Addendum I

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

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

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

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

The following example illustrates the changes :-

September 2002

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

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

Epicentral Estimates

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

Observational Data

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

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

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

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

Addendum II

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

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

Addendum III

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

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

DJA 01 00:13:05.4±1.4, 10°S±5°×11°7E±°, h10km±12km, M3.8/9, mb4.4/2, MLv3.5/9, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	1.32	29	P	Pn	00 13 28.4	-1.6
WBSI	Waikabubak, Su	2.27	81	P	Pn	00 13 42.4	-0.6
IGBI	Denpasar	2.27	301	P	Pn	00 13 43.3	+0.3
DNP	Denpasar	2.29	305	P	Pn	00 13 43.3	0.0
DNP				S	Sn	00 14 11.7	+0.1
SRBI	Singaraja	2.67	315	P	Pn	00 13 48.7	+0.2
JAGI	Jajag, Banyuwa	3.30	297	P	Pn	00 13 56.8	-0.3
GMJI	Gumukmas	4.01	295	P	Pn	00 14 07.0	+0.1
EDFI	Ende, Flores	4.67	75	P	Pn	00 14 15.8	-0.4
BKSI	Bulukumba	5.51	33	P	Pn	00 14 28.0	+0.4
	0.0nm6.8nm,0.9s						

*IDC **01** 00:20:22.7±1.3, 32°.55S×178°.53W, h0km, mb4.5/3, mbtmp4.6/5, ML4.5/2, MS3.6/7, Error ellipse: s-maj=36.3km s-min=24.3km az=124.0*
*NEIC **01** 00:20:24.8±2.3, 32°.77S±0°.08×178°.5W±0°.2, h10km±1km, mb4.5/10, Error ellipse: s-maj=23.9km s-min=13.0km az=105.0*
*WEL **01** 00:20:26.1±0.8, 32°S±22°×17°9W±5°4, h35km, M4.7/14, mB5.1/6, ML5.2/18, MLv4.9/14, Mw(mB)4.5/6, Error ellipse: s-maj=0.1km s-min=0.0km az=111.8*
ISC 01 00:20:25.7±0.8, 32°.76S±0°.06×178°.2W±0°.1, h35km, n60, σ1s87/70, mb4.6/7, MS3.6/6, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.50	4	P	Pn	00 21 14.8	-2.7
GLKZ				S	Sn	00 21 54.6	-3.1
RAO	Raoul Island	3.51	4	Pn	Pn	00 21 16.1	-1.6
	51nm,0.3s,baz=291,slow=20,SNR=1.7						
RAO				Sn	Sn	00 21 56.1	-1.9
	155nm,0.3s,baz=90,slow=20,SNR=5.6						
	138nm,0.2s						
RAO	Raoul Island	3.51	4		Pn	00 21 15.7	-2.0
RIZ	Raoul Island	3.51	4	P	Pn	00 21 16.0	-1.8
RIZ				S	Sn	00 21 55.7	-2.5
MXZ	Matakaoa Point	5.58	210	P	Pn	00 21 43.4	-2.8
WMGZ	Waiomatatini S	5.76	208	P	Pn	00 21 44.1	-4.5
PKGZ	Pakihiroa	5.95	210	P	Pn	00 21 48.9	-2.5
HAZ	Te Kaha	5.97	212	P	Pn	00 21 49.3	-2.2
HAZ				S	Sn	00 22 59.0	+0.4
PUZ	Puketiti	6.04	208	P	Pn	00 21 49.8	-2.6
RUGZ	Raukumara Rang	6.19	212	P	Pn	00 21 53.1	-1.5
RUGZ				S	Sn	00 23 02.9	-1.3
TWGZ	Tauwhareparae	6.24	209	P	Pn	00 21 53.3	-2.0
MWZ	Matawai	6.56	211	P	Pn	00 21 56.7	-3.0
MWZ				S	Sn	00 23 13.7	+0.4
URZ	Urewera	6.69	214	Pn	Pn	00 22 00.9	-0.5
	7.9nm,0.3s,baz=302,slow=23,SNR=28						
URZ				Sn	Sn	00 23 14.0	-2.3
	13nm,0.3s,baz=162,slow=17,SNR=3.6						
	18nm,0.3s						
URZ	Urewera	6.69	214		Pn	00 21 58.8	-2.5
URZ	Urewera	6.69	214	P	Pn	00 22 00.7	-0.7
RAGZ	Rawiri	6.74	211	P	Pn	00 22 01.2	-1.0
RAGZ				S	Sn	00 23 14.6	-3.3
RIGZ	Rimuhau	6.78	208	P	Pn	00 22 00.1	-2.6
RIGZ				S	Sn	00 23 17.9	-0.8
SNGZ	Shannon Statio	7.02	210	P	Pn	00 22 06.5	+0.5
SNGZ				S	Sn	00 23 22.9	-1.6
RTZ	Ruatahuna	7.04	213	P	Pn	00 22 05.6	-0.7
RTZ				S	Sn	00 23 23.7	-1.3
TOZ	Tahuroa Road	7.15	224	P	Pn	00 22 10.6	+2.9
RAHZ	Arahi	7.24	211	P	Pn	00 22 08.7	-0.3
RAHZ				S	Sn	00 23 28.7	-1.2
NMHZ	Naumai	7.51	211	P	Pn	00 22 12.3	-0.5
NMHZ				S	Sn	00 23 36.2	-0.5
ARHZ	Aropaoanui	7.57	210	P	Pn	00 22 13.1	-0.3
ARHZ				S	Sn	00 23 37.0	-0.9
BKZ	Black Stump Fm	7.70	212	P	Pn	00 22 14.3	-1.1
BKZ				S	Sn	00 23 37.8	-3.6
KWHZ	Kaweka Forest	7.95	212	P	Pn	00 22 17.8	-1.0
KWHZ				S	Sn	00 23 44.5	-2.9
OTVZ	Oturere	8.10	216	P	Pn	00 22 19.4	-1.4
KRHZ	Kereru	8.15	211	P	Pn	00 22 19.9	-1.6
BHW	Baring Head	10.25	211	Pn	Pn	00 22 52.1	+1.9
WHZ	Wether Hill Ro	16.90	215	Pn	Pn	00 24 19.5	+0.1
WHZ				IAmb	IAmb	00 24 26.2	
	comp=Z,57nm,1.5s						
DZM	Mont Dzumac	17.28	304	LR	LR	00 29 58.3	
	comp=Z,394nm,19.2s,baz=185,slow=34						
KOUNC	Koumac, New Ca	19.79	304		Pn	00 24 56.2	+1.5
KOUNC				IAmb	IAmb	00 24 57.6	
	comp=Z,26nm,0.9s						
RAR	Rarotonga	20.01	59	LR	LR	00 33 26.5	
	comp=Z,59nm,18.2s,baz=254,slow=39						
PPT	Papeete	29.87	67	LR	LR	00 38 19.6	
	comp=Z,46nm,18.1s,baz=205,slow=36						
STKA	Stephens Creek	33.85	260	LR	LR	00 39 38.0	
	comp=Z,204nm,18.1s,baz=189,slow=34						
CTA	Charters Tower	34.09	283	P	P	00 27 06.0	-1.0
	comp=Z,4.9nm,0.5s,baz=117,slow=9.5,SNR=10						
CTA				LR	LR	00 39 39.8	
	comp=Z,78nm,18.7s,baz=257,slow=34						
	comp=Z,4.9nm,0.5s						
CTAO	Charters Tower	34.09	283	P	P	00 27 07.6	+0.6
BBOO	Buckleboo	38.22	257	P	P	00 27 42.3	0.0
BBOO				IAmb	IAmb	00 27 51.3	
	comp=Z,14nm,1.4s						
AS31	Alice Springs	42.87	270	P	P	00 28 21.5	+0.7
ASAR	Alice Springs	42.87	270	P	P	00 28 20.8	-0.1
	comp=Z,2.3nm,0.5s,baz=106,slow=7.2,SNR=46						
	comp=Z,2.3nm,0.5s						
WR0	Warramunga Arr	43.90	275	P	P	00 28 29.3	+0.2
WR0				IAmb	IAmb	00 28 31.3	
	comp=Z,11nm,1.3s						
WB2	Warramunga Arr	44.06	275	P	P	00 28 30.6	+0.1
WB2				IAmb	IAmb	00 28 44.7	
	comp=Z,6.8nm,0.6s						
WRA	Warramunga Arr	44.07	275	P	P	00 28 30.5	0.0
	comp=Z,4.0nm,0.5s,baz=114,slow=7.7,SNR=82						
	comp=Z,4.0nm,0.5s						
WB0	Warramunga Arr	44.10	275	P	P	00 28 31.0	+0.2
WB0				IAmb	IAmb	00 28 32.3	
	comp=Z,8.4nm,0.8s						
FORT	Forrest	45.33	257	P	P	00 28 38.8	-1.6
CASY	Casey	52.99	209	P	P	00 29 39.8	+1.3
PMSA	Palmer Station	70.19	155	LR	LR	00 55 46.4	
	comp=Z,41nm,19.5s,baz=202,slow=30						
SNAA	Sanae	75.81	178	P	PcP	00 32 18.3	-1.9
VNA3	Neumayer Olymp	75.97	176	P	PcP	00 32 19.7	-1.1
VNA2	Neumayer--Watz	76.40	177	P	PcP	00 32 23.2	+0.5
	baz=176,slow=4.8						
VNA1	Neumayer--Stat	76.63	177	P	PcP	00 32 23.7	0.0
NEW	Newport	97.38	36	LR	LR	01 10 45.3	
	comp=Z,31nm,20.0s,baz=234,slow=31						
MKAR	Makanchi Array	119.15	309	PKP	PKiKP	00 39 11.7	+1.0
	comp=Z,0.4nm,0.6s,baz=223,slow=2.2,SNR=5.5						
FIA1	FINESS Array S	147.29	339	PKPdf	PKPab	00 40 05.8	-0.7
FINES	FINESS Array B	147.29	339	PKPbc	PKPab	00 40 05.9	-0.6
	comp=Z,6.1nm,0.6s,baz=45,slow=4.1,SNR=74						
NB2	NORSAR Subarra	151.05	351	PKP	PKiKP	00 40 15.8	+1.0
	comp=Z,0.9nm,0.6s,baz=15,slow=2.6						
NOA	NORSAR Array B	151.05	351	PKPbc	PKiKP	00 40 15.8	+1.0
	comp=Z,1.0nm,0.6s,baz=14,slow=4.1,SNR=6.9						
PABE	Paberze	152.48	332		PKPdf	00 40 13.5	+2.9
AKASG	Malin Array Be	153.03	320	PKPbc	PKiKP	00 40 20.6	+1.4
	comp=Z,0.5nm,0.3s,baz=46,slow=2.4,SNR=4.1						
AKASG	Malin Array Be	153.03	320		PKPdf	00 40 14.4	+2.8
TORD	Torodi Ar. Bea	160.47	180	PKPab	PKPab	00 41 07.5	+4.2
	comp=Z,0.2nm,0.7s,baz=194,slow=4.2,SNR=1.5						

*NEIC **01** 00:46:17.0±1.6, 52°.7N±0°.2×166°.9W±0°.2, h27km±10km, mb3.6/5, ML2.5(AEIC), Error ellipse: s-maj=31.9km s-min=7.7km az=148.0*
AEIC 01 00:46:12±1.8, 52°.5N±0°.2×166°.9W±0°.2, h8km±8km, Error ellipse: s-maj=26.3km s-min=7.8km az=151.0, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	Nikolski High	1.29	293	Pn	Pb	00 46 36.4	-0.1
UNV	Unalaska Valle	1.39	10	Pn	Pn	00 46 37.6	-0.1
AKUT	Akutan	1.79	22	Pn	Pn	00 46 43.1	-0.1
GSTR	Great Sitkin T	5.64	270	Pn	Pn	00 47 39.2	+3.2
KIWB	Kanaga Island	6.34	268	Pn	Pn	00 47 52.5	+6.9
P18K	Big Mountain,	9.52	39	Pn	Pn	00 48 28.9	-0.4
TTA	Tatalina	11.96	25	Pn	Pn	00 49 03.9	+1.2
IMAR	Indian Mountai	15.07	21	P	P	00 49 49.9	-0.4
NEA2	Nenana	15.22	30	Pn	Pn	00 49 47.1	+0.1
NEA2				IAmb	IAmb	00 49 48.0	
	comp=Z,2.5nm,1.0s						
WRH	Wood River Hil	15.45	32	P	P	00 49 57.5	+3.0
WRH				IAmb	IAmb	00 50 11.4	
	comp=Z,2.9nm,1.1s						
RDOG	Red Dog Mine	15.75	6	P	P	00 49 57.3	-0.6
RDOG				IAmb	IAmb	00 50 10.3	
	comp=Z,6.3nm,0.6s						
SCRK	Sand Creek	16.56	37	P	P	00 50 05.8	-1.2
BESE	Bessie Mountai	19.01	59	P	Pn	00 50 34.9	+0.3

*VAO **01** 00:51:11.2±0.4, 15°.84S×69°.54W, h248km±3km, mb3.9*
*IDC **01** 00:51:11.7±0.7, 16°.01S×69°.29W, h249km±5km, mb3.4/9, mbtmp4.0/12, Error ellipse: s-maj=17.8km s-min=14.5km az=50.0*
*NEIC **01** 00:51:12.0±1.9, 15°.87S±0°.07×69°.50W±0°.09, h255km±7km, mb4.4/36, Error ellipse: s-maj=13.1km s-min=10.6km az=84.0*
ISC 01 00:51:10.5±0.4, 15°.92S±0°.05×69°.51W±0°.07, h250km, n124, σ1s27/123, mb4.2/20, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	1.37	106	P	Pn	00 51 49.9	+1.2
	158nm,0.4s,baz=300,slow=4.8,SNR=894						
LPAZ				S	S	00 52 16.9	-1.7
	161nm,0.5s,baz=14,slow=23,SNR=32						
LPAZ	La Paz	1.37	106	eP	Pn	00 51 49.7	+1.0
PB18	Visviri	1.66	179		Pn	00 51 53.0	+2.3
PB16	IPOC Station P	2.40	180	Pn	Pn	00 51 59.4	+1.9
AP01	Chacalluta	2.56	198	Pn	Pn	00 51 59.2	+0.7
PB12	IPOC Station P	2.79	196	Pn	Pn	00 52 00.8	-0.1
PB11	IPOC Station P	3.82	182		Pn	00 52 12.7	+0.3
PB08	IPOC Station P	4.21	175	Pn	Pn	00 52 18.0	+0.8
TA01	Diego Aracena	4.67	188	Pn	Pn	00 52 21.8	-0.4
PB01	IPOC Station P	5.10	180	Pn	Pn	00 52 27.9	+0.3
PB02	IPOC Station P	5.38	184	Pn	Pn	00 52 31.2	+0.1
PB07	IPOC Station P	5.79	183	Pn	Pn	00 52 36.2	0.0
PB09	IPOC Station P	5.85	178	Pn	Pn	00 52 37.4	+0.4
PB04	IPOC Station P	6.41	185		Pn	00 52 44.1	+0.2
LVC	Limon Verde	6.68	175	P	Pn	00 52 48.4	+0.8
	21nm,0.3s,baz=32,slow=11,SNR=67						
LVC				S	S	00 54 00.7	-4.5
	56nm,0.4s,baz=127,slow=22,SNR=17						
LVC	Limon Verde	6.68	175	Pn	Pn	00 52 48.2	+0.7
LVC	Limon Verde	6.68	175	eP	Pn	00 52 48.3	+0.7
PB06	IPOC Station P	6.75	180	Pn	Pn	00 52 48.1	-0.1
ETMB	Extrema	6.86	28	eP	Pn	00 52 50.3	+0.7
PB15	IPOC Station P	7.25	180		Pn	00 52 55.0	+0.4
PB10	IPOC Station P	7.62	187	Pn	Pn	00 52 59.0	0.0
SIV	San Ignacio	8.12	92	P	Pn	00 53 03.3	-2.2
	2.1nm,0.4s,baz=277,slow=11,SNR=8.7						
NNA	Nana	8.12	298	Pn	Pn	00 53 03.8	-1.7
CZSB	Cruzeiro do Su	8.72	339	eP	Pn	00 53 11.7	-1.4
GO02	Mina Guanaco	9.20	180	Pn	Pn	00 53 20.6	+1.3
VBST	Vila Bela da S	9.27	83	eP	Pn	00 53 19.1	-0.9
VILB	Vilhena	9.49	73	eP	Pn	00 53 22.7	-0.1
PTLB	Pontes e Lacer	10.00	89	eP	Pn	00 53 30.0	+0.8
AC01	Pan de Azucar	10.23	186	Pn	Pn	00 53 32.2	+0.2
AC02	Maricunga	10.87	178	Pn	P	00 53 42.5	-2.6
AC06	Mina Casimiro	11.41	184	Pn	P	00 53 48.4	-2.2
GO03	Copiap	11.64	183	P	P	00 53 53.2	0.0
PTET	Porto Estrela	11.91	89	eP	Pn	00 53 52.8	-0.3
LCO	Las Campanas	13.08	185	P	P	00 54 10.4	+1.1
SALV	Santo Antonio	13.29	92	eP	P	00 54 10.9	-0.7
NBRS	Nobres	13.35	85	eP	P	00 54 11.9	-0.4
AQDB	Aquidauana	13.88	111	eP	P	00 54 18.6	+0.5
CO01	Juntas del Tor	14.00	182	P	P	00 54 22.1	+2.5
PP1B	Ponte de Pedra	14.11	99	eP	P	00 54 21.4	+0.7
ANTJ	Antonio Joao (	14.13	117	eP	P	00 54 21.7	+0.8
GO04	Tololo Observa	14.24	185	P	P	00 54 26.0	+3.8
CLDB	Colider	14.25	71	eP	P	00 54 22.7	+0.5
CO06	Fray Jorge	14.81	187	P	Pn	00 54 30.6	+2.1
CO03	El Pedregal	14.89	184	P	Pn	00 54 32.2	+2.7
CO02	Combarbal	15.28	185	P	Pn	00 54 35.4	+1.2
CO02				IAmb	IAmb	00 54 57.8	
	comp=Z,11nm,1.1s						
AMBA	Amambai (Brazi	15.36	119	eP	Pn	00 54 37.0	+1.9
CPUP	Villa Florida	15.36	134	P	Pn	00 54 35.1	0.0
	comp=Z,3.3nm,0.6s,baz=323,slow=10,SNR=7.2						
CPUP	Villa Florida	15.36	134	P	Pn	00 54 34.7	-0.4
CPUP	Villa Florida	15.36	134	eP	Pn	00 54 37.1	+2.0
MACA	Manacapuru-AM	15.37	35	eP	Pn	00 54 35.7	+0.4
DVLD	Doverlandia	16.67	95	eP	Pn	00 54 50.5	-0.1
MCR1	Marechal Candi	16.81	123	eP	Pn	00 54 52.3	0.0
ARAG	Araguaiana, MT	17.03	92	eP	Pn	00 54 54.2	-0.7
MT02	Curacav	17.33	185	P	Pn	00 54 58.7	+0.5
ITTB	Itaituba	17.75	51	eP	Pn	00 55 01.2	-2.1
MT09	Talagante	17.83	184	P	Pn	00 55 04.1	-0.2
MT09				IAmb	IAmb	00 55 10.4	
	comp=Z,12nm,1.2s						
BO04	La Punta	18.02	183	P	Pn	00 55 05.7	-0.7
BO04				IAmb	IAmb	00 55 29.6	
	comp=Z,21nm,1.5s						
ITQB	Itaqui	18.10	141	P	Pn	00 55 05.5	-1.8
ITQB	Itaqui	18.10	141	eP	Pn	00 55 06.3	-1.0
SNDB	Serra Nova Dou	18.11	80	eP	Pn	00 55 05.5	-2.0
PCMB	Pacaembu	18.18	111	eP	Pn	00 55 06.5	-1.8
OTAV	Otavalo	18.32	330	eP	Pn	00 55 06.7	-3.8
CRSM	Crissiumal (Br	18.39	131	eP	Pn	00 55 08.7	-2.1
BO01	Tunca	18.45	184	P	Pn	00 55 10.2	-1.2
BO01				IAmb	IAmb	00 55 12.3	
	comp=Z,9.3nm,1.2s						
PTGB	Pitanga	18.54	121	eP	Pn	00 55 11.1	-1.5
ITRB	Iturama	18.62	104	eP	Pn	00 55 11.5	-2.0
RODS	Rosario do Sul	19.45	140	eP	P	00 55 19.4	+0.7
ITAB	Concordia	19.67	128	eP	P	00 55 22.4	+1.3
ALGR	Alto Alegre (B	19.88	133	eP	P	00 55 22.4	-1.0
FRTB	Fartura	20.17	115	eP	P	00 55 28.1	+1.5
BOAV	Boa Vista	20.25	27	eP	P	00 55 26.8	-0.6
IPMB	Ipameri, GO	20.48	99	eP	P	00 55 29.0	-0.9
BB19B	Bebedouro	20.54	108	eP	P	00 55 31.2	+0.7
CPSB	Cacapava Do Su	20.61	137	eP	P	00 55 32.8	+1.7
CPSB				epP	pP	00 56 12.6	+0.6
BDFB	Brasilia	20.69	92	P	P	00 55 31.6	-0.6
	comp=Z,1.7nm,0.4s,baz=272,slow=14,SNR=4.6						
	comp=Z,1.7nm,0.4s						
BDFB	Brasilia	20.69	92	P	P	00 55 31.8	-0.5
BDFB	Brasilia	20.69	92	eP	P	00 55 32.9	+0.6
PEXB	Peixe	20.92	82	eP	P	00 55 35.5	+1.0
PLTB	Pedras Altas	21.41	140	P	P	00 55 39.0	-0.1
PLTB				IAmb	IAmb	00 55 45.9	
	comp=Z,19nm,1.5s						
PLTB	Pedras Altas	21.41	140	eP	P	00 55 41.4	+2.3
CNLB	Canela	21.74	131	eP	P	00 55 43.0	+0.8
TRQA	Tornquist	23.03	165	P	P	00 55 55.4	+1.5
TRQA				IAmb	IAmb	00 55 58.0	
	comp=Z,7.5nm,0.8s						
MCPB	Macapa, AP	23.14	50	eP	P	00 55 57.0	+1.8
BSCB	Bom Sucesso	23.99	106	eP	P	00 56 03.7	+0.8
BSCB				epP	pP	00 56 47.8	-1.1
SDV	Santo Domingo	24.67	357	P	P	00 56 09.8	+0.6
	comp=Z,2.6nm,0.3s,baz=158,slow=7.2,SNR=3.6						
	comp=Z,2.6nm,0.3s						
BAUV	El Baul	24.75	3	P	P	00 56 10.8	+1.2
PDPR	Patillas Dam,	33.90	6	P	P	00 57 30.4	+0.2
PDPR				IAmb	IAmb	00 57 42.6	
	comp=Z,18nm,1.1s						
CELP	Cerrillos	33.90	5	P	P	00 57 32.3	+2.0
MTP	Monte Pirata	34.03	7	P	P	00 57 31.1	-0.2
AOPR	Arecibo Observ	34.16	5	P	P	00 57 32.1	-0.3
CBYP	Canovanas	34.17	6	P	P	00 57 32.8	+0.2
GCPR	Guaynabo City	34.18	6	P	P	00 57 32.5	-0.1
DR12	Loma Pena Alta	34.49	0	P	P	00 57 35.3	-0.1
TXAR	Lajitas Array	55.78	324	P	P	01 00 24.2	+2.2
	comp=Z,0.7nm,0.6s,baz=145,slow=6.5,SNR=6.3						
	comp=Z,0.7nm,0.6s						
TXAR	Lajitas Array	55.78	324	P	P	01 00 23.5	+1.4
TX31	Lajitas Ar. Si	55.78	324	P	P	01 00 24.2	+2.1
S44A	Carbondale	56.47	341	P	P	01 00 26.3	-0.4
S44A				IAmb	IAmb	01 00 29.5	
	comp=Z,10nm,1.4s						
O53A	New Philadelph	56.93	349	P	P	01 00 30.1	+0.2
O53A				IAmb	IAmb	01 00 43.0	
	comp=Z,11nm,1.4s						
N53A	Lisbon	57.41	350	P	P	01 00 33.5	+0.4
N53A				IAmb	IAmb	01 00 34.9	
	comp=Z,11nm,1.3s						
S39A	Bolivar	57.84	338	P	P	01 00 35.9	-0.4
HRV	Adam Dziewonsk	58.16	358	P	P	01 00 38.8	+0.5
HRV				IAmb	IAmb	01 01 08.2	
	comp=Z,20nm,1.2s						
DELO	Deloro Mine	60.60	353	P	P	01 00 54.7	-0.2
DELO				IAmb	IAmb	01 01 07.6	
	comp=Z,5.1nm,0.9s						
G65A	Princeton	60.85	2	P	P	01 00 57.0	+0.4
G65A				IAmb	IAmb	01 01 16.1	
	comp=Z,25nm,1.4s						
F64A	Sherman	61.50	1	P	P	01 01 01.6	+0.7
F64A				IAmb	IAmb	01 01 11.7	
	comp=Z,14nm,1.2s						
LMN	Caledonia Moun	61.63	4	P	P	01 01 02.0	+0.3
LMN				IAmb	IAmb	01 01 19.8	
	comp=Z,18nm,1.4s						
SNAA	Sanae	67.72	162	P	P	01 01 42.4	+1.5
DBIC	Dimbokro	67.81	76	P	P	01 01 41.9	-0.4
	comp=Z,2.8nm,0.8s,baz=285,slow=4.9,SNR=7.5						
	comp=Z,2.8nm,0.8s						
DBIC	Dimbokro	67.81	76	P	P	01 01 42.7	+0.4
PDAR	Pinedale Array	69.03	330	P	P	01 01 51.9	+2.4
	comp=Z,0.4nm,0.6s,baz=126,slow=7.5,SNR=4.1						
	comp=Z,0.4nm,0.6s						
PDAR	Pinedale Array	69.03	330	P	P	01 01 50.2	+0.7
ULM	Lac du Bonnet	69.85	342	P	P	01 01 54.1	+0.1
ULM				IAmb	IAmb	01 02 06.2	
	comp=Z,7.3nm,1.2s						
NVAR	Mina Array Bea	70.79	321	P	P	01 02 03.2	+2.9
	comp=Z,0.5nm,0.7s,baz=137,slow=6.1,SNR=5.2						
	comp=Z,0.5nm,0.7s						
KOWA	Kowa	71.41	68	P	P	01 02 04.2	-0.1
TORD	Torodi Ar. Bea	76.09	72	P	P	01 02 31.1	-0.2
	comp=Z,1.4nm,0.5s,baz=267,slow=4.6,SNR=24						
	comp=Z,1.4nm,0.5s						
TORD	Torodi Ar. Bea	76.09	72	P	P	01 02 31.0	-0.3
ESDC	Sonseca Array	82.30	45	P	P	01 03 05.2	+0.8
	comp=Z,0.4nm,0.5s,baz=265,slow=5.1,SNR=6.4						
	comp=Z,0.4nm,0.5s						
YKA	Yellowknife Ar	85.76	341	P	P	01 03 22.6	+1.4
	comp=Z,1.3nm,0.5s,baz=131,slow=4.9,SNR=22						
	comp=Z,1.3nm,0.5s						
YKA	Yellowknife Ar	85.76	341	P	P	01 03 22.3	+1.1
ASAR	Alice Springs	134.49	211	PKP	PKiKP	01 10 01.8	+0.5
	comp=Z,0.2nm,0.3s,baz=142,slow=3.2,SNR=2.2						
ZALV	Zalesovo Beam	137.09	22	PKP	PKiKP	01 10 05.8	+0.4
	comp=Z,1.7nm,0.5s,baz=292,slow=2.6,SNR=8.7						
WRA	Warramunga Arr	137.34	214	PKP	PKiKP	01 10 07.5	+0.3
	comp=Z,0.2nm,0.3s,baz=138,slow=1.6,SNR=9.6						
SONM	Songino Array	148.00	5	PKPbc	PKPab	01 10 28.8	-1.2
	comp=Z,2.0nm,0.7s,baz=305,slow=1.2,SNR=12						
SONM	Songino Array	148.00	5		PKPab	01 10 29.0	-0.9
PZH	PanZhiHua	166.69	36	PKP	PKPdf	01 10 46.3	-0.6

*MOS **01** 01:53:33.9±0.0, 42°.29N×46°.68E, h51km, MPVA4.1*
*NORS **01** 01:53:34.3±0.0, 42°.25N×46°.60E, h49km, MPVA4.1*
*DRS **01** 01:53:35.4±0.0, 42°.21N×46°.52E, h18km*
ISC 01 01:53:36.4±0.9, 42°.32N±0°.02×46°.67E±0°.02, h48km±5km, n85, σ1s62/168, 5C-3D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XNZR	Khunzakh	0.22	8	eP	Pn	01 53 44.5	-0.4
XNZR				eS	Sn	01 53 51.2	+0.3
XNZR				i S		01 53 51.4	
XNZR				pmax	pmax		
	comp=Z,705nm,0.5s						
XNZR				smax	smax		
	comp=N,961nm,0.4s						
XNZR				smax	smax		
	comp=E,1μm,0.6s						
XNZR				smax	smax		
	comp=E,1μm,0.2s						
XNZR	Khunzakh	0.22	8	ePg	Pn	01 53 44.5	-0.4
XNZR				eSg	Sn	01 53 51.2	+0.3
GNBR	Gunib	0.23	73	⇓iP	Pn	01 53 44.3	-0.5
GNBR				i S	Sn	01 53 51.0	+0.2
GNBR				pmax	pmax		
	comp=Z,891nm,0.1s						
GNBR				smax	smax		
	comp=E,1μm,0.2s						
GNBR	Gunib	0.23	73	i Pg	Pn	01 53 44.3	-0.5
GNBR				eSg	Sn	01 53 51.9	+1.1
ARKR	Arakani	0.37	41	eP	Pn	01 53 45.1	-1.1
ARKR				eS	Sn	01 53 53.3	+0.3
ARKR	Arakani	0.37	41	ePg	Pn	01 53 45.1	-1.1
ARKR				eSg	Sn	01 53 53.3	+0.3
KMKR	Kumukh	0.37	121	eP	Pn	01 53 45.6	-0.7
KMKR				eS	Sn	01 53 53.1	-0.2
KMKR				i S		01 53 53.4	
KMKR				pmax	pmax		
	comp=Z,959nm,0.1s						
KMKR				smax	smax		
	comp=E,6μm,0.2s						
KMKR				smax	smax		
	comp=N,4μm,0.2s						
KMKR				smax	smax		
	comp=E,6μm,0.2s						
KMKR	Kumukh	0.37	121	ePg	Pn	01 53 45.6	-0.7
KMKR				eSg	Sn	01 53 53.2	-0.2
UNCR	Uncukul	0.40	14	eP	Pn	01 53 45.7	-0.8
UNCR				eS	Sn	01 53 54.0	+0.4
UNCR				i S		01 53 54.4	
UNCR				pmax	pmax		
	comp=Z,150nm,0.4s						
UNCR				smax	smax		
	comp=N,1μm,0.2s						
UNCR				smax	smax		
	comp=E,960nm,0.4s						
UNCR				smax	smax		
	comp=E,891nm,0.6s						
UNCR	Uncukul	0.40	14	ePg	Pn	01 53 45.7	-0.8
UNCR				eSg	Sn	01 53 54.1	+0.4
BTLR	Botlikh	0.47	316	⇑iP	Pn	01 53 47.0	-0.3
BTLR				eS	Sn	01 53 56.0	+1.0
BTLR	Botlikh	0.47	316	i Pg	Pn	01 53 47.0	-0.3
BTLR				eSg	Sn	01 53 56.0	+1.0
KRNR	Karanay	0.53	19	eP	Pn	01 53 47.1	-1.0
KRNR				eS	Sn	01 53 56.6	+0.2
KRNR	Karanay	0.53	19	ePg	Pn	01 53 47.1	-1.0
KRNR				eSg	Sn	01 53 56.6	+0.2
LGD	Lagodekhi	0.58	213	P	Pn	01 53 47.4	-1.2
LGD				S	Sn	01 53 57.7	+0.4
LGD	Lagodekhi	0.58	213	⇑P	Pn	01 53 47.4	-1.2
LGD				S	Sn	01 53 57.7	+0.4
BUJR	Buynaksk	0.60	33	eP	Pn	01 53 48.3	-0.5
BUJR				eS	Sn	01 53 58.7	+1.0
BUJR				i S		01 53 58.9	
BUJR				pmax	pmax		
	comp=Z,261nm,0.3s						
BUJR				smax	smax		
	comp=E,1μm,0.4s						
BUJR				smax	smax		
	comp=N,806nm,0.4s						
BUJR				smax	smax		
	comp=E,1μm,0.4s						
BUJR	Buynaksk	0.60	33	ePg	Pn	01 53 48.3	-0.5
BUJR				eSg	Sn	01 53 58.8	+1.0
DBC	Dubki	0.71	10	eP	Pn	01 53 49.6	-0.7
DBC				eS	Sn	01 54 01.3	+1.1
DBC				i S		01 54 02.0	
DBC				pmax	pmax		
	comp=Z,71nm,0.4s						
DBC				smax	smax		
	comp=N,515nm,0.4s						
DBC				smax	smax		
	comp=E,743nm,0.8s						
DBC				smax	smax		
	comp=E,662nm,0.8s						
DBC	Dubki	0.71	10	ePg	Pn	01 53 49.6	-0.7
DBC				eSg	Sn	01 54 01.4	+1.1
URKR	Urkarakh	0.73	102	eP	Pn	01 53 49.5	-1.2
URKR				eS	Sn	01 54 01.2	+0.2
URKR	Urkarakh	0.73	102	ePg	Pn	01 53 49.5	-1.2
URKR				eSg	Sn	01 54 01.2	+0.2
DLMR	Dylym	0.75	358	eP	Pn	01 53 50.3	-0.4
DLMR				eS	Sn	01 54 02.6	+1.5
DLMR				i S		01 54 03.0	
DLMR				pmax	pmax		
	comp=Z,121nm,0.3s						
DLMR				smax	smax		
	comp=N,742nm,0.4s						
DLMR				smax	smax		

comp=E,794nm,0.3s
DLMR smax smax
comp=E,608nm,0.3s
DLMR Dylym 0.75 358 *e*Pg **Pn 01 53 50.3 -0.4**
DLMR *e*Sg **Sn 01 54 02.6 +1.5**
DVE Vedeno 0.75 328⇑ *i*P **Pn 01 53 50.8 0.0**
DVE *e*S **Sn 01 54 03.2 +2.0**
DVE Vedeno 0.75 328 *i* Pg **Pn 01 53 50.8 0.0**
DVE *e*Sg **Sn 01 54 03.2 +2.0**
SGKR Sergokala 0.75 79 *e*P **Pn 01 53 50.1 -0.6**
SGKR *e*S **Sn 01 54 02.0 +0.9**
SGKR Sergokala 0.75 79 *e*Pg **Pn 01 53 50.1 -0.6**
SGKR *e*Sg **Sn 01 54 02.0 +0.9**
DDFL Dedoflistskaro 0.97 205 P **Pn 01 53 55.3 +1.6**
DDFL S **Sn 01 54 12.5 +6.1**
DDFL Dedoflistskaro 0.97 205⇓ P **Pn 01 53 55.3 +1.6**
DDFL S **Sn 01 54 12.5 +6.1**
KANR Karaman 1.06 35 *e*P **Pn 01 53 55.4 +0.5**
KANR *e*S **Sn 01 54 11.3 +2.8**
KANR *i* S 01 54 11.6
KANR pmax pmax
comp=Z,193nm,0.4s
KANR smax smax
comp=E,567nm,0.3s
KANR smax smax
comp=N,413nm,0.3s
KANR smax smax
comp=E,440nm,0.3s
KANR Karaman 1.06 35 *e*Pg **Pn 01 53 55.5 +0.5**
KANR *e*Sg **Sn 01 54 11.4 +2.8**
GROC Groznyy 1.09 324 *e*P **Pn 01 53 55.6 +0.3**
GROC *e* 01 54 12.6
GROC pmax pmax
comp=Z,127nm,0.3s
GROC smax smax
comp=E,122nm,0.2s
GROC smax smax
comp=N,198nm,0.6s
GROC smax smax
comp=N,161nm,0.6s
GROC Groznyy 1.09 324 *i* Pg **Pn 01 53 55.8 +0.5**
GROC *e*Sg **Sn 01 54 12.1 +2.9**
AKT Akhty 1.16 136 *e*P **Pn 01 53 55.1 -1.2**
AKT *e*S **Sn 01 54 10.8 -0.3**
AKT *i* S 01 54 11.2
AKT pmax pmax
comp=Z,170nm,0.2s
AKT smax smax
comp=E,298nm,0.2s
AKT smax smax
comp=N,200nm,0.3s
AKT smax smax
comp=E,282nm,0.2s
AKT Akhty 1.16 136 *e*Pg **Pn 01 53 55.2 -1.2**
AKT *e*Sg **Sn 01 54 10.8 -0.3**
SEKA Sheki 1.18 160 P **Pn 01 53 54.7 -1.9**
DRN Derbent 1.27 103 *e*P **Pn 01 53 57.7 0.0**
DRN *e*S **Sn 01 54 15.4 +1.8**
DRN *i* S 01 54 15.9
DRN pmax pmax
comp=Z,156nm,0.2s
DRN smax smax
comp=N,488nm,0.4s
DRN smax smax
comp=E,355nm,0.3s
DRN smax smax
comp=N,411nm,0.4s
DRN Derbent 1.27 103 *e*Pg **Pn 01 53 57.7 0.0**
DRN *e*Sg **Sn 01 54 15.4 +1.8**
KSMR Kasumkent 1.31 123 *e*P **Pn 01 53 57.8 -0.5**
KSMR *e*S **Sn 01 54 15.8 +1.1**
KSMR *i* S 01 54 15.9
KSMR pmax pmax
comp=Z,145nm,0.4s
KSMR smax smax
comp=E,1.0nm,0.1s
KSMR smax smax
comp=N,1.0nm,0.1s
KSMR smax smax
comp=E,1.0nm,0.8s
KSMR Kasumkent 1.31 123 *e*Pg **Pn 01 53 57.9 -0.5**
KSMR *e*Sg **Sn 01 54 15.8 +1.1**
KMGR Komgaron 1.52 300 *e*P **Pn 01 54 01.5 +0.3**
KMGR *e*S **Sn 01 54 24.0 +4.2**
KMGR Komgaron 1.52 300 *e*Pg **Pn 01 54 01.5 +0.3**
KMGR *e*Sg **Sn 01 54 22.6 +2.8**
PNSH Pansheti 1.55 282 P **Pn 01 54 01.4 -0.4**
PNSH S **Sn 01 54 22.6 +1.8**
PNSH Pansheti 1.55 282 P **Pn 01 54 01.4 -0.4**
PNSH S **Sn 01 54 22.6 +1.8**
MNGR Mingechevir, A 1.58 168 P **Pn 01 54 00.4 -1.6**
MTEO Meteo 1.62 283 P **Pn 01 54 02.4 -0.5**
MTEO S **Sn 01 54 25.2 +2.4**
GANJ Ganja 1.69 189 P **Pn 01 54 01.0 -2.6**
LACR Lac 1.82 287 *e*P **Pn 01 54 04.7 -0.7**
LACR *e*S **Sn 01 54 29.3 +2.0**
LACR Lac 1.82 287 *e*Pg **Pn 01 54 04.7 -0.7**
LACR *e*Sg **Sn 01 54 29.3 +2.0**
ARNR Ardon 1.95 297 *e*P **Pn 01 54 07.1 0.0**
ARNR *e*S **Sn 01 54 32.4 +2.0**
ARNR Ardon 1.95 297 *e*Pg **Pn 01 54 07.1 0.0**
ARNR *e*Sg **Sn 01 54 31.4 +1.0**
TRKR Terskaya 1.99 315 *e*P **Pn 01 54 07.6 -0.1**
TRKR *e*S **Sn 01 54 32.9 +1.5**
TRKR Terskaya 1.99 315 *e*Pg **Pn 01 54 07.5 -0.1**
TRKR *e*Sg **Sn 01 54 32.9 +1.5**
KORR Kora 2.06 293 *e*P **Pn 01 54 08.3 -0.3**
KORR *e*S **Sn 01 54 34.2 +1.1**
KORR Kora 2.06 293 *e*Pg **Pn 01 54 08.3 -0.3**
KORR *e*Sg **Sn 01 54 34.2 +1.1**
DMNI Dmanisi 2.10 243 P **Pn 01 54 07.2 -2.0**
DMNI S **Sn 01 54 32.2 -2.0**
DMNI Dmanisi 2.10 243 P **Pn 01 54 07.2 -2.0**
DMNI S **Sn 01 54 32.2 -2.0**
STDR Stavd-Durt 2.18 300 *e*P **Pn 01 54 10.5 +0.3**
STDR *e*S **Sn 01 54 37.5 +1.5**
STDR Stavd-Durt 2.18 300 *e*Pg **Pn 01 54 10.5 +0.3**
STDR *e*Sg **Sn 01 54 36.9 +0.8**
PRTR Priterechnaya 2.26 310 *i* P **Pn 01 54 11.0 -0.3**
PRTR *e*S **Sn 01 54 38.9 +1.0**
PRTR Priterechnaya 2.26 310 *i* Pn **Pn 01 54 11.0 -0.3**
PRTR *e*Sn **Sn 01 54 38.9 +1.0**
LSNR Lesken 2.30 296 *e*P **Pn 01 54 11.2 -0.7**
LSNR *e*S **Sn 01 54 39.6 +0.6**
LSNR Lesken 2.30 296 *e*Pn **Pn 01 54 11.2 -0.7**
LSNR *e*Sn **Sn 01 54 39.6 +0.6**
DIGR Digorskoe uzhe 2.35 285 *e*P **Pn 01 54 11.3 -1.4**
DIGR *e*S **Sn 01 54 39.9 -0.6**
DIGR Digorskoe uzhe 2.35 285 *e*Pn **Pn 01 54 11.3 -1.4**
DIGR *e*Sn **Sn 01 54 39.9 -0.6**
GNI Garni 2.61 214 *e*P **Pn 01 54 15.9 -0.4**
GNI *e*S **Sn 01 54 48.4 +1.5**
GNI Garni 2.61 214 *e*Pn **Pn 01 54 15.9 -0.4**
GNI *e*Sn **Sn 01 54 48.4 +1.5**
KBZ Khabaz 3.10 298⇑ *i*P **Pn 01 54 20.8 -2.0**
KBZ *e*S **Sn 01 54 55.9 -2.6**
KBZ Khabaz 3.10 298 *i* Pn **Pn 01 54 20.8 -2.0**
KBZ *e*Sn **Sn 01 54 55.9 -2.6**
PYA1 Pyatigorsk 3.14 305 *e*P **Pn 01 54 21.7 -1.7**
SHA1 Shidzhatmaz 3.26 297 *e*P **Pn 01 54 23.6 -1.7**
SHA1 *e*S **Sn 01 55 00.5 -2.4**
SHA1 Shidzhatmaz 3.26 297 *e*Pn **Pn 01 54 23.6 -1.7**
SHA1 *e*Sn **Sn 01 55 00.5 -2.4**
BEYR Belyy Ugol+ 3.28 302 *e*P **Pn 01 54 23.5 -1.9**
BEYR *e*S **Sn 01 55 00.2 -3.0**
BEYR Belyy Ugol+ 3.28 302 *e*Pn **Pn 01 54 23.5 -1.9**
BEYR *e*Sn **Sn 01 55 00.2 -3.0**
KIV0 Kislovodsk Arr 3.33 301 *i* Pn **Pn 01 54 24.0 -2.1**
KIV0 *e*Sn **Sn 01 55 02.1 -2.4**
KIV Kislovodsk 3.34 301⇓ *i*P **Pn 01 54 24.5 -1.7**
KIV *e*S **Sn 01 55 02.1 -2.5**
KIV Kislovodsk 3.34 301 *i* Pn **Pn 01 54 24.5 -1.7**
KIV *e*Sn **Sn 01 55 02.1 -2.5**
ALER Alexandrovskoy 3.66 313⇑ *i*P **Pn 01 54 29.4 -1.1**
ALER *e*S **Sn 01 55 10.3 -2.1**
ALER Alexandrovskoy 3.66 313 *i* Pn **Pn 01 54 29.4 -1.1**
ALER *e*Sn **Sn 01 55 10.3 -2.1**
GOF Gofitskoye 3.79 317 *e*P **Pn 01 54 30.6 -1.7**
GOF *e*S **Sn 01 55 13.4 -2.2**
GOF Gofitskoye 3.79 317 *e*Pn **Pn 01 54 30.6 -1.7**
GOF *e*Sn **Sn 01 55 13.4 -2.2**
LZRR Lazarevskoye 5.57 289 *i* P **Pn 01 54 58.5 +1.8**

MNK Minsk 17.36 321 *i* P **P 01 57 36.9 +1.1**
MNK *i* S **S 02 00 51.4 -2.4**
MNK pmax pmax
comp=E,1.0nm,0.9s
MNK pmax pmax
comp=Z,2.0nm,0.9s
MNK pmax pmax
comp=N,7.0nm,0.8s
MNK MLR MLR
comp=N,49nm,19.0s
MNK MLR MLR
comp=Z,112nm,18.0s
MNK MLR MLR
comp=E,4.0nm,16.0s
MNK Minsk 17.36 321 *i* P **P 01 57 37.0 +1.1**
comp=E,1.0nm,0.9s
MNK *i* P **P 01 57 37.0 +1.1**
comp=N,7.0nm,0.8s
MNK *i* P **P 01 57 37.0 +1.1**
comp=Z,2.0nm,0.9s,baz=128
MNK *i* PP **pP 01 57 47.1 -0.2**
MNK *i* S **S 02 00 51.4 -2.4**
MNK *i* SS **SnSn 02 01 06.1 +5.2**
MNK *i* SSS SSS 02 01 19.7
MNK *i* LQ LQ 02 02 18.1
MNK *i* LR LR 02 04 37.1
MNK *i* LRM MLR 02 07 07.0
comp=N,49nm,19.0s
MNK *i* LRM MLR 02 07 24.8
comp=Z,112nm,17.7s
MNK *i* LRM MLR 02 07 32.0
comp=E,4.0nm,16.4s

WEL 01 02:43:18.2±1.0, 31°S±6°×18°0W±1°7, h332km±15km, M4.6/10, mB4.9/8, ML5.2/10, MLv5.1/10, Mw(mB)4.2/8, Error ellipse: s-maj=0.0km s-min=0.0km az=105.9, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.45**	**39**	P	Pn	02 44 09.7	-1.8
GLKZ				S	S	02 44 55.4	+1.4
GRZ	**Great Barrier**	**6.47**	**217**	P	Pn	02 44 54.6	+0.8
MXZ	**Matakaoa Point**	**6.57**	**194**	P	Pn	02 44 56.7	+1.7
MXZ				S	S	02 46 14.6	+1.1
WMGZ	**Waiomatatini S**	**6.80**	**193**	P	Pn	02 44 53.4	-4.2
WMGZ				S	S	02 46 20.8	+2.5
HAZ	**Te Kaha**	**6.88**	**197**	P	Pn	02 44 59.1	+0.5
HAZ				S	S	02 46 21.2	+1.1
WCZ	**Waipu Caves**	**6.88**	**225**	P	Pn	02 44 58.9	+0.3
OUZ	**Omahuta**	**6.92**	**233**	P	Pn	02 44 59.1	0.0
PKGZ	**Pakihiroa**	**6.93**	**195**	P	Pn	02 44 59.0	-0.4
PKGZ				S	S	02 46 23.6	+2.3
PUZ	**Puketiti**	**7.07**	**193**	P	Pn	02 45 01.9	+1.0
PUZ				S	S	02 46 23.4	-0.9
RUGZ	**Raukumara Rang**	**7.10**	**197**	P	Pn	02 45 01.3	-0.1
RUGZ				S	S	02 46 22.1	-3.1
TWGZ	**Tauwhareparae**	**7.23**	**195**	P	Pn	02 45 04.9	+2.0
TWGZ				S	S	02 46 30.1	+2.3
TKGZ	**Te Karaka**	**7.51**	**195**	P	Pn	02 45 06.6	+0.5
TKGZ				S	S	02 46 34.5	+0.6
URZ	**Urewera**	**7.53**	**200**	P	Pn	02 45 04.9	-1.5
URZ				S	S	02 46 32.2	-2.1
KARZ	**Kaharoa**	**7.60**	**205**	P	Pn	02 45 08.6	+1.4
RAGZ	**Rawiri**	**7.67**	**197**	P	Pn	02 45 08.8	+0.7
RAGZ				S	S	02 46 39.5	+2.0
RIGZ	**Rimuhau**	**7.79**	**195**	P	Pn	02 45 10.3	+0.8
RIGZ				S	S	02 46 38.4	-1.6
MUGZ	**Murupara**	**7.83**	**201**	P	Pn	02 45 09.8	-0.2

*IDC **01** 02:48:52.4±3.5, 12°.22N×141°.19E, h117km±31km, mb3.3/5, mbtmp3.7/6, MS2.9/1, Error ellipse: s-maj=37.4km s-min=18.1km az=116.0*
ISC 01 02:48:50.6±1.0, 12°.2N±0°.2×141°.1E±0°.1, h100km, n8, σ1♀19/8, mb3.8/5, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.96**	**70**	P	**Pn**	**02 49 50.4**	**+1.1**
	38nm,0.3s,baz=359,slow=23,SNR=5.7						
GUMO				S	**Sn**	**02 50 34.5**	**-0.3**
	61nm,0.3s,baz=28,slow=22,SNR=7.0						
MJAR	**Matsushiro Arr**	**24.34**	**354**	LR	LR	03 03 14.1	
	comp=Z,28nm,19.5s,baz=354,slow=35						
WRA	**Warramunga Arr**	**32.64**	**192**	P	**P**	**02 55 12.9**	**-0.3**
	1.4nm,0.9s,baz=11,slow=9.8,SNR=5.7						
	1.4nm,0.9s						
ASAR	**Alice Springs**	**36.35**	**191**	P	**P**	**02 55 45.4**	**+0.2**
	0.5nm,0.4s,baz=21,slow=12,SNR=15						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**59.92**	**317**	P	**P**	**02 58 47.5**	**+1.2**
	0.3nm,0.9s,baz=118,slow=5.2,SNR=2.3						
	0.3nm,0.9s						
ILAR	**Eielson Array**	**71.39**	**25**	P	**P**	**02 59 57.6**	**-2.0**
	0.1nm,0.4s,baz=237,slow=6.2,SNR=4.3						
	0.1nm,0.4s						
NVAR	**Mina Array Bea**	**90.67**	**51**	P	**P**	**03 01 42.6**	**-0.1**
	0.4nm,0.5s,baz=275,slow=6.3,SNR=4.2						
	0.4nm,0.5s						
LPAZ	**La Paz**	**151.45**	**102**	PKPbc	**PKPbc**	**03 08 34.5**	**-0.1**
	1.7nm,0.5s,baz=322,slow=1.7,SNR=13						

IDC 01 02:59:21.5±3.1, 34°.05S×178°.75W, h0km, mb3.8/2, mbtmp3.9/3, ML3.9/1, Error ellipse: s-maj=72.8km s-min=36.4km az=120.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**5.37**	**217**	Pn	Pn	03 00 42.9	0.0
	4.2nm,0.3s,baz=300,slow=23,SNR=18						
URZ				Sn	Sn	03 01 45.3	-0.2
	4.8nm,0.3s,baz=115,slow=23,SNR=5.5						
	10nm,0.3s						
ASAR	**Alice Springs**	**42.41**	**271**	P	P	03 07 18.3	+0.2
	0.9nm,0.7s,baz=112,slow=7.7,SNR=11						
	0.9nm,0.7s						
WRA	**Warramunga Arr**	**43.73**	**276**	P	P	03 07 28.4	-0.3
	0.7nm,0.5s,baz=117,slow=7.5,SNR=13						
	0.7nm,0.5s						
FINES	**FINESS Array B**	**148.31**	**337**	PKPbc	PKPbc	03 19 08.2	-0.7
	0.7nm,0.6s,baz=52,slow=3.1,SNR=5.4						

*TUL **01** 03:04:53.2±1.1, 36°.89N±0°.01×97°.39W±0°.01, h8km±5km, ML2.8, mb_Lg2.4/29(NEIC), Error ellipse: s-maj=2.2km s-min=1.2km az=205.0*
NEIC 01 03:04:53.1±0.8, 36°.87N±0°.01×97°.39W±0°.01, h6km±6km, Error ellipse: s-maj=1.8km s-min=1.6km az=175.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T35A	**Sooner Cattle**	**0.71**	**86**	Pg	Pg	03 05 06.7	0.0
U32A	**Winter Ranch,**	**1.38**	**250**	Pn	Pn	03 05 18.9	-0.1
OKCFA	**Oklahoma City**	**1.45**	**182**	Pn	Pn	03 05 19.9	+0.1
OKCSW	**OKLAHOMA CITY**	**1.46**	**181**	Pn	Pn	03 05 20.2	+0.2
FNO	**Franklin**	**1.60**	**180**	Pn	Pn	03 05 22.4	+0.4
TUL1	**Leonard**	**1.60**	**126**	Pn	Pn	03 05 22.3	+0.3
R32A	**Long Quarter,**	**1.88**	**326**	IAmb_Lg		03 05 52.1	
	comp=Z,15nm,0.7s						
X34A	**Smith Ranch, M**	**2.29**	**189**	Pn	Pn	03 05 32.2	+0.9
KSU1	**Kansas State U**	**2.32**	**15**	Pn	Pn	03 05 32.6	+0.9
WMOK	**Wichita Mounta**	**2.40**	**208**	Pn	Pn	03 05 33.5	+0.5
WMOK				IAmb_Lg		03 06 10.7	
	comp=Z,15nm,1.0s						
X37A	**Clayton**	**2.80**	**143**	Pn	Pn	03 05 39.0	+0.6
X37A				IAmb_Lg		03 06 25.1	
	comp=Z,15nm,0.7s						
S39A	**Bolivar**	**3.35**	**75**	Pn	Pn	03 05 46.6	+0.6
W39A	**Magazine**	**3.37**	**119**	IAmb_Lg		03 06 48.1	
	comp=Z,8.2nm,0.8s						
U40A	**Yellville**	**3.69**	**97**	Pn	Pn	03 05 51.5	+0.9
U40A				IAmb_Lg		03 06 53.1	
	comp=Z,8.4nm,0.8s						
N33A	**J Bar K, Exete**	**3.87**	**359**	Pn	Pn	03 05 52.0	-1.1
MIAR	**Mount Ida**	**3.87**	**126**	IAmb_Lg		03 06 58.7	
	comp=Z,13nm,0.9s						
P38A	**Dawn**	**4.10**	**47**	Pn	Pn	03 05 57.4	+1.1
P38A				IAmb_Lg		03 07 08.6	
	comp=Z,6.7nm,0.8s						
Z38A	**Mt. Pleasant**	**4.10**	**151**	IAmb_Lg		03 07 09.4	
	comp=Z,17nm,0.7s						
R40A	**Maddies Statio**	**4.31**	**69**	Pn	Pn	03 05 59.0	-0.2
BGNE	**Belgrade**	**4.58**	**353**	Pn	Pn	03 06 03.0	+0.2
P40A	**Paris**	**4.98**	**56**	IAmb_Lg		03 07 38.4	
	comp=Z,7.3nm,0.8s						
CCM	**Cathedral Cave**	**5.03**	**74**	IAmb_Lg		03 07 38.2	
	comp=Z,5.0nm,0.8s						
PBMO	**Poplar Bluff**	**5.59**	**89**	Pn	Pn	03 06 14.5	-2.2
PBMO				IAmb_Lg		03 07 59.5	
	comp=Z,6.3nm,0.8s						
FVM	**French Village**	**5.66**	**77**	IAmb_Lg		03 07 53.2	
	comp=Z,5.0nm,0.7s						
SCIA	**State Center**	**5.98**	**31**	IAmb_Lg		03 08 08.3	
	comp=Z,8.9nm,0.8s						
S44A	**Carbondale**	**6.54**	**80**	IAmb_Lg		03 08 18.3	
	comp=Z,6.9nm,0.8s						
HDIL	**Hopedale**	**7.33**	**57**	IAmb_Lg		03 08 52.1	
	comp=Z,7.9nm,0.7s						

*TUL **01** 03:09:26.2±1.0, 36°.89N±0°.01×97°.39W±0°.02, h7km±1km, ML2.8, mb_Lg2.3/23(NEIC), Error ellipse: s-maj=2.6km s-min=1.5km az=49.0*
NEIC 01 03:09:26.3±0.6, 36°.858N±0°.010×97°.41W±0°.02, h8km±5km, Error ellipse: s-maj=2.1km s-min=1.3km az=66.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T35A	**Sooner Cattle**	**0.72**	**85**	Pg	Pg	03 09 40.1	0.0
OKCFA	**Oklahoma City**	**1.44**	**182**	Pn	Pb	03 09 53.1	-0.2
OKCSW	**OKLAHOMA CITY**	**1.45**	**181**	Pn	Pb	03 09 53.3	-0.2
FNO	**Franklin**	**1.60**	**180**		Pb	03 09 55.6	-0.5
TUL1	**Leonard**	**1.61**	**126**	Pn	Pn	03 09 55.3	+0.3
TUL1				IAmb_Lg		03 10 17.9	
	comp=Z,19nm,0.7s						
R32A	**Long Quarter,**	**1.88**	**327**	Pn	Pn	03 09 57.4	-1.3
WMOK	**Wichita Mounta**	**2.39**	**208**	Pn	Pn	03 10 06.2	+0.4
WMOK				IAmb_Lg		03 10 42.2	
	comp=Z,9.7nm,0.8s						
X37A	**Clayton**	**2.80**	**143**	Pn	Pn	03 10 10.7	-0.7
X37A				IAmb_Lg		03 11 02.9	
	comp=Z,15nm,0.7s						
HHAR	**Hobbs**	**2.85**	**101**	Pn	Pn	03 10 13.5	+1.4
W39A	**Magazine**	**3.37**	**118**	IAmb_Lg		03 11 20.2	
	comp=Z,6.7nm,0.8s						
U40A	**Yellville**	**3.70**	**96**	Pn	Pn	03 10 25.2	+1.5
MIAR	**Mount Ida**	**3.88**	**125**	IAmb_Lg		03 11 31.8	
	comp=Z,9.0nm,0.9s						
AMTX	**Amarillo**	**3.99**	**242**	IAmb_Lg		03 11 30.9	
	comp=Z,5.1nm,1.2s						
P38A	**Dawn**	**4.11**	**47**	IAmb_Lg		03 11 38.0	
	comp=Z,9.0nm,0.8s						
R40A	**Maddies Statio**	**4.32**	**69**	IAmb_Lg		03 11 45.5	
	comp=Z,6.1nm,0.7s						
W41B	**Gary Mavity, V**	**4.50**	**110**	IAmb_Lg		03 11 56.1	
	comp=Z,5.6nm,0.9s						
PBMO	**Poplar Bluff**	**5.60**	**89**	IAmb_Lg		03 12 31.9	
	comp=Z,6.8nm,0.8s						
S44A	**Carbondale**	**6.55**	**80**	IAmb_Lg		03 13 05.5	
	comp=Z,6.2nm,0.8s						
JCT	**Junction City**	**6.67**	**198**	IAmb_Lg		03 13 05.9	
	comp=Z,6.1nm,1.1s						
N23A	**Red Feather La**	**7.78**	**304**	IAmb_Lg		03 13 41.6	
	comp=Z,3.0nm,0.8s						

IDC 01 03:18:14.2±5.1, 29°.75S×178°.11W, h0km, mb3.5/2, mbtmp3.5/2, Error ellipse: s-maj=241.7km s-min=80.0km az=166.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.05**	**266**	P	P	03 26 15.5	-0.6
	0.2nm,0.4s,baz=102,slow=7.3,SNR=2.5						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**43.98**	**272**	P	P	03 26 23.7	+0.2
	0.4nm,0.4s,baz=112,slow=7.9,SNR=14						
	0.4nm,0.4s						
FINES	**FINESS Array B**	**144.50**	**340**	PKP	PKPbc	03 37 51.1	+0.7
	0.3nm,0.3s,baz=67,slow=3.6,SNR=1.2						

*IDC **01** 03:19:24.9±4.6, 36°.37N×71°.28E, h68km±31km, mb3.4/7, mbtmp3.8/13, ML3.7/6, Error ellipse: s-maj=54.4km s-min=22.5km az=149.0*
*NNC **01** 03:19:27.0±3.3, 36°.94N×70°.73E, h0km, mb4.4, mpv4.1, Error ellipse: s-maj=25.8km s-min=25.1km az=119.0*
ISC 01 03:19:26.7±0.7, 36°.38N±0°.07×71°.35E±0°.06, h100km, n35, σ2♀39/42, mb3.8/8, 1C-5D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**6.03**	**17**	P	**Pn**	**03 20 53.0**	**-0.8**
	SNR=67						
UCH	**Uchtor**	**6.34**	**22**	P	**Pn**	**03 20 57.8**	**-0.1**
	SNR=12						
EKS2	**Ekkin-Say**	**6.55**	**16**	P	**Pn**	**03 21 00.4**	**-0.2**
	SNR=14						
AAK	**Ala-Archa**	**6.71**	**20**	P	**Pn**	**03 21 02.8**	**0.0**
	SNR=19						
AAK	**Ala-Archa**	**6.71**	**20**	P	**Pn**	**03 21 02.4**	**-0.3**
	7.1nm,0.3s,baz=182,slow=5.7,SNR=35						
AAK				S	**Sn**	**03 22 13.0**	**-4.7**
	9.4nm,0.4s,baz=138,slow=22,SNR=9.1						
	12nm,0.3s						
KK31	**Karatay Array**	**6.75**	**355**	P	**Pn**	**03 21 00.9**	**-2.2**
	9.8nm,0.5s,baz=194,slow=15,SNR=147						
KK31				S	**Sn**	**03 22 11.1**	**-7.4**
	25nm,0.6s,baz=184,slow=20,SNR=7.0						
CHMS	**Chumysh**	**7.11**	**21**	P	**Pn**	**03 21 07.8**	**-0.3**
	SNR=8.6						
CHMS	**Chumysh**	**7.11**	**21**	⇓P	**Pn**	**03 21 07.5**	**-0.6**
	24nm,1.1s						
CHMS				⇓S	**Sn**	**03 22 27.0**	**-0.4**
	15nm,0.7s						
USP	**Ospenovka**	**7.30**	**18**	P	**Pn**	**03 21 10.2**	**-0.4**
	SNR=8.3						
TKM2	**Tokmak 2**	**7.31**	**25**	P	**Pn**	**03 21 10.9**	**-0.1**
	SNR=7.8						
TKM2	**Tokmak 2**	**7.31**	**25**	⇓P	**Pn**	**03 21 10.6**	**-0.4**
	3.8nm,0.5s						
TKM2				⇓S	**Sn**	**03 22 34.4**	**+1.9**
	16nm,1.2s						
MDOK	**Medeo**	**8.07**	**31**	⇑P	**Pn**	**03 21 22.6**	**+1.4**
	3.8nm,0.6s						
MDOK				⇓S	**Sn**	**03 22 55.4**	**+4.5**
	6.2nm,0.8s						
GEYT	**Alibeck**	**10.67**	**282**	P	**Pn**	**03 21 53.4**	**-3.2**
	1.5nm,0.3s,baz=114,slow=11,SNR=6.0						
GEYT				S	Sn	03 23 44.6	-9.5
	6.8nm,0.7s,baz=10,slow=41,SNR=4.6						
	3.0nm,0.4s						
PYUN	**Piuthan**	**12.85**	**127**	*e*P	**Pn**	**03 22 28.0**	**+2.2**
	29nm,0.4s						
DANN	**Dangsing**	**13.19**	**124**	*e*P	**Pn**	**03 22 32.0**	**+1.6**
	9.4nm,0.2s						
DANN				*e*S	**Sn**	**03 24 50.3**	**-5.2**
MKAR	**Makanchi Array**	**13.23**	**35**	P	**Pn**	**03 22 29.5**	**-1.0**
	0.1nm,0.3s,baz=228,slow=14,SNR=6.0						
	0.4nm,0.5s						
GKN	**Gorkha**	**14.00**	**123**	*e*P	**Pn**	**03 22 42.3**	**+1.5**
	9.3nm,0.2s						
PKIN	**Phulchoki**	**14.79**	**122**	*e*P	**Pn**	**03 22 52.1**	**+1.1**
PKI	**Pulchoki**	**14.80**	**122**	*e*P	**Pn**	**03 22 52.1**	**+0.8**
GUN	**Gumba**	**14.91**	**120**	*e*P	**Pn**	**03 22 53.2**	**+0.5**
KURBB	**Kurchatov Arra**	**15.15**	**18**	P	**Pn**	**03 22 55.8**	**+0.7**
	0.1nm,0.3s,baz=206,slow=10,SNR=8.1						
	0.8nm,0.7s						
JIRN	**Jiri**	**15.28**	**120**	*e*P	**Pn**	**03 22 58.4**	**+1.0**
	20nm,0.4s						
JIRN				*e*S	**Sn**	**03 25 39.6**	**-6.8**
RAMN	**Ramite**	**16.01**	**122**	*e*P	**Pn**	**03 23 07.6**	**+1.2**
	5.6nm,0.2s						
TAPN	**Taplejung**	**16.54**	**118**	*e*P	**Pn**	**03 23 13.5**	**+0.5**
AKTO	**Aktyubinsk**	**17.03**	**330**	P	**Pn**	**03 23 18.1**	**-0.4**
	0.3nm,0.3s,baz=130,slow=8.7,SNR=4.1						
	1.5nm,0.4s						
ZALV	**Zalesovo Beam**	**19.91**	**24**	P	**P**	**03 23 50.2**	**0.0**
	0.8nm,0.3s,baz=215,slow=10.0,SNR=7.9						
	2.1nm,0.3s						
BRTR	**Keskin Array B**	**29.74**	**288**	P	**P**	**03 25 24.3**	**+0.6**
	0.6nm,0.6s,baz=97,slow=11,SNR=2.5						
	0.6nm,0.6s						
AKASG	**Malin Array Be**	**33.24**	**309**	P	**P**	**03 25 54.7**	**+0.6**
	0.1nm,0.3s,baz=81,slow=8.2,SNR=2.2						
	0.1nm,0.3s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
FINES	**FINESS Array B**	**37.74**	**326**	P	**P**	**03 26 33.8**	**+1.4**
	0.5nm,0.4s,baz=126,slow=9.7,SNR=5.7						
	0.5nm,0.4s						
ARCES	**ARCESS Array B**	**41.37**	**338**	P	**P**	**03 27 03.4**	**+0.9**
	0.5nm,0.3s,baz=116,slow=8.1,SNR=1.8						
NB2	**NORSAR Subarra**	**44.65**	**323**	P	**P**	**03 27 30.1**	**+1.1**
	comp=Z,1.6nm,0.8s,baz=96,slow=7.9						
NOA	**NORSAR Array B**	**44.65**	**323**	P	**P**	**03 27 30.0**	**+0.9**
	comp=Z,0.9nm,0.7s,baz=96,slow=7.8,SNR=5.6						
	comp=Z,0.9nm,0.7s						
ESDC	**Sonseca Array**	**57.76**	**298**	P	**P**	**03 29 08.7**	**+1.3**
	comp=Z,0.5nm,0.5s,baz=50,slow=7.1,SNR=7.5						
	comp=Z,0.5nm,0.5s						
TORD	**Torodi Ar. Bea**	**65.99**	**269**	P	**P**	**03 30 04.3**	**+1.5**
	comp=Z,1.5nm,0.7s,baz=50,slow=6.1,SNR=31						
	comp=Z,1.5nm,0.7s						
YKA	**Yellowknife Ar**	**81.35**	**3**	P	**P**	**03 31 33.5**	**+1.7**
	comp=Z,0.2nm,0.5s,baz=348,slow=5.2,SNR=2.1						
	comp=Z,0.2nm,0.5s						

*IDC **01** 03:23:42.2±2.0, 4.°86N×125.°84E, h42km±17km, mb3.9/11, mbtmp4.2/13, ML4.5/2, MS3.2/8, Error ellipse: s-maj=45.2km s-min=10.1km az=75.0*
*MAN **01** 03:23:44.7, 5.°09N×126.°41E, h14km, mb5.1, ML4.1, MS4.2*
*DJA **01** 03:23:44.3±0.5, 5°N±4°×12°6E±°, h13km±3km, M4.4/13, mb4.6/12, mB4.9/8, MLv4.5/13, Mw(mB)4.2/8*
*NEIC **01** 03:23:57.3±1.4, 4.°80N±0.°07×125.°9E±0.°2, h190km±6km, mb4.0/9, Error ellipse: s-maj=26.9km s-min=9.2km az=82.0*
ISC 01 03:23:45.4±0.9**, 4.°97N**±0.°04×**126.°28E**±0.°08**, h72**km±9km**, n58,** σ**2.s52**/63**, mb4.1**/15**, 7D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.26**	**333**	⇓*e*P	**Pn**	**03 24 05.9**	**-1.5**
DDMP				*e*S	**Sn**	**03 24 17.0**	**-6.8**
GSPH	**General Santos**	**1.73**	**310**	⇓*i*P	**Pn**	**03 24 11.6**	**-2.0**
GSPH				*i* S	**Sn**	**03 24 33.5**	**-1.5**
MATI	**Mati**	**1.96**	**359**	⇓*i*P	**Pn**	**03 24 16.2**	**-0.4**
MATI				*e*S	**Sn**	**03 24 44.5**	**+4.0**
DAV	**Davao City (W)**	**2.20**	**342**	P	**Pn**	**03 24 17.1**	**-2.8**
	172nm,0.3s,baz=273,slow=12,SNR=2.9						
DAV				S	**Sn**	**03 24 42.5**	**-3.6**
	326nm,0.3s,baz=48,slow=20,SNR=4.3						
DAV				LR	LR	03 25 33.0	
	comp=Z,236nm,18.7s,baz=168,slow=50						
	471nm,0.4s						
DAV	**Davao City (W)**	**2.20**	**342**		**Sn**	**03 24 38.1**	**-8.0**
KCP	**Kidapawan**	**2.35**	**330**	⇓*e*P	**Pn**	**03 24 22.1**	**+0.3**
KCP				*i* S	**Sn**	**03 24 55.9**	**+6.2**
CTBH	**Cotabato--PC H**	**3.02**	**318**	*e*P	**Pn**	**03 24 30.3**	**-0.6**
CTBH				*i* S	**Sn**	**03 25 12.6**	**+6.7**
CGP	**Cagayan de Oro**	**3.80**	**336**	⇓*e*P	Pn	03 25 01.6	+20
CGP				*e*S	**Sn**	**03 25 28.1**	**+2.9**
PAGZ	**Pagadian**	**4.06**	**315**	⇓*e*P	**Pn**	**03 24 48.6**	**+3.6**
TNTI	**Ternate**	**4.31**	**165**	P	**Pn**	**03 24 48.3**	**-0.2**
TNTI				S	**Sn**	**03 25 36.9**	**-0.7**
GLSP	**General Luna,**	**4.79**	**358**	⇓*i*P	**Pn**	**03 24 56.8**	**+1.7**
GLSP				*e*S	**Sn**	**03 25 54.8**	**+5.6**
GTOI	**Gorontalo**	**5.40**	**217**	P	**Pn**	**03 25 01.8**	**-1.7**
	0.1nm362nm26nm,0.6s						
LBMI	**Labuha**	**5.70**	**168**	P	**Pn**	**03 25 06.8**	**-0.8**
	0.3nm61nm,0.7s						
MRSI	**Marisa**	**6.22**	**224**	P	**Pn**	**03 25 14.0**	**-0.7**
	0.4nm2μm96nm,0.5s						
LUWI	**Luwuk**	**6.92**	**210**	P	**Pn**	**03 25 25.0**	**+0.7**
	0.8nm6μm209nm,0.6s						
SANI	**Sanana**	**6.98**	**182**	P	**Pn**	**03 25 23.1**	**-1.9**
	0.2nm1μm23nm,0.7s						
APSI	**Ampana**	**7.45**	**218**	P	**Pn**	**03 25 32.1**	**+0.6**
	0.2nm612nm43nm,0.6s						
SWI	**Sorong**	**7.64**	**139**	P	**Pn**	**03 25 34.1**	**+0.1**
	0.1nm1μm14nm,0.6s						
SIJI	**Sorong**	**7.65**	**139**	P	**Pn**	**03 25 34.0**	**-0.2**
	5.1nm,0.3s,baz=3.1,slow=14,SNR=9.7						
	9.8nm,0.3s						
MYLDM	**Lahad Datu**	**7.75**	**272**		Pn	03 25 41.6	+6.0
MPSI	**Mapaga**	**7.86**	**234**	P	**Pn**	**03 25 36.3**	**-0.8**
FAKI	**Fak Fak**	**9.85**	**143**	P	**Pn**	**03 26 05.5**	**+1.2**
	1μm27nm,0.7s						
PLAI	**Plampang**	**16.11**	**212**	P	**Pn**	**03 27 28.3**	**+0.6**
PLAI				pP	**P**	**03 27 31.5**	**+1.8**
KNRA	**Kununurra**	**20.66**	**173**	P	**P**	**03 28 19.9**	**+0.5**
LEM	**Lembang**	**22.00**	**238**	LR	LR	03 37 26.6	
	comp=Z,133nm,20.2s,baz=332,slow=38						
WB0	**Warramunga Arr**	**25.84**	**162**	P	**P**	**03 29 09.7**	**-0.6**
WRA	**Warramunga Arr**	**25.99**	**162**	P	**P**	**03 29 10.5**	**-1.2**
	4.6nm,0.6s,baz=338,slow=10,SNR=46						
WRA				PcP	**PcP**	**03 32 38.1**	**-0.4**
	0.4nm,0.6s,baz=319,slow=2.4,SNR=2.7						
	4.6nm,0.6s						
WRA	**Warramunga Arr**	**25.99**	**162**	P	**P**	**03 29 11.4**	**-0.3**
WB2	**Warramunga Arr**	**26.00**	**162**	P	**P**	**03 29 10.9**	**-0.8**
WB2				IAmb	IAmb	03 29 29.8	
	comp=Z,10nm,0.8s						
WR0	**Warramunga Arr**	**26.07**	**162**	P	**P**	**03 29 13.0**	**+0.6**
WR0				IAmb	IAmb	03 29 14.8	
	comp=Z,5.3nm,0.8s						
PSA00	**Pilbara Seismi**	**27.12**	**193**	P	**P**	**03 29 20.3**	**-1.5**
PSA00				IAmb	IAmb	03 29 22.1	
	comp=Z,2.8nm,0.8s						
ASAR	**Alice Springs**	**29.42**	**166**	P	**P**	**03 29 42.2**	**-0.1**
	comp=Z,1.5nm,0.5s,baz=352,slow=7.6,SNR=35						
ASAR				PcP	**PcP**	**03 32 46.9**	**+0.1**
	comp=Z,1.0nm,0.7s,baz=350,slow=2.0,SNR=8.6						
	comp=Z,1.5nm,0.5s						
ASAR	**Alice Springs**	**29.42**	**166**	P	**P**	**03 29 41.9**	**-0.5**
ASAR					**PcP**	**03 32 44.2**	**-2.6**
KSRS	**Korea Array**	**32.37**	**2**	P	**P**	**03 30 10.0**	**+1.9**
	comp=Z,1.2nm,0.5s,baz=189,slow=9.4,SNR=5.9						
KSRS				LR	LR	03 41 50.6	
	comp=Z,29nm,22.0s,baz=270,slow=34						
	comp=Z,1.2nm,0.5s						
MJAR	**Matsushiro Arr**	**33.28**	**18**	LR	LR	03 42 13.4	
	comp=Z,26nm,21.5s,baz=182,slow=33						
USRK	**Ussuriysk Ar.**	**39.39**	**6**	P	**P**	**03 31 09.3**	**+1.2**
	comp=Z,2.7nm,0.7s,baz=215,slow=9.2,SNR=6.0						
	comp=Z,2.7nm,0.7s						
USRK	**Ussuriysk Ar.**	**39.39**	**6**	P	**P**	**03 31 08.6**	**+0.6**
STKA	**Stephens Creek**	**39.44**	**159**	P	**P**	**03 31 09.2**	**+0.6**
	comp=Z,7.7nm,0.6s,baz=333,slow=8.6,SNR=22						
	comp=Z,7.7nm,0.6s						
STKA	**Stephens Creek**	**39.44**	**159**	P	**P**	**03 31 08.8**	**+0.1**
STKA				IAmb	IAmb	03 31 09.9	
	comp=Z,1.4nm,0.7s						
ASAJ	**Asahikawa**	**41.55**	**18**	LR	LR	03 47 48.7	
	comp=Z,30nm,21.8s,baz=209,slow=35						
H11N1	**WAKE ISLAND Hy**	**42.15**	**66**	T	T	04 17 27.1	
	baz=255,slow=75,SNR=15						
H11N2	**WAKE ISLAND Hy**	**42.16**	**66**	T	T	04 17 27.9	
	baz=255,slow=75,SNR=16						
H11N3	**WAKE ISLAND Hy**	**42.17**	**66**	T	T	04 17 28.4	
	baz=255,slow=75,SNR=11						
KLR	**Kul'dur**	**44.35**	**5**	P	**P**	**03 31 49.6**	**+1.3**
	comp=Z,1.9nm,0.5s,baz=176,slow=5.0,SNR=8.7						
KLR				LR	LR	03 49 09.5	
	comp=Z,32nm,21.7s,baz=214,slow=34						
	comp=Z,1.9nm,0.5s						
MK31	**Makanchi Array**	**56.29**	**325**	P	**P**	**03 33 16.6**	**-2.0**
MK31				IAmb	IAmb	03 33 29.3	
	comp=Z,1.0nm,0.9s						
MKAR	**Makanchi Array**	**56.29**	**325**	P	**P**	**03 33 18.1**	**-0.6**
	comp=Z,1.1nm,0.5s,baz=121,slow=8.1,SNR=17						
MKAR				PcP	**PcP**	**03 34 15.0**	**-0.3**
	comp=Z,1.2nm,0.6s,baz=115,slow=3.2,SNR=5.7						
MKAR				ScP	**ScP**	**03 38 09.6**	**+1.2**
	comp=Z,0.2nm,0.6s,baz=145,slow=5.3,SNR=2.2						
	comp=Z,1.1nm,0.5s						
MKAR	**Makanchi Array**	**56.29**	**325**	P	**P**	**03 33 17.3**	**-1.4**
ZALV	**Zalesovo Beam**	**59.29**	**333**	P	**P**	**03 33 38.1**	**-1.4**
	comp=Z,0.5nm,0.4s,baz=128,slow=8.6,SNR=1.8						
	comp=Z,0.5nm,0.4s						
ZALV	**Zalesovo Beam**	**59.29**	**333**	P	**P**	**03 33 38.5**	**-1.0**
GNI	**Garni**	**80.35**	**310**	LR	LR	04 14 58.6	
	comp=Z,23nm,21.7s,baz=112,slow=38						
ILAR	**Eielson Array**	**84.19**	**25**	P	**P**	**03 36 09.8**	**+1.2**
	comp=Z,0.3nm,0.5s,baz=258,slow=4.9,SNR=7.8						
	comp=Z,0.3nm,0.5s						
ILAR	**Eielson Array**	**84.19**	**25**	P	**P**	**03 36 08.3**	**-0.3**
VNDA	**Vanda**	**84.70**	**173**	P	**P**	**03 36 10.9**	**0.0**
	comp=Z,0.4nm,0.6s,baz=300,slow=7.4,SNR=3.6						
	comp=Z,0.4nm,0.6s						
VNDA	**Vanda**	**84.70**	**173**	P	**P**	**03 36 07.7**	**-3.2**
KMBO	**Kilima Mbogo**	**89.13**	**269**	LR	LR	04 16 00.8	
	comp=Z,27nm,19.1s,baz=57,slow=35						
FINES	**FINESS Array B**	**90.53**	**332**	P	**P**	**03 36 38.1**	**-1.2**
	comp=Z,0.5nm,0.4s,baz=64,slow=6.6,SNR=8.3						
	comp=Z,0.5nm,0.4s						
TORD	**Torodi Ar. Bea**	**122.10**	**289**	PKP	**PKPdf**	**03 42 32.8**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=53,slow=2.0,SNR=12						
TORD	**Torodi Ar. Bea**	**122.10**	**289**		**PKPdf**	**03 42 28.3**	**-4.5**

WEL 01 03:57:42.0±1.0**, 32°S**±8°×**17°9E**±1°3**, h22**km±10km**, M4.4**/19**, mB5.0**/18**, ML5.0**/26**, MLv4.8**/19**, Mw(mB)4.3**/18**, Error ellipse: s-maj=0.0km s-min=0.0km az=117.8, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.74**	**39**	S	Sn	03 59 22.6	+0.8
MXZ	**Matakaoa Point**	**5.42**	**189**	P	Pn	03 59 04.0	+2.5
MXZ				S	Sn	04 00 04.3	+1.0
KUZ	**Kuaotunu**	**5.45**	**213**	S	Sn	04 00 12.0	+8.2
WMGZ	**Waiomatatini S**	**5.67**	**188**	P	Pn	03 59 06.6	+1.8
WMGZ				S	Sn	04 00 11.2	+1.9
HAZ	**Te Kaha**	**5.70**	**193**	P	Pn	03 59 09.2	+3.9
HAZ				S	Sn	04 00 11.2	+1.1
PKGZ	**Pakihiroa**	**5.78**	**190**	P	Pn	03 59 07.4	+1.0
PKGZ				S	Sn	04 00 14.6	+2.5
RUGZ	**Raukumara Rang**	**5.92**	**193**	P	Pn	03 59 12.6	+4.1
RUGZ				S	Sn	04 00 18.0	+2.3
PUZ	**Puketiti**	**5.93**	**189**	P	Pn	03 59 10.0	+1.5
PUZ				S	Sn	04 00 17.2	+1.3
TWGZ	**Tauwhareparae**	**6.08**	**190**	P	Pn	03 59 11.8	+1.2
TWGZ				S	Sn	04 00 22.3	+2.9
MTHZ	**Maungataniwha**	**6.96**	**197**	P	Pn	03 59 25.9	+3.3
MTHZ				S	Sn	04 00 42.2	+1.2
NMHZ	**Naumai**	**7.20**	**196**	P	Pn	03 59 28.7	+2.8
NMHZ				S	Sn	04 00 46.6	-0.4
HIZ	**Hauiti**	**7.30**	**209**	P	Pn	03 59 34.6	+7.3
ARHZ	**Aropaoanui**	**7.31**	**195**	P	Pn	03 59 29.3	+1.8
ARHZ				S	Sn	04 00 49.4	-0.3
BKZ	**Black Stump Fm**	**7.34**	**198**	P	Pn	03 59 26.4	-1.4
BKZ				S	Sn	04 00 50.2	-0.3
TMVZ	**Te Maari**	**7.52**	**202**	P	Pn	03 59 33.9	+3.4
ETVZ	**East Tongariro**	**7.54**	**202**	P	Pn	03 59 33.9	+3.3
MCHZ	**McNeill Hill**	**7.55**	**196**	P	Pn	03 59 32.8	+2.1
MCHZ				S	Sn	04 00 54.7	-1.0
WTVZ	**West Tongariro**	**7.56**	**203**	P	Pn	03 59 34.5	+3.6
TWVZ	**Taurewa**	**7.57**	**204**	P	Pn	03 59 34.7	+3.6
OTVZ	**Oturere**	**7.58**	**202**	P	Pn	03 59 33.9	+2.6
KWHZ	**Kaweka Forest**	**7.60**	**198**	P	Pn	03 59 33.0	+1.5
KWHZ				S	Sn	04 00 56.7	-0.2
SNVZ	**South Ngauruho**	**7.61**	**202**	P	Pn	03 59 34.3	+2.6
NGZ	**Ngauruhoe**	**7.61**	**203**	P	Pn	03 59 35.1	+3.4
TUVZ	**Tukino**	**7.68**	**202**	P	Pn	03 59 35.1	+2.5
FWVZ	**Far West T-bar**	**7.70**	**203**	P	Pn	03 59 35.7	+2.7
WNVZ	**Wahianoa**	**7.75**	**202**	P	Pn	03 59 35.8	+2.3
BHHZ	**Black Hill Sta**	**7.76**	**199**	P	Pn	03 59 34.8	+1.1
BHHZ				S	Sn	04 00 57.7	-3.1
MOVZ	**Moawhango**	**7.77**	**201**	P	Pn	03 59 35.0	+1.1
KRHZ	**Kereru**	**7.82**	**197**	P	Pn	03 59 32.8	-1.7
KRHZ				S	Sn	04 00 59.8	-2.5
KAHZ	**Kahuranaki**	**7.85**	**194**	P	Pn	03 59 35.5	+0.7
PNHZ	**Pukenui**	**8.12**	**198**	P	Pn	03 59 38.0	-0.5
TSZ	**Takapari Road**	**8.32**	**198**	P	Pn	03 59 40.6	-0.7
PRHZ	**Porangahau**	**8.35**	**195**	P	Pn	03 59 41.0	-0.7
DVHZ	**Dannevirke**	**8.49**	**197**	P	Pn	03 59 42.4	-1.2
POWZ	**Post Office Ro**	**8.68**	**199**	P	Pn	03 59 45.6	-0.7
PRWZ	**Pori Road**	**8.78**	**197**	P	Pn	03 59 47.0	-0.6
BFZ	**Birch Farm**	**8.84**	**196**	P	Pn	03 59 46.6	-1.7
MRZ	**Mangatainoka R**	**8.98**	**199**	P	Pn	03 59 47.5	-2.9
TIWZ	**Tintock**	**9.01**	**197**	P	Pn	03 59 49.2	-1.6
HOWZ	**Holdsworth Sta**	**9.22**	**199**	P	Pn	03 59 51.4	-2.3
OGWZ	**Otaki Gorge**	**9.24**	**200**	P	Pn	03 59 50.4	-3.5
TMWZ	**Te Maipa**	**9.32**	**196**	P	Pn	03 59 52.5	-2.5
KIW	**Kapiti Island**	**9.36**	**201**	P	Pn	03 59 53.6	-2.0
MTW	**Mount Morrison**	**9.47**	**198**	P	Pn	03 59 54.0	-3.0
CAW	**Cannon Point**	**9.54**	**200**	P	Pn	03 59 54.7	-3.3
TRWZ	**Traveller**	**9.65**	**197**	P	Pn	03 59 55.7	-3.7
MSWZ	**Moikau Station**	**9.78**	**199**	P	Pn	03 59 57.9	-3.4
PLWZ	**Palliser**	**9.92**	**198**	P	Pn	03 59 56.9	-6.4
TUWZ	**Tuamarina**	**10.19**	**204**	P	Pn	04 00 03.3	-3.6
NNZ	**Nelson**	**10.20**	**206**	P	Pn	04 00 04.5	-2.6
QRZ	**Quartz Range**	**10.22**	**211**	P	Pn	04 00 05.6	-1.6
MRNZ	**Matariki Terra**	**10.60**	**208**	P	Pn	04 00 10.0	-2.5
THZ	**Tophouse**	**10.85**	**207**	P	Pn	04 00 13.4	-2.6
KHZ	**Kahutara**	**11.21**	**203**	P	Pn	04 00 16.1	-4.6
DSZ	**Denniston Nort**	**11.28**	**210**	P	Pn	04 00 18.5	-3.5

*IDC **01** 04:00:09.8±1.1, 57.°69S×5.°88W, h0km, mb3.9/6, mbtmp3.9/6, MS3.5/2, Error ellipse: s-maj=45.3km s-min=22.0km az=63.0*
ISC 01 04:00:11.7±1.0**, 57.°8S**±0.°1×**6.°2W**±0.°2**, h10**km**, n14,** σ**1.s30**/12**, mb4.0**/6**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**12.96**	**183**	P	**Pn**	**04 03 15.4**	**-0.2**
VNA1				S	Sn	04 05 25.9	-14
VNA2	**Neumayer--Watz**	**13.21**	**182**	P	**Pn**	**04 03 18.2**	**-0.9**
	baz=350,slow=17						
VNA2				S	Sn	04 05 29.9	-16
VNA3	**Neumayer Olymp**	**13.60**	**185**	P	**Pn**	**04 03 22.7**	**-1.7**
VNA3				S	Sn	04 05 39.2	-16
SNAA	**Sanae**	**14.02**	**176**	P	**Pn**	**04 03 30.5**	**+0.4**
SNAA				S	Sn	04 05 49.4	-16
SNAA	**Sanae**	**14.02**	**176**	LR	LR	04 07 28.6	
	comp=Z,91nm,21.9s,baz=187,slow=31						
TROLL	**Troll, Antarti**	**14.73**	**169**	P	**Pn**	**04 03 41.2**	**+1.3**
TROLL				S	Sn	04 06 10.4	-13
MAW	**Mawson**	**31.42**	**137**	P	**P**	**04 06 32.4**	**0.0**
	3.0nm,0.9s,baz=12,slow=21,SNR=3.3						
	3.0nm,0.9s						
QSPA	**South Pole Qui**	**32.46**	**180**	P	**P**	**04 06 42.1**	**+0.2**
	6.2nm,0.8s,baz=205,slow=3.1,SNR=12						
	6.2nm,0.8s						
VNDA	**Vanda**	**44.75**	**176**	P	**P**	**04 08 24.9**	**+0.3**
	0.9nm,0.8s,baz=196,slow=7.3,SNR=6.0						
	0.9nm,0.8s						
BDFB	**Brasilia**	**52.35**	**306**	P	**P**	**04 09 25.3**	**+1.4**
	1.4nm,0.8s,baz=159,slow=6.4,SNR=3.2						
	1.4nm,0.8s						
LPAZ	**La Paz**	**61.50**	**285**	P	**P**	**04 10 30.0**	**+0.7**
	0.9nm,0.8s,baz=72,slow=4.8,SNR=5.5						
	0.9nm,0.8s						
TORD	**Torodi Ar. Bea**	**70.97**	**8**	P	**P**	**04 11 28.4**	**-0.8**
	0.3nm,0.7s,baz=194,slow=7.0,SNR=2.1						
	0.3nm,0.7s						
URZ	**Urewera**	**84.28**	**183**	LR	LR	04 45 46.8	
	comp=Z,56nm,20.4s,baz=211,slow=32						
YKA	**Yellowknife Ar**	**145.74**	**309**	PKPbc	**PKPdf**	**04 19 46.3**	**-2.5**
	0.4nm,0.7s,baz=114,slow=3.2,SNR=4.0						

*IDC **01** 04:12:44.9±2.6, 66.°87N×135.°41W, h0km, mb3.4/1, mbtmp2.9/3, ML2.6/2, MS3.3/2, Error ellipse: s-maj=57.6km s-min=15.5km az=177.0*
*PGC **01** 04:12:49.2±0.0, 66.°25N×135.°39W, h1km, ML2.8/6, 138km southwest of Fort McPherson, Nt Northern Yukon Territory, Canada*
ISC 01 04:12:49.9±0.9**, 66.°40N**±0.°04×**135.°25W**±0.°06**, h26**km**, n20,** σ**2.s08**/25**, Northern Yukon Territory**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I29M	**Ogilvie Camp,**	**1.63**	**232**	P	**Pn**	**04 13 15.6**	**-1.4**
I29M				S	**Sn**	**04 13 36.3**	**-0.8**
INK	**Inuvik**	**2.03**	**18**	Pn	**Pb**	**04 13 25.8**	**-0.2**
INK				Sn	**Sb**	**04 13 53.2**	**+2.5**
INK				Sg	Sn	04 13 57.9	+11
J29M	**Klondike Camp**	**2.31**	**214**	Sg	**Sn**	**04 13 55.2**	**+1.3**
DAWY	**Dawson**	**2.92**	**219**	Pn	**Pn**	**04 13 34.6**	**0.0**
DAWY				Sn	**Sn**	**04 14 08.0**	**-0.8**
M30M	**Minto, Yukon**	**3.90**	**191**	Pn	**Pn**	**04 13 46.8**	**-1.3**
M30M				Sg	**Sb**	**04 14 42.4**	**-2.0**
MMPY	**Sheldon Lake,**	**4.17**	**154**	Pn	**Pn**	**04 13 51.4**	**-0.4**
DOT	**Dot Lake**	**4.64**	**238**	Sg	**Sb**	**04 15 07.7**	**+1.8**
N31M	**Braeburn, Yuko**	**4.94**	**183**	Pn	**Pn**	**04 14 01.1**	**-1.3**
ILAR	**Eielson Array**	**5.09**	**257**	Pn	**Pn**	**04 14 02.8**	**-1.6**
	0.1nm,0.3s,baz=67,slow=8.9,SNR=2.1						
ILAR				Sn	**Sn**	**04 15 01.5**	**-0.9**
	0.1nm,0.3s,baz=64,slow=24,SNR=1.8						
ILAR				Lg	Lg	04 15 29.0	
	0.3nm,0.3s,baz=57,slow=27,SNR=6.1						
	0.3nm,0.8s						
C36M	**Paulatuk**	**5.16**	**50**	Sn	**Sn**	**04 15 04.2**	**+0.4**
YUK3	**Moose Creek**	**5.17**	**209**	Pn	**Pn**	**04 14 04.0**	**-1.7**
YUK3				Sn	**Sn**	**04 15 01.2**	**-3.4**
YUK2	**White River**	**5.24**	**210**	Sg	**Sb**	**04 15 25.3**	**+2.2**
YUK4	**Talbot Arm**	**5.29**	**198**	Pn	**Pn**	**04 14 05.7**	**-1.6**
YUK5	**Granite Creek**	**5.41**	**194**	Pn	**Pn**	**04 14 08.3**	**-0.6**
YUK5				Sg	**Sb**	**04 15 29.5**	**+1.3**
YUK6	**Outpost Mounta**	**5.65**	**196**	Sg	**Sb**	**04 15 40.2**	**+5.2**
HYT	**Haines Junctio**	**5.69**	**191**	Sg	**Sb**	**04 15 38.9**	**+2.9**
YKA	**Yellowknife Ar**	**9.72**	**104**	Pn	**Pn**	**04 15 05.6**	**-2.1**
	0.1nm,0.3s,baz=300,slow=12,SNR=9.1						
YKA				Sn	Sn	04 16 45.9	-10
	0.1nm,0.3s,baz=300,slow=21,SNR=2.4						
	0.3nm,0.6s						
PDAR	**Pinedale Array**	**27.57**	**136**	P	**P**	**04 18 37.0**	**+2.3**
	0.2nm,0.4s,baz=350,slow=10,SNR=2.4						
	0.2nm,0.4s						
TIXI	**Tiksi**	**31.22**	**323**	LR	LR	04 34 09.0	
	comp=Z,43nm,18.3s,baz=180,slow=42						
KIRV	**Kirov**	**55.28**	**357**	LR	LR	04 47 53.9	
	comp=Z,29nm,21.7s,baz=37,slow=38						

*IDC **01** 04:23:27.2±0.6, 0.°59N×25.°13W, h0km, mb4.0/18, mbtmp4.1/19, ML4.0/1, MS3.6/38, Error ellipse: s-maj=19.8km s-min=15.0km az=142.0*
*NEIC **01** 04:23:30.2±1.3, 0.°66N±0.°08×25.°2W±0.°1, h10km±1km, mb4.6/21, Error ellipse: s-maj=20.0km s-min=12.2km az=116.0*
ISC 01 04:23:29.0±0.5**, 0.°6N**±0.°1×**25.°16W**±0.°08**, h10**km**, n81,** σ**0.s65**/48**, mb4.3**/26**, MS3.6**/37**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**12.48**	**239**	Pn	**Pn**	**04 26 26.0**	**-0.8**
	0.8nm,0.3s,baz=203,slow=11,SNR=9.7						
RCBR				LR	LR	04 30 08.1	
	comp=Z,450nm,20.0s,baz=167,slow=32						
	14nm,0.8s						
RCBR	**Riachuelo**	**12.48**	**239**		**Pn**	**04 26 26.4**	**-0.4**
H10N3	**ASCENSION HYDR**	**13.54**	**128**	T	T	04 40 29.9	
	baz=307,slow=74,SNR=434						
H10N2	**ASCENSION HYDR**	**13.54**	**128**	T	T	04 40 31.2	
	baz=307,slow=74,SNR=446						
H10N1	**ASCENSION HYDR**	**13.56**	**128**	T	T	04 40 34.3	
	baz=307,slow=74,SNR=676						
H10S3	**ASCENSION HYDR**	**14.12**	**132**	T	T	04 41 16.3	
	baz=310,slow=74,SNR=190						
H10S2	**ASCENSION HYDR**	**14.14**	**132**	T	T	04 41 18.8	
	baz=270,slow=74,SNR=26						
DBIC	**Dimbokro**	**21.14**	**73**	P	**P**	**04 28 13.7**	**-0.7**
	2.5nm,0.6s,baz=223,slow=19,SNR=2.2						
DBIC				LR	LR	04 34 34.9	
	comp=Z,205nm,21.9s,baz=293,slow=32						
	2.5nm,0.6s						
DBIC	**Dimbokro**	**21.14**	**73**	P	**P**	**04 28 15.2**	**+0.8**
KOWA	**Kowa**	**25.06**	**56**	P	**P**	**04 28 54.2**	**+0.3**
KOWA				IAmb	IAmb	04 29 10.9	
	comp=Z,22nm,1.6s						
BDFB	**Brasilia**	**27.75**	**233**	LR	LR	04 39 07.6	
	comp=Z,295nm,21.4s,baz=121,slow=34						
TORD	**Torodi Ar. Bea**	**29.39**	**64**	P	**P**	**04 29 32.1**	**-0.6**
	comp=Z,1.1nm,0.7s,baz=245,slow=9.1,SNR=6.4						
TORD				LR	LR	04 39 58.8	
	comp=Z,268nm,19.8s,baz=214,slow=34						
	comp=Z,1.1nm,0.7s						
TORD	**Torodi Ar. Bea**	**29.39**	**64**	P	**P**	**04 29 33.1**	**+0.3**
TORD				IAmb	IAmb	04 29 34.7	
	comp=Z,9.6nm,1.9s						
MDT	**Midelt**	**37.44**	**29**	LR	LR	04 44 34.4	
	comp=Z,96nm,21.2s,baz=250,slow=34						
SAML	**Samuel**	**39.04**	**255**	P	**P**	**04 30 56.4**	**0.0**
SIV	**San Ignacio**	**39.09**	**243**	P	**P**	**04 30 58.1**	**+1.2**
	comp=Z,2.3nm,0.9s,baz=117,slow=5.2,SNR=5.0						
SIV				LR	LR	04 46 26.3	
	comp=Z,166nm,18.8s,baz=116,slow=35						
	comp=Z,2.3nm,0.9s						
CPUP	**Villa Florida**	**40.97**	**227**	LR	LR	04 46 56.0	
	comp=Z,64nm,21.4s,baz=54,slow=34						
ESDC	**Sonseca Array**	**43.44**	**24**	P	**P**	**04 31 32.2**	**-0.1**
	comp=Z,2.2nm,0.8s,baz=220,slow=8.5,SNR=16						
ESDC				LR	LR	04 49 10.3	
	comp=Z,22nm,18.2s,baz=232,slow=36						
	comp=Z,2.2nm,0.8s						
ESDC	**Sonseca Array**	**43.44**	**24**	P	**P**	**04 31 31.4**	**-0.9**
SJG	**San Juan**	**43.85**	**296**	LR	LR	04 46 00.1	
	comp=Z,36nm,21.9s,baz=99,slow=31						
LPAZ	**La Paz**	**45.59**	**246**	P	**P**	**04 31 51.0**	**+0.5**
	comp=Z,4.1nm,1.0s,baz=82,slow=8.5,SNR=10						
LPAZ				LR	LR	04 50 35.6	
	comp=Z,233nm,18.9s,baz=61,slow=36						
	comp=Z,4.1nm,1.0s						
LPAZ	**La Paz**	**45.59**	**246**	P	**P**	**04 31 50.9**	**+0.4**
LPAZ				IAmb	IAmb	04 31 54.1	
	comp=Z,3.8nm,0.9s						
TSUM	**Tsumeb**	**46.33**	**118**	P	**P**	**04 31 55.5**	**-0.1**
	comp=Z,1.1nm,0.4s,baz=293,slow=5.0,SNR=4.1						
TSUM				LR	LR	04 47 12.1	
	comp=Z,118nm,19.8s,baz=326,slow=31						
	comp=Z,1.1nm,0.4s						
TSUM	**Tsumeb**	**46.33**	**118**	P	**P**	**04 31 55.6**	**-0.1**
TSUM				IAmb	IAmb	04 32 06.4	
	comp=Z,20nm,2.0s						
LVC	**Limon Verde**	**48.43**	**239**	LR	LR	04 53 05.4	
	comp=Z,36nm,19.5s,baz=39,slow=37						
ROSC	**El Rosal**	**49.27**	**276**	LR	LR	04 51 17.8	
	comp=Z,129nm,19.7s,baz=132,slow=34						
VAE	**Valguarnera**	**51.73**	**40**	LR	LR	04 53 40.1	
	comp=Z,150nm,20.2s,baz=168,slow=35						
NNA	**Nana**	**52.80**	**255**	LR	LR	04 54 16.9	
	comp=Z,52nm,19.0s,baz=74,slow=35						
LSZ	**Lusaka**	**55.02**	**109**	LR	LR	04 54 21.9	
	comp=Z,49nm,19.2s,baz=111,slow=34						
DAVOX	**Davos/Dischmat**	**55.24**	**29**	LR	LR	04 57 09.5	
	comp=Z,27nm,18.6s,baz=260,slow=37						
MBAR	**Mbarara**	**55.91**	**91**	LR	LR	04 55 05.0	
	comp=Z,40nm,19.1s,baz=316,slow=34						
BOSA	**Boshof**	**56.27**	**125**	P	**P**	**04 33 09.7**	**-0.5**
	comp=Z,2.1nm,0.8s,baz=249,slow=6.9,SNR=3.1						
	comp=Z,2.1nm,0.8s						
BOSA	**Boshof**	**56.27**	**125**	P	**P**	**04 33 10.7**	**+0.4**
IDI	**Anoyia**	**57.91**	**48**	LR	LR	05 00 04.4	
	comp=Z,28nm,18.5s,baz=286,slow=38						
GERES	**GERESS Array B**	**58.53**	**29**	P	**P**	**04 33 25.7**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=212,slow=7.4,SNR=7.3						
	comp=Z,0.8nm,0.6s						
GERES	**GERESS Array B**	**58.53**	**29**	P	**P**	**04 33 26.0**	**+0.2**
JTS	**Las Juntas de**	**60.20**	**281**	LR	LR	04 59 41.3	
	comp=Z,24nm,18.4s,baz=174,slow=36						
VRAC	**Vranov**	**60.26**	**30**	LR	LR	05 00 23.8	
	comp=Z,18nm,19.2s,baz=236,slow=37						
J59A	**Piesco**	**61.22**	**321**	P	**P**	**04 33 44.9**	**+0.6**
KMBO	**Kilima Mbogo**	**62.44**	**92**	LR	LR	04 57 10.8	
	comp=Z,50nm,20.6s,baz=27,slow=32						
MLR	**Muntele Rosu**	**63.32**	**38**	LR	LR	05 04 14.4	
	comp=Z,75nm,18.4s,baz=124,slow=39						
SCHQ	**Schefferville**	**63.86**	**335**	P	**P**	**04 34 00.9**	**-0.8**
	comp=Z,4.0nm,0.7s,baz=151,slow=5.7,SNR=6.1						
	comp=Z,4.0nm,0.7s						
SCHQ	**Schefferville**	**63.86**	**335**	P	**P**	**04 34 02.6**	**+0.9**
EIL	**Elat**	**63.98**	**57**	LR	LR	05 02 03.9	
	comp=Z,65nm,19.1s,baz=254,slow=36						
TKL	**Tuckaleechee C**	**64.52**	**310**	LR	LR	04 59 59.6	
	comp=Z,22nm,19.4s,baz=76,slow=34						
BRTR	**Keskin Array B**	**66.04**	**46**	P	**P**	**04 34 15.8**	**-0.6**
	comp=Z,2.1nm,0.7s,baz=241,slow=5.1,SNR=6.1						
BRTR				LR	LR	05 04 12.4	
	comp=Z,42nm,20.5s,baz=162,slow=37						
	comp=Z,2.1nm,0.7s						
NB2	**NORSAR Subarra**	**66.37**	**18**	P	**P**	**04 34 18.8**	**+0.9**
	comp=Z,3.2nm,1.1s,baz=221,slow=6.5						
NOA	**NORSAR Array B**	**66.37**	**18**	P	**P**	**04 34 18.5**	**+0.6**
	comp=Z,0.9nm,0.7s,baz=221,slow=6.1,SNR=4.5						
	comp=Z,0.9nm,0.7s						
HFS	**Hagfors**	**66.50**	**20**	LR	LR	04 59 44.3	
	comp=Z,20nm,21.1s,baz=126,slow=33						
AKASG	**Malin Array Be**	**67.77**	**34**	P	**P**	**04 34 27.1**	**+0.1**
	comp=Z,3.9nm,0.8s,baz=238,slow=6.1,SNR=8.6						
	comp=Z,3.9nm,0.8s						
AKBB	**Malin Array Si**	**67.77**	**34**	P	**P**	**04 34 27.9**	**+0.9**
AKBB				IAmb	IAmb	04 34 28.1	
	comp=Z,5.2nm,0.8s						
ATD	**Arta Tunnel**	**68.35**	**78**	LR	LR	05 04 08.7	
	comp=Z,34nm,18.3s,baz=50,slow=36						
JMIC	**Jan Mayen**	**71.11**	**6**	LR	LR	05 01 19.3	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,9.8nm,20.0s,baz=121,slow=32						
MGMO	Mountain Grove	71.52	309	P	P	04 34 50.9	+0.4
MGMO				IAmb	IAmb	04 34 51.0	
	comp=Z,8.7nm,1.3s						
FINES	FINESS Array B	71.95	23	P	P	04 34 52.5	0.0
	comp=Z,2.0nm,0.7s,baz=191,slow=2.9,SNR=8.6						
	comp=Z,2.0nm,0.7s						
VNA2	Neumayer--Watz	72.34	174	P	P	04 34 56.2	+1.5
	baz=323,slow=7.8						
N38A	Joes South For	73.13	313	P	P	04 34 59.8	-0.1
SNAA	Sanae	73.57	173	P	P	04 35 01.9	-0.1
	comp=Z,1.8nm,1.1s,baz=339,slow=8.9,SNR=2.9						
SNAA				LR	LR	05 00 03.2	
	comp=Z,44nm,20.3s,baz=324,slow=30						
	comp=Z,1.8nm,1.1s						
KBZ	Khabaz	73.86	44	P	P	04 35 04.2	0.0
	comp=Z,1.2nm,0.7s,baz=295,slow=9.3,SNR=2.8						
	comp=Z,1.2nm,0.7s						
GNI	Garni	74.34	48	LR	LR	05 09 51.4	
	comp=Z,11nm,19.8s,baz=210,slow=38						
N35A	Tabor	74.92	312	P	P	04 35 10.6	+0.2
N35A				IAmb	IAmb	04 35 11.9	
	comp=Z,11nm,0.9s						
TXAR	Lajitas Array	79.68	300	P	P	04 35 36.7	-0.9
	comp=Z,0.6nm,0.9s,baz=101,slow=5.7,SNR=5.5						
TXAR				LR	LR	05 09 30.4	
	comp=Z,24nm,21.1s,baz=63,slow=35						
	comp=Z,0.6nm,0.9s						
TXAR	Lajitas Array	79.68	300	P	P	04 35 36.8	-0.7
SDCO	Great Sand Dun	81.99	308	P	P	04 35 49.8	-0.1
LAO	LASA Array	83.42	317	P	P	04 35 57.6	+0.6
RPN	Rapa Nui	85.08	243	LR	LR	05 09 31.3	
	comp=Z,44nm,21.4s,baz=134,slow=32						
AKTO	Aktyubinsk	85.19	40	LR	LR	05 16 25.3	
	comp=Z,31nm,20.6s,baz=182,slow=37						
RLMT	Red Lodge	85.41	315	P	P	04 36 07.2	0.0
RLMT				IAmb	IAmb	04 36 08.8	
	comp=Z,3.1nm,0.8s						
PDAR	Pinedale Array	85.47	313	P	P	04 36 07.2	-0.4
	comp=Z,0.6nm,0.8s,baz=75,slow=6.4,SNR=4.4						
	comp=Z,0.6nm,0.8s						
ARU	Arti	86.03	34	LR	LR	05 15 46.5	
	comp=Z,36nm,19.6s,baz=157,slow=36						
REDW	Red Top Meadow	86.45	313	P	P	04 36 11.7	-0.8
REDW				IAmb	IAmb	04 36 14.3	
	comp=Z,3.0nm,0.9s						
TPAW	Teton Pass	86.53	313	P	P	04 36 12.6	-0.3
TPAW				IAmb	IAmb	04 36 15.3	
	comp=Z,3.0nm,0.9s						
MTPU	Mount Pierson	87.28	308	P	P	04 36 16.4	-0.4
MTPU				IAmb	IAmb	04 36 19.8	
	comp=Z,8.3nm,1.5s						
YKA	Yellowknife Ar	89.22	332	P	P	04 36 24.8	-0.1
	comp=Z,0.5nm,0.8s,baz=91,slow=5.4,SNR=3.9						
	comp=Z,0.5nm,0.8s						
ELK	Elko	89.67	311	LR	LR	05 15 31.8	
	comp=Z,36nm,20.0s,baz=207,slow=35						
NEW	Newport	90.87	318	LR	LR	05 14 54.5	
	comp=Z,30nm,21.3s,baz=250,slow=34						
AAK	Ala-Archa	96.71	47	LR	LR	05 24 11.8	
	comp=Z,70nm,19.0s,baz=171,slow=38						
STKA	Stephens Creek	146.47	159	PKPbc	PKPdf	04 43 09.9	+0.1
	comp=Z,0.8nm,0.3s,baz=98,slow=2.7,SNR=3.6						
ASAR	Alice Springs	149.37	140	PKPbc	PKPbc	04 43 18.2	-1.0
	comp=Z,2.3nm,0.9s,baz=204,slow=2.7,SNR=14						
ASAR	Alice Springs	149.37	140	PKPdf	PKPdf	04 43 15.9	+1.0
WRA	Warramunga Arr	152.21	135	PKPbc	PKPbc	04 43 24.6	-1.4
	comp=Z,2.4nm,1.1s,baz=239,slow=1.9,SNR=7.2						

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*NAO **01** 05:40:26.7±16.0, 74°.56N×9°.00E, ML3.1*
*BER **01** 05:40:29.4±3.0, 74°.57N×8°.45E, h30^{km}±36^{km}, ML2.0, ML3.1(NAO), Confirmed Earthquake*
*IEPN **01** 05:40:33.0, 74°.48N×9°.79E, h10^{km}*
*KOLA **01** 05:40:36.2, 74°.88N×11°.46E, h0^{km}, ML2.2*
ISC 01 05:40:28.6±2.6**, 74°.73N**±0°.09×**9°.5E**±0°.1**, h10**^{km}**, n24, σ2^s.11**/41**, 1D, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BJO1	Bjornoya	2.56	90	Pn	Pn	05 41 11.2	+1.2
BJO1				Sn	Sn	05 41 40.4	-0.6
BJO1	Bjornoya	2.56	90	*e*P	Pn	05 41 10.8	+0.9
BJO1				*e*S	Sn	05 41 40.0	-1.0
HSPB	Hornsund (broa	2.73	30	Pn	Pn	05 41 13.2	+0.9
HSPB				Sn	Sn	05 41 43.7	-1.5
HSPB	Hornsund (broa	2.73	30	*e*P	Pn	05 41 13.2	+0.9
HSPB				*e*		05 41 43.0	
HSPB				*e*S	Sn	05 41 44.7	-0.6
BRBA	Barentsburg A	3.53	16	Pn	Pn	05 41 24.3	+0.9
BRBA				Sn	Sn	05 42 04.9	-0.1
BRBA	Barentsburg A	3.53	16	*e*P	Pn	05 41 23.9	+0.6
BRBA				*e*S	Sn	05 42 04.8	-0.3
BRBA				IAML		05 42 11.2	
	comp=Z,7.2nm,0.4s						
BRBB	Barentsburg B	3.56	16	Pn	Pn	05 41 24.7	+0.9
BRBB				Sn	Sn	05 42 05.8	0.0
BRBB	Barentsburg B	3.56	16	*e*P	Pn	05 41 24.4	+0.6
BRBB				*e*S	Sn	05 42 05.5	-0.3
SPA0	Spitsbergen Ar	3.83	22	Pn	Pn	05 41 29.1	+1.7
	baz=198,slow=18						
SPA0				Sn	Sn	05 42 13.4	+1.0
	baz=225,slow=18						
SPA0	Spitsbergen Ar	3.83	22	Pn	Pn	05 41 29.1	+1.7
	baz=198,slow=18						
SPA0				Sn	Sn	05 42 13.4	+1.0
	baz=225,slow=18						
SPA0				IAML		05 42 19.6	
	comp=Z,7.5nm,0.3s						
SPA0	Spitsbergen Ar	3.83	22	⇓*i*P	Pn	05 41 29.1	+1.7
SPA0				*e*S	Sn	05 42 11.1	-1.3
KBS	Kingsbay	4.26	6	Pn	Pn	05 41 33.5	+0.2
KBS				Sn	Sn	05 42 19.3	-3.7
KBS	Kingsbay	4.26	6	*e*P	Pn	05 41 33.3	-0.1
KBS				*e*S	Sn	05 42 20.4	-2.6
KBS				IAML		05 42 26.3	
	comp=Z,4.1nm,0.3s						
KBS	Kingsbay	4.26	6	*e*P	Pn	05 41 33.0	-0.3
KBS				*e*S	Sn	05 42 21.0	-2.0
HOPEN	Hopen	4.26	58	Pn	Pn	05 41 35.3	+1.9
HOPEN				Sn	Sn	05 42 22.1	-0.9
HOPEN	Hopen	4.26	58	*e*P	Pn	05 41 35.4	+2.0
HOPEN				*e*S	Sn	05 42 23.2	+0.2
HOPEN				IAML		05 42 25.9	
	comp=Z,10.0nm,0.2s						
HOPEN	Hopen	4.26	58	*e*P	Pn	05 41 35.3	+1.9
HOPEN				*e*S	Sn	05 42 21.8	-1.2
JMIC	Jan Mayen	6.48	244	*e*P	Pn	05 41 58.2	-5.6
ARCES	ARCESS Array B	7.15	129	P	Pn	05 42 16.5	+3.4
ARCES				S	Sn	05 43 30.7	-3.5
DAG	Danmarks Havn	7.18	300	*e*S	Sn	05 43 19.2	-16
DBG	Daneborg	7.90	281	*e*P	Pn	05 42 15.3	-8.0
DBG				*e*S	Sn	05 43 35.6	-17
PRVG	Vayda Guba	8.50	114	P	Pn	05 42 31.8	+0.4
PRVG				S	Sn	05 44 00.3	-7.0
ZFI	Zemlya Franca-	9.88	35	P	Pn	05 42 53.7	+3.5
ZFI2	Zemlya Franca-	9.88	35	*e*P	Pn	05 42 53.6	+3.4
ZFI2				S	Sn	05 44 37.7	-3.3

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*NEIC **01** 05:55:58.4±1.3, 18°.0S±0°.1×177°.8W±0°.1, h594^{km}±8^{km}, mb4.4/25, Error ellipse: s-maj=23.8km s-min=16.4km az=142.0*
*IDC **01** 05:56:00.0±1.0, 18°.00S×177°.91W, h619^{km}±10^{km}, mb3.3/9, mbtmp4.3/13, Error ellipse: s-maj=29.2km s-min=13.0km az=155.0*
ISC 01 05:55:58.0±0.5**, 18°.1S**±0°.1×**177°.87W**±0°.09**, h590**^{km}**, n47, σ1^s.80**/50**, mb4.3**/20**, 1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.89	274	P	P	05 57 25.7	+3.7
	368nm,0.7s,baz=132,slow=4.4,SNR=253						
MSVF				S	S	05 58 37.7	+7.1
	35nm,1.1s,baz=129,slow=24,SNR=6.4						
MSVF	Nonsavu	3.89	274	P	P	05 57 26.3	+4.2
AFI	Afiamalu	7.16	56	P	P	05 57 51.1	+1.9
	31nm,0.5s,baz=273,slow=18,SNR=6.1						
AFI	Afiamalu	7.16	56	P	P	05 57 49.1	-0.1
MARNC	Mare, Loyalty	13.70	253	P	P	05 58 53.5	-0.5
OUENC	Ouen Island, N	14.99	251	P	P	05 59 06.9	+0.5
OUENC				IAmb	IAmb	05 59 14.5	
	comp=Z,30nm,1.3s						
DZM	Mont Dzumac	15.27	252	P	P	05 59 09.4	+0.3
	comp=Z,7.0nm,1.0s,baz=221,slow=7.1,SNR=5.6						
DZM	Mont Dzumac	15.27	252	IAmb	IAmb	05 59 36.1	
	comp=Z,22nm,1.4s						
RAR	Rarotonga	17.34	103	P	P	05 59 29.8	+1.8
	comp=Z,10nm,0.8s,baz=225,slow=2.0,SNR=3.5						
URZ	Urewera	20.61	191	P	P	05 59 56.6	-0.9
LTZ	Lake Taylor	26.04	197	P	P	06 00 44.8	-0.9
EIDS	Eidsvold	29.70	250	P	P	06 01 17.8	0.0
EIDS				IAmb	IAmb	06 01 18.7	
	comp=Z,8.2nm,0.8s						
ARMA	Armidale	30.31	240	P	P	06 01 23.6	+0.5
ARMA				IAmb	IAmb	06 01 47.0	
	comp=Z,11nm,1.2s						
CTAO	Charters Tower	33.93	261	P	P	06 01 53.5	-0.1
CTAO				IAmb	IAmb	06 01 54.6	
	comp=Z,8.4nm,0.7s						
CAN	Canberra	34.03	233	P	P	06 01 54.9	+0.5
TOO	Toolangi	37.48	231	P	P	06 02 24.2	+1.5
TOO				IAmb	IAmb	06 02 24.8	
	comp=Z,11nm,1.1s						
COEN	Coen	37.62	270	P	P	06 02 25.1	+0.9
STKA	Stephens Creek	39.01	241	P	P	06 02 34.8	-0.4
	comp=Z,7.1nm,0.5s,baz=88,slow=9.7,SNR=26						
	comp=Z,7.1nm,0.5s						
STKA	Stephens Creek	39.01	241	P	P	06 02 35.0	-0.2
BBOO	Buckleboo	43.78	241	P	P	06 03 12.8	0.0
BBOO				IAmb	IAmb	06 03 13.6	
	comp=Z,14nm,0.9s						
WR0	Warramunga Arr	44.92	260	P	P	06 03 21.5	-0.2
WR0				IAmb	IAmb	06 03 22.5	
	comp=Z,7.6nm,1.2s						
WB0	Warramunga Arr	45.08	260	P	P	06 03 22.6	-0.3
WB0				IAmb	IAmb	06 03 23.0	
	comp=Z,9.9nm,0.8s						
WB2	Warramunga Arr	45.10	260	P	P	06 03 22.4	-0.6
WB2				IAmb	IAmb	06 03 23.1	
	comp=Z,11nm,1.0s						
WRAB	Tennant Creek	45.10	260	P	P	06 03 22.3	-0.8
WRAB				IAmb	IAmb	06 03 23.0	
	comp=Z,10nm,0.9s						
WRA	Warramunga Arr	45.11	260	P	P	06 03 22.6	-0.5
	comp=Z,6.9nm,0.6s,baz=96,slow=6.9,SNR=111						
WRA				PcP	PcP	06 04 50.5	-0.5
	comp=Z,0.6nm,0.5s,baz=100,slow=3.6,SNR=3.1						
	comp=Z,6.9nm,0.6s						
WRA	Warramunga Arr	45.11	260	P	P	06 03 22.3	-0.8
AS31	Alice Springs	45.24	254	P	P	06 03 24.0	-0.2
ASAR	Alice Springs	45.24	254	P	P	06 03 24.0	-0.1
	comp=Z,19nm,0.8s,baz=85,slow=8.6,SNR=140						
ASAR				PcP	PcP	06 04 50.3	-1.1
	comp=Z,1.6nm,0.6s,baz=105,slow=3.9,SNR=5.6						
ASAR				S	S	06 09 15.8	-6.6
	comp=Z,1.1nm,0.9s,baz=90,slow=15,SNR=8.0						
	comp=Z,19nm,0.8s						
ASAR	Alice Springs	45.24	254	P	P	06 03 24.2	+0.1
MTN	Manton Dam	49.30	268	P	P	06 03 53.9	-0.6
FORT	Forrest	50.41	245	P	P	06 04 01.7	-0.7
FORT				IAmb	IAmb	06 04 02.3	
	comp=Z,14nm,0.7s						
KNRA	Kununurra	50.98	264	P	P	06 04 06.0	-0.8
KNRA				IAmb	IAmb	06 04 06.7	
	comp=Z,10nm,0.8s						
PSA00	Pilbara Seismi	58.37	255	P	P	06 04 57.4	-0.8
MBWA	Marble Bar	58.53	256	P	P	06 04 58.6	-0.7
VNDA	Vanda	60.35	185	P	P	06 05 11.9	+1.5
KSM	Kuching	73.21	277	P	P	06 06 30.7	+0.2
PETK	Petropavlovsk-	73.94	345	P	P	06 06 32.2	-1.6
	comp=Z,4.6nm,0.9s,baz=162,slow=10,SNR=6.4						
	comp=Z,4.6nm,0.9s						
NVAR	Mina Array Bea	79.17	44	P	P	06 07 01.9	-1.1
	comp=Z,0.1nm,0.3s,baz=234,slow=6.1,SNR=2.0						
	comp=Z,0.1nm,0.3s						
TXAR	Lajitas Array	85.64	57	P	P	06 07 35.5	0.0
	comp=Z,0.6nm,0.7s,baz=210,slow=6.0,SNR=12						
	comp=Z,0.6nm,0.7s						
ILAR	Eielson Array	85.91	13	P	P	06 07 34.9	-1.0
	comp=Z,1.4nm,1.0s,baz=218,slow=5.3,SNR=5.6						
	comp=Z,1.4nm,1.0s						
CMAR	Chiang Mai Arr	89.41	290	P	P	06 07 52.9	-0.4
	comp=Z,0.6nm,0.3s,baz=116,slow=2.9,SNR=8.2						
	comp=Z,0.6nm,0.3s						
SONM	Songino Array	93.99	319	P	P	06 08 13.5	-0.4
	comp=Z,0.3nm,0.5s,baz=129,slow=3.9,SNR=2.2						
	comp=Z,0.3nm,0.5s						
ARCES	ARCESS Array B	126.54	350	PKP	PKPdf	06 13 53.3	-0.9
	comp=Z,1.4nm,0.8s,baz=29,slow=2.1,SNR=1.6						
BRTR	Keskin Array B	145.24	315	PKPbc	PKPdf	06 14 29.3	-0.4
	comp=Z,1.7nm,0.6s,baz=101,slow=3.9,SNR=6.0						
BRTR	Keskin Array B	145.24	315		PKPbc	06 14 29.9	-0.9
CLL	Collm	145.71	348	⇓*i*PKPbc	PKPbc	06 14 31.7	+0.1
	comp=Z,7.0nm,0.8s						
GERES	GERESS Array B	147.87	346	PKPbc	PKPbc	06 14 37.2	-0.4
	comp=Z,1.3nm,0.6s,baz=61,slow=3.3,SNR=12						

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*CRAAG **01** 06:02:10.6, 36°.32N×3°.45E, Ml3.3, Hypocentre not reviewed by the ISC*
MDD 01 06:02:10.1±0.9**, 36°.26N**×**3°.65E, h0**^{km}**, Mb4.0**/9**, M_mb3.3**/9**, 7C, Error ellipse: s-maj=7.4km s-min=4.5km az=136.0, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADJB	Djebel Djouab	0.20	240	P		06 02 15.4	
AKET	Djebel Ketaf	0.28	138	P		06 02 20.5	
ABA	Alger-Bouzarea	0.74	318	P		06 02 22.4	
EIBI	Ibiza	3.32	327	P	Pn	06 03 00.0	-3.2
EIBI				⇑*i*Vmb_V		06 03 06.0	
	180nm,SNR=2.5						
EIBI				S	Sn	06 03 39.4	-4.0
ETOS	Mallorca	3.57	350	P	Pn	06 03 04.5	-2.3
ETOS				⇑*i*Vmb_V		06 03 13.3	
	232nm,SNR=2.1						
ETOS				S	Sn	06 03 43.7	-5.9
EMUR	La Murta	4.22	293	P	Pn	06 03 14.0	-1.7
ECOL	Islas Columbre	4.32	328	P	Pn	06 03 15.5	-1.6
EZAR	Zarzadilla de	4.57	292	P	Pn	06 03 19.7	-0.9
ENIJ	Nijar	4.77	280	P	Pn	06 03 22.3	-0.9
ENIJ				⇑*i*Vmb_V		06 03 31.4	
	104nm,SNR=1.5						
ENIJ				S	Sn	06 04 14.8	-4.3
ETOB	Tobarra	4.77	302	P	Pn	06 03 22.0	-1.3
ETOB				⇑*i*Vmb_V		06 03 29.8	
	99nm,SNR=1.8						
ETOB				S	Sn	06 04 14.7	-4.7
ECHE	Chera	4.94	314	P	Pn	06 03 24.8	-0.8
ECHE				⇑*i*Vmb_V		06 03 27.3	
	159nm,SNR=1.7						
EMOS	Mosqueruela	5.23	323	P	Pn	06 03 28.5	-1.2
EMOS				⇑*i*Vmb_V		06 03 37.2	
	156nm,SNR=1.5						
EMOS				S	Sn	06 04 25.7	-5.0
EBER	Berja	5.30	279	P	Pn	06 03 28.5	-2.2
EBER				⇑*i*Vmb_V		06 03 30.8	
	58nm,SNR=1.3						
ELGU	Los Guajares,	5.89	278	S	Sn	06 04 44.3	-2.7
ETOR	Torete	6.38	317	S	Sn	06 04 53.9	-5.2
ECHI	Chisagues Biel	6.94	338	P	Pn	06 03 50.1	-3.0
PAB	San Pablo	7.13	300	S	Sn	06 05 12.6	-4.8

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*MDD **01** 06:17:46.3±0.4, 35°.46N×3°.62W, h9^{km}, mb_Lg2.5/9, Error ellipse: s-maj=4.1km s-min=3.2km az=179.0*
*SFS **01** 06:17:46.0, 35°.45N×3°.62W, h9^{km}, ML2.5, ALBORAN SUR*
*CNRM **01** 06:17:48.2, 35°.24N×3°.56W, h6^{km}, ml1.3*
ISC 01 06:17:46.0±1.0**, 35°.39N**±0°.04×**3°.61W**±0°.04**, h28**^{km}±11^{km}**, n19, σ0^s.82**/27**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALE	Palemas	0.32	237	P	Pn	06 17 54.1	-0.7
PALE				S	Sb	06 17 58.9	0.0
GOG	Mont Gurugu	0.53	108	P	Pb	06 17 57.0	+0.1
GOG				S	Sb	06 18 03.6	-0.6
EMEL	Melilla	0.54	99	Pg	Pn	06 17 57.9	+0.1
EMEL				Sg	Sb	06 18 05.1	+0.6
EMEL				*i* Vmb_Lg		06 18 07.1	
PVLZ	Peæn de	0.61	249	P	Pn	06 17 58.4	-0.3
PVLZ				S	Sn	06 18 07.6	+0.1
EALB	Alboran	0.72	40	Pg	Pn	06 17 60.0	-0.3
EALB				Sg	Sb	06 18 09.4	-0.1
CHAS	Isla Isabel II	0.98	102	P	Pb	06 18 04.0	-0.5
CHAS				S	Sb	06 18 16.5	-0.6
JBK	JBK	1.36	141	P	Pb	06 18 11.5	+0.6
JBK				S	Sb	06 18 27.8	-0.2
ELGU	Los Guajares,	1.47	359	Pg	Pn	06 18 10.7	0.0
ELGU				Sn	Sn	06 18 27.5	-1.6
ELGU				*i* Vmb_Lg		06 18 29.4	
EMIJ	Mijas	1.50	321	Sn	Sn	06 18 28.4	-1.4
EMIJ				*i* Vmb_Lg		06 18 32.7	
ECEU	Ceuta	1.53	290	Pn	Pn	06 18 11.8	+0.4
EBER	Berja	1.61	21	Pn	Pn	06 18 12.4	-0.3
EBER				*i* Vmb_Lg		06 18 35.4	
TLOR	Lorca, Murcia	2.74	34	Sn	Sn	06 19 01.9	+1.7
EADA	Adamuz	2.88	345	*i* Vmb_Lg		06 18 50.5	
EADA				Sn	Sn	06 19 04.2	+0.4
EZAR	Zarzadilla de	2.92	31	Sn	Sn	06 19 04.8	0.0
EGRO	El Granado	3.79	306	Pn	Pn	06 18 43.5	+1.1
EGRO				*i* Vmb_Lg		06 18 56.3	
AFON	Font Roja	4.09	36	Pn	Pn	06 18 46.8	+0.2
AFON				*i* Vmb_Lg		06 21 25.6	
ESAC	San Caprasio	6.78	20	Pn	Pn	06 19 22.3	-1.4
ECAL	Calabor	6.98	340	Pn	Pn	06 19 27.3	+0.8
ECAL				*i* Vmb_Lg		06 20 49.5	
EPOB	Poblet	7.00	30	Pn	Pn	06 19 27.8	+1.2
EPOB				*i* Vmb_Lg		06 20 51.5	

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*NEIC **01** 06:20:56.6±0.3, 36°.869N±0°.010×97°.39W±0°.01, h6^{km}±4^{km}, Error ellipse: s-maj=1.9km s-min=0.9km az=50.0*
*TUL **01** 06:20:56.5±0.7, 36°.89N±0°.01×97°.39W±0°.02, h8^{km}±3^{km}, ML3.2, mb_Lg2.9/78(NEIC), Error ellipse: s-maj=2.1km s-min=1.2km az=49.0*
*ANF **01** 06:20:56.5±0.2, 36°.87N×97°.41W, h4^{km}, ML3.6/14, Error ellipse: s-maj=2.1km s-min=1.9km az=156.0*
ISC 01 06:20:56.4±1.6**, 36°.87N**±0°.03×**97°.42W**±0°.04**, h2**^{km}±14^{km}**, n68, σ0^s.62**/45**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T35A	Sooner Cattle	0.73	86	Pg	Pg	06 21 10.2	-0.1
T35B	Sooner Cattle	0.73	86	P	Pg	06 21 10.2	-0.1
	baz=265,SNR=67						
T35B				S	Sg	06 21 19.7	-0.1
	baz=265						
U32A	Winter Ranch,	1.36	250	P	Pn	06 21 22.3	-0.1
	baz=69,SNR=11						
U32A				S	Sn	06 21 41.1	+0.1
	baz=69						
OKCFA	Oklahoma City	1.45	181	P	Pn	06 21 23.6	+0.1
	baz=1.4,SNR=19						
OKCFA				S	Sg	06 21 43.6	+0.7
	baz=1.4						
TUL1	Leonard	1.62	126		Pn	06 21 25.8	-0.1
TUL1	Leonard	1.62	126	P	Pn	06 21 25.8	-0.1
	baz=306,SNR=75						
TUL1				S	Sb	06 21 47.5	-0.3
	baz=306						
R32A	Long Quarter,	1.86	327		Pn	06 21 30.0	+0.7
R32A	Long Quarter,	1.86	327	P	Pn	06 21 30.0	+0.7
	baz=146						
R32A				S	Sb	06 21 54.7	-0.2
	baz=146						
X34A	Smith Ranch, M	2.28	189		Pn	06 21 36.2	+1.2
KSU1	Kansas State U	2.32	16		Pn	06 21 36.0	+0.4
KSU1	Kansas State U	2.32	16	P	Pn	06 21 36.0	+0.4
	baz=196,SNR=25						
KSU1				S	Sn	06 22 05.6	+1.0
	baz=196						
WMOK	Wichita Mounta	2.40	208		Pn	06 21 36.9	+0.3
WMOK				IAmb_Lg		06 22 12.1	
	comp=Z,44nm,0.7s						
WMOK	Wichita Mounta	2.40	208	P	Pn	06 21 37.2	+0.6
	baz=27,SNR=44						
WMOK				S	Sb	06 22 08.6	-1.5
	baz=27						
CBKS	Cedar Bluff	2.68	317		Pn	06 21 40.5	+0.1
CBKS	Cedar Bluff	2.68	317	P	Pn	06 21 40.5	+0.1
	baz=136,SNR=10						
X37A	Clayton	2.81	143		Pn	06 21 42.9	+0.6
X37A	Clayton	2.81	143	P	Pn	06 21 42.9	+0.6
	baz=324,SNR=15						
HHAR	Hobbs	2.86	101		Pn	06 21 43.7	+0.8
HHAR				IAmb_Lg		06 22 33.8	
	comp=Z,37nm,0.8s						
HHAR	Hobbs	2.86	101	P	Pn	06 21 43.7	+0.8
	baz=283						
S39A	Bolivar	3.37	75		Pn	06 21 50.0	+0.1
S39A	Bolivar	3.37	75	P	Pn	06 21 50.0	+0.1
	baz=257,SNR=10.0						
W39A	Magazine	3.38	118	IAmb_Lg		06 22 49.6	
	comp=Z,31nm,0.9s						
U40A	Yellville	3.71	97		Pn	06 21 54.9	+0.4
U40A	Yellville	3.71	97	P	Pn	06 21 55.0	+0.4
	baz=279,SNR=12						
U40A				P	Pn	06 21 55.0	+0.4
	baz=279,SNR=12						
N33B	J Bar K, Exete	3.87	360	P	Pn	06 21 56.5	-0.3
	baz=180,SNR=7.1						
N33A	J Bar K, Exete	3.87	360	Pn	Pn	06 21 56.4	-0.4
MIAR	Mount Ida	3.89	125	Pn	Pn	06 21 57.5	+0.4
MIAR				IAmb_Lg		06 23 02.0	
	comp=Z,44nm,0.9s						
AMTX	Amarillo	3.99	242	Pn	Pn	06 21 59.5	+1.0
AMTX				IAmb_Lg		06 23 12.5	
	comp=Z,27nm,0.8s						
AMTX	Amarillo	3.99	242	P	Pn	06 21 58.4	-0.1
	baz=59,SNR=9.8						
P38A	Dawn	4.12	47		Pn	06 21 59.6	-0.6
P38A				IAmb_Lg		06 23 11.6	
	comp=Z,34nm,0.7s						
P38A	Dawn	4.12	47	P	Pn	06 22 00.2	0.0
	baz=229,SNR=7.1						
MGMO	Mountain Grove	4.13	84	Pn	Pn	06 22 00.9	+0.5
MGMO				IAmb_Lg		06 23 18.1	
	comp=Z,23nm,1.0s						
R40A	Maddies Statio	4.33	69	IAmb_Lg		06 23 12.1	
	comp=Z,22nm,0.8s						
R40A	Maddies Statio	4.33	69	P	Pn	06 22 03.1	0.0
	baz=252,SNR=12						
WHAR	Wooly Hollow	4.44	109	IAmb_Lg		06 23 15.1	
	comp=Z,23nm,0.9s						
W41B	Gary Mavity, V	4.52	110	IAmb_Lg		06 23 18.5	
	comp=Z,20nm,0.7s						
ABTX	Abilene, Hawle	4.61	204	IAmb_Lg		06 23 22.3	
	comp=Z,17nm,0.8s						
UALR	University of	4.62	115	IAmb_Lg		06 23 30.7	
	comp=Z,20nm,1.0s						
WHTX	Lake Whitney,	4.86	180	P	Pn	06 22 10.5	+0.1
	baz=0.5,SNR=9.9						
P40A	Paris	5.00	56	IAmb_Lg		06 23 39.5	
	comp=Z,17nm,0.8s						
CCM	Cathedral Cave	5.05	75	IAmb_Lg		06 23 42.5	
	comp=Z,27nm,0.9s						
N38A	Joes South For	5.10	38		Pn	06 22 12.9	-0.9
N38A				IAmb_Lg		06 23 48.6	
	comp=Z,35nm,0.8s						
LCAR	Lake Charles	5.11	97	IAmb_Lg		06 23 42.8	
	comp=Z,18nm,1.1s						
Z41A	Richland Creek	5.22	132	IAmb_Lg		06 23 47.6	
	comp=Z,16nm,0.8s						
OGNE	Ogallala	5.44	320	IAmb_Lg		06 23 50.3	
	comp=Z,30nm,0.8s						
CCAR	Cane Creek	5.47	121	IAmb_Lg		06 24 04.4	
	comp=Z,14nm,0.9s						
T25A	Trinidad	5.61	275	IAmb_Lg		06 24 00.8	
	comp=Z,13nm,0.9s						
PBMO	Poplar Bluff	5.61	89	IAmb_Lg		06 23 56.4	
	comp=Z,21nm,0.8s						
FVM	French Village	5.67	77	IAmb_Lg		06 23 56.1	
	comp=Z,23nm,0.8s						
SLM	Saint Louis	5.96	71	IAmb_Lg		06 24 05.7	
	comp=Z,23nm,0.7s						
435B	Jarrell	6.07	181	IAmb_Lg		06 24 11.9	
	comp=Z,27nm,1.0s						
PEBM	Pemiscott Bayo	6.13	95	IAmb_Lg		06 24 19.8	
	comp=Z,28nm,0.8s						
PARMO	Parma	6.16	90	IAmb_Lg		06 24 15.3	
	comp=Z,27nm,0.7s						
Q24A	Divide	6.46	291	IAmb_Lg		06 24 27.3	
	comp=Z,16nm,0.7s						
S44A	Carbondale	6.56	80	IAmb_Lg		06 24 21.6	
	comp=Z,24nm,0.8s						
JCT	Junction City	6.67	198	IAmb_Lg		06 24 42.4	
	comp=Z,13nm,0.7s						
W45A	Hickory Valley	6.88	102	Pn	Pn	06 22 37.7	-0.6
ECSD	EROS Data Cent	6.89	5		Pn	06 22 37.1	-1.2
ECSD				IAmb_Lg		06 24 35.7	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,18nm,1.2s						
ECSD	EROS Data Cent	6.89	5	P	Pn	06 22 37.1	-1.2
	baz=185,SNR=9.9						
L40A	Anamosa	7.06	41	IAmb_Lg		06 24 35.8	
	comp=Z,22nm,0.9s						
Y45A	Yeager Farm, C	7.09	113	IAmb_Lg		06 24 50.0	
	comp=Z,13nm,0.9s						
O44A	Mansfield	7.75	62	IAmb_Lg		06 25 07.6	
	comp=Z,18nm,0.8s						
N23A	Red Feather La	7.77	304	IAmb_Lg		06 25 16.7	
	comp=Z,13nm,0.8s						
JFWS	Jewell Farm	8.18	40	IAmb_Lg		06 25 20.4	
	comp=Z,14nm,0.8s						
I40A	Norwalk	8.72	34	IAmb_Lg		06 25 36.3	
	comp=Z,9.4nm,0.9s						
SPMN	Marine on St.	9.05	21	IAmb_Lg		06 25 44.2	
	comp=Z,9.7nm,0.9s						
K22A	Casper	9.08	312	IAmb_Lg		06 25 58.3	
	comp=Z,13nm,1.1s						
I42A	Draeger Farm,	9.55	40	IAmb_Lg		06 26 03.2	
	comp=Z,11nm,1.0s						

*IDC **01** 06:30:14.1±1.2, 1°.33N×128°.42E, h0km, mb3.7/4, mbtmp3.8/5, ML4.1/1, MS2.8/2, Error ellipse: s-maj=56.6km s-min=18.5km az=61.0*
*DJA **01** 06:30:16.2±0.5, 1°N±5°×12°8E±°, h10km, M3.9/6, mb4.3/1, MLv3.7/6*
ISC 01 06:30:15.3±1.0, **1°.2N**±0°.1×**128°.26E**±0°.07, **h10km**, **n17**, σ**1s.17**/10, **mb3.7**/4, **Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TNTI	Ternate	0.99	244	P	Pg	06 30 33.3	-1.0
LBMI	Labuha	1.98	202	P	Pn	06 30 49.0	+0.2
SWI	Sorong	3.64	124	P	Pn	06 31 12.0	+0.3
SIJI	Sorong	3.64	124	Pn	Pn	06 31 10.5	-1.3
	15nm,0.3s,baz=310,slow=16,SNR=9.4						
SIJI				Sn	Sn	06 31 53.9	-1.0
	baz=25,slow=20						
	36nm,0.4s						
FAKI	Fak Fak	5.72	136	P	Pn	06 31 41.0	+0.7
DAV	Davao City (W)	6.41	335	LR	LR	06 34 13.9	
	comp=Z,24nm,18.7s,baz=174,slow=38						
WRA	Warramunga Arr	21.84	164	P	P	06 35 08.3	+0.2
	2.4nm,0.7s,baz=344,slow=11,SNR=15						
	2.4nm,0.7s						
ASAR	Alice Springs	25.32	168	P	P	06 35 44.7	+2.3
	1.2nm,0.7s,baz=345,slow=9.4,SNR=13						
	1.2nm,0.7s						
H11S3	WAKE ISLAND Hy	41.43	63	T	T	07 21 57.5	
	baz=249						
H11S2	WAKE ISLAND Hy	41.44	63	T	T	07 22 01.2	
	baz=249						
H11S1	WAKE ISLAND Hy	41.44	63	T	T	07 22 05.6	
	baz=249						
H11N1	WAKE ISLAND Hy	42.04	61	T	T	07 22 38.6	
	baz=248						
H11N2	WAKE ISLAND Hy	42.05	61	T	T	07 22 47.4	
	baz=248						
H11N3	WAKE ISLAND Hy	42.05	61	T	T	07 22 45.1	
	baz=248						
SONM	Songino Array	50.17	341	P	P	06 39 11.2	0.0
	0.7nm,0.8s,baz=156,slow=7.4,SNR=3.7						
	0.7nm,0.8s						
MKAR	Makanchi Array	60.49	325	P	P	06 40 25.7	+0.2
	1.0nm,0.6s,baz=121,slow=8.3,SNR=12						
	1.0nm,0.6s						
NRIK	Noril'sk	73.23	346	LR	LR	07 18 01.2	
	comp=Z,20nm,19.2s,baz=216,slow=39						

*IDC **01** 06:32:06.0±1.4, 55°.38N×158°.98W, h0km, mb3.5/7, mbtmp3.6/10, ML3.9/3, MS2.9/2, Error ellipse: s-maj=25.6km s-min=21.7km az=60.0*
*AEIC **01** 06:32:12±1.9, 55°.37N±0°.06×158°.44W±0°.07, h32km±2km, ML3.5/28, ML3.6/20(NEIC), Error ellipse: s-maj=8.9km s-min=4.6km az=152.0*
*NEIC **01** 06:32:13.5±1.9, 55°.39N±0°.06×158°.47W±0°.08, h53km±25km, Error ellipse: s-maj=9.8km s-min=6.3km az=156.0*
ISC 01 06:32:12.1±0.6, **55°.43N**±0°.07×**158°.47W**±0°.04, **h33km**, **n94**, σ**1s.65**/87, **mb3.5**/8, **Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CNBA	Chernabura Isl	0.89	227		Pn	06 32 28.1	-0.1
CNBA					Sb	06 32 41.2	+0.7
CNBA	Chernabura Isl	0.89	227	IAML		06 32 44.8	
	comp=E,1μm,0.5s						
SDPT	Sand Point	1.15	267		Pn	06 32 32.5	+0.6
SDPT					Sb	06 32 47.0	-1.0
SDPT	Sand Point	1.15	267	IAML		06 32 49.8	
	comp=E,2μm,0.6s						
SDPT				IAML		06 32 51.9	
	comp=N,2μm,0.6s						
ANPB	Aniakchak Plen	1.38	4		Pn	06 32 36.9	+1.8
AZAC	Aniakchak	1.48	5		Pn	06 32 38.7	+2.2
ANNE	Aniakchak Nort	1.51	9		Pn	06 32 39.0	+2.1
CHIR	Chirikof Islan	1.66	75		Pn	06 32 40.5	+1.6
CHIR					Sn	06 32 59.8	+0.8
PS4A	Pavlof South-4	1.94	269		Pn	06 32 44.2	+1.5
HAG	Hague Volcano	1.96	268		Pb	06 32 45.2	-2.0
DT1	Dutton Round H	2.21	263		Pn	06 32 48.2	+1.8
PLK1	Peulik 1	2.59	23		Pn	06 32 54.1	+2.4
SII	Sitkinak Islan	2.66	63	Pn	Pn	06 32 54.0	+1.3
SII				IAML		06 33 46.6	
	comp=N,470nm,0.7s						
FALS	False Pass	2.90	261		Pn	06 32 58.2	+2.3
FALS					Sn	06 33 32.0	+2.5
KJL	Kejulik	3.08	30		Pn	06 33 00.6	+2.1
ISLZ	Isanotski Laza	3.10	259		Pn	06 33 00.4	+1.8
CAHL	Cahill	3.16	32		Pn	06 33 01.6	+2.1
ANCK	Angle Creek	3.23	29		Pn	06 33 02.7	+2.3
SSLN	Shishaldin Nor	3.23	261		Pn	06 33 03.0	+2.4
KELA	Mount Kelaz	3.37	25		Pn	06 33 04.6	+2.2
OHAK	Old Harbor	3.40	56		Pn	06 33 03.7	+0.9
OHAK	Old Harbor	3.40	56	IAML		06 34 03.7	
	comp=N,124nm,0.7s						
OHAK				IAML		06 34 10.6	
	comp=E,77nm,3.8s						
WESE	West Dahl East	3.66	257		Pn	06 33 08.7	+2.3
KDAK	Kodiak Island	4.02	52	Pn	Pn	06 33 11.9	+0.6
	comp=E,3.5nm,0.3s,baz=237,slow=5.5,SNR=65						
KDAK				Sn	Sn	06 33 55.8	-1.3
	comp=E,3.9nm,0.3s,baz=48,slow=20,SNR=6.3						
KDAK				LR	LR	06 34 19.2	
	comp=E,57nm,21.1s,baz=223,slow=31						
	comp=E,8.9nm,0.3s						
KDAK	Kodiak Island	4.02	52	IAML		06 34 23.4	
	comp=E,63nm,2.2s						
KDAK				IAML		06 34 25.3	
	comp=E,78nm,2.8s						
P18K	Big Mountain,	4.34	22	Pn	Pn	06 33 16.9	+1.1
AKSA	Akutan Strait	4.38	256		Pn	06 33 19.1	+2.8
Q19K	Cape Douglas,	4.38	35		Pn	06 33 18.1	+1.7
O18K	Koktuh Hills	4.77	20		Pn	06 33 23.9	+2.2
UNV	Unalaska Valle	4.93	255	Pn	Pn	06 33 24.9	+1.1
O19K	Port Alsworth	5.27	23		Pn	06 33 30.6	+2.2
O19K				IAML		06 34 34.3	
	comp=E,57nm,0.5s						
O19K				IAML		06 35 18.8	
	comp=N,42nm,0.4s						
N18K	Kilae Creek	5.44	13	Pn	Pn	06 33 32.7	+1.8
CNPM	China Poot	5.67	41	Pn	Pn	06 33 35.9	+2.0
N19K	Bonanza Creek	5.80	20	Pn	Pn	06 33 38.3	+2.5
SVW2	Sparrevohn	5.89	14		Pn	06 33 39.0	+2.1
RSO	Redoubt South	5.89	29		Pn	06 33 39.7	+2.5
BRLK	Bradley Lake	5.96	40	Pn	Pn	06 33 37.7	-0.3
NIKH	Nikolski High	6.57	252	Pn	Pn	06 33 45.8	-0.5
SPU	Mount Spurr	6.69	28	Pn	Pn	06 33 50.6	+2.7
SEW	Seward	6.72	42	Pn	Pn	06 33 49.9	+1.5
SPIA	Saint Paul Isl	6.79	290	Pn	Pn	06 33 49.8	+0.6
M19K	Big River Lodg	6.83	16		Pn	06 33 52.6	+2.7
M20K	Styx River	7.05	21		Pn	06 33 55.5	+2.6
SUA	Susitna One	7.28	31	Pn	Pn	06 33 57.1	+1.0
RC01	Rabbit Creek A	7.31	35	Pn	Pn	06 33 57.1	+0.7
TTA	Tatalina	7.63	8		Pn	06 34 02.4	+1.5
GHO	Glory Hole Cre	8.08	34	Pn	Pn	06 34 08.2	+1.3
PPLA	Purkeypile	8.15	21		Pn	06 34 11.6	+3.5
K20K	Telida	8.26	14	Pn	Pn	06 34 11.4	+1.9
FID	Port Fidalgo	8.29	45	Pn	Pn	06 34 10.2	+0.3
SML	Sawmill	8.29	35	Pn	Pn	06 34 11.7	+1.7
EYAK	Cordova Ski Ar	8.48	48	Pn	Pn	06 34 12.6	+0.2
CAST	Castle Rocks	8.65	19	Pn	Pn	06 34 17.8	+3.1
SCM	Sheep Creek Mo	8.65	38		Pn	06 34 15.5	+0.6
HMT	Hamilton	9.02	51	Pn	Pn	06 34 21.0	+1.1
J20K	Nowinta River	9.04	12	Pn	Pn	06 34 21.9	+1.8
TRF	Thorofare Moun	9.05	24	Pn	Pn	06 34 22.0	+1.5
M24K	Tolsona, Glenn	9.24	39	Pn	Pn	06 34 23.8	+0.9
BPAW	Bear Paw Mtn.	9.47	20	Pn	Pn	06 34 26.7	+0.6
WAX	Waxell Ridge	9.70	52	Pn	Pn	06 34 29.6	+0.3
GLB	Gilahina Butte	9.75	46	Pn	Pn	06 34 29.9	-0.1
YAH	Yahtse	10.17	54	Pn	Pn	06 34 36.9	+1.1
I21K	Tanana	10.29	15	Pn	Pn	06 34 39.0	+1.8
GRNC	Granite Creek	10.31	52	Pn	Pn	06 34 38.7	+1.0
MLY	Manley	10.36	19	Pn	Pn	06 34 39.0	+0.8
WRH	Wood River Hil	10.44	26	Pn	Pn	06 34 38.0	-1.3
H21K	Melozitna Rive	10.63	13	Pn	Pn	06 34 43.8	+2.0
CCB	Clear Creek Bu	10.66	26	Pn	Pn	06 34 41.5	-0.7
I23K	Minto, Yukon-K	10.73	21	Pn	Pn	06 34 43.7	+0.4
MDM	Murphy Dome	10.82	24	Pn	Pn	06 34 43.3	-1.1
IMAR	Indian Mountai	10.84	10	Pn	Pn	06 34 46.4	+1.7
IL31		10.99	27	Pn	Pn	06 34 45.5	-1.2
ILAR	Eielson Array	10.99	27	Pn	Pn	06 34 41.8	-4.9
	comp=N,0.2nm,0.3s,baz=223,slow=13,SNR=11						
ILAR				Sn	Sn	06 36 39.3	-9.0
	comp=N,0.1nm,0.3s,baz=216,slow=22,SNR=1.3						
	comp=N,1.0nm,0.6s						
M27K	Edge Creek, AK	11.02	44	Pn	Pn	06 34 48.7	+1.4
SCRK	Sand Creek	11.24	34	Pn	Pn	06 34 50.4	+0.1
J25K	Salcha River,	11.28	30	Pn	Pn	06 34 50.2	-0.6
BCAR	Beaver Creek A	11.44	41	Pn	Pn	06 34 53.4	+0.4
DAWY	Dawson	12.89	40	Pn	Pn	06 35 13.1	+0.3
INK	Inuvik	17.28	32	P	Pn	06 36 10.8	+0.4
	comp=N,1.0nm,0.3s,baz=224,slow=15,SNR=19						
	comp=N,3.5nm,0.5s						
YKA	Yellowknife Ar	23.29	54	P	P	06 37 16.3	-0.3
	comp=N,0.3nm,0.5s,baz=273,slow=9.5,SNR=8.2						
	comp=N,0.3nm,0.5s						
NEW	Newport	26.20	88	P	P	06 37 44.2	+0.7
	comp=N,0.5nm,0.3s,baz=356,slow=9.1,SNR=3.1						
	comp=N,0.5nm,0.3s						
NVAR	Mina Array Bea	31.71	105	P	P	06 38 34.0	+1.2
	comp=N,0.1nm,0.3s,baz=299,slow=8.1,SNR=2.5						
	comp=N,0.1nm,0.3s						
ELK	Elko	31.81	99	LR	LR	06 49 00.1	
	comp=N,50nm,19.3s,baz=244,slow=32						
PDAR	Pinedale Array	33.72	91	P	P	06 38 52.0	+1.6
	comp=N,0.5nm,0.6s,baz=343,slow=1.5,SNR=4.4						
	comp=N,0.5nm,0.6s						
H11N2	WAKE ISLAND Hy	44.15	230	T	T	07 26 38.6	
	baz=28,slow=74						
H11N3	WAKE ISLAND Hy	44.15	230	T	T	07 26 46.8	
	baz=28,slow=74						
H11N1	WAKE ISLAND Hy	44.16	230	T	T	07 26 53.3	
	baz=28						
H11S1	WAKE ISLAND Hy	45.31	230	T	T	07 28 54.7	
	baz=29						
H11S2	WAKE ISLAND Hy	45.33	230	T	T	07 28 56.0	
	baz=29						
H11S3	WAKE ISLAND Hy	45.33	230	T	T	07 28 52.7	
	baz=29						
TXAR	Lajitas Array	46.58	101	P	P	06 40 37.6	+0.9
	comp=N,0.3nm,0.6s,baz=315,slow=5.3,SNR=5.3						
	comp=N,0.3nm,0.6s						
ARCES	ARCESS Array B	55.31	358	P	P	06 41 40.8	-0.9
	comp=N,2.5nm,1.0s,baz=354,slow=6.6,SNR=1.6						
MKAR	Makanchi Array	66.07	319	P	P	06 42 53.3	-2.0
	comp=N,0.2nm,0.5s,baz=22,slow=5.8,SNR=2.6						
	comp=N,0.2nm,0.5s						
AKASG	Malin Array Be	74.05	355	P	P	06 43 43.0	-1.1
	comp=N,0.7nm,0.4s,baz=9.1,slow=5.8,SNR=5.2						
	comp=N,0.7nm,0.4s						

*IDC **01** 06:53:13.5±1.2, 24°.69S×179°.95E, h499km±13km, mb3.6/14, mbtmp4.5/17, Error ellipse: s-maj=14.4km s-min=13.0km az=113.0*
*NEIC **01** 06:53:14.7±1.2, 24°.8S±0°.1×180°.0E±0°.1, h509km±8km, mb4.4/34, Error ellipse: s-maj=18.5km s-min=16.1km az=128.0*
ISC 01 06:53:13.5±0.4, **24°.78S**±0°.07×**179°.89E**±0°.07, **h501km**, **n72**, σ**1s.70**/72, **mb4.3**/30, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	4.87	157	P	P	06 54 40.1	+0.9
	177nm,0.2s,baz=70,slow=24,SNR=5.6						
RAO				S	S	06 55 45.9	-3.4
	169nm,0.3s,baz=88,slow=19,SNR=1.8						
MSVF	Nonsavu	7.21	346	P	P	06 55 01.4	-0.7
	28nm,0.3s,baz=255,slow=23,SNR=64						
MSVF	Nonsavu	7.21	346	P	P	06 55 02.0	-0.2
NIUE	Niue	11.02	61	P	P	06 55 42.4	+0.6
MARNC	Mare, Loyalty	11.39	284	P	P	06 55 47.6	+1.9
PINNC	Pines Island,	11.60	278	P	P	06 55 50.7	+2.8
OUZ	Omahuta	11.75	206	P	P	06 55 51.8	+2.6
OUENC	Ouen Island, N	12.19	278	P	P	06 55 57.4	+3.2
DZM	Mont Dzumac	12.63	280	P	P	06 56 00.8	+1.8
	22nm,0.9s,baz=84,slow=14,SNR=12						
URZ	Urewera	13.65	189	P	P	06 56 06.1	-3.2
	7.6nm,0.3s,baz=120,slow=23,SNR=16						
BKZ	Black Stump Fm	14.63	191	P	P	06 56 19.8	+0.1
THZ	Tophouse	17.91	197	P	P	06 56 52.1	-0.7
RPZ	Rata Peaks	20.23	199	P	P	06 57 13.4	-0.6
	4.3nm,0.4s,baz=61,slow=22,SNR=1.9						
	4.3nm,0.4s						
EIDS	Eidsvold	26.08	263	P	P	06 58 07.5	+1.0
EIDS				IAmb	IAmb	06 58 09.4	
	comp=Z,12nm,1.0s						
CAN	Canberra	28.62	241	P	P	06 58 30.5	+1.7
CAN				IAmb	IAmb	06 58 30.9	
	comp=Z,24nm,1.3s						
CTA	Charters Tower	31.39	272	P	P	06 58 54.2	+1.3
	comp=Z,20nm,0.3s,baz=95,slow=10,SNR=99						
	comp=Z,20nm,0.3s						
CTAO	Charters Tower	31.39	272	P	P	06 58 54.4	+1.5
STKA	Stephens Creek	34.31	249	P	P	06 59 18.4	+0.8
	comp=Z,3.4nm,0.3s,baz=90,slow=9.5,SNR=7.6						
	comp=Z,3.4nm,0.3s						
STKA	Stephens Creek	34.31	249	P	P	06 59 18.5	+0.9
BBOO	Buckleboo	39.01	248	P	P	06 59 56.5	+0.1
BBOO				IAmb	IAmb	06 59 57.1	
	comp=Z,10.0nm,0.9s						
AS31	Alice Springs	41.80	262	P	P	07 00 19.2	+0.4
ASAR	Alice Springs	41.80	262	P	P	07 00 19.2	+0.3
	comp=Z,4.2nm,0.3s,baz=93,slow=7.4,SNR=121						
ASAR				ScP	ScP	07 05 06.8	+0.9
	comp=Z,0.3nm,0.6s,baz=116,slow=4.5,SNR=2.3						
ASAR				S	S	07 05 52.9	-7.0
	comp=Z,0.3nm,0.8s,baz=95,slow=16,SNR=2.0						
	comp=Z,4.2nm,0.3s						
ASAR	Alice Springs	41.80	262	P	P	07 00 18.8	-0.1
WR0	Warramunga Arr	42.06	267	P	P	07 00 21.1	+0.1
WR0				IAmb	IAmb	07 00 21.3	
	comp=Z,8.1nm,0.6s						
WB2	Warramunga Arr	42.24	267	P	P	07 00 22.6	+0.2
WB2				IAmb	IAmb	07 00 23.2	
	comp=Z,27nm,1.1s						
WRAB	Tennant Creek	42.24	267	P	P	07 00 22.4	0.0
WRAB				IAmb	IAmb	07 00 23.2	
	comp=Z,29nm,1.2s						
WB0	Warramunga Arr	42.25	267	P	P	07 00 22.5	0.0
WB0				IAmb	IAmb	07 00 23.1	
	comp=Z,20nm,0.9s						
WRA	Warramunga Arr	42.25	267	P	P	07 00 22.3	-0.2
	comp=Z,9.0nm,0.4s,baz=99,slow=7.6,SNR=204						
WRA				ScP	ScP	07 05 09.2	+1.4
	comp=Z,1.8nm,0.8s,baz=99,slow=3.9,SNR=10						
WRA				S	S	07 05 59.3	-7.2
	comp=Z,0.6nm,1.0s,baz=104,slow=14,SNR=1.8						
	comp=Z,9.0nm,0.4s						
WRA	Warramunga Arr	42.25	267	P	P	07 00 21.3	-1.2
FORT	Forrest	45.92	250	P	P	07 00 50.3	-0.4
KNRA	Kununurra	48.59	271	P	P	07 01 11.7	+0.6
VNDA	Vanda	53.50	185	P	P	07 01 47.7	+1.8
	comp=Z,0.2nm,0.4s,baz=344,slow=16,SNR=1.4						
PSA00	Pilbara Seismi	54.91	260	P	P	07 01 56.7	-0.1
MBWA	Marble Bar	55.13	261	P	P	07 01 58.2	0.0
MORW	Morawa	56.48	250	P	P	07 02 07.5	-0.1
QSPA	South Pole Qui	65.31	180	P	P	07 03 06.2	+0.9
	comp=Z,2.1nm,0.7s,baz=358,slow=0.9,SNR=14						
	comp=Z,2.1nm,0.7s						
QSPA	South Pole Qui	65.31	180	IAmb	IAmb	07 05 27.0	
	comp=Z,27nm,1.9s						
MAW	Mawson	76.90	201	P	P	07 04 13.6	+0.4
	comp=Z,2.4nm,0.8s,baz=331,slow=22,SNR=3.5						
	comp=Z,2.4nm,0.8s						
MAW	Mawson	76.90	201	IAmb	IAmb	07 04 14.7	
	comp=Z,1.1nm,1.0s						
KSRS	Korea Array	78.85	320	P	P	07 04 24.8	+0.6
	comp=Z,0.6nm,0.3s,baz=138,slow=5.8,SNR=5.3						
	comp=Z,0.6nm,0.3s						
PETK	Petropavlovsk-	79.92	347	P	P	07 04 29.1	-0.4
	comp=Z,2.4nm,0.6s,baz=149,slow=6.6,SNR=9.2						
	comp=Z,2.4nm,0.6s						
TROLL	Troll, Antarti	83.46	181	P	P	07 04 48.0	+0.3
SNAA	Sanae	83.80	179	P	P	07 04 49.3	0.0
VNA3	Neumayer Olymp	84.01	177	P	P	07 04 50.0	-0.3
VNA2	Neumayer--Watz	84.43	178	P	P	07 04 52.6	+0.3
	baz=186,slow=3.8						
PNTR	Pine Nut	85.04	43	P	P	07 04 57.5	+1.4
PNTR				IAmb	IAmb	07 04 58.2	
	comp=Z,10.0nm,1.4s						
NVAR	Mina Array Bea	85.45	44	P	P	07 04 58.2	+0.2
	comp=Z,1.6nm,0.9s,baz=224,slow=8.4,SNR=12						
	comp=Z,1.6nm,0.9s						
KVN	Kaiserville	85.95	44	P	P	07 05 00.9	+0.5
TUC	Tucson	87.13	52	P	P	07 05 07.3	+1.3
PINE	Pine Mountain	87.14	39	P	P	07 05 06.8	+0.9
PINE				IAmb	IAmb	07 05 08.7	
	comp=Z,7.5nm,0.9s						
I07A	Izee	88.13	39	P	P	07 05 10.8	+0.4
I07A				IAmb	IAmb	07 05 12.4	
	comp=Z,5.2nm,0.9s						
U15A	North Rim	88.26	48	P	P	07 05 12.4	+0.9
U15A				IAmb	IAmb	07 05 13.7	
	comp=Z,5.8nm,1.2s						
J08A	Circle Bar Ran	88.29	40	P	P	07 05 11.4	+0.2
J08A				IAmb	IAmb	07 05 13.5	
	comp=Z,5.4nm,1.0s						
G08A	Pilot Rock	89.17	38	P	P	07 05 15.7	+0.4
G08A				IAmb	IAmb	07 05 17.7	
	comp=Z,5.7nm,1.2s						
MTPU	Mount Pierson	89.20	47	IAmb	IAmb	07 05 18.4	
	comp=Z,3.5nm,0.8s						
CMAR	Chiang Mai Arr	89.73	290	P	P	07 05 18.4	0.0
	comp=Z,1.7nm,0.5s,baz=151,slow=3.3,SNR=10						
	comp=Z,1.7nm,0.5s						
MFID	Camas Ranch	89.89	41	P	P	07 05 19.2	+0.5
MFID				IAmb	IAmb	07 05 20.2	
	comp=Z,4.0nm,0.9s						
TX32	Lajitas Array	90.98	58	IAmb	IAmb	07 08 42.0	
	comp=Z,13nm,1.9s						
TXAR	Lajitas Array	90.98	58	P	P	07 05 23.9	-0.2
	comp=Z,1.9nm,0.8s,baz=212,slow=6.8,SNR=25						
	comp=Z,1.9nm,0.8s						
ILAR	Eielson Array	92.90	14	P	P	07 05 30.4	-1.5
	comp=Z,0.3nm,0.7s,baz=229,slow=5.4,SNR=3.0						
	comp=Z,0.3nm,0.7s						
PDAR	Pinedale Array	93.39	44	P	P	07 05 34.3	-0.6
	comp=Z,0.3nm,0.5s,baz=199,slow=3.1,SNR=4.1						
	comp=Z,0.3nm,0.5s						
MKAR	Makanchi Array	112.67	312	PKiKP	PKiKP	07 10 51.2	-1.4
	comp=Z,0.3nm,0.6s,baz=78,slow=2.1,SNR=3.9						
ARCES	ARCESS Array B	132.72	348	PKP	PKPdf	07 11 29.5	-0.7
	comp=Z,0.9nm,0.6s,baz=66,slow=2.3,SNR=1.5						
FINES	FINESS Array B	139.24	341	PKhKP	PKPpre	07 11 31.5	
	comp=Z,1.0nm,0.8s,baz=27,slow=3.4,SNR=1.9						
FINES				SKPbc	SKPbc	07 14 30.4	0.0
	comp=Z,1.1nm,0.7s,baz=57,slow=5.1,SNR=2.0						
NB2	NORSAR Subarra	142.93	351	PKP	PKPdf	07 11 46.2	-3.0
	comp=Z,1.1nm,0.8s,baz=13,slow=3.7						
NOA	NORSAR Array B	142.93	351	PKhKP	PKPpre	07 11 45.6	
	comp=Z,2.3nm,0.9s,baz=16,slow=4.8,SNR=5.8						
AKASG	Malin Array Be	145.65	326	PKPbc	PKPdf	07 11 54.6	+0.4
	comp=Z,1.3nm,0.5s,baz=43,slow=4.5,SNR=12						
AKBB	Malin Array Si	145.65	326		PKPdf	07 11 54.9	+0.7
BRTR	Keskin Array B	148.01	306	PKPbc	PKPbc	07 12 01.9	-0.6
	comp=Z,1.8nm,0.7s,baz=132,slow=1.8,SNR=5.8						
CLL	Collm	151.66	343	*i* PKPbc	PKPbc	07 12 10.5	0.0
	comp=Z,6.0nm,0.8s						
ESDC	Sonseca Array	164.79	11	PKPab	PKPab	07 13 17.9	-1.1
	comp=Z,0.1nm,0.4s,baz=334,slow=5.0,SNR=4.2						
TORD	Torodi Ar. Bea	168.31	189	PKPab	PKPab	07 13 35.3	+0.3
	comp=Z,0.9nm,0.7s,baz=189,slow=4.3,SNR=6.0						

*IDC **01** 07:15:06.9±1.6, 4°.70S×150°.93E, h132km±14km, mb3.4/4, mbtmp3.8/5, Error ellipse: s-maj=73.3km s-min=11.4km az=137.0*
ISC 01 07:15:08.3±0.9, **5°.0S**±0°.6×**151°.3E**±0°.7, **h150km**, **n6**, σ**1s.76**/10, **mb3.6**/4, **New Britain region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.00	48	P	Pn	07 15 31.9	-1.1
	233nm,0.4s,baz=221,slow=1.6,SNR=25						
KRVT				S	Sn	07 15 50.3	-1.7
	161nm,0.6s,baz=33,slow=21,SNR=14						
PMG	Port Moresby	6.00	223	P	Pn	07 16 35.1	0.0
	24nm,0.6s,baz=51,slow=14,SNR=3.6						
PMG				S	Sn	07 17 40.5	-2.4
	68nm,0.6s,baz=74,slow=12,SNR=8.3						
WRA	Warramunga Arr	22.21	226	P	P	07 19 52.2	-0.5
	0.8nm,0.5s,baz=51,slow=10,SNR=25						
WRA				ScP	ScP	07 27 09.8	+2.5
	0.3nm,0.7s,baz=63,slow=2.7,SNR=2.0						
	0.8nm,0.5s						
ASAR	Alice Springs	25.01	220	P	P	07 20 19.0	+0.5
	1.2nm,0.4s,baz=54,slow=9.0,SNR=25						
ASAR				ScP	ScP	07 27 16.3	+1.5
	0.3nm,0.7s,baz=48,slow=2.6,SNR=2.2						
	1.2nm,0.4s						
ILAR	Eielson Array	82.90	22	P	P	07 27 15.3	-0.5
	0.5nm,0.5s,baz=251,slow=4.6,SNR=6.0						
	0.5nm,0.5s						
NVAR	Mina Array Bea	93.39	52	P	P	07 28 08.7	+1.6
	0.2nm,0.5s,baz=253,slow=6.1,SNR=1.9						
	0.2nm,0.5s						

*IDC **01** 07:17:21.9±0.6, 51°.21N×179°.75W, h0km, mb4.3/22, mbtmp4.3/23, ML4.0/2, MS3.6/35, Error ellipse: s-maj=20.1km s-min=11.8km az=167.0*
*AEIC **01** 07:17:26±2.8, 51°.1N±0°.1×179°.79W±0°.08, h17km±4km, Error ellipse: s-maj=16.1km s-min=6.5km az=167.0*
*BJI **01** 07:17:27.0±0.0, 51°.20N×179°.70W, h60km, mb4.7/32, mB4.8/16, Ms4.3/7, Ms7 4.0/8*
*MOS **01** 07:17:27.5±1.0, 51°.18N×179°.61W, h54km, mb4.9/32, Error ellipse: s-maj=10.2km s-min=6.9km az=110.8*
*NEIC **01** 07:17:29.2±2.1, 51°.11N±0°.09×179°.68W±0°.09, h52km±6km, mb4.6/214, ML4.2(AEIC), Error ellipse: s-maj=13.9km s-min=7.5km az=167.0*
ISC 01 07:17:29.0±0.8, **51°.15N**±0°.08×**179°.68W**±0°.03, **h52km**±5km, **n496**, σ**1s.11**/388, **mb4.6**/157, **MS3.9**/41, **24C-6D**, **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GAKI	Gareloi-Kavalg	0.67	53		Pn	07 17 41.2	-1.3
GASW	Gareloi Southw	0.81	39		Pn	07 17 43.8	-0.5
GALAA	Gareloi Lava P	0.83	43		Pn	07 17 44.2	-0.3
GAEA	Gareloi East	0.86	42		Pn	07 17 44.5	-0.4
TASE	Tanaga Southea	1.23	56		Pn	07 17 49.9	-0.1
TAFP	Tanaga Falls P	1.29	54		Pn	07 17 50.7	-0.1
TAFP					Sn	07 18 09.7	+2.6
TAPA	Tanaga Point A	1.34	60		Pn	07 17 51.5	+0.1
KIMD	Kanaga Island	1.64	67		Pn	07 17 55.5	0.0
KIKV	Kanaga Island	1.73	64		Pn	07 17 57.1	+0.5
KIKV					Sn	07 18 20.2	+2.6
KIWB	Kanaga Island	1.73	65		Pn	07 17 57.1	+0.5
KICM	Kanaga Island	1.73	63		Pn	07 17 57.6	+0.9
ADK	Adak	2.01	67	Pn	Pn	07 18 00.8	+0.4
ADK	Adak	2.01	67	P	Pn	07 18 00.8	+0.4
GSCK	Great Sitkin C	2.35	67		Pn	07 18 06.1	+0.9
GSTD	Great Sitkin T	2.38	66		Pn	07 18 06.8	+1.1
GSTD					Sn	07 18 38.2	+4.6
GSMY	Great Sitkin M	2.43	67		Pn	07 18 07.3	+1.1
GSTR	Great Sitkin T	2.44	66	Pn	Pn	07 18 08.8	+2.3
ATKA	Atka Island	3.57	71		Pn	07 18 22.1	+0.3
KOKL	Mount Kliuchef	3.60	69		Pn	07 18 23.5	+1.2
SHEM	Shemya Is, Ala	4.16	295	Pn	Pn	07 18 29.6	-0.3
	46nm,0.3s,baz=104,slow=2.8,SNR=65						
SHEM				Sn	Sn	07 19 21.4	+4.1
	37nm,0.3s,baz=99,slow=21,SNR=11						
SHEM				LR	LR	07 20 00.9	
	comp=Z,748nm,21.0s,baz=114,slow=39						
SMY	Shemya	4.16	295	Pn	Pn	07 18 31.6	+1.7
SMY	Shemya	4.16	295	P	Pn	07 18 31.6	+1.7
NIKH	Nikolski High	6.92	71	Pn	Pn	07 19 10.0	+2.3
NIKH	Nikolski High	6.92	71	P	Pn	07 19 08.3	+0.6
	baz=258						

SPIA **Saint Paul Isl** 8.18 39 Pn **Pn** 07 19 27.9 +2.9
SPIA **Saint Paul Isl** 8.18 39 P **Pn** 07 19 27.8 +2.9
baz=227
UNV **Unalaska Valle** 8.48 66 Pn **Pn** 07 19 31.0 +2.0
UNV **Unalaska Valle** 8.48 66 P **Pn** 07 19 31.5 +2.5
baz=256
SDPT **Sand Point** 12.23 62 Pn **Pn** 07 20 19.2 -1.0
SDPT **Sand Point** 12.23 62 P **Pn** 07 20 20.7 +0.5
baz=258
PET **Petropavlovsk** 13.45 286 *e*P **Pn** 07 20 39.4 +2.5
PET eS **Sn** 07 23 07.7 +3.1
PET MLR MLR
comp=Z,200nm,15.0s
PEA0B **Petropavlovsk-** 14.02 287 Pn **Pn** 07 20 47.2 +2.5
PEA0B **Petropavlovsk-** 14.02 287 P **Pn** 07 20 47.2 +2.5
PETK **Petropavlovsk-** 14.02 287 Pn **Pn** 07 20 45.2 +0.5
comp=Z,0.2nm,0.3s,baz=116,slow=13,SNR=12
PETK Sn **Sn** 07 23 17.4 -1.2
comp=Z,0.1nm,0.3s,baz=84,slow=15,SNR=1.8
PETK LR LR 07 25 56.9
comp=Z,267nm,21.7s,baz=96,slow=37
PETK **Petropavlovsk-** 14.02 287 Pn **Pn** 07 20 44.9 +0.1
PETK **Petropavlovsk-** 14.02 287 P **Pn** 07 20 44.9 +0.1
PETK 07 23 17.4
P16K **Nushagak River** 14.65 49 P **Pn** 07 20 52.6 -0.4
baz=247
O16K **Kokwok River B** 14.84 47 P **Pn** 07 20 54.9 -0.5
baz=245
N16K **Nishlik Lake** 14.94 43 P **Pn** 07 20 57.2 +0.5
baz=241
CHIR **Chirikof Islan** 15.03 63 P **Pn** 07 20 57.5 -0.4
baz=262
O17K **Koliganek Bris** 15.37 47 P **Pn** 07 21 02.1 -0.2
baz=246
O18K **Koktuh Hills** 16.28 48 P **P** 07 21 16.0 -0.2
O18K **Koktuh Hills** 16.28 48 P **Pn** 07 21 14.4 +0.5
baz=248
N18K **Kilae Creek** 16.30 45 P **P** 07 21 15.6 -0.8
N18K IAmb IAmb 07 21 23.2
comp=Z,52nm,1.4s
N18K **Kilae Creek** 16.30 45 P **Pn** 07 21 13.9 -0.3
baz=245
OHAK **Old Harbor** 16.53 58 P **Pn** 07 21 15.0 -2.0
OHAK IAmb IAmb 07 21 27.4
comp=Z,25nm,0.9s
OHAK **Old Harbor** 16.53 58 P **Pn** 07 21 16.3 -0.7
baz=260
SVW2 **Sparrevohn** 16.62 44 P **P** 07 21 20.8 +0.9
Q19K **Cape Douglas,** 16.74 52 P **Pn** 07 21 18.6 -1.1
baz=254
O19K **Port Alsworth** 16.82 48 P **Pn** 07 21 20.8 +0.2
baz=249
N19K **Bonanza Creek** 16.98 46 P **P** 07 21 25.0 +1.0
N19K IAmb IAmb 07 21 32.0
comp=Z,21nm,0.8s
N19K **Bonanza Creek** 16.98 46 P **P** 07 21 23.4 -0.6
baz=247,SNR=8.8
KDAK **Kodiak Island** 17.01 57 P **Pn** 07 21 20.0 -3.0
comp=Z,2.4nm,0.3s,baz=249,slow=4.8,SNR=17
comp=Z,6.5nm,0.3s
KDAK **Kodiak Island** 17.01 57 P **Pn** 07 21 21.1 -1.8
KDAK IAmb IAmb 07 21 36.5
comp=Z,38nm,1.3s
KDAK **Kodiak Island** 17.01 57 P **Pn** 07 21 20.0 -3.0
KDAK **Kodiak Island** 17.01 57 P **Pn** 07 21 22.7 -0.3
baz=259
Q20K **Shuyak Island** 17.29 54 P **P** 07 21 26.4 -0.9
baz=256
TTA **Tatalina** 17.33 38 **P** 07 21 29.6 +1.8
TTA **Tatalina** 17.33 38 P **P** 07 21 29.6 +1.8
TTA pmax pmax
comp=Z,17nm,1.2s
TTA **Tatalina** 17.33 38 P **P** 07 21 27.2 -0.6
baz=238,SNR=8.5
L19K **White Mountain** 17.42 41 P **Pn** 07 21 27.7 -0.4
baz=242
M19K **Big River Lodg** 17.48 42 P **P** 07 21 29.7 +0.2
baz=244
L20K **Farewell, AK** 17.96 41 P **P** 07 21 34.6 -0.1
baz=243
M20K **Styx River** 18.01 43 P **P** 07 21 35.9 +0.5
baz=246
GCSA **Galena City Sc** 18.06 32 P **P** 07 21 36.2 +0.5
baz=232
CNPM **China Poot** 18.09 51 P **Pn** 07 21 35.9 -0.5
CNPM IAmb IAmb 07 21 40.8
comp=Z,33nm,1.2s
BILL **Bilibino** 18.28 343 *ce*P **Pn** 07 21 39.6 +1.1
BILL S **S** 07 25 05.0 +0.8
BILL pmax pmax
comp=Z,47nm,1.7s
BILL MLR MLR
comp=Z,193nm,18.0s
K20K **Telida** 18.31 38 P **Pn** 07 21 40.3 +1.4
K20K **Telida** 18.31 38 P **Pn** 07 21 39.2 +0.3
baz=240,SNR=7.0
BRSE **Bradley Lake S** 18.39 51 P **Pn** 07 21 39.5 -0.4
baz=255
MA2 **Magadan** 18.66 308 LR LR 07 28 25.7
comp=Z,174nm,19.6s,baz=108,slow=36
MA2 **Magadan** 18.66 308 *i* P **Pn** 07 21 43.8 +0.7
MA2 pmax pmax
comp=Z,7.0nm,0.9s
J20K **Nowinta River** 18.70 36 P **Pn** 07 21 44.5 +0.9
J20K **Nowinta River** 18.70 36 P **Pn** 07 21 43.2 -0.4
baz=238,SNR=11
SKT **Skwentna** 18.75 44 IAmb IAmb 07 21 50.9
comp=Z,26nm,0.9s
SKT **Skwentna** 18.75 44 P **P** 07 21 43.1 -0.2
baz=248
RDOG **Red Dog Mine** 18.83 20 P **Pn** 07 21 44.0 -1.2
baz=215
PPLA **Purkeypile** 18.84 41 P **Pn** 07 21 46.4 +0.9
PPLA IAmb IAmb 07 21 57.1
comp=Z,40nm,1.2s
PPLA **Purkeypile** 18.84 41 P **Pn** 07 21 44.5 -1.0
baz=244
SEY **Seymchan** 19.05 319 P **P** 07 21 45.4 -1.2
comp=Z,0.1nm,0.3s,baz=135,slow=13,SNR=1.6
SEY LR LR 07 28 32.7
comp=Z,136nm,19.9s,baz=102,slow=35
SEY **Seymchan** 19.05 319 *ce*P **P** 07 21 46.4 -0.2
SEY pmax pmax
comp=Z,4.0nm,1.1s
O22K **Cooper Landing** 19.08 49 P **P** 07 21 46.9 0.0
baz=254
SEW **Seward** 19.11 50 P **Pn** 07 21 47.6 -0.9
baz=256
CAST **Castle Rocks** 19.12 40 IAmb IAmb 07 21 50.4
comp=Z,26nm,0.8s
CAST **Castle Rocks** 19.12 40 P **Pn** 07 21 48.7 0.0
baz=243,SNR=28
CHUM **Lake Minchumin** 19.25 38 P **Pn** 07 21 50.3 +0.2
baz=242,SNR=14
CUT **Chulitna** 19.46 43 P **P** 07 21 50.8 -0.3
baz=248
KTH **Kantishna Hill** 19.65 40 IAmb IAmb 07 21 55.4
comp=Z,52nm,0.9s
PMR **Palmer** 19.68 46 P **P** 07 21 53.4 -0.1
baz=252
GHO **Glory Hole Cre** 19.83 46 IAmb IAmb 07 21 59.7
comp=Z,13nm,0.6s
IMAR **Indian Mountai** 19.86 32 P **Pn** 07 21 56.5 -0.8
TRF **Thorofare Moun** 19.86 40 P **Pn** 07 21 56.9 -0.7
TRF IAmb IAmb 07 22 07.3
comp=Z,18nm,0.9s
TRF **Thorofare Moun** 19.86 40 P **P** 07 21 55.8 +0.2
baz=246,SNR=8.3
BPAW **Bear Paw Mtn.** 19.87 38 P **Pn** 07 21 56.9 -0.6
BPAW IAmb IAmb 07 22 01.2
comp=Z,22nm,0.8s
BPAW **Bear Paw Mtn.** 19.87 38 P **Pn** 07 21 56.7 -0.8
baz=243,SNR=21
KNK **Knik Glacier** 19.94 47 P **P** 07 21 56.5 +0.2
baz=253
H21K **Melozitna Rive** 19.99 33 IAmb IAmb 07 22 06.3
comp=Z,21nm,0.9s
H21K **Melozitna Rive** 19.99 33 P **Pn** 07 21 58.4 -0.5
baz=237,SNR=19
I21K **Tanana** 20.02 35 IAmb IAmb 07 22 00.3
comp=Z,21nm,0.9s
I21K **Tanana** 20.02 35 P **Pn** 07 21 58.1 -1.2
baz=239,SNR=16
SML **Sawmill** 20.11 46 P Pn 07 22 00.1 -0.4
SML **Sawmill** 20.11 46 P **P** 07 21 58.1 -0.2
baz=252
WAT1 **Susitna Watana** 20.35 43 P **P** 07 22 00.1 -0.8
baz=250
M23K **Glacier View** 20.38 46 P **P** 07 22 00.5 -0.6
baz=253
MLY **Manley** 20.40 36 P **P** 07 22 01.5 +0.1
baz=241,SNR=13
GLI **Glacier Island** 20.43 49 P **P** 07 22 00.9 -0.8
baz=256
MCK **McKinley** 20.53 40 P **P** 07 22 01.3 -1.4
baz=247
SCM **Sheep Creek Mo** 20.57 46 IAmb IAmb 07 22 24.3
comp=Z,23nm,1.2s
SCM **Sheep Creek Mo** 20.57 46 P **P** 07 22 02.3 -1.0
baz=254
WAT6 **Susitna Watana** 20.62 44 P **P** 07 22 02.8 -1.1
baz=251,SNR=25
NEA2 **Nenana** 20.84 38 IAmb IAmb 07 22 12.4
comp=Z,33nm,0.8s
NEA2 **Nenana** 20.84 38 P **P** 07 22 06.1 +0.2
baz=244,SNR=35
DHY **Denali Highway** 20.94 43 P **P** 07 22 07.6 +0.3
DHY IAmb IAmb 07 22 10.4
comp=Z,33nm,0.7s
DHY **Denali Highway** 20.94 43 P **P** 07 22 06.8 -0.5
baz=250,SNR=28
I23K **Minto, Yukon-K** 20.97 37 P **P** 07 22 07.6 +0.2
baz=243
KLU **Klutina** 21.13 48 P **P** 07 22 08.6 -0.7
baz=256
WRH **Wood River Hil** 21.17 39 P **P** 07 22 08.3 -1.3
M24K **Tolsona, Glenn** 21.17 46 IAmb IAmb 07 22 35.6
comp=Z,40nm,1.1s
M24K **Tolsona, Glenn** 21.17 46 P **P** 07 22 09.0 -0.7
baz=254
H23K **Yukon River** 21.23 35 P **P** 07 22 09.4 -0.8
baz=241,SNR=7.0
MDM **Murphy Dome** 21.32 38 IAmb IAmb 07 22 13.6
comp=Z,18nm,1.2s
COLA **College** 21.43 38 *i* P **P** 07 22 13.7 +1.4
COLA pmax pmax
comp=Z,13nm,0.9s
HDA **Harding Lake** 21.60 40 P **P** 07 22 12.8 -1.4
baz=248,SNR=6.8
BMRM **Bremner River** 21.64 49 IAmb IAmb 07 22 22.0
comp=Z,17nm,0.8s
BMRM **Bremner River** 21.64 49 P **P** 07 22 13.0 -1.7
baz=259
POKR **Poker Plat Res** 21.69 38 IAmb IAmb 07 22 20.7
comp=Z,12nm,0.8s
POKR **Poker Plat Res** 21.69 38 P **P** 07 22 13.7 -1.5
baz=246
HARP **HAARP** 21.71 46 P **P** 07 22 14.0 -1.5
baz=255
COLD **Coldfoot** 21.73 31 P **P** 07 22 14.6 -1.0
baz=237
PAX **Paxson** 21.73 44 IAmb IAmb 07 22 25.2
comp=Z,11nm,0.8s
PAX **Paxson** 21.73 44 P **P** 07 22 15.1 -0.6
baz=253,SNR=11
ILAR **Eielson Array** 21.76 39 P **P** 07 22 13.7 -2.2
comp=Z,2.2nm,0.9s,baz=242,slow=9.4,SNR=14
comp=Z,2.2nm,0.9s
ILAR **Eielson Array** 21.76 39 P **P** 07 22 16.6 +0.6
N25K **Chitina, Valde** 21.78 48 IAmb IAmb 07 22 18.8
comp=Z,11nm,0.8s
N25K **Chitina, Valde** 21.78 48 P **P** 07 22 15.3 -0.9
baz=257,SNR=6.4
H24K **Noodor Dome** 21.84 36 P **P** 07 22 17.2 +0.4
H24K IAmb IAmb 07 22 20.5
comp=Z,12nm,0.8s
H24K **Noodor Dome** 21.84 36 P **P** 07 22 15.5 -1.3
baz=243,SNR=15
K24K **Donnelly Dome** 21.86 42 P **P** 07 22 15.5 -1.5
baz=251
GLB **Gilahina Butte** 22.11 48 IAmb IAmb 07 22 22.0
comp=Z,15nm,0.8s
RIDG **Independent Ri** 22.23 42 P **P** 07 22 18.9 -2.2
baz=252
J25K **Salcha River,** 22.31 40 P **P** 07 22 19.7 -2.2
baz=249
MCARA **McCarthy VSAT** 22.47 49 P **P** 07 22 22.8 -0.8
baz=260
DOT **Dot Lake** 22.54 43 IAmb IAmb 07 22 25.4
comp=Z,18nm,0.9s
SCRK **Sand Creek** 22.67 42 P **P** 07 22 24.1 -1.6
baz=252,SNR=8.6
L26K **Log Cabin Wild** 22.68 44 IAmb IAmb 07 22 27.3
comp=Z,14nm,1.0s
L26K **Log Cabin Wild** 22.68 44 P **P** 07 22 24.3 -1.5
baz=255,SNR=12
M26K **Nabesna, AK** 22.69 46 P **P** 07 22 24.5 -1.4
baz=257
TOLK **Toolik Lake Re** 22.73 28 IAmb IAmb 07 22 40.5
comp=Z,16nm,1.1s
TOLK **Toolik Lake Re** 22.73 28 P **P** 07 22 25.7 -0.5
baz=235
J26L **Joseph Creek** 23.01 41 IAmb IAmb 07 22 29.9
comp=Z,11nm,0.9s
J26L **Joseph Creek** 23.01 41 P **P** 07 22 27.7 -1.5
baz=252,SNR=15
BARN **Barnard Glacie** 23.07 50 IAmb IAmb 07 22 36.7
comp=Z,15nm,1.0s
M27K **Edge Creek, AK** 23.19 47 IAmb IAmb 07 22 33.1
comp=Z,11nm,0.9s
M27K **Edge Creek, AK** 23.19 47 P **P** 07 22 30.9 -0.2
baz=259,SNR=8.0
CTG **Chitna Glacier** 23.21 50 P **P** 07 22 30.2 -1.1
baz=262
L27K **Beaver Creek,** 23.36 45 P **P** 07 22 31.9 -0.8
baz=257,SNR=11
BCAR **Beaver Creek A** 23.38 45 P **P** 07 22 31.8 -1.0
K27K **Chicken** 23.49 42 IAmb IAmb 07 22 35.5
comp=Z,14nm,0.9s
K27K **Chicken** 23.49 42 P **P** 07 22 32.8 -1.0
baz=255
PINM **Pinnacle** 23.65 52 P **P** 07 22 34.9 -0.6
baz=266
BVCY **Beaver Creek** 23.67 47 P **P** 07 22 34.9 -0.5
baz=260
BMAR **Burnt Mountain** 23.73 33 P **P** 07 22 34.7 -1.3
YUK3 **Moose Creek** 23.75 48 P **P** 07 22 35.6 -0.8
baz=252,SNR=13
YUK8 **Steele Glacier** 24.01 50 P **P** 07 22 38.3 -0.6
baz=263
EGAK **Eagle** 24.08 41 IAmb IAmb 07 22 40.8
comp=Z,25nm,0.9s
EGAK **Eagle** 24.08 41 P **P** 07 22 39.1 0.0
baz=254,SNR=22
YUK4 **Talbot Arm** 24.55 50 P **P** 07 22 43.9 +0.1
baz=264
DAWY **Dawson** 24.65 43 P **P** 07 22 43.7 -0.8
baz=258,SNR=9.6
HYT **Haines Junctio** 25.06 51 P **P** 07 22 48.4 +0.1
baz=266
N30M **Aishikik Lake** 25.31 49 P **P** 07 22 49.2 -1.3
baz=266
I29M **Ogilvie Camp,** 25.40 40 P **P** 07 22 50.1 -1.1
baz=256
M30M **Minto, Yukon** 25.56 47 P **P** 07 22 52.6 -0.1
baz=264
JKA **Kamikawa-asahi** 26.15 269 P **P** 07 22 58.1 -0.1
ASAJ **Asahikawa** 26.15 269 P **P** 07 22 58.1 -0.1
comp=Z,17nm,0.9s,baz=339,slow=33,SNR=2.8
comp=Z,17nm,0.9s
ASAJ **Asahikawa** 26.15 269 P **P** 07 22 58.1 -0.1
ASAJ pmax pmax
comp=Z,76nm,1.4s
P33M **Teslin, Yukon** 27.37 52 P **P** 07 23 09.4 +0.3
baz=272
INK **Ink** 27.96 35 P **P** 07 23 13.7 -0.4
comp=Z,2.0nm,0.7s,baz=244,slow=12,SNR=1.2
comp=Z,2.0nm,0.7s
MMPY **Sheldon Lake,** 28.11 47 P **P** 07 23 15.0 -0.6
baz=269
DLBC **Dease Lake** 28.94 56 LR LR 07 35 25.7
comp=Z,107nm,20.3s,baz=292,slow=37
YAK **Yakutsk** 29.15 312 LR LR 07 34 50.3
comp=Z,95nm,19.4s,baz=94,slow=36
YAK **Yakutsk** 29.15 312 *i* P **P** 07 23 24.4 -0.4
YAK pmax pmax
comp=Z,9.0nm,0.4s
TIXI **Tiksi** 30.56 331 LR LR 07 37 05.6
comp=Z,267nm,18.2s,baz=181,slow=39
KLR **Kul'dur** 30.71 286 LR LR 07 37 34.7
comp=Z,82nm,19.0s,baz=88,slow=40
A36M **Sachs Harbour** 31.55 29 P **P** 07 23 46.1 +0.3
baz=258
ZEA **Zeya** 31.83 296 *e*P **P** 07 23 47.7 -0.8
ZEA pmax pmax
comp=E,10.0nm,0.8s
ZEA pmax pmax
comp=Z,10.0nm,1.1s
ZEA MLR MLR
comp=Z,100nm,22.0s
USRK **Ussuriysk Ar.** 32.78 277 P **P** 07 23 56.5 -0.4
comp=Z,2.0nm,0.5s,baz=78,slow=10,SNR=4.9
USRK LR LR 07 38 54.3
comp=Z,68nm,19.4s,baz=6.4,slow=40
comp=Z,2.0nm,0.5s
H11N2 **WAKE ISLAND Hy** 33.10 204 T T 07 59 22.7
baz=18,slow=75,SNR=4.9
H11N3 **WAKE ISLAND Hy** 33.11 204 T T 07 59 26.7
baz=18,slow=75,SNR=8.7
H11N1 **WAKE ISLAND Hy** 33.12 204 T T 07 59 24.2
baz=18,slow=75,SNR=5.6
MJAR **Matsushiro Arr** 33.20 260 LR LR 07 36 55.7
comp=Z,78nm,20.2s,baz=60,slow=35
MSHR **Mys Shultsa** 34.12 275 *ce*P **P** 07 24 08.5 -0.1
MSHR pmax pmax
comp=Z,14nm,0.9s
H11S1 **WAKE ISLAND Hy** 34.32 203 T T 08 00 56.6
baz=18,slow=76,SNR=3.9
H11S2 **WAKE ISLAND Hy** 34.34 203 T T 08 00 57.9
baz=18,slow=76,SNR=3.2
H11S3 **WAKE ISLAND Hy** 34.34 203 T T 08 01 01.8
baz=18,slow=76,SNR=3.5
YKA **Yellowknife Ar** 35.78 46 P **P** 07 24 22.6 -0.2
comp=Z,5.9nm,0.8s,baz=282,slow=8.5,SNR=29
YKA PcP **PcP** 07 26 49.1 -0.1
comp=Z,0.6nm,0.8s,baz=285,slow=2.9,SNR=4.4
YKA ScP **ScP** 07 30 34.4 +3.7
comp=Z,0.7nm,0.9s,baz=284,slow=3.4,SNR=3.8
YKA LR LR 07 40 51.1
comp=Z,228nm,19.2s,baz=264,slow=39
comp=Z,5.9nm,0.8s
D03D **Eldon** 36.27 73 P **P** 07 24 26.9 -0.1
baz=297,SNR=7.2
E04D **Cinebar** 37.04 74 IAmb IAmb 07 24 37.0
comp=Z,13nm,0.9s
E04D **Cinebar** 37.04 74 P **P** 07 24 35.1 +1.5
baz=299
F04A **Amboy** 37.44 75 IAmb IAmb 07 24 39.6
comp=Z,8.0nm,0.8s
JCJ **Chichijima** 37.49 245 LR LR 07 37 32.8
comp=Z,46nm,21.7s,baz=234,slow=32
H04D **Lebanon** 37.95 77 P **P** 07 24 41.6 +0.3
baz=301
B08A **Colville Reser** 38.13 70 IAmb IAmb 07 24 45.1
comp=Z,7.1nm,0.9s
H04A **Detroit Lake** 38.20 77 P **P** 07 24 45.2 +1.7
H04A IAmb IAmb 07 24 51.1
comp=Z,11nm,1.0s
G05D **Wamic, OR** 38.45 75 P **P** 07 24 45.6 0.0
baz=300
I04A **Tendick Farm,** 38.53 78 P **P** 07 24 46.4 +0.2
baz=302
L02F **Cave Junction** 38.71 81 P **P** 07 24 47.6 -0.2
baz=303
J04D **Umpqua Nationa** 39.01 79 P **P** 07 24 50.3 -0.1
baz=302
C09A **Chrisman Ranch** 39.02 70 IAmb IAmb 07 24 52.2
comp=Z,11nm,1.2s
KSRS **Korea Array** 39.09 270 P **P** 07 24 51.0 +0.1
comp=Z,3.3nm,0.8s,baz=56,slow=8.6,SNR=13
KSRS PcP **PcP** 07 27 00.8 +1.1
comp=Z,0.4nm,0.3s,baz=73,slow=4.5,SNR=1.8
KSRS LR LR 07 41 31.4
comp=Z,30nm,19.3s,baz=220,slow=37
comp=Z,3.3nm,0.8s
EDM **Edmonton** 39.40 60 IAmb IAmb 07 25 09.1
comp=Z,19nm,1.4s
YBH **Yreka Blue Hor** 39.46 81 LR LR 07 39 20.6
comp=Z,70nm,19.2s,baz=294,slow=33
NEW **Newport** 39.48 69 LR LR 07 40 03.5
comp=Z,43nm,19.0s,baz=298,slow=34
NEW **Newport** 39.48 69 IAmb IAmb 07 24 56.0
comp=Z,7.3nm,1.0s
NEW **Newport** 39.48 69 P **P** 07 24 53.1 -1.1
baz=298,SNR=8.3
I07A **Izee** 40.16 76 IAmb IAmb 07 25 16.1
comp=Z,6.0nm,1.0s
MSO **Missoula** 42.06 69 IAmb IAmb 07 25 17.1
comp=Z,8.7nm,0.9s
MSO **Missoula** 42.06 69 P **P** 07 25 14.6 -1.0
baz=301,SNR=7.2
PNTR **Pine Nut** 42.92 82 IAmb IAmb 07 25 33.4
comp=Z,6.0nm,0.7s
HLID **Hailey** 43.53 73 P **P** 07 25 28.3 +0.7
baz=304
EGMT **Eagleton** 43.87 65 IAmb IAmb 07 25 32.0
comp=Z,7.8nm,0.9s
EGMT **Eagleton** 43.87 65 P **P** 07 25 29.9 -0.2
baz=301,SNR=5.5
KVN **Kaiserville** 43.88 81 P **P** 07 25 32.8 +2.4
KVN **Kaiserville** 43.88 81 P **P** 07 25 32.8 +2.4
KVN pmax pmax
comp=Z,5.0nm,1.2s
BOZ **Bozeman (W)** 44.08 69 IAmb IAmb 07 25 33.5
comp=Z,12nm,0.8s
BOZ **Bozeman (W)** 44.08 69 P **P** 07 25 32.1 +0.3
baz=303,SNR=26
NVAR **Mina Array Bea** 44.13 82 P **P** 07 25 33.7 +1.3
comp=Z,1.7nm,0.8s,baz=289,slow=7.8,SNR=11
NVAR PcP **PcP** 07 27 17.6 +0.9
comp=Z,0.9nm,0.9s,baz=264,slow=2.7,SNR=2.9
NVAR LR LR 07 42 02.4
comp=Z,52nm,18.3s,baz=292,slow=34
comp=Z,1.7nm,0.8s
NRIK **Noril'sk** 44.32 330 *i* P **P** 07 25 34.4 +1.1
ELK **Elko** 44.64 77 LR LR 07 41 07.1
comp=Z,76nm,21.8s,baz=310,slow=32
ELK **Elko** 44.64 77 P **P** 07 25 35.7 -0.9
ELK **Elko** 44.64 77 P **P** 07 25 35.7 -0.9
ELK pmax pmax
comp=Z,3.0nm,0.8s
YHL **Hebgen Lake** 44.75 70 IAmb IAmb 07 25 39.9
comp=Z,21nm,1.2s
BJI **Beijing** 44.88 282 P **P** 07 25 38.9 +0.8
BJI pmax pmax
comp=Z,8.0nm,0.9s
YMR **Madison River** 44.98 70 IAmb IAmb 07 25 41.1
comp=Z,9.4nm,1.0s
YNR **Norris Junctio** 45.12 70 IAmb IAmb 07 25 43.3
comp=Z,20nm,1.2s
VES **Vestal, Richgr** 45.24 85 P **P** 07 25 40.9 -0.1
baz=309
H17A **Grant Village** 45.36 70 IAmb IAmb 07 25 46.1
comp=Z,17nm,1.2s
H17A **Grant Village** 45.36 70 P **P** 07 25 43.3 +1.1
baz=304,SNR=14
LKWY **Lake** 45.37 70 IAmb IAmb 07 25 45.4
comp=Z,6.8nm,0.7s
FLWY **Flagg Ranch** 45.47 71 IAmb IAmb 07 25 45.6
comp=Z,6.6nm,0.9s
CWC **Cottonwood Cre** 45.50 84 P **P** 07 25 43.4 +0.2
baz=309
HVU **Hansel Valley** 45.54 75 IAmb IAmb 07 26 03.0
comp=Z,3.9nm,0.7s
RLMT **Red Lodge** 45.73 69 P **P** 07 25 45.5 +0.5
baz=304,SNR=22
ULN **Ulaanbaatar** 45.87 296 P **P** 07 25 46.0 0.0
ULN IAmb IAmb 07 25 47.2
comp=Z,4.4nm,0.7s
ULN **Ulaanbaatar** 45.87 296 *ce*P **P** 07 25 46.1 0.0
ULN pmax pmax
comp=Z,4.0nm,0.7s
R11A **Troy Canyon, C** 45.87 80 IAmb IAmb 07 25 51.2
comp=Z,4.9nm,1.1s
R11A **Troy Canyon, C** 45.87 80 P **P** 07 25 46.2 0.0
baz=308,SNR=12
BGU **Big Grassy Mou** 45.89 76 IAmb IAmb 07 26 10.1
comp=Z,8.3nm,1.4s
FURC **Furnace Creek,** 46.24 83 P **P** 07 25 49.5 +0.6
baz=309
SONM **Songino Array** 46.25 296 P **P** 07 25 49.1 +0.1
comp=Z,3.0nm,0.7s,baz=58,slow=9.2,SNR=19
SONM PcP **PcP** 07 27 24.3 +0.5
comp=Z,1.4nm,0.6s,baz=69,slow=2.2,SNR=5.1
SONM LR LR 07 46 38.9
comp=Z,191nm,19.2s,baz=126,slow=38
comp=Z,3.0nm,0.7s
SONM **Songino Array** 46.25 296 P **P** 07 25 49.4 +0.4
SONM IAmb IAmb 07 25 52.0
comp=Z,5.0nm,1.1s
TPNV **Topopah Spring** 46.32 82 IAmb IAmb 07 25 58.8
comp=Z,6.5nm,0.8s
TPNV **Topopah Spring** 46.32 82 P **P** 07 25 50.0 +0.2

baz=309,SNR=12
DUG **Dugway, Tooele** **46.46** **76** lAmb lAmb 07 26 12.6
comp=Z,9.3nm,0.9s
DUG **Dugway, Tooele** **46.46** **76** P **P** **07 25 50.6 -0.2**
baz=307,SNR=9.8
GWY **Greenwater Val** **46.54** **83** lAmb lAmb 07 26 01.9
comp=Z,4.6nm,0.8s
ZAK **Zakamensk** **46.60** **301** *eP* **P** **07 25 52.0 +0.3**
ZAK pmax pmax
comp=Z,13nm,1.3s
ZAK pmax pmax
comp=Z,5.0nm,1.5s
LAO **LASA Array** **46.62** **65** P **P** **07 25 51.4 -0.5**
baz=304
PRN **Pahroc Range** **46.78** **81** lAmb lAmb 07 25 58.9
comp=Z,5.9nm,0.8s
PSUT **Pine Spring** **46.83** **79** lAmb lAmb 07 26 13.7
comp=Z,4.5nm,0.7s
BW06 **Boulder Array** **46.90** **72** lAmb lAmb 07 25 56.0
comp=Z,7.1nm,0.9s
BW06 **Boulder Array** **46.90** **72** P **P** **07 25 54.2 -0.1**
baz=306,SNR=11
PD31 **Pinedale Array** **46.90** **72** lAmb lAmb 07 25 56.0
comp=Z,6.4nm,0.9s
PDAR **Pinedale Array** **46.90** **72** P **P** **07 25 55.1 +0.8**
comp=Z,4.3nm,0.7s,baz=303,slow=3.7,SNR=37
PDAR LR LR 07 43 13.4
comp=Z,41nm,20.9s,baz=327,slow=33
comp=Z,4.3nm,0.7s
PDAR **Pinedale Array** **46.90** **72** P **P** **07 25 54.9 +0.6**
GSC **Goldstone, Bar** **47.02** **84** lAmb lAmb 07 25 56.9
comp=Z,4.0nm,0.9s
GSC **Goldstone, Bar** **47.02** **84** P **P** **07 25 55.6 +0.5**
baz=310
JLU **Jordanelle** **47.04** **75** lAmb lAmb 07 25 58.2
comp=Z,4.6nm,1.0s
BFSC **Mount Baldy Ra** **47.17** **86** P **P** **07 25 56.5 +0.1**
baz=311
HHC **Hu-ho-hao-te** **47.22** **286** *eP* **P** **07 25 55.1 -1.6**
HHC pmax pmax
comp=Z,39nm,0.8s
HHC pmax pmax
comp=Z,81nm,6.3s
TMUT **Trail Mountain** **47.98** **76** lAmb lAmb 07 26 24.6
comp=Z,7.5nm,0.9s
LCMT **Little Creek M** **48.15** **80** lAmb lAmb 07 26 09.5
comp=Z,5.1nm,0.9s
Q16A **Castle Valley** **48.24** **77** lAmb lAmb 07 26 28.1
comp=Z,3.6nm,0.8s
NJ2 **Nanjing** **48.27** **271** *eP* **P** **07 26 02.0 -2.7**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
PFO **Pinyon Flats O** **48.33** **86** P **P** **07 26 04.4 -1.0**
baz=311
P18A **Preston Nutter** **48.37** **75** lAmb lAmb 07 26 29.6
comp=Z,4.3nm,0.8s
SRU **San Rafael Swe** **48.52** **76** lAmb lAmb 07 26 14.5
comp=Z,5.0nm,0.7s
K22A **Casper** **48.77** **70** lAmb lAmb 07 26 09.9
comp=Z,5.5nm,0.8s
K22A **Casper** **48.77** **70** P **P** **07 26 08.5 -0.2**
baz=307
IRM **Iron Mountain** **48.80** **84** P **P** **07 26 08.5 -0.4**
baz=311
U15A **North Rim** **49.11** **80** lAmb lAmb 07 26 16.9
comp=Z,5.4nm,0.8s
IKP **In-Ko-Pah, Jac** **49.19** **86** P **P** **07 26 11.0 -0.9**
baz=312
RSSD **Black Hills** **49.35** **67** P **P** **07 26 13.4 +0.3**
RSSD lAmb lAmb 07 26 13.7
comp=Z,3.2nm,0.8s
RSSD **Black Hills** **49.35** **67** P **P** **07 26 13.5 +0.3**
RSSD pmax pmax
comp=Z,3.0nm,0.9s
RSSD **Black Hills** **49.35** **67** P **P** **07 26 13.2 0.0**
baz=306
GLA **Glamis** **49.73** **85** P **P** **07 26 15.9 0.0**
baz=312
N23A **Red Feather La** **50.19** **71** P **P** **07 26 19.5 -0.1**
baz=308
ULM **Lac du Bonnet** **50.27** **56** LR LR 07 48 30.4
comp=Z,53nm,18.9s,baz=356,slow=37
WUAZ **Wupatki** **50.27** **80** P **P** **07 26 20.1 0.0**
WUAZ lAmb lAmb 07 26 43.5
comp=Z,3.9nm,0.8s
WUAZ **Wupatki** **50.27** **80** P **P** **07 26 20.3 +0.2**
baz=310
MVCO **Mesa Verde** **50.95** **77** P **P** **07 26 25.9 +0.5**
baz=310
ISCO **Idaho Springs** **51.06** **72** P **P** **07 26 26.4 +0.1**
baz=309
AGMN **Agassiz Nation** **51.43** **58** P **P** **07 26 28.2 -0.3**
baz=307
S22A **4UR Ranch, Cre** **51.63** **75** lAmb lAmb 07 26 46.7
comp=Z,9.9nm,1.5s
S22A **4UR Ranch, Cre** **51.63** **75** P **P** **07 26 29.0 -1.5**
baz=310
OGNE **Ogallala** **52.47** **69** P **P** **07 26 36.2 -0.2**
baz=309
TUC **Tucson** **52.75** **83** P **P** **07 26 39.1 +0.4**
TUC **Tucson** **52.75** **83** P **P** **07 26 39.1 +0.4**
TUC pmax pmax
comp=Z,3.0nm,0.9s
TUC **Tucson** **52.75** **83** P **P** **07 26 38.9 +0.2**
baz=312
T25A **Trinidad** **53.49** **74** lAmb lAmb 07 26 51.3
comp=Z,5.9nm,0.9s
T25A **Trinidad** **53.49** **74** P **P** **07 26 44.7 +0.5**
baz=311
ANMO **Albuquerque** **53.68** **77** *i* P **P** **07 26 46.1 +0.5**
ANMO pmax pmax
comp=Z,4.0nm,2.7s
ANMO **Albuquerque** **53.68** **77** P **P** **07 26 46.1 +0.5**
baz=312
ZALV **Zalesovo Beam** **53.78** **313** P **P** **07 26 45.0 -0.8**
comp=Z,1.5nm,0.7s,baz=37,slow=8.2,SNR=4.7
ZALV PcP **PcP** **07 27 52.5 +1.4**
comp=Z,1.5nm,0.6s,baz=20,slow=4.6,SNR=3.9
ZALV LR LR 07 50 06.0
comp=Z,68nm,20.8s,baz=82,slow=37
comp=Z,1.5nm,0.7s
ECSD **EROS Data Cent** **53.83** **63** P **P** **07 26 45.5 -0.8**
baz=309
BGNE **Belgrade** **54.44** **66** P **P** **07 26 50.8 0.0**
baz=310
LZH **Lanzhou** **54.91** **286** *eP* **P** **07 26 51.6 -2.9**
LZH pP pP 07 27 04.6 -3.1
LZH pmax pmax
comp=Z,18nm,1.3s
LZH pmax pmax
comp=Z,74nm,6.4s
LZH LR LR
comp=Z,320nm,15.4s
LZH LR LR
comp=Z,220nm,15.1s
LZH LR LR
comp=Z,200nm,17.2s
SPMN **Marine on St.** **54.98** **60** P **P** **07 26 54.1 -0.5**
baz=310
GTA **Gaotai** **55.14** **291** *eP* **P** **07 26 56.4 +0.4**
GTA pP pwP 07 27 11.7 -1.3
GTA sP sP 07 27 19.5 +4.7
GTA pmax pmax
comp=Z,6.0nm,1.1s
CBKS **Cedar Bluff** **55.19** **70** P **P** **07 26 56.9 +0.6**
CBKS **Cedar Bluff** **55.19** **70** P **P** **07 26 56.9 +0.6**
CBKS pmax pmax
comp=Z,11nm,0.8s
CBKS **Cedar Bluff** **55.19** **70** P **P** **07 26 56.7 +0.4**
baz=311
R32A **Long Quarter,** **56.05** **69** lAmb lAmb 07 27 03.8
comp=Z,9.6nm,0.9s
MNTX **Cornudas Mount** **56.53** **80** lAmb lAmb 07 27 11.1
comp=Z,3.4nm,1.0s
MNTX **Cornudas Mount** **56.53** **80** P **P** **07 27 06.5 +0.6**
baz=313
MSTX **Muleshoe** **56.59** **76** P **P** **07 27 06.7 +0.2**
baz=313
AMTX **Amarillo** **56.64** **74** P **P** **07 27 07.4 +0.6**
baz=312
KSU1 **Kansas State U** **56.83** **67** P **P** **07 27 07.5 -0.5**
baz=312
ARCES **ARCESS Array B** **58.22** **350** P **P** **07 27 16.0 -1.3**
comp=Z,2.8nm,0.7s,baz=33,slow=8.6,SNR=2.7
ARCES **ARCESS Array B** **58.22** **350** P **P** **07 27 16.0 -1.3**
ARCES pmax pmax
comp=Z,120nm,1.2s
WMOK **Wichita Mounta** **58.49** **73** lAmb lAmb 07 27 21.3
comp=Z,3.1nm,0.9s
WMOK **Wichita Mounta** **58.49** **73** P **P** **07 27 19.8 +0.1**
baz=313
LVZ **Lovozero** **58.52** **346** P **P** **07 27 18.5 -0.9**
LVZ **Lovozero** **58.52** **346** *ceP* **P** **07 27 18.4 -1.0**
LVZ pmax pmax
comp=Z,59nm,2.5s
KURK **Kurchatov** **58.77** **313** P **P** **07 27 21.0 -0.4**
KURK **Kurchatov** **58.77** **313** *ceP* **P** **07 27 21.6 +0.2**
KURK pmax pmax
comp=Z,15nm,0.8s
WMQ **Urumqi** **59.00** **302** *eP* **P** **07 27 27.7 +4.5**
WMQ pmax pmax
comp=Z,20nm,0.7s
WMQ LR LR
comp=Z,190nm,19.5s
WMQ LR LR
comp=Z,150nm,24.9s
TX31 **Lajitas Ar. Si** **59.23** **80** lAmb lAmb 07 27 47.4
comp=Z,6.7nm,1.0s
TXAR **Lajitas Array** **59.23** **80** P **P** **07 27 25.4 +0.3**
comp=Z,1.0nm,0.8s,baz=295,slow=4.9,SNR=15
comp=Z,1.0nm,0.8s
ABTX **Abilene, Hawle** **59.42** **75** P **P** **07 27 26.4 +0.2**
baz=314
TUL1 **Leonard** **59.47** **70** P **P** **07 27 26.6 +0.1**
baz=313
MK31 **Makanchi Array** **59.74** **308** ⇑*iP* **P** **07 27 27.4 -0.8**
MKAR **Makanchi Array** **59.74** **308** P **P** **07 27 27.6 -0.6**
comp=Z,10nm,0.9s,baz=55,slow=7.0,SNR=81
comp=Z,10nm,0.9s
MKAR **Makanchi Array** **59.74** **308** P **P** **07 27 27.8 -0.4**
MAKZ **Makanchi** **59.88** **308** P **P** **07 27 28.4 -0.8**
MAKZ **Makanchi** **59.88** **308** ⇑P **P** **07 27 28.6 -0.6**
GOMU **GeErMu** **60.22** **292** P **P** **07 27 31.0 -1.1**
GOMU pmax pmax
comp=Z,3.0nm,0.8s
GOMU pmax pmax
comp=Z,97nm,5.4s
SCHQ **Schefferville** **60.52** **38** P **P** **07 27 32.5 -0.9**
comp=Z,5.2nm,0.8s,baz=295,slow=9.4,SNR=4.7
SCHQ LR LR 07 55 33.9
comp=Z,90nm,19.2s,baz=68,slow=38
comp=Z,5.2nm,0.8s
CCM **Cathedral Cave** **60.63** **65** P **P** **07 27 33.5 -0.9**
baz=314
MGMO **Mountain Grove** **60.67** **66** lAmb lAmb 07 27 36.2
comp=Z,5.6nm,0.9s
BRVK **Borovoye** **60.72** **319** P **P** **07 27 35.1 +0.4**
BRVK **Borovoye** **60.72** **319** *ceP* **P** **07 27 33.7 -1.0**
BRVK pmax pmax
comp=Z,6.0nm,0.7s
U40A **Yellville** **60.88** **67** lAmb lAmb 07 27 36.6
comp=Z,12nm,1.3s
U40A **Yellville** **60.88** **67** P **P** **07 27 35.0 -1.1**
baz=314,SNR=5.9
W39A **Magazine** **61.14** **69** P **P** **07 27 37.2 -0.6**
baz=314
SFIN **Lafayette** **61.34** **60** P **P** **07 27 38.3 -0.8**
baz=314
MIAR **Mount Ida** **61.72** **69** P **P** **07 27 41.4 -0.4**
MIAR **Mount Ida** **61.72** **69** P **P** **07 27 41.4 -0.4**
MIAR pmax pmax
comp=Z,14nm,1.3s
MIAR **Mount Ida** **61.72** **69** P **P** **07 27 41.7 -0.1**
baz=315,SNR=5.2
PRGR **Permogore** **61.90** **337** *eP* **P** **07 27 41.4 -1.2**
WHAR **Wooly Hollow** **61.95** **68** P **P** **07 27 43.4 +0.1**
WHAR lAmb lAmb 07 27 44.2
comp=Z,9.8nm,1.1s
W41B **Gary Mavity, V** **62.06** **68** lAmb lAmb 07 27 45.5
comp=Z,11nm,1.4s
W41B **Gary Mavity, V** **62.06** **68** P **P** **07 27 43.9 -0.1**
baz=315
LCAR **Lake Charles** **62.06** **66** lAmb lAmb 07 27 44.3
comp=Z,5.7nm,1.0s
X40A **Basin Creek Fa** **62.20** **69** P **P** **07 27 44.2 -0.7**
baz=315
H06N1 **SOCORRO T-PHAS** **62.20** **94** T T 08 36 33.6
SNR=124
O48B **Farmland** **62.48** **59** P **P** **07 27 46.2 -0.6**
baz=315
ARU **Arti** **62.50** **328** *c i* P **P** **07 27 46.1 -0.6**
ARU *PP **sP** **07 28 02.5 -3.1**
ARU 07 30 01.7
ARU S **S** **07 36 09.5 -0.3**
ARU SS **SS** **07 40 08.7 -4.8**
ARU pmax pmax
comp=Z,72nm,19.5s,baz=114,slow=38
comp=Z,3.0nm,0.7s
PZH **PanZhiHua** **62.84** **279** P **P** **07 27 51.5 +2.0**
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,100nm,7.5s
KIRV **Kirov** **63.53** **334** LR LR 07 57 28.5
comp=Z,78nm,20.1s,baz=32,slow=38
WVT **Waverly** **63.92** **64** P **P** **07 27 56.5 +0.1**
WVT lAmb lAmb 07 27 57.9
comp=Z,5.9nm,0.8s
WVT **Waverly** **63.92** **64** P **P** **07 27 56.5 +0.1**
WVT pmax pmax
comp=Z,6.0nm,0.9s
WVT **Waverly** **63.92** **64** P **P** **07 27 55.8 -0.6**
baz=316
OXF **Oxford** **64.17** **67** P **P** **07 27 57.7 -0.4**
baz=316,SNR=5.8
P52A **Corning** **64.55** **58** P **P** **07 27 59.7 -0.8**
baz=316
O53A **New Philadelph** **64.60** **57** P **P** **07 28 00.1 -0.7**
baz=316
LONY **Lake Ozonia** **64.75** **50** P **P** **07 28 01.2 -0.5**
baz=318
V48A **Smith Brothers** **64.77** **64** lAmb lAmb 07 28 04.2
comp=Z,14nm,1.4s
U49A **Red Boiling Sp** **64.81** **63** lAmb lAmb 07 28 03.7
comp=Z,4.9nm,0.8s
T50A **Nancy** **64.97** **62** lAmb lAmb 07 28 04.8
comp=Z,7.6nm,0.8s
X48A **Hartselle** **65.57** **65** lAmb lAmb 07 28 07.4
comp=Z,4.7nm,0.8s
KDJ **Kajisay** **65.63** **307** P **P** **07 28 08.5 +0.8**
KDJ **Kajisay** **65.63** **307** P **P** **07 28 08.5 +0.8**
KDJ pmax pmax
comp=Z,13nm,0.9s
SWET **Sewanee** **65.65** **64** lAmb lAmb 07 28 08.5
comp=Z,9.8nm,1.0s
TKM2 **Tokmak 2** **65.83** **309** P **P** **07 28 10.0 +1.0**
SNR=14
BINY **Binghamton** **65.85** **52** P **P** **07 28 07.8 -1.1**
baz=318
FIA1 **FINESS Array S** **65.88** **347** lAmb lAmb 07 28 09.0
comp=Z,9.9nm,0.9s
FINES **FINESS Array B** **65.88** **347** P **P** **07 28 07.8 -0.9**
comp=Z,6.7nm,0.7s,baz=28,slow=8.6,SNR=20
FINES LR LR 07 57 31.5
comp=Z,31nm,21.7s,baz=65,slow=37
comp=Z,6.7nm,0.7s
ULHL **Ulahol** **66.01** **308** P **P** **07 28 11.1 +0.9**
SNR=12
W50A **Signal Mountai** **66.02** **63** lAmb lAmb 07 28 11.4
comp=Z,8.8nm,1.1s
TZTN **Tazewell** **66.02** **61** P **P** **07 28 09.9 -0.1**
baz=317
SSPA **Standing Stone** **66.05** **55** P **P** **07 28 09.4 -0.7**
baz=318
USP **Ospenovka** **66.11** **310** P **P** **07 28 11.8 +1.3**
SNR=13
FPAL **Fort Paine** **66.33** **64** lAmb lAmb 07 28 13.1
comp=Z,10nm,0.9s
KBK **Karagaybulak** **66.34** **309** P **P** **07 28 13.0 +0.8**
SNR=6.5
TKL **Tuckaleechee C** **66.54** **62** lAmb lAmb 07 28 15.3
comp=Z,9.8nm,1.1s
AAK **Ala-Archa** **66.58** **309** P **P** **07 28 14.6 +0.9**
SNR=9.3
AAK **Ala-Archa** **66.58** **309** P **P** **07 28 14.6 +0.9**
AAK **Ala-Archa** **66.58** **309** *ceP* **P** **07 28 14.0 +0.3**
AAK pmax pmax
comp=Z,14nm,0.9s
LRAL **Lakeview Retre** **66.63** **66** lAmb lAmb 07 28 14.6
comp=Z,7.1nm,0.9s
LRAL **Lakeview Retre** **66.63** **66** P **P** **07 28 13.0 -0.9**
baz=317
UCH **Uchtor** **66.88** **309** P **P** **07 28 16.5 +0.5**
SNR=7.5
EKS2 **Erkin-Say** **66.91** **310** P **P** **07 28 16.7 +0.9**
SNR=11
AML **Almayashu** **67.35** **309** P **P** **07 28 20.2 +1.2**
SNR=12
AKTO **Aktyubinsk** **67.55** **324** LR LR 08 00 40.0
comp=Z,121nm,18.4s,baz=34,slow=38
NC204 **NORSAR Array S** **67.61** **355** P **P** **07 28 19.6 -0.2**
Y52A **Lilburn** **67.69** **64** lAmb lAmb 07 28 22.0
comp=Z,6.9nm,0.8s
NB2 **NORSAR Subarra** **67.82** **354** P **P** **07 28 20.5 -0.6**
comp=Z,10nm,0.9s,baz=7.5,slow=6.5
NOA **NORSAR Array B** **67.82** **354** P **P** **07 28 20.8 -0.3**
comp=Z,7.5nm,0.9s,baz=6.9,slow=6.2,SNR=17
NOA LR LR 08 00 47.8
comp=Z,14nm,18.4s,baz=20,slow=38
comp=Z,7.5nm,0.9s
KK31 **Karatay Array** **68.13** **312** lAmb lAmb 07 28 24.7
comp=Z,9.2nm,0.8s
KKAR **Karatay Array** **68.13** **312** lAmb lAmb 07 28 24.7
comp=Z,9.2nm,0.8s
KSH **Kashi** **68.19** **306** P **P** **07 28 28.4 +4.5**
KSH pP sP 07 28 42.0 -1.3
KSH sP PcP 07 28 49.8 +0.3
KSH pmax pmax
comp=Z,17nm,1.1s
KMSC **Kings Mountain** **68.27** **61** P **P** **07 28 24.7 +0.4**
baz=318
GOGA **Godfrey** **68.36** **63** P **P** **07 28 24.5 -0.4**
baz=318
TAOE **Nuku Hiva Isla** **68.82** **138** *e* LR LR 07 48 20.6
comp=Z,97nm,22.3s
KONO **Kongsberg** **69.30** **355** P **P** **07 28 28.6 -1.6**
KONO **Kongsberg** **69.30** **355** *ceP* **P** **07 28 30.0 -0.3**
KONO pmax pmax
comp=Z,17nm,0.8s
OBN **Obninsk** **69.88** **339** LR LR 08 03 28.7
comp=Z,20nm,18.2s,baz=9.5,slow=40
OBN **Obninsk** **69.88** **339** ⇓*eP* **P** **07 28 32.9 -1.0**
OBN *e* 07 28 52.5
OBN 07 31 11.0
OBN *SS **SKiKP** **07 38 16.0 +0.5**
OBN SS **SS** **07 42 06.0 -1.7**
OBN pmax pmax
comp=Z,9.0nm,0.9s
OBN MLR MLR
comp=Z,86nm,18.0s
NHSC **New Hope** **70.42** **61** P **P** **07 28 36.8 -0.8**
baz=319
CMAR **Chiang Mai Arr** **70.49** **275** P **P** **07 28 37.9 -0.3**
comp=Z,1.5nm,0.4s,baz=22,slow=6.6,SNR=14
comp=Z,1.5nm,0.4s
CMAR **Chiang Mai Arr** **70.49** **275** *ceP* **P** **07 28 38.2 0.0**
CMAR pmax pmax
comp=Z,2.0nm,0.4s
TAPN **Taplejung** **70.77** **290** *eP* **P** **07 28 40.5 +0.3**
GUN **Gumba** **71.43** **291** *eP* **P** **07 28 44.8 +0.6**
comp=Z,56nm,0.9s
JIRN **Jiri** **71.43** **291** *eP* **P** **07 28 45.1 +0.8**
comp=Z,38nm,0.8s
PMOR **Pomariorio Ree** **71.49** **148** *eT* T 08 46 58.5
comp=Z,2.0nm,0.3s
RAMN **Ramite** **71.72** **290** *eP* **P** **07 28 46.1 +0.2**
PKI **Pulchoki** **71.96** **292** *eP* **P** **07 28 47.4 0.0**
PKIN **Phulchoki** **71.96** **292** *eP* **P** **07 28 47.5 +0.2**
comp=Z,9.0nm,0.4s
GKN **Gorkha** **72.08** **292** *eP* **P** **07 28 48.3 +0.4**
DANN **Dangsing** **72.33** **293** *eP* **P** **07 28 50.0 +0.4**
comp=Z,24nm,0.8s
PYUN **Piuthan** **72.97** **294** *eP* **P** **07 28 53.6 +0.3**
comp=Z,21nm,0.9s
PPT2 **Papete2** **73.36** **150** *e* LR LR 07 50 23.1
comp=Z,103nm,28.0s
DWPF **Disney Wildern** **73.48** **66** P **P** **07 28 55.1 -0.9**
baz=320
DZM **Mont Dzumac** **73.92** **193** *e* LR LR 07 51 03.9
comp=Z,132nm,22.3s
NIL **Nilore** **74.08** **304** P **P** **07 28 59.5 -0.1**
NIL **Nilore** **74.08** **304** P **P** **07 28 59.5 -0.1**
NIL pmax pmax
comp=Z,24nm,1.2s
RAR **Rarotonga** **74.15** **161** LR LR 07 55 21.2
comp=Z,93nm,19.1s,baz=318,slow=31
KBL **Kabul** **75.54** **307** P **P** **07 29 07.8 -0.3**
KBL **Kabul** **75.54** **307** P **P** **07 29 07.8 -0.3**
KBL pmax pmax
comp=Z,21nm,1.0s
AKASG **Malin Array Be** **75.59** **341** P **P** **07 29 07.0 -0.9**
comp=Z,2.2nm,0.5s,baz=23,slow=6.0,SNR=20
AKASG LR LR 08 06 52.9
comp=Z,35nm,18.4s,baz=46,slow=39
comp=Z,2.2nm,0.5s
AKASG **Malin Array Be** **75.59** **341** *ceP* **P** **07 29 07.3 -0.5**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKBB **Malin Array Si** **75.59** **341** lAmb lAmb 07 29 08.2
comp=Z,9.8nm,1.1s
AKBB **Malin Array Si** **75.59** **341** *ceP* **P** **07 29 07.8 0.0**
CLL **Collm** **77.35** **352** *i* P **P** **07 29 17.5 -0.3**
CLL pmax pmax
comp=Z,4.0nm,0.7s
CLL MLR MLR
comp=Z,600nm,19.5s
CLL **Collm** **77.35** **352** *i* P **P** **07 29 17.5 -0.3**
comp=Z,4.0nm,0.7s
OSTC **Ostas** **77.77** **350** AMS AMS 08 09 50.0
comp=Z,100nm,20.6s
GEYT **Alibeck** **77.87** **317** P **P** **07 29 20.6 -0.4**
comp=Z,1.6nm,0.5s,baz=14,slow=41,SNR=2.1
GEYT LR LR 08 06 24.4
comp=Z,76nm,18.1s,baz=84,slow=38
comp=Z,1.6nm,0.5s
GEYT **Alibeck** **77.87** **317** lAmb lAmb 07 29 27.4
comp=Z,2.4nm,0.7s
DPC **Dobruska-Polom** **77.96** **350** *eP* **P** **07 29 22.0 +0.7**
DPC **Dobruska-Polom** **77.96** **350** *eP* **P** **07 29 22.0 +0.7**
KRLC **Kraliky** **78.18** **349** *eP* **P** **07 29 22.8 +0.3**
KRLC **Kraliky** **78.18** **349** *eP* **P** **07 29 22.8 +0.3**
BTNL **Ternell** **78.52** **356** *dP* **P** **07 29 25.1 +0.8**
KBZ **Khabaz** **78.53** **330** LR LR 08 07 40.6
comp=Z,64nm,21.3s,baz=30,slow=38
KOLS **Kolonicke sedl** **78.54** **345** *eP* **P** **07 29 25.4 +0.9**
KOLS **Kolonicke sedl** **78.54** **345** *eP* **P** **07 29 25.4 +0.9**
SNF **Seneffe** **78.66** **357** *dP* **P** **07 29 25.5 +0.5**
SNF *dPcP **PcP** **07 29 33.5 -0.3**
LANS **Liptovska Anna** **78.74** **347** *eP* **P** **07 29 27.2 +1.6**
LANS pmax pmax
comp=Z,5.0nm,1.1s
LANS **Liptovska Anna** **78.74** **347** *eP* **P** **07 29 27.2 +1.6**
TBI **Tubuai** **78.81** **152** *e* LR LR 07 52 51.6
comp=Z,85nm,22.2s
BMRD **Maredsous** **78.85** **357** *dP* **P** **07 29 26.6 +0.5**
comp=Z,8.9nm,1.0s
ZEI **Tsey** **79.05** **329** *eP* **P** **07 29 27.3 -0.4**
ZEI pmax pmax
comp=Z,7.0nm,1.0s
BUR08 **Bucovina Ar. S** **79.28** **343** lAmb lAmb 07 29 30.6
comp=Z,11nm,1.1s
BURAR **Bucovina Array** **79.31** **343** ⇑P **P** **07 29 28.7 -0.1**
BURAR **Bucovina Array** **79.31** **343** lAmb lAmb 07 29 30.4
comp=Z,9.8nm,0.9s
BURAR **Bucovina Array** **79.31** **343** ⇑P **P** **07 29 28.7 -0.1**
KHC **Kasperske Hory** **79.45** **351** lAmb lAmb 07 29 30.9
comp=Z,5.0nm,1.1s
KHC **Kasperske Hory** **79.45** **351** *eP* **P** **07 29 30.0 +0.5**
KHC MLR MLR
comp=Z,100nm,20.9s
KHC **Kasperske Hory** **79.45** **351** *eP* **P** **07 29 30.0 +0.5**
KHC AMS AMS 08 08 00.0
comp=Z,100nm,20.9s
GERES **GERESS Array B** **79.72** **351** P **P** **07 29 31.0 -0.1**
comp=Z,1.6nm,0.6s,baz=24,slow=5.4,SNR=11
comp=Z,1.6nm,0.6s
GERES **GERESS Array B** **79.72** **351** P **P** **07 29 31.0 -0.1**
BIZ **Bicaz** **79.80** **342** ⇓P P 07 29 22.1 -9.3
RAO **Raoul Island** **80.07** **178** LR LR 08 03 35.2
comp=Z,45nm,18.1s,baz=6.0,slow=35
CONA **Conrad Observa** **80.40** **349** *eP* **P** **07 29 35.4 +0.7**
comp=Z,4.0nm,0.9s
DRGR **80.55** **345** ⇑P **P** **07 29 35.9 +0.4**
DRGR **80.55** **345** ⇑P **P** **07 29 35.9 +0.4**
DOPR **Dopca** **80.86** **343** ⇑P **P** **07 29 36.9 -0.3**
ARSA **Arzberg** **81.11** **350** *eP* **P** **07 29 39.2 +0.8**
comp=Z,4.2nm,0.9s
GNI **Garni** **81.14** **327** LR LR 08 10 36.0
comp=Z,69nm,18.6s,baz=66,slow=39
WATA **Walderalm** **81.41** **352** *eP* **P** **07 29 40.8 +0.6**

	comp=Z,4.9nm,0.6s						
VOIR		81.44	343	⇑P	P	07 29 41.3	+1.0
VOIR		81.44	343	⇑P	P	07 29 41.3	+1.0
MOTA	Moosalm	81.44	353	eP	P	07 29 41.4	+1.1
	comp=Z,11nm,1.3s						
WRA	Warramunga Arr	81.47	223	P	P	07 29 39.2	-1.3
	comp=Z,1.1nm,0.7s,baz=33,slow=6.0,SNR=12						
	comp=Z,1.1nm,0.7s						
WTTA	Wattenberg	81.48	352	eP	P	07 29 41.3	+0.7
	comp=Z,9.6nm,0.7s						
KBA	Koelnbreinsper	81.51	351	eP	P	07 29 41.5	+0.8
	comp=Z,14nm,0.7s						
SQTA	Sankt Quirin	81.56	353	eP	P	07 29 41.5	+0.6
	comp=Z,1.5nm,0.4s						
SOKA	Soboth	81.73	350	eP	P	07 29 42.6	+0.8
	comp=Z,12nm,1.1s						
FETA	Feichten	81.80	353	eP	P	07 29 42.5	+0.2
	comp=Z,8.0nm,1.0s						
GZR	Gura Zlata	81.89	344	⇑P	P	07 29 43.0	+0.4
GZR	Gura Zlata	81.89	344	⇑P	P	07 29 43.0	+0.4
ABTA	Abfaltersbach	81.91	352	eP	P	07 29 43.3	+0.5
	comp=Z,6.5nm,1.0s						
OBKA	Obir	81.95	350	eP	P	07 29 43.6	+0.6
	comp=Z,8.6nm,0.8s						
TUE	Stuetta	82.44	354	IAmb	IAmb	07 29 47.1	
	comp=Z,8.8nm,1.0s						
DIVS	Divibare	83.60	346	IAmb	IAmb	07 29 52.7	
	comp=Z,6.2nm,0.9s						
BRTR	Keskin Array B	84.92	335	P	P	07 29 58.5	+0.1
	comp=Z,2.4nm,0.9s,baz=39,slow=6.3,SNR=6.9						
	comp=Z,2.4nm,0.9s						
ASAR	Alice Springs	84.95	222	P	P	07 29 57.9	-0.6
	comp=Z,1.3nm,0.7s,baz=24,slow=4.9,SNR=12						
	comp=Z,1.3nm,0.7s						
EIL	Elat	93.92	330	LR	LR	08 18 45.2	
	comp=Z,53nm,19.6s,baz=90,slow=39						
TORD	Torodi Ar. Bea	115.96	359	PKP	PKiKP	07 36 05.4	-0.8
	comp=Z,1.4nm,1.2s,baz=343,slow=1.0,SNR=2.6						
H03N2	Juan Fernandez	121.62	105	T	T	09 49 25.0	
	baz=313						
H03N1	Juan Fernandez	121.63	105	T	T	09 49 34.6	
	baz=313						
H03N3	Juan Fernandez	121.63	105	T	T	09 49 28.7	
	baz=313						
LBTB	Lobatse	147.50	314	PKPbc	PKPbc	07 37 08.2	+1.0
	comp=Z,5.1nm,0.6s,baz=48,slow=1.3,SNR=10.0						
BOSA	Boshof	150.71	311	PKPbc	PKiKP	07 37 16.0	+0.1
	comp=Z,6.3nm,0.8s,baz=23,slow=2.4,SNR=10						
BOSA	Boshof	150.71	311	PKIKP	PKiKP	07 37 16.0	+0.1

KRSC 01 07:22:56.9±0.9**, 51°.21N×155°.64E, h436**^{km}±8^{km}**, ML3.7, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDTR	Khodutka, Kamc	1.64	68	S	S	07 24 40.9	+0.3
RUS	Russkaya	2.16	54	P	P	07 23 58.3	+1.4
RUS				S	S	07 24 45.7	-0.1
UGLR	Uglovaya	2.80	43	P	P	07 24 03.7	+2.4
AVH	Avacha	2.80	42	P	P	07 24 03.2	+1.9
SMAR	Somma	2.83	42	P	P	07 24 03.5	+1.8
SDLR	Sedlovina	2.88	43	P	P	07 24 03.7	+1.8
SPN	Mys Shipunski	3.29	53	P	P	07 24 07.0	+2.0
SPN				S	S	07 25 00.9	+0.4
MKZ	Mys Kozlova	4.98	45	P	P	07 24 22.5	+2.4
MKZ				S	S	07 25 27.7	-0.5
KBG	Krutoberegovo	6.56	37	P	P	07 24 38.6	+2.1
KBTR	Krutoberegovo	6.57	38	P	P	07 24 38.4	+1.8

*IDC **01** 07:28:52.6±0.9, 43°.39S×42°.21E, h0^{km}, mb3.9/8, mbtmp4.0/8, MS3.8/15, Error ellipse: s-maj=54.4km s-min=17.9km az=46.0*

ISC 01 07:28:54.3±0.9**, 43°.4S**±0°.3×**42°.3E**±0°.3**, h10**^{km}**, n22, σ1^{s}00**/9**, mb4.0**/6**, MS3.8**/15**, Prince Edward Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	Boshof	20.08	312	P	P	07 33 29.0	+1.1
	4.8nm,1.0s,baz=141,slow=12,SNR=3.9						
BOSA				LR	LR	07 39 40.7	
	comp=Z,299nm,21.1s,baz=172,slow=32						
	4.8nm,1.0s						
SUR	Sutherland	20.11	296	P	P	07 33 29.4	+1.1
	3.2nm,0.7s,baz=138,slow=17,SNR=1.2						
SUR				LR	LR	07 39 57.8	
	comp=Z,346nm,18.2s,baz=135,slow=33						
	3.2nm,0.7s						
LBTB	Lobatse	22.83	318	P	P	07 33 57.2	-0.3
	2.0nm,0.7s,baz=126,slow=8.7,SNR=2.4						
LBTB				LR	LR	07 41 25.3	
	comp=Z,334nm,19.4s,baz=124,slow=33						
	2.0nm,0.7s						
MATP	Matopo	25.60	329	P	P	07 34 23.6	-0.2
	0.4nm,0.3s,baz=184,slow=14,SNR=2.1						
	0.4nm,0.3s						
MAW	Mawson	26.69	163	P	P	07 34 33.1	0.0
	6.2nm,0.8s,baz=310,slow=11,SNR=8.5						
MAW				LR	LR	07 42 32.3	
	comp=Z,150nm,21.3s,baz=326,slow=31						
	6.2nm,0.8s						
LSZ	Lusaka	30.46	332	LR	LR	07 45 30.6	
	comp=Z,129nm,22.0s,baz=136,slow=33						
TSUM	Tsumeb	31.78	312	LR	LR	07 46 44.9	
	comp=Z,206nm,19.6s,baz=147,slow=34						
SNAA	Sanae	35.72	203	LR	LR	07 49 38.8	
	comp=Z,58nm,18.4s,baz=31,slow=35						
KMBO	Kilima Mbogo	42.28	353	LR	LR	07 52 31.3	
	comp=Z,163nm,18.8s,baz=94,slow=34						
MBAR	Mbarara	43.80	343	LR	LR	07 53 45.3	
	comp=Z,90nm,20.7s,baz=148,slow=34						
QSPA	South Pole Qui	46.85	180	LR	LR	07 55 38.4	
	comp=Z,97nm,18.5s,baz=267,slow=34						
VNDA	Vanda	53.89	166	LR	LR	07 59 18.0	
	comp=Z,42nm,18.7s,baz=286,slow=34						
H01W2	Cape Leeuwin H	54.83	107	T	T	08 38 04.6	
	baz=238,slow=75,SNR=478						
H01W3	Cape Leeuwin H	54.84	107	T	T	08 38 05.1	
	baz=238,slow=75,SNR=500						
H01W1	Cape Leeuwin H	54.84	107	T	T	08 38 05.6	
	baz=238,slow=75,SNR=463						
DBIC	Dimbokro	65.53	307	LR	LR	08 05 24.3	
	comp=Z,84nm,19.5s,baz=162,slow=33						
TORD	Torodi Ar. Bea	67.34	317	P	P	07 39 49.2	-0.3
	1.3nm,0.7s,baz=156,slow=6.7,SNR=5.2						
TORD				LR	LR	08 07 06.4	
	comp=Z,56nm,21.6s,baz=212,slow=34						
	1.3nm,0.7s						
STKA	Stephens Creek	75.00	120	P	P	07 40 36.4	+0.5
	2.2nm,0.7s,baz=244,slow=5.7,SNR=6.3						
	2.2nm,0.7s						
ASAR	Alice Springs	75.30	109	P	P	07 40 38.0	+0.3
	0.5nm,0.8s,baz=228,slow=5.4,SNR=4.1						
	0.5nm,0.8s						
KEST	Kesra	84.23	334	LR	LR	08 21 07.4	
	comp=Z,88nm,18.5s,baz=266,slow=37						
MDT	Midelt	87.07	322	LR	LR	08 21 02.4	
	comp=Z,92nm,18.7s,baz=148,slow=36						
TXAR	Lajitas Array	149.42	254	PKPbc	PKPbc	07 48 41.9	-1.8
	0.7nm,0.8s,baz=140,slow=6.0,SNR=8.6						

*IDC **01** 07:38:28.3±3.2, 54°.21N×87°.39E, h0^{km}, mbtmp2.7/2, ML2.6/2, Error ellipse: s-maj=26.0km s-min=17.2km az=55.0*

*NNC **01** 07:38:29.2±2.7, 54°.12N×87°.22E, h0^{km}, mb2.2, mpv2.1, Error ellipse: s-maj=22.6km s-min=13.0km az=25.0, Suspected Mining explosion.*

ISC 01 07:38:34.0±5.2**, 54°.1N**±0°.2×**86°.8E**±0°.3**, h0**^{km}**, n8, σ0^{s}85**/9**, 6C-2D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.16	266	i		07 47 38.8	
	baz=77,slow=323,SNR=7.6						
ZAA0	Zalesovo Array	1.16	266	⇑P	Pg	07 38 55.3	-1.0
	0.1nm,0.2s						
ZAA0				⇑S	Sn	07 39 15.3	+1.3
	0.5nm,0.6s						
ZALV	Zalesovo Beam	1.16	266	Pg	Pg	07 38 55.5	-0.8
	0.7nm,0.3s,baz=81,slow=15,SNR=6.6						
ZALV				Lg	Lg	07 39 18.2	
	1.6nm,0.3s,baz=76,slow=23,SNR=8.4						
KURK	Kurchatov	6.01	240	⇑Lg	Lg	07 41 47.7	
	8.4nm,1.0s						
KURBB	Kurchatov Arra	6.11	239	Pn	Pn	07 40 05.9	+0.4
	0.1nm,0.3s,baz=56,slow=14,SNR=4.5						
KURBB				Lg	Lg	07 41 51.0	
	baz=56,slow=31						
	0.4nm,0.4s						
MK31	Makanchi Array	7.80	203	⇑Pn	Pn	07 40 29.7	+0.9
	0.1nm,0.2s,baz=24,slow=19,SNR=5.9						
MK31				⇑Sn	Sn	07 41 57.6	-0.2
	0.8nm,0.9s,baz=35,slow=32,SNR=4.0						
MK31				⇓Lg	Lg	07 42 43.4	
	6.1nm,1.1s,baz=9.7,slow=37,SNR=3.6						
MKAR	Makanchi Array	7.80	203	Pn	Pn	07 40 28.6	-0.1
	0.1nm,0.3s,baz=25,slow=13,SNR=5.6						
MKAR				Sn	Sn	07 41 58.1	+0.3
	0.1nm,0.3s,baz=24,slow=26,SNR=4.4						
MKAR				Lg	Lg	07 42 46.4	
	baz=25,slow=31,SNR=5.8						
	0.2nm,0.4s						
MAKZ	Makanchi	7.87	205	⇑Sn	Sn	07 41 59.4	+0.1
	1.8nm,1.1s						
MAKZ				⇓Lg	Lg	07 42 43.1	
	5.9nm,1.8s						

*IDC **01** 07:50:34.3±4.9, 17°.48N×105°.69W, h0^{km}, mb3.6/5, mbtmp3.6/8, ML3.6/3, MS3.5/17, Error ellipse: s-maj=82.4km s-min=44.5km az=9.0*

*MEX **01** 07:50:40.8±1.6, 18°.09N×105°.75W, h2^{km}±133^{km}, MD4.3*

*NEIC **01** 07:50:42.6±2.3, 18°.16N±0°.08×105°.61W±0°.10, h10^{km}±2^{km}, mb4.3/121, Md4.4/37(MEX), Error ellipse: s-maj=16.5km s-min=12.7km az=241.0*

ISC 01 07:50:43.5±3.0**, 18°.18N**±0°.08×**105°.64W**±0°.07**, h23**^{km}±21^{km}**, n116, σ1^{s}49**/84**, mb4.3**/34**, MS3.4**/15**, Off coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CJM	Chamela	1.43	23	eP	Pn	07 51 06.1	-1.9
CJM				eS	Sn	07 51 25.5	-0.7
CDAR	Ciudad de Arme	1.72	64	i P	Pn	07 51 10.1	-1.9
CDAR				i S	Sn	07 51 33.0	-0.4
R15V		1.86	58		Pn	07 51 11.7	-2.3
R15V		1.86	58	eP	Pn	07 51 11.7	-2.3
R15V				eS	Sn	07 51 37.0	+0.2
COIG	Colima	2.10	61	eP	Pn	07 51 15.2	-2.2
COIG				eS	Sn	07 51 42.9	0.0
MNGA	Volcan de Coli	2.30	56	eP	Pn	07 51 19.1	-1.2
MNGA				i S	Sb	07 51 51.3	-1.4
EZ5V		2.33	56		Pn	07 51 19.9	-0.7
EZ5V		2.33	56	eP	Pn	07 51 19.9	-0.7
EZ5V				i S	Sb	07 51 52.1	-1.2
INCO	Volcan de Coli	2.35	55	eP	Pn	07 51 20.6	-0.5
INCO				eS	Sb	07 51 53.7	-0.4
JUBC	Volcan de Coli	2.37	56	eP	Pn	07 51 20.8	-0.5
JUBC				i S	Sb	07 51 55.5	+0.9
ANIG	Ahuacatlan	3.05	20		Pn	07 51 29.9	-0.5
ANIG					Sn	07 52 06.9	+0.6
ANIG	Ahuacatlan	3.05	20	i P	Pn	07 51 29.9	-0.5
ANIG				eS	Sn	07 52 06.9	+0.6
MOIG	Morelia	4.47	70		Pn	07 51 50.7	+0.6
AAIG	Aguscalientes	4.86	39	eP	Pn	07 51 56.6	+1.1
AAIG				i S	Sn	07 52 54.5	+3.4
ARIG	Puente Sto Nin	5.03	88		Pn	07 51 58.1	+0.4
ARIG					Sn	07 52 58.0	+2.8
ARIG	Puente Sto Nin	5.03	88	eP	Pn	07 51 58.1	+0.4
ARIG				i S	Sn	07 52 58.0	+2.8
H06E1	SOCORRO T-PHAS	5.05	278	T	T	07 56 43.1	
	SNR=338						
ZAIG	Zacatecas	5.40	32	Pn	Pn	07 52 05.2	+2.3
ZAIG	Zacatecas	5.40	32	e	Pn	07 52 06.0	+3.1
MEIG	Mezcala	5.74	92		Pn	07 52 06.0	-1.4
MEIG					Sn	07 53 11.3	-1.2
MEIG	Mezcala	5.74	92	i P	Pn	07 52 06.0	-1.4
MEIG				eS	Sn	07 53 11.3	-1.2
PLIG	Platanillo	5.84	87		Pn	07 52 09.9	+1.2
PLIG					Sn	07 53 15.2	+0.1
PLIG	Platanillo	5.84	87	eP	Pn	07 52 09.9	+1.2
PLIG				i S	Sn	07 53 15.2	+0.1
TLIG	Tlapa	6.77	94		Sn	07 53 37.3	-0.8
TLIG	Tlapa	6.77	94		Pn	07 52 20.7	-0.8
TLIG	Tlapa	6.77	94	eP	Pn	07 52 22.9	+1.3
TLIG				i S	Sn	07 53 37.3	-0.8
TX31	Lajitas Ar. Si	11.25	9		Pn	07 53 26.2	+3.2
TX32	Lajitas Array	11.25	9	Pn	Pn	07 53 27.5	+4.5
TXAR	Lajitas Array	11.25	9	Pn	Pn	07 53 27.2	+4.2
	0.1nm,0.3s,baz=181,slow=13,SNR=31						
TXAR				LR	LR	07 57 22.7	
	comp=Z,102nm,21.1s,baz=184,slow=34						
	2.4nm,0.8s						
833A	Chaparral WMA,	11.61	28	Pn	Pn	07 53 27.5	-0.3
JCT	Junction City	13.35	22		Pn	07 53 53.9	+2.3
MNTX	Cornudas Mount	13.46	1		Pn	07 53 53.6	+0.4
319A	Douglas	13.55	347		Pn	07 53 55.5	+1.1
121A	Cookes Peak, D	14.42	353	Pn	Pn	07 54 06.7	+0.3
435B	Jarrell	14.53	29		Pn	07 54 09.7	+2.0
TUC	Tucson	14.81	343	Pn	Pn	07 54 12.8	+1.1
ABTX	Abilene, Hawle	15.36	19	Pn	P	07 54 21.2	-2.3
ABTX				IAmb	IAmb	07 54 26.7	
	comp=Z,19nm,1.0s						
WHTX	Lake Whitney,	15.61	27	Pn	P	07 54 24.0	-2.1
WHTX				IAmb	IAmb	07 54 24.7	
	comp=Z,12nm,0.9s						
MSTX	Muleshoe	15.93	9		P	07 54 28.7	-1.1
MSTX				IAmb	IAmb	07 54 35.2	
	comp=Z,31nm,1.4s						
LENM	Lemitar	15.96	356	P	P	07 54 29.7	-0.6
113A	Mohawk Valley,	16.26	335	P	P	07 54 32.7	-0.6
ANMO	Albuquerque	16.71	358	P	P	07 54 39.6	+1.1
	comp=Z,0.1nm,0.3s,baz=173,slow=10,SNR=7.4						
ANMO				LR	LR	08 01 14.9	
	comp=Z,200nm,18.4s,baz=180,slow=37						
	comp=Z,1.9nm,1.0s						
ANMO	Albuquerque	16.71	358		P	07 54 39.6	+1.1
Z35A	Perchaven, San	16.86	25	P	P	07 54 39.6	-0.4
Z35A				IAmb	IAmb	07 54 42.5	
	comp=Z,28nm,1.3s						
AMTX	Amarillo	17.01	11		P	07 54 41.7	0.0
X34A	Smith Ranch, M	17.78	22		P	07 54 51.2	+1.1
X34A				IAmb	IAmb	07 54 53.3	
	comp=Z,23nm,1.0s						
WUAZ	Wupatki	18.00	345	P	P	07 54 54.7	+1.9
PFO	Pinyon Flats O	18.17	330	P	P	07 54 55.6	+1.0
	comp=Z,0.1nm,0.3s,baz=144,slow=15,SNR=4.6						
	comp=Z,2.8nm,1.1s						
PFO	Pinyon Flats O	18.17	330	P	P	07 54 55.0	+0.4
X37A	Clayton	18.73	27	IAmb	IAmb	07 55 05.5	
	comp=Z,22nm,1.2s						
143A	Socs Landing,	19.32	39	IAmb	IAmb	07 55 16.9	
	comp=Z,12nm,0.9s						
TUL1	Leonard	19.70	24	P	P	07 55 11.4	+0.2
W39A	Magazine	19.96	30	IAmb	IAmb	07 55 25.6	
	comp=Z,9.2nm,1.1s						
QSM	Queen of Sheba	20.31	333	P	P	07 55 18.4	+0.4
T35A	Sooner Cattle	20.32	21	P	P	07 55 18.8	+0.7
T35A				IAmb	IAmb	07 55 20.0	
	comp=Z,24nm,0.9s						
WHAR	Wooly Hollow	20.76	32	IAmb	IAmb	07 55 27.3	
	comp=Z,12nm,1.2s						
HHAR	Hobbs	20.79	28	IAmb	IAmb	07 55 28.6	
	comp=Z,19nm,1.2s						
KSCO	Kaye Shedlock'	20.92	7	IAmb	IAmb	07 55 32.5	
	comp=Z,13nm,1.1s						
MSU	Marysvale	21.05	346	P	P	07 55 27.0	+0.9
CBKS	Cedar Bluff	21.19	13	IAmb	IAmb	07 55 41.3	
	comp=Z,22nm,1.1s						
Y45A	Yeager Farm, C	21.25	40	IAmb	IAmb	07 55 36.5	
	comp=Z,29nm,1.4s						
FCAR	Ozark Folk Cen	21.32	31	IAmb	IAmb	07 55 30.8	
	comp=Z,9.0nm,1.1s						
U40A	Yellville	21.34	29	IAmb	IAmb	07 55 34.9	
	comp=Z,6.5nm,1.0s						
PSUT	Pine Spring	21.51	342	P	P	07 55 30.5	-0.5
JTS	Las Juntas de	21.52	109	P	P	07 55 32.2	+1.1
P17A	Butcher Ranch,	21.67	349	IAmb	IAmb	07 55 50.6	
	comp=Z,9.2nm,1.2s						
Z47A	Carrollton	21.73	43	IAmb	IAmb	07 55 39.5	
	comp=Z,13nm,0.9s						
LCAR	Lake Charles	21.95	33	IAmb	IAmb	07 55 42.2	
	comp=Z,9.0nm,1.2s						
S39A	Bolivar	22.24	27	IAmb	IAmb	07 55 45.1	
	comp=Z,14nm,1.1s						
MGMO	Mountain Grove	22.26	29	IAmb	IAmb	07 55 42.6	
	comp=Z,14nm,1.0s						
KSU1	Kansas State U	22.28	19	IAmb	IAmb	07 55 43.1	
	comp=Z,11nm,0.8s						
LRAL	Lakeview Retre	22.34	45	IAmb	IAmb	07 55 46.0	
	comp=Z,14nm,1.1s						
PBMO	Poplar Bluff	22.87	33	IAmb	IAmb	07 55 48.3	
	comp=Z,8.9nm,1.0s						
PLAL	Pickwick Lake	22.89	40	IAmb	IAmb	07 55 48.0	
	comp=Z,9.1nm,1.2s						
352A	Blakely	22.94	51	P	P	07 55 47.0	+0.8
NVAR	Mina Array Bea	23.00	334	P	P	07 55 47.9	+0.9
	comp=Z,0.3nm,0.6s,baz=154,slow=11,SNR=3.1						
NVAR				LR	LR	08 03 56.3	
	comp=Z,96nm,20.2s,baz=166,slow=34						
	comp=Z,0.3nm,0.6s						
X48A	Hartselle	23.18	42	P	P	07 55 48.3	-0.3
X48A				IAmb	IAmb	07 55 50.8	
	comp=Z,12nm,1.1s						
R40A	Maddies Statio	23.19	28	IAmb	IAmb	07 55 51.5	
	comp=Z,14nm,1.0s						
Y49A	Blount Mountai	23.23	44	P	P	07 55 49.1	+0.1
Y49A				IAmb	IAmb	07 55 51.5	
	comp=Z,13nm,1.1s						
CCM	Cathedral Cave	23.47	30	P	P	07 55 52.0	+0.7
152A	Waverly Hall	23.71	49	IAmb	IAmb	07 55 57.2	
	comp=Z,16nm,1.2s						
FVM	French Village	23.80	31	IAmb	IAmb	07 55 56.2	
	comp=Z,16nm,1.1s						
ELK	Elko	23.96	342	LR	LR	08 04 20.8	
	comp=Z,82nm,19.9s,baz=168,slow=34						
S44A	Carbondale	24.17	33	IAmb	IAmb	07 55 59.8	
	comp=Z,12nm,0.9s						
BMN	Battle Mountai	24.32	338	IAmb	IAmb	07 56 03.6	
	comp=Z,6.2nm,1.3s						
SWET	Sewanee	24.38	42	P	P	07 55 58.9	-1.1
SWET				IAmb	IAmb	07 56 02.1	
	comp=Z,18nm,1.3s						
MPK	Martis Peak	24.47	332	IAmb	IAmb	07 56 11.0	
	comp=Z,10nm,1.2s						
CLTN	Cedars of Leba	24.69	40	IAmb	IAmb	07 56 05.2	
	comp=Z,10nm,1.1s						
PDAR	Pinedale Array	24.73	353	P	P	07 56 03.5	+0.1
	comp=Z,0.8nm,0.8s,baz=158,slow=7.5,SNR=6.3						
PDAR				LR	LR	08 05 03.2	
	comp=Z,63nm,19.7s,baz=186,slow=34						
	comp=Z,0.8nm,0.8s						
GOGA	Godfrey	25.00	48	P	P	07 56 05.5	-0.1
SNOW	Snow King Moun	25.57	351	P	P	07 56 10.8	-0.2
W52A	Murphy	25.61	45	IAmb	IAmb	07 56 19.7	
	comp=Z,9.5nm,0.9s						
TPAW	Teton Pass	25.63	351	IAmb	IAmb	07 56 21.5	
	comp=Z,6.6nm,0.7s						
LOHW	Long Hollow	25.70	352	IAmb	IAmb	07 56 21.2	
	comp=Z,5.1nm,1.1s						
MOOW	Moose Ponds	25.85	352	IAmb	IAmb	07 56 23.3	
	comp=Z,3.0nm,0.7s						
TKL	Tuckaleechee C	26.04	44	P	P	07 56 14.9	-0.2
	comp=Z,2.8nm,0.9s,baz=209,slow=11,SNR=4.6						
TKL				LR	LR	08 09 03.0	
	comp=Z,77nm,18.7s,baz=241,slow=42						
	comp=Z,2.8nm,0.9s						
HODGE	Hodges	26.28	48	IAmb	IAmb	07 56 20.7	
	comp=Z,15nm,1.4s						
YBH	Yreka Blue Hor	27.64	332	LR	LR	08 07 16.5	
	comp=Z,80nm,18.1s,baz=164,slow=36						
I40A	Norwalk	28.59	23	IAmb	IAmb	07 56 39.1	
	comp=Z,9.0nm,0.9s						
NEW	Newport	31.43	345	LR	LR	08 09 35.0	
	comp=Z,63nm,18.5s,baz=168,slow=36						
ULM	Lac du Bonnet	32.94	12	LR	LR	08 11 11.0	
	comp=Z,75nm,18.5s,baz=161,slow=37						
SADO	Sadowa	34.54	34	LR	LR	08 12 48.5	
	comp=Z,129nm,18.1s,baz=244,slow=38						
BBB	Bella Bella	38.26	338	LR	LR	08 12 05.6	
	comp=Z,41nm,20.6s,baz=140,slow=33						
NNA	Nana	41.31	134	LR	LR	08 11 44.2	
	comp=Z,71nm,21.6s,baz=308,slow=31						
DLBC	Dease Lake	44.01	342	LR	LR	08 17 01.1	
	comp=Z,68nm,18.2s,baz=184,slow=36						
YKA	Yellowknife Ar	44.71	354	P	P	07 58 54.2	-0.4
	comp=Z,0.6nm,1.0s,baz=163,slow=7.3,SNR=4.0						
YKA				LR	LR	08 18 18.8	
	comp=Z,58nm,19.1s,baz=8.0,slow=37						
	comp=Z,0.6nm,1.0s						
RPN	Rapa Nui	45.18	185	LR	LR	08 13 04.3	
	comp=Z,79nm,20.2s,baz=134,slow=30						
LPAZ	La Paz	50.37	131	LR	LR	08 19 47.2	
	comp=Z,74nm,18.6s,baz=62,slow=35						
FRB	Frobisher Bay	52.05	20	LR	LR	08 22 37.6	
	comp=Z,83nm,18.3s,baz=199,slow=36						
ILAR	Eielson Array	54.09	340	P	P	08 00 04.7	-1.4
	comp=Z,1.1nm,1.1s,baz=156,slow=8.0,SNR=4.8						
	comp=Z,1.1nm,1.1s						
H03N2	Juan Fernandez	57.31	153	T	T	09 02 17.6	
	baz=331,slow=77,SNR=13						
H03N1	Juan Fernandez	57.33	153	T	T	09 02 29.5	
	baz=331,slow=77,SNR=21						
H03N3	Juan Fernandez	57.33	153	T	T	09 02 16.0	
	baz=331,slow=77,SNR=18						
H11S1	WAKE ISLAND Hy	82.26	287	T	T	09 33 30.5	
	baz=76						
H11S2	WAKE ISLAND Hy	82.26	287	T	T	09 33 29.2	
	baz=76						
H11S3	WAKE ISLAND Hy	82.27	287	T	T	09 33 32.2	
	baz=76						

*SJA **01** 07:53:04.5±0.8, 22°.54S×68°.86W, h167^{km}±7^{km}, ML4.6, MW4.3*

*NEIC **01** 07:53:07.1±1.9, 22°.67S±0°.04×68°.64W±0°.07, h99^{km}±4^{km}, mb4.4/10, Mwr4.4/28, Mwr4.7(GUC), Error ellipse: s-maj=9.4km s-min=6.2km az=91.0*

*GUC **01** 07:53:07.8±0.6, 22°.68S×68°.66W, h96^{km}±2^{km}, ML4.5*

*NEIC **01** 07:53:07.1, 22°.67S×68°.64W, h101^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.16; $M_{\theta\theta}$2.16; $M_{\phi\phi}$-1.00; $M_{r\theta}$-0.91; $M_{\theta\phi}$1.98; $M_{\phi r}$-4.84; Fault plane solution: $M_0$5.63000×10^{15} NP1:ϕ_s278.47000°, δ28.31000°, λ-12.58000°. NP2:ϕ_s19.59000°, δ84.07000°, λ-117.73000°. Principal axes: T 5.1787, Plg33.0000°, Azm133.0000°; N 0.8145, Plg28.0000°, Azm23.0000°; P -5.9932, Plg44.0000°, Azm262.0000°;*

*IDC **01** 07:53:07.8±0.5, 22°.62S×68°.50W, h102^{km}±4^{km}, mb3.7/10, mbtmp4.0/13, MS2.8/1 Error ellipse: s-maj=18.3km s-min=14.0km az=40.0*

ISC 01 07:53:07.2±0.5**, 22°.64S**±0°.03×**68°.63W**±0°.04**, h101**^{km}±3^{km}**, n89, σ1^{s}51**/122**, mb4.2**/10**, 4C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	0.26	276	P	Pn	07 53 22.4	+0.1
	2μm,0.4s,baz=89,slow=3.8,SNR=4183						
LVC				S	Sn	07 53 32.7	-0.8
	10μm,0.4s,baz=310,slow=20,SNR=34						
LVC	Limon Verde	0.26	276	Pn	Pn	07 53 22.3	0.0
LVC	Limon Verde	0.26	276	⇑eP	Pn	07 53 21.9	-0.4
LVC				i S	Sn	07 53 32.9	-0.6
AF01	San Pedro de A	0.52	127		Pn	07 53 24.2	+0.6
AF01	San Pedro de A	0.52	127	⇓eP	Pn	07 53 23.6	-0.1
AF01				eS	Sn	07 53 35.9	-0.1
AF01				IAML		07 53 57.4	
	comp=E,33μm,0.4s						
PB06	IPOC Station P	0.87	265		Pn	07 53 26.4	-0.3
PB06	IPOC Station P	0.87	265	eP	Pn	07 53 26.1	-0.5
PB06				eS	Sn	07 53 40.5	-0.7
PB06				IAML		07 53 44.0	
	comp=E,9μm,0.1s						
PB15	IPOC Station P	0.96	234		Pn	07 53 28.0	+0.4
PB15	IPOC Station P	0.96	234	⇑eP	Pn	07 53 27.7	+0.1
PB15				eS	Sn	07 53 42.2	-0.7
PB15	IPOC Station P	0.96	234	eP	Pn	07 53 28.0	+0.4
PB15				IAML		07 53 49.1	
	comp=Z,28μm,0.2s						
PB09	IPOC Station P	1.01	326		Pn	07 53 28.4	+0.3
PB09	IPOC Station P	1.01	326	eP	Pn	07 53 28.2	+0.1
PB09				eS	Sn	07 53 44.4	+0.6
PB04	IPOC Station P	1.44	282		Pn	07 53 32.6	-0.4
PB04	IPOC Station P	1.44	282	⇑eP	Pn	07 53 32.4	-0.6
PB04				eS	Sn	07 53 51.5	-1.0
PB04				IAML		07 54 01.4	
	comp=E,6μm,0.4s						
PB04	IPOC Station P	1.44	282	eP	Pn	07 53 33.9	+0.9
PB04				eS	Sn	07 53 54.6	+2.1
PB04				IAML		07 53 59.4	
	comp=Z,5μm,0.2s						
PB07	IPOC Station P	1.48	308		Pn	07 53 33.1	-0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB07	IPOC Station P	1.48	308	eP	Pn	07 53 32.8	-0.7
PB07				eS	Sn	07 53 53.2	-0.1
PB07				IAML		07 53 55.1	
	comp=N,7µm,0.2s						
PB02	IPOC Station P	1.76	318		Pn	07 53 36.8	-0.3
PB02	IPOC Station P	1.76	318	eP	Pn	07 53 36.6	-0.3
PB02				eS	Sn	07 53 59.0	-0.6
PB02				IAML		07 54 04.7	
	comp=E,8µm,0.4s						
PB02	IPOC Station P	1.76	318	eP	Pn	07 53 36.7	-0.3
PB02				eS	Sn	07 54 00.1	+0.5
PB02				IAML		07 54 08.0	
	comp=Z,7µm,0.2s						
PB01	IPOC Station P	1.78	333		Pn	07 53 37.2	0.0
PB01	IPOC Station P	1.78	333	eP	Pn	07 53 37.1	0.0
PB01				eS	Sn	07 53 59.9	+0.1
PB01				IAML		07 54 02.1	
	comp=E,9µm,0.4s						
PB01	IPOC Station P	1.78	333	eP	Pn	07 53 37.2	0.0
PB01				eS	Sn	07 54 01.6	+1.7
PB01				IAML		07 54 05.2	
	comp=Z,3µm,0.2s						
PB10	IPOC Station P	1.98	243	Pn	Pn	07 53 39.1	-0.5
PB10	IPOC Station P	1.98	243⇓	eP	Pn	07 53 39.1	-0.5
PB10				eS	Sn	07 54 02.5	-1.7
PB10	IPOC Station P	1.98	243	eP	Pn	07 53 39.0	-0.5
PB10				eS	Sn	07 54 07.6	+3.3
PB10				IAML		07 54 10.2	
	comp=Z,2µm,0.4s						
TA01	Diego Aracena	2.52	325	Pn	Pn	07 53 45.7	-1.0
TA01	Diego Aracena	2.52	325⇑	eP	Pn	07 53 45.5	-1.1
TA01				eS	Sn	07 54 16.4	-0.5
TA01				IAML		07 54 25.0	
	comp=E,2µm,0.3s						
TA01	Diego Aracena	2.52	325	eP	Pn	07 53 45.0	-1.7
TA01				IAML		07 54 26.0	
	comp=Z,2µm,0.3s						
PB08	IPOC Station P	2.53	349		Pn	07 53 48.0	+0.8
PB08	IPOC Station P	2.53	349	eP	Pn	07 53 47.8	+0.6
PB08				eS	Sn	07 54 19.1	+1.3
PB08				IAML		07 54 26.3	
	comp=E,1µm,0.2s						
PB08				IAML		07 54 27.5	
	comp=N,1µm,0.2s						
PB08	IPOC Station P	2.53	349	eP	Pn	07 53 48.0	+0.8
PB08				eP	Pn	07 53 48.0	+0.8
PB08				eS	Sn	07 54 17.2	-0.7
PB14	IPOC Station P	2.56	219	Pn	Pn	07 53 46.6	-1.0
PB14	IPOC Station P	2.56	219	eP	Pn	07 53 47.3	-0.3
PB14				eS	Sn	07 54 15.3	-3.1
PB14				IAML		07 54 29.5	
	comp=E,979nm,0.4s						
PB14	IPOC Station P	2.56	219	eP	Pn	07 53 48.0	+0.5
PB14				IAML		07 54 25.0	
	comp=Z,2µm,1.0s						
GO02	Mina Guanaco	2.66	199	Pn	Pn	07 53 49.1	+0.3
GO02	Mina Guanaco	2.66	199	eP	Pn	07 53 48.5	-0.3
GO02				eS	Sn	07 54 19.7	-1.1
GO02				IAML		07 54 33.4	
	comp=E,4µm,0.3s						
GO02	Mina Guanaco	2.66	199	eP	Pn	07 53 49.1	+0.3
GO02				eS	Sn	07 54 17.6	-3.2
YJA	Yavi	2.92	82	eP	Pn	07 53 56.0	+3.6
PB11	IPOC Station P	3.02	341		Pn	07 53 52.7	-0.8
PB11	IPOC Station P	3.02	341	eP	Pn	07 53 52.6	-0.8
PB11				eS	Sn	07 54 29.5	+0.5
PB11				IAML		07 54 42.8	
	comp=E,2µm,0.2s						
PB11	IPOC Station P	3.02	341	eP	Pn	07 53 52.0	-1.5
PB11				eS	Sn	07 54 16.7	-12
PB11				IAML		07 54 37.6	
	comp=Z,1µm,0.3s						
HJA	Humahuaca	3.02	101	eP	Pn	07 53 57.2	+3.5
SLA	San Lorenzo	3.54	127	eP	Pn	07 54 04.0	+3.6
AC01	Pan de Azucar	3.93	207		Pn	07 54 04.0	-1.5
AC01	Pan de Azucar	3.93	207	eP	Pn	07 54 04.0	-1.5
AC01				eS	Sn	07 54 37.7	-13
AC01				IAML		07 55 05.6	
	comp=Z,928nm,0.9s						
AC02	Maricunga	4.20	186	Pn	Pn	07 54 10.1	+0.5
AC02	Maricunga	4.20	186	eP	Pn	07 54 10.0	+0.3
AC02				IAML		07 55 28.3	
	comp=Z,450nm,0.7s						
PB12	IPOC Station P	4.31	338	Pn	Pn	07 54 09.0	-1.8
PB12	IPOC Station P	4.31	338	eP	Pn	07 54 08.0	-2.8
PB12				IAML		07 55 19.0	
	comp=Z,554nm,0.4s						
PB16	IPOC Station P	4.36	349	Pn	Pn	07 54 11.7	-0.2
PB16	IPOC Station P	4.36	349	eP	Pn	07 54 12.0	+0.1
GO03	Copiap	5.14	196	eP	Pn	07 54 20.4	-1.6
GO03				eS	Sn	07 55 21.2	+1.0
LPAZ	La Paz	6.33	4	P	Pn	07 54 39.9	+1.2
	comp=Z,3.0nm,0.4s,baz=193,slow=6.9,SNR=31						
LPAZ	La Paz	6.33	4	Pn	Pn	07 54 40.5	+1.8
LCO	Las Campanas	6.62	196	Pn	Pn	07 54 38.8	-3.4
CO02	Combarbal	8.79	193		Pn	07 55 06.4	-5.2
SIV	San Ignacio	9.72	48	P	Pn	07 55 22.0	-2.3
	comp=Z,11nm,0.6s,baz=233,slow=11,SNR=45						
SIV				S	Sn	07 57 03.6	-8.1
	comp=Z,6.0nm,0.9s,baz=128,slow=23,SNR=1.8						
VA06	Catapilco	10.16	193		Pn	07 55 26.1	-4.1
VA03	San Esteban	10.23	189		Pn	07 55 28.2	-2.9
MT02	Curacav	10.81	191		Pn	07 55 33.4	-5.6
CPUP	Villa Florida	10.93	112	P	Pn	07 55 38.0	-2.5
	comp=Z,4.8nm,0.9s,baz=285,slow=13,SNR=6.2						
CPUP	Villa Florida	10.93	112	Pn	Pn	07 55 38.8	-1.8
LMEL	Las Melosas	11.25	187	Pn	Pn	07 55 46.4	+1.3
BO04	La Punta	11.44	188		Pn	07 55 47.4	-0.1
NNA	Nana	13.17	322	LR	LR	08 00 41.5	
	comp=Z,39nm,20.1s,baz=152,slow=34						
TRCB	Terra Rica	14.76	94	P	P	07 56 34.7	+0.3
ITAB	Concordia	15.65	110		P	07 56 43.8	-0.3
ITAB				IAmb	IAmb	07 56 45.6	
	comp=Z,44nm,0.9s						
TRQA	Tornquist	16.39	161		Pn	07 56 50.7	-0.6
BDFB	Brasilia	20.67	74	P	P	07 57 37.4	-1.9
	comp=Z,6.0nm,0.8s,baz=244,slow=12,SNR=13						
	comp=Z,6.0nm,0.8s						
BDFB	Brasilia	20.67	74	P	P	07 57 38.1	-1.1
CNNC	Cliffs of the	58.23	351	P	P	08 02 50.2	-0.7
VNA3	Neumayer Olymp	58.92	161	P	P	08 02 56.6	+1.2
SNAA	Sanae	61.12	161	P	P	08 03 11.5	+1.0
SNAA	Sanae	61.12	161	P	P	08 03 10.8	+0.3
	comp=Z,3.4nm,0.9s,baz=286,slow=8.9,SNR=8.1						
	comp=Z,3.4nm,0.9s						
SNAA	Sanae	61.12	161	P	P	08 03 11.0	+0.5
SNAA				IAmb	IAmb	08 03 11.9	
	comp=Z,3.9nm,0.9s						
TXAR	Lajitas Array	61.71	325	P	P	08 03 15.4	+0.4
	comp=Z,0.2nm,0.8s,baz=128,slow=7.3,SNR=3.0						
TXAR				pP	pP	08 03 40.4	-0.6
	comp=Z,0.3nm,0.7s,baz=134,slow=7.2,SNR=3.5						
	comp=Z,0.2nm,0.8s						
S39A	Bolivar	64.35	338	P	P	08 03 32.3	+0.1
S39A				IAmb	IAmb	08 03 33.0	
	comp=Z,5.0nm,0.8s						
ANMO	Albuquerque	67.59	327	P	P	08 03 54.6	+1.3
	comp=Z,1.1nm,0.8s,baz=151,slow=7.7,SNR=6.8						
ANMO				pP	PcP	08 04 20.5	+0.8
	comp=Z,0.7nm,0.8s,baz=131,slow=6.5,SNR=2.7						
	comp=Z,1.1nm,0.8s						
PDAR	Pinedale Array	75.22	330	P	P	08 04 41.1	+2.0
	comp=Z,0.3nm,0.5s,baz=141,slow=8.7,SNR=2.6						
	comp=Z,0.3nm,0.5s						
NVAR	Mina Array Bea	76.55	322	P	P	08 04 47.7	+1.0
	comp=Z,0.7nm,1.0s,baz=146,slow=6.4,SNR=3.7						
NVAR				pP	pP	08 05 14.2	+0.8
	comp=Z,0.3nm,0.6s,baz=156,slow=6.8,SNR=2.6						
NVAR				sP	sP	08 05 25.1	+0.4
	comp=Z,0.6nm,0.8s,baz=167,slow=8.3,SNR=3.5						
	comp=Z,0.7nm,1.0s						
TORD	Torodi Ar. Bea	77.50	70	P	P	08 04 51.9	-0.4
	comp=Z,2.9nm,0.6s,baz=255,slow=4.6,SNR=24						
TORD				pP	pP	08 05 18.2	-1.3
	comp=Z,5.0nm,0.7s,baz=253,slow=5.5,SNR=9.7						
	comp=Z,2.9nm,0.6s						
TORD	Torodi Ar. Bea	77.50	70	P	P	08 04 52.0	-0.2
TORD				IAmb	IAmb	08 05 20.3	
	comp=Z,3.8nm,0.7s						
BOSA	Boshof	82.69	118	P	P	08 05 20.2	0.0
	comp=Z,3.0nm,0.9s,baz=257,slow=5.5,SNR=4.2						
BOSA				pP	pP	08 05 47.7	+0.3
	comp=Z,4.1nm,1.1s,baz=240,slow=3.7,SNR=3.1						
	comp=Z,3.0nm,0.9s						
MAW	Mawson	83.17	163	P	P	08 05 23.0	+1.3
	comp=Z,2.1nm,0.7s,baz=213,slow=17,SNR=2.9						
MAW				pP	pP	08 05 49.7	+0.6
	comp=Z,2.6nm,0.8s,baz=212,slow=6.4,SNR=2.8						
	comp=Z,2.1nm,0.7s						
YKA	Yellowknife Ar	92.34	340	P	P	08 06 05.8	+0.1
	comp=Z,1.1nm,0.8s,baz=137,slow=4.4,SNR=3.8						
YKA				pP	pP	08 06 32.9	-0.4
	comp=Z,0.8nm,0.8s,baz=138,slow=4.9,SNR=5.0						
	comp=Z,1.1nm,0.8s						
ASAR	Alice Springs	129.03	207	PKP	PKPdf	08 12 04.4	+0.4
	comp=Z,0.5nm,0.9s,baz=126,slow=2.7,SNR=4.1						
ASAR				pPKP	pPKPdf	08 12 33.6	+0.8
	comp=Z,0.4nm,0.8s,baz=160,slow=3.0,SNR=2.0						
WRA	Warramunga Arr	132.10	210	PKP	PKPdf	08 12 10.5	+0.6
	comp=Z,0.4nm,0.6s,baz=164,slow=1.7,SNR=5.8						
WRA				pPKP	pPKPdf	08 12 37.9	-0.8
	comp=Z,0.3nm,0.5s,baz=152,slow=1.8,SNR=2.2						
MKAR	Makanchi Array	146.39	37	PKPbc	PKPdf	08 12 35.3	+0.3
	comp=Z,0.5nm,0.7s,baz=298,slow=2.6,SNR=6.4						
MKAR				pPKPbc	pPKPdf	08 13 04.3	+0.6
	comp=Z,1.7nm,1.0s,baz=276,slow=2.3,SNR=3.6						

IDC ***01*** *08:12:22.8±5.0, 17°.33N×105°.52W, h0km, mb3.4/5, mbtmp3.5/8, ML3.4/3, MS3.2/6, Error ellipse: s-maj=83.7km s-min=46.9km az=7.0*

MEX ***01*** *08:12:27.8±2.2, 17°.74N×105°.41W, h20km±174km, MD4.5*

NEIC ***01*** *08:12:31.3±2.4, 17°.91N±0°.09×105°.6W±0°.1, h10km±2km, mb4.3/114, Md4.4/34(MEX), Error ellipse: s-maj=18.6km s-min=13.3km az=233.0*

ISC 01 08:12:33.5±2.2**, 18°.24N**±0°.08×**105°.37W**±0°.07**, h16**km±11km**, n90,** σ**2**s**17**/59**, mb4.3**/27**, Off coast of Jalisco**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CJM	Chamela	1.29	14	eS	Sg	08 13 15.7	+0.5
CDAR	Ciudad de Arme	1.46	61	i P	Pg	08 13 01.2	-0.5
CDAR				eS	Sn	08 13 17.2	-0.9
R15V		1.60	55	eP	Pn	08 12 56.6	-4.7
R15V				eS	Sn	08 13 21.4	-0.2
COIG	Colima	1.84	59	eP	Pn	08 13 00.7	-3.9
MNGA	Volcan de Coli	2.05	53	eP	Pn	08 13 04.0	-3.6
MNGA				eS	Sn	08 13 33.2	+0.1
EZ5V		2.07	53	eP	Pn	08 13 04.4	-3.6
INCO	Volcan de Coli	2.10	52	eP	Pn	08 13 04.4	-4.0
INCO				eS	Sn	08 13 34.4	0.0
JUBC	Volcan de Coli	2.12	53	eP	Pn	08 13 04.6	-4.0
JUBC				eS	Sn	08 13 34.3	-0.4
ANIG	Ahuacatlan	2.91	16		Pn	08 13 21.2	+1.9
ANIG					Sn	08 13 57.3	+3.3
ANIG	Ahuacatlan	2.91	16	eP	Pn	08 13 16.3	-3.0
ANIG				i S	Sn	08 13 54.6	+0.7
MOIG	Morelia	4.20	69		Pn	08 13 39.7	+2.5
AAIG	Aguscalientes	4.65	37	eP	Pn	08 13 48.5	+5.2
AAIG				i S	Sn	08 14 38.7	+1.6
ARIG	Puente Sto Nin	4.77	89		Pn	08 13 47.9	+3.1
ARIG					Sn	08 14 42.2	+2.4
ZAIG	Zacatecas	5.21	30	Pn	Pn	08 13 54.7	+3.6
H06E1	SOCORRO T-PHAS	5.30	277	T	T	08 18 39.3	
	SNR=121						
TLIG	Tlapa	6.51	95		Pn	08 14 06.0	-2.8
TLIG					Sn	08 15 28.2	+5.3
CMIG	Matias Romero	10.06	95	LR	LR	08 18 54.9	
	comp=Z,97nm,19.6s,baz=346,slow=39						
TX32	Lajitas Array	11.15	8	Pn	Pn	08 15 17.9	+5.5
TXAR	Lajitas Array	11.15	8	Pn	Pn	08 15 17.7	+5.3
	0.1nm,0.3s,baz=184,slow=13,SNR=7.8						
TXAR				LR	LR	08 19 13.8	
	comp=Z,93nm,21.4s,baz=185,slow=34						
	2.0nm,0.8s						
TX31	Lajitas Ar. Si	11.15	8		Pn	08 15 17.4	+5.0
833A	Chaparral WMA,	11.43	28		Pn	08 15 21.4	+5.1
JCT	Junction City	13.19	22	Pn	P	08 15 45.3	-4.9
319A	Douglas	13.55	346		Pn	08 15 47.2	+2.0
TUC	Tucson	14.84	342	Pn	Pn	08 16 04.0	+1.2
ABTX	Abilene, Hawle	15.22	19	Pn	P	08 16 10.8	-2.0
ABTX				IAmb	IAmb	08 16 17.2	
	comp=Z,17nm,1.1s						
214A	Organ Pipe Nat	15.22	335	Pn	Pn	08 16 08.9	+1.0
214A				IAmb	IAmb	08 16 25.1	
	comp=Z,11nm,1.2s						
WHTX	Lake Whitney,	15.44	26	Pn	P	08 16 13.7	-1.5
WHTX				IAmb	IAmb	08 16 15.3	
	comp=Z,12nm,1.0s						
MSTX	Muleshoe	15.83	8		Pn	08 16 16.1	+0.1
MSTX				IAmb	IAmb	08 16 31.5	
	comp=Z,39nm,1.4s						
BNM	Barren Site	15.88	356	Pn	P	08 16 19.6	-0.7
ANMO	Albuquerque	16.67	357	P	P	08 16 30.0	+1.0
	baz=178,slow=12,SNR=7.4						
ANMO				LR	LR	08 23 12.9	
	comp=Z,158nm,19.4s,baz=182,slow=37						
	comp=Z,1.7nm,1.0s						
ANMO	Albuquerque	16.67	357		P	08 16 29.7	+0.7
Z35A	Perchaven, San	16.70	24	P	P	08 16 30.0	+0.9
Z35A				IAmb	IAmb	08 16 34.5	
	comp=Z,19nm,1.1s						
AMTX	Amarillo	16.90	10		P	08 16 31.9	+0.5
X16A	Lo Mia Camp, P	17.00	343	P	P	08 16 32.5	-0.2
Y14A	Wickenburg	17.06	338	P	Pn	08 16 31.4	-0.2
BAR	Barrett	17.61	327		P	08 16 38.9	-0.4
BAR				IAmb	IAmb	08 16 39.7	
	comp=Z,23nm,1.5s						
342A	Flagon Creek P	17.61	40	P	P	08 16 40.4	+1.1
342A				IAmb	IAmb	08 16 49.2	
	comp=Z,16nm,0.8s						
X34A	Smith Ranch, M	17.62	21	P	P	08 16 41.0	+1.6
WUAZ	Wupatki	18.01	344		P	08 16 45.3	+1.5
PFO	Pinyon Flats O	18.25	329	P	P	08 16 46.5	+0.1
	comp=Z,0.1nm,0.3s,baz=134,slow=11,SNR=5.6						
PFO				LR	LR	08 22 53.9	
	comp=Z,95nm,18.7s,baz=144,slow=33						
	comp=Z,1.2nm,0.8s						
PFO	Pinyon Flats O	18.25	329	P	P	08 16 46.8	+0.4
X37A	Clayton	18.56	27	P	Pn	08 16 52.1	+2.2
X37A				IAmb	IAmb	08 17 04.2	
	comp=Z,16nm,1.1s						
W39A	Magazine	19.77	29	IAmb	IAmb	08 17 09.1	
	comp=Z,17nm,1.2s						
QSM	Queen of Sheba	20.38	332	IAmb	IAmb	08 17 32.9	
	comp=Z,11nm,1.3s						
GWY	Greenwater Val	20.48	333	IAmb	IAmb	08 17 18.6	
	comp=Z,9.9nm,1.3s						
WHAR	Wooly Hollow	20.57	32	P	Pn	08 17 14.9	+1.0
WHAR				IAmb	IAmb	08 17 17.7	
	comp=Z,18nm,1.3s						
HHAR	Hobbs	20.61	27	IAmb	IAmb	08 17 19.1	
	comp=Z,18nm,1.2s						
KSCO	Kaye Shedlock'	20.83	6	IAmb	IAmb	08 17 23.4	
	comp=Z,8.3nm,1.1s						
ISA	Isabella, Lake	20.88	329	P	P	08 17 15.1	0.0
PRN	Pahroc Range	20.90	338	IAmb	IAmb	08 17 33.8	
	comp=Z,10nm,1.4s						
TPNV	Topopah Spring	20.95	335	IAmb	IAmb	08 17 25.0	
	comp=Z,9.2nm,1.3s						
Y45A	Yeager Farm, C	21.03	39	IAmb	IAmb	08 17 24.1	
	comp=Z,16nm,1.1s						
CBKS	Cedar Bluff	21.08	12	P	P	08 17 18.4	+1.2
FCAR	Ozark Folk Cen	21.13	31	IAmb	IAmb	08 17 25.1	
	comp=Z,8.1nm,1.2s						
JTS	Las Juntas de	21.29	109	LR	LR	08 22 34.0	
	comp=Z,54nm,20.6s,baz=346,slow=29						
Z47A	Carrollton	21.51	43	IAmb	IAmb	08 17 30.5	
	comp=Z,12nm,0.9s						
P17A	Butcher Ranch,	21.66	349	IAmb	IAmb	08 17 41.1	
	comp=Z,9.8nm,1.2s						
LCAR	Lake Charles	21.75	32	P	P	08 17 27.2	+2.8
LCAR				IAmb	IAmb	08 17 38.2	
	comp=Z,13nm,1.3s						
S39A	Bolivar	22.06	26	IAmb	IAmb	08 17 35.5	
	comp=Z,16nm,1.1s						
MGMO	Mountain Grove	22.08	29	IAmb	IAmb	08 17 32.6	
	comp=Z,11nm,1.1s						
LRAL	Lakeview Retre	22.11	45	IAmb	IAmb	08 17 33.6	
	comp=Z,14nm,1.2s						
KSU1	Kansas State U	22.13	18	IAmb	IAmb	08 17 34.6	
	comp=Z,14nm,1.1s						
PBMO	Poplar Bluff	22.67	32	IAmb	IAmb	08 17 38.8	
	comp=Z,15nm,1.2s						
OMMB	Old Mammoth Mi	22.70	331	P	P	08 17 35.5	+0.5
X48A	Hartselle	22.96	42	P	P	08 17 39.7	+2.4
X48A				IAmb	IAmb	08 17 43.1	
	comp=Z,10nm,1.0s						
Y49A	Blount Mountai	23.00	44	P	P	08 17 38.7	+1.0
Y49A				IAmb	IAmb	08 17 47.2	
	comp=Z,8.9nm,1.1s						
R40A	Maddies Statio	23.02	27	IAmb	IAmb	08 17 41.5	
	comp=Z,9.2nm,1.1s						
NVAR	Mina Array Bea	23.07	333	P	P	08 17 37.7	-0.9
	comp=Z,0.3nm,0.7s,baz=162,slow=9.3,SNR=2.5						
	comp=Z,0.3nm,0.7s						
CCM	Cathedral Cave	23.28	29	P	P	08 17 43.0	+2.5
152A	Waverly Hall	23.47	48	IAmb	IAmb	08 17 47.8	
	comp=Z,10nm,1.0s						
KVN	Kaiserville	23.50	335	P	P	08 17 42.8	-0.2
FPAL	Fort Paine	23.94	43	IAmb	IAmb	08 18 01.0	
	comp=Z,12nm,1.0s						
S44A	Carbondale	23.97	33	IAmb	IAmb	08 17 50.3	
	comp=Z,14nm,1.1s						
SWET	Sewanee	24.15	42	IAmb	IAmb	08 18 21.1	
	comp=Z,12nm,1.4s						
X51A	Calhoun	24.45	44	IAmb	IAmb	08 17 56.3	
	comp=Z,9.3nm,0.9s						
Y52A	Lilburn	24.59	47	P	P	08 17 52.8	-0.2
PAHR	Pah Rah Range	24.59	333	IAmb	IAmb	08 18 06.6	
	comp=Z,5.3nm,1.3s						
PDAR	Pinedale Array	24.70	353	P	P	08 17 54.1	-0.1
	comp=Z,0.4nm,0.6s,baz=158,slow=10,SNR=3.0						
PDAR				LR	LR	08 26 54.2	
	comp=Z,72nm,19.5s,baz=197,slow=34						
	comp=Z,0.4nm,0.6s						
REDW	Red Top Meadow	25.47	351	P	P	08 18 01.0	-0.1
REDW				IAmb	IAmb	08 18 17.4	
	comp=Z,12nm,1.4s						
SNOW	Snow King Moun	25.55	351	IAmb	IAmb	08 18 10.6	
	comp=Z,7.5nm,0.8s						
TKL	Tuckaleechee C	25.81	43	P	P	08 18 03.4	-0.7
	comp=Z,1.3nm,0.8s,baz=196,slow=15,SNR=1.8						
	comp=Z,1.3nm,0.8s						
HODGE	Hodges	26.04	48	IAmb	IAmb	08 18 11.9	
	comp=Z,10nm,1.2s						
YKA	Yellowknife Ar	44.68	354	P	P	08 20 42.5	-2.8
	comp=Z,0.4nm,0.8s,baz=162,slow=8.2,SNR=2.7						
	comp=Z,0.4nm,0.8s						
ILAR	Eielson Array	54.12	339	P	P	08 21 55.2	-2.2
	comp=Z,0.4nm,0.8s,baz=136,slow=5.1,SNR=5.8						
	comp=Z,0.4nm,0.8s						
H03N2	Juan Fernandez	57.25	154	T	T	09 24 01.7	
	baz=331,slow=77,SNR=13						
H03N1	Juan Fernandez	57.26	154	T	T	09 24 04.1	
	baz=331,slow=77,SNR=17						
H03N3	Juan Fernandez	57.27	154	T	T	09 24 02.0	
	baz=331,slow=77,SNR=15						
H11S1	WAKE ISLAND Hy	82.49	287	T	T	09 55 23.0	
	baz=73						
H11S2	WAKE ISLAND Hy	82.49	287	T	T	09 55 23.2	
	baz=73						
H11S3	WAKE ISLAND Hy	82.51	287	T	T	09 55 21.8	
	baz=73						

IDC ***01*** *08:15:08.9±2.7, 53°.62N×87°.91E, h0km, mbtmp3.2/2, ML2.7/2, Error ellipse: s-maj=22.8km s-min=15.6km az=61.0*

NNC ***01*** *08:15:09.1±2.6, 53°.48N×87°.90E, h0km, mb3.3, mpv3.0, Error ellipse: s-maj=21.3km s-min=15.2km az=66.0, Suspected Mining explosion.*

ISC 01 08:15:10.5±3.4**, 53°.7N**±0°.1×**87°.8E**±0°.2**, h0**km**, n8,** σ**1**s**13**/13**, 8C-3D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.78	281	i		08 27 14.8	
	0.1nm,1.0s,baz=96,slow=326,SNR=1.5						
ZAA0	Zalesovo Array	1.78	281	⇓Pn	Pn	08 15 41.7	-0.8
	1.6nm,0.7s						
ZAA0				⇑Sn	Sg	08 16 09.0	+1.4
	1.8nm,0.3s						
ZALV	Zalesovo Beam	1.78	281	Pn	Pn	08 15 42.0	-0.5
	3.0nm,0.3s,baz=100,slow=16,SNR=27						
ZALV				Lg	Lg	08 16 08.0	
	5.0nm,0.3s,baz=102,slow=25,SNR=14						
KURK	Kurchatov	6.35	246	⇓Pn	Pn	08 16 45.4	+0.1
	1.7nm,0.9s						
KURK				⇑Sn	Sn	08 17 55.9	-2.5
	2.4nm,1.2s						
KURK				⇑Lg	Lg	08 18 31.6	
	4.8nm,0.9s						
KURBB	Kurchatov Arra	6.45	246	Pn	Pn	08 16 46.4	-0.2
	0.1nm,0.3s,baz=62,slow=14,SNR=13						
KURBB				Sn	Sn	08 17 60.0	-0.8
	baz=70,slow=13,SNR=1.2						
KURBB				Lg	Lg	08 18 34.5	
	baz=62,slow=34,SNR=4.0						
	1.6nm,0.5s						
KURBB	Kurchatov Arra	6.45	246	⇓Pn	Pn	08 16 45.9	-0.7
	2.3nm,0.5s						
KURBB				⇑Sn	Sn	08 18 00.5	-0.2
	5.0nm,0.7s						
KURBB				⇑Lg	Lg	08 18 34.8	
	7.0nm,0.6s						
MK31	Makanchi Array	7.71	209	⇑Pn	Pn	08 17 03.3	-0.7
	baz=28,slow=14,SNR=12						
MK31				⇑Pg	Pb	08 17 26.2	+1.2
	0.3nm,0.5s,baz=31,slow=14,SNR=4.0						
MK31				⇑Lg	Lg	08 19 12.5	
	0.8nm,0.6s,baz=32,slow=32,SNR=3.5						
MKAR	Makanchi Array	7.71	209	Pn	Pn	08 17 03.6	-0.3
	0.1nm,0.3s,baz=27,slow=12,SNR=9.2						
MKAR				Sn	Sn	08 18 31.2	-0.7
	0.1nm,0.3s,baz=29,slow=27,SNR=3.0						
MKAR				Lg	Lg	08 19 13.2	
	0.1nm,0.3s,baz=36,slow=32,SNR=4.3						
	0.3nm,0.2s						

IDC 01 08:20:00.6±7.5**, 26°.09S**×**178°.62W, h581**km±102km**, mb3.0**/4**, mbtmp4.1**/6**, Error ellipse: s-maj=220.0km s-min=30.0km az=86.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	8.87	339	P	P	08 22 08.1	+0.1
	3.1nm,0.4s,baz=216,slow=14,SNR=6.1						
URZ	Urewera	12.66	196	P	P	08 22 46.1	+0.3
	4.7nm,0.3s,baz=300,slow=24,SNR=8.2						
URZ				S	S	08 24 59.4	-2.3
	5.4nm,0.7s,baz=123,slow=23,SNR=1.5						
CTA	Charters Tower	32.79	273	P	P	08 25 46.6	-0.8
	1.5nm,0.4s,baz=85,slow=14,SNR=1.5						
	1.5nm,0.4s						
STKA	Stephens Creek	35.14	251	P	P	08 26 06.4	-0.4
	1.0nm,0.5s,baz=96,slow=14,SNR=5.9						
	1.0nm,0.5s						
ASAR	Alice Springs	42.96	263	P	P	08 27 10.1	+0.3
	1.0nm,0.4s,baz=96,slow=8.1,SNR=23						
	1.0nm,0.4s						
WRA	Warramunga Arr	43.55	268	P	P	08 27 14.2	-0.1
	1.0nm,0.4s,baz=103,slow=7.2,SNR=53						
	1.0nm,0.4s						

IDC 01 08:21:30.2±2.9**, 54°.24N**×**86°.81E, h0**km**, mbtmp3.1**/2**, ML2.6**/2**, Error ellipse: s-maj=26.8km s-min=15.1km az=55.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.21	257	i		08 30 00.0	
	0.3nm,0.8s,baz=72,slow=320,SNR=6.9						
ZALV	Zalesovo Beam	1.21	257	Pg	Pg	08 21 51.8	-1.6
	2.5nm,0.3s,baz=77,slow=17,SNR=39						
ZALV				Lg	Lg	08 22 09.9	
	4.1nm,0.3s,baz=79,slow=30,SNR=17						
KURBB	Kurchatov Arra	6.22	238	Pn	Pn	08 23 04.1	+0.9
	0.1nm,0.3s,baz=56,slow=14,SNR=22						
	2.0nm,0.6s						
MKAR	Makanchi Array	7.99	203	Pn	Pn	08 23 28.7	+1.2
	0.1nm,0.3s,baz=26,slow=14,SNR=10						
	0.6nm,0.7s						

IDC 01 08:21:44.6±3.2**, 53°.83N**×**90°.97E, h0**km**, mbtmp3.8**/2**, ML3.4**/2**, Error ellipse: s-maj=27.5km s-min=22.7km az=48.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	3.64	274	i		08 43 51.7	
	0.2nm,0.8s,baz=90,slow=318,SNR=5.8						
ZALV	Zalesovo Beam	3.64	274	Pg	Pb	08 22 49.0	-0.7

	4.2nm,0.3s,baz=88,slow=15,SNR=8.2						
ZALV				Lg	Lg	08 23 38.7	
	3.5nm,0.3s,baz=91,slow=24,SNR=9.1						
KURBB	Kurchatov Arra	8.29	252	Pn	Pn	08 23 46.0	+0.1
	0.3nm,0.3s,baz=64,slow=14,SNR=15						
KURBB				Sn	Sn	08 25 19.8	-0.3
	0.1nm,0.3s,baz=65,slow=25,SNR=4.3						
KURBB				Lg	Lg	08 26 04.5	
	0.1nm,0.3s,baz=68,slow=35,SNR=5.5						
	2.3nm,0.3s						
MKAR	Makanchi Array	8.96	222	Pn	Pn	08 23 55.5	+0.3
	0.6nm,0.3s,baz=41,slow=14,SNR=18						
MKAR				Sn	Sn	08 25 37.0	+0.1
	0.3nm,0.3s,baz=37,slow=23,SNR=5.7						
MKAR				Lg	Lg	08 26 25.2	
	0.3nm,0.3s,baz=39,slow=33,SNR=5.5						
	2.1nm,0.6s						
SONM	Songino Array	11.44	115	Lg	Lg	08 27 39.8	
	0.1nm,0.3s,baz=296,slow=31,SNR=5.4						
AAK	Ala-Archa	15.64	231	Lg	Lg	08 29 54.8	
	0.2nm,0.3s,baz=189,slow=17,SNR=1.8						

*IDC **01** 08:30:18.4±0.8, 17°.85N×105°.88W, h0km, mb4.4/16, mbtmp4.4/18, ML4.0/2, MS4.7/66, Error ellipse: s-maj=27.7km s-min=13.6km az=58.0*

*MEX **01** 08:30:19.7±2.1, 17°.85N×105°.92W, h16km±122km, MD5.1*

*NEIC **01** 08:30:21.3±2.8, 17°.91N±0°.07×105°.77W±0°.07, h10km±1km, mb5.0/531, Ms_20 4.8/259, Mww5.4, Md5.1/132(MEX), Error ellipse: s-maj=13.9km s-min=8.8km az=216.0*

*GCMT **01** 08:30:23.3±0.1, 18°.10N±0°.01×105°.87W±0°.01, h13km, MW5.3/136, Moment Tensor Solution. s111,c180; s136,c253; Duration: 1s1 Moment tensor: Scale 10[17] Nm; Mrr-0.24±.01; Mθθ0.23±.01; Mφφ0.01±.02; Mrθ0.19±.03; Mθφ-1.24±.02; Mφr0.17±.03; Best double couple: M0 1.27900×10[17] NP1:φs177.00000°,δ79.00000°, λ-10.00000°. NP2:φs269.00000°,δ80.00000°, λ-169.00000°. Principal axes: T 1.3640, Plg1.0000°, Azm42.0000°; N -0.1690, Plg75.0000°, Azm309.0000°; P -1.1950, Plg15.0000°, Azm133.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **01** 08:30:28, 17°.90N×105°.88W, h12km, Moment Tensor Solution. Duration: 14s0 Moment tensor: Scale 10[17]Nm; Mrr-0.24; Mθθ0.18; Mφφ0.05; Mrθ-0.41; Mθφ-1.25; Mφr0.61; Fault plane solution: M0 1.46000×10[17] NP1: φs266.00000°,δ66.00000°,λ174.00000°. NP2: φs358.00000°,δ84.00000°,λ24.00000°. Principal axes: T 1.6398, Plg21.0000°, Azm225.0000°; N -0.4742, Plg65.0000°, Azm11.0000°; P -1.1656, Plg12.0000°, Azm130.0000°;*

ISC 01 08:30:22.8±1.7, **17°.94N**±0°.04×**105°.77W**±0°.05, **h23**km±11km, **n862**, σ**1s73**/530, **mb5.0**/221, **MS4.8**/196, **54C-5D, Off coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CJM	Chamela	1.70	24	⇑eP	Pn	08 30 46.7	-4.3
CJM				⇑iS	Sn	08 31 07.6	-4.4
CDAR	Ciudad de Arme	1.94	59	eP	Pn	08 30 51.1	-3.4
CDAR				eS	Sn	08 31 15.6	-2.6
R15V		2.09	54		Pn	08 30 53.3	-3.3
R15V		2.09	54	⇑eP	Pn	08 30 53.3	-3.3
R15V				eS	Sn	08 31 19.2	-2.7
COIG	Colima	2.33	58	eP	Pn	08 30 57.1	-2.7
COIG				eS	Sn	08 31 25.7	-2.1
MMIG	Aquila	2.33	81		Pn	08 30 56.9	-2.8
MMIG					Sn	08 31 24.7	-3.0
MMIG	Aquila	2.33	81	⇑eP	Pn	08 30 56.9	-2.8
MMIG				eS	Sn	08 31 24.7	-3.0
MNGA	Volcan de Coli	2.54	53	⇑eP	Pn	08 31 00.9	-2.0
MNGA				eS	Sb	08 31 41.1	+2.2
EZ5V		2.56	53		Pn	08 31 01.5	-1.7
EZ5V		2.56	53	⇑eP	Pn	08 31 01.5	-1.7
EZ5V				eS	Sn	08 31 31.4	-2.4
INCO	Volcan de Coli	2.59	52	⇑eP	Pn	08 31 01.9	-1.8
INCO				eS	Sn	08 31 34.1	-0.5
JUBC	Volcan de Coli	2.61	53	⇑eP	Pn	08 31 01.9	-2.0
JUBC				eS	Sn	08 31 35.5	+0.5
ANIG	Ahuacatlan	3.31	21		Pn	08 31 11.3	-2.1
ANIG					Sn	08 31 51.8	-0.4
ANIG	Ahuacatlan	3.31	21	⇑eP	Pn	08 31 11.3	-2.1
ANIG				eS	Sn	08 31 51.8	-0.4
ZIIG	Zihuatanejo	4.12	94		Pn	08 31 25.1	+0.8
ZIIG					Sn	08 32 05.8	-6.0
ZIIG	Zihuatanejo	4.12	94	⇑eP	Pn	08 31 25.1	+0.8
ZIIG				eS	Sn	08 32 05.8	-6.0
MOIG	Morelia	4.67	68		Sn	08 32 25.3	-0.5
MOIG	Morelia	4.67	68		Pn	08 31 32.0	-0.2
MOIG	Morelia	4.67	68	⇑eP	Pn	08 31 32.4	+0.2
MOIG				eS	Sn	08 32 25.3	-0.5
H06E		4.96	280	e		08 32 27.2	
H06E1	SOCORRO T-PHAS	4.97	280	T	T	08 36 27.1	
	SNR=2558						
H06S		4.99	280	e		08 32 31.6	
H06N	Isla Socorro	5.04	281	e		08 32 29.6	
AAIG	Aguscalientes	5.12	38	⇑eP	Pn	08 31 38.0	-0.4
AAIG				eS	Sn	08 32 30.5	-6.4
ARIG	Puente Sto Nin	5.17	85		Pn	08 31 38.2	-0.6
ARIG					Sn	08 32 33.7	-4.1
ARIG	Puente Sto Nin	5.17	85	⇑eP	Pn	08 31 38.2	-0.6
ARIG				eS	Sn	08 32 33.7	-4.1
MAIG	Mazatlaan	5.26	353		Pn	08 31 39.8	-0.2
MAIG					Sn	08 32 47.6	+7.7
MAIG	Mazatlaan	5.26	353	⇓e	Pn	08 31 39.8	-0.2
MAIG				e		08 32 47.6	
ZAIG	Zacatecas	5.67	32	Pn	Pn	08 31 46.0	0.0
ZAIG	Zacatecas	5.67	32	⇑e	Pn	08 31 45.9	0.0
ZAIG				e		08 33 07.0	
JRQG	Juriquilla Cam	5.73	60		Pn	08 31 47.8	+1.0
JRQG					Sn	08 32 59.9	+8.0
JRQG	Juriquilla Cam	5.73	60	⇑e	Pn	08 31 47.8	+1.0
JRQG				eS	Sn	08 32 59.9	+8.0
MEIG	Mezcala	5.86	89		Pn	08 31 49.8	+1.4
MEIG					Sn	08 32 57.3	+2.5
MEIG	Mezcala	5.86	89	⇓eP	Pn	08 31 49.8	+1.4
MEIG				eS	Sn	08 32 57.3	+2.5
DAIG	Los Arroyos	5.91	98		Pn	08 31 50.4	+1.4
DAIG					Sn	08 32 48.8	-7.4
DAIG	Los Arroyos	5.91	98	⇑eP	Pn	08 31 50.4	+1.4
DAIG				eS	Sn	08 32 48.8	-7.4
TOVM	TOLUCA	5.93	76		Pn	08 31 52.5	+2.9
TOVM					Sn	08 33 00.2	+3.2
TOVM	TOLUCA	5.93	76	⇑eP	Pn	08 31 52.5	+2.9
TOVM				eS	Sn	08 33 00.2	+3.2
ACIG	Acambay	5.93	69	⇑e	Pn	08 31 50.2	+0.8
ACIG				e		08 33 14.9	
PLIG	Platanillo	5.98	85		Pn	08 31 50.4	+0.3
PLIG					Sb	08 33 08.1	-9.5
PLIG	Platanillo	5.98	85	⇑e	Pn	08 31 50.4	+0.3
PLIG				e		08 33 08.1	
MAVM	Malinalco, Edo	6.04	79		Pn	08 31 51.9	+0.9
MAVM					Sn	08 33 04.7	+5.0
MAVM	Malinalco, Edo	6.04	79	⇑e	Pn	08 31 51.9	+0.9
MAVM				e		08 33 04.7	
CJVM	Cuajimalpa	6.31	76	⇑e	Pn	08 32 00.3	+5.6
CJVM				e		08 33 18.4	
MCRU	Las Cruces	6.33	76	⇑e	Pn	08 31 56.3	+1.3
MCRU				e		08 33 23.2	
MHVM	Bosque de Chap	6.39	76	⇑e	Pn	08 31 57.3	+1.5
MHVM				e		08 33 25.6	
TLVM	San Miguel Top	6.40	78	⇑e	Pn	08 31 59.0	+2.9
TLVM				e		08 33 11.1	
UNM	Universidad Na	6.40	77		Pn	08 31 57.9	+1.9
UNM	Universidad Na	6.40	77	⇓e	Pn	08 31 59.6	+3.6
UNM				e		08 33 13.8	
APVM	Azcapotzalco	6.41	75	⇑e	Pn	08 32 00.5	+4.4
APVM				e		08 33 19.0	
BJVM	Benito Juarez	6.42	76	⇑e	Pn	08 32 02.2	+5.9
BJVM				e		08 33 27.4	
YAIG	Yautepec	6.43	81		Pn	08 31 56.9	+0.5
YAIG					Sn	08 33 09.0	-0.1
YAIG	Yautepec	6.43	81	⇑e	Pn	08 31 56.9	+0.5
YAIG				e		08 33 09.0	
XCVM	Xochimilco	6.44	77	⇑e	Pn	08 31 57.5	+0.9
XCVM				e		08 33 20.4	
CRIG	Cruz Grande	6.45	100		Pn	08 31 57.3	+0.8
CRIG					Sn	08 33 07.7	-1.8
CRIG	Cruz Grande	6.45	100	⇑e	Pn	08 31 57.3	+0.8
CRIG				e		08 33 07.7	
GMVM	Gustavo A Made	6.50	75	⇑e	Pn	08 31 58.1	+0.8
GMVM				e		08 33 17.4	
PBVM	Pinon	6.51	76		Pn	08 31 52.6	-4.7
PBVM					Sb	08 33 22.6	-10
PBVM	Pinon	6.51	76	⇑e	Pn	08 31 52.6	-4.7
PBVM				e		08 33 22.6	
PTVM	Pico Tres Padr	6.52	74		Pn	08 31 59.5	+1.9
PTVM					Sb	08 33 23.4	-10
PTVM	Pico Tres Padr	6.52	74	⇑e	Pn	08 31 59.5	+1.9
PTVM				e		08 33 23.4	
THVM	De Xico	6.59	77	⇑e	Pn	08 32 00.3	+1.7
THVM				e		08 33 26.4	
ZUVM	ZUMPANGO	6.61	72		Pn	08 31 59.9	+1.0
ZUVM					Sb	08 33 27.9	-8.1
ZUVM	ZUMPANGO	6.61	72	⇑e	Pn	08 31 59.9	+1.0
ZUVM				e		08 33 27.9	
RPIG	Rio Verde	6.71	53	⇑e	Pn	08 32 00.9	+0.8
RPIG				e		08 33 43.9	
AMVM	AMECAMECA	6.73	79		Pn	08 32 01.9	+1.4
AMVM					Sn	08 33 27.7	+11
AMVM	AMECAMECA	6.73	79	⇑e	Pn	08 32 01.9	+1.4
AMVM				e		08 33 27.7	
DEIG	Demacu	6.79	69	⇑e	Pn	08 32 02.4	+1.2
DEIG				e		08 33 37.2	
PPM	Popocatepetl	6.87	80	⇑e	Pn	08 32 03.7	+1.0
PPM				e		08 33 29.0	
TLIG	Tlapa	6.88	92	Pn	Pn	08 32 03.6	+1.2
TLIG	Tlapa	6.88	92	⇑e	Pn	08 32 04.9	+2.5
TLIG				e		08 33 14.1	
SLBS	Sierra La Lagu	6.92	326	Pn	Pn	08 32 03.0	0.0
PDIG	Papasquiaro	7.07	3	⇑e	Pn	08 32 07.8	+2.6
PDIG				e		08 33 35.1	
FTIG	Fresnillo de T	7.27	89	⇓e	Pn	08 32 09.7	+1.8
FTIG				e		08 33 27.9	
LPIG	La Paz	7.45	326	Pn	Pn	08 32 11.3	+1.2
	baz=137,slow=9.2						
PNIG	Pinotepa	7.47	101		Pn	08 32 11.9	+1.4
PNIG	Pinotepa	7.47	101	⇑e	Pn	08 32 11.9	+1.4
PNIG				e		08 33 13.7	
HLIG	Huajuapan de L	7.59	90	⇑e	Pn	08 32 14.2	+2.0
HLIG				e		08 33 52.0	
TXIG	Tlaxiaco	7.66	94	⇑e	Pn	08 32 15.4	+2.0
TXIG				e		08 33 40.2	
YOIG	Yosondua	7.93	97	⇑e	Pn	08 32 19.7	+2.7
YOIG				e		08 33 41.1	
TOIG	Toxpalan	8.29	88	⇓e	Pn	08 32 23.2	+1.5
TOIG				e		08 34 07.3	
JAUV	Jalcomulco	8.62	79	⇑e	Pn	08 32 27.2	+0.9
JAUV				e		08 34 16.7	
VHO	Vista Hermosa	8.67	94	⇑e	Pn	08 32 30.3	+3.2
VHO				e		08 34 30.0	
HPIG		8.95	1		Pn	08 32 32.7	+1.7
HPIG		8.95	1	⇑e	Pn	08 32 33.0	+2.0
HPIG				e		08 34 54.0	
CSIG	Choix	9.17	345	⇑i	Pn	08 32 34.4	+0.7
CSIG				e		08 34 37.0	
NEUV	Arroyo Zacate	9.50	90	⇑e	Pn	08 32 40.8	+2.5
NEUV				e		08 34 26.5	
CMIG	Matias Romero	10.42	93	Pn	Pn	08 32 51.4	+0.5
	0.5nm,0.3s,baz=296,slow=12,SNR=9.9						
CMIG				LR	LR	08 36 47.2	
	comp=Z,3μm,19.6s,baz=286,slow=37						
	17nm,0.9s						
CMIG	Matias Romero	10.42	93		Pn	08 32 51.1	+0.2
CMIG					Sn	08 34 58.9	+12
CMIG	Matias Romero	10.42	93	⇑e	Pn	08 32 51.1	+0.2
CMIG				e		08 34 58.9	
SRIG	Santa Rosalia	11.08	329	Pn	Pn	08 32 58.0	-1.9
UXUV	UXUV	11.10	91	⇑e	Pn	08 33 02.2	+1.9
UXUV				e		08 35 15.9	
TX31	Lajitas Ar. Si	11.50	9		Pn	08 33 08.0	+2.2
TX31	Lajitas Ar. Si	11.50	9	P	Pn	08 33 09.3	+3.5
	baz=190						
TX32	Lajitas Array	11.50	9	Pn	Pn	08 33 07.5	+1.7
TXAR	Lajitas Array	11.50	9	Pn	Pn	08 33 06.1	+0.3
	0.4nm,0.3s,baz=199,slow=15,SNR=84						
TXAR				LR	LR	08 37 50.8	
	comp=Z,3μm,18.9s,baz=188,slow=39						
	5.5nm,0.9s						
TXAR	Lajitas Array	11.50	9	Pn	Pn	08 33 07.7	+1.9
833A	Chaparral WMA,	11.88	28	Pn	Pn	08 33 13.4	+2.6
833A	Chaparral WMA,	11.88	28	P	Pn	08 33 14.8	+3.9
	baz=211						
833A	Chaparral WMA,	11.88	28	P	Pn	08 33 12.7	+1.8
	baz=211,SNR=44						
HSIG		12.01	338	Pn	Pn	08 33 13.9	+1.3
735A	Kenedy	13.09	32		Pn	08 33 29.8	+2.4
735A	Kenedy	13.09	32	P	Pn	08 33 29.2	+1.8
	baz=216						
CCIG	Comitan	13.14	95		Pn	08 33 26.8	-1.5
PATR	El Naranjo	13.28	100	⇑e	Pn	08 33 34.4	+4.1
PAVE	Pavencul	13.32	100	⇑e	Pn	08 33 34.4	+3.6
CHUJ	Union Juarez	13.40	100	⇑e	Pn	08 33 36.1	+4.1
JCT	Junction City	13.61	22	Pn	Pn	08 33 37.2	+2.6
JCT	Junction City	13.61	22	P	Pn	08 33 37.4	+2.8
	baz=205						
JCT	Junction City	13.61	22	P	Pn	08 33 37.0	+2.4
	baz=205,SNR=38						
MNTX	Cornudas Mount	13.70	1	Pn	Pn	08 33 37.5	+1.7
MNTX	Cornudas Mount	13.70	1	P	Pn	08 33 38.0	+2.2
	baz=182						
MNTX	Cornudas Mount	13.70	1	P	Pn	08 33 37.9	+2.1
	baz=182,SNR=36						
319A	Douglas	13.75	347	Pn	Pn	08 33 35.8	-0.7
KIDD	KIDD Seismic O	13.79	357	P	Pn	08 33 38.9	+1.8
	baz=178						
121A	Cookes Peak, D	14.64	353	Pn	Pn	08 33 50.9	+2.1
121A	Cookes Peak, D	14.64	353	P	P	08 33 52.0	-2.9
	baz=173						
121A	Cookes Peak, D	14.64	353	P	Pn	08 33 51.7	+2.9
	baz=173,SNR=34						
435B	Jarrell	14.79	29	P	Pn	08 33 51.5	+0.9
	baz=212						
435B	Jarrell	14.79	29	P	Pn	08 33 51.3	+0.6
	baz=212						
HKT	Hockley	15.00	35	Pn	Pn	08 33 53.2	-0.2
HKT	Hockley	15.00	35	P	Pn	08 33 53.1	-0.3
	baz=219						
TUC	Tucson	15.01	343	Pn	Pn	08 33 54.9	+1.3
TUC				IAmb	IAmb	08 33 59.3	
	comp=Z,52nm,1.2s						
TUC	Tucson	15.01	343	P	Pn	08 33 55.0	+1.4
	baz=162						
PETF	Flores	15.21	91	P	P	08 34 01.0	-0.2
PETF				IAmb	IAmb	08 34 12.7	
	comp=Z,57nm,0.9s						
214A	Organ Pipe Nat	15.34	337	Pn	Pn	08 33 59.4	+1.5
214A				IAmb	IAmb	08 34 08.2	
	comp=Z,97nm,1.2s						
214A	Organ Pipe Nat	15.34	337	P	Pn	08 33 58.0	0.0
	baz=154,SNR=20						
SFX	San Felipe	15.43	329	Pn	Pn	08 34 00.1	+1.1
ABTX	Abilene, Hawle	15.63	20	IAmb	IAmb	08 34 08.8	
	comp=Z,156nm,1.1s						
ABTX	Abilene, Hawle	15.63	20	P	Pn	08 34 02.1	+0.4
	baz=202						
ABTX	Abilene, Hawle	15.63	20	P	Pn	08 34 01.6	-0.2
	baz=202,SNR=69						
WHTX	Lake Whitney,	15.88	27	IAmb	IAmb	08 34 06.9	
	comp=Z,97nm,1.1s						
WHTX	Lake Whitney,	15.88	27	P	Pn	08 34 05.5	+0.5
	baz=210						
WHTX	Lake Whitney,	15.88	27	P	Pn	08 34 04.9	-0.1
	baz=210,SNR=26						
Y22A	Socorro	15.97	356	P	P	08 34 09.3	-0.3
	baz=176						
Y22D	IRIS PASSCAL I	16.10	357	P	P	08 34 11.3	+0.2
Y22D				IAmb	IAmb	08 34 15.7	
	comp=Z,147nm,1.2s						
Y22D	IRIS PASSCAL I	16.10	357	P	Pn	08 34 09.3	+1.4
	baz=176						
ESQI	Esquipulas	16.13	100	P	P	08 34 10.4	-1.0
ESQI				IAmb	IAmb	08 34 36.0	
	comp=Z,173nm,1.2s						
BNM	Barren Site	16.16	357		P	08 34 11.2	-0.6
MSTX	Muleshoe	16.19	9	IAmb	IAmb	08 34 12.5	
	comp=Z,196nm,1.2s						
MSTX	Muleshoe	16.19	9	P	Pn	08 34 10.1	+1.2
	baz=191						
MSTX	Muleshoe	16.19	9	P	Pn	08 34 09.6	+0.7
	baz=191,SNR=86						
237A	Washetta, Mont	16.64	31		Pn	08 34 14.7	0.0
237A				IAmb	IAmb	08 34 26.0	
	comp=Z,102nm,1.1s						
237A	Washetta, Mont	16.64	31	P	Pn	08 34 14.3	-0.3
	baz=215						
ANMO	Albuquerque	16.95	358	P	P	08 34 21.1	+0.6
	comp=Z,37nm,1.0s,baz=174,slow=12,SNR=74						
ANMO				LR	LR	08 39 36.2	
	comp=Z,2μm,20.8s,baz=181,slow=33						
ANMO	Albuquerque	16.95	358		P	08 34 20.2	-0.3
ANMO	Albuquerque	16.95	358	P	P	08 34 21.2	+0.6
	baz=178						
ANMO	Albuquerque	16.95	358	P	Pn	08 34 19.6	+0.9
	baz=178						
NATX	Nacogdoches	17.04	34	IAmb	IAmb	08 34 27.6	
	comp=Z,123nm,1.0s						
NATX	Nacogdoches	17.04	34	P	Pn	08 34 20.1	+0.5
	baz=219						
NATX	Nacogdoches	17.04	34	P	Pn	08 34 19.0	-0.6
	baz=219,SNR=7.3						
GLA	Glamis	17.11	333	P	P	08 34 21.6	-0.5
	baz=150,SNR=6.8						
441A	DeRidder	17.13	40	P	Pn	08 34 20.4	-0.3
	baz=225						
Z35A	Perchaven, San	17.13	25	IAmb	IAmb	08 34 24.1	
	comp=Z,146nm,1.0s						
Z35A	Perchaven, San	17.13	25	P	Pn	08 34 21.1	+0.4
	baz=209						
AMTX	Amarillo	17.26	11	IAmb	IAmb	08 34 25.6	
	comp=Z,112nm,1.1s						
AMTX	Amarillo	17.26	11	P	Pn	08 34 23.3	+0.7
	baz=194						
AMTX	Amarillo	17.26	11	P	Pn	08 34 22.8	+0.3
	baz=194						
IKP	In-Ko-Pah, Jac	17.36	330	P	P	08 34 24.7	-0.3
	baz=146,SNR=15						
SWSC	Sam W. Stewart	17.45	331	P	Pn	08 34 25.5	+0.7
	baz=147						
W18A	Petrified Fore	17.47	349	P	P	08 34 27.6	+1.4
	baz=168,SNR=25						
MONP2	Monument Peak	17.71	329	P	P	08 34 29.4	+0.5
	baz=145,SNR=24						
WMOK	Wichita Mounta	17.85	19	P	Pn	08 34 29.4	-0.4
	baz=202						
WMOK	Wichita Mounta	17.85	19	P	Pn	08 34 29.0	-0.8
	baz=202,SNR=17						
BC3	Big Chuckawall	17.89	333	P	P	08 34 31.1	+0.2
	baz=149,SNR=43						
PDMCI	Parker Dam,Lak	17.93	337	P	P	08 34 31.6	+0.4
	baz=154,SNR=18						
109C	Camp Elliot, M	18.04	328	P	P	08 34 33.6	+1.2
	baz=143						
Z38A	Mt. Pleasant	18.07	30	P	P	08 34 32.8	+0.1
	baz=215						
342A	Flagon Creek P	18.09	40	IAmb	IAmb	08 34 40.0	
	comp=Z,143nm,1.0s						
342B	Flagon Creek P	18.09	40	P	Pn	08 34 32.3	-0.4
	baz=226						
TGUH	Tegucigalpa,Un	18.20	100		P	08 34 36.5	+2.1
IRM	Iron Mountain	18.20	334	P	P	08 34 35.5	+1.4
	baz=151,SNR=38						
WUAZ	Wupatki	18.20	345	P	P	08 34 35.7	+1.4
	baz=163,SNR=57						
TPFO	Pinon Flats	18.31	330	P	Pn	08 34 38.3	+2.8
	baz=146,SNR=24						
PFO	Pinyon Flats O	18.31	330	P	Pn	08 34 36.9	+1.4
	comp=Z,26nm,1.2s,baz=136,slow=12,SNR=15						
PFO				LR	LR	08 40 46.7	
	comp=Z,3μm,18.1s,baz=142,slow=34						
PFO	Pinyon Flats O	18.31	330	P	Pn	08 34 36.3	+0.7
PFO	Pinyon Flats O	18.31	330	P	Pn	08 34 38.4	+2.8
	baz=146,SNR=24						
BELC	Belle Mtn. Jos	18.43	332	P	Pn	08 34 38.2	+1.3
	baz=148,SNR=50						
NEE2	Needles Airpor	18.52	337	P	Pn	08 34 39.8	+1.8
	baz=153						
MURC	Murrieta	18.66	329	P	Pn	08 34 40.6	+0.9
	baz=144						
SCI2	San Clemente I	18.88	325	P	Pn	08 34 42.8	+0.6
	baz=140						
GMRC	Granite Mounta	18.95	334	P	Pn	08 34 43.7	+0.4
	baz=150,SNR=30						
X37A	Clayton	19.00	27	IAmb	IAmb	08 34 53.6	
	comp=Z,84nm,0.9s						
BBRC	Big Bear Solar	19.07	331	P	Pn	08 34 45.6	+0.8
	baz=146						
CIS	Catalina Islan	19.13	326	P	Pn	08 34 45.3	0.0
	baz=141						
344A	Westbrook Farm	19.14	43	P	P	08 34 44.9	+0.4
344A				IAmb	IAmb	08 34 51.6	
	comp=Z,85nm,0.9s						
T25A	Trinidad	19.16	3	P	Pn	08 34 46.6	+0.7
	baz=184,SNR=41						
Z41A	Richland Creek	19.19	35	IAmb	IAmb	08 34 55.4	
	comp=Z,133nm,1.2s						
Z41A	Richland Creek	19.19	35	P	P	08 34 45.0	0.0
	baz=221,SNR=12						
HEC	Hector,Ludlow	19.28	333	P	Pn	08 34 47.3	+0.2
	baz=149						
U32A	Winter Ranch,	19.32	17	P	P	08 34 46.6	+0.2
U32A				IAmb	IAmb	08 34 56.0	
	comp=Z,84nm,0.8s						
MVCO	Mesa Verde	19.35	353	P	P	08 34 47.2	+0.2
	baz=172,SNR=18						
WLAR	White Oak Lake	19.36	33	IAmb	IAmb	08 35 05.1	
	comp=Z,117nm,1.2s						
BFSC	Mount Baldy Ra	19.40	329	P	P	08 34 47.7	+0.2
	baz=144,SNR=11						
143A	Socs Landing,	19.58	39	IAmb	IAmb	08 34 59.0	
	comp=Z,71nm,0.9s						
SNCC	San Nicolas Is	19.62	324	P	Pn	08 34 50.6	-0.5
	baz=138						
TUQ	Turquoise Moun	19.62	335	P	P	08 34 49.9	0.0
	baz=150,SNR=12						
SDCO	Great Sand Dun	19.73	1	IAmb	IAmb	08 34 57.6	
	comp=Z,110nm,1.4s						
SDCO	Great Sand Dun	19.73	1	P	Pn	08 34 52.3	-0.4
	baz=181,SNR=60						
DECC	Green Verdugo	19.75	328	P	P	08 34 52.1	+0.9
	baz=143						
S22A	4UR Ranch, Cre	19.75	358	P	P	08 34 52.4	+0.9
	baz=177,SNR=58						
VBMS	Vicksburg	19.79	41	P	P	08 34 50.7	-0.8
VBMS				IAmb	IAmb	08 34 57.6	
	comp=Z,185nm,1.4s						
VBMS	Vicksburg	19.79	41	P	P	08 34 51.6	+0.1
	baz=228,SNR=7.2						
MIAR	Mount Ida	19.80	31	P	P	08 34 51.4	-0.2
	baz=216,SNR=25						
GSC	Goldstone, Bar	19.88	333	IAmb	IAmb	08 35 00.7	
	comp=Z,151nm,1.9s						
GSC	Goldstone, Bar	19.88	333	P	P	08 34 53.0	+0.3
	baz=148,SNR=23						
346A	Big Creek Wild	19.93	45	P	P	08 34 54.1	+0.9
346A				IAmb	IAmb	08 35 09.9	
	comp=Z,58nm,0.9s						
TUL1	Leonard	19.96	24	P	P	08 34 53.1	-0.3
	baz=209,SNR=44						
EDW2	Edwards Air Fo	20.08	330	P	P	08 34 55.7	+0.9
	baz=144,SNR=6.9						
X40A	Basin Creek Fa	20.12	33	P	P	08 34 54.6	-0.6
	baz=218,SNR=7.7						
SHOC	Shoshone, Teco	20.16	335	P	P	08 34 56.4	+0.7
	baz=150,SNR=8.3						
W39A	Magazine	20.22	29	IAMs_20	IAMs_20	08 43 09.5	
	comp=Z,6μm,22.0s						
W39A	Magazine	20.22	29	P	P	08 34 56.5	+0.2
	baz=215,SNR=22						
OSI	Osito Audit: C	20.23	328	P	Pn	08 34 57.7	-0.8
	baz=142						
SCZ2	Santa Cruz Isl	20.24	325	P	P	08 34 57.3	+0.9
	baz=139						
PKCU	Pink Cliffs	20.26	345	IAmb	IAmb	08 35 04.9	
	comp=Z,140nm,1.4s						
LRMC	Laurel Mtn Rad	20.42	331	P	P	08 34 59.2	+0.6
	baz=146,SNR=9.9						
T35A	Sooner Cattle	20.59	22	P	P	08 35 00.2	0.0
UALR	University of	20.60	33	IAmb	IAmb	08 35 07.2	
	comp=Z,61nm,1.1s						
ARVC	Arvin	20.69	328	P	P	08 35 01.0	-0.3
	baz=143						
ACON	Acoyapa	20.76	104	IAmb	IAmb	08 35 17.1	
	comp=Z,126nm,1.5s						
BCW	Bitter Crk WRg	20.84	327	IAmb	IAmb	08 35 33.4	
	comp=Z,113nm,1.4s						
FURC	Furnace Creek,	20.89	334	P	P	08 35 04.2	+0.7
	baz=150,SNR=26						
ISA	Isabella, Lake	20.94	330	P	P	08 35 04.9	+0.7

baz=145,SNR=19
Q24A Divide 20.95 1 P P 08 35 05.3 +0.8
baz=182,SNR=16
W41B Gary Mavity, V 20.96 32 P P 08 35 04.3 +0.1
baz=219,SNR=22
146A Union 20.99 43 IAmb IAmb 08 35 14.1
comp=Z,79nm,1.1s
PKM Mcpherson Peak 21.01 326 P P 08 35 05.0 0.0
baz=140
WHAR Wooly Hollow 21.03 32 IAmb IAmb 08 35 10.0
comp=Z,78nm,1.2s
HHAR Hobbs 21.05 27 IAmb IAmb 08 35 10.1
comp=Z,92nm,1.0s
TPNV Topopah Spring 21.07 336 IAmb IAmb 08 35 11.3
comp=Z,60nm,1.2s
TPNV Topopah Spring 21.07 336 P P 08 35 06.4 +0.8
baz=152,SNR=49
DUNO Dulce Nombre, 21.15 109 IAmb IAmb 08 35 35.3
comp=Z,51nm,1.1s
KSCO Kaye Shedlock' 21.17 7 IAmb IAmb 08 35 14.6
comp=Z,103nm,1.1s
KSCO Kaye Shedlock' 21.17 7 P P 08 35 07.2 +0.5
baz=189,SNR=24
VES Vestal, Richgr 21.38 329 P P 08 35 10.1 +1.3
baz=144,SNR=36
CWC Cottonwood Cre 21.40 332 P P 08 35 09.8 +0.6
baz=147
Q16A Castle Valley 21.42 348 IAmb IAmb 08 35 14.8
comp=Z,72nm,1.1s
CBKS Cedar Bluff 21.45 13 P P 08 35 09.5 -0.1
baz=196,SNR=54
BRAL Brewton 21.48 49 P P 08 35 09.3 -0.6
baz=236,SNR=6.4
S11A Rachel 21.49 338 IAmb IAmb 08 35 30.9
comp=Z,138nm,1.4s
Y45A Yeager Farm, C 21.51 39 IAmb IAmb 08 35 15.1
comp=Z,100nm,1.1s
GRAC Grapevine Rang 21.55 334 IAmb IAmb 08 35 31.4
comp=Z,84nm,1.4s
GRAC Grapevine Rang 21.55 334 P P 08 35 11.3 +0.6
baz=149,SNR=16
JTS Las Juntas de 21.56 108 P P 08 35 12.9 +1.9
comp=Z,18nm,1.0s,baz=333,slow=1.7,SNR=8.2
JTS LR LR 08 41 38.3
comp=Z,2µm,21.8s,baz=349,slow=31
JTS Las Juntas de 21.56 108 P P 08 35 12.8 +1.9
JTS IAmb IAmb 08 35 20.8
comp=Z,98nm,1.6s
U40A Yellville 21.61 29 P P 08 35 10.5 -0.7
baz=215,SNR=38
ISCO Idaho Springs 21.78 0 IAMs_20 IAMs_20 08 43 26.7
comp=Z,2µm,18.0s
ISCO Idaho Springs 21.78 0 P P 08 35 14.0 +0.6
baz=181,SNR=29
SOR Soroa 21.87 73 P P 08 35 14.7 +0.5
PAGB Antelope Grade 21.88 327 IAmb IAmb 08 35 42.8
comp=Z,54nm,1.2s
P17A Butcher Ranch, 21.89 350 IAmb IAmb 08 35 26.3
comp=Z,62nm,1.2s
P18A Preston Nutter 21.96 351 IAmb IAmb 08 35 32.8
comp=Z,47nm,1.0s
Z47A Carrollton 21.99 43 P P 08 35 15.6 +0.2
OXF Oxford 22.03 38 P P 08 35 15.3 -0.5
baz=226,SNR=22
R11A Troy Canyon, C 22.07 339 P P 08 35 17.6 +1.3
baz=155,SNR=42
LCAR Lake Charles 22.21 33 IAmb IAmb 08 35 29.9
comp=Z,56nm,1.1s
O20A White River Ci 22.22 355 IAmb IAmb 08 35 22.7
comp=Z,68nm,1.4s
O20A White River Ci 22.22 355 P P 08 35 18.9 +0.9
baz=174,SNR=32
S39A Bolivar 22.50 27 IAmb IAmb 08 35 27.3
comp=Z,68nm,1.0s
PMPB Monarch Peak 22.54 327 IAmb IAmb 08 35 35.7
comp=Z,58nm,1.2s
KSU1 Kansas State U 22.54 19 IAMs_20 IAMs_20 08 44 29.5
comp=Z,4µm,18.0s
KSU1 Kansas State U 22.54 19 P P 08 35 20.9 -0.3
baz=203,SNR=50
LRAL Lakeview Retre 22.59 45 IAmb IAmb 08 35 28.6
comp=Z,57nm,1.1s
LRAL Lakeview Retre 22.59 45 P P 08 35 22.1 +0.3
baz=233,SNR=24
W45A Hickory Valley 22.62 37 IAmb IAmb 08 35 25.9
comp=Z,82nm,1.0s
MLAC Mammoth, Mammo 22.72 332 P P 08 35 23.9 +0.5
baz=147
RIMA Rio Macho 22.75 108 IAmb IAmb 08 35 48.7
comp=Z,69nm,1.4s
OMMB Old Mammoth Mi 22.78 332 IAmb IAmb 08 35 30.4
comp=Z,70nm,1.5s
MDPB Devils Postpil 22.83 332 IAmb IAmb 08 35 30.7
comp=Z,70nm,1.3s
N23A Red Feather La 22.88 360 IAmb IAmb 08 35 58.4
comp=Z,50nm,1.4s
N23A Red Feather La 22.88 360 P P 08 35 23.9 -1.1
baz=180,SNR=10
DUG Dugway, Tooele 23.00 346 IAmb IAmb 08 35 30.9
comp=Z,49nm,1.2s
DUG Dugway, Tooele 23.00 346 P P 08 35 25.2 -0.9
baz=163,SNR=56
LHV Little Huntoon 23.10 334 IAmb IAmb 08 35 32.8
comp=Z,72nm,1.8s
JLU Jordanelle 23.11 349 IAmb IAmb 08 35 48.9
comp=Z,54nm,1.6s
PBMO Poplar Bluff 23.13 33 IAmb IAmb 08 35 30.9
comp=Z,65nm,1.1s
OGNE Ogallala 23.15 7 P P 08 35 27.6 0.0
baz=189,SNR=6.9
PLAL Pickwick Lake 23.15 39 IAmb IAmb 08 35 29.6
comp=Z,53nm,1.1s
NVAR Mina Array Bea 23.16 334 P P 08 35 29.0 +1.0
comp=Z,10nm,1.1s,baz=150,slow=7.1,SNR=43
NVAR LR LR 08 43 39.2
comp=Z,2µm,21.1s,baz=152,slow=35
comp=Z,10nm,1.1s
CTU Camp Tracy 23.25 348 IAmb IAmb 08 35 34.1
comp=Z,54nm,1.1s
PHWY Pilot Hill 23.28 1 IAMs_20 IAMs_20 08 44 46.6
comp=Z,3µm,20.0s
SAO San Andreas Ge 23.29 327 IAMs_20 IAMs_20 08 43 16.1
comp=Z,3µm,18.0s
X48A Hartselle 23.44 42 P P 08 35 30.5 0.0
X48A IAmb IAmb 08 35 32.4
comp=Z,70nm,1.0s
Y49A Blount Mountai 23.48 44 IAmb IAmb 08 35 33.2
comp=Z,55nm,1.1s
KVN Kaiserville 23.61 335 IAmb IAmb 08 35 56.0
comp=Z,82nm,1.7s
RWWY Rawlins 23.70 357 IAMs_20 IAMs_20 08 44 40.3
comp=Z,3µm,20.0s
CCM Cathedral Cave 23.73 29 P P 08 35 32.9 -0.4
CCM Cathedral Cave 23.73 29 P P 08 35 32.8 -0.4
baz=216
N33A J Bar K, Exete 23.82 16 P P 08 35 33.5 -0.6
N33A IAmb IAmb 08 35 38.6
comp=Z,67nm,0.9s
PAYG Puerto Ayora 23.97 139 P P 08 35 34.5 -1.2
PAYG Puerto Ayora 23.97 139 IAMs_20 IAMs_20 08 42 22.0
comp=Z,5µm,22.0s
P38A Dawn 24.07 24 IAmb IAmb 08 35 39.6
comp=Z,42nm,1.0s
WVT Waverly 24.08 38 P P 08 35 36.4 -0.2
WVT Waverly 24.08 38 IAMs_20 IAMs_20 08 46 10.0
comp=Z,2µm,19.0s
WVT Waverly 24.08 38 P P 08 35 35.8 -0.9
baz=226
HWUT Hardware Ranch 24.10 349 IAMs_20 IAMs_20 08 44 17.7
comp=Z,2µm,20.0s
ELK Elko 24.14 342 P P 08 35 38.5 +1.0
comp=Z,6.2nm,1.1s,baz=159,slow=8.5,SNR=12
ELK LR LR 08 44 03.5
comp=Z,2µm,20.4s,baz=169,slow=34
comp=Z,6.2nm,1.1s
ELK Elko 24.14 342 P P 08 35 38.4 +1.0
ELK IAmb IAmb 08 35 44.1
comp=Z,122nm,2.6s
TIGA Tifton 24.16 52 P P 08 35 36.9 -0.4
baz=241,SNR=13
PNTR Pine Nut 24.27 333 IAmb IAmb 08 35 44.4
comp=Z,40nm,1.2s
BGNE Belgrade 24.29 14 P P 08 35 38.9 +0.4
baz=198,SNR=18
EMB Emerald Bay 24.39 332 IAmb IAmb 08 35 45.2
comp=Z,71nm,1.2s
V48A Smith Brothers 24.42 40 IAmb IAmb 08 35 42.3
comp=Z,46nm,1.1s

BMN Battle Mountai 24.50 339 IAmb IAmb 08 35 45.1
comp=Z,69nm,1.2s
DWPF Disney Wildern 24.54 61 P P 08 35 41.3 +0.4
DWPF Disney Wildern 24.54 61 P P 08 35 40.8 0.0
baz=251
K22A Casper 24.64 359 IAmb IAmb 08 35 54.1
comp=Z,39nm,1.3s
K22A Casper 24.64 359 P P 08 35 41.1 -0.7
baz=178,SNR=14
PAHR Pah Rah Range 24.69 334 IAmb IAmb 08 35 47.3
comp=Z,41nm,1.2s
CLTN Cedars of Leba 24.95 40 IAmb IAmb 08 35 46.8
comp=Z,48nm,0.9s
BW06 Boulder Array 24.95 353 P P 08 35 44.9 +0.1
baz=172,SNR=22
PDAR Pinedale Array 24.95 353 P P 08 35 45.2 +0.5
comp=Z,11nm,1.0s,baz=161,slow=9.4,SNR=36
PDAR LR LR 08 44 55.2
comp=Z,1µm,19.3s,baz=184,slow=35
comp=Z,11nm,1.0s
MCCM Marconi Confer 25.08 327 IAMs_20 IAMs_20 08 43 49.4
comp=Z,2µm,21.0s
GOGA Godfrey 25.25 48 P P 08 35 47.5 +0.3
baz=238,SNR=69
L34A Svendsen Farm, 25.26 17 IAmb IAmb 08 35 49.2
comp=Z,46nm,1.0s
ORV Orrville 25.50 331 IAmb IAmb 08 35 56.4
comp=Z,30nm,1.2s
HOPS Hopland Field 25.82 328 IAMs_20 IAMs_20 08 44 26.0
comp=Z,4µm,21.0s
TPAW Teton Pass 25.84 351 IAmb IAmb 08 36 22.3
comp=Z,31nm,1.1s
LOHW Long Hollow 25.92 352 IAmb IAmb 08 36 06.9
comp=Z,42nm,1.1s
V51A Loudon 26.01 43 IAmb IAmb 08 35 59.1
comp=Z,60nm,1.1s
RSSD Black Hills 26.14 3 P P 08 35 55.3 -0.2
RSSD Black Hills 26.14 3 IAMs_20 IAMs_20 08 45 13.1
comp=Z,2µm,19.0s
RSSD Black Hills 26.14 3 P P 08 35 54.9 -0.6
baz=184
SCIA State Center 26.19 22 IAMs_20 IAMs_20 08 46 23.1
comp=Z,3µm,18.0s
SCIA State Center 26.19 22 P P 08 35 55.1 -0.6
baz=208
TKL Tuckaleechee C 26.30 44 P P 08 35 57.0 +0.3
comp=Z,16nm,0.8s,baz=205,slow=11,SNR=25
TKL LR LR 08 49 15.2
comp=Z,2µm,18.6s,baz=236,slow=43
comp=Z,16nm,0.8s
TKL Tuckaleechee C 26.30 44 P P 08 35 57.2 +0.4
TKL IAmb IAmb 08 36 04.4
comp=Z,24nm,1.0s
FLWY Flagg Ranch 26.39 352 IAmb IAmb 08 36 10.4
comp=Z,79nm,1.6s
T50A Nancy 26.47 40 IAmb IAmb 08 36 01.2
comp=Z,24nm,0.8s
V52A Sevierville 26.52 43 IAmb IAmb 08 36 02.9
comp=Z,30nm,1.1s
HODGE Hodges 26.53 48 IAmb IAmb 08 36 03.9
comp=Z,49nm,1.0s
HLID Hailey 26.57 346 P P 08 36 00.2 +0.9
baz=162,SNR=23
YPP Pinstone Pla 26.59 352 IAmb IAmb 08 36 21.9
comp=Z,34nm,1.4s
HDIL Hopedale 26.64 29 P P 08 35 59.9 +0.1
HDIL IAmb IAmb 08 36 04.1
comp=Z,54nm,1.1s
HDIL Hopedale 26.64 29 P P 08 35 59.5 -0.3
baz=217,SNR=12
BCIP Isla Barro Col 26.65 106 IAMs_20 IAMs_20 08 44 28.5
comp=Z,2µm,19.0s
H17A Grant Village 26.68 352 P P 08 35 59.8 -0.6
baz=170,SNR=13
O44A Mansfield 26.71 30 IAmb IAmb 08 36 25.8
comp=Z,24nm,1.0s
WVOR Wild Horse Val 26.76 339 IAMs_20 IAMs_20 08 46 08.9
comp=Z,2µm,20.0s
LKWY Lake 26.83 353 IAMs_20 IAMs_20 08 44 34.9
comp=Z,2µm,22.0s
ECSD EROS Data Cent 26.85 15 IAMs_20 IAMs_20 08 45 39.3
comp=Z,3µm,22.0s
ECSD EROS Data Cent 26.85 15 P P 08 36 00.8 -0.9
baz=200,SNR=8.7
MOD Modoc Plateau 26.92 336 IAMs_20 IAMs_20 08 46 22.1
comp=Z,2µm,19.0s
P46A Rosedale 26.94 33 IAmb IAmb 08 36 12.0
comp=Z,31nm,0.9s
V53A Saluda 26.94 45 IAmb IAmb 08 36 05.4
comp=Z,38nm,1.1s
BLO Bloomington 26.97 34 IAmb IAmb 08 36 29.1
comp=Z,60nm,0.8s
TZTN Tazewell 26.97 42 IAmb IAmb 08 36 13.3
comp=Z,58nm,1.2s
TZTN Tazewell 26.97 42 P P 08 36 02.8 -0.1
baz=232,SNR=14
YMR Madison River 27.00 352 IAmb IAmb 08 36 19.3
comp=Z,49nm,1.5s
RLMT Red Lodge 27.26 355 P P 08 36 05.3 -0.2
baz=173
JSC Jenksville 27.27 49 IAmb IAmb 08 36 08.4
comp=Z,45nm,1.2s
NHSC New Hope 27.49 52 P P 08 36 07.1 -0.4
baz=243
SFIN Lafayette 27.56 32 IAmb IAmb 08 36 13.3
comp=Z,34nm,0.9s
SFIN Lafayette 27.56 32 P P 08 36 07.8 -0.2
baz=221,SNR=10
R50A Paris 27.60 38 IAmb IAmb 08 36 32.8
comp=Z,42nm,1.9s
S51A Bedttyville 27.62 40 IAmb IAmb 08 36 17.3
comp=Z,23nm,0.9s
KMSC Kings Mountain 27.66 47 IAmb IAmb 08 36 12.4
comp=Z,35nm,0.9s
KMSC Kings Mountain 27.66 47 P P 08 36 08.8 -0.2
baz=238,SNR=19
JCC Jacoby Creek, 27.69 329 IAMs_20 IAMs_20 08 47 08.4
comp=Z,3µm,18.0s
Y57A Sumter 27.76 50 IAmb IAmb 08 36 12.8
comp=Z,25nm,0.9s
P48A Milroy 27.77 35 IAmb IAmb 08 36 21.5
comp=Z,32nm,1.6s
YBH Yreka Blue Hor 27.79 332 P P 08 36 08.5 -1.7
comp=Z,3.8nm,1.1s,baz=141,slow=6.5,SNR=3.5
YBH LR LR 08 46 38.8
comp=Z,2µm,19.6s,baz=151,slow=35
comp=Z,3.8nm,1.1s
YBH Yreka Blue Hor 27.79 332 IAMs_20 IAMs_20 08 46 27.1
comp=Z,2µm,18.0s
K05A Summer Lake 27.85 336 IAmb IAmb 08 36 15.7
comp=Z,38nm,1.5s
DLMT Dillon 27.93 350 IAmb IAmb 08 36 35.3
comp=Z,26nm,1.1s
DLMT IAMs_20 IAMs_20 08 46 40.9
comp=Z,2µm,20.0s
BOZ Bozeman (W) 28.00 351 IAmb IAmb 08 36 15.4
comp=Z,36nm,1.5s
BOZ IAMs_20 IAMs_20 08 46 48.0
comp=Z,2µm,20.0s
BOZ Bozeman (W) 28.00 351 P P 08 36 12.2 0.0
baz=168,SNR=20
L04D Klamath Falls 28.01 333 IAmb IAmb 08 36 14.6
comp=Z,32nm,1.4s
L04D IAMs_20 IAMs_20 08 45 43.8
comp=Z,2µm,22.0s
L04D Klamath Falls 28.01 333 P P 08 36 10.9 -1.3
BIRD Birdtown, Kers 28.02 49 IAmb IAmb 08 36 17.6
comp=Z,43nm,1.6s
V55A Taylorsville 28.12 46 IAmb IAmb 08 36 16.0
comp=Z,24nm,1.0s
JFWS Jewell Farm 28.17 25 IAmb IAmb 08 36 18.9
comp=Z,33nm,1.0s
JFWS Jewell Farm 28.17 25 IAMs_20 IAMs_20 08 47 34.6
comp=Z,3µm,22.0s
JFWS Jewell Farm 28.17 25 P P 08 36 12.9 -0.5
baz=213,SNR=9.1
P49A Miami Univ. Ec 28.22 36 IAmb IAmb 08 36 23.1
comp=Z,37nm,1.2s
P49A Miami Univ. Ec 28.22 36 P P 08 36 13.2 -0.7
baz=226
J05D Fort Rock, OR 28.46 336 P P 08 36 16.0 -0.2
baz=148,SNR=10
O48B Farmland 28.48 34 P P 08 36 15.6 -0.7
baz=225,SNR=12
L02F Cave Junction 28.49 332 P P 08 36 16.8 +0.4
baz=143
BMO Blue Mountains 28.52 343 IAMs_20 IAMs_20 08 48 23.2

comp=Z,1µm,18.0s
HUMO Hull Mountain 28.60 333 IAMs_20 IAMs_20 08 47 15.7
comp=Z,3µm,19.0s
W57A Gilead 28.61 48 IAmb IAmb 08 36 20.0
comp=Z,40nm,1.2s
N47A Urbana 28.65 33 IAmb IAmb 08 36 19.6
comp=Z,24nm,1.0s
Q51A Peebles 28.66 38 IAmb IAmb 08 36 21.6
comp=Z,28nm,1.1s
LAO LASA Array 28.67 359 IAmb IAmb 08 36 19.8
comp=Z,27nm,1.2s
LAO IAMs_20 IAMs_20 08 48 00.9
comp=Z,3µm,19.0s
LAO LASA Array 28.67 359 P P 08 36 17.1 -0.9
baz=179,SNR=7.3
J04D Umpqua Nationa 28.77 335 IAmb IAmb 08 36 26.2
comp=Z,40nm,1.0s
J04D IAMs_20 IAMs_20 08 47 19.0
comp=Z,2µm,19.0s
J04D Umpqua Nationa 28.77 335 P P 08 36 19.0 0.0
baz=146,SNR=10
PINE Pine Mountain 28.77 337 P P 08 36 20.1 +1.0
E28A Huff 28.86 7 IAmb IAmb 08 36 31.1
comp=Z,43nm,1.3s
O49A Covington 28.88 35 IAmb IAmb 08 36 22.0
comp=Z,25nm,0.8s
K02D Willamette Mer 28.99 332 P P 08 36 20.9 0.0
baz=143
P51A Williamsport 29.13 38 IAmb IAmb 08 36 31.2
comp=Z,21nm,0.9s
S54A Dingess, Beckl 29.16 42 IAmb IAmb 08 36 35.5
comp=Z,33nm,1.1s
SPMN Marine on St. 29.28 19 IAmb IAmb 08 36 25.1
comp=Z,37nm,1.1s
SPMN Marine on St. 29.28 19 P P 08 36 21.8 -1.6
baz=206,SNR=9.6
I04A Tendick Farm, 29.35 335 P P 08 36 24.3 +0.3
baz=146
I05D Terrebonne, OR 29.39 337 P P 08 36 25.2 +0.8
baz=149,SNR=9.8
BLA Blacksburg 29.40 44 IAMs_20 IAMs_20 08 49 58.6
comp=Z,2µm,21.0s
BLA Blacksburg 29.40 44 P P 08 36 23.2 -1.3
baz=236,SNR=12
J01E Myrtle Point 29.48 332 IAmb IAmb 08 36 32.3
comp=Z,43nm,1.1s
J01E IAMs_20 IAMs_20 08 47 19.7
comp=Z,1µm,20.0s
J01E Myrtle Point 29.48 332 P P 08 36 25.4 +0.4
baz=143
N49A Columbus Grove 29.48 35 IAmb IAmb 08 36 29.3
comp=Z,25nm,1.1s
MSO Missoula 29.59 349 IAmb IAmb 08 36 30.8
comp=Z,26nm,1.1s
MSO IAMs_20 IAMs_20 08 47 41.7
comp=Z,2µm,19.0s
MSO Missoula 29.59 349 P P 08 36 25.7 -0.5
baz=164,SNR=23
F36A Milaca 29.64 17 IAmb IAmb 08 36 28.4
comp=Z,27nm,1.2s
I03D Drain, OR 29.66 334 P P 08 36 26.0 -0.7
baz=145
ACSO Alum Creek Sta 29.67 37 IAMs_20 IAMs_20 08 49 43.8
comp=Z,3µm,18.0s
P52A Corning 29.77 39 IAMs_20 IAMs_20 08 49 33.6
comp=Z,3µm,18.0s
P52A Corning 29.77 39 P P 08 36 27.5 -0.3
baz=230
BUCK Buck Mountain 29.91 335 IAmb IAmb 08 36 35.4
comp=Z,34nm,1.1s
H04A Detroit Lake 30.00 336 P P 08 36 29.7 -0.1
H04A IAmb IAmb 08 36 36.5
comp=Z,18nm,1.0s
L48A N Adams 30.07 33 IAmb IAmb 08 36 34.1
comp=Z,29nm,0.9s
H04D Lebanon 30.09 335 IAmb IAmb 08 36 49.4
comp=Z,40nm,1.4s
H04D IAMs_20 IAMs_20 08 48 17.9
comp=Z,2µm,19.0s
H04D Lebanon 30.09 335 P P 08 36 30.6 +0.1
baz=147
P53A Whipple 30.13 40 IAmb IAmb 08 36 33.1
comp=Z,35nm,0.9s
CNNC Cliffs of the 30.16 50 IAMs_20 IAMs_20 08 50 18.5
comp=Z,2µm,21.0s
G05D Wamic, OR 30.16 338 P P 08 36 30.8 -0.3
baz=150
Q54A Coxs Mills 30.16 41 IAmb IAmb 08 36 33.6
comp=Z,33nm,1.0s
EGMT Eagleton 30.18 355 IAmb IAmb 08 36 34.0
comp=Z,28nm,1.1s
EGMT Eagleton 30.18 355 P P 08 36 30.6 -0.7
baz=173
G40A Rib Lake 30.19 22 IAmb IAmb 08 36 34.0
comp=Z,28nm,1.1s
I02E Swisshome, OR 30.20 334 IAMs_20 IAMs_20 08 48 23.9
comp=Z,2µm,19.0s
I02E Swisshome, OR 30.20 334 P P 08 36 31.2 -0.2
baz=144
R55A Marlinton 30.20 43 IAmb IAmb 08 36 34.5
comp=Z,35nm,1.1s
MDND Maddock 30.25 8 P P 08 36 31.0 -0.9
baz=192
HOOD Mount Hood Mea 30.35 338 IAmb IAmb 08 36 36.5
comp=Z,31nm,1.2s
COR Corvallis 30.36 335 IAMs_20 IAMs_20 08 48 29.3
comp=Z,2µm,20.0s
H43A Windswept, Lux 30.46 26 IAmb IAmb 08 36 35.8
comp=Z,30nm,0.9s
N51A Ashland 30.47 36 IAmb IAmb 08 36 42.6
comp=Z,42nm,1.2s
DGMT Dagmar 30.48 2 IAmb IAmb 08 36 36.7
comp=Z,35nm,1.0s
DGMT Dagmar 30.48 2 P P 08 36 33.4 -0.5
baz=183,SNR=16
HAWA Hanford 30.57 341 IAMs_20 IAMs_20 08 48 28.6
comp=Z,2µm,20.0s
O53A New Philadelph 30.71 39 IAmb IAmb 08 36 37.8
comp=Z,31nm,1.1s
O53A New Philadelph 30.71 39 P P 08 36 35.0 -1.0
baz=231
SJCC San Jacinto, C 30.71 101 eP P 08 36 40.4 +4.0
AAM Ann Arbor 30.73 33 IAMs_20 IAMs_20 08 48 52.7
comp=Z,2µm,19.0s
AAM Ann Arbor 30.73 33 P P 08 36 35.4 -0.8
baz=225
U59A Littleton 30.75 48 IAmb IAmb 08 36 39.2
comp=Z,34nm,1.4s
F05D White Salmon 30.76 338 IAmb IAmb 08 36 39.3
comp=Z,19nm,1.2s
F05D IAMs_20 IAMs_20 08 48 23.8
comp=Z,1µm,22.0s
F05D White Salmon 30.76 338 P P 08 36 35.3 -1.2
baz=150
DBBC Dabeiba 30.79 107 eP P 08 36 46.2 +9.1
J47A Sunmer 30.83 31 IAmb IAmb 08 36 39.2
comp=Z,36nm,1.2s
G03D McMinnville, O 30.87 336 IAMs_20 IAMs_20 08 48 59.5
comp=Z,2µm,19.0s
G03D McMinnville, O 30.87 336 P P 08 36 37.2 -0.1
baz=146
E38A The Farm, Brul 30.91 19 IAmb IAmb 08 36 39.5
comp=Z,35nm,1.1s
F04A Amboy 31.15 337 IAmb IAmb 08 36 42.3
comp=Z,24nm,1.5s
O54A Avella 31.17 39 IAmb IAmb 08 36 53.1
comp=Z,13nm,0.9s
MCWV Mont Chateau 31.18 41 IAmb IAmb 08 36 42.5
comp=Z,30nm,1.1s
MCWV IAMs_20 IAMs_20 08 50 25.6
comp=Z,2µm,20.0s
MCWV Mont Chateau 31.18 41 P P 08 36 39.3 -0.9
baz=234,SNR=6.2
COWI Conover 31.29 23 IAMs_20 IAMs_20 08 48 38.1
comp=Z,2µm,19.0s
AGMN Agassiz Nation 31.34 13 IAmb IAmb 08 36 44.7
comp=Z,23nm,1.0s
AGMN IAMs_20 IAMs_20 08 48 58.0
comp=Z,3µm,19.0s
AGMN Agassiz Nation 31.34 13 P P 08 36 40.9 -0.6
baz=198,SNR=14
CBOC Ciudad Bolivar 31.43 109 eP P 08 36 44.2 +1.4
R58B Mineral 31.50 45 IAmb IAmb 08 36 46.9
comp=Z,17nm,1.1s
PLMC San Jos del P 31.61 111 eP P 08 36 44.2 -0.1
NEW Newport 31.63 345 LR LR 08 48 44.9
comp=Z,924nm,19.2s,baz=162,slow=35
NEW Newport 31.63 345 P P 08 36 44.2 +0.1

baz=159,SNR=11
LTY Liberty 31.70 341 IAmb IAmb 08 36 56.0
comp=Z,16nm,1.1s
E04D Cinebar 31.73 338 IAmb IAmb 08 36 52.0
comp=Z,30nm,1.1s
E04D IAMs_20 IAMs_20 08 49 33.5
comp=Z,2µm,20.0s
E04D Cinebar 31.73 338 P **P** **08 36 44.5 -0.5**
baz=149
HELC Santa Helena 31.74 108 *eP* **P** **08 36 49.1 +3.3**
M53A WI Miller and 31.78 37 P **P** **08 36 44.8 -0.7**
baz=230
CBN Corbin Frederi 31.97 45 P **P** **08 36 46.1 -1.0**
baz=239
D05A Enumclaw 32.07 339 IAmb IAmb 08 36 53.4
comp=Z,29nm,1.3s
OTAV Otavalo 32.11 120 P **P** **08 36 51.6 +2.4**
OTAV IAmb IAmb 08 36 53.5
comp=Z,36nm,1.3s
OTAV Otavalo 32.11 120 IAMs_20 IAMs_20 08 46 31.0
OTAV Otavalo 32.11 120 *eP* **P** **08 36 52.7 +3.6**
EYMN Ely 32.12 18 P **P** **08 36 47.3 -1.1**
baz=206,SNR=7.1
B08A Colville Reser 32.29 343 IAmb IAmb 08 37 01.1
comp=Z,19nm,1.2s
D04E Lakebay 32.34 338 P **P** **08 36 49.3 -0.9**
baz=149
POPC Popayan, Colom 32.38 115 *eP* **P** **08 36 53.9 +2.6**
GCUF Volcan Galeras 32.49 118 *eP* **P** **08 36 53.9 +1.4**
ERPA Erie 32.61 37 IAMs_20 IAMs_20 08 51 25.7
comp=Z,3µm,18.0s
SOTA Rioblanco 32.64 115 *eP* **P** **08 36 54.9 +1.0**
PCON Cinco Dias 32.73 115 *eP* **P** **08 36 55.8 +1.1**
D03D Eldon 32.76 338 P **P** **08 36 53.6 -0.3**
baz=149,SNR=7.1
MARP Paez Belalcaza 32.85 114 *eP* **P** **08 36 58.7 +3.2**
NLWA Neilton Lookou 32.92 337 IAmb IAmb 08 37 06.7
comp=Z,19nm,1.2s
NLWA IAMs_20 IAMs_20 08 50 49.8
comp=Z,2µm,18.0s
SDMD Soldier's Deli 32.96 44 IAmb IAmb 08 36 58.5
comp=Z,21nm,1.2s
SSPA Standing Stone 32.97 41 P **P** **08 36 54.9 -1.0**
SSPA IAmb IAmb 08 37 02.7
comp=Z,20nm,0.9s
SSPA Standing Stone 32.97 41 IAMs_20 IAMs_20 08 51 30.9
comp=Z,2µm,18.0s
SSPA Standing Stone 32.97 41 P **P** **08 36 54.8 -1.0**
baz=235
B06A Marblemount 33.07 341 IAmb IAmb 08 37 03.4
comp=Z,23nm,1.0s
ULM Lac du Bonnet 33.20 12 P **P** **08 36 56.5 -1.2**
comp=Z,15nm,1.1s,baz=201,slow=9.3,SNR=10
ULM LR LR 08 51 11.7
comp=Z,2µm,19.5s,baz=198,slow=38
comp=Z,15nm,1.1s
ULM Lac du Bonnet 33.20 12 IAmb IAmb 08 36 59.6
comp=Z,23nm,1.1s
SPBC San Pablo de B 33.28 108 *eP* **P** **08 37 00.6 +1.7**
ROSC El Rosal 33.39 109 LR LR 08 49 10.3
comp=Z,408nm,21.5s,baz=322,slow=34
E46A Sault Ste Mari 33.45 27 IAmb IAmb 08 37 01.7
comp=Z,24nm,0.9s
WVNY West Valley, N 33.59 38 IAmb IAmb 08 37 03.8
comp=Z,21nm,1.0s
MVL Millersville 33.59 43 IAmb IAmb 08 37 04.2
comp=Z,41nm,1.4s
BARC Barichara 33.72 105 *eP* **P** **08 37 06.4 +3.4**
N58A Sunbury 33.82 41 IAmb IAmb 08 37 05.0
comp=Z,22nm,1.0s
M57A Sunshine Farm, 33.84 40 IAmb IAmb 08 37 29.4
comp=Z,31nm,1.2s
PAMC Pamplona, Colo 33.88 104 *eP* **P** **08 37 07.4 +2.7**
CHIC Chingaza 34.01 109 *eP* **P** **08 37 07.4 +1.7**
WUPA West Chester U 34.04 44 IAmb IAmb 08 37 08.2
comp=Z,32nm,1.4s
L56A Greenwood 34.04 39 IAmb IAmb 08 37 07.5
comp=Z,21nm,1.1s
RUSC La Rusia 34.08 107 *eP* **P** **08 37 06.4 0.0**
MMNY Mt. Morris Dam 34.20 38 IAmb IAmb 08 37 08.4
comp=Z,26nm,1.1s
SADO Sadowa 34.81 34 LR LR 08 51 30.3
comp=Z,2µm,21.4s,baz=242,slow=36
OZB Mount Ozzard 34.83 337 IAmb IAmb 08 37 14.6
comp=Z,30nm,1.2s
K57A Scipio Center 35.02 39 IAmb IAmb 08 37 15.7
comp=Z,23nm,1.0s
BINY Binghamton 35.03 40 P **P** **08 37 12.6 -1.3**
baz=236,SNR=11
MACC Macarena, Meta 35.03 113 *eP* **P** **08 37 15.1 +1.0**
TAMC Tame, Arauca 35.05 105 *eP* **P** **08 37 12.2 -2.2**
SDV Santo Domingo 35.29 100 LR LR 08 51 40.9
comp=Z,460nm,19.6s,baz=292,slow=36
SDV Santo Domingo 35.29 100 P **P** **08 37 18.4 +1.8**
SDV IAmb IAmb 08 37 32.0
comp=Z,27nm,0.9s
SDV Santo Domingo 35.29 100 *eP* **P** **08 37 19.3 +2.8**
ODNJ Ogdensburg 35.29 43 IAmb IAmb 08 37 18.6
comp=Z,38nm,1.4s
DELO Deloro Mine 35.47 36 IAmb IAmb 08 37 19.5
comp=Z,20nm,1.2s
TRNY Table Rock, Ra 35.57 43 IAmb IAmb 08 37 21.9
comp=Z,24nm,1.1s
PTGC Puerto Gaitan, 35.63 109 *eP* **P** **08 37 18.0 -1.3**
CBB Campbell River 35.67 338 IAmb IAmb 08 37 26.1
comp=Z,20nm,1.1s
EDM Edmonton 35.70 352 IAmb IAmb 08 37 22.1
comp=Z,37nm,1.4s
PAL Palisades 35.70 43 IAMs_20 IAMs_20 08 53 21.4
comp=Z,3µm,21.0s
PAL Palisades 35.70 43 P **P** **08 37 18.4 -1.1**
baz=239
HATO Hato, Curacao 35.96 94 IAMs_20 IAMs_20 08 50 38.5
comp=Z,1µm,21.0s
YLE Yale 36.49 43 IAMs_20 IAMs_20 08 53 46.7
comp=Z,2µm,20.0s
TRY Troy 36.76 41 IAmb IAmb 08 37 33.1
comp=Z,40nm,1.5s
TRY IAMs_20 IAMs_20 08 53 36.3
comp=Z,2µm,19.0s
ATAH Atahualpa 36.76 130 P **P** **08 37 27.7 -1.7**
comp=Z,2.3nm,0.7s,baz=168,slow=4.4,SNR=2.1
ATAH LR LR 08 49 20.8
comp=Z,3µm,20.9s,baz=312,slow=31
comp=Z,2.3nm,0.7s
ACCN Adirondack Com 37.11 40 P **P** **08 37 30.7 -0.9**
ACCN IAmb IAmb 08 37 33.9
comp=Z,26nm,1.1s
UCCT U. Connecticut 37.20 43 IAmb IAmb 08 37 39.7
comp=Z,60nm,1.6s
LONY Lake Ozonia 37.26 38 IAMs_20 IAMs_20 08 54 08.7
comp=Z,2µm,18.0s
LONY Lake Ozonia 37.26 38 P **P** **08 37 31.4 -1.4**
baz=234,SNR=7.7
SJG San Juan 37.63 83 LR LR 08 54 42.9
comp=Z,427nm,18.8s,baz=276,slow=39
BRYW Bryant College 37.70 43 IAMs_20 IAMs_20 08 54 31.3
comp=Z,2µm,20.0s
BAUV El Baul 37.70 99 P **P** **08 37 37.3 +0.4**
BAUV IAmb IAmb 08 37 54.8
comp=Z,33nm,1.1s
J61A Chester 37.78 41 IAmb IAmb 08 37 40.4
comp=Z,52nm,1.2s
VLDQ Val d'Or 37.92 31 IAmb IAmb 08 37 39.7
comp=Z,30nm,1.2s
HRV Adam Dziewonsk 37.98 43 IAMs_20 IAMs_20 08 53 33.6
comp=Z,975nm,21.0s
HRV Adam Dziewonsk 37.98 43 P **P** **08 37 38.8 -0.2**
baz=240
WES Weston 38.07 43 IAMs_20 IAMs_20 08 54 39.0
comp=Z,2µm,19.0s
HNH Hanover 38.13 40 P **P** **08 37 40.8 +0.6**
BCX Boston College 38.15 43 IAMs_20 IAMs_20 08 54 43.0
comp=Z,2µm,20.0s
VT1 Waterbury 38.18 39 IAmb IAmb 08 37 43.0
comp=Z,25nm,1.1s
MNTQ Montreal, Queb 38.32 37 IAmb IAmb 08 37 44.2
comp=Z,32nm,1.1s
FFD Franklin Falls 38.40 41 IAmb IAmb 08 37 45.7
comp=Z,38nm,1.2s
BBB Bella Bella 38.43 338 LR LR 08 53 12.2
comp=Z,868nm,20.9s,baz=156,slow=36
LBNH Lisbon 38.63 40 P **P** **08 37 43.7 -0.7**
baz=238
I62A Tamworth 38.81 41 IAmb IAmb 08 37 49.8
comp=Z,76nm,1.4s
H62A Milan 39.28 40 IAmb IAmb 08 38 03.1
comp=Z,32nm,1.2s
I63A Otisfield 39.37 41 IAmb IAmb 08 37 53.6
comp=Z,30nm,1.2s
LATQ La Tuque 39.89 35 IAmb IAmb 08 37 57.3
comp=Z,60nm,1.4s
PKME Peaks-Kenny Pk 40.77 40 P **P** **08 38 02.7 +0.5**
baz=240
F63A Nahmakanta, Br 41.10 40 IAmb IAmb 08 38 07.7
comp=Z,23nm,1.1s
NNA Nana 41.23 134 LR LR 08 51 37.3
comp=Z,1µm,20.6s,baz=323,slow=31
NNA Nana 41.23 134 IAMs_20 IAMs_20 08 51 26.5
comp=Z,1µm,20.0s
LMQ La Malbaie 41.36 36 IAmb IAmb 08 38 08.8
comp=Z,37nm,0.8s
CZSB Cruzeiro do Su 41.43 125 *eP* **P** **08 38 10.7 +2.7**
EMMW East Machias 41.65 42 IAMs_20 IAMs_20 08 56 36.6
comp=Z,2µm,21.0s
FCC Fort Churchill 41.66 9 P **P** **08 38 08.7 -0.5**
FCC IAmb IAmb 08 38 10.6
comp=Z,43nm,1.0s
D62A Allapoint, All 41.84 38 P **P** **08 38 10.8 -0.2**
D62A IAmb IAmb 08 38 13.1
comp=Z,26nm,0.8s
PQI Presque Isle 42.24 39 IAMs_20 IAMs_20 08 57 02.5
comp=Z,2µm,21.0s
T35M Bob Quinn 43.07 341 P **P** **08 38 22.4 +1.6**
baz=145,SNR=5.5
TAOE Nuku Hiva Isla 43.14 235 *e*LR LR 08 49 35.5
comp=Z,3µm,26.3s
TAOE Nuku Hiva Isla 43.14 235 *e*T T 09 23 56.0
comp=Z,27nm,0.2s
WRAK Wrangell Islan 43.31 339 P **P** **08 38 24.2 +1.5**
baz=142
BATG Bathurst New B 43.71 39 P **P** **08 38 26.2 +0.1**
BATG IAmb IAmb 08 38 28.5
comp=Z,33nm,1.0s
LMN Caledonia Moun 43.83 41 P **P** **08 38 26.2 -0.9**
LMN IAmb IAmb 08 38 29.7
comp=Z,47nm,1.2s
S34M Telegraph Cree 44.10 341 P **P** **08 38 29.4 +0.3**
baz=144
DLBC Dease Lake 44.20 342 LR LR 08 57 28.2
comp=Z,2µm,18.8s,baz=144,slow=37
DLBC Dease Lake 44.20 342 P **P** **08 38 31.8 +1.8**
DLBC IAmb IAmb 08 38 33.2
comp=Z,34nm,1.1s
DLBC Dease Lake 44.20 342 P **P** **08 38 31.1 +1.1**
baz=146,SNR=16
RPN Rapa Nui 44.93 184 LR LR 08 52 45.4
comp=Z,1µm,20.0s,baz=9.5,slow=30
YKA Yellowknife Ar 44.93 354 P **P** **08 38 34.6 -1.0**
comp=Z,3.0nm,0.8s,baz=166,slow=7.8,SNR=26
YKA LR LR 08 56 42.2
comp=Z,1µm,19.0s,baz=171,slow=35
comp=Z,3.0nm,0.8s
YKA Yellowknife Ar 44.93 354 P **P** **08 38 33.4 -2.3**
WTLY Watson Lake, Y 45.27 344 P **P** **08 38 38.7 +0.3**
baz=149
JIS Juneau Island 45.45 339 IAMs_20 IAMs_20 08 56 11.3
comp=Z,857nm,22.0s
TGTN Hyland Airport 46.35 345 P **P** **08 38 47.5 +0.5**
baz=150
P33M Teslin, Yukon 46.48 342 P **P** **08 38 48.2 +0.2**
P33M IAmb IAmb 08 38 51.1
P33M comp=Z,20nm,1.4s IAMs_20 IAMs_20 08 58 38.2
comp=Z,1µm,21.0s
P33M Teslin, Yukon 46.48 342 P **P** **08 38 48.2 +0.2**
baz=144,SNR=8.1
SKAG Skagway 46.68 340 P **P** **08 38 50.0 +0.5**
baz=140
BOAV Boa Vista 46.97 104 *eP* **P** **08 38 56.1 +3.6**
PLBC Pleasant Camp 47.02 339 P **P** **08 38 53.4 +1.3**
baz=139,SNR=5.2
SCHQ Schefferville 47.30 30 P **P** **08 38 54.2 -0.2**
comp=Z,12nm,1.0s,baz=224,slow=7.0,SNR=5.9
SCHQ PP **PP** **08 40 44.5 -1.1**
comp=Z,11nm,1.0s,baz=247,slow=8.5,SNR=4.5
SCHQ LR LR 08 59 32.7
comp=Z,2µm,18.2s,baz=239,slow=37
comp=Z,12nm,1.0s
N32M Quiet Lake 47.31 342 P **P** **08 38 55.6 +1.1**
baz=144
P30M Million Dollar 47.72 339 P **P** **08 38 59.0 +1.3**
baz=138
O30N Mendenhall 47.93 340 P **P** **08 38 59.4 +0.1**
baz=140,SNR=6.4
MMPY Sheldon Lake, 48.03 344 P **P** **08 39 00.7 +0.7**
baz=147,SNR=21
FARO Faro, Yukon 48.26 343 P **P** **08 39 02.4 +0.6**
baz=144,SNR=6.7
N31M Braeburn, Yuko 48.38 341 IAMs_20 IAMs_20 08 59 46.5
comp=Z,1µm,19.0s
N31M Braeburn, Yuko 48.38 341 P **P** **08 39 03.2 +0.5**
baz=141,SNR=10
HYT Haines Junctio 48.42 340 P **P** **08 39 04.1 +0.9**
HYT IAmb IAmb 08 39 15.2
comp=Z,23nm,1.4s
HYT Haines Junctio 48.42 340 P **P** **08 39 04.1 +0.9**
baz=138
BCPM Bancas Point 48.52 338 P **P** **08 39 03.5 -0.3**
M31M Drury Creek, Y 48.53 343 IAmb IAmb 08 39 06.5
comp=Z,21nm,1.2s
M31M IAMs_20 IAMs_20 08 59 19.5
comp=Z,1µm,19.0s
M31M Drury Creek, Y 48.53 343 P **P** **08 39 04.1 +0.2**
baz=143,SNR=10
N30M Aishikik Lake 48.77 341 P **P** **08 39 06.1 +0.3**
baz=139,SNR=7.4
YUK6 Outpost Mounta 48.80 340 P **P** **08 39 07.5 +1.3**
baz=137
PINM Pinnacle 48.84 338 P **P** **08 39 06.7 +0.3**
baz=134
MACA Manacapuru-AM 49.13 111 *eP* **P** **08 39 09.6 +0.5**
YUK4 Talbot Arm 49.18 340 P **P** **08 39 10.0 +0.9**
baz=137,SNR=8.3
TABL Table Mountain 49.40 338 IAMs_20 IAMs_20 08 59 41.7
comp=Z,671nm,19.0s
YUK8 Steele Glacier 49.51 339 P **P** **08 39 11.4 -0.4**
baz=136
MESA MESA 49.52 337 P **P** **08 39 11.5 -0.2**
baz=133
M30M Minto, Yukon 49.53 342 IAmb IAmb 08 39 19.2
comp=Z,14nm,1.2s
M30M IAMs_20 IAMs_20 09 00 21.8
comp=Z,1µm,19.0s
M30M Minto, Yukon 49.53 342 P **P** **08 39 11.9 +0.4**
baz=140,SNR=8.1
YAH Yahtse 49.56 337 IAMs_20 IAMs_20 08 59 49.3
comp=Z,683nm,20.0s
LOGN Logan Glacier 49.62 338 IAMs_20 IAMs_20 09 01 32.4
comp=Z,640nm,19.0s
GRNC Granite Creek 49.82 338 IAmb IAmb 08 39 22.2
comp=Z,29nm,1.2s
GRNC IAMs_20 IAMs_20 08 57 46.8
comp=Z,583nm,20.0s
SAML Samuel 49.82 119 P **P** **08 39 13.1 -1.3**
SAML IAMs_20 IAMs_20 08 57 53.5
comp=Z,550nm,19.0s
CTGM Chitina Glacie 49.83 338 IAMs_20 IAMs_20 09 01 39.1
comp=Z,621nm,18.0s
ISLE Juniper Island 49.94 337 IAMs_20 IAMs_20 08 56 03.1
comp=Z,616nm,18.0s
WAX Waxell Ridge 50.03 337 IAMs_20 IAMs_20 08 56 19.4
comp=Z,609nm,18.0s
YUK3 Moose Creek 50.10 339 P **P** **08 39 16.6 +0.5**
baz=135,SNR=8.2
TGL Tana Glacier 50.23 337 IAMs_20 IAMs_20 09 00 33.5
comp=Z,631nm,19.0s
LPAZ La Paz 50.31 130 P **P** **08 39 18.6 -0.2**
comp=Z,5.5nm,0.9s,baz=327,slow=6.5,SNR=17
LPAZ LR LR 08 58 12.6
comp=Z,1µm,20.3s,baz=316,slow=33
comp=Z,5.5nm,0.9s
LPAZ La Paz 50.31 130 P **P** **08 39 17.2 -1.6**
LPAZ IAmb IAmb 08 39 21.7
comp=Z,47nm,1.9s
LPAZ La Paz 50.31 130 *eP* **P** **08 39 19.8 +1.0**
BVCY Beaver Creek 50.68 340 P **P** **08 39 21.2 +0.9**
baz=135
PB16 IPOC Station P 50.70 133 IAmb IAmb 08 39 47.1
comp=Z,38nm,1.7s
MCARA McCarthy VSAT 50.72 338 IAMs_20 IAMs_20 09 00 22.5
comp=Z,609nm,18.0s
MCARA McCarthy VSAT 50.72 338 P **P** **08 39 21.3 +0.7**
baz=132
VRDI Verde Repeater 50.77 338 IAmb IAmb 08 39 29.2
comp=Z,27nm,1.2s
VRDI IAMs_20 IAMs_20 09 00 26.9
comp=Z,567nm,20.0s
M27K Edge Creek, AK 50.98 339 IAmb IAmb 08 39 31.3
comp=Z,27nm,1.1s
M27K Edge Creek, AK 50.98 339 P **P** **08 39 23.1 +0.4**
baz=134,SNR=20
BMRM Bremner River 51.02 337 IAmb IAmb 08 39 30.9
comp=Z,25nm,1.1s
BMRM Bremner River 51.02 337 P **P** **08 39 23.2 +0.3**
baz=130
GLB Gilahina Butte 51.04 338 IAmb IAmb 08 39 30.6
comp=Z,25nm,1.1s
GLB IAMs_20 IAMs_20 09 00 35.1
comp=Z,580nm,20.0s
EYAK Cordova Ski Ar 51.20 336 P **P** **08 39 25.2 +1.1**
baz=128
J29M Klondike Camp 51.37 343 IAMs_20 IAMs_20 09 00 59.6
comp=Z,848nm,19.0s
M26K Nabesna, AK 51.39 339 IAmb IAmb 08 39 37.0
comp=Z,15nm,1.1s
M26K Nabesna, AK 51.39 339 P **P** **08 39 25.9 +0.2**
baz=133,SNR=11
DAWY Dawson 51.42 342 IAmb IAmb 08 39 32.8
comp=Z,15nm,1.1s
DAWY Dawson 51.42 342 P **P** **08 39 25.9 +0.1**
baz=138,SNR=16
N25K Chitina, Valde 51.43 337 IAmb IAmb 08 39 34.3
comp=Z,23nm,1.1s
N25K Chitina, Valde 51.43 337 P **P** **08 39 26.4 +0.4**
baz=130,SNR=7.2
BCAR Beaver Creek A 51.45 340 P **P** **08 39 25.5 -0.6**
L27K Beaver Creek, 51.46 340 IAMs_20 IAMs_20 09 02 22.8
comp=Z,833nm,19.0s
L27K Beaver Creek, 51.46 340 P **P** **08 39 27.0 +0.9**
baz=134,SNR=10.0
KLU Klutina 51.85 337 IAmb IAmb 08 39 40.0
comp=Z,19nm,1.1s
KLU Klutina 51.85 337 P **P** **08 39 30.2 +1.1**
baz=129
GLI Glacier Island 51.92 336 IAmb IAmb 08 39 40.4
comp=Z,29nm,1.1s
GLI Glacier Island 51.92 336 P **P** **08 39 30.2 +0.6**
baz=127
L26K Log Cabin Wild 51.94 339 IAmb IAmb 08 39 34.0
comp=Z,22nm,1.5s
L26K Log Cabin Wild 51.94 339 P **P** **08 39 30.5 +0.8**
baz=133,SNR=6.9
I29M Ogilvie Camp, 52.09 343 IAmb IAmb 08 39 41.3
comp=Z,15nm,1.1s
I29M IAMs_20 IAMs_20 09 01 22.6
comp=Z,1µm,19.0s
I29M Ogilvie Camp, 52.09 343 P **P** **08 39 30.9 +0.1**
baz=140,SNR=12
HARP HAARP 52.15 338 P **P** **08 39 32.1 +0.8**
baz=130
K27K Chicken 52.22 341 IAmb IAmb 08 39 34.5
comp=Z,19nm,0.9s
K27K IAMs_20 IAMs_20 09 02 05.9
comp=Z,829nm,18.0s
K27K Chicken 52.22 341 P **P** **08 39 32.7 +0.9**
baz=135
FRB Frobisher Bay 52.31 20 LR LR 09 02 20.7
comp=Z,2µm,18.3s,baz=230,slow=37
M24K Tolsona, Glenn 52.33 337 P **P** **08 39 33.2 +0.5**
baz=129
SEW Seward 52.42 334 P **P** **08 39 33.3 +0.1**
baz=124
EPYK Eagle Plains 52.46 345 IAmb IAmb 08 39 40.4
comp=Z,20nm,1.1s
EPYK IAMs_20 IAMs_20 09 03 45.5
comp=Z,939nm,19.0s
EPYK Eagle Plains 52.46 345 P **P** **08 39 33.9 +0.3**
baz=142
EGAK Eagle 52.47 342 IAmb IAmb 08 39 35.4
comp=Z,18nm,0.9s
EGAK IAMs_20 IAMs_20 09 02 20.6
comp=Z,756nm,18.0s
EGAK Eagle 52.47 342 P **P** **08 39 33.8 +0.3**
baz=136,SNR=19
KDAK Kodiak Island 52.59 331 LR LR 09 00 07.8
comp=Z,359nm,19.4s,baz=137,slow=34
DOT Dot Lake 52.60 340 IAmb IAmb 08 39 58.6
comp=Z,26nm,1.5s
PAX Paxson 52.63 338 P **P** **08 39 35.1 +0.3**
baz=130,SNR=6.4
C36M Paulatuk 52.63 352 IAMs_20 IAMs_20 09 01 49.2
comp=Z,1µm,19.0s
C36M Paulatuk 52.63 352 P **P** **08 39 35.1 +0.4**
baz=158
BRSE Bradley Lake S 52.77 333 P **P** **08 39 36.7 +0.8**
baz=122
KNK Knik Glacier 52.77 336 P **P** **08 39 36.8 +0.9**
baz=126
SCRK Sand Creek 52.79 340 IAmb IAmb 08 39 38.4
comp=Z,18nm,1.2s
SCRK IAMs_20 IAMs_20 08 59 54.1
comp=Z,604nm,20.0s
SCRK Sand Creek 52.79 340 P **P** **08 39 36.9 +0.8**
baz=132,SNR=10
RIDG Independent Ri 52.92 339 IAMs_20 IAMs_20 08 59 43.4
comp=Z,556nm,20.0s
RIDG Independent Ri 52.92 339 P **P** **08 39 37.4 +0.4**
baz=131,SNR=25
SML Sawmill 52.95 336 IAMs_20 IAMs_20 09 01 51.7
comp=Z,472nm,18.0s
SML Sawmill 52.95 336 P **P** **08 39 37.8 +0.5**
baz=126
J26L Joseph Creek 53.01 341 IAmb IAmb 08 39 40.3
comp=Z,26nm,1.1s
J26L IAMs_20 IAMs_20 09 02 39.9
comp=Z,900nm,19.0s
J26L Joseph Creek 53.01 341 P **P** **08 39 38.1 +0.4**
baz=133,SNR=23
PMR Palmer 53.14 336 IAmb IAmb 08 39 45.9
comp=Z,14nm,1.0s
PMR Palmer 53.14 336 P **P** **08 39 38.7 +0.2**
baz=125
WAT6 Susitna Watana 53.20 337 P **P** **08 39 38.7 -0.5**
baz=128,SNR=6.9
K24K Donnelly Dome 53.27 339 P **P** **08 39 39.4 -0.1**
baz=130,SNR=8.8
INK Inuvik 53.31 348 LR LR 09 02 22.2
comp=Z,747nm,19.0s,baz=139,slow=36
INK Inuvik 53.31 348 IAmb IAmb 08 39 41.4
comp=Z,32nm,1.1s
INK Inuvik 53.31 348 P **P** **08 39 39.5 -0.2**
baz=147,SNR=19
DHY Denali Highway 53.37 338 P **P** **08 39 40.4 -0.1**
baz=128
MDP Montagnes des 53.41 97 LR LR 09 03 09.8
comp=Z,351nm,20.7s,baz=290,slow=37
M22K Willow 53.62 336 P **P** **08 39 42.2 +0.2**
baz=124
WAT1 Susitna Watana 53.65 337 P **P** **08 39 42.5 +0.2**
baz=127
J25K Salcha River, 53.67 340 IAMs_20 IAMs_20 09 03 04.0
comp=Z,709nm,18.0s
J25K Salcha River, 53.67 340 P **P** **08 39 43.2 +0.7**
baz=131
SUA Susitna One 53.70 335 IAmb IAmb 08 39 49.1
comp=Z,16nm,1.0s
SUA Susitna One 53.70 335 P **P** **08 39 43.4 +0.6**
baz=124
CUT Chulitna 54.05 336 IAMs_20 IAMs_20 09 06 04.5
comp=Z,492nm,19.0s
HDA Harding Lake 54.06 339 P **P** **08 39 44.9 -0.3**
baz=129,SNR=7.4
LVC Limon Verde 54.07 137 LR LR 08 57 56.8
comp=Z,864nm,21.5s,baz=302,slow=31
LVC Limon Verde 54.07 137 IAMs_20 IAMs_20 08 57 44.8
comp=Z,990nm,20.0s
RND Reindeer 54.10 338 IAmb IAmb 08 40 09.4
comp=Z,29nm,1.2s
ILAR Eielson Array 54.27 340 P **P** **08 39 47.0 +0.2**
comp=Z,12nm,1.0s,baz=152,slow=5.8,SNR=61
ILAR LR LR 09 03 34.4
comp=Z,288nm,21.1s,baz=119,slow=37
comp=Z,12nm,1.0s
SKT Skwentna 54.30 335 P **P** **08 39 47.2 +0.1**
baz=123
MCK McKinley 54.33 338 IAmb IAmb 08 39 57.9
comp=Z,22nm,1.1s
MCK IAMs_20 IAMs_20 09 01 49.0
comp=Z,515nm,20.0s
MCK McKinley 54.33 338 P **P** **08 39 47.7 +0.4**
baz=127,SNR=8.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
VILB	Vilhena	54.45	121	eP	P	08 39 50.1	+1.3
WRH	Wood River Hil	54.48	339	IAmb	IAmb	08 39 53.9	
	comp=Z,15nm,1.1s						
WRH				IAMs_20	IAMs_20	09 05 32.1	
	comp=Z,585nm,19.0s						
TRF	Thorofare Moun	54.65	337	P	P	08 39 49.6	-0.2
	baz=125,SNR=16						
COLA	College	54.65	339	P	P	08 39 49.1	-0.5
POKR	Poker Plat Res	54.67	340	IAMs_20	IAMs_20	09 05 39.6	
	comp=Z,676nm,18.0s						
POKR	Poker Plat Res	54.67	340	P	P	08 39 49.6	-0.1
	baz=129						
O18K	Koktuh Hills	54.78	332	P	P	08 39 50.5	-0.1
	baz=118						
MDM	Murphy Dome	54.83	339	IAmb	IAmb	08 40 00.2	
	comp=Z,13nm,1.1s						
M20K	Styx River	54.89	335	IAmb	IAmb	08 40 04.0	
	comp=Z,16nm,1.1s						
M20K				IAMs_20	IAMs_20	09 03 16.0	
	comp=Z,434nm,18.0s						
M20K	Styx River	54.89	335	P	P	08 39 51.4	-0.1
	baz=121						
NEA2	Nenana	54.89	339	P	P	08 39 50.9	-0.5
	baz=127,SNR=26						
N19K	Bonanza Creek	54.92	333	P	P	08 39 51.3	-0.3
	baz=119						
KTH	Kantishna Hill	54.94	337	IAmb	IAmb	08 39 53.1	
	comp=Z,21nm,1.2s						
PPLA	Purkeypile	55.06	336	P	P	08 39 52.0	-0.8
	baz=123						
A36M	Sachs Harbour	55.24	353	P	P	08 39 53.1	-0.6
	baz=157						
H24K	Noodor Dome	55.27	340	IAmb	IAmb	08 40 05.4	
	comp=Z,28nm,1.1s						
H24K				IAMs_20	IAMs_20	09 04 09.5	
	comp=Z,744nm,18.0s						
H24K	Noodor Dome	55.27	340	P	P	08 39 54.0	-0.1
	baz=129,SNR=26						
BPAW	Bear Paw Mtn.	55.28	338	IAMs_20	IAMs_20	09 07 23.1	
	comp=Z,571nm,21.0s						
BPAW	Bear Paw Mtn.	55.28	338	P	P	08 39 53.8	-0.4
	baz=125,SNR=5.6						
CAST	Castle Rocks	55.30	337	IAmb	IAmb	08 39 55.3	
	comp=Z,27nm,1.2s						
CAST	Castle Rocks	55.30	337	P	P	08 39 53.6	-0.7
	baz=123						
I23K	Minto, Yukon-K	55.33	339	P	P	08 39 54.1	-0.3
	baz=127,SNR=19						
M19K	Big River Lodg	55.42	334	IAmb	IAmb	08 40 01.6	
	comp=Z,18nm,1.1s						
M19K	Big River Lodg	55.42	334	P	P	08 39 55.5	+0.3
	baz=120						
SIV	San Ignacio	55.46	125	LR	LR	09 01 26.6	
	comp=Z,1μm,19.2s,baz=324,slow=34						
N18K	Kilae Creek	55.46	333	IAmb	IAmb	08 40 18.7	
	comp=Z,31nm,1.3s						
N18K	Kilae Creek	55.46	333	P	P	08 39 55.0	-0.5
	baz=118,SNR=7.1						
L20K	Farewell, AK	55.50	335	P	P	08 39 55.0	-0.7
	baz=121,SNR=8.3						
SVW2	Sparrevohn	55.52	333	IAmb	IAmb	08 40 07.8	
	comp=Z,13nm,1.1s						
SDPT	Sand Point	55.56	326	P	P	08 39 56.4	+0.2
	baz=110						
O17K	Koliganek Bris	55.59	331	P	P	08 39 56.7	+0.3
	baz=116						
CHUM	Lake Minchumin	55.64	337	P	P	08 39 56.6	-0.1
	baz=123						
MLY	Manley	55.73	339	P	P	08 39 56.9	-0.5
	baz=126,SNR=9.9						
L19K	White Mountain	55.74	335	IAmb	IAmb	08 40 04.8	
	comp=Z,31nm,1.3s						
L19K	White Mountain	55.74	335	P	P	08 39 57.1	-0.4
	baz=120						
H23K	Yukon River	55.80	340	IAmb	IAmb	08 40 04.4	
	comp=Z,14nm,1.1s						
H23K				IAMs_20	IAMs_20	09 04 27.5	
	comp=Z,698nm,19.0s						
H23K	Yukon River	55.80	340	P	P	08 39 58.0	+0.2
	baz=127,SNR=10						
MCPB	Macapa, AP	55.84	103	eP	P	08 40 00.7	+1.7
O16K	Kokwok River B	55.97	331	P	P	08 39 58.5	-0.7
	baz=115						
K20K	Telida	56.03	336	P	P	08 39 58.9	-0.6
	baz=121,SNR=17						
I21K	Tanana	56.25	339	IAmb	IAmb	08 40 07.9	
	comp=Z,27nm,1.1s						
I21K	Tanana	56.25	339	P	P	08 40 00.6	-0.5
	baz=124,SNR=13						
J20K	Nowinta River	56.48	337	IAmb	IAmb	08 40 03.8	
	comp=Z,27nm,1.1s						
J20K	Nowinta River	56.48	337	P	P	08 40 01.8	-0.9
	baz=122,SNR=13						
TTA	Tatalina	56.58	335	P	P	08 40 02.6	-0.9
	baz=119,SNR=11						
PDRB	Porto dos Gac	56.62	118	eP	P	08 40 05.4	+1.0
N16K	Nishlik Lake	56.65	332	P	P	08 40 03.3	-0.7
	baz=115						
PTLB	Pontes e Lacer	56.68	123	eP	P	08 40 05.4	+0.6
H21K	Melozitna Rive	56.80	339	P	P	08 40 04.6	-0.4
	baz=124,SNR=27						
COLD	Coldfoot	56.86	341	P	P	08 40 05.5	+0.1
COLD				IAmb	IAmb	08 40 16.5	
	comp=Z,19nm,1.2s						
COLD	Coldfoot	56.86	341	P	P	08 40 05.2	-0.1
	baz=127,SNR=6.6						
RES	Resolute Bay	57.07	3	LR	LR	09 05 17.7	
	comp=Z,1μm,19.7s,baz=180,slow=37						
H03N2	Juan Fernandez	57.16	153	T	T	09 42 00.3	
	baz=331,slow=77,SNR=74						
H03N1	Juan Fernandez	57.17	153	T	T	09 41 58.1	
	baz=331,slow=77,SNR=101						
H03N3	Juan Fernandez	57.17	153	T	T	09 41 52.3	
	baz=331,slow=77,SNR=88						
IMAR	Indian Mountai	57.30	339	P	P	08 40 07.2	-1.3
TOLK	Toolik Lake Re	57.55	343	IAmb	IAmb	08 40 12.0	
	comp=Z,16nm,1.1s						
TOLK				IAMs_20	IAMs_20	09 04 57.8	
	comp=Z,816nm,22.0s						
TOLK	Toolik Lake Re	57.55	343	P	P	08 40 10.4	+0.1
	baz=129,SNR=11						
GCSA	Galena City Sc	57.79	337	P	P	08 40 12.2	+0.2
	baz=119						
TBI	Tubuai	59.20	228	eLR	LR	08 56 59.4	
	comp=Z,3μm,27.5s						
TBI	Tubuai	59.20	228	eS	S	08 48 29.8	+0.7
	comp=Z,3μm,27.5s						
TBI				eLR	LR	08 57 06.0	
SALV	Santo Antonio	59.70	121	eP	P	08 40 27.0	+1.0
PRPB	Parauapebas	60.19	108	eP	P	08 40 32.0	+2.6
SFJD	Kangerlussuaq	60.31	22	LR	LR	09 07 17.4	
	comp=Z,1μm,18.1s,baz=241,slow=37						
A21K	Barrow	61.09	343	IAMs_20	IAMs_20	09 05 57.3	
	comp=Z,516nm,19.0s						
SNDB	Serra Nova Dou	61.44	115	eP	P	08 40 38.6	+0.7
RDOG	Red Dog Mine	61.45	339	P	P	08 40 33.6	-3.6
RDOG				IAMs_20	IAMs_20	09 09 45.3	
	comp=Z,492nm,20.0s						
LMEL	Las Melosas	61.66	147	P	P	08 40 39.1	-0.1
LMEL				IAmb	IAmb	08 40 50.0	
	comp=Z,20nm,1.2s						
DY2G	Dye2	61.68	23	iP	P	08 40 39.2	+0.2
DY2G				IAmb	IAmb	08 40 41.3	
	comp=Z,39nm,1.4s						
SMTB	Santa Maria do	63.31	110	eP	P	08 40 53.4	+2.9
PEXB	Peixe	64.09	114	eP	P	08 40 57.8	+2.2
ROSB	Rosrio	64.14	102	eP	P	08 40 59.1	+3.2
CPUP	Villa Florida	64.43	132	P	P	08 40 57.0	-0.5
	comp=Z,2.7nm,0.8s,baz=325,slow=5.2,SNR=3.3						
CPUP				LR	LR	09 08 35.6	
	comp=Z,660nm,18.9s,baz=322,slow=36						
	comp=Z,2.7nm,0.8s						
CPUP	Villa Florida	64.43	132	eP	P	08 40 58.5	+1.0
ICESG	Greenland Ices	64.91	21	iP	P	08 41 00.3	-0.2
ICESG				IAmb	IAmb	08 41 01.7	
	comp=Z,45nm,1.2s						
RAR	Rarotonga	65.67	236	LR	LR	09 02 21.2	
	comp=Z,584nm,18.1s,baz=60,slow=29						
BDFB	Brasilia	65.97	117	P	P	08 41 08.5	+0.6
	comp=Z,4.4nm,0.7s,baz=293,slow=8.9,SNR=8.6						
BDFB				LR	LR	09 08 41.0	
	comp=Z,497nm,20.4s,baz=312,slow=35						
	comp=Z,4.4nm,0.7s						
BDFB	Brasilia	65.97	117	P	P	08 41 08.3	+0.5
BDFB				IAmb	IAmb	08 41 10.5	
	comp=Z,11nm,1.1s						
BDFB	Brasilia	65.97	117	eP	P	08 41 10.3	+2.4
ITRB	Iturama	66.01	122	eP	P	08 41 09.2	+1.2
PCMB	Pacaembu	66.28	124	eP	P	08 41 11.2	+1.6
IPMB	Ipameri, GO	66.92	119	eP	P	08 41 15.5	+1.7
NBPS	Pedro II - PI	67.17	103	eP	P	08 41 18.8	+3.2
LL02	Futaleuf	68.35	154	P	P	08 41 23.3	+1.0
LL02				IAmb	IAmb	08 41 37.1	
	comp=Z,16nm,1.4s						
JANB	Januaria	68.88	115	eP	P	08 41 28.3	+2.0
SHEM	Shemya Is, Ala	69.98	320	LR	LR	09 05 23.3	
	comp=Z,351nm,21.9s,baz=100,slow=30						
VAO	Valinhos	70.41	123	eP	P	08 41 38.4	+2.8
NBPN	Ponto Novo - B	70.76	109	eP	P	08 41 40.4	+2.5
PET01	Itanhaem-SP	70.81	125	eP	P	08 41 40.4	+2.5
BORG	Borgarnes	71.57	27	LR	LR	09 13 12.2	
	comp=Z,846nm,18.9s,baz=277,slow=36						
DAG	Danmarks Havn	72.00	14	iP	P	08 41 43.0	-1.3
DAG				IAmb	IAmb	08 41 44.9	
	comp=Z,17nm,1.3s						
NOR	Nord	72.24	9	iP	P	08 41 45.4	-0.2
NOR				IAmb	IAmb	08 41 51.8	
	comp=Z,16nm,1.3s						
AFI	Afiamalu	72.38	249	LR	LR	09 06 37.6	
	comp=Z,544nm,18.1s,baz=102,slow=30						
BILL	Bilibino	72.76	337	IAMs_20	IAMs_20	09 17 42.2	
	comp=Z,331nm,21.0s						
RCBR	Riachuelo	72.84	102	LR	LR	09 14 24.2	
	comp=Z,388nm,21.2s,baz=84,slow=36						
GUA01	Guaratinga, BA	73.44	114	eP	P	08 41 55.8	+1.9
JMIC	Jan Mayen	75.53	20	LR	LR	09 15 52.1	
	comp=Z,1μm,18.1s,baz=276,slow=36						
SPITS	Spitsbergen Ar	78.75	10	LR	LR	09 18 16.1	
	comp=Z,758nm,18.1s,baz=270,slow=36						
USHA	Ushuaia	79.15	159	LR	LR	09 10 15.3	
	comp=Z,503nm,21.9s,baz=234,slow=30						
PETK	Petropavlovsk-	79.69	322	P	P	08 42 28.3	-0.4
	comp=Z,1.1nm,0.8s,baz=106,slow=11,SNR=2.9						
PETK				LR	LR	09 10 45.8	
	comp=Z,202nm,21.9s,baz=73,slow=30						
	comp=Z,1.1nm,0.8s						
MA2	Magadan	81.33	330	LR	LR	09 17 04.0	
	comp=Z,118nm,19.4s,baz=58,slow=34						
H11N3	WAKE ISLAND Hy	81.68	288	T	T	10 12 58.0	
	baz=65,slow=74						
H11N2	WAKE ISLAND Hy	81.69	288	T	T	10 13 00.2	
	baz=65,slow=74						
H11N1	WAKE ISLAND Hy	81.70	288	T	T	10 13 04.5	
	baz=65						
H11S1	WAKE ISLAND Hy	82.21	287	T	T	10 13 11.1	
	baz=77,slow=75,SNR=23						
H11S2	WAKE ISLAND Hy	82.21	287	T	T	10 13 09.1	
	baz=77,slow=75,SNR=19						
H11S3	WAKE ISLAND Hy	82.22	287	T	T	10 13 13.0	
	baz=77,slow=75,SNR=22						
EKA	Eskdalemuir Ar	82.39	34	LR	LR	09 19 45.4	
	comp=Z,681nm,19.0s,baz=312,slow=36						
MSVF	Nonsavu	82.87	249	LR	LR	09 10 55.1	
	comp=Z,525nm,20.1s,baz=50,slow=29						
TIXI	Tiksi	83.34	345	P	P	08 42 46.9	-0.7
TIXI				IAmb	IAmb	08 42 58.1	
	comp=Z,25nm,1.8s						
RAO	Raoul Island	83.90	237	LR	LR	09 10 11.2	
	comp=Z,393nm,21.9s,baz=90,slow=29						
ARCES	ARCESS Array B	86.23	15	LR	LR	09 22 15.2	
	comp=Z,974nm,19.5s,baz=304,slow=36						
NOA	NORSAR Array B	86.72	26	P	P	08 43 03.7	-1.1
	comp=Z,1.1nm,0.8s,baz=304,slow=4.8,SNR=4.3						
	comp=Z,1.1nm,0.8s						
ESDC	Sonseca Array	87.46	49	P	P	08 43 08.1	-0.7
	comp=Z,1.0nm,0.9s,baz=319,slow=5.5,SNR=5.1						
ESDC				LR	LR	09 23 02.9	
	comp=Z,424nm,18.5s,baz=298,slow=36						
	comp=Z,1.0nm,0.9s						
ESDC	Sonseca Array	87.46	49	P	P	08 43 08.1	-0.7
HFS	Hagfors	88.24	26	LR	LR	09 21 46.1	
	comp=Z,480nm,21.1s,baz=298,slow=35						
YAK	Yakutsk	89.11	337	LR	LR	09 27 31.8	
	comp=Z,222nm,18.0s,baz=84,slow=38						
YAK	Yakutsk	89.11	337	IAMs_20	IAMs_20	09 25 28.4	
	comp=Z,260nm,21.0s						
MDT	Midelt	89.43	56	LR	LR	09 25 18.6	
	comp=Z,238nm,18.1s,baz=309,slow=37						
RGN	Rugen	91.19	31	IAMs_20	IAMs_20	09 29 05.5	
	comp=Z,510nm,20.0s						
URZ	Urewera	91.25	230	LR	LR	09 14 45.0	
	comp=Z,597nm,22.0s,baz=31,slow=29						
STU	Stuttgart	92.08	37	IAMs_20	IAMs_20	09 24 13.5	
	comp=Z,581nm,21.0s						
FINES	FINESS Array B	92.10	21	LR	LR	09 24 25.2	
	comp=Z,940nm,20.4s,baz=316,slow=35						
ASAJ	Asahikawa	92.31	318	LR	LR	09 18 03.0	
	comp=Z,148nm,21.2s,baz=73,slow=31						
NRIK	Noril'sk	92.44	355	LR	LR	09 26 25.8	
	comp=Z,326nm,22.0s,baz=23,slow=36						
CLL	Collm	92.83	33	ePP	PP	08 47 17.0	+1.6
CLL				eSKSac	SKSac	08 54 06.0	-0.1
CLL				eS	S	08 54 36.0	-1.7
CLL				ePS	PS	08 55 56.0	+4.1
CLL				eSS	SS	09 00 52.0	+1.9
CLL				eSSS	SSS	09 04 24.0	
CLL				Lm	MLR	09 27 00.0	
	comp=N,300nm,18.8s						
CLL				Lm	MLR	09 27 00.0	
	comp=E,400nm,20.0s						
CLL				Lm	MLR	09 27 00.0	
	comp=Z,600nm,19.5s						
DAVOX	Davos/Dischmat	93.48	38	LR	LR	09 26 04.6	
	comp=Z,2μm,18.5s,baz=272,slow=36						
GERES	GERESS Array B	94.56	35	LR	LR	09 25 38.8	
	comp=Z,855nm,21.8s,baz=298,slow=35						
DZM	Mont Dzumac	94.60	248	LR	LR	09 17 08.2	
	comp=Z,659nm,20.4s,baz=69,slow=30						
DZM	Mont Dzumac	94.60	248	eLR	LR	09 13 25.4	
	comp=Z,2μm,26.6s						
VRAC	Vranov	95.86	34	LR	LR	09 26 33.8	
	comp=Z,563nm,21.2s,baz=306,slow=35						
KLR	Kul'dur	95.96	326	LR	LR	09 21 18.1	
	comp=Z,182nm,21.0s,baz=46,slow=32						
VSL	Villasalto	96.84	45	IAMs_20	IAMs_20	09 27 55.0	
	comp=Z,500nm,20.0s						
RPZ	Rata Peaks	97.40	227	LR	LR	09 20 31.5	
	comp=Z,453nm,19.0s,baz=52,slow=31						
DBIC	Dimbokro	98.26	80	LR	LR	09 30 51.5	
	comp=Z,192nm,18.6s,baz=298,slow=37						
KEST	Kesra	98.67	48	LR	LR	09 29 44.7	
	comp=Z,358nm,18.4s,baz=294,slow=36						
USRK	Ussuriysk Ar.	98.78	322	LR	LR	09 23 18.1	
	comp=Z,115nm,21.1s,baz=25,slow=32						
MAJO	Matsushiro	98.91	313	IAMs_20	IAMs_20	09 18 41.1	
	comp=Z,449nm,21.0s						
DIVS	Divibare	100.87	37	IAMs_20	IAMs_20	09 29 30.1	
	comp=Z,395nm,21.0s						
CEL	Celeste	101.81	43	IAMs_20	IAMs_20	09 33 30.4	
	comp=Z,383nm,18.0s						
HIA	Hailar	101.87	331	IAMs_20	IAMs_20	09 37 17.9	
	comp=Z,248nm,18.0s						
MILM	Milestii Mici	103.60	30	e	PKiKP	08 48 30.0	-11
MILM				eL	L	09 27 28.0	
MILM				eLR	LR	09 32 52.0	
	comp=Z,200nm,15.0s						
GUMO	Guam	103.61	289	IAMs_20	IAMs_20	09 21 17.5	
	comp=Z,280nm,19.0s						
ARU	Arti	104.75	9	IAMs_20	IAMs_20	09 30 32.1	
	comp=Z,421nm,22.0s						
ULN	Ulaanbaatar	108.20	337	IAMs_20	IAMs_20	09 36 00.1	
	comp=Z,211nm,20.0s						
SANT	Santorini	109.00	40	IAMs_20	IAMs_20	09 35 11.9	
	comp=Z,331nm,21.0s						
IDI	Anoyia	109.35	41	IAMs_20	IAMs_20	09 36 31.9	
	comp=Z,203nm,21.0s						
BJT	Baijiatuau	110.35	327	IAMs_20	IAMs_20	09 28 55.7	
	comp=Z,266nm,22.0s						
KARP	Karpathos	110.58	40	IAMs_20	IAMs_20	09 38 48.6	
	comp=Z,355nm,20.0s						
KIV	Kislovodsk	111.97	24	IAMs_20	IAMs_20	09 37 05.5	
	comp=Z,248nm,20.0s						
HHC	Hu-ho-hao-te	112.01	330	eP	PKiKP	08 48 52.0	-4.7
HHC				LR	LR		
	comp=N,170nm,19.0s						
HHC				LR	LR		
	comp=E,340nm,17.7s						
HHC				LR	LR		
	comp=Z,340nm,19.4s						
BTO	Baotou	112.92	331	ePKP	PKiKP	08 48 52.8	-5.6
BTO	Baotou	112.92	331	SS	SS	09 05 21.5	-5.9
BTO				LR	LR		
	comp=N,820nm,19.0s						
BTO				LR	LR		
	comp=E,620nm,17.7s						
CSS	Mathiatis	114.60	36	IAMs_20	IAMs_20	09 39 38.7	
	comp=Z,257nm,21.0s						
MAKZ	Makanchi	115.18	354	IAMs_20	IAMs_20	09 47 16.2	
	comp=Z,332nm,18.0s						
GNI	Garni	116.01	25	IAMs_20	IAMs_20	09 40 20.4	
	comp=Z,417nm,21.0s						
WMQ	Urumqi	117.31	349	eP	PKiKP	08 49 06.9	+0.1
WMQ				LR	LR		
	comp=N,290nm,20.5s						
WMQ				LR	LR		
	comp=E,440nm,23.3s						
WMQ				LR	LR		
	comp=Z,290nm,23.3s						
SSLB	Suanglung	118.36	311	IAMs_20	IAMs_20	09 29 46.4	
	comp=Z,345nm,22.0s						
GHAJ	Ghor Haditha	118.55	38	IAMs_20	IAMs_20	09 39 12.4	
	comp=Z,197nm,22.0s						
LZH	Lanzhou	119.39	333	ePKP	PKPdf	08 49 10.4	-0.7
LZH				pPKP	PKiKP	08 49 12.6	+1.4
LZH				sPKP		08 49 14.2	
LZH				PP	PP	08 50 33.7	+2.3
LZH				AMB	AMB		
	comp=Z,160nm,9.1s						
LZH				LR	LR		
	comp=N,360nm,17.9s						
LZH				LR	LR		
	comp=E,330nm,18.0s						
LZH				LR	LR		
	comp=Z,450nm,20.1s						
ENH	Enshi	121.26	324	IAMs_20	IAMs_20	09 34 55.7	
	comp=Z,243nm,19.0s						
WRA	Warramunga Arr	123.38	258	PKP	PKPdf	08 49 16.4	-2.4
	comp=Z,0.8nm,0.8s,baz=57,slow=1.8,SNR=4.2						
CD2	Chengdu	123.74	329	PKP	PKPdf	08 49 18.3	-1.1
ASAR	Alice Springs	124.26	253	PKP	PKPdf	08 49 17.9	-2.6
	comp=Z,0.9nm,0.9s,baz=86,slow=2.2,SNR=2.7						
PZH	PanZhiHua	128.37	328	PKP	PKiKP	08 49 29.1	0.0
LSA	Lhasa	129.90	341	IAMs_20	IAMs_20	09 49 54.2	
	comp=Z,242nm,20.0s						
RAYN	Ar Rayn	130.15	35	IAMs_20	IAMs_20	09 50 58.1	
	comp=Z,181nm,19.0s						
UOSS	Minazif	133.90	23	IAMs_20	IAMs_20	09 51 52.8	
	comp=Z,292nm,22.0s						
MBAR	Mbarara	133.93	73	IAMs_20	IAMs_20	09 45 16.4	
	comp=Z,307nm,22.0s						
CHTO	Chiang Mai	136.14	325	IAMs_20	IAMs_20	09 56 48.8	
	comp=Z,267nm,18.0s						
LODK	Lodwar	136.20	65	IAMs_20	IAMs_20	09 49 55.9	
	comp=Z,230nm,19.0s						
CMAR	Chiang Mai Arr	136.43	325	PKP	PKPdf	08 49 43.4	-0.3
	comp=Z,0.7nm,0.3s,baz=328,slow=2.4,SNR=4.4						
HYBB	Hyderabad (bro	144.61	353	ePKiKP	PKPdf	08 49 59.2	+0.7
HYBB				ePP	PP	08 53 12.7	-0.3

*IDC **01** 08:31:13.6±1.0, 38.°60N×99.°15E, h0^{km}, mb3.6/6, mbtmp3.7/9, ML3.4/3, Error ellipse: s-maj=28.4km s-min=18.8km az=75.0*

ISC 01 08:31:14.5±0.8**, 38.°66N**±0.°09×**99.°05E**±0.°09**, h10^{km}, n12,** σ1^{s}77/15**, mb3.8**/5**, 1D, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTA	Gaotai	0.96	38	⇓Pg	Pg	08 31 30.9	-2.1
GTA				Sg	Sg	08 31 43.3	-2.2
GTA				smax	smax		
	comp=N,370nm,0.8s						
GTA				smax	smax		
	comp=E,460nm,0.7s						
GOMU	GeErMu	4.17	235	Pn	Pn	08 32 20.5	+2.0
GOMU				Pg	Pg	08 32 32.4	-1.9
GOMU				Sn	Sn	08 33 05.8	-1.6
GOMU				Sg	Sg	08 33 27.3	-1.1
GOMU				smax	smax		
	comp=N,49nm,0.8s						
GOMU				smax	smax		
	comp=E,55nm,1.0s						
SONM	Songino Array	10.62	28	Pn	Pn	08 33 48.3	+1.6
	comp=E,2.1nm,0.3s,baz=208,slow=14,SNR=36						
SONM				Lg	Lg	08 36 49.4	
	comp=E,0.5nm,0.3s,baz=227,slow=30,SNR=7.4						
	comp=E,5.3nm,0.4s						
MKAR	Makanchi Array	14.74	309	Pn	P	08 34 46.5	-2.5
	comp=E,0.1nm,0.3s,baz=112,slow=14,SNR=3.3						
MKAR				Lg	Lg	08 39 07.8	
	baz=108,slow=27,SNR=2.5						
ZALV	Zalesovo Beam	18.13	332	P	P	08 35 27.4	+0.9
	comp=E,0.2nm,0.3s,baz=148,slow=12,SNR=2.0						
	comp=E,0.9nm,0.3s						
KURBB	Kurchatov Arra	18.80	316	P	Pn	08 35 36.0	+1.6
	comp=E,0.1nm,0.3s,baz=121,slow=11,SNR=6.0						
	comp=E,1.4nm,0.8s						
CMAR	Chiang Mai Arr	20.13	180	P	Pn	08 35 49.5	-1.0
	comp=E,0.9nm,0.3s,baz=351,slow=10.0,SNR=5.0						
	comp=E,0.9nm,0.3s						
KSRS	Korea Array	22.73	84	P	P	08 36 15.9	-0.7
	comp=E,1.7nm,0.9s,baz=277,slow=8.2,SNR=7.3						
	comp=E,1.7nm,0.9s						
NOA	NORSAR Array B	56.09	324	P	P	08 40 54.1	+0.5
	comp=E,0.3nm,0.6s,baz=71,slow=7.4,SNR=2.1						
	comp=E,0.3nm,0.6s						
ILAR	Eielson Array	64.83	26	P	P	08 41 55.1	+1.9
	comp=E,0.4nm,0.6s,baz=314,slow=6.4,SNR=2.5						
	comp=E,0.4nm,0.6s						
WRA	Warramunga Arr	67.03	144	P	P	08 42 07.7	-0.1
	comp=E,0.5nm,0.7s,baz=333,slow=7.5,SNR=5.5						
	comp=E,0.5nm,0.7s						
ASAR	Alice Springs	70.08	146	P	P	08 42 26.8	0.0
	comp=E,0.5nm,0.5s,baz=338,slow=6.5,SNR=7.2						
	comp=E,0.5nm,0.5s						

*WEL **01** 08:37:00, 36.°99S×178.°02E, h56^{km}, ML4.7, Mw4.6, Moment Tensor Solution. s5 Moment tensor: Scale 10^{16} Nm; M_{rr}-0.51; $M_{\theta\theta}$0.43; $M_{\phi\phi}$0.08; $M_{r\theta}$0.48; $M_{\theta\phi}$-0.04; $M_{\phi r}$0.86; Fault plane solution: $M_0$1.05000×10^{16} NP1: ϕ_s82.00000°, δ14.00000°, λ-46.00000°. NP2: ϕ_s216.00000°, δ80.00000°, λ-100.00000°. Principal axes: T -1227.8300, Plg34.0000°, Azm315.0000°; N 361.6700, Plg10.0000°, Azm217.0000°; P 866.1600, Plg54.0000°, Azm114.0000°;*

*NOU **01** 08:37:26.6, 37.°21S×178.°75E, h149^{km}, mb4.7/10, Off E. Coast of N. Island, N.Z.*

*WEL **01** 08:37:33.5±0.8, 37°S±4°×17°8E±°, h26^{km}±6^{km}, M4.5/14, ML4.8/14, MLv4.5/14, Error ellipse: s-maj=0.0km s-min=0.0km az=44.1*

*NEIC **01** 08:37:33.3±2.7, 37.°27S±0.°07×178.°05E±0.°09, h55^{km}±5^{km}, mb4.6/24, ML4.5(WEL), Error ellipse: s-maj=12.2km s-min=9.2km az=46.0*

*IDC **01** 08:37:37.1±2.2, 37.°07S×178.°11E, h94^{km}±18^{km}, mb4.2/13, mbtmp4.5/15, MS3.7/9, Error ellipse: s-maj=18.9km s-min=14.4km az=47.0*

ISC 01 08:37:34.2±0.7**, 37.°16S**±0.°04×**178.°09E**±0.°04**, h69^{km}**±6^{km}**, n208,** σ1^{s}**60**/216**, mb4.6**/28**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.44	157		Pn	08 37 44.1	-2.2
MXZ	Matakaoa Point	0.44	157	P	Pn	08 37 44.0	-2.3
MXZ				S	Sn	08 37 53.2	-1.9
HAZ	Te Kaha	0.64	202	P	Pn	08 37 46.5	-1.8
HAZ				S	Sn	08 37 58.2	-0.6
WMGZ	Waiomatatini S	0.71	159	P	Pn	08 37 49.0	0.0
WMGZ				S	Sn	08 38 01.6	+1.6
PKGZ	Pakihiroa	0.73	181	P	Pn	08 37 49.2	-0.2
PKGZ				S	Sn	08 38 01.2	+0.7
WIZ	White Island	0.81	243	P	Pn	08 37 48.5	-1.7
WIZ				S	Sn	08 38 00.4	-1.7
WSRZ	White Island S	0.81	244	P	Pn	08 37 48.9	-1.4
WSRZ				S	Sn	08 38 01.1	-1.0
RUGZ	Raukumara Rang	0.87	202	P	Pn	08 37 49.8	-1.3
PUZ	Puketiti	0.92	172	P	Pn	08 37 51.2	-0.4
PUZ				S	Sn	08 38 06.0	+1.4
TWGZ	Tauwhareparae	1.02	185	P	Pn	08 37 53.3	+0.4
TWGZ				S	Sn	08 38 10.4	+3.7
WHRZ	Whale Island	1.13	232	P	Pn	08 37 53.5	-0.8
WHRZ				S	Sn	08 38 09.3	+0.1
MWZ	Matawai	1.25	201	P	Pn	08 37 55.2	-0.7
TKGZ	Te Karaka	1.29	189	P	Pn	08 37 56.2	-0.1
TKGZ				S	Sn	08 38 14.9	+2.0
CNGZ	Carnagh Statio	1.32	176	P	Pn	08 37 56.3	-0.4
CNGZ				S	Sn	08 38 16.5	+2.8

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
URZ	**Urewera**	**1.34**	**215**	P	**Pn**	**08 37 56.2**	**-0.8**
	735nm,0.4s,baz=247,slow=3.3,SNR=750						
URZ				S	**Sn**	**08 38 13.0**	**-1.2**
	2µm,0.3s,baz=18,slow=4.9,SNR=21						
URZ	**Urewera**	**1.34**	**215**	P	**Pn**	**08 37 56.2**	**-0.8**
URZ				S	**Sn**	**08 38 13.6**	**-0.6**
URZ	**Urewera**	**1.34**	**215**	P	**Pn**	**08 37 56.6**	**-0.4**
MARZ	**Manawahe**	**1.40**	**233**	P	**Pn**	**08 37 56.9**	**-0.8**
MARZ				S	**Sn**	**08 38 14.3**	**-1.1**
EDRZ	**Edgecumbe**	**1.43**	**228**	P	**Pn**	**08 37 57.5**	**-0.7**
RAGZ	**Rawiri**	**1.44**	**202**	P	**Pn**	**08 37 58.7**	**+0.4**
RAGZ				S	**Sn**	**08 38 19.6**	**+3.1**
MYRZ	**Mayor Island**	**1.48**	**265**	P	**Pn**	**08 37 57.7**	**-1.1**
TGRZ	**Tauranga**	**1.56**	**248**	P	**Pn**	**08 37 59.2**	**-0.7**
TGRZ				S	**Sn**	**08 38 18.6**	**-0.7**
RIGZ	**Rimuhau**	**1.56**	**189**	P	**Pn**	**08 37 59.6**	**-0.4**
LIRZ	**Lichensteins R**	**1.60**	**238**	P	**Pn**	**08 38 00.6**	**+0.3**
MKRZ	**Makatiti**	**1.62**	**232**	P	**Pn**	**08 38 02.1**	**+1.4**
TARZ	**Mount Tarawera**	**1.65**	**229**	P	**Pn**	**08 38 01.6**	**+0.4**
OMRZ	**Omania**	**1.66**	**235**	P	**Pn**	**08 38 01.1**	**-0.2**
MUGZ	**Murupara**	**1.68**	**218**	P	**Pn**	**08 38 00.8**	**-0.7**
RTZ	**Ruatahuna**	**1.70**	**211**	P	**Pn**	**08 38 01.2**	**-0.6**
KARZ	**Kaharoa**	**1.70**	**239**	P	**Pn**	**08 38 01.3**	**-0.4**
RRRZ	**Republican Roa**	**1.72**	**226**	P	**Pn**	**08 38 01.6**	**-0.4**
SNGZ	**Shannon Statio**	**1.72**	**200**	P	**Pn**	**08 38 02.4**	**+0.3**
HLRZ	**Highlands Stat**	**1.76**	**231**	P	**Pn**	**08 38 02.4**	**-0.2**
PRGZ	**Paritu Road**	**1.77**	**185**	P	**Pn**	**08 38 01.7**	**-1.0**
NGRZ	**Ngongotaha**	**1.78**	**238**	P	**Pn**	**08 38 02.8**	**0.0**
UTU	**Utuhina**	**1.82**	**235**	P	**Pn**	**08 38 03.8**	**+0.5**
KMRZ	**Kaimai**	**1.84**	**248**	P	**Pn**	**08 38 03.0**	**-0.7**
HSRZ	**Hossack Road**	**1.86**	**231**	P	**Pn**	**08 38 04.3**	**+0.4**
HRRZ	**Handcock Road**	**1.89**	**229**	P	**Pn**	**08 38 04.9**	**+0.6**
KNZ	**Kokohu**	**1.89**	**190**	P	**Pn**	**08 38 03.0**	**-1.2**
PRRZ	**Plateau Road**	**1.90**	**225**	P	**Pn**	**08 38 04.0**	**-0.4**
RAHZ	**Arahi**	**1.92**	**204**	P	**Pn**	**08 38 05.2**	**+0.4**
KUZ	**Kuaotunu**	**1.94**	**282**	P	**Pn**	**08 38 03.8**	**-1.2**
KUZ				S	**Sn**	**08 38 26.3**	**-2.2**
MTHZ	**Maungataniwha**	**1.96**	**210**	P	**Pn**	**08 38 04.8**	**-0.4**
ALRZ	**Allen Road**	**1.97**	**224**	P	**Pn**	**08 38 05.3**	**-0.1**
GRRZ	**Galatos Road**	**1.97**	**232**	P	**Pn**	**08 38 05.9**	**+0.5**
MHGZ	**Mahia Peninsul**	**1.99**	**184**	P	**Pn**	**08 38 04.6**	**-1.1**
WPRZ	**Whakapapatarin**	**2.04**	**228**	P	**Pn**	**08 38 07.4**	**+1.1**
MRHZ	**Matea Rd**	**2.13**	**218**	P	**Pn**	**08 38 07.6**	**0.0**
TOZ	**Tahuroa Road**	**2.14**	**254**	P	**Pn**	**08 38 07.0**	**-0.6**
NMHZ	**Naumai**	**2.18**	**207**	P	**Pn**	**08 38 08.9**	**+0.6**
KUTZ	**Kaahu Road**	**2.23**	**233**	P	**Pn**	**08 38 09.2**	**+0.3**
WHTZ	**Whakaora**	**2.26**	**228**	P	**Pn**	**08 38 11.6**	**+2.2**
ARHZ	**Aropaoanui**	**2.27**	**202**	P	**Pn**	**08 38 09.4**	**0.0**
GRZ	**Great Barrier**	**2.30**	**292**	P	**Pn**	**08 38 09.1**	**-0.8**
TLZ	**Tolley Road**	**2.34**	**239**	P	**Pn**	**08 38 10.2**	**-0.1**
HATZ	**Hinemaiaia**	**2.34**	**222**	P	**Pn**	**08 38 11.4**	**+1.0**
MKAZ	**Moumakai**	**2.34**	**270**	P	**Pn**	**08 38 10.0**	**-0.3**
BKZ	**Black Stump Fm**	**2.37**	**212**	Pn	**Pn**	**08 38 10.5**	**-0.2**
BKZ	**Black Stump Fm**	**2.37**	**212**	P	**Pn**	**08 38 10.9**	**+0.2**
BKZ	**Black Stump Fm**	**2.37**	**212**	P	**Pn**	**08 38 10.7**	**-0.1**
WIAZ	**Waiheke Island**	**2.40**	**278**	P	**Pn**	**08 38 10.7**	**-0.4**
WATZ	**Wairara**	**2.42**	**230**	P	**Pn**	**08 38 13.1**	**+1.5**
RATZ	**Rangitukua**	**2.50**	**226**	P	**Pn**	**08 38 14.2**	**+1.6**
RITZ	**Rihia Road**	**2.53**	**224**	P	**Pn**	**08 38 13.9**	**+0.9**
MCHZ	**McNeill Hill**	**2.53**	**205**	P	**Pn**	**08 38 12.7**	**-0.2**
ETAZ	**East Tamaki Re**	**2.54**	**274**	P	**Pn**	**08 38 13.0**	**0.0**
MBAZ	**Motutapu North**	**2.59**	**278**	P	**Pn**	**08 38 13.6**	**-0.1**
KWHZ	**Kaweka Forest**	**2.61**	**210**	P	**Pn**	**08 38 13.8**	**-0.4**
CKHZ	**Cape Kidnapper**	**2.62**	**197**	P	**Pn**	**08 38 12.9**	**-1.2**
KATZ	**Kakaramea**	**2.62**	**226**	P	**Pn**	**08 38 15.5**	**+1.2**
ABAZ	**Army Bay**	**2.67**	**281**	P	**Pn**	**08 38 15.0**	**+0.2**
EPAZ	**Eden Park BICE**	**2.69**	**275**	P	**Pn**	**08 38 15.7**	**+0.6**
HBAZ	**Herne Bay Bore**	**2.71**	**276**	P	**Pn**	**08 38 16.0**	**+0.6**
TMVZ	**Te Maari**	**2.71**	**223**	P	**Pn**	**08 38 15.8**	**+0.2**
NTVZ	**North Tongarir**	**2.71**	**224**	P	**Pn**	**08 38 16.6**	**+1.0**
ETVZ	**East Tongariro**	**2.72**	**223**	P	**Pn**	**08 38 15.9**	**+0.2**
KRVZ	**Karewarewa**	**2.73**	**224**	P	**Pn**	**08 38 16.7**	**+0.9**
AWAZ	**Awhitu Peninsu**	**2.76**	**271**	P	**Pn**	**08 38 16.4**	**+0.3**
OTVZ	**Oturere**	**2.77**	**223**	P	**Pn**	**08 38 16.5**	**+0.2**
NNVZ	**North Ngauruho**	**2.77**	**224**	P	**Pn**	**08 38 16.8**	**+0.5**
WTVZ	**West Tongariro**	**2.77**	**225**	P	**Pn**	**08 38 17.4**	**+1.0**
KAHZ	**Kahuranaki**	**2.80**	**200**	P	**Pn**	**08 38 15.4**	**-1.2**
SNVZ	**South Ngauruho**	**2.80**	**223**	P	**Pn**	**08 38 17.0**	**+0.3**
NGZ	**Ngauruhoe**	**2.81**	**224**	P	**Pn**	**08 38 17.8**	**+0.9**
BHHZ	**Black Hill Sta**	**2.82**	**214**	P	**Pn**	**08 38 16.7**	**-0.3**
KRHZ	**Kereru**	**2.82**	**208**	P	**Pn**	**08 38 15.9**	**-1.1**
WTAZ	**Waiatarua**	**2.82**	**274**	P	**Pn**	**08 38 17.3**	**+0.4**
TWVZ	**Taurewa**	**2.83**	**227**	P	**Pn**	**08 38 18.2**	**+1.0**
RVAZ	**Riverhead Bore**	**2.84**	**277**	P	**Pn**	**08 38 17.6**	**+0.5**
TUVZ	**Tukino**	**2.85**	**222**	P	**Pn**	**08 38 17.8**	**+0.4**
FWVZ	**Far West T-bar**	**2.89**	**223**	P	**Pn**	**08 38 18.5**	**+0.4**
WHVZ	**Whangaehu Hut**	**2.89**	**222**	P	**Pn**	**08 38 18.4**	**+0.3**
HIZ	**Hauiti**	**2.90**	**241**		**Pn**	**08 38 18.2**	**+0.3**
HIZ	**Hauiti**	**2.90**	**241**	P	**Pn**	**08 38 18.4**	**+0.5**
HIZ	**Hauiti**	**2.90**	**241**	P	**Pn**	**08 38 18.7**	**+0.8**
MOVZ	**Moawhango**	**2.90**	**219**	P	**Pn**	**08 38 17.8**	**-0.2**
DRZ	**Dome Shelter**	**2.90**	**223**	P	**Pn**	**08 38 19.3**	**+1.1**
WNVZ	**Wahianoa**	**2.92**	**221**	P	**Pn**	**08 38 18.6**	**+0.2**
TRVZ	**Turoa**	**2.93**	**222**	P	**Pn**	**08 38 18.9**	**+0.4**
MTVZ	**Mangateitei**	**3.03**	**222**	P	**Pn**	**08 38 20.2**	**+0.4**
PKVZ	**Pokaka**	**3.03**	**225**	P	**Pn**	**08 38 21.1**	**+1.3**
PNHZ	**Pukenui**	**3.12**	**208**	P	**Pn**	**08 38 19.3**	**-1.8**
WPHZ	**Waipukurau**	**3.17**	**204**	P	**Pn**	**08 38 19.8**	**-1.9**
WCZ	**Waipu Caves**	**3.25**	**291**	P	**Pn**	**08 38 22.5**	**-0.3**
VRZ	**Vera Road**	**3.28**	**232**	P	**Pn**	**08 38 24.6**	**+1.5**
PRHZ	**Porangahau**	**3.30**	**200**	P	**Pn**	**08 38 21.0**	**-2.4**
TSZ	**Takapari Road**	**3.34**	**209**	P	**Pn**	**08 38 22.0**	**-2.0**
ANWZ	**Angora Road**	**3.53**	**200**	P	**Pn**	**08 38 24.2**	**-2.3**
WAZ	**Wanganui**	**3.56**	**222**	P	**Pn**	**08 38 27.3**	**+0.4**
DREZ	**Durham Road**	**3.67**	**235**	P	**Pn**	**08 38 31.4**	**+2.9**
LREZ	**Lake Rotokare**	**3.70**	**231**	P	**Pn**	**08 38 30.5**	**+1.6**
POWZ	**Post Office Ro**	**3.70**	**209**	P	**Pn**	**08 38 26.6**	**-2.3**
OHWZ	**Ohakea**	**3.74**	**215**	P	**Pn**	**08 38 28.6**	**-0.8**
PRWZ	**Pori Road**	**3.77**	**205**	P	**Pn**	**08 38 27.4**	**-2.5**
PREZ	**Palmer Road**	**3.79**	**234**	P	**Pn**	**08 38 33.6**	**+3.5**
NEZ	**North Egmont**	**3.79**	**235**	P	**Pn**	**08 38 33.1**	**+3.0**
BFZ	**Birch Farm**	**3.80**	**202**	Pn	**Pn**	**08 38 27.0**	**-3.2**
BFZ	**Birch Farm**	**3.80**	**202**	P	**Pn**	**08 38 27.2**	**-3.0**
PKE	**Pukeiti**	**3.82**	**237**	P	**Pn**	**08 38 32.8**	**+2.2**
KHEZ	**Kahui Hut**	**3.85**	**235**	P	**Pn**	**08 38 33.6**	**+2.6**
NBEZ	**Newall Road No**	**3.94**	**236**	P	**Pn**	**08 38 34.8**	**+2.7**
NMEZ	**Namu Road**	**4.01**	**235**	P	**Pn**	**08 38 36.4**	**+3.4**
OUZ	**Omahuta**	**4.12**	**297**	Pn	**Pn**	**08 38 35.1**	**+0.4**
OUZ	**Omahuta**	**4.12**	**297**	P	**Pn**	**08 38 35.0**	**+0.4**
OUZ	**Omahuta**	**4.12**	**297**	P	**Pn**	**08 38 35.0**	**+0.4**
MSWZ	**Moikau Station**	**4.79**	**207**		**Pn**	**08 38 39.4**	**-4.3**
SNZO	**South Karori**	**4.91**	**211**	P	**Pn**	**08 38 41.6**	**-3.7**
PLWZ	**Palliser**	**4.92**	**206**		**Pn**	**08 38 41.3**	**-4.3**
BHW	**Baring Head**	**4.92**	**210**		**Pn**	**08 38 42.9**	**-2.7**
TUWZ	**Tuamarina**	**5.34**	**216**	Pn	**Pn**	**08 38 48.5**	**-2.7**
CMWZ	**Cape Campbell**	**5.48**	**212**	P	**Pn**	**08 38 52.6**	**-0.5**
QRZ	**Quartz Range**	**5.67**	**228**		**Pn**	**08 38 54.2**	**-1.6**
QRZ	**Quartz Range**	**5.67**	**228**	P	**Pn**	**08 38 53.3**	**-2.5**
THZ	**Tophouse**	**6.10**	**220**	Pn	**Pn**	**08 38 57.8**	**-3.9**
KHZ	**Kahutara**	**6.31**	**212**	Pn	Pn	08 38 59.6	-4.9
KHZ	**Kahutara**	**6.31**	**212**	P	**Pn**	**08 39 00.2**	**-4.3**
LTZ	**Lake Taylor**	**7.17**	**217**		**Pn**	**08 39 12.0**	**-4.4**
OXZ	**Oxford**	**7.70**	**215**	Pn	Pn	08 39 18.3	-5.3
CTZ	**Chatham Island**	**7.71**	**150**	P	**Pn**	**08 39 20.8**	**-2.8**
RPZ	**Rata Peaks**	**8.46**	**217**	P	**Pn**	**08 39 29.5**	**-4.5**
	5.3nm,0.3s,baz=257,slow=2.6,SNR=25						
RPZ				S	Sn	08 40 58.6	-9.3
	31nm,0.3s,baz=320,slow=24,SNR=14						
RPZ				LR	LR	08 43 40.4	
	comp=Z,460nm,19.8s,baz=46,slow=42						
RPZ	**Rata Peaks**	**8.46**	**217**	Pn	**Pn**	**08 39 29.7**	**-4.2**
RPZ	**Rata Peaks**	**8.46**	**217**	P	**Pn**	**08 39 29.7**	**-4.2**
RAO	**Raoul Island**	**8.56**	**24**	LR	LR	08 41 57.3	
	comp=Z,113nm,19.4s,baz=312,slow=31						
RIZ	**Raoul Island**	**8.57**	**24**	P	**Pn**	**08 39 38.8**	**+3.3**
ODZ	**Otahua Downs**	**9.67**	**213**	P	Pn	08 39 45.2	-5.2
DZM	**Mont Dzumac**	**18.10**	**323**	P	**Pn**	**08 41 40.9**	**-0.2**
	7.8nm,0.8s,baz=152,slow=17,SNR=4.3						
DZM				LR	LR	08 47 35.5	
	comp=Z,209nm,19.4s,baz=188,slow=33						
MSVF	**Nonsavu**	**19.35**	**360**	P	**Pn**	**08 41 55.5**	**-0.5**
	13nm,0.7s,baz=188,slow=6.7,SNR=10						
MSVF	**Nonsavu**	**19.35**	**360**	P	**P**	**08 41 53.9**	**-0.4**
EIDS	**Eidsvold**	**25.82**	**289**	P	**P**	**08 42 58.7**	**-0.3**
EIDS				IAmb	IAmb	08 43 05.3	
	comp=Z,14nm,0.8s						
TOO	**Toolangi**	**25.85**	**259**	P	**P**	**08 42 58.8**	**-0.4**
STKA	**Stephens Creek**	**30.40**	**269**	P	**P**	**08 43 40.6**	**+0.7**
	comp=Z,7.9nm,0.9s,baz=95,slow=10,SNR=16						
STKA				LR	LR	08 54 55.7	
	comp=Z,143nm,19.5s,baz=178,slow=34						
	comp=Z,7.9nm,0.9s						
STKA	**Stephens Creek**	**30.40**	**269**	P	**P**	**08 43 40.4**	**+0.5**
CTA	**Charters Tower**	**32.51**	**293**	P	**P**	**08 43 59.7**	**+1.2**
	comp=Z,7.0nm,0.7s,baz=131,slow=11,SNR=7.5						
CTA				LR	LR	08 55 31.4	
	comp=Z,165nm,21.2s,baz=126,slow=33						
	comp=Z,7.0nm,0.7s						
BBOO	**Buckleboo**	**34.51**	**264**	P	**P**	**08 44 15.2**	**-0.6**
BBOO				IAmb	IAmb	08 44 19.7	
	comp=Z,6.5nm,1.0s						
COEN	**Coen**	**38.73**	**297**	P	**P**	**08 44 52.6**	**+0.9**
PMG	**Port Moresby**	**39.30**	**307**	LR	LR	08 59 35.1	
	comp=Z,85nm,20.1s,baz=164,slow=34						
AS31	**Alice Springs**	**40.06**	**277**	P	**P**	**08 45 02.9**	**0.0**
AS31				IAmb	IAmb	08 45 04.7	
	comp=Z,4.1nm,0.6s						
ASAR	**Alice Springs**	**40.06**	**277**	P	**P**	**08 45 02.5**	**-0.5**
	comp=Z,8.5nm,0.5s,baz=120,slow=7.8,SNR=52						
ASAR				PcP	**PcP**	**08 47 07.7**	**+1.1**
	comp=Z,0.6nm,0.5s,baz=118,slow=4.0,SNR=1.8						
ASAR				ScP	**ScP**	**08 50 45.2**	**-4.4**
	comp=Z,0.6nm,0.6s,baz=119,slow=3.7,SNR=5.6						
ASAR				S	**S**	**08 51 05.1**	**+1.0**
	comp=Z,1.3nm,0.7s,baz=122,slow=13,SNR=5.6						
ASAR				LR	LR	09 00 33.5	
	comp=Z,129nm,20.5s,baz=148,slow=34						
	comp=Z,8.5nm,0.5s						
ASAR	**Alice Springs**	**40.06**	**277**	P	**P**	**08 45 02.7**	**-0.2**
RABL	**Rabaul**	**40.51**	**318**	P	**P**	**08 45 08.5**	**+1.9**
VNDA	**Vanda**	**41.07**	**185**	P	**P**	**08 45 11.0**	**+0.5**
	comp=Z,1.2nm,1.1s,baz=235,slow=9.3,SNR=3.0						
VNDA				LR	LR	09 00 19.7	
	comp=Z,141nm,18.1s,baz=306,slow=33						
	comp=Z,1.2nm,1.1s						
VNDA	**Vanda**	**41.07**	**185**	P	**P**	**08 45 11.5**	**+1.0**
WR0	**Warramunga Arr**	**41.52**	**282**	P	**P**	**08 45 15.2**	**+0.3**
WR0				IAmb	IAmb	08 45 17.3	
	comp=Z,9.4nm,1.0s						
FORT	**Forrest**	**41.59**	**264**	P	**P**	**08 45 14.2**	**-1.1**
WB2	**Warramunga Arr**	**41.67**	**282**	P	**P**	**08 45 15.3**	**-0.9**
WB2				IAmb	IAmb	08 45 18.5	
	comp=Z,32nm,1.5s						
WRAB	**Tennant Creek**	**41.68**	**282**	P	**P**	**08 45 15.4**	**-0.8**
WRAB				IAmb	IAmb	08 45 18.0	
	comp=Z,8.6nm,0.8s						
WRA	**Warramunga Arr**	**41.69**	**282**	P	**P**	**08 45 15.3**	**-1.0**
	comp=Z,4.3nm,0.3s,baz=123,slow=7.0,SNR=88						
WRA				PcP	**PcP**	**08 47 13.5**	**+1.7**
	comp=Z,1.1nm,0.7s,baz=123,slow=3.1,SNR=3.3						
WRA				ScP	**ScP**	**08 50 50.8**	**-5.2**
	comp=Z,0.7nm,0.9s,baz=120,slow=3.5,SNR=2.3						
WRA				LR	LR	09 02 38.3	
	comp=Z,90nm,18.8s,baz=232,slow=36						
	comp=Z,4.3nm,0.3s						
WRA	**Warramunga Arr**	**41.69**	**282**	P	**P**	**08 45 15.6**	**-0.7**
WB0	**Warramunga Arr**	**41.74**	**282**	IAmb	IAmb	08 45 18.4	
	comp=Z,32nm,1.5s						
CASY	**Casey**	**47.67**	**210**	P	**P**	**08 46 03.3**	**+0.1**
CASY				IAmb	IAmb	08 46 05.9	
	comp=Z,7.3nm,0.9s						
KNRA	**Kununurra**	**48.47**	**283**	P	**P**	**08 46 07.6**	**-2.5**
MBWA	**Marble Bar**	**52.63**	**271**	P	**P**	**08 46 40.8**	**-0.5**
MBWA				IAmb	IAmb	08 46 42.5	
	comp=Z,4.7nm,0.7s						
QSPA	**South Pole Qui**	**52.96**	**180**	P	**P**	**08 46 44.4**	**+1.0**
	comp=Z,4.2nm,0.7s,baz=56,slow=0.1,SNR=26						
	comp=Z,4.2nm,0.7s						
QSPA	**South Pole Qui**	**52.96**	**180**	P	**P**	**08 46 45.1**	**+1.7**
QSPA				IAmb	IAmb	08 46 55.7	
	comp=Z,6.7nm,0.8s						
SOEI	**Soe**	**55.52**	**285**	P	**P**	**08 47 04.8**	**+2.2**
	comp=Z,28nm,0.8s						
SIJI	**Sorong**	**56.25**	**299**	P	**P**	**08 47 07.7**	**0.0**
	comp=Z,12nm,0.6s,baz=130,slow=3.1,SNR=6.0						
	comp=Z,12nm,0.6s						
SANI	**Sanana**	**59.22**	**293**	P	**P**	**08 47 29.1**	**+0.6**
	comp=Z,27nm,0.9s						
BELA	**Belgrano 2**	**63.53**	**173**	P	**P**	**08 47 56.0**	**-0.7**
BELA				IAmb	IAmb	08 47 57.8	
	comp=Z,4.2nm,0.9s						
MAW	**Mawson**	**64.84**	**203**	P	**P**	**08 48 07.1**	**+1.7**
	comp=Z,2.3nm,0.6s,baz=271,slow=3.4,SNR=4.4						
	comp=Z,2.3nm,0.6s						
PWJI	**Pagerwojo**	**66.33**	**278**	P	**P**	**08 48 17.2**	**+1.4**
	comp=Z,46nm,1.1s						
BBKI	**Banjar Baru**	**66.73**	**284**	P	**P**	**08 48 19.7**	**+1.3**
	comp=Z,36nm,0.7s						
WOJI	**Wonogiri, Jawa**	**67.13**	**278**	P	**P**	**08 48 22.5**	**+1.6**
	comp=Z,40nm,0.9s						
SNAA	**Sanae**	**71.47**	**180**	P	**P**	**08 48 47.4**	**+0.5**
SNAA	**Sanae**	**71.47**	**180**	P	**P**	**08 48 47.2**	**+0.3**
SNAA				IAmb	IAmb	08 48 53.4	
	comp=Z,11nm,1.5s						
VNA3	**Neumayer Olymp**	**71.76**	**177**	P	**P**	**08 48 48.9**	**+0.3**
VNA2	**Neumayer--Watz**	**72.15**	**178**	P	**P**	**08 48 51.5**	**+0.6**
	baz=178,slow=5.1						
VNA1	**Neumayer--Stat**	**72.40**	**178**	P	**P**	**08 48 53.1**	**+0.8**
H03S2	**Juan Fernandez**	**79.40**	**124**	T	T	10 16 15.1	
	baz=225						
H03S1	**Juan Fernandez**	**79.41**	**124**	T	T	10 16 08.8	
	baz=225						
H03S3	**Juan Fernandez**	**79.42**	**124**	T	T	10 16 18.0	
	baz=225						
H03N3	**Juan Fernandez**	**79.63**	**124**	T	T	10 16 14.1	
	baz=234,slow=72,SNR=11						
H03N2	**Juan Fernandez**	**79.64**	**124**	T	T	10 16 21.5	
	baz=234,slow=72,SNR=12						
H03N1	**Juan Fernandez**	**79.65**	**124**	T	T	10 16 31.2	
	baz=234,slow=72,SNR=12						
CO02	**Combarbal**	**86.23**	**127**	P	**P**	**08 50 09.4**	**+0.9**
KSRS	**Korea Array**	**87.53**	**322**	P	**P**	**08 50 14.2**	**0.0**
	comp=Z,3.5nm,0.8s,baz=143,slow=5.8,SNR=15						
	comp=Z,3.5nm,0.8s						
PETK	**Petropavlovsk-**	**91.63**	**348**	P	**P**	**08 50 31.9**	**-1.1**
	comp=Z,1.9nm,0.7s,baz=127,slow=6.1,SNR=6.3						
	comp=Z,1.9nm,0.7s						
CMAR	**Chiang Mai Arr**	**92.67**	**291**	P	**P**	**08 50 38.4**	**-0.4**
	comp=Z,1.2nm,0.3s,baz=155,slow=3.4,SNR=7.2						
	comp=Z,1.2nm,0.3s						
NVAR	**Mina Array Bea**	**95.36**	**45**	P	**P**	**08 50 50.3**	**-0.6**
	comp=Z,0.3nm,0.7s,baz=221,slow=3.6,SNR=2.8						
	comp=Z,0.3nm,0.7s						
LPAZ	**La Paz**	**98.14**	**117**	P	Pdif	08 51 06.3	+1.7
	comp=Z,1.0nm,0.8s,baz=113,slow=6.6,SNR=4.0						
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**119.51**	**308**	PKP	**PKPdf**	**08 56 15.1**	**-0.4**
	comp=Z,1.3nm,0.9s,baz=117,slow=0.3,SNR=6.6						
KBZ	**Khabaz**	**145.61**	**295**	PKPbc	**PKPdf**	**08 57 03.8**	**-0.4**
	comp=Z,11nm,0.9s,baz=185,slow=3.8,SNR=16						
DBIC	**Dimbokro**	**149.53**	**174**	PKPbc	**PKiKP**	**08 57 17.0**	**-0.2**
	comp=Z,3.5nm,0.5s,baz=71,slow=1.7,SNR=5.0						
FINES	**FINESS Array B**	**150.05**	**333**	PKPbc	**PKPbc**	**08 57 14.6**	**-1.4**
	comp=Z,7.4nm,0.8s,baz=36,slow=4.8,SNR=16						
BRTR	**Keskin Array B**	**152.15**	**286**	PKPbc	**PKPbc**	**08 57 20.8**	**-1.0**
	comp=Z,6.3nm,0.9s,baz=143,slow=4.3,SNR=16						
AKASG	**Malin Array Be**	**154.03**	**311**	PKPbc	**PKiKP**	**08 57 26.1**	**+0.7**
	comp=Z,1.7nm,0.6s,baz=53,slow=3.1,SNR=7.3						
TORD	**Torodi Ar. Bea**	**155.87**	**189**	PKPbc	PKPbc	08 57 31.8	
	comp=Z,0.3nm,0.3s,baz=174,slow=2.5,SNR=9.0						
TORD				PKPab	sPKPdf	08 57 45.7	-1.4
	comp=Z,2.3nm,0.9s,baz=184,slow=2.6,SNR=7.6						
GERES	**GERESS Array B**	**163.71**	**321**	PKPab	**PKPab**	**08 58 19.4**	**-1.8**
	comp=Z,0.5nm,0.6s,baz=66,slow=4.5,SNR=4.5						

*SOME **01** 08:48:32.5, 39°.45N×73°.53E, h5km*
*NNC **01** 08:48:37.2±1.4, 39°.53N×73°.57E, h0km, mb3.8, mpv3.5,*
Error ellipse: s-maj=11.1km s-min=5.9km az=174.0
*KRNET **01** 08:48:37.4±0.1, 39°.58N×73°.60E, mb3.0*
ISC 01 08:48:39.9±1.0**, 39°.65N**±0°.06×**73°.51E**±0°.03**, h10km, n42,**
σ1°.79/59**, 14C-11D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	**Osh**	**1.03**	**328**	⇓*i*P	**Pb**	**08 48 59.0**	**-0.9**
	baz=27						
OHH				⇓*i*S	**Sn**	**08 49 14.6**	**-0.5**
	baz=27						
DRK	**Karamyk**	**1.34**	**263**	⇑*i*P	**Pb**	**08 49 03.7**	**-1.5**
	baz=67						
DRK				⇑*i*S	**Sg**	**08 49 22.9**	**0.0**
	baz=67						
BTK	**Batken**	**2.12**	**282**	⇑*i*P	**Pb**	**08 49 16.8**	**-1.5**
	baz=83						
BTK				⇑*i*S	**Sb**	**08 49 46.1**	**+1.4**
	baz=83						
ARK	**Arkit**	**2.45**	**332**	⇑*i*P	**Pb**	**08 49 22.1**	**-1.9**
	baz=31						
ARK				⇑*i*S	**Sb**	**08 49 54.5**	**+0.2**
	baz=31						
TRKS	**Terek-Say**	**2.60**	**317**	⇑*i*P	**Pn**	**08 49 23.2**	**+1.0**
	baz=16						
TRKS				⇑*i*S	**Sb**	**08 49 57.1**	**-1.8**
	baz=16						
MRKS	**Merke**	**3.10**	**356**	*e*P	**Pb**	**08 49 35.0**	**-0.1**
	5.9nm,0.3s						
MRKS				*e*S	**Sg**	**08 50 19.3**	**-0.1**
	9.0nm,0.3s						
MRKS	**Merke**	**3.10**	**356**	Pg	**Pb**	**08 49 35.0**	**-0.1**
	5.9nm,0.3s						
MRKS				Lg	Lg	08 50 19.3	
	9.0nm,0.3s						
BOOM	**Boomskoye usch**	**3.38**	**32**	⇓*i*P	Pb	08 49 34.3	-5.6
	baz=31						
BOOM				⇓*i*S	**Sn**	**08 50 14.8**	**+1.8**
	baz=31						
CHMS	**Chumysh**	**3.47**	**15**	⇑Pn	**Pn**	**08 49 34.8**	**+0.8**
	2.8nm,0.4s						
CHMS				⇓Lg	Lg	08 50 33.3	
	12nm,0.8s						
TKM2	**Tokmak 2**	**3.62**	**25**	⇓Pn	**Pn**	**08 49 37.9**	**+1.7**
	1.9nm,0.7s						
TKM2				⇑Lg	Lg	08 50 36.9	
	9.9nm,0.8s						
IUG	**Iuzhnay**	**3.63**	**314**	*e*P	**Pb**	**08 49 43.8**	**-0.4**
	192nm,0.3s						
IUG				*e*S	**Sg**	**08 50 34.5**	**-2.0**
	33nm,0.5s						
IUG	**Iuzhnay**	**3.63**	**314**	Pg	**Pb**	**08 49 43.8**	**-0.4**
	192nm,0.3s						
IUG				Lg	Lg	08 50 34.5	
	33nm,0.5s						
KST	**Kastek**	**3.86**	**28**	*e*P	**Pb**	**08 49 48.9**	**+0.8**
	2.4nm,0.7s						
KST				*e*S	**Sg**	**08 50 43.4**	**-0.3**
	13nm,0.7s						
KST	**Kastek**	**3.86**	**28**	Pg	**Pb**	**08 49 48.9**	**+0.8**
	2.4nm,0.7s						
KST				Lg	Lg	08 50 43.4	
	13nm,0.7s						
SGDS	**Sogindy**	**3.89**	**12**	*e*P	**Pb**	**08 49 49.0**	**+0.4**
	4.1nm,0.5s						
SGDS				*e*S	**Sg**	**08 50 43.4**	**-1.3**
	2.8nm,0.4s						
SGDS	**Sogindy**	**3.89**	**12**	Pg	**Pb**	**08 49 48.9**	**+0.4**
	4.1nm,0.5s						
SGDS				Lg	Lg	08 50 43.4	
	2.8nm,0.4s						
MTBS	**Maitube**	**4.11**	**31**	*e*P	Pg	08 49 53.8	-4.7
	2.3nm,0.1s						
MTBS				*e*S	**Sg**	**08 50 51.7**	**-0.1**
	11nm,0.3s						
MTBS	**Maitube**	**4.11**	**31**	Pg	Pg	08 49 53.8	-4.7
	2.3nm,0.1s						
MTBS				Lg	Lg	08 50 51.7	
	11nm,0.3s						
KK31	**Karatay Array**	**4.12**	**328**	⇑Pn	**Pn**	**08 49 44.0**	**+1.1**
	1.0nm,0.3s,baz=132,slow=11,SNR=24						
KK31				⇓Pg	**Pb**	**08 49 54.5**	**+2.0**
	1.4nm,0.4s,baz=153,slow=14,SNR=5.4						
KK31				⇓Sn	**Sn**	**08 50 36.4**	**+5.2**
	3.3nm,0.5s,baz=150,slow=24,SNR=4.0						
KK31				⇑Lg	Lg	08 50 52.3	
	3.1nm,0.5s						
TNSS	**Tian-Shan**	**4.25**	**36**	*e*P	**Pb**	**08 49 55.2**	**+0.2**
	4.1nm,0.2s						
TNSS				*e*S	**Sg**	**08 50 54.0**	**-2.5**
	5.1nm,0.7s						
TNSS	**Tian-Shan**	**4.25**	**36**	Pg	**Pb**	**08 49 55.3**	**+0.2**
	4.1nm,0.2s						
TNSS				Lg	Lg	08 50 54.0	
	5.1nm,0.7s						
KRBS	**Karabastau**	**4.35**	**21**	*e*P	**Pb**	**08 49 57.9**	**+1.4**
	2.4nm,0.5s						
KRBS				*e*S	**Sg**	**08 50 58.5**	**-1.0**
	5.1nm,0.7s						
KRBS	**Karabastau**	**4.35**	**21**	Pg	**Pb**	**08 49 57.9**	**+1.4**
	2.4nm,0.5s						
KRBS				Lg	Lg	08 50 58.5	
	5.1nm,0.7s						
BRLS	**Borolday**	**4.37**	**322**	*e*P	**Pb**	**08 49 54.8**	**-1.9**
	12nm,0.3s						
BRLS				*e*S	**Sb**	**08 50 53.5**	**+4.1**
	11nm,0.3s						
BRLS	**Borolday**	**4.37**	**322**	Pg	**Pb**	**08 49 54.8**	**-1.9**
	12nm,0.3s						
BRLS				Lg	Lg	08 50 53.5	
	11nm,0.3s						
MDOK	**Medeo**	**4.40**	**36**	*e*P	**Pb**	**08 49 58.5**	**+1.1**
	2.9nm,0.4s						
MDOK				*e*S	**Sg**	**08 50 59.6**	**-1.5**
	8.8nm,0.8s						
MDOK	**Medeo**	**4.40**	**36**	⇑Pn	Pb	08 49 52.7	-4.7
	1.5nm,0.5s						
MDOK				Pg	**Pb**	**08 49 58.4**	**+1.1**
	2.9nm,0.4s						
MDOK				Lg	Lg	08 50 59.2	
	11nm,0.8s						
MDOK				Lg	Lg	08 50 59.6	
	8.8nm,0.8s						
KTBS	**Karatobe**	**4.70**	**29**	*e*P	**Pb**	**08 50 03.7**	**+1.4**
	2.4nm,0.3s						
KTBS				*e*S	**Sg**	**08 51 08.7**	**-2.0**
	15nm,0.3s						
KTBS	**Karatobe**	**4.70**	**29**	Pg	**Pb**	**08 50 03.7**	**+1.4**
	2.4nm,0.3s						
KTBS				Lg	Lg	08 51 08.7	
	15nm,0.3s						
KUU	**Kurty**	**4.73**	**26**	*e*P	**Pb**	**08 50 03.9**	**+1.0**
	2.0nm,0.4s						
KUU				*e*S	**Sg**	**08 51 09.0**	**-2.8**
	5.1nm,0.5s						
KUU	**Kurty**	**4.73**	**26**	Pg	**Pb**	**08 50 03.9**	**+1.0**
	2.0nm,0.4s						
KUU				Lg	Lg	08 51 09.0	
	5.1nm,0.5s						
CHKK	**Chushkaly**	**4.94**	**31**	*e*P	**Pb**	**08 50 08.4**	**+2.0**
	1.2nm,0.1s						
CHKK				*e*S	**Sg**	**08 51 16.8**	**-1.5**
	9.2nm,0.4s						
CHKK	**Chushkaly**	**4.94**	**31**	Pg	**Pb**	**08 50 08.4**	**+2.0**
	1.2nm,0.1s						
CHKK				Lg	Lg	08 51 16.8	
	9.2nm,0.4s						
SATY	**Saty**	**5.01**	**46**	*e*P	**Pb**	**08 50 08.8**	**+1.1**
	7.5nm,0.2s						
SATY				*e*S	**Sg**	**08 51 17.5**	**-3.3**
	12nm,0.5s						
SATY	**Saty**	**5.01**	**46**	Pg	**Pb**	**08 50 08.8**	**+1.1**
	7.5nm,0.2s						
SATY				Lg	Lg	08 51 17.5	
	12nm,0.5s						
KURS	**Kuram**	**5.18**	**41**	*e*P	Pg	08 50 12.8	-6.4
	3.1nm,0.5s						
KURS				*e*S	**Sg**	**08 51 24.4**	**-1.9**
	3.6nm,1.0s						
KURS	**Kuram**	**5.18**	**41**	Pg	Pg	08 50 12.8	-6.4
	3.1nm,0.5s						
KURS				Lg	Lg	08 51 24.4	
	3.6nm,1.0s						
KPKS	**Kokpek**	**5.44**	**44**	*e*P	**Pb**	**08 50 15.6**	**+0.7**
	1.9nm,0.2s						
KPKS				*e*S	**Sg**	**08 51 29.3**	**-5.1**
	5.4nm,0.3s						
KPKS	**Kokpek**	**5.44**	**44**	Pg	**Pb**	**08 50 15.6**	**+0.7**
	1.9nm,0.2s						
KPKS				Lg	Lg	08 51 29.3	
	5.4nm,0.3s						
PDGK	**Podgornoye**	**5.80**	**49**	Pg	**Pb**	**08 50 23.3**	**+2.2**
	1.4nm,0.6s						
PDGK				Lg	Lg	08 51 42.2	
	1.4nm,0.6s						
AB31	**Akbulak array**	**13.62**	**319**	⇓P	**Pn**	**08 51 54.4**	**+1.4**
	0.3nm,0.4s,baz=232,slow=15,SNR=10						
AB31				⇓S	P	08 52 09.3	+7.2
	0.5nm,0.4s,baz=237,slow=31,SNR=8.5						
AKTO	**Aktyubinsk**	**15.34**	**320**	⇓Pn	Pn	08 52 08.8	-7.5
	0.8nm,0.6s						
AKTO				⇑Lg	Lg	08 52 33.8	
	1.4nm,0.7s						

*TUL **01** 08:50:35.1±0.5, 36°.136N±0°.010×97°.83W±0°.02, h6km±4km,*
ML2.6, mb_Lg2.4/20(NEIC), Error ellipse: s-maj=2.0km

s-min=1.3km az=76.0

NEIC 01 08:50:35.1±0.5**,36°14N**±0°01×**97°82W**±0°01**,h7**km±3km**,**
Error ellipse: s-maj=1.7km s-min=1.5km az=197.0,
Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKCFA	**Oklahoma City**	**0.78**	**157**	Pg	Pg	08 50 49.9	-0.3
OKCSW	**OKLAHOMA CITY**	**0.80**	**157**		Pg	08 50 50.2	-0.2
T35A	**Sooner Cattle**	**1.31**	**53**		Pn	08 50 59.6	-0.2
T35A				Sn	Sb	08 51 16.7	-0.3
X34A	**Smith Ranch, M**	**1.54**	**180**		Pb	08 51 03.9	0.0
WMOK	**Wichita Mounta**	**1.60**	**210**		Pn	08 51 03.8	-0.1
TUL1	**Leonard**	**1.66**	**97**	Pn	Pn	08 51 05.0	+0.4
TUL1				IAmb_Lg		08 51 29.4	
	comp=Z,24nm,0.9s						
Z35A	**Perchaven, San**	**2.84**	**170**	Pn	Pn	08 51 22.1	+1.2
CBKS	**Cedar Bluff**	**3.07**	**331**	Pn	Pn	08 51 25.6	+1.5
Z38A	**Mt. Pleasant**	**3.70**	**140**	IAmb_Lg		08 52 37.5	
	comp=Z,15nm,0.9s						
MIAR	**Mount Ida**	**3.82**	**113**	IAmb_Lg		08 52 45.7	
	comp=Z,8.0nm,0.8s						
S39A	**Bolivar**	**3.92**	**65**	Pn	Pn	08 51 36.6	+0.9
S39A				IAmb_Lg		08 52 36.7	
	comp=Z,9.7nm,1.3s						
X40A	**Basin Creek Fa**	**4.40**	**111**	IAmb_Lg		08 52 59.3	
	comp=Z,9.0nm,0.8s						
FCAR	**Ozark Folk Cen**	**4.62**	**91**	IAmb_Lg		08 53 02.5	
	comp=Z,5.8nm,0.7s						
KSCO	**Kaye Shedlock'**	**4.77**	**308**	IAmb_Lg		08 53 18.0	
	comp=Z,6.9nm,0.8s						
P38A	**Dawn**	**4.86**	**43**	IAmb_Lg		08 53 17.8	
	comp=Z,6.1nm,0.9s						
T25A	**Trinidad**	**5.39**	**283**	IAmb_Lg		08 53 25.6	
	comp=Z,8.3nm,0.8s						
JCT	**Junction City**	**5.88**	**197**	IAmb_Lg		08 53 50.7	
	comp=Z,7.5nm,0.8s						

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*TEH **01** 09:08:23.5,25°33N×62°93E,h28km,ML3.6*
*OMAN **01** 09:08:27.4±0.2,25°17N×62°81E,h37km±39km,mb5.2/6,*
ml3.6/6,Error ellipse: s-maj=8.3km s-min=2.6km az=277.0
ISC 01 09:08:21.0±2.2**,25°18N**±0°07×**63°1E**±0°1**,h28**km**,n39,**
σ**1§97**/55**,Southwestern Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NGCH	**Negor - Chabah**	**1.82**	**276**	*e*Pg	**Pb**	**09 08 53.7**	**+0.2**
NGCH				*e*Sg	**Sb**	**09 09 15.1**	**-0.8**
SRVN	**Saravan**	**2.31**	**344**	*e*Pn	**Pn**	**09 08 58.1**	**+0.8**
SRVN				*e*		09 08 58.5	
	comp=Z,3μm,0.3s						
CHBR	**Chabahar**	**2.43**	**280**	*e*Pn	**Pn**	**09 09 01.3**	**+2.4**
WSAR	**Wadi Sarin**	**4.54**	**246**	P	**Pn**	**09 09 29.8**	**+1.9**
WSAR				S	**Sn**	**09 10 16.4**	**-3.3**
JLN	**Jalan Bani Buh**	**4.55**	**229**	P	**Pn**	**09 09 30.6**	**+2.6**
JLN				S	**Sn**	**09 10 16.4**	**-3.6**
WBK	**Wadi Bani Khal**	**4.59**	**237**	P	**Pn**	**09 09 29.0**	**+0.5**
WBK				S	**Sn**	**09 10 17.2**	**-3.7**
ZHDN	**Zahedan**	**4.68**	**334**	*e*Pn	**Pn**	**09 09 30.8**	**+0.8**
JASK	**Jask - Hormozg**	**4.81**	**279**	*e*Pn	**Pn**	**09 09 34.7**	**+3.2**
BIDO	**Bidbid**	**4.85**	**251**	*e*Pn	**Pn**	**09 09 34.3**	**+2.1**
BIDO	**Bidbid**	**4.85**	**251**	P	**Pn**	**09 09 34.3**	**+2.1**
BIDO				S	**Sn**	**09 10 25.9**	**-1.6**
SMDO	**Samad**	**5.10**	**247**	P	**Pn**	**09 09 37.8**	**+2.1**
SMDO				S	**Sn**	**09 10 32.2**	**-1.5**
JMDO	**Jabal Madar**	**5.39**	**240**	P	**Pn**	**09 09 41.7**	**+2.1**
JMDO				S	**Sn**	**09 10 39.4**	**-1.3**
HOQ	**Hoqain**	**5.54**	**255**	P	**Pn**	**09 09 42.9**	**+1.3**
HOQ				S	**Sn**	**09 10 43.7**	**-0.7**
KBAM	**BAM**	**5.74**	**314**	*e*Pn	**Pn**	**09 09 45.5**	**+1.1**
KBAM				*e*		09 09 46.7	
	comp=Z,762nm,0.3s						
BSY	**Bisya**	**5.94**	**247**	P	**Pn**	**09 09 49.2**	**+2.1**
BSY				S	**Sn**	**09 10 53.9**	**-0.5**
SOHO	**SOHO**	**6.09**	**262**	*e*Pn	**Pn**	**09 09 50.1**	**+0.9**
SOHO	**SOHO**	**6.09**	**262**	P	**Pn**	**09 09 50.9**	**+1.7**
SOHO				S	**Sn**	**09 10 55.6**	**-2.4**
BANOM	**Banah**	**6.21**	**278**	*e*Pn	**Pn**	**09 09 52.0**	**+1.1**
BANOM	**Banah**	**6.21**	**278**	P	**Pn**	**09 09 53.0**	**+2.1**
	SNR=45						
BANOM				S	**Sn**	**09 11 00.1**	**-1.0**
UOSS	**Minazif**	**6.29**	**269**	*e*Pn	**Pn**	**09 09 52.4**	**+0.5**
UOSS	**Minazif**	**6.29**	**269**	P	**Pn**	**09 09 52.9**	**+1.0**
UOSS				S	**Sn**	**09 10 59.8**	**-3.0**
ARQ	**Araqi**	**6.30**	**254**	P	**Pn**	**09 09 54.3**	**+2.1**
MASF	**Masafi**	**6.32**	**273**	P	**Pn**	**09 09 53.4**	**+1.1**
MASF				S	**Sn**	**09 11 01.5**	**-2.1**
MSFE	**Esma-Masafi**	**6.32**	**273**	*e*Pn	**Pn**	**09 09 53.0**	**+0.7**
HATD	**Hatta, Dubai**	**6.36**	**268**	*e*Pn	**Pn**	**09 09 53.5**	**+0.6**
HATD	**Hatta, Dubai**	**6.36**	**268**	P	**Pn**	**09 09 54.6**	**+1.7**
HATD				S	**Sn**	**09 11 02.2**	**-2.5**
SHME	**Shamm**	**6.37**	**279**	*e*Pn	**Pn**	**09 09 54.6**	**+1.6**
SHME	**Shamm**	**6.37**	**279**	P	**Pn**	**09 09 55.9**	**+2.9**
	SNR=56						
SHME				S	**Sn**	**09 11 04.1**	**-0.8**
ASHO	**Ashiyiah**	**6.44**	**267**	*e*Pn	**Pn**	**09 09 55.5**	**+1.5**
ASHO	**Ashiyiah**	**6.44**	**267**	P	Pn	09 09 58.8	+4.8
ASHO				S	**Sn**	**09 11 05.6**	**-1.0**
GENO	**Geno**	**6.63**	**291**	*e*Pn	**Pn**	**09 09 59.7**	**+3.0**
ALNE	**Al Ain**	**6.81**	**262**	*e*Pn	**Pn**	**09 10 01.0**	**+1.9**
ALNE	**Al Ain**	**6.81**	**262**	P	**Pn**	**09 10 02.7**	**+3.7**
ALNE				S	**Sn**	**09 11 16.0**	**+0.3**
CHMN	**Cheshme madani**	**6.81**	**314**	*e*Pn	**Pn**	**09 10 00.9**	**+1.5**
FAQ	**Al Faqa, Dubai**	**6.86**	**268**	*e*Pn	**Pn**	**09 10 01.7**	**+2.0**
NGRK	**Negar Kerman**	**7.22**	**309**	*e*Pn	**Pn**	**09 10 06.5**	**+1.5**
KHGB	**Koh Gabri**	**7.84**	**313**	*e*Pn	**Pn**	**09 10 14.9**	**+1.5**
KHGB				*e*		09 10 25.9	
	comp=Z,115nm,0.4s						
IKOO	**Kooshah**	**8.07**	**334**	*e*Pn	**Pn**	**09 10 16.3**	**-0.3**
IKOO				*e*		09 10 16.8	
	comp=N,116nm,0.2s						
IBAF	**Bafgh**	**9.23**	**316**	*e*Pn	**Pn**	**09 10 34.2**	**+1.9**
IBAF				*e*		09 10 53.3	
	comp=N,108nm,0.3s						

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*CRAAG **01** 09:12:20.5,36°34N×3°47E,Ml3.5,Hypocentre not reviewed by the ISC*
MDD 01 09:12:17.6±1.2**,36°03N×3°90E,h0**km**,Mb4.3**/7**,**
M_mb3.7/7**,5C,Error ellipse: s-maj=12.1km**
s-min=5.0km az=140.0,Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKET	**Djebel Ketaf**	**0.03**	**330**	P		09 12 30.7	
ADJB	**Djebel Djouab**	**0.40**	**290**	P		09 12 25.5	
ABMS	**Boumerdes**	**0.80**	**335**	P		09 12 30.6	
EIBI	**Ibiza**	**3.62**	**327**	P	Pn	09 13 11.9	-3.0
EIBI				⇑*i*Vmb_V		09 13 15.6	
	320nm,SNR=3.9						
EIBI				S	Sn	09 13 47.0	-11
ETOS	**Mallorca**	**3.83**	**347**	P	Pn	09 13 15.2	-2.7
ETOS				S	Sn	09 13 53.7	-10
ECOL	**Islas Columbre**	**4.63**	**328**	P	Pn	09 13 25.7	-3.0
ETOB	**Tobarra**	**5.07**	**303**	P	Pn	09 13 32.4	-2.5
ETOB				⇑*i*Vmb_V		09 13 38.5	
	115nm,SNR=2.3						
ETOB				S	Sn	09 14 24.0	-10
ECHE	**Chera**	**5.25**	**314**	P	Pn	09 13 35.1	-2.2
ECHE				⇑*i*Vmb_V		09 13 38.4	
	144nm,SNR=1.9						
EMOS	**Mosqueruela**	**5.53**	**323**	S	Sn	09 14 34.7	-11
EBER	**Berja**	**5.54**	**281**	S	Sn	09 14 41.0	-5.0
EMIR	**Miracle**	**6.16**	**343**	P	Pn	09 13 49.2	-0.7
EMIR				⇑*i*Vmb_V		09 13 51.4	
	494nm,SNR=2.1						
EJON	**La Jonquera**	**6.46**	**353**	⇑*i*Vmb_V		09 13 53.4	
	340nm,SNR=1.0						
EJON				P	Pn	09 13 53.7	-0.3
EZAM	**Zamans**	**11.53**	**306**	P	Pn	09 15 02.2	-1.3

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*IDC **01** 09:12:29.9±1.9,17°88N×105°79W,h0km,mb3.7/6,*
mbtmp3.7/9,ML3.2/3,MS3.8/33,Error ellipse:
s-maj=58.7km s-min=23.0km az=54.0
*MEX **01** 09:12:31.0±1.1,17°90N×105°92W,h16km±631km,MD4.3*
*NEIC **01** 09:12:31.7±1.8,17°74N±0°10×105°80W±0°10,h10km±2km,*
mb4.2/98,Md4.3/10(MEX),Error ellipse: s-maj=17.0km
s-min=14.8km az=219.0
ISC 01 09:12:35.3±3.2**,18°03N**±0°09×**105°64W**±0°07**,**
h27km±22km**,n145,**σ**1§57**/103**,mb4.2**/32**,MS3.9**/31**,Off**
coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CJM	**Chamela**	**1.56**	**21**	*e*P	**Pn**	**09 12 57.8**	**-3.7**
CJM				*e*S	**Sn**	**09 13 17.2**	**-3.6**
CDAR	**Ciudad de Arme**	**1.79**	**59**	*e*P	**Pn**	**09 13 02.8**	**-1.8**
CDAR				*i* S	**Sn**	**09 13 25.4**	**-1.1**
R15V		**1.94**	**54**	*e*P	**Pn**	**09 13 04.3**	**-2.3**
R15V				*e*S	**Sn**	**09 13 28.9**	**-1.2**
COIG	**Colima**	**2.17**	**58**	*e*P	**Pn**	**09 13 08.2**	**-1.6**
COIG				*i* S	**Sn**	**09 13 36.0**	**0.0**
MNGA	**Volcan de Coli**	**2.39**	**53**	*e*P	**Pn**	**09 13 11.8**	**-1.2**
MNGA				*i* S	**Sn**	**09 13 42.5**	**+1.0**
EZ5V		**2.41**	**53**	*e*P	**Pn**	**09 13 12.0**	**-1.3**
EZ5V				*i* S	**Sn**	**09 13 42.3**	**+0.3**
INCO	**Volcan de Coli**	**2.43**	**52**	*e*P	**Pn**	**09 13 12.1**	**-1.6**
INCO				*e*S	**Sn**	**09 13 44.2**	**+1.3**
JUBC	**Volcan de Coli**	**2.45**	**53**	*e*P	**Pn**	**09 13 13.0**	**-1.0**
JUBC				*e*S	**Sn**	**09 13 45.2**	**+2.0**
ANIG	**Ahuacatlan**	**3.19**	**19**		**Pn**	**09 13 24.8**	**+0.9**
ANIG					**Sb**	**09 14 07.4**	**-2.3**
ANIG	**Ahuacatlan**	**3.19**	**19**	*e*P	**Pn**	**09 13 24.3**	**+0.4**
ANIG				*i* S	**Sn**	**09 14 03.9**	**+2.9**
MOIG	**Morelia**	**4.52**	**68**	Pn	**Pn**	**09 13 43.0**	**+0.7**
H06E1	**SOCORRO T-PHAS**	**5.07**	**279**	T	T	09 18 43.2	
	SNR=654						
ZAIG	**Zacatecas**	**5.52**	**31**	Pn	**Pn**	**09 13 58.5**	**+2.3**
TLIG	**Tlapa**	**6.75**	**93**		**Pn**	**09 14 14.0**	**+1.1**
SLBS	**Sierra La Lagu**	**6.92**	**325**	Pn	**Pn**	**09 14 15.8**	**+0.7**
CMIG	**Matias Romero**	**10.30**	**94**	Pn	**Pn**	**09 15 00.2**	**-1.3**
	0.2nm,0.3s,baz=180,slow=17,SNR=2.5						
CMIG				LR	LR	09 18 56.5	
	comp=Z,369nm,18.3s,baz=286,slow=37						
	3.3nm,1.1s						
TX31	**Lajitas Ar. Si**	**11.39**	**9**		**Pn**	**09 15 20.4**	**+3.9**
TX32	**Lajitas Array**	**11.39**	**9**	Pn	**Pn**	**09 15 19.9**	**+3.4**
TXAR	**Lajitas Array**	**11.39**	**9**	Pn	**Pn**	**09 15 18.6**	**+2.1**
	baz=176,slow=12,SNR=20						
TXAR				LR	LR	09 19 49.6	
	comp=Z,332nm,19.5s,baz=190,slow=38						
	2.2nm,0.9s						
TXAR	**Lajitas Array**	**11.39**	**9**		**Pn**	**09 15 19.8**	**+3.2**
JCT	**Junction City**	**13.48**	**22**	Pn	**Pn**	**09 15 49.7**	**+4.7**
MNTX	**Cornudas Mount**	**13.61**	**1**	Pn	**Pn**	**09 15 50.5**	**+3.8**
319A	**Douglas**	**13.69**	**347**	Pn	**Pn**	**09 15 50.0**	**+2.1**
121A	**Cookes Peak, D**	**14.57**	**353**	Pn	**Pn**	**09 16 03.2**	**+3.2**
435B	**Jarrell**	**14.65**	**28**	Pn	**Pn**	**09 16 02.5**	**+1.6**
HKT	**Hockley**	**14.86**	**35**	Pn	**P**	**09 16 07.8**	**-1.3**
TUC	**Tucson**	**14.96**	**343**	Pn	**Pn**	**09 16 06.3**	**+1.2**
214A	**Organ Pipe Nat**	**15.30**	**336**	Pn	**Pn**	**09 16 09.8**	**+0.1**
ABTX	**Abilene, Hawle**	**15.50**	**19**	P	**P**	**09 16 16.9**	**+0.5**
ABTX				IAmb	IAmb	09 16 22.4	
	comp=Z,12nm,1.0s						
WHTX	**Lake Whitney,**	**15.74**	**26**	Pn	**Pn**	**09 16 17.7**	**+2.4**
CRNM	**Carthage**	**15.89**	**357**		**P**	**09 16 20.5**	**-0.3**
ESQI	**Esquipulas**	**16.02**	**100**	Pn	**Pn**	**09 16 18.3**	**-0.8**
ESQI				IAmb	IAmb	09 16 46.1	
	comp=Z,32nm,1.3s						
BNM	**Barren Site**	**16.08**	**357**	Pn	**Pn**	**09 16 21.4**	**+1.6**
MSTX	**Muleshoe**	**16.08**	**9**	Pn	**Pn**	**09 16 21.2**	**+1.4**
MSTX				IAmb	IAmb	09 16 28.8	
	comp=Z,41nm,1.4s						
LENM	**Lemitar**	**16.11**	**356**		**Pn**	**09 16 22.0**	**+1.8**
113A	**Mohawk Valley,**	**16.40**	**335**	Pn	**Pn**	**09 16 24.4**	**+0.7**
ANMO	**Albuquerque**	**16.86**	**358**	Pn	**Pn**	**09 16 29.0**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=178,slow=7.9,SNR=11						
	comp=Z,3.3nm,1.0s						
ANMO	**Albuquerque**	**16.86**	**358**		**P**	**09 16 32.5**	**+0.8**
X18A	**Snowflake**	**16.88**	**348**	P	**P**	**09 16 32.1**	**+0.3**
NATX	**Nacogdoches**	**16.89**	**34**	P	**Pn**	**09 16 29.4**	**-0.6**
NATX				IAmb	IAmb	09 16 49.5	
	comp=Z,14nm,0.8s						
Z35A	**Perchaven, San**	**16.99**	**25**	P	**Pn**	**09 16 31.6**	**+0.4**
Z35A				IAmb	IAmb	09 16 39.6	
	comp=Z,17nm,0.9s						
GLA	**Glamis**	**17.09**	**333**	P	**Pn**	**09 16 31.4**	**-1.0**
X16A	**Lo Mia Camp, P**	**17.12**	**344**	P	**Pn**	**09 16 33.6**	**+0.6**
AMTX	**Amarillo**	**17.15**	**11**		**P**	**09 16 35.2**	**+0.4**
AMTX				IAmb	IAmb	09 16 39.7	
	comp=Z,32nm,1.4s						
Y14A	**Wickenburg**	**17.16**	**339**	P	**Pn**	**09 16 33.2**	**-0.1**
W18A	**Petrified Fore**	**17.40**	**349**	P	**P**	**09 16 38.3**	**+0.6**
WMOK	**Wichita Mounta**	**17.73**	**19**	P	**P**	**09 16 42.7**	**+1.7**
WUAZ	**Wupatki**	**18.14**	**345**	P	**P**	**09 16 47.1**	**+1.3**
W13A	**Hualapai Mount**	**18.52**	**338**		**Pn**	**09 16 50.6**	**+0.4**
X37A	**Clayton**	**18.86**	**27**	P	**Pn**	**09 16 54.8**	**+0.6**
X37A				IAmb	IAmb	09 17 15.3	
	comp=Z,12nm,1.1s						
U32A	**Winter Ranch,**	**19.20**	**16**		**P**	**09 16 58.0**	**+0.8**
U32A				IAmb	IAmb	09 17 08.1	
	comp=Z,20nm,1.2s						
U15A	**North Rim**	**19.24**	**344**	P	**Pn**	**09 16 59.4**	**+0.3**
MVCO	**Mesa Verde**	**19.27**	**353**		**P**	**09 16 58.6**	**+0.3**
MVCO				IAmb	IAmb	09 17 23.1	
	comp=Z,18nm,1.5s						
VBMS	**Vicksburg**	**19.64**	**41**	P	**P**	**09 17 02.2**	**+0.2**
SDCO	**Great Sand Dun**	**19.64**	**0**	P	**Pn**	**09 17 04.5**	**+0.7**
SDCO				IAmb	IAmb	09 17 12.6	
	comp=Z,14nm,1.3s						
TUL1	**Leonard**	**19.83**	**24**		**P**	**09 17 04.8**	**+0.7**
TUL1				IAmb	IAmb	09 17 18.1	
	comp=Z,9.8nm,0.9s						
LCMT	**Little Creek M**	**20.06**	**342**	P	**P**	**09 17 08.2**	**+1.4**
SHPR	**Sheep Range**	**20.23**	**337**	P	**P**	**09 17 09.4**	**+0.7**
QSM	**Queen of Sheba**	**20.44**	**333**	P	**P**	**09 17 10.5**	**-0.3**
QSM				IAmb	IAmb	09 17 27.5	
	comp=Z,10nm,1.2s						
T35A	**Sooner Cattle**	**20.46**	**21**		**P**	**09 17 10.9**	**0.0**
GWY	**Greenwater Val**	**20.55**	**334**		**P**	**09 17 12.0**	**-0.1**
GWY				IAmb	IAmb	09 17 28.4	
	comp=Z,16nm,1.4s						
MTPU	**Mount Pierson**	**20.74**	**345**	P	**P**	**09 17 15.2**	**+0.8**
MTPU				IAmb	IAmb	09 17 31.5	
	comp=Z,16nm,1.4s						
HHAR	**Hobbs**	**20.91**	**27**	IAmb	IAmb	09 17 24.9	
	comp=Z,19nm,1.4s						
PRN	**Pahroc Range**	**21.00**	**339**	P	**P**	**09 17 18.3**	**+1.4**
TPNV	**Topopah Spring**	**21.04**	**336**	P	**P**	**09 17 17.6**	**+0.2**
TPNV				IAmb	IAmb	09 17 30.3	
	comp=Z,12nm,1.3s						
KSCO	**Kaye Shedlock'**	**21.07**	**7**	IAmb	IAmb	09 17 27.3	
	comp=Z,25nm,1.4s						
SMCO	**Snowmass**	**21.10**	**357**	P	**P**	**09 17 19.5**	**+1.2**
SMCO				IAmb	IAmb	09 17 26.0	
	comp=Z,8.0nm,1.1s						
Q16A	**Castle Valley**	**21.36**	**348**	P	**P**	**09 17 21.9**	**+1.0**
Q16A				IAmb	IAmb	09 17 27.5	
	comp=Z,15nm,1.2s						
U40A	**Yellville**	**21.47**	**29**	IAmb	IAmb	09 17 27.5	
	comp=Z,13nm,1.4s						
JTS	**Las Juntas de**	**21.47**	**108**	LR	LR	09 23 37.6	
	comp=Z,191nm,21.6s,baz=356,slow=31						
ISCO	**Idaho Springs**	**21.69**	**0**	P	**P**	**09 17 25.7**	**+1.2**
TMUT	**Trail Mountain**	**21.73**	**348**	P	**P**	**09 17 25.9**	**+0.9**
TMUT				IAmb	IAmb	09 17 53.9	
	comp=Z,16nm,1.4s						
OXF	**Oxford**	**21.89**	**38**		**P**	**09 17 27.1**	**+0.8**
MGMO	**Mountain Grove**	**22.39**	**29**	IAmb	IAmb	09 17 34.7	
	comp=Z,10nm,1.1s						
TPH	**Tonopah**	**22.39**	**335**	P	**P**	**09 17 32.6**	**+0.7**
KSU1	**Kansas State U**	**22.41**	**19**	P	**P**	**09 17 32.6**	**+0.7**
OMMB	**Old Mammoth Mi**	**22.76**	**332**	P	**P**	**09 17 36.2**	**+0.2**
OMMB				IAmb	IAmb	09 17 46.1	
	comp=Z,14nm,1.4s						
DUG	**Dugway, Tooele**	**22.94**	**346**		**P**	**09 17 38.5**	**+0.8**
DUG				IAmb	IAmb	09 17 45.3	
	comp=Z,11nm,1.4s						
PBMO	**Poplar Bluff**	**22.99**	**33**	P	**P**	**09 17 38.8**	**+0.8**
PBMO				IAmb	IAmb	09 17 51.0	
	comp=Z,6.2nm,0.9s						
PLAL	**Pickwick Lake**	**23.00**	**39**	P	**P**	**09 17 39.4**	**+1.2**
PLAL				IAmb	IAmb	09 17 45.3	
	comp=Z,10nm,1.2s						
NV11	**Mina Array Sit**	**23.08**	**334**	P	**P**	**09 17 39.1**	**0.0**
NVAR	**Mina Array Bea**	**23.14**	**334**	P	**P**	**09 17 39.4**	**-0.4**
	comp=Z,1.0nm,0.9s,baz=147,slow=12,SNR=8.4						
	comp=Z,1.0nm,0.9s						
X48A	**Hartselle**	**23.29**	**42**	P	**P**	**09 17 42.8**	**+1.6**
X48A				IAmb	IAmb	09 17 46.1	
	comp=Z,14nm,1.2s						
RYN	**Ryan**	**23.40**	**334**	P	**P**	**09 17 41.7**	**-0.6**
HICK	**Hickman**	**23.44**	**35**	P	**P**	**09 17 43.3**	**+0.7**
CCM	**Cathedral Cave**	**23.59**	**29**	P	**P**	**09 17 44.7**	**+0.7**
152A	**Waverly Hall**	**23.81**	**48**	IAmb	IAmb	09 17 55.5	
	comp=Z,7.9nm,0.9s						
FVM	**French Village**	**23.93**	**31**	P	**P**	**09 17 47.8**	**+0.6**
YERR	**Yerington**	**24.00**	**333**	IAmb	IAmb	09 17 53.4	
	comp=Z,5.5nm,1.1s						
PNTR	**Pine Nut**	**24.24**	**333**	P	**P**	**09 17 51.4**	**+1.0**
PNTR				IAmb	IAmb	09 17 56.0	
	comp=Z,5.5nm,1.0s						
VCNR	**Virginia City**	**24.43**	**333**	IAmb	IAmb	09 18 05.5	
	comp=Z,5.5nm,1.1s						
BMN	**Battle Mountai**	**24.46**	**338**	P	**P**	**09 17 51.7**	**-0.6**
BMN				IAmb	IAmb	09 17 58.3	
	comp=Z,7.2nm,1.1s						
MPK	**Martis Peak**	**24.60**	**332**	IAmb	IAmb	09 18 00.1	
	comp=Z,11nm,1.1s						
PAHR	**Pah Rah Range**	**24.66**	**334**	IAmb	IAmb	09 18 02.5	
	comp=Z,8.3nm,1.2s						
W50A	**Signal Mountai**	**24.87**	**43**	P	**P**	**09 17 57.7**	**+1.8**
W50A				IAmb	IAmb	09 17 59.2	
	comp=Z,9.7nm,1.0s						
PDAR	**Pinedale Array**	**24.88**	**353**	P	**P**	**09 17 55.8**	**-0.3**
	comp=Z,0.7nm,0.8s,baz=156,slow=7.5,SNR=6.8						
	comp=Z,0.7nm,0.8s						
PDAR	**Pinedale Array**	**24.88**	**353**	P	**P**	**09 17 56.9**	**+0.7**
REDW	**Red Top Meadow**	**25.63**	**351**	IAmb	IAmb	09 18 10.4	
	comp=Z,9.1nm,1.2s						
SNOW	**Snow King Moun**	**25.72**	**351**	IAmb	IAmb	09 18 11.4	
	comp=Z,9.3nm,1.1s						
TPAW	**Teton Pass**	**25.77**	**351**	IAmb	IAmb	09 18 15.4	
	comp=Z,7.0nm,1.1s						
LOHW	**Long Hollow**	**25.84**	**352**	IAmb	IAmb	09 18 08.3	
	comp=Z,8.5nm,1.2s						
MOOW	**Moose Ponds**	**26.00**	**352**	IAmb	IAmb	09 18 18.1	
	comp=Z,5.3nm,1.1s						
TKL	**Tuckaleechee C**	**26.14**	**43**	LR	LR	09 29 18.2	
	comp=Z,115nm,20.2s,baz=236,slow=38						
BG3	**Lake Jocassee**	**26.32**	**46**	P	**P**	**09 18 12.1**	**+3.0**
YBH	**Yreka Blue Hor**	**27.77**	**332**	LR	LR	09 28 48.0	
	comp=Z,199nm,18.9s,baz=146,slow=35						
BOZ	**Bozeman (W)**	**27.93**	**351**	IAmb	IAmb	09 18 38.8	
	comp=Z,4.4nm,1.4s						
NEW	**Newport**	**31.57**	**345**	LR	LR	09 30 33.7	
	comp=Z,107nm,19.4s,baz=34,slow=34						
ULM	**Lac du Bonnet**	**33.08**	**12**	LR	LR	09 33 20.8	
	comp=Z,255nm,20.2s,baz=268,slow=38						
SADO	**Sadowa**	**34.66**	**34**	LR	LR	09 33 39.8	
	comp=Z,124nm,21.9s,baz=238,slow=36						
ATAH	**Atahualpa**	**36.73**	**131**	LR	LR	09 31 20.2	
	comp=Z,264nm,21.2s,baz=328,slow=31						
NNA	**Nana**	**41.20**	**134**	LR	LR	09 34 06.1	
	comp=Z,127nm,18.4s,baz=328,slow=32						
DLBC	**Dease Lake**	**44.15**	**342**	LR	LR	09 38 55.9	
	comp=Z,159nm,18.9s,baz=136,slow=36						
YKA	**Yellowknife Ar**	**44.86**	**354**	P	**P**	**09 20 48.0**	**+0.9**
	comp=Z,0.6nm,0.9s,baz=166,slow=8.2,SNR=3.0						
	comp=Z,0.6nm,0.9s						
RPN	**Rapa Nui**	**45.03**	**185**	LR	LR	09 34 57.2	
	comp=Z,96nm,20.7s,baz=30,slow=30						
SCHQ	**Schefferville**	**47.16**	**30**	LR	LR	09 41 41.8	
	comp=Z,134nm,18.4s,baz=98,slow=37						
LPAZ	**La Paz**	**50.27**	**131**	P	**P**	**09 21 29.5**	**-1.0**
	comp=Z,0.9nm,0.8s,baz=324,slow=8.5,SNR=4.4						
LPAZ				LR	LR	09 40 21.7	
	comp=Z,114nm,18.8s,baz=263,slow=33						
	comp=Z,0.9nm,0.8s						
N25K	**Chitina, Valde**	**51.40**	**337**	P	**P**	**09 21 36.1**	**-1.7**
FRB	**Frobisher Bay**	**52.19**	**20**	LR	LR	09 44 30.9	
	comp=Z,200nm,19.6s,baz=215,slow=37						
INK	**Inuvik**	**53.25**	**347**	P	**P**	**09 21 49.9**	**-1.4**
	comp=Z,2.2nm,0.9s,baz=179,slow=15,SNR=2.6						
	comp=Z,2.2nm,0.9s						
MDP	**Montagnes des**	**53.30**	**97**	LR	LR	09 45 22.3	
	comp=Z,66nm,19.4s,baz=9.0,slow=37						
LVC	**Limon Verde**	**54.05**	**137**	LR	LR	09 40 07.2	
	comp=Z,68nm,21.1s,baz=314,slow=31						
ILAR	**Eielson Array**	**54.23**	**340**	P	**P**	**09 21 57.0**	**-1.5**
	comp=Z,2.2nm,1.1s,baz=142,slow=4.6,SNR=7.9						
	comp=Z,2.2nm,1.1s						
ILAR	**Eielson Array**	**54.23**	**340**	P	**P**	**09 21 58.1**	**-0.5**
SIV	**San Ignacio**	**55.41**	**125**	LR	LR	09 43 26.5	
	comp=Z,114nm,18.2s,baz=306,slow=34						
PPT	**Papeete**	**55.85**	**233**	LR	LR	09 39 01.6	
	comp=Z,72nm,19.0s,baz=6.0,slow=29						
RES	**Resolute Bay**	**56.97**	**3**	LR	LR	09 47 45.0	
	comp=Z,128nm,20.5s,baz=14,slow=37						
H03N2	**Juan Fernandez**	**57.18**	**153**	T	T	10 24 08.1	
	baz=331,slow=77,SNR=19						
H03N1	**Juan Fernandez**	**57.19**	**153**	T	T	10 24 08.7	
	baz=331,slow=77,SNR=24						
H03N3	**Juan Fernandez**	**57.20**	**153**	T	T	10 24 08.7	
	baz=331,slow=77,SNR=21						
SFJD	**Kangerlussuaq**	**60.18**	**22**	LR	LR	09 46 51.3	
	comp=Z,76nm,19.8s,baz=262,slow=34						
RAR	**Rarotonga**	**65.83**	**236**	LR	LR	09 43 20.8	
	comp=Z,69nm,20.2s,baz=16,slow=28						
SHEM	**Shemya Is, Ala**	**69.99**	**320**	LR	LR	09 49 10.7	
	comp=Z,61nm,19.0s,baz=10,slow=31						
BORG	**Borgarnes**	**71.44**	**27**	LR	LR	09 53 45.5	
	comp=Z,86nm,20.3s,baz=310,slow=35						
JMIC	**Jan Mayen**	**75.41**	**20**	LR	LR	09 58 11.1	
	comp=Z,72nm,19.0s,baz=253,slow=36						
SPITS	**Spitsbergen Ar**	**78.63**	**10**	LR	LR	10 00 55.8	
	comp=Z,61nm,18.5s,baz=338,slow=37						
PETK	**Petropavlovsk-**	**79.69**	**323**	LR	LR	09 56 19.4	
	comp=Z,41nm,18.9s,baz=172,slow=33						
H11S1	**WAKE ISLAND Hy**	**82.30**	**287**	T	T	10 55 21.1	
	baz=77,slow=75,SNR=8.5						
H11S2	**WAKE ISLAND Hy**	**82.30**	**287**	T	T	10 55 22.5	
	baz=77,slow=75,SNR=8.0						
H11S3	**WAKE ISLAND Hy**	**82.32**	**287**	T	T	10 55 19.1	
	baz=77,slow=75,SNR=8.2						
ARCES	**ARCESS Array B**	**86.11**	**15**	LR	LR	10 06 00.3	
	comp=Z,64nm,18.9s,baz=24,slow=37						
NOA	**NORSAR Array B**	**86.58**	**26**	LR	LR	10 04 48.7	
	comp=Z,26nm,18.9s,baz=95,slow=36						
HFS	**Hagfors**	**88.11**	**26**	LR	LR	10 04 45.3	
	comp=Z,42nm,18.8s,baz=140,slow=36						
FINES	**FINESS Array B**	**91.97**	**21**	LR	LR	10 06 45.1	
	comp=Z,84nm,20.1s,baz=2.0,slow=35						
DAVOX	**Davos/Dischmat**	**93.34**	**38**	LR	LR	10 08 23.5	
	comp=Z,109nm,19.0s,baz=263,slow=36						
MJAR	**Matsushiro Arr**	**98.94**	**313**	LR	LR	10 01 01.2	
	comp=Z,42nm,20.9s,baz=308,slow=29						

RSNC 01 09:22:51.2±1.2**,3°79N×71°43W,h0**km±8km**,ML3.1,Mw3.5,**
Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTGC	**Puerto Gaitan,**	**0.81**	**300**	*e*P	Pg	09 23 05.0	-1.8
PTGC				*e*S	Sg	09 23 17.9	+0.5
PTGC				*i*		09 23 23.2	
	comp=Z,294nm,0.3s						
GUVC	**San Jose del G**	**1.72**	**224**	*e*P	Pn	09 23 20.8	-1.6
GUVC				*e*S	Sn	09 23 44.9	-0.2
CHIC	**Chingaza**	**2.44**	**290**	*e*P	Pn	09 23 31.8	-1.0
CHIC				*e*S	Sn	09 24 03.4	-0.2
CHIC				*i*		09 24 23.6	
	comp=Z,78nm,0.6s						
TAMC	**Tame, Arauca**	**2.66**	**352**	*e*P	Pn	09 23 32.2	-3.2
TAMC				*e*S	Sn	09 24 08.5	+0.2
RUSC	**La Rusia**	**2.66**	**322**	*e*P	Pn	09 23 34.8	-1.0
RUSC				*e*S	Sn	09 24 08.7	-0.4
RUSC				*i*		09 24 30.2	
	comp=Z,46nm,0.5s						
MACC	**Macarena, Meta**	**2.91**	**236**	*e*P	Pn	09 23 39.5	+0.6
MACC				*e*S	Sb	09 24 20.0	-0.4
ROSC	**El Rosal**	**3.07**	**290**	*e*P	Pg	09 23 50.5	+0.4
ROSC				*e*S	Sg	09 24 30.7	+0.8
SPBC	**San Pablo de B**	**3.22**	**305**	*e*P	Pb	09 23 50.4	+1.0
SPBC				*e*S	Sb	09 24 28.1	-1.1
SPBC				*i*		09 24 40.0	
	comp=Z,50nm,0.5s						
BARC	**Barichara**	**3.29**	**328**	*e*P	Pb	09 23 47.8	-2.8
BARC				*e*S	Sn	09 24 26.4	+2.2
BARC				*i*		09 24 42.6	
	comp=Z,78nm,0.4s						
PRAC	**Prado**	**3.45**	**269**	*e*P	Pn	09 23 46.3	0.0
PRAC				*e*S	Sb	09 24 34.0	-1.9
PRAC				*i*		09 24 57.5	
	comp=Z,51nm,0.5s						
PAMC	**Pamplona, Colo**	**3.75**	**340**	*e*P	Pb	09 23 58.2	-0.4
PAMC				*e*S	Sb	09 24 44.8	0.0
PAMC				*i*		09 24 53.0	
	comp=Z,77nm,0.4s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ORTC	**Ortega, Tolima**	**3.81**	**272**	*e*P	Pn	09 23 50.6	-0.7
ORTC				*e*S	Sg	09 24 51.3	-2.5
NORC	**Norcasia**	**3.86**	**297**	*e*P	Pb	09 24 00.9	+0.7
NORC				*i*		09 25 00.3	
	comp=Z,19nm,0.4s						
BRRC	**Barranca, Sant**	**4.00**	**326**	*e*P	Pn	09 23 51.4	-2.5
BRRC				*e*S	Sn	09 24 38.5	-3.1
ANIL	**Santa Ana**	**4.03**	**280**	*e*P	Pn	09 23 52.8	-1.7
ANIL				*e*S	Sg	09 24 58.4	-2.2
ANIL				*i*		09 25 08.8	
	comp=Z,86nm,0.4s						
PTBC	**PUERTO BERRIO,**	**4.07**	**312**	*e*P	Pn	09 23 52.0	-2.8
GARC	**Garzon, Huila**	**4.36**	**249**	*e*P	Pb	09 24 06.4	-2.5
GARC				*e*S	Sb	09 25 03.5	+1.4
MARP	**Paez Belalcaza**	**4.62**	**258**	*e*P	Pb	09 24 14.3	+1.0
MARP				*e*S	Sg	09 25 15.7	-4.0
MARP				*i*		09 25 26.8	
	comp=Z,14nm,0.3s						
FLOC	**Florencia**	**4.75**	**243**	*e*P	Pb	09 24 12.3	-3.2
FLOC				*e*S	Sb	09 25 17.4	+4.0
OCAC	**Ocana**	**4.81**	**337**	*e*P	Pn	09 24 01.1	-3.9
OCAC				*e*S	Sn	09 24 57.6	-3.9
YOTC	**Yotoco, Valle**	**4.91**	**272**	*e*P	Pn	09 24 04.0	-2.4
YOTC				*e*S	Sb	09 25 18.9	+1.0
YOTC				*i*		09 25 30.0	
	comp=Z,7.2nm,0.4s						
PCON	**Cinco Dias**	**5.17**	**254**	*e*P	Pb	09 24 17.4	-5.5
PCON				*e*S	Sb	09 25 29.3	+3.5
POPC	**Popayan, Colom**	**5.38**	**257**	*e*P	Pn	09 24 15.5	+2.4
POPC				*e*S	Sb	09 25 36.0	+4.3
POPC				*i*		09 25 50.4	
	comp=Z,7.2nm,0.6s						
CRJC	**Cerrejon, Guaj**	**7.33**	**349**	*e*P	Pn	09 24 36.6	-3.1
CRJC				*e*S	Sn	09 25 54.4	-9.3

*NOU **01** 09:30:12.0, 38°.92S×178°.92E, h0km, mb4.3/9, Off E. Coast of N. Island, N.Z.*
*WEL **01** 09:30:20.3±0.8, 39°S±3°×17°8E±°, h23km±5km, M3.8/11, ML4.1/11, MLv3.8/11, Error ellipse: s-maj=0.0km s-min=0.0km az=112.7*
ISC 01 09:30:15.7±1.8**, 38°.84S**±0°.03×**178°.63E**±0°.07**, h11**km±11km**, n121,** σ**1s.01**/134**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNGZ	**Carnagh Statio**	**0.48**	**317**	P	**Pn**	**09 30 28.4**	**-0.2**
PRGZ	**Paritu Road**	**0.59**	**261**	P	**Pn**	**09 30 30.6**	**+0.5**
MHGZ	**Mahia Peninsul**	**0.64**	**240**	P	**Pn**	**09 30 32.4**	**+1.6**
MHGZ				S	**Sb**	**09 30 40.2**	**+2.2**
RIGZ	**Rimuhau**	**0.69**	**281**	P	**Pn**	**09 30 31.3**	**-0.1**
RIGZ				S	**Sb**	**09 30 39.7**	**+0.4**
TKGZ	**Te Karaka**	**0.73**	**303**	P	**Pb**	**09 30 31.5**	**+1.1**
TKGZ				S	**Sg**	**09 30 39.8**	**+0.5**
KNZ	**Kokohu**	**0.77**	**256**	P	**Pn**	**09 30 33.0**	**+0.5**
PUZ	**Puketiti**	**0.82**	**339**	P	**Pn**	**09 30 33.5**	**+0.3**
PUZ				S	**Sb**	**09 30 43.2**	**+0.2**
TWGZ	**Tauwhareparae**	**0.83**	**322**	P	**Pn**	**09 30 33.4**	**0.0**
TWGZ				S	**Sb**	**09 30 44.0**	**+0.6**
MWZ	**Matawai**	**1.00**	**300**	P	**Pg**	**09 30 35.2**	**+0.3**
MWZ				S	**Sg**	**09 30 45.7**	**-2.2**
SNGZ	**Shannon Statio**	**1.01**	**273**	P	**Pg**	**09 30 35.7**	**+0.6**
SNGZ				S	**Sg**	**09 30 47.0**	**-1.2**
RAGZ	**Rawiri**	**1.01**	**289**	P	**Pg**	**09 30 35.7**	**+0.6**
RAGZ				S	**Sg**	**09 30 46.9**	**-1.3**
WMGZ	**Waiomatatini S**	**1.03**	**351**	P	**Pn**	**09 30 37.4**	**+1.4**
WMGZ				S	**Sn**	**09 30 50.7**	**+0.2**
PKGZ	**Pakihiroa**	**1.04**	**335**	P	**Pn**	**09 30 36.9**	**+0.6**
PKGZ				S	**Sg**	**09 30 49.4**	**+0.1**
RUGZ	**Raukumara Rang**	**1.15**	**319**	P	**Pb**	**09 30 37.5**	**-0.1**
RAHZ	**Arahi**	**1.21**	**266**	P	**Pn**	**09 30 38.9**	**+0.4**
HAZ	**Te Kaha**	**1.27**	**328**	P	**Pn**	**09 30 39.4**	**+0.1**
HAZ				S	**Sb**	**09 30 54.5**	**-1.4**
MXZ	**Matakaoa Point**	**1.30**	**349**	P	**Pg**	**09 30 41.1**	**+0.5**
MXZ				S	**Sb**	**09 30 56.7**	**-0.1**
RTZ	**Ruatahuna**	**1.31**	**279**	P	**Pn**	**09 30 39.9**	**-0.1**
RTZ				S	**Sb**	**09 30 54.4**	**-2.8**
URZ	**Urewera**	**1.32**	**295**	P	**Pb**	**09 30 41.0**	**+0.5**
URZ				S	**Sb**	**09 30 55.9**	**-1.6**
URZ	**Urewera**	**1.32**	**295**	P	**Pn**	**09 30 40.0**	**-0.1**
ARHZ	**Aropaoanui**	**1.34**	**251**	P	**Pb**	**09 30 41.7**	**+0.9**
MTHZ	**Maungataniwha**	**1.40**	**269**	P	**Pn**	**09 30 41.2**	**0.0**
NMHZ	**Naumai**	**1.44**	**259**	P	**Pn**	**09 30 42.4**	**+0.6**
CKHZ	**Cape Kidnapper**	**1.46**	**235**	P	**Pb**	**09 30 43.1**	**+0.2**
MUGZ	**Murupara**	**1.50**	**283**	P	**Pn**	**09 30 42.9**	**+0.3**
MCHZ	**McNeill Hill**	**1.62**	**247**	P	**Pn**	**09 30 45.2**	**+0.9**
WHRZ	**Whale Island**	**1.63**	**306**	P	**Pn**	**09 30 45.0**	**+0.6**
EDRZ	**Edgecumbe**	**1.65**	**296**	P	**Pn**	**09 30 45.3**	**+0.5**
KAHZ	**Kahuranaki**	**1.66**	**234**	P	**Pn**	**09 30 46.0**	**+1.2**
BKZ	**Black Stump Fm**	**1.70**	**258**	P	**Pn**	**09 30 45.7**	**+0.3**
BKZ	**Black Stump Fm**	**1.70**	**258**	P	**Pn**	**09 30 46.0**	**+0.7**
MRHZ	**Matea Rd**	**1.73**	**269**	P	**Pn**	**09 30 46.8**	**+1.1**
RRRZ	**Republican Roa**	**1.73**	**286**	P	**Pn**	**09 30 46.5**	**+0.8**
WIZ	**White Island**	**1.73**	**319**	P	**Pn**	**09 30 45.6**	**-0.1**
MARZ	**Manawahe**	**1.75**	**298**	P	**Pn**	**09 30 46.6**	**+0.5**
TARZ	**Mount Tarawera**	**1.77**	**289**	P	**Pn**	**09 30 47.3**	**+0.9**
PRRZ	**Plateau Road**	**1.78**	**280**	P	**Pn**	**09 30 46.4**	**0.0**
ALRZ	**Allen Road**	**1.81**	**278**	P	**Pn**	**09 30 47.2**	**+0.3**
KWHZ	**Kaweka Forest**	**1.81**	**250**	P	**Pn**	**09 30 47.5**	**+0.6**
HLRZ	**Highlands Stat**	**1.88**	**287**	P	**Pn**	**09 30 48.6**	**+0.8**
HRRZ	**Handcock Road**	**1.89**	**283**	P	**Pn**	**09 30 48.7**	**+0.8**
OMRZ	**Omania**	**1.92**	**292**	P	**Pn**	**09 30 48.5**	**+0.2**
KRHZ	**Kereru**	**1.93**	**245**	P	**Pn**	**09 30 48.9**	**+0.4**
HSRZ	**Hossack Road**	**1.94**	**285**	P	**Pn**	**09 30 49.5**	**+0.9**
LIRZ	**Lichensteins R**	**1.95**	**295**	P	**Pn**	**09 30 49.0**	**+0.3**
WPRZ	**Whakapapatarin**	**1.96**	**279**	P	**Pb**	**09 30 50.9**	**-0.5**
GRRZ	**Galatos Road**	**2.03**	**283**	P	**Pn**	**09 30 48.7**	**-1.3**
KARZ	**Kaharoa**	**2.04**	**293**	P	**Pn**	**09 30 49.9**	**-0.1**
NGRZ	**Ngongotaha**	**2.05**	**290**	P	**Pn**	**09 30 50.9**	**+0.7**
WPHZ	**Waipukurau**	**2.09**	**233**	P	**Pn**	**09 30 51.3**	**+0.6**
WHTZ	**Whakaora**	**2.10**	**274**	P	**Pb**	**09 30 55.1**	**+1.3**
BHHZ	**Black Hill Sta**	**2.10**	**251**	P	**Pn**	**09 30 51.3**	**+0.4**
PRHZ	**Porangahau**	**2.10**	**227**	P	**Pn**	**09 30 51.2**	**+0.4**
RITZ	**Rihia Road**	**2.17**	**265**	P	**Pn**	**09 30 53.1**	**+1.3**
PNHZ	**Pukenui**	**2.17**	**240**	P	**Pn**	**09 30 52.1**	**+0.3**
TGRZ	**Tauranga**	**2.17**	**300**	P	**Pn**	**09 30 51.6**	**-0.1**
KUTZ	**Kaahu Road**	**2.22**	**278**	P	**Pn**	**09 30 53.0**	**+0.5**
RATZ	**Rangitukua**	**2.23**	**268**	P	**Pn**	**09 30 54.5**	**+1.9**
ETVZ	**East Tongariro**	**2.29**	**262**	P	**Pn**	**09 30 54.6**	**+1.0**
KATZ	**Kakaramea**	**2.29**	**266**	P	**Pn**	**09 30 54.6**	**+1.0**
TMVZ	**Te Maari**	**2.30**	**262**	P	**Pn**	**09 30 54.4**	**+0.8**
MOVZ	**Moawhango**	**2.31**	**255**	P	**Pn**	**09 30 54.8**	**+1.0**
NTVZ	**North Tongarir**	**2.32**	**263**	P	**Pn**	**09 30 54.9**	**+0.9**
ANWZ	**Angora Road**	**2.32**	**225**	P	**Pn**	**09 30 54.2**	**+0.4**
OTVZ	**Oturere**	**2.33**	**261**	P	**Pn**	**09 30 54.9**	**+0.8**
KMRZ	**Kaimai**	**2.33**	**294**	P	**Pn**	**09 30 53.9**	**-0.2**
KRVZ	**Karewarewa**	**2.34**	**263**	P	**Pn**	**09 30 55.1**	**+0.8**
SNVZ	**South Ngauruho**	**2.35**	**261**	P	**Pn**	**09 30 55.3**	**+0.8**
TUVZ	**Tukino**	**2.35**	**259**	P	**Pn**	**09 30 55.7**	**+1.2**
NNVZ	**North Ngauruho**	**2.37**	**262**	P	**Pn**	**09 30 55.5**	**+0.9**
NGZ	**Ngauruhoe**	**2.38**	**261**	P	**Pn**	**09 30 55.7**	**+0.8**
WTVZ	**West Tongariro**	**2.38**	**262**	P	**Pn**	**09 30 55.7**	**+0.8**
DVHZ	**Dannevirke**	**2.40**	**232**	P	**Pn**	**09 30 55.0**	**+0.1**
TSZ	**Takapari Road**	**2.40**	**239**	P	**Pn**	**09 30 54.9**	**-0.1**
WHVZ	**Whangaehu Hut**	**2.41**	**258**	P	**Pn**	**09 30 56.3**	**+1.1**
WNVZ	**Wahianoa**	**2.41**	**257**	P	**Pn**	**09 30 56.0**	**+0.8**
FWVZ	**Far West T-bar**	**2.43**	**259**	P	**Pn**	**09 30 56.4**	**+0.9**
TRVZ	**Turoa**	**2.44**	**258**	P	**Pn**	**09 30 56.7**	**+1.0**
TLZ	**Tolley Road**	**2.47**	**281**	P	**Pn**	**09 30 56.8**	**+0.7**
TWVZ	**Taurewa**	**2.50**	**264**	P	**Pn**	**09 30 57.2**	**+0.8**
MTVZ	**Mangateitei**	**2.52**	**256**	P	**Pn**	**09 30 57.5**	**+0.9**
PKVZ	**Pokaka**	**2.59**	**259**	P	**Pn**	**09 30 58.9**	**+1.2**
BFZ	**Birch Farm**	**2.60**	**224**	P	**Pn**	**09 30 57.4**	**-0.3**
BFZ	**Birch Farm**	**2.60**	**224**	P	**Pn**	**09 30 57.6**	**-0.1**
TOZ	**Tahuroa Road**	**2.70**	**293**	P	**Pn**	**09 30 58.7**	**-0.3**
HIZ	**Hauiti**	**2.97**	**275**	P	**Pn**	**09 31 04.2**	**+1.4**
HIZ	**Hauiti**	**2.97**	**275**	P	**Pn**	**09 31 03.8**	**+1.0**
WAZ	**Wanganui**	**2.97**	**251**	P	**Pn**	**09 31 04.6**	**+1.8**
MRZ	**Mangatainoka R**	**2.97**	**231**	P	**Pn**	**09 31 02.6**	**-0.2**
VRZ	**Vera Road**	**3.03**	**263**	P	**Pn**	**09 31 04.5**	**+0.9**
KUZ	**Kuaotunu**	**3.11**	**311**	P	**Pn**	**09 31 03.7**	**-1.0**
MKAZ	**Moumakai**	**3.24**	**301**	P	**Pn**	**09 31 06.4**	**-0.1**
OGWZ	**Otaki Gorge**	**3.32**	**232**	P	**Pn**	**09 31 07.1**	**-0.4**
LREZ	**Lake Rotokare**	**3.34**	**258**	P	**Pn**	**09 31 09.6**	**+1.7**
WIAZ	**Waiheke Island**	**3.44**	**305**	P	**Pn**	**09 31 09.2**	**0.0**
DREZ	**Durham Road**	**3.47**	**263**	P	**Pn**	**09 31 11.6**	**+2.0**
ETAZ	**East Tamaki Re**	**3.48**	**302**	P	**Pn**	**09 31 10.3**	**+0.6**
KIW	**Kapiti Island**	**3.50**	**234**	P	**Pn**	**09 31 09.6**	**-0.6**
PREZ	**Palmer Road**	**3.51**	**260**	P	**Pn**	**09 31 12.3**	**+2.0**
CAW	**Cannon Point**	**3.55**	**229**	P	**Pn**	**09 31 10.0**	**-0.8**
NEZ	**North Egmont**	**3.56**	**262**	P	**Pn**	**09 31 13.0**	**+2.0**
MBAZ	**Motutapu North**	**3.60**	**304**	P	**Pn**	**09 31 12.2**	**+0.7**
GRZ	**Great Barrier**	**3.61**	**315**	P	**Pn**	**09 31 11.1**	**-0.5**
AWAZ	**Awhitu Peninsu**	**3.61**	**298**	P	**Pn**	**09 31 12.1**	**+0.5**
KHEZ	**Kahui Hut**	**3.62**	**261**	P	**Pn**	**09 31 14.2**	**+2.4**
PKE	**Pukeiti**	**3.63**	**263**	P	**Pn**	**09 31 13.5**	**+1.6**
NBEZ	**Newall Road No**	**3.73**	**262**	P	**Pn**	**09 31 15.6**	**+2.3**
NMEZ	**Namu Road**	**3.74**	**260**	P	**Pn**	**09 31 15.2**	**+1.8**
SNZO	**South Karori**	**3.89**	**229**	P	**Pn**	**09 31 14.6**	**-0.9**
TCW	**Tory Channel**	**4.10**	**233**	P	**Pn**	**09 31 17.0**	**-1.3**
DUWZ	**D'Urville Isla**	**4.12**	**240**	P	**Pn**	**09 31 17.7**	**-1.0**
WCZ	**Waipu Caves**	**4.47**	**309**	P	**Pn**	**09 31 23.5**	**+0.1**
NNZ	**Nelson**	**4.68**	**238**	P	**Pn**	**09 31 25.1**	**-1.1**
QRZ	**Quartz Range**	**5.10**	**245**	P	**Pn**	**09 31 30.3**	**-1.7**
MRNZ	**Matariki Terra**	**5.18**	**239**	P	**Pn**	**09 31 31.7**	**-1.4**
KHZ	**Kahutara**	**5.27**	**226**	P	**Pn**	**09 31 32.4**	**-2.0**
CTZ	**Chatham Island**	**6.06**	**145**	P	Pn	09 31 50.7	+5.5
WVZ	**Waitaha Valley**	**7.32**	**232**	P	**Pn**	**09 32 01.9**	**-0.6**
RPZ	**Rata Peaks**	**7.50**	**227**	P	**Pn**	**09 32 04.6**	**-0.4**
GCSZ	**Gaunt Creek Bo**	**7.70**	**232**	P	**Pn**	**09 32 06.8**	**-1.0**
ODZ	**Otahua Downs**	**8.59**	**221**	P	**Pn**	**09 32 18.4**	**-1.6**

*IDC **01** 09:57:27.9±19.0, 17°.12N×105°.13W, h0km, mb3.3/2, mbtmp3.3/3, ML3.1/1, MS3.4/6, Error ellipse: s-maj=496.1km s-min=96.1km az=121.0*
*MEX **01** 09:57:39.0±0.9, 18°.06N×105°.83W, h13km±91km, MD3.6*
ISC 01 09:57:35.8±2.8**, 18°.1N**±0°.3×**105°.6W**±0°.1**, h0**km±23km**, n17,** σ**0s.89**/17**, MS3.4**/3**, Off coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CJM	**Chamela**	**1.50**	**20**	*e*P	**Pn**	**09 58 03.6**	**-0.3**
CJM				*i* S	**Sn**	**09 58 23.4**	**-0.7**
CDAR	**Ciudad de Arme**	**1.73**	**60**	*e*P	**Pg**	**09 58 09.2**	**+0.3**
CDAR				*i* S	**Sb**	**09 58 30.7**	**+0.1**
R15V		**1.87**	**55**	*e*P	**Pb**	**09 58 10.5**	**-0.4**
R15V				*i* S	**Sb**	**09 58 34.2**	**-0.6**
COIG	**Colima**	**2.11**	**59**	*e*P	**Pb**	**09 58 14.2**	**-0.7**
COIG				*i* S	**Sb**	**09 58 41.7**	**0.0**
MNGA	**Volcan de Coli**	**2.32**	**54**	*e*P	**Pb**	**09 58 18.2**	**-0.4**
MNGA				*e*S	**Sb**	**09 58 48.0**	**+0.1**
EZ5V		**2.34**	**54**	*e*P	**Pb**	**09 58 18.2**	**-0.8**
INCO	**Volcan de Coli**	**2.37**	**53**	*e*P	**Pb**	**09 58 18.9**	**-0.7**
INCO				*e*S	**Sb**	**09 58 51.1**	**+1.7**
JUBC	**Volcan de Coli**	**2.39**	**53**	*e*P	**Pb**	**09 58 18.9**	**-0.9**
JUBC				*e*S	**Sb**	**09 58 51.6**	**+1.7**
H06E1	**SOCORRO T-PHAS**	**5.10**	**279**	T	T	10 03 44.7	
LPIG	**La Paz**	**7.42**	**324**	LR	LR	10 01 27.4	
	comp=Z,222nm,18.2s,baz=193,slow=28						
TXAR	**Lajitas Array**	**11.33**	**9**	Pn	Pn	10 00 25.4	+6.4
	baz=184,slow=14,SNR=6.9						
TXAR				LR	LR	10 05 06.5	
	comp=Z,138nm,20.1s,baz=184,slow=38						
	0.5nm,0.8s						
PFO	**Pinyon Flats O**	**18.27**	**330**	LR	LR	10 07 18.8	
	comp=Z,114nm,18.4s,baz=144,slow=31						
NVAR	**Mina Array Bea**	**23.10**	**334**	LR	LR	10 10 17.8	
	comp=Z,77nm,19.9s,baz=175,slow=32						
PDAR	**Pinedale Array**	**24.83**	**353**	P	**P**	**10 03 00.9**	**+1.0**
	0.2nm,0.5s,baz=175,slow=11,SNR=2.5						
	0.2nm,0.5s						
YBH	**Yreka Blue Hor**	**27.74**	**332**	LR	LR	10 14 12.5	
	comp=Z,90nm,18.2s,baz=152,slow=35						
ULM	**Lac du Bonnet**	**33.02**	**11**	LR	LR	10 18 27.0	
	comp=Z,99nm,21.2s,baz=356,slow=37						
ILAR	**Eielson Array**	**54.19**	**340**	P	**P**	**10 07 02.7**	**0.0**
	0.6nm,1.0s,baz=143,slow=5.4,SNR=4.3						
	0.6nm,1.0s						

*IDC **01** 09:58:58.6±9.7, 17°.99N×105°.87W, h0km, mb3.2/3, mbtmp3.2/4, ML3.1/1, Error ellipse: s-maj=173.4km s-min=88.5km az=135.0*
*MEX **01** 09:59:01.2±0.6, 18°.14N×105°.70W, h10km, MD3.8*
ISC 01 09:59:02.1±1.9**, 18°.3N**±0°.1×**105°.50W**±0°.08**, h10**km**, n13,** σ**1s.30**/20**, mb3.1**/3**, Off coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CJM	**Chamela**	**1.30**	**19**	*e*P	**Pn**	**09 59 24.6**	**-1.8**
CJM				*e*S	**Sb**	**09 59 42.4**	**-1.1**
CDAR	**Ciudad de Arme**	**1.56**	**64**	*e*P	**Pn**	**09 59 28.9**	**-1.1**
CDAR				*i* S	**Sn**	**09 59 50.0**	**-0.2**
R15V		**1.69**	**58**	*e*P	**Pn**	**09 59 30.6**	**-1.1**
R15V				*i* S	**Sn**	**09 59 53.4**	**-0.2**
COIG	**Colima**	**1.94**	**62**	*e*P	**Pn**	**09 59 34.6**	**-0.6**
COIG				*e*S	**Sn**	**09 59 59.9**	**+0.2**
MNGA	**Volcan de Coli**	**2.14**	**56**	*e*P	**Pn**	**09 59 38.2**	**0.0**
MNGA				*i* S	**Sn**	**10 00 05.9**	**+1.0**
EZ5V		**2.16**	**56**	*e*P	**Pn**	**09 59 38.9**	**+0.4**
EZ5V				*i* S	**Sb**	**10 00 08.2**	**-0.3**
INCO	**Volcan de Coli**	**2.19**	**55**	*e*P	**Pn**	**09 59 37.9**	**-1.0**
INCO				*i* S	**Sn**	**10 00 06.4**	**+0.2**
JUBC	**Volcan de Coli**	**2.21**	**55**	*e*P	**Pn**	**09 59 39.0**	**-0.1**
JUBC				*i* S	**Sb**	**10 00 08.1**	**-1.8**
H06E1	**SOCORRO T-PHAS**	**5.18**	**277**	T	T	10 05 03.7	
	SNR=36						
TXAR	**Lajitas Array**	**11.15**	**8**	Pn	**Pn**	**10 01 45.4**	**+3.7**
	baz=186,slow=15,SNR=3.5						
	0.5nm,0.9s						
NVAR	**Mina Array Bea**	**22.99**	**334**	P	**P**	**10 04 06.2**	**-1.0**
	0.2nm,0.7s,baz=159,slow=8.2,SNR=2.1						
	0.2nm,0.7s						
PDAR	**Pinedale Array**	**24.67**	**353**	P	**P**	**10 04 23.8**	**+0.5**
	0.4nm,0.8s,baz=148,slow=7.1,SNR=2.1						
	0.4nm,0.8s						
ILAR	**Eielson Array**	**54.06**	**340**	P	**P**	**10 08 25.2**	**-1.3**
	0.9nm,1.0s,baz=152,slow=7.0,SNR=4.7						
	0.9nm,1.0s						

*IDC **01** 10:05:15.3±0.5, 0°.35N×80°.43W, h0km, mb4.3/19, mbtmp4.3/24, ML3.4/5, MS4.4/51, Error ellipse: s-maj=21.4km s-min=11.4km az=58.0*
*IGQ **01** 10:05:15±0.5, 0°N±2°×8°1W±°, h14km*
*GCMT **01** 10:05:16.8±0.2, 0°.10N±0°.02×80°.53W±0°.01, h12km, MW5.1/113, Moment Tensor Solution. s59,c69; s113,c176; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-5.28±.08; $M_{\theta\theta}$1.34±.07; $M_{\phi\phi}$3.94±.09; $M_{r\theta}$0.37±.32; $M_{\theta\phi}$-2.17±.07; $M_{\phi r}$-1.64±.28; Best double couple: $M_0$5.48800×10^{16} NP1:ϕ_s146.00000°, δ37.00000°, λ-98.00000°. NP2:ϕ_s335.00000°, δ54.00000°, λ-84.00000°. Principal axes: T 5.4130, Plg9.0000°, Azm61.0000°; N 0.1500, Plg5.0000°, Azm152.0000°; P -5.5630, Plg80.0000°, Azm270.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **01** 10:05:18.8±2.1, 0°.22N±0°.05×80°.41W±0°.06, h23km±2km, mb4.9/401 Error ellipse: s-maj=9.3km s-min=7.6km az=92.0*
*VAO **01** 10:05:20.6±0.5, 0°.21N×80°.38W, h27km, mb4.7*
*RSNC **01** 10:05:24.5±55.0, 0°.40N×80°.67W, h3km, ML4.0*
ISC 01 10:05:15.9±1.2**, 0°.29N**±0°.02×**80°.55W**±0°.03**, h7**km±7km**, n813,** σ**1s.25**/620**, mb4.9**/207**, MS4.4**/54**, 1C-7D, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMOM	**Mompiche**	**0.54**	**69**	P	**Pb**	**10 05 28.0**	**+0.2**
AMOM				S	**Sb**	**10 05 37.0**	**+1.2**
APED	**Ecuador-Perden**	**0.54**	**114**	P	**Pg**	**10 05 27.0**	**+0.6**
APED				S	**Sb**	**10 05 37.0**	**+1.2**
JAMA	**Jama**	**0.65**	**148**	P	**Pg**	**10 05 29.0**	**+0.5**
JAMA				S	**Sb**	**10 05 40.0**	**+1.0**
CABP	**Cabo Pasado**	**0.69**	**170**	P	**Pb**	**10 05 30.0**	**-0.3**
CABP				S	**Sn**	**10 05 43.0**	**-0.1**
CHIB	**CHIBUNGA**	**0.83**	**118**	P	**Pg**	**10 05 33.0**	**+1.0**
CHIB				S	**Sn**	**10 05 48.0**	**+1.3**
ASAM	**Ecuador-Same-C**	**0.84**	**49**	P	**Pb**	**10 05 32.0**	**-0.8**
ASAM				S	**Sn**	**10 05 46.0**	**-0.8**
MAG1	**Magdalena**	**0.86**	**115**	P	**Pb**	**10 05 33.0**	**-0.2**
AATC	**Ecuador-Atacam**	**0.89**	**51**	P	**Pb**	**10 05 32.0**	**-1.7**
AATC				S	**Sn**	**10 05 47.0**	**-1.0**
ATON	**Ecuador-Tonsup**	**0.94**	**51**	P	**Pg**	**10 05 34.0**	**-0.1**
FLF1	**Flavio Alfaro-**	**0.96**	**132**	P	**Pb**	**10 05 35.0**	**+0.1**
FLF1				S	**Sn**	**10 05 53.0**	**+3.2**
ABH2	**Ecuador-Univer**	**0.96**	**171**	P	**Pb**	**10 05 34.0**	**-0.9**
LGCB	**Laguna Cube**	**0.98**	**85**	P	**Pb**	**10 05 34.0**	**-1.3**
AMA1	**Acelerografo,**	**1.04**	**52**	P	**Pg**	**10 05 36.0**	**0.0**
AMA1				S	**Sn**	**10 05 54.0**	**+2.1**
AV21	**Acelerografo,**	**1.07**	**70**	P	**Pb**	**10 05 36.0**	**-0.8**
AV18	**Acelerografo,**	**1.07**	**89**	P	**Pg**	**10 05 37.0**	**+0.4**
AV18				S	**Sn**	**10 05 55.0**	**+2.4**
AMNT	**Manta-Manabi**	**1.24**	**189**	P	**Pb**	**10 05 39.0**	**-0.7**
BV15	**Puerto Quito-O**	**1.33**	**96**	P	**Pn**	**10 05 40.0**	**-1.0**
BV15				S	**Sn**	**10 05 59.0**	**-0.1**
ASDO	**Santo Domingo**	**1.53**	**111**	P	**Pn**	**10 05 43.0**	**-0.8**
APR2	**Miler**	**1.60**	**98**	P	**Pn**	**10 05 44.0**	**-0.7**
ISPT	**Isla de la Pla**	**1.63**	**199**	P	**Pn**	**10 05 44.0**	**-1.1**
PPLP	**Puerto Lpez**	**1.84**	**187**	P	**Pn**	**10 05 47.0**	**-1.0**
PPLP	**Puerto Lpez**	**1.84**	**187**	P	**Pb**	**10 05 48.0**	**-2.0**
APR1	**Acelerografo,**	**1.97**	**100**	P	**Pn**	**10 05 50.0**	**-0.1**
PINO	**Pino**	**1.99**	**103**	P	**Pn**	**10 05 50.0**	**-0.6**
TERV	**Terraza Guagua**	**2.00**	**103**	P	**Pn**	**10 05 50.0**	**-0.7**
GGPC	**Guagua Pichinc**	**2.01**	**104**	P	**Pn**	**10 05 50.0**	**-0.8**
YANA	**Yana**	**2.02**	**102**	P	**Pn**	**10 05 50.0**	**-0.9**
ILLI	**Illinizas Sur**	**2.08**	**119**	P	**Pn**	**10 05 51.0**	**-0.7**
ROQE	**Tereno de la P**	**2.08**	**104**	P	**Pn**	**10 05 51.0**	**-0.7**
DELA	**Administracion**	**2.10**	**101**	P	**Pn**	**10 05 52.0**	**+0.2**
VIFL	**Administracin**	**2.10**	**105**	P	**Pb**	**10 05 53.0**	**-1.5**
SANF	**Convento San F**	**2.10**	**104**	P	**Pn**	**10 05 52.0**	**+0.1**
OTAV	**Otavalo**	**2.10**	**92**	Pn	**Pn**	**10 05 51.6**	**-0.3**
OTAV	**Otavalo**	**2.10**	**92**	*e*P	**Pn**	**10 05 51.8**	**-0.2**
OTAV	**Otavalo**	**2.10**	**92**	P	**Pn**	**10 05 51.0**	**-1.0**
OTAV	**Otavalo**	**2.10**	**92**	*e*P	**Pn**	**10 05 51.5**	**-0.4**
CIRC	**Crculo Milita**	**2.12**	**103**	P	**Pn**	**10 05 53.0**	**+0.8**
EPNL	**EPN Laboratori**	**2.12**	**104**	P	**Pn**	**10 05 53.0**	**+0.9**
JBPC	**Jardin Botanic**	**2.12**	**103**	P	**Pn**	**10 05 53.0**	**+0.9**
PAST	**Pastocalle**	**2.15**	**117**	P	**Pn**	**10 05 52.0**	**-0.6**
CUSE	**Cuicocha Este**	**2.15**	**90**	P	**Pn**	**10 05 53.0**	**+0.3**
CUIC	**Cuicocha-Domo**	**2.19**	**90**	P	**Pn**	**10 05 53.0**	**-0.2**
CUSW	**Cuicocha Oeste**	**2.20**	**90**	P	**Pn**	**10 05 53.0**	**-0.3**
AV11	**Acelerografo,**	**2.21**	**99**	P	**Pb**	**10 05 55.0**	**-1.4**
SRAM	**San Ramn-Vol**	**2.24**	**118**	P	**Pn**	**10 05 54.0**	**+0.2**
LITE1	**Lita**	**2.25**	**77**	P	**Pn**	**10 05 54.0**	**+0.3**
ALIT	**Ecuador-Imbabu**	**2.25**	**77**	P	**Pn**	**10 05 54.0**	**+0.3**
ALIT				S	**Sn**	**10 06 21.0**	**-0.8**
SUCR	**Mariscal Sucre**	**2.26**	**114**	P	**Pn**	**10 05 54.0**	**-0.1**
CAMI	**Rancho Maria**	**2.26**	**115**	P	**Pn**	**10 05 55.0**	**+0.8**
BNAS	**Cotopaxi Volca**	**2.28**	**115**	P	**Pn**	**10 05 55.0**	**+0.5**
NAS2	**Nasa**	**2.28**	**114**	P	**Pb**	**10 05 56.0**	**-1.8**
SLOR	**San Lorenzo -**	**2.29**	**116**	P	**Pn**	**10 05 55.0**	**+0.4**
URCU	**Urcuqui**	**2.30**	**86**	P	**Pn**	**10 05 54.0**	**-0.7**
BREF	**Cotopaxi Volca**	**2.32**	**114**	P	**Pn**	**10 05 56.0**	**+0.9**
BMOR	**Cotopaxi Volca**	**2.33**	**116**	P	**Pn**	**10 05 56.0**	**+0.8**
BRRN	**Barrancas-Volc**	**2.33**	**117**	P	**Pn**	**10 05 56.0**	**+0.8**
BVC2	**Cotopaxi Volca**	**2.34**	**114**	P	**Pn**	**10 05 56.0**	**+0.6**
VC1	**Cotopaxi 1**	**2.34**	**113**	P	**Pn**	**10 05 56.0**	**+0.7**
BTAM	**Cotopaxi Volca**	**2.36**	**114**	P	**Pn**	**10 05 56.0**	**+0.4**
TUMC	**Tumaco**	**2.37**	**50**		**Pn**	**10 05 54.1**	**-1.2**
TUMC	**Tumaco**	**2.37**	**50**	*e*P	**Pn**	**10 05 54.8**	**-0.5**
TUMC	**Tumaco**	**2.37**	**50**	P	**Pn**	**10 05 55.0**	**-0.3**
TAMB	**Tambo**	**2.39**	**114**	P	**Pn**	**10 05 57.0**	**+0.9**
VCES	**Cotopaxi**	**2.42**	**117**	P	**Pn**	**10 05 57.0**	**+0.6**
ANTG	**Antisana-Guama**	**2.43**	**109**	P	**Pn**	**10 05 57.0**	**+0.4**
CHSH	**Refugio Sur-Vo**	**2.45**	**137**	P	**Pn**	**10 05 57.0**	**+0.2**
ANTM	**Antisana-La Mi**	**2.47**	**110**	P	**Pn**	**10 05 58.0**	**+0.9**
YAHU	**Yahuarcocha**	**2.48**	**88**	P	**Pb**	**10 05 59.0**	**-2.1**
PORT	**Chimborazo Vol**	**2.49**	**134**	P	**Pn**	**10 05 57.0**	**-0.5**
ANTI	**Antisana**	**2.50**	**107**	P	**Pn**	**10 05 59.0**	**+1.4**
ANTS	**Antisana-Sarah**	**2.51**	**108**	P	**Pn**	**10 05 58.0**	**+0.3**
TAMH	**Tambohuasha Ch**	**2.54**	**136**	P	**Pn**	**10 05 58.0**	**-0.1**
CHMA	**Chilma**	**2.55**	**77**	P	**Pn**	**10 05 56.0**	**-2.0**
ANGU	**Angureal**	**2.55**	**96**	P	**Pb**	**10 06 01.0**	**-1.5**
CAYR	**Refugio Cayamb**	**2.56**	**96**	P	**Pn**	**10 06 00.0**	**+1.6**
CAYA	**Cayambe**	**2.57**	**95**	P	**Pb**	**10 06 02.0**	**-0.7**
LNGL	**El Angel-Carch**	**2.59**	**80**	P	**Pn**	**10 05 58.0**	**-0.7**
AMIL	**Milagro (Trans**	**2.59**	**158**	P	**Pb**	**10 06 02.0**	**-0.8**
IGUA	**Igualata**	**2.61**	**133**	P	**Pb**	**10 06 02.0**	**-1.4**
PIAT	**Ana Tenorio**	**2.62**	**119**	P	**Pn**	**10 06 00.0**	**+0.9**
ECEN	**Cerro Negro**	**2.63**	**78**	P	**Pn**	**10 05 59.0**	**-0.4**
CHL1	**Volc¡n Chiles**	**2.65**	**79**	P	**Pn**	**10 05 59.0**	**-0.6**
CHL2	**Volc¡n Chiles**	**2.68**	**79**	P	**Pn**	**10 06 00.0**	**0.0**
JUI6	**Juive**	**2.69**	**129**	P	**Pb**	**10 06 03.0**	**-1.7**
BBIL	**Ulba Tungurahu**	**2.69**	**130**	P	**Pn**	**10 06 02.0**	**+2.0**
POND	**Pondoa**	**2.70**	**129**	P	**Pn**	**10 06 02.0**	**+1.8**
RETU	**Refugio**	**2.73**	**129**	P	**Pb**	**10 06 03.0**	**-2.4**
BMAS	**Trigal station**	**2.73**	**131**	P	**Pn**	**10 06 02.0**	**+1.4**
BRUN	**Tungurahua Vol**	**2.73**	**129**	P	**Pn**	**10 06 02.0**	**+1.4**
ARRY	**Arrayan**	**2.75**	**130**	P	**Pn**	**10 06 03.0**	**+2.1**
BPAT	**Tungurahua Vol**	**2.77**	**130**	P	**Pn**	**10 06 02.0**	**+0.8**
TULM	**Tulcn-Chalpat**	**2.79**	**81**	P	**Pn**	**10 06 03.0**	**+1.4**
CMBC	**Cumbal**	**2.80**	**77**	*i* P	**Pn**	**10 06 02.3**	**+0.7**
CMBC				IAML		10 06 57.2	
	comp=Z,60µm,0.6s						
CMBC	**Cumbal**	**2.80**	**77**	P	**Pn**	**10 06 02.0**	**+0.4**
ATUL	**Tulcn**	**2.87**	**80**	P	**Pb**	**10 06 05.0**	**-2.6**
CONE	**Cono NE Rev Vo**	**2.93**	**97**	P	**Pb**	**10 06 08.0**	**-0.8**
BONI	**La Bonita**	**3.03**	**87**	P	**Pb**	**10 06 07.0**	**-3.3**
COHC	**Cochancay**	**3.03**	**155**	P	**Pn**	**10 06 04.0**	**-0.4**
CASC	**Dorado de Casc**	**3.22**	**93**	P	**Pb**	**10 06 10.0**	**-3.5**
ISPG	**Isla Puna-Puer**	**3.26**	**173**	P	**Pb**	**10 06 12.0**	**-2.3**
GCUF	**Volcan Galeras**	**3.34**	**74**	*i* P	**Pn**	**10 06 09.9**	**+0.9**
GCUF				IAML		10 07 02.6	
	comp=Z,230nm,0.5s						
GR1C	**Gorgona, Isla**	**3.59**	**42**	IAML		10 07 22.2	
	comp=Z,2µm,0.6s						
CRUC	**La Cruz**	**3.81**	**71**	*e*P	**Pn**	**10 06 17.7**	**+2.2**
CRUC				IAML		10 07 11.5	
	comp=Z,21µm,0.6s						
BOSC	**San Juan Bosco**	**3.99**	**149**	P	**Pn**	**10 06 21.0**	**+3.2**
SOTA	**Rioblanco**	**4.34**	**65**	*e*P	**Pn**	**10 06 22.8**	**-0.1**
SOTA				IAML		10 07 19.6	
	comp=Z,232nm,0.5s						
POPC	**Popayan, Colom**	**4.47**	**60**	*e*P	**Pn**	**10 06 24.2**	**-0.2**
POPC				IAML		10 07 22.8	
	comp=Z,80nm,0.7s						
PCON	**Cinco Dias**	**4.62**	**64**	*e*P	**Pn**	**10 06 27.2**	**+0.5**
PCON				IAML		10 07 49.5	
	comp=Z,177nm,0.5s						
GONZ	**Gonzanam**	**4.65**	**166**	P	Pb	10 06 32.0	-6.1
MALC	**Bahia Malaga**	**4.90**	**41**	*e*P	**Pb**	**10 06 38.8**	**-3.2**
MALC				IAML		10 08 17.0	
	comp=Z,91nm,0.5s						
FLOC	**Florencia**	**5.06**	**75**	*i* P	**Pn**	**10 06 34.4**	**+2.0**
FLOC				IAML		10 08 03.9	
	comp=Z,55nm,0.6s						
MARP	**Paez Belalcaza**	**5.25**	**61**	*e*P	**Pn**	**10 06 37.8**	**+2.7**
MARP				IAML		10 08 17.1	
	comp=Z,13nm,0.7s						
ZUMB	**Zumba**	**5.31**	**165**	P	Pn	10 06 40.0	+4.1
GARC	**Garzon, Huila**	**5.39**	**70**	*i* P	**Pn**	**10 06 38.2**	**+1.1**
GARC				IAML		10 07 00.2	
	comp=Z,70nm,0.5s						
YOTC	**Yotoco, Valle**	**5.58**	**49**	*e*P	**Pn**	**10 06 41.1**	**+1.6**
BETC	**Betania**	**5.63**	**65**	*e*P	Pb	10 06 49.3	-5.4
BETC				IAML		10 08 38.3	
	comp=Z,37nm,0.7s						
PLMC	**San Jos del P**	**6.26**	**43**	*e*P	Pn	10 06 54.0	+5.2
PLMC				IAML		10 08 34.6	
	comp=Z,54nm,0.5s						
ORTC	**Ortega, Tolima**	**6.40**	**56**	*e*P	**Pn**	**10 06 52.6**	**+1.8**
ORTC				IAML		10 08 26.7	
	comp=Z,64nm,0.6s						
PRAC	**Prado**	**6.60**	**59**	*e*P	**Pn**	**10 06 54.7**	**+1.2**
PRAC				IAML		10 07 27.2	
	comp=Z,31nm,0.5s						
ANIL	**Santa Ana**	**6.62**	**51**	*e*P	**Pn**	**10 06 56.2**	**+2.2**
ANIL				IAML		10 08 48.6	
	comp=Z,68nm,0.5s						
MACC	**Macarena, Meta**	**6.95**	**75**	*e*P	**Pn**	**10 06 59.4**	**+1.1**
MACC				IAML		10 09 01.4	
	comp=Z,30nm,0.6s						
CACAO	**El Cacao, Vera**	**7.01**	**357**	*e*P		10 08 38.3	
CBOC	**Ciudad Bolivar**	**7.15**	**39**	*e*P	Pb	10 07 14.3	-6.3
CBOC				IAML		10 09 04.2	
	comp=Z,27nm,0.7s						
ATAH	**Atahualpa**	**7.69**	**164**	Pn	**Pn**	**10 07 11.0**	**+2.2**
	comp=Z,2.2nm,0.3s,baz=20,slow=12,SNR=13						
ATAH				Sn	**Sn**	**10 08 42.2**	**+5.8**
	comp=Z,0.9nm,0.3s,baz=37,slow=8.5,SNR=3.6						
	comp=Z,6.3nm,0.5s						
ROSC	**El Rosal**	**7.69**	**54**	Pn	**Pn**	**10 07 08.3**	**-0.4**
	comp=Z,1.7nm,0.3s,baz=241,slow=19,SNR=3.0						
ROSC				Sn	**Sn**	**10 08 37.8**	**+1.4**
	comp=Z,1.1nm,0.3s,baz=137,slow=19,SNR=1.1						
ROSC				LR	LR	10 10 29.1	
	comp=Z,13µm,18.7s,baz=222,slow=42						
	comp=Z,16nm,0.7s						
ROSC	**El Rosal**	**7.69**	**54**	Pn	**Pn**	**10 07 10.7**	**+1.9**
ROSC	**El Rosal**	**7.69**	**54**	*e*P	Pb	10 07 21.0	-9.0

ROSC IAML 10 09 18.3
comp=Z,13nm,0.6s
HELC Santa Helena 7.71 40 *e*P Pb 10 07 22.8 -7.5
HELC IAML 10 10 09.1
comp=Z,3.7nm,0.5s
NORC Norcasia 7.72 47 *e*P Pb 10 07 19.4 -11
NORC IAML 10 07 29.1
comp=Z,31nm,0.6s
DBBC Dabeiba 7.96 33 *i* P Pn 10 07 17.7 +5.5
DBBC IAML 10 07 53.8
comp=Z,108nm,0.7s
CHIC Chingaza 8.06 58 *e*P Pb 10 07 24.4 -12
CHIC IAML 10 09 14.3
comp=Z,12nm,0.6s
PNME Penonome 8.14 2 *e*P 10 09 10.4
SPBC San Pablo de B 8.38 50 *e*P Pn 10 07 23.8 +5.8
SPBC IAML 10 09 17.6
comp=Z,6.2nm,0.5s
CDITO Canoas 8.54 344 Pn **Pn** **10 07 21.3 +1.1**
PTBC PUERTO BERRIO, 8.69 44 *e*P Pn 10 07 29.0 +6.9
PTBC IAML 10 07 55.1
comp=Z,18nm,0.6s
UPA Univ. de Panam 8.69 7 *e*P Pn 10 07 27.2 +5.0
BRU2 Volcan 8.71 346 Pn **Pn** **10 07 22.8 +0.3**
BRU2 Volcan 8.71 346 *e*P Pn 10 07 26.4 +3.8
BRU2 IAML 10 11 46.0
comp=Z,1.7nm,0.3s
BCIP Isla Barro Col 8.84 5 Pn Pn 10 07 28.0 +3.7
BCIP Isla Barro Col 8.84 5 *e*P Pn 10 07 28.2 +3.9
BCIP IAML 10 12 39.4
comp=Z,1.1nm,0.7s
CAPC Capurgana 8.88 21 *e*P **Pn** **10 07 26.3 +1.6**
CAPC IAML 10 13 01.8
comp=Z,1.8nm,0.7s
PTGC Puerto Gaitan, 9.26 65 *e*P Pn 10 07 44.1 +14
PTGC IAML 10 10 02.7
comp=Z,16nm,0.5s
RUSC La Rusia 9.30 53 *e*P Pn 10 07 41.6 +11
RUSC IAML 10 12 08.9
comp=Z,2.6nm,0.6s
DRK0 Durika 9.30 343 Pn 10 07 34.3 +3.5
SRBA San Rafael, Bu 9.31 343 Pn 10 07 34.7 +3.9
LCBC Los crdobas, 9.47 26 IAML 10 11 56.8
comp=Z,8.6nm,0.7s
PEZE Perez Zeledon, 9.55 341 Pn 10 07 36.8 +2.7
BRRC Barranca, Sant 9.61 45 *e*P Pn 10 07 39.5 +4.7
BRRC IAML 10 13 28.7
comp=Z,10nm,0.3s
BARC Barichara 9.65 49 *e*P Pn 10 07 40.7 +5.1
BARC IAML 10 09 55.5
comp=Z,7.4nm,0.7s
PAYG Puerto Ayora 9.78 264 Pn **Pn** **10 07 38.3 +1.1**
BATAN Batan 10.14 344 Pn **Pn** **10 07 42.8 +0.8**
PAMC Pamplona, Colo 10.50 48 IAML 10 11 12.7
comp=Z,4.2nm,0.2s
TAMC Tame, Arauca 10.66 55 *e*P Pn 10 08 09.8 +21
TAMC IAML 10 10 31.4
comp=Z,13nm,0.4s
OCAC Ocana 10.69 42 **Pn** **10 07 50.4 +0.7**
OCAC Ocana 10.69 42 *e*P Pn 10 07 55.0 +5.3
OCAC IAML 10 12 11.0
comp=Z,8.8nm,0.3s
JTS Las Juntas de 10.85 336 Pn **Pn** **10 07 53.6 +1.8**
comp=Z,0.3nm,0.3s,baz=186,slow=7.8,SNR=10
comp=Z,12nm,0.8s
JTS Las Juntas de 10.85 336 Pn 10 07 54.1 +2.3
SJCC San Jacinto, C 10.93 29 Pn **Pn** **10 07 53.0 0.0**
SJCC San Jacinto, C 10.93 29 *e*P **Pn** **10 07 52.8 -0.2**
SJCC IAML 10 14 05.2
comp=Z,1.1nm,0.4s
ORTG Ortega, Santa 11.13 334 Pn 10 07 59.2 +3.5
CZSB Cruzeiro do Su 11.17 136 *e*P **Pn** **10 07 54.5 -1.6**
ARGC Ariguani, Magd 11.38 33 *e*P Pn 10 08 18.5 +19
ARGC IAML 10 13 41.7
comp=Z,13nm,0.4s
LL1C La Loma 1 Cana 11.53 37 *e*P 10 09 11.9
LL1C IAML 10 14 15.1
comp=Z,176nm,0.4s
LL5C La Loma 5 El P 11.59 36 *e*P 10 11 15.9
LL6C La Loma 6 Bece 11.85 37 *e*P **Pn** **10 08 08.2 +2.7**
LL6C IAML 10 12 25.6
comp=Z,6.1nm,0.7s
ACON Acoyapa 12.47 339 Pn **Pn** **10 08 15.4 +1.4**
SMRC Santa Marta, M 12.49 30 *e*P Pn 10 08 17.5 +3.2
NNA Nana 12.74 163 Pn **Pn** **10 08 19.0 +1.2**
comp=Z,1.6nm,0.3s,baz=309,slow=15,SNR=1.9
NNA Sn **Sn** **10 10 41.8 +1.7**
comp=Z,0.5nm,0.3s,baz=264,slow=23,SNR=0.8
comp=Z,6.7nm,0.5s
NNA Nana 12.74 163 **Pn** **10 08 17.6 -0.2**
SDV Santo Domingo 13.05 49 Pn **Pn** **10 08 20.9 -1.2**
comp=Z,1.4nm,0.3s,baz=218,slow=13,SNR=3.4
SDV Sn **Sn** **10 10 55.1 +7.2**
comp=Z,1.8nm,0.3s,baz=293,slow=12,SNR=1.5
SDV LR LR 10 14 07.6
comp=Z,2µm,20.9s,baz=235,slow=41
comp=Z,3.4nm,0.3s
SDV Santo Domingo 13.05 49 Pn **Pn** **10 08 21.9 -0.3**
SDV Santo Domingo 13.05 49 *e*P **P** **10 08 34.9 +2.2**
BOAB BOACO BROADBAN 13.10 337 Pn **Pn** **10 08 24.5 +2.0**
CRJC Cerrejon, Guaj 13.10 35 *e*P **P** **10 08 34.1 +1.0**
CRJC IAML 10 16 01.7
comp=Z,22nm,0.9s
CNGN Cerro Negro 13.57 334 Pn P 10 08 32.2 -6.1
MATN Matagalpa 13.64 337 **Pn** **10 08 31.6 +1.6**
BAUV El Baul 15.13 55 **Pn** **10 08 49.3 -1.0**
BAUV IAmb IAmb 10 09 18.5
comp=Z,34nm,0.9s
HATO Hato, Curacao 16.49 44 Pn **Pn** **10 09 07.0 -0.9**
BIRV Birongo 17.43 54 **P** **10 09 19.8 -1.3**
BIRV IAmb IAmb 10 09 26.6
comp=Z,49nm,0.8s
ETMB Extrema 17.45 126 *e*P **Pn** **10 09 19.0 -1.0**
MTDJ Mount Denham 18.07 9 *e*P **P** **10 09 31.3 +3.1**
PETF Flores 18.90 331 P **Pn** **10 09 38.2 +0.4**
PETF IAmb IAmb 10 09 44.3
comp=Z,72nm,1.3s
CCIG Comitan 19.57 325 P **Pn** **10 09 45.9 -0.1**
BOAV Boa Vista 20.13 84 *e*P Pn 10 09 51.3 -1.3
MACA Manacapuru-AM 20.15 100 *e*P **P** **10 09 50.6 -0.5**
GTBY Guantanamo Bay 20.23 15 P Pn 10 09 51.3 -2.4
GTBY Guantanamo Bay 20.23 15 *e*P Pn 10 09 53.5 -0.1
GTBY IAML 10 13 60.0
comp=Z,2.7nm,0.8s
LPAZ La Paz 20.54 144 P **P** **10 09 55.5 -0.3**
comp=Z,3.6nm,0.9s,baz=327,slow=9.4,SNR=8.0
LPAZ S **S** **10 13 44.2 -2.2**
comp=Z,0.6nm,0.8s,baz=32,slow=19,SNR=0.9
comp=Z,3.6nm,0.9s
LPAZ La Paz 20.54 144 P **P** **10 09 52.0 -3.8**
LPAZ La Paz 20.54 144 *e*P Pn 10 09 56.0 -1.9
LPAZ IAML 10 17 46.2
comp=Z,0.3nm,0.5s
SDDR Presa de Saban 20.68 26 P Pn 10 09 58.0 -1.0
SDDR IAmb IAmb 10 10 23.4
comp=Z,78nm,1.4s
SDDR Presa de Saban 20.68 26 *e*P Pn 10 09 59.1 +0.1
SDDR IAML 10 10 24.5
comp=Z,3.1nm,0.2s
PB12 IPOC Station P 21.31 152 P **P** **10 10 02.8 -0.8**
PB12 IAmb IAmb 10 10 29.0
comp=Z,45nm,1.2s
DR12 Loma Pena Alta 21.40 30 P **P** **10 10 04.6 0.0**
PB16 IPOC Station P 21.46 150 P **P** **10 10 03.5 -2.2**
PB16 IAmb IAmb 10 10 17.7
comp=Z,60nm,1.3s
CMIG Matias Romero 21.86 321 P **P** **10 10 09.0 -0.4**
comp=Z,5.9nm,0.9s,baz=133,slow=9.2,SNR=2.4
CMIG S Sn 10 14 15.2 -5.9
comp=Z,1.4nm,0.7s,baz=191,slow=19,SNR=1.1
CMIG LR LR 10 17 04.3
comp=Z,867nm,18.6s,baz=152,slow=32
comp=Z,5.9nm,0.9s
CELP Cerrillos 22.38 37 P **P** **10 10 13.1 -2.0**
CELP IAmb IAmb 10 10 18.1
comp=Z,39nm,1.1s
AOPR Arecibo Observ 22.48 36 P **P** **10 10 14.1 -2.1**
PB11 IPOC Station P 22.61 152 P **P** **10 10 13.1 -4.5**
PB11 IAmb IAmb 10 10 22.9
comp=Z,67nm,1.3s
SJG San Juan 22.67 38 P **P** **10 10 17.1 -1.0**
comp=Z,14nm,0.7s,baz=209,slow=17,SNR=1.1
SJG S **S** **10 14 24.9 -1.8**
comp=Z,16nm,0.3s,baz=297,slow=17,SNR=3.0
SJG LR LR 10 21 07.9
comp=Z,1µm,18.6s,baz=236,slow=42
comp=Z,14nm,0.7s
SJG San Juan 22.67 38 P **P** **10 10 17.3 -0.8**
SJG IAmb IAmb 10 10 22.5
comp=Z,61nm,1.2s
SJG San Juan 22.67 38 *e*P **P** **10 10 19.8 +1.7**
SJG IAML 10 15 50.7
comp=Z,256nm,0.1s
PDPR Patillas Dam, 22.68 38 P **P** **10 10 17.1 -1.0**
PDPR IAmb IAmb 10 10 25.2
comp=Z,43nm,1.1s
GCPR Guaynabo City 22.86 38 P **P** **10 10 19.8 -0.3**
GCPR IAmb IAmb 10 10 22.9
comp=Z,44nm,1.1s
PB01 IPOC Station P 23.81 154 IAmb IAmb 10 10 57.5
comp=Z,34nm,1.3s
VILB Vilhena 24.09 124 *e*P **P** **10 10 32.3 -0.2**
PB07 IPOC Station P 24.24 155 P **P** **10 10 32.0 -1.8**
PB07 IAmb IAmb 10 10 49.8
comp=Z,37nm,1.3s
TLIG Tlapa 24.67 315 P **P** **10 10 38.2 +0.4**
TLIG IAmb IAmb 10 10 45.6
comp=Z,28nm,1.2s
SIV San Ignacio 25.13 131 P **P** **10 10 41.6 -0.3**
comp=Z,3.0nm,0.7s,baz=307,slow=8.0,SNR=19
SIV LR LR 10 22 09.1
comp=Z,1µm,19.7s,baz=322,slow=40
comp=Z,3.0nm,0.7s
ITTB Itaituba 25.22 101 *e*P **P** **10 10 42.9 +0.2**
LVC Limon Verde 25.43 154 P **P** **10 10 45.3 +0.3**
comp=Z,8.9nm,0.9s,baz=324,slow=8.5,SNR=9.1
comp=Z,8.9nm,0.9s
LVC Limon Verde 25.43 154 P **P** **10 10 42.4 -2.5**
PB15 IPOC Station P 25.73 156 P **P** **10 10 46.8 -0.7**
PTLB Pontes e Lacer 26.31 127 *e*P **P** **10 10 51.3 -1.3**
MALB Monte Alegre 26.37 95 *e*P **P** **10 10 52.9 -0.2**
PDRB Porto dos Gac 26.45 117 *e*P **P** **10 10 53.7 -0.2**
CLDB Colider 26.99 115 *e*P **P** **10 10 58.3 -0.5**
DWPF Disney Wildern 27.67 358 P **P** **10 11 05.2 +0.6**
baz=178
MDP Montagnes des 28.28 80 LR LR 10 22 47.7
comp=Z,7µm,18.3s,baz=254,slow=37
553A Crawfordville 29.96 353 P **P** **10 11 25.6 +0.6**
553A IAmb IAmb 10 11 53.6
comp=Z,21nm,1.1s
ZAIG Zacatecas 30.95 318 P **P** **10 11 34.2 +0.1**
ZAIG IAmb IAmb 10 11 40.6
comp=Z,26nm,1.5s
TIGA Tifton 31.11 355 P **P** **10 11 35.1 0.0**
baz=174
SNDB Serra Nova Dou 31.50 114 *e*P **P** **10 11 38.9 +0.1**
152A Waverly Hall 32.44 353 IAmb IAmb 10 11 52.6
comp=Z,9.9nm,0.9s
NHSC New Hope 32.64 1 P **P** **10 11 47.0 -1.5**
baz=180
HKT Hockley 32.89 335 P **P** **10 11 49.6 -1.1**
HKT IAmb IAmb 10 11 55.1
comp=Z,24nm,1.5s
GOGA Godfrey 33.06 356 P **P** **10 11 52.8 +0.6**
baz=174
VBMS Vicksburg 33.12 344 P **P** **10 11 53.6 +0.8**
baz=162
LRAL Lakeview Retre 33.13 350 IAmb IAmb 10 11 56.0
comp=Z,11nm,0.9s
LRAL Lakeview Retre 33.13 350 P **P** **10 11 53.5 +0.6**
baz=168,SNR=7.1
833A Chaparral WMA, 33.20 329 P **P** **10 11 54.0 +0.4**
baz=144
NATX Nacogdoches 34.02 338 P **P** **10 12 01.1 +0.4**
baz=154
SMTB Santa Maria do 34.07 106 *e*P **P** **10 12 00.6 -0.8**
BIRD Birdtown, Kers 34.17 0 P **P** **10 12 02.2 +0.3**
BIRD IAmb IAmb 10 12 07.6
comp=Z,22nm,1.4s
VA03 San Esteban 34.21 165 P **P** **10 11 59.1 -3.3**
VA03 IAmb IAmb 10 12 15.4
comp=Z,24nm,1.2s
PEXB Peixe 34.30 112 *e*P **P** **10 12 02.7 -0.6**
X51A Calhoun 34.33 354 IAmb IAmb 10 12 06.2
comp=Z,18nm,1.1s
435B Jarrell 34.37 333 P **P** **10 12 04.0 +0.3**
baz=149
FPAL Fort Paine 34.40 353 IAmb IAmb 10 12 06.8
comp=Z,19nm,1.3s
X48A Hartselle 34.52 351 P **P** **10 12 04.7 -0.3**
X48A IAmb IAmb 10 12 05.7
comp=Z,21nm,1.4s
CPUP Villa Florida 34.67 142 LR LR 10 29 37.7
comp=Z,936nm,18.4s,baz=316,slow=42
KMSC Kings Mountain 34.68 359 P **P** **10 12 06.8 +0.5**
baz=178,SNR=6.0
237A Washetta, Mont 34.68 337 IAmb IAmb 10 12 10.7
comp=Z,18nm,1.0s
Z41A Richland Creek 34.76 342 IAmb IAmb 10 12 11.2
comp=Z,12nm,0.9s
Z41A Richland Creek 34.76 342 P **P** **10 12 07.2 +0.2**
baz=158
W52A Murphy 34.76 355 IAmb IAmb 10 12 09.2
comp=Z,15nm,1.0s
CNNC Cliffs of the 34.85 4 P **P** **10 12 08.0 +0.2**
baz=184
W50A Signal Mountai 35.01 353 IAmb IAmb 10 12 21.3
comp=Z,13nm,1.1s
OXF Oxford 35.04 347 IAmb IAmb 10 12 28.0
comp=Z,15nm,1.1s
OXF Oxford 35.04 347 P **P** **10 12 09.1 -0.3**
baz=164
MT09 Talagante 35.06 166 P **P** **10 12 07.4 -2.4**
MT09 IAmb IAmb 10 12 27.8
comp=Z,18nm,1.2s
CCAR Cane Creek 35.06 344 P **P** **10 12 08.8 -0.8**
SWET Sewanee 35.10 352 IAmb IAmb 10 12 11.6
comp=Z,11nm,0.9s
JCT Junction City 35.16 330 P P 10 12 12.9 +2.3
baz=145,SNR=12
CPCT Cooper Cave 35.17 354 IAmb IAmb 10 12 12.7
comp=Z,17nm,0.8s
PLAL Pickwick Lake 35.22 349 P **P** **10 12 09.0 -1.9**
PLAL IAmb IAmb 10 12 14.2
comp=Z,24nm,1.5s
WLAR White Oak Lake 35.25 342 P **P** **10 12 11.6 +0.3**
TKL Tuckaleechee C 35.31 355 LR LR 10 26 15.8
comp=Z,715nm,19.9s,baz=174,slow=36
V58A Windy Hill, Pi 35.34 2 P **P** **10 12 10.8 -1.2**
V58A IAmb IAmb 10 12 15.9
comp=Z,26nm,1.2s
WHTX Lake Whitney, 35.34 335 IAmb IAmb 10 12 16.2
comp=Z,17nm,1.1s
WHTX Lake Whitney, 35.34 335 P **P** **10 12 13.6 +1.4**
baz=150
V55A Taylorsville 35.38 359 IAmb IAmb 10 12 20.6
comp=Z,15nm,1.4s
Z38A Mt. Pleasant 35.49 339 P **P** **10 12 14.0 +0.7**
V51A Loudon 35.51 355 IAmb IAmb 10 12 15.4
comp=Z,20nm,0.9s
W45A Hickory Valley 35.61 348 P **P** **10 12 13.7 -0.6**
BO01 Tunca 35.63 166 P **P** **10 12 14.3 -0.2**
BO01 IAmb IAmb 10 12 31.8
comp=Z,25nm,1.4s
ITRB Iturama 35.65 126 *e*P **P** **10 12 15.2 +0.2**
V48A Smith Brothers 35.75 351 P **P** **10 12 15.2 -0.3**
BDFB Brasilia 35.82 118 P **P** **10 12 16.5 -0.1**
comp=Z,2.2nm,0.3s,baz=278,slow=10,SNR=5.3
BDFB LR LR 10 29 54.2
comp=Z,2µm,18.1s,baz=294,slow=41
comp=Z,2.2nm,0.3s
BDFB Brasilia 35.82 118 P **P** **10 12 12.8 -3.8**
BDFB IAmb IAmb 10 12 31.2
comp=Z,18nm,1.4s
BDFB Brasilia 35.82 118 *e*P **P** **10 12 17.2 +0.6**
HPIG 35.84 320 P **P** **10 12 17.9 +1.2**
U56A King 35.87 0 P **P** **10 12 16.8 +0.2**
X40A Basin Creek Fa 35.91 343 P **P** **10 12 16.3 -0.6**
baz=159
CLTN Cedars of Leba 36.02 352 IAmb IAmb 10 12 20.6
comp=Z,16nm,1.2s
UALR University of 36.03 343 P **P** **10 12 17.2 -0.7**
UALR IAmb IAmb 10 12 19.9
comp=Z,26nm,1.2s
U54A Nelsons Funny 36.06 358 P **P** **10 12 18.2 -0.1**
U54A IAmb IAmb 10 12 23.0
comp=Z,18nm,1.1s
TZTN Tazewell 36.17 356 P **P** **10 12 19.1 -0.1**
TZTN Tazewell 36.17 356 P **P** **10 12 19.1 -0.1**
baz=175,SNR=6.7
MIAR Mount Ida 36.19 342 P **P** **10 12 19.2 -0.2**
MIAR IAmb IAmb 10 12 22.6
comp=Z,20nm,1.4s
MIAR Mount Ida 36.19 342 P **P** **10 12 19.7 +0.4**
baz=158,SNR=8.3
WVT Waverly 36.29 350 P **P** **10 12 18.6 -1.6**
WVT Waverly 36.29 350 P **P** **10 12 19.4 -0.8**
baz=168
TX31 Lajitas Ar. Si 36.34 325 IAmb IAmb 10 12 28.8
comp=Z,9.9nm,0.8s
TX32 Lajitas Array 36.34 325 P **P** **10 12 22.7 +1.9**
TXAR Lajitas Array 36.34 325 P **P** **10 12 22.2 +1.4**
comp=Z,0.9nm,0.6s,baz=144,slow=10.0,SNR=14
TXAR PcP **PcP** **10 14 46.7 +1.1**
comp=Z,1.6nm,0.8s,baz=165,slow=5.8,SNR=8.6
comp=Z,0.9nm,0.6s
TXAR Lajitas Array 36.34 325 P **P** **10 12 22.8 +2.0**
W41B Gary Mavity, V 36.38 344 P **P** **10 12 21.4 +0.5**
W41B IAmb IAmb 10 12 22.0
comp=Z,30nm,1.5s
W41B Gary Mavity, V 36.38 344 P **P** **10 12 21.1 +0.2**
baz=160,SNR=7.4
WHAR Wooly Hollow 36.50 344 IAmb IAmb 10 12 24.9
comp=Z,17nm,1.1s
IPMB Ipameri, GO 36.62 121 *e*P **P** **10 12 22.8 -0.5**
BLA Blacksburg 36.73 0 P **P** **10 12 23.7 -0.3**
baz=180
T50A Nancy 36.76 354 P **P** **10 12 24.5 +0.3**
ABTX Abilene, Hawle 36.85 333 IAmb IAmb 10 12 27.6
comp=Z,29nm,1.4s
ABTX Abilene, Hawle 36.85 333 P **P** **10 12 26.5 +1.4**
baz=147,SNR=8.1
W39A Magazine 36.85 342 P **P** **10 12 26.1 +1.1**
W39A IAmb IAmb 10 12 29.7
comp=Z,39nm,1.4s
W39A Magazine 36.85 342 P **P** **10 12 24.8 -0.2**
baz=158,SNR=10
LCAR Lake Charles 36.93 346 IAmb IAmb 10 12 27.1
comp=Z,18nm,0.8s
FCAR Ozark Folk Cen 37.02 344 P **P** **10 12 26.9 +0.5**
FCAR IAmb IAmb 10 12 29.0
comp=Z,19nm,1.3s
PTGB Pitanga 37.13 134 *e*P **P** **10 12 28.1 +0.4**
S51A Beattyville 37.27 356 IAmb IAmb 10 12 30.0
comp=Z,16nm,0.9s
LPIG La Paz 37.31 312 LR LR 10 24 09.4
comp=Z,351nm,21.2s,baz=146,slow=30
S57A Dark Hollow, R 37.31 2 P **P** **10 12 29.9 +1.0**
S54A Dingess, Beckl 37.33 359 IAmb IAmb 10 12 30.9
comp=Z,36nm,1.4s
ITQB Itaqui 37.53 145 *e*P **P** **10 12 31.5 +0.6**
SDBA SAO DESIDERIO 37.55 111 *e*P **P** **10 12 30.7 -0.6**
U40A Yellville 37.66 344 IAmb IAmb 10 12 33.8
comp=Z,21nm,1.1s
U40A Yellville 37.66 344 P **P** **10 12 32.2 +0.4**
baz=160,SNR=14
R55A Marlinton 37.80 1 IAmb IAmb 10 12 52.9
comp=Z,12nm,1.0s
CBN Corbin Frederi 37.84 4 P **P** **10 12 33.7 +0.4**
baz=185
R53A Hurricane 37.87 358 IAmb IAmb 10 12 37.8
comp=Z,26nm,1.1s
HHAR Hobbs 37.90 342 P **P** **10 12 34.9 +0.9**
R50A Paris 37.96 355 P **P** **10 12 34.8 +0.4**
R50A IAmb IAmb 10 12 46.8
comp=Z,14nm,1.1s
S44A Carbondale 38.07 349 IAmb IAmb 10 12 36.5
comp=Z,25nm,1.1s
TUL1 Leonard 38.17 340 IAmb IAmb 10 12 38.4
comp=Z,19nm,1.0s
TUL1 Leonard 38.17 340 P **P** **10 12 36.7 +0.6**
baz=155
FRTB Fartura 38.20 130 *e*P **P** **10 12 35.6 -1.0**
MGMO Mountain Grove 38.24 345 P **P** **10 12 37.1 +0.3**
MGMO IAmb IAmb 10 12 38.6
comp=Z,25nm,1.0s
WMOK Wichita Mounta 38.27 335 P **P** **10 12 37.6 +0.6**
baz=150
FVM French Village 38.59 347 IAmb IAmb 10 12 41.6
comp=Z,18nm,0.8s
Q51A Peebles 38.63 357 IAmb IAmb 10 12 41.4
comp=Z,20nm,1.1s
ITAB Concordia 38.67 137 *e*P **P** **10 12 40.0 -0.5**
CCM Cathedral Cave 38.85 346 P **P** **10 12 41.2 -0.6**
CCM IAmb IAmb 10 12 43.0
comp=Z,50nm,1.5s
CCM Cathedral Cave 38.85 346 P **P** **10 12 41.8 -0.1**
baz=163
RPN Rapa Nui 38.85 223 LR LR 10 24 24.0
comp=Z,1µm,18.4s,baz=64,slow=30
JANB Januaria 38.93 115 *e*P **P** **10 12 42.1 -0.8**
P53A Whipple 39.01 359 IAmb IAmb 10 12 47.6
comp=Z,40nm,1.4s
S39A Bolivar 39.03 344 P **P** **10 12 43.1 -0.3**
P51A Williamsport 39.07 357 IAmb IAmb 10 12 44.6
comp=Z,33nm,1.4s
MNTX Cornudas Mount 39.08 325 IAmb IAmb 10 12 50.9
comp=Z,25nm,1.2s
MNTX Cornudas Mount 39.08 325 P **P** **10 12 45.3 +1.3**
baz=138,SNR=30
P52A Corning 39.18 358 IAmb IAmb 10 12 45.8
comp=Z,52nm,1.5s
P52A Corning 39.18 358 P **P** **10 12 43.6 -1.0**
baz=177
MCWV Mont Chateau 39.18 1 P **P** **10 12 43.8 -0.8**
baz=181
Q44A Meyer Farm, Va 39.20 350 IAmb IAmb 10 12 45.6
comp=Z,23nm,0.9s
P48A Milroy 39.23 354 IAmb IAmb 10 12 45.4
comp=Z,24nm,1.2s
P49A Miami Univ. Ec 39.24 355 P **P** **10 12 44.4 -0.6**
baz=173
T35A Sooner Cattle 39.32 340 IAmb IAmb 10 12 48.3
comp=Z,28nm,1.1s
MSTX Muleshoe 39.45 330 P **P** **10 12 47.7 +0.6**
MSTX Muleshoe 39.45 330 P **P** **10 12 48.5 +1.5**
baz=144,SNR=16
AMTX Amarillo 39.67 332 P **P** **10 12 50.3 +1.4**
AMTX Amarillo 39.67 332 P **P** **10 12 49.2 +0.3**
baz=146
O53A New Philadelph 39.77 359 P **P** **10 12 49.5 0.0**
baz=179
ACSO Alum Creek Sta 39.81 357 IAmb IAmb 10 12 51.5
comp=Z,12nm,0.8s
ACSO Alum Creek Sta 39.81 357 P **P** **10 12 49.4 -0.5**
baz=176
CPSB Cacapava Do Su 39.97 142 *e*P **P** **10 12 51.7 +0.5**
O48B Farmland 40.00 355 P **P** **10 12 49.4 -2.0**
baz=173
P43A Skaggs, Pawnee 40.01 349 P **P** **10 12 51.7 +0.2**
P43A IAmb IAmb 10 12 52.4
comp=Z,45nm,1.3s
SSPA Standing Stone 40.23 3 P **P** **10 12 53.9 +0.6**
SSPA IAmb IAmb 10 12 55.3
comp=Z,22nm,1.2s
SSPA Standing Stone 40.23 3 P **P** **10 12 52.7 -0.5**
baz=184
O44A Mansfield 40.32 351 P **P** **10 12 52.0 -2.0**
O44A IAmb IAmb 10 12 56.4
comp=Z,32nm,1.2s
SFIN Lafayette 40.34 352 P **P** **10 12 52.6 -1.7**
baz=170
HDIL Hopedale 40.85 350 IAmb IAmb 10 12 58.8
comp=Z,22nm,0.7s
HDIL Hopedale 40.85 350 P **P** **10 12 57.2 -1.3**
baz=166,SNR=6.4
M53A WI Miller and 40.96 360 P **P** **10 12 58.5 -0.8**
baz=180
PAL Palisades 40.97 8 P **P** **10 12 57.4 -2.0**
baz=190
M55A Ridgway 41.02 2 IAmb IAmb 10 13 00.6
comp=Z,29nm,1.5s
121A Cookes Peak, D 41.08 324 IAmb IAmb 10 13 08.4
comp=Z,16nm,0.8s
121A Cookes Peak, D 41.08 324 P P 10 13 03.6 +2.9
baz=136,SNR=17
319A Douglas 41.18 321 P P 10 13 03.8 +2.3
319A IAmb IAmb 10 13 09.2
comp=Z,32nm,1.3s
PARB Paraibuna 41.27 127 *e*P **P** **10 13 01.8 -0.5**
KSPA Keystone Colle 41.30 5 P **P** **10 13 02.6 +0.5**
KSPA IAmb IAmb 10 13 04.5
comp=Z,18nm,1.1s
KSU1 Kansas State U 41.33 341 P **P** **10 13 02.8 +0.3**
KSU1 Kansas State U 41.33 341 P **P** **10 13 03.2 +0.8**
baz=155,SNR=16
NBPN Ponto Novo - B 41.61 107 *e*P **P** **10 13 04.5 -0.6**
LL04 Puerto Octay 41.67 171 P **P** **10 13 03.7 -1.5**

LL04				IAmb	IAmb	10 13 09.6	
	comp=Z,36nm,1.5s						
LENM	Lemitar	41.81	326	P	P	10 13 07.8	+1.2
AAM	Ann Arbor	41.91	357	P	P	10 13 07.2	+0.1
	baz=175						
BINY	Binghamton	41.92	5	P	P	10 13 07.4	+0.2
BINY				IAmb	IAmb	10 13 09.4	
	comp=Z,22nm,1.1s						
BINY	Binghamton	41.92	5	P	P	10 13 08.2	+1.0
	baz=187						
N38A	Joes South For	41.92	346	IAmb	IAmb	10 13 08.4	
	comp=Z,30nm,1.0s						
ESAR	Angra dos Reis	42.07	126	eP	P	10 13 08.8	+0.1
ANMO	Albuquerque	42.11	328	P	P	10 13 10.7	+1.5
ANMO				IAmb	IAmb	10 13 13.2	
	comp=Z,36nm,1.1s						
ANMO	Albuquerque	42.11	328	P	P	10 13 11.2	+2.0
	baz=139						
CBKS	Cedar Bluff	42.18	338	P	P	10 13 11.0	+1.5
CBKS	Cedar Bluff	42.18	338	P	P	10 13 11.2	+1.8
	baz=151,SNR=13						
NBMA	Muriti-CE	42.36	101	eP	P	10 13 11.7	+0.4
K57A	Scipio Center	42.40	4	IAmb	IAmb	10 13 15.4	
	comp=Z,24nm,1.1s						
L40A	Anamosa	42.68	348	IAmb	IAmb	10 13 13.9	
	comp=Z,23nm,1.1s						
TUC	Tucson	42.75	321	P	P	10 13 15.6	+1.3
TUC	Tucson	42.75	321	P	P	10 13 16.3	+2.1
	baz=132						
T25A	Trinidad	42.79	332	IAmb	IAmb	10 13 21.6	
	comp=Z,36nm,1.1s						
T25A	Trinidad	42.79	332	P	P	10 13 17.3	+2.7
	baz=144,SNR=19						
GDU01	Guandu, BA	42.90	111	eP	P	10 13 15.1	-0.6
SCIA	State Center	42.97	346	IAmb	IAmb	10 13 32.6	
	comp=Z,17nm,1.1s						
SCIA	State Center	42.97	346	P	P	10 13 15.1	-0.7
	baz=161						
JFWS	Jewell Farm	43.31	350	IAmb	IAmb	10 13 19.0	
	comp=Z,15nm,0.9s						
JFWS	Jewell Farm	43.31	350	P	P	10 13 17.5	-1.0
	baz=166						
CMC01	Camacan, BA	43.41	113	eP	P	10 13 19.6	-0.2
KSCO	Kaye Shedlock'	43.52	335	P	P	10 13 22.7	+2.3
	baz=147						
K38A	Parkersburg	43.57	347	P	P	10 13 19.4	-1.2
K38A				IAmb	IAmb	10 13 21.2	
	comp=Z,22nm,1.0s						
X18A	Snowflake	43.77	324	P	P	10 13 24.1	+1.5
X18A				IAmb	IAmb	10 13 25.8	
	comp=Z,26nm,1.5s						
SDCO	Great Sand Dun	43.79	331	P	P	10 13 25.2	+2.3
	baz=142,SNR=46						
214A	Organ Pipe Nat	43.82	319	P	P	10 13 25.4	+2.5
	baz=130,SNR=9.7						
L34A	Svendsen Farm,	43.87	343	P	P	10 13 23.4	+0.3
L34A				IAmb	IAmb	10 13 27.4	
	comp=Z,16nm,0.7s						
BGNE	Belgrade	43.92	341	P	P	10 13 23.9	+0.4
	baz=154						
NBLA	Lagarto - SE	43.95	106	eP	P	10 13 23.1	-1.0
LL02	Futaleuf	43.99	171	P	P	10 13 23.3	-0.7
LL02				IAmb	IAmb	10 13 27.8	
	comp=Z,26nm,1.4s						
W18A	Petrified Fore	44.06	325	P	P	10 13 27.7	+2.8
	baz=136,SNR=6.9						
DELO	Deloro Mine	44.11	3	IAmb	IAmb	10 13 26.9	
	comp=Z,13nm,1.1s						
SADO	Sadowa	44.30	1	IAmb	IAmb	10 13 27.0	
	comp=Z,32nm,1.5s						
LBNH	Lisbon	44.42	9	P	P	10 13 28.4	+1.0
	baz=192						
S22A	4UR Ranch, Cre	44.45	330	P	P	10 13 30.0	+1.9
	baz=141,SNR=16						
LONY	Lake Ozonia	44.45	6	P	P	10 13 27.5	-0.2
	baz=188						
X16A	Lo Mia Camp, P	44.58	323	IAmb	IAmb	10 13 33.1	
	comp=Z,10nm,0.7s						
Q24A	Divide	44.60	332	P	P	10 13 32.0	+2.7
Q24A	Divide	44.60	332	P	P	10 13 30.5	+1.2
	baz=144						
SFX	San Felipe	44.63	316	P	P	10 13 31.0	+1.7
SFX				IAmb	IAmb	10 13 35.0	
	comp=Z,30nm,1.4s						
MVCO	Mesa Verde	44.90	328	P	P	10 13 33.6	+2.0
	baz=138,SNR=23						
OGNE	Ogallala	44.91	337	P	P	10 13 33.5	+2.0
	baz=149						
113A	Mohawk Valley,	44.96	319	IAmb	IAmb	10 13 35.7	
	comp=Z,25nm,1.3s						
RCBR	Riachuelo	44.99	98	LR	LR	10 34 03.6	
	comp=Z,1µm,21.0s,baz=70,slow=38						
I37A	Lemond, Waseca	45.01	347	P	P	10 13 31.6	-0.6
I37A				IAmb	IAmb	10 13 33.8	
	comp=Z,14nm,1.1s						
NBAN	Anadia - AL	45.16	104	eP	P	10 13 32.5	-1.3
K31A	O'Neill	45.20	341	P	P	10 13 35.3	+1.5
Y14A	Wickenburg	45.22	321	IAmb	IAmb	10 13 39.8	
	comp=Z,26nm,1.4s						
WUAZ	Wupatki	45.29	324	P	P	10 13 36.6	+1.9
WUAZ	Wupatki	45.29	324	P	P	10 13 37.4	+2.7
	baz=134,SNR=42						
ISCO	Idaho Springs	45.48	333	P	P	10 13 38.4	+2.1
	baz=144,SNR=12						
ECSD	EROS Data Cent	45.57	344	P	P	10 13 35.4	-1.1
ECSD	EROS Data Cent	45.57	344	P	P	10 13 35.9	-0.7
	baz=157,SNR=8.5						
G40A	Rib Lake	45.59	350	IAmb	IAmb	10 13 37.4	
	comp=Z,29nm,1.4s						
G62A	West of Eustis	45.60	10	P	P	10 13 37.6	+0.8
G62A				IAmb	IAmb	10 13 53.0	
	comp=Z,21nm,1.2s						
SMCO	Snowmass	45.63	331	P	P	10 13 39.0	+1.3
GLA	Glamis	45.83	319	P	P	10 13 38.0	-0.9
	baz=128						
PKME	Peaks-Kenny Pk	45.88	11	P	P	10 13 39.8	+0.9
	baz=196						
SPMN	Marine on St.	46.04	348	P	P	10 13 39.5	-0.7
	baz=163						
CCX	Cicese	46.37	316	IAmb	IAmb	10 13 46.6	
	comp=Z,9.5nm,0.7s						
SWSC	Sam W. Stewart	46.41	318	P	P	10 13 43.3	-0.2
	baz=127						
IKP	In-Ko-Pah, Jac	46.45	317	P	P	10 13 44.1	+0.3
	baz=127,SNR=6.6						
N23A	Red Feather La	46.52	333	IAmb	IAmb	10 14 02.0	
	comp=Z,22nm,1.4s						
N23A	Red Feather La	46.52	333	P	P	10 13 44.9	+0.5
	baz=144,SNR=5.5						
W13A	Hualapai Mount	46.53	322	IAmb	IAmb	10 13 51.7	
	comp=Z,6.4nm,0.9s						
BC3	Big Chuckawall	46.62	319	P	P	10 13 45.2	0.0
	baz=128,SNR=13						
PHWY	Pilot Hill	46.63	334	P	P	10 13 45.7	+0.4
PHWY				IAmb	IAmb	10 13 50.7	
	comp=Z,12nm,1.1s						
IRM	Iron Mountain	46.73	320	P	P	10 13 45.7	-0.2
	baz=129,SNR=14						
NEE2	Needles Airpor	46.78	321	P	P	10 13 46.9	+0.7
	baz=130						
F36A	Milaca	46.80	348	P	P	10 13 45.4	-0.8
F36A				IAmb	IAmb	10 13 47.7	
	comp=Z,12nm,1.3s						
MONP2	Monument Peak	46.80	317	P	P	10 13 46.3	-0.5
	baz=127						
SUSD	Miller	46.91	342	P	P	10 13 47.2	+0.1
	baz=154						
O20A	White River Ci	46.99	331	IAmb	IAmb	10 14 11.7	
	comp=Z,7.9nm,1.0s						
O20A	White River Ci	46.99	331	P	P	10 13 47.2	-0.9
	baz=141,SNR=8.8						
BELC	Belle Mtn. Jos	47.19	319	P	P	10 13 49.0	-0.7
	baz=128,SNR=12						
TPFO	Pinon Flats	47.25	318	P	P	10 13 50.1	-0.1
	baz=127,SNR=8.4						
PFO	Pinyon Flats O	47.26	318	LR	LR	10 32 06.5	
	comp=Z,201nm,18.5s,baz=136,slow=34						
PFO	Pinyon Flats O	47.26	318	P	P	10 13 51.7	+1.5
PFO				IAmb	IAmb	10 13 55.8	
	comp=Z,22nm,1.5s						
PFO	Pinyon Flats O	47.26	318	P	P	10 13 49.8	-0.4
	baz=127,SNR=7.1						
109C	Camp Elliot, M	47.26	317	P	P	10 13 51.2	+1.1
109C	Camp Elliot, M	47.26	317	P	P	10 13 50.7	+0.6
	baz=126						
LCMT	Little Creek M	47.41	324	IAmb	IAmb	10 13 57.2	
	comp=Z,13nm,1.1s						

GMRC	Granite Mounta	47.45	320	P	P	10 13 52.3	+0.6
	baz=129,SNR=6.2						
Q16A	Castle Valley	47.58	327	IAmb	IAmb	10 14 06.4	
	comp=Z,12nm,1.3s						
P18A	Preston Nutter	47.62	329	P	P	10 13 54.8	+1.7
P18A				IAmb	IAmb	10 14 05.2	
	comp=Z,11nm,1.2s						
D62A	Allapoint, All	47.67	11	P	P	10 13 53.9	+0.9
D62A				IAmb	IAmb	10 13 58.2	
	comp=Z,16nm,1.4s						
MURC	Murrieta	47.74	318	P	P	10 13 54.7	+0.9
	baz=126						
CCUT	Cedar City	47.85	324	IAmb	IAmb	10 14 03.5	
	comp=Z,11nm,1.1s						
HEC	Hector,Ludlow	47.91	320	P	P	10 13 57.7	+2.5
	baz=128						
ELS	Elsinore Mount	47.93	318	IAmb	IAmb	10 14 19.8	
	comp=Z,12nm,1.5s						
BBRC	Big Bear Solar	47.95	319	P	P	10 13 57.9	+2.2
	baz=127,SNR=8.6						
TUQ	Turquoise Moun	48.03	321	P	P	10 13 57.8	+1.6
	baz=129						
TCRU	Three Creeks R	48.06	326	IAmb	IAmb	10 14 05.1	
	comp=Z,12nm,1.1s						
K22A	Casper	48.19	334	P	P	10 13 57.7	+0.3
K22A				IAmb	IAmb	10 14 04.9	
	comp=Z,14nm,1.1s						
K22A	Casper	48.19	334	P	P	10 13 58.3	+1.0
	baz=144,SNR=6.9						
SCI2	San Clemente I	48.31	316	P	P	10 14 00.1	+1.9
	baz=125						
RRX	Edison Barstow	48.37	319	P	P	10 14 00.9	+2.2
	baz=128						
RSSD	Black Hills	48.39	337	P	P	10 14 01.2	+2.3
RSSD	Black Hills	48.39	337	P	P	10 14 00.8	+1.9
	baz=148						
BFSC	Mount Baldy Ra	48.43	318	P	P	10 14 00.8	+1.5
	baz=126						
CIS	Catalina Islan	48.46	317	P	P	10 14 00.8	+1.4
	baz=125						
GSC	Goldstone, Bar	48.51	320	IAmb	IAmb	10 14 15.7	
	comp=Z,9.0nm,1.1s						
GSC	Goldstone, Bar	48.51	320	P	P	10 14 01.6	+1.8
	baz=128,SNR=9.1						
SHOC	Shoshone, Teco	48.54	321	P	P	10 14 02.1	+2.1
	baz=129,SNR=5.8						
FMP	Fort Macarthur	48.55	317	P	P	10 14 01.8	+1.8
	baz=125						
MPU	Maple Canyon	48.62	328	IAmb	IAmb	10 14 08.6	
	comp=Z,6.5nm,0.8s						
PASC	Pasadena Art C	48.74	318	IAmb	IAmb	10 14 14.3	
	comp=Z,4.4nm,0.6s						
PSUT	Pine Spring	48.80	325	P	P	10 14 04.0	+1.8
PSUT				IAmb	IAmb	10 14 07.2	
	comp=Z,12nm,1.1s						
NLU	North Lily Min	48.82	328	P	P	10 14 02.8	+0.6
NLU				IAmb	IAmb	10 14 07.6	
	comp=Z,10nm,1.5s						
DECC	Green Verdugo	48.89	318	P	P	10 14 04.2	+1.5
	baz=126						
JLU	Jordanelle	48.96	329	IAmb	IAmb	10 14 10.4	
	comp=Z,14nm,1.0s						
QSM	Queen of Sheba	48.96	320	P	P	10 14 04.6	+1.4
QSM				IAmb	IAmb	10 14 06.7	
	comp=Z,15nm,1.3s						
EDW2	Edwards Air Fo	49.03	319	P	P	10 14 05.6	+1.7
	baz=126,SNR=7.1						
LRMC	Laurel Mtn Rad	49.18	319	P	P	10 14 06.4	+1.3
	baz=127						
TPNV	Topopah Spring	49.19	322	IAmb	IAmb	10 14 10.5	
	comp=Z,16nm,1.1s						
TPNV	Topopah Spring	49.19	322	P	P	10 14 07.2	+2.1
	baz=130,SNR=17						
FURC	Furnace Creek,	49.27	321	P	P	10 14 07.6	+2.2
	baz=129,SNR=13						
S11A	Rachel	49.33	323	IAmb	IAmb	10 14 15.5	
	comp=Z,18nm,1.1s						
OSI	Osito Audit: C	49.36	318	P	P	10 14 07.8	+1.5
	baz=126						
DUG	Dugway, Tooele	49.38	327	P	P	10 14 08.4	+1.9
	baz=135,SNR=16						
AGMN	Agassiz Nation	49.62	347	P	P	10 14 08.4	+0.4
AGMN				IAmb	IAmb	10 14 10.4	
	comp=Z,16nm,1.4s						
AGMN	Agassiz Nation	49.62	347	P	P	10 14 07.1	-0.9
	baz=160						
SCZ2	Santa Cruz Isl	49.63	317	P	P	10 14 08.7	+0.3
	baz=124						
PDAR	Pinedale Array	49.65	332	P	P	10 14 09.0	+0.4
	comp=Z,0.7nm,0.6s,baz=133,slow=11,SNR=12						
PDAR				PcP	PcP	10 15 30.2	+0.2
	comp=Z,1.3nm,0.8s,baz=134,slow=4.3,SNR=4.4						
PDAR				LR	LR	10 35 52.7	
	comp=Z,285nm,19.8s,baz=140,slow=37						
	comp=Z,0.7nm,0.6s						
BW06	Boulder Array	49.65	332	P	P	10 14 08.9	+0.3
BW06	Boulder Array	49.65	332	P	P	10 14 09.1	+0.5
	baz=140,SNR=7.3						
R11A	Troy Canyon, C	49.69	324	P	P	10 14 09.9	+1.0
	baz=131,SNR=15						
ARVC	Arvin	49.73	318	P	P	10 14 10.9	+1.8
	baz=126						
ISA	Isabella, Lake	49.81	319	P	P	10 14 10.2	+0.4
ISA				IAmb	IAmb	10 14 15.5	
	comp=Z,25nm,1.4s						
ISA	Isabella, Lake	49.81	319	P	P	10 14 10.3	+0.4
	baz=127,SNR=6.8						
GRAC	Grapevine Rang	49.91	321	IAmb	IAmb	10 14 19.2	
	comp=Z,17nm,1.1s						
GRAC	Grapevine Rang	49.91	321	P	P	10 14 10.9	+0.5
	baz=129						
BCW	Bitter Crk WRg	50.01	318	P	P	10 14 13.2	+1.8
BGU	Big Grassy Mou	50.02	328	P	P	10 14 12.2	+0.8
BGU				IAmb	IAmb	10 14 18.4	
	comp=Z,22nm,1.3s						
CWC	Cottonwood Cre	50.02	320	P	P	10 14 13.1	+1.6
	baz=128						
MDND	Maddock	50.18	343	P	P	10 14 13.5	+1.3
MDND	Maddock	50.18	343	P	P	10 14 13.1	+0.8
	baz=155						
PKM	Mcpherson Peak	50.25	317	P	P	10 14 14.3	+0.9
	baz=125						
VES	Vestal, Richgr	50.32	319	P	P	10 14 15.6	+2.0
	baz=126,SNR=11						
AHID	Auburn Hatcher	50.38	331	IAmb	IAmb	10 14 17.9	
	comp=Z,21nm,1.4s						
SMMC	Simmler	50.62	318	P	P	10 14 17.7	+1.8
	baz=125						
SNOW	Snow King Moun	50.75	332	P	P	10 14 18.8	+1.9
TPAW	Teton Pass	50.86	332	P	P	10 14 17.6	-0.2
TPAW				IAmb	IAmb	10 14 27.8	
	comp=Z,16nm,1.4s						
PAGB	Antelope Grade	51.03	318	IAmb	IAmb	10 14 26.4	
	comp=Z,24nm,1.3s						
ELK	Elko	51.09	326	LR	LR	10 35 39.6	
	comp=Z,180nm,18.3s,baz=142,slow=36						
ELK	Elko	51.09	326	IAmb	IAmb	10 14 25.0	
	comp=Z,29nm,1.4s						
FLWY	Flagg Ranch	51.19	332	P	P	10 14 20.3	+0.1
OMMB	Old Mammoth Mi	51.32	321	IAmb	IAmb	10 14 25.1	
	comp=Z,22nm,1.2s						
RLMT	Red Lodge	51.35	334	P	P	10 14 21.2	-0.3
RLMT				IAmb	IAmb	10 14 25.4	
	comp=Z,13nm,1.4s						
RLMT	Red Lodge	51.35	334	P	P	10 14 22.3	+0.8
	baz=142,SNR=6.9						
H17A	Grant Village	51.38	333	P	P	10 14 23.8	+2.1
	baz=140						
MDPB	Devils Postpil	51.38	321	IAmb	IAmb	10 14 25.4	
	comp=Z,11nm,1.0s						
LAO	LASA Array	51.38	338	P	P	10 14 22.5	+1.1
	baz=146						
NVAR	Mina Array Bea	51.38	322	P	P	10 14 24.1	+2.3
	comp=Z,9.5nm,0.7s,baz=134,slow=6.9,SNR=73						
NVAR				PcP	PcP	10 15 36.9	+0.4
	comp=Z,1.6nm,0.8s,baz=130,slow=4.1,SNR=1.5						
NVAR				LR	LR	10 35 18.2	
	comp=Z,184nm,18.3s,baz=136,slow=35						
	comp=Z,9.5nm,0.7s						
ULM	Lac du Bonnet	51.46	347	P	P	10 14 20.7	-1.2
	comp=Z,10.0nm,0.6s,baz=153,slow=7.6,SNR=12						
	comp=Z,10.0nm,0.6s						
ULM	Lac du Bonnet	51.46	347	IAmb	IAmb	10 14 22.6	
	comp=Z,13nm,0.8s						
KVN	Kaiserville	51.65	323	P	P	10 14 25.1	+1.3
KVN				IAmb	IAmb	10 14 28.3	
	comp=Z,13nm,1.0s						
PMPB	Monarch Peak	51.67	318	P	P	10 14 26.0	+2.2

BMN	Battle Mountai	52.01	325	IAmb	IAmb	10 14 33.6	
	comp=Z,19nm,1.0s						
DGMT	Dagmar	52.16	340	P	P	10 14 28.8	+1.6
	baz=150						
SAO	San Andreas Ge	52.41	318	P	P	10 14 31.6	+2.4
SAO				IAmb	IAmb	10 14 39.3	
	comp=Z,13nm,1.2s						
PNTR	Pine Nut	52.59	322	IAmb	IAmb	10 14 36.5	
	comp=Z,10nm,1.0s						
HLID	Hailey	52.62	329	P	P	10 14 31.4	+0.5
	baz=136,SNR=15						
BOZ	Bozeman (W)	52.77	333	P	P	10 14 33.0	+1.1
	baz=140,SNR=20						
EMB	Emerald Bay	52.83	321	P	P	10 14 35.1	+2.6
EMB				IAmb	IAmb	10 14 38.3	
	comp=Z,30nm,1.5s						
PAHR	Pah Rah Range	52.83	323	IAmb	IAmb	10 14 38.2	
	comp=Z,25nm,1.5s						
MPK	Martis Peak	52.98	322	P	P	10 14 35.2	+1.5
DLMT	Dillon	53.05	332	IAmb	IAmb	10 14 39.2	
	comp=Z,26nm,1.5s						
MFID	Camas Ranch	53.25	328	IAmb	IAmb	10 14 45.4	
	comp=Z,9.3nm,1.0s						
BEKR	Beckworth	53.52	322	P	P	10 14 37.2	-0.4
EGMT	Eagleton	53.86	336	P	P	10 14 40.0	+0.2
EGMT	Eagleton	53.86	336	P	P	10 14 40.7	+0.9
	baz=143,SNR=10						
WVOR	Wild Horse Val	54.12	326	P	P	10 14 42.2	+0.4
PLID	Pearl Lake	54.50	330	IAmb	IAmb	10 15 07.4	
	comp=Z,11nm,1.4s						
J08A	Circle Bar Ran	54.63	327	IAmb	IAmb	10 14 50.8	
	comp=Z,7.5nm,1.1s						
MSO	Missoula	54.76	332	P	P	10 14 47.7	+1.3
	baz=138,SNR=6.1						
SCHQ	Schefferville	55.51	10	LR	LR	10 39 28.8	
	comp=Z,148nm,19.7s,baz=238,slow=37						
K05A	Summer Lake	55.59	325	IAmb	IAmb	10 15 03.2	
	comp=Z,7.3nm,0.8s						
F10A	Beach Ranch, E	55.74	330	IAmb	IAmb	10 14 59.5	
	comp=Z,13nm,1.1s						
USHA	Ushuaia	55.84	172	LR	LR	10 36 25.9	
	comp=Z,441nm,18.9s,baz=278,slow=34						
K04D	Chiloquin, OR	56.03	324	P	P	10 14 57.1	+1.5
	baz=128						
YBH	Yreka Blue Hor	56.07	323	LR	LR	10 37 34.1	
	comp=Z,182nm,20.0s,baz=142,slow=35						
L04D	Klamath Falls	56.11	323	P	P	10 14 57.0	+0.7
	baz=127,SNR=5.5						
J05D	Fort Rock, OR	56.13	325	P	P	10 14 58.2	+1.8
	baz=128,SNR=16						
G08A	Pilot Rock	56.17	328	P	P	10 14 57.6	+1.0
WALA	Waterton Lakes	56.41	334	IAmb	IAmb	10 15 02.4	
	comp=Z,10nm,1.1s						
J04D	Umpqua Nationa	56.61	325	P	P	10 15 01.2	+1.2
	baz=128,SNR=10						
L02F	Cave Junction	56.82	323	P	P	10 15 02.1	+1.0
	baz=126						
I05D	Terrebonne, OR	56.85	326	P	P	10 15 03.4	+2.0
	baz=129,SNR=8.2						
F07A	Phinny Hill Vi	57.08	328	IAmb	IAmb	10 15 16.0	
	comp=Z,7.8nm,1.1s						
I04A	Tendick Farm,	57.12	325	P	P	10 15 03.8	+0.4
	baz=128						
K02D	Willamette Mer	57.21	323	P	P	10 15 05.4	+1.5
	baz=126,SNR=7.0						
NEW	Newport	57.29	332	LR	LR	10 40 32.7	
	comp=Z,175nm,18.8s,baz=134,slow=37						
NEW	Newport	57.29	332	IAmb	IAmb	10 15 09.0	
	comp=Z,11nm,1.4s						
NEW	Newport	57.29	332	P	P	10 15 04.6	+0.2
	baz=135						
G05D	Wamic, OR	57.41	327	P	P	10 15 05.8	+0.5
	baz=129,SNR=7.1						
H04A	Detroit Lake	57.54	326	P	P	10 15 06.5	+0.2
H04A				IAmb	IAmb	10 15 13.3	
	comp=Z,14nm,1.1s						
I03D	Drain, OR	57.61	324	P	P	10 15 07.7	+1.0
	baz=126						
J01E	Myrtle Point	57.64	323	P	P	10 15 08.7	+1.8
J01E	Myrtle Point	57.64	323	P	P	10 15 08.9	+2.0
	baz=126						
H04D	Lebanon	57.75	325	P	P	10 15 08.3	+0.6
	baz=128						
F05D	White Salmon	57.89	327	IAmb	IAmb	10 15 13.6	
	comp=Z,19nm,1.1s						
F05D	White Salmon	57.89	327	P	P	10 15 10.8	+2.1
	baz=129						
COR	Corvallis	58.11	325	P	P	10 15 12.6	+2.4
I02E	Swisshome, OR	58.14	324	P	P	10 15 11.6	+1.2
	baz=126						
LTY	Liberty	58.36	329	P	P	10 15 13.0	+1.0
LTY				IAmb	IAmb	10 15 17.1	
	comp=Z,12nm,1.3s						
B08A	Colville Reser	58.42	331	P	P	10 15 12.7	+0.3
F04A	Amboy	58.44	327	IAmb	IAmb	10 15 16.4	
	comp=Z,12nm,1.1s						
E04D	Cinebar	58.91	327	P	P	10 15 17.1	+1.3
	baz=129						
FCC	Fort Churchill	59.27	352	IAmb	IAmb	10 15 20.0	
	comp=Z,14nm,1.1s						
D03D	Eldon	59.80	328	P	P	10 15 23.1	+1.2
	baz=129						
TAOE	Nuku Hiva Isla	60.04	260	eLR	LR	10 32 45.7	
	comp=Z,908nm,24.6s						
NLWA	Neilton Lookou	60.13	327	P	P	10 15 25.8	+1.6
FRB	Frobisher Bay	63.92	6	LR	LR	10 44 54.6	
	comp=Z,242nm,20.6s,baz=191,slow=37						
BBB	Bella Bella	65.20	330	LR	LR	10 45 35.1	
	comp=Z,103nm,18.2s,baz=124,slow=37						
PMSA	Palmer Station	66.03	172	LR	LR	10 41 44.9	
	comp=Z,318nm,18.0s,baz=344,slow=33						
YKA	Yellowknife Ar	67.10	344	P	P	10 16 09.6	-0.2
	comp=Z,4.8nm,0.8s,baz=135,slow=6.4,SNR=36						
	comp=Z,4.8nm,0.8s						
PMOZ	Porto Moniz, M	67.64	54	eLR	LR	10 37 08.9	
	comp=Z,164nm,22.0s						
T35M	Bob Quinn	69.00	333	P	P	10 16 22.6	+0.6
	baz=125						
CRAG	Craig	69.50	331	P	P	10 16 25.3	+0.3
	baz=122						
DLBC	Dease Lake	69.75	335	IAmb	IAmb	10 16 34.0	
	comp=Z,14nm,1.1s						
DLBC	Dease Lake	69.75	335	P	P	10 16 27.9	+1.2
	baz=126						
S34M	Telegraph Cree	69.92	334	P	P	10 16 28.7	+1.1
	baz=125						
PPT	Papeete	70.13	251	LR	LR	10 39 22.4	
	comp=Z,711nm,19.3s,baz=68,slow=29						
PPT2	Papeete2	70.13	251	eS	S	10 25 25.7	-16
	comp=Z,1µm,23.5s						
PPT2	Papeete2	70.13	251	eLR	LR	10 37 28.1	
	comp=Z,1µm,24.8s						
TBI	Tubuai	70.81	245	eS	S	10 25 27.4	-22
	comp=Z,1µm,28.2s						
TBI	Tubuai	70.81	245	eLR	LR	10 37 44.4	
	comp=Z,877nm,27.8s						
TGTN	Hyland Airport	70.92	338	P	P	10 16 35.1	+1.3
	baz=128						
P33M	Teslin, Yukon	71.94	335	P	P	10 16 40.9	+0.9
P33M				IAmb	IAmb	10 16 43.0	
	comp=Z,13nm,1.2s						
P33M	Teslin, Yukon	71.94	335	P	P	10 16 40.4	+0.4
	baz=124						
MMPY	Sheldon Lake,	72.70	338	P	P	10 16 45.9	+1.4
	baz=126,SNR=11						
FARO	Faro, Yukon	73.28	337	P	P	10 16 49.1	+1.3
	baz=124						
O30N	Mendenhall	73.61	335	P	P	10 16 51.1	+1.2
	baz=121						
P30M	Million Dollar	73.66	334	P	P	10 16 49.9	-0.3
	baz=120						
M31M	Drury Creek, Y	73.67	337	IAmb	IAmb	10 16 55.2	
	comp=Z,14nm,1.2s						
M31M	Drury Creek, Y	73.67	337	P	P	10 16 51.4	+1.3
	baz=123						
N31M	Braeburn, Yuko	73.85	336	P	P	10 16 52.1	+0.9
	baz=121						
HYT	Haines Junctio	74.24	335	P	P	10 16 54.8	+1.2
	baz=119						
N30M	Aishikik Lake	74.38	335	P	P	10 16 55.9	+1.5
	baz=120						
PNL	Peninsula	74.52	333	P	P	10 16 56.0	+0.8
	baz=117						
YUK6	Outpost Mounta	74.66	335	P	P	10 16 57.4	+1.1
	baz=119						
RES	Resolute Bay	74.79	356	LR	LR	10 51 05.9	
	comp=Z,209nm,19.3s,baz=142,slow=37						
C36M	Paulatuk	74.81	345	P	P	10 16 56.9	+0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=134						
M30M	Minto, Yukon	74.82	336	IAmb	IAmb	10 17 02.5	
	comp=Z,21nm,1.4s						
M30M	Minto, Yukon	74.82	336	P	P	10 16 58.1	+1.2
	baz=120,SNR=7.1						
YUK4	Talbot Arm	74.98	335	P	P	10 16 59.6	+1.6
	baz=119						
YUK8	Steele Glacier	75.42	335	P	P	10 17 02.5	+1.8
	baz=117						
MORF	Marmelete	75.47	52	*e*P	P	10 17 00.6	-0.6
LIC	Lamto	75.58	84	*e*P	P	10 17 02.2	0.0
	comp=Z,65nm,2.0s						
TIC	Toumodi	75.59	83	*e*PKP2	P	10 17 02.8	+0.5
	comp=Z,82nm,1.5s						
PNCL	Nicolau / Gran	75.72	51	*e*P	P	10 17 04.9	+2.4
	comp=Z,27nm,1.7s						
PNCL	Nicolau / Gran	75.72	51	*e*SS	SS	10 31 50.1	+14
DBIC	Dimbokro	75.76	83	P	P	10 17 03.5	+0.3
	comp=Z,4.0nm,0.8s,baz=302,slow=8.7,SNR=5.5						
DBIC				LR	LR	10 48 21.9	
	comp=Z,316nm,18.4s,baz=262,slow=34						
	comp=Z,4.0nm,0.8s						
DBIC	Dimbokro	75.76	83	P	P	10 17 02.3	-0.9
PSBE	So Bento	75.79	49	*e*S	S	10 26 54.9	+9.3
KIC	Kosan Boka	75.86	84	*e*PKP2	P	10 17 03.4	-0.4
	comp=Z,21nm,0.7s						
MESJ	Messejana	75.91	51	*e*P	P	10 17 03.0	-0.7
MESJ				IAmb	IAmb	10 17 05.7	
	comp=Z,31nm,1.6s						
YUK3	Moose Creek	75.95	335	P	P	10 17 04.6	+1.0
	baz=117						
CTG	Chitna Glacier	75.96	334	P	P	10 17 02.9	-0.7
	baz=116						
PCVE	Castro Verde	76.01	51	*e*P	P	10 17 06.6	+2.4
PBDV	Barranco-do-Ve	76.03	52	*e*SS	SS	10 31 48.2	+7.0
PCAS	Casmilo, Conde	76.13	49	*e*P	P	10 17 06.2	+1.4
	comp=Z,68nm,1.9s						
PMTG	Montargil	76.14	50	*e*P	P	10 17 06.5	+1.6
	comp=Z,25nm,1.8s						
PVAQ	Vaqueiros	76.22	52	*e*P	P	10 17 06.8	+1.4
PVAQ	Vaqueiros	76.22	52	*e*LR	LR	10 41 22.1	
	comp=Z,300nm,20.0s						
BVCY	Beaver Creek	76.40	335	P	P	10 17 07.3	+1.3
	baz=117						
DAWY	Dawson	76.58	337	IAmb	IAmb	10 17 09.3	
	comp=Z,12nm,0.9s						
DAWY	Dawson	76.58	337	P	P	10 17 07.1	+0.2
	baz=118,SNR=13						
PESTR	Estremoz	76.59	50	*e*P	P	10 17 08.4	+0.9
	comp=Z,35nm,1.5s						
PESTR				*e*S	S	10 27 05.0	+11
PESTR				*e*SS	SS	10 32 00.2	+11
PESTR	Estremoz	76.59	50	P	P	10 17 07.2	-0.3
PESTR				IAmb	IAmb	10 17 09.7	
	comp=Z,8.9nm,1.0s						
PGAV	Gavieira, Arco	76.68	47	*e*SS	SS	10 31 59.7	+8.6
PGAV				*e*LR	LR	10 41 45.3	
	comp=Z,249nm,20.0s						
PVIS	Viseu	76.71	48	*e*P	P	10 17 09.4	+1.2
	comp=Z,32nm,1.9s						
EPYK	Eagle Plains	76.76	340	P	P	10 17 08.4	+0.5
	baz=121						
INK	Inuvik	76.78	342	P	P	10 17 08.5	+0.6
	baz=125,SNR=15						
I29M	Ogilvie Camp,	76.80	339	P	P	10 17 09.0	+0.8
	baz=120,SNR=15						
M27K	Edge Creek, AK	76.80	335	IAmb	IAmb	10 17 11.5	
	comp=Z,16nm,1.1s						
M27K	Edge Creek, AK	76.80	335	P	P	10 17 09.8	+1.4
	baz=116,SNR=5.2						
PMRV	Marv??o	76.84	50	*e*LR	LR	10 41 16.1	
	comp=Z,183nm,20.0s						
PCBR	Castelo Branco	76.86	49	*e*P	P	10 17 09.6	+0.7
	comp=Z,34nm,1.7s						
MCARA	McCarthy VSAT	76.88	334	P	P	10 17 10.1	+1.4
	baz=114						
KOWA	Kowa	76.89	75	P	P	10 17 08.1	-1.5
MTE	Manteigas	76.91	49	*e*SS	SS	10 32 03.8	+9.3
MTE				*e*LR	LR	10 41 50.8	
	comp=Z,215nm,18.0s						
POLO	Lamas de Olo	76.91	48	*e*P	P	10 17 11.3	+1.9
	comp=Z,14nm,1.6s						
A36M	Sachs Harbour	76.94	347	P	P	10 17 08.9	+0.2
	baz=134						
BORG	Borgarnes	77.05	22	LR	LR	10 49 16.1	
	comp=Z,77nm,19.6s,baz=240,slow=34						
BCAR	Beaver Creek A	77.07	336	P	P	10 17 11.1	+1.4
L27K	Beaver Creek,	77.09	336	IAmb	IAmb	10 17 17.6	
	comp=Z,22nm,1.5s						
L27K	Beaver Creek,	77.09	336	P	P	10 17 10.9	+1.1
	baz=116,SNR=14						
GLB	Gilahina Butte	77.25	334	P	P	10 17 11.7	+0.9
GLB				IAmb	IAmb	10 17 13.8	
	comp=Z,18nm,1.1s						
M26K	Nabesna, AK	77.29	335	IAmb	IAmb	10 17 13.8	
	comp=Z,22nm,1.4s						
M26K	Nabesna, AK	77.29	335	P	P	10 17 11.2	+0.2
	baz=115						
BMRM	Bremner River	77.42	333	P	P	10 17 13.1	+1.3
	baz=113						
MVO	Moncorvo	77.44	48	*e*SS	SS	10 32 14.0	+12
EGAK	Eagle	77.59	338	P	P	10 17 13.6	+1.0
	baz=117,SNR=18						
K27K	Chicken	77.61	337	P	P	10 17 14.3	+1.6
	baz=116						
N25K	Chitina, Valde	77.66	334	P	P	10 17 14.2	+1.1
	baz=113						
L26K	Log Cabin Wild	77.70	335	P	P	10 17 14.4	+1.2
	baz=114,SNR=8.4						
PBRG	Braganca	77.77	47	*e*P	P	10 17 15.6	+1.5
	comp=Z,25nm,1.8s						
MENT	Mentasta	77.82	335	P	P	10 17 14.3	+0.4
MENT				IAmb	IAmb	10 17 18.5	
	comp=Z,13nm,1.3s						
MDT	Midelt	78.04	57	LR	LR	10 49 46.4	
	comp=Z,124nm,20.5s,baz=292,slow=34						
KLU	Klutina	78.21	334	P	P	10 17 17.0	+0.8
	baz=112						
HARP	HAARP	78.21	335	P	P	10 17 17.8	+1.7
	baz=113						
SCRK	Sand Creek	78.36	336	P	P	10 17 17.8	+0.8
SCRK				IAmb	IAmb	10 17 21.5	
	comp=Z,11nm,1.2s						
SCRK	Sand Creek	78.36	336	P	P	10 17 18.4	+1.4
	baz=114,SNR=7.9						
J26L	Joseph Creek	78.40	337	IAmb	IAmb	10 17 20.1	
	comp=Z,15nm,0.9s						
J26L	Joseph Creek	78.40	337	P	P	10 17 18.3	+1.1
	baz=114,SNR=18						
M24K	Tolsona, Glenn	78.55	334	P	P	10 17 18.8	+0.8
	baz=112						
PAX	Paxson	78.57	335	P	P	10 17 18.1	0.0
PAX				IAmb	IAmb	10 17 22.2	
	comp=Z,22nm,1.4s						
PAX	Paxson	78.57	335	P	P	10 17 18.8	+0.7
	baz=112,SNR=7.9						
RIDG	Independent Ri	78.61	336	P	P	10 17 19.7	+1.4
	baz=113,SNR=6.4						
SCM	Sheep Creek Mo	78.95	334	IAmb	IAmb	10 17 24.1	
	comp=Z,12nm,1.0s						
SCM	Sheep Creek Mo	78.95	334	P	P	10 17 20.8	+0.6
	baz=110						
K24K	Donnelly Dome	79.02	336	P	P	10 17 21.3	+0.8
	baz=112						
M23K	Glacier View	79.12	334	P	P	10 17 22.2	+1.1
	baz=110						
J25K	Salcha River,	79.16	337	P	P	10 17 22.4	+1.0
	baz=113						
PAB	San Pablo	79.19	50	P	P	10 17 22.0	0.0
PAB				IAmb	IAmb	10 17 24.3	
	comp=Z,13nm,1.2s						
KNK	Knik Glacier	79.32	333	P	P	10 17 22.6	+0.4
	baz=110						
SEW	Seward	79.35	332	P	P	10 17 22.6	+0.3
	baz=108						
SML	Sawmill	79.39	333	P	P	10 17 22.7	+0.1
	baz=110						
WAT6	Susitna Watana	79.40	334	P	P	10 17 23.1	+0.3
	baz=110,SNR=8.4						
DHY	Denali Highway	79.42	335	P	P	10 17 23.9	+1.0
DHY	Denali Highway	79.42	335	P	P	10 17 22.8	-0.1
	baz=111						
ESDC	Sonseca Array	79.50	50	P	P	10 17 24.6	+0.9
	comp=Z,5.6nm,1.0s,baz=265,slow=5.7,SNR=25						
ESDC				LR	LR	10 50 38.9	
	comp=Z,119nm,19.5s,baz=254,slow=34						
	comp=Z,5.6nm,1.0s						
ESBB	Sonseca Array	79.50	50	IAmb	IAmb	10 17 28.0	
	comp=Z,24nm,1.4s						
HDA	Harding Lake	79.72	336	P	P	10 17 24.7	+0.4
	baz=111,SNR=7.0						
RC01	Rabbit Creek A	79.80	333	P	P	10 17 24.3	-0.5
	baz=108						
ILAR	Eielson Array	79.83	336	P	P	10 17 25.6	+0.8
	comp=Z,2.7nm,0.9s,baz=122,slow=3.8,SNR=19						
ILAR				PP	PP	10 20 26.2	+0.1
	comp=Z,0.8nm,0.9s,baz=131,slow=5.7,SNR=4.1						
ILAR				LR	LR	10 56 40.8	
	comp=Z,104nm,18.0s,baz=76,slow=39						
	comp=Z,2.7nm,0.9s						
ILAR	Eielson Array	79.83	336	P	P	10 17 24.3	-0.6
BRSE	Bradley Lake S	79.86	331	P	P	10 17 25.2	0.0
	baz=107						
BMAR	Burnt Mountain	79.99	339	P	P	10 17 27.1	+1.4
RAR	Rarotonga	80.06	249	LR	LR	10 43 58.8	
	comp=Z,366nm,20.8s,baz=110,slow=29						
RND	Reindeer	80.16	335	P	P	10 17 27.5	+0.7
POKR	Poker Plat Res	80.17	337	P	P	10 17 26.7	0.0
	baz=111						
COLA	College	80.25	336	P	P	10 17 27.8	+0.7
	baz=111						
TCOL	CIGO, UAF Yank	80.25	336	P	P	10 17 27.7	+0.6
	baz=111						
HOM	Homer	80.28	331	P	P	10 17 28.3	+0.9
	baz=106						
MCK	McKinley	80.30	335	P	P	10 17 27.7	+0.2
MCK				IAmb	IAmb	10 17 31.5	
	comp=Z,8.5nm,1.2s						
MCK	McKinley	80.30	335	P	P	10 17 28.1	+0.6
	baz=109						
CAPN	Captain Cook N	80.36	332	P	P	10 17 28.6	+0.9
	baz=107						
SUA	Susitna One	80.38	333	P	P	10 17 28.9	+0.8
	baz=107						
CUT	Chulitna	80.45	334	P	P	10 17 28.4	+0.2
	baz=108						
H24K	Noodor Dome	80.60	337	IAmb	IAmb	10 17 31.6	
	comp=Z,20nm,1.3s						
H24K	Noodor Dome	80.60	337	P	P	10 17 30.2	+1.2
	baz=111,SNR=9.0						
NEA2	Nenana	80.64	336	IAmb	IAmb	10 17 31.4	
	comp=Z,21nm,1.3s						
NEA2	Nenana	80.64	336	P	P	10 17 29.7	+0.4
	baz=109,SNR=7.9						
TRF	Thorofare Moun	80.78	335	IAmb	IAmb	10 17 33.6	
	comp=Z,17nm,1.2s						
TRF	Thorofare Moun	80.78	335	P	P	10 17 31.1	+0.8
	baz=108						
O20K	Slope Mountain	80.87	331	P	P	10 17 31.0	+0.3
	baz=106						
SKT	Skwentna	80.89	333	P	P	10 17 31.4	+0.8
	baz=107						
I23K	Minto, Yukon-K	80.94	336	IAmb	IAmb	10 17 33.3	
	comp=Z,21nm,1.3s						
I23K	Minto, Yukon-K	80.94	336	P	P	10 17 30.9	+0.1
	baz=109,SNR=10						
SPCR	Spurr Chakacha	80.98	332	P	P	10 17 31.2	0.0
	baz=106						
KTH	Kantishna Hill	81.08	335	P	P	10 17 32.0	+0.3
KTH				IAmb	IAmb	10 17 33.0	
	comp=Z,16nm,1.3s						
H23K	Yukon River	81.24	337	P	P	10 17 33.0	+0.5
H23K				IAmb	IAmb	10 17 35.8	
	comp=Z,9.4nm,1.2s						
H23K	Yukon River	81.24	337	P	P	10 17 32.7	+0.2
	baz=109						
BPAW	Bear Paw Mtn.	81.28	335	P	P	10 17 33.2	+0.5
	baz=108,SNR=11						
CHIR	Chirikof Islan	81.40	327	P	P	10 17 33.3	-0.1
	baz=102						
PPLA	Purkeypile	81.44	334	P	P	10 17 33.2	-0.6
PPLA	Purkeypile	81.44	334	P	P	10 17 33.8	0.0
	baz=106,SNR=6.1						
MLY	Manley	81.46	336	P	P	10 17 33.6	0.0
	baz=108,SNR=11						
CAST	Castle Rocks	81.54	334	P	P	10 17 34.1	-0.1
CAST	Castle Rocks	81.54	334	P	P	10 17 34.1	-0.1
	baz=106,SNR=8.3						
M20K	Styx River	81.59	333	IAmb	IAmb	10 17 37.5	
	comp=Z,8.4nm,0.9s						
M20K	Styx River	81.59	333	P	P	10 17 34.1	-0.4
	baz=105						
CHUM	Lake Minchumin	81.77	335	P	P	10 17 35.6	+0.4
	baz=106						
BELA	Belgrano 2	81.83	171	P	P	10 17 33.9	-1.5
BELA				IAmb	IAmb	10 17 36.9	
	comp=Z,19nm,1.5s						
N19K	Bonanza Creek	81.95	332	P	P	10 17 36.1	-0.3
	baz=104						
COLD	Coldfoot	81.95	338	P	P	10 17 37.2	+1.1
	baz=109						
I21K	Tanana	82.01	336	P	P	10 17 37.2	+0.7
I21K	Tanana	82.01	336	P	P	10 17 36.7	+0.2
	baz=107						
O18K	Koktuh Hills	82.07	331	P	P	10 17 36.5	-0.5
	baz=103						
L20K	Farewell, AK	82.08	333	P	P	10 17 36.9	-0.1
	baz=105,SNR=6.0						
M19K	Big River Lodg	82.17	333	P	P	10 17 36.6	-0.8
	baz=104						
TOLK	Toolik Lake Re	82.19	340	P	P	10 17 37.3	-0.1
	baz=110						
TOA0	Torodi Ar. Sit	82.38	77	P	P	10 17 38.5	-1.0
TORD	Torodi Ar. Bea	82.38	77	P	P	10 17 38.9	-0.6
	comp=Z,2.4nm,0.6s,baz=282,slow=6.3,SNR=24						
TORD				LR	LR	10 52 55.6	
	comp=Z,418nm,19.9s,baz=220,slow=35						
	comp=Z,2.4nm,0.6s						
TORD	Torodi Ar. Bea	82.38	77	P	P	10 17 39.1	-0.4
K20K	Telida	82.39	334	P	P	10 17 38.1	-0.4
	baz=105,SNR=6.0						
L19K	White Mountain	82.45	333	P	P	10 17 38.9	-0.1
	baz=104						
H21K	Melozitna Rive	82.47	337	P	P	10 17 38.6	-0.4
	baz=106						
N18K	Kilae Creek	82.59	331	P	P	10 17 40.3	+0.6
N18K				IAmb	IAmb	10 18 04.6	
	comp=Z,7.1nm,1.1s						
N18K	Kilae Creek	82.59	331	P	P	10 17 39.4	-0.3
	baz=103						
EKA	Eskdalemuir Ar	82.59	34	LR	LR	10 53 35.0	
	comp=Z,120nm,18.9s,baz=215,slow=35						
J20K	Nowinta River	82.63	335	IAmb	IAmb	10 17 41.5	
	comp=Z,9.4nm,1.0s						
J20K	Nowinta River	82.63	335	P	P	10 17 39.9	+0.2
	baz=105						
IMAR	Indian Mountai	82.94	337	P	P	10 17 42.0	+0.7
O17K	Koliganek Bris	82.98	330	P	P	10 17 41.6	-0.1
	baz=102						
TTA	Tatalina	83.14	334	P	P	10 17 43.1	+0.5
TTA				IAmb	IAmb	10 17 46.0	
	comp=Z,10nm,1.2s						
TTA	Tatalina	83.14	334	P	P	10 17 41.8	-0.8
	baz=103						
O16K	Kokwok River B	83.45	330	P	P	10 17 43.7	-0.4
	baz=101						
GCSA	Galena City Sc	83.92	335	P	P	10 17 46.2	-0.2
	baz=102						
JMIC	Jan Mayen	83.92	18	LR	LR	10 54 47.7	
	comp=Z,54nm,19.3s,baz=246,slow=36						
VNA3	Neumayer Olymp	84.20	162	P	P	10 17 48.3	+0.5
VNA1	Neumayer--Stat	84.46	161	P	P	10 17 50.3	+1.3
VNA2	Neumayer--Watz	84.81	162	P	P	10 17 50.6	-0.2
	baz=314,slow=3.9						
SNAA	Sanae	86.42	162	P	P	10 17 59.3	+0.4
SNAA	Sanae	86.42	162	P	P	10 17 58.6	-0.3
	comp=Z,1.6nm,0.8s,baz=279,slow=3.5,SNR=4.3						
SNAA				LR	LR	10 55 04.4	
	comp=Z,144nm,21.5s,baz=297,slow=35						
	comp=Z,1.6nm,0.8s						
SNAA	Sanae	86.42	162	P	P	10 17 58.2	-0.7
SNAA				IAmb	IAmb	10 18 02.5	
	comp=Z,9.3nm,1.4s						
SNF	Seneffe	86.48	40	*d*PcP	PcP	10 18 00.2	-1.7
DOU	Dourbes	86.65	40	*d*PcP	PcP	10 18 01.1	-1.6
BMRD	Maredsous	86.78	40	*d*PcP	PcP	10 18 02.2	-1.0
BGES	Gesves	86.98	40	*d*PcP	PcP	10 18 02.9	-1.3
RCHB	Rochefort	87.06	40	*d*PcP	PcP	10 18 03.1	-1.4
BCLA	Clavier	87.12	40	*d*PcP	PcP	10 18 04.3	-0.5
ANM	Nome	87.50	335	P	P	10 18 04.0	-0.3
	baz=94						
WLF	Walferdange	87.64	40	*d*PcP	PcP	10 18 06.3	-0.8
TNA	Tin City	88.64	335	P	P	10 18 09.6	0.0
	baz=92						
TUE	Stuetta	89.72	44	P	P	10 18 15.6	+0.2
KEST	Kesra	89.75	54	LR	LR	10 58 48.1	
	comp=Z,107nm,19.5s,baz=261,slow=36						
DAVOX	Davos/Dischmat	90.08	43	LR	LR	10 57 51.7	
	comp=Z,137nm,18.4s,baz=261,slow=35						
GAMB	Gambell	90.25	334	P	P	10 18 17.4	+0.2
	baz=89						
QSPA	South Pole Qui	90.34	180	P	P	10 18 18.9	+1.2
	comp=Z,3.9nm,0.6s,baz=155,slow=2.0,SNR=38						
QSPA				LR	LR	10 53 29.1	
	comp=Z,172nm,19.8s,baz=160,slow=32						
	comp=Z,3.9nm,0.6s						
QSPA	South Pole Qui	90.34	180	P	P	10 18 18.8	+1.1
QSPA				IAmb	IAmb	10 18 21.0	
	comp=Z,6.4nm,0.8s						
NOA	NORSAR Array B	90.60	29	P	P	10 18 19.6	+0.6
	comp=Z,0.4nm,0.7s,baz=269,slow=4.8,SNR=2.2						
NOA				LR	LR	10 55 26.7	
	comp=Z,56nm,21.6s,baz=275,slow=33						
	comp=Z,0.4nm,0.7s						
SPITS	Spitsbergen Ar	91.14	12	LR	LR	11 01 20.8	
	comp=Z,70nm,18.1s,baz=213,slow=37						
AFI	Afiamalu	91.26	256	LR	LR	10 50 28.5	
	comp=Z,161nm,19.4s,baz=150,slow=30						
HFS	Hagfors	91.87	30	LR	LR	10 56 14.4	
	comp=Z,129nm,21.0s,baz=248,slow=33						
CLL	Collm	92.00	39	*e*P	P	10 18 27.0	+1.4
CLL				*e*SKSac	SKSac	10 29 00.0	+0.8
CLL				*e*sS	sS	10 29 42.0	+10
CLL				*e*PS	PnS	10 30 41.0	+1.6
CLL				*e*PPS	PPS	10 31 18.0	
CLL				*e*SS	SS	10 35 38.0	+1.5
CLL				*e*SSS	SSS	10 39 18.0	
CLL				*e*SSSS		10 42 12.0	
CLL				LmV		10 57 00.0	
	comp=Z,100nm,20.2s						
GERES	GERESS Array B	92.59	41	P	P	10 18 28.5	0.0
	comp=Z,0.5nm,0.5s,baz=4.8,slow=1.6,SNR=7.2						
GERES				LR	LR	10 58 46.1	
	comp=Z,144nm,20.0s,baz=240,slow=35						
	comp=Z,0.5nm,0.5s						
GERES	GERESS Array B	92.59	41	P	P	10 18 27.8	-0.7
LJU	Ljubljana	93.33	44	*i*P	P	10 18 33.1	+1.2
VAE	Valguarnera	93.77	53	LR	LR	11 00 37.7	
	comp=Z,196nm,18.3s,baz=273,slow=36						
BOJS	Bojanci	93.87	45	*i*P	P	10 18 35.6	+1.3
VRAC	Vranov	94.45	41	LR	LR	10 59 36.4	
	comp=Z,97nm,19.9s,baz=271,slow=35						
ARCES	ARCESS Array B	95.31	20	LR	LR	10 57 59.4	
	comp=Z,47nm,19.4s,baz=284,slow=33						
VNDA	Vanda	96.07	191	LR	LR	10 55 47.1	
	comp=Z,220nm,18.5s,baz=119,slow=32						
RAO	Raoul Island	96.58	241	LR	LR	10 51 31.2	
	comp=Z,266nm,21.6s,baz=95,slow=29						
FINES	FINESS Array B	97.64	28	LR	LR	10 59 27.5	
	comp=Z,117nm,21.5s,baz=256,slow=33						
TSUM	Tsumeb	97.78	109	LR	LR	11 01 06.5	
	comp=Z,349nm,19.1s,baz=325,slow=34						
SUR	Sutherland	99.75	123	LR	LR	11 03 26.4	
	comp=Z,374nm,18.1s,baz=282,slow=35						
URZ	Urewera	99.87	231	LR	LR	10 57 46.8	
	comp=Z,214nm,18.1s,baz=211,slow=32						
ZALV	Zalesovo Beam	124.60	10	PKP	PKiKP	10 24 15.5	-1.0
	comp=Z,1.8nm,0.8s,baz=263,slow=2.9,SNR=4.8						
MKAR	Makanchi Array	130.75	16	PKP	PKiKP	10 24 27.8	-1.4
	comp=Z,1.1nm,0.8s,baz=20,slow=3.9,SNR=9.7						
SONM	Songino Array	131.68	354	PKP	PKiKP	10 24 29.2	-2.0
	comp=Z,0.9nm,0.8s,baz=100,slow=0.9,SNR=5.8						
SONM	Songino Array	131.68	354		PKiKP	10 24 30.2	-0.9
KSRS	Korea Array	134.14	328	PKP	PKiKP	10 24 34.7	-1.5
	comp=Z,1.1nm,0.7s,baz=20,slow=2.6,SNR=5.2						
BTO	Baotou	138.17	348	*e*PKP	PKPdf	10 24 40.6	-1.8
ASAR	Alice Springs	139.29	233	PKhKP	PKPpre	10 24 36.4	
	comp=Z,0.5nm,0.9s,baz=101,slow=3.3,SNR=6.4						
ASAR				PKP	PKiKP	10 24 44.8	-2.4
	comp=Z,0.9nm,0.7s,baz=114,slow=1.9,SNR=16						
WRA	Warramunga Arr	140.66	238	PKhKP	PKPpre	10 24 39.9	
	comp=Z,0.6nm,0.6s,baz=113,slow=2.0,SNR=7.8						
WRA				PKP	PKiKP	10 24 47.3	-2.7
	comp=Z,1.7nm,0.9s,baz=112,slow=1.6,SNR=15						
WRA	Warramunga Arr	140.66	238		PKiKP	10 24 46.8	-3.2
LZH	Lanzhou	143.57	354	*e*PKP	PKPdf	10 24 50.3	-2.1
LZH				pPKP	sPKPdf	10 24 55.7	+0.3
LZH				LR	LR		
	comp=N,270nm,17.9s						
LZH				LR	LR		
	comp=E,190nm,18.0s						
LZH				LR	LR		
	comp=Z,220nm,20.6s						
WHN	Wuhan	146.22	336	⇑PKPbc	PKiKP	10 24 58.3	-2.8
PZH	PanZhiHua	153.27	355	PKPbc	PKPdf	10 25 03.8	-4.5
CMAR	Chiang Mai Arr	161.36	2	PKP	PKPdf	10 25 19.9	+1.3
	comp=Z,0.7nm,0.3s,baz=297,slow=2.8,SNR=4.5						
CMAR				PKPab	PKPab	10 26 01.0	-1.2
	comp=Z,1.6nm,0.7s,baz=339,slow=5.2,SNR=5.7						
CMAR	Chiang Mai Arr	161.36	2	PKPdf	PKPdf	10 25 14.9	-3.6
CMAR				PKPab	PKPab	10 26 01.8	-0.3

*UCR **01** 10:07:51.0±1.1, 12°.84N×89°.12W, h30km±2km, ML3.7*
*SNET **01** 10:07:51.1±1.2, 12°.82N×89°.12W, h35km±10km, ML3.8*
*INET **01** 10:07:51.4±1.0, 12°.79N×89°.15W, h35km±85km, ML3.8*

ISC 01 10:07:50.6±1.9, 12°.80N±0°.08×89°.13W±0°.04, h29km±12km, n64, σ0s.43/95, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJTE	Alcalda de S	0.82	8	*e*P	Pn	10 08 05.9	-0.3
SJTE				*e*S	Sn	10 08 17.4	-0.1
SJTE	Alcalda de S	0.82	8	*e*P	Pn	10 08 05.9	-0.3
SJTE				*e*S	Sn	10 08 17.4	-0.1
LFRS	El Faro	0.82	5	*e*P	Pn	10 08 06.4	0.0
LFRS	El Faro	0.82	5	*e*P	Pn	10 08 06.4	0.0
COEG	Centro de Oper	0.85	17	*e*P	Pn	10 08 06.6	-0.1
COEG	Centro de Oper	0.85	17	*e*P	Pn	10 08 06.6	-0.1
ITCA	Escuela Especi	0.88	351	*e*S	Sn	10 08 19.6	+0.6
ITCA	Escuela Especi	0.88	351	*e*S	Sn	10 08 19.6	+0.6
SNET	Serv Nac Est T	0.89	354	*e*P	Pn	10 08 07.2	0.0
SNET	Serv Nac Est T	0.89	354	*e*P	Pn	10 08 07.2	0.0
SNET	Serv Nac Est T	0.89	354	*e*P	Pb	10 08 07.6	0.0
SNET				*e*S	Sb	10 08 19.3	+0.2
AEIL	Aeropuerto Ilo	0.90	1	*e*S	Sb	10 08 20.0	+0.7
AEIL				IAML		10 08 22.1	
	comp=Z,2µm,0.2s						
AEIL	Aeropuerto Ilo	0.90	1	*e*S	Sb	10 08 20.0	+0.7
AEIL				IAML		10 08 22.1	
	comp=Z,2µm,0.2s						
UESV	Universidad de	0.90	22	*e*P	Pn	10 08 07.2	-0.1
UESV				*e*S	Sn	10 08 19.0	-0.3
UESV	Universidad de	0.90	22	*e*P	Pn	10 08 07.2	-0.1
UESV				*e*S	Sn	10 08 19.0	-0.3
SEMO	Seminario San	0.91	354	*e*S	Sb	10 08 19.7	+0.2
JAYA	Jayaque - finc	0.91	340	*e*P	Pn	10 08 06.4	-1.1
JAYA				*e*S	Sn	10 08 19.1	-0.6
JAYA	Jayaque - finc	0.91	340	*e*P	Pn	10 08 06.4	-1.1
JAYA				*e*S	Sn	10 08 19.1	-0.6
COEB	Comit de Eme	0.91	40	*e*P	Pn	10 08 07.5	0.0
COEB				*e*S	Sb	10 08 19.7	0.0
COEB	Comit de Eme	0.91	40	*e*P	Pn	10 08 07.5	0.0
COEB				*e*S	Sb	10 08 19.7	0.0
UDBS	Universidad Do	0.91	358	*e*S	Sb	10 08 19.8	0.0
UDBS	Universidad Do	0.91	358	*e*S	Sb	10 08 19.8	0.0
UEES	Universidad Ev	0.92	353	*e*S	Sb	10 08 20.4	+0.4
UEES	Universidad Ev	0.92	353	*e*S	Sb	10 08 20.4	+0.4
PAVA	Las Pavas	0.93	12	*e*P	Pb	10 08 08.1	-0.1
PAVA				*e*S	Sn	10 08 20.2	0.0
PAVA	Las Pavas	0.93	12	*e*P	Pb	10 08 08.1	-0.1
PAVA				*e*S	Sn	10 08 20.2	0.0
PAVA	Las Pavas	0.93	12	*e*P	Pn	10 08 08.0	+0.2
PAVA				*e*S	Sb	10 08 20.8	+0.5
BOQS	Boqueron	0.94	351	*e*P	Pn	10 08 08.1	0.0
BOQS	Boqueron	0.94	351	*e*P	Pn	10 08 08.1	0.0
SCLA	Alcaldia de Sa	0.98	23	*e*P	Pn	10 08 08.8	+0.3
SCLA				*e*S	Sb	10 08 21.8	+0.1
SCLA	Alcaldia de Sa	0.98	23	*e*P	Pn	10 08 08.8	+0.3
SCLA				*e*S	Sb	10 08 21.8	+0.1
PQSS	Presa 15 de Se	0.99	34	*e*P	Pn	10 08 08.8	+0.3
PQSS				*e*S	Sb	10 08 21.7	-0.2
PQSS	Presa 15 de Se	0.99	34	*e*P	Pn	10 08 08.8	+0.3
PQSS				*e*S	Sb	10 08 21.7	-0.2
PACA	Pacayal	1.03	50	*e*P	Pn	10 08 09.0	-0.2
PACA				*e*S	Sb	10 08 23.5	+0.3
PACA	Pacayal	1.03	50	*e*P	Pn	10 08 09.0	-0.2
PACA				*e*S	Sb	10 08 23.5	+0.3

CEDA	San Andres	1.03	346	eS	Sb	10 08 22.9	-0.3
CEDA	San Andres	1.03	346	eS	Sb	10 08 22.9	-0.3
RANC	El Ranchito	1.04	52	eP	Pn	10 08 09.5	+0.2
RANC	El Ranchito	1.04	52	eP	Pn	10 08 09.5	+0.2
VSM	San Miguel	1.04	53	eP	Pn	10 08 09.2	-0.3
VSM	San Miguel	1.04	53	eP	Pn	10 08 09.2	-0.3
CEVE	Cerro Verde	1.13	335	eP	Pn	10 08 10.3	-0.4
CEVE				eS	Sb	10 08 26.8	+0.6
CEVE	Cerro Verde	1.13	335	eP	Pn	10 08 10.3	-0.4
CEVE				eS	Sb	10 08 26.8	+0.6
SBLS	San Blas	1.14	335	eP	Pn	10 08 10.8	0.0
SBLS	San Blas	1.14	335	eP	Pn	10 08 10.8	0.0
RTR	El Retiro	1.20	335	eP	Pn	10 08 12.0	+0.4
RTR	El Retiro	1.20	335	eP	Pn	10 08 12.0	+0.4
NUBE	Las Nubes	1.27	330	eP	Pn	10 08 12.9	+0.4
NUBE				eS	Sn	10 08 28.7	+0.1
NUBE	Las Nubes	1.27	330	eP	Pn	10 08 12.9	+0.4
NUBE				eS	Sn	10 08 28.7	+0.1
LCND	La Caada	1.31	67	eP	Pn	10 08 13.0	+0.1
LCND				eS	Sn	10 08 29.7	+0.2
LCND				IAML		10 08 32.0	
	comp=Z,1μm,0.2s						
LCND	La Caada	1.31	67	eP	Pn	10 08 13.0	+0.1
LCND				eS	Sn	10 08 29.7	+0.2
LCND				eS	Sb	10 08 29.8	-1.2
LCND				IAML		10 08 32.0	
	comp=Z,1μm,0.2s						
CAHU	Cacacuatique	1.32	43	eP	Pn	10 08 12.9	-0.3
CAHU	Cacacuatique	1.32	43	eP	Pn	10 08 12.9	-0.3
FAGO	Alcalda de S	1.34	48	eP	Pn	10 08 13.7	+0.5
FAGO				eS	Sb	10 08 31.1	-0.7
FAGO	Alcalda de S	1.34	48	eP	Pn	10 08 13.7	+0.5
FAGO				eS	Sb	10 08 31.1	-0.7
FAGO	Alcalda de S	1.34	48	eP	Pn	10 08 13.8	+0.5
FAGO				eS	Sn	10 08 30.8	+0.7
CNCH	Conchagua	1.35	69	eP	Pn	10 08 13.1	-0.5
CNCH				eS	Sn	10 08 30.7	+0.1
CNCH				IAML		10 08 35.8	
	comp=Z,2μm,0.4s						
CNCH	Conchagua	1.35	69	eP	Pn	10 08 13.1	-0.5
CNCH				eS	Sn	10 08 30.7	+0.1
CNCH				IAML		10 08 35.8	
	comp=Z,2μm,0.4s						
LLGN	La Laguna	1.37	8	eS	Sb	10 08 32.0	-0.8
LLGN	La Laguna	1.37	8	eS	Sb	10 08 32.0	-0.8
SLOZ	Alcaldia de Sa	1.38	333	eS	Sb	10 08 32.3	-0.7
CRIN	San Cristobal	2.03	92	eP	Pn	10 08 23.2	+0.4
CRIN				eS	Sn	10 08 47.4	+0.1
CRIN				IAML		10 08 48.0	
	comp=N,602nm,0.4s						
TGUH	Tegucigalpa,Un	2.20	55	eP	Pn	10 08 25.9	+0.7
TGUH	Tegucigalpa,Un	2.20	55	eP	Pn	10 08 26.0	+0.7

MAN 01 10:15:10.4, 16°.10N×120°.41E, h23km, mb3.8, ML2.6, MS2.1, 3D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPP	San Manuel, Pa	0.27	80	⇓iP	Pn	10 15 18.2	+0.1
BOLP	Bolinao	0.55	300	⇓iP	Pn	10 15 22.2	+0.8
BOLP				eS		10 15 31.5	
BALP	Baler	1.18	108	⇓eP	Pb	10 15 31.8	+0.7
BALP				eS		10 15 47.5	

NOU 01 10:50:15.3, 15°.65S×166°.47E, h6km, MLv4.2/10, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	Devils Point	2.64	142	P	Pn	10 50 58.0	-0.4
KOUNC	Koumac, New Ca	5.30	203	P	Pn	10 51 34.9	-0.1
DZM	Mont Dzumac	6.39	180	P	Pn	10 51 49.5	-0.6
NOUC	Port Laguerre	6.42	181	P	Pn	10 51 50.5	+0.1
OUENC	Ouen Island, N	6.74	177	P	Pn	10 51 55.9	+1.0
PINNC	Pines Island,	6.99	173	P	Pn	10 51 58.8	+0.6

*AEIC **01** 11:12:57±2.0, 51°.2N±0°.1×179°.84W±0°.08, h34km±2km, ML3.7/17, mb3.9/44(NEIC), Error ellipse: s-maj=19.1km s-min=6.8km az=172.0*

*NEIC **01** 11:12:58.6±1.7, 51°.1N±0°.1×179°.67W±0°.09, h46km±11km, Error ellipse: s-maj=16.6km s-min=7.3km az=168.0*

*IDC **01** 11:13:01.1±3.4, 51°.47N×179°.61W, h61km±28km, mb3.4/9, mbtmp3.8/12, ML3.8/3, MS3.1/3, Error ellipse: s-maj=48.7km s-min=14.9km az=4.0*

ISC 01 11:12:57.8±1.0, 51°.1N±0°.2×179°.69W±0°.05, h43km, n89, σ1s.19/87, mb3.9/25, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAKI	Gareloi-Kavalg	0.74	47		Pn	11 13 10.9	-0.9
GASW	Gareloi Southw	0.89	35		Pn	11 13 13.7	-0.2
GALAA	Gareloi Lava P	0.91	39		Pn	11 13 14.2	0.0
GAEA	Gareloi East	0.94	39		Pn	11 13 14.5	0.0
TASE	Tanaga Southea	1.29	52		Pn	11 13 19.8	+0.4
TAFP	Tanaga Falls P	1.36	51		Pn	11 13 20.6	+0.4
TAFP					Sn	11 13 37.6	+0.5
TAPA	Tanaga Point A	1.40	56		Pn	11 13 21.2	+0.4
KIMD	Kanaga Island	1.69	64		Pn	11 13 25.3	+0.5
KIWB	Kanaga Island	1.78	62		Pn	11 13 26.6	+0.6
KIKV	Kanaga Island	1.78	61		Pn	11 13 27.3	+1.3
KIKV					Sn	11 13 50.3	+2.9
ADK	Adak	2.05	65	Pn	Pn	11 13 30.4	+0.7
ADK	Adak	2.05	65		Sn	11 13 57.8	+3.7
GSCK	Great Sitkin C	2.40	65		Pn	11 13 36.1	+1.6
GSTD	Great Sitkin T	2.43	64		Pn	11 13 36.5	+1.5
GSMY	Great Sitkin M	2.47	65		Pn	11 13 36.7	+1.2
GSTR	Great Sitkin T	2.49	64	Pn	Pn	11 13 35.2	-0.6
SHEM	Shemya Is, Ala	4.20	296	P	Pn	11 13 59.4	+0.3
	12nm,0.3s,baz=86,slow=14,SNR=27						
SHEM				S	Sn	11 14 49.9	+3.1
	19nm,0.5s,baz=297,slow=23,SNR=1.0						
SHEM				LR	LR	11 15 29.7	
	comp=Z,107nm,20.4s,baz=117,slow=36						
	32nm,0.4s						
NIKH	Nikolski High	6.96	70	Pn	Pn	11 14 36.7	-0.3
SPIA	Saint Paul Isl	8.26	38	Pn	Pn	11 14 54.7	-0.2
UNV	Unalaska Valle	8.52	66	Pn	Pn	11 14 56.5	-1.9
AKUT	Akutan	9.01	65	Pn	Pn	11 15 04.7	-0.5
FALS	False Pass	10.52	62	Pn	Pn	11 15 24.6	-1.2
SDPT	Sand Point	12.28	62	Pn	Pn	11 15 49.6	-0.2
PETK	Petropavlovsk-	14.04	287	P	Pn	11 16 14.3	+0.4
	0.5nm,0.3s,baz=159,slow=12,SNR=1.9						
PETK				LR	LR	11 21 48.5	
	comp=Z,74nm,20.2s,baz=30,slow=38						
	1.1nm,0.4s						
O18K	Koktuh Hills	16.35	48		Pn	11 16 44.6	+0.6
O18K				IAmb	IAmb	11 16 53.7	
	comp=Z,8.3nm,0.9s						
N18K	Kilae Creek	16.37	45	Pn	Pn	11 16 44.2	0.0
N18K				IAmb	IAmb	11 16 57.3	
	comp=Z,10nm,1.3s						
OHAK	Old Harbor	16.59	58	Pn	Pn	11 16 45.0	-1.8
SVW2	Sparrevohn	16.69	44	Pn	Pn	11 16 47.5	-0.7
KDAK	Kodiak Island	17.07	56	P	Pn	11 16 51.0	-1.9
	comp=Z,1.0nm,0.3s,baz=250,slow=4.7,SNR=7.2						
	comp=Z,14nm,1.1s						
KDAK	Kodiak Island	17.07	56	Pn	Pn	11 16 51.5	-1.4
TTA	Tatalina	17.41	38		P	11 16 58.2	+0.2
CNPM	China Poot	18.16	51	P	Pn	11 17 05.3	-1.1
K20K	Telida	18.39	38	P	P	11 17 07.8	-1.0
J20K	Nowinta River	18.78	36	P	Pn	11 17 13.8	-0.1
J20K				IAmb	IAmb	11 17 23.1	
	comp=Z,11nm,1.5s						
SEW	Seward	19.18	50	P	P	11 17 17.5	+0.1
CAST	Castle Rocks	19.20	39	P	Pn	11 17 17.9	-1.0
CAST				IAmb	IAmb	11 17 19.8	
	comp=Z,6.3nm,0.6s						
KTH	Kantishna Hill	19.73	40	P	Pn	11 17 24.6	-0.6
KTH				IAmb	IAmb	11 17 25.1	
	comp=Z,10nm,0.7s						
TRF	Thorofare Moun	19.94	40	P	Pn	11 17 26.9	-0.9
IMAR	Indian Mountai	19.94	32	P	Pn	11 17 26.8	-0.9
H21K	Melozitna Rive	20.07	33	P	P	11 17 26.9	-0.2
I21K	Tanana	20.11	35	P	P	11 17 27.6	+0.1
SML	Sawmill	20.18	46	P	P	11 17 26.6	-1.8
SML				IAmb	IAmb	11 17 51.9	
	comp=Z,6.4nm,1.0s						
MLY	Manley	20.48	36	P	P	11 17 32.0	+0.3
GLI	Glacier Island	20.50	49	P	Pn	11 17 33.1	-1.2
RND	Reindeer	20.51	41	P	P	11 17 31.7	-0.3
RND				IAmb	IAmb	11 17 43.2	
	comp=Z,6.1nm,1.0s						
SCM	Sheep Creek Mo	20.65	46	P	P	11 17 32.5	-1.0
FID	Port Fidalgo	20.77	49	P	P	11 17 32.3	-2.4
NEA2	Nenana	20.92	38	P	P	11 17 36.6	+0.4
NEA2				IAmb	IAmb	11 17 42.1	
	comp=Z,5.9nm,0.8s						
DHY	Denali Highway	21.02	43	P	P	11 17 36.8	-0.7
DHY				IAmb	IAmb	11 17 40.2	
	comp=Z,8.2nm,0.7s						
I23K	Minto, Yukon-K	21.05	36	P	P	11 17 38.1	+0.4
M24K	Tolsona, Glenn	21.25	46	P	P	11 17 39.2	-0.7
WRH	Wood River Hil	21.25	39	P	P	11 17 38.5	-1.3
H23K	Yukon River	21.31	35	P	P	11 17 39.0	-1.5
H23K				IAmb	IAmb	11 18 04.9	
	comp=Z,6.5nm,1.2s						
MDM	Murphy Dome	21.40	37	P	P	11 17 38.8	-2.7
MDM				IAmb	IAmb	11 17 52.4	
	comp=Z,8.2nm,1.5s						
CCB	Clear Creek Bu	21.43	38	P	P	11 17 40.2	-1.6
HDA	Harding Lake	21.68	39	P	P	11 17 44.0	-0.4
BMRM	Bremner River	21.71	49	P	P	11 17 46.3	+1.5
PAX	Paxson	21.81	44	P	P	11 17 46.0	+0.1
PAX				IAmb	IAmb	11 17 51.4	
	comp=Z,9.2nm,1.5s						
ILAR	Eielson Array	21.84	39	P	P	11 17 43.0	-3.2
	comp=Z,0.8nm,0.9s,baz=231,slow=8.1,SNR=9.2						
	comp=Z,0.8nm,0.9s						
N25K	Chitina, Valde	21.85	48	P	P	11 17 46.2	-0.1
N25K				IAmb	IAmb	11 17 48.3	
	comp=Z,4.4nm,0.7s						
H24K	Noodor Dome	21.92	36	P	P	11 17 47.0	-0.1
H24K				IAmb	IAmb	11 17 50.2	
	comp=Z,6.9nm,1.4s						
GLB	Gilahina Butte	22.18	48	P	P	11 17 49.7	-0.2
GLB				IAmb	IAmb	11 17 52.2	
	comp=Z,5.1nm,0.9s						
VRDI	Verde Repeater	22.31	49	P	P	11 17 52.2	+0.8
VRDI				IAmb	IAmb	11 18 19.6	
	comp=Z,6.3nm,1.2s						
RIDG	Independent Ri	22.31	42	P	P	11 17 50.4	-0.9
RIDG				IAmb	IAmb	11 17 53.8	
	comp=Z,5.9nm,1.3s						
DOT	Dot Lake	22.62	43	P	P	11 17 53.3	-1.2
DOT				IAmb	IAmb	11 17 55.6	
	comp=Z,2.7nm,0.7s						
L26K	Log Cabin Wild	22.75	44	P	P	11 17 55.9	0.0
L26K				IAmb	IAmb	11 17 57.6	
	comp=Z,2.3nm,0.7s						
J26L	Joseph Creek	23.09	41	P	P	11 17 57.1	-2.3
J26L				IAmb	IAmb	11 18 02.2	
	comp=Z,3.1nm,0.8s						
M27K	Edge Creek, AK	23.26	46	P	P	11 18 01.6	+0.4
M27K				IAmb	IAmb	11 18 27.9	
	comp=Z,6.2nm,1.1s						
L27K	Beaver Creek,	23.43	45	P	P	11 18 02.8	0.0
L27K				IAmb	IAmb	11 18 04.1	
	comp=Z,6.8nm,1.5s						
BCAR	Beaver Creek A	23.45	45	P	P	11 18 02.6	-0.4
BMAR	Burnt Mountain	23.81	33	P	P	11 18 06.4	+0.1
EGAK	Eagle	24.16	41	P	P	11 18 08.9	-0.5
DLBC	Dease Lake	29.00	56	LR	LR	11 30 54.6	
	comp=Z,79nm,18.9s,baz=268,slow=37						
H11N2	WAKE ISLAND Hy	33.01	204	T	T	11 54 58.7	
	baz=17,slow=76,SNR=6.0						
H11N3	WAKE ISLAND Hy	33.02	204	T	T	11 54 54.7	
	baz=17,slow=76,SNR=4.7						
H11N1	WAKE ISLAND Hy	33.02	204	T	T	11 54 57.1	
	baz=17,slow=76,SNR=5.5						
YKA	Yellowknife Ar	35.86	46	P	P	11 19 52.6	-0.3
	comp=Z,1.0nm,0.5s,baz=282,slow=7.2,SNR=15						
	comp=Z,1.0nm,0.5s						
BOZ	Bozeman (W)	44.12	69	P	P	11 21 01.9	+0.1
NVAR	Mina Array Bea	44.15	82	P	P	11 21 03.1	+0.9
	comp=Z,0.1nm,0.5s,baz=295,slow=6.9,SNR=2.0						
	comp=Z,0.1nm,0.5s						
SONM	Songino Array	46.29	296	P	P	11 21 18.9	0.0
	comp=Z,0.6nm,0.7s,baz=51,slow=9.7,SNR=3.8						
	comp=Z,0.6nm,0.7s						
PDAR	Pinedale Array	46.94	71	P	P	11 21 25.3	+1.1
	comp=Z,1.4nm,0.6s,baz=298,slow=4.1,SNR=11						
	comp=Z,1.4nm,0.6s						
PDAR	Pinedale Array	46.94	71	P	P	11 21 25.4	+1.2
HHC	Hu-ho-hao-te	47.24	286	eP	P	11 21 25.6	-0.8
HHC				pmax	pmax		
	comp=Z,31nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,6.3s						
WMQ	Urumqi	59.05	303	eP	P	11 22 53.0	-0.2
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
TXAR	Lajitas Array	59.26	80	P	P	11 22 55.1	+0.3
	comp=Z,0.1nm,0.4s,baz=316,slow=5.3,SNR=5.9						
	comp=Z,0.1nm,0.4s						
MKAR	Makanchi Array	59.79	308	P	P	11 22 57.8	-0.5
	comp=Z,1.7nm,0.8s,baz=54,slow=6.4,SNR=12						
	comp=Z,1.7nm,0.8s						
MKAR	Makanchi Array	59.79	308	P	P	11 22 57.4	-0.8
FINES	FINESS Array B	65.97	347	P	P	11 23 37.4	-1.6
	comp=Z,1.5nm,0.8s,baz=35,slow=5.1,SNR=2.9						
	comp=Z,1.5nm,0.8s						
NOA	NORSAR Array B	67.91	354	P	P	11 23 50.5	-0.9
	comp=Z,1.0nm,0.7s,baz=355,slow=4.8,SNR=2.1						
	comp=Z,1.0nm,0.7s						

MAN 01 11:13:26.3, 9°.64N×122°.30E, h32km, mb3.8, ML2.6, MS2.1, Negros

*SOME **01** 11:35:48.7, 44°.45N×82°.85E, h20km*

*NNC **01** 11:35:52.5±1.8, 44°.51N×82°.47E, h0km, mb2.6, mpv2.0, Error ellipse: s-maj=26.2km s-min=7.7km az=116.0*

ISC 01 11:35:50.7±2.5, 44°.32N±0°.09×82°.9E±0°.1, h17km, n9, σ1s.40/15, 2C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	Ketmen	2.05	246	eP	Pn	11 36 26.8	+2.2
	1.3nm,0.2s						
KTMS				eS	Sb	11 36 54.0	+1.1
	5.7nm,0.1s						
DJR	Jarkent	2.24	271	eP	Pn	11 36 28.7	+1.6
	4.5nm,0.3s						
DJR				eS	Sb	11 36 57.2	-1.1
	4.6nm,0.2s						
MK31	Makanchi Array	2.51	350	Pn	Pn	11 36 31.7	+1.0
	0.1nm,0.1s,baz=174,slow=16,SNR=66						
MK31				Lg	Lg	11 37 04.1	
	0.9nm,0.3s,baz=168,slow=25,SNR=13						
MAKZ	Makanchi	2.57	345	⇓Pn	Pn	11 36 32.1	+0.5
	0.3nm,0.2s						
MAKZ				⇓Lg	Lg	11 37 06.2	
	0.6nm,0.4s						
PDGK	Podgornoye	2.67	249	⇑Pn	Pn	11 36 33.8	+0.7
	0.5nm,0.2s						
PDGK				⇑Lg	Lg	11 37 10.3	
	3.8nm,0.4s						
KAPS	Kapalarasan	2.71	292	eP	Pb	11 36 37.6	-1.2
	1.3nm,0.4s						
KAPS				eS	Sb	11 37 12.1	+0.4
	8.7nm,0.4s						
SHLS	Shalkode	2.76	246	eP	Pn	11 36 34.0	-0.3
	3.1nm,0.2s						
SHLS				eS	Sn	11 37 06.0	-1.3
	7.7nm,0.3s						
KPKS	Kokpek	3.18	256	eP	Pb	11 36 44.9	-1.8
	1.3nm,0.2s						
KPKS				eS	Sb	11 37 24.9	-0.3
	11nm,0.4s						
BLB	Baldybastay	3.20	267	eP	Pb	11 36 46.9	-0.2
	2.0nm,0.1s						
BLB				eS	Sb	11 37 28.1	+2.3
	2.2nm,0.2s						

*NOU **01** 11:52:52.9, 24°.06S×179°.38W, h556km, mb4.2/18, South of Fiji Islands*

*IDC **01** 11:52:55.1±2.1, 24°.28S×179°.92E, h506km±18km, mb3.4/9, mbtmp4.3/11, Error ellipse: s-maj=35.3km s-min=15.6km az=148.0*

*NEIC **01** 11:52:56.1±1.6, 24°.4S±0°.1×180°.0E±0°.1, h522km±7km, mb4.4/35, Error ellipse: s-maj=17.5km s-min=14.3km az=218.0*

ISC 01 11:52:55.6±0.6, 24°.30S±0°.08×179°.92E±0°.09, h517km, n73, σ1s.28/76, mb4.3/28, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	6.16	11	P	P	11 54 31.2	-3.0
MSVF	Nonsavu	6.77	345	P	P	11 54 39.7	-0.6
	8.9nm,0.5s,baz=184,slow=19,SNR=27						
MSVF	Nonsavu	6.77	345	P	P	11 54 39.6	-0.7
MSVF	Nonsavu	6.77	345	P	P	11 54 39.7	-0.6
MARNC	Mare, Loyalty	11.31	282	P	P	11 55 27.4	+0.5
PINNC	Pines Island,	11.57	276	P	P	11 55 32.1	+2.4
PINNC	Pines Island,	11.57	276	P	P	11 55 32.5	+2.9
YATNC	Mamie plateau,	12.19	278	P	P	11 55 40.0	+3.8
DZM	Mont Dzumac	12.59	277	P	P	11 55 41.1	+0.6
	9.1nm,0.7s,baz=221,slow=21,SNR=11						
DZM	Mont Dzumac	12.59	277	P	P	11 55 40.8	+0.3
DZM	Mont Dzumac	12.59	277	P	P	11 55 42.5	+2.0
URZ	Urewera	14.12	189	P	P	11 55 55.4	-0.7
BKZ	Black Stump Fm	15.10	190	P	P	11 56 05.7	-0.8
QRZ	Quartz Range	17.60	199	P	P	11 56 31.4	+0.1
ARMA	Armidale	25.81	250	P	P	11 57 47.3	+1.8
ARMA				IAmb	IAmb	11 58 12.1	
	comp=Z,17nm,1.3s						
EIDS	Eidsvold	26.17	262	P	P	11 57 49.4	+0.9
EIDS				IAmb	IAmb	11 57 49.7	
	comp=Z,7.0nm,0.8s						
RMQ	Roma	28.20	259	P	P	11 58 07.6	+1.2
	comp=Z,12nm,0.8s						
CNB	Canberra Magne	28.59	240	P	P	11 58 11.0	+1.3
CAN	Canberra	28.88	240	P	P	11 58 13.6	+1.4
CAN				IAmb	IAmb	11 58 41.4	
	comp=Z,25nm,1.3s						
CMSA	Cobar Meteorol	31.00	249	P	P	11 58 30.9	+0.3
CTA	Charters Tower	31.41	271	P	P	11 58 35.1	+0.9
CTAO	Charters Tower	31.41	271	P	P	11 58 35.1	+0.9
TOO	Toolangi	32.17	238	P	P	11 58 41.3	+0.7
TOO				IAmb	IAmb	11 58 41.6	
	comp=Z,6.1nm,0.8s						
TOO	Toolangi	32.17	238	P	P	11 58 41.2	+0.7
QLP	Quilpie	32.24	258	P	P	11 58 41.6	+0.3
TAU	Tasmania Unive	32.61	227	P	P	11 58 44.8	+0.7
TAU				IAmb	IAmb	11 59 12.2	
	comp=Z,14nm,1.1s						
RABL	Rabaul	33.38	302	P	P	11 58 50.3	-0.8
MTSU	Mount Surprise	33.69	274	P	P	11 58 54.6	+1.0
STKA	Stephens Creek	34.51	249	P	P	11 59 00.8	+0.4
	comp=Z,4.3nm,0.6s,baz=94,slow=11,SNR=23						
	comp=Z,4.3nm,0.6s						
STKA	Stephens Creek	34.51	249	P	P	11 59 00.9	+0.6
STKA	Stephens Creek	34.51	249	P	P	11 59 00.9	+0.6
PMG	Port Moresby	34.56	290	P	P	11 59 01.2	+0.3
COEN	Coen	36.11	280	P	P	11 59 14.5	+0.6
COEN				IAmb	IAmb	11 59 14.9	
	comp=Z,16nm,1.1s						
BBOO	Buckleboo	39.22	247	P	P	11 59 38.5	-0.6
BBOO				IAmb	IAmb	11 59 54.8	
	comp=Z,22nm,1.4s						
AS31	Alice Springs	41.90	261	P	P	12 00 00.7	0.0
ASAR	Alice Springs	41.90	261	P	P	12 00 00.6	-0.1
	comp=Z,3.9nm,0.6s,baz=95,slow=6.9,SNR=98						
ASAR				ScP	ScP	12 04 46.4	+0.9
	comp=Z,1.1nm,1.0s,baz=112,slow=4.1,SNR=5.3						
ASAR				S	S	12 05 34.9	-6.5
	comp=Z,0.3nm,1.0s,baz=97,slow=15,SNR=2.3						
	comp=Z,3.9nm,0.6s						
ASAR	Alice Springs	41.90	261	P	P	12 00 00.4	-0.3
WR0	Warramunga Arr	42.12	267	P	P	12 00 01.8	-0.6
WR0				IAmb	IAmb	12 00 02.6	
	comp=Z,14nm,1.2s						
WB2	Warramunga Arr	42.30	267	P	P	12 00 03.5	-0.4
WRAB	Tennant Creek	42.30	267	P	P	12 00 03.3	-0.6
WB0	Warramunga Arr	42.30	267	P	P	12 00 03.2	-0.6
WB0				IAmb	IAmb	12 00 04.0	
	comp=Z,13nm,0.7s						
WRA	Warramunga Arr	42.31	267	P	P	12 00 03.3	-0.6
	comp=Z,10.0nm,0.5s,baz=98,slow=8.1,SNR=294						
WRA				ScP	ScP	12 04 48.9	+1.8
	comp=Z,2.7nm,0.9s,baz=98,slow=4.4,SNR=11						
	comp=Z,10.0nm,0.5s						
WRA	Warramunga Arr	42.31	267	P	P	12 00 02.9	-1.0
FORT	Forrest	46.10	250	P	P	12 00 31.9	-1.2
KNRA	Kununurra	48.61	270	P	P	12 00 51.9	-0.3
FAKI	Fak Fak	50.63	287	P	P	12 01 06.5	-0.6
PSA00	Pilbara Seismi	55.02	260	P	P	12 01 37.5	-0.9
MORW	Morawa	56.67	250	P	P	12 01 49.4	-0.3
MORW				IAmb	IAmb	12 01 49.6	
	comp=Z,5.9nm,0.6s						
CASY	Casey	59.72	206	P	P	12 02 09.7	0.0
QSPA	South Pole Qui	65.78	180	P	P	12 02 49.7	+0.7
QSPA				IAmb	IAmb	12 02 53.7	
	comp=Z,4.9nm,1.1s						
KSM	Kuching	72.10	280	P	P	12 03 28.0	+0.1
KSM				IAmb	IAmb	12 03 28.2	
	comp=Z,8.4nm,0.9s						
JSU	Suzuyama	72.92	317	P	P	12 03 32.6	+0.4
JSU				IAmb	IAmb	12 03 37.7	
	comp=Z,10nm,1.2s						
BELA	Belgrano 2	76.05	173	P	P	12 03 48.8	-0.3
KSRS	Korea Array	78.51	320	P	P	12 04 03.3	+0.3
	comp=Z,0.6nm,0.6s,baz=116,slow=5.7,SNR=2.7						
	comp=Z,0.6nm,0.6s						
PEA0B	Petropavlovsk-	79.47	347	P	P	12 04 08.3	+0.5
PEA0B				IAmb	IAmb	12 04 30.3	
	comp=Z,18nm,1.5s						
PETK	Petropavlovsk-	79.47	347	P	P	12 04 07.2	-0.6
	comp=Z,1.7nm,1.0s,baz=138,slow=6.9,SNR=3.8						
	comp=Z,1.7nm,1.0s						
PETK	Petropavlovsk-	79.47	347	P	P	12 04 08.2	+0.4
USA0B	Ussuriysk Arra	81.06	327	P	P	12 04 16.3	0.0
USA0B				IAmb	IAmb	12 04 43.2	
	comp=Z,5.2nm,0.8s						
USRK	Ussuriysk Ar.	81.06	327	P	P	12 04 17.0	+0.7
SNAA	Sanae	84.27	179	P	P	12 04 31.4	-0.8
VNA3	Neumayer Olymp	84.48	177	P	P	12 04 33.1	-0.1
VNA2	Neumayer--Watz	84.89	178	P	P	12 04 35.0	-0.2
	baz=183,slow=3.5						
NVAR	Mina Array Bea	85.09	44	P	P	12 04 36.7	-0.3
	comp=Z,0.6nm,0.8s,baz=223,slow=7.6,SNR=4.1						
	comp=Z,0.6nm,0.8s						
NVAR	Mina Array Bea	85.09	44	P	P	12 04 37.3	+0.4
KVN	Kaiserville	85.59	44	P	P	12 04 39.7	+0.4
I07A	Izee	87.75	39	P	P	12 04 49.8	+0.5
I07A				IAmb	IAmb	12 04 50.9	
	comp=Z,3.6nm,1.1s						
CMAR	Chiang Mai Arr	89.60	290	P	P	12 04 59.6	+1.3
	comp=Z,0.6nm,0.4s,baz=126,slow=3.6,SNR=6.0						
	comp=Z,0.6nm,0.4s						
TMUT	Trail Mountain	90.17	46	P	P	12 05 01.4	+0.5
TMUT				IAmb	IAmb	12 05 02.7	
	comp=Z,3.8nm,0.9s						
TX31	Lajitas Ar. Si	90.71	58	P	P	12 05 03.8	+0.4
TX31				IAmb	IAmb	12 05 05.2	
	comp=Z,4.7nm,0.8s						
TXAR	Lajitas Array	90.71	58	P	P	12 05 04.3	+0.9
	comp=Z,1.5nm,0.7s,baz=212,slow=6.4,SNR=24						
	comp=Z,1.5nm,0.7s						
PDAR	Pinedale Array	93.03	44	P	P	12 05 13.7	-0.3
	comp=Z,0.3nm,0.5s,baz=153,slow=1.3,SNR=4.3						
	comp=Z,0.3nm,0.5s						
BRTR	Keskin Array B	147.76	307	PKPbc	PKiKP	12 11 43.6	-0.2
	comp=Z,1.3nm,0.7s,baz=108,slow=4.0,SNR=3.6						
TORD	Torodi Ar. Bea	168.78	189	PKPab	PKPab	12 13 17.3	-0.3
	comp=Z,0.5nm,0.7s,baz=180,slow=3.9,SNR=3.2						

IDC 01 12:13:33.5±5.5, 28°.13S×23°.26E, h0km, Error ellipse: s-maj=36.2km s-min=33.3km az=108.0, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I47ZA	BOSHOF INFRASO	1.81	106	i		12 26 00.0	
	0.2nm,0.6s,baz=282,slow=294,SNR=2.5						
BOSA	Boshof	1.83	106	Pn	Pn	12 14 05.6	-0.7
	1.1nm,0.3s,baz=288,slow=16,SNR=9.8						
BOSA				Pg	Pb	12 14 07.9	0.0
	1.1nm,0.3s,baz=289,slow=16,SNR=25						
BOSA				Lg	Lg	12 14 31.0	
	4.6nm,0.3s,baz=17,slow=19,SNR=20						
BOSA				Rg	Rg	12 14 41.9	
	23nm,0.6s,baz=9.4,slow=2.8,SNR=9.1						
I35NA	TSUMEB INFRASO	10.31	328	i		13 20 20.0	
	baz=152,slow=318,SNR=5.0						

*JMA **01** 12:18:00.9±0.3, 24°N±2°×122°.4E±0°.5, h19km±4km, MV3.0/11, TAIWAN REGION*
*TAP **01** 12:18:01.3, 24°.03N×122°.38E, h26km, ML3.3, C*
ISC 01 12:18:01.0±0.9**, 23°.98N**±0°.02×**122°.37E**±0°.02**, h20**km±11km**, n131, σ0s.80**/171**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	Heping Village	0.66	300	eP	Pb	12 18 13.9	0.0
	baz=296						
HWA	Hwalien	0.70	270	iP	Pb	12 18 14.9	+0.4
	baz=253						
JYNG	Yonagunijimaku	0.70	48	P	Pb	12 18 14.4	-0.1
JYNG				S	Sb	12 18 23.1	-0.7
ETL	Fush Village	0.71	285	eP	Pb	12 18 14.8	+0.2
	baz=266						
ETL				S	Sn	12 18 25.0	-1.1
	baz=266						
EWUT	Wuta	0.71	311	iP	Pb	12 18 14.5	-0.2
	baz=307						
TWD	Chiawan	0.71	278	eP	Pb	12 18 14.7	-0.1
	baz=274						
TWD				S	Sb	12 18 24.9	+0.7
	baz=274						
TEYL	Yanliau Villag	0.72	261	eP	Pb	12 18 15.1	+0.3
	baz=247						
ENA	Nanau	0.73	308	iP	Pb	12 18 14.8	-0.1
	baz=312						
ENA				iS	Sn	12 18 25.1	-1.5
	baz=312						
NACB	Ninganchiao	0.73	285	eP	Pb	12 18 14.9	-0.1
	baz=267						
NACB				eS	Sn	12 18 25.6	-1.3
	baz=267						
YOJ	Yonaguni jima	0.76	51	P	Pb	12 18 15.3	-0.1
	baz=61						
YOJ				eS	Sb	12 18 24.6	-0.7
	baz=61						
YOJ	Yonaguni jima	0.76	51	P	Pb	12 18 15.4	-0.1
YOJ				eS	Sb	12 18 24.6	-0.7
TWC	Suao	0.79	323	iP	Pb	12 18 15.3	-0.6
	baz=320						
ETM	Tongmen	0.80	269	eP	Pb	12 18 15.9	-0.3
	baz=255						
TEGC	Jichi Village	0.81	251	eP	Pb	12 18 16.6	+0.3
	baz=248						
TEGC				iS	Sb	12 18 27.8	+1.1
	baz=248						
ETLH	Xiulin Townshi	0.84	286	eP	Pb	12 18 16.7	-0.3
	baz=271						
ETLH				eS	Sn	12 18 28.6	-1.0
	baz=271						
ESL	Shilin	0.87	259	eP	Pb	12 18 17.2	-0.3
	baz=247						
NDS	Dongshan	0.88	318	iP	Pb	12 18 17.5	-0.1
	baz=315						
EGFH	Guangfu	0.92	250	eP	Pb	12 18 18.6	+0.4
	baz=248						
EGFH				eS	Sb	12 18 30.6	+0.6
	baz=248						
LATG	Datong	0.95	306	eP	Pb	12 18 18.7	-0.1
	baz=302						
LATG				eS	Sn	12 18 31.6	-0.7
	baz=302						
EGS		0.95	335	eP	Pn	12 18 18.8	-0.4
	baz=333						
TWE	Neicheng	0.98	319	eP	Pn	12 18 19.3	-0.2
	baz=316						
TWE				eS	Sb	12 18 31.1	-0.5
	baz=316						
ENTT	Nioudou	0.98	312	iP	Pn	12 18 19.4	-0.3
	baz=308						
HGSD	Ruisui	0.99	241	eP	Pb	12 18 19.6	+0.1
	baz=239						
NTC	Toucheng	1.00	331	iP	Pn	12 18 19.5	-0.3
	baz=327						
NTC				eS	Sn	12 18 33.9	+0.6
	baz=327						
NNSB	Datong	1.01	296	eP	Pb	12 18 19.6	-0.2
	baz=293						
NNSB				eS	Sn	12 18 33.5	-0.2
	baz=293						
NNS	Nan Shan	1.02	297	P	Pb	12 18 19.9	-0.1
	baz=293						
NNS				eS	Sn	12 18 33.9	-0.1
	baz=293						
WHF	Hehuan Shan	1.02	279	iP	Pb	12 18 19.9	-0.3
	baz=264						
WHF				iS	Sb	12 18 33.8	+0.3
	baz=264						
FUSB	Fushanzhiwuyua	1.05	318	P	Pb	12 18 20.6	0.0
	baz=314						
FUSB				S	Sn	12 18 34.7	-0.1
	baz=314						
FUSS	Fushou	1.06	285	P	Pn	12 18 20.3	-0.6
	baz=282						
EHY	Hungye	1.07	244	iP	Pn	12 18 20.2	-0.7
	baz=242						
TWB1	Santiao Chiao	1.08	341	iP	Pn	12 18 20.5	-0.4
	baz=339						
OWD	Renai	1.09	269	eP	Pn	12 18 20.5	-0.7
	baz=266						
OWD				eS	Sb	12 18 34.5	-0.6
	baz=266						
CHGB	Renai	1.10	274	P	Pn	12 18 20.8	-0.6
	baz=260						
TIPB	Shuangxi	1.10	333	eP	Pb	12 18 21.1	-0.3
	baz=330						
TIPB				eS	Sn	12 18 36.2	+0.2
	baz=330						
NWLT	Wulai	1.12	315	iP	Pb	12 18 21.4	-0.2
	baz=312						
NWLT				S	Sn	12 18 36.6	+0.2
	baz=312						
TWT	Tachien	1.12	284	eP	Pb	12 18 22.0	+0.2
	baz=268						
TWT				eS	Sn	12 18 37.2	+0.5
	baz=268						
YHNB	Yeheng	1.14	307	eP	Pb	12 18 21.7	-0.3
	baz=304						
TDCB	Techi	1.14	284	eP	Pn	12 18 21.9	0.0
	baz=270						
YULB	Yu-li	1.15	239	eP	Pn	12 18 21.1	-0.7
	baz=238						
WUSB	Renai	1.15	271	P	Pn	12 18 21.5	-0.5
	baz=268						
VWDT	VWDT	1.15	259	eP	Pn	12 18 21.7	-0.1
	baz=249						
EYUL	Yuli	1.15	237	eP	Pn	12 18 21.9	-0.1
	baz=236						
EYUL				S	Sb	12 18 36.8	+0.1
	baz=236						
NSK	Sanguang	1.15	307	iP	Pn	12 18 21.9	-0.2
	baz=304						
NSK				eS	Sn	12 18 37.8	+0.5
	baz=304						
TWF1	Yuli	1.17	238	P	Pn	12 18 21.6	-0.6
	baz=236						
TWF1				eS	Sn	12 18 36.7	-0.8
	baz=236						
SXI1	Grass Mountain	1.20	338	eP	Pn	12 18 22.2	-0.4
	baz=335						
WFSB	Wu-fen Shan	1.21	334	eP	Pb	12 18 22.8	-0.4
	baz=330						
WFSB				iS	Sb	12 18 38.8	+0.4
	baz=330						
TWA	Mucha	1.23	324	eP	Pb	12 18 23.9	+0.4
	baz=321						
NHDH	Xindian Distri	1.24	322	eP	Pb	12 18 23.3	-0.4
	baz=332						
FULB	Fuli	1.26	232	eP	Pn	12 18 22.5	-0.9
	baz=231						
TATO	Taipei	1.27	321	P	Pb	12 18 23.9	-0.4
	baz=317						
TATO				eS	Sb	12 18 40.4	+0.1
	baz=317						
TNOU	National Taiwa	1.28	335	eP	Pb	12 18 24.0	-0.5
	baz=332						
IRIF	Iriomote-Funau	1.29	74	P	Pb	12 18 24.6	0.0
IRIF				S	Sb	12 18 41.8	+1.1
WPL	Puli Township	1.29	272	eP	Pb	12 18 24.3	-0.3
	baz=269						
SSLB	Suanglung	1.31	262	eP	Pn	12 18 24.2	+0.1
	baz=260						
HATJ	Hateruma jima	1.31	86	P	Pn	12 18 24.4	+0.2
HATJ				eS	Sb	12 18 41.5	+0.1
NFF	Wufeng Townshi	1.31	300	iP	Pb	12 18 24.6	-0.4
	baz=297						
DPDB	Guoxing	1.32	273	eP	Pn	12 18 24.6	+0.3
	baz=270						
WHP	Taichung City	1.33	283	eP	Pb	12 18 25.1	-0.3
	baz=270						
WCS	Beigang Elemen	1.34	274	eP	Pn	12 18 24.7	+0.2
	baz=263						
WCS				eS	Sb	12 18 42.3	+0.3
	baz=263						
SMLT	Sun Moon Lake	1.35	266	P	Pn	12 18 25.0	+0.2
	baz=264						
ECS	Chishang	1.38	230	eP	Pb	12 18 25.9	-0.2
	baz=219						
YUS	Yu-Shan	1.39	250	iP	Pn	12 18 25.6	0.0
	baz=248						
YUS				eS	Sn	12 18 42.6	-1.0
	baz=248						
EDH	Donghe	1.40	224	eP	Pn	12 18 24.5	-0.9
	baz=214						
EDH				eS	Sn	12 18 40.5	-2.8
	baz=214						
LIOB	Emei	1.40	298	eP	Pb	12 18 26.5	0.0
	baz=295						
NSTT	Nanjuang	1.41	298	eP	Pb	12 18 26.6	+0.1
	baz=294						
TWS1	Kuangyinshan	1.41	322	iP	Pb	12 18 26.2	-0.4
	baz=319						
NCUH	Zhongli	1.46	313	eP	Pn	12 18 26.5	+0.3
	baz=309						
TWY	Chenhua	1.47	332	eP	Pb	12 18 27.0	-0.6
	baz=328						
ELDTW	Lidau	1.47	238	eP	Pn	12 18 25.6	-0.9
	baz=237						
ELDTW				eS	Sn	12 18 43.5	-1.6
	baz=237						
SBCB	Hsinchu	1.50	303	eP	Pb	12 18 27.4	-0.8
	baz=299						
TWQ1	Liyutan	1.50	284	eP	Pb	12 18 28.1	-0.1
	baz=281						
ALS	Alishan	1.51	252	eP	Pn	12 18 27.6	+0.4
	baz=250						
ALS				eS	Sb	12 18 47.1	-0.1
	baz=250						
WJS	Zhushan	1.51	264	eP	Pb	12 18 28.1	-0.2
	baz=262						
JKRS	Kuro-shima	1.52	80	P	Pb	12 18 27.8	-0.7
JKRS				eS	Sb	12 18 46.8	-0.5
WWF	Wufeng	1.53	273	eP	Pb	12 18 29.1	+0.4
	baz=271						
NSY	Sanyi	1.53	287	eP	Pb	12 18 28.6	0.0
	baz=284						
LDUT	Ludao	1.54	213	eP	Pn	12 18 25.9	-1.4
	baz=212						
LDUT				eS	Sn	12 18 43.8	-2.9
	baz=212						
NMLH	Miaoli	1.54	291	eP	Pb	12 18 28.3	-0.6
	baz=288						
WNT	Mingjian	1.55	267	eP	Pb	12 18 28.7	-0.2
	baz=265						
TCU	Taichung	1.56	276	eP	Pb	12 18 29.1	0.0
	baz=274						
LONT	Longtian	1.56	227	eP	Pn	12 18 28.1	+0.5
	baz=239						
CHN5	Tsauling	1.60	256	eP	Pb	12 18 29.5	-0.3
	baz=255						
WDJ	Dajia District	1.62	283	eP	Pn	12 18 29.2	+0.8
	baz=281						
TWGBT	Beinan	1.66	226	eP	Pn	12 18 28.8	-0.2
	baz=237						
TTN	Taitung	1.66	223	eP	Pn	12 18 30.0	+1.1
	baz=222						
TWG	Pinlang	1.66	226	eP	Pn	12 18 28.9	0.0
	baz=237						
JIJ	Ishigaki jima	1.66	76	P	Pn	12 18 28.8	-0.2
JIJ				S	Sn	12 18 49.2	-0.5
PCYT	Pengchaiyu	1.66	351	eP	Pn	12 18 29.3	+0.3
	baz=348						
STYH	Taoyuan	1.67	241	eP	Pn	12 18 29.8	+0.7
	baz=229						
WGK	Gukeng	1.68	260	eP	Pn	12 18 30.1	+0.9
	baz=259						
STYT	Tauyuan	1.69	242	eP	Pn	12 18 29.8	+0.4
	baz=229						
WDLH	Douliu	1.70	261	eP	Pb	12 18 30.9	-0.7
	baz=259						
TPUB	Ta-pu	1.73	247	eP	Pn	12 18 31.0	+1.0
	baz=246						
WTP	Ta-pu	1.77	246	eP	Pb	12 18 31.9	-0.8
	baz=234						
WRL	Guolierlin Hig	1.82	268	eP	Pn	12 18 32.4	+1.2
	baz=266						
WTK	Tuku	1.84	261	eP	Pb	12 18 32.9	-1.0
	baz=249						
CHY	Chiayi	1.85	255	eP	Pn	12 18 32.7	+1.2
	baz=254						
CHN1	Nanshi	1.87	245	eP	Pb	12 18 33.7	-0.7
	baz=244						
TWK	Hsinying	1.87	248	eP	Pb	12 18 33.4	-1.0
	baz=247						
SGST	Jiashian	1.87	242	eP	Pn	12 18 33.3	+1.5
	baz=231						
JISG	Ishigakijimahi	1.87	71	P	Pn	12 18 31.7	-0.2
JISG				eS	Sn	12 18 54.6	-0.3
SNST	Tainan City	1.88	247	eP	Pn	12 18 33.2	+1.3
	baz=246						
ECL	Taimali	1.90	224	eP	Pn	12 18 32.9	+0.7
	baz=233						
WSF	Szhu	2.00	261	eP	Pn	12 18 34.1	+0.5
	baz=259						
ICHU	Yijhu	2.01	253	eP	Pn	12 18 35.3	+1.5
	baz=252						
WSL	Shuilin Townsh	2.02	257	eP	Pn	12 18 35.1	+1.3
	baz=256						
SSD	Sandimen	2.02	233	eP	Pn	12 18 35.1	+1.3
	baz=224						
TSMG	Majia	2.03	232	eP	Pn	12 18 35.0	+0.9
	baz=223						
SCST	Cishan	2.04	238	eP	Pn	12 18 35.9	+1.8
	baz=229						
MASBT	Mashibuluo	2.10	230	eP	Pn	12 18 35.4	+0.4
	baz=222						
TAW	Tawu	2.11	220	eP	Pn	12 18 36.4	+1.3
	baz=230						
EAST	Anshuo	2.12	222	eP	Pn	12 18 36.8	+1.5
	baz=222						
JTJ	Tarama	2.23	72	P	Pn	12 18 37.9	+1.2
JTJ				eS	Sn	12 19 05.2	+1.5
SSPT	Xinbi	2.23	228	eP	Pn	12 18 38.3	+1.6
	baz=222						
SCZT	Fangliau	2.27	226	eP	Pn	12 18 38.8	+1.4
	baz=225						
SLIU	Shizi	2.28	220	eP	Pn	12 18 37.3	-0.1
	baz=220						
TSEB	Hengchuen, Pin	2.48	213	eP	Pn	12 18 41.7	+1.6
	baz=214						
HEN	Hengchun	2.48	218	eP	Pn	12 18 41.8	+1.7
	baz=218						
TWKBT	Hengchun	2.49	216	eP	Pn	12 18 41.5	+1.2
	baz=216						
TWK1	Hengchun	2.49	216	eP	Pn	12 18 42.0	+1.7
	baz=216						
WDGT	Dungji	2.59	254	eP	Pn	12 18 42.6	+0.9
	baz=254						
PHUB	P'eng-hu	2.61	260	eP	Pn	12 18 43.0	+1.1
	baz=258						
PHUB				eS	Sn	12 19 13.6	+0.6
	baz=258						
PNG	Penghu	2.61	261	eP	Pn	12 18 43.0	+0.9
	baz=259						
PNG				eS	Sn	12 19 14.0	+0.9
	baz=259						
VCHM	Qimei	2.81	255	eP	Pn	12 18 46.2	+1.5
	baz=254						
VWUC	VWUC	2.84	291	eP	Pn	12 18 44.9	-0.3
	baz=289						
PTMZ	Houxiangcun	3.14	290	eP	Pn	12 18 49.1	-0.2
	baz=288						
LYJJ	Jianjiangzhen	3.48	318	eP	Pn	12 18 54.4	+0.4
	baz=314						
XPSS	Dashiqiu	3.54	327	eP	Pn	12 18 54.5	-0.3
	baz=333						
KNM	Kinmen	3.62	278	eP	Pn	12 18 57.9	+2.0
	baz=276						
KNMB	Chin-men Tao	3.67	278	eP	Pn	12 18 56.3	-0.3
	baz=276						
AXDP	Jialang	4.11	284	eP	Pn	12 19 02.6	0.0
	baz=281						

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*IDC **01** 12:24:56.7±0.9, 18°.29N×105°.34W, h0km, mb4.4/14, mbtmp4.4/17, ML4.1/3, MS4.2/56, Error ellipse: s-maj=30.5km s-min=14.1km az=62.0*
*MEX **01** 12:25:00.4±0.9, 18°.40N×105°.36W, h15km±23km, MD4.6*
*NEIC **01** 12:25:00.3±1.7, 18°.48N±0°.07×105°.30W±0°.07, h10km±1km, mb4.9/350, Md4.6/34(MEX), Error ellipse: s-maj=13.7km s-min=7.9km az=223.0*
*GCMT **01** 12:25:01.3±0.2, 18°.51N±0°.01×105°.51W±0°.01, h15km±1km, MW5.0/116, Moment Tensor Solution. s40,c51; s116,c183; Duration: 0 Moment tensor: Scale 10^16Nm; M_{rr}-1.36±.12; $M_{\theta\theta}$3.16±.10; $M_{\phi\phi}$-1.80±.09; $M_{r\theta}$-0.04±.18; $M_{\theta\phi}$-3.41±.09; $M_{\phi r}$0.42±.18; Best double couple: $M_0$4.25000×10^16 NP1:ϕ_s252.00000°, δ82.00000°, λ-175.00000°. NP2:ϕ_s162.00000°, δ85.00000°, λ-8.00000°. Principal axes: T 4.9050, Plg2.0000°, Azm207.0000°; N -1.3110, Plg81.0000°, Azm310.0000°; P -3.5940, Plg9.0000°, Azm117.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 01 12:25:00.8±2.2**, 18°.45N**±0°.06×**105°.33W**±0°.06**, h23**km±15km**, n527, σ0s.99**/385**, mb4.8**/151**, MS4.2**/57**, Off coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CJM	Chamela	1.08	15	eP	Pn	12 25 17.4	-3.1
CJM				eS	Sn	12 25 31.9	-2.9
CDAR	Ciudad de Arme	1.34	69	eP	Pn	12 25 21.9	-2.3
CDAR				eS	Sn	12 25 37.9	-3.5
R15V		1.47	61		Pn	12 25 23.8	-2.1
R15V		1.47	61	eP	Pn	12 25 23.8	-2.1
R15V				eS	Sn	12 25 42.3	-2.2
COIG	Colima	1.72	65	eP	Pn	12 25 27.6	-1.8
COIG				eS	Sn	12 25 46.9	-3.8
COMA	Comala	1.72	59	eP	Pn	12 25 28.2	-1.2
COMA				iS	Sn	12 25 48.6	-2.2
MMIG	Aquila	1.90	95		Pn	12 25 29.1	-2.7
MMIG					Sn	12 25 51.8	-3.2
MMIG	Aquila	1.90	95	eP	Pn	12 25 29.1	-2.7
MMIG				eS	Sn	12 25 51.8	-3.2
MNGA	Volcan de Coli	1.91	58	eP	Pn	12 25 31.6	-0.6
MNGA				eS	Sn	12 25 56.7	+0.9
EZ5V		1.93	58		Pn	12 25 32.1	-0.4
EZ5V		1.93	58	eP	Pn	12 25 32.1	-0.4
EZ5V				eS	Sn	12 25 54.1	-2.1
INCO	Volcan de Coli	1.95	57	eP	Pn	12 25 32.4	-0.6
INCO				eS	Sn	12 25 54.7	-2.3
JUBC	Volcan de Coli	1.98	57	eP	Pn	12 25 32.7	-0.5
JUBC				eS	Sn	12 25 54.7	-2.7
PUVA	Puert Vallarta	2.17	3		Pn	12 25 33.7	-1.8
PUVA					Sn	12 25 59.9	-1.8
PUVA	Puert Vallarta	2.17	3	eP	Pn	12 25 33.7	-1.8
PUVA				eS	Sn	12 25 59.9	-1.8
ANIG	Ahuacatlan	2.70	16		Pn	12 25 42.3	-0.7
ANIG					Sn	12 26 13.5	-1.5
ANIG	Ahuacatlan	2.70	16	eP	Pn	12 25 42.3	-0.7
ANIG				eS	Sn	12 26 13.5	-1.5
MOIG	Morelia	4.11	72	Pn	Pn	12 26 03.5	+1.0
AAIG	Aguscalientes	4.46	38	eP	Pn	12 26 07.9	+0.5
ZAIG	Zacatecas	5.02	31	Pn	Pn	12 26 15.3	+0.3
ZAIG	Zacatecas	5.02	31	eP	Pn	12 26 15.5	+0.5
H06E1	SOCORRO T-PHAS	5.31	274	T	T	12 31 23.2	
	SNR=631						
UNM	Universidad Na	5.89	81	Pn	Pn	12 26 28.0	+1.0
TLIG	Tlapa	6.50	97	Pn	Pn	12 26 36.3	+1.1
SLBS	Sierra La Lagu	6.76	321	Pn	Pn	12 26 37.9	-0.8
HPIG		8.45	358		Pn	12 27 01.8	-0.3
CMIG	Matias Romero	10.05	96	LR	LR	12 31 20.1	
	comp=Z,3μm,21.2s,baz=238,slow=38						
SRIG	Santa Rosalia	10.88	325	Pn	Pn	12 27 34.7	-0.4
TX31	Lajitas Ar. Si	10.94	8		Pn	12 27 36.0	-0.1
TX32	Lajitas Array	10.94	8	Pn	Pn	12 27 35.9	-0.2
TXAR	Lajitas Array	10.94	8	Pn	Pn	12 27 38.4	+2.3
	1.0nm,0.3s,baz=186,slow=11,SNR=50						
TXAR				LR	LR	12 32 03.5	
	comp=Z,3μm,18.2s,baz=186,slow=38						
	5.4nm,0.6s						
TXAR	Lajitas Array	10.94	8	Pn	Pn	12 27 36.4	+0.2
833A	Chaparral WMA,	11.23	28	P	Pn	12 27 41.8	+1.7
	baz=210,SNR=13						
HSIG		11.71	335		Pn	12 27 46.0	-0.5
735A	Kenedy	12.44	32		Pn	12 27 56.8	+0.3
CCIG	Comitan	12.78	98		Pn	12 28 02.4	+0.9
JCT	Junction City	12.99	22	Pn	Pn	12 28 06.5	+2.5
JCT	Junction City	12.99	22	P	Pn	12 28 05.4	+1.3
	baz=204,SNR=12						
MNTX	Cornudas Mount	13.19	360	Pn	Pn	12 28 06.5	-0.3
MNTX	Cornudas Mount	13.19	360	P	Pn	12 28 08.2	+1.4
	baz=180,SNR=23						
319A	Douglas	13.36	345		Pn	12 28 10.0	+0.9
435B	Jarrell	14.15	28		Pn	12 28 21.7	+1.8
435B	Jarrell	14.15	28	P	Pn	12 28 21.6	+1.8
	baz=212						
121A	Cookes Peak, D	14.19	352		Pn	12 28 22.1	+1.4
121A	Cookes Peak, D	14.19	352	P	Pn	12 28 22.8	+2.1
	baz=170,SNR=42						
HKT	Hockley	14.35	35	Pn	Pn	12 28 23.1	+0.6
TUC	Tucson	14.65	341	Pn	Pn	12 28 27.2	+0.4
TUC	Tucson	14.65	341	P	Pn	12 28 27.8	+1.0
	baz=159						
PETF	Flores	14.82	94	Pn	Pn	12 28 29.3	+0.3
ABTX	Abilene, Hawle	15.01	19		Pn	12 28 32.7	+1.1
ABTX	Abilene, Hawle	15.01	19	P	Pn	12 28 32.7	+1.1
	baz=201,SNR=65						
214A	Organ Pipe Nat	15.04	335	P	Pn	12 28 33.0	+1.0
	baz=152,SNR=9.9						
WHTX	Lake Whitney,	15.24	26		Pn	12 28 35.2	+0.6
WHTX	Lake Whitney,	15.24	26	P	Pn	12 28 35.5	+0.9
	baz=210,SNR=20						
MSTX	Muleshoe	15.62	8		Pn	12 28 41.6	+1.9
MSTX	Muleshoe	15.62	8	P	Pn	12 28 40.7	+1.0
	baz=189,SNR=57						
Y22D	IRIS PASSCAL I	15.62	355	P	Pn	12 28 41.7	+1.9
	baz=174						
BNM	Barren Site	15.68	356	Pn	Pn	12 28 42.8	+2.2
LENM	Lemitar	15.72	355		Pn	12 28 41.9	+0.9
ESQI	Esquipulas	15.81	102	Pn	Pn	12 28 43.8	+1.5
237A	Washetta, Mont	16.00	31		Pn	12 28 44.3	-0.1
113A	Mohawk Valley,	16.15	334		Pn	12 28 47.5	+1.2
NATX	Nacogdoches	16.39	34	Pn	Pn	12 28 49.8	+0.4
NATX	Nacogdoches	16.39	34	P	Pn	12 28 49.7	+0.3
	baz=218,SNR=13						
ANMO	Albuquerque	16.46	357	Pn	P	12 28 52.7	-0.3
	0.3nm,0.3s,baz=173,slow=13,SNR=103						
ANMO				LR	LR	12 35 55.0	
	comp=Z,313nm,21.8s,baz=178,slow=40						
	48nm,1.0s						
ANMO	Albuquerque	16.46	357	P	P	12 28 52.8	-0.3
ANMO				IAmb	IAmb	12 28 57.0	
	comp=Z,106nm,1.2s						
ANMO	Albuquerque	16.46	357	P	P	12 28 52.4	-0.7
	baz=176						
441A	DeRidder	16.47	40		Pn	12 28 50.2	-0.2
441A				IAmb	IAmb	12 28 57.5	
	comp=Z,102nm,1.1s						
Z35A	Perchaven, San	16.49	24		Pn	12 28 51.0	+0.3
X18A	Snowflake	16.53	346		Pn	12 28 51.7	+0.3
AMTX	Amarillo	16.69	11	Pn	Pn	12 28 53.9	+0.6
AMTX	Amarillo	16.69	11	P	Pn	12 28 54.1	+0.8
	baz=192						
X16A	Lo Mia Camp, P	16.81	342		Pn	12 28 55.5	+0.6
Y14A	Wickenburg	16.88	338		Pn	12 28 56.1	+0.4
YUH	Yuha Desert	17.04	328	P	Pn	12 28 58.6	+0.9
W18A	Petrified Fore	17.05	348		P	12 28 59.4	-0.3
W18A	Petrified Fore	17.05	348	P	P	12 28 59.5	-0.2
	baz=166,SNR=22						
RMX	La Rumorosa	17.09	328	Pn	Pn	12 28 57.6	-0.8
IKP	In-Ko-Pah, Jac	17.14	328	P	P	12 29 00.7	+0.2
	baz=143						
CBX	Cerro Bola	17.16	326	P	Pn	12 28 58.8	-0.6
SWSC	Sam W. Stewart	17.22	329	P	P	12 29 01.4	+0.1
	baz=144						
WMOK	Wichita Mounta	17.24	18	P	Pn	12 28 60.0	-0.2
WMOK				IAmb	IAmb	12 29 03.5	
	comp=Z,220nm,1.2s						
WMOK	Wichita Mounta	17.24	18	P	Pn	12 29 00.0	-0.2
	baz=201,SNR=76						
BLYC	Blythe	17.31	333	P	P	12 29 03.2	+0.8
X34A	Smith Ranch, M	17.42	21		Pn	12 29 03.1	+0.8
Z38A	Mt. Pleasant	17.42	30	P	Pn	12 29 02.3	-0.1
Z38A				IAmb	IAmb	12 29 06.9	

comp=Z,188nm,1.4s
342A Flagon Creek P 17.44 40 P Pn 12 29 02.9 +0.3
BAR Barrett 17.45 326 P Pn 12 29 03.2 +0.3
MONP2 Monument Peak 17.49 327 P Pn 12 29 04.3 +0.8
baz=142
BC3 Big Chuckawall 17.64 331 P P 12 29 07.4 +1.3
baz=146
WUAZ Wupatki 17.82 344 P Pn 12 29 08.1 +0.5
WUAZ Wupatki 17.82 344 P P 12 29 09.2 +1.0
baz=161,SNR=45
109C Camp Elliot, M 17.85 326 P P 12 29 08.9 +0.7
baz=141
TGUH Tegucigalpa,Un 17.88 101 P P 12 29 10.1 +1.2
TGUH IAmb IAmb 12 29 13.1
comp=Z,105nm,1.1s
IRM Iron Mountain 17.93 333 P P 12 29 10.1 +1.0
baz=148,SNR=12
TPFO Pinon Flats 18.08 329 P P 12 29 12.1 +1.2
baz=144
PFO Pinyon Flats O 18.09 329 P P 12 29 12.6 +1.5
comp=Z,0.1nm,0.3s,baz=151,slow=14,SNR=7.0
PFO LR LR 12 35 11.1
comp=Z,600nm,18.6s,baz=158,slow=34
comp=Z,5.2nm,1.0s
PFO Pinyon Flats O 18.09 329 P P 12 29 11.3 +0.3
PFO Pinyon Flats O 18.09 329 P P 12 29 12.0 +0.9
baz=144
FNO Franklin 18.16 21 Pn 12 29 11.7 +0.1
FNO IAmb IAmb 12 29 14.5
comp=Z,163nm,1.1s
BELC Belle Mtn. Jos 18.18 330 P P 12 29 12.9 +0.8
baz=146
NEE2 Needles Airpor 18.23 335 P P 12 29 13.0 +0.5
baz=151
OKCFA Oklahoma City 18.29 21 IAmb IAmb 12 29 16.1
comp=Z,95nm,1.0s
X37A Clayton 18.36 27 IAmb IAmb 12 29 16.1
comp=Z,152nm,1.1s
344A Westbrook Farm 18.49 43 P P 12 29 14.9 -0.4
344A IAmb IAmb 12 29 32.0
comp=Z,51nm,0.9s
Z41A Richland Creek 18.54 35 IAmb IAmb 12 29 19.8
comp=Z,86nm,0.8s
Z41A Richland Creek 18.54 35 P P 12 29 15.4 -0.5
baz=220
T25A Trinidad 18.64 2 P Pn 12 29 19.5 +2.0
baz=183,SNR=108
GMRC Granite Mounta 18.68 333 P Pn 12 29 19.3 +1.2
baz=148,SNR=6.5
WLAR White Oak Lake 18.70 33 P P 12 29 17.9 +0.3
WLAR IAmb IAmb 12 29 37.7
comp=Z,86nm,1.2s
SCI2 San Clemente I 18.71 323 P Pn 12 29 19.1 +0.8
baz=137
U32A Winter Ranch, 18.71 16 P 12 29 18.1 +0.3
MVCO Mesa Verde 18.89 352 P P 12 29 20.4 +0.4
MVCO IAmb IAmb 12 29 40.8
comp=Z,114nm,1.5s
MVCO Mesa Verde 18.89 352 P Pn 12 29 21.2 +0.5
baz=171,SNR=18
HEC Hector,Ludlow 19.02 331 P Pn 12 29 22.1 0.0
baz=146
FMP Fort Macarthur 19.11 325 P P 12 29 22.8 +0.7
baz=139
VBMS Vicksburg 19.13 41 P P 12 29 22.4 0.0
VBMS IAmb IAmb 12 29 26.1
comp=Z,88nm,0.9s
VBMS Vicksburg 19.13 41 P P 12 29 22.5 +0.2
baz=229
MIAR Mount Ida 19.15 31 P P 12 29 23.0 +0.5
baz=216,SNR=12
BFSC Mount Baldy Ra 19.19 327 P P 12 29 23.6 +0.5
baz=142
SDCO Great Sand Dun 19.22 360 IAmb IAmb 12 29 31.9
comp=Z,142nm,1.3s
SDCO Great Sand Dun 19.22 360 P Pn 12 29 25.6 +0.9
baz=179,SNR=120
S22A 4UR Ranch, Cre 19.27 356 IAmb IAmb 12 29 43.4
comp=Z,64nm,1.1s
S22A 4UR Ranch, Cre 19.27 356 P Pn 12 29 25.7 +0.4
baz=176,SNR=84
TUL1 Leonard 19.33 24 P 12 29 24.8 +0.3
TUL1 Leonard 19.33 24 P P 12 29 24.7 +0.1
baz=208,SNR=21
TUQ Turquoise Moun 19.35 333 P Pn 12 29 26.2 +0.2
baz=148,SNR=12
SNCC San Nicolas Is 19.47 322 P P 12 29 26.5 +0.4
baz=136
MATN Matagalpa 19.47 104 P P 12 29 26.9 +0.6
X40A Basin Creek Fa 19.47 32 P P 12 29 25.9 -0.2
baz=218,SNR=8.8
W39A Magazine 19.58 29 P P 12 29 26.4 -0.9
W39A IAmb IAmb 12 29 33.0
comp=Z,93nm,1.2s
W39A Magazine 19.58 29 P P 12 29 27.7 +0.4
baz=214,SNR=22
GSC Goldstone, Bar 19.63 331 P Pn 12 29 29.3 -0.1
baz=146,SNR=7.8
EDW2 Edwards Air Fo 19.86 328 P P 12 29 30.7 +0.2
baz=142
BOAB BOACO BROADBAN 19.87 105 P P 12 29 31.7 +1.1
SHOC Shoshone, Teco 19.89 333 P Pn 12 29 31.9 -0.5
baz=148
UALR University of 19.95 33 P P 12 29 31.8 +0.5
SHPR Sheep Range 19.96 336 P P 12 29 32.5 +0.8
T35A Sooner Cattle 19.96 21 P 12 29 31.8 +0.4
QSM Queen of Sheba 20.21 332 P Pn 12 29 35.5 -0.6
QSM IAmb IAmb 12 29 43.5
comp=Z,47nm,1.3s
CCUT Cedar City 20.29 341 P P 12 29 36.6 +1.4
GWY Greenwater Val 20.30 333 P P 12 29 36.0 +0.6
W41B Gary Mavity, V 20.31 32 P P 12 29 35.8 +0.6
W41B Gary Mavity, V 20.31 32 P P 12 29 35.3 +0.2
baz=218,SNR=7.8
146A Union 20.34 43 P P 12 29 36.9 +1.3
WHAR Wooly Hollow 20.38 32 P P 12 29 36.5 +0.5
WHAR IAmb IAmb 12 29 46.3
comp=Z,53nm,1.2s
HHAR Hobbs 20.41 27 P P 12 29 36.5 +0.1
HHAR IAmb IAmb 12 29 42.0
comp=Z,92nm,1.1s
MTPU Mount Pierson 20.42 344 IAmb IAmb 12 29 48.0
comp=Z,61nm,1.2s
Q24A Divide 20.44 0 P P 12 29 37.9 +0.9
baz=180,SNR=40
ACON Acoyapa 20.48 105 P Pn 12 29 39.0 -0.5
ACON IAmb IAmb 12 29 44.1
comp=Z,80nm,1.4s
KSCO Kaye Shedlock' 20.62 6 IAmb IAmb 12 29 48.8
comp=Z,53nm,1.1s
KSCO Kaye Shedlock' 20.62 6 P P 12 29 39.4 +0.6
baz=187
BCW Bitter Crk WRg 20.65 325 IAmb IAmb 12 29 55.7
comp=Z,69nm,1.4s
SMCO Snowmass 20.70 356 P P 12 29 40.3 +0.4
ISA Isabella, Lake 20.72 328 P P 12 29 40.0 +0.2
ISA Isabella, Lake 20.72 328 P P 12 29 40.2 +0.5
baz=142,SNR=7.4
PRN Pahroc Range 20.72 338 P P 12 29 41.2 +1.4
R32A Long Quarter, 20.72 15 P P 12 29 39.8 +0.1
TPNV Topopah Spring 20.78 335 P Pn 12 29 42.4 -0.5
TPNV Topopah Spring 20.78 335 P P 12 29 41.9 +1.4
baz=150,SNR=33
Y45A Yeager Farm, C 20.85 40 P P 12 29 41.5 +0.4
MSU Marysvale 20.86 345 P Pn 12 29 43.4 -0.5
CBKS Cedar Bluff 20.87 12 P P 12 29 42.0 +0.7
CBKS Cedar Bluff 20.87 12 P P 12 29 41.5 +0.2
baz=195,SNR=66
FCAR Ozark Folk Cen 20.93 31 P P 12 29 41.7 -0.3
FCAR IAmb IAmb 12 29 46.8
comp=Z,46nm,1.1s
U40A Yellville 20.96 29 P P 12 29 41.9 -0.4
baz=215,SNR=17
Q16A Castle Valley 21.02 347 IAmb IAmb 12 29 48.4
comp=Z,137nm,1.5s
TCRU Three Creeks R 21.02 344 IAmb IAmb 12 29 49.9
comp=Z,52nm,1.2s
SRU San Rafael Swe 21.07 349 IAmb IAmb 12 29 51.9
comp=Z,36nm,1.1s
CWC Cottonwood Cre 21.15 330 P P 12 29 44.8 +0.3
baz=144
VES Vestal, Richgr 21.16 328 P P 12 29 44.8 +0.3
baz=141,SNR=6.8
S11A Rachel 21.19 337 IAmb IAmb 12 29 50.2
comp=Z,36nm,1.1s
SMMC Simmler 21.24 325 P P 12 29 45.2 -0.2
baz=138

ISCO Idaho Springs 21.27 359 P P 12 29 47.3 +1.4
ISCO IAmb IAmb 12 29 52.1
comp=Z,109nm,1.4s
ISCO Idaho Springs 21.27 359 P P 12 29 46.5 +0.5
baz=179,SNR=54
GRAC Grapevine Rang 21.29 333 P P 12 29 46.5 +0.6
GRAC Grapevine Rang 21.29 333 P P 12 29 45.9 +0.1
baz=147,SNR=9.0
SOR Soroa 21.33 75 P P 12 29 47.0 +0.7
Z47A Carrollton 21.34 43 P P 12 29 46.4 +0.1
PSUT Pine Spring 21.34 341 P P 12 29 48.3 +1.7
PSUT IAmb IAmb 12 29 57.4
comp=Z,49nm,1.3s
OXF Oxford 21.38 38 P P 12 29 46.9 +0.1
OXF IAmb IAmb 12 29 53.9
comp=Z,90nm,1.1s
OXF Oxford 21.38 38 P P 12 29 46.3 -0.5
baz=226,SNR=9.6
TMUT Trail Mountain 21.39 347 P P 12 29 48.8 +1.6
TMUT IAmb IAmb 12 29 54.4
comp=Z,86nm,1.3s
P17A Butcher Ranch, 21.46 349 IAmb IAmb 12 29 52.8
comp=Z,118nm,1.3s
P18A Preston Nutter 21.53 350 IAmb IAmb 12 29 60.0
comp=Z,58nm,1.2s
LCAR Lake Charles 21.56 33 IAmb IAmb 12 29 53.9
comp=Z,67nm,0.9s
TIN Tinemaha, Big 21.72 331 P P 12 29 50.7 +0.1
baz=145
R11A Troy Canyon, C 21.75 338 P P 12 29 51.9 +1.0
baz=153,SNR=16
O20A White River Ci 21.75 354 IAmb IAmb 12 29 59.5
comp=Z,41nm,1.1s
O20A White River Ci 21.75 354 P P 12 29 51.3 +0.3
baz=172,SNR=15
MGMO Mountain Grove 21.88 29 P P 12 29 52.0 -0.2
MGMO IAmb IAmb 12 30 00.1
comp=Z,32nm,0.9s
KSU1 Kansas State U 21.93 18 P P 12 29 53.3 +0.7
KSU1 Kansas State U 21.93 18 P P 12 29 53.2 +0.6
baz=203,SNR=23
LRAL Lakeview Retre 21.94 45 P P 12 29 52.7 -0.2
LRAL Lakeview Retre 21.94 45 P P 12 29 52.6 -0.2
baz=233,SNR=9.4
MPU Maple Canyon 22.17 347 IAmb IAmb 12 30 01.4
comp=Z,91nm,1.5s
RDMU Red Mountain 22.34 351 IAmb IAmb 12 30 03.3
comp=Z,80nm,1.3s
N23A Red Feather La 22.37 359 P P 12 29 58.9 +1.2
N23A Red Feather La 22.37 359 P P 12 29 57.3 -0.4
baz=178,SNR=12
MLAC Mammoth, Mammo 22.47 331 P P 12 29 58.2 -0.5
baz=144
PBMO Poplar Bluff 22.48 33 P P 12 29 58.8 +0.2
PBMO IAmb IAmb 12 30 06.1
comp=Z,28nm,0.9s
PLAL Pickwick Lake 22.50 40 P P 12 29 58.0 -0.8
PLAL IAmb IAmb 12 30 06.6
comp=Z,51nm,1.4s
OMMB Old Mammoth Mi 22.53 331 P P 12 30 01.1 +1.5
MDPB Devils Postpil 22.59 331 P P 12 30 01.1 +1.0
OGNE Ogallala 22.60 7 IAmb IAmb 12 30 05.5
comp=Z,101nm,1.4s
OGNE Ogallala 22.60 7 P P 12 30 00.4 +0.5
baz=188,SNR=6.6
DUG Dugway, Tooele 22.61 345 P P 12 30 00.3 +0.2
DUG IAmb IAmb 12 30 06.4
comp=Z,47nm,1.5s
DUG Dugway, Tooele 22.61 345 P P 12 30 00.1 0.0
baz=161,SNR=19
X48A Hartselle 22.79 42 P P 12 30 00.8 -1.0
X48A IAmb IAmb 12 30 08.8
comp=Z,45nm,1.1s
R40A Maddies Statio 22.82 27 P P 12 30 02.0 -0.1
R40A IAmb IAmb 12 30 09.8
comp=Z,58nm,1.1s
LHV Little Huntoon 22.83 332 P P 12 30 03.6 +1.4
NVAR Mina Array Bea 22.89 333 P P 12 30 05.1 +1.9
comp=Z,1.9nm,0.8s,baz=155,slow=11,SNR=11
NVAR LR LR 12 38 45.5
comp=Z,431nm,18.8s,baz=154,slow=36
comp=Z,1.9nm,0.8s
NVAR Mina Array Bea 22.89 333 P P 12 30 03.2 0.0
CCM Cathedral Cave 23.09 29 P P 12 30 04.7 -0.2
CCM IAmb IAmb 12 30 08.7
comp=Z,39nm,1.1s
CCM Cathedral Cave 23.09 29 P P 12 30 04.3 -0.7
baz=216
RYN Ryan 23.15 333 P P 12 30 06.2 +0.4
RWWY Rawlins 23.22 356 P P 12 30 06.7 +0.2
152A Waverly Hall 23.31 49 P P 12 30 07.2 -0.1
152A IAmb IAmb 12 30 19.7
comp=Z,62nm,1.5s
KVN Kaiserville 23.33 334 P P 12 30 09.0 +1.4
KVN IAmb IAmb 12 30 17.3
comp=Z,40nm,1.3s
BGU Big Grassy Mou 23.35 345 P P 12 30 09.5 +1.7
FVM French Village 23.42 31 IAmb IAmb 12 30 21.1
comp=Z,36nm,1.3s
WVT Waverly 23.43 38 P P 12 30 07.8 -0.5
WVT IAmb IAmb 12 30 18.9
comp=Z,33nm,1.3s
WVT Waverly 23.43 38 P P 12 30 07.9 -0.5
baz=226
P38A Dawn 23.44 23 P P 12 30 08.2 -0.3
HWUT Hardware Ranch 23.69 348 IAmb IAmb 12 30 17.2
comp=Z,39nm,1.4s
BGNE Belgrade 23.69 14 P P 12 30 11.0 0.0
baz=197
FPAL Fort Paine 23.77 44 IAmb IAmb 12 30 14.2
comp=Z,26nm,1.0s
S44A Carbondale 23.78 33 IAmb IAmb 12 30 22.3
comp=Z,28nm,0.9s
ELK Elko 23.79 341 P P 12 30 13.9 +1.7
comp=Z,4.4nm,1.0s,baz=174,slow=8.2,SNR=12
ELK LR LR 12 38 43.3
comp=Z,244nm,18.8s,baz=174,slow=34
comp=Z,4.4nm,1.0s
P40A Paris 23.95 26 IAmb IAmb 12 30 15.8
comp=Z,61nm,1.1s
SWET Sewanee 23.98 42 P P 12 30 13.3 -0.4
SWET IAmb IAmb 12 30 21.1
comp=Z,21nm,1.0s
SLM Saint Louis 24.03 30 P P 12 30 14.6 +0.6
HVU Hansel Valley 24.11 346 IAmb IAmb 12 30 23.6
comp=Z,39nm,1.4s
K22A Casper 24.14 358 IAmb IAmb 12 30 42.0
comp=Z,49nm,1.3s
K22A Casper 24.14 358 P P 12 30 16.1 +0.8
baz=177,SNR=14
BMN Battle Mountai 24.18 337 IAmb IAmb 12 30 24.6
comp=Z,40nm,1.3s
CLTN Cedars of Leba 24.29 40 IAmb IAmb 12 30 24.1
comp=Z,76nm,1.3s
MPK Martis Peak 24.37 332 P P 12 30 17.5 -0.1
MPK IAmb IAmb 12 30 23.8
comp=Z,27nm,1.1s
PAHR Pah Rah Range 24.42 333 IAmb IAmb 12 30 27.5
comp=Z,21nm,1.1s
Y52A Lilburn 24.42 47 P P 12 30 18.0 +0.2
T47A Sharon Grove 24.44 37 IAmb IAmb 12 30 25.0
comp=Z,59nm,1.1s
BW06 Boulder Array 24.50 352 P P 12 30 18.7 0.0
baz=170
PD31 Pinedale Array 24.50 352 P P 12 30 18.5 -0.2
PDAR Pinedale Array 24.50 352 P P 12 30 19.4 +0.7
comp=Z,3.2nm,0.9s,baz=203,slow=11,SNR=13
PDAR LR LR 12 39 41.1
comp=Z,309nm,19.3s,baz=182,slow=36
comp=Z,3.2nm,0.9s
PDAR Pinedale Array 24.50 352 P P 12 30 18.3 -0.4
GOGA Godfrey 24.60 48 IAmb IAmb 12 30 20.9
comp=Z,24nm,0.7s
GOGA Godfrey 24.60 48 P P 12 30 18.9 -0.5
baz=238,SNR=18
L34A Svendsen Farm, 24.65 16 IAmb IAmb 12 30 21.5
comp=Z,29nm,0.9s
AHID Auburn Hatcher 24.73 350 IAmb IAmb 12 30 27.3
comp=Z,33nm,1.4s
U49A Red Boiling Sp 24.91 40 IAmb IAmb 12 30 24.9
comp=Z,31nm,1.2s
CPCT Cooper Cave 25.03 43 IAmb IAmb 12 30 25.9
comp=Z,51nm,1.5s
ECR Eagle Creek 25.05 350 P P 12 30 24.6 +1.0
W52A Murphy 25.21 45 P P 12 30 25.3 +0.4
ORV Oroville 25.26 330 P P 12 30 25.7 +0.4

REDW Red Top Meadow 25.27 351 IAmb IAmb 12 30 31.2
comp=Z,33nm,1.1s
V51A Loudon 25.35 43 IAmb IAmb 12 30 28.0
comp=Z,26nm,0.8s
TPAW Teton Pass 25.41 350 IAmb IAmb 12 30 34.7
comp=Z,53nm,1.3s
LOHW Long Hollow 25.48 351 IAmb IAmb 12 30 35.0
comp=Z,43nm,1.3s
SCIA State Center 25.56 21 P P 12 30 27.8 -0.2
baz=207
RSSD Black Hills 25.62 2 P P 12 30 29.8 +1.1
RSSD Black Hills 25.62 2 P P 12 30 28.2 -0.5
baz=183
MOOW Moose Ponds 25.63 351 P P 12 30 29.5 +0.6
MOOW IAmb IAmb 12 30 36.7
comp=Z,33nm,1.3s
TKL Tuckaleechee C 25.64 44 P P 12 30 28.8 0.0
comp=Z,13nm,0.9s,baz=221,slow=10,SNR=16
TKL LR LR 12 43 15.5
comp=Z,249nm,19.4s,baz=234,slow=43
comp=Z,13nm,0.9s
TKL Tuckaleechee C 25.64 44 IAmb IAmb 12 30 30.5
comp=Z,23nm,1.0s
T50A Nancy 25.81 40 IAmb IAmb 12 30 33.1
comp=Z,20nm,0.8s
V52A Sevierville 25.87 44 IAmb IAmb 12 30 57.4
comp=Z,29nm,1.2s
FLWY Flagg Ranch 25.95 351 IAmb IAmb 12 30 38.4
comp=Z,35nm,1.2s
HDIL Hopedale 25.99 29 P P 12 30 31.8 -0.2
baz=217
HLID Hailey 26.18 345 P P 12 30 34.3 +0.4
baz=160,SNR=8.0
H17A Grant Village 26.24 351 P P 12 30 34.9 +0.5
baz=169
ECSD EROS Data Cent 26.25 14 P P 12 30 34.0 -0.3
baz=199
V53A Saluda 26.29 45 IAmb IAmb 12 30 42.6
comp=Z,27nm,1.3s
TZTN Tazewell 26.32 42 IAmb IAmb 12 30 44.9
comp=Z,48nm,1.2s
TZTN Tazewell 26.32 42 P P 12 30 34.7 -0.3
baz=233
K38A Parkersburg 26.37 21 P P 12 30 34.9 -0.4
K38A IAmb IAmb 12 30 38.5
comp=Z,69nm,1.4s
L40A Anamosa 26.43 24 P P 12 30 36.9 +1.0
R49A Shelbyville 26.45 38 P P 12 30 37.1 +1.0
R49A IAmb IAmb 12 30 45.2
comp=Z,20nm,1.2s
JSC Jenkinsville 26.62 49 IAmb IAmb 12 30 42.1
comp=Z,25nm,1.1s
MOD Modoc Plateau 26.64 335 IAmb IAmb 12 30 49.7
comp=Z,25nm,1.4s
YHL Hebgen Lake 26.77 351 IAmb IAmb 12 30 49.9
comp=Z,35nm,1.3s
RLMT Red Lodge 26.80 354 P P 12 30 39.4 0.0
baz=172
NHSC New Hope 26.85 52 P P 12 30 39.7 0.0
baz=243
SFIN Lafayette 26.91 32 IAmb IAmb 12 30 44.1
comp=Z,51nm,1.3s
SFIN Lafayette 26.91 32 P P 12 30 40.3 +0.1
baz=221
R50A Paris 26.94 39 P P 12 30 39.7 -0.8
R50A IAmb IAmb 12 30 47.0
comp=Z,21nm,1.3s
S51A Beattyville 26.97 40 P P 12 30 40.9 +0.1
S51A IAmb IAmb 12 30 47.9
comp=Z,34nm,1.1s
KMSC Kings Mountain 27.01 47 IAmb IAmb 12 30 45.5
comp=Z,22nm,0.9s
KMSC Kings Mountain 27.01 47 P P 12 30 41.5 +0.3
baz=238,SNR=6.0
L42A Oliver, Polo 27.01 26 IAmb IAmb 12 30 44.1
comp=Z,32nm,1.0s
MCMT McKenzie Canyo 27.04 348 P P 12 30 42.6 +1.0
P48A Milroy 27.12 35 IAmb IAmb 12 30 47.6
comp=Z,40nm,1.4s
U54A Nelsons Funny 27.43 44 IAmb IAmb 12 30 52.2
comp=Z,19nm,0.8s
JFWS Jewell Farm 27.53 24 IAmb IAmb 12 30 52.7
comp=Z,23nm,0.7s
JFWS Jewell Farm 27.53 24 P P 12 30 45.5 -0.3
baz=212
YBH Yreka Blue Hor 27.54 331 LR LR 12 41 21.8
comp=Z,382nm,19.3s,baz=156,slow=36
P49A Miami Univ. Ec 27.56 36 P P 12 30 45.1 -1.0
baz=226
K05A Summer Lake 27.56 335 IAmb IAmb 12 31 13.1
comp=Z,33nm,1.5s
BOZ Bozeman (W) 27.57 350 P P 12 30 46.8 +0.5
baz=167,SNR=12
L04D Klamath Falls 27.75 332 P P 12 30 47.5 -0.4
baz=143
O48B Farmland 27.83 34 P P 12 30 47.7 -0.7
baz=224
W57A Gilead 27.96 48 IAmb IAmb 12 30 51.5
comp=Z,27nm,1.2s
Q51A Peebles 28.01 38 P P 12 30 49.9 -0.2
Q51A IAmb IAmb 12 30 57.1
comp=Z,24nm,1.1s
PLID Pearl Lake 28.01 344 P P 12 30 51.0 +0.6
J05D Fort Rock, OR 28.17 335 P P 12 30 51.4 -0.3
baz=146
LAO LASA Array 28.17 359 P P 12 30 51.6 0.0
LAO IAmb IAmb 12 31 00.0
comp=Z,19nm,1.2s
LAO LASA Array 28.17 359 P P 12 30 51.0 -0.5
baz=178
O49A Covington 28.23 35 IAmb IAmb 12 30 59.2
comp=Z,16nm,1.0s
U56A King 28.30 46 IAmb IAmb 12 30 57.0
comp=Z,28nm,1.2s
J04D Umpqua Nationa 28.49 334 P P 12 30 53.5 -1.1
baz=145
Q52A Bidwell 28.61 40 IAmb IAmb 12 30 57.0
comp=Z,24nm,1.1s
SPMN Marine on St. 28.67 19 P P 12 30 55.4 -0.5
baz=205
K02D Willamette Mer 28.74 331 P P 12 30 56.6 -0.1
baz=142
BLA Blacksburg 28.75 44 IAmb IAmb 12 31 04.6
comp=Z,31nm,1.1s
N49A Columbus Grove 28.82 35 P P 12 30 58.2 +0.8
N49A IAmb IAmb 12 31 01.3
comp=Z,46nm,1.4s
I42A Draeger Farm, 28.88 25 P P 12 30 58.3 +0.5
I42A IAmb IAmb 12 31 01.2
comp=Z,31nm,1.3s
V58A Windy Hill, Pi 28.90 48 P P 12 30 59.4 +1.4
V58A IAmb IAmb 12 31 00.2
comp=Z,15nm,1.0s
F36A Milaca 29.04 17 IAmb IAmb 12 31 02.8
comp=Z,28nm,1.3s
I05D Terrebonne, OR 29.09 336 P P 12 30 59.6 -0.1
baz=147
P52A Corning 29.12 39 P P 12 30 59.2 -0.8
baz=230
MSO Missoula 29.18 348 IAmb IAmb 12 31 15.8
comp=Z,22nm,1.1s
MSO Missoula 29.18 348 P P 12 31 00.6 +0.1
baz=163,SNR=9.2
T57A Hurt 29.42 46 IAmb IAmb 12 31 07.8
comp=Z,39nm,1.4s
P53A Whipple 29.47 40 IAmb IAmb 12 31 04.6
comp=Z,32nm,1.2s
Q54A Coxs Mills 29.50 41 P P 12 31 03.6 +0.2
Q54A IAmb IAmb 12 31 12.1
comp=Z,22nm,1.2s
R55A Marlinton 29.55 43 P P 12 31 04.6 +0.7
R55A IAmb IAmb 12 31 11.3
comp=Z,16nm,1.1s
H04A Detroit Lake 29.71 335 IAmb IAmb 12 31 09.2
comp=Z,14nm,1.1s
EGMT Eagleton 29.72 354 P P 12 31 05.4 +0.1
baz=172
H04D Lebanon 29.80 335 P P 12 31 05.2 -0.8
baz=145
DGMT Dagmar 29.96 2 IAmb IAmb 12 31 16.6
comp=Z,31nm,1.2s
S57A Dark Hollow, R 30.02 45 IAmb IAmb 12 31 15.4
comp=Z,23nm,1.2s
HOOD Mount Hood Mea 30.04 337 IAmb IAmb 12 31 17.4
comp=Z,19nm,1.2s
SJCC San Jacinto, C 30.41 102 P P 12 31 13.4 +1.6
SJCC IAmb IAmb 12 31 14.4
comp=Z,14nm,1.0s

F05D **White Salmon** 30.45 337 P **P** 12 31 13.8 +2.1
F05D IAmb IAmb 12 31 16.8
comp=Z,30nm,1.4s
T59A **Double "B" Far** 30.57 47 P **P** 12 31 13.7 +0.8
T59A IAmb IAmb 12 31 17.2
comp=Z,17nm,1.1s
COWI **Conover** 30.66 22 IAmb IAmb 12 31 15.3
comp=Z,27nm,1.2s
AGMN **Agassiz Nation** 30.75 12 IAmb IAmb 12 31 19.4
comp=Z,27nm,1.2s
AGMN **Agassiz Nation** 30.75 12 P **P** 12 31 13.9 -0.4
baz=198,SNR=6.0
NEW **Newport** 31.25 345 LR LR 12 43 06.3
comp=Z,232nm,18.4s,baz=163,slow=35
NEW **Newport** 31.25 345 P **P** 12 31 18.8 0.0
baz=158
LTY **Liberty** 31.36 340 IAmb IAmb 12 31 29.3
comp=Z,29nm,1.4s
E04D **Cinebar** 31.43 337 IAmb IAmb 12 31 29.2
comp=Z,26nm,1.3s
E04D **Cinebar** 31.43 337 P **P** 12 31 20.4 +0.2
baz=147
EYMN **Ely** 31.51 18 P **P** 12 31 21.1 +0.1
EYMN **Ely** 31.51 18 P **P** 12 31 20.5 -0.5
baz=206,SNR=9.4
B08A **Colville Reser** 31.93 342 P **P** 12 31 26.0 +1.3
B08A IAmb IAmb 12 31 40.0
comp=Z,37nm,1.5s
OTAV **Otavalo** 32.01 121 P **P** 12 31 28.2 +1.9
OTAV IAmb IAmb 12 31 29.2
comp=Z,17nm,1.2s
SSPA **Standing Stone** 32.31 41 P **P** 12 31 28.3 +0.2
SSPA IAmb IAmb 12 31 30.9
comp=Z,25nm,1.2s
SSPA **Standing Stone** 32.31 41 P **P** 12 31 28.2 0.0
baz=235
D03D **Eldon** 32.44 337 P **P** 12 31 29.9 +0.7
baz=147
ULM **Lac du Bonnet** 32.62 11 P **P** 12 31 30.2 -0.4
comp=Z,5.7nm,0.9s,baz=200,slow=8.7,SNR=5.4
ULM LR LR 12 45 25.2
comp=Z,1µm,21.2s,baz=198,slow=38
comp=Z,5.7nm,0.9s
ULM **Lac du Bonnet** 32.62 11 P **P** 12 31 30.2 -0.4
N58A **Sunbury** 33.16 42 IAmb IAmb 12 31 37.0
comp=Z,32nm,1.2s
SADO **Sadowa** 34.16 34 LR LR 12 47 04.1
comp=Z,492nm,20.8s,baz=246,slow=39
SADO **Sadowa** 34.16 34 IAmb IAmb 12 31 45.4
comp=Z,22nm,1.2s
BINY **Binghamton** 34.38 40 IAmb IAmb 12 31 47.9
comp=Z,29nm,1.1s
BINY **Binghamton** 34.38 40 P **P** 12 31 46.0 -0.2
baz=235,SNR=6.4
ODNJ **Ogdensburg** 34.64 43 IAmb IAmb 12 31 52.2
comp=Z,30nm,1.3s
PECO **Prince Edward** 34.80 37 IAmb IAmb 12 31 51.0
comp=Z,25nm,1.1s
L59A **Walton** 34.95 41 P **P** 12 31 51.0 -0.2
SDV **Santo Domingo** 34.97 101 LR LR 12 45 47.4
comp=Z,224nm,20.6s,baz=322,slow=36
PAL **Palisades** 35.05 43 P **P** 12 31 53.0 +1.0
PAL IAmb IAmb 12 31 59.5
comp=Z,26nm,1.1s
PAL **Palisades** 35.05 43 P **P** 12 31 51.8 -0.2
baz=240
J57A **Williamstown** 35.07 38 P **P** 12 31 51.7 -0.3
J57A IAmb IAmb 12 31 55.3
comp=Z,22nm,1.1s
EDM **Edmonton** 35.26 352 P **P** 12 31 53.7 +0.1
EDM IAmb IAmb 12 31 59.4
comp=Z,12nm,0.9s
J59A **Piesco** 35.99 39 IAmb IAmb 12 32 01.4
comp=Z,19nm,1.2s
NCB **Newcomb** 36.44 39 IAmb IAmb 12 32 05.3
comp=Z,15nm,1.2s
ACCN **Adirondack Com** 36.45 40 IAmb IAmb 12 32 05.5
comp=Z,17nm,1.1s
UCCT **U. Connecticut** 36.54 43 P **P** 12 32 05.9 +1.2
L61B **Northampton** 36.58 42 P **P** 12 32 05.0 0.0
baz=239
LONY **Lake Ozonia** 36.60 38 P **P** 12 32 04.9 -0.4
LONY IAmb IAmb 12 32 08.0
comp=Z,19nm,1.2s
LONY **Lake Ozonia** 36.60 38 P **P** 12 32 05.2 -0.1
baz=234
ATAH **Atahualpa** 36.78 131 LR LR 12 43 57.1
comp=Z,340nm,21.6s,baz=306,slow=31
K62A **Royalston** 36.97 42 IAmb IAmb 12 32 23.4
comp=Z,27nm,1.4s
BRYW **Bryant College** 37.05 44 P **P** 12 32 10.1 +1.0
BRYW IAmb IAmb 12 32 11.1
comp=Z,33nm,1.1s
J61A **Chester** 37.12 41 P **P** 12 32 09.7 +0.1
J61A IAmb IAmb 12 32 12.2
comp=Z,28nm,1.0s
SJG **San Juan** 37.16 84 LR LR 12 46 26.6
comp=Z,112nm,21.9s,baz=274,slow=35
VLDQ **Val d'Or** 37.27 31 P **P** 12 32 10.6 -0.3
HRV **Adam Dziewonsk** 37.32 43 P **P** 12 32 12.1 +0.7
HRV IAmb IAmb 12 32 15.7
comp=Z,43nm,1.2s
HRV **Adam Dziewonsk** 37.32 43 P **P** 12 32 12.1 +0.7
baz=240
BAUV **El Baul** 37.37 100 P **P** 12 32 12.0 -0.2
HNH **Hanover** 37.47 41 IAmb IAmb 12 32 14.9
comp=Z,19nm,1.1s
VT1 **Waterbury** 37.52 39 IAmb IAmb 12 32 18.4
comp=Z,22nm,1.1s
TRQ **Mont Tremblant** 37.57 36 P **P** 12 32 13.8 +0.3
TRQ IAmb IAmb 12 32 17.4
comp=Z,23nm,1.1s
LBNH **Lisbon** 37.98 40 P **P** 12 32 18.2 +1.3
LBNH IAmb IAmb 12 32 19.4
comp=Z,19nm,1.1s
LBNH **Lisbon** 37.98 40 P **P** 12 32 17.4 +0.4
baz=238
BBB **Bella Bella** 38.12 337 LR LR 12 47 34.3
comp=Z,165nm,19.8s,baz=140,slow=36
I63A **Otisfield** 38.71 41 IAmb IAmb 12 32 27.7
comp=Z,37nm,1.1s
G62A **West of Eustis** 39.34 40 IAmb IAmb 12 32 32.8
comp=Z,30nm,1.2s
PKME **Peaks-Kenny Pk** 40.11 40 P **P** 12 32 34.7 0.0
baz=240
F64A **Sherman** 40.98 40 IAmb IAmb 12 32 55.0
comp=Z,33nm,1.4s
D62A **Allapoint, All** 41.19 38 IAmb IAmb 12 32 47.4
comp=Z,18nm,1.1s
NNA **Nana** 41.29 135 LR LR 12 46 14.6
comp=Z,177nm,19.7s,baz=310,slow=31
WRAK **Wrangell Islan** 42.99 338 P **P** 12 32 57.9 -0.2
baz=141
BATG **Bathurst New B** 43.05 39 IAmb IAmb 12 33 06.9
comp=Z,35nm,1.1s
S34M **Telegraph Cree** 43.76 340 P **P** 12 33 04.7 +0.3
baz=143
TAOE **Nuku Hiva Isla** 43.78 235 *e*LR LR 12 44 14.6
comp=Z,480nm,26.3s
TAOE **Nuku Hiva Isla** 43.78 235 *e*T T 13 19 15.0
comp=Z,64nm,0.3s
DLBC **Dease Lake** 43.85 342 P **P** 12 33 06.6 +1.4
comp=Z,10nm,1.1s,baz=169,slow=9.7,SNR=12
DLBC LR LR 12 51 21.5
comp=Z,293nm,20.5s,baz=140,slow=36
comp=Z,10nm,1.1s
DLBC **Dease Lake** 43.85 342 IAmb IAmb 12 33 10.6
comp=Z,22nm,1.3s
DLBC **Dease Lake** 43.85 342 P **P** 12 33 06.1 +0.9
baz=145
YKA **Yellowknife Ar** 44.47 354 P **P** 12 33 09.6 -0.4
comp=Z,5.2nm,1.0s,baz=166,slow=7.5,SNR=23
YKA LR LR 12 51 29.3
comp=Z,464nm,18.8s,baz=164,slow=36
comp=Z,5.2nm,1.0s
RPN **Rapa Nui** 45.47 185 LR LR 12 47 39.1
comp=Z,435nm,20.9s,baz=351,slow=30
P33M **Teslin, Yukon** 46.13 341 P **P** 12 33 23.9 +0.6
baz=143
SKAG **Skagway** 46.35 339 P **P** 12 33 25.7 +0.8
baz=139
SCHQ **Schefferville** 46.66 30 P **P** 12 33 27.2 -0.2
comp=Z,15nm,1.1s,baz=197,slow=5.2,SNR=5.6
SCHQ LR LR 12 54 03.3
comp=Z,496nm,18.5s,baz=226,slow=37
comp=Z,15nm,1.1s
SCHQ **Schefferville** 46.66 30 P **P** 12 33 27.5 +0.1
SCHQ IAmb IAmb 12 33 31.3
comp=Z,25nm,1.3s
PLBC **Pleasant Camp** 46.70 339 P **P** 12 33 27.1 -0.6
baz=138
O30N **Mendenhall** 47.59 340 P **P** 12 33 34.6 -0.1
baz=139
MMPY **Sheldon Lake,** 47.65 344 P **P** 12 33 35.5 +0.4
baz=146,SNR=5.5
FARO **Faro, Yukon** 47.90 343 P **P** 12 33 37.4 +0.4
baz=143
N31M **Braeburn, Yuko** 48.03 341 P **P** 12 33 37.9 -0.2
baz=140
HYT **Haines Junctio** 48.09 339 P **P** 12 33 38.4 -0.3
baz=137
M31M **Drury Creek, Y** 48.17 342 P **P** 12 33 39.1 0.0
baz=142
YUK8 **Steele Glacier** 49.19 339 P **P** 12 33 47.7 +0.4
baz=135
LPAZ **La Paz** 50.33 131 P **P** 12 33 56.3 -0.6
comp=Z,5.8nm,0.9s,baz=342,slow=8.3,SNR=16
LPAZ LR LR 12 53 43.3
comp=Z,138nm,19.1s,baz=310,slow=34
comp=Z,5.8nm,0.9s
LPAZ **La Paz** 50.33 131 IAmb IAmb 12 33 57.5
comp=Z,8.6nm,1.0s
M27K **Edge Creek, AK** 50.66 339 P **P** 12 33 58.2 0.0
baz=133
PB16 **IPOC Station P** 50.75 134 IAmb IAmb 12 34 01.5
comp=Z,15nm,1.1s
EYAK **Cordova Ski Ar** 50.90 336 P **P** 12 34 00.9 +1.0
baz=128
DAWY **Dawson** 51.07 342 P **P** 12 34 01.2 0.0
baz=137
M26K **Nabesna, AK** 51.07 339 P **P** 12 34 00.9 -0.4
baz=132
L27K **Beaver Creek,** 51.12 340 P **P** 12 34 01.7 +0.1
baz=134
N25K **Chitina, Valde** 51.12 337 P **P** 12 34 01.9 +0.1
baz=130
FRB **Frobisher Bay** 51.69 20 LR LR 12 56 54.1
comp=Z,768nm,19.0s,baz=222,slow=37
K27K **Chicken** 51.88 340 P **P** 12 34 08.4 +1.2
baz=134
EPYK **Eagle Plains** 52.08 345 P **P** 12 34 09.1 +0.4
baz=141
EGAK **Eagle** 52.12 341 P **P** 12 34 09.1 +0.2
baz=135
RIDG **Independent Ri** 52.59 339 P **P** 12 34 13.0 +0.4
baz=130
J26L **Joseph Creek** 52.67 340 IAmb IAmb 12 34 31.6
comp=Z,10nm,1.1s
J26L **Joseph Creek** 52.67 340 P **P** 12 34 13.1 -0.1
baz=132,SNR=6.5
WAT6 **Susitna Watana** 52.89 337 P **P** 12 34 14.9 -0.1
baz=127
INK **Inuvik** 52.91 347 P **P** 12 34 15.3 +0.5
comp=Z,8.6nm,1.0s,baz=142,slow=9.2,SNR=8.6
INK LR LR 12 59 32.4
comp=Z,196nm,18.1s,baz=130,slow=39
comp=Z,8.6nm,1.0s
INK **Inuvik** 52.91 347 IAmb IAmb 12 34 16.0
comp=Z,10nm,1.0s
INK **Inuvik** 52.91 347 P **P** 12 34 14.2 -0.5
baz=146,SNR=8.9
DHY **Denali Highway** 53.06 338 P **P** 12 34 16.4 +0.3
baz=127
MDP **Montagnes des** 53.07 98 LR LR 12 56 33.9
comp=Z,116nm,21.3s,baz=284,slow=36
PMOR **Pomariorio Ree** 53.51 234 *e*T T 13 31 35.6
comp=Z,1.4nm,0.3s
RND **Reindeer** 53.79 337 IAmb IAmb 12 34 36.5
comp=Z,22nm,1.4s
ILAR **Eielson Array** 53.94 339 P **P** 12 34 22.3 -0.1
comp=Z,2.4nm,1.0s,baz=150,slow=5.6,SNR=14
ILAR LR LR 12 59 24.8
comp=Z,106nm,19.0s,baz=128,slow=38
comp=Z,2.4nm,1.0s
MCK **McKinley** 54.01 338 P **P** 12 34 23.2 +0.2
baz=126
SKT **Skwentna** 54.01 335 P **P** 12 34 23.5 +0.5
baz=122
LVC **Limon Verde** 54.16 137 LR LR 12 52 32.7
comp=Z,152nm,21.5s,baz=313,slow=31
POKR **Poker Plat Res** 54.34 340 P **P** 12 34 24.2 -1.2
baz=128
TRF **Thorofare Moun** 54.34 337 IAmb IAmb 12 34 40.9
comp=Z,22nm,1.3s
TRF **Thorofare Moun** 54.34 337 P **P** 12 34 25.1 -0.5
baz=124
NEA2 **Nenana** 54.57 339 P **P** 12 34 26.7 -0.4
baz=126
M20K **Styx River** 54.61 335 P **P** 12 34 27.4 -0.1
baz=120
A36M **Sachs Harbour** 54.78 353 P **P** 12 34 28.2 -0.2
baz=157
H24K **Noodor Dome** 54.93 340 IAmb IAmb 12 34 47.4
comp=Z,10.0nm,1.1s
H24K **Noodor Dome** 54.93 340 P **P** 12 34 29.6 -0.1
baz=128
BPAW **Bear Paw Mtn.** 54.97 337 P **P** 12 34 29.6 -0.3
baz=124
CAST **Castle Rocks** 55.00 336 P **P** 12 34 29.6 -0.5
baz=122
I23K **Minto, Yukon-K** 55.00 339 P **P** 12 34 29.9 -0.2
baz=126
M19K **Big River Lodg** 55.14 334 P **P** 12 34 30.8 -0.4
baz=119
N18K **Kiln Creek** 55.20 332 P **P** 12 34 31.0 -0.7
baz=117
L20K **Farewell, AK** 55.22 335 P **P** 12 34 31.2 -0.6
baz=120
CHUM **Lake Minchumin** 55.34 337 P **P** 12 34 32.4 -0.1
baz=122
O17K **Koliganek Bris** 55.35 331 P **P** 12 34 32.8 +0.2
baz=115
MLY **Manley** 55.41 338 P **P** 12 34 32.8 -0.3
baz=125
SIV **San Ignacio** 55.41 125 LR LR 12 55 42.2
comp=Z,283nm,21.4s,baz=294,slow=33
L19K **White Mountain** 55.47 334 P **P** 12 34 33.4 -0.1
baz=119
H23K **Yukon River** 55.47 340 P **P** 12 34 33.4 -0.1
baz=126
K20K **Telida** 55.73 336 IAmb IAmb 12 34 43.5
comp=Z,23nm,1.3s
K20K **Telida** 55.73 336 P **P** 12 34 34.8 -0.7
baz=120
I21K **Tanana** 55.93 338 P **P** 12 34 36.3 -0.5
baz=124
J20K **Nowinta River** 56.18 337 IAmb IAmb 12 34 53.6
comp=Z,13nm,1.2s
J20K **Nowinta River** 56.18 337 P **P** 12 34 37.1 -1.5
baz=121,SNR=7.1
TTA **Tatalina** 56.29 335 P **P** 12 34 37.8 -1.8
baz=118,SNR=5.4
PPT **Papeete** 56.34 233 LR LR 12 51 45.8
comp=Z,165nm,21.4s,baz=46,slow=29
PPT2 **Papeete2** 56.35 233 *e*LR LR 12 50 03.1
comp=Z,537nm,26.0s
N16K **Nishlik Lake** 56.40 331 P **P** 12 34 39.1 -1.2
baz=114
H21K **Melozitna Rive** 56.48 339 IAmb IAmb 12 35 07.5
comp=Z,12nm,1.1s
H21K **Melozitna Rive** 56.48 339 P **P** 12 34 39.5 -1.2
baz=123,SNR=7.7
RES **Resolute Bay** 56.54 3 LR LR 13 00 08.3
comp=Z,853nm,18.6s,baz=192,slow=37
TOLK **Toolik Lake Re** 57.19 342 P **P** 12 34 45.7 -0.1
TOLK IAmb IAmb 12 35 01.8
comp=Z,12nm,1.3s
TOLK **Toolik Lake Re** 57.19 342 P **P** 12 34 45.0 -0.8
baz=128
H03N2 **Juan Fernandez** 57.43 154 T T 13 36 46.0
baz=331,slow=77,SNR=70
H03N1 **Juan Fernandez** 57.44 154 T T 13 36 46.5
baz=331,slow=77,SNR=138
H03N3 **Juan Fernandez** 57.44 154 T T 13 36 41.4
baz=331,slow=77,SNR=104
SFJD **Kangerlussuaq** 59.68 22 LR LR 13 01 42.2
comp=Z,407nm,18.7s,baz=240,slow=37
SFJD **Kangerlussuaq** 59.68 22 *e*P P 12 35 07.9 +4.8
TBI **Tubuai** 59.85 228 *e*LR LR 12 51 43.4
comp=Z,598nm,28.0s
TBI **Tubuai** 59.85 228 *e*T T 13 39 21.4
comp=Z,2.6nm,0.3s
DY2G **Dye2** 61.05 23 *i* P **P** 12 35 11.6 -1.2
DY2G IAmb IAmb 12 35 14.5
comp=Z,18nm,0.9s
LMEL **Las Melosas** 61.86 147 P **P** 12 35 18.8 +0.3
LMEL IAmb IAmb 12 35 19.6
comp=Z,9.4nm,0.9s
EUNU **Eureka** 62.23 4 P **P** 12 35 20.1 -0.2
EUNU IAmb IAmb 12 35 23.8
comp=Z,14nm,1.5s
ICESG **Greenland Ices** 64.28 21 *e*P **P** 12 35 32.6 -1.8
ICESG IAmb IAmb 12 35 36.0
comp=Z,28nm,1.0s
CPUP **Villa Florida** 64.46 132 P **P** 12 35 35.0 -0.7
comp=Z,6.2nm,0.9s,baz=318,slow=8.0,SNR=7.6
CPUP LR LR 13 01 44.5
comp=Z,154nm,21.2s,baz=333,slow=34
comp=Z,6.2nm,0.9s
CPUP **Villa Florida** 64.46 132 P **P** 12 35 35.3 -0.5
CPUP IAmb IAmb 12 35 36.0
comp=Z,10nm,1.1s
BDFB **Brasilia** 65.83 117 P **P** 12 35 44.7 -0.3
comp=Z,4.0nm,0.7s,baz=293,slow=3.8,SNR=4.6
comp=Z,4.0nm,0.7s
BDFB **Brasilia** 65.83 117 P **P** 12 35 45.0 0.0
BDFB IAmb IAmb 12 35 46.1
comp=Z,11nm,1.2s
RAR **Rarotonga** 66.30 236 LR LR 12 56 48.8
comp=Z,96nm,20.0s,baz=50,slow=29
SHEM **Shemya Is, Ala** 69.86 320 LR LR 13 00 21.6
comp=Z,40nm,21.1s,baz=102,slow=30
BORG **Borgarnes** 70.93 27 LR LR 13 07 44.1
comp=Z,233nm,18.5s,baz=286,slow=36
DAG **Danmarks Havn** 71.41 14 *i* P **P** 12 36 17.0 -1.7
DAG IAmb IAmb 12 36 19.1
comp=Z,5.6nm,1.0s
NOR **Nord** 71.67 9 *e*P **P** 12 36 20.4 +0.1
RCBR **Riachuelo** 72.54 102 LR LR 13 09 05.9
comp=Z,176nm,20.2s,baz=88,slow=36
JMIC **Jan Mayen** 74.92 20 LR LR 13 10 35.1
comp=Z,492nm,18.1s,baz=260,slow=36
SPITS **Spitsbergen Ar** 78.17 10 LR LR 13 12 25.0
comp=Z,292nm,20.5s,baz=273,slow=36
PETK **Petropavlovsk-** 79.54 323 LR LR 13 06 12.9
comp=Z,39nm,21.5s,baz=92,slow=31
EKA **Eskdalemuir Ar** 81.73 34 LR LR 13 13 00.5
comp=Z,155nm,20.1s,baz=353,slow=35
TIXI **Tiksi** 82.96 345 P **P** 12 37 23.1 -0.5
TIXI IAmb IAmb 12 37 32.1
comp=Z,18nm,1.5s
ARCES **ARCESS Array B** 85.63 15 LR LR 13 16 29.3
comp=Z,333nm,21.1s,baz=294,slow=36
NOA **NORSAR Array B** 86.08 26 LR LR 13 16 32.5
comp=Z,150nm,20.1s,baz=295,slow=36
ESDC **Sonseca Array** 86.81 49 P **P** 12 37 43.6 -0.1
comp=Z,3.3nm,1.2s,baz=301,slow=5.9,SNR=7.3
ESDC LR LR 13 17 22.1
comp=Z,100nm,18.6s,baz=304,slow=36
comp=Z,3.3nm,1.2s
ESDC **Sonseca Array** 86.81 49 P **P** 12 37 43.6 -0.1
HFS **Hagfors** 87.60 26 LR LR 13 17 19.4
comp=Z,204nm,19.6s,baz=294,slow=36
PMSA **Palmer Station** 88.77 164 LR LR 13 08 12.1
comp=Z,168nm,19.7s,baz=262,slow=29
MDT **Midelt** 88.80 56 LR LR 13 15 45.5
comp=Z,80nm,18.1s,baz=337,slow=34
YAK **Yakutsk** 88.81 337 LR LR 13 21 52.3
comp=Z,71nm,18.3s,baz=87,slow=38
FINES **FINESS Array B** 91.48 21 LR LR 13 19 08.4
comp=Z,280nm,20.7s,baz=313,slow=36
URZ **Urewera** 91.89 230 LR LR 13 09 17.5
comp=Z,101nm,22.0s,baz=32,slow=29
CLL **Collm** 92.17 34 *e*SKSac **SKSac** 12 48 41.0 +0.5
CLL *e*S ScS 12 49 23.0 +11
CLL *e*PS PS 12 50 26.0 +3.3
CLL *e*PPS PPS 12 50 48.0
CLL *e*SS **SS** 12 55 24.0 +5.2
CLL *e*x x 12 56 36.0
CLL *e*SSS SSS 12 58 54.0
CLL *e*SSSS 13 02 12.0
CLL LmH 13 26 00.0
comp=N,100nm,19.7s
CLL LmH 13 26 00.0
comp=E,100nm,19.2s
CLL LmV 13 26 00.0
comp=Z,100nm,19.8s
DAVOX **Davos/Dischmat** 92.83 38 LR LR 13 20 45.3
comp=Z,372nm,18.1s,baz=265,slow=36
GERES **GERESS Array B** 93.91 35 LR LR 13 20 22.2
comp=Z,202nm,21.2s,baz=266,slow=35
DZM **Mont Dzumac** 95.18 249 *e*LR LR 13 08 03.7
comp=Z,171nm,21.8s
VRAC **Vranov** 95.20 34 LR LR 13 22 23.7
comp=Z,101nm,18.3s,baz=304,slow=36
KEST **Kesra** 98.02 48 LR LR 13 24 41.6
comp=Z,74nm,18.1s,baz=248,slow=36
RPZ **Rata Peaks** 98.05 227 LR LR 13 15 24.8
comp=Z,63nm,18.8s,baz=288,slow=31
MJAR **Matsushiro Arr** 98.86 313 LR LR 13 13 42.9
comp=Z,80nm,21.4s,baz=86,slow=30
JHJ **Hachijo jima 2** 99.44 309 LR LR 13 17 36.9
comp=Z,134nm,19.3s,baz=93,slow=32
HHC **Hu-ho-hao-te** 111.77 331 *e*P **PKiKP** 12 43 34.1 -0.2
WMQ **Urumqi** 116.89 349 *e*P **PKiKP** 12 43 45.1 +1.1
WMQ LR LR
comp=E,180nm,17.9s
WMQ LR LR
comp=Z,130nm,24.7s
WRA **Warramunga Arr** 123.89 258 PKP **PKPdf** 12 43 55.7 -2.2
comp=Z,0.8nm,0.8s,baz=72,slow=2.3,SNR=6.6
WRA **Warramunga Arr** 123.89 258 PKP **PKPdf** 12 43 56.3 -1.6
ASAR **Alice Springs** 124.80 254 PKP **PKPdf** 12 43 57.6 -2.0
comp=Z,0.5nm,0.7s,baz=90,slow=2.2,SNR=4.0
PZH **PanZhiHua** 128.15 329 PKP **PKPdf** 12 44 06.4 +0.3

ISU ***01*** *12:35:41.2,40˚.40N×69˚.38E,h27km*
KRNET ***01*** *12:35:43.9±0.1,40˚.53N×69˚.75E,h14km,mb2.9*
ISC 01 12:35:44.3±1.3**,40˚.50N**±0˚.03×**69˚.64E**±0˚.04**,h7**km±12km**,**
n13,σ1ˢ55/24,14C-4D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
TAS	**Tashkent**	**0.86**	**342**	⇑*i*P		**Pg**	**12 36 00.8**	**-0.1**
TAS	baz=37			⇑*i*S		**Sb**	**12 36 12.7**	**-0.7**
BTK	**Batken**	**1.00**	**116**	⇑*i*P		**Pg**	**12 36 01.9**	**-1.7**
BTK	baz=19			⇑*i*S		**Sg**	**12 36 15.1**	**-1.5**
CHMG	**Chimgan**	**1.08**	**15**	P		**Pb**	**12 36 04.8**	**-0.6**
CHMG				S		**Sn**	**12 36 22.9**	**+1.6**
CHRV	**Charvak**	**1.16**	**11**	P		**Pb**	**12 36 06.0**	**-0.7**
CHRV				S		**Sn**	**12 36 25.2**	**+2.1**
CHMI	**Chimion**	**1.45**	**99**	P		**Pg**	**12 36 12.2**	**0.0**
CHMI				S		**Sg**	**12 36 34.8**	**+3.7**
TRKS	**Terek-Say**	**1.53**	**47**	⇑*i*P		**Pn**	**12 36 10.7**	**-1.5**
TRKS	baz=49			⇑*i*S		**Sn**	**12 36 30.5**	**-1.8**
GAR	**Garm**	**1.59**	**161**	⇑*i*P		**Pb**	**12 36 13.5**	**-0.6**
GAR	baz=64			⇑*i*S		**Sg**	**12 36 35.4**	**0.0**
SHAK	**Shakhimardan**	**1.69**	**108**	P		**Pb**	**12 36 15.5**	**-0.4**
SHAK				S		**Sg**	**12 36 41.1**	**+2.3**
CHGR	**Chuyangaron**	**1.88**	**192**	⇑*i*P		**Pb**	**12 36 19.7**	**+0.7**
CHGR	baz=94			⇑*i*S		**Sg**	**12 36 45.6**	**+0.8**
ARK	**Arkit**	**2.18**	**53**	⇓*i*P		**Pb**	**12 36 22.9**	**-1.2**
ARK	baz=52			⇓*i*S		**Sb**	**12 36 50.0**	**-1.3**
KK31	**Karatay Array**	**2.68**	**14**	⇓Pn		**Pb**	**12 36 31.7**	**-0.8**
KK31	0.4nm,0.2s,baz=230,slow=17,SNR=21			⇓Lg		Lg	12 37 07.6	
UCH	1.8nm,0.3s,baz=197,slow=30,SNR=13 **Uchtor**	**4.05**	**63**	⇑*e*P		**Pn**	**12 36 48.4**	**+1.3**
UCH	baz=63			⇑*i*S		**Sn**	**12 37 35.5**	**+0.6**
TKM2	baz=63 **Tokmak 2**	**5.07**	**60**	⇑Pn		**Pb**	**12 37 15.1**	**+1.7**
TKM2	1.2nm,0.6s 1.6nm,0.6s			⇑Lg		Lg	12 38 33.3	

NEIC ***01*** *12:39:27.1±1.5,11˚.7N±0˚.1×124˚.7E±0˚.2,h50km±10km,*

mb4.4/18, Error ellipse: s-maj=36.6km s-min=6.7km az=68.0
*MAN **01** 12:39:33.9, 11°.72N×124°.87E, h180km, mb5.0, ML3.9, MS3.9*
*IDC **01** 12:39:40.3±4.7, 11°.63N×124°.82E, h182km±44km, mb3.6/14, mbtmp4.1/14, MS3.8/4, Error ellipse: s-maj=28.0km s-min=11.7km az=69.0*
ISC 01 12:39:37.0±0.7**, 11°.73N**±0°.05×**124°.82E**±0°.07**, h155**km±6km**, n58,** σ**1.s48**/61**, mb4.1**/24**, 2C-9D, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	Ormoc	0.71	197	⇓ iP	Pn	12 39 59.8	-0.4
OCLP				eS	Sn	12 40 22.4	+4.5
MSLP	Maasin	1.59	179	⇓ eP	Pn	12 40 08.4	+0.5
MSLP				eS	Sn	12 40 32.7	+1.1
LLP	Lapu-Lapu	1.64	211	eP	Pn	12 40 00.2	-8.2
LLP				i S	Sn	12 40 30.7	-1.9
PVCP	Virac	1.96	341	⇓ iP	Pn	12 40 11.7	-0.3
PVCP				eS	Sn	12 40 37.3	-1.8
RCP	Roxas	2.04	265	⇑ eP	Pn	12 40 11.8	-1.2
SCPH	Surigao	2.04	161	eP	Pn	12 40 14.2	+1.2
SCPH				eS	Sn	12 40 41.2	+0.5
TBP	Tagbilaran	2.23	205	⇓ eP	Pn	12 40 15.2	0.0
TBP				i S	Sn	12 40 43.6	-1.1
GLSP	General Luna,	2.32	146	⇓ eP	Pn	12 40 14.7	-1.6
GLSP				eS	Sn	12 40 43.7	-2.8
JAP	San Jose, Anti	2.98	251	⇑ eP	Pn	12 40 25.1	+0.7
JCNP	Jose Panganiba	3.28	321	⇓ eP	Pn	12 40 27.0	-1.1
JCNP				eS	Sn	12 41 04.5	-3.3
SJMP	San Jose	3.69	282	⇓ eP	Pn	12 40 33.5	+0.1
BIPH	Bislig	3.84	157	⇓ eP	Pn	12 40 32.8	-2.5
BIPH				eS	Sn	12 41 17.1	-3.6
DAV	Davao City (W)	4.69	171	Pn	Pn	12 40 35.0	-12
SMPP	San Manuel, Pa	5.95	318	⇓ eP	Pn	12 41 01.2	-2.0
IPM	Ipoh	24.62	255	P	P	12 44 39.9	-3.4
IPM				IAmb	IAmb	12 44 44.3	
	comp=Z,13nm,1.0s						
MTN	Manton Dam	25.21	165	P	P	12 44 46.7	-1.8
MTN				IAmb	IAmb	12 45 14.5	
	comp=Z,16nm,1.4s						
KSRS	Korea Array	25.77	6	P	P	12 44 55.2	+1.9
	comp=Z,1.5nm,0.7s,baz=186,slow=9.8,SNR=7.7						
	comp=Z,1.5nm,0.7s						
CMAR	Chiang Mai Arr	25.84	288	P	P	12 44 55.5	+1.2
	comp=Z,1.7nm,0.7s,baz=101,slow=8.0,SNR=11						
	comp=Z,1.7nm,0.7s						
MJAR	Matsushiro Arr	27.50	24	LR	LR	12 54 26.8	
	comp=Z,38nm,21.6s,baz=238,slow=32						
KNRA	Kununurra	27.51	172	P	P	12 45 08.4	-0.7
KNRA				IAmb	IAmb	12 45 13.3	
	comp=Z,19nm,1.4s						
WB0	Warramunga Arr	32.69	163	P	P	12 45 54.0	-0.8
WRAB	Tennant Creek	32.83	163	P	P	12 45 53.9	-2.2
WRAB				IAmb	IAmb	12 46 02.7	
	comp=Z,6.9nm,1.2s						
WRA	Warramunga Arr	32.84	163	P	P	12 45 55.2	-0.9
	comp=Z,0.5nm,0.6s,baz=340,slow=8.5,SNR=13						
WRA				PcP	PcP	12 48 37.2	-0.2
	comp=Z,0.4nm,0.5s,baz=348,slow=2.9,SNR=6.7						
	comp=Z,0.5nm,0.6s						
WB2	Warramunga Arr	32.84	163	P	P	12 45 55.5	-0.7
WB2				IAmb	IAmb	12 45 58.7	
	comp=Z,8.8nm,1.4s						
WR0	Warramunga Arr	32.91	163	P	P	12 45 56.1	-0.7
ASAR	Alice Springs	36.28	166	P	P	12 46 26.1	+0.4
	comp=Z,1.0nm,0.3s,baz=341,slow=7.6,SNR=30						
ASAR				PcP	PcP	12 48 47.2	-0.2
	comp=Z,0.4nm,0.6s,baz=343,slow=3.5,SNR=5.3						
	comp=Z,1.0nm,0.3s						
SONM	Songino Array	39.17	340	P	P	12 46 51.4	+1.6
	comp=Z,1.3nm,0.7s,baz=160,slow=8.9,SNR=5.6						
	comp=Z,1.3nm,0.7s						
H11N1	WAKE ISLAND Hy	41.18	73	T	T	13 31 05.0	
	baz=265,slow=74,SNR=11						
H11N2	WAKE ISLAND Hy	41.19	73	T	T	13 31 05.5	
	baz=265,slow=74,SNR=5.7						
H11N3	WAKE ISLAND Hy	41.20	73	T	T	13 31 06.3	
	baz=265,slow=74,SNR=7.3						
MORW	Morawa	41.44	192	P	P	12 47 07.5	-0.9
FORT	Forrest	42.38	176	P	P	12 47 16.2	+0.1
NWAO	Narrogin (SRO)	44.99	189	P	P	12 47 36.9	-0.1
BBOO	Buckleboo	45.57	167	P	P	12 47 42.1	+0.5
MK31	Makanchi Array	50.01	323	P	P	12 48 15.6	0.0
MKAR	Makanchi Array	50.01	323	P	P	12 48 17.0	+1.4
	comp=Z,0.6nm,0.3s,baz=122,slow=7.8,SNR=8.5						
MKAR				PcP	PcP	12 49 33.7	+0.4
	comp=Z,0.7nm,0.6s,baz=104,slow=3.9,SNR=5.2						
	comp=Z,0.6nm,0.3s						
MKAR	Makanchi Array	50.01	323	P	P	12 48 16.0	+0.4
MAKZ	Makanchi	50.20	323	P	P	12 48 16.8	-0.2
MAKZ				IAmb	IAmb	12 48 45.6	
	comp=Z,2.3nm,0.5s						
ZALV	Zalesovo Beam	52.67	331	P	P	12 48 35.7	+0.5
	comp=Z,1.1nm,0.4s,baz=124,slow=7.4,SNR=4.1						
	comp=Z,1.1nm,0.4s						
ZALV	Zalesovo Beam	52.67	331	P	P	12 48 35.2	0.0
KURK	Kurchatov	54.06	325	P	P	12 48 46.0	+0.6
KURK				IAmb	IAmb	12 48 47.3	
	comp=Z,3.8nm,0.8s						
KK31	Karatay Array	56.22	314	P	P	12 49 00.1	-0.9
KKAR	Karatay Array	56.22	314	P	P	12 48 60.0	-1.1
BRVK	Borovoye	59.73	325	P	P	12 49 25.9	+0.6
BRVK				IAmb	IAmb	12 49 26.5	
	comp=Z,3.8nm,1.1s						
NRIK	Noril'sk	62.26	346	P	P	12 49 43.4	+1.3
	comp=Z,1.9nm,0.4s,baz=99,slow=8.1,SNR=5.7						
	comp=Z,1.9nm,0.4s						
NRIK	Noril'sk	62.26	346	P	P	12 49 43.5	+1.5
NRIK				IAmb	IAmb	12 49 43.9	
	comp=Z,2.7nm,0.7s						
KIRV	Kirov	72.46	328	LR	LR	13 24 13.5	
	comp=Z,205nm,21.7s,baz=339,slow=37						
RAYN	Ar Rayn	75.71	291	P	P	12 51 05.3	-0.7
RAYN				IAmb	IAmb	12 51 06.9	
	comp=Z,3.6nm,0.8s						
KBZ	Khabaz	76.18	312	LR	LR	13 30 18.8	
	comp=Z,91nm,20.6s,baz=336,slow=40						
ASF	Jabal al Asfar	82.12	301	P	P	12 51 42.1	+1.3
	comp=Z,1.9nm,0.3s,baz=69,slow=8.6,SNR=4.9						
	comp=Z,1.9nm,0.3s						
SPITS	Spitsbergen Ar	82.31	349	P	P	12 51 41.6	+0.7
	comp=Z,4.0nm,0.8s,baz=94,slow=8.7,SNR=6.7						
	comp=Z,4.0nm,0.8s						
ARCES	ARCESS Array B	82.34	340	P	P	12 51 41.6	+0.5
	comp=Z,0.9nm,0.4s,baz=90,slow=5.4,SNR=2.0						
MMAI	Mount Meron Ar	83.23	302	LR	LR	13 34 55.8	
	comp=Z,67nm,19.0s,baz=88,slow=40						
BRTR	Keskin Array B	83.51	309	P	P	12 51 48.2	+0.2
	comp=Z,0.8nm,0.4s,baz=126,slow=4.5,SNR=3.5						
	comp=Z,0.8nm,0.4s						
FINES	FINESS Array B	83.94	331	P	P	12 51 49.9	+0.5
	comp=Z,1.6nm,0.8s,baz=56,slow=4.4,SNR=5.5						
	comp=Z,1.6nm,0.8s						
AKASG	Malin Array Be	84.54	321	P	P	12 51 52.2	-0.5
	comp=Z,1.2nm,0.6s,baz=65,slow=5.7,SNR=6.4						
	comp=Z,1.2nm,0.6s						
YKA	Yellowknife Ar	93.00	24	P	P	12 52 32.9	+0.4
	comp=Z,0.2nm,0.5s,baz=302,slow=4.5,SNR=3.2						
	comp=Z,0.2nm,0.5s						
TXAR	Lajitas Array	117.93	48	PKP	PKPdf	12 58 06.0	0.0
	comp=Z,0.1nm,0.5s,baz=222,slow=1.2,SNR=1.8						

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*UPP **01** 12:51:17.7±0.7, 55°.40N×16°.32E, h0km, ML3.0, Suspected explosion*
*DNK **01** 12:51:18.5±0.9, 55°.44N×16°.38E, h0km, Suspected explosion*
*IDC **01** 12:51:20.1±2.3, 55°.54N×16°.27E, h0km, mbtmp3.2/4, ML2.7/4, Error ellipse: s-maj=25.1km s-min=17.3km az=36.0*
ISC 01 12:51:18.7±1.2**, 55°.57N**±0°.06×**16°.30E**±0°.04**, h0**km**, n26,** σ**1.s24**/36**, Baltic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLEU	Blekinge	0.79	340	P	Pb	12 51 35.5	+0.3
BLEU				i P	Pb	12 51 35.6	+0.3
BLEU				S	Sb	12 51 47.2	+0.7
BLEU	Blekinge	0.79	340	P	Pb	12 51 35.5	+0.3
BLEU				S	Sb	12 51 47.2	+0.7
VXJU	Vaexsjoe	1.56	331	P	Pb	12 51 48.5	+0.2
VXJU	Vaexsjoe	1.56	331	P	Pb	12 51 48.5	+0.2
DEL	Delary	1.64	305	eP	Pb	12 51 49.7	0.0
DEL				eS	Sn	12 52 09.8	-0.6
DEL				IAML		12 52 14.8	
	comp=Z,17nm,0.2s						
DEL	Delary	1.64	305	P	Pb	12 51 49.7	0.0
DEL				i P	Pg	12 51 50.5	+0.4
DEL				S	Sg	12 52 12.3	+1.1
DEL				eS	Sb	12 52 12.9	+2.1
DEL	Delary	1.64	305	P	Pb	12 51 49.7	0.0
DEL				S	Sg	12 52 12.3	+1.1
OSKU	Oskarshamn	1.64	356	P	Pb	12 51 49.9	+0.2
OSKU	Oskarshamn	1.64	356	P	Pb	12 51 49.9	+0.2
BYXU	Byxelkrok	1.77	13	P	Pb	12 51 52.2	+0.1
BYXU	Byxelkrok	1.77	13	P	Pb	12 51 52.2	+0.1
BJUU	Bjuv	1.92	287	P	Pn	12 51 52.7	+0.1
BJUU				eP	Pb	12 51 53.4	-1.0
BJUU	Bjuv	1.92	287	P	Pn	12 51 52.7	+0.1
VIKU	Vikbolandet	2.95	4	eP	Pn	12 52 08.4	+1.7
VIKU				IAML		12 53 00.2	
	comp=Z,10nm,0.4s						
ONAU	Onsala	3.04	309	i P	Pn	12 52 10.0	+1.9
PBUR	Paburge	3.21	79	eP	Pn	12 52 09.6	-0.8
PBUR				IAML		12 53 06.8	
	comp=Z,36nm,0.2s						
SLIT	Slitere, Latvi	3.91	56	eP	Pn	12 52 19.5	-0.4
SLIT				IAML		12 53 32.0	
	comp=Z,46nm,0.4s						
PABE	Paberze	4.36	88	eP	Pb	12 52 38.0	+1.9
PABE				IAML		12 53 59.4	
	comp=Z,7.8nm,0.4s						
HFS	Hagfors	4.79	344	Pn	Pn	12 52 32.6	+0.6
	comp=Z,0.5nm,0.3s,baz=157,slow=14,SNR=13						
HFS				Sn	Sn	12 53 25.7	-2.4
	comp=Z,0.4nm,0.3s,baz=138,slow=22,SNR=1.9						
HFS				Lg	Lg	12 53 50.3	
	comp=Z,1.8nm,0.3s,baz=160,slow=31,SNR=9.4						
	comp=Z,1.2nm,0.3s						
AAL	Aland	5.03	22	eP	Pn	12 52 35.5	+0.2
MTSE	Matsula	5.17	49	eP	Pn	12 52 37.0	-0.2
NOA	NORSAR Array B	6.11	336	Pn	Pn	12 52 49.0	-1.1
	comp=Z,0.1nm,0.3s,baz=150,slow=12,SNR=14						
NOA				Lg	Lg	12 54 32.9	
	comp=Z,0.1nm,0.3s,baz=132,slow=12,SNR=4.8						
	comp=Z,0.3nm,0.3s						
RAF	Rauma	6.18	26	eP	Pn	12 52 51.9	+0.8
FINES	FINESS Array B	7.80	37	Pn	Pn	12 53 12.7	-0.7
	comp=Z,0.4nm,0.3s,baz=221,slow=12,SNR=9.3						
	comp=Z,0.7nm,0.3s						
EKA	Eskdalemuir Ar	11.05	277	Pn	Pn	12 53 57.2	-0.6
	comp=Z,0.3nm,0.3s,baz=86,slow=13,SNR=9.3						
ARCES	ARCESS Array B	14.62	13	Pn	Pn	12 54 41.9	-4.6
	comp=Z,0.1nm,0.3s,baz=195,slow=14,SNR=2.7						

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*AUST **01** 13:00:46.2±0.8, 32°.30S×122°.35E, h0km, Error ellipse: s-maj=11.8km s-min=5.7km az=171.0*
*NEIC **01** 13:00:47.4±2.5, 32°.4S±0°.1×122°.34E±0°.06, h10km±2km, Error ellipse: s-maj=18.5km s-min=7.4km az=13.0*
*IDC **01** 13:00:54.5±10.0, 31°.95S×123°.25E, h0km, mbtmp3.7/3, ML3.7/3, Error ellipse: s-maj=96.7km s-min=64.0km az=71.0*
ISC 01 13:00:47.4±0.8**, 32°.36S**±0°.07×**122°.51E**±0°.05**, h19**km**, n39,** σ**2.s45**/49**, Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLBR	Kellerberrin	4.11	279	P	Pn	13 01 48.9	-0.3
	baz=4.0,SNR=20						
KLBR				S	Sn	13 02 35.2	-1.6
	baz=4.0						
KLBR	Kellerberrin	4.11	279		Pn	13 01 49.1	-0.1
KLBR					Sn	13 02 35.1	-1.6
NWAO	Narrogin (SRO)	4.48	261		Pn	13 01 54.5	+0.2
AUALB	St Joseph's Co	4.66	234	P	Pn	13 01 56.9	+0.2
	baz=4.6						
FORT	Forrest	4.99	73	P	Pn	13 02 04.9	+3.5
	baz=5.1,SNR=13						
FORT				S	Sn	13 03 02.8	+4.2
	baz=5.1						
FORT	Forrest	4.99	73		Pn	13 02 04.6	+3.2
RKGY	Rocky Gully	5.13	243	P	Pn	13 02 02.8	-0.5
	baz=5.0,SNR=20						
RKGY				S	Sn	13 03 00.3	-1.7
	baz=5.0						
BLDU	Ballidu	5.25	288	P	Pn	13 02 04.0	-0.8
	baz=5.1						
BLDU				S	Sn	13 03 05.2	+0.4
	baz=5.1						
MUN	Mundaring	5.35	272	P	Pn	13 02 05.1	-1.2
	baz=5.2,SNR=8.4						
MUN				S	Sn	13 03 07.3	-0.1
	baz=5.2						
AUMAZ	Mazenod Senior	5.49	272	P	Pn	13 02 07.3	-0.9
	baz=5.4						
MORW	Morawa	6.46	299	P	Pn	13 02 22.5	+0.9
	baz=6.3,SNR=8.8						
MORW				S	Sn	13 03 33.0	-1.7
	baz=6.3						
MORW	Morawa	6.46	299	Pn	Pn	13 02 21.2	-0.3
WRKA	Warakurna	8.89	36	P	Pn	13 02 59.2	+4.3
	baz=8.9,SNR=38						
WRKA				S	Sn	13 04 39.6	+5.0
	baz=8.9						
MULG	Mulgathing	10.10	81	P	Pn	13 03 13.4	+2.0
	baz=10,SNR=8.7						
MULG				S	Sn	13 05 04.1	0.0
	baz=10						
PSA00	Pilbara Seismi	11.00	347		Pn	13 03 24.0	+0.1
PSA00	Pilbara Seismi	11.00	347		Pn	13 03 23.4	-0.4
MBWA	Marble Bar	11.43	347		Pn	13 03 29.8	+0.2
BBOO	Buckleboo	11.44	96	P	Pn	13 03 32.6	+2.7
	baz=12						
BBOO	Buckleboo	11.44	96	Pn	Pn	13 03 33.6	+3.8
GIRL	Giralia	12.14	321	P	Pn	13 03 41.2	+1.8
	baz=12						
GIRL	Giralia	12.14	321	Pn	Pn	13 03 43.3	+3.9
OOD	Oodnadatta	12.29	72	P	Pn	13 03 41.2	-0.2
	baz=12,SNR=9.6						
AUKAR	St Luke's Coll	12.63	335	P	Pn	13 03 46.2	+0.1
	baz=13						
ASAR	Alice Springs	13.27	52	Pn	Pn	13 03 55.8	+0.9
	0.6nm,0.3s,baz=227,slow=12,SNR=21						
ASAR				Sn	Sn	13 06 16.2	-5.8
	1.4nm,0.3s,baz=232,slow=26,SNR=9.4						
	1.1nm,0.3s						
ASAR	Alice Springs	13.27	52	Pn	Pn	13 03 56.0	+1.1
AS31	Alice Springs	13.27	52		Pn	13 03 56.5	+1.6
LCRK	Leigh Creek	13.56	86	P	Pn	13 03 58.9	+0.3
	baz=14						
STKA	Stephens Creek	16.18	93	Pn	Pn	13 04 34.4	+0.6
	0.1nm,0.3s,baz=260,slow=11,SNR=2.2						
STKA				Sn	Sn	13 07 27.3	-5.5
	0.4nm,0.3s,baz=225,slow=7.8,SNR=3.6						
	0.4nm,0.4s						
WRA	Warramunga Arr	16.29	43	Pn	Pn	13 04 35.0	-0.2
	0.6nm,0.3s,baz=218,slow=15,SNR=15						
WRA				Sn	Sn	13 07 27.6	-7.8
	0.5nm,0.3s,baz=219,slow=20,SNR=3.4						
	0.7nm,0.4s						
WRA	Warramunga Arr	16.29	43	Pn	Pn	13 04 36.2	+1.0
WB2	Warramunga Arr	16.29	44	P	Pn	13 04 34.7	-0.6
	baz=16						
WB2	Warramunga Arr	16.29	44	Pn	Pn	13 04 34.9	-0.4
WB2				IAmb	IAmb	13 05 08.5	
	comp=Z,4.4nm,0.8s						
WR0	Warramunga Arr	16.39	44		Pn	13 04 36.6	+0.1
WR0				IAmb	IAmb	13 05 04.6	
	comp=Z,6.0nm,0.5s						
WB0	Warramunga Arr	16.45	43	Pn	Pn	13 04 36.8	-0.5
WB0				IAmb	IAmb	13 05 03.1	
	comp=Z,16nm,1.4s						
KNRA	Kununurra	17.56	20	P	Pn	13 04 51.1	0.0
	baz=18						
KNRA	Kununurra	17.56	20	Pn	Pn	13 04 50.8	-0.4
KNRA				IAmb	IAmb	13 05 03.5	
	comp=Z,6.7nm,0.9s						
MTN	Manton Dam	20.98	24	P	Pn	13 05 33.3	+1.1
	baz=21						
MTN	Manton Dam	20.98	24	P	Pn	13 05 32.2	0.0
MTN				IAmb	IAmb	13 06 14.1	
	comp=Z,11nm,1.1s						
QSPA	South Pole Qui	57.75	180	P	P	13 10 37.7	+0.8

IDC 01 13:01:07.4±10.0**, 31°.72S**×**122°.40E, h0**km**, mbtmp4.0**/3**, ML4.0**/3**, Error ellipse: s-maj=117.3km s-min=70.3km az=91.0, Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	12.96	55	Pn	Pn	13 04 14.2	+1.3
	0.9nm,0.3s,baz=228,slow=11,SNR=8.2						
ASAR				Sn	Sn	13 06 36.9	-1.1
	3.2nm,0.3s,baz=228,slow=23,SNR=7.6						
	2.8nm,0.5s						
WRA	Warramunga Arr	15.89	45	Pn	Pn	13 04 53.6	+1.1
	0.8nm,0.3s,baz=220,slow=14,SNR=7.8						
WRA				Sn	Sn	13 07 50.2	+0.8
	1.4nm,0.3s,baz=225,slow=25,SNR=6.5						
	1.8nm,0.5s						
STKA	Stephens Creek	16.33	96	Pn	Pn	13 04 56.4	-1.7
	0.3nm,0.3s,baz=271,slow=12,SNR=3.0						
	0.8nm,0.4s						

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*DJA **01** 13:03:51.4±0.5, 2°N±4°×12°8E±°, h122km±6km, M3.8/8, mb4.0/1, MLv3.7/8*
*IDC **01** 13:04:02.0±2.4, 2°.62N×129°.72E, h234km±26km, mb3.5/5, mbtmp4.2/6, Error ellipse: s-maj=74.4km s-min=15.7km az=75.0*
ISC 01 13:03:52.4±1.0**, 2°.08N**±0°.09×**127°.45E**±0°.10**, h112**km**, n15,** σ**1.s73**/14**, mb4.0**/5**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.30	184	P	Pn	13 04 18.1	+1.0
TNTI				S	Sn	13 04 37.8	+2.0
SGSI	Sangihe	2.50	310	P	Pn	13 04 31.1	-0.8
LBMI	Labuha	2.70	179	P	Pn	13 04 35.5	+0.9
SANI	Sanana	4.36	200	P	Pn	13 04 54.8	-1.8
GTOI	Gorontalo	4.67	252	P	Pn	13 05 02.8	+2.0
SIJI	Sorong	4.81	128	P	Pn	13 05 03.8	+1.1
	2.2nm,0.3s,baz=153,slow=23,SNR=1.9						
SPSI	Sidrap Palu	9.75	232	P	Pn	13 06 10.0	+0.3
SMKI	Samarinda	10.55	256	P	Pn	13 06 14.5	-6.0
BATI	Baumata	12.78	197	P	P	13 07 12.2	+15
	15nm,0.6s,baz=90,slow=3.0,SNR=1.6						
WRA	Warramunga Arr	22.91	163	P	P	13 08 44.9	-2.0
	5.2nm,0.4s,baz=343,slow=10,SNR=8.2						
	5.2nm,0.4s						
ASAR	Alice Springs	26.35	167	P	P	13 09 16.7	-1.5
	2.2nm,0.5s,baz=344,slow=11,SNR=1.3						
	2.2nm,0.5s						
SONM	Songino Array	49.08	341	P	P	13 12 27.4	-1.1
	3.0nm,0.9s,baz=147,slow=9.4,SNR=15						
	3.0nm,0.9s						
MKAR	Makanchi Array	59.31	325	P	P	13 13 45.2	+2.7
	0.4nm,0.4s,baz=113,slow=11,SNR=5.8						
	0.4nm,0.4s						
VNDA	Vanda	81.71	173	P	P	13 15 56.1	-1.8
	0.6nm,0.6s,baz=325,slow=6.6,SNR=3.5						
	0.6nm,0.6s						
TORD	Torodi Ar. Bea	124.11	287	PKP	PKiKP	13 22 39.1	0.0
	0.2nm,0.3s,baz=63,slow=1.8,SNR=2.3						

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*DNK **01** 13:04:43.8±1.3, 55°.47N×16°.29E, h0km, Suspected explosion*
*UPP **01** 13:04:44.4±0.8, 55°.54N×16°.23E, h0km, ML3.0, Suspected explosion*
*IDC **01** 13:04:44.4±0.8, 55°.48N×16°.24E, h0km, mbtmp3.2/7, ML3.3/8, Error ellipse: s-maj=17.5km s-min=8.1km az=75.0*
ISC 01 13:04:41.5±1.0**, 55°.53N**±0°.06×**16°.56E**±0°.05**, h0**km**, n23,** σ**1.s60**/35**, Baltic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLEU	Blekinge	0.88	332	i P	Pg	13 04 59.5	+1.1
VXJU	Vaexsjoe	1.66	328	P	Pb	13 05 13.4	+0.4
VXJU				S	Sg	13 05 34.8	-0.1
VXJU	Vaexsjoe	1.66	328	P	Pb	13 05 13.4	+0.4
VXJU				S	Sg	13 05 34.8	-0.1
OSKU	Oskarshamn	1.69	351	P	Pg	13 05 15.0	+1.2
OSKU	Oskarshamn	1.69	351	P	Pg	13 05 15.0	+1.2
DEL	Delary	1.78	303	i P	Pn	13 05 13.0	-0.5
DEL				P	Pn	13 05 14.0	+0.5
DEL				eS	Sn	13 05 36.5	-0.3
DEL				S	Sn	13 05 36.8	0.0
DEL	Delary	1.78	303	P	Pn	13 05 14.0	+0.5
DEL				S	Sn	13 05 36.8	0.0
BYXU	Byxelkrok	1.78	8	P	Pb	13 05 16.5	+1.6
BYXU	Byxelkrok	1.78	8	P	Pb	13 05 16.5	+1.6
BJUU	Bjuv	2.07	287	P	Pn	13 05 18.4	+0.9
BJUU				i P	Pb	13 05 19.2	-0.7
BJUU				eS	Sn	13 05 42.5	-1.4
BJUU	Bjuv	2.07	287	P	Pn	13 05 18.4	+0.9
VSTU	Vaestervik	2.13	360	P	Pb	13 05 22.5	+1.5
VSTU	Vaestervik	2.13	360	P	Pb	13 05 22.5	+1.5
ONAU	Onsala	3.18	308	i P	Pn	13 05 33.5	+0.8
TJOU	Tjoern	3.70	315	i P	Pn	13 05 41.9	+2.1
HFS	Hagfors	4.86	343	Pn	Pn	13 05 57.6	+1.7
	0.5nm,0.3s,baz=156,slow=13,SNR=14						
HFS				Pg	Pb	13 06 08.2	+0.7
	0.4nm,0.3s,baz=158,slow=16,SNR=4.0						
HFS				Sn	Sn	13 06 50.2	-2.5
	0.4nm,0.3s,baz=188,slow=20,SNR=1.7						
HFS				Lg	Lg	13 07 11.2	
	1.6nm,0.3s,baz=154,slow=28,SNR=7.3						
	1.0nm,0.3s						
NOA	NORSAR Array B	6.20	335	Pn	Pn	13 06 15.0	+0.8
	0.1nm,0.3s,baz=150,slow=12,SNR=20						
NOA				Sn	Sn	13 07 22.3	-3.5
	baz=167,slow=8.2,SNR=1.8						
NOA				Lg	Lg	13 07 54.0	
	0.1nm,0.3s,baz=103,slow=20,SNR=3.9						
	0.4nm,0.3s						
VRAC	Vranov	6.23	180	Pn	Pn	13 06 16.2	+1.6
	1.6nm,0.3s,baz=337,slow=16,SNR=6.6						
	3.4nm,0.3s						
GERES	GERESS Array B	6.92	196	Pn	Pn	13 06 26.0	+1.8
	0.1nm,0.3s,baz=13,slow=13,SNR=2.1						
	0.3nm,0.3s						
FINES	FINESS Array B	7.74	36	Pn	Pn	13 06 37.0	+1.7
	0.4nm,0.3s,baz=352,slow=38,SNR=3.0						
FINES				Sn	Sn	13 07 59.3	-4.2
	0.2nm,0.3s,baz=228,slow=21,SNR=2.5						
	0.6nm,0.3s						
AKASG	Malin Array Be	9.02	117	Pn	Pn	13 06 53.5	+0.6
	1.5nm,0.3s,baz=305,slow=12,SNR=4.7						
	0.2nm,0.3s						
EKA	Eskdalemuir Ar	11.20	277	Pn	Pn	13 07 21.2	-1.5
	baz=87,slow=14						
	0.7nm,0.4s						
ARCES	ARCESS Array B	14.62	13	Pn	Pn	13 08 06.9	-2.5
	0.1nm,0.3s,baz=194,slow=14,SNR=2.1						

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*TAP **01** 13:06:48.6, 24°.00N×122°.40E, h27km, ML4.2, D*
*JMA **01** 13:06:48.8±0.2, 24°N±1°×122°.4E±0°.3, h21km±2km, MV3.7/15, TAIWAN REGION*
*NIED **01** 13:06:48.8, 23°.99N×122°.37E, h21km, MW3.9, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}2.88; $M_{\theta\theta}$-4.66; $M_{\phi\phi}$1.77; $M_{r\theta}$6.13; $M_{\theta\phi}$0.26; $M_{\phi r}$5.34; Fault plane solution: $M_0$9.08000×10^{14} NP1: ϕ_s302.00000°, δ23.00000°, λ156.00000°. NP2: ϕ_s55.00000°, δ81.00000°, λ69.00000°.*
ISC 01 13:06:48.7±1.2**, 23°.96N**±0°.02×**122°.37E**±0°.02**, h21**km±4km**, n111,** σ**0.s75**/210**, 1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	Heping Village	0.67	302	eP	Pb	13 07 01.9	+0.1
	baz=307						
EHP				eS	Sb	13 07 11.2	+0.4
	baz=307						
HWA	Hwalien	0.70	272	i P	Pb	13 07 02.6	+0.4
	baz=254						
HWA				S	Sb	13 07 12.1	+0.7
	baz=254						
ETL	Fush Village	0.71	287	P	Pb	13 07 02.5	0.0
	baz=267						
ETL				S	Sn	13 07 12.9	-0.9
	baz=267						
TEYL	Yanliau Villag	0.71	263	P	Pb	13 07 02.9	+0.5
	baz=251						
TEYL				S	Sn	13 07 13.4	-0.3
	baz=251						
TWD	Chiawan	0.72	280	i P	Pb	13 07 02.2	-0.4
	baz=275						
TWD				i S	Sb	13 07 12.3	+0.4

	baz=275						
JYNG	**Yonagunijimaku**	**0.72**	**47**	P	**Pb**	**13 07 02.1**	**-0.5**
JYNG				*e*S	**Sb**	**13 07 10.9**	**-1.1**
EWUT	**Wuta**	**0.73**	**312**	P	**Pb**	**13 07 02.1**	**-0.6**
	baz=307						
EWUT				S	**Sn**	**13 07 13.4**	**-0.8**
	baz=307						
NACB	**Ninganchiao**	**0.74**	**287**	P	**Pb**	**13 07 02.7**	**-0.2**
	baz=268						
NACB				S	**Sb**	**13 07 13.2**	**+0.6**
	baz=268						
ENA	**Nanau**	**0.74**	**309**	*i* P	**Pb**	**13 07 02.5**	**-0.5**
	baz=313						
ENA				S	**Sn**	**13 07 13.7**	**-0.8**
	baz=313						
YOJ	**Yonaguni jima**	**0.77**	**49**	P	**Pb**	**13 07 03.0**	**-0.4**
	baz=58						
YOJ				S	**Sb**	**13 07 12.9**	**-0.6**
	baz=58						
YOJ	**Yonaguni jima**	**0.77**	**49**	P	**Pb**	**13 07 03.1**	**-0.4**
YOJ				*e*S	**Sb**	**13 07 12.5**	**-1.0**
TEGC	**Jichi Village**	**0.80**	**252**	P	**Pb**	**13 07 04.1**	**+0.2**
	baz=249						
TEGC				S	**Sb**	**13 07 15.5**	**+1.3**
	baz=249						
TWC	**Suao**	**0.81**	**324**⇓	*i*P	**Pb**	**13 07 03.1**	**-0.9**
	baz=320						
TWC				S	**Sb**	**13 07 13.6**	**-0.9**
	baz=320						
ETLH	**Xiulin Townshi**	**0.85**	**287**	P	**Pb**	**13 07 04.6**	**-0.2**
	baz=272						
ETLH				S	**Sn**	**13 07 16.6**	**-0.8**
	baz=272						
ESL	**Shilin**	**0.87**	**261**	*i* P	**Pb**	**13 07 04.3**	**-0.8**
	baz=249						
ESL				*i* S	**Sb**	**13 07 17.1**	**+0.8**
	baz=249						
NDS	**Dongshan**	**0.90**	**319**	P	**Pb**	**13 07 05.3**	**-0.3**
	baz=315						
NDS				S	**Sb**	**13 07 16.9**	**-0.3**
	baz=315						
EGFH	**Guangfu**	**0.91**	**252**	*i* P	**Pb**	**13 07 05.5**	**-0.3**
	baz=249						
EGFH				S	**Sb**	**13 07 17.8**	**+0.3**
	baz=249						
LATG	**Datong**	**0.96**	**307**	P	**Pb**	**13 07 06.5**	**-0.3**
	baz=303						
LATG				S	**Sn**	**13 07 20.0**	**-0.1**
	baz=303						
EGS		**0.97**	**336**	*i* P	**Pn**	**13 07 06.5**	**-0.6**
	baz=324						
EGS				S	**Sn**	**13 07 19.4**	**-0.7**
	baz=324						
HGSD	**Ruisui**	**0.98**	**242**	P	**Pn**	**13 07 06.7**	**-0.5**
	baz=240						
HGSD				S	**Sb**	**13 07 19.7**	**+0.2**
	baz=240						
ILA	**Ilan**	**0.98**	**325**	*i* P	**Pn**	**13 07 07.0**	**-0.3**
	baz=322						
ILA				*i* S	**Sn**	**13 07 20.5**	**0.0**
	baz=322						
TWE	**Neicheng**	**0.99**	**320**	*i* P	**Pn**	**13 07 06.9**	**-0.5**
	baz=317						
TWE				*i* S	**Sn**	**13 07 20.7**	**-0.1**
	baz=317						
ENTT	**Nioudou**	**1.00**	**313**	*i* P	**Pb**	**13 07 07.2**	**-0.1**
	baz=309						
ENTT				*i* S	**Sn**	**13 07 20.4**	**-0.6**
	baz=309						
NNSB	**Datong**	**1.02**	**298**	P	**Pn**	**13 07 07.4**	**-0.4**
	baz=281						
NNSB				S	**Sn**	**13 07 21.4**	**-0.1**
	baz=281						
NTC	**Toucheng**	**1.02**	**331**	*i* P	**Pb**	**13 07 07.4**	**-0.2**
	baz=328						
NTC				*i* S	**Sn**	**13 07 21.0**	**-0.4**
	baz=328						
WHF	**Hehuan Shan**	**1.03**	**281**	*i* P	**Pn**	**13 07 07.5**	**-0.8**
	baz=264						
WHF				S	**Sb**	**13 07 20.2**	**-1.0**
	baz=264						
NNS	**Nan Shan**	**1.03**	**298**	*i* P	**Pn**	**13 07 07.5**	**-0.5**
	baz=282						
NNS				*i* S	**Sn**	**13 07 21.6**	**-0.2**
	baz=282						
EHY	**Hungye**	**1.06**	**245**	*i* P	**Pn**	**13 07 07.7**	**-0.5**
	baz=258						
EHY				*i* S	**Sb**	**13 07 21.5**	**-0.3**
	baz=258						
FUSS	**Fushou**	**1.07**	**286**	*i* P	**Pn**	**13 07 08.4**	**-0.3**
	baz=282						
FUSS				*i* S	**Sn**	**13 07 22.6**	**-0.3**
	baz=282						
FUSB	**Fushanzhiwuyua**	**1.07**	**318**	P	**Pb**	**13 07 08.5**	**-0.1**
	baz=315						
FUSB				S	**Sn**	**13 07 23.3**	**+0.5**
	baz=315						
OWD	**Renai**	**1.09**	**270**	*i* P	**Pn**	**13 07 08.2**	**-0.6**
	baz=267						
OWD				*i* S	**Sb**	**13 07 21.9**	**-0.9**
	baz=267						
CHGB	**Renai**	**1.10**	**276**	P	**Pn**	**13 07 08.6**	**-0.5**
	baz=261						
CHGB				S	**Sb**	**13 07 22.9**	**-0.2**
	baz=261						
TWB1	**Santiao Chiao**	**1.10**	**342**	*i* P	**Pn**	**13 07 08.2**	**-0.6**
	baz=356						
TWB1				*i* S	**Sn**	**13 07 23.0**	**-0.5**
	baz=356						
TIPB	**Shuangxi**	**1.13**	**334**	*i* P	**Pn**	**13 07 08.8**	**-0.4**
	baz=331						
TIPB				*i* S	**Sn**	**13 07 23.7**	**-0.4**
	baz=331						
YULB	**Yu-li**	**1.13**	**240**	P	**Pn**	**13 07 08.7**	**-0.6**
	baz=254						
YULB				S	**Sn**	**13 07 23.3**	**-0.9**
	baz=254						
NWLT	**Wulai**	**1.14**	**316**	*i* P	**Pb**	**13 07 09.3**	**-0.4**
	baz=312						
NWLT				*i* S	**Sn**	**13 07 24.9**	**+0.6**
	baz=312						
EYUL	**Yuli**	**1.14**	**238**	*i* P	**Pn**	**13 07 09.1**	**-0.3**
	baz=236						
EYUL				S	**Sn**	**13 07 24.3**	**0.0**
	baz=236						
VWDT	**VWDT**	**1.14**	**260**	P	**Pn**	**13 07 09.6**	**+0.2**
	baz=257						
VWDT				*e*S	**Sn**	**13 07 24.4**	**0.0**
	baz=257						
TDCB	**Techi**	**1.15**	**285**	P	**Pn**	**13 07 09.4**	**-0.2**
	baz=269						
TDCB				S	**Sb**	**13 07 25.0**	**+0.6**
	baz=269						
WUSB	**Renai**	**1.15**	**272**	P	**Pn**	**13 07 09.2**	**-0.4**
	baz=269						
YHNB	**Yeheng**	**1.15**	**308**	P	**Pn**	**13 07 09.4**	**-0.2**
	baz=304						
YHNB				S	**Sb**	**13 07 24.7**	**+0.2**
	baz=304						
TWF1	**Yuli**	**1.15**	**239**	P	**Pn**	**13 07 09.4**	**-0.2**
	baz=236						
TWF1				*e*S	**Sn**	**13 07 24.6**	**-0.1**
	baz=236						
NSK	**Sanguang**	**1.17**	**308**	*i* P	**Pn**	**13 07 09.7**	**-0.1**
	baz=304						
NSK				*i* S	**Sb**	**13 07 25.5**	**+0.5**
	baz=304						
SXI1	**Grass Mountain**	**1.22**	**338**	P	**Pn**	**13 07 09.9**	**-0.7**
	baz=336						
SXI1				S	**Sb**	**13 07 28.2**	**+1.7**
	baz=336						
NWF	**Wu-fen Shan**	**1.23**	**334**	*i* P	**Pn**	**13 07 10.1**	**-0.6**
	baz=332						
NWF				*i* S	**Sb**	**13 07 27.2**	**+0.4**
	baz=332						
FULB	**Fuli**	**1.24**	**233**	*i* P	**Pn**	**13 07 10.4**	**-0.4**
	baz=219						
FULB				*i* S	**Sn**	**13 07 26.5**	**-0.4**
	baz=219						
TWA	**Mucha**	**1.25**	**325**	*i* P	**Pb**	**13 07 11.2**	**-0.3**
	baz=322						
TWA				*i* S	**Sb**	**13 07 27.9**	**+0.7**
	baz=322						
NHDH	**Xindian Distri**	**1.26**	**323**	*i* P	**Pb**	**13 07 11.8**	**0.0**
	baz=319						
NHDH				S	**Sb**	**13 07 28.8**	**+1.1**
	baz=319						
WPL	**Puli Township**	**1.29**	**273**	P	**Pn**	**13 07 11.8**	**+0.4**
	baz=270						
IRIF	**Iriomote-Funau**	**1.30**	**73**	P	**Pb**	**13 07 11.8**	**-0.6**
IRIF				*e*S	**Sb**	**13 07 28.2**	**-0.4**
SSLB	**Suanglung**	**1.31**	**263**	P	**Pn**	**13 07 11.9**	**+0.2**
	baz=260						
SSLB				S	**Sb**	**13 07 29.4**	**+0.5**
	baz=260						
TNOU	**National Taiwa**	**1.31**	**336**	*e*P	**Pb**	**13 07 13.1**	**+0.5**
	baz=333						
HATJ	**Hateruma jima**	**1.32**	**85**	P	**Pb**	**13 07 12.3**	**-0.4**
HATJ				*e*S	**Sb**	**13 07 29.0**	**-0.2**
NFF	**Wufeng Townshi**	**1.32**	**301**	P	**Pb**	**13 07 12.5**	**-0.4**
	baz=297						
NFF				S	**Sb**	**13 07 30.0**	**+0.5**
	baz=297						
TAP	**Taipei**	**1.33**	**324**	*i* P	**Pb**	**13 07 12.6**	**-0.4**
	baz=321						
TAP				*i* S	**Sb**	**13 07 32.1**	**+2.4**
	baz=321						
WCS	**Beigang Elemen**	**1.34**	**275**	P	**Pn**	**13 07 12.7**	**+0.6**
	baz=263						
WCS				S	**Sb**	**13 07 29.8**	**+0.1**
	baz=263						
WHP	**Taichung City**	**1.34**	**284**	*i* P	**Pb**	**13 07 13.0**	**-0.2**
	baz=270						
WHP				S	**Sb**	**13 07 30.5**	**+0.6**
	baz=270						
SMLT	**Sun Moon Lake**	**1.35**	**267**	*i* P	**Pn**	**13 07 12.5**	**+0.2**
	baz=264						
SMLT				*i* S	**Sn**	**13 07 29.7**	**+0.1**
	baz=264						
YUS	**Yu-Shan**	**1.38**	**251**	*i* P	**Pn**	**13 07 13.3**	**+0.1**
	baz=248						
YUS				*i* S	**Sn**	**13 07 30.3**	**-0.6**
	baz=248						
EDH	**Donghe**	**1.38**	**225**	*i* P	**Pn**	**13 07 12.2**	**-0.6**
	baz=214						
EDH				*i* S	**Sn**	**13 07 28.4**	**-2.0**
	baz=214						
TYC	**Yuchr**	**1.38**	**268**	*i* P	**Pn**	**13 07 13.0**	**+0.3**
	baz=265						
TYC				*i* S	**Sb**	**13 07 31.6**	**+0.5**
	baz=265						
YM01	**YM01**	**1.39**	**329**	P	**Pn**	**13 07 12.6**	**-0.3**
	baz=342						
YM01				*e*S	**Sb**	**13 07 30.7**	**-0.6**
	baz=342						
LIOB	**Emei**	**1.41**	**299**	*i* P	**Pb**	**13 07 14.3**	**0.0**
	baz=295						
LIOB				*i* S	**Sb**	**13 07 32.8**	**+0.9**
	baz=295						
NSTT	**Nanjuang**	**1.42**	**299**	*i* P	**Pb**	**13 07 14.2**	**-0.2**
	baz=295						
NSTT				*i* S	**Sb**	**13 07 32.4**	**+0.3**
	baz=295						
TWS1	**Kuangyinshan**	**1.43**	**323**	*i* P	**Pb**	**13 07 13.9**	**-0.8**
	baz=337						
TWS1				S	**Sb**	**13 07 33.0**	**+0.5**
	baz=337						
ANP	**Anpu**	**1.45**	**328**	*i* P	**Pn**	**13 07 13.8**	**+0.1**
	baz=325						
ELDTW	**Lidau**	**1.46**	**239**	*i* P	**Pn**	**13 07 13.4**	**-0.4**
	baz=236						
ELDTW				S	**Sn**	**13 07 31.4**	**-1.0**
	baz=236						
NTST	**Danshui**	**1.47**	**325**	*i* P	**Pb**	**13 07 14.5**	**-0.8**
	baz=338						
NCU	**National Centr**	**1.48**	**313**	*i* P	**Pb**	**13 07 14.5**	**-0.9**
	baz=310						
NCU				*i* S	**Sb**	**13 07 34.1**	**+0.4**
	baz=310						
NCUH	**Zhongli**	**1.48**	**313**	P	**Pb**	**13 07 14.7**	**-0.8**
	baz=310						
HSN1	**Hsinchu**	**1.48**	**304**	P	**Pb**	**13 07 15.2**	**-0.3**
	baz=301						
TWY	**Chenhua**	**1.49**	**332**	*i* P	**Pb**	**13 07 15.2**	**-0.5**
	baz=329						
ALS	**Alishan**	**1.50**	**253**	*i* P	**Pn**	**13 07 15.2**	**+0.6**
	baz=250						
ALS				*i* S	**Sb**	**13 07 35.5**	**+0.7**
	baz=250						
WJS	**Zhushan**	**1.51**	**265**	*i* P	**Pb**	**13 07 16.5**	**+0.5**
	baz=262						
WJS				S	**Sb**	**13 07 37.0**	**+2.3**
	baz=262						
TWQ1	**Liyutan**	**1.51**	**285**	*i* P	**Pb**	**13 07 15.9**	**-0.1**
	baz=281						
TWQ1				*i* S	**Sb**	**13 07 35.9**	**+1.2**
	baz=281						
SBCB	**Hsinchu**	**1.51**	**304**	P	**Pb**	**13 07 15.4**	**-0.7**
	baz=300						
LDUT	**Ludao**	**1.52**	**213**	*i* P	**Pn**	**13 07 13.8**	**-0.9**
	baz=212						
LDUT				*i* S	**Sn**	**13 07 31.5**	**-2.3**
	baz=212						
JKRS	**Kuro-shima**	**1.52**	**79**	P	**Pb**	**13 07 15.5**	**-0.8**
JKRS				*e*S	**Sb**	**13 07 35.2**	**+0.1**
HSN	**Hsinchu**	**1.53**	**304**	*i* P	**Pn**	**13 07 14.8**	**0.0**
	baz=301						
HSN				*i* S	**Sb**	**13 07 36.0**	**+0.7**
	baz=301						
WWF	**Wufeng**	**1.53**	**274**	P	**Pn**	**13 07 15.5**	**+0.7**
	baz=271						
NSY	**Sanyi**	**1.54**	**288**	*i* P	**Pb**	**13 07 16.5**	**0.0**
	baz=284						
NSY				*i* S	**Sb**	**13 07 37.1**	**+1.5**
	baz=284						
WNT	**Mingjian**	**1.54**	**267**	*i* P	**Pb**	**13 07 16.8**	**+0.2**
	baz=264						
WNT				*i* S	**Sb**	**13 07 36.6**	**+0.9**
	baz=264						
LONT	**Longtian**	**1.54**	**228**	*i* P	**Pn**	**13 07 14.7**	**-0.3**
	baz=240						
LONT				*i* S	**Sn**	**13 07 34.0**	**-0.4**
	baz=240						
WNT1	**Nantou City**	**1.55**	**269**	*e*P	**Pb**	**13 07 17.1**	**+0.4**
	baz=265						
WNT1				*e*S	**Sb**	**13 07 37.3**	**+1.6**
	baz=265						
NMLH	**Miaoli**	**1.55**	**292**	*i* P	**Pb**	**13 07 16.5**	**-0.2**
	baz=288						
NMLH				*i* S	**Sb**	**13 07 36.9**	**+0.9**
	baz=288						
TCU	**Taichung**	**1.56**	**277**	*i* P	**Pb**	**13 07 16.8**	**-0.1**
	baz=274						
TCU				*i* S	**Sb**	**13 07 37.6**	**+1.5**
	baz=274						
CHN5	**Tsauling**	**1.59**	**257**	*i* P	**Pb**	**13 07 18.0**	**+0.5**
	baz=245						
CHN5				*i* S	**Sb**	**13 07 38.6**	**+1.4**
	baz=245						
NHW	**Xinwu Township**	**1.59**	**311**	P	**Pb**	**13 07 16.6**	**-0.9**
	baz=308						
NHW				*e*S	**Sb**	**13 07 36.7**	**-0.5**
	baz=308						
WDJ	**Dajia District**	**1.63**	**284**	*i* P	**Pb**	**13 07 17.6**	**-0.4**
	baz=280						
WDJ				*i* S	**Sb**	**13 07 39.2**	**+1.1**
	baz=280						
TWGBT	**Beinan**	**1.64**	**227**	P	**Pn**	**13 07 15.8**	**-0.4**
	baz=238						
TWGBT				S	**Sn**	**13 07 35.8**	**-0.9**
	baz=238						
TTN	**Taitung**	**1.64**	**223**	*e*P	**Pn**	**13 07 16.9**	**+0.7**
	baz=222						
TTN				*i* S	**Sn**	**13 07 36.8**	**+0.1**
	baz=222						
TWG	**Pinlang**	**1.64**	**227**	*i* P	**Pn**	**13 07 15.9**	**-0.4**
	baz=238						
TWG				S	**Sn**	**13 07 34.8**	**-2.0**
	baz=238						
STYH	**Taoyuan**	**1.66**	**242**	P	**Pn**	**13 07 17.4**	**+0.9**
	baz=231						
STYH				S	**Sn**	**13 07 38.0**	**+0.8**
	baz=231						
WCHH	**Zhanghua**	**1.66**	**275**	*i* P	**Pb**	**13 07 18.1**	**-0.5**
	baz=271						
WCHH				*i* S	**Sb**	**13 07 40.1**	**+1.1**
	baz=271						
JIJ	**Ishigaki jima**	**1.67**	**76**	P	**Pn**	**13 07 16.6**	**0.0**
JIJ				S	**Sn**	**13 07 36.9**	**-0.5**
STYT	**Tauyuan**	**1.68**	**242**	P	**Pn**	**13 07 17.6**	**+0.8**
	baz=230						
STYT				*e*S	**Sn**	**13 07 37.7**	**-0.1**
	baz=230						
WGK	**Gukeng**	**1.68**	**261**	*e*P	**Pb**	**13 07 20.3**	**+1.5**
	baz=258						
WGK				*e*S	**Sb**	**13 07 40.2**	**+0.7**
	baz=258						
PCYT	**Pengchaiyu**	**1.69**	**351**	P	**Pn**	**13 07 16.8**	**-0.2**
	baz=334						
WDLH	**Douliu**	**1.70**	**261**	*i* P	**Pb**	**13 07 18.7**	**-0.5**
	baz=258						
WDLH				*i* S	**Sb**	**13 07 41.0**	**+0.8**
	baz=258						
TPUB	**Ta-pu**	**1.72**	**248**	P	**Pb**	**13 07 19.1**	**-0.5**
	baz=246						
TPUB				S	**Sb**	**13 07 41.5**	**+0.6**
	baz=246						
WTP	**Ta-pu**	**1.76**	**247**	*i* P	**Pb**	**13 07 19.7**	**-0.6**
	baz=244						
WTP				*i* S	**Sb**	**13 07 42.3**	**+0.4**
	baz=244						
WRL	**Guolierlin Hig**	**1.82**	**269**	P	**Pb**	**13 07 20.5**	**-0.9**
	baz=279						
WRL				S	**Sb**	**13 07 43.8**	**0.0**
	baz=279						
WTK	**Tuku**	**1.83**	**262**	*i* P	**Pb**	**13 07 21.1**	**-0.4**
	baz=259						
WTK				*i* S	**Sb**	**13 07 45.1**	**+1.0**
	baz=259						
CHY	**Chiayi**	**1.84**	**256**	*i* P	**Pb**	**13 07 21.2**	**-0.4**
	baz=253						
CHY				*i* S	**Sb**	**13 07 44.7**	**+0.5**
	baz=253						
TWK	**Hsinying**	**1.86**	**249**	*i* P	**Pb**	**13 07 21.4**	**-0.6**
	baz=246						
TWK				*i* S	**Sb**	**13 07 45.3**	**+0.5**
	baz=246						
JISG	**Ishigakijimahi**	**1.88**	**70**	P	**Pn**	**13 07 19.5**	**-0.1**
JISG				S	**Sn**	**13 07 42.3**	**-0.3**
JTJ	**Tarama**	**2.23**	**72**	P	**Pn**	**13 07 25.4**	**+0.9**
JTJ				S	**Sn**	**13 07 52.7**	**+1.3**
JIRB	**Irabujima**	**2.70**	**71**	P	**Pn**	**13 07 31.7**	**+0.8**
JIKM	**Ikemajima**	**2.79**	**69**	P	**Pn**	**13 07 33.8**	**+1.7**
JIKM				*e*S	**Sn**	**13 08 05.7**	**+0.5**
JMJ2	**Miyako jima3**	**2.81**	**73**	P	**Pn**	**13 07 33.9**	**+1.6**
JMJ2				*e*S	**Sn**	**13 08 07.0**	**+1.4**
JOGS	**Gusukube**	**2.88**	**73**	*e*P	**Pn**	**13 07 35.5**	**+2.1**
JOGS				S	**Sn**	**13 08 09.3**	**+1.9**

IDC 01 13:09:42.9±13.0**, 27°.79S×23°.00E, h0**km**, mbtmp2.1**/1**, ML1.8**/1**, Error ellipse: s-maj=130.9km s-min=48.1km az=114.0, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I47ZA	**BOSHOF INFRASO**	**2.14**	**113**	*i*		13 23 50.0	
	0.1nm,0.6s,baz=292,slow=300,SNR=1.7						
BOSA	**Boshof**	**2.16**	**113**	Pn	Pn	13 10 20.3	0.0
	0.2nm,0.3s,baz=289,slow=18,SNR=5.5						
BOSA				Sn	Sn	13 10 40.2	-7.6
	0.6nm,0.3s,baz=16,slow=21,SNR=12						
	1.7nm,0.6s						
I35NA	**TSUMEB INFRASO**	**9.90**	**329**	*i*		14 13 40.0	
	baz=150,slow=319,SNR=2.0						

PRE 01 13:09:57.8±1.6**, 26°.46S×27°.43E, h2**km**, ML1.6, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRYS	**Parys**	**0.47**	**187**	*e*P	Pg	13 10 07.5	+0.8
PRYS				*e*S	Sg	13 10 13.4	+0.5
PRYS				IAML		13 10 16.0	
	comp=Z,11nm,0.5s						
HRAO	**HartRAO**	**0.61**	**22**	*e*P	Pg	13 10 10.2	+0.6
HRAO				*e*S	Sg	13 10 17.3	-0.3
HRAO				IAML		13 10 19.5	
	comp=Z,17nm,0.4s						
KSR	**Koster**	**0.77**	**322**	*e*P	Pg	13 10 12.3	-0.2
KSR				*e*S	Sb	13 10 24.3	-0.7
KSR				IAML		13 10 29.5	
	comp=Z,38nm,0.2s						
SWZ	**Schweizer**	**2.00**	**249**	*e*P	Pn	13 10 32.5	-0.3
SWZ				*e*S	Sn	13 10 59.1	+0.5
SWZ				IAML		13 11 02.6	
	comp=Z,9.5nm,0.8s						
LBTB	**Lobatse**	**2.19**	**311**	*e*P	Pb	13 10 37.0	-1.3
LBTB				*e*S	Sn	13 11 03.2	+0.1
LBTB				IAML		13 11 07.2	
	comp=Z,9.3nm,0.2s						

*NEIC **01** 13:17:52.5±1.7, 20°.8S±0°.1×177°.5W±0°.1, h456km±9km, mb4.4/21, Error ellipse: s-maj=19.5km s-min=17.2km az=139.0*

*IDC **01** 13:17:54.5±2.0, 20°.88S×177°.73W, h476km±20km, mb3.4/15, mbtmp4.3/18, Error ellipse: s-maj=18.4km s-min=12.6km az=110.0*

ISC 01 13:17:51.8±0.5**, 20°.76S**±0°.08×**177°.51W**±0°.08**, h450**km**, n55, σ1s.53**/56**, mb4.1**/26**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.17**	**305**	P	**P**	**13 19 21.0**	**+3.1**
	8.3nm,0.4s,baz=288,slow=22,SNR=31						
MSVF	**Nonsavu**	**5.17**	**305**	P	**P**	**13 19 20.9**	**+3.0**
NIUE	**Niue**	**7.33**	**78**	P	**P**	**13 19 39.3**	**-0.8**
AFI	**Afiamalu**	**8.74**	**40**	P	**P**	**13 19 55.3**	**0.0**
	53nm,0.8s,baz=154,slow=2.1,SNR=8.8						
AFI				S	**S**	**13 21 31.7**	**-5.1**
	19nm,0.4s,baz=11,slow=23,SNR=2.6						
PINNC	**Pines Island,**	**14.11**	**260**	P	**P**	**13 20 54.7**	**+1.3**
DZM	**Mont Dzumac**	**15.00**	**262**	P	**P**	**13 21 02.9**	**-0.3**
	6.3nm,0.8s,baz=131,slow=22,SNR=7.0						
MXZ	**Matakaoa Point**	**17.13**	**191**	P	**P**	**13 21 26.1**	**+0.8**
URZ	**Urewera**	**18.05**	**194**	P	**P**	**13 21 32.6**	**-2.2**
	9.2nm,0.3s,baz=301,slow=23,SNR=22						
URZ				S	**S**	**13 24 34.7**	**-3.1**
	3.8nm,0.4s,baz=301,slow=24,SNR=2.0						
EIDS	**Eidsvold**	**29.22**	**255**	P	**P**	**13 23 14.8**	**-0.8**
EIDS				IAmb	IAmb	13 23 18.5	
	comp=Z,22nm,1.4s						
ARMA	**Armidale**	**29.37**	**245**	P	**P**	**13 23 16.4**	**-0.5**
ARMA				IAmb	IAmb	13 23 37.1	
	comp=Z,22nm,1.4s						
CTA	**Charters Tower**	**33.92**	**265**	P	**P**	**13 23 55.6**	**-0.4**
	comp=Z,14nm,0.4s,baz=90,slow=9.9,SNR=47						
	comp=Z,14nm,0.4s						
CTAO	**Charters Tower**	**33.92**	**265**	P	**P**	**13 23 55.3**	**-0.8**
PMG	**Port Moresby**	**35.85**	**283**	P	**P**	**13 24 11.5**	**-0.8**
PMG				IAmb	IAmb	13 24 29.9	
	comp=Z,30nm,1.2s						
TOO	**Toolangi**	**36.12**	**234**	P	**P**	**13 24 14.2**	**0.0**
COEN	**Coen**	**38.06**	**274**	P	**P**	**13 24 29.8**	**-0.8**
COEN				IAmb	IAmb	13 24 32.0	
	comp=Z,12nm,1.0s						
STKA	**Stephens Creek**	**38.09**	**245**	P	**P**	**13 24 30.0**	**-0.7**
	comp=Z,3.3nm,0.7s,baz=96,slow=8.6,SNR=9.1						
	comp=Z,3.3nm,0.7s						
STKA	**Stephens Creek**	**38.09**	**245**	IAmb	IAmb	13 24 31.1	
	comp=Z,0.9nm,0.9s						
WR0	**Warramunga Arr**	**44.83**	**262**	P	**P**	**13 25 22.9**	**-1.6**
WR0				IAmb	IAmb	13 25 24.6	
	comp=Z,4.8nm,0.6s						
AS31	**Alice Springs**	**44.91**	**257**	P	**P**	**13 25 23.6**	**-1.6**
ASAR	**Alice Springs**	**44.91**	**257**	P	**P**	**13 25 24.1**	**-1.1**
	comp=Z,12nm,0.5s,baz=91,slow=8.2,SNR=413						
ASAR				PcP	**pwP**	**13 26 56.8**	**+1.6**
	comp=Z,1.3nm,0.7s,baz=108,slow=4.0,SNR=5.6						
	comp=Z,12nm,0.5s						
ASAR	**Alice Springs**	**44.91**	**257**	P	**P**	**13 25 23.8**	**-1.4**
WRA	**Warramunga Arr**	**45.02**	**262**	P	**P**	**13 25 24.4**	**-1.6**
	comp=Z,8.2nm,0.6s,baz=96,slow=7.5,SNR=342						
	comp=Z,8.2nm,0.6s						
WRA	**Warramunga Arr**	**45.02**	**262**	P	**P**	**13 25 24.4**	**-1.6**
FORT	**Forrest**	**49.61**	**247**	P	**P**	**13 25 59.1**	**-1.5**
FORT				IAmb	IAmb	13 26 00.1	
	comp=Z,14nm,0.6s						
MTN	**Manton Dam**	**49.62**	**271**	P	**P**	**13 25 59.7**	**-1.3**
MTN				IAmb	IAmb	13 26 00.2	
	comp=Z,18nm,0.6s						
KNRA	**Kununurra**	**51.10**	**266**	P	**P**	**13 26 10.9**	**-0.9**
KNRA				IAmb	IAmb	13 26 11.6	
	comp=Z,19nm,0.6s						
FAKI	**Fak Fak**	**52.01**	**283**	P	**P**	**13 26 17.3**	**-1.2**
SOEI	**Soe**	**56.97**	**272**	P	**P**	**13 26 54.1**	**+0.4**
SBA	**Scott Base**	**57.64**	**184**	P	**P**	**13 27 00.0**	**+2.9**
VNDA	**Vanda**	**57.69**	**185**	P	**P**	**13 26 59.0**	**+1.5**
	comp=Z,0.4nm,0.5s,baz=47,slow=5.1,SNR=2.4						
	comp=Z,0.4nm,0.5s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MBWA	Marble Bar	58.25	257	P	P	13 27 00.8	-1.4
MORW	Morawa	60.16	248	P	P	13 27 13.7	-1.3
MORW				IAmb	IAmb	13 27 22.8	
	comp=Z,11nm,1.1s						
QSPA	South Pole Qui	69.31	180	P	P	13 28 13.7	+1.1
QSPA				IAmb	IAmb	13 28 14.8	
	comp=Z,3.6nm,0.8s						
MJAR	Matsushiro Arr	70.69	323	P	P	13 28 20.5	-0.6
	comp=Z,2.7nm,0.6s,baz=150,slow=6.2,SNR=11						
	comp=Z,2.7nm,0.6s						
JHS	Saijyo	72.60	319	P	P	13 28 32.4	0.0
JHS				IAmb	IAmb	13 28 52.7	
	comp=Z,20nm,1.2s						
TPUB	Ta-pu	74.50	303	P	P	13 28 42.3	-1.2
PETK	Petropavlovsk-	76.64	345	P	P	13 28 55.2	+0.4
	comp=Z,1.7nm,0.9s,baz=153,slow=12,SNR=5.9						
	comp=Z,1.7nm,0.9s						
KSRS	Korea Array	77.39	318	P	P	13 29 00.1	+0.9
	comp=Z,0.9nm,0.6s,baz=133,slow=5.3,SNR=6.0						
	comp=Z,0.9nm,0.6s						
USRK	Ussuriysk Ar.	79.44	326	P	P	13 29 11.7	+1.6
	comp=Z,2.9nm,0.8s,baz=174,slow=1.9,SNR=4.2						
	comp=Z,2.9nm,0.8s						
NVAR	Mina Array Bea	80.90	43	P	P	13 29 20.4	+2.2
	comp=Z,0.6nm,0.8s,baz=227,slow=8.6,SNR=5.5						
	comp=Z,0.6nm,0.8s						
MAW	Mawson	81.47	200	P	P	13 29 20.7	+0.2
	comp=Z,3.1nm,1.0s,baz=135,slow=5.7,SNR=2.4						
	comp=Z,3.1nm,1.0s						
TXAR	Lajitas Array	86.81	57	P	P	13 29 50.1	+2.4
	comp=Z,0.4nm,0.7s,baz=218,slow=7.2,SNR=6.2						
	comp=Z,0.4nm,0.7s						
SNAA	Sanae	87.74	178	P	P	13 29 51.1	-0.2
VNA3	Neumayer Olymp	87.85	176	P	P	13 29 52.0	+0.2
VNA2	Neumayer--Watz	88.30	177	P	P	13 29 54.2	+0.4
	baz=189,slow=3.7						
ILAR	Eielson Array	88.47	13	P	P	13 29 54.4	-0.1
	comp=Z,0.4nm,0.5s,baz=219,slow=5.8,SNR=5.2						
	comp=Z,0.4nm,0.5s						
VNA1	Neumayer--Stat	88.52	176	P	P	13 29 55.4	+0.5
PDAR	Pinedale Array	88.84	43	P	P	13 29 58.3	+1.2
	comp=Z,0.3nm,0.5s,baz=242,slow=3.2,SNR=4.4						
	comp=Z,0.3nm,0.5s						
CMAR	Chiang Mai Arr	90.64	289	P	P	13 30 06.4	+0.7
	comp=Z,0.5nm,0.5s,baz=98,slow=2.6,SNR=1.8						
	comp=Z,0.5nm,0.5s						
MKAR	Makanchi Array	111.71	313	PKiKP	PKiKP	13 35 32.9	-1.5
	comp=Z,0.4nm,0.5s,baz=83,slow=0.2,SNR=4.9						
KURBB	Kurchatov Arra	114.55	317	PKP	PKPdf	13 35 38.3	-1.3
	comp=Z,0.7nm,0.7s,baz=110,slow=1.6,SNR=6.2						
AKASG	Malin Array Be	143.46	331	PKP	PKPab	13 36 31.1	-0.9
	comp=Z,1.1nm,0.4s,baz=43,slow=4.5,SNR=8.7						
CLL	Collm	148.42	347	*i* PKPbc	PKPbc	13 36 46.7	+0.2
	comp=Z,4.0nm,0.8s						
CLL				*e*PKPab	PKPab	13 36 51.0	-0.3
GERES	GERESS Array B	150.57	345	PKPbc	PKPbc	13 36 51.6	-0.3
	comp=Z,0.7nm,0.6s,baz=5.7,slow=1.3,SNR=6.3						
TORD	Torodi Ar. Bea	172.39	174	PKP	PKPdf	13 37 08.3	-0.6
	comp=Z,0.6nm,0.9s,baz=80,slow=1.9,SNR=4.1						

*KRNET **01** 13:18:08.5±0.1, 41°.38N×69°.56E, h30km, mb2.7*
*ISU **01** 13:18:09.4, 41°.40N×69°.70E, h15km*
ISC 01 13:18:09.6±0.9**, 41°.45N**±0°.04×**69°.69E**±0°.04**, h11**km±8km**, n12,** σ1s.61/20**, 6C-4D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TGS	TashGRES	0.13	257	S	Sg	13 18 19.5	+4.5
YBZ	Yangibazar	0.17	208	P	Pg	13 18 12.8	-0.6
YBZ				S	Sg	13 18 15.2	-0.8
CHMG	Chimgan	0.26	68	S	Sg	13 18 17.6	-1.0
CHRV	Charvak	0.27	46	P	Pg	13 18 13.8	-1.4
CHRV				S	Sg	13 18 18.0	-0.9
TAS	Tashkent	0.32	247	⇓*i*P	Pg	13 18 14.4	-1.7
	baz=55						
TAS				⇓*i*S	Sg	13 18 18.3	-2.2
	baz=55						
TRKS	Terek-Say	1.09	85	⇑*i*P	Pb	13 18 30.7	+0.1
	baz=86						
TRKS				⇑*i*S	Sn	13 18 47.2	+0.9
	baz=86						
BTK	Batken	1.64	148	⇑*i*P	Pn	13 18 37.7	-0.8
	baz=44						
BTK				⇑*i*S	Sn	13 18 59.4	-0.2
	baz=44						
ARK	Arkit	1.74	78	⇓*i*P	Pn	13 18 41.0	+1.1
	baz=76						
ARK				⇓*i*S	Sb	13 19 05.0	+1.5
	baz=76						
KK31	Karatay Array	1.76	20	P	Pn	13 18 40.4	+0.3
	0.6nm,0.2s,baz=204,slow=17,SNR=10						
KK31				S	Sb	13 19 03.8	-0.3
	11nm,0.4s,baz=198,slow=29,SNR=23						
KKAR	Karatay Array	1.76	20	⇑*i*P	Pn	13 18 40.8	+0.7
	baz=22						
KKAR				⇑*i*S	Sb	13 19 04.7	+0.7
	baz=22						
CHMI	Chimion	1.82	130	S	Sb	13 19 06.5	+0.5
SHAK	Shakhimardan	2.16	133	S	Sb	13 19 17.4	+1.6

IDC 01 13:30:33.5±2.0**, 18°.40S**×**173°.57E, h0**km**, mb4.1**/3**, mbtmp4.1**/4**, ML4.9**/1**, Error ellipse: s-maj=126.8km s-min=29.4km az=169.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.31	82	Pn	Pn	13 31 40.5	+0.1
	2.6nm,0.3s,baz=56,slow=5.1,SNR=18						
MSVF				Sn	Sn	13 32 15.8	-16
	0.2nm,0.3s,baz=17,slow=19,SNR=1.0						
	31nm,0.8s						
STKA	Stephens Creek	31.78	239	P	P	13 37 00.2	+0.5
	0.7nm,0.3s,baz=70,slow=6.3,SNR=6.4						
	0.7nm,0.3s						
WRA	Warramunga Arr	37.04	261	P	P	13 37 45.1	-0.3
	0.3nm,0.3s,baz=95,slow=7.8,SNR=22						
	0.3nm,0.3s						
ASAR	Alice Springs	37.31	255	P	P	13 37 47.4	-0.3
	3.8nm,0.4s,baz=89,slow=7.8,SNR=185						
	3.8nm,0.4s						

HEL 01 13:34:54.2±0.2**, 62°.42N**×**22°.03E, h0**km**, ML1.4, Explosion, Finland**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VAF	Ylistaro	0.69	25	PG	Pg	13 35 06.6	-0.9
VAF				SG	Sg	13 35 16.0	-0.5
KEF	Keuruu	1.35	99	PG	Pg	13 35 18.5	-1.5
KEF				MSG		13 35 34.9	
	comp=Z,1.7nm,0.2s						
KEF				SB	Sg	13 35 35.9	-1.6
RAF	Rauma	1.40	185	PG	Pn	13 35 19.8	-1.2
RAF				MSG		13 35 36.5	
	comp=Z,2.0nm,0.2s						
RAF				SG	Sg	13 35 37.8	-1.4
UMAU	Umeaa	1.60	338	PG	Pn	13 35 23.5	-0.1
UMAU				SN	Sg	13 35 47.7	+2.2
HEMU	Hemsoen	1.87	280	PG	Pn	13 35 27.0	-0.4
HEMU				SG	Sb	13 35 53.1	0.0
SUF	Sumiainen	1.93	79	PG	Pn	13 35 28.4	+0.2
SUF				MSG		13 35 51.5	
	comp=Z,3.0nm,0.2s						
SUF				SG	Sn	13 35 53.6	+0.4
KAF	Kangasniemi	2.02	97	MSG		13 35 54.3	
	comp=Z,2.4nm,0.2s						
OBF8	Ulkokalla	2.02	18	SG	Sb	13 35 57.0	-0.5
FIA0	FINESS Array S	2.15	115	SG	Sn	13 35 59.1	+0.6
OUF	Merijarvi	2.31	31	MSG		13 36 02.4	
	comp=Z,0.9nm,0.2s						
OUF				SG	Sn	13 36 03.4	+1.0
JOF	Joensuu	4.31	79	SG	Sb	13 37 06.5	+3.3

IDC 01 13:37:17.7±1.2**, 5°.64S**×**150°.32E, h0**km**, mb3.3**/4**, mbtmp3.3**/5**, ML2.9**/1**, MS3.2**/1**, Error ellipse: s-maj=44.9km s-min=14.1km az=136.0, New Britain region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	2.15	52	Pn	Pb	13 37 56.7	-0.9
	4.0nm,0.3s,baz=244,slow=2.1,SNR=8.5						
KRVT				Lg	Lg	13 38 25.3	
	18nm,0.3s,baz=287,slow=23,SNR=20						
	8.3nm,0.3s						
SIJI	Sorong	19.60	283	LR	LR	13 49 12.7	
	comp=Z,69nm,19.8s,baz=144,slow=36						
WRA	Warramunga Arr	21.07	226	P	P	13 42 04.7	+1.0
	0.5nm,0.7s,baz=55,slow=11,SNR=2.3						
	0.5nm,0.7s						
ASAR	Alice Springs	23.90	220	P	P	13 42 32.9	-0.6
	0.2nm,0.4s,baz=56,slow=9.2,SNR=12						
	0.2nm,0.4s						
STKA	Stephens Creek	27.35	196	P	P	13 43 05.0	+0.4
	0.3nm,0.3s,baz=0.0,slow=15,SNR=1.7						
	0.3nm,0.3s						
SONM	Songino Array	65.74	329	P	P	13 48 03.7	-0.9
	0.1nm,0.3s,baz=118,slow=5.4,SNR=1.9						
	0.1nm,0.3s						

MAN 01 13:45:31.4, 6°.64N×126°.05E, h129km**, mb4.0, ML2.8, MS2.4, Mindanao**

*IDC **01** 13:50:36.3±1.5, 16°.00S×167°.57E, h0km, mb4.1/8, mbtmp4.1/9, ML4.1/1, MS3.6/9, Error ellipse: s-maj=50.4km s-min=21.4km az=121.0*
*NEIC **01** 13:50:42.6±1.2, 16°.1S±0°.1×167°.5E±0°.2, h36km±9km, mb4.3/13, Error ellipse: s-maj=21.7km s-min=15.8km az=96.0*
ISC 01 13:50:42.1±0.8**, 16°.07S**±0°.08×**167°.6E**±0°.1**, h39**km**, n34,** σ0s.92/26**, mb4.1**/12**, MS3.7**/7**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LIFNC	LIFOU	4.69	184	Pn	Pn	13 51 50.0	-0.5
MARNC	Mare, Loyalty	5.40	175	Pn	Pn	13 52 00.1	0.0
KOUNC	Koumac, New Ca	5.44	214		Pn	13 52 01.1	+0.4
DZM	Mont Dzumac	6.06	190	Pn	Pn	13 52 09.5	+0.1
	4.5nm,0.3s,baz=332,slow=19,SNR=161						
DZM				Sn	Sn	13 53 15.9	-1.7
	13nm,0.3s,baz=144,slow=22,SNR=9.1						
DZM				LR	LR	13 54 19.3	
	comp=Z,427nm,21.0s,baz=356,slow=36						
	11nm,0.3s						
DZM	Mont Dzumac	6.06	190		Pn	13 52 09.1	-0.2
ONTNC	Ouen Toro	6.29	189		Pn	13 52 12.7	+0.3
PINNC	Pines Island,	6.51	181	Pn	Pn	13 52 16.7	+1.3
MSVF	Nonsavu	10.17	101	LR	LR	13 56 17.7	
	comp=Z,256nm,18.7s,baz=214,slow=34						
CTA	Charters Tower	20.65	256	LR	LR	14 01 07.2	
	comp=Z,112nm,20.6s,baz=221,slow=30						
CTAO	Charters Tower	20.65	256	P	P	13 55 19.8	+1.2
CTAO				IAmb	IAmb	13 55 37.4	
	comp=Z,17nm,1.2s						
URZ	Urewera	23.65	161	LR	LR	14 04 12.1	
	comp=Z,98nm,19.9s,baz=31,slow=34						
RPZ	Rata Peaks	27.71	175	LR	LR	14 06 14.1	
	comp=Z,132nm,18.9s,baz=273,slow=34						
STKA	Stephens Creek	28.37	232	P	P	13 56 33.3	+0.6
	comp=Z,1.8nm,0.6s,baz=24,slow=7.4,SNR=6.5						
STKA				LR	LR	14 07 00.7	
	comp=Z,276nm,18.6s,baz=220,slow=35						
	comp=Z,1.8nm,0.6s						
STKA	Stephens Creek	28.37	232	IAmb	IAmb	13 56 34.4	
	comp=Z,0.8nm,1.0s						
WB0	Warramunga Arr	31.75	258	P	P	13 57 02.2	-0.7
WB0				IAmb	IAmb	13 57 30.6	
	comp=Z,5.3nm,1.2s						
WRA	Warramunga Arr	31.80	258	P	P	13 57 02.2	-1.1
	comp=Z,1.1nm,0.8s,baz=87,slow=9.1,SNR=12						
	comp=Z,1.1nm,0.8s						
AS31	Alice Springs	32.49	251	P	P	13 57 08.6	-0.7
AS31				IAmb	IAmb	13 57 10.1	
	comp=Z,1.7nm,0.6s						
ASAR	Alice Springs	32.49	251	P	P	13 57 08.9	-0.5
	comp=Z,4.7nm,0.7s,baz=77,slow=8.9,SNR=88						
ASAR				LR	LR	14 09 09.1	
	comp=Z,163nm,18.6s,baz=294,slow=34						
	comp=Z,4.7nm,0.7s						
KNRA	Kununurra	37.29	265	P	P	13 57 49.8	-0.9
FORT	Forrest	38.88	241	P	P	13 58 03.8	-0.2
MBWA	Marble Bar	45.49	256	P	P	13 58 57.8	-0.2
MBWA				IAmb	IAmb	13 58 59.3	
	comp=Z,6.8nm,0.9s						
VNDA	Vanda	61.53	181	P	P	14 00 56.1	+1.3
SBA	Scott Base	61.80	180	P	P	14 00 57.5	+0.9
PETK	Petropavlovsk-	69.42	354	P	P	14 01 46.6	+0.7
	comp=Z,0.7nm,0.5s,baz=157,slow=7.8,SNR=2.0						
	comp=Z,0.7nm,0.5s						
KLR	Kul'dur	72.35	336	P	P	14 02 05.0	+1.2
	comp=Z,1.6nm,0.7s,baz=166,slow=9.0,SNR=5.3						
	comp=Z,1.6nm,0.7s						
QSPA	South Pole Qui	73.96	180	P	P	14 02 13.9	+0.6
QSPA				IAmb	IAmb	14 02 28.3	
	comp=Z,3.3nm,1.1s						
MA2	Magadan	76.61	351	LR	LR	14 30 12.0	
	comp=Z,35nm,20.3s,baz=239,slow=31						
SONM	Songino Array	83.74	324	P	P	14 03 06.4	-0.8
	comp=Z,0.9nm,0.8s,baz=156,slow=12,SNR=5.7						
	comp=Z,0.9nm,0.8s						
SONM	Songino Array	83.74	324	IAmb	IAmb	14 03 09.9	
	comp=Z,1.5nm,1.0s						
ILAR	Eielson Array	87.71	18	P	P	14 03 24.4	-1.9
	comp=Z,0.4nm,0.6s,baz=243,slow=4.0,SNR=4.0						
	comp=Z,0.4nm,0.6s						
TIXI	Tiksi	91.34	349	P	P	14 03 43.1	-0.1
	comp=Z,0.3nm,0.3s,baz=90,slow=22,SNR=5.0						
	comp=Z,0.3nm,0.3s						
TIXI	Tiksi	91.34	349	IAmb	IAmb	14 03 45.0	
	comp=Z,2.0nm,1.1s						
PDAR	Pinedale Array	95.64	47	LR	LR	14 43 17.3	
	comp=Z,27nm,18.1s,baz=337,slow=33						
ARCES	ARCESS Array B	121.62	345	PKP	PKPdf	14 09 30.6	-0.5
	comp=Z,2.0nm,0.8s,baz=25,slow=2.4,SNR=1.4						

IDC 01 14:07:18.3±6.2**, 28°.35S**×**23°.01E, h0**km**, Error ellipse: s-maj=47.1km s-min=38.8km az=7.0, South Africa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I47ZA	BOSHOF INFRASO	1.98	98	*i*		14 20 20.0	
	0.1nm,0.7s,baz=277,slow=282,SNR=2.4						
BOSA	Boshof	2.00	98	Pn	Pn	14 07 53.0	-0.4
	0.1nm,0.3s,baz=283,slow=17,SNR=1.9						
BOSA				Pg	Pb	14 07 55.8	+0.2
	0.2nm,0.3s,baz=281,slow=17,SNR=2.0						
BOSA				Sn	Sn	14 08 18.9	-0.4
	0.8nm,0.3s,baz=5.2,slow=16,SNR=5.6						
BOSA				Lg	Lg	14 08 21.7	
	1.2nm,0.3s,baz=199,slow=19,SNR=13						
BOSA				Rg	Rg	14 08 30.6	
	44nm,0.9s,baz=310,slow=1.9,SNR=7.8						
I35NA	TSUMEB INFRASO	10.38	330	*i*		15 10 40.0	
	baz=153,slow=318,SNR=3.7						

*NIED **01** 14:08:34.1, 37°.73N×142°.32E, h34km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.89; $M_{\theta\theta}$-1.06; $M_{\phi\phi}$-0.83; $M_{r\theta}$2.83; $M_{\theta\phi}$-1.35; $M_{\phi r}$5.09; Fault plane solution: $M_0$6.20000×10^{14} NP1: ϕ_s248.00000°, δ12.00000°, λ127.00000°. NP2: ϕ_s30.00000°, δ81.00000°, λ83.00000°.*
*JMA **01** 14:08:34.1±0.2, 37°.7N±0°.5×142°.3E±1°.0, h34km±2km, MV3.9/36, SE OFF MIYAGI PREF*
*IDC **01** 14:08:36.6±2.8, 37°.61N×142°.40E, h41km±24km, mb3.6/6, mbtmp3.8/11, ML3.0/5, MS3.3/7, Error ellipse: s-maj=22.7km s-min=15.7km az=104.0*
ISC 01 14:08:31.9±2.4**, 37°.69N**±0°.06×**142°.34E**±0°.08**, h6**km±13km**, n35,** σ1s.63/33**, mb3.8**/6**, MS3.5**/3**, 4D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.93	312	⇓*i*P	Pg	14 08 50.4	+0.6
JIKH				⇓*e*S	Sb	14 09 01.8	-1.2
JIO	Ouri	1.09	315	⇓*i*P	Pb	14 08 52.9	-0.3
JIO				⇓S	Sg	14 09 05.9	-1.3
JMST	Minamisoumatoc	1.15	272	*i* P	Pb	14 08 53.9	-0.4
JMST				*e*S	Sb	14 09 07.9	-1.5
JFK	Kawauchi	1.21	255	P	Pb	14 08 54.9	-0.3
JMM	Marumori	1.24	279	*i* P	Pb	14 08 55.2	-0.5
JMM				S	Sg	14 09 10.3	-1.5
JKMT	Kesennumamotoy	1.31	329	*i* P	Pn	14 08 55.9	-0.8
JKMT				S	Sb	14 09 11.2	-2.8
JOU	Okura	1.49	298	P	Pn	14 08 59.4	+0.2
JOU				*e*S	Sb	14 09 17.4	-1.7
JMK	Ichinoseki	1.54	325	P	Pn	14 08 59.4	-0.5
JFT	Otama	1.60	265	*i* P	Pb	14 09 01.4	-0.5
JYS	Shirataka	1.88	287	*e*P	Pb	14 09 05.5	-1.0
JOM	Ohasama	1.96	336	P	Pn	14 09 05.4	-0.3
JYK	Kaneyama	1.98	309	P	Pn	14 09 06.5	+0.5
JRG	Rokugo	2.17	322	*i* P	Pn	14 09 09.4	+0.9
JYA	Atsumi	2.26	294	P	Pn	14 09 11.2	+1.5
MJAR	Matsushiro Arr	3.50	252	P	Pn	14 09 29.1	+2.2
	0.3nm,0.3s,baz=79,slow=15,SNR=15						
MJAR				S	Sn	14 10 08.6	+0.1
	4.3nm,0.4s,baz=90,slow=15,SNR=5.1						
MJAR				LR	LR	14 11 06.4	
	comp=Z,251nm,18.2s,baz=102,slow=43						
	6.6nm,0.8s						
JHJ	Hachijo jima 2	5.01	205	P	Pn	14 09 48.3	+0.6
	6.3nm,0.3s,baz=327,slow=22,SNR=6.8						
JHJ				S	Sn	14 10 42.5	-3.4
	68nm,0.6s,baz=52,slow=18,SNR=1.8						
	82nm,0.9s						
ASAJ	Asahikawa	6.42	2	P	Pn	14 10 07.8	+0.7
	0.6nm,0.3s,baz=190,slow=19,SNR=10.0						
	13nm,1.0s						
USRK	Ussuriysk Ar.	10.18	313	P	Pn	14 11 02.7	+4.3
	0.4nm,0.3s,baz=122,slow=14,SNR=8.4						
USRK				LR	LR	14 14 41.5	
	comp=Z,104nm,18.9s,baz=188,slow=36						
	6.2nm,0.7s						
KSRS	Korea Array	11.45	273	P	Pn	14 11 19.4	+3.5
	0.1nm,0.3s,baz=83,slow=15,SNR=4.4						
KSRS				LR	LR	14 15 32.8	
	comp=Z,72nm,18.1s,baz=215,slow=36						
	1.4nm,0.8s						
KLR	Kul'dur	13.85	330	LR	LR	14 17 09.4	
	comp=Z,77nm,19.2s,baz=208,slow=37						
SEY	Seymchan	26.01	10	P	P	14 14 06.5	+1.2
	0.8nm,0.8s,baz=169,slow=8.9,SNR=2.1						
	0.8nm,0.8s						
H11N2	WAKE ISLAND Hy	27.87	123	T	T	14 43 35.3	
	baz=316,slow=75,SNR=95						
H11N1	WAKE ISLAND Hy	27.87	123	T	T	14 43 39.9	
	baz=316,slow=75,SNR=72						
H11N3	WAKE ISLAND Hy	27.88	123	T	T	14 43 35.9	
	baz=316,slow=75,SNR=70						
SONM	Songino Array	28.04	303	P	P	14 14 24.9	+1.0
	1.7nm,0.7s,baz=104,slow=8.4,SNR=13						
	1.7nm,0.7s						
H11S1	WAKE ISLAND Hy	28.61	125	T	T	14 44 29.7	
	baz=317,slow=76,SNR=18						
H11S3	WAKE ISLAND Hy	28.61	125	T	T	14 44 23.9	
	baz=317,slow=76,SNR=19						
H11S2	WAKE ISLAND Hy	28.63	125	T	T	14 44 22.9	
	baz=317,slow=76,SNR=17						
ZALV	Zalesovo Beam	42.02	312	P	P	14 16 23.6	-0.2
	0.8nm,0.5s,baz=106,slow=9.1,SNR=2.3						
	0.8nm,0.5s						
NRIK	Noril'sk	42.99	335	LR	LR	14 34 00.3	
	comp=Z,72nm,19.9s,baz=186,slow=35						
MKAR	Makanchi Array	44.40	302	P	P	14 16 43.3	+0.1
	0.7nm,0.6s,baz=85,slow=10,SNR=9.0						
	0.7nm,0.6s						
HNR	Honiara	49.69	157	LR	LR	14 38 17.7	
	comp=Z,50nm,18.4s,baz=138,slow=36						
WRA	Warramunga Arr	57.82	189	P	P	14 18 23.4	-0.7
	1.8nm,0.9s,baz=4.5,slow=7.1,SNR=15						
	1.8nm,0.9s						
ASAR	Alice Springs	61.54	189	P	P	14 18 48.8	-1.0
	0.6nm,0.7s,baz=11,slow=7.4,SNR=7.9						
	0.6nm,0.7s						
NOA	NORSAR Array B	73.87	338	LR	LR	14 56 16.4	
	comp=Z,17nm,18.4s,baz=70,slow=39						

*TAP **01** 14:21:52.6, 23°.43N×121°.51E, h26km, ML3.3, B*
*JMA **01** 14:21:53.6±0.2, 23°.5N±0°.6×12°2E±°, h19km±2km, MV2.8/11, TAIWAN REGION*
ISC 01 14:21:53.3±0.9**, 23°.43N**±0°.02×**121°.49E**±0°.02**, h32**km±4km**, n92,** σ0s.87/175**, Taiwan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HGSD	Ruisui	0.09	316	P	Pb	14 21 58.9	+0.1
	baz=309						
HGSD				S	Sb	14 22 04.4	+1.7
	baz=309						
ECBN	Changbin	0.12	200	*e*P	Pn	14 21 59.7	+0.7
	baz=206						
ECBN				*e*S	Sb	14 22 03.7	+0.8
	baz=206						
EHY	Hungye	0.18	297	P	Pb	14 21 58.4	-1.2
	baz=294						
EHY				S	Sb	14 22 02.8	-1.0
	baz=294						
EYUL	Yuli	0.18	244	*i* P	Pb	14 21 59.1	-0.4
	baz=245						
EYUL				*e*S	Sb	14 22 05.8	+2.1
	baz=245						
YULB	Yu-li	0.18	260	P	Pb	14 21 58.9	-0.7
	baz=260						
YULB				*e*S	Sb	14 22 02.7	-1.2
	baz=260						
TWF1	Yuli	0.20	248	P	Pb	14 21 59.0	-0.7
	baz=248						
TWF1				*e*S	Sb	14 22 03.3	-0.8
	baz=248						
EGFH	Guangfu	0.25	346	*e*P	Pb	14 21 58.9	-1.4
	baz=342						
EGFH				S	Sb	14 22 04.5	-0.6
	baz=342						
TEGC	Jichi Village	0.29	8	*e*P	Pn	14 22 01.3	0.0
	baz=6.0						
TEGC				S	Sn	14 22 07.5	+1.0
	baz=6.0						
FULB	Fuli	0.29	219	*i* P	Pb	14 22 00.7	-0.2
	baz=221						
FULB				S	Sb	14 22 06.5	+0.6
	baz=221						
ESL	Shilin	0.39	352	P	Pb	14 22 01.4	-0.8
	baz=350						
ESL				*e*S	Sb	14 22 07.2	-1.1
	baz=350						
ECS	Chishang	0.41	218	P	Pb	14 22 01.6	-0.9
	baz=219						
ECS				S	Sb	14 22 08.7	-0.1
	baz=219						
TEYL	Yanliau Villag	0.45	12	P	Pn	14 22 03.9	+0.3
	baz=9.0						
TEYL				*e*S	Sn	14 22 12.4	+1.8
	baz=9.0						
VWDT	VWDT	0.46	315	P	Pb	14 22 02.9	-0.3
	baz=313						
VWDT				*e*S	Sb	14 22 09.9	-0.1
	baz=313						
EDH	Donghe	0.48	201	P	Pb	14 22 02.7	-0.8
	baz=202						
EDH				*e*S	Sb	14 22 10.4	-0.1
	baz=202						
ELDTW	Lidau	0.50	242	*e*P	Pb	14 22 02.5	-1.3
	baz=241						
ELDTW				*e*S	Sb	14 22 09.0	-2.1
	baz=241						
YUS	Yu-Shan	0.50	277	P	Pb	14 22 03.5	-0.7
	baz=276						
YUS				*e*S	Sn	14 22 12.0	-0.5
	baz=276						
ETM	Tongmen	0.54	360	P	Pb	14 22 03.4	-1.1
	baz=358						
ETM				*e*S	Sb	14 22 10.9	-1.2
	baz=358						
HWA	Hwalien	0.56	10	P	Pb	14 22 04.8	0.0
	baz=9.0						
HWA				S	Sn	14 22 14.0	+0.7
	baz=9.0						
OWD	Renai	0.60	331	P	Pb	14 22 04.8	-0.8
	baz=329						
OWD				*e*S	Sn	14 22 14.8	+0.3
	baz=329						
SSLB	Suanglung	0.61	306	P	Pb	14 22 04.9	-0.8
	baz=305						
SSLB				*e*S	Sb	14 22 12.6	-1.5
	baz=305						
LONT	Longtian	0.61	213	*e*P	Pb	14 22 03.8	-1.9
	baz=214						
ALS	Alishan	0.64	278	P	Pb	14 22 06.1	-0.2
	baz=277						
ALS				*e*S	Sn	14 22 15.8	+0.1
	baz=277						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TWD	**Chiawan**	**0.66**	**8**	P	**Pb**	**14 22 05.5**	**-1.0**
	baz=7.0						
TWD				eS	**Sn**	**14 22 15.8**	**0.0**
	baz=7.0						
WUSB	**Renai**	**0.66**	**329**	P	**Pb**	**14 22 06.0**	**-0.6**
	baz=327						
WUSB				eS	**Sb**	**14 22 13.6**	**-2.0**
	baz=327						
CHGB	**Renai**	**0.70**	**335**	P	**Pb**	**14 22 06.7**	**-0.6**
	baz=333						
CHGB				eS	**Sb**	**14 22 15.5**	**-1.2**
	baz=333						
STYH	**Taoyuan**	**0.71**	**249**	P	**Pb**	**14 22 06.3**	**-0.9**
	baz=249						
STYH				eS	**Sb**	**14 22 14.8**	**-1.9**
	baz=249						
SMLT	**Sun Moon Lake**	**0.71**	**310**	P	**Pb**	**14 22 06.8**	**-0.5**
	baz=309						
SMLT				S	**Sn**	**14 22 17.4**	**+0.2**
	baz=309						
TWGBT	**Beinan**	**0.71**	**212**	P	**Pb**	**14 22 05.0**	**-2.3**
	baz=213						
TWGBT				S	**Sn**	**14 22 18.4**	**+1.3**
	baz=213						
TWG	**Pinlang**	**0.72**	**213**	eP	**Pb**	**14 22 05.2**	**-2.1**
	baz=213						
TWG				eS	**Sb**	**14 22 17.1**	**+0.1**
	baz=213						
STYT	**Tauyuan**	**0.73**	**249**	P	**Pb**	**14 22 06.6**	**-0.9**
	baz=248						
STYT				eS	**Sn**	**14 22 17.8**	**+0.4**
	baz=248						
ETL	**Fush Village**	**0.74**	**9**	P	**Pb**	**14 22 06.6**	**-1.2**
	baz=8.0						
WHF	**Hehuan Shan**	**0.75**	**344**	eP	**Pb**	**14 22 06.8**	**-1.4**
	baz=342						
WHF				eS	**Sb**	**14 22 17.1**	**-1.2**
	baz=342						
LDUT	**Ludao**	**0.75**	**182**	eP	**Pn**	**14 22 06.1**	**-1.6**
	baz=182						
NACB	**Ninganchiao**	**0.75**	**7**	eP	**Pb**	**14 22 06.3**	**-1.7**
	baz=5.0						
NACB				eS	**Sn**	**14 22 19.4**	**+1.4**
	baz=5.0						
TYC	**Yuchr**	**0.75**	**309**	P	**Pb**	**14 22 07.5**	**-0.5**
	baz=309						
TYC				eS	**Sn**	**14 22 18.8**	**+0.7**
	baz=309						
WPL	**Puli Township**	**0.76**	**320**	P	**Pb**	**14 22 07.7**	**-0.5**
	baz=318						
WPL				S	**Sn**	**14 22 18.4**	**0.0**
	baz=318						
CHN5	**Tsauling**	**0.77**	**283**	P	**Pn**	**14 22 08.2**	**+0.2**
	baz=282						
CHN5				eS	**Sn**	**14 22 19.7**	**+1.2**
	baz=282						
ETLH	**Xiulin Townshi**	**0.78**	**359**	P	**Pn**	**14 22 06.7**	**-1.5**
	baz=358						
ETLH				S	**Sn**	**14 22 18.8**	**-0.1**
	baz=358						
DPDB	**Guoxing**	**0.80**	**319**	P	**Pn**	**14 22 08.5**	**0.0**
	baz=318						
DPDB				S	**Sn**	**14 22 19.8**	**+0.5**
	baz=318						
TPUB	**Ta-pu**	**0.80**	**261**	P	**Pn**	**14 22 08.4**	**0.0**
	baz=261						
TPUB				S	**Sb**	**14 22 19.3**	**-0.2**
	baz=261						
WJS	**Zhushan**	**0.81**	**300**	i P	**Pb**	**14 22 09.1**	**+0.3**
	baz=298						
WJS				S	**Sn**	**14 22 20.2**	**+0.8**
	baz=298						
WCS	**Beigang Elemen**	**0.82**	**320**	P	**Pn**	**14 22 08.7**	**0.0**
	baz=318						
WCS				S	**Sn**	**14 22 19.8**	**0.0**
	baz=318						
WTP	**Ta-pu**	**0.83**	**258**	P	**Pn**	**14 22 08.8**	**0.0**
	baz=257						
WTP				eS	**Sn**	**14 22 20.6**	**+0.7**
	baz=257						
FUSS	**Fushou**	**0.85**	**344**	P	**Pn**	**14 22 08.9**	**-0.4**
	baz=343						
FUSS				eS	**Sn**	**14 22 21.2**	**+0.4**
	baz=343						
WNT	**Mingjian**	**0.87**	**301**	eP	**Pb**	**14 22 10.2**	**+0.3**
	baz=300						
WNT				eS	**Sn**	**14 22 22.3**	**+1.4**
	baz=300						
TWT	**Tachien**	**0.88**	**341**	P	**Pn**	**14 22 09.6**	**0.0**
	baz=338						
TWT				eS	**Sn**	**14 22 21.9**	**+0.6**
	baz=338						
TDCB	**Techi**	**0.88**	**340**	P	**Pn**	**14 22 09.7**	**+0.1**
	baz=338						
TDCB				eS	**Sb**	**14 22 20.3**	**-1.5**
	baz=338						
WNT1	**Nantou City**	**0.89**	**303**	eP	**Pb**	**14 22 10.9**	**+0.7**
	baz=302						
WNT1				eS	**Sb**	**14 22 23.0**	**+1.2**
	baz=302						
WGK	**Gukeng**	**0.89**	**287**	eP	**Pb**	**14 22 10.4**	**0.0**
	baz=286						
WGK				eS	**Sb**	**14 22 22.6**	**+0.6**
	baz=286						
SGST	**Jiashian**	**0.91**	**248**	P	**Pn**	**14 22 10.1**	**+0.3**
	baz=247						
SGST				S	**Sn**	**14 22 21.5**	**-0.3**
	baz=247						
WDLH	**Douliu**	**0.92**	**287**	P	**Pb**	**14 22 10.6**	**-0.1**
	baz=286						
WDLH				S	**Sb**	**14 22 24.0**	**+1.4**
	baz=286						
CHN1	**Nanshi**	**0.92**	**255**	P	**Pb**	**14 22 10.6**	**-0.1**
	baz=255						
CHN1				eS	**Sb**	**14 22 23.2**	**+0.5**
	baz=255						
TWK	**Hsinying**	**0.94**	**261**	eP	**Pb**	**14 22 10.9**	**-0.2**
	baz=260						
TWK				eS	**Sb**	**14 22 23.5**	**+0.2**
	baz=260						
SNST	**Tainan City**	**0.94**	**258**	P	**Pb**	**14 22 11.2**	**+0.1**
	baz=257						
SNST				S	**Sb**	**14 22 23.5**	**+0.3**
	baz=257						
CHN2	**Minshiung**	**0.94**	**277**	P	**Pb**	**14 22 11.7**	**+0.6**
	baz=276						
CHN2				S	**Sb**	**14 22 25.2**	**+1.9**
	baz=276						
WWF	**Wufeng**	**0.95**	**310**	P	**Pb**	**14 22 11.8**	**+0.4**
	baz=309						
WWF				S	**Sb**	**14 22 24.4**	**+0.8**
	baz=309						
ECL	**Taimali**	**0.96**	**211**	eP	**Pn**	**14 22 10.2**	**-0.4**
	baz=211						
ECL				eS	**Sn**	**14 22 23.5**	**+0.3**
	baz=211						
CHY	**Chiayi**	**0.98**	**274**	eP	**Pb**	**14 22 12.1**	**+0.2**
	baz=274						
CHY				S	**Sb**	**14 22 24.9**	**+0.3**
	baz=274						
NNSB	**Datong**	**1.00**	**354**	P	**Pn**	**14 22 11.1**	**-0.2**
	baz=353						
NNS	**Nan Shan**	**1.02**	**354**	P	**Pn**	**14 22 11.3**	**-0.1**
	baz=353						
NNS				eS	**Sb**	**14 22 25.2**	**-0.4**
	baz=353						
ENA	**Nanau**	**1.02**	**13**	eP	**Pn**	**14 22 10.7**	**-0.8**
	baz=12						
ENA				eS	**Sb**	**14 22 25.1**	**-0.5**
	baz=12						
TCU	**Taichung**	**1.04**	**314**	eP	**Pn**	**14 22 11.8**	**+0.1**
	baz=313						
TCU				eS	**Sn**	**14 22 24.2**	**-0.9**
	baz=313						
SSD	**Sandimen**	**1.04**	**230**	P	**Pn**	**14 22 11.2**	**-0.5**
	baz=229						
SSD				eS	**Sn**	**14 22 25.8**	**+0.6**
	baz=229						
EWUT	**Wuta**	**1.05**	**14**	P	**Pn**	**14 22 11.4**	**-0.4**
	baz=13						
EWUT				S	**Sb**	**14 22 26.0**	**-0.4**
	baz=13						
TSMG	**Majia**	**1.06**	**228**	eP	**Pn**	**14 22 12.6**	**+0.7**
	baz=228						
TSMG				eS	**Sn**	**14 22 26.3**	**+0.7**
	baz=228						
SCST	**Cishan**	**1.06**	**240**	eP	**Pn**	**14 22 12.1**	**0.0**
	baz=240						
SCST				eS	**Sb**	**14 22 26.6**	**-0.2**
	baz=240						
WCHH	**Zhanghua**	**1.08**	**307**	eP	**Pn**	**14 22 12.4**	**+0.3**
	baz=306						
WCHH				eS	**Sb**	**14 22 27.3**	**+0.2**
	baz=306						
LATG	**Datong**	**1.11**	**2**	P	**Pn**	**14 22 12.3**	**-0.4**
TWQ1	**Liyutan**	**1.13**	**324**	eP	**Pb**	**14 22 14.0**	**-0.3**
	baz=323						
TWQ1				eS	**Sb**	**14 22 28.5**	**-0.2**
	baz=323						
CHN8	**Yiju**	**1.18**	**266**	eP	**Pn**	**14 22 14.4**	**+0.8**
	baz=266						
CHN8				eS	**Sb**	**14 22 29.5**	**-0.6**
	baz=266						
NSY	**Sanyi**	**1.19**	**326**	eP	**Pn**	**14 22 13.9**	**+0.1**
	baz=325						
NSY				eS	**Sb**	**14 22 29.9**	**-0.6**
	baz=325						
EAST	**Anshuo**	**1.20**	**210**	eP	**Pn**	**14 22 13.6**	**-0.3**
	baz=210						
EAST				eS	**Sn**	**14 22 29.3**	**+0.2**
	baz=210						
ENTT	**Nioudou**	**1.21**	**3**	P	**Pn**	**14 22 14.0**	**-0.1**
	baz=2.0						
TWC	**Suao**	**1.22**	**15**	eP	**Pn**	**14 22 14.9**	**+0.7**
	baz=15						
TWC				eS	**Sn**	**14 22 30.1**	**+0.4**
	baz=15						
NSK	**Sanguang**	**1.25**	**354**	eP	**Pn**	**14 22 15.1**	**+0.4**
	baz=353						
NSK				eS	**Sn**	**14 22 31.0**	**+0.6**
	baz=353						
NMLH	**Miaoli**	**1.28**	**330**	P	**Pb**	**14 22 16.0**	**-0.8**
	baz=329						
NMLH				eS	**Sb**	**14 22 32.2**	**-0.8**
	baz=329						
LIOB	**Emei**	**1.29**	**340**	eP	**Pn**	**14 22 15.3**	**+0.2**
	baz=339						
TWE	**Neicheng**	**1.30**	**7**	P	**Pn**	**14 22 15.6**	**+0.3**
	baz=6.0						
TWE				eS	**Sn**	**14 22 32.0**	**+0.5**
	baz=6.0						
SCZT	**Fangliau**	**1.32**	**218**	eP	**Pn**	**14 22 15.4**	**-0.1**
	baz=217						
SCZT				eS	**Sn**	**14 22 32.5**	**+0.4**
	baz=217						
NWLT	**Wulai**	**1.35**	**0**	P	**Pn**	**14 22 16.4**	**+0.5**
	baz=359						
NWLT				eS	**Sn**	**14 22 33.4**	**+0.6**
	baz=359						
TIPB	**Shuangxi**	**1.57**	**11**	eP	**Pn**	**14 22 19.0**	**0.0**
	baz=10.0						
TIPB				eS	**Sn**	**14 22 38.7**	**+0.4**
	baz=10.0						
JYNG	**Yonagunijimaku**	**1.68**	**52**	P	**Pn**	**14 22 21.4**	**+1.0**
JYNG				eS	**Sn**	**14 22 40.9**	**+0.1**
WDGT	**Dungji**	**1.69**	**265**	P	**Pn**	**14 22 20.8**	**+0.1**
	baz=264						
YOJ	**Yonaguni jima**	**1.73**	**53**	P	**Pn**	**14 22 22.0**	**+0.9**
	baz=52						
YOJ				eS	**Sn**	**14 22 43.6**	**+1.4**
	baz=52						
YOJ	**Yonaguni jima**	**1.73**	**53**	P	**Pn**	**14 22 22.2**	**+1.0**
YOJ				S	**Sn**	**14 22 43.0**	**+0.8**
PNG	**Penghu**	**1.79**	**275**	P	**Pn**	**14 22 22.4**	**+0.5**
	baz=274						
HATJ	**Hateruma jima**	**2.21**	**73**	P	**Pn**	**14 22 28.6**	**+0.9**
HATJ				S	**Sn**	**14 22 54.7**	**+0.7**
IRIF	**Iriomote-Funau**	**2.24**	**66**	P	**Pn**	**14 22 29.5**	**+1.3**
IRIF				S	**Sn**	**14 22 55.6**	**+0.9**
JKRS	**Kuro-shima**	**2.44**	**70**	P	**Pn**	**14 22 32.7**	**+1.8**
JKRS				eS	**Sn**	**14 23 01.1**	**+1.4**
JIJ	**Ishigaki jima**	**2.60**	**68**	P	**Pn**	**14 22 34.1**	**+1.0**
JIJ				S	**Sn**	**14 23 03.4**	**-0.2**
JISG	**Ishigakijimahi**	**2.82**	**65**	eP	**Pn**	**14 22 36.6**	**+0.4**
JISG				eS	**Sn**	**14 23 08.6**	**-0.5**
JTJ	**Tarama**	**3.17**	**67**	P	**Pn**	**14 22 42.3**	**+1.3**
JTJ				eS	**Sn**	**14 23 19.1**	**+1.3**

MAN 01 14:41:52.7, 8°.09N×125°.13E, h19km, mb3.9, ML2.6, MS2.2, Mindanao

*IDC **01** 14:45:01.0±2.4, 7°.46S×129°.54E, h97km±27km, mb3.4/2, mbtmp4.0/6, Error ellipse: s-maj=34.3km s-min=19.3km az=76.0*
*DJA **01** 14:45:02.0±0.2, 7°S±3°×12°9E±°, h70km±8km, M4.1/12, mb4.1/10, mB5.0/3, MLv4.1/12, Mw(mB)4.3/3*
ISC 01 14:44:59.8±0.8**, 7°.40S**±0°.06×**129°.45E**±0°.06**, h79**km**, n20, σ2.91**/24**, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.92**	**108**	P	**Pn**	**14 45 31.7**	**+1.1**
SAUI				S	**Sn**	**14 45 57.5**	**+3.4**
SAUI	**Saumlaki**	**1.92**	**108**	P	Pn	14 45 37.6	+7.0
AAI	**Ambon**	**3.90**	**341**	P	**Pn**	**14 45 58.7**	**+1.4**
FAKI	**Fak Fak**	**5.25**	**32**	P	**Pn**	**14 46 16.6**	**+0.7**
	0.2nm38nm,1.1s						
FAKI	**Fak Fak**	**5.25**	**32**	P	**Pn**	**14 46 16.6**	**+0.7**
KMPI	**Kaimana, Papua**	**5.63**	**49**	P	**Pn**	**14 46 22.8**	**+1.8**
	0.3nm59nm,0.5s						
SOEI	**Soe**	**5.63**	**245**	P	**Pn**	**14 46 23.9**	**+2.8**
	0.2nm38nm,0.9s						
SOEI	**Soe**	**5.63**	**245**	P	**Pn**	**14 46 25.5**	**+4.4**
MTN	**Manton Dam**	**5.66**	**163**	P	**Pn**	**14 46 26.1**	**+4.8**
KDU	**Kakadu**	**6.04**	**151**	P	**Pn**	**14 46 29.6**	**+3.1**
BATI	**Baumata**	**6.36**	**244**	P	**Pn**	**14 46 34.5**	**+3.5**
	32nm,0.3s,baz=113,slow=9.3,SNR=8.1						
BATI				S	**Sn**	**14 47 42.4**	**+0.2**
	20nm,0.3s,baz=71,slow=23,SNR=1.9						
BATI	**Baumata**	**6.36**	**244**	P	**Pn**	**14 46 33.9**	**+2.9**
SIJI	**Sorong**	**6.74**	**16**	P	**Pn**	**14 46 37.2**	**+1.0**
	1.7nm,0.2s,baz=186,slow=19,SNR=27						
SIJI				S	**Sn**	**14 47 48.6**	**-2.8**
	3.5nm,0.3s,baz=118,slow=23,SNR=5.8						
SWI	**Sorong**	**6.74**	**16**	P	**Pn**	**14 46 37.4**	**+1.2**
	0.1nm8.0nm,1.4s						
EDFI	**Ende, Flores**	**7.80**	**260**	P	**Pn**	**14 46 53.5**	**+2.8**
	0.0nm2.8nm,0.8s						
KNRA	**Kununurra**	**8.25**	**185**	P	**Pn**	**14 46 59.5**	**+2.7**
WRA	**Warramunga Arr**	**13.34**	**160**	P	**Pn**	**14 48 03.8**	**-2.1**
	3.0nm,0.4s,baz=334,slow=11,SNR=69						
WRA				S	**Sn**	**14 50 26.9**	**-5.7**
	2.0nm,0.5s,baz=329,slow=22,SNR=3.5						
ASAR	**Alice Springs**	**16.73**	**166**	P	**P**	**14 48 50.5**	**+0.1**
	2.8nm,0.7s,baz=332,slow=9.9,SNR=43						
ASAR				S	**Sn**	**14 51 50.7**	**-4.0**
	0.9nm,0.6s,baz=317,slow=20,SNR=6.0						
STKA	**Stephens Creek**	**26.86**	**157**	P	**P**	**14 50 32.6**	**-0.5**
	0.6nm,0.4s,baz=333,slow=18,SNR=1.8						
	0.6nm,0.4s						
MKAR	**Makanchi Array**	**68.26**	**327**	P	**P**	**14 55 51.7**	**-0.6**
	0.3nm,0.4s,baz=121,slow=7.5,SNR=5.7						
	0.3nm,0.4s						

*IDC **01** 15:00:51.8±0.7, 0°.38N×80°.36W, h0km, mb4.2/17, mbtmp4.3/20, ML3.9/3, MS4.0/27, Error ellipse: s-maj=32.1km s-min=12.5km az=51.0*
*IGQ **01** 15:00:52±0.7, 0°N±3°×8°1W±°, h11km*
*GCMT **01** 15:00:53.5±0.4, 0°.06N±0°.04×80°.56W±0°.03, h17km±1km, MW4.9/82, Moment Tensor Solution. s12,c13; s82,c95; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.50±.19; $M_{\theta\theta}$0.64±.10; $M_{\phi\phi}$1.86±.15; $M_{r\theta}$-0.46±.33; $M_{\theta\phi}$-0.90±.07; $M_{\phi r}$0.40±.39; Best double couple: $M_0$2.49400×10^{16} NP1:ϕ_s336.00000°, δ39.00000°, λ-83.00000°. NP2: ϕ_s147.00000°, δ52.00000°, λ-95.00000°. Principal axes: T 2.4060, Plg7.0000°, Azm241.0000°; N 0.1770, Plg4.0000°, Azm151.0000°; P -2.5820, Plg82.0000°, Azm28.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **01** 15:00:54.5±1.9, 0°.34N±0°.07×80°.47W±0°.08, h10km±1km, mb4.7/75 Error ellipse: s-maj=14.7km s-min=10.0km az=244.0*
*VAO **01** 15:01:01.1±1.5, 0°.25N×79°.53W, h10km, mb4.5*
ISC 01 15:00:52.0±1.5**, 0°.26N**±0°.03×**80°.55W**±0°.04**, h2**km±9km**, n436, σ1.23**/415**, mb4.7**/44**, MS3.9**/23**, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAMA	**Jama**	**0.62**	**146**	P	**Pg**	**15 01 05.0**	**+1.1**
JAMA				S	**Sb**	**15 01 16.0**	**+1.2**
CABP	**Cabo Pasado**	**0.65**	**169**	P	**Pb**	**15 01 06.0**	**-0.1**
CABP				S	**Sn**	**15 01 18.0**	**-1.1**
MAG1	**Magdalena**	**0.84**	**113**	P	**Pg**	**15 01 09.0**	**+0.8**
FLF1	**Flavio Alfaro-**	**0.93**	**131**	P	**Pb**	**15 01 11.0**	**0.0**
FLF1				S	**Sn**	**15 01 28.0**	**+1.8**
AMA1	**Acelerografo,**	**1.06**	**51**	P	**Pg**	**15 01 13.0**	**+0.5**
AMA1				S	**Sn**	**15 01 29.0**	**-0.4**
AV18	**Acelerografo,**	**1.07**	**87**	P	**Pg**	**15 01 13.0**	**+0.4**
AV18				S	**Sn**	**15 01 33.0**	**+3.4**
AV21	**Acelerografo,**	**1.08**	**68**	P	**Pg**	**15 01 13.0**	**+0.3**
AV21				S	**Sn**	**15 01 29.0**	**-0.7**
AMNT	**Manta-Manabi**	**1.20**	**189**	P	**Pg**	**15 01 15.0**	**-0.1**
ACRM	**Ecuador-Munici**	**1.22**	**116**	P	**Pg**	**15 01 15.0**	**-0.4**
BV15	**Puerto Quito-O**	**1.33**	**94**	P	**Pn**	**15 01 16.0**	**-1.6**
BV15				S	**Sn**	**15 01 36.0**	**+0.1**
APR2	**Miler**	**1.59**	**96**	P	**Pn**	**15 01 20.0**	**-1.3**
ISPT	**Isla de la Pla**	**1.60**	**199**	P	**Pn**	**15 01 19.0**	**-2.3**
PAC1	**Pacto, Paraso**	**1.76**	**90**	P	**Pn**	**15 01 22.0**	**-1.6**
PPLP	**Puerto Lpez**	**1.80**	**187**	P	**Pn**	**15 01 24.0**	**-0.2**
HPAL	**Hacienda Las P**	**1.96**	**104**	P	**Pn**	**15 01 26.0**	**-0.5**
APR1	**Acelerografo,**	**1.96**	**99**	P	**Pn**	**15 01 26.0**	**-0.6**
PINO	**Pino**	**1.99**	**102**	P	**Pn**	**15 01 25.0**	**-2.2**
TERV	**Terraza Guagua**	**1.99**	**102**	P	**Pn**	**15 01 27.0**	**-0.2**
JUA2	**San Juan 2**	**2.00**	**104**	P	**Pn**	**15 01 27.0**	**-0.3**
GGPC	**Guagua Pichinc**	**2.00**	**102**	P	**Pn**	**15 01 26.0**	**-1.4**
YANA	**Yana**	**2.01**	**101**	P	**Pn**	**15 01 27.0**	**-0.5**
ILLI	**Illinizas Sur**	**2.06**	**118**	P	**Pn**	**15 01 27.0**	**-1.1**
OTAV	**Otavalo**	**2.10**	**91**	Pn	**Pn**	**15 01 27.3**	**-1.3**
OTAV	**Otavalo**	**2.10**	**91**	eP	**Pn**	**15 01 27.7**	**-0.9**
OTAV	**Otavalo**	**2.10**	**91**	P	**Pn**	**15 01 28.0**	**-0.6**
PAST	**Pastocalle**	**2.13**	**116**	P	**Pn**	**15 01 29.0**	**0.0**
CUSE	**Cuicocha Este**	**2.15**	**89**	P	**Pn**	**15 01 29.0**	**-0.3**
CUIC	**Cuicocha-Domo**	**2.19**	**89**	P	**Pn**	**15 01 30.0**	**+0.2**
CUSW	**Cuicocha Oeste**	**2.20**	**89**	P	**Pn**	**15 01 30.0**	**+0.1**
SRAM	**San Ramn-Vol**	**2.22**	**117**	P	**Pn**	**15 01 30.0**	**-0.2**
SUCR	**Mariscal Sucre**	**2.24**	**113**	P	**Pn**	**15 01 31.0**	**+0.4**
CAMI	**Rancho Maria**	**2.25**	**114**	P	**Pn**	**15 01 31.0**	**+0.4**
ALIT	**Ecuador-Imbabu**	**2.25**	**76**	P	**Pn**	**15 01 30.0**	**-0.4**
BNAS	**Cotopaxi Volca**	**2.27**	**114**	P	**Pn**	**15 01 31.0**	**+0.1**
NAS2	**Nasa**	**2.27**	**113**	P	**Pn**	**15 01 31.0**	**0.0**
SLOR	**San Lorenzo -**	**2.27**	**116**	P	**Pn**	**15 01 31.0**	**0.0**
BREF	**Cotopaxi Volca**	**2.30**	**114**	P	**Pn**	**15 01 31.0**	**-0.5**
URCU	**Urcuqui**	**2.30**	**85**	P	**Pn**	**15 01 32.0**	**+0.6**
BMOR	**Cotopaxi Volca**	**2.31**	**115**	P	**Pn**	**15 01 31.0**	**-0.6**
BRRN	**Barrancas-Volc**	**2.32**	**116**	P	**Pn**	**15 01 32.0**	**+0.4**
BVC2	**Cotopaxi Volca**	**2.32**	**113**	P	**Pn**	**15 01 32.0**	**+0.2**
VC1	**Cotopaxi 1**	**2.33**	**113**	P	**Pn**	**15 01 32.0**	**+0.2**
BTAM	**Cotopaxi Volca**	**2.34**	**113**	P	**Pn**	**15 01 32.0**	**-0.1**
TAMB	**Tambo**	**2.38**	**113**	P	**Pn**	**15 01 34.0**	**+1.5**
TUMC	**Tumaco**	**2.40**	**49**	Pn	**Pn**	**15 01 33.7**	**+1.4**
TUMC	**Tumaco**	**2.40**	**49**	eP	**Pb**	**15 01 36.7**	**+0.8**
TUMC	**Tumaco**	**2.40**	**49**	P	**Pb**	**15 01 36.0**	**+0.1**
VCES	**Cotopaxi**	**2.40**	**116**	P	**Pn**	**15 01 33.0**	**+0.2**
ANTG	**Antisana-Guama**	**2.42**	**108**	P	**Pn**	**15 01 34.0**	**+1.0**
CHSH	**Refugio Sur-Vo**	**2.42**	**136**	P	**Pb**	**15 01 35.0**	**-1.6**
ANTM	**Antisana-La Mi**	**2.46**	**109**	P	**Pn**	**15 01 35.0**	**+1.4**
PORT	**Chimborazo Vol**	**2.46**	**134**	P	**Pn**	**15 01 33.0**	**-0.7**
YAHU	**Yahuarcocha**	**2.48**	**87**	P	**Pn**	**15 01 35.0**	**+1.2**
ANTI	**Antisana**	**2.49**	**106**	P	**Pn**	**15 01 35.0**	**+0.9**
ANTS	**Antisana-Sarah**	**2.50**	**107**	P	**Pn**	**15 01 35.0**	**+0.8**
TAMH	**Tambohuasha Ch**	**2.52**	**135**	P	**Pn**	**15 01 35.0**	**+0.7**
CAYR	**Refugio Cayamb**	**2.56**	**95**	P	**Pn**	**15 01 36.0**	**+1.0**
CHMA	**Chilma**	**2.56**	**76**	P	**Pn**	**15 01 33.0**	**-1.8**
IGUA	**Igualata**	**2.58**	**132**	P	**Pn**	**15 01 37.0**	**+1.7**
LNGL	**El Angel-Carch**	**2.59**	**79**	P	**Pn**	**15 01 34.0**	**-1.4**
PIAT	**Ana Tenorio**	**2.60**	**119**	P	**Pn**	**15 01 36.0**	**+0.5**
ECEN	**Cerro Negro**	**2.64**	**78**	P	**Pn**	**15 01 35.0**	**-1.1**
CHL1	**Volc¡n Chiles**	**2.66**	**78**	P	**Pn**	**15 01 35.0**	**-1.4**
JUI6	**Juive**	**2.67**	**129**	P	**Pb**	**15 01 39.0**	**-1.7**
BBIL	**Ulba Tungurahu**	**2.67**	**129**	P	**Pb**	**15 01 39.0**	**-1.8**
POND	**Pondoa**	**2.68**	**128**	P	**Pb**	**15 01 39.0**	**-1.9**
CHL2	**Volc¡n Chiles**	**2.69**	**78**	P	**Pn**	**15 01 36.0**	**-0.8**
RETU	**Refugio**	**2.70**	**129**	P	**Pn**	**15 01 39.0**	**+2.0**
BMAS	**Trigal station**	**2.71**	**130**	P	**Pn**	**15 01 39.0**	**+2.1**
BRUN	**Tungurahua Vol**	**2.71**	**128**	P	**Pn**	**15 01 38.0**	**+1.1**
ARRY	**Arrayan**	**2.73**	**130**	P	**Pn**	**15 01 39.0**	**+1.8**
BPAT	**Tungurahua Vol**	**2.75**	**130**	P	**Pb**	**15 01 41.0**	**-1.1**
TULM	**Tulcn-Chalpat**	**2.80**	**81**	P	**Pn**	**15 01 40.0**	**+1.7**
CMBC	**Cumbal**	**2.81**	**76**	eP	**Pn**	**15 01 39.8**	**+1.4**
CMBC	**Cumbal**	**2.81**	**76**	P	**Pn**	**15 01 39.0**	**+0.6**
ATUL	**Tulcn**	**2.87**	**80**	P	**Pn**	**15 01 41.0**	**+1.9**
CONE	**Cono NE Rev Vo**	**2.93**	**96**	P	**Pn**	**15 01 42.0**	**+2.1**
COHC	**Cochancay**	**3.00**	**154**	P	**Pn**	**15 01 41.0**	**+0.4**
BONI	**La Bonita**	**3.03**	**86**	P	**Pn**	**15 01 42.0**	**+0.8**
CASC	**Dorado de Casc**	**3.21**	**92**	P	**Pb**	**15 01 47.0**	**-2.9**
ISPG	**Isla Puna-Puer**	**3.23**	**173**	P	**Pn**	**15 01 47.0**	**+3.2**
GCUF	**Volcan Galeras**	**3.35**	**73**	eP	**Pn**	**15 01 45.4**	**-0.5**
GR1C	**Gorgona, Isla**	**3.62**	**41**	eP	**Pb**	**15 01 58.7**	**+1.9**
CRUC	**La Cruz**	**3.83**	**70**	eP	**Pn**	**15 01 54.3**	**+2.0**
BOSC	**San Juan Bosco**	**3.96**	**149**	P	**Pb**	**15 02 00.0**	**-2.7**
SOTA	**Rioblanco**	**4.36**	**65**	eP	**Pn**	**15 02 00.6**	**+0.8**
POPC	**Popayan, Colom**	**4.49**	**60**	eP	**Pn**	**15 02 00.1**	**-1.2**
PCON	**Cinco Dias**	**4.63**	**64**	eP	**Pn**	**15 02 03.8**	**+0.2**
MALC	**Bahia Malaga**	**4.92**	**41**	eP	**Pb**	**15 02 19.7**	**+0.7**
FLOC	**Florencia**	**5.07**	**75**	eP	**Pb**	**15 02 17.5**	**-4.0**
CGR1C	**Isla Gorgona,**	**5.16**	**58**	eP	Pn	15 01 59.9	-10
MARP	**Paez Belalcaza**	**5.26**	**61**	eP	Pn	15 02 17.9	+5.9
ZUMB	**Zumba**	**5.28**	**165**	P	**Pn**	**15 02 16.0**	**+3.9**
GARC	**Garzon, Huila**	**5.41**	**69**	eP	Pn	15 02 19.3	+5.3
YOTC	**Yotoco, Valle**	**5.60**	**49**	eP	Pb	15 02 24.1	-6.5
PLMC	**San Jos del P**	**6.28**	**43**	eP	**Pb**	**15 02 39.0**	**-3.2**
ORTC	**Ortega, Tolima**	**6.42**	**56**	eP	**Pn**	**15 02 29.9**	**+2.2**
PRAC	**Prado**	**6.62**	**59**	eP	Pn	15 02 37.7	+7.3
ANIL	**Santa Ana**	**6.64**	**51**	eP	Pn	15 02 38.5	+7.5
MACC	**Macarena, Meta**	**6.96**	**74**	eP	**Pn**	**15 02 35.7**	**+0.6**
CBOC	**Ciudad Bolivar**	**7.18**	**39**	eP	Pn	15 02 47.7	+9.5
ATAH	**Atahualpa**	**7.65**	**164**	Pn	Pn	15 02 50.4	+5.5
	1.4nm,0.3s,baz=340,slow=7.6,SNR=5.9						
ATAH				Sn	Sn	15 04 22.2	+10
	0.8nm,0.3s,baz=153,slow=9.4,SNR=3.8						
ATAH				LR	LR	15 06 12.4	
	comp=Z,495nm,19.4s,baz=331,slow=42						
ROSC	**El Rosal**	**7.71**	**54**	Pn	Pn	15 02 50.6	+4.9
	3.3nm,0.3s,baz=112,slow=16,SNR=9.7						
ROSC				Sn	**Sn**	**15 04 15.9**	**+2.0**
	3.8nm,0.3s,baz=122,slow=19,SNR=1.3						
ROSC				LR	LR	15 06 05.2	
	comp=Z,4µm,18.9s,baz=233,slow=42						
ROSC	**El Rosal**	**7.71**	**54**	Pn	**Pn**	**15 02 47.8**	**+2.1**
HELC	**Santa Helena**	**7.74**	**40**	eP	Pb	15 02 57.1	-10
NORC	**Norcasia**	**7.74**	**47**	eP	Pn	15 02 53.4	+7.5
VILC	**Villavicencio,**	**7.85**	**61**	eP	Pn	15 02 55.2	+7.8
DBBC	**Dabeiba**	**7.99**	**33**	eP	Pn	15 02 56.0	+6.7
CHIC	**Chingaza**	**8.08**	**57**	eP	**Pn**	**15 02 55.5**	**+4.7**
PTBC	**PUERTO BERRIO,**	**8.71**	**44**	eP	Pn	15 03 09.2	+10
BCIP	**Isla Barro Col**	**8.88**	**5**	eP	**Pn**	**15 03 02.7**	**+1.3**
RUSC	**La Rusia**	**9.32**	**53**	eP	Pn	15 03 14.6	+6.6
DRK0	**Durika**	**9.34**	**343**	Pn	**Pn**	**15 03 08.2**	**+0.3**
SRBA	**San Rafael, Bu**	**9.35**	**343**	Pn	**Pn**	**15 03 10.3**	**+2.4**
JTS	**Las Juntas de**	**10.89**	**336**	Pn	**Pn**	**15 03 29.3**	**+0.3**
	1.0nm,0.3s,baz=170,slow=12,SNR=4.1						
JTS				LR	LR	15 06 45.2	
	comp=Z,553nm,21.6s,baz=234,slow=33						
	8.5nm,0.7s						
NNA	**Nana**	**12.71**	**163**	Pn	**Pn**	**15 03 56.6**	**+2.7**
	1.6nm,0.3s,baz=293,slow=14,SNR=2.2						
NNA				Sn	**Sn**	**15 06 22.1**	**+5.9**
	2.5nm,0.3s,baz=275,slow=12,SNR=2.4						
NNA				LR	LR	15 09 26.6	
	comp=Z,450nm,19.9s,baz=319,slow=40						
	3.7nm,0.3s						
NNA	**Nana**	**12.71**	**163**		**Pn**	**15 03 55.3**	**+1.3**
SDV	**Santo Domingo**	**13.08**	**49**	Pn	**Pn**	**15 03 57.7**	**-1.4**
	2.6nm,0.3s,baz=242,slow=8.9,SNR=1.9						
SDV				LR	LR	15 09 43.6	
	comp=Z,570nm,20.5s,baz=237,slow=41						
	7.9nm,0.3s						
SDV	**Santo Domingo**	**13.08**	**49**	Pn	**Pn**	**15 03 58.4**	**-0.7**
CRJC	**Cerrejon, Guaj**	**13.13**	**35**	eP	**P**	**15 04 10.6**	**+0.5**
BAUV	**El Baul**	**15.15**	**55**	Pn	**Pn**	**15 04 28.7**	**+1.4**
BAUV				IAmb	IAmb	15 04 57.1	
	comp=Z,19nm,0.8s						
TGUH	**Tegucigalpa,Un**	**15.24**	**334**	Pn	**Pn**	**15 04 30.9**	**+2.3**
TGUH	**Tegucigalpa,Un**	**15.24**	**334**	eP	**P**	**15 04 32.0**	**-1.7**
ESQI	**Esquipulas**	**16.66**	**329**		**P**	**15 04 49.5**	**+0.1**
ESQI				IAmb	IAmb	15 05 04.8	

comp=Z,90nm,1.3s
ETMB Extrema 17.43 125 *e*P **Pn 15 04 53.8 -2.7**
BIRV Birongo 17.45 54 P 15 04 59.0 +0.9
BOAV Boa Vista 20.13 84 *e*P **P 15 05 24.3 -3.3**
LPAZ La Paz 20.50 144 P **P 15 05 32.1 -0.1**
comp=Z,5.0nm,0.8s,baz=353,slow=8.9,SNR=14
LPAZ LR LR 15 14 48.0
comp=Z,474nm,18.2s,baz=314,slow=41
comp=Z,5.0nm,0.8s
LPAZ La Paz 20.50 144 P **P 15 05 31.1 -1.1**
LPAZ La Paz 20.50 144 *e*P Pn 15 05 34.0 -0.3
PB18 Visviri 20.82 149 P P 15 05 36.5 +1.0
PB16 IPOC Station P 21.43 150 P P 15 05 42.0 -0.1
CMIG Matias Romero 21.89 321 P P 15 05 45.9 -0.6
comp=Z,4.2nm,0.8s,baz=135,slow=7.1,SNR=3.0
CMIG LR LR 15 12 40.7
comp=Z,270nm,19.3s,baz=174,slow=32
comp=Z,4.2nm,0.8s
PB11 IPOC Station P 22.58 152 P P 15 05 56.0 +2.0
PB11 IAmb IAmb 15 06 23.0
comp=Z,43nm,1.3s
SJG San Juan 22.70 38 LR LR 15 16 53.1
comp=Z,395nm,18.4s,baz=254,slow=43
PB02 IPOC Station P 23.84 155 P P 15 06 07.5 +0.7
VILB Vilhena 24.07 124 *e*P **P 15 06 09.3 +0.3**
SIV San Ignacio 25.11 131 P P 15 06 17.9 -0.6
comp=Z,1.7nm,0.6s,baz=297,slow=10,SNR=7.3
SIV LR LR 15 17 44.9
comp=Z,328nm,19.4s,baz=300,slow=40
comp=Z,1.7nm,0.6s
ITTB Itaituba 25.21 101 *e*P **P 15 06 19.1 -0.3**
LVC Limon Verde 25.40 154 P P 15 06 22.2 +0.8
comp=Z,14nm,1.2s,baz=310,slow=9.2,SNR=4.7
comp=Z,14nm,1.2s
LVC Limon Verde 25.40 154 P P 15 06 22.0 +0.6
LVC IAmb IAmb 15 06 32.1
comp=Z,23nm,1.1s
LVC Limon Verde 25.40 154 *e*P **P 15 06 25.8 +4.4**
PTLB Pontes e Lacer 26.29 127 *e*P **P 15 06 28.3 -0.9**
MALB Vitoria Alegre 26.36 95 *e*P **P 15 06 30.6 +0.7**
PDRB Porto dos Gac 26.44 117 *e*P **P 15 06 30.2 -0.4**
CLDB Colider 26.98 115 *e*P **P 15 06 34.4 -1.0**
MDP Montagnes des 28.28 80 LR LR 15 18 23.7
comp=Z,2µm,18.7s,baz=250,slow=38
SNDB Serra Nova Dou 31.48 114 *e*P **P 15 07 14.7 -0.8**
NHSC New Hope 32.68 1 P P 15 07 24.6 -1.1
baz=180
GOGA Godfrey 33.09 356 P P 15 07 28.3 -1.1
baz=174
LRAL Lakeview Retre 33.16 350 P P 15 07 29.5 -0.4
baz=168
833A Chaparral WMA, 33.23 329 P P 15 07 29.3 -1.4
baz=144
NATX Nacogdoches 34.06 338 P P 15 07 38.7 +0.9
NATX IAmb IAmb 15 07 42.7
comp=Z,13nm,0.9s
NATX Nacogdoches 34.06 338 P P 15 07 37.5 -0.3
baz=154
SMTB Santa Maria do 34.06 106 *e*P **P 15 07 38.2 +0.1**
PEXB Peixe 34.29 112 *e*P **P 15 07 38.9 -1.1**
435B Jarrell 34.40 333 P P 15 07 40.5 -0.3
baz=149
Y45A Yeager Farm, C 34.48 347 P P 15 07 41.1 -0.4
CPUP Villa Florida 34.64 141 LR LR 15 24 40.6
comp=Z,142nm,18.6s,baz=324,slow=41
237A Washetta, Mont 34.71 337 P P 15 07 44.8 +1.3
KMSC Kings Mountain 34.71 359 P P 15 07 43.3 -0.2
KMSC IAmb IAmb 15 07 48.1
comp=Z,12nm,1.0s
KMSC Kings Mountain 34.71 359 P P 15 07 42.8 -0.7
baz=178
CCAR Cane Creek 35.10 344 P P 15 07 47.0 +0.2
JCT Junction City 35.19 330 P P 15 07 49.2 +1.5
JCT Junction City 35.19 330 P P 15 07 46.9 -0.8
baz=145
TKL Tuckaleechee C 35.35 355 LR LR 15 21 52.3
comp=Z,248nm,19.9s,baz=168,slow=36
WHTX Lake Whitney, 35.38 335 P P 15 07 48.5 -0.7
baz=150
BDFB Brasilia 35.80 118 P P 15 07 51.9 -1.3
comp=Z,3.2nm,0.8s,baz=278,slow=6.8,SNR=2.7
BDFB LR LR 15 25 29.6
comp=Z,557nm,18.8s,baz=303,slow=41
comp=Z,3.2nm,0.8s
BDFB Brasilia 35.80 118 *e*P **P 15 07 52.0 -1.3**
X40A Basin Creek Fa 35.94 343 P P 15 07 53.2 -0.8
baz=159
TZTN Tazewell 36.21 356 P P 15 07 55.5 -0.8
baz=175
MIAR Mount Ida 36.22 342 P P 15 07 55.8 -0.6
baz=158
WVT Waverly 36.33 350 P P 15 07 55.4 -1.9
baz=168
TX31 Lajitas Ar. Si 36.37 325 P P 15 07 57.5 -0.4
TX31 IAmb IAmb 15 07 59.8
comp=Z,19nm,1.4s
TX32 Lajitas Array 36.37 325 P P 15 07 58.1 +0.2
TXAR Lajitas Array 36.37 325 P P 15 07 59.2 +1.4
comp=Z,0.9nm,0.8s,baz=154,slow=9.6,SNR=9.1
TXAR PcP **PcP 15 10 22.9 +0.3**
comp=Z,0.7nm,0.8s,baz=156,slow=6.7,SNR=5.2
comp=Z,0.9nm,0.8s
TXAR Lajitas Array 36.37 325 P P 15 07 58.9 +1.0
W41B Gary Mavity, V 36.41 344 P P 15 07 57.3 -0.8
baz=160
IPMB Ipameri, GO 36.60 121 *e*P **P 15 07 59.3 -0.7**
BLA Blacksburg 36.77 0 P P 15 07 60.0 -1.2
baz=180
ABTX Abilene, Hawle 36.89 333 P P 15 08 00.4 -1.8
baz=147
W39A Magazine 36.89 342 P P 15 08 01.0 -1.1
baz=158
LPIG La Paz 37.33 312 LR LR 15 19 21.0
comp=Z,80nm,21.0s,baz=172,slow=30
SDBA SAO DESIDERIO 37.54 111 *e*P **P 15 08 07.3 -0.7**
U40A Yellville 37.69 344 P P 15 08 07.5 -1.4
baz=160,SNR=7.1
TUL1 Leonard 38.20 340 P P 15 08 13.1 -0.2
TUL1 Leonard 38.20 340 P P 15 08 12.2 -1.1
baz=155
WMOK Wichita Mounta 38.30 335 P P 15 08 12.4 -1.8
baz=150
RPN Rapa Nui 38.82 223 LR LR 15 19 51.0
comp=Z,372nm,22.0s,baz=50,slow=29
CCM Cathedral Cave 38.88 347 P P 15 08 17.9 -1.0
baz=163
S39A Bolivar 39.07 344 P P 15 08 19.6 -0.9
MNTX Cornudas Mount 39.11 325 P P 15 08 20.2 -0.8
baz=138,SNR=7.1
MSTX Muleshoe 39.48 330 P P 15 08 23.7 -0.5
baz=143
AMTX Amarillo 39.70 332 P P 15 08 25.7 -0.3
baz=146
O53A New Philadelph 39.81 359 P P 15 08 25.1 -1.6
baz=179
U32A Winter Ranch, 39.81 336 P P 15 08 27.3 +0.5
U32A IAmb IAmb 15 08 28.5
comp=Z,15nm,0.8s
O48B Farmland 40.03 355 P P 15 08 26.8 -1.7
baz=173
SSPA Standing Stone 40.26 3 P P 15 08 29.5 -0.9
baz=184
121A Cookes Peak, D 41.11 324 P P 15 08 37.6 -0.2
121A IAmb IAmb 15 08 41.3
comp=Z,19nm,1.1s
121A Cookes Peak, D 41.11 324 P P 15 08 36.9 -0.8
baz=136,SNR=8.9
KSU1 Kansas State U 41.36 341 P P 15 08 39.0 -0.6
KSU1 IAmb IAmb 15 08 42.4
comp=Z,17nm,0.9s
KSU1 Kansas State U 41.36 341 P P 15 08 38.3 -1.2
baz=155
ERPA Erie 41.67 1 P P 15 08 40.7 -1.3
baz=181
LENM Lemitar 41.84 326 P P 15 08 42.6 -1.1
N38A Joes South For 41.96 346 P P 15 08 43.8 -0.6
N38A IAmb IAmb 15 08 47.5
comp=Z,31nm,1.2s
ANMO Albuquerque 42.14 328 LR LR 15 26 00.9
comp=Z,60nm,18.9s,baz=148,slow=36
ANMO Albuquerque 42.14 328 P **P 15 08 47.9 +1.6**
ANMO IAmb IAmb 15 08 49.2
comp=Z,23nm,1.1s
ANMO Albuquerque 42.14 328 P P 15 08 45.8 -0.4
baz=139
CBKS Cedar Bluff 42.22 338 P P 15 08 46.1 -0.5
baz=151
TUC Tucson 42.78 321 P P 15 08 50.5 -0.9
baz=132
T25A Trinidad 42.82 332 P P 15 08 52.6 +0.8
baz=143,SNR=9.9
HRV Adam Dziewonsk 42.83 10 P P 15 08 51.3 -0.2
baz=193
SCIA State Center 43.01 346 P P 15 08 51.6 -1.3
baz=161
JFWS Jewell Farm 43.35 350 P P 15 08 54.6 -1.1
baz=166
CMC01 Camacan, BA 43.40 113 *e*P **P 15 08 56.9 +0.4**
KSCO Kaye Shedlock' 43.55 335 P P 15 08 58.6 +1.1
KSCO IAmb IAmb 15 09 02.7
comp=Z,15nm,1.1s
KSCO Kaye Shedlock' 43.55 335 P P 15 08 56.8 -0.7
baz=147
X18A Snowflake 43.80 324 P P 15 09 01.5 +1.8
SDCO Great Sand Dun 43.83 331 P P 15 09 01.0 +1.0
SDCO IAmb IAmb 15 09 05.3
comp=Z,15nm,1.0s
SDCO Great Sand Dun 43.83 331 P P 15 08 59.8 -0.2
baz=142,SNR=29
NBLA Lagarto - SE 43.94 106 *e*P **P 15 08 60.0 -0.9**
W18A Petrified Fore 44.09 325 P P 15 09 02.9 +0.9
W18A IAmb IAmb 15 09 05.2
comp=Z,20nm,1.1s
W18A Petrified Fore 44.09 325 P P 15 09 02.9 +0.9
baz=136,SNR=8.3
SADO Sadowa 44.34 1 LR LR 15 30 00.5
comp=Z,52nm,18.2s,baz=166,slow=40
S22A 4UR Ranch, Cre 44.48 330 P P 15 09 05.7 +0.5
S22A IAmb IAmb 15 09 08.2
comp=Z,16nm,1.4s
S22A 4UR Ranch, Cre 44.48 330 P P 15 09 06.0 +0.8
baz=141,SNR=7.8
Q24A Divide 44.63 332 P P 15 09 07.5 +1.1
Q24A IAmb IAmb 15 09 10.8
comp=Z,11nm,1.2s
Q24A Divide 44.63 332 P P 15 09 06.9 +0.5
baz=144
MVCO Mesa Verde 44.93 328 P P 15 09 09.2 +0.4
MVCO IAmb IAmb 15 09 13.4
comp=Z,20nm,1.4s
MVCO Mesa Verde 44.93 328 P P 15 09 09.3 +0.6
baz=138,SNR=8.0
OGNE Ogallala 44.95 337 P P 15 09 08.9 +0.3
baz=149
RCBR Riachuelo 44.98 98 LR LR 15 29 39.3
comp=Z,319nm,20.4s,baz=71,slow=39
Y14A Wienkenburg 45.25 321 P P 15 09 12.2 +1.1
WUAZ Wupatki 45.32 324 P P 15 09 13.5 +1.7
WUAZ Wupatki 45.32 324 P P 15 09 11.8 0.0
baz=134,SNR=13
ISCO Idaho Springs 45.52 333 P P 15 09 13.6 +0.1
ISCO Idaho Springs 45.52 333 P P 15 09 13.3 -0.1
baz=144
ECSD EROS Data Cent 45.60 344 P P 15 09 11.6 -2.1
baz=157
SMCO Snowmass 45.66 331 P P 15 09 15.0 +0.2
SMCO IAmb IAmb 15 09 17.5
comp=Z,8.3nm,1.0s
GLA Glamis 45.86 319 P P 15 09 16.8 +0.8
baz=128
PKME Peaks-Kenny Pk 45.91 11 P P 15 09 17.6 +1.6
baz=196
SWSC Sam W. Stewart 46.44 318 P P 15 09 21.6 +1.1
baz=127
IKP In-Ko-Pah, Jac 46.47 317 P P 15 09 21.3 +0.4
baz=127
U15A North Rim 46.49 324 P P 15 09 22.0 +0.9
U15A IAmb IAmb 15 09 23.7
comp=Z,11nm,1.3s
N23A Red Feather La 46.55 333 P P 15 09 22.5 +1.0
baz=144
W13A Hualapai Mount 46.56 322 P P 15 09 22.8 +1.2
W13A IAmb IAmb 15 09 24.5
comp=Z,4.6nm,0.9s
BC3 Big Chuckawall 46.65 319 P P 15 09 23.5 +1.3
baz=128
IRM Iron Mountain 46.76 320 P P 15 09 24.1 +1.1
baz=129
MONP2 Monument Peak 46.83 317 P P 15 09 24.3 +0.6
baz=126
O20A White River Ci 47.02 331 P P 15 09 26.8 +1.7
baz=140
BELC Belle Mtn. Jos 47.22 319 P P 15 09 27.1 +0.4
baz=128
TPFO Pinon Flats 47.28 318 P P 15 09 28.7 +1.6
baz=127
PFO Pinyon Flats O 47.28 318 LR LR 15 27 43.1
comp=Z,111nm,18.5s,baz=155,slow=34
PFO Pinyon Flats O 47.28 318 P P 15 09 28.8 +1.6
baz=127
SRU San Rafael Swe 47.41 328 P P 15 09 28.9 +0.7
GMRC Granite Mounta 47.48 320 P P 15 09 29.8 +1.0
baz=129
SZCU Shurtz Canyon 47.75 325 P P 15 09 30.8 -0.1
SZCU IAmb IAmb 15 09 33.7
comp=Z,5.7nm,1.0s
MSU Marysvale 47.88 326 P P 15 09 32.5 +0.6
HEC Hector,Ludlow 47.94 320 P P 15 09 33.7 +1.4
baz=128
TUQ Turquoise Moun 48.06 321 P P 15 09 34.3 +1.0
baz=129
RSSD Black Hills 48.42 337 P P 15 09 36.2 +0.2
RSSD Black Hills 48.42 337 P P 15 09 36.7 +0.7
baz=148
BFSC Mount Baldy Ra 48.46 318 P P 15 09 37.7 +1.3
baz=126
CIS Catalina Islan 48.48 317 P P 15 09 36.9 +0.4
baz=125
GSC Goldstone, Bar 48.54 320 P P 15 09 37.2 +0.3
GSC IAmb IAmb 15 09 42.1
comp=Z,6.1nm,1.1s
GSC Goldstone, Bar 48.54 320 P P 15 09 37.1 +0.2
baz=128
EDW2 Edwards Air Fo 49.06 319 P P 15 09 40.5 -0.4
baz=126
LRMC Laurel Mtn Rad 49.21 319 P P 15 09 43.4 +1.3
baz=127
TPNV Topopah Spring 49.22 322 P P 15 09 43.5 +1.3
baz=130,SNR=9.6
FURC Furnace Creek, 49.29 321 P P 15 09 43.2 +0.7
baz=129
DUG Dugway, Tooele 49.41 327 P P 15 09 44.5 +0.9
baz=135
BW06 Boulder Array 49.68 332 P P 15 09 45.8 +0.1
baz=140
PDAR Pinedale Array 49.68 332 P P 15 09 45.1 -0.6
comp=Z,0.7nm,0.8s,baz=128,slow=9.6,SNR=6.4
PDAR LR LR 15 31 38.8
comp=Z,126nm,19.2s,baz=122,slow=37
comp=Z,0.7nm,0.8s
R11A Troy Canyon, C 49.72 324 P P 15 09 46.2 +0.2
baz=131,SNR=8.5
ARVC Arvin 49.76 318 P P 15 09 47.3 +1.2
baz=126
ISA Isabella, Lake 49.84 319 P P 15 09 47.7 +0.8
ISA Isabella, Lake 49.84 319 P P 15 09 48.2 +1.4
baz=126
GRAC Grapevine Rang 49.94 321 P P 15 09 49.0 +1.5
baz=128
BCW Bitter Crk WRg 50.04 318 P P 15 09 48.8 +0.4
BCW IAmb IAmb 15 09 52.9
comp=Z,16nm,1.1s
CWC Cottonwood Cre 50.05 320 P P 15 09 49.8 +1.3
baz=127
MDND Maddock 50.21 343 P P 15 09 49.1 -0.2
baz=155
PKM Mcpherson Peak 50.28 317 P P 15 09 52.5 +2.1
baz=125
TPH Tonopah 50.53 322 P P 15 09 52.9 +0.8
REDW Red Top Meadow 50.75 332 P P 15 09 54.1 +0.3
REDW IAmb IAmb 15 09 58.3
comp=Z,21nm,1.4s
ELK Elko 51.12 326 LR LR 15 31 16.1
comp=Z,95nm,18.2s,baz=146,slow=36
NV11 Mina Array Sit 51.32 322 P P 15 09 59.2 +1.1
NV11 IAmb IAmb 15 10 00.9
comp=Z,12nm,1.1s
RLMT Red Lodge 51.39 334 P P 15 09 59.4 +0.9
baz=142
NVAR Mina Array Bea 51.41 322 P P 15 10 00.3 +1.4
comp=Z,5.4nm,0.8s,baz=137,slow=7.3,SNR=46
comp=Z,5.4nm,0.8s
NVAR Mina Array Bea 51.41 322 P P 15 10 00.1 +1.3
ULM Lac du Bonnet 51.50 347 P P 15 09 58.3 -0.7
comp=Z,5.8nm,0.7s,baz=172,slow=9.7,SNR=4.6
comp=Z,5.8nm,0.7s
BMN Battle Mountai 52.04 325 P P 15 10 04.6 +1.2
BMN IAmb IAmb 15 10 08.2
comp=Z,14nm,1.0s
DGMT Dagmar 52.20 340 P P 15 10 06.7 +2.4
baz=149
HLID Hailey 52.65 329 P P 15 10 08.8 +0.9
baz=136
MCMT McKenzie Canyo 52.80 331 P P 15 10 10.1 +1.0
BOZ Bozeman (W) 52.81 333 P P 15 10 09.3 +0.3
baz=140,SNR=9.8
MFID Camas Ranch 53.28 328 P P 15 10 13.1 +0.6
EGMT Eagleton 53.90 336 P P 15 10 16.5 -0.4
baz=143
WVOR Wild Horse Val 54.15 326 P P 15 10 19.6 +0.7
MSO Missoula 54.79 332 P P 15 10 22.3 -1.2
baz=138
SCHQ Schefferville 55.55 10 LR LR 15 33 37.9
comp=Z,71nm,21.6s,baz=140,slow=36
YBH Yreka Blue Hor 56.10 323 P P 15 10 32.3 -0.7
comp=Z,3.1nm,1.0s,baz=150,slow=2.6,SNR=4.1
comp=Z,3.1nm,1.0s
YBH Yreka Blue Hor 56.10 323 P P 15 10 31.2 -1.8
YBH IAmb IAmb 15 10 36.7
comp=Z,7.8nm,1.3s
L04D Klamath Falls 56.14 323 P P 15 10 33.6 +0.3
baz=127
J05D Fort Rock, OR 56.17 325 P P 15 10 34.6 +1.1
baz=128
J04D Umpqua Nationa 56.64 325 P P 15 10 37.5 +0.5
J04D Umpqua Nationa 56.64 325 P P 15 10 37.5 +0.5
baz=127
L02F Cave Junction 56.85 323 P P 15 10 37.9 -0.3
baz=125
I05D Terrebonne, OR 56.88 326 P P 15 10 39.3 +0.8
baz=129
I04A Tendick Farm, 57.15 325 P P 15 10 40.5 +0.1
baz=127
K02D Willamette Mer 57.24 323 P P 15 10 41.5 +0.5
baz=126
NEW Newport 57.32 332 LR LR 15 36 17.1
comp=Z,111nm,18.0s,baz=140,slow=37
G05D Wamic, OR 57.44 327 P P 15 10 43.0 +0.7
baz=129
I03D Drain, OR 57.64 324 P P 15 10 44.3 +0.6
baz=126
J01E Myrtle Point 57.67 324 P P 15 10 44.3 +0.4
baz=126
HOOD Mount Hood Mea 57.67 327 P P 15 10 44.4 +0.3
I02E Swisshome, OR 58.17 324 P P 15 10 47.6 +0.1
baz=126
G03D McMinnville, O 58.50 326 P P 15 10 50.1 +0.3
baz=127
D03D Eldon 59.83 328 P P 15 11 00.5 +1.5
baz=128
FRB Frobisher Bay 63.96 6 LR LR 15 40 30.3
comp=Z,88nm,20.2s,baz=214,slow=37
YKA Yellowknife Ar 67.13 344 P P 15 11 46.2 -0.7
comp=Z,4.3nm,1.0s,baz=135,slow=6.5,SNR=34
comp=Z,4.3nm,1.0s
YKA Yellowknife Ar 67.13 344 P P 15 11 46.1 -0.8
WRAK Wrangell Islan 69.67 332 P P 15 12 03.4 +0.4
baz=123
DLBC Dease Lake 69.78 335 P P 15 12 04.3 +0.6
comp=Z,3.6nm,0.7s,baz=115,slow=15,SNR=6.3
comp=Z,3.6nm,0.7s
DLBC Dease Lake 69.78 335 P P 15 12 04.7 +0.9
DLBC IAmb IAmb 15 12 08.0
comp=Z,5.1nm,0.8s
DLBC Dease Lake 69.78 335 P P 15 12 04.0 +0.2
baz=126
TGTN Hyland Airport 70.96 338 P P 15 12 11.0 +0.2
baz=128
SIT Sitka 71.41 332 P P 15 12 13.8 +0.3
baz=120
P33M Teslin, Yukon 71.98 335 P P 15 12 20.1 +3.0
baz=124
MMPY Sheldon Lake, 72.74 338 P P 15 12 21.9 +0.3
baz=126
FARO Faro, Yukon 73.31 337 P P 15 12 25.6 +0.7
baz=124
O30N Mendenhall 73.64 335 P P 15 12 29.3 +2.4
baz=121
M31M Drury Creek, Y 73.71 337 P P 15 12 29.7 +2.5
baz=123
N30M Aishikik Lake 74.41 335 P P 15 12 32.9 +1.5
baz=120
PNL Peninsula 74.55 333 P P 15 12 34.0 +1.8
baz=117
YUK6 Outpost Mounta 74.70 335 P P 15 12 34.0 +0.7
baz=119
RES Resolute Bay 74.83 356 LR LR 15 45 05.7
comp=Z,62nm,19.0s,baz=116,slow=36
M30M Minto, Yukon 74.86 336 P P 15 12 36.4 +2.4
baz=120
YUK4 Talbot Arm 75.01 335 P P 15 12 36.7 +1.6
baz=118
DBIC Dimbokro 75.76 83 P P 15 12 39.7 -0.3
comp=Z,5.1nm,1.1s,baz=267,slow=9.2,SNR=2.3
DBIC LR LR 15 44 42.1
comp=Z,112nm,18.2s,baz=268,slow=35
comp=Z,5.1nm,1.1s
YUK3 Moose Creek 75.98 335 P P 15 12 42.5 +1.8
baz=117
CTG Chitna Glacier 76.00 334 P P 15 12 41.3 +0.6
baz=116
BVCY Beaver Creek 76.44 335 P P 15 12 44.2 +1.2
baz=117
DAWY Dawson 76.61 337 P P 15 12 44.1 +0.1
DAWY IAmb IAmb 15 12 45.3
comp=Z,8.0nm,1.1s
DAWY Dawson 76.61 337 P P 15 12 44.1 +0.1
baz=118,SNR=6.3
EPYK Eagle Plains 76.79 340 P P 15 12 47.7 +2.7
baz=121
INK Inuvik 76.82 342 P P 15 12 45.0 0.0
comp=Z,7.5nm,1.0s,baz=152,slow=3.5,SNR=11
comp=Z,7.5nm,1.0s
INK Inuvik 76.82 342 P P 15 12 44.8 -0.1
INK Inuvik 76.82 342 P P 15 12 44.9 0.0
baz=125
M27K Edge Creek, AK 76.84 335 P P 15 12 46.1 +0.7
baz=116
MCARA McCarthy VSAT 76.92 334 P P 15 12 45.7 0.0
baz=114
A36M Sachs Harbour 76.97 347 P P 15 12 46.1 +0.3
baz=134
BCAR Beaver Creek A 77.11 336 P P 15 12 47.2 +0.4
L27K Beaver Creek, 77.12 336 P P 15 12 48.0 +1.2
baz=116
M26K Nabesna, AK 77.33 335 P P 15 12 48.9 +0.8
baz=115
BMRM Bremner River 77.45 333 P P 15 12 48.9 +0.1
baz=113
EGAK Eagle 77.62 338 P P 15 12 50.2 +0.7
EGAK Eagle 77.62 338 P P 15 12 49.7 +0.1
baz=117
K27K Chicken 77.65 337 P P 15 12 51.3 +1.5
baz=116
EYAK Cordova Ski Ar 77.81 333 P P 15 12 52.1 +1.4
baz=112
KLU Klutina 78.24 334 P P 15 12 53.3 +0.1
baz=112
SCRK Sand Creek 78.39 336 P P 15 12 54.3 +0.3
baz=114
J26L Joseph Creek 78.44 337 P P 15 12 54.1 -0.2
J26L IAmb IAmb 15 12 56.1
comp=Z,8.4nm,1.1s
J26L Joseph Creek 78.44 337 P P 15 12 54.5 +0.2
baz=114
GLI Glacier Island 78.55 333 P P 15 12 55.1 +0.3
baz=110
PAX Paxson 78.60 335 P P 15 12 55.1 -0.1
baz=112
RIDG Independent Ri 78.64 336 P P 15 12 55.0 -0.3
baz=113
SCM Sheep Creek Mo 78.99 334 P P 15 12 57.4 +0.1
baz=110
K24K Donnelly Dome 79.05 336 P P 15 12 58.4 +0.8
baz=112
M23K Glacier View 79.15 334 P P 15 12 58.3 +0.2
baz=110
J25K Salcha River, 79.20 337 P P 15 12 58.0 -0.4
baz=113
KNK Knik Glacier 79.35 333 P P 15 12 58.9 -0.3
baz=109
SML Sawmill 79.43 333 P P 15 12 59.4 -0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=110						
WAT6	Susitna Watana	79.43	334	P	P	15 12 59.5	-0.3
	baz=110,SNR=6.3						
DHY	Denali Highway	79.45	335	P	P	15 12 59.7	-0.2
	baz=111						
ESDC	Sonseca Array	79.52	50	P	P	15 13 00.1	-0.6
	comp=Z,2.3nm,1.0s,baz=262,slow=4.9,SNR=9.8						
	comp=Z,2.3nm,1.0s						
ESDC	Sonseca Array	79.52	50	P	P	15 13 00.2	-0.5
PMR	Palmer	79.72	333	P	P	15 13 01.7	+0.6
	baz=109						
HDA	Harding Lake	79.75	336	P	P	15 13 02.1	+0.7
	baz=111						
RC01	Rabbit Creek A	79.83	333	P	P	15 13 03.7	+1.9
	baz=108						
IL31		79.86	336	P	P	15 13 01.7	-0.1
ILAR	Eielson Array	79.86	336	P	P	15 13 01.4	-0.5
	comp=Z,2.1nm,1.1s,baz=122,slow=3.6,SNR=13						
	comp=Z,2.1nm,1.1s						
ILAR	Eielson Array	79.86	336	P	P	15 13 01.6	-0.4
WAT1	Susitna Watana	79.87	334	P	P	15 13 01.2	-0.9
	baz=110						
BRSE	Bradley Lake S	79.89	331	P	P	15 13 01.8	-0.4
	baz=107						
BMAR	Burnt Mountain	80.03	339	P	P	15 13 02.8	-0.1
RND	Reindeer	80.19	335	P	P	15 13 04.0	+0.2
RND				IAmb	IAmb	15 13 09.0	
	comp=Z,8.3nm,1.0s						
KDAK	Kodiak Island	80.27	329	P	P	15 13 05.2	+1.0
	baz=105						
HOM	Homer	80.31	331	P	P	15 13 05.3	+0.9
	baz=106						
MCK	McKinley	80.33	335	P	P	15 13 05.4	+0.9
	baz=109						
CAPN	Captain Cook N	80.39	332	P	P	15 13 04.7	-0.1
	baz=107						
CUT	Chulitna	80.48	334	P	P	15 13 05.0	-0.3
	baz=108						
H24K	Noodor Dome	80.64	337	P	P	15 13 06.6	+0.5
	baz=111						
NEA2	Nenana	80.68	336	P	P	15 13 07.3	+0.9
	baz=109						
SII	Sitkinak Islan	80.81	327	P	P	15 13 07.8	+0.6
	baz=104						
TRF	Thorofare Moun	80.82	335	P	P	15 13 08.2	+0.9
	baz=108						
O20K	Slope Mountain	80.90	331	P	P	15 13 07.7	0.0
	baz=105						
SKT	Skwentna	80.92	333	P	P	15 13 08.4	+0.7
	baz=107						
I23K	Minto, Yukon-K	80.98	336	P	P	15 13 08.4	+0.5
	baz=109						
SPCR	Spurr Chakacha	81.01	332	P	P	15 13 07.9	-0.4
	baz=106						
H23K	Yukon River	81.28	337	P	P	15 13 10.0	+0.5
	baz=109						
BPAW	Bear Paw Mtn.	81.31	335	P	P	15 13 09.3	-0.4
BPAW				IAmb	IAmb	15 13 10.7	
	comp=Z,14nm,1.3s						
BPAW	Bear Paw Mtn.	81.31	335	P	P	15 13 09.2	-0.6
	baz=108						
PPLA	Purkeypile	81.48	334	P	P	15 13 11.3	+0.5
	baz=106						
MLY	Manley	81.50	336	P	P	15 13 10.3	-0.4
	baz=108						
M20K	Styx River	81.62	333	P	P	15 13 11.2	-0.3
	baz=105						
CHUM	Lake Minchumin	81.81	335	P	P	15 13 13.0	+0.7
	baz=106						
I21K	Tanana	82.04	336	P	P	15 13 13.4	-0.1
	baz=107						
L20K	Farewell, AK	82.11	333	P	P	15 13 14.1	0.0
	baz=105						
M19K	Big River Lodg	82.20	333	P	P	15 13 14.5	+0.1
	baz=104						
TOA0	Torodi Ar. Sit	82.39	77	P	P	15 13 15.7	-0.7
TORD	Torodi Ar. Bea	82.39	77	P	P	15 13 15.1	-1.3
	comp=Z,1.1nm,0.7s,baz=285,slow=6.2,SNR=9.1						
TORD				LR	LR	15 50 02.2	
	comp=Z,124nm,18.7s,baz=223,slow=36						
	comp=Z,1.1nm,0.7s						
TORD	Torodi Ar. Bea	82.39	77	P	P	15 13 15.3	-1.1
K20K	Telida	82.42	334	P	P	15 13 15.1	-0.5
	baz=105						
N18K	Kilae Creek	82.62	331	P	P	15 13 17.0	+0.3
	baz=103						
J20K	Nowinta River	82.66	335	P	P	15 13 16.9	+0.1
	baz=105						
TTA	Tatalina	83.18	334	P	P	15 13 21.0	+1.4
	baz=103						
CHNA	Chernabura Isl	83.47	325	P	P	15 13 23.0	+1.9
	baz=99						
GCSA	Galena City Sc	83.95	335	P	P	15 13 23.8	+0.4
	baz=102						
VNA3	Neumayer Olymp	84.16	162	P	P	15 13 25.3	+0.8
VNA3	Neumayer Olymp	84.16	162	PKiKP	PKiKP	15 18 34.5	-4.9
VNA1	Neumayer--Stat	84.42	161	P	P	15 13 26.1	+0.4
VNA2	Neumayer--Watz	84.78	162	P	P	15 13 27.3	-0.3
	baz=27,slow=2.4						
FALS	False Pass	85.67	325	P	P	15 13 34.6	+2.3
	baz=96						
SNAA	Sanae	86.38	162	P	P	15 13 34.4	-1.2
TROLL	Troll, Antarti	88.10	162	P	P	15 13 44.9	+1.0
TNA	Tin City	88.68	335	P	P	15 13 47.2	+0.5
	baz=92						
AFI	Afiamalu	91.25	256	LR	LR	15 47 27.2	
	comp=Z,991nm,21.7s,baz=194,slow=31						
CLL	Collm	92.03	39	*e*PS	PS	15 26 16.0	+0.4
CLL				*e*SS	SS	15 31 30.0	+16
CLL				*e*x	x	15 32 18.0	
CLL				*e*SSS	SSS	15 34 48.0	
ZALV	Zalesovo Beam	124.64	10	PKP	PKPdf	15 19 52.7	-0.5
	comp=Z,0.6nm,0.4s,baz=323,slow=2.2,SNR=3.5						
MKAR	Makanchi Array	130.79	16	PKP	PKPdf	15 20 03.8	-1.4
	comp=Z,0.5nm,0.8s,baz=358,slow=3.9,SNR=5.3						
MKAR	Makanchi Array	130.79	16		PKPdf	15 20 03.2	-2.1
ASAR	Alice Springs	139.27	233	PKP	PKPdf	15 20 21.6	-0.1
	comp=Z,0.3nm,0.7s,baz=124,slow=2.4,SNR=5.4						
ASAR	Alice Springs	139.27	233	PKPdf	PKPdf	15 20 20.8	-0.9
WRA	Warramunga Arr	140.64	238	PKP	PKPdf	15 20 23.6	-0.6
	comp=Z,1.4nm,1.0s,baz=120,slow=1.4,SNR=5.9						
CMAR	Chiang Mai Arr	161.40	2	PKP	PKPdf	15 20 54.5	-1.0
	comp=Z,0.6nm,0.8s,baz=320,slow=4.0,SNR=2.2						
CMAR				PKPab	PKPab	15 21 38.0	-1.1
	comp=Z,0.4nm,0.7s,baz=342,slow=4.8,SNR=4.6						
CMAR	Chiang Mai Arr	161.40	2	PKPdf	PKPdf	15 20 54.7	-0.8
CMAR					PKPab	15 21 37.2	-2.0

MAN 01 15:14:30.1, 10°.23N×125°.47E, h23km, mb4.1, ML2.9, MS2.6, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	Surigao	0.44	177	*e*P	Pb	15 14 39.3	+0.2
SCPH				*i* S		15 14 45.5	

GUC 01 15:21:32.0±0.7, 30°.37S×71°.62W, h32km±3km, ML3.5, 3C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.30	182	⇑*i*P	Pb	15 21 39.2	-0.5
CO06				*i* S	Sb	15 21 44.4	-0.7
CO05	La Serena	0.56	36	*e*P	Pb	15 21 43.3	-0.2
CO05				*i* S	Sb	15 21 51.0	-0.4
GO04	Tololo Observa	0.74	75	⇓*i*P	Pn	15 21 46.1	-0.2
GO04				*i* S	Sb	15 21 56.4	-0.1
GO04				IAML		15 21 58.4	
	comp=N,4μm,0.6s						
CO02	Combarbal	0.99	147	⇓*i*P	Pn	15 21 49.6	-0.1
CO02				*i* S	Sn	15 22 02.9	+0.2
CO02				IAML		15 22 05.4	
	comp=N,6μm,0.1s						
CO01	Juntas del Tor	1.38	74	*e*P	Pn	15 21 56.3	+1.0
CO01				*i* S	Sn	15 22 12.2	-0.3
LCO	Las Campanas	1.57	31	⇑*i*P	Pn	15 21 58.9	+1.0
LCO				*i* S	Sb	15 22 18.9	-1.5
VA06	Catapilco	2.20	173	⇑*e*P	Pn	15 22 06.5	+0.2
VA06				IAML		15 22 44.8	
	comp=E,356nm,0.2s						
AC04	Llanos de Chal	2.21	13	*i* P	Pn	15 22 06.8	+0.3
AC04				IAML		15 22 44.2	
	comp=N,121nm,0.7s						
VA03	San Esteban	2.55	159	*e*P	Pn	15 22 13.4	+2.2
VA03				IAML		15 22 57.0	
	comp=E,318nm,0.7s						
ROCH	El Roble	2.64	169	*e*P	Pb	15 22 13.5	-5.4
ROCH				*e*P	Pn	15 22 12.6	0.0
ROCH				*i* S	Sb	15 22 47.7	-3.3
ROCH				IAML		15 22 57.8	
	comp=N,313nm,0.5s						
ROCH				IAML		15 22 58.3	
	comp=N,267nm,0.5s						
PEL	Peldehue	2.88	164	*e*P	Pb	15 22 19.8	-2.9
MT02	Curacav	2.91	172	*e*P	Pn	15 22 17.4	+1.3
MT02				*i* S	Sn	15 22 51.2	+1.4
MT02				IAML		15 23 08.1	
	comp=E,93nm,0.5s						
GO03	Copiap	3.02	24	*e*P	Pn	15 22 19.3	+1.6
FCH	Farellones	3.16	159	*e*P	Pn	15 22 23.1	+3.4
FCH				IAML		15 23 11.1	
	comp=E,93nm,0.5s						
MT09	Talagante	3.44	171	*e*P	Pn	15 22 24.4	+1.0
MT09				*i* S	Sn	15 23 04.1	+1.0
MT09				IAML		15 23 16.3	
	comp=E,92nm,0.2s						
BO01	Tunca	4.03	174	*e*P	Pn	15 22 32.0	+0.6
BO01				*i* S	Sn	15 23 16.3	-1.3
BO01				IAML		15 23 41.8	

*BJI **01** 15:24:53.5±0.0, 5°.54S×152°.18E, h61km, mb4.9/69, mB4.9/34, Ms4.6/26, Ms7 4.4/26*

*MOS **01** 15:24:56.8±1.0, 5°.20S×151°.70E, h57km, mb5.2/33, Error ellipse: s-maj=9.0km s-min=5.8km az=100.6*

*NEIC **01** 15:24:58.4±1.7, 5°.24S±0°.05×151°.78E±0°.08, h56km±4km, mb5.1/188, Error ellipse: s-maj=11.3km s-min=7.2km az=103.0*

*DJA **01** 15:24:58.0±0.3, 5°S±2°×15°2E±°, h64km±4km, M5.1/54, mb5.1/54, mB5.4/17, MLv5.6/3, Mw(mB)4.9/17, MwMwp4.7/2, Mwp5.0/2*

*IDC **01** 15:24:58.7±0.8, 5°.27S×151°.79E, h64km±6km, mb4.6/38, mbtmp4.9/42, MS4.0/13, Error ellipse: s-maj=10.8km s-min=6.9km az=111.0*

*GCMT **01** 15:24:59.3±0.3, 5°.49S±0°.02×151°.86E±0°.02, h47km±1km, MW5.1/63, Moment Tensor Solution. s54,c74; s63,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.42±.21; $M_{\theta\theta}$-4.25±.13; $M_{\phi\phi}$-0.17±.15; $M_{r\theta}$2.06±.14; $M_{\theta\phi}$-0.79±.13; $M_{\phi r}$-0.79±.14; Best double couple: $M_0$4.92400×10^{16} NP1:ϕ_s247.00000°, δ35.00000°, λ69.00000°. NP2: ϕ_s92.00000°, δ58.00000°, λ104.00000°. Principal axes: T 5.0550, Plg73.0000°, Azm38.0000°; N -0.2680, Plg12.0000°, Azm265.0000°; P -4.7920, Plg12.0000°, Azm172.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 15:24:58.3±0.4**, 5°.27S**±0°.04×**151°.79E**±0°.04**, h62**km±3km**, h62**km**:pP-P, n694,** σ1.01/655**, mb5.0**/168**, 72C-66D, Fault plane solution: NP1:**ϕ_s120.11423°, δ67.40165°, λ103.27013°. **NP2:**ϕ_s268.57529°, δ26.02926°, λ61.12394°. **Principal axes:** T Plg65.1082°, Azm52.7966°; N Plg12.2348°, Azm294.9359°; P Plg21.3255°, Azm200.0797°; **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	0.98	14	P	Pn	15 25 16.2	-0.1
	19μm,0.3s,baz=207,slow=2.3						
KRVT				S	Sn	15 25 30.6	+1.1
RABL	Rabaul	1.13	19	Pn	Pn	15 25 17.8	-0.4
RABL				Sn	Sn	15 25 34.9	+1.8
MANU	Manus Island	5.45	306	Pn	Pn	15 26 20.5	+3.4
PMG	Port Moresby	6.16	228	P	Pn	15 26 28.0	+1.2
	767nm,0.8s,baz=43,slow=4.8,SNR=103						
PMG				S	Sn	15 27 37.3	+1.4
	125nm,0.4s,baz=231,slow=22,SNR=7.3						
PMG	Port Moresby	6.16	228	Pn	Pn	15 26 27.8	+1.0
PMG	Port Moresby	6.16	228	P	Pn	15 26 28.5	+1.7
HNR	Honiara	9.09	118	P	Pn	15 27 07.8	+0.9
	158nm,0.7s,baz=282,slow=4.0,SNR=5.4						
HNR				LR	LR	15 30 56.8	
	comp=Z,588nm,21.1s,baz=285,slow=39						
HNR	Honiara	9.09	118	Pn	Pn	15 27 07.4	+0.6
GENI	Genyem	11.89	282	P	Pn	15 27 43.0	-2.2
	2μm83nm,1.4s						
GENI	Genyem	11.89	282	P	Pn	15 27 47.0	+1.8
	95nm,1.3s						
COEN	Coen	12.11	224	P	Pn	15 27 47.9	-0.3
	baz=12,SNR=5.5						
COEN	Coen	12.11	224		Pn	15 27 47.4	-0.8
SMPI	Sarmi	13.45	284	P	Pn	15 28 08.6	+2.2
	719nm39nm,1.0s						
PATS	Pohnpei	13.68	29	Pn	Pn	15 28 06.1	-3.4
MTSU	Mount Surprise	14.72	209	P	Pn	15 28 24.1	+0.8
	baz=15,SNR=11						
MTSU	Mount Surprise	14.72	209	P	Pn	15 28 23.8	+0.5
CTA	Charters Tower	15.68	200	P	Pn	15 28 35.5	-0.1
	16nm,0.9s,baz=10,slow=14,SNR=5.0						
CTA				LR	LR	15 34 08.1	
	comp=Z,980nm,20.8s,baz=34,slow=35						
CTA	Charters Tower	15.68	200	P	Pn	15 28 36.5	+0.9
CTAO	Charters Tower	15.68	200	Pn	Pn	15 28 35.1	-0.5
CTAO	Charters Tower	15.68	200	P	Pn	15 28 35.1	-0.5
CTAO				pmax	pmax		
	comp=Z,45nm,0.9s						
CTAO	Charters Tower	15.68	200	P	Pn	15 28 36.5	+0.9
SRPI	Serui, Papua	15.88	282	P	Pn	15 28 39.0	+0.9
	comp=Z,2μmcomp=Z,46nm,0.8s						
BAKI	Biak	16.17	284	P	Pn	15 28 42.6	+0.8
	comp=Z,1μmcomp=Z,89nm,1.0s						
RK1H	Rockhampton Ha	18.06	184	P	Pn	15 29 06.0	+1.0
QIS	Mount Isa	19.26	217	P	Pn	15 29 19.2	-0.4
	baz=19,SNR=99						
QIS	Mount Isa	19.26	217	P	Pn	15 29 19.8	+0.2
FAKI	Fak Fak	19.63	276		P	15 29 22.1	0.0
FAKI	Fak Fak	19.63	276	P	P	15 29 22.5	+0.4
	comp=Z,54nm,1.0s						
GUMO	Guam	19.95	340	P	Pn	15 29 27.4	-0.3
	comp=Z,316nm,1.0s,baz=154,slow=9.2,SNR=18						
GUMO				LR	LR	15 38 19.8	
	comp=Z,184nm,18.2s,baz=152,slow=40						
GUMO	Guam	19.95	340	Pn	P	15 29 26.4	+0.8
GUMO	Guam	19.95	340	P	Pn	15 29 28.2	+0.5
EIDS	Eidsvold	20.00	182	P	P	15 29 25.0	-1.0
	baz=20,SNR=18						
EIDS	Eidsvold	20.00	182	P	P	15 29 25.9	-0.1
EIDS				IAmb	IAmb	15 29 30.8	
	comp=Z,72nm,0.8s						
EIDS	Eidsvold	20.00	182	P	P	15 29 26.8	+0.8
KDU	Kakadu	20.44	248	P	P	15 29 31.0	+0.1
	baz=21,SNR=148						
KDU	Kakadu	20.44	248	P	P	15 29 31.1	+0.2
SIJI	Sorong	20.95	281	P	P	15 29 37.6	+1.3
	comp=Z,23nm,0.6s,baz=125,slow=10,SNR=22						
	comp=Z,23nm,0.6s						
SWI	Sorong	20.96	281	P	Pn	15 29 38.8	-0.8
	comp=Z,852nmcomp=Z,84nm,1.2s						
RMQ	Roma	21.30	187	P	P	15 29 39.9	-0.1
	baz=21,SNR=55						
RMQ	Roma	21.30	187	P	P	15 29 41.0	+1.0
LIFNC	LIFOU	21.51	137	P	P	15 29 43.4	+1.1
LIFNC				IAmb	IAmb	15 29 59.0	
	comp=Z,101nm,1.0s						
MTN	Manton Dam	21.73	248	P	P	15 29 44.4	-0.2
	baz=22,SNR=27						
MTN	Manton Dam	21.73	248	P	P	15 29 44.3	-0.4
MTN	Manton Dam	21.73	248	P	P	15 29 46.1	+1.4
NOUC	Port Laguerre	21.85	141	P	P	15 29 46.5	+0.6
DZM	Mont Dzumac	21.91	141	P	P	15 29 46.6	-0.1
	comp=Z,21nm,0.6s,baz=328,slow=7.0,SNR=31						
	comp=Z,21nm,0.6s						
DZM	Mont Dzumac	21.91	141	*e*LR	LR	15 35 55.6	
	comp=Z,55nm,1.6s						
DZM	Mont Dzumac	21.91	141	P	P	15 29 45.8	-0.9
DZM				IAmb	IAmb	15 29 48.1	
	comp=Z,87nm,1.5s						
DZM	Mont Dzumac	21.91	141	P	P	15 29 46.8	+0.1
TARA	Tarawa	22.11	73	P	P	15 29 48.6	-0.2
TARA				IAmb	IAmb	15 29 51.5	
	comp=Z,129nm,1.1s						
TARA	Tarawa	22.11	73	P	P	15 29 50.7	+1.9
	comp=Z,121nm,1.1s						
YATNC	Mamie plateau,	22.19	140	P	P	15 29 50.6	+1.0
WB0	Warramunga Arr	22.23	228	P	P	15 29 49.9	-0.2
WB0				IAmb	IAmb	15 30 07.3	
	comp=Z,58nm,0.8s						
WR0	Warramunga Arr	22.25	227	P	P	15 29 50.1	-0.2
WR0				IAmb	IAmb	15 30 04.2	
	comp=Z,71nm,0.8s						
WRAB	Tennant Creek	22.37	228	P	P	15 29 51.1	-0.5
WRAB				IAmb	IAmb	15 30 05.7	
	comp=Z,74nm,0.8s						
WRAB	Tennant Creek	22.37	228	⇑*i*P	P	15 29 50.6	-1.0
WRAB	Tennant Creek	22.37	228	P	P	15 29 51.3	-0.3
WB2	Warramunga Arr	22.37	228	P	P	15 29 51.2	-0.4
WB2				IAmb	IAmb	15 30 11.7	
	comp=Z,72nm,0.7s						
WRA	Warramunga Arr	22.38	228	P	P	15 29 51.5	-0.2
	comp=Z,32nm,0.6s,baz=53,slow=10,SNR=208						
WRA				PcP	PcP	15 33 45.4	+0.5
	comp=Z,3.1nm,0.5s,baz=46,slow=2.1,SNR=5.1						
WRA				S	S	15 33 53.0	-0.8
	comp=Z,17nm,1.0s,baz=48,slow=16,SNR=14						
WRA				ScP	ScP	15 37 18.5	+1.2
	comp=Z,21nm,1.0s,baz=50,slow=2.9,SNR=22						
WRA				LR	LR	15 39 00.1	
	comp=Z,395nm,19.1s,baz=36,slow=38						
	comp=Z,32nm,0.6s						
WRA	Warramunga Arr	22.38	228	P	P	15 29 50.4	-1.4
WRA	Warramunga Arr	22.38	228	*i* P	P	15 29 51.5	-0.2
WRA				pmax	pmax		
	comp=Z,33nm,0.6s						
QLP	Quilpie	22.39	198	P	P	15 29 51.5	-0.2
	baz=22,SNR=20						
QLP	Quilpie	22.39	198	P	P	15 29 52.0	+0.3
OUENC	Ouen Island, N	22.42	141	P	P	15 29 51.9	-0.1
OUENC				IAmb	IAmb	15 30 12.4	
	comp=Z,76nm,1.5s						
LBMI	Labuha	24.68	280	P	P	15 30 14.4	+0.6
	comp=Z,963nmcomp=Z,36nm,0.8s						
INKA	Innaminka	24.70	204	P	P	15 30 14.0	+0.3
KNRA	Kununurra	24.86	244	P	P	15 30 15.5	+0.2
	baz=25,SNR=66						
KNRA	Kununurra	24.86	244	P	P	15 30 15.6	+0.2
KNRA	Kununurra	24.86	244	P	P	15 30 15.7	+0.3
ARMA	Armidale	25.02	180	P	P	15 30 16.5	-0.3
	baz=25,SNR=11						
ARMA	Armidale	25.02	180	P	P	15 30 16.4	-0.3
ARMA				IAmb	IAmb	15 30 29.9	
	comp=Z,45nm,1.1s						
ARMA	Armidale	25.02	180	P	P	15 30 17.8	+1.1
AS31	Alice Springs	25.13	222	P	P	15 30 18.2	+0.4
ASAR	Alice Springs	25.13	222	P	P	15 30 18.0	+0.2
	comp=Z,72nm,0.7s,baz=55,slow=9.0,SNR=251						
ASAR				PcP	PcP	15 33 51.4	+0.6
	comp=Z,2.8nm,0.7s,baz=46,slow=2.7,SNR=3.5						
ASAR				S	S	15 34 40.3	+1.9
	comp=Z,2.2nm,1.1s,baz=41,slow=17,SNR=1.7						
ASAR				ScP	ScP	15 37 26.4	+1.6
	comp=Z,9.3nm,0.8s,baz=48,slow=3.3,SNR=25						
ASAR				LR	LR	15 39 50.3	
	comp=Z,669nm,21.4s,baz=51,slow=36						
	comp=Z,72nm,0.7s						
SANI	Sanana	25.94	276	P	P	15 30 25.2	0.0
	comp=Z,27nm,0.8s						
CMSA	Cobar Meteorol	26.75	192	P	P	15 30 32.0	-0.3
	baz=27,SNR=35						
CMSA	Cobar Meteorol	26.75	192	P	P	15 30 31.9	-0.3
OOD	Oodnadatta	27.14	213	P	P	15 30 35.8	0.0
SOEI	Soe	27.64	259	P	P	15 30 41.3	+0.7
SOEI	Soe	27.64	259	P	P	15 30 40.6	0.0
	comp=Z,1μmcomp=Z,108nm,1.0s						
SOEI	Soe	27.64	259	P	P	15 30 42.1	+1.5
LCRK	Leigh Creek	28.12	205	P	P	15 30 44.6	0.0
STKA	Stephens Creek	28.14	199	P	P	15 30 44.5	-0.3
	comp=Z,4.9nm,0.6s,baz=33,slow=13,SNR=14						
STKA				ScP	ScP	15 37 36.4	+2.9
	comp=Z,6.6nm,1.0s,baz=27,slow=7.4,SNR=6.6						
	comp=Z,4.9nm,0.6s						
STKA	Stephens Creek	28.14	199	P	P	15 30 44.0	-0.7
	baz=28,SNR=8.8						
STKA	Stephens Creek	28.14	199	P	P	15 30 44.0	-0.7
STKA	Stephens Creek	28.14	199	P	P	15 30 45.1	+0.4
BATI	Baumata	28.29	258	P	P	15 30 47.4	+1.1
	comp=Z,92nm,0.7s,baz=185,slow=1.1,SNR=21						
BATI				LR	LR	15 44 26.1	
	comp=Z,848nm,19.7s,baz=108,slow=41						
	comp=Z,92nm,0.7s						
BATI	Baumata	28.29	258	P	P	15 30 46.5	+0.2
	comp=Z,709nmcomp=Z,82nm,0.8s						
MSVF	Nonsavu	28.51	118	P	P	15 30 49.8	+1.5
	comp=Z,4.0nm,0.7s,baz=246,slow=18,SNR=1.5						
	comp=Z,4.0nm,0.7s						
DAV	Davao City (W)	28.89	295	LR	LR	15 41 59.5	
	comp=Z,284nm,18.6s,baz=112,slow=35						
WRKA	Warakurna	29.91	226	P	P	15 31 00.2	-0.3
	baz=30,SNR=104						
WRKA	Warakurna	29.91	226	P	P	15 31 00.2	-0.3
MULG	Mulgathing	29.97	212	P	P	15 31 00.7	-0.3
CAN	Canberra	30.02	185	P	P	15 31 01.5	+0.1
CAN	Canberra	30.02	185	P	P	15 31 01.5	+0.1
CAN				pmax	pmax		
	comp=Z,22nm,1.2s						
EDFI	Ende, Flores	30.07	262	P	P	15 31 01.1	-1.1
	comp=Z,16nm,0.8s						
APSI	Ampana	30.40	277	P	P	15 31 05.4	+0.4
	comp=Z,31nm,0.6s						
HTT	Hallett	30.47	202	P	P	15 31 05.5	0.0
	baz=31,SNR=12						
HTT	Hallett	30.47	202	P	P	15 31 05.7	+0.2
NAPP	Napperby	30.54	203	P	P	15 31 07.3	+1.3
BBOO	Buckleboo	31.09	206	P	P	15 31 10.7	-0.1
	baz=31,SNR=10						
BBOO	Buckleboo	31.09	206	P	P	15 31 10.2	-0.6
BASI	Baing, Sumba	31.30	259	P	P	15 31 28.1	+15
TOLI2	Tolitoli	31.61	281	P	P	15 31 14.2	-1.4
TOLI2				IAmb	IAmb	15 31 18.9	
	comp=Z,13nm,0.6s						
KAPI	Kappang	31.91	269	LR	LR	15 48 13.2	
	comp=Z,92nm,18.1s,baz=79,slow=44						
MPSI	Mapaga	32.33	279	P	P	15 31 21.5	-0.5
	comp=Z,14nm,0.7s						
WBSI	Waikabubak, Su	32.40	260	P	P	15 31 21.6	-1.1
	comp=Z,109nm,0.9s						
ARPS	Mount Arapiles	32.65	195	P	P	15 31 25.1	+0.5
	baz=33,SNR=34						
ARPS	Mount Arapiles	32.65	195	P	P	15 31 25.0	+0.5
BRAT	Ballarat	32.92	192	P	P	15 31 27.5	+0.7
JCJ	Chichijima	33.49	344	P	P	15 31 31.6	-0.3
	comp=Z,45nm,0.8s,baz=214,slow=18,SNR=4.2						
JCJ				LR	LR	15 45 29.7	
	comp=Z,135nm,19.5s,baz=159,slow=37						
	comp=Z,45nm,0.8s						
FORT	Forrest	33.79	219	P	P	15 31 34.3	-0.2
	baz=34,SNR=20						
FORT	Forrest	33.79	219	P	P	15 31 33.2	-1.3
FORT	Forrest	33.79	219	P	P	15 31 34.2	-0.3
MBWA	Marble Bar	34.87	240	P	P	15 31 43.2	-0.7
MBWA				IAmb	IAmb	15 31 56.7	
	comp=Z,34nm,1.0s						
MBWA	Marble Bar	34.87	240	P	P	15 31 44.2	+0.2
MBWA	Marble Bar	34.87	240	P	P	15 31 43.7	-0.2
MBWA				pP	pP	15 31 55.8	-3.8
PSA00	Pilbara Seismi	34.92	239	P	P	15 31 43.9	-0.6
PSA00	Pilbara Seismi	34.92	239	P	P	15 31 46.2	+1.7
JAGI	Jajag, Banyuwa	37.49	263	P	P	15 32 05.6	-0.9
	comp=Z,31nm,0.9s						
TAU	Tasmania Unive	37.69	185	P	P	15 32 08.2	+0.4
TAU				IAmb	IAmb	15 32 21.5	
	comp=Z,26nm,0.9s						
TAU	Tasmania Unive	37.69	185	P	P	15 32 08.2	+0.4
TAU				pmax	pmax		
	comp=Z,26nm,1.0s						
TAU	Tasmania Unive	37.69	185	P	P	15 32 08.7	+1.0
JOW	Kunigami	39.20	326	P	P	15 32 22.1	+1.6
	comp=Z,80nm,0.7s,baz=165,slow=7.7,SNR=10						
JOW				LR	LR	15 45 42.1	
	comp=Z,389nm,20.2s,baz=222,slow=32						
	comp=Z,80nm,0.7s						
JOW	Kunigami	39.20	326	P	P	15 32 22.9	+2.3
JHJ	Hachijo jima 2	39.84	344	LR	LR	15 45 55.7	
	comp=Z,240nm,21.0s,baz=183,slow=32						
GIRL	Giralia	40.16	241	P	P	15 32 29.4	+0.7
	baz=40,SNR=4.8						
GIRL	Giralia	40.16	241	P	P	15 32 29.0	+0.3
SBUM	Sibu	40.26	280	P	P	15 32 27.4	-2.3
PCJI	Pacitan	40.42	264	P	P	15 32 29.7	-1.3
	comp=Z,68nm,1.0s						
STKI	Sintang	40.60	276	P	P	15 32 32.3	-0.2
	comp=Z,9.0nm,0.9s						
KLBR	Kellerberrin	41.25	226	P	P	15 32 38.2	+0.6
MORW	Morawa	41.27	231	P	P	15 32 37.5	-0.2

baz=42,SNR=20
MORW Morawa 41.27 231 P **P** **15 32 37.3 -0.5**
MORW IAmb IAmb 15 32 38.4
comp=Z,49nm,1.4s
MORW Morawa 41.27 231 P **P** **15 32 37.4 -0.4**
BLDU Ballidu 41.51 228 P **P** **15 32 40.4 +0.7**
baz=42,SNR=9.4
PLWZ Palliser 41.78 153 P **P** **15 32 41.1 -0.7**
RPZ Rata Peaks 41.89 159 P **P** **15 32 43.1 +0.5**
comp=Z,7.1nm,0.6s,baz=300,slow=20,SNR=1.7
comp=Z,7.1nm,0.6s
RPZ Rata Peaks 41.89 159 IAmb IAmb 15 32 55.1
comp=Z,26nm,1.0s
KSM Kuching 41.97 278 P **P** **15 32 42.9 -0.8**
MUN Mundaring 42.58 227 P **P** **15 32 48.6 +0.2**
baz=43,SNR=3.5
MUN Mundaring 42.58 227 P **P** **15 32 49.2 +0.8**
JYT Yasato 42.69 346 IAmb IAmb 15 32 51.2
comp=Z,26nm,0.7s
JGF Kuroka 42.86 343 P **P** **15 32 51.9 +1.3**
JGF IAmb IAmb 15 33 07.3
comp=Z,90nm,1.9s
JNU Nakatsue 43.03 334 P **P** **15 32 52.1 +0.1**
comp=Z,18nm,0.6s,baz=29,slow=1.7,SNR=9.4
comp=Z,18nm,0.6s
JNU Nakatsue 43.03 334 IAmb IAmb 15 33 21.1
comp=Z,28nm,0.9s
MJAR Matsushiro Arr 43.49 344 P **P** **15 32 54.0 -1.7**
comp=Z,7.8nm,0.8s,baz=162,slow=8.9,SNR=14
MJAR LR LR 15 48 59.3
comp=Z,253nm,21.6s,baz=182,slow=33
comp=Z,7.8nm,0.8s
MJAR Matsushiro Arr 43.49 344 P **P** **15 32 54.0 -1.7**
MAJO Matsushiro 43.49 344 P **P** **15 32 55.0 -0.7**
MAJO Matsushiro 43.49 344 P **P** **15 32 55.0 -0.7**
MAJO pmax pmax
comp=Z,22nm,1.1s
MAJO Matsushiro 43.49 344 P **P** **15 32 55.9 +0.2**
MAJO Matsushiro 43.49 344 P **P** **15 32 56.3 +0.6**
MAJO pP **pP** **15 33 10.7 -0.8**
MJB9 Matsu-Tunnel 43.50 344 P **P** **15 32 55.7 0.0**
JHS Saijyo 43.74 338 P **P** **15 32 58.1 +0.3**
JTM Tenmabayashi 46.88 349 P **P** **15 33 23.7 +1.4**
TJN Taejon 47.32 333 *i* P **P** **15 33 26.1 +0.2**
TJN Taejon 47.32 333 P **P** **15 33 26.8 +0.9**
QIZ Qiongzhong 47.84 301 IAmb IAmb 15 33 33.8
comp=Z,17nm,0.8s
QIZ Qiongzhong 47.84 301 P **P** **15 33 30.8 +0.5**
QIZ PP **PP** **15 35 17.3 -5.5**
QIZ S **S** **15 40 23.1 0.0**
QIZ pmax pmax
comp=Z,16nm,1.0s
QIZ LR LR
comp=Z,280nm,17.5s
QIZ LR LR
comp=Z,240nm,19.1s
QIZ LR LR
comp=Z,340nm,27.1s
QIZ Qiongzhong 47.84 301 P **P** **15 33 31.5 +1.2**
KSRS Korea Array 47.97 334 P **P** **15 33 31.1 +0.2**
comp=Z,4.3nm,0.5s,baz=151,slow=7.1,SNR=31
KSRS PcP **PcP** **15 34 59.6 +1.2**
comp=Z,0.7nm,0.6s,baz=176,slow=3.0,SNR=5.4
KSRS LR LR 15 52 25.2
comp=Z,97nm,20.1s,baz=150,slow=34
comp=Z,4.3nm,0.5s
KSAR Wonju Array Be 47.98 334 P **P** **15 33 30.4 -0.6**
KSAR Wonju Array Be 47.98 334 P **P** **15 33 30.4 -0.6**
KS19 Wonju Array Si 48.04 334 P **P** **15 33 30.5 -1.0**
INCN Inchon 48.56 333 P **P** **15 33 35.8 +0.2**
INCN Inchon 48.56 333 P **P** **15 33 35.8 +0.2**
INCN pmax pmax
comp=Z,38nm,0.6s
INCN Inchon 48.56 333 P **P** **15 33 37.0 +1.4**
NJ2 Nanjing 48.58 322 *e*P **P** **15 33 40.3 +4.5**
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
ASAJ Asahikawa 49.85 351 P **P** **15 33 47.4 +2.1**
comp=Z,27nm,0.9s,baz=151,slow=10,SNR=7.1
comp=Z,27nm,0.9s
WHN Wuhan 50.50 317 ⇓P **P** **15 33 52.1 +1.7**
IPM Ipoh 51.62 280 P **P** **15 33 58.1 -1.0**
IPM IAmb IAmb 15 33 59.5
comp=Z,12nm,0.8s
IPM Ipoh 51.62 280 P **P** **15 33 59.3 +0.2**
KULM Kulim 52.13 281 P **P** **15 34 02.0 -0.9**
USRK Ussuriysk Ar. 52.37 342 P **P** **15 34 06.1 +1.9**
comp=Z,7.6nm,0.8s,baz=168,slow=8.0,SNR=13
comp=Z,7.6nm,0.8s
TIA Tai'an 52.50 325 ⇓P **P** **15 34 05.4 +0.1**
TIA pmax pmax
comp=Z,8.0nm,0.8s
MDJ Mudanjiang 53.51 340 P **P** **15 34 12.2 -0.3**
ENH Enshi 53.74 314 P **P** **15 34 14.4 -0.2**
GYA Guiyang 53.88 308 ⇓P **P** **15 34 17.3 +1.5**
GYA pmax pmax
comp=Z,25nm,0.8s
LYN LuoYang 54.24 320 *e*P **P** **15 34 19.2 +1.1**
LYN LR LR
comp=Z,430nm,19.5s
LYN LR LR
comp=Z,590nm,24.6s
HNS HongShan 54.72 324 ⇓P **P** **15 34 22.4 +0.9**
HNS *e*S **S** **15 41 59.3 +1.9**
HNS pmax pmax
comp=Z,17nm,0.8s
HNS LR LR
comp=Z,190nm,19.2s
HNS LR LR
comp=Z,340nm,21.8s
BNX BinXian 55.24 339 ⇓P **P** **15 34 27.0 +1.9**
BNX pmax pmax
comp=Z,26nm,0.8s
BNX pmax pmax
comp=Z,150nm,4.9s
BJI Beijing 55.73 327 P **P** **15 34 30.8 +2.1**
BJI pmax pmax
comp=Z,6.0nm,0.7s
BJI LR LR
comp=Z,170nm,20.7s
BJI LR LR
comp=Z,150nm,20.9s
BJI LR LR
comp=Z,260nm,22.0s
XAN Xi'an 56.27 317 P **P** **15 34 33.3 +0.5**
XAN pmax pmax
comp=Z,18nm,1.2s
KMI Kunming 56.42 305 ⇓P **P** **15 34 36.3 +2.1**
KMI pmax pmax
comp=Z,31nm,0.9s
KLR Kul'dur 57.02 344 P **P** **15 34 37.4 -0.4**
comp=Z,5.8nm,0.7s,baz=150,slow=6.2,SNR=14
comp=Z,5.8nm,0.7s
KLR Kul'dur 57.02 344 *ce*P **P** **15 34 37.3 -0.4**
KLR pmax pmax
comp=Z,10.0nm,1.0s
CMAR Chiang Mai Arr 57.17 296 P **P** **15 34 40.6 +1.3**
comp=Z,18nm,0.9s,baz=119,slow=5.3,SNR=67
CMAR PKP2bc 16 04 41.0
comp=Z,2.3nm,0.9s,baz=285,slow=3.5,SNR=9.8
comp=Z,18nm,0.9s
CMAR Chiang Mai Arr 57.17 296 P **P** **15 34 39.9 +0.5**
CMAR Chiang Mai Arr 57.17 296 *i* P **P** **15 34 40.7 +1.3**
CMAR pmax pmax
comp=Z,19nm,0.9s
CHTO Chiang Mai 57.28 296 P **P** **15 34 40.0 -0.1**
CHTO IAmb IAmb 15 34 43.3
comp=Z,22nm,1.0s
CHTO Chiang Mai 57.28 296 P **P** **15 34 40.0 -0.1**
CHTO pmax pmax
comp=Z,22nm,1.0s
CHTO Chiang Mai 57.28 296 P **P** **15 34 41.3 +1.1**
comp=Z,15nm,1.1s
CHTO Chiang Mai 57.28 296 P **P** **15 34 41.2 +1.0**
CHTO pP **pP** **15 34 57.3 +0.5**
PZH PanZhiHua 57.82 306 P **P** **15 34 44.8 +0.8**
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,120nm,5.7s
CD2 Chengdu 58.28 311 P **P** **15 34 48.0 +1.0**
CD2 pmax pmax
comp=Z,50nm,0.5s
PEA0B Petropavlovsk- 58.37 4 P **P** **15 34 47.7 +0.6**
PEA0B IAmb IAmb 15 35 02.8
comp=Z,11nm,1.0s
PEA0B Petropavlovsk- 58.37 4 P **P** **15 34 47.7 +0.6**
PEA0B pmax pmax
comp=Z,11nm,1.0s
PETK Petropavlovsk- 58.37 4 P **P** **15 34 47.0 -0.2**
comp=Z,2.9nm,0.5s,baz=176,slow=7.2,SNR=32
comp=Z,2.9nm,0.5s
PETK Petropavlovsk- 58.37 4 P **P** **15 34 46.7 -0.4**
PETK Petropavlovsk- 58.37 4 P **P** **15 34 47.0 -0.2**
XLT XiLinHaoTe 58.57 330 *e*P **P** **15 34 48.9 +0.1**
XLT S **S** **15 42 48.2 0.0**
XLT pmax pmax
comp=Z,39nm,0.9s
XLT pmax pmax
comp=Z,48nm,3.6s
XLT LR LR
comp=Z,160nm,20.8s
XLT LR LR
comp=Z,290nm,21.0s
HHC Hu-ho-hao-te 58.84 325 *e*P **P** **15 34 52.0 +1.2**
HHC pmax pmax
comp=Z,45nm,0.9s
HHC pmax pmax
comp=Z,160nm,6.3s
HHC LR LR
comp=Z,410nm,19.6s
HHC LR LR
comp=Z,280nm,18.2s
HHC LR LR
comp=Z,580nm,18.8s
TBI Tubuai 59.29 114 *e*LR LR 15 53 10.7
comp=Z,5µm,30.5s
BTO Baotou 59.58 324 *e*P **P** **15 34 59.0 +3.1**
BTO S **S** **15 43 07.0 +5.5**
BTO LR LR
comp=Z,920nm,19.6s
BTO LR LR
comp=Z,500nm,17.1s
LZH Lanzhou 60.87 316 *e*P **P** **15 35 06.4 +1.5**
LZH pP pP 15 35 16.3 -5.2
LZH sP sP 15 35 23.5 -5.1
LZH pmax pmax
comp=Z,28nm,1.3s
LZH LR LR
comp=Z,250nm,16.4s
LZH LR LR
comp=Z,280nm,16.8s
LZH LR LR
comp=Z,310nm,18.0s
HIA Hailar 61.05 337 IAmb IAmb 15 35 09.0
comp=Z,15nm,0.7s
ZEA Zeya 62.30 344 *e*P **P** **15 35 15.3 +1.3**
ZEA pmax pmax
comp=Z,10.0nm,1.0s
MA2 Magadan 64.65 359 P **P** **15 35 30.5 +1.2**
comp=Z,11nm,0.6s,baz=168,slow=6.6,SNR=8.7
comp=Z,11nm,0.6s
MA2 Magadan 64.65 359 *ce*P **P** **15 35 29.3 0.0**
MA2 pmax pmax
comp=Z,12nm,0.7s
GTA Gaotai 65.32 318 ⇓P **P** **15 35 35.4 +1.1**
GTA pmax pmax
comp=Z,8.0nm,0.9s
SHL Shillong 65.68 301 P **P** **15 35 36.5 -0.4**
SHL Shillong 65.68 301 P **P** **15 35 36.5 -0.4**
SHL pmax pmax
comp=Z,45nm,1.1s
ULN Ulaanbaatar 65.86 329 P **P** **15 35 37.6 -0.1**
ULN Ulaanbaatar 65.86 329 *ce*P **P** **15 35 38.2 +0.5**
ULN pmax pmax
comp=Z,11nm,0.9s
ULN Ulaanbaatar 65.86 329 P **P** **15 35 38.7 +1.1**
ULN pP **pP** **15 35 53.4 -1.1**
SONM Songino Array 66.19 328 P **P** **15 35 40.3 +0.6**
comp=Z,8.0nm,0.6s,baz=142,slow=5.0,SNR=40
comp=Z,8.0nm,0.6s
SONM Songino Array 66.19 328 IAmb IAmb 15 35 43.7
comp=Z,22nm,1.3s
GOMU GeErMu 67.33 313 ⇑P **P** **15 35 48.1 +0.6**
GOMU pmax pmax
comp=Z,8.0nm,0.9s
GOMU pmax pmax
comp=Z,85nm,6.6s
TAOE Nuku Hiva Isla 67.57 97 *e*LR LR 15 56 58.0
comp=Z,2µm,23.1s
LSA Lhasa 67.67 305 P **P** **15 35 50.3 +0.3**
LSA IAmb IAmb 15 35 52.0
comp=Z,25nm,0.8s
LSA Lhasa 67.67 305 P **P** **15 35 50.3 +0.3**
LSA pmax pmax
comp=Z,25nm,0.8s
LSA Lhasa 67.67 305 P **P** **15 35 50.8 +0.9**
LSA pmax pmax
comp=Z,40nm,0.7s
SEY Seymchan 68.01 0 P **P** **15 35 50.3 -0.4**
comp=Z,0.9nm,0.4s,baz=184,slow=7.1,SNR=4.0
comp=Z,0.9nm,0.4s
YAK Yakutsk 69.24 349 P **P** **15 36 00.0 +1.7**
comp=Z,9.2nm,0.7s,baz=216,slow=0.3,SNR=12
comp=Z,9.2nm,0.7s
YAK Yakutsk 69.24 349 P **P** **15 35 59.4 +1.0**
YAK IAmb IAmb 15 36 02.3
comp=Z,19nm,0.8s
YAK Yakutsk 69.24 349 *e*P **P** **15 36 00.4 +2.0**
YAK *e* 15 36 21.1
YAK *e* 15 38 33.7
YAK *e*S **S** **15 45 02.4 +2.8**
YAK *e**SS **sS** **15 45 32.4 +4.4**
YAK *e* 15 45 54.8
YAK *e*SS **SS** **15 49 28.1 +0.7**
YAK pmax pmax
comp=Z,22nm,1.2s
YAK pmax pmax
comp=N,2.0nm,1.1s
YAK pmax pmax
comp=E,2.0nm,0.9s
YAK pmax pmax
comp=Z,51nm,3.5s
YAK pmax pmax
comp=N,25nm,3.3s
YAK pmax pmax
comp=E,23nm,3.3s
YAK smax smax
comp=E,38nm,4.6s
YAK smax smax
comp=N,36nm,4.0s
YAK Yakutsk 69.24 349 P **P** **15 36 01.4 +3.0**
YAK pP **pP** **15 36 15.3 -0.2**
ZAK Zakamensk 69.37 329 *e*P **P** **15 35 59.5 -0.1**
ZAK pmax pmax
comp=Z,22nm,1.0s
TAPN Taplejung 69.79 302 *e*P **P** **15 36 02.4 -0.5**
comp=Z,42nm,0.9s
RAMN Ramite 70.62 301 *e*P **P** **15 36 07.4 -0.5**
comp=Z,14nm,0.6s
JIRN Jiri 71.17 301 *e*P **P** **15 36 11.2 -0.2**
comp=Z,30nm,0.7s
GUN Gumba 71.50 302 *e*P **P** **15 36 12.8 -0.6**
comp=Z,74nm,0.7s
PKI Pulchoki 71.81 301 *e*P **P** **15 36 14.3 -0.9**
comp=Z,32nm,0.8s
PKIN Phulchoki 71.82 301 *e*P **P** **15 36 14.1 -1.1**
comp=Z,29nm,0.8s
DMN Daman 72.08 301 *e*P **P** **15 36 16.5 -0.3**
comp=Z,83nm,0.8s
VNDA Vanda 72.40 178 P **P** **15 36 18.1 +0.6**
comp=Z,2.6nm,0.7s,baz=327,slow=6.0,SNR=18
comp=Z,2.6nm,0.7s
VNDA Vanda 72.40 178 P **P** **15 36 18.5 +1.1**
VNDA Vanda 72.40 178 P **P** **15 36 18.5 +1.1**
VNDA pmax pmax
comp=Z,6.0nm,1.0s
GKN Gorkha 72.58 301 *e*P **P** **15 36 19.3 -0.4**
comp=Z,70nm,0.8s
DANN Dangsing 73.42 301 *e*P **P** **15 36 23.5 -1.3**
comp=Z,54nm,0.8s
BILL Bilibino 73.85 6 P **P** **15 36 25.4 -0.7**
BILL Bilibino 73.85 6 ⇓*e*P **P** **15 36 25.8 -0.3**
BILL *e**SP **PcP** **15 36 38.5 -2.8**
BILL *i* 15 36 45.5
BILL S **SKiKP** **15 45 48.0 -1.5**
BILL SS **SS** **15 50 38.0 +0.1**
BILL pmax pmax
comp=Z,3.0nm,0.5s
BILL MLR MLR
comp=Z,66nm,18.0s
PYUN Piuthan 74.01 301 *e*P **P** **15 36 27.2 -0.9**
comp=Z,94nm,0.8s
WMQ Urumqi 75.41 318 *e*P **P** **15 36 35.7 0.0**
WMQ pP PcP 15 36 47.1 -1.5
WMQ pmax pmax
comp=Z,15nm,1.3s
WMQ LR LR
comp=Z,140nm,19.1s
WMQ LR LR
comp=Z,250nm,18.5s
HYBB Hyderabad (bro 75.70 289 *e*P **P** **15 36 38.1 +0.3**
HYBB *ep*P **pP** **15 36 53.4 -1.7**
O16K Kokwok River B 75.74 24 P **P** **15 36 37.8 +0.6**
baz=232
O17K Koliganek Bris 76.25 24 P P 15 37 04.3 +24
baz=233
OHAK Old Harbor 76.42 27 P **P** **15 36 42.0 +1.0**
baz=237
Q19K Cape Douglas, 77.21 26 P **P** **15 36 45.0 -0.5**
Q19K Cape Douglas, 77.21 26 P **P** **15 36 46.1 +0.6**
baz=236
N18K Kilae Creek 77.28 24 P **P** **15 36 46.6 +0.8**
baz=234
SVW2 Sparrevohn 77.65 23 P **P** **15 36 46.6 -1.3**
TIXI Tiksi 78.23 353 P **P** **15 36 49.9 -1.0**
TIXI Tiksi 78.23 353 *ce*P **P** **15 36 48.8 -2.1**
TIXI pmax pmax
comp=Z,8.0nm,1.2s
O20K Slope Mountain 78.28 25 P **P** **15 36 52.1 +0.6**
baz=237
HOM Homer 78.47 26 P **P** **15 36 53.4 +0.9**
baz=238
TTA Tatalina 78.57 22 P **P** **15 36 54.1 +1.0**
baz=233,SNR=5.6
M19K Big River Lodg 78.58 23 P **P** **15 36 53.4 +0.3**
BRSE Bradley Lake S 78.90 26 P **P** **15 36 55.7 +0.9**
baz=239
M20K Styx River 79.06 23 P **P** **15 36 57.0 +1.2**
baz=236
L20K Farewell, AK 79.11 23 P **P** **15 36 57.3 +1.4**
baz=236
CAPN Captain Cook N 79.26 25 P **P** **15 36 57.9 +1.2**
baz=238
GCSA Galena City Sc 79.37 20 P **P** **15 36 58.3 +1.1**
baz=232
K20K Telida 79.54 22 IAmb IAmb 15 37 03.2
comp=Z,12nm,0.7s
K20K Telida 79.54 22 P **P** **15 36 59.4 +1.1**
baz=235,SNR=7.1
SEW Seward 79.64 26 P **P** **15 36 59.8 +1.0**
baz=240
O22K Cooper Landing 79.72 25 P **P** **15 36 59.5 +0.3**
baz=240
J20K Nowinta River 79.98 21 IAmb IAmb 15 37 05.6
comp=Z,13nm,0.6s
J20K Nowinta River 79.98 21 P **P** **15 37 01.5 +0.9**
baz=235,SNR=14
PPLA Purkeypile 79.99 23 P **P** **15 37 01.6 +0.8**
baz=237
MK31 Makanchi Array 80.02 319 P **P** **15 37 00.5 -0.7**
MK31 Makanchi Array 80.02 319 *i* P **P** **15 37 00.9 -0.3**
MKAR Makanchi Array 80.02 319 P **P** **15 37 01.1 -0.1**
comp=Z,6.5nm,0.8s,baz=104,slow=6.5,SNR=50
comp=Z,6.5nm,0.8s
MKAR Makanchi Array 80.02 319 *i* P **P** **15 37 01.1 -0.1**
MKAR pmax pmax
comp=Z,6.0nm,0.8s
RC01 Rabbit Creek A 80.02 25 P **P** **15 37 01.2 +0.3**
baz=240
MAKZ Makanchi 80.23 319 P **P** **15 37 01.9 -0.5**
MAKZ Makanchi 80.23 319 P **P** **15 37 01.9 -0.5**
MAKZ pmax pmax
comp=Z,12nm,0.9s
CAST Castle Rocks 80.31 22 P **P** **15 37 03.0 +0.6**
baz=237
CHUM Lake Minchumin 80.48 22 P **P** **15 37 04.0 +0.7**
baz=237,SNR=13
PMR Palmer 80.53 25 P **P** **15 37 04.1 +0.5**
baz=240
KNK Knik Glacier 80.72 25 P **P** **15 37 05.5 +0.8**
baz=241
KTH Kantishna Hill 80.83 22 IAmb IAmb 15 37 08.5
comp=Z,9.5nm,0.6s
PDGK Podgornoye 80.88 315 P **P** **15 37 05.3 -0.8**
SML Sawmill 80.96 25 IAmb IAmb 15 37 10.3
comp=Z,23nm,0.6s
SML Sawmill 80.96 25 P **P** **15 37 06.6 +0.6**
baz=241,SNR=5.7
ZAA0 Zalesovo Array 80.98 327 IAmb IAmb 15 37 08.2
comp=Z,13nm,0.6s
ZALV Zalesovo Beam 80.98 327 P **P** **15 37 05.0 -1.2**
comp=Z,12nm,0.5s,baz=111,slow=6.4,SNR=26
comp=Z,12nm,0.5s
TRF Thorofare Moun 81.02 23 P **P** **15 37 06.0 -0.4**
TRF Thorofare Moun 81.02 23 P **P** **15 37 06.5 +0.1**
baz=239
GLI Glacier Island 81.04 26 P **P** **15 37 06.7 +0.4**
GLI IAmb IAmb 15 37 11.0
comp=Z,15nm,0.8s
GLI Glacier Island 81.04 26 P **P** **15 37 06.8 +0.4**
baz=242
BPAW Bear Paw Mtn. 81.09 22 P **P** **15 37 07.2 +0.5**
baz=238
M23K Glacier View 81.21 25 P **P** **15 37 07.4 +0.2**
baz=241
H21K Melozitna Rive 81.30 20 P **P** **15 37 08.8 +1.2**
baz=236
I21K Tanana 81.32 21 P **P** **15 37 08.8 +1.1**
baz=237,SNR=9.1
WAT1 Susitna Watana 81.38 24 P **P** **15 37 09.0 +0.8**
baz=240
SCM Sheep Creek Mo 81.39 25 P **P** **15 37 09.2 +0.9**
baz=242
EYAK Cordova Ski Ar 81.47 26 P **P** **15 37 09.9 +1.2**
baz=243
RND Reindeer 81.55 23 IAmb IAmb 15 37 12.5
comp=Z,11nm,0.6s
WAT6 Susitna Watana 81.58 24 P **P** **15 37 10.0 +0.6**
baz=241
MCK McKinley 81.68 23 P **P** **15 37 09.2 -0.6**
MCK IAmb IAmb 15 37 32.6
comp=Z,17nm,0.9s
MCK McKinley 81.68 23 P **P** **15 37 09.2 -0.6**
MCK pmax pmax
comp=Z,17nm,0.9s
MCK McKinley 81.68 23 P **P** **15 37 10.1 +0.4**
baz=240
MLY Manley 81.68 21 IAmb IAmb 15 37 13.8
comp=Z,19nm,0.6s
MLY Manley 81.68 21 P **P** **15 37 10.1 +0.4**
baz=238,SNR=38
DIV Divide 81.73 26 IAmb IAmb 15 37 14.7
comp=Z,8.7nm,0.5s
KLU Klutina 81.83 25 IAmb IAmb 15 37 34.7
comp=Z,17nm,1.0s
KLU Klutina 81.83 25 P **P** **15 37 10.9 +0.3**
baz=243
DHY Denali Highway 81.97 24 P **P** **15 37 11.6 +0.2**
baz=241
M24K Tolsona, Glenn 82.00 25 P **P** **15 37 11.9 +0.4**
baz=243
NEA2 Nenana 82.06 22 IAmb IAmb 15 37 15.0
comp=Z,13nm,0.6s
NEA2 Nenana 82.06 22 P **P** **15 37 11.7 0.0**
baz=240,SNR=13
KDJ Kajisay 82.20 314 IAmb IAmb 15 37 15.1
comp=Z,27nm,0.9s
I23K Minto, Yukon-K 82.24 21 P **P** **15 37 11.6 -1.0**
I23K IAmb IAmb 15 37 17.3
comp=Z,8.1nm,0.6s
I23K Minto, Yukon-K 82.24 21 P **P** **15 37 12.8 +0.3**
baz=239,SNR=12
WRH Wood River Hil 82.37 22 IAmb IAmb 15 37 16.6
comp=Z,18nm,1.3s
N25K Chitina, Valde 82.45 26 P **P** **15 37 14.4 +0.5**
baz=244
KSH Kashi 82.48 311 P **P** **15 37 17.2 +2.6**
KSH pmax pmax
comp=Z,13nm,0.9s
H23K Yukon River 82.52 21 P **P** **15 37 14.6 +0.5**
baz=239
MDOK Medeo 82.55 315 P **P** **15 37 14.7 -0.2**
TCOL CIGO, UAF Yank 82.65 22 P **P** **15 37 15.1 +0.3**
baz=241
COLA College 82.66 22 *i* P **P** **15 37 14.8 +0.1**
COLA pmax pmax
comp=Z,11nm,0.6s
COLA College 82.66 22 P **P** **15 37 15.0 +0.2**

baz=241
PAX **Paxson** 82.69 24 P P 15 37 15.4 +0.3
baz=243
HDA **Harding Lake** 82.78 23 IAmb IAmb 15 37 19.1
comp=Z,9.3nm,0.5s
HDA **Harding Lake** 82.78 23 P P 15 37 15.7 +0.3
baz=242,SNR=14
ULHL **Ulahol** 82.91 314 P P 15 37 17.4 +0.6
SNR=15
POKR **Poker Plat Res** 82.93 22 P P 15 37 16.6 +0.4
baz=241
K24K **Donnelly Dome** 82.95 23 P P 15 37 16.6 +0.2
baz=243
IL31 82.97 22 P P 15 37 15.7 -0.6
IL31 IAmb IAmb 15 37 19.2
comp=Z,12nm,0.7s
ILAR **Eielson Array** 82.97 22 P P 15 37 15.2 -1.2
comp=Z,11nm,0.6s,baz=249,slow=5.1,SNR=54
comp=Z,11nm,0.6s
ILAR **Eielson Array** 82.97 22 P P 15 37 15.4 -1.0
ILAR **Eielson Array** 82.97 22 P P 15 37 15.4 -1.0
MCARA **McCarthy VSAT** 83.04 26 P P 15 37 17.6 +0.8
baz=246
H24K **Noodor Dome** 83.12 21 P P 15 37 17.7 +0.5
baz=241,SNR=11
BOOM **Boomskoye usch** 83.18 314 IAmb IAmb 15 37 21.7
comp=Z,16nm,0.7s
RIDG **Independent Ri** 83.29 24 IAmb IAmb 15 37 42.4
comp=Z,17nm,1.2s
RIDG **Independent Ri** 83.29 24 P P 15 37 18.4 +0.2
baz=244
M26K **Nabesna, AK** 83.47 25 P P 15 37 19.7 +0.6
baz=246
BARN **Barnard Glacie** 83.51 27 IAmb IAmb 15 37 24.5
comp=Z,10nm,0.6s
KURK **Kurchatov** 83.52 322 P P 15 37 18.4 -1.1
KURK IAmb IAmb 15 37 22.2
comp=Z,17nm,1.1s
KURK **Kurchatov** 83.52 322 *ce* P P 15 37 18.0 -1.5
KURK pmax pmax
comp=Z,21nm,1.3s
TKM2 **Tokmak 2** 83.53 314 P P 15 37 20.1 +0.1
SNR=27
TKM2 **Tokmak 2** 83.53 314 P P 15 37 19.9 -0.2
KURBB **Kurchatov Arra** 83.55 322 P P 15 37 18.8 -0.9
L26K **Log Cabin Wild** 83.59 25 IAmb IAmb 15 37 24.2
comp=Z,5nm,0.6s
L26K **Log Cabin Wild** 83.59 25 P P 15 37 20.4 +0.8
baz=245,SNR=7.5
CTG **Chitna Glacier** 83.62 27 P P 15 37 20.6 +0.6
baz=247
SCRK **Sand Creek** 83.73 24 P P 15 37 21.0 +0.5
baz=244
M27K **Edge Creek, AK** 83.93 25 IAmb IAmb 15 37 27.2
comp=Z,13nm,1.1s
M27K **Edge Creek, AK** 83.93 25 P P 15 37 22.0 +0.5
baz=246,SNR=8.8
KBK **Karagaybulak** 83.94 314 P P 15 37 22.8 +0.7
SNR=7.8
TOLK **Toolik Lake Re** 83.97 18 P P 15 37 21.9 +0.4
baz=239
PNL **Peninsula** 84.03 28 P P 15 37 22.3 +0.3
baz=249
J26L **Joseph Creek** 84.13 23 P P 15 37 22.9 +0.4
baz=245,SNR=7.5
CHMS **Chumysh** 84.15 314 P P 15 37 23.2 +0.2
SNR=7.7
CHMS **Chumysh** 84.15 314 *i* P P 15 37 22.7 -0.3
CHMS pmax pmax
comp=Z,27nm,1.0s
UCH **Uchtor** 84.16 313 P P 15 37 24.3 +0.7
SNR=24
L27K **Beaver Creek,** 84.23 25 P P 15 37 23.4 +0.5
baz=246,SNR=5.9
BCAR **Beaver Creek A** 84.25 25 P P 15 37 22.8 -0.3
AAK **Ala-Archa** 84.26 314 P P 15 37 24.3 +0.6
SNR=11
AAK **Ala-Archa** 84.26 314 P P 15 37 23.9 +0.2
AAK IAmb IAmb 15 37 25.1
comp=Z,16nm,0.9s
AAK **Ala-Archa** 84.26 314 *ce* P P 15 37 24.0 +0.2
AAK pmax pmax
comp=Z,17nm,0.9s
YUK3 **Moose Creek** 84.32 26 P P 15 37 23.9 +0.3
baz=248
USP **Aspenovka** 84.39 314 P P 15 37 24.6 +0.4
SNR=18
QSPA **South Pole Qui** 84.69 180 P P 15 37 25.4 0.0
QSPA IAmb IAmb 15 37 40.1
comp=Z,14nm,0.8s
AML **Almayashu** 84.73 313 P P 15 37 27.2 +0.8
SNR=52
MAW **Mawson** 84.75 203 P P 15 37 25.9 +0.5
comp=Z,7.1nm,0.9s,baz=90,slow=6.0,SNR=18
comp=Z,7.1nm,0.9s
MAW **Mawson** 84.75 203 P P 15 37 25.0 -0.5
baz=85,SNR=7.8
MAW **Mawson** 84.75 203 P P 15 37 25.5 0.0
EKS2 **Erkin-Say** 84.78 314 P P 15 37 26.8 +0.5
SNR=28
YUK6 **Outpost Mounta** 84.96 27 P P 15 37 27.4 +0.5
baz=250
YUK4 **Talbot Arm** 84.97 27 P P 15 37 27.5 +0.6
baz=250,SNR=5.4
EGAK **Eagle** 85.19 23 IAmb IAmb 15 37 32.3
comp=Z,14nm,1.1s
EGAK **Eagle** 85.19 23 P P 15 37 28.2 +0.6
baz=247,SNR=8.8
HYT **Haines Junctio** 85.31 28 IAmb IAmb 15 37 35.3
comp=Z,15nm,1.2s
HYT **Haines Junctio** 85.31 28 P P 15 37 28.6 0.0
baz=251,SNR=8.4
PLBC **Pleasant Camp** 85.41 29 P P 15 37 28.7 -0.2
baz=252
DAWY **Dawson** 85.62 24 P P 15 37 30.1 +0.2
baz=249
N30M **Aishikik Lake** 85.72 27 P P 15 37 30.6 +0.2
baz=251
SKAG **Skagway** 85.91 29 P P 15 37 31.5 +0.1
baz=253
O30N **Mendenhall** 85.95 28 P P 15 37 31.6 0.0
baz=252,SNR=5.2
NRIK **Noril'sk** 86.08 341 P P 15 37 31.3 -0.7
comp=Z,10nm,0.5s,baz=114,slow=6.0,SNR=16
comp=Z,10nm,0.5s
NRIK **Noril'sk** 86.08 341 IAmb IAmb 15 37 35.5
comp=Z,13nm,0.7s
NRIK **Noril'sk** 86.08 341 *ce* P P 15 37 31.0 -1.0
NRIK pmax pmax
comp=Z,13nm,0.7s
M30M **Minto, Yukon** 86.21 26 P P 15 37 32.9 0.0
M30M **Minto, Yukon** 86.21 26 P P 15 37 32.8 0.0
baz=251,SNR=7.4
N31M **Braeburn, Yuko** 86.32 27 IAmb IAmb 15 38 00.9
comp=Z,13nm,1.1s
N31M **Braeburn, Yuko** 86.32 27 P P 15 37 33.6 +0.2
baz=252
I29M **Ogilvie Camp,** 86.53 23 IAmb IAmb 15 37 38.8
comp=Z,5.8nm,0.7s
I29M **Ogilvie Camp,** 86.53 23 P P 15 37 34.6 +0.3
baz=250
GAR **Garm** 86.68 309 IAmb IAmb 15 37 36.4
comp=Z,10nm,0.8s
OTUK **Ortayu** 86.90 319 P P 15 37 35.2 -1.4
M31M **Drury Creek, Y** 87.16 27 IAmb IAmb 15 38 02.5
comp=Z,8.6nm,1.0s
M31M **Drury Creek, Y** 87.16 27 P P 15 37 37.5 +0.1
baz=253,SNR=6.2
KK31 **Karatay Array** 87.22 314 IAmb IAmb 15 37 40.9
comp=Z,11nm,1.0s
KK31 **Karatay Array** 87.22 314 *i* P P 15 37 37.6 -0.6
KKAR **Karatay Array** 87.22 314 P P 15 37 37.6 -0.6
KKAR **Karatay Array** 87.22 314 P P 15 37 37.6 -0.6
P33M **Teslin, Yukon** 87.34 29 P P 15 37 38.6 +0.1
baz=255
EPYK **Eagle Plains** 87.48 22 P P 15 37 39.1 +0.2
baz=251
S34M **Telegraph Cree** 87.61 31 P P 15 37 39.9 +0.2
baz=256
FARO **Faro, Yukon** 87.64 27 P P 15 37 40.4 +0.6
baz=254
T35M **Bob Quinn** 87.86 32 P P 15 37 41.5 +0.5
baz=257
DLBC **Dease Lake** 88.30 31 P P 15 37 42.9 -0.2
comp=Z,3.3nm,0.9s,baz=315,slow=4.3,SNR=4.9
comp=Z,3.3nm,0.9s
DLBC **Dease Lake** 88.30 31 IAmb IAmb 15 37 59.0
comp=Z,14nm,1.4s
DLBC **Dease Lake** 88.30 31 P P 15 37 43.3 +0.3
baz=257
MMPY **Sheldon Lake,** 88.68 27 P P 15 37 45.5 +0.8
baz=256
BRVK **Borovoye** 89.08 323 P P 15 37 45.0 -1.8
BRVK IAmb IAmb 15 37 48.2
comp=Z,11nm,0.9s
BRVK **Borovoye** 89.08 323 *ce* P P 15 37 45.5 -1.2
BRVK pmax pmax
comp=Z,13nm,1.0s
INK **Inuvik** 89.25 21 P P 15 37 46.8 -0.4
comp=Z,2.0nm,0.5s,baz=244,slow=3.8,SNR=3.0
comp=Z,2.0nm,0.5s
INK **Inuvik** 89.25 21 P P 15 37 46.1 -1.0
INK **Inuvik** 89.25 21 P P 15 37 48.4 +1.2
baz=254
J01E **Myrtle Point** 89.40 47 P P 15 37 48.9 +0.4
baz=262
CBB **Campbell River** 89.41 40 IAmb IAmb 15 37 50.8
comp=Z,22nm,1.4s
L02F **Cave Junction** 89.53 48 P P 15 37 50.0 +0.8
baz=262
K02D **Willamette Mer** 89.53 47 P P 15 37 49.8 +0.5
baz=262
I02E **Swisshome, OR** 89.59 46 P P 15 37 50.2 +0.9
baz=262
I03D **Drain, OR** 89.89 46 P P 15 37 51.4 +0.6
baz=263,SNR=5.9
YBH **Yreka Blue Hor** 90.12 48 P P 15 37 52.1 +0.1
comp=Z,7.1nm,0.9s,baz=250,slow=2.6,SNR=9.8
comp=Z,7.1nm,0.9s
YBH **Yreka Blue Hor** 90.12 48 P P 15 37 52.2 +0.2
YBH IAmb IAmb 15 37 54.9
comp=Z,11nm,1.1s
YBH **Yreka Blue Hor** 90.12 48 P P 15 37 52.2 +0.2
YBH pmax pmax
comp=Z,11nm,1.1s
G03D **McMinnville, O** 90.14 45 P P 15 37 52.4 +0.5
baz=263
H04D **Lebanon** 90.43 45 P P 15 37 53.7 +0.4
baz=263
L04D **Klamath Falls** 90.47 48 P P 15 37 53.7 0.0
baz=263,SNR=5.9
D03D **Eldon** 90.56 42 P P 15 37 54.1 +0.3
baz=263
I04A **Tendick Farm,** 90.58 46 P P 15 37 54.4 +0.3
baz=263
J04D **Umpqua Nationa** 90.73 47 P P 15 37 55.3 +0.3
baz=264,SNR=14
ORV **Oroville** 90.78 51 IAmb IAmb 15 37 57.4
comp=Z,6.3nm,1.0s
E04D **Cinebar** 90.79 43 P P 15 37 55.4 +0.5
baz=263
H04A **Detroit Lake** 90.84 45 P P 15 37 55.0 -0.3
H04A IAmb IAmb 15 37 56.5
comp=Z,8.8nm,1.0s
K04D **Chiloquin, OR** 90.92 47 P P 15 37 56.1 +0.3
baz=264
HOOD **Mount Hood Mea** 91.29 45 P P 15 37 57.1 -0.3
J05D **Fort Rock, OR** 91.37 47 P P 15 37 58.4 +0.5
baz=264,SNR=26
I05D **Terrebonne, OR** 91.41 46 P P 15 37 58.2 +0.3
baz=264
F05D **White Salmon** 91.48 44 P P 15 37 58.9 +0.7
baz=264
CMB **Columbia Colle** 91.50 52 P P 15 37 58.5 +0.1
CMB IAmb IAmb 15 38 00.3
comp=Z,7.4nm,1.1s
CMB **Columbia Colle** 91.50 52 P P 15 37 58.5 +0.1
CMB pmax pmax
comp=Z,7.0nm,1.2s
G05D **Wamic, OR** 91.52 45 P P 15 37 58.9 +0.5
baz=264
PINE **Pine Mountain** 91.64 46 P P 15 37 59.6 +0.4
PKM **Mcpherson Peak** 91.67 55 P P 15 37 59.7 +0.3
baz=265
BEKR **Beckworth** 91.69 50 IAmb IAmb 15 38 01.2
comp=Z,13nm,1.2s
EMB **Emerald Bay** 91.81 51 IAmb IAmb 15 38 03.6
comp=Z,5.0nm,0.7s
VCNR **Virginia City** 92.19 51 IAmb IAmb 15 38 03.9
comp=Z,11nm,1.1s
PAHR **Pah Rah Range** 92.42 51 P P 15 38 03.2 +0.4
PAHR IAmb IAmb 15 38 04.7
comp=Z,13nm,1.2s
YERR **Yerington** 92.48 51 IAmb IAmb 15 38 05.0
comp=Z,9.9nm,1.0s
MDPB **Devils Postpil** 92.49 53 IAmb IAmb 15 38 05.3
comp=Z,7.4nm,0.9s
OMMB **Old Mammoth Mi** 92.55 53 IAmb IAmb 15 38 05.7
comp=Z,11nm,1.3s
CIS **Catalina Islan** 92.69 57 P P 15 38 04.3 +0.2
baz=266
A36M **Sachs Harbour** 92.79 18 P P 15 38 04.6 +1.0
baz=262
C36M **Paulatuk** 92.82 21 IAmb IAmb 15 38 07.0
comp=Z,5.1nm,0.7s
C36M **Paulatuk** 92.82 21 P P 15 38 04.5 +0.7
baz=263
ISA **Isabella, Lake** 92.82 55 P P 15 38 05.0 +0.3
baz=266
RYN **Ryan** 93.01 52 P P 15 38 05.3 -0.3
RYN IAmb IAmb 15 38 07.5
comp=Z,10nm,1.0s
B08A **Colville Reser** 93.15 42 IAmb IAmb 15 38 06.9
comp=Z,7.3nm,1.1s
EDW2 **Edwards Air Fo** 93.16 55 P P 15 38 06.6 +0.4
baz=266
NVAR **Mina Array Bea** 93.17 52 P P 15 38 07.5 +1.1
comp=Z,8.9nm,0.8s,baz=253,slow=7.0,SNR=62
comp=Z,8.9nm,0.8s
G08A **Pilot Rock** 93.18 45 IAmb IAmb 15 38 07.7
comp=Z,10nm,1.1s
CWC **Cottonwood Cre** 93.20 54 P P 15 38 06.8 +0.3
baz=266
BFSC **Mount Baldy Ra** 93.39 56 P P 15 38 07.8 +0.4
baz=266
J08A **Circle Bar Ran** 93.39 47 P P 15 38 07.3 +0.2
J08A IAmb IAmb 15 38 08.8
comp=Z,9.3nm,0.8s
LRMC **Laurel Mtn Rad** 93.45 55 P P 15 38 08.3 +0.6
baz=266
LCH **Last Change Ra** 93.60 53 IAmb IAmb 15 38 10.1
comp=Z,5.8nm,1.2s
GRAC **Grapevine Rang** 93.81 53 IAmb IAmb 15 38 11.2
comp=Z,14nm,1.2s
GRAC **Grapevine Rang** 93.81 53 P P 15 38 09.9 +0.7
baz=266,SNR=6.2
QSM **Queen of Sheba** 94.14 54 IAmb IAmb 15 38 12.7
comp=Z,9.8nm,0.8s
GSC **Goldstone, Bar** 94.16 55 IAmb IAmb 15 38 13.0
comp=Z,6.9nm,1.1s
GSC **Goldstone, Bar** 94.16 55 P P 15 38 11.1 +0.2
baz=266
FURC **Furnace Creek,** 94.18 54 P P 15 38 11.4 +0.7
baz=267,SNR=7.7
BMO **Blue Mountains** 94.32 45 IAmb IAmb 15 38 12.7
comp=Z,11nm,1.1s
GWY **Greenwater Val** 94.32 54 IAmb IAmb 15 38 13.0
comp=Z,5.6nm,0.9s
MONP2 **Monument Peak** 94.33 57 P P 15 38 12.3 +0.5
baz=267
PFO **Pinyon Flats O** 94.34 57 P P 15 38 13.7 +1.9
comp=Z,2.2nm,0.4s,baz=290,slow=3.6,SNR=4.4
comp=Z,2.2nm,0.4s
PFO **Pinyon Flats O** 94.34 57 P P 15 38 12.3 +0.6
baz=267
TPFO **Pinon Flats** 94.34 57 P P 15 38 11.8 +0.1
baz=267
F10A **Beach Ranch, E** 94.43 44 IAmb IAmb 15 38 13.1
comp=Z,8.3nm,0.9s
HEC **Hector,Ludlow** 94.51 56 P P 15 38 12.6 +0.1
baz=267
NEW **Newport** 94.62 42 P P 15 38 10.8 -1.8
comp=Z,6.9nm,0.9s,baz=222,slow=3.8,SNR=6.3
comp=Z,6.9nm,0.9s
NEW **Newport** 94.62 42 IAmb IAmb 15 38 13.8
comp=Z,8.0nm,0.9s
NEW **Newport** 94.62 42 P P 15 38 12.8 +0.2
baz=267
TPNV **Topopah Spring** 94.70 53 P P 15 38 14.1 +0.7
baz=267
BELC **Belle Mtn. Jos** 94.75 56 P P 15 38 13.7 +0.1
baz=267
TUQ **Turquoise Moun** 94.88 55 P P 15 38 14.7 +0.5
baz=267
GMRC **Granite Mounta** 95.06 56 P P 15 38 15.1 +0.1
baz=267,SNR=5.9
AB31 **Akbulak array** 95.16 319 *i* P P 15 38 12.8 -2.2
ABKAR **Akbulak array** 95.16 319 P P 15 38 12.7 -2.3
BC3 **Big Chuckawall** 95.18 57 P P 15 38 15.4 -0.2
baz=267
PLID **Pearl Lake** 95.26 45 IAmb IAmb 15 38 16.5
comp=Z,5.7nm,0.8s
R11A **Troy Canyon, C** 95.29 52 IAmb IAmb 15 38 18.7
comp=Z,5.3nm,1.1s
R11A **Troy Canyon, C** 95.29 52 P P 15 38 15.9 -0.2
baz=268
IRM **Iron Mountain** 95.46 56 P P 15 38 17.0 +0.2
baz=267,SNR=6.1
SHPR **Sheep Range** 95.55 54 IAmb IAmb 15 38 19.7
comp=Z,8.7nm,0.9s
ELK **Elko** 95.66 50 P P 15 38 18.1 +0.3
comp=Z,1.9nm,0.9s,baz=248,slow=5.4,SNR=4.9
comp=Z,1.9nm,0.9s
ARU **Arti** 96.14 326 P P 15 38 18.3 -1.0
comp=Z,1.5nm,0.3s,baz=108,slow=20,SNR=4.9
comp=Z,1.5nm,0.3s
ARU **Arti** 96.14 326 *d* *i* P P 15 38 17.2 -2.1
ARU 15 42 10.4
ARU S SKSac 15 48 50.8 +0.5
ARU SS SS 15 55 59.5 -6.6
ARU pmax pmax
comp=Z,4.0nm,0.8s
ARU MLR MLR
comp=Z,267nm,22.0s
YKA **Yellowknife Ar** 96.31 28 P P 15 38 19.8 -0.1
comp=Z,1.9nm,0.6s,baz=271,slow=4.8,SNR=17
YKA PKiKP PKiKP 15 42 57.4 -0.1
comp=Z,0.9nm,0.7s,baz=270,slow=1.4,SNR=9.0
comp=Z,1.9nm,0.6s
YKA **Yellowknife Ar** 96.31 28 P P 15 38 19.2 -0.6
HLID **Hailey** 96.35 47 P P 15 38 20.0 -0.8
baz=269
AKTO **Aktyubinsk** 96.43 320 P P 15 38 20.6 -0.1
comp=Z,1.7nm,0.8s,baz=93,slow=6.1,SNR=4.4
comp=Z,1.7nm,0.8s
W13A **Hualapai Mount** 96.53 55 IAmb IAmb 15 38 24.4
comp=Z,4.3nm,0.9s
PSUT **Pine Spring** 96.66 52 IAmb IAmb 15 38 26.6
comp=Z,4.4nm,0.8s
CCUT **Cedar City** 97.02 53 P P 15 38 23.7 -0.4
CCUT IAmb IAmb 15 38 26.6
comp=Z,5.7nm,1.1s
ECSD **EROS Data Cent** 109.18 46 P PKiKP 15 43 20.9 -0.7
baz=281
WHTX **Lake Whitney,** 110.36 58 P PKiKP 15 43 23.2 -0.9
baz=277
FINES **FINESS Array B** 111.06 335 PKiKP PKiKP 15 43 24.2 -0.3
comp=Z,0.9nm,0.4s,baz=90,slow=4.2,SNR=10
EYMN **Ely** 111.62 40 P PKiKP 15 43 25.3 -0.7
baz=287
U40A **Yellville** 113.46 53 P PKiKP 15 43 29.3 -0.6
baz=281
AKASG **Malin Array Be** 114.28 324 PKP PKPdf 15 43 29.9 -1.1
comp=Z,1.1nm,0.4s,baz=48,slow=3.1,SNR=6.2
FRB **Frobisher Bay** 114.79 18 PKP PKiKP 15 43 30.6 -1.0
comp=Z,2.1nm,0.6s,baz=344,slow=7.4,SNR=3.8
BRTR **Keskin Array B** 114.86 311 PKP PKiKP 15 43 31.8 -0.9
comp=Z,1.6nm,0.5s,baz=97,slow=2.1,SNR=7.7
SORM **Soroca** 115.80 322 ⇓P PKiKP 15 43 33.3 -0.7
SORM **Soroca** 115.80 322 ⇓PKiKP PKiKP 15 43 33.3 -0.7
EIL **Elat** 115.86 300 PKP PKPdf 15 43 33.3 -1.4
comp=Z,3.3nm,0.6s,baz=346,slow=8.8,SNR=3.7
MDUB **Mudurnu** 116.46 313 PKPdf PKPdf 15 43 33.5 -2.1
SFJD **Kangerlussuaq** 116.47 10 PKP PKPdf 15 43 33.9 -0.8
comp=Z,3.8nm,0.5s,baz=35,slow=22,SNR=1.8
SFJD **Kangerlussuaq** 116.47 10 PKPdf 15 43 33.3 -1.4
HFS **Hagfors** 116.74 338 PKP PKPdf 15 43 33.3 -2.1
comp=Z,2.3nm,0.8s,baz=66,slow=3.7,SNR=4.9
NB2 **NORSAR Subarra** 117.00 340 PKPdf PKPdf 15 43 35.1 -0.9
comp=Z,0.9nm,0.6s,baz=42,slow=1.9
NOA **NORSAR Array B** 117.00 340 PKP PKPdf 15 43 34.1 -1.9
comp=Z,1.2nm,0.7s,baz=48,slow=1.9,SNR=4.3
CFR **Carcaliu** 117.05 319 ⇓P PKPdf 15 43 36.2 -0.2
CFR **Carcaliu** 117.05 319 ⇓PKiKP PKPdf 15 43 36.2 -0.2
HARR **Harsova** 117.37 318 ⇑P PKiKP 15 43 37.6 +0.5
HARR **Harsova** 117.37 318 ⇑PKiKP PKiKP 15 43 37.6 +0.5
WVT **Waverly** 117.47 52 P PKPdf 15 43 36.9 -0.7
baz=285
BIZ **Bicaz** 117.68 321 ⇑P PKiKP 15 43 38.0 +0.3
VRI **Vrincioaia** 117.71 320 ⇑P PKPdf 15 43 36.9 -0.9
VRI **Vrincioaia** 117.71 320 ⇑PKiKP PKPdf 15 43 36.9 -0.9
BURAR **Bucovina Array** 117.94 322 ⇑P PKiKP 15 43 38.9 +0.6
BURAR **Bucovina Array** 117.94 322 ⇑PKiKP PKiKP 15 43 38.9 +0.6
O48B **Farmland** 118.32 47 P PKPdf 15 43 38.7 -0.4
baz=289
MLR **Muntele Rosu** 118.36 320 ⇓P PKPdf 15 43 39.0 -0.2
MLR **Muntele Rosu** 118.36 320 PKP PKPdf 15 43 38.5 -0.7
comp=Z,2.1nm,0.5s,baz=96,slow=5.0,SNR=4.3
MLR **Muntele Rosu** 118.36 320 PKPdf PKPdf 15 43 38.0 -1.2
MLR **Muntele Rosu** 118.36 320 ⇓PKiKP PKPdf 15 43 39.0 -0.2
BOSA **Boshof** 118.54 234 PKP PKPdf 15 43 40.0 -0.1
comp=Z,2.0nm,0.4s,baz=127,slow=2.1,SNR=6.7
BOSA **Boshof** 118.54 234 PKPdf 15 43 39.3 -0.8
BOSA **Boshof** 118.54 234 PKiKP PKPdf 15 43 40.0 -0.1
P49A **Miami Univ. Ec** 118.87 47 PKPdf PKPdf 15 43 39.2 -1.0
P49A **Miami Univ. Ec** 118.87 47 P PKPdf 15 43 39.8 -0.4
baz=289
LRAL **Lakeview Retre** 118.88 55 PKPdf PKiKP 15 43 40.4 0.0
LRAL **Lakeview Retre** 118.88 55 P PKPdf 15 43 39.8 -0.6
baz=284
BRAL **Brewton** 119.25 57 P PKPdf 15 43 40.9 -0.2
baz=282
DRGR 119.84 322 ⇓P PKPdf 15 43 41.5 -0.4
DRGR 119.84 322 ⇓PKiKP PKPdf 15 43 41.5 -0.4
ACSO **Alum Creek Sta** 119.90 46 P PKPdf 15 43 42.2 0.0
baz=290
VLDQ **Val d'Or** 120.22 36 PKPdf PKPdf 15 43 40.9 -1.6
Z51A **Franklin** 120.30 54 PKPdf PKPdf 15 43 42.5 -0.6
GZR **Gura Zlata** 120.43 321 ⇑P PKPdf 15 43 42.9 -0.2
GZR **Gura Zlata** 120.43 321 ⇑PKiKP PKPdf 15 43 42.9 -0.2
LANS **Liptovska Anna** 120.60 326 *e*PKiKP PKiKP 15 43 44.3 +0.9
LANS **Liptovska Anna** 120.60 326 *e*PKP PKiKP 15 43 44.3 +0.9
TZTN **Tazewell** 120.68 50 P PKPdf 15 43 43.0 -0.7
baz=288
P52A **Corning** 120.72 47 P PKPdf 15 43 43.4 -0.3
baz=291
SIRR **Siria** 120.73 322 ⇓P PKiKP 15 43 43.8 +0.1
SADO **Sadowa** 120.74 40 PKP PKPdf 15 43 42.9 -0.8
comp=Z,10nm,0.6s,baz=328,slow=1.7,SNR=9.9
TKL **Tuckaleechee C** 120.77 51 PKP PKPdf 15 43 43.9 -0.1
comp=Z,4.9nm,0.5s,baz=188,slow=2.5,SNR=7.9
HERR **Hercyne** 120.88 320 ⇓P PKPdf 15 43 43.4 -0.5
KARP **Karpathos** 120.95 309 PKPdf PKPdf 15 43 42.9 -1.5
BZS **Buzias** 121.05 321 ⇑P PKPdf 15 43 43.8 -0.4
BZS **Buzias** 121.05 321 ⇑PKiKP PKPdf 15 43 43.8 -0.4
M53A **WI Miller and** 121.08 44 P PKPdf 15 43 44.1 -0.3
baz=293
O53A **New Philadelph** 121.16 46 P PKPdf 15 43 44.5 -0.1
baz=292
ERPA **Erie** 121.29 43 P PKPdf 15 43 44.7 0.0
baz=294
VYHS **Vyhne** 121.30 325 *e*PKiKP PKPdf 15 43 44.5 -0.1
VYHS **Vyhne** 121.30 325 *e*PKP PKPdf 15 43 44.5 -0.1
VTS **Vitosha** 121.31 317 ⇑P PKPdf 15 43 44.4 -0.6
VTS **Vitosha** 121.31 317 PKPdf PKPdf 15 43 43.5 -1.5
VTS **Vitosha** 121.31 317 ⇑PKiKP PKPdf 15 43 44.4 -0.6
MORC **Moravsky Berou** 121.33 327 ⇓P PKPdf 15 43 44.3 -0.3
MORC **Moravsky Berou** 121.33 327 ⇓PKiKP PKPdf 15 43 44.3 -0.3
MORC **Moravsky Berou** 121.33 327 *e*PKP PKPdf 15 43 44.7 0.0
MDVR **Moldovita** 121.37 320 ⇓P PKPdf 15 43 44.6 -0.3
MAUC **Maruska** 121.40 327 *e*PKPDF PKiKP 15 43 45.0 +0.1
MAUC *ex* x 15 43 59.5
KRLC **Kraliky** 121.57 328 *e*PKiKP PKPdf 15 43 45.1 0.0
KRLC **Kraliky** 121.57 328 *e*PKPDF PKPdf 15 43 45.1 0.0
OSTC **Ostas** 121.59 328 *e*PKPDF PKiKP 15 43 45.3 0.0
SCHQ **Schefferville** 121.64 25 PKP PKPdf 15 43 44.8 -0.3
comp=Z,3.8nm,0.7s,baz=51,slow=0.8,SNR=6.3
GOGA **Godfrey** 121.65 54 P PKPdf 15 43 45.7 0.0
baz=286
DPC **Dobruska-Polom** 121.66 328 *e*PKiKP PKiKP 15 43 45.5 +0.1
DPC **Dobruska-Polom** 121.66 328 *e*PKPDF PKiKP 15 43 45.5 +0.1
JAVC **Velka Javorina** 121.76 326 *e*PKP PKiKP 15 43 46.5 +0.8
BOVS **Bovan** 121.89 319 ⇑P PKPdf 15 43 44.9 -0.9
Q54A **Coxs Mills** 121.89 47 PKPdf PKPdf 15 43 46.1 +0.1
SANT **Santorini** 122.01 310 ⇓P PKPdf 15 43 45.1 -1.3
TIGA **Tifton** 122.07 56 P PKPdf 15 43 46.4 -0.2
baz=285
VRAC **Vranov** 122.10 327 *e*PKP PKiKP 15 43 46.3 0.0
MODS **Modra-Piesok** 122.24 326 *e*PKiKP PKiKP 15 43 46.6 0.0
MODS **Modra-Piesok** 122.24 326 *e*PKP PKiKP 15 43 46.6 0.0
KRUC **Moravsky** 122.35 327 *e*PKP PKPdf 15 43 46.4 -0.2

MCWV	**Mont Chateau** baz=293	122.35	46	P	PKPdf	15 43 46.8	-0.1
HODGE	**Hodges**	122.38	53	PKPdf	PKPdf	15 43 47.1	+0.1
FRGS	**Fruska Gora**	122.39	321	⇑P	PKiKP	15 43 47.1	+0.1
ZST	**Bratislava**	122.44	326	*e*PKiKP	PKiKP	15 43 47.1	+0.1
ZST	**Bratislava**	122.44	326	*e*PKP	PKiKP	15 43 47.0	+0.1
BRG	**Berggiesshubel**	122.57	330	*e*PKP	PKiKP	15 43 47.2	0.0
BRG	comp=Z,5.4nm,0.6s			Amp		15 43 48.5	
BRG	**Berggiesshubel**	122.57	330	*e*PKiKP	PKiKP	15 43 47.1	0.0
BRG	comp=Z,5.0nm,0.6s			pmax	pmax		
MORH	**Mrgy, Hungar**	122.58	323	⇓P	PKPdf	15 43 47.1	+0.1
CLL	**Collm**	122.77	331	*i* PKiKP	PKPdf	15 43 47.3	0.0
CLL	comp=Z,8.0nm,0.6s			pmax	pmax		
CLL	**Collm** comp=Z,8.0nm,0.6s	122.77	331	*i* PKPdf	PKPdf	15 43 47.3	0.0
IDI	**Anoyia**	122.79	309	⇑P	PKiKP	15 43 48.3	+0.1
IDI	**Anoyia**	122.79	309	PKPdf	PKPdf	15 43 46.8	-1.1
PRU	**Pruhonice**	122.80	329	*e*PKiKP	PKPdf	15 43 47.5	+0.1
PRU	**Pruhonice**	122.80	329	*e*PKPDF	PKPdf	15 43 47.5	+0.1
KMSC	**Kings Mountain** baz=289	122.82	51	P	PKPdf	15 43 47.8	-0.2
BLA	**Blacksburg** baz=291	122.83	49	P	PKPdf	15 43 47.8	-0.1
L56A	**Greenwood**	122.92	42	PKPdf	PKPdf	15 43 47.1	-0.9
RONA	**Rosalia, Austr** comp=Z,3.1nm,0.7s	123.16	326	*e*P	PKPdf	15 43 48.2	-0.1
CONA	**Conrad Observa** comp=Z,3.0nm,0.5s	123.28	326	*e*P	PKPdf	15 43 48.6	0.0
FNA	**Florina**	123.34	316	PKPdf	PKPdf	15 43 46.8	-2.0
FNA	**Florina**	123.34	316	PKiKP	PKPdf	15 43 46.8	-2.0
SSPA	**Standing Stone**	123.34	44	PKPdf	PKPdf	15 43 48.2	-0.6
SSPA	**Standing Stone** baz=295	123.34	44	P	PKPdf	15 43 48.7	-0.1
J57A	**Williamstown**	123.37	40	PKPdf	PKPdf	15 43 47.4	-1.3
CKRC	**Cesky Krumlov**	123.61	328	*e*PKPDF	PKPdf	15 43 49.1	+0.1
CKRC				*ex*	x	15 44 03.3	
LONY	**Lake Ozonia** baz=300	123.68	38	P	PKPdf	15 43 49.3	0.0
NKC	**Novy Kostel**	123.72	330	*e*PKiKP	PKiKP	15 43 49.4	-0.1
NKC	**Novy Kostel**	123.72	330	*e*PKPDF	PKiKP	15 43 49.4	-0.1
KHC	**Kasperske Hory**	123.81	328	PKPdf	PKPdf	15 43 49.2	-0.3
KHC	**Kasperske Hory**	123.81	328	*e*PKiKP	PKPdf	15 43 49.5	0.0
KHC	**Kasperske Hory**	123.81	328	*e*PKPDF	PKPdf	15 43 49.5	0.0
ARSA	**Arzberg** comp=Z,2.7nm,0.7s	123.85	325	*e*P	PKPdf	15 43 48.9	-0.7
GERES	**GERESS Array B** comp=Z,5.9nm,0.6s,baz=83,slow=1.5,SNR=39	123.92	328	PKP	PKPdf	15 43 49.8	0.0
GERES	**GERESS Array B**	123.92	328	PKPdf	PKPdf	15 43 48.4	-1.3
BINY	**Binghamton** baz=297	123.94	42	P	PKiKP	15 43 50.1	-0.1
PDG	**Podgorica**	124.04	319	⇑P	PKPdf	15 43 49.5	-0.5
MOA	**Molln** comp=Z,1.6nm,0.5s	124.20	327	*e*P	PKPdf	15 43 49.9	-0.4
PAGS	**Pennsylvania G**	124.32	44	PKPdf	PKPdf	15 43 49.5	-1.2
SOKA	**Soboth** comp=Z,1.9nm,0.7s	124.44	325	*e*P	PKPdf	15 43 49.5	-1.3
BIOA	**Bad Ischl, Aus** comp=Z,1.9nm,0.4s	124.64	327	*e*P	PKPdf	15 43 50.8	-0.2
CBN	**Corbin Frederi** baz=294	124.69	46	P	PKiKP	15 43 51.8	+0.1
OBKA	**Obir** comp=Z,4.5nm,1.1s	124.82	325	*e*P	PKiKP	15 43 51.9	0.0
KBA	**Koelnbreinsper**	125.16	326	*e*P	PKPdf	15 43 51.7	-0.5
TRY	**Troy**	125.19	40	PKPdf	PKPdf	15 43 52.2	0.0
MYKA	**Terra Mystica** comp=Z,2.0nm,0.4s	125.26	326	*e*P	PKPdf	15 43 51.9	-0.4
CNNC	**Cliffs of the** baz=291	125.44	50	P	PKPdf	15 43 53.1	+0.2
LBNH	**Lisbon**	125.50	38	PKPdf	PKPdf	15 43 52.6	-0.2
LBNH	**Lisbon**	125.50	38	PKiKP	PKPdf	15 43 52.6	-0.2
LBNH	**Lisbon** baz=302	125.50	38	P	PKiKP	15 43 53.3	+0.2
ABTA	**Abfaltersbach** comp=Z,4.2nm,0.7s	125.82	326	*e*P	PKPdf	15 43 52.7	-0.7
PAL	**Palisades** baz=298	125.88	42	P	PKiKP	15 43 54.0	0.0
L61B	**Northampton** baz=301	125.97	40	P	PKiKP	15 43 54.2	0.0
WATA	**Walderalm** comp=Z,5.6nm,0.5s	125.98	327	*e*P	PKPdf	15 43 53.6	-0.1
WTTA	**Wattenberg** comp=Z,5.3nm,0.5s	125.98	327	*e*P	PKPdf	15 43 53.4	-0.4
EKA	**Eskdalemuir Ar** comp=Z,1.8nm,0.4s,baz=20,slow=3.1,SNR=11	126.18	343	PKP	PKPdf	15 43 53.6	-0.1
MOTA	**Moosalm** comp=Z,7.9nm,0.5s	126.22	328	*e*P	PKPdf	15 43 53.9	-0.3
SQTA	**Sankt Quirin** comp=Z,4.7nm,0.5s	126.24	328	*e*P	PKPdf	15 43 53.5	-0.8
RETA	**Reutte** comp=Z,1.9nm,0.4s	126.31	328	*e*P	PKPdf	15 43 53.5	-0.8
BTNL	**Ternell**	126.47	333	*d*PKPdf	PKiKP	15 43 54.8	-0.1
PKME	**Peaks-Kenny Pk** baz=306	126.49	35	P	PKiKP	15 43 55.2	+0.2
MEM	**Membach**	126.51	334	*d*PKPdf	PKPdf	15 43 54.6	+0.1
FETA	**Feichten** comp=Z,3.9nm,0.6s,SNR=5.6	126.62	328	*i* P	PKPdf	15 43 55.1	+0.1
HRV	**Adam Dziewonsk**	126.65	39	⇑PKiKP	PKiKP	15 43 55.9	+0.4
HRV	**Adam Dziewonsk** baz=302	126.65	39	P	PKiKP	15 43 55.5	0.0
DAVA	**Damuels** comp=Z,7.0nm,0.6s,SNR=4.3	126.90	328	*i* P	PKPdf	15 43 55.8	+0.2
BATG	**Bathurst New B**	127.03	32	PKPdf	PKPdf	15 43 54.7	-0.9
WLF	**Walferdange**	127.12	333	*d*PKPdf	PKPdf	15 43 55.9	+0.2
DAVOX	**Davos/Dischmat** comp=Z,6.4nm,0.5s,baz=210,slow=2.3,SNR=11	127.22	328	PKP	PKiKP	15 43 56.5	-0.3
TIP	**Timpagrande**	127.23	316	⇓P	PKiKP	15 43 57.0	+0.2
BMRD	**Maredsous**	127.28	334	*d*PKPdf	PKPdf	15 43 56.0	0.0
TUE	**Stuetta**	127.70	328	PKPdf	PKPdf	15 43 55.9	-1.3
ATAH	**Atahualpa** comp=Z,12nm,0.7s,baz=43,slow=23,SNR=7.3	128.43	103	PKP	PKiKP	15 44 01.8	+1.4
TSUM	**Tsumeb**	128.78	240	PKPdf	PKPdf	15 44 00.1	+0.1
CMBC	**Cumbal**	130.29	93	*e*P	PKiKP	15 44 10.1	+5.9
POPC	**Popayan, Colom**	131.58	91	*e*P	PKPdf	15 44 04.3	-1.2
PLMC	**San Jos del P**	132.13	88	*e*P	PKiKP	15 44 07.2	-0.2
CBOC	**Ciudad Bolivar**	132.43	87	*e*P	PKPdf	15 44 06.2	-0.8
PB16	**IPOC Station P**	133.01	121	PKPdf	PKPdf	15 44 08.3	-0.2
PRAC	**Prado**	133.45	90	*e*P	PKPdf	15 44 08.9	+0.1
NORC	**Norcasia**	133.56	87	*e*P	PKPdf	15 44 08.1	-0.9
KEST	**Kesra** comp=Z,4.7nm,0.5s,baz=212,slow=2.2,SNR=6.5	134.04	76	PKP	PKiKP	15 44 10.1	-0.6
CHIC	**Chingaza**	134.65	89	*e*P	PKPdf	15 44 10.1	-1.5
LPAZ	**La Paz** comp=Z,4.9nm,0.8s,baz=262,slow=1.7,SNR=15	135.08	119	PKP	PKiKP	15 44 13.6	-0.4
LPAZ	**La Paz**	135.08	119	PKPpre	PKPpre	15 44 01.5	
SDV	**Santo Domingo** comp=Z,17nm,0.4s,baz=264,slow=2.2,SNR=8.8	137.77	83	PKP	PKPdf	15 44 17.9	+0.9
CPUP	**Villa Florida** comp=Z,2.1nm,0.7s,baz=242,slow=3.8,SNR=5.2	137.77	139	PKP	PKPdf	15 44 16.7	+0.2
ESDC	**Sonseca Array** comp=Z,1.0nm,0.6s,baz=16,slow=3.1,SNR=6.7	139.36	331	PKP	PKPdf	15 44 19.8	+0.8
ESDC	comp=Z,2.9nm,0.8s,baz=25,slow=7.1,SNR=17			PP	PP	15 47 13.7	+1.1
BAUV	**El Baul**	140.32	82	PKPpre	PKPpre	15 44 11.6	
SJG	**San Juan** comp=Z,14nm,0.2s,baz=27,slow=2.9,SNR=4.8	140.82	68	PKP	PKPdf	15 44 22.1	0.0
BIRV	**Birongo**	141.97	80	PKPpre	PKPpre	15 44 19.2	
MDT	**Midelt** comp=Z,7.3nm,0.8s,baz=256,slow=0.9,SNR=14	144.85	324	PKP	PKPbc	15 44 28.4	+0.1
MDT	**Midelt**	144.85	324	P	PKPbc	15 44 28.4	+0.2
CBE	**Ff, Capester**	145.53	69		PKPdf	15 44 29.1	-1.5
TZRR	**Tazzarine**	146.87	323	P	PKPbc	15 44 35.0	+0.5
SRHM	**Skhour des Reh**	146.95	327	P	PKPbc	15 44 35.0	+0.3
OUZM	**OUZ**	147.49	324	P	PKPbc	15 44 36.6	+0.3
OUK	**Oukaimeden**	147.89	326	P	PKiKP	15 44 39.0	-0.5
TOA0	**Torodi Ar. Sit**	149.49	287	PKPdf	PKPdf	15 44 35.6	-1.6
TORD	**Torodi Ar. Bea** comp=Z,23nm,0.4s,baz=95,slow=2.7,SNR=112	149.49	287	PKPbc	PKPbc	15 44 41.6	-0.1
TORD	**Torodi Ar. Bea**	149.49	287	PKPdf	PKPdf	15 44 35.9	-1.3
TORD				PKPbc	PKPbc	15 44 40.7	-1.0
BDFB	**Brasilia** comp=Z,14nm,0.7s,baz=242,slow=1.2,SNR=28	151.43	137	PKPbc	PKPbc	15 44 46.5	+0.1
BDFB	**Brasilia**	151.43	137	PKPbc	PKPbc	15 44 46.0	-0.4
BDFB	**Brasilia**	151.43	137	PKiKP	PKPbc	15 44 46.0	-0.4
KOWA	**Kowa**	154.49	293	PKPbc	PKPbc	15 44 51.7	-1.4
DBIC	**Dimbokro** comp=Z,1.8nm,0.6s,baz=202,slow=3.7,SNR=4.2	156.73	275	PKP	PKPdf	15 44 46.1	-1.6

*IDC **01** 15:25:54.8±1.0,55˚.49N×16˚.29E,h0km,mbtmp3.1/6, ML2.9/6 Error ellipse: s-maj=17.0km s-min=9.6km az=68.0*

*DNK **01** 15:25:54.6±1.4,55˚.49N×16˚.31E,h0km,Suspected explosion*
*UPP **01** 15:25:55.9±0.8,55˚.61N×16˚.46E,h0km,ML2.9,Suspected explosion*

ISC 01 15:25:52.2±0.9,55˚.41N±0˚.05×16˚.37E±0˚.06,h0km,n27, σ1§10/33,1D,Baltic Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BLEU	**Blekinge**	0.95	341	*i* P		Pg	15 26 10.5	+0.1
BLEU				P		Pg	15 26 10.6	+0.2
BLEU				S		Sg	15 26 22.3	-0.4
BLEU	**Blekinge**	0.95	341	P		Pg	15 26 10.6	+0.2
BLEU				S		Sg	15 26 22.3	-0.4
VXJU	**Vaexsjoe**	1.71	333	P		Pn	15 26 24.0	+0.8
VXJU	**Vaexsjoe**	1.71	333	P		Pn	15 26 24.0	+0.8
DEL	**Delary**	1.76	308	*i* P		Pb	15 26 25.5	+0.1
DEL				*i* S		Sn	15 26 45.5	-1.6
OSKU	**Oskarshamn**	1.80	355	P		Pn	15 26 25.0	+0.6
OSKU				S		Sn	15 26 48.0	+0.1
OSKU	**Oskarshamn**	1.80	355	P		Pn	15 26 25.0	+0.6
OSKU				S		Sn	15 26 48.0	+0.1
BYXU	**Byxelkrok**	1.92	10	P		Pn	15 26 27.3	+1.2
BYXU	**Byxelkrok**	1.92	10	P		Pn	15 26 27.3	+1.2
BJUU	**Bjuv**	2.00	291	*i* P		Pb	15 26 29.2	-0.3
VSTU	**Vaestervik**	2.26	2	P		Pn	15 26 32.3	+1.6
VSTU	**Vaestervik**	2.26	2	P		Pn	15 26 32.3	+1.6
GNOU	**Gnosjoe**	2.38	323	P		Pb	15 26 35.4	-0.5
GNOU	**Gnosjoe**	2.38	323	P		Pb	15 26 35.4	-0.5
GOTU	**Gotland**	2.59	27	P		Pn	15 26 36.3	+1.1
GOTU	**Gotland**	2.59	27	P		Pn	15 26 36.3	+1.1
LNKU	**Linkoeping**	2.86	351	P		Pn	15 26 40.4	+1.4
LNKU	**Linkoeping**	2.86	351	P		Pn	15 26 40.4	+1.4
ONAU	**Onsala**	3.17	311	*i* P		Pn	15 26 44.7	+1.4
HFS	**Hagfors**	4.95	344	Pn		Pn	15 27 08.1	+0.4
HFS	0.5nm,0.3s,baz=160,slow=15,SNR=10			Sn		Sn	15 28 05.1	-0.5
HFS	0.5nm,0.3s,baz=161,slow=23,SNR=1.7			Lg		Lg	15 28 24.0	
NOA	1.1nm,0.3s,baz=162,slow=29,SNR=3.9 0.9nm,0.3s **NORSAR Array B**	6.27	336	Pn		Pn	15 27 25.2	-0.6
NOA	0.1nm,0.3s,baz=147,slow=12,SNR=14			Lg		Lg	15 29 06.5	
GERES	0.1nm,0.3s,baz=171,slow=17,SNR=2.9 0.3nm,0.3s **GERESS Array B**	6.78	195	Pn		Pn	15 27 36.3	+3.4
FINES	0.2nm,0.3s,baz=8.4,slow=14,SNR=2.6 0.2nm,0.3s **FINESS Array B**	7.91	36	Pn		Pn	15 27 47.5	-0.8
AKASG	0.3nm,0.3s,baz=228,slow=12,SNR=8.9 0.6nm,0.3s **Malin Array Be**	9.06	116	Pn		Pn	15 28 03.8	-0.3
EKA	0.9nm,0.3s,baz=308,slow=12,SNR=4.3 0.2nm,0.3s **Eskdalemuir Ar**	11.11	278	Pn		Pn	15 28 32.4	+0.3
BLKB	0.4nm,0.3s,baz=88,slow=13,SNR=9.5 **Belogradchik**	12.48	158	⇓S		Sn	15 31 09.3	-1.3
ARCES	**ARCESS Array B** 0.1nm,0.3s,baz=195,slow=14,SNR=1.3	14.76	13	Pn		Pn	15 29 16.5	-5.5

*JMA **01** 15:30:08.1±0.2,24˚.N×122˚.3E±0˚.5,h34km,MV1.5/8, TAIWAN REGION*
*TAP **01** 15:30:08.7,24˚.06N×122˚.25E,h62km,ML3.2,D*

ISC 01 15:30:07.8±1.1,24˚.03N±0˚.03×122˚.32E±0˚.02,h30km±11km, n58,σ0§87/107,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
EWUT	**Wuta** baz=321	0.64	310	*e*P		Pn	15 30 21.6	+0.7
EWUT				*e*S		Sn	15 30 30.9	+0.8
ETL	**Fush Village** baz=273	0.65	282	*e*P		Pn	15 30 21.3	+0.4
ETL				*e*S		Sn	15 30 30.6	+0.4
ENA	**Nanau** baz=317	0.66	307	*e*P		Pn	15 30 21.8	+0.7
ENA				*e*S		Sn	15 30 31.3	+0.8
TWD	**Chiawan** baz=273	0.66	275	*e*P		Pb	15 30 20.4	-0.4
TWD				*e*S		Sn	15 30 30.7	+0.3
NACB	**Ninganchiao** baz=276	0.68	283	*e*P		Pb	15 30 21.0	-0.1
NACB				*e*S		Sn	15 30 31.4	+0.5
JYNG	**Yonagunijimaku**	0.71	54	P		Pn	15 30 20.7	-1.1
JYNG				*e*S		Sb	15 30 29.0	-2.2
TWC	**Suao** baz=327	0.72	324	*e*P		Pb	15 30 21.2	-0.6
TWC				*e*S		Sn	15 30 33.3	+1.3
YOJ	**Yonaguni jima** baz=59	0.77	56	*e*P		Pb	15 30 24.6	+2.0
YOJ				*e*S		Sn	15 30 36.1	+3.1
YOJ	**Yonaguni jima**	0.77	56	P		Pn	15 30 21.6	-0.9
YOJ				S		Sb	15 30 30.5	-2.2
ETLH	**Xiulin Townshi** baz=282	0.78	283	*e*P		Pn	15 30 22.7	-0.2
ETLH				*e*S		Sn	15 30 34.5	+0.8
NDS	**Dongshan** baz=322	0.81	318	P		Pb	15 30 23.2	-0.2
NDS				S		Sn	15 30 35.2	+0.9
ESL	**Shilin** baz=248	0.84	255	*e*P		Pn	15 30 23.6	+0.1
ESL				*e*S		Sn	15 30 35.1	+0.3
LATG	**Datong** baz=306	0.88	305	P		Pb	15 30 24.8	+0.2
LATG				S		Sb	15 30 37.0	+0.9
EGS		0.89	337	*e*P		Pb	15 30 25.1	+0.5
EGS	baz=340			*e*S		Sb	15 30 37.1	+1.0
EGFH	**Guangfu** baz=240	0.89	246	*e*P		Pn	15 30 24.9	+0.6
EGFH				*e*S		Sb	15 30 37.0	+0.8
ILA	**Ilan** baz=320	0.90	325	*e*S		Sb	15 30 38.4	+1.9
TWE	**Neicheng** baz=322	0.91	319	P		Pb	15 30 25.5	+0.4
TWE				S		Sb	15 30 37.3	+0.5
ENTT	**Nioudou** baz=313	0.92	312	P		Pb	15 30 25.2	+0.1
ENTT				*e*S		Sb	15 30 37.9	+0.9
NTC	**Toucheng** baz=343	0.94	332	*e*P		Pb	15 30 25.9	+0.4
NTC				*e*S		Sb	15 30 37.6	+0.1
NNSB	**Datong** baz=295	0.94	295	P		Pb	15 30 25.6	-0.1
NNSB				S		Sb	15 30 37.6	-0.2
NNS	**Nan Shan** baz=296	0.95	296	*e*P		Pb	15 30 25.9	0.0
NNS				*e*S		Sb	15 30 39.2	+1.0
WHF	**Hehuan Shan** baz=276	0.97	277	*e*P		Pn	15 30 25.7	-0.1
WHF				*e*S		Sb	15 30 39.6	+0.7
HGSD	**Ruisui** baz=230	0.98	237	*e*P		Pn	15 30 25.8	+0.4
HGSD				*e*S		Sb	15 30 39.5	+0.8
FUSB	**Fushanzhiwuyua** baz=313	0.99	318	P		Pb	15 30 26.7	+0.4
FUSB				S		Sb	15 30 38.7	-0.4
FUSS	**Fushou** baz=275	1.00	283	*e*P		Pb	15 30 26.9	+0.2
FUSS				*e*S		Sb	15 30 39.2	-0.5
TWB1	**Santiao Chiao** baz=346	1.02	343	*e*P		Pb	15 30 26.8	-0.1
TWB1				*e*S		Sb	15 30 39.1	-0.9
TIPB	**Shuangxi** baz=343	1.04	335	*e*P		Pb	15 30 27.0	-0.3
TIPB				*e*S		Sb	15 30 39.7	-0.9
CHGB	**Renai** baz=271	1.05	272	*e*P		Pn	15 30 26.8	+0.2
CHGB				*e*S		Sn	15 30 39.8	-0.5
OWD	**Renai** baz=271	1.05	266	*e*P		Pn	15 30 26.7	+0.1
OWD				*e*S		Sb	15 30 40.6	-0.3
EHY	**Hungye** baz=247	1.05	241	*e*P		Pn	15 30 27.0	+0.5
EHY				*e*S		Sn	15 30 39.8	-0.3
NWLT	**Wulai** baz=308	1.05	315	*e*P		Pb	15 30 27.5	+0.1
NWLT				*e*S		Sb	15 30 40.1	-0.8
TWT	**Tachien** baz=274	1.07	282	*e*P		Pb	15 30 27.7	0.0
TWT				*e*S		Sb	15 30 41.0	-0.5
YHNB	**Yeheng** baz=301	1.07	307	P		Pb	15 30 27.7	-0.1
YHNB				*e*S		Sn	15 30 40.0	-0.7
TDCB	**Techi** baz=274	1.08	282	*e*P		Pn	15 30 27.3	+0.2
TDCB				*e*S		Sn	15 30 40.7	-0.4
NSK	**Sanguang** baz=301	1.09	307	P		Pb	15 30 28.0	-0.1
NSK				S		Sn	15 30 40.0	-1.1
WUSB	**Renai** baz=272	1.10	268	*e*P		Pb	15 30 28.1	-0.2
WUSB				*e*S		Sb	15 30 42.6	+0.3
VWDT	**VWDT** baz=247	1.11	256	*e*P		Pn	15 30 27.7	+0.4
VWDT				*e*S		Sn	15 30 41.4	-0.2
YULB	**Yu-li** baz=244	1.13	236	*e*P		Pn	15 30 27.2	-0.4
YULB				*e*S		Sn	15 30 40.3	-1.8
SXI1	**Grass Mountain** baz=350	1.14	339	*e*P		Pb	15 30 28.2	-0.7
SXI1				*e*S		Sb	15 30 44.3	+1.0
EYUL	**Yuli** baz=242	1.14	234	*e*P		Pn	15 30 28.4	+0.7
EYUL				*e*S		Sn	15 30 43.3	+1.0
NWF	**Wu-fen Shan** baz=347	1.15	335	*e*P		Pb	15 30 29.0	-0.1
NWF				*e*S		Sb	15 30 44.6	+0.9
TWA	**Mucha** baz=326	1.16	325	*e*P		Pb	15 30 28.8	-0.4
TWA				*e*S		Sb	15 30 42.4	-1.5
NHDH	**Xindian Distri** baz=323	1.18	322	*e*S		Sb	15 30 44.2	-0.2
NFF	**Wufeng Townshi** baz=299	1.25	299	*e*P		Pb	15 30 30.4	-0.4
NFF				*e*S		Sb	15 30 45.5	-1.1
FULB	**Fuli** baz=219	1.25	229	*e*P		Pn	15 30 29.2	0.0
FULB				*e*S		Sn	15 30 45.8	+0.7
SSLB	**Suanglung** baz=258	1.27	259	*e*P		Pn	15 30 29.5	0.0
SSLB				*e*S		Sn	15 30 45.1	-0.5
WHP	**Taichung City** baz=276	1.28	281	*e*P		Pb	15 30 32.1	+0.8
WHP				*e*S		Sn	15 30 45.0	-0.8
WCS	**Beigang Elemen** baz=271	1.29	272	*e*P		Pn	15 30 30.6	+0.9
WCS				*e*S		Sn	15 30 45.8	-0.1
YM01	**YM01** baz=341	1.30	329	*e*S		Sn	15 30 45.7	-0.7
IRIF	**Iriomote-Funau**	1.33	76	*e*P		Pn	15 30 30.7	+0.4
LIOB	**Emei** baz=298	1.34	298	*e*P		Pb	15 30 31.5	-0.7
LIOB				*e*S		Sb	15 30 47.5	-1.5
NSTT	**Nanjuang** baz=297	1.34	297	*e*P		Pb	15 30 31.9	-0.5
NSTT				*e*S		Sb	15 30 48.0	-1.2
TWS1	**Kuangyinshan** baz=313	1.35	323	*e*P		Pb	15 30 31.7	-0.6
TWS1				*e*S		Sb	15 30 49.6	+0.3
ANP	**Anpu** baz=340	1.36	328	*e*S		Sb	15 30 48.1	-1.7
TWY	**Chenhua** baz=344	1.40	332	*e*S		Sb	15 30 49.0	-1.9
EDH	**Donghe** baz=213	1.40	222	*e*S		Sn	15 30 46.9	-1.9
JIJ	**Ishigaki jima**	1.70	78	P		Pn	15 30 35.1	-0.3
JISG	**Ishigakijimahi**	1.90	73	*e*P		Pn	15 30 38.4	+0.2

*NIED **01** 15:30:42.3,24˚.03N×122˚.34E,h12km,MW3.9,Moment Tensor Solution. s2 Moment tensor: Scale 10^14^Nm; Mrr3.02; Mθθ-3.63; Mφφ0.62; Mrθ6.35; Mθφ-0.08; Mφr4.05; Fault plane solution: M08.25000×10^14^ NP1: φs292.00000°,δ16.00000°,λ140.00000°. NP2: φs61.00000°,δ80.00000°,λ77.00000°.*
*JMA **01** 15:30:42.3±0.3,24˚.N±1˚×122˚.3E±0˚.4,h12km±3km, MV3.6/14, TAIWAN REGION*
*TAP **01** 15:30:42.4,24˚.00N×122˚.36E,h32km,ML4.0,D*

ISC 01 15:30:42.1±1.2,23˚.97N±0˚.02×122˚.36E±0˚.02,h21km±4km, n142,σ0§84/276,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
EHP	**Heping Village** baz=298	0.66	301	*e*S		Sn	15 31 04.5	-1.5
HWA	**Hwalien** baz=257	0.69	271	*e*P		Pn	15 30 55.7	-0.9
HWA				*e*S		Sb	15 31 04.7	+0.2
ETL	**Fush Village** baz=271	0.70	286	*e*P		Pn	15 30 55.8	-1.0
ETL				*e*S		Sb	15 31 05.7	+0.8
TWD	**Chiawan** baz=277	0.70	279	P		Pn	15 30 55.5	-1.4
TWD				S		Sb	15 31 05.3	+0.3
EWUT	**Wuta** baz=319	0.71	312	P		Pn	15 30 55.7	-1.3
EWUT				S		Sn	15 31 05.9	-1.4
JYNG	**Yonagunijimaku**	0.72	48	P		Pn	15 30 55.8	-1.3
JYNG				S		Sb	15 31 04.5	-1.0
ENA	**Nanau** baz=315	0.72	309	*e*P		Pn	15 30 56.3	-0.9
ENA				S		Sn	15 31 06.6	-1.0
NACB	**Ninganchiao** baz=271	0.72	287	P		Pn	15 30 55.3	-1.9
NACB				S		Sb	15 31 05.5	0.0
YOJ	**Yonaguni jima** baz=51	0.77	50	P		Pn	15 30 57.0	-0.9
YOJ				S		Sb	15 31 06.1	-0.8
YOJ	**Yonaguni jima**	0.77	50	P		Pn	15 30 56.8	-1.1
YOJ				*e*S		Sb	15 31 05.9	-1.0
TWC	**Suao** baz=323	0.79	324	P		Pn	15 30 56.4	-1.6
TWC				*e*S		Sb	15 31 06.5	-0.9
ETLH	**Xiulin Townshi** baz=274	0.83	287	P		Pn	15 30 57.5	-1.2

ETLH				S	**Sn**	**15 31 08.9**	**-1.5**
	baz=274								
ESL	**Shilin**	**0.86**	**260**	P	**Pn**	**15 30 57.5**	**-1.5**
ESL	baz=250			*e*S	**Sn**	**15 31 08.5**	**-2.4**
	baz=250								
NDS	**Dongshan**	**0.88**	**319**	P	**Pb**	**15 30 58.8**	**0.0**
NDS	baz=323			S	**Sb**	**15 31 11.3**	**+1.2**
	baz=323								
EGFH	**Guangfu**	**0.90**	**251**	*e*P	**Pn**	**15 30 59.3**	**-0.3**
EGFH	baz=249			S	**Sb**	**15 31 11.7**	**+1.1**
	baz=249								
LATG	**Datong**	**0.94**	**307**	P	**Pb**	**15 30 59.8**	**0.0**
LATG	baz=304			S	**Sb**	**15 31 13.1**	**+1.1**
	baz=304								
EGS		**0.95**	**336**	P	**Pb**	**15 31 00.3**	**+0.3**
EGS	baz=324			*e*S	**Sb**	**15 31 13.1**	**+0.9**
	baz=324								
ILA	**Ilan**	**0.97**	**325**	P	**Pb**	**15 31 00.3**	**+0.1**
ILA	baz=323			S	**Sb**	**15 31 13.2**	**+0.7**
	baz=323								
HGSD	**Ruisui**	**0.98**	**241**	*e*P	**Pn**	**15 30 60.0**	**-0.6**
HGSD	baz=240			*e*S	**Sn**	**15 31 13.4**	**-0.5**
	baz=240								
TWE	**Neicheng**	**0.98**	**320**	P	**Pb**	**15 31 00.5**	**+0.2**
TWE	baz=318			*e*S	**Sb**	**15 31 13.1**	**+0.3**
	baz=318								
ENTT	**Nioudou**	**0.98**	**313**	P	**Pn**	**15 31 00.2**	**-0.5**
ENTT	baz=298			*e*S	**Sb**	**15 31 13.9**	**+0.9**
	baz=298								
NNSB	**Datong**	**1.00**	**297**	P	**Pn**	**15 31 00.7**	**-0.4**
NNSB	baz=295			S	**Sn**	**15 31 13.6**	**-1.1**
	baz=295								
NTC	**Toucheng**	**1.00**	**332**	*e*P	**Pb**	**15 31 00.8**	**0.0**
NTC	baz=329			*e*S	**Sb**	**15 31 14.5**	**+0.9**
	baz=329								
NNS	**Nan Shan**	**1.01**	**298**	P	**Pn**	**15 31 00.9**	**-0.4**
NNS	baz=286			S	**Sb**	**15 31 14.5**	**+0.6**
	baz=286								
WHF	**Hehuan Shan**	**1.01**	**280**	P	**Pn**	**15 31 00.8**	**-0.7**
WHF	baz=267			S	**Sn**	**15 31 14.6**	**-0.8**
	baz=267								
EHY	**Hungye**	**1.05**	**244**	*e*P	**Pn**	**15 31 01.6**	**-0.1**
EHY	baz=258			*e*S	**Sn**	**15 31 15.2**	**-0.6**
	baz=258								
FUSS	**Fushou**	**1.05**	**286**	P	**Pn**	**15 31 01.5**	**-0.4**
FUSS	baz=283			S	**Sb**	**15 31 15.8**	**+0.5**
	baz=283								
FUSB	**Fushanzhiwuyua**	**1.05**	**319**	P	**Pb**	**15 31 01.5**	**-0.2**
FUSB	baz=316			S	**Sb**	**15 31 15.5**	**+0.4**
	baz=316								
OWD	**Renai**	**1.08**	**270**	*e*P	**Pn**	**15 31 01.8**	**-0.4**
OWD	baz=268			*e*S	**Sn**	**15 31 15.8**	**-0.8**
	baz=268								
CHGB	**Renai**	**1.08**	**275**	P	**Pn**	**15 31 01.9**	**-0.4**
CHGB	baz=273			S	**Sn**	**15 31 16.3**	**-0.5**
	baz=273								
TWB1	**Santiao Chiao**	**1.09**	**342**	P	**Pb**	**15 31 01.8**	**-0.5**
TWB1	baz=339			S	**Sb**	**15 31 16.3**	**+0.3**
	baz=339								
TIPB	**Shuangxi**	**1.11**	**334**	*e*P	**Pb**	**15 31 02.3**	**-0.3**
TIPB	baz=332			*e*S	**Sb**	**15 31 16.9**	**+0.2**
	baz=332								
TWT	**Tachien**	**1.11**	**285**	*e*P	**Pn**	**15 31 02.1**	**-0.6**
TWT	baz=272			*e*S	**Sb**	**15 31 17.6**	**+0.7**
	baz=272								
NWLT	**Wulai**	**1.12**	**316**	P	**Pn**	**15 31 02.3**	**-0.3**
NWLT	baz=313			*e*S	**Sb**	**15 31 17.5**	**+0.6**
	baz=313								
YULB	**Yu-li**	**1.13**	**240**	*e*P	**Pn**	**15 31 01.5**	**-1.2**
YULB	baz=254			*e*S	**Sn**	**15 31 17.0**	**-0.6**
	baz=254								
TDCB	**Techi**	**1.13**	**285**	*e*P	**Pn**	**15 31 02.6**	**-0.3**
TDCB	baz=273			*e*S	**Sb**	**15 31 17.4**	**+0.1**
	baz=273								
VWDT	**VWDT**	**1.13**	**259**	*e*P	**Pn**	**15 31 02.2**	**-0.6**
VWDT	baz=258			*e*S	**Sb**	**15 31 17.7**	**+0.5**
	baz=258								
WUSB	**Renai**	**1.13**	**271**	*e*P	**Pn**	**15 31 02.1**	**-0.8**
WUSB	baz=269			*e*S	**Sn**	**15 31 16.8**	**-1.1**
	baz=269								
EYUL	**Yuli**	**1.13**	**237**	*e*P	**Pn**	**15 31 02.7**	**-0.1**
EYUL	baz=237			*e*S	**Sb**	**15 31 17.8**	**+0.5**
	baz=237								
YHNB	**Yeheng**	**1.14**	**308**	P	**Pb**	**15 31 02.8**	**-0.3**
YHNB	baz=294			S	**Sb**	**15 31 17.6**	**+0.2**
	baz=294								
NSK	**Sanguang**	**1.15**	**308**	*e*P	**Pn**	**15 31 02.8**	**-0.3**
NSK	baz=305			*e*S	**Sb**	**15 31 18.0**	**+0.1**
	baz=305								
SXI1	**Grass Mountain**	**1.20**	**339**	*e*P	**Pn**	**15 31 03.4**	**-0.4**
SXI1	baz=336			*e*S	**Sb**	**15 31 19.7**	**+0.3**
	baz=336								
NWF	**Wu-fen Shan**	**1.22**	**335**	*e*P	**Pn**	**15 31 03.8**	**-0.2**
NWF	baz=331			*e*S	**Sb**	**15 31 19.9**	**+0.1**
	baz=331								
TWA	**Mucha**	**1.23**	**325**	*e*P	**Pb**	**15 31 05.1**	**+0.5**
TWA	baz=322			*e*S	**Sb**	**15 31 20.3**	**+0.3**
	baz=322								
FULB	**Fuli**	**1.24**	**232**	*e*P	**Pn**	**15 31 04.0**	**-0.3**
FULB	baz=220			*e*S	**Sn**	**15 31 19.7**	**-0.7**
	baz=220								
NHDH	**Xindian Distri**	**1.25**	**323**	*e*P	**Pb**	**15 31 05.2**	**+0.3**
NHDH	baz=319			*e*S	**Sb**	**15 31 20.6**	**+0.1**
	baz=319								
SSLB	**Suanglung**	**1.30**	**262**	*e*P	**Pn**	**15 31 05.1**	**+0.1**
SSLB	baz=261			*e*S	**Sn**	**15 31 21.6**	**-0.2**
	baz=261								
IRIF	**Iriomote-Funau**	**1.31**	**74**	*e*P	**Pb**	**15 31 06.5**	**+0.5**
IRIF				*e*S	**Sb**	**15 31 22.6**	**+0.3**
NFF	**Wufeng Townshi**	**1.31**	**301**	*e*P	**Pb**	**15 31 05.6**	**-0.5**
NFF	baz=298			*e*S	**Sn**	**15 31 21.2**	**-1.0**
	baz=298								
TAP	**Taipei**	**1.32**	**324**	*e*P	**Pn**	**15 31 05.2**	**-0.1**
TAP	baz=321			*e*S	**Sb**	**15 31 22.2**	**-0.4**
	baz=321								
WCS	**Beigang Elemen**	**1.32**	**274**	*e*P	**Pn**	**15 31 05.5**	**+0.1**
WCS	baz=266			*e*S	**Sb**	**15 31 22.5**	**-0.3**
	baz=266								
WHP	**Taichung City**	**1.32**	**284**	*e*P	**Pn**	**15 31 05.7**	**+0.2**
WHP	baz=272			*e*S	**Sn**	**15 31 22.1**	**-0.5**
	baz=272								
HATJ	**Hateruma jima**	**1.33**	**86**	*e*P	**Pb**	**15 31 06.7**	**+0.4**
HATJ				*e*S	**Sb**	**15 31 23.4**	**+0.5**
SMLT	**Sun Moon Lake**	**1.33**	**267**	*e*P	**Pn**	**15 31 05.5**	**-0.1**
SMLT	baz=265			*e*S	**Sn**	**15 31 22.6**	**-0.3**
	baz=265								
YUS	**Yu-Shan**	**1.37**	**250**	*e*P	**Pn**	**15 31 06.1**	**-0.4**
YUS	baz=249			*e*S	**Sn**	**15 31 23.7**	**-0.6**
	baz=249								
TYC	**Yuchr**	**1.37**	**268**	*e*P	**Pn**	**15 31 06.1**	**0.0**
TYC	baz=266			*e*S	**Sb**	**15 31 23.8**	**-0.4**
	baz=266								
YM01	**YM01**	**1.37**	**329**	*e*P	**Pn**	**15 31 06.2**	**0.0**
YM01	baz=341			*e*S	**Sb**	**15 31 24.0**	**-0.3**
	baz=341								
EDH	**Donghe**	**1.38**	**224**	*e*P	**Pn**	**15 31 05.5**	**-0.7**
EDH	baz=216			*e*S	**Sn**	**15 31 22.1**	**-1.8**
	baz=216								
LIOB	**Emei**	**1.40**	**299**	*e*P	**Pb**	**15 31 07.5**	**0.0**
LIOB	baz=297			*e*S	**Sb**	**15 31 24.3**	**-0.6**
	baz=297								
NSTT	**Nanjuang**	**1.40**	**298**	*e*P	**Pb**	**15 31 07.0**	**-0.6**
NSTT	baz=296			*e*S	**Sb**	**15 31 24.5**	**-0.5**
	baz=296								
TWS1	**Kuangyinshan**	**1.42**	**323**	*e*P	**Pn**	**15 31 06.7**	**0.0**
TWS1	baz=320			*e*S	**Sb**	**15 31 24.6**	**-0.8**
	baz=320								
ANP	**Anpu**	**1.43**	**328**	*e*P	**Pn**	**15 31 07.0**	**+0.1**
ANP	baz=339			*e*S	**Sn**	**15 31 23.8**	**-1.4**
	baz=339								
ELDTW	**Lidau**	**1.45**	**238**	*e*P	**Pn**	**15 31 07.1**	**-0.2**
ELDTW	baz=237			*e*S	**Sn**	**15 31 24.7**	**-1.0**
	baz=237								
NCU	**National Centr**	**1.46**	**313**	*e*P	**Pn**	**15 31 07.2**	**-0.1**
NCU	baz=310			*e*S	**Sn**	**15 31 25.5**	**-0.3**
	baz=310								
NCUH	**Zhongli**	**1.46**	**313**	*e*P	**Pn**	**15 31 07.5**	**+0.3**
NCUH	baz=310			*e*S	**Sb**	**15 31 26.1**	**-0.6**
	baz=310								
TWY	**Chenhua**	**1.47**	**332**	*e*P	**Pn**	**15 31 07.0**	**-0.4**
TWY	baz=329			*e*S	**Sb**	**15 31 26.2**	**-0.9**
	baz=329								
ALS	**Alishan**	**1.49**	**253**	*e*P	**Pn**	**15 31 06.9**	**-1.1**
ALS	baz=251			*e*S	**Sn**	**15 31 26.8**	**-0.3**
	baz=251								
SBCB	**Hsinchu**	**1.50**	**304**	*e*P	**Pb**	**15 31 08.7**	**-0.5**
SBCB	baz=301			*e*S	**Sb**	**15 31 26.7**	**-1.0**
	baz=301								
TWQ1	**Liyutan**	**1.50**	**285**	*e*P	**Pb**	**15 31 09.2**	**0.0**
TWQ1	baz=283			*e*S	**Sb**	**15 31 28.7**	**+1.0**
	baz=283								
WJS	**Zhushan**	**1.50**	**265**	*e*P	**Pb**	**15 31 08.8**	**-0.4**
WJS	baz=263			*e*S	**Sb**	**15 31 29.1**	**+1.3**
	baz=263								
HSN	**Hsinchu**	**1.51**	**304**	*e*P	**Pn**	**15 31 07.6**	**-0.4**
HSN	baz=302			*e*S	**Sn**	**15 31 26.4**	**-0.7**
	baz=302								
NSY	**Sanyi**	**1.52**	**287**	*e*P	**Pb**	**15 31 09.3**	**-0.3**
NSY	baz=285			*e*S	**Sb**	**15 31 28.9**	**+0.3**
	baz=285								
LDUT	**Ludao**	**1.52**	**212**	*e*P	**Pn**	**15 31 07.2**	**-0.9**
LDUT	baz=213			*e*S	**Sn**	**15 31 25.3**	**-2.1**
	baz=213								
WNT	**Mingjian**	**1.53**	**267**	*e*P	**Pb**	**15 31 10.1**	**+0.3**
WNT	baz=265			*e*S	**Sn**	**15 31 27.7**	**+0.1**
	baz=265								
JKRS	**Kuro-shima**	**1.53**	**80**	*e*P	**Pb**	**15 31 10.2**	**+0.4**
JKRS				*e*S	**Sb**	**15 31 29.1**	**+0.3**
NMLH	**Miaoli**	**1.54**	**292**	*e*P	**Pb**	**15 31 09.7**	**-0.2**
NMLH	baz=289			*e*S	**Sb**	**15 31 29.1**	**+0.2**
	baz=289								
LONT	**Longtian**	**1.54**	**227**	*e*P	**Pn**	**15 31 08.4**	**0.0**
LONT	baz=240			*e*S	**Sn**	**15 31 28.1**	**+0.3**
	baz=240								
TCU	**Taichung**	**1.55**	**277**	*e*P	**Pb**	**15 31 09.8**	**-0.2**
TCU	baz=275			*e*S	**Sb**	**15 31 29.3**	**+0.2**
	baz=275								
WDJ	**Dajia District**	**1.61**	**284**	*e*P	**Pn**	**15 31 09.5**	**+0.2**
WDJ	baz=282			*e*S	**Sb**	**15 31 30.0**	**-1.1**
	baz=282								
TWGBT	**Beinan**	**1.64**	**226**	*e*P	**Pn**	**15 31 08.7**	**-1.0**
TWGBT	baz=237			*e*S	**Sn**	**15 31 29.0**	**-1.2**
	baz=237								
TTN	**Taitung**	**1.64**	**223**	*e*P	**Pn**	**15 31 09.9**	**+0.2**
TTN	baz=214			*e*S	**Sn**	**15 31 29.9**	**-0.3**
	baz=214								
TWG	**Pinlang**	**1.64**	**226**	*e*P	**Pn**	**15 31 09.7**	**-0.1**
TWG	baz=237			*e*S	**Sn**	**15 31 29.7**	**-0.6**
	baz=237								
WCHH	**Zhanghua**	**1.65**	**274**	*e*P	**Pb**	**15 31 11.3**	**-0.4**
WCHH	baz=272			*e*S	**Sb**	**15 31 33.4**	**+1.3**
	baz=272								
STYH	**Taoyuan**	**1.65**	**242**	*e*P	**Pn**	**15 31 09.9**	**0.0**
STYH	baz=233			*e*S	**Sn**	**15 31 30.7**	**+0.2**
	baz=233								
JIJ	**Ishigaki jima**	**1.68**	**76**	P	**Pb**	**15 31 11.6**	**-0.7**
JIJ				*e*S	**Sb**	**15 31 31.9**	**-1.1**
WDLH	**Douliu**	**1.69**	**261**	*e*P	**Pb**	**15 31 12.4**	**-0.1**
WDLH	baz=260			*e*S	**Sb**	**15 31 33.8**	**+0.6**
	baz=260								
TPUB	**Ta-pu**	**1.72**	**248**	*e*P	**Pn**	**15 31 11.9**	**+1.0**
TPUB	baz=247			*e*S	**Sn**	**15 31 33.0**	**+0.8**
	baz=247								
WTP	**Ta-pu**	**1.75**	**246**	*e*P	**Pb**	**15 31 14.0**	**+0.4**
WTP	baz=246			*e*S	**Sb**	**15 31 35.2**	**0.0**
	baz=246								
CHN2	**Minshiung**	**1.78**	**256**	*e*P	**Pb**	**15 31 13.1**	**-0.9**
CHN2	baz=255			*e*S	**Sb**	**15 31 35.7**	**-0.1**
	baz=255								
WRL	**Guolierlin Hig**	**1.81**	**268**	*e*P	**Pb**	**15 31 13.6**	**-0.9**
WRL	baz=280			*e*S	**Sb**	**15 31 36.9**	**0.0**
	baz=280								
WTK	**Tuku**	**1.82**	**262**	*e*P	**Pb**	**15 31 13.9**	**-0.8**
WTK	baz=260			*e*S	**Sb**	**15 31 36.7**	**-0.4**
	baz=260								
CHY	**Chiayi**	**1.83**	**256**	*e*P	**Pn**	**15 31 13.7**	**+1.3**
CHY	baz=255			*e*S	**Sb**	**15 31 36.6**	**-0.8**
	baz=255								
CHN1	**Nanshi**	**1.85**	**245**	*e*P	**Pn**	**15 31 13.9**	**+1.3**
CHN1	baz=245			*e*S	**Sn**	**15 31 35.6**	**+0.2**
	baz=245								
TWK	**Hsinying**	**1.85**	**248**	*e*P	**Pb**	**15 31 14.9**	**-0.4**
TWK	baz=248			*e*S	**Sb**	**15 31 38.0**	**0.0**
	baz=248								
SGST	**Jiashian**	**1.85**	**242**	*e*P	**Pb**	**15 31 14.2**	**-1.1**
SGST	baz=233			*e*S	**Sb**	**15 31 37.3**	**-0.6**
	baz=233								
SNST	**Tainan City**	**1.86**	**247**	*e*P	**Pb**	**15 31 15.3**	**-0.1**
SNST	baz=246			*e*S	**Sb**	**15 31 39.0**	**+0.8**
	baz=246								
ECL	**Taimali**	**1.88**	**224**	*e*P	**Pn**	**15 31 11.9**	**-1.1**
ECL	baz=224			*e*S	**Sn**	**15 31 34.2**	**-1.9**
	baz=224								
JISG	**Ishigakijimahi**	**1.89**	**71**	*e*S	**Sn**	**15 31 35.8**	**-0.5**
WSF	**Szhu**	**1.98**	**261**	*e*P	**Pb**	**15 31 16.2**	**-1.3**
WSF	baz=260			*e*S	**Sb**	**15 31 41.8**	**0.0**
	baz=260								
SSD	**Sandimen**	**2.00**	**233**	*e*P	**Pn**	**15 31 15.0**	**+0.3**
SSD	baz=228			*e*S	**Sn**	**15 31 39.2**	**+0.2**
	baz=228								
ICHU	**Yijhu**	**2.00**	**253**	*e*P	**Pn**	**15 31 16.2**	**+1.5**
ICHU	baz=252			*e*S	**Sn**	**15 31 39.7**	**+0.7**
	baz=252								
WSL	**Shuilin Townsh**	**2.00**	**258**	*e*P	**Pn**	**15 31 16.1**	**+1.4**
WSL	baz=257			*e*S	**Sb**	**15 31 41.4**	**-0.8**
	baz=257								
TSMG	**Majia**	**2.01**	**232**	*e*P	**Pn**	**15 31 15.6**	**+0.7**
TSMG	baz=227			*e*S	**Sn**	**15 31 40.2**	**+0.7**
	baz=227								
SCST	**Cishan**	**2.02**	**238**	*e*P	**Pb**	**15 31 17.9**	**-0.2**
SCST	baz=227			*e*S	**Sb**	**15 31 44.5**	**+1.7**
	baz=227								
CHN3	**Shinhua**	**2.03**	**244**	*e*P	**Pb**	**15 31 18.0**	**-0.3**
CHN3	baz=244			*e*S	**Sb**	**15 31 43.9**	**+0.8**
	baz=244								
LAY	**Lan-yu**	**2.06**	**201**	*e*P	**Pn**	**15 31 15.6**	**+0.1**
LAY	baz=200			*e*S	**Sn**	**15 31 40.1**	**-0.5**
	baz=200								
CHN8	**Yiju**	**2.06**	**253**	*e*P	**Pn**	**15 31 17.1**	**+1.6**
CHN8	baz=252			*e*S	**Sb**	**15 31 43.6**	**-0.4**
	baz=252								
SHHT	**Tainan City**	**2.07**	**243**	*e*P	**Pb**	**15 31 18.7**	**-0.3**
SHHT	baz=243			*e*S	**Sb**	**15 31 44.5**	**+0.2**
	baz=243								
MASBT	**Mashibuluo**	**2.08**	**230**	*e*P	**Pn**	**15 31 16.2**	**+0.4**
MASBT	baz=226			*e*S	**Sn**	**15 31 41.5**	**+0.4**
	baz=226								
LYUB	**Lan-yu**	**2.08**	**200**	*e*P	**Pn**	**15 31 14.5**	**-1.3**
LYUB	baz=208			*e*S	**Sn**	**15 31 37.5**	**-3.6**
	baz=208								
TAW	**Tawu**	**2.09**	**220**	*e*P	**Pn**	**15 31 15.6**	**-0.3**
TAW	baz=230			*e*S	**Sn**	**15 31 39.6**	**-1.8**
	baz=230								
EAST	**Anshuo**	**2.10**	**222**	*e*P	**Pn**	**15 31 16.8**	**+0.7**
EAST	baz=222			*e*S	**Sn**	**15 31 41.4**	**-0.3**
	baz=222								
TWM1	**Shoushan**	**2.11**	**238**	*e*P	**Pb**	**15 31 18.6**	**-1.1**
TWM1	baz=237			*e*S	**Sb**	**15 31 45.6**	**+0.2**
	baz=237								
SGLT	**Jiouru**	**2.11**	**235**	*e*P	**Pb**	**15 31 18.9**	**-0.9**
SGLT	baz=235			*e*S	**Sb**	**15 31 44.7**	**-0.8**
	baz=235								
SCLT	**Jiali**	**2.13**	**249**	*e*S	**Sn**	**15 31 42.6**	**+0.2**
	baz=248								
SSPT	**Xinbi**	**2.21**	**228**	*e*P	**Pn**	**15 31 19.3**	**+1.7**
SSPT	baz=224			*e*S	**Sn**	**15 31 44.4**	**+0.1**
	baz=224								
JTJ	**Tarama**	**2.24**	**72**	*e*P	**Pn**	**15 31 19.6**	**+1.5**
JTJ				S	**Sb**	**15 31 46.7**	**-2.5**
SCZT	**Fangliau**	**2.25**	**226**	*e*P	**Pn**	**15 31 18.6**	**+0.4**
SCZT	baz=221			*e*S	**Sn**	**15 31 45.0**	**-0.3**
	baz=221								
SLIU	**Shizi**	**2.26**	**220**	*e*P	**Pn**	**15 31 19.1**	**+0.8**
SLIU	baz=229			*e*S	**Sn**	**15 31 45.5**	**0.0**
	baz=229								
SMST	**Manzhou Townsh**	**2.39**	**216**	*e*P	**Pn**	**15 31 20.7**	**+0.6**
SMST	baz=218			*e*S	**Sn**	**15 31 48.6**	**-0.1**
	baz=218								
WLCH	**Liuqiu**	**2.43**	**229**	*e*P	**Pb**	**15 31 24.2**	**-0.9**
WLCH	baz=244			*e*S	**Sb**	**15 31 54.9**	**+0.3**
	baz=244								
HEN	**Hengchun**	**2.46**	**218**	*e*P	**Pn**	**15 31 22.8**	**+1.8**
HEN	baz=219			*e*S	**Sn**	**15 31 50.8**	**+0.4**
	baz=219								
TSEB	**Hengchuen, Pin**	**2.46**	**213**	*e*P	**Pn**	**15 31 22.1**	**+1.1**
TSEB	baz=223			*e*S	**Sn**	**15 31 50.9**	**+0.5**
	baz=223								
TWKBT	**Hengchun**	**2.47**	**215**	*e*P	**Pn**	**15 31 22.0**	**+0.8**
TWKBT	baz=217			*e*S	**Sn**	**15 31 51.5**	**+0.8**
	baz=217								
TWK1	**Hengchun**	**2.47**	**216**	*e*P	**Pn**	**15 31 21.9**	**+0.7**
TWK1	baz=217			*e*S	**Sn**	**15 31 50.6**	**-0.2**
	baz=217								
WDGT	**Dungji**	**2.57**	**255**	*e*P	**Pn**	**15 31 23.1**	**+0.5**
WDGT	baz=244			*e*S	**Sn**	**15 31 53.2**	**0.0**
	baz=244								
PHUB	**P'eng-hu**	**2.59**	**260**	*e*P	**Pn**	**15 31 23.3**	**+0.5**
PHUB	baz=274			*e*S	**Sn**	**15 31 53.8**	**+0.1**
	baz=274								
PNG	**Penghu**	**2.60**	**262**	*e*P	**Pn**	**15 31 22.8**	**-0.1**
PNG	baz=261			*e*S	**Sn**	**15 31 54.1**	**+0.2**
	baz=261								
JIRB	**Irabujima**	**2.71**	**71**	*e*S	**Sn**	**15 31 58.6**	**+2.0**
VCHM	**Qimei**	**2.79**	**255**	*e*P	**Pn**	**15 31 26.1**	**+0.5**
VCHM	baz=255			*e*S	**Sn**	**15 31 58.2**	**-0.4**
	baz=255								
JIKM	**Ikemajima**	**2.80**	**70**	*e*S	**Sn**	**15 32 00.1**	**+1.1**
JMJ2	**Miyako jima3**	**2.82**	**74**	*e*S	**Sn**	**15 32 00.5**	**+1.2**
VWUC	**VWUC**	**2.84**	**292**	*e*P	**Pn**	**15 31 26.8**	**+0.6**
VWUC	baz=289			*e*S	**Sn**	**15 31 59.7**	**-0.1**
	baz=289								
MATB	**Ma-tsu**	**3.08**	**315**	*e*P	**Pn**	**15 31 30.1**	**+0.5**
MATB	baz=310			*e*S	**Sn**	**15 32 05.8**	**-0.1**
	baz=310								
PTMZ	**Houxiangcun**	**3.13**	**291**	*e*P	**Pn**	**15 31 31.0**	**+0.7**
PTMZ	baz=288			*e*S	**Sn**	**15 32 07.1**	**0.0**
	baz=288								
LYJJ	**Jianjiangzhen**	**3.48**	**318**	*e*P	**Pn**	**15 31 36.1**	**+1.0**
LYJJ	baz=313			*e*S	**Sn**	**15 32 15.6**	**-0.1**
	baz=313								
XPSS	**Dashiqiu**	**3.54**	**327**	*e*P	**Pn**	**15 31 36.6**	**+0.7**
KNM	**Kinmen**	**3.61**	**278**	*e*P	**Pn**	**15 31 39.4**	**+2.5**
KNM	baz=276			*e*S	**Sn**	**15 32 21.1**	**+2.2**
	baz=276								
KNMB	**Chin-men Tao**	**3.66**	**279**	*e*P	**Pn**	**15 31 38.3**	**+0.8**
KNMB	baz=277			*e*S	**Sn**	**15 32 19.9**	**-0.1**
	baz=277								
AXDP	**Jialang**	**4.10**	**284**	*e*P	**Pn**	**15 31 44.2**	**+0.5**
AXDP	baz=282			*e*S	**Sn**	**15 32 30.0**	**-1.0**
	baz=282								
ZPLA	**Ao Xicun**	**4.21**	**270**	*e*P	**Pn**	**15 31 46.1**	**+1.0**
ZPLA	baz=269			*e*S	**Sn**	**15 32 33.0**	**-0.8**
	baz=269								
SXFK	**Yanhouchang**	**4.91**	**301**	*e*P	**Pn**	**15 31 55.1**	**+0.4**
	baz=300								

*CRAAG **01** 15:31:58.9, 35°.88N×0°.64E, MI2.8, Hypocentre not reviewed by the ISC*

MDD 01 15:31:58.7±0.8,**35.83N**×**0.67E, h13**km±5km,**Mb3.7**/7, **M_mb2.9**/8,**7C, Error ellipse: s-maj=7.1km s-min=5.4km az=152.0, Northern Algeria**

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

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time	Res
OKGL	**Djebel Kef Gue**	**0.21**	**355**	P		15 32 03.7	
OJGS	**Djebel Guires**	**0.33**	**168**	P		15 32 08.6	
OJBR	**Djebel Berber**	**0.36**	**227**	P		15 32 05.0	
EANR	**'Ain N'Sour**	**0.37**	**71**	P		15 32 07.4	
ECHA	**Ech Chlef**	**0.65**	**60**	P		15 32 08.7	
ODJA	**Bouhanifia**	**0.83**	**233**	P		15 32 22.6	
EBNR	**Beni Rached**	**0.84**	**56**	P		15 32 17.2	
OTSS	**Djebel Tessala**	**1.31**	**246**	P		15 32 05.0	
EMUR	**La Murta**	**2.52**	**323**	Pn	Pn	15 32 38.0	-1.5
EMUR				⇑*i*Vmb_V		15 32 42.0	
	107nm,SNR=2.0						
EMUR				Sn	Sn	15 33 07.8	-2.4
ENIJ	**Nijar**	**2.58**	**297**	Pn	Pn	15 32 39.5	-0.7
ENIJ				⇑*i*Vmb_V		15 32 47.1	
	169nm,SNR=2.3						
ENIJ				Sn	Sn	15 33 05.9	-5.7
EALB	**Alboran**	**3.01**	**273**	Sn	Sn	15 33 18.9	-3.1
EBER	**Berja**	**3.06**	**291**	Pn	Pn	15 32 45.2	-1.8
EBER				⇑*i*Vmb_V		15 32 49.3	
	268nm,SNR=4.3						
EBER				Sn	Sn	15 33 18.8	-4.9
EIBI	**Ibiza**	**3.24**	**9**	Sn	Sn	15 33 23.6	-4.1
ETOB	**Tobarra**	**3.32**	**329**	Pn	Pn	15 32 50.9	+0.5
ETOB				⇑*i*Vmb_V		15 32 51.2	
	139nm,SNR=2.5						
ETOB				Sn	Sn	15 33 27.3	-2.5
ELGU	**Los Guajares,**	**3.62**	**288**	Pn	Pn	15 32 52.8	-1.7
ELGU				⇑*i*Vmb_V		15 32 54.0	
	162nm,SNR=3.5						
ELGU				Sn	Sn	15 33 32.6	-4.6
EADA	**Adamuz**	**4.80**	**301**	Pn	Pn	15 33 09.9	-0.9
EADA				⇑*i*Vmb_V		15 33 10.2	
	82nm,SNR=2.5						
ECAB	**El Cabril**	**5.36**	**297**	Pn	Pn	15 33 17.7	-0.9
ECAB				⇑*i*Vmb_V		15 33 20.0	
	38nm,SNR=1.1						
PAB	**San Pablo**	**5.44**	**315**	Pn	Pn	15 33 19.2	-0.4

*JMA **01** 15:32:26.5±0.2, 24°N±1°×122°.4E±0°.3, h18km±3km, MV3.5/15, TAIWAN REGION*
*TAP **01** 15:32:26.5, 24°.00N×122°.38E, h35km, ML3.8, D*
ISC 01 15:32:26.4±1.5**, 23°.96N**±0°.02×**122°.36E**±0°.02**, h20**km±5km**, n130,** σ0s.62/251**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.69**	**271**	*e*P	**Pb**	**15 32 39.1**	**-0.6**
	baz=258						
HWA				*e*S	**Sg**	**15 32 49.4**	**0.0**
	baz=258						
ETL	**Fush Village**	**0.70**	**286**	P	**Pb**	**15 32 39.9**	**-0.1**
	baz=270						
ETL				S	**Sb**	**15 32 49.4**	**+0.2**
	baz=270						
TWD	**Chiawan**	**0.71**	**280**	P	**Pb**	**15 32 40.0**	**0.0**
	baz=276						
TWD				S	**Sb**	**15 32 49.7**	**+0.3**
	baz=276						
EWUT	**Wuta**	**0.72**	**312**	P	**Pb**	**15 32 39.6**	**-0.6**
	baz=318						
EWUT				S	**Sg**	**15 32 50.0**	**-0.1**
	baz=318						
JYNG	**Yonagunijimaku**	**0.72**	**48**	P	**Pb**	**15 32 39.6**	**-0.7**
JYNG				*e*S	**Sb**	**15 32 48.3**	**-1.5**
NACB	**Ninganchiao**	**0.73**	**287**	P	**Pb**	**15 32 39.9**	**-0.6**
	baz=272						
NACB				S	**Sg**	**15 32 50.6**	**+0.1**
	baz=272						
ENA	**Nanau**	**0.73**	**309**	P	**Pb**	**15 32 39.9**	**-0.5**
	baz=315						
ENA				S	**Sg**	**15 32 50.8**	**+0.2**
	baz=315						
YOJ	**Yonaguni jima**	**0.77**	**50**	P	**Pb**	**15 32 40.9**	**-0.3**
	baz=60						
YOJ				*e*S	**Sn**	**15 32 53.1**	**-0.2**
	baz=60						
YOJ	**Yonaguni jima**	**0.77**	**50**	P	**Pb**	**15 32 40.7**	**-0.5**
YOJ				S	**Sb**	**15 32 49.9**	**-1.4**
TWC	**Suao**	**0.80**	**324**	P	**Pb**	**15 32 40.3**	**-1.2**
	baz=322						
TWC				*e*S	**Sb**	**15 32 52.1**	**+0.1**
	baz=322						
ETLH	**Xiulin Townshi**	**0.84**	**287**	P	**Pb**	**15 32 42.0**	**-0.4**
	baz=274						
ETLH				*e*S	**Sb**	**15 32 53.7**	**+0.4**
	baz=274						
ESL	**Shilin**	**0.86**	**260**	*e*P	**Pb**	**15 32 41.9**	**-0.8**
	baz=251						
ESL				*e*S	**Sb**	**15 32 53.8**	**0.0**
	baz=251						
NDS	**Dongshan**	**0.89**	**319**	P	**Pb**	**15 32 42.6**	**-0.5**
	baz=316						
NDS				*e*S	**Sg**	**15 32 55.1**	**-0.5**
	baz=316						
EGFH	**Guangfu**	**0.90**	**251**	*e*P	**Pb**	**15 32 43.1**	**-0.3**
	baz=249						
EGFH				*e*S	**Sg**	**15 32 55.8**	**-0.2**
	baz=249						
LATG	**Datong**	**0.95**	**307**	P	**Pb**	**15 32 44.0**	**-0.3**
	baz=304						
LATG				S	**Sn**	**15 32 58.0**	**+0.1**
	baz=304						
EGS		**0.96**	**336**	*e*P	**Pb**	**15 32 44.3**	**-0.1**
	baz=324						
EGS				*e*S	**Sg**	**15 32 57.6**	**-0.3**
	baz=324						
ILA	**Ilan**	**0.98**	**325**	P	**Pb**	**15 32 44.4**	**-0.2**
	baz=322						
ILA				*e*S	**Sn**	**15 32 58.0**	**-0.3**
	baz=322						
HGSD	**Ruisui**	**0.98**	**242**	*e*P	**Pb**	**15 32 44.8**	**+0.1**
	baz=240						
HGSD				*e*S	**Sn**	**15 32 58.3**	**0.0**
	baz=240						
TWE	**Neicheng**	**0.99**	**320**	P	**Pb**	**15 32 44.5**	**-0.3**
	baz=318						
TWE				*e*S	**Sb**	**15 32 57.7**	**+0.3**
	baz=318						
ENTT	**Nioudou**	**0.99**	**313**	P	**Pb**	**15 32 44.6**	**-0.3**
	baz=299						
ENTT				*e*S	**Sn**	**15 32 58.3**	**-0.4**
	baz=299						
NNSB	**Datong**	**1.01**	**298**	P	**Pb**	**15 32 44.9**	**-0.4**
	baz=286						
NNSB				S	**Sb**	**15 32 58.1**	**-0.1**
	baz=286						
NTC	**Toucheng**	**1.01**	**331**	*e*P	**Pb**	**15 32 44.8**	**-0.5**
	baz=329						
NTC				*e*S	**Sg**	**15 32 59.7**	**+0.3**
	baz=329						
WHF	**Hehuan Shan**	**1.02**	**281**	*e*P	**Pb**	**15 32 45.1**	**-0.5**
	baz=268						
WHF				*e*S	**Sb**	**15 32 58.6**	**-0.1**
	baz=268						
NNS	**Nan Shan**	**1.02**	**298**	P	**Pb**	**15 32 45.1**	**-0.3**
	baz=287						
NNS				S	**Sb**	**15 32 59.0**	**+0.5**
	baz=287						
EHY	**Hungye**	**1.05**	**245**	*e*P	**Pb**	**15 32 45.6**	**-0.4**
	baz=256						
EHY				*e*S	**Sb**	**15 32 59.9**	**+0.5**
	baz=256						
FUSS	**Fushou**	**1.06**	**286**	*e*P	**Pb**	**15 32 46.0**	**-0.2**
	baz=283						
FUSS				*e*S	**Sb**	**15 32 60.0**	**+0.2**
	baz=283						
FUSB	**Fushanzhiwuyua**	**1.06**	**319**	P	**Pb**	**15 32 46.1**	**-0.1**
	baz=316						
FUSB				S	**Sb**	**15 32 60.0**	**+0.3**
	baz=316						
OWD	**Renai**	**1.08**	**270**	*e*P	**Pb**	**15 32 46.0**	**-0.6**
	baz=268						
OWD				*e*S	**Sb**	**15 33 00.1**	**-0.3**
	baz=268						
CHGB	**Renai**	**1.09**	**275**	P	**Pb**	**15 32 46.0**	**-0.8**
	baz=273						
CHGB				*e*S	**Sb**	**15 33 00.9**	**+0.3**
	baz=273						
TWB1	**Santiao Chiao**	**1.09**	**342**	*e*P	**Pn**	**15 32 45.8**	**-0.9**
	baz=355						
TWB1				*e*S	**Sn**	**15 33 00.9**	**-0.3**
	baz=355						
TIPB	**Shuangxi**	**1.12**	**334**	*e*P	**Pn**	**15 32 46.4**	**-0.6**
	baz=332						
TIPB				*e*S	**Sb**	**15 33 01.0**	**-0.3**
	baz=332						
TWT	**Tachien**	**1.12**	**285**	P	**Pb**	**15 32 47.4**	**+0.1**
	baz=274						
TWT				*e*S	**Sn**	**15 33 02.2**	**+0.1**
	baz=274						
NWLT	**Wulai**	**1.13**	**316**	*e*P	**Pn**	**15 32 46.8**	**-0.4**
	baz=313						
NWLT				*e*S	**Sn**	**15 33 01.9**	**-0.1**
	baz=313						
YULB	**Yu-li**	**1.13**	**240**	*e*P	**Pn**	**15 32 46.6**	**-0.5**
	baz=253						
YULB				*e*S	**Sb**	**15 33 01.3**	**-0.2**
	baz=253						
EYUL	**Yuli**	**1.14**	**238**	*e*P	**Pn**	**15 32 47.3**	**+0.1**
	baz=236						
EYUL				*e*S	**Sn**	**15 33 02.6**	**+0.4**
	baz=236						
VWDT	**VWDT**	**1.14**	**260**	*e*P	**Pb**	**15 32 47.5**	**+0.2**
	baz=258						
VWDT				*e*S	**Sb**	**15 33 01.9**	**+0.2**
	baz=258						
TDCB	**Techi**	**1.14**	**285**	P	**Pn**	**15 32 46.9**	**-0.5**
	baz=274						
TDCB				*e*S	**Sb**	**15 33 02.1**	**+0.3**
	baz=274						
WUSB	**Renai**	**1.14**	**272**	P	**Pn**	**15 32 47.1**	**-0.2**
	baz=269						
WUSB				*e*S	**Sb**	**15 33 02.1**	**+0.2**
	baz=269						
YHNB	**Yeheng**	**1.14**	**308**	*e*P	**Pn**	**15 32 47.0**	**-0.3**
	baz=305						
YHNB				*e*S	**Sn**	**15 33 02.3**	**-0.2**
	baz=305						
NSK	**Sanguang**	**1.16**	**308**	P	**Pn**	**15 32 47.2**	**-0.4**
	baz=305						
NSK				*e*S	**Sb**	**15 33 02.1**	**-0.3**
	baz=305						
SXI1	**Grass Mountain**	**1.21**	**339**	P	**Pn**	**15 32 47.2**	**-1.1**
	baz=336						
SXI1				*e*S	**Sn**	**15 33 04.5**	**+0.3**
	baz=336						
NWF	**Wu-fen Shan**	**1.22**	**335**	*e*P	**Pn**	**15 32 47.9**	**-0.6**
	baz=332						
NWF				*e*S	**Sn**	**15 33 04.7**	**+0.1**
	baz=332						
TWA	**Mucha**	**1.24**	**325**	*e*P	**Pn**	**15 32 48.2**	**-0.4**
	baz=322						
TWA				*e*S	**Sb**	**15 33 04.6**	**-0.1**
	baz=322						
FULB	**Fuli**	**1.24**	**232**	*e*P	**Pn**	**15 32 48.0**	**-0.7**
	baz=221						
FULB				*e*S	**Sn**	**15 33 05.0**	**+0.2**
	baz=221						
NHDH	**Xindian Distri**	**1.25**	**323**	*e*P	**Pb**	**15 32 49.5**	**+0.1**
	baz=320						
NHDH				*e*S	**Sn**	**15 33 05.1**	**0.0**
	baz=320						
SSLB	**Suanglung**	**1.30**	**263**	*e*P	**Pn**	**15 32 49.5**	**0.0**
	baz=261						
SSLB				*e*S	**Sn**	**15 33 05.9**	**-0.4**
	baz=261						
IRIF	**Iriomote-Funau**	**1.30**	**73**	P	**Pn**	**15 32 49.9**	**+0.4**
IRIF				*e*S	**Sb**	**15 33 07.1**	**+0.5**
NFF	**Wufeng Townshi**	**1.32**	**301**	*e*P	**Pn**	**15 32 49.7**	**0.0**
	baz=298						
NFF				*e*S	**Sn**	**15 33 06.7**	**-0.1**
	baz=298						
HATJ	**Hateruma jima**	**1.32**	**86**	P	**Pn**	**15 32 49.8**	**0.0**
HATJ				*e*S	**Sb**	**15 33 08.0**	**+0.9**
TAP	**Taipei**	**1.32**	**324**	*e*P	**Pn**	**15 32 49.7**	**-0.1**
	baz=321						
TAP				*e*S	**Sn**	**15 33 06.7**	**-0.2**
	baz=321						
WCS	**Beigang Elemen**	**1.33**	**274**	*e*P	**Pn**	**15 32 49.9**	**+0.1**
	baz=267						
WCS				*e*S	**Sb**	**15 33 07.6**	**+0.4**
	baz=267						
WHP	**Taichung City**	**1.33**	**284**	*e*P	**Pb**	**15 32 51.2**	**+0.4**
	baz=273						
WHP				*e*S	**Sb**	**15 33 07.5**	**+0.1**
	baz=273						
SMLT	**Sun Moon Lake**	**1.34**	**267**	*e*P	**Pn**	**15 32 49.6**	**-0.5**
	baz=265						
SMLT				*e*S	**Sn**	**15 33 07.0**	**-0.4**
	baz=265						
YUS	**Yu-Shan**	**1.38**	**250**	*e*P	**Pn**	**15 32 50.0**	**-0.9**
	baz=249						
YUS				*e*S	**Sn**	**15 33 08.4**	**-0.4**
	baz=249						
TYC	**Yuchr**	**1.38**	**268**	*e*P	**Pn**	**15 32 50.4**	**-0.1**
	baz=266						
TYC				*e*S	**Sn**	**15 33 08.0**	**-0.2**
	baz=266						
YM01	**YM01**	**1.38**	**329**	*e*P	**Pn**	**15 32 50.7**	**+0.1**
	baz=341						
YM01				*e*S	**Sb**	**15 33 08.5**	**-0.3**
	baz=341						
EDH	**Donghe**	**1.38**	**225**	*e*P	**Pn**	**15 32 48.9**	**-1.7**
	baz=216						
EDH				*e*S	**Sn**	**15 33 06.5**	**-1.8**
	baz=216						
LIOB	**Emei**	**1.40**	**299**	P	**Pb**	**15 32 51.6**	**-0.3**
	baz=297						
LIOB				*e*S	**Sn**	**15 33 09.1**	**+0.2**
	baz=297						
NSTT	**Nanjuang**	**1.41**	**298**	*e*P	**Pb**	**15 32 51.5**	**-0.5**
	baz=296						
NSTT				*e*S	**Sn**	**15 33 08.3**	**-0.7**
	baz=296						
TWS1	**Kuangyinshan**	**1.42**	**323**	*e*P	**Pn**	**15 32 51.2**	**0.0**
	baz=335						
TWS1				*e*S	**Sn**	**15 33 09.3**	**0.0**
	baz=335						
ANP	**Anpu**	**1.44**	**328**	*e*P	**Pn**	**15 32 51.0**	**-0.5**
	baz=339						
ANP				*e*S	**Sn**	**15 33 09.1**	**-0.8**
	baz=339						
ELDTW	**Lidau**	**1.45**	**238**	*e*P	**Pn**	**15 32 51.2**	**-0.4**
	baz=237						
ELDTW				*e*S	**Sn**	**15 33 09.7**	**-0.5**
	baz=237						
NCU	**National Centr**	**1.47**	**313**	*e*S	**Sn**	**15 33 10.1**	**-0.3**
	baz=311						
NCUH	**Zhongli**	**1.47**	**313**	*e*P	**Pn**	**15 32 51.3**	**-0.5**
	baz=310						
NCUH				*e*S	**Sn**	**15 33 10.5**	**+0.1**
	baz=310						
TWY	**Chenhua**	**1.48**	**332**	*e*P	**Pb**	**15 32 52.7**	**-0.5**
	baz=330						
TWY				*e*S	**Sn**	**15 33 10.5**	**-0.2**
	baz=330						
ALS	**Alishan**	**1.50**	**253**	*e*P	**Pn**	**15 32 52.3**	**-0.1**
	baz=251						
ALS				*e*S	**Sn**	**15 33 11.1**	**-0.4**
	baz=251						
WJS	**Zhushan**	**1.50**	**265**	*e*P	**Pn**	**15 32 52.2**	**0.0**
	baz=263						
WJS				*e*S	**Sn**	**15 33 11.6**	**+0.3**
	baz=263						
SBCB	**Hsinchu**	**1.50**	**304**	*e*P	**Pn**	**15 32 52.3**	**+0.1**
	baz=301						
SBCB				*e*S	**Sn**	**15 33 11.6**	**+0.3**
	baz=301						
LDUT	**Ludao**	**1.52**	**213**	*e*P	**Pn**	**15 32 51.5**	**-1.1**
	baz=211						
LDUT				*e*S	**Sn**	**15 33 09.4**	**-2.3**
	baz=211						
NSY	**Sanyi**	**1.53**	**287**	*e*P	**Pn**	**15 32 52.3**	**-0.3**
	baz=285						
NSY				*e*S	**Sn**	**15 33 11.4**	**-0.6**
	baz=285						
JKRS	**Kuro-shima**	**1.53**	**79**	P	**Pn**	**15 32 52.7**	**+0.1**
JKRS				*e*S	**Sb**	**15 33 13.1**	**+0.1**
WNT	**Mingjian**	**1.54**	**267**	*e*P	**Pn**	**15 32 52.5**	**-0.2**
	baz=265						
WNT				*e*S	**Sn**	**15 33 12.4**	**+0.3**
	baz=265						
NMLH	**Miaoli**	**1.54**	**292**	*e*P	**Pn**	**15 32 52.9**	**+0.1**
	baz=290						
NMLH				*e*S	**Sn**	**15 33 12.5**	**+0.2**
	baz=290						
LONT	**Longtian**	**1.54**	**227**	*e*P	**Pn**	**15 32 53.0**	**+0.2**
	baz=239						
LONT				*e*S	**Sn**	**15 33 13.0**	**+0.6**
	baz=239						
TCU	**Taichung**	**1.55**	**277**	*e*P	**Pn**	**15 32 53.3**	**+0.4**
	baz=275						
TCU				*e*S	**Sn**	**15 33 12.7**	**+0.2**
	baz=275						
WDJ	**Dajia District**	**1.62**	**284**	*e*P	**Pn**	**15 32 53.7**	**-0.2**
	baz=282						
WDJ				*e*S	**Sn**	**15 33 14.8**	**+0.6**
	baz=282						
TWGBT	**Beinan**	**1.64**	**226**	*e*P	**Pn**	**15 32 53.4**	**-0.7**
	baz=238						
TWGBT				*e*S	**Sn**	**15 33 14.3**	**-0.3**
	baz=238						
TTN	**Taitung**	**1.64**	**223**	*e*S	**Sn**	**15 33 14.8**	**+0.1**
	baz=212						
TWG	**Pinlang**	**1.64**	**226**	*e*P	**Pn**	**15 32 54.0**	**-0.1**
	baz=238						
TWG				*e*S	**Sn**	**15 33 15.0**	**+0.3**
	baz=238						
WCHH	**Zhanghua**	**1.65**	**274**	*e*S	**Sn**	**15 33 15.3**	**+0.4**
	baz=286						
STYH	**Taoyuan**	**1.66**	**242**	*e*P	**Pn**	**15 32 54.5**	**+0.1**
	baz=233						
STYH				*e*S	**Sn**	**15 33 15.1**	**+0.1**
	baz=233						
JIJ	**Ishigaki jima**	**1.68**	**76**	P	**Pn**	**15 32 55.1**	**+0.5**
JIJ				*e*S	**Sb**	**15 33 16.8**	**-0.5**
WDLH	**Douliu**	**1.69**	**261**	*e*P	**Pn**	**15 32 55.0**	**+0.2**
	baz=260						
WDLH				*e*S	**Sn**	**15 33 16.4**	**+0.4**
	baz=260						
TPUB	**Ta-pu**	**1.72**	**248**	*e*P	**Pn**	**15 32 55.3**	**0.0**
	baz=247						
TPUB				*e*S	**Sn**	**15 33 16.9**	**+0.3**
	baz=247						
WTP	**Ta-pu**	**1.75**	**246**	*e*P	**Pn**	**15 32 56.3**	**+0.5**
	baz=245						
WTP				*e*S	**Sn**	**15 33 17.5**	**-0.1**
	baz=245						
CHN2	**Minshiung**	**1.78**	**256**	*e*P	**Pn**	**15 32 56.4**	**+0.3**
	baz=255						
CHN2				*e*S	**Sn**	**15 33 18.5**	**+0.4**
	baz=255						
WRL	**Guolierlin Hig**	**1.82**	**268**	*e*P	**Pn**	**15 32 57.0**	**+0.4**
	baz=279						
WRL				*e*S	**Sn**	**15 33 19.2**	**+0.2**
	baz=279						
WTK	**Tuku**	**1.83**	**262**	*e*P	**Pn**	**15 32 56.7**	**0.0**
	baz=260						
WTK				*e*S	**Sn**	**15 33 20.1**	**+0.8**
	baz=260						
CHY	**Chiayi**	**1.83**	**256**	*e*P	**Pn**	**15 32 57.1**	**+0.3**
	baz=255						
CHY				*e*S	**Sn**	**15 33 19.4**	**0.0**
	baz=255						
CHN1	**Nanshi**	**1.85**	**246**	*e*P	**Pn**	**15 32 57.4**	**+0.3**
	baz=245						
CHN1				*e*S	**Sn**	**15 33 20.7**	**+0.7**
	baz=245						
SGST	**Jiashian**	**1.85**	**242**	*e*P	**Pn**	**15 32 57.0**	**-0.1**
	baz=231						
SGST				*e*S	**Sn**	**15 33 20.6**	**+0.6**
	baz=231						
TWK	**Hsinying**	**1.85**	**248**	*e*P	**Pn**	**15 32 57.4**	**+0.3**
	baz=247						
TWK				*e*S	**Sn**	**15 33 20.6**	**+0.6**
	baz=247						
SNST	**Tainan City**	**1.86**	**247**	*e*P	**Pn**	**15 32 57.9**	**+0.7**
	baz=246						
SNST				*e*S	**Sn**	**15 33 20.4**	**+0.3**
	baz=246						
ECL	**Taimali**	**1.88**	**224**	*e*P	**Pn**	**15 32 56.3**	**-1.1**
	baz=223						
ECL				*e*S	**Sn**	**15 33 18.6**	**-1.9**
	baz=223						
JISG	**Ishigakijimahi**	**1.89**	**70**	*e*P	**Pn**	**15 32 57.3**	**-0.2**
WSF	**Szhu**	**1.99**	**261**	*e*P	**Pn**	**15 32 59.2**	**+0.4**
	baz=260						
WSF				*e*S	**Sn**	**15 33 24.3**	**+1.1**
	baz=260						
SSD	**Sandimen**	**2.00**	**233**	*e*P	**Pn**	**15 32 59.4**	**+0.4**
	baz=228						
SSD				*e*S	**Sn**	**15 33 23.8**	**+0.2**
	baz=228						
ICHU	**Yijhu**	**2.00**	**253**	*e*P	**Pn**	**15 32 59.7**	**+0.6**
	baz=252						
ICHU				*e*S	**Sn**	**15 33 24.4**	**+0.9**
	baz=252						
WSL	**Shuilin Townsh**	**2.00**	**258**	*e*P	**Pn**	**15 32 59.3**	**+0.2**
	baz=257						
WSL				*e*S	**Sn**	**15 33 24.1**	**+0.4**
	baz=257						
TSMG	**Majia**	**2.01**	**232**	*e*P	**Pn**	**15 32 59.2**	**0.0**
	baz=227						
TSMG				*e*S	**Sn**	**15 33 24.8**	**+0.9**
	baz=227						
SCST	**Cishan**	**2.02**	**238**	*e*P	**Pb**	**15 33 01.5**	**-1.0**
	baz=227						
SCST				*e*S	**Sb**	**15 33 27.3**	**0.0**
	baz=227						
CHN3	**Shinhua**	**2.03**	**245**	*e*S	**Sb**	**15 33 27.3**	**-0.3**
	baz=244						
LAY	**Lan-yu**	**2.06**	**201**	*e*P	**Pn**	**15 32 58.7**	**-1.2**
	baz=200						
LAY				*e*S	**Sn**	**15 33 23.2**	**-1.8**
	baz=200						
CHN8	**Yiju**	**2.06**	**253**	*e*P	**Pn**	**15 33 00.5**	**+0.5**
	baz=252						
CHN8				*e*S	**Sn**	**15 33 25.6**	**+0.4**
	baz=252						
SHHT	**Tainan City**	**2.07**	**244**	*e*P	**Pb**	**15 33 02.2**	**-1.2**
	baz=243						
SHHT				*e*S	**Sb**	**15 33 29.1**	**+0.4**
	baz=243						
LYUB	**Lan-yu**	**2.08**	**200**	*e*P	**Pn**	**15 32 58.9**	**-1.3**
	baz=199						
LYUB				*e*S	**Sn**	**15 33 23.2**	**-2.3**
	baz=199						
MASBT	**Mashibuluo**	**2.08**	**230**	*e*P	**Pn**	**15 33 00.6**	**+0.4**
	baz=226						
MASBT				*e*S	**Sn**	**15 33 26.2**	**+0.7**
	baz=226						
TAW	**Tawu**	**2.09**	**220**	*e*P	**Pn**	**15 33 00.7**	**+0.4**
	baz=228						
TAW				*e*S	**Sn**	**15 33 25.8**	**0.0**
	baz=228						
EAST	**Anshuo**	**2.10**	**222**	*e*P	**Pn**	**15 33 00.6**	**+0.1**
	baz=221						
EAST				*e*S	**Sn**	**15 33 24.3**	**-1.8**
	baz=221						
SSPT	**Xinbi**	**2.21**	**229**	*e*P	**Pn**	**15 33 02.2**	**+0.2**
	baz=224						
SSPT				*e*S	**Sn**	**15 33 29.3**	**+0.6**
	baz=224						
JTJ	**Tarama**	**2.24**	**72**	P	**Pn**	**15 33 02.9**	**+0.5**
SCZT	**Fangliau**	**2.25**	**226**	*e*P	**Pn**	**15 33 03.3**	**+0.8**
	baz=220						
SCZT				*e*S	**Sn**	**15 33 30.8**	**+1.0**
	baz=220						
SLIU	**Shizi**	**2.26**	**220**	*e*P	**Pn**	**15 33 02.9**	**+0.2**
	baz=227						
SLIU				*e*S	**Sn**	**15 33 30.2**	**+0.3**
	baz=227						
SMST	**Manzhou Townsh**	**2.39**	**216**	*e*P	**Pn**	**15 33 05.2**	**+0.8**
	baz=215						
SMST				*e*S	**Sn**	**15 33 34.1**	**+0.9**
	baz=215						
TSEB	**Hengchuen, Pin**	**2.46**	**214**	*e*P	**Pn**	**15 33 06.0**	**+0.7**
	baz=221						
TSEB				*e*S	**Sn**	**15 33 36.0**	**+1.2**
	baz=221						
HEN	**Hengchun**	**2.46**	**218**	*e*P	**Pn**	**15 33 06.3**	**+0.9**
	baz=217						
HEN				*e*S	**Sn**	**15 33 35.6**	**+0.8**
	baz=217						
TWKBT	**Hengchun**	**2.47**	**216**	*e*P	**Pn**	**15 33 06.6**	**+1.1**
	baz=215						
TWKBT				*e*S	**Sn**	**15 33 36.2**	**+1.1**
	baz=215						
TWK1	**Hengchun**	**2.47**	**216**	*e*P	**Pn**	**15 33 06.3**	**+0.7**
	baz=215						
TWK1				*e*S	**Sn**	**15 33 36.0**	**+0.9**
	baz=215						
WDGT	**Dungji**	**2.57**	**255**	*e*P	**Pn**	**15 33 07.5**	**+0.5**
	baz=244						
WDGT				*e*S	**Sn**	**15 33 38.0**	**+0.3**
	baz=244						
PHUB	**P'eng-hu**	**2.59**	**261**	*e*P	**Pn**	**15 33 07.6**	**+0.4**
	baz=275						
PHUB				*e*S	**Sn**	**15 33 38.8**	**+0.6**
	baz=275						
PNG	**Penghu**	**2.60**	**262**	*e*P	**Pn**	**15 33 07.6**	**+0.3**
	baz=276						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PNG				*e*S	**Sn**	**15 33 38.7**	**+0.3**
	baz=276						
JIRB	**Irabujima**	**2.71**	**71**	*e*P	**Pn**	**15 33 09.7**	**+0.9**
JIRB				*e*S	**Sn**	**15 33 41.5**	**+0.6**
VCHM	**Qimei**	**2.79**	**255**	*e*S	**Sn**	**15 33 43.5**	**+0.4**
	baz=255						
JIKM	**Ikemajima**	**2.80**	**69**	*e*P	**Pn**	**15 33 10.4**	**+0.3**
JMJ2	**Miyako jima3**	**2.81**	**73**	*e*S	**Sn**	**15 33 44.5**	**+0.9**
VWUC	**VWUC**	**2.84**	**292**	*e*P	**Pn**	**15 33 11.0**	**+0.3**
	baz=290						
VWUC				*e*S	**Sn**	**15 33 43.3**	**-1.1**
	baz=290						
JOGS	**Gusukube**	**2.89**	**73**	*e*P	**Pn**	**15 33 12.8**	**+1.5**
JOGS				*e*S	**Sn**	**15 33 46.9**	**+1.4**
PTMZ	**Houxiangcun**	**3.14**	**291**	*e*P	**Pn**	**15 33 15.6**	**+0.8**
	baz=289						
PTMZ				*e*S	**Sn**	**15 33 51.5**	**-0.2**
	baz=289						
KNMB	**Chin-men Tao**	**3.66**	**279**	*e*P	**Pn**	**15 33 23.2**	**+1.2**
	baz=278						
KNMB				*e*S	**Sn**	**15 34 04.0**	**-0.5**
	baz=278						
ZPLA	**Ao Xicun**	**4.22**	**270**	*e*P	**Pn**	**15 33 30.0**	**+0.4**
	baz=270						
ZPLA				*e*S	**Sn**	**15 34 17.3**	**-1.0**
	baz=270						

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*IDC **01** 15:34:17.6±1.0, 19°.13S×67°.30W, h213km±10km, mb3.5/1, mbtmp3.8/4, Error ellipse: s-maj=19.9km s-min=9.9km az=102.0*
*GUC **01** 15:34:19.4±0.8, 19°.10S×67°.62W, h250km±9km, ML3.6*
*SCB **01** 15:34:21.3±3.7, 19°.21S×67°.42W, h35km±39km, ML2.9/13, MW3.3, Error ellipse: s-maj=12.5km s-min=10.6km az=0.0*
ISC 01 15:34:19.2±1.0**, 19°.11S**±0°.04×**67°.39W**±0°.06**, h210**km±10km**, n31, σ1s.53**/45**, 4C, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PB08	**IPOC Station P**	**1.95**	**238**	*e*P	**Pn**	**15 34 59.8**	**+1.3**
PB08				*i* S	**S**	**15 35 31.5**	**+2.9**
PB08				IAML		15 35 35.5	
	comp=N,97nm,0.3s						
PB08	**IPOC Station P**	**1.95**	**238**	P	**Pn**	**15 34 59.7**	**+1.3**
PB08				IAML		15 35 34.0	
	comp=N,42nm,0.3s						
PB16	**IPOC Station P**	**2.15**	**291**	⇑*i*P	**Pn**	**15 35 02.1**	**+1.4**
PB16				IAML		15 35 38.0	
	comp=E,37nm,0.5s						
PB16	**IPOC Station P**	**2.15**	**291**	P	**Pn**	**15 35 02.2**	**+1.5**
PB16				IAML		15 35 39.2	
	comp=E,23nm,0.4s						
PB11	**IPOC Station P**	**2.24**	**253**	⇑*i*P	**Pn**	**15 35 01.5**	**+0.5**
PB11				*i* S	**S**	**15 35 34.2**	**+0.9**
PB11				IAML		15 35 35.7	
	comp=E,328nm,0.2s						
PB11	**IPOC Station P**	**2.24**	**253**	P	**Pn**	**15 35 01.6**	**+0.5**
BBOE	**La Paz, Chanca**	**2.36**	**346**	P	**Pn**	**15 35 04.7**	**+1.8**
BBOE				IAML		15 35 41.9	
	comp=E,49nm,0.7s						
MOCB	**Mochara**	**2.69**	**143**	P	**Pn**	**15 35 08.4**	**+2.1**
MOCB				S	**S**	**15 35 41.8**	**-0.8**
MOCB				IAML		15 35 45.6	
	comp=E,58nm,0.8s						
MOCB				IAML		15 35 47.3	
	comp=E,35nm,0.4s						
BBOD	**La Paz, Gloria**	**2.72**	**335**	P	**Pn**	**15 35 08.3**	**+1.5**
BBOD				IAML		15 35 48.1	
	comp=E,32nm,0.6s						
PB01	**IPOC Station P**	**2.75**	**225**	⇑*i*P	**Pn**	**15 35 07.1**	**+0.4**
PB01				*i* S	**S**	**15 35 43.7**	**+0.4**
PB01				IAML		15 35 44.6	
	comp=N,190nm,0.4s						
PB01	**IPOC Station P**	**2.75**	**225**	P	**Pn**	**15 35 07.1**	**+0.4**
PB01				S	**S**	**15 35 40.6**	**-2.8**
PB01				IAML		15 35 44.6	
	comp=N,145nm,0.4s						
PB12	**IPOC Station P**	**2.83**	**280**	⇑*i*P	**Pn**	**15 35 07.0**	**-0.6**
PB12				*i* S	**S**	**15 35 43.8**	**-1.0**
LPAZ	**La Paz**	**2.90**	**346**	P	**Pn**	**15 35 09.4**	**+0.5**
	comp=N,38nm,0.3s,baz=156,slow=7.7,SNR=168						
LPAZ				S	**S**	**15 35 47.3**	**+0.1**
	comp=N,15nm,0.6s,baz=142,slow=10,SNR=8.0						
LPAZ	**La Paz**	**2.90**	**346**	P	**Pn**	**15 35 09.9**	**+1.0**
LPAZ				IAML		15 35 48.3	
	comp=N,11nm,0.8s						
TA01	**Diego Aracena**	**3.00**	**241**	*e*P	**Pn**	**15 35 09.2**	**-0.2**
TA01				*i* S	**S**	**15 35 46.3**	**-1.9**
PB09	**IPOC Station P**	**3.19**	**213**	*e*P	**Pn**	**15 35 13.0**	**+1.2**
PB09	**IPOC Station P**	**3.19**	**213**	P	**Pn**	**15 35 12.7**	**+1.0**
PB09				IAML		15 36 03.1	
	comp=N,26nm,1.0s						
PB02	**IPOC Station P**	**3.22**	**227**	*e*P	**Pn**	**15 35 12.5**	**+0.5**
PB02				*i* S	**S**	**15 35 52.9**	**-0.2**
PB02	**IPOC Station P**	**3.22**	**227**	P	**Pn**	**15 35 12.7**	**+0.6**
PB02				IAML		15 36 00.4	
	comp=N,151nm,0.3s						
PB07	**IPOC Station P**	**3.50**	**222**	*e*P	**Pn**	**15 35 15.6**	**+0.1**
PB07				*i* S	**S**	**15 35 57.8**	**-1.4**
PB07	**IPOC Station P**	**3.50**	**222**	P	**Pn**	**15 35 16.0**	**+0.5**
PB07				IAML		15 36 03.0	
	comp=N,52nm,0.3s						
YJA	**Yavi**	**3.51**	**150**	P	**Pn**	**15 35 17.1**	**+1.2**
LVC	**Limon Verde**	**3.76**	**202**	P	**Pn**	**15 35 19.3**	**+0.5**
	comp=N,3.2nm,0.4s,baz=2.6,slow=11,SNR=2.5						
LVC				S	**S**	**15 36 04.3**	**-0.9**
	comp=N,9.9nm,0.4s,baz=238,slow=19,SNR=10						
LVC	**Limon Verde**	**3.76**	**202**	P	**Pn**	**15 35 19.3**	**+0.5**
PB04	**IPOC Station P**	**4.12**	**218**	*e*P	**Pn**	**15 35 23.1**	**+0.1**
PB04				*i* S	**S**	**15 36 10.1**	**-2.7**
PB04	**IPOC Station P**	**4.12**	**218**	P	**Pn**	**15 35 23.4**	**+0.4**
PB04				IAML		15 36 15.2	
	comp=N,27nm,0.7s						
PB06	**IPOC Station P**	**4.12**	**209**	*e*P	**Pn**	**15 35 23.4**	**+0.5**
PB06				*i* S	**S**	**15 36 10.6**	**-2.2**
PB06				IAML		15 36 12.8	
	comp=E,58nm,0.4s						
PB06	**IPOC Station P**	**4.12**	**209**	P	**Pn**	**15 35 23.5**	**+0.5**
PB06				IAML		15 36 15.5	
	comp=E,35nm,0.8s						
SIV	**San Ignacio**	**6.78**	**64**	P	**Pn**	**15 35 54.4**	**-2.3**
	comp=E,4.1nm,0.5s,baz=254,slow=12,SNR=13						
SIV				S	**S**	**15 37 10.9**	**-3.2**
	comp=E,0.7nm,0.2s,baz=309,slow=18,SNR=3.6						
YKA	**Yellowknife Ar**	**89.43**	**340**	P	**P**	**15 46 49.6**	**-2.2**
	comp=E,0.8nm,0.7s,baz=133,slow=4.7,SNR=6.1						
	comp=E,0.8nm,0.7s						
SONM	**Songino Array**	**150.91**	**9**	PKPbc	**PKPdf**	**15 53 44.9**	**+3.6**
	comp=E,0.7nm,0.5s,baz=0.4,slow=1.7,SNR=3.1						

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*NEIC **01** 15:35:12.1±2.0, 44°.46N±0°.05×105°.39W±0°.07, h0km±2km, ML3.5/44, Error ellipse: s-maj=9.7km s-min=8.2km az=38.0*
*IDC **01** 15:35:12.4±1.0, 44°.67N×105°.89W, h0km, mbtmp3.2/6, ML2.6/4, Error ellipse: s-maj=24.5km s-min=8.6km az=141.0*
*ANF **01** 15:35:13.1±0.3, 44°.35N×105°.54W, h0km, ML3.8/14, Error ellipse: s-maj=2.3km s-min=2.1km az=53.0*
ISC 01 15:35:11.4±0.7**, 44°.46N**±0°.03×**105°.39W**±0°.04**, h0**km**, n79, σ1s.35**/88**, Wyoming**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
RSSD	**Black Hills**	**1.03**	**109**		**Pg**	**15 35 31.9**	**+0.7**
RSSD	**Black Hills**	**1.03**	**109**	P	**Pg**	**15 35 32.0**	**+0.8**
	baz=282						
RSSD				S	**Sn**	**15 35 50.5**	**+1.8**
	baz=282						
K22A	**Casper**	**1.98**	**205**		**Pn**	**15 35 46.2**	**-0.3**
K22A				IAML		15 36 13.8	
	comp=E,566nm,1.9s						
K22A				IAML		15 36 17.4	
	comp=N,391nm,1.2s						
K22A	**Casper**	**1.98**	**205**	P	**Pn**	**15 35 46.1**	**-0.3**
	baz=22,SNR=80						
K22A				S	**Sn**	**15 36 11.9**	**-0.2**
	baz=22						
LAO	**LASA Array**	**2.31**	**346**	Pn	**Pn**	**15 35 52.4**	**+1.7**
LAO				IAML		15 36 35.2	
	comp=N,288nm,0.5s						
LAO				IAML		15 36 49.6	
	comp=N,263nm,0.9s						
LAO	**LASA Array**	**2.31**	**346**	P	**Pn**	**15 35 52.7**	**+2.0**
	baz=168,SNR=28						
LAO				S	**Sg**	**15 36 24.9**	**-0.6**
	baz=168						
RLMT	**Red Lodge**	**2.84**	**285**		**Pn**	**15 35 58.7**	**+0.5**
RLMT	**Red Lodge**	**2.84**	**285**	P	**Pn**	**15 35 58.7**	**+0.5**
	baz=105,SNR=32						
RLMT				S	**Sn**	**15 36 32.1**	**-1.1**
	baz=105						
RWWY	**Rawlins**	**3.07**	**206**	Pn	**Pn**	**15 36 02.0**	**+0.6**
PHWY	**Pilot Hill**	**3.16**	**181**	Pn	**Pn**	**15 36 02.6**	**0.0**
PHWY				IAML		15 37 01.2	
	comp=N,119nm,1.4s						
GCMT	**Greycliff**	**3.31**	**295**	Pn	**Pn**	**15 36 05.7**	**+1.2**
BW06	**Boulder Array**	**3.46**	**242**	Pn	**Pn**	**15 36 06.4**	**-0.4**
BW06				IAML		15 37 10.3	
	comp=N,59nm,1.2s						
BW06	**Boulder Array**	**3.46**	**242**	P	**Pn**	**15 36 06.6**	**-0.2**
	baz=60,SNR=12						
BW06				Sb	**Sb**	**15 36 55.7**	**-0.8**
	baz=60						
PD31	**Pinedale Array**	**3.46**	**242**	Pn	**Pn**	**15 36 06.7**	**-0.1**
PDAR	**Pinedale Array**	**3.46**	**242**	Pn	**Pn**	**15 36 06.9**	**+0.1**
	comp=N,4.5nm,0.3s,baz=60,slow=15,SNR=63						
PDAR				Pg	**Pb**	**15 36 14.2**	**+0.4**
	comp=N,11nm,0.3s,baz=59,slow=19,SNR=31						
PDAR				Lg	Lg	15 36 55.6	
	comp=N,6.1nm,0.3s,baz=60,slow=31,SNR=4.4						
PDAR	**Pinedale Array**	**3.46**	**242**	Pn	**Pn**	**15 36 06.8**	**-0.1**
N23A	**Red Feather La**	**3.58**	**187**	Pn	**Pn**	**15 36 09.1**	**+0.6**
N23A				IAML		15 37 17.7	
	comp=E,124nm,1.8s						
N23A				IAML		15 37 17.9	
	comp=N,119nm,0.9s						
N23A	**Red Feather La**	**3.58**	**187**	P	**Pn**	**15 36 08.8**	**+0.3**
	baz=4.8,SNR=10						
N23A				S	**Sn**	**15 36 52.4**	**+0.7**
	baz=4.8						
H17A	**Grant Village**	**3.71**	**271**	Pn	**Pn**	**15 36 11.8**	**+1.6**
YPP	**Pitchstone Pla**	**3.88**	**269**	Pn	**Pn**	**15 36 14.3**	**+1.7**
YPP				IAML		15 37 29.7	
	comp=E,43nm,2.3s						
MOOW	**Moose Ponds**	**3.92**	**261**	Pn	**Pn**	**15 36 15.4**	**+2.3**
REDW	**Red Top Meadow**	**4.09**	**256**	Pn	**Pn**	**15 36 16.6**	**+1.2**
REDW				IAML		15 37 25.5	
	comp=E,81nm,2.1s						
REDW				IAML		15 38 20.3	
	comp=E,66nm,1.8s						
DGMT	**Dagmar**	**4.10**	**11**	Pn	**Pn**	**15 36 17.4**	**+2.1**
DGMT	**Dagmar**	**4.10**	**11**	P	**Pn**	**15 36 18.6**	**+3.3**
	baz=193,SNR=5.7						
DGMT				Sb	**Sg**	**15 37 21.8**	**-1.2**
	baz=193						
TPAW	**Teton Pass**	**4.13**	**258**	Pn	**Pn**	**15 36 16.8**	**+0.9**
TPAW				IAML		15 37 29.8	
	comp=E,48nm,1.6s						
TPAW				IAML		15 37 40.4	
	comp=E,34nm,2.5s						
YHL	**Hebgen Lake**	**4.15**	**277**	Pn	**Pn**	**15 36 17.4**	**+1.1**
YHL				IAML		15 37 36.3	
	comp=N,62nm,1.4s						
YHL				IAML		15 37 48.6	
	comp=E,60nm,1.6s						
OGNE	**Ogallala**	**4.30**	**144**	Pn	**Pn**	**15 36 19.0**	**+0.9**
OGNE	**Ogallala**	**4.30**	**144**	P	**Pn**	**15 36 17.9**	**-0.2**
	baz=324,SNR=7.2						
OGNE				Sb	**Sg**	**15 37 26.2**	**-3.2**
	baz=324						
AHID	**Auburn Hatcher**	**4.48**	**250**	Pn	**Pn**	**15 36 21.8**	**+1.1**
AHID				IAML		15 37 49.3	
	comp=E,38nm,1.4s						
BOZ	**Bozeman (W)**	**4.56**	**287**	Pn	**Pn**	**15 36 22.1**	**+0.3**
BOZ				IAML		15 37 40.3	
	comp=E,32nm,1.6s						
BOZ				IAML		15 37 57.1	
	comp=E,36nm,1.8s						
BOZ	**Bozeman (W)**	**4.56**	**287**	P	**Pn**	**15 36 22.2**	**+0.3**
	baz=104						
BOZ				Sb	**Sb**	**15 37 30.1**	**+2.0**
	baz=104						
SUSD	**Miller**	**4.61**	**88**	Sb	**Sg**	**15 37 39.4**	**-0.1**
	baz=271						
ISCO	**Idaho Springs**	**4.66**	**182**	Pn	**Pn**	**15 36 23.6**	**+0.3**
ISCO				IAML		15 37 45.6	
	comp=E,31nm,0.7s						
ISCO				IAML		15 38 28.7	
	comp=E,44nm,1.9s						
ISCO	**Idaho Springs**	**4.66**	**182**	P	**Pn**	**15 36 23.9**	**+0.6**
	baz=0.7						
ISCO				S	**Sn**	**15 37 18.1**	**-0.2**
	baz=0.7						
EGMT	**Eagleton**	**4.68**	**321**		**Pn**	**15 36 24.4**	**+1.1**
O20A	**White River Ci**	**4.81**	**207**	Pn	**Pn**	**15 36 25.3**	**+0.1**
O20A	**White River Ci**	**4.81**	**207**	P	**Pn**	**15 36 25.6**	**+0.3**
	baz=24						
O20A				S	**Sn**	**15 37 22.0**	**+0.2**
	baz=24						
HRY	**Holter Researc**	**5.05**	**299**	Pn	**Pn**	**15 36 28.2**	**-0.2**
LRM	**Limekiln Ridge**	**5.17**	**288**	Pn	**Pn**	**15 36 30.3**	**-0.1**
DLMT	**Dillon**	**5.20**	**283**	Pn	**Pn**	**15 36 31.8**	**+1.2**
DLMT				IAML		15 38 05.6	
	comp=E,42nm,2.0s						
DLMT				IAML		15 38 41.3	
	comp=E,38nm,1.9s						
MDND	**Maddock**	**5.26**	**48**	Sb	**Sg**	**15 37 57.4**	**-3.0**
	baz=232						
MCMT	**McKenzie Canyo**	**5.33**	**277**	Pn	**Pn**	**15 36 31.1**	**-1.4**
HWUT	**Hardware Ranch**	**5.35**	**240**	Pn	**Pn**	**15 36 31.0**	**-1.6**
SMCO	**Snowmass**	**5.41**	**193**	Pn	**Pn**	**15 36 31.6**	**-2.1**
Q24A	**Divide**	**5.49**	**178**	Pn	**Pn**	**15 36 34.9**	**+0.1**
Q24A	**Divide**	**5.49**	**178**	Sb	**Sb**	**15 37 59.8**	**+4.8**
	baz=357						
BCYI	**Bear Canyon**	**5.74**	**271**	Pn	**Pn**	**15 36 39.7**	**+1.6**
P18A	**Preston Nutter**	**6.03**	**218**	Pn	**Pn**	**15 36 41.5**	**-0.6**
P17A	**Butcher Ranch,**	**6.38**	**220**	Pn	**Pn**	**15 36 47.5**	**+0.7**
MSO	**Missoula**	**6.44**	**295**	Pn	**Pn**	**15 36 47.9**	**+0.3**
PV07	**Paradox Valley**	**6.49**	**203**	Pn	**Pn**	**15 36 49.5**	**+1.1**
HLID	**Hailey**	**6.57**	**265**	Pn	**Pn**	**15 36 50.7**	**+1.3**
PV23	**Carpenter Ridg**	**6.59**	**206**	Pn	**Pn**	**15 36 49.0**	**-0.8**
BGU	**Big Grassy Mou**	**6.64**	**241**	Pn	**Pn**	**15 36 50.9**	**+0.5**
PV10	**Paradox Valley**	**6.67**	**205**	Pn	**Pn**	**15 36 52.0**	**+1.2**
PV11	**David Mesa, Pa**	**6.69**	**204**	Pn	**Pn**	**15 36 50.3**	**-0.7**
NLU	**North Lily Min**	**6.70**	**230**	Pn	**Pn**	**15 36 50.0**	**-1.2**
SDCO	**Great Sand Dun**	**6.71**	**181**	Pn	**Pn**	**15 36 51.7**	**+0.3**
TMUT	**Trail Mountain**	**6.74**	**222**	Pn	**Pn**	**15 36 52.2**	**+0.4**
DUG	**Dugway, Tooele**	**6.95**	**235**	Pn	**Pn**	**15 36 54.4**	**-0.3**
Q16A	**Castle Valley**	**7.02**	**220**	Pn	**Pn**	**15 36 55.9**	**+0.2**
T25A	**Trinidad**	**7.35**	**174**	Pn	**Pn**	**15 36 58.6**	**-1.6**
MVCO	**Mesa Verde**	**7.61**	**199**	Pn	**Pn**	**15 37 05.6**	**+1.7**
MSU	**Marysvale**	**7.82**	**223**	Pn	**Pn**	**15 37 06.2**	**-0.5**
ELK	**Elko**	**8.15**	**246**	Pn	**Pn**	**15 37 12.7**	**+1.5**
	comp=E,0.1nm,0.3s,baz=67,slow=15,SNR=1.5						
ELK				Lg	Lg	15 39 25.4	
	baz=271,slow=7.0,SNR=4.8						
	comp=E,0.4nm,0.4s						
ELK	**Elko**	**8.15**	**246**		**Pn**	**15 37 12.2**	**+1.0**
MTPU	**Mount Pierson**	**8.20**	**221**	Pn	**Pn**	**15 37 10.6**	**-1.3**
F10A	**Beach Ranch, E**	**8.49**	**284**	Pn	**Pn**	**15 37 15.9**	**+0.2**
ULM	**Lac du Bonnet**	**8.67**	**45**	Pn	**Pn**	**15 37 19.9**	**+1.8**
	comp=E,0.8nm,0.3s,baz=237,slow=12,SNR=5.0						
ULM				Lg	Lg	15 39 40.8	
	comp=E,0.3nm,0.3s,baz=167,slow=21,SNR=6.2						
	comp=E,2.5nm,0.5s						
ULM	**Lac du Bonnet**	**8.67**	**45**	Pn	**Pn**	**15 37 17.7**	**-0.4**
PSUT	**Pine Spring**	**8.68**	**230**	Pn	**Pn**	**15 37 19.6**	**+1.2**
NEW	**Newport**	**8.96**	**299**	Lg	Lg	15 39 42.1	
	comp=E,0.1nm,0.3s,baz=47,slow=20,SNR=1.6						
I56US	**NEWPORT INFRAS**	**8.96**	**299**	*i*		16 24 50.0	
	comp=E,0.1nm,1.2s,baz=114,slow=312,SNR=8.0						
ANMO	**Albuquerque**	**9.54**	**185**	Lg	Lg	15 40 12.3	
	comp=E,0.1nm,0.3s,baz=312,slow=15,SNR=3.4						
WUAZ	**Wupatki**	**10.04**	**209**	Pn	**Pn**	**15 37 38.9**	**+2.0**
EDM	**Edmonton**	**10.21**	**332**	Pn	**Pn**	**15 37 37.7**	**-1.5**
NVAR	**Mina Array Bea**	**11.40**	**243**	Pn	**Pn**	**15 37 56.4**	**+0.7**
	comp=E,0.1nm,0.3s,baz=59,slow=13,SNR=2.9						
NVAR				Lg	Lg	15 41 04.8	
	baz=47,slow=36,SNR=1.2						
	comp=E,0.4nm,0.7s						
TXAR	**Lajitas Array**	**15.16**	**174**	Pn	**P**	**15 38 52.2**	**0.0**
	comp=E,0.1nm,0.5s,baz=1.7,slow=9.0,SNR=2.0						
TXAR				Lg	Lg	15 43 10.7	
	baz=6.9,slow=25						
YKA	**Yellowknife Ar**	**18.84**	**347**	P	**P**	**15 39 29.2**	**-3.4**
	baz=162,slow=13,SNR=4.1						
	comp=E,0.7nm,0.9s						

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*TUL **01** 15:36:50.7±0.5, 36°.89N±0°.02×97°.403W±0°.008, h7km±3km, ML2.7, mb_Lg2.3/14(NEIC), Error ellipse: s-maj=2.2km s-min=0.5km az=201.0*
NEIC 01 15:36:51.3±0.3**, 36°.88N**±0°.01×**97°.401W**±0°.009**, h2**km±4km**, Error ellipse: s-maj=2.2km s-min=0.8km az=198.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
T35A	**Sooner Cattle**	**0.71**	**87**	Pg	Pg	15 37 04.6	-0.4
T35A				Sg	Sg	15 37 13.7	-0.5
U32A	**Winter Ranch,**	**1.38**	**249**		Pn	15 37 16.3	-1.3
OKCSW	**OKLAHOMA CITY**	**1.47**	**181**		Pn	15 37 17.9	-0.9
FNO	**Franklin**	**1.62**	**180**	Pn	Pn	15 37 20.1	-0.7
TUL1	**Leonard**	**1.62**	**126**	Pn	Pn	15 37 20.1	-0.7
R32A	**Long Quarter,**	**1.86**	**326**	Pn	Pn	15 37 23.9	-0.3
R32A				IAmb_Lg		15 37 53.1	
	comp=Z,16nm,0.8s						
X34A	**Smith Ranch, M**	**2.30**	**189**	Pn	Pn	15 37 29.2	-1.0
X34A				IAmb_Lg		15 38 06.3	
	comp=Z,10nm,0.8s						
KSU1	**Kansas State U**	**2.31**	**15**	IAmb_Lg		15 38 08.8	
	comp=Z,21nm,1.1s						
WMOK	**Wichita Mounta**	**2.41**	**208**	Pn	Pn	15 37 31.3	-0.4
X37A	**Clayton**	**2.82**	**144**	IAmb_Lg		15 38 22.3	
	comp=Z,6.8nm,0.8s						
S39A	**Bolivar**	**3.35**	**75**	Pn	Pn	15 37 44.5	-0.1
U40A	**Yellville**	**3.69**	**97**	IAmb_Lg		15 38 59.0	
	comp=Z,5.2nm,1.0s						
MIAR	**Mount Ida**	**3.89**	**126**	IAmb_Lg		15 38 56.0	
	comp=Z,4.5nm,0.9s						
AMTX	**Amarillo**	**4.00**	**241**	IAmb_Lg		15 39 06.3	
	comp=Z,8.1nm,0.8s						
SCIA	**State Center**	**5.98**	**32**	IAmb_Lg		15 39 58.6	
	comp=Z,8.9nm,0.8s						

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*MOS **01** 15:37:22.7±1.1, 30°.11S×178°.06W, h51km, mb5.5/29, MS5.0/19, Error ellipse: s-maj=9.5km s-min=8.6km az=97.7*
*NEIC **01** 15:37:23.3±2.1, 30°.22S±0°.08×178°.0W±0°.1, h44km±4km, mb5.4/267, Ms_20 5.1/211, Mwc5.5(GCMT), Error ellipse: s-maj=13.3km s-min=11.2km az=95.0*
*BJI **01** 15:37:23.5±0.0, 29°.72S×177°.35W, h62km, mb5.1/41, mB5.6/23, Ms5.1/32, Ms7 4.9/32*
*NOU **01** 15:37:23.3, 30°.63S×177°.21W, h76km, mb5.5/84, Kermadec Islands, New Zealand*
*GCMT **01** 15:37:25.3±0.1, 30°.35S±0°.01×177°.85W±0°.01, h62km, MW5.5/147, Moment Tensor Solution. s147,c255; s139,c240; Duration: 1s.4 Moment tensor: Scale 10^{17} Nm; M_{rr}-2.36±.03; $M_{\theta\theta}$0.49±.03; $M_{\phi\phi}$1.86±.03; $M_{r\theta}$-0.27±.02; $M_{\theta\phi}$1.36±.02; $M_{\phi r}$0.15±.02; Best double couple: $M_0$2.55300×10^{17} NP1:ϕ_s203.00000°,δ46.00000°, λ-102.00000°. NP2:ϕ_s40.00000°,δ46.00000°, λ-78.00000°. Principal axes: T 2.6990, Plg0.0000°, Azm122.0000°; N -0.2970, Plg9.0000°, Azm212.0000°; P -2.4070, Plg81.0000°, Azm31.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **01** 15:37:25.4±0.4, 29°.93S×178°.10W, h63km±3km, mb4.9/28, mbtmp5.1/29, MS4.8/54 Error ellipse: s-maj=10.6km s-min=7.4km az=98.0*
ISC 01 15:37:23.0±0.2**, 30°.30S**±0°.02×**177°.91W**±0°.04**, h48**km±1km**, h48**km**:pP-P, n1220, σ1s.69**/1054**, mb5.4**/217**, MS5.1**/183**, 53C-59D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GLKZ	**Green Lake**	**1.03**	**360**	P	**Pn**	**15 37 40.1**	**-0.9**
GLKZ				S	**Sn**	**15 37 51.4**	**-3.0**
RAO	**Raoul Island**	**1.04**	**360**	P	**Pn**	**15 37 40.0**	**-1.2**
	19µm,0.2s,baz=184,slow=16,SNR=392						
RAO				S	**Sn**	**15 37 51.5**	**-3.1**
	66µm,0.2s,baz=54,slow=20,SNR=18						
RAO	**Raoul Island**	**1.04**	**360**	Pn	**Pn**	**15 37 39.9**	**-1.3**
RIZ	**Raoul Island**	**1.05**	**359**	P	**Pn**	**15 37 40.5**	**-0.8**
RIZ				S	**Sn**	**15 37 52.4**	**-2.4**
MXZ	**Matakaoa Point**	**7.90**	**202**	Pn	**Pn**	**15 39 11.5**	**-3.7**
MXZ	**Matakaoa Point**	**7.90**	**202**	P	**Pn**	**15 39 11.8**	**-3.4**
MXZ				S	**Sn**	**15 40 43.1**	**-0.1**
WMGZ	**Waiomatatini S**	**8.10**	**201**	P	**Pn**	**15 39 15.4**	**-2.5**
WMGZ				S	**Sn**	**15 40 48.5**	**+0.4**
HAZ	**Te Kaha**	**8.25**	**204**	P	**Pn**	**15 39 17.4**	**-2.7**
HAZ				S	**Sn**	**15 40 53.9**	**+2.0**
PKGZ	**Pakihiroa**	**8.27**	**203**	P	**Pn**	**15 39 16.8**	**-3.6**
PKGZ				S	**Sn**	**15 40 47.7**	**-4.7**
WSRZ	**White Island S**	**8.28**	**208**	P	**Pn**	**15 39 23.7**	**+3.3**
KUZ	**Kuaotunu**	**8.34**	**218**	P	**Pn**	**15 39 22.7**	**+1.5**
PUZ	**Puketiti**	**8.38**	**201**	P	**Pn**	**15 39 17.9**	**-4.0**
PUZ				S	**Sn**	**15 40 52.1**	**-3.0**
RUGZ	**Raukumara Rang**	**8.48**	**204**	P	**Pn**	**15 39 19.7**	**-3.5**
RUGZ				S	**Sn**	**15 40 55.7**	**-1.9**
TWGZ	**Tauwhareparae**	**8.56**	**202**	P	**Pn**	**15 39 20.7**	**-3.7**
TWGZ				S	**Sn**	**15 40 59.3**	**-0.3**
WCZ	**Waipu Caves**	**8.59**	**227**	P	Pn	15 39 32.0	+7.3
WHRZ	**Whale Island**	**8.65**	**208**	P	**Pn**	**15 39 26.8**	**+1.3**
WHRZ				S	**Sn**	**15 41 04.7**	**+3.0**
OUZ	**Omahuta**	**8.67**	**233**	P	Pn	15 39 33.1	+7.3
OUZ	**Omahuta**	**8.67**	**233**	P	Pn	15 39 33.1	+7.3
CNGZ	**Carnagh Statio**	**8.77**	**200**	P	**Pn**	**15 39 23.9**	**-3.3**
CNGZ				S	**Sn**	**15 41 03.8**	**-0.9**
TKGZ	**Te Karaka**	**8.85**	**202**	S	**Sn**	**15 41 06.0**	**-0.4**
TGRZ	**Tauranga**	**8.85**	**212**	P	Pn	15 39 22.0	-6.2
MWZ	**Matawai**	**8.86**	**204**	P	Pn	15 39 24.1	-4.3
MWZ				S	**Sn**	**15 41 07.4**	**+0.5**
MARZ	**Manawahe**	**8.88**	**209**	P	**Pn**	**15 39 28.8**	**+0.1**
URZ	**Urewera**	**8.95**	**206**	P	**Pn**	**15 39 25.8**	**-3.7**
	19nm,0.3s,baz=86,slow=13,SNR=35						
URZ				S	**Sn**	**15 41 06.6**	**-2.2**
	524nm,0.7s,baz=217,slow=23,SNR=21						
URZ	**Urewera**	**8.95**	**206**	P	**Pn**	**15 39 25.8**	**-3.7**
URZ				S	**Sn**	**15 41 08.7**	**-0.2**
URZ	**Urewera**	**8.95**	**206**	P	**Pn**	**15 39 26.3**	**-3.2**
EDRZ	**Edgecumbe**	**8.96**	**208**	P	Pn	15 39 34.9	+5.1
KARZ	**Kaharoa**	**9.10**	**211**	P	**Pn**	**15 39 33.9**	**+2.2**
RIGZ	**Rimuhau**	**9.12**	**202**	P	**Pn**	**15 39 27.7**	**-4.2**
RIGZ				S	**Sn**	**15 41 11.0**	**-2.1**
TARZ	**Mount Tarawera**	**9.17**	**209**	P	**Pn**	**15 39 35.1**	**+2.4**
TOZ	**Tahuroa Road**	**9.21**	**215**	P	**Pn**	**15 39 32.8**	**-0.4**
HLRZ	**Highlands Stat**	**9.24**	**209**	P	**Pn**	**15 39 35.8**	**+2.1**
RRRZ	**Republican Roa**	**9.25**	**208**	P	**Pn**	**15 39 34.3**	**+0.5**
MUGZ	**Murupara**	**9.27**	**207**	P	**Pn**	**15 39 30.4**	**-3.5**
MUGZ				S	**Sn**	**15 41 14.3**	**-2.5**
PRGZ	**Paritu Road**	**9.28**	**201**	P	Pn	15 39 29.8	-4.3
PRGZ				S	**Sn**	**15 41 14.6**	**-2.4**
SNGZ	**Shannon Statio**	**9.32**	**204**	P	Pn	15 39 30.5	-4.3
SNGZ				S	**Sn**	**15 41 16.4**	**-1.9**
HSRZ	**Hossack Road**	**9.34**	**210**	P	**Pn**	**15 39 38.2**	**+3.3**
HRRZ	**Handcock Road**	**9.39**	**209**	P	**Pn**	**15 39 38.6**	**+2.9**
KNZ	**Kokohu**	**9.43**	**201**	P	**Pn**	**15 39 32.4**	**-3.8**
KNZ				S	**Sn**	**15 41 14.9**	**-5.9**
PRRZ	**Plateau Road**	**9.44**	**208**	P	**Pn**	**15 39 35.0**	**-1.3**
PRRZ				S	**Sn**	**15 41 20.9**	**-0.1**
MHGZ	**Mahia Peninsul**	**9.48**	**200**	P	Pn	15 39 31.6	-5.3
MHGZ				S	**Sn**	**15 41 17.5**	**-4.6**
ALRZ	**Allen Road**	**9.51**	**208**	P	**Pn**	**15 39 35.2**	**-2.1**
ALRZ				S	**Sn**	**15 41 22.4**	**-0.4**
RAHZ	**Arahi**	**9.53**	**204**	P	**Pn**	**15 39 33.5**	**-4.2**
RAHZ				S	**Sn**	**15 41 22.2**	**-1.2**
WPRZ	**Whakapapatarin**	**9.55**	**209**	P	**Pn**	**15 39 41.5**	**+3.6**
TLZ	**Tolley Road**	**9.67**	**212**	P	**Pn**	**15 39 42.1**	**+2.6**
KUTZ	**Kaahu Road**	**9.67**	**211**	P	**Pn**	**15 39 41.9**	**+2.4**
NMHZ	**Naumai**	**9.79**	**205**	P	**Pn**	**15 39 37.7**	**-3.6**
NMHZ				S	**Sn**	**15 41 28.7**	**-1.2**
ARHZ	**Aropaoanui**	**9.88**	**204**	P	**Pn**	**15 39 38.5**	**-3.8**
WATZ	**Wairara**	**9.89**	**210**	P	Pn	15 39 47.2	+4.7
BKZ	**Black Stump Fm**	**9.97**	**206**	P	Pn	15 39 38.0	-5.7
BKZ				S	**Sn**	**15 41 31.3**	**-2.9**
BKZ	**Black Stump Fm**	**9.97**	**206**	P	**Pn**	**15 39 44.2**	**+0.6**
RATZ	**Rangitukua**	**10.01**	**210**	P	**Pn**	**15 39 42.5**	**-1.6**
RITZ	**Rihia Road**	**10.06**	**209**	P	**Pn**	**15 39 45.7**	**+0.8**
KATZ	**Kakaramea**	**10.13**	**210**	P	**Pn**	**15 39 47.6**	**+1.7**
HIZ	**Hauiti**	**10.14**	**214**	P	**Pn**	**15 39 47.7**	**+1.8**
MCHZ	**McNeill Hill**	**10.14**	**204**	P	Pn	15 39 41.4	-4.5
CKHZ	**Cape Kidnapper**	**10.20**	**202**	P	Pn	15 39 41.5	-5.2
KWHZ	**Kaweka Forest**	**10.22**	**206**	P	Pn	15 39 42.0	-5.1
NTVZ	**North Tongarir**	**10.24**	**209**	P	**Pn**	**15 39 47.0**	**-0.4**

TMVZ **Te Maari** 10.24 209 P **Pn** **15 39 46.9 -0.5**
ETVZ **East Tongariro** 10.26 209 P **Pn** **15 39 45.9 -1.7**
WTVZ **West Tongariro** 10.29 210 P **Pn** **15 39 50.3 +2.2**
OTVZ **Oturere** 10.30 209 P Pn 15 39 44.0 -4.2
TWVZ **Taurewa** 10.32 210 P **Pn** **15 39 47.4 -1.1**
SNVZ **South Ngauruho** 10.33 209 P **Pn** **15 39 46.3 -2.4**
NGZ **Ngauruhoe** 10.34 209 P **Pn** **15 39 49.2 +0.5**
KAHZ **Kahuranaki** 10.39 203 P Pn 15 39 43.9 -5.5
TUVZ **Tukino** 10.39 209 P **Pn** **15 39 49.5 0.0**
BHHZ **Black Hill Sta** 10.42 207 P Pn 15 39 44.7 -5.1
FWVZ **Far West T-bar** 10.43 209 P **Pn** **15 39 47.6 -2.4**
WHVZ **Whangaehu Hut** 10.43 209 P **Pn** **15 39 49.2 -0.9**
KRHZ **Kereru** 10.44 205 P Pn 15 39 44.2 -5.7
TRVZ **Turoa** 10.46 209 P **Pn** **15 39 50.4 -0.1**
WNVZ **Wahianoa** 10.47 209 P **Pn** **15 39 47.2 -3.3**
MOVZ **Moawhango** 10.47 208 P **Pn** **15 39 46.6 -3.9**
PXZ **Pawanui** 10.61 202 P Pn 15 39 46.4 -5.8
VRZ **Vera Road** 10.67 212 P **Pn** **15 39 53.7 +0.5**
PNHZ **Pukenui** 10.73 205 P Pn 15 39 47.7 -6.3
WPHZ **Waipukurau** 10.78 204 P Pn 15 39 49.5 -5.2
PRHZ **Porangahau** 10.90 203 P Pn 15 39 51.8 -4.5
TSZ **Takapari Road** 10.95 206 P Pn 15 39 50.7 -6.3
WAZ **Wanganui** 11.08 210 P **Pn** **15 39 59.2 +0.4**
DVHZ **Dannevirke** 11.09 204 P Pn 15 39 52.6 -6.2
PKE **Pukeiti** 11.09 215 P **Pn** **15 40 01.3 +2.3**
LREZ **Lake Rotokare** 11.10 213 P **Pn** **15 40 02.7 +3.7**
ANWZ **Angora Road** 11.12 203 P **Pn** **15 39 55.6 -3.8**
POWZ **Post Office Ro** 11.31 205 P Pn 15 39 56.5 -5.5
PRWZ **Pori Road** 11.38 204 P Pn 15 39 57.7 -5.2
BFZ **Birch Farm** 11.40 203 P Pn 15 39 56.2 -6.9
TIWZ **Tintock** 11.61 204 P Pn 15 39 59.1 -6.9
TMWZ **Te Maipa** 11.90 203 P Pn 15 40 03.1 -6.8
LKBA **Tubou, Lakemba** 12.04 356 P **P** **15 40 19.7 -3.9**
NFK **Norfolk Island** 12.37 272 P **Pn** **15 40 18.5 +2.1**
baz=13
MSVF **Nonsavu** 13.04 343 P **Pn** **15 40 26.2 +0.6**
70nm,1.0s,baz=155,slow=13,SNR=19
MSVF LR LR 15 44 41.5
comp=Z,11µm,19.0s,baz=171,slow=34
MSVF **Nonsavu** 13.04 343 Pn **Pn** **15 40 24.9 -0.7**
MSVF **Nonsavu** 13.04 343 P **Pn** **15 40 24.9 -0.7**
MSVF **Nonsavu** 13.04 343 P **Pn** **15 40 28.3 +2.7**
QRZ **Quartz Range** 13.06 214 P **Pn** **15 40 28.2 +2.4**
NIUE **Niue** 13.31 35 P Pn 15 40 24.3 -5.1
baz=13,SNR=6.8
NIUE **Niue** 13.31 35 Pn Pn 15 40 23.8 -5.5
KHZ **Kahutara** 13.91 207 P Pn 15 40 33.0 -4.3
DGTI **Dogotuki** 14.10 351 P **P** **15 40 47.5 +1.0**
AMCZ **Amberley** 14.90 208 P **Pn** **15 40 47.5 -3.0**
INZ **Inchbonnie** 15.05 212 P **Pn** **15 40 48.3 -4.2**
PINNC **Pines Island,** 15.17 297 P **P** **15 41 00.9 +2.5**
PINNC **Pines Island,** 15.17 297 P **P** **15 41 00.9 +2.5**
MARNC **Mare, Loyalty** 15.38 301 P **P** **15 41 00.9 +0.1**
MARNC **Mare, Loyalty** 15.38 301 P **P** **15 41 03.9 +3.1**
OUENC **Ouen Island, N** 15.74 296 P **P** **15 41 03.4 -1.4**
OUENC **Ouen Island, N** 15.74 296 P **P** **15 41 08.2 +3.4**
RPZ **Rata Peaks** 16.01 210 P **Pn** **15 41 00.7 -4.2**
10nm,0.8s,baz=53,slow=10,SNR=2.1
RPZ S Sn 15 43 45.4 -16
51nm,0.5s,baz=2.5,slow=19,SNR=3.3
RPZ **Rata Peaks** 16.01 210 P **Pn** **15 41 03.8 -1.1**
ONTNC **Ouen Toro** 16.11 296 P **P** **15 41 07.7 -1.1**
ONTNC **Ouen Toro** 16.11 296 P P 15 41 16.9 +8.1
DZM **Mont Dzumac** 16.24 297 P **P** **15 41 11.2 +0.8**
38nm,1.0s,baz=97,slow=15,SNR=11
DZM S **S** **15 44 19.2 +1.0**
8.6nm,0.9s,baz=146,slow=20,SNR=1.2
DZM LR LR 15 46 11.0
comp=Z,10µm,19.4s,baz=130,slow=33
DZM **Mont Dzumac** 16.24 297 *e*P **P** **15 41 12.5 +2.1**
546nm,1.6s
DZM *e*LR LR 15 45 07.4
comp=Z,25µm,26.1s
DZM **Mont Dzumac** 16.24 297 P **P** **15 41 11.3 +0.8**
NOUC **Port Laguerre** 16.34 296 P **P** **15 41 15.6 +4.3**
LIFNC **LIFOU** 16.40 302 P **Pn** **15 41 12.5 +0.5**
LIFNC IAmb IAmb 15 41 20.5
comp=Z,318nm,1.1s
ODZ **Otahua Downs** 17.26 208 P **Pn** **15 41 17.0 -3.5**
AFI **Afiamalu** 17.26 20 P **Pn** **15 41 14.4 -6.4**
comp=Z,54nm,0.9s,baz=164,slow=15,SNR=7.0
AFI S Sn 15 44 12.2 -20
comp=Z,28nm,0.8s,baz=206,slow=23,SNR=1.6
AFI **Afiamalu** 17.26 20 Pn Pn 15 41 13.5 -7.3
AFI **Afiamalu** 17.26 20 P Pn 15 41 13.5 -7.3
AFI pmax pmax
comp=Z,76nm,0.9s
RAR **Rarotonga** 18.66 65 P **P** **15 41 36.6 -0.3**
comp=Z,89nm,0.9s,baz=226,slow=8.0,SNR=28
RAR S Sn 15 44 47.9 -18
comp=Z,51nm,0.7s,baz=98,slow=20,SNR=8.0
RAR LR LR 15 49 26.4
comp=Z,1µm,18.2s,baz=262,slow=39
RAR **Rarotonga** 18.66 65 P **P** **15 41 36.8 -0.2**
RAR **Rarotonga** 18.66 65 P **P** **15 41 36.8 -0.2**
RAR pmax pmax
comp=Z,118nm,1.0s
KOUNC **Koumac, New Ca** 18.76 297 P **P** **15 41 38.0 -0.1**
LHI **Lord Howe Isla** 19.79 261 P **Pn** **15 41 52.5 +1.4**
baz=20,SNR=4.2
NTLH **Newcastle Hard** 25.97 256 P **P** **15 42 54.0 +2.9**
ARMA **Armidale** 26.25 262 P **P** **15 42 57.5 +3.7**
baz=26,SNR=20
ARMA **Armidale** 26.25 262 P **P** **15 42 56.9 +3.1**
ARMA **Armidale** 26.25 262 P **P** **15 42 58.3 +4.5**
TBI **Tubuai** 26.27 82 *e*LR LR 15 48 37.4
comp=Z,9µm,28.2s
TBI **Tubuai** 26.27 82 *e*T T 16 09 55.8
comp=Z,176nm,0.3s
RIV **Riverview** 26.40 254 P **P** **15 42 58.8 +3.9**
baz=27,SNR=4.1
MGCD **Mangrove Creek** 26.45 256 P **P** **15 42 59.3 +3.7**
baz=27,SNR=23
MGCD **Mangrove Creek** 26.45 256 P **P** **15 43 01.1 +5.6**
SYDH **Sydney Hard Ro** 26.74 254 P **P** **15 43 01.3 +3.2**
EIDS **Eidsvold** 27.80 273 P **P** **15 43 09.6 +1.9**
baz=28,SNR=14
EIDS **Eidsvold** 27.80 273 P **P** **15 43 08.8 +1.1**
EIDS **Eidsvold** 27.80 273 P **P** **15 43 09.1 +1.4**
CNB **Canberra Magne** 27.88 251 P **P** **15 43 11.4 +3.0**
baz=28,SNR=18
CNB **Canberra Magne** 27.88 251 P **P** **15 43 10.0 +1.6**
CAN **Canberra** 28.18 251 P **P** **15 43 13.3 +2.2**
CAN **Canberra** 28.18 251 P **P** **15 43 13.3 +2.2**
CAN pmax pmax
comp=Z,37nm,0.8s
CAN **Canberra** 28.18 251 P **P** **15 43 14.0 +3.0**
PAE **Paea** 28.69 70 *e*T T 16 12 55.2
comp=Z,47nm,0.3s
PPT2 **Papeete2** 28.73 70 *e*LR LR 15 49 41.5
comp=Z,9µm,27.5s
PPT2 **Papeete2** 28.73 70 *e*T T 16 13 03.3
comp=Z,35nm,0.3s
PPT **Papeete** 28.74 70 P **P** **15 43 16.2 +0.1**
comp=Z,32nm,1.0s,baz=261,slow=16,SNR=2.6
PPT LR LR 15 52 02.3
comp=Z,986nm,21.9s,baz=240,slow=30
comp=Z,32nm,1.0s
TIAR **Tiarei** 28.94 71 *e*T T 16 13 08.1
comp=Z,4.4nm,0.2s
RK1H **Rockhampton Ha** 28.95 276 P **P** **15 43 20.5 +2.6**
comp=Z,113nm,0.7s
HNR **Honiara** 29.29 311 LR LR 15 53 08.8
comp=Z,2µm,21.3s,baz=148,slow=33
RMQ **Roma** 29.50 269 P **P** **15 43 26.2 +3.3**
baz=30,SNR=36
RMQ **Roma** 29.50 269 P **P** **15 43 27.1 +4.3**
MEH **Mehetia** 29.82 72 *e*T T 16 14 22.8
comp=Z,90nm,0.3s
CORO **Coronation Par** 30.23 239 P **P** **15 43 29.9 +0.8**
MOO **Moorlands** 30.39 237 P **P** **15 43 32.5 +2.0**
baz=31,SNR=5.8
TAU **Tasmania Unive** 30.40 236 P **P** **15 43 31.1 +0.6**
TAU IAmb IAmb 15 43 33.1
comp=Z,80nm,1.5s
TAU **Tasmania Unive** 30.40 236 P **P** **15 43 31.1 +0.6**
TAU pmax pmax
comp=Z,80nm,1.5s
TAU **Tasmania Unive** 30.40 236 P **P** **15 43 29.9 -0.7**
TOO **Toolangi** 31.07 247 P **P** **15 43 38.6 +2.0**
baz=31,SNR=18
TOO **Toolangi** 31.07 247 P **P** **15 43 37.3 +0.7**
TOO IAmb IAmb 15 43 41.3
comp=Z,56nm,1.0s
TOO **Toolangi** 31.07 247 P **P** **15 43 37.3 +0.7**
TOO pmax pmax
comp=Z,56nm,1.0s
TOO **Toolangi** 31.07 247 P **P** **15 43 40.1 +3.5**
CMSA **Cobar Meteorol** 31.16 258 P **P** **15 43 39.6 +2.2**
baz=31,SNR=74
CMSA **Cobar Meteorol** 31.16 258 P **P** **15 43 40.5 +3.1**
PMOR **Pomariorio Ree** 31.48 68 *e*T T 16 16 24.9
comp=Z,16nm,0.3s
VAH **Vaihoa** 31.57 68 *e*T T 16 16 33.9
comp=Z,254nm,0.2s
GEXS **Deakin Univers** 32.05 245 P **P** **15 43 47.8 +2.7**
BRAT **Ballarat** 32.31 247 P **P** **15 43 50.0 +2.6**
TARA **Tarawa** 32.66 343 P **P** **15 43 48.2 -2.5**
TARA IAmb IAmb 15 43 51.9
comp=Z,76nm,1.0s
TARA **Tarawa** 32.66 343 IAMs_20 IAMs_20 15 53 59.7
comp=Z,3µm,20.0s
TARA **Tarawa** 32.66 343 P **P** **15 43 51.6 +0.9**
comp=Z,79nm,0.9s
QLP **Quilpie** 33.39 267 P **P** **15 43 58.2 +1.3**
baz=34,SNR=40
QLP **Quilpie** 33.39 267 P **P** **15 43 59.7 +2.7**
CTA **Charters Tower** 33.85 279 LR LR 15 55 36.9
comp=Z,6µm,21.8s,baz=112,slow=32
CTA **Charters Tower** 33.85 279 P **P** **15 44 03.8 +2.7**
CTAO **Charters Tower** 33.85 279 P **P** **15 44 02.8 +1.7**
CTAO **Charters Tower** 33.85 279 P **P** **15 44 02.8 +1.7**
CTAO pmax pmax
comp=Z,92nm,0.8s
CTAO **Charters Tower** 33.85 279 P **P** **15 44 03.8 +2.7**
CTAO **Charters Tower** 33.85 279 P **P** **15 44 03.0 +1.9**
CTAO pP **pP** **15 44 11.1 -2.1**
ARPS **Mount Arapiles** 33.98 248 P **P** **15 44 03.8 +1.8**
baz=34,SNR=12
ARPS **Mount Arapiles** 33.98 248 P **P** **15 44 05.5 +3.5**
STKA **Stephens Creek** 34.57 257 P **P** **15 44 09.0 +1.7**
comp=Z,118nm,0.8s,baz=93,slow=9.8,SNR=202
STKA LR LR 15 56 31.7
comp=Z,4µm,21.2s,baz=87,slow=33
comp=Z,118nm,0.8s
STKA **Stephens Creek** 34.57 257 P **P** **15 44 08.9 +1.7**
baz=35,SNR=116
STKA **Stephens Creek** 34.57 257 P **P** **15 44 09.1 +1.7**
STKA IAmb IAmb 15 44 13.5
comp=Z,25nm,0.8s
STKA **Stephens Creek** 34.57 257 P **P** **15 44 09.1 +1.9**
STKA pmax pmax
comp=Z,25nm,0.8s
STKA **Stephens Creek** 34.57 257 P **P** **15 44 09.6 +2.4**
INKA **Innaminka** 36.10 264 P **P** **15 44 22.9 +2.5**
MTSU **Mount Surprise** 36.35 281 P **P** **15 44 23.8 +1.2**
baz=36,SNR=59
MTSU **Mount Surprise** 36.35 281 P **P** **15 44 25.2 +2.6**
HTT **Hallett** 36.60 254 P **P** **15 44 25.9 +1.3**
baz=37,SNR=102
HTT **Hallett** 36.60 254 P **P** **15 44 26.7 +2.0**
GHSS **Government Hou** 36.71 251 P **P** **15 44 28.5 +3.0**
TWOA **Tennyson Woods** 36.72 251 P **P** **15 44 27.9 +2.4**
comp=Z,42nm,0.7s
NAPP **Napperby** 37.28 254 P **P** **15 44 32.2 +1.9**
comp=Z,176nm,0.8s
PTPS **Port Pirie** 37.41 254 P **P** **15 44 34.4 +3.0**
comp=Z,343nm,0.7s
LCRK **Leigh Creek** 37.67 258 P **P** **15 44 35.2 +1.5**
WHYH **Whyalla** 37.77 254 P **P** **15 44 35.9 +1.4**
comp=Z,132nm,0.7s
RABL **Rabaul** 38.37 307 P **P** **15 44 38.2 -1.5**
RABL IAmb IAmb 15 44 45.9
comp=Z,34nm,0.8s
RABL **Rabaul** 38.37 307 P **P** **15 44 39.4 -0.3**
PMG **Port Moresby** 38.63 295 LR LR 15 57 52.0
comp=Z,3µm,21.1s,baz=116,slow=32
PMG **Port Moresby** 38.63 295 IAMs_20 IAMs_20 15 57 19.0
comp=Z,3µm,22.0s
BBOO **Buckleboo** 39.07 254 P **P** **15 44 46.3 +0.8**
baz=39,SNR=60
BBOO **Buckleboo** 39.07 254 P **P** **15 44 45.8 +0.4**
BBOO **Buckleboo** 39.07 254 P **P** **15 44 47.9 +2.5**
COEN **Coen** 39.31 286 P **P** **15 44 47.9 +0.2**
baz=40,SNR=10
COEN **Coen** 39.31 286 P **P** **15 44 48.6 +0.9**
COEN **Coen** 39.31 286 P **P** **15 44 50.6 +3.0**
QIS **Mount Isa** 39.38 274 P **P** **15 44 48.4 +0.3**
baz=40,SNR=26
QIS **Mount Isa** 39.38 274 P **P** **15 44 49.4 +1.2**
OOD **Oodnadatta** 40.43 262 P **P** **15 44 58.5 +1.7**
TAOE **Nuku Hiva Isla** 41.20 67 *e*LR LR 15 55 24.0
comp=Z,5µm,28.0s
MULG **Mulgathing** 41.22 257 P **P** **15 45 04.3 +1.0**
KWAJ **Kwajalein Atol** 41.29 338 IAMs_20 IAMs_20 15 58 18.2
comp=Z,2µm,22.0s
AS31 **Alice Springs** 43.19 267 P **P** **15 45 18.8 -0.7**
ASAR **Alice Springs** 43.19 267 P **P** **15 45 18.7 -0.8**
comp=Z,32nm,0.6s,baz=104,slow=7.4,SNR=253
ASAR ScP **ScP** **15 50 54.9 -0.7**
comp=Z,2.2nm,0.9s,baz=115,slow=4.2,SNR=3.3
ASAR LR LR 16 03 01.9
comp=Z,4µm,18.5s,baz=120,slow=36
comp=Z,32nm,0.6s
MANU **Manus Island** 43.26 304 P **P** **15 45 19.5 -0.5**
WR0 **Warramunga Arr** 43.99 272 IAmb IAmb 15 45 27.4
comp=Z,50nm,0.7s
WRAB **Tennant Creek** 44.16 272 P **P** **15 45 26.4 -0.9**
WRAB IAmb IAmb 15 45 28.7
comp=Z,85nm,0.8s
WRAB **Tennant Creek** 44.16 272 *ce*P **P** **15 45 26.8 -0.5**
WRAB pmax pmax
comp=Z,78nm,0.7s
WRAB **Tennant Creek** 44.16 272 P **P** **15 45 27.3 0.0**
WRA **Warramunga Arr** 44.17 272 P **P** **15 45 26.5 -0.8**
comp=Z,61nm,0.5s,baz=111,slow=8.1,SNR=638
WRA ScP **ScP** **15 50 58.6 -1.1**
comp=Z,2.7nm,1.0s,baz=111,slow=4.1,SNR=4.1
WRA S **S** **15 51 54.0 -3.3**
comp=Z,3.2nm,0.8s,baz=110,slow=14,SNR=4.6
WRA LR LR 16 02 13.9
comp=Z,3µm,21.8s,baz=122,slow=34
comp=Z,61nm,0.5s
WRA **Warramunga Arr** 44.17 272 P **P** **15 45 26.6 -0.7**
WRA **Warramunga Arr** 44.17 272 P **P** **15 45 26.6 -0.7**
WRA pmax pmax
comp=Z,5.0nm,0.8s
WB0 **Warramunga Arr** 44.19 272 IAmb IAmb 15 45 28.9
comp=Z,92nm,0.7s
DRV **Dumont d'Urvil** 44.27 202 P **P** **15 45 27.9 +0.5**
DRV pP **pP** **15 45 36.8 -2.7**
FORT **Forrest** 46.15 255 P **P** **15 45 41.7 -1.2**
baz=46,SNR=44
FORT **Forrest** 46.15 255 P **P** **15 45 41.5 -1.4**
FORT **Forrest** 46.15 255 P **P** **15 45 43.8 +0.9**
WRKA **Warakurna** 47.57 263 P **P** **15 45 52.7 -1.4**
baz=48,SNR=66
WRKA **Warakurna** 47.57 263 P **P** **15 45 53.9 -0.2**
SBA **Scott Base** 48.15 184 P **P** **15 46 02.1 +4.3**
SBA pP **sP** **15 46 18.8 +3.7**
VNDA **Vanda** 48.21 186 P **P** **15 46 01.0 +2.8**
comp=Z,3.0nm,0.6s,baz=6.9,slow=8.3,SNR=25
VNDA PcP **PcP** **15 47 26.9 +2.1**
comp=Z,17nm,0.9s,baz=335,slow=3.8,SNR=4.7
comp=Z,3.0nm,0.6s
VNDA **Vanda** 48.21 186 P **P** **15 46 00.2 +2.0**
GENI **Genyem** 48.28 297 P **P** **15 45 58.6 -1.0**
comp=Z,2µmcomp=Z,92nm,0.8s
GENI **Genyem** 48.28 297 P **P** **15 46 02.1 +2.5**
KDU **Kakadu** 48.97 280 P **P** **15 46 05.1 +0.2**
baz=49,SNR=8.2
KDU **Kakadu** 48.97 280 P **P** **15 46 05.2 +0.2**
SMPI **Sarmi** 49.79 296 P **P** **15 46 10.2 -1.0**
comp=Z,783nmcomp=Z,18nm,1.1s
MTN **Manton Dam** 50.04 279 P **P** **15 46 12.3 -0.8**
baz=50,SNR=10.0
MTN **Manton Dam** 50.04 279 IAmb IAmb 15 46 14.0
comp=Z,20nm,0.8s
MTN **Manton Dam** 50.04 279 P **P** **15 46 17.5 +4.4**
KNRA **Kununurra** 50.77 274 P **P** **15 46 17.9 -0.7**
baz=51,SNR=58
KNRA **Kununurra** 50.77 274 P **P** **15 46 17.4 -1.3**
KNRA IAmb IAmb 15 46 21.5
comp=Z,43nm,0.7s
KNRA **Kununurra** 50.77 274 P **P** **15 46 19.3 +0.7**
WAKE **Wake Island** 51.48 341 P **P** **15 46 23.9 +0.2**
WAKE **Wake Island** 51.48 341 IAMs_20 IAMs_20 16 05 36.4
comp=Z,2µm,19.0s
WAKE **Wake Island** 51.48 341 P **P** **15 46 24.2 +0.5**
WAKE pP **pP** **15 46 35.4 -0.7**
SRPI **Serui, Papua** 51.80 294 P **P** **15 46 25.3 -1.0**
comp=Z,69nm,0.8s
CCD **Concordia, Ant** 53.07 196 P **P** **15 46 36.5 +1.0**
HMH **Humu'ula Sheep** 54.10 26 P **P** **15 46 43.9 +0.4**
FAKI **Fak Fak** 54.37 290 P **P** **15 46 44.2 -1.1**
comp=Z,1µmcomp=Z,69nm,1.2s
HPAH **Hawaii Prepara** 54.41 26 P **P** **15 46 46.3 +0.8**
KLBR **Kellerberrin** 54.45 251 P **P** **15 46 44.6 -1.2**
baz=55,SNR=22
KLBR **Kellerberrin** 54.45 251 P **P** **15 46 45.6 -0.1**
KIP **Kipapa** 54.87 23 P **P** **15 46 46.3 -2.3**
KIP **Kipapa** 54.87 23 P **P** **15 46 46.0 -2.6**
CASY **Casey** 55.27 208 P **P** **15 46 49.8 -1.2**
CASY **Casey** 55.27 208 P **P** **15 46 51.2 +0.2**
CASY pP **pP** **15 46 59.9 -3.5**
BLDU **Ballidu** 55.60 252 P **P** **15 46 53.4 -0.6**
baz=56,SNR=7.6
MUN **Mundaring** 55.60 250 P **P** **15 46 53.5 -0.5**
baz=56,SNR=4.9
MUN **Mundaring** 55.60 250 P **P** **15 46 55.0 +1.0**
PSA00 **Pilbara Seismi** 56.05 263 P **P** **15 46 55.3 -2.1**
PSA00 **Pilbara Seismi** 56.05 263 P **P** **15 46 56.2 -1.2**
MBWA **Marble Bar** 56.31 264 P **P** **15 46 57.5 -1.7**
MBWA IAmb IAmb 15 46 59.5
comp=Z,31nm,0.8s
MBWA **Marble Bar** 56.31 264 P **P** **15 46 58.3 -0.9**
MBWA **Marble Bar** 56.31 264 P **P** **15 46 57.6 -1.5**
MBWA sP **pwP** **15 47 13.5 -1.0**
SIJI **Sorong** 56.36 291 P **P** **15 46 58.5 -1.1**
comp=Z,43nm,0.8s,baz=90,slow=7.6,SNR=31
SIJI LR LR 16 10 37.3
comp=Z,779nm,20.9s,baz=103,slow=36
comp=Z,43nm,0.8s
SWI **Sorong** 56.37 291 P **P** **15 46 58.3 -1.4**
comp=Z,1µmcomp=Z,73nm,0.9s
GUMO **Guam** 56.46 315 P **P** **15 46 58.1 -2.1**
comp=Z,84nm,0.8s,baz=168,slow=9.7,SNR=9.7
GUMO LR LR 16 08 52.9
comp=Z,774nm,19.7s,baz=118,slow=34
comp=Z,84nm,0.8s
GUMO **Guam** 56.46 315 P **P** **15 46 58.9 -1.3**
GUMO **Guam** 56.46 315 P **P** **15 46 58.9 -1.3**
GUMO pmax pmax
comp=Z,95nm,0.9s
GUMO **Guam** 56.46 315 P **P** **15 46 59.4 -0.8**
GUMO **Guam** 56.46 315 P **P** **15 46 58.9 -1.3**
GUMO pP **pP** **15 47 11.7 -1.1**
GUMO sP **pwP** **15 47 15.4 -0.3**
MORW **Morawa** 56.63 253 P **P** **15 47 00.2 -1.2**
baz=57,SNR=10
SOEI **Soe** 57.41 278 IAmb IAmb 15 47 24.5
comp=Z,77nm,1.2s
SOEI **Soe** 57.41 278 P **P** **15 47 06.3 -0.9**
comp=Z,52nm,0.8s
SOEI **Soe** 57.41 278 P **P** **15 47 09.0 +1.8**
BATI **Baumata** 57.71 277 P **P** **15 47 08.1 -1.1**
comp=Z,24nm,0.6s,baz=135,slow=1.4,SNR=5.7
BATI LR LR 16 11 57.3
comp=Z,5µm,19.7s,baz=132,slow=36
comp=Z,24nm,0.6s
BATI **Baumata** 57.71 277 P **P** **15 47 08.4 -0.8**
comp=Z,24nm,0.7s
MIDW **Midway** 58.19 1 IAMs_20 IAMs_20 16 06 28.1
comp=Z,2µm,22.0s
LBMI **Labuha** 59.55 289 P **P** **15 47 21.1 -0.9**
comp=Z,19nm,0.7s
MMRI **Maumere** 59.71 278 P **P** **15 47 22.4 -0.7**
MMRI IAmb IAmb 15 47 23.9
comp=Z,41nm,0.9s
QSPA **South Pole Qui** 59.81 180 P **P** **15 47 25.3 +2.1**
comp=Z,39nm,0.7s,baz=34,slow=1.1,SNR=277
comp=Z,39nm,0.7s
QSPA **South Pole Qui** 59.81 180 P **P** **15 47 24.7 +1.5**
QSPA **South Pole Qui** 59.81 180 IAMs_20 IAMs_20 16 12 10.8
comp=Z,1µm,19.0s
QSPA **South Pole Qui** 59.81 180 P **P** **15 47 25.8 +2.6**
SANI **Sanana** 60.00 287 P **P** **15 47 23.9 -1.2**
comp=Z,819nmcomp=Z,58nm,1.0s
SANI **Sanana** 60.00 287 P **P** **15 47 26.0 +0.9**
EDFI **Ende, Flores** 60.12 278 P **P** **15 47 25.2 -0.8**
comp=Z,16nm,0.7s
GIRL **Giralia** 60.44 260 P **P** **15 47 27.8 -0.1**
baz=61,SNR=4.9
TNTI **Ternate** 60.48 290 IAmb IAmb 15 47 28.7
comp=Z,32nm,1.1s
TNTI **Ternate** 60.48 290 P **P** **15 47 27.4 -0.9**
comp=Z,602nmcomp=Z,23nm,1.9s
TNTI **Ternate** 60.48 290 P **P** **15 47 29.1 +0.8**
comp=Z,23nm,1.5s
BKSI **Bulukumba** 63.19 280 P **P** **15 47 45.7 -0.9**
comp=Z,630nmcomp=Z,28nm,1.6s
PLAI **Plampang** 63.44 275 P **P** **15 47 47.5 -0.8**
comp=Z,66nm,0.8s
PLAI **Plampang** 63.44 275 P **P** **15 47 51.1 +2.8**
comp=Z,66nm,0.8s
KAPI **Kappang** 63.66 280 P **P** **15 47 49.2 -0.5**
comp=Z,8.1nm,0.6s,baz=153,slow=14,SNR=4.1
KAPI LR LR 16 16 15.6
comp=Z,785nm,18.1s,baz=122,slow=37
comp=Z,8.1nm,0.6s
SGSI **Sangihe** 63.66 292 P **P** **15 47 48.8 -0.9**
comp=Z,45nm,0.8s
TTSI **Tana Toraja** 64.63 282 P **P** **15 47 55.3 -0.8**
comp=Z,21nm,1.0s
DAV **Davao City (W)** 65.65 295 LR LR 16 16 21.1
comp=Z,163nm,19.9s,baz=137,slow=36
SRBI **Singaraja** 66.02 275 P **P** **15 48 04.3 -0.7**
comp=Z,55nm,0.9s
TOLI2 **Tolitoli** 66.08 286 P **P** **15 48 03.3 -2.1**
MPSI **Mapaga** 66.39 285 P **P** **15 48 06.4 -1.0**
comp=Z,22nm,0.8s
BLJI **Banyuglugur** 67.58 274 P **P** **15 48 14.3 -0.6**
comp=Z,41nm,0.8s
KMMI **Kalianget** 67.60 275 P **P** **15 48 14.7 -0.4**
comp=Z,56nm,0.8s
JCJ **Chichijima** 68.65 322 LR LR 16 12 47.5
comp=Z,381nm,20.4s,baz=118,slow=31
BBKI **Banjar Baru** 68.65 279 P **P** **15 48 21.0 -0.7**
comp=Z,24nm,0.9s
PWJI **Pagerwojo** 68.99 273 P **P** **15 48 23.0 -0.8**
comp=Z,43nm,0.7s
PCJI **Pacitan** 69.44 272 P **P** **15 48 26.0 -0.6**
comp=Z,145nm,0.8s
WOJI **Wonogiri, Jawa** 69.84 273 P **P** **15 48 28.4 -0.6**
comp=Z,70nm,1.1s
BELA **Belgrano 2** 69.88 172 P **P** **15 48 28.6 +0.2**
MTKI **Muara Teweh, K** 69.91 281 P **P** **15 48 29.0 -0.5**
PBKI **Pangkalan Bun** 71.75 278 P **P** **15 48 40.0 -0.7**
comp=Z,2µmcomp=Z,95nm,1.0s
PMSA **Palmer Station** 72.33 156 LR LR 16 13 39.9
comp=Z,635nm,21.2s,baz=239,slow=30
PMSA **Palmer Station** 72.33 156 P **P** **15 48 43.6 +0.3**
PMSA IAmb IAmb 15 48 54.7
comp=Z,58nm,0.7s
MAW **Mawson** 72.43 201 P **P** **15 48 44.3 +0.5**
comp=Z,13nm,0.6s,baz=140,slow=8.0,SNR=10
MAW pP **sP** **15 49 02.6 +1.0**
comp=Z,18nm,0.7s,baz=153,slow=7.4,SNR=6.9
MAW LR LR 16 19 08.4
comp=Z,1µm,20.6s,baz=113,slow=34
comp=Z,13nm,0.6s
MAW **Mawson** 72.43 201 P **P** **15 48 44.7 +0.8**
baz=72,SNR=22
MAW **Mawson** 72.43 201 P **P** **15 48 44.4 +0.5**
MAW **Mawson** 72.43 201 P **P** **15 48 44.4 +0.5**
MAW pmax pmax
comp=Z,6.0nm,0.8s
LEM **Lembang** 73.19 272 P **P** **15 48 48.0 -1.5**
comp=Z,62nm,0.7s,baz=135,slow=12,SNR=15
LEM LR LR 16 19 40.7
comp=Z,1µm,21.9s,baz=114,slow=35
comp=Z,62nm,0.7s
LEM **Lembang** 73.19 272 P **P** **15 48 48.0 -1.5**
LEM **Lembang** 73.19 272 P **P** **15 48 48.7 -0.7**
comp=Z,55nm,1.2s
STKI **Sintang** 73.35 280 P **P** **15 48 49.5 -0.7**
comp=Z,48nm,0.9s
TGY **Tagaytay City** 73.54 298 LR LR 16 19 24.9
comp=Z,353nm,20.6s,baz=119,slow=34
SBUM **Sibu** 73.97 283 IAMs_20 IAMs_20 16 20 18.0
comp=Z,980nm,22.0s
DBJI **Dramaga** 74.07 272 P **P** **15 48 53.7 -0.8**
comp=Z,8µmcomp=Z,59nm,0.8s
JHJ **Hachijo jima 2** 74.70 324 LR LR 16 17 50.5
comp=Z,315nm,20.3s,baz=114,slow=33
KSM **Kuching** 75.08 281 P **P** **15 48 59.2 -1.0**
KSM IAmb IAmb 15 49 00.7

comp=Z,30nm,0.9s
KSM **Kuching** **75.08 281** P **P** **15 49 00.0 -0.2**
USHA **Ushuaia** **75.97 146** LR LR 16 14 34.3
comp=Z,730nm,21.1s,baz=232,slow=29
JOW **Kunigami** **76.65 312** LR LR 16 18 36.4
comp=Z,651nm,21.7s,baz=120,slow=32
JYT **Yasato** **76.98 326** P **P** **15 49 09.4 -1.1**
JYT IAmb IAmb 15 49 26.0
comp=Z,50nm,1.0s
INU **Inuyama** **77.86 324** P **P** **15 49 14.5 -1.0**
INU **Inuyama** **77.86 324** P **P** **15 49 15.7 +0.2**
JGF **Kuroka** **77.89 324** P **P** **15 49 14.5 -1.2**
TROLL **Troll, Antarti** **77.98 180** P **P** **15 49 17.1 +1.2**
MJAR **Matsushiro Arr** **78.20 325** P **P** **15 49 15.6 -1.8**
comp=Z,8.3nm,0.9s,baz=157,slow=5.9,SNR=13
MJAR LR LR 16 19 04.5
comp=Z,254nm,21.2s,baz=131,slow=32
comp=Z,8.3nm,0.9s
MAJO **Matsushiro** **78.20 325** P **P** **15 49 16.9 -0.4**
MAJO **Matsushiro** **78.20 325** P **P** **15 49 16.9 -0.4**
MAJO pmax pmax
comp=Z,17nm,0.9s
MAJO **Matsushiro** **78.20 325** P **P** **15 49 17.3 -0.1**
SNAA **Sanae** **78.26 178** P **P** **15 49 18.1 +0.8**
SNAA S **S** **15 59 14.5 +6.1**
SNAA **Sanae** **78.26 178** LR LR 16 23 52.7
comp=Z,604nm,18.1s,baz=188,slow=36
SNAA **Sanae** **78.26 178** P **P** **15 49 17.6 +0.2**
SNAA IAMs_20 IAMs_20 16 23 41.1
comp=Z,870nm,19.0s
SNAA **Sanae** **78.26 178** *ce*P **P** **15 49 18.1 +0.8**
SNAA pmax pmax
comp=Z,82nm,1.8s
VNA3 **Neumayer Olymp** **78.40 176** P **P** **15 49 18.8 +0.7**
VNA3 S **S** **15 59 16.0 +6.1**
JSU **Suzuyama** **78.61 317** IAmb IAmb 15 49 24.4
comp=Z,34nm,1.0s
VNA2 **Neumayer--Watz** **78.84 177** P **P** **15 49 21.4 +0.9**
baz=173,slow=5.1
VNA2 S **S** **15 59 20.8 +6.3**
TWG **Pinlang** **78.86 305** IAmb IAmb 15 49 44.0
comp=Z,17nm,0.6s
COYC **Coyhaique** **78.96 136** P **P** **15 49 22.7 +1.1**
NVL **N'lazarevskaya** **78.98 183** ⇓*i*P **P** **15 49 21.9 +0.7**
NVL *i* S **S** **15 59 09.6 -6.4**
NVL pmax pmax
comp=Z,34nm,0.9s
VNA1 **Neumayer--Stat** **79.07 177** P **P** **15 49 22.7 +1.0**
AY01 **Puyuhuapi** **79.23 135** P **P** **15 49 23.6 +0.6**
AY01 IAmb IAmb 15 49 44.6
comp=Z,79nm,1.1s
JNU **Nakatsue** **79.53 318** LR LR 16 20 06.6
comp=Z,256nm,21.8s,baz=97,slow=32
SSLB **Suanglung** **79.56 305** P **P** **15 49 25.5 +0.4**
JHS **Saijyo** **79.66 321** P **P** **15 49 24.4 -1.0**
JHS IAmb IAmb 15 49 26.8
comp=Z,42nm,0.9s
LL02 **Futaleuf** **80.37 135** P **P** **15 49 29.8 +0.5**
H03S2 **Juan Fernandez** **80.46 124** T T 17 18 38.6
baz=236,SNR=309
H03S1 **Juan Fernandez** **80.47 124** T T 17 18 45.6
baz=236,SNR=320
H03S3 **Juan Fernandez** **80.48 124** T T 17 18 38.5
baz=236,SNR=309
H03N3 **Juan Fernandez** **80.65 123** T T 17 19 01.4
baz=240,slow=72,SNR=200
H03N2 **Juan Fernandez** **80.65 123** T T 17 18 53.6
baz=240,slow=72,SNR=157
H03N1 **Juan Fernandez** **80.67 123** T T 17 18 52.9
baz=240,slow=72,SNR=382
MYKOM **Kota Tinggi** **80.75 278** P **P** **15 49 31.1 -0.7**
MYKOM IAmb IAmb 15 49 32.4
comp=Z,32nm,0.9s
MYKOM IAMs_20 IAMs_20 16 30 34.8
comp=Z,887nm,19.0s
KRJI **Kerinci** **80.85 273** P **P** **15 49 30.5 -2.0**
comp=Z,152nm,0.8s
LL04 **Puerto Octay** **81.25 132** IAmb IAmb 15 49 55.3
comp=Z,53nm,0.9s
ORCD **Orcadas** **81.58 159** P **P** **15 49 36.0 +0.7**
ASAJ **Asahikawa** **82.38 332** LR LR 16 23 59.3
comp=Z,866nm,19.0s,baz=164,slow=34
EFI **East Falkland** **82.84 147** P **P** **15 49 42.5 +0.4**
EFI **East Falkland** **82.84 147** *ce*P **P** **15 49 43.4 +1.3**
EFI pmax pmax
comp=Z,112nm,2.5s
SHEM **Shemya Is, Ala** **82.97 355** LR LR 16 19 49.4
comp=Z,974nm,21.6s,baz=144,slow=31
NIKH **Nikolski High** **83.29 6** P **P** **15 49 43.6 -0.5**
NIKH **Nikolski High** **83.29 6** P **P** **15 49 44.3 +0.2**
baz=188
SKR **Severo-Kuril's** **83.83 344** *e*P P 15 49 37.7 -9.2
SKR pmax pmax
comp=Z,100nm,4.2s
TJN **Taejon** **83.87 319** P **P** **15 49 47.2 -0.2**
TJN **Taejon** **83.87 319** *ce*P **P** **15 49 47.5 0.0**
TJN **Taejon** **83.87 319** P **P** **15 49 49.0 +1.5**
comp=Z,121nm,2.4s
SNCC **San Nicolas Is** **83.92 46** P **P** **15 49 47.2 -0.6**
baz=228
KSRS **Korea Array** **84.32 320** P **P** **15 49 49.4 -0.4**
comp=Z,7.4nm,0.8s,baz=143,slow=5.6,SNR=32
KSRS LR LR 16 25 06.2
comp=Z,241nm,19.5s,baz=120,slow=34
comp=Z,7.4nm,0.8s
KSAR **Wonju Array Be** **84.33 320** P **P** **15 49 48.8 -1.0**
KSAR **Wonju Array Be** **84.33 320** P **P** **15 49 48.8 -1.0**
SCI2 **San Clemente I** **84.35 47** P **P** **15 49 49.9 -0.1**
baz=228
SCZ2 **Santa Cruz Isl** **84.35 45** P **P** **15 49 50.1 +0.1**
baz=227
UNV **Unalaska Valle** **84.37 7** P **P** **15 49 49.4 -0.2**
baz=190
LPIG **La Paz** **84.42 58** LR LR 16 22 51.3
comp=Z,475nm,18.1s,baz=215,slow=32
IPM **Ipoh** **84.55 278** P **P** **15 49 49.9 -1.6**
IPM IAmb IAmb 15 49 51.7
comp=Z,31nm,0.8s
IPM **Ipoh** **84.55 278** P **P** **15 49 50.5 -1.0**
YSS **Yuzh-Sakhalins** **84.69 334** P **P** **15 49 52.2 +0.8**
YSS **Yuzh-Sakhalins** **84.69 334** *e*P **P** **15 49 51.1 -0.2**
YSS *e**PP **sP** **15 50 14.2 +4.7**
YSS *e*S **S** **16 00 12.9 -2.1**
YSS pmax pmax
comp=Z,700nm,4.4s
YSS pmax pmax
comp=Z,70nm,1.1s
YSS MLR MLR
comp=Z,800nm,21.0s
YSS **Yuzh-Sakhalins** **84.69 334** P **P** **15 49 51.3 0.0**
PKM **Mcpherson Peak** **84.84 44** P **P** **15 49 52.5 -0.2**
baz=227
QIZ **Qiongzhong** **85.02 295** P **P** **15 49 52.3 -1.4**
QIZ S **S** **16 00 25.3 +5.8**
QIZ LR LR
comp=Z,280nm,30.4s
QIZ LR LR
comp=Z,300nm,33.1s
QIZ LR LR
comp=Z,660nm,36.6s
SMMC **Simmler** **85.02 44** P **P** **15 49 54.2 +0.8**
baz=227
109C **Camp Elliot, M** **85.20 47** P **P** **15 49 55.2 +0.9**
baz=229
KULM **Kulim** **85.28 279** IAmb IAmb 15 49 55.1
comp=Z,25nm,0.9s
OSI **Osito Audit: C** **85.32 45** P **P** **15 49 56.2 +1.3**
baz=228
DECC **Green Verdugo** **85.32 46** P **P** **15 49 55.8 +0.8**
baz=228
PET **Petropavlovsk** **85.45 346** IAMs_20 IAMs_20 16 23 12.6
comp=Z,639nm,22.0s
PET **Petropavlovsk** **85.45 346** *e*P **P** **15 49 55.0 0.0**
PET *e*S **S** **16 00 23.5 +1.3**
PET pmax pmax
comp=Z,24nm,1.3s
ELS **Elsinore Mount** **85.49 47** P **P** **15 49 56.4 +0.5**
ELS IAmb IAmb 15 50 16.5
comp=Z,31nm,1.1s
PSI **Prapat** **85.50 276** P **P** **15 49 54.1 -2.3**
comp=Z,14nm,0.9s,baz=187,slow=6.9,SNR=11
PSI LR LR 16 30 52.1
comp=Z,1μm,18.5s,baz=126,slow=38
comp=Z,14nm,0.9s
ARVC **Arvin** **85.60 45** P **P** **15 49 57.8 +1.6**
baz=228
MURC **Murrieta** **85.61 47** P **P** **15 49 57.5 +1.1**
baz=229
MONP2 **Monument Peak** **85.64 48** P **P** **15 49 58.2 +1.4**
baz=229,SNR=9.8
IKP **In-Ko-Pah, Jac** **85.69 48** P **P** **15 49 58.3 +1.4**
baz=230,SNR=9.8
FALS **False Pass** **85.72 8** P **P** **15 49 56.9 +0.6**
baz=192
FALS **False Pass** **85.72 8** P **P** **15 49 57.4 +1.1**
PEA0B **Petropavlovsk-** **85.73 346** *ce*P **P** **15 49 55.5 -0.9**
PETK **Petropavlovsk-** **85.73 346** P **P** **15 49 55.7 -0.7**
comp=Z,28nm,0.9s,baz=165,slow=7.3,SNR=36
PETK LR LR 16 27 40.4
comp=Z,289nm,18.3s,baz=165,slow=35
comp=Z,28nm,0.9s
BFSC **Mount Baldy Ra** **85.73 46** P **P** **15 49 58.8 +1.7**
baz=229,SNR=9.9
YUH **Yuha Desert** **85.80 48** IAmb IAmb 15 50 18.8
comp=Z,39nm,1.3s
GSI **Gunungsitoli** **85.91 274** P **P** **15 49 57.9 -0.4**
GSI **Gunungsitoli** **85.91 274** P **P** **15 49 57.6 -0.7**
comp=Z,167nm,0.8s
GSI **Gunungsitoli** **85.91 274** P **P** **15 49 59.5 +1.2**
VES **Vestal, Richgr** **85.92 44** P **P** **15 49 58.9 +1.1**
baz=228
EDW2 **Edwards Air Fo** **85.95 45** P **P** **15 49 59.2 +1.1**
baz=228,SNR=9.2
VOG **Valley Oaks Go** **86.06 44** P **P** **15 49 59.5 +1.0**
baz=227
SWSC **Sam W. Stewart** **86.07 48** P **P** **15 49 59.8 +1.2**
baz=230
PFO **Pinyon Flats O** **86.08 47** P **P** **15 49 59.8 +0.9**
comp=Z,8.1nm,0.8s,baz=226,slow=4.3,SNR=11
PFO pP **sP** **15 50 18.0 +1.3**
comp=Z,17nm,0.9s,baz=256,slow=2.1,SNR=7.8
PFO LR LR 16 24 41.6
comp=Z,448nm,18.0s,baz=234,slow=33
comp=Z,8.1nm,0.8s
PFO **Pinyon Flats O** **86.08 47** P **P** **15 49 59.1 +0.3**
PFO IAmb IAmb 15 50 19.7
comp=Z,26nm,1.0s
PFO **Pinyon Flats O** **86.08 47** P **P** **15 50 00.8 +2.0**
baz=229,SNR=6.7
TPFO **Pinon Flats** **86.08 47** P **P** **15 50 00.4 +1.5**
baz=229,SNR=7.2
ISA **Isabella, Lake** **86.17 45** P **P** **15 50 01.0 +1.8**
baz=228,SNR=21
BBRC **Big Bear Solar** **86.21 47** P **P** **15 50 00.1 +0.5**
baz=229
NJ2 **Nanjing** **86.23 311** *e*P **P** **15 50 03.6 +4.2**
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
CHNA **Chernabura Isl** **86.24 11** P **P** **15 50 01.6 +2.8**
baz=196
BO04 **La Punta** **86.24 127** IAmb IAmb 15 50 29.8
comp=Z,31nm,0.9s
MSHR **Mys Shultsa** **86.32 325** *i* P **P** **15 49 58.8 -0.8**
MSHR pmax pmax
comp=Z,15nm,1.1s
ROC1 **El Roble** **86.53 126** P **P** **15 50 00.9 -0.6**
LRMC **Laurel Mtn Rad** **86.53 45** P **P** **15 50 02.6 +1.6**
baz=228,SNR=14
RRX **Edison Barstow** **86.56 46** P **P** **15 50 02.3 +1.3**
baz=229
SDPT **Sand Point** **86.60 10** P **P** **15 50 00.4 -0.2**
SDPT **Sand Point** **86.60 10** P **P** **15 50 01.7 +1.1**
baz=195,SNR=9.1
BELC **Belle Mtn. Jos** **86.62 47** P **P** **15 50 03.1 +1.6**
baz=230,SNR=14
CMB **Columbia Colle** **86.63 42** IAmb IAmb 15 50 22.1
comp=Z,23nm,0.8s
PEL **Peldehue** **86.66 127** IAMs_20 IAMs_20 16 19 37.0
comp=Z,937nm,20.0s
BC3 **Big Chuckawall** **86.75 48** P **P** **15 50 04.2 +2.1**
baz=230,SNR=16
GLA **Glamis** **86.77 49** IAmb IAmb 15 50 23.5
comp=Z,31nm,0.9s
GLA **Glamis** **86.77 49** P **P** **15 50 04.5 +2.4**
baz=230,SNR=7.4
CWC **Cottonwood Cre** **86.92 44** P **P** **15 50 04.0 +1.1**
baz=228
HEC **Hector,Ludlow** **86.95 46** P **P** **15 50 04.5 +1.5**
baz=229,SNR=23
GSC **Goldstone, Bar** **86.96 46** P **P** **15 50 04.3 +1.2**
baz=229,SNR=12
VA03 **San Esteban** **86.97 126** IAmb IAmb 15 50 23.9
comp=Z,31nm,0.8s
ORV **Oroville** **87.05 40** IAMs_20 IAMs_20 16 25 42.6
comp=Z,665nm,19.0s
USRK **Ussuriysk Ar.** **87.11 326** P **P** **15 50 02.4 -1.1**
comp=Z,9.0nm,0.9s,baz=151,slow=3.3,SNR=10.0
USRK LR LR 16 23 21.8
comp=Z,564nm,21.8s,baz=133,slow=32
comp=Z,9.0nm,0.9s
USA0B **Ussuriysk Arra** **87.11 326** *i* P **P** **15 50 03.2 -0.2**
TIN **Tinemaha, Big** **87.24 44** P **P** **15 50 05.8 +1.3**
baz=228
RFA **San Rafael** **87.25 129** *i* P **P** **15 50 06.2 +1.5**
IRM **Iron Mountain** **87.27 48** P **P** **15 50 06.4 +1.9**
baz=230,SNR=25
113A **Mohawk Valley,** **87.28 49** IAmb IAmb 15 50 25.5
comp=Z,35nm,1.3s
GMRC **Granite Mounta** **87.34 47** P **P** **15 50 06.4 +1.4**
baz=230,SNR=9.7
QSM **Queen of Sheba** **87.35 45** P **P** **15 50 05.4 +0.5**
QSM IAmb IAmb 15 50 25.4
comp=Z,24nm,0.9s
214A **Organ Pipe Nat** **87.41 51** IAmb IAmb 15 50 26.4
comp=Z,19nm,0.9s
214A **Organ Pipe Nat** **87.41 51** P **P** **15 50 07.3 +2.0**
baz=231
EMB **Emerald Bay** **87.44 41** IAmb IAmb 15 50 07.5
comp=Z,17nm,1.1s
CO02 **Combarbal** **87.53 125** P **P** **15 50 07.0 +0.8**
TUQ **Turquoise Moun** **87.59 46** P **P** **15 50 07.8 +1.6**
baz=230
GWY **Greenwater Val** **87.62 45** IAmb IAmb 15 50 26.8
comp=Z,22nm,0.9s
SHOC **Shoshone, Teco** **87.67 46** P **P** **15 50 08.3 +1.9**
baz=229
FURC **Furnace Creek,** **87.68 45** P **P** **15 50 07.7 +1.3**
baz=229,SNR=6.3
MPK **Martis Peak** **87.70 41** IAmb IAmb 15 50 09.0
comp=Z,29nm,1.0s
GRAC **Grapevine Rang** **87.72 44** P **P** **15 50 08.3 +1.6**
GRAC **Grapevine Rang** **87.72 44** P **P** **15 50 08.1 +1.4**
baz=229,SNR=8.1
L02F **Cave Junction** **87.72 37** P **P** **15 50 07.8 +1.3**
baz=224
CHIR **Chirikof Islan** **87.86 12** P **P** **15 50 08.5 +1.7**
baz=199
LHV **Little Huntoon** **87.88 43** IAmb IAmb 15 50 28.5
comp=Z,27nm,0.8s
BEKR **Beckworth** **87.90 41** IAmb IAmb 15 50 28.0
comp=Z,11nm,0.8s
YBH **Yreka Blue Hor** **87.90 38** LR LR 16 20 49.3
comp=Z,345nm,21.4s,baz=244,slow=30
VCNR **Virginia City** **87.91 41** IAmb IAmb 15 50 30.6
comp=Z,16nm,0.9s
YERR **Yerington** **87.94 42** IAmb IAmb 15 50 28.4
comp=Z,20nm,0.8s
NEE2 **Needles Airpor** **87.99 47** P **P** **15 50 09.7 +1.8**
baz=230
PDMCI **Parker Dam,Lak** **88.00 48** P **P** **15 50 10.2 +2.2**
baz=231,SNR=5.8
ARCO **CERRO ARCO** **88.05 127** *i* P **P** **15 50 07.4 -1.3**
K02D **Willamette Mer** **88.08 37** P **P** **15 50 09.0 +0.8**
baz=224
AUSP **Uspallata** **88.08 126** *i* P **P** **15 50 11.6 +2.5**
NVAR **Mina Array Bea** **88.11 43** P **P** **15 50 09.8 +1.1**
comp=Z,14nm,0.8s,baz=221,slow=8.2,SNR=98
NVAR pP **sP** **15 50 27.9 +1.3**
comp=Z,23nm,0.8s,baz=225,slow=7.8,SNR=18
NVAR LR LR 16 26 03.8
comp=Z,814nm,18.1s,baz=240,slow=33
comp=Z,14nm,0.8s
NVAR **Mina Array Bea** **88.11 43** P **P** **15 50 09.4 +0.7**
NV11 **Mina Array Sit** **88.20 43** IAmb IAmb 15 50 29.8
comp=Z,19nm,0.9s
GO04 **Tololo Observa** **88.25 124** IAmb IAmb 15 50 29.7
comp=Z,26nm,0.8s
ASAL **Salagasta** **88.26 127** *i* P **P** **15 50 11.4 +1.8**
J01E **Myrtle Point** **88.28 36** P **P** **15 50 10.0 +0.9**
baz=224
PAHR **Pah Rah Range** **88.34 41** IAmb IAmb 15 50 30.2
comp=Z,15nm,0.9s
TPNV **Topopah Spring** **88.37 45** P **P** **15 50 10.4 +0.5**
TPNV IAmb IAmb 15 50 30.6
comp=Z,19nm,0.8s
TPNV IAMs_20 IAMs_20 16 27 26.9
comp=Z,851nm,19.0s
TPNV **Topopah Spring** **88.37 45** P **P** **15 50 10.4 +0.5**
TPNV pmax pmax
comp=Z,19nm,0.8s
TPNV MLR MLR
comp=Z,900nm,19.0s
TPNV **Topopah Spring** **88.37 45** P **P** **15 50 11.6 +1.7**
baz=229,SNR=16
L04D **Klamath Falls** **88.46 38** IAmb IAmb 15 50 30.2
comp=Z,30nm,0.9s
L04D **Klamath Falls** **88.46 38** P **P** **15 50 11.4 +1.3**
baz=225
Y14A **Wickenburg** **88.51 49** P **P** **15 50 11.7 +1.2**
Y14A IAmb IAmb 15 50 31.5
comp=Z,30nm,0.8s
MDJ **Mudanjiang** **88.58 325** P **P** **15 50 11.4 +1.0**
MDJ pmax pmax
comp=Z,8.0nm,1.0s
MDJ pmax pmax
comp=Z,480nm,5.3s
MDJ **Mudanjiang** **88.58 325** P **P** **15 50 10.7 +0.3**
KVN **Kaiserville** **88.64 42** IAmb IAmb 15 50 31.7
comp=Z,22nm,0.9s
W13A **Hualapai Mount** **88.67 48** IAmb IAmb 15 50 33.0
comp=Z,30nm,1.2s
SHPR **Sheep Range** **88.75 46** IAmb IAmb 15 50 14.6
comp=Z,17nm,1.2s
SII **Sitkinak Islan** **88.83 13** P **P** **15 50 12.3 +1.0**
baz=200
CO01 **Juntas del Tor** **88.86 124** IAmb IAmb 15 50 42.9
comp=Z,42nm,1.4s
DL2 **Dalian** **88.92 317** ⇓*i*P **P** **15 50 08.7 -3.5**
DL2 SKS **SKSac** **16 00 32.6 -5.1**
DL2 S **S** **16 00 56.3 -0.1**
DL2 pmax pmax
comp=Z,10.0nm,1.0s
DL2 pmax pmax
comp=Z,190nm,6.3s
DL2 LR LR
comp=Z,250nm,19.6s
DL2 LR LR
comp=Z,420nm,20.6s
DL2 LR LR
comp=Z,800nm,25.9s
I03D **Drain, OR** **88.96 36** P **P** **15 50 13.0 +0.8**
baz=224
TUC **Tucson** **88.99 51** P **P** **15 50 14.2 +1.4**
TUC IAmb IAmb 15 50 36.0
comp=Z,27nm,0.9s
TUC **Tucson** **88.99 51** P **P** **15 50 14.2 +1.4**
TUC pmax pmax
comp=Z,27nm,1.0s
TUC **Tucson** **88.99 51** P **P** **15 50 15.4 +2.6**
baz=233
I02E **Swisshome, OR** **89.00 36** IAMs_20 IAMs_20 16 20 24.0
comp=Z,910nm,22.0s
I02E **Swisshome, OR** **89.00 36** P **P** **15 50 13.6 +1.2**
baz=224
K04D **Chiloquin, OR** **89.04 38** P **P** **15 50 13.6 +0.8**
baz=226
J04D **Umpqua Nationa** **89.28 37** P **P** **15 50 15.0 +0.9**
baz=225
MOD **Modoc Plateau** **89.32 39** IAmb IAmb 15 50 34.2
comp=Z,15nm,0.9s
MOD IAMs_20 IAMs_20 16 26 43.7
comp=Z,668nm,19.0s
PRN **Pahroc Range** **89.40 45** IAmb IAmb 15 50 36.6
comp=Z,51nm,1.4s
I04A **Tendick Farm,** **89.51 37** P **P** **15 50 15.8 +0.9**
baz=225
K05A **Summer Lake** **89.56 38** IAmb IAmb 15 50 36.4
comp=Z,34nm,1.0s
COR **Corvallis** **89.61 36** IAMs_20 IAMs_20 16 21 16.2
comp=Z,949nm,22.0s
OHAK **Old Harbor** **89.63 13** P **P** **15 50 15.9 +0.9**
baz=201
R11A **Troy Canyon, C** **89.67 44** P **P** **15 50 16.7 +0.7**
baz=230,SNR=6.4
SNY **Shenyang** **89.76 320** ⇓P **P** **15 50 16.2 +0.2**
SNY S **S** **16 01 04.0 0.0**
SNY pmax pmax
comp=Z,240nm,4.7s
SNY LR LR
comp=Z,450nm,21.8s
SNY LR LR
comp=Z,260nm,18.7s
SNY LR LR
comp=Z,850nm,22.7s
J05D **Fort Rock, OR** **89.77 38** P **P** **15 50 17.2 +0.9**
baz=226
X16A **Lo Mia Camp, P** **89.83 49** P **P** **15 50 18.2 +1.4**
H04D **Lebanon** **89.85 36** IAmb IAmb 15 50 45.5
comp=Z,27nm,0.9s
H04D IAMs_20 IAMs_20 16 21 24.7
comp=Z,652nm,22.0s
H04D **Lebanon** **89.85 36** P **P** **15 50 17.2 +0.8**
baz=225
TIA **Tai'an** **89.95 313** ⇓P **P** **15 50 17.5 +0.4**
TIA pmax pmax
comp=Z,19nm,0.8s
BMN **Battle Mountai** **90.06 42** IAmb IAmb 15 50 20.5
comp=Z,30nm,1.4s
G03D **McMinnville, O** **90.08 35** IAMs_20 IAMs_20 16 21 42.5
comp=Z,645nm,22.0s
G03D **McMinnville, O** **90.08 35** P **P** **15 50 18.6 +1.2**
baz=225
CN2 **Changchun** **90.10 323** *e*P **P** **15 50 16.7 -0.9**
CN2 SKS **SKSac** **16 00 42.2 -2.2**
CN2 *es*S sS 16 01 27.8 -2.2
CN2 *e*SS **SS** **16 07 08.6 +1.0**
CN2 pmax pmax
comp=Z,20nm,1.1s
CN2 pmax pmax
comp=Z,250nm,7.0s
CN2 LR LR
comp=Z,210nm,25.0s
CN2 LR LR
comp=Z,440nm,25.0s
CN2 LR LR
comp=Z,520nm,26.0s
GRNR **Gornyy** **90.22 333** ⇓*i*P **P** **15 50 18.9 +0.9**
GRNR pmax pmax
comp=Z,5.0nm,0.7s
GRNR MLR MLR
comp=E,180nm,19.0s
H04A **Detroit Lake** **90.25 36** IAmb IAmb 15 50 38.7
comp=Z,25nm,0.9s
LCMT **Little Creek M** **90.27 46** P **P** **15 50 20.1 +1.4**
LCMT IAmb IAmb 15 50 39.6
comp=Z,14nm,0.8s
KDAK **Kodiak Island** **90.29 13** LR LR 16 23 51.0
comp=Z,293nm,21.8s,baz=226,slow=31
KDAK **Kodiak Island** **90.29 13** P **P** **15 50 19.1 +1.0**
baz=202
I05D **Terrebonne, OR** **90.44 37** P **P** **15 50 20.1 +0.8**
baz=226
BNX **BinXian** **90.47 325** ⇓P P 15 50 13.2 -6.0
BNX pmax pmax
comp=Z,23nm,0.9s
BNX pmax pmax
comp=Z,280nm,6.5s
MRA **San Martin** **90.49 128** *i* P **P** **15 50 21.9 +1.8**
CCUT **Cedar City** **90.53 46** P **P** **15 50 21.4 +1.4**
CCUT IAmb IAmb 15 50 41.2
comp=Z,12nm,0.9s
WUAZ **Wupatki** **90.54 48** IAmb IAmb 15 50 41.8
comp=Z,31nm,1.1s
WUAZ **Wupatki** **90.54 48** P **P** **15 50 21.4 +1.3**
baz=232
WVOR **Wild Horse Val** **90.59 40** IAmb IAmb 15 50 41.0
comp=Z,28nm,1.3s
PSUT **Pine Spring** **90.84 45** IAmb IAmb 15 50 42.4
comp=Z,12nm,0.7s
X18A **Snowflake** **90.88 50** P **P** **15 50 23.1 +1.4**
X18A IAmb IAmb 15 50 43.0
comp=Z,21nm,0.9s
P17K **Kvichak River** **90.92 11** P **P** **15 50 21.3 +0.3**
baz=198
HOOD **Mount Hood Mea** **90.96 36** IAmb IAmb 15 50 42.3
comp=Z,28nm,1.0s
KLR **Kul'dur** **90.98 330** LR LR 16 25 52.5
comp=Z,566nm,21.3s,baz=144,slow=32
KLR **Kul'dur** **90.98 330** *ce*P **P** **15 50 21.0 -0.6**
KLR pmax pmax
comp=Z,6.0nm,0.7s

O16K	Kokwok River B	91.05	10	P	P	15 50 21.2	-0.4
	baz=197						
G05D	Wamic, OR	91.08	36	P	P	15 50 23.2	+1.1
	baz=226						
Q20K	Shuyak Island	91.10	13	P	P	15 50 23.6	+1.8
	baz=202						
Q19K	Cape Douglas,	91.16	12	P	P	15 50 22.1	-0.1
	baz=201						
121A	Cookes Peak, D	91.16	53	IAmb	IAmb	15 50 44.3	
	comp=Z,15nm,0.8s						
121A	Cookes Peak, D	91.16	53	P	P	15 50 24.5	+1.5
	baz=234						
121A	Cookes Peak, D	91.16	53	P	P	15 50 24.7	+1.6
	baz=234						
I07A	Izee	91.23	38	IAmb	IAmb	15 50 43.8	
	comp=Z,24nm,0.9s						
J08A	Circle Bar Ran	91.30	39	P	P	15 50 24.4	+1.0
J08A				IAmb	IAmb	15 50 44.1	
	comp=Z,25nm,1.2s						
P18K	Big Mountain,	91.31	11	P	P	15 50 22.0	-0.9
P18K	Big Mountain,	91.31	11	P	P	15 50 22.5	-0.4
	baz=199,SNR=6.5						
NLWA	Neilton Lookou	91.33	33	IAmb	IAmb	15 50 44.4	
	comp=Z,20nm,0.9s						
NLWA				IAMs_20	IAMs_20	16 23 19.6	
	comp=Z,553nm,21.0s						
W18A	Petrified Fore	91.37	50	P	P	15 50 25.1	+1.1
	baz=233						
E04D	Cinebar	91.37	35	IAmb	IAmb	15 50 43.9	
	comp=Z,16nm,0.9s						
E04D	Cinebar	91.37	35	P	P	15 50 24.3	+0.9
	baz=225						
O17K	Koliganek Bris	91.37	10	P	P	15 50 35.2	+12
	baz=198						
ELK	Elko	91.41	42	LR	LR	16 28 26.2	
	comp=Z,847nm,18.0s,baz=234,slow=34						
ELK	Elko	91.41	42	P	P	15 50 24.9	+0.8
ELK	Elko	91.41	42	P	P	15 50 24.9	+0.8
ELK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ELK				MLR	MLR		
	comp=Z,1µm,18.0s						
F05D	White Salmon	91.45	36	IAMs_20	IAMs_20	16 22 26.9	
	comp=Z,840nm,22.0s						
F05D	White Salmon	91.45	36	P	P	15 50 24.6	+0.8
	baz=226						
GYA	Guiyang	91.56	300	⇓P	P	15 50 26.6	+1.6
GYA				pmax	pmax		
	comp=Z,17nm,1.2s						
MTPU	Mount Pierson	91.56	46	IAmb	IAmb	15 50 46.5	
	comp=Z,15nm,0.9s						
D04E	Lakebay	91.71	34	P	P	15 50 24.2	-0.8
	baz=225						
O18K	Koktuh Hills	91.75	11	P	P	15 50 25.3	+0.4
	baz=199,SNR=23						
D03D	Eldon	91.81	34	P	P	15 50 26.0	+0.6
	baz=225						
MSU	Marysvale	91.86	46	P	P	15 50 27.8	+1.6
MSU	Marysvale	91.86	46	P	P	15 50 27.8	+1.6
LYN	LuoYang	91.99	309	*e*P	P	15 50 26.8	+0.2
LYN				S	S	16 01 22.3	-2.5
LYN				SS	SS	16 07 33.8	-1.4
LYN				pmax	pmax		
	comp=Z,20nm,0.6s						
LYN				pmax	pmax		
	comp=Z,200nm,4.0s						
LYN				LR	LR		
	comp=Z,520nm,20.6s						
LYN				LR	LR		
	comp=Z,760nm,27.1s						
HNS	HongShan	92.21	313	⇓P	P	15 50 28.2	+0.7
HNS				S	S	16 01 27.3	+0.7
HNS				pmax	pmax		
	comp=Z,13nm,0.7s						
HNS				LR	LR		
	comp=Z,210nm,20.8s						
HNS				LR	LR		
	comp=Z,310nm,22.2s						
HNS				LR	LR		
	comp=Z,460nm,24.7s						
HOM	Homer	92.22	13	P	P	15 50 27.9	+0.9
	baz=202						
TX31	Lajitas Ar. Si	92.27	57	P	P	15 50 29.0	+0.8
	baz=236						
TX32	Lajitas Array	92.27	57	IAmb	IAmb	15 50 48.8	
	comp=Z,17nm,1.2s						
TXAR	Lajitas Array	92.27	57	P	P	15 50 28.9	+0.8
	comp=Z,4.6nm,1.0s,baz=205,slow=5.5,SNR=31						
TXAR				pP	sP	15 50 48.0	+1.8
	comp=Z,4.1nm,0.8s,baz=216,slow=6.2,SNR=11						
TXAR				LR	LR	16 27 47.0	
	comp=Z,252nm,18.3s,baz=246,slow=33						
	comp=Z,4.6nm,1.0s						
TXAR	Lajitas Array	92.27	57	P	P	15 50 28.8	+0.6
MNTX	Cornudas Mount	92.36	54	P	P	15 50 28.4	0.0
MNTX				IAmb	IAmb	15 50 49.4	
	comp=Z,11nm,0.8s						
MNTX	Cornudas Mount	92.36	54	P	P	15 50 29.0	+0.6
	baz=236						
MNTX	Cornudas Mount	92.36	54	P	P	15 50 28.8	+0.4
	baz=235						
N18K	Kilae Creek	92.42	11	IAmb	IAmb	15 50 28.7	
	comp=Z,22nm,1.2s						
N18K	Kilae Creek	92.42	11	P	P	15 50 28.3	+0.3
	baz=199						
O20K	Slope Mountain	92.42	12	P	P	15 50 28.7	+0.6
	baz=202						
BRLK	Bradley Lake	92.46	13	P	P	15 50 28.5	+0.2
BRLK				IAMs_20	IAMs_20	16 23 29.1	
	comp=Z,767nm,20.0s						
BRSE	Bradley Lake S	92.47	13	P	P	15 50 28.7	+0.5
	baz=203,SNR=6.0						
DUG	Dugway, Tooele	92.51	44	P	P	15 50 29.5	+0.4
	baz=232						
Y22A	Socorro	92.53	52	P	P	15 50 30.7	+1.3
	baz=235						
CMIG	Matias Romero	92.65	72	P	P	15 50 31.1	+1.1
	comp=Z,4.8nm,1.0s,baz=200,slow=3.6,SNR=4.3						
CMIG				pP	sP	15 50 50.4	+2.4
	comp=Z,6.1nm,0.7s,baz=298,slow=5.9,SNR=5.8						
	comp=Z,4.8nm,1.0s						
Q16A	Castle Valley	92.73	46	P	P	15 50 31.9	+1.7
HAWA	Hanford	92.78	36	IAmb	IAmb	15 50 50.1	
	comp=Z,15nm,1.1s						
HAWA				IAMs_20	IAMs_20	16 27 20.0	
	comp=Z,685nm,19.0s						
N19K	Bonanza Creek	92.78	11	IAmb	IAmb	15 50 30.7	
	comp=Z,17nm,0.9s						
N19K	Bonanza Creek	92.78	11	P	P	15 50 29.3	-0.4
	baz=200,SNR=7.2						
MFID	Camas Ranch	92.79	40	IAmb	IAmb	15 50 50.8	
	comp=Z,18nm,0.9s						
MFID				IAMs_20	IAMs_20	16 23 57.6	
	comp=Z,640nm,20.0s						
NLU	North Lily Min	92.81	45	P	P	15 50 31.2	+0.6
SVW2	Sparrevohn	92.87	11	P	P	15 50 29.5	-0.5
SVW2				IAmb	IAmb	15 50 31.1	
	comp=Z,8.7nm,0.8s						
BNM	Barren Site	92.89	52	P	P	15 50 31.5	+0.5
BJI	Beijing	92.90	315	P	P	15 50 32.9	+2.2
BJI				S	S	16 01 35.2	+2.6
BJI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BJI				LR	LR		
	comp=Z,370nm,24.6s						
BJI				LR	LR		
	comp=Z,290nm,25.6s						
BJI				LR	LR		
	comp=Z,830nm,27.0s						
TMUT	Trail Mountain	92.94	46	IAmb	IAmb	15 50 57.1	
	comp=Z,18nm,0.9s						
BBB	Bella Bella	92.97	28	LR	LR	16 24 44.5	
	comp=Z,178nm,21.5s,baz=228,slow=31						
SEW	Seward	93.07	14	P	P	15 50 33.0	+2.1
	baz=204						
Q23K	Middleton Isla	93.14	16	P	P	15 50 33.9	+2.6
	baz=207						
MA2	Magadan	93.21	345	LR	LR	16 27 44.4	
	comp=Z,782nm,21.4s,baz=172,slow=32						
MA2	Magadan	93.21	345	IAMs_20	IAMs_20	16 27 21.9	
	comp=Z,869nm,21.0s						
MA2	Magadan	93.21	345	*i* P	P	15 50 31.8	+0.2
MA2				pmax	pmax		
	comp=Z,12nm,0.9s						
SRU	San Rafael Swe	93.25	46	P	P	15 50 32.7	+0.1
SRU				IAmb	IAmb	15 50 52.8	
	comp=Z,14nm,0.9s						

SRU	San Rafael Swe	93.25	46	P	P	15 50 32.7	+0.1
SRU				pmax	pmax		
	comp=Z,14nm,0.9s						
CAPN	Captain Cook N	93.34	13	P	P	15 50 33.3	+1.2
	baz=203						
O22K	Cooper Landing	93.36	14	P	P	15 50 34.2	+2.0
	baz=204						
NNA	Nana	93.38	106	P	P	15 50 34.6	+1.0
	comp=Z,5.6nm,0.4s,baz=264,slow=9.2						
NNA				pP	sP	15 50 53.6	+2.0
	comp=Z,15nm,0.7s,baz=264,slow=3.7,SNR=3.1						
NNA				LR	LR	16 22 47.1	
	comp=Z,621nm,21.9s,baz=235,slow=29						
	comp=Z,5.6nm,0.4s						
NNA	Nana	93.38	106	P	P	15 50 33.6	0.0
NNA				IAmb	IAmb	15 50 54.8	
	comp=Z,23nm,0.9s						
MVCO	Mesa Verde	93.41	48	P	P	15 50 34.6	+1.2
	baz=234						
P23K	Montague Islan	93.41	15	P	P	15 50 34.3	+1.8
	baz=206						
CMAR	Chiang Mai Arr	93.44	289	P	P	15 50 34.0	+0.3
	comp=Z,2.4nm,0.7s,baz=140,slow=3.6,SNR=14						
CMAR				PKKP	PKKPbc	16 07 40.5	+1.1
	comp=Z,1.2nm,0.8s,baz=291,slow=4.3,SNR=7.5						
CMAR				LR	LR	16 34 52.7	
	comp=Z,161nm,18.9s,baz=205,slow=37						
	comp=Z,2.4nm,0.7s						
CMAR	Chiang Mai Arr	93.44	289	*i* P	P	15 50 34.7	+1.0
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ANMO	Albuquerque	93.45	51	LR	LR	16 29 11.3	
	comp=Z,431nm,18.1s,baz=252,slow=33						
ANMO	Albuquerque	93.45	51	P	P	15 50 33.7	0.0
ANMO				IAmb	IAmb	15 50 54.6	
	comp=Z,9.7nm,0.9s						
ANMO	Albuquerque	93.45	51	IAMs_20	IAMs_20	16 28 59.9	
	comp=Z,572nm,20.0s						
ANMO	Albuquerque	93.45	51	*ce*P	P	15 50 34.7	+1.1
ANMO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ANMO	Albuquerque	93.45	51	P	P	15 50 34.8	+1.2
	baz=235						
ANMO	Albuquerque	93.45	51	P	P	15 50 35.2	+1.5
	baz=235						
HVU	Hansel Valley	93.51	43	P	P	15 50 33.9	+0.2
HVU				IAmb	IAmb	15 50 53.8	
	comp=Z,19nm,0.8s						
HVU	Hansel Valley	93.51	43	P	P	15 50 33.9	+0.2
HVU				pmax	pmax		
	comp=Z,19nm,0.8s						
D08A	Wollman Farm,	93.53	36	IAmb	IAmb	15 50 35.8	
	comp=Z,13nm,0.7s						
SPCR	Spurr Chakacha	93.54	12	P	P	15 50 32.7	-0.5
	baz=202						
SPU	Mount Spurr	93.55	12	P	P	15 50 32.5	-0.8
CHTO	Chiang Mai	93.62	290	P	P	15 50 33.9	-0.6
CHTO	Chiang Mai	93.62	290	P	P	15 50 33.9	-0.6
CHTO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CRAG	Craig	93.62	24	P	P	15 50 34.9	+1.4
	baz=217						
HLID	Hailey	93.68	41	IAmb	IAmb	15 50 55.2	
	comp=Z,10nm,0.8s						
HLID	Hailey	93.68	41	P	P	15 50 35.5	+1.1
	baz=231,SNR=20						
F10A	Beach Ranch, E	93.69	38	IAmb	IAmb	15 51 03.7	
	comp=Z,13nm,0.9s						
P18A	Preston Nutter	93.73	46	P	P	15 50 35.9	+0.9
PLID	Pearl Lake	93.77	39	IAmb	IAmb	15 50 37.0	
	comp=Z,15nm,1.0s						
M19K	Big River Lodg	93.82	11	IAmb	IAmb	15 50 49.5	
	comp=Z,11nm,0.8s						
KMI	Kunming	93.84	297	⇑P	P	15 50 37.6	+1.9
KMI				pmax	pmax		
	comp=Z,18nm,1.2s						
KMI				LR	LR		
	comp=Z,340nm,20.4s						
KMI				LR	LR		
	comp=Z,310nm,22.1s						
KMI				LR	LR		
	comp=Z,370nm,19.9s						
GAMB	Gambell	93.88	3	P	P	15 50 35.7	+1.1
	baz=185						
RC01	Rabbit Creek A	93.91	13	P	P	15 50 35.5	+0.7
	baz=204						
LVC	Limon Verde	93.92	119	P	P	15 50 38.1	+1.6
	comp=Z,4.8nm,0.8s,baz=242,slow=8.6,SNR=3.9						
LVC				pP	sP	15 50 56.9	+2.5
	comp=Z,13nm,1.0s,baz=211,slow=4.1,SNR=4.7						
LVC				LR	LR	16 24 01.6	
	comp=Z,853nm,21.7s,baz=250,slow=30						
	comp=Z,4.8nm,0.8s						
HIN	Hinchinbrook I	93.97	15	IAMs_20	IAMs_20	16 23 19.3	
	comp=Z,848nm,21.0s						
L19K	White Mountain	94.01	11	IAmb	IAmb	15 50 37.2	
	comp=Z,28nm,1.1s						
M20K	Styx River	94.02	11	P	P	15 50 35.2	-0.2
	baz=201						
PV07	Paradox Valley	94.03	47	P	P	15 50 36.7	+0.5
PV07				IAmb	IAmb	15 50 58.6	
	comp=Z,9.0nm,0.9s						
SUA	Susitna One	94.06	13	IAMs_20	IAMs_20	16 38 42.6	
	comp=Z,497nm,18.0s						
XAN	Xi'an	94.11	307	P	P	15 50 38.3	+1.8
XAN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SIT	Sitka	94.16	22	P	P	15 50 36.2	+0.2
	baz=216						
GLI	Glacier Island	94.27	15	P	P	15 50 36.6	+0.2
	baz=206,SNR=8.9						
EYAK	Cordova Ski Ar	94.27	15	P	P	15 50 37.3	+0.9
	baz=207						
FID	Port Fidalgo	94.29	15	IAMs_20	IAMs_20	16 23 53.6	
	comp=Z,602nm,21.0s						
SKT	Skwentna	94.39	12	IAmb	IAmb	15 50 55.6	
	comp=Z,9.3nm,0.9s						
SKT				IAMs_20	IAMs_20	16 28 14.4	
	comp=Z,548nm,20.0s						
SKT	Skwentna	94.39	12	P	P	15 50 36.7	-0.4
	baz=202						
HMT	Hamilton	94.43	16	IAMs_20	IAMs_20	16 33 18.7	
	comp=Z,773nm,19.0s						
M22K	Willow	94.44	13	P	P	15 50 37.0	-0.2
	baz=204						
L20K	Farewell, AK	94.45	11	P	P	15 50 37.0	-0.3
	baz=200						
KNK	Knik Glacier	94.46	14	IAmb	IAmb	15 50 39.1	
	comp=Z,17nm,0.9s						
KNK	Knik Glacier	94.46	14	P	P	15 50 37.7	+0.3
	baz=205						
PMR	Palmer	94.49	13	IAmb	IAmb	15 50 38.4	
	comp=Z,12nm,1.0s						
PMR	Palmer	94.49	13	P	P	15 50 37.6	+0.1
	baz=204						
TTA	Tatalina	94.54	10	P	P	15 50 37.9	+0.1
	baz=199,SNR=7.4						
ATAH	Atahualpa	94.59	101	LR	LR	16 23 28.8	
	comp=Z,469nm,21.8s,baz=247,slow=29						
WRAK	Wrangell Islan	94.64	23	P	P	15 50 37.9	-0.3
	baz=218						
BCYI	Bear Canyon	94.71	41	P	P	15 50 39.0	-0.2
DIV	Divide	94.79	15	IAmb	IAmb	15 50 40.6	
	comp=Z,19nm,1.0s						
S22A	4UR Ranch, Cre	94.80	49	P	P	15 50 38.9	-1.0
	baz=235						
SML	Sawmill	94.85	14	P	P	15 50 39.0	-0.1
	baz=205						
MESA	MESA	94.87	17	P	P	15 50 39.4	-0.1
	baz=210						
WAX	Waxell Ridge	94.88	17	IAmb	IAmb	15 50 41.7	
	comp=Z,16nm,0.9s						
833A	Chaparral WMA,	94.88	60	P	P	15 50 38.4	-1.7
	baz=238						
BMRM	Bremner River	94.91	16	P	P	15 50 39.9	+0.4
BMRM				IAmb	IAmb	15 50 41.3	
	comp=Z,24nm,0.9s						
BMRM	Bremner River	94.91	16	P	P	15 50 39.7	+0.3
	baz=208,SNR=11						
M23K	Glacier View	94.96	14	P	P	15 50 39.7	0.0
	baz=206						
CUT	Chulitna	95.01	13	P	P	15 50 40.0	+0.2
	baz=204						
ANM	Nome	95.06	5	P	P	15 50 41.1	+1.1
	baz=191						
KLU	Klutina	95.08	15	IAmb	IAmb	15 50 55.8	
	comp=Z,13nm,1.0s						
KLU	Klutina	95.08	15	P	P	15 50 40.2	-0.1

	baz=207						
SCM	Sheep Creek Mo	95.08	14	P	P	15 50 40.4	+0.2
	baz=206,SNR=7.9						
YAH	Yahtse	95.08	17	IAmb	IAmb	15 50 44.0	
	comp=Z,14nm,0.8s						
YAH				IAMs_20	IAMs_20	16 25 13.6	
	comp=Z,761nm,21.0s						
AHID	Auburn Hatcher	95.09	43	P	P	15 50 41.6	+0.6
AHID				IAmb	IAmb	15 51 01.6	
	comp=Z,15nm,0.8s						
AHID				IAMs_20	IAMs_20	16 25 54.8	
	comp=Z,612nm,19.0s						
PPLA	Purkeypile	95.12	12	P	P	15 50 40.8	+0.3
	baz=202						
ISLE	Juniper Island	95.14	17	IAmb	IAmb	15 50 43.9	
	comp=Z,14nm,1.0s						
ISLE				IAMs_20	IAMs_20	16 25 27.3	
	comp=Z,630nm,22.0s						
TGL	Tana Glacier	95.15	16	IAmb	IAmb	15 50 42.6	
	comp=Z,10nm,0.9s						
TGL				IAMs_20	IAMs_20	16 25 30.6	
	comp=Z,657nm,21.0s						
PINM	Pinnacle	95.24	18	P	P	15 50 40.8	-0.2
	baz=212						
K20K	Telida	95.24	11	P	P	15 50 40.2	-0.7
K20K	Telida	95.24	11	P	P	15 50 41.0	+0.1
	baz=200						
NEW	Newport	95.25	36	LR	LR	16 30 10.5	
	comp=Z,448nm,18.1s,baz=217,slow=33						
NEW	Newport	95.25	36	IAMs_20	IAMs_20	16 24 54.3	
	comp=Z,732nm,22.0s						
NEW	Newport	95.25	36	P	P	15 50 41.2	-0.1
	baz=229						
O20A	White River Ci	95.27	46	P	P	15 50 41.6	-0.3
	baz=234						
BCPM	Bancas Point	95.28	18	IAMs_20	IAMs_20	16 25 30.2	
	comp=Z,778nm,21.0s						
TABL	Table Mountain	95.30	17	IAMs_20	IAMs_20	16 25 30.6	
	comp=Z,721nm,19.0s						
PZH	PanZhiHua	95.32	297	P	P	15 50 44.2	+1.9
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,140nm,8.8s						
MCMT	McKenzie Canyo	95.35	40	P	P	15 50 42.7	+0.6
GRNC	Granite Creek	95.39	17	IAMs_20	IAMs_20	16 28 30.1	
	comp=Z,594nm,19.0s						
VRDI	Verde Repeater	95.41	16	IAmb	IAmb	15 50 43.3	
	comp=Z,12nm,1.0s						
VRDI				IAMs_20	IAMs_20	16 28 45.4	
	comp=Z,630nm,22.0s						
JIS	Juneau Island	95.44	21	IAMs_20	IAMs_20	16 27 24.6	
	comp=Z,699nm,20.0s						
MSTX	Muleshoe	95.44	54	IAmb	IAmb	15 51 02.9	
	comp=Z,16nm,0.8s						
MSTX	Muleshoe	95.44	54	P	P	15 50 43.1	+0.4
	baz=237						
MSTX	Muleshoe	95.44	54	P	P	15 50 43.1	+0.4
	baz=237						
N25K	Chitina, Valde	95.47	15	IAmb	IAmb	15 50 43.4	
	comp=Z,18nm,1.1s						
N25K				IAMs_20	IAMs_20	16 25 29.2	
	comp=Z,508nm,20.0s						
N25K	Chitina, Valde	95.47	15	P	P	15 50 42.1	+0.1
	baz=208,SNR=6.3						
GLB	Gilahina Butte	95.51	16	IAmb	IAmb	15 50 43.5	
	comp=Z,13nm,1.0s						
GLB				IAMs_20	IAMs_20	16 25 04.2	
	comp=Z,584nm,22.0s						
M24K	Tolsona, Glenn	95.57	14	P	P	15 50 43.2	+0.7
	baz=207						
REDW	Red Top Meadow	95.60	42	IAmb	IAmb	15 51 03.9	
	comp=Z,9.9nm,0.9s						
TPAW	Teton Pass	95.62	42	P	P	15 50 44.2	+0.8
MCARA	McCarthy VSAT	95.65	16	IAmb	IAmb	15 50 45.9	
	comp=Z,15nm,0.9s						
MCARA				IAMs_20	IAMs_20	16 28 52.8	
	comp=Z,556nm,20.0s						
MCARA	McCarthy VSAT	95.65	16	P	P	15 50 44.3	+1.5
	baz=210						
LOGN	Logan Glacier	95.66	17	IAMs_20	IAMs_20	16 25 21.3	
	comp=Z,849nm,22.0s						
WAT6	Susitna Watana	95.67	14	P	P	15 50 43.0	-0.1
	baz=206,SNR=6.0						
SDCO	Great Sand Dun	95.67	49	P	P	15 50 45.3	+1.5
	baz=236						
SDCO	Great Sand Dun	95.67	49	P	P	15 50 43.4	-0.5
	baz=236						
CTG	Chitna Glacier	95.70	17	P	P	15 50 43.7	+0.5
	baz=211						
BARN	Barnard Glacie	95.70	17	IAmb	IAmb	15 50 45.4	
	comp=Z,15nm,1.0s						
BARN				IAMs_20	IAMs_20	16 28 40.2	
	comp=Z,530nm,18.0s						
CTGM	Chitina Glacie	95.70	17	IAmb	IAmb	15 50 45.2	
	comp=Z,9.7nm,1.0s						
CTGM				IAMs_20	IAMs_20	16 25 09.2	
	comp=Z,820nm,22.0s						
JCT	Junction City	95.71	58	P	P	15 50 44.9	+1.0
	baz=238						
JCT	Junction City	95.71	58	P	P	15 50 42.7	-1.2
	baz=238						
WAT1	Susitna Watana	95.73	13	P	P	15 50 44.0	+0.8
	baz=205						
T35M	Bob Quinn	95.80	24	P	P	15 50 45.0	+1.4
	baz=220						
DLMT	Dillon	95.82	40	IAMs_20	IAMs_20	16 25 43.7	
	comp=Z,510nm,21.0s						
SEY	Seymchan	95.89	347	LR	LR	16 30 29.9	
	comp=Z,482nm,20.3s,baz=167,slow=33						
SEY	Seymchan	95.89	347	*ce*P	P	15 50 42.8	-1.0
SEY				pmax	pmax		
	comp=Z,9.0nm,1.0s						
LOHW	Long Hollow	95.89	42	IAMs_20	IAMs_20	16 31 16.9	
	comp=Z,722nm,19.0s						
KTH	Kantishna Hill	95.95	12	IAmb	IAmb	15 50 44.1	
	comp=Z,10nm,1.0s						
KTH				IAMs_20	IAMs_20	16 32 23.7	
	comp=Z,538nm,19.0s						
TRF	Thorofare Moun	95.97	12	IAmb	IAmb	15 50 47.0	
	comp=Z,18nm,1.0s						
TRF				IAMs_20	IAMs_20	16 25 36.2	
	comp=Z,726nm,22.0s						
TRF	Thorofare Moun	95.97	12	P	P	15 50 44.5	+0.1
	baz=204,SNR=13						
MSO	Missoula	95.99	38	IAMs_20	IAMs_20	16 25 07.1	
	comp=Z,717nm,21.0s						
J20K	Nowinta River	96.00	10	IAmb	IAmb	15 50 46.0	
	comp=Z,14nm,1.3s						
J20K	Nowinta River	96.00	10	P	P	15 50 44.6	+0.3
	baz=200,SNR=6.4						
BW06	Boulder Array	96.01	43	IAMs_20	IAMs_20	16 25 31.0	
	comp=Z,824nm,22.0s						
BW06	Boulder Array	96.01	43	P	P	15 50 44.4	-0.8
	baz=234						
PD31	Pinedale Array	96.01	43	P	P	15 50 44.9	-0.3
PDAR	Pinedale Array	96.01	43	P	P	15 50 45.2	+0.1
	comp=Z,1.8nm,0.8s,baz=210,slow=3.4,SNR=14						
PDAR				pP	sP	15 51 03.8	+0.7
	comp=Z,2.7nm,0.8s,baz=204,slow=3.5,SNR=9.7						
PDAR				PKKP	PKKPbc	16 07 32.5	-1.4
	comp=Z,0.8nm,0.7s,baz=88,slow=3.2,SNR=5.7						
PDAR				LR	LR	16 31 25.9	
	comp=Z,552nm,18.0s,baz=228,slow=34						
	comp=Z,1.8nm,0.8s						
PDAR	Pinedale Array	96.01	43	P	P	15 50 44.6	-0.6
CHUM	Lake Minchumin	96.02	11	P	P	15 50 44.5	+0.1
	baz=202						
HARP	HAARP	96.05	15	P	P	15 50 45.1	+0.5
	baz=208						
CD2	Chengdu	96.09	302	P	P	15 50 47.0	+1.4
SKAG	Skagway	96.11	20	P	P	15 50 45.6	+0.7
	baz=216						
FLWY	Flagg Ranch	96.12	42	IAmb	IAmb	15 50 48.5	
	comp=Z,13nm,1.1s						
GCSA	Galena City Sc	96.15	9	P	P	15 50 45.5	+0.6
	baz=198						
QLMT	Earthquake Lak	96.15	41	P	P	15 50 46.8	+1.1
DHY	Denali Highway	96.19	13	P	P	15 50 45.0	-0.4
	baz=206						
ZEA	Zeya	96.19	331	*e*P	P	15 50 47.3	+1.9
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
RND	Reindeer	96.20	13	IAmb	IAmb	15 50 49.1	
	comp=Z,21nm,0.9s						
RND				IAMs_20	IAMs_20	16 31 30.1	
	comp=Z,508nm,20.0s						
HHC	Hu-ho-hao-te	96.22	314	*e*P	P	15 50 47.2	+1.2

HHC pmax pmax
comp=Z,21nm,0.9s
HHC pmax pmax
comp=Z,160nm,6.7s
HHC LR LR
comp=Z,580nm,23.1s
HHC LR LR
comp=Z,660nm,21.0s
HHC LR LR
comp=Z,2µm,23.6s
S34M Telegraph Cree 96.22 23 P **P** 15 50 43.4 -2.0
baz=219
YHL Hebgen Lake 96.30 41 IAmb IAmb 15 50 49.9
comp=Z,18nm,1.4s
H17A Grant Village 96.38 42 P **P** 15 50 46.6 -0.3
baz=233
BPAW Bear Paw Mtn. 96.44 12 P **P** 15 50 47.2 +0.8
baz=203
MCK McKinley 96.48 13 IAmb IAmb 15 50 50.2
comp=Z,23nm,1.0s
MCK IAMs_20 IAMs_20 16 29 37.6
comp=Z,450nm,19.0s
MCK McKinley 96.48 13 P **P** 15 50 46.3 -0.2
baz=205,SNR=5.5
PAX Paxson 96.49 14 P **P** 15 50 46.6 0.0
baz=208,SNR=5.1
BOZ Bozeman (W) 96.50 40 P **P** 15 50 48.0 +0.8
BOZ IAMs_20 IAMs_20 16 31 18.8
comp=Z,493nm,19.0s
BOZ Bozeman (W) 96.50 40 P **P** 15 50 48.0 +0.8
BOZ pmax pmax
comp=Z,7.0nm,0.9s
BOZ MLR MLR
comp=Z,500nm,19.0s
BOZ Bozeman (W) 96.50 40 P **P** 15 50 47.4 +0.2
baz=233,SNR=8.6
M26K Nabesna, AK 96.54 16 IAmb IAmb 15 51 05.1
comp=Z,9.4nm,0.9s
M26K Nabesna, AK 96.54 16 P **P** 15 50 47.2 +0.4
baz=210
Q24A Divide 96.58 49 P **P** 15 50 48.1 +0.1
baz=236
HYT Haines Junctio 96.60 19 P **P** 15 50 47.6 +0.3
baz=214
YUK3 Moose Creek 96.61 17 P **P** 15 50 47.8 +0.4
baz=212
HIA Hailar 96.68 324 IAMs_20 IAMs_20 16 33 21.1
comp=Z,506nm,20.0s
AMTX Amarillo 96.69 54 P **P** 15 50 47.4 -0.9
baz=238
YUK4 Talbot Arm 96.72 18 P **P** 15 50 48.4 +0.5
baz=213
ISCO Idaho Springs 96.74 48 P **P** 15 50 47.1 -1.6
baz=236
M27K Edge Creek, AK 96.77 16 IAmb IAmb 15 50 50.4
comp=Z,16nm,1.1s
M27K IAMs_20 IAMs_20 16 29 29.3
comp=Z,528nm,20.0s
M27K Edge Creek, AK 96.77 16 P **P** 15 50 48.1 +0.1
baz=211,SNR=8.1
RWWY Rawlins 96.81 45 IAMs_20 IAMs_20 16 25 52.2
comp=Z,860nm,22.0s
MENT Mentasta 96.84 15 IAmb IAmb 15 50 50.1
comp=Z,9.4nm,0.7s
ABTX Abilene, Hawle 96.95 56 P **P** 15 50 48.4 -1.1
baz=238
O30N Mendenhall 96.95 19 P **P** 15 50 48.4 -0.4
baz=215
DLBC Dease Lake 97.00 23 P 15 50 49.8
comp=Z,2.4nm,0.8s,baz=238,slow=7.8,SNR=3.4
DLBC LR LR 16 26 28.3
comp=Z,550nm,21.6s,baz=232,slow=30
comp=Z,2.4nm,0.8s
DLBC Dease Lake 97.00 23 P 15 50 49.7
baz=220
L26K Log Cabin Wild 97.00 15 IAMs_20 IAMs_20 16 30 00.6
comp=Z,505nm,20.0s
L26K Log Cabin Wild 97.00 15 P Pdif 15 50 49.9 +0.9
baz=209
BVCY Beaver Creek 97.06 16 P **P** 15 50 49.1 -0.1
baz=211
N23A Red Feather La 97.15 47 P **P** 15 50 49.7 -0.8
baz=236
K24K Donnelly Dome 97.16 14 P Pdif 15 50 49.9 +0.2
baz=207,SNR=7.8
N30M Aishikik Lake 97.23 18 P **P** 15 50 49.5 -0.5
baz=214
NEA2 Nenana 97.24 12 P **P** 15 50 49.4 -0.5
NEA2 Nenana 97.24 12 P **P** 15 50 49.8 -0.1
baz=205
I21K Tanana 97.28 11 P **P** 15 50 50.1 +0.1
baz=202
RIDG Independent Ri 97.30 14 IAmb IAmb 15 50 51.4
comp=Z,7.9nm,0.8s
RIDG IAMs_20 IAMs_20 16 40 57.5
comp=Z,441nm,19.0s
RIDG Independent Ri 97.30 14 P Pdif 15 50 50.7 +0.4
baz=208,SNR=5.6
WRH Wood River Hil 97.31 13 IAmb IAmb 15 50 54.3
comp=Z,12nm,0.8s
MLY Manley 97.35 11 P Pdif 15 50 50.6 +0.1
baz=203
L27K Beaver Creek, 97.38 16 P Pdif 15 50 51.3 +0.6
baz=211
HDA Harding Lake 97.47 13 IAmb IAmb 15 50 56.3
comp=Z,12nm,0.8s
HDA Harding Lake 97.47 13 P Pdif 15 50 51.4 +0.4
baz=206,SNR=12
P33M Teslin, Yukon 97.47 21 IAMs_20 IAMs_20 16 28 18.2
comp=Z,550nm,20.0s
P33M Teslin, Yukon 97.47 21 P Pdif 15 50 51.3 +0.1
baz=218
CCB Clear Creek Bu 97.52 13 IAmb IAmb 15 50 55.0
comp=Z,11nm,0.9s
H21K Melozitna Rive 97.59 10 P Pdif 15 50 52.5 +0.9
baz=202
N31M Braeburn, Yuko 97.62 19 IAMs_20 IAMs_20 16 26 21.1
comp=Z,647nm,21.0s
N31M Braeburn, Yuko 97.62 19 P Pdif 15 50 52.5 +0.7
baz=216
JTS Las Juntas de 97.65 83 LR LR 16 26 05.7
comp=Z,432nm,19.9s,baz=304,slow=30
I23K Minto, Yukon-K 97.69 12 IAMs_20 IAMs_20 16 40 41.7
comp=Z,479nm,18.0s
I23K Minto, Yukon-K 97.69 12 P Pdif 15 50 52.6 +0.7
baz=204
SCRK Sand Creek 97.69 14 P Pdif 15 50 52.3 +0.1
SCRK IAmb IAmb 15 50 55.1
comp=Z,10nm,0.9s
SCRK Sand Creek 97.69 14 P Pdif 15 50 52.5 +0.3
baz=209,SNR=13
TCOL CIGO, UAF Yank 97.72 12 IAmb IAmb 15 50 56.1
comp=Z,17nm,0.8s
TCOL CIGO, UAF Yank 97.72 12 P Pdif 15 50 53.1 +1.0
baz=206
COLA College 97.72 12 *i* P **P** 15 50 51.1 -0.9
COLA pmax pmax
comp=Z,17nm,0.9s
COLA College 97.72 12 P Pdif 15 50 53.2 +1.1
baz=206
MDM Murphy Dome 97.72 12 P **P** 15 50 51.4 -0.7
MDM IAmb IAmb 15 50 53.1
comp=Z,20nm,1.5s
K22A Casper 97.77 45 IAmb IAmb 15 51 13.2
comp=Z,8.8nm,0.8s
K22A Casper 97.77 45 P Pdif 15 50 54.3 +1.1
baz=236
K22A Casper 97.77 45 P **P** 15 50 52.8 -0.3
baz=236
ILAR Eielson Array 97.81 13 P **P** 15 50 51.7 -0.8
comp=Z,3.7nm,0.8s,baz=220,slow=5.8,SNR=30
ILAR PKiKP **PKiKP** 15 55 26.1 +0.1
comp=Z,0.8nm,0.8s,baz=290,slow=3.7,SNR=4.4
ILAR LR LR 16 32 11.8
comp=Z,117nm,18.2s,baz=204,slow=34
comp=Z,3.7nm,0.8s
POKR Poker Plat Res 98.01 13 P **P** 15 50 53.4 0.0
POKR IAmb IAmb 15 50 57.7
comp=Z,12nm,0.9s
POKR Poker Plat Res 98.01 13 P Pdif 15 50 54.2 +0.7
baz=206
LPAZ La Paz 98.12 114 P Pdif 15 50 57.1 +1.1
comp=Z,1.3nm,0.7s,baz=212,slow=6.9,SNR=5.0
LPAZ pP sP 15 51 15.2 +1.4
comp=Z,3.1nm,0.6s,baz=216,slow=5.1,SNR=5.7
LPAZ LR LR 16 26 26.2
comp=Z,401nm,21.6s,baz=218,slow=30
comp=Z,1.3nm,0.7s

K27K Chicken 98.16 15 IAMs_20 IAMs_20 16 30 28.2
comp=Z,480nm,19.0s
WHTX Lake Whitney, 98.21 58 P **P** 15 50 54.1 -1.0
baz=239
M30M Minto, Yukon 98.23 18 P **P** 15 50 54.5 0.0
M30M IAMs_20 IAMs_20 16 26 43.2
comp=Z,730nm,21.0s
M30M Minto, Yukon 98.23 18 P Pdif 15 50 55.1 +0.6
baz=215
J26L Joseph Creek 98.24 14 P Pdif 15 50 55.0 +0.4
baz=209,SNR=26
KSCO Kaye Shedlock' 98.25 50 P **P** 15 50 53.2 -2.1
baz=237
H24K Noodor Dome 98.58 12 IAMs_20 IAMs_20 16 30 45.2
comp=Z,497nm,20.0s
H24K Noodor Dome 98.58 12 P Pdif 15 50 57.0 +1.0
baz=206
M31M Drury Creek, Y 98.59 19 IAMs_20 IAMs_20 16 27 00.7
comp=Z,761nm,21.0s
LZH Lanzhou 98.72 307 *e*P Pdif 15 51 03.6 +6.1
LZH *e*S **S** **16 02 25.2 +1.7**
LZH pmax pmax
comp=Z,25nm,1.4s
LZH LR LR
comp=Z,370nm,17.3s
LZH LR LR
comp=Z,440nm,17.0s
LZH LR LR
comp=Z,660nm,19.6s
BILL Bilibino 98.75 354⇓ *e*P Pdif 15 50 57.0 +0.4
BILL *e* 15 51 10.8
BILL *e* 15 55 03.3
BILL PPP PPP 15 57 03.0
BILL *e*S **SKSac** **16 01 22.0 -8.0**
BILL *e* 16 02 18.4
BILL pmax pmax
comp=Z,2.0nm,0.8s
BILL MLR MLR
comp=Z,186nm,18.0s
EGAK Eagle 99.01 15 IAMs_20 IAMs_20 16 30 52.6
comp=Z,603nm,21.0s
EGAK Eagle 99.01 15 P **Pdif** **15 50 57.9 0.0**
baz=211,SNR=5.6
J29M Klondike Camp 99.42 16 IAMs_20 IAMs_20 16 27 52.6
comp=Z,583nm,21.0s
OGNE Ogallala 99.66 48 IAMs_20 IAMs_20 16 28 02.0
comp=Z,543nm,19.0s
CPUP Villa Florida 99.99 128 pP pP 15 51 25.1 +8.7
comp=Z,5.8nm,1.0s,baz=269,slow=3.9,SNR=4.9
CBKS Cedar Bluff 100.07 51 IAMs_20 IAMs_20 16 32 58.0
comp=Z,501nm,18.0s
RSSD Black Hills 100.09 45 P **Pdif** **15 51 04.5 +1.0**
baz=238
RSSD Black Hills 100.09 45 P **Pdif** **15 51 02.6 -0.9**
baz=237
I29M Ogilvie Camp, 100.16 16 P **Pdif** **15 51 03.7 +0.7**
baz=214
LAO LASA Array 100.20 42 IAMs_20 IAMs_20 16 33 53.7
comp=Z,596nm,18.0s
YAK Yakutsk 101.18 338 IAMs_20 IAMs_20 16 29 37.7
comp=Z,775nm,22.0s
YAK Yakutsk 101.18 338 *e*P **Pdif** **15 51 06.2 -1.3**
YAK pmax pmax
comp=Z,10.0nm,1.0s
YAK pmax pmax
comp=N,2.0nm,1.0s
YAK pmax pmax
comp=E,2.0nm,1.0s
DGMT Dagmar 102.31 41 IAMs_20 IAMs_20 16 30 04.6
comp=Z,560nm,21.0s
W39A Magazine 102.45 57 IAMs_20 IAMs_20 16 29 25.3
comp=Z,656nm,19.0s
X40A Basin Creek Fa 102.81 58 IAMs_20 IAMs_20 16 35 43.9
comp=Z,384nm,18.0s
YKA Yellowknife Ar 105.32 25 Pdiff **Pdif** **15 51 25.8 -0.2**
comp=Z,0.4nm,0.8s,baz=238,slow=4.2,SNR=3.9
YKA PKiKP **PKiKP** **15 55 38.8 -0.7**
comp=Z,0.4nm,0.6s,baz=263,slow=1.4,SNR=5.5
YKA PKKPbc **PKKPbc** **16 07 05.5 -1.8**
comp=Z,2.3nm,0.8s,baz=46,slow=3.1,SNR=20
YKA PKKPab **PKKPdf** **16 07 17.0 -1.3**
comp=Z,2.5nm,0.9s,baz=49,slow=3.5,SNR=7.7
OXF Oxford 105.33 59 IAMs_20 IAMs_20 16 37 25.9
comp=Z,403nm,18.0s
C36M Paulatuk 106.75 17 IAMs_20 IAMs_20 16 31 55.4
comp=Z,854nm,22.0s
MTDJ Mount Denham 107.71 79 IAMs_20 IAMs_20 16 30 05.8
comp=Z,728nm,22.0s
TIXI Tiksi 108.18 345 IAMs_20 IAMs_20 16 37 18.3
comp=Z,584nm,22.0s
A36M Sachs Harbour 108.29 15 P **PKiKP** **15 55 43.7 -1.1**
baz=226
PCHI Peechi 108.78 271 *e*P **PKiKP** **15 55 48.4 +0.9**
PCHI *ex* x 16 05 53.0
GOGA Godfrey 109.34 62 P **PKiKP** **15 55 46.6 -1.4**
baz=246
EYMN Ely 109.59 45 IAMs_20 IAMs_20 16 33 25.4
comp=Z,610nm,22.0s
HYBB Hyderabad (bro 110.03 279 *e*P **PKiKP** **15 55 49.6 -0.2**
HYBB *e*PKiKP **PKiKP** **15 55 49.6 -0.2**
HYBB *es*PKiKP **sPKiKP** **15 56 08.4 0.0**
HYBB *e*PP **PP** **15 56 23.2 -0.5**
TZTN Tazewell 110.52 59 P **PKiKP** **15 55 49.5 -0.7**
baz=247
ACSO Alum Creek Sta 112.32 56 IAMs_20 IAMs_20 16 35 31.7
comp=Z,521nm,21.0s
P52A Corning 112.72 56 IAMs_20 IAMs_20 16 35 43.2
comp=Z,399nm,20.0s
P52A Corning 112.72 56 P **PKiKP** **15 55 53.6 -0.6**
baz=249
WMQ Urumqi 113.22 308 *e*PKP **PKiKP** **15 55 55.6 +0.4**
WMQ LR LR
comp=Z,180nm,14.1s
WMQ LR LR
comp=Z,150nm,22.9s
WMQ LR LR
comp=Z,150nm,18.5s
O53A New Philadelph 113.59 56 IAMs_20 IAMs_20 16 40 39.4
comp=Z,526nm,20.0s
O53A New Philadelph 113.59 56 P **PKiKP** **15 55 55.2 -0.7**
baz=249
MCWV Mont Chateau 114.38 57 IAMs_20 IAMs_20 16 35 53.2
comp=Z,426nm,18.0s
SUR Sutherland 115.19 197 PKP **PKPdf** **15 55 59.6 0.0**
baz=155,slow=5.3
CBN Corbin Frederi 115.71 59 IAMs_20 IAMs_20 16 42 42.6
comp=Z,359nm,20.0s
SSPA Standing Stone 116.12 57 IAMs_20 IAMs_20 16 37 17.2
comp=Z,445nm,22.0s
SSPA Standing Stone 116.12 57 P **PKPdf** **15 56 00.3 -0.4**
baz=251
BOSA Boshof 117.39 203 PKP **PKiKP** **15 56 04.2 +0.3**
comp=Z,5.0nm,0.7s,baz=174,slow=2.4,SNR=11
BOSA Boshof 117.39 203 PKPdf **PKPdf** **15 56 02.8 -1.0**
MK31 Makanchi Array 117.76 310 *i* PKiKP **PKPdf** **15 56 01.9 -1.8**
MKAR Makanchi Array 117.76 310 PKP **PKPdf** **15 56 02.6 -1.2**
comp=Z,5.5nm,0.7s,baz=94,slow=1.2,SNR=22
MKAR PKKPbc **PKKPbc** **16 06 25.7 +0.2**
comp=Z,0.6nm,0.7s,baz=281,slow=5.4,SNR=5.1
BINY Binghamton 117.95 55 IAMs_20 IAMs_20 16 39 03.6
comp=Z,555nm,21.0s
BINY Binghamton 117.95 55 P **PKPdf** **15 56 03.9 -0.4**
baz=253
MAKZ Makanchi 117.97 310 PKPdf **PKPdf** **15 56 02.2 -1.9**
MAKZ Makanchi 117.97 310 PKiKP **PKPdf** **15 56 02.2 -1.9**
MAKZ MLR MLR
comp=Z,200nm,20.0s
ZALV Zalesovo Beam 118.00 318 PKP **PKPdf** **15 56 01.7 -2.2**
comp=Z,3.7nm,0.6s,baz=147,slow=2.6,SNR=13
PAL Palisades 119.11 57 P **PKPdf** **15 56 06.0 -0.5**
baz=254
NRIK Noril'sk 119.57 336 PKP **PKPdf** **15 56 05.0 -1.4**
comp=Z,9.6nm,0.8s,baz=79,slow=3.9,SNR=12
NRIK Noril'sk 119.57 336 PKPdf **PKPdf** **15 56 05.2 -1.2**
NRIK Noril'sk 119.57 336 *i* PKiKP **PKPdf** **15 56 05.7 -0.8**
LONY Lake Ozonia 119.59 53 P **PKPdf** **15 56 06.6 -0.7**
baz=255
YLE Yale 119.90 57 IAMs_20 IAMs_20 16 38 58.7
comp=Z,606nm,22.0s
KSH Kashi 120.25 301 PKP **PKiKP** **15 56 10.3 +1.3**
KSH LR LR
comp=Z,240nm,21.0s
KSH LR LR
comp=Z,220nm,22.3s
KSH LR LR
comp=Z,380nm,26.4s
L61B Northampton 120.38 56 IAMs_20 IAMs_20 16 40 18.9
comp=Z,578nm,22.0s
L61B Northampton 120.38 56 P **PKPdf** **15 56 08.3 -0.6**
baz=255
ULHL Ulahol 120.77 304 P **PKiKP** **15 56 10.2 +0.2**
SNR=18
KURK Kurchatov 121.03 314 PKPdf **PKPdf** **15 56 08.0 -1.9**
KURK Kurchatov 121.03 314 IAMs_20 IAMs_20 16 44 40.9
comp=Z,378nm,21.0s
KURK Kurchatov 121.03 314*c* *i*PKIKP **PKPdf** **15 56 08.8 -1.0**
KURK pmax pmax
comp=Z,26nm,1.0s
HRV Adam Dziewonsk 121.20 56 P **PKPdf** **15 56 10.2 -0.2**
baz=256
LBNH Lisbon 121.34 54 P **PKPdf** **15 56 09.9 -0.8**
baz=257
TKM2 Tokmak 2 121.39 304 P **PKPdf** **15 56 10.0 -1.1**
SNR=26
KBK Karagaybulak 121.80 304 P **PKiKP** **15 56 14.5 +2.5**
SNR=16
UCH Uchtor 122.01 303 P **PKPdf** **15 56 12.4 -0.3**
SNR=42
CHMS Chumysh 122.02 304 P **PKiKP** **15 56 14.6 +2.4**
SNR=14
AAK Ala-Archa 122.12 304 P **PKiKP** **15 56 15.1 +2.5**
SNR=5.4
AAK Ala-Archa 122.12 304 PKPdf **PKPdf** **15 56 11.4 -1.0**
USP Ospenovka 122.25 305 P **PKiKP** **15 56 15.1 +2.4**
SNR=21
AML Almayashu 122.58 303 P **PKPdf** **15 56 13.2 -0.4**
SNR=33
EKS2 Erkin-Say 122.64 304 P **PKiKP** **15 56 16.0 +2.5**
SNR=19
ALE Alert 123.13 8 IAMs_20 IAMs_20 16 47 22.7
comp=Z,329nm,20.0s
PKME Peaks-Kenny Pk 123.39 53 P **PKPdf** **15 56 14.2 -0.3**
baz=259
TULEG Thule 123.66 15 IAMs_20 IAMs_20 16 48 37.9
comp=Z,379nm,22.0s
TULEG Thule 123.66 15 *i* P **PKPdf** **15 56 11.9 -2.3**
KBL Kabul 124.25 293 PKPdf **PKPdf** **15 56 15.9 -0.9**
KBL Kabul 124.25 293 PKIKP **PKPdf** **15 56 15.9 -0.9**
PQI Presque Isle 124.52 52 PKPdf **PKPdf** **15 56 15.2 -1.4**
BATG Bathurst New B 125.93 51 PKPdf **PKPdf** **15 56 18.1 -1.3**
SCHQ Schefferville 126.11 42 PKP **PKPdf** **15 56 18.0 -1.5**
comp=Z,11nm,0.8s,baz=290,slow=1.8,SNR=9.1
SCHQ Schefferville 126.11 42 PKPdf **PKPdf** **15 56 18.3 -1.2**
BRVK Borovoye 126.45 316 PKPdf **PKPdf** **15 56 19.4 -0.7**
BRVK Borovoye 126.45 316 IAMs_20 IAMs_20 16 49 26.0
comp=Z,316nm,21.0s
BRVK Borovoye 126.45 316*c* *i*PKIKP **PKPdf** **15 56 19.6 -0.6**
BRVK pmax pmax
comp=Z,27nm,1.0s
NOR Nord 128.09 3 *i* P **PKPdf** **15 56 22.1 -0.5**
RCBR Riachuelo 128.87 128 PKP **PKiKP** **15 56 26.6 -0.2**
comp=Z,10nm,0.8s,baz=353,slow=4.7,SNR=4.6
RCBR Riachuelo 128.87 128 **PKPdf** **15 56 24.6 -1.5**
KBS Kingsbay 131.09 357 IAMs_20 IAMs_20 16 45 15.8
comp=Z,465nm,21.0s
KBS Kingsbay 131.09 357 *e*PKPdf **PKiKP** **15 56 29.0 -0.3**
SPA0 Spitsbergen Ar 131.60 356 *e*PKPdf **PKPdf** **15 56 29.9 +0.5**
SPITS Spitsbergen AR 131.60 356 PKP **PKPdf** **15 56 28.9 -0.5**
comp=Z,12nm,0.7s,baz=59,slow=8.7,SNR=5.7
SPB2 Spitsbergen Ar 131.61 356 PKPdf **PKPdf** **15 56 28.7 -0.6**
SVE Sverdlovsk 131.86 321 *i* PKIKP **PKPdf** **15 56 29.4 -0.9**
SVE pmax pmax
comp=Z,13nm,0.9s
SFJD Kangerlussuaq 131.87 25 *i* P **PKPdf** **15 56 23.2 -6.9**
DAG Danmarks Havn 132.43 6 *i* P **PKPdf** **15 56 28.7 -2.2**
KIBK Kibwezi 132.78 233 IAMs_20 IAMs_20 16 51 32.7
comp=Z,367nm,20.0s
ARU Arti 133.06 321 PKPdf **PKPdf** **15 56 31.0 -1.6**
ARU Arti 133.06 321 *i* PKIKP **PKPdf** **15 56 32.5 -0.1**
ARU 15 58 54.4
ARU MLR MLR
comp=Z,648nm,23.0s
GEYT Alibeck 133.58 295 PKP **PKPdf** **15 56 33.6 -0.6**
comp=Z,12nm,0.9s,baz=70,slow=1.7,SNR=13
KMBO Kilima Mbogo 134.20 233 PKP **PKPdf** **15 56 36.9 +0.5**
comp=Z,2.9nm,0.7s,baz=184,slow=4.2,SNR=4.9
KMBO Kilima Mbogo 134.20 233 IAMs_20 IAMs_20 16 53 46.7
comp=Z,419nm,21.0s
ICESG Greenland Ices 134.44 20 *i* P **PKPdf** **15 56 35.5 +0.2**
DBG Daneborg 134.49 8 *i* P **PKPdf** **15 56 33.4 -1.5**
PRGR Permogore 137.76 331 *e*PKIKP **PKPdf** **15 56 40.9 -0.3**
LVZ Lovozero 137.77 342*c* *i*PKIKP **PKiKP** **15 56 43.2 +0.1**
LVZ pmax pmax
comp=Z,12nm,0.8s
ATD Arta Tunnel 137.88 253 IAMs_20 IAMs_20 16 50 16.4
comp=Z,483nm,22.0s
ARA0 ARCESS Array S 138.50 348 *e*PKPdf **PKPdf** **15 56 42.1 -0.3**
ARCES ARCESS Array B 138.50 348 PKhKP PKPpre 15 56 37.3
comp=Z,6.2nm,0.7s,baz=36,slow=3.4,SNR=3.8
MBAR Mbarara 138.91 227 IAMs_20 IAMs_20 16 47 56.3
comp=Z,416nm,21.0s
KTK1 Kautokeino 139.36 348 *e*PKPdf **PKPdf** **15 56 44.5 +0.5**
TRO Tromso 139.46 351 *e*PKPdf **PKPdf** **15 56 44.9 +0.8**
RAYN Ar Rayn 140.88 271 PKPdf **PKPdf** **15 56 47.2 -1.0**
RAYN Ar Rayn 140.88 271⇑ PKIKP **PKiKP** **15 56 50.4 -0.4**
LOF Lofoten 141.53 353 *e*PKPdf **PKPdf** **15 56 48.2 +0.3**
STEI Steigen 141.53 352 *e*PKPdf **PKPdf** **15 56 47.7 -0.2**
FAUS Fauske 142.05 352 *e*PKPdf **PKPdf** **15 56 50.0 +1.2**
GROC Groznyy 143.09 303 *e*PKIKP PKPbc 15 56 49.2 +0.8
GROC *e* 16 00 00.1
GROC *e* 16 03 59.5
GROC pmax pmax
comp=Z,31nm,0.7s
MOR8 Moi Rana 143.31 352 *e*PKPdf **PKPdf** **15 56 51.5 +0.3**
GNI Garni 144.09 298 PKPdf **PKPab** **15 56 51.3 +0.1**
GNI Garni 144.09 298 PKIKP **PKPab** **15 56 51.3 +0.1**
MOS Moscow 144.29 326 *e*PKHKP PKPpre 15 56 48.7
ZEI Tsey 144.51 302 *i* PKIKP **PKPab** **15 56 51.9 -0.8**
ZEI pmax pmax
comp=Z,36nm,0.9s
GOF Gofitskoye 144.79 306⇑ *e*PKIKP **PKPab** **15 56 53.3 -0.1**
GOF pmax pmax
comp=Z,51nm,0.7s
PUL Pulkovo 144.93 335*ce*PKIKP **PKPdf** **15 56 53.8 -0.3**
PUL pmax pmax
comp=Z,191nm,0.7s
AKH Akhalkalaki 144.96 300⇑ P **PKPab** **15 56 54.7 +0.3**
FINES FINESS Array B 145.07 340 PKP **PKPbc** **15 56 52.5 -1.3**
comp=Z,125nm,0.7s,baz=64,slow=4.4,SNR=220
LPSR Galich'ya Gora 145.08 320 *e*PKIKP **PKPbc** **15 56 53.1 -1.0**
LPSR pmax pmax
comp=Z,40nm,0.8s
KBZ Khabaz 145.11 304 PKP **PKPbc** **15 56 53.5 -1.0**
comp=Z,22nm,0.9s,baz=153,slow=1.8,SNR=26
KBZ Khabaz 145.11 304*ce*PKIKP **PKPbc** **15 56 54.5 0.0**
OBN Obninsk 145.13 325⇑ P **PKPbc** **15 56 53.5 -0.7**
OBN Obninsk 145.13 325 **PKPbc** **15 56 53.8 -0.4**
OBN Obninsk 145.13 325*d* *i*PKIKP **PKPbc** **15 56 53.3 -0.9**
OBN *e* 15 57 16.3
OBN *e* 16 04 00.5
OBN PPS PPS 16 12 55.0
OBN SS SS 16 19 03.0 +2.7
OBN pmax pmax
comp=Z,202nm,2.1s
OBN pmax pmax
comp=Z,38nm,0.6s
NSS Namsos 145.19 353 *e* **PKPbc** **15 56 53.1 -1.0**
KIV Kislovodsk 145.23 304⇑ P **PKPbc** **15 56 53.9 -1.2**
KIV Kislovodsk 145.23 304 **PKPbc** **15 56 53.9 -1.2**
KIV IAMs_20 IAMs_20 17 07 03.9
comp=Z,267nm,21.0s
KIV Kislovodsk 145.23 304 *i* PKIKP **PKiKP** **15 56 57.9 -1.3**
KIV *e* 16 00 12.3
KIV *e*SS SS 16 19 04.1 +1.2
KIV pmax pmax
comp=Z,33nm,1.1s
KIV MLR MLR
comp=Z,238nm,25.0s
VORR Voronezh 145.30 319 *e*PKIKP **PKPbc** **15 56 54.5 -0.4**
VORR pmax pmax
comp=Z,80nm,0.5s
VSR Storozhevoye 145.51 318 *e*PKP2 **PKPdf** **15 56 54.0 -1.4**
VSR pmax pmax
comp=Z,100nm,1.4s
VORD Divnogorie 145.53 317 *e*PKP2 **PKPdf** **15 56 54.2 -1.2**
VORD pmax pmax
comp=Z,40nm,1.3s
CHVG Ch'k'valeri 145.85 302⇓ P **PKPab** **15 56 57.9 +0.4**
CHVG Ch'k'valeri 145.85 302⇓ PKP2 **PKPab** **15 56 57.9 +0.4**
BATM Batumi 146.28 301⇓ P **PKPdf** **15 56 57.5 +0.5**
BATM Batumi 146.28 301⇓ PKP2 **PKPdf** **15 56 57.5 +0.5**
RAF Rauma 146.61 343 *e*P **PKPbc** **15 56 57.9 -0.6**

TBLU Trondheim 146.62 353 ePKPbc PKPbc 15 56 58.1 -0.4
VSU Vasula 147.16 336 eP PKPbc 15 56 59.7 -0.5
SOC Sochi 147.41 305 dPKP2 PKPbc 15 57 00.3 -1.1
SOC pmax pmax
comp=Z,43nm,0.8s
SOC MLR MLR
comp=Z,253nm,21.0s
MOL Molde 147.52 355 ePKPbc PKPbc 15 57 01.2 +0.2
AAL Aland 147.79 343 eP PKPbc 15 57 00.7 -1.1
KTUT Trabzon 147.79 300 ⇓P PKPbc 15 57 02.1 -0.4
DOMB Dombas 147.92 354 ePKPbc PKPbc 15 57 01.6 -0.6
MTSE Matsula 147.94 339 eP PKPbc 15 57 01.9 -0.4
AKN Aaknes 147.95 356 ePKPbc PKPbc 15 57 02.1 -0.2
NC204 NORSAR Array S 148.49 352 PKPdf 15 57 01.3 +1.1
FOO Floro 148.63 357 ePKPbc PKPbc 15 57 04.1 +0.1
UPP Uppsala 148.63 345 eP PKPbc 15 57 02.9 -1.2
NB2 NORSAR Subarra 148.66 351 PKPab PKPbc 15 57 03.2 -1.0
baz=14,slow=2.8
NB2 NORSAR Subarra 148.66 351 PKP PKPbc 15 57 03.2 -1.0
comp=Z,64nm,0.8s,baz=14,slow=2.8
NOA NORSAR Array B 148.66 351 PKP PKPdf 15 56 59.6 -0.8
comp=Z,33nm,0.8s,baz=15,slow=4.3,SNR=70
NOA PKPbc PKPbc 15 57 03.4 -0.8
comp=Z,31nm,0.8s,baz=14,slow=4.4,SNR=82
ANN Anapa 148.73 307 iPKP2 PKPbc 15 57 04.1 -0.7
ANN pmax pmax
comp=Z,105nm,0.8s
ANN MLR MLR
comp=Z,525nm,25.0s
NC602 NORSAR Array S 148.91 351 ePKPbc PKPbc 15 57 04.8 0.0
HYA Hoyanger 149.00 356 ePKPbc PKPbc 15 57 05.1 +0.2
SUE Sulen 149.18 357 ePKPbc PKPbc 15 57 04.8 -0.6
SLIT Slitere, Latvi 149.29 339 eP PKPbc 15 57 04.5 -1.3
SKAR Skarslia 149.33 354 ePKPbc PKPbc 15 57 06.1 +0.2
IDIB Didziasalis 149.45 332 eP PKPbc 15 57 06.4 +0.1
ISAL Salakas 149.51 333 eP PKPbc 15 57 05.8 -0.6
MNK Minsk 149.53 330 iPKP2 PKPbc 15 57 06.5 0.0
MNK i 16 00 41.6
MNK i 16 04 05.8
MNK iSS SS 16 19 54.2 +4.5
MNK iSSS SSS 16 25 34.3
MNK pmax pmax
comp=E,3.0nm,0.8s
MNK pmax pmax
comp=Z,110nm,0.9s
MNK pmax pmax
comp=N,30nm,0.8s
MNK Minsk 149.53 330 iPKP PKPbc 15 57 06.5 0.0
comp=E,3.0nm,0.8s
MNK iPKP PKPbc 15 57 06.5 0.0
comp=N,30nm,0.8s
MNK iPKP PKPbc 15 57 06.5 0.0
comp=Z,110nm,0.9s,baz=228
MNK iPKS PP 16 00 41.7 +2.2
MNK iPP PP 16 00 46.1 +6.6
MNK iSKS SKSdf 16 04 05.8 0.0
MNK iPPS PPS 16 17 39.6
MNK iSS SS 16 19 54.3 +4.6
MNK iSSS SSS 16 25 34.4
MNK iLR LR 16 59 55.1
MNK iLRM MLR 17 03 38.3
MNK iLRM MLR 17 04 05.0
MNK iLRM MLR 17 04 17.2
IIGN Ignalina 149.63 332 eP PKPbc 15 57 06.8 +0.1
NACGM Naroch 149.72 331 ⇓ePKP PKPbc 15 57 05.7 -1.3
baz=46
ASK Askoy 149.74 357 ePKPbc PKPbc 15 57 07.1 +0.3
OSL Oslo 149.79 351 ePKPbc PKPbc 15 57 07.0 0.0
BER Bergen 149.83 357 ePKPbc PKiKP 15 57 07.6 -0.4
VSVD Vaisvydziai 150.04 335 eP PKPbc 15 57 07.5 -0.1
VIKU Vikbolandet 150.06 345 eP PKPbc 15 57 06.8 -0.8
LRW Lerwick 150.08 3 eP PKPbc 15 57 07.2 -0.5
KONO Kongsberg 150.21 352 PKPdf PKPdf 15 57 02.0 -0.9
KONO PKPbc PKPbc 15 57 07.3 -0.7
KONO Kongsberg 150.21 352 IAMs_20 IAMs_20 16 55 02.9
comp=Z,347nm,21.0s
KONO Kongsberg 150.21 352 ⇓PKIKP PKPbc 15 57 07.5 -0.5
KONO Kongsberg 150.21 352 ePKPbc PKPbc 15 57 07.9 -0.1
ODD1 Odda 150.22 355 ePKPbc PKPbc 15 57 08.4 +0.3
ASF Jabal al Asfar 150.25 283 PKP PKPdf 15 57 03.5 -0.5
comp=Z,26nm,0.9s,baz=70,slow=1.0,SNR=9.6
PABE Paberze 150.39 335 eP PKPbc 15 57 08.4 -0.1
STRU Stroemstad 150.60 350 iP PKPbc 15 57 07.4 -1.5
PBUR Paburge 150.71 337 eP PKPbc 15 57 09.0 -0.3
BLS5 Blasjo 150.72 355 ePKPbc PKPbc 15 57 09.2 -0.1
SIM Simferopol' 150.94 309 iPKIKP PKPbc 15 57 10.1 -0.1
SIM pmax pmax
comp=Z,55nm,0.7s
KMY Karmoy 151.00 357 ePKPbc PKiKP 15 57 10.4 0.0
DIKM Dikmen 151.03 302 ⇑P PKPbc 15 57 09.8 -0.8
LEWI Lewis, Hebride 151.48 10 eP PKPbc 15 57 09.6 -1.4
TJOU Tjoern 151.50 349 iP PKPbc 15 57 09.8 -1.2
BIGH Upper Bighouse 151.51 7 eP PKPbc 15 57 10.0 -1.1
MMAI Mount Meron Ar 151.58 284 PKP PKPdf 15 57 07.1 +1.2
comp=Z,2.1nm,0.5s,baz=54,slow=3.8,SNR=3.3
MMAI PKPbc PKiKP 15 57 13.2 +0.6
comp=Z,33nm,0.8s,baz=78,slow=3.9,SNR=19
EIL Elat 151.58 277 PKPbc PKiKP 15 57 12.4 -0.2
comp=Z,60nm,0.8s,baz=5.9,slow=1.6,SNR=16
HOMB Hombors und 151.68 353 iP PKPbc 15 57 11.0 -0.4
HOMB Hombors und 151.68 353 ePKPbc PKPbc 15 57 11.2 -0.3
LINV Loch Inver, As 151.70 8 eP PKPbc 15 57 10.1 -1.4
SNART Snartemo 151.74 354 iP PKiKP 15 57 15.2 +3.2
SNART Snartemo 151.74 354 ePKPbc PKPbc 15 57 11.5 -0.1
MLA1 Latheron 151.74 6 eP PKPbc 15 57 10.2 -1.4
SUW Suwalki 151.82 333 ePKP PKPbc 15 57 11.8 -0.1
SUW Suwalki 151.82 333 eP PKPbc 15 57 11.8 -0.1
BZK Bozkurt 151.87 303 ⇑P PKPbc 15 57 12.2 -0.2
ONAU Onsala 152.05 349 iP PKPbc 15 57 11.6 -0.7
BLEU Blekinge 152.26 343 iP PKPbc 15 57 12.2 -0.6
KAC Achnashellach 152.32 9 eP PKPbc 15 57 12.2 -0.8
OVD Ostervraa, Den 152.40 350 iP PKPbc 15 57 12.8 -0.3
OVD IAmb IAmb 15 57 17.6
comp=Z,113nm,0.6s
KPL Plockton 152.43 9 eP PKPbc 15 57 12.1 -1.0
DEL Delary 152.55 346 eP PKPbc 15 57 13.1 -0.4
DEL Delary 152.55 346 iP PKPbc 15 57 12.0 -1.5
BR131 Keskin Array S 152.62 299 PKPdf PKPdf 15 57 06.5 -0.9
BR131 PKPbc PKPbc 15 57 14.3 -0.1
BR131 Keskin Array S 152.62 299 PKiKP PKPdf 15 57 06.5 -0.9
BRTR Keskin Array B 152.62 299 PKPbc PKiKP 15 57 16.2 +1.6
comp=Z,17nm,0.7s,baz=122,slow=2.9,SNR=25
GOET G??ttrup 152.81 351 iP PKPbc 15 57 13.4 -0.6
GOET IAmb IAmb 15 57 29.0
comp=Z,50nm,0.8s
PURM Purcari 153.05 315 ⇓P PKPbc 15 57 14.7 -0.2
BJUU Bjuv 153.09 346 iP PKPbc 15 57 14.6 -0.1
SORM Soroca 153.16 319 ⇑P PKPdf 15 57 10.5 +2.8
SORM Soroca 153.16 319 ⇑PKiKP PKPbc 15 57 10.5 +2.8
ANTO Ankara 153.23 299 PKPdf PKPdf 15 57 07.2 -1.0
ANTO PKPbc PKPbc 15 57 15.1 -0.6
ANTO Ankara 153.23 299 PKiKP PKPdf 15 57 07.2 -1.0
KIS Kishinev 153.47 316 ePKP PKPbc 15 57 15.0 -0.8
comp=Z,70nm,0.6s
KIS eL L 17 08 47.0
KIS LRM MLR 17 10 45.0
comp=Z,120nm,19.0s
KIS Kishinev 153.47 316 ePKIKP PKPbc 15 57 15.0 -0.8
KIS pmax pmax
comp=Z,70nm,0.6s
KIS MLR MLR
comp=Z,120nm,19.0s
MILM Milestii Mici 153.51 316 ⇓iPKP PKPbc 15 57 15.0 -0.9
comp=Z,60nm,0.8s
MILM eL L 16 54 34.0
MILM LRM MLR 17 09 09.0
comp=Z,300nm,20.0s
MILM Milestii Mici 153.51 316 ⇑P PKPbc 15 57 15.4 -0.5
MILM Milestii Mici 153.51 316 dPKIKP PKPbc 15 57 15.0 -0.9
MILM pmax pmax
comp=Z,150nm,1.8s
MILM MLR MLR
comp=Z,300nm,20.0s
LAWE Loch Awe, Argy 153.51 9 eP PKPbc 15 57 15.0 -0.6
EAB Aberfoyle 153.72 8 eP PKPbc 15 57 12.7 -3.4
LLD Lille Linde 153.95 347 iP PKPbc 15 57 16.4 -0.2
LLD IAmb IAmb 15 57 17.6
comp=Z,67nm,0.9s
TLCR 154.31 313 ⇑P PKPbc 15 57 17.5 -0.2
TLCR 154.31 313 ⇑PKiKP PKPbc 15 57 17.5 -0.2
JURR Jurilovca 154.46 312 ⇑P PKiKP 15 57 19.2 +1.1
VLDR Vladesti 154.47 315 ⇓P PKPbc 15 57 13.8 -4.2
SCTR Scanteiesti 154.60 314 ⇑P PKiKP 15 57 19.7 +1.3

TPGR Topolog 154.71 312 ⇓P PKiKP 15 57 18.7 +0.1
CFR Carcaliu 154.75 313 ⇑P PKiKP 15 57 18.8 +0.2
CFR Carcaliu 154.75 313 ⇑PKiKP PKiKP 15 57 18.8 +0.2
TIRR Tirgusor 154.89 312 ⇑P PKPbc 15 57 17.9 -1.1
TIRR Tirgusor 154.89 312 ⇑P PKPbc 15 57 17.9 -1.1
TIRR Tirgusor 154.89 312 ⇑PKiKP PKPbc 15 57 17.9 -1.1
TESR Tescani 155.00 317 ⇓P PKPdf 15 57 15.9 +5.6
MFTR Murfatlar 155.00 311 ⇑P PKPdf 15 57 15.1 +4.7
MANR Mangalia 155.04 310 ⇓P PKPdf 15 57 18.6 +8.1
BIZ Bicaz 155.08 319 ⇑P PKPdf 15 57 19.7 +9.2
HARR Harsova 155.09 312 ⇓P PKPdf 15 57 19.5 +9.0
HARR Harsova 155.09 312 ⇓PKIKP PKPdf 15 57 19.5 +9.0
LIC Lamto 155.14 163 eP PKPdf 15 57 12.5 +1.0
comp=Z,46nm,0.9s
BURAR Bucovina Array 155.19 321 ⇑P PKPdf 15 57 20.6 +10
BURAR Bucovina Array 155.19 321 PKPdf PKPdf 15 57 10.7 0.0
BURAR PKPbc pPKPdf 15 57 20.1 -4.3
BURAR Bucovina Array 155.19 321 ⇑PKiKP PKPdf 15 57 20.6 +10
VRI Vrincioaia 155.28 316 ⇓P PKPdf 15 57 19.8 +9.0
VRI Vrincioaia 155.28 316 ⇓PKIKP PKPdf 15 57 19.8 +9.0
PLOR Plostina 155.34 316 ⇓P PKPab 15 57 35.9 -0.5
PLOR Plostina 155.34 316 ⇓PKP2 PKPab 15 57 35.9 -0.5
KIC Kosan Boka 155.34 164 ePKIKP PKPdf 15 57 12.2 +0.4
comp=Z,34nm,0.7s
BISRR Bisoca 155.45 315 ⇓P PKPab 15 57 24.1 -13
TIC Toumodi 155.54 163 ePKIKP PKPdf 15 57 12.5 +0.4
comp=Z,11nm,0.2s
DBIC Dimbokro 155.61 163 PKP PKPdf 15 57 12.5 +0.4
comp=Z,3.2nm,0.6s,baz=226,slow=3.3,SNR=4.6
DBIC PKPab sPKPbc 15 57 39.7 0.0
comp=Z,9.2nm,0.8s,baz=183,slow=6.1,SNR=6.3
DBIC Dimbokro 155.61 163 ⇓PKIKP PKPdf 15 57 11.9 -0.3
KOLS Kolonicke sedl 155.87 326 ePKIKP PKPdf 15 57 12.9 +1.4
KOLS Kolonicke sedl 155.87 326 ePKP PKPdf 15 57 12.9 +1.4
MLR Muntele Rosu 155.95 316 ⇑P PKPdf 15 57 12.2 +0.4
MLR Muntele Rosu 155.95 316 PKPdf PKPdf 15 57 09.9 -1.9
MLR Muntele Rosu 155.95 316 ⇑PKiKP PKPdf 15 57 12.2 +0.4
DOPR Dopca 156.03 317 ⇓P PKPdf 15 57 11.9 +0.1
UZH Uzhgorod 156.07 326 ePKIKP PKPdf 15 57 20.4 +8.7
UZH i 15 57 40.2
CRVS Cervenica-Dubn 156.28 327 ePKIKP PKPdf 15 57 13.1 +1.1
CRVS Cervenica-Dubn 156.28 327 ePKP PKPdf 15 57 13.1 +1.1
CRVS e 15 57 40.0
VOIR 156.51 316 ⇑P PKPdf 15 57 25.6 +13
VOIR 156.51 316 ⇑PKiKP PKPdf 15 57 25.6 +13
LANS Liptovska Anna 157.00 330 ePKP2 PKPab 15 57 44.2 +0.8
OKC Ostrava-Krasne 157.02 333 AMS AMS 17 11 30.0
comp=Z,400nm,18.8s
DRGR 157.05 322 ⇓P PKPdf 15 57 21.4 +8.2
DRGR 157.05 322 ⇓PKIKP PKPdf 15 57 21.4 +8.2
OSTC Ostas 157.16 336 ePKPDF PKPdf 15 57 13.2 +0.1
OSTC AMS AMS 17 06 40.0
comp=Z,500nm,21.2s
LOT Lotru 157.26 318 ⇓P PKPdf 15 57 22.7 +9.2
UPC Upice 157.27 337 AMS AMS 17 06 50.0
comp=Z,500nm,24.7s
DPC Dobruska-Polom 157.29 336 ePKIKP PKPdf 15 57 13.9 +0.6
DPC MLR MLR
comp=Z,600nm,22.4s
DPC Dobruska-Polom 157.29 336 ePKPDF PKPdf 15 57 13.9 +0.6
DPC ePKPAB PKPab 15 57 45.0 +0.4
DPC AMS AMS 17 06 50.0
comp=Z,600nm,22.4s
MORC Moravsky Berou 157.31 333 ⇑P PKPdf 15 57 12.4 -0.9
MORC Moravsky Berou 157.31 333 ⇑PKiKP PKPdf 15 57 12.4 -0.9
MORC Moravsky Berou 157.31 333 ePKP PKPdf 15 57 12.8 -0.5
KRLC Kraliky 157.35 335 ePKIKP PKPdf 15 57 14.1 +0.7
KRLC MLR MLR
comp=Z,300nm,21.0s
KRLC Kraliky 157.35 335 ePKPDF PKPdf 15 57 14.1 +0.7
KRLC ePKPAB PKPab 15 57 47.0 +2.2
KRLC AMS AMS 17 07 30.0
comp=Z,300nm,21.0s
CLL Collm 157.49 342 IAMs_20 IAMs_20 17 01 27.8
comp=Z,308nm,22.0s
CLL Collm 157.49 342 ePKIKP PKPdf 15 57 12.0 -1.4
CLL i 15 57 24.4
CLL pmax pmax
comp=Z,44nm,2.1s
CLL pmax pmax
comp=Z,12nm,1.1s
CLL pmax pmax
comp=Z,23nm,1.0s
CLL Collm 157.49 342 ePKPdf PKPdf 15 57 12.0 -1.4
comp=Z,44nm,2.1s
CLL iPKPdif pPKPdf 15 57 24.4 -2.8
comp=Z,12nm,1.1s
CLL epPKPdf sPKPdf 15 57 29.0 -3.1
CLL iPKPab PKPab 15 57 44.2 -1.1
comp=Z,23nm,1.0s
CLL iPKPabmax 15 57 47.3
comp=Z,26nm,0.7s
CLL epPKPab pPKPab 15 57 58.0 -0.7
CLL ePP PP 16 01 22.0 -2.1
CLL ePPP PPP 16 05 03.0
CLL ePPPP 16 07 22.0
CLL eSKKSac SKKSac 16 08 12.0 +2.6
CLL ePSKS 16 11 45.0
CLL ePPS PPS 16 14 43.0
CLL ePSKSrev 16 15 54.0
CLL eSS SS 16 21 12.0 -4.1
CLL eSKSSKSac 3'S'ac 16 22 00.0 +8.7
CLL e(SSS) 16 27 00.0
CLL eSSSS 16 31 42.0
MAUC Maruska 157.52 332 AMS AMS 17 11 40.0
comp=Z,900nm,19.6s
BRG Berggiesshubel 157.61 340 ePKIKP PKPdf 15 57 13.8 +0.2
BRG pmax pmax
comp=Z,16nm,1.4s
BRG Berggiesshubel 157.61 340 ⇓ePKPf 15 57 13.9
BRG Berggiesshubel 157.61 340 Amp 15 57 17.2
comp=Z,16nm,1.4s
BRG Berggiesshubel 157.61 340 ⇑PKP PKPdf 15 57 25.3 +12
BRG Berggiesshubel 157.61 340 Amp 15 57 27.1
comp=Z,11nm,1.2s
BRG Berggiesshubel 157.61 340 PKPab PKPab 15 57 45.8 0.0
BRG Berggiesshubel 157.61 340 Amp 15 57 49.0
comp=Z,24nm,0.8s
PVCC Panska Ves 157.72 339 ePKP2 PKPab 15 57 49.3 +3.0
PVCC MLR MLR
comp=Z,500nm,24.4s
PVCC Panska Ves 157.72 339 ePKPAB PKPab 15 57 49.3 +3.0
PVCC AMS AMS 17 02 50.0
comp=Z,500nm,24.4s
VYHS Vyhne 157.77 330 ePKIKP PKPdf 15 57 14.7 +0.8
VYHS Vyhne 157.77 330 ePKP PKPdf 15 57 14.7 +0.8
VYHS e 15 57 47.2
GZR Gura Zlata 157.86 319 ⇑P PKPdf 15 57 14.3 +0.1
GZR Gura Zlata 157.86 319 ⇑PKiKP PKPdf 15 57 14.3 +0.1
SIRR Siria 157.95 322 ⇑P PKPdf 15 57 14.9 +0.7
JAVC Velka Javorina 157.99 332 ePKP PKPdf 15 57 15.1 +0.9
VRAC Vranov 158.05 334 ⇓P PKPdf 15 57 11.7 -2.5
VRAC Vranov 158.05 334 ⇓PKIKP PKPdf 15 57 11.7 -2.5
VRAC Vranov 158.05 334 ePKP PKPdf 15 57 14.4 +0.2
RDO Rodhopi 158.16 306 PKPdf PKPdf 15 57 12.5 -2.1
PRU Pruhonice 158.20 338 ePKIKP PKPdf 15 57 10.7 -3.7
PRU MLR MLR
comp=Z,400nm,22.4s
PRU Pruhonice 158.20 338 ePKPDF PKPdf 15 57 10.7 -3.7
PRU AMS AMS 17 03 20.0
comp=Z,400nm,22.4s
KRUC Moravsky 158.33 334 ePKP PKPdf 15 57 13.8 -0.8
KARP Karpathos 158.33 291 IAMs_20 IAMs_20 17 11 24.1
comp=Z,390nm,22.0s
MODS Modra-Piesok 158.53 331 ePKIKP PKPdf 15 57 15.5 +0.6
MODS e 15 57 49.9
MODS Modra-Piesok 158.53 331 ePKP PKPdf 15 57 15.5 +0.6
MODS e 15 57 49.9
NKC Novy Kostel 158.61 342 ePKP2 PKPab 15 57 50.0 -0.2
NKC Novy Kostel 158.61 342 ePKPAB PKPab 15 57 50.0 -0.2
ZST Bratislava 158.74 331 ePKP2 PKPab 15 57 49.9 -0.9
MDVR Moldovita 158.83 319 ⇑P PKPdf 15 57 09.7 -5.7
VTS Vitosha 159.07 312 ⇑P PKPab 15 57 49.9 -2.8
VTS Vitosha 159.07 312 PKPdf PKPdf 15 57 14.2 -1.6
VTS PKPab 15 57 52.1 -0.6
VTS Vitosha 159.07 312 ⇑PKP2 PKPab 15 57 49.9 -2.8
KHC Kasperske Hory 159.26 338 ePKIKP PKPdf 15 57 10.4 -5.3
KHC MLR MLR
comp=Z,500nm,22.8s
KHC Kasperske Hory 159.26 338 ePKPDF PKPdf 15 57 10.4 -5.3
KHC ePKPAB PKPab 15 57 53.6 +0.5
KHC ex x 15 58 04.5
KHC ex x 16 01 18.6
KHC ex x 16 11 53.1
KHC AMS AMS 17 05 40.0
comp=Z,500nm,22.8s
CKRC Cesky Krumlov 159.29 337 ePKPDF PKPdf 15 57 13.6 -2.1
CKRC ePKPAB PKPab 15 57 55.1 +1.9
CKRC AMS AMS 17 08 20.0
comp=Z,400nm,20.4s
BEBN Eben Emael 159.34 354 dPKP PKPab 15 57 53.1 -0.1
CONA Conrad Observa 159.46 333 eP PKPdf 15 57 16.1 0.0
comp=Z,5.0nm,1.0s
CONA eP PKPab 15 57 53.5 -0.6
comp=Z,10nm,0.9s
RONA Rosalia, Austr 159.47 332 eP PKPdf 15 57 15.0 -1.0
comp=Z,7.2nm,1.4s
RONA eP PKPab 15 57 53.8 -0.3
comp=Z,12nm,0.9s
GERES GERESS Array B 159.47 338 PKP PKPdf 15 57 15.4 -0.6
comp=Z,1.7nm,0.8s,baz=80,slow=1.1,SNR=12
GERES PKPab PKPab 15 57 53.4 -0.7
comp=Z,4.1nm,0.7s,baz=35,slow=4.9,SNR=9.9
GERES GERESS Array B 159.47 338 PKPdf 15 57 14.1 -1.9
GERES PKPab 15 57 53.1 -1.0
MEM Membach 159.50 353 dPKPdf PKPdf 15 57 15.8 0.0
MEM dPKP PKPab 15 57 52.9 -1.1
MORH Mrgy, Hungar 159.53 326 ⇑P PKPdf 15 57 14.4 -1.6
SANT Santorini 159.57 293 ⇓P PKPdf 15 57 17.3 +0.8
SNF Seneffe 159.74 356 dPKPdf PKPdf 15 57 16.5 +0.3
SNF dPKP PKPab 15 57 54.8 -0.2
BHOU Houvegnez 159.75 353 dPKP PKPab 15 57 55.1 0.0
BCLA Clavier 159.75 354 dPKPdf PKPdf 15 57 16.0 -0.1
BCLA dPKP PKPab 15 57 54.5 -0.6
BGES Gesves 159.81 354 dPKP PKPab 15 57 55.0 -0.4
BMRD Maredsous 159.91 355 dPKP PKPab 15 57 55.3 -0.5
RCHB Rochefort 160.02 354 dPKPdf PKPdf 15 57 15.9 -0.6
MOA Molln 160.13 335 eP PKPab 15 57 58.5 +1.6
comp=Z,111nm,1.1s
DOU Dourbes 160.13 355 dPKPdf PKPdf 15 57 16.4 -0.2
DOU dPKP PKPab 15 57 55.6 -1.2
ARSA Arzberg 160.14 332 eP PKPdf 15 57 15.9 -0.9
comp=Z,3.6nm,0.9s
ARSA eP PKPab 15 57 55.6 -1.4
comp=Z,3.4nm,0.8s
IDI Anoyia 160.21 291 ⇓P PKPdf 15 57 17.8 +0.5
IDI Anoyia 160.21 291 PKP PKPdf 15 57 18.7 +1.4
comp=Z,5.0nm,0.8s,baz=176,slow=3.8,SNR=3.0
IDI PKPab PKPab 15 57 57.9 0.0
comp=Z,14nm,0.8s,baz=8.0,slow=5.3,SNR=5.9
IDI Anoyia 160.21 291 PKPdf PKPdf 15 57 16.4 -0.9
IDI PKPab PKPab 15 57 58.2 +0.4
WLF Walferdange 160.41 352 dPKPdf PKPdf 15 57 15.7 -1.2
WLF dPKP PKPab 15 57 57.0 -1.0
BIOA Bad Ischl, Aus 160.48 336 eP PKPdf 15 57 16.2 -0.9
comp=Z,4.8nm,1.0s
BIOA eP PKPab 15 57 58.4 -0.1
comp=Z,18nm,1.1s
LIT Litokhoron 160.71 306 PKPdf PKPdf 15 57 15.6 -2.0
LIT PKPab 15 57 59.1 -0.7
LIT Litokhoron 160.71 306 PKP2 PKPab 15 57 59.1 -0.7
LIT 16 57 15.6
SOKA Soboth 160.80 332 eP PKPdf 15 57 16.8 -0.8
comp=Z,4.2nm,0.9s
SOKA eP PKPab 15 58 02.4 +2.5
comp=Z,10nm,1.2s
KBA Koelnbreinsper 161.11 336 eP PKPdf 15 57 18.3 +0.3
comp=Z,4.8nm,1.0s
KBA eP PKPab 15 58 05.8 +4.4
comp=Z,7.8nm,0.8s
OBKA Obir 161.13 333 eP PKPdf 15 57 18.2 +0.2
comp=Z,4.8nm,1.1s
OBKA eP PKPab 15 58 03.6 +2.2
comp=Z,4.4nm,0.7s
BFO Black Forest 161.37 347 PKPab PKPab 15 58 01.2 -1.0
BFO Black Forest 161.37 347 PKP2 PKPab 15 58 01.2 -1.0
MYKA Terra Mystica 161.38 334 eP PKPdf 15 57 16.7 -1.5
comp=Z,1.0nm,0.3s
MYKA eP PKPab 15 58 04.1 +1.6
comp=Z,4.9nm,0.5s
WATA Walderalm 161.47 339 eP PKPdf 15 57 18.3 -0.1
comp=Z,3.9nm,0.7s
WATA eP PKPab 15 58 03.3 +0.4
comp=Z,15nm,0.8s
WTTA Wattenberg 161.52 339 eP PKPdf 15 57 18.5 +0.1
comp=Z,9.6nm,1.2s
WTTA iP PKPab 15 58 03.7 +0.5
comp=Z,14nm,0.8s,SNR=5.2
LJU Ljubljana 161.52 332 iPKPdf PKPdf 15 57 17.7 -0.6
LJU iPP PP 16 01 46.2 +0.1
RETA Reutte 161.57 341 eP PKPdf 15 57 21.0 +2.6
comp=Z,3.4nm,0.9s
RETA iP PKPab 15 58 02.8 -0.4
comp=Z,16nm,0.7s,SNR=11
MOTA Moosalm 161.60 340 eP PKPdf 15 57 21.5 +3.0
comp=Z,6.3nm,1.1s
MOTA eP PKPab 15 58 03.6 0.0
comp=Z,33nm,0.9s
PDG Podgorica 161.66 316 ⇓P PKPab 15 58 03.5 -0.3
PDG Podgorica 161.66 316 PKPdf PKPdf 15 57 16.8 -1.7
PDG PKPab 15 58 01.8 -1.9
CADS Cadrg 161.68 334 iPKPdf PKPdf 15 57 17.1 -1.4
SQTA Sankt Quirin 161.69 340 eP PKPdf 15 57 18.5 0.0
comp=Z,6.6nm,1.1s
SQTA eP PKPab 15 58 04.0 +0.2
comp=Z,21nm,1.0s
ABTA Abfaltersbach 161.69 337 eP PKPdf 15 57 18.3 -0.2
ABTA eP PKPab 15 58 04.8 +1.0
comp=Z,8.4nm,0.8s
TIR Tirane 161.88 312 ⇓P PKPdf 15 57 33.7 +15
DAVA Damuels 162.00 343 eP PKPdf 15 57 17.8 -1.1
comp=Z,11nm,1.4s
DAVA iP PKPab 15 58 05.2 0.0
comp=Z,28nm,0.9s,SNR=5.0
FETA Feichten 162.01 341 eP PKPdf 15 57 18.9 0.0
comp=Z,8.3nm,1.4s
FETA eP PKPab 15 58 05.3 0.0
comp=Z,11nm,1.0s
TUE Stuetta 162.89 343 PKPdf PKPdf 15 57 17.1 -2.8
TUE PKPab PKPab 15 58 08.8 -0.5
TORD Torodi Ar. Bea 162.93 179 PKP PKPdf 15 57 19.9 -0.7
comp=Z,8.9nm,1.1s,baz=198,slow=0.4,SNR=24
TORD PKPab PKPab 15 58 09.8 0.0
comp=Z,33nm,0.7s,baz=171,slow=2.6,SNR=12
TORD Torodi Ar. Bea 162.93 179 PKPdf PKPdf 15 57 20.9 +0.3
TORD PKPab 15 58 09.8 0.0
SENIN Lac Senin/Sane 163.45 347 PKPab PKPab 15 58 11.1 -0.6
PGAV Gavieira, Arco 165.67 33 ePKPdf PKPdf 15 57 23.5 +1.1
PGAV Gavieira, Arco 165.67 33 eLR LR 16 55 04.9
comp=Z,371nm,20.0s
POLO Lamas de Olo 166.36 33 ePKPdf PKPdf 15 57 23.9 +0.9
PBRG Braganca 166.49 29 ePKPab PKPab 15 58 25.1 +0.1
PVIS Viseu 166.81 35 ePKPdf PKPdf 15 57 24.9 +1.6
MVO Moncorvo 166.88 32 ePKPdf PKPdf 15 57 24.9 +1.6
MVO Moncorvo 166.88 32 eLR LR 16 58 06.1
comp=Z,517nm,20.0s
MTE Manteigas 167.23 35 ePKPdf PKPdf 15 57 24.6 +1.0
MTE Manteigas 167.23 35 eLR LR 16 55 47.2
comp=Z,334nm,22.0s
PCBR Castelo Branco 167.68 37 ePKPdf PKPdf 15 57 25.1 +1.3
PCBR Castelo Branco 167.68 37 ePKPab PKPab 15 58 29.4 -0.9
PMTG Montargil 167.82 41 ePKPdf PKPdf 15 57 25.6 +1.6
PMTG Montargil 167.82 41 ePKPab PKPab 15 58 30.7 -0.3
PMRV Marv??o 168.02 38 ePKPdf PKPdf 15 57 24.6 +0.5
PMRV Marv??o 168.02 38 ePKPab PKPab 15 58 32.0 +0.1
PMRV Marv??o 168.02 38 eLR LR 16 55 36.4
comp=Z,436nm,20.0s
PNCL Nicolau / Gran 168.26 46 ePKPdf PKPdf 15 57 25.8 +1.5
PNCL Nicolau / Gran 168.26 46 ePKPab PKPab 15 58 33.0 0.0
EVO Evora 168.30 43 ePKPdf PKPdf 15 57 25.2 +0.9
MESJ Messejana 168.62 46 ePKPdf PKPdf 15 57 24.3 -0.3
MESJ ePP PP 16 02 23.1 -0.7
MESJ Messejana 168.62 46 ePKPdf PKPdf 15 57 25.2 +0.7
PFVI Vila Bisbo 168.64 50 ePKPdf PKPdf 15 57 26.2 +1.6
MORF Marmelete 168.66 49 ePKPdf PKPdf 15 57 24.2 -0.4
MORF ePP PP 16 02 23.2 -1.0
MORF Marmelete 168.66 49 ePKPdf PKPdf 15 57 27.1 +2.4
PBEJ Beja 168.72 44 ePKPdf PKPdf 15 57 26.4 +1.8
PCVE Castro Verde 168.86 46 ePKPdf PKPdf 15 57 26.3 +1.6
PBDV Barranco-do-Ve 169.16 48 ePKPdf PKPdf 15 57 25.1 +0.1
PVAQ Vaqueiros 169.20 46 ePKPdf PKPdf 15 57 25.7 +0.8
PVAQ Vaqueiros 169.20 46 eLR LR 16 56 49.2
comp=Z,340nm,20.0s
PAB San Pablo 169.37 28 ⇑PKIKP PKPdf 15 57 26.2 +1.1
ESDC Sonseca Array 169.41 26 PKP PKPdf 15 57 25.8 +0.7
comp=Z,3.8nm,0.9s,baz=344,slow=2.9,SNR=25
ESDC PKPab PKPab 15 58 37.6 -0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,3.6nm,0.9s,baz=325,slow=3.9,SNR=8.8						
ESDC				PP	**PP**	**16 02 26.5**	**-0.7**
	comp=Z,1.8nm,1.0s,baz=327,slow=4.2,SNR=6.7						
ESDC	**Sonseca Array**	**169.41**	**26**	PKPdf	**PKPdf**	**15 57 26.1**	**+1.0**
ESDC				PKPab	**PKPab**	**15 58 38.1**	**+0.1**
KEST	**Kesra**	**171.84**	**314**	PKP	**PKPdf**	**15 57 27.1**	**+0.6**
	comp=Z,5.1nm,0.8s,baz=296,slow=5.4,SNR=6.0						

*IPEC **01** 15:37:28.8±0.4, 51°.55N×16°.34E, h0km±1km, ML2.9/3, Error ellipse: s-maj=3.4km s-min=1.6km az=49.0*
*DNK **01** 15:37:28.0±0.7, 51°.44N×15°.80E, h0km±344km*
*MCSM **01** 15:37:30.0±0.6, 51°N±4°×1°6E±°, h4km±3km, ML3.1*
*PRU **01** 15:37:31.5±0.0, 51°.44N×16°.11E, h0km*
*IDC **01** 15:37:31.2±0.7, 51°.43N×16°.09E, h0km, mbtmp3.3/6, ML3.0/7, Error ellipse: s-maj=12.9km s-min=6.7km az=116.0*
*BGR **01** 15:37:31.9±0.2, 51°.42N×16°.17E, h1km, ML3.1/26, Error ellipse: s-maj=2.2km s-min=2.2km az=35.0*
*VIE **01** 15:37:34.1±0.5, 51°.24N×15°.91E, h0km, mb2.7/17, ml2.8/15, ms3.2/1, Error ellipse: s-maj=3.0km s-min=2.3km az=12.0 75 km NE of Liberec Suspected Mining induced.*
ISC 01 15:37:29.2±0.6**, 51°.47N**±0°.02×**16°.15E**±0°.02**, h0km, n109, σ1s57**/209**, Poland**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.63**	**172**	*e*Pg	**Pb**	**15 37 42.9**	**-0.3**
KSP				*e*Sg	**Sg**	**15 37 51.2**	**+1.7**
KSP	**Ksiaz**	**0.63**	**172**	Pg	**Pg**	**15 37 42.7**	**+1.4**
KSP				Sg	**Sg**	**15 37 51.6**	**+2.1**
KSP	**Ksiaz**	**0.63**	**172**	*e*Pg	**Pb**	**15 37 43.0**	**-0.2**
KSP				*e*Sg	**Sg**	**15 37 51.4**	**+1.8**
OSTC	**Ostas**	**0.92**	**177**	*e*PG	**Pb**	**15 37 48.3**	**+0.3**
OSTC				*e*SG	**Sg**	**15 38 00.4**	**+1.8**
	comp=Z,83nm,0.3s						
OSTC	**Ostas**	**0.92**	**177**	Pg	**Pb**	**15 37 48.3**	**+0.3**
OSTC				Sg	**Sg**	**15 38 00.3**	**+1.7**
UPC	**Upice**	**0.97**	**185**	*e*PG	**Pb**	**15 37 49.1**	**+0.2**
UPC				*e*SG	**Sg**	**15 38 01.8**	**+1.5**
	comp=Z,299nm,0.4s						
UPC	**Upice**	**0.97**	**185**	Pg	**Pb**	**15 37 49.0**	**+0.2**
UPC				Sg	**Sb**	**15 38 03.1**	**+0.9**
DPC	**Dobruska-Polom**	**1.13**	**174**	*e*PG	**Pg**	**15 37 51.7**	**+1.0**
DPC				*e*SG	**Sg**	**15 38 06.4**	**+1.1**
	comp=Z,94nm,0.5s						
DPC	**Dobruska-Polom**	**1.13**	**174**	Pg	**Pg**	**15 37 51.6**	**+0.8**
DPC	**Dobruska-Polom**	**1.13**	**174**	*e*Pg	**Pg**	**15 37 51.8**	**+1.0**
DPC				*e*Sg	**Sg**	**15 38 06.6**	**+1.2**
PVCC	**Panska Ves**	**1.37**	**227**	*e*PG	**Pb**	**15 37 56.7**	**+1.0**
PVCC				*e*SG	**Sn**	**15 38 15.7**	**+1.2**
	comp=Z,232nm,0.3s						
PVCC	**Panska Ves**	**1.37**	**227**	Pg	**Pb**	**15 37 56.8**	**+1.0**
PVCC	**Panska Ves**	**1.37**	**227**	*e*Pn	**Pb**	**15 37 57.0**	**+1.2**
PVCC				*e*Sg	**Sn**	**15 38 16.6**	**+2.1**
KRLC	**Kraliky**	**1.45**	**164**	*e*PG	**Pn**	**15 37 57.1**	**+0.3**
KRLC				*e*SG	**Sg**	**15 38 16.2**	**+0.4**
	comp=Z,54nm,0.4s						
KRLC	**Kraliky**	**1.45**	**164**	Pg	**Pn**	**15 37 57.2**	**+0.4**
BRG	**Berggiesshubel**	**1.51**	**248**	Pg	**Pg**	**15 38 00.0**	**+1.8**
BRG				Sg	**Sb**	**15 38 20.2**	**+2.3**
BRG				Amp		15 38 23.5	
	comp=Z,117nm,0.4s						
BRG	**Berggiesshubel**	**1.51**	**248**	*e*Pn	**Pg**	**15 37 58.9**	**+0.7**
BRG				*e*Sg	**Sb**	**15 38 20.2**	**+2.3**
RUE	**Ruedersdorf**	**1.78**	**306**	*e*Pn	**Pn**	**15 38 01.8**	**+0.6**
RUE				*e*Sg	**Sg**	**15 38 28.9**	**+2.4**
GOPC	**GO Pecny, Ondr**	**1.78**	**210**	Pn	**Pb**	**15 38 02.7**	**-0.1**
PRU	**Pruhonice**	**1.80**	**215**	*e*PG	**Pg**	**15 38 04.1**	**+0.4**
PRU				*e*SG	**Sb**	**15 38 27.6**	**+1.4**
	comp=Z,71nm,0.6s						
PRU	**Pruhonice**	**1.80**	**215**	Pn	**Pn**	**15 38 02.4**	**+0.9**
PRU	**Pruhonice**	**1.80**	**215**	*e*Pn	**Pb**	**15 38 03.1**	**+0.1**
PRU				*e*Sg	**Sg**	**15 38 27.7**	**+0.7**
FBE	**Freiberg**	**1.84**	**254**	*e*Pn	**Pb**	**15 38 04.4**	**+0.6**
FBE				*e*Pg	**Pg**	**15 38 06.2**	**+1.7**
FBE				*e*Sg	**Sg**	**15 38 30.8**	**+2.4**
MORC	**Moravsky Berou**	**1.91**	**152**	*e*Pn	**Pn**	**15 38 03.1**	**0.0**
	baz=337						
MORC				*e*Sg	**Sn**	**15 38 29.1**	**+1.2**
	comp=Z,58nm,0.7s,baz=337						
MORC	**Moravsky Berou**	**1.91**	**152**	*e*PN	**Pn**	**15 38 03.2**	**+0.1**
MORC				*e*SG	**Sn**	**15 38 29.2**	**+1.3**
MORC	**Moravsky Berou**	**1.91**	**152**	Pn	**Pn**	**15 38 03.4**	**+0.3**
MORC	**Moravsky Berou**	**1.91**	**152**	*e*Pn	**Pn**	**15 38 03.7**	**+0.6**
MORC				*e*Sg	**Sn**	**15 38 29.3**	**+1.4**
GKP	**Gorka Klasztor**	**1.92**	**20**	*e*Sg	**Sg**	**15 38 34.8**	**+3.9**
CLL	**Collm**	**1.98**	**267**	*e*Pn	**Pn**	**15 38 04.0**	**0.0**
CLL				*e*Pg	**Pg**	**15 38 08.0**	**+0.9**
CLL				*e*Sg	**Sg**	**15 38 35.0**	**+2.2**
	comp=Z,50nm,0.6s						
CLL	**Collm**	**1.98**	**267**	*e*Pn	**Pn**	**15 38 04.5**	**+0.6**
CLL				*e*Pg	**Pg**	**15 38 08.8**	**+1.7**
CLL				*e*Sg	**Sg**	**15 38 35.0**	**+2.2**
OKC	**Ostrava-Krasne**	**2.07**	**141**	*e*PG	**Pg**	**15 38 08.9**	**0.0**
OKC	**Ostrava-Krasne**	**2.07**	**141**	Pn	**Pn**	**15 38 05.2**	**0.0**
OKC	**Ostrava-Krasne**	**2.07**	**141**	*e*Pg	**Pg**	**15 38 10.5**	**+1.7**
OKC				*e*Sg	**Sb**	**15 38 35.2**	**+1.4**
VRAC	**Vranov**	**2.18**	**172**	Pn	**Pn**	**15 38 07.6**	**+0.9**
	comp=Z,3.3nm,0.3s,baz=340,slow=15,SNR=11						
VRAC				Lg	Lg	15 38 38.6	
	comp=Z,5.6nm,0.3s,baz=83,slow=19,SNR=5.5						
	comp=Z,10nm,0.3s						
VRAC	**Vranov**	**2.18**	**172**	*e*Pn	**Pn**	**15 38 07.3**	**+0.5**
	baz=356						
VRAC				*e*Sg	**Sg**	**15 38 39.3**	**+0.1**
	comp=Z,58nm,0.8s,baz=356						
VRAC	**Vranov**	**2.18**	**172**	*e*PN	**Pn**	**15 38 07.3**	**+0.5**
VRAC				*e*SG	**Sg**	**15 38 39.4**	**+0.1**
VRAC	**Vranov**	**2.18**	**172**	*e*Pn	**Pn**	**15 38 08.4**	**+1.7**
VRAC				*e*Sg	**Sg**	**15 38 39.4**	**+0.1**
TREC	**Trest**	**2.22**	**191**	*e*PG	**Pg**	**15 38 11.9**	**+0.2**
TREC				*e*SG	**Sg**	**15 38 40.7**	**+0.3**
	comp=Z,30nm,0.4s						
TREC	**Trest**	**2.22**	**191**	*e*Pn	**Pb**	**15 38 09.7**	**-0.5**
TREC				*e*Pg	**Pg**	**15 38 12.0**	**+0.3**
TREC				*e*Sg	**Sg**	**15 38 41.0**	**+0.6**
MAUC	**Maruska**	**2.36**	**152**	*e*PG	**Pg**	**15 38 14.6**	**+0.1**
MAUC				*e*SG	**Sg**	**15 38 45.1**	**0.0**
	comp=Z,114nm,0.7s						
KRUC	**Moravsky**	**2.42**	**176**	*e*Pn	**Pn**	**15 38 10.7**	**+0.7**
	baz=359						
KRUC				*e*Sg	**Sg**	**15 38 46.8**	**0.0**
	comp=Z,55nm,1.0s,baz=359						
KRUC	**Moravsky**	**2.42**	**176**	*e*PN	**Pn**	**15 38 10.7**	**+0.7**
KRUC				*e*SG	**Sg**	**15 38 46.9**	**+0.1**
KRUC	**Moravsky**	**2.42**	**176**	*e*Pn	**Pn**	**15 38 11.7**	**+1.8**
KRUC				*e*Sg	**Sg**	**15 38 47.6**	**+0.8**
TANN	**Tannenbergstha**	**2.56**	**247**	*e*Pn	**Pn**	**15 38 13.5**	**+1.5**
TANN				*e*Pg	**Pg**	**15 38 20.1**	**+1.8**
TANN				*e*Sg	**Sg**	**15 38 52.0**	**+0.5**
OJC	**Ojcow**	**2.63**	**117**	*e*Pg	**Pg**	**15 38 19.2**	**-0.4**
OJC				*e*Sg	**Sg**	**15 38 54.4**	**+0.8**
OJC	**Ojcow**	**2.63**	**117**	*e*Pg	**Pg**	**15 38 19.2**	**-0.4**
OJC				*e*Sg	**Sg**	**15 38 55.2**	**+1.6**
WERD	**Werda**	**2.64**	**249**	*e*Pn	**Pn**	**15 38 14.5**	**+1.4**
WERD				*e*Pg	**Pg**	**15 38 20.8**	**+1.1**
WERD				*e*Sg	**Sg**	**15 38 55.3**	**+1.4**
NKC	**Novy Kostel**	**2.65**	**244**	*e*PN	**Pn**	**15 38 14.6**	**+1.4**
NKC				*e*PG	**Pg**	**15 38 21.0**	**+1.0**
NKC	**Novy Kostel**	**2.65**	**244**	*e*Pn	**Pn**	**15 38 14.7**	**+1.4**
NKC				*e*Pg	**Pg**	**15 38 21.8**	**+1.8**
NKC				*e*Sg	**Sg**	**15 38 56.9**	**+2.5**
GUNZ	**Gunzen**	**2.66**	**247**	*e*Pn	**Pn**	**15 38 15.0**	**+1.6**
GUNZ				*e*Pg	**Pg**	**15 38 22.5**	**+2.4**
GUNZ				*e*Sg	**Sg**	**15 38 56.4**	**+1.8**
WERN	**Wernitzgruen**	**2.67**	**245**	*e*Pn	**Pn**	**15 38 14.7**	**+1.2**
WERN				*e*Pg	**Pg**	**15 38 22.7**	**+2.3**
WERN				*e*Sg	**Sg**	**15 38 56.6**	**+1.8**
PLN	**Plauen**	**2.71**	**250**	*e*Pg	**Pg**	**15 38 22.2**	**+1.1**
PLN				*e*Sg	**Sg**	**15 38 57.1**	**+0.9**
NEUB	**Neuenburg**	**2.76**	**266**	*e*Pg	**Pg**	**15 38 23.7**	**+1.7**
NEUB				*e*Sg	**Sg**	**15 39 00.6**	**+2.8**
JAVC	**Velka Javorina**	**2.79**	**159**	*e*PN	**Pn**	**15 38 15.5**	**+0.3**
JAVC	**Velka Javorina**	**2.79**	**159**	*e*Pn	**Pn**	**15 38 17.9**	**+2.7**
JAVC				*e*Pg	**Pg**	**15 38 25.5**	**+2.9**
KHC	**Kasperske Hory**	**2.86**	**216**	*e*PN	**Pn**	**15 38 17.2**	**+1.0**
KHC				*e*PG	**Pb**	**15 38 23.0**	**+1.8**
KHC				*e*SN	**Sn**	**15 38 51.1**	**-0.2**
KHC				*e*SG	**Sg**	**15 39 00.8**	**-0.4**
	comp=Z,24nm,0.4s						
KHC	**Kasperske Hory**	**2.86**	**216**	Pn	**Pn**	**15 38 17.4**	**+1.2**
KHC	**Kasperske Hory**	**2.86**	**216**	*e*Pn	**Pn**	**15 38 17.5**	**+1.4**
KHC				*e*Pg	**Pg**	**15 38 23.7**	**-0.4**
KHC				*e*Sn	**Sn**	**15 38 51.3**	**-0.1**
KHC				*e*Sg	**Sg**	**15 39 01.1**	**0.0**
CKRC	**Cesky Krumlov**	**2.91**	**205**	*e*PG	**Pg**	**15 38 24.5**	**-0.4**
CKRC				*e*SG	**Sg**	**15 39 01.6**	**-0.9**
	comp=Z,39nm,0.6s						
CKRC	**Cesky Krumlov**	**2.91**	**205**	Pn	**Pn**	**15 38 18.0**	**+1.3**
CKRC	**Cesky Krumlov**	**2.91**	**205**	*e*Pn	**Pn**	**15 38 18.6**	**+1.9**
CKRC				*e*Pg	**Pg**	**15 38 25.2**	**+0.3**
CKRC				*e*Sg	**Sg**	**15 39 01.8**	**-0.7**
MOX	**Moxa**	**2.98**	**256**	*e*Pn	**Pn**	**15 38 19.7**	**+2.0**
MOX				*e*Pg	**Pg**	**15 38 27.7**	**+1.4**
MOX				*e*Sg	**Sg**	**15 39 06.0**	**+1.1**
GEC2	**GERESS Array S**	**3.06**	**212**	*e*Pn	**Pn**	**15 38 21.0**	**+2.0**
GEC2				*e*Pg	**Pg**	**15 38 27.2**	**-0.7**
GEC2				*e*Sg	**Sg**	**15 39 06.6**	**-1.0**
GERES	**GERESS Array B**	**3.06**	**212**	Pn	**Pn**	**15 38 20.4**	**+1.4**
	comp=Z,1.2nm,0.3s,baz=30,slow=13,SNR=28						
GERES				Pg	**Pb**	**15 38 26.9**	**+2.2**
	comp=Z,5.8nm,0.3s,baz=33,slow=18,SNR=24						
GERES				Sn	**Sn**	**15 38 56.0**	**-0.3**
	comp=Z,2.9nm,0.3s,baz=32,slow=26,SNR=6.5						
GERES				Lg	Lg	15 39 05.8	
	comp=Z,6.6nm,0.3s,baz=39,slow=27,SNR=5.5						
	comp=Z,2.3nm,0.4s						
SMOL	**Smolenice**	**3.07**	**164**	*e*PG	**Pg**	**15 38 29.9**	**+1.8**
SMOL				*e*SG	**Sg**	**15 39 09.6**	**+1.8**
WET	**Wettzell**	**3.13**	**223**	*e*Pn	**Pn**	**15 38 21.3**	**+1.4**
WET				*e*Sg	**Sg**	**15 39 10.0**	**+0.2**
LANS	**Liptovska Anna**	**3.15**	**136**	*e*PN	**Pn**	**15 38 21.2**	**+1.1**
LANS				*e*PG	**Pg**	**15 38 30.1**	**+0.6**
LANS				*e*SG	**Sg**	**15 39 11.0**	**+0.7**
FLTG	**Flechtingen**	**3.16**	**288**	*e*Pg	**Pg**	**15 38 31.4**	**+1.6**
MODS	**Modra-Piesok**	**3.18**	**166**	*e*PN	**Pn**	**15 38 22.4**	**+1.9**
MODS				*e*PG	**Pg**	**15 38 31.8**	**+1.6**
MODS				*e*SG	**Sg**	**15 39 13.3**	**+1.9**
ZST	**Bratislava**	**3.33**	**169**	*e*SG	**Sg**	**15 39 16.9**	**+0.6**
NIE	**Niedzica**	**3.35**	**126**	*e*P	**Pg**	**15 38 33.4**	**0.0**
NIE				S	**Sg**	**15 39 17.9**	**+1.0**
VYHS	**Vyhne**	**3.45**	**149**	*e*PG	**Pg**	**15 38 37.2**	**+2.0**
VYHS				*e*SG	**Sg**	**15 39 21.2**	**+1.3**
CONA	**Conrad Observa**	**3.55**	**183**	*e*Pn	**Pn**	**15 38 26.9**	**+1.3**
	comp=Z,1.6nm,0.5s						
CONA				*e*Sg	**Sg**	**15 39 25.3**	**+2.1**
	comp=Z,12nm,0.3s						
GRF	**Grafenberg Arr**	**3.61**	**242**	*e*Sg	**Sg**	**15 39 26.9**	**+1.7**
RONA	**Rosalia, Austr**	**3.77**	**179**	*e*Pn	**Pn**	**15 38 30.3**	**+1.6**
	comp=Z,2.3nm,0.4s						
RONA				*e*Sg	**Sg**	**15 39 31.9**	**+1.4**
	comp=Z,11nm,0.5s						
MOA	**Molln**	**3.83**	**199**	Pn	**Pn**	**15 38 30.9**	**+1.6**
	comp=Z,2.1nm,0.4s,SNR=8.7						
MOA				*e*Sg	**Sg**	**15 39 32.0**	**-0.1**
	comp=Z,8.5nm,0.3s						
STHS	**Stebnicka Huta**	**3.85**	**120**	*e*PG	**Pg**	**15 38 47.1**	**+4.1**
STHS				*e*SG	**Sg**	**15 39 39.8**	**+7.0**
BIOA	**Bad Ischl, Aus**	**4.12**	**204**	*e*Pn	**Pn**	**15 38 34.1**	**+0.6**
	comp=Z,3.2nm,0.2s						
BIOA				*e*Sg	**Sg**	**15 39 42.6**	**+1.1**
	comp=Z,24nm,0.8s						
ARSA	**Arzberg**	**4.24**	**186**	*e*Pn	**Pn**	**15 38 36.7**	**+1.6**
	comp=Z,1.6nm,0.4s						
ARSA				*e*Sg	**Sg**	**15 39 45.8**	**+0.3**
	comp=Z,3.8nm,0.4s						
CRVS	**Cervenica-Dubn**	**4.27**	**125**	*e*PG	**Pg**	**15 38 52.9**	**+1.9**
CRVS				*e*SG	**Sg**	**15 39 50.9**	**+4.5**
KOLS	**Kolonicke sedl**	**4.68**	**120**	*e*PG	**Pg**	**15 39 03.0**	**+4.1**
KBA	**Koelnbreinsper**	**4.76**	**204**	Pn	**Pn**	**15 38 43.8**	**+1.4**
	SNR=5.6						
KBA				*e*Sn	**Sn**	**15 39 39.7**	**+1.4**
	comp=Z,4.7nm,0.4s						
BLEU	**Blekinge**	**4.85**	**358**	*i* P	**Pn**	**15 38 43.0**	**-0.3**
BLEU				*e*S	**Sn**	**15 39 37.4**	**-2.7**
BJUU	**Bjuv**	**4.97**	**339**	*e*P	**Pn**	**15 38 43.6**	**-1.4**
BJUU				*e*S	**Sn**	**15 39 38.6**	**-4.5**
OBKA	**Obir**	**5.08**	**193**	*e*Pn	**Pn**	**15 38 48.0**	**+1.4**
	comp=Z,1.3nm,0.5s						
OBKA				*e*Sn	**Sn**	**15 39 46.6**	**+0.7**
	comp=Z,4.4nm,0.5s						
WATA	**Walderalm**	**5.10**	**218**	*e*Pn	**Pn**	**15 38 47.9**	**+0.9**
	comp=Z,4.9nm,0.4s						
WATA				*e*Sg	**Sg**	**15 40 12.8**	**-0.3**
	comp=Z,2.7nm,0.3s						
MYKA	**Terra Mystica**	**5.12**	**200**	*e*Pn	**Pb**	**15 38 59.8**	**+0.2**
	comp=Z,2.3nm,0.3s						
MYKA				*e*Sg	**Sg**	**15 40 13.1**	**-0.4**
	comp=Z,3.7nm,0.5s						
WTTA	**Wattenberg**	**5.14**	**217**	*e*Pn	**Pn**	**15 38 48.5**	**+1.0**
	comp=Z,0.6nm,0.2s						
WTTA				*e*Sg	**Sg**	**15 40 14.4**	**+0.2**
	comp=Z,4.5nm,0.5s						
DEL	**Delary**	**5.19**	**346**	*i* P	**Pn**	**15 38 47.0**	**-1.0**
DEL				*e*S	**Sn**	**15 39 45.2**	**-3.3**
MOTA	**Moosalm**	**5.28**	**221**	*e*Pn	**Pn**	**15 38 51.2**	**+1.8**
	comp=Z,1.8nm,0.4s						
MOTA				*e*Sg	**Sg**	**15 40 18.3**	**-0.5**
	comp=Z,3.3nm,0.3s						
ABTA	**Abfaltersbach**	**5.29**	**208**	*e*Pn	**Pn**	**15 38 50.2**	**+0.6**
	comp=Z,3.2nm,0.5s						
ABTA				*e*Sg	**Sg**	**15 40 20.7**	**+1.5**
	comp=Z,7.1nm,0.8s						
SQTA	**Sankt Quirin**	**5.34**	**219**	*e*Pn	**Pn**	**15 38 51.4**	**+1.1**
	comp=Z,0.8nm,0.2s						
FETA	**Feichten**	**5.69**	**221**	*e*Pn	**Pn**	**15 38 56.8**	**+1.6**
	comp=Z,0.7nm,0.4s						
FETA				*e*Sg	**Sg**	**15 40 31.6**	**-0.4**
	comp=Z,1.0nm,0.4s						
DAVA	**Damuels**	**5.86**	**227**	*e*Pn	**Pn**	**15 38 58.0**	**+0.7**
	comp=Z,0.8nm,0.2s						
DAVA				*e*Sg	**Sg**	**15 40 39.4**	**+2.2**
	comp=Z,5.1nm,0.6s						
DAVOX	**Davos/Dischmat**	**6.24**	**224**	Pn	**Pn**	**15 39 03.0**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=191,slow=22,SNR=1.8						
DAVOX				Sn	**Sn**	**15 40 14.5**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=19,slow=18,SNR=1.6						
DAVOX				Lg	Lg	15 40 46.2	
	comp=Z,0.4nm,0.3s,baz=355,slow=20,SNR=2.8						
	comp=Z,1.2nm,0.4s						
KMPD	**K-Podol'skiy**	**7.25**	**110**	Pn	**Pn**	**15 39 16.3**	**0.0**
KMPD				pP	**Pn**	**15 39 17.3**	**+1.0**
MI29	**MI29, Kamyanyy**	**7.47**	**94**	Pn	**Pn**	**15 39 19.3**	**0.0**
MI29				pP	**Pn**	**15 39 20.5**	**+1.2**
MI30	**MI30,Zelenitsa**	**7.62**	**91**	Pn	**Pn**	**15 39 20.6**	**-0.7**
MI30				pP	**Pn**	**15 39 21.7**	**+0.4**
AK16	**Malin Array Si**	**8.20**	**91**	Pn	**Pn**	**15 39 29.0**	**-0.4**
AK04	**Malin Array Si**	**8.23**	**90**	Pn	**Pn**	**15 39 29.2**	**-0.6**
AK11	**Malin Array Si**	**8.24**	**90**	Pn	**Pn**	**15 39 29.4**	**-0.5**
AKASG	**Malin Array Be**	**8.27**	**90**	Pn	**Pn**	**15 39 29.4**	**-1.0**
	comp=Z,1.5nm,0.3s,baz=279,slow=12,SNR=8.4						
AKASG				Lg	Lg	15 41 57.2	
	comp=Z,0.3nm,0.3s,baz=277,slow=28,SNR=1.3						
	comp=Z,0.8nm,0.4s						
AKBB	**Malin Array Si**	**8.27**	**90**	Pn	**Pn**	**15 39 29.7**	**-0.6**
AK07	**Malin Array Si**	**8.29**	**91**	Pn	**Pn**	**15 39 29.5**	**-1.0**
AK08	**Malin Array Si**	**8.30**	**91**	Pn	**Pn**	**15 39 29.6**	**-1.1**
HFS	**Hagfors**	**8.79**	**352**	Pn	**Pn**	**15 39 36.9**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=156,slow=14,SNR=5.2						
	comp=Z,4.8nm,1.2s						
FINES	**FINESS Array B**	**11.39**	**25**	Pn	**Pn**	**15 40 10.3**	**-2.7**
	comp=Z,0.2nm,0.3s,baz=205,slow=12,SNR=6.9						
FINES				Sn	**Sn**	**15 42 15.9**	**-4.8**
	comp=Z,0.2nm,0.3s,baz=210,slow=21,SNR=4.3						
	comp=Z,0.7nm,0.4s						
EKA	**Eskdalemuir Ar**	**12.15**	**296**	Pn	**Pn**	**15 40 21.1**	**-2.3**
	baz=104,slow=14						
ARCES	**ARCESS Array B**	**18.66**	**10**	Pn	**P**	**15 41 45.1**	**-3.2**
	comp=Z,0.2nm,0.3s,baz=200,slow=10,SNR=1.2						

IDC 01 15:46:13.4±26.0**, 22°.22S**×**173°.53W, h0km, mb4.1**/4**, mbtmp4.1**/4**, Error ellipse: s-maj=489.9km s-min=158.8km az=75.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**37.49**	**266**	P	P	15 53 30.0	+0.8
	4.8nm,0.3s,baz=96,slow=11,SNR=32						
	4.8nm,0.3s						
STKA	**Stephens Creek**	**40.86**	**247**	P	P	15 53 56.5	-0.8
	0.8nm,0.5s,baz=90,slow=11,SNR=1.8						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**48.20**	**258**	P	P	15 54 55.7	-0.4
	0.6nm,0.4s,baz=93,slow=8.0,SNR=14						
	0.6nm,0.4s						
WRA	**Warramunga Arr**	**48.50**	**263**	P	P	15 54 58.1	-0.3
	1.7nm,0.5s,baz=99,slow=7.9,SNR=19						
	1.7nm,0.5s						

MAN 01 16:00:27.2, 9°.91N×122°.82E, h29km, mb4.4, ML3.2, MS3.0, Negros

DJA 01 16:03:29.1±0.4**, 8°S**±5°×**11°8E**±°**, h238km**±5km**, M3.7**/12**, mb4.0**/5**, MLv3.6**/12**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.67**	**173**	P	Pn	16 04 02.6	+1.4
PLAI				S	S	16 04 27.6	+1.1
WBSI	**Waikabubak, Su**	**2.23**	**131**	P	Pn	16 04 13.4	+0.5
BSSI	**Bau Bau, Buton**	**3.43**	**54**	P	Pn	16 04 25.9	+0.2
BASI	**Baing, Sumba**	**3.51**	**126**	P	Pn	16 04 27.2	+0.6
JAGI	**Jajag, Banyuwa**	**3.52**	**265**	P	Pn	16 04 27.1	+0.4
BKSI	**Bulukumba**	**3.71**	**41**	P	Pn	16 04 28.9	-0.1
EDFI	**Ende, Flores**	**4.00**	**99**	P	Pn	16 04 32.6	+0.1
GMJI	**Gumukmas**	**4.20**	**268**	P	Pn	16 04 35.1	+0.3
BNSI	**Bone**	**4.44**	**33**	P	Pn	16 04 38.1	+0.4
BATI	**Baumata**	**6.24**	**109**	P	Pn	16 05 00.4	+0.3
	17nm,0.7s						
PCJI	**Pacitan**	**6.45**	**269**	P	Pn	16 05 02.7	0.0
	32nm,0.6s						
SOEI	**Soe**	**6.69**	**104**	P	Pn	16 05 05.6	-0.3
	0.1nm26nm,0.7s						
UGM	**Wanagama**	**7.10**	**271**	P	Pn	16 05 10.7	-0.3
	0.7nm96nm,1.7s						

GUC 01 16:14:07.4±0.7**, 30°.67S**×**71°.93W, h28km**±3km**, ML3.9, 2C-4D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.25**	**91**	⇓*i*P	Pb	16 14 13.6	-0.5
CO06				*i* S	Sb	16 14 18.0	-0.7
CO05	**La Serena**	**0.96**	**39**	⇓*i*P	Pn	16 14 24.4	-0.5
CO05				*i* S	Sn	16 14 37.0	-0.6
CO05				IAML		16 14 40.7	
	comp=N,3μm,0.3s						
CO02	**Combarbal**	**0.96**	**124**	⇓*i*P	Pn	16 14 24.9	-0.1
CO02				*i* S	Sn	16 14 37.3	-0.6
CO02				IAML		16 14 40.7	
	comp=N,10μm,0.1s						
GO04	**Tololo Observa**	**1.09**	**63**	⇓*i*P	Pn	16 14 26.9	-0.2
GO04				*i* S	Sb	16 14 42.0	+0.2
GO04				IAML		16 14 47.4	
	comp=E,7μm,0.4s						
CO01	**Juntas del Tor**	**1.73**	**67**	⇑*i*P	Pb	16 14 37.4	-1.2
CO01				*e*S	Sb	16 14 59.9	-0.2
VA06	**Catapilco**	**1.96**	**164**	*e*P	Pn	16 14 40.3	+1.5
VA06				*i* S	Sb	16 15 05.9	-0.6
VA06				IAML		16 15 14.6	
	comp=N,1μm,0.4s						
LCO	**Las Campanas**	**1.97**	**33**	*e*P	Pn	16 14 39.3	+0.2
LCO				*i* S	Sn	16 15 04.4	+1.5
VA03	**San Esteban**	**2.40**	**151**	*e*P	Pn	16 14 46.4	+1.6
VA03				*i* S	Sb	16 15 16.8	-2.3
VA03				IAML		16 15 27.7	
	comp=N,1μm,0.6s						
ROCH	**El Roble**	**2.42**	**161**	⇑*i*P	Pb	16 14 47.9	-2.6
ROCH				*e*P	Pn	16 14 46.5	+1.2
ROCH				*i* S	Sb	16 15 18.2	-1.8
ROCH				*e*S	Sn	16 15 19.6	+5.3
ROCH				IAML		16 15 31.8	
	comp=E,733nm,0.8s						
ROCH				IAML		16 15 31.9	
	comp=E,712nm,0.3s						
AC04	**Llanos de Chal**	**2.57**	**17**	*e*P	Pn	16 14 46.2	-0.9
AC04				IAML		16 15 39.9	
	comp=E,163nm,0.4s						
MT02	**Curacav**	**2.67**	**166**	*e*P	Pn	16 14 49.1	+0.6
MT02				IAML		16 15 38.9	
	comp=E,216nm,0.5s						
MT05	**Renca**	**2.90**	**160**	IAML		16 15 43.1	
	comp=E,739nm,0.3s						
VA05	**Santo Domingo**	**2.99**	**175**	IAML		16 15 46.2	
	comp=E,409nm,0.7s						
FCH	**Farellones**	**2.99**	**153**	*e*P	Pn	16 14 55.0	+1.7
FCH				*i* S	Sn	16 15 32.4	+4.0
FCH				IAML		16 15 47.8	
	comp=E,148nm,0.2s						
MT03	**Universidad Ad**	**3.06**	**157**	*e*P	Pn	16 14 57.2	+3.2
MT03				*e*S	Sn	16 15 32.1	+2.4
MT03				IAML		16 15 49.9	
	comp=E,576nm,0.4s						
MT09	**Talagante**	**3.20**	**166**	*e*P	Pn	16 14 57.8	+1.9
MT09				IAML		16 15 54.0	
	comp=N,286nm,0.4s						
GO03	**Copiap**	**3.40**	**26**	*e*P	Pn	16 14 58.0	-0.7
GO03				IAML		16 16 00.3	
	comp=E,209nm,0.3s						
LMEL	**Las Melosas**	**3.49**	**156**	*e*P	Pn	16 15 02.1	+2.1
LMEL				*i* S	Sn	16 15 42.9	+2.5
LMEL				IAML		16 15 57.7	
	comp=N,223nm,0.2s						
BO04	**La Punta**	**3.49**	**162**	*e*P	Pn	16 15 01.3	+1.4
BO04				*i* S	Sn	16 15 42.4	+2.1
BO04				IAML		16 16 00.4	
	comp=E,163nm,0.5s						
AC06	**Mina Casimiro**	**3.58**	**23**	*e*P	Pn	16 15 00.8	-0.2
AC06				IAML		16 16 08.9	
	comp=E,110nm,0.2s						
BO01	**Tunca**	**3.78**	**169**	*e*P	Pn	16 15 05.7	+1.9
BO03	**Pichilemu**	**3.82**	**180**	*e*P	Pn	16 15 04.0	-0.3
AC02	**Maricunga**	**4.54**	**33**	*e*P	Pn	16 15 15.4	+0.7
AC02				IAML		16 16 30.7	
	comp=E,91nm,0.5s						

IDC 01 16:58:11.0±4.3**, 3°.47S**×**129°.63E, h205km**±68km**, mb3.0**/2**, mbtmp3.3**/4**, Error ellipse: s-maj=117.1km s-min=56.3km az=115.0, Seram**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.05**	**32**	P	Pn	16 59 01.4	-0.2
	5.2nm,0.8s,baz=225,slow=6.5,SNR=8.4						
SIJI				S	S	16 59 41.7	+1.1
	6.2nm,0.2s,baz=176,slow=23,SNR=17						
WRA	**Warramunga Arr**	**17.01**	**165**	P	P	17 01 55.6	-0.2
	0.2nm,0.5s,baz=345,slow=11,SNR=6.7						
ASAR	**Alice Springs**	**20.50**	**169**	P	P	17 02 33.6	+0.1
	0.4nm,0.5s,baz=346,slow=11,SNR=20						
	0.4nm,0.5s						
STKA	**Stephens Creek**	**30.42**	**160**	P	P	17 04 04.2	-0.1
	0.7nm,0.3s,baz=329,slow=12,SNR=5.1						
	0.7nm,0.3s						

MAN 01 17:09:17.6, 6°.24N×126°.30E, h93km, mb4.3, ML3.2, MS2.9, Mindanao

*NOU **01** 17:16:11.9, 14°.66S×167°.52E, h138km, mb4.6/16, Vanuatu Islands*
*NEIC **01** 17:16:15.6±2.7, 14°.98S±0°.07×167°.4E±0°.1, h125km±10km, mb4.4/18, Error ellipse: s-maj=17.7km s-min=2.4km az=55.0*
*IDC **01** 17:16:16.7±3.0, 14°.90S×167°.26E, h140km±26km, mb3.7/7, mbtmp4.3/9, Error ellipse: s-maj=28.7km s-min=17.8km az=52.0*
ISC 01 17:16:15.6±0.9**, 14°.99S**±0°.08×**167°.35E**±0°.10**, h129km, n47, σ1s21**/49**, mb4.3**/14**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**2.83**	**164**	P	**Pn**	**17 17 01.1**	**+1.1**
LIFNC	**LIFOU**	**5.75**	**181**	Pn	**Pn**	**17 17 37.5**	**-1.3**
LIFNC	**LIFOU**	**5.75**	**181**	P	**Pn**	**17 17 37.8**	**-1.0**
KOUNC	**Koumac, New Ca**	**6.25**	**207**		**Pn**	**17 17 46.0**	**+0.5**
KOUNC					**Sn**	**17 18 53.8**	**-1.9**
KOUNC	**Koumac, New Ca**	**6.25**	**207**	P	**Pn**	**17 17 46.8**	**+1.3**
MARNC	**Mare, Loyalty**	**6.48**	**174**		**Pn**	**17 17 46.8**	**-1.9**
MARNC	**Mare, Loyalty**	**6.48**	**174**	P	**Pn**	**17 17 47.3**	**-1.3**
YATNC	**Mamie plateau,**	**7.04**	**184**	P	**Pn**	**17 17 55.9**	**-0.3**
DZM	**Mont Dzumac**	**7.09**	**187**	P	**Pn**	**17 17 58.4**	**+1.4**
	26nm,0.4s,baz=18,slow=13,SNR=93						

DZM S Sn 17 19 15.7 -0.5
4.6nm,0.3s,baz=123,slow=23,SNR=1.2
DZM Mont Dzumac 7.09 187 Pn 17 17 57.8 +0.8
DZM Sn 17 19 13.8 -2.4
DZM Mont Dzumac 7.09 187 P Pn 17 17 58.3 +1.4
NOUC Port Laguerre 7.14 188 P Pn 17 17 59.0 +1.5
ONTNC Ouen Toro 7.32 187 Pn 17 18 00.9 +0.9
ONTNC Ouen Toro 7.32 187 P Pn 17 18 02.4 +2.4
OUENC Ouen Island, N 7.40 184 Pn 17 18 01.7 +0.7
OUENC Ouen Island, N 7.40 184 P Pn 17 18 02.9 +1.9
PINNC Pines Island, 7.58 179 Pn 17 18 04.6 +1.2
PINNC Pines Island, 7.58 179 P Pn 17 18 05.2 +1.8
HNR Honiara 9.11 307 P Pn 17 18 24.2 +0.2
45nm,0.3s,baz=181,slow=7.5,SNR=14
HNR S Sn 17 20 03.5 -1.5
37nm,0.3s,baz=156,slow=8.5,SNR=5.8
HNR Honiara 9.11 307 Pn 17 18 24.7 +0.6
EIDS Eidsvold 18.41 233 P Pn 17 20 23.4 +0.8
EIDS IAmb IAmb 17 20 24.0
comp=Z,9.5nm,0.6s
CTA Charters Tower 20.74 253 P P 17 20 45.8 -0.4
comp=Z,6.2nm,0.8s,baz=70,slow=13,SNR=5.0
comp=Z,6.2nm,0.8s
OUZ Omahuta 20.91 166 P P 17 20 47.4 -0.4
OUZ IAmb IAmb 17 20 50.8
comp=Z,22nm,1.0s
URZ Urewera 24.73 161 P P 17 21 25.5 +0.6
comp=Z,9.9nm,0.7s,baz=308,slow=20,SNR=3.2
comp=Z,9.9nm,0.7s
URZ Urewera 24.73 161 P P 17 21 24.5 -0.5
BKZ Black Stump Fm 25.39 163 P P 17 21 31.7 +0.7
BKZ IAmb IAmb 17 21 47.7
comp=Z,35nm,1.4s
BFZ Birch Farm 26.74 165 P P 17 21 42.5 -0.6
THZ Tophouse 27.10 171 P P 17 21 47.5 +1.1
MSWZ Moikau Station 27.20 167 P P 17 21 44.9 -2.4
LTZ Lake Taylor 28.01 172 P P 17 21 54.9 +0.5
LTZ IAmb IAmb 17 21 56.6
comp=Z,12nm,0.8s
STKA Stephens Creek 28.88 230 P P 17 22 03.8 +1.5
comp=Z,1.2nm,0.3s,baz=45,slow=8.8,SNR=8.3
comp=Z,1.2nm,0.3s
STKA Stephens Creek 28.88 230 IAmb IAmb 17 22 05.1
comp=Z,0.8nm,1.1s
LBZ Lake Benmore 29.39 176 P P 17 22 07.5 +0.8
WR0 Warramunga Arr 31.65 256 P P 17 22 26.8 -0.1
WR0 IAmb IAmb 17 22 28.0
comp=Z,6.8nm,1.4s
WB0 Warramunga Arr 31.78 257 P P 17 22 27.1 -1.0
WB0 IAmb IAmb 17 22 31.3
comp=Z,10nm,1.4s
WB2 Warramunga Arr 31.83 256 P P 17 22 27.1 -1.4
WB2 IAmb IAmb 17 22 47.7
comp=Z,7.4nm,1.4s
WRA Warramunga Arr 31.84 256 P P 17 22 27.1 -1.4
comp=Z,0.6nm,0.6s,baz=86,slow=9.6,SNR=15
comp=Z,0.6nm,0.6s
WRA Warramunga Arr 31.84 256 IAmb IAmb 17 22 33.5
comp=Z,0.3nm,1.4s
AS31 Alice Springs 32.65 249 P P 17 22 34.8 -0.8
ASAR Alice Springs 32.66 249 P P 17 22 34.7 -1.0
comp=Z,1.3nm,0.4s,baz=78,slow=9.0,SNR=74
comp=Z,1.3nm,0.4s
ASAR Alice Springs 32.66 249 P P 17 22 34.9 -0.8
KNRA Kununurra 37.19 264 P P 17 23 13.9 -0.7
KNRA IAmb IAmb 17 23 42.4
comp=Z,12nm,1.4s
VNDA Vanda 62.60 181 P P 17 26 26.1 +0.5
comp=Z,0.8nm,0.5s,baz=353,slow=8.1,SNR=9.0
comp=Z,0.8nm,0.5s
VNDA Vanda 62.60 181 P P 17 26 26.4 +0.7
SBA Scott Base 62.87 180 P P 17 26 28.3 +0.9
SBA IAmb IAmb 17 26 30.2
comp=Z,5.6nm,1.0s
QSPA South Pole Qui 75.03 180 P P 17 27 43.0 +0.1
QSPA IAmb IAmb 17 27 43.7
comp=Z,3.6nm,0.8s
ILAR Eielson Array 86.75 18 P P 17 28 44.2 -0.6
comp=Z,0.5nm,0.8s,baz=225,slow=4.7,SNR=1.8
comp=Z,0.5nm,0.8s

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*IDC **01** 17:29:58.2±4.6, 56.65S×26.52W, h106km±41km, mb4.2/10, mbtmp4.6/12, MS3.8/5, Error ellipse: s-maj=18.5km s-min=14.8km az=51.0*
*NEIC **01** 17:30:00.5±1.1, 56.7S±0.1×26.7W±0.2, h128km±7km, mb4.7/35, Error ellipse: s-maj=15.8km s-min=12.3km az=216.0*
ISC 01 17:29:57.6±0.4**, 56.77S**±0.07**×26.60W**±0.07**, h100km, n75, σ1s81**/72**, mb4.6**/18**, 1C, South Sandwich Islands region**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
HOPE Hope Point 6.14 290 Pn Pn 17 31 28.1 +2.4
HOPE Sn Sn 17 32 33.2 -1.3
VNA1 Neumayer--Stat 16.00 158 P Pn 17 33 39.7 +3.2
VNA1 S Sn 17 36 30.8 -2.5
VNA1 Neumayer--Stat 16.00 158 ScP ScP 17 41 48.3 -3.2
VNA3 Neumayer Olymp 16.20 160 P Pn 17 33 41.2 +2.2
VNA3 S Sn 17 36 28.8 -9.3
VNA3 Neumayer Olymp 16.20 160 ScP ScP 17 41 48.4 -3.7
VNA2 Neumayer--Watz 16.40 157 P Pn 17 33 42.0 +0.6
baz=315,slow=14
VNA2 S Sn 17 36 34.0 -8.9
VNA2 Neumayer--Watz 16.40 157 ScP ScP 17 41 48.0 -4.4
ESPZ Base Esperanza 16.42 234 Pn Pn 17 33 40.0 -1.7
ESPZ IAmb IAmb 17 33 51.7
comp=Z,88nm,1.2s
SNAA Sanae 17.95 156 P P 17 34 00.7 +1.2
SNAA S S 17 37 14.9 -5.2
SNAA Sanae 17.95 156 ScP ScP 17 41 52.9 -2.8
SNAA Sanae 17.95 156 P P 17 34 00.6 +1.1
comp=Z,8.8nm,0.4s,baz=301,slow=9.3,SNR=145
SNAA S S 17 37 13.1 -7.0
comp=Z,10nm,0.6s,baz=30,slow=21,SNR=7.9
SNAA Sanae 17.95 156 P P 17 34 01.0 +1.5
SNAA IAmb IAmb 17 34 10.8
comp=Z,36nm,0.5s
EFI East Falkland 18.98 272 P P 17 34 11.2 +0.3
EFI IAmb IAmb 17 34 12.4
comp=Z,23nm,0.9s
TROLL Troll, Antarti 19.45 153 P P 17 34 17.1 +1.0
TROLL S S 17 37 50.2 -0.1
TROLL Troll, Antarti 19.45 153 ScP ScP 17 41 56.4 -2.7
PMSA Palmer Station 19.68 231 P P 17 34 19.5 +1.1
comp=Z,68nm,0.9s,baz=82,slow=8.7,SNR=9.1
PMSA LR LR 17 39 49.2
comp=Z,180nm,19.2s,baz=96,slow=30
PMSA Palmer Station 19.68 231 P P 17 34 18.1 -0.3
BELA Belgrano 2 21.38 185 P P 17 34 36.2 -0.4
SMAI San Martin Ant 21.43 222 P P 17 34 37.9 +0.8
USHA Ushuaia 23.33 257 P P 17 34 56.9 +0.3
comp=Z,9.0nm,0.9s,baz=126,slow=8.5,SNR=3.7
comp=Z,9.0nm,0.9s
MG02 Cerro Sombrero 24.60 261 P P 17 35 08.1 -0.1
MG03 Isla Dawson 24.81 258 P P 17 35 09.3 -0.7
MG03 IAmb IAmb 17 35 34.3
comp=Z,22nm,1.3s
MG04 Isla Riesco 25.84 259 P P 17 35 18.3 -1.0
GO09 Cerro Castillo 27.01 262 P P 17 35 27.8 -2.1
AY01 Puyuhuapi 31.12 273 P P 17 36 04.9 -1.4
LL04 Puerto Octay 33.34 279 P P 17 36 23.2 -2.6
LL04 IAmb IAmb 17 36 24.2
comp=Z,13nm,1.4s
QSPA South Pole Qui 33.48 180 P P 17 36 27.7 +0.8
ITQB Itaqui 34.31 309 P P 17 36 34.0 -0.2
ITQB IAmb IAmb 17 36 49.7
comp=Z,29nm,1.3s
CPUP Villa Florida 37.53 311 P P 17 37 01.1 -0.7
comp=Z,3.5nm,0.7s,baz=122,slow=8.7,SNR=6.4
comp=Z,3.5nm,0.7s
CPUP Villa Florida 37.53 311 P P 17 37 00.8 -1.0
CPUP IAmb IAmb 17 37 28.3
comp=Z,15nm,1.5s
MAW Mawson 39.37 143 P P 17 37 17.4 +0.7
comp=Z,1.8nm,0.3s,baz=216,slow=5.6,SNR=14
comp=Z,1.8nm,0.3s
MAW Mawson 39.37 143 P P 17 37 17.4 +0.7
SBA Scott Base 45.38 184 P P 17 38 06.3 +1.0
SBA IAmb IAmb 17 38 07.2
comp=Z,20nm,1.4s
BOSA Boshof 45.84 75 P P 17 38 08.2 -1.4
comp=Z,5.8nm,0.8s,baz=202,slow=9.0,SNR=11
comp=Z,5.8nm,0.8s
BOSA Boshof 45.84 75 P P 17 38 09.3 -0.4
BOSA IAmb IAmb 17 38 10.0
comp=Z,10nm,0.9s
VNDA Vanda 45.87 183 P P 17 38 10.5 +1.4
comp=Z,10nm,1.0s,baz=186,slow=6.5,SNR=36
comp=Z,10nm,1.0s
VNDA Vanda 45.87 183 P P 17 38 09.9 +0.8
VNDA IAmb IAmb 17 38 11.2
comp=Z,11nm,0.9s
LBTB Lobatse 48.91 72 LR LR 17 55 42.2
comp=Z,85nm,18.0s,baz=2.0,slow=32
LBTB Lobatse 48.91 72 P P 17 38 33.0 -0.4
LBTB IAmb IAmb 17 38 34.0
comp=Z,10nm,1.0s
TSUM Tsumeb 49.76 60 LR LR 17 55 40.7
comp=Z,122nm,19.3s,baz=354,slow=31
LPAZ La Paz 51.06 305 P P 17 38 50.3 0.0
comp=Z,9.5nm,0.6s,baz=139,slow=5.4,SNR=40
comp=Z,9.5nm,0.6s
LPAZ La Paz 51.06 305 P P 17 38 49.9 -0.5
LPAZ IAmb IAmb 17 38 51.2
comp=Z,17nm,0.9s
CASY Casey 53.12 160 P P 17 39 05.1 +0.9
CASY IAmb IAmb 17 39 06.1
comp=Z,11nm,0.8s
SAML Samuel 55.54 314 P P 17 39 21.3 -1.1
DBIC Dimbokro 65.69 24 P P 17 40 30.6 -0.6
comp=Z,4.2nm,0.9s,baz=202,slow=7.7,SNR=3.5
DBIC LR LR 18 03 04.3
comp=Z,64nm,19.5s,baz=156,slow=30
comp=Z,4.2nm,0.9s
DBIC Dimbokro 65.69 24 IAmb IAmb 17 40 40.4
comp=Z,15nm,1.5s
OTAV Otavalo 70.33 303 P P 17 41 00.2 -0.7
OTAV IAmb IAmb 17 41 03.4
comp=Z,11nm,1.1s
SOTA Rioblanco 71.17 306 eP P 17 41 06.5 +0.4
POPC Popayan, Colom 71.56 306 eP P 17 41 07.9 -0.2
PRAC Prado 71.83 308 eP P 17 41 08.6 -0.9
ORTC Ortega, Tolima 72.16 308 eP P 17 41 10.6 -0.8
RUSC La Rusia 73.02 311 eP P 17 41 15.6 -1.4
NORC Norcasia 73.48 309 eP P 17 41 16.8 -2.4
TOA0 Torodi Ar. Sit 73.53 29 P P 17 41 18.9 -0.4
TORD Torodi Ar. Bea 73.53 29 P P 17 41 19.0 -0.4
comp=Z,2.6nm,0.6s,baz=199,slow=6.6,SNR=18
comp=Z,2.6nm,0.6s
TORD Torodi Ar. Bea 73.53 29 P P 17 41 18.5 -0.8
PTBC PUERTO BERRIO, 74.18 310 eP P 17 41 19.9 -3.4
SJCC San Jacinto, C 77.51 311 P P 17 41 41.3 -0.9
SJCC IAmb IAmb 17 41 43.1
comp=Z,19nm,1.1s
STKA Stephens Creek 91.13 170 P P 17 42 51.4 +0.4
comp=Z,1.4nm,0.9s,baz=153,slow=7.3,SNR=4.0
comp=Z,1.4nm,0.9s
STKA Stephens Creek 91.13 170 IAmb IAmb 17 42 58.0
comp=Z,1.7nm,1.4s
PPT Papeete 92.03 233 LR LR 18 17 48.5
comp=Z,42nm,19.5s,baz=102,slow=31
ASAR Alice Springs 98.20 162 P P 17 43 22.6 -0.8
comp=Z,0.9nm,0.6s,baz=190,slow=4.0,SNR=18
ASAR PP PP 17 47 19.6 -3.4
comp=Z,0.8nm,0.9s,baz=188,slow=7.2,SNR=5.3
comp=Z,0.9nm,0.6s
WRA Warramunga Arr 101.92 162 P Pdif 17 43 39.1 -0.9
comp=Z,0.4nm,0.6s,baz=198,slow=4.5,SNR=6.7
NVAR Mina Array Bea 121.98 292 PKP PKPdf 17 48 39.4 -0.4
comp=Z,0.6nm,0.6s,baz=151,slow=2.5,SNR=5.7
CMAR Chiang Mai Arr 124.51 110 PKP PKPdf 17 48 44.4 -0.5
comp=Z,1.3nm,0.9s,baz=226,slow=3.1,SNR=7.4
FINES FINESS Array B 124.87 28 PKP PKPdf 17 48 43.4 -0.8
comp=Z,2.2nm,0.7s,baz=202,slow=2.1,SNR=6.4
ARCES ARCESS Array B 131.49 22 PKP PKPdf 17 48 55.8 -0.8
comp=Z,3.1nm,0.8s,baz=214,slow=1.3,SNR=4.6
PZH PanZhiHua 132.58 107 PKP PKPdf 17 48 59.8 -0.4
MKAR Makanchi Array 136.81 72 PKP PKPdf 17 49 07.2 -0.2
comp=Z,0.1nm,0.3s,baz=265,slow=2.3,SNR=3.6
YKA Yellowknife Ar 136.93 317 PKP PKPdf 17 49 06.6 -0.4
comp=Z,1.1nm,0.6s,baz=121,slow=2.3,SNR=9.2
LZH Lanzhou 141.16 101 ⇑PKP PKPdf 17 49 19.4 +3.6
LZH pPKP PKiKP 17 49 31.3 +13
ZALV Zalesovo Beam 142.39 64 PKP PKPdf 17 49 18.7 +1.5
comp=Z,1.1nm,0.3s,baz=238,slow=4.0,SNR=5.6
SONM Songino Array 150.44 87 PKPbc PKPdf 17 49 35.9 +4.7
comp=Z,5.4nm,0.6s,baz=220,slow=3.4,SNR=37
ILAR Eielson Array 150.84 311 PKPbc PKPdf 17 49 35.8 +4.8
comp=Z,6.3nm,0.9s,baz=128,slow=1.5,SNR=35
KSRS Korea Array 154.30 128 PKPab PKPab 17 49 59.6 -0.1
comp=Z,0.3nm,0.5s,baz=227,slow=3.9,SNR=4.1

MAN 01 17:30:16.3, 9.93N×122.87E, h23km, mb4.0, ML2.8, MS2.4, 2C, Negros

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
SNPH Sibulan 0.68 148 ⇑iP Pn 17 30 30.1 +1.2
SNPH iS 17 30 40.6
TBP Tagbilaran 1.01 103 eP Pn 17 30 31.2 +2.8
TBP iS 17 30 49.2
RCP Roxas 1.63 356 ⇑eP Pn 17 30 45.4 +2.4
RCP eS 17 31 05.4

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*NNC **01** 17:39:47.4±4.0, 36.67N×70.24E, h0km, mb4.8, mpv4.6, Error ellipse: s-maj=31.8km s-min=29.9km az=105.0*
*IDC **01** 17:39:52.0±2.5, 36.35N×70.88E, h197km±22km, mb3.8/16, mbtmp4.3/21, Error ellipse: s-maj=16.0km s-min=12.2km az=5.0*
*MOS **01** 17:39:53.6±1.0, 36.59N×70.93E, h218km, mb4.1/10, Error ellipse: s-maj=9.9km s-min=3.9km az=74.5*
*BJI **01** 17:39:54.1±0.0, 36.86N×70.66E, h231km, mb4.2/17, mB4.4/8*
*NEIC **01** 17:39:55.1±1.6, 36.60N±0.07×70.83E±0.09, h221km±4km, mb4.2/37, Error ellipse: s-maj=12.1km s-min=7.1km az=133.0*
ISC 01 17:39:53.1±0.4**, 36.50N**±0.05**×70.82E**±0.04**, h200km, n200, σ1s45**/214**, mb4.2**/43**, 13C-7D, Hindu Kush region**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
KBL Kabul 2.44 217 Pn Pn 17 40 40.8 +4.2
KBL Kabul 2.44 217 PN Pn 17 40 40.8 +4.2
CHGR Chuyangaron 2.52 329 Pn Pn 17 40 39.6 +2.3
CHGR Chuyangaron 2.52 329 PN Pn 17 40 39.6 +2.3
GAR Garm 2.52 351 Pn 17 40 39.6 +2.2
GAR Sn Sn 17 41 12.3 +0.2
CEP Cherat 2.82 161 P Pn 17 40 44.8 +4.0
DRK Karamyk 3.07 14 Pn 17 40 45.8 +2.0
CHCP Chirah Chowk 3.47 144 P Pn 17 40 52.2 +3.7
BTK Batken 3.55 360 Pn Pn 17 40 51.9 +2.5
BTK Batken 3.55 360 PN Pn 17 40 51.9 +2.5
THW Thamme Wali 3.78 168 P Pn 17 40 55.6 +3.4
TAS Tashkent 4.96 347 Pn Pn 17 41 08.7 +1.7
TAS Tashkent 4.96 347 PN Pn 17 41 08.7 +1.7
KSH Kashi 5.06 52 P Pn 17 41 04.8 -3.5
KSH S Sn 17 41 56.3 -11
KSH pmax pmax
comp=Z,84nm,0.5s
KSH smax smax
comp=N,170nm,0.5s
KSH smax smax
comp=E,180nm,0.6s
IUG Iuzhnay 5.67 354 ePN Pn 17 41 17.2 +1.1
IUG eS Sn 17 42 19.2 -2.6
IUG Iuzhnay 5.67 354 eP Pn 17 41 17.3 +1.1
baz=351
IUG eS Sn 17 42 19.2 -2.6
baz=351
THN Thein Dam 5.73 134 eP Pn 17 41 19.0 +2.2
THN eS Sn 17 42 23.2 +0.2
THN IAML 17 42 24.1
comp=E,221nm,0.6s
THN IAML 17 42 24.4
comp=N,200nm,0.7s
AML Almayashu 6.04 21 P Pn 17 41 21.7 +0.4
SNR=199
UCH Uchtor 6.39 25 P Pn 17 41 26.4 +0.6
SNR=224
DZA Taraz 6.39 3 ePN Pn 17 41 24.8 -0.6
DZA pmax pmax
comp=Z,25nm,0.8s
DZA Taraz 6.39 3 eP Pn 17 41 24.9 -0.6
comp=Z,25nm,0.8s,baz=1.5
DZA eS Sn 17 42 34.3 -4.3
baz=1.5
EKS2 Erkin-Say 6.56 19 P Pn 17 41 28.3 +0.6
SNR=54
BRLS Boroldav 6.56 354 ePN Pn 17 41 24.7 -2.9
BRLS Boroldav 6.56 354 eP Pn 17 41 24.7 -2.9
baz=350
BRLS eS Sn 17 42 33.2 -9.4
baz=350
KK31 Karatay Array 6.60 358 Pn 17 41 28.5 +0.5
KK31 Karatay Array 6.60 358 PN Pn 17 41 28.5 +0.5
KK31 Karatay Array 6.60 358 ⇓P Pn 17 41 24.0 -4.0
comp=Z,18nm,0.4s,baz=186,slow=12,SNR=358
KK31 S Sn 17 42 38.4 -4.9
comp=Z,16nm,0.4s,baz=185,slow=18,SNR=7.9
KKAR Karatay Array 6.60 358 Pn Pn 17 41 28.2 +0.2
KKAR Karatay Array 6.60 358 Pn 17 41 28.4 +0.4
KKAR Karatay Array 6.60 358 PN Pn 17 41 28.4 +0.4
AAK Ala-Archa 6.75 24 P Pn 17 41 30.8 +0.6
SNR=33
AAK Ala-Archa 6.75 24 P Pn 17 41 31.0 +0.8
comp=Z,66nm,0.3s,baz=204,slow=6.0,SNR=180
AAK S Sn 17 42 44.6 -2.5
comp=Z,13nm,0.4s,baz=245,slow=9.3,SNR=3.6
AAK Ala-Archa 6.75 24 Pn Pn 17 41 30.7 +0.6
BHK Bhakra 6.88 136 eP Pn 17 41 33.4 +1.6
BHK eS Sn 17 42 47.6 -2.5
KBK Karagaybulak 6.92 26 P Pn 17 41 33.3 +0.9
SNR=54
FRU1 Bishkek 6.95 24 Pn Pn 17 41 33.4 +0.7
FRU1 Bishkek 6.95 24 PN Pn 17 41 33.4 +0.7
ULHL Ulahol 7.11 35 P Pn 17 41 35.3 +0.4
SNR=46
CHMS Chumysh 7.16 24 P Pn 17 41 35.4 +0.1
SNR=36
CHMS Chumysh 7.16 24 PN Pn 17 41 35.2 -0.1
CHMS S Sn 17 42 55.8 -0.8
CHMS Chumysh 7.16 24 ⇑P Pn 17 41 35.2 -0.1
comp=Z,28nm,0.5s
CHMS ⇓S Sn 17 42 55.8 -0.8
comp=Z,34nm,0.8s
BOOM Boomskoye usch 7.17 32 Pn Pn 17 41 35.7 +0.1
BOOM Boomskoye usch 7.17 32 PN Pn 17 41 35.7 +0.1
USP Ospenovka 7.32 22 P Pn 17 41 37.0 -0.4
SNR=48
TKM2 Tokmak 2 7.39 28 P Pn 17 41 39.0 +0.4
SNR=58
TKM2 Tokmak 2 7.39 28 PN Pn 17 41 38.4 -0.1
TKM2 S Sn 17 43 05.3 +3.0
TKM2 Tokmak 2 7.39 28 ⇓P Pn 17 41 38.4 -0.1
comp=Z,43nm,0.8s
TKM2 ⇑S Sn 17 43 05.0 +2.7
comp=Z,48nm,0.8s
KDJ Kajisay 7.47 39 Pn Pn 17 41 39.5 -0.1
KDJ Kajisay 7.47 39 PN Pn 17 41 39.5 -0.1
SMLA Simla 7.52 134 eP Pn 17 41 41.4 +1.3
SMLA eS Sn 17 43 01.6 -3.6
SMLA IAML 17 43 04.8
comp=E,125nm,0.3s
SMLA IAML 17 43 06.1
comp=N,70nm,0.2s
SGDS Sogindy 7.53 22 d iPN Pn 17 41 39.6 -0.6
SGDS pmax pmax
comp=Z,6.0nm,0.5s
SGDS Sogindy 7.53 22 ⇓iP Pn 17 41 39.6 -0.6
comp=Z,6.3nm,0.5s,baz=22
TNSS Tian-Shan 8.05 34 ePN Pn 17 41 46.8 -0.5
TNSS Tian-Shan 8.05 34 eP Pn 17 41 46.8 -0.5
baz=35
AAA Alma-Ata 8.17 33 ePN Pn 17 41 48.7 +0.2
AAA Alma-Ata 8.17 33 eP Pn 17 41 48.8 +0.2
baz=34
MDOK Medeo 8.19 34 ePN Pn 17 41 48.8 -0.1
MDOK Medeo 8.19 34 eP Pn 17 41 48.9 -0.1
baz=34
MDOK Medeo 8.19 34 P Pn 17 41 49.1 +0.1
comp=Z,15nm,0.6s
MDOK ⇑S Sn 17 43 27.1 +5.8
comp=Z,19nm,1.0s
PRZ Przheval'sk 8.36 42 Pn Pn 17 41 52.1 +0.9
PRZ Przheval'sk 8.36 42 PN Pn 17 41 52.1 +0.9
KUU Kurty 8.50 28 ePN Pn 17 41 51.0 -1.8
KUU Kurty 8.50 28 eP Pn 17 41 51.0 -1.8
baz=28
CHKK Chushkaly 8.72 31 ePN Pn 17 41 54.8 -0.9
CHKK Chushkaly 8.72 31 eP Pn 17 41 54.9 -0.9
baz=31
SATY Saty 8.77 39 ePN Pn 17 41 55.1 -1.3
SATY Saty 8.77 39 eP Pn 17 41 55.1 -1.3
baz=40
BTLS Baital 8.87 15 ePN Pn 17 41 57.0 -0.6
BTLS pmax pmax
comp=Z,2.0nm,0.4s
BTLS Baital 8.87 15 eP Pn 17 41 57.0 -0.6
comp=Z,1.6nm,0.4s,baz=14
UZB Uzynbulak 9.15 41 eP Pn 17 41 59.5 -1.9
UZB Uzynbulak 9.15 41 eP Pn 17 41 59.6 -1.9
baz=42
KPKS Kokpek 9.20 39 eP Pn 17 42 00.1 -1.9
KPKS Kokpek 9.20 39 eP Pn 17 42 00.1 -1.9
baz=39
SHLS Shalkode 9.39 42 eP Pn 17 42 06.6 +2.1
SHLS Shalkode 9.39 42 eP Pn 17 42 06.7 +2.1
baz=45
PDGK Podgornoye 9.53 42 P Pn 17 42 05.4 -0.8
PDGK Podgornoye 9.53 42 ⇑P Pn 17 42 05.4 -0.8
comp=Z,2.3nm,0.6s
PDGK ⇑S Sn 17 44 02.8 +10
comp=Z,8.5nm,0.8s
KUDL Kundal 9.61 149 eP Pn 17 42 07.6 +0.2
KUDL eS Sn 17 43 49.4 -5.5
GEYT Alibeck 10.23 282 P Pn 17 42 15.6 +0.2
comp=Z,1.5nm,0.6s,baz=80,slow=7.9,SNR=2.1
GEYT S Sn 17 44 09.0 -0.7
comp=Z,4.1nm,0.9s,baz=107,slow=29,SNR=1.8
PTH Pithoragarh 10.49 129 eP Pn 17 42 18.3 -0.6
PTH eS Sn 17 44 04.5 -12
AJM Ajmer 10.51 161 eP Pn 17 42 19.9 +0.8
AJM eS Sn 17 44 14.1 -2.3
LGTI Lohaghat 10.58 129 eP Pn 17 42 18.9 -1.0
LGTI eS Sn 17 44 09.2 -8.9
LGTI IAML 17 44 11.6
comp=E,14nm,0.7s
JHNI Jhansi 12.83 147 eS S 17 45 02.7 -9.0
MAKZ Makanchi 13.23 35 Pn Pn 17 42 52.5 -0.9
MAKZ Makanchi 13.23 35 P Pn 17 42 52.5 -0.9
PYUN Piuthan 13.26 126 eP Pn 17 42 53.4 -0.7
comp=E,15nm,0.4s
MK31 Makanchi Array 13.37 36 Pn 17 42 53.9 -1.2
MK31 Makanchi Array 13.37 36 ⇑iP Pn 17 42 53.6 -1.5
MKAR Makanchi Array 13.37 36 P Pn 17 42 55.0 -0.1
comp=E,4.3nm,0.6s,baz=222,slow=13,SNR=33
MKAR Makanchi Array 13.37 36 Pn Pn 17 42 54.2 -1.0
MKAR Makanchi Array 13.37 36 P Pn 17 42 55.0 -0.1
DANN Dangsing 13.61 123 eP Pn 17 42 58.0 -0.5
comp=E,37nm,0.7s
GKN Gorkha 14.43 122 eP Pn 17 43 08.4 -0.1
comp=E,26nm,0.5s
WMQ Urumqi 14.81 55 eP P 17 43 15.1 +1.2
ABKAR Akbulak array 15.01 331 P Pn 17 43 14.1 -1.2
ABKAR Akbulak array 15.01 331 P Pn 17 43 14.6 -0.7
KURBB Kurchatov Arra 15.17 19 P Pn 17 43 16.0 -1.1
comp=E,2.6nm,0.6s,baz=206,slow=11,SNR=27
PKIN Phulchoki 15.21 122 eP Pn 17 43 17.5 -0.8
comp=E,25nm,0.5s
PKI Pulchoki 15.23 122 eP Pn 17 43 18.0 -0.5
comp=E,30nm,0.7s
KURK Kurchatov 15.27 19 Pn 17 43 16.9 -1.5
KURK IAmb IAmb 17 43 20.7
comp=Z,5.6nm,0.9s
KURK Kurchatov 15.27 19 ceP Pn 17 43 16.7 -1.7
KURK pmax pmax
comp=Z,7.0nm,1.0s
GUN Gumba 15.34 120 eP Pn 17 43 19.7 -0.2
comp=Z,16nm,0.4s
RAMN Ramite 16.44 121 eP P 17 43 32.2 0.0
comp=Z,24nm,0.7s
BRVK Borovoye 16.56 359 P 17 43 33.0 0.0
BRVK IAmb IAmb 17 43 35.7
comp=Z,5.0nm,0.5s
BRVK Borovoye 16.56 359 ceP P 17 43 33.2 +0.3
BRVK pmax pmax
comp=Z,4.0nm,0.7s
AKTO Aktyubinsk 16.71 330 P P 17 43 35.5 +0.8
comp=Z,5.5nm,0.5s,baz=142,slow=11,SNR=21
AKTO S S 17 46 36.2 -2.5
comp=Z,1.3nm,0.5s,baz=3.5,slow=19,SNR=2.3

TAPN	Taplejung	16.97	118	eP	P	17 43 38.2	+0.1
	comp=Z,18nm,0.5s						
ZAA0	Zalesovo Array	19.97	25	P	P	17 44 09.1	-0.8
ZALV	Zalesovo Beam	19.97	25	P	P	17 44 09.6	-0.4
	comp=Z,8.4nm,0.4s,baz=218,slow=11,SNR=47						
	comp=Z,8.4nm,0.4s						
ZALV	Zalesovo Beam	19.97	25	P	P	17 44 09.3	-0.6
ARU	Arti	21.58	341	P	P	17 44 27.3	+0.4
	comp=Z,2.1nm,0.4s,baz=146,slow=9.5,SNR=4.8						
	comp=Z,2.1nm,0.4s						
ARU	Arti	21.58	341	IAmb	IAmb	17 44 29.8	
	comp=Z,3.7nm,0.8s						
ARU	Arti	21.58	341	d iP	P	17 44 27.5	+0.6
ARU				*PP	pP	17 45 03.6	+2.2
ARU				S	S	17 48 15.8	+3.4
ARU				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV	Kislovodsk	22.66	298	eP	P	17 44 37.4	0.0
KIV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BELG	Belogornoye	22.80	321	P	P	17 44 38.8	+0.5
	comp=Z,11nm,0.6s,baz=141,slow=2.3,SNR=3.8						
	comp=Z,11nm,0.6s						
GTA	Gaotai	23.00	74	eP	P	17 44 41.7	+1.2
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KNGR	Kungurtug, Tuv	23.77	45	i P	P	17 44 48.0	+0.6
KNGR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KIRV	Kirov	26.18	334	P	P	17 45 09.8	+1.0
	comp=Z,12nm,0.6s,baz=112,slow=5.8,SNR=4.6						
	comp=Z,12nm,0.6s						
KIRV	Kirov	26.18	334	ceP	P	17 45 09.6	+0.8
PZH	PanZhiHua	28.08	102	P	P	17 45 28.2	+1.9
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,100nm,8.0s						
SONM	Songino Array	28.45	55	P	P	17 45 29.9	+0.6
	comp=Z,1.7nm,0.8s,baz=267,slow=9.5,SNR=7.5						
	comp=Z,1.7nm,0.8s						
SONM	Songino Array	28.45	55	P	P	17 45 29.6	+0.3
SONM	Songino Array	28.45	55	P	P	17 45 30.0	+0.6
ULN	Ulaanbaatar	28.89	55	ceP	P	17 45 33.7	+0.4
ULN				pmax	pmax		
	comp=Z,1.0nm,0.6s						
HHC	Hu-ho-hao-te	31.90	70	eP	P	17 46 00.7	+1.0
HHC				pmax	pmax		
	comp=Z,22nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,4.5s						
ELL	Elmali	32.66	283	P	P	17 46 07.8	+1.4
ELL	Elmali	32.66	283	P	P	17 46 07.8	+1.4
ELL				pmax	pmax		
	comp=Z,15nm,0.6s						
AKASG	Malin Array Be	32.83	309	P	P	17 46 08.8	+1.2
	comp=Z,1.3nm,0.6s,baz=80,slow=7.1,SNR=6.5						
	comp=Z,1.3nm,0.6s						
AKASG	Malin Array Be	32.83	309	IAmb	IAmb	17 46 09.1	
	comp=Z,1.7nm,1.1s						
AKASG	Malin Array Be	32.83	309	P	P	17 46 08.8	+1.2
AKASG				pmax	pmax		
	comp=Z,2.0nm,1.1s						
NRIK	Noril'sk	34.15	10	P	P	17 46 19.4	+0.6
	comp=Z,5.6nm,0.6s,baz=187,slow=6.6,SNR=9.1						
	comp=Z,5.6nm,0.6s						
NRIK	Noril'sk	34.15	10	P	P	17 46 18.2	-0.5
NRIK				IAmb	IAmb	17 46 20.4	
	comp=Z,5.9nm,0.7s						
NRIK	Noril'sk	34.15	10	ceP	P	17 46 19.5	+0.8
NRIK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ARG	Arkhangelos	34.18	283	P	P	17 46 18.8	-0.7
ARG	Arkhangelos	34.18	283	P	P	17 46 18.8	-0.7
ARG				pmax	pmax		
	comp=Z,40nm,1.4s						
KARP	Karpathos	35.10	282	P	P	17 46 28.6	+1.2
KARP				IAmb	IAmb	17 46 29.7	
	comp=Z,6.2nm,0.8s						
FIA1	FINESS Array S	37.40	326	P	P	17 46 46.9	+0.4
FIA1				IAmb	IAmb	17 46 50.3	
	comp=Z,10nm,1.4s						
FINES	FINESS Array B	37.40	326	P	P	17 46 47.0	+0.6
	comp=Z,3.3nm,0.5s,baz=121,slow=10.0,SNR=36						
	comp=Z,3.3nm,0.5s						
FINES	FINESS Array B	37.40	326	P	P	17 46 46.7	+0.3
NJ2	Nanjing	39.62	82	eP	P	17 47 02.7	-2.6
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
ARA0	ARCESS Array S	41.09	338	eP	P	17 47 17.9	+1.0
ARCES	ARCESS Array B	41.09	338	P	P	17 47 17.6	+0.7
	comp=Z,5.0nm,0.4s,baz=112,slow=7.7,SNR=63						
	comp=Z,5.0nm,0.4s						
ARCES	ARCESS Array B	41.09	338	IAmb	IAmb	17 47 18.3	
	comp=Z,5.0nm,0.7s						
KTK1	Kautokeino	41.56	336	eP	P	17 47 20.9	+0.3
HAMF	Hammerfest	42.17	339	eP	P	17 47 26.2	+0.6
TRO	Tromso	43.21	336	eP	P	17 47 34.6	+0.7
FAUS	Fauske	43.73	333	eP	P	17 47 38.8	+0.7
MOR8	Moi Rana	43.74	331	eP	P	17 47 38.0	-0.2
STEI	Steigen	43.91	333	eP	P	17 47 39.8	+0.3
YAK	Yakutsk	44.05	35	P	P	17 47 39.9	-0.8
YAK				IAmb	IAmb	17 47 41.0	
	comp=Z,5.5nm,0.8s						
YAK	Yakutsk	44.05	35	ceP	P	17 47 39.9	-0.8
YAK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NB2	NORSAR Subarra	44.29	323	P	P	17 47 42.4	-0.3
	baz=97,slow=7.9						
NB2	NORSAR Subarra	44.29	323	P	P	17 47 42.4	-0.3
	comp=Z,1.1nm,0.5s,baz=97,slow=7.9						
NOA	NORSAR Array B	44.29	323	P	P	17 47 42.9	+0.2
	comp=Z,1.4nm,0.5s,baz=97,slow=7.7,SNR=10						
	comp=Z,1.4nm,0.5s						
KONS	Konsvik	44.34	331	eP	P	17 47 43.4	+0.4
LOF	Lofoten	44.58	333	eP	P	17 47 44.4	-0.4
KLR	Kul'dur	45.26	54	i P	P	17 47 50.0	-0.5
KLR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SKAR	Skarslia	45.69	322	eP	P	17 47 53.2	-0.5
TIXI	Tiksi	45.83	22	P	P	17 47 53.8	-0.8
TIXI				IAmb	IAmb	17 47 55.1	
	comp=Z,7.5nm,0.9s						
TIXI	Tiksi	45.83	22	ceP	P	17 47 54.3	-0.2
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
AKN	Aaknes	46.39	324	eP	P	17 47 58.8	-0.4
HSPB	Hornsund (broa	47.10	345	eP	P	17 48 04.0	-0.4
SPA0	Spitsbergen Ar	47.46	347	eP	P	17 48 08.1	+0.9
KBS	Kingsbay	48.58	347	eP	P	17 48 16.4	+0.7
BILL	Bilibino	58.67	26	deP	P	17 49 29.3	+0.3
BILL						17 51 36.0	
BILL				i SSS	SSS	18 03 41.2	
BILL				pmax	pmax		
	comp=Z,7.0nm,2.5s						
TOA0	Torodi Ar. Sit	65.58	269	P	P	17 50 14.1	-1.6
TOA0				IAmb	IAmb	17 50 15.4	
	comp=Z,2.1nm,0.5s						
TORD	Torodi Ar. Bea	65.58	269	P	P	17 50 14.6	-1.2
	comp=Z,2.1nm,0.4s,baz=51,slow=6.0,SNR=34						
	comp=Z,2.1nm,0.4s						
TORD	Torodi Ar. Bea	65.58	269	P	P	17 50 14.1	-1.6
J20K	Nowinta River	73.57	19	P	P	17 51 03.3	-0.5
J20K				IAmb	IAmb	17 51 04.7	
	comp=Z,3.6nm,0.6s						
C36M	Paulatuk	73.89	5	P	P	17 51 04.7	-0.8
TTA	Tatalina	74.07	20	P	P	17 51 06.7	-0.1
TTA	Tatalina	74.07	20	P	P	17 51 06.7	-0.1
TTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
K20K	Telida	74.26	19	P	P	17 51 07.5	-0.3
MDM	Murphy Dome	74.36	16	P	P	17 51 08.6	+0.2
BPAW	Bear Paw Mtn.	74.43	18	P	P	17 51 08.5	-0.4
BPAW				IAmb	IAmb	17 51 12.7	
	comp=Z,3.3nm,0.8s						
ILAR	Eielson Array	74.81	16	P	P	17 51 10.0	-1.0
	comp=Z,1.1nm,0.8s,baz=301,slow=4.6,SNR=6.0						
	comp=Z,1.1nm,0.8s						
ILAR	Eielson Array	74.81	16	P	P	17 51 10.0	-1.0
PPLA	Purkeypile	75.13	19	P	P	17 51 12.6	-0.4
KNRA	Kununurra	75.35	122	P	P	17 51 14.3	-0.3
I29M	Ogilvie Camp,	75.96	12	P	P	17 51 17.2	-0.3
I29M				IAmb	IAmb	17 51 20.1	
	comp=Z,6.5nm,1.5s						
SKT	Skwentna	76.06	19	P	P	17 51 17.4	-0.8
SKT				IAmb	IAmb	17 51 45.1	
	comp=Z,6.7nm,1.2s						
SCRK	Sand Creek	76.13	15	P	P	17 51 18.5	-0.2
SCRK				IAmb	IAmb	17 51 19.0	
	comp=Z,3.2nm,0.6s						
RIDG	Independent Ri	76.16	15	P	P	17 51 17.8	-0.9
RIDG				IAmb	IAmb	17 51 24.4	
	comp=Z,10nm,1.4s						
DHY	Denali Highway	76.17	17	P	P	17 51 17.3	-1.6
DHY				IAmb	IAmb	17 51 19.6	
	comp=Z,3.8nm,0.7s						
PAX	Paxson	76.69	16	P	P	17 51 21.4	-0.4
PAX				IAmb	IAmb	17 51 22.1	
	comp=Z,3.0nm,0.7s						
PAX	Paxson	76.69	16	P	P	17 51 21.4	-0.4
PAX				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SML	Sawmill	77.03	18	P	P	17 51 23.0	-0.6
SCM	Sheep Creek Mo	77.25	17	P	P	17 51 24.4	-0.5
SCM	Sheep Creek Mo	77.25	17	P	P	17 51 24.4	-0.5
SCM				pmax	pmax		
	comp=Z,5.0nm,0.7s						
M24K	Tolsona, Glenn	77.29	17	P	P	17 51 24.4	-0.7
L27K	Beaver Creek,	77.39	15	P	P	17 51 25.4	-0.2
BCAR	Beaver Creek A	77.40	15	P	P	17 51 25.4	-0.3
BOSA	Boshof	77.66	220	P	P	17 51 27.6	0.0
	comp=Z,1.9nm,0.9s,baz=90,slow=4.0,SNR=1.7						
	comp=Z,1.9nm,0.9s						
M27K	Edge Creek, AK	78.01	15	P	P	17 51 29.5	+0.3
M27K				IAmb	IAmb	17 51 29.9	
	comp=Z,7.8nm,1.3s						
FID	Port Fidalgo	78.40	18	P	P	17 51 30.8	-0.3
FID				IAmb	IAmb	17 51 37.8	
	comp=Z,8.1nm,1.1s						
YKA	Yellowknife Ar	81.25	3	P	P	17 51 46.2	-0.1
	comp=Z,1.7nm,0.5s,baz=352,slow=5.4,SNR=20						
	comp=Z,1.7nm,0.5s						
YKA	Yellowknife Ar	81.25	3	i P	P	17 51 46.0	-0.4
YKA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
WRA	Warramunga Arr	82.11	122	P	P	17 51 50.0	-1.6
	comp=Z,1.2nm,0.7s,baz=323,slow=4.9,SNR=24						
	comp=Z,1.2nm,0.7s						
WRA	Warramunga Arr	82.11	122	P	P	17 51 50.0	-1.6
ASAR	Alice Springs	84.37	125	P	P	17 52 01.6	-1.5
	comp=Z,1.0nm,0.5s,baz=313,slow=4.8,SNR=44						
	comp=Z,1.0nm,0.5s						

MAN 01 17:50:35.9, 14°.80N×119°.23E, h21km, mb4.0, ML2.8, MS2.4, Luzon

NEIC 01 17:55:21.8±0.5, 35°.986N±0°.006×96°.81W±0°.01, h5km±1km, mb_Lg2.2/6, Error ellipse: s-maj=2.5km s-min=1.6km az=152.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKCFA	Oklahoma City	0.77	223	Pg	Pg	17 55 36.0	-0.6
TUL1	Leonard	0.83	95	Pg	Pg	17 55 36.6	-1.1
FNO	Franklin	0.87	214	Pg	Pg	17 55 37.6	-0.9
T35A	Sooner Cattle	0.96	14	Pg	Pg	17 55 39.3	-0.9
X34A	Smith Ranch, M	1.62	212		Pn	17 55 51.0	0.0
X37A	Clayton	1.82	139	IAmb_Lg		17 56 24.1	
	comp=Z,14nm,0.8s						
WMOK	Wichita Mounta	2.04	233	Pn	Pn	17 55 57.1	+0.3
W39A	Magazine	2.59	107	Pn	Pn	17 56 04.4	+0.1
FCAR	Ozark Folk Cen	3.80	90	IAmb_Lg		17 57 24.0	
	comp=Z,4.1nm,1.0s						
MGMO	Mountain Grove	3.83	71	IAmb_Lg		17 57 28.5	
	comp=Z,3.9nm,0.9s						

IDC 01 18:01:58.5±5.0, 48°.95N×154°.68E, h0km, mb3.5/4, mbtmp3.6/7, ML4.9/1, MS3.3/3, Error ellipse: s-maj=105.0km s-min=25.0km az=55.0
KRSC 01 18:02:12.9±3.2, 49°.55N×157°.13E, h41km±28km, ML4.1
ISC 01 18:02:12.0±1.7, 49°.4N±0°.1×156°.5E±0°.1, h35km, n37, σ1.63/34, mb3.6/4, MS3.3/3, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.31	350	eP	Pn	18 02 32.7	-1.0
SKR				eS	Sn	18 02 48.0	-1.9
MIPR	Malaya Ipel'ka	2.89	3	eP	Pn	18 02 55.9	+0.5
ASAK	Asacha	3.12	16	eP	Pn	18 03 00.3	+1.6
MTVR	Mutnovka	3.27	19	eP	Pn	18 03 01.9	+1.1
MTVR				eS	Sn	18 03 38.9	+0.3
RUS	Russkaya	3.30	22	eP	Pn	18 03 01.2	+0.1
RUS				eS	Sn	18 03 37.8	-1.2
GRL	Gorelyy	3.31	17	eP	Pn	18 03 02.9	+1.5
GRL				eS	Sn	18 03 40.3	+0.7
KRMR	Karymshinskiy	3.59	16	eP	Pn	18 03 06.9	+1.8
PETK	Petropavlovsk-	3.79	11	Pn	Pn	18 03 09.0	+1.1
	3.6nm,0.6s,baz=178,slow=11,SNR=19						
PET	Petropavlovsk	3.88	20	eP	Pn	18 03 10.7	+1.7
PET				eS	Sn	18 03 53.9	+0.6
DALK	Dalny	3.91	21	eP	Pn	18 03 10.3	+0.9
DALK				eS	Sn	18 03 54.1	+0.1
UGLR	Uglovaya	4.09	20	eP	Pn	18 03 13.5	+1.5
AVH	Avacha	4.12	19	eP	Pn	18 03 14.7	+2.2
KOK	Koryaka	4.13	18	eP	Pn	18 03 14.7	+2.2
SMAR	Somma	4.13	20	eP	Pn	18 03 14.7	+1.9
KRER	Koryakskii	4.16	19	eP	Pn	18 03 15.0	+1.9
SDLR	Sedlovina	4.17	20	eP	Pn	18 03 13.9	+0.8
NLC	Nalytchevo	4.18	24	eS	Sn	18 03 57.6	-3.2
KRX	Arik	4.19	18	eP	Pn	18 03 16.0	+2.5
GNL	Ganaly	4.40	11	eP	Pn	18 03 18.4	+2.1
MKZ	Mys Kozlova	6.10	30	eP	Pn	18 03 39.1	-0.4
TUMR	Tumrok	6.31	19	eP	Pn	18 03 45.4	+2.9
KBTR	Krutoberegovo	7.82	27	eP	Pn	18 04 03.2	0.0
MA2	Magadan	10.72	344	Pn	Pn	18 04 39.6	-3.2
	0.8nm,0.3s,baz=177,slow=18,SNR=4.4						
	5.5nm,0.5s						
SEY	Seymchan	13.76	352	Pn	Pn	18 05 24.2	0.0
	0.4nm,0.3s,baz=204,slow=22,SNR=5.3						
H11N2	WAKE ISLAND Hy	30.75	161	T	T	18 41 24.7	
	baz=347,slow=76,SNR=12						
H11N1	WAKE ISLAND Hy	30.77	161	T	T	18 41 25.1	
	baz=347,slow=76,SNR=14						
H11N3	WAKE ISLAND Hy	30.77	161	T	T	18 41 25.1	
	baz=347,slow=76,SNR=18						
NRIK	Noril'sk	37.71	327	LR	LR	18 23 56.7	
	comp=Z,70nm,19.9s,baz=160,slow=35						
INK	Inuvik	38.19	34	LR	LR	18 26 38.5	
	comp=Z,51nm,20.1s,baz=16,slow=38						
YKA	Yellowknife Ar	47.44	39	P	P	18 10 42.0	-0.6
	0.5nm,0.8s,baz=302,slow=6.9,SNR=4.2						
	0.5nm,0.8s						
NVAR	Mina Array Bea	59.24	66	P	P	18 12 10.3	+0.4
	0.4nm,0.5s,baz=307,slow=5.7,SNR=5.0						
	0.4nm,0.5s						
PDAR	Pinedale Array	61.38	57	P	P	18 12 24.6	+0.2
	0.4nm,0.6s,baz=282,slow=1.8,SNR=3.9						
	0.4nm,0.6s						
OBN	Obninsk	64.38	326	LR	LR	18 43 40.6	
	comp=Z,14nm,20.3s,baz=13,slow=39						
TXAR	Lajitas Array	74.25	63	P	P	18 13 45.2	-0.3
	0.3nm,0.5s,baz=307,slow=4.6,SNR=5.2						
	0.3nm,0.5s						
H03N2	Juan Fernandez	136.49	90	T	T	20 53 34.6	
	baz=313,slow=77,SNR=8.8						
H03N1	Juan Fernandez	136.51	90	T	T	20 53 40.4	
	baz=313,slow=77,SNR=9.6						
H03N3	Juan Fernandez	136.51	90	T	T	20 53 35.6	
	baz=313,slow=77,SNR=9.6						

ANF 01 18:13:18.4±0.2, 37°.22N×97°.99W, h5km, ML4.0/17, Error ellipse: s-maj=3.1km s-min=2.2km az=57.0
NEIC 01 18:13:18.4±0.6, 37°.19N±0°.02×98°.00W±0°.02, h5km±1km, Error ellipse: s-maj=3.5km s-min=2.7km az=339.0
ISC 01 18:13:17.4±1.4, 37°.20N±0°.03×98°.01W±0°.04, h2km±12km, n86, σ0.84/75, Kansas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
U32A	Winter Ranch,	1.14	224		Pg	18 13 39.8	+0.6
U32A	Winter Ranch,	1.14	224	P	Pg	18 13 39.8	+0.6
	baz=45						
T35A	Sooner Cattle	1.23	103		Pb	18 13 41.0	-0.3
T35B	Sooner Cattle	1.23	103	P	Pb	18 13 41.0	-0.4
	baz=284,SNR=411						
T35B				S	Sb	18 13 56.8	-0.9
	baz=284						
R32A	Long Quarter,	1.34	336	Pn	Pg	18 13 43.5	+0.4
R32A	Long Quarter,	1.34	336	P	Pg	18 13 43.5	+0.4
	baz=155						
R32A				S	Sg	18 14 01.4	+1.0
	baz=155						
OKCFA	Oklahoma City	1.84	166		Pb	18 13 50.6	-1.1
OKCFA	Oklahoma City	1.84	166	P	Pb	18 13 50.6	-1.1
	baz=346,SNR=6.1						
OKCFA				S	Sg	18 14 16.0	-0.4
	baz=346						
OKCSW	OKLAHOMA CITY	1.85	165		Pn	18 13 50.0	-0.1
FNO	Franklin	2.00	165		Pn	18 13 51.9	-0.3
CBKS	Cedar Bluff	2.11	320	Pn	Pb	18 13 54.7	-1.7
CBKS	Cedar Bluff	2.11	320	P	Pb	18 13 55.3	-1.1
	baz=139,SNR=34						
CBKS				S	Sb	18 14 22.6	-0.4
	baz=139						
KSU1	Kansas State U	2.20	30	Pn	Pn	18 13 55.4	+0.5
KSU1				IAmb_Lg		18 14 27.0	
	comp=Z,56nm,0.8s						
KSU1	Kansas State U	2.20	30	P	Pb	18 13 56.5	-1.3
	baz=210,SNR=13						
KSU1				S	Sb	18 14 24.8	-0.7
	baz=210						
TUL1	Leonard	2.20	125		Pn	18 13 55.2	+0.2
TUL1	Leonard	2.20	125	P	Pn	18 13 55.8	+0.9
	baz=307,SNR=34						
TUL1				S	Sb	18 14 24.1	-1.6
	baz=307						
WMOK	Wichita Mounta	2.53	194		Pn	18 14 00.3	+0.8
WMOK	Wichita Mounta	2.53	194	P	Pn	18 14 00.8	+1.3
	baz=14,SNR=20						
X34A	Smith Ranch, M	2.60	177	Pn	Pn	18 14 00.1	-0.3
X37A	Clayton	3.37	140		Pn	18 14 11.9	+0.9
X37A				IAmb_Lg		18 15 11.0	
	comp=Z,78nm,0.8s						
X37A	Clayton	3.37	140	P	Pn	18 14 12.2	+1.1
	baz=322,SNR=8.8						
X37A				S	Sn	18 14 52.6	+1.0
	baz=322						
HHAR	Hobbs	3.40	104		Pn	18 14 11.6	+0.2
HHAR	Hobbs	3.40	104	P	Pn	18 14 12.4	+1.0
	baz=287						
N33B	J Bar K, Exete	3.56	7	S	Sn	18 14 56.5	+0.2
	baz=187						
AMTX	Amarillo	3.76	233		Pn	18 14 17.4	+0.9
AMTX				IAmb_Lg		18 15 20.7	
	comp=Z,38nm,0.8s						
AMTX	Amarillo	3.76	233	P	Pn	18 14 17.6	+1.1
	baz=51,SNR=9.3						
S39A	Bolivar	3.77	81		Pn	18 14 16.7	+0.3
S39A				IAmb_Lg		18 15 20.8	
	comp=Z,44nm,0.8s						
S39A	Bolivar	3.77	81	P	Pn	18 14 17.1	+0.7
	baz=264,SNR=38						
W39A	Magazine	3.96	119		Pn	18 14 19.4	+0.2
W39A	Magazine	3.96	119	P	Pn	18 14 19.7	+0.6
	baz=302,SNR=13						
N35A	Tabor	4.10	26	S	Sn	18 15 11.2	+1.7
	baz=207						
BGNE	Belgrade	4.21	359	IAmb_Lg		18 15 39.4	
	comp=Z,57nm,0.8s						
U40A	Yellville	4.23	100		Pn	18 14 23.4	+0.6
U40A	Yellville	4.23	100	P	Pn	18 14 23.5	+0.7
	baz=283,SNR=43						
U40A				P	Pn	18 14 23.5	+0.7
	baz=283,SNR=43						
P38A	Dawn	4.27	54		Pn	18 14 22.5	-0.9
MIAR	Mount Ida	4.47	125		Pn	18 14 26.6	+0.5
MIAR				IAmb_Lg		18 15 47.7	
	comp=Z,34nm,0.7s						
MIAR	Mount Ida	4.47	125	P	Pn	18 14 27.2	+1.1
	baz=308,SNR=18						
MGMO	Mountain Grove	4.59	89		Pn	18 14 28.3	+0.5
MGMO				IAmb_Lg		18 15 48.7	
	comp=Z,32nm,0.8s						
Z38A	Mt. Pleasant	4.65	147		Pn	18 14 28.3	-0.2
Z38A				IAmb_Lg		18 15 57.3	
	comp=Z,45nm,0.9s						
R40A	Maddies Statio	4.68	75		Pn	18 14 29.2	+0.2
R40A				IAmb_Lg		18 15 52.4	
	comp=Z,39nm,1.2s						
R40A	Maddies Statio	4.68	75	P	Pn	18 14 29.6	+0.6
	baz=258,SNR=20						
OGNE	Ogallala	4.88	321	Pn	Pn	18 14 33.1	+1.3
OGNE				IAmb_Lg		18 16 04.8	
	comp=Z,39nm,0.8s						
OGNE	Ogallala	4.88	321	P	Pn	18 14 32.3	+0.5
	baz=139,SNR=8.6						
FCAR	Ozark Folk Cen	4.92	104		Pn	18 14 32.3	0.0
X40A	Basin Creek Fa	5.00	121		Pn	18 14 33.2	-0.2
X40A				IAmb_Lg		18 15 53.2	
	comp=Z,27nm,0.7s						
X40A	Basin Creek Fa	5.00	121	P	Pn	18 14 34.5	+1.1
	baz=304,SNR=11						
X40A				P	Pn	18 14 34.5	+1.1
	baz=304,SNR=11						
WHAR	Wooly Hollow	5.00	111		Pn	18 14 34.2	+0.8
WHAR				IAmb_Lg		18 16 05.3	
	comp=Z,33nm,0.7s						
MSTX	Muleshoe	5.04	232		Pn	18 14 32.3	-1.8
W41B	Gary Mavity, V	5.08	112		Pn	18 14 34.7	+0.2
W41B				IAmb_Lg		18 16 03.1	
	comp=Z,41nm,0.8s						
T25A	Trinidad	5.11	271		Pn	18 14 35.3	+0.2
T25A				IAmb_Lg		18 16 07.0	
	comp=Z,37nm,1.0s						
N38A	Joes South For	5.17	45		Pn	18 14 34.8	-0.9
N38A				IAmb_Lg		18 16 05.3	
	comp=Z,45nm,0.8s						
P40A	Paris	5.23	62		Pn	18 14 34.8	-1.8
WLAR	White Oak Lake	5.32	130		Pn	18 14 36.3	-1.5
WLAR				IAmb_Lg		18 16 21.2	
	comp=Z,35nm,0.8s						
CCM	Cathedral Cave	5.44	79		Pn	18 14 39.4	0.0
CCM				IAmb_Lg		18 16 15.5	
	comp=Z,19nm,0.8s						
CCM	Cathedral Cave	5.44	79	P	Pn	18 14 39.6	+0.2
	baz=263,SNR=6.5						
237A	Washetta, Mont	5.50	160	IAmb_Lg		18 16 26.4	
	comp=Z,28nm,0.9s						
LCAR	Lake Charles	5.63	99	Pn	Pn	18 14 42.0	-0.1
LCAR				IAmb_Lg		18 16 17.7	
	comp=Z,35nm,0.8s						
Q24A	Divide	5.90	290	Pn	Pn	18 14 45.8	-0.2
Q24A				IAmb_Lg		18 16 36.9	
	comp=Z,18nm,0.8s						
FVM	French Village	6.08	80		Pn	18 14 47.5	-0.7
FVM				IAmb_Lg		18 16 33.4	
	comp=Z,21nm,0.8s						
PBMO	Poplar Bluff	6.08	92	IAmb_Lg		18 16 38.8	
	comp=Z,31nm,0.7s						
NATX	Nacogdoches	6.09	152	IAmb_Lg		18 16 40.8	
	comp=Z,32nm,1.2s						
SLM	Saint Louis	6.31	75	IAmb_Lg		18 16 35.8	
	comp=Z,25nm,0.9s						
ISCO	Idaho Springs	6.50	296		Pn	18 14 54.3	0.0
N41A	Harden Midland	6.59	56	IAmb_Lg		18 16 47.3	
	comp=Z,36nm,0.7s						
ECSD	EROS Data Cent	6.61	9	IAmb_Lg		18 16 53.3	
	comp=Z,15nm,0.9s						
K38A	Parkersburg	6.77	35	IAmb_Lg		18 17 01.3	
	comp=Z,34nm,1.0s						
JCT	Junction City	6.87	193	IAmb_Lg		18 17 10.3	
	comp=Z,30nm,0.9s						
S44A	Carbondale	6.99	83	P	Pn	18 15 01.0	+0.3
	baz=268,SNR=6.0						
P43A	Skaggs, Pawnee	7.10	67	IAmb_Lg		18 17 05.8	
	comp=Z,32nm,1.1s						
L40A	Anamosa	7.14	45	IAmb_Lg		18 17 08.3	
	comp=Z,27nm,0.8s						
N23A	Red Feather La	7.19	303	Pn	Pn	18 15 03.5	-0.2
Q44A	Meyer Farm, Va	7.30	74	IAmb_Lg		18 17 13.7	
	comp=Z,21nm,0.9s						
SMCO	Snowmass	7.33	288	Pn	Pn	18 15 05.5	-0.3
OXF	Oxford	7.48	108	IAmb_Lg		18 17 25.6	
	comp=Z,30nm,0.9s						
HDIL	Hopedale	7.58	61	Pn	Pn	18 15 09.4	+0.6
HDIL				IAmb_Lg		18 17 30.1	
	comp=Z,23nm,0.7s						
BNM	Barren Site	7.64	249		Pn	18 15 10.3	+0.4
O44A	Mansfield	8.03	66	IAmb_Lg		18 17 37.5	
	comp=Z,20nm,0.8s						
L42A	Oliver, Polo	8.03	51	IAmb_Lg		18 17 43.7	
	comp=Z,19nm,0.8s						

JFWS	Jewell Farm	8.25	44	IAmb_Lg		18 17 47.1	
	comp=Z,18nm,0.7s						
WVT	Waverly	8.25	94	Pn	Pn	18 15 17.1	-1.0
RWWY	Rawlins	8.41	305	Pn	Pn	18 15 21.4	+0.9
RWWY				IAmb_Lg		18 17 55.0	
	comp=Z,21nm,1.1s						
K22A	Casper	8.51	312	IAmb_Lg		18 17 56.8	
	comp=Z,12nm,0.8s						
F33A	5 Mile Ranch,	8.73	8	IAmb_Lg		18 17 50.5	
	comp=Z,16nm,1.0s						
I40A	Norwalk	8.74	38	IAmb_Lg		18 18 01.7	
	comp=Z,11nm,0.8s						
TXAR	Lajitas Array	9.16	213	Pn	Pn	18 15 30.8	+0.2
K43A	Burlington	9.24	51	IAmb_Lg		18 18 19.2	
	comp=Z,21nm,0.9s						

NEIC ***01*** *18:27:13.6±1.4, 47.°7N±0.°1×153.°9E±0.°2, h35km±2km, mb4.5/93, Error ellipse: s-maj=20.4km s-min=14.0km az=138.0*

MOS ***01*** *18:27:14.4±1.0, 47.°64N×154.°00E, h65km, mb4.5/28, Error ellipse: s-maj=9.2km s-min=6.3km az=61.2*

SKHL ***01*** *18:27:14.8±0.1, 47.°60N×154.°20E, h68km±7km, mb5.2/7*

IDC ***01*** *18:27:17.7±2.3, 47.°71N×153.°86E, h79km±21km, mb3.7/18, mbtmp4.1/25, MS3.4/30, Error ellipse: s-maj=17.2km s-min=11.0km az=146.0*

ISC 01 18:27:12.4±0.5**, 47.°63N**±0.°06×**154.°07E**±0.°05**, h31km, n225,** σ**1^{s}29**/204**, mb4.5**/71**, MS3.7**/24**, 3C-2D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	3.33	23⇓	iPN	Pn	18 28 04.3	+1.9
SKR				iS	Sn	18 28 41.5	+0.6
SKR				pmax	pmax		
	comp=Z,182nm,0.5s						
SKR				smax	smax		
	comp=Z,200nm,2.7s						
SKR				smax	smax		
	comp=N,806nm,0.7s						
SKR				smax	smax		
	comp=E,535nm,0.7s						
SKR	Severo-Kuril's	3.33	23	iP	Pn	18 28 04.3	+1.9
SKR				AMB	AMB	18 28 07.4	
	comp=E,240nm,0.4s						
SKR				iS	Sn	18 28 41.5	+0.6
SKR				A	A	18 28 46.0	
	comp=E,410nm,0.3s						
SKR				A	A	18 28 46.0	
	comp=E,680nm,0.3s						
PAU	Pauzhetka	4.23	24	eP	Pn	18 28 17.3	+2.6
PAU				AMB	AMB	18 28 22.5	
	comp=E,160nm,0.4s						
PAU				eS	Sn	18 29 04.1	+1.1
PAU				A	A	18 29 07.0	
	comp=E,500nm,0.5s						
PAU				A	A	18 29 07.0	
	comp=E,740nm,0.5s						
KUR	Kuril'sk	4.91	243d	iPN	Pn	18 28 26.4	+2.3
KUR				eS	Sn	18 29 23.2	+3.4
KUR				pmax	pmax		
	comp=Z,408nm,0.7s						
KUR				pmax	pmax		
	comp=E,56nm,0.6s						
KUR				pmax	pmax		
	comp=N,85nm,0.5s						
KUR				smax	smax		
	comp=N,151nm,0.7s						
KUR				smax	smax		
	comp=E,320nm,0.7s						
KUR	Kuril'sk	4.91	243	iP	Pn	18 28 26.8	+2.7
KUR				AMB	AMB	18 28 28.8	
	comp=E,410nm,0.7s						
KUR				AMB	AMB	18 28 34.1	
	comp=E,3μm,4.0s						
KUR				eS	Sn	18 29 22.4	+2.6
KUR				A	A	18 29 27.0	
	comp=E,4μm,4.0s						
KUR				A	A	18 29 27.0	
	comp=E,2μm,4.0s						
KUR				A	A	18 29 28.3	
	comp=E,480nm,0.7s						
KUR				A	A	18 29 28.3	
	comp=E,660nm,0.7s						
PEA0B	Petropavlovsk-	5.95	22		Pn	18 28 40.4	+2.1
PEA0B	Petropavlovsk-	5.95	22	cePN	Pn	18 28 40.8	+2.5
PETK	Petropavlovsk-	5.95	22	P	Pn	18 28 41.5	+3.1
	comp=E,14nm,0.5s,baz=96,slow=30,SNR=47						
PETK				LR	LR	18 31 38.1	
	comp=E,106nm,18.4s,baz=212,slow=44						
PETK	Petropavlovsk-	5.95	22		Pn	18 28 37.9	-0.4
PET	Petropavlovsk	6.14	27		Pn	18 28 42.7	+1.8
PET				Sn	Sn	18 29 48.8	-1.2
PET	Petropavlovsk	6.14	27	ePN	Pn	18 28 43.9	+3.0
PET				pmax	pmax		
	comp=Z,64nm,0.5s						
PET				MLR	MLR		
	comp=Z,100nm,14.0s						
PET	Petropavlovsk	6.14	27	eP	Pn	18 28 43.9	+3.0
PET				AMB	AMB	18 28 51.7	
	comp=Z,60nm,0.5s						
PET				eS	Sn	18 29 50.5	+0.5
PET				A	A	18 29 54.0	
	comp=Z,260nm,0.6s						
YSS	Yuzh-Sakhalins	7.72	269	Pn	Pn	18 29 06.5	+3.8
YSS	Yuzh-Sakhalins	7.72	269	ePN	Pn	18 29 06.9	+4.3
YSS				pmax	pmax		
	comp=Z,50nm,1.0s						
YSS				MLR	MLR		
	comp=Z,400nm,16.0s						
YSS	Yuzh-Sakhalins	7.72	269	eP	Pn	18 29 06.9	+4.3
YSS				AMB	AMB	18 29 11.9	
	comp=Z,50nm,1.0s						
YSS				eS	Sn	18 30 29.8	+0.8
YSS				A	A	18 30 35.6	
YSS				A	A	18 30 36.6	
	comp=Z,20nm,0.6s						
YSS				A	A	18 30 36.6	
	comp=Z,20nm,0.6s						
UGL	Uglegorsk	8.12	285	ePN	Pn	18 29 13.3	+5.2
UGL	Uglegorsk	8.12	285	eP	Pn	18 29 13.3	+5.2
UGL				AMB	AMB	18 29 14.7	
	comp=Z,40nm,0.5s						
JKA	Kamikawa-asahi	8.74	250	Pn	Pn	18 29 18.0	+1.4
JKA	Kamikawa-asahi	8.74	250	eP	Pn	18 29 20.6	+4.0
ASAJ	Asahikawa	8.74	250	P	Pn	18 29 20.0	+3.4
	comp=Z,28nm,0.6s,baz=86,slow=18,SNR=26						
ASAJ				LR	LR	18 32 27.3	
	comp=Z,232nm,19.7s,baz=256,slow=36						
OKH	Okha	9.22	314	eP	Pn	18 29 27.6	+4.4
OKH				AMB	AMB	18 29 28.6	
	comp=Z,100nm,0.4s						
OKH				eS	Sn	18 31 06.6	+0.8
OKH				A	A	18 31 10.9	
	comp=Z,130nm,0.4s						
OKH				A	A	18 31 10.9	
	comp=Z,80nm,0.4s						
ERM	Erimo	9.57	238	Pn	Pn	18 29 27.4	-0.5
ERM	Erimo	9.57	238	PN	Pn	18 29 27.4	-0.5
NKL	Nikolayevsk	10.17	308	eP	Pn	18 29 40.1	+4.0
NKL				AMB	AMB	18 29 42.9	
	comp=Z,30nm,0.5s						
JTM	Tenmabayashi	11.56	238	Pn	Pn	18 29 51.0	-4.2
MA2	Magadan	12.12	352	P	Pn	18 30 05.5	+2.7
	comp=Z,9.8nm,0.4s,baz=173,slow=9.5,SNR=9.0						
MA2				LR	LR	18 35 14.4	
	comp=Z,80nm,18.5s,baz=136,slow=40						
MA2	Magadan	12.12	352	Pn	Pn	18 30 03.4	+0.6
MA2	Magadan	12.12	352	eP	Pn	18 30 03.4	+0.6
SHEM	Shemya Is, Ala	13.80	61	P	Pn	18 30 25.5	-0.2
	comp=Z,16nm,0.4s,baz=119,slow=1.1,SNR=4.3						
SHEM				S	Sn	18 32 48.3	-9.3
	comp=Z,22nm,0.5s,baz=159,slow=23,SNR=7.5						
SHEM				LR	LR	18 36 05.7	
	comp=Z,57nm,19.9s,baz=282,slow=38						
KLR	Kul'dur	14.89	284	P	P	18 30 46.3	+0.4
	comp=Z,9.7nm,1.0s,baz=83,slow=14,SNR=20						
KLR				LR	LR	18 36 28.6	
	comp=Z,130nm,18.7s,baz=102,slow=37						
KLR	Kul'dur	14.89	284	ceP	P	18 30 45.3	-0.7
KLR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KLR	Kul'dur	14.89	284	erx	rx	18 30 45.3	
SEY	Seymchan	15.36	357	P	P	18 30 50.0	-1.1
	comp=Z,1.4nm,0.5s,baz=174,slow=14,SNR=8.8						
SEY				LR	LR	18 36 59.8	
	comp=Z,58nm,19.6s,baz=112,slow=38						
SEY	Seymchan	15.36	357	iP	P	18 30 50.4	-0.7
USA0B	Ussuriysk Arra	15.73	266	P	Pn	18 30 52.6	+1.0
USA0B	Ussuriysk Arra	15.73	266	iP	P	18 30 53.9	-1.4
USRK	Ussuriysk Ar.	15.73	266	P	Pn	18 30 52.6	+0.9
	comp=Z,12nm,0.8s,baz=71,slow=13,SNR=9.2						
USRK	Ussuriysk Ar.	15.73	266	Pn	Pn	18 30 52.1	+0.5
MJB9	Matsu-Tunnel	16.13	232	P	Pn	18 30 55.9	-0.9
MAJO	Matsushiro	16.13	232	P	Pn	18 30 55.5	-1.3
MAJO	Matsushiro	16.13	232	P	Pn	18 30 55.5	-1.3
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MJAR	Matsushiro Arr	16.13	232	P	P	18 30 59.4	-0.4
	comp=Z,4.8nm,0.8s,baz=24,slow=11,SNR=9.7						
VLA	Vladivostok	16.21	262	iP	P	18 30 59.1	-1.5
VLA				pmax	pmax		
	comp=Z,10.0nm,0.4s						
VLA	Vladivostok	16.21	262	eP	P	18 30 59.1	-1.5
MSHR	Mys Shultsa	16.92	261	iP	P	18 31 07.8	-0.6
MSHR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MDJ	Mudanjiang	17.21	269		Pn	18 31 09.8	-0.6
JGF	Kuroka	17.30	232		P	18 31 13.5	+0.8
ZEA	Zeya	17.99	300	eP	P	18 31 22.7	+2.5
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ZEA				MLR	MLR		
	comp=E,100nm,20.0s						
ZEA				MLR	MLR		
	comp=Z,100nm,15.0s						
ZEA	Zeya	17.99	300	eP	P	18 31 20.1	-0.1
ZEA				AMB	AMB	18 31 34.9	
	comp=Z,10.0nm,0.9s						
JHJ	Hachijo jima 2	18.08	222	LR	LR	18 41 21.7	
	comp=Z,19nm,19.0s,baz=98,slow=47						
YAK	Yakutsk	19.95	325	P	Pn	18 31 42.7	-0.7
	comp=Z,2.6nm,0.4s,baz=303,slow=4.1,SNR=7.2						
YAK				LR	LR	18 39 13.8	
	comp=Z,98nm,18.8s,baz=102,slow=36						
YAK	Yakutsk	19.95	325	P	P	18 31 40.2	-1.3
YAK				IAmb	IAmb	18 31 56.6	
	comp=Z,13nm,0.7s						
YAK	Yakutsk	19.95	325	eP	Pn	18 31 45.8	+2.5
YAK				eS	Sn	18 35 26.6	+0.2
YAK				pmax	pmax		
	comp=Z,11nm,1.2s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.4s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,55nm,3.6s						
YAK				pmax	pmax		
	comp=N,36nm,3.5s						
YAK				pmax	pmax		
	comp=E,61nm,3.5s						
YAK				smax	smax		
	comp=N,34nm,2.2s						
YAK				smax	smax		
	comp=E,15nm,2.0s						
SEHB	SEOHWA	21.00	253	P	P	18 31 51.8	-1.4
SEHB				IAmb	IAmb	18 32 00.8	
	comp=Z,18nm,1.0s						
KSRS	Korea Array	21.69	252	P	P	18 32 01.3	+0.8
	comp=Z,9.6nm,0.9s,baz=54,slow=10,SNR=32						
KSRS				LR	LR	18 39 14.2	
	comp=Z,45nm,19.9s,baz=50,slow=33						
	comp=Z,9.6nm,0.9s						
KSRS	Korea Array	21.69	252	eP	P	18 32 03.8	+3.3
KSRS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KS19	Wonju Array Si	21.70	252	P	P	18 32 00.4	-0.2
KS19				IAmb	IAmb	18 32 04.6	
	comp=Z,20nm,1.1s						
KSAR	Wonju Array Be	21.72	252	P	P	18 31 60.0	-0.9
KSAR	Wonju Array Be	21.72	252	P	P	18 32 00.0	-0.9
KSCHJ	Chungju	22.00	250	P	P	18 32 03.9	0.0
KSCHJ				IAmb	IAmb	18 32 15.7	
	comp=Z,24nm,1.4s						
H11N2	WAKE ISLAND Hy	29.73	155	T	T	19 04 55.8	
	baz=342,slow=75,SNR=1063						
H11N1	WAKE ISLAND Hy	29.74	155	T	T	19 04 46.2	
	baz=342,slow=75,SNR=2156						
H11N3	WAKE ISLAND Hy	29.74	155	T	T	19 04 53.4	
	baz=342,slow=75,SNR=949						
H11S1	WAKE ISLAND Hy	30.83	156	T	T	19 06 16.7	
	baz=344,slow=76,SNR=6269						
H11S3	WAKE ISLAND Hy	30.84	156	T	T	19 06 17.5	
	baz=344,slow=76,SNR=6396						
H11S2	WAKE ISLAND Hy	30.85	156	T	T	19 06 19.8	
	baz=344,slow=76,SNR=6384						
HHC	Hu-ho-hao-te	30.89	273	eP	P	18 33 26.6	+0.5
HHC				pmax	pmax		
	comp=Z,34nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,4.5s						
N18K	Kilae Creek	31.24	47	P	P	18 33 29.6	+0.7
N18K				IAmb	IAmb	18 33 31.5	
	comp=Z,6.7nm,0.9s						
SONM	Songino Array	31.66	288	P	P	18 33 32.6	-0.3
	comp=Z,0.3nm,0.5s,baz=91,slow=10,SNR=2.7						
SONM				LR	LR	18 47 21.4	
	comp=Z,160nm,19.0s,baz=158,slow=38						
	comp=Z,0.3nm,0.5s						
SONM	Songino Array	31.66	288	IAmb	IAmb	18 33 32.8	
	comp=Z,2.0nm,1.4s						
SONM	Songino Array	31.66	288	P	P	18 33 32.6	-0.3
SONM				pmax	pmax		
	comp=Z,2.0nm,1.4s						
N19K	Bonanza Creek	31.94	46	P	P	18 33 36.5	+1.4
KDAK	Kodiak Island	33.04	52	LR	LR	18 46 22.4	
	comp=Z,70nm,21.5s,baz=258,slow=35						
BPAW	Bear Paw Mtn.	33.66	40	P	P	18 33 50.5	+0.5
KTH	Kantishna Hill	33.67	41	P	P	18 33 51.8	+1.7
NEA2	Nenana	34.51	40	P	P	18 33 58.2	+0.9
NEA2				IAmb	IAmb	18 33 59.6	
	comp=Z,4.4nm,0.6s						
RND	Reindeer	34.59	42	P	P	18 33 58.0	-0.1
RND				IAmb	IAmb	18 33 59.5	
	comp=Z,8.2nm,1.2s						
RND	Reindeer	34.59	42	P	P	18 33 58.0	-0.1
RND				pmax	pmax		
	comp=Z,8.0nm,1.2s						
KNK	Knik Glacier	34.84	45	P	P	18 34 01.2	+0.9
MDM	Murphy Dome	34.88	39	P	P	18 34 01.5	+1.0
MDM				IAmb	IAmb	18 34 15.2	
	comp=Z,3.6nm,0.8s						
SML	Sawmill	34.88	45	P	P	18 34 00.2	-0.4
WRH	Wood River Hil	34.93	40	P	P	18 34 01.7	+0.8
WRH				IAmb	IAmb	18 34 17.7	
	comp=Z,7.6nm,1.2s						
H24K	Noodor Dome	35.05	37	P	P	18 34 03.0	+0.9
CCB	Clear Creek Bu	35.06	40	P	P	18 34 02.2	+0.2
CCB				IAmb	IAmb	18 34 18.0	
	comp=Z,5.6nm,1.3s						
HDA	Harding Lake	35.43	40	P	P	18 34 05.4	+0.2
HDA				IAmb	IAmb	18 34 06.3	
	comp=Z,3.7nm,0.6s						
ILAR	Eielson Array	35.45	39	P	P	18 34 05.9	+0.5
	comp=Z,0.7nm,0.6s,baz=249,slow=6.4,SNR=7.3						
	comp=Z,0.7nm,0.6s						
ILAR	Eielson Array	35.45	39	eP	P	18 34 05.8	+0.3
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
DIV	Divide	36.16	46	P	P	18 34 12.2	+0.5
BMAR	Burnt Mountain	36.42	35	P	P	18 34 14.6	+0.8
BMRM	Bremner River	36.74	46	P	P	18 34 17.1	+0.4
J26L	Joseph Creek	36.89	40	P	P	18 34 18.6	+0.8
MENT	Mentasta	36.94	42	P	P	18 34 19.0	+0.8
M26K	Nabesna, AK	37.33	43	P	P	18 34 22.9	+1.3
M26K				IAmb	IAmb	18 34 24.5	
	comp=Z,4.7nm,0.8s						
L27K	Beaver Creek,	37.79	42	P	P	18 34 26.4	+1.0
L27K				IAmb	IAmb	18 34 38.2	
	comp=Z,5.6nm,1.1s						
BCAR	Beaver Creek A	37.81	42	P	P	18 34 26.7	+1.1
EGAK	Eagle	37.90	39	P	P	18 34 26.5	+0.2
EGAK				IAmb	IAmb	18 34 27.3	
	comp=Z,5.4nm,0.8s						
CTGM	Chitina Glacie	38.32	45	P	P	18 34 31.2	+1.1
CTGM				IAmb	IAmb	18 34 32.2	
	comp=Z,7.4nm,0.8s						
HYT	Haines Junctio	40.19	45	P	P	18 34 47.1	+1.5
INK	Inuvik	40.55	33	P	P	18 34 49.2	+0.9
	comp=Z,2.9nm,0.9s,baz=280,slow=7.5,SNR=3.8						
	comp=Z,2.9nm,0.9s						
INK	Inuvik	40.55	33	P	P	18 34 49.2	+0.9
INK				pmax	pmax		
	comp=Z,9.0nm,1.5s						
ZALV	Zalesovo Beam	42.62	305	P	P	18 35 04.5	-1.0
	comp=Z,0.9nm,0.6s,baz=61,slow=10,SNR=2.6						
ZALV				LR	LR	18 53 49.6	
	comp=Z,63nm,19.8s,baz=146,slow=38						
	comp=Z,0.9nm,0.6s						
A36M	Sachs Harbour	42.77	27	P	P	18 35 07.3	+0.8
A36M				IAmb	IAmb	18 35 09.3	
	comp=Z,9.8nm,0.9s						
DLBC	Dease Lake	44.51	47	LR	LR	18 55 19.3	
	comp=Z,58nm,19.3s,baz=6.0,slow=38						
WMQ	Urumqi	45.21	291	eP	P	18 35 27.2	+0.7
WMQ				LR	LR		
	comp=Z,92nm,17.9s						
PZH	PanZhiHua	45.78	262	P	P	18 35 31.7	+0.4
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,80nm,5.3s						
MK31	Makanchi Array	47.12	297	P	P	18 35 40.3	-1.1
MK31	Makanchi Array	47.12	297	iP	P	18 35 41.2	-0.2
MKAR	Makanchi Array	47.12	297	P	P	18 35 39.9	-1.5
	comp=Z,1.6nm,0.8s,baz=62,slow=7.3,SNR=14						
	comp=Z,1.6nm,0.8s						
MKAR	Makanchi Array	47.12	297	P	P	18 35 41.0	-0.4
MKAR	Makanchi Array	47.12	297	eP	P	18 35 41.4	0.0
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MKAR	Makanchi Array	47.12	297	eP	P	18 35 41.4	0.0
KURK	Kurchatov	47.42	303	P	P	18 35 42.1	-1.5
KURK				IAmb	IAmb	18 35 45.7	
	comp=Z,6.7nm,1.1s						
KURK	Kurchatov	47.42	303	ceP	P	18 35 41.5	-2.1
KURK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KURBB	Kurchatov Arra	47.51	303	P	P	18 35 43.0	-1.3
	comp=Z,3.7nm,0.8s,baz=67,slow=8.3,SNR=23						
	comp=Z,3.7nm,0.8s						
EUNU	Eureka	48.13	12	P	P	18 35 48.6	-0.3
EUNU				IAmb	IAmb	18 35 50.2	
	comp=Z,4.2nm,0.7s						
RES	Resolute Bay	49.79	19	LR	LR	19 01 20.4	
	comp=Z,55nm,18.4s,baz=296,slow=41						
YKA	Yellowknife Ar	49.83	37	P	P	18 36 02.5	+0.5
	comp=Z,2.1nm,0.8s,baz=298,slow=7.5,SNR=12						
	comp=Z,2.1nm,0.8s						
YKA	Yellowknife Ar	49.83	37	eP	P	18 36 02.7	+0.8
YKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BRVK	Borovoye	50.84	309	P	P	18 36 08.1	-1.7
BRVK	Borovoye	50.84	309	P	P	18 36 08.1	-1.7
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
CHTO	Chiang Mai	52.95	257	P	P	18 36 25.8	-0.2
CHTO				IAmb	IAmb	18 36 29.7	
	comp=Z,2.9nm,0.7s						
CHTO	Chiang Mai	52.95	257	P	P	18 36 25.8	-0.2
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CMAR	Chiang Mai Arr	53.21	256	P	P	18 36 27.6	-0.2
	comp=Z,1.8nm,0.8s,baz=38,slow=7.4,SNR=14						
	comp=Z,1.8nm,0.8s						
CMAR	Chiang Mai Arr	53.21	256	eP	P	18 36 28.2	+0.4
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AAK	Ala-Archa	54.02	296	LR	LR	19 01 30.8	
	comp=Z,72nm,18.6s,baz=142,slow=38						
ARU	Arti	54.80	317	LR	LR	19 01 46.5	
	comp=Z,56nm,20.1s,baz=118,slow=38						
NEW	Newport	56.12	54	LR	LR	18 58 48.0	
	comp=Z,34nm,21.3s,baz=318,slow=34						
PINE	Pine Mountain	56.58	60	P	P	18 36 53.4	+1.2
YBH	Yreka Blue Hor	56.76	63	LR	LR	18 58 06.2	
	comp=Z,32nm,19.9s,baz=276,slow=32						
K05A	Summer Lake	57.24	61	P	P	18 36 58.4	+1.5
I07A	Izee	57.25	59	P	P	18 36 57.8	+1.0
I07A				IAmb	IAmb	18 36 59.0	
	comp=Z,6.9nm,1.3s						
BMO	Blue Mountains	58.04	57	P	P	18 37 03.2	+0.8
BMO	Blue Mountains	58.04	57	P	P	18 37 03.2	+0.8
BMO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MOD	Modoc Plateau	58.09	61	P	P	18 37 04.2	+1.4
MOD				IAmb	IAmb	18 37 04.8	
	comp=Z,4.0nm,0.9s						
AKTO	Aktyubinsk	58.62	312	LR	LR	19 02 57.8	
	comp=Z,61nm,20.6s,baz=119,slow=37						
PLID	Pearl Lake	58.64	56	P	P	18 37 06.9	+0.2
WVOR	Wild Horse Val	58.75	60	P	P	18 37 09.0	+1.6
WVOR				IAmb	IAmb	18 37 09.4	
	comp=Z,4.9nm,1.1s						
WVOR	Wild Horse Val	58.75	60	P	P	18 37 09.0	+1.6
WVOR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
LRM	Limekiln Ridge	60.14	54	P	P	18 37 18.3	+1.2
HLID	Hailey	60.48	57	P	P	18 37 20.4	+1.1
YERR	Yerington	60.53	63	P	P	18 37 20.2	+0.4
BOZ	Bozeman (W)	60.73	53	P	P	18 37 21.6	+0.6
BOZ				IAmb	IAmb	18 37 22.5	
	comp=Z,3.1nm,0.7s						
BOZ	Bozeman (W)	60.73	53	P	P	18 37 21.6	+0.6
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BMN	Battle Mountai	60.83	61	P	P	18 37 22.1	+0.4
BMN				IAmb	IAmb	18 37 23.7	
	comp=Z,3.3nm,0.9s						
BMN	Battle Mountai	60.83	61	P	P	18 37 22.1	+0.4
BMN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KVN	Kaiserville	61.18	63	P	P	18 37 24.3	+0.1
KVN				IAmb	IAmb	18 37 26.1	
	comp=Z,4.3nm,0.9s						
KVN	Kaiserville	61.18	63	P	P	18 37 24.3	+0.1
KVN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
RYN	Ryan	61.19	63	P	P	18 37 24.4	+0.2
RYN				IAmb	IAmb	18 37 25.9	
	comp=Z,3.2nm,0.9s						
LHV	Little Huntoon	61.44	64	P	P	18 37 26.8	+1.1
NVAR	Mina Array Bea	61.45	63	P	P	18 37 26.8	+0.7
	comp=Z,1.8nm,0.7s,baz=297,slow=7.1,SNR=13						
	comp=Z,1.8nm,0.7s						
NVAR	Mina Array Bea	61.45	63	P	P	18 37 26.3	+0.2
RLMT	Red Lodge	62.31	53	P	P	18 37 32.1	+0.4
RLMT				IAmb	IAmb	18 37 34.7	
	comp=Z,1.8nm,0.6s						
TPH	Tonopah	62.33	63	P	P	18 37 32.4	+0.5
TPH	Tonopah	62.33	63	P	P	18 37 32.4	+0.5
TPH				pmax	pmax		
	comp=Z,23nm,1.0s						
TPAW	Teton Pass	62.46	55	P	P	18 37 34.0	+1.2
TPAW				IAmb	IAmb	18 37 35.5	
	comp=Z,3.4nm,0.7s						
HVU	Hansel Valley	62.54	57	P	P	18 37 33.9	+0.6
HVU	Hansel Valley	62.54	57	P	P	18 37 33.9	+0.6
HVU				pmax	pmax		
	comp=Z,3.0nm,1.1s						
LOHW	Long Hollow	62.57	55	P	P	18 37 34.8	+1.3
LOHW				IAmb	IAmb	18 37 36.2	
	comp=Z,6.9nm,1.4s						
LCH	Last Change Ra	62.62	64	P	P	18 37 34.4	+0.6
LCH				IAmb	IAmb	18 37 35.6	
	comp=Z,5.7nm,1.5s						
R11A	Troy Canyon, C	63.13	62	P	P	18 37 37.3	+0.1
R11A				IAmb	IAmb	18 37 38.8	
	comp=Z,2.8nm,0.9s						
FINES	FINESS Array B	63.52	335	P	P	18 37 37.4	-1.8
	comp=Z,1.2nm,0.6s,baz=40,slow=7.9,SNR=11						
FINES				LR	LR	19 08 32.8	
	comp=Z,40nm,18.3s,baz=79,slow=39						
	comp=Z,1.2nm,0.6s						
FINES	FINESS Array B	63.52	335	eP	P	18 37 37.2	-1.9
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
DUG	Dugway, Tooele	63.55	59	P	P	18 37 40.6	+0.6
DUG	Dugway, Tooele	63.55	59	P	P	18 37 40.6	+0.6
DUG				pmax	pmax		
	comp=Z,7.0nm,1.3s						
BW06	Boulder Array	63.70	55	P	P	18 37 41.5	+0.5
BW06				IAmb	IAmb	18 37 42.6	
	comp=Z,4.0nm,1.1s						
PD31	Pinedale Array	63.70	55	P	P	18 37 41.5	+0.5
PD31				IAmb	IAmb	18 37 42.6	
	comp=Z,3.3nm,1.0s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PDAR	Pinedale Array	63.70	55	P	P	18 37 41.6	+0.6
	comp=Z,1.6nm,0.8s,baz=318,slow=2.0,SNR=14						
	comp=Z,1.6nm,0.8s						
PDAR	Pinedale Array	63.70	55	P	P	18 37 41.2	+0.2
GWY	Greenwater Val	63.90	64	P	P	18 37 42.6	+0.3
GWY				IAmb	IAmb	18 37 43.7	
	comp=Z,4.3nm,1.0s						
QSM	Queen of Sheba	63.92	65	P	P	18 37 43.4	+1.1
QSM				IAmb	IAmb	18 37 43.9	
	comp=Z,4.3nm,1.0s						
FRB	Frobisher Bay	64.00	20	LR	LR	19 07 16.0	
	comp=Z,40nm,18.8s,baz=240,slow=38						
NLU	North Lily Min	64.14	58	P	P	18 37 44.8	+0.8
NLU				IAmb	IAmb	18 37 45.6	
	comp=Z,4.2nm,1.1s						
CCUT	Cedar City	64.98	61	P	P	18 37 50.4	+0.9
CCUT				IAmb	IAmb	18 37 51.4	
	comp=Z,5.0nm,1.1s						
RDMU	Red Mountain	65.16	57	P	P	18 37 51.2	+0.6
MTPU	Mount Pierson	65.35	60	P	P	18 37 53.0	+1.0
Q16A	Castle Valley	65.35	59	P	P	18 37 53.0	+1.2
Q16A				IAmb	IAmb	18 37 53.7	
	comp=Z,4.2nm,1.0s						
LCMT	Little Creek M	65.41	62	P	P	18 37 52.9	+0.7
LCMT				IAmb	IAmb	18 37 54.1	
	comp=Z,4.1nm,0.8s						
SRU	San Rafael Swe	65.59	58	P	P	18 37 54.0	+0.6
SRU	San Rafael Swe	65.59	58	P	P	18 37 54.0	+0.6
SRU				pmax	pmax		
	comp=Z,6.0nm,1.0s						
RSSD	Black Hills	65.76	51	P	P	18 37 54.8	+0.4
RSSD	Black Hills	65.76	51	P	P	18 37 54.8	+0.4
RSSD				pmax	pmax		
	comp=Z,5.0nm,0.8s						
U15A	North Rim	66.37	61	P	P	18 37 59.6	+1.2
U15A				IAmb	IAmb	18 38 00.5	
	comp=Z,3.4nm,1.0s						
GEYT	Alibeck	66.70	301	LR	LR	19 09 32.9	
	comp=Z,59nm,19.0s,baz=155,slow=38						
PV11	David Mesa, Pa	67.09	58	P	P	18 38 02.9	-0.1
PV13	Radium Mtn., P	67.22	58	P	P	18 38 04.3	+0.5
WUAZ	Wupatki	67.53	62	P	P	18 38 06.2	+0.4
WUAZ				IAmb	IAmb	18 38 07.7	
	comp=Z,3.2nm,0.9s						
NOA	NORSAR Array B	67.60	341	P	P	18 38 04.7	-0.9
	comp=Z,0.5nm,0.6s,baz=27,slow=6.3,SNR=3.5						
NOA				LR	LR	19 12 44.5	
	comp=Z,15nm,18.1s,baz=90,slow=40						
	comp=Z,0.5nm,0.6s						
NOA	NORSAR Array B	67.60	341	*e*P	P	18 38 05.9	+0.3
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
HFS	Hagfors	67.85	340	LR	LR	19 09 46.4	
	comp=Z,38nm,20.1s,baz=78,slow=38						
S22A	4UR Ranch, Cre	68.64	57	P	P	18 38 13.8	+1.0
MAK	Makhachkala	68.98	311	*e*P	P	18 38 14.1	-0.4
MAK				*e**PP	sP	18 38 29.7	+2.8
MAK				*e**SP	PcP	18 38 36.3	-2.3
MAK				*e*		18 40 46.8	
MAK				*e*PPP	PPP	18 42 26.3	
MAK				*e*S	S	18 47 13.5	-3.4
MAK				*e**SS	sS	18 47 40.7	+9.0
MAK				pmax	pmax		
	comp=Z,26nm,0.4s						
MAK				MLR	MLR		
	comp=Z,537nm,22.0s						
WRA	Warramunga Arr	69.56	200	P	P	18 38 17.2	-1.0
	comp=Z,0.7nm,0.7s,baz=14,slow=6.4,SNR=5.6						
	comp=Z,0.7nm,0.7s						
ECSD	EROS Data Cent	69.80	47	P	P	18 38 19.4	-0.2
ECSD				IAmb	IAmb	18 38 20.3	
	comp=Z,3.4nm,0.8s						
TUC	Tucson	70.10	64	P	P	18 38 21.2	-0.5
TUC	Tucson	70.10	64	P	P	18 38 21.2	-0.5
TUC				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KVAR	Kislovodsk Arr	70.64	315	LR	LR	19 12 22.9	
	comp=Z,72nm,19.9s,baz=248,slow=38						
KBZ	Khabaz	70.71	314	LR	LR	19 11 47.9	
	comp=Z,54nm,18.9s,baz=46,slow=38						
LENM	Lemitar	71.07	60	P	P	18 38 28.3	+0.6
AKASG	Malin Array Be	71.17	327	P	P	18 38 26.3	-1.4
	comp=Z,1.0nm,0.5s,baz=33,slow=6.2,SNR=6.2						
AKASG				LR	LR	19 13 45.3	
	comp=Z,50nm,18.3s,baz=15,slow=39						
	comp=Z,1.0nm,0.5s						
AKASG	Malin Array Be	71.17	327	*e*P	P	18 38 26.2	-1.6
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
319A	Douglas	71.66	64	P	P	18 38 31.6	+0.4
GNI	Garni	72.45	311	LR	LR	19 14 18.6	
	comp=Z,54nm,18.4s,baz=78,slow=39						
ASAR	Alice Springs	73.26	199	P	P	18 38 40.6	+0.1
	comp=Z,2.0nm,0.8s,baz=12,slow=5.1,SNR=18						
	comp=Z,2.0nm,0.8s						
ASAR	Alice Springs	73.26	199	P	P	18 38 40.4	-0.1
P38A	Dawn	74.41	48	P	P	18 38 46.6	-0.6
CLL	Collm	75.92	336	P	P	18 38 54.8	-0.9
CLL				IAmb	IAmb	18 38 55.5	
	comp=Z,3.7nm,0.7s						
CLL	Collm	75.92	336	*i* P	P	18 38 54.5	-1.2
CLL				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CLL	Collm	75.92	336	*i* P	P	18 38 54.5	-1.2
	comp=Z,4.0nm,0.7s						
TX31	Lajitas Ar. Si	76.49	61	P	P	18 38 59.5	0.0
TX32	Lajitas Array	76.49	61	P	P	18 38 59.2	-0.2
TX32				IAmb	IAmb	18 39 00.8	
	comp=Z,5.8nm,0.9s						
TXAR	Lajitas Array	76.49	61	P	P	18 38 60.0	+0.5
	comp=Z,4.9nm,0.8s,baz=298,slow=4.4,SNR=57						
	comp=Z,4.9nm,0.8s						
TXAR	Lajitas Array	76.49	61	P	P	18 38 59.2	-0.2
TXAR	Lajitas Array	76.49	61	P	P	18 39 00.0	+0.5
VRAC	Vranov	76.66	333	LR	LR	19 18 03.7	
	comp=Z,35nm,19.2s,baz=30,slow=40						
MLR	Muntele Rosu	76.71	325	P	P	18 39 00.0	-0.4
MLR	Muntele Rosu	76.71	325	P	P	18 39 00.0	-0.4
MLR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
U40A	Yellville	77.25	50	P	P	18 39 02.9	-0.6
KHC	Kasperske Hory	77.72	335	*e*P	P	18 39 05.3	-0.6
KHC	Kasperske Hory	77.72	335	*e*P	P	18 39 05.3	-0.6
GERES	GERESS Array B	77.94	334	P	P	18 39 06.5	-0.7
	comp=Z,0.4nm,0.5s,baz=37,slow=6.9,SNR=5.0						
	comp=Z,0.4nm,0.5s						
FCAR	Ozark Folk Cen	77.98	49	P	P	18 39 06.7	-0.9
BRTR	Keskin Array B	78.19	317	LR	LR	19 18 08.6	
	comp=Z,43nm,18.1s,baz=124,slow=39						
H03N2	Juan Fernandez	138.10	90	T	T	21 21 32.6	
	baz=309,slow=77,SNR=10						
H03N1	Juan Fernandez	138.12	90	T	T	21 21 35.8	
	baz=309,slow=77,SNR=13						
H03N3	Juan Fernandez	138.12	90	T	T	21 21 35.3	
	baz=309,slow=77,SNR=14						

NOU 01 18:33:58.5, 20.°91S×177.°80W, h500km, MLv4.3/7, Fiji Islands Region
NEIC 01 18:33:58.4±1.4, 21.°14S±0.°10×178.°0W±0.°1, h473km±7km, mb4.3/48, Error ellipse: s-maj=19.1km s-min=12.5km az=118.0
IDC 01 18:33:58.8±2.2, 21.°21S×178.°10W, h478km±20km, mb3.3/7, mbtmp4.2/10, Error ellipse: s-maj=28.4km s-min=18.6km az=113.0
ISC 01 18:34:00.1±0.6, 21.°10S±0.°10×178.°10W±0.°10, h495km, n81, σ1.s02/78, mb4.3/29, 1C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	2.93	347	P	P	18 35 08.8	-1.5
MSVF	Nonsavu	4.94	312	P	P	18 35 25.2	-1.2
	101nm,0.5s,baz=58,slow=23,SNR=153						
MSVF	Nonsavu	4.94	312	P	P	18 35 25.1	-1.4
MSVF	Nonsavu	4.94	312	P	P	18 35 25.2	-1.2
DGTI	Dogotuki	5.19	336	P	P	18 35 27.3	-1.4
NIUE	Niue	7.94	77	P	P	18 35 53.8	-2.0
AFI	Afiamalu	9.35	41	P	P	18 36 06.5	-4.3
	6.2nm,0.3s,baz=156,slow=23,SNR=1.2						
AFI				S	S	18 37 47.9	-10
	13nm,0.4s,baz=305,slow=23,SNR=6.2						
MARNC	Mare, Loyalty	12.93	266	P	P	18 36 48.2	-0.4
DZM	Mont Dzumac	14.41	263	P	P	18 37 04.2	-0.1
	5.4nm,0.6s,baz=84,slow=16,SNR=5.3						
OUZ	Omahuta	15.85	206	P	P	18 37 17.3	-1.8
OUZ				IAmb	IAmb	18 37 24.1	
	comp=Z,15nm,1.0s						
URZ	Urewera	17.60	193	P	P	18 37 34.9	-1.9
	comp=Z,4.1nm,0.5s,baz=121,slow=23,SNR=6.4						
URZ	Urewera	17.60	193	IAmb	IAmb	18 37 41.2	
	comp=Z,35nm,1.2s						
URZ	Urewera	17.60	193	P	P	18 37 37.8	+1.0
BKZ	Black Stump Fm	18.60	193	P	P	18 37 44.8	-1.3
BFZ	Birch Farm	20.11	193	P	P	18 37 59.7	-0.1
QRZ	Quartz Range	21.22	200	P	P	18 38 10.3	+0.4
QRZ	Quartz Range	21.22	200	P	P	18 38 10.7	+0.8
NNZ	Nelson	21.32	198	P	P	18 38 10.7	-0.1
THZ	Tophouse	21.96	198	P	P	18 38 15.3	-1.3
KHZ	Kahutara	22.39	196	P	P	18 38 20.3	-0.1
LTZ	Lake Taylor	23.08	198	P	P	18 38 25.2	-1.5
LTZ				IAmb	IAmb	18 38 31.0	
	comp=Z,14nm,0.8s						
RPZ	Rata Peaks	24.30	199	P	P	18 38 36.3	-1.1
	comp=Z,6.1nm,0.7s,baz=12,slow=22,SNR=1.6						
	comp=Z,6.1nm,0.7s						
FOZ	Fox Glacier	24.54	202	P	P	18 38 39.2	-0.3
WHZ	Wether Hill Ro	27.25	202	P	P	18 39 03.3	-0.2
EIDS	Eidsvold	28.60	255	P	P	18 39 15.4	-0.2
EIDS				IAmb	IAmb	18 39 28.5	
	comp=Z,16nm,1.2s						
ARMA	Armidale	28.72	245	P	P	18 39 17.1	+0.3
ARMA				IAmb	IAmb	18 39 35.3	
	comp=Z,12nm,1.2s						
CTAO	Charters Tower	33.34	265	P	P	18 39 56.5	0.0
CTAO				IAmb	IAmb	18 40 14.2	
	comp=Z,14nm,1.2s						
STKA	Stephens Creek	37.45	245	P	P	18 40 29.5	-1.1
	comp=Z,0.7nm,0.5s,baz=118,slow=14,SNR=3.8						
	comp=Z,0.7nm,0.5s						
STKA	Stephens Creek	37.45	245	IAmb	IAmb	18 40 35.3	
	comp=Z,1.1nm,1.3s						
COEN	Coen	37.53	274	P	P	18 40 31.7	+0.2
COEN				IAmb	IAmb	18 40 47.0	
	comp=Z,12nm,0.9s						
MANU	Manus Island	38.60	295	P	P	18 40 40.4	+0.1
BBOO	Buckleboo	42.20	244	P	P	18 41 08.6	-0.3
BBOO				IAmb	IAmb	18 41 22.1	
	comp=Z,11nm,1.2s						
WR0	Warramunga Arr	44.23	263	P	P	18 41 24.1	-0.9
AS31	Alice Springs	44.29	257	P	P	18 41 25.2	-0.2
ASAR	Alice Springs	44.29	257	P	P	18 41 25.1	-0.3
	comp=Z,2.6nm,0.8s,baz=94,slow=8.2,SNR=38						
ASAR				PcP	PcP	18 43 00.4	+1.1
	comp=Z,1.6nm,0.6s,baz=104,slow=3.9,SNR=19						
	comp=Z,2.6nm,0.8s						
WB0	Warramunga Arr	44.41	263	P	P	18 41 25.5	-0.8
WB2	Warramunga Arr	44.41	263	P	P	18 41 25.4	-1.0
WRA	Warramunga Arr	44.42	263	P	P	18 41 25.7	-0.8
	comp=Z,1.0nm,0.3s,baz=96,slow=7.6,SNR=86						
WRA				PcP	PcP	18 43 00.3	+0.5
	comp=Z,0.7nm,0.8s,baz=101,slow=3.0,SNR=3.6						
	comp=Z,1.0nm,0.3s						
WRA	Warramunga Arr	44.42	263	P	P	18 41 25.4	-1.1
OPA	Opana	46.83	26	P	P	18 41 44.7	0.0
KNRA	Kununurra	50.52	267	P	P	18 42 12.2	-0.3
ADK	Adak	72.67	1	P	P	18 44 37.4	+0.7
PETK	Petropavlovsk-	76.82	345	P	P	18 45 00.8	+0.8
	comp=Z,0.9nm,0.6s,baz=140,slow=7.2,SNR=4.1						
	comp=Z,0.9nm,0.6s						
CHIR	Chirikof Islan	78.96	13	P	P	18 45 12.6	+1.1
BELA	Belgrano 2	78.98	173	P	P	18 45 13.0	+1.5
O18K	Koktuh Hills	82.80	11	P	P	18 45 32.7	+1.3
O18K				IAmb	IAmb	18 45 33.0	
	comp=Z,8.6nm,0.8s						
N19K	Bonanza Creek	83.83	11	P	P	18 45 37.4	+0.8
N19K				IAmb	IAmb	18 45 49.2	
	comp=Z,5.8nm,1.1s						
M19K	Big River Lodg	84.86	11	P	P	18 45 42.3	+0.7
M19K				IAmb	IAmb	18 45 58.4	
	comp=Z,6.6nm,1.4s						
SUA	Susitna One	85.16	13	P	P	18 45 43.5	+0.3
SUA				IAmb	IAmb	18 45 44.5	
	comp=Z,5.3nm,0.8s						
K20K	Telida	86.27	11	P	P	18 45 48.1	-0.2
ISLE	Juniper Island	86.41	17	P	P	18 45 49.6	+0.4
ISLE				IAmb	IAmb	18 45 57.2	
	comp=Z,13nm,1.1s						
J20K	Nowinta River	87.02	10	P	P	18 45 52.7	+0.9
TRF	Thorofare Moun	87.05	12	P	P	18 45 52.3	+0.1
TRF				IAmb	IAmb	18 45 53.3	
	comp=Z,5.0nm,0.8s						
RND	Reindeer	87.30	13	P	P	18 45 53.9	+0.6
RND				IAmb	IAmb	18 45 55.3	
	comp=Z,5.8nm,0.8s						
I21K	Tanana	88.31	11	P	P	18 45 58.7	+0.9
I21K				IAmb	IAmb	18 45 59.3	
	comp=Z,3.0nm,0.7s						
MLY	Manley	88.39	11	P	P	18 45 58.5	+0.1
MLY				IAmb	IAmb	18 45 59.5	
	comp=Z,9.7nm,1.3s						
WRH	Wood River Hil	88.40	13	P	P	18 45 58.7	+0.4
WRH				IAmb	IAmb	18 45 59.6	
	comp=Z,4.0nm,0.7s						
HDA	Harding Lake	88.58	13	P	P	18 45 59.8	+0.7
HDA				IAmb	IAmb	18 46 00.5	
	comp=Z,3.8nm,0.6s						
H21K	Melozitna Rive	88.61	10	P	P	18 45 59.9	+0.6
CCB	Clear Creek Bu	88.62	13	P	P	18 45 59.7	+0.5
CCB				IAmb	IAmb	18 46 00.3	
	comp=Z,4.9nm,0.6s						
I23K	Minto, Yukon-K	88.76	12	P	P	18 46 00.4	+0.5
I23K				IAmb	IAmb	18 46 04.5	
	comp=Z,6.6nm,1.4s						
IMAR	Indian Mountai	88.76	10	P	P	18 46 00.7	+0.7
ILAR	Eielson Array	88.91	13	P	P	18 46 01.1	+0.4
	comp=Z,0.9nm,0.5s,baz=213,slow=5.2,SNR=9.2						
	comp=Z,0.9nm,0.5s						
J25K	Salcha River,	89.10	13	P	P	18 46 02.7	+1.1
J25K				IAmb	IAmb	18 46 27.5	
	comp=Z,4.3nm,1.5s						
J26L	Joseph Creek	89.41	14	P	P	18 46 05.2	+2.1
J26L				IAmb	IAmb	18 46 05.6	
	comp=Z,2.4nm,0.8s						
M30M	Minto, Yukon	89.56	18	P	P	18 46 05.2	+1.3
M30M				IAmb	IAmb	18 46 05.7	
	comp=Z,5.6nm,1.2s						
CMAR	Chiang Mai Arr	90.22	290	P	P	18 46 08.3	+0.5
	comp=Z,0.9nm,0.9s,baz=119,slow=3.2,SNR=7.4						
	comp=Z,0.9nm,0.9s						
KURBB	Kurchatov Arra	114.42	317	PKP	PKiKP	18 51 43.2	+0.2
	comp=Z,0.3nm,0.6s,baz=86,slow=1.4,SNR=5.6						
ARCES	ARCESS Array B	129.49	349	PKP	PKPdf	18 52 11.9	+0.5
	comp=Z,1.6nm,0.7s,baz=1.5,slow=9.0,SNR=4.0						
FINES	FINESS Array B	136.31	343	PKP	PKPdf	18 52 25.0	+0.6
	comp=Z,0.3nm,0.3s,baz=112,slow=2.4,SNR=4.2						
HFS	Hagfors	140.11	351	PKhKP	PKPpre	18 52 24.6	
	comp=Z,1.0nm,0.3s,baz=48,slow=4.4,SNR=13						
AKASG	Malin Array Be	143.48	331	PKP	PKPab	18 52 36.2	+0.3
	comp=Z,4.4nm,0.4s,baz=42,slow=4.7,SNR=29						
AKASG	Malin Array Be	143.48	331		PKPab	18 52 35.9	0.0
AKBB	Malin Array Si	143.48	331		PKPab	18 52 36.1	+0.2
BRTR	Keskin Array B	147.16	312	PKPbc	PKPbc	18 52 48.0	+0.4
	comp=Z,1.8nm,0.7s,baz=122,slow=3.8,SNR=5.2						
OSTC	Ostas	148.51	342	*e*PKP	PKiKP	18 52 52.1	+0.4
CLL	Collm	148.62	347	⇑*i*PKPbc	PKiKP	18 52 52.2	+0.4
	comp=Z,5.0nm,0.8s						
CLL				*i* PKPab	PKPab	18 52 56.7	+0.6
	comp=Z,6.0nm,1.1s						
DPC	Dobruska-Polom	148.66	342	*e*PKP	PKiKP	18 52 52.0	0.0
KHC	Kasperske Hory	150.51	344	*e*PKP	PKiKP	18 52 56.7	+0.8
KHC				*e*x	x	18 53 05.2	
CKRC	Cesky Krumlov	150.61	343	*e*PKP	PKiKP	18 52 56.9	+0.9
GERES	GERESS Array B	150.75	344	PKPbc	PKiKP	18 52 56.7	+0.3
	comp=Z,0.9nm,0.6s,baz=39,slow=2.6,SNR=10						

TIR 01 18:41:44.7, 41.°23N×21.°06E, h20km±3km, Md2.6, Ml1.9
ATH 01 18:41:45.9, 41.°21N×21.°03E, h10km±4km, ML1.7/7, Error ellipse: s-maj=5.8km s-min=1.5km az=170.0
ISC 01 18:41:45.2±1.3, 41.°24N±0.°03×21.°06E±0.°03, h3km±12km, n15, σ0.s56/25, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FNA	Florina	0.52	152	P	Pg	18 41 55.6	+0.5
FNA				S	Sg	18 42 02.5	+0.6
FNA				AML	AML	18 42 03.5	
	comp=E,434µm,0.3s						
FNA				AML	AML	18 42 07.0	
	comp=N,504µm,0.3s						
FNA	Florina	0.52	152	P	Pg	18 41 55.7	+0.5
	baz=151						
FNA				S	Sb	18 42 03.3	-1.6
	baz=151						
PHP	Peshkopia	0.64	314	P	Pg	18 41 57.1	-0.4
	baz=315						
PHP				S	Sg	18 42 06.5	+0.7
	baz=315						
PHP				AMP			
	comp=N,0.2nm,0.2s,baz=315						
KBN	Korca	0.65	198	P	Pb	18 41 59.0	-0.3
	baz=199						
KBN				S	Sg	18 42 05.9	-0.3
	baz=199						
KBN				AMP			
	comp=N,0.3nm,0.2s,baz=199						
NEST	Nestorio	0.83	180	P	Pg	18 42 00.5	-0.5
NEST				S	Sg	18 42 12.0	+0.2
NEST				AML	AML	18 42 17.2	
	comp=E,120µm,0.2s						
NEST				AML	AML	18 42 17.5	
	comp=N,176µm,0.4s						
TIR	Tirane	0.90	277	P	Pg	18 42 02.5	0.0
	baz=278						
TIR				S	Sb	18 42 16.1	+0.2
	baz=278						
GRG	Griva	1.06	105	P	Pb	18 42 06.0	-0.1
GRG				S	Sb	18 42 19.8	-0.6
GRG				AML	AML	18 42 24.5	
	comp=E,30µm,0.1s						
GRG				AML	AML	18 42 26.6	
	comp=N,43µm,0.4s						
KZN	Kozani	1.08	150	P	Pb	18 42 06.4	-0.2
KZN				AML	AML	18 42 23.7	
	comp=E,108µm,0.6s						
KZN				AML	AML	18 42 24.5	
	comp=N,103µm,0.3s						
LSK	Leskovik	1.15	198	P	Pb	18 42 07.9	+0.2
	baz=198						
LSK				S	Sg	18 42 22.2	+0.1
	baz=198						
KPRO	Kipourio	1.31	170	P	Pb	18 42 10.3	-0.1
KPRO				AML	AML	18 42 33.1	
	comp=E,76µm,0.7s						
KPRO				AML	AML	18 42 35.4	
	comp=N,78µm,0.6s						
BCI	Bajram Curri	1.34	327	P	Pg	18 42 10.2	-0.7
	baz=328						
BCI				S	Sn	18 42 30.0	+0.8
	baz=328						
KNT	Kendrikon	1.39	93	P	Pn	18 42 11.5	0.0
KNT				S	Sb	18 42 30.2	+0.2
IGT	Igoumenitsa	1.80	198	P	Pn	18 42 17.6	+0.5
IGT				AML	AML	18 42 45.9	
	comp=E,27µm,0.4s						
IGT				AML	AML	18 42 49.0	
	comp=N,20µm,0.8s						
KEK	Kerkira	1.81	212	P	Pn	18 42 17.0	-0.2
THL	Klokotos Trika	1.83	156	P	Pn	18 42 17.6	0.0
THL				AML	AML	18 42 46.2	
	comp=N,17µm,0.8s						
THL				AML	AML	18 42 50.9	
	comp=E,22µm,0.6s						

DJA 01 18:47:23.2±0.6, 0°N±5°×12°2E±°, h182km±6km, M3.5/8, mb3.5/2, mB4.6/1, MLv3.5/8, Mw(mB)3.8/1
IDC 01 18:47:24.8±8.9, 0.°41N×122.°58E, h219km±86km, mb2.8/3, mbtmp3.3/3, Error ellipse: s-maj=228.6km s-min=27.0km az=61.0
ISC 01 18:47:22.5±1.0, 0.°33N±0.°10×122.°22E±0.°07, h200km, n11, σ0.s80/14, mb3.3/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	Marisa	0.31	297	P	Pn	18 47 48.9	-0.1
MRSI				S	Sn	18 48 07.7	-1.8
APSI	Ampana	1.36	205	P	Pn	18 47 55.4	+0.4
LUWI	Luwuk	1.47	158	P	Pn	18 47 56.4	+0.4
LUWI				S	Sn	18 48 21.6	-0.5
KMSI	Cibinong	1.78	82	P	Pn	18 47 58.7	-0.1
MPSI	Mapaga	2.32	270	P	Pn	18 48 04.2	-0.2
TTSI	Tana Toraja	4.12	216	P	Pn	18 48 26.2	+0.3
SANI	Sanana	4.45	122	P	Pn	18 48 29.2	-0.7
LBMI	Labuha	5.37	100	P	Pn	18 48 42.5	+0.8
	0.1nm11nm,1.1s						
WRA	Warramunga Arr	23.39	150	P	P	18 52 13.1	-0.4
	0.6nm,0.6s,baz=326,slow=11,SNR=16						
	0.6nm,0.6s						
ASAR	Alice Springs	26.42	155	P	P	18 52 40.9	0.0
	0.3nm,0.5s,baz=343,slow=14,SNR=16						
ASAR				PcP	PcP	18 56 00.6	-0.5
	0.2nm,0.3s,baz=349,slow=2.0,SNR=11						
	0.3nm,0.5s						
MKAR	Makanchi Array	57.92	329	P	P	18 56 55.0	+1.3
	0.2nm,0.5s,baz=130,slow=9.0,SNR=1.9						
	0.2nm,0.5s						

IDC 01 18:53:00.5±3.1, 22.°61N×12.°00W, h0km, mb3.6/2, mbtmp3.5/3, ML3.4/1, Error ellipse: s-maj=56.3km s-min=47.6km az=96.0, Mauritania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	16.07	124	Pn	Pn	18 56 48.4	+0.5
	0.1nm,0.3s,baz=311,slow=13,SNR=12						
TORD				Sn	Sn	18 59 35.9	-11
	0.1nm,0.3s,baz=302,slow=23,SNR=1.8						
	0.2nm,0.3s						
I42PT	GRACIOSA ISLAN	21.33	324	*i*		21 05 30.0	
	baz=136,slow=327,SNR=1.3						
GERES	GERESS Array B	33.17	32	P	P	18 59 38.5	-0.3
	0.2nm,0.4s,baz=220,slow=9.0,SNR=1.9						
	0.2nm,0.4s						
FINES	FINESS Array B	46.78	24	P	P	19 01 31.4	0.0
	1.3nm,0.9s,baz=224,slow=3.8,SNR=4.5						
	1.3nm,0.9s						

IDC 01 19:12:34.7±0.9, 1.°59N×124.°42E, h0km, mb3.9/5, mbtmp3.9/5, Error ellipse: s-maj=58.3km s-min=18.5km az=71.0
NEIC 01 19:12:52.7±1.4, 1.°67N±0.°09×124.°84E±0.°08, h153km±11km, mb4.2/16, Error ellipse: s-maj=14.5km s-min=8.5km az=216.0
DJA 01 19:12:55.4±0.4, 2°N±4°×12°5E±°, h153km±8km, M4.0/16, mb4.0/5, mB5.0/1, MLv4.1/16, Mw(mB)4.4/1
ISC 01 19:12:52.7±0.6, 1.°66N±0.°08×124.°92E±0.°06, h154km, n36, σ1.s35/39, mb4.0/12, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	Cibinong	1.43	221	P	Pn	19 13 24.1	+2.3
SGSI	Sangihe	2.10	17	P	Pn	19 13 34.5	+5.2
TNTI	Ternate	2.60	110		Pn	19 13 36.4	+1.2
TNTI				Sn	Sn	19 14 08.0	-0.2
TNTI	Ternate	2.60	110	P	Pn	19 13 37.3	+2.1
TNTI				S	Sn	19 14 09.5	+1.4
MRSI	Marisa	3.20	248	P	Pn	19 13 45.5	+2.8
LUWI	Luwuk	3.44	219	Pn	Pn	19 13 45.7	-0.1
LUWI	Luwuk	3.44	219	P	Pn	19 13 47.6	+1.8
LBMI	Labuha	3.45	131	P	Pn	19 13 47.2	+1.3
SANI	Sanana	3.84	164	P	Pn	19 13 49.8	-1.2
APSI	Ampana	4.15	232	P	Pn	19 13 56.4	+1.4
TOLI2	Tolitoli	4.17	263	Pn	Pn	19 13 54.0	-1.2
MPSI	Mapaga	5.19	255	P	Pn	19 14 11.9	+3.3
	0.1nm11nm,1.1s						
AAI	Ambon	6.24	148	P	Pn	19 14 24.1	+1.4
	0.3nm30nm,0.8s						
MSAI	Masohi	6.39	141	P	Pn	19 14 25.8	+1.2
SWI	Sorong	6.82	112	P	Pn	19 14 31.6	+1.2
	0.1nm30nm,0.7s						
FAKI	Fak Fak	8.63	122	Pn	Pn	19 14 54.4	-0.1
KNRA	Kununurra	17.64	168	P	P	19 16 47.2	-0.6
KNRA				IAmb	IAmb	19 16 48.9	
	comp=Z,7.6nm,0.6s						
TPUB	Ta-pu	21.91	349	P	P	19 17 32.9	-0.8
NACB	Ninganchiao	22.61	352	P	P	19 17 38.5	-2.1
NACB				IAmb	IAmb	19 17 43.9	
	comp=Z,22nm,1.0s						
WB0	Warramunga Arr	23.24	157	P	P	19 17 45.6	-0.8
WB0				IAmb	IAmb	19 17 46.5	
	comp=Z,7.5nm,0.4s						
WRAB	Tennant Creek	23.37	157	P	P	19 17 47.2	-0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
WRAB				IAmb	IAmb	19 17 48.7	
	comp=Z,17nm,1.4s						
WRA	Warramunga Arr	23.38	157	P	P	19 17 47.1	-0.6
	comp=Z,3.3nm,0.4s,baz=334,slow=11,SNR=34						
	comp=Z,3.3nm,0.4s						
WRA	Warramunga Arr	23.38	157	P	P	19 17 46.3	-1.3
WB2	Warramunga Arr	23.38	157	P	P	19 17 47.5	-0.1
WB2				IAmb	IAmb	19 17 48.4	
	comp=Z,6.4nm,0.7s						
WR0	Warramunga Arr	23.47	157	P	P	19 17 48.7	+0.2
WR0				IAmb	IAmb	19 18 04.9	
	comp=Z,8.2nm,1.4s						
AS31	Alice Springs	26.65	161	P	P	19 18 16.3	-1.0
ASAR	Alice Springs	26.65	161	P	P	19 18 16.8	-0.5
	comp=Z,0.6nm,0.3s,baz=342,slow=7.9,SNR=21						
ASAR				PcP	PcP	19 21 37.2	-0.1
	comp=Z,0.2nm,0.4s,baz=343,slow=1.9,SNR=5.2						
	comp=Z,0.6nm,0.3s						
KS19	Wonju Array Si	35.77	4	P	P	19 19 35.5	-1.4
STKA	Stephens Creek	36.92	156	P	P	19 19 46.8	+0.1
	comp=Z,0.6nm,0.6s,baz=344,slow=12,SNR=4.1						
	comp=Z,0.6nm,0.6s						
PEA0B	Petropavlovsk-	58.02	23	P	P	19 22 30.5	+1.3
PETK	Petropavlovsk-	58.02	23	P	P	19 22 31.2	+1.9
	comp=Z,0.7nm,0.5s,baz=202,slow=3.8,SNR=8.8						
	comp=Z,0.7nm,0.5s						
MK31	Makanchi Array	58.25	327	P	P	19 22 30.1	-0.9
MKAR	Makanchi Array	58.25	327	P	P	19 22 30.4	-0.6
	comp=Z,0.5nm,0.4s,baz=122,slow=7.5,SNR=14						
MKAR				PcP	PcP	19 23 20.1	-0.4
	comp=Z,0.9nm,0.6s,baz=133,slow=3.9,SNR=7.1						
	comp=Z,0.5nm,0.4s						
MAKZ	Makanchi	58.43	327	P	P	19 22 31.5	-0.7
MAKZ				IAmb	IAmb	19 22 38.7	
	comp=Z,2.5nm,1.2s						
YAK	Yakutsk	60.33	3	P	P	19 22 45.6	+0.7
KURK	Kurchatov	62.53	329	P	P	19 22 59.0	-0.9
KURK				IAmb	IAmb	19 23 01.2	
	comp=Z,2.3nm,1.1s						

DJA 01 19:14:28.3±0.9,4°S±5°×11°9E±°,h14km±7km,M3.5/8, MLv3.5/8,Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPSI	Sidrap Palu	1.00	117	P	Pb	19 14 46.5	-0.8
SPSI				S	Sg	19 15 01.1	+0.5
SPSI	Sidrap Palu	1.00	117	P	Pb	19 14 46.0	-1.3
TTSI	Tana Toraja	1.04	64	P	Pn	19 14 48.6	+0.1
BNSI	Bone	1.51	126	P	Pn	19 14 54.7	-0.2
BNSI				Pg	Pg	19 14 57.2	-0.2
BKSI	Bulukumba	2.19	146	P	Pn	19 15 04.9	+0.7
BKSI				S	Sn	19 15 31.7	+0.6
BKB	Balikpapan	2.99	318	P	Pn	19 15 16.3	+1.0
BSSI	Bau Bau, Buton	3.07	149	P	Pn	19 15 17.2	+0.8
BSSI				Pg	Pg	19 15 25.7	-1.5

IDC 01 19:15:48.8±2.0,58°74S×25°99W,h0km,mb4.5/1, mbtmp4.5/1,Error ellipse: s-maj=115.9km s-min=68.3km az=133.0

ISC 01 19:16:01.0±1.3,59°3S±0°2×25°8W±0°4,h100km,n14, σ2s56/14,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	13.50	155	P	P	19 19 13.4	-0.3
VNA1				S	Sn	19 21 35.9	-0.3
VNA3	Neumayer Olymp	13.67	158	P	P	19 19 15.7	+0.1
VNA3				S	Sn	19 21 37.7	-2.7
VNA2	Neumayer--Watz	13.90	154	P	P	19 19 18.4	+0.3
	baz=316,slow=16						
VNA2				S	Sn	19 21 45.0	-0.9
SNAA	Sanae	15.47	152	P	P	19 19 39.7	+4.1
SNAA				S	Sn	19 22 22.8	-1.2
TROLL	Troll, Antarti	17.01	150	P	P	19 19 59.1	+6.4
TROLL				S	Sn	19 23 00.7	-0.4
H10S2	ASCENSION HYDR	50.95	14	T	T	20 19 19.6	
	baz=187,slow=74,SNR=3.7						
H10S3	ASCENSION HYDR	50.95	14	T	T	20 19 19.9	
	baz=33,slow=74,SNR=7.4						
H10N1	ASCENSION HYDR	52.07	14	T	T	20 20 42.7	
	baz=195						
H10N3	ASCENSION HYDR	52.07	14	T	T	20 20 44.2	
	baz=195,slow=74						
H10N2	ASCENSION HYDR	52.08	14	T	T	20 20 39.4	
	baz=195,slow=74						
TORD	Torodi Ar. Bea	75.56	28	P	P	19 27 32.4	-2.0
	1.8nm,0.4s,baz=199,slow=6.0,SNR=17						
	1.8nm,0.4s						
YKA	Yellowknife Ar	139.06	315	PKP	PKPdf	19 35 14.9	+0.7
	1.1nm,0.7s,baz=125,slow=2.4,SNR=9.4						
SONM	Songino Array	150.04	91	PKPbc	PKiKP	19 35 40.2	+0.5
	0.3nm,0.3s,baz=212,slow=5.1,SNR=2.9						
ILAR	Eielson Array	152.77	307	PKPbc	PKPbc	19 35 44.7	+0.3
	0.5nm,0.5s,baz=134,slow=1.8,SNR=6.5						

DJA 01 19:20:38.7±0.8,3°S±5°×12°8E±°,h12km±9km,M3.6/11, mb4.2/3,MLv3.3/11,Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	Ambon	0.96	162	P	Pg	19 20 56.8	-0.5
MSAI	Masohi	1.18	119	P	Pb	19 21 01.3	+0.2
MSAI				S	Sn	19 21 17.3	+0.1
SANI	Sanana	2.03	291	P	Pn	19 21 11.2	-1.6
LBMI	Labuha	2.15	350	P	Pn	19 21 15.2	+0.7
SWI	Sorong	3.86	61	P	Pn	19 21 38.0	0.0
FAKI	Fak Fak	4.36	92	P	Pn	19 21 44.0	-0.8
LUWI	Luwuk	5.40	288	P	Pn	19 21 59.5	+0.4
	0.1nm21nm,1.0s						
APSI	Ampana	6.50	286	P	Pn	19 22 15.7	+1.4
	0.2nm30nm,0.6s						
MRSI	Marisa	6.77	298	P	Pn	19 22 17.4	-0.5

ROM 01 19:28:40.3±0.3,42°86N±0°02×13°14E±0°01,h12km±2km, ML1.5/4,1C-2D,Error ellipse: s-maj=2.0km s-min=1.0km az=182.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	Norcia	0.03	211	P	Pg	19 28 42.7	+0.2
NRCA				S	Sg	19 28 44.4	+0.3
NRCA				AML	AML		
	comp=E,498μm,0.1s						
NRCA				AML	AML		
	comp=N,344μm,0.1s						
NRCA	Norcia	0.03	211	⇓P	Pg	19 28 42.7	+0.2
NRCA				AML	AML		
	comp=E,498μm,0.1s						
NRCA				AML	AML		
	comp=N,344μm,0.1s						
NRCA				AML	AML		
	comp=E,498μm,0.1s						
NRCA				AML	AML		
	comp=N,344μm,0.1s						
NRCA				AML	AML		
	comp=E,498μm,0.1s						
NRCA				AML	AML		
	comp=N,344μm,0.1s						
FEMA	Monte Fema	0.12	328	P	Pb	19 28 44.3	-0.4
FEMA				S	Sg	19 28 46.7	+0.9
FDMO	Fiordimonte	0.18	349	P	Pg	19 28 44.8	+0.5
FDMO				S	Sg	19 28 47.7	+0.6
FDMO				AML	AML		
	comp=N,33μm,1.3s						
FDMO				AML	AML		
	comp=E,34μm,0.8s						
FDMO	Fiordimonte	0.18	349	⇓P	Pg	19 28 44.9	+0.5
FDMO				AML	AML		
	comp=E,34μm,0.8s						
FDMO				AML	AML		
	comp=N,33μm,1.3s						
FDMO				AML	AML		
	comp=E,34μm,0.8s						
FDMO				AML	AML		
	comp=N,33μm,1.3s						
CESI	CESI - Serrava	0.22	311	P	Pg	19 28 45.4	+0.3
CESI				S	Sg	19 28 49.3	+1.0
CESI	CESI - Serrava	0.22	311	P	Pg	19 28 45.4	+0.3
CSP1	Cessapalombo	0.24	12	P	Pg	19 28 45.6	+0.3
CSP1				S	Sg	19 28 49.6	+0.9
CSP1	Cessapalombo	0.24	12	P	Pg	19 28 44.9	-0.4
LNSS	Leonessa	0.27	195	AML	AML		
	comp=N,40μm,0.9s						
LNSS				AML	AML		
	comp=E,41μm,1.1s						
LNSS				AML	AML		
	comp=N,40μm,0.9s						
RM33	Pellescritta (	0.35	171	AML	AML		
	comp=E,72μm,1.5s						
RM33				AML	AML		
	comp=N,75μm,1.6s						
TERO	Teramo	0.42	124	AML	AML		
	comp=E,55μm,0.8s						
TERO				AML	AML		
	comp=N,62μm,0.6s						
GIGS	Gran Sasso	0.52	142	AML	AML		
	comp=E,98μm,0.4s						
GIGS				AML	AML		
	comp=N,118μm,0.3s						
GIGS				AML	AML		
	comp=N,118μm,0.3s						
GIGS				AML	AML		
	comp=E,98μm,0.4s						
FAGN	Fagnano	0.68	151	AML	AML		
	comp=E,158μm,0.3s						
FAGN				AML	AML		
	comp=N,207μm,1.5s						
T0110	Collepietro	0.79	143	AML	AML		
	comp=N,70μm,1.6s						
T0110				AML	AML		
	comp=E,56μm,1.3s						
CPGN	Carpegna, Ital	1.11	328	P	Pn	19 29 02.1	+0.2
CPGN				AML	AML		
	comp=E,1170μm,1.5s						
CPGN				AML	AML		
	comp=N,1590μm,1.3s						
CPGN				AML	AML		
	comp=E,1170μm,1.5s						
CPGN				AML	AML		
	comp=N,1590μm,1.3s						
CPGN	Carpegna, Ital	1.11	328	AML	AML		
	comp=E,1170μm,1.5s						
CPGN				AML	AML		
	comp=N,1590μm,1.2s						
LIK	San Giovanni I	1.39	167	⇑P	Pn	19 29 03.7	-1.9
PZUN	Potenza	2.98	137	AML	AML		
	comp=N,134μm,0.1s						
PZUN				AML	AML		
	comp=E,70μm,1.2s						

ROM 01 19:28:47.5±0.2,42°386N±0°005×13°404E±0°007, h7km±1km,ML1.2/6,Error ellipse: s-maj=0.7km s-min=0.2km az=46.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.03	182	P	Pg	19 28 48.9	0.0
AQU				S	Sg	19 28 50.0	+0.1
GIGS	Gran Sasso	0.14	62	P	Pg	19 28 51.1	+0.6
GIGS				S	Sg	19 28 53.8	+1.4
GIGS				AML	AML		
	comp=E,98μm,0.4s						
GIGS				AML	AML		
	comp=N,118μm,0.3s						
GIGS				AML	AML		
	comp=E,98μm,0.4s						
GIGS				AML	AML		
	comp=N,118μm,0.3s						
CAMP	Campotosto	0.15	1	P	Pg	19 28 51.1	+0.5
CAMP				S	Sg	19 28 53.8	+0.9
FAGN	Fagnano	0.18	132	P	Pg	19 28 51.9	+0.8
FAGN				S	Sg	19 28 55.2	+1.6
FAGN				AML	AML		
	comp=N,207μm,1.5s						
FAGN				AML	AML		
	comp=E,158μm,0.3s						
RM33	Pellescritta (	0.19	311	P	Pg	19 28 51.7	+0.4
RM33				S	Sg	19 28 55.1	+1.2
RM33				AML	AML		
	comp=E,72μm,1.5s						
RM33				AML	AML		
	comp=N,75μm,1.6s						
FIAM	Fiamignano	0.24	241	P	Pg	19 28 52.6	+0.2
TERO	Teramo	0.28	32	P	Pg	19 28 53.3	+0.3
TERO				S	Sg	19 28 57.9	+1.1
TERO				AML	AML		
	comp=N,62μm,0.6s						
TERO				AML	AML		
	comp=E,55μm,0.8s						
T0110	Collepietro	0.32	120	P	Pg	19 28 54.6	+0.8
T0110				S	Sb	19 28 59.8	-1.3
T0110				AML	AML		
	comp=N,70μm,1.6s						
T0110				AML	AML		
	comp=E,56μm,1.3s						
LNSS	Leonessa	0.34	309	P	Pb	19 28 56.2	+0.2
LNSS				S	Sb	19 29 01.4	-0.4
LNSS				AML	AML		
	comp=N,40μm,0.9s						
LNSS				AML	AML		
	comp=N,40μm,0.9s						
LNSS				AML	AML		
	comp=E,41μm,1.1s						

MEX 01 19:32:55.6±1.1,18°35N×105°46W,h16km±94km,MD3.8
NEIC 01 19:32:57.2±1.8,18°43N±0°08×105°09W±0°06,h10km±2km, mb4.1/22,Md3.8/25(MEX),Error ellipse: s-maj=15.4km s-min=6.5km az=209.0

ISC 01 19:32:57.5±3.5,18°4N±0°1×105°18W±0°09,h24km±23km, n31,σ0s94/41,Off coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CDAR	Ciudad de Arme	1.23	64	*e*P	Pn	19 33 18.7	-0.4
CDAR				*i* S	Sn	19 33 35.4	+0.3
R15V		1.36	56		Pn	19 33 20.8	-0.3
R15V		1.36	56	*i* P	Pn	19 33 20.8	-0.3
R15V				*i* S	Sb	19 33 39.4	0.0
COIG	Colima	1.60	61	*e*P	Pn	19 33 24.1	-0.3
COIG				*e*S	Sb	19 33 46.2	-0.2
MNGA	Volcan de Coli	1.81	54	*e*P	Pn	19 33 27.9	+0.4
MNGA				*i* S	Sn	19 33 50.3	+0.4
EZ5V		1.83	54		Pn	19 33 28.7	+1.0
EZ5V		1.83	54	*e*P	Pn	19 33 28.7	+1.0
INCO	Volcan de Coli	1.86	53	*e*P	Pn	19 33 28.8	+0.6
INCO				*e*S	Sn	19 33 48.9	-2.3
JUBC	Volcan de Coli	1.88	54	*e*P	Pn	19 33 28.9	+0.5
JUBC				*e*S	Sn	19 33 50.9	-0.7
ANIG	Ahuacatlan	2.70	13		Pn	19 33 38.6	-1.0
ANIG					Sn	19 34 12.0	+0.4
ANIG	Ahuacatlan	2.70	13	*e*P	Pn	19 33 38.6	-1.0
ANIG				*e*S	Sn	19 34 12.0	+0.4
ARIG	Puente Sto Nin	4.59	91		Pn	19 34 04.8	-0.7
ARIG					Sn	19 34 58.5	+0.4
ARIG	Puente Sto Nin	4.59	91	*e*P	Pn	19 34 04.8	-0.7
ARIG				*i* S	Sn	19 34 58.5	+0.4
ABTX	Abilene, Hawle	15.01	18		Pn	19 36 30.6	+2.4
MSTX	Muleshoe	15.65	7		Pn	19 36 36.5	-0.1
MSTX				IAmb	IAmb	19 36 45.6	
	comp=Z,17nm,1.2s						
BNM	Barren Site	15.73	356	Pn	Pn	19 36 38.7	+0.8
LENM	Lemitar	15.78	355		Pn	19 36 39.0	+0.7
Z35A	Perchaven, San	16.47	24	Pn	Pn	19 36 47.0	0.0
Z35A				IAmb	IAmb	19 36 51.6	
	comp=Z,13nm,0.9s						
ANMO	Albuquerque	16.51	356		P	19 36 49.1	-1.1
AMTX	Amarillo	16.70	10	P	Pn	19 36 50.9	+0.8
AMTX				IAmb	IAmb	19 36 56.7	
	comp=Z,11nm,0.8s						
WMOK	Wichita Mounta	17.23	18		Pn	19 36 55.5	-1.2
X34A	Smith Ranch, M	17.41	21	P	P	19 37 00.3	+0.4
X34A				IAmb	IAmb	19 37 04.7	
	comp=Z,27nm,1.1s						
T25A	Trinidad	18.67	2	P	Pn	19 37 17.4	+2.8
T25A				IAmb	IAmb	19 37 19.1	
	comp=Z,9.3nm,1.1s						
U32A	Winter Ranch,	18.71	16		Pn	19 37 15.2	+0.3
SDCO	Great Sand Dun	19.27	359	P	P	19 37 20.2	-0.5
TUL1	Leonard	19.31	24	P	P	19 37 21.0	+0.1
TUL1				IAmb	IAmb	19 37 24.3	
	comp=Z,9.2nm,0.9s						
T35A	Sooner Cattle	19.95	21	P	Pn	19 37 29.0	-0.7
PV07	Paradox Valley	20.19	352	P	Pn	19 37 32.9	+0.2
CBKS	Cedar Bluff	20.88	12	P	P	19 37 38.6	+0.7
CBKS				IAmb	IAmb	19 37 42.7	
	comp=Z,13nm,1.0s						
LCAR	Lake Charles	21.52	32	P	P	19 37 45.0	+0.2
P17A	Butcher Ranch,	21.54	348	P	P	19 37 45.0	-0.2
P17A				IAmb	IAmb	19 37 49.4	
	comp=Z,8.4nm,1.5s						

IDC 01 19:43:35.2±0.8,55°60N×158°75W,h0km,mb4.1/22, mbtmp4.1/24,ML4.2/2,MS3.2/13,Error ellipse: s-maj=23.6km s-min=11.6km az=13.0
NEIC 01 19:43:40.5±1.7,55°34N±0°05×158°42W±0°06,h33km±6km, mb4.3/43,ML4.0/20,ML3.9(AEIC),Error ellipse: s-maj=7.6km s-min=4.3km az=153.0
AEIC 01 19:43:41±1.6,55°39N±0°06×158°39W±0°06,h24km±5km, Error ellipse: s-maj=9.2km s-min=3.9km az=159.0

ISC 01 19:43:40.8±0.9,55°44N±0°05×158°47W±0°03,h45km±9km, n272,σ1s25/277,mb4.3/47,MS3.3/10,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNSG	Veniaminof 6	0.77	333		Pn	19 43 55.3	-0.1
VNHG	Veniaminof 1	0.88	334		Pn	19 43 57.2	+0.3
CHNA	Chernabura Isl	0.89	227	P	Pn	19 43 56.0	-0.9
	baz=52,SNR=48						
CHNA				S	Sn	19 44 06.0	-2.6
	baz=52						
CNBA	Chernabura Isl	0.90	227	Pn	Pn	19 43 55.6	-1.4
CNBA	Chernabura Isl	0.90	227		Sn	19 44 06.1	-2.6
SDPT	Sand Point	1.15	266	Pn	Pn	19 44 00.1	-0.3
SDPT				IAML		19 44 20.0	
	comp=E,4μm,0.6s						
SDPT				IAML		19 44 20.1	
	comp=N,3μm,0.5s						
SDPT	Sand Point	1.15	266		Sn	19 44 15.6	+0.6
SDPT	Sand Point	1.15	266	P	Pn	19 44 00.3	-0.2
	baz=88,SNR=70						
SDPT				S	Sn	19 44 14.4	-0.6
	baz=88						
ANPB	Aniakchak Plen	1.37	4		Pn	19 44 04.4	+0.9
ANNW	Aniakchak Nort	1.54	5		Pn	19 44 07.3	+1.5
CHIR	Chirikof Islan	1.66	75	Pn	Pn	19 44 07.3	-0.1
CHIR				IAML		19 44 40.6	
	comp=N,2μm,0.7s						
CHIR	Chirikof Islan	1.66	75		Sn	19 44 27.4	0.0
CHIR	Chirikof Islan	1.66	75	P	Pn	19 44 07.5	+0.1
	baz=255,SNR=13						
CHIR				S	Sn	19 44 27.1	-0.4
	baz=255						
PVV	Pavlof Volcano	1.90	269		Pn	19 44 11.7	+1.0
PS4A	Pavlof South-4	1.94	269		Pn	19 44 11.7	+0.5
HAG	Hague Volcano	1.97	268		Pn	19 44 13.2	+1.5
HAG					Sn	19 44 35.9	+0.8
DT1	Dutton Round H	2.21	263		Pn	19 44 16.6	+1.7
PLK3	Peulik 3	2.56	27		Pn	19 44 21.8	+2.0
PLK3					Sn	19 44 51.6	+1.8
PLK1	Peulik 1	2.58	23		Pn	19 44 21.4	+1.4
SII	Sitkinak Islan	2.65	63	Pn	Pn	19 44 21.0	0.0
SII	Sitkinak Islan	2.65	63	P	Pn	19 44 21.1	0.0
	baz=245,SNR=15						
SII				S	Sn	19 44 52.1	+0.1
	baz=245						
PLK5	Peulik 5	2.71	18		Pn	19 44 23.6	+1.8
FALS	False Pass	2.90	260	Pn	Pn	19 44 23.8	-0.6
KJL	Kejulik	3.07	30		Pn	19 44 28.0	+1.2
ISLZ	Isanotski Laza	3.10	259		Pn	19 44 28.0	+0.8
CAHL	Cahill	3.15	32		Pn	19 44 28.7	+0.8
ANCK	Angle Creek	3.21	29		Pn	19 44 30.1	+1.3
KELA	Mount Kelaz	3.36	25		Pn	19 44 31.9	+1.1
OHAK	Old Harbor	3.39	56	Pn	Pn	19 44 30.6	-0.6
OHAK				IAML		19 45 29.0	
	comp=N,264nm,0.9s						
OHAK	Old Harbor	3.39	56	P	Pn	19 44 30.7	-0.4
	baz=239,SNR=12						
OHAK				S	Sn	19 45 08.6	-1.5
	baz=239						
P16K	Nushagak River	3.61	4		Pn	19 44 35.5	+1.3
P16K	Nushagak River	3.61	4	P	Pn	19 44 35.3	+1.1
	baz=184,SNR=18						
P16K				S	Sn	19 45 16.4	+0.9
	baz=184						
WECS	Westdahl Cape	3.75	259		Pn	19 44 37.7	+1.6
KDAK	Kodiak Island	4.01	52	Pn	Pn	19 44 39.1	-0.5
	comp=N,7.0nm,0.3s,baz=241,slow=8.5,SNR=53						
KDAK				Sn	Sn	19 45 22.9	-2.4
	comp=N,13nm,0.3s,baz=36,slow=19,SNR=8.4						
KDAK				LR	LR	19 46 10.2	
	comp=N,48nm,20.6s,baz=243,slow=38						
	comp=N,20nm,0.3s						
KDAK	Kodiak Island	4.01	52	Pn	Pn	19 44 39.1	-0.5
KDAK				IAML		19 45 50.4	
	comp=N,199nm,0.9s						
KDAK				IAML		19 45 52.9	
	comp=N,163nm,1.0s						
KDAK	Kodiak Island	4.01	52	P	Pn	19 44 39.1	-0.5
	baz=235						
KDAK				S	Sn	19 45 23.3	-2.0
	baz=235						
O16K	Kokwok River B	4.17	3	P	Pn	19 44 42.6	+0.7
	baz=182,SNR=34						
O16K				S	Sn	19 45 30.1	+0.8
	baz=182						
P18K	Big Mountain,	4.33	22		Pn	19 44 44.8	+0.7
Q19K	Cape Douglas,	4.37	35	Pn	Pn	19 44 45.3	+0.7
Q19K	Cape Douglas,	4.37	35	P	Pn	19 44 45.1	+0.4
	baz=218,SNR=11						
AKSA	Akutan Strait	4.38	256		Pn	19 44 46.1	+1.3
AKUT	Akutan	4.43	256		Pn	19 44 46.3	+0.9
AKUT				IAML		19 45 51.4	
	comp=E,212nm,1.2s						
AKUT				IAML		19 45 55.4	
	comp=N,201nm,0.9s						
Q20K	Shuyak Island	4.59	44	P	Pn	19 44 47.7	+0.1
	baz=228						
O18K	Koktuh Hills	4.76	20		Pn	19 44 50.8	+0.8
O18K				IAML		19 46 14.6	
	comp=E,109nm,0.7s						
O18K				IAML		19 46 31.6	
	comp=N,84nm,1.1s						
O18K	Koktuh Hills	4.76	20	P	Pn	19 44 50.8	+0.8
	baz=202,SNR=16						
O18K				S	Sn	19 45 43.6	-0.2
	baz=202						
UNV	Unalaska Valle	4.94	254	Pn	Pn	19 44 52.3	0.0
UNV	Unalaska Valle	4.94	254	P	Pn	19 44 52.1	-0.2
	baz=69						
N16K	Nishlik Lake	5.05	358		Pn	19 44 55.3	+1.3
MSW	Makushin Switc	5.06	256		Pn	19 44 54.7	+0.6
N18K	Kilae Creek	5.43	14		Pn	19 44 60.0	+0.8
N18K	Kilae Creek	5.43	14	P	Pn	19 45 00.0	+0.8
	baz=195,SNR=10						
N18K				S	Sn	19 45 59.3	-1.0
	baz=195						
O20K	Slope Mountain	5.61	31	P	Pn	19 45 02.2	+0.6
	baz=216						
O20K				S	Sn	19 46 05.4	+0.7
	baz=216						
CNPM	China Poot	5.66	41		Pn	19 45 01.6	-0.7
N19K	Bonanza Creek	5.79	20		Pn	19 45 05.0	+0.8
N19K	Bonanza Creek	5.79	20	P	Pn	19 45 05.2	+1.1
	baz=202,SNR=14						
RED	Redoubt Volcan	5.84	29		Pn	19 45 06.5	+1.6
SVW2	Sparrevohn	5.88	14	Pn	Pn	19 45 05.8	+0.6
RDWB	Redoubt West	5.88	28		Pn	19 45 06.8	+1.4
RSO	Redoubt South	5.88	29		Pn	19 45 06.5	+1.0
NCT	North Crescent	5.92	28		Pn	19 45 07.1	+1.2
BRLK	Bradley Lake	5.95	40		Pn	19 45 04.6	-1.6
BRSE	Bradley Lake S	5.99	41	P	Pn	19 45 06.0	-0.8
	baz=226						
NIKH	Nikolski High	6.58	252	Pn	Pn	19 45 15.2	+0.3
CAPN	Captain Cook N	6.60	33	S	Sn	19 46 29.7	+0.8
	baz=218						
SPCR	Spurr Chakacha	6.65	27	P	Pn	19 45 15.2	-0.6
	baz=212,SNR=5.3						
SPCR				S	Sn	19 46 31.5	+1.2
	baz=212						
SEW	Seward	6.71	42	P	Pn	19 45 17.4	+0.8
	baz=229						
SEW				S	Sn	19 46 31.1	-0.7
	baz=229						
SPIA	Saint Paul Isl	6.79	290	Pn	Pn	19 45 19.1	+1.5
SPIA	Saint Paul Isl	6.79	290	P	Pn	19 45 18.4	+0.7
	baz=100						
SPIA				S	Sn	19 46 32.9	-0.6

baz=100
M19K Big River Lodg 6.82 16 Pn Pn 19 45 19.5 +1.3
O22K Cooper Landing 6.87 39 S Sn 19 46 35.9 +0.5
baz=226
RC01 Rabbit Creek A 7.30 35 Pn 19 45 24.6 -0.1
RC01 Rabbit Creek A 7.30 35 P Pn 19 45 24.8 +0.2
baz=222
RC01 S Sn 19 46 42.3 -3.8
baz=222
L20K Farewell, AK 7.45 17 P Pn 19 45 28.3 +1.5
baz=200,SNR=30
L20K S Sn 19 46 49.9 +0.1
baz=200
SKT Skwentna 7.48 26 Pn 19 45 28.2 +0.9
TTA Tatalina 7.62 8 Pn Pn 19 45 29.7 +0.5
TTA Tatalina 7.62 8 P Pn 19 45 29.5 +0.3
baz=190
TTA S Sn 19 46 52.7 -1.4
baz=190
Q23K Middleton Isla 7.66 54 Pn Pn 19 45 29.9 +0.2
MID Middleton Isla 7.67 54 Pn Pn 19 45 29.8 +0.1
PMR Palmer 7.87 35 S Sn 19 46 54.0 -6.0
baz=222
KNK Knik Glacier 7.96 37 Pn 19 45 33.9 +0.1
KNK Knik Glacier 7.96 37 P Pn 19 45 32.9 -0.9
baz=225
KNK S Sn 19 46 57.4 -5.0
baz=225
HIN Hinchinbrook I 8.07 47 Pn Pn 19 45 34.8 -0.6
GLI Glacier Island 8.11 43 Pn Pn 19 45 35.5 -0.4
GLI Glacier Island 8.11 43 P Pn 19 45 34.6 -1.3
baz=232
PPLA Purkeypile 8.14 21 Pn Pn 19 45 39.2 +2.8
PPLA Purkeypile 8.14 21 P Pn 19 45 39.0 +2.7
baz=206,SNR=9.1
CUT Chulitna 8.17 28 S Sn 19 47 05.0 -2.4
baz=214
K20K Telida 8.25 14 Pn Pn 19 45 38.3 +0.5
K20K Telida 8.25 14 P Pn 19 45 38.2 +0.4
baz=197,SNR=6.2
FID Port Fidalgo 8.28 45 Pn 19 45 36.3 -1.9
SML Sawmill 8.28 35 Pn 19 45 36.9 -1.4
SML Sawmill 8.28 35 P Pn 19 45 38.2 -0.1
baz=224
EYAK Cordova Ski Ar 8.47 48 Pn Pn 19 45 41.6 +0.9
EYAK Cordova Ski Ar 8.47 48 P Pn 19 45 40.5 -0.3
baz=238
M23K Glacier View 8.48 37 P Pn 19 45 40.5 -0.4
baz=226
CAST Castle Rocks 8.63 19 P Pn 19 45 42.3 -0.7
baz=204
SCM Sheep Creek Mo 8.64 38 Pn 19 45 44.0 +0.9
SCM Sheep Creek Mo 8.64 38 P Pn 19 45 42.8 -0.4
baz=226
DIV Divide 8.78 44 Pn Pn 19 45 45.3 +0.2
KLU Klutina 8.94 42 Pn 19 45 47.4 +0.2
KLU Klutina 8.94 42 P Pn 19 45 46.6 -0.6
baz=232,SNR=11
KTH Kantishna Hill 8.99 22 Pn 19 45 50.6 +2.6
HMT Hamilton 9.01 51 Pn 19 45 48.0 -0.1
J20K Nowinta River 9.03 12 Pn Pn 19 45 49.2 +0.9
J20K Nowinta River 9.03 12 P Pn 19 45 48.2 -0.2
baz=195
WAT6 Susitna Watana 9.04 33 P Pn 19 45 47.8 -0.9
baz=222,SNR=6.5
TRF Thorofare Moun 9.04 24 Pn Pn 19 45 49.6 +0.9
TRF Thorofare Moun 9.04 24 P Pn 19 45 48.3 -0.4
baz=210,SNR=12
SUCK Suckling Hills 9.11 53 Pn Pn 19 45 50.6 +1.0
BMRM Bremner River 9.17 47 Pn Pn 19 45 50.7 +0.4
BMRM Bremner River 9.17 47 P Pn 19 45 49.9 -0.4
baz=238
M24K Tolsona, Glenn 9.23 39 Pn 19 45 52.5 +1.3
M24K Tolsona, Glenn 9.23 39 P Pn 19 45 51.4 +0.2
baz=229
RND Reindeer 9.36 28 Pn Pn 19 45 52.9 -0.2
BPAW Bear Paw Mtn. 9.46 20 Pn Pn 19 45 54.4 +0.1
BPAW Bear Paw Mtn. 9.46 20 P Pn 19 45 54.2 -0.1
baz=206
N25K Chitina, Valde 9.52 44 Pn 19 45 56.1 +1.0
N25K Chitina, Valde 9.52 44 P Pn 19 45 55.1 -0.1
baz=235
DHY Denali Highway 9.52 32 Pn 19 45 54.3 -0.9
DHY Denali Highway 9.52 32 P Pn 19 45 54.5 -0.8
baz=221
SNH Sunshine Point 9.59 54 Pn Pn 19 45 56.4 +0.3
WAX Waxell Ridge 9.69 52 Pn Pn 19 45 55.6 -2.0
GLB Gilahina Butte 9.74 46 Pn Pn 19 45 57.3 -0.9
VRDI Verde Repeater 9.78 48 Pn Pn 19 45 58.3 -0.6
HARP HAARP 9.78 39 P Pn 19 45 58.4 -0.3
baz=230
ISLE Juniper Island 9.98 52 Pn Pn 19 46 01.2 -0.4
MESA MESA 10.00 55 Pn Pn 19 46 00.6 -1.2
MESA MESA 10.00 55 P Pn 19 46 01.3 -0.5
baz=248
PAX Paxson 10.05 36 Pn 19 46 02.4 -0.1
PAX Paxson 10.05 36 P Pn 19 46 02.2 -0.3
baz=227,SNR=15
YAH Yahtse 10.16 54 Pn 19 46 04.0 -0.1
I21K Tanana 10.28 15 Pn 19 46 06.5 +1.1
I21K Tanana 10.28 15 P Pn 19 46 05.8 +0.3
baz=201
GRNC Granite Creek 10.30 52 Pn 19 46 06.8 +0.7
NEA2 Nenana 10.30 23 Pn 19 46 06.1 +0.3
NEA2 Nenana 10.30 23 P Pn 19 46 05.4 -0.4
baz=211
MLY Manley 10.35 19 Pn 19 46 07.7 +1.1
MLY Manley 10.35 19 P Pn 19 46 06.9 +0.4
baz=205
WRH Wood River Hil 10.43 26 Pn 19 46 07.5 -0.1
TABL Table Mountain 10.47 54 Pn 19 46 09.7 +1.4
BARN Barnard Glacie 10.48 51 Pn Pn 19 46 08.6 +0.2
K24K Donnelly Dome 10.54 32 P Pn 19 46 09.7 +0.6
baz=223,SNR=9.0
CTG Chitna Glacier 10.58 51 P Pn 19 46 10.0 +0.3
baz=246
CTGM Chitina Glacie 10.58 51 Pn Pn 19 46 10.7 +0.9
M26K Nabesna, AK 10.59 43 Pn 19 46 09.0 -0.8
H21K Melozitna Rive 10.62 13 Pn Pn 19 46 10.8 +0.7
H21K Melozitna Rive 10.62 13 P Pn 19 46 10.8 +0.7
baz=197,SNR=10
CCB Clear Creek Bu 10.64 26 Pn 19 46 10.4 -0.1
HDA Harding Lake 10.67 28 Pn 19 46 10.8 -0.1
HDA Harding Lake 10.67 28 P Pn 19 46 09.8 -1.0
baz=218,SNR=14
LOGN Logan Glacier 10.68 53 Pn Pn 19 46 11.8 +0.8
I23K Minto, Yukon-K 10.72 21 Pn 19 46 11.9 +0.4
I23K Minto, Yukon-K 10.72 21 P Pn 19 46 11.4 -0.1
baz=209
RIDG Independent Ri 10.79 34 Pn 19 46 12.5 0.0
RIDG Independent Ri 10.79 34 P Pn 19 46 11.5 -1.0
baz=225,SNR=6.5
MDM Murphy Dome 10.80 24 Pn 19 46 11.7 -1.0
IMAR Indian Mountai 10.82 10 Pn Pn 19 46 13.7 +0.7
L26K Log Cabin Wild 10.83 39 Pn 19 46 11.9 -1.1
IL31 10.98 27 Pn 19 46 14.6 -0.3
ILAR Eielson Array 10.98 27 Pn Pn 19 46 12.9 -2.1
comp=N,0.9nm,0.3s,baz=218,slow=13,SNR=40
ILAR Sn Sn 19 48 04.6 -12
comp=N,0.2nm,0.3s,baz=245,slow=21,SNR=1.5
ILAR Eielson Array 10.98 27 Pn 19 46 15.0 0.0
PNL Peninsula 11.07 60 P Pn 19 46 16.2 -0.2
baz=255
POKR Poker Plat Res 11.12 25 P Pn 19 46 16.8 -0.2
baz=214
SCRK Sand Creek 11.23 34 Pn Pn 19 46 19.2 +0.7
SCRK Sand Creek 11.23 34 P Pn 19 46 18.1 -0.5
baz=227
H23K Yukon River 11.29 19 Pn 19 46 20.4 +1.2
H23K Yukon River 11.29 19 P Pn 19 46 19.2 -0.1
baz=206
YUK3 Moose Creek 11.31 49 P Pn 19 46 19.7 -0.1
baz=243
L27K Beaver Creek, 11.41 41 Pn 19 46 22.0 +1.0
L27K Beaver Creek, 11.41 41 P Pn 19 46 21.2 +0.2
baz=235
BCAR Beaver Creek A 11.43 41 Pn Pn 19 46 23.3 +2.1
H24K Noodor Dome 11.63 22 Pn Pn 19 46 24.3 +0.4
H24K Noodor Dome 11.63 22 P Pn 19 46 23.7 -0.2
baz=211
J26L Joseph Creek 11.72 33 Pn Pn 19 46 26.2 +0.9
J26L Joseph Creek 11.72 33 P Pn 19 46 25.0 -0.3
baz=226,SNR=6.9
YUK4 Talbot Arm 11.93 52 P Pn 19 46 29.5 +1.2
baz=248

N30M Aishikik Lake 12.68 53 P Pn 19 46 38.2 -0.1
baz=251
EGAK Eagle 12.68 35 Pn 19 46 38.6 +0.3
RDOG Red Dog Mine 12.83 352 Pn 19 46 38.9 -1.4
DAWY Dawson 12.88 40 Pn 19 46 41.8 +0.8
I29M Ogilvie Camp, 14.00 37 P P 19 47 04.8 +1.7
M31M Drury Creek, Y 14.13 52 Pn 19 46 59.5 +1.5
P33M Teslin, Yukon 14.42 60 P 19 47 09.7 +1.8
EPYK Eagle Plains 15.12 35 P P 19 47 16.5 +0.9
DLBC Dease Lake 15.75 67 Pn P 19 47 23.0 +0.3
comp=N,0.5nm,0.3s,baz=260,slow=6.6,SNR=6.1
DLBC Dease Lake 15.75 67 IAmb IAmb 19 47 26.3
comp=Z,7.3nm,1.1s
SHEM Shemya Is, Ala 16.28 272 LR LR 19 53 10.5
comp=Z,28nm,19.0s,baz=75,slow=36
INK Inuvik 17.27 32 P Pn 19 47 38.2 0.0
comp=Z,1.2nm,0.3s,baz=216,slow=11,SNR=12
comp=Z,4.5nm,0.4s
INK Inuvik 17.27 32 Pn P 19 47 38.7 -0.5
INK Inuvik 17.27 32 P P 19 47 38.6 -0.6
baz=234,SNR=6.0
BBB Bella Bella 18.14 88 LR LR 19 53 35.6
comp=Z,44nm,20.9s,baz=272,slow=33
C36M Paulatuk 20.75 34 P P 19 48 17.2 -0.2
C36M Paulatuk 20.75 34 P P 19 48 17.2 -0.2
baz=245,SNR=20
YKA Yellowknife Ar 23.28 54 P P 19 48 45.0 +0.8
comp=Z,0.4nm,0.5s,baz=266,slow=8.6,SNR=4.4
comp=Z,0.4nm,0.5s
B08A Colville Reser 24.89 90 P P 19 49 00.5 +1.3
H04A Detroit Lake 25.37 100 P P 19 49 05.6 +2.0
H04A IAmb IAmb 19 49 07.0
comp=Z,9.1nm,1.0s
PETK Petropavlovsk- 25.39 283 P P 19 49 02.4 -1.3
comp=Z,3.8nm,0.8s,baz=79,slow=12,SNR=8.7
PETK LR LR 19 57 41.0
comp=Z,38nm,21.6s,baz=147,slow=34
comp=Z,3.8nm,0.8s
SEY Seymchan 25.68 307 P P 19 49 04.1 -2.1
comp=Z,3.0nm,0.7s,baz=97,slow=9.8,SNR=15
SEY LR LR 20 00 20.4
comp=Z,84nm,19.6s,baz=178,slow=40
comp=Z,3.0nm,0.7s
EDM Edmonton 26.05 76 P P 19 49 10.7 +1.0
EDM IAmb IAmb 19 49 11.6
comp=Z,11nm,0.7s
NEW Newport 26.20 88 P P 19 49 13.0 +1.9
comp=Z,4.8nm,0.9s,baz=306,slow=8.7,SNR=5.6
NEW LR LR 19 57 49.2
comp=Z,73nm,19.5s,baz=306,slow=32
comp=Z,4.8nm,0.9s
NEW Newport 26.20 88 P P 19 49 13.2 +2.1
YBH Yreka Blue Hor 26.99 105 LR LR 19 57 51.2
comp=Z,72nm,18.8s,baz=308,slow=32
MA2 Magadan 27.03 300 LR LR 20 01 40.5
comp=Z,76nm,18.8s,baz=208,slow=40
F10A Beach Ranch, E 27.40 93 P P 19 49 23.9 +1.9
F10A IAmb IAmb 19 49 25.2
comp=Z,4.6nm,0.9s
JTMT Jette 28.09 87 P P 19 49 30.2 +2.0
JTMT IAmb IAmb 19 49 31.0
comp=Z,4.7nm,0.9s
MFID Camas Ranch 29.74 96 P P 19 49 44.8 +2.0
MFID IAmb IAmb 19 49 45.7
comp=Z,4.0nm,0.9s
YHL Hebgen Lake 31.51 90 P P 19 50 00.6 +2.0
YHL IAmb IAmb 19 50 01.4
comp=Z,3.9nm,0.8s
NVAR Mina Array Bea 31.71 106 P P 19 50 02.5 +2.2
comp=Z,0.7nm,0.4s,baz=303,slow=7.9,SNR=10.0
NVAR LR LR 20 00 37.0
comp=Z,87nm,18.2s,baz=274,slow=32
comp=Z,0.7nm,0.4s
NVAR Mina Array Bea 31.71 106 P P 19 50 01.8 +1.5
YMR Madison River 31.74 90 P P 19 50 02.7 +2.2
ELK Elko 31.81 99 LR LR 19 59 52.8
comp=Z,48nm,20.0s,baz=25,slow=31
ELK Elko 31.81 99 P P 19 50 03.6 +2.3
FLWY Flagg Ranch 32.25 90 P P 19 50 07.8 +2.8
FLWY IAmb IAmb 19 50 08.6
comp=Z,4.8nm,0.8s
FXWY Fox Creek 32.34 91 P P 19 50 06.1 +0.3
RLMT Red Lodge 32.44 88 P P 19 50 08.7 +2.1
RLMT IAmb IAmb 19 50 09.7
comp=Z,2.2nm,0.7s
HVU Hansel Valley 32.52 95 P P 19 50 09.6 +2.2
HVU IAmb IAmb 19 50 10.7
comp=Z,4.3nm,0.8s
R11A Troy Canyon, C 33.27 103 P P 19 50 15.8 +1.8
TIXI Tiksi 33.57 327 P P 19 50 14.4 -1.6
comp=Z,1.5nm,0.3s,baz=91,slow=23,SNR=12
comp=Z,1.5nm,0.3s
TIXI Tiksi 33.57 327 P P 19 50 14.6 -1.4
TIXI IAmb IAmb 19 50 28.6
comp=Z,2.3nm,0.8s
BW06 Boulder Array 33.72 91 P P 19 50 19.1 +1.2
BW06 IAmb IAmb 19 50 20.1
comp=Z,2.8nm,0.7s
PD31 Pinedale Array 33.72 91 P P 19 50 19.3 +1.5
PD31 IAmb IAmb 19 50 20.1
comp=Z,2.6nm,0.7s
PDAR Pinedale Array 33.72 91 P P 19 50 19.6 +1.7
comp=Z,2.4nm,0.6s,baz=306,slow=5.3,SNR=24
comp=Z,2.4nm,0.6s
PDAR Pinedale Array 33.72 91 P P 19 50 19.3 +1.5
Q16A Castle Valley 35.35 98 P P 19 50 34.0 +2.0
Q16A IAmb IAmb 19 50 35.3
comp=Z,4.7nm,0.8s
SRU San Rafael Swe 35.58 97 P P 19 50 36.4 +2.5
RSSD Black Hills 36.02 85 P P 19 50 39.1 +1.4
RSSD IAmb IAmb 19 50 39.8
comp=Z,3.5nm,0.7s
YAK Yakutsk 36.06 310 P P 19 50 35.6 -2.0
comp=Z,3.4nm,0.5s,baz=130,slow=0.7,SNR=5.7
YAK LR LR 20 05 02.7
comp=Z,63nm,19.6s,baz=268,slow=36
comp=Z,3.4nm,0.5s
O20A White River Ci 36.18 94 P P 19 50 40.6 +1.5
PFO Pinyon Flats O 36.28 109 LR LR 20 02 24.4
comp=Z,63nm,20.9s,baz=234,slow=31
TULEG Thule 36.90 23 *i* P P 19 50 59.4 +15
TULEG IAmb IAmb 19 51 02.1
comp=Z,16nm,0.8s
PV13 Radium Mtn., P 37.20 97 P P 19 50 49.5 +1.7
PV13 IAmb IAmb 19 50 50.1
comp=Z,7.9nm,0.7s
WUAZ Wupatki 37.65 102 P P 19 50 52.0 +0.5
WUAZ IAmb IAmb 19 50 54.6
comp=Z,4.1nm,0.8s
MVCO Mesa Verde 38.05 97 P P 19 50 56.4 +1.4
MVCO IAmb IAmb 19 50 57.1
comp=Z,4.1nm,0.7s
AGMN Agassiz Nation 38.11 74 P P 19 50 55.4 +0.3
AGMN IAmb IAmb 19 50 56.3
comp=Z,4.5nm,0.8s
T25A Trinidad 40.42 94 P P 19 51 16.6 +1.9
T25A IAmb IAmb 19 51 17.4
comp=Z,4.8nm,0.9s
EYMN Ely 40.70 72 P P 19 51 17.1 +0.5
EYMN IAmb IAmb 19 51 18.3
comp=Z,6.2nm,0.8s
ANMO Albuquerque 40.82 98 P P 19 51 19.4 +1.4
comp=Z,0.8nm,0.5s,baz=317,slow=11,SNR=2.2
comp=Z,0.8nm,0.5s
ANMO Albuquerque 40.82 98 IAmb IAmb 19 51 23.8
comp=Z,0.9nm,0.7s
NOR Nord 41.67 8 *i* P P **19 51 23.8 -0.4**
N35A Tabor 42.87 83 P P 19 51 35.5 +1.1
MNTX Cornudas Mount 43.83 100 P P 19 51 44.1 +1.8
H11N2 WAKE ISLAND Hy 44.16 230 T T 20 39 02.1
baz=28,slow=75,SNR=7.6
H11N3 WAKE ISLAND Hy 44.16 230 T T 20 39 00.8
baz=28,slow=75,SNR=7.6
H11N1 WAKE ISLAND Hy 44.17 230 T T 20 39 01.4
baz=28,slow=75,SNR=6.0
H11S1 WAKE ISLAND Hy 45.32 230 T T 20 40 24.3
baz=28,slow=75,SNR=13
WMOK Wichita Mounta 45.33 91 P P 19 51 54.6 +0.3
WMOK IAmb IAmb 19 51 55.9
comp=Z,3.0nm,0.8s
H11S2 WAKE ISLAND Hy 45.33 230 T T 20 40 23.5
baz=28,slow=75,SNR=17
H11S3 WAKE ISLAND Hy 45.34 230 T T 20 40 19.7
baz=28,slow=75,SNR=4.4
DAG Danmarks Havn 45.62 12 *i* P P **19 51 55.0 -1.0**
DAG IAmb IAmb 19 51 55.8
comp=Z,2.4nm,0.6s
TX31 Lajitas Ar. Si 46.58 101 P P 19 52 05.4 +1.2
TX32 Lajitas Array 46.58 101 P P 19 52 05.6 +1.4
TX32 IAmb IAmb 19 52 30.1
comp=Z,4.5nm,1.4s
TXAR Lajitas Array 46.58 101 P P 19 52 05.7 +1.5
comp=Z,1.6nm,0.7s,baz=307,slow=6.0,SNR=22
TXAR LR LR 20 10 49.4
comp=Z,52nm,18.1s,baz=304,slow=35
comp=Z,1.6nm,0.7s
SPITS Spitsbergen Ar 46.60 1 P P 19 52 02.8 -0.9
comp=Z,8.6nm,1.1s,baz=52,slow=4.3,SNR=12
comp=Z,8.6nm,1.1s
DBG Daneborg 47.55 14 *i* P P **19 52 09.3 -1.8**
ICESG Greenland Ices 48.06 25 *eP* P **19 52 15.3 -0.2**
KSRS Korea Array 51.28 282 P P 19 52 39.8 -0.1
comp=Z,1.5nm,0.7s,baz=42,slow=7.4,SNR=7.7
comp=Z,1.5nm,0.7s
BLA Blacksburg 53.91 75 P P 19 52 59.9 +0.4
SONM Songino Array 55.05 305 P P 19 53 07.4 -0.4
comp=Z,1.6nm,0.8s,baz=47,slow=7.8,SNR=6.4
SONM PcP PcP 19 54 09.4 +0.6
comp=Z,0.4nm,0.6s,baz=58,slow=3.6,SNR=1.8
comp=Z,1.6nm,0.8s
ARCES ARCESS Array B 55.30 358 P P 19 53 08.2 -0.8
comp=Z,5.0nm,1.0s,baz=27,slow=6.0,SNR=6.5
comp=Z,5.0nm,1.0s
HHC Hu-ho-hao-te 57.61 296 *eP* P **19 53 28.1 +2.0**
HHC pmax pmax
comp=Z,28nm,0.8s
HHC pmax pmax
comp=Z,170nm,6.4s
ZALV Zalesovo Beam 59.24 322 P P 19 53 36.5 -0.6
comp=Z,1.2nm,0.7s,baz=17,slow=4.6,SNR=6.2
comp=Z,1.2nm,0.7s
FINES FINESS Array B 63.41 358 P P 19 54 04.4 -0.7
comp=Z,1.4nm,0.4s,baz=5.5,slow=8.7,SNR=24
comp=Z,1.4nm,0.4s
NB2 NORSAR Subarra 63.58 6 P P 19 54 05.6 -0.7
comp=Z,1.0nm,0.9s,baz=353,slow=6.9
NOA NORSAR Array B 63.58 6 P P 19 54 05.9 -0.4
comp=Z,1.1nm,0.8s,baz=353,slow=6.7,SNR=4.0
comp=Z,1.1nm,0.8s
MKAR Makanchi Array 66.06 319 P P 19 54 21.9 -0.8
comp=Z,0.9nm,0.7s,baz=38,slow=6.0,SNR=7.9
comp=Z,0.9nm,0.7s
WMQ Urumqi 66.41 314 *eP* P **19 54 27.8 +2.8**
PZH PanZhiHua 73.87 293 P P 19 55 10.4 -0.6
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,120nm,8.0s
AKASG Malin Array Be 74.03 355 P P 19 55 10.7 -0.7
comp=Z,2.5nm,0.4s,baz=9.6,slow=6.2,SNR=20
comp=Z,2.5nm,0.4s
GERES GERESS Array B 75.88 5 P P 19 55 22.3 +0.1
comp=Z,0.6nm,0.8s,baz=342,slow=7.0,SNR=4.2
comp=Z,0.6nm,0.8s
KBZ Khabaz 79.56 344 P P 19 55 43.0 +0.4
comp=Z,2.0nm,0.8s,baz=332,slow=5.7,SNR=5.5
comp=Z,2.0nm,0.8s
CM31 Chiang Mai Arr 81.91 291 P P 19 55 54.6 -1.0
CM31 IAmb IAmb 19 56 09.2
comp=Z,4.7nm,0.8s
CMAR Chiang Mai Arr 81.91 291 P P 19 55 55.5 -0.1
comp=Z,1.4nm,0.6s,baz=13,slow=5.8,SNR=19
comp=Z,1.4nm,0.6s

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*DJA **01** 19:50:42.5±0.2,9°S±2°×11°3E±°, h51km±3km, M4.8/32, mB5.3/11, mb4.9/32, MLv5.1/13, Mw(mB)4.7/11*
*IDC **01** 19:50:42.9±1.5,9°14S×113°09E, h56km±13km, mb4.3/23, mbtmp4.6/27, MS3.8/48, Error ellipse: s-maj=12.8km s-min=8.8km az=38.0*
*NEIC **01** 19:50:43.3±1.8,9°17S±0°08×113°11E±0°05, h58km±6km, mb4.7/50, Error ellipse: s-maj=11.9km s-min=7.0km az=174.0*
ISC 01 19:50:41.7±0.8, 9°27S±0°04×113°01E±0°04, h48km±7km, n259, σ1s38/226, mb4.7/57, MS3.9/48, 7C-6D, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GMJI	**Gumukmas**	**1.08**	**23**	P	**Pn**	**19 50 59.8**	**-0.7**
GMJI				S	**Sn**	**19 51 13.9**	**-0.4**
JAGI	**Jajag, Banyuwa**	**1.38**	**55**	Pn	**Pn**	**19 51 04.4**	**-0.1**
JAGI				Sn	**Sn**	**19 51 20.3**	**-1.4**
JAGI	**Jajag, Banyuwa**	**1.38**	**55**	P	**Pn**	**19 51 04.6**	**0.0**
JAGI				S	**Sn**	**19 51 21.9**	**+0.2**
JAGI	**Jajag, Banyuwa**	**1.38**	**55**	P	**Pn**	**19 51 05.2**	**+0.6**
BLJI	**Banyuglugur**	**1.62**	**21**	P	**Pn**	**19 51 09.4**	**+1.5**
BLJI				S	**Sn**	**19 51 30.7**	**+3.1**
PWJI	**Pagerwojo**	**1.72**	**316**	P	**Pn**	**19 51 09.2**	**0.0**
PWJI				S	**Sn**	**19 51 30.1**	**+0.1**
ABJI	**Asem Bagus**	**1.90**	**40**	P	**Pn**	**19 51 14.2**	**+2.5**
ABJI				S	**Sn**	**19 51 37.9**	**+3.4**
PCJI	**Pacitan**	**2.10**	**300**	P	**Pn**	**19 51 14.0**	**-0.5**
PCJI				S	**Sn**	**19 51 38.6**	**-0.8**
IGBI	**Denpasar**	**2.16**	**78**	P	**Pn**	**19 51 15.6**	**+0.4**
DNP	**Denpasar**	**2.25**	**75**	P	**Pn**	**19 51 17.7**	**+1.2**
GRJI	**Gresik**	**2.40**	**347**	P	**Pn**	**19 51 20.4**	**+1.9**
KMMI	**Kalianget**	**2.40**	**23**	P	**Pn**	**19 51 19.4**	**+0.8**
SRBI	**Singaraja**	**2.48**	**62**	P	**Pn**	**19 51 20.6**	**+1.0**
WOJI	**Wonogiri, Jawa**	**2.51**	**304**	P	**Pn**	**19 51 20.6**	**+0.6**
TBJI	**Tambak Boyo**	**2.69**	**335**	P	**Pn**	**19 51 24.3**	**+1.7**
UGM	**Wanagama**	**2.81**	**299**	Pn	**Pn**	**19 51 24.8**	**+0.7**
UGM				Sn	**Sn**	**19 51 55.7**	**-1.1**
UGM	**Wanagama**	**2.81**	**299**	P	**Pn**	**19 51 25.4**	**+1.3**
UGM	**Wanagama**	**2.81**	**299**	P	**Pn**	**19 51 25.7**	**+1.6**
YOGI	**Yogyakarta**	**3.05**	**298**	P	**Pn**	**19 51 28.3**	**+0.8**
SMRI	**Semarang**	**3.37**	**311**		**Pn**	**19 51 33.6**	**+1.8**
SMRI	**Semarang**	**3.37**	**311**	P	**Pn**	**19 51 33.3**	**+1.5**
SMRI	**Semarang**	**3.37**	**311**	P	**Pn**	**19 51 33.8**	**+2.0**
BWJI	**Bawean**	**3.42**	**354**	P	**Pn**	**19 51 34.2**	**+1.7**
UWJI	**Ujung Watu**	**3.49**	**324**	P	**Pn**	**19 51 35.0**	**+1.4**
PLAI	**Plampang**	**4.73**	**85**	P	**Pn**	**19 51 52.5**	**+2.0**
PLAI	**Plampang**	**4.73**	**85**	P	**Pn**	**19 51 52.5**	**+2.0**
CMJI	**Cimerak**	**4.75**	**288**	P	**Pn**	**19 51 48.8**	**-2.0**
JCJI	**Jatiwangi**	**5.45**	**300**	P	**Pn**	**19 51 59.8**	**-0.6**
	6μm488nm,0.7s						
LEM	**Lembang**	**5.87**	**294**	P	**Pn**	**19 52 08.2**	**+2.0**
	131nm,0.8s,baz=83,slow=9.5,SNR=29						
LEM				S	**Sn**	**19 53 15.5**	**+3.2**
	230nm,0.9s,baz=202,slow=23,SNR=3.6						
LEM				LR	LR	19 54 45.8	
	comp=Z,650nm,21.7s,baz=141,slow=41						
LEM	**Lembang**	**5.87**	**294**	P	**Pn**	**19 52 07.6**	**+1.3**
	142nm,0.9s						
BBKI	**Banjar Baru**	**6.05**	**18**	P	**Pn**	**19 52 10.9**	**+2.2**
	1μm96nm,1.0s						
CNJI	**Cibinong**	**6.14**	**288**	P	**Pn**	**19 52 11.4**	**+1.5**
	4μm337nm,1.2s						
WBSI	**Waikabubak, Su**	**6.31**	**94**	P	**Pn**	**19 52 12.6**	**+0.4**
	3μm161nm,0.9s						
PBKI	**Pangkalan Bun**	**6.66**	**348**	P	**Pn**	**19 52 19.0**	**+2.0**
	474nm,1.1s						
DBJI	**Dramaga**	**6.76**	**293**	P	Pn	19 52 26.0	+7.5
XMI	**Christmas Isla**	**7.31**	**260**	P	**Pn**	**19 52 25.4**	**-0.6**
XMIS	**Christmas Isla**	**7.35**	**260**	Pn	**Pn**	**19 52 24.7**	**-1.8**
XMIS	**Christmas Isla**	**7.35**	**260**	P	**Pn**	**19 52 25.6**	**-0.9**
BASI	**Baing, Sumba**	**7.52**	**98**	P	**Pn**	**19 52 30.9**	**+2.1**
	105nm,0.8s						
KAPI	**Kappang**	**7.91**	**58**	P	**Pn**	**19 52 35.2**	**+1.0**
	26nm,0.3s,baz=207,slow=7.2,SNR=24						
KAPI				S	**Sn**	**19 54 00.9**	**-1.6**
	19nm,0.6s,baz=30,slow=20,SNR=2.2						
KAPI				LR	LR	19 56 30.6	
	comp=Z,68nm,20.5s,baz=257,slow=45						
KAPI	**Kappang**	**7.91**	**58**	Pn	**Pn**	**19 52 34.7**	**+0.5**
KAPI	**Kappang**	**7.91**	**58**	P	**Pn**	**19 52 35.6**	**+1.4**
BSSI	**Bau Bau, Buton**	**8.04**	**68**	P	**Pn**	**19 52 37.0**	**+1.0**
	74nm,0.8s						
BKSI	**Bulukumba**	**8.07**	**61**	P	**Pn**	**19 52 38.1**	**+1.7**
TPI	**Tanjungpandan**	**8.38**	**320**	P	**Pn**	**19 52 42.3**	**+1.6**
	22nm,0.8s						
MTKI	**Muara Teweh, K**	**8.48**	**13**	P	**Pn**	**19 52 44.4**	**+2.3**
BNSI	**Bone**	**8.55**	**56**	P	**Pn**	**19 52 44.3**	**+1.4**
EDFI	**Ende, Flores**	**8.59**	**87**	P	**Pn**	**19 52 43.4**	**-0.2**
MMRI	**Maumere**	**9.14**	**87**	Pn	**Pn**	**19 52 48.8**	**-2.3**
MMRI	**Maumere**	**9.14**	**87**	P	**Pn**	**19 52 52.6**	**+1.5**
	1μm98nm,1.3s						
MMRI	**Maumere**	**9.14**	**87**	P	**Pn**	**19 52 52.5**	**+1.5**
TTSI	**Tana Toraja**	**9.17**	**48**	P	**Pn**	**19 52 52.8**	**+1.4**
KLI	**Kotabumi**	**9.20**	**298**	P	**Pn**	**19 52 53.2**	**+1.3**

KASI Kota Agung 9.23 293 P **Pn** **19 52 52.9 +0.7**
STKI Sintang 9.40 351 P **Pn** **19 52 56.3 +1.7**
BATI Baumata 10.54 96 P **Pn** **19 53 11.2 +0.9**
30nm,0.3s,baz=265,slow=4.5,SNR=16
BATI S **Sn** **19 55 04.2 -2.9**
12nm,0.4s,baz=217,slow=20,SNR=1.5
KSM Kuching 11.01 346 Pn **Pn** **19 53 17.7 +1.0**
KSM Kuching 11.01 346 P **Pn** **19 53 19.5 +2.9**
SOEI Soe 11.11 93 Pn Pn 19 53 13.3 -4.9
SOEI Soe 11.11 93 P **Pn** **19 53 19.6 +1.4**
89nm,0.8s
SOEI Soe 11.11 93 P **Pn** **19 53 18.6 +0.4**
LUWI Luwuk 12.70 50 P P 19 53 56.9 +7.2
TOLI2 Tolitoli 12.90 37 Pn **Pn** **19 53 41.5 -1.0**
TOLI2 Tolitoli 12.90 37 P **Pn** **19 53 44.7 +2.3**
GIRL Giralia 13.35 175 Pn Pn 19 53 45.3 -3.3
GIRL Giralia 13.35 175 P **Pn** **19 53 45.9 -2.7**
MBWA Marble Bar 13.48 152 Pn Pn 19 53 45.0 -5.3
MBWA Marble Bar 13.48 152 P Pn 19 53 45.9 -4.5
PSA00 Pilbara Seismi 13.89 153 Pn Pn 19 53 50.9 -5.0
PSA00 Pilbara Seismi 13.89 153 Pn 19 53 49.8 -6.2
PSA00 Pilbara Seismi 13.89 153 P Pn 19 53 51.6 -4.4
SANI Sanana 14.77 62 P **Pn** **19 54 09.2 +1.5**
518nm67nn,1.2s
KNRA Kununurra 16.64 114 P **Pn** **19 54 28.9 -2.8**
KNRA IAmb IAmb 19 54 50.8
comp=Z,38nn,0.9s
KNRA Kununurra 16.64 114 P **Pn** **19 54 32.9 +1.2**
BNDI Bandanaira 17.42 75 P **P** **19 54 43.5 +1.3**
TNTI Ternate 17.44 56 **Pn** **19 54 39.1 -2.6**
TNTI Ternate 17.44 56 P **P** **19 54 42.9 +0.5**
comp=Z,466nmcomp=Z,35nn,1.0s
MTN Manton Dam 18.14 103 **Pn** **19 54 50.7 +0.5**
MTN IAmb IAmb 19 54 53.0
comp=Z,28nn,0.5s
MTN Manton Dam 18.14 103 P **Pn** **19 54 50.9 +0.6**
IPM Ipoh 18.15 318 P **P** **19 54 49.8 -0.5**
PSI Prapat 18.46 310 LR LR 20 02 34.1
comp=Z,739nm,19.8s,baz=130,slow=39
KDU Kakadu 19.40 102 P **P** **19 55 04.8 +0.8**
MORW Morawa 19.90 172 P **P** **19 55 09.3 0.0**
SIJI Sorong 19.99 66 P **P** **19 55 10.2 -0.3**
comp=Z,30nn,0.8s,baz=289,slow=7.4,SNR=8.0
FAKI Fak Fak 20.14 73 P **P** **19 55 10.4 -1.6**
FAKI IAmb IAmb 19 55 12.9
comp=Z,32nn,0.6s
FAKI Fak Fak 20.14 73 P **P** **19 55 09.4 -2.6**
FAKI Fak Fak 20.14 73 P **P** **19 55 12.8 +0.8**
DAV Davao City (W) 20.50 38 LR LR 20 05 24.8
comp=Z,67nm,18.1s,baz=243,slow=43
WRKA Warakurna 21.39 139 P **P** **19 55 26.4 +0.9**
BLDU Ballidu 21.52 171 P **P** **19 55 27.0 +0.3**
MUN Mundaring 22.79 173 P **P** **19 55 41.4 +1.0**
WB0 Warramunga Arr 23.15 119 P **P** **19 55 42.9 -1.3**
WB0 IAmb IAmb 19 55 45.4
comp=Z,18nn,0.8s
WRA Warramunga Arr 23.18 120 P **P** **19 55 44.1 -0.4**
comp=Z,21nn,0.9s,baz=294,slow=11,SNR=94
WRA PcP **PcP** **19 59 32.0 +0.3**
comp=Z,2.2nn,0.8s,baz=296,slow=2.6,SNR=5.0
WRA S **S** **19 59 54.6 +1.8**
comp=Z,0.9nn,1.0s,baz=287,slow=26,SNR=1.5
WRA LR LR 20 04 28.6
comp=Z,344nn,21.6s,baz=9.0,slow=36
comp=Z,21nn,0.9s
WRA Warramunga Arr 23.18 120 P **P** **19 55 41.4 -3.0**
WRAB Tennant Creek 23.18 120 P **P** **19 55 43.8 -0.7**
WRAB IAmb IAmb 19 55 45.3
comp=Z,32nn,1.0s
WRAB Tennant Creek 23.18 120 P **P** **19 55 44.2 -0.3**
WB2 Warramunga Arr 23.19 120 P **P** **19 55 43.8 -0.7**
WB2 IAmb IAmb 19 55 45.3
comp=Z,28nn,1.1s
WR0 Warramunga Arr 23.36 119 P **P** **19 55 45.6 -0.6**
WR0 IAmb IAmb 19 55 46.7
comp=Z,29nn,0.8s
NWAO Narrogin (SRO) 23.86 171 P **P** **19 55 53.3 +2.5**
AS31 Alice Springs 24.57 128 P **P** **19 55 57.6 +0.1**
ASAR Alice Springs 24.57 128 P **P** **19 55 57.8 +0.4**
comp=Z,32nn,0.8s,baz=302,slow=8.4,SNR=370
ASAR PcP **PcP** **19 59 34.8 +0.1**
comp=Z,1.8nn,0.8s,baz=354,slow=3.0,SNR=4.9
ASAR LR LR 20 06 59.6
comp=Z,108nn,18.9s,baz=304,slow=40
comp=Z,32nn,0.8s
ASAR Alice Springs 24.57 128 P **P** **19 55 57.3 -0.1**
FORT Forrest 25.59 149 P **P** **19 56 07.0 +0.5**
FORT Forrest 25.59 149 P **P** **19 56 08.7 +2.2**
QIS Mount Isa 27.99 117 P **P** **19 56 29.3 +1.0**
OOD Oodnadatta 28.22 134 P **P** **19 56 31.1 +0.9**
QIZ Qiongzhong 28.29 354 P **P** **19 56 31.7 +0.8**
QIZ S **S** **20 01 13.8 -0.3**
QIZ LR LR
comp=N,180nn,16.7s
QIZ LR LR
comp=E,190nn,16.7s
QIZ LR LR
comp=Z,280nn,20.9s
MULG Mulgathing 28.69 140 P **P** **19 56 34.2 -0.2**
CM31 Chiang Mai Arr 30.85 333 P **P** **19 56 54.3 +0.7**
CM31 IAmb IAmb 19 57 02.3
comp=Z,9.0nn,0.9s
CMAR Chiang Mai Arr 30.85 333 P **P** **19 56 54.1 +0.5**
comp=Z,3.3nn,0.7s,baz=168,slow=8.4,SNR=35
CMAR PcP **PcP** **19 59 49.7 -0.2**
comp=Z,1.0nn,0.8s,baz=176,slow=2.9,SNR=4.9
CMAR ScP **ScP** **20 03 28.1 -0.8**
comp=Z,0.3nn,0.7s,baz=199,slow=4.6,SNR=5.1
CMAR LR LR 20 11 55.3
comp=Z,268nn,18.3s,baz=155,slow=41
comp=Z,3.3nn,0.7s
CMAR Chiang Mai Arr 30.85 333 P **P** **19 56 52.9 -0.7**
CHTO Chiang Mai 31.17 334 P **P** **19 56 56.6 +0.2**
LCRK Leigh Creek 31.57 135 P **P** **19 57 01.0 +1.1**
MTSU Mount Surprise 31.62 110 P **P** **19 57 02.2 +1.7**
BBOO Buckleboo 31.66 141 P **P** **19 56 59.9 -0.7**
BBOO IAmb IAmb 19 57 01.9
comp=Z,14nn,0.8s
BBOO Buckleboo 31.66 141 P **P** **19 57 01.0 +0.4**
NAPP Napperby 33.22 139 P **P** **19 57 16.1 +1.8**
comp=Z,35nn,0.9s
PMG Port Moresby 33.69 93 LR LR 20 14 56.8
comp=Z,114nn,18.1s,baz=198,slow=43
CTA Charters Tower 33.84 112 LR LR 20 11 31.6
comp=Z,114nn,21.6s,baz=279,slow=37
CTA Charters Tower 33.84 112 P **P** **19 57 21.5 +1.6**
CTAO Charters Tower 33.84 112 P **P** **19 57 21.5 +1.6**
HTT Hallett 33.88 139 P **P** **19 57 21.7 +1.6**
STKA Stephens Creek 34.76 134 P **P** **19 57 28.6 +1.0**
comp=Z,18nn,0.8s,baz=308,slow=8.8,SNR=53
STKA LR LR 20 12 02.7
comp=Z,410nn,21.4s,baz=298,slow=37
comp=Z,18nn,0.8s
STKA Stephens Creek 34.76 134 P **P** **19 57 27.8 +0.1**
STKA IAmb IAmb 19 57 44.7
comp=Z,5.5nn,0.8s
STKA Stephens Creek 34.76 134 P **P** **19 57 29.1 +1.4**
PZH PanZhiHua 37.21 343 P **P** **19 57 50.5 +1.8**
PZH pmax pmax
comp=Z,10.0nn,0.9s
PZH pmax pmax
comp=Z,90nn,6.3s
CMSA Cobar Meteorol 37.56 131 P **P** **19 57 54.7 +3.1**
ARPS Mount Arapiles 37.84 141 P **P** **19 57 56.2 +2.4**
JOW Kunigami 38.83 22 LR LR 20 16 00.3
comp=Z,43nn,19.6s,baz=150,slow=39
H08S2 Diego Garcia H 40.09 269 T T 20 40 49.9
baz=95,slow=76,SNR=36
H08S3 Diego Garcia H 40.10 269 T T 20 40 50.8
baz=95,slow=76,SNR=71
H08S1 Diego Carcia H 40.11 269 T T 20 40 53.1
baz=95,slow=76,SNR=19
SHL Shillong 40.28 330 P **P** **19 58 13.9 -0.7**
TOO Toolangi 40.64 139 P **P** **19 58 19.1 +1.8**
TOO Toolangi 40.64 139 P **P** **19 58 20.2 +2.9**
NJ2 Nanjing 41.47 8 *eP* P 19 58 29.1 +5.1
NJ2 pmax pmax
comp=Z,7.0nn,0.5s
CAN Canberra 41.82 134 P **P** **19 58 29.3 +2.2**
TAPN Taplejung 43.89 327 *eP* **P** **19 58 43.6 -0.6**
comp=Z,31nn,0.6s
LSA Lhasa 44.09 332 P **P** **19 58 46.5 +0.5**
LSA pmax pmax
comp=Z,13nn,0.7s
RAMN Ramite 44.19 325 *eP* **P** **19 58 46.0 -0.5**
comp=Z,7.8nn,0.6s
JIRN Jiri 44.97 326 *eP* **P** **19 58 51.9 -1.0**
comp=Z,37nn,0.6s
GUN Gumba 45.34 325 *eP* **P** **19 58 54.7 -1.1**
comp=Z,39nn,0.6s
PKI Pulchoki 45.34 325 *eP* **P** **19 58 54.7 -1.1**
PKIN Phulchoki 45.36 325 *eP* **P** **19 58 54.2 -1.6**
comp=Z,9.9nn,0.7s
DMN Daman 45.55 324 *eP* **P** **19 58 56.5 -0.8**
comp=Z,30nn,0.7s
LZH Lanzhou 45.93 350 *eP* **P** **19 59 00.9 +0.8**
LZH pP pP 19 59 17.0 +4.5
LZH sP sP 19 59 25.8 +7.9
LZH pmax pmax
comp=Z,20nn,1.3s
LZH LR LR
comp=N,210nn,14.1s
LZH LR LR
comp=E,240nn,14.1s
LZH LR LR
comp=Z,190nn,16.9s
GKN Gorkha 46.11 324 *eP* **P** **19 59 00.2 -1.5**
comp=Z,5.3nn,0.2s
DANN Dangsing 46.88 324 *eP* **P** **19 59 05.4 -2.5**
comp=Z,29nn,0.6s
PYUN Piuthan 47.15 323 *eP* **P** **19 59 08.2 -1.6**
comp=Z,7.4nn,0.5s
KSRS Korea Array 48.53 16 P **P** **19 59 20.2 +0.1**
comp=Z,2.4nn,0.9s,baz=192,slow=6.6,SNR=9.7
KSRS LR LR 20 21 34.9
comp=Z,52nn,19.2s,baz=205,slow=38
comp=Z,2.4nn,0.9s
JHJ Hachijo jima 2 49.27 30 LR LR 20 21 33.7
comp=Z,38nn,19.2s,baz=121,slow=38
BTO Baotou 49.70 357 *eP* **P** **19 59 30.5 +1.4**
HHC Hu-ho-hao-te 49.89 359 *eP* **P** **19 59 33.6 +3.1**
HHC pmax pmax
comp=Z,44nn,1.2s
HHC pmax pmax
comp=Z,150nn,5.5s
GTA Gaotai 49.96 347 *eP* **P** **19 59 31.6 +0.4**
GTA pP pP 19 59 44.4 +0.7
GTA sP sP 19 59 50.5 +1.5
GTA pmax pmax
comp=Z,3.0nn,1.1s
GTA pmax pmax
comp=Z,57nn,6.8s
GTA LR LR
comp=N,89nn,15.1s
GTA LR LR
comp=E,110nn,11.1s
GTA LR LR
comp=Z,140nn,17.1s
JGF Kuroka 50.20 26 P **P** **19 59 31.1 -1.8**
MAJO Matsushiro 51.36 26 P **P** **19 59 40.0 -1.6**
MJAR Matsushiro Arr 51.36 26 P **P** **19 59 40.0 -1.7**
comp=Z,6.4nn,0.7s,baz=196,slow=8.4,SNR=20
MJAR LR LR 20 24 21.3
comp=Z,30nn,18.4s,baz=206,slow=39
comp=Z,6.4nn,0.7s
MJB9 Matsu-Tunnel 51.36 26 P **P** **19 59 39.9 -1.7**
MJB9 IAmb IAmb 19 59 42.0
comp=Z,8.3nn,0.6s
DZM Mont Dzumac 52.75 111 LR LR 20 23 03.5
comp=Z,75nn,18.0s,baz=256,slow=37
USRK Ussuriysk Ar. 55.93 16 P **P** **20 00 14.3 -0.6**
comp=Z,6.7nn,0.8s,baz=196,slow=5.3,SNR=10
comp=Z,6.7nn,0.8s
USRK Ussuriysk Ar. 55.93 16 P **P** **20 00 13.7 -1.2**
ULN Ulaanbaatar 57.13 355 P **P** **20 00 22.5 -1.0**
ULN IAmb IAmb 20 00 26.4
comp=Z,5.4nn,0.9s
SONM Songino Array 57.16 355 P **P** **20 00 23.2 -0.5**
comp=Z,5.0nn,0.7s,baz=176,slow=8.4,SNR=44
SONM ScP **ScP** **20 05 12.3 -1.6**
comp=Z,1.0nn,1.0s,baz=164,slow=2.7,SNR=5.1
SONM LR LR 20 26 25.8
comp=Z,78nn,20.7s,baz=186,slow=38
comp=Z,5.0nn,0.7s
SONM Songino Array 57.16 355 P **P** **20 00 22.8 -0.9**
SONM IAmb IAmb 20 00 25.0
comp=Z,4.9nn,0.7s
WMQ Urumqi 57.63 339 *eP* **P** **20 00 29.3 +2.3**
ASAJ Asahikawa 59.52 24 LR LR 20 27 16.4
comp=Z,45nn,20.9s,baz=239,slow=37
KLR Kul'dur 60.53 14 LR LR 20 30 47.7
comp=Z,65nn,18.2s,baz=220,slow=40
RPZ Rata Peaks 60.72 135 P **P** **20 00 48.6 +0.1**
comp=Z,26nn,0.9s,baz=284,slow=1.8,SNR=4.6
RPZ LR LR 20 28 38.4
comp=Z,166nn,18.1s,baz=268,slow=37
comp=Z,26nn,0.9s
RPZ Rata Peaks 60.72 135 IAmb IAmb 20 00 51.1
comp=Z,44nn,1.1s
KDJ Kajisay 60.77 330 P **P** **20 00 48.9 -0.1**
KDJ IAmb IAmb 20 01 10.2
comp=Z,4.4nn,1.1s
BOOM Boomskoye usch 61.65 330 P **P** **20 00 54.6 -0.3**
MK31 Makanchi Array 62.18 337 P **P** **20 00 56.9 -1.3**
MK31 IAmb IAmb 20 01 19.6
comp=Z,2.8nn,0.8s
MKAR Makanchi Array 62.18 337 P **P** **20 00 57.3 -0.9**
comp=Z,3.2nn,0.6s,baz=149,slow=7.4,SNR=45
MKAR LR LR 20 30 30.8
comp=Z,72nn,20.3s,baz=160,slow=38
comp=Z,3.2nn,0.6s
MKAR Makanchi Array 62.18 337 P **P** **20 00 56.8 -1.4**
AAK Ala-Archa 62.49 329 LR LR 20 31 05.8
comp=Z,129nn,19.3s,baz=144,slow=39
AAK Ala-Archa 62.49 329 P **P** **20 00 59.7 -0.8**
AAK IAmb IAmb 20 01 19.0
comp=Z,6.6nn,1.1s
MSVF Nonsavu 63.55 105 LR LR 20 28 44.7
comp=Z,63nn,19.2s,baz=180,slow=36
URZ Urewera 64.02 128 LR LR 20 29 23.7
comp=Z,156nn,20.2s,baz=211,slow=36
KK31 Karatay Array 64.91 327 P **P** **20 01 16.1 -0.2**
KKAR Karatay Array 64.91 327 P **P** **20 01 15.8 -0.5**
KKAR Karatay Array 64.91 327 P **P** **20 01 15.9 -0.4**
KKAR IAmb IAmb 20 01 19.0
comp=Z,1.8nn,0.8s
KURBB Kurchatov Arra 66.74 337 LR LR 20 32 24.0
comp=Z,56nn,21.2s,baz=117,slow=38
KURK Kurchatov 66.78 337 P **P** **20 01 27.8 -0.3**
MAW Mawson 67.03 199 P **P** **20 01 30.6 +1.1**
comp=Z,4.9nn,0.8s,baz=58,slow=8.9,SNR=7.3
MAW LR LR 20 23 43.2
comp=Z,98nn,20.6s,baz=46,slow=30
comp=Z,4.9nn,0.8s
MAW Mawson 67.03 199 P **P** **20 01 30.5 +1.1**
ZAA0 Zalesovo Array 67.35 342 P **P** **20 01 30.2 -1.4**
ZAA0 IAmb IAmb 20 01 33.5
comp=Z,6.5nn,0.8s
ZALV Zalesovo Beam 67.35 342 P **P** **20 01 30.7 -1.0**
comp=Z,6.5nn,0.6s,baz=137,slow=4.5,SNR=26
comp=Z,6.5nn,0.6s
ZALV Zalesovo Beam 67.35 342 P **P** **20 01 29.6 -2.0**
GEYT Alibeck 69.45 316 P **P** **20 01 45.4 +0.1**
comp=Z,1.3nn,0.5s,baz=202,slow=19,SNR=4.3
comp=Z,1.3nn,0.5s
YAK Yakutsk 72.26 8 LR LR 20 36 31.6
comp=Z,78nn,19.0s,baz=266,slow=38
YAK Yakutsk 72.26 8 P **P** **20 02 00.3 -1.4**
YAK IAmb IAmb 20 02 05.3
comp=Z,8.7nn,0.6s
VNDA Vanda 72.69 170 P **P** **20 02 05.1 +1.0**
comp=Z,4.1nn,0.8s,baz=308,slow=5.9,SNR=18
VNDA LR LR 20 31 14.9
comp=Z,84nn,20.6s,baz=322,slow=33
comp=Z,4.1nn,0.8s
VNDA Vanda 72.69 170 P **P** **20 02 04.5 +0.3**
VNDA IAmb IAmb 20 02 05.9
comp=Z,6.2nn,0.9s
PETK Petropavlovsk- 72.82 26 P **P** **20 02 04.3 -0.9**
comp=Z,2.7nn,0.9s,baz=208,slow=15,SNR=5.6
comp=Z,2.7nn,0.9s
RAYN Ar Rayn 73.55 298 P **P** **20 02 09.2 -1.1**
RAYN IAmb IAmb 20 02 25.0
comp=Z,6.0nn,1.0s
ABKAR Akbulak array 74.47 327 P **P** **20 02 13.8 -1.2**
ABKAR IAmb IAmb 20 02 30.4
comp=Z,7.4nn,0.7s
ABKAR Akbulak array 74.47 327 P **P** **20 02 14.2 -0.8**
MA2 Magadan 74.97 19 LR LR 20 39 04.0
comp=Z,46nn,18.6s,baz=166,slow=39
KMBO Kilima Mbogo 75.76 271 P **P** **20 02 24.5 +0.9**
comp=Z,1.2nn,0.3s,baz=39,slow=11,SNR=4.4
KMBO LR LR 20 30 23.0
comp=Z,106nn,21.1s,baz=91,slow=31
comp=Z,1.2nn,0.3s
AKTO Aktyubinsk 76.17 327 LR LR 20 40 42.8
comp=Z,49nn,19.2s,baz=128,slow=39
SEY Seymchan 78.07 17 LR LR 20 39 05.6
comp=Z,38nn,19.4s,baz=206,slow=37
ARU Arti 79.29 333 P **P** **20 02 41.8 -0.2**
comp=Z,2.4nn,0.5s,baz=352,slow=1.4
ARU LR LR 20 40 38.9
comp=Z,80nn,20.0s,baz=130,slow=38
comp=Z,2.4nn,0.5s
ARU Arti 79.29 333 P **P** **20 02 42.1 +0.1**
GNI Garni 79.78 314 LR LR 20 44 22.2
comp=Z,16nn,18.9s,baz=100,slow=40
NRIK Noril'sk 80.41 351 P **P** **20 02 47.7 -0.1**
comp=Z,3.2nn,0.4s,baz=135,slow=4.3,SNR=3.1
comp=Z,3.2nn,0.4s
QSPA South Pole Qui 80.73 180 LR LR 20 35 43.1
comp=Z,93nn,20.8s,baz=334,slow=33
AKH Akhalkalaki 81.12 315 ⇑P **P** **20 02 56.8 +4.3**
KARS Kars 81.14 314 P **P** **20 02 52.8 +0.3**
GURO Guroymak-BITLI 81.20 311 P **P** **20 02 53.1 +0.3**
GURO IAmb IAmb 20 02 54.9
comp=Z,5.8nn,0.6s
TIXI Tiksi 81.43 5 P **P** **20 02 51.5 -1.6**
TIXI IAmb IAmb 20 03 08.3
comp=Z,5.5nn,0.9s
MBAR Mbarara 82.28 271 LR LR 20 36 25.7
comp=Z,66nn,18.9s,baz=75,slow=33
MBAR Mbarara 82.28 271 P **P** **20 02 58.1 -1.0**
MBAR IAmb IAmb 20 03 01.3
comp=Z,5.8nn,0.7s
KBZ Khabaz 82.35 317 P **P** **20 02 58.4 -0.2**
comp=Z,2.8nn,0.7s,baz=124,slow=5.4,SNR=6.5
comp=Z,2.8nn,0.7s
CHVG Ch'k'valeri 82.56 315 ⇓P **P** **20 02 59.8 +0.1**
LSZ Lusaka 82.65 256 LR LR 20 33 23.7
comp=Z,96nn,21.0s,baz=109,slow=31
BELG Belogornoye 82.79 326 LR LR 20 45 35.5
comp=Z,62nn,20.1s,baz=150,slow=40
BOSA Boshof 83.67 242 P **P** **20 03 07.5 +1.4**
comp=Z,4.4nn,0.9s,baz=109,slow=4.4,SNR=4.9
BOSA LR LR 20 33 03.8
comp=Z,67nn,21.0s,baz=142,slow=30
comp=Z,4.4nn,0.9s
BOSA Boshof 83.67 242 IAmb IAmb 20 03 08.3
comp=Z,15nn,1.2s
LBTB Lobatse 83.81 246 LR LR 20 37 28.3
comp=Z,55nn,18.1s,baz=84,slow=33
LBTB Lobatse 83.81 246 P **P** **20 03 05.7 -1.1**
RAR Rarotonga 84.13 110 LR LR 20 39 31.8
comp=Z,23nn,19.2s,baz=260,slow=35
KIRV Kirov 84.63 332 LR LR 20 44 24.2
comp=Z,56nn,21.2s,baz=133,slow=38
SUR Sutherland 86.95 238 LR LR 20 38 33.3
comp=Z,43nn,19.4s,baz=88,slow=33
TROLL Troll, Antarti 87.43 197 PKPdf **P** **20 03 25.1 +1.2**
BR131 Keskin Array S 87.79 311 P **P** **20 03 26.0 -0.2**
BRTR Keskin Array B 87.79 311 P **P** **20 03 25.8 -0.4**
comp=Z,4.9nn,0.8s,baz=130,slow=6.6,SNR=18
comp=Z,4.9nn,0.8s
BRTR Keskin Array B 87.79 311 P **P** **20 03 24.8 -1.4**
SNAA Sanae 89.10 197 PKPdf **P** **20 03 33.0 +1.4**
SNAA Sanae 89.10 197 LR LR 20 38 17.4
comp=Z,70nn,19.2s,baz=120,slow=32
SNAA Sanae 89.10 197 P **P** **20 03 33.1 +1.4**
OBN Obninsk 89.89 326 LR LR 20 48 04.8
comp=Z,15nn,21.4s,baz=178,slow=38
VNA2 Neumayer--Watz 90.75 196 PKPdf P 20 03 32.1 -7.2
baz=168,slow=1.1
VNA1 Neumayer--Stat 91.14 197 PKPdf P 20 03 33.0 -8.1
VNA3 Neumayer Olymp 91.20 196 PKPdf P 20 03 31.2 -10
TSUM Tsumeb 92.06 250 LR LR 20 40 10.7
comp=Z,42nn,18.1s,baz=146,slow=32
JURR Jurilovca 92.32 315 ⇓P **P** **20 03 47.0 0.0**
TIRR Tirgusor 92.59 314 ⇓P **P** **20 03 47.7 -0.6**
CFR Carcaliu 92.91 315 ⇑P **P** **20 03 48.7 -1.0**
HARR Harsova 92.97 315 ⇑P **P** **20 03 50.2 +0.2**
AKASG Malin Array Be 93.19 321 P **P** **20 03 49.7 -1.2**
comp=Z,0.8nn,0.5s,baz=75,slow=5.1,SNR=6.8
AKASG LR LR 20 49 58.1
comp=Z,35nn,22.0s,baz=118,slow=38
comp=Z,0.8nn,0.5s
AKASG Malin Array Be 93.19 321 IAmb IAmb 20 03 50.5
comp=Z,2.0nn,0.9s
AKBB Malin Array Si 93.19 321 P **P** **20 03 49.4 -1.4**
SORM Soroca 93.28 318 ⇑P **P** **20 03 49.7 -1.7**
VRI Vrincioaia 94.00 316 ⇓P **P** **20 03 54.3 -0.5**
PLOR Plostina 94.05 316 ⇑P **P** **20 03 54.9 -0.1**
TESR Tescani 94.16 316 ⇓P **P** **20 03 54.8 -0.7**
MLR Muntele Rosu 94.49 315 ⇑P **P** **20 03 57.4 +0.2**
DOPR Dopca 94.94 316 ⇑P P 20 04 09.6 +10
BURAR Bucovina Array 95.29 317 ⇓P **P** **20 04 01.3 +0.5**
BUR08 Bucovina Ar. S 95.30 317 P **P** **20 04 01.2 +0.4**
FINES FINESS Array B 96.60 331 P **P** **20 04 05.6 -0.6**
comp=Z,1.5nn,0.8s,baz=145,slow=7.0,SNR=4.5
FINES LR LR 20 54 17.6
comp=Z,42nn,19.6s,baz=81,slow=40
comp=Z,1.5nn,0.8s
ARCES ARCESS Array B 97.74 339 LR LR 20 53 31.4
comp=Z,56nn,19.7s,baz=132,slow=39
TORD Torodi Ar. Bea 112.69 280 PKiKP **PKiKP** **20 09 14.0 -0.1**
comp=Z,0.5nn,0.6s,baz=90,slow=1.4,SNR=5.9
NVAR Mina Array Bea 125.71 49 PKP **PKiKP** **20 09 39.1 0.0**
comp=Z,0.9nn,0.6s,baz=287,slow=1.5,SNR=7.5
ELK Elko 127.12 45 PKP **PKiKP** **20 09 42.0 +0.1**
comp=Z,0.7nn,0.6s,baz=3.9,slow=6.8,SNR=5.1
CPUP Villa Florida 143.39 195 PKP PKPbc 20 10 09.8 +0.9
comp=Z,3.1nn,0.7s,baz=126,slow=3.6,SNR=5.6
BDFB Brasilia 148.92 217 PKPbc **PKPbc** **20 10 26.0 +0.5**
comp=Z,3.9nn,0.6s,baz=189,slow=6.1,SNR=3.2
CMIG Matias Romero 151.78 71 PKPbc **PKiKP** **20 10 32.6 +0.1**
comp=Z,1.8nn,0.6s,baz=209,slow=2.0,SNR=6.6
LPAZ La Paz 154.58 177 PKPab **PKPab** **20 10 54.1 +0.6**
comp=Z,2.7nn,0.7s,baz=207,slow=2.6,SNR=8.9

NEIC ***01*** *20:35:39.5±1.6, 6°.25S±0°.09×103°.50E±0°.09, h35km±2km, mb4.4/25, Error ellipse: s-maj=17.4km s-min=12.3km az=225.0*

IDC ***01*** *20:35:42.1±3.1, 6°.28S×103°.60E, h60km±26km, mb3.9/15, mbtmp4.1/16, ML4.1/1, MS3.4/2, Error ellipse: s-maj=28.1km s-min=11.2km az=39.0*

ISC 01 20:35:38.1±0.6, 6°.46S±0°.08×103°.43E±0°.07, h35km, n63, σ1§19/51, mb4.3/28, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMBI	**Palembang**	**3.76**	**21**	Pn	**Pn**	**20 36 30.3**	**-3.4**
LEM	**Lembang**	**4.18**	**95**	P	**Pn**	**20 36 41.3**	**+1.7**
	12nm,0.3s,baz=181,slow=16,SNR=13						
LEM				S	**Sn**	**20 37 28.9**	**+1.6**
	48nm,0.5s,baz=304,slow=18,SNR=1.2						
	61nm,0.7s						
XMIS	**Christmas Isla**	**4.56**	**151**	Pn	**Pn**	**20 36 42.5**	**-2.2**
UGM	**Wanagama**	**7.19**	**102**	Pn	**Pn**	**20 37 20.1**	**-0.7**
JAGI	**Jajag, Banyuwa**	**10.82**	**101**		**Pn**	**20 38 10.8**	**+0.1**
KAPI	**Kappang**	**16.31**	**86**	LR	LR	20 46 31.6	
	comp=Z,169nn,18.5s,baz=228,slow=40						
MMRI	**Maumere**	**18.77**	**98**	P	**P**	**20 39 53.2**	**-1.3**
TOLI2	**Tolitoli**	**18.89**	**67**	P	**Pn**	**20 39 55.2**	**-1.3**
TOLI2					IAmb	IAmb	20 39 56.7
	comp=Z,15nn,0.7s						
MYLDM	**Lahad Datu**	**18.98**	**53**	P	**Pn**	**20 39 56.5**	**-1.2**
MYLDM					IAmb	IAmb	20 40 24.0
	comp=Z,21nn,1.1s						
BATI	**Baumata**	**20.36**	**102**	P	Pn	20 40 12.7	-1.5
	comp=Z,80nn,0.5s,baz=313,slow=1.9,SNR=28						
BATI				S	**S**	**20 43 56.3**	**-2.1**
	comp=Z,5.6nn,0.5s,baz=295,slow=19,SNR=1.7						
SOEI	**Soe**	**20.89**	**100**	P	**P**	**20 40 17.1**	**-0.6**
CM31	**Chiang Mai Arr**	**25.16**	**350**	P	**P**	**20 40 58.4**	**-1.9**
CMAR	**Chiang Mai Arr**	**25.16**	**350**	P	**P**	**20 40 59.3**	**-1.0**
	comp=Z,3.1nn,0.7s,baz=181,slow=8.9,SNR=30						
	comp=Z,3.1nn,0.7s						
CHTO	**Chiang Mai**	**25.50**	**350**	P	**P**	**20 41 02.2**	**-1.3**
KNRA	**Kununurra**	**26.47**	**112**	P	**P**	**20 41 11.7**	**-0.5**
KNRA					IAmb	IAmb	20 41 21.5
	comp=Z,9.3nn,0.8s						
H01W3	**Cape Leeuwin H**	**29.96**	**162**	T	T	21 13 07.8	
	baz=340,slow=76,SNR=9.9						
H01W2	**Cape Leeuwin H**	**29.97**	**162**	T	T	21 13 08.9	
	baz=340,slow=76,SNR=9.8						
H01W1	**Cape Leeuwin H**	**29.97**	**162**	T	T	21 13 07.3	
	baz=340,slow=76,SNR=13						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
H08S2	Diego Garcia H	30.72	266	T	T	21 14 07.5	
	baz=89,slow=76,SNR=14						
H08S3	Diego Garcia H	30.73	266	T	T	21 14 08.4	
	baz=89,slow=76,SNR=24						
H08S1	Diego Carcia H	30.74	266	T	T	21 14 10.8	
	baz=89,slow=76,SNR=10						
DGAR	Diego Garcia	30.76	266	P	P	20 41 49.0	-1.5
WRA	Warramunga Arr	32.86	117	P	P	20 42 09.3	+0.4
	comp=Z,0.8nm,0.5s,baz=288,slow=12,SNR=16						
	comp=Z,0.8nm,0.5s						
WRA	Warramunga Arr	32.86	117	IAmb	IAmb	20 42 12.3	
	comp=Z,0.1nm,0.8s						
WRAB	Tennant Creek	32.87	117	P	P	20 42 09.7	+0.7
WB2	Warramunga Arr	32.87	117	P	P	20 42 08.9	-0.1
WB2				IAmb	IAmb	20 42 19.5	
	comp=Z,8.5nm,1.2s						
WR0	Warramunga Arr	33.05	117	P	P	20 42 11.0	+0.4
WR0				IAmb	IAmb	20 42 21.1	
	comp=Z,8.8nm,1.4s						
ASAR	Alice Springs	33.91	124	P	P	20 42 19.4	+1.2
	comp=Z,0.7nm,0.6s,baz=304,slow=8.5,SNR=12						
	comp=Z,0.7nm,0.6s						
TAPN	Taplejung	36.90	336	eP	P	20 42 45.1	+1.1
	comp=Z,16nm,0.8s						
RAMN	Ramite	37.00	335	eP	P	20 42 46.1	+1.3
	comp=Z,9.0nm,0.6s						
GUN	Gumba	38.15	334	eP	P	20 42 55.5	+0.9
	comp=Z,21nm,0.5s						
GKN	Gorkha	38.77	333	eP	P	20 43 00.7	+1.0
	comp=Z,14nm,0.5s						
DANN	Dangsing	39.47	332	eP	P	20 43 06.0	+0.3
	comp=Z,27nm,0.8s						
PYUN	Piuthan	39.62	331	eP	P	20 43 07.9	+1.0
	comp=Z,4.9nm,0.4s						
STKA	Stephens Creek	43.66	130	P	P	20 43 40.4	+0.7
	comp=Z,2.6nm,0.6s,baz=306,slow=8.7,SNR=10						
	comp=Z,2.6nm,0.6s						
STKA	Stephens Creek	43.66	130	IAmb	IAmb	20 43 42.5	
	comp=Z,0.7nm,0.8s						
KSRS	Korea Array	49.31	26	P	P	20 44 23.6	-0.2
	comp=Z,1.5nm,0.6s,baz=222,slow=7.9,SNR=8.8						
	comp=Z,1.5nm,0.6s						
KDJ	Kajisay	53.97	336	P	P	20 44 59.7	+0.9
SONM	Songino Array	54.13	2	P	P	20 45 00.2	+0.4
	comp=Z,3.7nm,0.8s,baz=178,slow=9.3,SNR=26						
	comp=Z,3.7nm,0.8s						
SONM	Songino Array	54.13	2	P	P	20 44 59.9	+0.1
SONM				IAmb	IAmb	20 45 01.1	
	comp=Z,3.2nm,0.8s						
ULN	Ulaanbaatar	54.19	3	P	P	20 44 59.9	-0.4
ULN				IAmb	IAmb	20 45 01.0	
	comp=Z,1.8nm,0.7s						
MK31	Makanchi Array	56.25	343	P	P	20 45 15.5	+0.5
MKAR	Makanchi Array	56.25	343	P	P	20 45 15.3	+0.3
	comp=Z,2.7nm,0.8s,baz=140,slow=7.6,SNR=18						
	comp=Z,2.7nm,0.8s						
MKAR	Makanchi Array	56.25	343	P	P	20 45 15.1	+0.1
USRK	Ussuriysk Ar.	56.63	24	P	P	20 45 16.4	-1.3
	comp=Z,2.7nm,0.6s,baz=184,slow=4.9,SNR=5.4						
	comp=Z,2.7nm,0.6s						
KURBB	Kurchatov Arra	60.79	342	P	P	20 45 47.1	+0.5
	comp=Z,1.3nm,0.7s,baz=158,slow=6.4,SNR=9.9						
	comp=Z,1.3nm,0.7s						
KURK	Kurchatov	60.85	342	P	P	20 45 47.1	+0.2
KURK	Kurchatov	60.85	342	IAmb	IAmb	20 45 49.0	
	comp=Z,2.4nm,0.9s						
ZAA0	Zalesovo Array	62.19	348	P	P	20 45 56.2	+0.2
ZALV	Zalesovo Beam	62.19	348	P	P	20 45 55.7	-0.2
	comp=Z,2.7nm,0.4s,baz=156,slow=5.7,SNR=17						
	comp=Z,2.7nm,0.4s						
ZALV	Zalesovo Beam	62.19	348	P	P	20 45 55.5	-0.4
BRVK	Borovoye	65.60	339	P	P	20 46 18.7	+0.4
BRVK				IAmb	IAmb	20 46 34.8	
	comp=Z,3.9nm,1.4s						
MAW	Mawson	66.88	196	P	P	20 46 28.2	+1.8
ABKAR	Akbulak array	67.17	331	P	P	20 46 28.5	0.0
ABKAR				IAmb	IAmb	20 46 45.0	
	comp=Z,2.3nm,0.7s						
GNI	Garni	71.09	316	LR	LR	21 19 57.2	
	comp=Z,22nm,19.8s,baz=115,slow=37						
ARU	Arti	72.64	336	P	P	20 47 01.8	-0.2
	comp=Z,1.6nm,0.5s,baz=143,slow=5.2,SNR=3.6						
	comp=Z,1.6nm,0.5s						
ARU	Arti	72.64	336	IAmb	IAmb	20 47 12.2	
	comp=Z,3.9nm,1.1s						
KBZ	Khabaz	73.89	319	P	P	20 47 11.7	+2.0
	comp=Z,2.5nm,0.8s,baz=88,slow=7.3,SNR=6.6						
	comp=Z,2.5nm,0.8s						
BRTR	Keskin Array B	78.84	312	P	P	20 47 39.3	+1.3
	comp=Z,0.5nm,0.6s,baz=148,slow=6.6,SNR=2.2						
	comp=Z,0.5nm,0.6s						
AKASG	Malin Array Be	85.08	322	P	P	20 48 11.3	+1.0
	comp=Z,0.3nm,0.2s,baz=76,slow=4.1,SNR=5.9						
	comp=Z,0.3nm,0.2s						
AKASG	Malin Array Be	85.08	322	IAmb	IAmb	20 48 12.8	
	comp=Z,1.8nm,1.1s						
FINES	FINESS Array B	89.63	332	P	P	20 48 32.6	+0.6
	comp=Z,0.6nm,0.6s,baz=176,slow=8.4,SNR=5.7						
	comp=Z,0.6nm,0.6s						
TXAR	Lajitas Array	145.79	45	PKPbc	PKiKP	20 55 15.8	-2.2
	comp=Z,2.2nm,0.8s,baz=299,slow=1.7,SNR=28						

IDC 01 20:48:03.1±8.9, 17.30°N×105.16°W, h0km, mb3.5/5, mbtmp3.5/6, ML3.1/1, MS3.2/2, Error ellipse: s-maj=178.0km s-min=86.5km az=130.0
MEX 01 20:48:12.2±1.4, 17.95°N×105.64°W, h10km, MD4.3
NEIC 01 20:48:14.3±2.0, 18.27°N±0.04×105.4°W±0.1, h10km±1km, mb4.0/42, Md4.3/17(MEX), Error ellipse: s-maj=18.2km s-min=6.8km az=265.0
ISC 01 20:48:11.5±3.5, 18.2°N±0.1×105.48°W±0.07, h1km±20km, n75, σ1§30/77, mb3.9/12, Off coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CDAR	Ciudad de Arme	1.58	62	eP	Pn	20 48 40.2	-0.5
CDAR				iS	Sb	20 49 01.7	-0.4
R15V		1.72	55		Pn	20 48 42.1	-0.6
R15V		1.72	55	iP	Pn	20 48 42.1	-0.6
R15V				iS	Sb	20 49 05.9	-0.3
COIG	Colima	1.96	60	eP	Pn	20 48 46.5	+0.4
COIG				eS	Sb	20 49 13.6	+0.4
MNGA	Volcan de Coli	2.17	54	iP	Pn	20 48 50.9	+1.8
MNGA				iS	Sg	20 49 20.9	-0.4
EZ5V		2.19	54		Pn	20 48 49.9	+0.5
EZ5V		2.19	54	eP	Pn	20 48 49.9	+0.5
EZ5V				iS	Sn	20 49 17.5	+0.2
INCO	Volcan de Coli	2.22	53	eP	Pn	20 48 50.4	+0.5
INCO				iS	Sb	20 49 20.9	+0.1
JUBC	Volcan de Coli	2.24	54	eP	Pn	20 48 51.1	+1.1
JUBC				eS	Sg	20 49 22.5	-1.0
ANIG	Ahuacatlan	2.99	18		Pn	20 49 01.0	+0.9
ANIG	Ahuacatlan	2.99	18	eP	Pn	20 49 01.0	+0.9
MOIG	Morelia	4.32	69	Pn	Pn	20 49 18.4	-0.3
ZAIG	Zacatecas	5.31	30		Pn	20 49 33.2	+1.0
TLIG	Tlapa	6.62	94		Pn	20 49 51.6	+1.5
LPIG	La Paz	7.40	323	LR	LR	20 52 10.1	
	comp=Z,526nm,20.7s,baz=183,slow=30						
CMIG	Matias Romero	10.16	95	LR	LR	20 53 42.3	
	comp=Z,53nm,21.6s,baz=308,slow=34						
TX31	Lajitas Ar. Si	11.21	8		Pn	20 50 56.6	+3.5
TX32	Lajitas Array	11.21	8		Pn	20 50 56.9	+3.8
TXAR	Lajitas Array	11.21	8	Pn	Pn	20 50 57.5	+4.4
	baz=183,slow=11,SNR=12						
	1.1nm,0.8s						
TXAR	Lajitas Array	11.21	8	Pn	Pn	20 50 57.6	+4.5
319A	Douglas	13.57	346	Pn	Pn	20 51 24.6	-0.7
121A	Cookes Peak, D	14.43	352	Pn	Pn	20 51 38.6	+1.5
HKT	Hockley	14.64	35	Pn	Pn	20 51 39.7	-0.1
TUC	Tucson	14.85	342	Pn	Pn	20 51 43.0	+0.2
214A	Organ Pipe Nat	15.22	336	Pn	Pn	20 51 49.0	+1.3
214A				IAmb	IAmb	20 52 06.2	
	comp=Z,6.2nm,1.0s						
ABTX	Abilene, Hawle	15.30	19	Pn	Pn	20 51 50.2	+1.4
ABTX				IAmb	IAmb	20 52 05.8	
	comp=Z,7.0nm,0.8s						
WHTX	Lake Whitney,	15.53	26	Pn	Pn	20 51 52.1	+0.2
WHTX				IAmb	IAmb	20 51 54.9	
	comp=Z,7.6nm,0.8s						
MSTX	Muleshoe	15.90	8	Pn	Pn	20 51 56.7	0.0
MSTX				IAmb	IAmb	20 52 11.7	
	comp=Z,27nm,1.4s						
BNM	Barren Site	15.93	357	Pn	Pn	20 51 58.8	+1.6
113A	Mohawk Valley,	16.32	334	Pn	Pn	20 52 02.0	+0.1
ANMO	Albuquerque	16.71	357	Pn	Pn	20 52 06.5	-0.7
X18A	Snowflake	16.75	347		Pn	20 52 09.3	+1.7
Z35A	Perchaven, San	16.79	25	Pn	Pn	20 52 07.0	-1.0
AMTX	Amarillo	16.96	11		Pn	20 52 11.2	+0.9
AMTX				IAmb	IAmb	20 52 22.2	
	comp=Z,8.6nm,1.1s						
GLA	Glamis	17.01	332	Pn	Pn	20 52 10.9	+0.1
GLA				IAmb	IAmb	20 52 25.5	
	comp=Z,4.8nm,0.6s						
X16A	Lo Mia Camp, P	17.01	343	P	Pn	20 52 12.2	+1.2
Y14A	Wickenburg	17.06	338	Pn	Pn	20 52 10.2	-1.3
Y14A				IAmb	IAmb	20 52 38.4	
	comp=Z,5.2nm,0.3s						
W18A	Petrified Fore	17.28	348		Pn	20 52 14.8	+0.5
BLYC	Blythe	17.48	334	Pn	Pn	20 52 16.1	-0.6
BLYC				IAmb	IAmb	20 52 34.0	
	comp=Z,9.4nm,1.3s						
X34A	Smith Ranch, M	17.71	21		Pn	20 52 19.1	-0.4
X34A				IAmb	IAmb	20 52 35.6	
	comp=Z,20nm,1.1s						
U15A	North Rim	19.13	343		Pn	20 52 37.7	+0.5
SDCO	Great Sand Dun	19.48	360	P	P	20 52 41.0	+0.8
LCMT	Little Creek M	19.95	342	P	P	20 52 46.0	+0.7
PKCU	Pink Cliffs	20.09	344	P	P	20 52 46.8	-0.2
PKCU				IAmb	IAmb	20 52 57.5	
	comp=Z,15nm,1.3s						
PV13	Radium Mtn., P	20.11	352	P	P	20 52 47.1	+0.1
PV13				IAmb	IAmb	20 53 11.3	
	comp=Z,5.7nm,1.2s						
PV15	Paradox Valley	20.25	353	P	P	20 52 47.7	-0.8
PV15				IAmb	IAmb	20 52 56.9	
	comp=Z,14nm,1.1s						
PV07	Paradox Valley	20.36	353	P	P	20 52 49.9	+0.1
PV07				IAmb	IAmb	20 53 09.1	
	comp=Z,7.6nm,1.0s						
QSM	Queen of Sheba	20.37	333	P	P	20 52 49.5	-0.2
PV23	Carpenter Ridg	20.42	352	P	P	20 52 51.3	+0.9
PV23				IAmb	IAmb	20 53 16.4	
	comp=Z,5.7nm,0.9s						
MSU	Marysvale	21.07	345	P	P	20 52 58.0	+0.5
Q16A	Castle Valley	21.23	348	P	P	20 53 00.3	+1.1
Q16A				IAmb	IAmb	20 53 07.6	
	comp=Z,7.2nm,1.2s						
SRU	San Rafael Swe	21.30	349	P	P	20 53 00.7	+0.8
PSUT	Pine Spring	21.54	342	P	P	20 53 02.6	+0.1
PSUT				IAmb	IAmb	20 53 21.6	
	comp=Z,4.3nm,1.2s						
P17A	Butcher Ranch,	21.69	349	P	P	20 53 03.9	-0.2
P17A				IAmb	IAmb	20 53 26.7	
	comp=Z,4.9nm,1.1s						
R11A	Troy Canyon, C	21.93	338	P	P	20 53 07.5	+0.8
S39A	Bolivar	22.16	26	P	P	20 53 09.2	+0.3
S39A				IAmb	IAmb	20 53 25.6	
	comp=Z,11nm,1.3s						
MGMO	Mountain Grove	22.17	29	P	P	20 53 08.8	-0.3
MGMO				IAmb	IAmb	20 53 12.9	
	comp=Z,14nm,1.4s						
NVAR	Mina Array Bea	23.06	334	P	P	20 53 19.4	+0.7
	comp=Z,0.1nm,0.3s,baz=153,slow=8.1,SNR=2.0						
	comp=Z,0.1nm,0.3s						
X48A	Hartselle	23.07	42	P	P	20 53 19.4	+0.7
FVM	French Village	23.71	31	P	P	20 53 25.8	+0.7
SLM	Saint Louis	24.32	30	P	P	20 53 30.4	-0.4
BMN	Battle Mountai	24.36	338	P	P	20 53 30.4	-0.9
BMN				IAmb	IAmb	20 53 48.2	
	comp=Z,3.7nm,1.0s						
W50A	Signal Mountai	24.65	43	P	P	20 53 34.6	+0.7
PD31	Pinedale Array	24.74	353	P	P	20 53 34.5	-0.3
PD31				IAmb	IAmb	20 54 01.0	
	comp=Z,4.7nm,1.4s						
PDAR	Pinedale Array	24.74	353	P	P	20 53 35.0	+0.2
	comp=Z,0.2nm,0.5s,baz=164,slow=10,SNR=2.0						
	comp=Z,0.2nm,0.5s						
GOGA	Godfrey	24.87	48	P	P	20 53 37.5	+1.7
Q44A	Meyer Farm, Va	25.12	31	P	P	20 53 38.8	+0.8
LOHW	Long Hollow	25.71	351	P	P	20 53 45.2	+1.6
LOHW				IAmb	IAmb	20 53 52.8	
	comp=Z,4.2nm,1.0s						
TAOE	Nuku Hiva Isla	43.51	235	eLR	LR	21 07 27.3	
DLBC	Dease Lake	44.05	342	P	P	20 56 21.8	+1.0
	comp=Z,2.3nm,0.8s,baz=166,slow=8.3,SNR=4.5						
	comp=Z,2.3nm,0.8s						
YKA	Yellowknife Ar	44.71	354	P	P	20 56 25.2	-0.8
	comp=Z,0.4nm,0.7s,baz=160,slow=7.5,SNR=2.6						
	comp=Z,0.4nm,0.7s						
ILAR	Eielson Array	54.13	340	P	P	20 57 34.8	-3.2
	comp=Z,0.9nm,1.0s,baz=148,slow=7.4,SNR=4.7						
	comp=Z,0.9nm,1.0s						
PPT2	Papeete2	56.08	233	eLR	LR	21 13 13.9	
	comp=Z,198nm,26.0s						
TBI	Tubuai	59.58	228	eLR	LR	21 15 01.6	
	comp=Z,175nm,27.2s						
BDFB	Brasilia	65.83	117	P	P	20 58 59.8	+0.5

IDC 01 20:56:59.3±0.8, 42.04°N×119.57°W, h0km, mb2.7/1, mbtmp2.8/6, ML3.1/5, MS2.7/2, Error ellipse: s-maj=13.0km s-min=5.4km az=9.0
REN 01 20:57:01.9±1.6, 41.88°N±0.03×119.63°W±0.05, h11km±7km, Mwr3.6, ML3.3/94(NEIC), Error ellipse: s-maj=6.4km s-min=2.5km az=63.0
ANF 01 20:57:01.5±1.3, 41.84°N×119.62°W, h10km±12km, ML3.7/12, Error ellipse: s-maj=6.4km s-min=5.9km az=118.0
NEIC 01 20:57:02.2±1.6, 41.88°N±0.03×119.64°W±0.03, h15km±7km, Error ellipse: s-maj=5.7km s-min=2.4km az=149.0
NEIC 01 20:57:03, 41.88°N×119.63°W, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.03; $M_{\theta\theta}$-2.48; $M_{\phi\phi}$2.51; $M_{r\theta}$-0.80; $M_{\theta\phi}$-0.05; $M_{\phi r}$-0.81; Fault plane solution: $M_0$2.74000×10^{14} NP1:ϕ_s44.00000°, δ90.00000°, λ-25.00000°. NP2:ϕ_s135.00000°, δ65.00000°, λ-179.00000°. Principal axes: T 2.7525, Plg17.0000°, Azm92.0000°; N -0.0190, Plg65.0000°, Azm223.0000°; P -2.7335, Plg17.0000°, Azm357.0000°;
ISC 01 20:57:01.2±1.3, 41.90°N±0.03×119.60°W±0.02, h3km±13km, n75, σ1§30/82, Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOD	Modoc Plateau	0.53	271	Pg	Pg	20 57 12.0	+0.7
MOD	Modoc Plateau	0.53	271		Sg	20 57 19.2	+1.1
WVOR	Wild Horse Val	0.89	53		Pg	20 57 19.5	+1.3
WVOR					Sb	20 57 32.4	+0.7
K05A	Summer Lake	1.27	311	Pn	Pn	20 57 25.6	-0.4
J08A	Circle Bar Ran	1.68	29	Pn	Pn	20 57 31.2	-0.3
K04D	Chiloquin, OR	1.76	295	P	Pn	20 57 32.6	-0.1
	baz=115,SNR=18						
K04D				Sb	Sg	20 57 58.2	+0.6
	baz=115						
J05D	Fort Rock, OR	1.84	319	P	Pn	20 57 33.9	0.0
	baz=140,SNR=283						
J05D				Sb	Sg	20 58 00.7	+0.5
	baz=140						
L04D	Klamath Falls	2.04	280	Pn	Pn	20 57 35.2	-1.4
L04D				IAML		20 58 12.1	
	comp=N,171nm,0.9s						
L04D				IAML		20 58 15.2	
	comp=E,317nm,0.6s						
L04D	Klamath Falls	2.04	280	P	Pn	20 57 35.7	-0.9
	baz=99,SNR=61						
L04D				Sb	Sg	20 58 06.0	-0.7
	baz=99						
BEKR	Beckworth	2.11	196	Pg	Pb	20 57 39.5	-0.7
BEKR				IAML		20 58 09.4	
	comp=N,219nm,0.3s						
BEKR				IAML		20 58 10.0	
	comp=E,172nm,0.7s						
PINE	Pine Mountain	2.14	333	Pn	Pn	20 57 38.4	+0.5
PINE				IAML		20 58 17.9	
	comp=N,265nm,0.8s						
I07A	Izee	2.18	2	Pn	Pb	20 57 40.3	-1.1
I07A				IAML		20 58 12.8	
	comp=N,237nm,0.5s						
I07A				IAML		20 58 13.3	
	comp=E,162nm,0.5s						
PAHR	Pah Rah Range	2.20	176		Pn	20 57 39.4	+0.7
LCMM	Colby Mountain	2.28	220		Pb	20 57 43.7	+0.7
J04D	Umpqua Nationa	2.29	307	Pn	Pn	20 57 40.7	+0.7
J04D	Umpqua Nationa	2.29	307	Pb	Pb	20 57 43.5	+0.2
	baz=126,SNR=32						
J04D				Sb	Sg	20 58 13.6	-1.2
	baz=126						
BMN	Battle Mountai	2.31	128	Pn	Pn	20 57 39.9	-0.5
BMN				IAML		20 58 16.8	
	comp=N,196nm,0.8s						
BMN				IAML		20 58 24.2	
	comp=E,176nm,0.7s						
YBH	Yreka Blue Hor	2.33	267	Pn	Pn	20 57 39.2	-1.3
	comp=E,4.7nm,0.3s,baz=71,slow=14,SNR=47						
YBH				Pg	Pb	20 57 42.8	-1.2
	comp=E,4.7nm,0.3s,baz=81,slow=12,SNR=44						
YBH				LR	LR	20 58 08.5	
	comp=E,42nm,20.8s,baz=194,slow=29						
YBH				Lg	Lg	20 58 14.2	
	comp=E,9.1nm,0.3s,baz=54,slow=13,SNR=7.5						
	comp=E,19nm,0.6s						
YBH	Yreka Blue Hor	2.33	267	Pn	Pn	20 57 39.4	-1.2
HUMO	Hull Mountain	2.59	287	Pn	Pn	20 57 43.2	-0.9
HUMO				IAML		20 58 23.2	
	comp=N,105nm,0.7s						
HUMO				IAML		20 58 29.9	
	comp=E,110nm,0.7s						
VCNR	Virginia City	2.60	181		Pb	20 57 48.8	+0.2
VCNR				IAML		20 58 29.1	
	comp=N,185nm,0.9s						
VCNR				IAML		20 58 37.6	
	comp=E,159nm,0.9s						
MPK	Martis Peak	2.62	187		Pb	20 57 49.8	+0.8
MPK				IAML		20 58 27.3	
	comp=E,133nm,0.9s						
MPK				IAML		20 58 28.2	
	comp=N,158nm,0.9s						
I05D	Terrebonne, OR	2.75	333	Pb	Pb	20 57 51.6	+0.6
	baz=152,SNR=20						
I05D				Sb	Sg	20 58 27.9	-1.7
	baz=152						
ORV	Oroville	2.75	212		Pn	20 57 45.4	-0.8
PNTR	Pine Nut	2.81	180		Pb	20 57 53.3	+1.2
PNTR				IAML		20 58 37.9	
	comp=E,141nm,1.2s						
PNTR				IAML		20 58 47.9	
	comp=N,126nm,1.1s						
I04A	Tendick Farm,	2.81	313	Pb	Pb	20 57 52.3	+0.3
	baz=132,SNR=25						
YERR	Yerington	2.92	175		Pb	20 57 54.5	+0.4
YERR				IAML		20 58 37.0	
	comp=E,126nm,1.0s						
YERR				IAML		20 58 37.7	
	comp=N,134nm,0.9s						
EMB	Emerald Bay	2.95	188		Pb	20 57 54.7	+0.3
EMB				IAML		20 58 37.0	
	comp=E,79nm,1.0s						
EMB				IAML		20 58 39.2	
	comp=N,79nm,0.8s						
DBO	Dodson Butte	2.96	296		Pb	20 57 54.2	-0.4
DBO				IAML		20 58 36.6	
	comp=N,128nm,0.8s						
KVN	Kaiserville	3.06	158		Pn	20 57 50.3	-0.4
K02D	Willamette Mer	3.12	286	P	Pn	20 57 51.3	-0.1
	baz=104,SNR=13						
K02D				Sb	Sb	20 58 37.7	+1.8
	baz=104						
MFID	Camas Ranch	3.17	60	Pn	Pn	20 57 52.8	+0.7
KSXB	Camp Six Broad	3.20	270		Pn	20 57 52.8	+0.3
KHMM	Horse Mountain	3.27	253		Pb	20 57 59.6	-0.4
KHMM				IAML		20 59 04.9	
	comp=N,61nm,2.0s						
I03D	Drain, OR	3.29	304	Sb	Sg	20 58 44.0	-3.0
	baz=122						
H04A	Detroit Lake	3.37	327		Pn	20 57 54.4	-0.3
RYN	Ryan	3.37	166		Pb	20 57 58.5	-3.1
RYN				IAML		20 58 52.7	
	comp=N,57nm,0.7s						
RYN				IAML		20 58 54.2	
	comp=E,56nm,0.7s						
BMO	Blue Mountains	3.39	29		Pb	20 58 02.5	+0.5
BMO				IAML		20 58 52.8	
	comp=E,58nm,0.3s						
BMO				IAML		20 59 01.2	
	comp=E,79nm,1.8s						
G08A	Pilot Rock	3.42	8		Pn	20 57 54.8	-0.7
J01E	Myrtle Point	3.44	293		Pn	20 57 55.6	-0.1
J01E				IAML		20 59 07.9	
	comp=N,61nm,1.2s						
J01E				IAML		20 59 08.8	
	comp=E,82nm,1.3s						
KBO	Bosley Butte	3.46	277		Pn	20 57 54.2	-1.8
KBO				IAML		20 59 05.5	
	comp=E,70nm,1.3s						
ELK	Elko	3.48	108	Pn	Pn	20 57 57.2	+0.8
	comp=E,3.5nm,0.3s,baz=292,slow=13,SNR=5.5						
ELK				Pg	Pb	20 58 02.0	-1.6
	comp=E,4.8nm,0.3s,baz=296,slow=17,SNR=37						
ELK				Lg	Lg	20 58 49.3	
	comp=E,12nm,0.3s,baz=56,slow=16,SNR=4.0						
	comp=E,7.0nm,0.3s						
ELK	Elko	3.48	108	Pn	Pn	20 57 57.1	+0.7
H04D	Lebanon	3.49	320		Pb	20 58 04.8	+1.3
H04D				IAML		20 58 56.1	
	comp=N,68nm,1.3s						
H04D				IAML		20 59 11.6	
	comp=E,91nm,0.9s						
H04D	Lebanon	3.49	320	Sb	Sg	20 58 50.7	-2.4
	baz=138						
JCC	Jacoby Creek,	3.51	254	Pn	Pn	20 57 55.6	-1.0
KMRM	Mail Ridge	3.53	243		Pn	20 57 56.0	-1.0
KMRM				IAML		20 59 02.5	
	comp=N,62nm,1.3s						
KMRM				IAML		20 59 06.9	
	comp=E,63nm,2.2s						
G05D	Wamic, OR	3.57	340	Sb	Sg	20 58 52.9	-2.9
	baz=160						
NVAR	Mina Array Bea	3.60	164	Pn	Pn	20 57 59.1	+0.9
	comp=E,0.2nm,0.3s,baz=342,slow=13,SNR=2.9						
NVAR				Lg	Lg	20 58 56.7	
	comp=E,5.3nm,0.3s,baz=340,slow=15,SNR=8.6						
	comp=E,0.8nm,0.4s						
NVAR	Mina Array Bea	3.60	164		Pn	20 57 57.6	-0.5
NV11	Mina Array Sit	3.63	162		Pn	20 57 57.2	-1.3
KEBM	Edson Butte	3.64	287		Pn	20 57 59.4	+0.8
KEBM				IAML		20 59 07.8	
	comp=E,80nm,1.0s						
KEBM				IAML		20 59 09.4	
	comp=N,81nm,1.4s						
LHV	Little Huntoon	3.74	167		Pn	20 57 58.9	-0.8
I02E	Swisshome, OR	3.82	307		Pn	20 58 00.2	-0.7
I02E				IAML		20 59 14.0	
	comp=E,49nm,1.6s						
I02E				IAML		20 59 15.8	
	comp=N,51nm,2.2s						
PLID	Pearl Lake	4.12	38		Pn	20 58 05.1	-0.1
PLID				IAML		20 59 15.7	
	comp=N,28nm,0.6s						
HLID	Hailey	4.16	65		Pn	20 58 05.4	-0.4
HLID				IAML		20 59 24.3	
	comp=N,42nm,1.1s						
HLID	Hailey	4.16	65	Sb	Sb	20 59 10.3	+4.3
	baz=248						
R11A	Troy Canyon, C	4.69	138		Pn	20 58 12.5	-0.6
R11A				IAML		20 59 33.1	
	comp=N,26nm,0.8s						
R11A				IAML		20 59 38.1	
	comp=E,27nm,2.1s						
BGU	Big Grassy Mou	5.03	99	Pn	Pn	20 58 16.9	-0.8
BGU				IAML		20 59 59.8	
	comp=N,18nm,1.1s						
BCYI	Bear Canyon	5.13	60	Pn	Pn	20 58 19.1	-0.1
DUG	Dugway, Tooele	5.40	106		Pn	20 58 24.8	+2.0
DUG	Dugway, Tooele	5.40	106	P	Pn	20 58 24.9	+2.1
	baz=290						
PRN	Pahroc Range	5.69	141	Pn	Pn	20 58 28.8	+2.0
MCMT	McKenzie Canyo	5.72	57	Pn	Pn	20 58 27.3	0.0
AHID	Auburn Hatcher	6.36	79		Pb	20 58 51.6	-1.0
CCUT	Cedar City	6.47	130	Pn	Pn	20 58 36.9	-0.7
NEW	Newport	6.60	15	Lg	Lg	21 00 30.7	
	comp=N,0.3nm,0.3s,baz=340,slow=7.9,SNR=2.7						
REDW	Red Top Meadow	6.61	74		Pb	20 58 55.5	-1.4
YHL	Hebgen Lake	6.80	61		Pn	20 58 39.9	-2.3
LOHW	Long Hollow	6.84	72	Pg	Pb	20 58 58.8	-2.0
FLWY	Flagg Ranch	6.88	69		Pb	20 59 04.1	+2.6
PDAR	Pinedale Array	7.49	80	Pn	Pn	20 58 52.0	+0.5
	baz=262,slow=12,SNR=1.4						
PDAR				Pg	Pb	20 59 05.7	-6.1
	comp=N,0.1nm,0.3s,baz=263,slow=10,SNR=4.4						
	comp=N,0.2nm,0.5s						
ANMO	Albuquerque	12.41	120	LR	LR	21 04 57.8	
	comp=N,166nm,20.7s,baz=180,slow=38						
TXAR	Lajitas Array	17.99	129	P	P	21 01 12.3	-0.6
	baz=312,slow=12,SNR=1.3						
	comp=N,0.1nm,0.3s						
YKA	Yellowknife Ar	20.84	7	P	P	21 01 42.6	-1.1

comp=N,0.3nm,0.7s,baz=190,slow=9.9,SNR=2.8
comp=N,0.3nm,0.7s

GRAL ***01*** *21:27:36.0±0.3, 34°.90N×38°.49E, h0km±132km, MD3.5*
GII 01 21:27:36.4±0.0**, 35°.11N×38°.30E, h25km, MD2.2**/1**, Mm2.6**/3**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWQ	**Hawqa**	**2.11**	**247**	*e*P	Pb	21 28 12.4	-1.7
HWQ				*e*S	Sb	21 28 39.3	-0.6
BHL	**Bhannes**	**2.50**	**242**	*e*P	Pn	21 28 17.4	+1.8
BHL				*e*S	Sn	21 28 48.0	+2.7
DQRL	**Deir Qamar**	**2.66**	**239**	*e*P	Pn	21 28 19.4	+1.6
DQRL				*e*S	Sn	21 28 51.3	+2.0
SHBL	**Chebaa**	**2.75**	**231**	*e*P	Pn	21 28 20.2	+1.1
SHBL				*e*S	Sn	21 28 52.9	+1.2
NATI	**Neve Ativ**	**2.82**	**230**	Pn	Pn	21 28 20.2	+0.4
NATI				Sn	Sn	21 28 53.6	+0.7
GEM	**Giv'at Ha'Em**	**2.90**	**230**	Pn	Pn	21 28 21.0	+0.1
GEM				Sn	Sn	21 28 54.6	-0.4
KSHT	**Keshet**	**2.97**	**225**	Pn	Pn	21 28 21.9	-0.1
MMLI	**Mount Malkishu**	**3.59**	**223**	Pn	Pn	21 28 30.8	+0.3
MMLI				Sn	Sn	21 29 13.3	+1.2
HMDT	**Nahal Hemdat**	**3.67**	**220**	Pn	Pn	21 28 31.5	-0.1
HMDT				Sn	Sn	21 29 14.3	+0.2
OFRI	**`Ofer**	**3.71**	**229**	Pn	Pn	21 28 32.6	+0.4
SLTI	**Sal'it**	**3.95**	**224**	Pn	Pn	21 28 35.5	+0.1
GHAJ	**Ghor Haditha**	**4.44**	**212**	Pn	Pn	21 28 41.9	-0.2

IDC ***01*** *21:28:44.1±2.4, 53°.70N×169°.31E, h0km, mb3.3/2, mbtmp3.3/3, ML2.8/1, MS3.3/2, Error ellipse: s-maj=97.9km s-min=33.7km az=168.0*
KRSC ***01*** *21:28:49.2±1.5, 53°.55N×168°.56E, h48km±26km, ML4.1*
ISC 01 21:28:48.2±1.4**, 53°.50N**±0°.09×**169°.00E**±0°.08**, h35km, n27, σ1s87**/35**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	**Bering**	**2.46**	**315**	P	**Pn**	**21 29 26.7**	**+1.0**
BKI				*e*S	**Sn**	**21 29 53.5**	**-1.0**
MKZ	**Mys Kozlova**	**4.42**	**287**	P	**Pn**	**21 29 52.5**	**-0.1**
MKZ				S	**Sn**	**21 30 40.2**	**-2.5**
KBTR	**Krutoberegovo**	**4.49**	**310**	P	**Pn**	**21 29 53.6**	**0.0**
TUMD	**Tumrok D**	**5.31**	**292**	S	**Sn**	**21 31 04.9**	**0.0**
SPN	**Mys Shipunski**	**5.40**	**269**	*e*P	**Pn**	**21 30 07.6**	**+1.4**
SPN				*e*S	**Sn**	**21 31 05.8**	**-1.2**
TUMR	**Tumrok**	**5.47**	**293**	*e*P	**Pn**	**21 30 09.4**	**+2.1**
KII	**Karymskiy**	**5.69**	**279**	*e*P	**Pn**	**21 30 11.5**	**+1.3**
KII				*e*S	**Sn**	**21 31 13.7**	**-0.6**
NLC	**Nalytchevo**	**5.80**	**271**	*e*P	**Pn**	**21 30 13.3**	**+1.7**
NLC				*e*S	**Sn**	**21 31 14.9**	**-1.8**
SDLR	**Sedlovina**	**6.06**	**272**	*e*P	**Pn**	**21 30 17.1**	**+1.8**
UGLR	**Uglovaya**	**6.10**	**271**	*e*P	**Pn**	**21 30 17.8**	**+1.9**
KRER	**Koryakskii**	**6.14**	**272**	*e*P	**Pn**	**21 30 18.6**	**+2.1**
AVH	**Avacha**	**6.15**	**272**	*e*P	**Pn**	**21 30 18.8**	**+2.3**
KRX	**Arik**	**6.19**	**273**	*e*P	**Pn**	**21 30 18.8**	**+1.7**
KRX				*e*S	**Sn**	**21 31 25.1**	**-1.6**
KOK	**Koryaka**	**6.21**	**272**	*e*P	**Pn**	**21 30 19.1**	**+1.8**
RUS	**Russkaya**	**6.43**	**265**	S	**Sn**	**21 31 30.9**	**-1.4**
KRMR	**Karymshinskiy**	**6.57**	**268**	S	**Sn**	**21 31 34.6**	**-1.3**
GNL	**Ganaly**	**6.59**	**276**	P	**Pn**	**21 30 25.3**	**+2.7**
MTVR	**Mutnovka**	**6.61**	**265**	P	**Pn**	**21 30 24.7**	**+1.8**
MTVR				S	**Sn**	**21 31 34.9**	**-2.2**
GRL	**Gorelyy**	**6.66**	**266**	P	**Pn**	**21 30 26.0**	**+2.4**
PETK	**Petropavlovsk-**	**6.79**	**271**	Pn	**Pn**	**21 30 27.3**	**+2.1**
	0.9nm,0.3s,baz=86,slow=37,SNR=23						
PETK				Sn	**Sn**	**21 31 41.9**	**+0.7**
	0.9nm,0.3s,baz=101,slow=15,SNR=5.9						
	1.3nm,0.5s						
ASAK	**Asacha**	**6.80**	**265**	*e*P	**Pn**	**21 30 27.7**	**+2.2**
ASAK				*e*S	**Sn**	**21 31 41.3**	**-0.4**
KDTR	**Khodutka, Kamc**	**6.86**	**260**	*e*P	**Pn**	**21 30 27.9**	**+1.7**
KDTR				*e*S	**Sn**	**21 31 40.3**	**-2.6**
TILK	**Tilichiki**	**7.13**	**349**	S	**Sn**	**21 31 53.0**	**+3.4**
YAK	**Yakutsk**	**22.32**	**308**	LR	LR	21 43 15.8	
	comp=Z,66nm,18.7s,baz=267,slow=39						
KLR	**Kul'dur**	**23.46**	**275**	LR	LR	21 44 15.5	
	comp=Z,77nm,19.0s,baz=229,slow=39						
ILAR	**Eielson Array**	**24.71**	**46**	P	**P**	**21 34 03.3**	**-2.4**
	0.3nm,0.6s,baz=259,slow=9.1,SNR=2.4						
	0.3nm,0.6s						
TXAR	**Lajitas Array**	**65.47**	**73**	P	**P**	**21 39 27.9**	**+0.3**
	0.2nm,0.4s,baz=307,slow=5.5,SNR=5.0						
	0.2nm,0.4s						

ARE ***01*** *21:30:59±2.4, 13°.61S±0°.07×75°.28W±0°.08, h71km±5km, Error ellipse: s-maj=12.4km s-min=8.1km az=54.0*
MOS ***01*** *21:31:00.3±1.2, 13°.47S×75°.06W, h93km, mb4.9/4, Error ellipse: s-maj=10.9km s-min=5.6km az=111.7*
VAO ***01*** *21:31:00.9±0.5, 13°.53S×75°.10W, h89km±3km, mb5.1*
BJI ***01*** *21:31:00.0±0.0, 13°.50S×75°.10W, h80km, mB5.1/4, Ms5.0/3, Ms7 4.8/3*
NEIC ***01*** *21:31:01.1±1.6, 13°.51S±0°.05×75°.05W±0°.07, h83km±5km, mb5.1/213, Mww4.9, ML5.3(ARE), Error ellipse: s-maj=12.6km s-min=1.0km az=50.0*
NEIC ***01*** *21:31:01, 13°.61S×75°.17W, h130km, Moment Tensor Solution. Duration: 3s8 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.25; $M_{\theta\theta}$1.25; $M_{\phi\phi}$1.00; $M_{r\theta}$0.21; $M_{\theta\phi}$-1.96; $M_{\phi r}$1.78; Fault plane solution: $M_0$3.29000×10^{16} NP1: ϕ_s286.00000°, δ42.00000°, λ-136.00000°. NP2: ϕ_s160.00000°, δ63.00000°, λ-57.00000°. Principal axes: T 3.3091, Plg12.0000°, Azm227.0000°; N -0.0293, Plg29.0000°, Azm324.0000°; P -3.2797, Plg58.0000°, Azm117.0000°;*
IDC ***01*** *21:31:01.8±0.5, 13°.50S×75°.09W, h95km±4km, mb4.5/25, mbtmp4.8/31, MS3.7/28 Error ellipse: s-maj=13.3km s-min=6.7km az=46.0*
GCMT ***01*** *21:31:05.1±0.3, 13°.65S±0°.02×74°.99W±0°.02, h109km±3km, MW5.0/91, Moment Tensor Solution. s50,c51; s91,c113; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.75±.12; $M_{\theta\theta}$3.33±.13; $M_{\phi\phi}$-1.58±.16; $M_{r\theta}$0.21±.09; $M_{\theta\phi}$-2.50±.16; $M_{\phi r}$1.78±.10; Best double couple: $M_0$4.20000×10^{16} NP1: ϕ_s254.00000°, δ60.00000°, λ-154.00000°. NP2: ϕ_s151.00000°, δ68.00000°, λ-32.00000°. Principal axes: T 4.4220, Plg5.0000°, Azm204.0000°; N -0.4450, Plg52.0000°, Azm300.0000°; P -3.9770, Plg38.0000°, Azm110.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 01 21:31:00.7±0.3**, 13°.54S**±0°.04×**75°.07W**±0°.05**, h86km**±2km**, h86km:pP-P, n724, σ1s14**/729**, mb5.1**/153**, 15C, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	**Nana**	**2.32**	**311**	P	**Pn**	**21 31 36.7**	**-0.4**
	3μm,0.3s,baz=151,slow=11,SNR=480						
NNA				S	**Sn**	**21 32 05.8**	**+0.8**
	43μm,0.7s,baz=233,slow=19,SNR=25						
NNA				LR	LR	21 32 20.2	
	comp=Z,2μm,18.1s,baz=25,slow=34						
NNA	**Nana**	**2.32**	**311**	*ce*P	**Pn**	**21 31 36.5**	**-0.6**
NNA				pmax	pmax		
	comp=Z,4μm,0.6s						
CZSB	**Cruzeiro do Su**	**6.22**	**22**	*e*P	**Pn**	**21 32 29.8**	**-0.2**
AP01	**Chacalluta**	**6.61**	**137**	Pn	**Pn**	**21 32 37.0**	**+1.7**
PB18	**Visviri**	**6.72**	**128**	Pn	**Pn**	**21 32 39.4**	**+2.1**
PB12	**IPOC Station P**	**6.80**	**139**	Pn	**Pn**	**21 32 36.2**	**-1.7**
ATAH	**Atahualpa**	**7.16**	**332**	P	**Pn**	**21 32 42.0**	**-1.2**
	comp=Z,60nm,0.5s,baz=173,slow=4.8,SNR=19						
ATAH				S	**Sn**	**21 34 05.3**	**+2.2**
	comp=Z,158nm,0.6s,baz=145,slow=19,SNR=1.2						
PB16	**IPOC Station P**	**7.16**	**132**	Pn	**Pn**	**21 32 43.0**	**-0.4**
LPAZ	**La Paz**	**7.24**	**113**	P	**Pn**	**21 32 46.4**	**+1.9**
	comp=Z,49nm,0.4s,baz=302,slow=12,SNR=185						
LPAZ				LR	LR	21 35 49.5	
	comp=Z,249nm,21.1s,baz=280,slow=40						
LPAZ	**La Paz**	**7.24**	**113**	Pn	**Pn**	**21 32 47.1**	**+2.7**
LPAZ	**La Paz**	**7.24**	**113**	P	**Pn**	**21 32 47.1**	**+2.7**
PB11	**IPOC Station P**	**8.07**	**141**	Pn	**Pn**	**21 32 53.4**	**-2.0**
TA01	**Diego Aracena**	**8.40**	**147**	Pn	**Pn**	**21 32 59.9**	**+0.2**
PB08	**IPOC Station P**	**8.67**	**140**		**Pn**	**21 33 02.8**	**-0.9**
PB01	**IPOC Station P**	**9.17**	**145**	Pn	**Pn**	**21 33 09.8**	**-0.5**
PB02	**IPOC Station P**	**9.18**	**148**		**Pn**	**21 33 09.7**	**-0.7**
ETMB	**Extrema**	**9.43**	**68**	*e*P	**Pn**	**21 33 13.7**	**0.0**
PB07	**IPOC Station P**	**9.52**	**149**		**Pn**	**21 33 14.2**	**-1.0**
PB09	**IPOC Station P**	**9.91**	**147**		**Pn**	**21 33 21.0**	**+0.6**
PB04	**IPOC Station P**	**9.92**	**153**		**Pn**	**21 33 20.2**	**-0.4**
PB06	**IPOC Station P**	**10.50**	**151**		**Pn**	**21 33 28.2**	**-0.4**
TBTG	**Tabatinga, AM**	**10.60**	**29**	*e*P	**Pn**	**21 33 28.3**	**-1.4**
LVC	**Limon Verde**	**10.75**	**148**	P	**Pn**	**21 33 32.0**	**-0.1**
	comp=Z,22nm,0.3s,baz=336,slow=8.6,SNR=26						
LVC				S	**Sn**	**21 35 24.1**	**-6.7**
	comp=Z,25nm,0.4s,baz=128,slow=16,SNR=1.7						
LVC	**Limon Verde**	**10.75**	**148**	P	**Pn**	**21 33 32.0**	**-0.1**
LVC	**Limon Verde**	**10.75**	**148**	*e*P	**Pn**	**21 33 31.5**	**-0.6**
PB10	**IPOC Station P**	**10.80**	**157**	Pn	**Pn**	**21 33 32.5**	**+0.1**
PB15	**IPOC Station P**	**10.98**	**152**		**Pn**	**21 33 34.8**	**-0.4**
SAML	**Samuel**	**12.52**	**70**	Pn	**Pn**	**21 33 54.0**	**-1.6**
SAML	**Samuel**	**12.52**	**70**	P	**Pn**	**21 33 54.1**	**-1.6**
GO02	**Mina Guanaco**	**12.66**	**157**	Pn	**Pn**	**21 33 58.9**	**+1.0**
SLOR	**San Lorenzo -**	**13.17**	**345**	Pn	**Pn**	**21 34 05.6**	**+0.7**
AC01	**Pan de Azucar**	**13.23**	**162**	Pn	**Pn**	**21 34 05.9**	**+0.8**
SIV	**San Ignacio**	**13.75**	**102**	P	**Pn**	**21 34 11.5**	**-0.6**
	comp=Z,12nm,0.9s,baz=280,slow=11,SNR=26						
SIV				LR	LR	21 40 24.6	
	comp=Z,231nm,20.9s,baz=296,slow=41						
OTAV	**Otavalo**	**14.09**	**346**	Pn	**Pn**	**21 34 17.7**	**+0.8**
OTAV	**Otavalo**	**14.09**	**346**	P	**Pn**	**21 34 17.7**	**+0.8**
OTAV	**Otavalo**	**14.09**	**346**	*e*P	**P**	**21 34 20.8**	**-1.2**
AC02	**Maricunga**	**14.35**	**158**		**Pn**	**21 34 22.6**	**+2.4**
AC06	**Mina Casimiro**	**14.44**	**163**	Pn	**Pn**	**21 34 22.4**	**+1.6**
GO03	**Copiap**	**14.69**	**163**		**Pn**	**21 34 25.7**	**+1.5**
GCUF	**Volcan Galeras**	**14.84**	**351**	*e*P	**P**	**21 34 29.0**	**-1.3**
CCUFI	**Cufio, Nario**	**14.85**	**351**	⥣*e*P	**P**	**21 34 30.4**	**0.0**
FLOC	**Florencia**	**15.04**	**358**	*e*P	**Pn**	**21 34 25.4**	**-3.2**
MACC	**Macarena, Meta**	**15.63**	**5**	*e*P	**Pn**	**21 34 32.5**	**-3.6**
GARC	**Garzon, Huila**	**15.63**	**358**	*e*P	**P**	**21 34 37.3**	**-1.6**
SOTA	**Rioblanco**	**15.65**	**354**	*e*P	**P**	**21 34 39.8**	**+0.5**
PCON	**Cinco Dias**	**15.82**	**355**	*e*P	**P**	**21 34 40.9**	**-0.3**
LCO	**Las Campanas**	**15.92**	**166**		**Pn**	**21 34 40.4**	**+0.4**
LCO				IAmb	IAmb	21 35 15.5	
	comp=Z,183nm,1.0s						
LCO	**Las Campanas**	**15.92**	**166**	P	**Pn**	**21 34 40.4**	**+0.4**
LCO				pmax	pmax		
	comp=Z,183nm,1.0s						
POPC	**Popayan, Colom**	**16.06**	**354**	*e*P	**P**	**21 34 44.9**	**+1.4**
BETC	**Betania**	**16.12**	**359**	*e*P	**P**	**21 34 45.6**	**+1.5**
MARP	**Paez Belalcaza**	**16.30**	**357**	⥣*e*P	**Pn**	**21 34 43.8**	**-1.1**
CO05	**La Serena**	**16.68**	**168**		**P**	**21 34 50.4**	**+0.4**
CO01	**Juntas del Tor**	**16.99**	**165**		**P**	**21 34 55.1**	**+1.3**
GO04	**Tololo Observa**	**17.02**	**167**	P	**P**	**21 34 54.7**	**+0.7**
PRAC	**Prado**	**17.14**	**1**	⥣*e*P	**P**	**21 34 57.6**	**+2.2**
ORTC	**Ortega, Tolima**	**17.34**	**359**	*e*P	**P**	**21 34 59.9**	**+2.4**
CO06	**Fray Jorge**	**17.34**	**170**	P	**P**	**21 34 58.0**	**+0.7**
CO06				IAmb	IAmb	21 35 30.7	
	comp=Z,148nm,1.3s						
PTET	**Porto Estrela**	**17.44**	**98**	*e*P	**Pn**	**21 34 59.0**	**+0.5**
YOTC	**Yotoco, Valle**	**17.46**	**356**	*e*P	**Pn**	**21 34 59.9**	**+1.0**
MACA	**Manacapuru-AM**	**17.56**	**55**	*e*P	**Pn**	**21 35 00.0**	**0.0**
MACA				*e*pP	**pP**	**21 35 16.0**	**-1.4**
VILC	**Villavicencio,**	**17.59**	**5**	*e*P	**Pn**	**21 35 03.6**	**+3.1**
PTGC	**Puerto Gaitan,**	**17.86**	**10**	*e*P	**P**	**21 35 02.8**	**-0.5**
POCN	**Pocone**	**17.96**	**102**	*e*P	**Pn**	**21 35 05.0**	**+0.1**
CO02	**Combarbal**	**17.97**	**169**	P	**Pn**	**21 35 05.2**	**+0.1**
CO02				IAmb	IAmb	21 35 38.3	
	comp=Z,172nm,1.1s						
PDRB	**Porto dos Gac**	**18.00**	**86**	*e*P	**P**	**21 35 05.3**	**+0.6**
CHIC	**Chingaza**	**18.10**	**4**	*e*P	**Pn**	**21 35 09.2**	**+2.3**
ROSC	**El Rosal**	**18.28**	**2**	P	**P**	**21 35 08.1**	**-0.1**
	comp=Z,10nm,0.4s,baz=139,slow=20,SNR=10						
ROSC	**El Rosal**	**18.28**	**2**	P	**Pn**	**21 35 09.4**	**+0.4**
ROSC				IAmb	IAmb	21 35 37.2	
	comp=Z,98nm,0.9s						
ROSC	**El Rosal**	**18.28**	**2**	P	**Pn**	**21 35 09.4**	**+0.4**
ROSC				pmax	pmax		
	comp=Z,98nm,0.9s						
ROSC	**El Rosal**	**18.28**	**2**	*e*P	**Pn**	**21 35 11.0**	**+1.9**
PLMC	**San Jos del P**	**18.36**	**356**	*e*P	**Pn**	**21 35 14.2**	**+4.4**
NBRS	**Nobres**	**18.74**	**95**	*e*P	**Pn**	**21 35 14.2**	**-0.1**
ZON	**Zonda**	**18.86**	**163**		**Pn**	**21 35 15.4**	**-0.1**
ZON	**Zonda**	**18.86**	**163**	P	**Pn**	**21 35 15.5**	**-0.1**
ZON				pmax	pmax		
	comp=Z,60nm,1.4s						
SALV	**Santo Antonio**	**18.88**	**100**	*e*P	**P**	**21 35 15.0**	**+0.6**
NORC	**Norcasia**	**18.98**	**1**	*e*P	**Pn**	**21 35 16.5**	**-0.6**
CLDB	**Colider**	**19.02**	**84**	*e*P	**P**	**21 35 16.5**	**+0.5**
SPBC	**San Pablo de B**	**19.09**	**3**	*e*P	**Pn**	**21 35 19.2**	**+0.7**
VA06	**Catapilco**	**19.25**	**170**	P	**P**	**21 35 19.3**	**+1.0**
RUSC	**La Rusia**	**19.41**	**6**	*e*P	**Pn**	**21 35 24.1**	**+1.5**
VA03	**San Esteban**	**19.58**	**169**	P	**P**	**21 35 23.2**	**+1.2**
VA03				IAmb	IAmb	21 35 29.1	
	comp=Z,68nm,0.9s						
HELC	**Santa Helena**	**19.61**	**359**	*e*P	**P**	**21 35 20.9**	**-1.7**
VA01	**Torpederas**	**19.64**	**171**	P	**P**	**21 35 23.2**	**+0.6**
ROC1	**El Roble**	**19.70**	**170**	P	**P**	**21 35 24.0**	**+0.6**
AQDB	**Aquidauana**	**19.75**	**113**	*e*P	**P**	**21 35 25.2**	**+1.4**
PAYG	**Puerto Ayora**	**19.76**	**309**	P	**P**	**21 35 24.5**	**+0.5**
PP1B	**Ponte de Pedra**	**19.86**	**104**	*e*P	**P**	**21 35 25.2**	**+0.2**
PEL	**Peldehue**	**19.92**	**169**	P	**P**	**21 35 25.9**	**+0.3**
PEL				IAmb	IAmb	21 36 00.6	
	comp=Z,78nm,1.0s						
PEL	**Peldehue**	**19.92**	**169**	P	**P**	**21 35 25.9**	**+0.3**
PEL				pmax	pmax		
	comp=Z,79nm,1.0s						
MT02	**Curacav**	**19.95**	**170**	P	**Pn**	**21 35 27.8**	**-0.6**
ANTJ	**Antonio Joao (**	**19.99**	**118**	*e*P	**P**	**21 35 27.9**	**+1.4**
TAMC	**Tame, Arauca**	**20.11**	**10**	*e*P	**P**	**21 35 28.2**	**+0.4**
H03N1	**Juan Fernandez**	**20.12**	**189**	T	T	21 54 50.4	
	baz=13,slow=74,SNR=1916						
H03N2	**Juan Fernandez**	**20.12**	**189**	T	T	21 54 51.6	
	baz=13,slow=74,SNR=4156						
H03N3	**Juan Fernandez**	**20.14**	**189**	T	T	21 54 49.2	
	baz=13,slow=74,SNR=2106						
MT05	**Renca**	**20.15**	**169**	P	**P**	**21 35 29.0**	**+0.9**
MT05				IAmb	IAmb	21 36 06.6	
	comp=Z,171nm,1.2s						
VA05	**Santo Domingo**	**20.27**	**172**	P	Pn	21 35 31.1	-0.9
VA05				IAmb	IAmb	21 36 06.5	
	comp=Z,88nm,1.0s						
MT09	**Talagante**	**20.48**	**170**	P	**P**	**21 35 32.9**	**+1.0**
MT09				IAmb	IAmb	21 36 10.6	
	comp=Z,68nm,0.8s						
H03S3	**Juan Fernandez**	**20.50**	**189**	T	T	21 55 12.2	
	baz=21						
H03S2	**Juan Fernandez**	**20.51**	**189**	T	T	21 55 14.5	
	baz=21						
H03S1	**Juan Fernandez**	**20.51**	**189**	T	T	21 55 12.4	
	baz=21						
LMEL	**Las Melosas**	**20.70**	**168**	P	**P**	**21 35 35.3**	**+1.2**
LMEL				IAmb	IAmb	21 36 10.9	
	comp=Z,76nm,1.0s						
BO04	**La Punta**	**20.76**	**170**	P	**P**	**21 35 35.2**	**+0.6**
BO04				IAmb	IAmb	21 36 12.3	
	comp=Z,94nm,1.2s						
CPUP	**Villa Florida**	**20.94**	**130**	P	**P**	**21 35 36.8**	**+0.1**
	comp=Z,55nm,0.9s,baz=310,slow=11,SNR=43						
	comp=Z,55nm,0.9s						
CPUP	**Villa Florida**	**20.94**	**130**	P	**P**	**21 35 36.8**	**+0.1**
CPUP				IAmb	IAmb	21 35 41.4	
	comp=Z,62nm,0.9s						
CPUP	**Villa Florida**	**20.94**	**130**	P	**P**	**21 35 36.8**	**+0.1**
CPUP				pmax	pmax		
	comp=Z,62nm,0.9s						
CPUP	**Villa Florida**	**20.94**	**130**	*e*P	**P**	**21 35 37.6**	**+0.9**
BO01	**Tunca**	**21.07**	**171**	P	**P**	**21 35 38.7**	**+0.7**
BO01				IAmb	IAmb	21 36 15.1	
	comp=Z,147nm,1.2s						
ITTB	**Itaituba**	**21.14**	**66**	*e*P	**P**	**21 35 38.7**	**-0.2**
UREC	**San Jos de Ur**	**21.16**	**359**	*e*P	**P**	**21 35 41.8**	**+2.8**
AMBA	**Amambai (Brazi**	**21.21**	**119**	*e*P	**P**	**21 35 40.5**	**+1.0**
BOAV	**Boa Vista**	**21.42**	**43**	*e*P	**P**	**21 35 41.5**	**-0.3**
GO05	**Huala**	**21.56**	**173**	P	**P**	**21 35 45.0**	**+1.7**
GO05				IAmb	IAmb	21 36 18.3	
	comp=Z,71nm,1.1s						
OCAC	**Ocana**	**21.71**	**5**	P	**P**	**21 35 45.3**	**+0.2**
OCAC				IAmb	IAmb	21 35 56.1	
	comp=Z,50nm,0.7s						
C2SB	**Chapadao do Su**	**21.97**	**107**	*e*P	**P**	**21 35 48.1**	**+0.4**
ML02	**Panimavida**	**22.37**	**172**	P	**P**	**21 35 52.9**	**+1.1**
ARAG	**Araguaiana, MT**	**22.60**	**98**	*e*P	**P**	**21 35 52.8**	**-1.6**
MCR1	**Marechal Candi**	**22.62**	**122**	*e*P	**P**	**21 35 55.2**	**+0.6**
SDV	**Santo Domingo**	**22.71**	**11**	P	**P**	**21 35 56.5**	**+0.7**
	comp=Z,88nm,1.0s,baz=209,slow=11,SNR=23						
SDV				LR	LR	21 46 01.8	
	comp=Z,395nm,20.9s,baz=157,slow=40						
	comp=Z,88nm,1.0s						
SDV	**Santo Domingo**	**22.71**	**11**	P	**P**	**21 35 55.8**	**0.0**
SDV	**Santo Domingo**	**22.71**	**11**	*e*P	**P**	**21 35 57.0**	**+1.2**
SDV	**Santo Domingo**	**22.71**	**11**	*e*P	**P**	**21 35 57.1**	**+1.3**
BCIP	**Isla Barro Col**	**23.05**	**348**	P	**P**	**21 35 59.6**	**+0.7**
BCIP				IAmb	IAmb	21 36 28.5	
	comp=Z,91nm,1.1s						
BCIP	**Isla Barro Col**	**23.05**	**348**	P	**P**	**21 35 59.6**	**+0.7**
BCIP				pmax	pmax		
	comp=Z,91nm,1.1s						
TRCB	**Terra Rica**	**23.19**	**117**	P	**P**	**21 35 59.8**	**-0.5**
TRCB				IAmb	IAmb	21 36 01.7	
	comp=Z,103nm,0.8s						
TRCB	**Terra Rica**	**23.19**	**117**	*e*P	**P**	**21 36 00.1**	**-0.2**
SNDB	**Serra Nova Dou**	**23.24**	**89**	*e*P	**P**	**21 36 00.6**	**-0.2**
SJCC	**San Jacinto, C**	**23.29**	**360**	P	**P**	**21 36 02.0**	**+0.8**
BAUV	**El Baul**	**23.40**	**18**	P	**P**	**21 36 02.1**	**-0.1**
ITQB	**Itaqui**	**23.43**	**136**	P	**P**	**21 36 02.5**	**+0.1**
ITQB	**Itaqui**	**23.43**	**136**	*e*P	**P**	**21 36 02.8**	**+0.4**
BRU2	**Volcan**	**23.45**	**341**	P	**P**	**21 36 03.4**	**+0.6**
BRU2				IAmb	IAmb	21 36 29.7	
	comp=Z,129nm,1.0s						
MALB	**Monte Alegre**	**23.63**	**62**	*e*P	**P**	**21 36 04.4**	**+0.1**
CRSM	**Crissiumal (Br**	**24.04**	**129**	*e*P	**P**	**21 36 08.1**	**+0.3**
PCMB	**Pacaembu**	**24.05**	**113**	*e*P	**P**	**21 36 08.9**	**+0.9**
SRBA	**San Rafael, Bu**	**24.08**	**340**	P	**P**	**21 36 09.3**	**+0.9**
UNIS	**Unistalda (Bra**	**24.14**	**133**	*e*P	**P**	**21 36 09.2**	**+0.4**
PTGB	**Pitanga**	**24.37**	**121**	*e*P	**P**	**21 36 11.7**	**+0.7**
ITRB	**Iturama**	**24.44**	**108**	*e*P	**P**	**21 36 12.2**	**+0.6**
RODS	**Rosario do Sul**	**24.82**	**136**	*e*P	**P**	**21 36 14.9**	**0.0**
RODS				*e*pP	**pP**	**21 36 34.4**	**-1.4**
CVTR	**Volcan Turrial**	**24.95**	**339**	P	**P**	**21 36 17.4**	**+0.7**
CVTR				IAmb	IAmb	21 36 53.6	
	comp=Z,103nm,1.6s						
ITAB	**Concordia**	**25.39**	**126**	P	**P**	**21 36 20.5**	**+0.3**
ITAB	**Concordia**	**25.39**	**126**	*e*P	**P**	**21 36 20.4**	**+0.2**
BIRV	**Birongo**	**25.41**	**21**	P	**P**	**21 36 21.0**	**+0.7**
BIRV				IAmb	IAmb	21 37 01.2	
	comp=Z,101nm,1.2s						
ALGR	**Alto Alegre (B**	**25.48**	**130**	*e*P	**P**	**21 36 20.9**	**-0.1**
JTS	**Las Juntas de**	**25.63**	**337**	LR	LR	21 46 46.0	
	comp=Z,103nm,20.1s,baz=206,slow=37						
PRPB	**Parauapebas**	**25.91**	**76**	*e*P	**P**	**21 36 24.9**	**-0.1**
FRTB	**Fartura**	**26.04**	**116**	*e*P	**P**	**21 36 26.5**	**+0.3**
CPSB	**Cacapava Do Su**	**26.07**	**134**	*e*P	**P**	**21 36 25.6**	**-0.7**
PEXB	**Peixe**	**26.13**	**90**	*e*P	**P**	**21 36 26.8**	**-0.2**
BDFB	**Brasilia**	**26.26**	**98**	P	**P**	**21 36 27.0**	**-1.2**
	comp=Z,9.3nm,0.9s,baz=275,slow=9.8,SNR=14						
BDFB				LR	LR	21 47 49.7	
	comp=Z,167nm,18.6s,baz=320,slow=38						
	comp=Z,9.3nm,0.9s						
BDFB	**Brasilia**	**26.26**	**98**	P	**P**	**21 36 27.5**	**-0.7**
BDFB	**Brasilia**	**26.26**	**98**	P	**P**	**21 36 27.5**	**-0.7**
BDFB				pmax	pmax		
	comp=Z,31nm,1.4s						
BDFB	**Brasilia**	**26.26**	**98**	*e*P	**P**	**21 36 27.5**	**-0.7**
MCPB	**Macapa, AP**	**26.28**	**62**	*e*P	**P**	**21 36 29.1**	**+0.7**
BB19B	**Bebedouro**	**26.39**	**110**	*e*P	**P**	**21 36 29.5**	**+0.1**
PLTB	**Pedras Altas**	**26.77**	**136**	P	**P**	**21 36 32.1**	**-0.5**
PLTB	**Pedras Altas**	**26.77**	**136**	*e*P	**P**	**21 36 31.8**	**-0.8**
TIJ01	**Guaruva-PR**	**27.17**	**119**	*e*P	**P**	**21 36 36.9**	**+0.5**
SMTB	**Santa Maria do**	**27.34**	**83**	*e*P	**P**	**21 36 38.4**	**+0.5**
LL04	**Puerto Octay**	**27.37**	**176**	P	**P**	**21 36 37.7**	**-0.1**
LL04				IAmb	IAmb	21 37 11.2	
	comp=Z,50nm,1.2s						
PLCA	**Paso Flores**	**27.38**	**173**	P	**P**	**21 36 37.9**	**-0.1**
	comp=Z,12nm,0.8s,baz=347,slow=11,SNR=20						
PLCA				PcP	**PcP**	**21 39 55.3**	**+0.2**
	comp=Z,3.5nm,0.8s,baz=239,slow=2.4,SNR=3.5						
	comp=Z,12nm,0.8s						
PLCA	**Paso Flores**	**27.38**	**173**	P	**P**	**21 36 38.4**	**+0.4**
PLCA	**Paso Flores**	**27.38**	**173**	*e*P	**P**	**21 36 38.4**	**+0.4**
CNLB	**Canela**	**27.38**	**129**	*e*P	**P**	**21 36 38.4**	**+0.3**
RCLB	**Rio Claro- Sao**	**27.60**	**113**	*e*P	**P**	**21 36 40.4**	**+0.2**
VAO	**Valinhos**	**28.25**	**114**	*e*P	**P**	**21 36 46.0**	**+0.1**
PET01	**Itanhaem-SP**	**28.32**	**116**	*e*P	**P**	**21 36 46.6**	**+0.1**
TER01	**Tubaro-SC**	**28.35**	**126**	*e*P	**P**	**21 36 46.8**	**+0.1**
TMAB	**Tom-Au,PA,Br**	**28.88**	**70**	*e*P	**P**	**21 36 53.3**	**+1.7**
MDP	**Montagnes des**	**28.96**	**52**	LR	LR	21 49 21.8	
	comp=Z,504nm,18.8s,baz=230,slow=38						
SDBA	**SAO DESIDERIO**	**29.41**	**91**	*e*P	**P**	**21 36 56.5**	**+0.2**
PARB	**Paraibuna**	**29.53**	**114**	*e*P	**P**	**21 36 57.9**	**+0.6**
LL02	**Futaleuf**	**29.68**	**175**	P	**P**	**21 36 58.0**	**-0.3**
LL02				IAmb	IAmb	21 37 31.5	
	comp=Z,36nm,1.1s						
BSCB	**Bom Sucesso**	**29.82**	**109**	*e*P	**P**	**21 36 59.5**	**-0.4**
JANB	**Januaria**	**29.83**	**97**	*e*P	**P**	**21 36 59.5**	**-0.6**
SLP01	**Ubatuba-SP**	**29.94**	**113**	*e*P	**P**	**21 37 01.5**	**+0.5**
ESAR	**Angra dos Reis**	**30.51**	**112**	*e*P	**P**	**21 37 05.2**	**-0.7**
DIAM	**Diamantina, MG**	**30.53**	**103**	*e*P	**P**	**21 37 05.9**	**-0.4**
AY01	**Puyuhuapi**	**30.84**	**177**	P	**P**	**21 37 08.1**	**-0.5**
MAN01	**Angra dos Reis**	**30.91**	**112**	*e*P	**P**	**21 37 08.9**	**-0.6**
VAS01	**Vassouras-RJ**	**31.27**	**111**	*e*P	**P**	**21 37 12.9**	**+0.3**
MTDJ	**Mount Denham**	**31.66**	**356**	P	**P**	**21 37 17.0**	**+1.0**
COYC	**Coyhaique**	**32.03**	**176**	P	**P**	**21 37 18.4**	**-0.5**
COYC				IAmb	IAmb	21 37 53.0	
	comp=Z,51nm,1.1s						
DUB01	**Friburgo-RJ**	**32.21**	**110**	*e*P	**P**	**21 37 21.8**	**+0.9**
MLPR	**Magueyes Islan**	**32.29**	**14**	P	**P**	**21 37 22.2**	**+0.7**
MLPR				IAmb	IAmb	21 37 22.3	
	comp=Z,29nm,0.8s						
CRPR	**Cabo Rojo, PR**	**32.31**	**14**	P	**P**	**21 37 21.8**	**+0.1**
CRPR				IAmb	IAmb	21 37 47.5	
	comp=Z,26nm,0.7s						
ROSB	**Rosrio**	**32.35**	**74**	*e*P	**P**	**21 37 22.0**	**-0.2**
OBIP	**Obispado Ponce**	**32.47**	**15**	P	**P**	**21 37 23.1**	**0.0**
OBIP				IAmb	IAmb	21 37 37.1	
	comp=Z,36nm,0.8s						
CELP	**Cerrillos**	**32.51**	**15**	P	**P**	**21 37 23.4**	**-0.1**
CELP				IAmb	IAmb	21 37 37.9	
	comp=Z,37nm,0.7s						
SJG	**San Juan**	**32.66**	**16**	P	**P**	**21 37 23.6**	**-1.1**
	comp=Z,12nm,0.7s,baz=202,slow=4.1,SNR=4.6						
	comp=Z,12nm,0.7s						
SJG	**San Juan**	**32.66**	**16**	P	**P**	**21 37 23.9**	**-0.8**
SJG				IAmb	IAmb	21 37 45.2	
	comp=Z,26nm,0.7s						
SJG	**San Juan**	**32.66**	**16**	P	**P**	**21 37 23.9**	**-0.8**
SJG				pmax	pmax		
	comp=Z,26nm,0.7s						
AOPR	**Arecibo Observ**	**32.73**	**15**	P	**P**	**21 37 25.1**	**-0.3**
CAM01	**Campos-RJ**	**32.82**	**109**	*e*P	**P**	**21 37 26.6**	**+0.4**
CBYP	**Canovanas**	**32.89**	**16**	P	**P**	**21 37 25.7**	**-1.1**
SJMB	**Sao Joao De Ma**	**32.92**	**104**	*e*P	**P**	**21 37 26.3**	**-0.8**
CUPR	**Culebra, Puert**	**33.08**	**17**	P	**P**	**21 37 27.3**	**-1.1**
STVI	**Saint Thomas**	**33.22**	**18**	P	**P**	**21 37 29.1**	**-0.5**
STVI				IAmb	IAmb	21 38 17.8	
	comp=Z,48nm,1.2s						
BSFB	**Barra de Sao F**	**33.25**	**104**	*e*P	**P**	**21 37 29.2**	**-0.8**
ALF01	**Guarapari-ES**	**33.52**	**107**	*e*P	**P**	**21 37 32.4**	**+0.1**
ANWB	**Willy Bob**	**33.67**	**23**	P	**P**	**21 37 32.0**	**-1.5**
RIB01	**Linhares ES**	**33.71**	**105**	*e*P	**P**	**21 37 33.8**	**-0.2**
NAN01	**Guarapari, ES**	**33.88**	**102**	*e*P	**P**	**21 37 34.6**	**-0.8**
GUA01	**Guaratinga, BA**	**34.16**	**100**	*e*P	**P**	**21 37 37.5**	**-0.4**
NBPN	**Ponto Novo - B**	**34.17**	**89**	*e*P	**P**	**21 37 37.5**	**-0.6**
NBPS	**Pedro II - PI**	**34.39**	**78**	*e*P	**P**	**21 37 40.0**	**0.0**
CMC01	**Camacan, BA**	**34.45**	**97**	*e*P	**P**	**21 37 39.4**	**-1.0**
GDU01	**Guandu, BA**	**34.47**	**95**	*e*P	**P**	**21 37 40.2**	**-0.5**
RPN	**Rapa Nui**	**34.73**	**242**	LR	LR	21 49 10.6	
	comp=Z,126nm,18.9s,baz=110,slow=31						
NBPB	**Pedra_Branca-C**	**35.84**	**81**	*e*P	**P**	**21 37 53.1**	**+0.6**
NBMO	**Morrinhos-CE**	**36.05**	**77**	*e*P	**P**	**21 37 54.0**	**-0.2**
CMIG	**Matias Romero**	**36.19**	**327**	P	**P**	**21 37 55.1**	**-0.1**
	comp=Z,3.9nm,0.7s,baz=132,slow=6.2,SNR=7.9						
CMIG				PcP	**PcP**	**21 40 19.0**	**-0.1**
	comp=Z,4.3nm,0.8s,baz=62,slow=3.2,SNR=4.4						
	comp=Z,3.9nm,0.7s						
NBMA	**Muriti-CE**	**36.19**	**84**	*e*P	**P**	**21 37 55.6**	**+0.1**
NBLA	**Lagarto - SE**	**36.49**	**90**	*e*P	**P**	**21 37 57.1**	**-0.8**
NBAN	**Anadia - AL**	**38.16**	**88**	*e*P	**P**	**21 38 11.6**	**-0.5**
RCBR	**Riachuelo**	**39.31**	**83**	P	**P**	**21 38 21.7**	**-0.1**
	comp=Z,9.9nm,0.8s,baz=35,slow=9.5,SNR=4.2						
	comp=Z,9.9nm,0.8s						
RCBR	**Riachuelo**	**39.31**	**83**	P	**P**	**21 38 21.6**	**-0.2**
RCBR	**Riachuelo**	**39.31**	**83**	*e*P	**P**	**21 38 22.8**	**+1.0**
NBRF	**Rio Formoso -**	**39.45**	**87**	*e*P	**P**	**21 38 22.2**	**-0.7**
EFI	**East Falkland**	**40.43**	**164**	P	**P**	**21 38 31.0**	**+0.6**
EFI	**East Falkland**	**40.43**	**164**	*ce*P	**P**	**21 38 32.1**	**+1.7**
EFI				pmax	pmax		
	comp=Z,26nm,1.0s						
USHA	**Ushuaia**	**41.52**	**174**	P	**P**	**21 38 39.4**	**+0.1**
	comp=Z,14nm,1.0s,baz=36,slow=3.3,SNR=5.0						
	comp=Z,14nm,1.0s						
553A	**Crawfordville**	**44.40**	**348**	P	**P**	**21 39 02.9**	**+0.1**

553A IAmb IAmb 21 39 31.8
comp=Z,32nm,0.7s
152A Waverly Hall 46.87 349 P **P** **21 39 21.2 -1.1**
152A IAmb IAmb 21 39 50.3
comp=Z,14nm,0.8s
GOGA Godfrey 47.37 350 P **P** **21 39 25.3 -0.9**
baz=169
Z51A Franklin 47.58 349 P **P** **21 39 27.3 -0.5**
LRAL Lakeview Retre 47.70 346 P **P** **21 39 27.8 -0.9**
LRAL Lakeview Retre 47.70 346 P **P** **21 39 27.7 -0.9**
baz=164,SNR=8.9
833A Chaparral WMA, 47.82 331 P **P** **21 39 30.1 +0.5**
833A IAmb IAmb 21 39 31.2
comp=Z,15nm,0.8s
833A Chaparral WMA, 47.82 331 P **P** **21 39 30.2 +0.5**
baz=147
HODGE Hodges 48.00 352 P **P** **21 39 30.7 -0.3**
BIRD Birdtown, Kers 48.19 354 P **P** **21 39 32.7 +0.2**
PAULI Pauline 48.52 353 P **P** **21 39 34.6 -0.4**
W57A Gilead 48.65 355 P **P** **21 39 35.5 -0.5**
W57A IAmb IAmb 21 39 36.5
comp=Z,16nm,0.8s
KMSC Kings Mountain 48.78 353 P **P** **21 39 36.6 -0.4**
baz=172,SNR=6.4
NATX Nacogdoches 48.80 338 P **P** **21 39 37.8 +0.5**
baz=154
FPAL Fort Paine 48.85 348 P **P** **21 39 36.6 -1.0**
FPAL IAmb IAmb 21 39 37.4
comp=Z,17nm,1.0s
W52A Murphy 49.09 350 P **P** **21 39 38.9 -0.5**
W52A IAmb IAmb 21 39 39.7
comp=Z,56nm,1.8s
435B Jarrell 49.10 334 P **P** **21 39 39.7 +0.1**
baz=151
W50A Signal Mountai 49.44 349 P **P** **21 39 41.5 -0.6**
W50A IAmb IAmb 21 39 41.9
comp=Z,15nm,0.6s
Z41A Richland Creek 49.52 340 P **P** **21 39 42.7 +0.1**
baz=157
CPCT Cooper Cave 49.54 350 P **P** **21 39 42.1 -0.7**
SWET Sewanee 49.57 348 P **P** **21 39 42.1 -1.0**
TKL Tuckaleechee C 49.62 351 P **P** **21 39 42.2 -1.2**
comp=Z,5.3nm,0.9s,baz=167,slow=9.6,SNR=5.6
comp=Z,5.3nm,0.9s
TKL Tuckaleechee C 49.62 351 P **P** **21 39 42.6 -0.8**
TKL Tuckaleechee C 49.62 351 P **P** **21 39 42.6 -0.8**
TKL pmax pmax
comp=Z,49nm,1.3s
OXF Oxford 49.69 344 P **P** **21 39 43.0 -0.9**
OXF Oxford 49.69 344 P **P** **21 39 42.2 -1.8**
baz=162
V52A Sevierville 49.77 351 P **P** **21 39 43.6 -1.0**
V52A IAmb IAmb 21 39 44.5
comp=Z,18nm,0.8s
PLAL Pickwick Lake 49.81 346 P **P** **21 39 43.4 -1.5**
PLAL IAmb IAmb 21 39 44.2
comp=Z,14nm,0.8s
V51A Loudon 49.85 350 P **P** **21 39 44.2 -1.0**
V51A IAmb IAmb 21 39 45.1
comp=Z,14nm,0.8s
WLAR White Oak Lake 50.02 340 P **P** **21 39 46.9 +0.4**
HPIG 50.02 324 P **P** **21 39 47.7 +0.8**
WHTX Lake Whitney, 50.10 335 P **P** **21 39 47.3 +0.2**
WHTX IAmb IAmb 21 39 48.2
comp=Z,30nm,1.1s
WHTX Lake Whitney, 50.10 335 P **P** **21 39 46.9 -0.2**
baz=151
TZTN Tazewell 50.45 351 P **P** **21 39 49.1 -0.6**
TZTN IAmb IAmb 21 41 18.9
comp=Z,17nm,0.8s
TZTN Tazewell 50.45 351 P **P** **21 39 48.7 -1.0**
baz=169
HOPE Hope Point 50.63 152 P **P** **21 39 52.1 +1.2**
HOPE Hope Point 50.63 152 P **P** **21 39 52.1 +1.2**
HOPE pmax pmax
comp=Z,110nm,1.2s
BLA Blacksburg 50.73 354 P **P** **21 39 52.0 +0.2**
BLA IAmb IAmb 21 41 13.8
comp=Z,13nm,0.7s
BLA Blacksburg 50.73 354 P **P** **21 39 52.0 +0.2**
BLA Blacksburg 50.73 354 P **P** **21 39 51.4 -0.4**
baz=173
UALR University of 50.77 342 P **P** **21 39 51.6 -0.5**
UALR IAmb IAmb 21 39 52.7
comp=Z,20nm,0.9s
TX32 Lajitas Array 50.79 327 P **P** **21 39 52.6 +0.1**
TXAR Lajitas Array 50.79 327 P **P** **21 39 52.6 +0.1**
comp=Z,4.5nm,0.6s,baz=149,slow=8.8,SNR=76
TXAR PcP **PcP** **21 41 08.3 0.0**
comp=Z,2.0nm,0.5s,baz=149,slow=7.1,SNR=5.2
comp=Z,4.5nm,0.6s
TXAR Lajitas Array 50.79 327 P **P** **21 39 52.8 +0.3**
TXAR Lajitas Array 50.79 327 P **P** **21 39 52.8 +0.3**
U49A Red Boiling Sp 50.80 349 P **P** **21 39 51.3 -1.0**
WVT Waverly 50.85 347 P **P** **21 39 51.2 -1.5**
WVT Waverly 50.85 347 P **P** **21 39 51.2 -1.5**
WVT pmax pmax
comp=Z,10.0nm,0.8s
WVT Waverly 50.85 347 P **P** **21 39 50.9 -1.8**
baz=164
MIAR Mount Ida 50.95 340 P **P** **21 39 53.4 -0.1**
MIAR IAmb IAmb 21 39 54.2
comp=Z,17nm,0.8s
MIAR Mount Ida 50.95 340 P **P** **21 39 53.4 -0.1**
MIAR pmax pmax
comp=Z,17nm,0.8s
MIAR Mount Ida 50.95 340 P **P** **21 39 53.1 -0.4**
baz=157,SNR=18
JSRW J. Sargeant Re 51.03 357 P **P** **21 39 54.5 +0.5**
W41B Gary Mavity, V 51.11 342 P **P** **21 39 54.4 -0.3**
W41B IAmb IAmb 21 39 55.1
comp=Z,15nm,0.9s
W41B Gary Mavity, V 51.11 342 P **P** **21 39 54.0 -0.7**
baz=158,SNR=11
T50A Nancy 51.12 350 P **P** **21 39 53.6 -1.1**
T50A IAmb IAmb 21 41 22.4
comp=Z,9.4nm,0.5s
S57A Dark Hollow, R 51.16 356 P **P** **21 39 54.6 -0.4**
S57A IAmb IAmb 21 39 55.7
comp=Z,13nm,0.7s
WHAR Wooly Hollow 51.23 342 P **P** **21 39 55.2 -0.3**
WHAR IAmb IAmb 21 39 56.0
comp=Z,21nm,0.9s
ABTX Abilene, Hawle 51.57 333 P **P** **21 39 57.8 -0.4**
ABTX Abilene, Hawle 51.57 333 P **P** **21 39 58.2 0.0**
baz=149,SNR=13
X37A Clayton 51.61 339 **P** **21 39 58.5 +0.1**
X37A IAmb IAmb 21 39 59.6
comp=Z,32nm,1.0s
W39A Magazine 51.62 340 P **P** **21 39 58.5 0.0**
baz=157,SNR=6.0
LCAR Lake Charles 51.63 343 P **P** **21 39 57.5 -1.0**
LCAR IAmb IAmb 21 39 58.3
comp=Z,16nm,0.7s
ORCD Orcadas 52.04 162 P **P** **21 40 01.0 -0.2**
PBMO Poplar Bluff 52.10 344 P **P** **21 40 01.0 -1.0**
U40A Yellville 52.39 342 P **P** **21 40 03.6 -0.6**
U40A Yellville 52.39 342 P **P** **21 40 03.5 -0.7**
baz=158,SNR=29
X34A Smith Ranch, M 52.54 336 **P** **21 40 05.5 +0.2**
HHAR Hobbs 52.66 341 P **P** **21 40 05.8 -0.4**
HHAR IAmb IAmb 21 40 06.5
comp=Z,21nm,1.1s
SIUC Southern Illin 52.69 346 P **P** **21 40 05.4 -1.0**
TUL1 Leonard 52.95 339 **P** **21 40 07.7 -0.6**
TUL1 Leonard 52.95 339 P **P** **21 40 07.7 -0.6**
baz=154,SNR=6.9
WMOK Wichita Mounta 53.03 336 **P** **21 40 08.1 -0.9**
WMOK Wichita Mounta 53.03 336 P **P** **21 40 08.1 -0.9**
WMOK pmax pmax
comp=Z,10.0nm,0.8s
WMOK Wichita Mounta 53.03 336 P **P** **21 40 08.0 -0.9**
baz=151,SNR=6.2
MCWV Mont Chateau 53.11 355 P **P** **21 40 08.8 -0.6**
baz=174
MVL Millersville 53.28 359 P **P** **21 40 11.0 +0.4**
MVL IAmb IAmb 21 40 12.2
comp=Z,26nm,1.1s
P52A Corning 53.31 353 P **P** **21 40 09.7 -1.2**
P52A IAmb IAmb 21 40 10.4
comp=Z,19nm,0.6s
P52A Corning 53.31 353 P **P** **21 40 09.4 -1.5**
baz=171,SNR=9.0
CCM Cathedral Cave 53.52 344 P **P** **21 40 11.7 -0.8**
CCM Cathedral Cave 53.52 344 P **P** **21 40 11.7 -0.8**
CCM pmax pmax
comp=Z,23nm,0.7s
CCM Cathedral Cave 53.52 344 P **P** **21 40 11.0 -1.5**
baz=160
CCM Cathedral Cave 53.52 344 P **P** **21 40 11.3 -1.1**
CCM pP **sP** **21 40 42.5 -3.0**
CCM sP pP 21 40 56.3 +21
MNTX Cornudas Mount 53.56 328 P **P** **21 40 12.1 -0.8**
baz=142
P49A Miami Univ. Ec 53.56 351 P **P** **21 40 11.2 -1.5**
P49A IAmb IAmb 21 40 11.9
comp=Z,18nm,0.7s
P49A Miami Univ. Ec 53.56 351 P **P** **21 40 10.9 -1.8**
baz=168,SNR=5.4
O53A New Philadelph 53.82 354 P **P** **21 40 13.4 -1.2**
baz=173
SSPA Standing Stone 53.96 357 P **P** **21 40 15.4 -0.2**
SSPA IAmb IAmb 21 40 17.5
comp=Z,14nm,0.8s
SSPA Standing Stone 53.96 357 P **P** **21 40 15.6 0.0**
baz=177
SSPA Standing Stone 53.96 357 P **P** **21 40 15.9 +0.3**
SSPA pP **pP** **21 40 36.3 -2.3**
ACSO Alum Creek Sta 54.00 353 P **P** **21 40 14.8 -1.1**
ACSO Alum Creek Sta 54.00 353 P **P** **21 40 14.7 -1.2**
baz=170,SNR=7.0
MSTX Muleshoe 54.11 332 P **P** **21 40 16.3 -0.7**
MSTX IAmb IAmb 21 40 17.5
comp=Z,14nm,1.1s
MSTX Muleshoe 54.11 332 P **P** **21 40 16.2 -0.7**
baz=146
O48B Farmland 54.34 351 P **P** **21 40 16.7 -1.6**
baz=168,SNR=11
AMTX Amarillo 54.38 333 P **P** **21 40 17.9 -1.1**
baz=148
M57A Sunshine Farm, 54.63 358 P **P** **21 40 20.6 +0.2**
M57A IAmb IAmb 21 40 21.4
comp=Z,16nm,0.7s
SFIN Lafayette 54.79 349 P **P** **21 40 19.4 -2.3**
baz=166
KSPA Keystone Colle 54.82 359 P **P** **21 40 22.2 +0.4**
M53A WI Miller and 54.95 355 P **P** **21 40 21.3 -1.4**
baz=173
HDIL Hopedale 55.42 347 P **P** **21 40 24.1 -2.0**
baz=163,SNR=6.6
319A Douglas 55.43 324 P **P** **21 40 26.6 0.0**
319A IAmb IAmb 21 41 03.5
comp=Z,19nm,0.8s
BINY Binghamton 55.47 359 P **P** **21 40 26.9 +0.4**
BINY IAmb IAmb 21 40 27.5
comp=Z,22nm,0.7s
BINY Binghamton 55.47 359 P **P** **21 40 26.8 +0.4**
baz=179,SNR=11
121A Cookes Peak, D 55.48 326 P **P** **21 40 27.3 +0.3**
121A Cookes Peak, D 55.48 326 P **P** **21 40 27.6 +0.6**
baz=140,SNR=11
HRV Adam Dziewonsk 55.86 3 P **P** **21 40 29.5 +0.2**
baz=184
K62A Royalston 55.99 3 P **P** **21 40 30.2 +0.1**
K62A IAmb IAmb 21 40 50.3
comp=Z,45nm,1.6s
BNM Barren Site 56.13 328 P **P** **21 40 31.6 -0.1**
LENM Lemitar 56.32 328 P **P** **21 40 33.3 +0.3**
ANMO Albuquerque 56.68 329 LR LR 22 06 58.5
comp=Z,21nm,18.0s,baz=128,slow=38
ANMO Albuquerque 56.68 329 P **P** **21 40 35.4 -0.1**
ANMO Albuquerque 56.68 329*ce* **P** **21 40 35.8 +0.3**
ANMO pmax pmax
comp=Z,8.0nm,1.3s
ANMO Albuquerque 56.68 329 P **P** **21 40 35.3 -0.1**
baz=143
ANMO Albuquerque 56.68 329 P **P** **21 40 35.6 +0.1**
ANMO pP **pP** **21 41 00.4 +1.9**
ANMO sP **sP** **21 41 10.9 +2.3**
CBKS Cedar Bluff 56.96 337 P **P** **21 40 37.0 -0.2**
CBKS Cedar Bluff 56.96 337 P **P** **21 40 37.0 -0.2**
CBKS pmax pmax
comp=Z,40nm,0.6s
CBKS Cedar Bluff 56.96 337 P **P** **21 40 36.9 -0.4**
baz=151,SNR=7.5
TUC Tucson 56.98 324 P **P** **21 40 37.6 0.0**
TUC Tucson 56.98 324 P **P** **21 40 37.6 0.0**
TUC pmax pmax
comp=Z,5.0nm,1.1s
TUC Tucson 56.98 324 P **P** **21 40 37.9 +0.3**
baz=138
PECO Prince Edward 57.22 358 P **P** **21 40 38.5 -0.4**
T25A Trinidad 57.48 332 P **P** **21 40 41.6 +0.5**
T25A IAmb IAmb 21 40 42.2
comp=Z,19nm,0.8s
T25A Trinidad 57.48 332 P **P** **21 40 41.2 0.0**
baz=146,SNR=19
JFWS Jewell Farm 57.88 347 P **P** **21 40 42.2 -1.3**
JFWS IAmb IAmb 21 41 35.6
comp=Z,11nm,0.6s
JFWS Jewell Farm 57.88 347 P **P** **21 40 42.2 -1.3**
JFWS pmax pmax
comp=Z,11nm,0.6s
LONY Lake Ozonia 57.88 0 P **P** **21 40 43.5 -0.1**
LONY Lake Ozonia 57.88 0 P **P** **21 40 43.4 -0.1**
baz=180,SNR=8.3
214A Organ Pipe Nat 57.91 322 P **P** **21 40 44.2 +0.1**
214A IAmb IAmb 21 41 11.0
comp=Z,16nm,1.0s
SADO Sadowa 58.15 357 P **P** **21 40 44.3 -1.1**
KSCO Kaye Shedlock' 58.27 335 P **P** **21 40 46.1 -0.5**
KSCO IAmb IAmb 21 40 47.3
comp=Z,21nm,0.8s
KSCO Kaye Shedlock' 58.27 335 P **P** **21 40 46.1 -0.5**
baz=148
SDCO Great Sand Dun 58.47 332 P **P** **21 40 48.0 -0.2**
SDCO Great Sand Dun 58.47 332 P **P** **21 40 48.3 +0.1**
baz=145,SNR=42
W18A Petrified Fore 58.50 327 P **P** **21 40 48.4 +0.1**
W18A IAmb IAmb 21 40 49.9
comp=Z,24nm,1.1s
W18A Petrified Fore 58.50 327 P **P** **21 40 48.8 +0.6**
baz=140,SNR=8.1
BGNE Belgrade 58.69 340 P **P** **21 40 48.2 -1.1**
BGNE Belgrade 58.69 340 P **P** **21 40 48.2 -1.1**
baz=154
PKME Peaks-Kenny Pk 58.76 5 P **P** **21 40 49.6 0.0**
PKME Peaks-Kenny Pk 58.76 5 P **P** **21 40 50.1 +0.5**
baz=186
MNTQ Montreal, Queb 58.77 1 P **P** **21 40 49.7 0.0**
GGN Saint George 58.85 7 P **P** **21 40 50.3 0.0**
GGN IAmb IAmb 21 41 32.8
comp=Z,35nm,1.4s
113A Mohawk Valley, 59.06 322 P **P** **21 40 51.9 0.0**
113A IAmb IAmb 21 41 16.9
comp=Z,18nm,1.7s
S22A 4UR Ranch, Cre 59.09 331 P **P** **21 40 52.4 -0.1**
baz=143,SNR=5.1
Q24A Divide 59.31 333 P **P** **21 40 53.9 -0.1**
baz=146,SNR=5.1
MVCO Mesa Verde 59.48 329 P **P** **21 40 54.6 -0.4**
MVCO IAmb IAmb 21 40 56.1
comp=Z,11nm,0.8s
MVCO Mesa Verde 59.48 329 P **P** **21 40 55.0 -0.1**
baz=142,SNR=5.7
TRQ Mont Tremblant 59.48 0 P **P** **21 40 54.4 -0.3**
TRQ IAmb IAmb 21 40 55.4
comp=Z,14nm,0.9s
WUAZ Wupatki 59.68 326 P **P** **21 40 56.8 +0.4**
WUAZ IAmb IAmb 21 40 58.3
comp=Z,15nm,0.9s
WUAZ Wupatki 59.68 326 P **P** **21 40 57.0 +0.6**
baz=138,SNR=10
OGNE Ogallala 59.69 337 P **P** **21 40 55.2 -1.0**
OGNE Ogallala 59.69 337 P **P** **21 40 55.6 -0.6**
baz=149
LMN Caledonia Moun 59.84 8 P **P** **21 40 57.4 +0.3**
GBN Guysborough 59.94 11 P **P** **21 40 58.5 +0.8**
ISCO Idaho Springs 60.20 333 P **P** **21 40 59.6 -0.5**
ISCO Idaho Springs 60.20 333 P **P** **21 40 59.6 -0.5**
ISCO pmax pmax
comp=Z,8.0nm,0.9s
ISCO Idaho Springs 60.20 333 P **P** **21 41 00.1 0.0**
baz=145,SNR=11
ECSD EROS Data Cent 60.30 342 P **P** **21 40 59.3 -1.0**
ECSD EROS Data Cent 60.30 342 P **P** **21 40 59.2 -1.0**
baz=156,SNR=18
PV15 Paradox Valley 60.35 330 P **P** **21 41 01.5 +0.4**
D62A Allapoint, All 60.58 5 P **P** **21 41 02.4 +0.2**
D62A IAmb IAmb 21 41 43.3
comp=Z,12nm,0.8s
SPMN Marine on St. 60.66 346 P **P** **21 41 01.4 -1.2**
baz=160,SNR=5.6
LATQ La Tuque 60.68 2 P **P** **21 40 02.7 -0.1**
LATQ IAmb IAmb 21 41 03.5
comp=Z,12nm,0.7s
BC3 Big Chuckawall 60.69 322 P **P** **21 41 03.8 +0.6**
baz=134,SNR=5.1
MONP2 Monument Peak 60.76 320 P **P** **21 41 04.2 +0.3**
baz=133
IRM Iron Mountain 60.85 322 P **P** **21 41 05.0 +0.7**
baz=134,SNR=8.9
U15A North Rim 60.85 326 P **P** **21 41 05.2 +0.7**
BATG Bathurst New B 61.07 7 P **P** **21 41 05.8 +0.3**
N23A Red Feather La 61.24 334 P **P** **21 41 07.4 +0.3**
baz=145
BELC Belle Mtn. Jos 61.25 322 P **P** **21 41 07.9 +0.8**
baz=134
TPFO Pinon Flats 0 61.26 321 P **P** **21 41 08.0 +0.8**
baz=133
PFO Pinyon Flats O 61.27 321 P **P** **21 41 07.8 +0.6**
baz=133
VLDQ Val d'Or 61.41 358 P **P** **21 41 07.5 -0.2**
VLDQ IAmb IAmb 21 41 49.5
comp=Z,11nm,0.8s
GMRC Granite Mounta 61.59 322 P **P** **21 41 09.9 +0.5**
baz=134
O20A White River Ci 61.66 332 P **P** **21 41 09.9 +0.1**
baz=143,SNR=5.8
SRU San Rafael Swe 61.95 329 P **P** **21 41 11.8 0.0**
SRU IAmb IAmb 21 41 12.8
comp=Z,16nm,0.8s
SRU San Rafael Swe 61.95 329 P **P** **21 41 11.8 0.0**
SRU pmax pmax
comp=Z,17nm,0.8s
HEC Hector,Ludlow 62.02 322 P **P** **21 41 12.9 +0.7**
baz=134
TUQ Turquoise Moun 62.20 323 P **P** **21 41 14.1 +0.7**
baz=134
CIS Catalina Islan 62.34 320 P **P** **21 41 15.5 +1.1**
baz=131
BFSC Mount Baldy Ra 62.43 321 P **P** **21 41 15.9 +0.9**
baz=132
RWWY Rawlins 62.44 333 P **P** **21 41 15.2 +0.1**
RWWY IAmb IAmb 21 41 17.0
comp=Z,17nm,0.8s
GSC Goldstone, Bar 62.63 322 P **P** **21 41 17.0 +0.7**
GSC Goldstone, Bar 62.63 322 P **P** **21 41 17.0 +0.7**
GSC pmax pmax
comp=Z,6.0nm,0.9s
GSC Goldstone, Bar 62.63 322 P **P** **21 41 17.1 +0.9**
baz=133
K22A Casper 62.93 334 P **P** **21 41 18.1 -0.1**
K22A IAmb IAmb 21 41 19.0
comp=Z,18nm,0.7s
K22A Casper 62.93 334 P **P** **21 41 18.1 -0.1**
baz=145,SNR=10.0
EYMN Ely 62.94 348 P **P** **21 41 17.2 -0.7**
baz=162
SNCC San Nicolas Is 62.95 319 P **P** **21 41 17.4 -0.9**
baz=130
EDW2 Edwards Air Fo 63.06 321 P **P** **21 41 19.3 +0.2**
baz=132,SNR=5.5
PRN Pahroc Range 63.08 325 P **P** **21 41 20.1 +0.7**
RSSD Black Hills 63.17 337 P **P** **21 41 19.7 -0.1**
RSSD IAmb IAmb 21 41 20.7
comp=Z,27nm,1.4s
RSSD Black Hills 63.17 337 P **P** **21 41 19.7 -0.1**
RSSD pmax pmax
comp=Z,27nm,1.4s
RSSD Black Hills 63.17 337 P **P** **21 41 19.7 -0.1**
baz=148
RSSD Black Hills 63.17 337 P **P** **21 41 19.9 +0.1**
RSSD pP **pP** **21 41 41.1 -2.2**
RSSD sP **PcP** **21 41 55.5 -1.0**
LRMC Laurel Mtn Rad 63.27 322 P **P** **21 41 21.1 +0.5**
baz=133,SNR=5.1
TPNV Topopah Spring 63.44 324 P **P** **21 41 22.5 +0.8**
TPNV Topopah Spring 63.44 324 P **P** **21 41 22.5 +0.8**
TPNV pmax pmax
comp=Z,10.0nm,0.8s
TPNV Topopah Spring 63.44 324 P **P** **21 41 22.7 +1.0**
baz=134,SNR=13
FURC Furnace Creek, 63.46 323 P **P** **21 41 22.4 +0.8**
baz=134,SNR=12
TAOE Nuku Hiva Isla 63.86 267 *e*LR LR 22 00 14.0
comp=Z,185nm,26.7s
MBO M'Bour 63.87 66 P **P** **21 41 25.7 +1.0**
ISA Isabella, Lake 63.88 321 P **P** **21 41 25.0 +0.5**
baz=132,SNR=5.8
DUG Dugway, Tooele 63.93 329 P **P** **21 41 25.4 +0.6**
DUG IAmb IAmb 21 41 26.6
comp=Z,29nm,0.8s
DUG Dugway, Tooele 63.93 329 P **P** **21 41 25.4 +0.6**
DUG pmax pmax
comp=Z,29nm,0.8s
DUG Dugway, Tooele 63.93 329 P **P** **21 41 25.5 +0.6**
baz=139,SNR=39
R11A Troy Canyon, C 64.05 325 P **P** **21 41 26.6 +0.9**
baz=135,SNR=21
CWC Cottonwood Cre 64.16 322 P **P** **21 41 27.4 +1.0**
baz=133
PKM Mcpherson Peak 64.19 320 P **P** **21 41 27.2 +0.5**
baz=131,SNR=6.0
AGMN Agassiz Nation 64.28 345 P **P** **21 41 26.1 -0.6**
AGMN IAmb IAmb 21 41 27.0
comp=Z,17nm,0.8s
AGMN Agassiz Nation 64.28 345 P **P** **21 41 25.9 -0.9**
baz=158,SNR=8.5
BW06 Boulder Array 64.35 332 P **P** **21 41 26.7 -0.9**
baz=142,SNR=9.2
PD31 Pinedale Array 64.35 332 P **P** **21 41 26.8 -0.8**
PDAR Pinedale Array 64.35 332 P **P** **21 41 27.1 -0.5**
comp=Z,2.3nm,0.4s,baz=122,slow=9.4,SNR=35
PDAR LR LR 22 11 47.7
comp=Z,55nm,18.6s,baz=119,slow=38
comp=Z,2.3nm,0.4s
PDAR Pinedale Array 64.35 332 P **P** **21 41 26.9 -0.8**
HWUT Hardware Ranch 64.38 330 P **P** **21 41 27.6 -0.2**
HWUT IAmb IAmb 21 41 28.6
comp=Z,19nm,0.8s
DRLN Deer Lake 64.42 13 P **P** **21 41 27.8 +0.2**
TPH Tonopah 64.78 324 P **P** **21 41 31.1 +0.6**
TPH Tonopah 64.78 324 P **P** **21 41 31.1 +0.6**
TPH pmax pmax
comp=Z,60nm,0.7s
MDND Maddock 64.91 342 P **P** **21 41 31.0 0.0**
baz=154,SNR=5.7
AHID Auburn Hatcher 65.05 331 P **P** **21 41 31.8 -0.4**
AHID IAmb IAmb 21 41 32.8
comp=Z,12nm,0.7s
ECR Eagle Creek 65.40 331 P **P** **21 41 34.5 0.0**
REDW Red Top Meadow 65.40 332 P **P** **21 41 33.9 -0.6**
REDW IAmb IAmb 21 41 35.6
comp=Z,29nm,1.6s
NV11 Mina Array Sit 65.56 324 P **P** **21 41 35.9 +0.5**
ELK Elko 65.58 327 LR LR 22 08 38.6
comp=Z,64nm,20.6s,baz=128,slow=34
ELK Elko 65.58 327 P **P** **21 41 35.9 +0.2**
ELK Elko 65.58 327 P **P** **21 41 35.9 +0.2**
ELK pmax pmax
comp=Z,6.0nm,0.9s
NVAR Mina Array Bea 65.64 324 P **P** **21 41 36.8 +0.7**
comp=Z,5.1nm,0.8s,baz=146,slow=7.1,SNR=21
NVAR pP **pP** **21 41 58.2 -1.3**
comp=Z,1.9nm,0.8s,baz=98,slow=13,SNR=3.5
comp=Z,5.1nm,0.8s
NVAR Mina Array Bea 65.64 324 P **P** **21 41 36.6 +0.5**
ULM Lac du Bonnet 66.09 346 P **P** **21 41 37.5 -1.0**
comp=Z,8.3nm,0.6s,baz=155,slow=6.1,SNR=11
comp=Z,8.3nm,0.6s
YPP Pitchstone Pla 66.09 333 P **P** **21 41 39.4 +0.4**
RLMT Red Lodge 66.10 334 P **P** **21 41 38.7 -0.1**
RLMT Red Lodge 66.10 334 P **P** **21 41 38.8 -0.1**
baz=143,SNR=14
LAO LASA Array 66.16 337 P **P** **21 41 38.5 -0.5**
LAO LASA Array 66.16 337 P **P** **21 41 38.7 -0.3**
baz=147
DGMT Dagmar 66.94 339 P **P** **21 41 44.2 +0.3**
baz=149
HLID Hailey 67.23 330 P **P** **21 41 46.7 +0.6**
HLID Hailey 67.23 330 P **P** **21 41 46.5 +0.4**
baz=138,SNR=17
BELA Belgrano 2 67.43 171 P **P** **21 41 47.3 +0.6**
BELA IAmb IAmb 21 41 48.7
comp=Z,24nm,1.2s

BOZ Bozeman (W) 67.49 333 P P 21 41 47.5 -0.1
BOZ Bozeman (W) 67.49 333 P P 21 41 47.5 -0.1
BOZ pmax pmax
comp=Z,9.0nm,0.8s
BOZ Bozeman (W) 67.49 333 P P 21 41 47.6 -0.1
baz=141,SNR=17
SCHQ Schefferville 68.46 5 P P 21 41 53.1 -0.2
comp=Z,6.4nm,0.9s,baz=212,slow=4.7,SNR=7.8
SCHQ LR LR 22 13 16.7
comp=Z,41nm,19.3s,baz=218,slow=37
comp=Z,6.4nm,0.9s
SCHQ Schefferville 68.46 5 P P 21 41 52.9 -0.4
SCHQ IAmb IAmb 21 42 25.5
comp=Z,27nm,1.5s
EGMT Eagleton 68.63 336 P P 21 41 54.3 -0.3
baz=144
VNA3 Neumayer Olymp 69.44 162 P P 21 42 00.1 +0.8
MSO Missoula 69.47 333 P P 21 41 59.9 +0.1
MSO Missoula 69.47 333 P P 21 42 00.2 +0.3
baz=139,SNR=5.7
BMO Blue Mountains 69.60 329 P P 21 42 00.4 -0.3
BMO Blue Mountains 69.60 329 P P 21 42 00.4 -0.3
BMO pmax pmax
comp=Z,7.0nm,0.7s
VNA1 Neumayer--Stat 69.69 161 P P 21 42 01.1 +0.3
VNA2 Neumayer--Watz 70.05 161 P P 21 42 03.6 +0.6
baz=281,slow=7.3
JTMT Jette 70.31 333 P P 21 42 05.5 +0.4
YBH Yreka Blue Hor 70.36 324 LR LR 22 11 02.6
comp=Z,58nm,19.8s,baz=174,slow=34
K04D Chiloquin, OR 70.40 325 P P 21 42 05.5 -0.2
baz=131
L04D Klamath Falls 70.44 325 P P 21 42 05.9 -0.1
baz=131
J05D Fort Rock, OR 70.55 326 P P 21 42 07.1 +0.5
baz=132
TBI Tubuai 70.60 250 *e*LR LR 22 02 48.4
comp=Z,98nm,30.5s
PINE Pine Mountain 70.74 327 P P 21 42 08.0 +0.2
PINE IAmb IAmb 21 42 09.8
comp=Z,15nm,0.8s
J04D Umpqua Nationa 71.00 326 P P 21 42 09.6 +0.1
baz=131
L02F Cave Junction 71.10 324 P P 21 42 10.5 +0.7
baz=130
WALA Waterton Lakes 71.15 334 P P 21 42 10.4 +0.3
I05D Terrebonne, OR 71.32 327 P P 21 42 11.9 +0.8
baz=132,SNR=5.2
PPT2 Papeete2 71.48 256 *e*LR LR 22 03 16.9
comp=Z,80nm,32.0s
K02D Willamette Mer 71.52 324 P P 21 42 12.9 +0.5
baz=130
SNAA Sanae 71.66 161 P P 21 42 13.3 +0.5
SNAA Sanae 71.66 161 LR LR 22 14 29.2
comp=Z,31nm,19.4s,baz=122,slow=36
SNAA Sanae 71.66 161 P P 21 42 13.5 +0.6
SNAA IAmb IAmb 21 42 14.4
comp=Z,26nm,1.0s
SNAA Sanae 71.66 161 P P 21 42 13.5 +0.6
SNAA pmax pmax
comp=Z,26nm,1.0s
G05D Wamic, OR 71.91 328 P P 21 42 15.6 +1.0
baz=132
J01E Myrtle Point 71.97 325 P P 21 42 16.0 +1.0
baz=130
NEW Newport 71.98 332 P P 21 42 15.6 +0.6
baz=137
I03D Drain, OR 71.98 325 P P 21 42 15.7 +0.7
baz=130
LIC Lamto 72.24 79 *e*P P 21 42 17.1 -0.1
comp=Z,39nm,0.9s
TIC Toumodi 72.36 78 *e*P P 21 42 17.4 -0.6
comp=Z,61nm,1.2s
DBIC Dimbokro 72.53 78 P P 21 42 18.6 -0.3
comp=Z,26nm,0.6s,baz=261,slow=6.3,SNR=41
DBIC LR LR 22 11 21.8
comp=Z,52nm,21.2s,baz=272,slow=33
comp=Z,26nm,0.6s
DBIC Dimbokro 72.53 78 P P 21 42 18.7 -0.3
DBIC IAmb IAmb 21 42 19.5
comp=Z,30nm,0.8s
DBIC Dimbokro 72.53 78 P P 21 42 18.7 -0.3
DBIC pmax pmax
comp=Z,30nm,0.8s
KIC Kosan Boka 72.55 79 *e*P P 21 42 18.7 -0.4
comp=Z,63nm,0.6s
TROLL Troll, Antarti 73.38 162 P P 21 42 23.9 +0.8
E04D Cinebar 73.44 328 P P 21 42 23.7 +0.1
baz=132
FCC Fort Churchill 73.70 350 P P 21 42 24.7 -0.1
FCC IAmb IAmb 21 42 25.6
comp=Z,41nm,1.5s
FCC Fort Churchill 73.70 350 P P 21 42 24.7 -0.1
FCC pmax pmax
comp=Z,41nm,1.5s
EDM Edmonton 74.15 337 P P 21 42 26.8 -0.9
EDM Edmonton 74.15 337 P P 21 42 26.8 -0.9
EDM pmax pmax
comp=Z,137nm,2.0s
D03D Eldon 74.36 328 P P 21 42 29.6 +0.7
baz=131
NLWA Neilton Lookou 74.66 328 P P 21 42 31.8 +1.0
NLWA IAmb IAmb 21 42 33.0
comp=Z,24nm,0.9s
KOWA Kowa 75.64 71 P P 21 42 36.8 -0.2
KOWA IAmb IAmb 21 42 38.0
comp=Z,25nm,0.7s
NVL N'lazarevskaya 76.30 160 *e*P P 21 42 39.4 -0.3
NVL pmax pmax
comp=Z,12nm,1.1s
QSPA South Pole Qui 76.60 180 P P 21 42 42.9 +1.1
QSPA IAmb IAmb 21 42 43.3
comp=Z,21nm,0.6s
FRB Frobisher Bay 77.21 3 LR LR 22 18 43.7
comp=Z,37nm,19.6s,baz=207,slow=37
IVI Ivigtut 77.50 13 P P 21 42 46.3 -0.2
BBB Bella Bella 79.83 330 LR LR 22 19 01.1
comp=Z,72nm,18.5s,baz=120,slow=36
MORF Marmelete 80.22 48 *e*P P 21 43 02.8 +0.8
MORF IAmb IAmb 21 43 05.0
comp=Z,20nm,0.7s
MORF Marmelete 80.22 48 *e*P P 21 43 03.4 +1.4
comp=Z,36nm,1.7s
MORF *es*P pP 21 43 31.0 +4.8
MORF Marmelete 80.22 48 *e*P P 21 43 02.8 +0.8
PTEO Sao Teotonio 80.27 48 *e*P P 21 43 04.2 +2.0
RAR Rarotonga 80.36 250 LR LR 22 09 54.0
comp=Z,27nm,21.8s,baz=66,slow=29
TOA0 Torodi Ar. Sit 80.54 74 P P 21 43 04.1 0.0
TORD Torodi Ar. Bea 80.54 74 P P 21 43 04.0 -0.2
comp=Z,42nm,0.8s,baz=261,slow=5.1,SNR=207
TORD pP pP 21 43 30.9 +2.5
comp=Z,10nm,0.9s,baz=263,slow=5.1,SNR=2.8
comp=Z,42nm,0.8s
TORD Torodi Ar. Bea 80.54 74 P P 21 43 04.0 -0.2
PNCL Nicolau / Gran 80.65 47 *e*P P 21 43 05.1 +0.9
PNCL *es*P pP 21 43 33.0 +4.5
PBDV Barranco-do-Ve 80.71 48 *e*P P 21 43 06.2 +1.5
PBDV *es*P pP 21 43 33.9 +5.0
MESJ Messejana 80.76 48 *e*P P 21 43 05.7 +0.9
MESJ IAmb IAmb 21 43 07.1
comp=Z,8.0nm,1.0s
MESJ Messejana 80.76 48 *e*P P 21 43 06.5 +1.7
comp=Z,31nm,1.8s
MESJ *es*P pP 21 43 34.1 +5.1
MESJ Messejana 80.76 48 *e*P P 21 43 05.7 +0.9
PVAQ Vaqueiros 80.94 48 *e*P P 21 43 07.5 +1.7
comp=Z,29nm,1.4s
PBEJ Beja 81.09 47 *e*P P 21 43 07.9 +1.3
comp=Z,20nm,1.9s
PMTG Montargil 81.27 46 *e*P P 21 43 08.8 +1.2
comp=Z,27nm,1.6s
PMTG *es*P pP 21 43 35.9 +4.1
MDT Midelt 81.46 53 P P 21 43 10.2 +1.4
comp=Z,4.3nm,0.8s,baz=260,slow=3.4,SNR=12
comp=Z,4.3nm,0.8s
COI Coimbra 81.63 45 *e*P P 21 43 11.0 +1.6
comp=Z,69nm,1.1s
COI Coimbra 81.63 45 P P 21 43 10.3 +0.9
COI IAmb IAmb 21 43 11.8
comp=Z,38nm,0.9s
COI Coimbra 81.63 45 P P 21 43 10.3 +0.9
COI pmax pmax
comp=Z,38nm,0.9s
YKA Yellowknife Ar 81.83 343 P P 21 43 09.3 -0.6
comp=Z,9.0nm,0.7s,baz=138,slow=5.6,SNR=87
YKA pP pP 21 43 34.6 +0.3
comp=Z,2.9nm,0.6s,baz=143,slow=6.1,SNR=4.6
YKA LR LR 22 22 51.4
comp=Z,51nm,19.7s,baz=155,slow=38
comp=Z,9.0nm,0.7s
PMRV Marv??o 82.01 46 *e*P P 21 43 12.3 +0.8
comp=Z,10.0nm,1.2s
PMRV *es*P pP 21 43 40.0 +4.3
PCBR Castelo Branco 82.12 46 *e*P P 21 43 12.9 +0.9
comp=Z,19nm,1.2s
PCBR *es*P pP 21 43 40.3 +4.0
PVIS Viseu 82.20 45 *e*P P 21 43 13.5 +1.0
comp=Z,38nm,1.5s
PVIS *es*P pP 21 43 40.8 +4.0
SFJD Kangerlussuaq 82.30 9 LR LR 22 19 30.6
comp=Z,28nm,21.0s,baz=222,slow=35
MTE Manteigas 82.31 45 *e*P P 21 43 14.0 +0.9
comp=Z,24nm,1.2s
MTE *es*P pP 21 43 41.0 +3.6
MTE Manteigas 82.31 45 P P 21 43 13.8 +0.7
MTE IAmb IAmb 21 43 14.9
comp=Z,24nm,1.0s
SBA Scott Base 82.53 191 P P 21 43 14.9 +1.4
SBA Scott Base 82.53 191 P P 21 43 14.9 +1.4
SBA pmax pmax
comp=Z,12nm,1.1s
PCAB Cabril 82.54 44 *e*P P 21 43 15.3 +1.1
comp=Z,28nm,1.5s
PCAB *es*P pP 21 43 42.3 +3.7
POLO Lamas de Olo 82.55 44 *e*P P 21 43 15.3 +0.9
comp=Z,9.2nm,1.4s
POLO *es*P pP 21 43 42.5 +3.7
PVRL Vila Real 82.56 45 *e*P P 21 43 15.3 +1.0
PVRL *es*P pP 21 43 42.6 +3.9
MVO Moncorvo 82.99 45 *e*P P 21 43 17.6 +1.0
comp=Z,26nm,1.1s
MVO *es*P pP 21 43 44.9 +4.0
PBRG Braganca 83.45 44 *e*P P 21 43 19.9 +1.0
comp=Z,21nm,1.5s
PBRG *es*P pP 21 43 47.3 +4.0
VNDA Vanda 83.59 191 P P 21 43 20.1 +1.1
comp=Z,4.2nm,0.8s,baz=121,slow=4.5,SNR=22
VNDA pP pP 21 43 44.7 +1.4
comp=Z,3.7nm,0.9s,baz=138,slow=6.8,SNR=6.1
VNDA LR LR 22 14 06.4
comp=Z,92nm,18.5s,baz=141,slow=31
comp=Z,4.2nm,0.8s
VNDA Vanda 83.59 191 P P 21 43 20.1 +1.1
PAB San Pablo 84.22 47 P P 21 43 23.2 +0.3
PAB San Pablo 84.22 47 P P 21 43 23.2 +0.3
PAB pmax pmax
comp=Z,18nm,1.3s
DLBC Dease Lake 84.50 334 P P 21 43 24.3 +0.4
baz=127,SNR=5.6
ESDC Sonseca Array 84.54 47 P P 21 43 24.9 +0.4
comp=Z,3.6nm,0.7s,baz=262,slow=5.0,SNR=28
ESDC pP pP 21 43 51.5 +2.6
comp=Z,5.9nm,1.0s,baz=264,slow=4.8,SNR=8.5
comp=Z,3.6nm,0.7s
ESDC Sonseca Array 84.54 47 P P 21 43 24.5 0.0
ESBB Sonseca Array 84.54 47 P P 21 43 24.5 0.0
S34M Telegraph Cree 84.66 334 P P 21 43 25.4 +0.8
baz=126
TGTN Hyland Airport 85.70 337 P P 21 43 30.6 +0.8
baz=129
SIT Sitka 86.06 332 P P 21 43 32.9 +1.4
baz=122
P33M Teslin, Yukon 86.70 335 P P 21 43 35.0 +0.3
P33M Teslin, Yukon 86.70 335 P P 21 43 35.1 +0.3
baz=124,SNR=5.9
MMPY Sheldon Lake, 87.48 337 P P 21 43 38.8 +0.3
baz=126
PLBC Pleasant Camp 87.79 333 P P 21 43 40.6 +0.7
baz=121
BORG Borgarnes 87.90 20 P P 21 43 40.5 +0.2
comp=Z,22nm,0.9s,baz=144,slow=3.7,SNR=6.8
BORG LR LR 22 19 41.0
comp=Z,27nm,21.0s,baz=184,slow=33
comp=Z,22nm,0.9s
BORG Borgarnes 87.90 20 P P 21 43 41.6 +1.3
BORG Borgarnes 87.90 20 P P 21 43 41.6 +1.3
BORG pmax pmax
comp=Z,158nm,1.7s
FARO Faro, Yukon 88.06 337 P P 21 43 42.0 +0.9
baz=124
TSUM Tsumeb 88.08 109 P P 21 43 42.5 +0.1
TSUM IAmb IAmb 21 43 43.7
comp=Z,14nm,1.1s
O30N Mendenhall 88.36 335 P P 21 43 43.2 +0.5
baz=122,SNR=7.5
M31M Drury Creek, Y 88.45 336 P P 21 43 43.4 +0.3
baz=123,SNR=8.3
N31M Braeburn, Yuko 88.61 335 P P 21 43 44.3 +0.5
baz=122,SNR=6.7
RES Resolute Bay 88.92 355 LR LR 22 26 39.0
comp=Z,33nm,19.2s,baz=103,slow=38
RES Resolute Bay 88.92 355 P P 21 43 45.2 +0.3
RES IAmb IAmb 21 43 45.9
comp=Z,13nm,0.8s
RES Resolute Bay 88.92 355 P P 21 43 45.2 +0.3
RES pmax pmax
comp=Z,13nm,0.8s
HYT Haines Junctio 88.99 334 P P 21 43 46.6 +0.9
HYT IAmb IAmb 21 43 47.6
comp=Z,9.1nm,0.9s
HYT Haines Junctio 88.99 334 P P 21 43 46.4 +0.7
baz=120,SNR=6.7
N30M Aishikik Lake 89.14 335 P P 21 43 47.2 +0.9
baz=121,SNR=13
YUK6 Outpost Mounta 89.41 334 P P 21 43 48.6 +0.8
baz=120,SNR=9.5
M30M Minto, Yukon 89.59 336 P P 21 43 48.4 0.0
baz=121,SNR=13
YUK4 Talbot Arm 89.73 334 P P 21 43 50.0 +0.7
baz=120,SNR=20
PINM Pinnacle 89.82 333 P P 21 43 50.0 +0.4
baz=118
YUK8 Steele Glacier 90.17 334 P P 21 43 51.7 +0.3
baz=118,SNR=12
TABL Table Mountain 90.37 333 P P 21 43 52.4 +0.1
TABL IAmb IAmb 21 43 54.0
comp=Z,17nm,0.9s
MESA MESA 90.61 333 P P 21 43 53.4 0.0
baz=117
YUK3 Moose Creek 90.70 334 P P 21 43 53.9 +0.1
baz=118,SNR=12
CTG Chitna Glacier 90.70 333 P P 21 43 54.1 +0.4
baz=117
GRNC Granite Creek 90.77 333 P P 21 43 54.2 0.0
GRNC IAmb IAmb 21 43 55.4
comp=Z,13nm,0.9s
DAWY Dawson 91.36 337 P P 21 43 56.1 -0.4
DAWY IAmb IAmb 21 43 57.2
comp=Z,10nm,1.1s
DAWY Dawson 91.36 337 P P 21 43 56.2 -0.4
baz=119,SNR=7.0
EPYK Eagle Plains 91.53 339 P P 21 43 56.9 -0.5
baz=121
INK Inuvik 91.54 342 LR LR 22 28 47.2
comp=Z,63nm,20.0s,baz=116,slow=38
INK Inuvik 91.54 342 P P 21 43 56.7 -0.5
INK IAmb IAmb 21 43 57.9
comp=Z,9.9nm,1.1s
INK Inuvik 91.54 342 P P 21 43 56.7 -0.5
INK pmax pmax
comp=Z,10.0nm,1.1s
INK Inuvik 91.54 342 P P 21 43 56.8 -0.5
baz=124,SNR=6.0
M27K Edge Creek, AK 91.56 335 P P 21 43 57.4 -0.3
M27K IAmb IAmb 21 43 58.7
comp=Z,12nm,0.9s
M27K Edge Creek, AK 91.56 335 P P 21 43 57.6 -0.1
baz=117,SNR=12
A36M Sachs Harbour 91.57 346 P P 21 43 56.5 -0.8
A36M Sachs Harbour 91.57 346 P P 21 43 56.6 -0.7
baz=132,SNR=7.7
I29M Ogilvie Camp, 91.58 338 P P 21 43 57.2 -0.4
baz=120,SNR=12
MCARA McCarthy VSAT 91.61 333 P P 21 43 58.0 +0.2
baz=116
VRDI Verde Repeater 91.73 333 P P 21 43 57.9 -0.7
VRDI IAmb IAmb 21 43 59.4
comp=Z,10nm,0.9s
BCAR Beaver Creek A 91.84 335 P P 21 43 58.9 0.0
L27K Beaver Creek, 91.85 335 P P 21 43 58.9 0.0
baz=117,SNR=11
Q23K Middleton Isla 92.32 331 P P 21 44 00.3 -0.7
baz=113
EGAK Eagle 92.37 337 P P 21 44 00.6 -0.6
baz=117
K27K Chicken 92.39 336 P P 21 44 01.6 +0.3
baz=116
N25K Chitina, Valde 92.39 333 P P 21 44 01.4 -0.1
baz=114
L26K Log Cabin Wild 92.46 335 P P 21 44 01.5 -0.2
baz=115
KLU Klutina 92.93 333 P P 21 44 03.6 -0.4
baz=113,SNR=9.9
HARP HAARP 92.96 334 P P 21 44 03.9 -0.1
baz=114
P23K Montague Islan 93.03 331 P P 21 44 04.0 -0.3
baz=112
SCRK Sand Creek 93.12 336 P P 21 44 04.2 -0.6
baz=115,SNR=5.6
J26L Joseph Creek 93.18 336 P P 21 44 04.6 -0.5
baz=115,SNR=16
M24K Tolsona, Glenn 93.28 334 P P 21 44 05.3 -0.3
baz=113,SNR=5.3
PAX Paxson 93.32 334 P P 21 44 04.8 -1.0
baz=113,SNR=10
KEST Kesra 93.34 54 P P 21 44 06.3 -0.2
comp=Z,2.1nm,0.7s,baz=193,slow=2.1,SNR=6.2
comp=Z,2.1nm,0.7s
RIDG Independent Ri 93.37 335 P P 21 44 05.5 -0.5
baz=114
MAW Mawson 93.54 165 P P 21 44 06.9 +0.3
comp=Z,7.4nm,0.8s,baz=204,slow=4.3,SNR=12
MAW LR LR 22 28 49.1
comp=Z,56nm,18.0s,baz=322,slow=37
comp=Z,7.4nm,0.8s
SCM Sheep Creek Mo 93.68 333 P P 21 44 07.1 -0.3
baz=112
M23K Glacier View 93.84 333 P P 21 44 07.7 -0.4
baz=112
J25K Salcha River, 93.93 336 P P 21 44 07.8 -0.7
baz=113
SML Sawmill 94.11 333 P P 21 44 08.6 -0.8
baz=111,SNR=6.4
WAT6 Susitna Watana 94.14 334 P P 21 44 08.7 -0.9
baz=111,SNR=8.1
DHY Denali Highway 94.16 334 P P 21 44 08.7 -1.0
baz=112
HDA Harding Lake 94.48 336 P P 21 44 10.2 -0.8
baz=112
RC01 Rabbit Creek A 94.50 332 P P 21 44 10.7 -0.4
baz=110
BRSE Bradley Lake S 94.52 331 P P 21 44 10.9 -0.3
baz=109
WAT1 Susitna Watana 94.58 334 P P 21 44 11.1 -0.3
baz=111
ILAR Eielson Array 94.60 336 P P 21 44 10.7 -0.8
comp=Z,1.5nm,0.8s,baz=154,slow=3.4,SNR=14
ILAR PP PP 21 47 57.1 -3.5
comp=Z,0.7nm,0.7s,baz=110,slow=8.2,SNR=4.2
comp=Z,1.5nm,0.8s
KDAK Kodiak Island 94.81 328 P P 21 44 12.5 0.0
baz=108
POKR Poker Flat Res 94.94 336 P P 21 44 12.4 -0.6
baz=112
MCK McKinley 95.06 335 P P 21 44 13.3 -0.3
baz=110
SUA Susitna One 95.08 332 P P 21 44 13.8 -0.1
baz=109
URZ Urewera 95.21 229 LR LR 22 18 09.0
comp=Z,95nm,21.6s,baz=211,slow=30
H24K Noodor Dome 95.38 337 P P 21 44 14.8 -0.2
baz=111
NEA2 Nenana 95.41 335 P P 21 44 14.8 -0.4
baz=110
O20K Slope Mountain 95.52 331 P P 21 44 15.4 -0.5
baz=107
TRF Thorofare Moun 95.53 334 P P 21 44 14.8 -1.1
baz=109,SNR=6.0
SKT Skwentna 95.60 333 P P 21 44 15.3 -0.8
baz=108,SNR=6.3
I23K Minto, Yukon-K 95.72 336 P P 21 44 15.8 -0.7
I23K IAmb IAmb 21 44 17.2
comp=Z,4.2nm,0.9s
I23K Minto, Yukon-K 95.72 336 P P 21 44 16.1 -0.4
baz=110
H23K Yukon River 96.02 336 P P 21 44 17.6 -0.3
baz=110
BPAW Bear Paw Mtn. 96.03 335 P P 21 44 17.0 -1.1
baz=108,SNR=5.5
PPLA Purkeypile 96.17 333 P P 21 44 17.9 -0.9
baz=108
MLY Manley 96.23 336 P P 21 44 17.8 -1.2
baz=109,SNR=6.0
CAST Castle Rocks 96.29 334 P P 21 44 18.0 -1.2
baz=108,SNR=5.3
M20K Styx River 96.29 332 P P 21 44 18.5 -0.9
baz=107
DAVA Damuels 96.44 43 *e*P P 21 44 20.6 +0.2
comp=Z,5.1nm,1.0s
DAVA *e*P pP 21 44 41.5 -3.7
comp=Z,2.3nm,0.8s
COLD Coldfoot 96.73 338 P P 21 44 21.3 +0.2
baz=109
L20K Farewell, AK 96.80 333 P P 21 44 20.4 -1.2
baz=106
M19K Big River Lodg 96.87 332 P P 21 44 21.1 -0.8
baz=106
FETA Feichten 96.94 43 *e*P P 21 44 22.6 -0.1
comp=Z,7.9nm,1.7s
FETA *e*P pP 21 44 43.8 -3.7
comp=Z,4.7nm,1.7s
TOLK Toolik Lake Re 96.97 339 P P 21 44 21.4 -0.8
baz=109
RETA Reutte 97.06 43 *e*P Pdif 21 44 23.3 0.0
comp=Z,3.0nm,0.7s
RETA *e*P pP 21 44 50.6 +2.7
comp=Z,9.9nm,1.4s
K20K Telida 97.12 334 P P 21 44 22.0 -1.0
baz=106
L19K White Mountain 97.16 332 P P 21 44 22.1 -1.0
baz=105
RPZ Rata Peaks 97.20 222 LR LR 22 18 26.5
comp=Z,115nm,20.1s,baz=230,slow=29
H21K Melozitna Rive 97.25 336 P P 21 44 22.5 -1.0
baz=107
N18K Kilae Creek 97.25 331 P P 21 44 22.5 -1.2
baz=105
MOTA Moosalm 97.26 43 *e*P Pdif 21 44 24.3 +0.1
comp=Z,5.9nm,0.9s
MOTA *e*P pP 21 44 49.0 0.0
comp=Z,7.1nm,1.1s
SQTA Sankt Quirin 97.31 43 *e*P Pdif 21 44 24.4 0.0
comp=Z,5.1nm,0.9s
SQTA *e*P pP 21 44 48.9 -0.2
comp=Z,7.9nm,1.1s
J20K Nowinta River 97.38 334 P P 21 44 23.1 -1.1
baz=106
WATA Walderalm 97.57 43 *e*P P 21 44 25.4 -0.2
comp=Z,3.4nm,0.7s
WATA *e*P pP 21 44 47.9 -2.4
comp=Z,3.9nm,1.0s
WTTA Wattenberg 97.60 43 *e*P Pdif 21 44 25.8 0.0
comp=Z,4.9nm,0.9s
WTTA *e*P pP 21 44 49.5 -1.0
comp=Z,9.1nm,1.3s
TTA Tatalina 97.86 333 P P 21 44 25.4 -1.0
baz=104
ABTA Abfaltersbach 98.09 44 *e*P P 21 44 27.2 -0.6
comp=Z,5.2nm,1.0s
ABTA *e*P pP 21 44 49.6 -3.0
comp=Z,6.2nm,1.1s
KBA Koelnbreinsper 98.71 44 *e*P Pdif 21 44 32.8 +2.1
comp=Z,3.1nm,1.1s
KHC Kasperske Hory 99.22 42 *i* P **Pdif 21 44 32.6 -0.2**
KHC pmax pmax
comp=Z,3.0nm,0.8s
GERES GERESS Array B 99.26 42 P Pdif 21 44 32.9 -0.1
comp=Z,1.2nm,0.8s,baz=241,slow=2.4,SNR=11
comp=Z,1.2nm,0.8s
GERES GERESS Array B 99.26 42 P Pdif 21 44 32.1 -0.9
OBKA Obir 99.42 44 *e*P **Pdif 21 44 34.4 +0.6**
comp=Z,5.7nm,2.2s
MOA Molln 99.46 43 *e*P **Pdif 21 44 33.8 -0.1**
comp=Z,4.9nm,1.2s
MOA *e*P pP 21 44 54.9 -3.8
comp=Z,5.8nm,1.3s
NOA NORSAR Array B 99.94 30 LR LR 22 28 00.6
comp=Z,21nm,19.8s,baz=265,slow=34
ARSA Arzberg 100.20 44 *e*P **Pdif 21 44 35.7 -1.4**
comp=Z,2.1nm,0.8s
CONA Conrad Observa 100.53 43 *e*P **Pdif 21 44 36.9 -1.8**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,1.9nm,1.2s						
CONA				*e*P	pPdif	21 45 02.0	-1.4
	comp=Z,1.7nm,0.8s						
DZM	Mont Dzumac	110.08	240	*e*LR	LR	22 21 08.5	
	comp=Z,88nm,27.1s						
ASF	Jabal al Asfar	115.58	61	PKP	PKPdf	21 49 33.1	-0.4
	comp=Z,0.9nm,0.4s,baz=76,slow=2.6,SNR=5.0						
KBZ	Khabaz	119.40	47	PKP	PKiKP	21 49 40.9	+0.5
	comp=Z,4.2nm,0.8s,baz=312,slow=1.6,SNR=10						
KBZ	Khabaz	119.40	47*c*	*i*PKIKP	PKiKP	21 49 41.1	+0.8
H11N3	WAKE ISLAND Hy	120.56	285	T	T	00 01 20.4	
	baz=96,slow=74						
H11N2	WAKE ISLAND Hy	120.58	285	T	T	00 00 49.0	
	baz=96,slow=74						
H11N1	WAKE ISLAND Hy	120.58	285	T	T	00 00 56.6	
	baz=96						
H11S2	WAKE ISLAND Hy	120.66	284	T	T	00 00 42.2	
	baz=93,slow=74,SNR=48						
H11S1	WAKE ISLAND Hy	120.66	284	T	T	00 00 40.5	
	baz=93,slow=74,SNR=15						
H11S3	WAKE ISLAND Hy	120.67	284	T	T	00 00 39.0	
	baz=93,slow=74,SNR=16						
PETK	Petropavlovsk-	122.71	325	PKP	PKPdf	21 49 45.7	-0.7
	comp=Z,1.1nm,0.6s,baz=129,slow=2.1,SNR=5.3						
STKA	Stephens Creek	122.78	217	PKP	PKPdf	21 49 47.0	-0.3
	comp=Z,2.3nm,0.6s,baz=120,slow=3.1,SNR=9.3						
STKA	Stephens Creek	122.78	217	PKIKP	PKPdf	21 49 47.0	-0.3
ARU	Arti	124.49	29	PKP	PKiKP	21 49 50.1	+0.1
	comp=Z,2.8nm,0.4s,baz=145,slow=0.8,SNR=6.9						
ARU	Arti	124.49	29		PKiKP	21 49 49.9	-0.1
ARU	Arti	124.49	29	*i* PKIKP	PKiKP	21 49 49.9	-0.1
ARU						21 51 36.7	
ARU						21 56 54.0	
ARU				SS	SS	22 08 19.5	-3.1
AKTO	Aktyubinsk	127.13	36	PKP	PKiKP	21 49 55.3	-0.2
	comp=Z,5.1nm,0.7s,baz=298,slow=0.6,SNR=19						
BRVK	Borovoye	131.94	27*c*	*i*PKIKP	PKiKP	21 50 05.3	+0.3
BRVK				pmax	pmax		
	comp=Z,7.0nm,2.5s						
GEYT	Alibeck	131.97	51	PKP	PKPdf	21 50 04.3	-0.3
	comp=Z,0.7nm,0.4s,baz=246,slow=11,SNR=2.1						
ASAR	Alice Springs	133.42	218	PKP	PKPdf	21 50 07.2	-0.6
	comp=Z,4.2nm,0.9s,baz=127,slow=2.0,SNR=26						
YSS	Yuzh-Sakhalins	134.09	324*c*	*i*PKIKP	PKPdf	21 50 06.9	-1.3
YSS				pmax	pmax		
	comp=Z,93nm,2.5s						
WRA	Warramunga Arr	135.91	222	PKP	PKPdf	21 50 12.3	-0.2
	comp=Z,10nm,0.8s,baz=127,slow=2.1,SNR=40						
WRA	Warramunga Arr	135.91	222		PKPdf	21 50 11.8	-0.7
WRAB	Tennant Creek	135.91	222*c*	*i*PKIKP	PKPdf	21 50 13.1	+0.6
WRAB				pmax	pmax		
	comp=Z,12nm,0.8s						
ZALV	Zalesovo Beam	136.67	17	PKP	PKPdf	21 50 13.0	+0.2
	comp=Z,15nm,0.8s,baz=299,slow=2.5,SNR=38						
KURK	Kurchatov	137.21	25*c*	*i*PKIKP	PKiKP	21 50 14.7	-1.1
KURK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KLR	Kul'dur	138.13	334*c*	*i*PKIKP	PKiKP	21 50 16.8	-0.9
KLR				pmax	pmax		
	comp=Z,3.0nm,1.7s						
AAK	Ala-Archa	140.87	36*c*	*i*PKIKP	PKiKP	21 50 23.4	-0.4
AAK				pmax	pmax		
	comp=Z,7.0nm,1.7s						
MKAR	Makanchi Array	141.79	25	PKhKP	PKPpre	21 50 15.9	
	comp=Z,2.6nm,0.8s,baz=316,slow=3.3,SNR=7.1						
MKAR				PKP	PKPdf	21 50 22.4	-0.1
	comp=Z,2.5nm,0.8s,baz=340,slow=2.2,SNR=11						
MJAR	Matsushiro Arr	142.44	314	PKhKP	PKPpre	21 50 16.6	
	comp=Z,2.6nm,0.6s,baz=104,slow=1.9,SNR=6.3						
MJAR				PKP	PKPdf	21 50 23.8	-0.2
	comp=Z,3.3nm,0.8s,baz=324,slow=1.4,SNR=5.2						
ZAK	Zakamensk	143.24	2	*e*PKHKP	PKPpre	21 50 17.8	
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.5s						
KSH	Kashi	143.68	39	PKP	PKPdf	21 50 25.3	-0.9
SONM	Songino Array	145.79	358	PKPbc	PKPab	21 50 30.5	-0.1
	comp=Z,20nm,0.6s,baz=332,slow=2.3,SNR=159						
WMQ	Urumqi	146.39	23	*e*PKPbc	PKPab	21 50 32.5	-0.5
XLT	XiLinHaoTe	148.27	345	*e*PKPbc	PKPbc	21 50 35.5	-1.7
XLT				sPKP		21 51 10.1	
KSRS	Korea Array	148.58	323	PKP	PKPdf	21 50 34.8	+0.4
	comp=Z,16nm,0.9s,baz=5.0,slow=1.7,SNR=16						
KSRS				PKPbc	PKPbc	21 50 38.2	+0.1
	comp=Z,9.1nm,0.7s,baz=72,slow=2.8,SNR=31						
TJN	Taejon	149.64	322*c*	*i*PKP2	PKPbc	21 50 40.7	-0.1
HHC	Hu-ho-hao-te	152.18	349	*e*PKPbc	PKPdf	21 50 36.0	-4.0
BTO	Baotou	152.67	352	*e*PKPbc	PKiKP	21 50 48.0	-0.1
GTA	Gaotai	153.84	9	*e*PKPbc	PKPdf	21 50 43.0	+0.5
GTA				pPKP	PKPab	21 51 03.5	-0.1
GTA				sPKP		21 51 11.4	
HYBB	Hyderabad (bro	154.29	78	*e*PKiKP	PKPbc	21 50 51.6	-0.3
HYBB				*e*PP	PP	21 54 42.5	+0.6
TIA	Tai'an	154.91	336	⇑P	PKPab	21 51 07.1	-1.0
TIA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
GOMU	GeErMu	155.68	20	PKP	PKPdf	21 50 46.7	+1.2
GOMU				PKPab	pPKPdf	21 51 12.3	+1.1
NJ2	Nanjing	157.59	328	*e*P	PKPdf	21 50 53.3	+5.8
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2	Chengdu	162.68	3	PKP	PKPdf	21 50 52.0	-1.3
PZH	PanZhiHua	166.76	13	PKP	PKPdf	21 50 55.0	-2.1
CMAR	Chiang Mai Arr	172.44	49	PKP	PKPdf	21 51 00.2	-0.3
	comp=Z,2.7nm,0.8s,baz=287,slow=1.8,SNR=23						
CMAR				PKPab	PKPab	21 52 25.1	-0.4
	comp=Z,1.4nm,0.9s,baz=295,slow=5.7,SNR=6.4						

IPEC ***01*** *21:34:49.8±0.3, 51°.50N×16°.29E, h0km, ML2.4/3, Error ellipse: s-maj=2.8km s-min=1.4km az=53.0*
PRU ***01*** *21:34:52.1±0.0, 51°.41N×16°.15E, h0km*
VIE ***01*** *21:34:54.3±0.7, 51°.24N×15°.89E, h0km, mb2.5/11, ml2.4/14, Error ellipse: s-maj=4.7km s-min=4.0km az=159.0 74 km NE of Liberec Suspected Mining induced.*
DNK ***01*** *21:35:13.6±0.3, 53°.05N×15°.28E, h15km*
ISC 01 21:34:51.3±1.0, **51°.44N**±0°.04×**16°.12E**±0°.02, **h0**km, **n48**, σ1**s**.**06**/92, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.60	170	*i* Pg	Pg	21 35 02.8	-0.1
KSP				*e*Sg	Sg	21 35 10.5	-0.2
OSTC	Ostas	0.88	176	*e*PG	Pg	21 35 08.3	+0.1
OSTC				*e*SG	Sg	21 35 19.2	-0.4
	comp=Z,41nm,0.7s						
UPC	Upice	0.93	184	*e*PG	Pg	21 35 09.0	-0.1
UPC				*e*SG	Sg	21 35 21.6	+0.4
	comp=Z,120nm,0.4s						
DPC	Dobruska-Polom	1.09	173	*e*PG	Pg	21 35 11.6	-0.7
DPC				*e*SG	Sg	21 35 25.9	-0.5
	comp=Z,40nm,0.5s						
PVCC	Panska Ves	1.34	228	*e*PG	Pb	21 35 17.4	+0.2
PVCC				*e*SG	Sn	21 35 35.9	+0.2
	comp=Z,180nm,0.3s						
KRLC	Kraliky	1.43	163	*e*PG	Pn	21 35 17.3	-1.2
KRLC				*e*SG	Sg	21 35 35.7	-1.3
	comp=Z,20nm,0.6s						
BRG	Berggiesshubel	1.48	249	Pg	Pg	21 35 20.1	+0.4
BRG				Sg	Sn	21 35 40.5	+1.2
BRG				Amp		21 35 43.7	
	comp=Z,32nm,0.3s						
PRU	Pruhonice	1.76	215	*e*PG	Pb	21 35 24.4	-0.1
PRU				*e*SG	Sg	21 35 47.8	-0.1
	comp=Z,32nm,0.5s						
MORC	Moravsky Berou	1.89	151	*e*Pn	Pn	21 35 23.1	-1.8
	baz=336						
MORC				*e*Sg	Sn	21 35 49.3	-0.1
	comp=Z,31nm,0.8s,baz=336						
MORC	Moravsky Berou	1.89	151	*e*PN	Pn	21 35 23.2	-1.7
MORC				*e*SG	Sn	21 35 49.3	-0.1
CLL	Collm	1.96	267	*e*Pn	Pn	21 35 25.0	-0.8
CLL				*e*Pg	Pg	21 35 28.0	-0.8
CLL				*e*Sg	Sg	21 35 55.0	+0.8
	comp=Z,15nm,0.7s						
OKC	Ostrava-Krasne	2.06	140	*e*PG	Pb	21 35 29.1	-0.4
OKC				*e*SG	Sn	21 35 54.1	+0.7
	comp=Z,25nm,0.6s						
VRAC	Vranov	2.15	172	*e*Pn	Pn	21 35 28.0	-0.4
	baz=355						
VRAC				*e*Sg	Sb	21 35 58.7	+0.4
	comp=Z,15nm,0.4s,baz=355						
VRAC	Vranov	2.15	172	*e*PN	Pn	21 35 28.0	-0.4
VRAC				*e*SG	Sb	21 35 58.8	+0.4
TREC	Trest	2.18	191	*e*SG	Sb	21 35 59.6	+0.4
	comp=Z,17nm,0.3s						
MAUC	Maruska	2.34	152	*e*PN	Pn	21 35 30.8	-0.3
MAUC				*e*PG	Pb	21 35 34.4	0.0
KRUC	Moravsky	2.38	176	*e*Pn	Pn	21 35 30.7	-0.9
	baz=358						
KRUC				*e*Sg	Sb	21 36 06.1	+1.1
	comp=Z,20nm,0.8s,baz=358						
KRUC	Moravsky	2.38	176	*e*PN	Pn	21 35 30.7	-0.9
KRUC				*e*SG	Sb	21 36 06.2	+1.2
NKC	Novy Kostel	2.62	244	*e*PN	Pn	21 35 35.1	+0.2
NKC				*e*PG	Pg	21 35 40.8	-0.7
NKC				*e*SG	Sg	21 36 16.4	+0.9
	comp=Z,25nm,0.2s						
OJC	Ojcow	2.63	116	*e*Pg	Pb	21 35 39.6	+0.3
OJC				*e*Sg	Sg	21 36 14.0	-1.8
JAVC	Velka Javorina	2.77	158	*e*PN	Pn	21 35 36.1	-0.8
KHC	Kasperske Hory	2.83	216	*e*PN	Pn	21 35 37.9	+0.2
KHC				*e*PG	Pb	21 35 43.4	+0.8
KHC				*e*SN	Sn	21 36 11.0	-1.5
KHC				*e*SG	Sg	21 36 20.6	-1.4
	comp=Z,8.8nm,0.4s						
CKRC	Cesky Krumlov	2.87	205	*e*PN	Pn	21 35 38.8	+0.5
CKRC				*e*PG	Pb	21 35 44.5	+1.2
CKRC				*e*SG	Sg	21 36 21.6	-1.7
SMOL	Smolenice	3.04	163	*e*PG	Pg	21 35 49.6	0.0
SMOL				*e*SG	Sg	21 36 30.9	+1.9
LANS	Liptovska Anna	3.14	136	*e*PG	Pg	21 35 49.8	-1.6
LANS				*e*SG	Sg	21 36 33.3	+1.3
MODS	Modra-Piesok	3.15	166	*e*SG	Sg	21 36 31.5	-1.1
KOLL	Kolacno	3.22	152	*e*PN	Pn	21 35 43.0	0.0
KOLL				*e*PG	Pg	21 35 51.5	-1.4
KOLL				*e*SG	Sg	21 36 33.6	-1.0
ZST	Bratislava	3.30	169	*e*SG	Sg	21 36 35.9	-1.5
NIE	Niedzica	3.35	125	*e*P	Pg	21 35 55.4	-0.1
NIE				*e*S	Sg	21 36 38.7	-0.2
VYHS	Vyhne	3.43	148	*e*PG	Pg	21 35 59.1	+2.2
CONA	Conrad Observa	3.52	183	*e*Pn	Pn	21 35 48.2	+1.0
	comp=Z,0.3nm,0.2s						
CONA				*e*Sg	Sg	21 36 43.5	-0.7
	comp=Z,11nm,0.5s						
RONA	Rosalia, Austr	3.74	178	*e*Pn	Pn	21 35 50.9	+0.6
	comp=Z,2.0nm,0.4s						
RONA				*e*Sg	Sg	21 36 51.1	-0.3
	comp=Z,6.1nm,0.5s						
MOA	Molln	3.79	199	*e*Pn	Pn	21 35 51.1	+0.1
	comp=Z,0.9nm,0.2s						
MOA				*e*Sg	Sg	21 36 53.8	+0.9
	comp=Z,5.4nm,0.5s						
STHS	Stebnicka Huta	3.85	120	*e*PG	Pg	21 36 08.3	+3.3
BIOA	Bad Ischl, Aus	4.08	204	*e*Sg	Sg	21 37 02.4	0.0
	comp=Z,6.9nm,0.5s						
ARSA	Arzberg	4.21	186	*e*Pn	Pn	21 35 57.0	+0.3
	comp=Z,0.8nm,0.3s						
ARSA				*e*Sg	Sg	21 37 07.3	+0.9
	comp=Z,2.7nm,0.4s						
KBA	Koelnbreinsper	4.72	204	*e*Pn	Pn	21 36 03.3	-0.7
	comp=Z,0.1nm,0.1s						
KBA				*e*Sg	Sg	21 37 25.5	+2.5
	comp=Z,9.1nm,0.8s						
SOKA	Soboth	4.81	189	*e*Pn	Pn	21 36 04.9	-0.2
	comp=Z,0.4nm,0.3s						
SOKA				*e*Sg	Sg	21 37 24.1	-1.8
	comp=Z,0.5nm,0.3s						
BLEU	Blekinge	4.88	358	*i* P	Pn	21 36 04.8	-1.1
BJUU	Bjuv	5.00	340	*i* P	Pn	21 36 05.2	-2.3
OBKA	Obir	5.04	192	*e*Pn	Pn	21 36 08.2	0.0
	comp=Z,0.2nm,0.2s						
OBKA				*e*Sg	Sg	21 37 32.6	-0.4
	comp=Z,2.1nm,0.4s						
WATA	Walderalm	5.06	218	*e*Pn	Pn	21 36 07.8	-0.8
	comp=Z,0.8nm,0.2s						
WATA				*e*Sg	Sg	21 37 34.2	+0.3
	comp=Z,1.9nm,0.4s						
WTTA	Wattenberg	5.10	217	*e*Pn	Pn	21 36 08.1	-1.0
	comp=Z,0.6nm,0.2s						
WTTA				*e*Sg	Sg	21 37 34.7	-0.4
	comp=Z,3.0nm,0.5s						
DEL	Delary	5.22	346	*i* P	Pn	21 36 08.2	-2.3
MOTA	Moosalm	5.24	221	*e*Pn	Pn	21 36 11.2	+0.1
MOTA				*e*Sg	Sg	21 37 37.8	-1.9
	comp=Z,1.7nm,0.3s						
ABTA	Abfaltersbach	5.26	208	*e*Pn	Pn	21 36 10.0	-1.2
	comp=Z,0.9nm,0.6s						
ABTA				*e*Sg	Sg	21 37 39.2	-0.9
	comp=Z,1.1nm,0.3s						
SQTA	Sankt Quirin	5.30	219	*e*Pn	Pn	21 36 11.4	-0.4
	comp=Z,0.8nm,0.2s						
SQTA				*e*Sg	Sg	21 37 41.5	0.0
	comp=Z,6.5nm,0.7s						
FETA	Feichten	5.66	221	*e*Pn	Pn	21 36 17.2	+0.5
	comp=Z,0.2nm,0.2s						
FETA				*e*Sg	Sg	21 37 51.5	-1.4
	comp=Z,2.0nm,0.8s						

SJA ***01*** *21:47:52.7±0.8, 30°.10S×72°.39W, h14km±4km, ML4.0, MW4.3*
IDC ***01*** *21:47:55.9±0.8, 30°.15S×71°.94W, h0km, mb4.1/8, mbtmp4.1/12, ML4.0/4, MS3.3/6, Error ellipse: s-maj=29.9km s-min=16.6km az=101.0*
GUC ***01*** *21:47:55.9±0.7, 30°.12S×72°.28W, h33km±4km, ML4.0*
NEIC ***01*** *21:47:55.2, 30°.12S×72°.28W, h13km, Moment Tensor Solution. Moment tensor: Scale 10^15Nm; Mrr1.70; Mθθ0.11; Mφφ-1.81; Mrθ0.29; Mθφ-0.15; Mφr0.37; Fault plane solution: M0 1.83000×10^15 NP1:φs175.41000°, δ39.47000°, λ76.14000°. NP2:φs13.13000°, δ51.89000°, λ101.16000°. Principal axes: T 1.7828, Plg79.0000°, Azm330.0000°; N 0.0835, Plg9.0000°, Azm186.0000°; P -1.8664, Plg6.0000°, Azm95.0000°;*
NEIC ***01*** *21:47:56.0±1.6, 30°.11S±0°.04×72°.23W±0°.05, h10km±1km, mb4.6/12, Mwr4.1/43, ML4.0(GUC) Error ellipse: s-maj=8.9km s-min=5.4km az=42.0*
ISC 01 21:47:54.9±1.5, **30°.13S**±0°.02×**72°.20W**±0°.04, **h0**km±9km, **n121**, σ1**s**.**61**/150, **mb4.4**/9, **1C-3D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.73	138		Pb	21 48 10.2	-0.3
CO06					Sb	21 48 21.1	0.0
CO06	Fray Jorge	0.73	138	⇓*i*P	Pb	21 48 10.0	-0.5
CO06				*i* S	Sb	21 48 21.1	0.0
CO06				IAML		21 48 23.6	
	comp=E,5μm,0.5s						
CO05	La Serena	0.86	76		Pb	21 48 13.0	+0.2
CO05	La Serena	0.86	76	⇓*i*P	Pb	21 48 12.8	+0.1
CO05				*i* S	Sb	21 48 25.0	+0.1
CO05				IAML		21 48 30.2	
	comp=E,8μm,0.3s						
GO04	Tololo Observa	1.22	92		Pg	21 48 18.4	+0.1
GO04	Tololo Observa	1.22	92	⇓*i*P	Pg	21 48 18.3	+0.1
GO04				*i* S	Sb	21 48 35.4	+0.1
GO04	Tololo Observa	1.22	92	*e*P	Pn	21 48 19.0	-0.4
GO04				*e*S	Sn	21 48 38.0	+1.2
CO02	Combarbal	1.49	136		Pn	21 48 23.0	0.0
CO02				Sn	Sb	21 48 43.0	0.0
CO02	Combarbal	1.49	136	⇑*i*P	Pn	21 48 22.7	-0.3
CO02				*i* S	Sb	21 48 40.7	-2.3
CO02				IAML		21 48 47.0	
	comp=N,8μm,0.2s						
CO02	Combarbal	1.49	136	*e*P	Pn	21 48 23.0	0.0
CO02				*e*S	Sg	21 48 45.1	+2.3
CO02				IAML		21 48 46.3	
	comp=Z,3μm,0.4s						
LCO	Las Campanas	1.72	50		Pn	21 48 26.0	-0.3
LCO	Las Campanas	1.72	50	*e*P	Pn	21 48 26.0	-0.3
LCO				*i* S	Sg	21 48 49.4	-0.7
LCO	Las Campanas	1.72	50	*e*P	Pn	21 48 26.0	-0.3
LCO				*e*S	Sg	21 48 53.8	+3.6
CO01	Juntas del Tor	1.83	86		Pn	21 48 28.3	+0.4
CO01	Juntas del Tor	1.83	86	*e*P	Pb	21 48 28.6	-0.9
CO01				*i* S	Sb	21 48 52.7	-0.4
CO01				IAML		21 49 00.4	
	comp=N,993nm,0.2s						
CO01	Juntas del Tor	1.83	86	*e*P	Pb	21 48 28.6	-0.9
CO01				*e*S	Sg	21 48 55.2	+1.3
CO01				IAML		21 48 58.7	
	comp=Z,662nm,0.3s						
AC04	Llanos de Chal	2.16	27		Pn	21 48 31.5	-0.7
AC04	Llanos de Chal	2.16	27	*e*P	Pn	21 48 31.4	-0.8
AC04				IAML		21 49 17.3	
	comp=E,417nm,0.3s						
AC04	Llanos de Chal	2.16	27	*e*P	Pn	21 48 31.3	-0.8
AC04				*e*S	Sg	21 49 05.5	+1.2
AC04				*e*S	Sb	21 49 06.5	+4.3
AC04				*e*S	Sn	21 49 11.2	+12
AC04				IAML		21 49 15.5	
	comp=Z,446nm,0.6s						
AROD	Rodeo	2.37	92	*e*P	Pb	21 48 38.0	-0.6
AROD				*e*S	Sb	21 49 06.5	-2.0
VA06	Catapilco	2.54	162	Pn	Pn	21 48 37.2	-0.2
VA06	Catapilco	2.54	162	*e*P	Pn	21 48 27.9	-10
VA06				*e*S	Sg	21 49 18.5	+1.8
VA06				IAML		21 49 23.7	
	comp=E,1μm,0.5s						
ACDV	Cuesta del Vie	2.67	92	*e*P	Pb	21 48 42.7	-1.0
ACDV				IAML		21 49 25.3	
	comp=Z,338nm,0.5s						
ACCO	Cerro Coronel	2.75	100	*e*P	Pb	21 48 43.9	-1.2
VA01	Torpederas	2.92	171		Pn	21 48 41.5	-1.1
VA01	Torpederas	2.92	171	*e*P	Pn	21 48 37.1	-5.5
VA01				*e*S	Sg	21 49 31.2	+2.4
VA01				*e*S	Sb	21 49 33.0	+8.8
VA01				IAML		21 49 39.6	
	comp=E,296nm,0.8s						
VA03	San Esteban	2.98	152		Pn	21 48 44.1	+0.6
VA03	San Esteban	2.98	152	*e*P	Pn	21 48 44.3	+0.7
VA03				IAML		21 49 34.1	
	comp=N,759nm,0.2s						
VA03	San Esteban	2.98	152	*e*P	Pn	21 48 44.2	+0.7
VA03				*e*S	Sn	21 49 21.4	+1.3
VA03				IAML		21 49 34.3	
	comp=N,778nm,0.5s						
VA03	San Esteban	2.98	152	*e*P	Pn	21 48 44.3	+0.7
VA03				IAML		21 49 41.6	
	comp=Z,764nm,0.6s						
RTLS	Leoncito	3.00	124	*e*P	Pb	21 48 47.2	-2.2
RTLS				*e*S	Sb	21 49 28.5	+1.8
RTLS				IAML		21 49 33.6	
	comp=Z,425nm,1.5s						
ROCH	El Roble	3.01	161	*e*P	Pn	21 48 44.0	0.0
ROCH				*e*S	Sg	21 49 31.2	-0.4
ROCH				IAML		21 49 41.4	
	comp=N,567nm,0.3s						
ROC1	El Roble	3.01	161		Pn	21 48 44.0	-0.1
ROC1	El Roble	3.01	161	*e*P	Pn	21 48 44.0	-0.1
ROC1				*e*S	Sn	21 49 20.2	-0.8
GO03	Copiap	3.06	35		Pn	21 48 44.6	0.0
GO03	Copiap	3.06	35	*e*P	Pn	21 48 44.7	+0.1
GO03				*e*S	Sb	21 49 25.5	-2.8
AUSP	Uspallata	3.19	132	*e*P	Pb	21 48 49.8	-2.8
AUSP				*e*S	Sb	21 49 32.0	-0.2
AC06	Mina Casimiro	3.21	31		Pn	21 48 46.6	0.0
AC06	Mina Casimiro	3.21	31	*e*P	Pn	21 48 46.8	+0.2
AC06				IAML		21 49 45.8	
	comp=E,254nm,0.6s						
MT02	Curacav	3.25	164		Pn	21 48 46.5	-0.7
MT02	Curacav	3.25	164	*e*P	Pn	21 48 46.4	-0.7
MT02				IAML		21 49 54.6	
	comp=E,208nm,0.3s						
MT02	Curacav	3.25	164	*e*P	Pn	21 48 43.5	-3.7
MT02				*e*P	Pb	21 48 47.0	-6.5
MT02				IAML		21 49 50.1	
	comp=Z,254nm,0.8s						
PEL	Peldehue	3.27	157		Pn	21 48 47.6	+0.1
PEL	Peldehue	3.27	157	*e*P	Pn	21 48 47.9	+0.4
PEL				*e*S	Sn	21 49 26.7	-0.5
PEL				IAML		21 49 50.4	
	comp=N,312nm,0.5s						
PEL	Peldehue	3.27	157	*e*P	Pn	21 48 48.0	+0.4
PEL				*e*S	Sn	21 49 30.5	+3.3
RTLL	Cerro Villicun	3.42	111	*e*P	Pn	21 48 52.4	+2.8
RTLL				*e*S	Sg	21 49 45.5	+0.5
MT05	Renca	3.48	159		Pn	21 48 50.5	+0.1
MT05	Renca	3.48	159	*e*P	Pn	21 48 51.5	+1.1
MT05				*e*S	Sb	21 49 43.5	+3.1
MT05				IAML		21 49 58.1	
	comp=Z,684nm,1.8s						
VA05	Santo Domingo	3.55	172		Pn	21 48 50.1	-1.1
VA05	Santo Domingo	3.55	172	*e*P	Pn	21 48 49.9	-1.3
VA05				*e*S	Sg	21 49 49.2	+0.2
VA05				IAML		21 50 04.3	
	comp=N,331nm,0.4s						
FCH	Farellones	3.58	153	*e*P	Pn	21 48 52.8	+0.8
FCH				IAML		21 49 58.7	
	comp=E,241nm,0.8s						
MT03	Universidad Ad	3.65	157		Pn	21 48 53.1	+0.3
MT03	Universidad Ad	3.65	157	*e*P	Pn	21 48 53.8	+1.1
MT03				*e*S	Sn	21 49 37.0	+0.4
MT03				IAML		21 49 53.0	
	comp=Z,601nm,1.3s						
MT09	Talagante	3.78	164		Pn	21 48 54.8	+0.2
MT09	Talagante	3.78	164	*e*P	Pn	21 48 54.9	+0.3
MT09				*e*S	Sn	21 49 36.6	-3.2
LMEL	Las Melosas	4.08	156		Pn	21 48 59.8	+1.1
BO04	La Punta	4.08	161		Pn	21 48 58.8	+0.2
AVFE	Valle Fertil	4.13	99	*e*P	Pn	21 49 02.0	+2.6
AVFE				*e*P	Pb	21 49 02.0	-6.6
AVFE				*e*S	Sb	21 50 02.0	+2.8
AVFE				*e*S	Sg	21 50 03.5	-4.3
AVFE				IAML		21 50 12.0	
	comp=Z,191nm,1.5s						
AC01	Pan de Azucar	4.21	20		Pn	21 48 58.4	-2.0
AC01	Pan de Azucar	4.21	20	*e*P	Pn	21 48 58.8	-1.6
AC01				IAML		21 50 24.6	
	comp=Z,97nm,0.6s						
AC02	Maricunga	4.25	40		Pn	21 49 01.9	+0.6
AC02	Maricunga	4.25	40	*e*P	Pn	21 49 02.0	+0.6
AC02				*e*S	Sb	21 50 05.5	+2.5
AC02				IAML		21 50 20.8	
	comp=Z,155nm,0.7s						
BO01	Tunca	4.35	168		Pn	21 49 01.9	-0.4
BO01	Tunca	4.35	168	*e*P	Pn	21 49 02.0	-0.3
BO01				*e*S	Sn	21 49 51.9	-1.9
BO01				*e*S	Sb	21 50 03.5	-1.9
BO01				IAML		21 50 28.6	
	comp=Z,102nm,0.7s						
ACLC	CERRO LA CRUZ	4.62	83	*e*P	Pn	21 49 08.2	+2.1
ACLC				IAML		21 50 27.8	
	comp=Z,222nm,1.0s						
GO05	Huala	4.87	177		Pn	21 49 07.6	-1.8
GO05	Huala	4.87	177	*e*P	Pn	21 49 07.7	-1.8
GO05				*e*S	Sn	21 50 02.5	-4.1
APLL	PUNTA DE LOS L	4.92	94	*e*P	Pn	21 49 12.3	+2.2
GO02	Mina Guanaco	5.46	26		Pn	21 49 17.3	-0.6
H03N1	Juan Fernandez	6.60	238	Pn	Pn	21 49 31.9	-1.0
	baz=22,slow=73						
H03N1				T	T	21 56 42.1	
	baz=70,slow=72,SNR=24						
H03N2	Juan Fernandez	6.61	238	Pn	Pn	21 49 32.5	-0.6
	baz=22,slow=73						
H03N2				T	T	21 56 43.4	
	baz=70,slow=72,SNR=18						
H03N3	Juan Fernandez	6.61	238	Pn	Pn	21 49 31.7	-1.5
	baz=22,slow=73						
H03N3				T	T	21 56 37.0	
	baz=70,slow=72,SNR=14						
BI05	Punta Hualpn	6.65	187	Pn	Pn	21 49 31.8	-2.0
H03S3	Juan Fernandez	6.78	235	Pn	Pn	21 49 34.0	-1.5
H03S1	Juan Fernandez	6.79	235	Pn	Pn	21 49 33.9	-1.6
H03S2	Juan Fernandez	6.80	235	Pn	Pn	21 49 34.0	-1.7
PB15	IPOC Station P	7.32	20	Pn	Pn	21 49 41.8	-1.5
LVC	Limon Verde	8.05	22	Pn	Pn	21 49 51.5	-2.0
	comp=Z,0.4nm,0.3s,baz=236,slow=8.1,SNR=2.2						
LVC				Lg	Lg	21 52 05.2	
	comp=Z,1.3nm,0.3s,baz=90,slow=13,SNR=6.8						
	comp=Z,1.3nm,0.3s						
LVC	Limon Verde	8.05	22	Pn	Pn	21 49 52.3	-1.2
PB02	IPOC Station P	9.02	14	Pn	Pn	21 50 05.8	-0.7
LR04	Corral	9.78	186	Pn	Pn	21 50 15.7	-1.0
PLCA	Paso Flores	10.66	173	Pn	Pn	21 50 28.7	-0.3
	comp=Z,0.4nm,0.3s,baz=328,slow=14,SNR=4.9						
PLCA				LR	LR	21 55 20.4	
	comp=Z,101nm,18.4s,baz=7.5,slow=42						
	comp=Z,1.6nm,0.5s						
PLCA	Paso Flores	10.66	173	Pn	Pn	21 50 28.4	-0.6
ITQB	Itaqui	13.53	92	Pn	Pn	21 51 07.0	-1.0
CPUP	Villa Florida	13.65	78	LR	LR	21 56 44.6	
	comp=Z,137nm,20.1s,baz=258,slow=39						
AY01	Puyuhuapi	14.27	181	P	P	21 51 26.3	+0.6
LPAZ	La Paz	14.28	16	Pn	Pn	21 51 20.7	+1.7
	comp=Z,0.6nm,0.3s,baz=191,slow=7.7,SNR=18						
LPAZ				LR	LR	21 56 41.8	
	comp=Z,88nm,19.8s,baz=55,slow=37						

	comp=Z,4.7nm,0.6s						
LPAZ	**La Paz**	**14.28**	**16**		**Pn**	**21 51 21.2**	**+2.3**
PLTB	**Pedras Altas**	**16.04**	**101**		**P**	**21 51 43.6**	**-1.9**
SIV	**San Ignacio**	**17.39**	**38**	P	**Pn**	**21 51 59.1**	**0.0**
	comp=Z,0.1nm,0.3s,baz=230,slow=12,SNR=5.1						
SIV				LR	LR	21 59 06.9	
	comp=Z,85nm,20.4s,baz=276,slow=39						
	comp=Z,4.2nm,0.7s						
SAML	**Samuel**	**22.70**	**24**	P	**P**	**21 52 58.2**	**0.0**
USHA	**Ushuaia**	**24.84**	**175**	P	**P**	**21 53 18.9**	**+0.2**
	comp=Z,5.6nm,0.9s,baz=47,slow=14,SNR=2.0						
	comp=Z,5.6nm,0.9s						
BDFB	**Brasilia**	**26.47**	**62**	P	**P**	**21 53 33.6**	**-0.4**
	comp=Z,1.4nm,0.3s,baz=249,slow=11,SNR=3.6						
	comp=Z,1.4nm,0.3s						
BDFB	**Brasilia**	**26.47**	**62**	P	**P**	**21 53 32.8**	**-1.2**
PMSA	**Palmer Station**	**35.04**	**174**	LR	LR	22 09 02.6	
	comp=Z,53nm,19.0s,baz=64,slow=36						
MDP	**Montagnes des**	**39.73**	**31**	LR	LR	22 13 39.6	
	comp=Z,50nm,18.9s,baz=126,slow=39						
VNA3	**Neumayer Olymp**	**53.00**	**159**	P	**P**	**21 57 13.8**	**+0.8**
SNAA	**Sanae**	**55.22**	**159**	P	**P**	**21 57 29.7**	**+0.4**
SNAA	**Sanae**	**55.22**	**159**	P	**P**	**21 57 29.4**	**+0.1**
SNAA				IAmb	IAmb	21 57 39.9	
	comp=Z,12nm,1.3s						
TROLL	**Troll, Antarti**	**56.93**	**159**	P	**P**	**21 57 42.4**	**+0.8**
QSPA	**South Pole Qui**	**60.09**	**180**	P	**P**	**21 58 04.8**	**+1.0**
	comp=Z,1.4nm,0.6s,baz=141,slow=1.9,SNR=14						
	comp=Z,1.4nm,0.6s						
QSPA	**South Pole Qui**	**60.09**	**180**	P	**P**	**21 58 04.6**	**+0.8**
QSPA				IAmb	IAmb	21 58 14.9	
	comp=Z,5.5nm,1.2s						
HODGE	**Hodges**	**64.72**	**351**	P	**P**	**21 58 34.8**	**0.0**
BIRD	**Birdtown, Kers**	**64.90**	**352**	P	**P**	**21 58 35.2**	**-0.7**
TXAR	**Lajitas Array**	**66.31**	**330**	P	**P**	**21 58 47.5**	**+2.2**
	comp=Z,0.4nm,0.7s,baz=152,slow=8.5,SNR=6.4						
	comp=Z,0.4nm,0.7s						
TXAR	**Lajitas Array**	**66.31**	**330**	P	**P**	**21 58 45.6**	**+0.3**
DBIC	**Dimbokro**	**74.11**	**72**	P	**P**	**21 59 33.5**	**+0.1**
	comp=Z,3.1nm,0.6s,baz=250,slow=6.9,SNR=7.2						
	comp=Z,3.1nm,0.6s						
DBIC	**Dimbokro**	**74.11**	**72**	P	**P**	**21 59 33.4**	**0.0**
DBIC				IAmb	IAmb	21 59 42.8	
	comp=Z,5.6nm,1.0s						
ECSD	**EROS Data Cent**	**76.83**	**342**	P	**P**	**21 59 48.6**	**+0.3**
ECSD				IAmb	IAmb	21 59 50.6	
	comp=Z,5.4nm,0.8s						
PDAR	**Pinedale Array**	**80.26**	**333**	P	**P**	**22 00 09.1**	**+1.5**
	comp=Z,0.2nm,0.4s,baz=102,slow=8.4,SNR=2.3						
	comp=Z,0.2nm,0.4s						
TOA0	**Torodi Ar. Sit**	**83.04**	**71**	P	**P**	**22 00 22.7**	**+0.1**
TORD	**Torodi Ar. Bea**	**83.04**	**71**	P	**P**	**22 00 22.8**	**+0.2**
	comp=Z,3.4nm,0.7s,baz=281,slow=5.3,SNR=34						
	comp=Z,3.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**83.04**	**71**	P	**P**	**22 00 22.8**	**+0.2**
TORD				IAmb	IAmb	22 00 23.9	
	comp=Z,3.5nm,0.7s						
YKA	**Yellowknife Ar**	**98.36**	**342**	P	Pdif	22 01 35.8	+1.8
	comp=Z,0.2nm,0.5s,baz=156,slow=4.7,SNR=1.6						
	comp=Z,0.2nm,0.5s						
WRA	**Warramunga Arr**	**124.04**	**210**	PKP	**PKPdf**	**22 06 55.8**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=157,slow=1.7,SNR=1.4						
H11S2	**WAKE ISLAND Hy**	**125.59**	**272**	T	T	00 25 43.1	
	baz=114,slow=75,SNR=9.2						
H11S1	**WAKE ISLAND Hy**	**125.61**	**272**	T	T	00 25 43.1	
	baz=114,slow=75,SNR=13						
H11S3	**WAKE ISLAND Hy**	**125.61**	**272**	T	T	00 25 44.4	
	baz=114,slow=75,SNR=8.9						
ZALV	**Zalesovo Beam**	**150.97**	**28**	PKPbc	**PKiKP**	**22 07 50.1**	**+0.3**
	comp=Z,4.0nm,0.5s,baz=290,slow=3.1,SNR=19						
ZALV	**Zalesovo Beam**	**150.97**	**28**		**PKiKP**	**22 07 49.9**	**+0.2**
MKAR	**Makanchi Array**	**154.17**	**43**	PKP	**PKPdf**	**22 07 46.3**	**-2.2**
	comp=Z,0.3nm,0.7s,baz=224,slow=6.0,SNR=2.4						
MKAR				PKPbc	**PKiKP**	**22 07 57.4**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=290,slow=1.5,SNR=2.3						

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*IDC **01** 21:50:12.1±2.0, 8°.57N×58°.59E, h0km, mb3.9/8, mbtmp4.0/9, ML3.1/1, MS3.4/10, Error ellipse: s-maj=53.3km s-min=21.3km az=125.0*

*NEIC **01** 21:50:15±0.9, 8°.7N±0°.1×58°.51E±0°.09, h10km±2km, mb4.1/13, Error ellipse: s-maj=24.9km s-min=5.0km az=146.0*

ISC 01 21:50:15.2±1.3**, 8°.6N**±0°.1×**58°.6E**±0°.2**, h20km, n32, σ0s.76**/26**, mb4.1**/14**, MS3.3**/9**, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOCY	**Socotra**	**5.74**	**309**	Pn	**Pn**	**21 51 39.4**	**-0.1**
WSAR	**Wadi Sarin**	**14.55**	**0**	Pn	**Pn**	**21 53 41.6**	**+1.5**
	0.1nm,0.3s,baz=203,slow=7.7,SNR=2.9						
WSAR				LR	LR	21 58 22.1	
	comp=Z,162nm,18.4s,baz=186,slow=34						
	12nm,1.1s						
UOSS	**Minazif**	**16.41**	**352**	Pn	**Pn**	**21 54 03.3**	**-1.1**
UOSS				IAmb	IAmb	21 54 15.5	
	comp=Z,20nm,1.2s						
RAYN	**Ar Rayn**	**19.41**	**321**	P	**P**	**21 54 39.9**	**-0.4**
PALK	**Pallekele**	**21.97**	**92**	LR	LR	22 00 59.6	
	comp=Z,125nm,19.4s,baz=314,slow=30						
KMBO	**Kilima Mbogo**	**23.33**	**247**	P	**P**	**21 55 22.1**	**-0.7**
	comp=Z,1.7nm,0.8s,baz=38,slow=8.5,SNR=4.0						
KMBO				LR	LR	22 03 53.7	
	comp=Z,88nm,20.5s,baz=92,slow=35						
	comp=Z,1.7nm,0.8s						
KMBO	**Kilima Mbogo**	**23.33**	**247**	P	**P**	**21 55 22.4**	**-0.3**
LODK	**Lodwar**	**23.63**	**259**	P	**P**	**21 55 26.0**	**+0.5**
LODK				IAmb	IAmb	21 55 29.5	
	comp=Z,9.9nm,1.3s						
MBAR	**Mbarara**	**29.19**	**253**	LR	LR	22 07 57.3	
	comp=Z,76nm,20.6s,baz=32,slow=36						
OPO	**Ambohidratompo**	**29.24**	**203**	LR	LR	22 05 33.2	
	comp=Z,86nm,18.4s,baz=174,slow=32						
BTK	**Batken**	**33.18**	**17**	P	**P**	**21 56 49.1**	**-1.6**
GNI	**Garni**	**33.75**	**341**	LR	LR	22 11 22.9	
	comp=Z,35nm,19.2s,baz=80,slow=38						
KK31	**Karatay Array**	**35.93**	**15**	P	**P**	**21 57 14.4**	**+0.1**
KK31				IAmb	IAmb	21 57 23.7	
	comp=Z,2.8nm,1.0s						
KKAR	**Karatay Array**	**35.93**	**15**	P	**P**	**21 57 14.6**	**+0.2**
KKAR	**Karatay Array**	**35.93**	**15**	P	**P**	**21 57 14.2**	**-0.1**
KKAR				IAmb	IAmb	21 57 23.7	
	comp=Z,2.8nm,1.0s						
AAK	**Ala-Archa**	**36.68**	**20**	P	**P**	**21 57 20.8**	**-0.2**
AAK				IAmb	IAmb	21 57 31.5	
	comp=Z,3.1nm,1.2s						
KBZ	**Khabaz**	**37.57**	**341**	P	**P**	**21 57 29.7**	**+1.5**
	comp=Z,2.5nm,0.9s,baz=205,slow=3.3,SNR=5.8						
KBZ				LR	LR	22 15 23.2	
	comp=Z,42nm,19.0s,baz=184,slow=40						
	comp=Z,2.5nm,0.9s						
KIV	**Kislovodsk**	**37.84**	**341**	P	**P**	**21 57 30.8**	**+0.1**
KIV				IAmb	IAmb	21 57 35.0	
	comp=Z,5.4nm,1.2s						
BRTR	**Keskin Array B**	**38.16**	**328**	P	**P**	**21 57 33.8**	**+0.2**
	comp=Z,0.8nm,0.8s,baz=172,slow=4.9,SNR=2.7						
	comp=Z,0.8nm,0.8s						
LSZ	**Lusaka**	**38.33**	**232**	LR	LR	22 10 56.4	
	comp=Z,67nm,20.3s,baz=94,slow=32						
CMAR	**Chiang Mai Arr**	**40.38**	**72**	LR	LR	22 13 16.8	
	comp=Z,59nm,20.6s,baz=250,slow=34						
ABKAR	**Akbulak array**	**40.53**	**1**	P	**P**	**21 57 52.5**	**-0.5**
ABKAR	**Akbulak array**	**40.53**	**1**	P	**P**	**21 57 52.8**	**-0.2**
MATP	**Matopo**	**41.31**	**225**	P	**P**	**21 58 00.6**	**+0.7**
	comp=Z,6.5nm,1.2s,baz=24,slow=6.5,SNR=4.5						
	comp=Z,6.5nm,1.2s						
KURBB	**Kurchatov Arra**	**45.04**	**18**	P	**P**	**21 58 30.0**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=222,slow=8.0,SNR=4.9						
	comp=Z,0.7nm,0.7s						
KURK	**Kurchatov**	**45.15**	**18**	P	**P**	**21 58 31.5**	**+1.1**
KURK				IAmb	IAmb	21 58 39.0	
	comp=Z,3.8nm,1.4s						
ZAA0	**Zalesovo Array**	**49.90**	**20**	P	**P**	**21 59 07.6**	**+0.3**
ZALV	**Zalesovo Beam**	**49.90**	**20**	P	**P**	**21 59 06.5**	**-0.8**
	comp=Z,1.2nm,0.6s,baz=216,slow=8.8,SNR=6.0						
ZALV				LR	LR	22 20 36.8	
	comp=Z,81nm,20.8s,baz=194,slow=36						
	comp=Z,1.2nm,0.6s						
ZALV	**Zalesovo Beam**	**49.90**	**20**	P	**P**	**21 59 06.4**	**-0.9**
TORD	**Torodi Ar. Bea**	**55.94**	**280**	P	**P**	**21 59 52.8**	**+0.3**
	comp=Z,2.5nm,1.0s,baz=99,slow=7.2,SNR=11						
	comp=Z,2.5nm,1.0s						
TORD	**Torodi Ar. Bea**	**55.94**	**280**	P	**P**	**21 59 52.5**	**0.0**
ESDC	**Sonseca Array**	**63.47**	**310**	P	**P**	**22 00 43.5**	**-0.6**
	comp=Z,1.0nm,1.0s,baz=96,slow=6.3,SNR=6.2						
	comp=Z,1.0nm,1.0s						

IDC 01 22:10:37.0±2.8**, 33°.27S**×**179°.09W, h0km, mb3.5**/2**, mbtmp3.5**/3**, ML3.3**/1**, Error ellipse: s-maj=68.9km s-min=36.2km az=116.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**5.86**	**211**	Pn	Pn	22 12 05.7	+0.7
	0.8nm,0.3s,baz=301,slow=24,SNR=1.3						
URZ				Sn	Sn	22 13 12.2	-0.7
	1.0nm,0.3s,baz=121,slow=24,SNR=1.9						
	3.2nm,0.3s						
ASAR	**Alice Springs**	**42.12**	**271**	P	P	22 18 30.7	-0.4
	0.3nm,0.6s,baz=105,slow=7.0,SNR=5.1						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**43.37**	**276**	P	P	22 18 41.4	+0.1
	0.5nm,0.5s,baz=117,slow=7.6,SNR=5.4						
	0.5nm,0.5s						
FINES	**FINESS Array B**	**147.48**	**338**	PKPbc	PKPbc	22 30 21.3	-0.8
	0.7nm,0.5s,baz=42,slow=4.0,SNR=11						

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*TUL **01** 22:12:43.8±0.4, 36°.303N±0°.010×97°.69W±0°.01, h6km±3km, ML2.7, mb_Lg2.4/29(NEIC), Error ellipse: s-maj=1.6km s-min=1.3km az=46.0*

NEIC 01 22:12:44.5±0.4**, 36°.299N**±0°.010×**97°.69W**±0°.01**, h4km, Error ellipse: s-maj=1.7km s-min=1.5km az=64.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKCFA	**Oklahoma City**	**0.90**	**168**	Pg	Pg	22 13 00.9	-0.9
OKCSW	**OKLAHOMA CITY**	**0.92**	**167**		Pg	22 13 01.3	-0.7
U32A	**Winter Ranch,**	**1.06**	**275**		Pg	22 13 03.8	-1.1
FNO	**Franklin**	**1.07**	**167**	Pg	Pg	22 13 03.9	-1.0
T35A	**Sooner Cattle**	**1.13**	**57**	Pg	Pg	22 13 05.0	-1.1
TUL1	**Leonard**	**1.58**	**104**		Pn	22 13 12.2	-1.1
X34A	**Smith Ranch, M**	**1.70**	**184**		Pn	22 13 14.9	0.0
X34A				IAmb_Lg		22 13 38.0	
	comp=Z,18nm,1.2s						
WMOK	**Wichita Mounta**	**1.79**	**210**		Pn	22 13 15.6	-0.7
R32A	**Long Quarter,**	**2.27**	**339**		Pn	22 13 22.1	-0.7
X37A	**Clayton**	**2.55**	**131**	Pn	Pn	22 13 26.3	-0.2
W39A	**Magazine**	**3.36**	**108**	IAmb_Lg		22 14 39.0	
	comp=Z,13nm,0.8s						
AMTX	**Amarillo**	**3.55**	**248**	IAmb_Lg		22 14 41.3	
	comp=Z,11nm,0.9s						
S39A	**Bolivar**	**3.76**	**67**		Pn	22 13 42.8	-0.4
S39A				IAmb_Lg		22 14 48.3	
	comp=Z,11nm,1.1s						
MIAR	**Mount Ida**	**3.79**	**116**	Pn	Pn	22 13 41.7	-1.9
MIAR				IAmb_Lg		22 14 47.7	
	comp=Z,8.0nm,0.8s						
U40A	**Yellville**	**3.90**	**88**	IAmb_Lg		22 14 50.3	
	comp=Z,10nm,0.8s						
ABTX	**Abilene, Hawle**	**4.01**	**204**	IAmb_Lg		22 14 53.5	
	comp=Z,7.9nm,1.1s						
WHTX	**Lake Whitney,**	**4.30**	**177**	Pn	Pn	22 13 49.3	-1.4
X40A	**Basin Creek Fa**	**4.36**	**113**	IAmb_Lg		22 15 09.0	
	comp=Z,7.5nm,0.9s						
WHAR	**Wooly Hollow**	**4.50**	**101**	IAmb_Lg		22 15 11.2	
	comp=Z,6.4nm,0.7s						
FCAR	**Ozark Folk Cen**	**4.52**	**94**	IAmb_Lg		22 15 06.6	
	comp=Z,7.4nm,1.0s						
R40A	**Maddies Statio**	**4.76**	**64**	Pn	Pn	22 13 56.5	-0.4
KSCO	**Kaye Shedlock'**	**4.76**	**306**	IAmb_Lg		22 15 20.6	
	comp=Z,9.2nm,1.0s						
MSTX	**Muleshoe**	**4.77**	**242**	IAmb_Lg		22 15 28.5	
	comp=Z,7.1nm,1.1s						
CCM	**Cathedral Cave**	**5.43**	**69**	IAmb_Lg		22 15 44.4	
	comp=Z,7.9nm,0.9s						
JCT	**Junction City**	**6.07**	**198**	IAmb_Lg		22 16 04.6	
	comp=Z,6.8nm,0.8s						
Q24A	**Divide**	**6.49**	**296**	IAmb_Lg		22 16 08.7	
	comp=Z,5.8nm,0.7s						

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*ANF **01** 22:29:01.6±0.4, 35°.71N×97°.40W, h6km, ML2.5/6, Error ellipse: s-maj=4.5km s-min=3.1km az=132.0*

*TUL **01** 22:29:02.1±0.5, 35°.68N±0°.03×97°.39W±0°.03, h6km±6km, ML2.6, mb_Lg2.2/17(NEIC), Error ellipse: s-maj=4.0km s-min=3.1km az=148.0*

NEIC 01 22:29:02.6±0.6**, 35°.68N**±0°.03×**97°.40W**±0°.03**, h6km**±6km**, Error ellipse: s-maj=4.1km s-min=3.2km az=151.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK009	**Oakdale Elemen**	**0.10**	**192**	Pg	Pg	22 29 04.5	-0.3
OK005	**Luther M Schoo**	**0.17**	**98**	Pg	Pg	22 29 05.8	-0.2
OK005				Sg	Sg	22 29 08.6	+0.2
OKCFA	**Oklahoma City**	**0.27**	**190**	Pg	Pg	22 29 07.6	-0.3
OKCFA	**Oklahoma City**	**0.27**	**190**	P	Pg	22 29 07.6	-0.2
	baz=11						
OKCFA				S	Sg	22 29 11.8	+0.4
	baz=11						
OKCSW	**OKLAHOMA CITY**	**0.27**	**187**		Pg	22 29 07.7	-0.3
OKCSW				Sg	Sg	22 29 12.0	+0.3
FNO	**Franklin**	**0.42**	**180**	Pg	Pg	22 29 10.4	-0.4
X34A	**Smith Ranch, M**	**1.13**	**199**	Pg	Pg	22 29 23.8	-0.6
TUL1	**Leonard**	**1.32**	**79**		Pn	22 29 26.0	-1.7
TUL1				IAmb_Lg		22 29 45.0	
	comp=Z,9.6nm,0.9s						
TUL1	**Leonard**	**1.32**	**79**	P	Pn	22 29 26.0	-1.7
	baz=260						
TUL1				S	Sb	22 29 44.0	-1.1
	baz=260						
T35A	**Sooner Cattle**	**1.43**	**30**		Pn	22 29 28.1	-1.0
T35B	**Sooner Cattle**	**1.43**	**30**	P	Pn	22 29 28.0	-1.1
	baz=210						
T35B				S	Sb	22 29 47.4	-0.8
	baz=210						
WMOK	**Wichita Mounta**	**1.47**	**231**		Pn	22 29 28.8	-0.9
WMOK	**Wichita Mounta**	**1.47**	**231**	P	Pn	22 29 28.8	-0.9
	baz=50						
WMOK				S	Sn	22 29 48.5	-0.8
	baz=50						
U32A	**Winter Ranch,**	**1.48**	**299**		Pn	22 29 29.0	-0.8
U32A	**Winter Ranch,**	**1.48**	**299**	P	Pn	22 29 29.0	-0.8
	baz=118						
X37A	**Clayton**	**1.98**	**123**		Pn	22 29 36.9	+0.2
X37A	**Clayton**	**1.98**	**123**	P	Pn	22 29 37.2	+0.5
	baz=304						
X37A				Sb	Sb	22 30 04.8	+0.7
	baz=304						
W39A	**Magazine**	**2.99**	**98**	IAmb_Lg		22 30 40.9	
	comp=Z,6.6nm,0.7s						
MIAR	**Mount Ida**	**3.33**	**109**	Pn	Pn	22 29 55.8	+0.6
MIAR	**Mount Ida**	**3.33**	**109**	P	Pn	22 29 55.9	+0.7
	baz=291						
ABTX	**Abilene, Hawle**	**3.57**	**212**		Pn	22 29 57.8	-0.7
WHTX	**Lake Whitney,**	**3.68**	**181**	Pn	Pn	22 29 59.4	-0.6
S39A	**Bolivar**	**3.84**	**57**	Pn	Pn	22 30 01.8	-0.5
S39A				IAmb_Lg		22 31 07.5	
	comp=Z,6.4nm,0.8s						
WHAR	**Wooly Hollow**	**4.19**	**94**	Pn	Pn	22 30 06.0	-1.1
W41B	**Gary Mavity, V**	**4.24**	**95**	Pn	Pn	22 30 07.5	-0.2
FCAR	**Ozark Folk Cen**	**4.29**	**86**	Pn	Pn	22 30 07.9	-0.5
FCAR				IAmb_Lg		22 31 17.7	
	comp=Z,7.8nm,0.9s						
MGMO	**Mountain Grove**	**4.39**	**69**	IAmb_Lg		22 31 22.3	
	comp=Z,6.4nm,0.8s						
R40A	**Maddies Statio**	**4.86**	**56**	Pn	Pn	22 30 15.2	-1.2
LCAR	**Lake Charles**	**5.08**	**84**	IAmb_Lg		22 31 49.9	
	comp=Z,4.5nm,0.9s						
CCM	**Cathedral Cave**	**5.47**	**62**	Pn	Pn	22 30 24.6	-0.1
CCM				IAmb_Lg		22 31 55.0	
	comp=Z,4.5nm,0.8s						
JCT	**Junction City**	**5.56**	**202**	IAmb_Lg		22 32 04.9	
	comp=Z,5.8nm,0.9s						

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*AUST **01** 22:30:16.9±1.6, 32°.15S×116°.94E, h7km±12km, Error ellipse: s-maj=15.7km s-min=8.1km az=166.0*

*CUPWA **01** 22:30:16.8±0.4, 32°.26S×117°.01E, h4km±14km, ML2.6, Region: WESTERN AUSTRALIA*

*NOU **01** 22:30:16.1, 32°.23S×117°.00E, h0km, MLv3.3/7, Western Australia*

ISC 01 22:30:16.0±1.0**, 32°.25S**±0°.02×**116°.98E**±0°.03**, h8km**±10km**, n26, σ0s.62**/35**, Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PING	**Pingelly**	**0.26**	**177**	*i* P	**Pg**	**22 30 21.1**	**+0.1**
PING				*i* S	**Sg**	**22 30 24.4**	**-0.1**
QUAI	**Quairading**	**0.43**	**56**	P	**Pg**	**22 30 24.3**	**0.0**
QUAI	**Quairading**	**0.43**	**56**	S	**Sg**	**22 30 30.2**	**+0.3**
MECK	**Meckering**	**0.62**	**3**	P	**Pg**	**22 30 28.1**	**+0.2**
MECK				*i* S	**Sg**	**22 30 36.3**	**+0.4**
MUN	**Mundaring**	**0.70**	**292**	P	**Pg**	**22 30 29.3**	**-0.3**
	baz=0.6						
MUN				S	**Sg**	**22 30 38.6**	**-0.2**
	baz=0.6						
MUN	**Mundaring**	**0.70**	**292**	P	**Pg**	**22 30 29.6**	**0.0**
MUN	**Mundaring**	**0.70**	**292**	P	**Pg**	**22 30 29.3**	**-0.3**
MUN				S	**Sg**	**22 30 38.6**	**-0.1**
NWAO	**Narrogin (SRO)**	**0.71**	**162**	P	**Pg**	**22 30 29.3**	**-0.3**
AUMAZ	**Mazenod Senior**	**0.83**	**287**	P	**Pg**	**22 30 31.6**	**-0.3**
	baz=0.8						
AUMAZ				S	**Sg**	**22 30 42.3**	**-0.4**
	baz=0.8						
KLBR	**Kellerberrin**	**0.93**	**45**	P	**Pg**	**22 30 33.7**	**-0.2**
	baz=0.9,SNR=48						
KLBR				S	**Sg**	**22 30 46.7**	**+0.7**
	baz=0.9						
KLBR	**Kellerberrin**	**0.93**	**45**	P	**Pg**	**22 30 33.8**	**-0.1**
KLBR	**Kellerberrin**	**0.93**	**45**	P	**Pg**	**22 30 33.7**	**-0.2**
KLBR	**Kellerberrin**	**0.93**	**45**	S	**Sg**	**22 30 46.7**	**+0.7**
MTKN	**Mount Kenneth**	**1.07**	**287**	P	**Pb**	**22 30 37.4**	**+0.7**
AUKUL	**Kulin High Sch**	**1.08**	**113**	P	**Pg**	**22 30 35.7**	**-0.9**
AUKUL	**Kulin High Sch**	**1.08**	**113**	S	**Sg**	**22 30 50.0**	**-0.6**
BLDU	**Ballidu**	**1.65**	**352**	P	**Pn**	**22 30 44.9**	**-0.3**
	baz=1.6,SNR=26						
BLDU				S	**Sn**	**22 31 06.5**	**-0.1**
	baz=1.6						
BLDU	**Ballidu**	**1.65**	**352**	P	**Pn**	**22 30 45.4**	**+0.2**
BLDU	**Ballidu**	**1.65**	**352**	P	**Pn**	**22 30 44.9**	**-0.3**
BLDU				S	**Sn**	**22 31 06.5**	**-0.1**
GNOW	**Gnowangerup**	**1.79**	**155**	P	**Pb**	**22 30 49.4**	**+0.3**
GNOW				S	**Sg**	**22 31 14.5**	**+0.8**
RKGY	**Rocky Gully**	**2.35**	**180**	P	**Pb**	**22 30 57.4**	**-1.2**
	baz=2.5,SNR=7.2						
RKGY	**Rocky Gully**	**2.35**	**180**	P	**Pn**	**22 30 57.0**	**+2.0**
RKGY	**Rocky Gully**	**2.35**	**180**	P	**Pb**	**22 30 57.4**	**-1.2**
MORW	**Morawa**	**3.27**	**346**	P	**Pn**	**22 31 07.3**	**-0.3**
	baz=3.2						
MORW	**Morawa**	**3.27**	**346**	P	**Pn**	**22 31 07.7**	**+0.1**
MORW	**Morawa**	**3.27**	**346**	P	**Pn**	**22 31 07.3**	**-0.3**

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*MDD **01** 22:34:16.2±0.6, 36°.08N×3°.69E, h0km, Mb4.4/30, M_mb3.8/31, Error ellipse: s-maj=4.9km s-min=3.2km az=144.0*

*CRAAG **01** 22:34:17.9, 36°.36N×3°.42E, Ml4.1, Hypocentre not reviewed by the ISC*

*IDC **01** 22:34:17.9±0.9, 36°.42N×3°.44E, h0km, mb3.7/9, mbtmp3.8/15, ML3.7/6, MS3.1/4, Error ellipse: s-maj=19.9km s-min=15.3km az=154.0*

*NEIC **01** 22:34:19.9±1.8, 36°.37N±0°.09×3°.42E±0°.03, h10km±1km, mb4.0/17, Error ellipse: s-maj=15.1km s-min=3.8km az=169.0*

*LDG **01** 22:34:20.3±0.5, 36°.27N×3°.60E, h2km, Ml3.7/12, Error ellipse: s-maj=11.4km s-min=5.1km az=151.0*

*CNRM **01** 22:34:25.1, 36°.26N×2°.76E, h0km, ml4.2*

ISC 01 22:34:20.8±0.6**, 36°.41N**±0°.06×**3°.51E**±0°.04**, h18km, n152, σ1s.39**/189**, mb3.8**/12**, 25C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADJB	**Djebel Djouab**	**0.26**	**194**	P		22 34 22.8	
ABMS	**Boumerdes**	**0.34**	**356**	P		22 34 27.5	
AKET	**Djebel Ketaf**	**0.47**	**140**	P		22 34 29.0	
SET	**Setif**	**1.54**	**97**	P		22 34 49.0	
EBNR	**Beni Rached**	**1.60**	**266**	P		22 34 44.4	
ECHA	**Ech Chlef**	**1.75**	**262**	P		22 34 48.0	
DFRA	**Djebel Bou Aff**	**1.91**	**85**	P		22 34 53.1	
CASM	**Ain Smara**	**2.41**	**93**	P		22 35 03.1	
CKFL	**Kef-Lekhel**	**2.59**	**89**	P		22 35 02.0	
EIBI	**Ibiza**	**3.13**	**327**	P	**Pn**	**22 35 09.5**	**+0.3**
EIBI				⇑*i*Vmb_V		22 35 12.2	
	2µm,SNR=48						
EIBI				S	**Sn**	**22 35 43.8**	**-2.3**
CMAH	**Djebel Manchou**	**3.15**	**85**	P		22 35 19.6	
ABSA	**Djebel Ababsia**	**3.20**	**91**	P		22 35 11.6	
ETOS	**Mallorca**	**3.40**	**351**	P	**Pn**	**22 35 12.8**	**-0.2**
ETOS				⇑*i*Vmb_V		22 35 19.4	
	971nm,SNR=7.8						
ETOS				S	**Sn**	**22 35 51.4**	**-1.5**
MAHO	**Mahon**	**3.53**	**9**	P	**Pn**	**22 35 13.0**	**-1.7**
MAHO				S	**Sn**	**22 35 53.2**	**-2.8**
ETRV	**Los Montesinos**	**3.77**	**297**	P	**Pn**	**22 35 17.5**	**-0.5**
ETRV				⇑*i*Vmb_V		22 35 26.1	
	226nm,SNR=1.9						
ETRV				S	**Sn**	**22 36 02.8**	**+0.8**
CART	**Cartagena**	**3.80**	**289**	P	**Pn**	**22 35 17.4**	**-1.0**
CART				S	**Sn**	**22 36 00.1**	**-2.6**
CART	**Cartagena**	**3.80**	**289**	Pn	**Pn**	**22 35 16.9**	**-1.5**
CART	**Cartagena**	**3.80**	**289**	P	**Pn**	**22 35 17.5**	**-1.0**
CART				S	**Sn**	**22 35 58.2**	**-4.4**
AFON	**Font Roja**	**3.93**	**306**	P	**Pn**	**22 35 20.4**	**0.0**
AFON				⇑*i*Vmb_V		22 35 27.2	
	257nm,SNR=2.6						
AFON				S	**Sn**	**22 36 06.9**	**+0.8**
EMUR	**La Murta**	**4.06**	**292**	P	**Pn**	**22 35 20.8**	**-1.3**
EMUR				⇑*i*Vmb_V		22 35 29.3	
	326nm,SNR=8.3						
EMUR				S	**Sn**	**22 36 09.8**	**+0.7**
ECOL	**Islas Columbre**	**4.14**	**328**	P	**Pn**	**22 35 22.5**	**-0.5**
ECOL				S	**Sn**	**22 36 12.3**	**+1.3**
EZAR	**Zarzadilla de**	**4.41**	**291**	P	**Pn**	**22 35 26.8**	**-0.1**
EZAR				S	**Sn**	**22 36 18.6**	**+0.7**
ETOB	**Tobarra**	**4.60**	**301**	P	**Pn**	**22 35 29.4**	**-0.1**
ETOB				⇑*i*Vmb_V		22 35 35.5	
	476nm,SNR=7.3						
ETOB				S	**Sn**	**22 36 23.5**	**+1.0**
ENIJ	**Nijar**	**4.63**	**279**	P	**Pn**	**22 35 29.6**	**-0.3**
ENIJ				⇑*i*Vmb_V		22 35 31.0	
	244nm,SNR=5.4						
ENIJ				S	**Sn**	**22 36 23.9**	**+0.7**
ECHE	**Chera**	**4.75**	**313**	P	**Pn**	**22 35 32.4**	**+0.8**
ECHE				⇑*i*Vmb_V		22 35 36.7	
	654nm,SNR=4.3						
ECHE				S	**Sn**	**22 36 27.6**	**+1.3**
KEST	**Kesra**	**4.77**	**96**	Pn	**Pn**	**22 35 31.9**	**0.0**
	2.1nm,0.3s,baz=209,slow=0.9,SNR=50						
KEST				Sn	**Sn**	**22 36 31.4**	**+4.6**
	1.4nm,0.3s,baz=342,slow=20,SNR=1.9						
	25nm,0.6s						
KEST	**Kesra**	**4.77**	**96**	Pn	**Pn**	**22 35 32.4**	**+0.5**
EMOS	**Mosqueruela**	**5.04**	**323**	P	**Pn**	**22 35 36.2**	**+0.5**
EMOS				⇑*i*Vmb_V		22 35 38.8	
	807nm,SNR=10						
EMOS				S	**Sn**	**22 36 34.8**	**+1.3**
TAF	**Taforalt**	**5.08**	**253**	P	**Pn**	**22 35 34.6**	**-1.6**
EBER	**Berja**	**5.17**	**277**	P	**Pn**	**22 35 35.9**	**-1.5**
EBER				⇑*i*Vmb_V		22 35 43.7	
	241nm,SNR=5.5						
EBER				S	**Sn**	**22 36 37.3**	**+0.6**
ERTA	**Horta de San J**	**5.18**	**332**	P	**Pn**	**22 35 38.3**	**+0.9**
ERTA				⇑*i*Vmb_V		22 35 47.8	
	210nm,SNR=2.4						
ERTA				S	**Sn**	**22 36 38.3**	**+1.6**
EPOB	**Poblet**	**5.29**	**340**	P	**Pn**	**22 35 39.4**	**+0.5**
EPOB				⇑*i*Vmb_V		22 35 45.4	
	88nm,SNR=4.5						
EPOB				S	**Sn**	**22 36 41.1**	**+1.6**
JBK	**JBK**	**5.38**	**249**	P	**Pn**	**22 35 39.2**	**-1.2**
GOG	**Mont Gurugu**	**5.42**	**259**	P	**Pn**	**22 35 38.9**	**-1.9**
VSL	**Villasalto**	**5.57**	**55**		**Pn**	**22 35 43.2**	**+0.4**
VSL	**Villasalto**	**5.57**	**55**	P	**Pn**	**22 35 42.9**	**+0.2**
EQUE	**Quentar**	**5.63**	**280**	P	**Pn**	**22 35 44.2**	**+0.4**
EQUE				⇑*i*Vmb_V		22 35 48.4	
	87nm,SNR=3.9						
EQUE				S	**Sn**	**22 36 48.9**	**+0.8**
TDRA	**Tendrara**	**5.67**	**235**	P	**Pn**	**22 35 42.5**	**-1.8**
EMIR	**Miracle**	**5.71**	**345**	P	**Pn**	**22 35 45.7**	**+0.9**
EMIR				S	**Sn**	**22 36 51.6**	**+1.7**
ELGU	**Los Guajares,**	**5.76**	**277**	P	**Pn**	**22 35 45.2**	**-0.2**
ELGU				⇑*i*Vmb_V		22 35 54.4	
	120nm,SNR=12						
ELGU				S	**Sn**	**22 36 51.9**	**+0.8**
FIGM	**Figuig**	**5.81**	**224**	P	**Pn**	**22 35 46.0**	**-0.3**
EJON	**La Jonquera**	**6.05**	**356**	P	**Pn**	**22 35 50.8**	**+1.4**
EJON				⇑*i*Vmb_V		22 35 57.5	
	340nm,SNR=10						

EJON S Sn 22 37 00.0 +1.8
ESAC San Caprasio 6.14 331 P Pn 22 35 51.6 +0.9
ESAC ⇑*iVmb_V* 22 36 00.6
290nm,SNR=5.5
ESAC S Sn 22 37 02.3 +1.7
EGOR Sierra Gorda, 6.16 279 P Pn 22 35 52.8 +1.8
EGOR ⇑*iVmb_V* 22 35 58.8
51nm,SNR=7.8
EGOR S Sn 22 37 01.9 +0.8
ETOR Torete 6.20 317 P Pn 22 35 53.5 +2.0
ETOR ⇑*iVmb_V* 22 36 01.8
189nm,SNR=17
ETOR S Sn 22 37 03.4 +1.6
AKLM AKL 6.31 255 P Pn 22 35 52.7 -0.4
UCM Universidad Co 6.58 308 P Pn 22 35 57.1 +0.4
UCM S Sn 22 37 11.2 -0.1
EMIJ Mijas 6.68 274 P Pn 22 35 56.8 -1.2
EMIJ ⇑*iVmb_V* 22 36 03.9
44nm,SNR=3.7
ESBB Sonseca Array 6.74 301 Pn Pn 22 35 58.2 -0.7
ESDC Sonseca Array 6.74 301 Pn Pn 22 35 58.2 -0.7
0.6nm,0.3s,baz=117,slow=13,SNR=21
ESDC Sn Sn 22 37 17.0 +1.8
0.2nm,0.3s,baz=112,slow=23,SNR=4.9
2.5nm,0.5s
ESDC Sonseca Array 6.74 301 Pn Pn 22 35 57.9 -1.0
PAB San Pablo 6.95 299 Pn Pn 22 36 01.2 -0.6
PAB San Pablo 6.95 299 P Pn 22 36 01.3 -0.6
PAB ⇑*iVmb_V* 22 36 08.1
95nm,SNR=17
MTLF Montolieu 7.00 352 *e*Pn Pn 22 36 03.6 +1.3
MTLF *e*Sn Sn 22 37 20.8 -0.6
8.0nm,0.6s
EPF Esparros 7.05 341 *e*Pn Pn 22 36 04.8 +1.7
EPF *e*Sn Sn 22 37 22.3 -0.5
10nm,0.6s
LMR La Mourre 7.29 17 *e*Pn Pn 22 36 05.8 -0.6
LMR *e*Sn Sn 22 37 25.8 -2.8
6.2nm,0.3s
LMR *e*T T 22 42 25.5
GUD Guadarrama 7.35 307 P Pn 22 36 07.8 +0.5
GUD ⇑*iVmb_V* 22 36 10.6
52nm,SNR=7.2
PGF Pioggiola 7.45 33 *e*Pn Pn 22 36 08.9 +0.2
PGF *e*Sn Sn 22 37 29.4 -3.5
11nm,0.4s
PGF *e*T T 22 42 15.4
MDT Midelt 7.59 244 Pn Pn 22 36 09.9 -0.8
0.4nm,0.3s,baz=82,slow=20,SNR=12
MDT Lg Lg 22 38 18.0
0.5nm,0.3s,baz=65,slow=17,SNR=3.9
MDT LR LR 22 39 21.8
comp=Z,263nm,19.1s,baz=68,slow=40
2.4nm,0.5s
MDT Midelt 7.59 244 P Pn 22 36 10.0 -0.7
SJPF Ste Jean 7.62 333 *e*Pn Pn 22 36 12.1 +1.1
SJPF *e*Sn Sn 22 37 34.3 -2.6
23nm,0.7s
IFR Ifrane 7.66 250 P Pn 22 36 11.4 -0.2
IFR S Sn 22 37 35.5 -2.4
LASF Ste Croix 7.66 2 *e*Pn Pn 22 36 11.9 +0.4
LASF *e*Sn Sn 22 37 35.8 -2.1
20nm,0.7s
SMRF Simiane la Rot 7.72 11 *e*Pn Pn 22 36 13.5 +1.2
SMRF *e*Sn Sn 22 37 37.2 -2.1
7.9nm,0.7s
SMRF *e*T T 22 42 32.8
CLTB Caltabellotta 7.85 79 Pn Pn 22 36 15.7 +1.5
SBF Sospel 8.03 21 *e*Pn Pn 22 36 15.6 -1.0
SBF *e*Sn Sn 22 37 43.3 -3.6
17nm,0.6s
SBF *e*T T 22 43 03.0
VIVF Saint-Julien-l 8.48 6 *e*Pn Pn 22 36 23.1 +0.3
VIVF *e*Sn Sn 22 37 54.0 -4.1
14nm,0.8s
CASP Castiglione de 8.53 39 Pn Pn 22 36 23.5 +0.1
CAF Calviac 8.58 353 *e*Pn Pn 22 36 25.9 +1.8
ELAN Lanestosa 8.66 324 P Pn 22 36 26.2 +1.0
ELAN ⇑*iVmb_V* 22 36 31.1
158nm,SNR=5.8
MBDF Montbardon 8.67 16 *e*Pn Pn 22 36 24.4 -1.1
MBDF *e*Sn Sn 22 37 59.7 -3.1
9.3nm,0.7s
ORIF Oris-en-Rattie 8.69 11 *e*Pn Pn 22 36 26.2 +0.6
RAFF Raffo Rosso 8.74 81 Pn Pn 22 36 28.6 +2.3
LFF La Frestale 8.78 347 *e*Pn Pn 22 36 28.5 +1.7
EGRO El Granado 8.87 281 P Pn 22 36 28.8 +0.7
EGRO ⇑*iVmb_V* 22 36 29.5
46nm,SNR=3.9
SSB Saint Sauveur 8.90 5 Pn Pn 22 36 29.5 +1.1
BNI Bardonecchia 8.96 15 Pn Pn 22 36 30.2 +0.8
RJF Les Rejaudoux 9.01 351 *e*Pn Pn 22 36 31.4 +1.4
PVAQ Vaqueiros 9.05 280 *e*P Pn 22 36 29.7 -0.9
30nm,1.7s
PVAQ Vaqueiros 9.05 280 Pn Pn 22 36 29.7 -0.9
PMRV Marv??o 9.13 293 *e*P Pn 22 36 32.3 +0.7
39nm,1.6s
PBDV Barranco-do-Ve 9.21 279 *e*P Pn 22 36 32.9 +0.1
38nm,1.8s
OSSC Osservatorio P 9.26 37 Pn Pn 22 36 32.8 -0.5
PCBR Castelo Branco 9.31 295 *e*P Pn 22 36 36.5 +2.4
42nm,1.4s
LPG La Plagne 9.40 14 *e*Pn Pn 22 36 36.9 +1.3
LPG *e*Sn Sn 22 38 17.3 -3.7
4.8nm,0.8s
EVO Evora 9.40 286 *e*P Pn 22 36 35.7 +0.3
16nm,1.6s
LPL La Plagne 9.42 14 *e*Pn Pn 22 36 37.0 +1.2
LPL *e*Sn Sn 22 38 17.8 -3.5
4.3nm,0.5s
MESJ Messejana 9.48 282 *e*P Pn 22 36 35.4 -1.0
MVO Moncorvo 9.50 303 *e*P Pn 22 36 37.7 +0.9
23nm,1.6s
MTE Manteigas 9.55 298 *e*P Pn 22 36 37.7 +0.3
EARI Arriondas 9.61 318 P Pn 22 36 39.9 +1.8
EARI ⇑*iVmb_V* 22 36 43.3
239nm,SNR=7.1
PBRG Braganca 9.62 307 *e*P Pn 22 36 38.5 +0.2
14nm,1.2s
ECAL Calabor 9.68 308 P Pn 22 36 39.2 -0.1
ECAL ⇑*iVmb_V* 22 36 41.8
170nm,SNR=8.3
NRCA Norcia 9.79 46 Pn Pn 22 36 42.0 +1.2
PVIS Viseu 9.91 299 *e*P Pn 22 36 43.1 +0.7
TCF Toulx Ste Croi 9.92 355 *e*Pn Pn 22 36 44.3 +1.9
PVRL Vila Real 10.01 302 *e*P Pn 22 36 45.7 +1.9
POLO Lamas de Olo 10.11 303 *e*P Pn 22 36 47.1 +2.0
PCAS Casmilo, Conde 10.12 295 *e*P Pn 22 36 45.6 +0.3
BGF Bois d'Agland 10.15 357 *e*Pn Pn 22 36 46.3 +0.7
SMF Signal de Mont 10.23 1 *e*Pn Pn 22 36 47.6 +0.9
SENIN Lac Senin/Sane 10.34 15 Pn Pn 22 36 49.7 +1.3
AVF Avril sur Loir 10.37 359 *e*Pn Pn 22 36 50.0 +1.4
CABF La Chapelle 10.37 10 *e*Pn Pn 22 36 49.7 +1.0
MFF Saint Martin d 10.55 346 *e*Pn Pn 22 36 50.9 -0.1
SSF Saint Saulge 10.64 360 *e*Pn Pn 22 36 53.0 +0.7
LOR Lormes 10.85 1 *e*Pn Pn 22 36 56.9 +1.7
baz=183
HYF Humbligny 10.87 357 *e*Pn Pn 22 37 00.5 +5.0
DAVOX Davos/Dischmat 11.40 23 LR LR 22 41 25.1
comp=Z,56nm,18.6s,baz=240,slow=37
HINF Hinteralfeld 11.66 11 *e*Pn Pn 22 37 05.9 -0.4
HAU Haudompre 11.78 9 *e*Pn Pn 22 37 07.8 -0.1
SFTF Sexfontaines 11.84 5 *e*Pn Pn 22 37 10.2 +1.5
ECH Echery 12.10 12 Pn Pn 22 37 12.5 +0.2
MEZF Maizieres J'vi 12.14 5 *e*Pn Pn 22 37 13.2 +0.4
baz=174
PAGF Fort de Pagny 12.25 7 *e*Pn Pn 22 37 14.5 +0.2
baz=192
SAVF Savonnieres en 12.26 5 *e*Pn Pn 22 37 15.8 +1.4
baz=180
CDF Champ du Feu 12.31 12 *e*Pn Pn 22 37 15.9 +0.7
BFO Black Forest 12.43 15 Pn Pn 22 37 16.0 -0.8
LDF La Druitiere 12.47 349 *e*Pn Pn 22 37 16.4 -0.8
QUIF Quistinic 12.51 339 *e*Pn Pn 22 37 17.7 -0.2
SGMF Saint Gilles 12.65 341 *e*Pn Pn 22 37 20.6 +0.8
ROSF Rostrenen 12.92 339 *e*Pn Pn 22 37 25.1 +1.6
BAIF Baives 13.65 2 *e*Pn Pn 22 37 35.7 +2.3
GIVF Givet 13.72 4 *e*Pn Pn 22 37 34.5 +0.2
GEC2 GERESS Array S 14.50 28 Pn Pn 22 37 46.0 +0.9
GERES GERESS Array B 14.50 28 Pn Pn 22 37 43.9 -1.2
0.1nm,0.3s,baz=205,slow=12,SNR=9.5
0.6nm,0.7s
GERES GERESS Array B 14.50 28 Pn Pn 22 37 46.3 +1.2
KHC Kasperske Hory 14.69 27 Pn Pn 22 37 48.4 +0.8

KHC Kasperske Hory 14.69 27 *e*P Pn 22 37 49.0 +1.4
CKRC Cesky Krumlov 14.71 29 *e*P Pn 22 37 49.5 +1.6
CLL Collm 16.37 22 *e*(sP) P 22 38 15.0 +2.7
KRLC Kraliky 16.70 31 *e*P P 22 38 15.8 -0.2
IDI Anoyia 17.37 87 P P 22 38 23.5 -0.1
0.2nm,0.3s,baz=299,slow=12,SNR=13
3.0nm,0.7s
IDI Anoyia 17.37 87 P 22 38 23.9 +0.4
IDI IAmb IAmb 22 38 28.4
comp=Z,14nm,1.3s
SANT Santorini 17.67 84 P 22 38 26.8 -0.1
SANT IAmb IAmb 22 38 38.2
comp=Z,9.2nm,1.3s
RDO Rodhopi 17.80 68 Pn 22 38 27.9 +0.3
OJC Ojcow 18.14 35 Pn 22 38 31.6 0.0
OJC IAmb IAmb 22 38 35.2
comp=Z,9.1nm,1.4s
ALN Alexandroupoli 18.15 69 Pn Pn 22 38 31.0 -0.8
KARP Karpathos 19.15 86 P P 22 38 43.2 0.0
KARP IAmb IAmb 22 38 54.8
comp=Z,9.9nm,0.9s
MLR Muntele Rosu 19.17 55 P P 22 38 44.2 +0.7
comp=Z,0.1nm,0.3s,baz=288,slow=6.9,SNR=11
comp=Z,8.0nm,1.1s
MLR Muntele Rosu 19.17 55 P P 22 38 44.1 +0.7
MLR IAmb IAmb 22 38 52.9
comp=Z,16nm,1.5s
BURAR Bucovina Array 19.56 48 P Pn 22 38 49.0 0.0
BUR08 Bucovina Ar. S 19.57 48 P P 22 38 48.4 +0.6
ARG Arkhangelos 19.83 83 P P 22 38 51.1 +0.6
KOWA Kowa 22.84 199 P P 22 39 22.2 -0.8
KOWA IAmb IAmb 22 39 38.0
comp=Z,7.5nm,1.6s
TOA0 Torodi Ar. Sit 23.22 184 P P 22 39 25.6 -1.4
TOA0 IAmb IAmb 22 39 27.7
comp=Z,12nm,1.5s
TORD Torodi Ar. Bea 23.22 184 P P 22 39 25.2 -1.7
comp=Z,1.7nm,0.5s,baz=2.7,slow=8.0,SNR=20
comp=Z,1.7nm,0.5s
TORD Torodi Ar. Bea 23.22 184 P P 22 39 25.6 -1.4
TORD IAmb IAmb 22 39 28.5
comp=Z,5.1nm,1.2s
AKASG Malin Array Be 23.32 44 P P 22 39 25.9 -1.8
comp=Z,1.2nm,0.6s,baz=243,slow=9.6,SNR=4.1
AKASG LR LR 22 48 14.9
comp=Z,37nm,20.0s,baz=252,slow=36
comp=Z,1.2nm,0.6s
PABE Paberze 23.65 30 P P 22 39 30.8 0.0
HFS Hagfors 24.63 12 P P 22 39 39.7 -0.2
comp=Z,1.5nm,0.6s,baz=230,slow=9.3,SNR=4.9
comp=Z,1.5nm,0.6s
BNN Bunyan 25.65 75 P P 22 39 50.2 +0.6
BNN IAmb IAmb 22 39 57.9
comp=Z,7.1nm,0.8s
FINES FINESS Array B 28.81 22 P P 22 40 17.3 -0.2
comp=Z,0.8nm,0.7s,baz=197,slow=12,SNR=1.5
comp=Z,0.8nm,0.7s
BORG Borgarnes 32.02 340 LR LR 22 51 52.2
comp=Z,35nm,21.6s,baz=131,slow=33
ARCES ARCESS Array B 35.29 13 P P 22 41 13.6 -0.6
comp=Z,1.8nm,0.7s,baz=252,slow=1.9,SNR=4.1
comp=Z,1.8nm,0.7s
ARCES ARCESS Array B 35.29 13 P P 22 41 13.6 -0.6
LVZ Lovozero 36.07 19 P P 22 41 22.5 +1.5
MKAR Makanchi Array 57.50 53 P P 22 44 08.8 -0.1
comp=Z,0.4nm,0.6s,baz=308,slow=6.0,SNR=2.3
comp=Z,0.4nm,0.6s
YKA Yellowknife Ar 69.70 334 P P 22 45 28.4 -0.7
comp=Z,0.8nm,0.6s,baz=49,slow=5.8,SNR=5.9
comp=Z,0.8nm,0.6s
SONM Songino Array 71.61 44 P P 22 45 41.9 +0.8
comp=Z,0.4nm,0.7s,baz=285,slow=7.2,SNR=1.7
comp=Z,0.4nm,0.7s
TXAR Lajitas Array 85.41 303 P P 22 46 57.3 -0.3
comp=Z,0.2nm,0.7s,baz=91,slow=6.3,SNR=2.3
comp=Z,0.2nm,0.7s
ASAR Alice Springs 135.66 88 PKP PKiKP 22 53 41.6 -0.4
comp=Z,0.2nm,0.4s,baz=15,slow=7.7,SNR=2.6
STKA Stephens Creek 145.21 95 PKPbc PKPdf 22 53 58.4 +1.0
comp=Z,1.9nm,0.7s,baz=329,slow=7.8,SNR=4.9

*IDC **01** 22:34:24.7±0.9,36°.00N×141°.20E,h0km,mb3.8/9,*
mbtmp3.9/14,ML3.5/3,MS2.4/1,Error ellipse:
s-maj=26.6km s-min=16.1km az=74.0
*NEIC **01** 22:34:35.8±1.9,35°.65N±0°.05×140°.33E±0°.10,h63km±6km,*
mb4.3/14,Error ellipse: s-maj=11.4km s-min=7.2km
az=88.0
*JMA **01** 22:34:36.6±0.2,35°.7N±0°.6×140°.1E±0°.9,h71km±2km,*
MV3.7/40,CENTRAL CHIBA PREF
JMA Felt II J1 at CENTRAL CHIBA PREF .
*NIED **01** 22:34:36.6,35°.68N×140°.12E,h71km,MW3.9,Moment*
Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm;
Mrr2.27; Mθθ-1.42; Mφφ-0.85; Mrθ1.16; Mθφ2.04; Mφr6.57;
Fault plane solution: M₀7.09000×10¹⁴ NP1:
φs112.00000°,δ19.00000°,λ22.00000°. NP2:φs1.00000°,
δ83.00000°,λ107.00000°.

ISC 01 22:34:36.6±0.7,35°.59N±0°.04×140°.18E±0°.04,h75km±6km,
n63,σ1s55/68,mb4.0/17,12D,Near east coast of eastern
Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCN	**Nagara**	**0.17**	**173**	⇓P	**Pn**	**22 34 48.2**	**+0.5**
JCN				⇓S	**Sn**	**22 34 57.7**	**+1.9**
JSMT	**Sammumatsuo**	**0.23**	**75**	P	**Pn**	**22 34 48.0**	**+0.1**
JSMT				*e*S	**Sn**	**22 34 57.9**	**+1.6**
TOK	**Tokyo**	**0.36**	**287**	⇓P	**Pn**	**22 34 48.9**	**+0.2**
JIHU	**Itakohorinouch**	**0.47**	**37**	*e*P	**Pn**	**22 34 49.2**	**-0.4**
JYT	**Yasato**	**0.64**	**1**		**Pn**	**22 34 49.8**	**-1.4**
JYT					**Sn**	**22 34 59.4**	**-2.7**
BSO3	**Boso 3**	**0.83**	**161**	P	**Pn**	**22 34 53.6**	**+0.6**
BSO3				*e*S	**Sn**	**22 35 07.6**	**+2.4**
JOD2	**Odawara 2**	**0.95**	**250**	⇓P	**Pn**	**22 34 54.4**	**-0.3**
JOD2				⇓S	**Sn**	**22 35 07.0**	**-1.2**
JAG	**Ashikaga**	**1.02**	**325**	⇓P	**Pn**	**22 34 54.7**	**-0.9**
JIM2	**Oshima 3**	**1.06**	**215**	P	**Pn**	**22 34 55.6**	**-0.5**
JIM2				S	**Sn**	**22 35 09.9**	**-0.8**
JRY	**Ryogami san**	**1.12**	**293**	⇓P	**Pn**	**22 34 56.8**	**-0.1**
BSO1	**Boso 1**	**1.14**	**145**	P	**Pn**	**22 34 56.7**	**+0.2**
BSO1				*e*S	**Sn**	**22 35 13.9**	**+2.5**
JFNN	**Fujinakano**	**1.28**	**253**	⇓P	**Pn**	**22 34 58.8**	**0.0**
JFNN				⇓S	**Sn**	**22 35 15.5**	**-0.1**
JYN	**Shimob**	**1.33**	**267**	⇓P	**Pn**	**22 34 59.4**	**-0.2**
JIZS	**Izushimoda**	**1.37**	**231**	⇓P	**Pn**	**22 34 60.0**	**-0.1**
JIZS				⇓*e*S	**Sn**	**22 35 17.2**	**-0.5**
JKT	**Katashina**	**1.40**	**328**	P	**Pn**	**22 34 59.6**	**-0.9**
MJAR	**Matsushiro Arr**	**1.86**	**101**	Pn	**Pn**	**22 35 05.8**	**-0.7**
MJAR	7.3nm,0.3s,baz=190,slow=21,SNR=130			Sn	**Sn**	**22 35 30.5**	**+1.3**
MJAR	6.0nm,0.3s,baz=140,slow=51,SNR=4.7			LR	LR	22 35 46.9	
	comp=Z,70nm,20.3s,baz=153,slow=33						
	42nm,0.5s						
MAJO	**Matsushiro**	**1.86**	**301**		**Pn**	**22 35 06.8**	**+0.3**
MJB9	**Matsu-Tunnel**	**1.86**	**302**		**Pn**	**22 35 06.6**	**0.0**
JGF	**Kuroka**	**2.30**	**271**		**Pn**	**22 35 13.8**	**+1.4**
JMM	**Marumori**	**2.33**	**12**	Pn	**Pn**	**22 35 12.7**	**-0.1**
JMM				Sn	**Sn**	**22 35 39.2**	**-1.2**
JHJ	**Hachijo jima 2**	**2.48**	**188**	Pn	**Pn**	**22 35 15.4**	**+0.6**
	42nm,0.3s,baz=154,slow=23,SNR=67						
JHJ				Sn	**Sn**	**22 35 44.5**	**+0.4**
	214nm,0.3s,baz=255,slow=22,SNR=10						
	110nm,0.3s						
JHJ2	**Mitsune**	**2.48**	**187**		**Pn**	**22 35 15.6**	**+0.7**
INU	**Inuyama**	**2.59**	**266**		**Pn**	**22 35 16.9**	**+0.6**
JSD	**Sado**	**2.89**	**328**		**Pn**	**22 35 19.7**	**-0.6**
JHS	**Saijyo**	**5.80**	**266**		**Pn**	**22 36 02.0**	**+1.9**
ERM	**Erimo**	**6.83**	**19**	Pn	**Pn**	**22 36 10.6**	**-3.4**
JNU	**Nakatsue**	**8.07**	**255**	Pn	**Pn**	**22 36 30.5**	**-0.5**
JCJ	**Chichijima**	**8.63**	**168**	Pn	**Pn**	**22 36 35.9**	**-2.8**
	28nm,0.4s,baz=299,slow=24,SNR=8.1						
JCJ				Sn	**Sn**	**22 38 07.3**	**-7.2**
	5.4nm,0.3s,baz=252,slow=23,SNR=1.5						
JCJ	**Chichijima**	**8.63**	**168**		**Pn**	**22 36 35.8**	**-2.9**
KSRS	**Korea Array**	**10.04**	**284**	Pn	**Pn**	**22 37 00.4**	**+2.6**
	0.2nm,0.3s,baz=99,slow=13,SNR=3.5						
	1.3nm,0.5s						
USRK	**Ussuriysk Ar.**	**10.65**	**326**	Pn	Pn	22 36 59.5	-6.7
	0.4nm,0.6s,baz=148,slow=14,SNR=3.4						
PETK	**Petropavlovsk-**	**21.44**	**30**	P	P	22 39 05.2	-13
	0.6nm,0.6s,baz=191,slow=7.0,SNR=2.8						
	0.6nm,0.6s						

SONM Songino Array 27.80 307 P **P** 22 40 17.8 -0.8
0.6nm,0.6s,baz=110,slow=9.1,SNR=5.6
0.6nm,0.6s
SONM Songino Array 27.80 307 P **P** 22 40 17.5 -1.1
H11N2 WAKE ISLAND Hy 28.33 117 T T 23 10 05.4
baz=308,slow=75,SNR=57
H11N1 WAKE ISLAND Hy 28.33 117 T T 23 10 10.2
baz=308,slow=75,SNR=46
H11N3 WAKE ISLAND Hy 28.34 117 T T 23 10 07.8
baz=308,slow=75,SNR=53
H11S1 WAKE ISLAND Hy 28.97 119 T T 23 10 26.6
baz=313,slow=74,SNR=27
H11S3 WAKE ISLAND Hy 28.97 119 T T 23 10 29.8
baz=313,SNR=20
H11S2 WAKE ISLAND Hy 28.99 119 T T 23 10 32.4
baz=313,slow=74,SNR=25
ZAA0 Zalesovo Array 42.17 314 P **P** 22 42 22.9 +1.4
ZAA0 IAmb IAmb 22 42 23.1
comp=Z,1.7nm,0.8s
ZALV Zalesovo Beam 42.17 314 P **P** 22 42 21.8 +0.3
comp=Z,1.3nm,0.4s,baz=103,slow=8.6,SNR=7.8
comp=Z,1.3nm,0.4s
MK31 Makanchi Array 44.06 303 P **P** 22 42 37.4 +0.6
MK31 IAmb IAmb 22 42 38.3
comp=Z,2.8nm,1.1s
MKAR Makanchi Array 44.06 303 P **P** 22 42 37.5 +0.6
comp=Z,1.2nm,0.5s,baz=85,slow=9.9,SNR=19
comp=Z,1.2nm,0.5s
KURK Kurchatov 46.05 309 P **P** 22 42 52.9 +0.3
KURK IAmb IAmb 22 42 53.6
comp=Z,4.1nm,0.9s
PRZ Przheval'sk 47.55 298 P **P** 22 43 06.0 +1.4
PRZ IAmb IAmb 22 43 07.1
comp=Z,4.5nm,0.7s
KDJ Kajisay 48.51 298 P **P** 22 43 12.9 +0.9
KDJ IAmb IAmb 22 43 32.5
comp=Z,2.4nm,1.1s
MTN Manton Dam 48.92 192 P P 22 43 17.1 +2.0
KNRA Kununurra 52.12 194 P P 22 43 39.6 +0.5
KKAR Karatay Array 52.99 301 P P 22 43 45.5 0.0
WB0 Warramunga Arr 55.32 187 P P 22 44 02.6 +0.1
WRA Warramunga Arr 55.50 187 P **P** 22 44 04.2 +0.4
comp=Z,0.4nm,0.4s,baz=1.3,slow=7.6,SNR=13
comp=Z,0.4nm,0.4s
WRA Warramunga Arr 55.50 187 P P 22 44 03.6 -0.2
ARU Arti 56.79 319 P **P** 22 44 13.0 +0.4
ARU IAmb IAmb 22 44 20.8
comp=Z,2.3nm,0.8s
ABKAR Akbulak array 58.11 310 P P 22 44 22.5 +0.5
ABKAR IAmb IAmb 22 44 23.3
comp=Z,2.9nm,1.1s
ASAR Alice Springs 59.23 187 P **P** 22 44 32.0 +2.0
comp=Z,0.2nm,0.4s,baz=13,slow=9.7,SNR=4.1
comp=Z,0.2nm,0.4s
MBWA Marble Bar 59.67 202 P **P** 22 44 33.4 +0.4
MBWA IAmb IAmb 22 44 48.5
comp=Z,5.9nm,1.1s
ARCES ARCESS Array B 65.00 339 P P 22 45 06.9 -1.2
comp=Z,2.3nm,0.8s,baz=85,slow=13,SNR=1.7
comp=Z,2.3nm,0.8s
FINES FINESS Array B 69.63 332 P P 22 45 36.2 -1.1
comp=Z,1.8nm,1.0s,baz=68,slow=5.1,SNR=4.6
comp=Z,1.8nm,1.0s
FINES FINESS Array B 69.63 332 P **P** 22 45 37.0 -0.3
AKASG Malin Array Be 74.83 322 P **P** 22 46 09.0 +0.4
comp=Z,0.6nm,0.4s,baz=46,slow=5.3,SNR=4.8
comp=Z,0.6nm,0.4s
BURAR Bucovina Array 78.82 321 P **P** 22 46 31.6 +0.3
LPAZ La Paz 148.28 60 PKPbc **PKPdf** 22 54 09.6 -2.2
comp=Z,1.9nm,0.3s,baz=276,slow=6.8,SNR=5.5

DJA 01 22:35:01.2±2.1,3°.5±4°.×12°.3E±°,h27km±22km,M3.9/9,
mb4.6/1,MLv3.5/9,Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUWI	**Luwuk**	**1.96**	**1**	P	Pn	22 35 32.7	-0.1
LUWI				S	Sn	22 35 57.3	+0.8
APSI	**Ampana**	**2.36**	**333**	P	Pn	22 35 38.1	-0.1
TTSI	**Tana Toraja**	**2.91**	**269**	P	Pn	22 35 46.3	+0.6
BNSI	**Bone**	**2.96**	**242**	P	Pb	22 35 52.7	-0.5
SPSI	**Sidrap Palu**	**3.10**	**252**	P	Pn	22 35 48.9	+0.5
BKSI	**Bulukumba**	**3.46**	**229**	P	Pn	22 35 54.0	+0.6
MRSI	**Marisa**	**3.56**	**347**	P	Pn	22 35 55.0	+0.3
MPSI	**Mapaga**	**4.37**	**320**	P	Pn	22 36 05.1	-0.8
TNTI	**Ternate**	**5.97**	**51**	P	Pn	22 36 27.9	0.0

*IDC **01** 22:48:04.6±2.0,26°.46N×130°.95E,h0km,mb3.6/5,*
mbtmp3.6/5,Error ellipse: s-maj=127.5km s-min=25.6km
az=71.0
*JMA **01** 22:48:11.8±0.4,26°N±2°.×12°.8E±°,h51km±3km,MV3.2/10,*
NEAR OKINAWAJIMA ISLAND

ISC 01 22:48:13.8±1.1,25°.63N±0°.08×127°.83E±0°.06,h50km,n13,
σ1s65/17,mb3.5/5,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJT3	**Tamagusuku3**	**0.52**	**355**	P	**Pn**	**22 48 24.0**	**-1.2**
JJT3				*e*S	**Sn**	**22 48 32.9**	**-0.5**
JNTH	**Nagotoyohara**	**0.91**	**11**	P	**Pn**	**22 48 29.3**	**-0.9**
JNTH				*e*S	**Sn**	**22 48 42.6**	**+0.3**
JAGN	**Aguni-jima**	**1.09**	**331**	P	**Pn**	**22 48 31.4**	**-1.4**
JAGN				*e*S	**Sn**	**22 48 45.2**	**-1.6**
JKE	**Kume jima 2**	**1.17**	**307**	P	**Pn**	**22 48 31.0**	**-2.8**
JOW	**Kunigami**	**1.27**	**18**	P	**Pn**	**22 48 34.8**	**-0.4**
JIH	**Iheya**	**1.41**	**5**	P	**Pn**	**22 48 36.9**	**-0.1**
JMZ	**Minamidaito 2**	**3.06**	**86**	P	**Pn**	**22 48 58.5**	**-1.2**
JMZ				S	**Sn**	**22 49 32.6**	**-2.5**
JKDJ	**Kitadaitoujima**	**3.14**	**83**	P	**Pn**	**22 48 59.8**	**-1.0**
JKDJ				S	**Sn**	**22 49 34.6**	**-2.5**
MKAR	**Makanchi Array**	**41.67**	**312**	P	P	22 56 07.8	+10
	0.4nm,0.5s,baz=97,slow=9.5,SNR=5.6						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**45.74**	**171**	P	**P**	**22 56 31.7**	**+1.4**
	0.3nm,0.6s,baz=354,slow=8.5,SNR=2.2						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**49.35**	**173**	P	**P**	**22 57 00.0**	**+1.7**
	0.3nm,0.6s,baz=350,slow=8.3,SNR=2.6						
	0.3nm,0.6s						
FINES	**FINESS Array B**	**73.21**	**331**	P	P	**22 59 40.1**	**+0.9**
	1.3nm,0.9s,baz=60,slow=5.5,SNR=5.1						
	1.3nm,0.9s						
NOA	**NORSAR Array B**	**79.69**	**334**	P	**P**	**23 00 17.4**	**+1.4**
	0.9nm,0.9s,baz=57,slow=4.8,SNR=2.1						
	0.9nm,0.9s						

WEL 01 22:53:51.8±0.7,40°.5±3°.×17°.7E±°,h43km±6km,M3.1/14,
ML3.5/14,MLv3.1/14,Error ellipse: s-maj=0.0km
s-min=0.0km az=99.0,North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAHZ	**Kahuranaki**	**0.13**	**146**	P	Pn	22 54 00.3	+1.4
KAHZ				S	Sn	22 54 07.0	+3.0
CKHZ	**Cape Kidnapper**	**0.23**	**83**	P	Pn	22 54 00.6	+1.1
CKHZ				S	Sn	22 54 07.3	+2.3
MCHZ	**McNeill Hill**	**0.25**	**345**	P	Pn	22 54 01.4	+1.6
MCHZ				S	Sn	22 54 09.0	+3.6
KRHZ	**Kereru**	**0.32**	**278**	P	Pn	22 54 01.9	+1.4
KRHZ				S	Sn	22 54 09.2	+2.6
PXZ	**Pawanui**	**0.35**	**170**	P	Pn	22 54 01.7	+0.9
PXZ				S	Sn	22 54 09.3	+2.1
KWHZ	**Kaweka Forest**	**0.38**	**313**	P	Pn	22 54 02.5	+1.3
KWHZ				S	Sn	22 54 10.5	+2.7
ARHZ	**Aropaoanui**	**0.45**	**22**	P	Pn	22 54 03.2	+1.2
ARHZ				S	Sn	22 54 11.9	+2.7
WPHZ	**Waipukurau**	**0.46**	**215**	P	Pn	22 54 03.3	+1.2
WPHZ				S	Sn	22 54 12.9	+3.4
PNHZ	**Pukenui**	**0.50**	**243**	P	Pn	22 54 03.8	+1.1
PNHZ				S	Sn	22 54 13.1	+2.7
BKZ	**Black Stump Fm**	**0.57**	**337**	P	Pn	22 54 04.7	+1.1
BKZ				S	Sn	22 54 14.0	+2.2
NMHZ	**Naumai**	**0.59**	**2**	P	Pn	22 54 05.1	+1.2
NMHZ				S	Sn	22 54 14.5	+2.0
BHHZ	**Black Hill Sta**	**0.59**	**289**	P	Pn	22 54 05.2	+1.3
BHHZ				S	Sn	22 54 14.8	+2.3
PRHZ	**Porangahau**	**0.59**	**191**	P	Pn	22 54 04.6	+0.8
PRHZ				S	Sn	22 54 14.6	+2.2
TSZ	**Takapari Road**	**0.73**	**239**	P	Pn	22 54 06.5	+0.7
TSZ				S	Sn	22 54 17.4	+1.6
DVHZ	**Dannevirke**	**0.77**	**217**	P	Pn	22 54 06.7	+0.4
DVHZ				S	Sn	22 54 18.3	+1.5

RAHZ	Arahi	0.80	17	P	Pn	22 54 07.4	+0.6
RAHZ				S	Sn	22 54 19.4	+1.9
ANWZ	Angora Road	0.81	197	P	Pn	22 54 07.2	+0.5
ANWZ				S	Sn	22 54 19.7	+2.1
MTHZ	Maungataniwha	0.83	3	P	Pn	22 54 07.8	+0.6
MOVZ	Moawhango	0.84	289	P	Pn	22 54 09.1	+1.8
MRHZ	Matea Rd	0.90	342	P	Pn	22 54 09.4	+1.4
HATZ	Hinemaiaia	0.96	326	P	Pn	22 54 10.3	+1.5
KNZ	Kokohu	0.96	46	P	Pn	22 54 08.6	-0.1
TUVZ	Tukino	0.97	295	P	Pn	22 54 11.1	+2.1
WNVZ	Wahianoa	0.98	291	P	Pn	22 54 11.3	+2.0
ETVZ	East Tongariro	0.99	303	P	Pn	22 54 11.7	+2.3
SNGZ	Shannon Statio	1.00	26	P	Pn	22 54 09.7	+0.3
RITZ	Rihia Road	1.01	314	P	Pn	22 54 11.5	+2.0
WHVZ	Whangaehu Hut	1.01	293	P	Pn	22 54 11.5	+1.9
OTVZ	Oturere	1.01	301	P	Pn	22 54 11.5	+1.9
TMVZ	Te Maari	1.01	304	P	Pn	22 54 11.5	+1.9
SNVZ	South Ngauruho	1.01	299	P	Pn	22 54 11.6	+1.9
MHGZ	Mahia Peninsul	1.02	59	P	Pn	22 54 09.5	-0.2
DRZ	Dome Shelter	1.03	293	P	Pn	22 54 12.7	+2.7
TRVZ	Turoa	1.03	292	P	Pn	22 54 11.9	+1.9
NTVZ	North Tongarir	1.04	304	P	Pn	22 54 12.0	+2.0
FWVZ	Far West T-bar	1.04	294	P	Pn	22 54 11.9	+1.7
NGZ	Ngauruhoe	1.05	299	P	Pn	22 54 11.9	+1.8
POWZ	Post Office Ro	1.05	227	P	Pn	22 54 10.6	+0.5
NNVZ	North Ngauruho	1.06	301	P	Pn	22 54 12.2	+1.9
KRVZ	Karewarewa	1.06	303	P	Pn	22 54 12.2	+1.8
PRWZ	Pori Road	1.07	215	P	Pn	22 54 10.8	+0.6
BFZ	Birch Farm	1.08	202	P	Pn	22 54 10.3	-0.1
RTZ	Ruatahuna	1.08	8	P	Pn	22 54 11.0	+0.5
WTVZ	West Tongariro	1.08	301	P	Pn	22 54 12.4	+1.8
KATZ	Kakaramea	1.10	310	P	Pn	22 54 12.6	+1.7
RATZ	Rangitukua	1.13	316	P	Pn	22 54 13.0	+1.8
PRGZ	Paritu Road	1.15	49	P	Pn	22 54 11.2	-0.2
ALRZ	Allen Road	1.17	343	P	Pn	22 54 12.9	+1.1
PKVZ	Pokaka	1.18	289	P	Pn	22 54 13.8	+2.0
WHTZ	Whakaora	1.20	328	P	Pn	22 54 13.7	+1.5
MUGZ	Murupara	1.21	360	P	Pn	22 54 12.8	+0.6
TWVZ	Taurewa	1.21	300	P	Pn	22 54 13.6	+1.3
PRRZ	Plateau Road	1.22	346	P	Pn	22 54 13.4	+1.0
RIGZ	Rimuhau	1.24	38	P	Pn	22 54 12.5	-0.2
WPRZ	Whakapapatarin	1.26	337	P	Pn	22 54 14.0	+1.0
RAGZ	Rawiri	1.29	23	P	Pn	22 54 13.4	0.0
TIWZ	Tintock	1.29	212	P	Pn	22 54 13.4	+0.1
MRZ	Mangatainoka R	1.34	223	P	Pn	22 54 13.9	-0.1
RRRZ	Republican Roa	1.36	351	P	Pn	22 54 15.0	+0.7
WAZ	Wanganui	1.39	267	P	Pn	22 54 17.2	+2.6
URZ	Urewera	1.45	10	P	Pn	22 54 15.4	-0.1
TARZ	Mount Tarawera	1.46	351	P	Pn	22 54 16.7	+0.9
MWZ	Matawai	1.47	24	P	Pn	22 54 15.4	-0.4
HOWZ	Holdsworth Sta	1.55	218	P	Pn	22 54 16.4	-0.5
OMRZ	Omania	1.61	348	P	Pn	22 54 18.2	+0.4
VRZ	Vera Road	1.67	289	P	Pn	22 54 20.3	+1.8
OGWZ	Otaki Gorge	1.67	227	P	Pn	22 54 18.2	-0.3
MTW	Mount Morrison	1.77	213	P	Pn	22 54 19.2	-0.7
TWGZ	Tauwhareparae	1.77	32	P	Pn	22 54 20.2	+0.2
WHRZ	Whale Island	1.83	5	P	Pn	22 54 21.0	+0.2
KIW	Kapiti Island	1.85	230	P	Pn	22 54 20.8	-0.2
RUGZ	Raukumara Rang	1.85	22	P	Pn	22 54 20.9	-0.3
HIZ	Hauiti	1.90	307	P	Pn	22 54 23.0	+1.3
TRWZ	Traveller	1.90	206	P	Pn	22 54 20.5	-1.2
CAW	Cannon Point	1.93	222	P	Pn	22 54 21.2	-0.9
PUZ	Puketiti	1.98	36	P	Pn	22 54 21.7	-1.2
PAWZ	Paruwai Farm	1.98	211	P	Pn	22 54 21.9	-1.0
PKGZ	Pakihiroa	2.06	30	P	Pn	22 54 23.6	-0.3
HAZ	Te Kaha	2.08	22	P	Pn	22 54 23.5	-0.7
MSWZ	Moikau Station	2.08	214	P	Pn	22 54 22.5	-1.8
KHEZ	Kahui Hut	2.18	279	P	Pn	22 54 28.7	+3.2
TOZ	Tahuroa Road	2.19	332	P	Pn	22 54 26.5	+0.8
PLWZ	Palliser	2.21	211	P	Pn	22 54 24.4	-1.6
PKE	Pukeiti	2.22	282	P	Pn	22 54 29.1	+3.0
WMGZ	Waiomatatini S	2.26	35	P	Pn	22 54 25.6	-1.0
TCW	Tory Channel	2.44	231	P	Pn	22 54 28.1	-1.1
DUWZ	D'Urville Isla	2.46	242	P	Pn	22 54 29.0	-0.4
TUWZ	Tuamarina	2.78	230	P	Pn	22 54 32.0	-1.7
MKAZ	Moumakai	2.88	333	P	Pn	22 54 36.2	+1.2
BSWZ	Blackbirch Sta	3.00	227	P	Pn	22 54 34.5	-2.2
AWAZ	Awhitu Peninsu	3.11	327	P	Pn	22 54 39.7	+1.4
WIAZ	Waiheke Island	3.17	335	P	Pn	22 54 40.4	+1.4
QRZ	Quartz Range	3.45	249	P	Pn	22 54 42.1	-0.9
MRNZ	Matariki Terra	3.51	240	P	Pn	22 54 43.2	-0.6
OKCZ	Okains Bay	4.90	213	P	Pn	22 55 00.7	-2.2
CTZ	Chatham Island	6.38	131	P	Pn	22 55 22.7	-0.5

*MOS **01** 22:55:57.8±0.9, 2.03S×100.76E, h43km, mb6.6/62, MS6.0/78, Error ellipse: s-maj=5.9km s-min=3.4km az=114.4*

*BJI **01** 22:55:58.6±0.0, 2.10S×100.65E, h50km, mb6.2/91, mB6.4/82, Ms6.6/98, Ms7 6.3/94*

*NEIC **01** 22:55:59.9, 2.16S×100.64E, h55km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.42; $M_{\theta\theta}$-0.05; $M_{\phi\phi}$-0.37; $M_{r\theta}$2.61; $M_{\theta\phi}$-0.15; $M_{\phi r}$-4.90; Fault plane solution: $M_0$5.57000×10^{18} NP1:ϕ_s152.14000°, δ88.47000°, λ87.77000°. NP2:ϕ_s27.63000°, δ2.70000°, λ145.46000°. Principal axes: T 5.6883, Plg46.0000°, Azm60.0000°; N -0.2449, Plg2.0000°, Azm152.0000°; P -5.4433, Plg43.0000°, Azm244.0000°;*

*NEIC **01** 22:56:00.8±1.8, 2.10S±0.03×100.67E±0.06, h50km±1km, mb6.5/280, Ms_20 6.2/431, Mwb6.4/61, Mwc6.6/78, Mww6.6 Error ellipse: s-maj=10.5km s-min=3.3km az=249.0*

*KLM **01** 22:56:00, 2.33S×100.47E, h48km, mb6.5*

*IDC **01** 22:56:02.9±0.8, 2.00S×100.70E, h72km±6km, mb5.7/43, mbtmp6.0/45, MS6.0/84, Error ellipse: s-maj=7.6km s-min=6.4km az=59.0*

*DJA **01** 22:56:02.2±0.1, 2°S±1°×10°1E±°, h70km±1km, M6.4/136, mB6.7/135, mb6.3/136, MLv6.7/24, Mw6.5/39, Mw(mB)6.5/135, MwMwp6.3/124, Mwp6.3/124*

*GCMT **01** 22:56:04.8±0.0, 2.18S×100.57E, h29km, MW6.7/169, Moment Tensor Solution. s169,c425; s151,c577; Duration: 5s3 Moment tensor: Scale 10^{19}Nm; M_{rr}-0.02±.00; $M_{\theta\theta}$0.01±.00; $M_{\phi\phi}$0.00±.00; $M_{r\theta}$0.57±.01; $M_{\theta\phi}$-0.01±.00; $M_{\phi r}$-1.16±.01; Best double couple: $M_0$1.29100×10^{19} NP1:ϕ_s106.00000°, δ0.00000°, λ-138.00000°. NP2:ϕ_s334.00000°, δ90.00000°, λ-90.00000°. Principal axes: T 1.2860, Plg45.0000°, Azm64.0000°; N 0.0090, Plg0.0000°, Azm154.0000°; P -1.2950, Plg45.0000°, Azm244.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **01** 22:56:05, 2.41S×100.47E, h46km, Moment Tensor Solution. Duration: 9s2 Moment tensor: Scale 10^{18}Nm; M_{rr}0.10; $M_{\theta\theta}$0.66; $M_{\phi\phi}$-0.75; $M_{r\theta}$4.86; $M_{\theta\phi}$-0.22; $M_{\phi r}$-8.57; Fault plane solution: $M_0$9.88000×10^{18} NP1:ϕ_s54.00000°, δ4.00000°, λ174.00000°. NP2:ϕ_s150.00000°, δ89.00000°, λ86.00000°. Principal axes: T 9.8201, Plg45.0000°, Azm56.0000°; N 0.1247, Plg4.0000°, Azm150.0000°; P -9.9449, Plg44.0000°, Azm245.0000°;*

*NEIC **01** 22:56:21.4, 2.61S×100.62E, h39km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.48; $M_{\theta\theta}$0.29; $M_{\phi\phi}$0.20; $M_{r\theta}$3.69; $M_{\theta\phi}$-0.31; $M_{\phi r}$-7.86; Fault plane solution: $M_0$8.70000×10^{18} NP1:ϕ_s109.61000°, δ2.20000°, λ-135.19000°. NP2:ϕ_s334.82000°, δ88.45000°, λ-88.44000°. Principal axes: T 8.6861, Plg43.0000°, Azm63.0000°; N 0.0308, Plg2.0000°, Azm155.0000°; P -8.7168, Plg47.0000°, Azm246.0000°;*

ISC 01 22:56:01.3±0.2, **2.08S**±0.02×**100.70E**±0.02, **h62**km±1km, **h65**km**:pP-P, n2874, σ1s94**/3309, **mb6.3**/389, **313C-433D, Fault plane solution: NP1:**ϕ_s247.70587°, δ24.66443°, λ4.12091°. **NP2:**ϕ_s153.95979°, δ88.28156°, λ114.60822°. **Principal axes:** T Plg41.5904°, Azm87.1443°; N Plg24.5964°, Azm333.1729°; P Plg38.4178°, Azm221.8854°; **Fault plane solution: NP1:** ϕ_s154.95985°, δ87.95973°, λ58.42280°. **NP2:**ϕ_s61.64489°, δ31.63625°, λ176.10808°. **Principal axes:** T Plg38.8440°, Azm36.5740°; N Plg31.5549°, Azm156.2135°; P Plg35.2295°, Azm271.9152°; **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRJI	Kerinci	0.77	91	P	Pn	22 56 19.2	+2.6
KRJI				S	Sn	22 56 30.5	+2.6
PPSI	Pulau Pagai	0.96	225	P	Pn	22 56 17.6	-1.4
PPSI				S	Sn	22 56 30.7	-1.4
PPI	Padang Panjang	1.64	350	P	Pn	22 56 30.5	+2.5
SISI	Saibi	1.77	295	P	Pn	22 56 29.4	-0.3
RGRI	Rengat	2.37	44	P	Pn	22 56 40.8	+2.9
BKNI	Bangkinang	2.41	8		Pn	22 56 40.9	+2.4
BKNI	Bangkinang	2.41	8	P	Pn	22 56 41.6	+3.1
BKNI	Bangkinang	2.41	8	P	Pn	22 56 42.2	+3.7
BKNI	Bangkinang	2.41	8	⇑P	Pn	22 56 41.1	+2.6
PMBI	Palembang	4.16	102		Pn	22 57 03.0	+0.6
PMBI	Palembang	4.16	102	P	Pn	22 57 04.1	+1.8
PMBI	Palembang	4.16	102	P	Pn	22 57 02.7	+0.4
PMBI	Palembang	4.16	102	⇑P	Pn	22 57 03.4	+1.1
DSRI	Dabo	4.19	68	P	Pn	22 57 05.5	+2.7
LWLI	Liwa	4.45	131	P	Pn	22 57 08.2	+1.8
GSI	Gunungsitoli	4.58	317	Pn	Pn	22 57 07.2	-0.9
GSI	Gunungsitoli	4.58	317	P	Pn	22 57 07.3	-0.9
GSI	Gunungsitoli	4.58	317	P	Pn	22 57 09.4	+1.2
GSI	Gunungsitoli	4.58	317	⇑P	Pn	22 57 06.8	-1.4
TPRI	Tanjung Pinang	4.85	52	P	Pn	22 57 14.7	+2.9
MYKOM	Kota Tinggi	4.97	39		Pn	22 57 16.4	+2.9
MYKOM	Kota Tinggi	4.97	39	P	Pn	22 57 17.0	+3.5
MYKOM	Kota Tinggi	4.97	39	⇑P	Pn	22 57 16.6	+3.1
KLI	Kotabumi	4.99	124	P	Pn	22 57 16.0	+2.3
RPSI	Rantau Prapat	5.06	340		Pn	22 57 14.2	-0.5
KASI	Kota Agung	5.11	132	P	Pn	22 57 16.1	+0.8
	74nm220µm143µm8µm,0.7s						
PSI	Prapat	5.16	340	P	Pn	22 57 14.2	-2.0
	74nm,0.4s,baz=163,slow=9.3,SNR=64						
PSI				S	Sn	22 58 12.9	-1.6
	3µm,0.8s,baz=176,slow=15,SNR=5.5						
PPBI	Pangkal Pinang	5.44	91	P	Pn	22 57 22.5	+2.6
	62nm428µm55µm3µm,1.0s						
BLSI	Bandar Lampung	5.59	126	P	Pn	22 57 23.1	+1.1
	28nm247µm83µm6µm,0.9s						
TSI	Tuntungan	5.94	339	P	Pn	22 57 29.5	+2.8
	72nm108µm94µm10µm,1.0s						
JRMM	Jerantut	6.19	17	P	Pn	22 57 34.0	+3.8
KCSI	Kotacane, Aceh	6.29	332	P	Pn	22 57 31.3	-0.2
	41nm75µm38µm2µm,0.9s						
IPM	Ipoh	6.52	3		Pn	22 57 37.9	+3.1
IPM	Ipoh	6.52	3	P	Pn	22 57 39.0	+4.2
IPM	Ipoh	6.52	3	P	Pn	22 57 39.9	+5.1
IPM	Ipoh	6.52	3	⇑P	Pn	22 57 38.3	+3.5
SBJI	Serang	6.75	127	P	Pn	22 57 38.6	+0.8
	34nm54µm2µm,1.1s						
TPI	Tanjungpandan	6.99	96	P	Pn	22 57 43.7	+2.6
	17nm224µm20µm963nm,1.9s						
TNG	Tangerang	7.19	125	P	Pn	22 57 43.8	-0.1
	44nm216µm87µm8µm,1.1s						
KULM	Kulim	7.32	360	Pn	Pn	22 57 47.5	+1.8
KULM	Kulim	7.32	360	P	Pn	22 57 49.0	+3.3
KULM	Kulim	7.32	360	⇑P	Pn	22 57 47.5	+1.8
DBJI	Dramaga	7.50	127	P	Pn	22 57 49.2	+1.1
	25nm64µm3µm,1.1s						
SKJI	Sukabumi	7.62	130	P	Pn	22 57 49.1	-0.7
	17nm2µm28µm2µm,0.5s						
LHMI	Lhok Sumawe	8.17	333	Pn	Pn	22 57 56.7	-0.6
LHMI	Lhok Sumawe	8.17	333	P	Pn	22 57 57.4	+0.2
	53µm37µm1µm,0.6s						
LHMI	Lhok Sumawe	8.17	333	P	Pn	22 57 57.5	+0.2
LHMI	Lhok Sumawe	8.17	333	⇓P	Pn	22 57 57.9	+0.6
CNJI	Cibinong	8.25	129	P	Pn	22 57 56.9	-1.5
	135µm62µm4µm,1.2s						
LEM	Lembang	8.36	125	P	Pn	22 58 00.8	+0.8
	3µm,1.1s,baz=341,slow=8.9,SNR=125						
LEM				S	Sn	22 59 37.6	+4.6
	2µm,0.9s,baz=343,slow=19,SNR=1.9						
LEM				LR	LR	23 01 43.6	
	comp=Z,262µm,20.7s,baz=271,slow=41						
LEM	Lembang	8.36	125	P	Pn	22 58 01.4	+1.4
	113µm31µm1µm,0.9s						
JCJI	Jatiwangi	8.73	120	P	Pn	22 58 08.1	+3.1
	44µm2µm,1.1s						
CMJI	Cimerak	9.58	127	P	Pn	22 58 14.7	-1.9
	80µm22µm2µm,1.0s						
KSM	Kuching	10.24	70	Pn	Pn	22 58 28.4	+2.8
KSM	Kuching	10.24	70	P	Pn	22 58 29.0	+3.3
KSM	Kuching	10.24	70	P	Pn	22 58 28.9	+3.3
KSM	Kuching	10.24	70	⇑P	Pn	22 58 28.8	+3.2
SRIT	Nakonsritamara	10.66	354		Pn	22 58 31.1	-0.2
COCO	West Island	10.75	201		Pn	22 58 28.6	-4.0
COCO	West Island	10.75	201	P	Pn	22 58 28.6	-4.0
SMRI	Semarang	10.89	117		Pn	22 58 35.9	+1.3
SMRI	Semarang	10.89	117	P	Pn	22 58 36.9	+2.3
	168µm69µm3µm,0.7s						
SMRI	Semarang	10.89	117	P	Pn	22 58 37.8	+3.2
SMRI	Semarang	10.89	117	⇑P	Pn	22 58 37.1	+2.5
PBKI	Pangkalan Bun	10.98	93	P	Pn	22 58 39.8	+4.0
	233µm88µm4µm,1.7s						
STKI	Sintang	10.99	79	P	Pn	22 58 40.8	+4.9
	135µm41µm1µm,1.8s						
UWJI	Ujung Watu	11.09	113	P	Pn	22 58 40.0	+2.7
	41µm2µm,1.6s						
YOGI	Yogyakarta	11.13	121	P	Pn	22 58 37.4	-0.4
	72µm26µm2µm,0.8s						
UGM	Wanagama	11.37	121	Pn	Pn	22 58 40.2	-0.9
UGM	Wanagama	11.37	121	P	Pn	22 58 40.5	-0.6
	163µm59µm2µm,0.7s						
UGM	Wanagama	11.37	121	P	Pn	22 58 41.2	+0.1
WOJI	Wonogiri, Jawa	11.68	120	P	Pn	22 58 45.1	-0.2
	79µm17µm928nm,1.0s						
TBJI	Tambak Boyo	12.07	113	P	Pn	22 58 53.5	+2.8
	86µm40µm3µm,1.3s						
PCJI	Pacitan	12.07	121	P	Pn	22 58 48.5	-2.2
	101µm32µm2µm,2.0s						
BWJI	Bawean	12.51	108	P	Pn	22 58 58.8	+2.2
	89µm22µm1µm,1.0s						
PWJI	Pagerwojo	12.54	118	P	Pn	22 58 55.9	-1.1
	121µm32µm1µm,0.6s						
GRJI	Gresik	12.69	113	P	Pn	22 59 01.0	+1.9
	3µm15µm2µm,0.8s						
BLJI	Banyuglugur	14.03	114	P	Pn	22 59 17.6	+0.5
	72µm22µm903nm,0.5s						
GMJI	Gumukmas	14.10	116	P	Pn	22 59 17.1	-1.0
	89µm26µm725nm,1.0s						
KMMI	Kalianget	14.12	111	P	Pn	22 59 18.3	0.0
	137µm56µm5µm,1.6s						
BBKI	Banjar Baru	14.20	96	P	Pn	22 59 21.6	+2.2
	110µm44µm1µm,0.8s						
MTKI	Muara Teweh, K	14.24	86	P	Pn	22 59 22.3	+2.3
	97µm45µm2µm,1.8s						
ABJI	Asem Bagus	14.63	113	P	Pn	22 59 25.7	+0.7
	126µm49µm3µm,0.8s						
JAGI	Jajag, Banyuwa	14.82	116	Pn	Pn	22 59 25.1	-2.5
JAGI	Jajag, Banyuwa	14.82	116	P	Pn	22 59 24.8	-2.7
	87µm42µm1µm,0.7s						
JAGI	Jajag, Banyuwa	14.82	116	P	Pn	22 59 26.5	-1.0
SRBI	Singaraja	15.64	113	P	Pn	22 59 37.0	-1.0
	105µm31µm4µm,1.1s						
PBA	Port Blair	15.77	330		Pn	22 59 39.0	-0.7
PBA	Port Blair	15.77	330	P	Pn	22 59 39.5	-0.1
PBA	Port Blair	15.77	330	eP	P	22 59 42.9	+0.5
PBA				IAmb	IAmb	22 59 51.1	
	comp=Z,307nm,0.7s						
IGBI	Denpasar	15.86	116	P	Pn	22 59 40.7	-0.1
	comp=Z,43µmcomp=Z,19µmcomp=Z,907nm,0.7s						
DNP	Denpasar	15.86	115	P	Pn	22 59 40.3	-0.5
BKB	Balikpapan	16.21	87	P	P	22 59 48.4	+1.0
BKB	Balikpapan	16.21	87	P	P	22 59 49.0	+1.6
	comp=Z,212µmcomp=Z,145µmcomp=Z,7µm,1.3s						
BKB	Balikpapan	16.21	87	P	P	22 59 49.4	+2.0
BKB	Balikpapan	16.21	87	⇑P	P	22 59 49.2	+1.8
SMKI	Samarinda	16.59	85	P	P	22 59 53.5	+1.9
	comp=Z,266µmcomp=Z,150µmcomp=Z,6µm,1.7s						
SGKI	Sangatta, Kali	16.97	85	P	P	22 59 59.5	+3.7
	comp=Z,221µmcomp=Z,111µmcomp=Z,5µm,1.7s						
DGPR	DIGLIPUR	17.00	333	eP	Pn	22 59 55.4	+0.3
DGPR				IAmb	IAmb	23 00 01.4	
	comp=Z,376nm,0.9s						
SPMM	Sapulut	17.14	67	P	P	23 00 01.0	+3.3
PLAI	Plampang	18.27	112	P	P	23 00 06.4	-3.7
	comp=Z,108µmcomp=Z,26µmcomp=Z,3µm,0.8s						
PLAI	Plampang	18.27	112	P	P	23 00 10.0	-0.1
TTSI	Tana Toraja	19.13	93	P	Pn	23 00 21.7	+0.7
	comp=Z,204µmcomp=Z,51µmcomp=Z,2µm,1.2s						
SPSI	Sidrap Palu	19.14	96	P	P	23 00 19.8	+0.1
	comp=Z,168µmcomp=Z,43µmcomp=Z,2µm,1.0s						
MYLDM	Lahad Datu	19.19	68	P	Pn	23 00 22.5	+0.7
MYLDM				IAmb	IAmb	23 00 32.5	
	comp=Z,3µm,1.0s						
MYLDM	Lahad Datu	19.19	68	⇑P	Pn	23 00 23.0	+1.2
KAPI	Kappang	19.24	99	P	P	23 00 21.1	+0.3
	comp=Z,583nm,0.8s,baz=274,slow=11,SNR=164						
KAPI				S	S	23 03 53.4	-2.3
	comp=Z,34nm,0.7s,baz=267,slow=19,SNR=1.3						
KAPI				LR	LR	23 09 22.7	
	comp=Z,80µm,18.9s,baz=250,slow=42						
KAPI	Kappang	19.24	99	P	P	23 00 21.2	+0.4
KAPI	Kappang	19.24	99	P	P	23 00 21.2	+0.4
KAPI	Kappang	19.24	99	P	Pn	23 00 23.2	+0.9
KAPI				P	Pn	23 00 23.2	+0.9
KAPI	Kappang	19.24	99	P	Pn	23 00 22.7	+0.4
KAPI	Kappang	19.24	99	⇑P	Pn	23 00 21.5	-0.8
MPSI	Mapaga	19.35	83	P	Pn	23 00 24.8	+1.2
	comp=Z,247µmcomp=Z,93µmcomp=Z,5µm,1.2s						
BNSI	Bone	19.52	97	P	Pn	23 00 25.6	0.0
	comp=Z,194µmcomp=Z,86µmcomp=Z,6µm,1.6s						
BKSI	Bulukumba	19.65	100	P	Pn	23 00 26.0	-1.1
	comp=Z,169µmcomp=Z,94µmcomp=Z,6µm,0.9s						
WBSI	Waikabubak, Su	20.05	113	P	P	23 00 25.0	-4.6
	comp=Z,85µmcomp=Z,26µmcomp=Z,3µm,0.7s						
BSSI	Bau Bau, Buton	20.15	102	P	P	23 00 30.5	-0.2
	comp=Z,95µmcomp=Z,43µmcomp=Z,3µm,1.2s						
TOLI2	Tolitoli	20.33	81	P	Pn	23 00 34.2	-1.0
TOLI2	Tolitoli	20.33	81	P	Pn	23 00 34.7	-0.5
CM31	Chiang Mai Arr	20.48	355	P	P	23 00 33.0	-1.2
CM31	Chiang Mai Arr	20.48	355	P	Pn	23 00 35.7	-1.2
	SNR=314						
CM31				P	Pn	23 00 35.7	-1.2
	SNR=314						
CMAR	Chiang Mai Arr	20.48	355	P	P	23 00 33.0	-1.2
	comp=Z,232nm,0.9s,baz=185,slow=9.8,SNR=188						
CMAR				PcP	PcP	23 04 45.4	+1.2
	comp=Z,65nm,1.0s,baz=209,slow=3.0,SNR=6.2						
CMAR				ScP	ScP	23 08 15.1	-0.4
	comp=Z,30nm,0.8s,baz=208,slow=3.5,SNR=9.7						
CMAR				LR	LR	23 08 32.6	
	comp=Z,37µm,21.4s,baz=185,slow=37						
CMAR				P3KPbc		23 34 43.6	
	comp=Z,0.9nm,0.3s,baz=335,slow=4.9,SNR=8.6						
	comp=Z,232nm,0.9s						
CMAR	Chiang Mai Arr	20.48	355	P	P	23 00 32.4	-1.8
CMAR	Chiang Mai Arr	20.48	355	*ce*P	P	23 00 33.0	-1.2
CMAR				pmax	pmax		
	comp=Z,252nm,0.9s						
CHTO	Chiang Mai	20.83	355	P	P	23 00 36.6	-1.4
CHTO	Chiang Mai	20.83	355	P	P	23 00 36.6	-1.4
CHTO				pmax	pmax		
	comp=Z,375nm,0.8s						
CHTO				MLR	MLR		
	comp=Z,45µm,19.0s						
CHTO	Chiang Mai	20.83	355	P	P	23 00 38.2	+0.2
CHTO				P	P	23 00 38.2	+0.2
CHTO	Chiang Mai	20.83	355	P	Pn	23 00 40.2	-0.8
CHTO	Chiang Mai	20.83	355	⇑P	P	23 00 36.5	-1.4
APSI	Ampana	20.98	87	P	Pn	23 00 41.4	-1.4
	comp=Z,109µmcomp=Z,70µmcomp=Z,4µm,1.2s						
BASI	Baing, Sumba	21.34	113	P	P	23 00 42.3	-1.2
	comp=Z,59µmcomp=Z,36µmcomp=Z,2µm,0.8s						
MRSI	Marisa	21.39	83	P	P	23 00 45.0	+0.9
	comp=Z,179µmcomp=Z,80µmcomp=Z,6µm,0.9s						
EDFI	Ende, Flores	21.92	108	P	P	23 00 44.7	-5.1
	comp=Z,62µmcomp=Z,8µmcomp=Z,238nm,0.7s						
PALK	Pallekele	22.01	295	P	P	23 00 51.8	+1.1
	comp=Z,464nm,1.0s,baz=214,slow=8.9,SNR=45						
PALK				S	S	23 04 50.4	+0.2
	comp=Z,61nm,0.8s,baz=161,slow=22,SNR=7.5						
PALK				LR	LR	23 08 15.3	
	comp=Z,115µm,21.8s,baz=217,slow=33						
	comp=Z,464nm,1.0s						
PALK	Pallekele	22.01	295	P	P	23 00 50.8	+0.1
PALK	Pallekele	22.01	295	IAMs_20	IAMs_20	23 07 52.8	
	comp=Z,115µm,22.0s						
PALK	Pallekele	22.01	295	P	P	23 00 52.8	+2.1
PALK				P	P	23 00 52.8	+2.1
PALK	Pallekele	22.01	295	⇓P	P	23 00 52.0	+1.3
BBSI	Bau Bau	22.09	99	P	P	23 00 51.9	+0.4
	comp=Z,811nmcomp=Z,2µmcomp=Z,268nm,1.0s						
LUWI	Luwuk	22.09	88	P	P	23 00 52.2	+0.7
LUWI				IAMs_20	IAMs_20	23 10 40.9	
	comp=Z,67µm,19.0s						
LUWI	Luwuk	22.09	88	P	P	23 00 52.8	+1.2
	comp=Z,182µmcomp=Z,80µmcomp=Z,5µm,0.9s						
LUWI	Luwuk	22.09	88	P	P	23 00 55.2	+3.6
LUWI	Luwuk	22.09	88	⇑P	P	23 00 52.8	+1.2
MMRI	Maumere	22.40	108	P	P	23 00 51.0	-4.0
MMRI				IAMs_20	IAMs_20	23 10 20.5	
	comp=Z,100µm,22.0s						
MMRI	Maumere	22.40	108	P	P	23 00 51.1	-3.9
	comp=Z,95µmcomp=Z,16µmcomp=Z,1µm,1.4s						
MMRI	Maumere	22.40	108	P	P	23 00 53.8	-1.2
QIZ	Qiongzhong	22.82	23	P	P	23 00 58.6	-0.7
QIZ	Qiongzhong	22.82	23	P	P	23 00 58.9	-0.4
QIZ				sP	sP	23 01 17.9	-3.2
QIZ				S	S	23 05 04.5	+0.5
QIZ				pmax	pmax		
	comp=Z,490nm,1.5s						
QIZ				pmax	pmax		
	comp=Z,13µm,8.8s						
QIZ				LR	LR		
	comp=Z,51µm,20.3s						
QIZ				LR	LR		
	comp=Z,21µm,22.3s						
QIZ				LR	LR		
	comp=Z,66µm,28.7s						
QIZ	Qiongzhong	22.82	23	P	P	23 01 01.8	+2.5
KMSI	Cibinong	23.43	84	P	P	23 01 05.9	+0.6
	comp=Z,3µmcomp=Z,37µmcomp=Z,4µm,0.8s						
SLVN	Son La	23.48	8	P	P	23 01 05.1	-0.6
BATI	Baumata	24.20	110	P	P	23 01 09.6	-2.8
	comp=Z,1µm,0.8s,baz=223,slow=0.6,SNR=80						
BATI				S	S	23 05 21.1	-5.6
	comp=Z,138nm,0.5s,baz=279,slow=22,SNR=2.9						
BATI				LR	LR	23 13 25.4	
	comp=Z,48µm,20.7s,baz=275,slow=43						
BATI	Baumata	24.20	110	P	P	23 01 09.0	-3.4
	comp=Z,39µmcomp=Z,10µmcomp=Z,662nm,0.9s						
GIRL	Giralia	24.30	148	P	P	23 01 15.6	+2.5
	baz=24,SNR=14						
GIRL	Giralia	24.30	148	P	P	23 01 13.3	+0.2
GIRL				IAmb	IAmb	23 01 36.2	
	comp=Z,4µm,1.6s						
GIRL	Giralia	24.30	148	P	P	23 01 15.6	+2.5
GIRL	Giralia	24.30	148	⇑P	P	23 01 15.2	+2.1
SOEI	Soe	24.64	109	P	P	23 01 12.6	-3.9
SOEI				IAmb	IAmb	23 01 21.9	
	comp=Z,2µm,0.9s						
SOEI				IAMs_20	IAMs_20	23 11 45.7	
	comp=Z,83µm,22.0s						
SOEI	Soe	24.64	109	P	P	23 01 12.5	-3.9
	comp=Z,66µmcomp=Z,18µmcomp=Z,2µm,0.9s						
SOEI	Soe	24.64	109	P	P	23 01 14.4	-2.0
SOEI	Soe	24.64	109	⇑P	P	23 01 12.6	-3.9
MDRS	Chennai	25.27	307	eP	P	23 01 24.0	+2.1
MDRS				IAmb	IAmb	23 01 25.1	
	comp=Z,625nm,1.2s						
SANI	Sanana	25.28	90	P	P	23 01 21.5	-0.7
	comp=Z,116µmcomp=Z,24µmcomp=Z,1µm,1.4s						
SANI	Sanana	25.28	90	P	P	23 01 23.6	+1.5
SANI	Sanana	25.28	90	⇑P	P	23 01 21.4	-0.7
SGSI	Sangihe	25.47	77	P	P	23 01 24.8	+0.9
	comp=Z,2µmcomp=Z,10µmcomp=Z,732nm,0.9s						
TGY	Tagaytay City	25.71	51	P	P	23 01 26.8	+0.7
	comp=Z,2µm,0.6s,baz=240,slow=4.1,SNR=25						
TGY				LR	LR	23 12 57.7	
	comp=Z,52µm,20.4s,baz=216,slow=40						
TRD	Trivandrum	25.90	294	eP	P	23 01 30.1	+2.4
TRD				IAmb	IAmb	23 01 33.4	
	comp=Z,698nm,1.3s						
BRDH	Bariadhala	26.14	341	S	S	23 05 56.0	-1.2
	comp=Z,0.6nm,0.3s,baz=180,slow=20,SNR=1.2						
KOD	Kodaikanal	26.16	298	eP	P	23 01 32.0	+1.6
SALM	Salem	26.19	302	eP	P	23 01 32.9	+2.5
DAV	Davao City (W)	26.45	70	P	P	23 01 33.7	+1.0
	comp=Z,3µm,0.9s,baz=227,slow=19,SNR=55						
DAV				LR	LR	23 13 31.5	
	comp=Z,63µm,20.3s,baz=242,slow=40						
DAV	Davao City (W)	26.45	70	P	P	23 01 33.9	+1.2
DAV	Davao City (W)	26.45	70	IAMs_20	IAMs_20	23 13 20.1	
	comp=Z,62µm,20.0s						
DAV	Davao City (W)	26.45	70	P	P	23 01 35.2	+2.5
DAV				P	P	23 01 35.2	+2.5
DAV	Davao City (W)	26.45	70	⇑P	P	23 01 34.5	+1.8
MBWA	Marble Bar	26.53	137	P	P	23 01 32.7	-0.6
MBWA				IAmb	IAmb	23 01 53.4	
	comp=Z,3µm,1.8s						
MBWA	Marble Bar	26.53	137	P	P	23 01 33.8	+0.4
MBWA				P	P	23 01 33.8	+0.4
MBWA	Marble Bar	26.53	137	P	P	23 01 34.1	+0.7
MBWA	Marble Bar	26.53	137	⇑P	P	23 01 33.5	+0.2

BWNR Bhubaneshwar 26.60 327 *e*P **P** **23 01 35.5 +1.5**
TNTI Ternate 26.82 84 P **P** **23 01 35.9 -0.1**
TNTI IAmb IAmb 23 01 59.8
comp=Z,3μm,1.8s
TNTI Ternate 26.82 84 P **P** **23 01 35.3 -0.8**
comp=Z,47μmcomp=Z,12μmcomp=Z,697nm,1.7s
TNTI Ternate 26.82 84 P **P** **23 01 39.5 +3.4**
TNTI Ternate 26.82 84 ⇑P **P** **23 01 34.6 -1.4**
AZAL Aizawl 26.82 344 *e*P **P** **23 01 36.2 +0.1**
AZAL IAmb IAmb 23 01 41.1
comp=Z,919nm,0.9s
LBMI Labuha 26.84 87 P **P** **23 01 36.2 0.0**
comp=Z,56μmcomp=Z,36μmcomp=Z,2μm,1.2s
PSA00 Pilbara Seismi 26.89 138 P **P** **23 01 36.0 -0.6**
PSA00 IAmb IAmb 23 01 57.6
comp=Z,1μm,1.3s
PSA00 Pilbara Seismi 26.89 138 P **P** **23 01 37.6 +1.0**
VJD Vijayawada 27.08 314 *e*P **P** **23 01 39.6 +1.3**
KMI Kunming 27.11 4 ⇑P **P** **23 01 39.5 +0.7**
KMI pP pP 23 01 55.6 +1.6
KMI PP **PnPn** **23 02 28.5 +3.6**
KMI PcP **PcP** **23 04 59.3 +0.8**
KMI S **S** **23 06 13.1 +0.2**
KMI ScS **ScS** **23 12 25.3 +0.1**
KMI pmax pmax
comp=Z,560nm,0.9s
KMI pmax pmax
comp=Z,6μm,7.2s
KMI LR LR
comp=Z,41μm,22.0s
KMI LR LR
comp=Z,51μm,19.7s
KMI LR LR
comp=Z,51μm,22.9s
RAGD RAYAGADA 27.13 322 *e*P **P** **23 01 40.5 +1.7**
MCO Taipa Grande 27.14 27 P **P** **23 01 41.0 +2.2**
PCHI Peechi 27.28 298 *e*S **S** **23 06 16.4 +1.0**
AGT Agartala 27.39 341 *e*P **P** **23 01 43.1 +2.1**
AGT IAmb IAmb 23 01 47.5
comp=Z,1μm,0.7s
AAI Ambon 27.51 94 P **P** **23 01 40.0 -2.3**
comp=Z,72μmcomp=Z,9μmcomp=Z,342nm,0.8s
HKPS Hong Kong Po S 27.54 28 P **P** **23 01 42.7 +0.3**
HKPS IAmb IAmb 23 01 47.9
comp=Z,1μm,1.7s
HKPS IAMs_20 IAMs_20 23 12 55.3
comp=Z,51μm,20.0s
SILR SILCHAR 27.78 344 *e*P **P** **23 01 45.7 +1.2**
SILR IAmb IAmb 23 01 49.1
comp=Z,3μm,1.3s
KAAM Kaadhehdhoo 27.81 275 P **P** **23 01 43.8 -1.2**
KAAM IAmb IAmb 23 02 32.3
comp=Z,2μm,1.7s
KAAM IAMs_20 IAMs_20 23 10 27.5
comp=Z,73μm,22.0s
KAAM Kaadhehdhoo 27.81 275 P **P** **23 01 47.3 +2.3**
SNR=9.0
MSAI Masohi 28.23 93 P **P** **23 01 48.4 -0.3**
comp=Z,774nmcomp=Z,62nm,0.8s
KOHI KOHIMA 28.36 347 *e*P **P** **23 01 49.3 -0.5**
KOHI IAmb IAmb 23 01 56.3
comp=Z,406nm,0.7s
PZH PanZhiHua 28.43 2 P **P** **23 01 50.0 -0.5**
PZH sP **sP** **23 02 12.7 -0.4**
PZH PP **PnPn** **23 02 45.5 +2.7**
PZH PcP **PcP** **23 05 04.9 +3.4**
PZH S **S** **23 06 31.8 -1.7**
PZH ScP **ScP** **23 08 38.1 +0.6**
PZH ScS **ScS** **23 12 28.0 -2.9**
PZH pmax pmax
comp=Z,220nm,0.9s
PZH pmax pmax
comp=Z,4μm,10.8s
PZH LR LR
comp=Z,26μm,20.8s
PZH LR LR
comp=Z,30μm,19.8s
PZH LR LR
comp=Z,50μm,25.0s
H08S2 Diego Garcia H 28.63 258 P **P** **23 01 53.8 +1.9**
baz=44,slow=13,SNR=20
H08S2 T T 23 30 48.5
baz=80,slow=75,SNR=4072
DGAR Diego Garcia 28.63 258 P **P** **23 01 51.0 -1.2**
DGAR Diego Garcia 28.63 258 IAMs_20 IAMs_20 23 10 43.5
comp=Z,72μm,21.0s
DGAR Diego Garcia 28.63 258 *i*P **P** **23 01 52.9 +0.7**
DGAR MLR MLR
comp=Z,15μm,16.0s
DGAR Diego Garcia 28.63 258 P **P** **23 01 53.4 +1.2**
H08S3 Diego Garcia H 28.63 258 P **P** **23 01 55.3 +3.3**
baz=44,slow=13,SNR=21
H08S3 T T 23 30 40.7
baz=80,slow=75,SNR=3903
H08S1 Diego Carcia H 28.65 258 P **P** **23 01 55.4 +3.3**
baz=44,slow=13,SNR=8.3
H08S1 T T 23 30 20.7
baz=80,slow=75,SNR=3581
SHL Shillong 28.78 343 P **P** **23 01 53.0 -0.6**
SHL IAmb IAmb 23 01 57.7
comp=Z,2μm,1.2s
SHL Shillong 28.78 343 P **P** **23 01 53.0 -0.6**
SHL pmax pmax
comp=Z,2μm,1.2s
SHL Shillong 28.78 343 P **P** **23 01 53.6 0.0**
SNR=430
SHL Shillong 28.78 343 *e*P **P** **23 01 53.5 -0.1**
SHL IAmb IAmb 23 01 59.1
comp=Z,383nm,0.7s
GULI GuiLin 28.78 18 ⇑P **P** **23 01 50.6 -2.8**
GULI S **S** **23 06 35.1 -3.6**
GULI pmax pmax
comp=Z,60nm,1.1s
GULI LR LR
comp=Z,60μm,19.0s
GULI LR LR
comp=Z,45μm,17.9s
GULI LR LR
comp=Z,92μm,17.9s
MOKO MOKOCHONG 28.86 348 *e*P **P** **23 01 54.9 +0.6**
MOKO IAmb IAmb 23 02 06.4
comp=Z,499nm,0.8s
GYA Guiyang 28.95 11 ⇑P **P** **23 01 55.1 0.0**
GYA pP pP 23 02 08.7 -1.7
GYA S **S** **23 06 43.7 +2.1**
GYA ScP **ScP** **23 08 41.1 +2.0**
GYA ScS **ScS** **23 12 31.7 -1.5**
GYA pmax pmax
comp=Z,160nm,1.1s
GYA pmax pmax
comp=Z,6μm,8.1s
GYA LR LR
comp=Z,66μm,22.8s
GYA LR LR
comp=Z,67μm,16.4s
GYA LR LR
comp=Z,72μm,23.6s
HYB Hyderabad 29.19 312 *e*P **P** **23 01 57.4 +0.2**
HYBB Hyderabad (bro 29.19 312 *e*P **P** **23 01 57.8 +0.6**
HYBB IVmBBB 23 02 02.7
comp=Z,678nm,3.3s
HYBB *es*P **sP** **23 02 16.5 -3.0**
HYBB *e*PP **PP** **23 03 03.8 -0.3**
HYBB *e*PcP **PcP** **23 05 04.8 +1.3**
HYBB *e*S **S** **23 06 46.4 +1.0**
HYBB *e*ScP **ScP** **23 08 40.6 +0.6**
HYBB *e*PcS **PcS** **23 08 46.5 -0.2**
HYBB IVMs_BB IVMs_BB 23 11 17.0
comp=Z,5μm,21.6s
HYBB *e*ScS **ScS** **23 12 34.7 +0.2**
JORH JORHAT 29.32 348 *e*P **P** **23 01 57.8 -0.3**
MNCI Minicoy 29.42 291 P **P** **23 01 58.0 -1.2**
MNCI Minicoy 29.42 291 ⇑P **P** **23 02 01.6 +2.4**
GUWA GUWAHATI 29.42 343 *e*P **P** **23 01 59.1 +0.1**
GUWA IAmb IAmb 23 02 03.9
comp=Z,404nm,0.8s
MNCY Minicoy 29.44 291 *e*P **P** **23 02 01.5 +2.1**
MNCY IAmb IAmb 23 02 06.9
comp=Z,4μm,2.2s
BOK Bokaro 29.48 332 *e*P **P** **23 02 01.9 +2.2**
BOK IAmb IAmb 23 02 06.3
comp=Z,855nm,0.6s
TEZP TEZPUR 29.53 346 *e*P **P** **23 01 59.9 -0.1**
ITAN ITANAGAR 29.82 347 *e*P **P** **23 02 02.6 0.0**
ITAN IAmb IAmb 23 02 06.3
comp=Z,1μm,0.9s
BLSP Bilaspur 30.13 324 *e*P **P** **23 02 06.1 +0.7**
MORW Morawa 30.56 153 P **P** **23 02 10.3 +1.1**
baz=31,SNR=24
MORW Morawa 30.56 153 P **P** **23 02 08.5 -0.7**
MORW Morawa 30.56 153 P **P** **23 02 10.7 +1.5**
MORW Morawa 30.56 153 ⇑P **P** **23 02 10.2 +1.1**
SWI Sorong 30.58 88 P **P** **23 02 08.5 -1.0**
comp=Z,52μmcomp=Z,27μmcomp=Z,2μm,1.0s
SIJI Sorong 30.58 88 LR LR 23 16 25.7
comp=Z,13μm,20.3s,baz=228,slow=40
KNRA Kununurra 30.78 118 P **P** **23 02 09.1 -2.2**
baz=31,SNR=128
KNRA Kununurra 30.78 118 P **P** **23 02 08.9 -2.4**
KNRA Kununurra 30.78 118 P **P** **23 02 09.7 -1.6**
SLGI Shiliguri 30.97 338 *e*P **P** **23 02 15.8 +3.1**
SAUI Saumlaki 31.03 102 IAMs_20 IAMs_20 23 17 08.2
comp=Z,39μm,19.0s
GTK Tadong 31.47 339 *e*P **P** **23 02 19.2 +1.9**
GTK IAmb IAmb 23 02 21.7
comp=Z,1μm,0.6s
KNMB Chin-men Tao 31.49 32 P **P** **23 02 17.9 +0.6**
KNMB IAmb IAmb 23 02 22.2
comp=Z,2μm,1.3s
KNMB IAMs_20 IAMs_20 23 15 10.9
comp=Z,51μm,20.0s
FAKI Fak Fak 31.53 92 P **P** **23 02 17.1 -0.9**
FAKI IAmb IAmb 23 02 21.2
comp=Z,2μm,1.1s
FAKI Fak Fak 31.53 92 P **P** **23 02 17.1 -0.9**
comp=Z,51μmcomp=Z,23μmcomp=Z,2μm,1.1s
FAKI Fak Fak 31.53 92 P **P** **23 02 17.7 -0.3**
FAKI Fak Fak 31.53 92 ⇑P **P** **23 02 17.1 -0.9**
TWG Pinlang 31.74 38 P **P** **23 02 20.8 +1.2**
TWG IAmb IAmb 23 02 25.3
comp=Z,1μm,1.4s
GOA Goa 31.80 304 *e*P **P** **23 02 21.3 +1.1**
GOA IAmb IAmb 23 02 23.1
comp=Z,162nm,0.9s
TAPN Taplejung 31.82 338 *e*P **P** **23 02 22.4 +1.8**
TAPN Taplejung 31.82 338 *e*P **P** **23 02 22.4 +1.8**
comp=Z,5μm,0.9s
TPUB Ta-pu 31.83 36 P **P** **23 02 21.1 +0.6**
TPUB IAMs_20 IAMs_20 23 13 52.2
comp=Z,51μm,22.0s
TPUB Ta-pu 31.83 36 P **P** **23 02 23.6 +3.1**
RAMN Ramite 31.90 336 *e*P **P** **23 02 23.8 +2.5**
RAMN Ramite 31.90 336 *e*P **P** **23 02 22.6 +1.3**
MTN Manton Dam 31.97 111 P **P** **23 02 19.6 -2.2**
baz=32,SNR=38
MTN Manton Dam 31.97 111 P **P** **23 02 19.5 -2.3**
MTN Manton Dam 31.97 111 P **P** **23 02 20.7 -1.1**
MTN Manton Dam 31.97 111 ⇑P **P** **23 02 18.0 -3.8**
QZH Quanzhou 31.98 32 *i*P **P** **23 02 22.6 +0.9**
QZH PP **PP** **23 03 34.5 -0.5**
QZH S **S** **23 07 31.3 +2.4**
QZH pmax pmax
comp=Z,450nm,0.9s
QZH pmax pmax
comp=Z,7μm,3.9s
QZH LR LR
comp=Z,35μm,19.4s
QZH LR LR
comp=Z,23μm,18.0s
QZH LR LR
comp=Z,60μm,27.5s
BLDU Ballidu 32.18 153 P **P** **23 02 24.1 +0.7**
baz=32,SNR=16
BLDU Ballidu 32.18 153 P **P** **23 02 24.8 +1.4**
CNSH ChangSha 32.30 20 ⇑P **P** **23 02 24.7 +0.2**
CNSH S **S** **23 07 35.2 +1.3**
CNSH pmax pmax
comp=Z,5μm,7.4s
CNSH LR LR
comp=Z,66μm,17.6s
CNSH LR LR
comp=Z,41μm,15.4s
CNSH LR LR
comp=Z,84μm,17.4s
YULB Yu-li 32.30 37 P **P** **23 02 25.7 +1.1**
YULB IAmb IAmb 23 02 32.3
comp=Z,604nm,0.7s
SSLB Suanglung 32.40 36 P **P** **23 02 25.9 +0.5**
SSLB IAMs_20 IAMs_20 23 14 44.1
comp=Z,50μm,22.0s
SSLB Suanglung 32.40 36 P **P** **23 02 27.1 +1.7**
AKL Akola 32.42 315 *e*P **P** **23 02 26.0 +0.4**
KAD Karad 32.48 307 *e*P **P** **23 02 27.1 +0.9**
JIRN Jiri 32.70 336 *e*P **P** **23 02 30.4 +2.0**
ALBI Allahabad 32.81 327 *e*P **P** **23 02 30.6 +1.7**
LSA Lhasa 32.89 345 P **P** **23 02 30.6 +0.4**
LSA IAmb IAmb 23 02 36.2
comp=Z,1μm,1.4s
LSA Lhasa 32.89 345 P **P** **23 02 30.6 +0.4**
LSA pmax pmax
comp=Z,1μm,1.4s
LSA MLR MLR
comp=Z,9μm,22.0s
LSA Lhasa 32.89 345 P **P** **23 02 31.4 +1.2**
LSA S **S** **23 07 41.9 -2.0**
LSA pmax pmax
comp=Z,630nm,1.2s
LSA LR LR
comp=Z,20μm,30.6s
LSA LR LR
comp=Z,16μm,26.0s
LSA LR LR
comp=Z,11μm,28.5s
LSA Lhasa 32.89 345 P **P** **23 02 30.9 +0.7**
CD2 Chengdu 32.94 5 P **P** **23 02 29.0 -1.0**
CD2 pP pP 23 02 42.6 -2.8
CD2 sP sP 23 02 49.0 -3.8
CD2 S **S** **23 07 38.2 -5.5**
CD2 sS sS 23 08 06.7 -3.2
CD2 pmax pmax
comp=Z,520nm,0.6s
CD2 LR LR
comp=Z,74μm,15.1s
CD2 LR LR
comp=Z,71μm,23.0s
PKI Pulchoki 32.95 335 *e*P **P** **23 02 31.2 +0.7**
PKI Pulchoki 32.95 335 *e*P **P** **23 02 32.0 +1.5**
comp=Z,611nm,0.7s
PKIN Phulchoki 32.96 335 *e*P **P** **23 02 31.6 +1.0**
PKIN Phulchoki 32.96 335 *e*P **P** **23 02 32.0 +1.4**
comp=Z,645nm,0.6s
KMPI Kaimana, Papua 33.00 93 P **P** **23 02 29.2 -1.6**
comp=Z,30μmcomp=Z,13μmcomp=Z,867nm,0.8s
GUN Gumba 33.05 335 *e*P **P** **23 02 32.7 +1.3**
GUN Gumba 33.05 335 *e*P **P** **23 02 33.4 +2.0**
comp=Z,2μm,0.6s
NACB Ninganchiao 33.07 37 P **P** **23 02 32.4 +1.1**
NACB IAmb IAmb 23 02 37.2
comp=Z,1μm,0.9s
NACB IAMs_20 IAMs_20 23 15 16.9
comp=Z,43μm,22.0s
DMN Daman 33.11 334 *e*P **P** **23 02 33.4 +1.5**
DMN Daman 33.11 334 *e*P **P** **23 02 33.4 +1.5**
MUN Mundaring 33.14 155 P **P** **23 02 33.3 +1.5**
baz=33,SNR=34
MUN Mundaring 33.14 155 P **P** **23 02 33.6 +1.8**
KDU Kakadu 33.18 110 P **P** **23 02 29.4 -2.9**
baz=33,SNR=75
KDU Kakadu 33.18 110 P **P** **23 02 30.3 -2.1**
KDU Kakadu 33.18 110 ⇑P **P** **23 02 29.6 -2.8**
ENH Enshi 33.25 14 P **P** **23 02 31.7 -1.1**
ENH IAmb IAmb 23 02 35.1
comp=Z,524nm,0.7s
ENH IAMs_20 IAMs_20 23 16 54.4
comp=Z,54μm,21.0s
ENH Enshi 33.25 14 P **P** **23 02 31.7 -1.1**
YHNB Yeheng 33.32 36 P **P** **23 02 34.4 +0.9**
YHNB IAmb IAmb 23 02 38.7
comp=Z,990nm,1.1s
YHNB IAMs_20 IAMs_20 23 15 24.4
comp=Z,43μm,21.0s
YHNB Yeheng 33.32 36 P **P** **23 02 36.0 +2.5**
VLK Valmikinagar 33.42 332 *e*P **P** **23 02 38.8 +4.5**
POO Poona 33.42 309 ⇑*i*P **P** **23 02 33.0 -1.5**
comp=Z,350nm,1.0s
POO *e*P **P** **23 02 35.2 +0.8**
POO IAmb IAmb 23 02 36.5
comp=Z,278nm,1.1s
POO *e*S **S** **23 07 55.0 +3.4**
KLBR Kellerberrin 33.48 153 P **P** **23 02 35.5 +0.8**
baz=34,SNR=24
KLBR Kellerberrin 33.48 153 P **P** **23 02 36.0 +1.2**
TATO Taipei 33.62 36 P **P** **23 02 36.3 +0.3**
TATO IAmb IAmb 23 02 41.0
comp=Z,992nm,1.1s
TATO Taipei 33.62 36 IAMs_20 IAMs_20 23 15 10.4
comp=Z,40μm,22.0s
TATO Taipei 33.62 36 P **P** **23 02 37.4 +1.5**
TATO P **P** **23 02 37.4 +1.5**
GKN Gorkha 33.66 334 *e*P **P** **23 02 37.5 +1.0**
GKN Gorkha 33.66 334 *e*P **P** **23 02 38.2 +1.7**
comp=Z,973nm,0.6s
BHPL Bhopal 33.87 319 *e*P **P** **23 02 38.6 +0.3**
BHPL IAmb IAmb 23 02 48.4
comp=Z,165nm,0.6s
YOJ Yonaguni jima 34.14 38 P **P** **23 02 40.6 0.0**
YOJ IAmb IAmb 23 02 46.8
comp=Z,1μm,1.1s
YOJ Yonaguni jima 34.14 38 P **P** **23 02 40.6 0.0**
YOJ pmax pmax
comp=Z,1μm,1.1s
YOJ Yonaguni jima 34.14 38 P **P** **23 02 42.5 +1.9**
YOJ Yonaguni jima 34.14 38 ⇑P **P** **23 02 41.6 +1.1**
DANN Dangsing 34.35 333 *e*P **P** **23 02 43.6 +0.9**
DANN Dangsing 34.35 333 *e*P **P** **23 02 44.9 +2.2**
comp=Z,2μm,0.7s
NWAO Narrogin (SRO) 34.39 155 IAMs_20 IAMs_20 23 15 13.9
comp=Z,51μm,21.0s
NWAO Narrogin (SRO) 34.39 155 P **P** **23 02 44.3 +1.6**
NWAO Narrogin (SRO) 34.39 155 P **P** **23 02 44.2 +1.6**
PYUN Piuthan 34.50 332 *e*P **P** **23 02 44.8 +1.0**
PYUN Piuthan 34.50 332 *e*P **P** **23 02 45.9 +2.1**
comp=Z,2μm,0.8s
JHNI Jhansi 34.79 323 *e*P **P** **23 02 45.8 -0.3**
H01W3 Cape Leeuwin H 34.96 161 P **P** **23 02 50.4 +3.2**
baz=5.8,slow=4.3,SNR=9.9
H01W3 T T 23 39 30.1
baz=337,slow=76,SNR=104
WHN Wuhan 34.96 21 ⇑*i*P **P** **23 02 48.1 +0.6**
WHN S **S** **23 08 17.9 +3.0**
WHN ScS **ScS** **23 13 03.6 +0.6**
WHN pmax pmax
comp=Z,1μm,1.2s
WHN pmax pmax
comp=Z,12μm,9.1s
WHN LR LR
comp=Z,110μm,18.9s
WHN LR LR
comp=Z,61μm,14.3s
WHN LR LR
comp=Z,188μm,19.4s
H01W2 Cape Leeuwin H 34.97 161 P **P** **23 02 50.0 +2.7**
baz=5.8,slow=4.3,SNR=13
H01W2 T T 23 39 27.6
baz=337,slow=76,SNR=132
H01W1 Cape Leeuwin H 34.97 160 P **P** **23 02 50.8 +3.4**
baz=5.8,slow=4.3,SNR=12
H01W1 T T 23 39 12.5
baz=337,slow=76,SNR=63
WRKA Warakurna 35.06 133 P **P** **23 02 48.8 +0.2**
baz=35,SNR=162
WRKA Warakurna 35.06 133 P **P** **23 02 49.4 +0.8**
BAKI Biak 35.41 89 P **P** **23 02 50.5 -1.2**
comp=Z,19μmcomp=Z,1μm,1.0s
SRPI Serui, Papua 35.52 90 P **P** **23 02 51.4 -1.3**
comp=Z,27μmcomp=Z,11μmcomp=Z,649nm,0.9s
RKGY Rocky Gully 35.75 157 P **P** **23 02 56.4 +2.1**
baz=36,SNR=13
RKGY Rocky Gully 35.75 157 P **P** **23 02 56.5 +2.2**
JMJ Miyako jima 2 35.84 40 P **P** **23 02 57.1 +2.0**
XAN Xi'an 36.75 11 ⇑P **P** **23 03 01.6 -1.3**
XAN pP pP 23 03 12.3 -6.2
XAN PP **PnPn** **23 04 31.0 +2.7**
XAN S **S** **23 08 35.5 -6.9**
XAN SS **SnSn** **23 11 09.3 -10**
XAN pmax pmax
comp=Z,43nm,0.8s
XAN pmax pmax
comp=Z,8μm,8.9s
XAN LR LR
comp=Z,35μm,25.0s
XAN LR LR
comp=Z,75μm,19.5s
XAN LR LR
comp=Z,100μm,17.9s
LGTI Lohaghat 36.96 330 *e*P **P** **23 03 05.9 +1.3**
LGTI *e*P pP 23 03 10.8 -9.4
PTH Pithoragarh 37.05 330 *e*P **P** **23 03 07.2 +1.5**
WB0 Warramunga Arr 37.33 120 P **P** **23 03 06.6 -1.4**
WRA Warramunga Arr 37.35 121 P **P** **23 03 07.1 -1.1**
comp=Z,1μm,0.8s,baz=296,slow=9.6,SNR=539
WRA PcP **PcP** **23 05 28.4 +2.1**
comp=Z,65nm,0.9s,baz=321,slow=2.5,SNR=4.3
WRA S **S** **23 08 47.4 -4.5**
comp=Z,69nm,0.8s,baz=294,slow=16,SNR=8.2
WRA LR LR 23 21 03.4
comp=Z,12μm,21.1s,baz=288,slow=40
WRA P3KPbc 23 33 27.3
comp=Z,1.6nm,0.9s,baz=114,slow=4.1,SNR=3.6
WRA Warramunga Arr 37.35 121 P **P** **23 03 07.0 -1.3**
WRAB Tennant Creek 37.36 121 *c i*P **P** **23 03 07.2 -1.1**
WRAB pmax pmax
comp=Z,2μm,0.8s
WRAB Tennant Creek 37.36 121 P **P** **23 03 08.5 +0.2**
WRAB Tennant Creek 37.36 121 ⇑P **P** **23 03 07.2 -1.1**
WB2 Warramunga Arr 37.37 121 P **P** **23 03 07.8 -0.5**
baz=37
WR0 Warramunga Arr 37.53 121 P **P** **23 03 08.4 -1.3**
SONA Sohna 37.73 325 *e*P **P** **23 03 13.4 +2.2**
BISR Bishrakh 37.77 325 *e*P P 23 03 17.6 +6.0
AYAN Aya Nagar 37.88 325 *e*P **P** **23 03 16.4 +3.9**
AJM Ajmer 37.94 320 *e*P **P** **23 03 13.3 +0.3**
NDI New Delhi 37.99 325 *e*P **P** **23 03 15.0 +1.6**
NDI *e*S **S** **23 09 02.0 +0.8**
SMPI Sarmi 37.99 91 P **P** **23 03 12.7 -0.9**
comp=Z,25μmcomp=Z,12μmcomp=Z,546nm,1.9s
NJ2 Nanjing 38.06 25 ⇑P **P** **23 03 14.1 +0.1**
NJ2 pP **pP** **23 03 29.5 -0.1**
NJ2 PP **PnPn** **23 04 45.9 +1.8**
NJ2 PcP **PcP** **23 05 28.7 +0.5**
NJ2 S **S** **23 09 02.5 +0.3**
NJ2 ScP **ScP** **23 09 09.3 -1.4**
NJ2 sS **sS** **23 09 25.8 -2.9**
NJ2 ScS **ScS** **23 13 23.1 +2.9**
NJ2 pmax pmax
comp=Z,94nm,0.9s
NJ2 pmax pmax
comp=Z,7μm,6.3s
NJ2 LR LR
comp=Z,33μm,18.9s
NJ2 LR LR
comp=Z,22μm,16.6s
NJ2 LR LR
comp=Z,40μm,18.9s
LYN LuoYang 38.08 16 ⇑*i*P **P** **23 03 14.0 -0.1**
LYN pP pP 23 03 28.9 -0.8
LYN sP sP 23 03 36.5 -0.5
LYN PP **PP** **23 04 41.3 -0.9**
LYN S **S** **23 09 01.3 -1.1**
LYN sS sS 23 09 25.0 -3.9
LYN SS **SnSn** **23 11 43.8 -7.1**
LYN pmax pmax
comp=Z,610nm,1.1s
LYN pmax pmax
comp=Z,10μm,5.4s
LYN LR LR
comp=Z,50μm,20.1s
LYN LR LR
comp=Z,42μm,16.3s
LYN LR LR
comp=Z,53μm,21.8s
LZH Lanzhou 38.08 4 ⇑P **P** **23 03 14.2 -0.1**
LZH sP sP 23 03 34.0 -3.2
LZH PP **PnPn** **23 04 45.0 +0.5**
LZH PcP **PcP** **23 05 32.0 +3.6**
LZH S **S** **23 08 59.3 -3.5**
LZH ScS **ScS** **23 13 19.7 -0.9**
LZH pmax pmax
comp=Z,1μm,1.3s
LZH pmax pmax
comp=Z,7μm,5.4s
LZH LR LR
comp=Z,38μm,13.7s
LZH LR LR
comp=Z,50μm,14.3s

LZH LR LR
comp=Z,67µm,16.7s
SSE Sheshan 38.33 29 P **P** **23 03 17.8 +1.6**
SSE PP **PnPn** **23 04 47.1 -0.1**
SSE S **S** **23 09 07.8 +1.6**
SSE pmax pmax
comp=Z,140nm,1.4s
SSE pmax pmax
comp=Z,4µm,8.0s
GOMU GeErMu 38.47 352⇑*i*P **P** **23 03 17.8 0.0**
GOMU pP pP 23 03 32.8 -0.6
GOMU sP sP 23 03 41.6 +0.9
GOMU PP **PnPn** **23 04 49.5 +0.1**
GOMU PcP **PcP** **23 05 34.4 +4.5**
GOMU S **S** **23 09 06.4 -2.7**
GOMU sS sS 23 09 37.8 +2.2
GOMU pmax pmax
comp=Z,180nm,1.3s
GOMU pmax pmax
comp=Z,4µm,7.5s
GOMU LR LR
comp=Z,11µm,19.4s
GOMU LR LR
comp=Z,9µm,18.4s
GOMU LR LR
comp=Z,17µm,19.8s
FORT Forrest 38.54 141 P **P** **23 03 18.8 +0.8**
baz=39,SNR=142
FORT Forrest 38.54 141 P **P** **23 03 17.9 -0.1**
FORT IAmb IAmb 23 03 43.5
comp=Z,623nm,0.8s
FORT Forrest 38.54 141 P **P** **23 03 19.1 +1.1**
FORT Forrest 38.54 141⇑P **P** **23 03 18.7 +0.8**
AS31 Alice Springs 38.65 126 P **P** **23 03 18.9 -0.2**
ASAR Alice Springs 38.65 126 P **P** **23 03 18.9 -0.1**
comp=Z,1µm,0.9s,baz=304,slow=8.1,SNR=1690
ASAR PcP **PcP** **23 05 31.1 +0.8**
comp=Z,126nm,0.9s,baz=304,slow=2.8,SNR=6.1
ASAR S **S** **23 09 08.6 -2.9**
comp=Z,90nm,0.8s,baz=297,slow=14,SNR=14
ASAR LR LR 23 21 04.0
comp=Z,32µm,21.0s,baz=307,slow=39
ASAR P3KPbc 23 33 25.2
comp=Z,0.5nm,0.6s,baz=121,slow=4.3,SNR=6.0
ASAR P3KP 23 35 08.4
comp=Z,1.2nm,0.9s,baz=56,slow=3.5,SNR=4.2
comp=Z,1µm,0.9s
ASAR Alice Springs 38.65 126 P **P** **23 03 18.7 -0.4**
DDI Dehra Dun 38.79 328 *e*P **P** **23 03 22.9 +2.7**
DDI IAmb IAmb 23 03 27.2
comp=Z,1µm,0.7s
JOW Kunigami 39.17 41 LR LR 23 18 13.2
comp=Z,16µm,21.7s,baz=221,slow=34
JOW Kunigami 39.17 41 P **P** **23 03 24.2 +0.9**
JOW IAmb IAmb 23 03 27.9
comp=Z,809nm,1.2s
JOW Kunigami 39.17 41 P **P** **23 03 25.5 +2.2**
JOW Kunigami 39.17 41⇓P **P** **23 03 24.8 +1.5**
GENI Genyem 39.44 92 P **P** **23 03 23.6 -2.2**
comp=Z,43µmcomp=Z,15µmcomp=Z,779nm,1.6s
GENI Genyem 39.44 92 P **P** **23 03 28.4 +2.6**
comp=Z,778nm,1.6s
GENI Genyem 39.44 92⇑P **P** **23 03 24.0 -1.8**
SMLA Simla 39.90 328 *e*P **P** **23 03 29.6 +0.3**
SMLA IAmb IAmb 23 03 36.0
comp=Z,442nm,0.9s
BHK Bhakra 40.52 327 *e*P **P** **23 03 35.2 +0.6**
TIY Taiyuan 41.06 14⇑P **P** **23 03 39.3 +0.4**
TIY S **S** **23 09 44.1 -3.1**
TIY pmax pmax
comp=Z,380nm,0.8s
TIY pmax pmax
comp=Z,6µm,7.1s
TIY LR LR
comp=Z,33µm,20.1s
TIY LR LR
comp=Z,10µm,10.3s
TIY LR LR
comp=Z,35µm,21.6s
TIA Tai'an 41.06 20⇑P **P** **23 03 37.9 -1.0**
TIA pP **pP** **23 03 49.5 -5.2**
TIA sP **sP** **23 03 56.2 -5.7**
TIA PP **PnPn** **23 05 19.9 +0.4**
TIA S **S** **23 09 45.1 -2.0**
TIA sS sS 23 10 05.8 -8.0
TIA ScS **ScS** **23 13 38.6 +0.8**
TIA pmax pmax
comp=Z,61nm,1.1s
TIA pmax pmax
comp=Z,6µm,7.0s
TIA LR LR
comp=Z,31µm,21.1s
TIA LR LR
comp=Z,35µm,16.2s
TIA LR LR
comp=Z,54µm,24.2s
JAM Amami Oshima 41.10 40 P **P** **23 03 40.0 +0.7**
GTA Gaotai 41.30 359⇑P **P** **23 03 40.7 -0.2**
GTA pP pP 23 03 54.3 -2.4
GTA sP sP 23 03 58.9 -5.0
GTA PP **PnPn** **23 05 21.7 -0.7**
GTA ScP **ScP** **23 09 22.6 -0.7**
GTA S **S** **23 09 45.9 -4.8**
GTA ScS **ScS** **23 13 38.4 -0.9**
GTA pmax pmax
comp=Z,190nm,1.4s
GTA LR LR
comp=Z,28µm,18.7s
GTA LR LR
comp=Z,38µm,18.3s
GTA LR LR
comp=Z,28µm,22.7s
HNS HongShan 41.38 17⇑P **P** **23 03 41.4 0.0**
HNS pP **pP** **23 03 57.6 +0.4**
HNS ScP **ScP** **23 09 23.2 -0.2**
HNS S **S** **23 09 51.1 -0.6**
HNS sS **sS** **23 10 13.0 -5.4**
HNS ScS **ScS** **23 13 35.7 -3.8**
HNS pmax pmax
comp=Z,490nm,1.3s
HNS pmax pmax
comp=Z,7µm,9.8s
HNS LR LR
comp=Z,21µm,19.6s
HNS LR LR
comp=Z,37µm,19.4s
HNS LR LR
comp=Z,34µm,19.4s
AIS Amsterdam Isla 41.41 208 P **P** **23 03 41.7 0.0**
AIS IAmb IAmb 23 03 48.6
comp=Z,1µm,1.1s
AIS Amsterdam Isla 41.41 208⇑P **P** **23 03 45.0 +3.3**
AIS Amsterdam Isla 41.41 208 P **P** **23 03 45.0 +3.3**
AIS pP **sP** **23 04 05.7 +1.6**
THN Thein Dam 41.69 328 *e*P **P** **23 03 44.9 +0.9**
OOD Oodnadatta 42.10 131 P **P** **23 03 48.2 +0.7**
QIS Mount Isa 42.16 119 P **P** **23 03 47.1 -1.0**
baz=42,SNR=382
QIS Mount Isa 42.16 119 P **P** **23 03 48.2 +0.1**
MULG Mulgathing 42.26 135 P **P** **23 03 49.7 +0.9**
JMU Jammu 42.34 327 *e*P **P** **23 03 50.9 +1.5**
BTO Baotou 43.33 10 *e*P **P** **23 03 58.2 +0.8**
BTO S **S** **23 10 25.9 +5.3**
BTO LR LR
comp=Z,140µm,22.6s
BTO LR LR
comp=Z,148µm,14.5s
COEN Coen 43.60 108 P **P** **23 03 57.8 -2.1**
baz=44,SNR=15
COEN Coen 43.60 108 P **P** **23 03 57.5 -2.3**
COEN Coen 43.60 108 P **P** **23 04 00.0 +0.2**
COEN Coen 43.60 108⇑P **P** **23 03 57.3 -2.5**
JSU Suzuyama 43.76 38 P **P** **23 04 00.9 +0.1**
JSU IAmb IAmb 23 04 05.4
comp=Z,2µm,1.1s
JSU Suzuyama 43.76 38⇑P **P** **23 04 01.1 +0.3**
JSU Suzuyama 43.76 38 P **P** **23 04 00.9 +0.1**
HHC Hu-ho-hao-te 43.86 12 *e*P **P** **23 04 02.6 +0.9**
HHC sP pP 23 04 20.6 +3.0
HHC S **S** **23 10 26.9 -1.5**
HHC sS sS 23 10 49.0 -6.3
HHC ScS **ScS** **23 13 56.4 +1.3**
HHC pmax pmax
comp=Z,830nm,1.4s
HHC pmax pmax
comp=Z,10µm,6.7s
HHC LR LR
comp=Z,59µm,18.8s
HHC LR LR
comp=Z,45µm,16.7s
HHC LR LR
comp=Z,81µm,18.9s
BJT Baijiatuau 44.23 17 P **P** **23 04 04.8 +0.4**
BJT IAmb IAmb 23 04 09.5
comp=Z,2µm,1.7s
BJT Baijiatuau 44.23 17 P **P** **23 04 04.8 +0.4**
BJT pmax pmax
comp=Z,2µm,1.7s
BJT MLR MLR
comp=Z,59µm,20.0s
BJT Baijiatuau 44.23 17 P **P** **23 04 05.1 +0.6**
BJT pP **pP** **23 04 20.5 +0.1**
BJI Beijing 44.25 17 P **P** **23 04 04.8 +0.2**
BJI PcP **PP** **23 05 51.0 +2.1**
BJI ScP **ScP** **23 09 33.9 -1.1**
BJI S **S** **23 10 35.2 +1.4**
BJI pmax pmax
comp=Z,430nm,1.3s
BJI pmax pmax
comp=Z,6µm,6.8s
BJI LR LR
comp=Z,33µm,14.9s
BJI LR LR
comp=Z,18µm,16.3s
BJI LR LR
comp=Z,64µm,18.8s
NAWB Namwon 44.90 31 P **P** **23 04 09.9 0.0**
BBOO Buckleboo 45.11 137 P **P** **23 04 11.7 0.0**
baz=45,SNR=104
BBOO Buckleboo 45.11 137 P **P** **23 04 10.9 -0.7**
BBOO IAmb IAmb 23 04 31.2
comp=Z,1µm,1.3s
BBOO Buckleboo 45.11 137 P **P** **23 04 12.0 +0.3**
DL2 Dalian 45.11 23⇑*i*P **P** **23 04 11.2 -0.3**
DL2 pP **pP** **23 04 24.7 -2.8**
DL2 sP **sP** **23 04 36.0 +1.4**
DL2 PP **PP** **23 06 01.9 +3.8**
DL2 S **S** **23 10 46.7 +0.4**
DL2 ScS **ScS** **23 13 59.3 -3.5**
DL2 pmax pmax
comp=Z,190nm,1.4s
DL2 pmax pmax
comp=Z,7µm,7.6s
DL2 LR LR
comp=Z,21µm,19.9s
DL2 LR LR
comp=Z,26µm,18.9s
DL2 LR LR
comp=Z,20µm,26.7s
JNU Nakatsue 45.14 37 LR LR 23 23 19.0
comp=Z,38µm,21.4s,baz=224,slow=36
JNU Nakatsue 45.14 37 P **P** **23 04 12.3 +0.3**
JNU Nakatsue 45.14 37 P **P** **23 04 13.3 +1.4**
JNU Nakatsue 45.14 37⇑P **P** **23 04 12.2 +0.2**
JNU Nakatsue 45.14 37 P **P** **23 04 12.0 0.0**
MSEY Mahe Island 45.20 266 P **P** **23 04 11.7 -1.1**
MSEY Mahe Island 45.20 266 IAMs_20 IAMs_20 23 18 38.3
comp=Z,34µm,22.0s
MSEY Mahe Island 45.20 266 P **P** **23 04 11.7 -1.1**
MSEY pmax pmax
comp=Z,473nm,1.4s
MSEY MLR MLR
comp=Z,34µm,22.0s
MSEY Mahe Island 45.20 266 P **P** **23 04 14.4 +1.6**
MSEY P **P** **23 04 14.4 +1.6**
MSEY Mahe Island 45.20 266 *i*P **P** **23 04 14.8 +2.1**
SNR=7.8
MSEY Mahe Island 45.20 266⇓P **P** **23 04 14.2 +1.5**
JTU Tsushima 45.30 34 P **P** **23 04 12.8 -0.2**
JTU Tsushima 45.30 34⇑P **P** **23 04 13.2 +0.2**
LCRK Leigh Creek 45.36 132 P **P** **23 04 14.7 +1.0**
TJN Taejon 45.62 30 P **P** **23 04 15.3 -0.8**
TJN Taejon 45.62 30*c i*P **P** **23 04 15.9 +0.3**
TJN Taejon 45.62 30 P **P** **23 04 18.1 +2.5**
comp=Z,1µm,2.1s
MTSU Mount Surprise 45.65 113 P **P** **23 04 15.2 -1.0**
baz=46,SNR=189
MTSU Mount Surprise 45.65 113 P **P** **23 04 15.1 -1.0**
INKA Innaminka 45.99 128 P **P** **23 04 19.7 +1.0**
INCN Inchon 46.13 29 P **P** **23 04 18.9 -0.7**
INCN Inchon 46.13 29 IAMs_20 IAMs_20 23 22 53.3
comp=Z,28µm,22.0s
INCN Inchon 46.13 29 P **P** **23 04 18.9 -0.7**
INCN pmax pmax
comp=Z,221nm,0.9s
INCN MLR MLR
comp=Z,28µm,22.0s
INCN Inchon 46.13 29 P **P** **23 04 20.2 +0.6**
INCN P **P** **23 04 20.2 +0.6**
HJU Haeju 46.15 28 P **P** **23 04 19.3 -0.4**
HJU pP **pP** **23 04 30.7 -5.1**
HJU S **S** **23 11 00.6 -0.6**
HJU AmB
comp=Z,5µm,3.0s
HJU AMS AMS
comp=N,80µm,21.3s
HJU AMS AMS
comp=E,77µm,20.5s
HJU AMS AMS
comp=Z,76µm,20.2s
WHYH Whyalla 46.29 136 P **P** **23 04 22.0 +1.1**
KSCHJ Chungju 46.31 31 P **P** **23 04 20.9 -0.1**
GUMO Guam 46.48 69 LR LR 23 23 46.6
comp=Z,11µm,21.4s,baz=220,slow=36
GUMO Guam 46.48 69 P **P** **23 04 20.9 -1.9**
GUMO IAmb IAmb 23 05 36.9
comp=Z,643nm,1.2s
GUMO Guam 46.48 69 P **P** **23 04 20.9 -1.9**
GUMO pmax pmax
comp=Z,643nm,1.3s
GUMO MLR MLR
comp=Z,14µm,22.0s
GUMO Guam 46.48 69 P **P** **23 04 22.9 +0.2**
comp=Z,304nm,0.7s
GUMO Guam 46.48 69⇑P **P** **23 04 20.0 -2.7**
MANU Manus Island 46.64 91 P **P** **23 04 22.9 -1.1**
PTPS Port Pirie 46.66 136 P **P** **23 04 23.9 +0.1**
KSAR Wonju Array Be 46.71 30 P **P** **23 04 24.0 -0.1**
KSAR Wonju Array Be 46.71 30 P **P** **23 04 24.0 -0.1**
KSRS Korea Array 46.74 30 P **P** **23 04 24.1 -0.2**
comp=Z,249nm,0.9s,baz=224,slow=8.3,SNR=254
KSRS PcP **PcP** **23 05 58.1 +1.2**
comp=Z,64nm,0.9s,baz=218,slow=3.9,SNR=7.9
KSRS ScP **ScP** **23 09 43.2 -2.2**
comp=Z,7.4nm,1.0s,baz=179,slow=9.0,SNR=4.7
KSRS LR LR 23 23 39.8
comp=Z,20µm,21.6s,baz=220,slow=36
comp=Z,249nm,0.9s
KS19 Wonju Array Si 46.75 30 P **P** **23 04 24.4 0.0**
KS19 IAmb IAmb 23 04 28.1
comp=Z,435nm,1.0s
PMG Port Moresby 46.76 101 LR LR 23 27 56.0
comp=Z,18µm,20.3s,baz=288,slow=41
PMG Port Moresby 46.76 101 P **P** **23 04 23.6 -1.3**
PMG IAmb IAmb 23 04 28.0
comp=Z,533nm,0.9s
PMG Port Moresby 46.76 101 IAMs_20 IAMs_20 23 27 34.1
comp=Z,24µm,22.0s
PMG Port Moresby 46.76 101 P **P** **23 04 23.6 -1.3**
PMG pmax pmax
comp=Z,533nm,1.0s
PMG MLR MLR
comp=Z,24µm,22.0s
PMG Port Moresby 46.76 101 P **P** **23 04 24.3 -0.6**
comp=Z,691nm,0.9s
PMG Port Moresby 46.76 101⇑P **P** **23 04 23.6 -1.3**
NAPP Napperby 46.77 136 P **P** **23 04 25.8 +1.1**
PYAG Pyongyang 46.98 27 P **P** **23 04 25.6 -0.6**
PYAG pP **pP** **23 04 39.0 -3.4**
PYAG S **S** **23 11 13.6 +0.4**
PYAG AmB
comp=Z,991nm,1.1s
PYAG AMS AMS
comp=N,45µm,14.5s
PYAG AMS AMS
comp=E,49µm,15.9s
PYAG AMS AMS
comp=Z,55µm,17.9s
KBL Kabul 47.01 324 P **P** **23 04 25.8 -1.0**
KBL IAmb IAmb 23 04 37.0
comp=Z,248nm,0.6s
KBL Kabul 47.01 324 P **P** **23 04 25.8 -1.0**
KBL pmax pmax
comp=Z,249nm,0.6s
KBL Kabul 47.01 324 P **P** **23 04 27.0 +0.2**
SNR=126
KBL P **P** **23 04 27.0 +0.2**
SNR=126
WMQ Urumqi 47.16 347⇑*i*P **P** **23 04 28.9 +1.3**
WMQ sP sP 23 04 49.0 -1.8
WMQ ScP **ScP** **23 09 49.1 +2.0**
WMQ S **S** **23 11 15.6 -0.2**
WMQ ScS **ScS** **23 14 14.5 -1.7**
WMQ pmax pmax
comp=Z,4µm,1.1s
WMQ pmax pmax
comp=Z,12µm,3.8s
WMQ LR LR
comp=Z,10µm,16.7s
WMQ LR LR
comp=Z,9µm,11.9s
WMQ LR LR
comp=Z,12µm,23.5s
KSH Kashi 47.21 334 P **P** **23 04 28.6 +0.4**
KSH pP pP 23 04 39.6 -4.5
KSH sP sP 23 04 45.8 -5.5
KSH PP **PP** **23 06 20.0 +0.2**
KSH S **S** **23 11 16.0 -0.7**
KSH sS sS 23 11 38.2 -5.6
KSH SS **SS** **23 14 39.9 -5.0**
KSH pmax pmax
comp=Z,190nm,0.9s
KSH pmax pmax
comp=Z,7µm,6.7s
KSH LR LR
comp=Z,16µm,25.4s
KSH LR LR
comp=Z,13µm,25.1s
KSH LR LR
comp=Z,22µm,27.8s
SUJ Sinuiju 47.30 25 P **P** **23 04 27.9 -0.7**
SUJ pP **pP** **23 04 44.2 -0.5**
SUJ S **S** **23 11 15.0 -2.5**
SUJ AmB
comp=Z,2µm,2.3s
SUJ AMS AMS
comp=N,79µm,21.0s
SUJ AMS AMS
comp=E,47µm,12.4s
SUJ AMS AMS
comp=Z,80µm,21.1s
JMN Monobe 47.38 38 P **P** **23 04 28.9 -0.6**
JMN Monobe 47.38 38 P **P** **23 04 30.2 +0.7**
HTT Hallett 47.45 135 P **P** **23 04 30.7 +0.6**
baz=48,SNR=387
HTT Hallett 47.45 135 P **P** **23 04 31.2 +1.1**
HTT Hallett 47.45 135⇑P **P** **23 04 30.6 +0.6**
WBK Wadi Bani Khal 47.51 303 P **P** **23 04 32.2 +1.5**
SNR=8.9
WBK P **P** **23 04 32.2 +1.5**
SNR=8.9
SEHB SEOHWA 47.53 30 P **P** **23 04 30.2 -0.3**
DQM DQM 47.65 299 P **P** **23 04 32.8 +1.0**
SNR=9.3
DQM P **P** **23 04 32.8 +1.0**
SNR=9.3
MHTO MHTO 47.69 301 P **P** **23 04 32.0 0.0**
SNR=17
RER Riviere de l'E 47.69 243 P **P** **23 04 28.6 -3.6**
RER Riviere de l'E 47.69 243 P **P** **23 04 34.6 +2.4**
JHS Saijyo 47.78 36 P **P** **23 04 32.9 +0.4**
JHS Saijyo 47.78 36⇑P **P** **23 04 32.8 +0.2**
JHS Saijyo 47.78 36 P **P** **23 04 32.7 +0.2**
XLT XiLinHaoTe 47.81 15⇑*i*P **P** **23 04 32.2 -0.5**
XLT pP pP 23 04 43.3 -5.5
XLT sP sP 23 04 50.1 -5.8
XLT PcP **PcP** **23 06 04.1 +3.4**
XLT PP **PP** **23 06 27.1 +2.0**
XLT ScP **ScP** **23 09 48.8 -1.1**
XLT PcS **PcS** **23 09 59.2 +2.9**
XLT S **S** **23 11 24.9 -0.1**
XLT sS sS 23 11 49.5 -2.7
XLT ScS **ScS** **23 14 20.1 -0.4**
XLT SS **SS** **23 14 52.8 -1.6**
XLT pmax pmax
comp=Z,520nm,1.7s
XLT pmax pmax
comp=Z,7µm,6.2s
XLT LR LR
comp=Z,2µm,17.6s
XLT LR LR
comp=Z,19µm,17.1s
XLT LR LR
comp=Z,32µm,18.1s
CTA Charters Tower 47.94 115 S **S** **23 11 20.3 -7.1**
comp=Z,6.5nm,0.8s,baz=207,slow=18,SNR=0.9
CTA LR LR 23 27 17.8
comp=Z,25µm,20.5s,baz=290,slow=39
CTA Charters Tower 47.94 115 P **P** **23 04 34.8 +0.8**
CTAO Charters Tower 47.94 115 P **P** **23 04 33.2 -0.8**
CTAO IAmb IAmb 23 04 36.5
comp=Z,781nm,1.1s
CTAO Charters Tower 47.94 115 IAMs_20 IAMs_20 23 27 34.6
comp=Z,25µm,21.0s
CTAO Charters Tower 47.94 115 P **P** **23 04 33.2 -0.8**
CTAO pmax pmax
comp=Z,781nm,1.1s
CTAO MLR MLR
comp=Z,26µm,21.0s
CTAO Charters Tower 47.94 115 P **P** **23 04 34.7 +0.8**
CTAO Charters Tower 47.94 115⇑P **P** **23 04 33.1 -0.8**
CTAO Charters Tower 47.94 115 P **P** **23 04 33.6 -0.4**
CTAO pP **pP** **23 04 49.2 -0.9**
CTAO sP **sP** **23 04 56.1 -1.2**
WSAR Wadi Sarin 48.06 304 S **S** **23 11 29.4 +0.3**
comp=Z,4.8nm,0.9s,baz=23,slow=10,SNR=0.7
WSAR LR LR 23 24 43.0
comp=Z,10µm,19.0s,baz=132,slow=36
WSAR Wadi Sarin 48.06 304 P **P** **23 04 36.8 +1.8**
SNR=7.6
TWOA Tennyson Woods 48.10 137 P **P** **23 04 36.3 +1.3**
JMDO Jabal Madar 48.13 303 P **P** **23 04 36.4 +0.9**
SNR=7.9
JMDO P **P** **23 04 36.4 +0.9**
SNR=7.9
QLP Quilpie 48.34 124 P **P** **23 04 37.5 +0.5**
baz=48,SNR=131
QLP Quilpie 48.34 124 P **P** **23 04 37.6 +0.6**
QLP Quilpie 48.34 124⇑P **P** **23 04 37.4 +0.5**
JAD Aida 48.37 37 P **P** **23 04 36.7 -0.4**
SNY Shenyang 48.38 23⇑P **P** **23 04 36.2 -0.8**
SNY PP **PP** **23 06 33.6 +3.4**
SNY S **S** **23 11 28.8 -4.1**
SNY pmax pmax
comp=Z,120nm,1.2s
SNY LR LR
comp=Z,16µm,21.3s
SNY LR LR
comp=Z,20µm,22.0s
SNY LR LR
comp=Z,21µm,23.2s
SMDO Samad 48.47 304 P **P** **23 04 39.2 +1.0**
SNR=12
HHU Hamhung 48.49 28 P **P** **23 04 37.7 -0.2**
HHU pP **pP** **23 04 56.2 +2.1**
HHU S **S** **23 11 33.4 -1.2**
HHU AmB
comp=Z,2µm,2.2s
HHU AMS AMS
comp=N,29µm,17.4s
HHU AMS AMS
comp=E,30µm,18.2s
HHU AMS AMS
comp=Z,27µm,16.3s
SOCY Socotra 48.51 288 P **P** **23 04 38.0 -0.6**
SOCY IAmb IAmb 23 05 03.6
comp=Z,881nm,1.8s
SOCY Socotra 48.51 288 P **P** **23 04 39.7 +1.1**
SNR=7.0
SOCY Socotra 48.51 288⇓P **P** **23 04 39.3 +0.7**
STKA Stephens Creek 48.58 132 P **P** **23 04 39.0 +0.3**
comp=Z,401nm,0.7s,baz=302,slow=8.3,SNR=380
STKA S **S** **23 11 34.9 -1.3**
comp=Z,38nm,0.9s,baz=18,slow=20,SNR=6.7
STKA LR LR 23 27 35.0

comp=Z,18µm,20.9s,baz=298,slow=39
comp=Z,401nm,0.7s
STKA Stephens Creek 48.58 132 P **P** **23 04 39.1 +0.3**
baz=49,SNR=574
STKA Stephens Creek 48.58 132 P **P** **23 04 38.7 -0.1**
STKA Stephens Creek 48.58 132 P **P** **23 04 39.2 +0.4**
BIDO Bidbid 48.60 304 P **P** **23 04 40.4 +1.3**
SNR=15
BIDO P **P** **23 04 40.4 +1.3**
SNR=15
SHAO Shalim 48.66 296 P **P** **23 04 41.1 +1.5**
SNR=7.1
SHAO P **P** **23 04 41.1 +1.5**
SNR=7.1
SHAO Shalim 48.66 296 *i* P **P** **23 04 39.9 +0.3**
SNR=8.5
PRZ Przheval'sk 48.72 338 P **P** **23 04 41.4 +1.5**
PRZ Przheval'sk 48.72 338 P **P** **23 04 41.4 +1.5**
PRZ pmax pmax
comp=Z,773nm,0.9s
KDJ Kajisay 48.89 337 P **P** **23 04 41.9 +0.8**
KDJ Kajisay 48.89 337 P **P** **23 04 41.9 +0.8**
KDJ pmax pmax
comp=Z,1µm,0.9s
SHLS Shalkode 48.92 339*c* *i*P **P** **23 04 41.3 0.0**
SHLS *e*S **S** **23 11 38.0 -2.8**
SHLS pmax pmax
comp=Z,706nm,1.7s
SHLS smax smax
comp=N,2µm,5.3s
SHLS Shalkode 48.92 339⇑ *i*P **P** **23 04 41.4 0.0**
comp=N,706nm,1.7s,baz=340
SHLS *e*S **S** **23 11 38.0 -2.8**
comp=N,2µm,5.3s,baz=340
BSY Bisya 49.05 303 P **P** **23 04 43.8 +1.2**
SNR=27
BSY P **P** **23 04 43.8 +1.2**
SNR=27
UZB Uzynbulak 49.07 339*c* *i*P **P** **23 04 43.6 +1.1**
UZB *i*S **S** **23 11 42.1 -0.8**
UZB pmax pmax
comp=Z,198nm,0.5s
UZB smax smax
comp=N,3µm,5.5s
UZB Uzynbulak 49.07 339⇑ *i*P **P** **23 04 43.6 +1.1**
comp=N,198nm,0.5s,baz=339
UZB *i*S **S** **23 11 42.1 -0.8**
comp=N,3µm,5.5s,baz=339
DRK Karamyk 49.13 330 P **P** **23 04 44.0 +0.8**
DMTO DMTO 49.17 296 P **P** **23 04 44.5 +1.0**
SNR=7.9
DMTO P **P** **23 04 44.5 +1.0**
SNR=7.9
SATY Saty 49.22 338*c* *i*P **P** **23 04 44.7 +1.1**
SATY *i*S **S** **23 11 45.3 +0.4**
SATY pmax pmax
comp=Z,813nm,1.7s
SATY smax smax
comp=N,4µm,5.1s
SATY Saty 49.22 338⇑ *i*P **P** **23 04 44.8 +1.1**
comp=N,813nm,1.7s,baz=338
SATY *i*S **S** **23 11 45.4 +0.4**
comp=N,4µm,5.1s,baz=338
HOQ Hoqain 49.31 304 P **P** **23 04 45.6 +1.1**
SNR=15
HOQ P **P** **23 04 45.6 +1.1**
SNR=15
ULHL Ulahol 49.36 336 P **P** **23 04 47.9 +3.1**
SNR=21
JCJ Chichijima 49.38 51 LR LR 23 25 53.7
comp=N,12µm,20.8s,baz=254,slow=36
JCJ Chichijima 49.38 51 P **P** **23 04 43.4 -1.5**
JCJ Chichijima 49.38 51 P **P** **23 04 44.1 -0.9**
JCJ Chichijima 49.38 51 ⇑P **P** **23 04 43.1 -1.8**
KPKS Kokpek 49.47 339*c* *i*P **P** **23 04 46.1 +0.7**
KPKS *e* 23 06 43.7
KPKS *e*S **S** **23 11 47.5 -0.9**
KPKS pmax pmax
comp=Z,1µm,2.0s
KPKS smax smax
comp=N,4µm,6.1s
KPKS Kokpek 49.47 339⇑ *i*P **P** **23 04 46.1 +0.7**
comp=N,1µm,2.0s,baz=339
KPKS *e*PP **PP** **23 06 43.8 +3.5**
baz=339
KPKS *e*S **S** **23 11 47.6 -0.9**
comp=N,4µm,6.1s,baz=339
GAR Garm 49.52 329 P **P** **23 04 44.9 -1.1**
GAR lAmb lAmb 23 05 08.4
comp=Z,583nm,0.8s
JIE Ise 49.59 40 P **P** **23 04 46.8 +0.3**
BOOM Boomskoye usch 49.69 336 P **P** **23 04 47.8 +0.6**
BOOM lAmb lAmb 23 05 07.2
comp=Z,450nm,0.8s
BOOM Boomskoye usch 49.69 336 P **P** **23 04 47.8 +0.6**
BOOM pmax pmax
comp=Z,450nm,0.8s
TNSS Tian-Shan 49.75 337 *e*P **P** **23 04 49.1 +1.2**
TNSS Tian-Shan 49.75 337 *e*P **P** **23 04 49.2 +1.2**
baz=337
RBK Rabkut 49.77 295 P **P** **23 04 49.4 +1.2**
SNR=22
RBK P **P** **23 04 49.4 +1.2**
SNR=22
MDOK Medeo 49.81 337 *i*P **P** **23 04 48.7 +0.5**
MDOK *e* 23 06 45.6
MDOK *i*S **S** **23 11 53.5 +0.1**
MDOK Medeo 49.81 337 *i*P **P** **23 04 48.7 +0.5**
baz=337
MDOK *e*PP **PP** **23 06 45.7 +2.2**
baz=337
MDOK *i*S **S** **23 11 53.5 +0.1**
baz=337
MDOK *e*SS **SS** **23 15 31.8 +4.9**
baz=337
JASK Jask - Hormozg 49.86 307 P **P** **23 04 51.2 +2.6**
SNR=5.3
ARQ Araqi 49.86 303 P **P** **23 04 49.8 +1.1**
SNR=12
ARQ P **P** **23 04 49.8 +1.1**
SNR=12
CHGR Chuyangaron 49.88 328 P **P** **23 04 47.6 -1.0**
CHGR Chuyangaron 49.88 328 P **P** **23 04 47.6 -1.0**
CHGR pmax pmax
comp=Z,1µm,1.3s
AAA Alma-Ata 49.91 337*c* *i*P **P** **23 04 49.9 +1.2**
AAA *e* 23 06 47.1
AAA *i*S **S** **23 11 53.8 -0.6**
AAA Alma-Ata 49.91 337⇑ *i*P **P** **23 04 49.9 +1.2**
baz=337
AAA *e*PP **PP** **23 06 47.1 +3.0**
baz=337
AAA *i*S **S** **23 11 53.9 -0.6**
baz=337
SONM Songino Array 49.96 5 P **P** **23 04 49.4 +0.2**
comp=Z,335nm,0.6s,baz=190,slow=8.1,SNR=529
SONM PcP **PcP** **23 06 09.7 +1.2**
comp=Z,46nm,0.7s,baz=192,slow=5.1,SNR=4.1
SONM ScP **ScP** **23 09 57.7 -1.3**
comp=Z,26nm,0.9s,baz=193,slow=3.5,SNR=4.4
SONM S **S** **23 11 53.8 -1.4**
comp=Z,1.7nm,0.9s,baz=161,slow=24,SNR=0.8
SONM LR LR 23 28 46.9
comp=Z,34µm,18.7s,baz=180,slow=39
SONM PKPPKP **P'P'df** **23 35 38.8 -1.4**
comp=Z,2.6nm,1.1s,baz=356,slow=1.3,SNR=5.9
SONM P4KPbc 23 42 21.1
comp=Z,0.9nm,0.8s,baz=205,slow=3.1,SNR=4.9
comp=Z,335nm,0.6s
SONM Songino Array 49.96 5 P **P** **23 04 49.2 +0.1**
ULN Ulaanbaatar 50.05 6 P **P** **23 04 50.2 +0.3**
ULN Ulaanbaatar 50.05 6 IAMs_20 IAMs_20 23 28 26.8
comp=Z,28µm,21.0s
ULN Ulaanbaatar 50.05 6*c* *i*P **P** **23 04 50.2 +0.3**
ULN pmax pmax
comp=Z,995nm,1.3s
ULN MLR MLR
comp=Z,28µm,20.0s
ULN Ulaanbaatar 50.05 6 P **P** **23 04 51.1 +1.2**
ULN P **P** **23 04 51.1 +1.2**
ULN Ulaanbaatar 50.05 6 ⇑P **P** **23 04 50.2 +0.3**
BTK Batken 50.06 330 P **P** **23 04 50.4 +0.4**
BTK Batken 50.06 330 P **P** **23 04 50.4 +0.4**
UCH Uchtor 50.06 335 P **P** **23 04 52.1 +1.7**
SNR=22
TKM2 Tokmak 2 50.18 336 P **P** **23 04 53.0 +2.0**
SNR=74
TKM2 Tokmak 2 50.18 336 *i*P **P** **23 04 52.2 +1.2**
TKM2 pmax pmax
comp=Z,323nm,0.5s
DOK Doka 50.20 296 P **P** **23 04 51.9 +0.6**
SNR=19
DOK P **P** **23 04 51.9 +0.6**
SNR=19
KBK Karagaybulak 50.23 335 P **P** **23 04 53.0 +1.6**
SNR=157
WHFO Wadi Hawf 50.30 295 P **P** **23 04 52.4 +0.3**
SNR=17
WHFO P **P** **23 04 52.4 +0.3**
SNR=17
AML Almayashu 50.34 334 P **P** **23 04 53.9 +1.5**
SNR=27
AML Almayashu 50.34 334 P **P** **23 04 54.4 +1.9**
AML Almayashu 50.34 334 *i*P **P** **23 04 53.9 +1.5**
SNR=66
INU Inuyama 50.40 39 P **P** **23 04 52.7 +0.2**
INU lAmb lAmb 23 04 55.6
comp=Z,1µm,1.9s
INU Inuyama 50.40 39 P **P** **23 04 54.5 +2.0**
INU Inuyama 50.40 39 ⇓P **P** **23 04 52.3 -0.3**
AAK Ala-Archa 50.41 335 P **P** **23 04 54.1 +1.5**
SNR=68
AAK Ala-Archa 50.41 335 P **P** **23 04 53.7 +1.1**
comp=Z,141nm,0.6s,baz=127,slow=7.3
AAK S **S** **23 12 00.3 -1.3**
comp=Z,12nm,0.9s,baz=90,slow=17,SNR=1.8
AAK LR LR 23 30 04.4
comp=Z,10µm,21.3s,baz=148,slow=41
comp=Z,141nm,0.6s
AAK Ala-Archa 50.41 335 P **P** **23 04 54.2 +1.5**
AAK lAmb lAmb 23 05 19.6
comp=Z,907nm,1.4s
AAK Ala-Archa 50.41 335*c* *i*P **P** **23 04 54.6 +1.9**
AAK pmax pmax
comp=Z,158nm,0.7s
AAK MLR MLR
comp=Z,11µm,21.0s
AAK Ala-Archa 50.41 335 P **P** **23 04 55.2 +2.5**
AAK P **P** **23 04 55.2 +2.5**
AAK Ala-Archa 50.41 335 *i*P **P** **23 04 53.8 +1.2**
SNR=186
AAK Ala-Archa 50.41 335 ⇑P **P** **23 04 54.1 +1.5**
AAK Ala-Archa 50.41 335 P **P** **23 04 55.2 +2.5**
AAK pP **pP** **23 05 11.9 +3.2**
CHKK Chushkaly 50.43 338 *e*P **P** **23 04 52.5 -0.1**
CHKK Chushkaly 50.43 338 *e*P **P** **23 04 52.5 -0.1**
baz=338
FRU1 Bishkek 50.49 335 P **P** **23 04 54.6 +1.4**
FRU1 Bishkek 50.49 335 P **P** **23 04 54.6 +1.4**
FRU1 pmax pmax
comp=Z,1µm,1.0s
ABTO Aybut 50.55 294 P **P** **23 04 54.3 +0.2**
SNR=27
CHMS Chumysh 50.59 335 P **P** **23 04 55.1 +1.1**
SNR=93
CHMS Chumysh 50.59 335 *i*P **P** **23 04 54.9 +1.0**
CHMS pmax pmax
comp=Z,547nm,1.0s
KUU Kurty 50.71 337*c* *i*P **P** **23 04 54.6 -0.1**
KUU *i*S **S** **23 12 04.0 -1.5**
KUU pmax pmax
comp=Z,225nm,0.6s
KUU Kurty 50.71 337⇑ *i*P **P** **23 04 54.6 -0.1**
comp=Z,225nm,0.6s,baz=337
KUU *i*S **S** **23 12 04.0 -1.5**
baz=337
EKS2 Erkin-Say 50.73 334 P **P** **23 04 56.6 +1.5**
SNR=276
UMZA Um Al Zommool 50.76 302 P **P** **23 04 56.0 +0.6**
UMZA P **P** **23 04 56.0 +0.6**
JGF Kuroka 50.77 39 P **P** **23 04 54.6 -0.8**
JGF lAmb lAmb 23 04 59.3
comp=Z,2µm,1.9s
JGF Kuroka 50.77 39 ⇑P **P** **23 04 54.5 -0.9**
CN2 Changchun 50.78 23 *e*P **P** **23 04 52.3 -3.0**
CN2 *e*PP **PP** **23 06 51.6 -0.5**
CN2 *e*S **S** **23 12 04.7 -1.8**
CN2 pmax pmax
comp=Z,670nm,0.6s
CN2 pmax pmax
comp=Z,6µm,9.5s
CN2 LR LR
comp=Z,12µm,19.0s
CN2 LR LR
comp=Z,20µm,19.0s
CN2 LR LR
comp=Z,23µm,19.0s
UOSS Minazif 50.80 305 P **P** **23 04 55.4 -0.3**
UOSS Minazif 50.80 305 P **P** **23 04 56.8 +1.0**
UOSS P **P** **23 04 56.8 +1.0**
UOSS Minazif 50.80 305 *i*P **P** **23 04 55.9 +0.1**
SNR=6.2
UOSS Minazif 50.80 305 ⇓P **P** **23 04 55.8 0.0**
ALNE Al Ain 50.80 304 P **P** **23 04 56.8 +1.0**
SNR=21
ALNE P **P** **23 04 56.8 +1.0**
SNR=21
ALNE Al Ain 50.80 304 *i*P **P** **23 04 56.2 +0.4**
SNR=83
HATD Hatta, Dubai 50.81 305 P **P** **23 04 56.7 +0.9**
SNR=9.6
HATD Hatta, Dubai 50.81 305 *i*P **P** **23 04 56.1 +0.3**
SNR=13
ASHO Ashiyiah 50.81 304 P **P** **23 04 56.8 +1.0**
SNR=8.0
ASHO P **P** **23 04 56.8 +1.0**
SNR=8.0
ASHO Ashiyiah 50.81 304 *i*P **P** **23 04 55.8 -0.1**
SNR=17
JHJ Hachijo jima 2 50.85 43 LR LR 23 26 09.2
comp=Z,5µm,21.1s,baz=234,slow=36
JHJ2 Mitsune 50.87 43 P **P** **23 04 56.7 +0.6**
JHJ2 lAmb lAmb 23 05 37.0
comp=Z,723nm,1.2s
JHJ2 Mitsune 50.87 43 P **P** **23 04 58.3 +2.2**
comp=Z,596nm,1.4s
TDK Taldyqorghan 50.90 340*c* *i*P **P** **23 04 55.9 -0.3**
TDK *e* 23 06 56.0
TDK *e*S **S** **23 12 05.8 -2.4**
TDK pmax pmax
comp=Z,333nm,0.7s
TDK Taldyqorghan 50.90 340⇑ *i*P **P** **23 04 56.0 -0.3**
comp=Z,333nm,0.7s,baz=340
TDK *e*PP **PP** **23 06 56.1 +2.9**
baz=340
TDK *e*S **S** **23 12 05.8 -2.4**
baz=340
USP Ospenovka 50.92 335 P **P** **23 04 57.2 +0.8**
SNR=400
MSFE Esma-Masafi 51.01 305 *i*P **P** **23 04 58.2 +0.8**
SNR=9.6
MASF Masafi 51.02 305 P **P** **23 04 58.7 +1.3**
SGDS Sogindy 51.02 336 *e*P **P** **23 04 57.2 +0.1**
SGDS *e*S **S** **23 12 09.4 -0.5**
SGDS Sogindy 51.02 336 *e*P **P** **23 04 57.3 +0.1**
baz=336
SGDS *e*S **S** **23 12 09.4 -0.5**
baz=336
BANOM Banah 51.14 306 P **P** **23 05 00.0 +1.7**
BANOM P **P** **23 05 00.0 +1.7**
BANOM Banah 51.14 306 P **P** **23 04 57.2 -1.2**
JGN Niukaw 51.14 38 P **P** **23 04 57.4 -0.8**
HRA Herat 51.17 319 P **P** **23 04 58.0 -0.6**
FAQ Al Faqa, Dubai 51.22 304 P **P** **23 04 59.7 +0.8**
SNR=9.5
FAQ P **P** **23 04 59.7 +0.8**
SNR=9.5
FAQ Al Faqa, Dubai 51.22 304 *i*P **P** **23 04 60.0 +1.1**
SNR=19
ZSN Zaisan 51.24 346*c* *i*P **P** **23 04 59.6 +1.0**
ZSN *e*S **S** **23 12 12.0 -0.7**
ZSN pmax pmax
comp=Z,230nm,0.6s
ZSN Zaisan 51.24 346⇑ *i*P **P** **23 04 59.7 +1.0**
comp=Z,230nm,0.6s,baz=346
ZSN *e*S **S** **23 12 12.1 -0.7**
baz=346
ARPS Mount Arapiles 51.26 137 P **P** **23 04 59.9 +0.9**
baz=51,SNR=99
ARPS Mount Arapiles 51.26 137 P **P** **23 05 00.4 +1.4**
NAZ Nazwa, Dubai 51.26 305 P **P** **23 04 60.0 +0.8**
SNR=5.6
NAZ P **P** **23 04 60.0 +0.8**
SNR=5.6
NAZ Nazwa, Dubai 51.26 305 *i*P **P** **23 04 59.7 +0.5**
SNR=12
KRVT Keravat (AS076 51.29 94 LR LR 23 29 59.4
comp=Z,4µm,21.6s,baz=34,slow=40
MK31 Makanchi Array 51.30 344 P **P** **23 04 59.3 +0.2**
MK31 lAmb lAmb 23 05 24.5
comp=Z,314nm,0.8s
MK31 Makanchi Array 51.30 344*c* *i*P **P** **23 04 59.2 +0.1**
MKAR Makanchi Array 51.30 344 P **P** **23 04 59.4 +0.3**
comp=Z,324nm,0.6s,baz=148,slow=7.7,SNR=500
MKAR S **S** **23 12 14.0 +0.5**
comp=Z,33nm,1.0s,baz=149,slow=17,SNR=7.1
MKAR LR LR 23 31 35.0
comp=Z,10µm,20.7s,baz=158,slow=42
MKAR PKPPKP **P'P'df** **23 35 34.9 -3.6**
comp=Z,1.8nm,1.0s,baz=333,slow=1.4,SNR=5.0
comp=Z,324nm,0.6s
MKAR Makanchi Array 51.30 344*ce*P **P** **23 04 59.4 +0.3**
MKAR pmax pmax
comp=Z,323nm,0.6s
SHME Shamm 51.33 306 P **P** **23 05 01.1 +1.4**
ASUD Al Ashush, Dub 51.39 304 P **P** **23 05 01.7 +1.5**
SNR=6.7
ASUD P **P** **23 05 01.7 +1.5**
SNR=6.7
ASUD Al Ashush, Dub 51.39 304 *i*P **P** **23 05 02.0 +1.8**
SNR=13
MAKZ Makanchi 51.40 344 P **P** **23 05 00.1 +0.2**
MAKZ lAmb lAmb 23 05 26.7
comp=Z,298nm,1.1s
MAKZ Makanchi 51.40 344 P **P** **23 05 00.1 +0.2**
MAKZ pmax pmax
comp=Z,298nm,1.1s
MAKZ MLR MLR
comp=Z,7µm,18.0s
MAKZ Makanchi 51.40 344 ⇑P **P** **23 04 60.0 +0.1**
RABL Rabaul 51.43 94 P **P** **23 04 59.0 -1.7**
RABL lAmb lAmb 23 05 18.6
comp=Z,216nm,0.8s
SBV Sambava 51.45 255 P **P** **23 05 02.3 +1.5**
SNR=10
UMQ Umm Al-Quwin 51.49 305 P **P** **23 05 03.0 +2.1**
CMSA Cobar Meteorol 51.52 130 P **P** **23 05 01.4 +0.4**
baz=52,SNR=679
CMSA Cobar Meteorol 51.52 130 P **P** **23 05 01.9 +0.8**
AJN Ajban 51.64 304 P **P** **23 05 02.9 +0.8**
JOD2 Odawara 2 51.67 40 P **P** **23 05 00.9 -1.1**
TAS Tashkent 51.78 330 P **P** **23 05 03.0 +0.2**
TAS lAmb lAmb 23 05 11.7
comp=Z,606nm,0.8s
TAS Tashkent 51.78 330 P **P** **23 05 03.0 +0.2**
TAS pmax pmax
comp=Z,606nm,0.8s
MAJO Matsushiro 51.90 39 P **P** **23 05 03.0 -0.8**
MAJO Matsushiro 51.90 39*c* *i*P **P** **23 05 02.7 -1.1**
MAJO pmax pmax
comp=Z,733nm,1.8s
MAJO Matsushiro 51.90 39 P **P** **23 05 04.8 +1.0**
MAJO Matsushiro 51.90 39 ⇑P **P** **23 05 03.0 -0.8**
MAT Matsushiro 51.90 39 P **P** **23 05 03.0 -0.9**
MJB9 Matsu-Tunnel 51.90 39 P **P** **23 05 03.0 -0.8**
MJAR Matsushiro Arr 51.90 39 P **P** **23 05 03.1 -0.7**
comp=Z,101nm,0.6s,baz=209,slow=6.8,SNR=90
MJAR PcP **PcP** **23 06 17.5 +1.6**
comp=Z,54nm,0.9s,baz=212,slow=3.1,SNR=4.5
MJAR ScP **ScP** **23 10 07.1 -0.4**
comp=Z,26nm,0.9s,baz=202,slow=4.3,SNR=7.7
MJAR LR LR 23 28 01.1
comp=Z,14µm,20.3s,baz=227,slow=37
comp=Z,101nm,0.6s
MJAR Matsushiro Arr 51.90 39 P **P** **23 05 02.9 -0.9**
MJAR lAmb lAmb 23 05 07.5
comp=Z,429nm,1.2s
DZA Taraz 52.00 333 *e*P **P** **23 05 04.5 +0.1**
DZA *e*S **S** **23 12 23.1 -0.3**
DZA Taraz 52.00 333 *e*P **P** **23 05 04.6 +0.1**
baz=333
DZA *e*S **S** **23 12 23.2 -0.3**
baz=333
JRY Ryogami san 52.01 40 P **P** **23 05 03.8 -0.9**
IUG Iuzhnay 52.04 331 *e*P **P** **23 05 05.2 +0.4**
IUG *e*S **S** **23 12 23.4 -0.6**
IUG Iuzhnay 52.04 331 *e*P **P** **23 05 05.3 +0.4**
baz=331
IUG *e*S **S** **23 12 23.4 -0.6**
baz=331
RMQ Roma 52.08 122 P **P** **23 05 06.1 +0.7**
baz=52,SNR=70
RMQ Roma 52.08 122 P **P** **23 05 06.2 +0.9**
MZWR Madinat Zayed 52.25 302 P **P** **23 05 07.4 +0.8**
MZWR P **P** **23 05 07.4 +0.8**
MSHR Mys Shultsa 52.27 28*c* *i*P **P** **23 05 06.2 -0.2**
MSHR pmax pmax
comp=Z,386nm,1.6s
MSHR MLR MLR
comp=Z,8µm,19.0s
MZR Muzera 52.30 301 P **P** **23 05 08.0 +0.9**
SNR=13
MZR P **P** **23 05 08.0 +0.9**
SNR=13
MZR Muzera 52.30 301 *i*P **P** **23 05 07.9 +0.9**
SNR=27
ZAK Zakamensk 52.30 2 *e*P **P** **23 05 06.8 +0.1**
ZAK *e* 23 14 50.0
ZAK pmax pmax
comp=Z,339nm,1.4s
CHM Chimkent 52.37 331 *e*S **S** **23 12 27.8 -0.6**
baz=331
KK31 Karatay Array 52.54 332 P **P** **23 05 08.6 +0.1**
KK31 Karatay Array 52.54 332 P **P** **23 05 08.6 +0.1**
KK31 pmax pmax
comp=Z,172nm,0.8s
KKAR Karatay Array 52.54 332 P **P** **23 05 08.5 +0.1**
KKAR Karatay Array 52.54 332 P **P** **23 05 08.6 +0.1**
KKAR lAmb lAmb 23 05 37.5
comp=Z,172nm,0.8s
KKAR Karatay Array 52.54 332 P **P** **23 05 08.5 +0.1**
KKAR pmax pmax
comp=Z,172nm,0.8s
KKAR Karatay Array 52.54 332 ⇓P **P** **23 05 08.6 +0.1**
KNGR Kungurtug, Tuv 52.55 357*d* *i*P **P** **23 05 09.5 +1.0**
KNGR pmax pmax
comp=Z,998nm,1.1s
KNGR MLR MLR
comp=Z,13µm,18.0s
BTLS Baital 52.57 336*ce*P **P** **23 05 08.2 -0.3**
BTLS *e*S **S** **23 12 27.8 -3.2**
BTLS pmax pmax
comp=Z,76nm,0.7s
BTLS Baital 52.57 336⇑ *e*P **P** **23 05 08.3 -0.3**
comp=Z,76nm,0.7s,baz=336
BTLS *e*S **S** **23 12 27.8 -3.2**
baz=336
RK1H Rockhampton Ha 52.63 118 P **P** **23 05 10.0 +0.6**
BRLS Borolday 52.80 332 *e*P **P** **23 05 09.1 -1.2**
BRLS *e*S **S** **23 12 27.8 -6.5**
BRLS Borolday 52.80 332 *e*P **P** **23 05 09.2 -1.2**
baz=331
BRLS *e*S **S** **23 12 27.8 -6.5**
baz=331
JSD Sado 52.89 37 P **P** **23 05 10.5 -0.5**
JSD lAmb lAmb 23 05 14.8
comp=Z,339nm,1.0s
JSD Sado 52.89 37 ⇑P **P** **23 05 10.5 -0.5**
JYT Yasato 52.97 40 P **P** **23 05 10.2 -1.5**
JYT lAmb lAmb 23 05 13.7
comp=Z,255nm,0.8s
JYT Yasato 52.97 40 ⇑P **P** **23 05 09.9 -1.7**
VLA Vladivostok 53.03 28*c* *i*P **P** **23 05 13.0 +1.0**
VLA pmax pmax
comp=Z,693nm,1.0s
VLA MLR MLR
comp=Z,18µm,20.0s
MDJ Mudanjiang 53.16 26 P **P** **23 05 12.9 0.0**
MDJ Mudanjiang 53.16 26 P **P** **23 05 13.3 +0.4**
MDJ PP **PP** **23 07 16.3 +2.8**
MDJ S **S** **23 12 42.2 +3.2**
MDJ pmax pmax
comp=Z,72nm,1.0s
MDJ pmax pmax
comp=Z,9µm,7.3s
MDJ LR LR
comp=Z,37µm,21.4s

MDJ LR LR
comp=Z,33µm,21.4s
MDJ LR LR
comp=Z,55µm,21.6s
MDJ Mudanjiang 53.16 26 P **P** **23 05 16.1 +3.2**
comp=Z,346nm,0.9s
BNX BinXian 53.17 23 ⇓P **P** **23 05 13.2 +0.2**
BNX pP pP 23 05 21.0 -8.3
BNX PP **sP** **23 05 38.3 +1.9**
BNX sP **PP** **23 07 15.6 +2.0**
BNX S **S** **23 12 34.2 -4.9**
BNX sS **pS** **23 12 57.3 -0.6**
BNX pmax pmax
comp=Z,1µm,1.5s
BNX pmax pmax
comp=Z,18µm,8.9s
BNX LR LR
comp=N,48µm,14.4s
BNX LR LR
comp=E,23µm,15.0s
BNX LR LR
comp=Z,51µm,15.8s
GHWR Ruwais 53.18 302 P **P** **23 05 14.5 +1.0**
GHWR P **P** **23 05 14.5 +1.0**
MOY Mondy 53.55 0 *e*P **P** **23 05 16.2 +0.4**
MOY pmax pmax
comp=Z,120nm,1.7s
JRN Qarnain Island 53.58 303 P **P** **23 05 17.2 +0.9**
JRN P **P** **23 05 17.2 +0.9**
EIDS Eidsvold 53.72 120 P **P** **23 05 17.3 -0.1**
baz=54,SNR=110
EIDS Eidsvold 53.72 120 P **P** **23 05 17.0 -0.4**
EIDS Eidsvold 53.72 120 P **P** **23 05 17.8 +0.4**
EIDS Eidsvold 53.72 120 ⇑P **P** **23 05 17.2 -0.2**
HIA Hailar 53.73 15 P **P** **23 05 16.8 -0.3**
HIA IAmb IAmb 23 05 20.9
comp=Z,479nm,1.4s
HIA Hailar 53.73 15 P **P** **23 05 16.8 -0.3**
HIA pmax pmax
comp=Z,479nm,1.4s
HIA MLR MLR
comp=Z,47µm,20.0s
PAF Port-aux-Franc 53.81 204 P **P** **23 05 17.9 +0.3**
PAF IAMs_20 IAMs_20 23 23 01.9
comp=Z,27µm,20.0s
PAF Port-aux-Franc 53.81 204 P **P** **23 05 17.9 +0.3**
PAF pmax pmax
comp=Z,2µm,1.8s
PAF Port-aux-Franc 53.81 204 ⇑P **P** **23 05 20.0 +2.4**
USA0B Ussuriysk Arra 53.90 28 P **P** **23 05 18.5 +0.1**
USA0B IAmb IAmb 23 05 22.2
comp=Z,708nm,0.8s
USA0B Ussuriysk Arra 53.90 28*c i*P **P** **23 05 18.6 +0.2**
USRK Ussuriysk Ar. 53.90 28 P **P** **23 05 18.6 +0.3**
comp=Z,558nm,0.6s,baz=225,slow=4.3,SNR=182
USRK ScP **ScP** **23 10 14.9 -1.1**
comp=Z,6.3nm,0.8s,baz=242,slow=3.1,SNR=3.6
USRK S **S** **23 12 48.9 -0.2**
comp=Z,3.7nm,0.6s,baz=168,slow=25,SNR=1.8
USRK LR LR 23 29 25.5
comp=Z,31µm,20.5s,baz=216,slow=37
USRK PKP2bc 23 35 47.3
comp=Z,2.9nm,1.0s,baz=70,slow=6.3,SNR=5.6
comp=Z,558nm,0.6s
TOO Toolangi 54.17 136 P **P** **23 05 22.3 +1.7**
baz=54,SNR=55
TOO Toolangi 54.17 136 P **P** **23 05 21.6 +1.0**
TOO Toolangi 54.17 136 P **P** **23 05 21.6 +1.0**
TOO pmax pmax
comp=Z,256nm,1.0s
TOO Toolangi 54.17 136 P **P** **23 05 22.9 +2.3**
TOO Toolangi 54.17 136 ⇑P **P** **23 05 22.1 +1.6**
IRK Irkutsk 54.21 3 *e*P **P** **23 05 20.8 +0.3**
IRK *e*S **S** **23 12 55.8 +2.8**
IRK pmax pmax
comp=Z,2µm,2.2s
JMM Marumori 54.34 39 P **P** **23 05 21.2 -0.4**
JMM Marumori 54.34 39 ⇑P **P** **23 05 21.3 -0.4**
OPO Ambohidratompo 54.89 249 S **S** **23 13 00.0 -3.6**
comp=Z,5.6nm,1.0s,baz=3.7,slow=15,SNR=1.9
OPO LR LR 23 24 31.7
comp=Z,6µm,20.7s,baz=222,slow=31
ABPO Ambohimpanom 54.94 248 P **P** **23 05 26.3 -0.3**
ABPO IAmb IAmb 23 05 31.3
comp=Z,234nm,0.8s
ABPO Ambohimpanom 54.94 248 P **P** **23 05 26.3 -0.3**
ABPO pmax pmax
comp=Z,234nm,0.8s
ABPO MLR MLR
comp=Z,46µm,21.0s
ABPO Ambohimpanom 54.94 248 ⇓P **P** **23 05 27.6 +1.0**
ABPO Ambohimpanom 54.94 248 P **P** **23 05 28.1 +1.5**
ABPO pP **sP** **23 05 45.8 -3.7**
KHOR Al-Khor Airpor 54.95 303 P **P** **23 05 27.3 +0.9**
CIT Chita 54.99 10 *e*P **P** **23 05 27.4 +1.2**
CIT *e* 23 07 28.4
CIT *e* 23 13 07.8
CIT *e* 23 13 31.5
CIT *e* 23 15 13.0
CIT pmax pmax
comp=Z,3µm,2.6s
SEM Semipalatinsk 55.15 344*ce*P **P** **23 05 26.9 -0.6**
SEM *e*S **S** **23 13 03.1 -3.0**
SEM pmax pmax
comp=Z,236nm,0.6s
SEM Semipalatinsk 55.15 344⇑*e*P **P** **23 05 27.0 -0.6**
comp=Z,236nm,0.6s,baz=344
SEM *e*S **S** **23 13 03.1 -3.0**
baz=344
SMRA Abu-Samra 55.21 302 P **P** **23 05 28.9 +0.7**
SHMA Al-Shehemyia 55.50 303 P **P** **23 05 31.0 +0.7**
JOM Ohasama 55.63 38 P **P** **23 05 30.7 -0.3**
CAN Canberra 55.64 132 P **P** **23 05 31.6 +0.4**
CAN IAmb IAmb 23 05 51.8
comp=Z,1µm,1.3s
CAN Canberra 55.64 132 P **P** **23 05 31.6 +0.4**
CAN pmax pmax
comp=Z,1µm,1.3s
CAN MLR MLR
comp=Z,35µm,20.0s
CAN Canberra 55.64 132 P **P** **23 05 32.7 +1.4**
CAN Canberra 55.64 132 ⇑P **P** **23 05 32.0 +0.8**
CAN Canberra 55.64 132 P **P** **23 05 32.0 +0.8**
CAN pP **pP** **23 05 49.2 +1.6**
CAN sP **sP** **23 05 57.8 +3.1**
ARMA Armidale 55.79 126 P **P** **23 05 33.9 +1.4**
baz=56,SNR=179
ARMA Armidale 55.79 126 P **P** **23 05 33.4 +0.9**
ARMA Armidale 55.79 126 P **P** **23 05 34.2 +1.7**
ARMA Armidale 55.79 126 ⇑P **P** **23 05 33.8 +1.4**
ARMA ⇑P **P** **23 05 33.9 +1.4**
KURBB Kurchatov Arra 55.82 343 P **P** **23 05 32.2 +0.1**
comp=Z,256nm,0.7s,baz=159,slow=6.9,SNR=243
KURBB S **S** **23 13 09.3 -5.3**
comp=Z,12nm,0.8s,baz=148,slow=15,SNR=6.4
KURBB LR LR 23 34 21.4
comp=Z,11µm,18.3s,baz=134,slow=41
comp=Z,256nm,0.7s
KURK Kurchatov 55.88 343 P **P** **23 05 32.6 +0.1**
KURK IAmb IAmb 23 05 38.0
comp=Z,460nm,0.8s
KURK Kurchatov 55.88 343*c i*P **P** **23 05 32.4 -0.1**
KURK pmax pmax
comp=Z,513nm,0.8s
KURK Kurchatov 55.88 343 P **P** **23 05 33.3 +0.8**
KURK P **P** **23 05 33.3 +0.8**
KURK Kurchatov 55.88 343 ⇑P **P** **23 05 32.6 +0.1**
KURK ⇑P **P** **23 05 32.6 +0.1**
SAKB Bahrain 55.90 303 P **P** **23 05 33.8 +0.7**
CNB Canberra Magne 55.91 132 P **P** **23 05 33.7 +0.5**
baz=56,SNR=45
CNB Canberra Magne 55.91 132 P **P** **23 05 34.0 +0.8**
VOI Vohitsoka 55.93 245 P **P** **23 05 33.3 -0.4**
VOI IAMs_20 IAMs_20 23 28 25.2
comp=Z,14µm,19.0s
VOI Vohitsoka 55.93 245 P **P** **23 05 34.9 +1.2**
SNR=10
VOI Vohitsoka 55.93 245 ⇓P **P** **23 05 34.4 +0.8**
GEYT Alibeck 55.95 320 P **P** **23 05 33.5 +0.1**
comp=Z,69nm,0.8s,baz=172,slow=11,SNR=105
GEYT S **S** **23 13 15.5 -1.5**
comp=Z,1.2nm,0.5s,baz=95,slow=15,SNR=1.2
GEYT PKPPKP **P'P'df** **23 35 33.7 +0.5**
comp=Z,1.2nm,0.5s,baz=226,slow=5.8,SNR=3.2
comp=Z,69nm,0.8s

GYA0B ALIBECK ARRAY 55.95 320 P **P** **23 05 33.2 -0.2**
GYA0B IAmb IAmb 23 05 53.7
comp=Z,541nm,1.3s
JTM Tenmabayashi 56.31 36 P **P** **23 05 35.7 -0.1**
JTM Tenmabayashi 56.31 36 ⇑P **P** **23 05 35.8 -0.1**
JTM Tenmabayashi 56.31 36 P **P** **23 05 35.7 -0.1**
MGCD Mangrove Creek 56.39 129 P **P** **23 05 37.5 +1.0**
baz=56,SNR=12
MGCD Mangrove Creek 56.39 129 P **P** **23 05 37.4 +0.8**
RIV Riverview 56.66 130 P **P** **23 05 39.8 +1.3**
baz=57,SNR=15
RIV Riverview 56.66 130 ⇓P **P** **23 05 39.6 +1.2**
RIV ⇓P **P** **23 05 39.8 +1.3**
BRZS Berezniki 57.18 339 *e*P **P** **23 05 41.2 -0.6**
BRZS *e*S **S** **23 13 30.8 -1.8**
BRZS Berezniki 57.18 339 *e*P **P** **23 05 41.2 -0.6**
baz=339
BRZS *e*S **S** **23 13 30.9 -1.8**
baz=339
I46RU ZALESOVO INFRA 57.38 349 P **P** **23 05 43.4 +0.3**
baz=147,slow=7.8,SNR=2.0
ZAA0 Zalesovo Array 57.38 349 P **P** **23 05 43.1 0.0**
ZALV Zalesovo Beam 57.38 349 P **P** **23 05 43.0 -0.1**
comp=Z,1µm,0.7s,baz=165,slow=6.2,SNR=791
ZALV S **S** **23 13 33.6 -1.5**
comp=Z,115nm,0.9s,baz=151,slow=3.4,SNR=16
ZALV LR LR 23 33 50.2
comp=Z,12µm,20.8s,baz=160,slow=40
ZALV PKPPKP **P'P'df** **23 35 28.5 -1.0**
comp=Z,4.7nm,1.0s,baz=305,slow=5.2,SNR=6.5
comp=Z,1µm,0.7s
ZALV Zalesovo Beam 57.38 349*c i*P **P** **23 05 43.0 -0.1**
ZALV pmax pmax
comp=Z,1µm,0.7s
GLAD Gladstone 57.55 139 P **P** **23 05 46.8 +2.2**
KLR Kul'dur 57.72 24 S **S** **23 13 41.4 +1.6**
comp=Z,5.6nm,0.9s,baz=279,slow=19,SNR=7.2
KLR LR LR 23 32 20.6
comp=Z,39µm,19.5s,baz=214,slow=38
KLR PKPPKP 23 35 29.6
comp=Z,2.3nm,1.0s,baz=331,slow=3.4,SNR=4.9
KLR Kul'dur 57.72 24*c i*P **P** **23 05 45.5 -0.1**
KLR pmax pmax
comp=Z,2µm,1.8s
KLR MLR MLR
comp=Z,35µm,19.0s
MOO Moorlands 57.76 141 P **P** **23 05 47.7 +1.7**
baz=58,SNR=20
MOO Moorlands 57.76 141 P **P** **23 05 47.7 +1.7**
JEW Eniwo 57.83 35 P **P** **23 05 47.7 +1.2**
JEW Eniwo 57.83 35 ⇑P **P** **23 05 47.8 +1.2**
TAU Tasmania Unive 58.08 141 P **P** **23 05 48.8 +0.5**
TAU IAmb IAmb 23 06 09.8
comp=Z,924nm,1.4s
TAU Tasmania Unive 58.08 141 P **P** **23 05 48.8 +0.5**
TAU pmax pmax
comp=Z,924nm,1.4s
TAU MLR MLR
comp=Z,13µm,19.0s
TAU Tasmania Unive 58.08 141 P **P** **23 05 50.4 +2.1**
PATS Pohnpei 58.18 81 P **P** **23 05 48.9 -0.6**
PATS Pohnpei 58.18 81 P **P** **23 05 51.4 +1.9**
comp=Z,2µm,1.7s
HARA HARA 58.30 282 *e*P P 23 05 58.6 +8.0
HARA HARA 58.30 282⇓*e*P P 23 05 57.2 +6.6
HARA ⇓*e*S S 23 14 04.4 +15
HARA HARA 58.30 282 *i* P P 23 05 58.7 +8.1
HARA *e*S S 23 14 01.3 +12
HARA HARA 58.30 282 *i* P P 23 05 58.7 +8.1
HARA *e*S S 23 14 01.3 +12
HARA IAMs_20 IAMs_20 23 21 40.6
comp=N,14µm,23.8s
HARA HARA 58.30 282 *e*P P 23 06 04.2 +14
HARA *e*S S 23 14 03.3 +14
HARA HARA 58.30 282⇓*e*P P 23 05 57.2 +6.6
HARA ⇓*e*S S 23 14 04.4 +15
HARA HARA 58.30 282 *i* P P 23 05 58.7 +8.1
HARA *e*S S 23 14 01.3 +12
HARA HARA 58.30 282⇓*e*P P 23 05 57.2 +6.6
HARA ⇓*e*S S 23 14 04.4 +15
HARA HARA 58.30 282 *e*P P 23 05 58.6 +8.0
HARA HARA 58.30 282 *i* P P 23 05 58.7 +8.1
HARA *e*S S 23 14 01.3 +12
HARA IAMs_20 IAMs_20 23 21 40.6
comp=N,14µm,23.8s
ERM Erimo 58.31 36 P **P** **23 05 50.8 +1.0**
ERM IAmb IAmb 23 05 54.6
comp=Z,338nm,1.1s
ERM Erimo 58.31 36 P **P** **23 05 50.8 +1.0**
ERM pmax pmax
comp=Z,338nm,1.2s
ERM MLR MLR
comp=Z,10µm,20.0s
ERM Erimo 58.31 36 P **P** **23 05 50.8 +1.0**
ERM Erimo 58.31 36 ⇑P **P** **23 05 50.3 +0.5**
ERM ⇑P **P** **23 05 50.9 +1.1**
ERM Erimo 58.31 36 P **P** **23 05 51.2 +1.4**
ERM pP **pP** **23 06 07.6 +1.2**
ATD Arta Tunnel 59.06 285 P **P** **23 05 56.5 +0.8**
comp=Z,84nm,0.8s,baz=81,slow=9.5,SNR=20
ATD S **S** **23 13 52.2 -6.4**
comp=Z,4.5nm,0.3s,baz=69,slow=20,SNR=6.7
ATD LR LR 23 26 52.3
comp=Z,20µm,22.0s,baz=92,slow=31
comp=Z,84nm,0.8s
ATD Arta Tunnel 59.06 285 P **P** **23 05 55.9 +0.2**
ATD IAMs_20 IAMs_20 23 26 30.2
comp=Z,21µm,22.0s
ATD Arta Tunnel 59.06 285 P **P** **23 05 57.2 +1.5**
SNR=35
ATD Arta Tunnel 59.06 285 *e*P **P** **23 05 56.5 +0.8**
ATD Arta Tunnel 59.06 285⇓*e*P **P** **23 05 52.7 -3.0**
ATD ⇓*e*S **S** **23 13 53.8 -4.7**
ATD Arta Tunnel 59.06 285⇓*e*P **P** **23 05 52.7 -3.0**
ATD ⇓*e*S **S** **23 13 53.8 -4.7**
ATD Arta Tunnel 59.06 285⇓*e*P **P** **23 05 57.0 +1.3**
ATD *e*S **S** **23 14 04.4 +5.9**
ATD Arta Tunnel 59.06 285 *i* P **P** **23 05 56.8 +1.1**
ATD *e*S **S** **23 13 53.1 -5.4**
ATD Arta Tunnel 59.06 285 *i* P **P** **23 05 56.8 +1.1**
ATD *e*S **S** **23 13 53.1 -5.4**
ATD Arta Tunnel 59.06 285 *e*P **P** **23 05 57.2 +1.5**
ATD *e*S **S** **23 13 56.3 -2.2**
ATD Arta Tunnel 59.06 285⇓*e*P **P** **23 05 57.0 +1.3**
ATD *e*S **S** **23 14 04.4 +5.9**
ATD Arta Tunnel 59.06 285 *i* P **P** **23 05 56.8 +1.1**
ATD *e*S **S** **23 13 53.1 -5.4**
ATD Arta Tunnel 59.06 285 *e*P **P** **23 05 54.9 -0.8**
ATD Arta Tunnel 59.06 285 *e*P **P** **23 05 57.2 +1.5**
ATD *e*S **S** **23 13 56.3 -2.2**
ATD Arta Tunnel 59.06 285 *e*P **P** **23 05 55.4 -0.3**
ATD Arta Tunnel 59.06 285 *e*P **P** **23 05 55.4 -0.3**
ATD *e*S **S** **23 13 52.1 -6.4**
ATD Arta Tunnel 59.06 285⇓*e*P **P** **23 05 57.0 +1.3**
ATD *e*S **S** **23 14 04.4 +5.9**
ATD Arta Tunnel 59.06 285 *e*P **P** **23 05 56.5 +0.8**
ATD Arta Tunnel 59.06 285 *i* P **P** **23 05 56.8 +1.1**
ATD *e*S **S** **23 13 53.1 -5.4**
ATD Arta Tunnel 59.06 285 ⇓P **P** **23 05 56.9 +1.1**
ATD Arta Tunnel 59.06 285 P **P** **23 05 57.2 +1.5**
ATD sP **sP** **23 06 19.1 +0.3**
ASAJ Asahikawa 59.29 34 LR LR 23 31 24.0
comp=Z,7µm,21.9s,baz=238,slow=36
ASAJ Asahikawa 59.29 34 P **P** **23 05 57.1 +0.5**
ASAJ pmax pmax
comp=Z,1µm,1.5s
JKA Kamikawa-asahi 59.29 34 P **P** **23 05 57.1 +0.5**
HNR Honiara 59.34 100 LR LR 23 33 17.2
comp=Z,5µm,21.7s,baz=264,slow=38
HNR Honiara 59.34 100 P **P** **23 05 56.1 -1.4**
HNR Honiara 59.34 100 P **P** **23 05 56.1 -1.4**
HNR pmax pmax
comp=Z,2µm,1.1s
HNR MLR MLR
comp=Z,10µm,22.0s
HNR Honiara 59.34 100 P **P** **23 05 58.7 +1.2**
HNR Honiara 59.34 100 ⇑P **P** **23 05 56.1 -1.4**
RAYN Ar Rayn 59.38 299 P **P** **23 05 56.7 -1.1**
RAYN Ar Rayn 59.38 299 IAMs_20 IAMs_20 23 28 58.2
comp=Z,25µm,22.0s
RAYN Ar Rayn 59.38 299 P **P** **23 05 56.7 -1.1**

RAYN pmax pmax
comp=Z,197nm,1.1s
RAYN MLR MLR
comp=Z,25µm,22.0s
RAYN Ar Rayn 59.38 299 P **P** **23 05 57.9 +0.2**
RAYN Ar Rayn 59.38 299 *i* P **P** **23 05 57.9 +0.2**
SNR=34
JMP Maruseppu 59.65 35 P **P** **23 05 59.6 +0.5**
ZEA Zeya 59.86 18 *e*P **P** **23 06 01.0 +0.6**
ZEA *e* 23 08 12.6
ZEA *e*S **S** **23 14 06.3 -1.1**
ZEA *e*SS **SS** **23 18 08.0 +3.3**
ZEA pmax pmax
comp=N,2µm,3.0s
ZEA pmax pmax
comp=E,1µm,3.0s
ZEA pmax pmax
comp=Z,5µm,4.0s
ZEA pmax pmax
comp=Z,900nm,5.3s
ZEA smax smax
comp=N,1µm,9.9s
ZEA smax smax
comp=E,4µm,7.3s
ZEA MLR MLR
comp=E,3µm,14.0s
ZEA MLR MLR
comp=N,17µm,19.0s
ZEA MLR MLR
comp=Z,17µm,19.0s
BRVK Borovoye 60.56 339 P **P** **23 06 04.5 -0.7**
BRVK IAmb IAmb 23 06 10.2
comp=Z,333nm,0.8s
BRVK Borovoye 60.56 339*c i*P **P** **23 06 05.5 +0.3**
BRVK pmax pmax
comp=Z,310nm,0.7s
BRVK MLR MLR
comp=Z,12µm,22.0s
BRVK Borovoye 60.56 339 P **P** **23 06 05.8 +0.6**
BRVK P **P** **23 06 05.8 +0.6**
BRVK Borovoye 60.56 339 P **P** **23 06 04.7 -0.5**
BOD Bodaibo 60.66 8 *e*P **P** **23 06 06.1 +0.4**
BOD pmax pmax
comp=Z,2µm,1.7s
GRNR Gornyy 60.84 25⇑*i*P **P** **23 06 07.4 +0.3**
GRNR pmax pmax
comp=N,40nm,1.3s
GRNR pmax pmax
comp=E,30nm,1.3s
GRNR pmax pmax
comp=Z,100nm,1.3s
TEND Ethiopian Broa 60.89 285⇓*e*P P 23 06 03.4 -4.8
TEND *e*S **S** **23 14 23.0 +1.1**
TEND Ethiopian Broa 60.89 285⇓*e*P P 23 06 03.4 -4.8
TEND *e*S **S** **23 14 23.0 +1.1**
TEND Ethiopian Broa 60.89 285 *e*P **P** **23 06 10.0 +1.9**
TEND *e*S **S** **23 14 22.1 +0.2**
YUK Yuzh-Kuril'sk 61.10 36*c i*P **P** **23 06 10.5 +1.5**
YUK *i* 23 06 50.8
YUK *e* 23 08 28.3
YUK *e*S **S** **23 14 23.2 -0.3**
YUK *e* 23 15 49.2
YUK pmax pmax
comp=Z,4µm,2.2s
YUK pmax pmax
comp=Z,2µm,1.3s
YUK pmax pmax
comp=N,932nm,1.0s
YUK pmax pmax
comp=E,698nm,1.4s
YSS Yuzh-Sakhalins 61.18 32 P **P** **23 06 10.0 +0.5**
YSS Yuzh-Sakhalins 61.18 32*ce*P **P** **23 06 10.0 +0.5**
YSS *e**PP **pP** **23 06 24.7 -1.5**
YSS *e**SP **sP** **23 06 31.1 -2.1**
YSS *e* 23 08 26.4
YSS *e*S **S** **23 14 23.3 -1.1**
YSS *e*SS **SS** **23 18 30.6 +5.0**
YSS pmax pmax
comp=Z,8µm,3.6s
YSS pmax pmax
comp=E,2µm,2.5s
YSS pmax pmax
comp=E,260nm,1.2s
YSS pmax pmax
comp=Z,4µm,6.7s
YSS pmax pmax
comp=E,2µm,6.6s
YSS smax smax
comp=N,2µm,4.5s
YSS Yuzh-Sakhalins 61.18 32 P **P** **23 06 11.5 +2.0**
comp=N,1µm,1.1s
YSS Yuzh-Sakhalins 61.18 32 ⇑P **P** **23 06 09.8 +0.2**
CRZF Crozet Islands 61.25 216 P **P** **23 06 09.9 -0.1**
CRZF IAmb IAmb 23 06 15.4
comp=Z,369nm,0.8s
ANKE Ethiopia-Afar 61.81 282 *e*P **P** **23 06 16.5 +1.6**
ANKE Ethiopia-Afar 61.81 282⇑*e*P **P** **23 06 16.6 +1.8**
ANKE ⇓*e*S **S** **23 14 28.3 -5.9**
ANKE Ethiopia-Afar 61.81 282⇑*e*P **P** **23 06 16.6 +1.8**
ANKE ⇓*e*S **S** **23 14 28.3 -5.9**
ANKE Ethiopia-Afar 61.81 282 *e*P **P** **23 06 16.7 +1.8**
ANKE *e*S **S** **23 14 36.0 +1.7**
ANKE Ethiopia-Afar 61.81 282 *e*P **P** **23 06 18.2 +3.3**
ANKE *e*S **S** **23 14 40.5 +6.2**
ANKE Ethiopia-Afar 61.81 282 *e*P **P** **23 06 18.2 +3.3**
ANKE Ethiopia-Afar 61.81 282 *e*P **P** **23 06 18.2 +3.3**
ANKE *e*S **S** **23 14 40.5 +6.2**
ANKE Ethiopia-Afar 61.81 282 *e*P **P** **23 06 11.3 -3.5**
ANKE Ethiopia-Afar 61.81 282 *e*P **P** **23 06 16.3 +1.5**
ANKE *e*S **S** **23 14 41.0 +6.7**
ANKE Ethiopia-Afar 61.81 282 *e*P **P** **23 06 16.5 +1.6**
ABKAR Akbulak array 62.04 331 P **P** **23 06 15.2 -0.1**
DESE Dese 62.11 284⇓*e*P **P** **23 06 18.0 +1.2**
DESE ⇓*e*S **S** **23 14 47.0 +9.0**
DESE Dese 62.11 284 *e*P **P** **23 06 18.0 +1.2**
DESE ⇓*e*S **S** **23 14 43.9 +5.9**
DESE Dese 62.11 284 *e*P **P** **23 06 18.0 +1.2**
DESE ⇓*e*S **S** **23 14 43.9 +5.9**
DESE IAMs_20 IAMs_20 23 26 43.6
comp=N,14µm,23.3s
DESE Dese 62.11 284 *e*P **P** **23 06 15.8 -1.0**
DESE *e*S **S** **23 14 38.2 +0.2**
DESE Dese 62.11 284⇓*e*P **P** **23 06 18.0 +1.2**
DESE ⇓*e*S S 23 14 47.0 +9.0
DESE Dese 62.11 284 *e*P **P** **23 06 18.0 +1.2**
DESE ⇓*e*S **S** **23 14 43.9 +5.9**
DESE Dese 62.11 284⇓*e*P **P** **23 06 18.0 +1.2**
DESE ⇓*e*S S 23 14 47.0 +9.0
DESE Dese 62.11 284 *e*P **P** **23 06 18.0 +1.2**
DESE ⇓*e*S S **23 14 43.9 +5.9**
DESE IAMs_20 IAMs_20 23 26 43.6
comp=N,14µm,23.3s
LHI Lord Howe Isla 62.20 125 P **P** **23 06 17.5 +0.8**
baz=62,SNR=14
LHI Lord Howe Isla 62.20 125 P **P** **23 06 17.0 +0.3**
LHI Lord Howe Isla 62.20 125 P **P** **23 06 18.8 +2.1**
comp=N,1µm,1.2s
UGL Uglegorsk 62.23 29 *e*P **P** **23 06 15.9 -0.6**
UGL *e* 23 08 37.7
UGL *e*S **S** **23 14 37.6 +0.1**
UGL *e*SS **SS** **23 18 49.7 +7.9**
UGL pmax pmax
comp=Z,480nm,1.4s
UGL pmax pmax
comp=E,4µm,6.0s
UGL pmax pmax
comp=N,2µm,6.5s
UGL pmax pmax
comp=Z,8µm,4.0s
UGL pmax pmax
comp=E,2µm,7.0s
UGL pmax pmax
comp=N,2µm,8.5s
UGL pmax pmax
comp=Z,3µm,10.0s
UGL smax smax
comp=E,6µm,8.5s
UGL smax smax
comp=N,4µm,14.0s
KIBK Kibwezi 62.60 268 P **P** **23 06 20.2 +0.4**
KIBK IAmb IAmb 23 06 25.4
comp=Z,533nm,1.7s
KIBK IAMs_20 IAMs_20 23 27 37.4
comp=Z,20µm,22.0s

KIBK **Kibwezi** 62.60 268 P P 23 06 21.0 +1.2
SNR=43
AAE **Adis Abeba** 62.69 281 *e*P P 23 06 22.0 +1.4
AAE **Adis Abeba** 62.69 281⇑ *e*P P 23 06 17.0 -3.6
AAE ⇓*e*S S 23 14 39.0 -6.2
AAE **Adis Abeba** 62.69 281⇑ *e*P P 23 06 17.0 -3.6
AAE ⇓*e*S S 23 14 39.0 -6.2
AAE **Adis Abeba** 62.69 281⇓ *e*P P 23 06 22.4 +1.8
AAE ⇓*e*S S 23 14 48.8 +3.6
AAE **Adis Abeba** 62.69 281 *i* P P 23 06 22.6 +2.0
AAE *e*S S 23 14 43.5 -1.7
AAE IAMs_20 IAMs_20 23 15 01.5
comp=N,27µm,17.4s
AAE **Adis Abeba** 62.69 281 *i* P P 23 06 22.6 +2.0
AAE *e*S S 23 14 43.5 -1.7
AAE IAMs_20 IAMs_20 23 15 01.5
comp=N,27µm,17.4s
AAE IAMs_20 IAMs_20 23 27 56.1
comp=N,81µm,23.6s
AAE **Adis Abeba** 62.69 281 *e*P P 23 06 18.2 -2.5
AAE *e*S S 23 14 49.8 +4.6
AAE **Adis Abeba** 62.69 281⇓ *e*P P 23 06 22.4 +1.8
AAE ⇓*e*S S 23 14 48.8 +3.6
AAE **Adis Abeba** 62.69 281 *i* P P 23 06 22.6 +2.0
AAE *e*S S 23 14 43.5 -1.7
AAE IAMs_20 IAMs_20 23 15 01.5
comp=N,27µm,17.4s
AAE **Adis Abeba** 62.69 281 *e*P P 23 06 20.5 -0.1
AAE *e*S S 23 14 49.8 +4.6
AAE **Adis Abeba** 62.69 281 *e*P P 23 06 20.5 -0.1
AAE **Adis Abeba** 62.69 281 *e*P P 23 06 20.5 -0.1
AAE *e*S S 23 14 49.8 +4.6
AAE **Adis Abeba** 62.69 281 *e*P P 23 06 21.9 +1.4
AAE **Adis Abeba** 62.69 281 *e*P P 23 06 24.1 +3.5
AAE *e*S S 23 14 48.8 +3.6
AAE **Adis Abeba** 62.69 281⇓ *e*P P 23 06 22.4 +1.8
AAE ⇓*e*S S 23 14 48.8 +3.6
AAE **Adis Abeba** 62.69 281 *e*P P 23 06 22.0 +1.4
AAE **Adis Abeba** 62.69 281 *i* P P 23 06 22.6 +2.0
AAE *e*S S 23 14 43.5 -1.7
AAE IAMs_20 IAMs_20 23 15 01.5
comp=N,27µm,17.4s
AAE IAMs_20 IAMs_20 23 27 56.1
comp=N,81µm,23.6s
FURI **Furi** 62.75 281 *e*P P 23 06 16.1 -5.0
FURI **Furi** 62.75 281⇓ *e*P P 23 06 19.0 -2.1
FURI ⇓*e*S S 23 14 46.9 +0.9
FURI **Furi** 62.75 281⇓ *e*P P 23 06 19.0 -2.1
FURI ⇓*e*S S 23 14 46.9 +0.9
FURI **Furi** 62.75 281⇓ *e*P P 23 06 22.4 +1.3
FURI *e*S S 23 14 48.8 +2.7
FURI **Furi** 62.75 281 *i* P P 23 06 25.6 +4.5
FURI *e*S S 23 14 50.5 +4.4
FURI **Furi** 62.75 281 *e*P P 23 06 20.6 -0.4
FURI *e*S S 23 14 47.0 +0.9
FURI **Furi** 62.75 281 *i* P P 23 06 25.6 +4.5
FURI *e*S S 23 14 50.5 +4.4
FURI IAMs_20 IAMs_20 23 27 59.6
comp=N,16µm,22.4s
FURI **Furi** 62.75 281 *e*P P 23 06 22.8 +1.7
FURI *e*S S 23 14 49.8 +3.7
FURI **Furi** 62.75 281⇓ *e*P P 23 06 22.4 +1.3
FURI *e*S S 23 14 48.8 +2.7
FURI **Furi** 62.75 281 *i* P P 23 06 25.6 +4.5
FURI *e*S S 23 14 50.5 +4.4
FURI **Furi** 62.75 281 *e*P P 23 06 20.5 -0.6
FURI *e*S S 23 14 54.8 +8.7
FURI **Furi** 62.75 281 *e*P P 23 06 20.5 -0.6
FURI **Furi** 62.75 281 *e*P P 23 06 20.5 -0.6
FURI **Furi** 62.75 281 *e*P P 23 06 21.9 +0.9
FURI **Furi** 62.75 281 *e*P P 23 06 25.6 +4.5
FURI *e*S S 23 14 50.2 +4.1
FURI **Furi** 62.75 281⇓ *e*P P 23 06 22.4 +1.3
FURI *e*S S 23 14 48.8 +2.7
FURI **Furi** 62.75 281 *e*P P 23 06 16.1 -5.0
FURI **Furi** 62.75 281 *i* P P 23 06 25.6 +4.5
FURI *e*S S 23 14 50.5 +4.4
FURI IAMs_20 IAMs_20 23 27 59.6
comp=N,16µm,22.4s
DILA **Dilla** 62.87 278⇓ *e*P P 23 06 16.6 -5.1
DILA ⇓*e*S S 23 14 46.9 -0.4
DILA **Dilla** 62.87 278⇓ *e*P P 23 06 16.6 -5.1
DILA ⇓*e*S S 23 14 46.9 -0.4
DILA **Dilla** 62.87 278 *e*P P 23 06 22.9 +1.1
DILA ⇓*e*S S 23 14 46.8 -0.5
DILA **Dilla** 62.87 278 *e*P P 23 06 22.8 +1.1
DILA *e*S S 23 14 49.8 +2.5
DILA **Dilla** 62.87 278 *e*P P 23 06 20.5 -1.2
DILA **Dilla** 62.87 278 *e*P P 23 06 22.8 +1.1
DILA *e*S S 23 14 49.8 +2.5
DILA **Dilla** 62.87 278 *e*P P 23 06 19.3 -2.4
DILA **Dilla** 62.87 278 *e*P P 23 06 20.9 -0.8
DILA *e*S S 23 14 50.2 +3.0
KUR **Kuril'sk** 62.97 36*c* *i*P P 23 06 22.9 +1.4
KUR *e* 23 08 39.7
KUR *i*S S 23 14 49.1 +2.1
KUR *e*SS SS 23 18 56.5 +3.0
KUR pmax pmax
comp=Z,2µm,1.4s
KUR pmax pmax
comp=E,382nm,1.5s
KUR pmax pmax
comp=N,664nm,1.3s
KUR pmax pmax
comp=Z,9µm,3.4s
KUR MLR MLR
comp=Z,12µm,21.0s
KUR MLR MLR
comp=E,7µm,22.0s
KUR MLR MLR
comp=N,9µm,19.0s
KMBO **Kilima Mbogo** 63.42 270 P P 23 06 26.4 +1.0
comp=N,88nm,0.9s,baz=68,slow=8.4,SNR=151
KMBO S S 23 14 54.1 -0.2
comp=N,1.6nm,0.7s,baz=47,slow=18,SNR=1.5
KMBO LR LR 23 29 43.1
comp=N,23µm,21.0s,baz=72,slow=32
KMBO PKPPKP **P'P'df** 23 35 23.4 -0.9
comp=N,0.8nm,0.5s,baz=236,slow=7.3,SNR=2.0
KMBO PKP2ab 23 35 37.6
comp=N,2.7nm,0.8s,baz=22,slow=2.5,SNR=5.5
comp=N,88nm,0.9s
KMBO **Kilima Mbogo** 63.42 270 P P 23 06 26.1 +0.6
KMBO **Kilima Mbogo** 63.42 270 IAMs_20 IAMs_20 23 28 17.5
comp=Z,25µm,22.0s
KMBO **Kilima Mbogo** 63.42 270 P P 23 06 26.7 +1.2
KMBO P P 23 06 26.7 +1.2
KMBO **Kilima Mbogo** 63.42 270 *e*P P 23 06 25.8 +0.3
KMBO **Kilima Mbogo** 63.42 270⇓ *e*P P 23 06 16.6 -8.8
KMBO ⇓*e*S S 23 14 49.6 -4.7
KMBO **Kilima Mbogo** 63.42 270⇓ *e*P P 23 06 16.6 -8.8
KMBO ⇓*e*S S 23 14 49.6 -4.7
KMBO **Kilima Mbogo** 63.42 270⇓ *e*P P 23 06 25.8 +0.3
KMBO *e*S S 23 14 58.3 +4.0
KMBO **Kilima Mbogo** 63.42 270 *i* P P 23 06 26.4 +1.0
KMBO *e*S S 23 14 54.8 +0.5
KMBO **Kilima Mbogo** 63.42 270 *i* P P 23 06 26.4 +1.0
KMBO *e*S S 23 14 54.8 +0.5
KMBO IAMs_20 IAMs_20 23 27 31.3
comp=Z,21µm,26.2s
KMBO **Kilima Mbogo** 63.42 270 *e*P P 23 06 29.8 +4.3
KMBO *e*S S 23 14 54.4 +0.1
KMBO **Kilima Mbogo** 63.42 270⇓ *e*P P 23 06 25.8 +0.3
KMBO *e*S S 23 14 58.3 +4.0
KMBO **Kilima Mbogo** 63.42 270 *i* P P 23 06 26.4 +1.0
KMBO *e*S S 23 14 54.8 +0.5
KMBO **Kilima Mbogo** 63.42 270 *e*P P 23 06 27.5 +2.0
KMBO *e*S S 23 14 52.1 -2.2
KMBO **Kilima Mbogo** 63.42 270 *e*P P 23 06 27.5 +2.0
KMBO **Kilima Mbogo** 63.42 270 *e*P P 23 06 27.5 +2.0
KMBO *e*S S 23 14 52.1 -2.2
KMBO **Kilima Mbogo** 63.42 270⇓ *e*P P 23 06 24.6 -0.8
KMBO **Kilima Mbogo** 63.42 270 *e*P P 23 06 25.6 +0.1
KMBO *e*S S 23 14 52.6 -1.8
KMBO **Kilima Mbogo** 63.42 270⇓ *e*P P 23 06 25.8 +0.3
KMBO *e*S S 23 14 58.3 +4.0
KMBO **Kilima Mbogo** 63.42 270 *e*P P 23 06 25.8 +0.3
KMBO **Kilima Mbogo** 63.42 270 *i* P P 23 06 26.4 +1.0
KMBO *e*S S 23 14 54.8 +0.5
KMBO IAMs_20 IAMs_20 23 27 31.3
comp=Z,21µm,26.2s
KMBO **Kilima Mbogo** 63.42 270 *i* P P 23 06 26.6 +1.2
SNR=108
TYV **Tymovskoe** 63.70 28 *e*P P 23 06 28.9 +2.7
TYV *e*S S 23 15 03.2 +7.3
TYV pmax pmax
comp=Z,8µm,4.6s
TYV pmax pmax
comp=Z,408nm,1.7s
TYV smax smax
comp=N,2µm,11.8s
TYV smax smax
comp=E,6µm,11.8s
TYV MLR MLR
comp=E,11µm,16.0s
TYV MLR MLR
comp=Z,17µm,16.0s
AKTO **Aktyubinsk** 63.76 331 P P 23 06 26.4 -0.3
comp=Z,98nm,0.7s,baz=129,slow=7.6,SNR=108
AKTO S S 23 14 51.6 -5.1
baz=197,slow=19
AKTO LR LR 23 39 41.7
comp=Z,3µm,18.1s,baz=135,slow=41
comp=Z,98nm,0.7s
NKL **Nikolayevsk** 64.38 25 *e*P P 23 06 29.9 -0.7
NKL *e* 23 08 55.0
NKL *e*S S 23 15 03.5 -0.7
NKL pmax pmax
comp=N,2.0nm,0.9s
NKL pmax pmax
comp=Z,282nm,2.3s
NKL pmax pmax
comp=E,4.0nm,0.7s
NKL smax smax
comp=E,2.0nm,0.9s
NKL smax smax
comp=N,1.0nm,1.8s
NKL MLR MLR
comp=Z,13µm,16.0s
CASY **Casey** 64.45 176 P P 23 06 33.0 +2.1
CASY IAmb IAmb 23 06 54.8
comp=Z,350nm,1.2s
CASY **Casey** 64.45 176 IAMs_20 IAMs_20 23 27 44.4
comp=Z,24µm,22.0s
CASY **Casey** 64.45 176 ⇑P P 23 06 29.6 -1.2
CASY ⇑P P 23 06 29.7 -1.2
KOUNC **Koumac, New Ca** 64.59 112 P P 23 06 32.6 -0.1
KOUNC IAMs_20 IAMs_20 23 33 48.1
comp=Z,20µm,22.0s
KOUNC **Koumac, New Ca** 64.59 112 P P 23 06 34.2 +1.5
KOUNC **Koumac, New Ca** 64.59 112 ⇑P P 23 06 32.8 +0.1
KOUNC ⇓P P 23 06 33.2 +0.6
MAK **Makhachkala** 65.47 320*c* *i*P P 23 06 36.1 -1.9
MAK *e**PP pP 23 06 51.6 -3.1
MAK *e*S S 23 15 15.4 -2.7
MAK *e**SS sS 23 15 44.1 -2.1
MAK *e*SS SS 23 19 32.0 -0.8
MAK pmax pmax
comp=Z,821nm,1.2s
MAK MLR MLR
comp=Z,5µm,22.0s
LODK **Lodwar** 65.53 275 P P 23 06 39.7 +0.8
LODK IAMs_20 IAMs_20 23 32 37.2
comp=Z,13µm,20.0s
LODK **Lodwar** 65.53 275 P P 23 06 40.9 +1.8
SNR=73
LODK **Lodwar** 65.53 275 *e*P P 23 06 40.4 +1.4
LODK **Lodwar** 65.53 275⇑ *e*P P 23 06 32.6 -6.4
LODK *e*S S 23 15 16.2 -3.8
LODK **Lodwar** 65.53 275⇑ *e*P P 23 06 32.6 -6.4
LODK *e*S S 23 15 16.2 -3.8
LODK **Lodwar** 65.53 275⇓ *e*P P 23 06 39.8 +0.8
LODK *e*S S 23 15 23.6 +3.5
LODK **Lodwar** 65.53 275 *i* P P 23 06 40.4 +1.4
LODK ⇓*e*S S 23 15 24.8 +4.8
LODK **Lodwar** 65.53 275 *i* P P 23 06 40.4 +1.4
LODK ⇓*e*S S 23 15 24.8 +4.8
LODK **Lodwar** 65.53 275 *e*P P 23 06 41.4 +2.4
LODK *e*S S 23 15 24.7 +4.7
LODK **Lodwar** 65.53 275⇓ *e*P P 23 06 39.8 +0.8
LODK *e*S S 23 15 23.6 +3.5
LODK **Lodwar** 65.53 275 *i* P P 23 06 40.4 +1.4
LODK ⇓*e*S S 23 15 24.8 +4.8
LODK **Lodwar** 65.53 275 *e*P P 23 06 39.1 +0.1
LODK *e*S S 23 15 22.4 +2.3
LODK **Lodwar** 65.53 275 *e*P P 23 06 39.1 +0.1
LODK **Lodwar** 65.53 275 *e*P P 23 06 39.1 +0.1
LODK *e*S S 23 15 22.4 +2.3
LODK **Lodwar** 65.53 275 *e*P P 23 06 37.9 -1.1
LODK **Lodwar** 65.53 275 *e*P P 23 06 41.9 +2.8
LODK *e*S S 23 15 22.8 +2.8
LODK **Lodwar** 65.53 275⇓ *e*P P 23 06 39.8 +0.8
LODK *e*S S 23 15 23.6 +3.5
LODK **Lodwar** 65.53 275 *e*P P 23 06 40.4 +1.4
LODK **Lodwar** 65.53 275 *i* P P 23 06 40.4 +1.4
LODK ⇓*e*S S 23 15 24.8 +4.8
CUKT **Cukurca** 65.69 313 P P 23 06 39.2 -0.5
GNI **Garni** 66.06 316 P P 23 06 42.7 +0.6
comp=Z,64nm,1.0s,baz=170,slow=1.8,SNR=58
GNI S S 23 15 23.7 -2.1
comp=Z,5.5nm,0.9s,baz=110,slow=12,SNR=2.0
GNI LR LR 23 37 36.4
comp=Z,6µm,22.0s,baz=110,slow=38
comp=Z,64nm,1.0s
GNI **Garni** 66.06 316 P P 23 06 42.9 +0.9
GNI **Garni** 66.06 316 P P 23 06 42.6 +0.6
GNI IAmb IAmb 23 07 07.5
comp=Z,859nm,1.2s
GNI **Garni** 66.06 316*d* *i*P P 23 06 42.7 +0.6
GNI pmax pmax
comp=Z,634nm,1.3s
GNI MLR MLR
comp=Z,7µm,22.0s
GNI **Garni** 66.06 316 P P 23 06 43.0 +0.9
GNI P P 23 06 43.0 +0.9
GNI **Garni** 66.06 316 P P 23 06 41.8 -0.2
GNI **Garni** 66.06 316 ⇑P P 23 06 41.4 -0.7
GNI ⇓P P 23 06 42.7 +0.6
CLDR **Caldiran** 66.23 315 P P 23 06 43.9 +0.7
TASB **TASBURUN-IGDIR** 66.34 316 P P 23 06 44.6 +0.8
GEVA **Gevas** 66.51 314 P P 23 06 44.9 -0.1
GEVA IAmb IAmb 23 07 26.5
comp=Z,444nm,1.3s
AKDM **Akdamar-Van** 66.57 314 P P 23 06 45.8 +0.4
NOUC **Port Laguerre** 66.66 113 P P 23 06 47.5 +1.5
GROC **Groznyy** 66.70 319 *e*P P 23 06 46.1 +0.3
GROC *e**PP pP 23 07 02.3 -0.3
GROC *e* 23 07 14.6
GROC *e*S S 23 15 30.7 -2.3
GROC *e**SS sS 23 16 01.4 +0.3
GROC *e* 23 16 38.6
GROC pmax pmax
comp=Z,328nm,0.9s
DZM **Mont Dzumac** 66.78 113 LR LR 23 36 24.8
comp=Z,16µm,21.3s,baz=284,slow=36
DZM **Mont Dzumac** 66.78 113 *e*LR LR 23 27 19.7
comp=Z,39µm,25.1s
DZM **Mont Dzumac** 66.78 113 P P 23 06 46.8 -0.1
DZM IAmb IAmb 23 06 50.2
comp=Z,533nm,1.1s
DZM **Mont Dzumac** 66.78 113 P P 23 06 47.5 +0.6
DZM **Mont Dzumac** 66.78 113 P P 23 06 47.2 +0.3
ONTNC **Ouen Toro** 66.82 113 P P 23 06 46.7 -0.3
ONTNC IAmb IAmb 23 06 50.2
comp=Z,655nm,1.0s
ONTNC **Ouen Toro** 66.82 113 P P 23 06 48.9 +1.9
ONTNC **Ouen Toro** 66.82 113 ⇑P P 23 06 46.9 -0.1
ONTNC ⇓P P 23 06 47.4 +0.4
SVE **Sverdlovsk** 67.02 337*de*P P 23 06 47.7 +0.1
SVE *e* 23 09 18.1
SVE *e*PPP PPP 23 10 52.8
SVE *e*S S 23 15 34.4 -2.0
SVE pmax pmax
comp=Z,1µm,1.4s
SVE MLR MLR
comp=Z,8µm,19.0s
AGRB **Hanur-Agry** 67.06 315 P P 23 06 49.2 +0.7
OUENC **Ouen Island, N** 67.19 113 P P 23 06 49.7 +0.3
OUENC IAmb IAmb 23 06 52.9
comp=Z,619nm,0.9s
OUENC **Ouen Island, N** 67.19 113 P P 23 06 50.2 +0.8
YATNC **Mamie plateau,** 67.19 113 P P 23 06 51.0 +1.6
MLAZ **Malazgirt-MUS** 67.20 314 P P 23 06 50.3 +1.0
GURO **Guroymak-BITLI** 67.35 313 P P 23 06 51.0 +0.8
GURO **Guroymak-BITLI** 67.35 313 P P 23 06 50.1 -0.1
GURO IAmb IAmb 23 07 19.3
comp=Z,469nm,1.4s
LIFNC **LIFOU** 67.36 112 P P 23 06 50.7 +0.2
LIFNC **LIFOU** 67.36 112 P P 23 06 51.7 +1.2
comp=Z,2µm,1.4s
KARS **Kars** 67.42 316 P P 23 06 51.8 +1.1
KARS **Kars** 67.42 316 P P 23 06 51.3 +0.6
KARS **Kars** 67.42 316 P P 23 06 51.3 +0.6
KARS pmax pmax
comp=Z,2µm,1.1s
AKH **Akhalkalaki** 67.45 317 P P 23 06 54.1 +3.2
TETE **Tete** 67.45 253⇓ *i*P P 23 06 52.2 +1.1
TETE IAmb IAmb 23 06 57.3
comp=Z,372nm,1.2s
KWAJ **Kwajalein Atol** 67.56 80 P P 23 06 51.8 0.0
KWAJ IAmb IAmb 23 06 54.8
comp=Z,710nm,1.0s
KWAJ **Kwajalein Atol** 67.56 80 P P 23 06 51.8 0.0
KWAJ pmax pmax
comp=Z,710nm,1.0s
KWAJ MLR MLR
comp=Z,5µm,22.0s
ARU **Arti** 67.56 336 P P 23 06 50.5 -0.5
comp=Z,98nm,0.7s,baz=133,slow=4.3,SNR=90
ARU LR LR 23 39 33.0
comp=Z,12µm,21.7s,baz=130,slow=39
comp=Z,98nm,0.7s
ARU **Arti** 67.56 336 P P 23 06 50.5 -0.5
ARU IAmb IAmb 23 07 17.3
comp=Z,709nm,1.1s
ARU IAMs_20 IAMs_20 23 39 19.7
comp=Z,13µm,22.0s
ARU **Arti** 67.56 336*c* *i*P P 23 06 51.3 +0.3
ARU *PP pP 23 07 08.4 +0.5
ARU 23 07 21.3
ARU 23 09 18.5
ARU PPP PPP 23 11 02.6
ARU S S 23 15 45.3 +2.5
ARU *SS sS 23 16 10.6 -0.7
ARU 23 16 42.3
ARU pmax pmax
comp=Z,192nm,0.8s
ARU MLR MLR
comp=Z,14µm,22.0s
ARU **Arti** 67.56 336 P P 23 06 50.8 -0.2
YAK **Yakutsk** 67.64 14 S S 23 15 40.1 -3.6
comp=Z,7.7nm,0.4s,baz=258,slow=23,SNR=6.4
YAK **Yakutsk** 67.64 14 P P 23 06 50.5 -0.9
YAK **Yakutsk** 67.64 14 *e*P P 23 06 50.5 -0.9
YAK *e**PP pP 23 07 08.9 +0.6
YAK *e* 23 07 22.4
YAK *e* 23 09 18.7
YAK *ePPP PPP 23 10 58.3
YAK *e*S S 23 15 41.6 -2.0
YAK *e**SS sS 23 16 14.8 +1.8
YAK *e* 23 16 40.8
YAK pmax pmax
comp=Z,2µm,1.0s
YAK pmax pmax
comp=N,367nm,1.1s
YAK pmax pmax
comp=E,226nm,1.0s
YAK pmax pmax
comp=Z,768nm,3.7s
YAK pmax pmax
comp=N,607nm,3.4s
YAK pmax pmax
comp=E,494nm,3.2s
YAK smax smax
comp=E,2µm,4.8s
YAK smax smax
comp=N,1µm,4.8s
YAK MLR MLR
comp=Z,24µm,19.0s
YAK MLR MLR
comp=N,16µm,18.0s
YAK MLR MLR
comp=E,12µm,19.0s
ZEI **Tsey** 67.76 318 *e*P P 23 06 52.8 0.0
ZEI pmax pmax
comp=Z,363nm,0.8s
PINNC **Pines Island,** 67.77 113 P P 23 06 52.8 -0.2
PINNC IAmb IAmb 23 06 56.5
comp=Z,468nm,1.1s
SVAN **Silvan-Diyarba** 67.81 313 P P 23 06 53.5 +0.5
MARD **Mardin** 67.81 312 P P 23 06 53.3 +0.1
MARD IAmb IAmb 23 07 18.0
comp=Z,956nm,1.4s
DVP **Devils Point** 67.94 108 P P 23 06 55.0 +0.8
VRTB **Varto-Mus** 67.99 314 P P 23 06 55.6 +1.3
H11S3 **WAKE ISLAND Hy** 68.01 69 P P 23 06 54.2 -0.2
baz=242,slow=5.2,SNR=14
H11S1 **WAKE ISLAND Hy** 68.02 69 P P 23 06 53.8 -0.6
baz=242,slow=5.2,SNR=13
H11S2 **WAKE ISLAND Hy** 68.02 69 P P 23 06 53.8 -0.6
baz=242,slow=5.2,SNR=15
KOPR **Koprukoy-ERZUR** 68.03 315 P P 23 06 55.7 +1.2
WAKE **Wake Island** 68.11 68 P P 23 06 54.1 -1.1
WAKE IAmb IAmb 23 06 57.3
comp=Z,660nm,0.9s
MARNC **Mare, Loyalty** 68.17 112 P P 23 06 55.2 -0.4
MARNC **Mare, Loyalty** 68.17 112 P P 23 06 57.0 +1.4
KARO **Karliova-Bingo** 68.34 314 P P 23 06 57.6 +1.0
H11N1 **WAKE ISLAND Hy** 68.41 68 P P 23 06 56.8 0.0
baz=249,slow=8.0,SNR=58
H11N2 **WAKE ISLAND Hy** 68.42 68 P P 23 06 57.2 +0.3
baz=249,slow=8.0,SNR=29
H11N3 **WAKE ISLAND Hy** 68.43 68 P P 23 06 56.7 -0.3
baz=249,slow=8.0,SNR=45
BNGB **Bingl** 68.49 313 P P 23 06 58.0 +0.6
DYBB **Diyarbakir** 68.51 312 P P 23 06 58.4 +0.9
BATM **Batumi** 68.77 316 P P 23 06 59.3 +0.4
KBZ **Khabaz** 68.82 319 P P 23 06 59.6 +0.5
comp=Z,114nm,0.8s,baz=112,slow=5.3,SNR=150
KBZ S S 23 15 55.6 -2.7
comp=Z,2.1nm,0.8s,baz=24,slow=20,SNR=1.3
KBZ PKPPKP **P'P'df** 23 35 07.9 -4.6
comp=Z,1.1nm,0.8s,baz=310,slow=4.4,SNR=4.0
KBZ PKP2ab 23 35 15.2
comp=Z,4.3nm,0.9s,baz=297,slow=4.0,SNR=16
KBZ LR LR 23 40 15.2
comp=Z,4µm,21.2s,baz=112,slow=39
comp=Z,114nm,0.8s
KBZ **Khabaz** 68.82 319*d* *i*P P 23 06 59.6 +0.5
KBZ pmax pmax
comp=Z,1µm,1.1s
KBZ MLR MLR
comp=Z,6µm,22.0s
KOPT **Kop Dagi** 69.00 314 P P 23 07 01.2 +0.5
KIV **Kislovodsk** 69.06 319 ⇓P P 23 07 01.3 +0.5
KIV **Kislovodsk** 69.06 319 P P 23 07 01.2 +0.5
KIV **Kislovodsk** 69.06 319 P P 23 07 00.5 -0.3
KIV **Kislovodsk** 69.06 319 *e*P P 23 07 00.6 -0.2
KIV *e*S S 23 16 01.1 -0.3
KIV *e*SS SS 23 20 30.3 +1.8
KIV pmax pmax
comp=Z,93nm,1.1s
KIV MLR MLR
comp=Z,3µm,17.0s
KIV **Kislovodsk** 69.06 319 P P 23 07 01.6 +0.8
KIV P P 23 07 01.6 +0.8
KIV **Kislovodsk** 69.06 319 *i* P P 23 07 01.2 +0.4
SNR=68
NFK **Norfolk Island** 69.15 120 P P 23 07 02.7 +1.1
baz=69,SNR=4.2
ASF **Jabal al Asfar** 69.20 306 P P 23 07 02.9 +0.9
comp=Z,96nm,0.8s,baz=134,slow=3.8
ASF S S 23 16 02.3 -1.2
comp=Z,0.9nm,0.5s,baz=90,slow=2.0,SNR=1.3
ASF LR LR 23 36 59.8
comp=Z,20µm,21.5s,baz=115,slow=36
comp=Z,96nm,0.8s
CHOM **Cayeli-Rize** 69.22 316 P P 23 07 02.3 +0.6
SVRC **Sivrice-ELAZID** 69.28 312 P P 23 07 02.8 +0.4
GOF **Gofitskoye** 69.30 320⇑ *e*P P 23 07 02.3 +0.2
GOF *e*S S 23 16 05.4 +1.5
GOF pmax pmax
comp=Z,211nm,1.3s
GOF smax smax
comp=E,198nm,1.5s
GOF smax smax
comp=N,323nm,2.0s
BAYT **Aydıntepe-Bayb** 69.39 315 P P 23 07 04.1 +1.1
JAWL **J.Aulia** 69.58 287 *i* P P 23 07 00.1 -4.4
JAWL *i* 23 07 09.7
baz=276,slow=7.9

JAWL *i* P **S** **23 16 08.7 +0.3**
JAWL *i* S **S** **23 16 11.8 +3.4**
CNG Changalane 69.84 243 ⇓ *i* P **P** **23 07 06.5 +0.6**
CNG IAmb IAmb 23 07 09.4
comp=Z,55nm,0.8s
KTUT Trabzon 69.88 315 P **P** **23 07 06.4 +0.6**
MBAR Mbarara 69.95 270 P **P** **23 07 07.4 +0.5**
comp=Z,214nm,0.8s,baz=79,slow=6.5,SNR=30
MBAR LR LR 23 34 40.3
comp=Z,12μm,20.0s,baz=66,slow=33
comp=Z,214nm,0.8s
MBAR Mbarara 69.95 270 P **P** **23 07 08.0 +1.0**
MBAR Mbarara 69.95 270 IAMs_20 IAMs_20 23 34 29.5
comp=Z,14μm,20.0s
MBAR Mbarara 69.95 270 *ce* P **P** **23 07 08.2 +1.2**
MBAR pmax pmax
comp=Z,444nm,1.3s
MBAR Mbarara 69.95 270 P **P** **23 07 08.6 +1.7**
MBAR Mbarara 69.95 270 *e* P **P** **23 07 07.8 +0.8**
MBAR Mbarara 69.95 270 ⇑ *e* P P 23 07 01.8 -5.2
MBAR *e* S **S** **23 16 06.7 -6.4**
MBAR Mbarara 69.95 270 ⇓ *e* P P 23 07 01.8 -5.2
MBAR *e* S **S** **23 16 06.7 -6.4**
MBAR Mbarara 69.95 270 ⇓ *e* P **P** **23 07 07.3 +0.4**
MBAR *e* S **S** **23 16 10.5 -2.6**
MBAR Mbarara 69.95 270 *i* P **P** **23 07 08.0 +1.0**
MBAR *e* S **S** **23 16 15.2 +2.2**
MBAR Mbarara 69.95 270 *i* P **P** **23 07 08.0 +1.0**
MBAR *e* S **S** **23 16 15.2 +2.2**
MBAR Mbarara 69.95 270 *e* P **P** **23 07 07.0 0.0**
MBAR *e* S **S** **23 16 11.2 -1.9**
MBAR Mbarara 69.95 270 ⇓ *e* P **P** **23 07 07.3 +0.4**
MBAR *e* S **S** **23 16 10.5 -2.6**
MBAR Mbarara 69.95 270 *i* P **P** **23 07 08.0 +1.0**
MBAR *e* S **S** **23 16 15.2 +2.2**
MBAR Mbarara 69.95 270 *e* P **P** **23 07 07.0 0.0**
MBAR *e* S **S** **23 16 13.4 +0.4**
MBAR Mbarara 69.95 270 *e* P **P** **23 07 07.0 0.0**
MBAR Mbarara 69.95 270 *e* P **P** **23 07 07.0 0.0**
MBAR *e* S **S** **23 16 13.5 +0.4**
MBAR Mbarara 69.95 270 *e* P P 23 07 01.8 -5.2
MBAR Mbarara 69.95 270 *e* P **S** **23 07 02.8 -4.2**
MBAR *e* S **S** **23 16 11.6 -1.5**
MBAR Mbarara 69.95 270 ⇓ *e* P **S** **23 07 07.3 +0.4**
MBAR *e* S **S** **23 16 10.5 -2.6**
MBAR Mbarara 69.95 270 *e* P **P** **23 07 07.8 +0.8**
MBAR Mbarara 69.95 270 *i* P **P** **23 07 08.0 +1.0**
MBAR *e* S **S** **23 16 15.2 +2.2**
GHAJ Ghor Haditha 70.05 304 P **P** **23 07 07.7 +0.7**
GHAJ IAmb IAmb 23 07 29.7
comp=Z,459nm,0.9s
DRV Dumont d'Urvil 70.06 164 P **P** **23 07 07.1 +0.8**
EIL Elat 70.15 302 LR LR 23 37 51.1
comp=Z,31μm,19.6s,baz=106,slow=36
EIL Elat 70.15 302 P **P** **23 07 08.7 +1.0**
BELG Belogornoye 70.16 329 P **P** **23 07 06.6 -0.6**
comp=Z,349nm,1.0s,baz=126,slow=1.3,SNR=66
BELG S **S** **23 16 06.7 -7.0**
comp=Z,17nm,1.0s,baz=194,slow=16,SNR=1.5
BELG LR LR 23 43 33.7
comp=Z,4μm,20.2s,baz=120,slow=41
comp=Z,349nm,1.0s
BELG Belogornoye 70.16 329 *d* *i* P **P** **23 07 05.8 -1.4**
BELG pmax pmax
comp=Z,72nm,1.1s
ILIC ilic-Erzincan 70.19 313 P **P** **23 07 09.6 +1.7**
MOPA Mopani 70.21 246 ⇓ *i* P **P** **23 07 09.2 +1.0**
MOPA IAmb IAmb 23 07 11.8
comp=Z,118nm,0.7s
MOPA Mopani 70.21 246 *i* P **P** **23 07 09.8 +1.6**
MOPA Mopani 70.21 246 *i* P **P** **23 07 09.8 +1.6**
MOPA Mopani 70.21 246 *i* P **P** **23 07 09.8 +1.6**
ARPR Arapgir-MALATY 70.24 313 P **P** **23 07 09.1 +0.9**
UJAP Al Uja 70.31 305 P **P** **23 07 09.6 +1.1**
MCQ Macquarie Isla 70.37 148 P **P** **23 07 08.4 -0.1**
MCQ Macquarie Isla 70.37 148 P **P** **23 07 08.4 -0.1**
MCQ pmax pmax
comp=Z,340nm,1.0s
MAW Mawson 70.38 194 P **P** **23 07 09.7 +1.4**
comp=Z,120nm,0.7s,baz=18,slow=6.0,SNR=137
MAW S **S** **23 16 16.3 +0.5**
comp=Z,2.9nm,0.9s,baz=40,slow=16,SNR=1.0
MAW LR LR 23 32 02.4
comp=Z,12μm,21.9s,baz=34,slow=31
MAW PKPPKP **P'P'df** **23 35 07.0 -1.9**
comp=Z,20nm,1.0s,baz=189,slow=3.3,SNR=12
comp=Z,120nm,0.7s
MAW Mawson 70.38 194 P **P** **23 07 10.0 +1.8**
baz=70,SNR=145
MAW Mawson 70.38 194 P **P** **23 07 09.5 +1.3**
POGA Pongola 70.42 242 ⇓ *i* P **P** **23 07 10.2 +0.8**
POGA IAmb IAmb 23 07 15.2
comp=Z,418nm,1.6s
RCY Rachaya 70.43 307 *e* P **P** **23 07 10.3 +0.8**
SHBL Chebaa 70.46 306 *e* P **P** **23 07 11.0 +1.3**
MMLI Mount Malkishu 70.47 305 P **P** **23 07 10.9 +1.2**
SKR Severo-Kuril's 70.55 34 ⇓ *i* P **P** **23 07 11.4 +1.8**
SKR *i* S **S** **23 16 18.0 -0.3**
SKR *e* 23 17 06.1
SKR pmax pmax
comp=Z,1μm,1.0s
SKR pmax pmax
comp=Z,2μm,3.6s
SKR MLR MLR
comp=Z,6μm,19.0s
HWQ Hawqa 70.56 307 *e* P **P** **23 07 10.9 +0.7**
QRWL Qaraoun 70.57 307 *e* P **P** **23 07 11.0 +0.8**
ESPY Espiye-Giresun 70.58 315 P **P** **23 07 10.6 +0.5**
MAGG Maguga Dam 70.64 243 *e* P **P** **23 07 11.1 +0.3**
MAGG IAmb IAmb 23 07 14.3
comp=Z,242nm,0.8s
MMAI Mount Meron Ar 70.64 306 P **P** **23 07 07.2 -3.6**
comp=Z,8.2nm,0.8s,baz=195,slow=10,SNR=1.8
MMAI S **S** **23 16 19.9 -0.4**
comp=Z,0.5nm,0.5s,baz=266,slow=31,SNR=1.3
MMAI LR LR 23 38 09.3
comp=Z,20μm,21.4s,baz=274,slow=36
BHL Bhannes 70.69 307 *e* P **P** **23 07 12.0 +1.0**
MMAL MMAL 70.69 243 *e* P **P** **23 07 11.7 +0.6**
MMAL IAmb IAmb 23 07 14.6
comp=Z,258nm,0.8s
DARE Darende-Malaty 70.69 312 P **P** **23 07 11.3 +0.4**
DQRL Deir Qamar 70.70 307 *e* P **P** **23 07 12.1 +1.0**
HAGI HAGI 70.71 243 *e* P **P** **23 07 11.2 -0.2**
HAGI IAmb IAmb 23 07 14.8
comp=Z,195nm,0.8s
KMRS Kahramanmaras 70.79 311 P **P** **23 07 12.0 +0.5**
SOC Sochi 70.88 318 *e* P **P** **23 07 10.6 -1.2**
SOC *e**PP **pP** **23 07 26.7 -2.1**
SOC *e**SP **PcP** **23 07 33.0 +0.9**
SOC *i* S **S** **23 16 19.0 -3.5**
SOC *e**SS **SKiKP** **23 16 47.6 -1.1**
SOC *e*SS **SS** **23 20 53.9 -2.4**
SOC pmax pmax
comp=Z,187nm,0.8s
SOC MLR MLR
comp=Z,5μm,22.0s
YAYL Yayladag 70.94 309 P **P** **23 07 13.3 +0.7**
TAHT Tahtakopru-Hat 70.98 310 P **P** **23 07 13.6 +1.0**
RSDY Resadiye-TOKAT 71.41 314 P **P** **23 07 16.0 +0.9**
SARI SarD1z-Kayseri 71.43 312 P **P** **23 07 15.9 +0.4**
SVSK Karacayir 71.49 313 P **P** **23 07 16.4 +0.9**
KOZT Kozan 71.59 311 P **P** **23 07 16.6 +0.3**
CRLN Carolina, Mapu 71.74 243 ⇓ *i* P **P** **23 07 17.9 +0.2**
CRLN IAmb IAmb 23 07 21.2
comp=Z,92nm,0.8s
NRIK Noril'sk 71.84 355 P **P** **23 07 16.6 -0.5**
comp=Z,296nm,0.9s,baz=153,slow=5.4,SNR=158
NRIK S **S** **23 16 26.1 -6.5**
comp=Z,39nm,1.1s,baz=219,slow=6.5,SNR=15
NRIK PKPPKP **P'P'df** **23 35 08.9 +3.3**
comp=Z,0.9nm,0.4s,baz=339,slow=4.2,SNR=4.2
NRIK LR LR 23 42 12.3
comp=Z,14μm,19.8s,baz=168,slow=39
comp=Z,296nm,0.9s
NRIK Noril'sk 71.84 355 P **P** **23 07 16.6 -0.5**
NRIK IAmb IAmb 23 07 42.0
comp=Z,439nm,1.0s
NRIK Noril'sk 71.84 355 *c* *i* P **P** **23 07 16.3 -0.8**
NRIK pmax pmax
comp=Z,687nm,1.3s
NRIK MLR MLR
comp=Z,14μm,19.0s
BNN Bunyan 71.99 312 P **P** **23 07 18.9 +0.1**
BNN Bunyan 71.99 312 P **P** **23 07 18.6 -0.3**
BNN IAmb IAmb 23 07 41.0
comp=Z,728nm,1.1s
TOKA Tokat 72.00 314 P **P** **23 07 19.1 +0.4**
KARA Karaisali 72.11 310 P **P** **23 07 19.7 +0.3**
DCZ Deep Cove 72.15 137 P **P** **23 07 20.1 +0.7**
DCZ IAmb IAmb 23 07 39.9
comp=Z,640nm,1.3s
CMRD Camardi-Nigde 72.28 311 P **P** **23 07 21.6 +1.0**
TARA Tarawa 72.30 88 P **P** **23 07 21.3 +0.3**
TARA IAmb IAmb 23 07 24.4
comp=Z,786nm,1.1s
EREN Erenkoy 72.31 308 P **P** **23 07 21.0 +0.4**
MERS Mersin 72.41 310 P **P** **23 07 20.3 -1.0**
MSZ Milford Sound 72.47 136 P **P** **23 07 23.2 +1.8**
BLWY Bulawayo 72.47 250 ⇓ *i* P **P** **23 07 22.7 +0.6**
BLWY IAmb IAmb 23 07 26.1
comp=Z,2μm,0.8s
BLWY Bulawayo 72.47 250 *i* P **P** **23 07 21.9 -0.2**
BLWY Bulawayo 72.47 250 *i* P **P** **23 07 21.9 -0.2**
BLWY Bulawayo 72.47 250 *i* P **P** **23 07 21.9 -0.2**
LSZ Lusaka 72.58 255 P **P** **23 07 23.4 +0.6**
comp=Z,205nm,0.8s,baz=86,slow=5.5,SNR=186
LSZ S **S** **23 16 42.4 -0.9**
comp=Z,2.5nm,0.9s,baz=105,slow=21,SNR=1.8
LSZ LR LR 23 34 55.0
comp=Z,15μm,20.6s,baz=96,slow=32
comp=Z,205nm,0.8s
LSZ Lusaka 72.58 255 IAMs_20 IAMs_20 23 34 42.9
comp=Z,17μm,20.0s
PEA0B Petropavlovsk- 72.58 32 P **P** **23 07 21.7 -0.2**
PEA0B Petropavlovsk- 72.58 32 *c* *i* P **P** **23 07 21.6 -0.2**
PETK Petropavlovsk- 72.58 32 P **P** **23 07 21.1 -0.8**
comp=Z,223nm,0.9s,baz=212,slow=5.3,SNR=80
PETK LR LR 23 41 27.6
comp=Z,5μm,19.5s,baz=238,slow=38
comp=Z,223nm,0.9s
PETK Petropavlovsk- 72.58 32 P **P** **23 07 20.8 -1.1**
MATP Matopo 72.60 249 ⇓ *i* P **P** **23 07 23.7 +0.9**
MATP IAmb IAmb 23 07 26.6
comp=Z,20μm,0.8s
MATP Matopo 72.60 249 P **P** **23 07 23.6 +0.8**
comp=Z,613nm,0.8s,baz=92,slow=5.8,SNR=635
MATP S **S** **23 16 40.2 -3.2**
comp=Z,4.7nm,1.1s,baz=246,slow=19,SNR=1.8
MATP LR LR 23 33 48.6
comp=Z,35μm,21.6s,baz=76,slow=31
comp=Z,613nm,0.8s
MATP Matopo 72.60 249 *i* P **P** **23 07 23.9 +1.1**
MATP Matopo 72.60 249 *i* P **P** **23 07 23.9 +1.1**
MATP Matopo 72.60 249 *i* P **P** **23 07 23.9 +1.1**
YOZ Yozgat 72.62 313 P **P** **23 07 23.8 +1.2**
KIRV Kirov 72.74 335 P **P** **23 07 23.0 +0.4**
comp=Z,502nm,0.8s,baz=143,slow=0.9,SNR=56
KIRV LR LR 23 42 57.0
comp=Z,7μm,21.2s,baz=123,slow=39
comp=Z,502nm,0.8s
KIRV Kirov 72.74 335 *ce* P **P** **23 07 22.9 +0.3**
LFK Lefkose 72.75 308 P **P** **23 07 23.9 +0.6**
VRH Novokhopyorsk 72.78 326 *e* P **P** **23 07 22.7 -0.3**
VRH *e*S **S** **23 16 37.5 -6.5**
VRH pmax pmax
comp=Z,410nm,0.7s
VRH pmax pmax
comp=Z,450nm,0.8s
VRH smax smax
comp=N,4μm,3.1s
VRH MLR MLR
comp=Z,8μm,24.0s
MLZ Mavora Lakes 72.78 137 P **P** **23 07 23.0 -0.3**
MLZ IAmb IAmb 23 07 43.9
comp=Z,582nm,1.3s
MLZ IAMs_20 IAMs_20 23 39 41.7
comp=Z,12μm,21.0s
MLZ Mavora Lakes 72.78 137 P **P** **23 07 24.3 +1.0**
WHZ Wether Hill Ro 72.80 138 P **P** **23 07 23.3 0.0**
WHZ IAmb IAmb 23 07 44.1
comp=Z,502nm,1.4s
WHZ IAMs_20 IAMs_20 23 37 59.2
comp=Z,10μm,21.0s
WHZ Wether Hill Ro 72.80 138 P **P** **23 07 24.3 +1.0**
MA2 Magadan 72.82 24 S **S** **23 16 42.2 -2.0**
comp=Z,3.7nm,0.4s,baz=252,slow=14,SNR=1.6
MA2 LR LR 23 41 29.9
comp=Z,13μm,19.0s,baz=232,slow=38
MA2 Magadan 72.82 24 P **P** **23 07 23.5 +0.3**
MA2 IAmb IAmb 23 07 27.7
comp=Z,1μm,1.1s
MA2 IAMs_20 IAMs_20 23 41 58.5
comp=Z,15μm,20.0s
MA2 Magadan 72.82 24 *c* *i* P **P** **23 07 23.4 +0.3**
MA2 pmax pmax
comp=Z,1μm,1.1s
MA2 MLR MLR
comp=Z,15μm,19.0s
MA2 Magadan 72.82 24 P **P** **23 07 25.2 +2.1**
CSS Mathiatis 72.82 307 P **P** **23 07 24.2 +0.5**
CSS Mathiatis 72.82 307 P **P** **23 07 23.6 -0.1**
CSS IAmb IAmb 23 07 48.5
comp=Z,927nm,1.2s
CSS IAMs_20 IAMs_20 23 38 32.2
comp=Z,17μm,22.0s
KOZK Kozakli-Nevseh 72.83 312 P **P** **23 07 23.8 0.0**
ANN Anapa 72.86 318 *e* P **P** **23 07 25.0 +1.4**
ANN *e**PP **pP** **23 07 40.1 -0.5**
ANN *e*S **S** **23 16 40.1 -5.0**
ANN pmax pmax
comp=Z,66nm,0.8s
ANN MLR MLR
comp=Z,4μm,23.0s
JCZ Jackson Bay 72.92 136 P **P** **23 07 24.8 +0.6**
KEBE Keben-Mersin 72.92 309 P **P** **23 07 24.6 +0.3**
KSTD Kokstad 72.95 239 ⇓ *i* P **P** **23 07 25.9 +1.2**
KSTD IAmb IAmb 23 07 28.3
comp=Z,146nm,0.8s
AKKU Akkuyu-Mersin 72.97 309 P **P** **23 07 24.5 0.0**
PET Petropavlovsk 73.05 32 P **P** **23 07 24.7 +0.1**
PET Petropavlovsk 73.05 32 *e* P **P** **23 07 24.4 -0.2**
PET *e* 23 10 10.5
PET *e*S **S** **23 16 49.0 +2.0**
PET *e*SS **SS** **23 21 32.0 +2.9**
PET *e*SSS SSS 23 24 37.5
PET pmax pmax
comp=Z,8μm,4.9s
PET pmax pmax
comp=Z,2μm,1.2s
PET pmax pmax
comp=Z,4μm,20.7s
PET smax smax
comp=N,7μm,17.9s
PET MLR MLR
comp=Z,11μm,21.0s
PET MLR MLR
comp=Z,8μm,20.0s
PET Petropavlovsk 73.05 32 P **P** **23 07 26.1 +1.5**
TEVE Tevekalti-Mers 73.12 309 P **P** **23 07 25.3 -0.2**
LEF Lefka 73.21 308 P **P** **23 07 26.3 +0.3**
WKZ Wanaka 73.26 136 P **P** **23 07 25.9 -0.2**
WKZ IAMs_20 IAMs_20 23 40 17.9
comp=Z,15μm,21.0s
WKZ Wanaka 73.26 136 P **P** **23 07 26.5 +0.4**
SLR Silverton 73.27 244 ⇓ *i* P **P** **23 07 27.3 +0.6**
SLR IAmb IAmb 23 07 30.2
comp=Z,206nm,0.9s
BERE Bereket-Mersin 73.27 309 P **P** **23 07 26.9 +0.4**
CORM Corum 73.29 313 P **P** **23 07 26.8 +0.3**
DIKM Dikmen 73.29 315 P **P** **23 07 26.4 +0.1**
TEKE Tekeli-Mersin 73.30 309 P **P** **23 07 26.6 +0.1**
KRMN Karaman 73.46 310 P **P** **23 07 27.7 +0.2**
FOZ Fox Glacier 73.51 135 IAMs_20 IAMs_20 23 39 07.7
comp=Z,14μm,21.0s
FOZ Fox Glacier 73.51 135 P **P** **23 07 27.6 0.0**
YAYX Yaylak 73.53 312 P **P** **23 07 27.7 -0.3**
SULT Sultanhani-AKS 73.55 311 P **P** **23 07 28.5 +0.5**
EAZ Earnscleugh 73.56 137 P **P** **23 07 29.0 +1.1**
SERE Serefiikochisa 73.72 312 P **P** **23 07 28.5 -0.6**
KAMT Kaman 73.73 312 P **P** **23 07 28.7 -0.4**
HRAO HartRAO 73.82 244 ⇓ *i* P **P** **23 07 30.7 +0.8**
HRAO IAmb IAmb 23 07 33.9
comp=Z,366nm,0.9s
GCSZ Gaunt Creek Bo 73.83 135 P **P** **23 07 29.8 +0.3**
BR131 Keskin Array S 73.89 312 P **P** **23 07 28.9 -1.1**
BR131 IAmb IAmb 23 07 54.0
comp=Z,674nm,1.1s
BR131 Keskin Array S 73.89 312 *d* *i* P **P** **23 07 29.1 -0.9**
BR131 Keskin Array S 73.89 312 P **P** **23 07 29.5 -0.6**
SNR=69
BRTR Keskin Array B 73.89 312 P **P** **23 07 29.3 -0.8**
comp=Z,39nm,0.9s,baz=120,slow=7.3,SNR=134
BRTR PKPPKP **P'P'df** **23 34 57.4 -7.0**
comp=Z,1.1nm,0.8s,baz=250,slow=2.9,SNR=4.0
BRTR LR LR 23 43 26.7
comp=Z,9μm,19.3s,baz=116,slow=38
comp=Z,39nm,0.9s
BRTR Keskin Array B 73.89 312 P **P** **23 07 29.4 -0.6**
BRTR Keskin Array B 73.89 312 P **P** **23 07 29.4 -0.6**
GAZI Gazipasa 73.95 309 P **P** **23 07 29.9 -0.4**
TUZ Tuapeka 73.95 137 P **P** **23 07 31.0 +0.9**
LBZ Lake Benmore 73.97 136 P **P** **23 07 29.6 -0.7**
LBZ IAmb IAmb 23 07 50.5
comp=Z,729nm,1.4s
LBZ IAMs_20 IAMs_20 23 39 11.6
comp=Z,14μm,21.0s
LBZ Lake Benmore 73.97 136 P **P** **23 07 30.3 0.0**
SNKL Senekal, Frees 73.99 241 ⇓ *i* P **P** **23 07 31.2 +0.3**
SNKL IAmb IAmb 23 07 36.4
comp=Z,321nm,1.3s
HDMB Hadim 74.00 309 P **P** **23 07 30.9 0.0**
VORD Divnogorie 74.06 325 *e* P **P** **23 07 29.7 -0.9**
VORD *e*S **SKiKP** **23 16 51.9 -1.3**
VORD pmax pmax
comp=Z,160nm,0.7s
VORD pmax pmax
comp=Z,120nm,0.6s
VORD smax smax
comp=N,560nm,4.9s
WVZ Waitaha Valley 74.07 134 P **P** **23 07 31.1 +0.3**
WDLM Western Deep L 74.11 243 *e* P **P** **23 07 31.9 +0.3**
WDLM IAmb IAmb 23 07 35.2
comp=Z,203nm,0.7s
CHBY Cihanbeyli 74.13 311 P **P** **23 07 31.4 0.0**
CANT Cankiri 74.16 313 P **P** **23 07 31.6 +0.1**
PRYS Parys 74.21 243 ⇓ *i* P **P** **23 07 32.3 +0.1**
PRYS IAmb IAmb 23 07 35.4
comp=Z,281nm,0.8s
ILGA Ilgaz 74.22 314 P **P** **23 07 31.7 -0.3**
AFSR Afar-Bala (An 74.23 312 P **P** **23 07 31.7 -0.3**
VSR Storozhevoye 74.24 325 *e* P **P** **23 07 31.3 -0.3**
VSR *e*S **SKiKP** **23 16 54.6 +1.1**
VSR pmax pmax
comp=Z,250nm,0.8s
VSR pmax pmax
comp=Z,250nm,0.6s
VSR smax smax
comp=N,3μm,4.0s
BZK Bozkurt 74.28 315 ⇑ P **P** **23 07 32.6 +0.6**
BZK Bozkurt 74.28 315 P **P** **23 07 31.9 -0.2**
BZK Bozkurt 74.28 315 P **P** **23 07 31.8 -0.2**
KONT Konya--Tatoy 74.36 310 P **P** **23 07 32.8 +0.1**
VORR Voronezh 74.40 325 *e* P **P** **23 07 32.2 -0.4**
VORR *e*S **S** **23 16 58.3 -4.0**
VORR pmax pmax
comp=Z,500nm,1.5s
VORR pmax pmax
comp=Z,500nm,1.7s
VORR smax smax
comp=N,1μm,2.1s
LADK Ladik-KONYA 74.42 311 P **P** **23 07 32.6 -0.6**
RPZ Rata Peaks 74.43 135 LR LR 23 39 58.8
comp=N,16μm,21.0s,baz=282,slow=35
RPZ Rata Peaks 74.43 135 P **P** **23 07 33.4 +0.4**
RPZ IAmb IAmb 23 07 53.5
comp=Z,637nm,1.1s
RPZ IAMs_20 IAMs_20 23 39 48.0
comp=Z,19μm,21.0s
RPZ Rata Peaks 74.43 135 P **P** **23 07 33.4 +0.4**
RPZ Rata Peaks 74.43 135 P **P** **23 07 33.4 +0.4**
ODZ Otahua Downs 74.44 136 P **P** **23 07 33.7 +0.7**
ODZ IAMs_20 IAMs_20 23 41 26.0
comp=Z,11μm,21.0s
ODZ Otahua Downs 74.44 136 P **P** **23 07 34.6 +1.6**
ODZ Otahua Downs 74.44 136 P **P** **23 07 35.1 +2.2**
INZ Inchbonnie 74.50 134 P **P** **23 07 33.5 +0.1**
KSR Koster 74.52 244 *e* P **P** **23 07 34.5 +0.5**
KSR IAmb IAmb 23 07 47.0
comp=Z,49nm,0.8s
TMZ Timaru 74.54 136 P **P** **23 07 33.3 -0.3**
ANTO Ankara 74.55 312 P **P** **23 07 35.6 +1.8**
ANTO Ankara 74.55 312 P **P** **23 07 33.5 -0.3**
ANTO IAmb IAmb 23 07 58.2
comp=Z,560nm,1.0s
ANTO Ankara 74.55 312 P **P** **23 07 33.5 -0.3**
ANTO pmax pmax
comp=Z,560nm,1.0s
ANTO MLR MLR
comp=Z,7μm,22.0s
BR231 Keskin MP Arra 74.56 312 P **P** **23 07 33.5 -0.4**
BR231 IAmb IAmb 23 07 58.3
comp=Z,559nm,1.1s
LOD Lodumlu 74.58 312 P **P** **23 07 33.8 -0.2**
HHSZ Highcliff Hill 74.59 137 P **P** **23 07 33.0 -0.8**
SEYD Seydisehir-KON 74.62 310 P **P** **23 07 34.7 +0.4**
OUZ Omahuta 74.86 126 P **P** **23 07 36.4 +0.9**
OUZ IAmb IAmb 23 07 56.6
comp=Z,552nm,1.3s
OUZ Omahuta 74.86 126 P **P** **23 07 36.7 +1.1**
QRZ Quartz Range 74.94 132 P **P** **23 07 36.1 +0.2**
QRZ IAmb IAmb 23 07 56.8
comp=Z,1μm,1.2s
QRZ Quartz Range 74.94 132 P **P** **23 07 37.1 +1.2**
LPSR Galich'ya Gora 74.94 326 *e* P **P** **23 07 35.1 -0.6**
LPSR *e*S **S** **23 17 03.0 -5.3**
LPSR pmax pmax
comp=Z,240nm,1.0s
LPSR pmax pmax
comp=Z,230nm,0.9s
LPSR smax smax
comp=N,4μm,4.3s
WACZ Wakanui South 75.03 135 P **P** **23 07 38.4 +2.0**
OXZ Oxford 75.05 134 IAMs_20 IAMs_20 23 40 17.9
comp=Z,12μm,22.0s
OXZ Oxford 75.05 134 P **P** **23 07 36.8 +0.3**
LTZ Lake Taylor 75.11 134 P **P** **23 07 37.2 +0.3**
SIM Simferopol' 75.13 318 *e* P **P** **23 07 36.4 -0.5**
SIM *e* 23 07 56.0
SIM *e*S **S** **23 17 16.0 +5.3**
SIM pmax pmax
comp=Z,127nm,0.8s
KURC Kurucasile-Bar 75.15 314 P **P** **23 07 34.4 -2.7**
RACZ Rakaia 75.20 135 P **P** **23 07 37.2 -0.2**
SUTC Sutluce-Ispart 75.28 310 P **P** **23 07 37.3 -0.9**
AUSIV SIVRIHISAR 75.37 312 P **P** **23 07 39.3 +0.7**
SVRH Sivrihisar-ESK 75.39 312 P **P** **23 07 39.3 +0.6**
ANTB Antalya 75.41 309 P **P** **23 07 41.7 +3.0**
SEY Seymchan 75.44 22 S **S** **23 17 07.6 -5.9**
comp=Z,1.7nm,0.7s,baz=197,slow=20,SNR=1.3
SEY LR LR 23 41 56.8
comp=Z,19μm,21.8s,baz=235,slow=36
SEY Seymchan 75.44 22 *c* *i* P **P** **23 07 38.6 +0.3**
SEY pmax pmax
comp=Z,776nm,1.1s
SEY MLR MLR
comp=Z,22μm,22.0s
YUVA Yuva-Kibriscik 75.51 313 P **P** **23 07 39.5 +0.1**
AUMIH MIHALICIK 75.52 312 P **P** **23 07 39.2 -0.3**
MQZ McQueen's Vall 75.57 135 P **P** **23 07 39.8 +0.4**
MQZ IAmb IAmb 23 08 01.5
comp=Z,1μm,1.9s
MQZ McQueen's Vall 75.57 135 P **P** **23 07 41.2 +1.7**
LBTB Lobatse 75.62 245 ⇓ *i* P **P** **23 07 40.9 +0.6**
LBTB IAmb IAmb 23 07 45.1
comp=Z,627nm,1.6s
LBTB Lobatse 75.62 245 P **P** **23 07 40.9 +0.6**
comp=Z,136nm,0.7s,baz=98,slow=5.4,SNR=85
LBTB LR LR 23 36 04.8
comp=Z,29μm,20.8s,baz=87,slow=32
comp=Z,136nm,0.7s
LBTB Lobatse 75.62 245 P **P** **23 07 40.0 -0.3**
LBTB Lobatse 75.62 245 *i* P **P** **23 07 41.1 +0.7**
LBTB Lobatse 75.62 245 *i* P **P** **23 07 41.1 +0.7**
LBTB Lobatse 75.62 245 *i* P **P** **23 07 41.1 +0.7**
NNZ Nelson 75.64 132 P **P** **23 07 40.3 +0.3**
NNZ IAmb IAmb 23 07 59.8
comp=Z,914nm,1.6s
KORT Korkueli 75.67 309 P **P** **23 07 39.9 -0.5**
CIFT Cifteler, Eski 75.71 311 P **P** **23 07 40.2 -0.3**
NMEZ Namu Road 75.71 130 P **P** **23 07 43.0 +2.6**
ISP Isparta 75.73 310 P **P** **23 07 39.9 -0.8**
ISP Isparta 75.73 310 P **P** **23 07 40.6 -0.1**

ISP	**Isparta**	**75.73**	**310**	P	**P**	**23 07 40.6**	**-0.1**
ISP				pmax	pmax		
	comp=Z,255nm,1.1s						
ISP				MLR	MLR		
	comp=Z,8µm,21.0s						
PKE	**Pukeiti**	**75.76**	**130**	P	**P**	**23 07 42.9**	**+2.2**
KHEZ	**Kahui Hut**	**75.80**	**130**	P	**P**	**23 07 44.2**	**+3.2**
TIXI	**Tiksi**	**75.83**	**9**	S	**S**	**23 17 12.2**	**-5.2**
	comp=Z,9.2nm,1.0s,baz=270,slow=20,SNR=22						
TIXI				LR	LR	23 44 19.0	
	comp=Z,41µm,21.4s,baz=180,slow=38						
TIXI	**Tiksi**	**75.83**	**9**	P	**P**	**23 07 39.5**	**-0.8**
TIXI	**Tiksi**	**75.83**	**9**	⇑P	**P**	**23 07 39.7**	**-0.6**
NEZ	**North Egmont**	**75.86**	**130**	P	**P**	**23 07 44.2**	**+2.9**
SHUT	**Suhut-Afyon**	**75.89**	**311**	P	**P**	**23 07 41.2**	**-0.4**
MDUB	**Mudurnu**	**75.89**	**313**	P	**P**	**23 07 41.3**	**-0.3**
MDUB	**Mudurnu**	**75.89**	**313**	P	**P**	**23 07 41.2**	**-0.3**
ELL	**Elmali**	**75.95**	**309**	P	**P**	**23 07 41.9**	**-0.1**
ELL	**Elmali**	**75.95**	**309**	P	**P**	**23 07 41.3**	**-0.7**
ELL	**Elmali**	**75.95**	**309**	P	**P**	**23 07 41.3**	**-0.7**
ELL				pmax	pmax		
	comp=Z,2µm,1.2s						
KHZ	**Kahutara**	**75.97**	**133**	P	**P**	**23 07 41.5**	**-0.3**
KHZ				IAmb	IAmb	23 08 01.9	
	comp=Z,666nm,1.4s						
KHZ	**Kahutara**	**75.97**	**133**	P	**P**	**23 07 42.3**	**+0.5**
PRGR	**Permogore**	**76.02**	**336**	⇓*i*P	**P**	**23 07 41.9**	**+0.3**
PRGR				*i* *PP	**pP**	**23 07 59.9**	**+1.1**
PRGR				*i* S	**S**	**23 17 17.5**	**-2.3**
SWZ	**Schweizer**	**76.03**	**243**	*e*P	**P**	**23 07 42.8**	**+0.1**
SWZ				IAmb	IAmb	23 07 46.2	
	comp=Z,290nm,0.7s						
AKAS	**Kas**	**76.08**	**308**	P	**P**	**23 07 41.7**	**-1.0**
BASM	**Basmaki-Afyon**	**76.12**	**310**	P	**P**	**23 07 43.4**	**+0.5**
LREZ	**Lake Rotokare**	**76.12**	**130**	P	**P**	**23 07 44.9**	**+2.1**
SRCK	**Saricakaya, Es**	**76.21**	**312**	P	**P**	**23 07 42.7**	**-0.5**
HVD	**Gariep Dam**	**76.21**	**239**	⇓*i*P	**P**	**23 07 44.4**	**+0.8**
HVD				IAmb	IAmb	23 07 48.4	
	comp=Z,701nm,2.1s						
BOSA	**Boshof**	**76.23**	**241**	⇓*i*P	**P**	**23 07 44.0**	**+0.3**
BOSA				IAmb	IAmb	23 07 47.0	
	comp=Z,200nm,0.8s						
BOSA	**Boshof**	**76.23**	**241**	P	**P**	**23 07 44.0**	**+0.3**
	comp=Z,190nm,0.7s,baz=92,slow=5.1,SNR=172						
BOSA				PKPPKP	**P'P'df**	**23 35 01.3**	**-0.1**
	comp=Z,5.5nm,1.1s,baz=100,slow=2.3,SNR=3.7						
BOSA				LR	LR	23 35 44.9	
	comp=Z,14µm,21.3s,baz=88,slow=31						
	comp=Z,190nm,0.7s						
BOSA	**Boshof**	**76.23**	**241**	P	**P**	**23 07 43.4**	**-0.4**
BOSA	**Boshof**	**76.23**	**241**	*i* P	**P**	**23 07 44.1**	**+0.3**
BOSA	**Boshof**	**76.23**	**241**	*i* P	**P**	**23 07 44.1**	**+0.3**
BOSA	**Boshof**	**76.23**	**241**	*i* P	**P**	**23 07 44.1**	**+0.3**
BORA	**Eskisehir**	**76.29**	**312**	P	**P**	**23 07 43.4**	**-0.4**
HIZ	**Hauiti**	**76.33**	**129**	IAMs_20	IAMs_20	23 40 48.5	
	comp=Z,11µm,21.0s						
HIZ	**Hauiti**	**76.33**	**129**	P	**P**	**23 07 44.9**	**+0.9**
VRZ	**Vera Road**	**76.34**	**130**	P	**P**	**23 07 45.2**	**+1.2**
MKAZ	**Moumakai**	**76.37**	**128**	P	**P**	**23 07 46.3**	**+2.1**
SOE	**Somerset East**	**76.38**	**237**	*e*P	**P**	**23 07 46.0**	**+1.5**
SOE				IAmb	IAmb	23 07 49.8	
	comp=Z,656nm,1.6s						
GULT	**Gulveren**	**76.39**	**312**	P	**P**	**23 07 44.0**	**-0.3**
CAME	**Cameli-Denizli**	**76.47**	**309**	P	**P**	**23 07 44.6**	**-0.4**
FETY	**Fethiye**	**76.58**	**308**	P	**P**	**23 07 44.9**	**-0.5**
APMY	**Acipayam-Deniz**	**76.59**	**309**	P	**P**	**23 07 47.6**	**+2.0**
SAUV	**Serdivan-Sakar**	**76.60**	**313**	P	**P**	**23 07 45.0**	**-0.4**
WAZ	**Wanganui**	**76.61**	**130**	P	**P**	**23 07 47.2**	**+1.6**
AUBOZ	**BOZOYUK**	**76.61**	**312**	P	**P**	**23 07 45.5**	**-0.1**
SNZO	**South Karori**	**76.64**	**132**	P	**P**	**23 07 45.0**	**-0.6**
SNZO				IAmb	IAmb	23 08 05.2	
	comp=Z,2µm,1.6s						
SNZO	**South Karori**	**76.64**	**132**	P	**P**	**23 07 46.0**	**+0.4**
KIW	**Kapiti Island**	**76.72**	**131**	P	**P**	**23 07 46.0**	**-0.2**
TOZ	**Tahuroa Road**	**76.72**	**128**	P	**P**	**23 07 48.0**	**+1.8**
PKVZ	**Pokaka**	**76.82**	**130**	P	**P**	**23 07 48.0**	**+1.2**
TLZ	**Tolley Road**	**76.83**	**129**	P	**P**	**23 07 48.7**	**+1.8**
TWVZ	**Taurewa**	**76.86**	**130**	P	**P**	**23 07 48.6**	**+1.5**
GEDZ	**Gediz**	**76.87**	**311**	P	**P**	**23 07 47.9**	**+0.8**
CAW	**Cannon Point**	**76.88**	**132**	P	**P**	**23 07 47.0**	**+0.1**
OGWZ	**Otaki Gorge**	**76.91**	**131**	P	**P**	**23 07 47.5**	**+0.3**
MOS	**Moscow**	**76.92**	**329**	*e*P	**P**	**23 07 45.6**	**-1.3**
MOS				*e**PP	**pP**	**23 08 05.0**	**+1.1**
MOS				*e*		23 10 41.1	
MOS				*e*S	**S**	**23 17 24.9**	**-5.1**
MOS				*e*		23 17 53.6	
MOS				pmax	pmax		
	comp=Z,1µm,1.8s						
MOS				pmax	pmax		
	comp=Z,509nm,1.4s						
MOS				smax	smax		
	comp=E,4µm,4.2s						
MOS				smax	smax		
	comp=N,12µm,7.0s						
MOS				MLR	MLR		
	comp=Z,8µm,22.0s						
MOS				MLR	MLR		
	comp=N,5µm,23.0s						
MOS				MLR	MLR		
	comp=E,7µm,23.0s						
TVSB	**Tavsanli**	**76.93**	**311**	P	**P**	**23 07 47.2**	**-0.3**
DALY	**Dalyan (Mula)**	**76.95**	**308**	P	**P**	**23 07 47.2**	**-0.3**
ADVT	**Abdulvahap**	**76.96**	**312**	P	**P**	**23 07 46.9**	**-0.6**
FWVZ	**Far West T-bar**	**76.97**	**130**	P	**P**	**23 07 48.4**	**+0.6**
TRVZ	**Turoa**	**76.98**	**130**	P	**P**	**23 07 48.4**	**+0.6**
WTVZ	**West Tongariro**	**76.98**	**130**	P	**P**	**23 07 48.7**	**+0.9**
DRZ	**Dome Shelter**	**76.98**	**130**	P	**P**	**23 07 50.0**	**+2.0**
NGZ	**Ngauruhoe**	**77.00**	**130**	P	**P**	**23 07 48.7**	**+0.8**
NNVZ	**North Ngauruho**	**77.00**	**130**	P	**P**	**23 07 49.4**	**+1.4**
WHVZ	**Whangaehu Hut**	**77.00**	**130**	P	**P**	**23 07 48.6**	**+0.5**
WNVZ	**Wahianoa**	**77.02**	**130**	P	**P**	**23 07 48.7**	**+0.6**
KRVZ	**Karewarewa**	**77.02**	**130**	P	**P**	**23 07 49.1**	**+1.1**
SNVZ	**South Ngauruho**	**77.03**	**130**	P	**P**	**23 07 49.2**	**+1.1**
WATZ	**Wairara**	**77.04**	**129**	P	**P**	**23 07 50.1**	**+2.1**
KATZ	**Kakaramea**	**77.05**	**129**	P	**P**	**23 07 49.6**	**+1.5**
NTVZ	**North Tongarir**	**77.05**	**130**	P	**P**	**23 07 49.8**	**+1.6**
OTVZ	**Oturere**	**77.05**	**130**	P	**P**	**23 07 49.0**	**+0.8**
TUVZ	**Tukino**	**77.05**	**130**	P	**P**	**23 07 50.5**	**+2.3**
MSWZ	**Moikau Station**	**77.06**	**132**	P	**P**	**23 07 48.8**	**+0.7**
TMVZ	**Te Maari**	**77.07**	**130**	P	**P**	**23 07 49.9**	**+1.7**
ETVZ	**East Tongariro**	**77.08**	**130**	P	P	23 07 41.1	-7.3
RATZ	**Rangitukua**	**77.09**	**129**	P	**P**	**23 07 49.7**	**+1.4**
MOVZ	**Moawhango**	**77.15**	**130**	P	**P**	**23 07 48.7**	**0.0**
RITZ	**Rihia Road**	**77.17**	**129**	P	**P**	**23 07 50.3**	**+1.5**
HOWZ	**Holdsworth Sta**	**77.18**	**131**	P	**P**	**23 07 49.0**	**+0.3**
PAWZ	**Paruwai Farm**	**77.19**	**132**	P	**P**	**23 07 49.2**	**+0.5**
MRZ	**Mangatainoka R**	**77.19**	**131**	P	**P**	**23 07 49.0**	**+0.2**
WHTZ	**Whakaora**	**77.21**	**129**	P	**P**	**23 07 52.1**	**+3.1**
SIMA	**Simav-Kutahya**	**77.21**	**311**	P	**P**	**23 07 48.6**	**-0.4**
SILT	**Sile**	**77.21**	**313**	P	**P**	**23 07 49.1**	**+0.3**
MTW	**Mount Morrison**	**77.21**	**132**	P	**P**	**23 07 49.4**	**+0.6**
OBN	**Obninsk**	**77.23**	**328**	⇑P	**P**	**23 07 49.2**	**+0.6**
OBN	**Obninsk**	**77.23**	**328**	P	**P**	**23 07 48.8**	**+0.2**
	comp=E,21nm,0.6s,baz=91,slow=4.4,SNR=60						
OBN				S	**S**	**23 17 28.0**	**-5.3**
	comp=E,4.0nm,0.8s,baz=83,slow=16,SNR=3.2						
OBN				LR	LR	23 47 50.7	
	comp=E,1µm,19.4s,baz=108,slow=40						
OBN	**Obninsk**	**77.23**	**328**	P	**P**	**23 07 48.7**	**+0.1**
OBN	**Obninsk**	**77.23**	**328**	*d i*P	**P**	**23 07 48.8**	**+0.2**
OBN				*i*		23 07 54.5	
OBN				*i* *PP	**pP**	**23 08 08.7**	**+3.1**
OBN				*i*		23 10 48.8	
OBN				*e*PPP	PPP	23 12 35.7	
OBN				*i* S	**S**	**23 17 28.6**	**-4.7**
OBN				*i*		23 17 53.4	
OBN				*i* *SS	**ScS**	**23 17 59.3**	**-1.5**
OBN				*e*SS	**SS**	**23 22 28.9**	**-3.5**
OBN				pmax	pmax		
	comp=Z,453nm,1.3s						
OBN				pmax	pmax		
	comp=Z,5µm,7.3s						
OBN				MLR	MLR		
	comp=Z,12µm,24.0s						
ARG	**Arkhangelos**	**77.24**	**308**	P	**P**	**23 07 49.2**	**+0.1**
ARG	**Arkhangelos**	**77.24**	**308**	P	**P**	**23 07 48.5**	**-0.6**
ARG	**Arkhangelos**	**77.24**	**308**	P	**P**	**23 07 49.2**	**+0.1**
ARG				IAmb	IAmb	23 08 13.8	
	comp=Z,924nm,1.2s						
ARG	**Arkhangelos**	**77.24**	**308**	P	**P**	**23 07 49.2**	**+0.1**
ARG				pmax	pmax		
	comp=Z,924nm,1.2s						
TURN	**Turunc**	**77.26**	**308**	P	**P**	**23 07 49.3**	**+0.1**
YLV	**Yalova**	**77.26**	**312**	P	**P**	**23 07 49.1**	**-0.1**
POWZ	**Post Office Ro**	**77.30**	**131**	P	**P**	**23 07 50.9**	**+1.5**
YER	**Yerkesik**	**77.31**	**309**	P	**P**	**23 07 49.4**	**-0.2**
KROM	**Kromhout**	**77.31**	**236**	*e*P	**P**	**23 07 50.8**	**+1.2**
KROM				IAmb	IAmb	23 07 53.2	
	comp=Z,138nm,0.7s						
KULA	**Kula-Manisa**	**77.32**	**310**	P	**P**	**23 07 49.7**	**+0.1**
KULA	**Kula-Manisa**	**77.32**	**310**	P	**P**	**23 07 49.3**	**-0.3**
MSVF	**Nonsavu**	**77.33**	**108**	LR	LR	23 39 46.3	
	comp=Z,5µm,21.6s,baz=268,slow=34						
MSVF	**Nonsavu**	**77.33**	**108**	P	**P**	**23 07 50.0**	**0.0**
MSVF				IAmb	IAmb	23 07 53.7	
	comp=Z,527nm,1.1s						
MSVF	**Nonsavu**	**77.33**	**108**	P	**P**	**23 07 50.1**	**0.0**
MSVF				pmax	pmax		
	comp=Z,527nm,1.1s						
MSVF				MLR	MLR		
	comp=Z,7µm,22.0s						
MSVF	**Nonsavu**	**77.33**	**108**	P	**P**	**23 07 50.8**	**+0.8**
	comp=Z,541nm,2.2s						
GEMT	**Gemlik**	**77.37**	**312**	P	**P**	**23 07 49.6**	**-0.1**
ROSN	**Rosenhof**	**77.38**	**236**	*e*P	**P**	**23 07 50.8**	**+0.9**
ROSN				IAmb	IAmb	23 07 53.6	
	comp=Z,130nm,0.7s						
TRWZ	**Traveller**	**77.38**	**132**	P	**P**	**23 07 50.8**	**+1.0**
BHHZ	**Black Hill Sta**	**77.40**	**130**	P	**P**	**23 07 50.5**	**+0.5**
TSZ	**Takapari Road**	**77.40**	**130**	P	**P**	**23 07 50.7**	**+0.7**
TRML	**Termal-Yalova**	**77.42**	**312**	P	**P**	**23 07 49.5**	**-0.5**
TIWZ	**Tintock**	**77.44**	**131**	P	**P**	**23 07 51.0**	**+0.8**
PRWZ	**Pori Road**	**77.47**	**131**	P	**P**	**23 07 51.1**	**+0.7**
TMWZ	**Te Maipa**	**77.49**	**132**	P	**P**	**23 07 51.4**	**+0.9**
PNHZ	**Pukenui**	**77.56**	**130**	P	**P**	**23 07 51.5**	**+0.6**
MDNY	**Mudanya-Bursa**	**77.58**	**312**	P	**P**	**23 07 50.8**	**-0.1**
DVHZ	**Dannevirke**	**77.59**	**131**	P	**P**	**23 07 51.7**	**+0.7**
KAVV	**Kandilli-Istan**	**77.61**	**313**	P	**P**	**23 07 52.1**	**+1.0**
ISK	**Istanbul-Kandi**	**77.61**	**313**	P	**P**	**23 07 50.9**	**-0.2**
ARMT	**Armutlu**	**77.64**	**312**	P	**P**	**23 07 50.8**	**-0.5**
KRHZ	**Kereru**	**77.65**	**130**	P	**P**	**23 07 52.9**	**+1.5**
KLYT	**Kilyos**	**77.67**	**313**	P	**P**	**23 07 51.3**	**-0.1**
BKZ	**Black Stump Fm**	**77.69**	**130**	P	**P**	**23 07 51.3**	**-0.3**
BKZ				IAmb	IAmb	23 07 56.4	
	comp=Z,573nm,0.8s						
BKZ				IAMs_20	IAMs_20	23 41 40.9	
	comp=Z,15µm,21.0s						
BKZ	**Black Stump Fm**	**77.69**	**130**	P	**P**	**23 07 51.5**	**-0.2**
BKZ	**Black Stump Fm**	**77.69**	**130**	P	**P**	**23 07 51.8**	**+0.2**
CPWZ	**Castlepoint**	**77.70**	**131**	P	**P**	**23 07 54.4**	**+2.9**
BFZ	**Birch Farm**	**77.70**	**131**	P	**P**	**23 07 52.1**	**+0.4**
BFZ	**Birch Farm**	**77.70**	**131**	P	**P**	**23 07 52.4**	**+0.8**
MLSB	**Milas**	**77.74**	**309**	P	**P**	**23 07 52.2**	**+0.3**
WPHZ	**Waipukurau**	**77.76**	**130**	P	**P**	**23 07 52.6**	**+0.6**
DAT	**Datca**	**77.78**	**308**	P	**P**	**23 07 51.7**	**-0.6**
DAT	**Datca**	**77.78**	**308**	P	**P**	**23 07 51.5**	**-0.8**
AYDB	**Zeytinkoy-Aydi**	**77.79**	**309**	P	**P**	**23 07 52.6**	**+0.3**
ANWZ	**Angora Road**	**77.84**	**131**	P	**P**	**23 07 54.5**	**+2.1**
BGKT	**Bogazkoy**	**77.85**	**313**	P	**P**	**23 07 52.5**	**+0.1**
KARP	**Karpathos**	**77.87**	**307**	P	**P**	**23 07 53.2**	**+0.5**
KARP	**Karpathos**	**77.87**	**307**	P	**P**	**23 07 53.0**	**+0.3**
KARP	**Karpathos**	**77.87**	**307**	P	**P**	**23 07 53.0**	**+0.3**
KARP				IAMs_20	IAMs_20	23 47 54.1	
	comp=Z,14µm,21.0s						
MCHZ	**McNeill Hill**	**77.88**	**130**	P	**P**	**23 07 54.0**	**+1.3**
NMHZ	**Naumai**	**77.92**	**129**	P	**P**	**23 07 50.6**	**-2.4**
PRHZ	**Porangahau**	**77.94**	**131**	P	**P**	**23 07 54.2**	**+1.2**
RTZ	**Ruatahuna**	**77.99**	**129**	P	**P**	**23 07 53.5**	**+0.1**
URZ	**Urewera**	**78.05**	**129**	LR	LR	23 43 36.2	
	comp=Z,12µm,20.7s,baz=276,slow=36						
URZ	**Urewera**	**78.05**	**129**	P	**P**	**23 07 52.7**	**-0.9**
URZ				IAMs_20	IAMs_20	23 45 30.2	
	comp=Z,14µm,20.0s						
URZ	**Urewera**	**78.05**	**129**	P	**P**	**23 07 54.2**	**+0.6**
URZ	**Urewera**	**78.05**	**129**	P	**P**	**23 07 54.0**	**+0.4**
BODT	**Bodrum**	**78.06**	**308**	P	**P**	**23 07 53.3**	**-0.4**
BODT	**Bodrum**	**78.06**	**308**	P	**P**	**23 07 52.7**	**-1.0**
CTKS	**Kestanelik-??a**	**78.06**	**313**	P	**P**	**23 07 53.1**	**-0.4**
KAHZ	**Kahuranaki**	**78.06**	**130**	P	**P**	**23 07 54.5**	**+0.8**
NIS1	**Nisyros Isl.**	**78.07**	**308**	P	**P**	**23 07 53.4**	**-0.3**
NIS1	**Nisyros Isl.**	**78.07**	**308**	P	**P**	**23 07 52.7**	**-1.0**
NISR	**Nisiros**	**78.11**	**308**	P	**P**	**23 07 53.0**	**-0.9**
RAHZ	**Arahi**	**78.11**	**129**	P	**P**	**23 07 55.2**	**+1.2**
BALB	**Balikesir**	**78.17**	**311**	P	**P**	**23 07 54.3**	**+0.1**
GCAM	**G?zelcaml?**	**78.25**	**309**	P	**P**	**23 07 55.2**	**+0.5**
CTYL	**Yalikoy Yolu**	**78.28**	**313**	P	**P**	**23 07 54.2**	**-0.5**
SLVT	**Silivri**	**78.28**	**313**	P	**P**	**23 07 54.8**	**0.0**
SNGZ	**Shannon Statio**	**78.29**	**129**	P	**P**	**23 07 55.2**	**+0.3**
RAGZ	**Rawiri**	**78.32**	**129**	P	**P**	**23 07 55.8**	**+0.6**
FUNA	**Funafuti**	**78.33**	**98**	P	**P**	**23 07 56.0**	**+0.4**
FUNA				IAmb	IAmb	23 07 59.3	
	comp=Z,492nm,1.2s						
EDC	**Edincik**	**78.33**	**312**	P	**P**	**23 07 55.7**	**+0.6**
MWZ	**Matawai**	**78.39**	**129**	P	**P**	**23 07 55.5**	**0.0**
PURM	**Purcari**	**78.43**	**318**	⇓P	**P**	**23 07 55.9**	**+0.4**
RUGZ	**Raukumara Rang**	**78.46**	**128**	P	**P**	**23 07 56.1**	**+0.1**
HAZ	**Te Kaha**	**78.52**	**128**	P	**P**	**23 07 55.5**	**-0.7**
BLCB	**Balcova**	**78.54**	**310**	P	**P**	**23 07 56.7**	**+0.4**
BLCB	**Balcova**	**78.54**	**310**	P	**P**	**23 07 56.4**	**+0.1**
ZKR	**Zakros**	**78.54**	**306**	P	**P**	**23 07 56.9**	**+0.5**
ZKR	**Zakros**	**78.54**	**306**	P	**P**	**23 07 56.5**	**+0.1**
SMG	**Samos**	**78.56**	**309**	P	**P**	**23 07 56.1**	**-0.3**
CRLT	**Corlu**	**78.60**	**313**	P	**P**	**23 07 57.2**	**+0.6**
RIGZ	**Rimuhau**	**78.61**	**129**	P	**P**	**23 07 56.6**	**-0.1**
MANR	**Mangalia**	**78.62**	**315**	⇓P	**P**	**23 07 57.0**	**+0.5**
EFOR	**EFORIE**	**78.65**	**316**	⇑P	**P**	**23 07 57.3**	**+0.6**
JURR	**Jurilovca**	**78.65**	**316**	⇑P	**P**	**23 07 57.0**	**+0.3**
TKGZ	**Te Karaka**	**78.65**	**129**	P	**P**	**23 08 00.7**	**+3.8**
TWGZ	**Tauwhareparae**	**78.72**	**128**	P	**P**	**23 07 57.6**	**+0.2**
PRGZ	**Paritu Road**	**78.73**	**129**	P	**P**	**23 07 58.8**	**+1.4**
KRBG	**Karabiga-Canak**	**78.77**	**312**	P	**P**	**23 07 58.7**	**+1.2**
PKGZ	**Pakihiroa**	**78.77**	**128**	P	**P**	**23 07 57.9**	**+0.2**
MHGZ	**Mahia Peninsul**	**78.78**	**129**	P	**P**	**23 07 59.1**	**+1.5**
DKL	**Dikili**	**78.78**	**310**	P	**P**	**23 07 57.7**	**+0.1**
TLCR		**78.80**	**317**	⇓P	**P**	**23 07 58.2**	**+0.7**
TLCR		**78.80**	**317**	⇓P	**P**	**23 07 58.2**	**+0.7**
MFTR	**Murfatlar**	**78.82**	**316**	⇓P	**P**	**23 07 57.9**	**+0.2**
GZKV	**Gazikoy-Tekird**	**78.82**	**312**	P	**P**	**23 07 57.5**	**-0.2**
MAR3	**Marsite Statio**	**78.84**	**312**	P	**P**	**23 07 57.4**	**-0.5**
MAR6	**Marsite Statio**	**78.86**	**312**	P	**P**	**23 07 59.2**	**+1.2**
PSN	**Preselentsi**	**78.87**	**315**	*i* P	**P**	**23 07 58.0**	**0.0**
URLA	**Izmir**	**78.87**	**310**	P	**P**	**23 07 58.5**	**+0.3**
TIRR	**Tirgusor**	**78.89**	**316**	⇑P	**P**	**23 07 58.5**	**+0.4**
TIRR	**Tirgusor**	**78.89**	**316**	P	**P**	**23 07 57.9**	**-0.1**
TIRR				IAMs_20	IAMs_20	23 48 41.9	
	comp=Z,9µm,20.0s						
TIRR	**Tirgusor**	**78.89**	**316**	⇑P	**P**	**23 07 58.5**	**+0.4**
MXZ	**Matakaoa Point**	**78.92**	**128**	IAMs_20	IAMs_20	23 44 26.6	
	comp=Z,12µm,19.0s						
MXZ	**Matakaoa Point**	**78.92**	**128**	P	P	23 07 51.4	-7.0
PUZ	**Puketiti**	**78.93**	**128**	P	**P**	**23 07 58.6**	**+0.1**
CNGZ	**Carnagh Statio**	**78.94**	**129**	P	**P**	**23 07 58.0**	**-0.4**
TPGR	**Topolog**	**78.99**	**316**	⇓P	**P**	**23 07 58.8**	**+0.2**
WMGZ	**Waiomatatini S**	**79.03**	**128**	P	**P**	**23 07 58.8**	**-0.1**
CVDA	**Cernavoda**	**79.12**	**316**	⇓P	**P**	**23 07 59.6**	**+0.3**
TLBR	**Topalu**	**79.17**	**316**	⇑P	**P**	**23 07 60.0**	**+0.4**
GRAN	**Grantham**	**79.19**	**238**	⇓*i*P	**P**	**23 08 01.2**	**+1.0**
GRAN				IAmb	IAmb	23 08 04.3	
	comp=Z,133nm,0.8s						
MILM	**Milestii Mici**	**79.23**	**318**	⇓*i*P	**P**	**23 07 59.0**	**-0.9**
	comp=Z,1µm,6.1s						
MILM	**Milestii Mici**	**79.23**	**318**	*e*PP	PP	23 10 59.0	-1.3
MILM				*i* S	**S**	**23 17 49.0**	**-6.2**
	comp=Z,3µm,7.4s						
MILM	**Milestii Mici**	**79.23**	**318**	⇓P	**P**	**23 07 59.7**	**-0.2**
MILM	**Milestii Mici**	**79.23**	**318**	*d i*P	**P**	**23 07 59.0**	**-0.9**
MILM				*e*		23 08 20.0	
MILM				*e*		23 10 59.0	
MILM				*i* S	**S**	**23 17 49.0**	**-6.2**
MILM				*i*		23 18 11.0	
MILM				*e*PS	**PnS**	**23 18 42.0**	**-3.8**
MILM				*e*SS	**SS**	**23 22 59.0**	**-4.0**
MILM				pmax	pmax		
	comp=Z,1µm,6.1s						
MILM				smax	smax		
	comp=E,3µm,7.4s						
MILM				smax	smax		
	comp=N,8µm,12.9s						
MILM				MLR	MLR		
	comp=Z,3µm,22.0s						
MILM				MLR	MLR		
	comp=N,2µm,21.5s						
ICOR	**Ion Corvin**	**79.24**	**316**	⇑P	**P**	**23 08 00.6**	**+0.6**
KIS	**Kishinev**	**79.25**	**319**	⇓*i*P	**P**	**23 07 59.6**	**-0.4**
	comp=N,36nm,0.5s						
KIS	**Kishinev**	**79.25**	**319**	*e*PP	PP	23 10 59.0	-1.4
KIS				*i* S	**S**	**23 17 49.0**	**-6.4**
	comp=N,500nm,3.0s						
KIS	**Kishinev**	**79.25**	**319**	⇑P	**P**	**23 08 00.4**	**+0.4**
KIS	**Kishinev**	**79.25**	**319**	*d i*P	**P**	**23 07 59.6**	**-0.4**
KIS				*e*		23 08 20.0	
KIS				*e*		23 10 59.0	
KIS				*i* S	**S**	**23 17 49.0**	**-6.4**
KIS				*e*		23 18 12.0	
KIS				*i* PS	**PnS**	**23 18 43.0**	**-3.0**
KIS				smax	smax		
	comp=N,2µm,9.9s						
KIS				MLR	MLR		
	comp=Z,1µm,23.0s						
CFR	**Carcaliu**	**79.26**	**317**	⇓P	**P**	**23 08 00.2**	**+0.1**
CFR	**Carcaliu**	**79.26**	**317**	⇓P	**P**	**23 08 00.2**	**+0.1**
HARR	**Harsova**	**79.28**	**316**	⇓P	**P**	**23 08 00.6**	**+0.4**
CHOS	**Chios island**	**79.30**	**310**	P	**P**	**23 08 01.1**	**+0.6**
CHOS	**Chios island**	**79.30**	**310**	P	**P**	**23 08 00.7**	**+0.2**
PRK	**Paraskevi**	**79.30**	**310**	P	**P**	**23 08 01.4**	**+1.0**
PRD	**Provadia**	**79.31**	**315**	*i* P	**P**	**23 08 00.6**	**+0.2**
EZN	**Ezine**	**79.38**	**311**	P	**P**	**23 08 01.1**	**+0.3**
SANT	**Santorini**	**79.38**	**307**	⇓P	**P**	**23 08 00.6**	**-0.3**
SANT	**Santorini**	**79.38**	**307**	P	**P**	**23 08 00.9**	**-0.1**
SANT	**Santorini**	**79.38**	**307**	P	**P**	**23 07 59.9**	**-1.1**
SANT	**Santorini**	**79.38**	**307**	P	**P**	**23 08 00.3**	**-0.7**
SANT				IAmb	IAmb	23 08 25.8	
	comp=Z,732nm,1.2s						
ERIK	**Erikli-Kesan**	**79.41**	**312**	P	**P**	**23 08 01.2**	**+0.2**
UKOP	**Uzunkopru-Edir**	**79.42**	**312**	P	**P**	**23 08 01.9**	**+0.9**
VLDR	**Vladesti**	**79.46**	**317**	⇑P	**P**	**23 08 01.4**	**+0.2**
SCTR	**Scanteiesti**	**79.47**	**317**	⇓P	**P**	**23 08 01.8**	**+0.6**
HRKL	**Herakleio**	**79.48**	**306**	P	**P**	**23 08 02.9**	**+1.4**
EDRB	**Edirne**	**79.49**	**313**	P	**P**	**23 08 01.3**	**-0.1**
LEOM	**Leova**	**79.50**	**318**	⇑P	**P**	**23 08 02.0**	**+0.7**
LEOM	**Leova**	**79.50**	**318**	⇑P	**P**	**23 08 02.0**	**+0.7**
BOZC	**Bozcaada**	**79.58**	**311**	P	**P**	**23 08 01.8**	**-0.2**
SIGR	**SIGRI**	**79.61**	**310**	P	**P**	**23 08 01.6**	**-0.5**
VARL	**Varlezi**	**79.63**	**317**	⇓P	**P**	**23 08 02.7**	**+0.6**
IDI	**Anoyia**	**79.64**	**306**	⇑P	**P**	**23 08 03.4**	**+0.9**
IDI	**Anoyia**	**79.64**	**306**	LR	LR	23 45 14.5	
	comp=Z,5µm,21.4s,baz=90,slow=37						
IDI	**Anoyia**	**79.64**	**306**	P	**P**	**23 08 02.6**	**+0.1**
IDI	**Anoyia**	**79.64**	**306**	P	**P**	**23 08 02.4**	**-0.1**
IDI	**Anoyia**	**79.64**	**306**	P	**P**	**23 08 02.8**	**+0.3**
IDI				IAmb	IAmb	23 08 25.1	
	comp=Z,366nm,0.9s						
AMRR	**Amara**	**79.68**	**316**	⇓P	**P**	**23 08 02.1**	**-0.3**
AMRR	**Amara**	**79.68**	**316**	⇓P	**P**	**23 08 02.1**	**-0.3**
TUDR		**79.68**	**317**	⇓P	**P**	**23 08 02.8**	**+0.5**
ENEZ	**Enez**	**79.69**	**312**	P	**P**	**23 08 02.6**	**+0.1**
ENEZ	**Enez**	**79.69**	**312**	P	**P**	**23 08 02.2**	**-0.3**
UPI	**Upington**	**79.72**	**242**	⇓*i*P	**P**	**23 08 03.8**	**+0.7**
UPI				IAmb	IAmb	23 08 08.1	
	comp=Z,198nm,1.6s						
JMB	**Yambol**	**79.74**	**314**	*i* P	**P**	**23 08 03.2**	**+0.5**
GADA	**Gvkgeada**	**79.77**	**311**	P	**P**	**23 08 01.9**	**-1.1**
ALN	**Alexandroupoli**	**79.80**	**312**	P	**P**	**23 08 03.1**	**0.0**
VASR	**Vaslui**	**79.85**	**318**	⇓P	**P**	**23 08 03.7**	**+0.5**
SORM	**Soroca**	**79.85**	**320**	⇓P	**P**	**23 08 03.3**	**+0.1**
SORM	**Soroca**	**79.85**	**320**	⇓P	**P**	**23 08 03.3**	**+0.1**
BIR	**Birlad**	**79.87**	**318**	⇓P	**P**	**23 08 04.8**	**+1.4**
BIR	**Birlad**	**79.87**	**318**	⇓P	**P**	**23 08 04.8**	**+1.4**
GHRR		**79.97**	**317**	⇓P	**P**	**23 08 05.0**	**+1.1**
AKASG	**Malin Array Be**	**79.97**	**322**	P	**P**	**23 08 03.2**	**-0.7**
	comp=Z,10nm,0.5s,baz=83,slow=5.1,SNR=59						
AKASG				PP	**PP**	**23 11 11.9**	**+5.7**
	comp=Z,20nm,0.7s,baz=86,slow=6.8,SNR=6.5						
AKASG				S	**S**	**23 17 59.3**	**-3.5**
	comp=Z,7.2nm,1.1s,baz=98,slow=11,SNR=6.4						
AKASG				PKPPKP	**P'P'df**	**23 34 51.8**	**-0.8**
	comp=Z,0.2nm,0.2s,baz=306,slow=2.1,SNR=7.0						
AKASG				LR	LR	23 47 09.9	
	comp=Z,4µm,21.9s,baz=113,slow=38						
AKASG	**Malin Array Be**	**79.97**	**322**	P	**P**	**23 08 03.1**	**-0.7**
AKBB	**Malin Array Si**	**79.97**	**322**	P	**P**	**23 08 03.1**	**-0.7**
AKBB	**Malin Array Si**	**79.97**	**322**	*ce*P	**P**	**23 08 03.4**	**-0.4**
KEIM	**Keimoes**	**79.99**	**241**	⇓*i*P	**P**	**23 08 05.7**	**+1.1**
KEIM				IAmb	IAmb	23 08 09.9	
	comp=Z,578nm,1.7s						
LEHL	**Lehliu**	**80.01**	**316**	⇓P	**P**	**23 08 04.6**	**+0.4**
RAZG	**Razgrad**	**80.03**	**315**	⇑P	**P**	**23 08 04.5**	**+0.2**
SMTH	**Samothraki Isl**	**80.10**	**312**	P	**P**	**23 08 04.1**	**-0.7**
GVDS	**Gavdos**	**80.22**	**306**	P	**P**	**23 08 05.1**	**-0.4**
GVD	**Gavdhos**	**80.22**	**306**	P	**P**	**23 08 05.7**	**+0.2**
GVD	**Gavdhos**	**80.22**	**306**	P	**P**	**23 08 04.5**	**-1.0**
RDO	**Rodhopi**	**80.23**	**312**	P	**P**	**23 08 05.1**	**-0.3**
RDO	**Rodhopi**	**80.23**	**312**	P	**P**	**23 08 04.4**	**-1.0**
RDO	**Rodhopi**	**80.23**	**312**	P	**P**	**23 08 04.8**	**-0.6**
LIA	**Limnos Island**	**80.25**	**311**	P	**P**	**23 08 04.8**	**-0.7**
BISRR	**Bisoca**	**80.32**	**317**	⇓P	**P**	**23 08 07.4**	**+1.5**
SUR	**Sutherland**	**80.34**	**238**	LR	LR	23 37 00.8	
	comp=Z,38µm,21.9s,baz=89,slow=31						
SUR	**Sutherland**	**80.34**	**238**	P	**P**	**23 08 07.1**	**+0.6**
SUR	**Sutherland**	**80.34**	**238**	P	**P**	**23 08 08.2**	**+1.7**
SZH	**Strazhica**	**80.37**	**314**	*i* P	**P**	**23 08 06.0**	**-0.2**
VRI	**Vrincioaia**	**80.38**	**317**	⇓P	**P**	**23 08 07.0**	**+0.8**
VRI	**Vrincioaia**	**80.38**	**317**	P	**P**	**23 08 07.0**	**+0.8**
VRI	**Vrincioaia**	**80.38**	**317**	⇓P	**P**	**23 08 07.0**	**+0.8**
IMMV	**Iera Moni Meta**	**80.41**	**306**	P	**P**	**23 08 07.3**	**+0.8**
IMMV	**Iera Moni Meta**	**80.41**	**306**	P	**P**	**23 08 06.7**	**+0.2**
DIM	**Dimitrovgrad**	**80.41**	**313**	*i* P	**P**	**23 08 06.3**	**-0.1**
PLOR	**Plostina**	**80.43**	**317**	⇓P	**P**	**23 08 07.2**	**+0.7**
PLOR	**Plostina**	**80.43**	**317**	⇓P	**P**	**23 08 07.2**	**+0.7**
SULR		**80.44**	**316**	⇓P	**P**	**23 08 08.0**	**+1.5**
KARY	**Karystos**	**80.48**	**309**	P	**P**	**23 08 06.2**	**-0.7**
AUGR	**Augrabies**	**80.54**	**242**	*e*P	**P**	**23 08 08.4**	**+1.0**
AUGR				IAmb	IAmb	23 08 12.8	
	comp=Z,466nm,1.5s						
NEHR	**Nehoiu**	**80.58**	**317**	⇓P	**P**	**23 08 08.1**	**+0.8**
TESR	**Tescani**	**80.58**	**318**	⇑P	**P**	**23 08 08.1**	**+0.9**
MATJ	**Matjiesfontein**	**80.59**	**237**	⇓*i*P	**P**	**23 08 09.0**	**+1.3**
MATJ				IAmb	IAmb	23 08 11.9	
	comp=Z,154nm,0.7s						
KNDR	**Palaiochora Ch**	**80.61**	**306**	P	**P**	**23 08 05.3**	**-2.3**
KNDR	**Palaiochora Ch**	**80.61**	**306**	P	**P**	**23 08 06.5**	**-1.1**
SECR		**80.65**	**316**	⇑P	**P**	**23 08 09.1**	**+1.4**
COVR	**Voineasa-Covas**	**80.73**	**317**	⇑P	**P**	**23 08 08.6**	**+0.5**
MLR	**Muntele Rosu**	**80.83**	**317**	⇓P	**P**	**23 08 10.1**	**+1.3**
MLR	**Muntele Rosu**	**80.83**	**317**	P	**P**	**23 08 08.8**	**+0.1**
	comp=Z,70nm,1.0s,baz=79,slow=2.2						
MLR				S	**S**	**23 18 08.2**	**-4.2**
	comp=Z,2.8nm,0.9s,baz=130,slow=8.2,SNR=1.6						
MLR				LR	LR	23 48 36.7	
	comp=Z,7µm,20.3s,baz=112,slow=39						
	comp=Z,70nm,1.0s						
MLR	**Muntele Rosu**	**80.83**	**317**	P	**P**	**23 08 09.2**	**+0.4**
MLR				IAmb	IAmb	23 08 34.5	
	comp=Z,824nm,1.1s						
MLR				IAMs_20	IAMs_20	23 48 24.3	
	comp=Z,8µm,20.0s						
MLR	**Muntele Rosu**	**80.83**	**317**	⇓P	**P**	**23 08 10.1**	**+1.3**
RZN	**Rozhen**	**80.94**	**313**	*i* P	**P**	**23 08 09.4**	**-0.1**
PLD	**Plovdiv**	**81.03**	**313**	P	**P**	**23 08 09.2**	**-0.5**
PLD	**Plovdiv**	**81.03**	**313**	*i* P	**P**	**23 08 09.8**	**+0.1**
BIZ	**Bicaz**	**81.04**	**318**	⇑P	**P**	**23 08 10.6**	**+0.9**
COPA	**Copaceanca**	**81.06**	**315**	⇑P	**P**	**23 08 10.1**	**+0.3**
CVNA	**Calvinia**	**81.18**	**239**	*e*P	**P**	**23 08 11.7**	**+0.8**
CVNA				IAmb	IAmb	23 08 35.3	
	comp=Z,1µm,2.2s						
OUR	**Ouranopolis**	**81.24**	**311**	P	**P**	**23 08 10.8**	**0.0**
HUMR	**Humele**	**81.30**	**315**	⇑P	**P**	**23 08 11.3**	**+0.2**
DOPR	**Dopca**	**81.32**	**317**	⇓P	**P**	**23 08 11.5**	**+0.4**
ELIM	**Elim**	**81.37**	**235**	*e*P	**P**	**23 08 12.9**	**+1.2**
ELIM				IAmb	IAmb	23 08 15.8	
	comp=Z,95nm,0.7s						
VOIR		**81.44**	**316**	⇓P	**P**	**23 08 11.5**	**-0.4**
VOIR		**81.44**	**316**	⇓P	**P**	**23 08 11.5**	**-0.4**
RAO	**Raoul Island**	**81.47**	**119**	LR	LR	23 45 07.8	
	comp=Z,9µm,20.7s,baz=249,slow=36						
RAO	**Raoul Island**	**81.47**	**119**	P	**P**	**23 08 11.5**	**-0.8**
RAO				IAmb	IAmb	23 08 14.1	
	comp=Z,643nm,1.1s						
RAO	**Raoul Island**	**81.47**	**119**	IAMs_20	IAMs_20	23 44 45.7	
	comp=Z,9µm,21.0s						
RAO	**Raoul Island**	**81.47**	**119**	P	**P**	**23 08 11.5**	**-0.8**
VLAD	**Vladila**	**81.61**	**315**	⇑P	**P**	**23 08 09.2**	**-3.4**
MMB	**Musomiste**	**81.65**	**312**	*i* P	**P**	**23 08 12.1**	**-0.9**
SHEM	**Shemya Is, Ala**	**81.66**	**36**	LR	LR	23 47 32.0	
	comp=Z,2µm,19.4s,baz=256,slow=38						
SMY	**Shemya**	**81.66**	**36**	P	**P**	**23 08 12.2**	**-0.5**
SMY				IAmb	IAmb	23 08 16.2	

comp=Z,1µm,1.2s
SMY Shemya 81.66 36 P **P** **23 08 12.2 -0.5**
SMY pmax pmax
comp=Z,1µm,1.2s
CER Ceres 81.68 237⇓*i*P **P** **23 08 14.3 +1.0**
CER IAmb IAmb 23 08 18.6
comp=Z,93nm,1.4s
BUR01 Bucovina Ar. S 81.78 319⇓P **P** **23 08 15.0 +1.3**
BURAR Bucovina Array 81.78 319 P **P** **23 08 14.4 +0.7**
MNK Minsk 81.78 326*d i*P **P** **23 08 13.1 -0.2**
MNK Minsk 81.78 326 *i*P **P** **23 08 13.1 -0.2**
comp=E,24nm,0.9s
MNK *i*P **P** **23 08 13.1 -0.2**
comp=N,122nm,1.4s
MNK *i*P **P** **23 08 13.1 -0.2**
comp=Z,365nm,0.9s,baz=283
MNK *i*PP PP 23 10 54.5 -27
MNK *i*PPP PPP 23 12 58.9
MNK *i*S **S** **23 18 17.5 -4.0**
MNK *i*SS SS 23 23 02.9 -38
MNK *i*SSS SSS 23 26 27.6
MNK *i*LQ LQ 23 37 30.5
MNK *i*LR LR 23 42 31.7
MNK *i*LRM MLR 23 44 41.3
comp=E,1µm,27.8s
MNK *i*LRM MLR 23 44 41.3
comp=N,6µm,30.1s
MNK *i*LRM MLR 23 44 41.3
comp=Z,4µm,28.6s
BUR08 Bucovina Ar. S 81.80 319 P **P** **23 08 14.7 +0.9**
BUR08 IAmb IAmb 23 08 37.5
comp=Z,342nm,1.1s
HORT Hortiatis 81.95 311 P **P** **23 08 14.1 -0.6**
VNDA Vanda 81.95 169 P **P** **23 08 14.9 +1.1**
comp=Z,30nm,0.9s,baz=311,slow=5.9,SNR=40
VNDA S **S** **23 18 19.9 -2.6**
comp=Z,0.2nm,0.4s,baz=284,slow=21,SNR=0.8
VNDA PKKPbc **PKKPbc** **23 26 43.5 -3.7**
comp=Z,5.8nm,0.9s,baz=218,slow=2.1,SNR=12
VNDA PKP2bc 23 34 33.1
comp=Z,1.5nm,1.1s,baz=301,slow=3.0,SNR=4.1
VNDA PKPPKP **P'P'df** **23 34 48.2 -0.1**
comp=Z,1.9nm,0.9s,baz=140,slow=1.6,SNR=4.4
VNDA LR LR 23 39 37.4
comp=Z,7µm,21.8s,baz=314,slow=32
comp=Z,30nm,0.9s
VNDA Vanda 81.95 169 P **P** **23 08 14.8 +0.9**
VNDA IAmb IAmb 23 08 37.3
comp=Z,598nm,1.4s
MPEP Malo Peshtene 81.96 314 *i*P **P** **23 08 14.8 +0.2**
TGMR Targu Mures 82.02 317⇑P **P** **23 08 14.5 +0.6**
PUL Pulkovo 82.02 331*ce*P **P** **23 08 16.0 +1.5**
PUL pmax pmax
comp=Z,577nm,1.3s
PUL MLR MLR
comp=Z,8µm,22.0s
MDB Medias 82.04 317⇓P **P** **23 08 15.6 +0.6**
MDB Medias 82.04 317⇓P **P** **23 08 15.6 +0.6**
KKB Krupnik 82.17 313 *i*P **P** **23 08 15.1 -0.7**
KNT Kendrikon 82.19 312 P **P** **23 08 15.4 -0.5**
VTS Vitosha 82.19 313⇓P **P** **23 08 16.1 +0.2**
VTS Vitosha 82.19 313⇓P **P** **23 08 16.2 +0.2**
VTS Vitosha 82.19 313 *i*P **P** **23 08 15.6 -0.4**
ARCR ARCALIA 82.24 318⇓P **P** **23 08 17.1 +1.1**
ITM Ithomi 82.31 308 P **P** **23 08 16.4 -0.2**
ITM Ithomi 82.31 308 P **P** **23 08 16.2 -0.4**
ITM IAmb IAmb 23 08 41.2
comp=Z,350nm,0.9s
LIT Litokhoron 82.32 311 P **P** **23 08 15.8 -0.8**
LIT IAmb IAmb 23 08 40.7
comp=Z,724nm,1.2s
LIT Litokhoron 82.32 311 P **P** **23 08 15.8 -0.8**
LIT pmax pmax
comp=Z,724nm,1.2s
LOT Lotru 82.33 316⇓P **P** **23 08 16.5 0.0**
LOT Lotru 82.33 316 P **P** **23 08 16.6 0.0**
BAIL Bailesti 82.36 315⇑P **P** **23 08 17.3 +0.7**
NACGM Naroch 82.50 326⇓*e*P **P** **23 08 17.6 +0.5**
baz=105
GRG Griva 82.53 312 P **P** **23 08 16.6 -1.1**
IDID Didziasalis 82.63 326 *e*P **P** **23 08 18.8 +1.1**
CJR Cluj-Napoca 82.68 317⇓P **P** **23 08 19.7 +1.4**
CJR Cluj-Napoca 82.68 317⇓P **P** **23 08 19.7 +1.4**
PUNG Punghina 82.70 315⇓P **P** **23 08 18.4 0.0**
TSUM Tsumeb 82.82 251⇓*i*P **P** **23 08 20.7 +0.9**
TSUM IAmb IAmb 23 08 43.2
comp=Z,1µm,0.9s
TSUM Tsumeb 82.82 251 P **P** **23 08 20.6 +0.9**
comp=Z,163nm,1.1s,baz=95,slow=5.4,SNR=82
TSUM S **S** **23 18 31.3 -2.5**
comp=Z,0.7nm,0.5s,baz=94,slow=14,SNR=1.2
TSUM PKPPKP **P'P'df** **23 34 46.3 -3.6**
comp=Z,0.8nm,0.3s,baz=103,slow=16,SNR=1.6
TSUM LR LR 23 40 17.4
comp=Z,33µm,21.8s,baz=80,slow=32
comp=Z,163nm,1.1s
TSUM Tsumeb 82.82 251 P **P** **23 08 19.9 +0.2**
IIGN Ignalina 82.92 326 *e*P **P** **23 08 20.5 +1.2**
BMR Baia Mare 82.93 318⇓P **P** **23 08 20.9 +1.3**
BMR Baia Mare 82.93 318⇓P **P** **23 08 20.9 +1.3**
BILL Bilibino 82.99 20 P **P** **23 08 18.8 -0.6**
BILL IAmb IAmb 23 08 23.3
comp=Z,452nm,1.4s
BILL IAMs_20 IAMs_20 23 46 57.0
comp=Z,15µm,21.0s
BILL Bilibino 82.99 20*d i*P **P** **23 08 19.2 -0.2**
BILL *e**PP **pP** **23 08 36.8 0.0**
BILL *e* 23 11 33.3
BILL *e*PPP PPP 23 13 28.6
BILL *i*S **S** **23 18 28.7 -4.7**
BILL *e* 23 19 18.3
BILL *e* 23 19 35.0
BILL *e*SS **SS** **23 24 03.7 +5.7**
BILL pmax pmax
comp=Z,390nm,1.4s
BILL pmax pmax
comp=Z,5µm,6.1s
LVV L'vov 83.00 321 *e*P **P** **23 08 18.1 -1.8**
LVV *e* 23 08 29.4
LVV *e* 23 11 26.4
DEV Deva 83.00 317⇑P **P** **23 08 21.4 +1.5**
DEV Deva 83.00 317⇑P **P** **23 08 21.4 +1.5**
GZR Gura Zlata 83.00 316⇓P **P** **23 08 20.6 +0.5**
GZR Gura Zlata 83.00 316⇓P **P** **23 08 20.6 +0.5**
ISAL Salakas 83.03 327 *e*P **P** **23 08 21.1 +1.2**
SBA Scott Base 83.04 169 P **P** **23 08 21.3 +1.8**
SBA IAmb IAmb 23 08 44.0
comp=Z,858nm,1.5s
SBA Scott Base 83.04 169 P **P** **23 08 21.3 +1.8**
SBA pmax pmax
comp=Z,858nm,1.5s
SBA MLR MLR
comp=Z,7µm,21.0s
LVZ Lovozero 83.10 340 P **P** **23 08 19.8 -0.2**
LVZ IAMs_20 IAMs_20 23 50 40.6
comp=Z,12µm,22.0s
LVZ Lovozero 83.10 340*ce*P **P** **23 08 20.5 +0.5**
LVZ pmax pmax
comp=Z,312nm,1.7s
MESR Meseseni 83.20 318⇑P **P** **23 08 22.4 +1.5**
FNA Florina 83.27 311 P **P** **23 08 20.6 -0.9**
DRGR 83.30 317⇓P **P** **23 08 22.4 +0.9**
DRGR 83.30 317⇓P **P** **23 08 22.4 +0.9**
APA Apatity 83.41 339⇓*i*P **P** **23 08 23.9 +2.3**
APA *i* 23 08 38.0
APA *i* 23 11 37.0
APA *i*PPP PPP 23 13 30.0
APA *i*S **S** **23 18 39.0 +1.4**
APA *i*PS **PnS** **23 19 24.0 -13**
APA pmax pmax
comp=Z,73nm,0.7s
APA MLR MLR
comp=Z,14µm,23.0s
VSU Vasula 83.43 329*c i*P **P** **23 08 22.9 +1.1**
VSU pmax pmax
comp=Z,485nm,0.8s
VSU Vasula 83.43 329 *e*P **P** **23 08 22.7 +0.9**
BOVS Bovan 83.47 314⇓P **P** **23 08 21.8 -0.6**
MDVR Moldovita 83.64 315⇓P **P** **23 08 23.9 +0.5**
KWP Kalwaria Pacla 83.81 320 *e*P **P** **23 08 24.6 +0.5**
KWP *e*PcP **PcP** **23 08 27.6 -0.3**
KWP *e*PP **PP** **23 11 45.5 +7.5**
KWP *e*SKSac **SKSac** **23 18 40.8 -0.9**
KWP *e*L L 23 51 02.0
comp=Z,5µm,25.1s
KWP Kalwaria Pacla 83.81 320 P **P** **23 08 24.1 +0.1**
KWP Kalwaria Pacla 83.81 320 P **P** **23 08 24.2 +0.1**
BZS Buzias 83.84 316⇓P **P** **23 08 24.8 +0.5**
BZS Buzias 83.84 316⇓P **P** **23 08 24.8 +0.5**
MIDW Midway 83.87 61 P **P** **23 08 25.0 +0.2**
MIDW IAmb IAmb 23 08 28.4
comp=Z,280nm,0.9s
UZH Uzhgorod 83.90 319 *e*P **P** **23 08 25.3 +0.8**
UZH *e* 23 08 38.0
UZH *i* 23 08 45.6
UZH *e* 23 11 37.7
UZH *i*S **S** **23 18 44.3 +1.0**
UZH *i*SS **SS** **23 24 10.7 -1.6**
SIRR Siria 83.92 317⇓P **P** **23 08 25.4 +0.7**
LTVH Ltavrtes, Hu 83.94 318⇓P **P** **23 08 26.1 +1.4**
LTVH Ltavrtes, Hu 83.94 318 P **P** **23 08 25.8 +1.1**
KOLS Kolonicke sedl 83.96 319 *e*P **P** **23 08 26.3 +1.4**
KOLS pmax pmax
comp=Z,664nm,1.0s
KOLS Kolonicke sedl 83.96 319 *e*P **P** **23 08 26.2 +1.4**
TIM Timisoara 84.14 316⇓P **P** **23 08 27.5 +1.8**
TIM Timisoara 84.14 316⇓P **P** **23 08 27.5 +1.8**
BANR Banloc 84.14 316⇑P **P** **23 08 26.6 +0.8**
PABE Paberze 84.21 326 P **P** **23 08 26.2 +0.4**
PABE Paberze 84.21 326 *e*P **P** **23 08 27.0 +1.2**
KEK Kerkira 84.32 310 P **P** **23 08 26.8 0.0**
KEK IAmb IAmb 23 08 51.8
comp=Z,691nm,1.0s
VSVD Vaisvydziai 84.33 327 *e*P **P** **23 08 27.6 +1.1**
SUW Suwalki 84.35 325 *e*P **P** **23 08 26.7 +0.1**
SUW *e*PcP **PcP** **23 08 29.7 -0.5**
SUW *e*SKSac **SKSac** **23 18 44.7 -0.1**
SUW *e*L L 23 44 50.7
comp=Z,6µm,27.3s
SUW Suwalki 84.35 325 P **P** **23 08 26.5 -0.1**
SUW Suwalki 84.35 325 P **P** **23 08 26.5 -0.1**
SUW pmax pmax
comp=Z,3µm,1.3s
SUW MLR MLR
comp=Z,4µm,21.0s
SUW Suwalki 84.35 325 *e*P **P** **23 08 27.0 +0.4**
TIR Tirane 84.48 312 P **P** **23 08 26.8 -0.8**
TIR IAmb IAmb 23 08 53.1
comp=Z,307nm,1.2s
TIR IAMs_20 IAMs_20 23 48 44.0
comp=Z,10µm,22.0s
TIR Tirane 84.48 312 P **P** **23 08 26.8 -0.8**
TIR pmax pmax
comp=Z,307nm,1.2s
TIR MLR MLR
comp=Z,10µm,22.0s
CRVS Cervenica-Dubn 84.48 319 *e*P **P** **23 08 28.3 +0.8**
CRVS pmax pmax
comp=Z,445nm,1.4s
CRVS Cervenica-Dubn 84.48 319 *e*P **P** **23 08 28.3 +0.8**
CRVS *e*pP **pP** **23 08 45.9 +1.2**
CRVS *e*S **S** **23 18 43.0 -6.2**
FIA1 FINESS Array S 84.50 332 P **P** **23 08 27.2 0.0**
FIA1 IAmb IAmb 23 08 54.5
comp=Z,626nm,1.3s
FINES FINESS Array B 84.50 332 P **P** **23 08 27.8 +0.6**
comp=Z,36nm,0.6s,baz=108,slow=4.3,SNR=137
FINES S **S** **23 18 42.9 -5.9**
comp=Z,0.6nm,0.5s,baz=346,slow=5.0,SNR=1.3
FINES PKKPbc **PKKPbc** **23 26 38.0 -2.9**
comp=Z,0.8nm,0.4s,baz=318,slow=1.3,SNR=7.2
FINES LR LR 23 49 25.3
comp=Z,6µm,20.9s,baz=106,slow=38
comp=Z,36nm,0.6s
FINES FINESS Array B 84.50 332 P **P** **23 08 27.7 +0.5**
PVY Plav 84.58 313 *e*P **P** **23 08 27.8 -0.4**
VLO Vlora 84.64 311 P **P** **23 08 28.6 +0.2**
VLO IAmb IAmb 23 08 53.7
comp=Z,514nm,0.8s
VLO Vlora 84.64 311 P **P** **23 08 28.6 +0.2**
VLO pmax pmax
comp=Z,514nm,0.8s
SJES Sjenica 84.66 314⇓*i*P **P** **23 08 29.3 +0.7**
IVA Berane 84.66 313 *e*P **P** **23 08 28.3 -0.3**
STHS Stebnicka Huta 84.71 320 *e*P **P** **23 08 32.7 +4.1**
STHS *e*S **S** **23 18 52.7 +1.2**
STHS Stebnicka Huta 84.71 320 *e*P **P** **23 08 32.7 +4.1**
DIVS Divibare 84.76 314 P **P** **23 08 29.4 +0.3**
DIVS IAmb IAmb 23 08 54.7
comp=Z,385nm,1.3s
DIVS Divibare 84.76 314⇓*i*P **P** **23 08 29.3 +0.3**
KOME Kolasin 84.94 313 *e*P **P** **23 08 29.7 -0.3**
MTSE Matsula 84.97 329 *e*P **P** **23 08 30.6 +1.0**
ULC Ulcinj 85.02 312 *e*P **P** **23 08 29.8 -0.6**
BSZH Besenyszg 85.03 318⇑P **P** **23 08 31.5 +1.3**
BSZH Besenyszg 85.03 318 P **P** **23 08 31.0 +0.9**
BSZH PP **sP** **23 08 50.7 -3.5**
FRGS Fruska Gora 85.03 315⇓P **P** **23 08 30.4 +0.1**
FRGS Fruska Gora 85.03 315⇓*i*P **P** **23 08 30.1 -0.2**
KECS Kecovo 85.06 319 *e*P **P** **23 08 31.5 +1.1**
KECS pmax pmax
comp=Z,175nm,1.1s
KECS Kecovo 85.06 319 *e*P **P** **23 08 31.5 +1.1**
KECS *e*pP **pP** **23 08 48.9 +1.4**
PDG Podgorica 85.07 313⇓P **P** **23 08 30.4 -0.1**
PDG Podgorica 85.07 313 P **P** **23 08 30.3 -0.3**
PDG IAmb IAmb 23 08 55.4
comp=Z,417nm,1.0s
PDG Podgorica 85.07 313⇓*i*P **P** **23 08 30.2 -0.3**
TTG Podgorica 85.07 313 *e*P **P** **23 08 30.4 -0.1**
PLE Pljevlja 85.09 314 *e*P **P** **23 08 30.5 -0.3**
DRME Dracevica, Mon 85.09 312⇓*i*P **P** **23 08 30.5 -0.2**
DRME Dracevica, Mon 85.09 312 *e*P **P** **23 08 29.9 -0.8**
RUDO Rudo 85.14 314 *e*P **P** **23 08 30.6 -0.3**
BBLS Lazići 85.15 314⇓*i*P **P** **23 08 30.9 -0.1**
TEKS Tekeris 85.15 315 *e*P **P** **23 08 30.4 -0.5**
NKY Niksic 85.31 313 *e*P **P** **23 08 31.5 -0.4**
NIE Niedzica 85.32 320 *e*P **P** **23 08 32.6 +0.9**
NIE *e*PcP **PcP** **23 08 35.4 +0.7**
NIE *e*PP **PP** **23 11 56.5 +6.2**
NIE *e*SKSac **SKSac** **23 18 50.1 -1.3**
NIE *e*S **S** **23 18 58.0 +4.0**
NIE *e*L L 23 49 35.7
comp=Z,3µm,23.9s
BUM Brajici-Budva 85.32 313 *e*P **P** **23 08 31.5 -0.4**
CEME Cevo 85.33 313 *e*P **P** **23 08 31.6 -0.4**
PSZ Piszkesteto 85.36 318⇑P **P** **23 08 32.3 +0.3**
PSZ Piszkesteto 85.36 318 P **P** **23 08 32.1 +0.1**
PSZ Piszkesteto 85.36 318⇑P **P** **23 08 32.3 +0.3**
PSZ Piszkesteto 85.36 318 P **P** **23 08 32.1 +0.1**
PSZ PP **pP** **23 08 50.8 +1.6**
BLJ Bijeljina 85.37 315 *e*P **P** **23 08 30.3 -1.6**
BEL Belsk 85.39 322 *e*P **P** **23 08 32.8 +0.9**
BEL *e*PcP **PcP** **23 08 35.8 +1.0**
BEL *e*SKSac **SKSac** **23 18 53.2 +1.6**
BEL *e*S **SKKSac** **23 19 02.1 +3.8**
BEL *e*L L 23 53 27.2
comp=Z,7µm,22.0s
UPM Unac-Piva 85.42 313 *e*P **P** **23 08 32.3 -0.3**
UPM Unac-Piva 85.42 313 *e*P **P** **23 08 31.8 -0.8**
PBUR Paburge 85.44 326 *e*P **P** **23 08 33.0 +1.0**
SLIT Slitere, Latvi 85.55 328 *e*P **P** **23 08 33.0 +0.5**
HCY Herceg Novi 85.63 313 *e*P **P** **23 08 33.1 -0.3**
HCY Herceg Novi 85.63 313 *e*P **P** **23 08 32.9 -0.5**
BRY Bratogost 85.65 313 *e*P **P** **23 08 32.9 -0.7**
BRY Bratogost 85.65 313 *e*P **P** **23 08 33.2 -0.4**
OJC Ojcow 85.76 321 *e*P **P** **23 08 34.3 +0.5**
OJC *e*PcP **PcP** **23 08 37.2 +0.6**
OJC *e*PP **PP** **23 12 00.5 +6.8**
OJC *e*SKSac **SKSac** **23 18 52.0 -2.1**
OJC *e*S **S** **23 19 03.6 +1.9**
OJC *e*L L 23 47 36.0
comp=Z,4µm,24.6s
OJC Ojcow 85.76 321 P **P** **23 08 34.2 +0.5**
OJC IAmb IAmb 23 08 59.1
comp=Z,197nm,1.0s
OJC Ojcow 85.76 321 P **P** **23 08 34.3 +0.5**
OJC pmax pmax
comp=Z,197nm,1.0s
TREB Trebinje 85.77 313 *e*P **P** **23 08 33.5 -0.5**
LANS Liptovska Anna 85.82 319 *e*P **P** **23 08 35.2 +1.0**
LANS Liptovska Anna 85.82 319 *e*P **P** **23 08 35.2 +1.0**
BUD Budapest 85.89 318 P **P** **23 08 35.1 +0.7**
BUD PP **sP** **23 08 55.1 -3.4**
MORH Mrgy, Hungar 85.98 316⇓P **P** **23 08 35.3 +0.3**
MORH Mrgy, Hungar 85.98 316⇓*i*P **P** **23 08 35.0 0.0**
MORH Mrgy, Hungar 85.98 316 P **P** **23 08 35.2 +0.2**
MORH PP **sP** **23 08 57.7 -1.3**
VYHS Vyhne 86.14 319 *e*P **P** **23 08 36.3 +0.5**
VYHS pmax pmax
comp=Z,124nm,1.7s
VYHS Vyhne 86.14 319 *e*P **P** **23 08 36.3 +0.5**
VYHS *e*pP **pP** **23 08 54.0 +1.0**
VYHS *e*S **SKSac** **23 18 54.7 -1.9**
KLNR Kaliningrad 86.17 325 *i*P **P** **23 08 36.6 +0.9**
KLNR pmax pmax
comp=Z,451nm,1.0s
STON Ston 86.26 313⇓*i*P **P** **23 08 35.4 -1.0**
KEV Kevo 86.34 340 P **P** **23 08 37.1 +0.9**
KEV IAmb IAmb 23 09 03.7
comp=Z,261nm,1.0s
KEV IAMs_20 IAMs_20 23 53 33.0
comp=Z,8µm,21.0s
KEV Kevo 86.34 340 P **P** **23 08 37.1 +0.9**
KEV pmax pmax
comp=Z,261nm,1.0s
KEV MLR MLR
comp=Z,8µm,21.0s
KOVH Kovagototos 86.34 316 P **P** **23 08 36.9 +0.1**
KOVH PP **sP** **23 08 57.3 -3.4**
CSKK Cskako 86.39 318 P **P** **23 08 37.6 +0.6**
CSKK PP **sP** **23 08 57.5 -3.5**
SRO Srobarova 86.41 318 *e*P **P** **23 08 38.6 +1.6**
SRO pmax pmax
comp=Z,347nm,1.3s
SRO Srobarova 86.41 318 *e*P **P** **23 08 38.6 +1.6**
SRO *e*pP **pP** **23 08 55.3 +1.0**
KOLL Kolacno 86.44 319 *e*P **P** **23 08 37.9 +0.7**
RAF Rauma 86.45 331 *e*P **P** **23 08 37.8 +0.9**
TIH Tihany 86.58 317 P **P** **23 08 38.5 +0.5**
TIP Timpagrande 86.60 309⇓P **P** **23 08 39.6 +1.3**
TIP Timpagrande 86.60 309 P **P** **23 08 38.5 +0.2**
TIP IAmb IAmb 23 09 04.3
comp=Z,257nm,1.1s
OKC Ostrava-Krasne 86.76 320 *e*P **P** **23 08 39.3 +0.6**
OKC MLR MLR
comp=Z,4µm,20.2s
OKC Ostrava-Krasne 86.76 320 *e*P **P** **23 08 39.3 +0.6**
OKC AMS AMS 23 56 30.0
comp=Z,4µm,20.2s
KIWB Kanaga Island 86.77 38 P **P** **23 08 38.7 0.0**
MATE Matera 86.78 311⇑P **P** **23 08 40.0 +1.0**
SRKY Kupres RS 86.78 314 *e*P **P** **23 08 39.4 +0.3**
ARA0 ARCESS Array S 86.78 340 *e*P **P** **23 08 39.2 +0.8**
ARA0 *e*SKSac **SKSac** **23 18 59.2 -0.4**
ARCES ARCESS Array B 86.78 340 P **P** **23 08 38.9 +0.4**
comp=Z,127nm,0.9s,baz=98,slow=5.6,SNR=174
ARCES S **SKSac** **23 18 57.9 -1.8**
comp=Z,4.2nm,1.0s,baz=2.9,slow=2.4,SNR=1.8
ARCES PKKPbc **PKKPbc** **23 26 32.6 -3.1**
comp=Z,4.8nm,1.0s,baz=299,slow=2.5,SNR=4.6
ARCES LR LR 23 54 16.6
comp=Z,5µm,18.8s,baz=105,slow=40
comp=Z,127nm,0.9s
ARCES ARCESS Array B 86.78 340 P **P** **23 08 38.8 +0.4**
ARCES IAmb IAmb 23 09 06.2
comp=Z,372nm,1.1s
BLY Banja Luka 86.84 315⇓*i*P **P** **23 08 39.6 +0.4**
MPLH Magyarpolny 86.85 317 P **P** **23 08 39.8 +0.6**
MGRS Mrkonjic Grad 86.87 315 *e*P **P** **23 08 39.5 0.0**
MAUC Maruska 86.91 319 *e*P **P** **23 08 40.3 +0.8**
MAUC *e*SKS **SKSac** **23 19 01.2 -0.1**
MAUC AMS AMS 23 56 40.0
comp=Z,7µm,19.7s
JAVC Velka Javorina 86.96 319⇓*i*P **P** **23 08 41.1 +1.3**
JAVC *e*SKS **SKSac** **23 19 02.2 +0.5**
EGYH Egyhazaskeszo 87.02 318 P **P** **23 08 40.8 +0.7**
EGYH PP **pP** **23 08 58.9 +1.6**
ADK Adak 87.06 38 P **P** **23 08 39.7 -0.4**
ADK Adak 87.06 38 P **P** **23 08 39.7 -0.4**
ADK pmax pmax
comp=Z,1µm,1.3s
ADK MLR MLR
comp=Z,5µm,22.0s
SMOL Smolenice 87.08 319 *e*P **P** **23 08 41.2 +0.9**
SMOL *e* 23 08 58.8
SMOL *e*S **SKSac** **23 19 00.4 -1.9**
SMOL Smolenice 87.08 319 *e*P **P** **23 08 41.2 +0.9**
SMOL *e*pP **pP** **23 08 58.8 +1.2**
AFI Afiamalu 87.11 104 LR LR 23 49 49.5
comp=Z,2µm,19.9s,baz=269,slow=37
AFI Afiamalu 87.11 104 P **P** **23 08 41.8 +0.6**
AFI Afiamalu 87.11 104 P **P** **23 08 41.8 +0.6**
AFI pmax pmax
comp=Z,1µm,1.1s
AFI MLR MLR
comp=Z,5µm,22.0s
MORC Moravsky Berou 87.14 320⇑P **P** **23 08 41.8 +1.1**
MORC Moravsky Berou 87.14 320 P **P** **23 08 40.7 +0.1**
MORC IAmb IAmb 23 09 06.9
comp=Z,218nm,1.2s
MORC Moravsky Berou 87.14 320⇑P **P** **23 08 41.8 +1.1**
MORC Moravsky Berou 87.14 320⇓*i*P **P** **23 08 41.2 +0.5**
MORC *e*SKS **SKSac** **23 19 02.0 -0.8**
MODS Modra-Piesok 87.16 318 *e*P **P** **23 08 41.2 +0.4**
MODS pmax pmax
comp=Z,934nm,1.8s
MODS Modra-Piesok 87.16 318 *e*P **P** **23 08 41.2 +0.4**
MODS *e*pP **pP** **23 08 59.1 +1.1**
MODS *e*S **SKSac** **23 18 59.5 -3.4**
AAL Aland 87.16 330 *e*P **P** **23 08 41.0 +0.5**
CEL Celeste 87.19 308 P **P** **23 08 41.5 +0.3**
ZST Bratislava 87.26 318 *e*P **P** **23 08 42.5 +1.3**
ZST pmax pmax
comp=Z,2µm,1.9s
ZST Bratislava 87.26 318 *e*P **P** **23 08 42.5 +1.3**
ZST *e*pP **pP** **23 09 00.1 +1.7**
ZST Bratislava 87.26 318 *e*S **SKSac** **23 19 04.1 +0.7**
BEHE Becsehely 87.30 317⇓*i*P **P** **23 08 42.5 +1.1**
BEHE Becsehely 87.30 317 P **P** **23 08 42.3 +0.8**
BEHE PP **pP** **23 09 00.3 +1.6**
CUC Castrocucco 87.39 310 P **P** **23 08 41.2 -0.9**
KTK1 Kautokeino 87.45 339 *e*P **P** **23 08 42.5 +0.9**
KTK1 IVmB_BB 23 08 45.0
comp=Z,3µm,2.6s
KTK1 *e*PP **PP** **23 12 09.9 +3.0**
KTK1 *e*SKSac **SKSac** **23 19 01.5 -2.2**
KTK1 *e*SS **SS** **23 25 05.2 +1.7**
KTK1 IVMs_BB IVMs_BB 23 53 22.9
comp=Z,3µm,18.9s
GSTR Great Sitkin T 87.47 38 P **P** **23 08 41.6 -0.5**
KNTN Kanton 87.49 93 P **P** **23 08 43.1 +0.1**
KNTN IAmb IAmb 23 08 47.0
comp=Z,631nm,1.4s
SOP Sopron 87.57 318 P **P** **23 08 42.6 -0.1**
HAMF Hammerfest 87.66 341 *e*P **P** **23 08 42.9 +0.3**
HAMF IVmB_BB 23 08 47.2
comp=Z,6µm,4.2s
HAMF *e*PP **PP** **23 12 09.9 +1.4**
HAMF *e*SKSac **SKSac** **23 19 04.0 -0.9**
HAMF *e*SS **SS** **23 25 10.0 +3.6**
HAMF IVMs_BB IVMs_BB 23 50 41.2
comp=Z,3µm,24.6s
KOGS Kog 87.66 316 *i*P **P** **23 08 43.9 +0.7**
KOGS *e*pP **pP** **23 09 00.4 0.0**
KOGS *e*SKSac **SKSac** **23 19 02.7 -3.2**
KOGS *i*S **S** **23 19 18.9 -1.3**
KRLC Kraliky 87.67 320 *e*P **P** **23 08 44.3 +1.1**
KRLC *e* 23 19 04.8
KRLC MLR MLR
comp=Z,4µm,18.7s
KRLC Kraliky 87.67 320 *e*P **P** **23 08 44.3 +1.1**
KRLC *e*SKS **SKSac** **23 19 04.8 -1.1**
KRLC AMS AMS 23 58 00.0
comp=Z,4µm,18.7s
NVL N'lazarevskaya 87.67 199⇓*i*P **P** **23 08 43.9 +1.2**
NVL *e*PPP PPP 23 14 16.9
NVL pmax pmax
comp=Z,176nm,1.4s
VRAC Vranov 87.71 319 P **P** **23 08 43.8 +0.4**
comp=Z,3.9nm,0.6s,baz=81,slow=5.5,SNR=11
VRAC S **SKSac** **23 18 59.8 -6.3**
comp=Z,0.9nm,0.4s,baz=51,slow=9.6,SNR=1.3
VRAC LR LR 23 53 01.4
comp=Z,2µm,20.6s,baz=84,slow=39
VRAC Vranov 87.71 319⇓*i*P **P** **23 08 43.6 +0.2**
VRAC *e*SKS **SKSac** **23 19 05.7 -0.4**
GKP Gorka Klasztor 87.73 323 *e*P **P** **23 08 43.8 +0.5**
GKP *e*PcP **PcP** **23 08 46.5 +1.3**

GKP eSKSac **SKSac** **23 19 06.4 +0.4**
GKP eS **S** **23 19 19.9 -0.7**
GKP eL L 23 54 24.5
comp=Z,7µm,25.1s
GKP Gorka Klasztor 87.73 323 eP **P** **23 08 44.3 +1.0**
RONA Rosalia, Austr 87.75 318 *i* P **P** **23 08 43.9 +0.3**
comp=Z,25nm,1.0s,SNR=20
RONA eP **pP** **23 09 01.8 +0.9**
comp=Z,104nm,1.5s
RONA eP **PP** **23 12 06.8 -3.2**
comp=Z,31nm,1.6s
RONA eS **SKSac** **23 19 06.1 -0.4**
comp=Z,9.4nm,1.9s
KRUC Moravsky 87.81 319 ||*i* P **P** **23 08 44.3 +0.5**
KRUC eSKS **SKSac** **23 19 04.7 -2.0**
QSPA South Pole Qui 87.88 180 S **SKSac** **23 18 58.4 -8.4**
comp=Z,3.3nm,0.9s,baz=317,slow=12,SNR=1.9
QSPA LR LR 23 43 04.6
comp=Z,14µm,21.7s,baz=316,slow=32
QSPA South Pole Qui 87.88 180 P **P** **23 08 44.3 +0.3**
QSPA IAmb IAmb 23 09 07.9
comp=Z,513nm,1.4s
QSPA South Pole Qui 87.88 180 IAMs_20 IAMs_20 23 43 04.4
comp=Z,15µm,22.0s
DPC Dobruska-Polom 87.99 320 eP **P** **23 08 46.7 +2.0**
DPC e 23 19 07.1
DPC MLR MLR
comp=Z,5µm,20.4s
DPC Dobruska-Polom 87.99 320 eP **P** **23 08 46.7 +2.0**
DPC eSKS **SKSac** **23 19 07.1 -0.8**
DPC AMS AMS 23 53 30.0
comp=Z,5µm,20.4s
KSP Ksiaz 88.06 321 eP **P** **23 08 46.2 +1.3**
KSP ePcP **PcP** **23 08 49.0 +2.4**
KSP ePP **PP** **23 12 09.8 -2.5**
KSP eSKSac **SKSac** **23 19 05.5 -2.6**
KSP eS **S** **23 19 23.1 -0.8**
KSP eL L 23 55 23.4
comp=Z,8µm,22.0s
CONA Conrad Observa 88.06 318 *i* P **P** **23 08 45.4 +0.2**
comp=Z,13nm,1.2s,SNR=19
CONA eP **pP** **23 09 03.1 +0.6**
comp=Z,96nm,1.1s
CONA eP **PP** **23 12 09.0 -3.5**
comp=Z,51nm,1.4s
CONA eS **SKSac** **23 19 07.1 -1.4**
comp=Z,11nm,1.6s
OSTC Ostas 88.08 321 eSKS **SKSac** **23 19 06.1 -2.2**
OSTC AMS AMS 23 53 50.0
comp=Z,4µm,19.5s
CRES Cresnjev 88.15 316 ||*i* P **P** **23 08 46.0 +0.5**
UPC Upice 88.20 320 eP **P** **23 08 47.3 +1.6**
UPC e 23 19 06.9
UPC MLR MLR
comp=Z,5µm,21.5s
UPC Upice 88.20 320 eP **P** **23 08 47.3 +1.6**
UPC eSKS **SKSac** **23 19 06.9 -2.1**
UPC AMS AMS 23 53 50.0
comp=Z,5µm,21.5s
ARSA Arzberg 88.23 317 *i* P **P** **23 08 46.5 +0.6**
comp=Z,54nm,1.7s,SNR=31
ARSA eP **pP** **23 09 05.3 +2.1**
comp=Z,246nm,1.6s
ARSA eS **S** **23 19 25.8 +0.1**
comp=Z,3.7nm,0.9s
BOJS Bojanci 88.27 315 *i* P **P** **23 08 46.5 +0.5**
UPP Uppsala 88.30 330 eP **P** **23 08 46.7 +0.9**
VAE Valguarnera 88.30 307 P **P** **23 08 46.1 -0.4**
comp=Z,33nm,1.0s,baz=75,slow=3.7,SNR=4.1
VAE LR LR 23 56 18.1
comp=Z,908nm,18.2s,baz=143,slow=41
comp=Z,33nm,1.0s
RAFF Raffo Rosso 88.32 307 P **P** **23 08 46.8 +0.3**
RAFF IAmb IAmb 23 09 38.7
comp=Z,231nm,1.1s
PAOL Paolisi 88.42 311 P **P** **23 08 47.0 0.0**
PAOL IAmb IAmb 23 09 07.6
comp=Z,597nm,1.6s
TREC Trest 88.43 319 eP **P** **23 08 47.9 +1.1**
TREC e 23 19 10.1
TREC MLR MLR
comp=Z,5µm,21.0s
TREC Trest 88.43 319 eP **P** **23 08 47.9 +1.1**
TREC eSKS **SKSac** **23 19 10.1 -0.4**
TREC AMS AMS 23 57 40.0
comp=Z,5µm,21.0s
SOKA Soboth 88.52 317 *i* P **P** **23 08 47.9 +0.6**
comp=Z,110nm,1.1s,SNR=39
SOKA eP **pP** **23 09 06.4 +1.7**
comp=Z,337nm,1.8s
SOKA eP **PP** **23 12 14.9 -1.2**
comp=Z,24nm,1.4s
SOKA eS **SKSac** **23 19 11.3 0.0**
comp=Z,7.9nm,1.2s
JETT Jettan, Norway 88.54 340 eP **P** **23 08 47.9 +1.1**
VIKU Vikbolandet 88.61 329 eP **P** **23 08 48.5 +1.2**
HOPEN Hopen 88.68 347 eP **P** **23 08 48.7 +1.4**
HOPEN IVmB_BB 23 08 53.4
comp=Z,4µm,3.4s
HOPEN eSKSac **SKSac** **23 19 11.2 +0.4**
HOPEN e 23 19 26.1
HOPEN IVMs_BB IVMs_BB 23 52 12.4
comp=Z,6µm,24.4s
NIUE Niue 88.74 109 P **P** **23 08 51.2 +2.3**
baz=89,SNR=12
NIUE Niue 88.74 109 P **P** **23 08 49.5 +0.6**
LJU Ljubljana 88.82 316 ||*i* P **P** **23 08 49.5 +0.9**
LJU Ljubljana 88.82 316 *i* P **P** **23 08 49.5 +0.9**
LJU epP **pP** **23 09 06.3 +0.3**
LJU eSKSac **SKSac** **23 19 10.5 -2.4**
LJU *i* S **S** **23 19 30.3 -1.0**
LJU e 23 20 02.4
LJU e 23 32 08.1
OBKA Obir 88.83 316 *i* P **P** **23 08 49.5 +0.7**
comp=Z,51nm,1.5s,SNR=24
OBKA eP **pP** **23 09 04.3 -1.9**
comp=Z,212nm,1.9s
OBKA eP **PP** **23 12 21.0 +2.3**
comp=Z,43nm,1.4s
OBKA eS **S** **23 19 30.6 -1.0**
comp=Z,22nm,2.5s
CEY Cerknica 88.86 316 ||*i* P **P** **23 08 49.1 +0.2**
TRO Tromso 89.06 340 eP **P** **23 08 49.9 +0.7**
TRO IVmB_BB 23 08 52.1
comp=Z,2µm,2.8s
TRO ePP **PP** **23 12 21.4 +1.6**
TRO eSKSac **SKSac** **23 19 10.8 -2.5**
TRO e 23 19 29.5
TRO IVMs_BB IVMs_BB 23 52 14.7
comp=Z,3µm,18.9s
PRU Pruhonice 89.10 320 eP **P** **23 08 50.8 +0.9**
PRU e 23 19 13.4
PRU MLR MLR
comp=Z,5µm,21.5s
PRU Pruhonice 89.10 320 eP **P** **23 08 50.8 +0.9**
PRU eSKS **SKSac** **23 19 13.4 -1.0**
PRU AMS AMS 23 57 50.0
comp=Z,5µm,21.5s
PVCC Panska Ves 89.12 320 eP **P** **23 08 51.3 +1.3**
PVCC e 23 19 12.6
PVCC MLR MLR
comp=Z,7µm,20.9s
PVCC Panska Ves 89.12 320 eP **P** **23 08 51.3 +1.3**
PVCC eSKS **SKSac** **23 19 12.6 -1.9**
PVCC AMS AMS 23 55 20.0
comp=Z,7µm,20.9s
MOA Molln 89.12 318 *i* P **P** **23 08 50.1 0.0**
comp=Z,24nm,1.8s,SNR=18
MOA eP **pP** **23 09 07.4 0.0**
comp=Z,76nm,1.4s
MOA eP **PP** **23 12 26.8 +5.9**
comp=Z,34nm,1.5s
MOA eS **S** **23 19 34.4 +0.2**
comp=Z,10nm,1.9s
SKDS Skadanscina 89.14 315 ||*i* P **P** **23 08 50.0 -0.2**
CKRC Cesky Krumlov 89.16 319 eP **P** **23 08 51.2 +1.0**
CKRC eSKS **SKSac** **23 19 13.0 -1.9**
CKRC AMS AMS 23 58 00.0
comp=Z,5µm,22.0s
AQU L'Aquila 89.38 312 P **P** **23 08 52.4 +1.0**
AQU L'Aquila 89.38 312 P **P** **23 08 52.4 +1.0**
AQU pmax pmax
comp=Z,570nm,1.0s
AQU MLR MLR
comp=Z,7µm,22.0s

MYKA Terra Mystica 89.47 317 *i* P **P** **23 08 52.2 +0.4**
comp=Z,32nm,1.4s,SNR=18
MYKA eP **pP** **23 09 10.6 +1.5**
comp=Z,214nm,1.6s
MYKA eP **PP** **23 12 23.2 -0.6**
comp=Z,41nm,1.7s
MYKA eS **SKSac** **23 19 20.5 +3.7**
comp=Z,9.3nm,1.0s
BIOA Bad Ischl, Aus 89.54 318 *i* P **P** **23 08 52.1 +0.1**
comp=Z,40nm,1.4s,SNR=19
BIOA eP **pP** **23 09 07.9 -1.5**
comp=Z,111nm,1.1s
BIOA eS **S** **23 19 38.4 +0.4**
comp=Z,6.7nm,1.4s
BRG Berggiesshubel 89.54 321 *i* P **P** **23 08 53.0 +1.1**
BRG Amp 23 08 56.1
comp=Z,49nm,0.8s
BRG ex x 23 09 12.7
BRG Amp 23 09 15.1
comp=Z,318nm,1.3s
BRG ex x 23 10 04.0
BRG Amp 23 10 08.1
comp=Z,86nm,1.4s
BRG ex x 23 12 44.3
BRG Amp 23 12 46.1
comp=Z,63nm,1.4s
BRG Berggiesshubel 89.54 321 SS SS 23 25 45.0 +10
BRG PKPPKP 23 34 34.4
BRG Amp 23 34 35.9
comp=Z,26nm,2.1s
BRG Amp 23 51 08.0
comp=E,4.3nm,22.7s
BRG Amp 23 51 08.0
comp=Z,4.7nm,23.6s
BRG Amp 23 51 08.0
comp=N,4.9nm,23.6s
BRG Berggiesshubel 89.54 321 *i* P **P** **23 08 53.0 +1.1**
BRG e 23 09 12.7
BRG 23 19 17.0
BRG pmax pmax
comp=Z,49nm,0.8s
BRG MLR MLR
comp=E,4µm,22.7s
BRG MLR MLR
comp=N,5µm,23.6s
BRG MLR MLR
comp=Z,5µm,23.6s
GEC2 GERESS Array S 89.57 319 P **P** **23 08 52.8 +0.6**
GERES GERESS Array B 89.57 319 P **P** **23 08 52.6 +0.4**
comp=Z,12nm,1.0s,baz=90,slow=5.3,SNR=65
GERES S **SKSac** **23 19 11.6 -5.8**
comp=Z,0.1nm,0.4s,baz=130,slow=15,SNR=1.0
GERES PKPPKP **P'P'df** **23 34 39.3 +3.9**
comp=Z,0.2nm,0.3s,baz=222,slow=1.8,SNR=3.8
comp=Z,12nm,1.0s
NRCA Norcia 89.62 313 P **P** **23 08 52.5 -0.1**
NRCA IAmb IAmb 23 09 18.1
comp=Z,415nm,1.2s
KHC Kasperske Hory 89.67 319 P **P** **23 08 53.1 +0.6**
KHC Kasperske Hory 89.67 319 eP **P** **23 08 53.2 +0.6**
KHC e 23 09 10.5
KHC e 23 12 22.4
KHC e 23 19 16.0
KHC MLR MLR
comp=Z,5µm,19.9s
KHC Kasperske Hory 89.67 319 eP **P** **23 08 53.2 +0.6**
KHC ex x 23 08 59.1
KHC epP **pP** **23 09 10.5 +0.6**
KHC ePP **PP** **23 12 22.4 -2.8**
KHC eSKS **SKSac** **23 19 16.0 -1.8**
KHC AMS AMS 23 54 30.0
comp=Z,5µm,19.9s
KBA Koelnbreinsper 89.70 317 *i* P **P** **23 08 52.3 -0.7**
comp=Z,24nm,1.4s,SNR=15
KBA eP **pP** **23 09 07.6 -2.7**
comp=Z,147nm,1.4s
KBA eP **PP** **23 12 25.9 +0.1**
comp=Z,27nm,1.6s
KBA eS **S** **23 19 35.8 -4.1**
comp=Z,17nm,1.6s
BJO1 Bjornoya 89.77 345 eP **P** **23 08 53.5 +1.0**
BJO1 ePP **PP** **23 12 26.7 +1.4**
BJO1 eSKSac **SKSac** **23 19 15.9 -1.4**
BJO1 IVMs_BB IVMs_BB 23 53 58.1
comp=Z,5µm,21.4s
DEL Delary 89.96 326 eP **P** **23 08 55.0 +1.2**
STAL STALIGIAL 90.09 316 P **P** **23 08 55.0 +0.3**
STAL IAmb IAmb 23 09 20.5
comp=Z,380nm,1.1s
FAUS Fauske 90.13 337 eP **P** **23 08 55.2 +0.9**
FAUS IVmB_BB 23 08 56.1
comp=Z,1µm,1.5s
FAUS ePP **PP** **23 12 29.0 +0.7**
FAUS eSKSac **SKSac** **23 19 17.9 -1.7**
FAUS e 23 19 40.4
FAUS eSS **SS** **23 25 45.3 +2.9**
FAUS IVMs_BB IVMs_BB 23 49 46.4
comp=Z,3µm,23.7s
RGN Rugen 90.15 324 IAMs_20 IAMs_20 23 56 33.5
comp=Z,9µm,20.0s
CLL Collm 90.16 321 P **P** **23 08 55.1 +0.2**
CLL IAmb IAmb 23 09 18.9
comp=Z,163nm,1.1s
CLL Collm 90.16 321 eP **P** **23 08 55.0 +0.2**
CLL *i* *PP **pP** **23 09 14.7 +2.3**
CLL e 23 19 19.0
CLL eS **S** **23 19 44.0 +0.5**
CLL pmax pmax
comp=Z,61nm,1.5s
CLL Collm 90.16 321 eP **P** **23 08 55.0 +0.2**
comp=Z,61nm,1.5s
CLL ePmax 23 09 07.0
CLL *i* (pP) **pP** **23 09 14.7 +2.3**
comp=Z,182nm,1.1s
CLL e(sP) **sP** **23 09 22.0 +2.8**
CLL ex x 23 11 58.0
CLL ex x 23 12 07.0
CLL ePP **PP** **23 12 28.0 -1.0**
CLL epPP 23 12 45.0
CLL ex x 23 13 08.0
CLL ePPP PPP 23 14 30.0
CLL eSKSac **SKSac** **23 19 19.0 -1.5**
CLL eS **S** **23 19 44.0 +0.5**
comp=N,8µm,23.6s
CLL eS **S** **23 19 44.0 +0.5**
comp=E,3µm,25.5s
CLL esSKSac **sSKSac** **23 19 52.0 +0.7**
CLL *i* sS **sS** **23 20 14.9 +1.8**
CLL eSP **SPn** **23 20 49.0 -0.6**
CLL ePS **PS** **23 20 58.0 +0.1**
CLL ePPS PPS 23 21 30.0
CLL eSS **SS** **23 25 48.0 +4.3**
CLL ex x 23 27 24.0
CLL eSSS SSS 23 29 12.0
CLL ex x 23 31 12.0
CLL eSSSS 23 32 30.0
CLL ePKPPKPdf **P'P'df** **23 34 35.0 +1.1**
CLL Lmax 23 55 00.0
STEI Steigen 90.20 338 eP **P** **23 08 55.4 +0.8**
STEI IVmB_BB 23 08 57.9
comp=Z,3µm,1.2s
STEI ePP **PP** **23 12 30.2 +1.3**
STEI eSKSac **SKSac** **23 19 20.0 0.0**
STEI e 23 19 41.9
STEI eSS **SS** **23 25 47.1 +3.7**
STEI IVMs_BB IVMs_BB 23 49 60.0
comp=Z,3µm,30.2s
ABTA Abfaltersbach 90.25 317 *i* P **P** **23 08 54.4 -1.0**
comp=Z,20nm,1.1s,SNR=18
ABTA eP **pP** **23 09 13.4 +0.6**
comp=Z,60nm,1.0s
ABTA eP **PP** **23 12 28.4 -1.6**
comp=Z,16nm,1.2s
ABTA eS **S** **23 19 46.2 +1.4**
comp=Z,33nm,1.6s
HFS Hagfors 90.29 330 P **P** **23 08 55.8 +0.6**
comp=Z,34nm,1.0s,baz=158,slow=4.3,SNR=45
HFS S **SKSac** **23 19 22.9 +2.0**
comp=Z,5.9nm,0.9s,baz=113,slow=10,SNR=3.6
HFS LR LR 23 55 37.8
comp=Z,3µm,19.6s,baz=88,slow=40
comp=Z,34nm,1.0s
MOR8 Moi Rana 90.37 336 eP **P** **23 08 55.9 +0.4**
MOR8 IVmB_BB 23 08 58.2
comp=Z,2µm,2.8s

MOR8 eP **PP** **23 12 30.3 0.0**
MOR8 eSKSac **SKSac** **23 19 19.3 -1.8**
MOR8 e 23 19 40.9
MOR8 eSS **SS** **23 25 48.0 +2.1**
MOR8 IVMs_BB IVMs_BB 23 54 48.7
comp=Z,3µm,17.6s
JOHN Johnston Islan 90.38 73 P **P** **23 08 57.1 +0.6**
NKC Novy Kostel 90.46 320 eP **P** **23 08 57.2 +0.9**
NKC e 23 19 21.0
NKC MLR MLR
comp=Z,7µm,23.0s
NKC Novy Kostel 90.46 320 eP **P** **23 08 57.2 +0.9**
NKC eSKS **SKSac** **23 19 21.0 -1.4**
NKC AMS AMS 23 53 50.0
comp=Z,7µm,23.0s
TROLL Troll, Antarti 90.56 198 P **P** **23 08 58.7 +2.2**
LATE Laterza 90.58 312 P **P** **23 08 57.0 0.0**
COP Copenhagen 90.72 326 *i* P **P** **23 08 59.3 +2.0**
COP IAmb IAmb 23 09 26.1
comp=Z,130nm,0.9s
TEOL Teolo 90.78 315 P **P** **23 08 58.1 +0.3**
TEOL IAmb IAmb 23 09 23.9
comp=Z,465nm,1.4s
GAMB Gambell 90.78 26 P **P** **23 08 57.4 -0.1**
GAMB IAMs_20 IAMs_20 23 56 08.7
comp=Z,12µm,19.0s
GAMB Gambell 90.78 26 P **P** **23 08 57.3 -0.1**
baz=267
LLD Lille Linde 90.83 325 *i* P **P** **23 09 00.8 +3.1**
LLD IAmb IAmb 23 09 08.6
comp=Z,56nm,0.8s
LOF Lofoten 90.85 338 eP **P** **23 08 58.3 +0.7**
LOF IVmB_BB 23 09 02.0
comp=Z,3µm,4.9s
LOF ePP **PP** **23 12 36.4 +2.4**
LOF eSKSac **SKSac** **23 19 24.1 +0.4**
LOF e 23 19 46.5
LOF eSS **SS** **23 25 56.2 +3.4**
LOF IVMs_BB IVMs_BB 23 49 18.0
comp=Z,2µm,31.7s
SPB2 Spitsbergen Ar 90.85 348 P **P** **23 08 57.2 -0.3**
SPB2 IAmb IAmb 23 09 17.4
comp=Z,249nm,0.8s
SPA0 Spitsbergen Ar 90.85 348 eP **P** **23 08 58.8 +1.2**
SPITS Spitsbergen Ar 90.85 348 P **P** **23 08 57.1 -0.4**
comp=Z,41nm,0.5s,baz=119,slow=8.7,SNR=160
SPITS LR LR 23 57 58.0
comp=Z,11µm,18.4s,baz=65,slow=41
comp=Z,41nm,0.5s
SPITS Spitsbergen Ar 90.85 348 P **P** **23 08 57.3 -0.2**
SPITS pmax pmax
comp=Z,342nm,1.0s
WTTA Wattenberg 90.87 317 *i* P **P** **23 08 58.5 +0.1**
comp=Z,41nm,1.1s,SNR=29
WTTA eP **pP** **23 09 15.4 -0.4**
comp=Z,229nm,1.1s
WTTA eP **PP** **23 12 33.4 -1.6**
comp=Z,36nm,1.1s
WTTA eS **S** **23 19 52.3 +1.6**
comp=Z,29nm,1.2s
WATA Walderalm 90.92 317 *i* P **P** **23 08 58.4 -0.2**
comp=Z,25nm,1.1s,SNR=29
WATA eP **pP** **23 09 15.6 -0.3**
comp=Z,178nm,1.4s
WATA eP **PP** **23 12 33.7 -1.6**
comp=Z,38nm,1.3s
WATA eS **S** **23 19 51.2 +0.2**
comp=Z,28nm,1.7s
HSPB Hornsund (broa 90.92 347 eP **P** **23 08 58.1 +0.3**
HSPB ePcP **PcP** **23 09 00.2 +1.4**
HSPB ePP **PP** **23 12 38.4 +4.1**
HSPB eS **S** **23 19 48.2 -1.4**
HSPB eL L 23 52 52.6
comp=Z,16µm,24.9s
HSPB Hornsund (broa 90.92 347 eP **P** **23 08 59.5 +1.7**
KONS Konsvik 90.92 336 eP **P** **23 08 59.0 +1.0**
STOK Stokkvaagen 90.95 336 eP **P** **23 08 58.8 +0.7**
SQTA Sankt Quirin 91.16 317 *i* P **P** **23 08 59.7 0.0**
comp=Z,22nm,0.8s,SNR=29
SQTA eP **pP** **23 09 16.6 -0.4**
comp=Z,141nm,1.0s
SQTA eP **PP** **23 12 38.3 +1.0**
comp=Z,34nm,1.4s
SQTA eS **SKSac** **23 19 23.6 -3.1**
comp=Z,22nm,1.2s
SPIA Saint Paul Isl 91.22 33 P **P** **23 08 59.4 -0.2**
baz=268
GRA1 Grafenberg Arr 91.23 319 P **P** **23 09 00.4 +0.6**
GRA1 IAmb IAmb 23 09 26.6
comp=Z,226nm,1.1s
GRF Grafenberg Arr 91.23 319 P **P** **23 09 00.4 +0.6**
GRF pmax pmax
comp=Z,226nm,1.1s
GRF MLR MLR
comp=Z,4µm,22.0s
GRFO Grafenberg 91.23 319 P **P** **23 09 00.5 +0.7**
GRFO IAmb IAmb 23 09 26.6
comp=Z,219nm,1.1s
GRFO Grafenberg 91.23 319 P **P** **23 09 00.5 +0.7**
GRFO pmax pmax
comp=Z,219nm,1.1s
GRFO MLR MLR
comp=Z,4µm,21.0s
MOTA Moosalm 91.24 317 *i* P **P** **23 08 59.9 -0.2**
comp=Z,40nm,1.1s,SNR=34
MOTA eP **pP** **23 09 17.9 +0.4**
comp=Z,194nm,1.0s
MOTA eP **PP** **23 12 42.4 +4.5**
comp=Z,18nm,1.0s
MOTA eS **SKSac** **23 19 27.2 -0.1**
comp=Z,34nm,2.3s
ZCCA Zocca 91.24 314 P **P** **23 09 00.9 +0.9**
NSS Namsos 91.31 334 eP **P** **23 09 00.9 +1.1**
NSS IVmB_BB 23 09 04.5
comp=Z,2µm,3.2s
NSS ePP **PP** **23 12 39.5 +1.8**
NSS eSKSac **SKSac** **23 19 25.0 -0.6**
NSS e 23 19 51.7
NSS eSS **SS** **23 26 01.6 +2.0**
NSS IVMs_BB IVMs_BB 23 56 22.9
comp=Z,3µm,24.7s
NC602 NORSAR Array S 91.38 331 eP **P** **23 09 01.1 +0.8**
RETA Reutte 91.47 317 *i* P **P** **23 09 01.2 +0.1**
comp=Z,41nm,1.4s,SNR=35
RETA eP **pP** **23 09 18.9 +0.5**
comp=Z,142nm,1.0s
RETA eP **PP** **23 12 38.8 -0.8**
comp=Z,31nm,1.3s
RETA eS **SKSac** **23 19 29.0 +0.6**
comp=Z,35nm,1.3s
FETA Feichten 91.48 317 *i* P **P** **23 09 01.8 +0.5**
comp=Z,24nm,1.1s,SNR=25
FETA eP **pP** **23 09 16.0 -2.6**
comp=Z,117nm,1.1s
FETA eS **SKSac** **23 19 26.0 -2.7**
comp=Z,44nm,1.5s
EKNA AfricaArray - 91.51 274 eP P 23 09 07.5 +5.6
NB2 NORSAR Subarra 91.55 331 P **P** **23 09 01.3 +0.2**
baz=94,slow=4.8
NB2 NORSAR Subarra 91.55 331 P **P** **23 09 01.3 +0.2**
comp=Z,208nm,1.7s,baz=94,slow=4.8
NOA NORSAR Array B 91.55 331 P **P** **23 09 01.3 +0.2**
comp=Z,16nm,0.9s,baz=95,slow=5.0,SNR=25
NOA PP **PP** **23 12 40.8 +0.9**
comp=Z,1.3nm,0.5s,baz=90,slow=7.5,SNR=3.7
NOA LR LR 23 55 53.1
comp=Z,5µm,19.8s,baz=100,slow=39
comp=Z,16nm,0.9s
NAO01 NORSAR Array S 91.71 331 P **P** **23 09 02.3 +0.5**
NAO01 IAmb IAmb 23 09 29.6
comp=Z,202nm,1.1s
OSL Oslo 91.77 330 eP **P** **23 09 03.3 +1.2**
OSL IVmB_BB 23 09 05.6
comp=Z,1µm,1.4s
OSL eSKSac **SKSac** **23 19 29.7 +0.4**
OSL e 23 19 59.1
OSL eSS **SS** **23 26 08.7 +2.3**
OSL IVMs_BB IVMs_BB 23 52 54.1
comp=Z,2µm,24.8s
KBS Kingsbay 91.78 349 P **P** **23 09 01.6 -0.2**
KBS Kingsbay 91.78 349 *ce* P **P** **23 09 03.0 +1.2**
KBS pmax pmax
comp=Z,58nm,1.3s
KBS Kingsbay 91.78 349 *i* P **P** **23 09 01.9 +0.1**
KBS ePP **PP** **23 12 44.9 +3.7**
KBS Kingsbay 91.78 349 eP **P** **23 09 02.6 +0.8**

KBS IVmB_BB 23 09 03.9
comp=Z,2µm,3.8s
KBS ePP PP 23 12 42.9 +1.7
KBS e 23 19 49.7
KBS eSS SS 23 26 11.1 +5.2
KBS IVMs_BB IVMs_BB 23 58 15.9
comp=Z,6µm,16.4s
NIKH Nikolski High 91.92 37 P P **23 09 02.7 -0.2**
NIKH Nikolski High 91.92 37 P P **23 09 02.4 -0.5**
baz=269,SNR=24
OVD Ostervraa, Den 92.00 327 eP P **23 09 07.1 +4.0**
OVD IAmb IAmb 23 09 32.2
comp=Z,96nm,0.7s
TBLU Trondheim 92.04 333 eP P **23 09 04.3 +1.0**
TBLU IVmBBB 23 09 06.5
comp=Z,1µm,1.9s
TBLU ePP PP **23 12 43.5 0.0**
TBLU eSKSac SKSac **23 19 30.9 +0.2**
TBLU e 23 20 00.7
TBLU eSS SS **23 26 12.8 +2.7**
TBLU IVMs_BB IVMs_BB 23 53 58.4
comp=Z,3µm,22.4s
DAVOX Davos/Dischmat 92.06 317 LR LR 23 57 30.5
comp=Z,3µm,19.7s,baz=74,slow=40
DAVA Damuels 92.07 317 *i* P P **23 09 04.4 +0.5**
SNR=25
DAVA eP pP **23 09 22.4 +1.1**
comp=Z,258nm,1.1s
DAVA eP PP **23 12 49.3 +4.9**
comp=Z,39nm,1.1s
DAVA eS SKSac **23 19 33.6 +1.6**
comp=Z,15nm,1.6s
SNAA Sanae 92.28 198 P P **23 09 06.0 +1.6**
SNAA Sanae 92.28 198 pP pP 23 09 22.5 +0.9
SNAA Sanae 92.28 198 eP P **23 09 05.6 +1.2**
SNAA Sanae 92.28 198 PKKPbc PKKPbc 23 26 19.5 -2.5
comp=Z,3.5nm,0.7s,baz=275,slow=7.4,SNR=7.7
SNAA LR LR 23 43 13.9
comp=Z,13µm,21.4s,baz=88,slow=31
SNAA Sanae 92.28 198 P P **23 09 04.8 +0.5**
SNAA Sanae 92.28 198 *ce*P P **23 09 06.3 +2.0**
SNAA pmax pmax
comp=Z,108nm,1.6s
SNAA MLR MLR
comp=Z,4µm,17.0s
KEST Kesra 92.30 306 P P **23 09 06.5 +1.4**
comp=Z,72nm,1.0s,baz=62,slow=0.6,SNR=50
KEST S SKSac **23 19 33.9 +0.3**
comp=Z,1.9nm,0.7s,baz=256,slow=12,SNR=1.5
KEST PKKPbc PKKPbc **23 26 21.1 +0.4**
comp=Z,9.5nm,1.1s,baz=235,slow=6.5,SNR=5.1
KEST LR LR 23 51 05.6
comp=Z,7µm,21.9s,baz=59,slow=36
comp=Z,72nm,1.0s
KEST Kesra 92.30 306 P P **23 09 06.6 +1.4**
KEST IAmb IAmb 23 09 32.0
comp=Z,319nm,1.1s
KEST Kesra 92.30 306 P P **23 09 07.7 +2.5**
SNR=32
VSL Villasalto 92.33 309 P P **23 09 04.7 -0.5**
VSL IAmb IAmb 23 09 30.0
comp=Z,182nm,1.1s
KONO Kongsberg 92.34 329 P P **23 09 04.9 +0.2**
KONO Kongsberg 92.34 329 *ce*P P **23 09 06.3 +1.6**
KONO pmax pmax
comp=Z,93nm,0.9s
KONO MLR MLR
comp=Z,5µm,22.0s
KONO Kongsberg 92.34 329 eP P **23 09 06.0 +1.3**
KONO ePP PP **23 12 46.7 +0.8**
KONO eSKSac SKSac **23 19 32.6 +0.1**
KONO e 23 20 01.9
KONO eSS SS **23 26 17.4 +2.9**
KONO IVMs_BB IVMs_BB 23 48 26.3
comp=Z,2µm,27.3s
TNA Tin City 92.45 25 P P **23 09 04.9 -0.1**
baz=270
MUD Monsted U'grnd 92.56 326 *i* P P **23 09 08.0 +2.2**
MUD IAmb IAmb 23 09 10.3
comp=Z,87nm,1.4s
MUD IVmBBB 23 09 11.2
comp=Z,1µm,3.0s
DOMB Dombas 92.59 332 ⇧ *i* P P **23 09 06.8 +1.0**
DOMB IVmBBB 23 09 09.2
comp=Z,945nm,2.9s
DOMB ePP PP **23 12 50.6 +2.7**
DOMB eSKSac SKSac **23 19 35.1 +1.2**
DOMB e 23 20 07.8
DOMB eSS SS **23 26 19.2 +1.0**
DOMB IVMs_BB IVMs_BB 23 54 36.7
comp=Z,3µm,20.6s
HOMB Homborsund 92.91 328 eP P **23 09 08.8 +1.5**
SKAR Skarslia 92.97 331 eP P **23 09 08.6 +0.9**
SKAR IVmB_BB 23 09 11.6
comp=Z,1µm,2.9s
SKAR ePP PP **23 12 51.9 +0.9**
SKAR eSKSac SKSac **23 19 34.4 -1.8**
SKAR e 23 20 09.3
SKAR eSS SS **23 26 26.9 +3.1**
SKAR IVMs_BB IVMs_BB 23 51 55.5
comp=Z,2µm,25.5s
BFO Black Forest 93.12 318 P P **23 09 07.9 -0.7**
BFO Black Forest 93.12 318 P P **23 09 07.9 -0.7**
BFO pmax pmax
comp=Z,59nm,1.0s
BFO MLR MLR
comp=Z,3µm,21.0s
MOL Molde 93.29 332 eP P **23 09 09.9 +0.9**
MOL IVmB_BB 23 09 11.2
comp=Z,698nm,3.5s
MOL ePP PP **23 12 54.7 +1.4**
MOL eSKSac SKSac **23 19 37.8 +0.2**
MOL e 23 20 11.9
MOL IVMs_BB IVMs_BB 23 56 25.1
comp=Z,3µm,21.0s
UNV Unalaska Valle 93.32 36 P P **23 09 09.3 0.0**
UNV IAmb IAmb 23 09 12.0
comp=Z,275nm,1.8s
UNV Unalaska Valle 93.32 36 P P **23 09 08.9 -0.5**
baz=271
AKN Aaknes 93.56 332 eP P **23 09 11.2 +0.9**
AKN IVmB_BB 23 09 14.2
comp=Z,878nm,1.2s
AKN eScS S **23 20 17.0 +3.2**
AKN IVMs_BB IVMs_BB 23 51 40.6
comp=Z,2µm,18.8s
ANM Nome 93.56 26 IAMs_20 IAMs_20 23 55 23.1
comp=Z,7µm,19.0s
ANM Nome 93.56 26 P P **23 09 10.3 +0.1**
baz=273
SNART Snartemo 93.59 328 eP P **23 09 11.2 +0.7**
SNART ePP PP **23 12 55.4 -0.4**
SNART eSKSac SKSac **23 19 40.9 +1.4**
SNART e 23 20 14.5
ABSA Djebel Ababsia 93.82 306 P 23 09 15.5
ODD1 Odda 93.83 330 eP P **23 09 12.7 +1.0**
SENIN Lac Senin/Sane 93.84 316 P P **23 09 11.3 -1.0**
CMAH Djebel Manchou 93.86 306 P 23 09 13.7
VNA2 Neumayer--Watz 93.90 198 P P **23 09 13.1 +1.4**
baz=286,slow=8.0
ECH Echery 93.90 318 P P **23 09 11.9 -0.3**
ECH Echery 93.90 318 P P **23 09 11.9 -0.3**
ECH pmax pmax
comp=Z,74nm,1.2s
ECH MLR MLR
comp=Z,4µm,22.0s
BLS5 Blasjo 93.94 329 eP P **23 09 13.3 +1.1**
BLS5 IVmB_BB 23 09 15.8
comp=Z,1µm,1.8s
BLS5 ePP PP **23 13 00.4 +1.9**
BLS5 eSKSac SKSac **23 19 41.7 +0.2**
BLS5 IVMs_BB IVMs_BB 23 53 04.1
comp=Z,2µm,22.0s
HYA Hoyanger 93.99 331 eP P **23 09 13.2 +1.0**
HYA ePP PP **23 12 56.7 -2.1**
HYA eSKSac SKSac **23 19 40.8 -0.7**
HYA e 23 20 21.9
VNA1 Neumayer--Stat 94.26 198 P P **23 09 14.4 +1.1**
VNA1 Neumayer--Stat 94.26 198 pP pP 23 09 32.3 +1.7
RDOG Red Dog Mine 94.32 22 P P **23 09 10.8 -2.8**
baz=275
CKFL Kef-Lekhel 94.43 306 P 23 09 20.0
BER Bergen 94.45 330 eP P **23 09 15.3 +0.9**
BER IVmB_BB 23 09 21.2
comp=Z,815nm,2.8s
BER eSP SP **23 09 37.8 -1.0**
BER e 23 13 07.2
BER e 23 20 22.0
BER IVMs_BB IVMs_BB 23 52 38.1
comp=Z,2µm,26.6s
VNA3 Neumayer Olymp 94.50 198 P P **23 09 16.4 +1.9**
BTNL Ternell 94.50 320 *dx* x 23 09 22.0
BTNL *ds*P sP 23 09 33.8 -5.5
FOO Floro 94.51 331 eP P **23 09 14.8 +0.2**
ASK Askoy 94.52 330 eP P **23 09 15.3 +0.6**
ASK eSP SP **23 09 38.8 -0.2**
ASK ePP PP **23 13 04.0 +1.1**
ASK eSKSac SKSac **23 19 46.3 +1.9**
WLF Walferdange 94.52 319 P P **23 09 14.6 -0.4**
WLF Walferdange 94.52 319 P P **23 09 14.6 -0.4**
WLF pmax pmax
comp=Z,80nm,1.2s
WLF MLR MLR
comp=Z,5µm,22.0s
WLF Walferdange 94.52 319 *d*P P **23 09 15.4 +0.4**
WLF *ds*P sP **23 09 35.6 -3.8**
KMY Karmoy 94.57 329 eP P **23 09 15.7 +0.7**
MEM Membach 94.58 320 *dx* x 23 09 22.6
MEM *ds*P sP 23 09 33.5 -6.1
BHOU Houvegnez 94.59 320 *ds*P sP 23 09 35.0 -4.7
SUE Sulen 94.69 331 eP P **23 09 16.5 +1.0**
SUE IVmB_BB 23 09 18.9
comp=Z,1µm,1.9s
SUE eSKSac SKSac **23 19 46.1 +0.9**
SUE e 23 20 25.0
SUE eSS SS **23 26 51.9 +3.9**
SUE IVMs_BB IVMs_BB 23 49 05.5
comp=Z,3µm,29.0s
BSTI Sart Tilman 94.86 320 *d*P P **23 09 17.8 +1.2**
BSTI *ds*P pP **23 09 36.9 +2.8**
BCLA Clavier 95.04 320 *d*P P **23 09 17.6 +0.2**
BCLA *ds*P pP **23 09 36.9 +2.0**
FALS False Pass 95.09 35 P P **23 09 16.1 -1.3**
FALS IAmb IAmb 23 09 19.9
comp=Z,279nm,1.5s
RCHB Rochefort 95.10 320 *dx* x 23 09 20.3
RCHB *ds*P sP 23 09 37.0 -5.0
DFRA Djebel Bou Aff 95.10 306 P 23 09 23.6
BGES Gesves 95.17 320 *dx* x 23 09 24.6
BGES *ds*P sP 23 09 37.5 -4.9
BMRD Maredsous 95.38 320 *d*P P **23 09 20.7 +1.8**
BMRD *dp*P pP **23 09 33.6 -3.0**
BMRD *ds*P sP **23 09 38.8 -4.6**
DOU Dourbes 95.51 320 *d*P P **23 09 20.0 +0.5**
DOU *ds*P pP **23 09 39.5 +2.4**
SNF Seneffe 95.68 320 *d*P P **23 09 20.1 -0.1**
SNF *ds*P pP **23 09 40.2 +2.4**
SSB Saint Sauveur 95.81 315 P P **23 09 19.5 -1.6**
SSB Saint Sauveur 95.81 315 P P **23 09 19.5 -1.6**
SSB pmax pmax
comp=Z,30nm,1.1s
SSB MLR MLR
comp=Z,3µm,19.0s
NOR Nord 95.92 352 *i* P P **23 09 20.6 -0.2**
NOR IAmb IAmb 23 09 31.6
comp=Z,37nm,1.0s
NOR ePP PP **23 13 16.0 +2.6**
A21K Barrow 96.02 18 P P **23 09 21.7 +0.3**
baz=281
BELA Belgrano 2 96.60 189 P P **23 09 23.4 -0.6**
SDPT Sand Point 96.73 35 P P **23 09 24.8 -0.1**
baz=276,SNR=11
N16K Nishlik Lake 97.00 29 P P **23 09 26.4 +0.4**
baz=278
GCSA Galena City Sc 97.17 25 P Pdif 23 09 27.1 +0.3
baz=280,SNR=17
CLF Chambon-Foret 97.19 318 P P **23 09 27.1 0.0**
CHNA Chernabura Isl 97.30 35 P Pdif 23 09 27.8 +0.3
baz=277
O16K Kokwok River B 97.46 30 P P **23 09 28.1 0.0**
baz=279,SNR=15
P16K Nushagak River 97.60 31 P P **23 09 28.0 -0.7**
baz=279
ELMS Elmsett, Ipswi 97.60 322 eP Pdif 23 09 32.1 +3.1
ELMS IAMs_20 IAMs_20 23 56 18.3
comp=Z,6µm,23.5s
ELSH Elham, Standar 97.62 321 eP Pdif 23 09 31.2 +2.1
ELSH IAMs_20 IAMs_20 23 57 30.4
comp=Z,6µm,24.9s
TTA Tatalina 97.88 27 P Pdif 23 09 30.2 0.0
TTA IAmb IAmb 23 09 34.4
comp=Z,232nm,1.5s
TTA Tatalina 97.88 27 P Pdif 23 09 30.2 +0.1
TTA pmax pmax
comp=Z,232nm,1.5s
TTA Tatalina 97.88 27 P Pdif 23 09 30.2 +0.1
baz=281,SNR=34
RAR Rarotonga 98.13 112 LR LR 23 57 44.3
comp=Z,1µm,18.6s,baz=263,slow=38
JMIC Jan Mayen 98.15 342 LR LR 00 00 10.5
comp=Z,6µm,21.4s,baz=73,slow=39
JMIC Jan Mayen 98.15 342 ⇧ *i* P Pdif 23 09 33.8 +2.7
JMIC IVmBBB 23 09 37.8
comp=Z,1µm,1.6s
JMIC ePP PP **23 13 32.7 +2.0**
JMIC eSKSac SKSac **23 20 02.8 -0.3**
JMIC eSS SS **23 27 41.9 +5.5**
JMIC IVMs_BB IVMs_BB 23 57 08.0
comp=Z,3µm,28.8s
IMAR Indian Mountai 98.20 23 P Pdif 23 09 31.5 +0.1
N18K Kilae Creek 98.37 29 IAMs_20 IAMs_20 23 56 47.4
comp=Z,11µm,21.0s
N18K Kilae Creek 98.37 29 P Pdif 23 09 32.4 +0.2
baz=281,SNR=9.8
SVW2 Sparrevohn 98.44 28 P Pdif 23 09 32.8 +0.3
J20K Nowinta River 98.44 25 P Pdif 23 09 33.0 +0.5
baz=283,SNR=42
DAG Danmarks Havn 98.50 348 *i* P P **23 09 32.0 -0.4**
DAG IAmb IAmb 23 09 34.1
comp=Z,41nm,1.2s
DAG *ep*P pP **23 09 50.5 +0.4**
DAG ePP PP **23 13 35.7 +2.5**
L19K White Mountain 98.56 27 IAMs_20 IAMs_20 00 01 47.4
comp=Z,9µm,18.0s
L19K White Mountain 98.56 27 P Pdif 23 09 33.4 +0.3
baz=282,SNR=20
H21K Melozitna Rive 98.65 24 IAMs_20 IAMs_20 23 56 10.6
comp=Z,10µm,21.0s
H21K Melozitna Rive 98.65 24 P Pdif 23 09 33.9 +0.5
baz=284,SNR=65
K20K Telida 98.66 26 P Pdif 23 09 34.1 +0.6
K20K IAmb IAmb 23 09 38.1
comp=Z,262nm,1.3s
K20K IAMs_20 IAMs_20 23 57 06.9
comp=Z,8µm,20.0s
K20K Telida 98.66 26 P Pdif 23 09 34.0 +0.5
baz=283,SNR=49
M19K Big River Lodg 98.83 28 P Pdif 23 09 34.9 +0.6
M19K IAMs_20 IAMs_20 00 01 24.6
comp=Z,7µm,18.0s
M19K Big River Lodg 98.83 28 P Pdif 23 09 34.9 +0.6
baz=282
O18K Koktuh Hills 98.86 30 IAMs_20 IAMs_20 23 56 54.4
comp=Z,8µm,22.0s
O18K Koktuh Hills 98.86 30 P P **23 09 34.0 -0.4**
baz=281,SNR=13
CWF Charnwood Fore 98.92 323 eP Pdif 23 09 35.4 +0.6
CWF IAMs_20 IAMs_20 23 55 05.4
comp=Z,4µm,21.6s
HPK Haverah Park 98.92 324 eP Pdif 23 09 38.3 +3.5
HPK IAMs_20 IAMs_20 23 50 47.2
comp=Z,8µm,30.2s
DRUM Mains of Drumt 98.92 327 eP Pdif 23 09 36.4 +1.6
DRUM IAMs_20 IAMs_20 23 49 12.4
comp=Z,4µm,27.3s
P18K Big Mountain, 98.94 30 IAMs_20 IAMs_20 23 58 15.6
comp=Z,8µm,21.0s
P18K Big Mountain, 98.94 30 P P **23 09 34.0 -0.8**
baz=281
L20K Farewell, AK 98.94 27 P Pdif 23 09 35.3 +0.5
baz=283,SNR=20
EDMD Edmundbyers 98.98 325 eP Pdif 23 09 35.9 +0.8
EDMD *e* 23 09 40.6
EDMD IAMs_20 IAMs_20 23 51 07.1
comp=Z,6µm,32.3s
N19K Bonanza Creek 99.02 29 IAMs_20 IAMs_20 23 56 43.6
comp=Z,11µm,21.0s
N19K Bonanza Creek 99.02 29 P Pdif 23 09 35.5 +0.2
baz=282,SNR=23
TOLK Toolik Lake Re 99.04 20 P **Pdif 23 09 35.2 0.0**
TOLK IAmb IAmb 23 09 39.6
comp=Z,202nm,1.3s
TOLK Toolik Lake Re 99.04 20 P **Pdif 23 09 35.3 +0.2**
baz=288,SNR=40
I21K Tanana 99.11 24 IAMs_20 IAMs_20 23 56 35.6
comp=Z,8µm,21.0s
I21K Tanana 99.11 24 P **Pdif 23 09 36.0 +0.6**
baz=285,SNR=30
TOA0 Torodi Ar. Sit 99.23 283 P **Pdif 23 09 36.5 -0.6**
TOA0 Torodi Ar. Sit 99.23 283 P **Pdif 23 09 37.4 +0.4**
SNR=6.8
TORD Torodi Ar. Bea 99.23 283 P **Pdif 23 09 37.0 -0.1**
comp=Z,7.2nm,0.8s,baz=80,slow=3.7,SNR=43
TORD PP **PP 23 13 39.4 -1.2**
comp=Z,11nm,1.1s,baz=105,slow=7.9,SNR=4.9
TORD S **SKSac 23 20 06.3 -4.5**
comp=Z,2.7nm,0.9s,baz=29,slow=2.8,SNR=2.1
TORD PKKPbc **PKKPbc 23 25 59.4 -2.0**
comp=Z,4.6nm,0.7s,baz=298,slow=2.9,SNR=12
TORD LR LR 23 52 51.1
comp=Z,6µm,20.0s,baz=78,slow=34
comp=Z,7.2nm,0.8s
TORD Torodi Ar. Bea 99.23 283 P **Pdif 23 09 36.4 -0.7**
COLD Coldfoot 99.24 22 P **Pdif 23 09 36.2 +0.3**
baz=287,SNR=17
ALE Alert 99.28 358 IAMs_20 IAMs_20 00 00 03.2
comp=Z,9µm,20.0s
CHUM Lake Minchumin 99.30 25 P **Pdif 23 09 36.8 +0.5**
baz=284,SNR=14
BIGH Upper Bighouse 99.38 329 eP **Pdif 23 09 36.7 -0.1**
BIGH IAMs_20 IAMs_20 23 55 11.4
comp=Z,7µm,23.1s
M20K Styx River 99.42 27 P **Pdif 23 09 37.1 +0.1**
M20K IAmb IAmb 23 09 41.5
comp=Z,218nm,1.9s
M20K IAMs_20 IAMs_20 00 01 43.1
comp=Z,9µm,19.0s
M20K Styx River 99.42 27 P **Pdif 23 09 37.0 0.0**
baz=283
EDI Edinburgh 99.48 326 eP **Pdif 23 09 39.0 +1.7**
EDI IAMs_20 IAMs_20 23 56 38.8
comp=Z,5µm,22.9s
CAST Castle Rocks 99.51 26 P **Pdif 23 09 37.5 +0.2**
baz=285,SNR=42
EKA Eskdalemuir Ar 99.57 326 LR LR 00 01 47.7
comp=Z,3µm,18.8s,baz=80,slow=40
PPLA Purkeypile 99.60 26 P **Pdif 23 09 38.3 +0.4**
baz=284,SNR=11
ESK Eskdalemuir 99.60 326 eP **Pdif 23 09 40.2 +2.4**
ESK IAMs_20 IAMs_20 23 49 44.3
comp=Z,4µm,26.0s
MLY Manley 99.65 24 IAMs_20 IAMs_20 23 57 03.0
comp=Z,10µm,22.0s
MLY Manley 99.65 24 P **Pdif 23 09 37.8 -0.2**
baz=286,SNR=38
BPAW Bear Paw Mtn. 99.81 25 P **Pdif 23 09 38.4 -0.2**
baz=286,SNR=60
Q19K Cape Douglas, 99.83 30 IAMs_20 IAMs_20 23 59 44.2
comp=Z,8µm,21.0s
Q19K Cape Douglas, 99.83 30 P **Pdif 23 09 38.2 -0.6**
baz=282
INVG Invergeldie, C 99.86 327 eP **Pdif 23 09 40.2 +1.3**
HLM1 Long Mynd 99.90 323 eP **Pdif 23 09 42.6 +3.4**
HLM1 IAMs_20 IAMs_20 23 55 59.4
comp=Z,5µm,23.4s
H23K Yukon River 99.90 23 IAMs_20 IAMs_20 00 01 15.6
comp=Z,7µm,20.0s
H23K Yukon River 99.90 23 P **Pdif 23 09 39.2 +0.2**
baz=287,SNR=31
JSA Saint Aubin 99.97 320 eP **Pdif 23 09 41.7 +2.1**
KTH Kantishna Hill 99.98 26 IAMs_20 IAMs_20 00 03 15.9
comp=Z,6µm,20.0s
SPCR Spurr Chakacha 100.01 28 P **Pdif 23 09 39.5 -0.1**
baz=284
FOEL Foel Wylfa 100.03 323 eP **Pdif 23 09 42.6 +2.8**
FOEL IAMs_20 IAMs_20 23 56 02.7
comp=Z,5µm,23.5s
SII Sitkinak Islan 100.04 33 P **Pdif 23 09 39.4 -0.4**
baz=282
DBG Daneborg 100.05 346 *i* P **Pdif 23 09 40.0 +0.6**
DBG ePP PP **23 13 46.1 +1.1**
SKT Skwentna 100.13 27 IAMs_20 IAMs_20 23 56 48.8
comp=Z,7µm,21.0s
SKT Skwentna 100.13 27 P **Pdif 23 09 39.1 -1.0**
baz=285,SNR=14
I23K Minto, Yukon-K 100.18 24 IAMs_20 IAMs_20 23 59 02.9
comp=Z,7µm,20.0s
I23K Minto, Yukon-K 100.18 24 P **Pdif 23 09 40.4 +0.3**
baz=287,SNR=13
TRF Thorofare Moun 100.28 26 P **Pdif 23 09 41.2 +0.3**
baz=286,SNR=13
NEA2 Nenana 100.47 24 IAMs_20 IAMs_20 23 57 25.5
comp=Z,7µm,21.0s
NEA2 Nenana 100.47 24 P **Pdif 23 09 41.8 +0.3**
baz=288,SNR=12
KPL Plockton 100.53 328 eP **Pdif 23 09 43.9 +2.0**
CART Cartagena 100.53 308 P **Pdif 23 09 47.2 +4.8**
CART S **SKSac 23 20 14.1 -2.2**
Q20K Shuyak Island 100.54 31 P **Pdif 23 09 42.1 +0.2**
baz=284
GAL1 Galloway 100.54 325 eP **Pdif 23 09 43.6 +1.7**
GAL1 IAMs_20 IAMs_20 23 54 22.7
comp=Z,6µm,26.6s
H24K Noodor Dome 100.55 23 IAMs_20 IAMs_20 00 02 14.7
comp=Z,10µm,20.0s
H24K Noodor Dome 100.55 23 P **Pdif 23 09 42.1 +0.2**
baz=289,SNR=20
CUT Chulitna 100.58 27 IAMs_20 IAMs_20 23 58 29.9
comp=Z,6µm,21.0s
CUT Chulitna 100.58 27 P **Pdif 23 09 41.3 -0.7**
baz=286
CAPN Captain Cook N 100.61 28 IAMs_20 IAMs_20 23 58 26.8
comp=Z,7µm,20.0s
SUA Susitna One 100.62 28 IAMs_20 IAMs_20 00 02 40.9
comp=Z,7µm,19.0s
SUA Susitna One 100.62 28 P **Pdif 23 09 42.2 -0.2**
baz=286
KDAK Kodiak Island 100.63 31 IAMs_20 IAMs_20 23 57 02.4
comp=Z,9µm,21.0s
KDAK Kodiak Island 100.63 31 P **Pdif 23 09 42.7 +0.4**
baz=283
HOM Homer 100.66 29 IAMs_20 IAMs_20 23 57 28.0
comp=Z,6µm,20.0s
MDM Murphy Dome 100.69 24 IAMs_20 IAMs_20 23 59 20.5
comp=Z,7µm,20.0s
MCK McKinley 100.78 25 P **Pdif 23 09 42.4 -0.5**
baz=288,SNR=30
M22K Willow 100.83 27 IAMs_20 IAMs_20 23 56 22.5
comp=Z,7µm,22.0s
M22K Willow 100.83 27 P **Pdif 23 09 43.0 -0.1**
baz=286
TCOL CIGO, UAF Yank 100.87 24 IAMs_20 IAMs_20 23 59 25.2
comp=Z,8µm,21.0s
TCOL CIGO, UAF Yank 100.87 24 P **Pdif 23 09 43.1 -0.1**
baz=289
COLA College 100.87 24 IAMs_20 IAMs_20 23 59 25.2
comp=Z,7µm,21.0s
COLA College 100.87 24 P **Pdif 23 09 43.2 0.0**
baz=289
CNPM China Poot 100.89 30 IAMs_20 IAMs_20 23 57 37.3
comp=Z,7µm,20.0s
WRH Wood River Hil 100.91 24 IAMs_20 IAMs_20 23 59 44.1
comp=Z,6µm,20.0s
RND Reindeer 100.92 25 IAMs_20 IAMs_20 00 04 44.4
comp=Z,7µm,19.0s
FIS Fire Island 100.95 28 IAMs_20 IAMs_20 23 59 37.8
comp=Z,7µm,21.0s
POKR Poker Plat Res 100.96 24 IAMs_20 IAMs_20 23 58 48.6
comp=Z,8µm,20.0s
POKR Poker Plat Res 100.96 24 P **Pdif 23 09 43.5 -0.2**
baz=289
CCB Clear Creek Bu 100.97 24 IAMs_20 IAMs_20 23 59 27.8
comp=Z,7µm,22.0s
BRLK Bradley Lake 101.00 29 IAMs_20 IAMs_20 23 58 11.0
comp=Z,9µm,21.0s
BRSE Bradley Lake S 101.08 29 P **Pdif 23 09 44.2 -0.2**
baz=285
HTL Hartland 101.14 322 eP **Pdif 23 09 49.8 +5.0**
HTL IAMs_20 IAMs_20 23 50 11.2
comp=Z,7µm,30.8s
RC01 Rabbit Creek A 101.19 28 IAMs_20 IAMs_20 00 03 19.1
comp=Z,8µm,19.0s
RC01 Rabbit Creek A 101.19 28 P **Pdif 23 09 44.5 -0.3**
baz=286,SNR=12
WAT1 Susitna Watana 101.22 26 P **Pdif 23 09 44.9 0.0**
baz=288
CLGH Cloghs, Cushen 101.28 326 eP **Pdif 23 09 48.0 +2.7**

CLGH				IAMs_20	IAMs_20	23 50 48.9	
	comp=Z,6µm,34.0s						
ILAR	Eielson Array	101.30	24	P	Pdif	23 09 43.7	-1.5
	comp=Z,1.1nm,0.8s,baz=286,slow=3.7,SNR=5.0						
ILAR				S	SKSac	23 20 13.9	-4.9
	comp=Z,0.3nm,0.6s,baz=272,slow=4.4,SNR=2.3						
ILAR				PKKPbc	PKKPbc	23 25 55.6	-1.5
	comp=Z,4.6nm,0.6s,baz=143,slow=2.3,SNR=25						
ILAR				PKPPKP	P'P'df	23 34 15.6	+3.5
	comp=Z,0.5nm,0.9s,baz=192,slow=2.6,SNR=3.3						
ILAR	Eielson Array	101.30	24	Pdif	Pdif	23 09 44.2	-1.0
ILAR	Eielson Array	101.30	24	P	Pdif	23 09 44.2	-1.0
PMR	Palmer	101.33	27	P	Pdif	23 09 45.2	-0.2
	baz=287						
O22K	Cooper Landing	101.37	28	IAMs_20	IAMs_20	00 00 03.8	
	comp=Z,10µm,20.0s						
O22K	Cooper Landing	101.37	28	P	Pdif	23 09 45.3	-0.3
	baz=286						
GHO	Glory Hole Cre	101.37	27	IAMs_20	IAMs_20	00 03 27.6	
	comp=Z,7µm,20.0s						
HDA	Harding Lake	101.39	24	IAMs_20	IAMs_20	23 59 50.1	
	comp=Z,6µm,20.0s						
HDA	Harding Lake	101.39	24	P	Pdif	23 09 45.1	-0.5
	baz=290						
SEW	Seward	101.61	29	P	Pdif	23 09 44.3	-2.3
	baz=286						
SML	Sawmill	101.63	27	P	Pdif	23 09 46.4	-0.4
	baz=288,SNR=5.8						
ILTH	Belurgan, Co L	101.64	325	*e*P	Pdif	23 09 47.4	+0.5
DHY	Denali Highway	101.65	26	P	Pdif	23 09 46.6	-0.4
	baz=289,SNR=6.4						
WAT6	Susitna Watana	101.65	26	P	Pdif	23 09 46.6	-0.4
	baz=288,SNR=32						
KNK	Knik Glacier	101.69	27	IAMs_20	IAMs_20	00 00 00.2	
	comp=Z,7µm,22.0s						
KNK	Knik Glacier	101.69	27	P	Pdif	23 09 46.8	-0.3
	baz=288						
CCA1	Carnmenellis	101.76	321	*e*P	Pdif	23 09 50.0	+2.4
CCA1				IAMs_20	IAMs_20	23 49 14.2	
	comp=Z,7µm,32.8s						
M23K	Glacier View	101.91	27	P	Pdif	23 09 47.5	-0.5
	baz=288						
J25K	Salcha River,	101.96	24	IAMs_20	IAMs_20	00 00 18.1	
	comp=Z,9µm,21.0s						
J25K	Salcha River,	101.96	24	P	Pdif	23 09 47.6	-0.6
	baz=291						
UCM	Universidad Co	101.97	311	P	Pdif	23 09 52.9	+4.2
UCM				S	SKSac	23 20 21.5	-1.7
SCM	Sheep Creek Mo	102.08	27	IAMs_20	IAMs_20	23 57 43.3	
	comp=Z,7µm,21.0s						
SCM	Sheep Creek Mo	102.08	27	P	Pdif	23 09 48.3	-0.5
	baz=289						
K24K	Donnelly Dome	102.08	25	P	Pdif	23 09 48.1	-0.6
	baz=290						
IWEX	Carrickbyrne,	102.26	323	*e*P	Pdif	23 09 52.6	+2.9
WMELI	Melilla	102.33	306	P	Pdif	23 09 57.4	+7.0
WMELI				S	SKSac	23 20 23.9	-1.1
GLI	Glacier Island	102.49	28	IAMs_20	IAMs_20	00 04 08.2	
	comp=Z,7µm,19.0s						
GLI	Glacier Island	102.49	28	P	Pdif	23 09 50.1	-0.4
	baz=289						
RIDG	Independent Ri	102.49	25	P	Pdif	23 09 50.1	-0.5
	baz=291,SNR=12						
M24K	Tolsona, Glenn	102.50	26	P	Pdif	23 09 50.6	0.0
	baz=290,SNR=7.3						
PAX	Paxson	102.51	25	P	Pdif	23 09 50.6	-0.1
	baz=291,SNR=15						
ESDC	Sonseca Array	102.60	310	P	Pdif	23 09 51.2	-0.4
	comp=Z,0.2nm,0.6s,baz=147,slow=5.1,SNR=2.3						
ESDC				S	SKSac	23 20 24.3	-1.9
	comp=Z,0.2nm,0.6s,baz=1.1,slow=6.4,SNR=1.4						
ESDC				PKKPbc	PKKPbc	23 25 51.9	-0.7
	comp=Z,7.1nm,0.9s,baz=288,slow=2.8,SNR=18						
ESDC				PKPPKP	P'P'df	23 34 09.0	-2.3
	comp=Z,0.7nm,0.9s,baz=318,slow=2.0,SNR=4.5						
ESDC	Sonseca Array	102.60	310	Pdif	Pdif	23 09 52.3	+0.7
J26L	Joseph Creek	102.73	24	IAMs_20	IAMs_20	00 03 56.3	
	comp=Z,7µm,20.0s						
J26L	Joseph Creek	102.73	24	P	Pdif	23 09 51.5	-0.2
	baz=293,SNR=6.1						
SCRK	Sand Creek	102.76	24	IAMs_20	IAMs_20	00 01 21.1	
	comp=Z,9µm,21.0s						
SCRK	Sand Creek	102.76	24	P	Pdif	23 09 52.3	+0.5
	baz=292,SNR=14						
FID	Port Fidalgo	102.81	28	IAMs_20	IAMs_20	00 00 07.6	
	comp=Z,9µm,21.0s						
KLU	Klutina	102.82	27	IAMs_20	IAMs_20	23 55 27.0	
	comp=Z,7µm,22.0s						
KLU	Klutina	102.82	27	P	Pdif	23 09 51.6	-0.6
	baz=290						
HARP	HAARP	102.84	26	P	Pdif	23 09 51.7	-0.5
	baz=291,SNR=5.3						
HIN	Hinchinbrook I	102.92	28	IAMs_20	IAMs_20	00 00 52.7	
	comp=Z,9µm,21.0s						
EYAK	Cordova Ski Ar	103.22	28	P	Pdif	23 09 53.9	+0.1
	baz=290						
Q23K	Middleton Isla	103.31	29	IAMs_20	IAMs_20	23 59 03.2	
	comp=Z,10µm,20.0s						
Q23K	Middleton Isla	103.31	29	P	Pdif	23 09 53.0	-1.2
	baz=289						
N25K	Chitina, Valde	103.38	27	P	Pdif	23 09 54.8	+0.2
	baz=291,SNR=13						
L26K	Log Cabin Wild	103.39	25	IAMs_20	IAMs_20	00 01 33.8	
	comp=Z,7µm,22.0s						
L26K	Log Cabin Wild	103.39	25	P	Pdif	23 09 55.1	+0.5
	baz=293,SNR=17						
PVLZ	Peæn de	103.44	306	P	Pdif	23 10 07.5	+12
PVLZ				S	SKSac	23 20 26.5	-3.7
K27K	Chicken	103.51	24	IAMs_20	IAMs_20	00 01 04.0	
	comp=Z,7µm,22.0s						
K27K	Chicken	103.51	24	P	Pdif	23 09 56.0	+1.0
	baz=294						
EGAK	Eagle	103.57	23	IAMs_20	IAMs_20	00 05 07.4	
	comp=Z,10µm,21.0s						
EGAK	Eagle	103.57	23	P	Pdif	23 09 55.3	+0.1
	baz=295						
BMRM	Bremner River	103.60	27	IAMs_20	IAMs_20	00 06 17.7	
	comp=Z,6µm,19.0s						
BMRM	Bremner River	103.60	27	P	Pdif	23 09 56.3	+0.7
	baz=291						
M26K	Nabesna, AK	103.78	25	IAMs_20	IAMs_20	00 01 41.2	
	comp=Z,6µm,21.0s						
M26K	Nabesna, AK	103.78	25	P	Pdif	23 09 56.5	+0.2
	baz=293,SNR=27						
HMT	Hamilton	103.99	28	IAMs_20	IAMs_20	00 05 06.9	
	comp=Z,10µm,18.0s						
L27K	Beaver Creek,	104.01	25	IAMs_20	IAMs_20	00 01 03.3	
	comp=Z,7µm,20.0s						
L27K	Beaver Creek,	104.01	25	P	Pdif	23 09 57.9	+0.6
	baz=294,SNR=12						
MCARA	McCarthy VSAT	104.16	26	P	Pdif	23 09 58.1	+0.1
	baz=292,SNR=5.4						
M27K	Edge Creek, AK	104.28	25	P	Pdif	23 09 58.9	+0.2
	baz=294,SNR=9.5						
IFR	Ifrane	104.33	304	P	Pdif	23 10 14.2	+15
IFR				S	SKSac	23 20 35.2	+0.4
PBRG	Braganca	104.35	313	*e*Pdif	Pdif	23 10 05.8	+6.5
PBRG	Braganca	104.35	313	*e*PP	PP	23 14 25.2	+6.8
PBRG				*e*SKSac	SKSac	23 20 38.2	+4.0
I29M	Ogilvie Camp,	104.39	22	IAMs_20	IAMs_20	00 04 50.0	
	comp=Z,11µm,20.0s						
I29M	Ogilvie Camp,	104.39	22	P	Pdif	23 09 59.5	+0.5
	baz=298						
EPYK	Eagle Plains	104.47	21	P	Pdif	23 09 59.3	0.0
	baz=300						
TGL	Tana Glacier	104.49	27	IAMs_20	IAMs_20	23 57 28.1	
	comp=Z,7µm,22.0s						
A36M	Sachs Harbour	104.50	13	P	Pdif	23 09 59.7	+0.5
	baz=312						
INK	Inuvik	104.52	18	PKKPbc	PKKPbc	23 25 45.8	-1.9
	comp=Z,3.3nm,0.6s,baz=155,slow=2.5,SNR=6.3						
INK	Inuvik	104.52	18	Pdif	Pdif	23 09 57.8	-1.6
INK	Inuvik	104.52	18	P	Pdif	23 09 57.8	-1.6
INK	Inuvik	104.52	18	P	Pdif	23 09 59.8	+0.5
	baz=303						
DAWY	Dawson	104.57	23	P	Pdif	23 10 00.5	+0.7
	baz=297						
WAX	Waxell Ridge	104.59	27	IAMs_20	IAMs_20	23 56 21.9	
	comp=Z,8µm,22.0s						
MVO	Moncorvo	104.67	312	*e*Pdif	Pdif	23 10 06.9	+6.1
MVO	Moncorvo	104.67	312	*e*PP	PKiKP	23 14 19.0	+2.7
MVO				*e*SKSac	SKSac	23 20 38.8	+3.0
MVO	Moncorvo	104.67	312	*e*LR	LR	23 47 30.7	
	comp=Z,4µm,22.0s						
BVCY	Beaver Creek	104.68	25	P	Pdif	23 10 00.8	+0.4
	baz=295						
SNH	Sunshine Point	104.70	28	IAMs_20	IAMs_20	23 59 21.8	
	comp=Z,7µm,21.0s						
ISLE	Juniper Island	104.77	27	IAMs_20	IAMs_20	23 59 20.5	
	comp=Z,7µm,22.0s						
SFS	San Fernando	104.80	307	IAMs_20	IAMs_20	00 03 31.3	
	comp=Z,8µm,21.0s						
J29M	Klondike Camp	104.85	23	P	Pdif	23 10 02.8	+1.7
	baz=298						
BARN	Barnard Glacie	104.89	26	IAMs_20	IAMs_20	23 57 30.7	
	comp=Z,7µm,22.0s						
BORG	Borgarnes	105.06	338	IAMs_20	IAMs_20	00 02 17.2	
	comp=Z,7µm,22.0s						
CTG	Chitna Glacier	105.08	27	P	Pdif	23 10 02.8	+0.6
	baz=294,SNR=9.6						
CTGM	Chitina Glacie	105.08	27	IAMs_20	IAMs_20	00 04 15.6	
	comp=Z,6µm,21.0s						
MESA	MESA	105.11	27	IAMs_20	IAMs_20	23 57 58.7	
	comp=Z,8µm,22.0s						
MESA	MESA	105.11	27	P	Pdif	23 10 02.7	+0.2
	baz=293						
YUK3	Moose Creek	105.12	26	P	Pdif	23 10 03.6	+1.0
	baz=295,SNR=11						
ARNO	Arenosillo	105.13	308	P	Pdif	23 10 11.2	+8.4
ARNO				S	SKSac	23 20 39.9	+2.1
YAH	Yahtse	105.13	27	IAMs_20	IAMs_20	23 56 27.2	
	comp=Z,9µm,22.0s						
PBAR	Barrancos	105.19	309	*e*Pdif	sPdif	23 10 31.6	+4.4
PBAR	Barrancos	105.19	309	*e*PP	PP	23 14 26.6	+1.9
PBAR				*e*SKSac	SKSac	23 20 39.6	+1.5
MTE	Manteigas	105.20	311	*e*Pdif	Pdif	23 10 15.5	+12
MTE	Manteigas	105.20	311	*e*PP	PP	23 14 05.1	-20
MTE				*e*SKSac	SKSac	23 20 40.3	+2.1
MTE	Manteigas	105.20	311	*e*LR	LR	23 48 25.6	
	comp=Z,4µm,20.0s						
SHEL	Horse Pasture	105.20	253	IAMs_20	IAMs_20	23 52 34.5	
	comp=Z,9µm,21.0s						
POLO	Lamas de Olo	105.20	312	*e*Pdif	Pdif	23 10 08.7	+5.5
POLO	Lamas de Olo	105.20	312	*e*PP	PKiKP	23 14 18.6	+1.3
POLO				*e*SKSac	SKSac	23 20 43.0	+4.8
PMRV	Marv??o	105.25	310	*e*Pdif	Pdif	23 10 09.8	+6.4
PMRV	Marv??o	105.25	310	*e*PP	PP	23 14 25.0	-0.1
PMRV				*e*SKSac	SKSac	23 20 42.4	+4.0
PMRV	Marv??o	105.25	310	*e*LR	LR	23 47 16.9	
	comp=Z,4µm,22.0s						
LOGN	Logan Glacier	105.28	27	IAMs_20	IAMs_20	00 06 39.0	
	comp=Z,6µm,20.0s						
TABL	Table Mountain	105.38	27	IAMs_20	IAMs_20	23 58 32.6	
	comp=Z,7µm,22.0s						
TULEG	Thule	105.38	357	IAMs_20	IAMs_20	00 05 07.3	
	comp=Z,9µm,20.0s						
TULEG	Thule	105.38	357	*i* P	Pdif	23 10 03.8	+0.7
TULEG				IAmb	IAmb	23 10 10.9	
	comp=Z,87nm,1.4s						
PGAV	Gavieira, Arco	105.44	313	*e*Pdif	Pdif	23 10 09.8	+5.5
PGAV	Gavieira, Arco	105.44	313	*e*SKSac	SKSac	23 20 41.1	+1.8
PGAV	Gavieira, Arco	105.44	313	*e*LR	LR	23 47 38.1	
	comp=Z,4µm,22.0s						
PESTR	Estremoz	105.50	310	*e*Pdif	Pdif	23 10 09.6	+5.1
PESTR	Estremoz	105.50	310	*e*PP	PP	23 14 30.0	+3.0
PESTR				*e*SKSac	SKSac	23 20 41.2	+1.7
YUK8	Steele Glacier	105.64	26	P	Pdif	23 10 06.0	+1.1
	baz=296,SNR=5.3						
DBIC	Dimbokro	105.68	276	Pdiff	Pdif	23 10 04.3	-1.5
	comp=Z,3.2nm,0.8s,baz=176,slow=8.7,SNR=3.2						
PVAQ	Vaqueiros	105.85	308	*e*Pdif	Pdif	23 10 15.8	+10
PVAQ	Vaqueiros	105.85	308	*e*PP	PP	23 14 34.8	+5.2
PVAQ				*e*SKSac	SKSac	23 20 41.9	+0.8
PVAQ	Vaqueiros	105.85	308	*e*LR	LR	23 48 20.6	
	comp=Z,5µm,22.0s						
COI	Coimbra	105.89	311	*e*Pdif	Pdif	23 10 09.1	+3.0
COI	Coimbra	105.89	311	*e*PP	PP	23 14 41.1	+11
COI				*e*SKSac	SKSac	23 20 43.6	+2.5
EVO	Evora	105.89	309	P	Pdif	23 10 15.7	+9.5
EVO				S	SKSac	23 20 43.7	+2.5
EVO	Evora	105.89	309	*e*PP	PKiKP	23 14 19.9	+1.4
PINM	Pinnacle	105.92	27	P	Pdif	23 10 07.2	+1.3
	baz=295						
PCAS	Casmilo, Conde	105.98	311	*e*Pdif	Pdif	23 10 10.8	+4.2
PCAS	Casmilo, Conde	105.98	311	*e*PP	PP	23 14 38.1	+7.7
PCAS				*e*SKSac	SKSac	23 20 45.4	+3.8
PBDV	Barranco-do-Ve	106.05	308	*e*Pdif	Pdif	23 10 14.0	+7.0
PBDV	Barranco-do-Ve	106.05	308	*e*PP	PP	23 14 31.6	+0.5
PBDV				*e*SKSac	SKSac	23 20 43.6	+1.6
YUK4	Talbot Arm	106.09	26	P	Pdif	23 10 07.7	+0.9
	baz=297						
MESJ	Messejana	106.17	309	*e*PP	PKiKP	23 14 21.8	+2.8
AVE	Averroes	106.25	304	P	Pdif	23 10 19.7	+12
AVE				S	SKSac	23 20 43.2	+0.1
BCPM	Bancas Point	106.27	27	IAMs_20	IAMs_20	00 03 59.1	
	comp=Z,6µm,22.0s						
M30M	Minto, Yukon	106.30	24	IAMs_20	IAMs_20	00 06 19.7	
	comp=Z,7µm,20.0s						
M30M	Minto, Yukon	106.30	24	P	Pdif	23 10 08.3	+0.8
	baz=299						
PSBE	So Bento	106.31	311	*e*Pdif	Pdif	23 10 18.1	+10
PSBE	So Bento	106.31	311	*e*PP	PP	23 14 34.6	+1.7
PSBE				*e*SKSac	SKSac	23 20 47.7	+4.6
YUK6	Outpost Mounta	106.40	26	P	Pdif	23 10 09.0	+0.7
	baz=297,SNR=6.0						
PNL	Peninsula	106.50	27	P	Pdif	23 10 08.9	+0.5
	baz=295						
C36M	Paulatuk	106.58	15	IAMs_20	IAMs_20	00 07 09.6	
	comp=Z,9µm,19.0s						
C36M	Paulatuk	106.58	15	P	Pdif	23 10 08.8	+0.3
	baz=313						
MORF	Marmelete	106.60	308	*e*Pdif	Pdif	23 10 12.0	+2.5
MORF	Marmelete	106.60	308	*e*PP	PP	23 14 34.8	-0.4
MORF				*e*SKSac	SKSac	23 20 47.2	+2.7
N30M	Aishikik Lake	106.71	25	P	Pdif	23 10 09.3	-0.1
	baz=298						
PFVI	Vila Bisbo	106.77	308	*e*Pdif	Pdif	23 10 18.6	+8.5
PFVI	Vila Bisbo	106.77	308	*e*PP	PP	23 14 54.2	+18
PFVI				*e*SKSac	SKSac	23 20 47.3	+2.2
PMAFR	Mafra	106.78	310	*e*Pdif	Pdif	23 10 16.7	+6.5
PMAFR	Mafra	106.78	310	*e*PP	PKiKP	23 14 26.9	+6.7
PMAFR				*e*SKSac	SKSac	23 20 48.7	+3.5
HYT	Haines Junctio	106.83	26	P	Pdif	23 10 10.4	+0.4
	baz=298,SNR=5.7						
H09N1	TRISTAN DA CUN	106.91	230	T	T	01 08 42.8	
	SNR=25						
H09W1	TRISTAN DA CUN	106.92	230	T	T	01 08 31.8	
	SNR=24						
N31M	Braeburn, Yuko	107.25	25	IAMs_20	IAMs_20	00 06 56.8	
	comp=Z,6µm,20.0s						
N31M	Braeburn, Yuko	107.25	25	P	Pdif	23 10 11.2	-0.5
	baz=299						
TBI	Tubuai	107.31	115	*e*LR	LR	23 46 09.4	
	comp=Z,25µm,32.8s						
M31M	Drury Creek, Y	107.46	24	IAMs_20	IAMs_20	00 07 22.3	
	comp=Z,10µm,20.0s						
M31M	Drury Creek, Y	107.46	24	P	Pdif	23 10 12.9	+0.2
	baz=301						
O30N	Mendenhall	107.46	25	P	Pdif	23 10 12.9	+0.1
	baz=299,SNR=5.6						
FARO	Faro, Yukon	107.86	23	P	Pdif	23 10 14.3	-0.2
	baz=302						
PLBC	Pleasant Camp	107.97	27	P	Pdif	23 10 14.9	0.0
	baz=298						
ICESG	Greenland Ices	108.05	346	IAmb	IAmb	23 10 29.3	
	comp=Z,12nm,0.9s						
PPT2	Papeete2	108.12	109	*e*LR	LR	23 46 29.8	
	comp=Z,11µm,24.8s						
SKAG	Skagway	108.43	27	P	Pdif	23 10 17.1	+0.1
	baz=299						
MMPY	Sheldon Lake,	108.46	23	P	Pdif	23 10 18.2	+1.1
	baz=304						
P33M	Teslin, Yukon	109.14	25	IAMs_20	IAMs_20	00 01 16.0	
	comp=Z,6µm,22.0s						
P33M	Teslin, Yukon	109.14	25	P	Pdif	23 10 21.0	+0.8
	baz=302						
JIS	Juneau Island	109.44	27	IAMs_20	IAMs_20	00 04 16.1	
	comp=Z,10µm,21.0s						
SIT	Sitka	109.59	29	P	Pdif	23 10 24.1	+1.9
	baz=298						
ANGG	Ammassalik, Gr	110.04	343	IAMs_20	IAMs_20	00 05 37.6	
	comp=Z,6µm,22.0s						
TGTN	Hyland Airport	110.25	23	P	Pdif	23 10 25.9	+0.8
	baz=307						
ILULI	Ilulissat	110.37	350	IAMs_20	IAMs_20	00 06 57.1	
	comp=Z,7µm,19.0s						
WTLY	Watson Lake, Y	110.87	24	P	Pdif	23 10 29.1	+1.2
	baz=306						
WRGLY	Wrigley	110.91	20	P	Pdif	23 10 28.1	+0.1
	baz=312						
S34M	Telegraph Cree	111.11	27	P	Pdif	23 10 30.0	+1.0
	baz=303						
DLBC	Dease Lake	111.31	26	P	Pdif	23 10 31.9	+1.9
	baz=304						
WRAK	Wrangell Islan	111.34	28	IAMs_20	IAMs_20	00 08 45.3	
	comp=Z,6µm,22.0s						
DY2G	Dye2	111.67	346	*e*P	Pdif	23 10 28.2	-3.4
SFJD	Kangerlussuaq	112.19	348	IAMs_20	IAMs_20	00 09 43.2	
	comp=Z,8µm,20.0s						
YKA	Yellowknife Ar	114.24	17	PKP	PKiKP	23 14 32.6	-0.9
	comp=Z,36nm,1.1s,baz=331,slow=0.7,SNR=27						
YKA				PP	PP	23 15 29.2	+0.2
	comp=Z,18nm,0.8s,baz=339,slow=7.8,SNR=6.7						
YKA				PKKPbc	PKKPbc	23 25 13.7	-2.7
	comp=Z,3.6nm,0.9s,baz=136,slow=3.4,SNR=10.0						
PMOZ	Porto Moniz, M	114.40	305	*e*PP	PP	23 15 16.3	-15
PMOZ	Porto Moniz, M	114.40	305	*e*LR	LR	23 51 10.3	
	comp=Z,5µm,20.0s						
NRS	Narsarsuaq	115.71	343		PKPdf	23 14 36.8	+0.4
NRS				IAMs_20	IAMs_20	00 10 50.3	
	comp=Z,5µm,20.0s						
NRS	Narsarsuaq	115.71	343	PKIKP	PKPdf	23 14 36.8	+0.4
CBB	Campbell River	118.34	32		PKiKP	23 14 42.4	+0.6
TAOE	Nuku Hiva Isla	118.40	101	*e*LR	LR	23 51 30.9	
	comp=Z,9µm,23.7s						
D03D	Eldon	121.02	33	P	PKPdf	23 14 46.0	-1.0
	baz=306						
D04E	Lakebay	121.41	33	P	PKPdf	23 14 46.7	-1.0
	baz=306						
EDM	Edmonton	121.78	23		PKPdf	23 14 47.8	-0.6
EDM	Edmonton	121.78	23	PKIKP	PKPdf	23 14 47.8	-0.6
E04D	Cinebar	121.89	34		PKiKP	23 14 49.4	+0.5
E04D	Cinebar	121.89	34	P	PKPdf	23 14 48.3	-0.4
	baz=306,SNR=17						
F04D	Rainier, OR	121.92	35	P	PKiKP	23 14 49.5	+0.5
	baz=306						
G03D	McMinnville, O	122.28	35	P	PKPdf	23 14 49.0	-0.5
	baz=305,SNR=5.5						
FCC	Fort Churchill	122.30	9		PKPdf	23 14 48.3	-0.8
FCC	Fort Churchill	122.30	9	PKIKP	PKPdf	23 14 48.3	-0.8
I02E	Swisshome, OR	122.55	37	P	PKPdf	23 14 49.1	-1.0
	baz=304,SNR=6.0						
H04D	Lebanon	122.98	36	IAMs_20	IAMs_20	00 15 12.0	
	comp=Z,5µm,22.0s						
H04D	Lebanon	122.98	36	P	PKPdf	23 14 50.6	-0.3
	baz=305,SNR=29						
BUCK	Buck Mountain	123.02	36		PKiKP	23 14 51.3	0.0
J01E	Myrtle Point	123.02	38	IAMs_20	IAMs_20	00 13 42.5	
	comp=Z,5µm,21.0s						
J01E	Myrtle Point	123.02	38	P	PKPdf	23 14 50.4	-0.6
	baz=303,SNR=26						
I03D	Drain, OR	123.08	37	P	PKPdf	23 14 50.8	-0.3
	baz=304,SNR=31						
H04A	Detroit Lake	123.20	35		PKPdf	23 14 50.9	-0.5
G05D	Wamic, OR	123.37	34	P	PKPdf	23 14 51.1	-0.6
	baz=307,SNR=6.1						
K02D	Willamette Mer	123.44	38	P	PKPdf	23 14 51.0	-1.0
	baz=303,SNR=24						
EFI	East Falkland	123.49	196	IAMs_20	IAMs_20	23 59 45.7	
	comp=Z,6µm,22.0s						
I04A	Tendick Farm,	123.59	36	P	PKPdf	23 14 51.3	-0.8
	baz=305,SNR=34						
SACV	Santiago Islan	123.61	287	IAMs_20	IAMs_20	00 09 32.8	
	comp=Z,5µm,19.0s						
HAWA	Hanford	123.65	32		PKPdf	23 14 52.3	+0.1
HAWA				IAMs_20	IAMs_20	00 17 51.4	
	comp=Z,5µm,19.0s						
NEW	Newport	123.66	29	IAMs_20	IAMs_20	00 14 45.4	
	comp=Z,5µm,21.0s						
NEW	Newport	123.66	29	P	PKPdf	23 14 52.1	-0.1
	baz=313						
L02F	Cave Junction	123.81	39	P	PKPdf	23 14 51.5	-1.1
	baz=303,SNR=17						
I05D	Terrebonne, OR	123.90	35	P	PKPdf	23 14 52.5	-0.3
	baz=306						
HUMO	Hull Mountain	123.93	38		PKPdf	23 14 52.6	-0.3
J04D	Umpqua Nationa	124.08	37	P	PKPdf	23 14 52.6	-0.8
	baz=305,SNR=23						
L04D	Klamath Falls	124.55	38	P	PKPdf	23 14 53.4	-0.8
	baz=304,SNR=37						
J05D	Fort Rock, OR	124.58	36	P	PKPdf	23 14 53.2	-1.0
	baz=306,SNR=40						
WALA	Waterton Lakes	124.62	27		PKPdf	23 14 52.5	-1.6
K04D	Chiloquin, OR	124.65	37	P	PKPdf	23 14 53.8	-0.5
	baz=305						
JTMT	Jette	125.40	28		PKPdf	23 14 54.6	-1.0
HOPS	Hopland Field	125.80	42	IAMs_20	IAMs_20	00 02 11.4	
	comp=Z,6µm,22.0s						
BMO	Blue Mountains	125.84	33	IAMs_20	IAMs_20	00 21 04.3	
	comp=Z,5µm,20.0s						
MOD	Modoc Plateau	125.95	37	IAMs_20	IAMs_20	00 17 11.7	
	comp=Z,5µm,22.0s						
MSO	Missoula	126.21	29		PKPdf	23 14 56.8	-0.4
MSO	Missoula	126.21	29	P	PKPdf	23 14 56.3	-0.9
	baz=315						
SCHQ	Schefferville	126.44	351	PKP	PKiKP	23 14 57.5	-0.2
	comp=Z,56nm,0.9s,baz=43,slow=3.5,SNR=25						
SCHQ				PP	PP	23 16 50.4	-1.9
	comp=Z,13nm,0.8s,baz=13,slow=9.4,SNR=3.1						
SCHQ	Schefferville	126.44	351		PKPdf	23 14 57.2	0.0
ORV	Oroville	126.53	40	IAMs_20	IAMs_20	00 03 19.6	
	comp=Z,5µm,22.0s						
WVOR	Wild Horse Val	126.62	36	IAMs_20	IAMs_20	00 21 14.3	
	comp=Z,5µm,21.0s						
EGMT	Eagleton	127.23	25		PKPdf	23 14 59.3	+0.2
EGMT				IAMs_20	IAMs_20	00 16 14.4	
	comp=Z,7µm,22.0s						
EGMT	Eagleton	127.23	25	P	PKPdf	23 14 58.3	-0.8
	baz=321						
LRM	Limekiln Ridge	127.65	29		PKPdf	23 14 59.7	-0.5
CMB	Columbia Colle	128.09	41	IAMs_20	IAMs_20	00 12 07.0	
	comp=Z,4µm,22.0s						
BOZ	Bozeman (W)	128.21	29		PKPdf	23 15 01.0	-0.2
BOZ	Bozeman (W)	128.21	29	PKIKP	PKPdf	23 15 01.0	-0.2
BOZ	Bozeman (W)	128.21	29	P	PKPdf	23 15 00.9	-0.2
	baz=317						
HLID	Hailey	128.25	32		PKPdf	23 15 01.3	0.0
HLID				IAMs_20	IAMs_20	00 21 05.0	
	comp=Z,4µm,20.0s						
HLID	Hailey	128.25	32	P	PKPdf	23 15 01.0	-0.3
	baz=313						
BCYI	Bear Canyon	128.26	31		PKPdf	23 15 00.7	-0.6
DGMT	Dagmar	129.06	21		PKPdf	23 15 02.0	-0.5
DGMT	Dagmar	129.06	21	IAMs_20	IAMs_20	00 20 00.5	
	comp=Z,5µm,19.0s						
DGMT	Dagmar	129.06	21	P	PKiKP	23 15 03.8	+0.7
	baz=327						
DGMT	Dagmar	129.06	21	P	PKPdf	23 15 02.2	-0.3
	baz=327						
NVAR	Mina Array Bea	129.22	40	PKhKP	PKPpre	23 14 54.1	
	comp=Z,0.4nm,0.5s,baz=287,slow=34,SNR=3.9						
NVAR				PKP	PKiKP	23 15 04.2	+0.2
	comp=Z,28nm,0.9s,baz=254,slow=3.6,SNR=30						
NVAR				SKPbc	SKPab	23 18 18.5	-0.1
	comp=Z,16nm,0.8s,baz=259,slow=3.2,SNR=5.2						
NVAR	Mina Array Bea	129.22	40	PKPdf	PKPdf	23 15 03.3	-0.1
MLAC	Mammoth, Mammo	129.34	41	P	PKPdf	23 15 02.7	-0.9
	baz=305						
H17A	Grant Village	129.60	29	P	PKPdf	23 15 03.3	-0.6
	baz=318						
ELK	Elko	129.66	35	PKP	PKiKP	23 15 04.8	-0.1
	comp=Z,15nm,0.6s,baz=296,slow=2.0,SNR=8.8						
ELK				SKPbc	SKPab	23 18 20.4	0.0
	comp=Z,24nm,1.1s,baz=295,slow=2.7,SNR=6.8						
RLMT	Red Lodge	129.67	27	IAMs_20	IAMs_20	00 21 18.2	
	comp=Z,7µm,20.0s						
RLMT	Red Lodge	129.67	27	P	PKPdf	23 15 03.5	-0.5
	baz=320						
VOG	Valley Oaks Go	129.70	43	P	PKPdf	23 15 03.6	-0.4
	baz=303						
LAO	LASA Array	129.76	24	IAMs_20	IAMs_20	00 14 22.1	
	comp=Z,9µm,22.0s						
LAO	LASA Array	129.76	24	P	PKPdf	23 15 03.7	-0.2
	baz=324						
LAO	LASA Array	129.76	24	P	PKPdf	23 15 03.6	-0.3
	baz=324						
FLWY	Flagg Ranch	129.77	29	IAMs_20	IAMs_20	00 20 49.1	
	comp=Z,6µm,20.0s						
SMMC	Simmler	129.82	44	P	PKPdf	23 15 03.6	-0.8
	baz=302						
ULM	Lac du Bonnet	129.98	14	PKhKP	PKPpre	23 14 47.7	
	comp=Z,5.3nm,0.8s,baz=339,slow=4.4,SNR=5.0						
ULM				PKP	PKPdf	23 15 04.0	-0.1
	comp=Z,93nm,0.7s,baz=329,slow=2.0,SNR=46						
ULM				PP	PP	23 17 12.9	-2.7
	comp=Z,43nm,1.0s,baz=340,slow=6.4,SNR=7.7						
ULM				SKPbc	SKPab	23 18 19.3	-1.9
	comp=Z,26nm,1.0s,baz=339,slow=6.4,SNR=3.7						
ULM	Lac du Bonnet	129.98	14	PKPdf	PKPdf	23 15 04.1	0.0
ULM	Lac du Bonnet	129.98	14	PKIKP	PKPdf	23 15 04.1	0.0

MOOW **Moose Ponds** **130.00** **30** IAMs_20 IAMs_20 00 20 59.0
comp=Z,7µm,20.0s
TIN **Tinemaha, Big** **130.06** **41** P **PKPdf** **23 15 04.5 -0.3**
baz=305
TPAW **Teton Pass** **130.08** **30** IAMs_20 IAMs_20 00 21 43.3
comp=Z,7µm,19.0s
LOHW **Long Hollow** **130.16** **30** IAMs_20 IAMs_20 00 21 44.4
comp=Z,6µm,20.0s
VES **Vestal, Richgr** **130.17** **43** P **PKPdf** **23 15 04.6 -0.3**
baz=303
PKM **Mcpherson Peak** **130.18** **44** P **PKiKP** **23 15 05.7 -0.4**
baz=302,SNR=12
SNOW **Snow King Moun** **130.20** **30** IAMs_20 IAMs_20 00 21 47.4
comp=Z,8µm,21.0s
SBC **Santa Barbara** **130.48** **45** P **PKPdf** **23 15 05.8 +0.3**
baz=302
CWC **Cottonwood Cre** **130.51** **42** P **PKPdf** **23 15 05.5 -0.2**
baz=305
GRAC **Grapevine Rang** **130.66** **41** P **PKPdf** **23 15 06.2 +0.4**
baz=306,SNR=9.4
ISA **Isabella, Lake** **130.68** **43** P **PKPdf** **23 15 05.3 -0.7**
baz=304,SNR=6.1
ARVC **Arvin** **130.73** **44** P **PKPdf** **23 15 05.3 -0.7**
baz=303,SNR=6.5
SCZ2 **Santa Cruz Isl** **130.77** **45** P **PKPdf** **23 15 05.9 -0.3**
baz=302
R11A **Troy Canyon, C** **130.97** **38** P **PKPdf** **23 15 06.7 +0.1**
baz=309,SNR=44
OSI **Osito Audit: C** **131.08** **44** P **PKPdf** **23 15 07.1 +0.3**
baz=303
HWUT **Hardware Ranch** **131.12** **32** IAMs_20 IAMs_20 00 17 11.9
comp=Z,7µm,22.0s
MDND **Maddock** **131.15** **18** **PKPdf** **23 15 05.9 -0.5**
MDND **Maddock** **131.15** **18** P **PKPdf** **23 15 06.6 +0.2**
baz=333,SNR=12
SNCC **San Nicolas Is** **131.23** **46** P **PKPdf** **23 15 06.9 -0.1**
baz=301
CCAC **Calif City Air** **131.27** **43** **PKiKP** **23 15 08.0 0.0**
FURC **Furnace Creek,** **131.29** **41** P **PKPdf** **23 15 06.9 -0.1**
baz=306,SNR=8.0
BW06 **Boulder Array** **131.31** **30** **PKPdf** **23 15 03.7 -3.5**
BW06 IAMs_20 IAMs_20 00 22 05.6
comp=Z,5µm,19.0s
BW06 **Boulder Array** **131.31** **30** P **PKPdf** **23 15 06.6 -0.5**
baz=318
PDAR **Pinedale Array** **131.31** **30** PKhKP PKPpre 23 14 53.3
comp=Z,0.8nm,0.3s,baz=180,slow=0.9,SNR=4.4
PDAR PKP **PKiKP** **23 15 08.3 +0.2**
comp=Z,12nm,0.8s,baz=338,slow=1.6,SNR=16
PDAR PP **PP** **23 17 24.7 -0.3**
comp=Z,13nm,1.0s,baz=318,slow=2.0,SNR=6.8
PDAR SKPbc **SKPbc** **23 18 25.5 -1.4**
comp=Z,25nm,0.9s,baz=293,slow=1.1,SNR=8.2
PDAR **Pinedale Array** **131.31** **30** **PKPdf** **23 15 06.9 -0.3**
LRMC **Laurel Mtn Rad** **131.32** **42** P **PKPdf** **23 15 07.3 +0.1**
baz=304,SNR=6.1
TPNV **Topopah Spring** **131.41** **40** IAMs_20 IAMs_20 00 22 13.6
comp=Z,4µm,22.0s
TPNV **Topopah Spring** **131.41** **40** P **PKiKP** **23 15 08.3 -0.2**
baz=307
DUG **Dugway, Tooele** **131.41** **34** **PKPdf** **23 15 07.6 +0.3**
DUG IAMs_20 IAMs_20 00 24 42.0
comp=Z,5µm,21.0s
DUG **Dugway, Tooele** **131.41** **34** PKIKP **PKPdf** **23 15 07.6 +0.3**
DUG **Dugway, Tooele** **131.41** **34** P **PKPdf** **23 15 07.7 +0.3**
baz=313
EDW2 **Edwards Air Fo** **131.44** **43** P **PKiKP** **23 15 08.2 -0.2**
baz=304,SNR=11
DECC **Green Verdugo** **131.55** **44** P **PKPdf** **23 15 07.5 -0.1**
baz=303
PASC **Pasadena Art C** **131.69** **44** IAMs_20 IAMs_20 00 03 24.7
comp=Z,5µm,21.0s
AGMN **Agassiz Nation** **131.79** **15** P **PKPdf** **23 15 07.1 -0.5**
baz=338
AGMN **Agassiz Nation** **131.79** **15** P **PKPdf** **23 15 07.3 -0.3**
baz=338,SNR=10
FMP **Fort Macarthur** **131.87** **45** P **PKPdf** **23 15 08.5 +0.3**
baz=302
E28A **Huff** **131.91** **20** P **PKPdf** **23 15 07.0 -0.9**
baz=331
CIS **Catalina Islan** **131.94** **45** P **PKiKP** **23 15 09.5 +0.1**
baz=302
NLU **North Lily Min** **131.99** **34** **PKPdf** **23 15 08.8 +0.3**
GSC **Goldstone, Bar** **132.01** **42** P **PKPdf** **23 15 08.2 -0.4**
baz=305,SNR=9.6
SHOC **Shoshone, Teco** **132.01** **41** P **PKiKP** **23 15 09.4 -0.1**
baz=306
BFSC **Mount Baldy Ra** **132.02** **44** P **PKPdf** **23 15 07.0 -1.6**
baz=304
SCI2 **San Clemente I** **132.07** **46** P **PKPdf** **23 15 07.4 -1.2**
baz=302
RRX **Edison Barstow** **132.12** **43** P **PKPdf** **23 15 08.1 -0.6**
baz=305
B35A **Bob, Littlefor** **132.25** **13** P **PKPdf** **23 15 07.5 -0.9**
baz=340
TUQ **Turquoise Moun** **132.52** **41** P **PKPdf** **23 15 09.3 -0.3**
baz=306
BBRC **Big Bear Solar** **132.52** **43** P **PKPdf** **23 15 09.8 +0.1**
baz=304
HEC **Hector,Ludlow** **132.59** **42** P **PKPdf** **23 15 09.0 -0.6**
baz=305,SNR=7.7
MURC **Murrieta** **132.69** **44** P **PKiKP** **23 15 10.7 -0.2**
baz=304
RSSD **Black Hills** **132.74** **24** **PKPdf** **23 15 08.5 -1.3**
RSSD **Black Hills** **132.74** **24** IAMs_20 IAMs_20 00 15 16.1
comp=Z,5µm,22.0s
RSSD **Black Hills** **132.74** **24** PKIKP **PKPdf** **23 15 08.5 -1.3**
RSSD MLR MLR
comp=Z,6µm,22.0s
RSSD **Black Hills** **132.74** **24** P **PKPdf** **23 15 09.1 -0.7**
baz=325
RSSD **Black Hills** **132.74** **24** P **PKPdf** **23 15 09.1 -0.7**
baz=325
K22A **Casper** **132.84** **27** P **PKPdf** **23 15 09.2 -0.8**
baz=322,SNR=13
GMRC **Granite Mounta** **133.07** **42** P **PKPdf** **23 15 09.5 -1.1**
baz=306,SNR=10
EYMN **Ely** **133.11** **11** **PKPdf** **23 15 10.1 0.0**
EYMN **Ely** **133.11** **11** P **PKPdf** **23 15 10.1 0.0**
baz=343
EYMN **Ely** **133.11** **11** P **PKPdf** **23 15 10.6 +0.4**
baz=313
109C **Camp Elliot, M** **133.15** **45** P **PKPdf** **23 15 11.2 +0.6**
baz=303
PFO **Pinyon Flats O** **133.20** **44** PKhKP PKPpre 23 15 00.7
comp=Z,10nm,0.9s,baz=285,slow=3.6,SNR=1.6
PFO PKP **PKPdf** **23 15 11.2 +0.3**
comp=Z,39nm,0.9s,baz=327,slow=0.9,SNR=5.1
PFO PP **PP** **23 17 35.2 -2.4**
comp=Z,7.8nm,0.9s,baz=318,slow=6.0,SNR=5.6
PFO SKPbc **SKPbc** **23 18 32.0 -1.7**
comp=Z,48nm,1.1s,baz=287,slow=2.6,SNR=7.9
PFO **Pinyon Flats O** **133.20** **44** IAMs_20 IAMs_20 00 04 32.6
comp=Z,5µm,22.0s
PFO **Pinyon Flats O** **133.20** **44** P **PKPdf** **23 15 10.8 0.0**
baz=304,SNR=9.1
TPFO **Pinon Flats** **133.21** **44** P **PKiKP** **23 15 11.6 -0.5**
baz=304,SNR=9.0
RWWY **Rawlins** **133.26** **29** IAMs_20 IAMs_20 00 20 01.3
comp=Z,6µm,22.0s
BELC **Belle Mtn. Jos** **133.30** **43** P **PKPdf** **23 15 08.3 -2.7**
baz=305
BATG **Bathurst New B** **133.53** **348** **PKPdf** **23 15 11.1 +0.2**
MONP2 **Monument Peak** **133.62** **45** P **PKPdf** **23 15 09.4 -2.4**
baz=304,SNR=7.6
NEE2 **Needles Airpor** **133.77** **41** P **PKPdf** **23 15 10.8 -1.0**
baz=307
IRM **Iron Mountain** **133.78** **42** P **PKPdf** **23 15 09.5 -2.3**
baz=306,SNR=9.0
BC3 **Big Chuckawall** **133.87** **43** P **PKPdf** **23 15 12.1 0.0**
baz=305,SNR=8.7
O20A **White River Ci** **133.92** **31** P **PKPdf** **23 15 11.5 -0.6**
baz=318,SNR=20
F33A **5 Mile Ranch,** **133.94** **16** P **PKPdf** **23 15 09.3 -2.5**
baz=336
IKP **In-Ko-Pah, Jac** **133.98** **45** P **PKPdf** **23 15 12.8 +0.5**
baz=304,SNR=7.9
SWSC **Sam W. Stewart** **134.03** **44** P **PKPdf** **23 15 12.2 0.0**
baz=304,SNR=8.9
D62A **Allapoint, All** **134.30** **350** P **PKPdf** **23 15 09.7 -2.6**
baz=14
D62A P **PKPdf** **23 15 09.7 -2.6**
baz=14
PDMCI **Parker Dam,Lak** **134.37** **41** P **PKPdf** **23 15 12.1 -0.7**
baz=307,SNR=5.9
SUSD **Miller** **134.37** **20** P **PKPdf** **23 15 12.1 -0.5**
baz=332
SUSD **Miller** **134.37** **20** P **PKPdf** **23 15 12.3 -0.3**
baz=332
E38A **The Farm, Brul** **134.38** **12** P **PKPdf** **23 15 12.4 -0.2**
baz=343
PHWY **Pilot Hill** **134.39** **28** IAMs_20 IAMs_20 00 23 01.1
comp=Z,6µm,21.0s
LL02 **Futaleuf** **134.44** **188** **PKPdf** **23 15 11.7 -1.0**
D41A **Chassel** **134.48** **9** P **PKPdf** **23 15 12.7 0.0**
baz=347
N23A **Red Feather La** **134.48** **28** P **PKPdf** **23 15 12.3 -0.9**
baz=321,SNR=10
PQI **Presque Isle** **134.51** **349** **PKPdf** **23 15 12.8 0.0**
GLA **Glamis** **134.64** **43** P **PKiKP** **23 15 14.4 -0.5**
baz=305,SNR=9.0
F36A **Milaca** **134.65** **14** P **PKPdf** **23 15 12.2 -0.9**
baz=340
PV10 **Paradox Valley** **134.78** **33** **PKPdf** **23 15 14.3 +0.4**
E63A **Oxbow** **134.82** **349** P **PKPdf** **23 15 12.0 -1.4**
baz=15,SNR=6.2
E63A P **PKPdf** **23 15 12.0 -1.4**
baz=15,SNR=6.2
PV07 **Paradox Valley** **134.94** **33** **PKPdf** **23 15 14.1 -0.1**
SMCO **Snowmass** **135.28** **31** IAMs_20 IAMs_20 00 25 10.1
comp=Z,7µm,19.0s
COWI **Conover** **135.32** **10** **PKPdf** **23 15 14.3 0.0**
F64A **Sherman** **135.35** **349** P **PKiKP** **23 15 15.3 -0.6**
baz=16,SNR=9.9
F64A P **PKiKP** **23 15 15.3 -0.6**
baz=16,SNR=9.9
E43A **Lone Tree Farm** **135.37** **8** P **PKPdf** **23 15 14.5 +0.2**
baz=349
WUAZ **Wupatki** **135.37** **38** IAMs_20 IAMs_20 00 05 24.3
comp=Z,5µm,22.0s
WUAZ **Wupatki** **135.37** **38** P **PKPdf** **23 15 15.2 +0.2**
baz=311,SNR=8.4
SPMN **Marine on St.** **135.42** **14** **PKPdf** **23 15 13.9 -0.6**
SPMN **Marine on St.** **135.42** **14** P **PKPdf** **23 15 14.9 +0.4**
baz=341
ISCO **Idaho Springs** **135.49** **29** IAMs_20 IAMs_20 00 19 29.3
comp=Z,5µm,22.0s
ISCO **Idaho Springs** **135.49** **29** P **PKPdf** **23 15 14.6 -0.6**
baz=321,SNR=8.9
F63A **Nahmakanta, Br** **135.64** **350** P **PKPdf** **23 15 14.8 -0.1**
baz=15,SNR=13
F63A P **PKPdf** **23 15 14.8 -0.1**
baz=15,SNR=13
E46A **Sault Ste Mari** **135.68** **5** P **PKPdf** **23 15 14.6 -0.3**
baz=353
ECSD **EROS Data Cent** **135.76** **18** PKPdf **PKPdf** **23 15 12.9 -2.3**
ECSD **EROS Data Cent** **135.76** **18** P **PKPdf** **23 15 11.0 -4.2**
baz=335
ECSD **EROS Data Cent** **135.76** **18** P **PKPdf** **23 15 14.3 -0.9**
baz=335
F42A **Maple Grove Fa** **135.81** **9** P **PKPdf** **23 15 16.0 +0.8**
baz=347
G65A **Princeton** **135.83** **348** P **PKPdf** **23 15 14.8 -0.4**
baz=17
G65A P **PKPdf** **23 15 14.8 -0.4**
baz=17
TRQ **Mont Tremblant** **135.84** **355** **PKPdf** **23 15 14.0 -1.3**
MVCO **Mesa Verde** **135.91** **34** P **PKPdf** **23 15 15.5 -0.5**
baz=316,SNR=9.2
K31A **O'Neill** **136.04** **21** P **PKPdf** **23 15 15.2 -0.6**
baz=332
PKME **Peaks-Kenny Pk** **136.10** **350** IAMs_20 IAMs_20 00 23 37.5
comp=Z,7µm,20.0s
PKME **Peaks-Kenny Pk** **136.10** **350** P **PKPdf** **23 15 14.4 -1.4**
baz=14,SNR=6.4
PKME **Peaks-Kenny Pk** **136.10** **350** P **PKPdf** **23 15 15.9 +0.2**
baz=14,SNR=6.4
OGNE **Ogallala** **136.20** **25** IAMs_20 IAMs_20 00 21 49.7
comp=Z,7µm,21.0s
OGNE **Ogallala** **136.20** **25** P **PKPdf** **23 15 16.2 0.0**
baz=326
EMMW **East Machias** **136.28** **348** **PKPdf** **23 15 15.7 -0.4**
G62A **West of Eustis** **136.35** **351** P **PKPdf** **23 15 13.2 -3.1**
baz=13
G62A P **PKPdf** **23 15 13.2 -3.1**
baz=13
Q24A **Divide** **136.36** **30** P **PKPdf** **23 15 16.4 -0.5**
baz=321
S22A **4UR Ranch, Cre** **136.43** **32** P **PKPdf** **23 15 16.9 -0.1**
baz=318,SNR=8.4
W18A **Petrified Fore** **136.64** **37** P **PKPdf** **23 15 17.9 +0.5**
baz=313,SNR=14
PLCA **Paso Flores** **136.65** **190** PKhKP PKPpre 23 15 10.9
comp=Z,2.1nm,0.7s,baz=211,slow=5.8,SNR=4.3
PLCA PKP **PKPdf** **23 15 16.3 -0.8**
comp=Z,5.4nm,0.9s,baz=183,slow=6.0,SNR=5.7
PLCA SKPbc **SKPbc** **23 18 43.1 -1.3**
comp=Z,28nm,1.2s,baz=156,slow=2.5,SNR=5.5
PLCA **Paso Flores** **136.65** **190** **PKPdf** **23 15 16.5 -0.6**
PLCA **Paso Flores** **136.65** **190** PKIKP **PKPdf** **23 15 16.5 -0.6**
214A **Organ Pipe Nat** **136.66** **43** P **PKPdf** **23 15 17.9 +0.6**
baz=307
WVL **Waterville** **136.84** **350** IAMs_20 IAMs_20 00 24 09.2
comp=Z,7µm,20.0s
WVL **Waterville** **136.84** **350** P **PKPdf** **23 15 16.3 -0.9**
baz=14,SNR=7.3
G45A **Suttons Bay** **136.85** **7** P **PKPdf** **23 15 17.3 +0.1**
baz=351
G45A P **PKPdf** **23 15 17.3 +0.1**
baz=351
H62A **Milan** **137.07** **351** P **PKPdf** **23 15 17.7 +0.1**
baz=12
H62A P **PKPdf** **23 15 17.7 +0.1**
baz=12
SDCO **Great Sand Dun** **137.12** **31** **PKPdf** **23 15 17.7 -0.6**
SDCO IAMs_20 IAMs_20 00 22 40.7
comp=Z,6µm,21.0s
SDCO **Great Sand Dun** **137.12** **31** P **PKPdf** **23 15 18.4 +0.1**
baz=320
SDCO **Great Sand Dun** **137.12** **31** P **PKPdf** **23 15 18.1 -0.2**
baz=320
FRNY **Flat Rock** **137.12** **354** P **PKPdf** **23 15 18.3 +0.7**
H43A **Windswept, Lux** **137.13** **9** P **PKPdf** **23 15 17.5 -0.2**
baz=348
BMNY **Brushton-Moira** **137.21** **355** P **PKPdf** **23 15 18.3 +0.5**
baz=7.1,SNR=20
BGNE **Belgrade** **137.32** **21** P **PKPdf** **23 15 18.1 -0.1**
baz=332
BGNE **Belgrade** **137.32** **21** P **PKPdf** **23 15 17.2 -1.0**
baz=332
L34A **Svendsen Farm,** **137.43** **19** P **PKPdf** **23 15 18.5 +0.1**
baz=334
LONY **Lake Ozonia** **137.43** **355** P **PKPdf** **23 15 17.1 -1.2**
baz=7.0
SADO **Sadowa** **137.49** **360** PKhKP PKPpre 23 15 09.0
comp=Z,3.5nm,0.8s,baz=359,slow=7.0,SNR=3.7
SADO PP **PP** **23 18 01.1 -2.2**
comp=Z,43nm,0.8s,baz=356,slow=6.2,SNR=14
SADO **Sadowa** **137.49** **360** **PKPdf** **23 15 17.5 -0.9**
I42A **Draeger Farm,** **137.50** **10** P **PKiKP** **23 15 19.8 -0.6**
baz=346
LBNH **Lisbon** **137.51** **352** P **PKPdf** **23 15 19.3 +0.9**
baz=11
KSCO **Kaye Shedlock'** **137.52** **27** P **PKiKP** **23 15 20.5 -0.3**
baz=324
KSCO **Kaye Shedlock'** **137.52** **27** P **PKPdf** **23 15 17.6 -1.2**
baz=324
I45A **Fountain** **137.77** **7** P **PKiKP** **23 15 21.0 +0.1**
baz=350
I45A P **PKiKP** **23 15 21.0 +0.1**
baz=350
TUC **Tucson** **137.81** **41** IAMs_20 IAMs_20 00 30 20.1
comp=Z,5µm,20.0s
TUC **Tucson** **137.81** **41** P **PKPdf** **23 15 17.7 -1.8**
baz=309
K38A **Parkersburg** **137.85** **15** P **PKPdf** **23 15 19.0 -0.1**
baz=340
MCVT **Middlebury Col** **137.93** **353** P **PKPdf** **23 15 20.0 +0.7**
baz=9.4,SNR=14
NCB **Newcomb** **138.04** **355** **PKPdf** **23 15 19.4 -0.1**
NCB **Newcomb** **138.04** **355** P **PKPdf** **23 15 19.8 +0.3**
baz=7.6,SNR=8.9
LPA **La Plata** **138.10** **207** PKIKP **PKiKP** **23 15 20.9 -0.9**
LPA PP **PP** **23 18 08.1 +0.6**
LPA pPP 23 18 23.2
LPA SKP 23 18 49.0
LPA PKIKS 23 18 55.6
LPA PPP PPP 23 21 09.3
LPA SKIKS 23 22 21.4
LPA SKS **SKSdf** **23 22 32.7 +7.4**
LPA SDIFF **Sdif** **23 26 29.6 +1.6**
LPA PS PS 23 28 32.8 -4.5
LPA PSP PSP 23 30 21.3
LPA PPS PPS 23 30 26.2
LPA PPP PPP 23 30 52.0
LPA SS SS 23 36 53.2 +40
LPA SSS SSS 23 41 40.0
T25A **Trinidad** **138.14** **31** PKPdf **PKPdf** **23 15 20.0 -0.1**
T25A **Trinidad** **138.14** **31** P **PKPdf** **23 15 20.0 -0.1**
baz=321
WCNY **West Carthage** **138.15** **356** P **PKPdf** **23 15 16.7 -2.9**
baz=5.5
JFWS **Jewell Farm** **138.18** **12** P **PKPdf** **23 15 18.0 -1.7**
baz=344
I49A **Point Hope** **138.20** **4** P **PKPdf** **23 15 17.1 -2.6**
baz=355
I49A P **PKPdf** **23 15 17.1 -2.6**
baz=355
SCIA **State Center** **138.42** **16** P **PKPdf** **23 15 18.7 -1.5**
baz=339
J61A **Chester** **138.47** **353** P **PKPdf** **23 15 19.6 -0.6**
baz=10,SNR=7.2
J61A P **PKPdf** **23 15 19.6 -0.6**
baz=10,SNR=7.2
UNH **University of** **138.47** **351** P **PKPdf** **23 15 19.8 -0.4**
baz=13,SNR=7.3
J59A **Piesco** **138.57** **355** P **PKPdf** **23 15 21.1 +0.6**
baz=7.3,SNR=14
J59A P **PKPdf** **23 15 21.1 +0.6**
baz=7.3,SNR=14
ANMO **Albuquerque** **138.68** **35** PKhKP PKPpre 23 15 12.8
comp=Z,34nm,1.0s,baz=256,slow=1.9,SNR=19
ANMO SKPbc **SKPbc** **23 18 49.2 -1.5**
comp=Z,21nm,1.0s,baz=222,slow=2.5,SNR=8.4
ANMO **Albuquerque** **138.68** **35** IAMs_20 IAMs_20 00 28 21.4
comp=Z,6µm,22.0s
ANMO **Albuquerque** **138.68** **35** P PKPdf 23 15 13.1 -8.1
baz=316
ANMO **Albuquerque** **138.68** **35** P **PKPdf** **23 15 20.4 -0.7**
baz=316
J58A **Remsen** **138.74** **356** P **PKPdf** **23 15 21.3 +0.5**
baz=6.1,SNR=9.7
J58A P **PKPdf** **23 15 21.3 +0.5**
baz=6.1,SNR=9.7
K43A **Burlington** **138.75** **10** P PKPpre 23 15 11.0
baz=346
L40A **Anamosa** **138.78** **13** **PKPdf** **23 15 20.2 -0.6**
L40A **Anamosa** **138.78** **13** P **PKiKP** **23 15 22.0 -1.0**
baz=342
J56A **Wolcott** **138.92** **357** P **PKPdf** **23 15 20.9 -0.1**
baz=3.8,SNR=8.5
J56A P **PKPdf** **23 15 20.9 -0.1**
baz=3.8,SNR=8.5
CBKS **Cedar Bluff** **138.95** **25** P **PKPdf** **23 15 20.9 -0.4**
baz=328
J54A **Appleton** **138.98** **359** P **PKPdf** **23 15 18.1 -3.0**
baz=1.1
J54A P **PKPdf** **23 15 18.1 -3.0**
baz=1.1
Y22D **IRIS PASSCAL I** **139.03** **36** IAMs_20 IAMs_20 00 24 01.0
comp=Z,7µm,22.0s
Y22D **IRIS PASSCAL I** **139.03** **36** P **PKPdf** **23 15 22.0 +0.3**
baz=315
MEDO **Medina** **139.09** **359** **PKPdf** **23 15 19.9 -1.4**
K62A **Royalston** **139.10** **352** P **PKPdf** **23 15 17.4 -4.0**
baz=11,SNR=7.1
K62A P **PKPdf** **23 15 17.4 -4.0**
baz=11,SNR=7.1
Y22A **Socorro** **139.11** **36** P **PKPdf** **23 15 19.5 -2.4**
baz=315,SNR=17
HRV **Adam Dziewonsk** **139.16** **351** P **PKPdf** **23 15 21.4 -0.1**
baz=12,SNR=5.1
HRV **Adam Dziewonsk** **139.16** **351** P **PKPdf** **23 15 21.6 +0.1**
baz=12
TRY **Troy** **139.21** **354** **PKPdf** **23 15 22.1 +0.5**
WES **Weston** **139.24** **351** IAMs_20 IAMs_20 00 25 18.6
comp=Z,7µm,20.0s
HCNY **Howe Caverns** **139.32** **354** P **PKPdf** **23 15 16.9 -4.9**
baz=7.5,SNR=16
L44A **Lake County Fo** **139.34** **10** IAMs_20 IAMs_20 00 27 00.5
comp=Z,7µm,22.0s
L44A **Lake County Fo** **139.34** **10** P **PKPdf** **23 15 20.8 -1.0**
baz=347
K50A **Casco** **139.37** **4** **PKPdf** **23 15 20.9 -0.9**
K57A **Scipio Center** **139.45** **357** P **PKPdf** **23 15 15.4 -6.6**
baz=4.3,SNR=9.7
QUA2 **Belchertown** **139.50** **352** PKPdf **PKPdf** **23 15 22.4 +0.3**
QUA2 IAMs_20 IAMs_20 00 26 56.4
comp=Z,7µm,21.0s
MMNY **Mt. Morris Dam** **139.51** **358** PKPdf **PKPdf** **23 15 22.8 +0.7**
121A **Cookes Peak, D** **139.58** **38** P **PKPdf** **23 15 16.4 -6.4**
baz=313,SNR=5.7
121A **Cookes Peak, D** **139.58** **38** P **PKPdf** **23 15 23.0 +0.1**
baz=313,SNR=5.7
R32A **Long Quarter,** **139.70** **24** P **PKPdf** **23 15 15.2 -7.5**
baz=329,SNR=25
SRIG **Santa Rosalia** **139.70** **48** **PKPdf** **23 15 22.9 0.0**
AAM **Ann Arbor** **139.77** **5** **PKPdf** **23 15 21.5 -1.1**
AAM **Ann Arbor** **139.77** **5** PKIKP **PKPdf** **23 15 21.5 -1.1**
AAM **Ann Arbor** **139.77** **5** P **PKPdf** **23 15 22.8 +0.2**
baz=353
WVNY **West Valley, N** **139.85** **359** P **PKPdf** **23 15 15.7 -7.1**
baz=1.1,SNR=9.2
L59A **Walton** **139.88** **355** P **PKPdf** **23 15 23.5 +0.6**
baz=6.6,SNR=7.6
L59A P **PKPdf** **23 15 23.5 +0.6**
baz=6.6,SNR=7.6
KSU1 **Kansas State U** **139.91** **21** **PKPdf** **23 15 23.1 +0.1**
KSU1 **Kansas State U** **139.91** **21** P **PKPdf** **23 15 23.1 +0.1**
baz=333
BINY **Binghamton** **139.95** **356** P **PKPdf** **23 15 18.5 -4.5**
baz=5.2,SNR=16
BINY **Binghamton** **139.95** **356** P **PKPdf** **23 15 23.5 +0.5**
baz=5.2,SNR=16
L48A **N Adams** **140.05** **6** P **PKPdf** **23 15 18.1 -5.1**
baz=352,SNR=17
L48A P **PKPdf** **23 15 18.1 -5.1**
baz=352,SNR=17
L56A **Greenwood** **140.09** **358** P **PKPdf** **23 15 17.7 -5.6**
baz=2.8,SNR=6.3
L56A P **PKPdf** **23 15 17.7 -5.6**
baz=2.8,SNR=6.3
P38A **Dawn** **140.45** **17** P **PKPdf** **23 15 17.4 -6.5**
baz=337,SNR=21
YLE **Yale** **140.52** **352** IAMs_20 IAMs_20 00 30 31.3
comp=Z,6µm,21.0s
BRNY **Black Rk. Fore** **140.55** **354** P **PKPdf** **23 15 24.5 +0.4**
baz=8.4,SNR=6.0
KSPA **Keystone Colle** **140.57** **356** P **PKPdf** **23 15 24.7 +0.6**
baz=5.6,SNR=13
HDIL **Hopedale** **140.65** **12** P **PKPdf** **23 15 24.0 -0.3**
baz=344
HDIL **Hopedale** **140.65** **12** P **PKPdf** **23 15 22.6 -1.6**
baz=344
M52A **Chesterland** **140.67** **2** P **PKPdf** **23 15 24.1 -0.2**
baz=357
M52A P **PKPdf** **23 15 24.1 -0.2**
baz=357
M55A **Ridgway** **140.78** **359** P **PKiKP** **23 15 27.0 -0.1**
baz=0.9
M55A P **PKiKP** **23 15 27.0 -0.1**
baz=0.9
M53A **WI Miller and** **140.80** **2** P **PKPdf** **23 15 23.2 -1.3**
baz=358,SNR=6.5
M57A **Sunshine Farm,** **140.87** **357** P **PKPdf** **23 15 22.7 -1.9**
baz=3.5
M57A P **PKPdf** **23 15 22.7 -1.9**
baz=3.5
EPT **El Paso** **140.89** **38** IAMs_20 IAMs_20 00 25 25.3
comp=Z,6µm,22.0s
ODNJ **Ogdensburg** **140.94** **354** P **PKPdf** **23 15 23.3 -1.5**
baz=7.5,SNR=7.9
PAL **Palisades** **140.94** **354** P **PKPdf** **23 15 24.3 -0.5**
baz=8.6
N47A **Urbana** **140.95** **8** P **PKPdf** **23 15 23.3 -1.5**
baz=350
N47A P **PKPdf** **23 15 23.3 -1.5**
baz=350
P40A **Paris** **140.96** **16** P **PKPdf** **23 15 19.8 -5.1**
baz=340,SNR=13
N49A **Columbus Grove** **141.08** **6** P **PKPdf** **23 15 21.0 -4.1**
baz=352,SNR=8.3
N49A P **PKPdf** **23 15 21.0 -4.1**
baz=352,SNR=8.3
O44A **Mansfield** **141.20** **11** P **PKPdf** **23 15 23.5 -1.8**
baz=345
SFIN **Lafayette** **141.23** **10** P **PKPdf** **23 15 22.1 -3.2**
baz=348,SNR=11
SFIN **Lafayette** **141.23** **10** P **PKPdf** **23 15 24.7 -0.6**
baz=348
N51A **Ashland** **141.24** **4** P **PKPdf** **23 15 18.4 -6.9**
baz=355

N51A				P	PKPdf	23 15 18.4	-6.9
	baz=355						
AMTX	Amarillo	141.28	30	IAMs_20	IAMs_20	00 27 14.7	
	comp=Z,6µm,22.0s						
AMTX	Amarillo	141.28	30	P	PKPdf	23 15 20.9	-4.8
	baz=323,SNR=16						
AMTX	Amarillo	141.28	30	P	PKPdf	23 15 24.9	-0.8
	baz=323						
U32A	Winter Ranch,	141.31	26	P	PKPdf	23 15 21.2	-4.5
	baz=328,SNR=9.9						
N58A	Sunbury	141.34	357	P	PKPdf	23 15 20.5	-5.0
	baz=4.2,SNR=7.5						
N58A				P	PKPdf	23 15 20.5	-5.0
	baz=4.2,SNR=7.5						
JANB	Januaria	141.41	243	eP	PKPdf	23 15 26.4	0.0
N53A	Lisbon	141.42	2	P	PKPdf	23 15 21.1	-4.5
	baz=358,SNR=15						
N53A				P	PKPdf	23 15 21.1	-4.5
	baz=358,SNR=15						
MSTX	Muleshoe	141.43	32	P	PKPdf	23 15 23.6	-2.5
	baz=320,SNR=52						
MSTX	Muleshoe	141.43	32	P	PKPdf	23 15 25.6	-0.4
	baz=320,SNR=52						
P43A	Skaggs, Pawnee	141.47	13	P	PKPdf	23 15 20.4	-5.3
	baz=344,SNR=13						
FRTB	Fartura	141.56	227	eP	PKPdf	23 15 26.7	+0.2
SSPA	Standing Stone	141.60	358	P	PKPdf	23 15 22.0	-4.0
	baz=2.3,SNR=11						
SSPA	Standing Stone	141.60	358	P	PKPdf	23 15 25.7	-0.3
	baz=2.3						
MNTX	Cornudas Mount	141.63	37	P	PKPdf	23 15 22.5	-3.8
	baz=315,SNR=62						
MNTX	Cornudas Mount	141.63	37	P	PKPdf	23 15 26.1	-0.2
	baz=315,SNR=62						
O48B	Farmland	141.63	7	P	PKPdf	23 15 22.5	-3.5
	baz=351,SNR=16						
O48B	Farmland	141.63	7	P	PKPdf	23 15 25.9	-0.1
	baz=351,SNR=16						
PANJ	Princeton	141.65	354	P	PKPdf	23 15 24.9	-1.2
	baz=7.4,SNR=13						
ITQB	Itaqui	141.69	213		PKPdf	23 15 25.9	-0.5
O49A	Covington	141.79	6	P	PKPdf	23 15 21.6	-4.7
	baz=352,SNR=14						
O49A				P	PKPdf	23 15 21.6	-4.7
	baz=352,SNR=14						
T35B	Sooner Cattle	141.87	23	P	PKPdf	23 15 23.5	-3.1
	baz=332,SNR=30						
ACSO	Alum Creek Sta	141.88	5	P	PKPdf	23 15 20.9	-5.5
	baz=354,SNR=13						
ACSO	Alum Creek Sta	141.88	5	P	PKPdf	23 15 26.4	-0.1
	baz=354,SNR=13						
P46A	Rosedale	141.95	10	P	PKPdf	23 15 23.6	-3.0
	baz=347,SNR=16						
O53A	New Philadelph	141.97	2	P	PKPdf	23 15 26.5	-0.1
	baz=357,SNR=9.0						
R40A	Maddies Statio	142.05	17	P	PKPdf	23 15 20.6	-6.3
	baz=339,SNR=60						
O54A	Avella	142.06	1	P	PKPdf	23 15 24.8	-2.0
	baz=358,SNR=20						
O54A				P	PKPdf	23 15 24.8	-2.0
	baz=358,SNR=20						
O52A	Adamsville	142.07	3	P	PKPdf	23 15 21.0	-5.8
	baz=356,SNR=12						
O52A				P	PKPdf	23 15 21.0	-5.8
	baz=356,SNR=12						
S39A	Bolivar	142.29	18	P	PKPdf	23 15 21.8	-5.5
	baz=337,SNR=55						
Q44A	Meyer Farm, Va	142.29	12	P	PKPdf	23 15 26.5	-0.8
	baz=344,SNR=9.4						
P48A	Milroy	142.38	8	P	PKPdf	23 15 23.6	-3.9
	baz=350,SNR=24						
P48A				P	PKPdf	23 15 23.6	-3.9
	baz=350,SNR=24						
P49A	Miami Univ. Ec	142.40	7	P	PKPdf	23 15 23.6	-3.8
	baz=351,SNR=12						
P49A	Miami Univ. Ec	142.40	7	P	PKPdf	23 15 27.5	0.0
	baz=351,SNR=12						
GO05	Huala	142.46	190		PKPdf	23 15 25.8	-1.9
PTGB	Pitanga	142.47	223	eP	PKPdf	23 15 27.4	-0.7
P52A	Corning	142.53	4	P	PKPdf	23 15 28.0	+0.3
	baz=355,SNR=9.3						
CCM	Cathedral Cave	142.56	16	P	PKPdf	23 15 24.0	-3.7
	baz=340,SNR=38						
CCM	Cathedral Cave	142.56	16	P	PKPdf	23 15 28.5	+0.8
	baz=340						
MCWV	Mont Chateau	142.59	1	P	PKPdf	23 15 28.1	+0.3
	baz=359						
P53A	Whipple	142.72	3	P	PKPdf	23 15 24.5	-3.5
	baz=357,SNR=26						
P53A				P	PKPdf	23 15 24.5	-3.5
	baz=357,SNR=26						
P57A	Homestead Farm	142.75	358	P	PKPdf	23 15 24.4	-3.7
	baz=2.2,SNR=19						
P57A				P	PKPdf	23 15 24.4	-3.7
	baz=2.2,SNR=19						
SDMD	Soldier's Deli	142.78	357	P	PKPdf	23 15 24.2	-3.9
	baz=4.1						
WMOK	Wichita Mounta	142.78	27	P	PKPdf	23 15 24.0	-4.3
	baz=327,SNR=72						
WMOK	Wichita Mounta	142.78	27	P	PKPdf	23 15 29.9	+1.6
	baz=327,SNR=72						
OKCFA	Oklahoma City	142.79	25	P	PKPdf	23 15 25.1	-3.2
	baz=329,SNR=6.1						
FVM	French Village	142.84	15	P	PKPdf	23 15 24.5	-3.8
	baz=342,SNR=17						
LPIG	La Paz	142.88	51	PKP	PKPdf	23 15 26.7	-2.0
	comp=Z,30nm,0.3s,baz=348,slow=3.1,SNR=5.8						
BO01	Tunca	142.91	191		PKPdf	23 15 26.6	-1.9
SDBA	SAO DESIDERIO	142.93	246	eP	PKPdf	23 15 28.0	-1.1
TUL1	Leonard	143.03	23	P	PKPbc	23 15 24.8	-0.8
	baz=332,SNR=22						
TUL1	Leonard	143.03	23	P	PKiKP	23 15 30.4	-1.5
	baz=332,SNR=22						
Q51A	Peebles	143.04	5	P	PKPab	23 15 24.6	+0.7
	baz=353,SNR=16						
Q51A				P	PKPab	23 15 24.6	+0.7
	baz=353,SNR=16						
Q52A	Bidwell	143.19	4	P	PKPab	23 15 25.1	+0.5
	baz=355,SNR=24						
Q52A				P	PKPab	23 15 25.1	+0.5
	baz=355,SNR=24						
BO04	La Punta	143.20	192		PKPbc	23 15 27.7	+1.6
Q56A	Snyder Ridge,	143.21	360	P	PKPbc	23 15 26.5	+0.5
	baz=0.2						
Q56A				P	PKPbc	23 15 26.5	+0.5
	baz=0.2						
Q54A	Coxs Mills	143.24	2	P	PKPab	23 15 25.0	+0.3
	baz=358,SNR=27						
Q54A				P	PKPab	23 15 25.0	+0.3
	baz=358,SNR=27						
LMEL	Las Melosas	143.25	193		PKPbc	23 15 27.1	+0.7
HHAR	Hobbs	143.37	20	P	PKPab	23 15 25.2	-0.2
	baz=335						
SIUC	Southern Illin	143.38	13		PKPbc	23 15 27.1	+0.7
SLBS	Sierra La Lagu	143.38	52		PKPbc	23 15 27.3	+0.3
SLBS	Sierra La Lagu	143.38	52	IAMs_20	IAMs_20	00 14 21.2	
	comp=Z,4µm,22.0s						
S44A	Carbondale	143.40	13	P	PKPbc	23 15 26.1	-0.4
	baz=343,SNR=36						
IPMB	Ipameri, GO	143.46	236	eP	PKPbc	23 15 28.7	+1.4
MT09	Talagante	143.49	192		PKPbc	23 15 27.1	+0.1
R49A	Shelbyville	143.56	8	P	PKPab	23 15 26.1	+0.1
	baz=350,SNR=50						
R49A				P	PKPab	23 15 26.1	+0.1
	baz=350,SNR=50						
MT03	Universidad Ad	143.66	192		PKPbc	23 15 28.4	+0.9
U40A	Yellville	143.66	19	IAMs_20	IAMs_20	00 31 33.6	
	comp=Z,7µm,21.0s						
U40A	Yellville	143.66	19	P	PKPab	23 15 26.4	-0.1
	baz=337,SNR=96						
U40A				P	PKPab	23 15 26.4	-0.1
	baz=337,SNR=96						
U40A	Yellville	143.66	19	P	PKiKP	23 15 31.8	-1.4
	baz=337,SNR=96						
R50A	Paris	143.68	7	P	PKPab	23 15 26.2	-0.2
	baz=352,SNR=34						
R50A				P	PKPab	23 15 26.2	-0.2
	baz=352,SNR=34						
VA05	Santo Domingo	143.72	191		PKPbc	23 15 28.3	+0.8
MT05	Renca	143.80	192		PKPbc	23 15 28.8	+0.9
R53A	Hurricane	143.84	4	P	PKPab	23 15 27.2	+0.1
	baz=356,SNR=75						
R53A				P	PKPab	23 15 27.2	+0.1
	baz=356,SNR=75						
PCMB	Pacaembu	143.86	228	eP	PKPbc	23 15 29.4	+1.1
R55A	Marlinton	143.96	1	P	PKPab	23 15 27.1	-0.6
	baz=359,SNR=45						
R55A				P	PKPab	23 15 27.1	-0.6
	baz=359,SNR=45						
PBMO	Poplar Bluff	143.97	15	P	PKPab	23 15 27.3	-0.3
	baz=341,SNR=69						
CBN	Corbin Frederi	144.00	357		PKPbc	23 15 28.4	+0.2
CBN	Corbin Frederi	144.00	357	P	PKPbc	23 15 28.1	-0.2
	baz=3.3,SNR=11						
CBN	Corbin Frederi	144.00	357	P	PKPbc	23 15 28.6	+0.4
	baz=3.3						
MT02	Curacav	144.01	192		PKPbc	23 15 28.9	+0.4
PEL	Peldehue	144.03	192		PKPbc	23 15 29.2	+0.6
PEL	Peldehue	144.03	192	PKIKP	PKPbc	23 15 29.2	+0.6
ABTX	Abilene, Hawle	144.10	30	P	PKPbc	23 15 28.6	-0.2
	baz=324,SNR=75						
ABTX	Abilene, Hawle	144.10	30	P	PKPbc	23 15 29.6	+0.9
	baz=324,SNR=75						
TRCB	Terra Rica	144.12	225		PKPab	23 15 28.5	-0.1
TRCB	Terra Rica	144.12	225	eP	PKPab	23 15 28.5	-0.1
T45B	Paducah	144.18	13	P	PKPbc	23 15 28.8	0.0
	baz=344						
R58B	Mineral	144.26	358	P	PKPab	23 15 28.4	-0.2
	baz=2.5,SNR=98						
R58B				P	PKPab	23 15 28.4	-0.2
	baz=2.5,SNR=98						
ROC1	El Roble	144.26	192		PKPbc	23 15 29.8	+0.3
ITRB	Iturama	144.28	231	eP	PKPdf	23 15 30.7	-0.6
TX31	Lajitas Ar. Si	144.34	38		PKPbc	23 15 29.9	+0.2
TX31	Lajitas Ar. Si	144.34	38	P	PKPbc	23 15 30.4	+0.7
	baz=315,SNR=1000						
TXAR	Lajitas Array	144.34	38	PKP	PKPbc	23 15 30.2	+0.5
	comp=Z,742nm,0.8s,baz=270,slow=1.3,SNR=592						
TXAR	Lajitas Array	144.34	38		PKPbc	23 15 29.7	0.0
TXAR	Lajitas Array	144.34	38	PKIKP	PKPbc	23 15 29.7	0.0
VA01	Torpederas	144.34	191		PKPab	23 15 29.2	+0.1
X37A	Clayton	144.35	23	P	PKPab	23 15 29.1	0.0
	baz=332,SNR=258						
VA03	San Esteban	144.37	193		PKPbc	23 15 29.9	+0.2
S51A	Beattyville	144.39	6	P	PKPab	23 15 28.6	-0.5
	baz=353,SNR=169						
S51A				P	PKPab	23 15 28.6	-0.5
	baz=353,SNR=169						
BDFB	Brasilia	144.40	239	PKP	PKPbc	23 15 30.9	+0.6
	comp=Z,52nm,0.5s,baz=119,slow=3.1,SNR=93						
BDFB	Brasilia	144.40	239		PKPbc	23 15 30.5	+0.2
BDFB	Brasilia	144.40	239	PKIKP	PKPbc	23 15 30.5	+0.2
BDFB	Brasilia	144.40	239	eP	PKPdf	23 15 31.3	-0.5
S54A	Dingess, Beckl	144.40	3	P	PKPab	23 15 28.9	-0.3
	baz=357,SNR=43						
S54A				P	PKPab	23 15 28.9	-0.3
	baz=357,SNR=43						
W39A	Magazine	144.41	21	P	PKPab	23 15 28.8	-0.5
	baz=335,SNR=148						
W39A	Magazine	144.41	21	P	PKPbc	23 15 30.2	+0.6
	baz=335,SNR=148						
LCAR	Lake Charles	144.44	17		PKPab	23 15 28.8	-0.6
LCAR	Lake Charles	144.44	17	P	PKPab	23 15 28.9	-0.6
	baz=340,SNR=242						
S57A	Dark Hollow, R	144.49	360	P	PKPbc	23 15 29.7	-0.1
	baz=0.7,SNR=27						
S57A				P	PKPbc	23 15 29.7	-0.1
	baz=0.7,SNR=27						
HICK	Hickman	144.50	14		PKPbc	23 15 29.9	0.0
T47A	Sharon Grove	144.52	11	P	PKPab	23 15 29.4	-0.3
	baz=347,SNR=75						
JSRW	J. Sargeant Re	144.53	358		PKPab	23 15 29.3	-0.4
HPIG		144.65	43		PKPab	23 15 30.7	0.0
Z35A	Perchaven, San	144.65	26	P	PKPab	23 15 29.9	-0.4
	baz=328,SNR=289						
CPUP	Villa Florida	144.66	215	PKP	PKPbc	23 15 31.2	+0.5
	comp=Z,150nm,0.9s,baz=126,slow=2.9,SNR=188						
CPUP	Villa Florida	144.66	215		PKPbc	23 15 31.3	+0.7
VA06	Catapilco	144.72	192		PKPab	23 15 30.6	0.0
LNXT	Lenox	144.86	14	P	PKPab	23 15 30.5	-0.4
	baz=342,SNR=22						
T50A	Nancy	144.86	8	P	PKPab	23 15 29.8	-1.1
	baz=350						
T50A				P	PKPab	23 15 29.8	-1.1
	baz=350						
W41B	Gary Mavity, V	144.94	19	P	PKPab	23 15 30.3	-1.0
	baz=337,SNR=237						
W41B	Gary Mavity, V	144.94	19	P	PKPab	23 15 30.8	-0.5
	baz=337,SNR=237						
BLA	Blacksburg	145.02	2		PKPbc	23 15 30.4	-1.2
BLA	Blacksburg	145.02	2	PKIKP	PKPbc	23 15 30.4	-1.2
BLA	Blacksburg	145.02	2	P	PKPbc	23 15 30.3	-1.2
	baz=358,SNR=85						
BLA	Blacksburg	145.02	2	P	PKPbc	23 15 30.9	-0.6
	baz=358						
T60A	Surry	145.03	356	P	PKPbc	23 15 30.2	-1.3
	baz=4.5,SNR=50						
T60A				P	PKPbc	23 15 30.2	-1.3
	baz=4.5,SNR=50						
HBAR	Harrisburg	145.06	16	P	PKPbc	23 15 31.6	-0.1
	baz=340,SNR=16						
MIAR	Mount Ida	145.06	21		PKPbc	23 15 31.4	-0.3
MIAR	Mount Ida	145.06	21	PKIKP	PKPbc	23 15 31.4	-0.3
MIAR	Mount Ida	145.06	21	P	PKPbc	23 15 31.7	0.0
	baz=335,SNR=816						
MIAR	Mount Ida	145.06	21	P	PKPbc	23 15 31.5	-0.3
	baz=335,SNR=816						
WVT	Waverly	145.21	12		PKPbc	23 15 31.5	-0.6
WVT	Waverly	145.21	12	PKIKP	PKPbc	23 15 31.5	-0.6
WVT	Waverly	145.21	12	P	PKPbc	23 15 31.6	-0.5
	baz=345,SNR=475						
WVT	Waverly	145.21	12	P	PKPbc	23 15 31.6	-0.5
	baz=345						
U49A	Red Boiling Sp	145.22	9	P	PKPbc	23 15 31.2	-0.9
	baz=349,SNR=272						
T59A	Double "B" Far	145.24	358	P	PKPbc	23 15 31.8	-0.4
	baz=3.1,SNR=144						
T59A				P	PKPbc	23 15 31.8	-0.4
	baz=3.1,SNR=144						
T57A	Hurt	145.25	360	P	PKPbc	23 15 31.7	-0.5
	baz=0.1,SNR=148						
T57A				P	PKPbc	23 15 31.7	-0.5
	baz=0.1,SNR=148						
X40A	Basin Creek Fa	145.38	20	IAMs_20	IAMs_20	00 25 52.0	
	comp=Z,6µm,21.0s						
X40A	Basin Creek Fa	145.38	20	P	PKPbc	23 15 32.0	-0.7
	baz=336,SNR=193						
X40A				P	PKPbc	23 15 32.0	-0.7
	baz=336,SNR=193						
X40A	Basin Creek Fa	145.38	20	P	PKPbc	23 15 32.3	-0.4
	baz=336,SNR=193						
TZTN	Tazewell	145.48	6		PKPdf	23 15 32.2	-0.8
TZTN	Tazewell	145.48	6	P	PKPdf	23 15 32.4	-0.5
	baz=353,SNR=355						
TZTN	Tazewell	145.48	6	P	PKPdf	23 15 32.7	-0.2
	baz=353,SNR=355						
CLTN	Cedars of Leba	145.54	10		PKPdf	23 15 32.2	-0.8
U54A	Nelsons Funny	145.65	4	P	PKPdf	23 15 32.5	-0.8
	baz=356,SNR=54						
U54A				P	PKPdf	23 15 32.5	-0.8
	baz=356,SNR=54						
Z38A	Mt. Pleasant	145.67	24	P	PKPdf	23 15 33.3	0.0
	baz=332,SNR=100						
WHTX	Lake Whitney,	145.68	28	P	PKPdf	23 15 33.1	-0.3
	baz=327,SNR=133						
WHTX	Lake Whitney,	145.68	28	P	PKPdf	23 15 33.5	+0.1
	baz=327,SNR=133						
JCT	Junction City	145.72	32	IAMs_20	IAMs_20	00 26 21.5	
	comp=Z,7µm,22.0s						
JCT	Junction City	145.72	32	P	PKPdf	23 15 33.5	0.0
	baz=322,SNR=978						
JCT	Junction City	145.72	32	P	PKPab	23 15 34.5	+0.1
	baz=322,SNR=978						
V48A	Smith Brothers	145.79	11	P	PKPdf	23 15 33.1	-0.3
	baz=347,SNR=285						
W45A	Hickory Valley	145.83	14	P	PKPdf	23 15 33.4	-0.1
	baz=342,SNR=80						
U59A	Littleton	145.87	358	P	PKPdf	23 15 33.7	+0.1
	baz=2.7,SNR=54						
U59A				P	PKPdf	23 15 33.7	+0.1
	baz=2.7,SNR=54						
U56A	King	145.89	2	P	PKPdf	23 15 33.4	-0.3
	baz=358,SNR=59						
U56A				P	PKPdf	23 15 33.4	-0.3
	baz=358,SNR=59						
V51A	Loudon	146.12	7	P	PKPdf	23 15 34.0	0.0
	baz=351,SNR=77						
V52A	Sevierville	146.17	6	P	PKPdf	23 15 34.2	+0.1
	baz=352,SNR=161						
CCAR	Cane Creek	146.25	19	P	PKPbc	23 15 35.6	+0.2
	baz=337,SNR=41						
TKL	Tuckaleechee C	146.33	7	PKPbc	PKPdf	23 15 33.4	-1.0
	comp=Z,122nm,0.8s,baz=138,slow=4.3,SNR=88						
TKL				PP	PP	23 18 56.0	-1.0
	comp=Z,45nm,0.8s,baz=11,slow=1.3,SNR=3.8						
TKL	Tuckaleechee C	146.33	7		PKPdf	23 15 34.3	-0.1
TKL	Tuckaleechee C	146.33	7	P	PKPdf	23 15 34.6	+0.2
	baz=352,SNR=136						
V55A	Taylorsville	146.35	3	P	PKPdf	23 15 34.6	+0.2
	baz=357,SNR=157						
V55A				P	PKPdf	23 15 34.6	+0.2
	baz=357,SNR=157						
V61A	Roper	146.36	356	P	PKPdf	23 15 34.9	+0.5
	baz=5.0,SNR=18						
V61A				P	PKPdf	23 15 34.9	+0.5
	baz=5.0,SNR=18						
OXF	Oxford	146.38	15		PKPdf	23 15 34.2	-0.3
OXF	Oxford	146.38	15	PKP2	PKPdf	23 15 34.2	-0.3
OXF	Oxford	146.38	15	P	PKPdf	23 15 34.7	+0.2
	baz=342,SNR=52						
OXF	Oxford	146.38	15	P	PKPdf	23 15 34.6	+0.1
	baz=342,SNR=52						
237A	Washetta, Mont	146.42	26	P	PKPdf	23 15 35.2	+0.5
	baz=329,SNR=31						
V53A	Saluda	146.42	5	P	PKPdf	23 15 34.7	+0.1
	baz=354,SNR=287						
V53A				P	PKPdf	23 15 34.7	+0.1
	baz=354,SNR=287						
V58A	Windy Hill, Pi	146.45	360	P	PKPbc	23 15 35.4	-0.6
	baz=0.4,SNR=142						
V58A				P	PKPbc	23 15 35.4	-0.6
	baz=0.4,SNR=142						
Z41A	Richland Creek	146.50	21	P	PKPdf	23 15 35.4	+0.7
	baz=335,SNR=16						
Z41A				P	PKPdf	23 15 35.4	+0.7
	baz=335,SNR=16						
Z41A	Richland Creek	146.50	21	P	PKPbc	23 15 35.9	-0.3
	baz=335,SNR=16						
W50A	Signal Mountai	146.58	9	P	PKPdf	23 15 34.9	0.0
	baz=349,SNR=89						
435B	Jarrell	146.62	29	P	PKPdf	23 15 35.8	+0.8
	baz=325,SNR=34						
435B	Jarrell	146.62	29	P	PKPbc	23 15 36.2	-0.4
	baz=325						
W52A	Murphy	146.87	7	P	PKPbc	23 15 37.1	-0.2
	baz=352,SNR=119						
BBSR	BB Station	146.88	337		PKPdf	23 15 34.8	-0.6
BBSR	BB Station	146.88	337	IAMs_20	IAMs_20	00 25 40.7	
	comp=Z,5µm,22.0s						
GO04	Tololo Observa	146.92	194		PKPdf	23 15 36.1	+0.2
Y45A	Yeager Farm, C	146.96	16	P	PKPdf	23 15 36.2	+0.8
	baz=341,SNR=29						
CNNC	Cliffs of the	146.98	358		PKPbc	23 15 37.1	-0.3
CNNC	Cliffs of the	146.98	358	P	PKPbc	23 15 36.5	-0.9
	baz=2.6,SNR=16						
CNNC	Cliffs of the	146.98	358	P	PKPbc	23 15 36.6	-0.8
	baz=2.6,SNR=16						
X48A	Hartselle	146.99	12	P	PKPdf	23 15 34.3	-1.2
	baz=346,SNR=224						
KMSC	Kings Mountain	147.05	3	P	PKPdf	23 15 34.7	-0.9
	baz=356,SNR=156						
KMSC	Kings Mountain	147.05	3	P	PKPdf	23 15 36.2	+0.6
	baz=356,SNR=156						
BG3	Lake Jocassee	147.08	5		PKPdf	23 15 35.6	-0.1
CASEE	Lake Jocassee	147.08	5	P	PKPdf	23 15 36.4	+0.7
	baz=353,SNR=183						
W57A	Gilead	147.09	1	P	PKPdf	23 15 36.4	+0.7
	baz=359,SNR=125						
W57A				P	PKPdf	23 15 36.4	+0.7
	baz=359,SNR=125						
NATX	Nacogdoches	147.12	25		PKPdf	23 15 35.6	-0.2
NATX				IAMs_20	IAMs_20	00 30 32.6	
	comp=Z,6µm,20.0s						
NATX	Nacogdoches	147.12	25	P	PKPdf	23 15 36.8	+1.0
	baz=331,SNR=58						
NATX	Nacogdoches	147.12	25	P	PKPbc	23 15 37.0	-1.0
	baz=331,SNR=58						
X51A	Calhoun	147.27	8	P	PKPdf	23 15 35.9	-0.1
	baz=350,SNR=117						
X51A				P	PKPdf	23 15 35.9	-0.1
	baz=350,SNR=117						
143A	Socs Landing,	147.48	19	P	PKPdf	23 15 37.4	+1.0
	baz=337,SNR=11						
BIRD	Birdtown, Kers	147.58	2	P	PKPbc	23 15 37.9	-1.2
	baz=358,SNR=111						
833A	Chaparral WMA,	147.61	34		PKPdf	23 15 37.4	+0.7
833A	Chaparral WMA,	147.61	34	P	PKPdf	23 15 37.8	+1.1
	baz=320,SNR=72						
833A	Chaparral WMA,	147.61	34	P	PKPbc	23 15 39.2	-0.2
	baz=320,SNR=72						
X58A	Rowland	147.69	0	P	PKPdf	23 15 37.4	+0.7
	baz=360,SNR=16						
X58A				P	PKPdf	23 15 37.4	+0.7
	baz=360,SNR=16						
Y49A	Blount Mountai	147.69	11	P	PKPdf	23 15 36.0	-0.7
	baz=347,SNR=353						
HODGE	Hodges	147.89	5	P	PKPdf	23 15 36.8	-0.2
	baz=354,SNR=115						
JSC	Jenkinsville	147.91	3		PKPdf	23 15 36.8	-0.2
JSC	Jenkinsville	147.91	3	PKIKP	PKPdf	23 15 36.8	-0.2
JSC	Jenkinsville	147.91	3	P	PKPdf	23 15 37.7	+0.7
	baz=356,SNR=136						
Z47A	Carrollton	147.97	14	P	PKPdf	23 15 36.6	-0.5
	baz=343,SNR=87						
LCO	Las Campanas	148.00	194		PKPdf	23 15 37.7	-0.1
LCO	Las Campanas	148.00	194	IAMs_20	IAMs_20	00 18 53.8	
	comp=Z,4µm,20.0s						
LCO	Las Campanas	148.00	194	PKIKP	PKPdf	23 15 37.7	-0.1
LCO				MLR	MLR		
	comp=Z,4µm,20.0s						
735A	Kenedy	148.06	32	P	PKPbc	23 15 39.5	-1.2
	baz=323,SNR=44						
Y52A	Lilburn	148.07	7	P	PKPdf	23 15 38.0	+0.6
	baz=351,SNR=114						
Y52A				P	PKPdf	23 15 38.0	+0.6
	baz=351,SNR=114						
HKT	Hockley	148.15	28		PKPdf	23 15 38.1	+0.6
HKT	Hockley	148.15	28	PKIKP	PKPdf	23 15 38.1	+0.6
Y57A	Sumter	148.21	2	P	PKPbc	23 15 39.8	-1.1
	baz=358,SNR=51						
Y57A				P	PKPbc	23 15 39.8	-1.1
	baz=358,SNR=51						
VBMS	Vicksburg	148.22	18	P	PKPbc	23 15 40.5	-0.4
	baz=338,SNR=19						
VBMS	Vicksburg	148.22	18	P	PKPbc	23 15 41.5	+0.6
	baz=338,SNR=19						
Y60A	Bolivia	148.22	358	P	PKPbc	23 15 40.0	-0.9
	baz=2.1,SNR=42						
Y60A				P	PKPbc	23 15 40.0	-0.9
	baz=2.1,SNR=42						
146A	Union	148.25	16	P	PKPbc	23 15 40.4	-0.6
	baz=341,SNR=58						
Y59A	Loris	148.25	359	P	PKPbc	23 15 39.8	-1.2
	baz=0.9,SNR=14						
Y59A				P	PKPbc	23 15 39.8	-1.2
	baz=0.9,SNR=14						
Y58A	Scranton	148.34	1	P	PKPbc	23 15 40.6	-0.6
	baz=359,SNR=42						
Y58A				P	PKPbc	23 15 40.6	-0.6
	baz=359,SNR=42						
LRAL	Lakeview Retre	148.37	12	P	PKPdf	23 15 38.0	+0.1
	baz=345,SNR=89						
LRAL	Lakeview Retre	148.37	12	P	PKPbc	23 15 41.4	+0.1
	baz=345,SNR=89						
342B	Flagon Creek P	148.37	22	P	PKPab	23 15 44.5	0.0
	baz=335,SNR=15						
Z51A	Franklin	148.44	9	P	PKPdf	23 15 37.9	-0.1
	baz=349,SNR=44						
GOGA	Godfrey	148.59	7		PKPdf	23 15 38.1	-0.1
GOGA	Godfrey	148.59	7	PKIKP	PKPdf	23 15 38.1	-0.1
GOGA	Godfrey	148.59	7	P	PKPdf	23 15 38.1	-0.1
	baz=352,SNR=87						
GOGA	Godfrey	148.59	7	P	PKiKP	23 15 42.9	-0.4
	baz=352,SNR=87						
441A	DeRidder	148.60	23	P	PKiKP	23 15 43.3	-0.1
	baz=333,SNR=14						
HAW	Hawthorne Fire	148.81	4	P	PKPdf	23 15 38.6	0.0
	baz=356,SNR=84						
344A	Westbrook Farm	148.85	19	P	PKPdf	23 15 40.0	+1.4
	baz=338,SNR=25						
AC04	Llanos de Chal	148.87	194		PKPdf	23 15 38.0	-0.8
KVTX	Kingsville	149.05	33	P	PKPbc	23 15 42.0	-1.2
	baz=322,SNR=16						
NHSC	New Hope	149.12	1	P	PKPbc	23 15 42.3	-0.9
	baz=358						
NHSC	New Hope	149.12	1	P	PKPbc	23 15 43.8	+0.6
	baz=358						
152A	Waverly Hall	149.15	9	P	PKPdf	23 15 38.8	-0.3
	baz=350,SNR=33						
GO03	Copiap	149.23	196		PKPdf	23 15 39.3	-0.2
346A	Big Creek Wild	149.31	17	P	PKPdf	23 15 40.0	+0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=340,SNR=16						
154A	Montrose	149.42	6	P	PKPbc	23 15 42.6	-1.4
	baz=353,SNR=16						
ZAIG	Zacatecas	149.46	46		PKPdf	23 15 40.2	-0.1
AC06	Mina Casimiro	149.49	196		PKPdf	23 15 40.0	+0.1
250A	Grady	149.54	12	P	PKPdf	23 15 40.4	+0.6
	baz=346,SNR=70						
AC02	Maricunga	149.62	198		PKPbc	23 15 43.4	-2.0
BRAL	Brewton	150.15	13	P	PKPdf	23 15 42.1	+1.3
	baz=344,SNR=28						
BRAL	Brewton	150.15	13	P	PKPbc	23 15 46.2	+0.3
	baz=344						
255A	Hazlehurst	150.16	5	P	PKPdf	23 15 43.0	+2.3
	baz=354,SNR=26						
257A	Skidaway Islan	150.22	3	P	PKPbc	23 15 45.9	-0.1
	baz=357,SNR=6.8						
352A	Blakely	150.28	10	P	PKPdf	23 15 41.9	+0.9
	baz=349,SNR=49						
TIGA	Tifton	150.52	7	P	PKPdf	23 15 42.4	+1.0
	baz=351,SNR=54						
TIGA	Tifton	150.52	7	P	PKiKP	23 15 47.4	0.0
	baz=351						
451A	Vernon	150.97	11	P	PKPdf	23 15 44.2	+2.2
	baz=347,SNR=16						
GO02	Mina Guanaco	151.33	199		PKPdf	23 15 45.8	+2.6
456A	Hilliard	151.39	5	P	PKPbc	23 15 46.4	-2.4
	baz=354,SNR=28						
553A	Crawfordville	151.62	9	P	PKPdf	23 15 45.9	+2.8
	baz=349						
PB14	IPOC Station P	152.08	198		PKPdf	23 15 47.1	+2.7
MOIG	Morelia	152.36	49		PKPdf	23 15 46.4	+1.6
656A	Willston	152.69	6	P	PKPdf	23 15 46.6	+1.9
	baz=353						
AF01	San Pedro de A	152.86	203		PKPdf	23 15 48.8	+3.3
PB15	IPOC Station P	153.10	200		PKPdf	23 15 48.5	+2.8
MDP	Montagnes des	153.22	277	PKP	PKPdf	23 15 44.0	-1.8
	comp=Z,29nm,1.1s,baz=109,slow=4.0,SNR=3.1						
LVC	Limon Verde	153.45	202	PKP	PKPdf	23 15 48.5	+2.1
	comp=Z,21nm,1.1s,baz=174,slow=2.1,SNR=11						
LVC	Limon Verde	153.45	202		PKPdf	23 15 49.8	+3.4
LVC	Limon Verde	153.45	202	IAMs_20	IAMs_20	00 14 48.3	
	comp=Z,6μm,22.0s						
LVC	Limon Verde	153.45	202	PKIKP	PKPdf	23 15 49.8	+3.4
DWPF	Disney Wildern	154.03	4	P	PKPdf	23 15 48.6	+2.0
	baz=355						
DWPF	Disney Wildern	154.03	4	P	PKPbc	23 15 53.6	-1.1
	baz=355						
UNM	Universidad Na	154.07	47	IAMs_20	IAMs_20	00 37 53.8	
	comp=Z,5μm,21.0s						
PB09	IPOC Station P	154.31	202		PKPdf	23 15 50.7	+3.3
SIV	San Ignacio	154.56	224	PKP	PKPdf	23 15 48.4	+0.6
	comp=Z,10nm,0.9s,baz=183,slow=1.0,SNR=23						
SIV				PKPab	PKPab	23 16 09.9	-0.9
	comp=Z,33nm,0.8s,baz=130,slow=5.5,SNR=11						
PB07	IPOC Station P	154.61	201		PKPdf	23 15 46.9	-1.0
GDSD	La Dsirade Is	157.14	309	IAMs_20	IAMs_20	00 38 47.5	
	comp=Z,6μm,22.0s						
ABD	La Joyeuse, An	157.37	310	IAMs_20	IAMs_20	00 22 13.5	
	comp=Z,6μm,22.0s						
SMRT	St. Maarten	157.51	316	IAMs_20	IAMs_20	00 34 58.6	
	comp=Z,6μm,21.0s						
MAGL	Barre de l'ile	157.52	309	IAMs_20	IAMs_20	00 39 37.7	
	comp=Z,5μm,21.0s						
GDHS	Morne Mazeau,	157.70	310	IAMs_20	IAMs_20	00 42 14.3	
	comp=Z,5μm,21.0s						
SEUS	St. Eustatius	157.82	315	IAMs_20	IAMs_20	00 37 49.0	
	comp=Z,5μm,20.0s						
TDBA	Terre de Bas,	157.86	309	IAMs_20	IAMs_20	00 39 50.4	
	comp=Z,6μm,22.0s						
ILAM	Ilet Lapin Mar	157.86	306	IAMs_20	IAMs_20	00 40 00.0	
	comp=Z,5μm,21.0s						
MPOM	Morne Pois Mar	158.03	305	IAMs_20	IAMs_20	00 39 31.4	
	comp=Z,6μm,22.0s						
SVN	Savane Anatole	158.06	306	IAMs_20	IAMs_20	00 40 21.3	
	comp=Z,5μm,21.0s						
FDF	Fort de France	158.11	306	IAMs_20	IAMs_20	00 39 34.4	
	comp=Z,4μm,22.0s						
BIM	Bigot	158.16	305	IAMs_20	IAMs_20	00 39 50.9	
	comp=Z,5μm,21.0s						
CMIG	Matias Romero	158.62	45	PKP	PKPdf	23 15 52.5	-0.4
	comp=Z,28nm,1.0s,baz=334,slow=2.9,SNR=14						
CMIG				PKPab	PKPab	23 16 28.4	+0.3
	comp=Z,60nm,0.9s,baz=290,slow=3.3,SNR=15						
LPAZ	La Paz	158.67	211	PKP	PKPdf	23 15 54.1	+0.3
	comp=Z,60nm,1.2s,baz=45,slow=1.4,SNR=58						
LPAZ				PKPab	PKPab	23 16 30.8	+1.7
	comp=Z,10.0nm,0.7s,baz=52,slow=4.4,SNR=6.8						
LPAZ	La Paz	158.67	211	*e*P	PKPdf	23 15 55.2	+1.4
PDPR	Patillas Dam,	159.49	321	PKPdf	PKPdf	23 15 53.9	0.0
SJG	San Juan	159.50	322	PKPab	PKPab	23 16 33.3	+1.4
	comp=Z,30nm,0.8s,baz=24,slow=8.3,SNR=3.3						
SJG	San Juan	159.50	322	*e*P	PKPdf	23 15 52.4	-1.5
GRGR	Grenville	159.86	301	IAMs_20	IAMs_20	00 39 06.5	
	comp=Z,5μm,22.0s						
SDDR	Presa de Saban	161.46	335	*e*P	PKPdf	23 15 56.3	+0.2
GTBY	Guantanamo Bay	161.79	347	*e*P	PKPdf	23 15 56.3	0.0
ETMB	Extrema	162.40	228	*e*P	PKPdf	23 15 57.2	+0.1
MTDJ	Mount Denham	163.86	354	*e*P	PKPdf	23 15 58.2	-0.3
ESQI	Esquipulas	164.12	38		PKPdf	23 15 58.6	-0.2
ESQI				PKPab	PKPab	23 16 52.8	+0.5
TGUH	Tegucigalpa,Un	165.73	33	*e*P	PKPdf	23 15 59.5	-0.8
MATN	Matagalpa	167.38	31	PKPdf	PKPdf	23 16 01.0	-0.5
MATN					PKPab	23 17 05.6	-1.0
URIC	Uribia, Colomb	168.00	323	*e*P	PKPdf	23 16 01.7	-0.1
PRVC	Isla de Provid	168.59	10	PKPdf	PKPdf	23 16 02.7	+0.5
PRVC					PKPab	23 17 09.9	-1.8
SDV	Santo Domingo	169.04	308	*e*P	PKPdf	23 16 01.2	-1.6
CRJC	Cerrejon, Guaj	169.07	325	*e*P	PKPdf	23 16 03.0	+0.4
SMRC	Santa Marta, M	169.66	331	*e*P	PKPdf	23 16 01.7	-1.2
JTS	Las Juntas de	170.10	34	PKP	PKPdf	23 16 03.1	-0.1
	comp=Z,9.3nm,1.0s,baz=58,slow=4.6,SNR=2.4						
LL6C	La Loma 6 Bece	170.31	322	*e*P	PKPdf	23 16 03.9	+0.6
ARGC	Ariguani, Magd	170.78	327	*e*P	PKPdf	23 16 04.0	+0.5
ATAH	Atahualpa	170.80	186	PKPab	PKPab	23 17 24.6	+2.6
	comp=Z,31nm,0.9s,baz=200,slow=4.4,SNR=3.8						
SJCC	San Jacinto, C	171.22	332	*e*P	PKPdf	23 16 03.1	-0.7
TAMC	Tame, Arauca	171.35	300	*e*P	PKPdf	23 16 03.2	-0.7
OCAC	Ocana	171.46	316	*e*P	PKPdf	23 16 04.1	0.0
BARC	Barichara	172.43	306	*e*P	PKPdf	23 16 04.0	-0.6
BRRC	Barranca, Sant	172.52	312	*e*P	PKPdf	23 16 05.2	+0.8
BRU2	Volcan	172.53	27	*e*P	PKPdf	23 16 04.3	-0.3
PTGC	Puerto Gaitan,	172.54	287	*e*P	PKPdf	23 16 01.9	-2.5
RUSC	La Rusia	172.73	302	*e*P	PKPdf	23 16 03.2	-1.9
BCIP	Isla Barro Col	172.94	4	*e*P	PKPdf	23 16 03.6	-0.9
UPA	Univ. de Panam	173.14	2	*e*P	PKPdf	23 16 03.0	-1.6
CAPC	Capurgana	173.20	343	*e*P	PKPdf	23 16 04.9	+0.2
UREC	San Jos de Ur	173.23	326	*e*P	PKPdf	23 16 04.1	-0.6
PTBC	PUERTO BERRIO,	173.44	313	*e*P	PKPdf	23 16 03.4	-1.4
SPBC	San Pablo de B	173.69	304	*e*P	PKPdf	23 16 04.1	-0.9
CHIC	Chingaza	173.89	295	*e*P	PKPdf	23 16 04.2	-1.2
DBBC	Dabeiba	174.21	328	*e*P	PKPdf	23 16 04.8	-0.3
AZU	Azuero	174.24	10	*e*P	PKPdf	23 16 03.2	-1.8
ROSC	El Rosal	174.32	299	PKP	PKPdf	23 16 05.0	-0.6
	comp=Z,41nm,0.9s,baz=156,slow=3.7,SNR=21						
ROSC	El Rosal	174.32	299	PKIKP	PKPdf	23 16 05.0	-0.6
ROSC	El Rosal	174.32	299	*e*P	PKPdf	23 16 06.2	+0.6
NORC	Norcasia	174.38	308	*e*P	PKPdf	23 16 05.1	-0.1
HELC	Santa Helena	174.44	317	*e*P	PKPdf	23 16 03.8	-1.8
CACAO	El Cacao, Vera	174.54	16	*e*P	PKPdf	23 16 04.6	-0.5
MACC	Macarena, Meta	174.55	271	*e*P	PKPdf	23 16 04.7	-0.6
PTAC	Punta Ardita,	174.75	344	*e*P	PKPdf	23 16 04.2	-1.0
CBOC	Ciudad Bolivar	175.01	319	*e*P	PKPdf	23 16 04.5	-1.0
PRAC	Prado	175.30	290	*e*P	PKPdf	23 16 04.7	-0.8
ANIL	Santa Ana	175.43	302	*e*P	PKPdf	23 16 05.5	-0.3
ORTC	Ortega, Tolima	175.56	294	*e*P	PKPdf	23 16 05.1	-0.5
PLMC	San Jos del P	175.88	313	*e*P	PKPdf	23 16 04.9	-0.8
GARC	Garzon, Huila	176.19	272	*e*P	PKPdf	23 16 04.3	-1.6
FLOC	Florencia	176.32	262	*e*P	PKPdf	23 16 03.9	-1.8
YOTC	Yotoco, Valle	176.49	303	*e*P	PKPdf	23 16 05.2	-0.7
MARP	Paez Belalcaza	176.57	283	*e*P	PKPdf	23 16 05.8	-0.2
PCON	Cinco Dias	177.08	275	*e*P	PKPdf	23 16 07.5	+1.0
SOTA	Rioblanco	177.30	271	*e*P	PKPdf	23 16 06.2	-0.3
POPC	Popayan, Colom	177.33	280	*e*P	PKPdf	23 16 05.9	-0.2
GCUF	Volcan Galeras	177.87	247	*e*P	PKPdf	23 16 06.8	+0.3
OTAV	Otavalo	177.98	205	*e*P	PKPdf	23 16 07.2	+0.7
OTAV	Otavalo	177.98	205	*e*P	PKPdf	23 16 05.8	-0.7
TUMC	Tumaco	179.37	246	*e*P	PKPdf	23 16 04.8	-1.2

*NEIC **01** 23:05:19.3±1.2, 60°.17N±0°.04×152°.79W±0°.08, h119km±3km Error ellipse: s-maj=5.4km s-min=5.1km az=102.0*

*ANF **01** 23:05:19.4±0.2, 60°.17N×152°.73W, h117km±2km, ML3.8/63, Error ellipse: s-maj=1.7km s-min=1.5km az=168.0*

*AEIC **01** 23:05:20±1.3, 60°.16N±0°.03×152°.76W±0°.07, h115km±3km, ML3.5, ML3.7/136(NEIC), Error ellipse: s-maj=5.0km s-min=4.6km az=217.0*

ISC 01 23:05:18.9±1.2**, 60°.16N**±0°.03×**152°.76W**±0°.03**, h124**km±6km**, n283,** σ**0.69**/289**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
O20K	Slope Mountain	0.10	137		Pn	23 05 36.0	+0.2
O20K					Sn	23 05 48.5	-0.1
O20K	Slope Mountain	0.10	137	P	Pn	23 05 36.0	+0.2
	baz=320						
O20K				S	Sn	23 05 48.3	-0.3
	baz=320						
IVE	Iliamna Volcan	0.19	223		Pn	23 05 36.0	0.0
IVE					Sn	23 05 48.3	-0.6
RED	Redoubt Volcan	0.27	359		Pn	23 05 36.0	-0.2
RED					Sn	23 05 48.7	-0.7
RSO	Redoubt South	0.31	1		Pn	23 05 36.4	-0.1
RDWB	Redoubt West	0.34	353		Pn	23 05 36.0	-0.6
NCT	North Crescent	0.42	348		Pn	23 05 36.6	-0.3
NCT					Sn	23 05 49.7	-0.8
RDJH	Redoubt Jeurge	0.44	357		Pn	23 05 36.7	-0.3
DFR	Drift River	0.44	5		Pn	23 05 36.6	-0.4
RDT	Redoubt	0.46	23		Pn	23 05 36.9	-0.1
OPT	Oil Point	0.56	205		Pn	23 05 38.0	+0.4
HOM	Homer	0.75	131		Pn	23 05 39.9	+1.0
HOM				Sn	Sn	23 05 54.8	+0.6
HOM				IAML		23 05 55.6	
	comp=E,5μm,0.5s						
HOM	Homer	0.75	131	P	Pn	23 05 39.7	+0.7
	baz=313						
HOM				S	Sn	23 05 54.6	+0.4
	baz=313						
AU22	Augustine Moun	0.84	201		Pn	23 05 40.1	+0.4
AU22					Sn	23 05 55.7	+0.2
AU2	Augustine Isla	0.85	202		Pn	23 05 40.2	+0.5
AUL	Augustine Lava	0.85	204		Pn	23 05 40.3	+0.6
AUL					Sn	23 05 56.4	+0.8
AUCH	Augustine Cone	0.87	204		Pn	23 05 40.5	+0.5
AUQ	Augustine Qik'	0.87	203		Pn	23 05 40.6	+0.5
CNPM	China Poot	1.00	129		Pn	23 05 42.0	+0.8
CNPM	China Poot	1.00	129		Sn	23 05 58.0	0.0
CAPN	Captain Cook N	1.01	52		Pn	23 05 43.2	+2.0
CAPN	Captain Cook N	1.01	52	P	Pn	23 05 43.1	+1.9
	baz=233						
BRLK	Bradley Lake	1.02	112		Pn	23 05 41.7	+0.3
BRLK	Bradley Lake	1.02	112	IAML		23 06 00.2	
	comp=E,3μm,0.1s						
N19K	Bonanza Creek	1.08	309		Pn	23 05 41.9	-0.1
N19K	Bonanza Creek	1.08	309	P	Pn	23 05 42.2	+0.1
	baz=127						
N19K				S	Sn	23 05 58.8	-0.9
	baz=127						
SPCR	Spurr Chakacha	1.08	14		Pn	23 05 42.2	+0.1
SPCR					Sn	23 05 59.8	+0.1
SPCR	Spurr Chakacha	1.08	14	P	Pn	23 05 42.2	+0.1
	baz=195						
SPCR				S	Sn	23 05 59.1	-0.6
	baz=195						
BRSE	Bradley Lake S	1.10	111		Pn	23 05 42.5	+0.4
BRSE	Bradley Lake S	1.10	111	P	Pn	23 05 42.6	+0.4
	baz=294						
BRSE				S	Sn	23 05 59.1	-0.7
	baz=294						
CKN	Chakachatna No	1.11	15		Pn	23 05 42.8	+0.5
SPBG	Spurr Blockage	1.12	10		Pn	23 05 42.9	+0.4
SPBG					Sn	23 06 00.3	-0.1
BGL	Barrier Glacie	1.13	9		Pn	23 05 43.1	+0.5
SPWE	Spurr West	1.13	5		Pn	23 05 43.2	+0.7
CRP	Crater Peak	1.16	15		Pn	23 05 43.3	+0.4
SPCP	Crater Peak Br	1.16	15		Pn	23 05 43.2	+0.4
SPCP					Sn	23 06 01.0	-0.1
SPCG	Spurr Capps Gl	1.20	17		Pn	23 05 43.5	+0.2
O18K	Koktuh Hills	1.27	257		Pn	23 05 44.2	+0.3
O18K					Sn	23 06 02.6	-0.4
O18K	Koktuh Hills	1.27	257	P	Pn	23 05 44.2	+0.3
	baz=75						
O18K				S	Sn	23 06 02.5	-0.4
	baz=75						
Q19K	Cape Douglas,	1.31	200		Pn	23 05 44.6	+0.2
Q19K	Cape Douglas,	1.31	200	P	Pn	23 05 44.6	+0.2
	baz=20						
Q19K				S	Sn	23 06 03.8	0.0
	baz=20						
SLKM	Skilak Lake	1.31	73		Pn	23 05 44.4	0.0
STLK	Strandline Lak	1.42	18		Pn	23 05 46.0	+0.3
P18K	Big Mountain,	1.46	240		Pn	23 05 46.4	+0.3
P18K					Sn	23 06 06.7	-0.2
P18K	Big Mountain,	1.46	240	P	Pn	23 05 46.3	+0.1
	baz=57						
P18K				S	Sn	23 06 06.2	-0.7
	baz=57						
O22K	Cooper Landing	1.55	76		Pn	23 05 47.1	+0.2
O22K	Cooper Landing	1.55	76	IAML		23 06 09.0	
	comp=E,1μm,0.6s						
O22K				IAML		23 06 16.3	
	comp=N,1μm,0.4s						
O22K	Cooper Landing	1.55	76	P	Pn	23 05 47.2	+0.2
	baz=259						
O22K				S	Sn	23 06 07.7	-0.7
	baz=259						
Q20K	Shuyak Island	1.56	173	P	Pn	23 05 47.6	+0.4
	baz=353						
Q20K				S	Sn	23 06 08.7	0.0
	baz=353						
SYI	Shuyak Island	1.56	173		Pn	23 05 47.6	+0.4
FIS	Fire Island	1.60	50		Pn	23 05 49.0	+1.4
FIS	Fire Island	1.60	50	IAML		23 06 12.8	
	comp=N,1μm,0.6s						
FIS				IAML		23 06 13.5	
	comp=E,1μm,0.4s						
N18K	Kilae Creek	1.64	290		Pn	23 05 48.4	+0.2
N18K					Sn	23 06 09.9	-0.5
N18K	Kilae Creek	1.64	290	P	Pn	23 05 48.4	+0.2
	baz=107						
N18K				S	Sn	23 06 09.6	-0.8
	baz=107						
SUA	Susitna One	1.64	36		Pn	23 05 48.8	+0.5
SUA	Susitna One	1.64	36	P	Pn	23 05 48.7	+0.5
	baz=218						
SUA				S	Sn	23 06 10.8	+0.1
	baz=218						
SEW	Seward	1.66	90		Pn	23 05 48.0	-0.2
SEW	Seward	1.66	90	P	Pn	23 05 47.9	-0.3
	baz=274						
SEW				S	Sn	23 06 09.7	-1.0
	baz=274						
SVW2	Sparrevohn	1.68	305		Pn	23 05 48.6	0.0
SVW2					Sn	23 06 10.4	-0.9
M20K	Styx River	1.74	354		Pn	23 05 50.0	+0.6
M20K	Styx River	1.74	354	P	Pn	23 05 50.1	+0.6
	baz=174						
M20K				S	Sn	23 06 12.6	-0.1
	baz=174						
RC01	Rabbit Creek A	1.76	57		Pn	23 05 49.5	0.0
RC01	Rabbit Creek A	1.76	57	IAML		23 06 13.0	
	comp=N,1μm,0.2s						
RC01	Rabbit Creek A	1.76	57	P	Pn	23 05 49.6	0.0
	baz=239						
RC01				S	Sn	23 06 12.4	-0.6
	baz=239						
M19K	Big River Lodg	1.93	336		Pn	23 05 52.0	+0.5
M19K	Big River Lodg	1.93	336	P	Pn	23 05 52.0	+0.5
	baz=155						
M19K				S	Sn	23 06 16.3	-0.3
	baz=155						
SKT	Skwentna	1.93	18	IAML		23 06 19.9	
	comp=E,319nm,0.4s						
SKT				IAML		23 06 20.2	
	comp=N,300nm,0.3s						
SKT	Skwentna	1.93	18		Pn	23 05 51.6	+0.1
SKT					Sn	23 06 16.6	0.0
SKT	Skwentna	1.93	18	P	Pn	23 05 51.7	+0.1
	baz=199						
SKT				S	Sn	23 06 16.7	0.0
	baz=199						
M22K	Willow	2.06	38		Pn	23 05 54.0	+0.9
M22K	Willow	2.06	38	S	Sn	23 06 19.4	0.0
	baz=220						
P17K	Kvichak River	2.10	244		Pn	23 05 54.6	+1.0
KCG	Knife Ck. Glac	2.21	214		Pn	23 05 56.0	+0.9
O17K	Koliganek Bris	2.21	262		Pn	23 05 55.7	+0.6
L19K	White Mountain	2.27	334		Pn	23 05 56.3	+0.4
L19K	White Mountain	2.27	334	P	Pn	23 05 56.2	+0.4
	baz=152						
L19K				S	Sn	23 06 23.8	-0.5
	baz=152						
PMR	Palmer	2.29	49		Pn	23 05 55.4	-0.5
PMR	Palmer	2.29	49	IAML		23 06 23.5	
	comp=E,391nm,0.5s						
PMR				IAML		23 06 24.0	
	comp=N,254nm,0.3s						
PMR	Palmer	2.29	49	P	Pn	23 05 55.5	-0.5
	baz=233						
PMR				S	Sn	23 06 22.4	-2.1
	baz=233						
KELA	Mount Kelaz	2.30	223		Pn	23 05 57.0	+0.8
KDAK	Kodiak Island	2.38	178		Pn	23 05 56.6	-0.6
KDAK					Sn	23 06 25.1	-1.5
KDAK	Kodiak Island	2.38	178	P	Pn	23 05 56.6	-0.6
	baz=358						
KDAK				S	Sn	23 06 25.5	-1.1
	baz=358						
L20K	Farewell, AK	2.39	347		Pn	23 05 58.1	+0.8
L20K	Farewell, AK	2.39	347	P	Pn	23 05 58.1	+0.8
	baz=166						
KNK	Knik Glacier	2.46	57		Pn	23 05 57.6	-0.6
KNK	Knik Glacier	2.46	57	IAML		23 06 27.5	
	comp=E,561nm,0.7s						
KNK	Knik Glacier	2.46	57	P	Pn	23 05 57.7	-0.6
	baz=241						
KNK				S	Sn	23 06 26.6	-1.9
	baz=241						
GHO	Glory Hole Cre	2.48	47		Pn	23 05 58.1	-0.4
GHO	Glory Hole Cre	2.48	47	IAML		23 06 28.0	
	comp=E,585nm,0.7s						
GHO				IAML		23 06 28.4	
	comp=N,491nm,0.4s						
CAHL	Cahill	2.48	213		Pn	23 05 59.8	+1.2
CUT	Chulitna	2.56	27		Pn	23 06 00.3	+0.8
P23K	Montague Islan	2.69	91	P	Pn	23 06 01.4	+0.3
	baz=276						
SML	Sawmill	2.72	51		Pn	23 06 01.1	-0.6
SML	Sawmill	2.72	51	IAML		23 06 33.0	
	comp=N,320nm,0.7s						
SML				IAML		23 06 34.9	
	comp=E,280nm,0.6s						
SML	Sawmill	2.72	51	P	Pn	23 06 01.0	-0.6
	baz=234						
O16K	Kokwok River B	2.75	260		Pn	23 06 02.7	+0.8
O16K	Kokwok River B	2.75	260	P	Pn	23 06 02.8	+0.8
	baz=76						
PPLA	Purkeypile	2.77	5		Pn	23 06 03.2	+1.0
PPLA	Purkeypile	2.77	5	P	Pn	23 06 03.2	+1.0
	baz=186						
P16K	Nushagak River	2.89	249		Pn	23 06 05.3	+1.6
P16K	Nushagak River	2.89	249	P	Pn	23 06 04.4	+0.7
	baz=65						
GLI	Glacier Island	2.89	73		Pn	23 06 02.2	-1.6
GLI	Glacier Island	2.89	73	IAML		23 06 36.8	
	comp=E,329nm,0.5s						
GLI				IAML		23 06 37.0	
	comp=N,209nm,0.2s						
GLI	Glacier Island	2.89	73	P	Pn	23 06 02.3	-1.5
	baz=258						
M23K	Glacier View	2.95	54		Pn	23 06 04.1	-0.5
M23K	Glacier View	2.95	54	P	Pn	23 06 03.9	-0.7
	baz=238						
OHAK	Old Harbor	2.95	186		Pn	23 06 04.1	-0.5
OHAK	Old Harbor	2.95	186	IAML		23 06 39.5	
	comp=E,121nm,0.3s						
OHAK	Old Harbor	2.95	186	P	Pn	23 06 03.8	-0.8
	baz=5.1						
N16K	Nishlik Lake	3.01	279		Pn	23 06 06.2	+0.9
N16K	Nishlik Lake	3.01	279	P	Pn	23 06 06.2	+0.9
	baz=93						
HIN	Hinchinbrook I	3.13	83		Pn	23 06 05.9	-1.0
HIN	Hinchinbrook I	3.13	83	IAML		23 06 47.1	
	comp=N,130nm,0.5s						
HIN				IAML		23 06 49.0	
	comp=E,133nm,0.7s						
SCM	Sheep Creek Mo	3.14	55		Pn	23 06 06.6	-0.4
SCM	Sheep Creek Mo	3.14	55	IAML		23 06 45.8	
	comp=N,299nm,0.6s						
SCM	Sheep Creek Mo	3.14	55	P	Pn	23 06 06.6	-0.4
	baz=240						
FID	Port Fidalgo	3.17	76		Pn	23 06 05.6	-1.8
FID	Port Fidalgo	3.17	76	IAML		23 06 43.9	
	comp=E,222nm,0.3s						
FID				IAML		23 06 44.1	
	comp=N,237nm,0.3s						
JPK	Jack Peak	3.17	71		Pn	23 06 06.4	-1.1
TTA	Tatalina	3.19	332		Pn	23 06 07.8	+0.1
TTA	Tatalina	3.19	332	P	Pn	23 06 07.7	+0.1
	baz=149						
K20K	Telida	3.27	350		Pn	23 06 09.5	+0.7
K20K	Telida	3.27	350	P	Pn	23 06 09.5	+0.7
	baz=168						
VMT	TAPS TI Valdez	3.29	71		Pn	23 06 08.6	-0.3
CAST	Castle Rocks	3.29	5		Pn	23 06 09.3	+0.3
CAST	Castle Rocks	3.29	5	P	Pn	23 06 09.2	+0.2
	baz=186						
Q23K	Middleton Isla	3.32	100	P	Pn	23 06 09.5	+0.1
	baz=286						
MID	Middleton Isla	3.33	100		Pn	23 06 09.6	+0.1
MID	Middleton Isla	3.33	100	IAML		23 06 49.8	
	comp=N,195nm,0.7s						
MID				IAML		23 06 55.6	
	comp=E,195nm,2.2s						
WAT1	Susitna Watana	3.36	35		Pn	23 06 10.1	+0.2
WAT1	Susitna Watana	3.36	35	P	Pn	23 06 10.1	+0.2
	baz=219						
WAT6	Susitna Watana	3.43	43		Pn	23 06 11.0	0.0
WAT6	Susitna Watana	3.43	43	P	Pn	23 06 10.9	0.0
	baz=227						
EYAK	Cordova Ski Ar	3.51	80		Pn	23 06 11.8	0.0
EYAK	Cordova Ski Ar	3.51	80	P	Pn	23 06 11.9	+0.1
	baz=267						
TRF	Thorofare Moun	3.51	18		Pn	23 06 12.1	0.0
TRF	Thorofare Moun	3.51	18	IAML		23 06 53.4	
	comp=N,235nm,0.7s						
TRF				IAML		23 06 57.3	
	comp=E,138nm,0.5s						
TRF	Thorofare Moun	3.51	18	P	Pn	23 06 11.9	-0.1
	baz=201,SNR=43						
KTH	Kantishna Hill	3.52	14		Pn	23 06 12.0	-0.1
KTH				IAML		23 06 53.8	
	comp=E,117nm,0.8s						
KTH				IAML		23 06 55.0	
	comp=N,128nm,0.9s						
DIV	Divide	3.58	71		Pn	23 06 12.0	-0.8
KLU	Klutina	3.61	65		Pn	23 06 12.6	-0.7
KLU	Klutina	3.61	65	P	Pn	23 06 12.6	-0.7
	baz=251,SNR=17						
SII	Sitkinak Islan	3.68	192		Pn	23 06 14.5	+0.3
SII	Sitkinak Islan	3.68	192	IAML		23 08 22.9	
	comp=N,180nm,3.8s						
SII	Sitkinak Islan	3.68	192	P	Pn	23 06 13.6	-0.6
	baz=11						
M24K	Tolsona, Glenn	3.75	56		Pn	23 06 15.4	+0.3
M24K	Tolsona, Glenn	3.75	56	P	Pn	23 06 15.1	+0.1
	baz=242,SNR=8.1						
CHUM	Lake Minchumin	3.75	3		Pn	23 06 15.5	+0.5
CHUM	Lake Minchumin	3.75	3	P	Pn	23 06 15.1	+0.2
	baz=183,SNR=14						
RND	Reindeer	3.75	28		Pn	23 06 15.1	-0.1
RND	Reindeer	3.75	28	IAML		23 06 59.3	
	comp=N,67nm,0.4s						
RND				IAML		23 07 18.9	
	comp=E,84nm,1.0s						
DHY	Denali Highway	3.90	39		Pn	23 06 17.2	0.0
DHY	Denali Highway	3.90	39	IAML		23 07 05.0	
	comp=E,174nm,0.5s						
DHY	Denali Highway	3.90	39	P	Pn	23 06 17.2	0.0
	baz=224,SNR=20						
MCK	McKinley	4.02	25		Pn	23 06 19.1	+0.5
MCK	McKinley	4.02	25	IAML		23 07 07.6	
	comp=N,64nm,0.4s						
MCK				IAML		23 07 08.6	
	comp=E,89nm,0.4s						
MCK	McKinley	4.02	25	P	Pn	23 06 19.2	+0.5
	baz=208,SNR=31						
BPAW	Bear Paw Mtn.	4.05	11		Pn	23 06 18.5	-0.5
BPAW	Bear Paw Mtn.	4.05	11	IAML		23 07 04.4	
	comp=N,56nm,0.7s						
BPAW				IAML		23 07 05.5	
	comp=E,42nm,0.5s						
BPAW	Bear Paw Mtn.	4.05	11	P	Pn	23 06 18.6	-0.4

baz=193,SNR=30
J20K Nowinta River 4.09 351 Pn 23 06 20.2 +0.7
J20K Nowinta River 4.09 351 P Pn 23 06 20.1 +0.7
baz=170,SNR=140
BMRM Bremner River 4.11 75 Pn 23 06 18.9 -0.9
BMRM Bremner River 4.11 75 IAML 23 07 08.1
comp=N,76nm,0.4s
BMRM IAML 23 07 09.9
comp=E,78nm,0.4s
BMRM Bremner River 4.11 75 P Pn 23 06 18.8 -1.0
baz=262,SNR=8.5
HMT Hamilton 4.24 84 Pn 23 06 21.6 0.0
HMT IAML 23 07 11.2
comp=N,90nm,0.5s
N25K Chitina, Valde 4.25 66 Pn 23 06 21.2 -0.5
N25K Chitina, Valde 4.25 66 IAML 23 07 10.6
comp=E,83nm,0.6s
N25K IAML 23 07 11.7
comp=N,110nm,0.4s
N25K Chitina, Valde 4.25 66 P Pn 23 06 21.2 -0.5
baz=254,SNR=14
HARP HAARP 4.30 55 P Pn 23 06 22.5 0.0
baz=242
NICHA Nichawak Mount 4.39 85 Pn 23 06 24.0 +0.4
PAX Paxson 4.49 48 Pn 23 06 25.2 +0.3
PAX Paxson 4.49 48 P Pn 23 06 25.2 +0.3
baz=234
SUCK Suckling Hills 4.50 87 Pn Pn 23 06 25.6 +0.6
SUCK IAML 23 07 06.8
comp=N,73nm,2.9s
SUCK IAML 23 07 23.1
comp=E,50nm,2.0s
GLB Gilahina Butte 4.57 70 Pn 23 06 25.6 -0.5
GLB Gilahina Butte 4.57 70 IAML 23 07 19.3
comp=E,73nm,0.3s
GLB IAML 23 07 19.4
comp=N,71nm,0.3s
CHIR Chirikof Islan 4.60 201 Pn Pn 23 06 25.5 -0.9
VRDI Verde Repeater 4.70 73 Pn 23 06 27.1 -0.8
VRDI Verde Repeater 4.70 73 IAML 23 07 22.0
comp=N,72nm,0.6s
VRDI IAML 23 07 23.7
comp=E,41nm,0.6s
GRIN Grindle Hills 4.71 84 Pn 23 06 28.1 +0.2
KHIT Khitrov Hills 4.74 82 Pn 23 06 28.5 +0.1
NEA2 Nenana 4.77 19 Pn 23 06 28.7 -0.1
NEA2 Nenana 4.77 19 P Pn 23 06 28.6 -0.1
baz=203,SNR=62
WRH Wood River Hil 4.85 25 Pn 23 06 29.6 0.0
WRH Wood River Hil 4.85 25 IAML 23 07 23.9
comp=E,41nm,0.4s
WRH IAML 23 07 24.4
comp=N,38nm,0.4s
K24K Donnelly Dome 4.92 39 P Pn 23 06 32.1 +1.4
baz=225,SNR=18
MCARA McCarthy VSAT 4.93 71 Pn 23 06 31.1 +0.3
MCARA McCarthy VSAT 4.93 71 P Pn 23 06 30.3 -0.5
baz=260,SNR=7.2
WAX Waxell Ridge 4.94 82 Pn 23 06 29.7 -1.3
SNH Sunshine Point 4.96 85 Pn Pn 23 06 31.3 +0.1
SNH IAML 23 07 17.4
comp=E,48nm,2.9s
SNH IAML 23 07 44.9
comp=N,58nm,3.1s
MLY Manley 4.98 10 Pn 23 06 31.5 0.0
MLY Manley 4.98 10 IAML 23 09 42.6
comp=E,21nm,1.8s
MLY Manley 4.98 10 P Pn 23 06 31.2 -0.3
baz=192,SNR=83
GCSA Galena City Sc 4.99 339 P Pn 23 06 32.5 +0.9
baz=156
I21K Tanana 5.06 4 Pn 23 06 33.2 +0.7
I21K Tanana 5.06 4 IAML 23 09 39.7
comp=E,30nm,1.9s
I21K IAML 23 09 55.5
comp=N,27nm,1.2s
I21K Tanana 5.06 4 P Pn 23 06 32.7 +0.2
baz=184,SNR=35
HDA Harding Lake 5.06 30 Pn 23 06 32.5 0.0
HDA Harding Lake 5.06 30 P Pn 23 06 32.3 -0.1
baz=215,SNR=30
CCB Clear Creek Bu 5.06 25 Pn 23 06 32.1 -0.4
CCB IAML 23 07 29.1
comp=N,33nm,0.3s
CCB IAML 23 07 30.9
comp=E,62nm,0.3s
PTPK Patty Peak 5.17 74 Pn 23 06 34.2 +0.1
RIDG Independent Ri 5.18 43 Pn 23 06 34.7 +0.5
RIDG Independent Ri 5.18 43 P Pn 23 06 34.6 +0.4
baz=230,SNR=19
ISLE Juniper Island 5.19 81 Pn 23 06 34.9 +0.4
ISLE Juniper Island 5.19 81 IAML 23 07 32.5
comp=E,51nm,0.7s
ISLE IAML 23 07 37.0
comp=N,44nm,0.8s
M26K Nabesna, AK 5.22 60 Pn 23 06 34.6 -0.1
M26K IAML 23 07 34.6
comp=N,32nm,0.6s
M26K IAML 23 07 35.7
comp=E,37nm,0.4s
M26K Nabesna, AK 5.22 60 P Pn 23 06 35.1 +0.3
baz=249,SNR=32
I23K Minto, Yukon-K 5.25 16 Pn 23 06 35.2 +0.2
I23K Minto, Yukon-K 5.25 16 IAML 23 09 45.0
comp=E,20nm,2.4s
I23K IAML 23 09 51.6
comp=N,28nm,1.6s
I23K Minto, Yukon-K 5.25 16 P Pn 23 06 35.4 +0.4
baz=199,SNR=46
TCOL CIGO, UAF Yank 5.25 23 Pn 23 06 35.4 +0.3
TCOL CIGO, UAF Yank 5.25 23 P Pn 23 06 35.0 -0.1
baz=208
COLA College 5.25 24 P Pn 23 06 35.3 +0.2
baz=206
MDM Murphy Dome 5.26 22 Pn 23 06 35.2 0.0
MDM Murphy Dome 5.26 22 IAML 23 07 37.0
comp=E,20nm,0.7s
MDM IAML 23 07 40.7
comp=N,17nm,0.7s
BAGL Bagley Icefiel 5.32 82 Pn 23 06 37.1 +1.2
L26K Log Cabin Wild 5.34 53 Pn 23 06 37.5 +1.2
L26K IAML 23 07 58.3
comp=N,46nm,0.6s
L26K IAML 23 08 05.0
comp=E,62nm,0.4s
IL31 5.37 28 Pn 23 06 36.5 -0.2
ILAR Eielson Array 5.37 28 Pn 23 06 36.2 -0.5
MESA MESA 5.40 85 Pn 23 06 37.7 +0.4
MESA MESA 5.40 85 P Pn 23 06 38.0 +0.7
baz=274,SNR=6.1
GRNC Granite Creek 5.48 79 Pn 23 06 39.2 +0.8
YAH Yahtse 5.49 83 Pn 23 06 39.5 +1.0
H21K Melozitna Rive 5.52 360 Pn 23 06 38.8 0.0
H21K Melozitna Rive 5.52 360 P Pn 23 06 38.7 0.0
baz=180,SNR=43
BARN Barnard Glacie 5.54 76 Pn 23 06 40.1 +0.9
POKR Poker Plat Res 5.55 24 P Pn 23 06 35.9 -3.3
baz=209,SNR=31
SCRK Sand Creek 5.63 43 Pn 23 06 40.0 -0.4
SCRK Sand Creek 5.63 43 P Pn 23 06 39.9 -0.4
baz=231,SNR=9.2
J25K Salcha River, 5.64 34 Pn 23 06 40.5 +0.1
J25K Salcha River, 5.64 34 P Pn 23 06 40.5 +0.1
baz=221
CTG Chitna Glacier 5.69 77 P Pn 23 06 42.0 +0.8
baz=267,SNR=26
CTGM Chitina Glacie 5.70 77 Pn 23 06 42.2 +1.0
M27K Edge Creek, AK 5.70 62 Pn 23 06 41.9 +0.6
M27K Edge Creek, AK 5.70 62 P Pn 23 06 41.8 +0.6
baz=252,SNR=10
TABL Table Mountain 5.79 82 Pn 23 06 43.2 +0.7
CHX Chaix Hills 5.83 86 Pn 23 06 44.0 +1.1
LOGN Logan Glacier 5.85 78 Pn 23 06 44.2 +0.9
IM03 5.87 356 Pn 23 06 43.8 +0.4
IMAR Indian Mountai 5.87 356 Pn 23 06 43.8 +0.4
H23K Yukon River 5.88 13 Pn 23 06 44.0 +0.6
H23K Yukon River 5.88 13 P Pn 23 06 44.1 +0.6
baz=196,SNR=87
L27K Beaver Creek, 5.97 56 Pn 23 06 44.6 -0.2
L27K Beaver Creek, 5.97 56 P Pn 23 06 44.7 -0.2
baz=246
SAMH Samovar Hills 5.99 85 Pn 23 06 46.3 +1.2
BC03 5.99 56 Pn 23 06 45.2 +0.2
BCAR Beaver Creek A 5.99 56 Pn Pn 23 06 44.0 -1.1
YUK2 White River 6.03 69 Pn 23 06 45.9 +0.2
J26L Joseph Creek 6.11 41 Pn 23 06 46.8 +0.1
J26L Joseph Creek 6.11 41 P Pn 23 06 46.6 -0.2
baz=229,SNR=15
H24K Noodor Dome 6.12 19 Pn 23 06 47.0 +0.2
H24K Noodor Dome 6.12 19 P Pn 23 06 46.7 -0.1
baz=204,SNR=18
YUK3 Moose Creek 6.21 70 Pn 23 06 49.0 +0.8
YUK3 Moose Creek 6.21 70 P Pn 23 06 48.2 0.0
baz=260,SNR=18
PCA Pinnacle 6.25 85 Pn 23 06 49.6 +0.9
PINM Pinnacle 6.25 85 P Pn 23 06 49.3 +0.6
baz=276,SNR=7.2
K27K Chicken 6.34 48 Pn Pn 23 06 50.7 +1.0
K27K Chicken 6.34 48 P Pn 23 06 50.0 +0.3
baz=237
SDPT Sand Point 6.34 224 Pn Pn 23 06 51.3 +1.5
YUK8 Steele Glacier 6.48 74 P Pn 23 06 52.9 +1.1
baz=266,SNR=14
CNBA Chernabura Isl 6.49 217 Pn Pn 23 06 53.4 +1.6
BCPM Bancas Point 6.58 86 Pn 23 06 53.9 +1.0
PNL Peninsula 6.74 88 Pn 23 06 55.5 +0.3
PNL Peninsula 6.74 88 P Pn 23 06 55.4 +0.3
baz=280,SNR=6.2
YUK4 Talbot Arm 7.02 74 P Pn 23 07 00.2 +1.1
baz=266
EGAK Eagle 7.09 44 Pn 23 06 60.0 +0.1
YUK6 Outpost Mounta 7.14 77 Pn 23 07 01.6 +0.8
YUK6 Outpost Mounta 7.14 77 P Pn 23 07 01.3 +0.5
baz=270
COLD Coldfoot 7.19 8 Pn 23 07 01.6 +0.4
COLD Coldfoot 7.19 8 P Pn 23 07 01.6 +0.4
baz=190,SNR=21
YUK7 Dusty Glacier 7.27 81 Pn 23 07 03.0 +0.6
HYT Haines Junctio 7.57 78 Pn 23 07 07.3 +0.8
HYT Haines Junctio 7.57 78 P Pn 23 07 07.2 +0.8
baz=272
N30M Aishikik Lake 7.78 74 P Pn 23 07 08.8 -0.4
baz=267,SNR=5.8
M30M Minto, Yukon 8.04 66 Pn 23 07 13.9 +1.2
M30M Minto, Yukon 8.04 66 P Pn 23 07 13.2 +0.4
baz=260
BMAR Burnt Mountain 8.14 23 Pn 23 07 12.7 -1.4
PLBC Pleasant Camp 8.30 88 P Pn 23 07 17.1 +1.0
baz=282
N31M Braeburn, Yuko 8.40 74 Pn Pn 23 07 18.0 +0.4
N31M Braeburn, Yuko 8.40 74 P Pn 23 07 18.2 +0.6
baz=268
TOLK Toolik Lake Re 8.63 8 Pn 23 07 22.1 +1.4
TOLK Toolik Lake Re 8.63 8 P Pn 23 07 21.5 +0.9
baz=191
P33M Teslin, Yukon 9.93 81 P Pn 23 07 38.0 -0.2
baz=278

*IDC **01** 23:29:04.2±0.8, 15°.91S×173°.44W, h0km, mb4.0/8, mbtmp4.0/9, ML3.2/1, Error ellipse: s-maj=39.4km s-min=19.4km az=140.0*
*NEIC **01** 23:29:07.2±2.6, 16°.02S±0°.08×173°.0W±0°.1, h35km±2km, mb4.6/12, Error ellipse: s-maj=22.6km s-min=12.9km az=92.0*
ISC 01 23:29:06.9±0.5, 15°.97S±0°.07×173°.20W±0°.09, h26km, n54, σ1§49/47, mb4.3/13, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.47	34	Pn	Pn		23 29 43.3	-2.2
	24nm,0.3s,baz=211,slow=2.6,SNR=20							
AFI				Sn	Sn		23 30 12.6	-2.3
	75nm,0.3s,baz=231,slow=23,SNR=8.3							
AFI	Afiamalu	2.47	34		Pn		23 29 43.5	-2.0
NIUE	Niue	4.39	135	Pn	Pn		23 30 07.8	-4.1
MSVF	Nonsavu	8.56	257	Pn	Pn		23 31 16.2	+7.0
	0.7nm,0.3s,baz=108,slow=13,SNR=13							
RAR	Rarotonga	13.76	114	Pn	Pn		23 32 23.7	+3.4
	1.1nm,0.3s,baz=279,slow=10,SNR=5.1							
	11nm,0.7s							
URZ	Urewera	23.79	199	P	P		23 34 18.5	+1.1
	5.5nm,0.4s,baz=46,slow=5.6,SNR=4.4							
	5.5nm,0.4s							
URZ	Urewera	23.79	199	P	P		23 34 16.8	-0.7
URZ				IAmb	IAmb		23 34 18.4	
	comp=Z,41nm,1.4s							
BKZ	Black Stump Fm	24.81	199	P	P		23 34 26.6	-0.3
BKZ				IAmb	IAmb		23 34 50.7	
	comp=Z,26nm,1.3s							
H11S2	WAKE ISLAND Hy	39.55	329	T	T		00 18 50.3	
	baz=149,slow=76,SNR=4.2							
H11S3	WAKE ISLAND Hy	39.56	329	T	T		00 18 51.2	
	baz=149,slow=76,SNR=6.0							
H11S1	WAKE ISLAND Hy	39.56	329	T	T		00 18 51.6	
	baz=149,slow=76,SNR=5.9							
H11N3	WAKE ISLAND Hy	40.50	330	T	T		00 20 01.6	
	baz=150,slow=76,SNR=12							
H11N1	WAKE ISLAND Hy	40.50	330	T	T		00 20 02.7	
	baz=150,slow=76,SNR=12							
H11N2	WAKE ISLAND Hy	40.52	330	T	T		00 20 03.0	
	baz=150,slow=76,SNR=14							
COEN	Coen	42.14	267		P		23 36 58.0	+0.6
TOO	Toolangi	42.26	231	P	P		23 36 59.3	+1.1
TOO				IAmb	IAmb		23 37 18.6	
	comp=Z,6.9nm,1.1s							
STKA	Stephens Creek	43.92	240	P	P		23 37 10.8	-0.9
	comp=Z,0.7nm,0.2s,baz=74,slow=20,SNR=3.5							
	comp=Z,0.7nm,0.2s							
STKA	Stephens Creek	43.92	240	P	P		23 37 10.9	-0.8
BBOO	Buckleboo	48.69	240	P	P		23 37 46.8	-2.5
WB0	Warramunga Arr	49.86	257	P	P		23 37 56.9	-1.5
WB0				IAmb	IAmb		23 38 21.4	
	comp=Z,8.7nm,1.2s							
WRA	Warramunga Arr	49.90	257	P	P		23 37 57.6	-1.1
	comp=Z,0.5nm,0.5s,baz=95,slow=7.7,SNR=7.3							
WRA				PcP	PcP		23 39 20.7	+1.8
	comp=Z,0.4nm,0.7s,baz=104,slow=2.7,SNR=1.4							
	comp=Z,0.5nm,0.5s							
WRA	Warramunga Arr	49.90	257	P	P		23 37 56.9	-1.8
AS31	Alice Springs	50.12	252	P	P		23 37 58.7	-1.6
ASAR	Alice Springs	50.12	252	P	P		23 37 59.0	-1.3
	comp=Z,2.6nm,0.6s,baz=90,slow=8.1,SNR=22							
ASAR				PcP	PcP		23 39 21.0	+1.3
	comp=Z,0.5nm,0.7s,baz=96,slow=3.4,SNR=0.9							
	comp=Z,2.6nm,0.6s							
ASAR	Alice Springs	50.12	252	P	P		23 37 58.1	-2.2
MTN	Manton Dam	53.88	266	P	P		23 38 28.3	-0.1
MTN				IAmb	IAmb		23 38 40.0	
	comp=Z,8.2nm,1.0s							
FORT	Forrest	55.33	243	P	P		23 38 37.8	-0.9
QSPA	South Pole Qui	74.08	180	P	P		23 40 41.5	+0.9
QSPA				IAmb	IAmb		23 40 45.8	
	comp=Z,7.0nm,1.1s							
NVAR	Mina Array Bea	74.62	42	P	P		23 40 45.5	+1.2
	comp=Z,0.7nm,0.7s,baz=228,slow=10,SNR=5.8							
	comp=Z,0.7nm,0.7s							
NVAR	Mina Array Bea	74.62	42	P	P		23 40 42.6	-1.7
KSAR	Wonju Array Be	76.72	316	P	P		23 40 56.3	+0.4
PDAR	Pinedale Array	82.56	42	P	P		23 41 29.8	+1.9
	comp=Z,0.5nm,0.3s,baz=245,slow=3.1,SNR=3.8							
	comp=Z,0.5nm,0.3s							
ILAR	Eielson Array	82.97	11	P	P		23 41 30.6	+1.4
	comp=Z,0.3nm,0.6s,baz=217,slow=6.0,SNR=4.9							
	comp=Z,0.3nm,0.6s							
H03S2	Juan Fernandez	84.73	124	T	T		01 15 18.5	
	baz=252							
H03S1	Juan Fernandez	84.75	124	T	T		01 15 19.5	
	baz=252							
H03S3	Juan Fernandez	84.75	124	T	T		01 15 14.4	
	baz=252							
YKA	Yellowknife Ar	90.54	23	P	P		23 42 06.5	+0.3
	comp=Z,0.3nm,0.8s,baz=137,slow=6.8,SNR=4.4							
	comp=Z,0.3nm,0.8s							
KMBO	Kilima Mbogo	145.46	243	PKPbc	PKPab		23 48 45.3	+1.1
	comp=Z,4.0nm,1.1s,baz=50,slow=5.7,SNR=4.7							
BRTR	Keskin Array B	146.72	321	PKPbc	PKiKP		23 48 49.0	-0.7
	comp=Z,2.2nm,0.7s,baz=139,slow=2.1,SNR=11							
GERES	GERESS Array B	146.73	352	PKPbc	PKiKP		23 48 48.9	-0.5
	comp=Z,0.1nm,0.2s,baz=330,slow=4.6,SNR=3.6							
CONA	Conrad Observa	147.26	349	*e*P	PKiKP		23 48 50.8	+0.3
	comp=Z,4.4nm,1.2s							
RONA	Rosalia, Austr	147.40	348	*e*P	PKiKP		23 48 51.4	+0.7
	comp=Z,4.0nm,1.1s							
MOA	Molln	147.62	351	*e*P	PKPab		23 48 51.8	+0.6
	comp=Z,3.1nm,1.1s							
ARSA	Arzberg	147.98	349	*e*P	PKiKP		23 48 51.2	-0.6
	comp=Z,1.0nm,0.6s							
RETA	Reutte	148.40	355	*e*P	PKPab		23 48 55.2	+0.8
	comp=Z,5.7nm,1.2s							
WATA	Walderalm	148.47	354	*e*P	PKPab		23 48 54.0	-0.7
	comp=Z,4.6nm,1.1s							
KBA	Koelnbreinsper	148.51	351	*e*P	PKPab		23 48 54.9	-0.1
	comp=Z,2.3nm,0.9s							
MOTA	Moosalm	148.51	354	*e*P	PKiKP		23 48 53.7	+0.6
	comp=Z,6.3nm,1.1s							
WTTA	Wattenberg	148.54	354	*e*P	PKiKP		23 48 53.8	+0.6
	comp=Z,3.5nm,0.7s							
SOKA	Soboth	148.62	349	*e*P	PKPab		23 48 56.7	+1.4
	comp=Z,2.9nm,0.7s							
DAVA	Damuels	148.67	356	*e*P	PKPbc		23 48 50.6	-1.4
	comp=Z,5.0nm,1.2s							
FETA	Feichten	148.87	355	*e*P	PKPab		23 48 55.5	-0.9
	comp=Z,2.9nm,1.0s							
ABTA	Abfaltersbach	148.95	352	*e*P	PKiKP		23 48 54.5	+0.5
	comp=Z,3.9nm,0.8s							
VTS	Vitosha	149.94	335	PKPdf	PKPdf		23 48 49.0	-1.4

*IDC **01** 23:31:51.9±3.7, 47°.71N×151°.88E, h67km±34km, mb3.5/8, mbtmp3.7/10, ML2.6/2, Error ellipse: s-maj=27.2km s-min=17.1km az=134.0*
ISC 01 23:31:55.3±1.0, 47°.9N±0°.2×151°.8E±0°.1, h100km, n19, σ1§33/9, mb3.9/7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	6.44	33	P	Pn		23 33 25.5	-2.0
	0.3nm,0.3s,baz=186,slow=13,SNR=7.4							
	2.7nm,0.7s							
KLR	Kul'dur	13.38	283	P	Pn		23 35 00.2	-0.8
	0.1nm,0.3s,baz=66,slow=15,SNR=1.6							
	0.3nm,0.3s							
KSRS	Korea Array	20.36	248	P	Pn		23 36 22.2	-4.3
	2.0nm,0.9s,baz=64,slow=8.5,SNR=5.8							
	2.0nm,0.9s							
H11N2	WAKE ISLAND Hy	30.61	151	T	T		00 09 20.6	
	baz=340,slow=76,SNR=39							
H11N1	WAKE ISLAND Hy	30.63	151	T	T		00 09 27.9	
	baz=340,slow=76,SNR=48							
H11N3	WAKE ISLAND Hy	30.63	151	T	T		00 09 21.9	
	baz=340,slow=76,SNR=47							
H11S1	WAKE ISLAND Hy	31.70	152	T	T		00 10 45.6	
	baz=342,slow=76,SNR=44							
H11S3	WAKE ISLAND Hy	31.70	152	T	T		00 10 46.3	
	baz=342,slow=76,SNR=47							
H11S2	WAKE ISLAND Hy	31.71	152	T	T		00 11 04.5	
	baz=342,slow=76,SNR=41							
ILAR	Eielson Array	36.23	39	P	P		23 38 48.3	+0.2
	1.0nm,0.9s,baz=255,slow=6.4,SNR=6.9							
	1.0nm,0.9s							
MKAR	Makanchi Array	45.67	296	P	P		23 40 06.6	+0.9
	1.5nm,0.7s,baz=68,slow=8.5,SNR=9.1							
	1.5nm,0.7s							
YKA	Yellowknife Ar	50.55	37	P	P		23 40 44.4	+1.4
	0.7nm,0.6s,baz=300,slow=6.5,SNR=4.0							
	0.7nm,0.6s							
FINES	FINESS Array B	62.66	334	P	P		23 42 09.3	+0.6
	1.3nm,0.8s,baz=29,slow=8.7,SNR=8.3							
	1.3nm,0.8s							
WRA	Warramunga Arr	69.30	198	P	P		23 42 50.1	-1.5
	0.6nm,0.6s,baz=11,slow=6.6,SNR=6.2							
	0.6nm,0.6s							
ASAR	Alice Springs	73.01	197	P	P		23 43 13.9	-0.1
	0.8nm,0.5s,baz=11,slow=5.7,SNR=15							
	0.8nm,0.5s							
TXAR	Lajitas Array	77.69	60	P	P		23 43 41.9	+0.8
	0.4nm,0.6s,baz=287,slow=3.8,SNR=3.6							
	0.4nm,0.6s							
H03N2	Juan Fernandez	139.60	88	T	T		02 26 02.9	
	baz=308,slow=77,SNR=5.0							
H03N1	Juan Fernandez	139.62	88	T	T		02 26 04.2	
	baz=308,slow=77,SNR=8.2							
H03N3	Juan Fernandez	139.62	88	T	T		02 26 18.2	
	baz=308,slow=77,SNR=7.4							

MAN 01 23:34:29.6, 10°.67N×123°.58E, h21km, mb4.0, ML2.8, MS2.4, 3D, Cebu

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
LLP	Lapu-Lapu	0.51	133	‖*i*	P	Pg	23 34 40.2	+0.4
LLP				*i*	S		23 34 48.2	
TBP	Tagbilaran	1.01	164	*e*	P	Pb	23 34 48.6	0.0
RCP	Roxas	1.21	317	‖*e*	P	Pb	23 34 51.0	+0.4
RCP				*e*	S		23 35 07.6	
SNPH	Sibulan	1.36	195	‖*i*	P	Pn	23 34 53.5	0.0
SNPH				*i*	S		23 35 11.3	

*IDC **02** 00:01:25.4±0.4, 16°.65S×70°.29W, h0km, mb4.9/17, mbtmp4.8/21, ML3.9/4, MS4.1/2, Error ellipse: s-maj=18.7km s-min=11.4km az=65.0*
*ARE **02** 00:01:25±2.8, 16°.80S±0°.05×70°.62W±0°.07, h16km±3km, Error ellipse: s-maj=8.9km s-min=6.5km az=78.0*
*BJI **02** 00:01:26.5±0.0, 16°.74S×69°.62W, h10km, mB5.8/8, Ms5.6/8, Ms7 5.5/8*
*NEIC **02** 00:01:27.9, 16°.84S×70°.45W, h20km, Moment Tensor Solution. Moment tensor: Scale 10^16 Nm; Mrr=0.24; Mθθ=1.21; Mϕϕ 1.45; Mrθ=0.86; Mϕr=-2.11; Mϕr=0.19; Fault plane solution: M=2.65000×10^16 NP1:ϕ=14.60000°, δ72.75000°, λ=-10.19000°. NP2:ϕ=107.65000°, δ80.27000°, λ=-162.49000°. Principal axes: T 2.6388, Plg5.0000°, Azm240.0000°; N 0.0316, Plg70.0000°, Azm136.0000°; P -2.6703, Plg19.0000°, Azm332.0000°;*
*MOS **02** 00:01:27.3±1.5, 16°.73S×70°.48W, h19km, mb5.2/43 Error ellipse: s-maj=10.8km s-min=5.8km az=112.6*
*NEIC **02** 00:01:28.1±1.8, 16°.83S±0°.05×70°.42W±0°.07, h13km±3km, mb5.2/180, Mwr4.9/29, ML4.6(ARE), Error ellipse: s-maj=9.3km s-min=6.6km az=82.0*
*VAO **02** 00:01:29.4±0.4, 16°.81S×70°.39W, h16km, mb4.8*
ISC 02 00:01:27.1±0.2, 16°.79S±0°.04×70°.43W±0°.04, h10km, n585, σ1§00/591, mb5.2/121, MS5.4/3, 13C-2D, Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PB18	Visviri	1.21	131			Pn	00 01 50.5	-0.1
AP01	Chacalluta	1.58	177			Pn	00 01 53.8	-1.4
AP01					Sn	Sn	00 02 14.9	-0.7
PB16	IPOC Station P	1.77	150	Pn	Pn	Pn	00 01 58.5	+0.1
PB12	IPOC Station P	1.82	177	Pn	Pn	Pn	00 01 57.7	-0.9
PB12				Sn	Sn	Sn	00 02 21.7	-0.1
I08BO	LAS PENAS INFR	1.98	74	Pn	Pb	Pb	00 02 02.5	-1.1
	baz=253,slow=21							
I08BO				*i*			00 11 20.0	
	baz=254,slow=328,SNR=2.5							
LPAZ	La Paz	2.26	78	Pn	Pg		00 02 10.6	+0.1
	153nm,0.3s,baz=261,slow=13,SNR=3315							
LPAZ				LR	LR		00 02 37.0	
	comp=Z,3μm,20.8s,baz=260,slow=34							
LPAZ				Sn	Sg		00 02 38.4	-1.5
	baz=164,slow=23							
LPAZ	La Paz	2.26	78	Pn	Pb		00 02 09.0	+0.6
LPAZ	La Paz	2.26	78	P	Pb		00 02 09.0	+0.6
PB11	IPOC Station P	3.05	166		Pn		00 02 15.8	+0.3
PB08	IPOC Station P	3.55	160		Pn		00 02 24.8	+2.2
TA01	Diego Aracena	3.77	176	Pn	Pn		00 02 25.3	+0.1
PB01	IPOC Station P	4.33	168		Pn		00 02 33.6	+0.5
PB02	IPOC Station P	4.54	174		Pn		00 02 37.5	+1.5
PB07	IPOC Station P	4.94	174		Pn		00 02 42.1	+0.5
PB09	IPOC Station P	5.11	168		Pn		00 02 45.3	+1.4
PB04	IPOC Station P	5.52	177		Pn		00 02 48.9	-0.7
PB06	IPOC Station P	5.94	172		Pn		00 02 55.2	-0.1
LVC	Limon Verde	5.97	166	Pn	Pn		00 02 56.9	+1.0
	20nm,0.3s,baz=6.2,slow=7.7,SNR=82							
LVC				Sn	Sn		00 04 07.8	+3.3
	2.6nm,0.3s,baz=336,slow=14,SNR=2.8							
	150nm,0.5s							
LVC	Limon Verde	5.97	166	Pn	Pn		00 02 55.7	-0.2
LVC	Limon Verde	5.97	166	P	Pn		00 02 55.7	-0.2
LVC	Limon Verde	5.97	166	*e*P	Pn		00 02 56.9	+1.0
PB15	IPOC Station P	6.45	172		Pn		00 03 02.1	-0.3
PB10	IPOC Station P	6.69	181	Pn	Pn		00 03 03.7	-1.9
PB14	IPOC Station P	7.80	180	Pn	Pn		00 03 18.8	-2.2
NNA	Nana	7.83	307	Pn	Pn		00 03 21.7	+0.4
	1.9nm,0.3s,baz=149,slow=7.7,SNR=8.5							
NNA				Sn	Sn		00 04 50.6	+0.5
	2.1nm,0.3s,baz=226,slow=15,SNR=1.5							
NNA				Lg	Lg		00 05 23.1	
	5.8nm,0.3s,baz=56,slow=20,SNR=2.5							
NNA				LR	LR		00 06 57.6	
	comp=Z,2μm,21.0s,baz=128,slow=42							
	23nm,0.8s							
NNA	Nana	7.83	307			Pn	00 03 21.9	+0.6

NNA Nana 7.83 307 eP Pn 00 03 22.1 +0.8
ETMB Extrema 8.05 31 eP Pn 00 03 25.4 +1.1
GO02 Mina Guanaco 8.37 175 Pn Pn 00 03 27.6 -1.2
SIV San Ignacio 9.02 86 Pn Pn 00 03 39.8 +2.3
0.6nm,0.3s,baz=265,slow=13,SNR=119
SIV Sn Sn 00 05 20.9 +1.7
0.2nm,0.3s,baz=228,slow=10,SNR=1.6
SIV Lg Lg 00 06 11.6
0.5nm,0.3s,baz=343,slow=19,SNR=1.6
CZSB Cruzeiro do Su 9.27 346 eP Pn 00 03 43.2 +2.2
AC01 Pan de Azucar 9.32 181 Pn 00 03 38.3 -3.3
AC02 Maricunga 10.07 173 Pn 00 03 51.2 -1.2
SAML Samuel 10.51 43 Pn Pn 00 03 57.7 -0.3
SAML Samuel 10.51 43 P Pn 00 03 57.7 -0.3
AC06 Mina Casimiro 10.52 180 Pn 00 03 55.6 -2.4
VILB Vilhena 10.60 70 eP Pn 00 04 00.5 +1.3
GO03 Copiap 10.76 179 Pn 00 03 59.5 -1.9
PTLB Pontes e Lacer 10.93 85 eP Pn 00 04 04.8 +1.0
AC04 Llanos de Chal 11.38 183 Pn 00 04 05.5 -4.3
LCO Las Campanas 12.17 181 Pn 00 04 18.3 -2.6
LCO Las Campanas 12.17 181 P Pn 00 04 18.3 -2.6
ATAH Atahualpa 12.35 320 Pn Pn 00 04 23.4 -0.1
0.3nm,0.3s,baz=182,slow=5.6,SNR=1.9
ATAH Lg Lg 00 07 50.1
0.1nm,0.3s,baz=104,slow=21,SNR=2.8
3.1nm,0.7s
CO05 La Serena 13.09 183 Pn 00 04 32.4 -0.8
CO01 Juntas del Tor 13.13 179 Pn 00 04 33.4 -0.7
GO04 Tololo Observa 13.33 181 Pn Pn 00 04 34.9 -1.8
CO06 Fray Jorge 13.87 184 Pn 00 04 42.0 -1.9
SALV Santo Antonio 14.17 89 eP Pn 00 04 47.9 -0.1
PDRB Porto dos Gac 14.24 71 eP Pn 00 04 47.7 -1.3
CO02 Combarbal 14.36 182 Pn 00 04 50.4 -0.3
ZON Zonda 14.78 174 Pn 00 04 56.8 +0.5
ZON Zonda 14.78 174 P Pn 00 04 56.8 +0.5
CLDB Colider 15.37 69 eP Pn 00 05 04.5 +0.2
CPUP Villa Florida 15.44 130 Pn Pn 00 05 04.7 -0.4
0.1nm,0.3s,baz=306,slow=11,SNR=13
17nm,1.1s
CPUP Villa Florida 15.44 130 Pn 00 05 05.2 +0.1
CPUP Villa Florida 15.44 130 P Pn 00 05 05.2 +0.1
CPUP pmax pmax
comp=Z,84nm,1.7s
CPUP Villa Florida 15.44 130 eP Pn 00 05 05.6 +0.6
BOSC San Juan Bosco 15.70 329 Pn 00 05 09.6 +0.9
VA06 Catapilco 15.72 183 Pn 00 05 07.3 -1.4
VA06 IAmb IAmb 00 05 16.4
comp=Z,191nm,1.3s
VA03 San Esteban 15.91 180 Pn 00 05 10.2 -1.1
VA03 IAmb IAmb 00 05 14.4
comp=Z,116nm,0.9s
ROC1 El Roble 16.13 182 Pn 00 05 13.0 -1.3
ROC1 IAmb IAmb 00 05 31.7
comp=Z,113nm,0.8s
VA01 Torpederas 16.20 184 Pn 00 05 13.4 -1.5
ARNL Arenillas 16.21 323 Pn 00 05 16.3 +1.2
ARNL IAmb IAmb 00 05 22.9
comp=Z,134nm,1.0s
PEL Peldehue 16.29 181 Pn 00 05 15.7 -0.4
PEL IAmb IAmb 00 05 21.1
comp=Z,209nm,1.2s
PEL Peldehue 16.29 181 P Pn 00 05 15.7 -0.4
PEL pmax pmax
comp=Z,209nm,1.2s
MT02 Curacav 16.41 182 Pn 00 05 16.6 -1.0
MT02 IAmb IAmb 00 05 22.6
comp=Z,271nm,1.2s
MT05 Renca 16.54 181 Pn 00 05 18.9 -0.4
MT05 IAmb IAmb 00 05 26.8
comp=Z,289nm,1.0s
MACA Manacapuru-AM 16.58 36 eP Pn 00 05 18.8 -1.2
MT03 Universidad Ad 16.64 180 Pn 00 05 20.4 -0.2
MT03 IAmb IAmb 00 05 30.9
comp=Z,238nm,0.9s
COHC Cochancay 16.67 328 Pn 00 05 21.4 +0.4
VA05 Santo Domingo 16.83 183 Pn 00 05 20.3 -2.6
VA05 IAmb IAmb 00 05 29.2
comp=Z,148nm,1.1s
MT09 Talagante 16.93 182 Pn 00 05 23.1 -1.2
MT09 IAmb IAmb 00 05 30.6
comp=Z,173nm,1.1s
LMEL Las Melosas 16.99 179 Pn 00 05 24.8 -0.3
LMEL IAmb IAmb 00 05 32.9
comp=Z,262nm,0.9s
BO04 La Punta 17.13 181 Pn 00 05 24.5 -2.2
BO04 IAmb IAmb 00 05 35.9
comp=Z,196nm,1.2s
BO01 Tunca 17.54 182 Pn 00 05 29.2 -2.6
BO01 IAmb IAmb 00 05 35.7
comp=Z,308nm,1.6s
TRCB Terra Rica 17.77 112 P P 00 05 35.2 -0.5
TRCB IAmb IAmb 00 05 39.2
comp=Z,259nm,1.5s
SLOR San Lorenzo - 17.83 333 P P 00 05 37.2 +0.5
ITQB Itaqui 18.02 138 P P 00 05 38.2 +0.1
ITQB IAmb IAmb 00 05 48.6
comp=Z,163nm,1.3s
GO05 Huala 18.20 184 Pn 00 05 38.0 -2.0
OTAV Otavalo 18.67 334 P Pn 00 05 46.6 +0.3
OTAV Otavalo 18.67 334 P Pn 00 05 46.6 +0.3
OTAV pmax pmax
comp=Z,60nm,1.5s
OTAV Otavalo 18.67 334 eP Pn 00 05 49.1 +2.7
PCMB Pacaembu 18.72 108 eP Pn 00 05 47.3 +0.8
TULM Tulcn-Chalpat 18.85 337 P Pn 00 05 49.0 +0.6
TULM Tulcn-Chalpat 18.85 337 eP Pn 00 05 56.7 +8.3
PTGB Pitanga 18.89 118 eP Pn 00 05 48.6 +0.1
ML02 Panimavida 18.92 182 P P 00 05 47.4 -0.7
ML02 IAmb IAmb 00 05 53.0
comp=Z,148nm,0.9s
ITTB Itaituba 18.98 51 eP P 00 05 48.9 0.0
MACC Macarena, Meta 19.11 350 eP P 00 05 50.0 -0.3
SNDB Serra Nova Dou 19.14 78 eP Pn 00 05 51.6 +0.1
GCUF Volcan Galeras 19.16 338 eP Pn 00 05 53.9 +1.7
ITRB Iturama 19.28 102 eP Pn 00 05 53.4 +0.2
CRUC La Cruz 19.34 340 eP Pn 00 05 55.8 +1.5
GARC Garzon, Huila 19.50 345 eP Pn 00 05 56.7 +0.6
SOTA Rioblanco 19.77 341 eP Pn 00 06 00.6 +1.1
ITAB Concordia 19.87 125 P P 00 05 57.3 -1.3
ITAB IAmb IAmb 00 06 02.2
comp=Z,238nm,1.4s
ITAB Concordia 19.87 125 eP P 00 05 57.9 -0.7
PCON Cinco Dias 19.89 342 eP Pn 00 06 01.5 +0.5
BI05 Punta Hualpn 20.03 186 P P 00 05 59.6 -0.6
POPC Popayan, Colom 20.17 342 eP Pn 00 06 03.4 -0.6
CPSB Cacapava Do Su 20.61 134 eP P 00 06 06.4 -0.1
FRTB Fartura 20.64 112 eP P 00 06 07.5 +0.4
PRAC Prado 20.84 347 eP Pn 00 06 15.9 +4.2
PTGC Puerto Gaitan, 20.92 355 eP P 00 06 11.1 +1.1
ORTC Ortega, Tolima 21.11 347 eP P 00 06 11.1 -1.0
IPMB Ipameri, GO 21.24 97 eP P 00 06 12.9 -0.6
PLTB Pedras Altas 21.35 137 P P 00 06 13.3 -1.3
PLTB Pedras Altas 21.35 137 eP P 00 06 14.1 -0.4
BOAV Boa Vista 21.42 28 eP P 00 06 16.8 +1.4
YOTC Yotoco, Valle 21.45 344 eP P 00 06 14.9 -0.9
BDFB Brasilia 21.55 90 P P 00 06 16.4 -0.7
comp=Z,8.7nm,1.0s,baz=269,slow=14,SNR=8.4
comp=Z,8.7nm,1.0s
BDFB Brasilia 21.55 90 P P 00 06 16.3 -0.7
BDFB Brasilia 21.55 90 P P 00 06 16.3 -0.7
BDFB pmax pmax
comp=Z,74nm,1.7s
BDFB Brasilia 21.55 90 eP P 00 06 17.2 +0.2
MALB Monte Alegre 21.75 49 eP P 00 06 19.1 +0.1
ROSC El Rosal 21.83 350 P P 00 06 21.1 +0.9
ROSC El Rosal 21.83 350 P P 00 06 21.1 +0.9
ROSC pmax pmax
comp=Z,30nm,1.3s
CNLB Canela 21.87 128 eP P 00 06 19.8 -0.4
PEXB Peixe 21.92 81 eP P 00 06 21.3 +0.4
RCLB Rio Claro- Sao 22.27 108 eP P 00 06 25.4 +0.8
RUSC La Rusia 22.69 353 eP P 00 06 28.4 -1.2
PRPB Parauapebas 22.76 65 eP P 00 06 30.2 +0.4
LR03 Panguipulli 22.82 184 P P 00 06 29.9 -0.4
LR03 IAmb IAmb 00 06 34.5
comp=Z,86nm,0.9s
TER01 Tubaro-SC 22.83 125 eP P 00 06 29.8 -0.7
VAO Valinhos 22.90 109 eP P 00 06 31.4 +0.1
PET01 Itanhaem-SP 22.91 113 eP P 00 06 31.4 +0.1
LR04 Corral 23.16 186 P P 00 06 34.1 +0.4
SMTB Santa Maria do 23.60 73 eP P 00 06 38.5 0.0
PLCA Paso Flores 23.86 180 P P 00 06 41.2 +0.4
comp=Z,99nm,0.8s,baz=358,slow=11,SNR=41
comp=Z,99nm,0.8s
PLCA Paso Flores 23.86 180 P P 00 06 40.8 0.0
PLCA Paso Flores 23.86 180 P P 00 06 40.8 0.0
PLCA pmax pmax
comp=Z,195nm,1.0s
PLCA Paso Flores 23.86 180 eP P 00 06 41.1 +0.3
LL04 Puerto Octay 24.10 184 eP P 00 06 42.5 -0.4
PARB Paraibuna 24.18 110 eP P 00 06 43.6 -0.4
LL03 Petrohue 24.33 184 P P 00 06 45.2 +0.2
MCPB Macapa, AP 24.38 50 eP P 00 06 46.6 +0.9
LL05 Los Muermos 24.67 185 P P 00 06 48.1 0.0
SDBA SAO DESIDERIO 25.07 83 eP P 00 06 51.4 -0.7
JANB Januaria 25.17 90 eP P 00 06 52.0 -1.0
ESAR Angra dos Reis 25.19 108 eP P 00 06 53.0 0.0
PAYG Puerto Ayora 25.28 307 P P 00 06 55.3 +1.4
PAYG IAmb IAmb 00 06 59.4
comp=Z,64nm,1.2s
SDV Santo Domingo 25.51 360 P P 00 06 54.7 -1.4
comp=Z,13nm,0.4s,baz=207,slow=7.3,SNR=10.0
comp=Z,13nm,0.4s
SDV Santo Domingo 25.51 360 P P 00 06 55.7 -0.4
SDV Santo Domingo 25.51 360 eP P 00 06 57.8 +1.7
MAN01 Angra dos Reis 25.60 108 eP P 00 06 58.2 +1.4
BAUV El Salto 25.67 5 P P 00 06 57.7 +0.3
VAS01 Vassouras-RJ 25.99 106 eP P 00 07 01.5 +1.1
CAPC Capurgana 26.17 344 eP P 00 07 00.9 -1.0
TMAB Tom-Au,PA,Br 26.22 59 eP P 00 07 03.0 +0.6
LL02 Futaleuf 26.34 182 P P 00 07 03.1 -0.2
LL02 IAmb IAmb 00 07 10.1
comp=Z,137nm,1.9s
GO07 Milladeo Hill, 26.39 185 P P 00 07 03.4 -0.2
GO07 IAmb IAmb 00 07 09.8
comp=Z,102nm,1.1s
SJCC San Jacinto, C 26.93 350 P P 00 07 08.0 -0.8
SJCC San Jacinto, C 26.93 350 eP P 00 07 06.7 -2.1
DUB01 Friburgo-RJ 26.95 106 eP P 00 07 08.9 -0.2
BIRV Birongo 27.40 9 P P 00 07 12.9 -0.1
BCIP Isla Barro Col 27.41 339 P P 00 07 13.3 +0.1
BCIP IAmb IAmb 00 07 23.0
comp=Z,36nm,1.1s
BCIP Isla Barro Col 27.41 339 P P 00 07 13.3 +0.1
BCIP pmax pmax
comp=Z,36nm,1.2s
CAM01 Campos-RJ 27.59 105 eP P 00 07 14.4 -0.3
AY01 Puyuhuapi 27.61 183 P P 00 07 13.9 -0.7
AY01 IAmb IAmb 00 07 17.4
comp=Z,28nm,0.9s
BRU2 Volcan 28.16 334 P P 00 07 20.4 +0.4
BRU2 IAmb IAmb 00 07 36.4
comp=Z,46nm,1.1s
COYC Coyhaique 28.73 182 P P 00 07 23.7 -0.9
COYC IAmb IAmb 00 07 28.0
comp=Z,36nm,0.9s
SRBA San Rafael, Bu 28.84 333 P P 00 07 26.7 +0.7
NBPS Pedro II - PI 30.98 70 eP P 00 07 45.2 +0.2
NBPB Pedra_Branca-C 32.20 73 eP P 00 07 56.7 +0.9
NBMA Muriti-CE 32.30 77 eP P 00 07 56.1 -0.6
NBMO Morrinhos-CE 32.71 69 eP P 00 08 00.5 +0.3
MATN Matagalpa 33.26 332 P P 00 08 06.7 +1.8
NBAN Anadia - AL 33.95 82 eP P 00 08 10.0 -1.1
MG05 Puerto Natales 34.85 182 P P 00 08 18.3 0.0
MG05 IAmb IAmb 00 08 21.8
comp=Z,40nm,1.2s
TGUH Tegucigalpa,Un 34.87 331 P P 00 08 17.5 -1.5
TGUH IAmb IAmb 00 08 21.9
comp=Z,33nm,0.9s
GCPR Guaynabo City 35.14 7 P P 00 08 20.4 -0.7
CUPR Culebra, Puert 35.24 8 P P 00 08 19.0 -2.9
CUPR IAmb IAmb 00 08 21.6
comp=Z,20nm,0.9s
RCBR Riachuelo 35.50 76 P P 00 08 23.2 -1.2
RCBR IAmb IAmb 00 08 27.2
comp=Z,61nm,1.6s
RCBR Riachuelo 35.50 76 P P 00 08 23.2 -1.2
RCBR pmax pmax
comp=Z,61nm,1.6s
EFI East Falkland 36.17 167 P P 00 08 29.8 +0.2
EFI East Falkland 36.17 167 ceP P 00 08 30.7 +1.0
EFI pmax pmax
comp=Z,138nm,1.1s
ESQI Esquipulas 36.32 328 P P 00 08 32.0 +0.7
MG03 Isla Dawson 36.98 180 P P 00 08 36.6 +0.1
MG03 IAmb IAmb 00 08 40.8
comp=Z,70nm,0.9s
USHA Ushuaia 38.00 178 P P 00 08 45.5 +0.3
comp=Z,11nm,0.6s,baz=5.6,slow=8.2,SNR=9.9
comp=Z,11nm,0.6s
PETF Flores 38.58 329 P P 00 08 51.1 +0.6
CCIG Comitan 39.22 326 P P 00 08 56.0 0.0
TLIG Tlapa 43.97 320 P P 00 09 35.8 +0.9
TLIG IAmb IAmb 00 09 39.8
comp=Z,30nm,1.3s
HOPE Hope Point 45.69 153 P P 00 09 48.4 +0.3
HOPE Hope Point 45.69 153 P P 00 09 48.4 +0.3
HOPE pmax pmax
comp=Z,239nm,1.7s
DWPF Disney Wildern 45.89 346 P P 00 09 49.1 -0.8
baz=165
MOIG Morelia 47.19 319 P P 00 10 01.6 +1.0
ORCD Orcadas 47.62 163 P P 00 10 02.4 -0.6
352A Blakely 49.97 344 P P 00 10 21.2 -0.2
352A IAmb IAmb 00 10 22.7
comp=Z,28nm,0.8s
BRAL Brewton 50.28 341 P P 00 10 23.6 -0.2
BRAL Brewton 50.28 341 P P 00 10 24.0 +0.2
baz=159
ZAIG Zacatecas 50.34 320 P P 00 10 24.8 -0.1
ZAIG IAmb IAmb 00 10 28.7
comp=Z,24nm,1.2s
NHSC New Hope 50.48 349 P P 00 10 24.6 -0.7
baz=168
250A Grady 50.81 343 P P 00 10 27.5 -0.3
250A IAmb IAmb 00 10 29.2
comp=Z,37nm,0.8s
152A Waverly Hall 51.04 344 P P 00 10 29.0 -0.6
152A IAmb IAmb 00 10 31.4
comp=Z,23nm,1.0s
346A Big Creek Wild 51.27 339 P P 00 10 30.7 -0.6
GOGA Godfrey 51.45 346 P P 00 10 31.8 -0.8
baz=164
LRAL Lakeview Retre 52.01 342 P P 00 10 35.8 -1.0
LRAL Lakeview Retre 52.01 342 P P 00 10 36.0 -0.8
baz=160,SNR=9.9
Y52A Lilburn 52.02 346 P P 00 10 36.1 -0.8
VBMS Vicksburg 52.39 338 P P 00 10 38.8 -0.8
VBMS IAmb IAmb 00 10 40.7
comp=Z,62nm,1.1s
VBMS Vicksburg 52.39 338 P P 00 10 39.2 -0.5
baz=156
HKT Hockley 52.53 332 iP P 00 10 40.8 +0.2
HKT pmax pmax
comp=Z,11nm,1.1s
833A Chaparral WMA, 52.89 328 P P 00 10 43.6 +0.2
833A IAmb IAmb 00 10 45.8
comp=Z,25nm,0.8s
833A Chaparral WMA, 52.89 328 P P 00 10 43.7 +0.2
baz=145,SNR=12
FPAL Fort Paine 53.05 344 P P 00 10 44.4 -0.1
NATX Nacogdoches 53.58 334 P P 00 10 49.4 +1.0
NATX IAmb IAmb 00 10 51.2
comp=Z,32nm,0.7s
NATX Nacogdoches 53.58 334 P P 00 10 49.7 +1.3
baz=151
CPCT Cooper Cave 53.64 346 P P 00 10 48.1 -0.8
TKL Tuckaleechee C 53.67 347 P P 00 10 48.3 -0.7
TKL Tuckaleechee C 53.67 347 P P 00 10 48.3 -0.7
TKL pmax pmax
comp=Z,9.0nm,0.9s
SWET Sewanee 53.77 344 P P 00 10 49.1 -0.8
435B Jarrell 54.03 331 P P 00 10 52.2 +0.4
baz=148
OXF Oxford 54.12 341 P P 00 10 51.2 -1.1
OXF Oxford 54.12 341 P P 00 10 51.2 -1.1
OXF pmax pmax
comp=Z,46nm,1.0s
OXF Oxford 54.12 341 P P 00 10 51.8 -0.6
baz=158
Z41A Richland Creek 54.16 337 P P 00 10 53.0 +0.4
baz=153
TZTN Tazewell 54.47 347 P P 00 10 54.6 -0.3
baz=165
WLAR White Oak Lake 54.66 337 P P 00 10 56.6 +0.3
JCT Junction City 54.85 329 P P 00 10 57.7 -0.1
JCT IAmb IAmb 00 11 02.3
comp=Z,17nm,0.9s
JCT Junction City 54.85 329 P P 00 10 57.7 -0.1
JCT pmax pmax
comp=Z,17nm,0.9s
JCT Junction City 54.85 329 P P 00 10 58.0 +0.2
baz=145,SNR=7.2
WHTX Lake Whitney, 54.99 332 P P 00 10 58.7 0.0
WHTX Lake Whitney, 54.99 332 P P 00 10 58.7 0.0
baz=148
WVT Waverly 55.15 343 P P 00 10 57.7 -2.0
WVT IAmb IAmb 00 10 59.9
comp=Z,15nm,0.8s
WVT Waverly 55.15 343 P P 00 10 57.7 -2.0
WVT pmax pmax
comp=Z,15nm,0.8s
WVT Waverly 55.15 343 P P 00 10 58.2 -1.5
baz=160
X40A Basin Creek Fa 55.27 337 P P 00 11 00.2 -0.5
baz=154
HPIG 55.31 321 P P 00 11 02.0 +0.6
HPIG IAmb IAmb 00 11 04.0
comp=Z,10nm,0.6s
UALR University of 55.35 338 P P 00 11 00.1 -1.2
UALR IAmb IAmb 00 11 03.1
comp=Z,40nm,1.1s
MIAR Mount Ida 55.60 337 P P 00 11 02.0 -1.1
MIAR IAmb IAmb 00 11 05.3
comp=Z,44nm,1.1s
MIAR Mount Ida 55.60 337 P P 00 11 02.0 -1.1
MIAR pmax pmax
comp=Z,44nm,1.2s
MIAR Mount Ida 55.60 337 P P 00 11 02.6 -0.4
baz=153,SNR=22
W41B Gary Mavity, V 55.67 338 P P 00 11 02.6 -0.9
baz=155,SNR=15
WHAR Wooly Hollow 55.79 338 P P 00 11 03.1 -1.3
WHAR IAmb IAmb 00 11 06.1
comp=Z,28nm,1.0s
TX32 Lajitas Array 55.97 325 P P 00 11 05.4 -0.5
TXAR Lajitas Array 55.97 325 P P 00 11 05.6 -0.4
comp=Z,13nm,1.2s,baz=145,slow=7.5,SNR=37
comp=Z,13nm,1.2s
TXAR Lajitas Array 55.97 325 P P 00 11 05.5 -0.5
W39A Magazine 56.25 337 P P 00 11 07.3 -0.5
W39A IAmb IAmb 00 11 09.9
comp=Z,44nm,1.1s
W39A Magazine 56.25 337 P P 00 11 07.4 -0.3
baz=153,SNR=16
X37A Clayton 56.33 335 P 00 11 08.4 +0.1
ABTX Abilene, Hawle 56.53 330 P P 00 11 09.5 -0.3
ABTX Abilene, Hawle 56.53 330 P P 00 11 09.7 -0.1
baz=146,SNR=17
U40A Yellville 56.95 338 P P 00 11 11.2 -1.5
baz=154,SNR=22
P52A Corning 57.18 349 P P 00 11 13.2 -1.0
baz=167
HHAR Hobbs 57.27 337 P P 00 11 13.7 -1.4
HHAR IAmb IAmb 00 11 16.2
comp=Z,36nm,1.2s
TUL1 Leonard 57.65 336 P P 00 11 17.1 -0.5
TUL1 Leonard 57.65 336 P P 00 11 17.3 -0.3
baz=151,SNR=7.5
WMOK Wichita Mounta 57.90 333 P P 00 11 16.9 -2.5
baz=148,SNR=6.0
ACSO Alum Creek Sta 57.92 349 P P 00 11 17.8 -1.6
baz=166
CCM Cathedral Cave 57.95 341 P P 00 11 18.2 -1.5
CCM IAmb IAmb 00 11 21.1
comp=Z,34nm,0.9s
CCM Cathedral Cave 57.95 341 P P 00 11 18.2 -1.5
CCM pmax pmax
comp=Z,34nm,0.9s
CCM Cathedral Cave 57.95 341 P P 00 11 18.3 -1.4
baz=156
O48B Farmland 58.38 347 P P 00 11 21.0 -1.7
baz=164,SNR=7.0
MNTX Cornudas Mount 58.73 325 P P 00 11 23.9 -1.4
MNTX IAmb IAmb 00 11 26.8
comp=Z,19nm,1.1s
MNTX Cornudas Mount 58.73 325 P P 00 11 24.4 -0.9
baz=140,SNR=32
T35A Sooner Cattle 58.81 336 P 00 11 25.2 -0.6
SFIN Lafayette 58.95 345 P P 00 11 24.8 -1.8
SFIN IAmb IAmb 00 11 26.1
comp=Z,11nm,0.7s
SFIN Lafayette 58.95 345 P P 00 11 24.9 -1.7
baz=161
MSTX Muleshoe 59.14 329 P P 00 11 28.3 +0.1
baz=144,SNR=26
AMTX Amarillo 59.35 330 P P 00 11 29.2 -0.5
AMTX IAmb IAmb 00 11 31.2
comp=Z,31nm,1.4s
AMTX Amarillo 59.35 330 P P 00 11 28.7 -1.0
baz=145
P40A Paris 59.55 341 P P 00 11 29.0 -1.8
HDIL Hopedale 59.69 343 P P 00 11 30.0 -1.7
baz=159,SNR=6.1
121A Cookes Peak, D 60.69 324 P P 00 11 39.3 +0.2
121A IAmb IAmb 00 11 41.6
comp=Z,19nm,1.1s
121A Cookes Peak, D 60.69 324 P P 00 11 38.6 -0.5
baz=138,SNR=11
319A Douglas 60.70 322 P P 00 11 39.0 0.0
319A IAmb IAmb 00 11 41.4
comp=Z,21nm,1.2s
CRNM Carthage 61.18 326 P P 00 11 42.6 +0.3
CBKS Cedar Bluff 61.75 334 P P 00 11 46.0 +0.1
CBKS Cedar Bluff 61.75 334 P P 00 11 46.0 +0.1
CBKS pmax pmax
comp=Z,48nm,1.1s
CBKS Cedar Bluff 61.75 334 P P 00 11 46.1 +0.2
baz=148,SNR=7.5
PKME Peaks-Kenny Pk 61.76 1 P P 00 11 45.0 -0.8
PKME Peaks-Kenny Pk 61.76 1 P P 00 11 45.2 -0.5
baz=181
ANMO Albuquerque 61.79 327 P P 00 11 46.2 -0.2
ANMO IAmb IAmb 00 11 50.7
comp=Z,19nm,1.6s
ANMO Albuquerque 61.79 327 ceP P 00 11 46.4 0.0
ANMO pmax pmax
comp=Z,13nm,1.6s
ANMO Albuquerque 61.79 327 P P 00 11 46.5 0.0
baz=140
JFWS Jewell Farm 62.14 344 P P 00 11 47.3 -1.1
baz=159,SNR=9.9
TUC Tucson 62.26 322 P P 00 11 48.9 -0.7
TUC Tucson 62.26 322 P P 00 11 48.9 -0.7
TUC pmax pmax
comp=Z,9.0nm,1.4s
TUC Tucson 62.26 322 P P 00 11 49.2 -0.3
baz=136
T25A Trinidad 62.47 330 P P 00 11 51.2 +0.2
T25A IAmb IAmb 00 11 53.6
comp=Z,23nm,1.1s
T25A Trinidad 62.47 330 P P 00 11 51.6 +0.5
baz=143,SNR=9.6
LMN Caledonia Moun 62.55 4 P P 00 11 49.4 -1.6
KSCO Kaye Shedlock' 63.16 332 P P 00 11 55.9 +0.5
baz=145,SNR=9.3
214A Organ Pipe Nat 63.24 320 P P 00 11 57.3 +1.3
baz=134,SNR=16
BGNE Belgrade 63.34 337 P P 00 11 56.9 +0.5
baz=150
X18A Snowflake 63.38 324 P P 00 11 57.0 -0.1
X18A IAmb IAmb 00 12 00.2
comp=Z,23nm,1.3s
SDCO Great Sand Dun 63.48 329 P P 00 11 57.9 +0.1
SDCO IAmb IAmb 00 12 00.4
comp=Z,32nm,1.1s
SDCO Great Sand Dun 63.48 329 P P 00 11 58.0 +0.2
baz=142,SNR=33
W18A Petrified Fore 63.69 325 P P 00 11 59.4 +0.3
baz=138
BATG Bathurst New B 63.89 3 P P 00 11 58.3 -1.6
S22A 4UR Ranch, Cre 64.14 328 P P 00 12 02.3 +0.2
baz=141,SNR=6.6
Q24A Divide 64.28 330 P P 00 12 03.7 +0.7
baz=143,SNR=10
113A Mohawk Valley, 64.38 320 P P 00 12 03.7 +0.3
113A IAmb IAmb 00 12 08.0
comp=Z,24nm,1.4s
OGNE Ogallala 64.49 334 P P 00 12 04.2 0.0
OGNE Ogallala 64.49 334 P P 00 12 04.8 +0.6
baz=146,SNR=7.9
MVCO Mesa Verde 64.58 327 P P 00 12 05.1 +0.1
MVCO IAmb IAmb 00 12 07.1

comp=Z,28nm,1.2s
MVCO Mesa Verde 64.58 327 P P 00 12 05.4 +0.4
baz=139,SNR=15
ECSD EROS Data Cent 64.83 339 P P 00 12 05.2 -0.9
ECSD EROS Data Cent 64.83 339 P P 00 12 05.9 -0.2
baz=152,SNR=38
WUAZ Wupatki 64.90 324 P P 00 12 07.6 +0.6
WUAZ IAmb IAmb 00 12 09.7
comp=Z,27nm,1.1s
WUAZ Wupatki 64.90 324 P P 00 12 07.5 +0.5
baz=136,SNR=19
VNA3 Neumayer Olymp 64.98 162 P P 00 12 07.2 +0.3
SPMN Marine on St. 64.98 343 P P 00 12 05.6 -1.5
baz=156
ISCO Idaho Springs 65.16 331 P P 00 12 08.6 -0.2
ISCO IAmb IAmb 00 12 11.2
comp=Z,14nm,0.9s
ISCO Idaho Springs 65.16 331 P P 00 12 08.6 -0.2
ISCO pmax pmax
comp=Z,14nm,1.0s
ISCO Idaho Springs 65.16 331 P P 00 12 09.1 +0.3
baz=143,SNR=22
VNA1 Neumayer--Stat 65.18 161 P P 00 12 09.0 +0.8
GLA Glamis 65.23 320 P P 00 12 08.8 -0.2
baz=133
PV15 Paradox Valley 65.43 328 P P 00 12 11.0 +0.5
VNA2 Neumayer--Watz 65.55 161 P P 00 12 11.0 +0.4
baz=277,slow=6.0
PDMCI Parker Dam,Lak 65.66 321 P P 00 12 11.5 -0.2
baz=134
IKP In-Ko-Pah, Jac 65.77 319 P P 00 12 14.0 +1.4
baz=132,SNR=7.1
SWSC Sam W. Stewart 65.77 319 P P 00 12 13.6 +1.1
baz=132
BC3 Big Chuckawall 66.02 320 P P 00 12 15.4 +1.2
baz=132
MONP2 Monument Peak 66.12 319 P P 00 12 16.1 +1.1
baz=131,SNR=5.4
IRM Iron Mountain 66.17 320 P P 00 12 16.5 +1.4
baz=133,SNR=11
N23A Red Feather La 66.18 331 P P 00 12 16.3 +1.0
baz=143,SNR=11
SUSD Miller 66.26 338 P P 00 12 15.2 -0.3
baz=150
BELC Belle Mtn. Jos 66.59 320 P P 00 12 19.4 +1.4
baz=132
TPFO Pinon Flats 66.61 319 P P 00 12 19.3 +1.2
baz=132
PFO Pinyon Flats O 66.62 319 P P 00 12 18.5 +0.4
PFO Pinyon Flats O 66.62 319 P P 00 12 18.5 +0.4
PFO pmax pmax
comp=Z,14nm,1.4s
PFO Pinyon Flats O 66.62 319 P P 00 12 19.2 +1.1
baz=132,SNR=5.2
O20A White River Ci 66.68 329 P P 00 12 19.4 +1.0
baz=140,SNR=8.5
PKCU Pink Cliffs 66.81 325 P P 00 12 20.0 +0.5
PKCU IAmb IAmb 00 12 22.2
comp=Z,15nm,1.1s
GMRC Granite Mounta 66.91 321 P P 00 12 20.7 +0.8
baz=132,SNR=12
MURC Murrieta 67.07 319 P P 00 12 22.3 +1.4
baz=131
EYMN Ely 67.14 345 P P 00 12 19.8 -1.2
EYMN IAmb IAmb 00 12 21.7
comp=Z,19nm,0.8s
SNAA Sanae 67.18 161 P P 00 12 21.4 +0.3
SNAA Sanae 67.18 161 ⇓*iP* P 00 12 22.0 +0.9
SNAA Sanae 67.18 161 P P 00 12 21.1 +0.1
SNAA Sanae 67.18 161 *ce*P P 00 12 21.7 +0.6
SNAA pmax pmax
comp=Z,65nm,1.7s
HEC Hector,Ludlow 67.35 320 P P 00 12 24.2 +1.5
baz=132,SNR=10
RWWY Rawlins 67.39 331 P P 00 12 23.3 +0.3
RWWY IAmb IAmb 00 12 25.1
comp=Z,16nm,1.1s
TUQ Turquoise Moun 67.50 321 P P 00 12 25.3 +1.6
baz=132,SNR=11
SHPR Sheep Range 67.77 322 P P 00 12 26.2 +0.8
SHPR IAmb IAmb 00 12 28.3
comp=Z,13nm,1.1s
BFSC Mount Baldy Ra 67.78 319 P P 00 12 26.6 +1.1
baz=131,SNR=5.6
K22A Casper 67.83 332 P P 00 12 26.6 +0.9
baz=143
RSSD Black Hills 67.95 335 P P 00 12 26.4 0.0
RSSD IAmb IAmb 00 12 28.9
comp=Z,18nm,1.3s
RSSD Black Hills 67.95 335 P P 00 12 26.4 0.0
RSSD pmax pmax
comp=Z,18nm,1.3s
RSSD Black Hills 67.95 335 P P 00 12 27.1 +0.7
baz=145
GSC Goldstone, Bar 67.95 320 P P 00 12 27.8 +1.3
baz=132,SNR=12
EDW2 Edwards Air Fo 68.41 319 P P 00 12 30.4 +1.0
baz=131
LIC Lamto 68.56 76 *e*PKP1 P 00 12 30.7 0.0
comp=Z,32nm,1.3s
LRMC Laurel Mtn Rad 68.61 320 P P 00 12 31.9 +1.2
baz=131
AGMN Agassiz Nation 68.66 342 P P 00 12 29.3 -1.2
AGMN Agassiz Nation 68.66 342 P P 00 12 29.9 -0.6
baz=154
TPNV Topopah Spring 68.72 322 P P 00 12 32.2 +0.9
TPNV Topopah Spring 68.72 322 P P 00 12 32.3 +0.9
TPNV pmax pmax
comp=Z,8.0nm,1.1s
TPNV Topopah Spring 68.72 322 P P 00 12 32.6 +1.3
baz=133,SNR=18
TIC Toumodi 68.72 76 *e*PKP1 P 00 12 31.0 -0.6
comp=Z,89nm,1.3s
FURC Furnace Creek, 68.76 321 P P 00 12 32.5 +1.2
baz=132,SNR=8.2
KIC Kosan Boka 68.88 76 *e*PKP1 P 00 12 31.5 -1.1
comp=Z,29nm,0.8s
DBIC Dimbokro 68.88 76 *e*P P 00 12 31.8 -0.8
DBIC IAmb IAmb 00 12 34.1
comp=Z,18nm,1.1s
DBIC Dimbokro 68.88 76 P P 00 12 31.2 -1.4
comp=Z,18nm,0.9s,baz=252,slow=6.4,SNR=12
comp=Z,18nm,0.9s
DBIC Dimbokro 68.88 76 P P 00 12 31.6 -1.0
DBIC Dimbokro 68.88 76 P P 00 12 31.6 -1.0
DBIC pmax pmax
comp=Z,42nm,1.2s
TROLL Troll, Antarti 68.89 161 P P 00 12 31.8 -0.2
DUG Dugway, Tooele 69.06 326 P P 00 12 33.6 +0.3
DUG IAmb IAmb 00 12 36.5
comp=Z,27nm,1.2s
DUG Dugway, Tooele 69.06 326 P P 00 12 33.6 +0.3
DUG pmax pmax
comp=Z,27nm,1.2s
DUG Dugway, Tooele 69.06 326 P P 00 12 34.3 +0.9
baz=136,SNR=25
ARVC Arvin 69.09 319 P P 00 12 34.8 +1.3
baz=130
ISA Isabella, Lake 69.21 320 P P 00 12 35.2 +0.9
ISA IAmb IAmb 00 12 37.3
comp=Z,22nm,1.2s
ISA Isabella, Lake 69.21 320 P P 00 12 35.2 +0.9
ISA pmax pmax
comp=Z,22nm,1.3s
ISA Isabella, Lake 69.21 320 P P 00 12 35.8 +1.4
baz=130,SNR=8.1
R11A Troy Canyon, C 69.28 323 P P 00 12 35.8 +1.0
baz=134,SNR=21
BW06 Boulder Array 69.33 330 P P 00 12 34.9 -0.2
BW06 IAmb IAmb 00 12 37.8
comp=Z,36nm,1.6s
BW06 Boulder Array 69.33 330 P P 00 12 35.8 +0.7
baz=140,SNR=17
PDAR Pinedale Array 69.33 330 P P 00 12 34.3 -0.8
comp=Z,5.0nm,0.8s,baz=134,slow=6.4,SNR=25
comp=Z,5.0nm,0.8s
PDAR Pinedale Array 69.33 330 P P 00 12 35.0 -0.2
GRAC Grapevine Rang 69.41 321 P P 00 12 37.1 +1.6
baz=132
MDND Maddock 69.44 339 P P 00 12 35.9 +0.5
baz=150,SNR=9.8
CWC Cottonwood Cre 69.48 320 P P 00 12 37.4 +1.3
baz=131
PKM Mcpherson Peak 69.56 318 P P 00 12 37.6 +1.0
baz=129,SNR=6.8
VES Vestal, Richgr 69.71 319 P P 00 12 38.6 +1.3
baz=130

TPH Tonopah 70.04 322 P P 00 12 40.4 +0.8
TPH Tonopah 70.04 322 P P 00 12 40.4 +0.8
TPH pmax pmax
comp=Z,67nm,1.1s
AHID Auburn Hatcher 70.07 329 P P 00 12 39.9 +0.2
AHID IAmb IAmb 00 12 41.8
comp=Z,16nm,1.0s
ULM Lac du Bonnet 70.41 343 P P 00 12 40.0 -1.4
comp=Z,28nm,0.7s,baz=151,slow=5.9,SNR=24
comp=Z,28nm,0.7s
ULM Lac du Bonnet 70.41 343 P P 00 12 39.9 -1.4
ULM Lac du Bonnet 70.41 343 P P 00 12 39.9 -1.4
ULM pmax pmax
comp=Z,47nm,1.0s
ELK Elko 70.75 325 P P 00 12 43.4 -0.5
ELK Elko 70.75 325 P P 00 12 43.4 -0.5
ELK pmax pmax
comp=Z,9.0nm,1.1s
NV11 Mina Array Sit 70.83 322 P P 00 12 44.7 +0.4
MDPB Devils Postpil 70.86 321 P P 00 12 45.4 +0.7
MDPB IAmb IAmb 00 12 49.4
comp=Z,19nm,1.0s
NVAR Mina Array Bea 70.92 322 P P 00 12 44.5 -0.5
comp=Z,4.7nm,1.0s,baz=140,slow=6.0,SNR=28
comp=Z,4.7nm,1.0s
NVAR Mina Array Bea 70.92 322 P P 00 12 45.1 +0.1
LAO LASA Array 70.93 335 P P 00 12 44.4 -0.3
LAO LASA Array 70.93 335 P P 00 12 45.5 +0.9
baz=144,SNR=7.3
RLMT Red Lodge 71.00 332 P P 00 12 45.9 +0.6
baz=141
H17A Grant Village 71.05 331 P P 00 12 47.0 +1.3
baz=139
YPP Pitchstone Pla 71.06 331 P P 00 12 45.7 -0.1
SCHQ Schefferville 71.40 2 P P 00 12 45.7 -1.5
comp=Z,3.0nm,0.8s,baz=201,slow=4.7,SNR=4.5
comp=Z,3.0nm,0.8s
DGMT Dagmar 71.60 337 P P 00 12 49.0 +0.5
DGMT Dagmar 71.60 337 P P 00 12 49.8 +1.2
baz=146,SNR=5.5
GCMT Greycliff 71.70 332 P P 00 12 50.1 +0.7
NVL N'lazarevskaya 71.73 160 *e*P P 00 12 52.9 +3.8
NVL pmax pmax
comp=Z,20nm,0.8s
CMB Columbia Colle 71.91 321 P P 00 12 51.1 +0.4
CMB Columbia Colle 71.91 321 P P 00 12 51.1 +0.4
CMB pmax pmax
comp=Z,12nm,1.5s
HLID Hailey 72.31 328 P P 00 12 53.3 +0.1
HLID Hailey 72.31 328 P P 00 12 53.9 +0.8
baz=136,SNR=23
BOZ Bozeman (W) 72.44 331 P P 00 12 54.0 +0.1
BOZ Bozeman (W) 72.44 331 P P 00 12 54.0 +0.1
BOZ pmax pmax
comp=Z,12nm,0.9s
BOZ Bozeman (W) 72.44 331 P P 00 12 54.4 +0.5
baz=139,SNR=21
KOWA Kowa 72.55 69 P P 00 12 53.9 -1.0
KOWA IAmb IAmb 00 12 56.8
comp=Z,46nm,1.8s
QSPA South Pole Qui 73.38 180 P P 00 12 59.3 +0.1
QSPA IAmb IAmb 00 13 07.6
comp=Z,25nm,1.5s
EGMT Eagleton 73.46 334 P P 00 12 59.4 -0.3
EGMT IAmb IAmb 00 13 01.9
comp=Z,56nm,1.4s
EGMT Eagleton 73.46 334 P P 00 13 00.1 +0.3
baz=141,SNR=18
WVOR Wild Horse Val 73.76 325 P P 00 13 02.2 +0.5
WVOR Wild Horse Val 73.76 325 P P 00 13 02.2 +0.5
WVOR pmax pmax
comp=Z,12nm,1.5s
MSO Missoula 74.44 331 P P 00 13 06.2 +0.7
MSO IAmb IAmb 00 13 08.8
comp=Z,20nm,1.1s
MSO Missoula 74.44 331 P P 00 13 06.4 +0.8
baz=137,SNR=17
F10A Beach Ranch, E 75.43 328 P P 00 13 12.0 +0.7
F10A IAmb IAmb 00 13 15.3
comp=Z,20nm,1.1s
L04D Klamath Falls 75.69 323 P P 00 13 13.8 +0.9
baz=129
J05D Fort Rock, OR 75.76 324 P P 00 13 14.0 +0.6
baz=130,SNR=11
WALA Waterton Lakes 76.06 332 P P 00 13 14.7 -0.1
J04D Umpqua Nationa 76.22 324 P P 00 13 16.9 +0.9
baz=130
L02F Cave Junction 76.37 322 P P 00 13 17.4 +0.8
baz=128
I05D Terrebonne, OR 76.50 325 P P 00 13 18.5 +1.1
baz=130
I04A Tendick Farm, 76.75 324 P P 00 13 19.3 +0.5
baz=129,SNR=6.9
K02D Willamette Mer 76.78 323 P P 00 13 19.7 +0.6
baz=128,SNR=6.6
DBO Dodson Butte 76.80 323 P P 00 13 18.9 -0.2
DBO IAmb IAmb 00 13 21.2
comp=Z,17nm,1.2s
HAWA Hanford 76.89 328 P P 00 13 20.5 +1.0
HAWA IAmb IAmb 00 13 22.7
comp=Z,24nm,1.1s
NEW Newport 76.97 330 P P 00 13 19.8 -0.2
NEW Newport 76.97 330 P P 00 13 19.8 -0.2
NEW pmax pmax
comp=Z,4.0nm,1.0s
NEW Newport 76.97 330 P P 00 13 20.5 +0.6
baz=134
G05D Wamic, OR 77.07 326 P P 00 13 22.2 +1.7
baz=130
TOA0 Torodi Ar. Sit 77.20 72 P P 00 13 20.4 -1.5
TORD Torodi Ar. Bea 77.20 72 P P 00 13 20.2 -1.7
comp=Z,29nm,0.7s,baz=258,slow=4.5,SNR=65
comp=Z,29nm,0.7s
TORD Torodi Ar. Bea 77.20 72 P P 00 13 20.5 -1.4
TORD IAmb IAmb 00 13 23.7
comp=Z,34nm,0.9s
I03D Drain, OR 77.21 324 P P 00 13 22.4 +1.0
baz=129,SNR=5.7
J01E Myrtle Point 77.22 323 P P 00 13 22.9 +1.5
baz=128
H04D Lebanon 77.39 325 P P 00 13 23.2 +0.9
baz=129
FCC Fort Churchill 77.74 348 P P 00 13 23.6 -0.2
FCC IAmb IAmb 00 13 26.0
comp=Z,19nm,1.0s
FCC Fort Churchill 77.74 348 P P 00 13 23.7 -0.2
FCC pmax pmax
comp=Z,19nm,1.0s
I02E Swisshome, OR 77.75 324 P P 00 13 25.7 +1.4
baz=128
G03D McMinnville, O 78.11 325 P P 00 13 28.1 +1.7
baz=129
E04D Cinebar 78.58 326 P P 00 13 30.1 +1.2
baz=130
EDM Edmonton 78.91 335 P P 00 13 29.9 -0.7
EDM Edmonton 78.91 335 P P 00 13 29.9 -0.7
EDM pmax pmax
comp=Z,78nm,1.2s
D03D Eldon 79.48 327 P P 00 13 34.8 +1.0
baz=129
NLWA Neilton Lookou 79.80 326 P P 00 13 36.6 +1.0
NLWA IAmb IAmb 00 13 38.7
comp=Z,28nm,1.0s
SBA Scott Base 80.18 190 P P 00 13 37.3 +0.1
SBA Scott Base 80.18 190 P P 00 13 37.3 +0.1
SBA pmax pmax
comp=Z,14nm,1.2s
CER Ceres 80.73 122 *e*P P 00 13 42.9 +1.8
CER IAmb IAmb 00 13 43.9
comp=Z,31nm,2.0s
LLLB Lillooet 80.84 330 P P 00 13 41.1 -0.1
LLLB IAmb IAmb 00 13 44.4
comp=Z,31nm,1.4s
VNDA Vanda 81.22 190 P P 00 13 43.3 +0.5
comp=Z,2.0nm,0.7s,baz=123,slow=3.4,SNR=8.0
comp=Z,2.0nm,0.7s
VNDA Vanda 81.22 190 P P 00 13 43.0 +0.2
VNDA Vanda 81.22 190 P P 00 13 43.0 +0.2
VNDA pmax pmax
comp=Z,7.0nm,1.2s
MTE Manteigas 81.48 43 P P 00 13 44.5 -0.3
CVNA Calvinia 81.58 120 *e*P P 00 13 47.6 +1.9
CVNA IAmb IAmb 00 13 51.9
comp=Z,43nm,1.5s
MATJ Matjiesfontein 81.80 122 *e*P P 00 13 48.9 +2.0
MATJ IAmb IAmb 00 13 50.7

comp=Z,51nm,0.9s
SUR Sutherland 82.22 121 P P 00 13 49.3 +0.1
TSUM Tsumeb 82.81 108 *e*P P 00 13 53.3 +0.9
TSUM IAmb IAmb 00 13 54.2
comp=Z,132nm,1.1s
TSUM Tsumeb 82.81 108 P P 00 13 51.4 -1.0
TSUM IAmb IAmb 00 13 54.5
comp=Z,28nm,1.1s
PAB San Pablo 83.21 45 P P 00 13 53.5 -0.4
PAB San Pablo 83.21 45 P P 00 13 53.5 -0.4
PAB pmax pmax
comp=Z,7.0nm,0.9s
KEIM Keimoes 83.30 118 *e*P P 00 13 55.7 +0.9
KEIM IAmb IAmb 00 13 57.1
comp=Z,60nm,1.5s
ESDC Sonseca Array 83.53 45 P P 00 13 54.8 -0.8
comp=Z,2.8nm,0.7s,baz=252,slow=4.8,SNR=20
comp=Z,2.8nm,0.7s
ESDC Sonseca Array 83.53 45 P P 00 13 54.4 -1.1
ESDC IAmb IAmb 00 13 57.5
comp=Z,21nm,1.8s
ESBB Sonseca Array 83.53 45 P P 00 13 54.9 -0.6
ESBB IAmb IAmb 00 13 57.5
comp=Z,28nm,1.9s
UPI Upington 83.63 118 *e*P P 00 13 57.4 +0.9
UPI IAmb IAmb 00 13 58.7
comp=Z,29nm,1.3s
SOE Somerset East 85.98 123 *e*P P 00 14 09.6 +1.4
SOE IAmb IAmb 00 14 10.4
comp=Z,21nm,1.0s
YKA Yellowknife Ar 86.29 341 P P 00 14 08.2 -0.5
comp=Z,13nm,0.7s,baz=135,slow=5.1,SNR=82
comp=Z,13nm,0.7s
YKA Yellowknife Ar 86.29 341 P P 00 14 08.0 -0.7
YKA Yellowknife Ar 86.29 341 P P 00 14 08.0 -0.7
HVD Gariep Dam 86.55 121 *e*P P 00 14 12.2 +1.0
HVD IAmb IAmb 00 14 15.0
comp=Z,8.2nm,0.7s
BOSA Boshof 86.94 119 *e*P P 00 14 13.2 0.0
BOSA IAmb IAmb 00 14 14.5
comp=Z,1μm,5.7s
BOSA Boshof 86.94 119 P P 00 14 13.1 0.0
comp=Z,6.5nm,1.1s,baz=258,slow=2.0,SNR=5.1
comp=Z,6.5nm,1.1s
BOSA Boshof 86.94 119 P P 00 14 13.3 +0.2
BOSA IAmb IAmb 00 14 14.9
comp=Z,28nm,1.4s
BOSA Boshof 86.94 119 P P 00 14 13.3 +0.2
BOSA pmax pmax
comp=Z,29nm,1.4s
LBTB Lobatse 88.31 115 *e*P P 00 14 20.0 +0.3
LBTB IAmb IAmb 00 14 21.4
comp=Z,14nm,1.1s
LBTB Lobatse 88.31 115 P P 00 14 19.2 -0.5
LBTB Lobatse 88.31 115 P P 00 14 19.2 -0.5
LBTB pmax pmax
comp=Z,25nm,1.1s
T35M Bob Quinn 88.66 332 P P 00 14 21.5 +1.1
baz=124
SNKL Senekal, Frees 89.16 119 *e*P P 00 14 24.9 +1.1
SNKL IAmb IAmb 00 14 26.7
comp=Z,18nm,0.9s
KSR Koster 89.17 117 *e*P P 00 14 24.4 +0.5
KSR IAmb IAmb 00 14 27.5
comp=Z,7.6nm,1.0s
MAW Mawson 89.23 164 P P 00 14 23.8 +0.8
comp=Z,13nm,0.8s,baz=224,slow=4.3,SNR=18
comp=Z,13nm,0.8s
MAW Mawson 89.23 164 P P 00 14 24.2 +1.2
MAW Mawson 89.23 164 P P 00 14 24.2 +1.2
MAW pmax pmax
comp=Z,6.0nm,1.1s
PRYS Parys 89.23 118 *e*P P 00 14 23.9 -0.2
PRYS IAmb IAmb 00 14 25.9
comp=Z,13nm,0.9s
WRAK Wrangell Islan 89.32 331 P P 00 14 24.4 +1.0
baz=122
DLBC Dease Lake 89.38 333 P P 00 14 24.6 +0.8
DLBC Dease Lake 89.38 333 P P 00 14 24.7 +1.0
baz=124,SNR=16
S34M Telegraph Cree 89.57 332 P P 00 14 25.8 +1.2
baz=123,SNR=8.3
HRAO HartRAO 89.84 117 *e*P P 00 14 27.3 +0.4
HRAO IAmb IAmb 00 14 28.5
comp=Z,33nm,1.0s
SLR Silverton 90.39 117 *e*P P 00 14 30.1 +0.6
SLR IAmb IAmb 00 14 31.2
comp=Z,15nm,1.1s
P33M Teslin, Yukon 91.55 334 P P 00 14 34.2 +0.3
baz=122,SNR=9.1
MATP Matopo 92.28 112 *e*P P 00 14 38.8 +0.5
MATP IAmb IAmb 00 14 41.4
comp=Z,482nm,1.1s
PLBC Pleasant Camp 92.71 332 P P 00 14 39.9 +0.7
baz=119
HAGI HAGI 92.74 118 *e*P P 00 14 41.9 +1.5
HAGI IAmb IAmb 00 14 42.9
comp=Z,10nm,1.0s
MMAL MMAL 92.77 118 *e*P P 00 14 42.1 +1.6
MMAL IAmb IAmb 00 14 43.1
comp=Z,19nm,1.0s
MAGG Maguga Dam 92.82 118 *e*P P 00 14 41.7 +1.1
MAGG IAmb IAmb 00 14 43.2
comp=Z,20nm,1.2s
FARO Faro, Yukon 92.83 335 P P 00 14 40.7 +1.0
baz=121
N31M Braeburn, Yuko 93.45 334 P P 00 14 43.5 +0.9
baz=119
MOPA Mopani 93.80 116 *e*P P 00 14 46.9 +1.8
MOPA IAmb IAmb 00 14 48.1
comp=Z,8.0nm,1.0s
M30M Minto, Yukon 94.39 335 P P 00 14 47.6 +0.7
baz=118
YUK3 Moose Creek 95.57 333 P P 00 14 53.0 +0.5
baz=115
INK Inuvik 96.05 341 P P 00 14 52.6 -1.6
comp=Z,4.4nm,0.9s,baz=70,slow=7.6,SNR=4.3
comp=Z,4.4nm,0.9s
INK Inuvik 96.05 341 P P 00 14 54.8 +0.6
baz=121
DAWY Dawson 96.12 336 P P 00 14 54.6 -0.2
baz=116
EPYK Eagle Plains 96.17 338 P P 00 14 55.7 +0.7
baz=118
I29M Ogilvie Camp, 96.28 337 P P 00 14 56.0 +0.5
baz=117
M27K Edge Creek, AK 96.42 334 P P 00 14 56.0 -0.3
baz=114
L27K Beaver Creek, 96.68 334 P P 00 14 58.0 +0.7
L27K IAmb IAmb 00 15 07.7
comp=Z,9.6nm,0.8s
L27K Beaver Creek, 96.68 334 P P 00 14 58.1 +0.7
baz=114
EGAK Eagle 97.12 336 P Pdif 00 15 00.0 +0.7
baz=114
K27K Chicken 97.18 335 P P 00 14 59.4 -0.1
baz=114
ILAR Eielson Array 99.39 335 PP PP 00 19 10.9 -1.9
comp=Z,0.7nm,0.7s,baz=109,slow=7.2,SNR=4.2
APA Apatity 110.67 23 ⇓*i*PKIKP PKiKP 00 20 10.3 +11
APA pmax pmax
comp=Z,9.0nm,0.9s
APA MLR MLR
comp=Z,400nm,17.0s
BRTR Keskin Array B 111.24 53 PKiKP PKiKP 00 20 01.5 -0.2
comp=Z,0.9nm,0.7s,baz=222,slow=1.9,SNR=4.8
BRTR Keskin Array B 111.24 53 *c*/PKIKP PKiKP 00 20 02.5 +0.8
BRTR pmax pmax
comp=Z,1.0nm,0.7s
KBZ Khabaz 118.21 49 PKP PKPdf 00 20 14.4 -0.3
comp=Z,4.0nm,0.9s,baz=238,slow=3.8,SNR=8.9
KBZ Khabaz 118.21 49 *c*/PKIKP PKiKP 00 20 15.6 +0.9
ZEI Tsey 119.00 50 *e*PKIKP PKPdf 00 20 15.7 -0.9
ZEI pmax pmax
comp=Z,6.0nm,1.3s
GNI Garni 119.78 53 *c*/PKIKP PKiKP 00 20 19.7 +1.5
GNI pmax pmax
comp=Z,6.0nm,1.3s
STKA Stephens Creek 122.69 212 PKP PKPdf 00 20 23.7 -0.1
comp=Z,1.6nm,0.7s,baz=80,slow=3.1,SNR=5.4
TIXI Tiksi 123.96 353 *c*/PKIKP PKiKP 00 20 24.2 -0.7
TIXI pmax pmax
comp=Z,3.0nm,1.3s
ARU Arti 125.00 32 PKP PKPdf 00 20 26.4 -1.0
comp=Z,2.7nm,0.6s,baz=170,slow=4.7,SNR=6.1
ARU Arti 125.00 32 PKPdf PKiKP 00 20 27.7 +0.1

ARU	**Arti**	**125.00**	**32**	*i* PKIKP	**PKiKP**	**00 20 27.8**	**+0.1**
SEY	**Seymchan**	**125.22**	**338**	PKP	**PKPdf**	**00 20 27.8**	**+0.2**
	comp=Z,7.9nm,0.2s,baz=53,slow=1.8,SNR=7.1						
SEY	**Seymchan**	**125.22**	**338***c*	*i*PKIKP	**PKiKP**	**00 20 28.6**	**+0.7**
SEY				pmax	pmax		
	comp=Z,10.0nm,1.3s						
NRIK	**Noril'sk**	**125.70**	**9**	PKP	**PKPdf**	**00 20 27.9**	**-0.5**
	comp=Z,0.6nm,0.4s,baz=186,slow=2.6,SNR=1.5						
NRIK	**Noril'sk**	**125.70**	**9***c*	*i*PKIKP	**PKPdf**	**00 20 28.5**	**+0.2**
AKTO	**Aktyubinsk**	**126.98**	**39**	PKP	**PKPdf**	**00 20 31.2**	**-0.1**
	comp=Z,3.3nm,0.9s,baz=335,slow=2.6,SNR=6.3						
PEA0B	**Petropavlovsk-**	**127.91**	**325***c*	*i*PKIKP	**PKPdf**	**00 20 32.9**	**-0.2**
PETK	**Petropavlovsk-**	**127.91**	**325**	PKP	**PKPdf**	**00 20 33.0**	**0.0**
	comp=Z,2.8nm,0.7s,baz=77,slow=6.4,SNR=5.5						
ABKAR	**Akbulak array**	**128.56**	**40**	PKPdf	**PKiKP**	**00 20 34.9**	**-0.1**
GEYT	**Alibeck**	**130.37**	**54**	PKP	**PKPdf**	**00 20 38.2**	**-0.1**
	comp=Z,1.4nm,0.5s,baz=70,slow=8.5,SNR=3.8						
BRVK	**Borovoye**	**132.56**	**31**	PKPdf	**PKPdf**	**00 20 42.4**	**+0.5**
BRVK	**Borovoye**	**132.56**	**31***c*	*i*PKIKP	**PKiKP**	**00 20 43.4**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
ASAR	**Alice Springs**	**133.29**	**211**	PKP	**PKPdf**	**00 20 44.4**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=135,slow=2.2,SNR=12						
ASAR	**Alice Springs**	**133.29**	**211**	PKPdf	**PKPdf**	**00 20 43.2**	**-1.1**
ASAR	**Alice Springs**	**133.29**	**211**	PKIKP	**PKPdf**	**00 20 43.2**	**-1.1**
WRA	**Warramunga Arr**	**136.13**	**215**	PKP	**PKPdf**	**00 20 49.5**	**-0.2**
	comp=Z,5.0nm,0.8s,baz=142,slow=1.6,SNR=20						
WRA	**Warramunga Arr**	**136.13**	**215**		**PKPdf**	**00 20 48.5**	**-1.1**
WRA	**Warramunga Arr**	**136.13**	**215**	PKIKP	**PKPdf**	**00 20 48.5**	**-1.1**
WRAB	**Tennant Creek**	**136.13**	**215***c*	*i*PKIKP	**PKPdf**	**00 20 50.1**	**+0.5**
WRAB				pmax	pmax		
	comp=Z,24nm,2.5s						
KURK	**Kurchatov**	**138.06**	**29***c*	*i*PKIKP	**PKPdf**	**00 20 52.9**	**+0.7**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
ZAA0	**Zalesovo Array**	**138.22**	**22**	PKPdf	**PKPdf**	**00 20 51.6**	**-0.8**
ZALV	**Zalesovo Beam**	**138.22**	**22**	PKP	**PKPdf**	**00 20 52.5**	**+0.1**
	comp=Z,14nm,0.9s,baz=294,slow=1.5,SNR=32						
ZALV	**Zalesovo Beam**	**138.22**	**22**		**PKPdf**	**00 20 51.5**	**-0.9**
ZALV	**Zalesovo Beam**	**138.22**	**22**	PKIKP	**PKPdf**	**00 20 51.5**	**-0.9**
AAK	**Ala-Archa**	**140.55**	**42**	PKP	**PKPdf**	**00 20 54.5**	**-2.7**
	comp=Z,1.2nm,0.4s,baz=190,slow=12,SNR=1.6						
ZEA	**Zeya**	**140.63**	**343**	*e*PKIKP	**PKPdf**	**00 20 58.1**	**+1.3**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MAKZ	**Makanchi**	**142.35**	**31**	PKPdf	**PKPdf**	**00 20 59.6**	**-0.5**
MAKZ	**Makanchi**	**142.35**	**31**	PKIKP	**PKPdf**	**00 20 59.7**	**-0.5**
MKAR	**Makanchi Array**	**142.51**	**31**	PKhKP	PKPpre	00 20 56.6	
	comp=Z,0.9nm,0.7s,baz=332,slow=1.8,SNR=6.5						
MKAR	**Makanchi Array**	**142.51**	**31**	PKPdf	**PKPdf**	**00 20 58.8**	**-1.7**
MKAR	**Makanchi Array**	**142.51**	**31**	PKIKP	**PKPdf**	**00 20 58.8**	**-1.7**
KLR	**Kul'dur**	**142.96**	**336**	PKP	**PKPdf**	**00 20 58.8**	**-2.4**
	comp=Z,2.1nm,0.9s,baz=26,slow=5.9,SNR=3.8						
KSH	**Kashi**	**143.04**	**45**	PKP	PKPbc	00 21 00.2	+1.7
ZAK	**Zakamensk**	**146.11**	**7**	*e*PKP2	**PKPbc**	**00 21 07.8**	**+0.2**
ZAK				pmax	pmax		
	comp=Z,43nm,1.3s						
USRK	**Ussuriysk Ar.**	**146.75**	**330**	PKPbc	**PKPdf**	**00 21 08.7**	**+0.9**
	comp=Z,20nm,0.8s,baz=54,slow=0.9,SNR=24						
USRK	**Ussuriysk Ar.**	**146.75**	**330**		**PKPbc**	**00 21 09.5**	**0.0**
USRK	**Ussuriysk Ar.**	**146.75**	**330**	PKP2	**PKPbc**	**00 21 09.5**	**0.0**
WMQ	**Urumqi**	**147.30**	**30**	*e*PKPbc	**PKPdf**	**00 21 08.5**	**-0.4**
WMQ				LR	LR		
	comp=Z,450nm,20.9s						
WMQ				LR	LR		
	comp=Z,580nm,20.9s						
WMQ				LR	LR		
	comp=Z,560nm,23.9s						
BNX	**BinXian**	**147.51**	**336**	PKPbc	**PKPdf**	**00 21 09.8**	**+0.8**
BNX				AMB	AMB		
	comp=Z,1μm,11.4s						
MDJ	**Mudanjiang**	**147.53**	**333**	PKPbc	**PKPbc**	**00 21 12.3**	**+0.6**
MDJ				AMB	AMB		
	comp=Z,230nm,10.2s						
MJAR	**Matsushiro Arr**	**147.91**	**313**	PKPbc	**PKPbc**	**00 21 13.5**	**+0.4**
	comp=Z,36nm,1.0s,baz=89,slow=1.0,SNR=47						
MJAR	**Matsushiro Arr**	**147.91**	**313**		**PKPbc**	**00 21 13.2**	**+0.2**
MJAR	**Matsushiro Arr**	**147.91**	**313**	PKP2	**PKPbc**	**00 21 13.2**	**+0.2**
MAJO	**Matsushiro**	**147.91**	**313**		**PKPbc**	**00 21 12.6**	**-0.4**
MAJO	**Matsushiro**	**147.91**	**313**	PKP2	**PKPbc**	**00 21 12.6**	**-0.4**
MJB9	**Matsu-Tunnel**	**147.91**	**313**		**PKPbc**	**00 21 12.0**	**-1.1**
SONM	**Songino Array**	**148.93**	**4**	PKPbc	**PKPdf**	**00 21 13.5**	**+2.0**
	comp=Z,11nm,0.7s,baz=324,slow=1.9,SNR=27						
ULN	**Ulaanbaatar**	**148.94**	**3**	PKPdf	**PKPdf**	**00 21 11.8**	**+0.3**
ULN	**Ulaanbaatar**	**148.94**	**3**	PKIKP	**PKPdf**	**00 21 11.8**	**+0.3**
SOEI	**Soe**	**149.89**	**210**		**PKiKP**	**00 21 19.6**	**-0.2**
CN2	**Changchun**	**149.90**	**337**	*e*PKPbc	**PKPbc**	**00 21 16.4**	**-1.4**
HYBB	**Hyderabad (bro**	**150.36**	**84**	*e*PKPab	**PKiKP**	**00 21 22.4**	**+1.9**
XLT	**XiLinHaoTe**	**152.42**	**350**	*e*PKPbc	**PKPdf**	**00 21 13.7**	**-3.3**
XLT				pPKP	PKiKP	00 21 24.3	+0.2
XLT				PKPab	**PKPab**	**00 21 33.8**	**0.0**
KSRS	**Korea Array**	**153.81**	**325**	PKP	**PKPdf**	**00 21 20.1**	**+1.1**
	comp=Z,0.8nm,0.3s,baz=32,slow=1.4,SNR=12						
KSRS				PKPbc	**PKiKP**	**00 21 27.6**	**+0.6**
	comp=Z,6.5nm,0.9s,baz=33,slow=1.5,SNR=20						
GTA	**Gaotai**	**155.91**	**19**	*e*PKP	**PKPdf**	**00 21 23.0**	**+0.9**
HHC	**Hu-ho-hao-te**	**155.96**	**356**	*e*PKP	**PKPdf**	**00 21 18.7**	**-3.4**
HHC				LR	LR		
	comp=Z,790nm,18.4s						
HHC				LR	LR		
	comp=Z,500nm,17.1s						
HHC				LR	LR		
	comp=Z,2μm,17.1s						
GOMU	**GeErMu**	**156.64**	**31**	PKP	**PKPdf**	**00 21 23.2**	**-0.3**
GOMU				PKPab	**PKPab**	**00 21 52.6**	**+0.2**
LZH	**Lanzhou**	**160.12**	**14**	*e*PKP	**PKPdf**	**00 21 28.7**	**+1.3**
LZH				pPKP	sPKPdf	00 21 33.6	-0.5
LZH				LR	LR		
	comp=Z,660nm,18.0s						
LZH				LR	LR		
	comp=Z,520nm,18.0s						
LZH				LR	LR		
	comp=Z,1μm,20.1s						
NJ2	**Nanjing**	**162.63**	**333**	*e*PKP	**PKPdf**	**00 21 30.3**	**+0.4**
XAN	**Xi'an**	**162.81**	**2**	PKP	**PKPdf**	**00 21 31.1**	**+1.0**
CD2	**Chengdu**	**164.97**	**20**	PKP	**PKPdf**	**00 21 31.0**	**-1.2**
PZH	**PanZhiHua**	**167.90**	**36**	PKP	**PKPdf**	**00 21 33.3**	**-1.4**
PZH				PP	**PP**	**00 26 30.2**	**+0.7**
PZH				AMB	AMB		
	comp=Z,260nm,10.6s						
PZH				LR	LR		
	comp=Z,390nm,21.6s						
PZH				LR	LR		
	comp=Z,320nm,20.7s						
PZH				LR	LR		
	comp=Z,700nm,24.5s						
CMAR	**Chiang Mai Arr**	**169.73**	**79**	PKP	**PKPdf**	**00 21 36.8**	**+0.8**
	comp=Z,1.4nm,0.7s,baz=278,slow=2.2,SNR=8.9						
CMAR				PKPab	**PKPab**	**00 22 49.2**	**-0.8**
	comp=Z,6.1nm,1.0s,baz=279,slow=5.5,SNR=17						
CMAR				PP	**PP**	**00 26 40.6**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=283,slow=8.1,SNR=5.4						
CMAR	**Chiang Mai Arr**	**169.73**	**79**		**PKPdf**	**00 21 36.2**	**+0.3**
CMAR					**PKPab**	**00 22 49.1**	**-0.9**
CMAR	**Chiang Mai Arr**	**169.73**	**79**	PKIKP	**PKPdf**	**00 21 36.2**	**+0.3**
CMAR						00 22 49.1	

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*IDC **02** 00:09:14.4±0.6, 55°.01N×164°.52E, h0km, mb4.1/30, mbtmp4.1/33, ML3.8/3, Error ellipse: s-maj=17.3km s-min=10.8km az=161.0*

*KRSC **02** 00:09:14.5±1.4, 54°.81N×164°.59E, h46km±31km, ML4.5*

*NEIC **02** 00:09:15.7±1.2, 55°.0N±0°.1×164°.5E±0°.1, h10km±1km, mb4.5/62, Error ellipse: s-maj=20.8km s-min=11.7km az=169.0*

*MOS **02** 00:09:16.7±0.7, 54°.86N×164°.60E, h34km, mb4.5/9, Error ellipse: s-maj=5.8km s-min=5.0km az=61.4*

ISC 02 00:09:17.0±0.4**, 54°.85N**±0°.04×**164°.60E**±0°.04**, h21**km±4km**, n277, σ1s.15**/315**, mb4.4**/72**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.87**	**66**	PN	**Pb**	**00 09 32.7**	**-0.6**
BKI				S	**Sb**	**00 09 44.3**	**-0.2**
BKI	**Bering**	**0.87**	**66**	*e*P	**Pb**	**00 09 32.7**	**-0.6**
BKI				*e*S	**Sb**	**00 09 44.3**	**-0.2**
MKZ	**Mys Kozlova**	**1.69**	**261**	PN	**Pn**	**00 09 43.9**	**-1.4**
MKZ				S	**Sn**	**00 10 04.2**	**-2.0**
MKZ	**Mys Kozlova**	**1.69**	**261**	*e*P	**Pn**	**00 09 43.9**	**-1.4**
MKZ				*e*S	**Sn**	**00 10 04.2**	**-2.0**
KBTR	**Krutoberegovo**	**1.69**	**324**	PN	**Pn**	**00 09 42.5**	**-2.8**
KBTR				S	**Sn**	**00 10 01.7**	**-4.7**
KBTR	**Krutoberegovo**	**1.69**	**324**	*e*P	**Pn**	**00 09 42.5**	**-2.8**
KBTR				*e*S	**Sn**	**00 10 01.7**	**-4.7**
KBG	**Krutoberegovo**	**1.77**	**323**	PN	**Pn**	**00 09 44.3**	**-2.1**
KBG				S	**Sn**	**00 10 04.4**	**-3.8**
KBG	**Krutoberegovo**	**1.77**	**323**	*e*P	**Pn**	**00 09 44.3**	**-2.1**
KBG				*e*S	**Sn**	**00 10 04.4**	**-3.8**
TUMD	**Tumrok D**	**2.44**	**280**	*e*P	**Pn**	**00 09 54.9**	**-0.8**
TUMD				*e*S	**Sn**	**00 10 23.6**	**-1.3**
ZLN	**Zelenaya**	**2.46**	**300**	PN	**Pn**	**00 09 56.5**	**+0.6**
ZLN	**Zelenaya**	**2.46**	**300**	*e*P	**Pn**	**00 09 56.5**	**+0.6**
BZGR	**Bezymyannyi-Gr**	**2.48**	**298**	PN	**Pn**	**00 09 56.2**	**0.0**
BZGR				S	**Sn**	**00 10 26.4**	**+0.5**
BZGR	**Bezymyannyi-Gr**	**2.48**	**298**	*e*P	**Pn**	**00 09 56.2**	**0.0**
BZGR				*e*S	**Sn**	**00 10 26.4**	**+0.5**
SMKR	**Semkarok**	**2.48**	**316**	PN	**Pn**	**00 09 55.1**	**-1.1**
SMKR				S	**Sn**	**00 10 25.3**	**-0.5**
SMKR	**Semkarok**	**2.48**	**316**	*e*P	**Pn**	**00 09 55.1**	**-1.1**
SMKR				*e*S	**Sn**	**00 10 25.3**	**-0.5**
LGNR	**Loginova**	**2.54**	**301**	PN	**Pn**	**00 09 58.1**	**+0.8**
LGNR	**Loginova**	**2.54**	**301**	*e*P	**Pn**	**00 09 58.1**	**+0.8**
BDR	**Baidarnaya**	**2.58**	**313**	PN	**Pn**	**00 09 57.2**	**-0.3**
BDR	**Baidarnaya**	**2.58**	**313**	*e*P	**Pn**	**00 09 57.2**	**-0.3**
BZWR	**Bezymyannyi-We**	**2.59**	**297**	PN	**Pn**	**00 09 58.1**	**+0.3**
BZWR	**Bezymyannyi-We**	**2.59**	**297**	*e*P	**Pn**	**00 09 58.1**	**+0.3**
TUMR	**Tumrok**	**2.59**	**281**	PN	**Pn**	**00 09 54.9**	**-3.0**
TUMR	**Tumrok**	**2.59**	**281**	*e*P	**Pn**	**00 09 57.6**	**-0.3**
SRKR	**Sorokina**	**2.65**	**314**	PN	**Pn**	**00 09 58.2**	**-0.3**
SRKR				S	**Sn**	**00 10 31.4**	**+1.4**
SRKR	**Sorokina**	**2.65**	**314**	*e*P	**Pn**	**00 09 58.2**	**-0.3**
SRKR				*e*S	**Sn**	**00 10 31.4**	**+1.4**
KMNR	**Kamenistaya**	**2.65**	**292**	PN	**Pn**	**00 09 58.4**	**-0.2**
KMNR				S	**Sn**	**00 10 31.2**	**+1.1**
KMNR	**Kamenistaya**	**2.65**	**292**	*e*P	**Pn**	**00 09 58.4**	**-0.2**
KMNR				*e*S	**Sn**	**00 10 31.2**	**+1.1**
KIRR	**Kirishev**	**2.67**	**296**	PN	**Pn**	**00 09 58.8**	**0.0**
KIRR				S	**Sn**	**00 10 32.2**	**+1.7**
KIRR	**Kirishev**	**2.67**	**296**	*e*P	**Pn**	**00 09 58.8**	**0.0**
KIRR				*e*S	**Sn**	**00 10 32.2**	**+1.7**
KRSR	**Krestovskiy**	**2.67**	**302**	PN	**Pn**	**00 09 58.4**	**-0.4**
KRSR				S	**Sn**	**00 10 30.1**	**-0.5**
KRSR	**Krestovskiy**	**2.67**	**302**	*e*P	**Pn**	**00 09 58.4**	**-0.4**
KRSR				*e*S	**Sn**	**00 10 30.1**	**-0.5**
KLY	**Klyuchi**	**2.67**	**305**	PN	**Pn**	**00 09 56.9**	**-1.9**
KLY				S	**Sn**	**00 10 27.1**	**-3.4**
KLY	**Klyuchi**	**2.67**	**305**	*e*P	**Pn**	**00 09 56.9**	**-1.9**
KLY				*e*S	**Sn**	**00 10 27.1**	**-3.4**
KPT	**Kopyto**	**2.73**	**296**	PN	**Pn**	**00 10 00.2**	**+0.5**
KPT				S	**Sn**	**00 10 33.9**	**+1.8**
KPT	**Kopyto**	**2.73**	**296**	*e*P	**Pn**	**00 10 00.2**	**+0.5**
KPT				*e*S	**Sn**	**00 10 33.9**	**+1.8**
KOZ	**Kozyrevsk**	**2.95**	**296**	PN	**Pn**	**00 10 03.7**	**+1.1**
KOZ				S	**Sn**	**00 10 38.6**	**+1.3**
KOZ	**Kozyrevsk**	**2.95**	**296**	*e*P	**Pn**	**00 10 03.7**	**+1.1**
KOZ				*e*S	**Sn**	**00 10 38.6**	**+1.3**
KII	**Karymskiy**	**3.12**	**257**	PN	**Pn**	**00 10 04.9**	**-0.1**
KII	**Karymskiy**	**3.12**	**257**	*e*P	**Pn**	**00 10 04.9**	**-0.1**
SPN	**Mys Shipunski**	**3.22**	**239**	PN	**Pn**	**00 10 04.9**	**-1.4**
SPN	**Mys Shipunski**	**3.22**	**239**	*e*P	**Pn**	**00 10 04.9**	**-1.4**
SPN				*e*S	**Sn**	**00 10 40.1**	**-4.0**
NLC	**Nalytchevo**	**3.53**	**244**	PN	**Pn**	**00 10 09.7**	**-0.8**
NLC	**Nalytchevo**	**3.53**	**244**	*e*P	**Pn**	**00 10 09.7**	**-0.8**
NLC				*e*S	**Sn**	**00 10 49.4**	**-2.1**
ESO	**Esso**	**3.53**	**290**	PN	**Pn**	**00 10 10.2**	**-0.4**
ESO				S	**Sn**	**00 10 51.0**	**-0.7**
ESO	**Esso**	**3.53**	**290**	*e*P	**Pn**	**00 10 10.2**	**-0.4**
ESO				*e*S	**Sn**	**00 10 51.0**	**-0.7**
SDLR	**Sedlovina**	**3.72**	**247**	PN	**Pn**	**00 10 12.9**	**-0.4**
SDLR	**Sedlovina**	**3.72**	**247**	*e*P	**Pn**	**00 10 12.9**	**-0.4**
SMAR	**Somma**	**3.77**	**247**	PN	**Pn**	**00 10 13.6**	**-0.5**
SMAR	**Somma**	**3.77**	**247**	*e*P	**Pn**	**00 10 13.6**	**-0.5**
KRER	**Koryakskii**	**3.78**	**248**	PN	**Pn**	**00 10 14.3**	**+0.1**
KRER				S	**Sn**	**00 10 57.0**	**-1.1**
KRER	**Koryakskii**	**3.78**	**248**	*e*P	**Pn**	**00 10 14.3**	**+0.1**
KRER				*e*S	**Sn**	**00 10 57.0**	**-1.1**
UGLR	**Uglovaya**	**3.78**	**247**	PN	**Pn**	**00 10 13.9**	**-0.2**
UGLR	**Uglovaya**	**3.78**	**247**	*e*P	**Pn**	**00 10 13.9**	**-0.2**
AVH	**Avacha**	**3.80**	**248**	PN	**Pn**	**00 10 14.4**	**0.0**
AVH	**Avacha**	**3.80**	**248**	*e*P	**Pn**	**00 10 14.4**	**0.0**
AVH				*e*S	**Sn**	**00 10 57.2**	**-1.3**
KRX	**Arik**	**3.81**	**249**	PN	**Pn**	**00 10 14.5**	**0.0**
KRX	**Arik**	**3.81**	**249**	*e*P	**Pn**	**00 10 14.5**	**0.0**
KRX				*e*S	**Sn**	**00 10 56.0**	**-2.7**
KOK	**Koryaka**	**3.84**	**248**	PN	**Pn**	**00 10 15.1**	**+0.1**
KOK	**Koryaka**	**3.84**	**248**	*e*P	**Pn**	**00 10 15.1**	**+0.1**
KOK				*e*S	**Sn**	**00 10 57.1**	**-2.4**
DALK	**Dalny**	**3.91**	**245**	PN	**Pn**	**00 10 15.4**	**-0.3**
DALK	**Dalny**	**3.91**	**245**	*e*P	**Pn**	**00 10 15.4**	**-0.3**
DALK				*e*S	**Sn**	**00 10 57.3**	**-3.6**
PET	**Petropavlovsk**	**3.96**	**245**	Pn	**Pn**	**00 10 16.3**	**-0.1**
PET	**Petropavlovsk**	**3.96**	**245**	*e*PN	**Pn**	**00 10 17.0**	**+0.5**
PET				pmax	pmax		
	comp=Z,80nm,0.6s						
PET	**Petropavlovsk**	**3.96**	**245**	*e*P	**Pn**	**00 10 16.4**	**-0.1**
GNL	**Ganaly**	**4.07**	**256**	PN	**Pn**	**00 10 19.0**	**+0.9**
GNL	**Ganaly**	**4.07**	**256**	*e*P	**Pn**	**00 10 19.0**	**+0.9**
KRMR	**Karymshinskiy**	**4.33**	**245**	PN	**Pn**	**00 10 22.1**	**+0.5**
KRMR	**Karymshinskiy**	**4.33**	**245**	*e*P	**Pn**	**00 10 22.1**	**+0.5**
KRMR				*e*S	**Sn**	**00 11 09.7**	**-1.7**
RUS	**Russkaya**	**4.36**	**239**	PN	**Pn**	**00 10 21.2**	**-0.7**
RUS	**Russkaya**	**4.36**	**239**	*e*P	**Pn**	**00 10 21.2**	**-0.7**
PEA0B	**Petropavlovsk-**	**4.43**	**250**		**Pn**	**00 10 23.3**	**+0.3**
PEA0B	**Petropavlovsk-**	**4.43**	**250**	PN	**Pn**	**00 10 23.3**	**+0.3**
PETK	**Petropavlovsk-**	**4.43**	**250**	Pn	**Pn**	**00 10 22.9**	**-0.1**
	comp=Z,7.8nm,0.3s,baz=72,slow=18,SNR=89						
PETK				Sn	**Sn**	**00 11 13.5**	**-0.4**
	comp=Z,3.3nm,0.3s,baz=320,slow=8.5,SNR=11						
	comp=Z,16nm,0.4s						
PETK	**Petropavlovsk-**	**4.43**	**250**		**Pn**	**00 10 22.7**	**-0.3**
PETK	**Petropavlovsk-**	**4.43**	**250**	PN	**Pn**	**00 10 22.7**	**-0.3**
MTVR	**Mutnovka**	**4.49**	**241**	PN	**Pn**	**00 10 24.0**	**+0.1**
MTVR	**Mutnovka**	**4.49**	**241**	*e*P	**Pn**	**00 10 24.0**	**+0.1**
MTVR				*e*S	**Sn**	**00 11 13.2**	**-2.4**
GRL	**Gorelyy**	**4.51**	**242**	PN	**Pn**	**00 10 24.5**	**+0.3**
GRL	**Gorelyy**	**4.51**	**242**	*e*P	**Pn**	**00 10 24.5**	**+0.3**
GRL				*e*S	**Sn**	**00 11 15.3**	**-0.7**
ASAK	**Asacha**	**4.69**	**241**	PN	**Pn**	**00 10 27.1**	**+0.5**
ASAK	**Asacha**	**4.69**	**241**	*e*P	**Pn**	**00 10 27.1**	**+0.5**
ASAK				*e*S	**Sn**	**00 11 18.1**	**-2.3**
APC	**Apacha**	**4.80**	**249**	PN	**Pn**	**00 10 29.3**	**+1.2**
APC	**Apacha**	**4.80**	**249**	*e*P	**Pn**	**00 10 29.3**	**+1.2**
KDTR	**Khodutka, Kamc**	**4.96**	**235**	PN	**Pn**	**00 10 29.4**	**-0.7**
KDTR	**Khodutka, Kamc**	**4.96**	**235**	*e*P	**Pn**	**00 10 29.4**	**-0.7**
MIPR	**Malaya Ipel'ka**	**5.34**	**244**	PN	**Pn**	**00 10 36.4**	**+1.0**
MIPR	**Malaya Ipel'ka**	**5.34**	**244**	*e*P	**Pn**	**00 10 36.4**	**+1.0**
TILK	**Tilichiki**	**5.67**	**8**	PN	**Pn**	**00 10 40.8**	**+0.9**
TILK	**Tilichiki**	**5.67**	**8**	*e*P	**Pn**	**00 10 40.8**	**+0.9**
PAU	**Pauzhetka**	**5.78**	**237**	PN	**Pn**	**00 10 44.0**	**+2.5**
PAU	**Pauzhetka**	**5.78**	**237**	*e*P	**Pn**	**00 10 44.0**	**+2.5**
SHEM	**Shemya Is, Ala**	**6.02**	**107**	Pn	**Pn**	**00 10 46.5**	**+1.8**
	comp=Z,1.9nm,0.3s,baz=58,slow=16,SNR=1.4						
SHEM				Sn	**Sn**	**00 11 50.6**	**-2.4**
	comp=Z,1.9nm,0.3s,baz=267,slow=22,SNR=2.0						
	comp=Z,16nm,0.8s						
SKR	**Severo-Kuril's**	**6.62**	**234**	PN	**Pn**	**00 10 54.0**	**+0.9**
SKR	**Severo-Kuril's**	**6.62**	**234**	*e*P	**Pn**	**00 10 54.0**	**+0.9**
JKA	**Kamikawa-asahi**	**17.80**	**242**	P	**Pn**	**00 13 22.4**	**-0.9**
ASAJ	**Asahikawa**	**17.80**	**242**	P	**Pn**	**00 13 23.1**	**-0.2**
	comp=Z,0.9nm,0.3s,baz=236,slow=10,SNR=2.3						
	comp=Z,14nm,0.8s						
ASAJ	**Asahikawa**	**17.80**	**242**	P	**Pn**	**00 13 22.4**	**-0.8**
ASAJ				pmax	pmax		
	comp=Z,126nm,1.5s						
ERM	**Erimo**	**19.07**	**236**	P	**P**	**00 13 35.2**	**-2.6**
ERM	**Erimo**	**19.07**	**236**	P	**P**	**00 13 35.2**	**-2.6**
ERM				pmax	pmax		
	comp=Z,77nm,1.2s						
KLR	**Kul'dur**	**20.84**	**268**	P	**P**	**00 13 55.9**	**-1.2**
	comp=Z,1.0nm,0.7s,baz=49,slow=14,SNR=2.6						
	comp=Z,1.0nm,0.7s						
O17K	**Koliganek Bris**	**21.05**	**61**	P	**P**	**00 13 59.4**	**+0.2**
	baz=274						
TTA	**Tatalina**	**21.58**	**52**	P	**P**	**00 14 04.6**	**-0.4**
TTA	**Tatalina**	**21.58**	**52**	P	**P**	**00 14 04.6**	**-0.4**
TTA				pmax	pmax		
	comp=Z,13nm,1.4s						
TTA	**Tatalina**	**21.58**	**52**	P	**P**	**00 14 05.5**	**+0.5**
	baz=267						
N18K	**Kilae Creek**	**21.60**	**58**	P	**P**	**00 14 05.4**	**+0.1**
N18K	**Kilae Creek**	**21.60**	**58**	P	**P**	**00 14 05.3**	**+0.1**
	baz=272						
O18K	**Koktuh Hills**	**21.99**	**60**	P	**P**	**00 14 09.7**	**+0.3**
	baz=275						
L19K	**White Mountain**	**22.08**	**54**	P	**P**	**00 14 10.7**	**+0.3**
L19K	**White Mountain**	**22.08**	**54**	P	**P**	**00 14 10.8**	**+0.3**
	baz=270						
N19K	**Bonanza Creek**	**22.29**	**58**	P	**P**	**00 14 11.5**	**-1.1**
	baz=273						
M19K	**Big River Lodg**	**22.30**	**55**	P	**P**	**00 14 12.7**	**-0.1**
	baz=271						
K20K	**Telida**	**22.48**	**51**	P	**P**	**00 14 14.3**	**-0.3**
K20K				IAmb	IAmb	00 14 16.3	
	comp=Z,6.1nm,0.7s						
K20K	**Telida**	**22.48**	**51**	P	**P**	**00 14 14.0**	**-0.6**
	baz=267,SNR=5.6						
J20K	**Nowinta River**	**22.51**	**49**	P	**P**	**00 14 14.4**	**-0.5**
J20K				IAmb	IAmb	00 14 17.4	
	comp=Z,11nm,0.8s						
J20K	**Nowinta River**	**22.51**	**49**	P	**P**	**00 14 14.6**	**-0.3**
	baz=265,SNR=10						
L20K	**Farewell, AK**	**22.54**	**53**	P	**P**	**00 14 15.2**	**-0.1**
	baz=270						
TIXI	**Tiksi**	**22.70**	**331**	P	**P**	**00 14 15.1**	**-1.8**
	comp=Z,2.3nm,0.5s,baz=89,slow=24,SNR=5.2						
	comp=Z,2.3nm,0.5s						
TIXI	**Tiksi**	**22.70**	**331**	P	**P**	**00 14 16.5**	**-0.4**
IMAR	**Indian Mountai**	**22.89**	**44**	P	**P**	**00 14 18.5**	**-0.4**
M20K	**Styx River**	**22.90**	**55**	P	**P**	**00 14 18.8**	**-0.4**
	baz=272						
H21K	**Melozitna Rive**	**23.23**	**45**	P	**P**	**00 14 21.6**	**-0.8**
H21K	**Melozitna Rive**	**23.23**	**45**	P	**P**	**00 14 22.6**	**+0.1**
	baz=263,SNR=7.3						
I21K	**Tanana**	**23.52**	**47**	P	**P**	**00 14 25.2**	**-0.1**
I21K				IAmb	IAmb	00 14 25.8	
	comp=Z,4.6nm,0.6s						
I21K	**Tanana**	**23.52**	**47**	P	**P**	**00 14 25.4**	**+0.1**
	baz=265						
KDAK	**Kodiak Island**	**23.63**	**65**	P	**P**	**00 14 25.8**	**-0.6**
	comp=Z,5.8nm,0.5s,baz=266,slow=5.9,SNR=12						
	comp=Z,5.8nm,0.5s						
KDAK	**Kodiak Island**	**23.63**	**65**	P	**P**	**00 14 25.5**	**-0.9**
KDAK	**Kodiak Island**	**23.63**	**65**	P	**P**	**00 14 25.5**	**-0.9**
KDAK				pmax	pmax		
	comp=Z,45nm,1.4s						
SKT	**Skwentna**	**23.65**	**55**	P	**P**	**00 14 27.5**	**+0.9**
	baz=273						
BPAW	**Bear Paw Mtn.**	**23.89**	**49**	P	**P**	**00 14 29.0**	**+0.2**
BPAW				IAmb	IAmb	00 14 30.8	
	comp=Z,10nm,1.2s						
BPAW	**Bear Paw Mtn.**	**23.89**	**49**	P	**P**	**00 14 29.4**	**+0.6**
	baz=268,SNR=5.3						
MLY	**Manley**	**24.04**	**47**	P	**P**	**00 14 30.2**	**-0.1**
MLY				IAmb	IAmb	00 14 31.5	
	comp=Z,5.7nm,0.6s						
MLY	**Manley**	**24.04**	**47**	P	**P**	**00 14 30.1**	**-0.1**
	baz=267,SNR=11						
SUA	**Susitna One**	**24.05**	**56**	P	**P**	**00 14 30.3**	**-0.3**
SUA				IAmb	IAmb	00 14 31.7	
	comp=Z,6.3nm,0.7s						
SUA	**Susitna One**	**24.05**	**56**	P	**P**	**00 14 30.8**	**+0.2**
	baz=275						
TRF	**Thorofare Moun**	**24.19**	**51**	P	**P**	**00 14 32.0**	**+0.2**
	baz=271,SNR=20						
COLD	**Coldfoot**	**24.48**	**42**	P	**P**	**00 14 33.5**	**-0.8**
COLD				IAmb	IAmb	00 14 35.5	
	comp=Z,6.9nm,0.7s						
COLD	**Coldfoot**	**24.48**	**42**	P	**P**	**00 14 33.1**	**-1.1**
	baz=262,SNR=5.9						
H23K	**Yukon River**	**24.59**	**45**	P	**P**	**00 14 35.1**	**-0.2**
H23K				IAmb	IAmb	00 14 37.2	
	comp=Z,7.4nm,0.8s						
H23K	**Yukon River**	**24.59**	**45**	P	**P**	**00 14 35.8**	**+0.5**
	baz=266,SNR=11						
I23K	**Minto, Yukon-K**	**24.63**	**47**	P	**P**	**00 14 35.4**	**-0.2**
I23K	**Minto, Yukon-K**	**24.63**	**47**	P	**P**	**00 14 35.6**	**0.0**
	baz=268						
NEA2	**Nenana**	**24.73**	**48**	P	**P**	**00 14 36.3**	**-0.2**
	baz=269,SNR=16						
MCK	**McKinley**	**24.79**	**50**	P	**P**	**00 14 36.7**	**-0.4**
	baz=271						
SEW	**Seward**	**24.84**	**59**	P	**P**	**00 14 36.5**	**-0.9**
	baz=279						
KNK	**Knik Glacier**	**25.16**	**56**	P	**P**	**00 14 38.9**	**-1.5**
	baz=276						
SML	**Sawmill**	**25.17**	**55**	P	**P**	**00 14 40.9**	**+0.2**
	baz=276,SNR=5.9						
H24K	**Noodor Dome**	**25.28**	**45**	P	**P**	**00 14 41.4**	**-0.1**
H24K	**Noodor Dome**	**25.28**	**45**	P	**P**	**00 14 40.8**	**-0.7**
	baz=268						
WAT6	**Susitna Watana**	**25.38**	**53**	P	**P**	**00 14 42.5**	**-0.1**
	baz=275						
POKR	**Poker Plat Res**	**25.44**	**47**	P	**P**	**00 14 43.4**	**+0.4**
	baz=270						
M23K	**Glacier View**	**25.46**	**55**	P	**P**	**00 14 43.9**	**+0.7**
	baz=276						
DHY	**Denali Highway**	**25.52**	**52**	P	**P**	**00 14 42.5**	**-1.3**
	baz=274,SNR=6.4						
SCM	**Sheep Creek Mo**	**25.65**	**55**	P	**P**	**00 14 44.3**	**-0.6**
SCM				IAmb	IAmb	00 14 47.2	
	comp=Z,16nm,0.9s						
SCM	**Sheep Creek Mo**	**25.65**	**55**	P	**P**	**00 14 44.3**	**-0.6**
SCM				pmax	pmax		
	comp=Z,16nm,0.9s						
SCM	**Sheep Creek Mo**	**25.65**	**55**	P	**P**	**00 14 44.0**	**-0.9**
	baz=276						
HDA	**Harding Lake**	**25.65**	**49**	P	**P**	**00 14 43.3**	**-1.6**
	baz=272,SNR=8.3						
IL31		**25.67**	**48**	P	**P**	**00 14 44.5**	**-0.5**
IL31				IAmb	IAmb	00 14 47.6	
	comp=Z,9.2nm,0.7s						
ILAR	**Eielson Array**	**25.67**	**48**	P	**P**	**00 14 44.3**	**-0.7**
	comp=Z,6.5nm,0.6s,baz=261,slow=8.6,SNR=62						
	comp=Z,6.5nm,0.6s						
MJAR	**Matsushiro Arr**	**25.73**	**236**	P	**P**	**00 14 47.4**	**+1.6**
	comp=Z,0.8nm,0.3s,baz=21,slow=11,SNR=3.8						
	comp=Z,0.8nm,0.3s						
K24K	**Donnelly Dome**	**26.19**	**50**	P	**P**	**00 14 47.9**	**-1.9**
	baz=274						
J25K	**Salcha River,**	**26.33**	**48**	P	**P**	**00 14 49.4**	**-1.7**
J25K	**Salcha River,**	**26.33**	**48**	P	**P**	**00 14 48.8**	**-2.2**
	baz=272						
KLU	**Klutina**	**26.35**	**55**	P	**P**	**00 14 50.3**	**-1.1**
	baz=278						
HARP	**HAARP**	**26.60**	**53**	P	**P**	**00 14 53.0**	**-0.4**
	baz=277						
RIDG	**Independent Ri**	**26.61**	**50**	P	**P**	**00 14 51.2**	**-2.4**
	baz=275						
BMAR	**Burnt Mountain**	**26.67**	**42**	P	**P**	**00 14 53.8**	**-0.3**
N25K	**Chitina, Valde**	**26.96**	**55**	P	**P**	**00 14 56.4**	**-0.5**
	baz=279						
SCRK	**Sand Creek**	**26.97**	**49**	P	**P**	**00 14 55.8**	**-1.1**
SCRK				IAmb	IAmb	00 14 56.5	
	comp=Z,4.8nm,0.8s						
SCRK	**Sand Creek**	**26.97**	**49**	P	**P**	**00 14 56.4**	**-0.5**
	baz=275						
J26L	**Joseph Creek**	**27.11**	**48**	P	**P**	**00 14 56.1**	**-2.1**
	baz=274						
M26K	**Nabesna, AK**	**27.59**	**53**	P	**P**	**00 15 01.2**	**-1.2**
	baz=279						
BCAR	**Beaver Creek A**	**28.05**	**51**	P	**P**	**00 15 06.8**	**+0.3**
EGAK	**Eagle**	**28.12**	**48**	P	**P**	**00 15 06.0**	**-1.1**
EGAK				IAmb	IAmb	00 15 06.7	
	comp=Z,7.6nm,0.7s						
KS19	**Wonju Array Si**	**30.33**	**250**	P	**P**	**00 15 26.7**	**-0.2**
KSRS	**Korea Array**	**30.33**	**250**	P	**P**	**00 15 28.8**	**+1.9**
	comp=Z,1.2nm,0.6s,baz=46,slow=9.1,SNR=6.5						
	comp=Z,1.2nm,0.6s						
INK	**Inuvik**	**30.83**	**40**	P	**P**	**00 15 30.2**	**-0.8**
	comp=Z,5.0nm,0.6s,baz=289,slow=7.6,SNR=7.8						
	comp=Z,5.0nm,0.6s						
DLBC	**Dease Lake**	**34.85**	**57**	P	**P**	**00 16 07.8**	**+1.5**
DLBC				IAmb	IAmb	00 16 09.0	
	comp=Z,3.9nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**35.11**	**176**	T	T	00 54 17.8	
	baz=358,slow=76,SNR=147						
H11N3	**WAKE ISLAND Hy**	**35.12**	**176**	T	T	00 54 33.2	
	baz=358,slow=76,SNR=88						
H11N1	**WAKE ISLAND Hy**	**35.12**	**176**	T	T	00 54 17.4	
	baz=358,slow=76,SNR=120						
SONM	**Songino Array**	**36.08**	**284**	P	**P**	**00 16 17.3**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=55,slow=8.3,SNR=3.5						
SONM				PcP	**PcP**	**00 18 42.6**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=24,slow=1.4,SNR=4.3						
	comp=Z,0.4nm,0.5s						
SONM	**Songino Array**	**36.08**	**284**	P	**P**	**00 16 16.9**	**-0.2**
SONM	**Songino Array**	**36.08**	**284**	P	**P**	**00 16 16.9**	**-0.2**
SONM				pmax	pmax		
	comp=Z,2.0nm,1.4s						
H11S1	**WAKE ISLAND Hy**	**36.31**	**177**	T	T	00 56 07.8	
	baz=359,slow=75,SNR=4.4						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
H11S3	**WAKE ISLAND Hy**	**36.33**	**177**	T	T	00 55 51.4	
	baz=359,slow=75,SNR=3.9						
H11S2	**WAKE ISLAND Hy**	**36.33**	**177**	T	T	00 55 42.2	
	baz=359,slow=75,SNR=3.9						
GRNB	**Grenville Isla**	**36.91**	**64**	P	**P**	**00 16 24.9**	**+1.0**
GRNB				IAmb	IAmb	00 16 40.1	
	comp=Z,9.8nm,0.9s						
EUNU	**Eureka**	**39.58**	**15**	P	**P**	**00 16 46.4**	**+0.2**
EUNU				IAmb	IAmb	00 16 47.1	
	comp=Z,5.8nm,0.7s						
YKA	**Yellowknife Ar**	**40.05**	**45**	P	**P**	**00 16 50.2**	**+0.1**
	comp=Z,2.9nm,0.5s,baz=299,slow=8.1,SNR=19						
	comp=Z,2.9nm,0.5s						
RES	**Resolute Bay**	**40.67**	**24**	P	**P**	**00 16 54.7**	**-0.4**
RES	**Resolute Bay**	**40.67**	**24**	P	**P**	**00 16 54.7**	**-0.4**
RES				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ZALV	**Zalesovo Beam**	**44.05**	**303**	PcP	**PcP**	**00 19 07.0**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=42,slow=6.7,SNR=2.3						
SPITS	**Spitsbergen Ar**	**45.82**	**351**	P	**P**	**00 17 35.8**	**-0.9**
SPITS				pmax	pmax		
	comp=Z,28nm,1.4s						
SPB2	**Spitsbergen Ar**	**45.82**	**351**	P	**P**	**00 17 36.1**	**-0.6**
JTMT	**Jette**	**48.53**	**63**	P	**P**	**00 17 59.0**	**+0.7**
KURK	**Kurchatov**	**49.04**	**303**	P	**P**	**00 18 01.6**	**-0.4**
KURK				IAmb	IAmb	00 18 02.8	
	comp=Z,2.3nm,0.6s						
KURK	**Kurchatov**	**49.04**	**303**	P	**P**	**00 18 01.6**	**-0.4**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MK31	**Makanchi Array**	**49.76**	**297**	P	**P**	**00 18 07.3**	**-0.4**
MK31	**Makanchi Array**	**49.76**	**297**	P	**P**	**00 18 07.3**	**-0.4**
MK31				pmax	pmax		
	comp=Z,1.0nm,1.1s						
MKAR	**Makanchi Array**	**49.76**	**297**	P	**P**	**00 18 07.0**	**-0.6**
	comp=Z,1.0nm,0.7s,baz=57,slow=8.0,SNR=8.7						
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**49.76**	**297**	P	**P**	**00 18 07.0**	**-0.6**
MAKZ	**Makanchi**	**49.91**	**297**	P	**P**	**00 18 08.3**	**-0.5**
MAKZ				IAmb	IAmb	00 18 20.0	
	comp=Z,6.1nm,1.5s						
MAKZ	**Makanchi**	**49.91**	**297**	P	**P**	**00 18 08.3**	**-0.5**
MAKZ				pmax	pmax		
	comp=Z,6.0nm,1.5s						
FCC	**Fort Churchill**	**50.42**	**42**	P	**P**	**00 18 12.5**	**+0.1**
FCC				IAmb	IAmb	00 18 13.1	
	comp=Z,5.4nm,0.7s						
FCC	**Fort Churchill**	**50.42**	**42**	P	**P**	**00 18 12.5**	**+0.1**
FCC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ARCES	**ARCESS Array B**	**52.41**	**343**	P	**P**	**00 18 27.3**	**+0.1**
	comp=Z,2.1nm,0.8s,baz=35,slow=11,SNR=1.2						
	comp=Z,2.1nm,0.8s						
NVAR	**Mina Array Bea**	**52.67**	**74**	P	**P**	**00 18 31.5**	**+1.7**
	comp=Z,1.0nm,0.8s,baz=298,slow=7.5,SNR=8.8						
	comp=Z,1.0nm,0.8s						
NVAR	**Mina Array Bea**	**52.67**	**74**	P	**P**	**00 18 30.6**	**+0.8**
ARU	**Arti**	**53.87**	**319**	P	**P**	**00 18 37.9**	**-0.2**
	comp=Z,2.0nm,0.5s,baz=310,slow=6.6,SNR=5.8						
	comp=Z,2.0nm,0.5s						
ARU	**Arti**	**53.87**	**319**	P	**P**	**00 18 37.8**	**-0.3**
ARU				IAmb	IAmb	00 18 49.5	
	comp=Z,5.4nm,0.9s						
PDAR	**Pinedale Array**	**54.35**	**65**	P	**P**	**00 18 43.0**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=321,slow=4.0,SNR=6.0						
	comp=Z,0.7nm,0.7s						
PDAR	**Pinedale Array**	**54.35**	**65**	P	**P**	**00 18 42.3**	**+0.2**
PSUT	**Pine Spring**	**55.05**	**71**	P	**P**	**00 18 48.1**	**+0.8**
KDJ	**Kajisay**	**55.62**	**296**	P	**P**	**00 18 51.4**	**+0.2**
KDJ	**Kajisay**	**55.62**	**296**	P	**P**	**00 18 51.4**	**+0.2**
KDJ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
AAK	**Ala-Archa**	**56.64**	**298**	P	**P**	**00 18 58.8**	**+0.3**
	comp=Z,1.5nm,0.3s,baz=198,slow=11,SNR=3.8						
	comp=Z,1.5nm,0.3s						
AAK	**Ala-Archa**	**56.64**	**298**	P	**P**	**00 18 58.2**	**-0.3**
AAK				IAmb	IAmb	00 18 59.9	
	comp=Z,2.7nm,0.8s						
AAK	**Ala-Archa**	**56.64**	**298**	P	**P**	**00 18 58.2**	**-0.3**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KK31	**Karatay Array**	**58.31**	**301**	P	**P**	**00 19 09.8**	**-0.3**
KK31				IAmb	IAmb	00 19 11.1	
	comp=Z,2.5nm,1.0s						
KK31	**Karatay Array**	**58.31**	**301**	P	**P**	**00 19 09.8**	**-0.3**
KK31				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KKAR	**Karatay Array**	**58.31**	**301**	P	**P**	**00 19 09.8**	**-0.3**
KKAR	**Karatay Array**	**58.31**	**301**	P	**P**	**00 19 09.6**	**-0.4**
KKAR	**Karatay Array**	**58.31**	**301**	P	**P**	**00 19 09.6**	**-0.4**
AKTO	**Aktyubinsk**	**58.55**	**314**	P	**P**	**00 19 11.4**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=59,slow=6.4,SNR=2.6						
	comp=Z,0.8nm,0.5s						
ABKAR	**Akbulak array**	**58.63**	**312**	P	**P**	**00 19 11.6**	**-0.6**
ABKAR				IAmb	IAmb	00 19 23.2	
	comp=Z,8.4nm,1.3s						
ABKAR	**Akbulak array**	**58.63**	**312**	P	**P**	**00 19 11.2**	**-1.0**
FINES	**FINESS Array B**	**59.51**	**338**	P	**P**	**00 19 17.5**	**-0.5**
	comp=Z,1.6nm,0.7s,baz=42,slow=8.8,SNR=5.3						
	comp=Z,1.6nm,0.7s						
CMAR	**Chiang Mai Arr**	**61.12**	**261**	P	**P**	**00 19 31.1**	**+1.5**
	comp=Z,1.1nm,0.4s,baz=18,slow=6.5,SNR=6.1						
	comp=Z,1.1nm,0.4s						
NC405	**NORSAR Array S**	**62.40**	**346**	P	**P**	**00 19 37.0**	**-0.7**
NB2	**NORSAR Subarra**	**62.54**	**346**	P	**P**	**00 19 38.4**	**-0.3**
	comp=Z,1.4nm,0.7s,baz=17,slow=6.9						
NOA	**NORSAR Array B**	**62.54**	**346**	P	**P**	**00 19 38.2**	**-0.5**
	comp=Z,1.9nm,0.7s,baz=18,slow=6.7,SNR=8.1						
	comp=Z,1.9nm,0.7s						
SCHQ	**Schefferville**	**62.82**	**31**	P	**P**	**00 19 40.1**	**-0.4**
	comp=Z,2.3nm,0.5s,baz=13,slow=7.4,SNR=5.9						
	comp=Z,2.3nm,0.5s						
SCHQ	**Schefferville**	**62.82**	**31**	P	**P**	**00 19 39.9**	**-0.7**
HFS	**Hagfors**	**63.04**	**344**	P	**P**	**00 19 40.9**	**-1.1**
	comp=Z,1.6nm,0.5s,baz=9.9,slow=3.4,SNR=10						
	comp=Z,1.6nm,0.5s						
MNTX	**Cornudas Mount**	**64.76**	**70**	P	**P**	**00 19 54.2**	**+0.5**
MNTX				IAmb	IAmb	00 19 56.0	
	comp=Z,3.6nm,0.9s						
VLDQ	**Val d'Or**	**64.92**	**41**	P	**P**	**00 19 52.7**	**-1.8**
VLDQ				IAmb	IAmb	00 20 03.4	
	comp=Z,4.0nm,0.8s						
TX31	**Lajitas Ar. Si**	**67.52**	**71**	P	**P**	**00 20 12.7**	**+1.0**
TXAR	**Lajitas Array**	**67.52**	**71**	P	**P**	**00 20 12.4**	**+0.8**
	comp=Z,3.1nm,0.6s,baz=302,slow=4.6,SNR=48						
	comp=Z,3.1nm,0.6s						
GEYT	**Alibeck**	**68.30**	**305**	P	**P**	**00 20 16.8**	**+0.4**
	comp=Z,1.2nm,0.6s,baz=15,slow=7.4,SNR=2.7						
	comp=Z,1.2nm,0.6s						
FCAR	**Ozark Folk Cen**	**68.39**	**58**	P	**P**	**00 20 16.1**	**-0.8**
FCAR				IAmb	IAmb	00 20 16.9	
	comp=Z,5.3nm,0.8s						
AKASG	**Malin Array Be**	**68.41**	**331**	P	**P**	**00 20 16.1**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=27,slow=6.3,SNR=1.8						
	comp=Z,0.5nm,0.4s						
WHAR	**Wooly Hollow**	**68.78**	**59**	P	**P**	**00 20 19.9**	**+0.6**
WHAR				IAmb	IAmb	00 20 21.1	
	comp=Z,4.8nm,1.1s						
D62A	**Allapoint, All**	**68.82**	**36**	P	**P**	**00 20 18.9**	**-0.4**
L56A	**Greenwood**	**69.85**	**44**	P	**P**	**00 20 25.0**	**-0.9**
PLAL	**Pickwick Lake**	**71.08**	**56**	P	**P**	**00 20 33.3**	**-0.1**
PLAL				IAmb	IAmb	00 20 34.2	
	comp=Z,6.0nm,0.8s						
KWP	**Kalwaria Pacla**	**71.09**	**335**	P	**P**	**00 20 33.5**	**+0.2**
KWP	**Kalwaria Pacla**	**71.09**	**335**	P	**P**	**00 20 33.5**	**+0.2**
KWP				pmax	pmax		
	comp=Z,127nm,1.4s						
CLL	**Collm**	**71.59**	**342**	*i* P	**P**	**00 20 36.4**	**+0.2**
BUR08	**Bucovina Ar. S**	**72.29**	**332**	P	**P**	**00 20 40.1**	**-0.6**
BURAR	**Bucovina Array**	**72.31**	**332**	P	**P**	**00 20 40.6**	**-0.2**
FPAL	**Fort Paine**	**72.61**	**54**	P	**P**	**00 20 42.4**	**-0.3**
GERES	**GERESS Array B**	**73.82**	**340**	P	**P**	**00 20 49.2**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=53,slow=5.2,SNR=7.5						
	comp=Z,0.8nm,0.7s						
GERES	**GERESS Array B**	**73.82**	**340**	P	**P**	**00 20 48.9**	**-0.8**
GERES	**GERESS Array B**	**73.82**	**340**	P	**P**	**00 20 48.9**	**-0.8**
MLR	**Muntele Rosu**	**74.06**	**331**	P	**P**	**00 20 52.0**	**+0.8**
	comp=Z,1.0nm,0.6s,baz=348,slow=9.3,SNR=4.8						
	comp=Z,1.0nm,0.6s						
MLR	**Muntele Rosu**	**74.06**	**331**	P	**P**	**00 20 52.0**	**+0.8**
MOA	**Molln**	**74.66**	**340**	*e*P	**P**	**00 20 54.1**	**-0.4**
	comp=Z,3.1nm,1.1s						
KBA	**Koelnbreinsper**	**75.58**	**340**	*e*P	**P**	**00 21 01.4**	**+1.4**
	comp=Z,4.9nm,1.0s						
SOKA	**Soboth**	**75.62**	**339**	*e*P	**P**	**00 21 02.2**	**+2.1**
	comp=Z,2.3nm,0.6s						
WTTA	**Wattenberg**	**75.72**	**341**	*e*P	**P**	**00 21 01.6**	**+0.8**
	comp=Z,3.2nm,0.8s						
MOTA	**Moosalm**	**75.74**	**342**	*e*P	**P**	**00 21 01.6**	**+0.7**
	comp=Z,9.6nm,1.7s						
SQTA	**Sankt Quirin**	**75.84**	**342**	*e*P	**P**	**00 21 02.1**	**+0.7**
	comp=Z,4.7nm,0.9s						
OBKA	**Obir**	**75.88**	**339**	*e*P	**P**	**00 21 00.5**	**-1.1**
	comp=Z,5.1nm,0.9s						
DAVA	**Damuels**	**76.02**	**343**	*e*P	**P**	**00 21 00.4**	**-2.0**
	comp=Z,7.7nm,1.4s						
ABTA	**Abfaltersbach**	**76.06**	**341**	*e*P	**P**	**00 21 03.2**	**+0.5**
	comp=Z,3.4nm,1.0s						
FETA	**Feichten**	**76.12**	**342**	*e*P	**P**	**00 21 04.4**	**+1.3**
	comp=Z,4.2nm,1.0s						
BRTR	**Keskin Array B**	**76.88**	**323**	P	**P**	**00 21 06.5**	**-1.0**
	comp=Z,1.1nm,0.9s,baz=32,slow=6.5,SNR=3.6						
	comp=Z,1.1nm,0.9s						
WRA	**Warramunga Arr**	**78.86**	**209**	P	**P**	**00 21 18.9**	**+0.6**
	comp=Z,1.4nm,0.9s,baz=27,slow=5.7,SNR=2.7						
	comp=Z,1.4nm,0.9s						
NRCA	**Norcia**	**79.69**	**339**	P	**P**	**00 21 23.1**	**+0.2**
NRCA				IAmb	IAmb	00 21 35.4	
	comp=Z,9.7nm,0.9s						
ASAR	**Alice Springs**	**82.51**	**208**	P	**P**	**00 21 38.1**	**+0.2**
	comp=Z,2.2nm,0.9s,baz=20,slow=5.4,SNR=10						
	comp=Z,2.2nm,0.9s						
ASAR	**Alice Springs**	**82.51**	**208**	P	**P**	**00 21 37.9**	**0.0**
ASAR	**Alice Springs**	**82.51**	**208**	P	**P**	**00 21 37.9**	**0.0**
ESBB	**Sonseca Array**	**85.33**	**351**	P	**P**	**00 21 52.4**	**+0.1**
ESBB				IAmb	IAmb	00 22 03.6	
	comp=Z,6.6nm,1.3s						
ESDC	**Sonseca Array**	**85.33**	**351**	P	**P**	**00 21 52.3**	**0.0**
	comp=Z,3.4nm,1.0s,baz=360,slow=5.1,SNR=20						
	comp=Z,3.4nm,1.0s						
ESDC	**Sonseca Array**	**85.33**	**351**	P	**P**	**00 21 52.6**	**+0.2**
ESDC				IAmb	IAmb	00 21 53.8	
	comp=Z,2.4nm,0.9s						
PAB	**San Pablo**	**85.50**	**351**	P	**P**	**00 21 53.4**	**+0.2**
PAB				IAmb	IAmb	00 21 54.0	
	comp=Z,7.6nm,1.4s						
PAB	**San Pablo**	**85.50**	**351**	P	**P**	**00 21 53.4**	**+0.2**
PAB				pmax	pmax		
	comp=Z,8.0nm,1.4s						

NOU 02 00:15:05.8, 22°30S×171°12E, h0km, mb4.7/9, Southeast of Loyalty Islands, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**2.98**	**285**	P	Pn	00 15 54.6	+0.2
PINNC	**Pines Island,**	**3.41**	**264**	P	Pn	00 16 00.2	-0.1
LIFNC	**LIFOU**	**3.92**	**292**	P	Pn	00 16 06.1	-1.1
YATNC	**Mamie plateau,**	**3.93**	**273**	P	Pn	00 16 06.5	-0.9
OUENC	**Ouen Island, N**	**3.96**	**267**	P	Pn	00 16 07.7	-0.2
DZM	**Mont Dzumac**	**4.34**	**272**	P	Pn	00 16 13.1	-0.1
NOUC	**Port Laguerre**	**4.47**	**272**	P	Pn	00 16 14.6	-0.2
KOUNC	**Koumac, New Ca**	**6.60**	**284**	P	Pn	00 16 45.1	+1.0

*IDC **02** 00:28:26.6±1.4, 32°50N×130°55E, h0km, mb3.7/3, mbtmp3.5/6, ML3.0/3, Error ellipse: s-maj=28.1km s-min=11.1km az=115.0*
*JMA **02** 00:28:30.2±0.0, 32°6N±0°1×130°6E±0°2, h10km, MV3.8/20, SOUTHERN KUMAMOTO PREF*
JMA Felt III J1 at SOUTHERN KUMAMOTO PREF .
ISC 02 00:28:29.7±1.0**, 32°58N**±0°04×**130°63E**±0°07**, h17**km±7km**, n11,** σ1s03/14**, mb3.8**/3**, 2D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIU3	**Izumi3**	**0.16**	**101**	⇓P	**Pg**	**00 28 33.6**	**-0.3**
JIU3				⇓*e*S	**Sg**	**00 28 36.1**	**-0.7**
JTA	**Tamana**	**0.39**	**348**	P	**Pg**	**00 28 38.1**	**+0.3**
JTA				*e*S	**Sg**	**00 28 43.6**	**+0.4**
JZO	**Okuchi**	**0.44**	**183**	P	**Pg**	**00 28 38.9**	**+0.3**
JZO				*e*S	**Sg**	**00 28 44.8**	**+0.2**
JNU	**Nakatsue**	**0.58**	**21**	Pg	**Pg**	**00 28 40.7**	**-0.5**
	223nm,0.3s,baz=204,slow=6.7,SNR=422						
JNU				Lg	Lg	00 28 48.4	
	952nm,0.3s,baz=281,slow=22,SNR=39						
JTZ	**Takazaki**	**0.78**	**150**	*i* P	**Pb**	**00 28 45.7**	**+0.8**
KSRS	**Korea Array**	**5.34**	**336**	Pn	**Pn**	**00 29 48.1**	**-0.6**
	0.6nm,0.3s,baz=153,slow=12,SNR=2.3						
KSRS				Lg	Lg	00 31 17.1	
	1.1nm,0.3s,baz=154,slow=30,SNR=2.5						
	0.9nm,0.4s						
MJAR	**Matsushiro Arr**	**7.40**	**56**	Pn	**Pn**	**00 30 18.1**	**+1.2**
	0.1nm,0.3s,baz=248,slow=13,SNR=1.8						
	0.6nm,0.3s						
KLR	**Kul'dur**	**16.66**	**3**	Pn	**Pn**	**00 32 23.8**	**+1.6**
	0.1nm,0.3s,baz=174,slow=7.2,SNR=1.7						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**52.35**	**176**	P	**P**	**00 37 39.0**	**-1.8**
	0.4nm,0.8s,baz=354,slow=7.8,SNR=2.5						
	0.4nm,0.8s						
FINES	**FINESS Array B**	**68.40**	**330**	P	**P**	**00 39 30.7**	**+0.5**
	1.0nm,0.9s,baz=81,slow=5.0,SNR=3.8						
	1.0nm,0.9s						
NOA	**NORSAR Array B**	**74.55**	**334**	P	**P**	**00 40 06.4**	**-0.9**
	0.9nm,0.9s,baz=54,slow=5.8,SNR=1.3						
	0.9nm,0.9s						

*TUL **02** 00:30:16.7±0.5, 36°27N±0°01×97°57W±0°02, h5km±7km, ML2.7, mb_Lg2.7/39(NEIC), Error ellipse: s-maj=2.5km s-min=1.8km az=90.0*
NEIC 02 00:30:17.4±0.5**, 36°27N**±0°02×**97°57W**±0°02**, h4**km±7km**, Error ellipse: s-maj=2.2km s-min=1.8km az=184.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK005	**Luther M Schoo**	**0.68**	**153**	Pg	Pg	00 30 29.9	-0.6
OKCFA	**Oklahoma City**	**0.85**	**173**		Pg	00 30 33.1	-0.7
OKCSW	**OKLAHOMA CITY**	**0.87**	**173**		Pg	00 30 33.3	-0.7
FNO	**Franklin**	**1.02**	**172**		Pg	00 30 35.9	-1.0
T35A	**Sooner Cattle**	**1.07**	**52**		Pg	00 30 37.0	-0.9
U32A	**Winter Ranch,**	**1.16**	**276**	Pg	Pg	00 30 38.4	-1.3
TUL1	**Leonard**	**1.48**	**103**		Pn	00 30 43.5	-1.4
X34A	**Smith Ranch, M**	**1.68**	**187**		Pn	00 30 47.6	+0.1
X34A				IAmb_Lg		00 31 12.7	
	comp=Z,36nm,0.8s						
WMOK	**Wichita Mounta**	**1.82**	**213**	Pn	Pn	00 30 48.6	-0.9
WMOK				IAmb_Lg		00 31 16.8	
	comp=Z,32nm,0.8s						
R32A	**Long Quarter,**	**2.34**	**337**		Pn	00 30 56.6	0.0
X37A	**Clayton**	**2.46**	**132**		Pn	00 30 57.5	-0.7
X37A				IAmb_Lg		00 31 39.2	
	comp=Z,26nm,0.7s						
KSU1	**Kansas State U**	**2.93**	**15**		Pn	00 31 03.8	-1.0
HHAR	**Hobbs**	**2.93**	**89**		Pn	00 31 03.9	-0.9
W39A	**Magazine**	**3.26**	**108**		Pn	00 31 08.8	-0.6
W39A				IAmb_Lg		00 32 05.5	
	comp=Z,27nm,0.8s						
AMTX	**Amarillo**	**3.62**	**249**	Pn	Pn	00 31 14.9	+0.5
MIAR	**Mount Ida**	**3.69**	**117**		Pn	00 31 14.9	-0.3
MIAR				IAmb_Lg		00 32 19.0	
	comp=Z,13nm,0.7s						
S39A	**Bolivar**	**3.69**	**66**		Pn	00 31 14.7	-0.5
S39A				IAmb_Lg		00 32 21.0	
	comp=Z,37nm,0.9s						
U40A	**Yellville**	**3.81**	**87**	Pn	Pn	00 31 16.9	0.0
U40A				IAmb_Lg		00 32 20.0	
	comp=Z,44nm,0.7s						
ABTX	**Abilene, Hawle**	**4.02**	**206**	Pn	Pn	00 31 20.1	+0.3
ABTX				IAmb_Lg		00 32 27.3	
	comp=Z,11nm,0.7s						
X40A	**Basin Creek Fa**	**4.26**	**113**		Pn	00 31 23.2	+0.2
WHTX	**Lake Whitney,**	**4.27**	**179**	Pn	Pn	00 31 22.9	-0.2
MGMO	**Mountain Grove**	**4.35**	**77**		Pn	00 31 24.7	+0.3
MGMO				IAmb_Lg		00 32 38.4	
	comp=Z,31nm,0.8s						
WHAR	**Wooly Hollow**	**4.40**	**101**		Pn	00 31 25.3	+0.3
FCAR	**Ozark Folk Cen**	**4.43**	**93**		Pn	00 31 24.3	-1.1
W41B	**Gary Mavity, V**	**4.46**	**103**		Pn	00 31 25.7	-0.2
W41B				IAmb_Lg		00 32 40.6	
	comp=Z,12nm,0.9s						
P38A	**Dawn**	**4.63**	**42**	IAmb_Lg		00 32 55.6	
	comp=Z,14nm,0.9s						
R40A	**Maddies Statio**	**4.69**	**63**	Pn	Pn	00 31 28.5	-0.4
N35A	**Tabor**	**4.83**	**18**	IAmb_Lg		00 32 59.4	
	comp=Z,20nm,0.8s						
MSTX	**Muleshoe**	**4.84**	**243**	IAmb_Lg		00 32 55.0	
	comp=Z,8.2nm,0.7s						
LCAR	**Lake Charles**	**5.19**	**90**	Pn	Pn	00 31 35.1	-0.7
P40A	**Paris**	**5.45**	**52**	Pn	Pn	00 31 39.2	-0.2
L34A	**Svendsen Farm,**	**5.77**	**9**	IAmb_Lg		00 33 32.2	
	comp=Z,20nm,0.8s						
PBMO	**Poplar Bluff**	**5.77**	**83**	IAmb_Lg		00 33 32.7	
	comp=Z,11nm,0.8s						
OGNE	**Ogallala**	**5.83**	**325**	IAmb_Lg		00 33 35.9	
	comp=Z,20nm,0.8s						
FVM	**French Village**	**5.96**	**71**	IAmb_Lg		00 33 25.6	
	comp=Z,25nm,0.9s						
JCT	**Junction City**	**6.07**	**199**	IAmb_Lg		00 33 44.3	
	comp=Z,11nm,0.7s						
S44A	**Carbondale**	**6.81**	**75**	IAmb_Lg		00 33 56.0	
	comp=Z,18nm,0.7s						
RSSD	**Black Hills**	**9.27**	**330**	IAmb_Lg		00 35 31.1	
	comp=Z,3.7nm,0.9s						

*IDC **02** 00:37:26.7±2.9, 18°26N×146°74E, h50km±25km, mb3.8/14, mbtmp4.1/16, ML4.1/3, MS3.7/1, Error ellipse: s-maj=27.9km s-min=11.0km az=91.0*
*NEIC **02** 00:37:29.0±1.7, 18°21N±0°10×146°7E±0°1, h67km±7km, mb4.3/18, Error ellipse: s-maj=18.3km s-min=12.5km az=118.0*
ISC 02 00:37:28.1±0.5**, 18°25N**±0°05×**146°7E**±0°1**, h66**km**, n50,** σ0s76/47**, mb4.2**/22**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.95**	**201**	P	**Pn**	**00 38 39.4**	**-0.6**
	17nm,0.3s,baz=27,slow=18,SNR=3.9						
GUMO				S	**Sn**	**00 39 36.0**	**0.0**
	50nm,0.4s,baz=137,slow=23,SNR=1.4						
GUMO	**Guam**	**4.95**	**201**		**Pn**	**00 38 39.8**	**-0.3**
JCJ	**Chichijima**	**9.75**	**335**	P	**Pn**	**00 39 43.7**	**-1.8**
	4.0nm,0.3s,baz=187,slow=23,SNR=2.2						
JCJ				S	**Sn**	**00 41 32.1**	**-1.4**
	44nm,0.6s,baz=163,slow=24,SNR=1.7						
	51nm,0.6s						
PATS	**Pohnpei**	**16.02**	**134**	Pn	**Pn**	**00 41 07.5**	**-2.0**
PATS				IAmb	IAmb	00 41 27.1	
	comp=Z,52nm,1.0s						
JHJ	**Hachijo jima 2**	**16.06**	**339**	LR	LR	00 46 42.0	
	comp=Z,260nm,18.2s,baz=24,slow=35						
H11S3	**WAKE ISLAND Hy**	**18.97**	**86**	T	T	01 02 43.1	
	baz=274,slow=75,SNR=6.3						
H11S1	**WAKE ISLAND Hy**	**18.98**	**86**	T	T	01 02 42.0	
	baz=274,slow=75,SNR=8.6						
H11S2	**WAKE ISLAND Hy**	**18.99**	**86**	T	T	01 02 46.8	
	baz=274,slow=75,SNR=8.3						
H11N1	**WAKE ISLAND Hy**	**19.15**	**82**	T	T	01 03 00.7	
	baz=267,slow=74						
H11N2	**WAKE ISLAND Hy**	**19.15**	**82**	T	T	01 03 01.8	
	baz=267						
H11N3	**WAKE ISLAND Hy**	**19.16**	**82**	T	T	01 03 01.4	
	baz=267,slow=74						
JGF	**Kuroka**	**19.17**	**336**	P	**P**	**00 41 46.5**	**+0.1**
JGF				IAmb	IAmb	00 42 04.2	
	comp=Z,21nm,1.3s						
MJAR	**Matsushiro Arr**	**19.71**	**339**	P	**P**	**00 41 51.9**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=164,slow=9.4,SNR=1.6						
	comp=Z,0.8nm,0.3s						
SIJI	**Sorong**	**24.32**	**220**	P	**P**	**00 42 40.3**	**+0.5**
	comp=Z,6.3nm,0.4s,baz=34,slow=16,SNR=3.7						
	comp=Z,6.3nm,0.4s						
TOLI2	**Tolitoli**	**30.62**	**239**	P	**P**	**00 43 36.9**	**+0.7**
TOLI2				IAmb	IAmb	00 43 38.3	
	comp=Z,5.7nm,0.7s						
KLR	**Kul'dur**	**33.19**	**342**	P	**P**	**00 43 59.6**	**+1.2**
	comp=Z,2.0nm,0.5s,baz=141,slow=6.8,SNR=8.6						
	comp=Z,2.0nm,0.5s						
WB0	**Warramunga Arr**	**39.66**	**198**	P	**P**	**00 44 53.3**	**-0.6**
WB0				IAmb	IAmb	00 44 59.4	
	comp=Z,6.2nm,1.1s						
WRA	**Warramunga Arr**	**39.84**	**198**	P	**P**	**00 44 55.2**	**-0.2**
	comp=Z,1.6nm,0.3s,baz=24,slow=7.8,SNR=35						
WRA				PcP	**PcP**	**00 47 00.7**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=15,slow=3.2,SNR=5.5						
	comp=Z,1.6nm,0.3s						
WRA	**Warramunga Arr**	**39.84**	**198**	P	**P**	**00 44 54.4**	**-0.9**
AS31	**Alice Springs**	**43.49**	**197**	P	**P**	**00 45 24.9**	**-0.2**
AS31				IAmb	IAmb	00 45 27.6	
	comp=Z,1.5nm,0.5s						
ASAR	**Alice Springs**	**43.49**	**197**	P	**P**	**00 45 25.5**	**+0.3**
	comp=Z,1.7nm,0.5s,baz=21,slow=8.5,SNR=29						
ASAR				PcP	**PcP**	**00 47 12.9**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=36,slow=3.4,SNR=2.4						
	comp=Z,1.7nm,0.5s						
ASAR	**Alice Springs**	**43.49**	**197**	P	**P**	**00 45 24.9**	**-0.3**
SONM	**Songino Array**	**44.09**	**321**	P	**P**	**00 45 30.3**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=129,slow=9.0,SNR=4.1						
	comp=Z,0.4nm,0.5s						
SONM	**Songino Array**	**44.09**	**321**	P	**P**	**00 45 30.4**	**+0.5**
GSTR	**Great Sitkin T**	**44.63**	**32**	P	**P**	**00 45 33.5**	**-0.5**
CMAR	**Chiang Mai Arr**	**45.23**	**278**	P	**P**	**00 45 39.0**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=70,slow=5.9,SNR=1.3						
	comp=Z,0.5nm,0.3s						
STKA	**Stephens Creek**	**50.08**	**186**	P	**P**	**00 46 16.2**	**-0.2**
	comp=Z,0.8nm,0.3s,baz=52,slow=6.5,SNR=4.6						
	comp=Z,0.8nm,0.3s						
STKA	**Stephens Creek**	**50.08**	**186**	P	**P**	**00 46 16.2**	**-0.2**
BBOO	**Buckleboo**	**51.78**	**191**	P	**P**	**00 46 29.3**	**+0.1**
N18K	**Kilae Creek**	**58.48**	**29**	P	**P**	**00 47 18.0**	**+0.8**
O18K	**Koktuh Hills**	**58.52**	**30**	P	**P**	**00 47 17.8**	**+0.3**
ZALV	**Zalesovo Beam**	**58.95**	**323**	P	**P**	**00 47 20.1**	**-0.5**
	comp=Z,0.6nm,0.4s,baz=118,slow=8.3,SNR=4.1						
	comp=Z,0.6nm,0.4s						
MKAR	**Makanchi Array**	**59.46**	**314**	P	**P**	**00 47 25.4**	**+1.1**
	comp=Z,0.3nm,0.5s,baz=93,slow=9.2,SNR=3.7						
	comp=Z,0.3nm,0.5s						
CNPM	**China Poot**	**60.35**	**31**	P	**P**	**00 47 30.1**	**0.0**
IMAR	**Indian Mountai**	**61.24**	**24**	P	**P**	**00 47 36.9**	**+0.8**
I21K	**Tanana**	**61.66**	**25**	P	**P**	**00 47 40.2**	**+1.3**
I21K				IAmb	IAmb	00 47 41.7	
	comp=Z,3.6nm,1.1s						
MLY	**Manley**	**62.12**	**25**	P	**P**	**00 47 42.7**	**+0.7**
MLY				IAmb	IAmb	00 47 44.0	
	comp=Z,2.7nm,0.9s						
ILAR	**Eielson Array**	**63.63**	**26**	P	**P**	**00 47 51.2**	**-0.8**
	comp=Z,0.9nm,0.8s,baz=258,slow=6.2,SNR=6.8						
	comp=Z,0.9nm,0.8s						
ILAR	**Eielson Array**	**63.63**	**26**	P	**P**	**00 47 51.5**	**-0.5**
SCRK	**Sand Creek**	**64.70**	**27**	P	**P**	**00 47 59.4**	**+0.2**
SCRK				IAmb	IAmb	00 48 00.2	
	comp=Z,1.5nm,0.8s						
BMAR	**Burnt Mountain**	**65.15**	**23**	P	**P**	**00 48 03.5**	**+1.5**
BCAR	**Beaver Creek A**	**65.53**	**28**	P	**P**	**00 48 05.4**	**+0.9**
ARU	**Arti**	**73.99**	**325**	P	**P**	**00 48 56.6**	**+0.2**
ARU				IAmb	IAmb	00 49 07.0	
	comp=Z,2.1nm,0.9s						
ABKAR	**Akbulak array**	**74.32**	**317**	P	**P**	**00 48 58.5**	**-0.1**
ABKAR	**Akbulak array**	**74.32**	**317**	P	**P**	**00 48 58.4**	**-0.2**
ABKAR				IAmb	IAmb	00 49 01.3	
	comp=Z,1.3nm,1.1s						
YKA	**Yellowknife Ar**	**77.94**	**28**	P	**P**	**00 49 19.1**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=287,slow=5.7,SNR=4.7						
	comp=Z,0.7nm,0.7s						
NVAR	**Mina Array Bea**	**82.67**	**52**	P	**P**	**00 49 45.9**	**+0.8**
	comp=Z,0.7nm,0.5s,baz=266,slow=4.9,SNR=5.7						
	comp=Z,0.7nm,0.5s						
ARCES	**ARCESS Array B**	**83.21**	**342**	P	**P**	**00 49 47.7**	**+0.7**
	comp=Z,2.8nm,0.9s,baz=55,slow=3.4,SNR=1.7						
	comp=Z,2.8nm,0.9s						
FIA1	**FINESS Array S**	**87.69**	**336**		**P**	**00 50 08.9**	**-0.4**
FIA1				IAmb	IAmb	00 50 09.2	
	comp=Z,5.3nm,1.1s						
FINES	**FINESS Array B**	**87.69**	**336**	P	**P**	**00 50 09.0**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=75,slow=5.3,SNR=16						
	comp=Z,0.7nm,0.3s						

*SNET **02** 00:39:06.8±1.5, 12°84N×88°71W, h26km, ML4.3, ML4.2*
*INET **02** 00:39:07.9±1.4, 12°84N×88°63W, h22km±13km, MW3.5*
*UCR **02** 00:39:07.2±1.3, 12°86N×88°74W, h26km, ML4.2, mb3.8(NEIC)*
*NEIC **02** 00:39:08.3±2.0, 12°86N±0°06×88°66W±0°05, h35km±2km, mb3.8/2, Md4.3(SNET), Error ellipse: s-maj=12.8km s-min=5.2km az=213.0*
*GCG **02** 00:39:10.6±0.7, 13°80N×88°77W, h174km±24km, MD4.2*
ISC 02 00:39:06.6±1.2**, 12°83N**±0°04×**88°72W**±0°03**, h32**km±10km**, n79,** σ0s99/111**, 4D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JUCU	**Jucuar¡n**	**0.63**	**47**	⇓*e*P	**Pb**	**00 39 19.7**	**+0.4**
JUCU				*e*S	**Sn**	**00 39 29.1**	**+0.9**
JUCU				IAML		00 39 31.0	

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	comp=Z,9µm,0.3s						
JUCU	Jucuar¡n	0.63	47⇓	eP	Pb	00 39 19.7	+0.4
JUCU				eS	Sn	00 39 29.1	+0.9
JUCU				IAML		00 39 31.0	
	comp=Z,9µm,0.3s						
COEB	Comit de Eme	0.69	16⇓	eP	Pb	00 39 20.9	+0.6
COEB				eS	Sn	00 39 30.6	+0.7
COEB	Comit de Eme	0.69	16⇓	eP	Pb	00 39 20.9	+0.6
COEB				eS	Sn	00 39 30.6	+0.7
PACA	Pacayal	0.75	31	eP	Pb	00 39 21.6	+0.3
PACA				eS	Sn	00 39 32.5	+1.2
PACA				IAML		00 39 36.7	
	comp=Z,54µm,0.5s						
PACA	Pacayal	0.75	31	eP	Pb	00 39 21.6	+0.3
PACA				eS	Sn	00 39 32.5	+1.2
PACA				IAML		00 39 36.7	
	comp=Z,54µm,0.5s						
COEG	Centro de Oper	0.80	349	eP	Pb	00 39 22.3	+0.1
COEG				eS	Sn	00 39 33.5	+0.9
COEG				IAML		00 39 39.2	
	comp=Z,7µm,0.4s						
COEG	Centro de Oper	0.80	349	eP	Pb	00 39 22.3	+0.1
COEG				eS	Sn	00 39 33.5	+0.9
COEG				IAML		00 39 39.2	
	comp=Z,7µm,0.4s						
PQSS	Presa 15 de Se	0.81	11	eP	Pb	00 39 22.5	+0.2
PQSS				IAML		00 39 35.2	
	comp=Z,8µm,0.2s						
PQSS	Presa 15 de Se	0.81	11	eP	Pb	00 39 22.5	+0.2
PQSS				IAML		00 39 35.2	
	comp=Z,8µm,0.2s						
SJTE	Alcalda de S	0.83	340	eP	Pb	00 39 22.5	-0.2
SJTE				eS	Sb	00 39 33.3	-0.2
SJTE	Alcalda de S	0.83	340	eP	Pb	00 39 22.5	-0.2
SJTE				eS	Sb	00 39 33.3	-0.2
LFRS	El Faro	0.86	337	eP	Pb	00 39 23.0	-0.2
LFRS	El Faro	0.86	337	eP	Pb	00 39 23.0	-0.2
SCLA	Alcaldia de Sa	0.87	360	eP	Pb	00 39 23.7	+0.4
SCLA				eS	Sn	00 39 35.5	+1.2
SCLA	Alcaldia de Sa	0.87	360	eP	Pb	00 39 23.7	+0.4
SCLA				eS	Sn	00 39 35.5	+1.2
LALI	Alcalda de L	0.88	318	eP	Pb	00 39 22.2	-1.2
LALI	Alcalda de L	0.88	318	eP	Pb	00 39 22.2	-1.2
PAVA	Las Pavas	0.91	347	eP	Pb	00 39 23.9	0.0
PAVA				eS	Sb	00 39 35.6	-0.2
PAVA				IAML		00 39 38.5	
	comp=Z,5µm,0.2s						
PAVA	Las Pavas	0.91	347	eP	Pb	00 39 23.9	0.0
PAVA				eS	Sb	00 39 35.6	-0.2
PAVA				IAML		00 39 38.5	
	comp=Z,5µm,0.2s						
PAVA	Las Pavas	0.91	347	eP	Pb	00 39 24.0	0.0
PAVA				eS	Sn	00 39 37.1	+1.8
LCND	La Caada	0.94	59	eP	Pn	00 39 23.7	+0.1
LCND				IAML		00 39 38.0	
	comp=Z,8µm,0.3s						
LCND	La Caada	0.94	59	eP	Pn	00 39 23.7	+0.1
LCND				IAML		00 39 38.0	
	comp=Z,8µm,0.3s						
LBRS	Las Brisas	0.96	341	eP	Pn	00 39 24.6	+0.7
LBRS	Las Brisas	0.96	341	eP	Pn	00 39 24.6	+0.7
CNCH	Conchagua	0.97	63	eP	Pn	00 39 24.4	+0.3
CNCH				eS	Sb	00 39 37.2	-0.4
CNCH				IAML		00 39 42.2	
	comp=Z,11µm,0.3s						
CNCH	Conchagua	0.97	63	eP	Pn	00 39 24.4	+0.3
CNCH				eS	Sb	00 39 37.2	-0.4
CNCH				IAML		00 39 42.2	
	comp=Z,11µm,0.3s						
SNET	Serv Nac Est T	0.99	330	Pn	Pn	00 39 24.8	+0.5
SNET				Sn	Sb	00 39 38.5	+0.4
SNET	Serv Nac Est T	0.99	330	eP	Pn	00 39 24.9	+0.5
SNET				eS	Sb	00 39 37.8	-0.3
SNET				IAML		00 39 39.9	
	comp=Z,3µm,0.3s						
SNET	Serv Nac Est T	0.99	330	eP	Pn	00 39 24.9	+0.5
SNET				eS	Sb	00 39 37.8	-0.3
SNET				IAML		00 39 39.9	
	comp=Z,3µm,0.3s						
LFU	La Fuente	0.99	337	eP	Pn	00 39 25.1	+0.7
LFU				eS	Sb	00 39 37.5	-0.7
LFU	La Fuente	0.99	337	eP	Pn	00 39 25.1	+0.7
LFU				eS	Sb	00 39 37.5	-0.7
UEES	Universidad Ev	1.02	330	eP	Pn	00 39 25.2	+0.5
UEES	Universidad Ev	1.02	330	eP	Pn	00 39 25.2	+0.5
FAGO	Alcalda de S	1.05	35	eP	Pn	00 39 25.1	0.0
FAGO	Alcalda de S	1.05	35	eP	Pn	00 39 25.1	0.0
FAGO	Alcalda de S	1.05	35	eP	Pn	00 39 25.1	0.0
FAGO				eS	Sb	00 39 39.3	-0.4
BOQS	Boqueron	1.05	329	eP	Pn	00 39 26.1	+0.8
BOQS	Boqueron	1.05	329	eP	Pn	00 39 26.1	+0.8
JAYA	Jayaque - finc	1.08	319	eP	Pn	00 39 24.8	-0.9
JAYA				eS	Sn	00 39 38.9	-0.8
JAYA	Jayaque - finc	1.08	319	eP	Pn	00 39 24.8	-0.9
JAYA				eS	Sn	00 39 38.9	-0.8
CEDA	San Andres	1.17	326	eP	Pn	00 39 27.4	+0.7
CEDA	San Andres	1.17	326	eP	Pn	00 39 27.4	+0.7
CEVE	Cerro Verde	1.33	319	eP	Pn	00 39 29.9	+0.8
CEVE	Cerro Verde	1.33	319	eP	Pn	00 39 29.9	+0.8
SBLS	San Blas	1.33	319	eP	Pn	00 39 30.0	+0.8
SBLS	San Blas	1.33	319	eP	Pn	00 39 30.0	+0.8
SNJE	San Jose	1.34	320	eP	Pn	00 39 30.2	+0.8
SNJE	San Jose	1.34	320	eP	Pn	00 39 30.2	+0.8
RTR	El Retiro	1.39	320	eP	Pn	00 39 30.4	+0.5
RTR	El Retiro	1.39	320	eP	Pn	00 39 30.4	+0.5
NUBE	Las Nubes	1.48	316	eP	Pn	00 39 31.8	+0.6
NUBE				IAML		00 39 52.6	
	comp=Z,2µm,0.3s						
NUBE	Las Nubes	1.48	316	eP	Pn	00 39 31.8	+0.6
NUBE				IAML		00 39 52.6	
	comp=Z,2µm,0.3s						
SLOZ	Alcaldia de Sa	1.58	319	eP	Pn	00 39 33.2	+0.8
CRIN	San Cristobal	1.64	94	Pn	Pn	00 39 33.6	+0.5
CRIN				Sn	Sn	00 39 53.2	0.0
CRIN	San Cristobal	1.64	94	eP	Pn	00 39 33.7	+0.5
CRIN				eS	Sn	00 39 54.2	+1.0
ESQI	Esquipulas	1.82	341	Pn	Pn	00 39 36.8	+1.0
TGUH	Tegucigalpa,Un	1.86	49	Pn	Pn	00 39 36.9	+0.4
TGUH				Sn	Sn	00 39 59.4	+0.5
CNGN	Cerro Negro	2.00	99	Pn	Pn	00 39 38.4	+0.1
CNGN				Sn	Sn	00 40 01.3	-0.9
COPN	Copaltepe	2.18	107	eP	Pn	00 39 39.8	-0.8
NBG	Las Nubes	2.36	318	eP	Pn	00 39 45.9	+2.6
NBG				eS	Sn	00 40 11.3	0.0
MRL	Marmol	2.43	337	eP	Pn	00 39 43.7	-0.5
FUG	Fuego 3	2.62	308	eP	Pn	00 39 48.9	+2.1
FUG				eS	Sn	00 40 19.9	+2.4
MATN	Matagalpa	2.73	88	Pn	Pn	00 39 48.1	-0.2
BOAB	BOACO BROADBAN	3.01	97	Pn	Pn	00 39 51.5	-0.5
STG3	Santiaguito 3,	3.34	304	eP	Pn	00 40 00.4	+3.6
STG3				eS	Sn	00 40 36.3	+0.8
ACON	Acoyapa	3.57	103		Pn	00 40 00.3	+0.5
HZTE	Horizontes, Gu	3.71	124	Pn	Pn	00 40 03.0	+1.3
ORTG	Ortega, Santa	4.03	127		Pn	00 40 07.4	+1.3
DUNO	Dulce Nombre,	4.18	130	Pn	Pn	00 40 09.2	+1.0
JTS	Las Juntas de	4.47	124	Pn	Pn	00 40 14.0	+1.8
JACO	JACO, Garabito	5.08	128	Pn	Pn	00 40 22.4	+1.9
RIMA	Rio Macho	5.65	122		Pn	00 40 30.2	+1.6
PEZE	Perez Zeledon,	6.02	124	Pn	Pn	00 40 35.7	+2.2
SRBA	San Rafael, Bu	6.36	124		Pn	00 40 39.3	+1.0
DRK0	Durika	6.44	123		Pn	00 40 41.9	+2.6
BAUV	El Baul	20.67	99	P	P	00 43 41.1	-2.9
BAUV				IAmb	IAmb	00 43 46.5	
	comp=Z,7.4nm,0.9s						
TX32	Lajitas Array	21.51	322	P	P	00 43 52.1	-0.9
TX32				IAmb	IAmb	00 43 57.3	
	comp=Z,3.8nm,1.5s						
TXAR	Lajitas Array	21.51	322	P	P	00 43 52.8	-0.2

ASRS 02 01:14:17.5±0.4**, 49°N**±3°**×10°0E**±°**, h5**km**, MLh3.6**/4**, Error ellipse: s-maj=7.1km s-min=3.1km az=11.7, confirmed, Mongolia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNGR	Kungurtug, Tuv	1.91	308	Pg	Pg	01 14 56.8	+2.6
KNGR				Sg	Sg	01 15 22.0	+3.1
MOY	Mondy	2.32	17	Pg	Pg	01 15 02.6	+0.7
MOY				Sg	Sg	01 15 32.8	+0.8
ZAK	Zakamensk	2.38	66	Pg	Pg	01 15 04.2	+1.1
ZAK				Sg	Sg	01 15 37.2	+3.3
ERNS	Erzin	3.17	286	Pg	Pg	01 15 18.7	+0.5
ERNS				Sg	Sg	01 16 01.1	+1.9
KZLR	Kyzyl	4.13	305	Pg	Pg	01 15 39.0	+2.5
KZLR				Sg	Sg	01 16 29.0	-1.0
ULN	Ulaanbaatar	5.01	106	Pg	Pg	01 15 53.6	+0.2
ULN				Sg	Sg	01 17 00.3	+2.0
TRG	Tyrgan	5.24	48	Sg	Sg	01 17 01.0	-4.7
DJOS	Djoyskaya Sosn	6.30	305	Sg	Sg	01 17 37.4	-2.3
CERR	Cheremushki	6.32	306	Sg	Sg	01 17 41.0	+0.7
DJO	Djoy, Khakassi	6.39	305	Pg	Pg	01 16 22.8	+3.0
DJO				Sg	Sg	01 17 38.2	-4.4
MINR	Mina	6.47	329	Pg	Pg	01 16 18.3	-3.1
MINR				Sg	Sg	01 17 43.4	-1.8
CUR	Chagan-Uzun	7.50	279	Pg	Pg	01 16 38.9	-2.2
CUR				Sg	Sg	01 18 17.4	-0.8

NOU 02 01:16:09.4, 16°.02S×167°.59E, h17km**, mB3.9**/12**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	Devils Point	1.79	161	P	Pn	01 16 39.4	-0.1
MARNC	Mare, Loyalty	5.45	176	P	Pn	01 17 29.9	0.0
KOUNC	Koumac, New Ca	5.49	214	P	Pn	01 17 29.9	-0.6
YATNC	Mamie plateau,	6.04	186	P	Pn	01 17 38.2	+0.1
DZM	Mont Dzumac	6.12	190	P	Pn	01 17 38.0	-1.1
OUENC	Ouen Island, N	6.40	186	P	Pn	01 17 43.7	+0.7

*NEIC **02** 01:28:54.8±0.6, 36°.37N±0°.02×97°.72W±0°.02, h5km±6km, Error ellipse: s-maj=2.7km s-min=2.2km az=54.0*
*TUL **02** 01:28:54.9±0.6, 36°.38N±0°.02×97°.73W±0°.02, h6km±6km, ML3.4, mb_Lg3.2/106(NEIC), Error ellipse: s-maj=2.5km s-min=2.3km az=49.0*
*ANF **02** 01:28:55.1±0.3, 36°.36N×97°.72W, h6km, ML3.7/12, Error ellipse: s-maj=3.9km s-min=2.3km az=175.0*
ISC 02 01:28:55.0±0.8**, 36°.38N**±0°.03**×97°.73W**±0°.03**, h10**km**, n77, σ0s86**/47**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKCFA	Oklahoma City	0.99	167	Pg	Pg	01 29 13.5	-0.5
OKCFA	Oklahoma City	0.99	167	P	Pg	01 29 13.4	-0.6
	baz=347,SNR=17						
OKCSW	OKLAHOMA CITY	1.00	166		Pg	01 29 13.7	-0.5
U32A	Winter Ranch,	1.03	270	Pg	Pg	01 29 14.2	-0.5
U32A	Winter Ranch,	1.03	270	P	Pg	01 29 14.2	-0.5
	baz=90,SNR=30						
U32A				S	Sg	01 29 28.7	+0.6
	baz=90						
T35A	Sooner Cattle	1.11	61	Pg	Pb	01 29 15.8	-0.5
T35B	Sooner Cattle	1.11	61	P	Pb	01 29 15.8	-0.5
	baz=241,SNR=260						
T35B				S	Sb	01 29 31.3	+0.4
	baz=241						
FNO	Franklin	1.15	167	Pg	Pb	01 29 16.3	-0.7
TUL1	Leonard	1.64	106	Pn	Pn	01 29 24.2	+0.4
TUL1				IAmb_Lg		01 29 47.5	
	comp=Z,156nm,0.8s						
TUL1	Leonard	1.64	106	P	Pn	01 29 24.2	+0.4
	baz=287,SNR=105						
TUL1				S	Sb	01 29 46.3	+0.4
	baz=287						
X34A	Smith Ranch, M	1.78	183		Pn	01 29 26.8	+1.0
WMOK	Wichita Mounta	1.85	208	Pn	Pn	01 29 27.1	+0.4
WMOK				IAmb_Lg		01 29 53.8	
	comp=Z,85nm,0.7s						
WMOK	Wichita Mounta	1.85	208	P	Pn	01 29 27.4	+0.6
	baz=28,SNR=114						
R32A	Long Quarter,	2.18	339		Pn	01 29 31.8	+0.4
R32A	Long Quarter,	2.18	339	P	Pb	01 29 33.5	-1.1
	baz=159						
X37A	Clayton	2.63	132	Pn	Pn	01 29 37.7	+0.3
X37A				IAmb_Lg		01 30 19.2	
	comp=Z,72nm,0.8s						
X37A	Clayton	2.63	132	P	Pn	01 29 38.6	+1.2
	baz=314,SNR=31						
KSU1	Kansas State U	2.86	18	IAmb_Lg		01 30 27.6	
	comp=Z,55nm,0.8s						
CBKS	Cedar Bluff	2.91	327	IAmb_Lg		01 30 29.7	
	comp=Z,54nm,0.8s						
CBKS	Cedar Bluff	2.91	327	P	Pn	01 29 43.0	+1.7
	baz=146						
HHAR	Hobbs	3.06	91		Pn	01 29 43.6	+0.2
Z35A	Perchaven, San	3.07	173	Pn	Pn	01 29 43.7	+0.2
W39A	Magazine	3.42	109	IAmb_Lg		01 30 45.6	
	comp=Z,81nm,0.8s						
W39A	Magazine	3.42	109	S	Sn	01 30 30.3	+1.5
	baz=291						
AMTX	Amarillo	3.55	246	Pn	Pn	01 29 50.8	+0.6
AMTX				IAmb_Lg		01 30 57.3	
	comp=Z,67nm,0.9s						
AMTX	Amarillo	3.55	246	P	Pn	01 29 51.8	+1.6
	baz=64						
S39A	Bolivar	3.76	68		Pn	01 29 53.4	+0.3
S39A	Bolivar	3.76	68	P	Pn	01 29 54.1	+1.1
	baz=251						
Z38A	Mt. Pleasant	3.84	143	Pn	Pn	01 29 54.3	+0.1
Z38A				IAmb_Lg		01 31 02.0	
	comp=Z,80nm,0.8s						
MIAR	Mount Ida	3.85	117	Pn	Pn	01 29 54.4	+0.1
MIAR				IAmb_Lg		01 30 59.4	
	comp=Z,37nm,0.9s						
MIAR	Mount Ida	3.85	117	P	Pn	01 29 54.2	-0.1
	baz=300,SNR=21						
U40A	Yellville	3.93	89	Pn	Pn	01 29 54.6	-0.8
U40A				IAmb_Lg		01 31 03.3	
	comp=Z,72nm,0.8s						
ABTX	Abilene, Hawle	4.07	203	Pn	Pn	01 29 56.9	-0.4
ABTX				IAmb_Lg		01 31 07.1	
	comp=Z,36nm,0.8s						
WHTX	Lake Whitney,	4.38	177	Pn	Pn	01 30 02.3	+0.7
X40A	Basin Creek Fa	4.42	114	Pn	Pn	01 30 02.0	-0.1
MGMO	Mountain Grove	4.45	78		Pn	01 30 02.9	+0.4
MGMO				IAmb_Lg		01 31 14.7	
	comp=Z,40nm,0.8s						
WHAR	Wooly Hollow	4.55	102	IAmb_Lg		01 31 22.8	
	comp=Z,56nm,0.8s						
FCAR	Ozark Folk Cen	4.56	95	IAmb_Lg		01 31 19.1	
	comp=Z,29nm,0.8s						
W41B	Gary Mavity, V	4.62	104	Pn	Pn	01 30 05.2	+0.4
W41B				IAmb_Lg		01 31 28.9	
	comp=Z,48nm,1.0s						
P38A	Dawn	4.63	44	Pn	Pn	01 30 05.3	+0.3
WLAR	White Oak Lake	4.64	124	IAmb_Lg		01 31 28.8	
	comp=Z,50nm,0.7s						
237A	Washetta, Mont	4.65	159		Pn	01 30 04.9	-0.4
UALR	University of	4.67	108	Pn	Pn	01 30 06.3	+0.7
UALR				IAmb_Lg		01 31 25.8	
	comp=Z,52nm,0.9s						
KSCO	Kaye Shedlock'	4.69	306	IAmb_Lg		01 31 37.5	
	comp=Z,43nm,0.8s						
R40A	Maddies Statio	4.75	65		Pn	01 30 06.9	+0.2
R40A				IAmb_Lg		01 31 28.8	
	comp=Z,37nm,0.9s						
R40A	Maddies Statio	4.75	65	P	Pn	01 30 07.4	+0.8
	baz=248,SNR=18						
N35A	Tabor	4.76	19	Pn	Pn	01 30 05.7	-1.1
MSTX	Muleshoe	4.78	241	Pn	Pn	01 30 04.7	-2.5
Z41A	Richland Creek	5.11	126	IAmb_Lg		01 31 46.1	
	comp=Z,44nm,0.8s						
LCAR	Lake Charles	5.32	91	Pn	Pn	01 30 16.6	+2.1
LCAR				IAmb_Lg		01 31 44.9	
	comp=Z,29nm,0.8s						
T25A	Trinidad	5.42	280	Pn	Pn	01 30 16.6	+0.6
T25A				IAmb_Lg		01 31 55.5	
	comp=Z,45nm,0.9s						
CCM	Cathedral Cave	5.44	70	IAmb_Lg		01 31 52.1	
	comp=Z,24nm,0.8s						
CCAR	Cane Creek	5.46	115	IAmb_Lg		01 31 55.0	
	comp=Z,46nm,0.7s						
435B	Jarrell	5.58	179	IAmb_Lg		01 32 04.9	
	comp=Z,28nm,0.7s						
OGNE	Ogallala	5.67	325	Pn	Pn	01 30 19.8	+0.5
OGNE				IAmb_Lg		01 32 03.6	
	comp=Z,31nm,0.8s						
PBMO	Poplar Bluff	5.89	84	IAmb_Lg		01 32 04.3	
	comp=Z,35nm,0.8s						
SLM	Saint Louis	6.37	67	IAmb_Lg		01 32 26.9	
	comp=Z,28nm,0.9s						
143A	Socs Landing,	6.38	123	IAmb_Lg		01 32 28.2	
	comp=Z,30nm,0.8s						
Q24A	Divide	6.43	296	IAmb_Lg		01 32 30.3	
	comp=Z,30nm,0.7s						
N41A	Harden Midland	6.90	49	IAmb_Lg		01 32 37.1	
	comp=Z,38nm,0.7s						
S44A	Carbondale	6.90	77	IAmb_Lg		01 32 45.2	
	comp=Z,32nm,0.7s						
SIUC	Southern Illin	6.94	76	IAmb_Lg		01 32 35.7	
	comp=Z,29nm,0.9s						
OXF	Oxford	7.04	103	IAmb_Lg		01 32 48.7	
	comp=Z,33nm,1.0s						
W45A	Hickory Valley	7.05	97	IAmb_Lg		01 32 37.9	
	comp=Z,33nm,0.8s						
ISCO	Idaho Springs	7.09	301	IAmb_Lg		01 32 49.5	
	comp=Z,17nm,0.7s						
Y45A	Yeager Farm, C	7.16	108	IAmb_Lg		01 32 49.7	
	comp=Z,27nm,0.7s						
ECSD	EROS Data Cent	7.39	6	IAmb_Lg		01 32 59.1	
	comp=Z,15nm,0.9s						
PHWY	Pilot Hill	7.78	312	IAmb_Lg		01 33 11.6	
	comp=Z,29nm,1.0s						
N23A	Red Feather La	7.85	308	IAmb_Lg		01 33 05.5	
	comp=Z,22nm,1.0s						
SUSD	Miller	8.11	354	IAmb_Lg		01 33 21.6	
	comp=Z,28nm,1.0s						
O44A	Mansfield	8.20	60	IAmb_Lg		01 33 22.9	
	comp=Z,27nm,0.7s						
L42A	Oliver, Polo	8.40	46	IAmb_Lg		01 33 32.2	
	comp=Z,27nm,0.8s						
RWWY	Rawlins	9.08	309	IAmb_Lg		01 34 02.8	
	comp=Z,17nm,1.1s						
K22A	Casper	9.24	315	IAmb_Lg		01 33 58.9	
	comp=Z,23nm,1.1s						
I40A	Norwalk	9.27	34	IAmb_Lg		01 34 07.0	
	comp=Z,14nm,0.9s						
F33A	5 Mile Ranch,	9.51	6	IAmb_Lg		01 34 05.1	
	comp=Z,11nm,0.9s						
SPMN	Marine on St.	9.59	21	IAmb_Lg		01 34 04.8	
	comp=Z,12nm,0.8s						

DJA 02 01:33:36.3±0.4**, 9°S**±5°**×12°0E**±°**, h109**km±8km**, M3.9**/11**, mb4.2**/2**, MLv3.7**/11**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	0.81	190	P	Pn	01 33 55.6	0.0
WBSI				S	Sn	01 34 11.4	+1.3
WSI	Waingapu	1.11	138	P	Pn	01 33 58.3	-0.3
BASI	Baing, Sumba	1.71	143	P	Pn	01 34 06.6	+1.0
BASI				S	Sn	01 34 28.4	+0.4
PLAI	Plampang	1.74	270	P	Pn	01 34 06.7	+0.7
PLAI				S	Sn	01 34 30.0	+1.3
EDFI	Ende, Flores	2.13	88	P	Pn	01 34 11.1	+0.1
MMRI	Maumere	2.67	86	P	Pn	01 34 18.2	+0.2
BSSI	Bau Bau, Buton	2.84	19	P	Pn	01 34 19.8	-0.4
BKSI	Bulukumba	3.54	9	P	Pn	01 34 29.7	+0.2
BATI	Baumata	4.29	109	P	Pn	01 34 39.9	+0.3
SRBI	Singaraja	4.35	280	P	Pn	01 34 41.5	+1.2
JAGI	Jajag, Banyuwa	5.34	274	P	Pn	01 34 52.5	-1.3
	0.2nm19nm,0.8s						
GMJI	Gumukmas	6.05	275	P	Pn	01 35 02.5	-0.9

NOU 02 01:52:27.0, 16°.09S×167°.54E, h17km**, MLv4.3**/16**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	Devils Point	1.74	159	P	Pn	01 52 57.1	+0.6
RTV	Rentapao	1.89	154	P	Pn	01 52 59.4	+0.8
LIFNC	LIFOU	4.67	183	P	Pn	01 53 35.2	-1.6
MARNC	Mare, Loyalty	5.38	175	P	Pn	01 53 47.3	+0.7
KOUNC	Koumac, New Ca	5.41	214	P	Pn	01 53 46.9	0.0
YATNC	Mamie plateau,	5.97	186	P	Pn	01 53 52.9	-1.7
DZM	Mont Dzumac	6.04	190	P	Pn	01 53 55.1	-0.6
NOUC	Port Laguerre	6.09	191	P	Pn	01 53 57.0	+0.7
ONTNC	Ouen Toro	6.27	189	P	Pn	01 53 58.7	-0.1
OUENC	Ouen Island, N	6.33	186	P	Pn	01 53 59.8	+0.2

*IDC **02** 01:53:57.4±4.5, 36°.32N×70°.89E, h157km±44km, mb3.2/4, mbtmp3.7/9, Error ellipse: s-maj=41.5km s-min=21.2km az=169.0*
*NNC **02** 01:54:03.9±4.3, 36°.98N×71°.06E, h229km±52km, mb2.5, mpv3.5, Error ellipse: s-maj=45.5km s-min=29.1km az=2.0*
ISC 02 01:54:00.1±1.1**, 36°.7N**±0°.1**×70°.92E**±0°.10**, h188**km**, n13, σ1s52**/16**, mb3.3**/3**, 4C, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	6.42	357	⇑P	Pn	01 55 33.5	+0.9
	1.6nm,0.3s,baz=173,slow=12,SNR=39						
KK31				S	Sn	01 56 44.4	-1.3
	2.0nm,0.3s,baz=184,slow=21,SNR=7.0						
AAK	Ala-Archa	6.55	24	P	Pn	01 55 35.5	+1.1
	2.3nm,0.3s,baz=177,slow=9.1,SNR=4.8						
AAK				S	Sn	01 56 48.1	-0.9
	9.1nm,0.4s,baz=1.8,slow=20,SNR=22						
TKM2	Tokmak 2	7.19	29	⇑P	Pn	01 55 42.6	-0.3
	1.4nm,0.6s						
TKM2				⇑S	Sn	01 57 02.9	-1.3
	4.7nm,0.9s						
GEYT	Alibeck	10.28	281	P	Pn	01 56 21.5	-1.6
	1.4nm,0.5s,baz=148,slow=12,SNR=2.8						
MKAR	Makanchi Array	13.18	36	P	P	01 57 03.7	+0.3
	0.7nm,0.6s,baz=212,slow=9.1,SNR=8.3						
AB31	Akbulak array	14.89	331	P	P	01 57 21.8	-0.5
	0.6nm,0.6s,baz=150,slow=11,SNR=13						
KURBB	Kurchatov Arra	14.97	19	P	P	01 57 25.9	+2.8
	0.8nm,0.4s,baz=210,slow=9.3,SNR=3.5						
AKTO	Aktyubinsk	16.59	330	P	Pn	01 57 44.8	+3.0
	1.5nm,0.7s,baz=142,slow=7.9,SNR=7.0						
AKTO	Aktyubinsk	16.59	330	⇑P	P	01 57 39.5	-1.5
	2.0nm,0.8s						
ZALV	Zalesovo Beam	19.77	25	P	Pn	01 58 18.0	-1.4
	1.4nm,0.3s,baz=235,slow=9.7,SNR=7.1						
	1.4nm,0.3s						
TORD	Torodi Ar. Bea	65.66	268	P	P	02 04 24.8	+0.3
	0.2nm,0.4s,baz=57,slow=6.3,SNR=8.6						
	0.2nm,0.4s						
WRA	Warramunga Arr	82.14	122	P	P	02 06 00.2	+0.2
	0.5nm,0.8s,baz=311,slow=6.6,SNR=3.0						
	0.5nm,0.8s						
ASAR	Alice Springs	84.41	125	P	P	02 06 11.3	-0.2
	0.4nm,0.6s,baz=304,slow=5.1,SNR=4.1						
	0.4nm,0.6s						

*ECX **02** 02:22:54.7±2.3, 17°.33N×105°.34W, h0km±79km, MD5.9*
*IDC **02** 02:23:04.1±0.5, 17°.91N×105°.97W, h0km, mb4.6/18, mbtmp4.6/23, ML4.0/5, MS5.4/73, Error ellipse: s-maj=17.4km s-min=10.4km az=55.0*
*MOS **02** 02:23:05.4±1.4, 17°.99N×105°.62W, h13km, mb5.3/26, MS5.4/11, Error ellipse: s-maj=9.8km s-min=7.3km az=81.8*
*NEIC **02** 02:23:05.9±2.2, 18°.02N±0°.07×105°.83W±0°.06, h10km±1km, mb5.1/550, Ms_20 5.4/362, Mww5.8, Md5.6/167(MEX), Error ellipse: s-maj=11.8km s-min=8.9km az=208.0*
*BJI **02** 02:23:06.9±0.0, 17°.75N×106°.62W, h34km, mb5.4/1, mB5.4/7, Ms5.7/13, Ms7 5.5/12*
*GCMT **02** 02:23:07.9±0.1, 18°.12N±0°.01×105°.89W±0°.01, h16km, MW5.8/153, Moment Tensor Solution. s129,c246; s153,c452; Duration: 1s8 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.55±.05; $M_{\theta\theta}$-0.48±.04; $M_{\phi\phi}$1.03±.05; $M_{r\theta}$0.31±.13; $M_{\theta\phi}$-5.27±.04; $M_{\phi r}$1.05±.14; Best double couple: $M_0$5.44400×10^{17} NP1:ϕ_s274.00000°, δ78.00000°, λ-176.00000°. NP2:ϕ_s184.00000°, δ86.00000°, λ-12.00000°. Principal axes: T 5.6550, Plg5.0000°, Azm230.0000°; N -0.4250, Plg77.0000°, Azm345.0000°; P -5.2330, Plg11.0000°, Azm138.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*MEX **02** 02:23:07.9±2.1, 18°.14N×105°.70W, h6km±41km, MD5.6*
*NEIC **02** 02:23:16, 18°.01N×105°.79W, h20km, Moment Tensor Solution. Duration: 12s0 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.41; $M_{\theta\theta}$0.15; $M_{\phi\phi}$1.26; $M_{r\theta}$0.92; $M_{\theta\phi}$-6.15; $M_{\phi r}$3.36; Fault plane solution: $M_0$7.20000×10^{17} NP1: ϕ_s275.00000°, δ60.00000°, λ-168.00000°. NP2: ϕ_s179.00000°, δ80.00000°, λ-30.00000°. Principal axes: T 7.3131, Plg13.0000°, Azm231.0000°; N -0.2415, Plg58.0000°, Azm342.0000°; P -7.0715, Plg28.0000°, Azm133.0000°;*

ISC 02 02:23:05.7±0.3, 17.92N±0.03×105.81W±0.03, h10km, n1365, σ2.34/1388, mb5.1/256, MS5.4/269, 29C-3D, Off coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CJM	Chamela	1.73	25	⇑eP	Pn	02 23 31.4	-4.5
CJM				eS	Sn	02 23 49.8	-8.3
CDAR	Ciudad de Arme	1.99	59	⇑eP	Pn	02 23 35.0	-4.4
CDAR				eS	Sn	02 23 56.7	-7.7
R15V		2.14	54		Pn	02 23 37.1	-4.4
R15V		2.14	54	⇑eP	Pn	02 23 37.1	-4.4
R15V				eS	Sn	02 23 59.1	-9.1
COIG	Colima	2.37	58	⇑eP	Pn	02 23 40.8	-3.9
COIG				eS	Sn	02 24 06.5	-7.5
MMIG	Aquila	2.38	81		Pn	02 23 41.3	-3.4
MMIG					Sn	02 24 08.9	-5.0
MMIG	Aquila	2.38	81	⇑eP	Pn	02 23 41.3	-3.4
MMIG				eS	Sn	02 24 08.9	-5.0
COMA	Comala	2.40	54	e	Pn	02 23 39.5	-5.6
COMA				e		02 24 09.8	
MNGA	Volcan de Coli	2.59	53	⇑eP	Pn	02 23 44.7	-3.2
MNGA				eS	Sn	02 24 12.7	-6.9
EZ5V		2.61	53		Pn	02 23 45.0	-3.2
EZ5V		2.61	53	⇑eP	Pn	02 23 45.0	-3.2
EZ5V				eS	Sn	02 24 13.5	-6.5
INCO	Volcan de Coli	2.63	52	⇓eP	Pn	02 23 45.1	-3.6
INCO				iS	Sn	02 24 15.2	-5.7
JUBC	Volcan de Coli	2.65	53	⇑iP	Pn	02 23 45.9	-2.9
JUBC				iS	Sn	02 24 14.8	-6.4
PUVA	Puert Vallarta	2.75	12		Pn	02 23 46.5	-3.3
PUVA					Sn	02 24 16.2	-7.0
PUVA	Puert Vallarta	2.75	12	e	Pn	02 23 46.5	-3.3
PUVA				e		02 24 16.2	
ANIG	Ahuacatlan	3.35	21		Pn	02 23 54.9	-3.3
ANIG					Sn	02 24 32.1	-6.0
ANIG	Ahuacatlan	3.35	21	⇑eP	Pn	02 23 54.9	-3.3
ANIG				eS	Sn	02 24 32.1	-6.0
TPICX	Tepic	3.66	14	eP	Pn	02 23 59.5	-3.0
TPICX				eS	Sn	02 24 50.0	+4.2
URUA	Uruapan	3.85	67		Pn	02 24 04.5	-0.6
URUA					Sn	02 24 48.4	-2.2
URUA	Uruapan	3.85	67	e	Pn	02 24 04.5	-0.6
URUA				e		02 24 48.4	
ZIIG	Zihuatanejo	4.16	94		Pn	02 24 08.6	-0.6
ZIIG					Sn	02 24 51.2	-6.6
ZIIG	Zihuatanejo	4.16	94	eP	Pn	02 24 08.6	-0.6
ZIIG				e		02 24 51.2	
MOIG	Morelia	4.72	68	Pn	Pn	02 24 15.6	-1.6
MOIG				Sn	Sn	02 25 10.5	-1.6
MOIG	Morelia	4.72	68	⇑eP	Pn	02 24 15.7	-1.4
MOIG				eS	Sn	02 25 08.2	-3.9
H06E1	SOCORRO T-PHAS	4.93	281	Pn	Pn	02 24 18.6	-1.3
H06E1				T	T	02 29 18.4	
H06S1	SOCORRO T	4.95	280	Pn	Pn	02 24 19.6	-0.6
H06S1				T	T	02 29 13.7	
	SNR=649						
H06N1	SOCORRO T-PHAS	5.00	282	Pn	Pn	02 24 18.6	-2.2
H06N1				T	T	02 29 15.5	
	SNR=440						
AAIG	Aguscalientes	5.16	38	⇑eP	Pn	02 24 21.6	-1.7
AAIG				e		02 25 29.1	
ARIG	Puente Sto Nin	5.21	85		Pn	02 24 23.2	-0.6
ARIG					Sn	02 25 17.1	-6.9
ARIG	Puente Sto Nin	5.21	85	⇑eP	Pn	02 24 23.2	-0.6
ARIG				e		02 25 17.1	
MAIG	Mazatlaan	5.27	354		Pn	02 24 17.3	-7.2
MAIG					Sn	02 25 18.4	-7.0
MAIG	Mazatlaan	5.27	354	eP	Pn	02 24 17.3	-7.2
MAIG				eS	Sn	02 25 18.4	-7.0
CAIG	El Cayaco	5.36	98		Pn	02 24 24.1	-1.8
CAIG					Sn	02 25 22.6	-5.1
CAIG	El Cayaco	5.36	98	eP	Pn	02 24 24.1	-1.8
CAIG				e		02 25 22.6	
ZAIG	Zacatecas	5.71	32	Pn	Pn	02 24 29.7	-1.1
ZAIG					Sn	02 25 32.2	-4.3
ZAIG	Zacatecas	5.71	32	eP	Pn	02 24 30.3	-0.5
ZAIG				e		02 25 48.7	
JRQG	Juriquilla Cam	5.78	60		Pn	02 24 31.8	0.0
JRQG	Juriquilla Cam	5.78	60	eP	Pn	02 24 31.8	0.0
JRQG				e		02 26 00.9	
MEIG	Mezcala	5.90	89		Pn	02 24 32.5	-0.8
MEIG					Sn	02 25 28.9	-12
MEIG	Mezcala	5.90	89	eP	Pn	02 24 32.5	-0.8
MEIG				e		02 25 28.9	
DAIG	Los Arroyos	5.95	98		Pn	02 24 33.8	-0.1
DAIG					Sn	02 25 49.4	+7.2
DAIG	Los Arroyos	5.95	98	eP	Pn	02 24 33.8	-0.1
DAIG				e		02 25 49.4	
TOVM	TOLUCA	5.97	76		Pn	02 24 32.9	-1.7
TOVM					LR	02 26 12.3	
TOVM	TOLUCA	5.97	76	e	Pn	02 24 32.9	-1.7
TOVM				i		02 26 12.3	
PLIG	Platanillo	6.02	85		Pn	02 24 34.6	-0.3
PLIG					Sn	02 25 49.5	+5.5
PLIG	Platanillo	6.02	85	⇑eP	Pn	02 24 34.6	-0.3
PLIG				e		02 25 49.5	
MAVM	Malinalco, Edo	6.09	79		Pn	02 24 35.3	-0.7
MAVM					Sn	02 25 46.4	+0.6
MAVM	Malinalco, Edo	6.09	79	e	Pn	02 24 35.3	-0.7
MAVM				i		02 25 46.4	
AOVM	Tlapan	6.30	77	e	Pn	02 24 39.9	+0.7
AOVM				i		02 26 02.0	
CJVM	Cuajimalpa	6.35	76	e	Pn	02 24 31.2	-8.5
CJVM				i		02 25 53.4	
MCRU	Las Cruces	6.37	76	e	Pn	02 24 39.9	-0.2
MCRU				i		02 26 05.3	
AZVM	Cuida Lopez Ma	6.41	74		Pn	02 24 41.4	+0.9
AZVM					Sn	02 25 57.2	+3.4
AZVM	Cuida Lopez Ma	6.41	74	e	Pn	02 24 41.4	+0.9
AZVM				i		02 25 57.2	
MHVM	Bosque de Chap	6.43	76	e	Pn	02 24 41.4	+0.6
MHVM				i		02 26 08.8	
TLVM	San Miguel Top	6.45	77	e	Pn	02 24 40.3	-0.8
TLVM				i		02 26 04.9	
UNM	Universidad Na	6.45	76	Pn	Pn	02 24 39.7	-1.3
UNM	Universidad Na	6.45	76	P	Pn	02 24 39.7	-1.3
APVM	Azcapotzalco	6.45	75	e	Pn	02 24 40.7	-0.4
APVM				i		02 25 54.7	
BJVM	Benito Juarez	6.46	76	e	Pn	02 24 40.7	-0.5
BJVM				i		02 25 55.9	
YAIG	Yautepec	6.47	81		Pn	02 24 41.1	-0.1
YAIG					Sn	02 25 50.9	-4.4
YAIG	Yautepec	6.47	81	eP	Pn	02 24 41.1	-0.1
YAIG				e		02 25 50.9	
XCVM	Xochimilco	6.49	77	e	Pn	02 24 40.7	-0.9
XCVM				i		02 26 07.0	
CRIG	Cruz Grande	6.49	99		Pn	02 24 41.3	0.0
CRIG					Sn	02 25 50.2	-5.3
CRIG	Cruz Grande	6.49	99	eP	Pn	02 24 41.3	0.0
CRIG				e		02 25 50.2	
GMVM	Gustavo A Made	6.54	75	e	Pn	02 24 37.8	-4.5
GMVM				i		02 25 55.5	
PBVM	Pinon	6.56	76		Pn	02 24 34.9	-7.3
PBVM					Sn	02 25 53.0	-4.1
PBVM	Pinon	6.56	76	e	Pn	02 24 34.9	-7.3
PBVM				i		02 25 53.0	
PTVM	Pico Tres Padr	6.56	74		Pn	02 24 41.5	-1.1
PTVM					Sn	02 26 00.4	+2.7
PTVM	Pico Tres Padr	6.56	74	e	Pn	02 24 41.5	-1.1
PTVM				i		02 26 00.4	
THVM	De Xico	6.63	77	e	Pn	02 24 43.6	0.0
THVM				i		02 26 10.7	
ZUVM	ZUMPANGO	6.65	72		Pn	02 24 42.3	-1.5
ZUVM					Sn	02 26 11.5	+12
ZUVM	ZUMPANGO	6.65	72	e	Pn	02 24 42.3	-1.5
ZUVM				i		02 26 11.5	
RPIG	Rio Verde	6.76	53	⇑eP	Pn	02 24 44.4	-0.6
RPIG				e		02 26 24.7	
AMVM	AMECAMECA	6.78	79		Pn	02 24 46.0	+0.5
AMVM					Sn	02 26 04.1	+1.1
AMVM	AMECAMECA	6.78	79	e	Pn	02 24 46.0	+0.5
AMVM				i		02 26 04.1	
DEIG	Demacu	6.83	69	⇑eP	Pn	02 24 45.6	-0.6
DEIG				e		02 26 17.2	
MGIG	Malinaltepec	6.88	95	eP	Pn	02 24 48.8	+1.9
MGIG				e		02 25 58.1	
PPM	Popocatepetl	6.92	79	⇑eP	Pn	02 24 48.7	+1.1
PPM				e		02 26 10.0	
SLBS	Sierra La Lagu	6.92	327	Pn	Pn	02 24 46.0	-1.2
SLBS	Sierra La Lagu	6.92	327	eP	Pn	02 24 47.0	-0.3
SLBS				eS	Sn	02 26 15.8	+10
TLIG	Tlapa	6.92	92	Pn	Pn	02 24 46.0	-1.4
TLIG					Sn	02 26 04.4	-1.8
TLIG	Tlapa	6.92	92	⇑eP	Pn	02 24 46.4	-0.9
TLIG				e		02 26 08.4	
SSIG	Sanalona	6.98	350	eP	Pn	02 24 44.9	-3.1
SSIG				e		02 26 02.4	
PDIG	Papasquiaro	7.09	3	⇑eP	Pn	02 24 51.5	+1.7
PDIG				e		02 26 16.5	
FTIG	Fresnillo de T	7.31	89	eP	Pn	02 24 52.6	-0.1
FTIG				e		02 26 07.5	
LPIG	La Paz	7.45	326	Pn	Pn	02 24 54.7	+0.3
	5.5nm,0.3s,baz=224,slow=0.2,SNR=6.0						
LPIG				LR	LR	02 27 07.4	
	comp=Z,52μm,21.4s,baz=150,slow=33						
	38nm,0.7s						
LPIG	La Paz	7.45	326		Pn	02 24 51.5	-2.9
LPIG					Sn	02 26 21.0	+2.0
LPIG	La Paz	7.45	326	eP	Pn	02 24 51.5	-2.9
LPIG				e		02 26 21.0	
PNIG	Pinotepa	7.50	101		Pn	02 24 55.6	+0.3
PNIG					Sn	02 26 25.2	+4.7
PNIG	Pinotepa	7.50	101	⇓eP	Pn	02 24 55.6	+0.3
PNIG				e		02 26 25.2	
HLIG	Huajuapan de L	7.63	89	eP	Pn	02 24 57.4	+0.2
HLIG				e		02 26 18.9	
TXIG	Tlaxiaco	7.70	94	e	Sn	02 26 31.0	+5.2
YOIG	Yosondua	7.96	96	⇑eP	Pn	02 25 03.8	+1.9
YOIG				e		02 26 37.3	
TPIG	Tehuac#an	8.05	85		Pn	02 25 03.3	+0.3
TPIG					Sn	02 26 37.8	+3.6
TPIG	Tehuac#an	8.05	85	eP	Pn	02 25 03.3	+0.3
TPIG				e		02 26 37.8	
GTIG	Gomez Farias	8.06	49	eP	Pn	02 25 02.7	-0.3
GTIG				e		02 27 04.8	
TSIG	Topolobambo	8.21	339	eP	Pn	02 24 60.0	-4.9
TSIG				e		02 26 36.8	
TOIG	Toxpalan	8.33	87	eP	Pn	02 25 06.6	-0.1
TOIG				e		02 26 46.7	
JAUV	Jalcomulco	8.66	79	eP	Pn	02 25 09.3	-1.9
JAUV				e		02 27 02.2	
VHO	Vista Hermosa	8.71	94	eP	Pn	02 25 14.4	+2.5
VHO				e		02 26 49.2	
HPIG		8.97	1		Pn	02 25 13.1	-2.5
HPIG				Sn	Sn	02 26 53.5	-3.3
HPIG		8.97	1	e	Pn	02 25 15.0	-0.6
HPIG				e		02 26 59.5	
LVIG	Laguna Verde	9.08	77	e	Pn	02 25 00.6	-16
LVIG				e		02 27 18.8	
LNIG	Linares	9.12	39		Pn	02 25 17.3	-0.1
LNIG	Linares	9.12	39	⇑eP	Pn	02 25 17.3	-0.1
LNIG				e		02 27 23.9	
CSIG	Choix	9.18	346	eP	Pn	02 25 19.0	+0.8
CSIG				e		02 27 18.9	
NEUV	Arroyo Zacate	9.54	90	⇑eP	Pn	02 25 18.7	-4.5
NEUV				e		02 27 22.2	
CMIG	Matias Romero	10.46	93	Pn	Pn	02 25 37.9	+2.1
	1.4nm,0.3s,baz=288,slow=11,SNR=29						
	45nm,1.0s						
CMIG	Matias Romero	10.46	93	⇑eP	Pn	02 25 37.9	+2.1
GUYB	Guaymas	10.97	336	eP	Pn	02 25 42.3	-0.5
SRIG	Santa Rosalia	11.07	329	Pn	Pn	02 25 42.8	-1.4
SRIG	Santa Rosalia	11.07	329	eP	Pn	02 25 42.7	-1.4
SRIG				e		02 27 49.3	
SRIG	Santa Rosalia	11.07	329	eP	Pn	02 25 44.0	-0.2
UXUV	UXUV	11.14	91	eP	Pn	02 25 45.1	-0.1
UXUV				e		02 27 59.7	
TX31	Lajitas Ar. Si	11.53	9		Pn	02 25 51.7	+1.2
TX31	Lajitas Ar. Si	11.53	9	P	Pn	02 25 52.4	+1.8
	baz=190,SNR=24						
TX32	Lajitas Array	11.53	9		Pn	02 25 50.1	-0.4
TXAR	Lajitas Array	11.53	9	Pn	Pn	02 25 52.6	+2.1
	0.3nm,0.3s,baz=184,slow=12,SNR=18						
TXAR				LR	LR	02 29 48.8	
	comp=Z,6μm,18.2s,baz=188,slow=35						
	3.0nm,0.7s						
TXAR	Lajitas Array	11.53	9	Pn	Pn	02 25 45.7	-4.8
TXAR	Lajitas Array	11.53	9	P	Pn	02 25 45.7	-4.8
833A	Chaparral WMA,	11.92	29	Pn	Pn	02 25 54.0	-1.7
833A	Chaparral WMA,	11.92	29	P	Pn	02 25 57.5	+1.8
	baz=211,SNR=18						
833A				S	Sn	02 28 13.8	+5.0
	baz=211						
833A	Chaparral WMA,	11.92	29	P	Pn	02 25 56.5	+0.8
	baz=211,SNR=18						
HSIG		12.01	338	Pn	Pn	02 25 58.0	+1.1
HSIG		12.01	338	⇓eP	Pn	02 25 57.8	+0.8
HSIG				e		02 28 08.1	
HSIG		12.01	338	eP	Pn	02 25 56.7	-0.3
KVTX	Kingsville	12.04	36	Pn	Pn	02 25 58.3	+0.9
KVTX	Kingsville	12.04	36	P	Pn	02 25 56.3	-1.1
	baz=219						
KVTX				S	Sn	02 28 11.2	-0.7
	baz=219						
TGIG		12.17	93		Pn	02 25 58.6	-0.8
TGIG					Sn	02 28 21.4	+6.1
TGIG		12.17	93	eP	Pn	02 25 58.6	-0.8
TGIG				e		02 28 21.4	
PCIG		12.26	98		Pn	02 25 58.1	-2.4
PCIG					Sn	02 28 09.9	-7.3
PCIG		12.26	98	e	Pn	02 25 58.1	-2.4
PCIG				e		02 28 09.9	
CGIG		12.54	351		Pn	02 26 05.7	+1.2
CGIG					Sn	02 28 32.8	+8.4
CGIG		12.54	351	eP	Pn	02 26 05.7	+1.2
CGIG				e		02 28 32.8	
BAHB	Baha de los	13.07	328	eP	Pn	02 26 11.2	-0.2
BAHB				eS	Sn	02 28 47.5	+10
735A	Kenedy	13.13	33	Pn	Pn	02 26 12.2	-0.1
735A	Kenedy	13.13	33	P	Pn	02 26 14.0	+1.8
	baz=216						
735A				S	Sn	02 28 46.1	+7.7
	baz=216						
CCIG	Comitan	13.18	95	Pn	Pn	02 26 14.7	+1.6
CCIG	Comitan	13.18	95	e	Pn	02 26 12.8	-0.4
CCIG				e		02 28 37.7	
PATR	El Naranjo	13.32	100	e	Pn	02 26 16.4	+1.3
PAVE	Pavencul	13.35	100	e	Pn	02 26 17.8	+2.2
CHUJ	Union Juarez	13.44	100	e	Pn	02 26 17.0	+0.2
JCT	Junction City	13.65	23	Pn	Pn	02 26 20.1	+0.7
JCT	Junction City	13.65	23	P	Pn	02 26 20.1	+0.7
JCT	Junction City	13.65	23	P	Pn	02 26 21.0	+1.5
	baz=205						
JCT				S	Sn	02 28 55.8	+4.6
	baz=205						
JCT	Junction City	13.65	23	P	Pn	02 26 20.2	+0.7
	baz=205						
JCT				S	Sn	02 28 54.4	+3.1
	baz=205						
MNTX	Cornudas Mount	13.72	2	Pn	Pn	02 26 22.4	+1.9
MNTX	Cornudas Mount	13.72	2	P	Pn	02 26 20.5	0.0
	baz=182,SNR=23						
MNTX				S	Sn	02 28 54.5	+1.5
	baz=182						
MNTX	Cornudas Mount	13.72	2	P	Pn	02 26 21.3	+0.9
	baz=182,SNR=23						
MNTX				S	Sn	02 28 55.1	+2.1
	baz=182						
319A	Douglas	13.76	347	Pn	Pn	02 26 22.7	+1.7
KIDD	KIDD Seismic O	13.81	358	P	Pn	02 26 24.5	+2.9
	baz=177						
KIDD				S	Sn	02 28 58.2	+3.1
	baz=177						
LAPR	La Primavera	13.85	336	eP	Pn	02 26 22.7	+0.5
HUEH	Huehuetenango	13.96	99	Pn	Pn	02 26 26.9	+2.9
121A	Cookes Peak, D	14.66	353	Pn	Pn	02 26 34.7	+1.3
121A	Cookes Peak, D	14.66	353	P	Pn	02 26 34.0	+0.7
	baz=173,SNR=45						
121A				S	Sn	02 29 16.0	-0.1
	baz=173						
121A	Cookes Peak, D	14.66	353	P	Pn	02 26 35.1	+1.7
	baz=173,SNR=45						
435B	Jarrell	14.83	29		Pn	02 26 34.4	-1.1
435B	Jarrell	14.83	29	P	Pn	02 26 35.5	-0.1
	baz=212						
435B				S	Sn	02 29 22.5	+2.5
	baz=212						
435B	Jarrell	14.83	29	P	Pn	02 26 34.5	-1.1
	baz=212						
435B				S	Sn	02 29 21.4	+1.4
	baz=212						
TUC	Tucson	15.01	344	Pn	Pn	02 26 37.0	-1.1
TUC	Tucson	15.01	344	P	Pn	02 26 37.0	-1.1
TUC	Tucson	15.01	344	P	Pn	02 26 38.7	+0.6
	baz=162						
TUC				S	Sn	02 29 30.3	+5.7
	baz=162						
HKT	Hockley	15.04	35		Pn	02 26 36.2	-2.2
HKT	Hockley	15.04	35	iP	Pn	02 26 36.6	-1.7
HKT				pmax	pmax		
	comp=Z,5.0nm,1.0s						
PETF	Flores	15.25	91		Pn	02 26 40.3	-0.9
PETF				IAmb	IAmb	02 26 58.1	
	comp=Z,54nm,0.8s						
214A	Organ Pipe Nat	15.34	337	Pn	Pn	02 26 42.3	-0.1
214A				IAmb	IAmb	02 26 59.1	
	comp=Z,170nm,1.5s						
214A	Organ Pipe Nat	15.34	337	P	Pn	02 26 42.7	+0.3
	baz=154,SNR=16						
214A				S	Sn	02 29 39.3	+6.8
	baz=154						
214A	Organ Pipe Nat	15.34	337	eP	Pn	02 26 41.7	-0.7
SFX	San Felipe	15.42	330		Pn	02 26 42.8	-0.6
ABTX	Abilene, Hawle	15.66	20	Pn	Pn	02 26 46.4	-0.2
ABTX				IAmb	IAmb	02 26 54.9	
	comp=Z,119nm,1.2s						
ABTX	Abilene, Hawle	15.66	20	P	Pn	02 26 46.7	+0.1
	baz=202,SNR=13						
ABTX				S	Sn	02 29 40.5	+0.3
	baz=202						
ABTX	Abilene, Hawle	15.66	20	P	Pn	02 26 47.3	+0.7
	baz=202,SNR=13						
SPIG	San Pedro Mart	15.73	328	P	Pn	02 26 47.3	-0.5
SPIG	San Pedro Mart	15.73	328	e	Pn	02 26 47.3	-0.5
SPIG	San Pedro Mart	15.73	328	eP	Pn	02 26 47.5	-0.3
WHTX	Lake Whitney,	15.92	27	Pn	Pn	02 26 48.0	-1.8
WHTX	Lake Whitney,	15.92	27	P	Pn	02 26 49.1	-0.8
	baz=210						
WHTX				S	Sn	02 29 48.7	+2.3
	baz=210						
WHTX	Lake Whitney,	15.92	27	P	Pn	02 26 48.7	-1.2
	baz=210						
WHTX				S	Sn	02 29 46.3	-0.1
	baz=210						
Y22A	Socorro	15.98	357	P	Pn	02 26 50.0	-0.9
	baz=176,SNR=28						
Y22A				S	S	02 29 57.6	-4.7
	baz=176						
CRNM	Carthage	15.99	357	P	Pn	02 26 51.2	+0.3
Y22D	IRIS PASSCAL I	16.12	357	P	P	02 26 54.4	-1.5
	baz=176						
Y22D				S	S	02 30 04.6	-0.4
	baz=176						
Y22D	IRIS PASSCAL I	16.12	357	P	P	02 26 54.0	-1.9
	baz=176						
BNM	Barren Site	16.18	358	P	Pn	02 26 53.3	-0.1
LENM	Lemitar	16.21	357	P	Pn	02 26 54.2	+0.4
MSTX	Muleshoe	16.21	9	P	Pn	02 26 53.9	+0.1
	baz=191,SNR=21						
MSTX				S	Sn	02 29 55.9	+2.1
	baz=191						
MSTX	Muleshoe	16.21	9	P	P	02 26 55.4	-1.5
	baz=191,SNR=21						
113A	Mohawk Valley,	16.43	336		Pn	02 26 56.5	+0.1
YMD	Yuma Desert	16.56	333	eP	Pn	02 26 58.0	-0.1
237A	Washetta, Mont	16.68	31	IAmb	IAmb	02 27 15.4	
	comp=Z,192nm,1.4s						
237A	Washetta, Mont	16.68	31	P	Pn	02 26 58.3	-1.3
	baz=215						
237A				S	S	02 30 13.5	-2.8
	baz=215						
ANMO	Albuquerque	16.97	358	Pn	P	02 27 05.0	-0.4
	comp=Z,0.1nm,0.3s,baz=177,slow=12,SNR=34						
ANMO				LR	LR	02 33 32.9	
	comp=Z,16μm,18.9s,baz=182,slow=37						
	comp=Z,15nm,1.0s						
ANMO	Albuquerque	16.97	358		Pn	02 27 02.2	-1.3
ANMO	Albuquerque	16.97	358	ceP	P	02 27 05.6	+0.2
ANMO				pmax	pmax		
	comp=Z,86nm,2.0s						
ANMO	Albuquerque	16.97	358	P	Pn	02 27 03.4	0.0
	baz=178,SNR=32						
ANMO				S	S	02 30 22.8	+0.4
	baz=178						
ANMO	Albuquerque	16.97	358	P	Pn	02 27 03.1	-0.3
	baz=178						
ANMO				S	S	02 30 23.4	+1.0
	baz=178						
NATX	Nacogdoches	17.08	34	S	Sn	02 30 17.4	+2.8
	baz=219						
NATX	Nacogdoches	17.08	34	P	Pn	02 27 03.0	-1.6
	baz=219						
GLA	Glamis	17.11	333	P	P	02 27 05.8	-1.0
	baz=150,SNR=15						
GLA				S	S	02 30 24.7	-0.4
	baz=150						
Z35A	Perchaven, San	17.16	25	IAmb	IAmb	02 27 19.6	
	comp=Z,280nm,1.4s						
Z35A	Perchaven, San	17.16	25	P	Pn	02 27 03.7	-2.0
	baz=209,SNR=13						
Z35A				S	Sn	02 30 17.1	+0.4
	baz=209						
441A	DeRidder	17.17	40	P	Pn	02 27 03.4	-2.4
	baz=225						
441A				S	Sn	02 30 15.1	-1.7
	baz=225						
YUH2	Yuha Desert	17.26	330	eP	P	02 27 07.2	-1.2
WESC	Westside Schoo	17.27	331	eP	Pn	02 27 06.9	0.0
AMTX	Amarillo	17.29	12	IAmb	IAmb	02 27 23.8	
	comp=Z,262nm,1.4s						
AMTX	Amarillo	17.29	12	P	Pn	02 27 06.0	-1.4
	baz=194,SNR=26						
AMTX	Amarillo	17.29	12	P	Pn	02 27 06.3	-1.1
	baz=194						
IKP	In-Ko-Pah, Jac	17.35	330	P	P	02 27 08.8	-0.8
	baz=145,SNR=13						
IKP				S	S	02 30 31.1	+1.0
	baz=145						
SWSC	Sam W. Stewart	17.45	331	P	P	02 27 09.4	-1.1
	baz=147,SNR=16						
SWSC				S	S	02 30 33.7	+1.8
	baz=147						
TJIG	Tijuana	17.46	328	P	Pn	02 27 03.9	-5.4
TJIG	Tijuana	17.46	328	e	Pn	02 27 03.9	-5.4
W18A	Petrified Fore	17.48	349	P	P	02 27 11.3	+0.3
	baz=168,SNR=15						
W18A				S	S	02 30 33.4	+0.6
	baz=168						
MONP2	Monument Peak	17.70	329	P	P	02 27 13.9	+0.4
	baz=145,SNR=14						
MONP2				S	S	02 30 38.5	+1.1
	baz=145						
WMOK	Wichita Mounta	17.89	19	P	Pn	02 27 13.7	-0.9
	baz=202,SNR=22						
WMOK				S	Sn	02 30 26.7	-7.4
	baz=202						
WMOK	Wichita Mounta	17.89	19	P	Pn	02 27 14.2	-0.5
	baz=202,SNR=22						
BC3	Big Chuckawall	17.89	333	P	P	02 27 16.4	+0.9
	baz=149,SNR=21						
BC3				S	S	02 30 44.0	+2.9
	baz=149						
PDMCI	Parker Dam,Lak	17.93	337	P	P	02 27 16.4	+0.6
	baz=154,SNR=9.5						
PDMCI				S	S	02 30 44.6	+2.9
	baz=154						
109C	Camp Elliot, M	18.04	328	P	P	02 27 17.0	0.0
	baz=143						
109C				S	S	02 30 45.4	+1.5
	baz=143						
X34A	Smith Ranch, M	18.08	22	IAmb	IAmb	02 27 32.3	
	comp=Z,173nm,1.2s						
Z38A	Mt. Pleasant	18.11	30	P	Pn	02 27 16.4	-1.0
	baz=215						
342A	Flagon Creek P	18.14	40	P	Pn	02 27 15.4	-2.3
342A				IAmb	IAmb	02 27 23.3	
	comp=Z,105nm,0.8s						
342B	Flagon Creek P	18.14	40	P	Pn	02 27 16.7	-1.0
	baz=226,SNR=6.5						
342B				S	Sn	02 30 36.1	-4.1
	baz=226						
IRM	Iron Mountain	18.20	334	P	P	02 27 19.3	+0.5
	baz=150,SNR=14						
IRM				S	S	02 30 48.8	+1.6
	baz=150						
WUAZ	Wupatki	18.21	345	P	P	02 27 20.5	+1.5
	baz=163,SNR=29						
WUAZ				S	S	02 30 50.2	+2.6
	baz=163						

TGUH Tegucigalpa,Un 18.23 99 P **P** **02 27 20.5 +1.1**
TGUH IAmb IAmb 02 27 36.4
comp=Z,245nm,1.4s
TPFO Pinon Flats 18.30 331 P **P** **02 27 21.3 +1.3**
baz=146,SNR=14
TPFO S **S** **02 30 54.1 +4.6**
baz=146
PFO Pinyon Flats O 18.31 331 P **P** **02 27 20.2 +0.1**
comp=Z,0.1nm,0.3s,baz=153,slow=11,SNR=16
PFO LR LR 02 33 31.5
comp=Z,10µm,18.0s,baz=140,slow=34
comp=Z,9.9nm,0.9s
PFO Pinyon Flats O 18.31 331 P **P** **02 27 20.3 +0.1**
PFO Pinyon Flats O 18.31 331 eP **P** **02 27 21.9 +1.8**
PFO Pinyon Flats O 18.31 331 P **P** **02 27 21.7 +1.5**
baz=146,SNR=14
PFO S **S** **02 30 53.8 +4.2**
baz=146
BELC Belle Mtn. Jos 18.43 332 P **Pn** **02 27 22.1 +0.7**
baz=148,SNR=24
NEE2 Needles Airpor 18.52 337 P **Pn** **02 27 23.2 +0.7**
baz=153
NEE2 S **S** **02 30 56.6 +2.9**
baz=153
MURC Murrieta 18.65 329 P **Pn** **02 27 24.1 0.0**
baz=144
MURC S **S** **02 31 01.0 +4.6**
baz=144
SCI2 San Clemente I 18.87 325 P **Pn** **02 27 26.4 -0.3**
baz=140
OKCFA Oklahoma City 18.94 21 IAmb IAmb 02 27 39.7
comp=Z,100nm,1.1s
OKCFA Oklahoma City 18.94 21 P **P** **02 27 25.7 -1.3**
baz=205
OKCFA S **Sn** **02 31 01.0 +1.3**
baz=205
GMRC Granite Mounta 18.95 334 P **Pn** **02 27 27.6 -0.2**
baz=150,SNR=23
GMRC S **S** **02 31 07.8 +5.2**
baz=150
X37A Clayton 19.04 27 **P** **02 27 27.3 -0.7**
X37A IAmb IAmb 02 27 37.8
comp=Z,130nm,1.1s
X37A Clayton 19.04 27 P **P** **02 27 27.9 -0.1**
baz=212,SNR=21
X37A S **Sn** **02 31 01.7 -0.3**
baz=212
BBRC Big Bear Solar 19.06 331 P **Pn** **02 27 29.5 +0.2**
baz=146
BBRC S **S** **02 31 14.1 +9.1**
baz=146
CIS Catalina Islan 19.12 326 P **Pn** **02 27 29.8 0.0**
baz=141
CIS S **S** **02 31 10.9 +5.0**
baz=141
T25A Trinidad 19.18 3 P **Pn** **02 27 32.7 +2.0**
baz=184,SNR=17
T25A S **S** **02 31 12.2 +4.8**
baz=184
344A Westbrook Farm 19.19 43 P **P** **02 27 28.4 -1.3**
344A IAmb IAmb 02 27 54.6
comp=Z,191nm,1.4s
344A Westbrook Farm 19.19 43 P **P** **02 27 28.8 -0.9**
baz=229
344A S **S** **02 31 09.0 +1.8**
baz=229
Z41A Richland Creek 19.23 35 P **P** **02 27 29.0 -1.2**
Z41A Richland Creek 19.23 35 P **P** **02 27 28.9 -1.2**
baz=221,SNR=9.2
Z41A P **P** **02 27 28.9 -1.2**
baz=221,SNR=9.2
Z41A S **S** **02 31 08.4 +0.4**
baz=221
Z41A S **S** **02 31 08.4 +0.4**
baz=221
Z41A Richland Creek 19.23 35 P **P** **02 27 28.9 -1.2**
baz=221,SNR=9.2
HEC Hector,Ludlow 19.27 333 P **Pn** **02 27 31.2 -0.5**
baz=148
HEC S **S** **02 31 15.8 +6.7**
baz=148
FMP Fort Macarthur 19.30 327 P **P** **02 27 29.7 -1.1**
baz=142
FMP S **S** **02 31 16.6 +7.3**
baz=142
U32A Winter Ranch, 19.35 17 IAmb IAmb 02 27 41.2
comp=Z,99nm,1.0s
U32A Winter Ranch, 19.35 17 P **P** **02 27 30.8 -0.6**
baz=200
U32A S **Sn** **02 31 07.9 -1.6**
baz=200
MVCO Mesa Verde 19.36 354 IAmb IAmb 02 27 56.0
comp=Z,119nm,1.4s
MVCO Mesa Verde 19.36 354 P **Pn** **02 27 32.7 -0.2**
baz=172,SNR=21
MVCO S **S** **02 31 17.3 +6.3**
baz=172
WLAR White Oak Lake 19.39 34 P **P** **02 27 30.6 -1.3**
WLAR IAmb IAmb 02 27 52.1
comp=Z,197nm,1.4s
BFSC Mount Baldy Ra 19.40 329 P **P** **02 27 31.3 -0.8**
baz=144,SNR=24
BFSC S **S** **02 31 19.8 +8.2**
baz=144
RRX Edison Barstow 19.61 332 P **Pn** **02 27 34.4 -1.2**
baz=147
RRX S **Sn** **02 31 23.8 +8.1**
baz=147
SNCC San Nicolas Is 19.61 324 P **P** **02 27 33.0 -1.2**
baz=138
SNCC S **Sn** **02 31 22.4 +6.5**
baz=138
TUQ Turquoise Moun 19.62 335 P **Pn** **02 27 35.9 0.0**
baz=150,SNR=26
TUQ S **Sn** **02 31 24.7 +8.4**
baz=150
143A Socs Landing, 19.62 39 IAmb IAmb 02 27 42.9
comp=Z,156nm,1.2s
143A Socs Landing, 19.62 39 P **P** **02 27 31.7 -2.7**
baz=225
143A S **S** **02 31 13.7 -2.2**
baz=225
DECC Green Verdugo 19.74 328 P **P** **02 27 35.0 -0.8**
baz=142
DECC S **Sn** **02 31 25.9 +6.8**
baz=142
SDCO Great Sand Dun 19.75 1 P **P** **02 27 33.9 -2.2**
baz=181,SNR=16
SDCO S **Sn** **02 31 25.9 +6.2**
baz=181
SDCO Great Sand Dun 19.75 1 P **Pn** **02 27 36.6 -1.0**
baz=181,SNR=16
SDCO S **Sn** **02 31 25.6 +5.9**
baz=181
S22A 4UR Ranch, Cre 19.77 358 P **Pn** **02 27 37.0 -0.8**
baz=177,SNR=30
S22A S **Sn** **02 31 26.8 +6.7**
baz=177
MATN Matagalpa 19.80 102 P **Pn** **02 27 37.1 -1.0**
VBMS Vicksburg 19.83 41 P **P** **02 27 35.6 -1.0**
VBMS Vicksburg 19.83 41 P **P** **02 27 36.1 -0.6**
baz=228,SNR=6.4
VBMS S **S** **02 31 19.1 -0.9**
baz=228
VBMS Vicksburg 19.83 41 P **P** **02 27 36.0 -0.6**
baz=228,SNR=6.4
MIAR Mount Ida 19.84 31 P **P** **02 27 35.0 -1.7**
baz=217,SNR=18
MIAR S **S** **02 31 16.0 -4.1**
baz=217
MIAR Mount Ida 19.84 31 P **P** **02 27 34.6 -2.1**
baz=217,SNR=18
MIAR S **Sn** **02 31 26.1 +4.8**
baz=217
GSC Goldstone, Bar 19.88 333 P **Pn** **02 27 38.1 -0.8**
baz=148,SNR=14
GSC S **Sn** **02 31 28.2 +5.7**
baz=148
346A Big Creek Wild 19.98 45 P **P** **02 27 37.5 -0.9**
346A Big Creek Wild 19.98 45 P **P** **02 27 37.4 -0.9**
baz=232
346A S **S** **02 31 23.2 +0.1**
baz=232
TUL1 Leonard 20.00 24 IAmb IAmb 02 27 52.1
comp=Z,180nm,1.2s
TUL1 Leonard 20.00 24 P **P** **02 27 37.4 -1.1**
baz=209,SNR=15
TUL1 S **S** **02 31 22.0 -1.4**
baz=209
TUL1 Leonard 20.00 24 P **P** **02 27 38.9 +0.4**
baz=209,SNR=15
EDW2 Edwards Air Fo 20.08 330 P Pn 02 27 40.4 -0.8
baz=144,SNR=6.1
X40A Basin Creek Fa 20.16 33 P **P** **02 27 38.1 -2.2**
X40A IAMs_20 IAMs_20 02 36 03.4
comp=Z,21µm,19.0s
X40A Basin Creek Fa 20.16 33 P **P** **02 27 38.3 -1.9**
baz=218,SNR=5.9
X40A P **P** **02 27 38.3 -1.9**
baz=218,SNR=5.9
X40A S **S** **02 31 25.2 -1.5**
baz=218
X40A S **S** **02 31 25.2 -1.5**
baz=218
X40A Basin Creek Fa 20.16 33 P **P** **02 27 38.1 -2.2**
baz=218,SNR=5.9
SHOC Shoshone, Teco 20.17 335 P Pn 02 27 40.9 -1.3
baz=150,SNR=12
SHOC S Sn 02 31 35.8 +6.6
baz=150
BOAB BOACO BROADBAN 20.18 103 P **P** **02 27 41.2 +0.6**
OSI Osito Audit: C 20.23 328 P **P** **02 27 40.2 -0.8**
baz=142
OSI S Sn 02 31 35.3 +4.5
baz=142
SCZ2 Santa Cruz Isl 20.23 325 P **P** **02 27 39.8 -1.2**
baz=139
W39A Magazine 20.26 30 IAMs_20 IAMs_20 02 35 53.8
comp=Z,21µm,22.0s
W39A Magazine 20.26 30 P **P** **02 27 40.3 -1.0**
baz=215,SNR=17
W39A S **S** **02 31 28.7 +0.1**
baz=215
W39A Magazine 20.26 30 P **P** **02 27 40.4 -1.0**
baz=215,SNR=17
W39A S Sn 02 31 35.5 +4.0
baz=215
PKCU Pink Cliffs 20.27 345 IAmb IAmb 02 28 00.5
comp=Z,159nm,1.3s
CCAR Cane Creek 20.29 36 IAmb IAmb 02 27 50.2
comp=Z,102nm,1.0s
CCAR Cane Creek 20.29 36 P **P** **02 27 38.7 -3.0**
baz=222
CCAR S **S** **02 31 29.0 -0.2**
baz=222
LRMC Laurel Mtn Rad 20.42 331 P **P** **02 27 40.3 -2.9**
baz=146,SNR=12
LRMC S Sn 02 31 39.9 +4.3
baz=146
QSM Queen of Sheba 20.47 334 IAmb IAmb 02 28 04.0
comp=Z,116nm,1.3s
PV11 David Mesa, Pa 20.48 353 IAmb IAmb 02 27 50.9
comp=Z,118nm,1.2s
PV15 Paradox Valley 20.48 354 IAmb IAmb 02 27 51.4
comp=Z,173nm,1.3s
GWY Greenwater Val 20.57 334 IAmb IAmb 02 28 05.0
comp=Z,105nm,1.4s
PV10 Paradox Valley 20.57 353 IAmb IAmb 02 28 10.5
comp=Z,123nm,1.3s
PV07 Paradox Valley 20.59 354 IAmb IAmb 02 28 09.6
comp=Z,119nm,1.3s
SBC Santa Barbara 20.61 326 P **P** **02 27 42.1 -3.0**
baz=140
T35A Sooner Cattle 20.62 22 P **P** **02 27 43.3 -2.0**
T35B Sooner Cattle 20.62 22 P **P** **02 27 43.7 -1.6**
baz=206,SNR=52
T35B S **S** **02 31 33.7 -2.1**
baz=206
ARVC Arvin 20.68 328 P **P** **02 27 45.5 -0.4**
baz=143,SNR=7.9
ARVC S Sn 02 31 45.1 +3.4
baz=143
ACON Acoyapa 20.79 104 IAmb IAmb 02 27 56.4
comp=Z,123nm,1.4s
MTPU Mount Pierson 20.81 346 IAmb IAmb 02 28 18.8
comp=Z,100nm,1.3s
BCW Bitter Crk WRg 20.83 327 IAmb IAmb 02 28 15.5
comp=Z,171nm,1.4s
FURC Furnace Creek, 20.89 334 P **P** **02 27 48.0 -0.2**
baz=149,SNR=15
FURC S Sn 02 31 49.5 +2.8
baz=149
ISA Isabella, Lake 20.94 330 P **P** **02 27 48.1 -0.7**
baz=144,SNR=15
ISA S Sn 02 31 51.0 +3.0
baz=144
Q24A Divide 20.98 1 P **P** **02 27 47.5 -1.9**
baz=182
Q24A S Sn 02 31 51.2 +2.1
baz=182
W41B Gary Mavity, V 21.00 32 P **P** **02 27 49.6 +0.3**
baz=219,SNR=7.6
W41B S **S** **02 31 45.4 +2.2**
baz=219
W41B Gary Mavity, V 21.00 32 P **P** **02 27 49.2 -0.1**
baz=219,SNR=7.6
W41B S Sn 02 31 51.4 +2.2
baz=219
PKM Mcpherson Peak 21.00 326 P **P** **02 27 47.0 -2.6**
baz=140
PKM S Sn 02 31 51.2 +1.6
baz=140
146A Union 21.04 43 P **P** **02 27 49.3 -0.4**
146A IAmb IAmb 02 27 58.4
comp=Z,171nm,1.4s
146A Union 21.04 43 P **P** **02 27 49.5 -0.2**
baz=230
146A S **S** **02 31 43.0 -1.0**
baz=230
TPNV Topopah Spring 21.07 336 IAmb IAmb 02 28 19.1
comp=Z,145nm,1.4s
TPNV IAMs_20 IAMs_20 02 35 08.2
comp=Z,9µm,19.0s
TPNV Topopah Spring 21.07 336 P **P** **02 27 50.4 +0.2**
baz=151,SNR=29
TPNV S Sn 02 31 51.8 +0.6
baz=151
WHAR Wooly Hollow 21.07 32 IAmb IAmb 02 28 13.1
comp=Z,142nm,1.4s
HHAR Hobbs 21.09 28 IAmb IAmb 02 27 56.9
comp=Z,96nm,1.1s
HHAR Hobbs 21.09 28 P **P** **02 27 49.4 -1.0**
baz=213
HHAR S **S** **02 31 43.3 -1.8**
baz=213
ORTG Ortega, Santa 21.11 108 P **P** **02 27 52.4 +1.7**
ORTG IAmb IAmb 02 28 17.4
comp=Z,155nm,1.4s
KSCO Kaye Shedlock' 21.20 7 IAmb IAmb 02 28 05.6
comp=Z,173nm,1.3s
KSCO Kaye Shedlock' 21.20 7 P **P** **02 27 53.0 +1.4**
baz=188,SNR=9.2
KSCO S **S** **02 31 51.0 +3.6**
baz=188
KSCO Kaye Shedlock' 21.20 7 P **P** **02 27 53.5 +1.9**
baz=188,SNR=9.2
KSCO S Sn 02 31 52.3 -1.9
baz=188
SMCO Snowmass 21.20 358 IAMs_20 IAMs_20 02 35 59.1
comp=Z,10µm,19.0s
R32A Long Quarter, 21.35 15 P **P** **02 27 52.9 -0.2**
baz=199,SNR=23
R32A S **S** **02 31 49.2 -1.0**
baz=199
VES Vestal, Richgr 21.38 329 P **P** **02 27 53.6 +0.2**
baz=143,SNR=14
CWC Cottonwood Cre 21.39 332 P **P** **02 27 52.8 -1.0**
baz=146
CWC S Sn 02 32 01.4 +2.4
baz=146
SMMC Simmler 21.42 327 P **P** **02 27 52.5 -1.4**
baz=140
Q16A Castle Valley 21.44 349 P **P** **02 27 53.5 -0.8**
Q16A IAmb IAmb 02 28 28.4
comp=Z,136nm,1.4s
CBKS Cedar Bluff 21.48 13 P **P** **02 27 54.1 -0.5**
baz=196,SNR=17
CBKS S **S** **02 31 55.1 +2.3**
baz=196
CBKS Cedar Bluff 21.48 13 P **P** **02 27 53.2 -1.4**
baz=196,SNR=17
BRAL Brewton 21.53 49 P **P** **02 27 54.8 -0.2**
baz=237,SNR=7.0
BRAL Brewton 21.53 49 P **P** **02 27 55.2 +0.2**
baz=237,SNR=7.0
Y45A Yeager Farm, C 21.55 39 P **P** **02 27 54.8 -0.4**
baz=227,SNR=6.3
Y45A Yeager Farm, C 21.55 39 P **P** **02 27 55.2 -0.1**
baz=227,SNR=6.3
GRAC Grapevine Rang 21.56 334 P **P** **02 27 56.0 +0.6**
baz=149
GRAC S Sn 02 32 02.8 +0.1
baz=149
JTS Las Juntas de 21.59 108 P **P** **02 27 57.6 +1.7**
comp=Z,27nm,1.0s,baz=5.1,slow=4.1,SNR=13
JTS LR LR 02 34 23.8
comp=Z,7µm,21.3s,baz=348,slow=31
comp=Z,27nm,1.0s
JTS Las Juntas de 21.59 108 P **P** **02 27 56.6 +0.7**
JTS Las Juntas de 21.59 108 P **P** **02 27 56.6 +0.7**
JTS pmax pmax
comp=Z,373nm,2.3s
U40A Yellville 21.64 29 P **P** **02 27 55.0 -1.3**
baz=216,SNR=20
U40A P **P** **02 27 55.0 -1.3**
baz=216,SNR=20
U40A S **S** **02 31 49.9 -6.1**
baz=216
U40A S **S** **02 31 49.9 -6.1**
baz=216
U40A Yellville 21.64 29 P **P** **02 27 54.7 -1.6**
baz=216,SNR=20
ISCO Idaho Springs 21.80 0 IAMs_20 IAMs_20 02 36 24.0
comp=Z,13µm,19.0s
ISCO Idaho Springs 21.80 0 P **P** **02 27 56.8 -1.4**
baz=181,SNR=24
ISCO S **S** **02 32 01.3 +1.7**
baz=181
ISCO Idaho Springs 21.80 0 P **P** **02 27 57.0 -1.2**
baz=181,SNR=24
ISCO S Sn 02 32 07.0 -2.0
baz=181
P17A Butcher Ranch, 21.90 350 IAmb IAmb 02 28 14.4
comp=Z,80nm,1.3s
VOG Valley Oaks Go 21.91 329 P **P** **02 27 57.8 -1.3**
baz=143
SOR Soroa 21.92 73 P **P** **02 27 59.0 -0.3**
SOR IAmb IAmb 02 28 21.4
comp=Z,86nm,1.2s
SOR Soroa 21.92 73 P **P** **02 27 59.0 -0.3**
SOR pmax pmax
comp=Z,86nm,1.2s
P18A Preston Nutter 21.97 351 IAmb IAmb 02 28 27.2
comp=Z,59nm,1.2s
TIN Tinemaha, Big 21.97 333 P **P** **02 27 58.8 -1.2**
baz=147
TIN S Sn 02 32 12.7 -0.1
baz=147
Z47A Carrollton 22.03 43 P **P** **02 27 59.1 -1.3**
baz=231,SNR=52
Z47A S **S** **02 32 07.7 +4.1**
baz=231
R11A Troy Canyon, C 22.07 339 P **P** **02 28 01.0 -0.1**
baz=155,SNR=41
R11A S Sn 02 32 11.9 -3.4
baz=155
OXF Oxford 22.07 38 P **P** **02 27 59.5 -1.3**
OXF Oxford 22.07 38 P **P** **02 27 59.6 -1.3**
OXF pmax pmax
comp=Z,187nm,1.1s
OXF MLR MLR
comp=Z,6µm,20.0s
OXF Oxford 22.07 38 P **P** **02 28 00.1 -0.8**
baz=226,SNR=21
OXF S **S** **02 32 05.7 +1.3**
baz=226
OXF Oxford 22.07 38 P **P** **02 27 59.0 -1.9**
baz=226,SNR=21
OXF S **S** **02 32 03.6 -0.7**
baz=226
HBAR Harrisburg 22.12 34 P **P** **02 27 59.8 -1.6**
baz=222
HBAR S Sn 02 32 15.3 -1.0
baz=222
451A Vernon 22.19 52 P **P** **02 28 02.0 -0.1**
baz=240,SNR=7.4
451A S Sn 02 32 13.5 -4.4
baz=240
O20A White River Ci 22.24 355 IAmb IAmb 02 28 27.8
comp=Z,135nm,1.4s
O20A White River Ci 22.24 355 P **P** **02 28 02.2 -0.7**
baz=174,SNR=18
LCAR Lake Charles 22.25 33 IAmb IAmb 02 28 08.3
comp=Z,113nm,1.4s
LCAR Lake Charles 22.25 33 P **P** **02 28 01.6 -1.2**
baz=220,SNR=31
LCAR S **S** **02 32 06.6 -1.2**
baz=220
250A Grady 22.53 48 P **P** **02 28 04.1 -1.7**
250A Grady 22.53 48 P **P** **02 28 04.9 -0.9**
baz=236,SNR=44
PMPB Monarch Peak 22.53 327 P **P** **02 28 04.4 -1.5**
PMPB IAmb IAmb 02 28 25.8
comp=Z,104nm,1.3s
S39A Bolivar 22.54 27 IAmb IAmb 02 28 12.5
comp=Z,86nm,1.2s
S39A Bolivar 22.54 27 P **P** **02 28 04.4 -1.5**
baz=213,SNR=35
S39A S **S** **02 32 12.4 -0.7**
baz=213
MGMO Mountain Grove 22.57 29 IAmb IAmb 02 28 10.4
comp=Z,65nm,0.9s
KSU1 Kansas State U 22.57 19 IAmb IAmb 02 28 11.1
comp=Z,104nm,1.1s
KSU1 Kansas State U 22.57 19 IAMs_20 IAMs_20 02 37 03.7
comp=Z,13µm,18.0s
KSU1 Kansas State U 22.57 19 S **S** **02 32 14.5 +0.8**
baz=204
KSU1 Kansas State U 22.57 19 P **P** **02 28 04.8 -1.4**
baz=204
KSU1 S **S** **02 32 15.0 +1.3**
baz=204
LRAL Lakeview Retre 22.64 45 P **P** **02 28 06.6 -0.4**
baz=233,SNR=41
LRAL S **S** **02 32 09.6 -5.3**
baz=233
LRAL Lakeview Retre 22.64 45 P **P** **02 28 05.9 -1.0**
baz=233,SNR=41
W45A Hickory Valley 22.66 37 P **P** **02 28 05.0 -2.2**
W45A IAmb IAmb 02 28 23.8
comp=Z,106nm,1.1s
W45A Hickory Valley 22.66 37 P **P** **02 28 05.8 -1.3**
baz=225
W45A S **S** **02 32 15.7 +0.4**
baz=225
MLAC Mammoth, Mammo 22.72 332 P **P** **02 28 06.9 -1.1**
baz=146
GNAR Gosnell 22.78 35 P **P** **02 28 06.3 -2.1**
OMMB Old Mammoth Mi 22.78 332 P **P** **02 28 08.3 -0.5**
RIMA Rio Macho 22.78 108 P **P** **02 28 10.2 +1.4**
RDMU Red Mountain 22.80 353 IAmb IAmb 02 28 36.7
comp=Z,117nm,1.4s
N23A Red Feather La 22.90 360 IAmb IAmb 02 28 44.8
comp=Z,82nm,1.5s
N23A Red Feather La 22.90 360 P **P** **02 28 09.5 -0.4**
baz=180,SNR=11
N23A S **S** **02 32 23.7 +3.8**
baz=180
553A Crawfordville 22.98 54 P **P** **02 28 09.5 -1.1**
553A Crawfordville 22.98 54 P **P** **02 28 09.3 -1.3**
baz=243
553A S **S** **02 32 23.4 +2.3**
baz=243
DUG Dugway, Tooele 23.01 346 IAmb IAmb 02 28 25.6
comp=Z,91nm,1.5s
DUG IAMs_20 IAMs_20 02 36 20.6
comp=Z,9µm,20.0s
DUG Dugway, Tooele 23.01 346 P **P** **02 28 10.2 -0.7**
baz=163,SNR=32
LHV Little Huntoon 23.10 334 P **P** **02 28 11.2 -0.5**
LHV IAmb IAmb 02 28 40.6
comp=Z,161nm,1.7s
LNXT Lenox 23.16 35 P **P** **02 28 12.3 -0.1**
baz=223,SNR=6.2
NVAR Mina Array Bea 23.16 334 P **P** **02 28 12.9 +0.3**
comp=Z,5.0nm,0.9s,baz=163,slow=10.0,SNR=23
NVAR LR LR 02 36 24.3
comp=Z,9µm,21.8s,baz=154,slow=35
comp=Z,5.0nm,0.9s
PBMO Poplar Bluff 23.17 33 IAmb IAmb 02 28 16.7
comp=Z,112nm,1.2s
PBMO Poplar Bluff 23.17 33 P **P** **02 28 11.3 -1.1**
baz=220,SNR=12
PBMO S **S** **02 32 28.5 +4.3**
baz=220

OGNE Ogallala 23.18 7 P P 02 28 12.6 0.0
baz=189,SNR=10
OGNE S S 02 32 24.7 +0.3
baz=189
OGNE Ogallala 23.18 7 P P 02 28 12.9 +0.3
baz=189,SNR=10
OGNE S S 02 32 26.1 +1.7
baz=189
PLAL Pickwick Lake 23.20 39 IAmb IAmb 02 28 24.7
comp=Z,79nm,1.4s
352A Blakely 23.23 51 P P 02 28 11.4 -1.8
baz=240,SNR=46
352A S S 02 32 25.6 +0.3
baz=240
SAO San Andreas Ge 23.29 327 IAMs_20 IAMs_20 02 35 52.1
comp=Z,15µm,20.0s
PHWY Pilot Hill 23.30 1 IAMs_20 IAMs_20 02 37 12.7
comp=Z,12µm,20.0s
GLAT Glass 23.40 35 P P 02 28 13.3 -1.4
RYN Ryan 23.42 334 P P 02 28 14.6 -0.6
X48A Hartselle 23.49 42 IAmb IAmb 02 28 19.0
comp=Z,85nm,1.1s
X48A Hartselle 23.49 42 P P 02 28 13.5 -2.1
baz=230,SNR=39
X48A S S 02 32 30.0 +0.6
baz=230
R40A Maddies Statio 23.50 28 P P 02 28 13.3 -2.4
baz=214,SNR=74
R40A S S 02 32 31.6 +2.1
baz=214
Y49A Blount Mountai 23.53 44 IAmb IAmb 02 28 26.3
comp=Z,76nm,1.2s
Y49A Blount Mountai 23.53 44 P P 02 28 14.3 -1.8
baz=232,SNR=26
Y49A S S 02 32 32.6 +2.4
baz=232
UTMT University of 23.69 36 P P 02 28 16.7 -0.9
RWWY Rawlins 23.72 357 IAmb IAmb 02 28 52.1
comp=Z,62nm,1.3s
CCM Cathedral Cave 23.77 30 P P 02 28 16.9 -1.5
CCM Cathedral Cave 23.77 30 P P 02 28 16.9 -1.5
CCM pmax pmax
comp=Z,225nm,1.2s
CCM MLR MLR
comp=Z,23µm,18.0s
CCM Cathedral Cave 23.77 30 P P 02 28 16.5 -1.9
baz=217,SNR=80
CCM S S 02 32 33.5 -0.4
baz=217
CCM Cathedral Cave 23.77 30 P P 02 28 16.7 -1.7
baz=217
CCM S S 02 32 37.1 +3.2
baz=217
N33B J Bar K, Exete 23.85 16 S S 02 32 38.1 +2.9
baz=200
N33A J Bar K, Exete 23.86 16 IAmb IAmb 02 28 30.7
comp=Z,104nm,1.2s
PAYG Puerto Ayora 23.98 139 P P 02 28 21.1 +0.4
152A Waverly Hall 24.00 48 IAmb IAmb 02 28 30.6
comp=Z,70nm,1.1s
152A Waverly Hall 24.00 48 P P 02 28 19.1 -1.6
baz=238,SNR=31
152A S S 02 32 40.1 +2.4
baz=238
Z51A Franklin 24.04 46 P P 02 28 19.5 -1.6
Z51A Franklin 24.04 46 P P 02 28 20.3 -0.7
baz=236,SNR=12
Z51A S S 02 32 46.4 +8.0
baz=236
FVM French Village 24.11 31 P P 02 28 19.8 -1.8
baz=218,SNR=31
FVM S S 02 32 37.9 -1.4
baz=218
P38A Dawn 24.11 24 IAmb IAmb 02 28 25.2
comp=Z,80nm,1.1s
P38A Dawn 24.11 24 P P 02 28 19.3 -2.3
baz=210,SNR=27
P38A S S 02 32 40.0 +0.8
baz=210
HWUT Hardware Ranch 24.12 349 IAMs_20 IAMs_20 02 37 02.9
comp=Z,9µm,20.0s
WVT Waverly 24.13 38 P P 02 28 20.2 -1.6
WVT IAmb IAmb 02 28 24.4
comp=Z,77nm,1.5s
WVT Waverly 24.13 38 P P 02 28 20.2 -1.6
WVT pmax pmax
comp=Z,77nm,1.5s
WVT MLR MLR
comp=Z,7µm,21.0s
WVT Waverly 24.13 38 P P 02 28 20.2 -1.6
baz=226,SNR=8.9
WVT S S 02 32 40.5 +0.9
baz=226
WVT Waverly 24.13 38 P P 02 28 20.4 -1.4
baz=226
WVT S S 02 32 41.4 +1.8
baz=226
656A Willston 24.13 58 P P 02 28 21.0 -0.9
baz=247,SNR=14
656A S S 02 32 43.7 +3.9
baz=247
ELK Elko 24.15 342 P P 02 28 23.1 +0.8
comp=Z,3.7nm,1.0s,baz=167,slow=7.9,SNR=18
ELK LR LR 02 36 48.7
comp=Z,9µm,21.5s,baz=170,slow=34
comp=Z,3.7nm,1.0s
ELK Elko 24.15 342 IAMs_20 IAMs_20 02 36 36.8
comp=Z,9µm,21.0s
TIGA Tifton 24.21 52 P P 02 28 21.9 -0.6
baz=242,SNR=12
TIGA Tifton 24.21 52 P P 02 28 21.6 -1.0
baz=242,SNR=12
PNTR Pine Nut 24.27 333 IAmb IAmb 02 28 31.7
comp=Z,50nm,1.2s
T45B Paducah 24.30 35 P P 02 28 23.4 0.0
baz=223,SNR=7.1
T45B S S 02 32 41.0 -1.3
baz=223
BGNE Belgrade 24.32 14 P P 02 28 23.8 +0.3
baz=198,SNR=6.2
BGNE S S 02 32 51.0 +8.4
baz=198
BGNE Belgrade 24.32 14 P P 02 28 24.2 +0.7
baz=198,SNR=6.2
BGNE S S 02 32 43.1 +0.5
baz=198
EMB Emerald Bay 24.39 332 IAmb IAmb 02 28 32.3
comp=Z,66nm,1.1s
061Z Ochoppi 24.40 67 P P 02 28 25.5 +1.1
baz=256
061Z S S 02 32 52.8 +8.7
baz=256
VCNR Virginia City 24.46 333 IAmb IAmb 02 28 31.7
comp=Z,44nm,1.2s
V48A Smith Brothers 24.46 40 IAmb IAmb 02 28 30.2
comp=Z,85nm,1.5s
V48A Smith Brothers 24.46 40 P P 02 28 23.4 -1.5
baz=228,SNR=8.2
S44A Carbondale 24.47 33 P P 02 28 23.8 -1.2
baz=221,SNR=7.0
S44A S S 02 32 45.8 +0.6
baz=221
BMN Battle Mountai 24.50 339 IAmb IAmb 02 28 32.2
comp=Z,75nm,1.3s
DWPF Disney Wildern 24.58 61 P P 02 28 25.3 -0.8
DWPF Disney Wildern 24.58 61 P P 02 28 25.0 -1.0
baz=251,SNR=8.0
DWPF S S 02 32 52.7 +5.6
baz=251
DWPF Disney Wildern 24.58 61 P P 02 28 25.2 -0.8
baz=251
DWPF S S 02 32 49.8 +2.8
baz=251
MPK Martis Peak 24.62 333 IAmb IAmb 02 28 33.5
comp=Z,97nm,1.4s
P40A Paris 24.62 26 P P 02 28 25.1 -1.2
baz=213,SNR=74
P40A S S 02 32 47.9 +0.3
baz=213
K22A Casper 24.66 359 IAmb IAmb 02 28 49.0
comp=Z,49nm,1.4s
K22A Casper 24.66 359 P P 02 28 27.3 +0.5
baz=178,SNR=11
K22A S S 02 32 54.1 +5.7
baz=178
K22A Casper 24.66 359 P P 02 28 28.1 +1.3
baz=178,SNR=11
K22A S S 02 32 49.7 +1.3
baz=178
SWET Sewanee 24.68 42 IAmb IAmb 02 28 39.3
comp=Z,77nm,1.2s
PAHR Pah Rah Range 24.69 334 IAmb IAmb 02 29 03.7
comp=Z,73nm,1.4s
SLM Saint Louis 24.71 30 P P 02 28 27.6 +0.5
baz=218
SLM S S 02 32 49.0 0.0
baz=218
BW06 Boulder Array 24.97 353 IAMs_20 IAMs_20 02 37 56.8
comp=Z,8µm,20.0s
BW06 Boulder Array 24.97 353 P P 02 28 29.4 -0.3
baz=172,SNR=11
BW06 S S 02 32 55.4 +1.9
baz=172
PDAR Pinedale Array 24.97 353 P P 02 28 29.6 -0.1
comp=Z,5.2nm,0.9s,baz=162,slow=10,SNR=18
PDAR LR LR 02 38 07.2
comp=Z,7µm,19.9s,baz=184,slow=36
comp=Z,5.2nm,0.9s
X51A Calhoun 24.98 44 P P 02 28 28.0 -1.6
X51A IAmb IAmb 02 28 33.3
comp=Z,60nm,0.9s
X51A Calhoun 24.98 44 P P 02 28 28.2 -1.3
baz=234,SNR=14
X51A P P 02 28 28.2 -1.3
baz=234,SNR=14
X51A S S 02 32 59.8 +6.4
baz=234
X51A S S 02 32 59.8 +6.4
baz=234
CLTN Cedars of Leba 24.99 40 IAmb IAmb 02 28 32.6
comp=Z,37nm,0.9s
W50A Signal Mountai 25.06 43 P P 02 28 30.0 -0.4
baz=232,SNR=61
W50A S S 02 32 58.5 +3.6
baz=232
MCCM Marconi Confer 25.08 327 IAMs_20 IAMs_20 02 36 34.4
comp=Z,12µm,21.0s
Y52A Lilburn 25.12 47 P P 02 28 29.3 -1.6
Y52A Lilburn 25.12 47 P P 02 28 29.7 -1.1
baz=236,SNR=18
Y52A P P 02 28 29.7 -1.1
baz=236,SNR=18
Y52A S S 02 33 01.8 +6.1
baz=236
Y52A S S 02 33 01.8 +6.1
baz=236
154A Montrose 25.14 50 P P 02 28 31.1 +0.1
baz=240,SNR=42
T47A Sharon Grove 25.14 37 P P 02 28 30.6 -0.4
baz=226,SNR=20
T47A S S 02 33 00.9 +5.0
baz=226
AHID Auburn Hatcher 25.17 351 IAMs_20 IAMs_20 02 37 49.8
comp=Z,10µm,22.0s
N38A Joes South For 25.24 23 P P 02 28 32.4 +0.5
baz=209
N38A S S 02 32 54.2 -3.2
baz=209
255A Hazlehurst 25.27 52 P P 02 28 30.8 -1.5
baz=242,SNR=14
L34A Svendsen Farm, 25.29 17 IAmb IAmb 02 28 34.9
comp=Z,31nm,0.8s
GOGA Godfrey 25.29 48 P P 02 28 31.3 -1.1
baz=238,SNR=114
GOGA S S 02 33 01.9 +3.5
baz=238
GOGA Godfrey 25.29 48 P P 02 28 32.6 +0.2
baz=238,SNR=114
GOGA S S 02 32 58.6 +0.3
baz=238
ORV Oroville 25.49 331 IAMs_20 IAMs_20 02 37 57.4
comp=Z,9µm,18.0s
Q44A Meyer Farm, Va 25.52 32 P P 02 28 31.6 -2.7
baz=220,SNR=35
Q44A S S 02 33 08.2 +6.3
baz=220
U49A Red Boiling Sp 25.61 40 P P 02 28 33.4 -1.8
baz=229,SNR=10.0
U49A S S 02 33 04.1 +0.8
baz=229
CPCT Cooper Cave 25.73 43 IAmb IAmb 02 28 54.0
comp=Z,40nm,1.2s
SNOW Snow King Moun 25.80 352 IAmb IAmb 02 28 45.5
comp=Z,61nm,0.9s
P43A Skaggs, Pawnee 25.85 30 P P 02 28 37.4 0.0
baz=218,SNR=18
P43A S S 02 33 16.1 +9.0
baz=218
TPAW Teton Pass 25.86 351 P P 02 28 36.6 -1.2
TPAW IAmb IAmb 02 29 01.6
comp=Z,65nm,1.2s
W52A Murphy 25.91 44 P P 02 28 37.0 -1.0
baz=234,SNR=24
W52A S S 02 33 06.1 -2.1
baz=234
LOHW Long Hollow 25.93 352 IAmb IAmb 02 28 44.2
comp=Z,47nm,1.1s
LOHW IAMs_20 IAMs_20 02 38 26.1
comp=Z,7µm,20.0s
V51A Loudon 26.05 43 P P 02 28 37.4 -1.9
V51A IAmb IAmb 02 28 42.4
comp=Z,72nm,1.1s
V51A Loudon 26.05 43 P P 02 28 37.5 -1.9
baz=233,SNR=16
V51A S S 02 33 09.5 -0.9
baz=233
N41A Harden Midland 26.11 26 P P 02 28 38.4 -1.4
baz=214,SNR=8.5
N41A S S 02 33 12.2 +1.0
baz=214
RSSD Black Hills 26.16 3 S S 02 33 14.7 +2.3
baz=184
RSSD Black Hills 26.16 3 P P 02 28 40.4 -0.1
baz=184
RSSD S S 02 33 15.4 +2.9
baz=184
SCIA State Center 26.22 22 S S 02 33 12.2 -0.8
baz=208
SCIA State Center 26.22 22 P P 02 28 40.9 +0.1
baz=208
SCIA S S 02 33 14.8 +1.9
baz=208
TKL Tuckaleechee C 26.34 44 P P 02 28 43.1 +1.1
comp=Z,13nm,0.8s,baz=219,slow=9.4,SNR=24
TKL LR LR 02 41 29.7
comp=Z,6µm,18.9s,baz=241,slow=42
comp=Z,13nm,0.8s
TKL Tuckaleechee C 26.34 44 IAmb IAmb 02 28 51.9
comp=Z,38nm,1.1s
TKL Tuckaleechee C 26.34 44 P P 02 28 40.5 -1.5
baz=234,SNR=13
TKL S S 02 33 15.3 +0.3
baz=234
257A Skidaway Islan 26.39 53 P P 02 28 41.8 -0.6
baz=244
FLWY Flagg Ranch 26.41 352 P P 02 28 41.9 -0.8
FLWY IAmb IAmb 02 29 10.6
comp=Z,92nm,1.4s
FLWY IAMs_20 IAMs_20 02 38 41.7
comp=Z,7µm,19.0s
T50A Nancy 26.51 40 IAmb IAmb 02 28 47.4
comp=Z,26nm,0.8s
T50A Nancy 26.51 40 P P 02 28 42.6 -0.8
baz=230
T50A P P 02 28 42.6 -0.8
baz=230
T50A S S 02 33 17.8 +0.2
baz=230
T50A S S 02 33 17.8 +0.2
baz=230
BG3 Lake Jocassee 26.52 46 IAmb IAmb 02 28 49.0
comp=Z,57nm,0.9s
CASEE Lake Jocassee 26.52 46 P P 02 28 44.7 +1.1
baz=236,SNR=37
CASEE S S 02 33 25.6 +7.7
baz=236
V52A Sevierville 26.57 43 IAmb IAmb 02 29 00.9
comp=Z,71nm,1.4s
V52A Sevierville 26.57 43 P P 02 28 44.0 +0.1
baz=234,SNR=17
V52A S S 02 33 18.7 +0.1
baz=234
HODGE Hodges 26.58 48 IAmb IAmb 02 28 49.6
comp=Z,27nm,0.8s
HODGE Hodges 26.58 48 P P 02 28 44.1 0.0
baz=238,SNR=21
HODGE S S 02 33 26.5 +7.7
baz=238
HLID Hailey 26.58 346 P P 02 28 42.6 -1.5
HLID IAmb IAmb 02 29 07.2
comp=Z,69nm,1.6s
HLID IAMs_20 IAMs_20 02 38 42.0
comp=Z,7µm,19.0s
HLID Hailey 26.58 346 P P 02 28 43.5 -0.6
baz=162,SNR=21
HLID S S 02 33 24.9 +6.0
baz=162
HAW Hawthorne Fire 26.60 50 P P 02 28 43.4 -0.9
baz=241,SNR=8.2
HAW S S 02 33 19.7 +0.6
baz=241
HDIL Hopedale 26.68 29 P P 02 28 44.5 -0.4
baz=217,SNR=12
HDIL S S 02 33 21.5 +1.3
baz=217
HDIL Hopedale 26.68 29 P P 02 28 44.8 -0.1
baz=217,SNR=12
BCIP Isla Barro Col 26.68 106 IAMs_20 IAMs_20 02 37 23.7
comp=Z,7µm,18.0s
WVOR Wild Horse Val 26.77 339 IAMs_20 IAMs_20 02 38 54.0
comp=Z,8µm,19.0s
LKWY Lake 26.84 353 IAMs_20 IAMs_20 02 39 16.3
comp=Z,10µm,19.0s
MTDJ Mount Denham 26.88 85 P P 02 28 45.4 -1.6
ECSD EROS Data Cent 26.88 15 IAMs_20 IAMs_20 02 38 22.6
comp=Z,11µm,22.0s
ECSD EROS Data Cent 26.88 15 P P 02 28 46.4 -0.4
baz=200,SNR=11
ECSD S S 02 33 22.6 -0.7
baz=200
ECSD EROS Data Cent 26.88 15 P P 02 28 46.0 -0.7
baz=200,SNR=11
MOD Modoc Plateau 26.92 336 IAMs_20 IAMs_20 02 39 07.2
comp=Z,9µm,19.0s
P46A Rosedale 26.98 33 IAmb IAmb 02 28 51.0
comp=Z,71nm,1.3s
P46A Rosedale 26.98 33 P P 02 28 48.2 +0.6
baz=222,SNR=7.2
P46A S S 02 33 25.2 +0.3
baz=222
V53A Saluda 26.98 45 IAmb IAmb 02 29 06.5
comp=Z,74nm,1.3s
V53A Saluda 26.98 45 P P 02 28 47.9 +0.1
baz=235,SNR=15
V53A P P 02 28 47.9 +0.1
baz=235,SNR=15
YMR Madison River 27.02 352 IAmb IAmb 02 29 15.7
comp=Z,69nm,1.4s
TZTN Tazewell 27.02 42 P P 02 28 46.9 -1.2
baz=233,SNR=15
TZTN S S 02 33 22.4 -3.3
baz=233
TZTN Tazewell 27.02 42 P P 02 28 47.0 -1.0
baz=233,SNR=15
TZTN S S 02 33 26.8 +1.1
baz=233
K38A Parkersburg 27.03 21 IAmb IAmb 02 28 51.1
comp=Z,76nm,1.1s
K38A Parkersburg 27.03 21 P P 02 28 47.6 -0.5
baz=208,SNR=6.6
SUSD Miller 27.06 11 P P 02 28 47.3 -1.0
baz=195
SUSD S S 02 33 28.3 +2.1
baz=195
L40A Anamosa 27.10 24 IAmb IAmb 02 28 54.7
comp=Z,80nm,1.2s
L40A Anamosa 27.10 24 P P 02 28 47.8 -0.9
baz=212,SNR=12
R49A Shelbyville 27.15 37 IAmb IAmb 02 29 05.2
comp=Z,48nm,1.4s
R49A Shelbyville 27.15 37 S S 02 33 28.2 +0.4
baz=227
R49A S S 02 33 28.2 +0.4
baz=227
PAULI Pauline 27.20 47 P P 02 28 49.3 -0.3
PAULI IAmb IAmb 02 28 57.9
comp=Z,40nm,0.7s
PAULI Pauline 27.20 47 P P 02 28 49.7 0.0
baz=238
PAULI S S 02 33 31.0 +2.5
baz=238
RLMT Red Lodge 27.27 355 IAMs_20 IAMs_20 02 39 21.7
comp=Z,6µm,18.0s
RLMT Red Lodge 27.27 355 P P 02 28 48.9 -1.6
baz=173
RLMT S S 02 33 31.9 +1.9
baz=173
JSC Jenkinsville 27.31 49 IAmb IAmb 02 28 54.2
comp=Z,43nm,1.1s
JSC Jenkinsville 27.31 49 P P 02 28 49.9 -0.7
baz=240,SNR=15
NHSC New Hope 27.54 52 P P 02 28 53.0 +0.3
baz=243
NHSC New Hope 27.54 52 P P 02 28 51.7 -1.0
baz=243,SNR=6.1
SFIN Lafayette 27.60 32 IAmb IAmb 02 28 56.4
comp=Z,47nm,1.0s
SFIN Lafayette 27.60 32 P P 02 28 53.4 +0.2
baz=221,SNR=6.9
SFIN S S 02 33 36.7 +2.0
baz=221
SFIN Lafayette 27.60 32 P P 02 28 51.4 -1.8
baz=221,SNR=6.9
SFIN S S 02 33 35.6 +0.9
baz=221
R50A Paris 27.64 38 P P 02 28 52.0 -1.6
R50A Paris 27.64 38 P P 02 28 51.6 -2.0
baz=229
R50A P P 02 28 51.6 -2.0
baz=229
R50A S S 02 33 34.3 -1.1
baz=229
R50A S S 02 33 34.3 -1.1
baz=229
S51A Beattyville 27.67 40 IAmb IAmb 02 28 56.9
comp=Z,28nm,0.8s
S51A Beattyville 27.67 40 P P 02 28 52.6 -1.2
baz=231,SNR=11
S51A P P 02 28 52.6 -1.2
baz=231,SNR=11
S51A S S 02 33 37.7 +1.8
baz=231
S51A S S 02 33 37.7 +1.8
baz=231
L42A Oliver, Polo 27.68 26 P P 02 28 53.1 -0.9
baz=215,SNR=15
KMSC Kings Mountain 27.70 47 IAmb IAmb 02 28 57.6
comp=Z,36nm,0.9s
KMSC Kings Mountain 27.70 47 P P 02 28 53.9 -0.3
baz=238,SNR=17
KMSC S S 02 33 40.4 +3.9
baz=238
KMSC Kings Mountain 27.70 47 P P 02 28 53.7 -0.5
baz=238,SNR=17
KMSC S S 02 33 36.5 0.0
baz=238
YBH Yreka Blue Hor 27.79 332 LR LR 02 39 23.6
comp=Z,9µm,19.5s,baz=154,slow=35
YBH Yreka Blue Hor 27.79 332 IAMs_20 IAMs_20 02 39 12.1
comp=Z,9µm,19.0s
Y57A Sumter 27.81 50 IAmb IAmb 02 28 59.9
comp=Z,24nm,0.8s
Y57A Sumter 27.81 50 P P 02 28 54.5 -0.6
baz=241
Y57A P P 02 28 54.5 -0.6
baz=241
Y57A S S 02 33 40.3 +2.2
baz=241
Y57A S S 02 33 40.3 +2.2
baz=241
P48A Milroy 27.81 35 P P 02 28 56.3 +1.2
baz=225
P48A P P 02 28 56.3 +1.2
baz=225
P48A S S 02 33 40.0 +1.9
baz=225
P48A S S 02 33 40.0 +1.9
baz=225
K05A Summer Lake 27.85 336 P P 02 28 55.4 -0.2
K05A IAmb IAmb 02 29 25.9
comp=Z,46nm,1.4s
M44A Midewin, Midew 27.91 29 IAmb IAmb 02 28 58.5
comp=Z,66nm,1.5s
M44A Midewin, Midew 27.91 29 P P 02 28 57.1 +1.1

baz=218
M44A S S 02 33 39.2 -0.5
baz=218
L04D Klamath Falls 28.01 333 IAmb IAmb 02 29 27.7
comp=Z,34nm,1.2s
L04D IAMs_20 IAMs_20 02 38 39.9
comp=Z,8µm,22.0s
L04D Klamath Falls 28.01 333 P P 02 28 55.9 -1.1
baz=145
BOZ Bozeman (W) 28.02 351 IAMs_20 IAMs_20 02 39 33.2
comp=Z,7µm,21.0s
BOZ Bozeman (W) 28.02 351 P P 02 28 56.8 -0.2
baz=168,SNR=19
BOZ S S 02 33 44.5 +2.9
baz=168
I37B Waseca 28.04 19 P P 02 28 55.9 -1.2
baz=206,SNR=15
I37B S S 02 33 43.1 +1.5
baz=206
K04D Chiloquin, OR 28.11 335 P P 02 28 55.6 -2.3
baz=146
K04D S S 02 33 46.8 +3.8
baz=146
U54A Nelsons Funny 28.13 44 P P 02 28 57.4 -0.6
baz=235,SNR=17
U54A P P 02 28 57.4 -0.6
baz=235,SNR=17
U54A S S 02 33 43.5 +0.2
baz=235
U54A S S 02 33 43.5 +0.2
baz=235
V55A Taylorsville 28.16 46 IAmb IAmb 02 29 01.8
comp=Z,26nm,0.9s
V55A Taylorsville 28.16 46 P P 02 28 58.1 -0.2
baz=237,SNR=9.5
V55A P P 02 28 58.1 -0.2
baz=237,SNR=9.5
V55A S S 02 33 40.3 -3.4
baz=237
V55A S S 02 33 40.3 -3.4
baz=237
JFWS Jewell Farm 28.20 25 P P 02 28 57.5 -1.1
JFWS IAmb IAmb 02 29 01.1
comp=Z,33nm,0.9s
JFWS Jewell Farm 28.20 25 IAMs_20 IAMs_20 02 40 03.8
comp=Z,8µm,22.0s
JFWS Jewell Farm 28.20 25 P P 02 28 57.5 -1.1
JFWS pmax pmax
comp=Z,33nm,0.9s
JFWS MLR MLR
comp=Z,8µm,22.0s
JFWS Jewell Farm 28.20 25 P P 02 28 58.6 +0.1
baz=213,SNR=7.8
JFWS S S 02 33 44.2 0.0
baz=213
JFWS Jewell Farm 28.20 25 P P 02 28 58.2 -0.4
baz=213,SNR=7.8
JFWS S S 02 33 46.4 +2.2
baz=213
P49A Miami Univ. Ec 28.26 36 IAmb IAmb 02 29 01.4
comp=Z,33nm,1.1s
P49A Miami Univ. Ec 28.26 36 P P 02 28 57.9 -1.2
baz=226,SNR=12
P49A S S 02 33 47.1 +2.0
baz=226
P49A Miami Univ. Ec 28.26 36 P P 02 28 57.5 -1.6
baz=226,SNR=12
P49A S S 02 33 46.9 +1.7
baz=226
PLID Pearl Lake 28.40 345 IAMs_20 IAMs_20 02 40 30.1
comp=Z,7µm,20.0s
KSXB Camp Six Broad 28.40 331 IAmb IAmb 02 29 18.3
comp=Z,33nm,1.1s
J05D Fort Rock, OR 28.46 336 P P 02 28 59.5 -1.5
baz=148
J05D S S 02 33 49.3 +0.8
baz=148
L02F Cave Junction 28.48 332 P P 02 28 59.5 -1.6
baz=143
L02F S S 02 33 48.9 +0.2
baz=143
O48B Farmland 28.52 34 P P 02 29 00.9 -0.6
baz=225,SNR=18
O48B S S 02 33 51.2 +1.9
baz=225
O48B Farmland 28.52 34 P P 02 28 59.3 -2.1
baz=225,SNR=18
O48B S S 02 33 50.4 +1.1
baz=225
BMO Blue Mountains 28.53 343 IAMs_20 IAMs_20 02 39 47.6
comp=Z,6µm,18.0s
L44A Lake County Fo 28.60 29 IAMs_20 IAMs_20 02 40 58.4
comp=Z,13µm,19.0s
L44A Lake County Fo 28.60 29 S S 02 33 51.2 +0.8
baz=218
L44A Lake County Fo 28.60 29 P P 02 29 00.7 -1.4
baz=218
L44A S S 02 33 48.7 -1.7
baz=218
HUMO Hull Mountain 28.60 333 IAMs_20 IAMs_20 02 40 00.7
comp=Z,14µm,19.0s
W57A Gilead 28.65 48 IAmb IAmb 02 29 05.7
comp=Z,36nm,1.1s
W57A Gilead 28.65 48 P P 02 29 01.7 -0.9
baz=240,SNR=12
W57A P P 02 29 01.7 -0.9
baz=240,SNR=12
W57A S S 02 33 52.7 +1.3
baz=240
W57A S S 02 33 52.7 +1.3
baz=240
N47A Urbana 28.69 33 IAmb IAmb 02 29 05.4
comp=Z,44nm,1.1s
N47A Urbana 28.69 33 P P 02 29 02.4 -0.5
baz=223,SNR=11
N47A P P 02 29 02.4 -0.5
baz=223,SNR=11
N47A S S 02 33 53.0 +1.2
baz=223
N47A S S 02 33 53.0 +1.2
baz=223
LAO LASA Array 28.69 359 IAmb IAmb 02 29 25.6
comp=Z,41nm,1.5s
LAO LASA Array 28.69 359 P P 02 29 01.3 -1.6
baz=179
Q51A Peebles 28.71 38 IAmb IAmb 02 29 05.9
comp=Z,53nm,1.4s
Q51A Peebles 28.71 38 S S 02 33 56.7 +4.4
baz=229
Q51A S S 02 33 56.7 +4.4
baz=229
J04D Umpqua Nationa 28.77 335 IAmb IAmb 02 29 16.9
comp=Z,37nm,0.9s
J04D IAMs_20 IAMs_20 02 40 03.0
comp=Z,9µm,19.0s
J04D Umpqua Nationa 28.77 335 P P 02 29 02.5 -1.4
baz=146
J04D S S 02 33 56.2 +2.7
baz=146
X58A Rowland 28.83 50 S S 02 33 58.1 +3.9
baz=242
X58A S S 02 33 58.1 +3.9
baz=242
E28A Huff 28.89 7 IAmb IAmb 02 29 15.0
comp=Z,60nm,1.4s
I40A Norwalk 28.89 23 P P 02 29 04.5 -0.2
baz=211,SNR=10
I40A S S 02 33 54.9 -0.1
baz=211
O49A Covington 28.92 35 IAmb IAmb 02 29 07.3
comp=Z,22nm,0.8s
O49A Covington 28.92 35 P P 02 29 05.5 +0.5
baz=226,SNR=7.1
O49A P P 02 29 05.5 +0.5
baz=226,SNR=7.1
O49A S S 02 33 56.5 +0.9
baz=226
O49A S S 02 33 56.5 +0.9
baz=226
F33A 5 Mile Ranch, 28.94 14 S S 02 33 54.0 -1.8
baz=199
K02D Willamette Mer 28.98 332 P P 02 29 04.6 -1.1
baz=143
K02D S S 02 33 57.5 +0.8
baz=143
U56A King 29.00 46 IAmb IAmb 02 29 09.4
comp=Z,37nm,0.9s
U56A King 29.00 46 P P 02 29 06.8 +1.1
baz=238,SNR=8.1
U56A P P 02 29 06.8 +1.1
baz=238,SNR=8.1
R53A Hurricane 29.11 41 P P 02 29 06.8 +0.1
baz=232,SNR=16
R53A P P 02 29 06.8 +0.1
baz=232,SNR=16
R53A S S 02 34 01.3 +2.7
baz=232
R53A S S 02 34 01.3 +2.7
baz=232
P51A Williamsport 29.17 38 S S 02 34 01.5 +2.0
baz=229
P51A S S 02 34 01.5 +2.0
baz=229
S54A Dingess, Beckl 29.20 42 P P 02 29 07.1 -0.4
S54A IAmb IAmb 02 29 21.6
comp=Z,67nm,1.4s
S54A Dingess, Beckl 29.20 42 P P 02 29 07.3 -0.3
baz=234
S54A P P 02 29 07.3 -0.3
baz=234
S54A S S 02 33 59.3 -0.8
baz=234
S54A S S 02 33 59.3 -0.8
baz=234
L46A Eue Claire 29.23 31 IAmb IAmb 02 29 11.2
comp=Z,36nm,0.9s
L46A Eue Claire 29.23 31 P P 02 29 07.9 +0.2
baz=221,SNR=5.5
L46A P P 02 29 07.9 +0.2
baz=221,SNR=5.5
Q52A Bidwell 29.31 40 IAmb IAmb 02 29 23.1
comp=Z,46nm,1.2s
Q52A Bidwell 29.31 40 P P 02 29 06.3 -2.2
baz=231,SNR=6.0
Q52A P P 02 29 06.3 -2.2
baz=231,SNR=6.0
Q52A S S 02 34 03.1 +1.4
baz=231
Q52A S S 02 34 03.1 +1.4
baz=231
SPMN Marine on St. 29.31 19 IAmb IAmb 02 29 11.5
comp=Z,35nm,1.1s
SPMN Marine on St. 29.31 19 P P 02 29 08.4 0.0
baz=206,SNR=7.1
SPMN S S 02 34 02.1 +0.5
baz=206
SPMN Marine on St. 29.31 19 P P 02 29 07.4 -1.0
baz=206,SNR=7.1
SPMN S S 02 34 01.0 -0.6
baz=206
I04A Tendick Farm, 29.35 335 P P 02 29 07.4 -1.4
baz=146
I04A S S 02 34 03.2 +0.9
baz=146
I05D Terrebonne, OR 29.39 337 P P 02 29 07.4 -1.8
baz=149
I05D S S 02 34 04.8 +1.8
baz=149
BLA Blacksburg 29.45 44 P P 02 29 08.7 -1.0
BLA IAMs_20 IAMs_20 02 42 43.5
comp=Z,8µm,20.0s
BLA Blacksburg 29.45 44 P P 02 29 08.7 -1.0
BLA pmax pmax
comp=Z,61nm,1.1s
BLA MLR MLR
comp=Z,8µm,20.0s
BLA Blacksburg 29.45 44 P P 02 29 10.9 +1.2
baz=236,SNR=13
BLA S S 02 34 04.6 +0.6
baz=236
BLA Blacksburg 29.45 44 P P 02 29 08.9 -0.8
baz=236,SNR=13
BLA S S 02 34 03.4 -0.6
baz=236
J01E Myrtle Point 29.47 332 IAMs_20 IAMs_20 02 40 03.8
comp=Z,7µm,21.0s
J01E Myrtle Point 29.47 332 P P 02 29 07.0 -2.8
baz=143
J01E S S 02 34 03.1 -1.1
baz=143
N49A Columbus Grove 29.52 35 IAmb IAmb 02 29 13.4
comp=Z,63nm,1.3s
N49A Columbus Grove 29.52 35 S S 02 34 06.0 +1.1
baz=226
N49A S S 02 34 06.0 +1.1
baz=226
I42A Draeger Farm, 29.55 25 P P 02 29 08.3 -2.3
baz=214,SNR=12
I42A S S 02 34 05.3 -0.1
baz=214
V58A Windy Hill, Pi 29.59 48 P P 02 29 10.4 -0.6
baz=240
V58A P P 02 29 10.4 -0.6
baz=240
V58A S S 02 34 06.6 +0.4
baz=240
V58A S S 02 34 06.6 +0.4
baz=240
MSO Missoula 29.60 349 P P 02 29 10.8 -0.3
MSO IAmb IAmb 02 29 33.8
comp=Z,51nm,1.2s
MSO IAMs_20 IAMs_20 02 40 27.0
comp=Z,7µm,19.0s
MSO Missoula 29.60 349 P P 02 29 10.8 -0.3
baz=164,SNR=10
MSO S S 02 34 06.9 +0.5
baz=164
I03D Drain, OR 29.66 334 P P 02 29 09.1 -2.4
baz=145
I03D S S 02 34 08.9 +1.9
baz=145
F36A Milaca 29.68 17 IAmb IAmb 02 29 36.4
comp=Z,40nm,1.4s
F36A Milaca 29.68 17 P P 02 29 11.2 -0.4
baz=204,SNR=8.5
F36A S S 02 34 06.7 -0.6
baz=204
ACSO Alum Creek Sta 29.71 37 IAMs_20 IAMs_20 02 42 28.2
comp=Z,10µm,18.0s
ACSO Alum Creek Sta 29.71 37 P P 02 29 09.7 -2.3
baz=228
ACSO S S 02 34 08.2 +0.2
baz=228
P52A Corning 29.82 39 IAMs_20 IAMs_20 02 42 10.1
comp=Z,7µm,19.0s
P52A Corning 29.82 39 P P 02 29 11.3 -1.6
baz=230
P52A S S 02 34 11.5 +1.8
baz=230
BUCK Buck Mountain 29.92 335 IAmb IAmb 02 29 21.2
comp=Z,40nm,1.3s
H04A Detroit Lake 30.01 336 P P 02 29 12.5 -2.1
H04D Lebanon 30.09 335 IAMs_20 IAMs_20 02 41 02.9
comp=Z,8µm,19.0s
H04D Lebanon 30.09 335 P P 02 29 12.9 -2.3
baz=146
H04D S S 02 34 12.1 -1.7
baz=146
L48A N Adams 30.11 33 IAmb IAmb 02 29 18.4
comp=Z,64nm,1.3s
L48A N Adams 30.11 33 P P 02 29 16.6 +1.0
baz=224,SNR=7.3
L48A P P 02 29 16.6 +1.0
baz=224,SNR=7.3
L48A S S 02 34 13.3 -0.9
baz=224
L48A S S 02 34 13.3 -0.9
baz=224
T57A Hurt 30.11 46 P P 02 29 17.0 +1.4
baz=238,SNR=12
T57A P P 02 29 17.0 +1.4
baz=238,SNR=12
T57A S S 02 34 11.9 -2.5
baz=238
T57A S S 02 34 11.9 -2.5
baz=238
G05D Wamic, OR 30.16 338 P P 02 29 12.6 -3.4
baz=150
G05D S S 02 34 14.6 -0.4
baz=150
P53A Whipple 30.17 40 IAmb IAmb 02 29 18.9
comp=Z,48nm,1.1s
P53A Whipple 30.17 40 P P 02 29 13.8 -2.3
baz=232,SNR=9.9
P53A P P 02 29 13.8 -2.3
baz=232,SNR=9.9
P53A S S 02 34 13.5 -1.7
baz=232
P53A S S 02 34 13.5 -1.7
baz=232
EGMT Eagleton 30.20 355 IAMs_20 IAMs_20 02 41 40.0
comp=Z,5µm,19.0s
EGMT Eagleton 30.20 355 P P 02 29 13.4 -2.9
baz=173
EGMT S S 02 34 16.4 +0.8
baz=173
I02E Swisshome, OR 30.20 334 IAMs_20 IAMs_20 02 41 08.9
comp=Z,8µm,19.0s
I02E Swisshome, OR 30.20 334 P P 02 29 12.6 -3.6
baz=144
CNNC Cliffs of the 30.20 50 IAMs_20 IAMs_20 02 43 03.7
comp=Z,7µm,22.0s
CNNC Cliffs of the 30.20 50 P P 02 29 15.7 -0.6
baz=242
CNNC Cliffs of the 30.20 50 P P 02 29 13.9 -2.5
baz=242
CNNC S S 02 34 20.3 +4.5
baz=242
Q54A Coxs Mills 30.20 41 IAmb IAmb 02 29 19.4
comp=Z,44nm,1.0s
Q54A Coxs Mills 30.20 41 P P 02 29 18.1 +1.8
baz=233,SNR=16
Q54A P P 02 29 18.1 +1.8
baz=233,SNR=16
Q54A S S 02 34 14.5 -1.3
baz=233
Q54A S S 02 34 14.5 -1.3
baz=233
G40A Rib Lake 30.22 22 IAmb IAmb 02 29 19.8
comp=Z,42nm,1.2s
G40A Rib Lake 30.22 22 P P 02 29 17.8 +1.3
baz=211,SNR=8.9
R55A Marlinton 30.25 43 IAmb IAmb 02 29 21.8
comp=Z,40nm,1.1s
R55A Marlinton 30.25 43 P P 02 29 16.9 +0.1
baz=235,SNR=9.6
R55A P P 02 29 16.9 +0.1
baz=235,SNR=9.6
R55A S S 02 34 18.3 +1.7
baz=235
R55A S S 02 34 18.3 +1.7
baz=235
MDND Maddock 30.28 8 IAmb IAmb 02 29 27.0
comp=Z,56nm,1.2s
MDND Maddock 30.28 8 P P 02 29 14.1 -2.9
baz=192
O52A Adamsville 30.30 38 P P 02 29 15.9 -1.3
O52A Adamsville 30.30 38 P P 02 29 18.3 +1.1
baz=230
O52A P P 02 29 18.3 +1.1
baz=230
O52A S S 02 34 17.1 -0.2
baz=230
O52A S S 02 34 17.1 -0.2
baz=230
COR Corvallis 30.36 335 IAMs_20 IAMs_20 02 41 23.3
comp=Z,12µm,19.0s
M50A Fremont 30.47 35 S S 02 34 23.8 +4.0
baz=227
M50A S S 02 34 23.8 +4.0
baz=227
H43A Windswept, Lux 30.50 26 P P 02 29 18.2 -0.7
H43A IAmb IAmb 02 29 21.6
comp=Z,48nm,1.1s
H43A Windswept, Lux 30.50 26 S S 02 34 15.0 -5.2
baz=216
DGMT Dagmar 30.50 2 P P 02 29 16.6 -2.3
baz=183
N51A Ashland 30.51 36 IAmb IAmb 02 29 21.5
comp=Z,30nm,0.8s
N51A Ashland 30.51 36 P P 02 29 19.4 +0.3
baz=228,SNR=5.9
N51A P P 02 29 19.4 +0.3
baz=228,SNR=5.9
HAWA Hanford 30.58 341 IAMs_20 IAMs_20 02 41 13.0
comp=Z,8µm,20.0s
S57A Dark Hollow, R 30.72 45 IAmb IAmb 02 29 24.4
comp=Z,40nm,1.0s
S57A Dark Hollow, R 30.72 45 P P 02 29 20.8 -0.2
baz=237,SNR=10
S57A P P 02 29 20.8 -0.2
baz=237,SNR=10
S57A S S 02 34 28.1 +4.2
baz=237
S57A S S 02 34 28.1 +4.2
baz=237
SJCC San Jacinto, C 30.75 101 P P 02 29 22.9 +1.3
SJCC IAmb IAmb 02 29 25.7
comp=Z,21nm,0.9s
SJCC San Jacinto, C 30.75 101 eP P 02 29 24.1 +2.6
O53A New Philadelph 30.75 39 IAmb IAmb 02 29 23.7
comp=Z,36nm,1.4s
O53A New Philadelph 30.75 39 P P 02 29 19.3 -1.9
baz=231,SNR=6.3
O53A S S 02 34 25.1 +0.8
baz=231
AAM Ann Arbor 30.77 33 P P 02 29 21.3 0.0
baz=225,SNR=5.1
AAM Ann Arbor 30.77 33 P P 02 29 21.5 +0.2
baz=225,SNR=5.1
U59A Littleton 30.80 48 P P 02 29 21.2 -0.5
U59A IAmb IAmb 02 29 25.0
comp=Z,26nm,1.1s
U59A Littleton 30.80 48 P P 02 29 21.0 -0.6
baz=241
U59A P P 02 29 21.0 -0.6
baz=241
U59A S S 02 34 26.7 +1.6
baz=241
U59A S S 02 34 26.7 +1.6
baz=241
I45A Fountain 30.82 28 P P 02 29 22.7 +1.0
baz=219,SNR=6.1
I45A P P 02 29 22.7 +1.0
baz=219,SNR=6.1
DBBC Dabeiba 30.82 107 eP P 02 29 28.9 +6.8
G03D McMinnville, O 30.87 336 IAmb IAmb 02 29 40.3
comp=Z,32nm,1.0s
G03D IAMs_20 IAMs_20 02 41 43.6
comp=Z,11µm,19.0s
G03D McMinnville, O 30.87 336 P P 02 29 20.2 -1.9
baz=146
G03D S S 02 34 28.0 +2.0
baz=146
J47A Sunmer 30.87 31 P P 02 29 23.3 +1.1
baz=222,SNR=5.9
J47A P P 02 29 23.3 +1.1
baz=222,SNR=5.9
J47A S S 02 34 28.0 +2.0
baz=222
J47A S S 02 34 28.0 +2.0
baz=222
E38A The Farm, Brul 30.94 19 IAmb IAmb 02 29 32.4
comp=Z,34nm,1.2s
E38A The Farm, Brul 30.94 19 S S 02 34 27.3 +0.2
baz=207
UREC San Jos de Ur 31.16 105 eP P 02 29 24.1 -0.9
O54A Avella 31.21 39 P P 02 29 24.4 -0.8
O54A Avella 31.21 39 P P 02 29 25.9 +0.7
baz=232
O54A P P 02 29 25.9 +0.7
baz=232
MCWV Mont Chateau 31.22 41 IAmb IAmb 02 29 28.2
comp=Z,40nm,1.1s
MCWV IAMs_20 IAMs_20 02 43 10.3
comp=Z,8µm,20.0s
MCWV Mont Chateau 31.22 41 P P 02 29 26.0 +0.6
baz=234,SNR=7.9
MCWV S S 02 34 30.4 -1.3
baz=234
MCWV Mont Chateau 31.22 41 P P 02 29 25.2 -0.2
baz=234,SNR=7.9
MCWV S S 02 34 30.5 -1.3
baz=234
T59A Double "B" Far 31.27 47 P P 02 29 24.9 -0.8
baz=240,SNR=9.4
T59A P P 02 29 24.9 -0.8
baz=240,SNR=9.4
T59A S S 02 34 35.0 +2.6
baz=240
T59A S S 02 34 35.0 +2.6
baz=240
Q56A Snyder Ridge, 31.28 42 P P 02 29 25.7 -0.1
baz=235

Q56A P P 02 29 25.7 -0.1
baz=235
Q56A S S 02 34 31.6 -1.0
baz=235
Q56A S S 02 34 31.6 -1.0
baz=235
COWI Conover 31.32 23 IAMs_20 IAMs_20 02 40 52.3
comp=Z,6µm,21.0s
COWI Conover 31.32 23 P P 02 29 25.1 -1.1
baz=212
COWI S S 02 34 31.0 -2.2
baz=212
N53A Lisbon 31.33 38 IAmb IAmb 02 29 53.0
comp=Z,37nm,1.5s
AGMN Agassiz Nation 31.37 13 IAmb IAmb 02 29 30.5
comp=Z,47nm,1.3s
AGMN IAMs_20 IAMs_20 02 41 42.3
comp=Z,9µm,19.0s
AGMN Agassiz Nation 31.37 13 P P 02 29 26.1 -0.4
baz=198,SNR=12
AGMN S S 02 34 32.8 -1.0
baz=198
AGMN Agassiz Nation 31.37 13 P P 02 29 26.1 -0.4
baz=198,SNR=12
AGMN S S 02 34 34.7 +0.9
baz=198
CBOC Ciudad Bolivar 31.47 109 eP P 02 29 27.0 -1.0
F04D Rainier, OR 31.50 337 P P 02 29 26.2 -1.5
baz=148
F04D S S 02 34 38.4 +2.5
baz=148
M52A Chesterland 31.50 37 P P 02 29 27.9 +0.1
baz=229
M52A P P 02 29 27.9 +0.1
baz=229
R58B Mineral 31.55 45 IAmb IAmb 02 29 33.5
comp=Z,30nm,1.2s
R58B Mineral 31.55 45 P P 02 29 28.6 +0.3
baz=239,SNR=7.6
R58B P P 02 29 28.6 +0.3
baz=239,SNR=7.6
R58B S S 02 34 40.3 +3.4
baz=239
R58B S S 02 34 40.3 +3.4
baz=239
PLMC San Jos del P 31.64 111 eP P 02 29 32.8 +3.4
NEW Newport 31.64 346 LR LR 02 42 02.5
comp=Z,5µm,19.5s,baz=160,slow=36
NEW Newport 31.64 346 IAmb IAmb 02 29 46.7
comp=Z,25nm,1.3s
NEW Newport 31.64 346 IAMs_20 IAMs_20 02 41 42.0
comp=Z,5µm,21.0s
NEW Newport 31.64 346 P P 02 29 26.2 -2.8
baz=159,SNR=8.4
NEW S S 02 34 40.4 +2.2
baz=159
K50A Casco 31.64 34 P P 02 29 29.7 +0.7
baz=226,SNR=5.3
K50A P P 02 29 29.7 +0.7
baz=226,SNR=5.3
LTY Liberty 31.71 341 IAmb IAmb 02 29 42.1
comp=Z,23nm,1.2s
E04D Cinebar 31.74 338 IAmb IAmb 02 29 53.3
comp=Z,40nm,1.4s
E04D IAMs_20 IAMs_20 02 42 17.6
comp=Z,8µm,20.0s
E04D Cinebar 31.74 338 P P 02 29 26.7 -3.1
baz=149
E04D S S 02 34 41.1 +1.5
baz=149
WALA Waterton Lakes 31.75 350 IAmb IAmb 02 29 57.8
comp=Z,34nm,1.4s
M53A WI Miller and 31.82 37 IAmb IAmb 02 30 09.0
comp=Z,28nm,1.2s
M53A WI Miller and 31.82 37 P P 02 29 27.5 -3.1
baz=230
M53A S S 02 34 39.3 -1.7
baz=230
G45A Suttons Bay 31.86 28 P P 02 29 31.1 +0.3
baz=218,SNR=8.0
G45A P P 02 29 31.1 +0.3
baz=218,SNR=8.0
B35A Bob, Littlefor 31.92 15 S S 02 34 40.4 -2.0
baz=202
YOTC Yotoco, Valle 32.00 112 eP P 02 29 31.8 -0.8
CBN Corbin Frederi 32.02 45 P P 02 29 29.6 -2.7
baz=239
CBN S S 02 34 45.2 +1.1
baz=239
E03A Lebam 32.10 337 IAmb IAmb 02 29 42.8
comp=Z,33nm,1.1s
OTAV Otavalo 32.13 120 P P 02 29 35.0 +0.8
OTAV IAmb IAmb 02 29 41.7
comp=Z,42nm,1.1s
OTAV Otavalo 32.13 120 IAMs_20 IAMs_20 02 39 16.9
comp=Z,8µm,19.0s
OTAV Otavalo 32.13 120 P P 02 29 35.0 +0.8
OTAV pmax pmax
comp=Z,42nm,1.1s
OTAV Otavalo 32.13 120 eP P 02 29 33.7 -0.4
EYMN Ely 32.16 18 IAmb IAmb 02 29 43.5
comp=Z,31nm,1.0s
EYMN Ely 32.16 18 S S 02 34 46.3 +0.2
baz=206
EYMN Ely 32.16 18 P P 02 29 31.0 -2.5
baz=206
EYMN S S 02 34 43.4 -2.7
baz=206
ALLY Alegheny Colle 32.27 37 IAmb IAmb 02 29 56.7
comp=Z,36nm,1.1s
P57A Homestead Farm 32.28 43 IAmb IAmb 02 29 37.6
comp=Z,20nm,1.1s
P57A Homestead Farm 32.28 43 P P 02 29 36.8 +2.1
baz=236,SNR=5.5
P57A P P 02 29 36.8 +2.1
baz=236,SNR=5.5
B08A Colville Reser 32.30 343 IAmb IAmb 02 29 47.0
comp=Z,33nm,1.3s
D41A Chassel 32.35 22 P P 02 29 35.5 +0.3
baz=212,SNR=7.7
D41A S S 02 34 51.5 +2.4
baz=212
I49A Point Hope 32.37 32 S S 02 34 48.9 -0.6
baz=224
I49A S S 02 34 48.9 -0.6
baz=224
E43A Lone Tree Farm 32.37 25 S S 02 34 51.0 +1.5
baz=215
POPC Popayan, Colom 32.41 115 eP P 02 29 37.6 +1.2
GCUF Volcan Galeras 32.51 118 eP P 02 29 37.6 0.0
LL6C La Loma 6 Bece 32.59 100 eP P 02 29 41.4 +3.8
ANIL Santa Ana 32.61 111 eP P 02 29 37.6 -0.6
PTBC PUERTO BERRIO, 32.61 106 eP P 02 29 36.6 -1.2
NORC Norcasia 32.62 108 eP P 02 29 40.4 +2.4
ERPA Erie 32.65 37 P P 02 29 36.8 -1.1
baz=230
ERPA S S 02 34 51.4 -2.6
baz=230
CRUC La Cruz 32.67 117 eP P 02 29 42.4 +3.6
SOTA Rioblanco 32.67 115 eP P 02 29 39.5 +0.6
PCON Cinco Dias 32.76 115 eP P 02 29 43.3 +3.6
D03D Eldon 32.76 338 P P 02 29 37.0 -1.7
baz=149
D03D S S 02 34 59.6 +4.1
baz=149
MARP Paez Belalcaza 32.88 114 eP P 02 29 43.3 +2.8
NLWA Neilton Lookou 32.92 337 IAMs_20 IAMs_20 02 43 25.9
comp=Z,8µm,19.0s
M55A Ridgway 32.97 39 IAmb IAmb 02 29 55.0
comp=Z,39nm,1.4s
M55A Ridgway 32.97 39 P P 02 29 41.1 +0.4
baz=233,SNR=6.5
M55A P P 02 29 41.1 +0.4
baz=233,SNR=6.5
M55A S S 02 35 01.4 +2.4
baz=233
M55A S S 02 35 01.4 +2.4
baz=233
SDMD Soldier's Deli 33.00 44 S S 02 35 02.0 +2.6
baz=238
ORTC Ortega, Tolima 33.01 111 eP P 02 29 39.5 -1.9
SSPA Standing Stone 33.01 41 P P 02 29 40.6 -0.5
SSPA IAmb IAmb 02 29 44.0
comp=Z,18nm,0.8s
SSPA Standing Stone 33.01 41 P P 02 29 39.5 -1.6
baz=235,SNR=8.8
SSPA S S 02 34 59.3 -0.3
baz=235
SSPA Standing Stone 33.01 41 P P 02 29 40.3 -0.7
baz=235
SSPA S S 02 35 05.3 +5.7
baz=235
OCAC Ocana 33.03 103 eP P 02 29 40.4 -1.3
BRRC Barranca, Sant 33.07 105 eP P 02 29 42.4 +0.5
ULM Lac du Bonnet 33.22 12 P P 02 29 42.1 -0.7
comp=Z,19nm,1.2s,baz=202,slow=8.0,SNR=9.9
ULM LR LR 02 42 30.9
comp=Z,4µm,19.4s,baz=198,slow=35
comp=Z,19nm,1.2s
ULM Lac du Bonnet 33.22 12 IAmb IAmb 02 29 51.7
comp=Z,26nm,1.2s
SPBC San Pablo de B 33.31 108 eP P 02 29 51.0 +6.9
PRAC Prado 33.42 111 eP P 02 29 47.2 +2.2
ROSC El Rosal 33.42 109 P P 02 29 52.2 +6.8
comp=Z,6.1nm,0.4s,baz=79,slow=7.0,SNR=4.6
ROSC LR LR 02 43 03.9
comp=Z,2µm,19.0s,baz=320,slow=36
ROSC El Rosal 33.42 109 eP P 02 29 48.1 +2.7
E46A Sault Ste Mari 33.49 27 IAmb IAmb 02 29 47.5
comp=Z,23nm,1.0s
E46A Sault Ste Mari 33.49 27 P P 02 29 44.0 -1.1
baz=219,SNR=5.9
WVNY West Valley, N 33.63 38 IAmb IAmb 02 29 49.0
comp=Z,39nm,1.2s
WVNY West Valley, N 33.63 38 P P 02 29 46.5 0.0
baz=232,SNR=7.8
WVNY S S 02 35 09.3 0.0
baz=232
MVL Millersville 33.63 43 IAmb IAmb 02 29 49.9
comp=Z,28nm,1.1s
N58A Sunbury 33.86 41 IAmb IAmb 02 29 51.4
comp=Z,31nm,0.9s
N58A Sunbury 33.86 41 P P 02 29 48.7 +0.2
baz=236,SNR=12
N58A P P 02 29 48.7 +0.2
baz=236,SNR=12
N58A S S 02 35 13.3 +0.6
baz=236
N58A S S 02 35 13.3 +0.6
baz=236
M57A Sunshine Farm, 33.88 40 IAmb IAmb 02 29 51.0
comp=Z,41nm,1.4s
M57A Sunshine Farm, 33.88 40 P P 02 29 49.9 +1.2
baz=235,SNR=5.9
M57A P P 02 29 49.9 +1.2
baz=235,SNR=5.9
M57A S S 02 35 11.8 -1.3
baz=235
M57A S S 02 35 11.8 -1.3
baz=235
PAMC Pamplona, Colo 33.92 104 eP P 02 29 51.0 +1.2
GEDE Greenville 34.00 44 P P 02 29 51.8 +2.1
baz=239,SNR=6.4
GEDE S S 02 35 18.7 +3.8
baz=239
CHIC Chingaza 34.04 109 eP P 02 29 50.0 -0.8
L56A Greenwood 34.09 39 IAmb IAmb 02 29 52.6
comp=Z,36nm,1.3s
L56A Greenwood 34.09 39 P P 02 29 51.3 +0.9
baz=234,SNR=5.6
L56A P P 02 29 51.3 +0.9
baz=234,SNR=5.6
L56A S S 02 35 18.1 +1.7
baz=234
L56A S S 02 35 18.1 +1.7
baz=234
WUPA West Chester U 34.09 44 IAmb IAmb 02 29 54.0
comp=Z,37nm,1.3s
RUSC La Rusia 34.11 106 eP P 02 29 50.0 -1.5
J54A Appleton 34.16 36 S S 02 35 17.6 +0.4
baz=231
J54A S S 02 35 17.6 +0.4
baz=231
MEDO Medina 34.19 37 P P 02 29 50.7 -0.6
MEDO IAmb IAmb 02 29 53.8
comp=Z,48nm,1.2s
MMNY Mt. Morris Dam 34.24 38 P P 02 29 50.8 -0.9
MMNY IAmb IAmb 02 29 54.2
comp=Z,46nm,1.2s
TUPA Temple Univers 34.48 44 P P 02 29 54.2 +0.4
baz=239,SNR=6.0
J55A Hilton 34.62 37 IAmb IAmb 02 29 57.4
comp=Z,38nm,1.1s
J55A Hilton 34.62 37 P P 02 29 53.6 -1.4
baz=232,SNR=5.7
J55A P P 02 29 53.6 -1.4
baz=232,SNR=5.7
J55A S S 02 35 25.8 +1.4
baz=232
J55A S S 02 35 25.8 +1.4
baz=232
SADO Sadowa 34.85 34 LR LR 02 45 25.0
comp=Z,9µm,19.4s,baz=242,slow=38
SADO Sadowa 34.85 34 IAmb IAmb 02 30 06.8
comp=Z,43nm,1.2s
KSPA Keystone Colle 34.85 41 S S 02 35 29.9 +1.8
baz=237
PANJ Princeton 34.91 44 P P 02 29 58.2 +0.6
baz=239,SNR=5.5
PANJ S S 02 35 29.3 +0.4
baz=239
K57A Scipio Center 35.06 39 IAmb IAmb 02 30 01.5
comp=Z,30nm,1.1s
K57A Scipio Center 35.06 39 P P 02 30 00.1 +1.3
baz=234,SNR=7.1
K57A S S 02 35 31.7 +0.4
baz=234
BINY Binghamton 35.08 40 P P 02 29 59.6 +0.6
baz=236,SNR=16
BINY S S 02 35 32.2 +0.6
baz=236
BINY Binghamton 35.08 40 P P 02 29 57.2 -1.8
baz=236,SNR=16
BINY S S 02 35 32.7 +1.2
baz=236
BRNJ Basking Ridge 35.16 43 P P 02 29 59.8 +0.1
baz=239,SNR=5.4
BRNJ S S 02 35 36.0 +3.3
baz=239
J56A Wolcott 35.18 38 IAmb IAmb 02 30 02.5
comp=Z,22nm,0.9s
J56A Wolcott 35.18 38 P P 02 29 58.2 -1.6
baz=233,SNR=5.9
J56A P P 02 29 58.2 -1.6
baz=233,SNR=5.9
J56A S S 02 35 34.8 +1.8
baz=233
J56A S S 02 35 34.8 +1.8
baz=233
SDV Santo Domingo 35.33 100 LR LR 02 44 26.2
comp=Z,2µm,20.4s,baz=290,slow=36
SDV Santo Domingo 35.33 100 P P 02 30 01.3 -0.3
SDV IAmb IAmb 02 30 05.5
comp=Z,32nm,0.9s
SDV Santo Domingo 35.33 100 eP P 02 29 58.7 -3.0
SDV Santo Domingo 35.33 100 eP P 02 30 02.5 +0.8
ODNJ Ogdensburg 35.34 43 IAmb IAmb 02 30 04.5
comp=Z,52nm,1.3s
ODNJ Ogdensburg 35.34 43 P P 02 30 00.7 -0.5
baz=239,SNR=7.9
ODNJ S S 02 35 39.6 +4.1
baz=239
DELO Deloro Mine 35.51 36 IAmb IAmb 02 30 05.4
comp=Z,32nm,1.2s
L59A Walton 35.65 41 P P 02 30 03.6 -0.4
baz=237,SNR=18
L59A P P 02 30 03.6 -0.4
baz=237,SNR=18
L59A S S 02 35 40.6 +0.1
baz=237
L59A S S 02 35 40.6 +0.1
baz=237
PTGC Puerto Gaitan, 35.67 108 eP P 02 30 03.5 -0.9
EDM Edmonton 35.72 352 IAmb IAmb 02 30 07.6
comp=Z,33nm,1.3s
PAL Palisades 35.75 43 IAmb IAmb 02 30 08.1
comp=Z,56nm,1.2s
PAL IAMs_20 IAMs_20 02 46 05.3
comp=Z,9µm,21.0s
PAL Palisades 35.75 43 P P 02 30 05.1 +0.3
baz=240
PAL S S 02 35 47.0 +5.2
baz=240
PAL Palisades 35.75 43 P P 02 30 03.3 -1.4
baz=240
J57A Williamstown 35.77 38 IAmb IAmb 02 30 07.5
comp=Z,34nm,0.9s
J57A Williamstown 35.77 38 P P 02 30 05.6 +0.7
baz=234,SNR=14
J57A P P 02 30 05.6 +0.7
baz=234,SNR=14
BRNY Black Rk. Fore 35.89 43 P P 02 30 06.0 0.0
baz=239
BRNY S S 02 35 47.2 +3.1
baz=239
NPNY Mohonk Preserv 35.98 42 P P 02 30 06.8 0.0
baz=238,SNR=5.9
NPNY S S 02 35 49.4 +3.9
baz=238
HATO Hato, Curacao 36.00 94 IAMs_20 IAMs_20 02 43 35.7
comp=Z,4µm,22.0s
J58A Remsen 36.16 39 P P 02 30 09.1 +0.8
baz=235,SNR=5.6
J58A P P 02 30 09.1 +0.8
baz=235,SNR=5.6
J58A S S 02 35 49.5 +1.3
baz=235
J58A S S 02 35 49.5 +1.3
baz=235
WCNY West Carthage 36.30 38 P P 02 30 08.8 -0.7
baz=234
WCNY S S 02 35 51.0 +0.8
baz=234
HCNY Howe Caverns 36.33 40 S S 02 35 55.1 +4.4
baz=237
YLE Yale 36.54 43 IAMs_20 IAMs_20 02 46 30.5
comp=Z,7µm,20.0s
J59A Piesco 36.69 39 IAmb IAmb 02 30 15.6
comp=Z,38nm,1.2s
J59A Piesco 36.69 39 P P 02 30 13.0 +0.2
baz=236,SNR=11
J59A P P 02 30 13.0 +0.2
baz=236,SNR=11
J59A S S 02 35 58.8 +2.6
baz=236
J59A S S 02 35 58.8 +2.6
baz=236
ATAH Atahualpa 36.78 130 P P 02 30 16.9 +2.6
comp=Z,16nm,1.1s,baz=338,slow=7.8,SNR=8.3
ATAH LR LR 02 42 06.5
comp=Z,13µm,20.9s,baz=312,slow=31
comp=Z,16nm,1.1s
TRY Troy 36.80 41 IAmb IAmb 02 30 17.0
comp=Z,48nm,1.4s
TRY IAMs_20 IAMs_20 02 46 22.0
comp=Z,6µm,19.0s
TRY Troy 36.80 41 S S 02 36 04.0 +6.1
baz=238
NCB Newcomb 37.14 39 IAmb IAmb 02 30 19.4
comp=Z,30nm,1.0s
NCB Newcomb 37.14 39 P P 02 30 16.8 +0.2
baz=236,SNR=12
NCB S S 02 36 06.2 +3.1
baz=236
ACCN Adirondack Com 37.15 40 IAmb IAmb 02 30 19.7
comp=Z,42nm,1.1s
ACCN Adirondack Com 37.15 40 P P 02 30 17.0 +0.3
baz=237,SNR=13
ACCN S S 02 36 06.3 +3.0
baz=237
M63A Gales Ferry 37.17 44 P P 02 30 18.0 +1.2
baz=241,SNR=7.5
M63A P P 02 30 18.0 +1.2
baz=241,SNR=7.5
M63A S S 02 36 06.7 +3.3
baz=241
M63A S S 02 36 06.7 +3.3
baz=241
LONY Lake Ozonia 37.30 38 P P 02 30 17.0 -1.0
baz=235,SNR=9.3
LONY S S 02 36 04.8 -0.7
baz=235
QUA2 Belchertown 37.40 42 IAMs_20 IAMs_20 02 46 52.9
comp=Z,6µm,21.0s
QUA2 Belchertown 37.40 42 P P 02 30 17.4 -1.4
baz=240
QUA2 S S 02 36 10.4 +3.4
baz=240
BMNY Brushton-Moira 37.47 37 P P 02 30 20.9 +1.5
baz=234,SNR=5.6
BMNY S S 02 36 09.3 +1.3
baz=234
K62A Royalston 37.67 42 S S 02 36 15.5 +4.4
baz=240
K62A S S 02 36 15.5 +4.4
baz=240
SJG San Juan 37.67 83 LR LR 02 47 18.9
comp=Z,2µm,18.7s,baz=274,slow=38
BRYW Bryant College 37.75 43 IAmb IAmb 02 30 29.9
comp=Z,38nm,1.2s
BRYW IAMs_20 IAMs_20 02 47 15.2
comp=Z,8µm,21.0s
J61A Chester 37.82 41 P P 02 30 22.1 -0.3
baz=238,SNR=14
J61A P P 02 30 22.1 -0.3
baz=238,SNR=14
J61A S S 02 36 16.8 +3.4
baz=238
J61A S S 02 36 16.8 +3.4
baz=238
MCVT Middlebury Col 37.87 40 P P 02 30 23.7 +0.8
baz=237,SNR=7.6
MCVT S S 02 36 19.7 +5.4
baz=237
VLDQ Val d'Or 37.96 31 IAmb IAmb 02 30 25.4
comp=Z,30nm,1.2s
FRNY Flat Rock 38.01 38 P P 02 30 23.2 -0.7
FRNY Flat Rock 38.01 38 P P 02 30 24.6 +0.7
baz=236,SNR=9.1
FRNY S S 02 36 19.4 +3.2
baz=236
HRV Adam Dziewonsk 38.02 43 IAMs_20 IAMs_20 02 47 20.4
comp=Z,8µm,18.0s
HRV Adam Dziewonsk 38.02 43 S S 02 36 21.6 +5.1
baz=240
HRV Adam Dziewonsk 38.02 43 P P 02 30 22.6 -1.5
baz=240
HRV S S 02 36 19.3 +2.8
baz=240
WES Weston 38.11 43 IAmb IAmb 02 30 27.4
comp=Z,83nm,1.5s
WES IAMs_20 IAMs_20 02 47 22.9
comp=Z,7µm,22.0s
WES Weston 38.11 43 S S 02 36 22.0 +4.2
baz=241
HNH Hanover 38.17 40 IAmb IAmb 02 30 28.9
comp=Z,34nm,1.3s
L64A Middleborough 38.21 44 IAmb IAmb 02 30 28.9
comp=Z,47nm,1.2s
L64A Middleborough 38.21 44 S S 02 36 23.6 +4.2
baz=242
L64A S S 02 36 23.6 +4.2
baz=242
VT1 Waterbury 38.22 39 IAmb IAmb 02 30 28.9
comp=Z,64nm,1.4s
MTP Monte Pirata 38.24 83 IAmb IAmb 02 30 30.1
comp=Z,52nm,1.1s
MNTQ Montreal, Queb 38.37 37 IAmb IAmb 02 30 29.9
comp=Z,66nm,1.3s
BBB Bella Bella 38.43 338 LR LR 02 45 56.5
comp=Z,4µm,20.9s,baz=164,slow=36
FFD Franklin Falls 38.44 41 IAmb IAmb 02 30 31.5
comp=Z,40nm,1.2s
LBNH Lisbon 38.67 40 IAmb IAmb 02 30 33.4
comp=Z,82nm,1.4s
LBNH Lisbon 38.67 40 P P 02 30 31.5 +1.9
baz=238,SNR=9.6
LBNH Lisbon 38.67 40 P P 02 30 27.7 -1.9
baz=238,SNR=9.6
LBNH S S 02 36 29.6 +3.2
baz=238
UNH University of 38.75 42 P P 02 30 32.2 +2.0
baz=241,SNR=7.1
UNH S S 02 36 30.2 +2.7
baz=241
I62A Tamworth 38.85 41 IAmb IAmb 02 30 35.0
comp=Z,82nm,1.2s
I62A Tamworth 38.85 41 P P 02 30 33.6 +2.6
baz=239,SNR=12
I62A P P 02 30 33.6 +2.6
baz=239,SNR=12
I62A S S 02 36 33.8 +4.8
baz=239

I62A S **S** **02 36 33.8 +4.8**
baz=239
H62A **Milan** **39.32 40** P **P** **02 30 37.3 +2.3**
baz=239,SNR=8.5
H62A P **P** **02 30 37.3 +2.3**
baz=239,SNR=8.5
H62A S **S** **02 36 41.6 +5.5**
baz=239
H62A S **S** **02 36 41.6 +5.5**
baz=239
I63A **Otisfield** **39.41 41** IAmb IAmb 02 30 39.4
comp=Z,43nm,1.1s
I63A **Otisfield** **39.41 41** P **P** **02 30 38.0 +2.2**
baz=240,SNR=6.0
I63A P **P** **02 30 38.0 +2.2**
baz=240,SNR=6.0
I63A S **S** **02 36 41.6 +4.2**
baz=240
I63A S **S** **02 36 41.6 +4.2**
baz=240
BBSR **BB Station** **39.65 61** P **P** **02 30 37.2 -0.7**
BBSR IAmb IAmb 02 30 41.8
comp=Z,40nm,1.1s
BBSR **BB Station** **39.65 61** S **S** **02 36 47.1 +5.8**
baz=259
LATQ **La Tuque** **39.94 35** IAmb IAmb 02 30 43.1
comp=Z,99nm,1.5s
G62A **West of Eustis** **40.03 39** IAmb IAmb 02 30 44.5
comp=Z,48nm,1.2s
G62A **West of Eustis** **40.03 39** P **P** **02 30 43.4 +2.4**
baz=239,SNR=7.4
G62A P **P** **02 30 43.4 +2.4**
baz=239,SNR=7.4
G62A S **S** **02 36 48.5 +1.8**
baz=239
G62A S **S** **02 36 48.5 +1.8**
baz=239
WVL **Waterville** **40.24 41** IAMs_20 IAMs_20 02 48 26.9
comp=Z,8µm,21.0s
WVL **Waterville** **40.24 41** P **P** **02 30 44.8 +2.2**
baz=240,SNR=5.3
PKME **Peaks-Kenny Pk** **40.81 40** P **P** **02 30 47.7 +0.4**
PKME IAmb IAmb 02 30 50.8
comp=Z,50nm,1.3s
PKME **Peaks-Kenny Pk** **40.81 40** P **P** **02 30 49.6 +2.3**
baz=240,SNR=6.1
PKME **Peaks-Kenny Pk** **40.81 40** P **P** **02 30 48.0 +0.7**
baz=240,SNR=6.1
F63A **Nahmakanta, Br** **41.15 40** IAmb IAmb 02 30 53.5
comp=Z,41nm,1.1s
F63A **Nahmakanta, Br** **41.15 40** P **P** **02 30 50.3 +0.1**
baz=240,SNR=11
F63A P **P** **02 30 50.3 +0.1**
baz=240,SNR=11
NNA **Nana** **41.24 134** LR LR 02 44 23.1
comp=Z,7µm,20.5s,baz=317,slow=31
NNA **Nana** **41.24 134** P **P** **02 30 52.1 +0.8**
NNA **Nana** **41.24 134** IAMs_20 IAMs_20 02 43 58.8
comp=Z,8µm,21.0s
NNA **Nana** **41.24 134** P **P** **02 30 52.1 +0.8**
NNA pmax pmax
comp=Z,141nm,2.0s
CZSB **Cruzeiro do Su** **41.45 125** *e*P **P** **02 30 55.1 +2.1**
F64A **Sherman** **41.68 40** P **P** **02 30 56.4 +1.9**
baz=241,SNR=6.5
F64A P **P** **02 30 56.4 +1.9**
baz=241,SNR=6.5
FCC **Fort Churchill** **41.68 9** P **P** **02 30 54.3 0.0**
FCC IAmb IAmb 02 30 56.4
comp=Z,40nm,1.1s
FCC **Fort Churchill** **41.68 9** P **P** **02 30 54.3 0.0**
FCC pmax pmax
comp=Z,40nm,1.1s
EMMW **East Machias** **41.69 42** S **S** **02 37 12.2 +0.9**
baz=243
G65A **Princeton** **41.85 41** S **S** **02 37 16.0 +2.3**
baz=242
G65A S **S** **02 37 16.0 +2.3**
baz=242
D62A **Allapoint, All** **41.88 38** IAmb IAmb 02 30 59.5
comp=Z,49nm,1.1s
D62A **Allapoint, All** **41.88 38** P **P** **02 30 55.6 -0.5**
baz=239,SNR=13
D62A P **P** **02 30 55.6 -0.5**
baz=239,SNR=13
E63A **Oxbow** **41.92 39** P **P** **02 30 57.9 +1.5**
baz=240,SNR=8.8
E63A P **P** **02 30 57.9 +1.5**
baz=240,SNR=8.8
GDHS **Morne Mazeau,** **42.06 85** IAMs_20 IAMs_20 02 48 31.9
comp=Z,4µm,22.0s
TDBA **Terre de Bas,** **42.25 86** IAMs_20 IAMs_20 02 48 03.9
comp=Z,3µm,22.0s
PQI **Presque Isle** **42.28 39** IAMs_20 IAMs_20 02 49 47.0
comp=Z,8µm,21.0s
ABD **La Joyeuse, An** **42.30 85** IAMs_20 IAMs_20 02 48 59.0
comp=Z,3µm,21.0s
MAGL **Barre de l'ile** **42.57 86** IAMs_20 IAMs_20 02 47 07.4
comp=Z,3µm,22.0s
CRAG **Craig** **42.85 337** S **S** **02 37 32.2 +4.0**
baz=140
T35M **Bob Quinn** **43.07 341** P **P** **02 31 05.0 -0.7**
baz=145
T35M S **S** **02 37 35.8 +4.3**
baz=145
TAOE **Nuku Hiva Isla** **43.10 235** *e*LR LR 02 42 21.5
comp=Z,1µm,26.4s
TAOE **Nuku Hiva Isla** **43.10 235** *e*T T 03 16 40.5
comp=Z,73nm,0.2s
ILAM **Ile Lapin Mar** **43.16 87** IAMs_20 IAMs_20 02 48 00.0
comp=Z,3µm,21.0s
MPOM **Morne Pois Mar** **43.24 88** IAMs_20 IAMs_20 02 48 23.1
comp=Z,3µm,20.0s
WRAK **Wrangell Islan** **43.31 339** S **S** **02 37 40.7 +5.8**
baz=142
LMN **Caledonia Moun** **43.87 41** P **P** **02 31 12.1 -0.2**
S34M **Telegraph Cree** **44.11 341** P **P** **02 31 14.2 +0.2**
baz=144
S34M S **S** **02 37 51.4 +4.8**
baz=144
DLBC **Dease Lake** **44.21 342** LR LR 02 50 12.8
comp=Z,7µm,18.9s,baz=142,slow=37
DLBC **Dease Lake** **44.21 342** IAmb IAmb 02 31 21.5
comp=Z,23nm,0.9s
DLBC **Dease Lake** **44.21 342** P **P** **02 31 13.4 -1.5**
baz=146,SNR=16
DLBC S **S** **02 37 52.7 +4.6**
baz=146
SIT **Sitka** **44.86 338** S **S** **02 38 03.9 +6.4**
baz=138
RPN **Rapa Nui** **44.91 184** LR LR 02 45 31.4
comp=Z,3µm,19.9s,baz=5.0,slow=30
YKA **Yellowknife Ar** **44.95 354** P **P** **02 31 19.2 -1.4**
comp=Z,3.6nm,0.9s,baz=166,slow=7.6,SNR=16
YKA LR LR 02 50 37.2
comp=Z,5µm,18.6s,baz=170,slow=37
comp=Z,3.6nm,0.9s
YKA **Yellowknife Ar** **44.95 354** P **P** **02 31 18.9 -1.7**
YKA **Yellowknife Ar** **44.95 354** P **P** **02 31 18.9 -1.7**
JIS **Juneau Island** **45.45 339** IAMs_20 IAMs_20 02 49 04.4
comp=Z,3µm,20.0s
TGTN **Hyland Airport** **46.36 345** P **P** **02 31 32.9 +1.0**
baz=150
TGTN S **S** **02 38 21.2 +2.0**
baz=150
P33M **Teslin, Yukon** **46.48 342** IAMs_20 IAMs_20 02 51 21.6
comp=Z,6µm,19.0s
P33M **Teslin, Yukon** **46.48 342** P **P** **02 31 34.0 +1.1**
baz=144
P33M S **S** **02 38 25.7 +4.7**
baz=144
SKAG **Skagway** **46.68 340** P **P** **02 31 35.1 +0.7**
baz=140
POHA **Pohakuloa** **46.96 281** IAMs_20 IAMs_20 02 46 46.0
comp=Z,3µm,18.0s
BOAV **Boa Vista** **47.01 104** *e*P **P** **02 31 37.7 +0.1**
PLBC **Pleasant Camp** **47.02 339** P **P** **02 31 37.3 +0.3**
baz=139
PLBC S **S** **02 38 33.5 +4.9**
baz=139
SCHQ **Schefferville** **47.34 30** P **P** **02 31 40.9 +1.3**
comp=Z,22nm,1.1s,baz=235,slow=5.8,SNR=7.9
SCHQ LR LR 02 52 16.9
comp=Z,5µm,18.8s,baz=238,slow=37
comp=Z,22nm,1.1s
ETMB **Extrema** **47.84 122** *e*P **P** **02 31 43.9 -0.1**
O30N **Mendenhall** **47.93 341** P **P** **02 31 42.9 -1.2**
baz=140
O30N S **S** **02 38 46.5 +4.9**
baz=140
MMPY **Sheldon Lake,** **48.04 345** P **P** **02 31 43.5 -1.5**
baz=147,SNR=22
MMPY S **S** **02 38 48.0 +5.0**
baz=147
PNL **Peninsula** **48.23 338** S **S** **02 38 48.2 +2.4**
baz=135
FARO **Faro, Yukon** **48.27 343** P **P** **02 31 45.2 -1.6**
baz=144
N31M **Braeburn, Yuko** **48.39 341** IAmb IAmb 02 31 53.6
comp=Z,27nm,1.1s
N31M **Braeburn, Yuko** **48.39 341** P **P** **02 31 47.1 -0.6**
baz=141
N31M S **S** **02 38 53.6 +5.7**
baz=141
HYT **Haines Junctio** **48.43 340** IAmb IAmb 02 31 55.2
comp=Z,23nm,1.4s
HYT **Haines Junctio** **48.43 340** P **P** **02 31 47.4 -0.7**
baz=138
HYT S **S** **02 38 53.9 +5.2**
baz=138
M31M **Drury Creek, Y** **48.54 343** IAMs_20 IAMs_20 02 52 04.9
comp=Z,6µm,19.0s
M31M **Drury Creek, Y** **48.54 343** P **P** **02 31 48.3 -0.6**
baz=143
M31M S **S** **02 38 54.8 +4.7**
baz=143
N30M **Aishikik Lake** **48.77 341** P **P** **02 31 50.2 -0.4**
baz=139
N30M S **S** **02 38 57.8 +4.3**
baz=139
YUK6 **Outpost Mounta** **48.80 340** P **P** **02 31 50.8 -0.3**
baz=137
YUK6 S **S** **02 38 57.4 +3.2**
baz=137
MACA **Manacapuru-AM** **49.16 111** *e*P **P** **02 31 54.3 +0.1**
YUK4 **Talbot Arm** **49.19 340** P **P** **02 31 53.9 -0.2**
baz=137
YUK8 **Steele Glacier** **49.52 339** P **P** **02 31 56.8 +0.1**
baz=136,SNR=19
MESA **MESA** **49.52 337** P **P** **02 31 55.7 -0.9**
baz=132
M30M **Minto, Yukon** **49.53 342** P **P** **02 31 55.6 -0.8**
M30M **Minto, Yukon** **49.53 342** P **P** **02 31 55.4 -1.0**
baz=140
M30M S **S** **02 39 06.6 +2.5**
baz=140
YAH **Yahtse** **49.57 337** IAMs_20 IAMs_20 02 52 58.1
comp=Z,3µm,22.0s
GRNC **Granite Creek** **49.82 338** P **P** **02 31 58.4 -0.6**
GRNC IAmb IAmb 02 32 05.1
comp=Z,25nm,1.1s
GRNC IAMs_20 IAMs_20 02 50 18.9
comp=Z,3µm,21.0s
CTG **Chitna Glacier** **49.84 338** P **P** **02 31 58.7 -0.2**
baz=134
SAML **Samuel** **49.85 119** P **P** **02 31 57.1 -2.4**
SAML IAmb IAmb 02 32 01.3
comp=Z,20nm,1.1s
SAML IAMs_20 IAMs_20 02 50 30.4
comp=Z,3µm,19.0s
SAML **Samuel** **49.85 119** P **P** **02 31 57.1 -2.4**
SAML pmax pmax
comp=Z,20nm,1.1s
ISLE **Juniper Island** **49.95 337** IAMs_20 IAMs_20 02 53 11.2
comp=Z,2µm,19.0s
YUK3 **Moose Creek** **50.10 339** P **P** **02 32 00.3 -0.7**
baz=135
YUK3 S **S** **02 39 15.1 +2.7**
baz=135
PB18 **Visviri** **50.23 133** P **P** **02 32 01.6 -1.3**
TGL **Tana Glacier** **50.23 337** IAMs_20 IAMs_20 02 53 19.6
comp=Z,2µm,19.0s
LPAZ **La Paz** **50.33 130** P **P** **02 32 04.2 +0.4**
comp=Z,10nm,0.8s,baz=332,slow=7.7,SNR=49
LPAZ LR LR 02 50 58.4
comp=Z,6µm,20.3s,baz=316,slow=33
comp=Z,10nm,0.8s
LPAZ **La Paz** **50.33 130** P **P** **02 32 04.2 +0.4**
LPAZ IAmb IAmb 02 32 09.2
comp=Z,28nm,1.1s
LPAZ **La Paz** **50.33 130** P **P** **02 32 04.2 +0.4**
LPAZ pmax pmax
comp=Z,28nm,1.2s
LPAZ **La Paz** **50.33 130** *e*P **P** **02 32 04.5 +0.7**
PB16 **IPOC Station P** **50.72 133** P **P** **02 32 07.2 +0.6**
PB16 IAmb IAmb 02 32 12.8
comp=Z,20nm,1.1s
MCARA **McCarthy VSAT** **50.72 338** P **P** **02 32 04.8 -0.7**
baz=132
MCARA S **S** **02 39 24.5 +3.9**
baz=132
VRDI **Verde Repeater** **50.77 338** IAMs_20 IAMs_20 02 53 10.0
comp=Z,2µm,19.0s
M27K **Edge Creek, AK** **50.99 339** P **P** **02 32 06.8 -0.8**
M27K IAmb IAmb 02 32 14.2
comp=Z,43nm,1.3s
M27K **Edge Creek, AK** **50.99 339** P **P** **02 32 07.0 -0.6**
baz=134,SNR=19
M27K S **S** **02 39 29.5 +5.0**
baz=134
BMRM **Bremner River** **51.03 337** S **S** **02 39 29.2 +4.2**
baz=130
GLB **Gilahina Butte** **51.04 338** IAmb IAmb 02 32 14.1
comp=Z,26nm,1.0s
GLB IAMs_20 IAMs_20 02 53 18.1
comp=Z,2µm,18.0s
EYAK **Cordova Ski Ar** **51.20 336** P **P** **02 32 08.3 -0.7**
baz=128
J29M **Klondike Camp** **51.38 343** IAMs_20 IAMs_20 02 54 45.0
comp=Z,4µm,19.0s
M26K **Nabesna, AK** **51.40 339** IAMs_20 IAMs_20 02 51 28.5
comp=Z,2µm,20.0s
M26K **Nabesna, AK** **51.40 339** P **P** **02 32 11.5 +0.9**
baz=133,SNR=6.3
M26K S **S** **02 39 34.4 +4.3**
baz=133
DAWY **Dawson** **51.43 342** P **P** **02 32 10.5 -0.2**
baz=138
DAWY S **S** **02 39 32.9 +2.4**
baz=138
N25K **Chitina, Valde** **51.44 337** IAmb IAmb 02 32 17.2
comp=Z,19nm,0.9s
N25K IAMs_20 IAMs_20 02 55 36.5
comp=Z,2µm,19.0s
N25K **Chitina, Valde** **51.44 337** P **P** **02 32 10.9 0.0**
baz=130,SNR=11
N25K S **S** **02 39 34.1 +3.4**
baz=130
BCAR **Beaver Creek A** **51.45 340** P **P** **02 32 09.4 -1.6**
L27K **Beaver Creek,** **51.46 340** IAMs_20 IAMs_20 02 55 08.2
comp=Z,3µm,19.0s
L27K **Beaver Creek,** **51.46 340** P **P** **02 32 10.0 -1.1**
baz=134,SNR=6.5
L27K S **S** **02 39 36.1 +5.2**
baz=134
PB11 **IPOC Station P** **51.60 135** IAmb IAmb 02 32 32.2
comp=Z,31nm,1.1s
FID **Port Fidalgo** **51.60 336** P **P** **02 32 10.6 -1.5**
FID IAmb IAmb 02 32 18.2
comp=Z,21nm,1.0s
KLU **Klutina** **51.85 337** IAmb IAmb 02 32 20.6
comp=Z,29nm,1.2s
KLU **Klutina** **51.85 337** P **P** **02 32 12.8 -1.2**
baz=129
GLI **Glacier Island** **51.92 336** IAmb IAmb 02 32 19.4
comp=Z,27nm,1.1s
GLI **Glacier Island** **51.92 336** P **P** **02 32 13.1 -1.4**
baz=127
GLI S **S** **02 39 41.8 +4.6**
baz=127
L26K **Log Cabin Wild** **51.94 339** IAMs_20 IAMs_20 02 55 18.9
comp=Z,2µm,18.0s
HARP **HAARP** **52.15 338** P **P** **02 32 15.2 -0.9**
baz=130
PB08 **IPOC Station P** **52.20 135** IAmb IAmb 02 32 32.7
comp=Z,46nm,1.4s
K27K **Chicken** **52.22 341** P **P** **02 32 16.7 0.0**
K27K IAmb IAmb 02 32 22.8
comp=Z,20nm,0.9s
K27K IAMs_20 IAMs_20 02 54 51.3
comp=Z,4µm,19.0s
K27K **Chicken** **52.22 341** P **P** **02 32 16.2 -0.4**
baz=135
K27K S **S** **02 39 45.9 +4.7**
baz=135
M24K **Tolsona, Glenn** **52.33 337** P **P** **02 32 16.6 -1.0**
baz=129
FRB **Frobisher Bay** **52.35 20** LR LR 02 55 04.7
comp=Z,8µm,18.5s,baz=229,slow=37
EPYK **Eagle Plains** **52.47 345** IAMs_20 IAMs_20 02 56 47.8
comp=Z,4µm,18.0s
EPYK **Eagle Plains** **52.47 345** P **P** **02 32 16.6 -1.8**
baz=142
PB02 **IPOC Station P** **52.53 136** P **P** **02 32 20.1 +0.5**
PB02 IAmb IAmb 02 32 26.1
comp=Z,34nm,0.9s
KDAK **Kodiak Island** **52.59 331** LR LR 02 52 52.3
comp=Z,2µm,18.6s,baz=135,slow=34
KDAK **Kodiak Island** **52.59 331** IAMs_20 IAMs_20 02 52 42.1
comp=Z,2µm,18.0s
PB01 **IPOC Station P** **52.60 136** IAmb IAmb 02 32 26.6
comp=Z,32nm,1.3s
PAX **Paxson** **52.63 338** P **P** **02 32 18.2 -1.6**
baz=130
C36M **Paulatuk** **52.65 352** P **P** **02 32 18.5 -1.2**
baz=158
OHAK **Old Harbor** **52.65 330** P **P** **02 32 18.8 -1.0**
baz=118
M23K **Glacier View** **52.72 336** P **P** **02 32 18.8 -1.6**
baz=127
BRSE **Bradley Lake S** **52.77 333** P **P** **02 32 19.5 -1.2**
baz=122
SCRK **Sand Creek** **52.80 340** IAMs_20 IAMs_20 02 52 38.5
comp=Z,3µm,21.0s
SCRK **Sand Creek** **52.80 340** P **P** **02 32 19.3 -1.7**
baz=132,SNR=14
PB07 **IPOC Station P** **52.82 137** IAmb IAmb 02 32 35.6
comp=Z,47nm,1.3s
PMOR **Pomariorio Ree** **52.83 234** *e*T T 03 29 04.4
comp=Z,1.8nm,0.2s
BRLK **Bradley Lake** **52.84 333** IAmb IAmb 02 32 26.6
comp=Z,27nm,1.0s
RIDG **Independent Ri** **52.92 339** P **P** **02 32 21.3 -0.6**
RIDG IAMs_20 IAMs_20 02 52 26.8
comp=Z,3µm,22.0s
RIDG **Independent Ri** **52.92 339** P **P** **02 32 21.1 -0.8**
baz=131,SNR=40
SML **Sawmill** **52.96 336** P **P** **02 32 21.4 -0.8**
baz=126
J26L **Joseph Creek** **53.02 341** IAmb IAmb 02 32 28.6
comp=Z,25nm,0.9s
J26L IAMs_20 IAMs_20 02 55 25.3
comp=Z,4µm,18.0s
J26L **Joseph Creek** **53.02 341** P **P** **02 32 22.1 -0.6**
baz=133,SNR=35
XMAS **Kiritimati** **53.03 259** IAMs_20 IAMs_20 02 47 57.1
comp=Z,4µm,20.0s
PMR **Palmer** **53.14 336** P **P** **02 32 22.1 -1.3**
baz=125
WAT6 **Susitna Watana** **53.20 337** P **P** **02 32 21.9 -2.2**
baz=127,SNR=7.9
K24K **Donnelly Dome** **53.28 339** P **P** **02 32 22.8 -1.7**
baz=130,SNR=10
FIS **Fire Island** **53.32 335** IAMs_20 IAMs_20 02 49 14.3
comp=Z,2µm,19.0s
INK **Inuvik** **53.32 348** P **P** **02 32 23.6 -1.0**
comp=Z,15nm,0.9s,baz=138,slow=8.8,SNR=11
INK LR LR 02 55 06.7
comp=Z,3µm,19.4s,baz=134,slow=36
comp=Z,15nm,0.9s
INK **Inuvik** **53.32 348** P **P** **02 32 23.2 -1.4**
INK **Inuvik** **53.32 348** P **P** **02 32 23.2 -1.4**
INK pmax pmax
comp=Z,64nm,1.5s
INK **Inuvik** **53.32 348** P **P** **02 32 23.0 -1.7**
baz=146,SNR=9.4
DHY **Denali Highway** **53.37 338** P **P** **02 32 24.4 -1.0**
baz=128,SNR=5.5
MDP **Montagnes des** **53.45 97** LR LR 02 55 55.3
comp=Z,2µm,21.1s,baz=290,slow=37
M22K **Willow** **53.62 336** P **P** **02 32 25.8 -1.1**
baz=124,SNR=5.2
WAT1 **Susitna Watana** **53.65 337** P **P** **02 32 26.9 -0.4**
baz=127
J25K **Salcha River,** **53.67 340** IAMs_20 IAMs_20 02 55 47.6
comp=Z,3µm,19.0s
J25K **Salcha River,** **53.67 340** P **P** **02 32 26.7 -0.8**
baz=131
SUA **Susitna One** **53.71 335** P **P** **02 32 26.8 -0.9**
baz=124
CUT **Chulitna** **54.05 336** P **P** **02 32 27.3 -2.8**
baz=125
HDA **Harding Lake** **54.06 339** P **P** **02 32 28.2 -1.9**
baz=129
LVC **Limon Verde** **54.08 137** P **P** **02 32 31.8 +0.5**
comp=Z,12nm,1.1s,baz=294,slow=4.8,SNR=5.4
LVC LR LR 02 50 42.2
comp=Z,4µm,21.3s,baz=298,slow=31
comp=Z,12nm,1.1s
LVC **Limon Verde** **54.08 137** P **P** **02 32 32.2 +0.8**
LVC IAmb IAmb 02 32 36.7
comp=Z,33nm,1.4s
LVC **Limon Verde** **54.08 137** IAMs_20 IAMs_20 02 50 20.1
comp=Z,4µm,21.0s
LVC **Limon Verde** **54.08 137** *e*P **P** **02 32 33.9 +2.6**
LVC **Limon Verde** **54.08 137** *e*P **P** **02 32 32.0 +0.6**
RND **Reindeer** **54.10 338** IAmb IAmb 02 32 38.1
comp=Z,26nm,1.0s
RND IAMs_20 IAMs_20 02 56 46.2
comp=Z,2µm,18.0s
ITTB **Itaituba** **54.12 109** *e*P **P** **02 32 31.4 +0.1**
SPCR **Spurr Chakacha** **54.16 334** P **P** **02 32 29.5 -1.5**
baz=122
IL31 **54.27 340** P **P** **02 32 29.5 -2.1**
ILAR **Eielson Array** **54.27 340** P **P** **02 32 30.5 -1.2**
comp=Z,3.5nm,0.7s,baz=152,slow=6.2,SNR=31
ILAR LR LR 02 56 18.4
comp=Z,2µm,21.2s,baz=120,slow=37
comp=Z,3.5nm,0.7s
SKT **Skwentna** **54.30 335** P **P** **02 32 31.4 -0.6**
baz=123,SNR=6.2
MCK **McKinley** **54.33 338** IAmb IAmb 02 32 37.8
comp=Z,30nm,1.2s
MCK IAMs_20 IAMs_20 02 57 09.1
comp=Z,2µm,20.0s
MCK **McKinley** **54.33 338** P **P** **02 32 31.9 -0.3**
baz=127,SNR=5.8
MALB **Monte Alegre** **54.41 106** *e*P **P** **02 32 33.9 +0.4**
VILB **Vilhena** **54.47 121** *e*P **P** **02 32 33.9 0.0**
WRH **Wood River Hil** **54.49 339** IAMs_20 IAMs_20 02 58 15.2
comp=Z,3µm,18.0s
P18K **Big Mountain,** **54.57 332** IAmb IAmb 02 32 39.1
comp=Z,16nm,1.1s
P18K **Big Mountain,** **54.57 332** P **P** **02 32 32.7 -1.3**
baz=118
TRF **Thorofare Moun** **54.65 337** P **P** **02 32 34.0 -0.8**
baz=125,SNR=25
COLA **College** **54.66 339** *i*P **P** **02 32 37.2 +2.7**
COLA pmax pmax
comp=Z,6.0nm,0.8s
POKR **Poker Plat Res** **54.67 340** IAmb IAmb 02 32 39.5
comp=Z,18nm,1.0s
POKR IAMs_20 IAMs_20 02 56 29.1
comp=Z,3µm,18.0s
POKR **Poker Plat Res** **54.67 340** P **P** **02 32 33.5 -1.1**
baz=129
O18K **Koktuh Hills** **54.77 332** P **P** **02 32 33.7 -1.7**
baz=118
MDM **Murphy Dome** **54.84 339** IAMs_20 IAMs_20 02 53 24.4
comp=Z,2µm,22.0s
M20K **Styx River** **54.89 335** P **P** **02 32 35.4 -1.0**
baz=121,SNR=6.9
NEA2 **Nenana** **54.90 339** P **P** **02 32 34.8 -1.4**
NEA2 IAmb IAmb 02 32 41.1
comp=Z,30nm,1.0s
NEA2 **Nenana** **54.90 339** P **P** **02 32 34.6 -1.7**
baz=127,SNR=24
N19K **Bonanza Creek** **54.92 333** IAmb IAmb 02 32 41.7
comp=Z,33nm,1.2s
N19K **Bonanza Creek** **54.92 333** P **P** **02 32 35.5 -1.0**
baz=119,SNR=5.6
KTH **Kantishna Hill** **54.95 337** IAmb IAmb 02 32 40.9
comp=Z,24nm,1.1s
PPLA **Purkeypile** **55.06 336** P **P** **02 32 35.7 -1.9**
PPLA **Purkeypile** **55.06 336** P **P** **02 32 36.0 -1.6**
baz=123,SNR=6.7
A36M **Sachs Harbour** **55.25 353** IAmb IAmb 02 32 56.7
comp=Z,18nm,1.1s
A36M **Sachs Harbour** **55.25 353** P **P** **02 32 37.0 -1.7**
baz=157
H24K **Noodor Dome** **55.27 340** IAmb IAmb 02 32 44.8
comp=Z,34nm,1.2s
H24K IAMs_20 IAMs_20 02 56 44.9
comp=Z,3µm,20.0s

Sta	Name	Dist	Az	Phase	ID	Time	Res
H24K	Noodor Dome	55.27	340	P	P	02 32 37.6	-1.4
	baz=129,SNR=26						
BPAW	Bear Paw Mtn.	55.28	338	IAMs_20	IAMs_20	02 57 40.2	
	comp=Z,2µm,18.0s						
BPAW	Bear Paw Mtn.	55.28	338	P	P	02 32 37.6	-1.4
	baz=125,SNR=13						
I23K	Minto, Yukon-K	55.33	339	IAMs_20	IAMs_20	02 53 37.5	
	comp=Z,2µm,20.0s						
I23K	Minto, Yukon-K	55.33	339	P	P	02 32 38.9	-0.5
	baz=127,SNR=19						
M19K	Big River Lodg	55.42	334	P	P	02 32 38.6	-1.5
	baz=120						
N18K	Kilae Creek	55.46	333	P	P	02 32 38.5	-1.9
	baz=118						
GO02	Mina Guanaco	55.48	139	IAmb	IAmb	02 33 23.9	
	comp=Z,34nm,1.4s						
SIV	San Ignacio	55.48	125	LR	LR	02 54 12.3	
	comp=Z,7µm,19.1s,baz=322,slow=34						
L20K	Farewell, AK	55.50	335	P	P	02 32 39.2	-1.5
	baz=121,SNR=17						
SVW2	Sparrevohn	55.52	333	IAmb	IAmb	02 32 45.8	
	comp=Z,27nm,1.3s						
CHUM	Lake Minchumin	55.65	337	P	P	02 32 38.8	-2.8
	baz=123						
PPT	Papeete	55.65	233	LR	LR	02 49 36.9	
	comp=Z,4µm,21.9s,baz=56,slow=29						
PPTF	Pamatai, Papee	55.66	233	IAMs_20	IAMs_20	02 49 15.9	
	comp=Z,5µm,22.0s						
PPT2	Papeete2	55.67	233	eLR	LR	02 48 10.3	
	comp=Z,15µm,26.8s						
P16K	Nushagak River	55.69	330	P	P	02 32 39.0	-3.0
	baz=114						
MLY	Manley	55.73	339	P	P	02 32 40.3	-2.0
	baz=126						
L19K	White Mountain	55.74	335	IAmb	IAmb	02 32 47.8	
	comp=Z,36nm,1.4s						
L19K	White Mountain	55.74	335	P	P	02 32 39.5	-2.9
	baz=120						
H23K	Yukon River	55.80	340	IAMs_20	IAMs_20	02 57 13.0	
	comp=Z,3µm,18.0s						
H23K	Yukon River	55.80	340	P	P	02 32 40.8	-2.0
	baz=127,SNR=12						
MCPB	Macapa, AP	55.88	103	eP	P	02 32 43.9	-0.2
O16K	Kokwok River B	55.97	331	P	P	02 32 41.5	-2.5
	baz=115						
K20K	Telida	56.03	336	P	P	02 32 42.7	-1.8
	baz=121,SNR=21						
I21K	Tanana	56.25	339	IAmb	IAmb	02 32 50.7	
	comp=Z,25nm,0.9s						
I21K	Tanana	56.25	339	P	P	02 32 44.8	-1.1
	baz=124,SNR=6.5						
J20K	Nowinta River	56.48	337	IAmb	IAmb	02 32 52.1	
	comp=Z,28nm,0.9s						
J20K				IAMs_20	IAMs_20	03 01 16.0	
	comp=Z,2µm,20.0s						
J20K	Nowinta River	56.48	337	P	P	02 32 45.2	-2.4
	baz=122,SNR=28						
TTA	Tatalina	56.58	335	P	P	02 32 45.9	-2.6
	baz=119						
N16K	Nishlik Lake	56.65	332	P	P	02 32 47.1	-1.8
	baz=114						
PTLB	Pontes e Lacer	56.70	123	eP	P	02 32 49.6	-0.3
H21K	Melozitna Rive	56.80	339	IAMs_20	IAMs_20	02 57 51.4	
	comp=Z,2µm,19.0s						
H21K	Melozitna Rive	56.80	339	P	P	02 32 46.2	-3.8
	baz=124,SNR=36						
COLD	Coldfoot	56.87	341	IAmb	IAmb	02 33 09.2	
	comp=Z,27nm,1.3s						
COLD	Coldfoot	56.87	341	P	P	02 32 48.6	-1.7
	baz=127						
AC02	Maricunga	56.98	140	IAmb	IAmb	02 33 13.1	
	comp=Z,17nm,1.1s						
CLDB	Colider	57.07	116	eP	P	02 32 52.1	-0.5
RES	Resolute Bay	57.09	3	LR	LR	02 57 54.4	
	comp=Z,4µm,20.2s,baz=181,slow=37						
H03N2	Juan Fernandez	57.16	153	T	T	03 34 45.9	
	baz=331,slow=77,SNR=241						
H03N1	Juan Fernandez	57.17	153	T	T	03 34 45.0	
	baz=331,slow=77,SNR=294						
H03N3	Juan Fernandez	57.17	153	T	T	03 34 43.3	
	baz=331,slow=77,SNR=219						
IMAR	Indian Mountai	57.31	339	P	P	02 32 50.6	-2.9
LCO	Las Campanas	57.68	143	IAMs_20	IAMs_20	02 51 30.4	
	comp=Z,2µm,20.0s						
TBI	Tubuai	59.16	228	eLR	LR	02 49 51.0	
	comp=Z,14µm,27.5s						
TBI	Tubuai	59.16	228	eT	T	03 36 57.0	
	comp=Z,3.3nm,0.2s						
SALV	Santo Antonio	59.73	121	eP	P	02 33 11.3	+0.2
PRPB	Parauapebas	60.22	108	eP	P	02 33 15.9	+1.4
NRS	Narsarsuaq	60.30	29	IAMs_20	IAMs_20	02 57 34.8	
	comp=Z,3µm,20.0s						
TMAB	Tom-Au,PA,Br	60.30	103	eP	P	02 33 16.1	+1.0
SFJD	Kangerlussuaq	60.34	22	LR	LR	02 59 43.9	
	comp=Z,3µm,18.2s,baz=240,slow=36						
SFJD	Kangerlussuaq	60.34	22	IAMs_20	IAMs_20	02 59 57.7	
	comp=Z,4µm,19.0s						
JOHN	Johnston Islan	60.56	279	IAMs_20	IAMs_20	02 51 27.5	
	comp=Z,2µm,21.0s						
VA03	San Esteban	60.64	146	IAmb	IAmb	02 33 30.5	
	comp=Z,29nm,1.3s						
MT02	Curacav	60.72	147	IAmb	IAmb	02 33 31.0	
	comp=Z,27nm,1.3s						
ZON	Zonda	60.74	144	IAmb	IAmb	02 33 37.2	
	comp=Z,20nm,1.4s						
PEL	Peldehue	60.87	146	IAMs_20	IAMs_20	02 53 18.2	
	comp=Z,3µm,21.0s						
A21K	Barrow	61.09	343	IAMs_20	IAMs_20	03 00 39.7	
	comp=Z,3µm,21.0s						
MT09	Talagante	61.20	147	IAmb	IAmb	02 33 34.1	
	comp=Z,28nm,1.4s						
RDOG	Red Dog Mine	61.46	339	IAMs_20	IAMs_20	03 00 35.4	
	comp=Z,2µm,20.0s						
SNDB	Serra Nova Dou	61.47	115	eP	P	02 33 23.9	+0.9
BO01	Tunca	61.63	148	P	P	02 33 24.2	+0.5
LMEL	Las Melosas	61.66	147	P	P	02 33 23.9	-0.2
LMEL				IAmb	IAmb	02 33 37.8	
	comp=Z,22nm,1.1s						
SMTB	Santa Maria do	63.34	110	eP	P	02 33 36.8	+1.2
PEXB	Peixe	64.12	114	eP	P	02 33 41.7	+1.0
ROSB	Rosrio	64.18	102	eP	P	02 33 42.7	+1.6
ADK	Adak	64.32	319	IAMs_20	IAMs_20	02 54 42.9	
	comp=Z,2µm,22.0s						
CPUP	Villa Florida	64.44	132	P	P	02 33 42.9	+0.3
	comp=Z,13nm,1.1s,baz=323,slow=6.8,SNR=9.6						
CPUP				LR	LR	03 01 21.3	
	comp=Z,3µm,18.9s,baz=322,slow=36						
	comp=Z,13nm,1.1s						
CPUP	Villa Florida	64.44	132	P	P	02 33 42.2	-0.4
CPUP	Villa Florida	64.44	132	P	P	02 33 42.2	-0.4
CPUP				pmax	pmax		
	comp=Z,35nm,1.4s						
CPUP	Villa Florida	64.44	132	eP	P	02 33 43.9	+1.3
RAR	Rarotonga	65.63	236	LR	LR	02 55 25.8	
	comp=Z,3µm,18.6s,baz=58,slow=30						
BDFB	Brasilia	65.99	117	P	P	02 33 54.0	+1.0
	comp=Z,15nm,0.9s,baz=293,slow=5.0,SNR=20						
BDFB				LR	LR	03 01 26.9	
	comp=Z,2µm,20.0s,baz=302,slow=35						
	comp=Z,15nm,0.9s						
BDFB	Brasilia	65.99	117	P	P	02 33 52.5	-0.5
BDFB	Brasilia	65.99	117	P	P	02 33 52.5	-0.5
BDFB				pmax	pmax		
	comp=Z,27nm,1.1s						
BDFB	Brasilia	65.99	117	eP	P	02 33 54.1	+1.2
ITRB	Iturama	66.04	122	eP	P	02 33 54.4	+1.3
LL04	Puerto Octay	66.24	153	IAmb	IAmb	02 33 59.1	
	comp=Z,13nm,1.1s						
PCMB	Pacaembu	66.31	124	eP	P	02 33 56.1	+1.3
ALE	Alert	66.80	6	IAMs_20	IAMs_20	02 58 58.7	
	comp=Z,3µm,19.0s						
PLCA	Paso Flores	66.92	152	P	P	02 33 59.2	+0.8
	comp=Z,7.3nm,0.9s,baz=326,slow=8.4,SNR=10						
PLCA				LR	LR	02 57 14.4	
	comp=Z,5µm,18.5s,baz=330,slow=31						
	comp=Z,7.3nm,0.9s						
PLCA	Paso Flores	66.92	152	IAmb	IAmb	02 34 03.9	
	comp=Z,14nm,1.1s						
PLCA	Paso Flores	66.92	152	eP	P	02 34 00.1	+1.7
IPMB	Ipameri, GO	66.94	119	eP	P	02 33 59.6	+0.7
ITQB	Itaqui	66.99	134	eP	P	02 34 00.6	+1.7
NBPS	Pedro II - PI	67.21	103	eP	P	02 34 01.9	+1.1
SDBA	SAO DESIDERIO	67.24	112	eP	P	02 34 02.6	+1.7
PTGB	Pitanga	67.37	127	eP	P	02 34 02.4	+0.8
LL02	Futaleuf	68.35	154	IAmb	IAmb	02 34 13.0	
	comp=Z,23nm,1.2s						
ITAB	Concordia	68.72	130	eP	P	02 34 11.4	+1.5
JANB	Januaria	68.91	114	eP	P	02 34 12.4	+1.0
AY01	Puyuhuapi	69.04	155	IAmb	IAmb	02 34 17.0	
	comp=Z,20nm,1.2s						
CPSB	Cacapava Do Su	69.63	133	eP	P	02 34 15.9	+0.4
RCLB	Rio Claro- Sao	69.69	123	eP	P	02 34 18.2	+2.1
SHEM	Shemya Is, Ala	69.97	320	LR	LR	02 58 08.2	
	comp=Z,2µm,21.8s,baz=98,slow=30						
TIJ01	Guaruva-PR	70.03	126	eP	P	02 34 20.2	+2.0
COYC	Coyhaique	70.22	156	IAMs_20	IAMs_20	02 57 35.5	
	comp=Z,2µm,21.0s						
PLTB	Pedras Altas	70.32	134	eP	P	02 34 20.7	+1.0
VAO	Valinhos	70.43	123	eP	P	02 34 22.0	+1.3
NBMA	Muriti-CE	70.78	105	eP	P	02 34 25.2	+2.3
NBPN	Ponto Novo - B	70.79	109	eP	P	02 34 24.7	+1.7
PET01	Itanhaem-SP	70.83	125	eP	P	02 34 24.0	+1.0
BORG	Borgarnes	71.61	27	LR	LR	03 05 56.7	
	comp=Z,3µm,18.9s,baz=279,slow=36						
BORG	Borgarnes	71.61	27	IAMs_20	IAMs_20	03 05 15.7	
	comp=Z,3µm,19.0s						
AFI	Afiamalu	72.33	249	LR	LR	02 59 41.3	
	comp=Z,3µm,18.0s,baz=70,slow=30						
GDU01	Guandu, BA	72.50	111	eP	P	02 34 34.8	+1.5
BILL	Bilibino	72.76	337	P	P	02 34 32.4	-1.5
BILL				IAmb	IAmb	02 34 44.5	
	comp=Z,17nm,1.2s						
BILL	Bilibino	72.76	337	iP	P	02 34 34.6	+0.7
BILL				i		02 34 42.5	
BILL				i		02 34 53.2	
BILL				pmax	pmax		
	comp=Z,17nm,1.2s						
RCBR	Riachuelo	72.87	102	LR	LR	03 07 09.8	
	comp=Z,2µm,21.4s,baz=83,slow=36						
RCBR	Riachuelo	72.87	102	IAMs_20	IAMs_20	03 06 26.3	
	comp=Z,2µm,20.0s						
NBLA	Lagarto - SE	73.03	108	eP	P	02 34 38.3	+1.9
CMC01	Camacan, BA	73.22	113	eP	P	02 34 38.8	+1.3
GUA01	Guaratinga, BA	73.47	114	eP	P	02 34 40.8	+1.8
RIB01	Linhares ES	74.13	117	eP	P	02 34 44.0	+1.3
ALF01	Guarapari-ES	74.42	118	eP	P	02 34 46.1	+1.7
JMIC	Jan Mayen	75.57	20	LR	LR	03 08 36.2	
	comp=Z,5µm,18.2s,baz=284,slow=36						
KBS	Kingsbay	77.62	10	iP	P	02 35 04.2	+2.5
KBS				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SPITS	Spitsbergen Ar	78.77	10	LR	LR	03 11 02.1	
	comp=Z,3µm,18.2s,baz=271,slow=36						
PET	Petropavlovsk	79.15	322	IAMs_20	IAMs_20	03 03 11.9	
	comp=Z,1µm,22.0s						
USHA	Ushuaia	79.15	159	LR	LR	03 03 51.3	
	comp=Z,3µm,18.1s,baz=324,slow=31						
PMOZ	Porto Moniz, M	79.38	59	eLR	LR	03 00 36.9	
	comp=Z,721nm,20.0s						
SEY	Seymchan	79.46	333	LR	LR	03 06 40.5	
	comp=Z,1µm,20.6s,baz=54,slow=33						
SEY	Seymchan	79.46	333	ceP	P	02 35 15.5	+3.4
SEY				pmax	pmax		
	comp=Z,11nm,1.3s						
PETK	Petropavlovsk-	79.68	322	LR	LR	03 03 31.0	
	comp=Z,912nm,21.7s,baz=65,slow=30						
SKR	Severo-Kuril's	81.32	320	eP	P	02 35 23.8	+1.5
SKR				eS	S	02 45 34.4	+1.3
SKR				pmax	pmax		
	comp=Z,100nm,4.1s						
EKA	Eskdalemuir Ar	82.43	34	LR	LR	03 12 30.0	
	comp=Z,3µm,19.6s,baz=286,slow=36						
MSVF	Nonsavu	82.83	249	P	P	02 35 30.3	-0.7
	comp=Z,12nm,1.1s,baz=119,slow=10,SNR=3.0						
MSVF				LR	LR	03 03 40.4	
	comp=Z,3µm,20.4s,baz=58,slow=30						
	comp=Z,12nm,1.1s						
MSVF	Nonsavu	82.83	249	P	P	02 35 29.5	-1.4
MSVF	Nonsavu	82.83	249	P	P	02 35 29.5	-1.4
MSVF				pmax	pmax		
	comp=Z,36nm,1.2s						
TIXI	Tiksi	83.35	345	LR	LR	03 17 07.7	
	comp=Z,2µm,18.3s,baz=359,slow=39						
TIXI	Tiksi	83.35	345	P	P	02 35 30.5	-2.1
TIXI				IAmb	IAmb	02 35 37.2	
	comp=Z,14nm,1.1s						
TIXI				IAMs_20	IAMs_20	03 17 14.1	
	comp=Z,2µm,18.0s						
TIXI	Tiksi	83.35	345	iP	P	02 35 32.7	+0.1
TIXI				pmax	pmax		
	comp=Z,14nm,1.1s						
PGAV	Gavieira, Arco	83.66	48	eS	S	02 45 58.8	+1.1
PGAV	Gavieira, Arco	83.66	48	eLR	LR	03 02 34.0	
	comp=Z,3µm,20.0s						
PMAFR	Mafra	83.85	51	eP	P	02 35 34.6	-1.3
	comp=Z,71nm,1.6s						
PMAFR	Mafra	83.85	51	eS	S	02 45 59.8	+0.2
RAO	Raoul Island	83.86	237	LR	LR	03 03 19.3	
	comp=Z,2µm,21.8s,baz=22,slow=29						
LIS	Lisbon	84.03	51	eP	P	02 35 37.2	+0.4
LIS				IAMs_20	IAMs_20	03 12 23.5	
	comp=Z,3µm,26.4s						
LIS	Lisbon	84.03	51	eP	P	02 35 38.8	+2.1
	comp=Z,77nm,2.0s						
LIS	Lisbon	84.03	51	eP	P	02 35 37.1	+0.4
PSBE	So Bento	84.04	51	eP	P	02 35 37.5	+0.7
PSBE	So Bento	84.04	51	eS	S	02 46 00.1	-1.4
PCAS	Casmilo, Conde	84.09	50	eP	P	02 35 38.3	+1.2
	comp=Z,55nm,1.7s						
PCAS	Casmilo, Conde	84.09	50	eS	S	02 45 58.9	-3.0
KWAJ	Kwajalein Atol	84.10	277	IAMs_20	IAMs_20	03 06 03.5	
	comp=Z,1µm,19.0s						
COI	Coimbra	84.10	50	eS	S	02 46 07.0	+5.0
COI	Coimbra	84.10	50	IAMs_20	IAMs_20	03 13 41.4	
	comp=Z,2µm,19.0s						
POLO	Lamas de Olo	84.18	49	eP	P	02 35 38.5	+0.9
POLO	Lamas de Olo	84.18	49	eS	S	02 46 02.0	-1.0
PVRL	Vila Real	84.27	49	eP	P	02 35 40.6	+2.6
	comp=Z,38nm,1.7s						
PVIS	Viseu	84.32	49	eP	P	02 35 40.8	+2.5
	comp=Z,30nm,1.7s						
PMTG	Montargil	84.60	51	eP	P	02 35 40.5	+0.9
	comp=Z,39nm,1.8s						
PMTG	Montargil	84.60	51	eS	S	02 46 04.3	-2.7
MBO	M'Bour	84.61	77	IAMs_20	IAMs_20	03 16 33.7	
	comp=Z,1µm,19.0s						
MTE	Manteigas	84.67	49	eP	P	02 35 40.4	+0.3
	comp=Z,30nm,1.9s						
MTE	Manteigas	84.67	49	eS	S	02 46 09.7	+1.8
MTE	Manteigas	84.67	49	eLR	LR	03 02 35.5	
	comp=Z,2µm,18.0s						
MTE	Manteigas	84.67	49	P	P	02 35 38.8	-1.3
MTE				IAmb	IAmb	02 35 42.6	
	comp=Z,24nm,1.2s						
PNCL	Nicolau / Gran	84.68	52	eS	S	02 46 09.4	+1.6
PNCL	Nicolau / Gran	84.68	52	eLR	LR	03 02 51.7	
	comp=Z,1µm,18.0s						
PTEO	Sao Teotonio	84.71	52	eP	P	02 35 41.3	+1.1
	comp=Z,58nm,1.8s						
PFVI	Vila Bisbo	84.76	53	eS	S	02 46 16.8	+8.1
MVO	Moncorvo	84.79	49	eP	P	02 35 42.2	+1.5
	comp=Z,39nm,1.7s						
MVO	Moncorvo	84.79	49	eS	S	02 46 10.8	+1.7
MVO	Moncorvo	84.79	49	eLR	LR	03 03 14.0	
	comp=Z,2µm,18.0s						
MORF	Marmelete	84.84	53	eP	P	02 35 41.4	+0.4
MORF				eSKSac	SKSac	02 46 04.7	-1.1
MORF				IAMs_20	IAMs_20	03 14 48.0	
	comp=Z,3µm,23.6s						
MORF	Marmelete	84.84	53	eS	S	02 46 13.8	+4.2
MORF	Marmelete	84.84	53	eP	P	02 35 41.3	+0.4
MORF				e		02 46 04.6	
PCBR	Castelo Branco	84.90	50	eP	P	02 35 42.3	+1.2
	comp=Z,32nm,1.5s						
EVO	Evora	84.93	51	eP	P	02 35 43.1	+1.8
	comp=Z,37nm,2.0s						
MESJ	Messejana	85.00	52	eP	P	02 35 42.1	+0.4
MESJ				eSKSac	SKSac	02 46 05.5	-1.1
MESJ				IAMs_20	IAMs_20	03 14 43.8	
	comp=Z,2µm,22.9s						
MESJ	Messejana	85.00	52	eP	P	02 35 42.8	+1.1
	comp=Z,32nm,2.0s						
MESJ	Messejana	85.00	52	eP	P	02 35 42.0	+0.4
MESJ				e		02 46 05.5	
PMRV	Marv??o	85.10	50	eP	P	02 35 43.0	+0.8
	comp=Z,40nm,2.2s						
PMRV	Marv??o	85.10	50	eS	S	02 46 08.4	-3.6
PMRV	Marv??o	85.10	50	eLR	LR	03 02 59.0	
	comp=Z,2µm,18.0s						
PESTR	Estremoz	85.14	51	eP	P	02 35 43.6	+1.2
	comp=Z,23nm,1.9s						
PESTR	Estremoz	85.14	51	eS	S	02 46 14.5	+2.1
PBDV	Barranco-do-Ve	85.41	52	eP	P	02 35 44.4	+0.6
PBDV	Barranco-do-Ve	85.41	52	eS	S	02 46 10.9	-4.3
PVAQ	Vaqueiros	85.52	52	eS	S	02 46 36.1	+20
PVAQ	Vaqueiros	85.52	52	eLR	LR	03 03 07.1	
	comp=Z,2µm,18.0s						
PBAR	Barrancos	85.77	51	eS	S	02 46 26.3	+7.6
ARCES	ARCESS Array B	86.26	15	LR	LR	03 14 59.4	
	comp=Z,3µm,19.3s,baz=308,slow=36						
KEV	Kevo	86.48	15	IAMs_20	IAMs_20	03 16 19.9	
	comp=Z,2µm,19.0s						
NOA	NORSAR Array B	86.76	26	P	P	02 35 47.8	-2.2
	comp=Z,1.8nm,0.9s,baz=302,slow=4.8,SNR=5.3						
NOA				LR	LR	03 13 45.4	
	comp=Z,2µm,21.8s,baz=300,slow=35						
KONO	Kongsberg	86.79	27	ceP	P	02 35 50.6	+0.5
KONO				pmax	pmax		
	comp=Z,13nm,1.2s						
PAB	San Pablo	87.27	49	P	P	02 35 51.4	-1.6
PAB				IAmb	IAmb	02 35 56.1	
	comp=Z,12nm,1.2s						
PAB	San Pablo	87.27	49	P	P	02 35 51.4	-1.6
PAB				pmax	pmax		
	comp=Z,13nm,1.3s						
PAB				MLR	MLR		
	comp=Z,2µm,18.0s						
ESDC	Sonseca Array	87.50	49	P	P	02 35 54.0	0.0
	comp=Z,3.2nm,1.1s,baz=302,slow=5.6,SNR=11						
	comp=Z,3.2nm,1.1s						
ESDC	Sonseca Array	87.50	49	P	P	02 35 52.5	-1.6
HFS	Hagfors	88.28	26	LR	LR	03 14 30.6	
	comp=Z,2µm,21.5s,baz=301,slow=35						
PMSA	Palmer Station	88.40	163	LR	LR	03 07 25.0	
	comp=Z,962nm,18.5s,baz=316,slow=30						
YAK	Yakutsk	89.11	337	LR	LR	03 20 07.7	
	comp=Z,929nm,18.1s,baz=83,slow=38						
YAK	Yakutsk	89.11	337	IAMs_20	IAMs_20	03 18 35.4	
	comp=Z,1µm,22.0s						
YAK	Yakutsk	89.11	337	ceP	P	02 36 04.1	+3.0
YAK				pmax	pmax		
	comp=Z,21nm,0.6s						
MDT	Midelt	89.48	56	LR	LR	03 18 12.1	
	comp=Z,862nm,18.1s,baz=304,slow=37						
LVZ	Lovozero	89.70	14	IAMs_20	IAMs_20	03 18 08.1	
	comp=Z,2µm,20.0s						
MXZ	Matakaoa Point	90.06	230	IAMs_20	IAMs_20	03 06 09.1	
	comp=Z,2µm,22.0s						
YSS	Yuzh-Sakhalins	90.89	320	IAMs_20	IAMs_20	03 07 53.4	
	comp=Z,938nm,21.0s						
URZ	Urewera	91.20	230	LR	LR	03 07 30.8	
	comp=Z,3µm,21.9s,baz=30,slow=29						
RGN	Rugen	91.23	31	IAMs_20	IAMs_20	03 18 55.8	
	comp=Z,2µm,20.0s						
STU	Stuttgart	92.12	37	IAMs_20	IAMs_20	03 16 45.9	
	comp=Z,2µm,21.0s						
FINES	FINESS Array B	92.14	21	LR	LR	03 17 09.6	
	comp=Z,4µm,20.2s,baz=316,slow=35						
ASAJ	Asahikawa	92.30	318	LR	LR	03 10 27.1	
	comp=Z,672nm,21.7s,baz=34,slow=31						
NRIK	Noril'sk	92.45	355	LR	LR	03 20 25.9	
	comp=Z,1µm,19.6s,baz=22,slow=37						
NRIK	Noril'sk	92.45	355	ceP	P	02 36 18.1	+1.6
NRIK				pmax	pmax		
	comp=Z,15nm,1.5s						
CLL	Collm	92.86	33	eP	P	02 36 19.0	+0.2
CLL				e		02 46 52.0	
CLL				MLR	MLR		
	comp=Z,2µm,21.0s						
CLL	Collm	92.86	33	eP	P	02 36 19.0	+0.2
CLL				ePP	PP	02 40 02.0	+1.4
CLL				eSKSac	SKSac	02 46 52.0	-0.8
CLL				eSx	Sx	02 47 35.0	
CLL				ePS	PnS	02 48 39.0	+0.8
CLL				ePPS	PPS	02 49 18.0	
CLL				eSS	SS	02 53 40.0	+3.1
CLL				ex	x	02 54 36.0	
CLL				eSSS	SSS	02 57 42.0	
CLL				LmV		03 17 00.0	
	comp=Z,2µm,21.0s						
CLL				LmH		03 19 00.0	
	comp=N,1µm,21.3s						
CLL				LmH		03 19 00.0	
	comp=E,2µm,20.6s						
ERM	Erimo	92.90	316	IAMs_20	IAMs_20	03 11 36.7	
	comp=Z,1µm,20.0s						
HIZ	Hauiti	92.94	231	IAMs_20	IAMs_20	03 09 25.4	
	comp=Z,2µm,20.0s						
NKC	Novy Kostel	93.16	35	eSP	SP	02 48 38.2	-0.4
NKC				AMS	AMS	03 17 30.0	
	comp=Z,3µm,20.4s						
PATS	Pohnpei	93.47	278	IAMs_20	IAMs_20	03 13 42.4	
	comp=Z,1µm,20.0s						
DAVOX	Davos/Dischmat	93.53	38	LR	LR	03 18 48.9	
	comp=Z,5µm,18.5s,baz=302,slow=36						
PVCC	Panska Ves	94.12	34	eSP	SP	02 48 47.2	-2.0
PVCC				AMS	AMS	03 17 40.0	
	comp=Z,2µm,20.3s						
KHC	Kasperske Hory	94.38	35	eSP	SP	02 48 53.7	+1.6
KHC				AMS	AMS	03 17 30.0	
	comp=Z,3µm,21.7s						
PRU	Pruhonice	94.42	34	eSP	SP	02 48 57.0	+4.6
PRU				AMS	AMS	03 18 50.0	
	comp=Z,2µm,19.0s						
DZM	Mont Dzumac	94.56	248	LR	LR	03 09 43.2	
	comp=Z,3µm,20.6s,baz=80,slow=30						
DZM	Mont Dzumac	94.56	248	eLR	LR	03 05 57.7	
	comp=Z,8µm,26.6s						
GERES	GERESS Array B	94.60	35	LR	LR	03 18 23.1	
	comp=Z,3µm,21.7s,baz=311,slow=35						
GERES	GERESS Array B	94.60	35	P	P	02 36 25.9	-1.0
GERES	GERESS Array B	94.60	35	P	P	02 36 26.0	-1.0
UPC	Upice	94.89	33	eSP	SP	02 48 55.3	-2.3
UPC				AMS	AMS	03 20 40.0	
	comp=Z,2µm,18.3s						
CKRC	Cesky Krumlov	94.95	35	eSP	SP	02 49 00.3	+1.9
OSTC	Ostas	94.97	33	eSP	SP	02 49 01.8	+3.3
OSTC				AMS	AMS	03 20 40.0	
	comp=Z,2µm,19.0s						
DPC	Dobruska-Polom	95.14	33	eSP	SP	02 48 59.4	-1.0
DPC				AMS	AMS	03 20 40.0	
	comp=Z,2µm,18.2s						
VLC	Villacollemand	95.18	40	IAMs_20	IAMs_20	03 18 42.3	
	comp=Z,2µm,20.0s						
TREC	Trest	95.32	34	eSP	SP	02 49 08.4	+6.0
TREC				AMS	AMS	03 19 30.0	
	comp=Z,3µm,18.8s						
KBA	Koelnbreinsper	95.38	37	eP	P	02 36 30.8	+0.1
	comp=Z,5.2nm,1.0s						
MOA	Molln	95.47	36	eP	P	02 36 29.8	-1.1
	comp=Z,6.5nm,1.3s						
KRLC	Kraliky	95.54	33	eSP	SP	02 49 02.7	-2.1
KRLC				AMS	AMS	03 21 00.0	
	comp=Z,2µm,17.7s						
VRAC	Vranov	95.90	34	LR	LR	03 19 17.9	
	comp=Z,2µm,21.4s,baz=305,slow=35						
KLR	Kul'dur	95.96	326	LR	LR	03 14 02.9	
	comp=Z,838nm,21.0s,baz=42,slow=32						
KOUNC	Koumac, New Ca	96.04	250	IAMs_20	IAMs_20	03 10 50.2	
	comp=Z,1µm,20.0s						
SUW	Suwalki	96.12	27	IAMs_20	IAMs_20	03 20 35.9	
	comp=Z,2µm,21.0s						
OBKA	Obir	96.39	37	eP	P	02 36 34.7	-0.5
	comp=Z,7.3nm,1.0s						
OKC	Ostrava-Krasne	96.39	33	AMS	AMS	03 21 40.0	
	comp=Z,2µm,20.6s						
KOWA	Kowa	96.46	73	IAMs_20	IAMs_20	03 25 23.2	
	comp=Z,2µm,19.0s						
MAUC	Maruska	96.51	33	AMS	AMS	03 14 20.0	
	comp=Z,3µm,25.8s						
SOKA	Soboth	96.57	37	eP	P	02 36 34.5	-1.5
	comp=Z,7.0nm,1.3s						
HNR	Honiara	96.85	262	LR	LR	03 12 56.7	
	comp=Z,883nm,19.3s,baz=81,slow=31						
HNR	Honiara	96.85	262	IAMs_20	IAMs_20	03 12 16.3	
	comp=Z,915nm,19.0s						
VSL	Villasalto	96.88	45	IAMs_20	IAMs_20	03 20 58.0	
	comp=Z,2µm,18.0s						
NACGM	Naroch	97.04	25⇑	eP	Pdif	02 36 40.7	+2.9
	baz=316						
RPZ	Rata Peaks	97.36	227	LR	LR	03 13 27.0	
	comp=Z,2µm,18.7s,baz=48,slow=31						
MNK	Minsk	97.77	25	iP	P	02 36 40.4	-0.7
MNK				i		02 40 38.3	
MNK				iPPP	PPP	02 42 41.4	
MNK				iS	SKSac	02 47 15.0	-3.8
MNK				iSS	SS	02 54 44.6	-1.5
MNK				iSSS	SSS	02 58 32.4	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MNK				pmax	pmax		
	comp=E,2.0nm,1.0s						
MNK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MNK				pmax	pmax		
	comp=N,10.0nm,0.9s						
MNK				MLR	MLR		
	comp=E,163nm,16.0s						
MNK				MLR	MLR		
	comp=N,432nm,14.0s						
MNK				MLR	MLR		
	comp=Z,2μm,19.0s						
MNK	**Minsk**	**97.77**	**25**	*i* P	**P**	**02 36 40.4**	**-0.7**
	comp=E,2.0nm,1.0s						
MNK				*i* P	**P**	**02 36 40.4**	**-0.7**
	comp=N,10.0nm,0.9s,baz=316						
MNK				*i* P	**P**	**02 36 40.4**	**-0.7**
	comp=Z,7.0nm,0.8s						
MNK				*i* PP	**PP**	**02 40 38.3**	**-0.1**
MNK				*i* PPP	PPP	02 42 41.5	
MNK				*i* S	**SKSac**	**02 47 15.1**	**-3.8**
MNK				*i* SS	**SS**	**02 54 44.7**	**-1.5**
MNK				*i* SSS	SSS	02 58 32.4	
MNK				*i* LQ	LQ	03 14 48.3	
MNK				*i* LR	LR	03 20 30.4	
MNK				*i* LRM	MLR	03 21 39.4	
	comp=E,163nm,16.0s						
MNK				*i* LRM	MLR	03 21 40.0	
	comp=N,432nm,14.1s						
MNK				*i* LRM	MLR	03 21 42.0	
	comp=Z,2μm,18.5s						
DBIC	**Dimbokro**	**98.31**	**80**	LR	LR	03 23 16.5	
	comp=Z,733nm,18.9s,baz=296,slow=37						
KEST	**Kesra**	**98.72**	**48**	LR	LR	03 22 38.4	
	comp=Z,1μm,18.6s,baz=280,slow=36						
USRK	**Ussuriysk Ar.**	**98.77**	**322**	LR	LR	03 16 03.6	
	comp=Z,581nm,20.9s,baz=31,slow=32						
MJAR	**Matsushiro Arr**	**98.89**	**313**	LR	LR	03 12 21.6	
	comp=Z,1μm,21.8s,baz=80,slow=30						
MAJO	**Matsushiro**	**98.89**	**313**	IAMs_20	IAMs_20	03 11 03.6	
	comp=Z,2μm,22.0s						
LVV	**L'vov**	**99.33**	**30**	*e*P	**Pdif**	**02 36 51.7**	**+3.5**
LVV				*e*		02 40 58.5	
LVV				*e*		02 47 26.8	
LVV				*e*S	**S**	**02 48 19.2**	**-1.2**
LVV				*e*PS	**PS**	**02 49 50.8**	**+3.2**
LVV				*e*SS	**SS**	**02 55 15.1**	**+6.8**
JHJ	**Hachijo jima 2**	**99.43**	**309**	LR	LR	03 16 04.5	
	comp=Z,2μm,19.3s,baz=80,slow=32						
INU	**Inuyama**	**100.33**	**312**	IAMs_20	IAMs_20	03 12 09.3	
	comp=Z,1μm,22.0s						
OBN	**Obninsk**	**100.54**	**21**	*i* P	**Pdif**	**02 36 49.9**	**-3.5**
OBN				*i*		02 41 04.4	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
OBN				MLR	MLR		
	comp=Z,2μm,22.0s						
DIVS	**Divibare**	**100.91**	**37**	IAMs_20	IAMs_20	03 22 15.5	
	comp=Z,1μm,20.0s						
AKASG	**Malin Array Be**	**101.09**	**27**	P	**Pdif**	**02 36 52.1**	**-3.9**
	comp=Z,0.2nm,0.3s,baz=300,slow=2.5,SNR=6.2						
AKASG	**Malin Array Be**	**101.09**	**27**	*ce*P	**Pdif**	**02 36 56.0**	**0.0**
CEL	**Celeste**	**101.85**	**43**	IAMs_20	IAMs_20	03 26 07.2	
	comp=Z,1μm,18.0s						
HIA	**Hailar**	**101.87**	**331**	IAMs_20	IAMs_20	03 29 54.9	
	comp=Z,833nm,19.0s						
MILM	**Milestii Mici**	**103.64**	**30**	*e*PP	**PKiKP**	**02 41 24.0**	**-1.8**
MILM				*e*L	L	03 12 08.0	
MILM				LRM	MLR	03 26 48.0	
	comp=Z,900nm,19.0s						
ARU	**Arti**	**104.78**	**9**	IAMs_20	IAMs_20	03 30 03.4	
	comp=Z,1μm,18.0s						
INCN	**Inchon**	**106.04**	**319**	IAMs_20	IAMs_20	03 15 54.0	
	comp=Z,841nm,22.0s						
XLT	**XiLinHaoTe**	**107.52**	**330**	Pdif	**Pdif**	**02 37 18.8**	**-6.1**
XLT				PP	**PP**	**02 41 48.8**	**-3.0**
XLT				SS	SS	02 56 51.9	-9.3
XLT				LR	LR		
	comp=Z,94nm,18.1s						
XLT				LR	LR		
	comp=Z,870nm,17.3s						
XLT				LR	LR		
	comp=Z,1μm,19.4s						
QSPA	**South Pole Qui**	**107.83**	**180**	IAMs_20	IAMs_20	03 18 34.3	
	comp=Z,971nm,21.0s						
ULN	**Ulaanbaatar**	**108.20**	**337**	IAMs_20	IAMs_20	03 28 35.2	
	comp=Z,1μm,21.0s						
SANT	**Santorini**	**109.05**	**40**	IAMs_20	IAMs_20	03 27 57.3	
	comp=Z,1μm,20.0s						
BRVK	**Borovoye**	**109.24**	**2**	IAMs_20	IAMs_20	03 31 19.1	
	comp=Z,1μm,20.0s						
IDI	**Anoyia**	**109.39**	**41**	IAMs_20	IAMs_20	03 28 45.7	
	comp=Z,653nm,21.0s						
BJT	**Baijiatuau**	**110.34**	**327**	IAMs_20	IAMs_20	03 21 40.8	
	comp=Z,986nm,22.0s						
KARP	**Karpathos**	**110.62**	**40**	IAMs_20	IAMs_20	03 30 19.1	
	comp=Z,1μm,21.0s						
SNAA	**Sanae**	**110.96**	**161**	IAMs_20	IAMs_20	03 20 48.6	
	comp=Z,1μm,22.0s						
SOC	**Sochi**	**111.12**	**26**	*i* PKIKP	PKiKP	02 41 31.3	-8.5
SOC				*e*PPP	PPP	02 44 40.5	
SOC				*e*PS	**PS**	**02 51 46.8**	**-2.6**
SOC				*e*SS	SS	02 57 48.7	-0.5
SOC				MLR	MLR		
	comp=Z,2μm,20.0s						
HHC	**Hu-ho-hao-te**	**112.00**	**330**	*e*PKP	**PKiKP**	**02 41 37.3**	**-4.4**
HHC				LR	LR		
	comp=Z,620nm,18.4s						
HHC				LR	LR		
	comp=Z,840nm,17.1s						
HHC				LR	LR		
	comp=Z,1μm,18.4s						
KIV	**Kislovodsk**	**112.01**	**24**	IAMs_20	IAMs_20	03 29 16.8	
	comp=Z,1μm,21.0s						
BTO	**Baotou**	**112.92**	**331**	*e*PKP	**PKiKP**	**02 41 41.2**	**-2.3**
BTO				LR	LR		
	comp=Z,2μm,18.6s						
BTO				LR	LR		
	comp=Z,2μm,17.3s						
NJ2	**Nanjing**	**114.42**	**319**	*e*PKP	PKPdf	02 41 46.6	+0.2
MAK	**Makhachkala**	**114.64**	**21**	*e*P	**Pdif**	**02 37 57.9**	**+1.5**
MAK				*i*		02 41 45.4	
MAK				*e*		02 42 43.5	
MAK				*e*PPP	PPP	02 45 04.9	
MAK				*e*SSS	SSS	03 02 53.4	
MAK				pmax	pmax		
	comp=Z,167nm,1.3s						
CSS	**Mathiatis**	**114.64**	**36**	IAMs_20	IAMs_20	03 32 23.1	
	comp=Z,958nm,21.0s						
MAKZ	**Makanchi**	**115.19**	**354**	IAMs_20	IAMs_20	03 37 39.6	
	comp=Z,1μm,20.0s						
NVL	**N'lazarevskaya**	**115.78**	**161**	*e*PKIKP	PKiKP	02 41 29.5	-18
NVL				*e*		02 48 34.5	
NVL				MLR	MLR		
	comp=Z,847nm,18.0s						
WMQ	**Urumqi**	**117.33**	**349**	*e*PKP	**PKiKP**	**02 41 51.7**	**-0.1**
WMQ				LR	LR		
	comp=Z,1μm,17.7s						
WMQ				LR	LR		
	comp=Z,1μm,16.9s						
WMQ				LR	LR		
	comp=Z,1μm,18.1s						
STKA	**Stephens Creek**	**118.16**	**243**	PKP	**PKiKP**	**02 41 54.4**	**+0.8**
	comp=Z,0.8nm,0.2s,baz=355,slow=6.3,SNR=4.3						
YULB	**Yu-li**	**118.33**	**310**	IAMs_20	IAMs_20	03 22 00.8	
	comp=Z,1μm,22.0s						
GHAJ	**Ghor Haditha**	**118.59**	**37**	IAMs_20	IAMs_20	03 35 31.8	
	comp=Z,613nm,20.0s						
TWG	**Pinlang**	**118.84**	**310**	IAMs_20	IAMs_20	03 38 36.3	
	comp=Z,592nm,19.0s						
TPUB	**Ta-pu**	**118.87**	**310**	IAMs_20	IAMs_20	03 22 19.1	
	comp=Z,1μm,21.0s						
FAKI	**Fak Fak**	**121.23**	**278**	IAMs_20	IAMs_20	03 24 33.5	
	comp=Z,1μm,20.0s						
ENH	**Enshi**	**121.25**	**324**	IAMs_20	IAMs_20	03 37 06.7	
	comp=Z,678nm,20.0s						
WRA	**Warramunga Arr**	**123.33**	**258**	PKP	**PKPdf**	**02 42 02.3**	**-1.6**
	comp=Z,2.1nm,0.9s,baz=87,slow=1.7,SNR=7.8						
HKPS	**Hong Kong Po S**	**124.11**	**314**	IAMs_20	IAMs_20	03 26 12.1	
	comp=Z,1μm,22.0s						
ASAR	**Alice Springs**	**124.21**	**253**	PKP	**PKPdf**	**02 42 03.7**	**-1.8**
	comp=Z,1.7nm,0.9s,baz=74,slow=2.5,SNR=11						
TSUM	**Tsumeb**	**126.53**	**101**	IAMs_20	IAMs_20	03 34 46.0	
	comp=Z,1μm,20.0s						
PZH	**PanZhiHua**	**128.36**	**328**	PKP	**PKPdf**	**02 42 12.6**	**-0.9**
PZH				AMB	AMB		
	comp=Z,120nm,7.8s						
PZH				LR	LR		
	comp=Z,470nm,19.0s						
PZH				LR	LR		
	comp=Z,710nm,18.2s						
PZH				LR	LR		
	comp=Z,890nm,21.6s						
KMI	**Kunming**	**128.97**	**326**	SS	SS	03 01 34.6	-5.3
KMI				LR	LR		
	comp=N,530nm,21.2s						
KMI				LR	LR		
	comp=E,510nm,22.1s						
KMI				LR	LR		
	comp=Z,640nm,22.1s						
QIZ	**Qiongzhong**	**129.25**	**315**	IAMs_20	IAMs_20	03 31 26.3	
	comp=Z,537nm,21.0s						
QIZ	**Qiongzhong**	**129.25**	**315**	PKP	**PKPdf**	**02 42 12.0**	**-3.2**
QIZ				AMB	AMB		
	comp=Z,230nm,8.8s						
QIZ				LR	LR		
	comp=Z,540nm,21.1s						
QIZ				LR	LR		
	comp=Z,740nm,26.3s						
QIZ				LR	LR		
	comp=Z,1μm,38.2s						
MAW	**Mawson**	**129.81**	**174**	PKP	**PKPdf**	**02 42 13.3**	**-1.4**
	comp=Z,3.2nm,0.9s,baz=198,slow=9.6,SNR=3.3						
LSA	**Lhasa**	**129.91**	**341**	IAMs_20	IAMs_20	03 42 38.6	
	comp=Z,646nm,20.0s						
RAYN	**Ar Rayn**	**130.19**	**35**	IAMs_20	IAMs_20	03 40 23.5	
	comp=Z,696nm,21.0s						
UOSS	**Minazif**	**133.93**	**23**	IAMs_20	IAMs_20	03 44 48.1	
	comp=Z,852nm,22.0s						
MBAR	**Mbarara**	**133.98**	**73**	IAMs_20	IAMs_20	03 47 48.6	
	comp=Z,839nm,20.0s						
BOSA	**Boshof**	**134.08**	**113**	PKP	**PKPdf**	**02 42 23.6**	**-0.6**
	comp=Z,4.5nm,1.0s,baz=240,slow=3.2,SNR=5.2						
LSZ	**Lusaka**	**135.92**	**94**	IAMs_20	IAMs_20	03 42 06.9	
	comp=Z,836nm,20.0s						
FURI	**Furi**	**135.96**	**56**	IAMs_20	IAMs_20	03 53 21.7	
	comp=Z,609nm,20.0s						
CHTO	**Chiang Mai**	**136.13**	**325**	IAMs_20	IAMs_20	03 51 34.3	
	comp=Z,730nm,21.0s						
LODK	**Lodwar**	**136.25**	**65**	IAMs_20	IAMs_20	03 46 43.6	
	comp=Z,706nm,19.0s						
CMAR	**Chiang Mai Arr**	**136.42**	**325**	PKP	**PKPdf**	**02 42 28.4**	**-0.4**
	comp=Z,0.7nm,0.4s,baz=355,slow=3.9,SNR=1.9						
ATD	**Arta Tunnel**	**137.41**	**49**	IAMs_20	IAMs_20	03 42 08.0	
	comp=Z,561nm,21.0s						
KSM	**Kuching**	**139.55**	**295**	IAMs_20	IAMs_20	03 45 57.2	
	comp=Z,776nm,18.0s						
KMBO	**Kilima Mbogo**	**140.07**	**69**	IAMs_20	IAMs_20	03 47 02.7	
	comp=Z,1μm,20.0s						
KIBK	**Kibwezi**	**141.32**	**71**	IAMs_20	IAMs_20	03 48 49.1	
	comp=Z,839nm,19.0s						
HYBB	**Hyderabad (bro**	**144.62**	**353**	*e*PKPdf	**PKPdf**	**02 42 43.2**	**-0.4**
HYBB				*e*PKiKP	**PKiKP**	**02 42 48.5**	**+1.2**
HYBB				*e*PP	**PP**	**02 45 59.2**	**+1.1**
MSEY	**Mahe Island**	**157.46**	**56**	IAMs_20	IAMs_20	04 02 32.5	
	comp=Z,878nm,21.0s						

IDC ***02*** *02:29:31.6±1.5, 6°.18S×154°.64E, h412km±16km, mb3.6/14, mbtmp4.3/15, Error ellipse: s-maj=17.5km s-min=9.7km az=81.0*

NEIC ***02*** *02:29:32.1±0.8, 6°.2S±0°.1×154°.58E±0°.04, h417km±8km, mb4.1/14, Error ellipse: s-maj=15.6km s-min=6.5km az=177.0*

ISC 02 02:29:30.4±0.5**, 6°.18S**±0°.07×**154°.7E**±0°.1**, h400km, n40, σ0s.91**/42**, mb4.0**/20**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.26**	**305**	P	**Pn**	**02 30 37.6**	**+1.8**
	779nm,0.5s,baz=208,slow=1.0,SNR=126						
PATS	**Pohnpei**	**13.42**	**16**	P	**P**	**02 32 27.0**	**+1.3**
CTA	**Charters Tower**	**16.09**	**210**	P	**P**	**02 32 56.5**	**+1.9**
	5.4nm,0.7s,baz=38,slow=7.6,SNR=5.4						
DZM	**Mont Dzumac**	**19.45**	**146**	P	**P**	**02 33 30.7**	**+0.9**
	8.4nm,0.8s,baz=209,slow=9.4,SNR=8.4						
DZM	**Mont Dzumac**	**19.45**	**146**	P	**P**	**02 33 30.5**	**+0.6**
WB2	**Warramunga Arr**	**24.05**	**233**	P	**P**	**02 34 11.4**	**-0.4**
WB2				IAmb	IAmb	02 34 14.3	
	comp=Z,3.5nm,0.8s						
WRA	**Warramunga Arr**	**24.06**	**233**	P	**P**	**02 34 11.4**	**-0.5**
	comp=Z,1.5nm,0.5s,baz=61,slow=9.0,SNR=25						
	comp=Z,1.5nm,0.5s						
WRA	**Warramunga Arr**	**24.06**	**233**	P	**P**	**02 34 10.6**	**-1.3**
AS31	**Alice Springs**	**26.51**	**227**		**P**	**02 34 32.6**	**-1.0**
AS31				IAmb	IAmb	02 34 33.1	
	comp=Z,2.3nm,0.4s						
ASAR	**Alice Springs**	**26.52**	**227**	P	**P**	**02 34 32.7**	**-0.9**
	comp=Z,3.3nm,0.4s,baz=58,slow=9.1,SNR=61						
ASAR				PcP	**PcP**	**02 37 46.4**	**0.0**
	comp=Z,0.4nm,0.6s,baz=56,slow=3.2,SNR=4.9						
	comp=Z,3.3nm,0.4s						
ASAR	**Alice Springs**	**26.52**	**227**	P	**P**	**02 34 32.3**	**-1.3**
STKA	**Stephens Creek**	**28.36**	**204**	P	**P**	**02 34 49.2**	**-0.6**
	comp=Z,1.7nm,0.4s,baz=357,slow=8.1,SNR=11						
	comp=Z,1.7nm,0.4s						
STKA	**Stephens Creek**	**28.36**	**204**	P	**P**	**02 34 49.5**	**-0.3**
RPZ	**Rata Peaks**	**40.05**	**162**	P	**P**	**02 36 29.3**	**+0.6**
	comp=Z,8.3nm,0.6s,baz=350,slow=1.9,SNR=7.0						
	comp=Z,8.3nm,0.6s						
RPZ	**Rata Peaks**	**40.05**	**162**	P	**P**	**02 36 29.0**	**+0.3**
RPZ				IAmb	IAmb	02 36 33.6	
	comp=Z,8.7nm,0.8s						
MJAR	**Matsushiro Arr**	**45.22**	**341**	P	**P**	**02 37 08.5**	**-1.3**
	comp=Z,3.8nm,0.5s,baz=168,slow=8.5,SNR=10						
	comp=Z,3.8nm,0.5s						
MJAR	**Matsushiro Arr**	**45.22**	**341**	P	**P**	**02 37 08.9**	**-0.9**
MJAR				IAmb	IAmb	02 37 09.6	
	comp=Z,2.7nm,0.7s						
KSRS	**Korea Array**	**50.09**	**332**	P	**P**	**02 37 46.5**	**-0.1**
	comp=Z,1.3nm,0.8s,baz=152,slow=9.0,SNR=5.3						
	comp=Z,1.3nm,0.8s						
PETK	**Petropavlovsk-**	**59.11**	**2**	P	**P**	**02 38 50.6**	**+0.2**
	comp=Z,4.3nm,0.7s,baz=168,slow=7.6,SNR=10						
	comp=Z,4.3nm,0.7s						
PETK	**Petropavlovsk-**	**59.11**	**2**	P	**P**	**02 38 49.6**	**-0.7**
CMAR	**Chiang Mai Arr**	**60.18**	**295**	P	**P**	**02 38 58.8**	**+0.6**
	comp=Z,2.4nm,0.7s,baz=118,slow=5.2,SNR=13						
	comp=Z,2.4nm,0.7s						
SONM	**Songino Array**	**68.50**	**327**	P	**P**	**02 39 51.7**	**+0.6**
	comp=Z,1.4nm,0.8s,baz=135,slow=6.3,SNR=8.1						
	comp=Z,1.4nm,0.8s						
VNDA	**Vanda**	**71.40**	**178**	P	**P**	**02 40 08.6**	**+0.7**
	comp=Z,1.4nm,0.7s,baz=328,slow=7.3,SNR=9.4						
	comp=Z,1.4nm,0.7s						
BILL	**Bilibino**	**74.49**	**4**	P	**P**	**02 40 26.2**	**+0.3**
BILL				IAmb	IAmb	02 40 27.5	
	comp=Z,7.8nm,1.0s						
MK31	**Makanchi Array**	**82.61**	**319**	P	**P**	**02 41 09.7**	**-0.4**
MKAR	**Makanchi Array**	**82.61**	**319**	P	**P**	**02 41 10.3**	**+0.2**
	comp=Z,6.6nm,0.7s,baz=102,slow=6.0,SNR=65						
	comp=Z,6.6nm,0.7s						
MKAR	**Makanchi Array**	**82.61**	**319**	P	**P**	**02 41 10.2**	**0.0**
ILAR	**Eielson Array**	**82.72**	**22**	P	**P**	**02 41 09.4**	**-0.9**
	comp=Z,0.7nm,0.7s,baz=234,slow=6.0,SNR=4.5						
	comp=Z,0.7nm,0.7s						
ILAR	**Eielson Array**	**82.72**	**22**	P	**P**	**02 41 09.9**	**-0.4**
MAKZ	**Makanchi**	**82.82**	**319**	P	**P**	**02 41 11.4**	**+0.1**
ZALV	**Zalesovo Beam**	**83.35**	**326**	P	**P**	**02 41 12.6**	**-1.1**
	comp=Z,2.9nm,0.6s,baz=109,slow=6.3,SNR=10						
	comp=Z,2.9nm,0.6s						
ZALV	**Zalesovo Beam**	**83.35**	**326**	P	**P**	**02 41 13.1**	**-0.6**
QSPA	**South Pole Qui**	**83.79**	**180**	P	**P**	**02 41 15.8**	**0.0**
QSPA				IAmb	IAmb	02 41 16.7	
	comp=Z,4.8nm,0.8s						
KDJ	**Kajisay**	**84.94**	**313**	P	**P**	**02 41 21.0**	**-1.1**
KDJ				IAmb	IAmb	02 41 23.8	
	comp=Z,4.2nm,1.1s						
MAW	**Mawson**	**85.04**	**203**	P	**P**	**02 41 21.3**	**-0.5**
	comp=Z,1.6nm,0.4s,baz=90,slow=4.8,SNR=12						
	comp=Z,1.6nm,0.4s						
MAW	**Mawson**	**85.04**	**203**	P	**P**	**02 41 21.8**	**0.0**
BOOM	**Boomskoye usch**	**85.92**	**313**	P	**P**	**02 41 26.6**	**-0.3**
BOOM				IAmb	IAmb	02 41 28.6	
	comp=Z,1.7nm,0.7s						
BDFB	**Brasilia**	**148.75**	**134**	PKPbc	**PKPbc**	**02 48 32.3**	**-0.2**
	comp=Z,2.7nm,0.6s,baz=331,slow=3.0,SNR=5.9						
BDFB	**Brasilia**	**148.75**	**134**	PKPdf	**PKPdf**	**02 48 25.9**	**-2.3**
TORD	**Torodi Ar. Bea**	**152.53**	**287**	PKPbc	**PKPbc**	**02 48 40.0**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=53,slow=2.1,SNR=10						
TORD				PKPab	**PKPab**	**02 48 52.3**	**-1.1**
	comp=Z,0.3nm,0.7s,baz=81,slow=3.8,SNR=5.0						

MAN 02 02:38:22.9, 13°.59N×120°.60E, h31km, mb4.1, ML2.9, MS2.5, 2C-2D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.35**	**104**⇓	*e*P	Pn	02 38 32.2	+1.2
PGP				*i* S		02 38 40.1	
LUBP	**Lubang**	**0.37**	**293**⇓	*i*P	Pn	02 38 32.7	+1.5
LUBP				*i* S		02 38 40.4	
MACP	**Maragondon, Ca**	**0.68**	**10**⇑	*e*P	Pb	02 38 36.8	+1.3
SJMP	**San Jose**	**1.23**	**156**⇑	*e*P	Pn	02 38 43.8	+0.8
SJMP				*e*S		02 38 59.8	

NEIC ***02*** *02:43:06.9±1.8, 18°.20N±0°.09×105°.57W±0°.09, h10km±1km, mb4.7/313, Md4.7/13(MEX), Error ellipse: s-maj=17.6km s-min=11.3km az=225.0*

GCMT ***02*** *02:43:06.9±0.5, 18°.12N±0°.02×105°.90W±0°.02, h13km±2km, MW5.1/89, Moment Tensor Solution. s4,c5; s89,c118; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.91±.21; $M_{\theta\theta}$0.34±.19; $M_{\phi\phi}$0.56±.21; $M_{r\theta}$0.99±.57; $M_{\theta\phi}$-4.59±.20; $M_{\phi r}$2.08±.64; Best double couple: $M_0$5.19600×10^{16} NP1:ϕ_s274.00000°, δ65.00000°, λ-166.00000°. NP2: ϕ_s178.00000°, δ77.00000°, λ-25.00000°. Principal axes: T 5.1580, Plg8.0000°, Azm228.0000°; N 0.0750, Plg62.0000°, Azm333.0000°; P -5.2340, Plg27.0000°, Azm133.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MEX ***02*** *02:43:10.7, 18°.34N×105°.52W, h10km, MD4.7*

IDC ***02*** *02:43:12.2±4.4, 18°.12N×105°.70W, h64km±37km, mb4.0/14, mbtmp4.2/18, ML3.6/4, MS4.5/27, Error ellipse: s-maj=40.7km s-min=12.9km az=52.0*

ISC 02 02:43:09.8±2.0**, 18°.26N**±0°.06×**105°.53W**±0°.05**, h33km**±10km**, n418, σ1s.31**/314**, mb4.7**/103**, MS4.6**/27**, 1D, Off coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CJM	**Chamela**	**1.32**	**20**	*i* P	**Pn**	**02 43 29.0**	**-3.0**
CJM				*i* S	**Sn**	**02 43 45.0**	**-3.5**
CDAR	**Ciudad de Arme**	**1.60**	**64**	*e*P	**Pn**	**02 43 35.1**	**-0.7**
CDAR				*e*S	**Sn**	**02 43 57.0**	**+1.8**
R15V		**1.73**	**58**		**Pn**	**02 43 36.1**	**-1.5**
R15V		**1.73**	**58**	*e*P	**Pn**	**02 43 36.1**	**-1.5**
R15V				*e*S	**Sb**	**02 44 01.4**	**-1.0**
COIG	**Colima**	**1.97**	**62**	*e*P	**Pn**	**02 43 40.1**	**-1.0**
COIG				*e*S	**Sb**	**02 44 08.7**	**-0.8**
MNGA	**Volcan de Coli**	**2.17**	**56**	*e*P	**Pn**	**02 43 43.2**	**-0.7**
MNGA				*e*S	**Sb**	**02 44 16.3**	**+0.9**
EZ5V		**2.20**	**56**		**Pn**	**02 43 43.9**	**-0.4**
EZ5V		**2.20**	**56**	*e*P	**Pn**	**02 43 43.9**	**-0.4**
EZ5V				*i* S	**Sn**	**02 44 09.9**	**-0.6**
INCO	**Volcan de Coli**	**2.22**	**55**	*e*P	**Pn**	**02 43 43.9**	**-0.8**
INCO				*i* S	**Sn**	**02 44 09.0**	**-2.3**
JUBC	**Volcan de Coli**	**2.24**	**56**	*e*P	**Pn**	**02 43 44.3**	**-0.6**
JUBC				*i* S	**Sb**	**02 44 15.6**	**-1.7**
MOIG	**Morelia**	**4.35**	**70**	Pn	**Pn**	**02 44 13.2**	**-0.6**
ARIG	**Puente Sto Nin**	**4.93**	**89**	*e*P	**Pn**	**02 44 23.0**	**+1.3**
ARIG				*i* S	**Sn**	**02 45 16.4**	**-1.2**
H06E1	**SOCORRO T-PHAS**	**5.14**	**277**	P	Pn	02 44 30.7	+6.1
	SNR=10						
H06E1				T	T	02 49 12.7	
	SNR=1630						
H06S1	**SOCORRO T**	**5.17**	**276**	P	Pn	02 44 30.4	+5.5
H06S1				T	T	02 49 12.8	
	SNR=70						
H06N1	**SOCORRO T-PHAS**	**5.21**	**278**	T	T	02 49 14.8	
	SNR=104						
ZAIG	**Zacatecas**	**5.28**	**31**	Pn	**Pn**	**02 44 26.9**	**+0.2**
PLIG	**Platanillo**	**5.73**	**88**	*e*P	**Pn**	**02 44 33.6**	**+0.8**
MGIG	**Malinaltepec**	**6.65**	**98**	*e*P	**Pn**	**02 44 47.6**	**+2.2**
TLIG	**Tlapa**	**6.67**	**95**	Pn	**Pn**	**02 44 45.7**	**0.0**
LPIG	**La Paz**	**7.33**	**323**	LR	LR	02 47 04.1	
	comp=Z,6μm,19.1s,baz=158,slow=32						
CMIG	**Matias Romero**	**10.22**	**95**	P	**Pn**	**02 45 36.4**	**+2.2**
	0.3nm,0.3s,baz=297,slow=12,SNR=11						
CMIG				LR	LR	02 49 29.4	
	comp=Z,2μm,18.8s,baz=350,slow=36						
	11nm,1.0s						
TX32	**Lajitas Array**	**11.16**	**8**		**Pn**	**02 45 46.8**	**-0.4**
TXAR	**Lajitas Array**	**11.16**	**8**	P	**Pn**	**02 45 51.8**	**+4.6**
	0.1nm,0.3s,baz=183,slow=12,SNR=17						
	4.3nm,0.8s						
TXAR	**Lajitas Array**	**11.16**	**8**	Pn	**Pn**	**02 45 45.9**	**-1.3**
833A	**Chaparral WMA,**	**11.50**	**28**	Pn	**Pn**	**02 45 51.3**	**-0.5**
833A	**Chaparral WMA,**	**11.50**	**28**	P	Pn	02 45 56.8	+5.1
	baz=211,SNR=9.2						
CCIG	**Comitan**	**12.95**	**97**	Pn	**Pn**	**02 46 11.1**	**-0.7**
JCT	**Junction City**	**13.24**	**22**	Pn	**Pn**	**02 46 17.3**	**+1.7**
JCT	**Junction City**	**13.24**	**22**	P	**Pn**	**02 46 19.9**	**+4.3**
	baz=205,SNR=10						
MNTX	**Cornudas Mount**	**13.39**	**1**	Pn	**Pn**	**02 46 19.0**	**+1.4**
MNTX	**Cornudas Mount**	**13.39**	**1**	P	**Pn**	**02 46 20.5**	**+3.0**
	baz=182,SNR=7.9						
319A	**Douglas**	**13.50**	**346**	Pn	**Pn**	**02 46 20.8**	**+1.6**
121A	**Cookes Peak, D**	**14.36**	**352**	Pn	**Pn**	**02 46 32.9**	**+1.9**
121A	**Cookes Peak, D**	**14.36**	**352**	P	**Pn**	**02 46 33.5**	**+2.5**
	baz=173						
435B	**Jarrell**	**14.41**	**29**		**Pn**	**02 46 33.2**	**+1.7**
435B	**Jarrell**	**14.41**	**29**	P	**Pn**	**02 46 34.3**	**+2.8**
	baz=212						
HKT	**Hockley**	**14.62**	**35**	Pn	**Pn**	**02 46 37.0**	**+2.8**
TUC	**Tucson**	**14.77**	**342**	Pn	**Pn**	**02 46 36.9**	**+0.3**
TUC	**Tucson**	**14.77**	**342**	P	**Pn**	**02 46 37.2**	**+0.7**
	baz=162						
214A	**Organ Pipe Nat**	**15.14**	**336**	Pn	**Pn**	**02 46 42.0**	**+0.6**
214A				IAmb	IAmb	02 46 59.9	
	comp=Z,31nm,1.2s						
214A	**Organ Pipe Nat**	**15.14**	**336**	P	**Pn**	**02 46 42.3**	**+0.9**
	baz=154,SNR=8.5						
ABTX	**Abilene, Hawle**	**15.26**	**19**	P	**P**	**02 46 45.9**	**-1.6**
	baz=202,SNR=9.9						
WHTX	**Lake Whitney,**	**15.50**	**27**	P	**P**	**02 46 48.3**	**-1.7**
	baz=210,SNR=6.4						
CRNM	**Carthage**	**15.67**	**356**	Pn	**Pn**	**02 46 50.0**	**+1.6**
MSTX	**Muleshoe**	**15.84**	**8**	P	**P**	**02 46 52.8**	**-1.2**
	baz=190,SNR=36						
BNM	**Barren Site**	**15.86**	**357**	Pn	**Pn**	**02 46 50.4**	**-0.6**
LENM	**Lemitar**	**15.90**	**356**	Pn	**Pn**	**02 46 49.9**	**-1.4**
ESQI	**Esquipulas**	**15.96**	**101**	Pn	**Pn**	**02 46 51.2**	**-1.0**
ESQI				IAmb	IAmb	02 47 13.3	
	comp=Z,83nm,1.2s						
113A	**Mohawk Valley,**	**16.24**	**334**	Pn	**Pn**	**02 46 54.1**	**-1.4**
237A	**Washetta, Mont**	**16.26**	**31**	Pn	**Pn**	**02 46 56.9**	**+1.1**
237A				IAmb	IAmb	02 47 03.3	
	comp=Z,78nm,1.2s						
ANMO	**Albuquerque**	**16.64**	**357**	P	**P**	**02 47 04.6**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=159,slow=14,SNR=7.9						
ANMO				LR	LR	02 54 18.3	
	comp=Z,352nm,20.2s,baz=146,slow=40						
	comp=Z,1.1nm,0.6s						
ANMO	**Albuquerque**	**16.64**	**357**	Pn	**Pn**	**02 46 59.4**	**-1.4**
ANMO	**Albuquerque**	**16.64**	**357**	P	**P**	**02 47 02.5**	**-0.5**
	baz=178						
NATX	**Nacogdoches**	**16.65**	**34**	P	**P**	**02 47 03.4**	**+0.5**
	baz=219						
X18A	**Snowflake**	**16.68**	**347**	Pn	**Pn**	**02 46 59.2**	**-2.1**
Z35A	**Perchaven, San**	**16.75**	**25**	Pn	**Pn**	**02 47 01.8**	**-0.1**
Z35A				IAmb	IAmb	02 47 08.8	
	comp=Z,115nm,1.2s						
AMTX	**Amarillo**	**16.91**	**11**	Pn	**Pn**	**02 47 04.2**	**+0.1**
AMTX				IAmb	IAmb	02 47 35.2	
	comp=Z,82nm,1.5s						
AMTX	**Amarillo**	**16.91**	**11**	P	**P**	**02 47 06.1**	**+0.2**
	baz=193						
GLA	**Glamis**	**16.93**	**332**	P	**Pn**	**02 47 04.0**	**-0.4**
	baz=150						
X16A	**Lo Mia Camp, P**	**16.94**	**343**	Pn	**Pn**	**02 47 04.1**	**-0.4**
Y14A	**Wickenburg**	**16.99**	**338**	P	**Pn**	**02 47 04.6**	**-0.4**
YUH	**Yuha Desert**	**17.11**	**329**	Pn	**Pn**	**02 47 05.0**	**-1.5**
IKP	**In-Ko-Pah, Jac**	**17.21**	**328**	P	**Pn**	**02 47 07.5**	**-0.3**
	baz=145,SNR=5.2						
W18A	**Petrified Fore**	**17.21**	**348**		**P**	**02 47 09.4**	**+0.1**
W18A	**Petrified Fore**	**17.21**	**348**	P	**P**	**02 47 09.3**	**+0.1**
	baz=168						
CBX	**Cerro Bola**	**17.22**	**326**	Pn	**Pn**	**02 47 07.6**	**-0.5**
SWSC	**Sam W. Stewart**	**17.30**	**330**	P	**Pn**	**02 47 08.8**	**0.0**
	baz=147						
TKX	**Tecate**	**17.39**	**327**		**P**	**02 47 10.6**	**-0.5**
BLYC	**Blythe**	**17.40**	**334**		**P**	**02 47 10.8**	**-0.4**

WMOK **Wichita Mounta** 17.48 19 Pn 02 47 11.3 +0.1
WMOK **Wichita Mounta** 17.48 19 P P 02 47 12.5 +0.4
baz=202,SNR=11
BAR **Barrett** 17.52 327 P 02 47 12.0 -0.5
MONP2 **Monument Peak** 17.56 328 P P 02 47 12.7 -0.4
baz=145,SNR=8.9
X34A **Smith Ranch, M** 17.67 21 P 02 47 14.2 +0.1
Z38A **Mt. Pleasant** 17.69 30 P 02 47 14.4 +0.1
Z38A IAmb IAmb 02 47 19.4
comp=Z,71nm,1.4s
BC3 **Big Chuckawall** 17.72 332 P Pn 02 47 14.0 -0.3
baz=149,SNR=7.4
PDMCI **Parker Dam,Lak** 17.73 336 P P 02 47 15.0 +0.2
baz=153
109C **Camp Elliot, M** 17.90 327 P Pn 02 47 15.3 -1.0
baz=143
WUAZ **Wupatki** 17.96 344 Pn P 02 47 17.4 -0.1
WUAZ Pn 02 47 18.2 +1.1
WUAZ **Wupatki** 17.96 344 P P 02 47 18.9 +1.5
baz=163,SNR=8.1
IRM **Iron Mountain** 18.02 333 P P 02 47 18.0 0.0
baz=150,SNR=6.7
TPFO **Pinon Flats** 18.15 329 P P 02 47 20.5 +1.0
baz=146,SNR=6.0
PFO **Pinyon Flats O** 18.16 329 P P 02 47 20.4 +0.8
comp=Z,0.1nm,0.3s,baz=151,slow=14,SNR=8.8
PFO LR LR 02 52 43.5
comp=Z,1µm,21.6s,baz=143,slow=31
comp=Z,7.3nm,1.0s
PFO **Pinyon Flats O** 18.16 329 P Pn 02 47 19.2 -0.4
PFO **Pinyon Flats O** 18.16 329 P P 02 47 21.1 +1.4
baz=146,SNR=6.2
BELC **Belle Mtn. Jos** 18.26 331 P Pn 02 47 21.7 +0.8
baz=148,SNR=11
W13A **Hualapai Mount** 18.35 338 Pn 02 47 22.6 +0.6
FNO **Franklin** 18.41 22 P 02 47 22.1 -0.2
MURC **Murrieta** 18.51 328 P Pn 02 47 24.4 +0.6
baz=144
X37A **Clayton** 18.62 27 P 02 47 24.9 +0.3
X37A IAmb IAmb 02 47 28.7
comp=Z,84nm,1.2s
ELS **Elsinore Mount** 18.67 328 P Pn 02 47 25.5 -0.2
344A **Westbrook Farm** 18.76 43 P P 02 47 25.1 -1.1
344A IAmb IAmb 02 47 38.0
comp=Z,68nm,1.2s
GMRC **Granite Mounta** 18.77 333 P Pn 02 47 27.3 +0.3
baz=150,SNR=9.7
Z41A **Richland Creek** 18.80 35 P P 02 47 26.7 +0.1
Z41A IAmb IAmb 02 47 31.1
comp=Z,70nm,1.3s
Z41A **Richland Creek** 18.80 35 P Pn 02 47 29.1 +1.8
baz=221,SNR=7.0
T25A **Trinidad** 18.84 3 Pn 02 47 28.3 +0.4
T25A **Trinidad** 18.84 3 P Pn 02 47 30.8 +2.9
baz=184,SNR=8.0
U32A **Winter Ranch,** 18.95 16 Pn 02 47 29.4 +0.3
U32A IAmb IAmb 02 47 38.8
comp=Z,53nm,1.1s
WLAR **White Oak Lake** 18.97 33 P Pn 02 47 29.2 0.0
WLAR IAmb IAmb 02 47 38.8
comp=Z,66nm,1.1s
U15A **North Rim** 19.06 343 Pn 02 47 30.2 -0.4
MVCO **Mesa Verde** 19.06 353 Pn 02 47 30.5 -0.1
MVCO **Mesa Verde** 19.06 353 P Pn 02 47 33.0 +2.4
baz=172,SNR=9.2
HEC **Hector,Ludlow** 19.10 332 P Pn 02 47 30.8 -0.2
baz=148,SNR=12
143A **Socs Landing,** 19.20 39 P P 02 47 31.2 +0.3
143A IAmb IAmb 02 47 41.5
comp=Z,70nm,1.4s
BFSC **Mount Baldy Ra** 19.25 328 P Pn 02 47 32.9 0.0
baz=144,SNR=6.0
VBMS **Vicksburg** 19.41 41 P P 02 47 33.9 +0.7
VBMS IAmb IAmb 02 47 39.5
comp=Z,79nm,1.2s
VBMS **Vicksburg** 19.41 41 P Pn 02 47 37.5 +3.0
baz=228
MIAR **Mount Ida** 19.41 31 P Pn 02 47 34.2 -0.4
MIAR **Mount Ida** 19.41 31 P Pn 02 47 36.3 +1.7
baz=217
SDCO **Great Sand Dun** 19.42 0 P P 02 47 34.2 +0.6
SDCO IAmb IAmb 02 47 42.0
comp=Z,37nm,1.3s
SDCO **Great Sand Dun** 19.42 0 P Pn 02 47 37.1 +2.2
baz=181,SNR=20
TUQ **Turquoise Moun** 19.44 334 P Pn 02 47 34.9 -0.1
baz=150,SNR=11
S22A **4UR Ranch, Cre** 19.45 357 P 02 47 34.8 +0.7
S22A IAmb IAmb 02 47 44.3
comp=Z,54nm,1.4s
S22A **4UR Ranch, Cre** 19.45 357 P Pn 02 47 37.6 +2.3
baz=177,SNR=32
TUL1 **Leonard** 19.59 24 P 02 47 35.8 +0.6
TUL1 **Leonard** 19.59 24 P Pn 02 47 37.4 +0.8
baz=209,SNR=14
GSC **Goldstone, Bar** 19.71 332 P Pn 02 47 37.5 -0.8
baz=148,SNR=7.4
X40A **Basin Creek Fa** 19.74 33 P P 02 47 36.7 -0.1
X40A **Basin Creek Fa** 19.74 33 P Pn 02 47 38.8 +0.4
baz=218
W39A **Magazine** 19.84 29 P P 02 47 37.7 -0.2
W39A IAmb IAmb 02 47 42.5
comp=Z,61nm,1.4s
W39A **Magazine** 19.84 29 P Pn 02 47 40.8 +1.2
baz=215,SNR=11
CCAR **Cane Creek** 19.87 36 P P 02 47 37.1 -1.1
CCAR IAmb IAmb 02 47 54.5
comp=Z,68nm,1.2s
LCMT **Little Creek M** 19.88 342 P P 02 47 38.3 -0.2
EDW2 **Edwards Air Fo** 19.93 329 P P 02 47 38.9 -0.1
baz=144
SHOC **Shoshone, Teco** 19.98 334 P P 02 47 39.7 +0.2
baz=150
BOAB **BOACO BROADBA** 20.00 104 P P 02 47 39.9 0.0
PKCU **Pink Cliffs** 20.02 344 P P 02 47 40.7 +0.4
PKCU IAmb IAmb 02 48 03.8
comp=Z,41nm,1.3s
PV13 **Radium Mtn., P** 20.04 352 P P 02 47 38.6 -1.7
SHPR **Sheep Range** 20.07 337 P P 02 47 40.1 -0.4
PV15 **Paradox Valley** 20.18 353 P P 02 47 42.3 +0.4
PV15 IAmb IAmb 02 47 54.5
comp=Z,56nm,1.2s
PV11 **David Mesa, Pa** 20.18 352 P P 02 47 40.8 -1.0
PV11 IAmb IAmb 02 48 09.2
comp=Z,54nm,1.2s
UALR **University of** 20.21 33 P P 02 47 41.5 -0.5
UALR IAmb IAmb 02 47 51.0
comp=Z,53nm,1.3s
T35A **Sooner Cattle** 20.21 21 P 02 47 41.2 -0.9
T35A IAmb IAmb 02 47 45.1
comp=Z,61nm,1.1s
LRMC **Laurel Mtn Rad** 20.26 330 P P 02 47 43.3 +0.7
baz=146
PV10 **Paradox Valley** 20.28 352 P P 02 47 42.0 -1.0
PV10 IAmb IAmb 02 48 01.3
comp=Z,69nm,1.5s
QSM **Queen of Sheba** 20.29 333 P P 02 47 42.9 0.0
PV07 **Paradox Valley** 20.29 353 P P 02 47 43.4 +0.3
PV07 IAmb IAmb 02 47 56.9
comp=Z,33nm,1.2s
PV23 **Carpenter Ridg** 20.35 352 P P 02 47 43.1 -0.7
PV23 IAmb IAmb 02 47 57.9
comp=Z,31nm,1.1s
SZCU **Shurtz Canyon** 20.38 343 P P 02 47 43.4 -0.6
GWY **Greenwater Val** 20.39 333 P P 02 47 43.7 -0.5
GWY IAmb IAmb 02 48 09.2
comp=Z,33nm,1.4s
CCUT **Cedar City** 20.41 342 P P 02 47 44.5 0.0
ARVC **Arvin** 20.54 328 P P 02 47 45.9 +0.4
baz=143
MTPU **Mount Pierson** 20.55 345 P P 02 47 45.2 -0.9
MTPU IAmb IAmb 02 48 04.4
comp=Z,38nm,1.4s
W41B **Gary Mavity, V** 20.57 32 P P 02 47 46.0 +0.1
W41B IAmb IAmb 02 47 50.5
comp=Z,27nm,1.2s
W41B **Gary Mavity, V** 20.57 32 P Pn 02 47 48.4 +0.2
baz=219,SNR=9.0
ACON **Acoyapa** 20.62 105 P P 02 47 47.0 +0.5
Q24A **Divide** 20.64 1 P P 02 47 46.2 -0.7
Q24A IAmb IAmb 02 48 04.3
comp=Z,35nm,1.5s
Q24A **Divide** 20.64 1 P Pn 02 47 49.1 -0.2
baz=182
WHAR **Wooly Hollow** 20.64 32 P P 02 47 46.8 +0.1
WHAR IAmb IAmb 02 47 51.3
comp=Z,58nm,1.3s
HHAR **Hobbs** 20.67 27 P P 02 47 46.1 -0.9
HHAR IAmb IAmb 02 47 52.0
comp=Z,50nm,1.3s
BCW **Bitter Crk WRg** 20.70 326 P P 02 47 47.1 -0.4
BCW IAmb IAmb 02 47 53.4
comp=Z,34nm,1.1s
FURC **Furnace Creek,** 20.71 333 P P 02 47 48.2 +0.8
baz=149
ISA **Isabella, Lake** 20.79 329 P P 02 47 47.2 -1.1
ISA **Isabella, Lake** 20.79 329 P P 02 47 48.4 +0.1
baz=144
PRN **Pahroc Range** 20.83 338 P P 02 47 48.6 -0.2
KSCO **Kaye Shedlock'** 20.84 6 P 02 47 48.0 -0.9
KSCO **Kaye Shedlock'** 20.84 6 P Pn 02 47 53.1 +1.7
baz=188
TPNV **Topopah Spring** 20.88 335 P P 02 47 49.8 +0.5
TPNV **Topopah Spring** 20.88 335 P P 02 47 49.6 +0.3
baz=151,SNR=18
PKM **Mcpherson Peak** 20.88 325 P P 02 47 49.3 -0.2
baz=140
SMCO **Snowmass** 20.89 357 P P 02 47 48.1 -1.5
R32A **Long Quarter,** 20.96 15 P P 02 47 50.0 0.0
MSU **Marysvale** 21.00 345 P P 02 47 51.0 +0.3
CBKS **Cedar Bluff** 21.10 13 P P 02 47 52.1 +0.5
CBKS **Cedar Bluff** 21.10 13 P P 02 47 53.8 +2.2
baz=196,SNR=12
BRAL **Brewton** 21.11 49 P P 02 47 50.4 -1.3
BRAL **Brewton** 21.11 49 P P 02 47 54.3 +2.6
baz=237
Y45A **Yeager Farm, C** 21.12 40 P P 02 47 51.8 0.0
TCRU **Three Creeks R** 21.16 345 IAmb IAmb 02 48 10.8
comp=Z,32nm,1.3s
Q16A **Castle Valley** 21.16 348 IAmb IAmb 02 47 58.3
comp=Z,31nm,1.1s
FCAR **Ozark Folk Cen** 21.20 31 P P 02 47 51.7 -0.9
FCAR IAmb IAmb 02 47 58.6
comp=Z,26nm,1.2s
U40A **Yellville** 21.22 29 P P 02 47 55.0 +2.0
baz=215,SNR=9.3
CWC **Cottonwood Cre** 21.23 331 P P 02 47 53.1 -0.1
baz=146
VES **Vestal, Richgr** 21.23 328 P P 02 47 52.8 -0.2
baz=143,SNR=21
S11A **Rachel** 21.29 337 IAmb IAmb 02 48 03.8
comp=Z,50nm,1.2s
GRAC **Grapevine Rang** 21.38 333 P P 02 47 55.0 +0.3
baz=149
JTS **Las Juntas de** 21.44 109 P P 02 47 57.5 +2.0
comp=Z,13nm,1.0s,baz=8.4,slow=9.3,SNR=6.9
comp=Z,13nm,1.0s
ISCO **Idaho Springs** 21.47 360 P P 02 47 58.0 +2.2
baz=181,SNR=12
P17A **Butcher Ranch,** 21.62 349 IAmb IAmb 02 48 13.7
comp=Z,33nm,1.3s
OXF **Oxford** 21.65 38 P P 02 48 01.8 +4.3
baz=226,SNR=12
P18A **Preston Nutter** 21.69 350 IAmb IAmb 02 48 18.3
comp=Z,30nm,1.3s
PAGB **Antelope Grade** 21.75 326 IAmb IAmb 02 47 59.9
comp=Z,34nm,1.5s
LCAR **Lake Charles** 21.83 33 IAmb IAmb 02 48 11.2
comp=Z,55nm,1.4s
R11A **Troy Canyon, C** 21.86 338 P P 02 48 00.2 +0.3
baz=155,SNR=5.2
O20A **White River Ci** 21.93 354 IAmb IAmb 02 48 11.4
comp=Z,44nm,1.3s
O20A **White River Ci** 21.93 354 P P 02 48 03.2 +2.5
baz=174
S39A **Bolivar** 22.12 26 IAmb IAmb 02 48 15.5
comp=Z,45nm,1.2s
MGMO **Mountain Grove** 22.14 29 IAmb IAmb 02 48 07.9
comp=Z,47nm,1.1s
KSU1 **Kansas State U** 22.17 19 P P 02 48 05.8 +2.7
baz=203
LRAL **Lakeview Retre** 22.21 45 IAmb IAmb 02 48 09.8
comp=Z,55nm,1.3s
LRAL **Lakeview Retre** 22.21 45 P P 02 48 06.8 +3.2
baz=233,SNR=21
TPH **Tonopah** 22.23 335 IAmb IAmb 02 48 12.7
comp=Z,54nm,1.2s
RDMU **Red Mountain** 22.51 352 IAmb IAmb 02 48 12.6
comp=Z,45nm,1.2s
N23A **Red Feather La** 22.57 359 P P 02 48 10.3 +2.8
baz=180
OMMB **Old Mammoth Mi** 22.61 331 P P 02 48 08.6 +0.4
OMMB IAmb IAmb 02 48 14.2
comp=Z,28nm,1.5s
PBMO **Poplar Bluff** 22.75 33 IAmb IAmb 02 48 13.6
comp=Z,38nm,1.2s
DUG **Dugway, Tooele** 22.75 345 IAmb IAmb 02 48 15.6
comp=Z,23nm,1.3s
DUG **Dugway, Tooele** 22.75 345 P P 02 48 10.5 +1.1
baz=163,SNR=12
PLAL **Pickwick Lake** 22.77 40 IAmb IAmb 02 48 14.8
comp=Z,53nm,1.4s
OGNE **Ogallala** 22.81 7 P P 02 48 11.7 +1.7
baz=189
PHWY **Pilot Hill** 22.97 0 IAmb IAmb 02 48 16.9
comp=Z,18nm,1.2s
NVAR **Mina Array Bea** 22.98 334 P P 02 48 12.6 +0.7
comp=Z,3.2nm,1.0s,baz=152,slow=10,SNR=14
NVAR LR LR 02 56 32.0
comp=Z,1µm,19.6s,baz=134,slow=35
comp=Z,3.2nm,1.0s
R40A **Maddies Statio** 23.08 27 IAmb IAmb 02 48 16.9
comp=Z,44nm,1.2s
Y49A **Blount Mountai** 23.10 44 P P 02 48 13.0 +0.1
CCM **Cathedral Cave** 23.35 29 P P 02 48 17.3 +2.0
baz=216
152A **Waverly Hall** 23.58 49 IAmb IAmb 02 48 22.2
comp=Z,29nm,1.1s
WVT **Waverly** 23.70 38 P P 02 48 20.1 +1.3
baz=226
TIGA **Tifton** 23.79 52 P P 02 48 21.3 +1.7
baz=242,SNR=7.5
ELK **Elko** 23.92 342 P P 02 48 20.4 -0.6
comp=Z,2.4nm,1.1s,baz=275,slow=5.8,SNR=3.0
ELK LR LR 02 56 32.9
comp=Z,743nm,18.0s,baz=134,slow=33
comp=Z,2.4nm,1.1s
BGNE **Belgrade** 23.93 14 P P 02 48 22.8 +1.9
baz=198
V48A **Smith Brothers** 24.04 40 IAmb IAmb 02 48 25.5
comp=Z,27nm,1.1s
DWPF **Disney Wildern** 24.19 62 P P 02 48 24.5 +1.1
baz=251
BMN **Battle Mountai** 24.29 338 IAmb IAmb 02 48 45.5
comp=Z,26nm,1.4s
K22A **Casper** 24.33 358 IAmb IAmb 02 48 44.6
comp=Z,20nm,1.4s
K22A **Casper** 24.33 358 P P 02 48 25.9 +1.1
baz=178
X51A **Calhoun** 24.55 45 IAmb IAmb 02 48 32.0
comp=Z,31nm,1.4s
BW06 **Boulder Array** 24.67 353 P P 02 48 28.7 +0.8
baz=172
PDAR **Pinedale Array** 24.67 353 P P 02 48 28.8 +0.8
comp=Z,3.2nm,1.0s,baz=159,slow=13,SNR=9.2
PDAR LR LR 02 58 03.6
comp=Z,986nm,18.2s,baz=131,slow=36
comp=Z,3.2nm,1.0s
Y52A **Lilburn** 24.70 47 IAmb IAmb 02 48 33.3
comp=Z,36nm,1.3s
T47A **Sharon Grove** 24.71 37 IAmb IAmb 02 48 35.4
comp=Z,20nm,1.1s
255A **Hazlehurst** 24.86 52 IAmb IAmb 02 48 32.0
comp=Z,23nm,1.0s
GOGA **Godfrey** 24.87 48 P P 02 48 31.4 +1.9
baz=238,SNR=35
CPCT **Coper Cave** 25.30 43 IAmb IAmb 02 48 50.2
comp=Z,18nm,1.3s
ORV **Oroville** 25.34 330 IAmb IAmb 02 48 37.3
comp=Z,20nm,1.4s
REDW **Red Top Meadow** 25.43 351 IAmb IAmb 02 48 39.1
comp=Z,30nm,1.2s
W52A **Murphy** 25.48 45 IAmb IAmb 02 48 39.9
comp=Z,26nm,1.1s
TPAW **Teton Pass** 25.57 351 IAmb IAmb 02 48 45.5
comp=Z,23nm,1.2s
LOHW **Long Hollow** 25.64 351 IAmb IAmb 02 48 42.8
comp=Z,19nm,1.1s
SCIA **State Center** 25.81 21 P P 02 48 40.6 +2.6
baz=208
RSSD **Black Hills** 25.82 2 P P 02 48 39.7 +1.4
baz=184
TKL **Tuckaleechee C** 25.91 44 P P 02 48 40.9 +1.8
comp=Z,16nm,1.1s,baz=211,slow=11,SNR=9.7
comp=Z,16nm,1.1s
TKL **Tuckaleechee C** 25.91 44 IAmb IAmb 02 48 43.5
comp=Z,33nm,1.3s
FLWY **Flagg Ranch** 26.11 352 IAmb IAmb 02 48 59.1
comp=Z,27nm,1.4s
HODGE **Hodges** 26.15 48 IAmb IAmb 02 48 47.2
comp=Z,25nm,1.3s
HDIL **Hopedale** 26.26 29 P P 02 48 43.6 +1.5
baz=217
HLID **Hailey** 26.32 345 P P 02 48 43.1 +0.3
baz=162,SNR=10
O44A **Mansfield** 26.33 30 IAmb IAmb 02 48 45.4
comp=Z,15nm,0.8s
H17A **Grant Village** 26.40 352 P P 02 48 45.1 +1.5
baz=170
ECSD **EROS Data Cent** 26.49 15 IAmb IAmb 02 48 50.7
comp=Z,26nm,1.5s
ECSD **EROS Data Cent** 26.49 15 P P 02 48 46.4 +2.2
baz=200,SNR=7.5
V53A **Saluda** 26.56 45 IAmb IAmb 02 48 49.5
comp=Z,30nm,1.4s
TZTN **Tazewell** 26.59 42 P P 02 48 46.9 +1.8
TZTN **Tazewell** 26.59 42 P P 02 48 47.0 +1.9
baz=233,SNR=9.7
K38A **Parkersburg** 26.62 21 IAmb IAmb 02 48 48.7
comp=Z,24nm,1.0s
PAULI **Pauline** 26.77 47 IAmb IAmb 02 48 51.5
comp=Z,20nm,1.1s
YHL **Hebgen Lake** 26.94 351 IAmb IAmb 02 49 00.9
comp=Z,15nm,1.5s
RLMT **Red Lodge** 26.97 354 P P 02 48 49.1 +0.4
baz=173
SFIN **Lafayette** 27.18 32 P P 02 48 52.4 +2.1
baz=221,SNR=5.9
S51A **Beattyville** 27.24 40 IAmb IAmb 02 48 54.8
comp=Z,13nm,1.0s
KMSC **Kings Mountain** 27.28 47 IAmb IAmb 02 48 55.9
comp=Z,22nm,1.2s
KMSC **Kings Mountain** 27.28 47 P P 02 48 54.2 +2.8
baz=238
M44A **Midewin, Midew** 27.49 29 IAmb IAmb 02 48 56.8
comp=Z,20nm,1.1s
YBH **Yreka Blue Hor** 27.62 332 LR LR 02 59 10.5
comp=Z,868nm,19.1s,baz=128,slow=35
U54A **Nelsons Funny** 27.70 44 IAmb IAmb 02 48 59.3
comp=Z,21nm,1.2s
BOZ **Bozeman (W)** 27.73 351 P P 02 48 57.3 +1.9
baz=168,SNR=8.8
JFWS **Jewell Farm** 27.79 25 P P 02 48 57.8 +2.0
baz=213
L04D **Klamath Falls** 27.83 333 P P 02 48 56.0 -0.3
baz=145
P49A **Miami Univ. Ec** 27.83 36 P P 02 48 58.3 +2.1
baz=226
O48B **Farmland** 28.10 34 P P 02 49 00.8 +2.3
baz=225
L44A **Lake County Fo** 28.18 28 P P 02 49 01.1 +1.8
baz=218
N47A **Urbana** 28.26 33 IAmb IAmb 02 49 03.9
comp=Z,25nm,1.2s
J05D **Fort Rock, OR** 28.27 335 P P 02 48 59.8 -0.4
baz=148
LAO **LASA Array** 28.36 359 P P 02 49 01.8 +0.9
baz=179
I40A **Norwalk** 28.48 23 IAmb IAmb 02 49 04.4
comp=Z,20nm,1.1s
SPMN **Marine on St.** 28.91 19 IAmb IAmb 02 49 13.2
comp=Z,13nm,1.1s
SPMN **Marine on St.** 28.91 19 P P 02 49 07.0 +1.3
baz=206
BLA **Blacksburg** 29.02 44 IAmb IAmb 02 49 12.1
comp=Z,25nm,1.4s
BLA **Blacksburg** 29.02 44 P P 02 49 08.3 +1.4
baz=236
F36A **Milaca** 29.28 17 IAmb IAmb 02 49 18.0
comp=Z,8.7nm,1.1s
J01E **Myrtle Point** 29.30 332 P P 02 49 08.5 -0.8
baz=143
MSO **Missoula** 29.33 348 IAmb IAmb 02 49 13.7
comp=Z,20nm,1.3s
MSO **Missoula** 29.33 348 P P 02 49 10.3 +0.7
baz=164,SNR=9.1
T57A **Hurt** 29.69 46 IAmb IAmb 02 49 18.6
comp=Z,19nm,1.2s
H04A **Detroit Lake** 29.81 336 P P 02 49 12.6 -1.2
H04A IAmb IAmb 02 49 24.0
comp=Z,8.8nm,1.1s
EGMT **Eagleton** 29.89 354 IAmb IAmb 02 49 18.8
comp=Z,8.8nm,1.0s
EGMT **Eagleton** 29.89 354 P P 02 49 15.6 +1.1
baz=179
H04D **Lebanon** 29.90 335 P P 02 49 14.3 -0.2
baz=146
O53A **New Philadelph** 30.33 39 P P 02 49 20.2 +1.9
baz=231
AAM **Ann Arbor** 30.34 33 P P 02 49 20.8 +2.4
baz=225
G03D **McMinnville, O** 30.68 335 P P 02 49 21.6 +0.2
baz=146
MCWV **Mont Chateau** 30.79 41 P P 02 49 24.3 +1.8
baz=234
AGMN **Agassiz Nation** 30.98 13 IAmb IAmb 02 49 27.4
comp=Z,20nm,1.4s
AGMN **Agassiz Nation** 30.98 13 P P 02 49 25.7 +1.7
baz=198
NEW **Newport** 31.39 345 P P 02 49 28.0 +0.4
comp=Z,3.1nm,0.9s,baz=138,slow=15,SNR=4.2
NEW LR LR 03 01 02.7
comp=Z,754nm,20.1s,baz=138,slow=34
comp=Z,3.1nm,0.9s
NEW **Newport** 31.39 345 P P 02 49 27.1 -0.6
NEW IAmb IAmb 02 49 32.3
comp=Z,13nm,1.4s
NEW **Newport** 31.39 345 P P 02 49 28.6 +0.9
baz=159
M53A **WI Miller and** 31.40 37 P P 02 49 29.6 +1.8
baz=230
EYMN **Ely** 31.76 18 P P 02 49 32.0 +1.2
baz=206
B08A **Colville Reser** 32.06 343 IAmb IAmb 02 49 37.3
comp=Z,9.9nm,1.4s
OTAV **Otavalo** 32.07 121 P P 02 49 34.6 +0.1
M55A **Ridgway** 32.54 39 IAmb IAmb 02 49 41.4
comp=Z,19nm,1.3s
D03D **Eldon** 32.55 338 P P 02 49 37.4 -0.4
baz=148
SSPA **Standing Stone** 32.58 41 P P 02 49 39.8 +1.6
baz=235
PORT **Chimborazo Vol** 32.82 124 P P 02 49 41.4 +0.1
ULM **Lac du Bonnet** 32.84 11 P P 02 49 41.0 +0.6
comp=Z,8.9nm,1.1s,baz=191,slow=11,SNR=4.8
comp=Z,8.9nm,1.1s
ULM **Lac du Bonnet** 32.84 11 IAmb IAmb 02 49 44.3
comp=Z,14nm,1.1s
WVNY **West Valley, N** 33.21 38 IAmb IAmb 02 49 46.3
comp=Z,14nm,1.2s
ROSC **El Rosal** 33.28 110 LR LR 03 01 07.1
comp=Z,422nm,19.6s,baz=26,slow=32
BOSC **San Juan Bosco** 34.09 126 P P 02 49 52.3 +0.5
SADO **Sadowa** 34.42 34 LR LR 03 05 11.7
comp=Z,1µm,18.7s,baz=214,slow=38
SADO **Sadowa** 34.42 34 IAmb IAmb 02 49 57.5
comp=Z,16nm,1.1s
BINY **Binghamton** 34.65 40 IAmb IAmb 02 50 00.6
comp=Z,19nm,1.1s
BINY **Binghamton** 34.65 40 P P 02 49 57.5 +1.3
baz=236
PECO **Prince Edward** 35.08 37 IAmb IAmb 02 50 03.8
comp=Z,21nm,1.2s
DELO **Deloro Mine** 35.09 36 IAmb IAmb 02 50 06.2
comp=Z,17nm,1.5s
PAL **Palisades** 35.32 43 P P 02 50 03.2 +1.3
baz=240
J57A **Williamstown** 35.34 38 IAmb IAmb 02 50 05.5
comp=Z,11nm,1.1s
ATAH **Atahualpa** 36.79 131 LR LR 03 02 12.3
comp=Z,1µm,18.4s,baz=354,slow=31
VLDQ **Val d'Or** 37.53 31 IAmb IAmb 02 50 25.1
comp=Z,11nm,1.3s
HRV **Adam Dziewonsk** 37.59 43 P P 02 50 22.4 +1.0
baz=240
TRQ **Mont Tremblant** 37.84 36 IAmb IAmb 02 50 31.2
comp=Z,28nm,1.4s
I62A **Tamworth** 38.42 41 IAmb IAmb 02 50 32.7
comp=Z,26nm,1.2s
G62A **West of Eustis** 39.61 39 P P 02 50 38.4 +0.2
G62A IAmb IAmb 02 50 42.2
comp=Z,24nm,1.2s

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LMQ	La Malbaie	40.97	37	P	P	02 50 48.3	-1.2
LMQ				IAmb	IAmb	02 50 52.2	
	comp=Z,16nm,1.0s						
NNA	Nana	41.29	135	LR	LR	03 04 58.0	
	comp=Z,571nm,18.2s,baz=335,slow=32						
TAOE	Nuku Hiva Isla	43.51	235	*e*LR	LR	03 02 10.7	
	comp=Z,1μm,26.5s						
DLBC	Dease Lake	43.97	342	P	P	02 51 11.9	-1.9
	comp=Z,4.3nm,0.9s,baz=161,slow=4.8,SNR=6.5						
DLBC				LR	LR	03 10 09.4	
	comp=Z,1μm,18.1s,baz=117,slow=37						
	comp=Z,4.3nm,0.9s						
DLBC	Dease Lake	43.97	342	P	P	02 51 13.6	-0.2
DLBC				IAmb	IAmb	02 51 18.2	
	comp=Z,14nm,1.3s						
DLBC	Dease Lake	43.97	342	P	P	02 51 13.6	-0.2
	baz=146						
YKA	Yellowknife Ar	44.65	354	P	P	02 51 19.5	+0.5
	comp=Z,1.1nm,0.9s,baz=164,slow=7.2,SNR=7.3						
	comp=Z,1.1nm,0.9s						
P33M	Teslin, Yukon	46.25	342	P	P	02 51 32.0	+0.1
	baz=143						
O30N	Mendenhall	47.71	340	P	P	02 51 43.2	0.0
	baz=140						
MMPY	Sheldon Lake,	47.79	344	P	P	02 51 43.9	+0.1
	baz=147,SNR=7.4						
M31M	Drury Creek, Y	48.30	342	P	P	02 51 47.8	0.0
	baz=143						
N30M	Aishikik Lake	48.55	340	P	P	02 51 49.8	+0.1
	baz=139						
M30M	Minto, Yukon	49.30	342	P	P	02 51 54.9	-0.6
	baz=140						
YUK8	Steele Glacier	49.30	339	P	P	02 51 54.5	-1.2
	baz=136,SNR=5.6						
SAML	Samuel	49.78	119	P	P	02 51 58.0	-1.6
SAML				IAmb	IAmb	02 51 58.1	
	comp=Z,11nm,1.3s						
YUK3	Moose Creek	49.88	339	P	P	02 51 59.7	-0.5
	baz=135						
LPAZ	La Paz	50.34	131	P	P	02 52 03.8	-0.9
	comp=Z,3.1nm,0.8s,baz=325,slow=5.9,SNR=9.2						
LPAZ				LR	LR	03 10 45.8	
	comp=Z,446nm,18.9s,baz=342,slow=33						
	comp=Z,3.1nm,0.8s						
LPAZ	La Paz	50.34	131	P	P	02 52 02.9	-1.8
LPAZ				IAmb	IAmb	02 52 05.7	
	comp=Z,14nm,1.4s						
M27K	Edge Creek, AK	50.77	339	IAmb	IAmb	02 52 12.6	
	comp=Z,14nm,1.2s						
M27K	Edge Creek, AK	50.77	339	P	P	02 52 06.3	-0.4
	baz=134						
GLB	Gilahina Butte	50.84	337	IAmb	IAmb	02 52 10.6	
	comp=Z,9.0nm,1.2s						
M26K	Nabesna, AK	51.18	339	P	P	02 52 09.3	-0.5
	baz=133						
N25K	Chitina, Valde	51.23	337	IAmb	IAmb	02 52 13.3	
	comp=Z,15nm,1.3s						
N25K	Chitina, Valde	51.23	337	P	P	02 52 10.0	-0.1
	baz=130						
L27K	Beaver Creek,	51.24	340	P	P	02 52 10.2	+0.1
	baz=134						
L26K	Log Cabin Wild	51.72	339	P	P	02 52 13.4	-0.3
	baz=133						
K27K	Chicken	52.00	341	IAmb	IAmb	02 52 18.8	
	comp=Z,5.6nm,0.9s						
K27K	Chicken	52.00	341	P	P	02 52 15.9	+0.2
	baz=135						
M24K	Tolsona, Glenn	52.13	337	P	P	02 52 17.1	+0.3
	baz=129						
EPYK	Eagle Plains	52.22	345	P	P	02 52 17.4	0.0
	baz=142						
PAX	Paxson	52.42	338	P	P	02 52 18.2	-0.8
	baz=130						
SCRK	Sand Creek	52.58	340	P	P	02 52 19.5	-0.6
	baz=132						
RIDG	Independent Ri	52.70	339	P	P	02 52 20.0	-1.0
	baz=131,SNR=11						
J26L	Joseph Creek	52.79	340	IAmb	IAmb	02 52 25.3	
	comp=Z,10nm,1.2s						
J26L	Joseph Creek	52.79	340	P	P	02 52 20.3	-1.5
	baz=133,SNR=5.8						
WAT6	Susitna Watana	53.00	337	P	P	02 52 22.1	-1.2
	baz=127						
INK	Inuvik	53.06	347	P	P	02 52 22.4	-1.0
	comp=Z,19nm,1.4s,baz=147,slow=7.6,SNR=3.6						
	comp=Z,19nm,1.4s						
INK	Inuvik	53.06	347	P	P	02 52 22.3	-1.2
INK				IAmb	IAmb	02 52 29.6	
	comp=Z,11nm,1.2s						
INK	Inuvik	53.06	347	P	P	02 52 23.1	-0.3
	baz=146						
K24K	Donnelly Dome	53.06	339	P	P	02 52 23.9	+0.2
	baz=130						
DHY	Denali Highway	53.16	338	P	P	02 52 23.6	-0.9
	baz=128						
J25K	Salcha River,	53.45	340	P	P	02 52 26.4	-0.1
	baz=131						
SUA	Susitna One	53.52	335	P	P	02 52 26.7	-0.4
	baz=124						
IL31		54.05	340	IAmb	IAmb	02 52 33.3	
	comp=Z,7.2nm,1.1s						
ILAR	Eielson Array	54.05	340	P	P	02 52 29.1	-1.8
	comp=Z,3.7nm,1.1s,baz=148,slow=6.1,SNR=21						
	comp=Z,3.7nm,1.1s						
SKT	Skwentna	54.11	335	IAmb	IAmb	02 53 05.5	
	comp=Z,12nm,1.5s						
SKT	Skwentna	54.11	335	P	P	02 52 30.4	-1.0
	baz=123						
MCK	McKinley	54.12	338	P	P	02 52 30.6	-0.8
	baz=127						
LVC	Limon Verde	54.15	137	LR	LR	03 10 39.6	
	comp=Z,439nm,21.7s,baz=332,slow=30						
WRH	Wood River Hil	54.27	339	IAmb	IAmb	02 52 40.3	
	comp=Z,7.6nm,1.2s						
TRF	Thorofare Moun	54.45	337	P	P	02 52 33.0	-1.0
	baz=125						
NEA2	Nenana	54.68	339	IAmb	IAmb	02 52 40.2	
	comp=Z,8.9nm,1.1s						
NEA2	Nenana	54.68	339	P	P	02 52 34.1	-1.3
	baz=127						
M20K	Styx River	54.71	335	IAmb	IAmb	02 52 43.2	
	comp=Z,12nm,1.3s						
M20K	Styx River	54.71	335	P	P	02 52 33.9	-1.9
	baz=121						
N19K	Bonanza Creek	54.74	333	P	P	02 52 34.2	-1.9
	baz=119						
PPLA	Purkeypile	54.86	336	P	P	02 52 35.8	-1.2
	baz=123						
H24K	Noodor Dome	55.05	340	P	P	02 52 38.7	+0.5
H24K				IAmb	IAmb	02 52 41.0	
	comp=Z,13nm,1.3s						
H24K	Noodor Dome	55.05	340	P	P	02 52 36.9	-1.3
	baz=129,SNR=6.0						
BPAW	Bear Paw Mtn.	55.08	338	IAmb	IAmb	02 52 47.9	
	comp=Z,6.9nm,1.3s						
BPAW	Bear Paw Mtn.	55.08	338	P	P	02 52 37.3	-1.1
	baz=125						
I23K	Minto, Yukon-K	55.12	339	IAmb	IAmb	02 52 41.3	
	comp=Z,13nm,1.4s						
I23K	Minto, Yukon-K	55.12	339	P	P	02 52 38.1	-0.4
	baz=127						
M19K	Big River Lodg	55.23	334	P	P	02 52 38.8	-0.7
	baz=120						
N18K	Kilae Creek	55.29	333	P	P	02 52 38.5	-1.4
	baz=118						
L20K	Farewell, AK	55.31	335	P	P	02 52 38.8	-1.2
	baz=121						
SIV	San Ignacio	55.45	125	LR	LR	03 13 50.2	
	comp=Z,617nm,18.8s,baz=326,slow=33						
MLY	Manley	55.52	339	P	P	02 52 41.1	-0.5
	baz=126						
L19K	White Mountain	55.56	334	P	P	02 52 41.7	-0.1
L19K	White Mountain	55.56	334	P	P	02 52 41.0	-0.8
	baz=120						
H23K	Yukon River	55.58	340	IAmb	IAmb	02 52 43.8	
	comp=Z,4.6nm,0.9s						
H23K	Yukon River	55.58	340	P	P	02 52 41.3	-0.6
	baz=127						
O16K	Kokwok River B	55.81	331	P	P	02 52 42.5	-1.1
	baz=115						
K20K	Telida	55.83	336	IAmb	IAmb	02 52 45.7	
	comp=Z,12nm,1.1s						
K20K	Telida	55.83	336	P	P	02 52 42.9	-0.8
	baz=121						
I21K	Tanana	56.04	338	IAmb	IAmb	02 52 49.8	
	comp=Z,12nm,1.1s						
I21K	Tanana	56.04	338	P	P	02 52 43.7	-1.4
	baz=124						
PPT	Papeete	56.07	233	LR	LR	03 10 23.7	
	comp=Z,366nm,18.3s,baz=17,slow=29						
PPT2	Papeete2	56.08	233	*e*LR	LR	03 07 59.7	
	comp=Z,1μm,25.5s						
J20K	Nowinta River	56.28	337	IAmb	IAmb	02 52 56.5	
	comp=Z,9.5nm,1.0s						
J20K	Nowinta River	56.28	337	P	P	02 52 45.5	-1.4
	baz=122						
TTA	Tatalina	56.39	335	IAmb	IAmb	02 52 48.5	
	comp=Z,7.0nm,1.1s						
TTA	Tatalina	56.39	335	P	P	02 52 46.3	-1.6
	baz=119						
H21K	Melozitna Rive	56.59	339	IAmb	IAmb	02 52 53.6	
	comp=Z,11nm,1.1s						
H21K	Melozitna Rive	56.59	339	P	P	02 52 47.4	-1.7
	baz=124,SNR=6.7						
H03N2	Juan Fernandez	57.34	154	T	T	03 54 40.8	
	baz=331,slow=77,SNR=41						
H03N1	Juan Fernandez	57.35	154	T	T	03 54 42.3	
	baz=331,slow=77,SNR=55						
H03N3	Juan Fernandez	57.35	154	T	T	03 54 41.2	
	baz=331,slow=77,SNR=30						
TBI	Tubuai	59.58	228	*e*LR	LR	03 09 33.6	
	comp=Z,1μm,24.8s						
CPUP	Villa Florida	64.47	132	P	P	02 53 42.1	-1.3
	comp=Z,2.5nm,0.9s,baz=309,slow=6.5,SNR=2.9						
CPUP				LR	LR	03 20 41.2	
	comp=Z,488nm,19.9s,baz=336,slow=35						
	comp=Z,2.5nm,0.9s						
LR03	Panguipulli	65.39	152	P	P	02 53 48.4	-0.8
BDFB	Brasilia	65.91	117	P	P	02 53 51.4	-1.7
	comp=Z,4.3nm,0.8s,baz=216,slow=8.7,SNR=2.3						
	comp=Z,4.3nm,0.8s						
BDFB	Brasilia	65.91	117	P	P	02 53 52.6	-0.5
RAR	Rarotonga	66.04	236	LR	LR	03 14 38.6	
	comp=Z,447nm,18.5s,baz=46,slow=29						
SHEM	Shemya Is, Ala	69.89	320	LR	LR	03 18 00.7	
	comp=Z,250nm,19.8s,baz=53,slow=30						
AFI	Afiamalu	72.70	249	LR	LR	03 19 22.0	
	comp=Z,330nm,19.3s,baz=150,slow=30						
MSVF	Nonsavu	83.20	249	LR	LR	03 24 53.9	
	comp=Z,335nm,18.1s,baz=13,slow=30						
RAO	Raoul Island	84.26	237	LR	LR	03 23 15.8	
	comp=Z,225nm,21.2s,baz=340,slow=29						
URZ	Urewera	91.62	230	LR	LR	03 29 49.7	
	comp=Z,289nm,18.4s,baz=31,slow=31						
DZM	Mont Dzumac	94.93	249	LR	LR	03 29 52.1	
	comp=Z,229nm,21.5s,baz=40,slow=30						
DZM	Mont Dzumac	94.93	249	*e*LR	LR	03 26 12.0	
	comp=Z,545nm,25.9s						
MJAR	Matsushiro Arr	98.86	313	LR	LR	03 33 22.5	
	comp=Z,187nm,21.6s,baz=29,slow=30						
ASAR	Alice Springs	124.56	253	PKP	PKiKP	03 02 06.6	-0.3
	comp=Z,0.7nm,0.9s,baz=104,slow=3.1,SNR=5.0						
PZH	PanZhiHua	128.22	328	PKP	PKiKP	03 02 13.9	-0.4
KMI	Kunming	128.84	327	⇓PKP	PKiKP	03 02 15.4	-0.3
KMI				PP	PP	03 04 24.8	+4.1
KMI				LR	LR		
	comp=N,260nm,18.7s						
KMI				LR	LR		
	comp=E,330nm,19.8s						
KMI				LR	LR		
	comp=Z,480nm,19.1s						

*NNC **02** 02:56:12.9±1.2, 45°.83N×83°.33E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=11.2km s-min=5.5km az=123.0*
*ASRS **02** 02:56:18.2±0.7, 46°N±4°×8°4E±°, h3km, MLh3.5/5, Error ellipse: s-maj=8.5km s-min=3.5km az=168.5, confirmed*
ISC 02 02:56:17.6±1.7**, 46°.27N**±0°.07×**83°.46E**±0°.04**, h6**km±13km**, n28,** σ**2s.27**/32**, 4C-6D, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MK31	Makanchi Array	0.96	304	⇓P	Pg	02 56 34.8	-1.3
	0.5nm,0.1s,baz=132,slow=17,SNR=319						
MK31				⇓S	Sn	02 56 51.7	-0.1
	4.1nm,0.2s,baz=133,slow=29,SNR=10						
MKAR	Makanchi Array	0.96	304	Pg	Pg	02 56 35.0	-1.1
MKAR				Sg	Sn	02 56 52.4	+0.6
MAKZ	Makanchi	1.16	298	⇑P	Pb	02 56 37.9	-2.2
	2.2nm,0.3s						
MAKZ				⇑S	Sn	02 56 57.1	+0.5
	4.2nm,0.3s						
MAKZ	Makanchi	1.16	298	Pg	Pb	02 56 38.0	-2.0
MAKZ				Sg	Sn	02 56 57.4	+0.9
ZSN	Zaisan	1.53	39	P	Pg	02 56 46.0	-0.9
	26nm,0.1s						
ZSN				S	Sg	02 57 10.9	+4.2
	65nm,0.5s						
KAPS	Kapalarasan	3.03	253	Pg	Pn	02 57 05.0	-1.2
	3.5nm,0.2s						
KAPS				Lg	Lg	02 57 42.0	
	12nm,0.5s						
DJR	Jarkent	3.23	235	Pg	Pn	02 57 06.8	-2.2
	7.1nm,0.4s						
DJR				Lg	Lg	02 57 45.0	
	21nm,0.4s						
KTMS	Ketmen	3.58	219	Pg	Pn	02 57 12.2	-1.7
	0.8nm,0.2s						
KTMS				Lg	Lg	02 57 54.4	
	9.6nm,0.3s						
PDGK	Podgornoye	4.08	225	⇑Pg	Pn	02 57 23.7	+3.0
	1.9nm,0.4s						
PDGK				⇓Lg	Lg	02 58 09.2	
	9.1nm,0.8s						
BLB	Baldybastay	4.13	240	Pg	Pn	02 57 23.5	+2.1
	8.9nm,0.5s						
BLB				Lg	Lg	02 58 13.7	
	16nm,0.3s						
SHLS	Shalkode	4.22	224	Pg	Pn	02 57 19.0	-3.6
	3.0nm,0.2s						
SHLS				Lg	Lg	02 58 06.4	
	32nm,0.5s						
KPKS	Kokpek	4.40	232	Pg	Pn	02 57 26.9	+1.9
	4.3nm,0.3s						
KPKS				Lg	Lg	02 58 19.7	
	23nm,0.4s						
UZB	Uzynbulak	4.44	227	Pg	Pn	02 57 27.4	+1.7
	2.9nm,0.6s						
UZB				Lg	Lg	02 58 20.5	
	9.9nm,0.4s						
KURS	Kuram	4.67	235	Pg	Pn	02 57 32.6	+3.9
	2.3nm,0.6s						
KURS				Lg	Lg	02 58 29.5	
	3.8nm,0.3s						
UKR	Ust'-Kan	4.75	10	Pn	Pn	02 57 30.3	+0.4
UKR				Pg	Pg	02 57 46.6	-2.0
UKR				Sg	Sg	02 58 51.6	+1.5
SATY	Saty	4.82	230	Pg	Pn	02 57 34.4	+3.5
	4.3nm,0.3s						
SATY				Lg	Lg	02 58 33.0	
	6.8nm,0.2s						
CHBI	Chibit, Altay	4.87	32	Pn	Pn	02 57 33.3	+1.9
CHBI				Pg	Pg	02 57 49.5	-1.2
CHBI				Sg	Sg	02 58 56.3	+2.5
CUR	Chagan-Uzun	5.04	39	Pn	Pn	02 57 34.7	+0.9
CUR				Pg	Pg	02 57 50.3	-3.9
CUR				Sg	Sg	02 59 02.5	+3.1
ULGR	Ulagan, Altay	5.29	33	Pn	Pn	02 57 35.5	-1.8
ULGR				Pg	Pg	02 57 58.8	-0.1
ULGR				Sg	Sg	02 59 08.8	+1.4
KTBS	Karatobe	5.44	244	Pg	Pn	02 57 47.2	+7.8
	1.8nm,0.6s						
KTBS				Lg	Lg	02 58 54.4	
	13nm,0.6s						
KURBB	Kurchatov Arra	5.45	325	⇓Lg	Lg	02 59 14.6	
	18nm,0.7s						
KURK	Kurchatov	5.49	326	⇑Lg	Lg	02 59 14.6	
	8.1nm,0.6s						
KURK	Kurchatov	5.49	326	Sg	Sg	02 59 16.8	+3.0
KUU	Kurty	5.57	247	Pg	Pb	02 57 49.7	-5.6
	2.0nm,0.3s						
KUU				Lg	Lg	02 58 59.1	
	5.0nm,0.4s						
MTBS	Maitube	5.91	240	Pg	Pn	02 57 53.4	+7.6
	2.5nm,0.1s						
MTBS				Lg	Lg	02 59 05.5	
	6.5nm,0.1s						
KRBS	Karabastau	6.09	248	Pg	Pb	02 57 58.9	-5.2
	0.6nm,0.5s						
KRBS				Lg	Lg	02 59 14.5	
	2.0nm,0.5s						
TKM2	Tokmak 2	6.53	242	⇓Lg	Lg	02 59 30.1	
	2.1nm,0.8s						
OTUK	Ortayu	7.82	289	⇓Lg	Lg	03 00 24.7	
	3.1nm,0.7s						

*GII **02** 03:24:40.2±0.4, 34°.48N×26°.55E, h60km, Mm3.0/7*
*ISK **02** 03:24:46.7, 34°.65N×26°.47E, h86km, ML2.8/20*
*DDA **02** 03:24:47.2±0.0, 34°.75N×26°.96E, h6km±3km, ML2.7*
*HLW **02** 03:24:47.4, 34°.31N×26°.67E, h21km±11km, Md4.0, Ml3.7*
*THE **02** 03:24:48.3, 34°.49N×26°.55E, h62km±7km, ML2.5/6, Error ellipse: s-maj=8.2km s-min=1.2km az=354.0*
ISC 02 03:24:42.4±1.5**, 34°.22N**±0°.05×**26°.58E**±0°.05**, h28**km±16km**, n56,** σ**1s.56**/71**, Crete**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZKR	Zakros	0.95	342	P	Pn	03 25 00.8	+1.0
ZKR				S	Sn	03 25 12.6	+0.2
	258nm,0.4s						
ZKR	Zakros	0.95	342	PG	Pb	03 25 00.9	+0.7
ZKR				SG	Sn	03 25 12.6	+0.2
NPS	Neapolis	1.31	323	P	Pb	03 25 06.9	+0.5
NPS				S	Sn	03 25 21.5	0.0
KARP	Karpathos	1.41	20	P	Pn	03 25 08.1	+1.9
KARP				S	Sn	03 25 23.5	-0.4
	210nm,0.2s						
KARP	Karpathos	1.41	20	PG	Pn	03 25 08.1	+1.9
KARP				SG	Sn	03 25 22.9	-1.0
KSTL	Kastelli Herak	1.65	312	P	Pn	03 25 09.2	-0.3
KSTL				S	Sn	03 25 24.6	-5.2
	58nm,0.3s						
IDI	Anoyia	1.76	308	P	Pb	03 25 13.5	-0.5
IDI				S	Sn	03 25 33.0	+0.5
	98nm,0.4s						
IDI	Anoyia	1.76	308	PN	Pn	03 25 12.6	+1.6
IDI				SN	Sn	03 25 31.5	-1.0
GVD	Gavdhos	2.15	287	PN	Pb	03 25 19.6	-1.0
SANT	Santorini	2.34	337	PN	Pn	03 25 18.6	-0.4
ARG	Arkhangelos	2.36	32	PN	Pn	03 25 20.8	+1.5
IMMV	Iera Moni Meta	2.47	301	P	Pn	03 25 24.0	+3.2
IMMV				S	Sn	03 25 50.4	+0.3
	110nm,0.4s						
IMMV	Iera Moni Meta	2.47	301	PN	Pn	03 25 22.9	+2.1
KNDR	Palaiochora Ch	2.59	294	PN	Pn	03 25 25.8	+3.4
DAT	Datca	2.64	18	P	Pn	03 25 23.6	+0.4
DAT	Datca	2.64	18	PN	Pn	03 25 23.5	+0.4
DAT				SN	Sn	03 25 50.7	-3.6
RODP	Rodopos	2.68	301	P	Pn	03 25 27.0	+3.3
RODP				S	Sn	03 25 55.8	+0.6
	25nm,0.4s						
RODP	Rodopos	2.68	301	PN	Pn	03 25 25.8	+2.1
TURN	Turunc	2.89	28	PN	Pn	03 25 27.6	+1.1
TURN	Turunc	2.89	28	P	Pn	03 25 27.4	+0.9
TURN				S	Sn	03 25 57.8	-2.6
BODT	Bodrum	2.90	12	PN	Pn	03 25 26.6	-0.1
SLUM	Salum	2.95	203	P	Pb	03 25 34.6	+0.3
	baz=205						
SLUM				S	Sb	03 26 08.4	-1.5
	baz=205						
DALY	Dalyan (Mula)	3.10	32	PN	Pn	03 25 31.1	+1.7
FETY	Fethiye	3.16	40	PN	Pn	03 25 32.4	+2.1
FETY	Fethiye	3.16	40	P	Pn	03 25 33.9	+3.6
AKAS	Kas	3.19	50	PN	Pn	03 25 33.5	+2.7
AKAS	Kas	3.19	50	P	Pn	03 25 33.0	+2.3
AKAS				S	Sn	03 26 06.9	-1.1
AKAS				*i* AML	AML	03 26 09.0	
	comp=E,51nm,0.3s						
AKAS				*i* AML	AML	03 26 09.0	
	comp=N,82nm,0.6s						
MLSB	Milas	3.22	17	PN	Pn	03 25 31.9	+0.8
YER	Yerkesik	3.22	25	PN	Pn	03 25 32.1	+0.9
CAME	Cameli-Denizli	3.51	38	PN	Pn	03 25 36.9	+1.7
CAEL	Denizli, Camel	3.66	37	P	Pn	03 25 38.8	+1.5
CAEL				S	Sn	03 26 18.5	-1.0
CAEL				*i* AML	AML	03 26 27.0	
	comp=N,29nm,0.6s						
CAEL				*i* AML	AML	03 26 28.0	
	comp=E,35nm,0.7s						
ELL	Elmali	3.71	46	PN	Pn	03 25 40.2	+2.3
AKUM	Antalya-Kumluc	3.73	55	P	Pn	03 25 40.1	+2.1
AKUM				*i* AML	AML	03 26 20.0	
	comp=N,17nm,0.3s						
AKUM				S	Sn	03 26 20.0	-0.9
AKUM				*i* AML	AML	03 26 24.0	
	comp=E,23nm,0.2s						
TAVA	DENIZLI_Tavas	3.75	30	P	Pn	03 25 40.0	+1.4
TAVA				S	Sn	03 26 19.6	-2.2
GOLH	Golhisar	3.87	38	P	Pn	03 25 42.5	+2.4
GOLH				S	Sn	03 26 24.4	-0.2
GOLH				*i* AML	AML	03 26 26.0	
	comp=N,14nm,0.4s						
GOLH				*i* AML	AML	03 26 26.0	
	comp=E,18nm,0.4s						
AYDB	Zeytinkoy-Aydi	3.87	16	PN	Pn	03 25 40.4	+0.3
APMY	Acipayam-Deniz	3.93	33	PN	Pn	03 25 42.1	+1.2
SWA2		5.05	191	P	Pn	03 26 03.1	+6.9
	baz=192						
SWA2				S	Sn	03 26 59.0	+5.3
	baz=192						
RYAN	Fayoum	6.01	147	P	Pn	03 26 16.0	+6.6
	baz=148						
GLL	Jalalah	6.35	135	P	Pn	03 26 20.5	+6.3
	baz=136						
NBNS	Bani Suef	6.88	143	P	Pn	03 26 27.3	+5.9
	baz=143						
HFRF	Wahat Farafira	7.20	168	P	Pn	03 26 32.9	+7.1
	baz=168						
KZIT	Kziot	7.38	114	Sn	Sn	03 27 51.6	+0.6
MMA0B	Mount Meron ar	7.46	97	Sn	Sn	03 27 51.7	-1.3
AMAZ	Amatzia	7.50	109	Sn	Sn	03 27 54.1	0.0
MMLI	Mount Malkishu	7.61	101	Sn	Sn	03 27 55.6	-1.1
GEM	Giv'at Ha'Em	7.63	95	Pn	Pn	03 26 29.6	-2.1
GEM				Sn	Sn	03 27 56.2	-1.1
YTIR	Yattir	7.73	109	Sn	Sn	03 28 00.4	+0.6
HMDT	Nahal Hemdat	7.74	102	Pn	Pn	03 26 31.1	-2.1
HMDT				Sn	Sn	03 28 00.0	0.0
KSHT	Keshet	7.80	97	Pn	Pn	03 26 31.5	-2.5
DSI	Dead Sea	7.86	107	Pn	Pn	03 26 34.3	-0.5
DSI				Sn	Sn	03 28 02.2	-0.6
KRMI	Paran Flat	8.02	118	Pn	Pn	03 26 35.8	-1.3
KRMI				Sn	Sn	03 28 07.3	+0.4
PRNI	Paran	8.10	116	Pn	Pn	03 26 37.7	-0.5
PRNI				Sn	Sn	03 28 09.6	+0.7
HRFI	Mount Harif	8.29	118	Sn	Sn	03 28 14.7	+1.1
MBRI	Mt Berech	8.34	120	Pn	Pn	03 26 41.4	0.0
MBRI				Sn	Sn	03 28 15.8	+1.1
EIL	Elat	8.43	120	Pn	Pn	03 26 42.6	-0.1
EIL				Sn	Sn	03 28 18.0	+1.1

MAN 02 03:28:57.5, 6°.68N×126°.72E, h21km, mb4.5, ML3.4, MS3.2, Mindanao

*IDC **02** 03:46:43.3±1.4, 13°.40N×146°.55E, h0km, mb3.9/6, mbtmp3.8/6, Error ellipse: s-maj=33.1km s-min=23.7km az=78.0*
ISC 02 03:46:47.2±1.3**, 13°.4N**±0°.2×**146°.6E**±0°.1**, h26**km**, n7,** σ**1s.22**/8**, mb3.8**/6**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUMO	Guam	1.65	277	Pn	Pn	03 47 14.3	-0.2
	55nm,0.3s,baz=113,slow=10,SNR=8.6						
GUMO				Sn	Sn	03 47 35.1	+0.3
	65nm,0.3s,baz=52,slow=22,SNR=8.5						
KSRS	Korea Array	29.17	329	P	P	03 52 46.8	+0.3
	0.8nm,0.6s,baz=140,slow=8.6,SNR=4.4						
	0.8nm,0.6s						
WRA	Warramunga Arr	35.23	200	P	P	03 53 38.1	-1.5
	0.6nm,0.7s,baz=22,slow=9.2,SNR=4.1						
	0.6nm,0.7s						
ASAR	Alice Springs	38.84	199	P	P	03 54 12.2	+1.8
	0.1nm,0.4s,baz=28,slow=10,SNR=1.6						
	0.1nm,0.4s						
MKAR	Makanchi Array	62.77	316	P	P	03 57 09.7	-0.7
	0.5nm,0.3s,baz=89,slow=8.5,SNR=8.5						
	0.5nm,0.3s						
KURBB	Kurchatov Arra	65.84	320	P	P	03 57 31.3	+0.9
	2.2nm,0.6s,baz=102,slow=6.9,SNR=16						
	2.2nm,0.6s						
FINES	FINESS Array B	92.03	336	P	P	03 59 53.2	-0.5
	1.2nm,0.9s,baz=33,slow=7.3,SNR=5.0						
	1.2nm,0.9s						

*IDC **02** 03:58:14.6±2.2, 33°.52N×141°.76E, h0km, mb3.5/2, mbtmp3.4/3, ML2.5/1, Error ellipse: s-maj=37.6km s-min=25.9km az=55.0*
*JMA **02** 03:58:19.3±0.5, 34°N±1°×14°2E±°, h40km, MV3.2/37, E OFF HACHIJOJIMA ISLAND*
ISC 02 03:58:19.5±1.5**, 33°.63N**±0°.06×**141°.7E**±0°.1**, h41km, n16, σ0s.78**/22**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	Boso 1	1.21	328	P	Pn	03 58 39.0	-0.4
BSO3	Boso 3	1.56	319	P	Pn	03 58 44.3	-0.1
JHJ2	Mitsune	1.69	253	P	Pn	03 58 46.7	+0.2
JHJ	Hachijo jima 2	1.72	253	Pn	Pn	03 58 46.1	-0.8
	24nm,0.3s,baz=340,slow=20,SNR=12						
JHJ				Sn	Sn	03 59 07.2	-0.4
	32nm,0.3s,baz=252,slow=20,SNR=1.7						
BSO4	Boso 4	1.79	320	P	Pn	03 58 48.4	+0.6
JMKN	Mikurajimanish	1.81	279	eP	Pn	03 58 48.2	0.0
JMKN				eS	Sn	03 59 09.4	-0.6
JOD2	Odawara 2	2.73	307	eP	Pn	03 58 60.0	-1.0
JOD2				eS	Sn	03 59 31.3	-1.5
JHU	Hanno	3.01	318	eS	Sn	03 59 39.5	+0.1
JHO	Hitachi	3.13	342	P	Pn	03 59 05.6	-0.7
JHO				S	Sn	03 59 41.3	-1.2
JYN	Shimob	3.23	306	P	Pn	03 59 07.8	0.0
JRY	Ryogami san	3.34	316	eP	Pn	03 59 09.1	-0.1
JAG	Ashikaga	3.37	327	P	Pn	03 59 09.8	+0.2
JFT	Otama	4.05	344	P	Pn	03 59 19.2	+0.2
JFT				eS	Sn	04 00 04.0	-1.2
MJAR	Matsushiro Arr	4.11	316	Pn	Pn	03 59 20.6	+0.8
	0.3nm,0.3s,baz=164,slow=13,SNR=9.1						
MJAR				Sn	Sn	04 00 07.8	+1.3
	0.1nm,0.3s,baz=133,slow=15,SNR=4.7						
	1.2nm,0.3s						
MKAR	Makanchi Array	46.22	305	P	P	04 06 41.5	+1.0
	0.4nm,0.5s,baz=89,slow=8.6,SNR=5.1						
	0.4nm,0.5s						
WRA	Warramunga Arr	53.74	189	P	P	04 07 37.5	-0.1
	0.2nm,0.3s,baz=4.9,slow=7.6,SNR=9.6						
	0.2nm,0.3s						

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*LDG **02** 04:08:55.5±0.1, 51°.63N×16°.22E, h1km, Ml4.0/14, Error ellipse: s-maj=3.4km s-min=2.4km az=9.0, Suspected Mining induced.*
*DNK **02** 04:08:55.6±1.3, 51°.34N×16°.03E, h38km±114km*
*IPEC **02** 04:08:56.3±0.3, 51°.63N×16°.20E, h2km±1km, ML3.6/5, Error ellipse: s-maj=2.2km s-min=1.1km az=22.0*
*MCSM **02** 04:08:56.1±0.5, 52°N±3°×1°6E±°, h4km±3km, ML4.1*
*IDC **02** 04:08:57.2±0.5, 51°.55N×16°.00E, h0km, mb3.9/9, mbtmp3.8/17, ML3.5/8, Error ellipse: s-maj=9.9km s-min=6.6km az=96.0*
*PRU **02** 04:08:57.9±0.0, 51°.56N×16°.15E, h0km*
*BGR **02** 04:08:58.4±0.2, 51°.53N×16°.11E, h1km, ML4.0/41, Error ellipse: s-maj=2.2km s-min=1.1km az=36.0*
ISC 02 04:08:55.6±0.4**, 51°.63N**±0°.02×**16°.13E**±0°.02**, h0km, n201, σ1s.73**/323**, mb4.0**/11**, 5C-10D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.80	173	i Pg	Pb	04 09 11.8	-0.4
KSP				eSg	Sg	04 09 21.5	+0.4
KSP	Ksiaz	0.80	173	Pg	Pg	04 09 11.5	+0.7
KSP				Sg	Sg	04 09 21.9	+0.8
KSP	Ksiaz	0.80	173	ePg	Pb	04 09 11.9	-0.4
KSP				eSg	Sg	04 09 21.8	+0.7
OSTC	Ostas	1.08	177	ePG	Pb	04 09 16.7	-0.4
OSTC				eSG	Sg	04 09 30.4	+0.3
	comp=Z,1μm,0.9s						
OSTC	Ostas	1.08	177	Pg	Pb	04 09 17.1	0.0
UPC	Upice	1.13	184	ePG	Pb	04 09 17.7	-0.2
UPC				eSG	Sg	04 09 31.6	-0.2
	comp=Z,814nm,0.5s						
UPC	Upice	1.13	184	Pg	Pb	04 09 17.7	-0.2
DPC	Dobruska-Polom	1.29	175	ePG	Pb	04 09 20.6	-0.1
DPC				eSG	Sg	04 09 36.5	-0.4
	comp=Z,828nm,0.8s						
DPC	Dobruska-Polom	1.29	175	Pg	Pb	04 09 20.5	-0.1
DPC	Dobruska-Polom	1.29	175	ePg	Pb	04 09 20.6	-0.1
DPC				eSg	Sg	04 09 36.4	-0.4
PVCC	Panska Ves	1.48	222	ePG	Pb	04 09 24.2	+0.3
PVCC				eSG	Sn	04 09 43.7	+0.2
	comp=Z,2μm,0.6s						
PVCC	Panska Ves	1.48	222	Pn	Pg	04 09 23.9	0.0
PVCC	Panska Ves	1.48	222	ePn	Pb	04 09 24.0	+0.1
PVCC				ePg	Pg	04 09 25.0	+1.1
PVCC				eSg	Sn	04 09 44.3	+0.8
BRG	Berggiesshubel	1.57	242	Pn	Pn	04 09 24.9	+0.2
BRG				Pg	Pg	04 09 26.8	+1.2
BRG				Sg	Sg	04 09 47.3	+1.3
BRG				Amp		04 09 49.8	
	comp=Z,653nm,0.5s						
BRG	Berggiesshubel	1.57	242	ePn	Pn	04 09 24.9	+0.2
BRG				ePg	Pg	04 09 26.5	+0.8
BRG				eSg	Sg	04 09 47.2	+1.2
KRLC	Kraliky	1.61	165	ePG	Pn	04 09 25.7	+0.4
KRLC				eSG	Sn	04 09 46.3	-0.5
	comp=Z,486nm,0.4s						
RUE	Ruedersdorf	1.68	301	Pn	Pb	04 09 26.9	-0.5
RUE	Ruedersdorf	1.68	301	ePn	Pb	04 09 27.4	0.0
RUE				eSg	Sg	04 09 53.1	+3.5
GKP	Gorka Klasztor	1.77	22	ePn	Pg	04 09 30.9	+1.4
FBE	Freiberg	1.88	249	ePn	Pn	04 09 29.6	+0.6
GOPC	GO Pecny, Ondr	1.92	207	Pn	Pn	04 09 29.7	+0.2
PRU	Pruhonice	1.93	212	ePG	Pn	04 09 30.6	+1.0
PRU				eSG	Sb	04 09 56.7	+0.5
	comp=Z,423nm,0.6s						
PRU	Pruhonice	1.93	212	Pn	Pn	04 09 30.0	+0.4
PRU	Pruhonice	1.93	212	ePn	Pn	04 09 30.0	+0.4
PRU				eSg	Sg	04 09 57.0	-0.5
CLL	Collm	1.98	262	ePn	Pn	04 09 31.0	+0.6
	comp=Z,114nm,0.5s						
CLL				ePg	Pg	04 09 34.0	+0.4
CLL				i x	x	04 09 37.7	
CLL				eSg	Sg	04 10 00.0	+0.7
	comp=Z,273nm,0.6s						
CLL	Collm	1.98	262	ePn	Pn	04 09 30.8	+0.4
CLL				ePg	Pg	04 09 34.7	+1.2
CLL				eSg	Sg	04 10 00.6	+1.3
RAC	Raciborz	2.03	139	ePG	Pg	04 09 34.3	-0.1
RAC				eSG	Sg	04 10 01.2	+0.6
MORC	Moravsky Berou	2.06	154	⇑P	Pn	04 09 31.6	+0.1
MORC				⇑S	Sg	04 10 01.1	-0.6
MORC	Moravsky Berou	2.06	154	ePn	Pn	04 09 31.6	+0.1
	baz=336						
MORC				eSg	Sb	04 10 00.3	+0.2
	comp=Z,366nm,0.6s,baz=336						
MORC	Moravsky Berou	2.06	154	ePN	Pn	04 09 31.6	+0.1
MORC				eSG	Sb	04 10 00.4	+0.3
MORC	Moravsky Berou	2.06	154	Pn	Pn	04 09 31.2	-0.3
MORC	Moravsky Berou	2.06	154	ePn	Pn	04 09 31.8	+0.3
MORC				eSg	Sg	04 10 01.0	-0.8
OKC	Ostrava-Krasne	2.21	144	ePN	Pn	04 09 33.7	+0.3
OKC				ePG	Pb	04 09 36.6	+0.3
OKC				eSG	Sg	04 10 05.4	-1.0
	comp=Z,385nm,0.5s						
OKC	Ostrava-Krasne	2.21	144	Pn	Pn	04 09 33.1	-0.3
OKC	Ostrava-Krasne	2.21	144	ePn	Pn	04 09 33.2	-0.3
OKC				ePg	Pg	04 09 38.0	+0.2
OKC				eSg	Sb	04 10 05.2	+1.1
VRAC	Vranov	2.34	173	⇓P	Pn	04 09 35.9	+0.6
VRAC				⇑S	Sg	04 10 09.8	-1.0
VRAC	Vranov	2.34	173	Pn	Pn	04 09 36.1	+0.7
	comp=Z,16nm,0.3s,baz=346,slow=14,SNR=76						
VRAC				Lg	Lg	04 10 07.2	
	comp=Z,42nm,0.3s,baz=236,slow=21,SNR=9.7						
	comp=Z,70nm,0.3s						
VRAC	Vranov	2.34	173	ePn	Pn	04 09 35.7	+0.4
	baz=354						
VRAC				eSg	Sb	04 10 09.4	+1.3
	comp=Z,326nm,0.6s,baz=354						
VRAC	Vranov	2.34	173	ePN	Pn	04 09 35.8	+0.4
VRAC				eSG	Sb	04 10 09.5	+1.3
VRAC	Vranov	2.34	173	ePn	Pn	04 09 36.1	+0.7
VRAC				ePg	Pg	04 09 40.7	+0.3
VRAC				eSg	Sg	04 10 10.4	-0.5
TREC	Trest	2.38	190	ePN	Pn	04 09 36.7	+0.9
TREC				ePG	Pb	04 09 39.7	+0.5
TREC				eSG	Sb	04 10 10.2	+1.1
	comp=Z,326nm,0.7s						
TREC	Trest	2.38	190	ePn	Pn	04 09 36.7	+0.9
TREC				ePg	Pg	04 09 40.8	-0.3
TREC				eSg	Sg	04 10 10.5	-1.3
MAUC	Maruska	2.51	154	ePN	Pn	04 09 38.4	+0.7
MAUC				ePG	Pb	04 09 42.2	+0.6
MAUC				eSG	Sg	04 10 14.9	-1.4
	comp=Z,1μm,0.9s						
KRUC	Moravsky	2.58	176	ePn	Pn	04 09 39.0	+0.5
	baz=357						
KRUC				eSg	Sg	04 10 16.7	-1.6
	comp=Z,334nm,1.0s,baz=357						
KRUC	Moravsky	2.58	176	ePN	Pn	04 09 39.0	+0.5
KRUC				eSG	Sg	04 10 16.8	-1.6
KRUC	Moravsky	2.58	176	ePn	Pn	04 09 39.6	+1.1
KRUC				ePg	Pg	04 09 44.1	-0.8
KRUC				eSg	Sb	04 10 16.2	+1.3
TANN	Tannenbergstha	2.62	244	ePn	Pn	04 09 40.2	+1.0
TANN				ePg	Pg	04 09 46.5	+0.8
TANN				eSg	Sg	04 10 19.6	0.0
WERD	Werda	2.69	245	ePn	Pn	04 09 41.0	+0.9
WERD				ePg	Pg	04 09 48.0	+0.9
WERD				eSg	Sg	04 10 22.3	+0.3
GUNZ	Gunzen	2.72	244	ePn	Pn	04 09 41.3	+0.9
GUNZ				ePg	Pg	04 09 49.0	+1.4
GUNZ				eSg	Sg	04 10 23.2	+0.5
OJC	Ojcow	2.72	120	ePn	Pn	04 09 39.5	-0.9
OJC				i Pg	Pg	04 09 47.6	0.0
OJC				eSg	Sg	04 10 23.8	+1.0
OJC	Ojcow	2.72	120	ePn	Pn	04 09 39.7	-0.7
OJC				ePg	Pg	04 09 47.9	+0.3
OJC				eSg	Sg	04 10 24.0	+1.3
NKC	Novy Kostel	2.72	240	ePN	Pn	04 09 41.8	+1.3
NKC				eSG	Sg	04 10 23.4	+0.5
	comp=Z,566nm,0.7s						
NKC	Novy Kostel	2.72	240	Pn	Pn	04 09 41.4	+0.9
NKC	Novy Kostel	2.72	240	ePn	Pn	04 09 41.5	+1.0
WERN	Wernitzgruen	2.73	242	ePn	Pn	04 09 41.7	+1.0
WERN				ePg	Pg	04 09 48.6	+0.8
PLN	Plauen	2.76	247	ePn	Pn	04 09 41.9	+0.8
PLN				ePg	Pg	04 09 49.9	+1.5
PLN				eSg	Sg	04 10 24.7	+0.6
NEUB	Neuenburg	2.76	263	ePn	Pn	04 09 42.4	+1.4
NEUB				ePg	Pg	04 09 49.4	+1.0
NEUB				eSg	Sg	04 10 26.4	+2.2
BEL	Belsk	2.90	84	ePn	Pb	04 09 46.7	-1.4
JAVC	Velka Javorina	2.95	160	ePN	Pn	04 09 43.9	+0.2
JAVC	Velka Javorina	2.95	160	ePn	Pn	04 09 45.4	+1.8
JAVC				ePg	Pg	04 09 53.5	+1.5
KHC	Kasperske Hory	2.99	214	ePN	Pn	04 09 44.6	+0.4
KHC				ePG	Pb	04 09 51.0	+1.3
KHC				eSN	Sn	04 10 19.5	-1.3
KHC				eSG	Sg	04 10 30.9	-0.7
	comp=Z,179nm,0.4s						
KHC	Kasperske Hory	2.99	214	Pn	Pn	04 09 44.6	+0.4
KHC	Kasperske Hory	2.99	214	ePn	Pn	04 09 44.7	+0.4
KHC				ePg	Pg	04 09 51.6	-1.2
KHC				eSg	Sg	04 10 30.4	-1.2
MOX	Moxa	3.01	253	ePn	Pn	04 09 45.3	+0.8
MOX				ePg	Pg	04 09 53.8	+0.5
MOX				eSg	Sg	04 10 32.6	+0.4
CKRC	Cesky Krumlov	3.05	203	ePN	Pn	04 09 46.1	+1.1
CKRC				ePG	Pb	04 09 51.6	+0.9
CKRC				eSG	Sg	04 10 32.2	-1.2
CKRC	Cesky Krumlov	3.05	203	ePn	Pn	04 09 45.7	+0.7
CKRC				ePg	Pg	04 09 52.6	-1.3
CKRC				eSg	Sb	04 10 30.5	+2.1
FLTG	Flechtingen	3.11	285	ePn	Pn	04 09 48.7	+2.9
FLTG				ePg	Pg	04 09 55.5	+0.4
FLTG				eSg	Sg	04 10 36.6	+1.3
GEC2	GERESS Array S	3.20	210	ePn	Pn	04 09 47.8	+0.7
GEC2				ePg	Pb	04 09 54.9	+1.6
GEC2				eSg	Sg	04 10 36.2	-2.0
GERES	GERESS Array B	3.20	210	Pn	Pn	04 09 47.7	+0.6
	comp=Z,12nm,0.3s,baz=30,slow=13,SNR=254						
GERES				Lg	Lg	04 10 35.6	
	comp=Z,21nm,0.3s,baz=32,slow=26,SNR=5.5						
	comp=Z,26nm,0.3s						
SMOL	Smolenice	3.23	165	ePN	Pn	04 09 49.2	+1.7
SMOL				ePG	Pg	04 09 57.6	+0.2
SMOL				eSN	Sn	04 10 12.9	-14
SMOL				eSG	Sg	04 10 41.3	+2.0
SMOL				eLG	Lg	04 10 45.2	
WET	Wettzell	3.25	221	ePn	Pn	04 09 48.8	+1.1
WET				eSg	Sg	04 10 37.9	-1.8
LANS	Liptovska Anna	3.27	138	ePN	Pn	04 09 49.2	+1.0
LANS				ePG	Pg	04 09 58.8	+0.5
LANS				eSG	Sg	04 10 40.4	-0.3
MODS	Modra-Piesok	3.34	167	ePN	Pn	04 09 50.0	+0.9
MODS				ePG	Pg	04 10 00.0	+0.4
MODS				eSN	Sn	04 10 15.5	-14
MODS				eSG	Sg	04 10 45.1	+2.2
MODS				eLG	Lg	04 10 47.8	
ASSE	Asse, Remlinge	3.42	281	ePn	Pn	04 09 52.0	+2.0
CLNZ	Clenze	3.44	294	ePn	Pn	04 09 53.2	+2.9
ZST	Bratislava	3.50	169	ePN	Pn	04 09 52.6	+1.5
ZST				ePG	Pg	04 10 02.8	+0.3
ZST				eSG	Sg	04 10 47.3	-0.5
ZST				eLG	Lg	04 10 59.4	
CLZ	Clausthal	3.59	276	ePn	Pn	04 09 54.5	+2.0
VYHS	Vyhne	3.59	150	ePN	Pn	04 09 52.1	-0.4
VYHS				ePG	Pg	04 10 04.6	+0.2
VYHS				eSG	Sg	04 10 51.0	+0.1
VYHS				eLG	Lg	04 11 01.8	
GRF	Grafenberg Arr	3.68	240	ePn	Pn	04 09 55.0	+1.3
CONA	Conrad Observa	3.71	183	i Pn	Pn	04 09 55.1	+0.9
	SNR=21						
NRDL	Niedersach Rie	3.82	285	ePn	Pn	04 09 58.0	+2.5
RONA	Rosalia, Austr	3.94	178	i Pn	Pn	04 09 57.8	+0.5
	comp=Z,1.1nm,0.2s,SNR=8.2						
RONA				eSg	Sg	04 10 59.6	-2.4
	comp=Z,90nm,0.5s						
UBBA	Unterbreizbach	3.94	260	ePn	Pn	04 09 58.2	+1.1
STHS	Stebnicka Huta	3.94	122	ePN	Pb	04 10 01.8	-4.1
STHS				ePG	Pg	04 10 18.0	+6.9
STHS				eSG	Sg	04 11 08.3	+6.1
STHS				eLG	Lg	04 11 18.4	
SOP	Sopron	3.96	176	P	Pn	04 09 58.4	+0.9
MOA	Molln	3.98	198	i Pn	Pn	04 09 58.7	+1.0
	comp=Z,37nm,0.3s,SNR=54						
MOA				eSg	Sg	04 11 02.7	-0.5
	comp=Z,129nm,0.6s						
BSEG	Bad Segeberg	4.22	305	ePn	Pn	04 10 01.5	+0.5
KECS	Kecovo	4.22	137	ePN	Pn	04 10 01.9	+0.8
KECS				ePG	Pg	04 10 18.0	+1.6
KECS				eSG	Sg	04 11 09.9	-1.1
KECS				eLG	Lg	04 11 23.4	
BIOA	Bad Ischl, Aus	4.26	203	i Pn	Pn	04 10 02.6	+0.9
	comp=Z,34nm,0.3s,SNR=32						
BIOA				eSg	Sg	04 11 11.9	-0.6
	comp=Z,84nm,0.4s						
EGYH	Egyhazaskeszo	4.29	169	P	Pn	04 10 02.9	+0.9
RETH	Rethem/Aller,	4.31	288	ePn	Pn	04 10 04.3	+2.0
LUNU	Lund	4.32	339	i P	Pn	04 10 02.0	-0.4
LUNU				eS	Sn	04 10 52.0	-1.3
CRVS	Cervenica-Dubn	4.38	127	ePN	Pn	04 10 04.8	+1.5
CRVS				ePG	Pg	04 10 20.4	+1.0
CRVS				eSG	Sg	04 11 16.4	+0.3
CRVS				eLG	Lg	04 11 29.8	
ARSA	Arzberg	4.40	185	i Pn	Pn	04 10 05.4	+1.8
	comp=Z,10nm,0.5s,SNR=11						
ARSA				eSg	Sg	04 11 18.6	+1.7
	comp=Z,118nm,0.9s						
PSZ	Piszkesteto	4.45	145	⇑P	Pn	04 10 05.3	+1.1
PSZ				⇓S	Sg	04 11 20.1	+1.8
PSZ	Piszkesteto	4.45	145	P	Pn	04 10 05.6	+1.3
RJOB	Jochberg	4.46	210	ePn	Pn	04 10 06.2	+1.7
CSKK	Cskako	4.49	161	P	Pn	04 10 05.8	+1.0
MPLH	Magyarpolny	4.56	168	P	Pn	04 10 06.7	+0.9
FUR	Furstenfeldbru	4.68	224	ePn	Pn	04 10 08.6	+1.2
BLEU	Blekinge	4.69	358	i P	Pn	04 10 09.0	+1.5
BLEU				eS	Sn	04 11 00.7	-1.8
KOLS	Kolonicke sedl	4.77	122	ePN	Pn	04 10 09.5	+0.8
KOLS				ePG	Pg	04 10 29.8	+2.8
KOLS				eSG	Sg	04 11 34.1	+5.3
BJUU	Bjuv	4.82	339	i P	Pn	04 10 09.5	+0.3
KASTN	Kahler Asten	4.85	268	ePn	Pn	04 10 10.7	+1.0
TIH	Tihany	4.87	166	P	Pn	04 10 11.9	+1.9
SUW	Suwalki	4.89	58	eP	Pn	04 10 11.8	+1.5
SUW	Suwalki	4.89	58	ePn	Pn	04 10 12.1	+1.8
KBA	Koelnbreinsper	4.91	203	i Pn	Pn	04 10 11.9	+1.2
	comp=Z,41nm,0.4s,SNR=35						
KBA				eSg	Sg	04 11 32.5	-0.7
	comp=Z,70nm,0.5s						
SOKA	Soboth	5.01	189	i Pn	Pn	04 10 13.5	+1.4
	comp=Z,6.0nm,0.4s,SNR=6.8						
SOKA				eSg	Sb	04 11 30.4	+5.5
	comp=Z,28nm,0.5s						
DEL	Delary	5.03	346	eP	Pn	04 10 12.7	+0.6
DEL	Delary	5.03	346	i P	Pn	04 10 12.0	-0.2
BEHE	Becsehely	5.18	175	P	Pn	04 10 15.9	+1.6
WATA	Walderalm	5.22	216	i Pn	Pn	04 10 16.8	+1.7
	comp=Z,25nm,0.6s,SNR=14						
WATA				eSg	Sg	04 11 45.8	+2.5
	comp=Z,46nm,0.5s						
OBKA	Obir	5.23	192	ePn	Pn	04 10 16.2	+1.2
	comp=Z,1.9nm,0.3s						
OBKA				eSg	Sg	04 11 44.1	+0.6
	comp=Z,83nm,0.7s						
WTTA	Wattenberg	5.26	216	i Pn	Pn	04 10 17.0	+1.4
	comp=Z,8.3nm,0.3s,SNR=9.8						
WTTA				eSg	Sg	04 11 40.7	-3.9
	comp=Z,29nm,0.5s						
MYKA	Terra Mystica	5.27	199	ePn	Pn	04 10 16.6	+1.1
	comp=Z,2.6nm,0.3s						
MYKA				eSg	Sg	04 11 44.1	-0.5
	comp=Z,72nm,0.8s						
MOTA	Moosalm	5.40	219	i Pn	Pn	04 10 19.6	+2.1
	comp=Z,12nm,0.5s,SNR=5.8						
MOTA				eSg	Sg	04 11 52.4	+3.6
	comp=Z,56nm,0.6s						
RETA	Reutte	5.42	222	i Pn	Pn	04 10 18.4	+0.7
	comp=Z,1.7nm,0.2s,SNR=6.6						
RETA				eSg	Sg	04 11 51.8	+2.1
	comp=Z,52nm,0.6s						
ABTA	Abfaltersbach	5.43	207	i Pn	Pn	04 10 19.1	+1.2
	comp=Z,2.9nm,0.3s,SNR=15						
ABTA				eSg	Sg	04 11 50.1	+0.1
	comp=Z,39nm,0.6s						
SQTA	Sankt Quirin	5.46	218	i Pn	Pn	04 10 20.4	+2.1
	comp=Z,14nm,0.3s,SNR=8.1						
SQTA				eSg	Sg	04 11 50.0	-0.8
	comp=Z,20nm,0.4s						
BUG	Bochum--Univer	5.54	271	ePn	Pn	04 10 20.6	+1.4
UBR	Ueberruh	5.56	227	ePn	Pn	04 10 20.3	+0.7
HLG	Helgoland	5.61	300	ePn	Pn	04 10 21.7	+1.6
MORH	Mrgy, Hungar	5.67	162	⇓P	Pn	04 10 21.2	+0.2
MORH				⇓S	Sn	04 11 34.7	+8.0
MORH	Mrgy, Hungar	5.67	162	P	Pn	04 10 21.7	+0.7
KOVH	Kovagotottos	5.70	166	P	Pn	04 10 22.2	+0.8
FETA	Feichten	5.81	220	ePn	Pn	04 10 24.9	+1.8
	comp=Z,4.1nm,0.6s						
FETA				eSg	Sg	04 12 01.1	-1.0
	comp=Z,15nm,0.6s						
AHRW	Bad Neuenahr-A	5.81	263	ePn	Pn	04 10 24.8	+1.9
DAVA	Damuels	5.96	226	ePn	Pn	04 10 25.6	+0.4
	comp=Z,2.6nm,0.3s						
DAVA				eSg	Sg	04 12 07.6	+0.8
	comp=Z,52nm,0.6s						
BFO	Black Forest	6.02	240	ePn	Pn	04 10 25.3	-0.5
PABE	Paberze	6.07	47	eP	Pn	04 10 28.4	+2.0
DAVOX	Davos/Dischmat	6.35	223	Pn	Pn	04 10 31.1	+0.5
	comp=Z,1.4nm,0.3s,baz=28,slow=16,SNR=12						
DAVOX				Lg	Lg	04 12 07.9	
	comp=Z,1.3nm,0.3s,baz=83,slow=17,SNR=3.5						
	comp=Z,5.2nm,0.5s						
DRGR		6.48	136	⇑P	Pn	04 10 33.2	+1.0
SIRR	Siria	6.48	144	⇓P	Pn	04 10 32.7	+0.5
CDF	Champ du Feu	6.55	244	ePn	Pn	04 10 32.2	-1.0
CDF	Champ du Feu	6.55	244	ePg	Pg	04 10 58.7	-2.3
CDF				eSn	Sn	04 11 42.3	-6.3
CDF				eSg	Sg	04 12 22.0	-3.9
	comp=Z,171nm,0.9s						
VIKU	Vikbolandet	6.89	2	eP	Pn	04 10 39.1	+1.3
FRGS	Fruska Gora	6.92	158	⇓P	Pn	04 10 30.5	-7.7
BZS	Buzias	7.03	147	⇓P	Pn	04 10 42.0	+2.4
HINF	Hinteralfeld	7.12	241	ePn	Pn	04 10 40.3	-0.7
HINF	Hinteralfeld	7.12	241	ePg	Pg	04 11 08.4	-3.6
HINF				eSg	Sg	04 12 39.3	-4.9
	comp=Z,76nm,0.9s						
BURAR	Bucovina Array	7.14	121	⇓P	Pn	04 10 41.7	+0.4
NACGM	Naroch	7.18	59	eP	Pn	04 10 43.3	+1.6
	baz=249						
HAU	Haudompre	7.29	244	ePn	Pn	04 10 42.5	-0.8
HAU	Haudompre	7.29	244	ePg	Pg	04 11 12.7	-2.5
HAU				eSg	Sg	04 12 46.0	-3.7
	comp=Z,93nm,0.8s						
KMPD	K-Podol'skiy	7.32	111	Pn	Pn	04 10 43.1	-0.5
KMPD				Pn	Pn	04 10 42.6	-1.0
KMPD				pP	Pn	04 10 43.9	+0.3
GIVF	Givet	7.32	262	ePn	Pn	04 10 44.1	+0.5
PAGF	Fort de Pagny	7.37	249	ePn	Pn	04 10 43.8	-0.5
MI29	MI29, Kamyanyy	7.49	95	Pn	Pn	04 10 45.5	-0.5
LUBAR	Lubar, Ukraine	7.57	99	Pn	Pn	04 10 46.4	-0.6
LUBAR				pP	Pn	04 10 47.4	+0.4
MI30	MI30,Zelenitsa	7.63	92	Pn	Pn	04 10 47.1	-0.8
MI30				pP	Pn	04 10 48.3	+0.4
MEZF	Maizieres J'vi	7.79	251	eSg	Sg	04 13 00.4	-5.1
	comp=Z,14nm,0.6s						
MDVR	Moldovita	7.80	149	⇓P	Pn	04 10 40.7	-10
SFTF	Sexfontaines	7.94	249	ePn	Pn	04 10 52.0	-0.1
SFTF	Sexfontaines	7.94	249	ePg	Pg	04 11 24.2	-3.3
LOT	Lotru	8.00	138	⇓P	Pn	04 10 42.4	-11
CABF	La Chapelle	8.28	237	ePg	Pg	04 11 32.8	-1.3
CABF				eSg	Sg	04 13 15.8	-5.6
	comp=Z,183nm,1.3s						
AKASG	Malin Array Be	8.28	91	Pn	Pn	04 10 56.5	-0.3
	comp=Z,4.3nm,0.3s,baz=280,slow=12,SNR=25						
AKASG				Sn	Sn	04 12 27.3	-3.7
	comp=Z,2.1nm,0.3s,baz=266,slow=23,SNR=5.2						
	comp=Z,4.8nm,0.6s						
MTSE	Matsula	8.34	29	eP	Pn	04 10 58.1	+0.5
HFS	Hagfors	8.63	352	Pn	Pn	04 11 02.6	+1.0
	comp=Z,0.4nm,0.3s,baz=167,slow=14,SNR=16						
HFS				Sn	Sn	04 12 36.3	-3.2
	comp=Z,0.4nm,0.3s,baz=184,slow=17,SNR=2.0						
	comp=Z,0.9nm,0.3s						
LPL	La Plagne	8.73	229	ePn	Pn	04 11 05.1	+1.9
LPG	La Plagne	8.73	229	ePn	Pn	04 11 04.5	+1.2
AAL	Aland	8.84	13	eP	Pn	04 11 04.4	0.0
AAL				IAML		04 14 03.0	
	comp=Z,2.4nm,0.7s						
LOR	Lormes	9.11	246	ePn	Pn	04 11 07.9	-0.3
	baz=57						
LOR				eSg	Sn	04 13 41.8	+50
	comp=Z,4.3nm,0.6s,baz=58						
VSU	Vasula	9.15	37	eP	Pn	04 11 09.9	+1.2
MBDF	Montbardon	9.31	226	ePn	Pn	04 11 12.6	+1.5
SSF	Saint Saulge	9.42	246	ePn	Pn	04 11 11.5	-1.0
SSF	Saint Saulge	9.42	246	ePg	Pn	04 11 52.0	+40
SSF				eSg	Sn	04 13 52.2	+53
	comp=Z,4.7nm,0.5s						
SMF	Signal de Mont	9.47	243	ePn	Pn	04 11 12.1	-1.1
SMF	Signal de Mont	9.47	243	ePg	Pn	04 11 52.2	+39
SMF				eSg	Sn	04 13 53.6	+53
	comp=Z,34nm,0.8s						
ORIF	Oris-en-Rattie	9.58	229	ePn	Pn	04 11 18.3	+3.6
AVF	Avril sur Loir	9.66	245	ePn	Pn	04 11 14.5	-1.2
AVF	Avril sur Loir	9.66	245	ePg	Pn	04 11 55.6	+40
AVF				eSg	Sn	04 13 58.8	+54
	comp=Z,11nm,0.8s						
SBF	Sospel	9.73	220	ePn	Pn	04 11 17.8	+1.1
SBF				eSn	Sn	04 12 58.9	-7.7
	comp=Z,5.3nm,0.5s						
NOA	NORSAR Array B	9.81	346	Pn	Pn	04 11 16.5	-1.3
	baz=185,slow=11,SNR=6.7						
	comp=Z,0.1nm,0.3s						
RAF	Rauma	9.91	16	eP	Pn	04 11 19.7	+0.6
BGF	Bois d'Agland	10.08	245	ePn	Pn	04 11 19.9	-1.6
BGF	Bois d'Agland	10.08	245	ePg	Pn	04 12 03.2	+42
BGF				eSg	Sn	04 14 11.8	+57
	comp=Z,32nm,0.9s						
PGF	Pioggiola	10.30	211	ePn	Pn	04 11 23.9	-0.7
SMRF	Simiane la Rot	10.44	227	ePn	Pn	04 11 25.7	-0.7
LMR	La Mourre	10.54	222	ePn	Pn	04 11 27.6	-0.2
TCF	Toulx Ste Croi	10.60	245	ePn	Pn	04 11 27.4	-1.2
LDF	La Druitiere	10.87	260	ePn	Pn	04 11 30.8	-1.5
FLN	La Foliniere	11.03	261	eP	Pn	04 11 39.1	+4.6
LASF	Ste Croix	11.18	232	ePn	Pn	04 11 35.6	-0.9
FINES	FINESS Array B	11.25	25	Pn	Pn	04 11 37.1	-0.3
	comp=Z,0.8nm,0.3s,baz=204,slow=11,SNR=28						
FINES				Sn	Sn	04 13 35.8	-7.8
	comp=Z,0.7nm,0.3s,baz=210,slow=22,SNR=3.1						
	comp=Z,1.7nm,0.3s						
GRR	Gorron	11.40	260	ePn	Pn	04 11 38.1	-1.5
EKA	Eskdalemuir Ar	12.07	295	Pn	Pn	04 11 46.1	-2.4

baz=102,slow=14
EKA Sn Sn 04 13 52.5 -11
baz=97,slow=28
ARCES ARCESS Array B 18.50 10 Pn **P 04 13 10.8 -2.1**
comp=Z,0.1nm,0.3s,baz=185,slow=12,SNR=8.1
comp=Z,1.7nm,0.6s
ARU Arti 25.07 62 P **P 04 14 20.6 -0.7**
comp=Z,2.5nm,0.4s,baz=260,slow=7.0,SNR=3.8
EIL Elat 26.03 140 P **P 04 14 27.6 -2.7**
comp=Z,3.0nm,0.5s,baz=339,slow=17,SNR=1.6
AKTO Aktyubinsk 26.11 76 P **P 04 14 32.1 +1.2**
comp=Z,2.3nm,0.8s,baz=292,slow=9.0,SNR=6.7
comp=Z,2.3nm,0.8s
TORD Torodi Ar. Bea 40.12 202 P **P 04 16 33.8 +0.8**
comp=Z,0.7nm,0.8s,baz=12,slow=9.1,SNR=7.3
comp=Z,0.7nm,0.8s
MKAR Makanchi Array 42.16 69 P **P 04 16 51.6 +2.1**
comp=Z,0.3nm,0.3s,baz=280,slow=8.1,SNR=3.5
comp=Z,0.3nm,0.3s
SCHQ Schefferville 47.00 308 P **P 04 17 28.5 +0.4**
comp=Z,3.2nm,0.8s,baz=198,slow=9.6,SNR=3.8
comp=Z,3.2nm,0.8s
SONM Songino Array 54.83 56 P **P 04 18 29.7 +2.4**
comp=Z,0.4nm,0.5s,baz=299,slow=9.1,SNR=5.7
comp=Z,0.4nm,0.5s
YKA Yellowknife Ar 59.75 336 P **P 04 19 03.8 +2.2**
comp=Z,1.1nm,0.6s,baz=31,slow=6.8,SNR=14
comp=Z,1.1nm,0.6s
CMAR Chiang Mai Arr 71.33 84 P **P 04 20 18.4 +1.3**
comp=Z,1.6nm,0.3s,baz=294,slow=7.8,SNR=4.9
comp=Z,1.6nm,0.3s
PDAR Pinedale Array 74.85 322 P **P 04 20 40.0 +2.0**
comp=Z,0.9nm,0.6s,baz=54,slow=5.0,SNR=8.3
comp=Z,0.9nm,0.6s
TXAR Lajitas Array 83.64 310 P **P 04 21 26.9 +0.8**
comp=Z,0.3nm,0.7s,baz=36,slow=7.8,SNR=2.7
comp=Z,0.3nm,0.7s
ASAR Alice Springs 125.34 84 PKP **PKiKP 04 27 59.3 +0.7**
comp=Z,0.3nm,0.6s,baz=337,slow=2.1,SNR=2.2

IDC ***02*** *04:21:12.4±3.6, 18°.23N×102°.82W, h0km, mb3.6/4, mbtmp3.4/6, ML3.1/2, MS3.0/1, Error ellipse: s-maj=84.8km s-min=23.2km az=26.0*
MEX ***02*** *04:21:14.7±1.8, 17°.78N×103°.03W, h16km±30km, MD4.3*
ISC 02 04:21:11.4±3.2, 17°.74N±0°.08×103°.13W±0°.06, h16km±21km, n24, σ1s21/34, mb3.7/4, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
MMIG	**Aquila**	**0.58**	**339**	*i* P		**Pb**	**04 21 23.6**	**+0.4**
MMIG				*i* S		**Sb**	**04 21 31.0**	**-0.3**
CDAR	**Ciudad de Arme**	**1.46**	**325**	*e*P		**Pn**	**04 21 37.0**	**-0.1**
CDAR				*e*S		**Sb**	**04 21 56.4**	**-0.2**
COIG	**Colima**	**1.53**	**340**	*e*P		**Pn**	**04 21 37.6**	**-0.6**
COIG				*e*S		**Sn**	**04 21 56.0**	**-1.9**
ZIIG	**Zihuatanejo**	**1.59**	**94**	*i* P		**Pn**	**04 21 37.0**	**-2.0**
ZIIG				*e*S		**Sn**	**04 21 59.2**	**0.0**
R15V		**1.64**	**331**	*e*P		**Pn**	**04 21 39.5**	**-0.2**
R15V				*e*S		**Sn**	**04 21 59.9**	**-0.6**
MNGA	**Volcan de Coli**	**1.78**	**345**	*e*P		**Pn**	**04 21 41.9**	**+0.1**
MNGA				*e*S		**Sn**	**04 22 04.0**	**-0.3**
EZ5V		**1.79**	**346**	*e*P		**Pn**	**04 21 42.0**	**0.0**
EZ5V				*e*S		**Sn**	**04 22 03.9**	**-0.5**
JUBC	**Volcan de Coli**	**1.81**	**347**	*e*P		**Pn**	**04 21 42.3**	**0.0**
JUBC				*e*S		**Sn**	**04 22 05.5**	**+0.4**
INCO	**Volcan de Coli**	**1.83**	**346**	*e*P		**Pn**	**04 21 42.6**	**-0.1**
INCO				*e*S		**Sn**	**04 22 04.2**	**-1.6**
MOIG	**Morelia**	**2.67**	**43**	*i* P		**Pn**	**04 21 54.0**	**0.0**
MOIG				*e*S		**Sn**	**04 22 23.3**	**-2.8**
ARIG	**Puente Sto Nin**	**2.70**	**78**	*i* P		**Pn**	**04 21 52.7**	**-1.5**
ARIG				*e*S		**Sn**	**04 22 27.7**	**+1.0**
ANIG	**Ahuacatlan**	**3.55**	**339**	*e*P		**Pb**	**04 22 14.0**	**+0.1**
ANIG				*e*S		**Sb**	**04 22 54.8**	**-2.0**
JRQG	**Juriquilla Cam**	**3.89**	**40**	*e*P		**Pn**	**04 22 12.8**	**+2.0**
JRQG				*e*S		**Sn**	**04 22 57.5**	**+1.2**
ZAIG	**Zacatecas**	**5.03**	**6**	*e*P		**Pn**	**04 22 26.0**	**-0.6**
ZAIG				*e*S		**Sn**	**04 23 24.4**	**-0.2**
H06E1	**SOCORRO T-PHAS**	**7.48**	**279**	T		T	04 30 45.8	
SNR=21								
CMIG	**Matias Romero**	**7.90**	**93**	Pn		**Pn**	**04 23 06.3**	**+0.6**
0.2nm,0.3s,baz=273,slow=13,SNR=7.9								
CMIG				Lg		Lg	04 25 15.6	
0.6nm,0.3s,baz=188,slow=23,SNR=7.9								
0.7nm,0.2s								
TXAR	**Lajitas Array**	**11.55**	**358**	Pn		**Pn**	**04 23 55.5**	**-0.3**
baz=178,slow=13,SNR=4.7								
TXAR				Lg		Lg	04 27 09.9	
baz=177,slow=19,SNR=2.3								
TXAR				LR		LR	04 27 41.4	
comp=Z,81nm,20.2s,baz=18,slow=35								
0.1nm,0.4s								
NVAR	**Mina Array Bea**	**24.51**	**330**	P		**P**	**04 26 32.9**	**+2.5**
0.7nm,0.7s,baz=149,slow=9.9,SNR=5.1								
0.7nm,0.7s								
YKA	**Yellowknife Ar**	**45.42**	**353**	P		**P**	**04 29 27.3**	**-1.9**
0.8nm,0.9s,baz=160,slow=7.7,SNR=6.5								
0.8nm,0.9s								
ILAR	**Eielson Array**	**55.34**	**339**	P		**P**	**04 30 45.2**	**+0.9**
0.8nm,0.8s,baz=148,slow=5.3,SNR=8.1								
0.8nm,0.8s								
H03N2	**Juan Fernandez**	**55.89**	**156**	T		T	05 31 25.3	
baz=333,slow=77,SNR=48								
H03N1	**Juan Fernandez**	**55.90**	**156**	T		T	05 31 24.2	
baz=333,slow=77,SNR=65								
H03N3	**Juan Fernandez**	**55.91**	**156**	T		T	05 31 31.7	
baz=333,slow=77,SNR=52								
ESDC	**Sonseca Array**	**85.68**	**50**	P		**P**	**04 33 50.6**	**+0.7**
0.4nm,0.7s,baz=294,slow=7.3,SNR=4.5								
0.4nm,0.7s								

ATH 02 04:40:31.2, 36°.02N×21°.98E, h13km±3km, ML1.9/2, Error ellipse: s-maj=5.1km s-min=1.5km az=38.0, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
KTHR	**Kythira**	**0.86**	**74**	P		Pg	04 40 47.5	-0.4
KTHR				S		Sg	04 40 58.9	-0.3
KTHR				AML		AML	04 41 03.6	
comp=N,507μm,0.4s								
KTHR				AML		AML	04 41 07.6	
comp=E,296μm,0.3s								
PYL	**PYLOS**	**0.89**	**348**	P		Pg	04 40 48.1	-0.4
PYL				S		Sg	04 40 60.0	-0.2
KTHA	**Kythira Island**	**0.91**	**75**	P		Pg	04 40 48.1	-0.6
KTHA				S		Sb	04 41 01.2	+0.4
VLI	**Veliai**	**1.04**	**48**	P		Pb	04 40 49.8	-1.2
VLI				AML		AML	04 41 13.3	
comp=N,41μm,0.6s								
VLI				AML		AML	04 41 17.4	
comp=E,70μm,1.2s								
ANKY	**Antikythira Is**	**1.08**	**98**	P		Pb	04 40 51.1	-0.6
ANKY				S		Sb	04 41 05.9	+0.1
ITM	**Ithomi**	**1.16**	**358**	P		Pb	04 40 52.8	-0.3

BEO ***02*** *04:40:33.3±0.7, 38°.45N×15°.51E, h0km, ML3.8/9*
ROM ***02*** *04:40:35.4±0.2, 38°.507N±0°.006×15°.43E±0°.01, h185km±1km, ML3.7/80, Error ellipse: s-maj=1.0km s-min=0.8km az=119.0*
LDG ***02*** *04:40:35.6±0.1, 38°.45N×15°.49E, h184km, Ml3.0/3, Error ellipse: s-maj=3.1km s-min=2.7km az=97.0*
IDC ***02*** *04:40:36.4±0.9, 38°.63N×15°.29E, h197km±10km, mb3.4/13, mbtmp3.8/19, Error ellipse: s-maj=14.6km s-min=10.4km az=118.0*
PDG ***02*** *04:40:39.6±0.2, 38°.85N×15°.79E, h18km±3km, ML3.7/13, Error ellipse: s-maj=3.7km s-min=1.4km az=90.0*
THE ***02*** *04:40:40.7, 38°.45N×15°.92E, h8km±24km, ML3.5/16, Error ellipse: s-maj=31.8km s-min=1.3km az=260.0*
ISC 02 04:40:35.6±0.6, 38°.55N±0°.03×15°.47E±0°.03, h189km±5km, n263, σ1s74/357, mb3.8/12, 33C-42D, Sicily

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
MSRU	**Castanea**	**0.29**	**174**	⇓P		**Pn**	**04 40 59.6**	**-1.2**
MSRU				S		**Sn**	**04 41 17.8**	**-2.4**
MSRU				AML		AML		
comp=E,7425μm,0.4s								
MSRU				AML		AML		
comp=N,5800μm,0.4s								
IST3	**Stromboli F**	**0.31**	**323**	⇓P		**Pn**	**04 41 00.4**	**-0.4**
IST3				AML		AML		
comp=E,3240μm,0.6s								
IST3				AML		AML		
comp=N,3440μm,1.5s								
ISTR	**Stromboli Gino**	**0.32**	**318**	⇓P		**Pn**	**04 41 00.2**	**-0.5**
ISTR				AML		AML		
comp=E,1270μm,0.3s								
ISTR				AML		AML		
comp=E,1275μm,0.3s								
ISTR				AML		AML		
comp=N,1430μm,0.3s								
JOPP	**Joppolo**	**0.33**	**80**	⇓P		**Pn**	**04 41 00.3**	**-0.6**
JOPP				S		**Sn**	**04 41 18.7**	**-1.7**
JOPP				AML		AML		
comp=E,2085μm,0.5s								
JOPP				AML		AML		
comp=N,3200μm,0.6s								
MILZ	**Milazzo**	**0.34**	**214**	AML		AML		
comp=N,4440μm,0.4s								
MILZ				AML		AML		
comp=E,3860μm,0.5s								
MSCL	**Scilla**	**0.40**	**141**	⇓P		**Pn**	**04 41 00.3**	**-0.9**
MPNC	**Port Mandanici**	**0.41**	**193**	⇓P		**Pn**	**04 40 59.9**	**-1.2**
MPNC				S		**Sn**	**04 41 19.5**	**-1.3**
MPNC				AML		AML		
comp=N,3145μm,0.5s								
MPNC				AML		AML		
comp=E,2545μm,0.3s								
VPL	**Vulcano Piano**	**0.42**	**246**	⇓P		**Pn**	**04 40 60.0**	**-1.2**
VPL				AML		AML		
comp=N,7685μm,0.4s								
VPL				AML		AML		
comp=E,8150μm,0.2s								
LLI	**Lipari**	**0.42**	**256**	⇓P		**Pn**	**04 41 00.6**	**-0.5**
LLI				AML		AML		
comp=E,8090μm,0.4s								
LLI				AML		AML		
comp=N,11300μm,1.5s								
LLI				AML		AML		
comp=N,11250μm,1.5s								
CEL	**Celeste**	**0.44**	**131**	⇓P		**Pn**	**04 41 00.6**	**-0.7**
CEL				S		**Sn**	**04 41 19.1**	**-1.9**
CEL				AML		AML		
comp=E,2235μm,1.0s								
CEL				AML		AML		
comp=N,2705μm,0.2s								
CEL				AML		AML		
comp=E,2230μm,1.0s								
CEL				AML		AML		
comp=E,2725μm,1.0s								
CEL				AML		AML		
comp=N,2110μm,0.2s								
GMB	**Gambarie**	**0.47**	**143**	⇓P		**Pn**	**04 41 00.9**	**-0.6**
GMB				S		**Sn**	**04 41 20.3**	**-1.2**
GMB				AML		AML		
comp=E,22950μm,0.5s								
GMB				AML		AML		
comp=N,14200μm,1.1s								
MTTG	**Motta San Giov**	**0.57**	**162**	⇓P		**Pn**	**04 41 01.5**	**-0.3**
MTTG				S		**Sn**	**04 41 21.1**	**-0.9**
MTTG				AML		AML		
comp=E,2535μm,0.6s								
MTTG				AML		AML		
comp=N,2480μm,0.1s								
NOV	**Novara**	**0.58**	**207**	⇓P		**Pn**	**04 41 01.4**	**-0.5**
NOV				AML		AML		
comp=N,3320μm,0.7s								
NOV				AML		AML		
comp=E,4920μm,1.3s								
AIO	**Antillo**	**0.61**	**198**	⇓P		**Pn**	**04 41 01.6**	**-0.4**
AIO				S		**Sn**	**04 41 21.5**	**-0.8**
AIO				AML		AML		
comp=E,1845μm,1.0s								
AIO				AML		AML		
comp=N,2540μm,0.4s								
SOI	**Samo**	**0.66**	**136**	⇓P		**Pn**	**04 41 01.9**	**-0.3**
SOI				S		**Sn**	**04 41 21.4**	**-1.2**
SOI				AML		AML		
comp=E,1995μm,0.3s								
SOI				AML		AML		
comp=N,2770μm,0.2s								
IFIL	**Filicudi I Eol**	**0.71**	**272**	⇓P		**Pn**	**04 41 01.5**	**-0.9**
IFIL				AML		AML		
comp=E,4400μm,0.8s								
IFIL				AML		AML		
comp=N,1865μm,0.8s								
PLAC	**Placanica**	**0.77**	**97**	⇓P		**Pn**	**04 41 02.9**	**+0.2**
PLAC				S		**Sn**	**04 41 22.5**	**-1.2**
PLAC				AML		AML		
comp=E,1345μm,0.9s								
PLAC				AML		AML		
comp=N,2280μm,0.7s								
PLAC				AML		AML		
comp=N,1415μm,1.3s								
PLAC				AML		AML		
comp=E,2405μm,0.7s								
PLAC				AML		AML		
comp=E,1340μm,0.9s								
GRI	**Girifalco**	**0.79**	**70**	⇓P		**Pn**	**04 41 03.3**	**+0.5**
GRI				S		**Sn**	**04 41 23.1**	**-0.9**
GRI				AML		AML		
comp=E,4220μm,0.8s								
GRI				AML		AML		
comp=N,2795μm,0.5s								
GRI				AML		AML		
comp=E,4215μm,0.8s								
MSFR	**San Fratello**	**0.86**	**234**	⇓P		**Pn**	**04 41 02.7**	**-0.7**
MSFR				AML		AML		
comp=N,758μm,0.3s								
MSFR				AML		AML		
comp=E,491μm,0.3s								
EPZF	**Pizzo Felice**	**0.87**	**214**	⇓P		**Pn**	**04 41 03.7**	**+0.2**
EPZF				AML		AML		
comp=N,2110μm,1.1s								
EPZF				AML		AML		
comp=E,3560μm,0.7s								
IACL	**Alicudi**	**0.87**	**269**	⇓P		**Pn**	**04 41 02.4**	**-0.9**
IACL				AML		AML		
comp=E,704μm,0.8s								
IACL				AML		AML		
comp=N,679μm,0.4s								
CAR1	**CAROLEI**	**0.91**	**39**	⇓P		**Pn**	**04 41 03.6**	**0.0**
CAR1				S		**Sn**	**04 41 23.7**	**-1.8**
CAR1				AML		AML		
comp=E,5000μm,0.4s								
CAR1				AML		AML		
comp=N,7785μm,0.7s								
CAR1				AML		AML		
comp=N,7610μm,0.7s								
CAR1				AML		AML		
comp=E,5005μm,0.4s								
CAR1				AML		AML		
comp=N,7785μm,0.7s								
CAR1				AML		AML		
comp=E,5555μm,0.3s								
SPS2	**Spezzano della**	**1.01**	**42**	P		**Pn**	**04 41 04.5**	**+0.2**
SPS2				S		**Sn**	**04 41 25.2**	**-1.4**
SPS2				AML		AML		
comp=N,2595μm,0.8s								
SPS2				AML		AML		
comp=E,1350μm,1.0s								
ESML	**S. M. di Licod**	**1.04**	**207**	P		**Pn**	**04 41 04.3**	**-0.3**
ESML				AML		AML		
comp=E,2040μm,0.8s								
ESML				AML		AML		
comp=N,1690μm,0.7s								
CET2	**Cetraro**	**1.05**	**21**	P		**Pn**	**04 41 05.1**	**+0.5**
CET2				S		**Sn**	**04 41 25.6**	**-1.6**
CET2				AML		AML		
comp=E,7285μm,0.8s								
CET2				AML		AML		
comp=N,7390μm,0.5s								
SERS	**Sersale**	**1.07**	**63**	⇓P		**Pn**	**04 41 05.5**	**+0.7**
SERS				S		**Sn**	**04 41 26.9**	**-0.6**
SERS				AML		AML		
comp=E,2740μm,0.4s								
SERS				AML		AML		
comp=N,2585μm,0.4s								
SERS				AML		AML		
comp=E,2800μm,0.4s								
SERS				AML		AML		
comp=E,2735μm,0.4s								
SERS				AML		AML		
comp=N,2580μm,0.4s								
SERS				AML		AML		
comp=N,2875μm,0.4s								
GALF	**Gagliano Caste**	**1.10**	**221**	⇓P		**Pn**	**04 41 05.1**	**+0.1**
GALF				AML		AML		
comp=E,738μm,0.5s								
GALF				AML		AML		
comp=N,839μm,0.7s								
CELI	**Celico**	**1.18**	**43**	P		**Pn**	**04 41 06.5**	**+0.8**
CELI				AML		AML		
comp=N,2170μm,0.4s								
CELI				AML		AML		
comp=E,5245μm,0.6s								
CELI				AML		AML		
comp=N,5380μm,0.4s								
CELI				AML		AML		
comp=E,2075μm,0.6s								
PLLN	**Pollina**	**1.18**	**242**	⇓P		**Pn**	**04 41 04.5**	**-1.1**
PLLN				S		**Sn**	**04 41 26.7**	**-2.2**
TIP	**Timpagrande**	**1.19**	**58**	⇓P		**Pn**	**04 41 06.4**	**+0.8**
TIP				S		**Sn**	**04 41 28.5**	**-0.5**
TIP				AML		AML		
comp=E,1730μm,0.6s								
TIP				AML		AML		
comp=E,2045μm,0.6s								
TIP				AML		AML		
comp=N,1795μm,1.1s								
TIP				AML		AML		
comp=N,1405μm,1.1s								
CAGR	**Agira**	**1.20**	**220**	⇓P		**Pn**	**04 41 06.7**	**+0.9**
CAGR				AML		AML		
comp=E,2740μm,1.2s								
CAGR				AML		AML		
comp=N,2790μm,0.9s								
GIB	**Gibilmanna**	**1.27**	**244**	⇓P		**Pn**	**04 41 05.3**	**-1.1**
GIB				S		**Sn**	**04 41 27.8**	**-2.4**
GIB				AML		AML		
comp=N,1860μm,0.6s								
GIB				AML		AML		
comp=E,1162μm,0.6s								
CSLB	**Castelbuono**	**1.27**	**242**	⇓P		**Pn**	**04 41 05.1**	**-1.2**
CSLB				AML		AML		
comp=E,190μm,0.8s								
CSLB				AML		AML		
comp=N,250μm,0.8s								
PETRA	**Petralia Sopra**	**1.28**	**237**	AML		AML		
comp=N,784μm,0.7s								
PETRA				AML		AML		
comp=E,789μm,1.5s								
HAGA	**Augusta**	**1.29**	**191**	⇓P		**Pn**	**04 41 05.4**	**-1.1**
HAGA				S		**Sn**	**04 41 27.6**	**-2.7**
HAGA				AML		AML		
comp=E,758μm,1.5s								
HAGA				AML		AML		
comp=E,757μm,1.5s								
HAGA				AML		AML		
comp=N,865μm,1.5s								
HLNI	**Lentini**	**1.29**	**202**	P		**Pn**	**04 41 05.5**	**-1.0**
HLNI				S		**Sn**	**04 41 28.9**	**-1.4**
HLNI				AML		AML		
comp=E,1445μm,0.2s								
HLNI				AML		AML		
comp=N,1835μm,1.0s								
AGST	**Augusta-Monte**	**1.30**	**189**	⇓P		**Pn**	**04 41 05.3**	**-1.3**
AGST				AML		AML		
comp=E,803μm,0.8s								
AGST				AML		AML		
comp=N,1365μm,0.5s								
AGST				AML		AML		
comp=E,800μm,0.8s								
AGST				AML		AML		
comp=N,1370μm,0.5s								
VAE	**Valguarnera**	**1.36**	**218**	P		**Pn**	**04 41 08.3**	**+1.2**
comp=N,129nm,0.5s,baz=312,slow=0.6,SNR=48								
VAE				S		**Sn**	**04 41 36.4**	**+4.9**
comp=N,175nm,0.6s,baz=256,slow=18,SNR=6.1								
LADO	**San Nicola del**	**1.39**	**58**	⇓P		**Pn**	**04 41 07.8**	**+0.5**
LADO				AML		AML		
comp=E,224μm,0.4s								
LADO				AML		AML		
comp=N,144μm,0.6s								
MMN	**Mormanno**	**1.40**	**17**	P		**Pn**	**04 41 07.6**	**+0.3**
MMN				S		**Sn**	**04 41 31.2**	**-0.9**
MMN				AML		AML		
comp=N,856μm,0.4s								
MMN				AML		AML		
comp=E,398μm,0.6s								
PIPA	**Pietrapaola**	**1.40**	**48**	P		**Pn**	**04 41 08.3**	**+0.8**
PIPA				AML		AML		
comp=E,2790μm,0.3s								
PIPA				AML		AML		
comp=N,2190μm,0.4s								
PIPA				AML		AML		
comp=N,2305μm,1.2s								
PIPA				AML		AML		
comp=E,2730μm,0.3s								
SSY	**Sortino**	**1.43**	**193**	⇓P		**Pn**	**04 41 07.0**	**-0.8**
SSY				AML		AML		
comp=N,2905μm,1.5s								
SSY				AML		AML		
comp=E,1380μm,0.3s								
CUC	**Castrocucco**	**1.47**	**10**	⇑P		**Pn**	**04 41 08.3**	**+0.3**
CUC				S		**Sn**	**04 41 32.7**	**-0.7**
CUC				AML		AML		
comp=E,700μm,0.9s								
CUC				AML		AML		
comp=N,444μm,1.0s								
CUC				AML		AML		
comp=E,854μm,1.0s								
CUC				AML		AML		
comp=N,562μm,1.0s								
HVZN	**Vizzini**	**1.49**	**204**	⇓P		**Pn**	**04 41 07.8**	**-0.5**
HVZN				S		**Sn**	**04 41 32.0**	**-1.7**
MEU	**Monte Lauro**	**1.51**	**197**	⇓P		**Pn**	**04 41 08.0**	**-0.5**
MEU				S		**Sn**	**04 41 32.3**	**-1.7**
MEU				AML		AML		
comp=E,2075μm,1.4s								
MEU				AML		AML		
comp=N,2995μm,0.4s								
BULG	**Bulgheria - Ca**	**1.53**	**357**	⇑P		**Pn**	**04 41 09.4**	**+0.8**
BULG				AML		AML		
comp=E,468μm,0.9s								
BULG				AML		AML		
comp=N,736μm,0.7s								
BULG				AML		AML		
comp=N,693μm,0.7s								
BULG				AML		AML		
comp=E,478μm,0.9s								
ALJA	**Alia**	**1.57**	**240**	⇓P		**Pn**	**04 41 09.0**	**0.0**
ALJA				AML		AML		
comp=N,620μm,0.5s								
ALJA				AML		AML		
comp=E,576μm,1.3s								
MGR	**Morigerati**	**1.59**	**2**	⇑P		**Pn**	**04 41 09.7**	**+0.7**
MGR				S		**Sn**	**04 41 34.6**	**-0.7**
MGR				AML		AML		
comp=N,496μm,0.6s								
MGR				AML		AML		
comp=E,381μm,0.5s								
RAFF	**Raffo Rosso**	**1.59**	**214**	P		**Pn**	**04 41 09.0**	**-0.2**
RAFF				AML		AML		
comp=E,761μm,1.6s								
RAFF				AML		AML		
comp=N,1195μm,1.2s								
SOLUN	**Solunto**	**1.59**	**254**	⇓P		**Pn**	**04 41 08.2**	**-0.9**
SOLUN				S		**Sn**	**04 41 32.8**	**-2.4**
SOLUN				AML		AML		
comp=N,238μm,0.5s								
SOLUN				AML		AML		
comp=E,299μm,1.3s								
HAVL	**Avola**	**1.61**	**190**	⇓P		**Pn**	**04 41 08.7**	**-0.8**
HAVL				S		**Sn**	**04 41 34.0**	**-1.7**
HAVL				AML		AML		
comp=E,2365μm,0.3s								
HAVL				AML		AML		
comp=N,3865μm,0.4s								
SIRI	**Monte Sirino -**	**1.66**	**11**	⇑P		**Pn**	**04 41 10.3**	**+0.5**
SIRI				S		**Sn**	**04 41 35.2**	**-1.5**
SIRI				AML		AML		
comp=N,642μm,0.5s								
SIRI				AML		AML		
comp=E,724μm,0.3s								
SIRI				AML		AML		
comp=N,656μm,0.8s								
SIRI				AML		AML		
comp=E,697μm,0.3s								
HMDC	**Modica**	**1.68**	**199**	⇓P		**Pn**	**04 41 09.6**	**-0.5**
HMDC				S		**Sn**	**04 41 35.4**	**-1.4**
HMDC				AML		AML		

comp=E,1018µm,0.4s
HMDC AML AML
comp=N,1450µm,0.3s
CMDO Montedoro 1.69 231 P **Pn** **04 41 11.5 +1.3**
ORI Oriolo Calabro 1.69 26 P **Pn** **04 41 11.4 +1.3**
ORI S **Sn** **04 41 36.9 -0.2**
ORI AML AML
comp=N,2785µm,0.4s
ORI AML AML
comp=E,3030µm,0.7s
MPG Monte Pellegri 1.70 258 P **Pn** **04 41 09.4 -0.9**
MPG AML AML
comp=E,252µm,1.0s
MPG AML AML
comp=N,356µm,0.4s
SCHR S. Chirico Rap 1.71 16 ⇑P **Pn** **04 41 11.2 +0.8**
SCHR S **Sn** **04 41 38.7 +1.1**
SCHR AML AML
comp=E,830µm,0.6s
SCHR AML AML
comp=N,592µm,0.4s
MTSN Montesano sull 1.73 7 ⇑P **Pn** **04 41 11.1 +0.5**
MTSN S **Sn** **04 41 37.7 -0.2**
MTSN AML AML
comp=E,346µm,0.8s
MTSN AML AML
comp=N,453µm,0.4s
CMPR Campora 1.77 356 ⇑P **Pn** **04 41 11.8 +0.8**
CMPR AML AML
comp=E,441µm,0.6s
CMPR AML AML
comp=N,770µm,0.4s
MCEL Monticello 1.79 8 ⇑P **Pn** **04 41 11.8 +0.7**
MCEL S **Sn** **04 41 39.4 +0.4**
MCEL AML AML
comp=E,528µm,0.5s
MCEL AML AML
comp=E,528µm,0.5s
MCEL AML AML
comp=N,471µm,0.9s
MCEL AML AML
comp=N,470µm,1.0s
CLTA Licata 1.83 221 P **Pn** **04 41 11.8 +0.2**
CLTA S **Sn** **04 41 39.4 0.0**
CLTA AML AML
comp=N,1200µm,0.8s
CLTA AML AML
comp=E,643µm,0.7s
SLCN Sala Consilina 1.84 4 ⇑P **Pn** **04 41 12.4 +0.7**
SLCN S **Sn** **04 41 40.0 0.0**
SLCN AML AML
comp=E,646µm,0.9s
SLCN AML AML
comp=N,587µm,1.1s
HPAC Pachino 1.87 189 P **Pn** **04 41 11.6 -0.3**
HPAC AML AML
comp=N,1705µm,0.3s
HPAC AML AML
comp=E,1188µm,0.8s
FAVR Favara 1.92 229 P **Pn** **04 41 12.9 +0.5**
FAVR AML AML
comp=E,287µm,1.2s
FAVR AML AML
comp=N,259µm,1.0s
CDRU Civita di Ruta 1.94 356 ⇑P **Pn** **04 41 13.7 +1.0**
CDRU AML AML
comp=E,216µm,1.1s
CDRU AML AML
comp=N,252µm,0.5s
CRAC Craco 1.96 22 ⇑P **Pn** **04 41 14.0 +1.1**
CRAC S **Sn** **04 41 43.6 +1.6**
CRAC AML AML
comp=N,5745µm,0.7s
CRAC AML AML
comp=E,8725µm,0.3s
CLTB Caltabellotta 2.03 242 P **Pn** **04 41 13.3 -0.3**
CLTB S **Sn** **04 41 41.1 -2.0**
CRJA Costa Raja 2.08 250 P **Pn** **04 41 14.0 -0.2**
PZUN Potenza 2.11 7 ⇑P **Pn** **04 41 16.4 +2.0**
PZUN AML AML
comp=N,450µm,1.1s
PZUN AML AML
comp=N,458µm,1.1s
PZUN AML AML
comp=E,474µm,1.1s
PZUN AML AML
comp=E,396µm,0.7s
MMGO Monte Magaggia 2.16 247 P **Pn** **04 41 13.8 -1.2**
MMGO S **Sn** **04 41 44.0 -1.6**
MIGL Miglionico 2.19 20 ⇑P **Pn** **04 41 15.1 -0.1**
MIGL S **Sn** **04 41 46.3 0.0**
MIGL AML AML
comp=E,1610µm,1.4s
MIGL AML AML
comp=N,1825µm,0.4s
MCRV Calabrutti - M 2.24 354 ⇑P **Pn** **04 41 17.5 +1.5**
ACER Acerenza 2.27 9 ⇑P **Pn** **04 41 17.1 +0.9**
ACER S **Sn** **04 41 48.0 +0.1**
ACER AML AML
comp=N,447µm,0.4s
ACER AML AML
comp=N,452µm,0.4s
ACER AML AML
comp=E,482µm,0.6s
ACER AML AML
comp=E,494µm,0.6s
LTRZ Laterza 2.30 27 ⇑P **Pn** **04 41 15.7 -0.8**
LTRZ S **Sn** **04 41 46.5 -2.0**
LTRZ AML AML
comp=E,734µm,0.4s
LTRZ AML AML
comp=N,1200µm,0.3s
MATE Matera 2.30 24 ⇑P **Pn** **04 41 15.8 -0.6**
MATE S **Sn** **04 41 46.5 -2.0**
MATE AML AML
comp=E,817µm,0.7s
MATE AML AML
comp=N,898µm,0.4s
LIO3 Lioni 2.36 355 ⇑P **Pn** **04 41 18.6 +1.5**
SNAL S. Angelo Dei 2.38 355 ⇑P **Pn** **04 41 19.0 +1.6**
SNAL AML AML
comp=E,236µm,0.9s
SNAL AML AML
comp=N,311µm,1.3s
SNAL AML AML
comp=N,302µm,1.3s
SNAL AML AML
comp=E,237µm,1.4s
VCRE Vesuvio Crater 2.41 341 ⇑P **Pn** **04 41 19.2 +1.5**
VARP Vesuvio Array 2.41 340 P **Pn** **04 41 19.2 +1.5**
VARP AML AML
comp=N,760µm,1.1s
VARP AML AML
comp=E,634µm,1.1s
CRTO Cratere Ovest, 2.41 341 ⇑P **Pn** **04 41 19.2 +1.4**
PALZ Palazzo San Ge 2.42 9 ⇑P **Pn** **04 41 18.5 +0.6**
PALZ S **Sn** **04 41 50.5 -0.5**
PALZ AML AML
comp=E,564µm,0.7s
PALZ AML AML
comp=N,476µm,0.7s
VVDG Vesuvio Valle 2.42 341 ⇑P **Pn** **04 41 19.2 +1.3**
CAFE Carife 2.48 356 P **Pn** **04 41 20.2 +1.6**
AMUR Altamura 2.51 20 AML AML
comp=N,1410µm,0.4s
AMUR AML AML
comp=E,1080µm,0.9s
NOCI Noci 2.55 28 ⇑P **Pn** **04 41 18.5 -0.9**
NOCI S **Sn** **04 41 51.6 -2.1**
MRVN Minervino Murg 2.57 12 P **Pn** **04 41 19.4 -0.2**
MRVN S **Sn** **04 41 53.0 -1.1**
MRVN AML AML
comp=E,326µm,0.8s
MRVN AML AML
comp=N,534µm,0.4s
PAOL Paolisi 2.58 345 P **Pn** **04 41 20.6 +0.9**
PAOL AML AML
comp=N,275µm,0.5s
PAOL AML AML
comp=E,146µm,0.4s
MRB1 Monte Rocchett 2.60 352 P **Pn** **04 41 21.6 +1.7**
VITU Vitulano (BN) 2.71 346 ⇑P **Pn** **04 41 22.4 +1.2**
PSB1 Pescosannita 2.72 349 ⇑P **Pn** **04 41 22.8 +1.5**
PSB1 AML AML
comp=N,131µm,0.9s
PSB1 AML AML
comp=E,151µm,0.6s
PSB1 AML AML
comp=N,140µm,0.9s
PSB1 AML AML
comp=E,163µm,0.6s
SCTE Santa Cesarea 2.78 56 ⇓P **Pn** **04 41 22.0 0.0**
SCTE AML AML
comp=E,2555µm,0.5s
SCTE AML AML
comp=N,2665µm,0.5s
PIGN Pignataro Magg 2.83 340 ⇑P **Pn** **04 41 23.7 +1.1**
PIGN AML AML
comp=E,92µm,0.9s
PIGN AML AML
comp=N,120µm,1.4s
SGG Gregorio Mates 2.96 344 ⇑P **Pn** **04 41 25.4 +1.3**
SGG AML AML
comp=N,162µm,0.5s
SGG AML AML
comp=E,126µm,0.6s
MSAG Monte S. Angel 3.18 6 ⇑P **Pn** **04 41 27.4 +0.7**
MSAG AML AML
comp=E,145µm,1.6s
MSAG AML AML
comp=N,296µm,1.5s
APRC Apricena 3.21 1 ⇑P **Pn** **04 41 27.7 +0.6**
APRC AML AML
comp=E,141µm,0.5s
APRC AML AML
comp=N,166µm,1.5s
RNI2 Rionero Sannit 3.31 343 P **Pn** **04 41 30.5 +2.1**
RNI2 AML AML
comp=E,190µm,0.8s
RNI2 AML AML
comp=N,118µm,0.8s
KEK Kerkira 3.56 70 P **Pn** **04 41 32.2 +0.7**
KEK S **Sn** **04 42 11.8 -3.4**
comp=N,342nm,0.3s
KEK Kerkira 3.56 70 P **Pn** **04 41 32.2 +0.7**
KEK S **Sn** **04 42 11.8 -3.4**
KEK Kerkira 3.56 70 P **Pn** **04 41 32.1 +0.7**
KEK AML AML
comp=N,81µm,0.5s
KEK AML AML
comp=E,115µm,1.4s
SRN Sarande 3.76 68 P **Pn** **04 41 34.6 +0.7**
SRN S **Sn** **04 42 16.8 -2.8**
comp=E,128nm,0.3s
SRN Sarande 3.76 68 S Sn 04 42 16.8 -5.9
SRN Sarande 3.76 68 AML AML
comp=E,149µm,0.3s
SRN AML AML
comp=N,170µm,0.3s
SRN Sarande 3.76 68 P Pn 04 41 34.6 +0.3
DMLN Damoulianata-K 3.87 93 P **Pn** **04 41 36.1 +0.9**
DMLN S **Sn** **04 42 18.4 -3.6**
comp=N,435nm,0.6s
DMLN Damoulianata-K 3.87 93 P **Pn** **04 41 36.1 +0.9**
DMLN S **Sn** **04 42 18.4 -3.6**
IGT Igoumenitsa 3.91 74 P **Pn** **04 41 37.2 +1.4**
IGT S **Sn** **04 42 21.0 -2.0**
comp=N,138nm,0.2s
IGT Igoumenitsa 3.91 74 S Sb 04 42 21.0 -1.3
IGT Igoumenitsa 3.91 74 P Pb 04 41 37.2 +0.1
FSK Fiskardo 4.00 90 P **Pn** **04 41 38.1 +1.2**
FSK S **Sn** **04 42 22.0 -2.9**
comp=N,88nm,0.2s
FSK Fiskardo 4.00 90 P **Pn** **04 41 38.1 +1.2**
FSK S **Sn** **04 42 22.0 -2.9**
VLS Valsamata 4.04 94 P **Pn** **04 41 38.2 +0.7**
VLS S **Sn** **04 42 23.3 -2.7**
comp=N,120nm,0.5s
VLS Valsamata 4.04 94 P **Pn** **04 41 38.2 +0.7**
VLS S **Sn** **04 42 23.3 -2.7**
VLS Valsamata 4.04 94 ⇓P **Pn** **04 41 38.1 +0.7**
VLS AML AML
comp=E,70µm,0.8s
VLS AML AML
comp=N,44µm,0.4s
PSDA Pessada-Kefalo 4.04 95 P **Pn** **04 41 37.6 +0.1**
PSDA S **Sn** **04 42 22.1 -3.9**
comp=N,18nm,0.5s
PSDA Pessada-Kefalo 4.04 95 P **Pn** **04 41 37.6 +0.1**
PSDA S **Sn** **04 42 22.1 -3.9**
EVGI Lefkada island 4.06 87 P **Pn** **04 41 38.8 +1.1**
EVGI S **Sn** **04 42 24.4 -2.1**
comp=N,108nm,0.1s
EVGI Lefkada island 4.06 87 P **Pn** **04 41 38.8 +1.1**
EVGI S **Sn** **04 42 24.4 -2.1**
LKD2 Lefkada island 4.07 85 P **Pn** **04 41 38.9 +1.1**
LKD2 S **Sn** **04 42 23.2 -3.4**
comp=N,122nm,0.3s
LKD2 Lefkada island 4.07 85 P **Pn** **04 41 38.9 +1.1**
LKD2 S **Sn** **04 42 23.2 -3.4**
NYDR Nydri-Lefkada 4.10 86 P **Pn** **04 41 39.2 +1.1**
NYDR S **Sn** **04 42 24.8 -2.4**
comp=N,72nm,0.4s
NYDR Nydri-Lefkada 4.10 86 P **Pn** **04 41 39.2 +1.1**
NYDR S **Sn** **04 42 24.8 -2.4**
TIR Tirane 4.38 49 *e*Pn **Pn** **04 41 41.6 -0.1**
TIR *e*Sn **Sn** **04 42 33.0 -0.8**
ULC Ulcinj 4.47 39 *e*Pn **Pn** **04 41 42.6 -0.2**
ULC *e*Sn **Sn** **04 42 31.0 -4.8**
HCY Herceg Novi 4.53 30 *e*Pn **Pn** **04 41 43.2 -0.3**
HCY Herceg Novi 4.53 30 *e*Pn **Pn** **04 41 43.4 -0.1**
HCY *e*Sn **Sn** **04 42 32.3 -4.7**
BUM Brajici-Budva 4.57 34 ⇓*i*Pn **Pn** **04 41 43.9 -0.3**
BUM *e*Sn **Sn** **04 42 33.5 -4.6**
DRME Dracevica, Mon 4.61 37 *e*Pn **Pn** **04 41 45.2 +0.6**
DRME Dracevica, Mon 4.61 37 *e*Pn **Pn** **04 41 44.7 +0.1**
DRME *e*Sn **Sn** **04 42 34.2 -4.8**
STON Ston 4.64 21 *e*Pn **Pn** **04 41 45.9 +1.0**
STON *e*Sn **Sn** **04 42 39.6 0.0**
STON Ston 4.64 21 *e*Pn **Pn** **04 41 45.9 +1.0**
TREB Trebinje 4.71 27 *e*Pn **Pn** **04 41 46.2 +0.4**
TREB *e*Sn **Sn** **04 42 41.3 +0.1**
TREB Trebinje 4.71 27 *e*Pn **Pn** **04 41 46.1 +0.3**
PVO Paravola 4.75 87 P **Pn** **04 41 48.4 +2.0**
PVO S **Sn** **04 42 40.7 -1.4**
comp=N,92nm,0.3s
PVO Paravola 4.75 87 P **Pn** **04 41 48.4 +2.0**
PVO S **Sn** **04 42 40.7 -1.4**
CEME Cevo 4.78 32 *e*Pn **Pn** **04 41 47.2 +0.3**
CEME *e*Sn **Sn** **04 42 38.1 -4.9**
KPRO Kipourio 4.79 71 P **Pn** **04 41 49.8 +2.8**
KPRO S **Sn** **04 42 42.6 -0.5**
comp=N,135nm,0.4s
KPRO Kipourio 4.79 71 P **Pn** **04 41 49.8 +2.8**
KPRO S **Sn** **04 42 42.6 -0.5**
PDG Podgorica 4.83 35 *e*Pn **Pn** **04 41 48.1 +0.6**
PDG *e*Sn **Sn** **04 42 42.7 -1.4**
PDG Podgorica 4.83 35 *e*Pn **Pn** **04 41 48.0 +0.6**
TTG Podgorica 4.83 35 *e*Pn **Pn** **04 41 47.9 +0.5**
TTG *e*Sn **Sn** **04 42 39.5 -4.6**
BRY Bratogost 4.93 27 *e*Pn **Pn** **04 41 49.4 +0.5**
BRY Bratogost 4.93 27 *e*Pn **Pn** **04 41 49.0 +0.1**
BRY *e*Sn **Sn** **04 42 41.5 -5.2**
DRO Drossia 4.95 95 P **Pn** **04 41 50.7 +1.7**
DRO Drossia 4.95 95 P **Pn** **04 41 50.7 +1.7**
NKY Niksic 5.03 31 *e*Pn **Pn** **04 41 50.4 +0.3**
NKY *e*Sn **Sn** **04 42 43.9 -5.0**
EFP Efpalio 5.05 89 P **Pn** **04 41 51.9 +1.6**
EFP S **Sn** **04 42 48.2 -0.9**
comp=N,98nm,0.6s
EFP Efpalio 5.05 89 P **Pn** **04 41 51.9 +1.6**
EFP S **Sn** **04 42 48.2 -0.9**
ANX Ano Chora 5.05 87 P **Pn** **04 41 52.4 +1.9**
ANX S **Sn** **04 42 48.2 -1.2**
comp=N,85nm,0.5s
ANX Ano Chora 5.05 87 P **Pn** **04 41 52.4 +1.9**
ANX S **Sn** **04 42 48.2 -1.2**
SERG Sergoula 5.17 89 P **Pn** **04 41 53.6 +1.7**
SERG S **Sn** **04 42 50.3 -1.7**
comp=N,68nm,0.4s
SERG Sergoula 5.17 89 P **Pn** **04 41 53.6 +1.7**
SERG S **Sn** **04 42 50.3 -1.7**
MAKR Makrakomi, Fth 5.23 83 P **Pn** **04 41 55.4 +2.8**
MAKR S **Sn** **04 42 53.2 -0.1**
comp=N,195nm,0.3s
MAKR Makrakomi, Fth 5.23 83 P **Pn** **04 41 55.4 +2.8**
MAKR S **Sn** **04 42 53.2 -0.1**
PYL PYLOS 5.24 106 P **Pn** **04 41 53.4 +0.6**
KLV Kalavryta, Ach 5.28 93 P **Pn** **04 41 55.0 +1.7**
KLV Kalavryta, Ach 5.28 93 P **Pn** **04 41 55.0 +1.7**
KOME Kolasin 5.28 34 ⇑*i*Pn **Pn** **04 41 53.8 +0.4**
KOME *e*Sn **Sn** **04 42 50.1 -4.6**
ITM Ithomi 5.29 103 P **Pn** **04 41 54.7 +1.3**
ITM Ithomi 5.29 103 P **Pn** **04 41 54.7 +1.3**
PVY Plav 5.29 39 *e*Pn **Pn** **04 41 53.9 +0.4**
PVY *e*Sn **Sn** **04 42 49.8 -5.2**
UPM Unac-Piva 5.33 28 *e*Pn **Pn** **04 41 54.8 +0.8**
UPM Unac-Piva 5.33 28 ⇑*i*Pn **Pn** **04 41 54.5 +0.5**
UPM *i* Sn **Sn** **04 42 50.9 -5.0**
IVA Berane 5.47 36 ⇑*i*Pn **Pn** **04 41 56.3 +0.5**
IVA *e*Sn **Sn** **04 42 53.7 -5.4**
PLE Pljevlja 5.62 31 ⇓*i*Pn **Pn** **04 41 58.6 +0.8**
PLE *e*Sn **Sn** **04 42 57.7 -5.0**
KEST Kesra 5.64 242 P **Pn** **04 41 59.1 +1.0**
comp=N,6.4nm,0.8s,baz=256,slow=2.7,SNR=7.9
SRKY Kupres RS 5.66 12 *e*Pn **Pn** **04 41 59.1 +0.9**
SJES Sjenica 5.81 34 *e*Pn **Pn** **04 42 01.8 +1.6**
SJES *e*Sn **Sn** **04 43 07.3 +0.2**
SJES Sjenica 5.81 34 *e*Pn **Pn** **04 42 01.9 +1.7**
RUDO Rudo 5.86 29 *e*Pn **Pn** **04 42 01.5 +0.8**
MGRS Mrkonjic Grad 5.99 11 *e*Pn **Pn** **04 42 04.7 +2.3**
BBLS Lazići 6.08 28 *e*Pn **Pn** **04 42 04.9 +1.2**
BBLS *e*Sn **Sn** **04 43 13.4 0.0**
BBLS Lazići 6.08 28 *e*Pn **Pn** **04 42 04.9 +1.2**
IVAS Ivanjica 6.14 34 *e*Pn **Pn** **04 42 05.0 +0.5**
IVAS *e*Sn **Sn** **04 43 15.2 +0.4**
BLY Banja Luka 6.33 11 *e*Pn **Pn** **04 42 09.0 +2.2**
BLY Banja Luka 6.33 11 *e*Pn **Pn** **04 42 08.8 +2.0**
SELS Selova 6.33 41 *e*Pn **Pn** **04 42 07.1 +0.2**
SELS *e*Sn **Sn** **04 43 18.1 -1.0**
PGF Pioggiola 6.34 311 *e*P **Pn** **04 42 09.2 +2.0**
PRVS Prvonek 6.40 50 *e*Pn **Pn** **04 42 09.2 +1.4**
PRVS *e*Sn **Sn** **04 43 21.1 +0.3**
BARS Barje 6.43 47 *e*Pn **Pn** **04 42 08.9 +0.6**
BARS Barje 6.43 47 *e*Pn Pn 04 42 20.6 +12
BARS *e*Sn **Sn** **04 43 21.4 -0.2**
BARS *e*Sn Sn 04 43 42.7 +21
DIVS Divibare 6.50 30 *e*Pn **Pn** **04 42 10.2 +1.0**
DIVS *e*Sn **Sn** **04 43 23.1 -0.2**
DIVS Divibare 6.50 30 *e*Pn **Pn** **04 42 09.8 +0.6**
BOSS Bosilegrad 6.64 51 *e*Pn **Pn** **04 42 11.9 +1.0**
BOSS *e*Sn **Sn** **04 43 25.8 -0.5**
GRUS Gruza 6.64 35 *e*Pn **Pn** **04 42 11.7 +0.8**
TRUS Trudelj 6.78 32 *e*Pn **Pn** **04 42 13.1 +0.4**
CRES Cresnjev 7.27 360 *e*Pn **Pn** **04 42 21.2 +2.0**
ZAGS Zajecar 7.32 42 *e*Pn **Pn** **04 42 20.9 +1.1**
KOVH Kovagotottos 7.78 14 P **Pn** **04 42 25.9 +0.1**
OBKA Obir 7.99 355 *e*Pn **Pn** **04 42 29.2 +0.7**
comp=N,5.7nm,0.6s
MORH Mrgy, Hungar 8.01 16 *e*Pn **Pn** **04 42 29.5 +0.7**
MORH Mrgy, Hungar 8.01 16 P **Pn** **04 42 29.3 +0.5**
SBF Sospel 8.05 314 *e*P **Pn** **04 42 31.3 +1.8**
SOKA Soboth 8.13 358 *e*Pn **Pn** **04 42 31.6 +1.1**
comp=N,3.7nm,0.9s
IDI Anoyia 8.21 110 P **Pn** **04 42 32.8 +1.1**
comp=N,2.4nm,0.6s,baz=280,slow=13,SNR=3.6
LMR La Mourre 8.29 308 *e*P **Pn** **04 42 34.5 +1.9**
LMR *e*Sn **Sn** **04 44 03.9 -1.7**
comp=N,0.4nm,0.2s
ABTA Abfaltersbach 8.48 346 *e*Pn **Pn** **04 42 36.4 +1.3**
comp=N,5.0nm,0.7s
KBA Koelnbreinsper 8.67 350 *e*Pn **Pn** **04 42 39.6 +2.0**
comp=N,5.6nm,1.3s
MPLH Magyarpolny 8.75 9 P **Pn** **04 42 40.3 +1.8**
MBDF Montbardon 8.97 316 *e*P **Pn** **04 42 45.0 +3.5**
WTTA Wattenberg 9.15 343 *e*Pn **Pn** **04 42 45.4 +1.5**
comp=N,2.6nm,0.5s
FETA Feichten 9.15 339 *e*Pn **Pn** **04 42 45.3 +1.3**
comp=N,10nm,0.7s
RONA Rosalia, Austr 9.17 4 *e*Pn **Pn** **04 42 45.1 +1.1**
comp=N,3.0nm,0.5s
DAVOX Davos/Dischmat 9.20 335 P **Pn** **04 42 46.7 +2.2**
comp=N,6.3nm,0.7s,baz=134,slow=18,SNR=9.5
SMRF Simiane la Rot 9.21 309 *e*P **Pn** **04 42 46.9 +2.3**
WATA Walderalm 9.23 343 *e*Pn **Pn** **04 42 45.3 +0.4**
comp=N,5.1nm,0.6s
BIOA Bad Ischl, Aus 9.24 352 *e*Pn **Pn** **04 42 46.5 +1.7**
comp=N,12nm,1.0s
MOA Molln 9.34 355 *e*Pn **Pn** **04 42 47.9 +1.7**
comp=N,11nm,1.4s
MOTA Moosalm 9.35 341 *e*Pn **Pn** **04 42 47.8 +1.2**
comp=N,5.8nm,0.6s
CONA Conrad Observa 9.38 2 *e*Pn **Pn** **04 42 48.5 +1.7**
comp=N,2.4nm,1.0s
LPG La Plagne 9.50 320 *e*P **Pn** **04 42 51.2 +2.6**
LPL La Plagne 9.52 320 *e*P **Pn** **04 42 51.5 +2.7**
RETA Reutte 9.57 340 *e*Pn **Pn** **04 42 51.8 +2.5**
comp=N,3.8nm,0.5s
ORIF Oris-en-Rattie 9.58 315 *e*P **Pn** **04 42 52.2 +2.7**
ORIF *e*Sn **Sn** **04 44 33.4 -3.0**
comp=N,0.6nm,0.3s
DAVA Damuels 9.64 337 *e*Pn **Pn** **04 42 52.8 +2.5**
comp=N,6.6nm,0.7s
PSZ Piszkesteto 9.90 18 P **Pn** **04 42 54.5 +0.9**
VIVF Saint-Julien-l 10.24 311 *e*P **Pn** **04 43 00.6 +2.7**
LASF Ste Croix 10.33 306 *e*P **Pn** **04 43 01.7 +2.5**
GERES GERESS Array B 10.37 353 P **Pn** **04 43 01.0 +1.3**
comp=N,1.5nm,0.7s,baz=167,slow=13,SNR=10
CABF La Chapelle 10.61 322 *e*P **Pn** **04 43 06.0 +3.1**
KHC Kasperske Hory 10.67 353 *e*PN **Pn** **04 43 06.0 +2.5**
HINF Hinteralfeld 11.19 329 *e*P **Pn** **04 43 12.5 +2.3**
CDF Champ du Feu 11.51 332 *e*P **Pn** **04 43 15.5 +1.1**
HAU Haudompre 11.55 328 *e*P **Pn** **04 43 16.7 +1.9**
SMF Signal de Mont 11.78 317 *e*P **Pn** **04 43 20.0 +2.3**
CAF Calviac 11.86 307 *e*P **Pn** **04 43 21.8 +2.9**
AVF Avril sur Loir 12.13 317 *e*P **Pn** **04 43 25.3 +3.1**
LOR Lormes 12.17 319 *e*P **Pn** **04 43 24.9 +2.1**
SSF Saint Saulge 12.22 318 *e*P **Pn** **04 43 25.6 +2.2**
PAGF Fort de Pagny 12.24 328 *e*P **Pn** **04 43 24.8 +1.2**
BGF Bois d'Agland 12.27 315 *e*P **Pn** **04 43 27.4 +3.4**
SFTF Sexfontaines 12.27 325 *e*P **Pn** **04 43 27.2 +3.2**
EPF Esparros 12.31 296 *e*P **P** **04 43 29.1 -0.1**
BRG Berggiesshubel 12.37 355 *e*P **P** **04 43 32.3 +2.5**
BRG Amp 04 43 32.9
comp=Z,4.5nm,0.8s
LFF La Frestale 12.71 305 *e*P **Pn** **04 43 31.8 +2.2**
SJPF Ste Jean 13.44 295 *e*P **Pn** **04 43 40.7 +1.9**
GIVF Givet 13.82 330 *e*P **Pn** **04 43 45.0 +1.5**
MFF Saint Martin d 14.03 310 *e*P **P** **04 43 48.8 +0.6**
LDF La Druitiere 15.09 317 *e*P **Pn** **04 43 59.9 +0.8**
ESDC Sonseca Array 15.13 280 P **Pn** **04 43 59.8 0.0**
comp=Z,1.0nm,0.8s,baz=81,slow=9.8,SNR=8.4
GRR Gorron 15.37 315 *e*P **Pn** **04 44 02.7 +0.1**
FLN La Foliniere 15.38 317 *e*P **Pn** **04 44 02.8 +0.1**
AKASG Malin Array Be 15.57 34 P **Pn** **04 44 06.3 +1.4**
comp=Z,0.2nm,0.3s,baz=228,slow=9.8,SNR=5.0
SGMF Saint Gilles 16.27 312 *e*P **P** **04 44 12.7 -0.2**
QUIF Quistinic 16.46 311 *e*P **P** **04 44 15.2 +0.2**
ROSF Rostrenen 16.72 312 *e*P **P** **04 44 17.7 -0.2**
MDT Midelt 17.27 257 P **P** **04 44 24.0 -0.3**
comp=Z,2.1nm,0.9s,baz=135,slow=23,SNR=4.9
EKA Eskdalemuir Ar 20.95 329 P **P** **04 45 01.9 -1.6**
comp=Z,1.7nm,0.3s,baz=132,slow=9.7,SNR=27
comp=Z,1.7nm,0.3s
HFS Hagfors 21.64 358 P **P** **04 45 08.5 -2.1**
comp=Z,1.8nm,0.4s,baz=167,slow=11,SNR=18
comp=Z,1.8nm,0.4s
NB2 NORSAR Subarra 22.67 355 P **P** **04 45 19.1 -1.5**
comp=Z,0.5nm,0.5s,baz=172,slow=10
NOA NORSAR Array B 22.67 355 P **P** **04 45 19.6 -0.9**
comp=Z,0.5nm,0.7s,baz=180,slow=9.4,SNR=6.1
comp=Z,0.5nm,0.7s
FINES FINESS Array B 23.85 13 P **P** **04 45 30.9 -0.2**
comp=Z,5.7nm,0.6s,baz=190,slow=8.4,SNR=36
comp=Z,5.7nm,0.6s
TORD Torodi Ar. Bea 28.10 210 P **P** **04 46 09.8 0.0**
comp=Z,0.2nm,0.3s,baz=20,slow=9.6,SNR=8.7
TORD PcP **PcP** **04 49 17.9 -1.4**
comp=Z,0.3nm,0.6s,baz=61,slow=1.9,SNR=5.4
comp=Z,0.2nm,0.3s
ARCES ARCESS Array B 31.51 7 P **P** **04 46 38.0 -1.3**
comp=Z,1.1nm,0.5s,baz=187,slow=8.6,SNR=8.3
comp=Z,1.1nm,0.5s
DBIC Dimbokro 36.68 215 P **P** **04 47 24.3 0.0**
comp=Z,1.4nm,0.4s,baz=38,slow=8.7,SNR=7.8
comp=Z,1.4nm,0.4s
KURBB Kurchatov Arra 45.19 53 P **P** **04 48 34.3 +0.9**
comp=Z,1.0nm,0.7s,baz=282,slow=8.6,SNR=7.3
comp=Z,1.0nm,0.7s
ZALV Zalesovo Beam 48.39 48 P **P** **04 48 58.3 +0.2**
comp=Z,2.3nm,0.3s,baz=290,slow=8.9,SNR=5.6

	comp=Z,2.3nm,0.3s						
MKAR	**Makanchi Array**	**48.47**	**58**	P	**P**	**04 49 00.0**	**+1.1**
	comp=Z,1.3nm,0.3s,baz=283,slow=7.2,SNR=27						
	comp=Z,1.3nm,0.3s						
SCHQ	**Schefferville**	**55.46**	**316**	P	**P**	**04 49 48.5**	**-1.8**
	comp=Z,1.0nm,0.5s,baz=60,slow=14,SNR=1.3						
	comp=Z,1.0nm,0.5s						
SONM	**Songino Array**	**63.25**	**49**	P	**P**	**04 50 44.9**	**+1.0**
	comp=Z,0.8nm,0.7s,baz=294,slow=8.0,SNR=4.0						
	comp=Z,0.8nm,0.7s						
YKA	**Yellowknife Ar**	**71.62**	**338**	P	**P**	**04 51 35.5**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=41,slow=5.8,SNR=8.9						
	comp=Z,0.6nm,0.7s						
WRA	**Warramunga Arr**	**124.51**	**89**	PKP	**PKPdf**	**04 59 12.6**	**0.0**
	comp=Z,0.2nm,0.5s,baz=313,slow=1.7,SNR=6.1						
ASAR	**Alice Springs**	**126.16**	**93**	PKP	**PKPdf**	**04 59 14.1**	**-1.5**
	comp=Z,0.3nm,0.4s,baz=303,slow=1.7,SNR=1.9						

*JMA **02** 04:44:02.9±0.3, 39°.7N±0°.7×14°3E±°, h15km±3km, MV3.6/34, FAR E OFF SANRIKU*
*IDC **02** 04:44:10.3±1.8, 40°.24N×141°.91E, h0km, mb3.6/5, mbtmp3.6/6, ML2.3/1, MS3.4/1, Error ellipse: s-maj=45.3km s-min=28.4km az=158.0*
ISC 02 04:44:03.9±2.8**, 39°.75N**±0°.05×**143°.39E**±0°.08**, h16**km±16km**, n23,** σ**1s.02**/28**, mb3.6**/5**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	**Tanohata**	**1.19**	**279**	P	**Pn**	**04 44 25.7**	**-0.2**
JTH				S	**Sb**	**04 44 42.0**	**+0.8**
MIYJ	**Miyakonagasawa**	**1.22**	**262**	*i* P	**Pn**	**04 44 26.4**	**0.0**
MIYJ				S	**Sg**	**04 44 44.3**	**+0.8**
JKEN	**Kujiedanarisaw**	**1.37**	**290**	P	**Pn**	**04 44 28.2**	**-0.1**
JANG	**Nango**	**1.56**	**294**	P	**Pn**	**04 44 31.0**	**-0.1**
JANG				S	**Sn**	**04 44 50.9**	**-0.2**
JOM	**Ohasama**	**1.64**	**261**	*i* P	**Pn**	**04 44 32.9**	**+0.7**
JOM				S	**Sb**	**04 44 54.8**	**+0.5**
JMK	**Ichinoseki**	**1.86**	**245**	P	**Pn**	**04 44 35.4**	**+0.3**
JMK				S	**Sb**	**04 45 00.2**	**-0.3**
JIO	**Ouri**	**2.05**	**231**	P	**Pn**	**04 44 37.6**	**-0.1**
JIO				S	**Sn**	**04 45 01.4**	**-1.5**
JTM	**Tenmabayashi**	**2.05**	**301**	P	**Pn**	**04 44 38.8**	**+1.0**
JTM				S	**Sb**	**04 45 06.8**	**+0.7**
JAH	**Hinai**	**2.16**	**283**	P	**Pn**	**04 44 40.3**	**+1.1**
JAH				S	**Sb**	**04 45 10.3**	**+1.2**
JOT	**Ohata**	**2.41**	**313**	P	**Pb**	**04 44 45.2**	**-1.8**
JOT				S	**Sb**	**04 45 16.0**	**-0.5**
JYK	**Kaneyama**	**2.49**	**251**	P	**Pn**	**04 44 45.0**	**+1.2**
JNBK	**Urakawa-nobuka**	**2.57**	**349**	P	**Pn**	**04 44 46.7**	**+1.8**
JNBK				S	**Sb**	**04 45 19.1**	**-1.9**
JCH	**Churui**	**2.86**	**360**	*e*P	**Pn**	**04 44 49.5**	**+0.7**
JCH				S	**Sn**	**04 45 23.4**	**+0.5**
MJAR	**Matsushiro Arr**	**5.19**	**233**	Pn	**Pn**	**04 45 22.3**	**+1.4**
	0.1nm,0.3s,baz=38,slow=11,SNR=6.7						
	2.3nm,0.6s						
YAK	**Yakutsk**	**23.82**	**344**	LR	LR	04 58 11.1	
	comp=Z,99nm,19.0s,baz=268,slow=36						
H11N2	**WAKE ISLAND Hy**	**28.40**	**128**	T	T	05 19 43.4	
	baz=316,slow=74,SNR=16						
H11N1	**WAKE ISLAND Hy**	**28.41**	**128**	T	T	05 19 43.4	
	baz=316,slow=74,SNR=14						
H11N3	**WAKE ISLAND Hy**	**28.41**	**128**	T	T	05 19 46.5	
	baz=316,SNR=14						
MKAR	**Makanchi Array**	**44.04**	**300**	P	**P**	**04 52 10.1**	**-0.7**
	0.7nm,0.7s,baz=79,slow=7.5,SNR=5.2						
	0.7nm,0.7s						
KURBB	**Kurchatov Arra**	**45.60**	**306**	P	**P**	**04 52 22.7**	**-0.4**
	1.1nm,0.7s,baz=82,slow=8.6,SNR=8.0						
	1.1nm,0.7s						
ILAR	**Eielson Array**	**46.37**	**34**	P	P	04 52 40.4	+11
	0.4nm,0.8s,baz=273,slow=7.9,SNR=2.9						
	0.4nm,0.8s						
FINES	**FINESS Array B**	**67.13**	**332**	P	**P**	**04 54 57.5**	**+1.1**
	0.9nm,0.8s,baz=32,slow=11,SNR=1.7						
	0.9nm,0.8s						
NVAR	**Mina Array Bea**	**72.14**	**55**	P	P	04 55 40.6	+13
	0.3nm,0.6s,baz=258,slow=4.5,SNR=3.6						
	0.3nm,0.6s						

*IDC **02** 05:08:30.9±6.2, 23°.26S×177°.81W, h0km, mb4.3/3, mbtmp4.3/3, Error ellipse: s-maj=175.5km s-min=99.7km az=145.0*
*NOU **02** 05:09:19.8, 25°.15S×178°.68W, h369km, mb4.2/9, South of Fiji Islands*
*NEIC **02** 05:09:21.1±2.1, 24°.90S±0°.08×178°.9W±0°.2, h402km±11km, mb4.0/16, Error ellipse: s-maj=31.5km s-min=11.5km az=83.0*
ISC 02 05:09:21.6±0.9**, 25°.03S**±0°.07×**179°.1W**±0°.1**, h400**km**, n50,** σ**1s.18**/55**, mb4.0**/11**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.33**	**166**	Pn	**Pn**	**05 10 37.1**	**+0.3**
RAO				Sn	**S**	**05 11 38.7**	**+0.8**
LKBA	**Tubou, Lakemba**	**6.77**	**2**	P	**Pn**	**05 11 01.7**	**-1.1**
MSVF	**Nonsavu**	**7.74**	**339**	P	**Pn**	**05 11 13.4**	**-0.4**
MSVF	**Nonsavu**	**7.74**	**339**	P	**Pn**	**05 11 13.5**	**-0.3**
DGTI	**Dogotuki**	**8.75**	**352**	P	**Pn**	**05 11 24.7**	**-0.7**
KUZ	**Kuaotunu**	**12.50**	**200**	P	**Pn**	**05 12 08.7**	**+0.2**
MXZ	**Matakaoa Point**	**12.69**	**190**	P	**Pn**	**05 12 10.4**	**-0.3**
MXZ	**Matakaoa Point**	**12.69**	**190**	P	**P**	**05 12 10.0**	**+1.2**
WIAZ	**Waiheke Island**	**12.73**	**202**	P	**Pn**	**05 12 12.1**	**+0.9**
WMGZ	**Waiomatatini S**	**12.93**	**189**	P	**Pn**	**05 12 13.2**	**-0.2**
WMGZ				S	**S**	**05 14 32.3**	**+0.5**
HAZ	**Te Kaha**	**12.97**	**191**	P	**P**	**05 12 12.1**	**+0.3**
MKAZ	**Moumakai**	**13.01**	**201**	P	**Pn**	**05 12 15.0**	**+0.6**
PKGZ	**Pakihiroa**	**13.05**	**190**	P	**P**	**05 12 13.3**	**+0.5**
RUGZ	**Raukumara Rang**	**13.19**	**191**	P	**P**	**05 12 14.7**	**+0.4**
RUGZ				S	**S**	**05 14 35.9**	**-1.4**
PUZ	**Puketiti**	**13.20**	**189**	P	**P**	**05 12 15.3**	**+0.9**
PUZ				S	**S**	**05 14 32.7**	**-4.6**
KMRZ	**Kaimai**	**13.46**	**197**	P	**Pn**	**05 12 20.3**	**+0.7**
TOZ	**Tahuroa Road**	**13.48**	**199**	P	**Pn**	**05 12 20.0**	**+0.3**
URZ	**Urewera**	**13.58**	**193**	P	**P**	**05 12 18.2**	**-0.4**
URZ				S	**S**	**05 14 44.2**	**-0.7**
URZ	**Urewera**	**13.58**	**193**	P	**P**	**05 12 18.3**	**-0.2**
RAGZ	**Rawiri**	**13.75**	**192**	P	**P**	**05 12 21.3**	**+0.8**
RIGZ	**Rimuhau**	**13.90**	**190**	P	**P**	**05 12 22.5**	**+0.4**
RIGZ				S	**S**	**05 14 47.3**	**-4.0**
HIZ	**Hauiti**	**14.39**	**199**	P	**P**	**05 12 30.0**	**+2.6**
BKZ	**Black Stump Fm**	**14.59**	**194**	P	**P**	**05 12 28.3**	**-1.2**
BFZ	**Birch Farm**	**16.09**	**193**	P	**P**	**05 12 45.7**	**0.0**
QRZ	**Quartz Range**	**17.24**	**202**	P	**P**	**05 12 57.8**	**-0.2**
KHZ	**Kahutara**	**18.39**	**198**	P	**P**	**05 13 10.1**	**+0.1**
EIDS	**Eidsvold**	**26.98**	**263**	P	**P**	**05 14 30.0**	**+1.0**
CTAO	**Charters Tower**	**32.34**	**272**	P	**P**	**05 15 16.4**	**+0.6**
STKA	**Stephens Creek**	**35.10**	**250**	P	**P**	**05 15 40.2**	**+1.0**
	1.2nm,0.5s,baz=96,slow=10,SNR=3.8						
	1.2nm,0.5s						
STKA	**Stephens Creek**	**35.10**	**250**	P	**P**	**05 15 40.8**	**+1.5**
BBOO	**Buckleboo**	**39.79**	**248**	P	**P**	**05 16 17.7**	**-0.3**
BBOO				IAmb	IAmb	05 16 27.0	
	comp=Z,14nm,1.4s						
AS31	**Alice Springs**	**42.69**	**262**	P	**P**	**05 16 41.5**	**+0.1**
ASAR	**Alice Springs**	**42.69**	**262**	P	**P**	**05 16 41.0**	**-0.4**
	comp=Z,1.5nm,0.3s,baz=95,slow=7.4,SNR=28						
	comp=Z,1.5nm,0.3s						
ASAR	**Alice Springs**	**42.69**	**262**	P	**P**	**05 16 41.3**	**-0.2**
WR0	**Warramunga Arr**	**42.99**	**267**	P	**P**	**05 16 43.1**	**-0.7**
WR0				IAmb	IAmb	05 16 43.8	
	comp=Z,3.3nm,0.7s						
WB2	**Warramunga Arr**	**43.17**	**267**	P	**P**	**05 16 44.8**	**-0.5**
WB2				IAmb	IAmb	05 16 45.3	
	comp=Z,6.1nm,0.7s						
WRAB	**Tennant Creek**	**43.17**	**267**	P	**P**	**05 16 44.7**	**-0.5**
WRAB				IAmb	IAmb	05 16 45.7	
	comp=Z,12nm,1.4s						
WB0	**Warramunga Arr**	**43.18**	**267**	P	**P**	**05 16 44.7**	**-0.6**
WB0				IAmb	IAmb	05 16 45.4	
	comp=Z,6.0nm,0.7s						
WRA	**Warramunga Arr**	**43.18**	**267**	P	**P**	**05 16 44.5**	**-0.8**
	comp=Z,4.2nm,0.5s,baz=101,slow=6.7,SNR=103						
	comp=Z,4.2nm,0.5s						
WRA	**Warramunga Arr**	**43.18**	**267**	P	**P**	**05 16 43.8**	**-1.6**
KNRA	**Kununurra**	**49.53**	**270**	P	**P**	**05 17 34.1**	**+0.1**
VNDA	**Vanda**	**53.33**	**185**	P	**P**	**05 18 02.5**	**+1.5**
PSA00	**Pilbara Seismi**	**55.80**	**260**	P	**P**	**05 18 18.4**	**-1.0**
PSA00				IAmb	IAmb	05 18 24.9	
	comp=Z,6.6nm,1.4s						
MORW	**Morawa**	**57.29**	**250**	P	**P**	**05 18 28.6**	**-1.0**
CASY	**Casey**	**59.47**	**206**	P	**P**	**05 18 43.3**	**-0.5**
CASY				IAmb	IAmb	05 18 43.6	
	comp=Z,12nm,1.4s						
QSPA	**South Pole Qui**	**65.06**	**180**	P	**P**	**05 19 22.0**	**+1.4**
QSPA				IAmb	IAmb	05 19 38.0	
	comp=Z,4.4nm,1.4s						
TROLL	**Troll, Antarti**	**83.22**	**181**	P	**P**	**05 21 04.1**	**0.0**
VNA3	**Neumayer Olymp**	**83.71**	**177**	P	**P**	**05 21 06.2**	**-0.2**
VNA2	**Neumayer--Watz**	**84.13**	**177**	P	**P**	**05 21 08.1**	**-0.4**
	baz=181,slow=4.0						
HFS	**Hagfors**	**143.81**	**349**	PKP	PKPab	05 28 06.4	-1.5
	comp=Z,1.2nm,0.4s,baz=67,slow=4.8,SNR=9.5						

*IDC **02** 05:17:26.9±4.6, 36°.36N×71°.32E, h140km±39km, mb3.5/10, mbtmp4.0/14, MS3.7/1, Error ellipse: s-maj=31.0km s-min=18.8km az=21.0*
*NEIC **02** 05:17:31.3±1.6, 36°.65N±0°.05×71°.35E±0°.09, h176km±4km, mb4.1/11, Error ellipse: s-maj=10.9km s-min=7.0km az=97.0*
*NNC **02** 05:17:33.5±9.5, 36°.92N×71°.27E, h162km±127km, mb3.5, mpv4.5, Error ellipse: s-maj=84.0km s-min=42.3km az=3.0*
ISC 02 05:17:29.3±0.6**, 36°.59N**±0°.05×**71°.37E**±0°.07**, h150**km**, n69,** σ**1s.80**/75**, mb3.8**/14**, 1C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAR	**Garm**	**2.55**	**341**		**Pn**	**05 18 13.4**	**+2.3**
CHGR	**Chuyangaron**	**2.71**	**320**		**Pn**	**05 18 15.5**	**+2.4**
KBL	**Kabul**	**2.79**	**224**		**Pn**	**05 18 18.7**	**+4.5**
DRK	**Karamyk**	**2.91**	**7**	Pn	**Pn**	**05 18 18.6**	**+2.9**
BTK	**Batken**	**3.49**	**353**	Pn	**Pn**	**05 18 26.1**	**+3.1**
THN	**Thein Dam**	**5.48**	**138**	*e*P	**Pn**	**05 18 52.4**	**+3.3**
THN				*e*S	**Sn**	**05 19 53.2**	**+1.8**
AML	**Almayashu**	**5.82**	**17**	P	**Pn**	**05 18 54.5**	**+0.6**
	SNR=171						
UCH	**Uchtor**	**6.13**	**22**	P	**Pn**	**05 18 58.6**	**+0.5**
	SNR=79						
EKS2	**Erkin-Say**	**6.34**	**16**	P	**Pn**	**05 19 01.3**	**+0.7**
	SNR=20						
AAK	**Ala-Archa**	**6.50**	**21**	P	**Pn**	**05 19 03.7**	**+0.8**
	SNR=23						
AAK	**Ala-Archa**	**6.50**	**21**	P	**Pn**	**05 19 03.9**	**+1.1**
	21nm,0.4s,baz=189,slow=4.2,SNR=42						
AAK				S	**Sn**	**05 20 13.5**	**-2.5**
	30nm,0.6s,baz=150,slow=20,SNR=22						
AAK	**Ala-Archa**	**6.50**	**21**	Pn	**Pn**	**05 19 03.6**	**+0.8**
KK31	**Karatay Array**	**6.54**	**354**		**Pn**	**05 19 03.9**	**+0.7**
KK31	**Karatay Array**	**6.54**	**354**	P	**Pn**	**05 19 04.0**	**+0.8**
	18nm,0.3s,baz=173,slow=12,SNR=303						
KK31				S	**Sn**	**05 20 12.2**	**-4.6**
	25nm,0.3s,baz=171,slow=23,SNR=14						
KKAR	**Karatay Array**	**6.54**	**354**	Pn	**Pn**	**05 19 03.7**	**+0.6**
KKAR	**Karatay Array**	**6.54**	**354**		**Pn**	**05 19 03.9**	**+0.7**
BHK	**Bhakra**	**6.64**	**139**	*e*S	**Sn**	**05 20 19.1**	**-0.1**
KBK	**Karagaybulak**	**6.66**	**23**	P	**Pn**	**05 19 06.4**	**+1.5**
	SNR=16						
ULHL	**Ulahol**	**6.79**	**32**	P	**Pn**	**05 19 03.7**	**-3.0**
	SNR=17						
BOOM	**Boomskoye usch**	**6.87**	**30**		**Pn**	**05 19 07.9**	**+0.2**
CHMS	**Chumysh**	**6.91**	**21**	P	**Pn**	**05 19 08.6**	**+0.5**
	SNR=11						
USP	**Ospenovka**	**7.09**	**19**	P	**Pn**	**05 19 10.7**	**+0.2**
	SNR=6.7						
TKM2	**Tokmak 2**	**7.11**	**26**	P	**Pn**	**05 19 12.8**	**+1.8**
	SNR=9.2						
TKM2	**Tokmak 2**	**7.11**	**26**	⇑P	**Pn**	**05 19 11.1**	**+0.1**
	16nm,0.5s						
TKM2				⇓S	**Sn**	**05 20 27.8**	**-2.9**
	15nm,0.7s						
SMLA	**Simla**	**7.27**	**137**	*e*P	**Pn**	**05 19 15.0**	**+2.0**
SMLA				*e*S	**Sn**	**05 20 32.9**	**-1.3**
SMLA				IAML		05 20 35.6	
	comp=E,98nm,0.5s						
SMLA				IAML		05 20 38.6	
	comp=N,87nm,0.5s						
MDOK	**Medeo**	**7.88**	**32**	P	**Pn**	**05 19 21.3**	**+0.1**
	comp=N,16nm,0.7s						
MDOK				S	**Sn**	**05 20 53.3**	**+4.2**
	comp=N,5.9nm,0.6s						
PRZ	**Przheval'sk**	**8.01**	**41**		**Pn**	**05 19 24.5**	**+1.6**
KHET	**Khetri**	**9.28**	**155**	*e*P	**Pn**	**05 19 39.7**	**-0.1**
KHET				*e*S	**Sn**	**05 21 18.5**	**-4.2**
KUDL	**Kundal**	**9.46**	**151**	*e*P	**Pn**	**05 19 43.1**	**+0.9**
KUDL				*e*S	**Sn**	**05 21 22.0**	**-5.1**
LGTI	**Lohaghat**	**10.30**	**131**	*e*S	Sn	05 21 40.3	-6.9
MAKZ	**Makanchi**	**12.91**	**34**	Pn	**Pn**	**05 20 26.4**	**-0.8**
MK31	**Makanchi Array**	**13.04**	**35**		**Pn**	**05 20 29.1**	**+0.2**
MK31	**Makanchi Array**	**13.04**	**35**	P	**Pn**	**05 20 28.5**	**-0.4**
	comp=N,1.3nm,0.5s,baz=217,slow=12,SNR=20						
MKAR	**Makanchi Array**	**13.04**	**35**	P	**Pn**	**05 20 29.1**	**+0.1**
	comp=N,2.0nm,0.8s,baz=226,slow=15,SNR=17						
MKAR	**Makanchi Array**	**13.04**	**35**		**Pn**	**05 20 29.0**	**+0.1**
BHPL	**Bhopal**	**14.29**	**157**	*e*P	**P**	**05 20 49.6**	**+1.9**
KURBB	**Kurchatov Arra**	**14.95**	**18**	P	**Pn**	**05 20 50.3**	**-2.5**
	comp=N,6.0nm,0.7s,baz=207,slow=11,SNR=32						
KURK	**Kurchatov**	**15.05**	**18**		**Pn**	**05 20 54.5**	**+0.4**
KURK				IAmb	IAmb	05 20 56.5	
	comp=Z,7.4nm,1.0s						
AB31	**Akbulak array**	**15.15**	**330**	P	**Pn**	**05 20 55.0**	**-0.4**
	comp=Z,2.0nm,0.6s,baz=146,slow=12,SNR=32						
ABKAR	**Akbulak array**	**15.15**	**330**	P	**Pn**	**05 20 55.4**	**-0.1**
ABKAR				IAmb	IAmb	05 20 58.5	
	comp=Z,3.0nm,0.7s						
ABKAR	**Akbulak array**	**15.15**	**330**	P	**Pn**	**05 20 54.9**	**-0.5**
BRVK	**Borovoye**	**16.49**	**358**		**Pn**	**05 21 12.3**	**+0.5**
BRVK				IAmb	IAmb	05 21 14.5	
	comp=Z,6.7nm,0.5s						
AKTO	**Aktyubinsk**	**16.86**	**329**	P	**P**	**05 21 16.8**	**+1.0**
	comp=Z,5.3nm,0.4s,baz=132,slow=12,SNR=23						
AKTO	**Aktyubinsk**	**16.86**	**329**	⇓P	**P**	**05 21 16.1**	**+0.3**
	comp=Z,4.6nm,0.5s						
ZAA0	**Zalesovo Array**	**19.71**	**24**	P	**P**	**05 21 46.2**	**-0.6**
ZAA0				IAmb	IAmb	05 21 47.3	
	comp=Z,4.9nm,0.8s						
ZALV	**Zalesovo Beam**	**19.71**	**24**	P	**P**	**05 21 46.5**	**-0.4**
	comp=Z,3.9nm,0.3s,baz=214,slow=10,SNR=19						
ZALV	**Zalesovo Beam**	**19.71**	**24**	P	**P**	**05 21 46.1**	**-0.8**
ARU	**Arti**	**21.65**	**340**	P	**P**	**05 22 07.7**	**+0.2**
	comp=Z,4.2nm,0.2s,baz=144,slow=19,SNR=4.8						
	comp=Z,4.2nm,0.2s						
SONM	**Songino Array**	**28.04**	**55**	P	**P**	**05 23 07.4**	**+1.0**
	comp=Z,0.7nm,0.7s,baz=260,slow=8.5,SNR=1.9						
	comp=Z,0.7nm,0.7s						
SONM	**Songino Array**	**28.04**	**55**	P	**P**	**05 23 05.8**	**-0.6**
MLR	**Muntele Rosu**	**35.00**	**299**	P	**P**	**05 24 10.5**	**+3.1**
	comp=Z,2.0nm,0.6s,baz=135,slow=16,SNR=5.2						
FINES	**FINESS Array B**	**37.58**	**326**	P	**P**	**05 24 29.1**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=106,slow=8.8,SNR=5.4						
	comp=Z,0.6nm,0.3s						
FINES	**FINESS Array B**	**37.58**	**326**	P	**P**	**05 24 29.4**	**+0.6**
ARCES	**ARCESS Array B**	**41.18**	**337**	P	**P**	**05 24 59.1**	**+0.5**
	comp=Z,1.8nm,0.8s,baz=108,slow=6.9,SNR=8.0						
	comp=Z,1.8nm,0.8s						
HFS	**Hagfors**	**43.18**	**322**	P	**P**	**05 25 14.9**	**0.0**
	comp=Z,1.3nm,0.4s,baz=105,slow=9.7,SNR=9.1						
	comp=Z,1.3nm,0.4s						
NB201	**NORSAR Array S**	**44.45**	**323**	P	**P**	**05 25 24.5**	**-0.6**
NB2	**NORSAR Subarra**	**44.49**	**323**	P	**P**	**05 25 24.7**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=96,slow=7.9						
NOA	**NORSAR Array B**	**44.49**	**323**	P	**P**	**05 25 25.4**	**0.0**
	comp=Z,0.4nm,0.4s,baz=96,slow=7.7,SNR=3.5						
	comp=Z,0.4nm,0.4s						
MJAR	**Matsushiro Arr**	**52.64**	**69**	LR	LR	05 49 23.5	
	comp=Z,62nm,18.9s,baz=148,slow=36						
TOA0	**Torodi Ar. Sit**	**66.02**	**269**	P	**P**	**05 27 58.4**	**-1.7**
TOA0				IAmb	IAmb	05 28 00.1	
	comp=Z,8.2nm,1.5s						
TORD	**Torodi Ar. Bea**	**66.02**	**269**	P	**P**	**05 27 58.1**	**-1.9**
	comp=Z,1.1nm,0.5s,baz=46,slow=5.5,SNR=10						
	comp=Z,1.1nm,0.5s						
TORD	**Torodi Ar. Bea**	**66.02**	**269**	P	**P**	**05 27 58.4**	**-1.7**
KOWA	**Kowa**	**69.86**	**273**	P	**P**	**05 28 23.4**	**-0.7**
KOWA				IAmb	IAmb	05 28 32.6	
	comp=Z,4.0nm,1.4s						
C36M	**Paulatuk**	**73.76**	**6**	P	**P**	**05 28 45.4**	**-1.1**
C36M				IAmb	IAmb	05 29 03.1	
	comp=Z,2.9nm,1.1s						
YKA	**Yellowknife Ar**	**81.14**	**3**	P	**P**	**05 29 27.1**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=349,slow=5.1,SNR=5.6						
	comp=Z,0.3nm,0.6s						
YKA	**Yellowknife Ar**	**81.14**	**3**	P	**P**	**05 29 27.1**	**-0.4**
WRA	**Warramunga Arr**	**81.78**	**122**	P	**P**	**05 29 30.1**	**-1.4**
	comp=Z,0.6nm,0.7s,baz=322,slow=4.2,SNR=3.0						
	comp=Z,0.6nm,0.7s						
WB2	**Warramunga Arr**	**81.79**	**122**	P	**P**	**05 29 30.3**	**-1.3**
ASAR	**Alice Springs**	**84.06**	**125**	P	**P**	**05 29 41.7**	**-1.5**
	comp=Z,0.5nm,0.7s,baz=293,slow=5.6,SNR=2.5						
	comp=Z,0.5nm,0.7s						

*IDC **02** 05:18:23.5±4.7, 24°.47S×179°.71W, h506km±86km, mb3.3/5, mbtmp4.1/6, Error ellipse: s-maj=98.7km s-min=33.9km az=11.0*
ISC 02 05:18:22.5±1.8**, 24°.6S**±0°.2×**179°.7W**±0°.3**, h490**km**, n7,** σ**0s.67**/7**, mb3.8**/5**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**7.15**	**343**	P	**P**	**05 20 10.1**	**0.0**
	2.2nm,0.4s,baz=221,slow=21,SNR=6.5						
CTA	**Charters Tower**	**31.75**	**271**	P	**P**	**05 24 06.4**	**+0.7**
	4.7nm,0.5s,baz=91,slow=9.6,SNR=8.9						
	4.7nm,0.5s						
STKA	**Stephens Creek**	**34.71**	**249**	P	**P**	**05 24 30.6**	**0.0**
	1.1nm,0.4s,baz=102,slow=10,SNR=3.6						
	1.1nm,0.4s						
ASAR	**Alice Springs**	**42.19**	**261**	P	**P**	**05 25 31.1**	**-0.6**
	0.6nm,0.5s,baz=92,slow=8.2,SNR=5.0						
	0.6nm,0.5s						
WRA	**Warramunga Arr**	**42.63**	**267**	P	**P**	**05 25 34.5**	**-0.7**
	2.8nm,0.6s,baz=105,slow=7.7,SNR=7.4						
	2.8nm,0.6s						
MAW	**Mawson**	**77.18**	**200**	P	**P**	**05 29 25.2**	**+0.5**
	1.5nm,0.6s,baz=156,slow=6.3,SNR=6.4						
	1.5nm,0.6s						
TORD	**Torodi Ar. Bea**	**168.52**	**187**	PKPab	**PKPab**	**05 38 45.4**	**-0.5**
	0.4nm,0.6s,baz=198,slow=4.2,SNR=2.5						

*NEIC **02** 05:18:48.6±1.5, 8°.58S±0°.08×118°.33E±0°.08, h131km±11km, mb4.4/9, Error ellipse: s-maj=12.1km s-min=10.4km az=132.0*
*DJA **02** 05:18:48.9±0.2, 9°S±3°×11°8E±°, h120km±4km, M4.6/26, mb4.7/12, mB5.3/3, MLv4.6/26, Mw(mB)4.7/3*
*IDC **02** 05:18:49.6±5.0, 8°.50S×118°.47E, h144km±42km, mb3.6/5, mbtmp4.2/8, Error ellipse: s-maj=72.0km s-min=14.8km az=57.0*
ISC 02 05:18:49.0±0.6**, 8°.69S**±0°.06×**118°.36E**±0°.05**, h152**km**, n65,** σ**1s.59**/68**, mb4.2**/6**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.59**	**257**	P	**Pn**	**05 19 08.8**	**-2.2**
PLAI				S	**Sn**	**05 19 23.5**	**-4.3**
PLAI	**Plampang**	**0.59**	**257**	P	**Pn**	**05 19 08.9**	**-2.1**
WBSI	**Waikabubak, Su**	**1.39**	**133**	P	**Pn**	**05 19 14.9**	**-2.7**
WBSI				S	**Sn**	**05 19 35.6**	**-4.0**
BASI	**Baing, Sumba**	**2.66**	**125**	P	**Pn**	**05 19 29.7**	**-2.5**
DNP	**Denpasar**	**3.12**	**270**	P	**Pn**	**05 19 37.1**	**-0.8**
SRBI	**Singaraja**	**3.17**	**281**	P	**Pn**	**05 19 37.8**	**-0.8**
IGBI	**Denpasar**	**3.18**	**267**	P	**Pn**	**05 19 38.6**	**-0.1**
EDFI	**Ende, Flores**	**3.29**	**91**	P	**Pn**	**05 19 39.5**	**-0.8**
BSSI	**Bau Bau, Buton**	**3.30**	**40**	P	**Pn**	**05 19 38.8**	**-1.4**
BKSI	**Bulukumba**	**3.77**	**28**	P	**Pn**	**05 19 45.1**	**-1.3**
MMRI	**Maumere**	**3.83**	**89**		**Pn**	**05 19 46.9**	**-0.3**
MMRI	**Maumere**	**3.83**	**89**	P	**Pn**	**05 19 46.7**	**-0.4**
MMRI	**Maumere**	**3.83**	**89**	P	**Pn**	**05 19 47.6**	**+0.5**
KAPI	**Kappang**	**3.90**	**21**	P	**Pn**	**05 19 47.3**	**-0.8**
	87nm,0.5s,baz=196,slow=8.9,SNR=61						
KAPI	**Kappang**	**3.90**	**21**	P	**Pn**	**05 19 47.4**	**-0.7**
JAGI	**Jajag, Banyuwa**	**4.17**	**273**		**Pn**	**05 19 50.0**	**-1.5**
JAGI	**Jajag, Banyuwa**	**4.17**	**273**	P	**Pn**	**05 19 50.0**	**-1.5**
JAGI	**Jajag, Banyuwa**	**4.17**	**273**	P	**Pn**	**05 19 50.0**	**-1.5**
ABJI	**Asem Bagus**	**4.18**	**282**	P	**Pn**	**05 19 51.9**	**+0.3**
BNSI	**Bone**	**4.60**	**22**	P	**Pn**	**05 19 56.8**	**-0.4**
KMMI	**Kalianget**	**4.65**	**290**	P	**Pn**	**05 19 59.1**	**+1.3**
BLJI	**Banyuglugur**	**4.81**	**281**	P	**Pn**	**05 20 00.0**	**+0.1**
GMJI	**Gumukmas**	**4.88**	**274**	P	**Pn**	**05 19 59.7**	**-1.2**
SPSI	**Sidrap Palu**	**4.90**	**17**	P	**Pn**	**05 20 00.7**	**-0.4**
BATI	**Baumata**	**5.45**	**106**	P	**Pn**	**05 20 08.2**	**-0.2**
	204nm,0.4s,baz=283,slow=3.1,SNR=21						
BATI				S	**Sn**	**05 21 08.1**	**-2.3**
	95nm,0.3s,baz=215,slow=23,SNR=6.4						
BATI	**Baumata**	**5.45**	**106**	P	**Pn**	**05 20 07.3**	**-1.1**
	0.8nm2µm176nm,0.6s						
TTSI	**Tana Toraja**	**5.79**	**15**	P	**Pn**	**05 20 13.1**	**+0.1**
	0.2nm40nm,0.8s						
SOEI	**Soe**	**5.93**	**101**		**Pn**	**05 20 14.5**	**-0.3**
SOEI	**Soe**	**5.93**	**101**	P	**Pn**	**05 20 13.8**	**-1.1**
	0.6nm3µm172nm,0.7s						
SOEI	**Soe**	**5.93**	**101**	P	**Pn**	**05 20 14.6**	**-0.3**
GRJI	**Gresik**	**6.09**	**286**	P	**Pn**	**05 20 17.5**	**+0.6**
	0.3nm70nm,1.0s						
PWJI	**Pagerwojo**	**6.52**	**275**	P	**Pn**	**05 20 24.1**	**+1.4**
	0.3nm31nm,0.5s						
TBJI	**Tambak Boyo**	**6.72**	**286**	P	**Pn**	**05 20 25.7**	**+0.4**
	0.4nm103nm,1.1s						
PCJI	**Pacitan**	**7.12**	**273**	P	**Pn**	**05 20 30.7**	**0.0**
	0.5nm43nm,0.5s						
WOJI	**Wonogiri, Jawa**	**7.41**	**276**	P	**Pn**	**05 20 35.2**	**+0.7**
	0.2nm13nm,1.2s						
UGM	**Wanagama**	**7.79**	**275**	P	**Pn**	**05 20 40.2**	**+0.5**
	0.7nm161nm,1.9s						
KNRA	**Kununurra**	**12.31**	**125**		**Pn**	**05 21 38.7**	**-0.5**
KNRA	**Kununurra**	**12.31**	**125**	P	**Pn**	**05 21 38.6**	**-0.7**
MBWA	**Marble Bar**	**12.47**	**174**	Pn	**Pn**	**05 21 41.5**	**+0.2**
SBUM	**Sibu**	**12.65**	**331**	Pn	**Pn**	**05 21 41.9**	**-1.7**
PSA00	**Pilbara Seismi**	**12.89**	**174**	Pn	**Pn**	**05 21 47.1**	**+0.3**
MTN	**Manton Dam**	**13.21**	**109**		**Pn**	**05 21 49.8**	**-1.1**
MTN	**Manton Dam**	**13.21**	**109**	P	**Pn**	**05 21 49.6**	**-1.3**
KDU	**Kakadu**	**14.42**	**107**	P	**Pn**	**05 22 05.4**	**-0.8**
GIRL	**Giralia**	**14.43**	**195**	Pn	**P**	**05 22 08.0**	**-0.8**
FAKI	**Fak Fak**	**14.95**	**68**	Pn	**Pn**	**05 22 11.7**	**-1.2**
WB0	**Warramunga Arr**	**19.03**	**127**	P	**Pn**	**05 23 00.9**	**-0.9**
WB0				IAmb	IAmb	05 23 03.0	
	comp=Z,13nm,0.8s						
WRA	**Warramunga Arr**	**19.08**	**128**	P	**P**	**05 23 01.1**	**+1.2**
	comp=Z,5.0nm,0.7s,baz=302,slow=12,SNR=74						
WRA	**Warramunga Arr**	**19.08**	**128**	P	**P**	**05 23 01.2**	**+1.2**
WRAB	**Tennant Creek**	**19.08**	**128**	P	**Pn**	**05 23 01.6**	**-0.9**
WRAB				IAmb	IAmb	05 23 08.8	
	comp=Z,12nm,0.7s						
WRAB	**Tennant Creek**	**19.08**	**128**	P	**Pn**	**05 23 01.6**	**-0.9**
WB2	**Warramunga Arr**	**19.09**	**128**	P	**Pn**	**05 23 01.6**	**-1.0**
WB2				IAmb	IAmb	05 23 08.4	
	comp=Z,14nm,0.8s						
WR0	**Warramunga Arr**	**19.25**	**127**	P	**Pn**	**05 23 03.6**	**-0.9**
WR0				IAmb	IAmb	05 23 06.2	
	comp=Z,20nm,0.8s						
AS31	**Alice Springs**	**21.05**	**137**	P	**P**	**05 23 23.4**	**+2.2**
ASAR	**Alice Springs**	**21.05**	**137**	P	**P**	**05 23 23.4**	**+2.2**
	comp=Z,4.8nm,0.5s,baz=310,slow=9.1,SNR=104						
	comp=Z,4.8nm,0.5s						
QIS	**Mount Isa**	**23.66**	**122**	P	**P**	**05 23 49.1**	**+2.3**
FORT	**Forrest**	**23.77**	**159**	P	**P**	**05 23 51.5**	**+3.9**
COEN	**Coen**	**24.88**	**104**	P	**P**	**05 23 59.6**	**+1.7**
OOD	**Oodnadatta**	**25.08**	**141**	P	**P**	**05 24 02.0**	**+2.5**
BBOO	**Buckleboo**	**29.06**	**148**	P	**P**	**05 24 37.4**	**+2.4**
BBOO				IAmb	IAmb	05 24 50.6	
	comp=Z,10nm,1.2s						
CTA	**Charters Tower**	**29.25**	**116**	P	**P**	**05 24 40.0**	**+3.1**
	comp=Z,3.9nm,0.8s,baz=294,slow=12,SNR=2.0						
	comp=Z,3.9nm,0.8s						
STKA	**Stephens Creek**	**31.59**	**140**	P	**P**	**05 24 59.8**	**+2.4**
	comp=Z,2.1nm,0.5s,baz=316,slow=9.3,SNR=6.5						
	comp=Z,2.1nm,0.5s						
SONM	**Songino Array**	**57.27**	**350**	P	**P**	**05 28 20.9**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=163,slow=11,SNR=3.7						
	comp=Z,0.5nm,0.5s						
MKAR	**Makanchi Array**	**63.90**	**333**	P	**P**	**05 29 04.5**	**-1.1**
	comp=Z,0.3nm,0.6s,baz=132,slow=6.0,SNR=2.4						
	comp=Z,0.3nm,0.6s						
MKAR	**Makanchi Array**	**63.90**	**333**	P	**P**	**05 29 06.0**	**+0.5**

*IDC **02** 05:22:24.9±1.3, 3°.82S×129°.46E, h0km, mb3.9/4, mbtmp3.9/7, ML3.5/3, Error ellipse: s-maj=34.1km s-min=22.8km az=93.0*
*DJA **02** 05:22:26.2±1.0, 4°S±5°×12°9E±°, h23km±9km, M4.2/10, mb5.2/1, MLv3.7/10*
ISC 02 05:22:28.9±0.9**, 3°.94S**±0°.06×**129°.45E**±0°.05**, h36**km**, n15,** σ**1s.47**/18**, mb4.1**/3**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.79**	**319**	P	**Pn**	**05 22 41.4**	**-2.0**
MSAI				S	**Sn**	**05 22 52.4**	**-1.6**
AAI	**Ambon**	**1.27**	**282**	P	**Pn**	**05 22 48.3**	**-1.8**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
FAKI	**Fak Fak**	**2.98**	**70**	P	**Pn**	**05 23 13.1**	**-0.5**
FAKI				S	**Sn**	**05 23 47.1**	**-1.0**
SIJI	**Sorong**	**3.56**	**31**	Pn	**Pn**	**05 23 21.5**	**0.0**
	6.9nm,0.3s,baz=190,slow=23,SNR=9.4						
SIJI				Sn	**Sn**	**05 24 01.4**	**-0.9**
	3.7nm,0.3s,baz=295,slow=0.7,SNR=3.9						
	16nm,0.3s						
LBMI	**Labuha**	**3.81**	**329**	P	**Pn**	**05 23 24.1**	**-1.0**
SANI	**Sanana**	**3.93**	**298**	P	**Pn**	**05 23 25.6**	**-1.1**
KMPI	**Kaimana, Papua**	**4.26**	**86**	P	**Pn**	**05 23 29.0**	**-2.2**
SAUI	**Saumlaki**	**4.42**	**155**	P	**Pn**	**05 23 31.5**	**-1.9**
SRPI	**Serui, Papua**	**7.09**	**73**	P	**Pn**	**05 24 09.0**	**-1.2**
KAPI	**Kappang**	**9.72**	**263**	Pn	**Pn**	**05 24 48.4**	**+2.1**
	0.7nm,0.3s,baz=116,slow=7.1,SNR=5.3						
	9.7nm,0.7s						
WRA	**Warramunga Arr**	**16.60**	**164**	Pn	**P**	**05 26 22.4**	**+1.2**
	0.1nm,0.3s,baz=345,slow=13,SNR=2.3						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**20.07**	**168**	P	**P**	**05 27 00.5**	**+1.2**
	1.8nm,0.5s,baz=352,slow=10,SNR=12						
	1.8nm,0.5s						
SONM	**Songino Array**	**55.39**	**341**	P	**P**	**05 32 00.3**	**+0.7**
	0.4nm,0.4s,baz=156,slow=7.6,SNR=4.0						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**65.39**	**326**	P	**P**	**05 33 08.6**	**+0.8**
	1.3nm,0.7s,baz=117,slow=8.4,SNR=9.6						
	1.3nm,0.7s						
ZALV	**Zalesovo Beam**	**68.62**	**334**	P	**P**	**05 33 28.4**	**+0.3**
	1.7nm,0.8s,baz=120,slow=10,SNR=4.9						
	1.7nm,0.8s						

IDC 02 05:27:06.4±2.0**,1°.85N×126°.15E,h0**km**,mb3.4**/3**,**
mbtmp3.4/3**,MS3.7**/1**,Error ellipse: s-maj=177.4km**
s-min=24.9km az=65.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.10**	**160**	P	P	05 32 13.6	-0.5
	0.6nm,0.4s,baz=339,slow=11,SNR=9.9						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**26.46**	**164**	P	P	05 32 45.9	+0.5
	0.3nm,0.5s,baz=342,slow=7.7,SNR=5.3						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**58.77**	**326**	P	P	05 37 06.3	-0.1
	0.2nm,0.5s,baz=126,slow=7.1,SNR=3.7						
MKAR				LR	LR	06 02 59.0	
	comp=Z,58nm,19.2s,baz=179,slow=37						
	0.2nm,0.5s						

MAN 02 05:42:02.5,8°.81N×126°.33E,h27km**,mb4.4,ML3.2,MS3.0,**
3D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.62**	**178**	⇓*i*P	Pb	05 42 14.1	+0.2
BIPH				*i* S		05 42 22.9	
SCPH	**Surigao**	**1.28**	**319**	*e*P	Pn	05 42 24.5	+0.3
SCPH				*e*S		05 42 40.8	
BUKP	**Musuan**	**1.56**	**234**	⇓*i*P	Pb	05 42 29.7	+0.8
BUKP				*i* S		05 42 50.6	
KCP	**Kidapawan**	**2.17**	**215**	⇓*e*P	Pn	05 42 37.9	+1.3
KCP				*i* S		05 43 03.6	
TBP	**Tagbilaran**	**2.59**	**290**	*e*P	Pn	05 42 42.8	+0.4
TBP				*i* S		05 43 14.5	
CTBH	**Cotabato--PC H**	**2.60**	**233**	*e*P	Pn	05 42 44.5	+2.0
CTBH				*i* S		05 43 14.3	

GUC 02 05:42:02.3±0.8**,39°.94S×73°.89W,h24**km±7km**,ML3.8,**
3C-2D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LR04	**Corral**	**0.36**	**80**	⇓*e*P	Pb	05 42 09.4	-0.8
LR04				*i* S	Sb	05 42 14.8	-0.7
LR04				IAML		05 42 16.0	
	comp=E,16μm,0.2s						
LR02	**Universidad Au**	**0.51**	**75**	⇓*e*P	Pb	05 42 11.8	-0.8
LR02				*e*S	Sb	05 42 19.1	-0.5
LR02				IAML		05 42 21.7	
	comp=N,8μm,0.3s						
LC02	**Puerto Saavedr**	**1.21**	**19**	⇑*e*P	Pn	05 42 22.8	-1.0
LC02				*e*S	Sn	05 42 38.1	-1.3
LC02				IAML		05 42 44.8	
	comp=E,7μm,0.3s						
LR03	**Panguipulli**	**1.23**	**76**	*e*P	Pn	05 42 23.3	-0.7
LR03				*e*S	Sn	05 42 38.9	-0.9
LR03				IAML		05 42 45.9	
	comp=E,2μm,0.6s						
LL04	**Puerto Octay**	**1.49**	**131**	⇑*e*P	Pn	05 42 26.4	-1.1
LL04				*e*S	Sn	05 42 45.6	-0.6
LL04				IAML		05 42 49.8	
	comp=E,4μm,0.3s						
LL05	**Los Muermos**	**1.50**	**168**	*e*P	Pn	05 42 27.6	-0.1
LL05				*e*S	Sn	05 42 46.2	-0.2
LL05				IAML		05 42 59.1	
	comp=E,997nm,0.4s						
LL03	**Petrohue**	**1.65**	**137**	⇑*e*P	Pn	05 42 28.8	-1.0
LL03				*e*S	Sn	05 42 50.7	+0.5
LL03				IAML		05 42 57.2	
	comp=E,2μm,0.7s						
PLCA	**Paso Flores**	**2.67**	**108**	*e*P	Pn	05 42 46.0	+2.1
BI05	**Punta Hualpn**	**3.23**	**10**	*e*P	Pn	05 42 49.9	-1.6
GO05	**Huala**	**5.16**	**18**	*e*P	Pn	05 43 15.8	-2.3
BO03	**Pichilemu**	**5.65**	**16**	*e*P	Pn	05 43 21.7	-3.1
BO01	**Tunca**	**5.97**	**23**	*e*P	Pn	05 43 26.4	-2.8

IDC 02 05:44:50.6±13.0**,17°.65S×179°.10W,h598**km±42km**,**
mb3.5/4**,mbtmp4.4**/5**,Error ellipse: s-maj=260.0km**
s-min=95.3km az=74.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.72**	**268**	P	P	05 46 08.1	-0.1
	58nm,0.7s,baz=94,slow=4.2,SNR=44						
CTA	**Charters Tower**	**32.84**	**260**	P	P	05 50 37.5	+0.8
	3.2nm,0.6s,baz=91,slow=11,SNR=5.9						
	3.2nm,0.6s						
STKA	**Stephens Creek**	**38.18**	**241**	P	P	05 51 20.6	-0.1
	3.4nm,0.7s,baz=85,slow=11,SNR=8.5						
	3.4nm,0.7s						
WRA	**Warramunga Arr**	**44.03**	**259**	P	P	05 52 06.5	-0.5
	2.7nm,0.5s,baz=95,slow=7.4,SNR=98						
	2.7nm,0.5s						
ASAR	**Alice Springs**	**44.23**	**254**	P	P	05 52 08.2	-0.2
	11nm,0.5s,baz=86,slow=8.9,SNR=160						
	11nm,0.5s						

IDC ***02*** *06:02:38.4±0.7, 18°.39N×96°.37E, h0km, mb4.1/16, mbtmp4.0/17, ML3.5/1, MS3.6/4, Error ellipse: s-maj=21.3km s-min=11.5km az=24.0*
NEIC ***02*** *06:02:40.9±1.3, 18°.52N±0°.03×96°.53E±0°.06, h10km±1km, mb4.6/29, Error ellipse: s-maj=10.6km s-min=4.2km az=254.0*
DJA ***02*** *06:02:46.9±2.4, 19°N±6°×9°7E±°, h15km±16km, M4.8/4, mB5.6/2, mb4.7/4, MLv4.8/4, Mw(mB)5.1/2*
ISC 02 06:02:40.0±0.6**,18°.4N**±0°.1**×96°.47E**±0°.08**,h10**km**,n58,**
σ0ˢ.67/54**,mb4.4**/28**,MS3.7**/3**,Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**2.35**	**89**		**Pn**	**06 03 19.1**	**+0.4**
CMAR	**Chiang Mai Arr**	**2.35**	**89**	Pn	**Pn**	**06 03 18.8**	**+0.1**
	2.7nm,0.3s,baz=266,slow=14,SNR=51						
CMAR				Pg	**Pg**	**06 03 24.6**	**-0.4**
	46nm,0.3s,baz=263,slow=18,SNR=60						
CMAR				Lg	Lg	06 03 55.0	
	92nm,0.3s,baz=266,slow=32,SNR=17						
	25nm,0.7s						
CMAR	**Chiang Mai Arr**	**2.35**	**89**		**Pn**	**06 03 18.5**	**-0.2**
CHTO	**Chiang Mai**	**2.38**	**80**	Pn	**Pn**	**06 03 19.4**	**+0.3**
SHL	**Shillong**	**8.28**	**330**		**Pn**	**06 04 40.1**	**-0.2**
LSA	**Lhasa**	**12.22**	**338**	Pn	**Pn**	**06 05 34.3**	**-0.3**
PALK	**Pallekele**	**18.93**	**236**	LR	LR	06 14 24.4	
	comp=Z,167nm,18.2s,baz=144,slow=38						
SBUM	**Sibu**	**22.15**	**134**	P	**P**	**06 07 35.9**	**-0.2**
KBL	**Kabul**	**29.19**	**309**	P	**P**	**06 08 42.1**	**+0.1**
GAR	**Garm**	**30.57**	**318**	P	**P**	**06 08 55.2**	**+1.1**
GAR				IAmb	IAmb	06 09 17.2	
	comp=Z,6.8nm,1.2s						
MK31	**Makanchi Array**	**30.60**	**341**	P	**P**	**06 08 54.6**	**+0.5**
MKAR	**Makanchi Array**	**30.60**	**341**	P	**P**	**06 08 54.8**	**+0.7**
	comp=Z,2.4nm,0.6s,baz=155,slow=8.5,SNR=23						
	comp=Z,2.4nm,0.6s						
MKAR	**Makanchi Array**	**30.60**	**341**	P	**P**	**06 08 54.1**	**0.0**
KSRS	**Korea Array**	**33.41**	**49**	LR	LR	06 23 15.6	
	comp=Z,56nm,21.8s,baz=230,slow=37						
KURBB	**Kurchatov Arra**	**35.16**	**340**	PcP	**PcP**	**06 12 05.0**	**0.0**
	comp=Z,0.5nm,0.5s,baz=156,slow=2.7,SNR=5.7						
KURK	**Kurchatov**	**35.21**	**340**	P	**P**	**06 09 34.2**	**-0.1**
ZALV	**Zalesovo Beam**	**36.58**	**348**	P	**P**	**06 09 46.5**	**+0.6**
	comp=Z,1.5nm,0.6s,baz=176,slow=9.3,SNR=6.6						
	comp=Z,1.5nm,0.6s						
ZALV	**Zalesovo Beam**	**36.58**	**348**	P	**P**	**06 09 45.8**	**-0.1**
GEYT	**Alibeck**	**38.64**	**308**	P	**P**	**06 10 05.0**	**+1.3**
	comp=Z,5.9nm,0.8s,baz=212,slow=19,SNR=5.9						
	comp=Z,5.9nm,0.8s						
GEYT	**Alibeck**	**38.64**	**308**	P	**P**	**06 10 03.9**	**+0.2**
GEYT				IAmb	IAmb	06 10 07.7	
	comp=Z,5.8nm,0.7s						
GYA0B	**ALIBECK ARRAY**	**38.64**	**308**	P	**P**	**06 10 04.2**	**+0.5**
GYA0B				IAmb	IAmb	06 10 07.6	
	comp=Z,9.9nm,0.7s						
KLR	**Kul'dur**	**41.81**	**35**	LR	LR	06 28 41.9	
	comp=Z,100nm,18.1s,baz=226,slow=37						
ABKAR	**Akbulak array**	**42.50**	**325**	P	**P**	**06 10 34.7**	**-0.7**
ABKAR	**Akbulak array**	**42.50**	**325**	P	**P**	**06 10 34.8**	**-0.6**
ABKAR				IAmb	IAmb	06 10 36.1	
	comp=Z,3.1nm,1.1s						
GURO	**Guroymak-BITLI**	**51.10**	**305**	P	**P**	**06 11 44.1**	**+1.0**
GURO				IAmb	IAmb	06 11 47.3	
	comp=Z,8.0nm,0.7s						
WB0	**Warramunga Arr**	**53.16**	**134**	P	**P**	**06 11 58.4**	**0.0**
WB0				IAmb	IAmb	06 12 23.0	
	comp=Z,10.0nm,1.4s						
WRA	**Warramunga Arr**	**53.24**	**134**	P	**P**	**06 11 59.3**	**+0.3**
	comp=Z,1.9nm,0.8s,baz=324,slow=7.5,SNR=14						
	comp=Z,1.9nm,0.8s						
WRA	**Warramunga Arr**	**53.24**	**134**	P	**P**	**06 11 59.7**	**+0.7**
WB2	**Warramunga Arr**	**53.25**	**134**	P	**P**	**06 11 59.4**	**+0.3**
WB2				IAmb	IAmb	06 12 02.2	
	comp=Z,5.0nm,0.9s						
WR0	**Warramunga Arr**	**53.39**	**134**	P	**P**	**06 12 00.1**	**0.0**
WR0				IAmb	IAmb	06 12 02.1	
	comp=Z,9.0nm,1.2s						
ASAR	**Alice Springs**	**55.55**	**137**	P	**P**	**06 12 16.4**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=316,slow=6.4,SNR=12						
	comp=Z,0.8nm,0.6s						
TIXI	**Tiksi**	**56.50**	**12**	P	**P**	**06 12 21.3**	**-0.6**
TIXI				IAmb	IAmb	06 12 24.6	
	comp=Z,8.7nm,1.4s						
BRTR	**Keskin Array B**	**57.70**	**306**	P	**P**	**06 12 29.2**	**-1.9**
	comp=Z,1.2nm,0.8s,baz=127,slow=3.8,SNR=3.2						
	comp=Z,1.2nm,0.8s						
BRTR	**Keskin Array B**	**57.70**	**306**	P	**P**	**06 12 30.6**	**-0.5**
ILGA	**Ilgaz**	**57.70**	**307**	P	**P**	**06 12 30.9**	**-0.3**
PETK	**Petropavlovsk-**	**58.26**	**38**	LR	LR	06 38 46.4	
	comp=Z,55nm,19.3s,baz=269,slow=37						
MDUB	**Mudurnu**	**59.59**	**307**	P	**P**	**06 12 44.7**	**+0.5**
AKASG	**Malin Array Be**	**61.57**	**318**	P	**P**	**06 12 56.1**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=77,slow=6.6,SNR=2.8						
	comp=Z,0.2nm,0.3s						
KARP	**Karpathos**	**62.91**	**301**	P	**P**	**06 13 06.4**	**-0.3**
MLR	**Muntele Rosu**	**63.51**	**312**	P	**P**	**06 13 11.1**	**+0.4**
MLR				IAmb	IAmb	06 13 14.2	
	comp=Z,7.7nm,1.1s						
BURAR	**Bucovina Array**	**64.03**	**315**	P	**P**	**06 13 13.3**	**-0.7**
FIA1	**FINESS Array S**	**64.61**	**330**	P	**P**	**06 13 17.3**	**-0.1**
FIA1				IAmb	IAmb	06 13 28.2	
	comp=Z,11nm,1.3s						
FINES	**FINESS Array B**	**64.62**	**330**	P	**P**	**06 13 17.2**	**-0.3**
	comp=Z,2.2nm,0.7s,baz=97,slow=7.7,SNR=7.4						
	comp=Z,2.2nm,0.7s						
FINES	**FINESS Array B**	**64.62**	**330**	P	**P**	**06 13 17.3**	**-0.2**
IDI	**Anoyia**	**64.78**	**301**	P	**P**	**06 13 18.9**	**-0.1**
STKA	**Stephens Creek**	**66.13**	**139**	P	**P**	**06 13 27.3**	**-0.3**
	comp=Z,0.7nm,0.4s,baz=346,slow=12,SNR=3.2						
	comp=Z,0.7nm,0.4s						
ARCES	**ARCESS Array B**	**66.23**	**339**	P	**P**	**06 13 27.5**	**-0.3**
	comp=Z,5.2nm,1.0s,baz=91,slow=7.2,SNR=5.6						
	comp=Z,5.2nm,1.0s						
ARCES	**ARCESS Array B**	**66.23**	**339**	P	**P**	**06 13 27.8**	**0.0**
GERES	**GERESS Array B**	**71.65**	**316**	P	**P**	**06 14 02.2**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=59,slow=5.1,SNR=6.9						
	comp=Z,0.7nm,0.6s						
MLY	**Manley**	**82.62**	**23**	P	**P**	**06 15 04.5**	**+1.2**
MLY				IAmb	IAmb	06 15 07.4	
	comp=Z,3.1nm,0.9s						
BOSA	**Boshof**	**83.16**	**237**	P	**P**	**06 15 07.0**	**+0.2**
	comp=Z,1.8nm,0.5s,baz=70,slow=4.4,SNR=6.1						
	comp=Z,1.8nm,0.5s						
MDM	**Murphy Dome**	**83.59**	**23**	IAmb	IAmb	06 15 14.4	
	comp=Z,6.5nm,1.2s						
ILAR	**Eielson Array**	**84.18**	**23**	P	**P**	**06 15 11.2**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=306,slow=4.3,SNR=5.9						
	comp=Z,0.7nm,0.7s						
SML	**Sawmill**	**85.15**	**26**	P	**P**	**06 15 14.9**	**-1.4**
J26L	**Joseph Creek**	**85.53**	**22**	P	**P**	**06 15 19.0**	**+0.8**
J26L				IAmb	IAmb	06 15 19.2	
	comp=Z,4.3nm,1.0s						
ESDC	**Sonseca Array**	**86.15**	**310**	P	**P**	**06 15 21.5**	**-0.2**
	comp=Z,1.0nm,1.1s,baz=83,slow=4.0,SNR=4.8						
	comp=Z,1.0nm,1.1s						
TORD	**Torodi Ar. Bea**	**90.34**	**284**	P	**P**	**06 15 41.6**	**-0.4**
	comp=Z,0.7nm,0.9s,baz=64,slow=3.8,SNR=3.9						
	comp=Z,0.7nm,0.9s						
YKA	**Yellowknife Ar**	**95.69**	**14**	P	**P**	**06 16 07.5**	**+1.7**
	comp=Z,0.3nm,0.8s,baz=328,slow=4.4,SNR=3.7						
	comp=Z,0.3nm,0.8s						

MAN 02 06:11:19.5,13°.53N×120°.68E,h31km**,mb3.9,ML2.7,**
MS2.3,3C-1D,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.27**	**96**	⇑*e*P	Pn	06 11 28.8	+1.3
PGP				*e*S		06 11 38.1	
LUBP	**Lubang**	**0.46**	**296**	⇓*i*P	Pn	06 11 30.1	+1.2
LUBP				*i* S		06 11 39.7	
MACP	**Maragondon, Ca**	**0.73**	**3**	⇑*e*P	Pb	06 11 33.3	+0.1
MACP				*e*S		06 11 45.1	
SJMP	**San Jose**	**1.15**	**158**	⇑*e*P	Pn	06 11 38.8	+0.5
SJMP				*e*S		06 11 54.5	

IDC 02 06:14:44.5±2.5**,54°.28N×86°.11E,h0**km**,mbtmp3.0**/2**,**
ML2.8/2**,Error ellipse: s-maj=19.6km s-min=12.4km**
az=48.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.83**	**247**	*i*		06 20 39.8	
	baz=66,slow=328,SNR=2.0						
ZALV	**Zalesovo Beam**	**0.83**	**247**	Pg	Pg	06 14 59.0	-1.4
	1.1nm,0.3s,baz=64,slow=16,SNR=12						
ZALV				Lg	Lg	06 15 12.5	
	5.1nm,0.3s,baz=70,slow=28,SNR=26						
KURBB	**Kurchatov Arra**	**5.91**	**235**	Pn	Pn	06 16 14.1	+0.9
	0.1nm,0.3s,baz=51,slow=13,SNR=7.1						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**7.88**	**200**	Pn	Pn	06 16 41.3	+1.1
	0.3nm,0.3s,baz=23,slow=14,SNR=10						
	0.4nm,0.3s						

KRNET ***02*** *06:18:11.6±0.1, 39°.72N×72°.02E, h16km, mb3.4*
NNC ***02*** *06:18:14.9±3.0, 39°.79N×72°.10E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=24.2km s-min=12.6km az=175.0*
SOME ***02*** *06:18:16.5, 39°.93N×72°.20E, h5km*
ISC 02 06:18:13.2±1.0**,39°.55N**±0°.05**×71°.88E**±0°.03**,h24**km±7km**,**
n43,σ2ˢ.48/73**,29C-11D,Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**0.10**	**222**	⇑*i*P	**Pb**	**06 18 17.8**	**-0.3**
	baz=15						
DRK				⇑*i*S	**Sb**	**06 18 21.7**	**+0.3**
	baz=15						
BTK	**Batken**	**0.96**	**302**	⇓*i*P	**Pn**	**06 18 30.1**	**-1.3**
	baz=90						
BTK				⇓*i*S	**Sn**	**06 18 43.7**	**-0.6**
	baz=90						
OHH	**Osh**	**1.19**	**35**	⇑*i*P	**Pn**	**06 18 30.2**	**-4.3**
	baz=36						
OHH				⇑*i*S	**Sn**	**06 18 43.9**	**-6.1**
	baz=36						
GAR	**Garm**	**1.33**	**246**	⇑*i*P	**Pb**	**06 18 39.2**	**+1.5**
	baz=42						
GAR				⇑*i*S	**Sb**	**06 18 59.5**	**+5.1**
	baz=42						
TRKS	**Terek-Say**	**2.06**	**344**	⇑*i*P	**Pn**	**06 18 45.8**	**-0.7**
	baz=40						
TRKS				⇑*i*S	**Sn**	**06 19 10.6**	**-0.8**
	baz=40						
ARK	**Arkit**	**2.25**	**2**	⇑*i*P	**Pn**	**06 18 48.8**	**-0.2**
	baz=59						
ARK				⇑*i*S	**Sn**	**06 19 16.0**	**0.0**
	baz=59						
CHGR	**Chuyangaron**	**2.30**	**248**	⇓*i*P	**Pb**	**06 18 54.0**	**-0.1**
	baz=45						
CHGR				⇓*i*S	**Sb**	**06 19 24.9**	**+2.8**
	baz=45						
ARLS	**Aral**	**2.96**	**38**	⇓*i*P	**Pn**	**06 18 58.2**	**-0.7**
	baz=39						
ARLS				⇓*i*S	**Sn**	**06 19 32.3**	**-1.4**
	baz=39						
UCH	**Uchtor**	**3.33**	**36**	⇑*i*P	**Pn**	**06 19 03.6**	**-0.7**
	baz=36						
UCH				⇑*i*S	**Sn**	**06 19 41.7**	**-1.7**
	baz=36						
MRKS	**Merke**	**3.35**	**17**	*e*P	**Pb**	**06 19 09.5**	**-2.5**
	2.3nm,0.1s						
MRKS				*e*S	**Sb**	**06 19 48.0**	**-4.3**
	29nm,0.4s						
MRKS	**Merke**	**3.35**	**17**	Pg	**Pb**	**06 19 14.8**	**+2.8**
	7.3nm,0.3s						
MRKS				Lg	Lg	06 19 56.6	
	29nm,0.4s						
EKS2	**Erkin-Say**	**3.42**	**24**	⇑*i*P	**Pn**	**06 19 04.6**	**-0.6**
	baz=24						
EKS2				⇑*i*S	**Sn**	**06 19 43.5**	**-1.5**
	baz=24						
AAK	**Ala-Archa**	**3.66**	**32**	⇑*i*P	**Pn**	**06 19 08.0**	**-0.5**
	baz=32						
AAK				⇑*i*S	**Sn**	**06 19 49.1**	**-1.9**
	baz=32						
KK31	**Karatay Array**	**3.70**	**344**	⇓Pn	**Pn**	**06 19 10.3**	**+1.4**
	0.4nm,0.2s,baz=148,slow=11,SNR=23						
KK31				Pg	**Pb**	**06 19 22.2**	**+4.4**
	8.2nm,0.7s,baz=162,slow=15,SNR=4.8						
KK31				⇑Lg	Lg	06 20 03.5	
	2.4nm,0.3s,baz=150,slow=30,SNR=7.5						
KKAR	**Karatay Array**	**3.70**	**344**	⇑*i*P	**Pn**	**06 19 09.3**	**+0.4**
	baz=42						
KKAR				⇑*i*S	**Sn**	**06 19 51.5**	**-0.1**
	baz=42						
BRLS	**Boroldai**	**3.80**	**337**	*e*P	**Pb**	**06 19 19.3**	**-0.3**
	10nm,0.5s						
BRLS				*e*S	**Sb**	**06 20 05.1**	**-0.2**
	9.7nm,0.3s						
BRLS	**Boroldai**	**3.80**	**337**	Pg	**Pb**	**06 19 19.3**	**-0.3**
	10nm,0.5s						
BRLS				Lg	Lg	06 20 05.1	
	9.7nm,0.3s						
KBK	**Karagaybulak**	**3.87**	**36**	⇑*i*P	**Pn**	**06 19 10.9**	**-0.5**
	baz=36						
KBK				⇑*i*S	**Sn**	**06 19 54.1**	**-2.1**
	baz=36						
CHMS	**Chumysh**	**4.07**	**31**	⇓*i*P	**Pn**	**06 19 13.3**	**-0.7**
	baz=31						
CHMS				⇓*i*S	**Sn**	**06 19 58.7**	**-2.1**
	baz=31						
USP	**Ospenovka**	**4.20**	**27**	⇑*i*P	**Pn**	**06 19 15.3**	**-0.5**
	baz=27						
USP				⇑*i*S	**Sn**	**06 20 01.9**	**-2.3**
	baz=27						
BOOM	**Boomskoye usch**	**4.25**	**45**	⇑*i*P	**Pn**	**06 19 16.2**	**-0.4**
	baz=46						
BOOM				⇑*i*S	**Sn**	**06 20 03.4**	**-2.1**
	baz=46						
ULHL	**Ulahol**	**4.26**	**49**	⇑*i*P	**Pn**	**06 19 16.3**	**-0.5**
	baz=50						
ULHL				⇑*i*S	**Sn**	**06 20 03.8**	**-2.1**
	baz=50						
TKM2	**Tokmak 2**	**4.38**	**39**	⇑*i*P	**Pn**	**06 19 17.9**	**-0.5**
	baz=39						
TKM2				⇑*i*S	**Sn**	**06 20 06.5**	**-2.3**
	baz=39						
TKM2	**Tokmak 2**	**4.38**	**39**	⇓Pg	**Pb**	**06 19 29.5**	**0.0**
	3.8nm,0.5s						
TKM2				⇓Lg	Lg	06 20 22.5	
	6.3nm,0.5s						
SGDS	**Sogindy**	**4.41**	**27**	*e*P	**Pb**	**06 19 30.5**	**+0.5**
	3.3nm,0.4s						
SGDS				*e*S	**Sb**	**06 20 24.2**	**+1.4**
	8.4nm,0.7s						
SGDS	**Sogindy**	**4.41**	**27**	Pg	**Pb**	**06 19 30.5**	**+0.5**
	3.3nm,0.4s						
SGDS				Lg	Lg	06 20 24.2	
	8.4nm,0.7s						
KST	**Kastek**	**4.65**	**40**	*e*P	**Pb**	**06 19 34.2**	**+0.1**
	2.5nm,0.4s						
KST				*e*S	**Sb**	**06 20 31.4**	**+1.7**
	8.8nm,0.4s						
KST	**Kastek**	**4.65**	**40**	Pg	**Pb**	**06 19 34.2**	**+0.1**
	2.5nm,0.4s						
KST				Lg	Lg	06 20 31.4	
	8.8nm,0.4s						
MTBS	**Maitube**	**4.95**	**42**	*e*P	**Pb**	**06 19 41.1**	**+1.9**
	3.4nm,0.2s						
MTBS				*e*S	**Sb**	**06 20 42.3**	**+4.0**
	8.2nm,0.3s						
MTBS	**Maitube**	**4.95**	**42**	Pg	**Pb**	**06 19 41.1**	**+1.9**
	3.4nm,0.2s						
MTBS				Lg	Lg	06 20 42.3	
	8.2nm,0.3s						
KRBS	**Karabastau**	**5.02**	**33**	*e*P	**Pb**	**06 19 40.8**	**+0.4**
	3.2nm,0.3s						
KRBS				*e*S	**Sb**	**06 20 42.0**	**+1.6**
	7.6nm,0.5s						
KRBS	**Karabastau**	**5.02**	**33**	Pg	**Pb**	**06 19 40.8**	**+0.4**
	3.2nm,0.3s						
KRBS				Lg	Lg	06 20 42.0	
	7.6nm,0.5s						
TNSS	**Tian-Shan**	**5.17**	**46**	*e*P	**Pb**	**06 19 43.3**	**+0.2**
	2.9nm,0.4s						
TNSS				*e*S	**Sb**	**06 20 47.3**	**+2.5**
	3.9nm,0.5s						
TNSS	**Tian-Shan**	**5.17**	**46**	Pg	**Pb**	**06 19 43.3**	**+0.2**
	2.9nm,0.4s						
TNSS				Lg	Lg	06 20 47.3	
	3.9nm,0.5s						
MDOK	**Medeo**	**5.30**	**45**	*e*P	**Pb**	**06 19 46.8**	**+1.5**
	2.0nm,0.3s						
MDOK				*e*S	**Sb**	**06 20 53.0**	**+4.5**
	7.0nm,0.5s						
MDOK	**Medeo**	**5.30**	**45**	Pg	**Pb**	**06 19 46.8**	**+1.5**
	2.0nm,0.3s						
MDOK				Lg	Lg	06 20 53.0	
	7.0nm,0.5s						
KUU	**Kurty**	**5.47**	**36**	*e*P	**Pb**	**06 19 49.9**	**+1.8**
	2.3nm,0.5s						
KUU				*e*S	**Sb**	**06 20 57.4**	**+4.2**
	9.7nm,0.4s						
KUU	**Kurty**	**5.47**	**36**	Pg	**Pb**	**06 19 49.9**	**+1.8**
	2.3nm,0.5s						
KUU				Lg	Lg	06 20 57.4	
	9.7nm,0.4s						
BTLS	**Baital**	**5.71**	**16**	*e*P	**Pb**	**06 19 55.0**	**+2.8**
	2.2nm,0.6s						
BTLS				*e*S	**Sb**	**06 21 05.9**	**+5.7**
	5.2nm,0.6s						
KURS	**Kuram**	**6.14**	**48**	*e*P	Pb	06 20 04.5	+5.0
	1.7nm,0.3s						
KURS				*e*S	Sb	06 21 22.2	+10
	3.9nm,1.0s						
KPKS	**Kokpek**	**6.43**	**50**	*e*P	**Pb**	**06 20 08.3**	**+3.8**
	1.6nm,0.4s						
KPKS				*e*S	**Sb**	**06 21 28.7**	**+7.8**
	5.7nm,0.6s						
UZB	**Uzynbulak**	**6.46**	**54**	*e*P	**Pb**	**06 20 06.8**	**+1.8**
	2.9nm,0.4s						
UZB				*e*S	**Sb**	**06 21 26.3**	**+4.5**
	2.0nm,0.4s						
AB31	**Akbulak array**	**12.91**	**323**	P	**Pn**	**06 21 12.4**	**-2.7**
	0.4nm,0.4s,baz=128,slow=14,SNR=15						

IDC 02 06:27:38.2±4.1**,16°.91S×70°.36W,h85**km±36km**,mb3.3**/3**,**
mbtmp3.6/5**,MS2.7**/2**,Error ellipse: s-maj=57.5km**
s-min=19.6km az=103.0,Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**2.22**	**74**	P	Pn	06 28 14.3	+0.6
	29nm,0.5s,baz=255,slow=12,SNR=136						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPAZ				S	Sn	06 28 45.7	+4.9
	12nm,0.6s,baz=119,slow=19,SNR=1.3						
LPAZ				LR	LR	06 29 24.8	
	comp=Z,118nm,18.5s,baz=217,slow=48						
LVC	Limon Verde	5.84	167	P	Pn	06 29 01.8	-0.8
	4.3nm,0.5s,baz=343,slow=6.9,SNR=8.2						
LVC				S	Sn	06 30 08.0	-0.2
	3.4nm,0.6s,baz=255,slow=20,SNR=1.4						
NNA	Nana	7.96	307	LR	LR	06 32 29.5	
	comp=Z,79nm,18.8s,baz=141,slow=37						
H03N1	Juan Fernandez	18.18	203	T	T	06 49 23.6	
	baz=27,slow=73,SNR=28						
H03N2	Juan Fernandez	18.19	204	T	T	06 49 23.3	
	baz=27,slow=73,SNR=32						
H03N3	Juan Fernandez	18.20	204	T	T	06 49 22.4	
	baz=27,slow=73,SNR=29						
PLCA	Paso Flores	23.74	180	P	P	06 32 44.0	+1.2
	2.6nm,1.0s,baz=350,slow=14,SNR=4.7						
	2.6nm,1.0s						
TORD	Torodi Ar. Bea	77.17	72	P	P	06 39 22.9	-0.4
	0.4nm,0.7s,baz=258,slow=5.6,SNR=2.1						
	0.4nm,0.7s						
YKA	Yellowknife Ar	86.42	341	P	P	06 40 10.4	-0.3
	0.3nm,0.7s,baz=135,slow=5.4,SNR=5.1						
	0.3nm,0.7s						

*NNC **02** 06:30:04.7±5.1, 54.05N×86.47E, h0km, mb3.5, mpv2.7, Error ellipse: s-maj=39.1km s-min=22.5km az=28.0, Suspected Mining explosion.*
*IDC **02** 06:30:05.0±2.5, 54.09N×86.45E, h0km, mbtmp3.1/2, ML2.8/2, Error ellipse: s-maj=20.3km s-min=13.1km az=55.0*
ISC 02 06:29:58.3±2.4, 53.24N±0.06×86.5E±0.1, h0km, n8, σ1s67/11, 8C-2D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	1.22	306	⇑P	Pn	06 30 22.7	+0.1
	0.3nm,0.5s						
ZAA0				⇑S	Sg	06 30 36.8	-0.8
	1.4nm,0.6s						
ZALV	Zalesovo Beam	1.22	306	Pg	Pb	06 30 22.6	+0.3
	0.9nm,0.3s,baz=81,slow=16,SNR=7.4						
ZALV				Lg	Lg	06 30 36.8	
	1.9nm,0.3s,baz=77,slow=26,SNR=10						
I46RU	ZALESOVO INFRA	1.22	306	i		06 37 03.4	
	baz=82,slow=326,SNR=3.9						
KURK	Kurchatov	5.47	246	⇑Pn	Pb	06 31 35.9	+1.2
	1.8nm,0.8s						
KURK				⇑Sn	Sb	06 32 43.4	+2.5
	0.3nm,0.4s						
KURK				⇓Lg	Lg	06 33 16.4	
	1.4nm,0.6s						
KURBB	Kurchatov Arra	5.57	245	Pn	Pb	06 31 35.8	-0.6
	0.1nm,0.3s,baz=55,slow=14,SNR=21						
KURBB				Lg	Lg	06 33 14.1	
	baz=56,slow=35,SNR=5.1						
	2.1nm,0.6s						
KURBB	Kurchatov Arra	5.57	245	⇑Pn	Pb	06 31 34.9	-1.5
	1.8nm,0.5s						
KURBB				⇓Sn	Sb	06 32 41.5	-2.2
	0.9nm,0.5s						
KURBB				⇑Lg	Lg	06 33 18.6	
	2.9nm,0.7s						
MK31	Makanchi Array	6.99	204	Pn	Pb	06 31 59.5	-1.1
	0.2nm,0.4s,baz=24,slow=13,SNR=9.6						
MK31				⇑Sn	Sb	06 33 26.8	+2.2
	0.5nm,0.6s,baz=24,slow=21						
MK31				⇑Lg	Lg	06 34 05.7	
	0.4nm,0.6s						
MKAR	Makanchi Array	6.99	204	Pn	Pb	06 31 59.9	-0.7
	0.2nm,0.3s,baz=24,slow=13,SNR=9.2						
MKAR				Lg	Lg	06 34 13.5	
	baz=23,slow=27,SNR=4.2						
	0.3nm,0.3s						

*NNC **02** 06:35:12.3±9.9, 37.53N×71.64E, h0km, mb3.7, mpv3.5, Error ellipse: s-maj=94.3km s-min=53.8km az=156.0*
*SOME **02** 06:35:13.7, 38.32N×71.17E, h10km*
ISC 02 06:35:15.3±2.5, 38.1N±0.1×70.68E±0.09, h10km, n7, σ1s94/12, 2C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BRLS	Borolday	4.93	353	eP	Pb	06 36 39.3	-2.4
	4.6nm,0.1s						
BRLS				eS	Sb	06 37 39.6	-1.5
	12nm,0.2s						
KK31	Karatay Array	4.96	359	⇓P	Pb	06 36 41.4	-0.9
	2.6nm,0.3s,baz=171,slow=12,SNR=5.1						
KK31				⇑S	Sb	06 37 45.5	+3.5
	3.3nm,0.4s,baz=136,slow=15,SNR=6.1						
MRKS	Merke	5.00	22	eP	Pb	06 36 40.8	-2.1
	18nm,0.5s						
MRKS				eS	Sb	06 37 42.0	-1.1
	26nm,0.5s						
TKM2	Tokmak 2	6.07	37	⇓P	Pn	06 36 46.2	+0.9
	1.6nm,0.5s						
TKM2				⇓S	Sn	06 37 56.4	+1.5
	2.2nm,0.6s						
KST	Kastek	6.34	38	eP	Pb	06 37 04.2	-1.6
	1.0nm,0.3s						
KST				eS	Sb	06 38 22.0	+0.3
	3.5nm,0.3s						
AB31	Akbulak array	13.54	329	P	P	06 38 37.0	+0.4
	0.2nm,0.3s,baz=142,slow=13,SNR=16						
AKTO	Aktyubinsk	15.25	328	⇑P	P	06 38 56.7	+1.2
	0.9nm,0.5s						

*IDC **02** 06:38:53.5±1.5, 2.23S×100.50E, h0km, mb4.3/12, mbtmp4.3/13, ML4.6/1, MS3.6/1, Error ellipse: s-maj=54.9km s-min=15.4km az=58.0*
*NEIC **02** 06:38:59.7±1.4, 2.2S±0.1×100.4E±0.1, h41km±8km, mb4.4/17, Error ellipse: s-maj=19.2km s-min=14.8km az=52.0*
*DJA **02** 06:39:03.1±0.4, 2°S±4°×10°1E±°, h52km±8km, M4.1/13, mb3.7/2, mB5.5/1, MLv4.3/13, Mw(mB)4.9/1*
ISC 02 06:39:01.4±0.5, 2.24S±0.05×100.54E±0.04, h56km, n54, σ1s50/54, mb4.5/18, Southern Sumatera

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PPSI	Pulau Pagai	0.74	225	P	Pn	06 39 17.9	+1.9
PPSI				S	Sn	06 39 29.6	+3.0
KRJI	Kerinci	0.94	81	P	Pn	06 39 20.2	+1.7
KRJI				S	Sn	06 39 34.1	+2.9
SISI	Saibi	1.71	302	P	Pn	06 39 30.5	+1.7
SISI				S	Sn	06 39 50.5	+0.9
BKNI	Bangkinang	2.60	11		Pn	06 39 39.9	-1.1
BKNI	Bangkinang	2.60	11	P	Pn	06 39 44.9	+3.9
RGRI	Rengat	2.60	44	P	Pn	06 39 43.6	+2.6
MDSI	Maura Dua	4.26	122	P	Pn	06 40 00.4	-3.5
DSRI	Dabo	4.40	67	P	Pn	06 40 07.2	+1.5
LWLI	Liwa	4.47	128	P	Pn	06 40 07.5	+0.7
GSI	Gunungsitoli	4.60	320	Pn	Pn	06 40 04.5	-3.9
GSI	Gunungsitoli	4.60	320	P	Pn	06 40 10.8	+2.4
TPRI	Tanjung Pinang	5.07	52	P	Pn	06 40 16.1	+1.2
KASI	Kota Agung	5.12	130	P	Pn	06 40 16.6	+1.0
KCSI	Kotacane, Aceh	6.36	334	P	Pn	06 40 36.0	+3.5
KAPI	Kappang	19.37	99	P	P	06 43 23.1	+0.3
	1.9nm,0.3s,baz=253,slow=9.1,SNR=4.9						
KAPI				LR	LR	06 50 46.5	
	comp=Z,160nm,18.9s,baz=266,slow=37						
	5.8nm,0.4s						
KAPI	Kappang	19.37	99	P	P	06 43 23.0	+0.3
MYLDM	Lahad Datu	19.40	68	P	P	06 43 23.4	+0.4
TOLI2	Tolitoli	20.51	81	P	P	06 43 35.6	+0.4
TOLI2				IAmb	IAmb	06 43 36.4	
	comp=Z,16nm,0.7s						
CMAR	Chiang Mai Arr	20.63	356	P	P	06 43 35.5	-0.8
	comp=Z,1.1nm,0.3s,baz=184,slow=10,SNR=1.7						
	comp=Z,1.1nm,0.3s						
H08S2	Diego Garcia H	28.44	258	T	T	07 13 54.2	
	baz=81,slow=76,SNR=60						
H08S3	Diego Garcia H	28.45	258	T	T	07 13 55.1	
	baz=81,slow=76,SNR=87						
H08S1	Diego Carcia H	28.46	258	T	T	07 13 56.0	
	baz=81,slow=76,SNR=42						
WB0	Warramunga Arr	37.39	120	P	P	06 46 08.3	-0.9
WB0				IAmb	IAmb	06 46 08.7	
	comp=Z,7.7nm,1.2s						
WRA	Warramunga Arr	37.41	121	P	P	06 46 08.3	-1.1
	comp=Z,2.2nm,0.4s,baz=301,slow=9.6,SNR=79						
WRA				PcP	PcP	06 48 27.3	0.0
	comp=Z,0.3nm,0.5s,baz=316,slow=2.5,SNR=2.2						
	comp=Z,2.2nm,0.4s						
WRA	Warramunga Arr	37.41	121	P	P	06 46 08.3	-1.1
WRAB	Tennant Creek	37.41	120	P	P	06 46 08.6	-0.8
WRAB				IAmb	IAmb	06 46 09.5	
	comp=Z,6.7nm,0.8s						
WB2	Warramunga Arr	37.42	121	P	P	06 46 08.4	-1.0
WR0	Warramunga Arr	37.59	120	P	P	06 46 10.0	-0.9
WR0				IAmb	IAmb	06 46 10.9	
	comp=Z,5.4nm,0.8s						
AS31	Alice Springs	38.68	126	P	P	06 46 20.0	-0.1
AS31				IAmb	IAmb	06 46 20.8	
	comp=Z,2.2nm,0.5s						
ASAR	Alice Springs	38.68	126	P	P	06 46 19.8	-0.3
	comp=Z,5.0nm,0.6s,baz=304,slow=8.0,SNR=68						
	comp=Z,5.0nm,0.6s						
ASAR	Alice Springs	38.68	126	P	P	06 46 20.0	0.0
BBOO	Buckleboo	45.10	136	P	P	06 47 12.4	0.0
BBOO				IAmb	IAmb	06 47 36.5	
	comp=Z,5.6nm,1.1s						
PMG	Port Moresby	46.88	101	P	P	06 47 26.8	+0.1
KSAR	Wonju Array Be	46.92	30	P	P	06 47 26.8	+0.3
KS19	Wonju Array Si	46.96	30	P	P	06 47 27.0	+0.1
STKA	Stephens Creek	48.59	132	P	P	06 47 39.9	+0.2
	comp=Z,1.7nm,0.3s,baz=310,slow=8.3,SNR=5.4						
	comp=Z,1.7nm,0.3s						
SONM	Songino Array	50.13	5	P	P	06 47 51.3	+0.1
	comp=Z,0.9nm,0.4s,baz=186,slow=11,SNR=6.6						
	comp=Z,0.9nm,0.4s						
MK31	Makanchi Array	51.40	344	P	P	06 48 00.1	-0.6
MKAR	Makanchi Array	51.40	344	P	P	06 48 00.7	0.0
	comp=Z,1.5nm,0.5s,baz=153,slow=8.5,SNR=36						
	comp=Z,1.5nm,0.5s						
MKAR	Makanchi Array	51.40	344	P	P	06 48 00.1	-0.6
USRK	Ussuriysk Ar.	54.12	28	P	P	06 48 20.1	-0.5
	comp=Z,3.6nm,0.5s,baz=240,slow=7.1,SNR=6.3						
	comp=Z,3.6nm,0.5s						
USRK	Ussuriysk Ar.	54.12	28	P	P	06 48 20.0	-0.7
KURBB	Kurchatov Arra	55.93	343	P	P	06 48 33.6	0.0
	comp=Z,0.6nm,0.2s,baz=165,slow=7.2,SNR=4.2						
	comp=Z,0.6nm,0.2s						
ZAA0	Zalesovo Array	57.50	349	P	P	06 48 44.5	-0.2
ZAA0				IAmb	IAmb	06 48 45.0	
	comp=Z,4.7nm,0.8s						
ZALV	Zalesovo Beam	57.50	349	P	P	06 48 44.2	-0.5
	comp=Z,3.5nm,0.5s,baz=181,slow=5.6,SNR=12						
	comp=Z,3.5nm,0.5s						
ZALV	Zalesovo Beam	57.50	349	P	P	06 48 44.4	-0.3
KLR	Kul'dur	57.93	24	P	P	06 48 47.0	-0.9
	comp=Z,0.9nm,0.5s,baz=162,slow=22,SNR=4.1						
	comp=Z,0.9nm,0.5s						
ABKAR	Akbulak array	62.11	331	P	P	06 49 16.1	-0.4
ABKAR				IAmb	IAmb	06 49 16.6	
	comp=Z,1.5nm,0.7s						
SEY	Seymchan	75.65	22	P	P	06 50 39.7	-0.6
	comp=Z,1.7nm,0.6s,baz=197,slow=19,SNR=5.1						
	comp=Z,1.7nm,0.6s						
TIXI	Tiksi	76.01	9	P	P	06 50 40.6	-1.6
	comp=Z,3.3nm,0.5s,baz=298,slow=7.5,SNR=7.5						
	comp=Z,3.3nm,0.5s						
TIXI	Tiksi	76.01	9	P	P	06 50 40.9	-1.3
TIXI				IAmb	IAmb	06 50 42.0	
	comp=Z,3.1nm,0.6s						
BKZ	Black Stump Fm	77.71	129	P	P	06 50 52.8	+0.2
TXAR	Lajitas Array	144.56	38	PKP	PKPbc	06 58 31.4	+0.2
	comp=Z,1.7nm,0.7s,baz=282,slow=1.0,SNR=27						
TXAR	Lajitas Array	144.56	38		PKPab	06 58 30.8	-0.2

*JMA **02** 06:52:54.8±0.6, 23°N±3°×12°3E±°, h52km, MV2.6/10, NEAR ISHIGAKIJIMA ISLAND*
*TAP **02** 06:52:56.7, 23.02N×122.52E, h79km±1km, ML2.9, D*
ISC 02 06:52:54.0±1.7, 23.01N±0.06×122.69E±0.03, h24km±17km, n32, σ1s06/50, Taiwan region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LDUT	Ludao	1.18	254	P	Pb	06 53 15.9	+0.3
	baz=251						
LDUT				eS	Sn	06 53 29.2	-1.0
	baz=251						
HGSD	Ruisui	1.26	293	eP	Pn	06 53 16.4	+0.3
	baz=291						
HGSD				eS	Sn	06 53 30.8	-1.6
	baz=291						
EDH	Donghe	1.28	269	eP	Pb	06 53 17.4	-0.1
	baz=268						
EDH				S	Sn	06 53 31.9	-1.0
	baz=268						
FULB	Fuli	1.30	279	eP	Pb	06 53 17.5	-0.3
	baz=283						
FULB				S	Sn	06 53 32.2	-1.2
	baz=283						
EYUL	Yuli	1.31	285	eP	Pb	06 53 17.9	0.0
	baz=284						
YULB	Yu-li	1.34	287	eP	Pb	06 53 17.9	-0.5
	baz=287						
YULB				eS	Sn	06 53 34.9	+0.5
	baz=287						
JYNG	Yonagunijimaku	1.45	9	eP	Pn	06 53 19.9	+1.1
JYNG				eS	Sn	06 53 37.5	+0.4
HATJ	Hateruma jima	1.46	44	P	Pn	06 53 19.4	+0.5
HATJ				S	Sn	06 53 36.1	-1.1
TWD	Chiawan	1.47	317	S	Sn	06 53 36.2	-1.1
	baz=321						
YOJ	Yonaguni jima	1.48	11	eP	Pb	06 53 21.2	+0.5
	baz=10.0						
YOJ	Yonaguni jima	1.48	11	P	Pb	06 53 20.3	-0.5
YOJ				S	Sn	06 53 38.2	+0.6
VWDT	VWDT	1.61	298	eP	Pb	06 53 22.3	-0.6
	baz=305						
VWDT				eS	Sn	06 53 41.1	+0.2
	baz=305						
IRIF	Iriomote-Funau	1.63	36	P	Pn	06 53 21.7	+0.6
IRIF				S	Sn	06 53 40.9	-0.4
ETLH	Xiulin Townshi	1.63	317	eP	Pn	06 53 22.2	+0.9
	baz=321						
ETLH				eS	Sn	06 53 40.6	-1.0
	baz=321						
ENA	Nanau	1.66	328	eP	Pb	06 53 23.2	-0.7
	baz=327						
OWD	Renai	1.68	304	eP	Pn	06 53 23.2	+1.1
	baz=307						
OWD				S	Sn	06 53 41.9	-1.0
	baz=307						
JKRS	Kuro-shima	1.72	44	P	Pn	06 53 23.3	+0.9
JKRS				S	Sn	06 53 42.6	-1.1
WHF	Hehuan Shan	1.73	311	eP	Pn	06 53 23.8	+0.8
	baz=314						
CHGB	Renai	1.74	307	eP	Pb	06 53 24.4	-1.1
	baz=314						
WUSB	Renai	1.75	304	eP	Pb	06 53 24.4	-1.1
	baz=309						
TWC	Suao	1.77	334	eP	Pb	06 53 25.0	-0.8
	baz=345						
FUSS	Fushou	1.81	313	eP	Pn	06 53 25.1	+1.1
	baz=320						
NDS	Dongshan	1.85	331	eP	Pn	06 53 25.9	+1.6
	baz=341						
NNSB	Datong	1.85	320	eP	Pn	06 53 25.8	+1.4
	baz=316						
NNSB				S	Sn	06 53 46.5	-0.6
	baz=316						
LATG	Datong	1.86	325	eP	Pn	06 53 25.9	+1.5
	baz=328						
LATG				eS	Sn	06 53 46.4	-0.8
	baz=328						
JIJ	Ishigaki jima	1.89	44	P	Pn	06 53 25.6	+0.8
JIJ				S	Sn	06 53 46.3	-1.6
FUSB	Fushanzhiwuyua	2.02	330	eP	Pn	06 53 28.4	+1.8
	baz=333						
YHNB	Yeheng	2.05	324	eP	Pn	06 53 28.9	+1.9
	baz=327						
NWLT	Wulai	2.07	328	eP	Pb	06 53 29.8	-1.1
	baz=332						
TIPB	Shuangxi	2.11	338	eP	Pn	06 53 29.7	+1.8
	baz=350						
JISG	Ishigakijimahi	2.16	43	eP	Pn	06 53 29.3	+0.8
JISG				S	Sn	06 53 53.3	-1.2
JTJ	Tarama	2.45	48	P	Pn	06 53 33.9	+1.3
JTJ				S	Sn	06 54 01.1	-0.7

ATH 02 06:56:09.7, 37.54N×23.60E, h12km±2km, ML1.9/5, Error ellipse: s-maj=2.1km s-min=0.7km az=313.0, Southern Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YDRA	Hydra	0.22	210	P	Pg	06 56 14.5	+0.1
YDRA				S	Sg	06 56 18.2	+0.6
VLY	Voula,Athens	0.34	26	P	Pg	06 56 16.2	-0.4
VLY				S	Sg	06 56 21.9	+0.6
VLY				AML	AML	06 56 24.6	
	comp=N,267µm,0.3s						
VLY				AML	AML	06 56 27.1	
	comp=E,380µm,0.3s						
EPID	Epidavros	0.39	281	P	Pg	06 56 16.9	-0.5
EPID				S	Sg	06 56 23.1	+0.4
KRND	KRANIDI	0.39	246	P	Pg	06 56 17.0	-0.5
KRND				S	Sg	06 56 23.2	+0.4
KRND				AML	AML	06 56 23.6	
	comp=E,548µm,0.3s						
KRND				AML	AML	06 56 25.5	
	comp=N,676µm,0.3s						
ATHU	Athens Univers	0.45	19	P	Pg	06 56 17.9	-0.7
PTL	Penteli	0.55	22	P	Pg	06 56 20.3	-0.1
DION	Dionisos Attik	0.59	26	P	Pg	06 56 20.9	-0.4
LTK	Loutraki	0.69	314	P	Pg	06 56 22.8	-0.4
LTK				S	Sg	06 56 32.4	+0.1
VIL2	Platees	0.72	338	P	Pg	06 56 21.9	-1.7
VIL2				S	Sg	06 56 31.7	-1.4
VIL2				AML	AML	06 56 33.6	
	comp=N,347µm,0.2s						
VIL2				AML	AML	06 56 34.5	
	comp=E,353µm,0.4s						
KARY	Karystos	0.82	53	P	Pg	06 56 25.4	-0.1
KARY				S	Sg	06 56 36.5	+0.2
VLI	Veliai	0.98	213	P	Pg	06 56 27.7	-0.9
VLI				S	Sb	06 56 42.2	+0.7
VLI				AML	AML	06 56 45.0	
	comp=E,107µm,0.3s						
VLI				AML	AML	06 56 45.4	
	comp=N,167µm,0.4s						
KYMI	Kymi, Euboea I	1.16	20	P	Pb	06 56 31.1	-0.5
KYMI				S	Sg	06 56 46.9	-0.2
KYMI				AML	AML	06 56 51.7	
	comp=N,98µm,0.6s						
KYMI				AML	AML	06 56 51.9	
	comp=E,113µm,0.4s						
KLV	Kalavryta, Ach	1.25	294	P	Pn	06 56 33.1	0.0
KTHA	Kythira Island	1.35	199	P	Pn	06 56 34.4	0.0
KTHA				S	Sb	06 56 51.4	-0.9

BUC 02 06:57:53.8±0.5, 45.08N×23.41E, h3km, ml1.1/4, 18C-6D, Error ellipse: s-maj=3.5km s-min=2.1km az=126.0, Romania

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GZR	Gura Zlata	0.55	305	⇑P	Pg	06 58 03.9	-0.4
GZR				⇑S	Sg	06 58 12.2	+0.9
GZR	Gura Zlata	0.55	305	⇑P	Pg	06 58 03.9	-0.4
GZR				⇑S	Sg	06 58 12.2	+0.9
HERR	Herculane	0.73	254	⇑P	Pg	06 58 07.9	+0.1
HERR				⇑S	Sg	06 58 18.5	+1.1
HERR	Herculane	0.73	254	⇑P	Pg	06 58 07.9	+0.1
HERR				⇑S	Sg	06 58 18.5	+1.1
MDVR	Moldovita	1.24	257	⇑P	Pg	06 58 17.3	-0.2
MDVR				⇑S	Sb	06 58 34.8	+0.4
MDVR	Moldovita	1.24	257	⇑P	Pg	06 58 17.3	-0.2
MDVR				⇑S	Sb	06 58 34.8	+0.4
BZS	Buzias	1.37	294	⇓P	Pn	06 58 19.7	-0.1
BZS				⇑S	Sb	06 58 38.0	0.0
BZS	Buzias	1.37	294	⇓P	Pn	06 58 19.7	-0.1
BZS				⇑S	Sb	06 58 38.0	0.0
SIRR	Siria	1.71	315	⇑P	Pn	06 58 24.7	+0.3
SIRR				⇓S	Sg	06 58 48.2	-0.4
SIRR	Siria	1.71	315	⇑P	Pn	06 58 24.7	+0.3
SIRR				⇓S	Sg	06 58 48.2	-0.4
DRGR		1.78	344	⇑P	Pn	06 58 25.1	-0.4
DRGR				⇓S	Sb	06 58 49.7	0.0
DRGR		1.78	344	⇑P	Pn	06 58 25.1	-0.4
DRGR				⇓S	Sb	06 58 49.7	0.0

IDC 02 06:58:17.5±3.4, 54.26N×87.46E, h0km, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=29.8km s-min=19.8km az=38.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.59	260	i		07 07 50.0	
	baz=79,slow=326,SNR=2.6						
ZALV	Zalesovo Beam	1.59	260	Pg	Pn	06 58 45.7	-1.1
	2.5nm,0.3s,baz=74,slow=16,SNR=18						
ZALV				Lg	Lg	06 59 07.2	
	2.7nm,0.3s,baz=81,slow=28,SNR=10						
KURBB	Kurchatov Arra	6.56	240	Pn	Pn	06 59 55.8	+0.6
	0.1nm,0.3s,baz=54,slow=13,SNR=4.5						
KURBB				Lg	Lg	07 01 49.7	
	baz=59,slow=30,SNR=2.7						
	0.4nm,0.3s						
MKAR	Makanchi Array	8.16	206	Pn	Pn	07 00 18.3	+1.2
	0.1nm,0.3s,baz=27,slow=14,SNR=4.0						
	0.1nm,0.3s						

*IDC **02** 06:59:51.3±9.8, 17.39N×105.24W, h0km, mb3.2/3, mbtmp3.2/5, ML3.2/2, MS3.5/21, Error ellipse: s-maj=199.2km s-min=79.9km az=124.0*
*NEIC **02** 06:59:56.1±1.7, 17.8N±0.1×105.72W±0.08, h10km±2km, mb4.4/70, Md4.2/26(MEX), Error ellipse: s-maj=17.6km s-min=13.0km az=189.0*
*MEX **02** 06:59:58.4±2.0, 18.14N×105.82W, h10km, MD4.2*
ISC 02 06:59:59.1±1.0, 17.97N±0.08×105.63W±0.08, h26km, n108, σ1s44/93, mb4.3/12, MS3.5/21, Off coast of Jalisco

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CJM	Chamela	1.62	20	i P	Pn	07 00 21.8	-4.2
CJM				eS	Sn	07 00 41.0	-5.0
CDAR	Ciudad de Arme	1.81	58	i P	Pn	07 00 28.1	-0.6
CDAR				i S	Sn	07 00 50.0	-0.9
R15V		1.96	52		Pn	07 00 28.9	-2.0
R15V		1.96	52	i P	Pn	07 00 28.9	-2.0
R15V				i S	Sn	07 00 51.9	-2.8
MMIG	Aquila	2.19	81		Pn	07 00 35.7	+1.8
MMIG					Sn	07 00 58.4	-1.9
MMIG	Aquila	2.19	81	i P	Pn	07 00 35.7	+1.8
MMIG				i S	Sn	07 00 58.4	-1.9
COIG	Colima	2.20	57	i P	Pn	07 00 33.3	-0.8
COIG				i S	Sn	07 01 00.1	-0.3
MNGA	Volcan de Coli	2.42	52	i P	Pn	07 00 36.7	-0.5
MNGA				i S	Sn	07 01 06.7	+0.6
EZ5V		2.44	52		Pn	07 00 37.7	+0.1
EZ5V		2.44	52	i P	Pn	07 00 37.7	+0.1
EZ5V				i S	Sn	07 01 06.4	-0.2
INCO	Volcan de Coli	2.46	51	i P	Pn	07 00 37.9	-0.2
INCO				i S	Sn	07 01 07.5	+0.1
JUBC	Volcan de Coli	2.48	51	i P	Pn	07 00 37.7	-0.5
JUBC				i S	Sn	07 01 06.7	-1.1
MOIG	Morelia	4.53	67	Pn	Pn	07 01 07.5	+1.1
H06E1	SOCORRO T-PHAS	5.09	280	T	T	07 05 59.9	
	SNR=379						
H06S1	SOCORRO T	5.12	279	T	T	07 06 05.0	
	SNR=49						
H06N1	SOCORRO T-PHAS	5.16	281	T	T	07 06 14.5	
	SNR=52						
ZAIG	Zacatecas	5.57	31	Pn	Pn	07 01 22.2	+1.6
TLIG	Tlapa	6.74	92	Pn	Pn	07 01 36.6	0.0
SRIG	Santa Rosalia	11.12	328	Pn	Pn	07 02 35.2	-1.4
TX31	Lajitas Ar. Si	11.45	9		Pn	07 02 43.4	+2.2
TX32	Lajitas Array	11.45	9		Pn	07 02 43.1	+2.0
TXAR	Lajitas Array	11.45	9	Pn	Pn	07 02 43.9	+2.7
	baz=185,slow=9.8,SNR=6.2						
TXAR				LR	LR	07 06 37.4	
	comp=Z,127nm,20.8s,baz=188,slow=34						
	0.4nm,0.8s						
TXAR	Lajitas Array	11.45	9	Pn	Pn	07 02 43.3	+2.1
833A	Chaparral WMA,	11.79	28	Pn	Pn	07 02 47.8	+2.2
735A	Kenedy	12.99	32	Pn	Pn	07 03 04.5	+2.5
JCT	Junction City	13.53	22	Pn	Pn	07 03 11.4	+1.8
MNTX	Cornudas Mount	13.67	1		Pn	07 03 12.6	+1.3
319A	Douglas	13.75	347		Pn	07 03 13.3	+0.7
121A	Cookes Peak, D	14.63	353	Pn	Pn	07 03 25.6	+1.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
435B	Jarrell	14.70	28	Pn	Pn	07 03 26.0	+0.6
TUC	Tucson	15.02	343	Pn	Pn	07 03 30.8	+1.0
214A	Organ Pipe Nat	15.36	336	Pn	Pn	07 03 33.9	-0.4
ABTX	Abilene, Hawle	15.55	19	Pn	Pn	07 03 37.7	+0.9
ABTX				IAmb	IAmb	07 04 08.4	
	comp=Z,19nm,1.3s						
WHTX	Lake Whitney,	15.79	26	Pn	Pn	07 03 40.3	+0.5
WHTX				IAmb	IAmb	07 03 42.6	
	comp=Z,66nm,2.0s						
MSTX	Muleshoe	16.14	9		Pn	07 03 45.2	+0.9
MSTX				IAmb	IAmb	07 03 51.5	
	comp=Z,78nm,1.8s						
113A	Mohawk Valley,	16.46	335		Pn	07 03 48.1	-0.2
237A	Washetta, Mont	16.55	31	Pn	Pn	07 03 49.7	+0.2
237A				IAmb	IAmb	07 03 56.3	
	comp=Z,16nm,0.9s						
ANMO	Albuquerque	16.92	358	P	P	07 03 57.2	+1.0
	comp=Z,0.1nm,0.3s,baz=144,slow=8.7,SNR=7.3						
ANMO				LR	LR	07 10 21.9	
	comp=Z,170nm,18.1s,baz=178,slow=36						
	comp=Z,0.3nm,0.3s						
ANMO	Albuquerque	16.92	358	P	Pn	07 03 55.1	+0.7
NATX	Nacogdoches	16.94	34	P	Pn	07 03 55.3	+0.9
NATX				IAmb	IAmb	07 03 59.3	
	comp=Z,72nm,1.6s						
Z35A	Perchaven, San	17.04	25	P	Pn	07 03 57.1	+1.4
Z35A				IAmb	IAmb	07 04 00.5	
	comp=Z,84nm,1.9s						
X16A	Lo Mia Camp, P	17.18	344		Pn	07 03 58.1	+0.5
AMTX	Amarillo	17.21	11		Pn	07 03 59.0	+1.2
AMTX				IAmb	IAmb	07 03 59.7	
	comp=Z,24nm,1.6s						
Y14A	Wickenburg	17.22	339	P	Pn	07 03 58.8	+0.8
WMOK	Wichita Mounta	17.78	19		Pn	07 04 05.5	+0.6
WMOK				IAmb	IAmb	07 04 09.6	
	comp=Z,37nm,1.9s						
X34A	Smith Ranch, M	17.96	21		Pn	07 04 08.3	+1.2
X34A				IAmb	IAmb	07 04 11.6	
	comp=Z,58nm,1.4s						
Z38A	Mt. Pleasant	17.98	30	P	Pn	07 04 08.2	+0.9
Z38A				IAmb	IAmb	07 04 12.4	
	comp=Z,56nm,1.8s						
WUAZ	Wupatki	18.21	345		P	07 04 10.0	-0.3
PFO	Pinyon Flats O	18.35	330	LR	LR	07 10 10.1	
	comp=Z,76nm,21.6s,baz=136,slow=32						
X37A	Clayton	18.91	27	P	P	07 04 19.1	+1.2
X37A				IAmb	IAmb	07 04 20.9	
	comp=Z,52nm,1.6s						
CNGN	Cerro Negro	19.05	104	P	P	07 04 18.1	-1.5
CNGN				IAmb	IAmb	07 05 09.9	
	comp=Z,59nm,1.5s						
U15A	North Rim	19.30	344	P	P	07 04 23.4	+0.9
W39A	Magazine	20.13	29	IAmb	IAmb	07 04 36.4	
	comp=Z,33nm,1.7s						
PV15	Paradox Valley	20.45	354	P	P	07 04 35.3	+0.4
PV15				IAmb	IAmb	07 04 44.3	
	comp=Z,33nm,1.7s						
T35A	Sooner Cattle	20.51	21	P	P	07 04 36.0	+0.6
ACON	Acoyapa	20.63	104	P	P	07 04 36.6	-0.2
ACON				IAmb	IAmb	07 05 16.5	
	comp=Z,12nm,1.1s						
CCUT	Cedar City	20.65	342	P	P	07 04 37.6	+0.4
MTPU	Mount Pierson	20.80	345	P	P	07 04 39.6	+0.7
MTPU				IAmb	IAmb	07 05 09.9	
	comp=Z,18nm,2.0s						
ORTG	Ortega, Santa	20.95	108	P	P	07 04 39.3	-1.1
HHAR	Hobbs	20.96	27	P	P	07 04 41.2	+0.9
HHAR				IAmb	IAmb	07 04 43.0	
	comp=Z,29nm,1.7s						
TPNV	Topopah Spring	21.09	336	P	P	07 04 42.0	+0.2
SMCO	Snowmass	21.16	357	P	P	07 04 42.5	-0.3
MSU	Marysvale	21.25	346	P	P	07 04 43.1	-0.5
R32A	Long Quarter,	21.25	15	P	P	07 04 43.5	+0.1
CBKS	Cedar Bluff	21.39	13	P	P	07 04 45.2	+0.3
CBKS				IAmb	IAmb	07 04 49.7	
	comp=Z,29nm,1.4s						
JTS	Las Juntas de	21.44	108	LR	LR	07 11 15.0	
	comp=Z,106nm,21.0s,baz=346,slow=33						
FCAR	Ozark Folk Cen	21.49	31	P	P	07 04 47.2	+1.3
FCAR				IAmb	IAmb	07 04 52.5	
	comp=Z,16nm,1.5s						
SRU	San Rafael Swe	21.49	350	P	P	07 04 46.6	+0.5
GRAC	Grapevine Rang	21.59	334	P	P	07 04 46.0	-1.0
GRAC				IAmb	IAmb	07 04 55.4	
	comp=Z,20nm,1.6s						
TMUT	Trail Mountain	21.80	348	P	P	07 04 49.5	0.0
TMUT				IAmb	IAmb	07 05 18.0	
	comp=Z,22nm,1.9s						
LCAR	Lake Charles	22.11	33	P	P	07 04 54.8	+2.2
O20A	White River Ci	22.20	355	P	P	07 04 54.0	+0.2
S39A	Bolivar	22.42	26	P	P	07 04 56.9	+1.0
S39A				IAmb	IAmb	07 05 02.9	
	comp=Z,25nm,1.6s						
LRAL	Lakeview Retre	22.48	45	P	P	07 04 59.8	+3.2
NVAR	Mina Array Bea	23.20	334	P	P	07 05 06.8	+2.5
	comp=Z,0.1nm,0.3s,baz=153,slow=12,SNR=2.3						
NVAR				LR	LR	07 13 02.0	
	comp=Z,139nm,20.9s,baz=108,slow=33						
	comp=Z,0.1nm,0.3s						
R40A	Maddies Statio	23.37	27	P	P	07 05 06.3	+0.6
R40A				IAmb	IAmb	07 05 25.8	
	comp=Z,22nm,1.8s						
CCM	Cathedral Cave	23.64	29	P	P	07 05 09.2	+0.8
Z51A	Franklin	23.88	46	P	P	07 05 12.3	+1.7
FVM	French Village	23.97	31	P	P	07 05 11.9	+0.4
P38A	Dawn	23.99	23	P	P	07 05 12.3	+0.7
P38A				IAmb	IAmb	07 05 22.0	
	comp=Z,30nm,1.9s						
TIGA	Tifton	24.04	52	P	P	07 05 13.5	+1.4
ELK	Elko	24.16	342	LR	LR	07 13 37.9	
	comp=Z,106nm,20.0s,baz=164,slow=33						
FPAL	Fort Paine	24.31	43	P	P	07 05 16.3	+1.6
W50A	Signal Mountai	24.91	42	P	P	07 05 21.9	+1.8
PDAR	Pinedale Array	24.94	353	P	P	07 05 23.8	+3.2
	comp=Z,0.5nm,0.8s,baz=191,slow=9.2,SNR=2.4						
PDAR				LR	LR	07 15 05.9	
	comp=Z,72nm,20.5s,baz=176,slow=36						
	comp=Z,0.5nm,0.8s						
N38A	Joes South For	25.12	23	P	P	07 05 22.7	+0.7
GOGA	Godfrey	25.12	48	P	P	07 05 23.4	+1.3
LOHW	Long Hollow	25.91	352	P	P	07 05 30.4	+1.1
LOHW				IAmb	IAmb	07 05 40.1	
	comp=Z,6.9nm,1.3s						
TKL	Tuckaleechee C	26.18	43	LR	LR	07 18 18.2	
	comp=Z,122nm,19.0s,baz=244,slow=42						
BG3	Lake Jocassee	26.36	46	P	P	07 05 35.0	+1.8
YBH	Yreka Blue Hor	27.83	332	LR	LR	07 16 22.9	
	comp=Z,103nm,20.2s,baz=151,slow=35						
NEW	Newport	31.64	345	LR	LR	07 18 41.7	
	comp=Z,93nm,18.8s,baz=170,slow=35						
ULM	Lac du Bonnet	33.14	11	LR	LR	07 20 09.8	
	comp=Z,86nm,20.6s,baz=202,slow=36						
SADO	Sadowa	34.71	34	LR	LR	07 22 12.1	
	comp=Z,144nm,18.0s,baz=234,slow=38						
ATAH	Atahualpa	36.68	131	LR	LR	07 18 58.7	
	comp=Z,161nm,19.7s,baz=317,slow=32						
SJG	San Juan	37.49	83	LR	LR	07 21 12.2	
	comp=Z,48nm,20.6s,baz=187,slow=34						
BBB	Bella Bella	38.45	338	LR	LR	07 22 45.4	
	comp=Z,59nm,18.5s,baz=138,slow=35						
NNA	Nana	41.15	134	LR	LR	07 21 03.4	
	comp=Z,113nm,20.8s,baz=306,slow=31						
TAOE	Nuku Hiva Isla	43.27	235	eLR	LR	07 18 52.6	
	comp=Z,175nm,26.2s						
SCHQ	Schefferville	47.21	30	LR	LR	07 29 05.2	
	comp=Z,80nm,19.9s,baz=2.5,slow=37						
LPAZ	La Paz	50.23	130	LR	LR	07 27 21.7	
	comp=Z,58nm,19.7s,baz=280,slow=33						
LPAZ	La Paz	50.23	130	P	P	07 08 50.9	-3.1
LPAZ				IAmb	IAmb	07 09 14.6	
	comp=Z,9.8nm,1.6s						
FRB	Frobisher Bay	52.24	20	LR	LR	07 30 32.3	
	comp=Z,81nm,19.9s,baz=198,slow=35						
LVC	Limon Verde	54.00	137	LR	LR	07 27 46.1	
	comp=Z,35nm,21.3s,baz=290,slow=31						
ILAR	Eielson Array	54.29	340	P	P	07 09 23.2	+0.4
	comp=Z,1.1nm,1.1s,baz=152,slow=6.0,SNR=5.6						
	comp=Z,1.1nm,1.1s						
SIV	San Ignacio	55.37	125	LR	LR	07 30 54.4	
	comp=Z,68nm,19.2s,baz=292,slow=34						
PPT2	Papeete2	55.84	233	eLR	LR	07 24 47.7	
	comp=Z,183nm,26.8s						
TBI	Tubuai	59.32	228	eLR	LR	07 26 24.4	
	comp=Z,172nm,27.2s						

IDC 02 07:13:35.3±3.2, 54°.26N×87°.40E, h0km, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=25.8km s-min=19.9km az=46.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
I46RU	ZALESOVO INFRA	1.55	260	i		07 22 40.0	
	baz=80,slow=324,SNR=5.8						
ZALV	Zalesovo Beam	1.55	260	Pg	Pn	07 14 02.8	-1.4
	2.5nm,0.3s,baz=80,slow=17,SNR=21						
ZALV				Lg	Lg	07 14 25.2	
	1.0nm,0.3s,baz=73,slow=30,SNR=3.9						
KURBB	Kurchatov Arra	6.53	240	Pn	Pn	07 15 13.2	+0.6
	0.1nm,0.3s,baz=54,slow=13,SNR=6.5						
KURBB				Sn	Sn	07 16 27.1	-0.6
	baz=45,slow=20,SNR=1.3						
KURBB				Lg	Lg	07 17 01.4	
	baz=55,slow=29,SNR=1.1						
	0.6nm,0.5s						
MKAR	Makanchi Array	8.15	206	Pn	Pn	07 15 35.9	+1.1
	0.1nm,0.3s,baz=27,slow=15,SNR=1.9						
MKAR				Lg	Lg	07 17 56.6	
	baz=15,slow=28,SNR=2.0						
	0.1nm,0.3s						

NNC 02 07:18:33.6±0.8, 49°.91N×78°.54E, h0km, mb3.5, mpv3.3, 16C-10D, Error ellipse: s-maj=17.2km s-min=3.9km az=85.0, Suspected Mining explosion., Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
KUR07	Kurchatov Arra	0.67	359	⇑P	Pg	07 18 47.1	+0.6
KUR07				⇑S	Sg	07 18 56.3	+1.0
KUR06	Kurchatov Arra	0.69	359	⇑P	Pg	07 18 47.6	+0.7
KUR06				⇓S	Sg	07 18 56.5	+0.6
KUR14	Kurchatov Arra	0.71	3	⇓P	Pg	07 18 47.6	+0.5
KUR14				⇑S	Sg	07 18 56.5	+0.1
KUR15	Kurchatov Arra	0.71	1	⇑P	Pg	07 18 48.0	+0.7
KUR15				⇑S	Sg	07 18 57.3	+0.9
KURBB	Kurchatov Arra	0.71	359	⇑P	Pb	07 18 48.2	-0.7
	12nm,0.3s						
KURBB				⇓S	Sg	07 18 57.6	+1.0
	82nm,0.6s						
KUR16	Kurchatov Arra	0.72	358	⇓P	Pb	07 18 48.4	-0.7
KUR16				⇓S	Sg	07 18 57.6	+0.9
KUR17	Kurchatov Arra	0.72	356	⇑P	Pb	07 18 48.7	-0.4
KUR17				⇑S	Sg	07 18 58.2	+1.3
KUR05	Kurchatov Arra	0.73	360	⇑P	Pg	07 18 48.4	+0.7
KUR05				⇑S	Sg	07 18 57.5	+0.3
KUR04	Kurchatov Arra	0.75	0	⇑P	Pb	07 18 48.8	-0.8
KUR04				⇑S	Sg	07 18 58.2	+0.4
KURK	Kurchatov	0.81	3	⇑P	Pg	07 18 49.5	+0.4
	5.3nm,0.3s						
KURK				⇓S	Sg	07 18 59.8	+0.2
	60nm,0.7s						
MAKZ	Makanchi	3.86	142	⇓Pg	Pg	07 19 45.5	-2.0
	1.4nm,0.5s						
MAKZ				⇑Lg	Lg	07 20 36.4	
	7.9nm,0.8s						
MK31	Makanchi Array	4.00	140	⇑Pn	Pn	07 19 40.1	+4.0
	0.1nm,0.1s,baz=173,slow=18,SNR=27						
MK31				Pg	Pg	07 19 48.9	-1.3
	0.2nm,0.2s,baz=321,slow=14,SNR=13						
MK31				⇓Lg	Lg	07 20 42.7	
	9.6nm,0.6s,baz=340,slow=26,SNR=16						
OTUK	Ortayu	4.41	250	⇓Pg	Pg	07 19 56.9	-1.1
	0.4nm,0.2s						
OTUK				⇓Lg	Lg	07 20 56.3	
	3.9nm,0.6s						
KAPS	Kapalarasan	4.66	173	Pg	Pb	07 19 52.5	-3.7
	0.6nm,0.3s						
KAPS				Lg	Lg	07 21 05.4	
	9.2nm,0.6s						
ZSN	Zaisan	4.86	118	Pg	Pb	07 19 56.6	-3.0
	3.6nm,0.2s						
ZSN				Lg	Lg	07 21 11.8	
	8.2nm,0.6s						
DJR	Jarkent	5.64	171	Pg	Pb	07 20 12.5	-0.5
	0.6nm,0.1s						
DJR				Lg	Lg	07 21 38.6	
	5.2nm,0.5s						
BLB	Baldybastay	5.82	180	Pg	Pb	07 20 14.7	-1.3
	0.6nm,0.1s						
BLB				Lg	Lg	07 21 42.5	
	8.0nm,0.8s						
KTBS	Karatobe	6.33	192	Pg	Pb	07 20 27.4	+2.7
	1.8nm,0.7s						
KPKS	Kokpek	6.45	179	Pg	Pb	07 20 26.4	-0.3
	1.4nm,0.2s						
KPKS				Lg	Lg	07 22 03.7	
KTMS	Ketmen	6.58	168	Pg	Pb	07 20 31.4	+2.4
	0.5nm,0.1s						
KTMS				Lg	Lg	07 22 10.1	
PDGK	Podgornoye	6.62	174	Pg	Pb	07 20 29.7	+0.1
	0.4nm,0.3s						
PDGK				Lg	Lg	07 22 08.0	
	2.1nm,1.0s						
UZB	Uzynbulak	6.77	177	Pg	Pb	07 20 33.9	+1.6
	3.0nm,0.3s						
UZB				Lg	Lg	07 22 16.2	
SHLS	Shalkode	6.79	174	Pg	Pb	07 20 34.5	+2.0
	3.1nm,0.2s						
SHLS				Lg	Lg	07 22 16.2	
	3.4nm,0.5s						
SATY	Saty	6.85	181	Pg	Pb	07 20 32.2	-1.5
	0.6nm,0.1s						
SATY				Lg	Lg	07 22 12.4	
	3.7nm,0.1s						

MAN 02 07:22:50.7, 19°.16N×121°.47E, h19km, mb4.0, ML2.8, MS2.4, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
APYP	Conner	1.31	190	⇑iP	Pn	07 23 13.3	+0.2
APYP				iS		07 23 32.3	

IDC 02 07:27:40.7±1.7, 6°.68S×154°.11E, h0km, mb3.9/7, mbtmp4.0/9, ML3.0/2, MS3.5/1, Error ellipse: s-maj=46.6km s-min=23.8km az=117.0

ISC 02 07:27:44.4±1.2, 6°.32S±0°.09×153°.7E±0°.1, h10km, n10, σ1s.91/12, mb3.7/7, New Britain region

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
KRVT	Keravat (AS076	2.61	320	Pn	Pb	07 28 29.9	-1.4
	8.8nm,0.3s,baz=108,slow=20,SNR=1.7						
KRVT				Sn	Sb	07 29 03.4	0.0
	25nm,0.3s,baz=218,slow=22,SNR=8.7						
	40nm,0.4s						
PMG	Port Moresby	7.18	244	Pn	Pn	07 29 32.0	+2.4
	5.1nm,0.3s,baz=60,slow=9.0,SNR=9.5						
PMG				Sn	Sn	07 30 49.7	-1.5
	0.7nm,0.3s,baz=60,slow=14,SNR=0.9						
	28nm,0.5s						
WRA	Warramunga Arr	23.18	232	P	P	07 32 49.0	-2.5
	0.6nm,0.4s,baz=55,slow=9.8,SNR=13						
WRA				LR	LR	07 41 53.6	
	comp=Z,102nm,18.0s,baz=48,slow=37						
	0.6nm,0.4s						
ASAR	Alice Springs	25.70	226	P	P	07 33 13.1	-1.9
	0.9nm,0.6s,baz=60,slow=9.1,SNR=12						
	0.9nm,0.6s						
CMAR	Chiang Mai Arr	59.34	296	P	P	07 37 49.0	+1.8
	1.4nm,0.3s,baz=119,slow=4.5,SNR=5.2						
	1.4nm,0.3s						
SONM	Songino Array	68.08	328	P	P	07 38 46.6	+2.1
	0.8nm,0.7s,baz=141,slow=5.7,SNR=4.3						
	0.8nm,0.7s						
MKAR	Makanchi Array	82.06	319	P	P	07 40 06.3	+1.2
	0.2nm,0.5s,baz=116,slow=6.6,SNR=2.7						
	0.2nm,0.5s						
ILAR	Eielson Array	83.22	22	P	P	07 40 09.3	-1.4
	0.5nm,1.0s,baz=252,slow=4.1,SNR=2.8						
	0.5nm,1.0s						
KURBB	Kurchatov Arra	85.54	322	P	P	07 40 21.7	-1.1
	1.3nm,0.2s,baz=91,slow=5.1,SNR=1.7						
	1.3nm,0.2s						
TORD	Torodi Ar. Bea	151.62	286	PKPbc	PKPbc	07 47 39.6	-0.6
	1.8nm,0.7s,baz=75,slow=2.5,SNR=14						

IDC 02 07:41:31.6±2.8, 53°.75N×88°.02E, h0km, mbtmp3.5/2, ML3.4/2, Error ellipse: s-maj=23.8km s-min=15.5km az=53.0

NNC 02 07:41:33.5±2.1, 53°.63N×87°.96E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=16.8km s-min=10.0km az=63.0, Suspected Mining explosion.

ISC 02 07:41:31.6±3.3, 53°.8N±0°.1×88°.0E±0°.2, h0km, n9, σ0s.95/15, 7C-6D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
I46RU	ZALESOVO INFRA	1.88	275	i		07 54 20.0	
	0.4nm,0.9s,baz=93,slow=322,SNR=1.9						
ZAA0	Zalesovo Array	1.88	275	⇓Pn	Pb	07 42 05.9	-0.8
	2.5nm,0.5s						
ZAA0				⇓Sn	Sg	07 42 33.4	+1.5
	4.3nm,0.4s						
ZALV	Zalesovo Beam	1.88	275	Pg	Pn	07 42 05.2	+0.3
	7.2nm,0.3s,baz=91,slow=15,SNR=48						
ZALV				Lg	Lg	07 42 32.7	
	14nm,0.3s,baz=97,slow=24,SNR=20						
KURK	Kurchatov	6.53	245	⇑Pn	Pn	07 43 09.2	+0.3
	1.5nm,0.6s						
KURK				⇑Sn	Sn	07 44 24.2	+0.3
	1.7nm,0.6s						
KURK				⇑Lg	Lg	07 44 58.5	
	10nm,0.9s						
KURBB	Kurchatov Arra	6.63	245	Pn	Pn	07 43 10.8	+0.6
	0.6nm,0.3s,baz=63,slow=14,SNR=13						
KURBB				Sn	Sn	07 44 24.8	-1.6
	baz=62,slow=27						
KURBB				Lg	Lg	07 45 01.5	
	0.1nm,0.3s,baz=60,slow=31,SNR=9.7						
	3.2nm,0.3s						
KURBB	Kurchatov Arra	6.63	245	⇓Pn	Pn	07 43 10.4	+0.2
	3.9nm,0.3s						
KURBB				⇓Sn	Sn	07 44 25.8	-0.6
	5.7nm,0.6s						
KURBB				⇑Lg	Lg	07 45 00.9	
	15nm,0.7s						
MK31	Makanchi Array	7.92	210	Pn	Pn	07 43 28.9	+0.9
	0.6nm,0.5s,baz=31,slow=14,SNR=22						
MK31				⇑Sn	Sn	07 44 57.4	-0.8
	0.6nm,0.5s,baz=38,slow=28,SNR=5.6						
MK31				⇓Lg	Lg	07 45 38.7	
	1.2nm,0.6s,baz=21,slow=29,SNR=4.2						
MKAR	Makanchi Array	7.92	210	Pn	Pn	07 43 28.5	+0.6
	0.5nm,0.3s,baz=32,slow=14,SNR=24						
MKAR				Sn	Sn	07 44 57.2	-0.9
	0.4nm,0.3s,baz=25,slow=21,SNR=6.7						
MKAR				Lg	Lg	07 45 40.2	
	0.1nm,0.3s,baz=32,slow=27,SNR=1.5						
	0.9nm,0.4s						
MAKZ	Makanchi	8.00	211	⇓Pn	Pn	07 43 30.1	+1.1
	0.5nm,0.5s						
MAKZ				⇑Sn	Sn	07 44 59.5	-0.7
	0.9nm,0.5s						
MAKZ				⇑Lg	Lg	07 45 39.7	
	2.8nm,0.8s						

IDC 02 07:45:52.9±3.3, 53°.60N×87°.98E, h0km, mbtmp2.9/2, ML2.4/2, Error ellipse: s-maj=26.4km s-min=18.2km az=54.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
I46RU	ZALESOVO INFRA	1.91	282	i		07 58 06.5	
	0.1nm,0.8s,baz=96,slow=318,SNR=9.3						
ZALV	Zalesovo Beam	1.91	282	Pg	Pb	07 46 27.7	-0.9
	0.9nm,0.3s,baz=102,slow=13,SNR=5.5						
ZALV				Lg	Lg	07 46 53.5	
	2.5nm,0.3s,baz=101,slow=26,SNR=8.4						
KURBB	Kurchatov Arra	6.54	247	Pn	Pn	07 47 30.7	+0.5
	0.1nm,0.3s,baz=62,slow=14,SNR=1.6						
KURBB				Sn	Sn	07 48 45.5	+0.1
	baz=63,slow=23,SNR=1.9						
KURBB				Lg	Lg	07 49 19.1	
	baz=63,slow=32,SNR=3.4						
	0.5nm,0.2s						
MKAR	Makanchi Array	7.72	210	Pn	Pn	07 47 47.9	+1.3
	0.1nm,0.3s,baz=28,slow=14,SNR=2.3						
MKAR				Lg	Lg	07 49 55.3	
	baz=25,slow=31,SNR=1.9						
	0.2nm,0.4s						

INET 02 07:48:13.9±0.3, 11°.16N×86°.97W, h22km, MW3.5, 1C, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
COPN	Copaltepe	1.08	20	eP	Pn	07 48 32.7	-1.0
TISN	Laguna Tiscapa	1.19	35	eP	Pn	07 48 34.1	-1.2
MGAN	Managua	1.21	36	eP	Pn	07 48 34.4	-1.1
APYN	Apoyeque	1.23	30	eP	Pn	07 48 34.6	-1.2
WILN	Americas 2	1.26	38	eP	Pn	07 48 34.8	-1.3
CNGN	Cerro Negro	1.36	11	eP	Pn	07 48 36.2	-1.4
CONN	Concepcion	1.38	73	eP	Pn	07 48 36.3	-1.5
TEL3	Telica 3	1.41	5	eP	Pn	07 48 37.4	-0.8
HZTE	Horizontes, Gu	1.42	108	eP	Pn	07 48 37.3	-1.1
HZTE	Horizontes, Gu	1.42	108	eP	Pn	07 48 37.3	-1.2
CRIN	San Cristobal	1.53	357	eP	Pn	07 48 38.9	-1.1
GBS3	Finca Las Img	1.54	104	eP	Pn	07 48 38.6	-1.4
LAPC	Finca la Perla	1.56	104	eP	Pn	07 48 39.0	-1.3
BUEV	Buena Vista	1.58	103	eP	Pn	07 48 39.7	-0.9
GB1A	Borinquen Arri	1.58	102	eP	Pn	07 48 39.9	-0.9
BUAI	Buenos Aires	1.63	100	eP	Pn	07 48 40.6	-0.8
GPS2	Hotel Rincn d	1.64	104	eP	Pn	07 48 40.2	-1.3
SAJU	San Juanillo,	1.65	131	⇑eP	Pn	07 48 39.2	-2.3
GUAI	GUAI	1.69	121	eP	Pn	07 48 41.3	-0.8
LIM1	Limonal	1.75	105	eP	Pn	07 48 42.0	-1.0
GUAB	Guayabo de Bag	1.77	105	eP	Pb	07 48 44.5	-1.2
COLC	Colonia	1.80	106	eP	Pn	07 48 44.9	+1.2
HORNC	Hornillas	1.82	104	eP	Pn	07 48 43.8	-0.2
CUI	Cuipilapa	1.84	106	eP	Pn	07 48 43.6	-0.7
VMAR	Armenia, Volca	1.85	101	eP	Pn	07 48 43.9	-0.4
ACAL	Aguas Claras	1.97	105	eP	Pn	07 48 45.4	-0.7
MATN	Matagalpa	2.04	30	eP	Pn	07 48 44.6	-2.4
CNCH	Conchagua	2.27	338	eP	Pn	07 48 49.2	-0.9
LAFE	Finca La Fe, P	2.43	123	eP	Pn	07 48 50.7	-1.6

FUNV 02 07:52:05.8, 10°.51N×62°.63W, h22km, MW3.0

TRN 02 07:52:05.1, 10°.24N×62°.67W, h47km, MD3.3

ISC 02 07:52:04.0±1.7, 10°.23N±0°.06×62°.75W±0°.06, h34km±3km, n8, σ1s.70/15, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
CRUV	Carupano	0.65	313	eP	Pb	07 52 16.1	-1.0
CRUV				eS	Sb	07 52 25.1	-0.9
TRN	Trinidad (W)	1.39	72	eP	Pn	07 52 26.9	0.0
TRN				eS	Sn	07 52 43.6	-0.4
GRFF	Grenada Fort F	2.06	29	eP	Pn	07 52 37.1	+0.9
GRFF				eS	Sn	07 52 59.9	-0.9
GRGR	Grenville	2.17	29	eP	Pn	07 52 39.1	+1.3
GRGR				eS	Sn	07 53 03.8	+0.2
PRGV	PARIAGUAN	2.38	232	eP	Pb	07 52 46.6	+0.5
PRGV				eS	Sb	07 53 16.8	+1.8
GCMP	Grenada, Carri	2.59	30	eP	Pn	07 52 44.2	+0.7
GCMP				eS	Sn	07 53 13.0	-0.8
BIRV	Birongo	3.47	274	eP	Pn	07 52 59.3	+3.6
BIRV				eS	Sn	07 53 38.2	+2.6
CACV	CAICARA DEL OR	4.59	235	eP	Pn	07 53 10.9	-0.1
CACV				eS	Sn	07 53 59.2	-3.9

IDC 02 08:02:39.5±3.0, 53°.52N×87°.72E, h0km, mbtmp2.9/2, ML2.5/2, Error ellipse: s-maj=24.5km s-min=14.9km az=65.0

NNC 02 08:02:39.1±3.3, 53°.46N×87°.84E, h0km, mb2.9, mpv2.6, Error ellipse: s-maj=24.3km s-min=14.2km az=68.0, Suspected Mining explosion.

ISC 02 08:02:39.0±3.2, 53°.6N±0°.1×87°.8E±0°.2, h0km, n8, σ1s.37/12, 6C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
I46RU	ZALESOVO INFRA	1.79	283	i		08 14 20.0	
	0.1nm,1.0s,baz=98,slow=324,SNR=1.4						
ZAA0	Zalesovo Array	1.79	283	P	Pb	08 03 11.9	-0.8
	0.2nm,0.2s						
ZAA0				⇓S	Sg	08 03 37.1	+0.6
	1.3nm,0.5s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ZALV	Zalesovo Beam	1.79	283	Pg	Pn	08 03 11.4	+0.2
	1.4nm,0.3s,baz=104,slow=14,SNR=12						
ZALV				Lg	Lg	08 03 36.0	
	3.3nm,0.3s,baz=107,slow=28,SNR=15						
KURK	Kurchatov	6.32	247	⇑Pn	Pn	08 04 14.9	+1.5
	0.4nm,0.5s						
KURK				⇑Sn	Sn	08 05 28.1	+1.9
	1.0nm,0.5s						
KURK				⇑Lg	Lg	08 06 04.9	
	2.6nm,0.8s						
KURBB	Kurchatov Arra	6.42	246	Pn	Pn	08 04 15.3	+0.7
	0.1nm,0.3s,baz=62,slow=14,SNR=6.7						
KURBB				Sn	Sn	08 05 26.4	-2.2
	baz=66,slow=25,SNR=1.5						
KURBB				Lg	Lg	08 06 00.3	
	baz=63,slow=31,SNR=1.3						
	0.9nm,0.5s						
KURBB	Kurchatov Arra	6.42	246	⇑Pn	Pn	08 04 15.7	+1.0
	0.7nm,0.3s						
KURBB				⇓Sn	Sn	08 05 27.6	-1.0
	3.5nm,0.6s						
KURBB				⇑Lg	Lg	08 06 00.5	
	4.8nm,0.7s						
MK31	Makanchi Array	7.65	210	⇑Sn	Sn	08 05 58.3	-0.6
	0.3nm,0.5s,baz=29,slow=26						
MK31				⇓Lg	Lg	08 06 37.2	
	0.7nm,0.7s,baz=28,slow=31,SNR=2.7						
MKAR	Makanchi Array	7.65	210	Pn	Pn	08 04 32.4	+0.8
	0.1nm,0.3s,baz=26,slow=12,SNR=2.6						
MKAR				Sn	Sn	08 05 57.6	-1.3
	baz=29,slow=24,SNR=2.1						
MKAR				Lg	Lg	08 06 39.9	
	0.1nm,0.3s,baz=29,slow=30,SNR=2.6						
	0.3nm,0.5s						

KRSZO 02 08:04:46.9, 46°.12N×18°.02E, h0km, Explosion. locality : Bkksd I. GT info : GT2 explosion, Hungary

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KOVH	Kovagotottos	0.06	121	Pg	Pg	08 04 49.0	+1.0
KOVH				Lg	Lg	08 04 50.2	
KOVH	Kovagotottos	0.06	121	P	Pg	08 04 49.0	+1.0
KOVH				S	Sg	08 04 50.2	+1.3
MORH	Mrgy, Hungar	0.44	77	Pg	Pg	08 04 56.3	+0.9
MORH				Lg	Lg	08 05 03.2	
MORH	Mrgy, Hungar	0.44	77	P	Pg	08 04 56.3	+0.9
MORH				S	Sb	08 05 03.2	-1.5

NEIC 02 08:11:31.8±0.2, 37°.23N±0°.01×97°.88W±0°.01, h3km±1km, Error ellipse: s-maj=1.7km s-min=1.2km az=171.0, Kansas

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
T35A	Sooner Cattle	1.14	106	Pg	Pg	08 11 52.5	-1.1
U32A	Winter Ranch,	1.24	227	Pg	Pg	08 11 54.3	-1.3
R32A	Long Quarter,	1.36	331		Pn	08 11 56.3	-1.4
TUL1	Leonard	2.14	128	IAmb_Lg		08 12 40.9	
	comp=Z,13nm,0.9s						
X34A	Smith Ranch, M	2.63	179	IAmb_Lg		08 12 56.8	
	comp=Z,10nm,0.8s						
N33A	J Bar K, Exete	3.52	5	IAmb_Lg		08 13 31.5	
	comp=Z,14nm,0.8s						
S39A	Bolivar	3.65	81	IAmb_Lg		08 13 33.6	
	comp=Z,6.6nm,0.9s						
AMTX	Amarillo	3.87	234	IAmb_Lg		08 13 41.2	
	comp=Z,11nm,0.9s						
W39A	Magazine	3.88	120	IAmb_Lg		08 13 40.7	
	comp=Z,12nm,0.8s						
KSCO	Kaye Shedlock'	4.14	297	IAmb_Lg		08 13 54.2	
	comp=Z,5.8nm,0.8s						
MIAR	Mount Ida	4.40	126	IAmb_Lg		08 14 00.8	
	comp=Z,7.3nm,0.8s						
MGMO	Mountain Grove	4.48	89	IAmb_Lg		08 13 51.9	
	comp=Z,6.2nm,0.7s						
FCAR	Ozark Folk Cen	4.82	104	IAmb_Lg		08 14 04.7	
	comp=Z,5.7nm,0.8s						
N38A	Joes South For	5.07	44	IAmb_Lg		08 14 21.7	
	comp=Z,4.7nm,0.8s						
T25A	Trinidad	5.22	271	IAmb_Lg		08 14 22.0	
	comp=Z,7.7nm,0.9s						
CCM	Cathedral Cave	5.33	79	IAmb_Lg		08 14 25.9	
	comp=Z,5.7nm,0.9s						
Q24A	Divide	5.99	289	IAmb_Lg		08 14 54.1	
	comp=Z,5.3nm,0.8s						
JCT	Junction City	6.92	194	IAmb_Lg		08 15 25.9	
	comp=Z,4.9nm,0.9s						

IDC 02 08:18:50.0±2.9, 53°.47N×87°.29E, h0km, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=27.0km s-min=15.6km az=62.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.55	289	*i*		08 28 50.0	
	0.1nm,0.8s,baz=108,slow=326,SNR=10						
ZALV	Zalesovo Beam	1.55	289	Pg	Pn	08 19 17.6	-1.2
	0.3nm,0.3s,baz=109,slow=16,SNR=2.4						
ZALV				Lg	Lg	08 19 39.2	
	0.9nm,0.3s,baz=106,slow=30,SNR=5.1						
KURBB	Kurchatov Arra	6.11	246	Pn	Pn	08 20 21.7	+0.3
	0.1nm,0.3s,baz=62,slow=14,SNR=4.7						
KURBB				Lg	Lg	08 22 03.6	
	baz=61,slow=32,SNR=3.2						
	0.3nm,0.3s						
MKAR	Makanchi Array	7.41	208	Pn	Pn	08 20 40.9	+1.5
	0.1nm,0.3s,baz=27,slow=14,SNR=8.9						
MKAR				Lg	Lg	08 22 45.8	
	baz=28,slow=31,SNR=3.0						
	0.3nm,0.3s						

DJA 02 08:34:33.2±0.3, 0°N±3°×12°5E±°, h10km, M3.8/12, mb3.8/2, mB4.7/1, MLv3.8/12, Mw(mB)3.9/1, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KMSI	Cibinong	1.19	279	P	Pb	08 34 55.4	-0.4
KMSI				S	Sb	08 35 10.9	-0.3
SANI	Sanana	2.56	161	P	Pn	08 35 14.5	-0.2
LBMI	Labuha	2.56	113	P	Pn	08 35 14.3	-0.5
LUWI	Luwuk	2.77	239	P	Pn	08 35 17.5	-0.1
MRSI	Marisa	3.21	272	P	Pn	08 35 23.6	-0.1
SGSI	Sangihe	3.31	7	P	Pn	08 35 25.2	+0.1
APSI	Ampana	3.73	250	P	Pn	08 35 31.0	+0.1
MPSI	Mapaga	5.25	270	P	Pn	08 35 51.8	0.0
	0.1nm725nm6.4nm,0.8s						
MSAI	Masohi	5.29	134	P	Pn	08 35 52.4	+0.1

IDC 02 08:55:06.8±7.1, 59°.75S×149°.10E, h0km, mb3.3/2, mbtmp3.3/3, ML2.9/1, MS3.4/2, Error ellipse: s-maj=861.9km s-min=32.6km az=76.0, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VNDA	Vanda	18.35	171	P	Pn	08 59 22.1	-0.2
	baz=339,slow=9.6,SNR=5.2						
	0.4nm,0.6s						
QSPA	South Pole Qui	30.34	180	LR	LR	09 12 58.1	
	comp=Z,46nm,19.3s,baz=351,slow=35						
MAW	Mawson	35.98	221	LR	LR	09 16 05.4	
	comp=Z,71nm,18.6s,baz=22,slow=35						
ASAR	Alice Springs	37.61	337	P	P	09 02 22.8	-0.3
	0.4nm,0.8s,baz=168,slow=10,SNR=5.9						
	0.4nm,0.8s						
WRA	Warramunga Arr	41.15	339	P	P	09 02 52.6	+0.1
	0.2nm,0.5s,baz=166,slow=8.7,SNR=6.6						
	0.2nm,0.5s						
H08S2	Diego Garcia H	76.69	278	T	T	10 31 28.4	
	baz=149,slow=76						
H08S1	Diego Carcia H	76.70	278	T	T	10 31 36.5	
	baz=149						
H08S3	Diego Garcia H	76.71	278	T	T	10 31 29.8	
	baz=149,slow=76						

MAN 02 08:59:20.1, 16°.32N×120°.12E, h31km, mb4.0, ML2.8, MS2.4, 2C, Luzon

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BOLP	Bolinao	0.21	287	⇑*e*P	Pn	08 59 28.1	+1.2
BOLP				*e*S		08 59 33.2	
SMPP	San Manuel, Pa	0.56	107	⇑*e*P	Pn	08 59 32.4	+0.5

MOS 02 09:03:44.6±0.0, 44°.63N×37°.16E, h23km, MPVA3.5
SIGU 02 09:03:45.6, 44°.66N×37°.14E, h18km, Black Sea region 5
ISC 02 09:03:45.6±1.3, 44°.60N±0°.09×37°.16E±0°.03, h16km±10km, n20, σ0.s97/37, 3D, Western Caucasus

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ANN	Anapa	0.28	44	*i* Pg	Pg	09 03 51.8	+0.1
ANN				*i* Sg	Sg	09 03 55.8	-0.1
GL1R	Gelendzhik	0.65	94	*i* Pg	Pb	09 03 59.3	+0.7
GL1R				*e*Sg	Sg	09 04 07.5	+0.4
SPGR	Shapsug	0.67	77	*e*Pg	Pb	09 03 58.8	-0.1
SPGR				*i* Sg	Sg	09 04 06.0	-1.6
SUDU	Sudak	1.57	282	⇓*e*Pn	Pn	09 04 11.1	-1.7
SUDU				Pnm		09 04 11.3	
	comp=Z,6.0nm,0.2s						
SUDU				*e*Sn	Sn	09 04 30.8	-1.9
SUDU				Snm		09 04 35.3	
	comp=N,50nm,0.3s						
SUDU				Snm		09 04 35.3	
	comp=E,17nm,0.3s						
GOYR	Goytkh	1.63	102	*e*Pg	Pn	09 04 13.4	-0.2
GOYR				*e*Sg	Sn	09 04 34.8	+0.6
LZRR	Lazarevskoye	1.73	112	*i* Pg	Pn	09 04 15.1	+0.1
LZRR				*i* Sg	Sn	09 04 36.8	+0.2
ALU	Alushta	1.97	273	*e*Pg	Pn	09 04 19.5	+1.2
ALU	Alushta	1.97	273	*e*(Pn)	Pn	09 04 19.5	+1.2
SOC	Sochi	2.10	118	*e*Pg	Pn	09 04 20.6	+0.4
SOC				*e*Sg	Sn	09 04 46.0	+0.1
YAL	Yalta	2.15	268	*e*Pg	Pn	09 04 21.0	+0.2
YAL				*e*Sg	Sn	09 04 47.6	+0.5
YAL	Yalta	2.15	268	⇓*e*Pn	Pn	09 04 21.0	+0.2
YAL				Pnm		09 04 22.2	
	comp=Z,15nm,0.2s						
YAL				*e*Sn	Sn	09 04 47.6	+0.5
YAL				Snm		09 04 47.9	
	comp=N,27nm,0.3s,comp=E,31nm,0.3s						
VSLR	Vesyoloye	2.36	118	*e*Pn	Pn	09 04 22.8	-0.9
VSLR				*e*Sn	Sn	09 04 51.3	-1.1
RPOR	Krasnaya Polya	2.41	111	*e*Pn	Pn	09 04 23.2	-1.2
RPOR				*e*Sn	Sn	09 04 53.1	-0.4
SEV	Sevastopol'	2.50	270	*e*Pn	Pn	09 04 26.1	+0.6
SEV				*e*Sn	Sn	09 04 54.9	-0.7
SEV	Sevastopol'	2.50	270	⇓*e*Pn	Pn	09 04 26.1	+0.6
SEV				Pnm		09 04 26.4	
	comp=Z,10.0nm,0.4s						
SEV				*e*(Sn)		09 05 54.9	
SEV				Snm		09 05 56.1	
	comp=N,5.0nm,0.2s						
SEV				Snm		09 05 56.1	
	comp=E,8.0nm,0.2s						
ERBR	Yeremizino-Bor	2.60	63	*e*Pn	Pn	09 04 27.6	+0.6
ERBR				*e*Sn	Sn	09 04 58.1	-0.2
AHMR	Akhmetovskaya	2.82	98	*e*Pn	Pn	09 04 29.1	-1.0
AHMR				*e*Sn	Sn	09 05 04.1	+0.4
ARXR	Arkhyz	3.14	108	*e*Pn	Pn	09 04 32.9	-1.6
ARXR				*e*Sn	Sn	09 05 11.4	-0.4
SHA1	Shidzhatmaz	4.05	100	*e*Pn	Pn	09 04 49.3	+2.2
SHA1				*e*Sn	Sn	09 05 34.4	+0.1
KBZ	Khabaz	4.22	100	*e*Pn	Pn	09 04 50.8	+1.6
KBZ				*e*Sn	Sn	09 05 37.3	-0.8

NEIC 02 09:09:07.0±0.5, 19°.17N±0°.03×67°.19W±0°.04, h29km±10km, Error ellipse: s-maj=5.4km s-min=4.5km az=73.0
RSPR 02 09:09:07.0, 19°.26N×67°.24W, h45km±8km, MD3.3/12
OSPL 02 09:09:08.1±0.9, 19°.12N×67°.16W, h28km±11km, ML2.8
ISC 02 09:09:07.2±1.4, 19°.15N±0°.06×67°.21W±0°.04, h29km, n53, σ0.s57/56, 7C-6D, Mona Passage

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.68	172	⇓*e*P	Pb	09 09 19.9	-0.6
AGPR	Aguadilla, PR	0.68	172	*e*S	Sn	09 09 31.4	+0.9
AGPR	Aguadilla, PR	0.68	172		Pb	09 09 19.9	-0.6
AGPR					Sn	09 09 31.4	+0.9
AGPR	Aguadilla, PR	0.68	172	IAML		09 09 35.8	
	comp=N,595nm,0.3s						
AGPR				IAML		09 09 37.9	
	comp=E,655nm,0.7s						
AGPR	Aguadilla, PR	0.68	172	*i* P	Pb	09 09 19.9	-0.6
AGPR				IAML		09 09 32.6	
	comp=Z,359nm,0.2s						
IDE	Isla Desecheo	0.80	199	⇑*e*P	Pn	09 09 21.7	-0.8
IDE	Isla Desecheo	0.80	199	*e*S	Sn	09 09 34.5	+1.0
AOPR	Arecibo Observ	0.90	152	⇓*e*P	Pn	09 09 23.1	-0.9
AOPR	Arecibo Observ	0.90	152	*e*S	Sb	09 09 36.9	+0.9
AOPR	Arecibo Observ	0.90	152		Pn	09 09 23.1	-0.9
AOPR					Sb	09 09 36.9	+0.9
AOPR	Arecibo Observ	0.90	152	IAML		09 09 46.9	
	comp=N,412nm,0.3s						
EMPR	Esperanza - Ma	0.92	136	⇑*e*P	Pb	09 09 24.7	0.0
EMPR	Esperanza - Ma	0.92	136		Pb	09 09 24.7	0.0
EMPR	Esperanza - Ma	0.92	136	IAML		09 09 47.8	
	comp=N,301nm,1.0s						
EMPR				IAML		09 09 55.8	
	comp=E,348nm,0.5s						
LSP	Las Mesas	0.97	173	⇑*e*P	Pn	09 09 24.5	-0.4
LSP	Las Mesas	0.97	173	*e*S	Sb	09 09 39.1	+1.1
CRPR	Cabo Rojo, PR	1.14	175	⇓*e*P	Pn	09 09 26.8	-0.3
CRPR	Cabo Rojo, PR	1.14	175	*e*S	Sb	09 09 42.8	+0.2
CRPR	Cabo Rojo, PR	1.14	175		Pn	09 09 26.8	-0.3
CRPR					Sb	09 09 42.8	+0.2
CRPR	Cabo Rojo, PR	1.14	175	IAML		09 09 47.4	
	comp=N,266nm,0.4s						
CRPR				IAML		09 09 50.1	
	comp=E,154nm,0.6s						
CRPR	Cabo Rojo, PR	1.14	175	*i* P	Pn	09 09 26.8	-0.3
CRPR				*e*S	Sn	09 09 39.7	-2.1
CRPR				IAML		09 09 45.2	
	comp=Z,233nm,0.3s						
MLPR	Magueyes Islan	1.18	172	⇓*e*P	Pn	09 09 27.5	-0.2
MLPR	Magueyes Islan	1.18	172	*e*S	Sb	09 09 44.1	+0.2
MLPR	Magueyes Islan	1.18	172		Pn	09 09 27.5	-0.2
MLPR					Sb	09 09 44.1	+0.2
MLPR	Magueyes Islan	1.18	172	IAML		09 09 55.3	
	comp=E,155nm,0.3s						
CELP	Cerrillos	1.22	151		Pn	09 09 28.1	-0.3
CELP				IAML		09 09 47.1	
	comp=N,242nm,0.6s						
CELP				IAML		09 09 51.4	
	comp=E,180nm,0.3s						
OBIP	Obispado Ponce	1.24	152	⇓*e*P	Pn	09 09 28.4	-0.2
OBIP	Obispado Ponce	1.24	152	*e*S	Sn	09 09 44.8	+0.6
OBIP	Obispado Ponce	1.24	152		Pn	09 09 28.4	-0.2
OBIP					Sn	09 09 44.8	+0.6
GCPR	Guaynabo City	1.35	128		Pn	09 09 29.9	-0.2
SJG	San Juan	1.44	136		Pn	09 09 31.5	+0.3
SJG				IAML		09 09 54.3	
	comp=E,121nm,0.4s						
CBYP	Canovanas	1.55	124		Pn	09 09 32.5	-0.3
IGPR	InterUniversit	1.57	138	⇑*e*P	Pn	09 09 33.2	0.0
IGPR	InterUniversit	1.57	138	*e*S	Sn	09 09 52.8	+0.3
PDPR	Patillas Dam,	1.59	135		Pn	09 09 33.7	+0.3
PDPR				IAML		09 09 59.9	
	comp=E,100nm,0.9s						
HUMP	Col San Antoni	1.63	128	⇑*e*P	Pn	09 09 33.6	-0.4
HUMP	Col San Antoni	1.63	128	*e*S	Sn	09 09 54.3	+0.4
HUMP	Col San Antoni	1.63	128		Pn	09 09 33.6	-0.4
HUMP					Sn	09 09 54.3	+0.4
HUMP	Col San Antoni	1.63	128	IAML		09 10 04.3	
	comp=N,87nm,0.5s						
MTP	Monte Pirata	1.88	123	⇓*e*P	Pn	09 09 36.8	-0.7
MTP	Monte Pirata	1.88	123	*e*S	Sn	09 10 00.3	+0.1
MTP	Monte Pirata	1.88	123		Pn	09 09 36.8	-0.7
MTP					Sn	09 10 00.3	+0.1
MTP	Monte Pirata	1.88	123	IAML		09 10 09.2	
	comp=E,72nm,0.3s						
CUPR	Culebra, Puert	2.00	114	⇑*e*P	Pn	09 09 39.2	+0.1
CUPR	Culebra, Puert	2.00	114	*e*S	Sn	09 10 03.1	-0.2
CUPR	Culebra, Puert	2.00	114		Pn	09 09 39.2	+0.1
CUPR					Sn	09 10 03.1	-0.2
DR12	Loma Pena Alta	2.09	261		Pn	09 09 40.1	-0.2
STVI	Saint Thomas	2.28	110	Pn	Pn	09 09 42.3	-0.5
STVI				IAML		09 10 17.8	
	comp=N,54nm,0.7s						
SJVI	Gifft Hill Sch	2.44	109	⇑*e*P	Pn	09 09 44.7	-0.5
SJVI	Gifft Hill Sch	2.44	109	*e*S	Sn	09 10 14.1	-0.1
SJVI	Gifft Hill Sch	2.44	109		Pn	09 09 44.7	-0.5
SJVI					Sn	09 10 14.1	-0.1
BANI	BANI	3.08	256	Pn	Pn	09 09 54.0	0.0
SDDR	Presa de Saban	3.86	268		Pn	09 10 04.8	+0.1

INET 02 09:12:43.8±0.4, 12°.75N×88°.52W, h15km±9km, MW3.5
SNET 02 09:12:43.2±2.1, 12°.72N×88°.53W, h25km, ML3.7
UCR 02 09:12:45.2±1.2, 12°.82N×88°.57W, h26km±4km, mb4.2(NEIC)
ISC 02 09:12:42.4±1.6, 12°.70N±0°.06×88°.57W±0°.03, h20km±4km, n59, σ0.s50/94, 4C-4D, Off coast of central America

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LCY	Lacayo	0.76	20	*e*P	Pn	09 12 58.6	+0.4
LCY	Lacayo	0.76	20	*e*P	Pn	09 12 58.6	+0.4
VSM	San Miguel	0.78	21	*e*P	Pn	09 12 58.9	+0.4
VSM				*e*S	Sn	09 13 09.5	-0.2
VSM	San Miguel	0.78	21	*e*P	Pn	09 12 58.9	+0.4
VSM				*e*S	Sn	09 13 09.5	-0.2
COEB	Comit de Eme	0.79	2	*e*P	Pn	09 12 58.9	+0.3
COEB				*e*S	Sg	09 13 08.8	+0.3
COEB	Comit de Eme	0.79	2	*e*P	Pn	09 12 58.9	+0.3
COEB				*e*S	Sg	09 13 08.8	+0.3
PACA	Pacayal	0.80	17	*e*P	Pn	09 12 59.1	+0.4
PACA				*e*S	Sn	09 13 09.2	-0.9
PACA	Pacayal	0.80	17	*e*P	Pn	09 12 59.1	+0.4
PACA				*e*S	Sn	09 13 09.2	-0.9
LCND	La Caada	0.89	47	⇓*e*P	Pg	09 12 59.7	-0.2
LCND				*e*S	Sg	09 13 11.7	0.0
LCND	La Caada	0.89	47	⇓*e*P	Pg	09 12 59.7	-0.2
LCND				*e*S	Sg	09 13 11.7	0.0
CNCH	Conchagua	0.91	51	*e*P	Pn	09 13 00.5	+0.3
CNCH				*e*P	Pg	09 13 00.7	+0.4
CNCH				*e*S	Sn	09 13 13.1	+0.2
CNCH	Conchagua	0.91	51	*e*P	Pn	09 13 00.5	+0.3
CNCH				*e*P	Pg	09 13 00.7	+0.4
CNCH				*e*S	Sn	09 13 13.1	+0.2
PQSS	Presa 15 de Se	0.92	0	*e*P	Pn	09 13 00.5	+0.3
PQSS				*e*S	Sb	09 13 11.3	-0.1
PQSS	Presa 15 de Se	0.92	0	*e*P	Pn	09 13 00.5	+0.3
PQSS				*e*S	Sb	09 13 11.3	-0.1
COEG	Centro de Oper	0.96	341	⇑*e*P	Pn	09 13 01.2	+0.3
COEG	Centro de Oper	0.96	341	⇑*e*P	Pn	09 13 01.2	+0.3
SJTE	Alcalda de S	1.00	335	⇑*e*P	Pn	09 13 01.7	+0.3
SJTE				*e*S	Sb	09 13 13.9	-0.1
SJTE	Alcalda de S	1.00	335	⇑*e*P	Pn	09 13 01.7	+0.3
SJTE				*e*S	Sb	09 13 13.9	-0.1
SCLA	Alcaldia de Sa	1.01	351	⇓*e*P	Pg	09 13 02.2	+0.2
SCLA				*e*S	Sg	09 13 14.5	-0.8
SCLA	Alcaldia de Sa	1.01	351	⇓*e*P	Pg	09 13 02.2	+0.2
SCLA				*e*S	Sg	09 13 14.5	-0.8
LFRS	El Faro	1.03	332	*e*P	Pn	09 13 02.2	+0.3
LFRS				*e*S	Sb	09 13 15.3	+0.4
LFRS	El Faro	1.03	332	*e*P	Pn	09 13 02.2	+0.3
LFRS				*e*S	Sb	09 13 15.3	+0.4
PAVA	Las Pavas	1.07	340	*e*P	Pg	09 13 03.0	-0.2
PAVA				*e*S	Sb	09 13 16.3	+0.4
PAVA	Las Pavas	1.07	340	*e*P	Pg	09 13 03.0	-0.2
PAVA				*e*S	Sb	09 13 16.3	+0.4
PAVA	Las Pavas	1.07	340	*e*P	Pn	09 13 02.8	+0.4
LALI	Alcalda de L	1.07	317	*e*P	Pg	09 13 03.1	-0.2
LALI				*e*S	Sb	09 13 16.2	+0.2
LALI	Alcalda de L	1.07	317	*e*P	Pg	09 13 03.1	-0.2
LALI				*e*S	Sb	09 13 16.2	+0.2
FAGO	Alcalda de S	1.08	24	*e*P	Pb	09 13 02.1	-0.4
FAGO				*e*S	Sb	09 13 16.0	-0.3
FAGO	Alcalda de S	1.08	24	*e*P	Pb	09 13 02.1	-0.4
FAGO				*e*S	Sb	09 13 16.0	-0.3
FAGO	Alcalda de S	1.08	24	*e*P	Pb	09 13 02.1	-0.4
FAGO				*e*S	Sb	09 13 16.4	+0.1
LBRS	Las Brisas	1.13	336	*e*P	Pg	09 13 04.1	-0.2
LBRS	Las Brisas	1.13	336	*e*P	Pg	09 13 04.1	-0.2
LFU	La Fuente	1.17	333	*e*P	Pb	09 13 04.4	+0.4
LFU				*e*S	Sn	09 13 19.5	+0.3
LFU	La Fuente	1.17	333	*e*P	Pb	09 13 04.4	+0.4
LFU				*e*S	Sn	09 13 19.5	+0.3
SNET	Serv Nac Est T	1.17	327	*e*P	Pn	09 13 04.2	+0.3
SNET				*e*S	Sn	09 13 19.8	+0.5
SNET	Serv Nac Est T	1.17	327	*e*P	Pn	09 13 04.2	+0.3
SNET				*e*S	Sn	09 13 19.8	+0.5
SNET	Serv Nac Est T	1.17	327	*e*P	Pb	09 13 04.3	+0.2
UEES	Universidad Ev	1.20	327	*e*P	Pb	09 13 04.8	+0.3
UEES	Universidad Ev	1.20	327	*e*P	Pb	09 13 04.8	+0.3
BOQS	Boqueron	1.24	326	*e*P	Pb	09 13 05.5	+0.2
BOQS				*e*S	Sn	09 13 21.7	+0.6
BOQS	Boqueron	1.24	326	*e*P	Pb	09 13 05.5	+0.2
BOQS				*e*S	Sn	09 13 21.7	+0.6
JAYA	Jayaque - finc	1.28	318	*e*P	Pn	09 13 04.1	-1.2
JAYA				*e*S	Sb	09 13 20.3	-1.7
JAYA	Jayaque - finc	1.28	318	*e*P	Pn	09 13 04.1	-1.2
JAYA				*e*S	Sb	09 13 20.3	-1.7
CEDA	San Andres	1.36	324	*e*P	Pb	09 13 07.2	0.0
CEDA	San Andres	1.36	324	*e*P	Pb	09 13 07.2	0.0
CRIN	San Cristobal	1.48	90	*e*P	Pn	09 13 08.8	+0.7
CEVE	Cerro Verde	1.52	317	*e*P	Pb	09 13 10.0	-0.1
CEVE	Cerro Verde	1.52	317	*e*P	Pb	09 13 10.0	-0.1
SBLS	San Blas	1.53	318	*e*P	Pb	09 13 10.2	0.0
SBLS	San Blas	1.53	318	*e*P	Pb	09 13 10.2	0.0
RTR	El Retiro	1.59	319	*e*P	Pb	09 13 10.9	-0.2
RTR	El Retiro	1.59	319	*e*P	Pb	09 13 10.9	-0.2
NUBE	Las Nubes	1.68	315	*e*P	Pn	09 13 11.6	+0.8
NUBE	Las Nubes	1.68	315	*e*P	Pn	09 13 11.6	+0.8
TEL3	Telica 3	1.69	94	*e*P	Pn	09 13 10.7	-0.1
SLOZ	Alcaldia de Sa	1.77	318	*e*P	Pn	09 13 12.8	+0.8
TGUH	Tegucigalpa,Un	1.84	43	*e*P	Pn	09 13 12.7	-0.4
ESQI	Esquipulas	1.99	338	*e*P	Pn	09 13 16.3	+1.1
RCON	San Juan de Ri	2.47	71	*e*P	Pb	09 13 26.1	-0.2

IDC 02 09:23:50.1±2.5, 34°.47N×116°.15W, h0km, mbtmp2.8/3, ML3.5/3, Error ellipse: s-maj=43.2km s-min=10.4km az=46.0
NEIC 02 09:23:52.0±1.5, 34°.74N±0°.04×116°.00W±0°.05, h5km±1km, Error ellipse: s-maj=6.0km s-min=5.8km az=131.0
ANF 02 09:23:51.5±0.1, 34°.71N×116°.03W, h13km±1km, ML3.3/33, Error ellipse: s-maj=1.0km s-min=0.9km az=33.0
PAS 02 09:23:52.1±1.2, 34°.72N±0°.03×116°.03W±0°.04, h3km±7km, ML3.3/192, ML3.1/65(NEIC), Error ellipse: s-maj=5.6km s-min=2.7km az=58.0
ISC 02 09:23:51.2±1.1, 34°.67N±0°.02×116°.00W±0°.02, h6km±10km, n64, σ0.s93/89, Southern California

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GMRC	Granite Mounta	0.31	67	P	Pb	09 23 58.3	-0.9
	baz=258						
GMRC				S	Sb	09 24 02.9	-1.7
	baz=258						
HEC	Hector,Ludlow	0.32	301	P	Pg	09 23 57.6	+0.2
	baz=114,SNR=1000						
HEC				S	Sg	09 24 01.6	0.0
	baz=114						
BELC	Belle Mtn. Jos	0.66	180	P	Pb	09 24 05.6	+0.3
	baz=358,SNR=152						
BELC				S	Sb	09 24 15.3	+0.5
	baz=358						
TUQ	Turquoise Moun	0.77	5	P	Pg	09 24 05.7	-0.4
	baz=187,SNR=45						
TUQ				S	Sg	09 24 15.6	-0.5
	baz=187						
RRX	Edison Barstow	0.84	285	P	Pg	09 24 07.3	-0.1
	baz=101,SNR=19						
RRX				S	Sg	09 24 18.6	+0.2
	baz=101						
BBRC	Big Bear Solar	0.86	242	P	Pb	09 24 08.3	-0.4
	baz=58,SNR=190						
BBRC				S	Sb	09 24 20.2	-0.3
	baz=58						
IRM	Iron Mountain	0.87	125	P	Pn	09 24 09.2	-0.9
	baz=308,SNR=224						
IRM				S	Sn	09 24 22.2	-1.0
	baz=308						
GSC	Goldstone, Bar	0.91	314		Pg	09 24 08.5	-0.3
GSC				IAML		09 24 23.1	
	comp=N,1μm,0.4s						
GSC	Goldstone, Bar	0.91	314	P	Pg	09 24 08.4	-0.3
	baz=132,SNR=1000						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GSC				S	Sg	09 24 19.9	-0.8
	baz=132						
BC3	Big Chuckawall	1.11	155	P	Pn	09 24 13.1	-0.3
	baz=336,SNR=200						
BC3				S	Sn	09 24 29.3	+0.2
	baz=336						
PFO	Pinyon Flats O	1.12	200		Pn	09 24 13.4	-0.2
PFO	Pinyon Flats O	1.12	200	P	Pn	09 24 13.4	-0.2
	baz=18,SNR=98						
PFO				S	Sn	09 24 28.4	-0.9
	baz=18						
NEE2	Needles Airpor	1.15	85	P	Pn	09 24 13.3	-0.5
	baz=268,SNR=31						
NEE2				S	Sn	09 24 29.0	-0.8
	baz=268						
SHOC	Shoshone, Teco	1.25	350	P	Pg	09 24 13.6	-1.6
	baz=170,SNR=414						
SHOC				S	Sg	09 24 30.4	-1.0
	baz=170						
BFSC	Mount Baldy Ra	1.43	253	P	Pn	09 24 17.2	-0.7
	baz=70,SNR=65						
BFSC				S	Sb	09 24 36.5	-0.5
	baz=70						
MURC	Murrieta	1.45	223	P	Pn	09 24 17.9	-0.1
	baz=40,SNR=52						
MURC				S	Sg	09 24 37.9	0.0
	baz=40						
QSM	Queen of Sheba	1.48	332		Pn	09 24 16.9	-1.4
QSM				IAML		09 24 38.8	
	comp=E,423nm,0.3s						
QSM				IAML		09 24 41.9	
	comp=N,361nm,0.7s						
BLYC	Blythe	1.53	126		Pn	09 24 18.7	-0.4
BLYC				IAML		09 24 47.7	
	comp=N,198nm,0.5s						
BLYC				IAML		09 24 55.7	
	comp=E,203nm,0.6s						
ELS	Elsinore Mount	1.56	230		Pn	09 24 19.6	0.0
PDMCI	Parker Dam,Lak	1.58	103	P	Pn	09 24 19.4	-0.4
	baz=285						
PDMCI				S	Sb	09 24 40.1	-1.0
	baz=285						
LRMC	Laurel Mtn Rad	1.60	301	P	Pn	09 24 18.7	-1.4
	baz=119,SNR=106						
LRMC				Sg	Sg	09 24 42.7	+0.1
	baz=119						
GWY	Greenwater Val	1.61	340		Pn	09 24 18.7	-1.7
EDW2	Edwards Air Fo	1.65	278	P	Pn	09 24 19.7	-1.1
	baz=95						
EDW2				S	Sn	09 24 40.5	-1.9
	baz=95						
CCAC	Calif City Air	1.72	287		Pn	09 24 22.4	+0.6
W13A	Hualapai Mount	1.79	75	Pn	Pn	09 24 22.9	0.0
W13A				IAML		09 24 50.4	
	comp=N,295nm,0.6s						
W13A				IAML		09 24 51.2	
	comp=E,210nm,0.4s						
MONP2	Monument Peak	1.80	191	P	Pn	09 24 23.1	+0.1
	baz=9.9						
MONP2				Sb	Sg	09 24 50.2	+1.0
	baz=9.9						
PASC	Pasadena Art C	1.87	255		Pb	09 24 25.2	-0.6
PASC				IAML		09 24 53.0	
	comp=E,175nm,0.5s						
PASC				IAML		09 24 55.0	
	comp=N,162nm,0.6s						
GLA	Glamis	1.89	148	Pn	Pg	09 24 25.9	-1.4
GLA				IAML		09 25 06.6	
	comp=N,200nm,0.7s						
GLA	Glamis	1.89	148	Pg	Pg	09 24 28.2	+0.9
	baz=329						
GLA				Sb	Sg	09 24 53.3	+1.5
	baz=329						
FURC	Furnace Creek,	1.93	339	Pg	Pb	09 24 27.0	+0.2
	baz=159						
FURC				Sb	Sb	09 24 51.5	+0.4
	baz=159						
SHPR	Sheep Range	1.96	20		Pn	09 24 24.7	-0.5
SHPR				IAML		09 24 57.7	
	comp=E,204nm,0.8s						
SHPR				IAML		09 24 59.0	
	comp=N,106nm,0.8s						
DECC	Green Verdugo	1.97	259	Sb	Sg	09 24 53.8	-0.7
	baz=76						
109C	Camp Elliot, M	2.00	208		Pb	09 24 27.0	-0.9
109C				IAML		09 24 59.9	
	comp=E,85nm,0.8s						
109C	Camp Elliot, M	2.00	208	Pb	Pg	09 24 28.6	-0.8
	baz=26						
109C				Sb	Sg	09 24 54.7	-0.7
	baz=26						
IKP	In-Ko-Pah, Jac	2.01	183	Sb	Sg	09 24 56.3	+0.4
	baz=1.7						
BAR	Barrett	2.06	196		Pb	09 24 28.1	-0.9
BAR				IAML		09 24 59.1	
	comp=E,74nm,0.5s						
FMP	Fort Macarthur	2.12	244	Sb	Sg	09 24 58.2	-1.3
	baz=61						
OSI	Osito Audit: C	2.24	269	Pg	Pg	09 24 34.0	-0.2
	baz=87						
OSI				Sb	Sb	09 25 01.8	+1.5
	baz=87						
ISA	Isabella, Lake	2.25	297	Pn	Pn	09 24 27.9	-1.2
ISA				IAML		09 25 03.3	
	comp=E,69nm,0.6s						
ISA				IAML		09 25 05.8	
	comp=N,75nm,0.5s						
ISA	Isabella, Lake	2.25	297	P	Pn	09 24 27.9	-1.2
	baz=115,SNR=61						
ISA				Sb	Sb	09 25 01.4	+0.8
	baz=115						
TPNV	Topopah Spring	2.29	355	Pg	Pb	09 24 33.8	+0.8
	baz=175						
TPNV				Sb	Sb	09 25 02.4	+0.8
	baz=175						
CIS	Catalina Islan	2.37	238	Pb	Pb	09 24 34.5	+0.2
	baz=56						
ARVC	Arvin	2.37	282	Pg	Pg	09 24 35.6	-1.0
	baz=99						
ARVC				Sb	Sb	09 25 05.3	+1.5
	baz=99						
GRAC	Grapevine Rang	2.58	335	P	Pn	09 24 32.8	-0.7
	baz=154						
Y14A	Wickenburg	2.59	105		Pn	09 24 33.6	-0.1
Y14A				IAML		09 25 25.3	
	comp=N,122nm,0.5s						
Y14A				IAML		09 25 27.0	
	comp=E,111nm,0.5s						
113A	Mohawk Valley,	2.66	135		Pn	09 24 35.5	+0.9
113A				IAML		09 25 20.8	
	comp=E,44nm,0.7s						
SCI2	San Clemente I	2.70	232	Pg	Pg	09 24 42.6	-0.4
	baz=50						
VES	Vestal, Richgr	2.78	296	Pg	Pb	09 24 42.8	+1.5
	baz=113						
BCW	Bitter Crk WRg	2.82	277	Pn	Pn	09 24 37.6	+0.7
PRN	Pahroc Range	2.84	15	Pn	Pn	09 24 37.5	+0.2
LCH	Last Change Ra	2.89	333		Pn	09 24 37.3	-0.6
LCMT	Little Creek M	3.24	43		Pn	09 24 43.1	+0.4
U15A	North Rim	3.50	59	Pn	Pn	09 24 47.1	+0.7
U15A				IAML		09 25 47.0	
	comp=E,55nm,0.7s						
U15A				IAML		09 25 48.2	
	comp=N,44nm,1.1s						
X16A	Lo Mia Camp, P	3.77	92	Pn	Pn	09 24 51.0	+0.8
X16A				IAML		09 26 02.9	
	comp=E,34nm,1.0s						
X16A				IAML		09 26 05.4	
	comp=N,30nm,1.0s						
214A	Organ Pipe Nat	3.80	134	P	Pn	09 24 49.8	-0.6
	baz=317						
LHV	Little Huntoon	4.11	331		Pn	09 24 54.9	+0.4
LHV				IAML		09 26 11.2	
	comp=N,26nm,0.9s						
LHV				IAML		09 26 13.8	
	comp=E,41nm,0.9s						
NV11	Mina Array Sit	4.14	336	Pn	Pn	09 24 55.3	+0.2
NV11				IAML		09 26 08.3	
	comp=E,15nm,1.1s						
NVAR	Mina Array Bea	4.19	334	Pn	Pn	09 24 55.6	-0.2
	comp=E,0.2nm,0.3s,baz=156,slow=15,SNR=5.3						
NVAR				Pg	Pb	09 25 08.3	+2.8
	comp=E,2.1nm,0.3s,baz=163,slow=17,SNR=27						
NVAR				Lg	Lg	09 26 03.1	
	comp=E,2.1nm,0.3s,baz=153,slow=31,SNR=7.4						
	comp=E,0.2nm,0.3s						
PSUT	Pine Spring	4.23	24	Pn	Pn	09 24 56.7	+0.3
PSUT				IAML		09 26 13.7	
	comp=N,24nm,0.8s						
PSUT				IAML		09 26 14.0	
	comp=E,37nm,1.2s						
TUC	Tucson	4.95	117	P	Pn	09 25 06.1	-0.2
	baz=300						
X18A	Snowflake	5.00	90	Pn	Pn	09 25 09.1	+2.2
PNTR	Pine Nut	5.27	328	Pn	Pn	09 25 11.3	+0.5
PNTR				IAML		09 27 05.3	
	comp=E,11nm,1.6s						
PNTR				IAML		09 27 10.2	
	comp=N,12nm,1.3s						
PDAR	Pinedale Array	9.53	30	Pn	Pn	09 26 15.4	+6.2
	comp=N,0.1nm,0.3s,baz=216,slow=17,SNR=1.5						
	comp=N,0.1nm,0.3s						
TXAR	Lajitas Array	11.74	114	Pn	Pn	09 26 41.4	+2.0
	comp=N,0.2nm,0.3s,baz=293,slow=13,SNR=11						
TXAR				Lg	Lg	09 29 59.1	
	baz=307,slow=38,SNR=1.8						
	comp=N,0.3nm,0.4s						

*NIED **02** 09:36:09.4, 35°.43N×140°.31E, h29km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; Mrr0.53; Mθθ-0.50; Mφφ-0.03; Mrθ0.83; Mθφ-0.35; Mφr0.52; Fault plane solution: M0 1.15000×10^{15} NP1: φs247.00000°, δ16.00000°, λ99.00000°. NP2:φs58.00000°, δ74.00000°, λ87.00000°.*
*JMA **02** 09:36:09.4±0.2, 35°.4N±0°.4×140°.3E±0°.7, h29km±1km, MV3.7/20, KUJUKURI COAST BOSO PEN*
JMA Felt III J1 at KUJUKURI COAST BOSO PEN .
*IDC **02** 09:36:11.6±2.0, 35°.22N×140°.26E, h45km±19km, mb3.6/8, mbtmp3.9/12, ML3.9/3, MS3.3/10, Error ellipse: s-maj=26.8km s-min=7.6km az=71.0*
ISC 02 09:36:09.7±0.8**, 35°.39N**±0°.03×**140°.32E**±0°.06**, h30**km±5km**, n39, σ1s.07**/30**, mb3.9**/8**, MS3.4**/7**, 9D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JCN	Nagara	0.10	287	P	Pb	09 36 14.8	-0.2
JCN				S	Sb	09 36 19.1	+0.4
KTR	Katsuura	0.24	180	*i* P	Pb	09 36 16.1	-0.4
KTR				S	Sb	09 36 21.1	+0.2
JKUC	kamogawauchiur	0.25	203	*i* P	Pb	09 36 16.2	-0.4
JKUC				S	Sb	09 36 21.2	+0.1
JSMT	Sammumatsuo	0.27	23	⇓*i*P	Pb	09 36 16.4	-0.5
JSMT				⇓S	Sb	09 36 21.6	0.0
BSO4	Boso 4	0.40	177	*i* P	Pb	09 36 19.0	+0.5
BSO3	Boso 3	0.61	165	⇓*i*P	Pb	09 36 21.8	0.0
JYT	Yasato	0.84	353	⇓P	Pn	09 36 24.1	-1.5
JYT				⇓S	Sb	09 36 35.9	-1.0
BSO1	Boso 1	0.91	143	⇓P	Pn	09 36 25.2	-0.8
JIM2	Oshima 3	0.99	227	⇓P	Pn	09 36 26.5	-1.1
JOD2	Odawara 2	1.01	263	⇓P	Pn	09 36 27.6	-0.3
JAG	Ashikaga	1.25	326	⇓P	Pn	09 36 30.5	-0.7
MJAR	Matsushiro Arr	2.06	305	P	Pn	09 36 43.1	+0.7
	23nm,0.4s,baz=222,slow=22,SNR=68						
MJAR				S	Sb	09 37 10.1	-1.6
	73nm,0.6s,baz=131,slow=13,SNR=3.1						
JHJ	Hachijo jima 2	2.31	191	P	Pn	09 36 44.7	-1.1
	298nm,0.3s,baz=76,slow=21,SNR=100						
JHJ				S	Sn	09 37 10.3	-2.8
	328nm,0.3s,baz=135,slow=24,SNR=9.3						
JHJ				LR	LR	09 37 10.5	
	comp=Z,135nm,18.5s,baz=82,slow=28						
	455nm,0.3s						
JNU	Nakatsue	8.13	257	P	Pn	09 38 06.9	+1.1
	2.3nm,0.3s,baz=178,slow=2.4,SNR=8.9						
	11nm,0.4s						
KSRS	Korea Array	10.20	285	P	Pn	09 38 35.8	+1.7
	0.1nm,0.3s,baz=102,slow=15,SNR=1.5						
KSRS				LR	LR	09 42 33.6	
	comp=Z,125nm,19.2s,baz=90,slow=37						
	0.4nm,0.3s						
KLR	Kul'dur	15.20	338	LR	LR	09 45 22.0	
	comp=Z,81nm,18.6s,baz=198,slow=36						
SONM	Songino Array	28.01	307	P	P	09 41 57.9	-0.2
	0.6nm,0.5s,baz=118,slow=10.0,SNR=4.0						
	0.6nm,0.5s						
H11N2	WAKE ISLAND Hy	28.14	117	T	T	10 11 07.6	
	baz=309,slow=75,SNR=234						
H11N1	WAKE ISLAND Hy	28.14	117	T	T	10 11 17.4	
	baz=309,slow=75,SNR=190						
H11N3	WAKE ISLAND Hy	28.16	117	T	T	10 11 21.0	
	baz=309,slow=75,SNR=142						
SEY	Seymchan	28.57	12	LR	LR	09 54 41.3	
	comp=Z,68nm,18.2s,baz=224,slow=39						
H11S3	WAKE ISLAND Hy	28.78	119	T	T	10 11 54.0	
	baz=311,slow=75,SNR=81						
H11S1	WAKE ISLAND Hy	28.78	119	T	T	10 12 04.1	
	baz=311,slow=75,SNR=134						
H11S2	WAKE ISLAND Hy	28.80	119	T	T	10 11 57.6	
	baz=311,slow=75,SNR=66						
CMAR	Chiang Mai Arr	40.23	256	LR	LR	09 59 51.8	
	comp=Z,18nm,18.8s,baz=235,slow=35						
ZALV	Zalesovo Beam	42.39	314	P	P	09 44 01.9	+0.8
	3.5nm,0.6s,baz=91,slow=6.5,SNR=9.7						
	3.5nm,0.6s						
MKAR	Makanchi Array	44.26	303	P	P	09 44 16.8	+0.3
	1.8nm,0.6s,baz=89,slow=9.7,SNR=24						
MKAR				LR	LR	10 03 31.6	
	comp=Z,79nm,18.1s,baz=174,slow=37						
	1.8nm,0.6s						
KURBB	Kurchatov Arra	46.33	309	LR	LR	10 04 41.1	
	comp=Z,36nm,19.6s,baz=193,slow=37						
ILAR	Eielson Array	51.35	32	P	P	09 45 11.8	+0.7
	0.8nm,0.8s,baz=276,slow=6.6,SNR=9.5						
	0.8nm,0.8s						
WRA	Warramunga Arr	55.32	187	P	P	09 45 39.6	-1.1
	0.8nm,0.4s,baz=2.4,slow=7.6,SNR=26						
	0.8nm,0.4s						
ASAR	Alice Springs	59.05	187	P	P	09 46 06.4	-0.6
	0.3nm,0.5s,baz=18,slow=12,SNR=3.7						
	0.3nm,0.5s						
FINES	FINESS Array B	69.85	332	P	P	09 47 16.6	-0.6
	0.9nm,0.6s,baz=77,slow=12,SNR=3.8						
	0.9nm,0.6s						
GNI	Garni	71.97	307	LR	LR	10 21 53.7	
	comp=Z,32nm,18.7s,baz=122,slow=38						
NOA	NORSAR Array B	75.35	337	LR	LR	10 24 02.5	
	comp=Z,19nm,18.8s,baz=60,slow=38						
NVAR	Mina Array Bea	76.69	52	P	P	09 48 00.3	+2.0
	0.2nm,0.5s,baz=286,slow=6.0,SNR=3.7						
	0.2nm,0.5s						
SCHQ	Schefferville	87.16	15	LR	LR	10 30 08.8	
	comp=Z,18nm,19.3s,baz=100,slow=37						
H03N2	Juan Fernandez	147.70	98	T	T	12 40 38.4	
	baz=289,slow=76,SNR=9.6						
H03N3	Juan Fernandez	147.72	98	T	T	12 40 36.7	
	baz=289,slow=76,SNR=10.0						
H03N1	Juan Fernandez	147.72	98	T	T	12 40 38.3	
	baz=289,slow=76,SNR=10						

*RSPR **02** 09:36:47.5, 19°.28N×67°.24W, h14km±5km, MD3.3/13*
*NEIC **02** 09:36:47.5±1.2, 19°.18N±0°.02×67°.19W±0°.04, h25km±10km, Error ellipse: s-maj=6.3km s-min=2.5km az=66.0*
*OSPL **02** 09:36:49.2±0.7, 19°.13N×67°.18W, h42km±22km, ML2.7*
ISC 02 09:36:48.2±1.4**, 19°.15N**±0°.06×**67°.19W**±0°.04**, h29**km**, n54, σ0s.69**/63**, 9C-6D, Mona Passage**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.68	173	⇓*e*P	Pb	09 37 01.0	-0.6
AGPR	Aguadilla, PR	0.68	173	*e*S	Sn	09 37 11.8	+0.2
AGPR	Aguadilla, PR	0.68	173		Pb	09 37 01.0	-0.6
AGPR					Sn	09 37 11.8	+0.2
AGPR	Aguadilla, PR	0.68	173	IAML		09 37 19.0	
	comp=E,465nm,0.5s						
AGPR	Aguadilla, PR	0.68	173	*i* P	Pb	09 37 01.0	-0.6
AGPR				*e*S	Sb	09 37 10.4	-0.4
AGPR				IAML		09 37 13.7	
	comp=Z,295nm,0.2s						
IDE	Isla Desecheo	0.81	199	⇑*e*P	Pn	09 37 02.8	-0.8
IDE	Isla Desecheo	0.81	199	*e*S	Sb	09 37 14.7	+0.5
AOPR	Arecibo Observ	0.90	152	⇓*e*P	Pn	09 37 04.2	-0.8
AOPR	Arecibo Observ	0.90	152	*e*S	Sn	09 37 17.5	+0.4
AOPR	Arecibo Observ	0.90	152		Pn	09 37 04.2	-0.8
AOPR					Sn	09 37 17.5	+0.4
AOPR	Arecibo Observ	0.90	152	IAML		09 37 22.7	
	comp=E,505nm,0.3s						
LSP	Las Mesas	0.98	174	⇓*e*P	Pn	09 37 05.7	-0.3
LSP	Las Mesas	0.98	174	*e*S	Sb	09 37 19.9	+0.8
CRPR	Cabo Rojo, PR	1.14	176	⇓*e*P	Pn	09 37 07.9	-0.3
CRPR	Cabo Rojo, PR	1.14	176	*e*S	Sn	09 37 23.9	+1.0
CRPR	Cabo Rojo, PR	1.14	176		Pn	09 37 07.9	-0.3
CRPR					Sn	09 37 23.9	+1.0
CRPR	Cabo Rojo, PR	1.14	176	*i* P	Pn	09 37 07.9	-0.3
CRPR				*e*S	Sn	09 37 20.8	-2.1
CRPR				IAML		09 37 28.5	
	comp=Z,160nm,0.5s						
MLPR	Magueyes Islan	1.18	173	⇓*e*P	Pn	09 37 08.6	-0.2
MLPR	Magueyes Islan	1.18	173	*e*S	Sn	09 37 25.0	+1.1
MLPR	Magueyes Islan	1.18	173		Pn	09 37 08.6	-0.2
MLPR					Sn	09 37 25.0	+1.1
CELP	Cerrillos	1.22	151		Pn	09 37 09.3	0.0
CELP				IAML		09 37 32.5	
	comp=E,150nm,0.3s						
CELP				IAML		09 37 36.4	
	comp=N,159nm,0.4s						
OBIP	Obispado Ponce	1.23	153	⇑*e*P	Pn	09 37 09.5	0.0
OBIP	Obispado Ponce	1.23	153	*e*S	Sn	09 37 26.2	+0.9
OBIP	Obispado Ponce	1.23	153		Pn	09 37 09.5	0.0
OBIP					Sn	09 37 26.2	+0.9
OBIP	Obispado Ponce	1.23	153	IAML		09 37 36.5	
	comp=N,187nm,0.5s						
GCPR	Guaynabo City	1.34	128	⇓*e*P	Pn	09 37 10.8	-0.2
GCPR	Guaynabo City	1.34	128	*e*S	Sn	09 37 28.4	+0.4
GCPR	Guaynabo City	1.34	128		Pn	09 37 10.8	-0.2
GCPR					Sn	09 37 28.4	+0.4
SJG	San Juan	1.43	136		Pn	09 37 12.5	+0.3
SJG				IAML		09 37 39.2	
	comp=N,101nm,0.3s						
SJG				IAML		09 37 44.3	
	comp=N,94nm,0.3s						
CBYP	Canovanas	1.54	124	⇑*e*P	Pn	09 37 13.2	-0.6
CBYP	Canovanas	1.54	124	*e*S	Sn	09 37 33.4	+0.6
CBYP	Canovanas	1.54	124		Pn	09 37 13.2	-0.6
CBYP					Sn	09 37 33.4	+0.6
IGPR	InterUniversit	1.57	139	⇑*e*P	Pn	09 37 13.6	-0.5
IGPR	InterUniversit	1.57	139	*e*S	Sn	09 37 34.4	+1.0
IGPR	InterUniversit	1.57	139		Sn	09 37 34.4	+1.0
PDPR	Patillas Dam,	1.58	135		Pn	09 37 15.0	+0.7
PDPR				IAML		09 37 38.0	
	comp=E,72nm,0.2s						
HUMP	Col San Antoni	1.62	128	⇑*e*P	Pn	09 37 14.1	-0.8
HUMP	Col San Antoni	1.62	128	*e*S	Sn	09 37 35.4	+0.6
HUMP	Col San Antoni	1.62	128		Pn	09 37 14.1	-0.8
HUMP					Sn	09 37 35.4	+0.6
HUMP	Col San Antoni	1.62	128	IAML		09 37 45.3	
	comp=N,69nm,0.3s						
MTP	Monte Pirata	1.88	124	⇑*e*P	Pn	09 37 18.2	-0.1
MTP	Monte Pirata	1.88	124	*e*S	Sn	09 37 41.7	+0.7
MTP	Monte Pirata	1.88	124		Pn	09 37 18.2	-0.1
MTP					Sn	09 37 41.7	+0.7
CUPR	Culebra, Puert	2.00	115	⇑*e*P	Pn	09 37 19.3	-0.7
CUPR	Culebra, Puert	2.00	115	*e*S	Sn	09 37 44.4	+0.3
CUPR	Culebra, Puert	2.00	115		Pn	09 37 19.3	-0.7
CUPR					Sn	09 37 44.4	+0.3
DR12	Loma Pena Alta	2.10	260	⇑*e*P	Pn	09 37 20.6	-0.8
DR12	Loma Pena Alta	2.10	260		Pn	09 37 21.0	-0.5
STVI	Saint Thomas	2.27	110	Pn	Pn	09 37 24.9	+1.2
STVI				IAML		09 38 29.1	
	comp=N,34nm,2.2s						
SJVI	Gifft Hill Sch	2.44	109	⇑*e*P	Pn	09 37 25.3	-0.8
SJVI	Gifft Hill Sch	2.44	109	*e*S	Sn	09 37 55.2	+0.3
SJVI	Gifft Hill Sch	2.44	109		Pn	09 37 25.3	-0.8
SJVI					Sn	09 37 55.2	+0.3
BANI	BANI	3.09	256	Pn	Pn	09 37 35.3	+0.1
SDDR	Presa de Saban	3.88	268	Pn	Pn	09 37 46.7	+0.8

WEL 02 09:54:18.6±2.0**, 38°S**±15°×**18°0W**±1°3**, h12**km**, M3.4**/19**, ML3.7**/22**, MLv3.4**/19**, Error ellipse: s-maj=0.0km s-min=0.0km az=41.6, East of North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.44	273	P	Pn	09 54 43.7	-0.7
MXZ	Matakaoa Point	1.56	282	P	Pn	09 54 45.0	-1.2
PUZ	Puketiti	1.57	264	P	Pn	09 54 45.5	-0.7
CNGZ	Carnagh Statio	1.69	250	P	Pn	09 54 48.2	+0.2
PKGZ	Pakihiroa	1.70	270	P	Pn	09 54 47.3	-0.9
TWGZ	Tauwhareparae	1.80	261	P	Pn	09 54 48.7	-0.7
HAZ	Te Kaha	1.94	274	P	Pn	09 54 50.8	-0.6
TKGZ	Te Karaka	1.95	254	P	Pn	09 54 51.4	-0.1
RUGZ	Raukumara Rang	2.02	268	P	Pn	09 54 51.7	-0.8
RIGZ	Rimuhau	2.10	247	P	Pn	09 54 53.6	0.0
PRGZ	Paritu Road	2.10	241	P	Pn	09 54 54.1	+0.5
MWZ	Matawai	2.17	258	P	Pn	09 54 53.9	-0.7
MHGZ	Mahia Peninsul	2.20	235	P	Pn	09 54 55.4	+0.4
KNZ	Kokohu	2.29	240	P	Pn	09 54 56.3	+0.1
SNGZ	Shannon Statio	2.43	248	P	Pn	09 54 58.3	+0.1
URZ	Urewera	2.49	261	P	Pn	09 54 58.9	0.0
RTZ	Ruatahuna	2.65	254	P	Pn	09 55 01.7	+0.4
RAHZ	Arahi	2.67	247	P	Pn	09 55 01.6	+0.2
MUGZ	Murupara	2.78	257	P	Pn	09 55 02.9	0.0
MTHZ	Maungataniwha	2.82	250	P	Pn	09 55 03.7	+0.1
ARHZ	Aropaoanui	2.87	241	P	Pn	09 55 05.1	+0.9
NMHZ	Naumai	2.94	245	P	Pn	09 55 05.4	+0.3
TARZ	Mount Tarawera	2.96	263	P	Pn	09 55 05.3	-0.1
RRRZ	Republican Roa	2.96	261	P	Pn	09 55 05.2	-0.3
MRHZ	Matea Rd	3.13	252	P	Pn	09 55 08.1	+0.2
MCHZ	McNeill Hill	3.16	240	P	Pn	09 55 08.6	+0.4
BKZ	Black Stump Fm	3.19	246	P	Pn	09 55 08.4	-0.1
KAHZ	Kahuranaki	3.22	233	P	Pn	09 55 09.2	+0.2
KWHZ	Kaweka Forest	3.34	242	P	Pn	09 55 10.6	-0.1
KRHZ	Kereru	3.48	239	P	Pn	09 55 12.3	-0.3
KUTZ	Kaahu Road	3.52	259	P	Pn	09 55 12.7	-0.4
BHHZ	Black Hill Sta	3.62	243	P	Pn	09 55 14.4	-0.1
WPHZ	Waipukurau	3.65	233	P	Pn	09 55 14.3	-0.6
PRHZ	Porangahau	3.65	229	P	Pn	09 55 14.3	-0.6
PNHZ	Pukenui	3.73	236	P	Pn	09 55 15.6	-0.4
NTVZ	North Tongarir	3.76	250	P	Pn	09 55 16.5	0.0
OTVZ	Oturere	3.79	249	P	Pn	09 55 16.8	-0.2
MOVZ	Moawhango	3.81	246	P	Pn	09 55 17.5	+0.3
SNVZ	South Ngauruho	3.82	249	P	Pn	09 55 17.2	-0.1
TSZ	Takapari Road	3.96	236	P	Pn	09 55 18.0	-1.1
DVHZ	Dannevirke	3.96	232	P	Pn	09 55 18.3	-0.8
MKAZ	Moumakai	4.11	280	P	Pn	09 55 20.4	-0.8
PRWZ	Pori Road	4.23	230	P	Pn	09 55 22.1	-0.8
POWZ	Post Office Ro	4.26	233	P	Pn	09 55 23.1	-0.2
HIZ	Hauiti	4.28	260	P	Pn	09 55 23.6	+0.2
TIWZ	Tintock	4.42	228	P	Pn	09 55 24.4	-1.1
MRZ	Mangatainoka R	4.53	231	P	Pn	09 55 25.5	-1.6
TMWZ	Te Maipa	4.63	225	P	Pn	09 55 26.8	-1.5
CAW	Cannon Point	5.11	230	P	Pn	09 55 33.3	-1.7
CTZ	Chatham Island	6.29	159	P	Pn	09 55 54.2	+3.1
CTZ				S	Sn	09 57 00.9	-1.9

*HEL **02** 09:58:45.2±0.3, 64°.79N×30°.98E, h0km, ML2.0, Explosion*
*BER **02** 09:58:46.1±2.1, 64°.82N×31°.12E, h0km, ML1.9, ML2.0(HEL), Suspected explosion*
*KOLA **02** 09:58:46.9, 64°.84N×30°.63E, h0km, ML2.5*
*NAO **02** 09:58:46.8±1.5, 64°.84N×30°.61E, ML2.6*
*IDC **02** 09:58:48.0±2.5, 64°.78N×30°.28E, h0km, mbtmp2.9/4, ML2.3/4, Error ellipse: s-maj=39.3km s-min=8.6km az=100.0*
ISC 02 09:58:44.5±0.9**, 64°.85N**±0°.04×**30°.56E**±0°.05**, h0**km**, n38, σ1s.33**/53**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RMF	Romuvaara	0.69	204	*e*P	Pg	09 58 57.8	+0.1
KU6	Riekki	1.22	347	*e*P	Pb	09 59 09.0	+0.6
KU6				*e*S	Sb	09 59 25.4	+0.8
KU6	Riekki	1.22	347	*e*P	Pb	09 59 09.0	+0.6
KU6				*e*S	Sb	09 59 25.4	+0.8
MSF	Maaselka	1.24	330	*e*P	Pb	09 59 09.5	+0.6
MSF	Maaselka	1.24	330	*e*P	Pb	09 59 09.5	+0.6
JOF	Joensuu	1.96	170	*e*P	Pn	09 59 18.5	-0.6
JOF	Joensuu	1.96	170	*e*P	Pn	09 59 18.5	-0.6
OUL	Oulu	2.00	279	*e*P	Pb	09 59 22.2	+0.6
OUL				*e*S	Sg	09 59 49.4	+0.7
OUL				MSG		09 59 52.1	
	comp=Z,12nm,0.1s						
OUL	Oulu	2.00	279	*e*P	Pb	09 59 22.2	+0.6
OUL				*e*S	Sg	09 59 49.4	+0.7
OUL				MSG		09 59 52.1	
	comp=Z,12nm,0.1s						
OBF4	Vikkela, Lumij	2.33	272	*e*P	Pb	09 59 27.4	0.0
OBF4				MSG		10 00 03.5	
	comp=Z,4.6nm,0.1s						
OBF4	Vikkela, Lumij	2.33	272	*e*P	Pb	09 59 27.4	0.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OBF4				eS	Sg	09 59 58.7	-0.7
OBF4				MSG		10 00 03.5	
	comp=Z,4.6nm,0.1s						
OUF	**Merijarvi**	**2.56**	**262**	eP	**Pb**	**09 59 30.6**	**-0.6**
OUF				MSG		10 00 07.4	
	comp=Z,5.6nm,0.1s						
OUF	**Merijarvi**	**2.56**	**262**	eP	**Pb**	**09 59 30.6**	**-0.6**
OUF				MSG		10 00 07.4	
	comp=Z,5.6nm,0.1s						
RNF	**Rovaniemi**	**2.58**	**315**	eP	**Pb**	**09 59 30.9**	**-0.7**
RNF				eS	**Sb**	**10 00 04.3**	**+0.5**
RNF	**Rovaniemi**	**2.58**	**315**	eP	**Pb**	**09 59 30.9**	**-0.7**
RNF				eS	**Sb**	**10 00 04.3**	**+0.5**
APA0	**Apatity Array**	**2.94**	**18**	Pn	**Pn**	**09 59 34.7**	**+2.2**
	baz=200,slow=12						
APA0				Lg	Lg	10 00 17.6	
	baz=192,slow=37						
APA0	**Apatity Array**	**2.94**	**18**	Sg	**Sg**	**10 00 17.6**	**-1.4**
	baz=192,slow=37						
APA0	**Apatity Array**	**2.94**	**18**	P	**Pn**	**09 59 34.6**	**+2.1**
APA0				S	**Sn**	**10 00 10.7**	**+2.2**
LVZ	**Lovozero**	**3.48**	**26**	P	**Pn**	**09 59 41.5**	**+1.6**
LVZ				S	**Sn**	**10 00 21.4**	**-0.3**
FIA0	**FINESS Array S**	**3.98**	**213**	Pn	**Pn**	**09 59 48.1**	**+1.4**
	baz=35,slow=14						
FIA0				Lg	Lg	10 00 48.0	
	baz=23,slow=37						
FIA0	**FINESS Array S**	**3.98**	**213**	Pn	**Pn**	**09 59 48.1**	**+1.4**
	baz=35,slow=14						
FINES	**FINESS Array B**	**3.98**	**213**	Pn	**Pn**	**09 59 47.9**	**+1.3**
	comp=Z,0.5nm,0.3s,baz=39,slow=13,SNR=6.8						
FINES				Pg	**Pb**	**09 59 56.4**	**+1.0**
	comp=Z,0.5nm,0.3s,baz=25,slow=14,SNR=4.3						
FINES				Lg	Lg	10 00 47.7	
	comp=Z,1.7nm,0.3s,baz=34,slow=28,SNR=16						
FINES				Rg	Rg	10 01 07.4	
	comp=Z,21nm,1.1s,baz=34,slow=28,SNR=10						
	comp=Z,0.5nm,0.3s						
PRVG	**Vayda Guba**	**4.96**	**7**	P	**Pn**	**10 00 01.0**	**+0.8**
PRVG				S	**Sn**	**10 00 57.5**	**-0.7**
KTK1	**Kautokeino**	**5.08**	**329**	eP	**Pn**	**10 00 03.6**	**+1.8**
KTK1				eS	**Sn**	**10 01 00.3**	**-0.7**
KTK1				IAML		10 01 27.8	
	comp=Z,2.2nm,0.4s						
ARA0	**ARCESS Array S**	**5.10**	**340**	Pn	**Pn**	**10 00 03.7**	**+1.6**
	baz=153,slow=14						
ARA0				Sn	**Sn**	**10 01 00.7**	**-1.0**
	baz=158,slow=28						
ARA0				Lg	Lg	10 01 22.4	
	baz=149,slow=37						
ARA0	**ARCESS Array S**	**5.10**	**340**	Pn	**Pn**	**10 00 03.7**	**+1.6**
	baz=153,slow=14						
ARA0				IAML		10 01 00.6	
	comp=Z,2.3nm,0.8s						
ARA0				Sn	**Sn**	**10 01 00.7**	**-1.0**
	baz=158,slow=28						
ARCES	**ARCESS Array B**	**5.10**	**340**	Pn	**Pn**	**10 00 03.9**	**+1.7**
	comp=Z,0.5nm,0.3s,baz=154,slow=14,SNR=50						
ARCES				Sn	**Sn**	**10 01 01.4**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=156,slow=26,SNR=8.7						
ARCES				Lg	Lg	10 01 23.6	
	comp=Z,0.6nm,0.3s,baz=140,slow=36,SNR=3.8						
	comp=Z,1.3nm,0.2s						
ARCES	**ARCESS Array B**	**5.10**	**340**	P	**Pn**	**10 00 03.8**	**+1.6**
ARCES				S	**Sn**	**10 01 00.8**	**-0.8**
SALU	**Saltoluokta**	**5.52**	**303**	eP	**Pn**	**10 00 09.8**	**+1.9**
I37NO	**I37NO**	**6.32**	**317**	i		10 35 50.0	
	baz=130,slow=321,SNR=5.9						
HAMF	**Hammerfest**	**6.38**	**339**	eP	**Pn**	**10 00 18.9**	**-0.7**
HAMF				IAML		10 02 04.4	
	comp=Z,4.3nm,0.7s						
HFS	**Hagfors**	**9.11**	**247**	Pn	**Pn**	**10 00 54.8**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=62,slow=13,SNR=0.9						
HFS				Sn	Sn	10 02 28.5	-12
	comp=Z,0.1nm,0.3s,baz=194,slow=36,SNR=1.5						
HFS				Lg	Lg	10 03 24.9	
	comp=Z,0.2nm,0.3s,baz=64,slow=31,SNR=3.7						
	comp=Z,0.2nm,0.3s						
HFS	**Hagfors**	**9.11**	**247**	Pn	**Pn**	**10 00 58.5**	**+1.5**
	baz=52,slow=12						
HFS	**Hagfors**	**9.11**	**247**	Pn	**Pn**	**10 00 58.5**	**+1.5**
	baz=52,slow=12						
NB2	**NORSAR Subarra**	**9.59**	**255**	Pn	**Pn**	**10 01 05.7**	**+2.0**
NB2	**NORSAR Subarra**	**9.59**	**255**	Pn	**Pn**	**10 01 05.7**	**+2.0**
NOA	**NORSAR Array B**	**9.59**	**255**	Pn	**Pn**	**10 01 02.0**	**-1.7**
	baz=62,slow=14,SNR=1.2						
	comp=Z,0.2nm,0.6s						
SPA0	**Spitsbergen Ar**	**14.05**	**348**	Pn	**Pn**	**10 02 01.0**	**-3.5**
	baz=161,slow=16						

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*TUL **02** 10:21:31.9±1.0, 36°46N±0°01×98°186W±0°009, h7km±5km, ML2.5, mb_Lg2.4/31(NEIC), Error ellipse: s-maj=1.7km s-min=1.1km az=182.0*

NEIC 02 10:21:31.9±0.5, 36°46N±0°01×98°18W±0°01, h12km±4km, Error ellipse: s-maj=1.9km s-min=1.2km az=156.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FNO	**Franklin**	**1.35**	**152**	Pn	Pn	10 21 56.8	+0.1
WMOK	**Wichita Mounta**	**1.79**	**196**	Pn	Pn	10 22 03.6	+1.0
X34A	**Smith Ranch, M**	**1.87**	**171**		Pn	10 22 04.7	+0.9
X34A				IAmb_Lg		10 22 35.0	
	comp=Z,16nm,0.7s						
TUL1	**Leonard**	**2.00**	**105**	Pn	Pn	10 22 06.9	+1.3
TUL1				IAmb_Lg		10 22 39.6	
	comp=Z,17nm,0.8s						
R32A	**Long Quarter,**	**2.01**	**348**	Pn	Pb	10 22 07.7	-0.7
X37A	**Clayton**	**2.95**	**128**	IAmb_Lg		10 23 13.1	
	comp=Z,12nm,0.7s						
AMTX	**Amarillo**	**3.26**	**242**	IAmb_Lg		10 23 15.1	
	comp=Z,8.5nm,0.8s						
W39A	**Magazine**	**3.79**	**108**	IAmb_Lg		10 23 42.6	
	comp=Z,10nm,0.9s						
S39A	**Bolivar**	**4.07**	**71**	IAmb_Lg		10 23 40.7	
	comp=Z,6.7nm,0.7s						
MIAR	**Mount Ida**	**4.21**	**116**	IAmb_Lg		10 23 54.8	
	comp=Z,8.2nm,0.8s						
U40A	**Yellville**	**4.29**	**90**	IAmb_Lg		10 23 54.9	
	comp=Z,6.2nm,0.7s						
WHAR	**Wooly Hollow**	**4.92**	**102**	IAmb_Lg		10 24 09.7	
	comp=Z,6.1nm,0.8s						
FCAR	**Ozark Folk Cen**	**4.93**	**95**	IAmb_Lg		10 24 19.7	
	comp=Z,6.1nm,1.1s						
W41B	**Gary Mavity, V**	**4.99**	**103**	IAmb_Lg		10 24 21.9	
	comp=Z,7.1nm,1.1s						
T25A	**Trinidad**	**5.05**	**280**	IAmb_Lg		10 24 16.6	
	comp=Z,8.0nm,1.0s						
P40A	**Paris**	**5.73**	**56**	IAmb_Lg		10 24 35.0	
	comp=Z,7.6nm,0.8s						
Q24A	**Divide**	**6.07**	**296**	IAmb_Lg		10 24 44.7	
	comp=Z,4.8nm,0.9s						
JCT	**Junction City**	**6.12**	**193**	IAmb_Lg		10 24 55.3	
	comp=Z,6.2nm,0.8s						
PBMO	**Poplar Bluff**	**6.24**	**85**	IAmb_Lg		10 24 56.3	
	comp=Z,5.9nm,0.9s						
N23A	**Red Feather La**	**7.52**	**308**	IAmb_Lg		10 25 33.6	
	comp=Z,6.2nm,0.8s						

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*IDC **02** 10:25:48.2±0.6, 52°82N×173°66E, h0km, mb4.0/15, mbtmp4.0/18, ML3.1/2, MS3.3/16, Error ellipse: s-maj=18.5km s-min=7.6km az=14.0*

*NEIC **02** 10:25:52.8±2.0, 52°9N±0°1×173°53E±0°09, h27km±6km, mb4.2/79, Error ellipse: s-maj=17.1km s-min=5.3km az=199.0*

*ANF **02** 10:25:57.5±2.2, 53°29N×173°26E, h61km±14km, ML4.3/42, Error ellipse: s-maj=17.0km s-min=8.8km az=65.0*

ISC 02 10:25:51.4±0.5, 52°94N±0°09×173°51E±0°05, h18km, n237, σ0s77/191, mb4.2/49, MS3.2/12, Near Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHEM	**Shemya Is, Ala**	**0.41**	**120**	Pn	**Pg**	**10 25 59.6**	**-0.3**
	792nm,0.3s,baz=21,slow=3.6,SNR=925						
SHEM				Sn	**Sb**	**10 26 07.0**	**+0.9**
	1µm,0.3s,baz=196,slow=22,SNR=36						
SMY	**Shemya**	**0.41**	**120**	Pg	**Pg**	**10 25 59.6**	**-0.3**
ADK	**Adak**	**6.09**	**96**	Pn	**Pn**	**10 27 21.4**	**+0.9**
PEA0B	**Petropavlovsk-**	**9.53**	**277**	Pn	**Pn**	**10 28 08.5**	**+0.8**
PETK	**Petropavlovsk-**	**9.53**	**277**	Pn	**Pn**	**10 28 08.0**	**+0.3**
	0.9nm,0.3s,baz=109,slow=19,SNR=7.8						
PETK				LR	LR	10 31 34.4	
	comp=Z,76nm,20.4s,baz=87,slow=36						
	2.3nm,0.4s						
UNV	**Unalaska Valle**	**11.96**	**78**	Pn	**Pn**	**10 28 40.5**	**-0.4**
AKUT	**Akutan**	**12.38**	**76**	Pn	**Pn**	**10 28 46.9**	**+0.4**
MA2	**Magadan**	**14.23**	**307**	LR	LR	10 33 48.7	
	comp=Z,62nm,21.3s,baz=102,slow=33						
SEY	**Seymchan**	**14.96**	**320**	Pn	**Pn**	**10 29 21.8**	**+0.2**
	0.1nm,0.3s,baz=29,slow=22,SNR=2.0						
SEY				LR	LR	10 34 43.2	
	comp=Z,61nm,18.1s,baz=164,slow=35						
	1.5nm,0.8s						
SDPT	**Sand Point**	**15.40**	**71**	Pn	**Pn**	**10 29 26.5**	**-1.0**
SDPT				IAmb	IAmb	10 29 27.9	
	comp=Z,16nm,1.0s						
CNBA	**Chernabura Isl**	**15.94**	**72**	Pn	**Pn**	**10 29 34.3**	**-0.2**
O16K	**Kokwok River B**	**17.02**	**56**	P	**Pn**	**10 29 49.7**	**+1.5**
	baz=261						
N18K	**Kilae Creek**	**18.31**	**53**	P	**P**	**10 30 05.3**	**+1.0**
N18K	**Kilae Creek**	**18.31**	**53**	P	**P**	**10 30 05.4**	**+1.2**
	baz=260						
P18K	**Big Mountain,**	**18.44**	**57**	P	**P**	**10 30 06.0**	**+0.4**
P18K	**Big Mountain,**	**18.44**	**57**	P	**Pn**	**10 30 07.1**	**+1.3**
	baz=264						
O18K	**Koktuh Hills**	**18.51**	**56**	P	**P**	**10 30 06.7**	**+0.3**
O18K	**Koktuh Hills**	**18.51**	**56**	P	**Pn**	**10 30 07.4**	**+0.8**
	baz=263						
SVW2	**Sparrevohn**	**18.55**	**52**	P	**Pn**	**10 30 08.8**	**+1.8**
TTA	**Tatalina**	**18.83**	**46**	P	**P**	**10 30 10.2**	**+0.3**
	baz=253						
N19K	**Bonanza Creek**	**19.02**	**53**	P	**Pn**	**10 30 14.2**	**+1.4**
	baz=261						
L19K	**White Mountain**	**19.13**	**49**		**P**	**10 30 12.9**	**-0.3**
L19K	**White Mountain**	**19.13**	**49**	P	**P**	**10 30 13.0**	**-0.3**
	baz=257						
Q19K	**Cape Douglas,**	**19.21**	**59**	P	**P**	**10 30 14.5**	**+0.4**
	baz=267						
M19K	**Big River Lodg**	**19.28**	**50**	P	**Pn**	**10 30 16.1**	**+0.3**
M19K	**Big River Lodg**	**19.28**	**50**	P	**P**	**10 30 14.2**	**-0.6**
	baz=258						
OHAK	**Old Harbor**	**19.36**	**64**	P	**P**	**10 30 15.7**	**0.0**
OHAK				IAmb	IAmb	10 30 26.2	
	comp=Z,16nm,1.1s						
OHAK	**Old Harbor**	**19.36**	**64**	P	**P**	**10 30 16.5**	**+0.8**
	baz=273						
L20K	**Farewell, AK**	**19.65**	**48**	P	**P**	**10 30 19.8**	**+0.9**
	baz=257						
KDAK	**Kodiak Island**	**19.73**	**62**	P	**P**	**10 30 20.2**	**+0.5**
	comp=Z,7.0nm,0.4s,baz=282,slow=7.3,SNR=18						
KDAK				LR	LR	10 37 41.7	
	comp=Z,119nm,19.8s,baz=279,slow=36						
KDAK	**Kodiak Island**	**19.73**	**62**	P	**Pn**	**10 30 21.3**	**0.0**
	baz=272						
K20K	**Telida**	**19.80**	**46**	P	**P**	**10 30 21.8**	**+1.3**
K20K	**Telida**	**19.80**	**46**	P	**P**	**10 30 21.2**	**+0.8**
	baz=254						
M20K	**Styx River**	**19.86**	**50**	P	**Pn**	**10 30 24.0**	**+1.2**
M20K	**Styx River**	**19.86**	**50**	P	**P**	**10 30 22.1**	**+0.8**
	baz=260						
J20K	**Nowinta River**	**20.02**	**43**	P	Pn	10 30 24.6	0.0
J20K				IAmb	IAmb	10 30 27.0	
	comp=Z,18nm,1.1s						
J20K	**Nowinta River**	**20.02**	**43**	P	**P**	**10 30 23.9**	**+1.0**
	baz=252,SNR=9.8						
SPCR	**Spurr Chakacha**	**20.17**	**52**	P	**P**	**10 30 25.8**	**+1.1**
	baz=262						
SPU	**Mount Spurr**	**20.24**	**52**	P	**P**	**10 30 27.0**	**+1.7**
HOM	**Homer**	**20.28**	**57**	P	**P**	**10 30 27.1**	**+1.4**
	baz=267						
CNPM	**China Poot**	**20.48**	**57**		**P**	**10 30 28.2**	**+0.2**
PPLA	**Purkeypile**	**20.50**	**47**	P	**P**	**10 30 28.2**	**-0.1**
	baz=258						
SKT	**Skwentna**	**20.62**	**50**	P	**P**	**10 30 29.7**	**+0.2**
	baz=261						
CAPN	**Captain Cook N**	**20.62**	**54**	P	**P**	**10 30 29.7**	**+0.3**
	baz=265						
CAST	**Castle Rocks**	**20.68**	**46**	P	**P**	**10 30 31.3**	**+1.3**
	baz=257						
CHUM	**Lake Minchumin**	**20.70**	**45**	P	**P**	**10 30 30.8**	**+0.6**
	baz=255,SNR=5.7						
BRSE	**Bradley Lake S**	**20.74**	**57**	P	**P**	**10 30 31.5**	**+0.7**
	baz=268						
IMAR	**Indian Mountai**	**20.82**	**39**	P	Pn	10 30 34.4	+0.3
SUA	**Susitna One**	**20.91**	**52**	P	**P**	**10 30 33.6**	**+1.0**
SUA				IAmb	IAmb	10 30 39.0	
	comp=Z,12nm,1.0s						
SUA	**Susitna One**	**20.91**	**52**	P	**P**	**10 30 33.4**	**+0.8**
	baz=263						
H21K	**Melozitna Rive**	**21.06**	**40**	P	**P**	**10 30 36.3**	**+2.1**
H21K				IAmb	IAmb	10 30 39.9	
	comp=Z,9.0nm,0.9s						
H21K	**Melozitna Rive**	**21.06**	**40**	P	**P**	**10 30 34.6**	**+0.5**
	baz=250,SNR=8.7						
KTH	**Kantishna Hill**	**21.21**	**46**	IAmb	IAmb	10 30 41.2	
	comp=Z,14nm,0.8s						
I21K	**Tanana**	**21.22**	**41**	P	**P**	**10 30 36.6**	**+0.8**
	baz=252						
M22K	**Willow**	**21.24**	**51**	P	**P**	**10 30 36.3**	**+0.2**
	baz=263						
BPAW	**Bear Paw Mtn.**	**21.32**	**45**	P	**P**	**10 30 35.7**	**-1.2**
BPAW	**Bear Paw Mtn.**	**21.32**	**45**	P	**P**	**10 30 37.7**	**+0.8**
	baz=256						
RC01	**Rabbit Creek A**	**21.35**	**53**	P	**P**	**10 30 38.6**	**+1.4**
RC01				IAmb	IAmb	10 31 06.2	
	comp=Z,17nm,1.2s						
TRF	**Thorofare Moun**	**21.47**	**46**	P	**P**	**10 30 40.4**	**+1.7**
TRF				IAmb	IAmb	10 30 43.6	
	comp=Z,13nm,0.9s						
TRF	**Thorofare Moun**	**21.47**	**46**	P	**P**	**10 30 38.9**	**+0.2**
	baz=259,SNR=9.6						
MLY	**Manley**	**21.68**	**42**	P	**P**	**10 30 41.3**	**+0.5**
MLY	**Manley**	**21.68**	**42**	P	**P**	**10 30 41.5**	**+0.6**
	baz=254,SNR=10						
PMR	**Palmer**	**21.69**	**52**	P	**P**	**10 30 41.1**	**+0.2**
	baz=264						
KNK	**Knik Glacier**	**21.99**	**52**	P	**P**	**10 30 44.3**	**0.0**
	baz=266						
SML	**Sawmill**	**22.09**	**51**	P	**P**	**10 30 44.8**	**-0.5**
	baz=265,SNR=11						
MCK	**McKinley**	**22.12**	**46**	IAmb	IAmb	10 30 48.7	
	comp=Z,11nm,0.7s						
MCK	**McKinley**	**22.12**	**46**	P	**P**	**10 30 45.4**	**-0.1**
	baz=259						
WAT1	**Susitna Watana**	**22.13**	**49**	P	**P**	**10 30 44.7**	**-0.9**
	baz=262						
ASAJ	**Asahikawa**	**22.15**	**259**	LR	LR	10 40 44.8	
	comp=Z,42nm,19.5s,baz=18,slow=40						
NEA2	**Nenana**	**22.25**	**44**	IAmb	IAmb	10 30 51.0	
	comp=Z,6.1nm,0.8s						
NEA2	**Nenana**	**22.25**	**44**	P	**P**	**10 30 47.0**	**+0.1**
	baz=257						
I23K	**Minto, Yukon-K**	**22.27**	**42**	IAmb	IAmb	10 30 49.6	
	comp=Z,8.3nm,1.1s						
I23K	**Minto, Yukon-K**	**22.27**	**42**	P	**P**	**10 30 47.0**	**-0.1**
	baz=256						
M23K	**Glacier View**	**22.38**	**51**	P	**P**	**10 30 48.1**	**-0.3**
	baz=265,SNR=8.2						
WAT6	**Susitna Watana**	**22.46**	**49**	P	**P**	**10 30 48.9**	**-0.5**
	baz=263						
SCM	**Sheep Creek Mo**	**22.57**	**51**	P	**P**	**10 30 49.9**	**-0.5**
	baz=266,SNR=6.6						
WRH	**Wood River Hil**	**22.64**	**44**	IAmb	IAmb	10 30 53.6	
	comp=Z,7.4nm,0.7s						
MDM	**Murphy Dome**	**22.69**	**43**	IAmb	IAmb	10 30 54.3	
	comp=Z,8.7nm,0.8s						
DHY	**Denali Highway**	**22.70**	**48**	P	**P**	**10 30 51.9**	**+0.1**
	baz=263						
CCB	**Clear Creek Bu**	**22.79**	**44**	IAmb	IAmb	10 30 55.0	
	comp=Z,6.3nm,0.8s						
TCOL	**CIGO, UAF Yank**	**22.82**	**43**	P	**P**	**10 30 53.1**	**+0.2**
	baz=258,SNR=7.7						
COLA	**College**	**22.82**	**43**	P	**P**	**10 30 53.3**	**+0.3**
COLA	**College**	**22.82**	**43**	P	**P**	**10 30 52.7**	**-0.3**
	baz=258						
FID	**Port Fidalgo**	**22.91**	**54**	P	**P**	**10 30 52.9**	**-1.1**
H24K	**Noodor Dome**	**23.05**	**41**	IAmb	IAmb	10 31 01.7	
	comp=Z,8.6nm,1.1s						
H24K	**Noodor Dome**	**23.05**	**41**	P	**P**	**10 30 54.8**	**-0.6**
	baz=256,SNR=6.3						
POKR	**Poker Plat Res**	**23.05**	**43**	P	**P**	**10 30 54.8**	**-0.6**
	baz=258,SNR=7.2						
HDA	**Harding Lake**	**23.11**	**45**	P	**P**	**10 30 54.9**	**-1.1**
	baz=260						
M24K	**Tolsona, Glenn**	**23.14**	**51**	P	**P**	**10 30 56.1**	**-0.2**
	baz=266,SNR=5.5						
IL31		**23.21**	**44**	IAmb	IAmb	10 30 58.3	
	comp=Z,4.6nm,0.8s						
ILAR	**Eielson Array**	**23.21**	**44**	P	**P**	**10 30 56.5**	**-0.5**
	comp=Z,3.3nm,0.7s,baz=251,slow=8.5,SNR=47						
	comp=Z,3.3nm,0.7s						
KLU	**Klutina**	**23.21**	**52**	P	**P**	**10 30 57.4**	**+0.3**
KLU				IAmb	IAmb	10 30 59.4	
	comp=Z,5.8nm,0.5s						
KLU	**Klutina**	**23.21**	**52**	P	**P**	**10 30 56.8**	**-0.3**
	baz=268						
EYAK	**Cordova Ski Ar**	**23.27**	**55**	P	**P**	**10 30 57.3**	**-0.2**
	baz=270						
TOLK	**Toolik Lake Re**	**23.37**	**34**	P	**P**	**10 30 58.9**	**+0.3**
TOLK				IAmb	IAmb	10 31 00.5	
	comp=Z,8.1nm,0.9s						
TOLK	**Toolik Lake Re**	**23.37**	**34**	P	**P**	**10 30 57.5**	**-1.1**
	baz=247						
K24K	**Donnelly Dome**	**23.51**	**47**	P	**P**	**10 30 59.2**	**-0.9**
	baz=263,SNR=5.7						
PAX	**Paxson**	**23.55**	**49**	IAmb	IAmb	10 31 02.4	
	comp=Z,17nm,1.4s						
PAX	**Paxson**	**23.55**	**49**	P	**P**	**10 30 59.7**	**-0.8**
	baz=265,SNR=8.6						
HARP	**HAARP**	**23.64**	**50**	P	**P**	**10 31 00.9**	**-0.3**
	baz=266						
J25K	**Salcha River,**	**23.82**	**45**	P	**P**	**10 31 02.2**	**-0.8**
	baz=261						
BMRM	**Bremner River**	**23.83**	**54**	P	**P**	**10 31 02.7**	**-0.5**
	baz=270						
N25K	**Chitina, Valde**	**23.85**	**52**	IAmb	IAmb	10 31 04.4	
	comp=Z,6.4nm,0.7s						
N25K	**Chitina, Valde**	**23.85**	**52**	P	**P**	**10 31 02.6**	**-0.8**
	baz=269						
RIDG	**Independent Ri**	**23.91**	**47**	IAmb	IAmb	10 31 08.4	
	comp=Z,5.4nm,0.9s						
RIDG	**Independent Ri**	**23.91**	**47**	P	**P**	**10 31 02.6**	**-1.3**
	baz=264						
DOT	**Dot Lake**	**24.25**	**47**	P	**P**	**10 31 06.3**	**-0.7**
DOT				IAmb	IAmb	10 31 09.0	
	comp=Z,4.7nm,0.7s						
SCRK	**Sand Creek**	**24.32**	**46**		**P**	**10 31 07.2**	**-0.6**
SCRK				IAmb	IAmb	10 31 08.8	
	comp=Z,6.2nm,0.7s						
SCRK	**Sand Creek**	**24.32**	**46**	P	**P**	**10 31 06.7**	**-1.0**
	baz=264,SNR=11						
MENT	**Mentasta**	**24.34**	**49**	IAmb	IAmb	10 31 10.4	
	comp=Z,5.9nm,0.7s						
L26K	**Log Cabin Wild**	**24.52**	**49**	P	**P**	**10 31 08.2**	**-1.2**
	baz=267						
J26L	**Joseph Creek**	**24.57**	**45**	IAmb	IAmb	10 31 10.7	
	comp=Z,4.3nm,0.8s						
J26L	**Joseph Creek**	**24.57**	**45**	P	**P**	**10 31 08.8**	**-1.2**
	baz=263,SNR=7.2						
MCARA	**McCarthy VSAT**	**24.60**	**53**	P	**P**	**10 31 09.7**	**-0.6**
	baz=271,SNR=6.7						
M26K	**Nabesna, AK**	**24.64**	**50**	P	**P**	**10 31 10.0**	**-0.6**
	baz=268						
M27K	**Edge Creek, AK**	**25.16**	**50**	P	**P**	**10 31 14.9**	**-0.5**
	baz=270,SNR=10						
K27K	**Chicken**	**25.16**	**46**	P	**P**	**10 31 14.8**	**-0.5**
	baz=266						
L27K	**Beaver Creek,**	**25.21**	**49**	IAmb	IAmb	10 31 18.7	
	comp=Z,7.6nm,0.8s						
L27K	**Beaver Creek,**	**25.21**	**49**	P	**P**	**10 31 15.4**	**-0.3**
	baz=268,SNR=13						
CTG	**Chitna Glacier**	**25.43**	**54**	P	**P**	**10 31 17.5**	**-0.4**
	baz=273						
BVCY	**Beaver Creek**	**25.64**	**50**	P	**P**	**10 31 19.0**	**-0.6**
	baz=270						
YUK3	**Moose Creek**	**25.83**	**52**	P	**P**	**10 31 21.2**	**-0.3**
	baz=272						
PINM	**Pinnacle**	**26.02**	**56**	P	**P**	**10 31 22.9**	**-0.2**
	baz=276						
YUK8	**Steele Glacier**	**26.18**	**53**	P	**P**	**10 31 24.7**	**-0.1**
	baz=274						
KLR	**Kul'dur**	**26.22**	**279**	LR	LR	10 41 40.6	
	comp=Z,58nm,18.6s,baz=234,slow=36						
DAWY	**Dawson**	**26.35**	**47**	P	**P**	**10 31 26.7**	**+0.7**
DAWY				IAmb	IAmb	10 31 29.7	
	comp=Z,4.1nm,0.8s						
DAWY	**Dawson**	**26.35**	**47**	P	**P**	**10 31 25.9**	**-0.1**
	baz=268,SNR=6.6						
HYT	**Haines Junctio**	**27.31**	**54**	IAmb	IAmb	10 31 36.5	
	comp=Z,4.7nm,0.8s						
HYT	**Haines Junctio**	**27.31**	**54**	P	**P**	**10 31 35.1**	**+0.3**
	baz=276						
EPYK	**Eagle Plains**	**27.61**	**42**	P	**P**	**10 31 36.5**	**-0.9**
	baz=266						
USRK	**Ussuriysk Ar.**	**28.48**	**269**	P	**P**	**10 31 45.2**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=124,slow=39,SNR=2.4						
USRK				LR	LR	10 43 25.5	
	comp=Z,63nm,19.4s,baz=194,slow=37						
	comp=Z,0.8nm,0.6s						
M31M	**Drury Creek, Y**	**28.66**	**50**	P	**P**	**10 31 47.0**	**+0.3**
	baz=276						
INK	**Inuvik**	**29.01**	**38**	P	**P**	**10 31 49.4**	**-0.3**
	baz=266						
FARO	**Faro, Yukon**	**29.15**	**50**	P	**P**	**10 31 50.6**	**-0.4**
	baz=277						
MJAR	**Matsushiro Arr**	**29.58**	**251**	LR	LR	10 42 34.5	
	comp=Z,23nm,21.1s,baz=155,slow=34						
P33M	**Teslin, Yukon**	**29.69**	**54**	IAmb	IAmb	10 31 58.0	
	comp=Z,5.2nm,1.0s						
P33M	**Teslin, Yukon**	**29.69**	**54**	P	**P**	**10 31 56.9**	**+0.9**
	baz=281						
MMPY	**Sheldon Lake,**	**30.07**	**49**	P	**P**	**10 31 59.5**	**+0.3**
	baz=278						
JHJ	**Hachijo jima 2**	**31.20**	**244**	LR	LR	10 45 24.3	
	comp=Z,31nm,18.1s,baz=283,slow=38						
DLBC	**Dease Lake**	**31.47**	**57**	LR	LR	10 45 24.8	
	comp=Z,71nm,19.0s,baz=288,slow=37						
DLBC	**Dease Lake**	**31.47**	**57**	P	**P**	**10 32 13.5**	**+1.8**
	baz=286						
T35M	**Bob Quinn**	**31.76**	**60**	P	**P**	**10 32 15.0**	**+0.9**
	baz=288						
H11N2	**WAKE ISLAND Hy**	**33.54**	**191**	T	T	11 07 42.5	
	baz=6.7,slow=76,SNR=201						
H11N3	**WAKE ISLAND Hy**	**33.55**	**191**	T	T	11 07 43.4	
	baz=6.7,slow=76,SNR=196						
H11N1	**WAKE ISLAND Hy**	**33.56**	**191**	T	T	11 07 43.8	
	baz=6.7,slow=76,SNR=232						
H11S1	**WAKE ISLAND Hy**	**34.77**	**191**	T	T	11 09 15.9	
	baz=6.4,slow=76,SNR=232						
H11S3	**WAKE ISLAND Hy**	**34.79**	**191**	T	T	11 09 22.8	
	baz=6.4,slow=76,SNR=209						
H11S2	**WAKE ISLAND Hy**	**34.79**	**191**	T	T	11 09 23.0	
	baz=6.4,slow=76,SNR=163						
KSRS	**Korea Array**	**35.01**	**262**	P	**P**	**10 32 43.4**	**+0.8**
	comp=Z,1.5nm,0.8s,baz=50,slow=7.5,SNR=5.7						
KSRS				LR	LR	10 47 06.0	
	comp=Z,15nm,19.9s,baz=235,slow=36						
	comp=Z,1.5nm,0.8s						
YKA	**Yellowknife Ar**	**37.59**	**46**	P	**P**	**10 33 04.3**	**0.0**
	comp=Z,1.8nm,0.7s,baz=290,slow=8.3,SNR=12						
	comp=Z,1.8nm,0.7s						
E04D	**Cinebar**	**40.56**	**72**	P	**P**	**10 33 30.3**	**+0.9**
	baz=304						
SONM	**Songino Array**	**41.69**	**291**	P	**P**	**10 33 39.7**	**+0.9**
	comp=Z,2.3nm,0.7s,baz=60,slow=8.1,SNR=13						
	comp=Z,2.3nm,0.7s						
SONM	**Songino Array**	**41.69**	**291**	IAmb	IAmb	10 33 40.9	
	comp=Z,1.6nm,0.7s						
G05D	**Wamic, OR**	**42.02**	**73**	P	**P**	**10 33 42.1**	**+0.6**
	baz=306						
I04A	**Tendick Farm,**	**42.22**	**76**	P	**P**	**10 33 43.2**	**+0.1**
	baz=307						
NEW	**Newport**	**42.71**	**67**	LR	LR	10 50 43.3	
	comp=Z,23nm,19.0s,baz=316,slow=35						
NEW	**Newport**	**42.71**	**67**	P	**P**	**10 33 47.1**	**0.0**
	baz=304						
J04D	**Umpqua Nationa**	**42.72**	**76**	P	**P**	**10 33 47.3**	**-0.1**
	baz=307						
J05D	**Fort Rock, OR**	**43.21**	**76**	P	**P**	**10 33 51.5**	**+0.2**
	baz=307						
L04D	**Klamath Falls**	**43.22**	**78**	P	**P**	**10 33 52.1**	**+0.7**
	baz=308						
WALA	**Waterton Lakes**	**44.05**	**65**	P	**P**	**10 33 57.6**	**-0.3**
MSO	**Missoula**	**45.30**	**67**	P	**P**	**10 34 07.5**	**-0.4**
	baz=306						
PAHR	**Pah Rah Range**	**46.51**	**78**	IAmb	IAmb	10 34 19.2	
	comp=Z,2.8nm,1.1s						
EGMT	**Eagleton**	**46.90**	**63**	IAmb	IAmb	10 34 32.3	
	comp=Z,3.5nm,0.8s						
EGMT	**Eagleton**	**46.90**	**63**	P	**P**	**10 34 19.8**	**-0.7**
	baz=307						
HLID	**Hailey**	**46.99**	**71**	P	**P**	**10 34 21.3**	**-0.1**
	baz=309						
BOZ	**Bozeman (W)**	**47.32**	**67**	IAmb	IAmb	10 34 24.3	
	comp=Z,2.3nm,0.9s						
BOZ	**Bozeman (W)**	**47.32**	**67**	P	**P**	**10 34 23.2**	**-0.8**
	baz=308						
NVAR	**Mina Array Bea**	**47.98**	**79**	P	**P**	**10 34 28.9**	**-0.2**

	comp=Z,0.9nm,0.8s,baz=290,slow=8.0,SNR=7.7						
	comp=Z,0.9nm,0.8s						
YHL	Hebgen Lake	48.03	68	IAmb	IAmb	10 34 31.0	
	comp=Z,4.3nm,1.0s						
ELK	Elko	48.29	75	LR	LR	10 53 56.5	
	comp=Z,32nm,18.5s,baz=286,slow=35						
H17A	Grant Village	48.65	68	P	P	10 34 35.5	+1.2
	baz=309						
RLMT	Red Lodge	48.93	66	P	P	10 34 36.8	+0.4
	baz=309						
LAO	LASA Array	49.62	63	P	P	10 34 41.8	+0.3
	baz=309						
R11A	Troy Canyon, C	49.64	77	P	P	10 34 41.9	0.0
	baz=312						
DUG	Dugway, Tooele	50.05	74	P	P	10 34 44.5	-0.5
	baz=311						
FURC	Furnace Creek,	50.14	80	P	P	10 34 46.0	+0.6
	baz=313						
TPNV	Topopah Spring	50.18	79	P	P	10 34 46.3	+0.3
	baz=313						
BW06	Boulder Array	50.26	69	P	P	10 34 45.4	-1.2
	baz=310						
PDAR	Pinedale Array	50.26	69	P	P	10 34 46.6	0.0
	comp=Z,0.9nm,0.6s,baz=299,slow=4.6,SNR=8.7						
	comp=Z,0.9nm,0.6s						
TMUT	Trail Mountain	51.58	73	IAmb	IAmb	10 34 58.2	
	comp=Z,3.4nm,1.0s						
LCMT	Little Creek M	51.92	77	IAmb	IAmb	10 35 00.9	
	comp=Z,3.7nm,1.3s						
K22A	Casper	52.03	67	P	P	10 34 59.5	-0.3
	baz=312						
SRU	San Rafael Swe	52.10	73	IAmb	IAmb	10 35 01.6	
	comp=Z,3.4nm,0.9s						
MDND	Maddock	52.37	58	P	P	10 35 01.8	-0.2
MDND	Maddock	52.37	58	P	P	10 35 01.6	-0.5
	baz=311						
ULM	Lac du Bonnet	52.69	54	P	P	10 35 02.8	-1.5
	comp=Z,3.4nm,0.8s,baz=287,slow=8.8,SNR=4.0						
ULM				LR	LR	10 58 11.9	
	comp=Z,37nm,18.2s,baz=322,slow=37						
	comp=Z,3.4nm,0.8s						
ULM	Lac du Bonnet	52.69	54	IAmb	IAmb	10 35 17.5	
	comp=Z,2.1nm,0.8s						
O20A	White River Ci	52.73	71	P	P	10 35 05.0	-0.1
	baz=312						
N23A	Red Feather La	53.52	68	P	P	10 35 11.1	+0.1
	baz=313						
PV13	Radium Mtn., P	53.72	73	P	P	10 35 12.1	-0.3
AGMN	Agassiz Nation	53.97	56	P	P	10 35 13.0	-0.8
	baz=312						
KURK	Kurchatov	54.43	309	P	P	10 35 16.7	-0.4
KURK				IAmb	IAmb	10 35 21.5	
	comp=Z,2.9nm,0.8s						
ISCO	Idaho Springs	54.45	69	P	P	10 35 18.1	+0.3
	baz=313						
S22A	4UR Ranch, Cre	55.15	72	P	P	10 35 23.1	+0.1
	baz=314						
MK31	Makanchi Array	55.28	303	P	P	10 35 22.3	-1.1
MKAR	Makanchi Array	55.28	303	P	P	10 35 22.3	-1.1
	comp=Z,0.6nm,0.5s,baz=57,slow=5.9,SNR=11						
	comp=Z,0.6nm,0.5s						
SDCO	Great Sand Dun	55.91	71	IAmb	IAmb	10 35 30.1	
	comp=Z,2.6nm,1.1s						
SDCO	Great Sand Dun	55.91	71	P	P	10 35 28.9	+0.5
	baz=314						
TUC	Tucson	56.63	79	P	P	10 35 35.0	+1.7
	baz=316						
KSCO	Kaye Shedlock'	56.67	68	P	P	10 35 34.4	+0.9
KSCO	Kaye Shedlock'	56.67	68	P	P	10 35 34.0	+0.5
	baz=314						
ECSD	EROS Data Cent	56.68	60	P	P	10 35 31.9	-1.5
	baz=314						
T25A	Trinidad	56.96	71	P	P	10 35 35.9	+0.2
	baz=315						
ANMO	Albuquerque	57.32	74	P	P	10 35 38.6	+0.3
	baz=316						
SPMN	Marine on St.	57.61	57	P	P	10 35 39.2	-0.7
	baz=315						
CBKS	Cedar Bluff	58.42	66	P	P	10 35 45.9	+0.2
	baz=315						
AMTX	Amarillo	60.12	71	P	P	10 35 57.8	+0.1
	baz=316						
MSTX	Muleshoe	60.15	72	P	P	10 35 57.3	-0.5
	baz=317						
MNTX	Cornudas Mount	60.26	76	P	P	10 35 59.6	+1.0
	baz=317						
JFWS	Jewell Farm	60.54	57	P	P	10 35 59.3	-1.0
	baz=317						
SCHQ	Schefferville	61.57	35	P	P	10 36 06.1	-1.0
	comp=Z,4.0nm,0.8s,baz=312,slow=6.5,SNR=4.4						
	comp=Z,4.0nm,0.8s						
SCHQ	Schefferville	61.57	35	IAmb	IAmb	10 36 07.2	
	comp=Z,6.8nm,0.9s						
WMOK	Wichita Mounta	61.87	69	P	P	10 36 09.7	+0.3
	baz=317						
ABTX	Abilene, Hawle	62.92	71	P	P	10 36 17.2	+0.7
	baz=318						
TXAR	Lajitas Array	63.00	76	P	P	10 36 17.4	+0.2
	comp=Z,1.7nm,0.8s,baz=304,slow=3.8,SNR=20						
	comp=Z,1.7nm,0.8s						
CCM	Cathedral Cave	63.58	61	P	P	10 36 18.8	-1.9
	baz=318						
U40A	Yellville	63.97	64	P	P	10 36 22.4	-0.9
	baz=318						
SFIN	Lafayette	64.01	57	P	P	10 36 22.5	-1.0
	baz=319						
W39A	Magazine	64.32	65	P	P	10 36 25.3	-0.3
	baz=318						
JCT	Junction City	64.41	73	P	P	10 36 26.8	+0.4
	baz=318						
MIAR	Mount Ida	64.91	66	P	P	10 36 29.5	0.0
	baz=319						
W41B	Gary Mavity, V	65.17	64	P	P	10 36 30.2	-1.0
	baz=319						
X40A	Basin Creek Fa	65.36	65	P	P	10 36 32.3	-0.2
	baz=319						
CMAR	Chiang Mai Arr	66.21	269	P	P	10 36 39.1	+1.0
	comp=Z,1.1nm,0.5s,baz=22,slow=7.8,SNR=7.0						
	comp=Z,1.1nm,0.5s						
M53A	WI Miller and	66.37	52	P	P	10 36 38.1	-0.7
	baz=321						
LONY	Lake Ozonia	66.67	46	P	P	10 36 39.0	-1.7
	baz=323						
WVT	Waverly	66.82	61	P	P	10 36 41.4	-0.5
	baz=320						
O53A	New Philadelph	67.03	53	P	P	10 36 42.0	-1.1
	baz=321						
OXF	Oxford	67.21	63	P	P	10 36 43.9	-0.4
	baz=320						
SSPA	Standing Stone	68.31	51	P	P	10 36 50.4	-0.7
	baz=322						
WRA	Warramunga Arr	80.12	217	P	P	10 37 59.7	-0.4
	comp=Z,1.1nm,0.8s,baz=32,slow=6.2,SNR=5.3						
	comp=Z,1.1nm,0.8s						
BRTR	Keskin Array B	81.38	330	P	P	10 38 06.3	-0.6
	comp=Z,0.2nm,0.3s,baz=42,slow=2.5,SNR=1.5						
	comp=Z,0.2nm,0.3s						
ASAR	Alice Springs	83.70	216	P	P	10 38 18.2	-0.6
	comp=Z,0.4nm,0.7s,baz=17,slow=5.5,SNR=4.5						
	comp=Z,0.4nm,0.7s						
URZ	Urewera	90.88	177	LR	LR	11 17 41.5	
	comp=Z,66nm,18.3s,baz=211,slow=34						
RPZ	Rata Peaks	96.30	182	LR	LR	11 19 53.2	
	comp=Z,57nm,18.3s,baz=260,slow=34						
MAW	Mawson	144.79	218	PKP	PKPbc	10 45 25.3	+0.7
	comp=Z,2.5nm,0.9s,baz=225,slow=1.4,SNR=3.1						

KRSZO 02 10:46:10.9±5.3, 48°.23N×19°.87E, h0km, ML0.8/3, Error ellipse: s-maj=52.3km s-min=5.7km az=55.0, Explosion., Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSZ	Piszkesteto	0.31	177	Pg	Pg	10 46 17.1	+0.3
PSZ				Lg	Lg	10 46 22.6	
PSZ	Piszkesteto	0.31	177	P	Pg	10 46 17.1	+0.3
PSZ				S	Sg	10 46 22.6	+1.9
VYHS	Vyhne	0.74	292	Pg	Pb	10 46 26.5	-0.2
VYHS				Lg	Lg	10 46 35.5	

*IDC **02** 10:49:11.1±0.7, 36°.75N×10°.95E, h0km, mb3.8/15, mbtmp3.7/21, ML3.8/6, MS3.7/49, Error ellipse: s-maj=19.2km s-min=12.0km az=140.0*

*NEIC **02** 10:49:12.9±2.7, 36°.58N±0°.06×11°.13E±0°.05, h16km±4km, mb4.0/9, Error ellipse: s-maj=9.0km s-min=4.5km az=151.0*

*LDG **02** 10:49:12.5±0.2, 36°.64N×11°.05E, h13km, Ml4.0/12, Error ellipse: s-maj=5.1km s-min=4.3km az=2.0*

*CRAAG **02** 10:49:13.4, 36°.53N×11°.12E, Ml4.5, Hypocentre not reviewed by the ISC*

*ROM **02** 10:49:13.1, 36°.39N×11°.14E, h20km, mb4.3/6, Mwp4.5/4, Error ellipse: s-maj=7.5km s-min=4.4km az=172.0*

*MED_RC **02** 10:49:13.0±0.5, 36°.55N×11°.09E, h10km, MW4.4/22, Moment Tensor Solution. Mantle waves: s22,c29; Duration: 1s0 Moment tensor: Scale 10^{15}Nm; M_{rr}0.70±.16; $M_{\theta\theta}$-0.78±.14; $M_{\phi\phi}$0.08±.19; $M_{r\theta}$1.88±.43; $M_{\theta\phi}$-4.46±.12; $M_{\phi r}$-0.55±.49; Best double couple: $M_0$4.92000×10^{15} NP1:ϕ_s91.00000°, δ82.00000°, λ156.00000°. NP2:ϕ_s184.00000°, δ66.00000°, λ9.00000°. Principal axes: T 4.8200, Plg23.0000°, Azm45.0000°; N 0.2000, Plg65.0000°, Azm253.0000°; P -5.0200, Plg11.0000°, Azm140.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

ISC 02 10:49:13.1±0.5, 36°.70N±0°.06×10°.94E±0°.05, h14km, n183, σ2.32/149, mb3.8/16, MS3.8/43, 18C-5D, Tunisia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAMR	Tamra	1.51	284	⇓P	Pn	10 49 39.6	-0.1
KEST	Kesra	1.61	234	Pn	Pn	10 49 41.1	-0.1
	81nm,0.3s,baz=51,slow=4.7,SNR=123						
KEST				Sn	Sg	10 50 05.1	+0.1
	154nm,0.3s,baz=238,slow=20,SNR=13						
KEST	Kesra	1.61	234		Pn	10 49 40.8	-0.4
CLTB	Caltabellotta	2.02	63	Pn	Pn	10 49 43.3	-3.6
CLTB	Caltabellotta	2.02	63	⇑P	Pn	10 49 43.1	-3.8
RAFF	Raffo Rosso	2.79	78		Pn	10 49 55.2	-2.2
ABSA	Djebel Ababsia	2.82	262	P		10 50 00.2	
CMAH	Djebel Manchou	2.83	270	P		10 49 58.0	
VAE	Valguarnera	2.88	73	Pn	Pb	10 50 00.6	-3.8
	3.9nm,0.3s,baz=153,slow=10,SNR=3.6						
VAE				Sn	Sn	10 50 34.0	+0.8
	26nm,0.3s,baz=225,slow=14,SNR=6.6						
VSL	Villasalto	3.05	337	Pn	Pn	10 50 01.0	0.0
VSL	Villasalto	3.05	337	⇑P	Pn	10 50 00.7	-0.3
CKFL	Kef-Lekhel	3.41	266	P		10 50 07.2	
CASM	Ain Smara	3.61	264	P		10 50 14.1	
CTEI	Djebel Teioual	3.71	262	P		10 50 14.5	
DFRA	Djebel Bou Aff	4.08	269	P		10 50 15.9	
TATN	Tataouine	4.12	185	⇑P	Pn	10 50 10.3	-5.5
CEL	Celeste	4.24	67		Pn	10 50 16.1	-1.2
CEL	Celeste	4.24	67	⇑P	Pn	10 50 16.8	-0.6
CUC	Castrocucco	5.05	48		Pn	10 50 27.1	-1.4
PAOL	Paolisi	5.17	32		Pn	10 50 29.5	-0.6
TIP	Timpagrande	5.22	60		Pn	10 50 29.2	-1.7
TIP	Timpagrande	5.22	60	⇑P	Pn	10 50 29.7	-1.1
AQU	L'Aquila	5.96	18	Pn	Pn	10 50 40.2	-0.8
PGF	Pioggiola	6.03	346	eP	Pn	10 50 43.1	+1.1
PGF	Pioggiola	6.03	346	ePn	Pn	10 50 43.2	+1.2
PGF				eSn	Sn	10 51 47.8	-3.1
	58nm,0.4s						
CASP	Castiglione de	6.09	359		Pn	10 50 44.5	+1.8
MAHO	Mahon	6.14	303	⇑P	Pn	10 50 45.0	+1.6
SGRT	San Giovanni R	6.28	35	Pn	Pn	10 50 45.7	+0.3
NRCA	Norcia	6.35	15		Pn	10 50 49.0	+2.6
MURB	Monte Urbino	6.67	10		Pn	10 50 51.9	+1.1
LMR	La Mourre	7.45	334	ePn	Pn	10 50 59.7	-1.6
LMR	La Mourre	7.45	334	eP	Pn	10 51 03.7	+2.4
LMR				eSn	Sn	10 52 21.0	-4.6
	9.6nm,0.5s						
VLC	Villacollemand	7.47	357	Pn	Pn	10 51 04.6	+2.9
SBF	Sospel	7.64	341	ePn	Pn	10 51 03.8	-0.3
SBF	Sospel	7.64	341	eP	Pn	10 51 07.0	+2.9
SBF				eSn	Sn	10 52 25.2	-5.3
	10nm,0.4s						
MSSA	Maissana	7.69	352	Pn	Pn	10 51 07.7	+3.0
SMRF	Simiane la Rot	8.34	332	ePn	Pn	10 51 11.9	-1.8
SMRF	Simiane la Rot	8.34	332	eP	Pn	10 51 14.8	+1.1
SMRF				eSn	Sn	10 52 41.5	-6.2
	18nm,0.6s						
MBDF	Montbardon	8.62	340	ePn	Pn	10 51 15.9	-1.7
MBDF	Montbardon	8.62	340	eP	Pn	10 51 21.0	+3.4
MBDF				eSn	Sn	10 52 48.4	-6.3
	6.0nm,0.5s						
ITM	Ithomi	8.81	84	Pn	Pn	10 51 17.1	-3.0
BNI	Bardonecchia	8.95	340	Pn	Pn	10 51 24.6	+2.5
BNI	Bardonecchia	8.95	340	⇑P	Pn	10 51 26.3	+4.2
ORIF	Oris-en-Rattie	9.06	337	ePn	Pn	10 51 22.1	-1.5
ORIF	Oris-en-Rattie	9.06	337	eP	Pn	10 51 25.8	+2.2
ORIF				eSn	Sn	10 52 59.3	-6.1
	18nm,1.0s						
LASF	Ste Croix	9.14	326	eP	Pn	10 51 25.7	+1.2
LASF				eSn	Sn	10 53 01.5	-5.6
	7.8nm,0.5s						
LPG	La Plagne	9.34	342	eP	Pn	10 51 31.3	+3.7
CTI	Castel Tesino	9.36	3	Pn	Pn	10 51 28.5	+0.9
LPL	La Plagne	9.36	342	eP	Pn	10 51 31.7	+3.9
LPL				eSn	Sn	10 53 06.6	-6.4
MTLF	Montolieu	9.42	317	eP	Pn	10 51 32.3	+3.9
MTLF				eSn	Sn	10 53 08.4	-5.7
	16nm,0.5s						
VIVF	Saint-Julien-l	9.43	332	ePn	Pn	10 51 26.7	-1.9
VIVF	Saint-Julien-l	9.43	332	eP	Pn	10 51 30.8	+2.2
SSB	Saint Sauveur	9.84	333	Pn	Pn	10 51 35.4	+1.2
TUE	Stuetta	9.84	354	Pn	Pn	10 51 36.1	+1.8
TUE	Stuetta	9.84	354	⇑P	Pn	10 51 39.1	+4.8
SENIN	Lac Senin/Sane	10.04	345	Pn	Pn	10 51 36.9	-0.1
DAVOX	Davos/Dischmat	10.11	356	Pn	Pn	10 51 40.5	+2.5
	1.9nm,0.3s,baz=213,slow=9.1,SNR=23						
DAVOX				LR	LR	10 55 46.3	
	comp=Z,457nm,18.7s,baz=243,slow=39						
ABTA	Abfaltersbach	10.11	6	ePn	Pn	10 51 42.9	+5.0
	4.5nm,1.1s						
OBKA	Obir	10.17	14	ePn	Pn	10 51 44.5	+5.8
	3.9nm,0.8s						
EPF	Esparros	10.31	311	eP	Pn	10 51 44.2	+3.6
FETA	Feichten	10.32	359	ePn	Pn	10 51 44.6	+3.8
	5.4nm,0.9s						
SOKA	Soboth	10.43	16	ePn	Pn	10 51 44.7	+2.5
	0.5nm,0.3s						
SQTA	Sankt Quirin	10.52	1	ePn	Pn	10 51 46.8	+3.3
	5.3nm,0.4s						
KBA	Koelnbreinsper	10.53	9	ePn	Pn	10 51 48.0	+4.3
	17nm,1.1s						
CABF	La Chapelle	10.55	341	ePn	Pn	10 51 41.9	-2.0
CABF	La Chapelle	10.55	341	eP	Pn	10 51 47.7	+3.8
WTTA	Wattenberg	10.57	3	ePn	Pn	10 51 47.5	+3.2
	4.2nm,0.7s						
DAVA	Damuels	10.61	356	ePn	Pn	10 51 48.6	+3.8
	9.1nm,0.6s						
DAVA	Damuels	10.61	356	⇓P	Pn	10 51 50.2	+5.4
CAF	Calviac	10.62	323	ePn	Pn	10 51 43.2	-1.6
CAF	Calviac	10.62	323	eP	Pn	10 51 48.5	+3.7
MOTA	Moosalm	10.64	1	ePn	Pn	10 51 49.1	+3.8
	5.5nm,0.6s						
WATA	Walderalm	10.64	2	ePn	Pn	10 51 49.0	+3.8
	3.0nm,0.4s						
ARSA	Arzberg	11.08	16	ePn	Pn	10 51 55.9	+4.8
	1.2nm,0.5s						
RJF	Les Rejaudoux	11.16	323	ePn	Pn	10 51 50.0	-2.2
RJF	Les Rejaudoux	11.16	323	eP	Pn	10 51 53.9	+1.7
RJF				eSn	Sn	10 53 49.6	-7.1
	18nm,1.1s						
BIOA	Bad Ischl, Aus	11.17	9	ePn	Pn	10 51 54.2	+1.9
	11nm,0.9s						
SMF	Signal de Mont	11.26	334	ePn	Pn	10 51 52.0	-1.6
SMF	Signal de Mont	11.26	334	eP	Pn	10 51 56.4	+2.8
LFF	La Frestale	11.28	320	ePn	Pn	10 51 51.3	-2.6
LFF	La Frestale	11.28	320	eP	Pn	10 51 57.4	+3.5
LFF				eSn	Sn	10 53 53.2	-6.6
	40nm,1.0s						
SJPF	Ste Jean	11.32	308	ePn	Pn	10 51 53.0	-1.5
SJPF	Ste Jean	11.32	308	eP	Pn	10 51 58.9	+4.4
IDI	Anoyia	11.39	93	Pn	Pn	10 52 00.1	+4.7
	0.4nm,0.3s,baz=274,slow=19,SNR=1.8						
MOA	Molln	11.41	11	ePn	Pn	10 52 00.1	+4.4
	1.1nm,0.5s						
HINF	Hinteralfeld	11.52	346	eP	Pn	10 52 01.9	+4.8
BGF	Bois d'Agland	11.56	331	ePn	Pn	10 51 55.6	-2.0
BGF	Bois d'Agland	11.56	331	eP	Pn	10 52 00.6	+3.0
AVF	Avril sur Loir	11.56	333	eP	Pn	10 52 01.4	+3.7
TCF	Toulx Ste Croi	11.60	328	eP	Pn	10 52 01.1	+2.9
RONA	Rosalia, Austr	11.69	18	ePn	Pn	10 52 01.2	+1.8
	0.7nm,0.3s						
SSF	Saint Saulge	11.74	334	eP	Pn	10 52 03.5	+3.4
BFO	Black Forest	11.78	351	Pn	Pn	10 52 01.9	+1.2
CONA	Conrad Observa	11.80	16	ePn	Pn	10 52 03.8	+2.8
	0.3nm,0.2s						
HAU	Haudompre	11.80	345	ePn	Pn	10 51 59.6	-1.3
HAU	Haudompre	11.80	345	eP	Pn	10 52 05.7	+4.8
CDF	Champ du Feu	12.01	348	eP	Pn	10 52 07.4	+3.5
ESBB	Sonseca Array	12.10	289		Pn	10 52 05.9	+0.8
ESDC	Sonseca Array	12.10	289	Pn	Pn	10 52 05.5	+0.4
	0.3nm,0.3s,baz=96,slow=14,SNR=14						
ESDC				LR	LR	10 56 33.0	
	comp=Z,369nm,19.4s,baz=98,slow=36						
	0.7nm,0.3s						
SFTF	Sexfontaines	12.29	341	ePn	Pn	10 52 06.7	-1.0
GERES	GERESS Array B	12.31	9	Pn	Pn	10 52 08.2	+0.2
	0.1nm,0.3s,baz=175,slow=12,SNR=1.8						
GERES				LR	LR	10 56 24.4	
	comp=Z,74nm,18.3s,baz=198,slow=35						
	0.2nm,0.3s						
PAB	San Pablo	12.37	288	Pn	Pn	10 52 09.8	+0.9
PAB	San Pablo	12.37	288	⇑P	Pn	10 52 13.4	+4.5
PAGF	Fort de Pagny	12.45	344	ePn	Pn	10 52 08.8	-1.1
MEZF	Maizieres J'vi	12.56	342	ePn	Pn	10 52 07.9	-3.5
MFF	Saint Martin d	12.90	324	eP	Pn	10 52 20.0	+4.1
VRAC	Vranov	13.26	16	LR	LR	10 57 15.2	
	comp=Z,133nm,18.8s,baz=214,slow=37						
MDT	Midelt	13.36	258	Pn	Pn	10 52 22.8	+0.4
	0.1nm,0.3s,baz=110,slow=11,SNR=1.5						
	0.7nm,0.6s						
VOIR		13.75	46	⇑P	P	10 52 37.9	+1.6
MLR	Muntele Rosu	14.31	47	⇑P	P	10 52 44.4	+1.9
MLR	Muntele Rosu	14.31	47	Pn	Pn	10 52 35.4	+0.1
	0.2nm,0.3s,baz=157,slow=21,SNR=1.3						
MLR				LR	LR	10 59 19.0	
	comp=Z,456nm,18.3s,baz=234,slow=43						
	0.9nm,0.5s						
MLR	Muntele Rosu	14.31	47	Pn	Pn	10 52 36.7	+1.3
LDF	La Druitiere	14.39	329	eP	Pn	10 52 39.5	+3.2
NEHR	Nehoiu	14.48	48	⇑P	P	10 52 44.3	0.0
GRR	Gorron	14.54	327	eP	Pn	10 52 41.2	+2.8
VRI	Vrincioaia	14.97	47	⇑P	P	10 52 52.2	+2.4
HARR	Harsova	15.14	53	⇑P	P	10 52 52.1	+0.5
BURAR	Bucovina Array	15.18	40	Pn	Pn	10 52 48.3	+1.2
BUR08	Bucovina Ar. S	15.19	39	Pn	Pn	10 52 47.2	0.0
BUR08				IAmb	IAmb	10 52 59.9	
	comp=Z,7.2nm,1.2s						
BIZ	Bicaz	15.22	43	⇑P	P	10 52 53.1	+0.6
TIRR	Tirgusor	15.36	54	⇑P	Pn	10 52 50.9	+1.6
TIRR	Tirgusor	15.36	54	Pn	Pn	10 52 48.9	-0.4
CFR	Carcaliu	15.49	52	⇓P	P	10 52 54.4	-1.1
KWP	Kalwaria Pacla	15.49	30	Pn	Pn	10 52 49.9	-1.3
TPGR	Topolog	15.53	53	⇓P	Pn	10 52 51.9	+0.2
TLCR		15.92	52	⇑P	P	10 53 03.9	+3.6
MILM	Milestii Mici	16.75	47	eP	Pn	10 53 08.0	+0.8
	comp=Z,70nm,0.9s						
KIS	Kishinev	16.80	47	eP	P	10 53 09.0	-0.9
	comp=Z,50nm,0.5s						
KIS				LRM	MLR	11 01 37.0	
	comp=Z,150nm,15.0s						
SORM	Soroca	17.16	43	⇑P	P	10 53 14.1	+0.2
BR131	Keskin Array S	18.09	73	P	Pn	10 53 22.8	-1.3
BRTR	Keskin Array B	18.09	73	P	P	10 53 24.4	0.0
	baz=249,slow=10,SNR=5.4						
BRTR				LR	LR	11 01 32.9	
	comp=Z,130nm,20.5s,baz=280,slow=41						
	comp=Z,0.6nm,0.7s						
BRTR	Keskin Array B	18.09	73	P	P	10 53 23.3	-1.1
ILGA	Ilgaz	18.25	69	P	P	10 53 26.4	+0.2
ILGA				IAmb	IAmb	10 53 30.7	
	comp=Z,21nm,1.2s						
AKASG	Malin Array Be	19.18	37	P	P	10 53 35.6	-0.5
	comp=Z,1.3nm,0.3s,baz=232,slow=8.9,SNR=22						
AKASG				LR	LR	11 01 33.6	
	comp=Z,109nm,20.6s,baz=235,slow=39						
	comp=Z,3.6nm,0.5s						
AKBB	Malin Array Si	19.18	37	P	P	10 53 35.8	-0.4
AKBB				IAmb	IAmb	10 53 39.2	
	comp=Z,9.8nm,0.7s						
BNN	Bunyan	19.79	76	P	Pn	10 53 43.6	-1.1
MMAI	Mount Meron Ar	20.39	93	LR	LR	11 04 05.1	
	comp=Z,83nm,20.2s,baz=58,slow=44						
EKA	Eskdalemuir Ar	20.98	337	LR	LR	11 02 39.5	
	comp=Z,366nm,20.3s,baz=168,slow=39						
NACGM	Naroch	21.21	26	⇓eP	P	10 53 59.5	+1.3
	baz=217						
EIL	Elat	21.25	102	LR	LR	11 03 58.9	
	comp=Z,66nm,18.9s,baz=272,slow=42						
MNK	Minsk	21.29	28	*i* P	P	10 53 59.9	+0.8
	comp=E,1.0nm,0.7s						
MNK				*i* P	P	10 53 59.9	+0.8
	comp=N,12nm,0.7s						
MNK				*i* P	P	10 53 59.9	+0.8
	comp=Z,7.0nm,1.1s,baz=219						
MNK				*i* PP	PnPn	10 54 20.2	+1.5
MNK				*i* PPP	PPP	10 54 28.1	
MNK				*i* S	S	10 57 58.6	+3.5
MNK				*i* SS	SnSn	10 58 23.1	+5.6
MNK				*i* SSS	SSS	10 58 36.3	
MNK				*i* LQ	LQ	11 00 31.9	
MNK				*i* LR	LR	11 02 11.6	
MNK				*i* LRM	MLR	11 03 17.9	
	comp=N,68nm,11.0s						
MNK				*i* LRM	MLR	11 03 22.4	
	comp=Z,265nm,18.1s						
MNK				*i* LRM	MLR	11 03 23.7	
	comp=E,24nm,13.5s						
ASF	Jabal al Asfar	21.85	94	P	P	10 54 05.0	-0.4
	comp=E,1.9nm,0.8s,baz=334,slow=6.3,SNR=3.6						
	comp=E,1.9nm,0.8s						
HFS	Hagfors	23.52	3	P	P	10 54 20.9	-1.6
	comp=E,0.9nm,0.6s,baz=167,slow=14,SNR=4.8						
HFS				LR	LR	11 03 31.5	
	comp=E,104nm,19.6s,baz=192,slow=37						
	comp=E,0.9nm,0.6s						
NOA	NORSAR Array B	24.36	0	P	P	10 54 28.5	-2.0
	comp=E,0.4nm,0.7s,baz=220,slow=21,SNR=1.8						
	comp=E,0.4nm,0.7s						
TORD	Torodi Ar. Bea	24.87	202	P	P	10 54 35.0	-0.4
	comp=E,1.7nm,1.0s,baz=358,slow=6.9,SNR=7.5						
TORD				LR	LR	11 05 40.2	
	comp=E,311nm,19.7s,baz=226,slow=40						
	comp=E,1.7nm,1.0s						
TORD	Torodi Ar. Bea	24.87	202	P	P	10 54 36.7	+1.3
TORD				IAmb	IAmb	10 55 04.2	
	comp=Z,3.3nm,0.9s						
KBZ	Khabaz	25.29	64	P	P	10 54 40.7	+1.8
	comp=Z,1.7nm,0.8s,baz=259,slow=5.5,SNR=2.9						
	comp=Z,1.7nm,0.8s						
FINES	FINESS Array B	26.54	16	P	P	10 54 48.7	-1.5
	comp=Z,1.2nm,0.5s,baz=198,slow=9.2,SNR=8.4						
FINES				LR	LR	11 06 28.7	
	comp=Z,160nm,18.8s,baz=214,slow=39						
	comp=Z,1.2nm,0.5s						
GNI	Garni	26.61	72	P	P	10 54 51.6	+0.4
	comp=Z,2.1nm,0.3s,baz=70,slow=22,SNR=1.2						
GNI				LR	LR	11 07 18.9	
	comp=Z,55nm,18.8s,baz=296,slow=41						
	comp=Z,2.1nm,0.3s						
BELG	Belogornoye	30.10	47	LR	LR	11 08 49.2	
	comp=Z,112nm,19.5s,baz=29,slow=39						
DBIC	Dimbokro	33.19	210	P	P	10 55 49.7	+0.2
	comp=Z,1.5nm,0.5s,baz=324,slow=12,SNR=2.0						
DBIC				LR	LR	11 08 57.0	
	comp=Z,181nm,20.3s,baz=30,slow=36						
	comp=Z,1.5nm,0.5s						
ARCES	ARCESS Array B	33.84	9	LR	LR	11 11 39.7	
	comp=Z,94nm,20.1s,baz=246,slow=40						
BORG	Borgarnes	34.00	336	LR	LR	11 09 20.9	
	comp=Z,173nm,18.6s,baz=148,slow=36						
JMIC	Jan Mayen	35.85	349	LR	LR	11 11 12.8	
	comp=Z,50nm,19.3s,baz=140,slow=37						
AKTO	Aktyubinsk	36.15	53	LR	LR	11 12 28.0	
	comp=Z,64nm,21.3s,baz=275,slow=39						
GEYT	Alibeck	37.23	73	LR	LR	11 15 56.2	
	comp=Z,69nm,18.1s,baz=102,slow=43						
ARU	Arti	37.28	43	LR	LR	11 12 27.7	
	comp=Z,59nm,18.8s,baz=281,slow=38						
ATD	Arta Tunnel	38.11	123	LR	LR	11 14 14.7	
	comp=Z,72nm,19.3s,baz=344,slow=39						
MBAR	Mbarara	41.41	149	LR	LR	11 14 46.6	
	comp=Z,109nm,18.6s,baz=114,slow=37						
KMBO	Kilima Mbogo	44.87	141	LR	LR	11 17 37.7	
	comp=Z,78nm,20.4s,baz=86,slow=38						
SFJD	Kangerlussuaq	45.77	331	LR	LR	11 14 44.8	
	comp=Z,102nm,21.1s,baz=95,slow=34						
AAK	Ala-Archa	48.26	62	LR	LR	11 25 17.4	
	comp=Z,47nm,18.0s,baz=146,slow=45						
KURBB	Kurchatov Arra	49.17	51	P	P	10 57 58.8	-1.6
	comp=Z,0.3nm,0.7s,baz=284,slow=35,SNR=3.7						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KURBB				LR	LR	11 23 31.4	
	comp=Z,95nm,18.3s,baz=191,slow=42						
	comp=Z,0.3nm,0.7s						
ZALV	**Zalesovo Beam**	**52.28**	**46**	LR	LR	11 22 43.7	
	comp=Z,110nm,18.1s,baz=250,slow=38						
MKAR	**Makanchi Array**	**52.49**	**55**	P	**P**	**10 58 24.3**	**-1.3**
	comp=Z,0.6nm,0.5s,baz=282,slow=7.0,SNR=7.2						
MKAR				LR	LR	11 24 42.2	
	comp=Z,60nm,19.1s,baz=220,slow=41						
	comp=Z,0.6nm,0.5s						
FRB	**Frobisher Bay**	**53.26**	**327**	LR	LR	11 19 53.8	
	comp=Z,83nm,18.5s,baz=3.5,slow=35						
SCHQ	**Schefferville**	**54.28**	**316**	P	**P**	**10 58 38.3**	**-0.3**
	comp=Z,2.5nm,0.9s,baz=204,slow=14,SNR=2.0						
	comp=Z,2.5nm,0.9s						
RES	**Resolute Bay**	**58.98**	**343**	LR	LR	11 25 37.2	
	comp=Z,120nm,18.4s,baz=77,slow=37						
LBTB	**Lobatse**	**62.92**	**165**	LR	LR	11 29 20.6	
	comp=Z,121nm,18.2s,baz=348,slow=38						
BOSA	**Boshof**	**66.34**	**166**	LR	LR	11 30 42.5	
	comp=Z,120nm,18.5s,baz=354,slow=38						
SONM	**Songino Array**	**67.16**	**47**	P	**P**	**11 00 07.3**	**+0.8**
	comp=Z,0.6nm,0.6s,baz=47,slow=30,SNR=4.5						
	comp=Z,0.6nm,0.6s						
YAK	**Yakutsk**	**69.97**	**26**	LR	LR	11 34 01.4	
	comp=Z,72nm,19.4s,baz=100,slow=38						
YKA	**Yellowknife Ar**	**71.94**	**337**	P	**P**	**11 00 35.7**	**+0.1**
	comp=Z,1.0nm,0.9s,baz=48,slow=5.8,SNR=8.2						
YKA				LR	LR	11 32 55.3	
	comp=Z,72nm,18.3s,baz=8.0,slow=36						
	comp=Z,1.0nm,0.9s						
ULM	**Lac du Bonnet**	**72.12**	**320**	LR	LR	11 29 49.0	
	comp=Z,27nm,18.2s,baz=26,slow=34						
TKL	**Tuckaleechee C**	**73.05**	**302**	LR	LR	11 32 42.7	
	comp=Z,41nm,18.1s,baz=66,slow=36						
DLBC	**Dease Lake**	**79.77**	**340**	LR	LR	11 38 18.2	
	comp=Z,61nm,18.8s,baz=330,slow=37						
NEW	**Newport**	**83.59**	**328**	LR	LR	11 41 09.5	
	comp=Z,40nm,18.1s,baz=10,slow=37						
PDAR	**Pinedale Array**	**84.14**	**320**	P	**P**	**11 01 45.0**	**+1.0**
	comp=Z,0.4nm,0.4s,baz=92,slow=3.4,SNR=5.9						
PDAR				LR	LR	11 38 35.7	
	comp=Z,28nm,18.6s,baz=53,slow=35						
	comp=Z,0.4nm,0.4s						
BBB	**Bella Bella**	**84.54**	**336**	LR	LR	11 40 08.4	
	comp=Z,42nm,18.6s,baz=62,slow=36						
KSRS	**Korea Array**	**85.98**	**45**	LR	LR	11 46 00.1	
	comp=Z,52nm,18.4s,baz=145,slow=40						
ANMO	**Albuquerque**	**87.97**	**313**	LR	LR	11 41 20.5	
	comp=Z,47nm,18.5s,baz=54,slow=36						
ELK	**Elko**	**88.49**	**322**	LR	LR	11 39 13.2	
	comp=Z,35nm,20.3s,baz=66,slow=34						
JTS	**Las Juntas de**	**88.60**	**282**	LR	LR	11 39 39.7	
	comp=Z,25nm,20.4s,baz=190,slow=34						
CPUP	**Villa Florida**	**89.74**	**236**	LR	LR	11 43 47.5	
	comp=Z,116nm,18.4s,baz=34,slow=36						
TXAR	**Lajitas Array**	**90.13**	**307**	P	**P**	**11 02 14.5**	**+1.3**
	comp=Z,0.4nm,1.1s,baz=188,slow=0.9,SNR=4.0						
	comp=Z,0.4nm,1.1s						
LPAZ	**La Paz**	**91.12**	**251**	LR	LR	11 41 14.8	
	comp=Z,28nm,20.3s,baz=72,slow=34						
YBH	**Yreka Blue Hor**	**91.18**	**327**	LR	LR	11 44 07.3	
	comp=Z,39nm,18.2s,baz=54,slow=36						
WRA	**Warramunga Arr**	**128.17**	**87**	PKP	**PKiKP**	**11 08 20.8**	**+0.8**
	comp=Z,0.5nm,1.1s,baz=329,slow=1.9,SNR=2.4						
ASAR	**Alice Springs**	**129.68**	**92**	PKP	**PKiKP**	**11 08 22.4**	**-0.6**
	comp=Z,0.3nm,0.8s,baz=317,slow=1.6,SNR=2.3						

*TAP **02** 10:49:34.0, 24°.44N×122°.30E, h6km, ML2.8, C*
*JMA **02** 10:49:34.3±0.0, 24°.4N±0°.5×122°.3E±0°.2, h27km±1km, MV2.3/9, TAIWAN REGION*
ISC 02 10:49:33.3±1.1**, 24°.45N**±0°.03×**122°.33E**±0°.02**, h9**km±10km**, n36,** σ**0s.62**/69**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.47**	**290**	*e*P	**Pg**	**10 49 41.5**	**-1.0**
	baz=293						
TWC				*e*S	**Sg**	**10 49 49.1**	**+0.5**
	baz=293						
EWUT	**Wuta**	**0.51**	**270**	P	**Pg**	**10 49 42.9**	**-0.3**
	baz=270						
EWUT				S	**Sg**	**10 49 50.1**	**+0.3**
	baz=270						
EGS		**0.54**	**317**	*i* P	**Pg**	**10 49 43.9**	**+0.1**
	baz=321						
EGS				S	**Sg**	**10 49 51.2**	**+0.4**
	baz=321						
JYNG	**Yonagunijimaku**	**0.56**	**90**	P	**Pb**	**10 49 45.7**	**+0.4**
JYNG				S	**Sb**	**10 49 53.6**	**+0.2**
NTC	**Toucheng**	**0.61**	**311**	*e*P	**Pg**	**10 49 44.7**	**-0.4**
	baz=314						
NTC				*e*S	**Sb**	**10 49 54.8**	**-0.1**
	baz=314						
YOJ	**Yonaguni jima**	**0.62**	**89**	P	**Pb**	**10 49 46.7**	**+0.4**
	baz=87						
YOJ				*e*S	**Sb**	**10 49 57.1**	**+2.0**
	baz=87						
YOJ	**Yonaguni jima**	**0.62**	**89**	P	**Pb**	**10 49 46.8**	**+0.4**
YOJ				S	**Sb**	**10 49 55.4**	**+0.3**
TWE	**Neicheng**	**0.66**	**294**	P	**Pg**	**10 49 45.7**	**-0.5**
	baz=296						
TWE				S	**Sg**	**10 49 55.2**	**+0.4**
	baz=296						
TIPB	**Shuangxi**	**0.70**	**318**	P	**Pg**	**10 49 46.6**	**-0.2**
	baz=321						
TIPB				*i* S	**Sb**	**10 49 56.8**	**-0.6**
	baz=321						
ENTT	**Nioudou**	**0.72**	**285**	P	**Pg**	**10 49 46.8**	**-0.5**
	baz=286						
ENTT				*e*S	**Sb**	**10 49 58.1**	**-0.1**
	baz=286						
NACB	**Ninganchiao**	**0.73**	**248**	*i* P	**Pg**	**10 49 47.2**	**-0.1**
	baz=247						
NACB				S	**Sg**	**10 49 57.3**	**+0.5**
	baz=247						
LATG	**Datong**	**0.74**	**277**	P	**Pg**	**10 49 47.1**	**-0.5**
	baz=277						
LATG				S	**Sg**	**10 49 57.2**	**-0.1**
	baz=277						
FUSB	**Fushanzhiwuyua**	**0.75**	**295**	P	**Pg**	**10 49 47.9**	**+0.2**
	baz=296						
FUSB				*e*S	**Sg**	**10 49 56.9**	**-0.6**
	baz=296						
SXI1	**Grass Mountain**	**0.77**	**327**	*i* P	**Pg**	**10 49 48.3**	**+0.3**
	baz=329						
SXI1				S	**Sb**	**10 49 59.3**	**-0.2**
	baz=329						
NWF	**Wu-fen Shan**	**0.80**	**321**	P	**Pb**	**10 49 49.6**	**+0.2**
	baz=323						
NWF				S	**Sg**	**10 49 59.6**	**+0.6**
	baz=323						
WFSB	**Wu-fen Shan**	**0.80**	**321**	P	**Pb**	**10 49 49.5**	**+0.1**
	baz=323						
WFSB				S	**Sg**	**10 49 59.5**	**+0.5**
	baz=323						
ETLH	**Xiulin Townshi**	**0.81**	**253**	*i* P	**Pg**	**10 49 48.8**	**-0.2**
	baz=252						
ETLH				*e*S	**Sg**	**10 49 59.6**	**0.0**
	baz=252						
NWLT	**Wulai**	**0.82**	**293**	*i* P	**Pg**	**10 49 48.9**	**-0.3**
	baz=295						
NWLT				S	**Sg**	**10 50 00.6**	**+0.6**
	baz=295						
TWA	**Mucha**	**0.86**	**308**	*e*P	**Pb**	**10 49 50.8**	**+0.3**
	baz=310						
TWA				*i* S	**Sg**	**10 50 01.4**	**+0.2**
	baz=310						
NNSB	**Datong**	**0.87**	**269**	P	**Pg**	**10 49 49.7**	**-0.4**
	baz=269						
NNSB				S	**Sg**	**10 50 01.6**	**+0.3**
	baz=269						
NNS	**Nan Shan**	**0.88**	**270**	P	**Pg**	**10 49 49.8**	**-0.4**
	baz=270						
NNS				*e*S	**Sg**	**10 50 00.8**	**-0.8**
	baz=270						
YHNB	**Yeheng**	**0.90**	**284**	P	**Pg**	**10 49 50.3**	**-0.3**
	baz=285						
YHNB				*e*S	**Sg**	**10 50 01.1**	**-1.3**
	baz=285						
NSK	**Sanguang**	**0.92**	**284**	P	**Pg**	**10 49 50.9**	**0.0**
	baz=285						
NSK				S	**Sg**	**10 50 03.0**	**+0.1**
	baz=285						
TATO	**Taipei**	**0.93**	**304**	P	**Pg**	**10 49 51.2**	**0.0**
	baz=306						
TATO				*e*S	**Sb**	**10 50 04.1**	**0.0**
	baz=306						
YM01	**YM01**	**0.98**	**315**	P	**Pg**	**10 49 52.3**	**+0.1**
	baz=316						
YM01				*e*S	**Sg**	**10 50 03.3**	**-1.7**
	baz=316						
FUSS	**Fushou**	**1.01**	**259**	P	**Pg**	**10 49 52.6**	**-0.3**
	baz=258						
FUSS				S	**Sg**	**10 50 05.8**	**-0.2**
	baz=258						
NFF	**Wufeng Townshi**	**1.12**	**280**	P	**Pg**	**10 49 54.5**	**-0.4**
	baz=280						
NFF				S	**Sg**	**10 50 09.0**	**-0.5**
	baz=280						
CHGB	**Renai**	**1.13**	**250**	*e*P	**Pn**	**10 49 56.0**	**+0.4**
	baz=249						
CHGB				*e*S	**Sn**	**10 50 12.1**	**+0.8**
	baz=249						
OWD	**Renai**	**1.17**	**245**	*e*P	**Pb**	**10 49 55.8**	**+0.1**
	baz=244						
OWD				*e*S	**Sg**	**10 50 09.5**	**-1.4**
	baz=244						
WUSB	**Renai**	**1.20**	**248**	*e*P	**Pb**	**10 49 56.3**	**0.0**
	baz=247						
LIOB	**Emei**	**1.22**	**279**	*e*P	**Pn**	**10 49 57.1**	**+0.5**
	baz=280						
HGSD	**Ruisui**	**1.27**	**221**	*e*P	**Pn**	**10 49 58.5**	**+1.3**
	baz=220						
IRIF	**Iriomote-Funau**	**1.28**	**95**	P	**Pn**	**10 49 56.9**	**-0.5**
IRIF				S	**Sg**	**10 50 13.7**	**-0.7**
JKRS	**Kuro-shima**	**1.54**	**98**	P	**Pn**	**10 50 01.0**	**0.0**
JKRS				S	**Sn**	**10 50 20.9**	**-0.4**
JIJ	**Ishigaki jima**	**1.65**	**93**	P	**Pn**	**10 50 02.7**	**+0.2**
JIJ				S	**Sn**	**10 50 22.6**	**-1.3**
JISG	**Ishigakijimahi**	**1.81**	**85**	P	**Pn**	**10 50 05.0**	**+0.4**
JISG				S	**Sn**	**10 50 26.4**	**-1.4**

IDC 02 10:59:52.2±755.0**, 33°.88N**×**111°.85W, h0**km**, Error ellipse: s-maj=291.4km s-min=85.1km az=91.0, Eastern Arizona**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I57US	**PINON FLAT INF**	**3.84**	**267**	*i*		11 22 40.0	
	0.8nm,0.8s,baz=82,slow=323,SNR=14						
I56US	**NEWPORT INFRAS**	**14.90**	**346**	*i*		12 31 10.0	
	baz=160,slow=319,SNR=1.1						
I59US	**HAWAII INFRASO**	**41.52**	**261**	*i*		15 12 30.0	
	0.1nm,1.0s,baz=61,slow=321,SNR=5.4						

*IDC **02** 11:02:39.5±1.0, 47°.67N×151°.67E, h0km, mb3.8/6, mbtmp3.8/7, ML2.1/1, Error ellipse: s-maj=44.3km s-min=21.4km az=127.0*
ISC 02 11:02:44.7±1.1**, 47°.7N**±0°.2×**151°.6E**±0°.2**, h35**km**, n16,** σ**0s.75**/7**, mb3.9**/6**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**6.67**	**33**	Pn	**Pn**	**11 04 20.7**	**+0.6**
	0.2nm,0.3s,baz=220,slow=13,SNR=4.5						
	5.5nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**30.53**	**151**	T	T	11 40 23.4	
	baz=341,slow=76,SNR=103						
H11N1	**WAKE ISLAND Hy**	**30.55**	**151**	T	T	11 40 24.7	
	baz=341,slow=76,SNR=120						
H11N3	**WAKE ISLAND Hy**	**30.55**	**151**	T	T	11 40 23.4	
	baz=341,slow=76,SNR=72						
H11S1	**WAKE ISLAND Hy**	**31.61**	**152**	T	T	11 42 01.4	
	baz=342,slow=76,SNR=39						
H11S3	**WAKE ISLAND Hy**	**31.62**	**152**	T	T	11 41 46.0	
	baz=342,slow=76,SNR=47						
H11S2	**WAKE ISLAND Hy**	**31.63**	**152**	T	T	11 42 02.7	
	baz=342,slow=76,SNR=44						
ILAR	**Eielson Array**	**36.46**	**39**	P	**P**	**11 09 45.2**	**-0.6**
	1.6nm,1.0s,baz=268,slow=8.7,SNR=13						
	1.6nm,1.0s						
MKAR	**Makanchi Array**	**45.61**	**296**	P	**P**	**11 11 01.2**	**-0.1**
	0.3nm,0.6s,baz=63,slow=10,SNR=2.5						
	0.3nm,0.6s						
YKA	**Yellowknife Ar**	**50.78**	**37**	P	**P**	**11 11 40.9**	**0.0**
	0.9nm,0.6s,baz=298,slow=6.9,SNR=7.8						
	0.9nm,0.6s						
WRA	**Warramunga Arr**	**69.09**	**197**	P	**P**	**11 13 46.4**	**-0.6**
	0.7nm,0.6s,baz=339,slow=8.1,SNR=2.2						
	0.7nm,0.6s						
ASAR	**Alice Springs**	**72.80**	**197**	P	**P**	**11 14 10.6**	**+1.1**
	0.8nm,0.5s,baz=11,slow=5.7,SNR=4.7						
	0.8nm,0.5s						
TXAR	**Lajitas Array**	**77.91**	**60**	P	**P**	**11 14 38.8**	**-0.3**
	1.8nm,0.8s,baz=302,slow=4.1,SNR=21						
	1.8nm,0.8s						
H03N2	**Juan Fernandez**	**139.76**	**88**	T	T	13 57 04.8	
	baz=308,slow=77,SNR=14						
H03N1	**Juan Fernandez**	**139.77**	**88**	T	T	13 57 06.2	
	baz=308,slow=77,SNR=19						
H03N3	**Juan Fernandez**	**139.77**	**88**	T	T	13 57 24.1	
	baz=308,slow=77,SNR=18						

*BJI **02** 11:02:46.3±0.0, 23°.44S×176°.85W, h275km, mb4.6/32, mB4.8/18*
*NEIC **02** 11:02:48.3±2.4, 23°.48S±0°.07×177°.67W±0°.08, h248km±5km, mb4.9/241, Error ellipse: s-maj=11.4km s-min=10.1km az=110.0*
*NOU **02** 11:02:48.8, 23°.56S×177°.00W, h304km, mb5.2/97, South of Fiji Islands*
*IDC **02** 11:02:49.3±1.1, 23°.42S×177°.88W, h260km±9km, mb4.4/32, mbtmp5.0/32, Error ellipse: s-maj=10.0km s-min=8.5km az=161.0*
*GCMT **02** 11:02:52.3±0.4, 23°.47S±0°.03×177°.51W±0°.02, h282km±3km, MW5.1/86, Moment Tensor Solution. s45,c50; s86,c115; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.06±.24; $M_{\theta\theta}$-4.51±.20; $M_{\phi\phi}$3.45±.19; $M_{r\theta}$-0.07±.26; $M_{\theta\phi}$1.50±.21; $M_{\phi r}$-5.18±.20; Best double couple: $M_0$6.35800×10^{16} NP1:ϕ_s245.00000°, δ52.00000°, λ18.00000°. NP2:ϕ_s144.00000°, δ76.00000°, λ140.00000°. Principal axes: T 7.6930, Plg38.0000°, Azm97.0000°; N -2.6700, Plg48.0000°, Azm307.0000°; P -5.0230, Plg15.0000°, Azm200.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 02 11:02:50.3±0.5**, 23°.64S**±0°.04×**177°.68W**±0°.05**, h277**km±4km**, h277**km**:pP-P, n823,** σ**1s.67**/756**, mb4.9**/172**, 31C-11D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**5.48**	**349**	P	**Pn**	**11 04 11.5**	**-1.2**
RIZ	**Raoul Island**	**5.59**	**182**	P	**Pn**	**11 04 10.7**	**-3.3**
RIZ				S	**S**	**11 05 18.0**	**-3.1**
RAO	**Raoul Island**	**5.60**	**182**	P	**Pn**	**11 04 11.4**	**-2.6**
	133nm,0.3s,baz=94,slow=21,SNR=1.9						
RAO				S	**S**	**11 05 19.5**	**-1.8**
	857nm,0.3s,baz=274,slow=23,SNR=12						
RAO	**Raoul Island**	**5.60**	**182**	Pn	**Pn**	**11 04 13.3**	**-0.7**
RAO					**S**	**11 05 21.4**	**+0.2**
GLKZ	**Green Lake**	**5.61**	**182**	P	**Pn**	**11 04 13.2**	**-0.9**
GLKZ				S	**S**	**11 05 20.1**	**-1.4**
MSVF	**Nonsavu**	**7.10**	**325**	P	**Pn**	**11 04 31.9**	**-0.8**
	229nm,0.8s,baz=137,slow=15,SNR=88						
MSVF				S	**S**	**11 05 50.2**	**-5.0**
	16nm,0.7s,baz=348,slow=22,SNR=0.6						
MSVF	**Nonsavu**	**7.10**	**325**		**Pn**	**11 04 32.6**	**-0.1**
MSVF	**Nonsavu**	**7.10**	**325**	P	**Pn**	**11 04 33.1**	**+0.4**
DGTI	**Dogotuki**	**7.69**	**341**	P	**Pn**	**11 04 39.6**	**-0.3**
NIUE	**Niue**	**8.53**	**59**	P	Pn	11 04 40.9	-10
	baz=8.4,SNR=45						
NIUE	**Niue**	**8.53**	**59**	Pn	Pn	11 04 45.9	-4.5
AFI	**Afiamalu**	**11.17**	**31**	P	Pn	11 05 14.5	-8.7
	152nm,0.4s,baz=198,slow=3.7,SNR=52						
AFI				S	S	11 07 08.6	-20
	269nm,0.5s,baz=206,slow=23,SNR=9.3						
AFI	**Afiamalu**	**11.17**	**31**	Pn	Pn	11 05 15.0	-8.2
AFI	**Afiamalu**	**11.17**	**31**	P	Pn	11 05 15.4	-7.9
MARNC	**Mare, Loyalty**	**13.37**	**276**		**Pn**	**11 05 49.5**	**-0.6**
MARNC	**Mare, Loyalty**	**13.37**	**276**	P	**P**	**11 05 54.7**	**+4.0**
PINNC	**Pines Island,**	**13.72**	**271**	P	**P**	**11 05 58.4**	**+3.9**
OUZ	**Omahuta**	**13.81**	**211**		**P**	**11 05 58.5**	**+3.1**
RTV	**Rentapao**	**14.23**	**292**	P	**Pn**	**11 06 04.3**	**+3.8**
MXZ	**Matakaoa Point**	**14.30**	**193**	P	P	11 05 54.0	-6.8
OUENC	**Ouen Island, N**	**14.30**	**272**	Pn	**Pn**	**11 06 03.4**	**+2.2**
OUENC	**Ouen Island, N**	**14.30**	**272**	P	**Pn**	**11 06 04.8**	**+3.6**
YATNC	**Mamie plateau,**	**14.31**	**273**	P	**Pn**	**11 06 04.5**	**+3.2**
DVP	**Devils Point**	**14.47**	**291**	P	**Pn**	**11 06 07.6**	**+4.4**
WMGZ	**Waiomatatini S**	**14.53**	**192**	P	P	11 05 57.8	-5.4
HAZ	**Te Kaha**	**14.60**	**194**	P	P	11 05 57.8	-6.2
ONTNC	**Ouen Toro**	**14.67**	**272**		**Pn**	**11 06 05.3**	**-0.3**
ONTNC	**Ouen Toro**	**14.67**	**272**	P	**Pn**	**11 06 09.3**	**+3.6**
DZM	**Mont Dzumac**	**14.72**	**273**	*e*P	**Pn**	**11 06 08.2**	**+1.9**
	252nm,1.1s						
DZM				*e*LR	LR	11 09 40.8	
	comp=Z,739nm,24.5s						
DZM	**Mont Dzumac**	**14.72**	**273**	Pn	**Pn**	**11 06 08.1**	**+1.8**
DZM	**Mont Dzumac**	**14.72**	**273**	P	**Pn**	**11 06 09.6**	**+3.3**
NOUC	**Port Laguerre**	**14.84**	**273**	P	**Pn**	**11 06 10.8**	**+3.1**
WHRZ	**Whale Island**	**14.89**	**197**	P	**Pn**	**11 06 09.6**	**+1.5**
WHRZ				S	**S**	**11 08 47.8**	**-3.3**
TWGZ	**Tauwhareparae**	**14.96**	**193**	P	**Pn**	**11 06 08.5**	**-0.5**
TWGZ				S	**S**	**11 08 44.1**	**-8.4**
EDRZ	**Edgecumbe**	**15.19**	**197**	P	**Pn**	**11 06 12.0**	**+0.2**
URZ	**Urewera**	**15.24**	**196**	P	**P**	**11 06 08.0**	**-3.1**
	213nm,0.7s,baz=301,slow=2.7,SNR=109						
URZ				S	**S**	**11 08 52.1**	**-6.0**
	42nm,0.3s,baz=86,slow=23,SNR=14						
URZ	**Urewera**	**15.24**	**196**		**P**	**11 06 10.1**	**-1.0**
URZ	**Urewera**	**15.24**	**196**	P	**Pn**	**11 06 11.2**	**-1.0**
OMRZ	**Omania**	**15.29**	**198**	P	**Pn**	**11 06 13.9**	**+1.0**
MKRZ	**Makatiti**	**15.30**	**198**	P	**Pn**	**11 06 14.1**	**+1.1**
FUNA	**Funafuti**	**15.32**	**348**		**P**	**11 06 09.9**	**-2.4**
FUNA	**Funafuti**	**15.32**	**348**	P	**P**	**11 06 10.4**	**-1.8**
TARZ	**Mount Tarawera**	**15.38**	**198**	P	**Pn**	**11 06 13.7**	**-0.2**
TARZ				S	**S**	**11 08 58.8**	**-2.3**
HSRZ	**Hossack Road**	**15.52**	**198**	P	**Pn**	**11 06 16.2**	**+0.7**
HRRZ	**Handcock Road**	**15.58**	**198**	P	**Pn**	**11 06 15.9**	**-0.4**
HRRZ				S	**S**	**11 09 05.7**	**+0.6**
GRRZ	**Galatos Road**	**15.60**	**198**	P	**Pn**	**11 06 16.0**	**-0.4**
RTZ	**Ruatahuna**	**15.61**	**196**	P	**P**	**11 06 14.0**	**-1.3**
RTZ				S	**S**	**11 08 57.7**	**-7.9**
PRRZ	**Plateau Road**	**15.65**	**197**	P	**Pn**	**11 06 15.3**	**-1.8**
PRRZ				S	**S**	**11 09 00.3**	**-6.1**
PRGZ	**Paritu Road**	**15.70**	**193**	P	**P**	**11 06 15.0**	**-1.2**
PRGZ				S	**S**	**11 08 56.5**	**-11**
WPRZ	**Whakapapatarin**	**15.74**	**198**	P	**Pn**	**11 06 17.4**	**-0.8**
KUTZ	**Kaahu Road**	**15.81**	**199**	P	**Pn**	**11 06 18.4**	**-0.6**
KNZ	**Kokohu**	**15.84**	**193**	P	**P**	**11 06 16.7**	**-1.0**
KNZ				S	**S**	**11 08 59.5**	**-10**
MTHZ	**Maungataniwha**	**15.87**	**196**	P	**P**	**11 06 17.0**	**-1.1**
MTHZ				S	**S**	**11 09 02.9**	**-7.8**
RAHZ	**Arahi**	**15.87**	**195**	P	**P**	**11 06 16.7**	**-1.3**
RAHZ				S	**S**	**11 09 03.9**	**-6.8**
MHGZ	**Mahia Peninsul**	**15.92**	**193**	P	**P**	**11 06 17.4**	**-1.1**
NMHZ	**Naumai**	**16.11**	**196**	P	**P**	**11 06 18.7**	**-2.1**
NMHZ				S	**S**	**11 09 07.5**	**-8.0**
HIZ	**Hauiti**	**16.14**	**202**	P	**Pn**	**11 06 22.2**	**-0.5**
HIZ	**Hauiti**	**16.14**	**202**	P	**Pn**	**11 06 22.1**	**-0.7**
HIZ	**Hauiti**	**16.14**	**202**	P	**Pn**	**11 06 22.4**	**-0.4**
RATZ	**Rangitukua**	**16.17**	**199**	P	**Pn**	**11 06 21.2**	**-2.1**
ARHZ	**Aropaoanui**	**16.22**	**195**	P	**Pn**	**11 06 21.7**	**-2.1**
ARHZ				S	**S**	**11 09 09.7**	**-7.9**
RITZ	**Rihia Road**	**16.25**	**198**	P	**P**	**11 06 21.7**	**-0.5**
BKZ	**Black Stump Fm**	**16.25**	**196**	P	**P**	**11 06 19.7**	**-2.6**
BKZ				IAmb	IAmb	11 06 36.8	
	comp=Z,42nm,0.9s						
BKZ	**Black Stump Fm**	**16.25**	**196**	P	**P**	**11 06 17.8**	**-4.5**
BKZ				S	**S**	**11 09 09.7**	**-8.7**
BKZ	**Black Stump Fm**	**16.25**	**196**	P	**P**	**11 06 21.7**	**-0.6**
NTVZ	**North Tongarir**	**16.42**	**199**	P	**P**	**11 06 23.5**	**-0.6**
NTVZ				S	**S**	**11 09 19.2**	**-2.5**
KRVZ	**Karewarewa**	**16.42**	**199**	P	**P**	**11 06 23.3**	**-0.9**
TMVZ	**Te Maari**	**16.42**	**198**	P	**P**	**11 06 23.6**	**-0.6**
TMVZ				S	**S**	**11 09 18.4**	**-3.4**
ETVZ	**East Tongariro**	**16.44**	**198**	P	**P**	**11 06 23.4**	**-1.0**
WTVZ	**West Tongariro**	**16.46**	**199**	P	**P**	**11 06 23.7**	**-0.9**
TWVZ	**Taurewa**	**16.46**	**199**	P	**Pn**	**11 06 24.4**	**-2.2**
NNVZ	**North Ngauruho**	**16.46**	**199**	P	**P**	**11 06 23.7**	**-1.0**
MCHZ	**McNeill Hill**	**16.47**	**196**	P	**P**	**11 06 22.1**	**-2.4**
MCHZ				S	**S**	**11 09 15.3**	**-7.2**
OTVZ	**Oturere**	**16.48**	**199**	P	**P**	**11 06 22.0**	**-2.8**
SNVZ	**South Ngauruho**	**16.51**	**199**	P	**P**	**11 06 22.5**	**-2.7**
NGZ	**Ngauruhoe**	**16.51**	**199**	P	**P**	**11 06 24.0**	**-1.2**
KWHZ	**Kaweka Forest**	**16.52**	**196**	P	**P**	**11 06 21.9**	**-3.3**
KWHZ				S	**S**	**11 09 18.0**	**-5.6**
CKHZ	**Cape Kidnapper**	**16.58**	**194**	P	**P**	**11 06 25.3**	**-0.4**
TUVZ	**Tukino**	**16.58**	**198**	P	**P**	**11 06 25.2**	**-0.8**
FWVZ	**Far West T-bar**	**16.60**	**199**	P	**P**	**11 06 25.1**	**-1.1**
WHVZ	**Whangaehu Hut**	**16.61**	**199**	P	**P**	**11 06 25.2**	**-1.2**
TRVZ	**Turoa**	**16.64**	**199**	P	**P**	**11 06 25.6**	**-1.0**
WNVZ	**Wahianoa**	**16.65**	**198**	P	**P**	**11 06 25.3**	**-1.4**
BHHZ	**Black Hill Sta**	**16.67**	**197**	P	**P**	**11 06 22.8**	**-4.0**
MOVZ	**Moawhango**	**16.68**	**198**	P	**P**	**11 06 24.9**	**-2.0**
PKVZ	**Pokaka**	**16.69**	**199**	P	**P**	**11 06 25.8**	**-1.3**
VRZ	**Vera Road**	**16.72**	**201**	P	**Pn**	**11 06 27.4**	**-2.3**
RAR	**Rarotonga**	**16.73**	**85**	P	**P**	**11 06 26.4**	**-1.2**
	comp=Z,98nm,0.8s,baz=247,slow=7.7,SNR=24						
RAR	**Rarotonga**	**16.73**	**85**	P	**P**	**11 06 26.1**	**-1.5**
KRHZ	**Kereru**	**16.73**	**196**	P	**P**	**11 06 23.9**	**-3.5**
MTVZ	**Mangateitei**	**16.74**	**199**	P	**P**	**11 06 26.9**	**-0.7**
KAHZ	**Kahuranaki**	**16.75**	**195**	P	**P**	**11 06 25.2**	**-2.5**
DREZ	**Durham Road**	**16.97**	**202**	P	**Pn**	**11 06 32.7**	**+0.2**
KOUNC	**Koumac, New Ca**	**16.99**	**277**	P	**P**	**11 06 31.2**	**+0.7**
KOUNC				IAmb	IAmb	11 06 41.3	
	comp=Z,65nm,0.9s						
KOUNC	**Koumac, New Ca**	**16.99**	**277**	P	**Pn**	**11 06 34.1**	**+1.1**
PNHZ	**Pukenui**	**17.03**	**196**	P	**P**	**11 06 28.3**	**-2.4**
PKE	**Pukeiti**	**17.05**	**203**	P	**Pn**	**11 06 33.3**	**-0.1**
NEZ	**North Egmont**	**17.08**	**202**	P	**Pn**	**11 06 33.6**	**-0.2**
WPHZ	**Waipukurau**	**17.12**	**195**	P	**P**	**11 06 30.0**	**-1.6**
PREZ	**Palmer Road**	**17.12**	**202**	P	**Pn**	**11 06 34.4**	**0.0**
KHEZ	**Kahui Hut**	**17.13**	**202**	P	**Pn**	**11 06 34.0**	**-0.5**
LREZ	**Lake Rotokare**	**17.14**	**201**	P	**Pn**	**11 06 33.1**	**-1.5**
NBEZ	**Newall Road No**	**17.16**	**203**	P	**Pn**	**11 06 34.7**	**0.0**
WAZ	**Wanganui**	**17.23**	**199**	P	**P**	**11 06 31.6**	**-1.2**
TSZ	**Takapari Road**	**17.23**	**197**	P	**P**	**11 06 29.4**	**-3.5**
PRHZ	**Porangahau**	**17.26**	**195**	P	**P**	**11 06 31.6**	**-1.6**
NMEZ	**Namu Road**	**17.28**	**203**	P	**Pn**	**11 06 35.8**	**-0.3**
DVHZ	**Dannevirke**	**17.41**	**196**	P	**P**	**11 06 33.1**	**-1.6**
ANWZ	**Angora Road**	**17.48**	**195**	P	**P**	**11 06 34.9**	**-0.6**
POWZ	**Post Office Ro**	**17.59**	**197**	P	**P**	**11 06 35.1**	**-1.7**
PRWZ	**Pori Road**	**17.70**	**196**	P	**P**	**11 06 37.2**	**-0.7**
BFZ	**Birch Farm**	**17.75**	**195**	P	**P**	**11 06 36.0**	**-2.4**
BFZ	**Birch Farm**	**17.75**	**195**	P	**P**	**11 06 38.3**	**-0.1**
MRZ	**Mangatainoka R**	**17.90**	**197**	P	**P**	**11 06 36.1**	**-4.0**
TIWZ	**Tintock**	**17.93**	**196**	P	**P**	**11 06 38.4**	**-2.0**
HOWZ	**Holdsworth Sta**	**18.14**	**197**	P	**P**	**11 06 38.6**	**-4.0**
OGWZ	**Otaki Gorge**	**18.15**	**198**	P	**P**	**11 06 39.1**	**-3.7**
TMWZ	**Te Maipa**	**18.24**	**196**	P	**P**	**11 06 42.4**	**-1.3**
KIW	**Kapiti Island**	**18.27**	**198**	P	**P**	**11 06 41.2**	**-2.9**
MTW	**Mount Morrison**	**18.38**	**197**	P	**P**	**11 06 42.6**	**-2.6**
CAW	**Cannon Point**	**18.45**	**198**	P	**P**	**11 06 43.1**	**-2.9**
TRWZ	**Traveller**	**18.56**	**196**	P	**P**	**11 06 45.6**	**-1.6**
PAWZ	**Paruwai Farm**	**18.61**	**196**	P	**P**	**11 06 44.7**	**-3.0**
MSWZ	**Moikau Station**	**18.69**	**197**	P	**P**	**11 06 46.1**	**-2.5**
TCW	**Tory Channel**	**18.78**	**199**	P	**P**	**11 06 46.1**	**-3.4**
BHW	**Baring Head**	**18.79**	**198**	P	**P**	**11 06 49.3**	**-0.2**
PLWZ	**Palliser**	**18.83**	**197**	P	**P**	**11 06 48.0**	**-2.1**
PLWZ	**Palliser**	**18.83**	**197**	P	**P**	**11 06 47.8**	**-2.3**
QRZ	**Quartz Range**	**19.01**	**203**	P	**P**	**11 06 51.9**	**-0.1**
QRZ	**Quartz Range**	**19.01**	**203**	P	**P**	**11 06 50.5**	**-1.5**
TUWZ	**Tuamarina**	**19.08**	**200**	P	**P**	**11 06 49.7**	**-2.9**
CMWZ	**Cape Campbell**	**19.29**	**199**	P	**P**	**11 06 53.1**	**-1.8**
BSWZ	**Blackbirch Sta**	**19.36**	**199**	P	**P**	**11 06 54.1**	**-1.6**
KHZ	**Kahutara**	**20.10**	**199**	P	**P**	**11 07 00.9**	**-2.6**
KHZ				IAmb	IAmb	11 07 09.4	
	comp=Z,44nm,0.8s						
KHZ	**Kahutara**	**20.10**	**199**	P	**P**	**11 07 00.7**	**-2.8**
LTZ	**Lake Taylor**	**20.83**	**201**	P	**P**	**11 07 10.4**	**-0.8**
KNTN	**Kanton**	**21.53**	**16**	P	**P**	**11 07 15.2**	**-2.8**
LHI	**Lord Howe Isla**	**22.03**	**244**	P	**P**	**11 07 22.3**	**-0.1**
	baz=22,SNR=6.1						
LHI	**Lord Howe Isla**	**22.03**	**244**	P	**P**	**11 07 24.4**	**+2.0**
LHI	**Lord Howe Isla**	**22.03**	**244**	P	**P**	**11 07 25.3**	**+2.9**
RPZ	**Rata Peaks**	**22.07**	**202**	P	**P**	**11 07 20.4**	**-2.2**
	comp=Z,21nm,0.4s,baz=322,slow=2.0,SNR=28						
RPZ	**Rata Peaks**	**22.07**	**202**	P	**P**	**11 07 21.5**	**-1.2**
RPZ	**Rata Peaks**	**22.07**	**202**	P	**P**	**11 07 22.5**	**-0.1**
LBZ	**Lake Benmore**	**22.96**	**203**	P	**P**	**11 07 29.4**	**-1.4**
LBZ				IAmb	IAmb	11 07 30.2	
	comp=Z,31nm,0.7s						
ODZ	**Otahua Downs**	**23.38**	**201**	IAmb	IAmb	11 07 35.0	
	comp=Z,78nm,1.2s						
ODZ	**Otahua Downs**	**23.38**	**201**	P	**P**	**11 07 34.6**	**+0.1**
DCZ	**Deep Cove**	**25.02**	**206**	IAmb	IAmb	11 07 52.9	
	comp=Z,48nm,1.0s						

HNR **Honiara** 25.62 300 P P 11 07 51.3 -3.7
comp=Z,68nm,0.3s,baz=215,slow=12,SNR=5.3
comp=Z,68nm,0.3s
HNR **Honiara** 25.62 300 IAmb IAmb 11 07 57.0
comp=Z,211nm,0.9s
TBI **Tubuai** 25.87 95 *e*T T 11 33 22.3
comp=Z,4.9nm,0.3s
TARA **Tarawa** 26.47 339 P P 11 08 00.7 -1.9
TARA **Tarawa** 26.47 339 P P 11 08 00.7 -1.9
PAE **Paea** 26.93 83 *e*T T 11 33 56.9
comp=Z,3.4nm,0.3s
PPT2 **Papeete2** 26.96 82 *e*T T 11 33 57.3
comp=Z,4.4nm,0.3s
ARMA **Armidale** 28.10 249 P P 11 08 17.3 +0.2
baz=28,SNR=30
ARMA **Armidale** 28.10 249 P P 11 08 19.1 +2.0
NTLH **Newcastle Hard** 28.42 244 P P 11 08 22.0 +2.3
EIDS **Eidsvold** 28.45 260 P P 11 08 19.8 -0.2
baz=28,SNR=13
EIDS **Eidsvold** 28.45 260 P P 11 08 21.0 +0.9
MGCD **Mangrove Creek** 28.97 244 P P 11 08 25.3 +0.7
baz=29,SNR=24
MGCD **Mangrove Creek** 28.97 244 P P 11 08 27.9 +3.3
RMQ **Roma** 30.48 258 P P 11 08 37.9 -0.2
baz=30,SNR=65
RMQ **Roma** 30.48 258 P P 11 08 39.7 +1.7
CNB **Canberra Magne** 30.82 240 P P 11 08 41.0 0.0
baz=31,SNR=33
CNB **Canberra Magne** 30.82 240 P P 11 08 42.4 +1.4
CAN **Canberra** 31.11 240 IAmb IAmb 11 08 46.1
comp=Z,52nm,1.1s
CAN **Canberra** 31.11 240 P P 11 08 45.5 +2.0
CMSA **Cobar Meteorol** 33.28 248 P P 11 09 02.6 +0.4
baz=33,SNR=91
CMSA **Cobar Meteorol** 33.28 248 P P 11 09 02.8 +0.5
GLAD **Gladstone** 33.49 231 P P 11 09 04.8 +0.9
CTA **Charters Tower** 33.60 269 P P 11 09 05.2 +0.1
comp=Z,94nm,0.8s,baz=97,slow=10,SNR=58
comp=Z,94nm,0.8s
CTA **Charters Tower** 33.60 269 P P 11 09 05.9 +0.7
CTAO **Charters Tower** 33.60 269 P P 11 09 05.7 +0.5
CTAO **Charters Tower** 33.60 269 P P 11 09 05.9 +0.7
CTAO **Charters Tower** 33.60 269 P P 11 09 05.6 +0.5
CTAO x x 11 09 16.0
CTAO pP pwP 11 10 05.1 +2.8
CORO **Coronation Par** 34.27 230 P P 11 09 11.8 +1.3
TOO **Toolangi** 34.38 238 P P 11 09 12.3 +0.6
baz=34,SNR=22
TOO **Toolangi** 34.38 238 IAmb IAmb 11 09 14.0
comp=Z,28nm,0.7s
TOO **Toolangi** 34.38 238 P P 11 09 13.7 +2.1
QLP **Quilpie** 34.53 257 P P 11 09 13.2 +0.2
baz=34,SNR=22
QLP **Quilpie** 34.53 257 P P 11 09 14.5 +1.5
MOO **Moorlands** 34.59 229 P P 11 09 14.4 +1.1
baz=35,SNR=4.9
TAU **Tasmania Unive** 34.67 228 P P 11 09 16.5 +2.5
KRVT **Keravat (AS076** 34.97 299 P P 11 09 15.2 -1.8
comp=Z,83nm,0.9s,baz=263,slow=2.6,SNR=13
comp=Z,83nm,0.9s
GEXS **Deakin Univers** 35.45 237 P P 11 09 21.7 +1.1
BRAT **Ballarat** 35.58 238 P P 11 09 22.8 +1.0
MTSU **Mount Surprise** 35.85 271 P P 11 09 23.9 -0.5
baz=36,SNR=94
MTSU **Mount Surprise** 35.85 271 P P 11 09 25.3 +0.9
PMG **Port Moresby** 36.43 287 P P 11 09 28.7 -0.5
comp=Z,297nm,0.8s,baz=91,slow=5.2,SNR=62
PMG **Port Moresby** 36.43 287 P P 11 09 28.9 -0.3
PMG **Port Moresby** 36.43 287 P P 11 09 29.5 +0.2
PMG **Port Moresby** 36.43 287 P P 11 09 29.0 -0.3
PMG x x 11 09 42.3
PMG pP pwP 11 10 28.2 +1.0
STKA **Stephens Creek** 36.79 248 P P 11 09 32.3 +0.2
comp=Z,29nm,0.7s,baz=94,slow=10,SNR=102
comp=Z,29nm,0.7s
STKA **Stephens Creek** 36.79 248 P P 11 09 32.2 +0.1
baz=37,SNR=101
STKA **Stephens Creek** 36.79 248 P P 11 09 32.3 +0.2
STKA **Stephens Creek** 36.79 248 P P 11 09 32.4 +0.2
ARPS **Mount Arapiles** 37.09 240 P P 11 09 34.8 +0.3
baz=37,SNR=24
ARPS **Mount Arapiles** 37.09 240 P P 11 09 36.8 +2.3
INKA **Innaminka** 37.56 255 P P 11 09 40.5 +1.9
COEN **Coen** 38.18 277 P P 11 09 44.2 +0.3
baz=38,SNR=27
COEN **Coen** 38.18 277 P P 11 09 45.0 +1.1
PATS **Pohnpei** 38.30 319 P P 11 09 44.9 0.0
baz=38,SNR=6.3
PATS **Pohnpei** 38.30 319 P P 11 09 44.1 -0.7
PATS **Pohnpei** 38.30 319 P P 11 09 43.8 -1.0
TAOE **Nuku Hiva Isla** 38.77 74 *e*LR LR 11 20 28.6
comp=Z,171nm,29.8s
TAOE **Nuku Hiva Isla** 38.77 74 P P 11 09 48.9 0.0
HTT **Hallett** 39.12 246 P P 11 09 51.2 -0.3
baz=39,SNR=79
HTT **Hallett** 39.12 246 P P 11 09 51.6 +0.1
TWOA **Tennyson Woods** 39.51 243 P P 11 09 54.7 +0.1
QIS **Mount Isa** 39.59 266 P P 11 09 55.4 -0.1
baz=40,SNR=10
QIS **Mount Isa** 39.59 266 P P 11 09 55.6 +0.1
LCRK **Leigh Creek** 39.67 250 P P 11 09 56.2 +0.2
NAPP **Napperby** 39.75 246 P P 11 09 57.1 +0.4
MANU **Manus Island** 40.06 297 P P 11 09 58.6 -0.8
MANU IAmb IAmb 11 09 59.4
comp=Z,50nm,1.5s
WHYH **Whyalla** 40.23 246 P P 11 10 00.6 +0.1
BBOO **Buckleboo** 41.50 247 P P 11 10 10.1 -0.8
baz=42,SNR=38
BBOO **Buckleboo** 41.50 247 P P 11 10 12.2 -0.7
BBOO IAmb IAmb 11 10 12.2
comp=Z,54nm,0.8s
BBOO **Buckleboo** 41.50 247 P P 11 10 10.2 -0.7
OOD **Oodnadatta** 42.02 254 P P 11 10 16.3 +1.1
MULG **Mulgathing** 43.27 250 P P 11 10 24.6 -0.5
ASAR **Alice Springs** 44.17 260 P P 11 10 31.9 -0.5
comp=Z,54nm,0.9s,baz=93,slow=8.2,SNR=262
ASAR PcP PcP 11 12 12.4 +0.3
comp=Z,9.7nm,0.6s,baz=107,slow=3.6,SNR=9.4
ASAR ScP ScP 11 15 40.9 +3.7
comp=Z,1.2nm,0.8s,baz=68,slow=6.2,SNR=4.0
ASAR S S 11 16 43.5 -1.0
comp=Z,1.9nm,0.9s,baz=98,slow=16,SNR=6.5
comp=Z,54nm,0.9s
WR0 **Warramunga Arr** 44.36 265 IAmb IAmb 11 10 34.7
comp=Z,43nm,0.7s
WB2 **Warramunga Arr** 44.53 265 IAmb IAmb 11 10 35.8
comp=Z,54nm,0.7s
WRAB **Tennant Creek** 44.54 265 P P 11 10 34.4 -0.9
WRAB IAmb IAmb 11 10 36.2
comp=Z,56nm,0.9s
WRAB **Tennant Creek** 44.54 265 P P 11 10 34.5 -0.9
WRAB **Tennant Creek** 44.54 265 P P 11 10 34.3 -0.9
WRAB pP pwP 11 11 36.8 +1.7
WRAB sP PcP 11 12 14.3 +1.0
WRA **Warramunga Arr** 44.54 265 P P 11 10 34.4 -1.0
comp=Z,46nm,0.6s,baz=97,slow=7.9,SNR=608
WRA PcP PcP 11 12 13.9 +0.5
comp=Z,12nm,0.9s,baz=100,slow=4.0,SNR=7.4
WRA ScP ScP 11 15 41.2 +2.5
comp=Z,2.5nm,0.8s,baz=95,slow=4.1,SNR=6.3
WRA S S 11 16 45.2 -4.6
comp=Z,1.1nm,0.8s,baz=96,slow=16,SNR=3.1
comp=Z,46nm,0.6s
GENI **Genyem** 45.80 291 P P 11 10 44.8 -0.4
comp=Z,48nm,1.0s
GENI **Genyem** 45.80 291 P P 11 10 45.1 -0.1
SMPI **Sarmi** 47.36 290 P P 11 10 56.9 -0.3
comp=Z,23nm,0.7s
KDU **Kakadu** 48.38 274 P P 11 11 04.0 -1.1
baz=48,SNR=20
KDU **Kakadu** 48.38 274 P P 11 11 04.7 -0.4
FORT **Forrest** 48.39 249 P P 11 11 03.7 -1.2
baz=48,SNR=93
FORT **Forrest** 48.39 249 P P 11 11 04.0 -0.9
FORT **Forrest** 48.39 249 P P 11 11 05.1 +0.2
WRKA **Warakurna** 48.97 257 P P 11 11 08.7 -0.8
baz=49,SNR=56
WRKA **Warakurna** 48.97 257 P P 11 11 08.9 -0.5
MTN **Manton Dam** 49.56 273 P P 11 11 12.8 -1.2
baz=50,SNR=13
MTN **Manton Dam** 49.56 273 IAmb IAmb 11 11 13.5
comp=Z,20nm,0.7s
MTN **Manton Dam** 49.56 273 P P 11 11 13.3 -0.6
BAKI **Biak** 50.00 290 P P 11 11 18.4 +1.1
comp=Z,1µmcomp=Z,74nm,1.3s

DRV **Dumont d'Urvil** 50.52 200 P P 11 11 22.0 +1.7
KNRA **Kununurra** 50.81 269 P P 11 11 22.8 -0.5
baz=51,SNR=57
KNRA **Kununurra** 50.81 269 P P 11 11 23.2 -0.1
FAKI **Fak Fak** 52.55 285 P P 11 11 34.5 -1.6
FAKI IAmb IAmb 11 11 36.0
comp=Z,67nm,1.2s
FAKI **Fak Fak** 52.55 285 P P 11 11 35.8 -0.3
comp=Z,550nmcomp=Z,54nm,1.5s
FAKI **Fak Fak** 52.55 285 P P 11 11 35.5 -0.6
SWI **Sorong** 54.39 287 P P 11 11 48.5 -0.9
comp=Z,1µmcomp=Z,144nm,0.9s
SBA **Scott Base** 54.78 184 P P 11 11 53.6 +2.4
SBA **Scott Base** 54.78 184 P P 11 11 55.4 +4.2
SBA pP pwP 11 12 52.2 -0.6
VNDA **Vanda** 54.83 185 P P 11 11 53.5 +1.9
comp=Z,4.9nm,1.1s,baz=9.0,slow=6.7,SNR=7.9
comp=Z,4.9nm,1.1s
VNDA **Vanda** 54.83 185 P P 11 11 54.0 +2.5
SOEI **Soe** 56.94 274 P P 11 12 08.4 +0.8
comp=Z,2µmcomp=Z,175nm,0.7s
SOEI **Soe** 56.94 274 P P 11 12 08.8 +1.2
KLBR **Kellerberrin** 57.05 247 P P 11 12 07.2 -0.8
baz=57,SNR=26
KLBR **Kellerberrin** 57.05 247 P P 11 12 08.0 0.0
PSA00 **Pilbara Seismi** 57.30 259 IAmb IAmb 11 12 09.8
comp=Z,20nm,0.8s
PSA00 **Pilbara Seismi** 57.30 259 IAmb IAmb 11 12 09.9
comp=Z,9.4nm,0.8s
PSA00 **Pilbara Seismi** 57.30 259 P P 11 12 09.1 -0.8
BATI **Baumata** 57.33 273 P P 11 12 11.2 +1.0
comp=Z,99nm,0.6s
MBWA **Marble Bar** 57.51 259 P P 11 12 10.6 -0.8
MBWA **Marble Bar** 57.51 259 P P 11 12 11.5 +0.1
MBWA **Marble Bar** 57.51 259 P P 11 12 10.3 -1.1
MBWA x x 11 12 23.3
LBMI **Labuha** 57.81 285 P P 11 12 13.2 -0.3
comp=Z,49nm,0.7s
BLDU **Ballidu** 58.09 248 P P 11 12 14.3 -1.0
baz=58,SNR=23
BLDU **Ballidu** 58.09 248 P P 11 12 15.9 +0.6
MUN **Mundaring** 58.28 246 P P 11 12 16.6 0.0
baz=58,SNR=6.7
MUN **Mundaring** 58.28 246 P P 11 12 17.1 +0.5
SANI **Sanana** 58.51 283 P P 11 12 16.9 -1.5
comp=Z,46nm,0.6s
SANI **Sanana** 58.51 283 P P 11 12 18.2 -0.2
MORW **Morawa** 58.96 249 P P 11 12 20.5 -0.8
baz=59,SNR=16
MORW **Morawa** 58.96 249 IAmb IAmb 11 12 21.4
comp=Z,26nm,0.8s
MORW **Morawa** 58.96 249 P P 11 12 21.1 -0.2
CCD **Concordia, Ant** 59.52 195 P P 11 12 27.0 +2.2
CCD pP PcP 11 13 10.4 +1.2
CCD sP pwP 11 13 37.5 +10
EDFI **Ende, Flores** 59.67 274 P P 11 12 25.6 -0.9
comp=Z,71nm,0.6s
CASY **Casey** 61.28 206 P P 11 12 37.5 +1.3
CASY **Casey** 61.28 206 P P 11 12 37.6 +1.3
CASY x x 11 12 47.1
WBSI **Waikabubak, Su** 61.45 272 P P 11 12 41.2 +2.9
LUWI **Luwuk** 61.84 282 P P 11 12 40.8 0.0
comp=Z,2µmcomp=Z,89nm,1.0s
LUWI **Luwuk** 61.84 282 P P 11 12 40.2 -0.6
GIRL **Giralia** 62.04 256 P P 11 12 42.9 +0.8
baz=62,SNR=4.5
GIRL **Giralia** 62.04 256 P P 11 12 42.5 +0.4
BKSI **Bulukumba** 62.44 277 P P 11 12 43.7 -1.1
comp=Z,66nm,0.7s
BNSI **Bone** 62.83 277 P P 11 12 47.2 -0.2
comp=Z,45nm,0.7s
KAPI **Kappang** 62.90 277 P P 11 12 47.0 -0.9
comp=Z,13nm,0.5s
comp=Z,13nm,0.5s
KAPI **Kappang** 62.90 277 P P 11 12 47.3 -0.5
KAPI IAmb IAmb 11 12 48.6
comp=Z,18nm,0.7s
KAPI **Kappang** 62.90 277 P P 11 12 48.4 +0.5
PLAI **Plampang** 63.23 272 P P 11 12 50.1 +0.1
comp=Z,146nm,0.8s
PLAI **Plampang** 63.23 272 P P 11 12 49.9 -0.1
SPSI **Sidrap Palu** 63.31 278 P P 11 12 48.8 -1.7
comp=Z,32nm,0.8s
TOLI2 **Tolitoli** 64.58 283 P P 11 12 59.2 +0.5
MPSI **Mapaga** 65.02 282 P P 11 13 00.2 -1.4
comp=Z,3µmcomp=Z,76nm,0.7s
SRBI **Singaraja** 65.86 272 P P 11 13 07.2 +0.2
comp=Z,61nm,0.9s
QSPA **South Pole Qui** 66.45 180 P P 11 13 12.4 +2.5
comp=Z,6.8nm,0.6s,baz=352,slow=0.7,SNR=79
comp=Z,6.8nm,0.6s
QSPA **South Pole Qui** 66.45 180 P P 11 13 12.5 +2.5
QSPA IAmb IAmb 11 13 13.0
comp=Z,9.0nm,0.7s
QSPA **South Pole Qui** 66.45 180 P P 11 13 12.4 +2.5
QSPA pP pwP 11 14 15.3 +3.4
KMMI **Kalianget** 67.39 272 P P 11 13 16.8 +0.2
comp=Z,65nm,1.0s
BBKI **Banjar Baru** 68.00 276 P P 11 13 25.2 +4.8
GRJI **Gresik** 68.81 272 P P 11 13 26.6 +1.2
comp=Z,1µmcomp=Z,130nm,0.7s
MTKI **Muara Teweh, K** 68.99 279 P P 11 13 26.8 +0.3
PWJI **Pagerwojo** 69.01 270 P P 11 13 27.2 +0.6
comp=Z,47nm,0.7s
PCJI **Pacitan** 69.52 270 P P 11 13 30.9 +1.2
comp=Z,139nm,0.6s
WOJI **Wonogiri, Jawa** 69.89 270 P P 11 13 32.7 +0.7
comp=Z,69nm,0.9s
PBKI **Pangkalan Bun** 71.20 275 P P 11 13 42.3 +2.4
KPJI **Karang Pucung** 71.90 270 P P 11 13 44.8 +0.7
comp=Z,35nm,0.6s
JOW **Kunigami** 72.41 311 P P 11 13 45.9 -0.9
comp=Z,30nm,0.9s,baz=164,slow=11,SNR=4.4
comp=Z,30nm,0.9s
STKI **Sintang** 72.51 278 P P 11 13 48.2 +0.5
SBUM **Sibu** 72.84 281 P P 11 13 48.6 -1.0
MJAR **Matsushiro Arr** 72.91 324 P P 11 13 48.2 -1.3
comp=Z,5.9nm,1.0s,baz=151,slow=5.7,SNR=8.4
comp=Z,5.9nm,1.0s
MJAR **Matsushiro Arr** 72.91 324 P P 11 13 48.1 -1.3
LEM **Lembang** 73.30 270 P P 11 13 51.9 -0.6
comp=Z,52nm,0.7s
comp=Z,52nm,0.7s
KSM **Kuching** 74.16 279 P P 11 13 56.8 -0.4
KSM IAmb IAmb 11 13 57.7
comp=Z,28nm,0.8s
KSM **Kuching** 74.16 279 P P 11 13 56.7 -0.5
JHS **Saijyo** 74.67 320 P P 11 13 59.4 -0.3
JHS IAmb IAmb 11 13 59.9
comp=Z,16nm,0.7s
TWG **Pinlang** 75.33 303 IAmb IAmb 11 14 02.2
comp=Z,20nm,0.6s
TPUB **Ta-pu** 75.93 303 P P 11 14 06.3 -0.8
SHEM **Shemya Is, Ala** 76.38 355 P P 11 14 07.7 -1.2
comp=Z,43nm,0.9s,baz=148,slow=3.2,SNR=4.9
comp=Z,43nm,0.9s
BELA **Belarano 2** 76.42 172 P P 11 14 10.4 +1.4
NIKH **Nikolski High** 76.67 5 P P 11 14 10.1 -0.4
NIKH **Nikolski High** 76.67 5 P P 11 14 09.7 -0.8
baz=188,SNR=5.9
UNV **Unalaska Valle** 77.76 7 P P 11 14 15.8 -0.7
UNV **Unalaska Valle** 77.76 7 P P 11 14 15.6 -0.9
baz=190,SNR=8.2
PMSA **Palmer Station** 78.31 156 P P 11 14 21.1 +1.6
comp=Z,17nm,0.4s,baz=260,slow=8.2,SNR=8.2
comp=Z,17nm,0.4s
MAW **Mawson** 78.73 200 P P 11 14 23.9 +2.2
comp=Z,12nm,0.8s,baz=130,slow=7.4,SNR=19
comp=Z,12nm,0.8s
MAW **Mawson** 78.73 200 P P 11 14 23.8 +2.0
baz=79,SNR=15
MAW **Mawson** 78.73 200 P P 11 14 23.7 +2.0
FALS **False Pass** 79.12 8 P P 11 14 25.3 +1.4
baz=193
FALS **False Pass** 79.12 8 P P 11 14 20.8 -3.1
PETK **Petropavlovsk-** 79.36 345 P P 11 14 24.1 -1.2
comp=Z,16nm,1.1s,baz=132,slow=4.2,SNR=7.8
comp=Z,16nm,1.1s
KSRS **Korea Array** 79.43 319 P P 11 14 25.8 -0.2
comp=Z,2.5nm,0.8s,baz=140,slow=5.2,SNR=10
comp=Z,2.5nm,0.8s
SCZ2 **Santa Cruz Isl** 79.55 46 P P 11 14 27.1 +0.4
baz=232
SCI2 **San Clemente I** 79.66 47 P P 11 14 28.2 +0.8
baz=233
CHNA **Chernabura Isl** 79.68 11 P P 11 14 27.6 +0.7
baz=197
PKM **Mcpherson Peak** 79.98 45 P P 11 14 30.0 +0.8
baz=232
CIS **Catalina Islan** 80.00 47 P P 11 14 30.0 +0.8
baz=233
SDPT **Sand Point** 80.03 10 P P 11 14 28.4 -0.3
baz=196
SMMC **Simmler** 80.12 45 P P 11 14 30.9 +1.0
baz=232
BCW **Bitter Crk WRg** 80.27 45 IAmb IAmb 11 14 33.3
comp=Z,30nm,0.8s
SPIA **Saint Paul Isl** 80.74 4 P P 11 14 33.9 +1.4
baz=187
ARVC **Arvin** 80.77 45 P P 11 14 34.1 +0.9
baz=233
ELS **Elsinore Mount** 80.81 47 IAmb IAmb 11 14 35.6
comp=Z,18nm,0.9s
SLBS **Sierra La Lagu** 80.84 59 P P 11 14 34.3 +0.4
SLBS IAmb IAmb 11 14 35.4
comp=Z,14nm,0.8s
KMPM **Mount Pierce** 80.89 38 IAmb IAmb 11 14 36.4
comp=Z,28nm,1.0s
MURC **Murrieta** 80.94 47 P P 11 14 35.1 +0.9
baz=234,SNR=5.7
SRIG **Santa Rosalia** 80.96 55 IAmb IAmb 11 14 36.2
comp=Z,29nm,0.9s
KMRM **Mail Ridge** 80.99 39 IAmb IAmb 11 14 36.6
comp=Z,33nm,0.9s
BFSC **Mount Baldy Ra** 81.01 47 P P 11 14 35.1 +0.5
baz=234,SNR=5.9
VES **Vestal, Richgr** 81.03 45 P P 11 14 35.6 +1.1
baz=232
MONP2 **Monument Peak** 81.05 48 P P 11 14 35.9 +0.8
baz=234,SNR=9.4
IKP **In-Ko-Pah, Jac** 81.13 49 P P 11 14 36.5 +1.2
baz=235,SNR=7.3
EDW2 **Edwards Air Fo** 81.17 46 P P 11 14 36.4 +1.0
baz=233,SNR=14
YUH **Yuha Desert** 81.25 49 IAmb IAmb 11 14 38.1
comp=Z,21nm,1.2s
ISA **Isabella, Lake** 81.32 45 IAmb IAmb 11 14 38.5
comp=Z,23nm,0.9s
ISA **Isabella, Lake** 81.32 45 P P 11 14 37.4 +1.2
baz=233
PFO **Pinyon Flats O** 81.44 48 P P 11 14 38.1 +1.2
PFO **Pinyon Flats O** 81.44 48 P P 11 14 37.7 +0.8
baz=234,SNR=5.4
TPFO **Pinon Flats** 81.44 48 P P 11 14 37.7 +0.7
baz=234,SNR=7.5
SWSC **Sam W. Stewart** 81.51 49 P P 11 14 38.0 +0.8
baz=235
BBRC **Big Bear Solar** 81.51 47 P P 11 14 38.3 +0.9
baz=234
USRK **Ussuriysk Ar.** 81.71 326 P P 11 14 37.8 -0.1
comp=Z,1.1nm,0.9s,baz=98,slow=2.9,SNR=9.3
comp=Z,8.1nm,0.9s
USRK **Ussuriysk Ar.** 81.71 326 P P 11 14 38.0 +0.1
LRMC **Laurel Mtn Rad** 81.73 46 P P 11 14 39.5 +1.1
baz=233,SNR=6.4
KSXB **Camp Six Broad** 81.96 38 IAmb IAmb 11 14 46.6
comp=Z,22nm,1.2s
BELC **Belle Mtn. Jos** 81.98 48 P P 11 14 40.8 +1.1
baz=235,SNR=9.0
CWC **Cottonwood Cre** 82.04 45 P P 11 14 41.0 +0.9
baz=233
NJ2 **Nanjing** 82.10 310 *e*P P 11 14 37.2 -3.0
NJ2 pmax pmax
comp=Z,12nm,1.0s
BC3 **Big Chuckawall** 82.15 48 P P 11 14 42.0 +1.4
baz=235,SNR=5.9
GSC **Goldstone, Bar** 82.20 46 IAmb IAmb 11 14 42.9
comp=Z,18nm,1.0s
GSC **Goldstone, Bar** 82.20 46 P P 11 14 41.7 +0.9
baz=234,SNR=7.5
HEC **Hector,Ludlow** 82.24 47 P P 11 14 41.9 +1.0
baz=234,SNR=12
GLA **Glamis** 82.24 49 IAmb IAmb 11 14 43.7
comp=Z,39nm,1.1s
GLA **Glamis** 82.24 49 P P 11 14 42.5 +1.5
baz=235,SNR=5.5
TIN **Tinemaha, Big** 82.32 44 P P 11 14 42.4 +1.0
baz=233
L02F **Cave Junction** 82.32 37 P P 11 14 42.7 +1.5
baz=229
QSM **Queen of Sheba** 82.55 46 IAmb IAmb 11 14 44.5
comp=Z,21nm,1.2s
YBH **Yreka Blue Hor** 82.55 38 P P 11 14 43.1 +0.6
comp=Z,5.8nm,0.8s,baz=207,slow=2.8,SNR=15
comp=Z,5.8nm,0.8s
MPK **Martis Peak** 82.57 41 P P 11 14 42.5 -0.3
MPK IAmb IAmb 11 14 45.0
comp=Z,27nm,0.9s
IRM **Iron Mountain** 82.65 48 P P 11 14 44.5 +1.4
baz=235,SNR=10
K02D **Willamette Mer** 82.65 37 P P 11 14 44.2 +1.3
baz=228
GMRC **Granite Mounta** 82.66 47 P P 11 14 44.1 +0.8
baz=235,SNR=5.9
VCNR **Virginia City** 82.80 42 IAmb IAmb 11 14 46.0
comp=Z,13nm,0.9s
J01E **Myrtle Point** 82.82 36 P P 11 14 45.0 +1.3
baz=228
GRAC **Grapevine Rang** 82.83 45 P P 11 14 45.2 +1.2
baz=233
FURC **Furnace Creek,** 82.85 45 P P 11 14 44.8 +0.9
baz=234
YERR **Yerington** 82.86 42 IAmb IAmb 11 14 46.1
comp=Z,16nm,0.8s
TUQ **Turquoise Moun** 82.86 46 P P 11 14 45.2 +0.9
baz=234,SNR=5.7
SHOC **Shoshone, Teco** 82.90 46 P P 11 14 45.2 +0.9
baz=234
214A **Organ Pipe Nat** 83.05 51 P P 11 14 46.4 +1.2
baz=237
L04D **Klamath Falls** 83.10 38 IAmb IAmb 11 14 47.5
comp=Z,18nm,1.1s
L04D **Klamath Falls** 83.10 38 P P 11 14 46.2 +0.8
baz=230
NVAR **Mina Array Bea** 83.10 43 P P 11 14 46.4 +0.9
comp=Z,17nm,0.9s,baz=223,slow=9.0,SNR=19
comp=Z,17nm,0.9s
PAHR **Pah Rah Range** 83.22 41 IAmb IAmb 11 14 47.9
comp=Z,14nm,0.9s
PDMCI **Parker Dam,Lak** 83.42 48 P P 11 14 48.1 +1.1
baz=236,SNR=7.1
I03D **Drain, OR** 83.49 36 P P 11 14 48.0 +0.9
baz=229
TPNV **Topopah Spring** 83.53 45 P P 11 14 48.3 +0.7
baz=234,SNR=7.3
COYC **Coyhaique** 83.65 137 P P 11 14 50.0 +2.0
COYC IAmb IAmb 11 14 50.9
comp=Z,19nm,1.0s
K04D **Chiloquin, OR** 83.67 38 P P 11 14 49.2 +1.0
baz=230
IPM **Ipoh** 83.83 278 P P 11 14 49.5 0.0
J04D **Umpqua Nationa** 83.87 37 IAmb IAmb 11 14 51.5
comp=Z,30nm,1.0s
J04D **Umpqua Nationa** 83.87 37 P P 11 14 50.4 +1.1
baz=230
P16K **Nushagak River** 83.96 10 P P 11 14 49.5 +0.5
baz=198
H03S2 **Juan Fernandez** 83.99 124 T T 12 47 39.2
SNR=25
H03S1 **Juan Fernandez** 84.00 124 T T 12 47 41.0
SNR=26
H03S3 **Juan Fernandez** 84.00 124 T T 12 47 37.0
SNR=24
MOD **Modoc Plateau** 84.04 39 IAmb IAmb 11 14 52.0
comp=Z,16nm,0.8s
I04A **Tendick Farm,** 84.06 37 P P 11 14 50.3 +0.3
baz=229
K05A **Summer Lake** 84.22 38 IAmb IAmb 11 14 53.4
comp=Z,25nm,1.0s
H04D **Lebanon** 84.36 36 P P 11 14 52.1 +0.7
baz=229
J05D **Fort Rock, OR** 84.39 38 P P 11 14 52.9 +1.0
baz=230
O16K **Kokwok River B** 84.48 10 P P 11 14 50.9 -0.7
baz=198,SNR=12
KULM **Kulim** 84.50 278 IAmb IAmb 11 14 53.8
comp=Z,17nm,0.7s
TROLL **Troll, Antarti** 84.61 180 P P 11 14 54.0 +1.4
Q19K **Cape Douglas,** 84.63 12 P P 11 14 51.8 -0.7
baz=202
TUC **Tucson** 84.68 51 P P 11 14 55.1 +1.6
baz=238
H04A **Detroit Lake** 84.77 36 P P 11 14 54.2 +0.7
P18K **Big Mountain,** 84.77 11 P P 11 14 52.8 -0.4

baz=201
R11A Troy Canyon, C 84.77 44 P P 11 14 53.9 0.0
baz=234
PINE Pine Mountain 84.88 37 IAmb IAmb 11 14 56.7
comp=Z,14nm,1.1s
SNAA Sanae 84.88 178 P P 11 14 54.9 +1.1
LL02 Futaleuf 84.90 135 P P 11 14 56.1 +1.7
LL02 IAmb IAmb 11 14 57.4
comp=Z,30nm,1.0s
CN2 Changchun 84.95 323 eP P 11 14 54.3 -0.1
CN2 eS S 11 25 00.7 +1.4
CN2 pmax pmax
comp=Z,10.0nm,1.3s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=Z,100nm,16.0s
CN2 LR LR
comp=Z,100nm,16.0s
CN2 LR LR
comp=Z,200nm,17.2s
BMN Battle Mountai 84.97 42 IAmb IAmb 11 14 56.6
comp=Z,13nm,1.0s
I05D Terrebonne, OR 85.01 37 P P 11 14 55.4 +0.6
baz=230
VNA3 Neumayer Olymp 85.01 176 P P 11 14 55.3 +0.9
VNA3 Neumayer Olymp 85.01 176 pP pP 11 15 59.1 -0.3
O18K Koktuh Hills 85.21 11 P P 11 14 55.1 -0.1
baz=201
N16K Nishlik Lake 85.22 9 P P 11 14 56.0 +0.6
baz=197,SNR=18
KLR Kul'dur 85.37 329 P P 11 14 56.0 -0.3
comp=Z,3.4nm,0.9s,baz=101,slow=5.4,SNR=6.7
comp=Z,3.4nm,0.9s
VNA2 Neumayer--Watz 85.45 177 P P 11 14 57.8 +1.2
baz=191,slow=6.0
F04A Amboy 85.46 35 IAmb IAmb 11 14 58.7
comp=Z,11nm,0.8s
LL04 Puerto Octay 85.59 133 P P 11 14 59.0 +1.2
LL04 IAmb IAmb 11 14 59.7
comp=Z,12nm,0.8s
HOM Homer 85.71 13 P P 11 14 58.2 +0.6
baz=204
E04D Cinebar 85.79 35 P P 11 14 58.6 +0.2
baz=229
N18K Kilae Creek 85.87 11 P P 11 14 58.2 -0.3
baz=200
SZCU Shurtz Canyon 85.97 46 IAmb IAmb 11 15 02.2
comp=Z,16nm,1.0s
BRSE Bradley Lake S 85.97 13 P P 11 14 59.3 +0.2
baz=205
WUAZ Wupatki 85.98 48 P P 11 14 58.7 -1.2
baz=237
N19K Bonanza Creek 86.23 11 IAmb IAmb 11 15 00.8
comp=Z,15nm,0.8s
N19K Bonanza Creek 86.23 11 P P 11 14 59.8 -0.6
baz=201,SNR=8.3
ZAIG Zacatecas 86.33 63 IAmb IAmb 11 15 04.4
comp=Z,13nm,1.1s
ELK Elko 86.38 42 P P 11 15 02.7 +0.9
comp=Z,4.0nm,0.9s,baz=271,slow=8.4,SNR=4.9
comp=Z,4.0nm,0.9s
PKCU Pink Cliffs 86.40 46 IAmb IAmb 11 15 05.1
comp=Z,33nm,1.1s
MTPU Mount Pierson 86.81 46 IAmb IAmb 11 15 06.9
comp=Z,19nm,0.9s
W18A Petrified Fore 86.91 50 P P 11 15 05.1 +0.7
baz=238
PLCA Paso Flores 86.91 133 P P 11 15 06.0 +1.7
comp=Z,8.4nm,1.0s,baz=227,slow=4.4,SNR=11
comp=Z,8.4nm,1.0s
G08A Pilot Rock 86.92 37 IAmb IAmb 11 15 06.0
comp=Z,12nm,1.0s
P23K Montague Islan 86.94 15 P P 11 15 02.2 -1.4
baz=208
121A Cookes Peak, D 86.97 53 IAmb IAmb 11 15 07.6
comp=Z,20nm,1.1s
121A Cookes Peak, D 86.97 53 P P 11 15 06.0 +1.3
baz=240
121A Cookes Peak, D 86.97 53 P P 11 15 06.1 +1.3
baz=240
SPCR Spurr Chakacha 87.01 12 P P 11 15 03.5 -0.6
baz=203
E07A Sunnyside 87.22 36 IAmb IAmb 11 15 07.6
comp=Z,14nm,0.9s
GAMB Gambell 87.25 3 P P 11 15 04.9 0.0
baz=186
M19K Big River Lodg 87.27 11 P P 11 15 04.9 -0.3
baz=201
RC01 Rabbit Creek A 87.41 13 P P 11 15 05.7 -0.1
baz=206
L19K White Mountain 87.45 10 IAmb IAmb 11 15 07.7
comp=Z,25nm,1.0s
L19K White Mountain 87.45 10 P P 11 15 06.3 +0.2
baz=201,SNR=14
M20K Styx River 87.47 11 P P 11 15 05.9 -0.4
baz=202
KIDD KIDD Seismic O 87.53 54 P P 11 15 08.5 +1.1
baz=240
SUA Susitna One 87.54 13 IAmb IAmb 11 15 07.8
comp=Z,16nm,0.7s
GLI Glacier Island 87.80 14 P P 11 15 07.5 -0.2
baz=208
SKT Skwentna 87.86 12 P P 11 15 07.1 -0.9
baz=204
L20K Farewell, AK 87.89 11 P P 11 15 08.1 -0.1
baz=202,SNR=6.6
M22K Willow 87.93 13 P P 11 15 07.8 -0.5
baz=205,SNR=6.4
LYN LuoYang 87.95 309 eP P 11 15 09.6 +0.5
LYN pP pP 11 16 15.9 +1.1
KNK Knik Glacier 87.97 14 P P 11 15 08.4 -0.2
baz=207
TTA Tatalina 87.97 10 IAmb IAmb 11 15 10.1
comp=Z,16nm,1.2s
TTA Tatalina 87.97 10 P P 11 15 07.7 -0.9
baz=200,SNR=11
PMR Palmer 87.99 13 P P 11 15 08.4 -0.1
baz=206
D08A Wollman Farm, 88.04 36 IAmb IAmb 11 15 11.3
comp=Z,16nm,1.0s
ENH Enshi 88.04 304 IAmb IAmb 11 15 11.0
comp=Z,14nm,0.8s
E09A Wood Farm, Sta 88.12 37 IAmb IAmb 11 15 11.3
comp=Z,21nm,1.2s
GHO Glory Hole Cre 88.19 13 IAmb IAmb 11 15 10.8
comp=Z,26nm,1.0s
Y22A Socorro 88.27 52 P P 11 15 12.1 +1.3
baz=240
F10A Beach Ranch, E 88.30 37 IAmb IAmb 11 15 11.9
comp=Z,21nm,0.9s
MNTX Cornudas Mount 88.33 54 IAmb IAmb 11 15 13.2
comp=Z,21nm,0.8s
MNTX Cornudas Mount 88.33 54 P P 11 15 12.2 +1.2
baz=241
MNTX Cornudas Mount 88.33 54 P P 11 15 11.2 +0.2
baz=241
SML Sawmill 88.35 13 P P 11 15 10.9 +0.5
baz=207
GYA Guiyang 88.45 300 ⇓P P 11 15 13.6 +1.8
GYA pmax pmax
comp=Z,10.0nm,0.8s
BMRM Bremner River 88.46 15 P P 11 15 11.3 +0.4
baz=210
PLID Pearl Lake 88.46 39 IAmb IAmb 11 15 13.2
comp=Z,17nm,1.4s
M23K Glacier View 88.47 14 P P 11 15 11.4 +0.5
baz=207
SRU San Rafael Swe 88.48 46 IAmb IAmb 11 15 13.6
comp=Z,24nm,0.8s
CUT Chulitna 88.49 12 P P 11 15 10.7 -0.3
baz=205
TX31 Lajitas Ar. Si 88.50 57 P P 11 15 12.9 +1.0
baz=242
TX32 Lajitas Array 88.50 57 IAmb IAmb 11 15 15.2
comp=Z,14nm,1.1s
TXAR Lajitas Array 88.50 57 P P 11 15 13.4 +1.5
comp=Z,5.1nm,0.8s,baz=218,slow=6.2,SNR=41
comp=Z,5.1nm,0.8s
HLID Hailey 88.50 41 P P 11 15 12.6 +0.8
baz=235
P17A Butcher Ranch, 88.53 45 IAmb IAmb 11 15 14.7
comp=Z,16nm,1.0s
PPLA Purkeypile 88.58 11 P P 11 15 11.2 -0.3
baz=203
SCM Sheep Creek Mo 88.59 14 IAmb IAmb 11 15 12.9
comp=Z,26nm,1.3s
SCM Sheep Creek Mo 88.59 14 P P 11 15 11.7 +0.2
baz=208
KLU Klutina 88.61 15 P P 11 15 11.5 -0.2
baz=209
B08A Colville Reser 88.63 35 IAmb IAmb 11 15 13.2
comp=Z,8.2nm,0.8s
K20K Telida 88.68 10 IAmb IAmb 11 15 13.0
comp=Z,19nm,0.9s
K20K Telida 88.68 10 P P 11 15 11.4 -0.4
baz=202,SNR=14
PNL Peninsula 88.75 18 P P 11 15 12.5 +0.3
baz=215
C09A Chrisman Ranch 88.84 35 IAmb IAmb 11 15 14.6
comp=Z,12nm,0.9s
N25K Chitina, Valde 89.02 15 IAmb IAmb 11 15 15.0
comp=Z,24nm,1.5s
N25K Chitina, Valde 89.02 15 P P 11 15 13.8 +0.2
baz=210
CAST Castle Rocks 89.08 11 IAmb IAmb 11 15 13.6
comp=Z,22nm,0.9s
CAST Castle Rocks 89.08 11 P P 11 15 12.5 -1.2
baz=203,SNR=25
M24K Tolsona, Glenn 89.09 14 P P 11 15 13.8 -0.1
baz=209
ANMO Albuquerque 89.13 51 P P 11 15 15.8 +0.9
comp=Z,13nm,0.9s,baz=208,slow=5.9,SNR=33
comp=Z,13nm,0.9s
ANMO Albuquerque 89.13 51 P P 11 15 15.8 +0.9
ANMO IAmb IAmb 11 15 17.0
comp=Z,16nm,0.9s
ANMO Albuquerque 89.13 51 P P 11 15 15.6 +0.7
baz=240
ANMO Albuquerque 89.13 51 P P 11 15 14.6 -0.3
baz=240
WAT6 Susitna Watana 89.17 13 P P 11 15 14.4 0.0
baz=207,SNR=7.8
MCARA McCarthy VSAT 89.21 16 P P 11 15 14.5 +0.1
baz=211
WAT1 Susitna Watana 89.22 13 P P 11 15 14.6 +0.2
baz=206
BARN Barnard Glacie 89.29 17 IAmb IAmb 11 15 29.4
comp=Z,12nm,1.0s
CTG Chitna Glacier 89.29 17 P P 11 15 15.0 +0.1
baz=213
KTH Kantishna Hill 89.42 12 IAmb IAmb 11 15 15.9
comp=Z,16nm,0.9s
J20K Nowinta River 89.44 10 IAmb IAmb 11 15 16.5
comp=Z,15nm,0.8s
J20K Nowinta River 89.44 10 P P 11 15 15.4 +0.1
baz=202,SNR=11
TRF Thorofare Moun 89.44 12 IAmb IAmb 11 15 16.1
comp=Z,20nm,0.8s
TRF Thorofare Moun 89.44 12 P P 11 15 14.8 -0.8
baz=205,SNR=14
CHUM Lake Minchumin 89.47 11 P P 11 15 14.7 -0.8
baz=203,SNR=7.9
SEY Seymchan 89.48 347 P P 11 15 15.2 -0.3
comp=Z,12nm,0.8s,baz=148,slow=5.6,SNR=26
comp=Z,12nm,0.8s
GCSA Galena City Sc 89.56 9 P P 11 15 16.3 +0.5
baz=199
HARP HAARP 89.58 15 P P 11 15 16.4 +0.3
baz=210
DHY Denali Highway 89.69 13 P P 11 15 16.2 -0.5
baz=208
NEW Newport 89.74 36 P P 11 15 17.3 +0.2
comp=Z,2.1nm,0.8s,baz=236,slow=5.3,SNR=4.9
comp=Z,2.1nm,0.8s
NEW Newport 89.74 36 P P 11 15 16.4 -0.7
baz=233
BPAW Bear Paw Mtn. 89.90 11 P P 11 15 17.1 -0.5
baz=204
MT09 Talagante 89.93 127 IAmb IAmb 11 15 21.0
comp=Z,13nm,1.1s
MCK McKinley 89.96 12 IAmb IAmb 11 15 18.7
comp=Z,22nm,1.2s
MCK McKinley 89.96 12 P P 11 15 17.8 0.0
baz=206,SNR=7.9
YUK8 Steele Glacier 89.98 17 P P 11 15 18.2 -0.1
baz=214
PAX Paxson 90.01 14 P P 11 15 18.3 +0.2
baz=209
S34M Telegraph Cree 90.03 23 P P 11 15 18.8 +0.6
baz=222
AHID Auburn Hatcher 90.07 43 IAmb IAmb 11 15 21.1
comp=Z,14nm,1.2s
M26K Nabesna, AK 90.09 15 P P 11 15 19.2 +0.7
baz=212
YUK6 Outpost Mounta 90.09 18 P P 11 15 18.8 +0.1
baz=216
YUK3 Moose Creek 90.20 17 P P 11 15 19.5 +0.3
baz=214
XAN Xi'an 90.26 307 P P 11 15 20.2 +0.2
XAN pmax pmax
comp=Z,19nm,1.0s
S22A 4UR Ranch, Cre 90.26 48 IAmb IAmb 11 15 22.4
comp=Z,14nm,1.1s
S22A 4UR Ranch, Cre 90.26 48 P P 11 15 20.5 +0.3
baz=240
M27K Edge Creek, AK 90.33 16 IAmb IAmb 11 15 33.8
comp=Z,19nm,1.3s
M27K Edge Creek, AK 90.33 16 P P 11 15 20.9 +1.1
baz=212
YUK4 Talbot Arm 90.34 18 P P 11 15 20.6 +0.7
baz=215
PEL Peldehue 90.46 127 IAmb IAmb 11 15 23.2
comp=Z,17nm,1.1s
XLT XiLinHaoTe 90.48 319 eP P 11 15 22.6 +1.8
XLT pP pP 11 16 25.6 -1.1
XLT pmax pmax
comp=Z,6.0nm,1.0s
XLT pmax pmax
comp=Z,110nm,3.6s
O20A White River Ci 90.52 46 IAmb IAmb 11 15 22.7
comp=Z,13nm,1.4s
O20A White River Ci 90.52 46 P P 11 15 21.3 +0.1
baz=239
L26K Log Cabin Wild 90.54 15 P P 11 15 21.5 +1.0
baz=211
TPAW Teton Pass 90.56 42 IAmb IAmb 11 15 23.4
comp=Z,9.6nm,1.0s
DLMT Dillon 90.59 40 IAmb IAmb 11 15 23.4
comp=Z,11nm,0.9s
O30N Mendenhall 90.61 19 P P 11 15 21.8 +0.9
baz=218
BVCY Beaver Creek 90.63 16 P P 11 15 21.9 +0.9
baz=213
MSO Missoula 90.64 38 P P 11 15 22.0 +0.5
baz=235
SNOW Snow King Moun 90.66 42 IAmb IAmb 11 15 23.9
comp=Z,12nm,0.8s
K24K Donnelly Dome 90.67 14 P P 11 15 21.8 +0.6
baz=209
NEA2 Nenana 90.71 12 P P 11 15 22.1 +0.8
baz=206
I21K Tanana 90.72 11 IAmb IAmb 11 15 22.9
comp=Z,18nm,1.0s
I21K Tana 90.72 11 P P 11 15 21.1 -0.2
baz=203,SNR=6.5
WRH Wood River Hil 90.79 12 IAmb IAmb 11 15 23.1
comp=Z,23nm,1.2s
MLY Manley 90.80 11 P P 11 15 21.1 -0.6
baz=205,SNR=11
DLBC Dease Lake 90.81 23 P P 11 15 23.1 +1.2
comp=Z,2.6nm,0.8s,baz=210,slow=7.1,SNR=4.7
comp=Z,2.6nm,0.8s
DLBC Dease Lake 90.81 23 P P 11 15 21.7 -0.2
baz=223
RIDG Independent Ri 90.82 14 IAmb IAmb 11 15 35.2
comp=Z,13nm,1.4s
RIDG Independent Ri 90.82 14 P P 11 15 22.1 +0.2
baz=210
HDA Harding Lake 90.96 13 P P 11 15 22.7 +0.3
baz=208,SNR=8.6
CCB Clear Creek Bu 91.00 12 IAmb IAmb 11 15 23.7
comp=Z,20nm,1.2s
H21K Melozitna Rive 91.03 10 P P 11 15 23.1 +0.4
baz=203,SNR=6.4
FLWY Flagg Ranch 91.03 42 IAmb IAmb 11 15 25.8
comp=Z,16nm,0.8s
BW06 Boulder Array 91.04 43 IAmb IAmb 11 15 24.8
comp=Z,9.6nm,0.9s
BW06 Boulder Array 91.04 43 P P 11 15 23.6 0.0
baz=238,SNR=12
PD31 Pinedale Array 91.04 43 IAmb IAmb 11 15 24.8
comp=Z,8.6nm,0.9s
PDAR Pinedale Array 91.04 43 P P 11 15 23.8 +0.2
comp=Z,7.9nm,0.9s,baz=204,slow=3.3,SNR=36
comp=Z,7.9nm,0.9s
YHL Hebgen Lake 91.15 41 IAmb IAmb 11 15 26.7
comp=Z,16nm,0.9s
I23K Minto, Yukon-K 91.15 12 P P 11 15 24.0 +0.7
baz=206
SDCO Great Sand Dun 91.18 49 P P 11 15 24.8 +0.3
baz=241
SDCO Great Sand Dun 91.18 49 P P 11 15 24.3 -0.2
baz=241
YMR Madison River 91.18 41 IAmb IAmb 11 15 26.7
comp=Z,12nm,0.8s
TCOL CIGO, UAF Yank 91.19 12 IAmb IAmb 11 15 24.7
comp=Z,16nm,0.8s
TCOL CIGO, UAF Yank 91.19 12 P P 11 15 23.6 +0.1
baz=207,SNR=6.6
COLA College 91.19 12 P P 11 15 23.9 +0.5
baz=207
P33M Teslin, Yukon 91.19 21 P P 11 15 24.4 +0.7
baz=220
MDM Murphy Dome 91.20 12 IAmb IAmb 11 15 24.7
comp=Z,18nm,1.1s
SCRK Sand Creek 91.22 14 P P 11 15 23.9 +0.1
baz=211
H17A Grant Village 91.27 41 IAmb IAmb 11 15 27.7
comp=Z,8.2nm,0.8s
H17A Grant Village 91.27 41 P P 11 15 25.8 +1.2
baz=238,SNR=8.0
BOZ Bozeman (W) 91.29 40 IAmb IAmb 11 15 26.6
comp=Z,11nm,0.8s
BOZ Bozeman (W) 91.29 40 P P 11 15 25.6 +1.0
baz=237,SNR=26
ILAR Eielson Array 91.29 13 P P 11 15 23.3 -0.6
comp=Z,2.4nm,0.7s,baz=220,slow=4.9,SNR=22
comp=Z,2.4nm,0.7s
MSTX Muleshoe 91.33 53 P P 11 15 25.4 +0.4
baz=242
MSTX Muleshoe 91.33 53 P P 11 15 25.4 +0.4
baz=242
833A Chaparral WMA, 91.38 60 P P 11 15 25.8 +0.6
baz=244
833A Chaparral WMA, 91.38 60 P P 11 15 25.4 +0.2
baz=244
CMAR Chiang Mai Arr 91.43 289 P P 11 15 26.9 +1.3
comp=Z,9.0nm,0.8s,baz=131,slow=3.3,SNR=46
CMAR SKPbc 11 19 01.7
comp=Z,0.9nm,0.8s,baz=120,slow=5.3,SNR=2.2
comp=Z,9.0nm,0.8s
J25K Salcha River, 91.47 13 P P 11 15 24.5 -0.3
baz=209
LKWY Lake 91.47 41 IAmb IAmb 11 15 28.8
comp=Z,9.2nm,0.8s
POKR Poker Plat Res 91.49 12 P P 11 15 25.1 +0.2
baz=208
CHTO Chiang Mai 91.58 290 P P 11 15 26.9 +0.6
CHTO Chiang Mai 91.58 290 P P 11 15 24.7 -1.7
T25A Trinidad 91.64 50 IAmb IAmb 11 15 28.0
comp=Z,6.6nm,0.8s
T25A Trinidad 91.64 50 P P 11 15 26.5 0.0
baz=242
K27K Chicken 91.70 15 P P 11 15 26.8 +1.0
baz=212
H23K Yukon River 91.73 11 P P 11 15 26.6 +0.6
baz=206
HHC Hu-ho-hao-te 91.74 314 eP P 11 15 28.0 +1.2
HHC pmax pmax
comp=Z,49nm,0.8s
J26L Joseph Creek 91.76 14 IAmb IAmb 11 15 40.0
comp=Z,8.7nm,1.1s
J26L Joseph Creek 91.76 14 P P 11 15 26.8 +0.6
baz=211,SNR=9.7
M30M Minto, Yukon 91.85 18 P P 11 15 27.3 +0.6
baz=217
JCT Junction City 92.00 58 IAmb IAmb 11 15 28.7
comp=Z,8.6nm,0.8s
JCT Junction City 92.00 58 P P 11 15 28.3 +0.1
baz=244
JCT Junction City 92.00 58 P P 11 15 28.0 -0.2
baz=244
Q24A Divide 92.01 48 IAmb IAmb 11 15 30.1
comp=Z,10nm,1.1s
Q24A Divide 92.01 48 P P 11 15 28.8 +0.5
baz=241
H24K Noodor Dome 92.05 12 P P 11 15 29.0 +1.5
baz=207
ISCO Idaho Springs 92.10 47 P P 11 15 29.1 +0.4
baz=241
M31M Drury Creek, Y 92.25 19 P P 11 15 28.3 -0.2
baz=219
DAWY Dawson 92.38 16 P P 11 15 29.8 +0.8
baz=215
N23A Red Feather La 92.42 46 P P 11 15 30.6 +0.5
baz=241
PZH PanZhiHua 92.43 298 P P 11 15 30.7 +0.4
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,130nm,6.9s
RLMT Red Lodge 92.45 41 P P 11 15 30.8 +0.7
baz=239
WTLY Watson Lake, Y 92.47 22 P P 11 15 30.7 +1.2
baz=224
AMTX Amarillo 92.56 53 IAmb IAmb 11 15 31.9
comp=Z,8.9nm,0.9s
AMTX Amarillo 92.56 53 P P 11 15 31.0 +0.4
baz=243
AMTX Amarillo 92.56 53 P P 11 15 30.6 0.0
baz=243
BTO Baotou 92.64 313 eP P 11 15 32.0 +1.1
BTO S S 11 26 11.7 +0.6
BTO LR LR
comp=Z,380nm,15.7s
BTO LR LR
comp=Z,640nm,14.2s
COLD Coldfoot 92.89 10 IAmb IAmb 11 15 35.1
comp=Z,6.4nm,0.9s
COLD Coldfoot 92.89 10 P P 11 15 32.4 +1.1
baz=205
K22A Casper 92.90 44 IAmb IAmb 11 15 33.5
comp=Z,11nm,1.0s
K22A Casper 92.90 44 P P 11 15 32.5 +0.4
baz=240
K22A Casper 92.90 44 P P 11 15 32.3 +0.2
baz=240
ABTX Abilene, Hawle 93.07 56 P P 11 15 33.3 +0.3
baz=244
ABTX Abilene, Hawle 93.07 56 P P 11 15 33.0 0.0
baz=244
MMPY Sheldon Lake, 93.51 20 P P 11 15 35.4 +1.1
baz=222
EGMT Eagleton 93.68 39 P P 11 15 35.8 +0.3
baz=238
I29M Ogilvie Camp, 93.71 15 P P 11 15 36.2 +1.1
baz=216
KSCO Kaye Shedlock' 93.77 49 IAmb IAmb 11 15 37.9
comp=Z,17nm,1.1s
KSCO Kaye Shedlock' 93.77 49 P P 11 15 36.4 +0.3
baz=243
TOLK Toolik Lake Re 94.28 10 P P 11 15 38.8 +1.1
baz=206
WHTX Lake Whitney, 94.47 57 P P 11 15 39.9 +0.6
baz=245
WMOK Wichita Mounta 94.63 54 P P 11 15 40.9 +0.9
baz=245
LZH Lanzhou 94.90 307 eP P 11 15 42.0 +0.6
LZH pmax pmax
comp=Z,18nm,1.4s
OGNE Ogallala 95.05 47 P P 11 15 42.5 +0.6
baz=243
LAO LASA Array 95.07 41 IAmb IAmb 11 15 43.9
comp=Z,6.1nm,0.7s
LAO LASA Array 95.07 41 P P 11 15 43.5 +1.7
baz=241
LAO LASA Array 95.07 41 P P 11 15 43.2 +1.4
baz=241
RSSD Black Hills 95.20 44 P P 11 15 42.0 -0.7
RSSD IAmb IAmb 11 15 44.4
comp=Z,11nm,1.0s
RSSD Black Hills 95.20 44 P P 11 15 43.0 +0.4
baz=242
RSSD Black Hills 95.20 44 P P 11 15 43.4 +0.7
baz=242
R32A Long Quarter, 96.25 51 IAmb IAmb 11 15 50.0
comp=Z,12nm,1.1s
YKA Yellowknife Ar 99.22 25 P Pdif 11 16 00.6 +0.6
comp=Z,0.4nm,0.8s,baz=241,slow=4.2,SNR=4.2
comp=Z,0.4nm,0.8s
ECSD EROS Data Cent 99.87 47 P Pdif 11 16 03.8 +0.4
baz=247
MKAR Makanchi Array 113.54 312 Pdiff Pdif 11 17 07.1 +3.0
comp=Z,0.2nm,0.5s,baz=234,slow=50,SNR=2.7

MKAR PKiKP **PKiKP** **11 20 54.5 -0.9**
comp=Z,1.1nm,0.5s,baz=112,slow=1.3,SNR=6.9
KURK Kurchatov 116.47 316 **PKPdf** **11 21 00.1 -0.8**
KURBB Kurchatov Arra 116.52 316 PKP **PKPdf** **11 21 00.1 -0.9**
comp=Z,1.3nm,0.5s,baz=102,slow=2.1,SNR=11
BOSA Boshof 123.55 204 PKP **PKiKP** **11 21 16.2 +0.5**
comp=Z,1.9nm,1.0s,baz=228,slow=4.3,SNR=3.6
SPITS Spitsbergen Ar 125.00 356 PKP **PKiKP** **11 21 16.4 -0.6**
comp=Z,3.7nm,0.7s,baz=134,slow=4.8,SNR=2.3
ARU Arti 127.92 324 PKP **PKiKP** **11 21 23.1 -0.3**
comp=Z,5.5nm,0.2s,baz=231,slow=2.3,SNR=6.4
AKTO Aktyubinsk 129.57 317 PKP **PKiKP** **11 21 26.1 -0.7**
comp=Z,2.4nm,0.6s,baz=76,slow=3.7,SNR=7.2
GEYT Alibeck 130.67 300 PKP **PKiKP** **11 21 29.3 -0.2**
comp=Z,2.7nm,0.6s,baz=133,slow=6.1,SNR=3.7
GEYT SKPbc **SKPab** **11 24 28.6 +2.1**
comp=Z,3.0nm,0.6s,baz=236,slow=10,SNR=6.8
ARCES ARCESS Array B 132.04 349 PKhKP PKPpre 11 21 20.1
comp=Z,3.5nm,1.1s,baz=5.7,slow=2.4,SNR=4.2
ARCES PKP **PKPdf** **11 21 29.9 -0.3**
comp=Z,4.5nm,0.9s,baz=336,slow=2.7,SNR=6.8
ARCES SKPbc **SKPab** **11 24 32.9 +1.7**
comp=Z,3.4nm,0.8s,baz=34,slow=5.1,SNR=5.7
FINES FINESS Array B 138.85 343 PKhKP PKPpre 11 21 35.1
comp=Z,1.8nm,0.6s,baz=60,slow=4.6,SNR=6.1
FINES PKP **PKiKP** **11 21 43.8 -1.5**
comp=Z,5.3nm,0.6s,baz=90,slow=3.8,SNR=11
FINES SKP 11 24 52.8
comp=Z,2.5nm,0.9s,baz=100,slow=7.9,SNR=5.7
KBZ Khabaz 141.22 311 PKP **PKPdf** **11 21 46.7 -1.2**
comp=Z,1.1nm,0.7s,baz=24,slow=4.8,SNR=4.9
MTSE Matsula 141.76 342 *e*P **PKPdf** **11 21 45.0 -3.4**
NB2 NORSAR Subarra 142.12 353 PKP **PKPdf** **11 21 44.4 -4.6**
comp=Z,4.1nm,1.0s,baz=16,slow=3.2
NOA NORSAR Array B 142.12 353 PKhKP PKPpre 11 21 44.5
comp=Z,4.7nm,0.7s,baz=21,slow=3.8,SNR=22
HFS Hagfors 142.67 351 PKhKP PKPpre 11 21 45.9
comp=Z,19nm,0.6s,baz=67,slow=3.9,SNR=67
CHOM Cayeli-Rize 143.51 308 *e*P PKPbc 11 21 49.7 -0.5
VIKU Vikbolandet 143.68 347 *e*P PKPab 11 21 49.3 +0.1
MNK Minsk 143.74 335 *i* PKP PKPbc 11 21 50.1 -0.3
comp=E,3.0nm,0.8s
MNK *i* PKP PKPbc 11 21 50.1 -0.3
comp=N,28nm,0.8s
MNK *i* PKP PKPbc 11 21 50.1 -0.3
comp=Z,51nm,0.8s,baz=42
MNK *i* SKP 11 24 59.1
MNK *i* PP **PP** **11 25 06.4 -1.3**
MNK *i* PKS **PKSdf** **11 25 26.0 -1.4**
MNK *i* PPP PPP 11 28 18.9
MNK *i* SKS **SKSdf** **11 28 33.9 -0.7**
MNK *i* SKKS **SKKSdf** **11 37 48.5 -1.9**
MNK *i* SS **SS** **11 43 28.1 +1.2**
MNK *i* SSS SSS 11 48 54.5
MNK *i* LRM MLR 12 27 52.3
comp=N,94nm,18.4s
MNK *i* LRM MLR 12 27 53.0
comp=E,17nm,24.3s
MNK *i* LRM MLR 12 28 00.2
comp=Z,176nm,21.6s
NACGM Naroch 143.86 336⇓*e*PKP **PKPdf** **11 21 51.2 -1.0**
baz=40
SVAN Silvan-Diyarba 143.91 303 *e*P PKPbc 11 21 51.5 0.0
VSVD Vaisvydziai 143.99 339 *e*P PKPbc 11 21 51.0 -0.1
STRU Stroemstad 144.07 352 *i* P **PKPab** **11 21 50.5 -0.3**
BNGB Bingl 144.12 304 *e*P **PKPdf** **11 21 52.6 -0.8**
PABE Paberze 144.37 339 *e*P **PKPdf** **11 21 52.4 -0.7**
PBUR Paburge 144.58 341 *e*P **PKPdf** **11 21 52.8 -0.6**
DYBB Diyarbakir 144.77 303 *e*P **PKPdf** **11 21 54.5 0.0**
TJOU Tjoern 144.99 351 *i* P **PKPdf** **11 21 53.0 -1.0**
HOMB Homborsund 145.11 354 *e*P **PKPab** **11 21 54.4 -0.3**
SNART Snartemo 145.15 355 *i* P **PKPbc** **11 21 54.3 -0.2**
SVRC Sivrice-ELAZID 145.31 304 *e*P **PKPab** **11 21 56.8 +0.3**
ONAU Onsala 145.56 351 *i* P **PKPbc** **11 21 55.0 -0.8**
SUW Suwalki 145.85 338 *e*PKP **PKPbc** **11 21 56.7 -0.1**
SUW Suwalki 145.85 338 *e*P **PKPbc** **11 21 56.8 -0.1**
ARPR Arapgir-MALATY 145.85 305 *e*P **PKPab** **11 21 58.5 0.0**
AKASG Malin Array Be 145.87 329 PKPbc **PKPbc** **11 21 56.1 -0.9**
comp=Z,38nm,0.6s,baz=41,slow=4.6,SNR=159
AKASG SKPbc **SKiKP** **11 25 10.1 +0.6**
comp=Z,3.2nm,0.9s,baz=43,slow=3.0,SNR=5.8
BLEU Blekinge 145.90 347 *e*P **PKPbc** **11 21 56.4 -0.4**
DEL Delary 146.13 348 *e*P **PKPdf** **11 21 56.1 0.0**
DEL Delary 146.13 348 *i* P **PKPbc** **11 21 56.8 -0.7**
RSDY Resadiye-TOKAT 146.21 308 *e*P **PKPab** **11 21 59.2 -0.5**
SVSK Karacayir 146.60 307 *e*P **PKPab** **11 22 00.6 -0.5**
DARE Darende-Malaty 146.64 305 *e*P **PKPab** **11 22 00.7 -0.8**
BJUU Bjuv 146.66 349 *e*P **PKPbc** **11 21 58.4 -0.7**
DIKM Dikmen 147.22 311 ⇑P **PKPbc** **11 22 00.6 -0.5**
SARI SarD1z-Kayseri 147.49 305 *e*P **PKiKP** **11 22 02.7 -1.3**
BNN Bunyan 147.78 306 *e*P **PKPbc** **11 22 03.1 +0.2**
BZK Bozkurt 147.95 312 ⇑P **PKPbc** **11 22 02.8 -0.2**
BZK Bozkurt 147.95 312 *e*P **PKPbc** **11 22 02.8 -0.2**
EKA Eskdalemuir Ar 148.08 6 PKPbc **PKPbc** **11 22 02.5 -0.4**
comp=Z,6.9nm,0.8s,baz=337,slow=1.9,SNR=8.4
KOZT Kozan 148.20 304 *e*P **PKPbc** **11 22 03.9 +0.1**
TAHT Tahtakopru-Hat 148.21 301 *e*P **PKiKP** **11 22 04.5 -0.9**
CORM Corum 148.22 309 *e*P **PKiKP** **11 22 04.7 -0.7**
YAYL Yayladag 148.35 301 *e*P **PKiKP** **11 22 04.9 -0.9**
ASF Jabal al Asfar 148.39 293 PKPbc **PKiKP** **11 22 05.4 -0.6**
comp=Z,46nm,0.8s,baz=130,slow=1.9,SNR=40
CMRD Camardi-Nigde 148.78 304 *e*P **PKiKP** **11 22 05.9 -0.8**
KARA Karaisali 148.85 303 *e*P **PKiKP** **11 22 05.6 -1.1**
BRTR Keskin Array B 149.09 309 PKP **PKPdf** **11 22 02.1 +0.4**
comp=Z,15nm,0.7s,baz=27,slow=4.1,SNR=3.8
BRTR PKPbc **PKPbc** **11 22 06.0 -0.3**
comp=Z,16nm,0.7s,baz=145,slow=5.5,SNR=68
BRTR Keskin Array B 149.09 309 *e*P **PKPbc** **11 22 05.9 -0.3**
BHL Bhannes 149.16 297 *e*P **PKiKP** **11 22 07.0 -0.5**
KAMT Kaman 149.17 308 *e*P **PKPbc** **11 22 06.1 -0.2**
SHBL Chebaa 149.18 296 *e*P **PKiKP** **11 22 07.4 -0.3**
YAYX Yaylak 149.25 307 *e*P **PKPbc** **11 22 06.3 -0.2**
MERS Mersin 149.37 303 *e*P **PKPbc** **11 22 05.9 -0.9**
SERE Sereflikochisa 149.43 307 *e*P **PKPbc** **11 22 06.8 -0.2**
KWP Kalwaria Pacla 149.52 333 *e*PKP **PKiKP** **11 22 07.1 -0.5**
MMLI Mount Malkishu 149.59 294 *e*P **PKiKP** **11 22 08.6 +0.2**
VLDR Vladesti 149.59 323 ⇑P **PKiKP** **11 22 07.5 -0.3**
AFSR Afar-Bala (An 149.60 309 *e*P **PKiKP** **11 22 07.6 -0.7**
UJAP Al Uja 149.62 293 *e*P **PKiKP** **11 22 08.4 +0.1**
ANTO Ankara 149.64 309 *e*P **PKiKP** **11 22 07.8 -0.5**
LOD Lodumlu 149.65 309 *e*P **PKiKP** **11 22 07.8 -0.5**
GHRR 149.82 324 ⇑P **PKiKP** **11 22 08.8 +0.5**
BURAR Bucovina Array 149.90 328 ⇑P **PKiKP** **11 22 08.1 -0.6**
BIZ Bicaz 149.93 327 ⇑P **PKiKP** **11 22 08.5 -0.1**
TESR Tescani 149.93 325 ⇑P **PKiKP** **11 22 07.9 -0.7**
CFR Carcaliu 149.97 322 ⇑P **PKPbc** **11 22 07.6 -0.2**
EREN Erenkoy 150.00 301 *e*P **PKiKP** **11 22 08.6 -0.5**
CHBY Cihanbeyli 150.05 307 *e*P **PKPbc** **11 22 08.2 -0.3**
KEBE Keben-Mersin 150.11 303 *e*P **PKiKP** **11 22 08.9 -0.5**
OJC Ojcow 150.16 337 *e*PKP **PKiKP** **11 22 08.6 -0.4**
YUVA Yuva-Kibriscik 150.20 311 *e*P **PKiKP** **11 22 09.1 -0.4**
KOLS Kolonicke sedl 150.25 333 *e*PKP **PKiKP** **11 22 09.5 +0.3**
STHS Stebnicka Huta 150.28 335 *e*PKP **PKPab** **11 22 12.8 -3.0**
EIL Elat 150.29 289 PKPbc **PKiKP** **11 22 09.7 -0.1**
comp=Z,59nm,0.8s,baz=337,slow=2.6,SNR=28
VRI Vrincioaia 150.31 324 ⇑P **PKiKP** **11 22 08.7 -0.7**
VRI ⇑P **PKPbc** **11 22 08.9 +0.2**
AKKU Akkuyu-Mersin 150.32 302 *e*P **PKPbc** **11 22 08.8 -0.2**
TEVE Tevekalti-Mers 150.32 303 *e*P **PKiKP** **11 22 09.4 -0.4**
PLOR Plostina 150.36 324 ⇑P **PKiKP** **11 22 08.8 -0.7**
HARR Harsova 150.38 321 ⇑P **PKiKP** **11 22 09.5 0.0**
TLBR Topalu 150.40 321 ⇑P **PKiKP** **11 22 09.5 0.0**
MDUB Mudurnu 150.50 312 *e*P **PKiKP** **11 22 09.5 -0.6**
BERE Bereket-Mersin 150.52 303 *e*P **PKiKP** **11 22 09.8 -0.5**
BISRR Bisoca 150.53 324 ⇑P **PKiKP** **11 22 09.8 -0.1**
LFK Lefkose 150.57 300 *e*P **PKiKP** **11 22 09.9 -0.4**
LADK Ladik-KONYA 150.57 307 *e*P **PKPbc** **11 22 09.2 -0.5**
CRVS Cervenica-Dubn 150.60 334 *e*PKP **PKiKP** **11 22 10.1 +0.2**
NIE Niedzica 150.64 336 *e*PKP **PKiKP** **11 22 10.5 +0.5**
KIZT Kizilcal 150.67 308 *e*P **PKiKP** **11 22 09.9 -0.6**
ARCR ARCALIA 150.69 328 ⇑P **PKPbc** **11 22 06.5 -3.1**
AUSIV SIVRIHISAR 150.70 309 *e*P **PKPbc** **11 22 09.6 -0.4**
KSP Ksiaz 150.75 342 *e*PKP **PKiKP** **11 22 10.3 +0.2**
DOPR Dopca 150.95 326 ⇑P **PKiKP** **11 22 11.2 +0.5**
MLR Muntele Rosu 150.97 324 ⇑P **PKiKP** **11 22 10.2 -0.7**
MLR Muntele Rosu 150.97 324 PKPbc **PKPbc** **11 22 10.0 -0.4**
comp=Z,20nm,1.1s,baz=79,slow=2.2,SNR=18
MLR PKPab **PKPab** **11 22 17.9 -1.1**
comp=Z,5.1nm,0.6s,baz=274,slow=14,SNR=5.7
MLR Muntele Rosu 150.97 324 **PKPbc** **11 22 09.8 -0.7**
OSTC Ostas 151.03 342⇑*e*PKP **PKiKP** **11 22 10.6 -0.2**
OSTC *e*x x 11 22 16.5
CIFT Cifteler, Eski 151.07 310 *e*P **PKiKP** **11 22 10.6 -0.7**
SRCK Saricakaya, Es 151.08 311 *e*P **PKiKP** **11 22 10.6 -0.6**
LEF Lefka 151.12 300 *e*P **PKiKP** **11 22 10.9 -0.5**
UPC Upice 151.13 342⇑*e*PKP **PKiKP** **11 22 11.0 +0.1**
UPC *e*PKPAB **PKPab** **11 22 16.9 -2.4**
LANS Liptovska Anna 151.17 336 *e*PKP **PKiKP** **11 22 12.0 +0.9**
LANS *e* 11 22 18.3
DPC Dobruska-Polom 151.18 341⇑*e*PKP **PKiKP** **11 22 11.1 0.0**
DPC *e*x x 11 22 15.8
SILT Sile 151.24 314 *e*P **PKiKP** **11 22 10.8 -0.6**
SEYD Seydisehir-KON 151.24 305 *e*P **PKiKP** **11 22 11.8 +0.1**
GAZI Gazipasa 151.25 303 *e*P **PKPbc** **11 22 10.4 -0.9**
BORA Eskisehir 151.27 311 *e*P **PKiKP** **11 22 11.1 -0.6**
KRLC Kraliky 151.29 340⇑*e*PKP **PKiKP** **11 22 11.0 -0.3**
KRLC *e*x x 11 22 16.3
MORC Moravsky Berou 151.31 339 ⇑P **PKPbc** **11 22 10.3 -0.7**
MORC Moravsky Berou 151.31 339 *e*PKP **PKiKP** **11 22 10.9 -0.5**
CJR Cluj-Napoca 151.32 329 ⇑P **PKPbc** **11 22 10.5 -0.6**
BRG Berggiesshubel 151.35 345 *i* PKP **PKiKP** **11 22 11.4 +0.1**
BRG Amp 11 22 12.7
comp=Z,21nm,0.7s
BRG *e*x x 11 22 17.5
BRG Amp 11 22 18.4
comp=Z,17nm,0.9s
BRG *e*x x 11 22 20.5
BRG Amp 11 22 21.3
comp=Z,25nm,0.9s
BRG pPKP **pPKPbc** **11 23 20.0 +0.4**
BRG Amp 11 23 25.0
comp=Z,16nm,1.5s
VOIR 151.48 325 ⇑P **PKPbc** **11 22 10.7 -0.8**
PVCC Panska Ves 151.51 344 *e*PKP **PKiKP** **11 22 12.0 +0.3**
MAUC Maruska 151.57 338⇑*e*PKP **PKiKP** **11 22 12.1 +0.2**
MAUC *e*x x 11 22 17.1
DRGR 151.68 330 ⇑P **PKiKP** **11 22 12.2 -0.1**
YLV Yalova 151.70 313 *e*P **PKPbc** **11 22 11.8 -0.4**
ARR Arges 151.74 326 ⇑P **PKiKP** **11 22 13.1 +0.7**
SHUT Suhut-Afyon 151.76 308 *e*P **PKiKP** **11 22 12.6 -0.2**
VYHS Vyhne 151.95 336 *e*PKP **PKiKP** **11 22 12.7 0.0**
VYHS *e* 11 22 23.3
PRU Pruhonice 152.01 343⇑*e*PKP **PKiKP** **11 22 12.4 -0.3**
PSZ Piszkesteto 152.02 334 ⇓P **PKPbc** **11 22 11.7 -1.0**
VRAC Vranov 152.02 340 PKPbc **PKiKP** **11 22 13.3 +0.5**
comp=Z,1.9nm,0.6s,baz=83,slow=4.3,SNR=4.0
VRAC PKPab **PKPab** **11 22 22.5 -0.6**
comp=Z,16nm,1.1s,baz=32,slow=6.1,SNR=10
VRAC Vranov 152.02 340 *e*PKP **PKiKP** **11 22 12.8 0.0**
ARMT Armutlu 152.04 313 *e*P **PKPbc** **11 22 12.4 -0.5**
JAVC Velka Javorina 152.06 338 *e*PKP **PKiKP** **11 22 13.8 +0.8**
TVSB Tavsanli 152.15 311 *e*P **PKiKP** **11 22 13.5 0.0**
KRUC Moravsky 152.30 340 *e*PKP **PKiKP** **11 22 13.2 -0.2**
KORT Korkueli 152.49 305 *e*P **PKiKP** **11 22 13.9 -0.5**
BEBN Eben Emael 152.76 355 *d*PKPab **PKPab** **11 22 25.7 -0.3**
MEM Membach 152.92 355 *d*PKPab **PKPab** **11 22 26.4 -0.3**
BSTI Sart Tilman 152.98 355 *d*PKPab **PKPab** **11 22 26.8 -0.2**
BZS Buzias 153.06 329 ⇑P **PKPbc** **11 22 13.8 -1.2**
SNF Seneffe 153.13 357 *d*PKPab **PKPab** **11 22 27.5 -0.1**
CKRC Cesky Krumlov 153.14 342⇑*e*PKP **PKiKP** **11 22 15.6 +0.4**
CKRC *e*x x 11 22 20.4
BHOU Houvegnez 153.18 355 *d*PKPab **PKPab** **11 22 27.7 -0.2**
GERES GERESS Array B 153.28 343 PKPbc **PKiKP** **11 22 15.2 -0.3**
comp=Z,1.7nm,0.7s,baz=54,slow=2.3,SNR=13
GERES PKPab **PKPab** **11 22 27.9 -0.6**
comp=Z,4.7nm,1.0s,baz=25,slow=4.4,SNR=10.0
GERES GERESS Array B 153.28 343 **PKiKP** **11 22 15.0 -0.5**
CAME Cameli-Denizli 153.29 306 *e*P **PKiKP** **11 22 15.9 -0.1**
BMRD Maredsous 153.31 357 *d*PKPab **PKPab** **11 22 28.0 -0.4**
AKAS Kas 153.33 304 *e*P **PKiKP** **11 22 15.5 -0.6**
CONA Conrad Observa 153.47 339 *e*P **PKiKP** **11 22 16.0 +0.1**
comp=Z,2.6nm,0.9s
CONA *e*P **PKPab** **11 22 29.6 +0.3**
comp=Z,20nm,1.5s
RONA Rosalia, Austr 153.52 339 *e*P **PKiKP** **11 22 16.3 +0.2**
comp=Z,2.2nm,0.5s
RONA *e*P **PKPab** **11 22 29.7 +0.2**
comp=Z,20nm,1.1s
DOU Dourbes 153.53 357 *d*PKPab **PKPab** **11 22 27.6 -1.7**
MDVR Moldovita 153.63 328 ⇑P **PKPbc** **11 22 13.9 -2.4**
WLF Walferdange 153.85 354 *d*PKPab **PKPab** **11 22 30.5 -0.2**
MORH Mrgy, Hungar 153.90 334 PKP **PKiKP** **11 22 22.6 +5.8**
MOA Molln 154.03 341 *e*P **PKPab** **11 22 31.2 -0.4**
comp=Z,19nm,1.6s
BIOA Bad Ischl, Aus 154.35 342 *e*P **PKPab** **11 22 33.3 +0.3**
comp=Z,28nm,1.2s
URLA Izmir 154.64 311 *e*P **PKiKP** **11 22 18.5 -0.1**
SOKA Soboth 154.83 339 *e*P **PKPab** **11 22 35.2 0.0**
comp=Z,4.7nm,0.8s
KBA Koelnbreinsper 154.99 342 *e*P **PKPab** **11 22 36.3 +0.4**
comp=Z,12nm,1.7s
OBKA Obir 155.14 340 *e*P **PKPab** **11 22 35.4 -1.1**
comp=Z,8.5nm,1.0s
WATA Walderalm 155.22 345 *e*P **PKPab** **11 22 37.1 +0.2**
comp=Z,22nm,1.3s
RETA Reutte 155.26 346 *e*P **PKPab** **11 22 36.5 -0.5**
comp=Z,17nm,1.1s
WTTA Wattenberg 155.27 345 *e*P **PKPab** **11 22 36.8 -0.4**
comp=Z,13nm,0.7s
MYKA Terra Mystica 155.31 341 *e*P **PKPab** **11 22 36.9 -0.3**
comp=Z,7.5nm,0.9s
MOTA Moosalm 155.32 346 *e*P **PKPab** **11 22 36.7 -0.6**
comp=Z,25nm,1.2s
SQTA Sankt Quirin 155.41 345 *e*P **PKPab** **11 22 37.4 -0.2**
comp=Z,6.3nm,0.7s
ABTA Abfaltersbach 155.52 343 *e*P **PKPdf** **11 22 09.0 -1.8**
comp=Z,5.7nm,1.0s
ABTA *e*P **PKPab** **11 22 37.4 -0.7**
comp=Z,9.3nm,0.9s
DAVA Damuels 155.63 347 *e*P **PKPab** **11 22 38.0 -0.7**
comp=Z,12nm,0.8s
FETA Feichten 155.71 346 *e*P **PKPab** **11 22 38.3 -0.7**
comp=Z,13nm,1.3s
DAVOX Davos/Dischmat 156.12 347 PKPab **PKPab** **11 22 40.2 -0.6**
comp=Z,12nm,0.8s,baz=353,slow=4.4,SNR=11
DBIC Dimbokro 161.78 157 PKPab **PKPab** **11 23 07.3 +1.4**
comp=Z,6.5nm,0.9s,baz=256,slow=4.1,SNR=5.0
ESDC Sonseca Array 163.15 17 PKPab **PKPab** **11 23 11.7 +0.2**
comp=Z,0.6nm,0.7s,baz=356,slow=3.8,SNR=5.0
KEST Kesra 166.49 335 PKPab **PKPab** **11 23 26.4 0.0**
comp=Z,4.9nm,0.9s,baz=330,slow=7.9,SNR=3.8
TORD Torodi Ar. Bea 169.55 177 PKP **PKPdf** **11 22 25.2 -0.1**
comp=Z,2.9nm,0.9s,baz=345,slow=1.0,SNR=14
TORD PKPab **PKPab** **11 23 40.8 +0.7**
comp=Z,1.4nm,0.8s,baz=187,slow=3.2,SNR=5.9

PAS ***02*** *11:11:22.9±1.7, 34.°72N±0.°04×116.°04W±0.°04, h3km±7km, ML3.2/174, ML3.0/62(NEIC), Error ellipse: s-maj=6.0km s-min=5.3km az=172.0*
ANF ***02*** *11:11:22.1±0.1, 34.°71N×116.°03W, h14km±1km, ML3.2/28, Error ellipse: s-maj=1.0km s-min=0.9km az=36.0*
NEIC ***02*** *11:11:22.6±1.5, 34.°72N±0.°04×116.°00W±0.°04, h5km±7km, Error ellipse: s-maj=6.1km s-min=4.7km az=156.0*
ISC 02 11:11:22.7±0.9**, 34.°70N**±0.°02×**116.°02W**±0.°02**, h12**km±8km**, n56,** σ**0.s69**/73**, Southern California**

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

HEC Hector,Ludlow 0.29 296 P **Pg** **11 11 28.5 -0.1**
baz=114,SNR=633
HEC S **Sg** **11 11 32.4 -0.2**
baz=114
GMRC Granite Mounta 0.31 75 P **Pg** **11 11 29.1 0.0**
baz=258,SNR=1000
GMRC S **Sg** **11 11 33.4 +0.1**
baz=258
BELC Belle Mtn. Jos 0.70 178 P **Pg** **11 11 36.4 +0.2**
baz=358,SNR=122
BELC S **Sg** **11 11 46.1 +0.6**
baz=358
TUQ Turquoise Moun 0.74 6 P **Pg** **11 11 36.5 -0.4**
baz=187,SNR=33
TUQ S **Sg** **11 11 46.4 -0.3**
baz=187
RRX Edison Barstow 0.82 282 P **Pg** **11 11 38.0 -0.6**
baz=101,SNR=13
RRX S **Sg** **11 11 49.3 0.0**
baz=101
BBRC Big Bear Solar 0.86 240 P **Pg** **11 11 39.0 -0.3**
baz=58,SNR=179
BBRC S **Sg** **11 11 50.9 +0.2**
baz=58
GSC Goldstone, Bar 0.88 313 **Pg** **11 11 39.3 -0.4**
GSC IAML 11 11 53.4
comp=N,727nm,0.5s
GSC Goldstone, Bar 0.88 313 P **Pg** **11 11 39.2 -0.4**
baz=133,SNR=736
GSC S **Sg** **11 11 50.9 -0.3**
baz=133
IRM Iron Mountain 0.91 127 P **Pg** **11 11 40.0 -0.2**
baz=308,SNR=172
BC3 Big Chuckawall 1.15 156 P **Pg** **11 11 43.9 -0.8**
baz=336,SNR=216
BC3 S **Sg** **11 11 59.8 +0.1**
baz=336
PFO Pinyon Flats O 1.15 199 **Pg** **11 11 44.5 -0.2**
PFO IAML 11 12 05.0
comp=N,185nm,0.9s
PFO Pinyon Flats O 1.15 199 P **Pg** **11 11 44.1 -0.7**
baz=18,SNR=75
PFO S **Sg** **11 11 59.4 -0.2**
baz=18
TPFO Pinon Flats 1.15 198 S **Sg** **11 11 59.8 0.0**
baz=17
NEE2 Needles Airpor 1.16 86 P **Pg** **11 11 44.0 -0.9**
baz=268,SNR=86
NEE2 S **Sb** **11 12 00.0 +0.5**
baz=268
SHOC Shoshone, Teco 1.21 350 P **Pg** **11 11 44.4 -1.6**
baz=170,SNR=411
SHOC S **Sg** **11 12 01.3 -0.5**
baz=170
BFSC Mount Baldy Ra 1.43 252 P **Pn** **11 11 48.1 -0.5**
baz=70,SNR=52
BFSC S **Sb** **11 12 07.2 -0.3**
baz=70
QSM Queen of Sheba 1.44 331 **Pn** **11 11 47.9 -0.7**
QSM IAML 11 12 09.5
comp=E,286nm,0.3s
QSM IAML 11 12 13.8
comp=N,275nm,0.7s
MURC Murrieta 1.47 222 P **Pn** **11 11 48.8 -0.2**
baz=40,SNR=43
MURC S **Sn** **11 12 08.5 +0.3**
baz=40
BLYC Blythe 1.56 127 **Pn** **11 11 49.7 -0.5**
BLYC IAML 11 12 21.0
comp=N,184nm,0.5s
BLYC IAML 11 12 26.4
comp=E,175nm,0.6s
LRMC Laurel Mtn Rad 1.57 300 P **Pn** **11 11 49.5 -0.9**
baz=119,SNR=124
LRMC Sg **Sg** **11 12 13.5 +0.4**
baz=119
ELS Elsinore Mount 1.57 228 **Pn** **11 11 50.7 +0.3**
GWY Greenwater Val 1.57 341 **Pn** **11 11 49.5 -1.1**
PDMCI Parker Dam,Lak 1.60 104 P **Pn** **11 11 50.1 -0.7**
baz=285,SNR=39
PDMCI S **Sn** **11 12 10.9 -0.5**
baz=285
EDW2 Edwards Air Fo 1.63 277 P **Pn** **11 11 50.4 -0.9**
baz=95
EDW2 S **Sn** **11 12 11.4 -0.9**
baz=95
CCAC Calif City Air 1.70 286 **Pn** **11 11 53.4 +1.2**
W13A Hualapai Mount 1.80 77 **Pn** **11 11 53.7 -0.1**
W13A IAML 11 12 21.1
comp=N,219nm,0.7s
W13A IAML 11 12 21.9
comp=E,159nm,0.4s
MONP2 Monument Peak 1.84 191 Pg **Pb** **11 11 57.1 +0.8**
baz=9.9
PASC Pasadena Art C 1.86 254 **Pn** **11 11 55.6 +1.1**
PASC IAML 11 12 23.7
comp=E,134nm,0.4s
PASC IAML 11 12 25.7
comp=N,119nm,0.6s
GLA Glamis 1.92 149 **Pn** **11 11 55.5 +0.2**
GLA IAML 11 12 37.3
comp=N,164nm,0.7s
GLA Glamis 1.92 149 P **Pn** **11 11 54.4 -0.8**
baz=329
SHPR Sheep Range 1.93 21 **Pn** **11 11 55.4 0.0**
SHPR IAML 11 12 28.5
comp=E,149nm,0.8s
DECC Green Verdugo 1.96 257 Pb **Pb** **11 11 58.4 +0.1**
baz=76
109C Camp Elliot, M 2.02 207 **Pb** **11 11 59.0 -0.3**
109C IAML 11 12 26.1
comp=N,80nm,0.3s
109C IAML 11 12 27.3
comp=E,77nm,0.3s
109C Camp Elliot, M 2.02 207 Pb **Pb** **11 11 59.3 -0.1**
baz=26
109C Sb **Sb** **11 12 25.5 +1.1**
baz=26
ISA Isabella, Lake 2.23 296 Pn **Pn** **11 11 58.8 -0.7**
ISA IAML 11 12 34.0
comp=E,59nm,0.6s
ISA IAML 11 12 36.0
comp=N,63nm,0.4s
ISA Isabella, Lake 2.23 296 P **Pn** **11 11 58.6 -0.9**
baz=115,SNR=31
TPNV Topopah Spring 2.25 355 Pg **Pg** **11 12 05.2 -0.6**
baz=176
ARVC Arvin 2.35 281 Pg **Pb** **11 12 06.1 +1.2**
baz=99
CIS Catalina Islan 2.37 238 Pb **Pb** **11 12 05.3 0.0**
baz=56
Y14A Wickenburg 2.61 106 Pn **Pn** **11 12 04.5 -0.2**
Y14A IAML 11 12 54.8
comp=E,98nm,0.4s
113A Mohawk Valley, 2.69 135 Pn **Pn** **11 12 05.1 -0.7**
113A IAML 11 12 51.5
comp=E,35nm,0.6s
BCW Bitter Crk WRg 2.80 276 Pn **Pn** **11 12 07.9 +0.5**
PRN Pahroc Range 2.81 16 **Pn** **11 12 08.2 +0.6**
PRN IAML 11 13 04.5
comp=N,84nm,0.9s
LCH Last Change Ra 2.85 333 **Pn** **11 12 08.1 +0.1**
LCMT Little Creek M 3.23 44 **Pn** **11 12 13.7 +0.5**
U15A North Rim 3.49 59 **Pn** **11 12 18.0 +0.9**
X16A Lo Mia Camp, P 3.79 93 **Pn** **11 12 21.7 +0.6**
214A Organ Pipe Nat 3.84 135 Pn **Pn** **11 12 20.4 -1.2**
214A IAML 11 13 35.8
comp=N,17nm,0.6s
214A IAML 11 13 37.9
comp=E,15nm,0.4s
214A Organ Pipe Nat 3.84 135 P **Pn** **11 12 20.5 -1.1**
baz=317
PKCU Pink Cliffs 4.06 47 Pn **Pn** **11 12 26.2 +1.3**
PKCU IAML 11 13 37.7
comp=N,29nm,0.9s
LHV Little Huntoon 4.07 331 Pn **Pn** **11 12 25.6 +1.0**
LHV IAML 11 13 42.4
comp=N,18nm,0.9s
LHV IAML 11 13 44.5
comp=E,24nm,0.9s
NVAR Mina Array Bea 4.15 334 Pn **Pn** **11 12 26.9 +0.9**
PSUT Pine Spring 4.20 24 Pn **Pn** **11 12 27.6 +0.8**
PSUT IAML 11 13 44.1
comp=N,17nm,1.1s
PSUT IAML 11 13 44.7
comp=E,27nm,1.2s
RYN Ryan 4.40 334 Pn **Pn** **11 12 30.0 +0.6**
TCRU Three Creeks R 4.84 35 Pn **Pn** **11 12 37.0 +1.4**
TCRU IAML 11 14 24.3
comp=E,8.3nm,0.8s
TCRU IAML 11 14 25.6
comp=N,9.6nm,3.7s
TUC Tucson 4.98 117 P **Pn** **11 12 36.8 -0.5**
baz=300

ARE ***02*** *11:16:42±6.2, 16.°84S±0.°05×70.°56W±0.°08, h14km±5km, Error ellipse: s-maj=0.0km s-min=0.0km az=196.0*
NEIC ***02*** *11:16:58.8±2.8, 16.°90S±0.°05×70.°44W±0.°08, h36km±7km, mb4.5/29, ML3.7(ARE), Error ellipse: s-maj=11.1km s-min=7.2km az=96.0*
IDC ***02*** *11:17:00.1±2.7, 16.°75S×70.°40W, h54km±26km, mb3.6/9, mbtmp3.9/12, ML3.7/3, MS3.3/8, Error ellipse: s-maj=28.7km s-min=15.6km az=87.0*
ISC 02 11:16:57.5±0.6**, 16.°76S**±0.°07×**70.°45W**±0.°07**, h33**km**, n60,** σ**1.s21**/47**, mb4.4**/19**, MS3.5**/3**, Southern Peru**

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

PB18 Visviri 1.24 132 **Pn** **11 17 18.5 -0.6**
AP01 Chacalluta 1.60 176 **Pn** **11 17 21.6 -2.0**
PB16 IPOC Station P 1.81 150 **Pn** **11 17 25.7 -1.2**
PB12 IPOC Station P 1.85 176 **Pn** **11 17 25.3 -1.8**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
LPAZ	La Paz	2.27	78	P	Pb	11 17 37.1	-1.1
	24nm,0.3s,baz=259,slow=13,SNR=406						
LPAZ				S	Sb	11 18 06.2	0.0
	35nm,0.6s,baz=101,slow=21,SNR=1.3						
LPAZ				LR	LR	11 18 51.3	
	comp=Z,496nm,21.1s,baz=248,slow=50						
	109nm,0.5s						
LPAZ	La Paz	2.27	78		Pb	11 17 38.0	-0.3
PB11	IPOC Station P	3.08	166		Pn	11 17 44.2	+0.1
PB08	IPOC Station P	3.58	160		Pn	11 17 53.4	+2.3
TA01	Diego Aracena	3.79	176	Pn	Pn	11 17 53.5	-0.2
PATCX	Punta Patache	4.05	176		Pn	11 17 56.9	-0.4
PB01	IPOC Station P	4.36	168		Pn	11 18 02.1	+0.6
PB02	IPOC Station P	4.56	174		Pn	11 18 04.7	+0.3
PB07	IPOC Station P	4.97	174		Pn	11 18 10.0	-0.1
PB09	IPOC Station P	5.14	167		Pn	11 18 13.5	+1.2
LVC	Limon Verde	6.00	166	P	Pn	11 18 26.5	+2.2
	1.8nm,0.3s,baz=318,slow=8.3,SNR=14						
LVC				S	Sn	11 19 33.6	+1.5
	8.5nm,0.6s,baz=287,slow=21,SNR=1.5						
LVC				LR	LR	11 20 58.6	
	comp=Z,155nm,19.4s,baz=320,slow=40						
	20nm,0.6s						
LVC	Limon Verde	6.00	166	Pn	Pn	11 18 25.7	+1.3
PB15	IPOC Station P	6.48	172		Pn	11 18 30.8	0.0
NNA	Nana	7.80	307	LR	LR	11 21 53.3	
	comp=Z,322nm,18.4s,baz=148,slow=37						
PB14	IPOC Station P	7.83	180	Pn	Pn	11 18 46.4	-3.0
GO02	Mina Guanaco	8.40	175	Pn	Pn	11 18 55.5	-1.8
SIV	San Ignacio	9.03	86	P	Pn	11 19 06.3	+0.6
	0.1nm,0.3s,baz=267,slow=12,SNR=13						
SIV				LR	LR	11 23 01.9	
	comp=Z,192nm,19.0s,baz=284,slow=40						
	2.0nm,0.4s						
AC02	Maricunga	10.10	173	Pn	Pn	11 19 18.8	-2.0
CPUP	Villa Florida	15.47	130	LR	LR	11 27 33.8	
	comp=Z,59nm,20.5s,baz=320,slow=41						
VA03	San Esteban	15.94	180	P	Pn	11 20 38.4	-1.1
MT09	Talagante	16.95	182	P	P	11 20 53.9	-0.1
BO04	La Punta	17.16	180	P	Pn	11 20 54.9	+0.1
H03N1	Juan Fernandez	18.28	203	T	T	11 38 47.8	
	baz=27,slow=73,SNR=68						
H03N2	Juan Fernandez	18.29	203	T	T	11 38 47.6	
	baz=27,slow=73,SNR=91						
H03N3	Juan Fernandez	18.30	203	T	T	11 38 46.6	
	baz=27,slow=73,SNR=70						
PLCA	Paso Flores	23.89	180	P	P	11 22 08.8	+0.5
	5.9nm,0.9s,baz=355,slow=12,SNR=10						
	5.9nm,0.9s						
PLCA	Paso Flores	23.89	180	IAmb	IAmb	11 22 12.8	
	comp=Z,9.8nm,0.9s						
BAUV	El Baul	25.65	5	P	P	11 22 25.4	+1.0
RCBR	Riachuelo	35.51	76	LR	LR	11 40 46.9	
	comp=Z,62nm,18.1s,baz=356,slow=40						
TXAR	Lajitas Array	55.93	325	P	P	11 26 32.9	+0.2
	comp=Z,0.6nm,0.8s,baz=136,slow=10.0,SNR=4.8						
	comp=Z,0.6nm,0.8s						
FCAR	Ozark Folk Cen	56.24	339	IAmb	IAmb	11 26 35.2	
	comp=Z,9.8nm,1.5s						
HHAR	Hobbs	57.24	337	IAmb	IAmb	11 26 43.5	
	comp=Z,9.5nm,1.4s						
MGMO	Mountain Grove	57.44	339	IAmb	IAmb	11 26 45.3	
	comp=Z,6.0nm,1.1s						
S39A	Bolivar	58.28	339	P	P	11 26 48.7	-0.3
S39A				IAmb	IAmb	11 26 49.2	
	comp=Z,3.7nm,0.8s						
R40A	Maddies Statio	58.47	340	IAmb	IAmb	11 26 51.5	
	comp=Z,4.3nm,0.8s						
MNTX	Cornudas Mount	58.69	325	P	P	11 26 52.8	+0.7
MNTX				IAmb	IAmb	11 26 54.0	
	comp=Z,2.7nm,1.1s						
SADO	Sadowa	61.74	353	LR	LR	11 57 00.1	
	comp=Z,31nm,19.4s,baz=222,slow=39						
ANMO	Albuquerque	61.76	327	P	P	11 27 12.2	-1.0
	comp=Z,0.8nm,0.8s,baz=131,slow=6.8,SNR=3.2						
	comp=Z,0.8nm,0.8s						
ANMO	Albuquerque	61.76	327	P	P	11 27 14.1	+0.9
SDCO	Great Sand Dun	63.45	329	P	P	11 27 24.9	+0.3
SDCO				IAmb	IAmb	11 27 27.1	
	comp=Z,5.9nm,1.3s						
ECSD	EROS Data Cent	64.80	339	P	P	11 27 32.5	-0.4
WUAZ	Wupatki	64.86	324	P	P	11 27 35.7	+1.9
WUAZ				IAmb	IAmb	11 27 37.5	
	comp=Z,4.9nm,1.2s						
PV15	Paradox Valley	65.40	328	P	P	11 27 38.8	+1.5
PV15				IAmb	IAmb	11 27 40.6	
	comp=Z,6.5nm,0.9s						
SNAA	Sanae	67.21	162	P	P	11 27 49.3	+1.1
	comp=Z,1.4nm,0.7s,baz=281,slow=6.9,SNR=8.8						
	comp=Z,1.4nm,0.7s						
SNAA	Sanae	67.21	162	IAmb	IAmb	11 27 53.8	
	comp=Z,2.4nm,0.9s						
DBIC	Dimbokro	68.89	76	LR	LR	11 56 01.9	
	comp=Z,33nm,20.1s,baz=144,slow=34						
PDAR	Pinedale Array	69.30	330	P	P	11 28 02.2	+0.4
	comp=Z,0.2nm,0.5s,baz=115,slow=6.7,SNR=4.5						
	comp=Z,0.2nm,0.5s						
ULM	Lac du Bonnet	70.38	343	P	P	11 28 07.1	-0.9
	comp=Z,3.0nm,0.7s,baz=150,slow=5.1,SNR=4.1						
	comp=Z,3.0nm,0.7s						
NVAR	Mina Array Bea	70.88	322	P	P	11 28 12.8	+1.1
	comp=Z,0.2nm,0.5s,baz=158,slow=5.8,SNR=3.5						
	comp=Z,0.2nm,0.5s						
YHL	Hebgen Lake	71.64	331	IAmb	IAmb	11 28 19.6	
	comp=Z,4.7nm,1.2s						
TORD	Torodi Ar. Bea	77.21	72	P	P	11 28 47.1	-1.8
	comp=Z,2.5nm,1.1s,baz=259,slow=4.6,SNR=5.9						
	comp=Z,2.5nm,1.1s						
TORD	Torodi Ar. Bea	77.21	72	P	P	11 28 47.0	-1.8
TORD				IAmb	IAmb	11 28 50.2	
	comp=Z,5.6nm,1.4s						
YKA	Yellowknife Ar	86.26	341	P	P	11 29 36.0	+0.5
	comp=Z,1.3nm,0.7s,baz=137,slow=5.0,SNR=16						
	comp=Z,1.3nm,0.7s						
USRK	Ussuriysk Ar.	146.72	330	PKPbc	PKPbc	11 36 35.6	-0.6
	comp=Z,1.0nm,0.6s,baz=174,slow=31,SNR=3.3						
MJAR	Matsushiro Arr	147.88	313	PKPbc	PKPbc	11 36 39.6	-0.1
	comp=Z,3.7nm,1.0s,baz=65,slow=1.4,SNR=7.6						
SONM	Songino Array	148.90	4	PKPbc	PKiKP	11 36 43.0	-0.5
	comp=Z,0.7nm,0.6s,baz=328,slow=1.7,SNR=5.3						

*IDC **02** 11:17:09.8±0.7, 7.°08S×117.°21E, h483km±7km, mb4.0/34, mbtmp4.8/38, Error ellipse: s-maj=9.4km s-min=5.8km az=54.0*

*NEIC **02** 11:17:10.5±1.9, 7.°11S±0.°09×117.°2E±0.°1, h486km±6km, mb4.5/55, Error ellipse: s-maj=14.6km s-min=12.5km az=72.0*

*DJA **02** 11:17:10.2±0.1, 7°S±2°×11°7E±°, h476km±2km, M4.6/43, mB5.1/18, mb4.7/43, MLv5.0/32, Mw(mB)4.4/18, MwMwp5.8/1, Mwp5.9/1*

ISC 02 11:17:09.6±0.5**, 7.°14S**±0.°05×**117.°16E**±0.°05**, h481**km±5km**, n231, σ1.s22**/230**, mb4.5**/73**, 1C-1D, Bali Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	Plampang	1.79	160	P	P	11 18 11.1	-0.9
PLAI				S	S	11 18 59.0	-3.6
PLAI	Plampang	1.79	160	P	P	11 18 12.2	+0.2
SRBI	Singaraja	2.15	244	P	P	11 18 14.1	+0.4
SRBI				S	S	11 19 05.1	-0.7
DNP	Denpasar	2.46	231	P	P	11 18 15.8	+0.2
DNP				S	S	11 19 05.1	-4.0
IGBI	Denpasar	2.60	230	P	P	11 18 15.7	-0.7
IGBI				S	S	11 19 05.7	-5.0
ABJI	Asem Bagus	2.97	257	P	P	11 18 19.5	+0.6
ABJI				S	S	11 19 15.8	+0.6
KMMI	Kalianget	3.17	271	P	P	11 18 21.4	+1.1
JAGI	Jajag, Banyuwa	3.26	246		P	11 18 19.9	-1.1
JAGI	Jajag, Banyuwa	3.26	246	P	P	11 18 19.9	-1.1
WBSI	Waikabubak, Su	3.33	139	P	P	11 18 20.8	-0.7
KAPI	Kappang	3.33	51	P	P	11 18 21.9	+0.4
	322nm,0.3s,baz=220,slow=6.4,SNR=159						
KAPI				S	S	11 19 18.8	-1.1
	20nm,0.3s,baz=56,slow=18,SNR=0.8						
KAPI	Kappang	3.33	51	P	P	11 18 22.1	+0.6
BSSI	Bau Bau, Buton	3.46	74	P	P	11 18 22.5	0.0
BKSI	Bulukumba	3.46	59	P	P	11 18 22.7	+0.2
BLJI	Banyuglugur	3.58	260	P	P	11 18 24.0	+0.6
GMJI	Gumukmas	3.85	253	P	P	11 18 26.0	+0.5
BNSI	Bone	4.00	47	P	P	11 18 27.5	+0.7
SPSI	Sidrap Palu	4.09	40	P	P	11 18 28.2	+0.6
BBKI	Banjar Baru	4.32	328	P	P	11 18 30.5	+0.9
BASI	Baing, Sumba	4.56	132	P	P	11 18 32.1	+0.5
EDFI	Ende, Flores	4.77	110	P	P	11 18 32.4	-1.2
TTSI	Tana Toraja	4.85	33	P	P	11 18 36.1	+1.8
MMRI	Maumere	5.25	107		P	11 18 37.1	-0.9
MMRI	Maumere	5.25	107	P	P	11 18 37.9	0.0
	1.7nm6µm326nm,1.8s						
MMRI	Maumere	5.25	107	P	P	11 18 37.9	0.0
	324nm,1.8s						
PWJI	Pagerwojo	5.38	260	P	P	11 18 39.8	+0.6
	0.7nm62nm,0.6s						
BBSI	Bau Bau	5.62	73	P	P	11 18 43.2	+1.7
	0.1nm411nm47nm,1.1s						
BKB	Balikpapan	5.84	357	P	P	11 18 47.6	+3.9
BKB	Balikpapan	5.84	357	P	P	11 18 47.7	+4.0
	6.4nm15µm2µm,0.8s						
PCJI	Pacitan	6.02	260	P	P	11 18 45.2	-0.2
	1.1nm75nm,1.1s						
MTKI	Muara Teweh, K	6.55	340	P	P	11 18 51.5	+0.8
	1.6nm489nm,0.7s						
UGM	Wanagama	6.62	263	P	P	11 18 52.6	+1.3
SMKI	Samarinda	6.65	0	P	P	11 18 54.0	+2.3
	3.5nm14µm1µm,0.9s						
SMRI	Semarang	6.67	270	P	P	11 18 54.0	+2.2
	0.5nm80nm,1.0s						
PBKI	Pangkalan Bun	7.02	309	P	P	11 18 57.2	+1.8
	2.8nm8µm783nm,0.9s						
BATI	Baumata	7.12	116	P	P	11 18 57.4	+1.0
	100nm,0.2s,baz=266,slow=0.9,SNR=40						
BATI				S	S	11 20 21.4	-2.6
	238nm,0.3s,baz=79,slow=22,SNR=12						
BATI	Baumata	7.12	116	P	P	11 18 56.4	0.0
SOEI	Soe	7.50	111	P	P	11 19 00.7	+0.3
SOEI	Soe	7.50	111	P	P	11 19 00.4	-0.1
	3.6nm118nm,0.8s						
SOEI	Soe	7.50	111	P	P	11 19 00.8	+0.3
APSI	Ampana	7.64	36	P	P	11 19 02.6	+0.8
	0.2nm58nm,1.0s						
MPSI	Mapaga	7.91	20	P	P	11 19 05.4	+0.7
	0.5nm2µm119nm,0.7s						
KPJI	Karang Pucung	8.16	268	P	P	11 19 09.2	+1.9
	0.5nm127nm,0.6s						
LUWI	Luwuk	8.25	43	P	P	11 19 09.0	+0.8
LUWI	Luwuk	8.25	43	P	P	11 19 09.0	+0.8
	2µm70nm,1.0s						
MRSI	Marisa	8.94	32	P	P	11 19 16.2	+0.6
	3µm257nm,0.7s						
TOLI2	Tolitoli	8.96	24	P	P	11 19 15.7	0.0
TOLI2	Tolitoli	8.96	24	P	P	11 19 15.4	-0.4
STKI	Sintang	9.13	321	P	P	11 19 19.3	+1.7
	168nm,0.8s						
LEM	Lembang	9.47	271	P	P	11 19 22.6	+1.2
	81nm,0.6s,baz=128,slow=21,SNR=17						
LEM				S	S	11 21 07.9	-1.9
	72nm,1.0s,baz=336,slow=19,SNR=8.0						
SANI	Sanana	10.15	61	P	P	11 19 31.4	+2.9
SANI	Sanana	10.15	61	P	P	11 19 29.7	+1.2
KMSI	Cibinong	10.25	42	P	P	11 19 31.8	+2.3
	6µm197nm,0.6s						
SBUM	Sibu	10.72	332	P	P	11 19 36.5	+1.9
KSM	Kuching	10.95	321	P	P	11 19 38.4	+1.4
XMIS	Christmas Isla	11.85	253	P	P	11 19 47.0	+0.4
MYLDM	Lahad Datu	12.31	6	P	P	11 19 53.2	+1.6
MBWA	Marble Bar	14.16	170	P	P	11 20 12.2	+1.0
MBWA	Marble Bar	14.16	170	P	P	11 20 12.3	+1.0
KNRA	Kununurra	14.19	128	P	P	11 20 11.8	+0.2
KNRA	Kununurra	14.19	128	P	P	11 20 12.0	+0.4
PSA00	Pilbara Seismi	14.58	170	P	P	11 20 16.9	+1.2
PSA00	Pilbara Seismi	14.58	170	P	P	11 20 15.8	+0.1
PSA00	Pilbara Seismi	14.58	170	P	P	11 20 16.5	+0.8
MTN	Manton Dam	14.88	113	P	P	11 20 18.4	-0.5
MTN	Manton Dam	14.88	113	P	P	11 20 19.0	0.0
SIJI	Sorong	15.38	67	P	P	11 20 25.7	+1.4
	9.3nm,0.6s,baz=219,slow=16,SNR=5.0						
GIRL	Giralia	15.67	190	P	P	11 20 28.7	+1.5
KDU	Kakadu	16.06	111	P	P	11 20 30.3	-1.0
PPI	Padang Panjang	17.98	291	P	P	11 20 52.4	+1.5
	20nm,1.1s						
RPSI	Rantau Prapat	20.65	298	P	P	11 21 16.8	+1.5
PSI	Prapat	20.70	298	P	P	11 21 16.8	+0.8
	10nm,0.6s,baz=153,slow=22,SNR=4.7						
	10nm,0.6s						
WRKA	Warakurna	20.74	150	P	P	11 21 16.9	+0.8
WB0	Warramunga Arr	20.91	129	P	P	11 21 17.8	+0.1
WB0				IAmb	IAmb	11 21 18.8	
	comp=Z,17nm,0.7s						
WRA	Warramunga Arr	20.97	129	P	P	11 21 18.3	+0.2
	comp=Z,23nm,0.7s,baz=309,slow=9.3,SNR=309						
WRA				S	S	11 24 37.9	-2.1
	comp=Z,4.0nm,1.0s,baz=308,slow=17,SNR=4.6						
	comp=Z,23nm,0.7s						
WRAB	Tennant Creek	20.97	129	P	P	11 21 18.3	+0.1
WRAB	Tennant Creek	20.97	129	P	P	11 21 19.1	+0.9
WB2	Warramunga Arr	20.98	129	P	P	11 21 18.7	+0.5
WR0	Warramunga Arr	21.14	129	P	P	11 21 20.1	+0.4
MORW	Morawa	21.84	183	P	P	11 21 26.6	+0.8
MORW				IAmb	IAmb	11 21 27.6	
	comp=Z,30nm,1.2s						
MORW	Morawa	21.84	183	P	P	11 21 27.0	+1.1
ASAR	Alice Springs	22.99	137	P	P	11 21 36.8	+0.3
	comp=Z,9.7nm,0.5s,baz=315,slow=8.4,SNR=250						
ASAR				S	S	11 25 09.9	-2.0
	comp=Z,7.1nm,0.7s,baz=307,slow=16,SNR=8.9						
	comp=Z,9.7nm,0.5s						
QIS	Mount Isa	25.50	124	P	P	11 21 59.6	+0.8
FORT	Forrest	25.64	158	P	P	11 22 01.2	+1.4
NWAO	Narrogin (SRO)	25.66	180	P	P	11 22 00.8	+0.8
NWAO				IAmb	IAmb	11 22 01.4	
	comp=Z,20nm,0.8s						
COEN	Coen	26.44	107	P	P	11 22 06.7	-0.5
COEN				IAmb	IAmb	11 22 07.6	
	comp=Z,10nm,0.8s						
OOD	Oodnadatta	27.02	142	P	P	11 22 12.8	+0.7
MULG	Mulgathing	27.96	148	P	P	11 22 21.2	+0.9
INKA	Innaminka	30.32	135	P	P	11 22 42.2	+1.3
LCRK	Leigh Creek	30.46	142	P	P	11 22 43.1	+1.0
BBOO	Buckleboo	31.00	148	P	P	11 22 47.4	+0.7
BBOO	Buckleboo	31.00	148	P	P	11 22 47.5	+0.8
CTA	Charters Tower	31.00	117	P	P	11 22 47.6	+0.7
	comp=Z,9.5nm,0.8s,baz=288,slow=6.7,SNR=5.5						
	comp=Z,9.5nm,0.8s						
CMAR	Chiang Mai Arr	31.14	325	P	P	11 22 48.8	+0.7
	comp=Z,4.5nm,0.4s,baz=155,slow=6.9,SNR=19						
	comp=Z,4.5nm,0.4s						
CHTO	Chiang Mai	31.43	325	P	P	11 22 50.8	+0.3
CHTO				IAmb	IAmb	11 22 52.7	
	comp=Z,6.8nm,0.8s						
WHYH	Whyalla	31.98	146	P	P	11 22 56.0	+0.9
	comp=Z,29nm,0.8s						
QLP	Quilpie	32.20	130	P	P	11 22 59.0	+1.9
NAPP	Napperby	32.41	146	P	P	11 23 00.4	+1.6
	comp=Z,30nm,0.7s						
HTT	Hallett	33.03	145	P	P	11 23 05.4	+1.3
STKA	Stephens Creek	33.54	140	P	P	11 23 09.5	+1.1
	comp=Z,29nm,0.6s,baz=315,slow=9.2,SNR=85						
STKA				S	S	11 27 55.3	-0.4
	comp=Z,8.3nm,0.9s,baz=126,slow=18,SNR=6.6						
	comp=Z,29nm,0.6s						
STKA	Stephens Creek	33.54	140	P	P	11 23 09.8	+1.4
TWOA	Tennyson Woods	34.04	148	P	P	11 23 14.4	+1.8
	comp=Z,25nm,0.8s						
GUMO	Guam	34.37	53	P	P	11 23 15.2	-0.4
	comp=Z,34nm,0.4s,baz=259,slow=2.2,SNR=13						
	comp=Z,34nm,0.4s						
RMQ	Roma	35.68	126	P	P	11 23 27.7	+1.2
CMSA	Cobar Meteorol	36.03	136	P	P	11 23 31.1	+1.7
	comp=Z,18nm,1.7s						
PZH	PanZhiHua	36.63	336	P	P	11 23 38.0	+3.5
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,100nm,8.4s						
ARPS	Mount Arapiles	37.10	146	P	P	11 23 39.2	+1.1
	comp=Z,49nm,0.6s						
TOO	Toolangi	39.74	144	P	P	11 24 00.8	+1.1
ARMA	Armidale	39.75	130	P	P	11 24 01.3	+1.3
ARMA				IAmb	IAmb	11 24 03.0	
	comp=Z,9.8nm,0.8s						
SHL	Shillong	40.75	324	P	P	11 24 07.8	-0.3
SHL				IAmb	IAmb	11 24 08.7	
	comp=Z,32nm,1.0s						
XAN	Xi'an	41.69	350	P	P	11 24 14.5	-0.8
XAN				pmax	pmax		
	comp=Z,11nm,0.7s						
LSA	Lhasa	44.35	327	IAmb	IAmb	11 24 38.0	
	comp=Z,15nm,0.8s						
LSA	Lhasa	44.35	327	P	P	11 24 37.2	+0.5
LSA				pmax	pmax		
	comp=Z,25nm,0.7s						
TAPN	Taplejung	44.58	321	eP	P	11 24 38.6	+0.2
	comp=Z,31nm,0.5s						
LZH	Lanzhou	44.78	345	eP	P	11 24 42.8	+3.2
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
RAMN	Ramite	45.00	320	eP	P	11 24 41.5	-0.1
	comp=Z,41nm,0.6s						
KSAR	Wonju Array Be	45.47	12	P	P	11 24 44.3	-0.3
KSRS	Korea Array	45.49	12	P	P	11 24 45.0	+0.2
	comp=Z,7.1nm,0.9s,baz=190,slow=8.1,SNR=30						
	comp=Z,7.1nm,0.9s						
JIRN	Jiri	45.75	320	eP	P	11 24 47.4	-0.1
	comp=Z,54nm,0.5s						
GUN	Gumba	46.12	320	eP	P	11 24 50.1	-0.2
	comp=Z,60nm,0.7s						
PKI	Pulchoki	46.19	320	eP	P	11 24 50.1	-0.7
PKIN	Phulchoki	46.20	320	eP	P	11 24 50.0	-0.8
	comp=Z,28nm,0.5s						
DMN	Daman	46.41	319	eP	P	11 24 51.9	-0.5
BJI	Beijing	46.95	359	P	P	11 24 55.5	-0.4
BJI				pmax	pmax		
	comp=Z,11nm,0.6s						
GKN	Gorkha	46.98	319	eP	P	11 24 56.1	-0.5
	comp=Z,24nm,0.3s						
MAJO	Matsushiro	47.73	23	P	P	11 25 00.2	-1.7
MJAR	Matsushiro Arr	47.73	23	P	P	11 25 00.5	-1.4
	comp=Z,9.1nm,0.9s,baz=192,slow=7.3,SNR=18						
	comp=Z,9.1nm,0.9s						
MJAR	Matsushiro Arr	47.73	23	P	P	11 25 00.1	-1.8
DANN	Dangsing	47.78	319	eP	P	11 25 02.2	-0.6
	comp=Z,80nm,0.6s						
HHC	Hu-ho-hao-te	48.03	354	eP	P	11 25 07.5	+3.3
HHC				pmax	pmax		
	comp=Z,21nm,1.0s						
HHC				pmax	pmax		
	comp=Z,120nm,6.2s						
HHC				LR	LR		
	comp=N,200nm,13.3s						
HHC				LR	LR		
	comp=E,260nm,14.0s						
HHC				LR	LR		
	comp=Z,220nm,14.0s						
PYUN	Piuthan	48.12	318	eP	P	11 25 04.5	-0.8
	comp=Z,44nm,0.6s						
GTA	Gaotai	49.02	342	⇑P	P	11 25 12.5	+0.8
GTA				pP	PcP	11 26 27.3	+0.5
GTA				pmax	pmax		
	comp=Z,14nm,0.9s						
MDJ	Mudanjiang	52.72	11	P	P	11 25 38.2	-0.2
MDJ				pmax	pmax		
	comp=Z,19nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,130nm,9.6s						
MDJ	Mudanjiang	52.72	11	P	P	11 25 38.2	-0.2
	comp=Z,22nm,0.9s						
USRK	Ussuriysk Ar.	52.83	13	P	P	11 25 38.9	-0.3
	comp=Z,8.3nm,0.8s,baz=190,slow=7.1,SNR=13						
	comp=Z,8.3nm,0.8s						
USRK	Ussuriysk Ar.	52.83	13	P	P	11 25 38.0	-1.1
ULN	Ulaanbaatar	55.49	352	P	P	11 25 57.5	-0.6
ULN				IAmb	IAmb	11 25 58.5	
	comp=Z,9.4nm,0.6s						
SONM	Songino Array	55.55	351	P	P	11 25 58.5	-0.1
	comp=Z,15nm,0.6s,baz=168,slow=8.3,SNR=84						
SONM				PcP	PcP	11 26 51.3	-0.1
	comp=Z,3.3nm,0.7s,baz=170,slow=4.6,SNR=5.8						
	comp=Z,15nm,0.6s						
SONM	Songino Array	55.55	351	P	P	11 25 58.1	-0.5
SONM				IAmb	IAmb	11 25 59.2	
	comp=Z,15nm,0.7s						
WMQ	Urumqi	57.30	335	eP	P	11 26 13.5	+2.8
KSH	Kashi	60.03	324	P	P	11 26 29.4	+0.1
KSH				pmax	pmax		
	comp=Z,19nm,0.8s						
KDJ	Kajisay	61.11	327	IAmb	IAmb	11 26 37.6	
	comp=Z,15nm,1.4s						
KBL	Kabul	61.49	316	P	P	11 26 38.0	-1.2
MK31	Makanchi Array	61.98	334	IAmb	IAmb	11 26 42.5	
	comp=Z,11nm,0.7s						
MKAR	Makanchi Array	61.98	334	P	P	11 26 41.6	-0.3
	comp=Z,17nm,0.7s,baz=148,slow=7.6,SNR=121						
MKAR				PcP	PcP	11 27 16.7	-0.4
	comp=Z,3.3nm,0.7s,baz=128,slow=6.0,SNR=5.1						
	comp=Z,17nm,0.7s						
MAKZ	Makanchi	62.13	333	P	P	11 26 42.3	-0.5
TKM2	Tokmak 2	62.50	327	P	P	11 26 45.3	-0.3
	SNR=9.4						
UCH	Uchtor	62.65	325	P	P	11 26 46.9	+0.1
	SNR=8.3						
KBK	Karagaybulak	62.69	326	P	P	11 26 46.9	+0.2
	SNR=9.9						
AAK	Ala-Archa	62.92	326	P	P	11 26 48.4	+0.1
	SNR=8.8						
AAK	Ala-Archa	62.92	326	P	P	11 26 47.6	-0.6
	comp=Z,10nm,0.6s,baz=140,slow=6.6,SNR=20						
	comp=Z,10nm,0.6s						
AAK	Ala-Archa	62.92	326	P	P	11 26 47.9	-0.3
AAK				IAmb	IAmb	11 26 49.3	
	comp=Z,13nm,0.8s						
AML	Almayashu	63.05	325	P	P	11 26 49.4	0.0
	SNR=25						
USP	Ospenovka	63.33	326	P	P	11 26 50.3	-0.4
	SNR=11						
EKS2	Erkin-Say	63.34	325	P	P	11 26 51.2	+0.3
	SNR=17						
BTK	Batken	63.47	322	IAmb	IAmb	11 26 52.6	
	comp=Z,12nm,0.8s						
CHGR	Chuyangaron	63.70	320	P	P	11 26 52.3	-1.0
KURBB	Kurchatov Arra	66.51	334	P	P	11 27 09.9	-0.7
	comp=Z,7.5nm,0.6s,baz=146,slow=5.6,SNR=43						
KURBB				PcP	PcP	11 27 35.4	-0.3
	comp=Z,2.1nm,0.6s,baz=129,slow=3.4,SNR=5.6						
	comp=Z,7.5nm,0.6s						
KURK	Kurchatov	66.54	334	P	P	11 27 10.1	-0.6
KURK				IAmb	IAmb	11 27 11.3	
	comp=Z,21nm,1.1s						
ZAA0	Zalesovo Array	66.67	340	IAmb	IAmb	11 27 11.2	
	comp=Z,14nm,0.7s						
ZALV	Zalesovo Beam	66.67	340	P	P	11 27 10.4	-1.2
	comp=Z,11nm,0.4s,baz=141,slow=4.8,SNR=44						
	comp=Z,11nm,0.4s						
OPO	Ambohidratompo	68.81	253	P	P	11 27 25.9	+0.3
	comp=Z,14nm,0.8s,baz=80,slow=4.6,SNR=9.9						
	comp=Z,14nm,0.8s						
PETK	Petropavlovsk-	69.14	25	P	P	11 27 26.7	+0.1
	comp=Z,5.0nm,0.7s,baz=199,slow=7.4,SNR=6.0						
	comp=Z,5.0nm,0.7s						
MAW	Mawson	70.37	199	P	P	11 27 34.9	+1.2
	comp=Z,7.4nm,0.9s,baz=55,slow=9.7,SNR=9.0						
	comp=Z,7.4nm,0.9s						
MAW	Mawson	70.37	199	P	P	11 27 34.7	+0.9
GEYT	Alibeck	70.84	314	P	P	11 27 37.4	+0.1
	comp=Z,5.2nm,0.7s,baz=214,slow=7.9,SNR=5.4						
	comp=Z,5.2nm,0.7s						
GEYT	Alibeck	70.84	314	P	P	11 27 36.9	-0.4
BRVK	Borovoye	71.88	332	P	P	11 27 41.9	-1.1
BRVK				IAmb	IAmb	11 27 43.4	
	comp=Z,20nm,1.2s						
VNDA	Vanda	74.10	171	P	P	11 27 56.3	+0.9
	comp=Z,1.8nm,0.6s,baz=314,slow=7.6,SNR=26						
	comp=Z,1.8nm,0.6s						
ABKAR	Akbulak array	75.00	325	IAmb	IAmb	11 28 01.3	
	comp=Z,24nm,0.9s						
RAYN	Ar Rayn	76.25	296	P	P	11 28 07.0	-1.5
RAYN				IAmb	IAmb	11 28 08.8	
	comp=Z,8.5nm,0.8s						
AKTO	Aktyubinsk	76.67	326	P	P	11 28 09.7	-0.5
	comp=Z,14nm,0.7s,baz=114,slow=7.5,SNR=48						
	comp=Z,14nm,0.7s						
KIBK	Kibwezi	78.91	269	P	P	11 28 22.5	-0.8
KIBK				IAmb	IAmb	11 28 24.7	
	comp=Z,9.8nm,0.9s						
NRIK	Noril'sk	79.00	350	P	P	11 28 21.3	-1.1
	comp=Z,2.8nm,0.5s,baz=164,slow=8.0,SNR=4.6						
	comp=Z,2.8nm,0.5s						
TIXI	Tiksi	79.01	4	P	P	11 28 20.7	-1.6
TIXI				IAmb	IAmb	11 28 22.0	
	comp=Z,11nm,1.0s						
ARU	Arti	79.36	331	P	P	11 28 23.3	-1.3
	comp=Z,5.5nm,0.2s,baz=189,slow=1.7,SNR=6.9						
	comp=Z,5.5nm,0.2s						
KMBO	Kilima Mbogo	79.84	270	P	P	11 28 28.6	+0.3
	comp=Z,11nm,0.8s,baz=75,slow=6.3,SNR=20						
	comp=Z,11nm,0.8s						
KMBO	Kilima Mbogo	79.84	270	P	P	11 28 28.0	-0.4
KMBO				IAmb	IAmb	11 28 29.9	
	comp=Z,14nm,1.0s						
LODK	Lodwar	82.30	274	P	P	11 28 40.0	-0.8

QSPA	South Pole Qui	82.84	180	P	P	11 28 43.0	+0.4
	comp=Z,3.5nm,0.6s,baz=329,slow=0.4,SNR=44						
	comp=Z,3.5nm,0.6s						
QSPA	South Pole Qui	82.84	180	P	P	11 28 43.4	+0.7
GURO	Guroymak-BITLI	82.93	310	IAmb	IAmb	11 28 46.3	
	comp=Z,26nm,1.2s						
BELG	Belogornoye	83.39	325	P	P	11 28 44.2	-1.1
	comp=Z,9.2nm,0.4s,baz=348,slow=3.3,SNR=7.6						
	comp=Z,9.2nm,0.4s						
KBZ	Khabaz	83.68	315	P	P	11 28 47.1	+0.1
	comp=Z,6.5nm,0.8s,baz=88,slow=4.8,SNR=15						
	comp=Z,6.5nm,0.8s						
ASF	Jabal al Asfar	85.59	303	P	P	11 28 57.3	+0.5
	comp=Z,8.4nm,0.8s,baz=187,slow=0.3,SNR=13						
	comp=Z,8.4nm,0.8s						
MBAR	Mbarara	86.37	270	P	P	11 29 01.4	+0.3
GHAJ	Ghor Haditha	86.54	302	IAmb	IAmb	11 29 03.1	
	comp=Z,27nm,1.1s						
LSZ	Lusaka	87.16	255	P	P	11 29 04.5	-0.2
LSZ				IAmb	IAmb	11 29 05.9	
	comp=Z,9.8nm,1.1s						
BOSA	Boshof	88.29	242	P	P	11 29 10.4	+0.6
	comp=Z,1.6nm,0.6s,baz=105,slow=3.2,SNR=7.1						
	comp=Z,1.6nm,0.6s						
BRTR	Keskin Array B	89.55	310	P	P	11 29 14.2	-1.2
	comp=Z,1.9nm,0.8s,baz=115,slow=5.6,SNR=8.5						
	comp=Z,1.9nm,0.8s						
TROLL	Troll, Antarti	90.64	196	P	P	11 29 20.8	+1.1
SNAA	Sanae	92.28	196	P	P	11 29 27.6	+0.4
SNAA	Sanae	92.28	196	P	P	11 29 27.3	0.0
	comp=Z,2.4nm,0.5s,baz=195,slow=5.5,SNR=28						
	comp=Z,2.4nm,0.5s						
SNAA	Sanae	92.28	196	P	P	11 29 27.5	+0.2
SNAA				IAmb	IAmb	11 29 28.9	
	comp=Z,3.3nm,0.6s						
VNA2	Neumayer--Watz	93.92	196	P	P	11 29 35.3	+0.6
	baz=100,slow=4.0						
NACGM	Naroch	96.00	324	⇓eP	P	11 29 44.6	+0.3
	baz=94						
BUR08	Bucovina Ar. S	96.54	317	IAmb	IAmb	11 29 47.0	
	comp=Z,2.0nm,0.8s						
FINES	FINESS Array B	96.73	331	P	P	11 29 46.1	-1.4
	comp=Z,2.2nm,0.6s,baz=102,slow=6.4,SNR=8.6						
	comp=Z,2.2nm,0.6s						
ILAR	Eielson Array	98.95	26	P	Pdif	11 29 55.0	-2.4
	comp=Z,0.3nm,0.7s,baz=237,slow=4.7,SNR=7.2						
ILAR				PKKPbc	PKKPbc	11 46 21.8	-2.9
	comp=Z,0.5nm,0.7s,baz=125,slow=1.0,SNR=5.2						
	comp=Z,0.3nm,0.7s						
SPITS	Spitsbergen Ar	99.15	348	P	Pdif	11 29 56.2	-1.8
	comp=Z,3.7nm,0.7s,baz=81,slow=6.0,SNR=4.4						
	comp=Z,3.7nm,0.7s						
YKA	Yellowknife Ar	113.23	23	PKiKP	PKiKP	11 34 51.1	-0.4
	comp=Z,1.3nm,0.4s,baz=305,slow=1.8,SNR=47						
YKA				SKP		11 37 39.6	
	comp=Z,0.4nm,0.7s,baz=306,slow=1.8,SNR=5.1						
TOA0	Torodi Ar. Sit	116.33	281	PKPdf	PKPdf	11 34 58.4	-0.4
TORD	Torodi Ar. Bea	116.33	281	PKP	PKPdf	11 34 58.3	-0.6
	comp=Z,7.9nm,0.5s,baz=60,slow=1.9,SNR=96						
TORD	Torodi Ar. Bea	116.33	281		PKPdf	11 34 58.4	-0.4
ESDC	Sonseca Array	118.32	311	PKP	PKPdf	11 35 01.9	-0.2
	comp=Z,0.2nm,0.3s,baz=19,slow=3.5,SNR=4.1						
PNTR	Pine Nut	120.06	49		PKiKP	11 35 07.1	+1.3
MSO	Missoula	121.17	39		PKPdf	11 35 07.3	-0.2
NVAR	Mina Array Bea	121.22	49	PKP	PKiKP	11 35 09.0	+0.9
	comp=Z,1.7nm,0.7s,baz=262,slow=1.8,SNR=20						
KIC	Kosan Boka	122.33	273	ePKP1	PKPdf	11 35 10.0	-0.4
	comp=Z,14nm,0.7s						
DBIC	Dimbokro	122.47	273	PKP	PKPdf	11 35 10.5	-0.2
	comp=Z,8.3nm,0.7s,baz=98,slow=2.0,SNR=10						
LIC	Lamto	122.60	273	ePKP1	PKPdf	11 35 10.8	-0.2
	comp=Z,35nm,1.6s						
TIC	Toumodi	122.63	273	ePKP1	PKPdf	11 35 10.4	-0.6
	comp=Z,22nm,0.7s						
ELK	Elko	122.71	46		PKiKP	11 35 11.3	+0.3
MPU	Maple Canyon	125.53	45	PKPdf	PKPdf	11 35 13.8	-2.3
PDAR	Pinedale Array	125.77	41	PKP	PKiKP	11 35 17.0	0.0
	comp=Z,0.5nm,0.4s,baz=241,slow=1.5,SNR=5.4						
SCHQ	Schefferville	132.33	3	PKP	PKPdf	11 35 28.8	+0.4
	comp=Z,3.3nm,0.7s,baz=37,slow=4.2,SNR=7.4						
TXAR	Lajitas Array	135.71	55	PKP	PKPdf	11 35 36.4	+0.8
	comp=Z,0.5nm,0.7s,baz=191,slow=1.3,SNR=5.7						
TXAR				SKPbc	SKPbc	11 38 21.6	0.0
	comp=Z,1.2nm,0.9s,baz=269,slow=2.6,SNR=8.4						
U40A	Yellville	140.04	39		PKPpre	11 35 36.2	
WVT	Waverly	143.19	35		PKPab	11 35 46.5	+0.2
143A	Socs Landing,	143.25	42		PKPbc	11 35 47.6	+0.6
LCO	Las Campanas	143.27	168		PKPbc	11 35 48.2	+0.6
OXF	Oxford	143.38	38		PKPab	11 35 47.1	+0.1
M57A	Sunshine Farm,	143.65	18		PKPab	11 35 47.4	-0.5
TLIG	Tlapa	143.66	70		PKPdf	11 35 49.8	-0.5
SSPA	Standing Stone	144.04	20		PKPbc	11 35 48.3	-0.9
TKL	Tuckaleechee C	145.74	31	PKPbc	PKPbc	11 35 54.7	+0.1
	comp=Z,24nm,0.6s,baz=160,slow=3.3,SNR=55						
CPUP	Villa Florida	146.30	189	PKPbc	PKPbc	11 35 57.2	+0.8
	comp=Z,13nm,0.9s,baz=148,slow=1.0,SNR=17						
CPUP	Villa Florida	146.30	189	PKPab	PKPbc	11 35 56.9	+0.4
CMIG	Matias Romero	147.20	69	PKPbc	PKPbc	11 35 59.9	+0.8
	comp=Z,13nm,0.6s,baz=337,slow=2.6,SNR=13						
GO02	Mina Guanaco	147.23	169		PKPbc	11 36 00.1	+0.6
BDFB	Brasilia	153.02	213	PKPbc	PKPbc	11 36 12.5	-0.6
	comp=Z,3.3nm,0.5s,baz=228,slow=4.9,SNR=4.8						

*NNC **02** 11:18:20.3±0.9, 44°.94N×80°.01E, h0km, mb2.8, mpv2.4, Error ellipse: s-maj=16.0km s-min=5.8km az=122.0*
*SOME **02** 11:18:22.3, 44°.92N×79°.98E, h15km*
ISC 02 11:18:19.4±1.4**, 44°.97N**±0°.04×**79°.95E**±0°.04**, h13**km±11km**, n20,** σ0s.99/35**, 3C-4D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPS	Kapalarasan	0.52	307	eP	Pn	11 18 33.6	+1.1
	8.3nm,0.1s						
KAPS				eS	Sn	11 18 41.4	+0.1
	36nm,0.1s						
DJR	Jarkent	0.65	190	eP	Pn	11 18 33.2	-1.2
	15nm,0.2s						
DJR				eS	Sb	11 18 41.3	-0.3
	88nm,0.3s						
KNOS	Konyrlen	0.82	222	eP	Pn	11 18 37.4	+0.7
	0.3nm,0.1s						
KNOS				eS	Sn	11 18 47.6	-1.3
KTMS	Ketmen	1.56	169	eP	Pg	11 18 50.6	+1.3
	2.9nm,0.1s						
KTMS				eS	Sg	11 19 10.2	+0.8
	3.4nm,0.2s						
PDGK	Podgornoye	1.68	191	⇓P	Pg	11 18 51.2	-0.4
	1.7nm,0.5s						
PDGK				⇓S	Sg	11 19 12.6	-0.7
	5.3nm,0.4s						
KPKS	Kokpek	1.76	211	eP	Pg	11 18 53.6	+0.5
	4.4nm,0.1s						
KPKS				eS	Sg	11 19 16.5	+0.5
	22nm,0.2s						
SHLS	Shalkode	1.85	191	eP	Pg	11 18 54.3	-0.6
	2.4nm,0.1s						
SHLS				eS	Sg	11 19 16.8	-2.1
	12nm,0.2s						
UZB	Uzynbulak	1.94	200	eP	Pg	11 18 56.5	-0.1
	2.8nm,0.1s						
UZB				eS	Sg	11 19 21.1	-0.7
	18nm,0.2s						
SATY	Saty	2.21	211	eP	Pg	11 19 02.5	+0.7
	5.0nm,0.1s						
SATY				eS	Sg	11 19 30.6	+0.1
	38nm,0.1s						
MAKZ	Makanchi	2.32	37	⇑Lg	Lg	11 19 33.9	
	0.6nm,0.2s						
CHKK	Chushkaly	2.40	243	eP	Pg	11 19 05.5	+0.2
	0.5nm,0.1s						
CHKK				eS	Sg	11 19 36.1	-0.3
	14nm,0.2s						
MK31	Makanchi Array	2.45	41	⇓Pg	Pg	11 19 05.3	-1.0
	0.3nm,0.3s,baz=222,slow=13,SNR=12						
MK31				⇓Lg	Lg	11 19 36.6	
	0.7nm,0.2s,baz=215,slow=25,SNR=27						
KTBS	Karatobe	2.66	243	eP	Pg	11 19 10.4	+0.1
	1.8nm,0.2s						
KTBS				eS	Sg	11 19 44.8	0.0
	7.7nm,0.4s						
MDOK	Medeo	2.76	230	eP	Pg	11 19 12.2	-0.1
	2.0nm,0.3s						
MDOK				eS	Sg	11 19 47.6	-0.5
	5.8nm,0.4s						
MDOK	Medeo	2.76	230	Pg	Pb	11 19 10.2	+1.5
	1.3nm,0.5s						
MDOK				Lg	Lg	11 19 47.5	
	9.8nm,0.6s						
KUU	Kurty	2.80	249	eP	Pg	11 19 13.4	+0.4
	1.4nm,0.2s						
KUU				eS	Sg	11 19 49.8	+0.5
	6.0nm,0.2s						
TNSS	Tian-Shan	2.90	229	eP	Pg	11 19 14.1	-0.9
	1.4nm,0.2s						
TNSS				eS	Sg	11 19 51.6	-1.0
	2.3nm,0.2s						
MTBS	Maitube	3.13	235	eP	Pg	11 19 19.2	-0.2
MTBS				eS	Sg	11 19 59.5	-0.5
KRBS	Karabastau	3.32	249	eP	Pg	11 19 21.4	-1.6
	0.4nm,0.2s						
KRBS				eS	Sg	11 20 03.3	-2.7
	1.4nm,0.4s						
TKM2	Tokmak 2	3.75	238	⇑Pg	Pg	11 19 30.8	-0.4
	1.2nm,0.5s						
TKM2				⇑Lg	Lg	11 20 18.5	
	0.9nm,0.3s						

IDC 02 11:56:32.6±3.9**, 6°.52S**×**154°.96E, h0**km**, mb3.6**/4**, mbtmp3.6**/4**, Error ellipse: s-maj=120.8km s-min=33.6km az=114.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.06	234	P	P	12 01 48.5	-1.4
	0.3nm,0.6s,baz=61,slow=9.4,SNR=2.6						
	0.3nm,0.6s						
ASAR	Alice Springs	26.46	228	P	P	12 02 12.4	+0.7
	0.3nm,0.4s,baz=59,slow=9.4,SNR=10						
	0.3nm,0.4s						
MKAR	Makanchi Array	83.03	319	P	P	12 09 01.1	+1.0
	0.3nm,0.6s,baz=103,slow=6.9,SNR=3.9						
	0.3nm,0.6s						
ZALV	Zalesovo Beam	83.77	326	P	P	12 09 02.7	-0.9
	0.9nm,0.4s,baz=115,slow=6.5,SNR=2.9						
	0.9nm,0.4s						

IDC 02 11:58:13.4±2.2**, 1°.11N**×**125°.80E, h0**km**, mb3.5**/3**, mbtmp3.5**/3**, Error ellipse: s-maj=189.9km s-min=27.7km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.53	159	P	P	12 03 15.1	0.0
	1.1nm,0.4s,baz=337,slow=11,SNR=22						
	1.1nm,0.4s						
ASAR	Alice Springs	25.86	163	P	P	12 03 46.9	-0.1
	0.2nm,0.3s,baz=341,slow=8.0,SNR=9.1						
	0.2nm,0.3s						
MKAR	Makanchi Array	59.19	327	P	P	12 08 16.3	0.0
	0.2nm,0.3s,baz=119,slow=8.8,SNR=2.8						
	0.2nm,0.3s						

NOU 02 12:01:07.9, 21°.75S×**170°.25E, h0**km**, ML4.0**/11**, Southeast of Loyalty Islands, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	2.08	277	P	Pn	12 01 43.0	-1.1
PINNC	Pines Island,	2.74	251	P	Pn	12 01 53.0	-0.1
YATNC	Mamie plateau,	3.13	264	P	Pn	12 01 57.4	-1.2
OUENC	Ouen Island, N	3.23	257	P	Pn	12 01 59.9	0.0
DZM	Mont Dzumac	3.55	264	P	Pn	12 02 04.3	-0.1
ONTNC	Ouen Toro	3.56	260	P	Pn	12 02 04.5	0.0
NOUC	Port Laguerre	3.68	264	P	Pn	12 02 06.1	0.0
KOUNC	Koumac, New Ca	5.69	281	P	Pn	12 02 34.4	+0.6

*UPA **02** 12:08:42.9±1.1, 8°.29N×82°.71W, h35km±3km, MW4.4, Fault plane solution: NP1:φs80.00000°, δ62.00000°, λ118.00000°.*
*UCR **02** 12:08:43.0±1.8, 8°.25N×82°.79W, h32km±4km, MW4.4*
*INET **02** 12:08:54.5±0.1, 9°.31N×83°.10W, h19km±1km, MW3.6*
ISC 02 12:08:43.1±1.0**, 8°.27N**±0°.04×**82°.71W**±0°.02**, h33**km±2km**, n70,** σ0s.88/98**, 15C-17D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.15	328	⇓iP	Pb	12 08 49.2	-0.1
LESP3				iS	Sb	12 08 54.0	+0.4
PTPM	Petroterminale	0.18	248	⇑iP	Pb	12 08 49.7	+0.1
PTPM				iS	Sb	12 08 56.5	+2.5
BAGA3	Bagala, Chiriq	0.26	43	⇓iP	Pn	12 08 50.2	-0.2
BAGA3				iS	Sb	12 08 57.5	+2.0
DVD	David	0.30	58	⇑iP	Pb	12 08 50.3	-0.6
DVD				iS	Sn	12 08 56.6	+0.7
CHIR3	Chiriqui UPA,	0.39	72	⇓iP	Pb	12 08 51.3	-0.9
CHIR3				iS	Sb	12 08 58.3	0.0
PTAR3	Potrerillos Ar	0.47	27	⇓iP	Pb	12 08 52.4	-0.9
PTAR3				iS	Sb	12 09 00.7	+0.4
BCO2	Palmira	0.48	22	⇓iP	Pb	12 08 52.6	-0.9
BCO2				iS	Sb	12 09 01.0	+0.3
BRU2	Volcan	0.52	2	⇓eP	Pn	12 08 53.0	-1.3
BRU2				iS	Sb	12 09 02.0	+0.3
BC3P	Paso Ancho	0.55	10	⇓iP	Pn	12 08 53.5	-1.2
BC3P				iS	Sb	12 09 01.9	-0.7
EDSV	San Vito	0.60	334	eP	Pn	12 08 54.5	-0.9
EDSV				eS	Sb	12 09 05.1	+1.2
PIRO	Carate, Puerto	0.64	282	⇓iP	Pn	12 08 54.2	-1.5
PIRO				iS	Sn	12 09 03.3	-1.4
CHGR2	Aguacate	0.86	40	⇑eP	Pn	12 08 57.3	-1.7
CHGR2				iS	Sn	12 09 09.3	-1.2
REME3	Remedios, Chir	0.87	93	⇓eP	Pn	12 08 57.8	-1.2
EDPN	Palmar Norte	1.01	313	⇑iP	Pn	12 08 59.8	-1.1
EDPN				eS	Sn	12 09 14.1	+0.2
EDBA	Buenos Aires	1.05	328	eP	Pn	12 09 00.6	-0.9
EDBA				eS	Sn	12 09 15.5	+0.5
DRK0	Durika	1.12	332	⇑iP	Pn	12 09 02.1	-0.5
DRK0				iS	Sn	12 09 17.2	+0.3
DRK0	Durika	1.12	332	eP	Pn	12 09 02.2	-0.5
CNI2	El Empalme, Bo	1.17	12	⇓eP	Pn	12 09 02.6	-0.5
RGM0	Gandoca	1.31	4	⇑iP	Pn	12 09 05.5	+0.4
RGM0				⇑eP	Pn	12 09 05.5	+0.4
RGM0				eS	Sn	12 09 21.9	+0.5
RGM0	Gandoca	1.31	4	eP	Pn	12 09 05.3	+0.2
PEZE	Perez Zeledon,	1.46	319	eP	Pn	12 09 06.0	-1.3
EDDO	Dominical	1.50	311	eP	Pn	12 09 06.7	-1.0
RSUS3	Rio de Jesus,	1.56	101	⇓eP	Pn	12 09 08.3	-0.3
RSUS3				iS	Sn	12 09 27.8	+0.2
CDM	Cerro de Muert	1.64	321	⇑iP	Pn	12 09 09.0	-1.1
CDM	Cerro de Muert	1.64	321	eP	Pn	12 09 09.1	-1.1
STIA3	Santiago, Vera	1.73	96	⇓eP	Pn	12 09 10.3	-0.5
MARI3	Mariato, Verag	1.81	110	⇓iP	Pn	12 09 12.0	0.0
MARI3				iS	Sn	12 09 33.8	0.0
CALO3	Calobre, Verag	1.85	88	eP	Pn	12 09 12.0	-0.5
CALO3				iS	Sn	12 09 35.9	+1.1
RIMA	Rio Macho	1.87	323	⇑eP	Pn	12 09 12.1	-0.9
RIMA				eS	Sn	12 09 35.9	+0.3
RIMA	Rio Macho	1.87	323	eP	Pn	12 09 12.1	-0.9
BATAN	Batan	1.93	340	⇓eP	Pn	12 09 13.8	+0.2
BATAN				eS	Sn	12 09 37.7	+1.0
LCR2	La Lucha 2	1.94	319	eP	Pn	12 09 13.1	-0.9
CACAO	El Cacao, Vera	2.05	117	⇓eP	Pn	12 09 14.2	-1.1
CACAO				eS	Sn	12 09 39.3	-0.4
PESE3	Pese, Herrera	2.11	100	eP	Pn	12 09 16.3	+0.2
HDC3	Heredia 3	2.21	321	eP	Pn	12 09 17.7	+0.1
HDC	Heredia	2.21	321	⇑iP	Pn	12 09 17.4	-0.2
HDC	Heredia	2.21	321	⇓iP	Pn	12 09 17.8	+0.3
HDC				iS	Sn	12 09 45.9	+2.1
CHIT3	Chitre	2.29	98	eP	Pn	12 09 18.9	+0.4
PNME	Penonome	2.37	85	⇑eP	Pn	12 09 20.1	+0.5
JACO	JACO, Garabito	2.37	306	eP	Pn	12 09 18.1	-1.6
AZU	Azuero	2.46	101	⇓eP	Pn	12 09 20.8	-0.1
AZU				iS	Sn	12 09 50.4	+0.6
SRA1	San Ramn	2.51	316	eP	Pn	12 09 22.9	+1.1
VTON	El Valle, Cocl	2.59	82	⇑eP	Pn	12 09 24.5	+1.7
ACHO3	Achotines, Los	2.65	109	eP	Pn	12 09 23.7	+0.1
LAFE	Finca La Fe, P	2.66	305	eP	Pn	12 09 23.9	+0.3
LAFE	Finca La Fe, P	2.66	305	eP	Pn	12 09 23.8	+0.3
PEDA3	Pedasi	2.76	105	eP	Pn	12 09 25.1	+0.1
ZANG	Zanguenga, Cho	2.89	76	eP	Pn	12 09 26.6	-0.2
ZANG				eS	Sn	12 09 58.5	-1.9
CASO	Castillo	2.93	317	eP	Pn	12 09 28.2	+0.7
CEDE	Laguna Cedeo	2.95	318	eP	Pn	12 09 28.9	+1.1
BCIP	Isla Barro Col	2.97	72	⇑eP	Pn	12 09 27.9	-0.1
BCIP				eS	Sb	12 10 11.3	0.0
CHOR3	La Chorrera	2.98	78	eP	Pn	12 09 29.3	+1.3
GAMB1	Gamboa	3.08	74	⇑eP	Pn	12 09 30.6	+1.1
ARRA3	Arraijan, Pana	3.10	77	eP	Pn	12 09 29.8	+0.1
INDI	Punta indio, G	3.18	300	eP	Pn	12 09 29.4	-1.4
UPA	Univ. de Panam	3.22	77	⇑eP	Pn	12 09 32.3	+1.0
UPA				iS	Sn	12 10 08.2	-0.3
DUNO	Dulce Nombre,	3.28	303	eP	Pn	12 09 31.0	-1.3
CUI	Cuipilapa	3.39	315	eP	Pn	12 09 33.9	+0.2
GUAI	GUAI	3.40	306	eP	Pn	12 09 33.1	-0.8
ORTG	Ortega, Santa	3.42	308	eP	Pn	12 09 33.8	-0.4
COLC	Colonia	3.42	314	eP	Pn	12 09 33.8	-0.4
HORNC	Hornillas	3.44	315	eP	Pn	12 09 34.9	+0.5
GUAB	Guayabo de Bag	3.47	314	eP	Pn	12 09 35.3	+0.5
LIM1	Limonal	3.48	314	eP	Pn	12 09 35.3	+0.3
GPS2	Hotel Rincn d	3.59	314	eP	Pn	12 09 37.1	+0.6
LAPC	Finca la Perla	3.66	313	eP	Pn	12 09 37.5	+0.1
BUEV	Buena Vista	3.66	314	eP	Pn	12 09 38.0	+0.5
BUAI	Buenos Aires	3.66	315	eP	Pn	12 09 37.7	+0.2
CHPO	Chepo, Panama	3.66	76	eP	Pn	12 09 37.9	+0.5
GBS3	Finca Las Img	3.68	313	eP	Pn	12 09 38.0	+0.2

*IDC **02** 12:14:31.0±3.7, 16°.90S×70°.34W, h75km±33km, mb3.4/3, mbtmp3.7/6, MS3.0/5, Error ellipse: s-maj=39.8km s-min=17.9km az=112.0*
ISC 02 12:14:26.7±1.4**, 16°.81S**±0°.09×**70°.6W**±0°.1**, h35**km**, n9,** σ1s.70/8**, mb3.7**/3**, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	2.41	78	P	Pn	12 15 07.0	+2.7
	35nm,0.6s,baz=254,slow=14,SNR=103						
LPAZ				LR	LR	12 16 18.9	
	comp=Z,180nm,19.9s,baz=153,slow=49						
LVC	Limon Verde	5.99	165	P	Pn	12 15 54.6	+1.4
	7.1nm,0.6s,baz=344,slow=6.9,SNR=7.9						
LVC				S	Sn	12 17 01.6	+1.0
	5.4nm,0.8s,baz=278,slow=17,SNR=1.7						
LVC				LR	LR	12 18 27.2	
	comp=Z,74nm,19.3s,baz=258,slow=40						
NNA	Nana	7.72	308	LR	LR	12 19 14.0	
	comp=Z,88nm,18.3s,baz=138,slow=36						
SIV	San Ignacio	9.17	86	P	Pn	12 16 35.9	-0.6
	0.8nm,0.3s,baz=262,slow=14,SNR=4.4						
SIV				S	Sn	12 18 17.6	-1.0
	0.4nm,0.3s,baz=218,slow=13,SNR=3.4						
PLCA	Paso Flores	23.84	180	P	P	12 19 37.0	+0.2
	2.0nm,0.8s,baz=2.1,slow=12,SNR=5.7						
	2.0nm,0.8s						
MDP	Montagnes des	28.08	41	LR	LR	12 32 31.2	
	comp=Z,33nm,18.1s,baz=296,slow=39						
JTS	Las Juntas de	30.44	331	LR	LR	12 32 52.0	
	comp=Z,49nm,18.0s,baz=160,slow=36						
TORD	Torodi Ar. Bea	77.35	72	P	P	12 26 17.0	-1.5
	0.7nm,0.9s,baz=250,slow=5.9,SNR=3.1						
	0.7nm,0.9s						
YKA	Yellowknife Ar	86.26	341	P	P	12 27 04.6	+0.3
	0.4nm,0.7s,baz=131,slow=4.7,SNR=5.3						
	0.4nm,0.7s						

*NEIC **02** 12:16:31.4±0.8, 19°.17N±0°.02×67°.21W±0°.05, h29km±9km, Error ellipse: s-maj=6.6km s-min=1.9km az=73.0*
*RSPR **02** 12:16:31.2, 19°.30N×67°.26W, h39km±9km, MD3.4/14*
ISC 02 12:16:31.3±1.5**, 19°.19N**±0°.07×**67°.23W**±0°.04**, h29**km**, n56,** σ0s.59/58**, 7C-8D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.72	171	⇓eP	Pb	12 16 44.5	-0.9
AGPR	Aguadilla, PR	0.72	171	eS	Sb	12 16 55.9	+0.9
AGPR	Aguadilla, PR	0.72	171		Pb	12 16 44.5	-0.9
AGPR					Sb	12 16 55.9	+0.9
AGPR	Aguadilla, PR	0.72	171	IAML		12 17 00.5	
	comp=N,1µm,0.3s						
IDE	Isla Desecheo	0.83	197	⇑eP	Pn	12 16 46.3	-0.8
IDE	Isla Desecheo	0.83	197	eS	Sn	12 16 58.9	+0.6
AOPR	Arecibo Observ	0.95	152	⇓eP	Pn	12 16 47.7	-1.0
AOPR	Arecibo Observ	0.95	152	eS	Sn	12 17 01.1	-0.2
AOPR	Arecibo Observ	0.95	152		Pn	12 16 47.7	-1.0
AOPR					Sn	12 17 01.1	-0.2
EMPR	Esperanza - Ma	0.96	137	⇑eP	Pn	12 16 48.7	-0.2
EMPR	Esperanza - Ma	0.96	137	eS	Sn	12 17 02.0	+0.3
EMPR	Esperanza - Ma	0.96	137		Pn	12 16 48.7	-0.2
EMPR					Sn	12 17 02.0	+0.3
EMPR	Esperanza - Ma	0.96	137	IAML		12 17 09.3	
	comp=N,544nm,0.6s						
EMPR				IAML		12 17 15.7	
	comp=E,677nm,0.8s						
LSP	Las Mesas	1.01	173	⇓eP	Pn	12 16 49.2	-0.5
LSP	Las Mesas	1.01	173	eS	Sb	12 17 03.9	+0.6
CRPR	Cabo Rojo, PR	1.18	175	⇓eP	Pn	12 16 51.5	-0.4
CRPR	Cabo Rojo, PR	1.18	175	eS	Sn	12 17 07.4	+0.5
CRPR	Cabo Rojo, PR	1.18	175		Pn	12 16 51.5	-0.4
CRPR					Sn	12 17 07.4	+0.5
CRPR	Cabo Rojo, PR	1.18	175	IAML		12 17 09.9	
	comp=N,522nm,0.7s						
MLPR	Magueyes Islan	1.22	172	⇓eP	Pn	12 16 52.1	-0.4
MLPR	Magueyes Islan	1.22	172	eS	Sn	12 17 08.7	+0.7
MLPR	Magueyes Islan	1.22	172		Pn	12 16 52.1	-0.4
MLPR					Sn	12 17 08.7	+0.7
MLPR	Magueyes Islan	1.22	172	IAML		12 17 09.2	
	comp=E,266nm,0.6s						
CELP	Cerrillos	1.26	151		Pn	12 16 52.6	-0.4
CELP				IAML		12 17 11.3	
	comp=N,414nm,0.6s						
CELP				IAML		12 17 16.1	
	comp=E,405nm,0.3s						
OBIP	Obispado Ponce	1.28	153	⇓eP	Pn	12 16 52.9	-0.4
OBIP	Obispado Ponce	1.28	153	eS	Sn	12 17 10.2	+0.7
OBIP	Obispado Ponce	1.28	153		Pn	12 16 52.9	-0.4
OBIP					Sn	12 17 10.2	+0.7
OBIP	Obispado Ponce	1.28	153	IAML		12 17 19.7	
	comp=N,488nm,0.6s						
GCPR	Guaynabo City	1.39	129	⇓eP	Pn	12 16 54.0	-0.7
GCPR	Guaynabo City	1.39	129	eS	Sn	12 17 12.4	+0.2
GCPR	Guaynabo City	1.39	129		Pn	12 16 54.0	-0.7
GCPR					Sn	12 17 12.4	+0.2
ICMP	Isla Caja de M	1.45	153		Pn	12 16 56.2	+0.6
ICMP				IAML		12 17 25.1	
	comp=E,328nm,0.8s						
ICMP				IAML		12 17 27.6	
	comp=N,214nm,0.8s						
SJG	San Juan	1.48	136	Pn	Pn	12 16 56.3	+0.3
SJG				IAML		12 17 21.7	
	comp=N,233nm,0.3s						
SJG				IAML		12 17 24.6	
	comp=N,214nm,0.6s						
CBYP	Canovanas	1.58	125	⇑eP	Pn	12 16 57.0	-0.5
CBYP	Canovanas	1.58	125		Pn	12 16 57.0	-0.5
CBYP	Canovanas	1.58	125	IAML		12 17 26.7	
	comp=E,634nm,0.2s						
IGPR	InterUniversit	1.61	139	⇑eP	Pn	12 16 57.7	-0.1
IGPR	InterUniversit	1.61	139	eS	Sn	12 17 17.6	0.0
PDPR	Patillas Dam,	1.63	135		Pn	12 16 58.2	+0.2
PDPR				IAML		12 17 22.9	
	comp=E,187nm,0.4s						
HUMP	Col San Antoni	1.67	128	⇑eP	Pn	12 16 58.0	-0.6
HUMP	Col San Antoni	1.67	128	eS	Sn	12 17 19.8	+0.8
HUMP	Col San Antoni	1.67	128		Pn	12 16 58.0	-0.6
HUMP					Sn	12 17 19.8	+0.8
HUMP	Col San Antoni	1.67	128	IAML		12 17 26.2	
	comp=N,212nm,0.2s						
MTP	Monte Pirata	1.92	124	⇑eP	Pn	12 17 01.8	-0.3
MTP	Monte Pirata	1.92	124	eS	Sn	12 17 25.8	+0.5
MTP	Monte Pirata	1.92	124		Pn	12 17 01.8	-0.3
MTP					Sn	12 17 25.8	+0.5
MTP	Monte Pirata	1.92	124	IAML		12 17 33.8	
	comp=E,134nm,0.4s						
CUPR	Culebra, Puert	2.04	115	⇑eP	Pn	12 17 03.3	-0.4
CUPR	Culebra, Puert	2.04	115	eS	Sn	12 17 28.3	+0.1
CUPR	Culebra, Puert	2.04	115		Pn	12 17 03.3	-0.4
CUPR					Sn	12 17 28.3	+0.1
DR12	Loma Pena Alta	2.08	259	⇓eP	Pn	12 17 03.0	-1.4
DR12	Loma Pena Alta	2.08	259		Pn	12 17 04.3	0.0
STVI	Saint Thomas	2.31	111	Pn	Pn	12 17 07.3	-0.1
CDVI	St. Croix	2.73	121	Pn	Pn	12 17 14.3	+1.1
BANI	BANI	3.07	256		Pn	12 17 18.2	+0.2
SDDR	Presa de Saban	3.85	268		Pn	12 17 29.4	+0.7

WEL 02 12:16:46.6±1.0**,34°S**±19°×**17°9W**±2°5**,h167**km±34km**,**
M3.8/10**,mB4.3**/5**,ML4.2**/13**,MLv4.0**/10**,Mw(mB)3.4**/5**,**
Error ellipse: s-maj=0.0km s-min=0.0km az=125.0,
South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.40**	**211**	P	Pn	12 17 49.3	-3.1
MXZ				S	Sn	12 18 44.6	+0.7
WMGZ	**Waiomatatini S**	**4.57**	**209**	P	Pn	12 17 55.0	+0.4
PKGZ	**Pakihiroa**	**4.77**	**211**	P	Pn	12 17 55.7	-1.6
PKGZ				S	Sn	12 18 52.6	0.0
HAZ	**Te Kaha**	**4.79**	**214**	P	Pn	12 17 58.1	+0.6
HAZ				S	Sn	12 18 54.7	+1.6
PUZ	**Puketiti**	**4.85**	**208**	P	Pn	12 17 58.5	+0.1
PUZ				S	Sn	12 18 54.4	-0.2
RUGZ	**Raukumara Rang**	**5.01**	**214**	P	Pn	12 18 00.6	+0.1
RUGZ				S	Sn	12 18 59.0	+0.6
TWGZ	**Tauwhareparae**	**5.05**	**210**	P	Pn	12 18 01.8	+0.8
TWGZ				S	Sn	12 19 00.4	+1.1
CNGZ	**Carnagh Statio**	**5.23**	**207**	P	Pn	12 18 03.8	+0.5
MWZ	**Matawai**	**5.38**	**212**	P	Pn	12 18 05.2	-0.1
MWZ				S	Sn	12 19 07.4	+0.4
URZ	**Urewera**	**5.51**	**216**	P	Pn	12 18 06.1	-0.9
URZ				S	Sn	12 19 09.4	-0.7
RAGZ	**Rawiri**	**5.56**	**212**	P	Pn	12 18 07.8	0.0
RIGZ	**Rimuhau**	**5.59**	**209**	P	Pn	12 18 07.6	-0.5
RIGZ				S	Sn	12 19 11.7	-0.3
SNGZ	**Shannon Statio**	**5.83**	**211**	P	Pn	12 18 12.0	+0.7
SNGZ				S	Sn	12 19 19.0	+1.3
RTZ	**Ruatahuna**	**5.86**	**214**	P	Pn	12 18 11.2	-0.4
RTZ				S	Sn	12 19 18.7	+0.3
RAHZ	**Arahi**	**6.06**	**212**	P	Pn	12 18 15.9	+1.7
RAHZ				S	Sn	12 19 24.9	+1.9
MTHZ	**Maungataniwha**	**6.11**	**214**	P	Pn	12 18 15.8	+0.8
MTHZ				S	Sn	12 19 24.7	+0.3
MRHZ	**Matea Rd**	**6.30**	**216**	P	Pn	12 18 17.6	+0.1
MRHZ				S	Sn	12 19 29.3	+0.4
NMHZ	**Naumai**	**6.33**	**213**	P	Pn	12 18 19.0	+1.2
NMHZ				S	Sn	12 19 29.8	+0.3
BKZ	**Black Stump Fm**	**6.53**	**214**	P	Pn	12 18 19.8	-0.7
BKZ				S	Sn	12 19 32.9	-1.3
KAHZ	**Kahuranaki**	**6.88**	**209**	P	Pn	12 18 24.3	-0.8
KAHZ				S	Sn	12 19 41.9	-0.7

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*OSPL **02** 12:27:21.6±1.0,19°19N×67°07W,h28km±13km,ML2.3*
*NEIC **02** 12:27:21.1±1.2,19°18N±0°05×67°32W±0°04,h32km±10km,*
Error ellipse: s-maj=8.8km s-min=2.9km az=212.0
*RSPR **02** 12:27:21.1,19°14N×67°29W,h74km±7km,MD3.2/8*
ISC 02 12:27:19.2±1.5**,19°22N**±0°07×**67°32W**±0°04**,h27**km**,n38,**
σ**0°76**/40**,6C-3D,Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.77**	**165**	⇑eP	**Pn**	**12 27 34.5**	**+0.2**
AGPR	**Aguadilla, PR**	**0.77**	**165**	eS	**Sn**	**12 27 45.3**	**+0.2**
AGPR	**Aguadilla, PR**	**0.77**	**165**		**Pn**	**12 27 34.5**	**+0.2**
AGPR					**Sn**	**12 27 45.3**	**+0.2**
AGPR	**Aguadilla, PR**	**0.77**	**165**	i P	**Pn**	**12 27 34.4**	**+0.2**
AGPR				IAML		12 27 47.3	
	comp=Z,106nm,0.8s						
IDE	**Isla Desecheo**	**0.84**	**190**	⇑eP	**Pn**	**12 27 36.3**	**+1.1**
IDE	**Isla Desecheo**	**0.84**	**190**	eS	**Sn**	**12 27 48.8**	**+2.0**
AOPR	**Arecibo Observ**	**1.02**	**148**	⇑eP	**Pn**	**12 27 37.6**	**-0.1**
AOPR	**Arecibo Observ**	**1.02**	**148**	eS	**Sn**	**12 27 51.1**	**-0.2**
AOPR	**Arecibo Observ**	**1.02**	**148**		**Pn**	**12 27 37.6**	**-0.1**
AOPR					**Sn**	**12 27 51.1**	**-0.2**
EMPR	**Esperanza - Ma**	**1.05**	**134**	⇓eP	**Pb**	**12 27 38.9**	**+0.1**
EMPR	**Esperanza - Ma**	**1.05**	**134**	eS	**Sb**	**12 27 53.6**	**+1.4**
EMPR	**Esperanza - Ma**	**1.05**	**134**		**Pb**	**12 27 38.9**	**+0.1**
EMPR					**Sb**	**12 27 53.6**	**+1.4**
EMPR	**Esperanza - Ma**	**1.05**	**134**	IAML		12 28 03.4	
	comp=E,122nm,1.2s						
LSP	**Las Mesas**	**1.06**	**168**	⇑eP	**Pb**	**12 27 39.1**	**+0.2**
LSP	**Las Mesas**	**1.06**	**168**	eS	**Sb**	**12 27 53.4**	**+1.0**
CRPR	**Cabo Rojo, PR**	**1.22**	**170**	⇓eP	**Pb**	**12 27 41.3**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.22**	**170**	eS	**Sn**	**12 27 55.6**	**-0.6**
CRPR	**Cabo Rojo, PR**	**1.22**	**170**		**Pb**	**12 27 41.3**	**-0.3**
CRPR					**Sn**	**12 27 55.6**	**-0.6**
CRPR	**Cabo Rojo, PR**	**1.22**	**170**	IAML		12 27 59.9	
	comp=N,71nm,0.9s						
CRPR	**Cabo Rojo, PR**	**1.22**	**170**	i P	**Pb**	**12 27 41.3**	**-0.3**
CRPR				eS	**Sn**	**12 27 54.6**	**-1.5**
CRPR				IAML		12 28 02.2	
	comp=Z,56nm,0.2s						
MLPR	**Magueyes Islan**	**1.27**	**168**	⇑eP	**Pb**	**12 27 42.0**	**-0.5**
MLPR	**Magueyes Islan**	**1.27**	**168**	eS	**Sb**	**12 27 57.6**	**-0.8**
MLPR	**Magueyes Islan**	**1.27**	**168**		**Pb**	**12 27 42.0**	**-0.5**
MLPR					**Sb**	**12 27 57.6**	**-0.8**
MLPR	**Magueyes Islan**	**1.27**	**168**	IAML		12 27 59.4	
	comp=E,52nm,0.7s						
CELP	**Cerrillos**	**1.34**	**148**		**Pb**	**12 27 42.9**	**-0.8**
CELP				IAML		12 28 01.1	
	comp=E,57nm,0.7s						
CELP				IAML		12 28 01.6	
	comp=N,68nm,0.8s						
OBIP	**Obispado Ponce**	**1.35**	**150**	⇓eP	**Pb**	**12 27 43.0**	**-0.8**
OBIP	**Obispado Ponce**	**1.35**	**150**	eS	**Sn**	**12 27 58.7**	**-0.7**
OBIP	**Obispado Ponce**	**1.35**	**150**		**Pb**	**12 27 43.0**	**-0.8**
OBIP					**Sn**	**12 27 58.7**	**-0.7**
OBIP	**Obispado Ponce**	**1.35**	**150**	IAML		12 28 09.6	
	comp=N,67nm,0.7s						
SJG	**San Juan**	**1.56**	**134**	Pn	**Pb**	**12 27 46.5**	**-1.0**
SJG				IAML		12 28 16.3	
	comp=N,41nm,0.7s						
SJG				IAML		12 28 20.2	
	comp=N,36nm,0.4s						
CBYP	**Canovanas**	**1.68**	**124**	Pn	**Pb**	**12 27 48.5**	**-1.0**
HUMP	**Col San Antoni**	**1.76**	**127**	Pn	**Pb**	**12 27 50.8**	**0.0**
HUMP				IAML		12 28 18.1	
	comp=N,27nm,0.5s						
DR12	**Loma Pena Alta**	**1.99**	**258**	Pn	**Pb**	**12 27 54.5**	**-0.3**
MTP	**Monte Pirata**	**2.02**	**123**	⇑eP	**Pn**	**12 27 51.5**	**0.0**
MTP	**Monte Pirata**	**2.02**	**123**		**Pn**	**12 27 51.5**	**0.0**
MTP	**Monte Pirata**	**2.02**	**123**	IAML		12 28 29.2	
	comp=N,30nm,2.1s						
CUPR	**Culebra, Puert**	**2.14**	**115**	Pn	**Pn**	**12 27 54.0**	**+0.9**
SDDR	**Presa de Saban**	**3.76**	**267**	Pn	**Pn**	**12 28 15.3**	**-0.2**

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*ATH **02** 12:31:31.2,34°89N×25°61E,h15km±9km,ML2.8/4,Error*
ellipse: s-maj=10.1km s-min=1.4km az=19.0
*ISK **02** 12:31:31.0,34°93N×25°64E,h8km,ML3.1/19*
*THE **02** 12:31:31.5,34°94N×25°62E,h0km±1km,ML2.4/4,Error*
ellipse: s-maj=2.9km s-min=0.7km az=191.0
ISC 02 12:31:32.2±0.9**,35°04N**±0°05×**25°57E**±0°02**,h14**km±7km**,**
n31,σ**1°48**/44**,Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FRMA	**Ierapetra Chan**	**0.13**	**100**	P	**Pb**	**12 31 36.2**	**-0.3**
FRMA				S	**Sg**	**12 31 40.3**	**+2.2**
FRMA				AML	AML	12 31 46.7	
	comp=N,11964µm,0.6s						
FRMA				AML	AML	12 31 53.0	
	comp=E,10295µm,0.4s						
FRMA	**Ierapetra Chan**	**0.13**	**100**	P	**Pb**	**12 31 36.2**	**-0.3**
FRMA				S	**Sg**	**12 31 40.0**	**+1.9**
	comp=E,2µm,0.5s						
NPS	**Neapolis**	**0.23**	**8**	P	**Pb**	**12 31 38.3**	**+0.2**
NPS				S	**Sb**	**12 31 43.5**	**+1.4**
NPS	**Neapolis**	**0.23**	**8**	P	**Pb**	**12 31 38.3**	**+0.2**
NPS				S	**Sb**	**12 31 43.5**	**+1.4**
HRKL	**Herakleio**	**0.47**	**305**	PG	**Pb**	**12 31 42.6**	**+0.3**
KSTL	**Kastelli Herak**	**0.49**	**303**	P	**Pg**	**12 31 39.2**	**-2.7**
KSTL				S	**Sg**	**12 31 45.2**	**-3.3**
KSTL				AML	AML	12 31 48.8	
	comp=E,3312µm,0.5s						
KSTL				AML	AML	12 31 51.0	
	comp=N,5500µm,0.5s						
KSTL	**Kastelli Herak**	**0.49**	**303**	P	**Pg**	**12 31 39.2**	**-2.7**
KSTL				S	**Sg**	**12 31 45.5**	**-3.0**
	comp=N,750nm,0.5s						
ZKR	**Zakros**	**0.53**	**82**	P	**Pg**	**12 31 41.6**	**-1.1**
ZKR				S	**Sb**	**12 31 50.3**	**-0.7**
ZKR				AML	AML	12 31 50.9	
	comp=N,2478µm,0.5s						
ZKR				AML	AML	12 31 52.2	
	comp=E,5074µm,0.4s						
ZKR	**Zakros**	**0.53**	**82**	P	**Pg**	**12 31 41.8**	**-0.9**
ZKR				S	**Sb**	**12 31 50.0**	**-0.9**
	comp=E,2µm,0.5s						
ZKR	**Zakros**	**0.53**	**82**	PG	**Pg**	**12 31 41.4**	**-1.3**
ZKR				SG	**Sg**	**12 31 49.3**	**-0.5**
IDI	**Anoyia**	**0.61**	**294**	P	**Pb**	**12 31 44.6**	**-0.2**
IDI				S	**Sb**	**12 31 55.2**	**+1.9**
IDI				AML	AML	12 32 03.5	
	comp=E,790µm,0.5s						
IDI				AML	AML	12 32 12.3	
	comp=N,725µm,0.4s						
IDI	**Anoyia**	**0.61**	**294**	P	**Pb**	**12 31 44.8**	**0.0**
IDI				S	**Sn**	**12 31 55.8**	**-0.5**
	comp=N,368nm,0.5s						
IDI	**Anoyia**	**0.61**	**294**	PG	**Pb**	**12 31 44.6**	**-0.2**
IDI				SG	**Sn**	**12 31 55.6**	**-0.7**
GVD	**Gavdhos**	**1.24**	**261**	PN	**Pg**	**12 31 55.9**	**-0.1**
SANT	**Santorini**	**1.33**	**356**	PN	**Pg**	**12 31 58.5**	**+0.6**
IMMV	**Iera Moni Meta**	**1.37**	**288**	PN	**Pg**	**12 31 58.8**	**+0.2**
KARP	**Karpathos**	**1.40**	**68**	P	**Pb**	**12 31 57.7**	**-0.4**
KARP	**Karpathos**	**1.40**	**68**	PN	**Pb**	**12 31 57.3**	**-0.8**
KARP				SN	**Sg**	**12 32 16.4**	**-0.8**
KNDR	**Palaiochora Ch**	**1.56**	**278**	PN	**Pg**	**12 32 01.2**	**-1.0**
NIS1	**Nisyros Isl.**	**2.03**	**39**	PN	**Pn**	**12 32 07.3**	**+1.2**
KOSK	**Kos Island**	**2.06**	**33**	PN	**Pb**	**12 32 08.0**	**-1.3**
DAT	**Datca**	**2.34**	**43**	PN	**Pn**	**12 32 11.5**	**+1.0**
ARG	**Arkhangelos**	**2.39**	**60**	PN	**Pn**	**12 32 10.2**	**-0.8**
BODT	**Bodrum**	**2.46**	**34**	PN	**Pn**	**12 32 13.7**	**+1.7**
TURN	**Turunc**	**2.78**	**51**	PN	**Pn**	**12 32 17.6**	**+1.3**
YER	**Yerkesik**	**3.03**	**46**	PN	**Pn**	**12 32 21.1**	**+1.2**
FETY	**Fethiye**	**3.27**	**60**	PN	**Pn**	**12 32 23.8**	**+0.7**
CHOS	**Chios island**	**3.36**	**6**	PN	**Pn**	**12 32 26.9**	**+2.5**
CAME	**Cameli-Denizli**	**3.57**	**57**	PN	**Pn**	**12 32 28.3**	**+0.9**
ITM	**Ithomi**	**3.65**	**307**	PN	**Pn**	**12 32 31.2**	**+3.0**
KORT	**Korkueli**	**4.34**	**62**	PN	**Pn**	**12 32 39.1**	**+1.2**

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*IDC **02** 12:42:30.3±0.9,42°78N×71°78E,h0km,mb3.6/6,*
mbtmp3.8/12,ML3.3/6,MS3.4/2,Error ellipse:
s-maj=14.6km s-min=8.6km az=4.0
*MOS **02** 12:42:32.1±1.3,42°83N×71°75E,h17km,mb3.9/2,Error*
ellipse: s-maj=6.4km s-min=5.4km az=154.8
*NNC **02** 12:42:33.0±0.4,42°92N×71°78E,h0km,mb4.3,mpv4.0,*
Error ellipse: s-maj=7.4km s-min=2.0km az=0.0
*KRNET **02** 12:42:33.4±0.1,42°74N×71°71E,h35km,mb4.2*
*SOME **02** 12:42:34.4,42°88N×71°87E,h10km,MS2.7*
ISC 02 12:42:31.8±0.7**,42°81N**±0°03×**71°85E**±0°01**,h7**km±5km**,**
n161,σ**2°29**/231**,mb3.7**/8**,37C-34D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZA	**Taraz**	**0.39**	**282**	ePG	**Pg**	**12 42 40.0**	**+0.7**
DZA				eS	**Sg**	**12 42 45.5**	**+1.1**
DZA	**Taraz**	**0.39**	**282**	eP	**Pg**	**12 42 40.5**	**+1.2**
	799nm,0.1s						
DZA				eS	**Sg**	**12 42 45.4**	**+1.1**
	13µm,0.3s						
DZA	**Taraz**	**0.39**	**282**	eP	**Pg**	**12 42 40.0**	**+0.7**
	baz=258						
DZA				eS	**Sg**	**12 42 45.6**	**+1.1**
	baz=258						
ARK	**Arkit**	**1.02**	**175**	⇓iP	**Pg**	**12 42 51.8**	**+0.5**
	baz=68						
ARK				⇓iS	**Sg**	**12 43 05.1**	**+0.6**
	baz=68						
MRKS	**Merke**	**1.02**	**93**	eP	**Pn**	**12 42 56.4**	**+3.8**
	24nm,0.3s						
MRKS				eS	**Sn**	**12 43 10.4**	**+3.1**
	685nm,0.4s						
MRKS	**Merke**	**1.02**	**93**	P	**Pn**	**12 42 56.4**	**+3.8**
	24nm,0.3s						
MRKS				S	**Sn**	**12 43 10.4**	**+3.1**
	685nm,0.4s						
KK31	**Karatay Array**	**1.02**	**287**	PG	**Pg**	**12 42 51.2**	**-0.2**
KK31				S	**Sg**	**12 43 04.4**	**-0.3**
KK31	**Karatay Array**	**1.02**	**287**	⇑P	**Pg**	**12 42 51.2**	**-0.2**
	50nm,0.3s,baz=108,slow=14,SNR=2802						
KK31				⇓S	**Sg**	**12 43 04.6**	**-0.1**
	210nm,0.2s,baz=112,slow=30,SNR=36						
KKAR	**Karatay Array**	**1.02**	**287**	⇑iP	**Pg**	**12 42 51.2**	**-0.2**
	baz=93						
KKAR				⇑iS	**Sg**	**12 43 04.4**	**-0.3**
	baz=93						
KKAR	**Karatay Array**	**1.02**	**287**	i PG	**Pg**	**12 42 51.2**	**-0.2**
KKAR				i S	**Sg**	**12 43 04.4**	**-0.3**
TRKS	**Terek-Say**	**1.38**	**203**	⇑iP	**Pn**	**12 42 58.1**	**+0.4**
	baz=98						
TRKS				⇑iS	**Sn**	**12 43 13.7**	**-2.7**
	baz=98						
EKS2	**Erkin-Say**	**1.43**	**95**	P	**Pn**	**12 42 59.7**	**+1.3**
	SNR=96						
EKS2	**Erkin-Say**	**1.43**	**95**	⇓iP	**Pn**	**12 42 59.8**	**+1.5**
	baz=92						
EKS2				⇓iS	**Sn**	**12 43 18.9**	**+1.4**
	baz=92						
EKS2	**Erkin-Say**	**1.43**	**95**	i PG	**Pn**	**12 42 59.8**	**+1.5**
EKS2				i S	**Sn**	**12 43 18.9**	**+1.4**
BRLS	**Borolday**	**1.49**	**279**	ePG	**Pn**	**12 43 00.9**	**+1.9**
BRLS				eS	**Sb**	**12 43 21.8**	**+2.7**
BRLS	**Borolday**	**1.49**	**279**	eP	**Pn**	**12 43 01.0**	**+1.9**
	104nm,0.5s						
BRLS				eS	**Sn**	**12 43 19.3**	**+0.4**
	936nm,0.4s						
BRLS	**Borolday**	**1.49**	**279**	eP	**Pn**	**12 43 00.9**	**+1.9**
	baz=264						
BRLS				eS	**Sb**	**12 43 21.8**	**+2.7**
	baz=264						
BRLS	**Borolday**	**1.49**	**279**	P	**Pn**	**12 43 01.1**	**+2.0**
	104nm,0.5s						
BRLS				S	**Sb**	**12 43 21.4**	**+2.4**
	936nm,0.4s						
IUG	**Iuzhnay**	**1.50**	**244**	ePG	**Pn**	**12 42 59.8**	**+0.6**
IUG				eS	**Sn**	**12 43 19.7**	**+0.6**
IUG	**Iuzhnay**	**1.50**	**244**	eP	**Pn**	**12 43 01.0**	**+1.8**
IUG				eS	**Sn**	**12 43 19.6**	**+0.6**
IUG	**Iuzhnay**	**1.50**	**244**	eP	**Pn**	**12 42 59.8**	**+0.6**
	baz=239						
IUG				eS	**Sn**	**12 43 19.8**	**+0.6**
	baz=239						
IUG	**Iuzhnay**	**1.50**	**244**	P	**Pn**	**12 43 01.0**	**+1.8**
	12µm,0.4s						
IUG				S	**Sn**	**12 43 19.6**	**+0.6**
	4µm,0.5s						
AML	**Almayashu**	**1.53**	**116**	P	**Pn**	**12 43 00.7**	**+0.8**
	SNR=146						
AML	**Almayashu**	**1.53**	**116**	i PN	Pg	12 43 10.7	+10
AML				i S	**Sn**	**12 43 20.5**	**+0.3**
CHM	**Chimkent**	**1.73**	**254**	eP	**Pn**	**12 43 05.6**	**+3.3**
	7.1nm,0.6s						
CHM				eS	**Sn**	**12 43 27.3**	**+2.7**
	2µm,0.2s						
AAK	**Ala-Archa**	**1.96**	**94**	P	**Pn**	**12 43 08.9**	**+3.2**
	SNR=65						
AAK	**Ala-Archa**	**1.96**	**94**	Pn	**Pn**	**12 43 08.9**	**+3.2**
	65nm,0.3s,baz=256,slow=5.9,SNR=88						
AAK				Sn	**Sb**	**12 43 35.4**	**+2.8**
	64nm,0.3s,baz=15,slow=23,SNR=26						
	151nm,0.3s						
AAK	**Ala-Archa**	**1.96**	**94**	⇓iP	**Pn**	**12 43 07.2**	**+1.6**
	baz=92						
AAK				⇓iS	**Sn**	**12 43 31.8**	**+1.2**
	baz=92						
USP	**Ospenovka**	**2.00**	**76**	P	**Pn**	**12 43 08.0**	**+1.9**
	SNR=96						
USP	**Ospenovka**	**2.00**	**76**	⇑iP	**Pn**	**12 43 08.0**	**+1.9**
	baz=75						
USP				⇑iS	**Sn**	**12 43 33.3**	**+1.9**
	baz=75						
USP	**Ospenovka**	**2.00**	**76**	i PN	**Pn**	**12 43 08.0**	**+1.9**
USP				i S	**Sn**	**12 43 33.3**	**+1.9**
UCH	**Uchtor**	**2.06**	**106**	P	**Pn**	**12 43 10.5**	**+3.3**
	SNR=117						
UCH	**Uchtor**	**2.06**	**106**	⇑iP	**Pn**	**12 43 08.3**	**+1.1**
	baz=3.0						
UCH				⇑iS	**Sn**	**12 43 33.8**	**+0.4**
	baz=3.0						
UCH	**Uchtor**	**2.06**	**106**	i PN	**Pn**	**12 43 08.3**	**+1.1**
UCH				i S	**Sn**	**12 43 33.8**	**+0.4**
ARLS	**Aral**	**2.07**	**117**	⇓iP	**Pn**	**12 43 08.1**	**+1.0**
	baz=14						
ARLS				⇓iS	**Sn**	**12 43 33.2**	**-0.1**
	baz=14						
ARLS	**Aral**	**2.07**	**117**	i PN	**Pn**	**12 43 08.1**	**+1.0**
ARLS				i S	**Sn**	**12 43 33.2**	**-0.1**
SGDS	**Sogindy**	**2.14**	**72**	ePN	**Pn**	**12 43 10.1**	**+2.1**
SGDS	**Sogindy**	**2.14**	**72**	eP	**Pb**	**12 43 11.9**	**+1.1**
	26nm,0.3s						
SGDS				eS	**Sb**	**12 43 37.9**	**+0.3**
	610nm,0.2s						
SGDS	**Sogindy**	**2.14**	**72**	ePg	**Pn**	**12 43 10.2**	**+2.1**
	baz=76						
SGDS				eLg	Lg	12 43 40.4	
	baz=76						
SGDS	**Sogindy**	**2.14**	**72**	Pg	**Pb**	**12 43 11.3**	**+0.4**
	26nm,0.3s						
SGDS				Lg	Lg	12 43 38.1	
	610nm,0.2s						
CHMS	**Chumysh**	**2.14**	**84**	P	**Pn**	**12 43 10.5**	**+2.5**
	SNR=51						
CHMS	**Chumysh**	**2.14**	**84**	⇓iP	**Pn**	**12 43 10.0**	**+2.0**
	baz=82						
CHMS				⇓iS	**Sn**	**12 43 36.4**	**+1.5**
	baz=82						
CHMS	**Chumysh**	**2.14**	**84**	i PN	**Pn**	**12 43 10.1**	**+2.0**
CHMS				pmax	pmax		
	comp=Z,48nm,0.3s						
CHMS	**Chumysh**	**2.14**	**84**	⇑Pn	**Pn**	**12 43 10.3**	**+2.3**
	comp=Z,48nm,0.3s						
CHMS				⇓Lg	Lg	12 43 40.5	
	comp=Z,133nm,0.3s						
KBK	**Karagaybulak**	**2.29**	**93**	P	**Pn**	**12 43 13.0**	**+2.8**
	SNR=56						
KBK	**Karagaybulak**	**2.29**	**93**	⇓iP	**Pn**	**12 43 11.8**	**+1.6**
	baz=91						
KBK				⇓iS	**Sn**	**12 43 39.9**	**+1.1**
	baz=91						
KBK	**Karagaybulak**	**2.29**	**93**	i PN	**Pn**	**12 43 11.8**	**+1.6**
KBK				i S	**Sn**	**12 43 39.9**	**+1.1**
OHH	**Osh**	**2.39**	**163**	⇑iP	**Pn**	**12 43 11.0**	**-0.5**
	baz=60						
OHH				⇑iS	**Sn**	**12 43 38.6**	**-2.5**
	baz=60						
OHH	**Osh**	**2.39**	**163**	i PN	**Pn**	**12 43 11.0**	**-0.5**
TAS	**Tashkent**	**2.41**	**233**	⇓iP	**Pn**	**12 43 10.6**	**-1.1**
	baz=33						
TAS				⇓iS	**Sn**	**12 43 37.7**	**-3.8**
	baz=33						
TAS	**Tashkent**	**2.41**	**233**	i PN	**Pn**	**12 43 10.6**	**-1.1**
TAS				i S	**Sn**	**12 43 37.7**	**-3.8**
BTLS	**Baital**	**2.74**	**35**	ePN	**Pn**	**12 43 18.8**	**+2.6**
BTLS	**Baital**	**2.74**	**35**	eP	**Pb**	**12 43 23.6**	**+2.5**
	comp=Z,50nm,0.3s						
BTLS				eS	**Sg**	**12 43 59.1**	**-0.6**
	comp=Z,171nm,0.3s						
BTLS	**Baital**	**2.74**	**35**	ePg	**Pn**	**12 43 18.9**	**+2.6**
	baz=37						
BTLS				eLg	Lg	12 43 53.5	
	baz=37						
BTLS	**Baital**	**2.74**	**35**	Pg	**Pb**	**12 43 23.6**	**+2.5**
	comp=Z,50nm,0.3s						
BTLS				Lg	Lg	12 43 59.1	
	comp=Z,171nm,0.3s						
TKM2	**Tokmak 2**	**2.76**	**86**	P	**Pn**	**12 43 19.1**	**+2.4**
	SNR=18						
TKM2	**Tokmak 2**	**2.76**	**86**	⇑iP	**Pn**	**12 43 18.7**	**+2.1**
	baz=85						
TKM2				⇑iS	**Sn**	**12 43 51.6**	**+1.2**
	baz=85						
TKM2	**Tokmak 2**	**2.76**	**86**	PN	**Pn**	**12 43 18.8**	**+2.1**
TKM2						12 43 59.2	
TKM2	**Tokmak 2**	**2.76**	**86**	⇓Pn	**Pn**	**12 43 18.8**	**+2.2**
	comp=Z,3.9nm,0.3s						
TKM2				⇓Lg	Lg	12 43 59.3	
	comp=Z,226nm,0.6s						
BTK	**Batken**	**2.86**	**196**	⇓iP	**Pn**	**12 43 16.8**	**-1.1**
	baz=94						
BTK				⇓iS	**Sn**	**12 43 48.9**	**-3.7**
	baz=94						
BTK	**Batken**	**2.86**	**196**	i PN	**Pn**	**12 43 16.8**	**-1.1**
KRBS	**Karabastau**	**2.93**	**71**	eP	**Pb**	**12 43 27.0**	**+2.5**
	comp=Z,16nm,0.3s						
KRBS				eS	**Sb**	**12 44 04.0**	**+3.4**
	comp=Z,231nm,0.5s						
KST	**Kastek**	**3.03**	**84**	eP	**Pb**	**12 43 29.1**	**+2.9**
	comp=Z,29nm,0.4s						
KST				eS	**Sb**	**12 44 07.8**	**+4.4**
	comp=Z,348nm,0.3s						
KST	**Kastek**	**3.03**	**84**	Pg	**Pb**	**12 43 29.1**	**+2.9**
	comp=Z,29nm,0.4s						
KST				Lg	Lg	12 44 07.9	
	comp=Z,348nm,0.3s						
BOOM	**Boomskoye usch**	**3.04**	**95**	⇓iP	**Pn**	**12 43 22.1**	**+1.6**
	baz=93						
BOOM				⇓iS	**Sn**	**12 43 57.7**	**+0.5**
	baz=93						
BOOM	**Boomskoye usch**	**3.04**	**95**	i PN	**Pn**	**12 43 22.1**	**+1.6**
BOOM				i S	**Sn**	**12 43 57.7**	**+0.5**
ULHL	**Ulahol**	**3.30**	**98**	P	**Pn**	**12 43 28.5**	**+4.4**
	SNR=12						
ULHL	**Ulahol**	**3.30**	**98**	⇓iP	**Pn**	**12 43 25.6**	**+1.5**
	baz=97						
ULHL				⇓iS	**Sn**	**12 44 03.7**	**0.0**
	baz=97						
ULHL	**Ulahol**	**3.30**	**98**	i PN	**Pn**	**12 43 25.6**	**+1.5**
ULHL				i S	**Sn**	**12 44 03.7**	**0.0**
DRK	**Karamyk**	**3.33**	**181**	⇑iP	**Pn**	**12 43 24.3**	**-0.3**
	baz=79						
DRK				⇑iS	**Sn**	**12 44 00.9**	**-3.6**
	baz=79						
MTBS	**Maitube**	**3.38**	**83**	eP	**Pg**	**12 43 36.5**	**0.0**
	comp=Z,19nm,0.3s						
MTBS				eS	**Sg**	**12 44 19.6**	**-0.6**
	comp=Z,106nm,0.3s						
MTBS	**Maitube**	**3.38**	**83**	Pg	**Pg**	**12 43 36.5**	**0.0**
	comp=Z,19nm,0.3s						
MTBS				Lg	Lg	12 44 19.6	
	comp=Z,106nm,0.3s						
KUU	**Kurty**	**3.45**	**70**	ePN	**Pn**	**12 43 28.8**	**+2.8**
KUU				e		12 43 34.9	
KUU	**Kurty**	**3.45**	**70**	eP	**Pb**	**12 43 36.9**	**+3.6**
	comp=Z,14nm,0.3s						
KUU				eS	**Sg**	**12 44 21.7**	**-0.9**
	comp=Z,113nm,0.3s						
KUU	**Kurty**	**3.45**	**70**	ePn	**Pn**	**12 43 28.8**	**+2.8**
	baz=73						
KUU				ePg	**Pb**	**12 43 34.9**	**+1.7**
	baz=73						
KUU				eLg	Lg	12 44 21.0	
	baz=73						
KUU	**Kurty**	**3.45**	**70**	Pg	**Pb**	**12 43 36.9**	**+3.6**
	comp=Z,14nm,0.3s						
KUU				Lg	Lg	12 44 21.7	
	comp=Z,113nm,0.3s						
KTBS	**Karatobe**	**3.65**	**74**	eP	**Pb**	**12 43 40.3**	**+3.8**
	comp=Z,9.0nm,0.2s						
KTBS				eS	**Sg**	**12 44 27.2**	**-1.6**
	comp=Z,244nm,0.4s						
KTBS	**Karatobe**	**3.65**	**74**	Pg	**Pb**	**12 43 40.3**	**+3.8**
	comp=Z,9.0nm,0.2s						
KTBS				Lg	Lg	12 44 27.2	
	comp=Z,244nm,0.4s						
AAA	**Alma-Ata**	**3.74**	**82**	ePN	**Pn**	**12 43 30.4**	**+0.4**
AAA				e		12 43 39.7	
AAA	**Alma-Ata**	**3.74**	**82**	eP	**Pb**	**12 43 42.6**	**+4.4**
	comp=Z,33nm,0.1s						
AAA				eS	**Sg**	**12 44 30.7**	**-1.2**
	comp=Z,156nm,0.3s						
AAA	**Alma-Ata**	**3.74**	**82**	ePn	**Pn**	**12 43 30.5**	**+0.4**
	baz=84						
AAA				ePg	**Pb**	**12 43 39.7**	**+1.5**
	baz=84						
AAA				eLg	Lg	12 44 30.5	
	baz=84						
TNSS	**Tian-Shan**	**3.75**	**85**	ePN	**Pn**	**12 43 33.5**	**+3.0**
TNSS				e		12 43 40.1	
TNSS	**Tian-Shan**	**3.75**	**85**	eP	**Pb**	**12 43 42.6**	**+4.0**
	comp=Z,35nm,0.4s						
TNSS				eS	**Sg**	**12 44 31.1**	**-1.2**
	comp=Z,108nm,0.4s						
TNSS	**Tian-Shan**	**3.75**	**85**	ePn	**Pn**	**12 43 33.5**	**+3.0**
	baz=87						
TNSS				ePg	**Pb**	**12 43 40.2**	**+1.6**
	baz=87						
TNSS				eLg	Lg	12 44 31.0	
	baz=87						
TNSS	**Tian-Shan**	**3.75**	**85**	Pg	**Pb**	**12 43 42.6**	**+4.0**
	comp=Z,35nm,0.4s						
TNSS				Lg	Lg	12 44 31.1	
	comp=Z,108nm,0.4s						
KNDC	**Almaty**	**3.78**	**82**	PN	**Pb**	**12 43 41.1**	**+2.3**
KNDC						12 44 32.3	
KNDC	**Almaty**	**3.78**	**82**	⇑Pg	**Pg**	**12 43 44.8**	**+0.7**
	comp=Z,58nm,0.6s						

KNDC ⇑Lg Lg 12 44 32.3
comp=Z,261nm,0.5s
MDOK Medeo 3.83 83 *e*PN **Pn 12 43 33.5 +2.1**
MDOK e 12 43 42.7
MDOK Medeo 3.83 83 *e*P **Pb 12 43 43.4 +3.5**
comp=Z,10nm,0.3s
MDOK *e*S **Sg 12 44 32.4 -2.4**
comp=Z,87nm,0.5s
MDOK Medeo 3.83 83 *e*Pn **Pn 12 43 33.6 +2.1**
baz=85
MDOK *e*Pg **Pb 12 43 42.8 +2.9**
baz=85
MDOK *e*Lg Lg 12 44 33.3
baz=85
MDOK Medeo 3.83 83 ⇑Pg **Pb 12 43 43.4 +3.5**
comp=Z,20nm,0.6s
MDOK Pg **Pb 12 43 43.4 +3.5**
comp=Z,10nm,0.3s
MDOK Lg Lg 12 44 32.4
comp=Z,87nm,0.5s
MDOK ⇓Lg Lg 12 44 33.3
comp=Z,94nm,0.5s
CHKK Chushkaly 3.89 73 *e*PN **Pb 12 43 43.4 +2.6**
CHKK Chushkaly 3.89 73 *e*P **Pg 12 43 46.6 +0.2**
comp=Z,13nm,0.4s
CHKK *e*S **Sg 12 44 37.1 +0.3**
comp=Z,157nm,0.3s
CHKK Chushkaly 3.89 73 *e*Pg **Pb 12 43 43.5 +2.6**
baz=75
CHKK *e*Lg Lg 12 44 35.8
baz=75
CHKK Chushkaly 3.89 73 Pg **Pg 12 43 46.6 +0.2**
comp=Z,13nm,0.4s
CHKK Lg Lg 12 44 37.1
comp=Z,157nm,0.3s
GAR Garm 3.98 197 ⇑*i*P **Pn 12 43 32.3 -1.1**
baz=96
GAR ⇑*i*S **Sn 12 44 15.4 -5.0**
baz=96
GAR Garm 3.98 197 *i* PN **Pn 12 43 32.3 -1.1**
KDJ Kajisay 4.00 98 ⇑*i*P **Pn 12 43 35.6 +1.8**
baz=97
KDJ ⇑*i*S **Sn 12 44 20.9 -0.2**
baz=97
KDJ Kajisay 4.00 98 *i* PN **Pn 12 43 35.6 +1.8**
KDJ *i* S **Sn 12 44 20.9 -0.2**
ANVS Anan'yevo 4.28 88 ⇑*i*P **Pn 12 43 39.1 +1.5**
baz=87
ANVS ⇑*i*S **Sn 12 44 27.6 -0.4**
baz=87
KSH Kashi 4.53 135 Pn **Pb 12 43 50.0 -1.7**
KSH Sn **Sb 12 44 54.0 +7.4**
KSH smax smax
comp=N,40nm,1.0s
KSH smax smax
comp=E,31nm,1.0s
CHGR Chuyangaron 4.62 207 ⇑*i*P **Pn 12 43 41.2 -1.0**
baz=6.0
CHGR ⇑*i*S Sn 12 44 30.6 -5.6
baz=6.0
CHGR Chuyangaron 4.62 207 *i* PN **Pn 12 43 41.2 -1.0**
KURS Kuram 4.68 80 *e*P **Pg 12 43 59.9 -1.4**
comp=E,8.1nm,0.6s
KURS *e*S **Sg 12 45 00.6 -1.3**
comp=E,52nm,0.7s
KURS Kuram 4.68 80 Pg **Pg 12 43 59.9 -1.4**
comp=E,8.1nm,0.6s
KURS Lg Lg 12 45 00.6
comp=E,52nm,0.7s
SATY Saty 4.82 85 *e*P Pb 12 44 01.7 +5.0
comp=E,6.9nm,0.3s
SATY *e*S **Sg 12 45 04.5 -2.2**
comp=E,38nm,0.3s
SATY Saty 4.82 85 *e*Pg **Pb 12 44 00.5 +3.8**
baz=87
SATY *e*Lg Lg 12 45 05.6
baz=87
SATY Saty 4.82 85 Pg Pb 12 44 01.7 +5.0
comp=E,6.9nm,0.3s
SATY Lg Lg 12 45 04.5
comp=E,38nm,0.3s
PRZ Przheval'sk 4.84 92 ⇑*i*P **Pn 12 43 47.0 +1.7**
baz=91
PRZ ⇑*i*S **Sn 12 44 40.9 -0.9**
baz=91
PRZ Przheval'sk 4.84 92 *i* PN **Pn 12 43 47.0 +1.7**
KPKS Kokpek 5.05 80 *e*P Pb 12 44 05.8 +5.3
comp=E,9.3nm,0.7s
KPKS *e*S **Sg 12 45 10.4 -3.4**
comp=E,108nm,0.3s
KPKS Kokpek 5.05 80 *e*Pg **Pb 12 44 05.2 +4.7**
baz=82
KPKS *e*Lg Lg 12 45 11.7
baz=82
KPKS Kokpek 5.05 80 Pg Pb 12 44 05.8 +5.3
comp=E,7.5nm,0.4s
KPKS Lg Lg 12 45 11.8
comp=E,108nm,0.3s
TDK Taldyqorghan 5.22 63 *e*PN **Pn 12 43 50.6 +0.3**
TDK Taldyqorghan 5.22 63 *e*P **Pg 12 44 10.3 -1.4**
comp=E,63nm,0.6s
TDK *e*S **Sg 12 45 18.0 -1.4**
comp=E,248nm,0.5s
TDK Taldyqorghan 5.22 63 *e*Pn **Pn 12 43 50.7 +0.3**
baz=65
TDK *e*Lg Lg 12 45 16.4
baz=65
TDK Taldyqorghan 5.22 63 Pg **Pg 12 44 10.3 -1.4**
comp=E,63nm,0.6s
TDK Lg Lg 12 45 18.0
comp=E,248nm,0.5s
UZB Uzynbulak 5.28 84 *e*P **Pg 12 44 11.0 -1.8**
comp=E,5.4nm,0.4s
UZB *e*S **Sg 12 45 19.7 -1.5**
comp=E,46nm,0.6s
UZB Uzynbulak 5.28 84 *e*Pg Pb 12 44 09.4 +5.0
baz=86
UZB *e*Lg Lg 12 45 18.6
baz=86
UZB Uzynbulak 5.28 84 Pg **Pg 12 44 11.0 -1.8**
comp=E,5.4nm,0.4s
UZB Lg Lg 12 45 19.7
comp=E,46nm,0.6s
OTUK Ortayu 5.45 3 PN **Pn 12 43 54.5 +1.1**
OTUK Ortayu 5.45 3 ⇑Pn **Pn 12 43 54.6 +1.1**
comp=E,8.0nm,0.4s
OTUK ⇓Lg Lg 12 45 25.4
comp=E,111nm,0.7s
SHLS Shalkode 5.60 84 *e*P **Pg 12 44 22.5 +3.5**
comp=E,4.4nm,0.1s
SHLS *e*S **Sg 12 45 39.2 +7.7**
comp=E,30nm,0.7s
SHLS Shalkode 5.60 84 *e*Pg **Pg 12 44 20.9 +1.9**
baz=85
SHLS *e*Lg Lg 12 45 38.7
baz=85
PDGK Podgornoye 5.62 82 Pg Pb 12 44 16.6 +6.2
comp=E,2.7nm,0.4s
PDGK Lg Lg 12 45 28.4
comp=E,20nm,0.7s
PDGK Podgornoye 5.62 82 ⇑Pg Pb 12 44 15.7 +5.4
comp=E,6.5nm,0.7s
PDGK ⇑Lg Lg 12 45 29.1
comp=E,48nm,0.6s
KAPS Kapalarasan 5.95 63 *e*P Pb 12 44 21.5 +5.7
comp=E,5.4nm,0.3s
KAPS *e*S **Sg 12 45 37.4 -5.4**
comp=E,86nm,0.7s
DJR Jarkent 5.97 73 *e*P **Pg 12 44 24.2 -1.9**
comp=E,4.7nm,0.3s
DJR *e*S **Sg 12 45 43.3 -0.1**
comp=E,28nm,0.5s
DJR Jarkent 5.97 73 Pg **Pg 12 44 24.2 -1.9**
comp=E,4.7nm,0.3s
DJR Lg Lg 12 45 43.3
comp=E,28nm,0.5s
BRZS Berezniki 7.20 4 *e*PN **Pn 12 44 18.3 +0.9**
BRZS Berezniki 7.20 4 *e*P **Pn 12 44 18.3 +0.9**
baz=4.5
BRZS *e*S **Sn 12 45 37.8 -1.6**
baz=4.5
MK31 Makanchi Array 8.43 58 *de*P **Pn 12 44 35.8 +1.5**
MK31 Makanchi Array 8.43 58 Pn **Pn 12 44 35.6 +1.3**
comp=E,2.4nm,0.5s,baz=242,slow=16,SNR=64
MK31 Sn **Sn 12 46 11.2 +1.6**
comp=E,1.3nm,0.3s,baz=238,slow=25,SNR=4.1
MK31 ⇓Lg Lg 12 46 57.5
comp=E,12nm,0.6s,baz=240,slow=32,SNR=3.9

MKAR Makanchi Array 8.43 58 Pn **Pn 12 44 35.9 +1.6**
comp=E,0.9nm,0.3s,baz=243,slow=13,SNR=31
MKAR Sn **Sn 12 46 09.1 -0.5**
comp=E,1.3nm,0.3s,baz=237,slow=27,SNR=5.2
MKAR Lg Lg 12 47 01.1
comp=E,2.2nm,0.3s,baz=253,slow=29,SNR=5.9
comp=E,3.0nm,0.4s
KURBB Kurchatov Arra 9.06 28 Pn **Pn 12 44 41.9 -1.0**
comp=E,0.4nm,0.3s,baz=221,slow=13,SNR=3.8
KURBB Sn **Sn 12 46 22.4 -2.7**
comp=E,0.5nm,0.3s,baz=216,slow=19,SNR=7.6
KURBB Lg Lg 12 47 20.9
comp=E,0.4nm,0.3s,baz=215,slow=32,SNR=8.5
comp=E,2.2nm,0.2s
KURBB Kurchatov Arra 9.06 28 P **Pn 12 44 41.5 -1.4**
KURBB 12 46 20.9
KURB Kurchatov Arra 9.06 28 ⇓Pn **Pn 12 44 41.6 -1.4**
comp=E,0.8nm,0.3s
KURBB ⇓Sn **Sn 12 46 21.0 -4.1**
comp=E,19nm,0.7s
KURBB ⇑Lg Lg 12 47 16.5
comp=E,47nm,0.6s
KURK Kurchatov 9.17 28 P **Pn 12 44 41.9 -2.5**
KURK 12 46 22.4
KURK Kurchatov 9.17 28 ⇓Pn **Pn 12 44 47.5 +3.1**
comp=E,1.2nm,0.3s
KURK ⇓Sn **Sn 12 46 28.2 +0.4**
comp=E,5.7nm,0.6s
KURK ⇑Lg Lg 12 47 23.4
comp=E,18nm,0.6s
SEM Semipalatinsk 9.54 34 *e*P **Pn 12 44 49.4 -0.4**
SEM Semipalatinsk 9.54 34 *e*P **Pn 12 44 49.4 -0.4**
baz=35
BRVK Borovoye 10.31 355 ⇓*e*P **Pn 12 45 01.7 +1.7**
AB31 Akbulak array 10.48 312 P **Pn 12 45 00.4 -2.0**
comp=E,2.3nm,0.5s,baz=113,slow=13,SNR=62
AKTO Aktyubinsk 12.17 314 Pn **Pn 12 45 24.0 -1.6**
comp=E,0.2nm,0.3s,baz=119,slow=16,SNR=2.1
AKTO Sn **Sn 12 47 34.2 -7.3**
comp=E,0.1nm,0.3s,baz=334,slow=23,SNR=1.8
AKTO Lg Lg 12 49 00.5
comp=E,0.1nm,0.3s,baz=57,slow=20,SNR=1.4
comp=E,0.9nm,0.4s
AKTO Aktyubinsk 12.17 314 ⇑P **Pn 12 45 28.8 +3.3**
comp=E,4.7nm,1.0s
ZALV Zalesovo Beam 14.06 33 Pn **Pn 12 45 49.8 -1.5**
comp=E,0.6nm,0.3s,baz=218,slow=12,SNR=7.0
ZALV Sn **Sn 12 48 21.3 -6.2**
comp=E,0.8nm,0.3s,baz=227,slow=24,SNR=5.5
comp=E,1.4nm,0.3s
ZALV Zalesovo Beam 14.06 33 *i* P **Pn 12 45 50.5 -0.8**
ZALV pmax pmax
comp=Z,1.0nm,0.3s
ARU Arti 16.08 333 Pn **Pn 12 46 13.9 -4.2**
baz=131,slow=12,SNR=1.6
comp=Z,1.8nm,0.4s
ARU Arti 16.08 333 *c i*P **P 12 46 22.0 +0.4**
ARU pmax pmax
comp=Z,3.0nm,0.7s
KBZ Khabaz 21.06 282 P **P 12 47 16.6 +0.2**
comp=Z,0.6nm,0.4s,baz=67,slow=7.7,SNR=2.3
comp=Z,0.6nm,0.4s
KBZ Khabaz 21.06 282 ⇑*e*P **P 12 47 18.1 +1.8**
KBZ pmax pmax
comp=Z,2.0nm,1.0s
KIV Kislovodsk 21.18 283 *e*P P 12 47 32.0 +14
KIV pmax pmax
comp=Z,5.0nm,1.1s
PZH PanZhiHua 29.28 114 P **P 12 48 38.9 +4.0**
PZH pmax pmax
comp=Z,10.0nm,1.2s
PZH pmax pmax
comp=Z,90nm,9.0s
NACGM Naroch 31.46 308 ⇓*e*P **P 12 48 54.7 +1.0**
baz=93
ARCES ARCESS Array B 35.66 334 P **P 12 49 30.1 0.0**
comp=Z,1.8nm,0.8s,baz=110,slow=7.8,SNR=5.1
comp=Z,1.8nm,0.8s
KEST Kesra 47.92 284 LR LR 13 17 20.1
comp=Z,24nm,18.2s,baz=261,slow=44
SHEM Shemya Is, Ala 63.73 42 LR LR 13 22 26.9
comp=Z,35nm,18.1s,baz=292,slow=38
TORD Torodi Ar. Bea 66.64 266 P **P 12 53 20.9 -2.5**
comp=Z,2.2nm,0.5s,baz=44,slow=5.6,SNR=2.6
comp=Z,0.2nm,0.5s
ILAR Eielson Array 68.55 17 P **P 12 53 32.9 -1.7**
comp=Z,0.2nm,0.6s,baz=317,slow=5.2,SNR=2.2
comp=Z,0.2nm,0.6s
YKA Yellowknife Ar 74.92 3 P **P 12 54 12.3 -0.6**
comp=Z,0.2nm,0.5s,baz=356,slow=5.8,SNR=2.4
comp=Z,0.2nm,0.5s
DBIC Dimbokro 75.74 266 P **P 12 54 19.6 +1.1**
comp=Z,1.8nm,0.7s,baz=49,slow=9.3,SNR=4.0
comp=Z,1.8nm,0.7s

IDC 02 12:48:45.5±2.8, 19°53S×69°99W, h0km, mb3.8/2, mbtmp3.9/3, ML4.2/1, Error ellipse: s-maj=67.6km s-min=64.6km az=124.0, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**3.68**	**29**	Pn	Pn	12 49 44.2	0.0
	13nm,0.3s,baz=219,slow=6.5,SNR=204						
	49nm,0.3s						
TORD	**Torodi Ar. Bea**	**77.67**	**71**	P	P	13 00 44.6	0.0
	0.8nm,0.4s,baz=257,slow=5.9,SNR=8.1						
	0.2nm,0.4s						
YKA	**Yellowknife Ar**	**89.00**	**341**	P	P	13 01 41.8	0.0
	0.1nm,0.5s,baz=144,slow=4.4,SNR=2.0						
	0.1nm,0.5s						

IDC 02 13:18:45.5±6.0, 31°53S×177°04W, h0km, mb3.1/2, mbtmp3.1/2, Error ellipse: s-maj=253.3km s-min=59.9km az=157.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**43.88**	**268**	P	P	13 26 53.7	-0.2
	0.2nm,0.6s,baz=111,slow=9.1,SNR=1.9						
	0.2nm,0.6s						
WRA	**Warramunga Arr**	**44.97**	**273**	P	P	13 27 02.7	0.0
	0.3nm,0.8s,baz=115,slow=8.2,SNR=5.4						
	0.3nm,0.8s						
FINES	**FINESS Array B**	**146.49**	**340**	PKPbc	PKPdf	13 38 27.1	+0.5
	0.5nm,0.4s,baz=42,slow=4.1,SNR=6.0						

IDC 02 13:23:11.0±2.6, 22°77N×11°68W, h0km, mb3.6/1, mbtmp3.7/3, ML3.6/2, Error ellipse: s-maj=79.8km s-min=35.1km az=76.0, Mauritania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TORD	**Torodi Ar. Bea**	**15.91**	**125**	Pn	Pn	13 26 57.5	+1.1
	0.1nm,0.3s,baz=314,slow=13,SNR=4.4						
TORD				Sn	Sn	13 29 53.0	-0.5
	0.1nm,0.3s,baz=309,slow=22,SNR=2.4						
TORD				Lg	Lg	13 31 42.7	
	baz=300,slow=28						
	0.5nm,0.6s						
DBIC	**Dimbokro**	**17.30**	**157**	P	Pn	13 27 14.0	-0.2
	0.6nm,0.3s,baz=345,slow=12,SNR=6.3						
	2.0nm,0.5s						
I42PT	**GRACIOSA ISLAN**	**21.38**	**323**	*i*		15 35 00.0	
	baz=138,slow=319,SNR=5.1						
GERES	**GERESS Array B**	**32.88**	**31**	P	P	13 29 46.8	0.0
	0.3nm,0.4s,baz=231,slow=7.5,SNR=3.8						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	**148.26**	**91**	PKPbc	PKPbc	13 42 59.2	-0.7
	0.3nm,0.7s,baz=290,slow=2.4,SNR=1.3						
ASAR	**Alice Springs**	**148.40**	**98**	PKPbc	PKPbc	13 42 59.5	-0.7
	0.2nm,0.6s,baz=290,slow=1.9,SNR=7.6						

MAN 02 13:32:53.1, 6°68N×127°04E, h19km, mb4.7, ML3.6, MS3.6, Philippine Islands region

*IDC **02** 13:34:55.0±0.8, 35°.32N×140°.32E, h0km, mb3.9/8, mbtmp3.9/13, ML3.4/4, MS3.4/6, Error ellipse: s-maj=24.4km s-min=14.9km az=79.0*
*JMA **02** 13:34:59.1±0.1, 35°.4N±0°.3×140°.3E±0°.6, h30km±1km, MV3.5/34, KUJUKURI COAST BOSO PEN*
JMA Felt III J1 at KUJUKURI COAST BOSO PEN .
*NIED **02** 13:34:59.1, 35°.43N×140°.31E, h30km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.57; $M_{\theta\theta}$-0.60; $M_{\phi\phi}$0.04; $M_{r\theta}$0.76; $M_{r\phi}$-0.41; $M_{\theta\phi}$0.49; Fault plane solution: $M_0$1.14000×10^{15} NP1: ϕ_s255.00000°, δ19.00000°, λ107.00000°. NP2: ϕ_s58.00000°, δ72.00000°, λ84.00000°.*

ISC 02 13:34:59.2±0.8, 35°.38N±0°.04×140°.35E±0°.08, h31km±5km, n32, σ09°94/27, mb3.9/8, MS3.7/3, 6D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCN	**Nagara**	**0.13**	**289**	P	**Pb**	**13 35 04.6**	**-0.3**
JCN				S	**Sb**	**13 35 09.1**	**+0.3**
KTR	**Katsuura**	**0.23**	**186**	*i* P	**Pb**	**13 35 05.9**	**0.0**
KTR				S	**Sb**	**13 35 11.0**	**+0.6**
JKUC	**kamogawauchiur**	**0.25**	**209**	*i* P	**Pb**	**13 35 06.0**	**-0.1**
JKUC				*e*S	**Sb**	**13 35 11.2**	**+0.4**
JSMT	**Sammumatsuo**	**0.28**	**17**	⇓*i*P	**Pb**	**13 35 06.1**	**-0.4**
JSMT				⇓*e*S	**Sn**	**13 35 11.6**	**-0.7**
BSO4	**Boso 4**	**0.39**	**181**	P	**Pn**	**13 35 08.8**	**+0.3**
BSO3	**Boso 3**	**0.59**	**167**	⇓*i*P	**Pn**	**13 35 11.6**	**+0.4**
JYT	**Yasato**	**0.86**	**352**	⇓P	**Pn**	**13 35 13.8**	**-1.3**
JYT				⇓S	**Sb**	**13 35 25.5**	**-1.3**
BSO1	**Boso 1**	**0.89**	**144**	⇓P	**Pn**	**13 35 15.0**	**-0.1**
MJAR	**Matsushiro Arr**	**2.09**	**304**	Pn	**Pn**	**13 35 32.1**	**0.0**
	2.0nm,0.3s,baz=129,slow=13,SNR=78						
	33nm,0.6s						
JHJ	**Hachijo jima 2**	**2.30**	**192**	Pn	**Pn**	**13 35 34.6**	**-0.4**
	190nm,0.3s,baz=67,slow=21,SNR=64						
JHJ				Sn	**Sn**	**13 35 59.6**	**-2.6**
	139nm,0.3s,baz=101,slow=22,SNR=10						
	319nm,0.3s						
JCJ	**Chichijima**	**8.40**	**169**	Pn	**Pn**	**13 36 57.6**	**-1.3**
	77nm,0.4s,baz=256,slow=19,SNR=2.4						
ASAJ	**Asahikawa**	**8.90**	**11**	Pn	**Pn**	**13 37 04.8**	**-0.7**
	0.5nm,0.3s,baz=230,slow=11,SNR=6.9						
	14nm,0.9s						
KSRS	**Korea Array**	**10.23**	**285**	Pn	**Pn**	**13 37 24.3**	**+0.5**
	0.1nm,0.3s,baz=99,slow=14,SNR=1.8						
KSRS				LR	LR	13 41 14.1	
	comp=Z,138nm,19.2s,baz=95,slow=37						
	0.4nm,0.5s						
USRK	**Ussuriysk Ar.**	**10.90**	**326**	LR	LR	13 41 07.3	
	comp=Z,134nm,21.9s,baz=158,slow=34						
KLR	**Kul'dur**	**15.22**	**338**	LR	LR	13 44 02.1	
	comp=Z,84nm,19.3s,baz=193,slow=36						
SONM	**Songino Array**	**28.04**	**307**	P	**P**	**13 40 47.0**	**-0.6**
	0.7nm,0.6s,baz=113,slow=8.7,SNR=5.3						
	0.7nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**28.11**	**117**	T	T	14 10 04.8	
	baz=309,slow=75,SNR=140						
H11N1	**WAKE ISLAND Hy**	**28.12**	**117**	T	T	14 10 01.6	
	baz=309,slow=75,SNR=122						
H11N3	**WAKE ISLAND Hy**	**28.13**	**117**	T	T	14 10 16.2	
	baz=309,slow=75,SNR=115						
H11S1	**WAKE ISLAND Hy**	**28.75**	**119**	T	T	14 11 00.4	
	baz=311,slow=75,SNR=64						
H11S3	**WAKE ISLAND Hy**	**28.75**	**119**	T	T	14 10 54.1	
	baz=311,slow=75,SNR=47						
H11S2	**WAKE ISLAND Hy**	**28.77**	**119**	T	T	14 11 01.6	
	baz=311,slow=75,SNR=35						
ZALV	**Zalesovo Beam**	**42.41**	**314**	P	**P**	**13 42 51.4**	**+0.7**
	3.0nm,0.6s,baz=91,slow=6.1,SNR=11						
	3.0nm,0.6s						
MKAR	**Makanchi Array**	**44.29**	**303**	P	**P**	**13 43 06.6**	**+0.6**
	1.8nm,0.6s,baz=89,slow=9.7,SNR=25						
	1.8nm,0.6s						
ILAR	**Eielson Array**	**51.35**	**32**	P	**P**	**13 44 02.0**	**+1.7**
	0.8nm,0.8s,baz=269,slow=5.9,SNR=8.9						
	0.8nm,0.8s						
WRA	**Warramunga Arr**	**55.31**	**187**	P	**P**	**13 44 29.5**	**-0.4**
	0.7nm,0.4s,baz=2.0,slow=7.6,SNR=24						
	0.7nm,0.4s						
ASAR	**Alice Springs**	**59.04**	**187**	P	**P**	**13 44 56.0**	**-0.3**
	0.2nm,0.4s,baz=1.8,slow=6.5,SNR=14						
	0.2nm,0.4s						
YKA	**Yellowknife Ar**	**65.67**	**29**	P	**P**	**13 45 41.3**	**+1.1**
	0.5nm,0.8s,baz=302,slow=6.7,SNR=3.7						
	0.5nm,0.8s						
FINES	**FINESS Array B**	**69.88**	**332**	P	**P**	**13 46 06.9**	**+0.2**
	1.1nm,0.6s,baz=56,slow=5.1,SNR=4.6						
	1.1nm,0.6s						
AKASG	**Malin Array Be**	**75.08**	**322**	LR	LR	14 22 03.3	
	comp=Z,43nm,19.8s,baz=70,slow=38						
SFJD	**Kangerlussuaq**	**77.60**	**4**	LR	LR	14 24 32.7	
	comp=Z,32nm,18.2s,baz=345,slow=38						
DAVOX	**Davos/Dischmat**	**86.89**	**328**	LR	LR	14 29 52.1	
	comp=Z,23nm,18.4s,baz=92,slow=38						

*JMA **02** 13:53:22.6±0.2, 23°.7N±0°.9×122°.0E±0°.8, h32km±3km, MV2.5/11, TAIWAN REGION*
*TAP **02** 13:53:23.6, 23°.75N×121°.97E, h32km, ML2.4, C*

ISC 02 13:53:23.1±1.0, 23°.71N±0°.02×121°.96E±0°.02, h32km±9km, n54, σ08°50/95, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TEYL	**Yanliau Villag**	**0.36**	**295**	*e*P	**Pn**	**13 53 32.6**	**+0.5**
	baz=294						
TEYL				*e*S	**Sn**	**13 53 39.4**	**+1.2**
	baz=294						
TEGC	**Jichi Village**	**0.38**	**269**	P	**Pn**	**13 53 32.7**	**+0.3**
	baz=264						
TEGC				*e*S	**Sn**	**13 53 39.8**	**+1.2**
	baz=264						
HWA	**Hwalien**	**0.41**	**309**	P	**Pb**	**13 53 32.5**	**+0.1**
	baz=304						
HWA				S	**Sb**	**13 53 38.6**	**0.0**
	baz=304						
EGFH	**Guangfu**	**0.49**	**265**	P	**Pn**	**13 53 33.8**	**-0.1**
	baz=261						
EGFH				*i* S	**Sn**	**13 53 42.1**	**+0.9**
	baz=261						
ESL	**Shilin**	**0.49**	**282**	P	**Pb**	**13 53 33.5**	**0.0**
	baz=277						
ESL				S	**Sb**	**13 53 40.6**	**0.0**
	baz=277						
TWD	**Chiawan**	**0.49**	**318**	P	**Pb**	**13 53 33.4**	**-0.1**
	baz=314						
TWD				*i* S	**Sb**	**13 53 40.8**	**+0.1**
	baz=314						
ETM	**Tongmen**	**0.49**	**301**	P	**Pb**	**13 53 33.5**	**0.0**
	baz=296						
ETM				S	**Sb**	**13 53 40.6**	**-0.1**
	baz=296						
HGSD	**Ruisui**	**0.54**	**246**	P	**Pb**	**13 53 34.3**	**+0.1**
	baz=243						
ETL	**Fush Village**	**0.54**	**326**	*i* P	**Pb**	**13 53 34.1**	**-0.2**
	baz=322						
ETL				*i* S	**Sb**	**13 53 42.0**	**+0.1**
	baz=322						
NACB	**Ninganchiao**	**0.56**	**324**	P	**Pb**	**13 53 34.4**	**-0.3**
	baz=321						
NACB				S	**Sb**	**13 53 42.3**	**-0.3**
	baz=321						
EHY	**Hungye**	**0.62**	**251**	P	**Pn**	**13 53 35.9**	**+0.2**
	baz=247						
EHY				S	**Sn**	**13 53 45.7**	**+1.3**
	baz=247						
EHP	**Heping Village**	**0.62**	**342**	*i* P	**Pb**	**13 53 35.2**	**-0.5**
	baz=340						
ETLH	**Xiulin Townshi**	**0.66**	**319**	P	**Pb**	**13 53 35.7**	**-0.5**
	baz=315						
ETLH				S	**Sb**	**13 53 44.9**	**-0.3**
	baz=315						
YULB	**Yu-li**	**0.68**	**242**	P	**Pb**	**13 53 36.8**	**+0.1**
	baz=240						
YULB				*e*S	**Sn**	**13 53 46.8**	**+0.7**
	baz=240						
TWF1	**Yuli**	**0.70**	**239**	*e*P	**Pb**	**13 53 37.0**	**0.0**
	baz=237						
TWF1				S	**Sn**	**13 53 47.6**	**+1.0**
	baz=237						
ENA	**Nanau**	**0.74**	**345**	P	**Pn**	**13 53 37.1**	**-0.2**
	baz=343						
ENA				S	**Sb**	**13 53 47.0**	**-0.4**
	baz=343						
EWUT	**Wuta**	**0.75**	**347**	P	**Pn**	**13 53 36.9**	**-0.5**
	baz=345						
EWUT				S	**Sb**	**13 53 47.4**	**-0.2**
	baz=345						
VWDT	**VWDT**	**0.75**	**273**	*e*P	**Pb**	**13 53 38.0**	**+0.3**
	baz=270						
OWD	**Renai**	**0.75**	**289**	P	**Pn**	**13 53 37.8**	**+0.1**
	baz=285						
OWD				S	**Sb**	**13 53 47.7**	**-0.3**
	baz=285						

WHF	**Hehuan Shan**	**0.76**	**304**	P	**Pn**	**13 53 37.7**	**-0.3**
	baz=301						
WHF				S	**Sb**	**13 53 47.8**	**-0.8**
	baz=301						
CHGB	**Renai**	**0.80**	**296**	P	**Pn**	**13 53 38.5**	**+0.2**
	baz=293						
CHGB				*i* S	**Sn**	**13 53 49.2**	**+0.1**
	baz=293						
FULB	**Fuli**	**0.80**	**230**	*e*P	**Pn**	**13 53 37.7**	**-0.4**
	baz=228						
FULB				*e*S	**Sn**	**13 53 49.0**	**+0.1**
	baz=228						
WUSB	**Renai**	**0.82**	**290**	P	**Pb**	**13 53 39.0**	**0.0**
	baz=287						
WUSB				S	**Sn**	**13 53 49.6**	**0.0**
	baz=287						
FUSS	**Fushou**	**0.84**	**309**	*i* S	**Sn**	**13 53 50.1**	**-0.2**
	baz=306						
NNSB	**Datong**	**0.88**	**324**	P	**Pn**	**13 53 39.7**	**+0.3**
	baz=321						
TWC	**Suao**	**0.90**	**354**	P	**Pn**	**13 53 39.2**	**-0.3**
	baz=353						
TWC				S	**Sn**	**13 53 50.5**	**-0.8**
	baz=353						
NNS	**Nan Shan**	**0.90**	**324**	S	**Sn**	**13 53 51.3**	**-0.3**
	baz=321						
TDCB	**Techi**	**0.91**	**306**	*i* S	**Sn**	**13 53 51.6**	**-0.2**
	baz=304						
LATG	**Datong**	**0.91**	**334**	P	**Pn**	**13 53 39.8**	**+0.1**
	baz=332						
LATG				S	**Sn**	**13 53 51.4**	**-0.4**
	baz=332						
ECS	**Chishang**	**0.92**	**228**	P	**Pb**	**13 53 40.5**	**-0.1**
	baz=226						
ECS				S	**Sb**	**13 53 53.1**	**+0.7**
	baz=226						
SSLB	**Suanglung**	**0.92**	**275**	P	**Pn**	**13 53 40.2**	**+0.3**
	baz=272						
NDS	**Dongshan**	**0.94**	**347**	*e*P	**Pn**	**13 53 40.4**	**+0.3**
	baz=345						
NDS				*i* S	**Sn**	**13 53 52.4**	**-0.1**
	baz=345						
YUS	**Yu-Shan**	**0.95**	**257**	P	**Pn**	**13 53 41.0**	**+0.4**
	baz=254						
EDH	**Donghe**	**0.95**	**219**	*e*P	**Pn**	**13 53 39.6**	**-0.6**
	baz=218						
EDH				*e*S	**Sn**	**13 53 51.9**	**-0.8**
	baz=218						
WPL	**Puli Township**	**0.96**	**288**	P	**Pb**	**13 53 41.0**	**-0.3**
	baz=285						
WPL				S	**Sb**	**13 53 53.5**	**-0.2**
	baz=285						
SMLT	**Sun Moon Lake**	**0.98**	**280**	*e*P	**Pb**	**13 53 41.5**	**-0.1**
	baz=277						
DPDB	**Guoxing**	**0.99**	**289**	*e*P	**Pb**	**13 53 41.7**	**-0.1**
	baz=286						
DPDB				S	**Sb**	**13 53 55.0**	**+0.3**
	baz=286						
ELDTW	**Lidau**	**1.01**	**239**	P	**Pn**	**13 53 41.0**	**-0.1**
	baz=237						
ELDTW				*e*S	**Sn**	**13 53 54.0**	**-0.2**
	baz=237						
WCS	**Beigang Elemen**	**1.02**	**290**	P	**Pb**	**13 53 41.8**	**-0.4**
	baz=287						
WCS				S	**Sn**	**13 53 54.8**	**+0.5**
	baz=287						
TYC	**Yuchr**	**1.02**	**281**	P	**Pb**	**13 53 42.0**	**-0.3**
	baz=278						
ALS	**Alishan**	**1.07**	**259**	*e*P	**Pb**	**13 53 43.5**	**+0.1**
	baz=257						
LONT	**Longtian**	**1.11**	**224**	*e*P	**Pn**	**13 53 41.9**	**-0.5**
	baz=222						
LONT				*e*S	**Sn**	**13 53 56.4**	**-0.2**
	baz=222						
LDUT	**Ludao**	**1.13**	**203**	*e*P	**Pn**	**13 53 42.0**	**-0.7**
	baz=203						
LDUT				*e*S	**Sn**	**13 53 55.9**	**-1.1**
	baz=203						
JYNG	**Yonagunijimaku**	**1.16**	**51**	P	**Pn**	**13 53 43.6**	**+0.5**
JYNG				S	**Sn**	**13 53 58.0**	**+0.1**
TWG	**Pinlang**	**1.21**	**223**	*e*P	**Pn**	**13 53 43.3**	**-0.4**
	baz=221						
TWG				*e*S	**Sn**	**13 53 58.3**	**-0.7**
	baz=221						
STYH	**Taoyuan**	**1.21**	**244**	P	**Pb**	**13 53 45.0**	**-0.5**
	baz=242						
STYH				S	**Sb**	**13 54 00.6**	**-0.2**
	baz=242						
YOJ	**Yonaguni jima**	**1.22**	**52**	P	**Pn**	**13 53 44.3**	**+0.4**
	baz=52						
YOJ				S	**Sn**	**13 53 59.7**	**+0.5**
	baz=52						
STYT	**Tauyuan**	**1.23**	**244**	P	**Pn**	**13 53 45.0**	**+0.9**
	baz=242						
STYT				S	**Sb**	**13 54 00.8**	**-0.6**
	baz=242						
HATJ	**Hateruma jima**	**1.73**	**78**	P	**Pn**	**13 53 51.1**	**+0.3**
HATJ				S	**Sn**	**13 54 12.0**	**+0.2**
IRIF	**Iriomote-Funau**	**1.73**	**69**	P	**Pn**	**13 53 51.6**	**+0.7**
IRIF				S	**Sn**	**13 54 12.7**	**+0.7**
JKRS	**Kuro-shima**	**1.95**	**74**	P	**Pn**	**13 53 54.9**	**+0.9**
JKRS				S	**Sn**	**13 54 17.8**	**+0.5**
JIJ	**Ishigaki jima**	**2.10**	**72**	P	**Pn**	**13 53 56.4**	**+0.3**
JIJ				S	**Sn**	**13 54 21.4**	**+0.4**
JISG	**Ishigakijimahi**	**2.32**	**68**	S	**Sn**	**13 54 25.2**	**-1.3**
JTJ	**Tarama**	**2.67**	**69**	P	**Pn**	**13 54 04.4**	**+0.6**
JTJ				S	**Sn**	**13 54 35.2**	**+0.1**

DDA 02 14:15:11.2±0.0**, 38.°26N×26.°51E, h8**km±2km**, ML1.2, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZEYE	**Izmir, Urla-Ze**	**0.02**	**187**	P	Pg	14 15 12.3	-0.3
ZEYE				S	Sg	14 15 14.7	+1.0
URLA	**Izmir**	**0.12**	**36**	P	Pg	14 15 13.5	-0.4
URLA				S	Sg	14 15 16.5	+0.7
URLA				*i* AML	AML	14 15 19.0	
	comp=E,111nm,0.8s						
URLA				*i* AML	AML	14 15 19.0	
	comp=N,54nm,0.7s						
DGB	**zmir**	**0.36**	**125**	P	Pg	14 15 18.9	+0.6

BUC 02 14:16:50.6±0.3**, 45.°26N×24.°79E, h9**km±2km**, ml1.3**/5**, 18C-8D, Error ellipse: s-maj=3.1km s-min=1.2km az=176.0, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARR	**Arges**	**0.16**	**315**	⇑P	Pg	14 16 54.4	+0.3
ARR				⇓S	Sg	14 16 56.8	+0.3
ARR	**Arges**	**0.16**	**315**	⇑P	Pg	14 16 54.4	+0.3
ARR				⇓S	Sg	14 16 56.8	+0.3
MTUR	**Matau**	**0.19**	**99**	⇑P	Pg	14 16 54.6	-0.1
MTUR	**Matau**	**0.19**	**99**	⇑P	Pg	14 16 54.6	-0.1
VOIR		**0.26**	**45**	⇑P	Pg	14 16 55.7	-0.1
VOIR				⇓S	Sg	14 16 59.4	0.0
VOIR		**0.26**	**45**	⇑P	Pg	14 16 55.7	-0.1
VOIR				⇓S	Sg	14 16 59.4	0.0
LOT	**Lotru**	**0.75**	**285**	⇑P	Pb	14 17 05.6	-0.3
LOT				⇑S	Sg	14 17 15.2	+0.4
LOT	**Lotru**	**0.75**	**285**	⇑P	Pb	14 17 05.6	-0.3
LOT				⇑S	Sg	14 17 15.2	+0.4
DOPR	**Dopca**	**0.82**	**30**	⇑P	Pg	14 17 06.3	-0.2
DOPR				⇑S	Sb	14 17 18.5	+0.1
DOPR	**Dopca**	**0.82**	**30**	⇑P	Pg	14 17 06.3	-0.2
DOPR				⇑S	Sb	14 17 18.5	+0.1
MLR	**Muntele Rosu**	**0.84**	**74**	⇑P	Pg	14 17 07.2	+0.3
MLR				⇓S	Sb	14 17 19.0	0.0
MLR	**Muntele Rosu**	**0.84**	**74**	⇑P	Pg	14 17 07.2	+0.3
MLR				⇓S	Sb	14 17 19.0	0.0
GZR	**Gura Zlata**	**1.43**	**276**	⇓P	Pb	14 17 17.3	-0.2
GZR				⇑S	Sb	14 17 36.2	+0.3
GZR	**Gura Zlata**	**1.43**	**276**	⇓P	Pb	14 17 17.3	-0.2
GZR				⇑S	Sb	14 17 36.2	+0.3

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*IDC **02** 14:23:40.8±1.0, 38.°59N×24.°35E, h0km, mb3.5/6, mbtmp3.4/10, ML3.2/4, MS2.7/7, Error ellipse: s-maj=21.6km s-min=14.5km az=85.0*
*ISK **02** 14:23:41.2, 38.°60N×24.°44E, h7km, ML3.4/23*
*DDA **02** 14:23:42.1±0.0, 38.°64N×24.°57E, h27km±3km, MW3.6*
*THE **02** 14:23:42.6, 38.°59N×24.°43E, h11km, ML3.6/10, Error ellipse: s-maj=0.9km s-min=0.5km az=189.0*
ISC 02 14:23:42.4±0.9**, 38.°59N**±0.°02×**24.°44E**±0.°02**, h14**km±7km**, n91, σ0.s93**/114**, mb3.5**/6**, MS3.0**/5**, 10C-8D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYMI	**Kymi, Euboea I**	**0.27**	**279**	P	**Pb**	**14 23 48.5**	**-0.5**
KYMI				S	**Sg**	**14 23 52.3**	**+0.3**
	11µm,0.3s						
SKY	**Skiros Island**	**0.30**	**16**	P	**Pg**	**14 23 48.6**	**0.0**
SKY				S	**Sg**	**14 23 52.9**	**+0.1**
	21µm,0.2s						
KARY	**Karystos**	**0.56**	**180**	P	**Pg**	**14 23 53.4**	**+0.1**
DION	**Dionisos Attik**	**0.65**	**218**	P	**Pg**	**14 23 55.1**	**0.0**
DION				S	**Sb**	**14 24 04.0**	**-0.4**
	31µm,0.5s						
PTL	**Penteli**	**0.71**	**220**	P	**Pg**	**14 23 56.0**	**-0.1**
ATHU	**Athens Univers**	**0.81**	**220**	P	**Pg**	**14 23 57.7**	**-0.4**
ATHU				S	**Sb**	**14 24 09.1**	**+0.1**
	3µm,0.5s						
ATH	**Athens Observa**	**0.84**	**223**	P	**Pb**	**14 23 58.6**	**-0.1**
ATH				S	**Sb**	**14 24 10.1**	**+0.2**
	7µm,0.3s						
VLY	**Voula,Athens**	**0.90**	**215**	P	**Pg**	**14 23 59.4**	**-0.3**
VLY				S	**Sb**	**14 24 12.0**	**+0.5**
	9µm,0.5s						
VILL	**Villia**	**0.98**	**245**	P	**Pg**	**14 24 00.7**	**-0.7**
VILL				S	**Sn**	**14 24 15.6**	**0.0**
	8µm,0.6s						
ATAL	**Atalanti**	**1.12**	**276**	P	**Pb**	**14 24 02.9**	**-0.6**
ATAL				S	**Sn**	**14 24 19.6**	**+0.8**
	1µm,0.5s						
NEO	**Neokhori**	**1.19**	**307**	P	**Pb**	**14 24 04.5**	**-0.2**
NEO				S	**Sg**	**14 24 20.4**	**-0.4**
XOR	**Xorichti**	**1.24**	**309**	P	**Pn**	**14 24 05.2**	**-0.2**
XOR				S	**Sb**	**14 24 21.4**	**-0.2**
SIGR	**SIGRI**	**1.27**	**60**	P	**Pn**	**14 24 05.4**	**-0.2**
SIGR				S	**Sg**	**14 24 22.9**	**-0.3**
	1µm,0.5s						
CHOS	**Chios island**	**1.28**	**99**	P	**Pn**	**14 24 05.8**	**-0.1**
CHOS				S	**Sn**	**14 24 23.4**	**+0.5**
	1µm,0.5s						
CHOS	**Chios island**	**1.28**	**99**	PN	**Pn**	**14 24 05.9**	**0.0**
CHOS				SN	**Sg**	**14 24 23.8**	**+0.1**
GPNR	**Gulpinar-Canak**	**1.57**	**56**	PN	**Pn**	**14 24 10.4**	**+0.5**
KOCA	**Canakkale, Ayv**	**1.60**	**55**	P	**Pn**	**14 24 09.8**	**-0.5**
KOCA				S	**Sn**	**14 24 30.0**	**-0.8**
KOCA				*i* AML	AML	14 24 42.0	
	comp=N,383nm,0.7s						
KOCA				*i* AML	AML	14 24 42.0	
	comp=E,469nm,1.2s						
ZEYE	**Izmir, Urla-Ze**	**1.66**	**102**	P	**Pn**	**14 24 11.1**	**+0.1**
ZEYE				S	**Sn**	**14 24 32.3**	**+0.3**
ZEYE				*i* AML	AML	14 24 42.0	
	comp=N,270nm,0.6s						
ZEYE				*i* AML	AML	14 24 45.0	
	comp=E,200nm,0.6s						
URLA	**Izmir**	**1.71**	**97**	PN	**Pn**	**14 24 12.1**	**+0.4**
URLA				SN	**Sb**	**14 24 35.2**	**+0.4**
URLA	**Izmir**	**1.71**	**97**	P	**Pn**	**14 24 12.4**	**+0.7**
URLA				S	**Sn**	**14 24 32.9**	**-0.4**
URLA				*i* AML	AML	14 24 45.0	
	comp=N,246nm,0.6s						
URLA				*i* AML	AML	14 24 47.0	
	comp=E,367nm,0.6s						
APE	**Apeiranthos**	**1.75**	**150**	⇑P	**Pg**	**14 24 15.4**	**-0.5**
APE				⇓S	**Sg**	**14 24 39.6**	**+1.0**
BOZC	**Bozcaada**	**1.77**	**45**	PN	**Pn**	**14 24 12.2**	**-0.3**
BOZC	**Bozcaada**	**1.77**	**45**	P	**Pn**	**14 24 12.4**	**-0.1**
BOZC				S	**Sn**	**14 24 31.8**	**-3.0**
BOZC				*i* AML	AML	14 24 43.0	
	comp=N,258nm,0.7s						
BOZC				*i* AML	AML	14 24 46.0	
	comp=E,308nm,0.8s						
OUR	**Ouranopolis**	**1.78**	**349**	PN	**Pn**	**14 24 12.9**	**+0.2**
FOCM	**Foa**	**1.80**	**85**	PN	**Pn**	**14 24 13.4**	**+0.5**
AYVA	**Ayvalik**	**1.89**	**67**	P	**Pn**	**14 24 15.1**	**+0.9**
EZN	**Ezine**	**1.91**	**49**	PN	**Pn**	**14 24 15.1**	**+0.6**
GADA	**Gvkgeada**	**1.96**	**35**	PN	**Pn**	**14 24 15.5**	**+0.4**
GOKA	**anakkale-Gk**	**1.96**	**35**	P	**Pn**	**14 24 15.7**	**+0.5**
ECEA	**Canakkale, Ece**	**1.98**	**42**	P	**Pn**	**14 24 14.5**	**-0.9**
ECEA				S	**Sn**	**14 24 39.8**	**-0.2**
DKL	**Dikili**	**1.98**	**75**	PN	**Pn**	**14 24 16.4**	**+0.9**
DGB	**zmir**	**1.99**	**105**	P	**Pn**	**14 24 15.7**	**+0.1**
DGB				S	**Sn**	**14 24 41.8**	**+1.4**
BAYC	**CANAKKALE_Bayr**	**2.00**	**54**	P	**Pn**	**14 24 15.1**	**-0.6**
BLCB	**Balcova**	**2.05**	**95**	PN	**Pn**	**14 24 17.3**	**+0.9**
ZEDA	**zmir-Bergama**	**2.09**	**79**	P	**Pn**	**14 24 15.6**	**-1.4**
BUHA	**Balikesir, Bur**	**2.24**	**65**	P	**Pn**	**14 24 19.9**	**+0.8**
HORT	**Hortiatis**	**2.26**	**333**	PN	**Pn**	**14 24 20.1**	**+0.8**
SANT	**Santorini**	**2.36**	**160**	⇑P	**Pb**	**14 24 23.1**	**-1.6**
SANT				⇑S	**Sb**	**14 24 53.9**	**+0.3**
SANT	**Santorini**	**2.36**	**160**	PN	**Pn**	**14 24 21.6**	**+0.9**
ITM	**Ithomi**	**2.44**	**235**	PN	**Pn**	**14 24 22.5**	**+0.7**
DDIM	**Aydin, Didim**	**2.48**	**116**	P	**Pn**	**14 24 22.3**	**0.0**
CAVK	**Edirne/Enez-Ca**	**2.48**	**32**	P	Pn	14 24 16.8	-5.6
ENEZ	**Enez**	**2.52**	**31**	PN	**Pn**	**14 24 23.7**	**+0.9**
ALN	**Alexandroupoli**	**2.61**	**28**	PN	**Pn**	**14 24 25.1**	**+0.9**
ERIK	**Erikli-Kesan**	**2.62**	**37**	PN	**Pn**	**14 24 24.9**	**+0.6**
RDO	**Rodhopi**	**2.69**	**18**	PN	**Pn**	**14 24 25.9**	**+0.7**
BALY	**Balya**	**2.72**	**64**	P	**Pn**	**14 24 24.8**	**-0.9**
BODT	**Bodrum**	**2.74**	**123**	PN	**Pn**	**14 24 26.8**	**+0.9**
AYDB	**Zeytinkoy-Aydi**	**2.79**	**102**	PN	**Pn**	**14 24 27.8**	**+1.1**
KNT	**Kendrikon**	**2.83**	**336**	PN	**Pn**	**14 24 27.9**	**+0.8**
GRG	**Griva**	**2.84**	**327**	PN	**Pn**	**14 24 28.1**	**+0.8**
KRBG	**Karabiga-Canak**	**2.85**	**50**	PN	**Pn**	**14 24 28.3**	**+0.9**
AYDN	**Tasoluk**	**2.87**	**108**	P	**Pn**	**14 24 27.3**	**-0.4**
BALB	**Balikesir**	**2.87**	**68**	PN	**Pn**	**14 24 28.5**	**+0.8**
MMB	**Musomiste**	**3.04**	**350**	*i* P	**Pn**	**14 24 32.1**	**+2.0**
UKOP	**Uzunkopru-Edir**	**3.04**	**33**	PN	**Pn**	**14 24 31.1**	**+1.0**
MAR3	**Marsite Statio**	**3.08**	**45**	PN	**Pn**	**14 24 31.7**	**+1.2**
GZKV	**Gazikoy-Tekird**	**3.10**	**45**	PN	**Pn**	**14 24 32.2**	**+1.4**
RZN	**Rozhen**	**3.10**	**4**	*i* P	**Pn**	**14 24 31.8**	**+0.8**
KDZ	**Kurdzhali**	**3.15**	**13**	*i* P	**Pb**	**14 24 36.7**	**-1.4**
MRMT	**Marmara Adasi**	**3.16**	**49**	PN	**Pn**	**14 24 32.9**	**+1.2**
FNA	**Florina**	**3.22**	**314**	PN	**Pn**	**14 24 33.7**	**+1.1**
DURS	**Dursunbey**	**3.29**	**71**	P	**Pn**	**14 24 35.1**	**+1.5**
IDI	**Anoyia**	**3.32**	**174**	⇓P	**Pn**	**14 24 34.3**	**+0.4**
IDI				⇓S	**Sn**	**14 25 11.0**	**-2.2**
IDI	**Anoyia**	**3.32**	**174**	Pn	**Pn**	**14 24 34.4**	**+0.5**
	3.2nm,0.3s,baz=342,slow=13,SNR=19						
IDI				Sn	**Sn**	**14 25 11.2**	**-1.9**
	8.8nm,0.3s,baz=346,slow=14,SNR=8.1						
IDI				Lg	Lg	14 25 27.0	
	6.8nm,0.3s,baz=314,slow=21,SNR=4.5						
IDI				LR	LR	14 25 49.6	
	comp=Z,46nm,19.4s,baz=291,slow=39						
	12nm,0.3s						
KKB	**Krupnik**	**3.43**	**343**	*e*P	**Pn**	**14 24 36.5**	**+1.0**
EDRB	**Edirne**	**3.70**	**28**	PN	**Pn**	**14 24 40.6**	**+1.5**
ARMN	**Kirklareli, Me**	**3.99**	**34**	P	**Pn**	**14 24 43.0**	**-0.1**
VTS	**Vitosha**	**4.13**	**348**	⇑P	**Pn**	**14 24 46.0**	**+0.9**
VTS				⇓S	**Sn**	**14 25 32.1**	**-1.1**
VTS	**Vitosha**	**4.13**	**348**	*i* P	**Pn**	**14 24 46.8**	**+1.7**
MPEP	**Malo Peshtene**	**4.79**	**354**	*i* P	**Pn**	**14 24 55.0**	**+0.9**
BLKB	**Belogradchik**	**5.20**	**346**	⇑P	**Pn**	**14 25 01.3**	**+1.6**
PDG	**Podgorica**	**5.51**	**316**	⇑P	**Pn**	**14 25 04.3**	**+0.4**
TIP	**Timpagrande**	**6.02**	**278**	⇓P	**Pn**	**14 25 09.9**	**-1.2**
TIP				⇑S	**Sn**	**14 26 18.4**	**-1.4**
MATE	**Matera**	**6.32**	**291**	⇑P	**Pn**	**14 25 14.2**	**-0.8**
MDVR	**Moldovita**	**6.51**	**343**	⇑P	**Pn**	**14 25 19.0**	**+1.2**
GZR	**Gura Zlata**	**6.91**	**350**	⇓P	**Pn**	**14 25 24.7**	**+1.5**
GZR				⇓S	**Sn**	**14 26 40.7**	**-0.9**
MLR	**Muntele Rosu**	**6.99**	**9**	⇑P	**Pn**	**14 25 25.8**	**+1.5**
MLR	**Muntele Rosu**	**6.99**	**9**	Pn	**Pn**	**14 25 25.6**	**+1.3**
	0.2nm,0.3s,baz=225,slow=10.0,SNR=2.0						
MLR				LR	LR	14 27 53.0	
	comp=Z,42nm,21.4s,baz=108,slow=36						
	0.7nm,0.3s						
BRTR	**Keskin Array B**	**7.24**	**78**	Pn	**Pn**	**14 25 29.7**	**+1.9**
	0.1nm,0.3s,baz=261,slow=13,SNR=3.1						
	0.5nm,0.5s						
BZS	**Buzias**	**7.33**	**344**	⇓P	**Pn**	**14 25 29.1**	**+0.2**
GERES	**GERESS Array B**	**12.85**	**326**	Pn	**Pn**	**14 26 45.1**	**+0.5**
	0.1nm,0.3s,baz=131,slow=16,SNR=4.0						
	0.2nm,0.2s						
ESDC	**Sonseca Array**	**22.03**	**282**	P	**P**	**14 28 36.4**	**0.0**
	1.1nm,0.8s,baz=78,slow=9.1,SNR=10						
	1.1nm,0.8s						
FINES	**FINESS Array B**	**22.90**	**2**	P	**P**	**14 28 47.1**	**+1.7**
	1.2nm,0.6s,baz=168,slow=7.1,SNR=4.5						
FINES				LR	LR	14 38 14.4	
	comp=Z,50nm,20.1s,baz=177,slow=38						
	1.2nm,0.6s						
NOA	**NORSAR Array B**	**23.94**	**344**	P	**P**	**14 28 55.6**	**-0.3**
	1.4nm,0.9s,baz=151,slow=10,SNR=2.0						
NOA				LR	LR	14 40 24.1	
	comp=Z,3.0nm,18.5s,baz=55,slow=42						
	1.4nm,0.9s						
MDT	**Midelt**	**24.23**	**265**	LR	LR	14 39 45.2	
	comp=Z,11nm,18.6s,baz=150,slow=40						
EKA	**Eskdalemuir Ar**	**24.96**	**321**	P	**P**	**14 29 04.1**	**-1.0**
	1.0nm,0.7s,baz=126,slow=8.0,SNR=1.7						
	1.0nm,0.7s						
ARU	**Arti**	**28.73**	**40**	LR	LR	14 43 49.5	
	comp=Z,32nm,18.4s,baz=160,slow=42						
TORD	**Torodi Ar. Bea**	**32.39**	**225**	P	**P**	**14 30 11.8**	**0.0**
	0.4nm,0.6s,baz=29,slow=10,SNR=3.9						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**42.45**	**60**	P	**P**	**14 31 37.8**	**+1.1**
	0.5nm,0.7s,baz=274,slow=8.6,SNR=4.5						
	0.5nm,0.7s						
TSUM	**Tsumeb**	**57.85**	**188**	LR	LR	15 00 54.0	
	comp=Z,32nm,18.1s,baz=322,slow=39						

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*NNC **02** 14:31:02.5±2.0, 48.°58N×77.°74E, h0km, mb2.5, mpv2.1, Error ellipse: s-maj=16.1km s-min=7.6km az=48.0, Suspected Mining explosion.*
IDC 02 14:31:09.9±5.6**, 48.°68N×78.°28E, h0**km**, mbtmp1.7**/1**, ML1.5**/1**, 1C-4D, Error ellipse: s-maj=71.3km s-min=44.3km az=34.0, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**1.96**	**5**	⇑Pg	Pn	14 31 41.0	-3.3
	1.2nm,0.5s,baz=197,slow=16						
KURBB				⇓Lg	Lg	14 32 09.2	
	4.4nm,0.5s,baz=194,slow=35						
MAKZ	**Makanchi**	**3.12**	**125**	⇓Lg	Lg	14 32 49.1	
	0.8nm,0.5s						
MK31	**Makanchi Array**	**3.30**	**123**	⇓Pg	Pb	14 32 07.3	-2.0
	0.1nm,0.2s,baz=88,slow=9.5,SNR=3.9						
MK31				⇓Lg	Lg	14 32 56.0	
	0.4nm,0.4s,baz=311,slow=25,SNR=5.5						
MKAR	**Makanchi Array**	**3.30**	**123**	Pn	Pn	14 32 03.8	+0.9
	0.1nm,0.3s,baz=306,slow=11,SNR=2.2						
MKAR				Lg	Lg	14 32 53.9	
	0.2nm,0.3s,baz=306,slow=28,SNR=8.0						
	0.2nm,0.5s						
I46RU	**ZALESOVO INFRA**	**6.68**	**35**	*i*		15 09 30.0	
	baz=224,slow=332,SNR=3.0						
I31KZ	**AKTYUBINSK INF**	**13.26**	**285**	*i*		15 45 40.0	
	baz=91,slow=317,SNR=1.7						

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*SKHL **02** 14:35:42.2±0.5, 44.°40N×148.°20E, h43km±5km, mb4.5/4*
*JMA **02** 14:35:43.3±0.5, 44°N±2°×14°8E±°, h0km, MV4.1/20, SE OFF ETOROFU*
ISC 02 14:35:41.0±2.9**, 44.°38N**±0.°09×**148.°1E**±0.°2**, h11**km±11km**, n15, σ1.s21**/25**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.87**	**349**	*i* P	**Pg**	**14 35 57.5**	**-0.2**
KUR				AMB	AMB	14 35 58.7	
	230nm,0.4s						
KUR				*e*S	**Sg**	**14 36 08.5**	**-0.5**
KUR				A	A	14 36 11.2	
	760nm,0.4s						
KUR				A	A	14 36 11.2	
	1µm,0.4s						
SHO	**Shikotan**	**1.05**	**241**	*e*P	**Pg**	**14 36 01.0**	**-0.1**
SHO				AMB	AMB	14 36 01.8	
	130nm,0.4s						
SHO				*e*S	**Sg**	**14 36 14.8**	**0.0**
SHO				A	A	14 36 17.5	
	270nm,0.3s						
SHO				A	A	14 36 17.5	
	480nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.65**	**259**	*e*P	**Pn**	**14 36 09.3**	**-0.5**
YUK				AMB	AMB	14 36 11.7	
	160nm,0.3s						
YUK				*e*S	**Sn**	**14 36 29.5**	**-1.4**
YUK				A	A	14 36 35.5	
	380nm,0.4s						
YUK				A	A	14 36 35.5	
	520nm,0.4s						
GLVR	**Golovnino**	**1.97**	**252**	*e*P	**Pn**	**14 36 13.6**	**-0.6**
GLVR				AMB	AMB	14 36 19.7	
	100nm,0.3s						
GLVR				*e*S	**Sn**	**14 36 37.3**	**-1.5**
GLVR				A	A	14 36 45.0	
	710nm,0.3s						
GLVR				A	A	14 36 45.0	
	320nm,0.3s						
NEM2	**Nemuro 2**	**1.99**	**240**	*e*P	**Pn**	**14 36 14.2**	**-0.2**
NEM2				*e*S	**Sn**	**14 36 37.0**	**-2.2**
NMR	**Nemuro--Hokkai**	**1.99**	**240**	*e*P	**Pn**	**14 36 14.3**	**-0.2**
NMR				*e*S	**Sn**	**14 36 38.7**	**-0.7**
JRA	**Rausu**	**2.19**	**259**	*e*P	**Pn**	**14 36 19.1**	**+1.9**
JNSB	**Nemuroshibetsu**	**2.31**	**256**	*e*P	**Pn**	**14 36 20.5**	**+1.6**
JNK	**Nakash**	**2.57**	**253**	*e*P	**Pn**	**14 36 23.9**	**+1.5**
JNK				*e*S	**Sn**	**14 36 54.1**	**+0.5**
AKK	**Akkeshi**	**2.73**	**241**	*e*P	**Pn**	**14 36 25.2**	**+0.6**
AKK				*e*S	**Sn**	**14 36 57.4**	**-0.2**
JAK	**Akkeshi**	**2.83**	**242**	*e*P	**Pn**	**14 36 26.3**	**+0.2**
JAR	**Ashorobuto**	**3.32**	**252**	*e*P	**Pn**	**14 36 34.9**	**+2.2**
JOB	**Onbets**	**3.43**	**246**	*e*P	**Pn**	**14 36 35.9**	**+1.6**
JOB				*e*S	**Sn**	**14 37 15.2**	**+0.3**
JCH	**Churui**	**3.88**	**245**	*e*P	**Pn**	**14 36 41.5**	**+1.1**
JCH				*e*S	**Sn**	**14 37 25.1**	**-0.7**
JNBK	**Urakawa-nobuka**	**4.43**	**244**	*e*P	**Pn**	**14 36 49.5**	**+1.4**

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*IDC **02** 14:57:38.5±0.7, 71.°96N×0.°14W, h0km, mb3.7/12, mbtmp3.7/18, ML3.3/6, MS3.5/37, Error ellipse: s-maj=18.2km s-min=13.0km az=59.0*
*NAO **02** 14:57:38.2±252.0, 71.°90N×0.°38W, h12km±126km, ML3.6*
*BER **02** 14:57:43.6±3.3, 72.°12N×0.°15E, h25km±34km, ML2.4, ML3.6(NAO), Confirmed Earthquake*
*DNK **02** 14:57:47.1±2.8, 72.°27N×1.°23W, h36km±74km, ML2.6, Ms3.1*
ISC 02 14:57:39.2±0.5**, 71.°98N**±0.°06×**0.°24E**±0.°05**, h10**km**, n99, σ2.s61**/90**, mb3.6**/12**, MS3.6**/31**, 4D, Norwegian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMIC	**Jan Mayen**	**2.96**	**254**	LR	LR	14 59 08.8	
	comp=Z,50nm,20.6s,baz=58,slow=32						
JMIC	**Jan Mayen**	**2.96**	**254**	*e*P	**Pn**	**14 58 27.7**	**+1.5**
JMIC				*e*S	**Sn**	**14 59 00.8**	**-1.0**
JMIC				IAML		14 59 02.9	
	comp=Z,22nm,0.6s						
LOF	**Lofoten**	**5.96**	**124**	*e*P	**Pn**	**14 59 09.1**	**+1.7**
LOF				*e*S	**Sn**	**15 00 13.7**	**-1.9**
LOF				IAML		15 00 16.0	
	comp=Z,8.2nm,0.1s						
BJO1	**Bjornoya**	**5.97**	**56**	Pn	**Pn**	**14 59 08.4**	**+1.0**
BJO1	**Bjornoya**	**5.97**	**56**	*e*P	**Pn**	**14 59 06.8**	**-0.6**
DBG	**Daneborg**	**6.37**	**301**	Pn	**Pn**	**14 59 08.6**	**-4.4**
DBG	**Daneborg**	**6.37**	**301**	⇓*i*P	**Pn**	**14 59 08.5**	**-4.4**
DBG				IAML		14 59 28.7	
	comp=Z,14nm,0.6s						
DBG				IVMs_BB	IVMs_BB	15 01 17.4	
	comp=Z,199nm,4.8s						
DBG	**Daneborg**	**6.37**	**301**	⇓*i*P	**Pn**	**14 59 08.5**	**-4.4**
HSPB	**Hornsund (broa**	**6.47**	**32**	Pn	**Pn**	**14 59 15.2**	**+0.9**
HSPB	**Hornsund (broa**	**6.47**	**32**	*e*P	**Pn**	**14 59 14.2**	**-0.1**
STEI	**Steigen**	**6.55**	**121**	*e*P	**Pn**	**14 59 17.3**	**+1.8**
TRO	**Tromso**	**6.58**	**102**	*e*P	**Pn**	**14 59 16.8**	**+1.0**
TRO				*e*S	**Sn**	**15 00 24.6**	**-6.2**
TRO				IAML		15 00 28.6	
	comp=Z,9.4nm,0.6s						
FAUS	**Fauske**	**6.97**	**124**	*e*P	**Pn**	**14 59 22.8**	**+1.6**
FAUS				*e*S	**Sn**	**15 00 34.7**	**-5.5**
FAUS				IAML		15 00 40.2	
	comp=Z,4.8nm,0.5s						
DAG	**Danmarks Havn**	**6.97**	**322**	⇓*i*P	**Pn**	**14 59 17.1**	**-4.0**
DAG				*e*S	Sn	15 00 24.8	-16
DAG				IAML		15 00 27.4	
	comp=Z,33nm,0.4s						
DAG	**Danmarks Havn**	**6.97**	**322**	⇓*i*P	**Pn**	**14 59 17.1**	**-4.0**
DAG				*e*S	Sn	15 00 25.3	-15
JETT	**Jettan, Norway**	**7.07**	**100**	Pn	**Pn**	**14 59 24.7**	**+2.1**
JETT				Sn	**Sn**	**15 00 38.4**	**-4.6**
BRBB	**Barentsburg B**	**7.09**	**24**	Pn	**Pn**	**14 59 25.5**	**+2.6**
BRBB	**Barentsburg B**	**7.09**	**24**	*e*P	**Pn**	**14 59 22.6**	**-0.3**

KONS	**Konsvik**	**7.14**	**134**	*e*P		**Pn**		**14 59 25.5**	**+1.9**
STOK	**Stokkvaagen**	**7.26**	**135**	*e*P		**Pn**		**14 59 29.1**	**+4.0**
STOK				*e*S		**Sn**		**15 00 42.7**	**-4.8**
SCO	**Scoresbysund**	**7.29**	**269**	*e*P		**Pn**		**14 59 23.1**	**-2.5**
SPA0	**Spitsbergen Ar**	**7.45**	**26**	Pn		**Pn**		**14 59 29.4**	**+1.7**
	baz=214,slow=12								
SPA0	**Spitsbergen Ar**	**7.45**	**26**	Pn		**Pn**		**14 59 29.4**	**+1.7**
	baz=214,slow=12								
SPITS	**Spitsbergen Ar**	**7.45**	**26**	Pn		**Pn**		**14 59 29.4**	**+1.7**
	baz=199,slow=12								
	comp=Z,3.5nm,0.4s								
KIF	**Kilpisjarvi**	**7.48**	**104**	Pn		**Pn**		**14 59 29.8**	**+1.7**
KIF				Sn		**Sn**		**15 00 48.2**	**-4.6**
KIF	**Kilpisjarvi**	**7.48**	**104**	*e*P		**Pn**		**14 59 29.3**	**+1.2**
KIF				Pn		**Pn**		**14 59 29.8**	**+1.7**
KIF				Sn		**Sn**		**15 00 48.2**	**-4.6**
KBS	**Kingsbay**	**7.55**	**17**	Pn		**Pn**		**14 59 29.0**	**-0.1**
KBS	**Kingsbay**	**7.55**	**17**	*i* P		**Pn**		**14 59 29.2**	**+0.1**
KBS	**Kingsbay**	**7.55**	**17**	*e*P		**Pn**		**14 59 28.4**	**-0.7**
KBS				IAML				15 01 34.9	
	comp=Z,1.8nm,0.7s								
HAMF	**Hammerfest**	**7.62**	**89**	Pn		**Pn**		**14 59 29.0**	**-1.1**
HAMF				Sn		**Sn**		**15 00 49.8**	**-6.6**
HAMF	**Hammerfest**	**7.62**	**89**	*e*P		**Pn**		**14 59 29.2**	**-0.9**
HAMF				IAML				15 01 04.7	
	comp=Z,4.9nm,0.6s								
MOR8	**Moi Rana**	**7.72**	**132**	*e*P		**Pn**		**14 59 33.4**	**+2.0**
MOR8				*e*S		**Sn**		**15 00 54.3**	**-4.4**
MOR8				IAML				15 00 57.9	
	comp=Z,8.9nm,0.4s								
SALU	**Saltoluokta**	**7.83**	**117**	*e*P		**Pn**		**14 59 34.6**	**+1.7**
KTK1	**Kautokeino**	**8.22**	**100**	*e*P		**Pn**		**14 59 40.1**	**+1.8**
NSS	**Namsos**	**8.64**	**144**	*e*P		**Pn**		**14 59 45.6**	**+1.6**
NSS				*e*S		**Sn**		**15 01 15.8**	**-5.5**
NSS				IAML				15 01 19.3	
	comp=Z,9.6nm,0.6s								
ARA0	**ARCESS Array S**	**8.66**	**94**	Pn		**Pn**		**14 59 44.7**	**+0.4**
	baz=300,slow=12								
ARA0				Sn		**Sn**		**15 01 17.1**	**-4.7**
	baz=300,slow=28								
ARA0	**ARCESS Array S**	**8.66**	**94**	Pn		**Pn**		**14 59 44.7**	**+0.4**
	baz=300,slow=12								
ARA0				Sn		**Sn**		**15 01 17.1**	**-4.7**
	baz=300,slow=28								
ARCES	**ARCESS Array B**	**8.66**	**94**	Pn		**Pn**		**14 59 45.3**	**+1.0**
	comp=Z,0.7nm,0.3s,baz=298,slow=12,SNR=36								
ARCES				Sn		**Sn**		**15 01 18.1**	**-3.7**
	comp=Z,0.2nm,0.3s,baz=306,slow=20,SNR=2.1								
ARCES				LR		LR		15 02 52.6	
	comp=Z,135nm,21.6s,baz=290,slow=36								
	comp=Z,1.2nm,0.3s								
HEF	**Hetta**	**8.68**	**103**	*e*P		**Pn**		**14 59 45.3**	**+0.7**
KEV	**Kevo**	**9.02**	**91**	*e*P		**Pn**		**14 59 49.1**	**-0.1**
NOD	**Norderasen**	**10.17**	**140**	*e*P		**Pn**		**15 00 07.7**	**+2.6**
AKN	**Aaknes**	**10.19**	**162**	*e*P		**Pn**		**15 00 08.9**	**+3.6**
AKN				*e*S		**Sn**		**15 01 52.9**	**-6.4**
NOR	**Nord**	**10.33**	**346**	Pn		**Pn**		**15 00 05.2**	**-1.9**
NOR	**Nord**	**10.33**	**346**	*e*P		**Pn**		**15 00 05.2**	**-1.9**
NOR	**Nord**	**10.33**	**346**	*e*P		**Pn**		**15 00 05.5**	**-1.6**
NOR				*e*S		Sn		15 01 48.8	-14
SUMG	**Summit**	**11.66**	**291**	*i* P		**Pn**		**15 00 24.5**	**-1.2**
NB2	**NORSAR Subarra**	**11.80**	**153**	Pn		**Pn**		**15 00 28.1**	**+0.8**
NB2	**NORSAR Subarra**	**11.80**	**153**	Pn		**Pn**		**15 00 28.1**	**+0.8**
NOA	**NORSAR Array B**	**11.80**	**153**	Pn		**Pn**		**15 00 28.3**	**+1.0**
	baz=335,slow=12,SNR=4.0								
NOA				Sn		**Sn**		**15 02 40.4**	**+1.6**
	baz=208,slow=22,SNR=2.0								
NOA				LR		LR		15 04 59.9	
	comp=Z,194nm,19.0s,baz=345,slow=37								
	comp=Z,0.4nm,0.5s								
APA0	**Apatity Array**	**12.01**	**95**	Pn		**Pn**		**15 00 29.5**	**-0.6**
	baz=310,slow=18								
APA0	**Apatity Array**	**12.01**	**95**	Pn		**Pn**		**15 00 29.5**	**-0.6**
	baz=310,slow=18								
HFS	**Hagfors**	**13.04**	**149**	Pn		**Pn**		**15 00 45.3**	**+1.1**
	comp=Z,0.4nm,0.3s,baz=354,slow=12,SNR=10								
HFS				LR		LR		15 05 28.2	
	comp=Z,215nm,21.2s,baz=354,slow=36								
	comp=Z,1.9nm,0.6s								
HFS	**Hagfors**	**13.04**	**149**	Pn		**Pn**		**15 00 44.8**	**+0.6**
	baz=351,slow=14								
HFS	**Hagfors**	**13.04**	**149**	Pn		**Pn**		**15 00 44.8**	**+0.6**
	baz=351,slow=14								
FIA0	**FINESS Array S**	**14.53**	**123**	P		**Pn**		**15 01 04.1**	**-0.4**
	baz=319,slow=16								
FIA0	**FINESS Array S**	**14.53**	**123**	P		**Pn**		**15 01 04.1**	**-0.4**
	baz=319,slow=16								
FINES	**FINESS Array B**	**14.53**	**123**	Pn		**Pn**		**15 01 05.9**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=354,slow=12,SNR=7.1								
FINES				LR		LR		15 06 13.3	
	comp=Z,325nm,18.6s,baz=22,slow=35								
	comp=Z,3.5nm,0.9s								
EKA	**Eskdalemuir Ar**	**16.78**	**187**	Pn		**P**		**15 01 35.8**	**-0.3**
	baz=4.5,slow=10.0								
EKA				LR		LR		15 07 33.9	
	comp=Z,72nm,19.0s,baz=357,slow=36								
	comp=Z,1.2nm,0.6s								
SFJD	**Kangerlussuaq**	**18.00**	**279**	LR		LR		15 07 58.1	
	comp=Z,146nm,18.1s,baz=42,slow=35								
KLMR	**Klimovskoe**	**18.81**	**106**	*e*P		**P**		**15 01 57.6**	**-0.8**
	comp=Z,18nm,1.2s								
VRAC	**Vranov**	**23.94**	**153**	LR		LR		15 12 45.2	
	comp=Z,96nm,18.8s,baz=334,slow=38								
GERES	**GERESS Array B**	**24.02**	**158**	P		**P**		**15 02 56.3**	**+2.3**
	comp=Z,2.1nm,0.7s,baz=354,slow=8.0,SNR=14								
GERES				LR		LR		15 12 03.5	
	comp=Z,101nm,18.2s,baz=6.0,slow=36								
	comp=Z,2.1nm,0.7s								
RES	**Resolute Bay**	**24.66**	**321**	LR		LR		15 12 22.1	
	comp=Z,206nm,19.7s,baz=56,slow=36								
AKASG	**Malin Array Be**	**24.97**	**133**	P		**P**		**15 03 03.0**	**+0.7**
	comp=Z,0.7nm,0.5s,baz=338,slow=9.9,SNR=3.0								
AKASG				LR		LR		15 12 30.6	
	comp=Z,192nm,19.9s,baz=356,slow=36								
	comp=Z,0.7nm,0.5s								
FRB	**Frobisher Bay**	**25.68**	**287**	LR		LR		15 11 56.9	
	comp=Z,74nm,20.1s,baz=4.0,slow=34								
DAVOX	**Davos/Dischmat**	**25.68**	**165**	LR		LR		15 13 20.7	
	comp=Z,89nm,19.9s,baz=84,slow=37								
ARU	**Arti**	**28.24**	**92**	P		**P**		**15 03 34.0**	**+2.2**
	comp=Z,1.3nm,0.3s,baz=327,slow=10,SNR=1.9								
ARU				LR		LR		15 14 05.4	
	comp=Z,78nm,22.0s,baz=275,slow=35								
	comp=Z,1.3nm,0.3s								
BELG	**Belogornoye**	**28.34**	**108**	LR		LR		15 14 28.8	
	comp=Z,137nm,18.7s,baz=314,slow=36								
MLR	**Muntele Rosu**	**29.22**	**141**	LR		LR		15 15 44.9	
	comp=Z,203nm,18.1s,baz=5.5,slow=37								
SCHQ	**Schefferville**	**32.30**	**274**	LR		LR		15 16 00.7	
	comp=Z,83nm,21.0s,baz=98,slow=34								
ESDC	**Sonseca Array**	**32.45**	**186**	P		**P**		**15 04 10.1**	**+0.8**
	comp=Z,0.3nm,0.8s,baz=11,slow=7.2,SNR=2.1								
ESDC				LR		LR		15 18 25.2	
	comp=Z,52nm,18.1s,baz=346,slow=38								
	comp=Z,0.3nm,0.8s								
AKTO	**Aktyubinsk**	**33.20**	**99**	LR		LR		15 17 37.2	
	comp=Z,54nm,20.6s,baz=15,slow=36								
KBZ	**Khabaz**	**34.86**	**121**	LR		LR		15 18 43.1	
	comp=Z,118nm,18.4s,baz=5.5,slow=36								
BRTR	**Keskin Array B**	**36.36**	**134**	LR		LR		15 20 07.2	
	comp=Z,53nm,21.2s,baz=10.0,slow=37								
KEST	**Kesra**	**36.63**	**168**	LR		LR		15 20 44.2	
	comp=Z,61nm,18.9s,baz=303,slow=38								
INK	**Inuvik**	**36.66**	**333**	P		**P**		**15 04 44.9**	**-0.3**
	comp=Z,2.5nm,0.9s,baz=355,slow=11,SNR=3.1								
	comp=Z,2.5nm,0.9s								
ZALV	**Zalesovo Beam**	**38.38**	**71**	P		**P**		**15 05 01.3**	**+1.3**
	comp=Z,0.8nm,0.7s,baz=317,slow=8.1,SNR=2.7								
ZALV				LR		LR		15 25 46.2	
	comp=Z,23nm,18.1s,baz=244,slow=44								
	comp=Z,0.8nm,0.7s								
YKA	**Yellowknife Ar**	**38.65**	**318**	P		**P**		**15 05 02.0**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=25,slow=9.5,SNR=4.2								
	comp=Z,0.6nm,0.8s								
GNI	**Garni**	**38.70**	**121**	LR		LR		15 21 12.6	
	comp=Z,80nm,18.0s,baz=348,slow=36								
ILAR	**Eielson Array**	**41.70**	**340**	P		**P**		**15 05 28.8**	**+1.4**
	comp=Z,0.9nm,0.8s,baz=12,slow=7.2,SNR=11								
ILAR				LR		LR		15 26 04.7	
	comp=Z,36nm,18.2s,baz=26,slow=41								
	comp=Z,0.9nm,0.8s								
MKAR	**Makanchi Array**	**43.94**	**79**	P		**P**		**15 05 47.6**	**+1.8**
	comp=Z,0.6nm,0.7s,baz=343,slow=7.9,SNR=7.5								
MKAR				PcP		**PcP**		**15 07 31.8**	**+0.3**
	comp=Z,0.3nm,0.7s,baz=344,slow=3.9,SNR=4.1								
	comp=Z,0.6nm,0.7s								
GEYT	**Alibeck**	**44.55**	**107**	LR		LR		15 26 28.5	
	comp=Z,69nm,18.1s,baz=338,slow=39								
SADO	**Sadowa**	**44.94**	**278**	LR		LR		15 23 22.0	
	comp=Z,58nm,20.1s,baz=104,slow=34								
ULM	**Lac du Bonnet**	**44.98**	**295**	LR		LR		15 24 19.9	
	comp=Z,93nm,19.0s,baz=352,slow=36								
DLBC	**Dease Lake**	**45.37**	**326**	LR		LR		15 26 08.6	
	comp=Z,125nm,18.6s,baz=302,slow=38								
SONM	**Songino Array**	**49.91**	**58**	P		**P**		**15 06 34.6**	**+2.1**
	comp=Z,0.6nm,0.5s,baz=334,slow=9.9,SNR=3.6								
	comp=Z,0.6nm,0.5s								
NEW	**Newport**	**52.30**	**311**	LR		LR		15 28 53.9	
	comp=Z,83nm,18.3s,baz=351,slow=36								
TKL	**Tuckaleechee C**	**54.69**	**277**	LR		LR		15 28 54.1	
	comp=Z,43nm,21.3s,baz=329,slow=34								
PDAR	**Pinedale Array**	**55.57**	**303**	LR		LR		15 30 12.6	
	comp=Z,50nm,19.2s,baz=0.5,slow=35								
TORD	**Torodi Ar. Bea**	**58.81**	**178**	P		**P**		**15 07 38.1**	**+0.7**
	comp=Z,0.9nm,0.8s,baz=352,slow=6.9,SNR=6.4								
	comp=Z,0.9nm,0.8s								
ELK	**Elko**	**58.92**	**307**	LR		LR		15 32 31.9	
	comp=Z,56nm,18.7s,baz=12,slow=36								
YBH	**Yreka Blue Hor**	**59.77**	**313**	LR		LR		15 33 42.4	
	comp=Z,62nm,18.1s,baz=14,slow=36								
NVAR	**Mina Array Bea**	**61.87**	**309**	LR		LR		15 33 49.5	
	comp=Z,41nm,18.7s,baz=12,slow=35								
ANMO	**Albuquerque**	**62.07**	**297**	LR		LR		15 35 01.8	
	comp=Z,88nm,18.5s,baz=19,slow=36								
PFO	**Pinyon Flats O**	**65.99**	**305**	LR		LR		15 36 51.4	
	comp=Z,60nm,18.4s,baz=20,slow=36								
TXAR	**Lajitas Array**	**66.55**	**293**	P		**P**		**15 08 28.8**	**-0.3**
	comp=Z,0.2nm,0.6s,baz=74,slow=4.8,SNR=3.5								
	comp=Z,0.2nm,0.6s								
LBTB	**Lobatse**	**98.31**	**157**	LR		LR		15 57 48.2	
	comp=Z,24nm,21.0s,baz=70,slow=37								
ASAR	**Alice Springs**	**125.19**	**54**	PKP		**PKPdf**		**15 16 39.1**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=358,slow=2.1,SNR=7.6								
MAW	**Mawson**	**145.38**	**143**	PKPbc		**PKPab**		**15 17 16.6**	**+1.2**
	comp=Z,4.3nm,1.1s,baz=308,slow=7.5,SNR=4.7								

*IDC **02** 14:58:13.3±1.4, 53.86N×163.45W, h0km, mb4.0/21, mbtmp4.0/23, ML3.3/2, MS3.4/9, Error ellipse: s-maj=36.0km s-min=15.6km az=164.0*
*NEIC **02** 14:58:15.1±1.3, 53.47N±0.07×163.21W±0.09, h26km±11km, Error ellipse: s-maj=11.4km s-min=5.8km az=148.0*
*AEIC **02** 14:58:16±1.5, 53.49N±0.06×163.17W±0.09, h25km±7km, ML3.6/40, mb3.9/4(NEIC), ML3.7/8(NEIC), Error ellipse: s-maj=10.6km s-min=5.5km az=143.0*

ISC 02 14:58:13.6±3.2, 53.54N±0.10×163.16W±0.04, h14km±19km, n104, σ1s27/97, mb4.0/20, MS3.3/7, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BRPK	**Brown Peak**	**1.16**	**343**			**Pb**	**14 58 35.7**	**+0.3**
ISLZ	**Isanotski Laza**	**1.23**	**345**			**Pn**	**14 58 36.7**	**+0.3**
WESE	**West Dahl East**	**1.25**	**319**			**Pb**	**14 58 37.1**	**0.0**
FALS	**False Pass**	**1.32**	**354**			**Pb**	**14 58 38.5**	**+0.2**
FALS	**False Pass**	**1.32**	**354**	P		**Pb**	**14 58 38.5**	**+0.2**
	baz=174							
WESN	**West Dahl Nort**	**1.33**	**321**			**Pb**	**14 58 38.4**	**+0.1**
ISNN	**Isanotski Nort**	**1.34**	**345**			**Pb**	**14 58 39.1**	**+0.5**
SSLW	**Shishaldin Wes**	**1.35**	**336**			**Pb**	**14 58 38.9**	**+0.1**
WECS	**Westdahl Cape**	**1.37**	**317**			**Pn**	**14 58 38.8**	**+0.4**
WEBT	**Westdahl Beart**	**1.41**	**319**			**Pn**	**14 58 39.4**	**+0.6**
AKSA	**Akutan Strait**	**1.61**	**293**			**Pn**	**14 58 41.8**	**+0.1**
AKSA	**Akutan Strait**	**1.61**	**293**			**Pn**	**14 58 41.8**	**+0.1**
AKUT	**Akutan**	**1.66**	**292**			**Pn**	**14 58 42.9**	**+0.6**
AKUT						**Sn**	**14 59 03.6**	**+0.3**
AKUT	**Akutan**	**1.66**	**292**	IAML			14 59 06.9	
	comp=E,657nm,0.5s							
AKBBA	**Akutan Broad B**	**1.73**	**290**			**Pn**	**14 58 43.6**	**+0.3**
HSB	**Akutan Spr's B**	**1.75**	**293**			**Pn**	**14 58 44.0**	**+0.3**
ZRO	**Akutan Zero**	**1.76**	**289**			**Pn**	**14 58 44.2**	**+0.5**
AKGG	**Akutan Green G**	**1.80**	**293**			**Pn**	**14 58 44.7**	**+0.5**
AKGG						**Sn**	**14 59 07.6**	**+0.7**
HAG	**Hague Volcano**	**1.92**	**22**			**Pb**	**14 58 47.7**	**-0.8**
PS4A	**Pavlof South-4**	**1.96**	**22**			**Pn**	**14 58 47.9**	**+1.4**
UNV	**Unalaska Valle**	**2.01**	**280**			**Pn**	**14 58 46.9**	**-0.3**
UNV	**Unalaska Valle**	**2.01**	**280**	P		**Pn**	**14 58 46.8**	**-0.3**
	baz=99							
MNAT	**Makushin Natee**	**2.12**	**281**			**Pn**	**14 58 48.7**	**+0.1**
MNAT						**Sn**	**14 59 13.8**	**-1.0**
MTBL	**Makushin Table**	**2.13**	**283**			**Pn**	**14 58 49.7**	**+0.8**
MSW	**Makushin Switc**	**2.18**	**281**			**Pn**	**14 58 49.9**	**+0.4**
MSW						**Sn**	**14 59 16.2**	**-0.1**
MGOD	**Makushin Gods**	**2.22**	**278**			**Pn**	**14 58 50.7**	**+0.6**
SDPT	**Sand Point**	**2.40**	**40**			**Pn**	**14 58 53.9**	**+1.5**
SDPT						**Sn**	**14 59 21.9**	**+0.4**
SDPT	**Sand Point**	**2.40**	**40**	IAML			14 59 33.2	
	comp=N,494nm,1.3s							
SDPT				IAML			14 59 35.3	
	comp=E,430nm,0.6s							
SDPT	**Sand Point**	**2.40**	**40**	P		**Pn**	**14 58 53.9**	**+1.5**
	baz=221							
SDPT				S		**Sn**	**14 59 21.9**	**+0.4**
	baz=221							
CNBA	**Chernabura Isl**	**2.46**	**57**			**Pn**	**14 58 54.4**	**+1.1**
CNBA						**Sn**	**14 59 23.3**	**+0.2**
CNBA	**Chernabura Isl**	**2.46**	**57**	IAML			14 59 25.6	
	comp=E,257nm,0.4s							
CHNA	**Chernabura Isl**	**2.46**	**57**	P		**Pn**	**14 58 54.3**	**+1.0**
	baz=239							
CHNA				S		**Sn**	**14 59 23.3**	**+0.1**
	baz=239							
OKFG	**Magazine Ridge**	**2.84**	**269**			**Pn**	**14 58 59.7**	**+1.2**
NIKH	**Nikolski High**	**3.47**	**263**			**Pn**	**14 59 06.7**	**-0.5**
NIKH	**Nikolski High**	**3.47**	**263**	P		**Pn**	**14 59 06.7**	**-0.5**
	baz=79							
VNHG	**Veniaminof 1**	**3.54**	**39**			**Pn**	**14 59 10.3**	**+2.1**
ANPB	**Aniakchak Plen**	**4.30**	**39**			**Pn**	**14 59 20.5**	**+1.8**
CHIR	**Chirikof Islan**	**4.94**	**59**			**Pn**	**14 59 27.9**	**+0.7**
CHIR	**Chirikof Islan**	**4.94**	**59**	P		**Pn**	**14 59 27.9**	**+0.7**
	baz=245							
SII	**Sitkinak Islan**	**5.98**	**56**			**Pn**	**14 59 42.8**	**+1.1**
SII	**Sitkinak Islan**	**5.98**	**56**	P		**Pn**	**14 59 42.7**	**+1.1**
	baz=243							
OHAK	**Old Harbor**	**6.73**	**53**			**Pn**	**14 59 51.7**	**-0.1**
OHAK	**Old Harbor**	**6.73**	**53**	P		**Pn**	**14 59 51.7**	**-0.1**
	baz=241							
KDAK	**Kodiak Island**	**7.34**	**50**	Pn		**Pn**	**15 00 00.0**	**-0.2**
	comp=E,0.9nm,0.3s,baz=183,slow=5.8,SNR=11							
KDAK				Sn		**Sn**	**15 01 17.1**	**-6.0**
	comp=E,0.9nm,0.3s,baz=0.9,slow=22,SNR=6.7							
	comp=E,2.3nm,0.4s							
O18K	**Koktuh Hills**	**7.69**	**31**			**Pn**	**15 00 05.8**	**+0.7**
O18K	**Koktuh Hills**	**7.69**	**31**	P		**Pn**	**15 00 05.8**	**+0.7**
	baz=218							
N19K	**Bonanza Creek**	**8.67**	**29**			**Pn**	**15 00 21.4**	**+2.7**
M19K	**Big River Lodg**	**9.60**	**26**			**Pn**	**15 00 32.5**	**+1.3**
L19K	**White Mountain**	**9.72**	**24**	Pn		**Pn**	**15 00 34.1**	**+1.2**
M20K	**Styx River**	**9.92**	**29**			**Pn**	**15 00 38.0**	**+2.3**
SUA	**Susitna One**	**10.36**	**35**			**Pn**	**15 00 42.5**	**+0.8**
K20K	**Telida**	**10.92**	**22**			**Pn**	**15 00 50.8**	**+1.5**
J20K	**Nowinta River**	**11.62**	**20**	Pn		**Pn**	**15 00 59.8**	**+0.9**
SCM	**Sheep Creek Mo**	**11.84**	**39**			**Pn**	**15 01 00.4**	**-1.5**
KLU	**Klutina**	**12.19**	**42**			**Pn**	**15 01 06.0**	**-0.7**
M24K	**Tolsona, Glenn**	**12.44**	**40**			**Pn**	**15 01 09.9**	**-0.2**
MLY	**Manley**	**13.12**	**24**			**Pn**	**15 01 20.6**	**+1.3**
PAX	**Paxson**	**13.22**	**37**			**Pn**	**15 01 18.3**	**-2.4**
SHEM	**Shemya Is, Ala**	**13.66**	**276**	LR		LR	15 06 15.3	
	comp=E,91nm,21.6s,baz=55,slow=36							
M26K	**Nabesna, AK**	**13.84**	**42**			**Pn**	**15 01 28.6**	**-0.7**
RIDG	**Independent Ri**	**13.91**	**36**			**Pn**	**15 01 29.7**	**-0.5**
ILAR	**Eielson Array**	**13.96**	**30**	Pn		**Pn**	**15 01 27.6**	**-3.2**
	comp=E,0.1nm,0.3s,baz=217,slow=13,SNR=5.8							
ILAR				LR		LR	15 07 18.5	
	comp=E,128nm,20.4s,baz=226,slow=40							
	comp=E,0.1nm,0.4s							
M27K	**Edge Creek, AK**	**14.27**	**43**			**Pn**	**15 01 35.7**	**+0.5**
J25K	**Salcha River,**	**14.31**	**32**			**Pn**	**15 01 33.0**	**-2.7**
J26L	**Joseph Creek**	**14.83**	**35**			**Pn**	**15 01 43.8**	**+1.0**
COLD	**Coldfoot**	**15.09**	**20**	Pn		**Pn**	**15 01 44.4**	**-1.8**
COLD				IAmb	IAmb		15 01 52.9	
	comp=Z,6.1nm,0.8s							
DAWY	**Dawson**	**16.09**	**40**			**Pn**	**15 01 58.7**	**-0.6**
TOLK	**Toolik Lake Re**	**16.44**	**18**			**P**	**15 02 07.6**	**+1.2**
TOLK				IAmb	IAmb		15 02 10.3	
	comp=Z,5.2nm,0.6s							
INK	**Inuvik**	**20.33**	**32**	P		**P**	**15 02 48.0**	**-0.9**
	comp=Z,1.6nm,0.5s,baz=247,slow=7.7,SNR=2.7							
	comp=Z,1.6nm,0.5s							
PETK	**Petropavlovsk-**	**23.18**	**285**	P		**P**	**15 03 18.6**	**-1.1**
	comp=Z,2.3nm,0.6s,baz=83,slow=12,SNR=10							
PETK				LR		LR	15 12 40.8	
	comp=Z,73nm,19.0s,baz=11,slow=38							
	comp=Z,2.3nm,0.6s							
PETK	**Petropavlovsk-**	**23.18**	**285**	P		**P**	**15 03 17.2**	**-2.4**
SEY	**Seymchan**	**24.72**	**310**	P		**P**	**15 03 33.5**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=100,slow=14,SNR=4.0							
	comp=Z,0.7nm,0.6s							
YKA	**Yellowknife Ar**	**26.61**	**51**	P		**P**	**15 03 53.5**	**+2.3**
	comp=Z,1.1nm,0.6s,baz=272,slow=9.3,SNR=11							
	comp=Z,1.1nm,0.6s							
YKA	**Yellowknife Ar**	**26.61**	**51**	P		**P**	**15 03 52.7**	**+1.5**
YBH	**Yreka Blue Hor**	**29.31**	**97**	LR		LR	15 13 58.0	
	comp=Z,63nm,18.3s,baz=292,slow=32							
TIXI	**Tiksi**	**33.70**	**328**	LR		LR	15 19 50.7	
	comp=Z,86nm,19.3s,baz=274,slow=39							
H11N2	**WAKE ISLAND Hy**	**40.85**	**226**	T		T	15 49 40.8	
	baz=26,slow=76,SNR=42							
H11N3	**WAKE ISLAND Hy**	**40.85**	**226**	T		T	15 49 34.6	
	baz=26,slow=76,SNR=48							
H11N1	**WAKE ISLAND Hy**	**40.87**	**226**	T		T	15 49 34.8	
	baz=26,slow=76,SNR=40							
H11S1	**WAKE ISLAND Hy**	**42.02**	**225**	T		T	15 51 01.0	
	baz=26,slow=76,SNR=50							
H11S2	**WAKE ISLAND Hy**	**42.03**	**225**	T		T	15 50 56.6	
	baz=26,slow=76,SNR=37							
H11S3	**WAKE ISLAND Hy**	**42.03**	**225**	T		T	15 50 58.0	
	baz=26,slow=76,SNR=53							
MJAR	**Matsushiro Arr**	**43.46**	**271**	LR		LR	15 27 02.0	
	comp=Z,26nm,18.6s,baz=208,slow=40							
FRB	**Frobisher Bay**	**45.79**	**38**	LR		LR	15 27 22.3	
	comp=Z,71nm,21.5s,baz=320,slow=38							
SPITS	**Spitsbergen Ar**	**48.54**	**0**	P		**P**		**15 06 54.7**	**-0.9**
	comp=Z,15nm,1.1s,baz=34,slow=6.1,SNR=5.3								
	comp=Z,15nm,1.1s								
KSRS	**Korea Array**	**48.95**	**280**	P		**P**		**15 06 59.6**	**+0.4**
	comp=Z,0.9nm,0.5s,baz=162,slow=33,SNR=4.8								
	comp=Z,0.9nm,0.5s								
TXAR	**Lajitas Array**	**49.03**	**95**	P		**P**		**15 07 02.6**	**+2.5**
	comp=Z,0.3nm,0.7s,baz=309,slow=5.7,SNR=2.6								
	comp=Z,0.3nm,0.7s								
SFJD	**Kangerlussuaq**	**49.62**	**28**	LR		LR	15 32 02.4		
	comp=Z,26nm,19.0s,baz=302,slow=41								
SONM	**Songino Array**	**53.85**	**303**	P		**P**		**15 07 36.0**	**0.0**
	comp=Z,1.4nm,0.7s,baz=32,slow=7.6,SNR=5.3								
	comp=Z,1.4nm,0.7s								
ARCES	**ARCESS Array B**	**57.07**	**356**	P		**P**		**15 07 57.5**	**-1.1**
	comp=Z,0.7nm,0.6s,baz=8.3,slow=8.3,SNR=5.8								
	comp=Z,0.7nm,0.6s								
ARCES	**ARCESS Array B**	**57.07**	**356**	P		**P**

EDFI Ende, Flores 8.79 196 P Pn 15 03 35.6 +6.6
MTKI Muara Teweh, K 9.21 266 P Pn 15 03 40.7 +6.0
SOEI Soe 9.46 179 **Pn** **15 03 37.9 -0.3**
SOEI Soe 9.46 179 P Pn 15 03 43.1 +4.9
SOEI Soe 9.46 179 P **Pn** **15 03 39.4 +1.2**
BBKI Banjar Baru 9.77 251 P Pn 15 03 48.9 +6.5
8µm49nm,1.4s
BATI Baumata 9.91 182 P **Pn** **15 03 48.3 +4.0**
17nm,0.7s,baz=298,slow=17,SNR=4.6
BATI LR LR 15 07 19.8
comp=Z,668nm,20.6s,baz=280,slow=36
BAKI Biak 12.06 95 P **P** **15 04 26.4 +3.6**
SBUM Sibu 12.15 283 Pn **Pn** **15 04 15.4 +0.7**
STKI Sintang 12.61 271 P **Pn** **15 04 23.6 +2.8**
36nm,1.1s
PBKI Pangkalan Bun 12.65 259 P **P** **15 04 28.0 -1.3**
79nm,0.6s
JAGI Jajag, Banyuwa 12.84 230 Pn **Pn** **15 04 22.5 -1.4**
KSM Kuching 13.88 277 Pn **Pn** **15 04 36.3 -1.2**
KSM Kuching 13.88 277 P **P** **15 04 41.4 -1.6**
MTN Manton Dam 14.35 151 Pn **Pn** **15 04 43.6 -0.1**
PWJI Pagerwojo 14.47 237 P **P** **15 04 48.8 -0.8**
75nm,1.1s
WOJI Wonogiri, Jawa 15.13 240 P **P** **15 04 59.8 +2.9**
40nm,1.2s
KNRA Kununurra 16.02 163 **P** **15 05 06.8 +0.1**
KNRA Kununurra 16.02 163 P **P** **15 05 07.9 +1.1**
TPI Tanjungpandan 16.61 261 P **P** **15 05 18.8 +5.5**
16nm,1.3s
LEM Lembang 17.68 248 P **Pn** **15 05 27.2 +1.7**
26nm,0.5s,baz=72,slow=8.8,SNR=9.7
LEM LR LR 15 13 33.2
comp=Z,121nm,20.7s,baz=38,slow=41
CBJI Citeko 18.26 250 P **Pn** **15 05 35.8 +3.4**
183nm,1.2s
DSRI Dabo 19.50 269 P **Pn** **15 05 47.5 +0.3**
17nm,0.8s
TPRI Tanjung Pinang 19.59 273 P **Pn** **15 05 48.2 0.0**
118nm,0.9s
MYKOM Kota Tinggi 20.33 276 P **P** **15 05 55.2 +1.1**
MYKOM IAmb IAmb 15 05 59.3
comp=Z,36nm,0.9s
MBWA Marble Bar 21.23 191 P **P** **15 06 03.0 -0.6**
MBWA Marble Bar 21.23 191 P **P** **15 06 04.1 +0.5**
PSA00 Pilbara Seismi 21.61 191 P **P** **15 06 07.1 -0.6**
PSA00 Pilbara Seismi 21.61 191 P **P** **15 06 07.9 +0.2**
PSA00 IAmb IAmb 15 06 45.2
comp=Z,6.0nm,1.0s
WB0 Warramunga Arr 21.88 153 P **P** **15 06 09.4 -1.3**
WRAB Tennant Creek 22.01 153 P **P** **15 06 10.8 -1.3**
WRAB Tennant Creek 22.01 153 P **P** **15 06 12.6 +0.6**
WRA Warramunga Arr 22.01 153 P **P** **15 06 10.5 -1.5**
comp=Z,8.3nm,0.9s,baz=336,slow=9.6,SNR=76
WRA PcP **PcP** **15 10 08.1 +0.6**
comp=Z,1.0nm,0.5s,baz=332,slow=2.1,SNR=5.1
WRA ScP **ScP** **15 13 38.5 +1.2**
comp=Z,0.6nm,0.6s,baz=331,slow=2.5,SNR=6.4
comp=Z,8.3nm,0.9s
WRA Warramunga Arr 22.01 153 P **P** **15 06 09.6 -2.5**
WB2 Warramunga Arr 22.02 153 P **P** **15 06 11.0 -1.1**
WR0 Warramunga Arr 22.12 153 P **P** **15 06 11.4 -1.8**
COEN Coen 23.30 127 P **P** **15 06 24.2 -1.1**
COEN Coen 23.30 127 P **P** **15 06 25.6 +0.3**
MANU Manus Island 23.35 95 P **P** **15 06 27.6 +1.8**
IPM Ipoh 23.50 282 P **P** **15 06 26.9 -0.2**
TPUB Ta-pu 23.64 352 P **P** **15 06 27.5 -0.7**
TPUB IAmb IAmb 15 06 33.1
comp=Z,38nm,0.8s
TPUB Ta-pu 23.64 352 P **P** **15 06 28.0 -0.2**
YULB Yu-li 23.64 354 P **P** **15 06 25.0 -3.3**
KULM Kulim 24.03 284 P **P** **15 06 31.0 -0.9**
SSLB Suanglung 24.07 353 P **P** **15 06 30.0 -2.1**
SSLB IAmb IAmb 15 06 49.7
comp=Z,146nm,1.8s
SSLB Suanglung 24.07 353 P **P** **15 06 35.5 +3.4**
GIRL Giralia 24.25 203 P **P** **15 06 32.7 -1.0**
GIRL IAmb IAmb 15 06 57.5
comp=Z,100nm,1.3s
GIRL Giralia 24.25 203 P **P** **15 06 35.5 +1.8**
NACB Ninganchiao 24.39 354 P **P** **15 06 31.5 -3.4**
NACB IAmb IAmb 15 07 06.1
comp=Z,56nm,1.4s
PMG Port Moresby 24.71 112 P **P** **15 06 37.9 -0.1**
comp=Z,20nm,0.7s,baz=335,slow=5.2,SNR=7.7
comp=Z,20nm,0.7s
PMG Port Moresby 24.71 112 P **P** **15 06 36.1 -2.0**
PMG IAmb IAmb 15 06 39.8
comp=Z,21nm,0.8s
PMG Port Moresby 24.71 112 P **P** **15 06 39.2 +1.2**
PMG Port Moresby 24.71 112 P **P** **15 06 39.3 +1.2**
GUMO Guam 24.76 55 P **P** **15 06 38.1 -0.3**
comp=Z,40nm,0.6s,baz=175,slow=11,SNR=4.0
comp=Z,40nm,0.6s
GUMO Guam 24.76 55 IAmb IAmb 15 06 39.8
comp=Z,220nm,1.8s
YHNB Yeheng 24.90 354 P **P** **15 06 38.4 -1.3**
YHNB IAmb IAmb 15 07 06.0
comp=Z,106nm,1.7s
YHNB Yeheng 24.90 354 P **P** **15 06 41.6 +1.9**
WRKA Warakurna 24.99 171 P **P** **15 06 41.2 +0.7**
AS31 Alice Springs 25.17 158 P **P** **15 06 41.6 -0.5**
ASAR Alice Springs 25.17 158 P **P** **15 06 42.0 -0.1**
comp=Z,9.5nm,0.7s,baz=335,slow=6.9,SNR=156
ASAR PcP **PcP** **15 10 15.2 +1.0**
comp=Z,2.7nm,0.5s,baz=355,slow=2.1,SNR=14
ASAR ScP **ScP** **15 13 47.2 +1.5**
comp=Z,0.6nm,0.6s,baz=344,slow=2.7,SNR=5.7
ASAR LR LR 15 17 46.5
comp=Z,117nm,18.6s,baz=338,slow=39
comp=Z,9.5nm,0.7s
ASAR Alice Springs 25.17 158 P **P** **15 06 42.1 0.0**
QIS Mount Isa 25.27 144 P **P** **15 06 44.1 +1.1**
MEEK Meekatharra 26.77 191 P **P** **15 06 56.6 0.0**
JOW Kunigami 27.21 8 P **P** **15 07 02.5 +2.0**
comp=Z,29nm,0.9s,baz=186,slow=9.2,SNR=3.9
JOW LR LR 15 17 03.8
comp=Z,22nm,19.9s,baz=158,slow=35
KRVT Keravat (AS076 28.21 99 P **P** **15 07 10.7 +1.2**
comp=Z,58nm,0.8s,baz=219,slow=2.1,SNR=16
comp=Z,58nm,0.8s
CTA Charters Tower 29.33 134 P **P** **15 07 21.1 +1.6**
comp=Z,12nm,1.1s,baz=314,slow=9.4,SNR=4.6
CTA LR LR 15 19 28.8
comp=Z,42nm,21.9s,baz=288,slow=37
comp=Z,12nm,1.1s
CTAO Charters Tower 29.33 134 P **P** **15 07 19.2 -0.3**
CTAO IAmb IAmb 15 07 22.3
comp=Z,23nm,1.2s
OOD Oodnadatta 29.58 159 P **P** **15 07 21.7 +0.2**
FORT Forrest 30.61 173 P **P** **15 07 30.3 -0.3**
FORT IAmb IAmb 15 07 54.0
comp=Z,18nm,0.7s
FORT Forrest 30.61 173 P **P** **15 07 30.7 +0.1**
CM31 Chiang Mai Arr 30.91 308 P **P** **15 07 33.7 +0.3**
CMAR Chiang Mai Arr 30.91 308 P **P** **15 07 34.5 +1.1**
comp=Z,1.9nm,0.7s,baz=138,slow=7.3,SNR=20
CMAR PcP **PcP** **15 10 29.7 +1.4**
comp=Z,0.9nm,0.6s,baz=113,slow=1.7,SNR=4.5
CMAR ScP **ScP** **15 14 04.8 +1.3**
comp=Z,3.1nm,1.1s,baz=165,slow=2.8,SNR=11
comp=Z,1.9nm,0.7s
CMAR Chiang Mai Arr 30.91 308 P **P** **15 07 31.4 -2.0**
CMAR **ScP** **15 14 04.4 +0.8**
CHTO Chiang Mai 31.11 309 P **P** **15 07 33.6 -1.6**
MULG Mulgathing 31.35 163 P **P** **15 07 37.8 +0.7**
INKA Innaminka 31.68 151 P **P** **15 07 40.9 +0.9**
JSU Suzuyama 32.14 10 P **P** **15 07 42.0 -2.0**
JSU IAmb IAmb 15 07 46.3
comp=Z,19nm,0.8s
JCJ Chichijima 32.28 31 P **P** **15 07 44.1 -1.1**
JCJ Chichijima 32.28 31 P **P** **15 07 45.1 -0.2**
NJ2 Nanjing 32.49 352 *eP* P 15 07 53.3 +6.2
NJ2 pmax pmax
comp=Z,7.0nm,0.7s
LCRK Leigh Creek 32.91 157 P **P** **15 07 51.3 +0.5**
JNU Nakatsue 33.79 10 P **P** **15 07 56.6 -1.9**
JNU IAmb IAmb 15 08 01.5
comp=Z,30nm,1.0s
JNU Nakatsue 33.79 10 P **P** **15 08 01.2 +2.7**
PZH PanZhiHua 34.20 323 P **P** **15 08 03.4 +1.2**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,120nm,7.3s
BBOO Buckleboo 34.31 162 P **P** **15 08 01.1 -1.9**
BBOO IAmb IAmb 15 08 37.4
comp=Z,48nm,1.8s
BBOO Buckleboo 34.31 162 P **P** **15 08 03.5 +0.6**
JTU Tsushima 34.94 8 P **P** **15 08 08.5 +0.2**
STKA Stephens Creek 35.56 154 P **P** **15 08 14.1 +0.4**
comp=Z,2.7nm,0.5s,baz=330,slow=9.4,SNR=10
comp=Z,2.7nm,0.5s
STKA Stephens Creek 35.56 154 P **P** **15 08 13.5 -0.2**
STKA Stephens Creek 35.56 154 P **P** **15 08 14.3 +0.6**
HTT Hallett 35.85 159 P **P** **15 08 17.6 +1.4**
JHS Saijyo 36.06 13 P **P** **15 08 16.8 -1.2**
JHS IAmb IAmb 15 08 19.6
comp=Z,31nm,1.0s
LYN LuoYang 36.28 344 *eP* **P** **15 08 21.2 +1.5**
LYN sP sP 15 08 55.7 +6.5
LYN pmax pmax
comp=Z,10.0nm,0.7s
LYN pmax pmax
comp=Z,100nm,6.2s
XAN Xi'an 36.95 339 P **P** **15 08 26.1 +0.6**
XAN pmax pmax
comp=Z,8.0nm,1.0s
KSCHJ Chungju 37.10 5 P **P** **15 08 26.2 -0.5**
KSCHJ IAmb IAmb 15 08 28.5
comp=Z,10.0nm,0.9s
CMSA Cobar Meteorol 37.25 149 P **P** **15 08 29.8 +1.7**
INU Inuyama 37.41 18 P **P** **15 08 29.6 +0.3**
INU IAmb IAmb 15 08 30.4
comp=Z,22nm,1.0s
KSAR Wonju Array Be 37.66 5 P **P** **15 08 27.3 -4.1**
KSRS Korea Array 37.67 5 P **P** **15 08 32.0 +0.5**
comp=Z,5.0nm,0.8s,baz=181,slow=8.9,SNR=15
comp=Z,5.0nm,0.8s
KS19 Wonju Array Si 37.71 5 P **P** **15 08 28.6 -3.3**
KS19 IAmb IAmb 15 09 12.7
comp=Z,17nm,1.4s
JGF Kuroka 37.74 18 P **P** **15 08 31.3 -0.9**
JGF IAmb IAmb 15 08 37.1
comp=Z,24nm,1.3s
SEHB SEOHWA 38.51 5 P **P** **15 08 38.7 +0.1**
SEHB IAmb IAmb 15 09 02.4
comp=Z,27nm,1.2s
MAJO Matsushiro 38.87 18 P **P** **15 08 40.2 -1.4**
MAJO IAmb IAmb 15 08 41.9
comp=Z,14nm,0.8s
MAJO Matsushiro 38.87 18 P **P** **15 08 41.1 -0.6**
MAJO pP **sP** **15 09 09.5 -1.7**
MJAR Matsushiro Arr 38.87 18 P **P** **15 08 40.7 -1.0**
comp=Z,13nm,0.9s,baz=187,slow=9.2,SNR=23
MJAR PcP **PcP** **15 10 52.1 +1.0**
comp=Z,2.2nm,0.7s,baz=169,slow=3.8,SNR=4.3
comp=Z,13nm,0.9s
MJAR Matsushiro Arr 38.87 18 P **P** **15 08 40.2 -1.5**
MJB9 Matsu-Tunnel 38.88 18 P **P** **15 08 40.8 -0.9**
MJB9 IAmb IAmb 15 08 41.8
comp=Z,13nm,0.8s
ARMA Armidale 39.83 141 P **P** **15 08 48.5 -1.3**
ARMA IAmb IAmb 15 09 19.7
comp=Z,26nm,1.6s
JSD Sado 40.27 17 P **P** **15 08 52.2 -0.9**
JSD IAmb IAmb 15 09 10.5
comp=Z,29nm,1.1s
BJI Beijing 40.73 351 P **P** **15 08 57.9 +0.9**
BJI pmax pmax
comp=Z,9.0nm,1.0s
LZH Lanzhou 40.75 335 *eP* P 15 09 03.8 +6.4
LZH pmax pmax
comp=Z,26nm,1.3s
JMM Marumori 40.93 20 P **P** **15 08 57.7 -1.0**
CAN Canberra 41.93 149 P **P** **15 09 07.9 +1.0**
CAN IAmb IAmb 15 09 13.5
comp=Z,60nm,1.7s
CAN Canberra 41.93 149 P **P** **15 09 09.4 +2.4**
CAN Canberra 41.93 149 P **P** **15 09 09.3 +2.3**
CAN pP **sP** **15 09 36.3 0.0**
CAN sP sP 15 09 56.0 +20
TOO Toolangi 42.08 154 P **P** **15 09 07.3 -0.8**
TOO IAmb IAmb 15 09 48.9
comp=Z,18nm,1.4s
TOO Toolangi 42.08 154 P **P** **15 09 10.4 +2.3**
HHC Hu-ho-hao-te 42.45 346 *eP* **P** **15 09 13.2 +2.1**
HHC pmax pmax
comp=Z,19nm,1.0s
HHC pmax pmax
comp=Z,78nm,4.9s
BTO Baotou 42.62 344 *eP* **P** **15 09 17.3 +4.8**
JTM Tenmabayashi 43.66 19 P **P** **15 09 21.6 +0.9**
PALK Pallekele 43.90 281 LR LR 15 27 26.0
comp=Z,168nm,19.7s,baz=198,slow=36
USA0B Ussuriysk Arra 44.80 8 P **P** **15 09 29.8 0.0**
USA0B IAmb IAmb 15 09 31.1
comp=Z,25nm,0.8s
USRK Ussuriysk Ar. 44.80 8 P **P** **15 09 30.1 +0.2**
comp=Z,18nm,0.6s,baz=192,slow=6.7,SNR=39
comp=Z,18nm,0.6s
USRK Ussuriysk Ar. 44.80 8 P **P** **15 09 29.9 +0.1**
MDJ Mudanjiang 44.93 6 P **P** **15 09 31.2 +0.4**
MDJ pmax pmax
comp=Z,16nm,0.8s
MDJ pmax pmax
comp=Z,170nm,4.2s
GTA Gaotai 45.28 333 *eP* **P** **15 09 35.2 +1.3**
GTA pmax pmax
comp=Z,7.0nm,0.9s
GTA pmax pmax
comp=Z,41nm,6.5s
GTA LR LR
comp=Z,76nm,16.7s
GTA LR LR
comp=Z,110nm,18.5s
GTA LR LR
comp=Z,64nm,18.2s
OUENC Ouen Island, N 47.09 121 P **P** **15 09 48.6 +0.5**
OUENC IAmb IAmb 15 10 36.2
comp=Z,58nm,1.4s
ASAJ Asahikawa 47.15 18 P **P** **15 09 48.9 +0.6**
comp=Z,5.2nm,0.5s,baz=225,slow=8.5,SNR=13
ASAJ LR LR 15 32 16.9
comp=Z,33nm,18.4s,baz=215,slow=39
comp=Z,5.2nm,0.5s
JKA Kamikawa-asahi 47.15 18 P **P** **15 09 48.2 -0.1**
KLR Kul'dur 49.72 7 P **P** **15 10 07.5 -0.5**
comp=Z,10nm,0.7s,baz=205,slow=4.6,SNR=40
comp=Z,10nm,0.7s
ULN Ulaanbaatar 50.15 345 P **P** **15 10 10.2 -1.3**
SONM Songino Array 50.29 345 P **P** **15 10 11.6 -0.9**
comp=Z,2.0nm,0.6s,baz=162,slow=8.4,SNR=8.2
comp=Z,2.0nm,0.6s
SONM Songino Array 50.29 345 P **P** **15 10 11.2 -1.2**
WMQ Urumqi 54.56 328 *eP* **P** **15 10 46.2 +2.2**
MLZ Mavora Lakes 59.36 145 P **P** **15 11 16.4 -1.5**
MK31 Makanchi Array 59.38 328 P **P** **15 11 17.1 -1.0**
MKAR Makanchi Array 59.38 328 P **P** **15 11 17.1 -0.9**
comp=Z,3.2nm,0.7s,baz=123,slow=8.2,SNR=26
MKAR ScP **ScP** **15 15 56.9 -1.4**
comp=Z,0.4nm,0.6s,baz=123,slow=4.6,SNR=3.5
comp=Z,3.2nm,0.7s
MKAR Makanchi Array 59.38 328 P **P** **15 11 17.0 -1.1**
MAKZ Makanchi 59.56 328 P **P** **15 11 18.2 -1.0**
MAKZ IAmb IAmb 15 11 20.9
comp=Z,11nm,1.7s
KDJ Kajisay 59.63 321 P **P** **15 11 19.0 -1.1**
KDJ IAmb IAmb 15 11 26.2
comp=Z,7.0nm,0.3s
LBZ Lake Benmore 60.00 143 P **P** **15 11 21.6 -0.7**
PEA0B Petropavlovsk- 60.08 23 P **P** **15 11 23.6 +0.9**
PEA0B PcP **PcP** **15 12 08.6 +1.0**
PETK Petropavlovsk- 60.08 23 P **P** **15 11 23.2 +0.6**
comp=Z,13nm,0.8s,baz=203,slow=9.7,SNR=12
PETK PcP **PcP** **15 12 08.4 +0.7**
comp=Z,2.1nm,0.5s,baz=216,slow=4.1,SNR=4.9
comp=Z,13nm,0.8s
RPZ Rata Peaks 60.16 142 P **P** **15 11 23.7 +0.3**
LREZ Lake Rotokare 60.21 137 P **P** 15 11 37.9 +14
THZ Tophouse 60.31 140 P **P** **15 11 23.4 -1.2**
NNZ Nelson 60.35 139 P **P** **15 11 22.9 -1.8**
OXZ Oxford 60.56 142 P **P** **15 11 27.3 +1.2**
BOOM Boomskoye usch 60.61 321 P **P** **15 11 27.3 +0.6**
TUWZ Tuamarina 60.83 139 P **P** **15 11 26.7 -1.3**
OTVZ Oturere 60.95 136 P **P** **15 11 32.0 +3.0**
KHZ Kahutara 61.05 140 P **P** **15 11 29.2 -0.1**
MQZ McQueen's Vall 61.14 142 P **P** **15 11 29.9 -0.1**
WHRZ Whale Island 61.31 134 P **P** 15 11 38.8 +7.4
BHHZ Black Hill Sta 61.37 136 P **P** **15 11 32.7 +1.0**
BHW Baring Head 61.43 138 P **P** **15 11 32.0 -0.1**
BKZ Black Stump Fm 61.52 136 P **P** **15 11 33.4 +0.6**
BKZ IAmb IAmb 15 12 02.0
comp=Z,18nm,1.2s
BKZ Black Stump Fm 61.52 136 P **P** **15 11 33.8 +1.0**
MRZ Mangatainoka R 61.56 137 P **P** **15 11 33.4 +0.5**
URZ Urewera 61.58 134 P **P** **15 11 31.7 -1.4**
URZ IAmb IAmb 15 11 42.2
comp=Z,42nm,1.6s
URZ Urewera 61.58 134 P **P** **15 11 33.7 +0.6**
KWHZ Kaweka Forest 61.59 136 P **P** **15 11 34.5 +1.2**
RTZ Ruatahuna 61.63 135 P **P** **15 11 31.0 -2.6**
MWZ Matawai 61.91 134 P **P** **15 11 36.5 +1.2**
YAK Yakutsk 62.25 3 P **P** **15 11 35.8 -1.3**
YAK Yakutsk 62.25 3 P **P** **15 11 37.2 +0.1**
YAK pP **PcP** **15 12 12.1 -4.1**
YAK sP sP 15 12 24.0 +17
CNGZ Carnagh Statio 62.46 134 P **P** **15 11 40.5 +1.5**
GAR Garm 62.74 315 P **P** **15 11 39.5 -1.5**
GAR IAmb IAmb 15 11 42.4
comp=Z,12nm,1.1s
ZALV Zalesovo Beam 62.98 335 P **P** **15 11 40.1 -2.0**
comp=Z,1.0nm,0.4s,baz=120,slow=6.2,SNR=6.6
comp=Z,1.0nm,0.4s
MA2 Magadan 63.18 15 P **P** **15 11 44.2 +0.8**
comp=Z,28nm,0.7s,baz=187,slow=5.2,SNR=15
MA2 LR LR 15 38 59.9
comp=Z,33nm,19.2s,baz=146,slow=36
comp=Z,28nm,0.7s
MA2 Magadan 63.18 15 **P** **15 11 43.4 0.0**
MA2 Magadan 63.18 15 P **P** **15 11 44.5 +1.1**
MA2 sP PcP 15 12 34.6 +15
KURK Kurchatov 63.72 330 P **P** **15 11 45.9 -1.2**
KURK sP PcP 15 12 31.2 +8.7
KKAR Karatay Array 64.40 319 P **P** **15 11 50.3 -1.4**
SEY Seymchan 66.48 14 P **P** **15 12 05.5 +0.9**
comp=Z,7.7nm,0.8s,baz=219,slow=5.8,SNR=12
SEY LR LR 15 41 16.0
comp=Z,26nm,18.9s,baz=322,slow=36
comp=Z,7.7nm,0.8s
CASY Casey 66.61 186 P **P** **15 12 06.6 +1.1**
SMY Shemya 67.20 30 P **P** **15 12 10.2 +0.8**
BRVK Borovoye 69.31 329 P **P** **15 12 21.2 -1.5**
KIWB Kanaga Island 71.44 34 P **P** **15 12 36.1 +0.5**
ADK Adak 71.71 34 P **P** **15 12 37.2 0.0**
TIXI Tiksi 71.83 2 LR LR 15 44 53.3
comp=Z,17nm,20.5s,baz=180,slow=36
TIXI Tiksi 71.83 2 P **P** **15 12 37.0 -0.6**
TIXI IAmb IAmb 15 12 38.4
comp=Z,11nm,1.0s
TIXI Tiksi 71.83 2 P **P** **15 12 37.2 -0.5**
TIXI pP sP 15 13 16.5 +8.6
ABKAR Akbulak array 73.58 322 P **P** **15 12 46.9 -1.6**
ABKAR Akbulak array 73.58 322 P **P** **15 12 46.7 -1.7**
NRIK Noril'sk 73.66 347 P **P** **15 12 48.0 -0.5**
comp=Z,6.8nm,0.6s,baz=128,slow=5.5,SNR=13
comp=Z,6.8nm,0.6s
NRIK Noril'sk 73.66 347 P **P** **15 12 47.7 -0.8**
NRIK IAmb IAmb 15 12 48.8
comp=Z,7.2nm,0.8s
BILL Bilibino 74.04 15 P **P** **15 12 50.6 -0.2**
ARU Arti 76.89 329 P **P** **15 13 05.4 -1.9**
comp=Z,2.5nm,0.4s,baz=175,slow=6.1,SNR=5.9
comp=Z,2.5nm,0.4s
KEKH Kekaha 77.31 68 P **P** **15 13 08.9 -1.4**
VOI Vohitsoka 78.12 248 P **P** **15 13 13.7 -1.3**
VOI IAmb IAmb 15 13 39.5
comp=Z,33nm,1.2s
UNV Unalaska Valle 78.17 35 P **P** **15 13 13.6 -0.9**
UNV IAmb IAmb 15 13 18.9
comp=Z,64nm,1.5s
UNV Unalaska Valle 78.17 35 P **P** **15 13 15.7 +1.3**
baz=253
AKUT Akutan 78.67 34 P **P** **15 13 18.1 +0.9**
GAMB Gambell 79.07 24 P **P** **15 13 20.4 +1.3**
baz=246
VNDA Vanda 79.87 172 P **P** **15 13 24.1 +0.8**
comp=Z,0.7nm,0.5s,baz=312,slow=6.0,SNR=8.7
VNDA LR LR 15 48 11.3
comp=Z,33nm,19.1s,baz=333,slow=35
comp=Z,0.7nm,0.5s
VNDA Vanda 79.87 172 P **P** **15 13 23.0 -0.3**
FALS False Pass 80.18 34 P **P** **15 13 26.2 +0.8**
FALS False Pass 80.18 34 P **P** **15 13 26.2 +0.8**
baz=255
SDPT Sand Point 81.94 34 P **P** **15 13 35.7 +0.9**
SDPT Sand Point 81.94 34 P **P** **15 13 35.5 +0.8**
baz=258
N16K Nishlik Lake 83.88 29 P **P** **15 13 46.7 +1.9**
baz=259,SNR=26
P16K Nushagak River 83.99 31 P **P** **15 13 46.8 +1.6**
baz=260,SNR=15
O16K Kokwok River B 84.05 30 P **P** **15 13 47.0 +1.4**
baz=259,SNR=20
CHIR Chirikof Islan 84.74 34 P **P** **15 13 50.9 +1.8**
CHIR Chirikof Islan 84.74 34 P **P** **15 13 50.0 +0.9**
baz=262
P17K Kvichak River 84.81 31 P **P** **15 13 50.4 +1.0**
baz=261
N18K Kilae Creek 85.32 29 P **P** **15 13 53.5 +1.6**
baz=261
P18K Big Mountain, 85.45 30 P **P** **15 13 53.4 +0.7**
baz=262
SVW2 Sparrevohn 85.53 29 P **P** **15 13 54.5 +1.5**
SVW2 IAmb IAmb 15 13 55.1
comp=Z,6.6nm,0.6s
O18K Koktuh Hills 85.53 30 P **P** **15 13 53.8 +0.8**
O18K IAmb IAmb 15 13 56.3
comp=Z,7.0nm,0.7s
O18K Koktuh Hills 85.53 30 P **P** **15 13 54.0 +1.0**
baz=262
TTA Tatalina 85.61 27 P **P** **15 13 54.4 +1.0**
TTA Tatalina 85.61 27 P **P** **15 13 54.2 +0.8**
baz=261
SII Sitkinak Islan 85.63 33 P **P** **15 13 54.8 +1.3**
baz=263
N19K Bonanza Creek 86.02 29 P **P** **15 13 56.2 +0.7**
N19K IAmb IAmb 15 13 58.1
comp=Z,12nm,0.8s
N19K Bonanza Creek 86.02 29 P **P** **15 13 56.6 +1.0**
baz=262
L19K White Mountain 86.03 28 P **P** **15 13 56.1 +0.6**
L19K White Mountain 86.03 28 P **P** **15 13 56.4 +1.0**
baz=262
OHAK Old Harbor 86.20 33 P **P** **15 13 57.2 +0.9**
OHAK IAmb IAmb 15 13 58.3
comp=Z,24nm,0.8s
OHAK Old Harbor 86.20 33 P **P** **15 13 57.5 +1.2**
baz=264
Q19K Cape Douglas, 86.20 31 P **P** **15 13 55.8 -0.5**
Q19K Cape Douglas, 86.20 31 P **P** **15 13 56.4 0.0**
baz=263
M19K Big River Lodg 86.21 28 P **P** **15 13 57.5 +1.2**
baz=262
L20K Farewell, AK 86.52 27 P **P** **15 13 59.0 +1.1**
baz=263
K20K Telida 86.55 27 P **P** **15 13 59.0 +1.0**
baz=263
J20K Nowinta River 86.62 26 P **P** **15 13 58.9 +0.7**
J20K IAmb IAmb 15 14 00.3
comp=Z,15nm,1.6s
J20K Nowinta River 86.62 26 P **P** **15 13 59.2 +1.0**
baz=262
KDAK Kodiak Island 86.63 32 P **P** **15 13 59.0 +0.6**
KDAK Kodiak Island 86.63 32 P **P** **15 13 59.5 +1.1**
baz=264
M20K Styx River 86.80 28 P **P** **15 14 00.2 +0.9**
M20K IAmb IAmb 15 14 01.1
comp=Z,7.6nm,0.8s
M20K Styx River 86.80 28 P **P** **15 14 00.1 +0.8**
baz=264
Q20K Shuyak Island 86.82 31 P **P** **15 14 00.3 +1.0**
baz=264
RSO Redoubt South 86.82 30 P **P** **15 13 59.8 +0.2**
IMAR Indian Mountai 87.02 24 P **P** **15 14 00.5 +0.3**
SPCR Spurr Chakacha 87.16 29 P **P** **15 14 01.6 +0.5**
baz=264
HOM Homer 87.30 30 P **P** **15 14 02.6 +1.0**
baz=265
PPLA Purkeypile 87.34 27 P **P** **15 14 02.3 +0.3**
baz=264
H21K Melozitna Rive 87.36 24 P **P** **15 14 02.4 +0.6**
H21K Melozitna Rive 87.36 24 P **P** **15 14 02.6 +0.7**
baz=264
CHUM Lake Minchumin 87.38 26 P **P** **15 14 02.6 +0.7**
baz=264
CAST Castle Rocks 87.44 27 P **P** **15 14 02.7 +0.4**

	baz=264							
SKT	**Skwentna**	**87.56**	**28**	P		**P**	**15 14 02.7**	**-0.2**
	baz=265							
I21K	**Tanana**	**87.66**	**25**	P		**P**	**15 14 03.7**	**+0.4**
I21K				IAmb		IAmb	15 14 05.1	
	comp=Z,6.4nm,0.7s							
I21K	**Tanana**	**87.66**	**25**	P		**P**	**15 14 03.9**	**+0.7**
	baz=264							
BRSE	**Bradley Lake S**	**87.76**	**30**	P		**P**	**15 14 04.1**	**+0.2**
	baz=266							
SUA	**Susitna One**	**87.89**	**29**	P		P	**15 14 04.6**	**0.0**
	baz=266							
BPAW	**Bear Paw Mtn.**	**87.99**	**26**	P		**P**	**15 14 05.1**	**+0.2**
BPAW	**Bear Paw Mtn.**	**87.99**	**26**	P		**P**	**15 14 05.6**	**+0.7**
	baz=265							
MLY	**Manley**	**88.17**	**25**	P		**P**	**15 14 06.3**	**+0.5**
MLY				IAmb		IAmb	15 14 07.2	
	comp=Z,6.4nm,0.8s							
MLY	**Manley**	**88.17**	**25**	P		**P**	**15 14 06.1**	**+0.4**
	baz=266,SNR=10							
M22K	**Willow**	**88.21**	**28**	P		**P**	**15 14 05.8**	**-0.1**
	baz=266							
TRF	**Thorofare Moun**	**88.25**	**27**	P		**P**	**15 14 06.1**	**-0.2**
	baz=266							
O22K	**Cooper Landing**	**88.32**	**30**	P		**P**	**15 14 06.3**	**-0.2**
	baz=267							
RC01	**Rabbit Creek A**	**88.35**	**29**	P		**P**	**15 14 06.4**	**-0.3**
	baz=267							
SEW	**Seward**	**88.43**	**30**	P		**P**	**15 14 07.1**	**+0.1**
	baz=267							
COLD	**Coldfoot**	**88.55**	**23**	P		**P**	**15 14 07.3**	**-0.1**
COLD				IAmb		IAmb	15 14 09.5	
	comp=Z,7.5nm,0.7s							
COLD	**Coldfoot**	**88.55**	**23**	P		**P**	**15 14 08.4**	**+1.0**
	baz=266							
H23K	**Yukon River**	**88.72**	**24**	P		**P**	**15 14 09.1**	**+0.7**
H23K				IAmb		IAmb	15 14 10.2	
	comp=Z,5.7nm,0.8s							
H23K	**Yukon River**	**88.72**	**24**	P		**P**	**15 14 09.0**	**+0.7**
	baz=267,SNR=6.6							
I23K	**Minto, Yukon-K**	**88.76**	**25**	P		**P**	**15 14 09.0**	**+0.6**
I23K				IAmb		IAmb	15 14 10.1	
	comp=Z,7.9nm,0.7s							
I23K	**Minto, Yukon-K**	**88.76**	**25**	P		**P**	**15 14 09.1**	**+0.7**
	baz=267,SNR=6.0							
NEA2	**Nenana**	**88.85**	**26**	P		**P**	**15 14 08.9**	**-0.1**
	baz=267							
MCK	**McKinley**	**88.87**	**26**	P		**P**	**15 14 09.1**	**0.0**
MCK				IAmb		IAmb	15 14 10.2	
	comp=Z,7.7nm,0.9s							
MCK	**McKinley**	**88.87**	**26**	P		**P**	**15 14 08.9**	**-0.1**
	baz=267							
TOLK	**Toolik Lake Re**	**88.88**	**21**	P		**P**	**15 14 09.2**	**+0.2**
	baz=266							
RND	**Reindeer**	**88.89**	**27**			**P**	**15 14 08.4**	**-0.8**
RND				IAmb		IAmb	15 14 09.6	
	comp=Z,9.2nm,1.0s							
KNK	**Knik Glacier**	**88.98**	**29**	P		**P**	**15 14 09.6**	**0.0**
	baz=268							
WAT1	**Susitna Watana**	**89.00**	**27**	P		**P**	**15 14 09.5**	**-0.2**
	baz=268							
SML	**Sawmill**	**89.06**	**28**	P		**P**	**15 14 10.0**	**-0.1**
SML				IAmb		IAmb	15 14 11.1	
	comp=Z,12nm,1.0s							
SML	**Sawmill**	**89.06**	**28**	P		**P**	**15 14 09.9**	**-0.1**
	baz=268							
MDM	**Murphy Dome**	**89.23**	**25**	P		**P**	**15 14 10.4**	**-0.3**
WRH	**Wood River Hil**	**89.27**	**26**	P		**P**	**15 14 10.4**	**-0.5**
WRH				IAmb		IAmb	15 14 11.4	
	comp=Z,5.0nm,0.8s							
M23K	**Glacier View**	**89.35**	**28**	P		**P**	**15 14 11.4**	**+0.1**
	baz=268							
WAT6	**Susitna Watana**	**89.36**	**28**	P		**P**	**15 14 11.9**	**+0.3**
	baz=268							
CCB	**Clear Creek Bu**	**89.40**	**25**	P		**P**	**15 14 10.2**	**-1.3**
CCB				IAmb		IAmb	15 14 11.8	
	comp=Z,5.0nm,0.7s							
H24K	**Noodor Dome**	**89.41**	**24**	P		**P**	**15 14 11.6**	**0.0**
H24K				IAmb		IAmb	15 14 13.6	
	comp=Z,11nm,1.4s							
H24K	**Noodor Dome**	**89.41**	**24**	P		**P**	**15 14 12.2**	**+0.6**
	baz=268							
P23K	**Montague Islan**	**89.46**	**30**	P		**P**	**15 14 12.5**	**+0.6**
	baz=269							
SCM	**Sheep Creek Mo**	**89.54**	**28**	P		**P**	**15 14 12.3**	**0.0**
	baz=269							
DHY	**Denali Highway**	**89.55**	**27**	P		**P**	**15 14 12.6**	**+0.2**
DHY				IAmb		IAmb	15 14 13.5	
	comp=Z,3.8nm,0.6s							
DHY	**Denali Highway**	**89.55**	**27**	P		**P**	**15 14 12.8**	**+0.4**
	baz=269							
POKR	**Poker Plat Res**	**89.57**	**25**	P		**P**	**15 14 12.6**	**+0.3**
	baz=269							
GLI	**Glacier Island**	**89.63**	**29**	P		**P**	**15 14 12.3**	**-0.4**
	baz=269							
QSPA	**South Pole Qui**	**89.70**	**180**	P		**P**	**15 14 14.0**	**+1.0**
	comp=Z,0.9nm,0.7s,baz=351,slow=0.9,SNR=5.6							
	comp=Z,0.9nm,0.7s							
QSPA	**South Pole Qui**	**89.70**	**180**	IAmb		IAmb	15 14 33.9	
	comp=Z,12nm,1.6s							
HDA	**Harding Lake**	**89.76**	**26**				**15 14 12.0**	**-1.2**
HDA				IAmb		IAmb	15 14 13.1	
	comp=Z,6.1nm,0.8s							
HDA	**Harding Lake**	**89.76**	**26**	P		**P**	**15 14 12.0**	**-1.2**
	baz=269,SNR=6.4							
IL31		**89.80**	**25**	P		**P**	**15 14 11.8**	**-1.5**
IL31				IAmb		IAmb	15 14 13.3	
	comp=Z,9.2nm,1.6s							
ILAR	**Eielson Array**	**89.80**	**25**	P		**P**	**15 14 12.2**	**-1.2**
	comp=Z,1.1nm,0.5s,baz=243,slow=5.1,SNR=36							
	comp=Z,1.1nm,0.5s							
M24K	**Tolsona, Glenn**	**90.09**	**28**	P		**P**	**15 14 15.5**	**+0.6**
M24K	**Tolsona, Glenn**	**90.09**	**28**	P		**P**	**15 14 15.3**	**+0.4**
	baz=270							
KLU	**Klutina**	**90.20**	**29**	P		**P**	**15 14 15.7**	**+0.3**
	baz=270							
K24K	**Donnelly Dome**	**90.27**	**26**	P		**P**	**15 14 16.0**	**+0.4**
	baz=270							
DIV	**Divide**	**90.28**	**29**	P		**P**	**15 14 15.2**	**-0.5**
DIV				IAmb		IAmb	15 14 17.9	
	comp=Z,11nm,0.9s							
PAX	**Paxson**	**90.41**	**27**	P		**P**	**15 14 16.9**	**+0.5**
PAX				IAmb		IAmb	15 14 17.8	
	comp=Z,6.6nm,1.2s							
PAX	**Paxson**	**90.41**	**27**	P		**P**	**15 14 16.9**	**+0.5**
	baz=270							
J25K	**Salcha River,**	**90.45**	**26**	P		**P**	**15 14 16.0**	**-0.5**
	baz=270							
HARP	**HAARP**	**90.56**	**28**	P		**P**	**15 14 17.8**	**+0.8**
	baz=271							
RIDG	**Independent Ri**	**90.69**	**26**	P		**P**	**15 14 17.5**	**-0.1**
RIDG				IAmb		IAmb	15 14 18.6	
	comp=Z,7.9nm,0.7s							
RIDG	**Independent Ri**	**90.69**	**26**	P		**P**	**15 14 17.4**	**-0.1**
	baz=271,SNR=6.9							
BMAR	**Burnt Mountain**	**90.73**	**23**	P		**P**	**15 14 18.9**	**+1.2**
N25K	**Chitina, Valde**	**90.84**	**29**	P		**P**	**15 14 18.9**	**+0.6**
	baz=271							
BMRM	**Bremner River**	**90.85**	**29**	P		**P**	**15 14 19.0**	**+0.6**
	baz=271							
SCRK	**Sand Creek**	**91.06**	**26**	P		**P**	**15 14 19.8**	**+0.3**
SCRK	**Sand Creek**	**91.06**	**26**	P		**P**	**15 14 19.6**	**+0.2**
	baz=272							
GLB	**Gilahina Butte**	**91.22**	**29**	P		**P**	**15 14 20.3**	**+0.2**
GLB				IAmb		IAmb	15 14 21.3	
	comp=Z,4.9nm,0.7s							
J26L	**Joseph Creek**	**91.23**	**26**	P		**P**	**15 14 20.4**	**+0.3**
J26L				IAmb		IAmb	15 14 21.3	
	comp=Z,4.8nm,0.8s							
J26L	**Joseph Creek**	**91.23**	**26**	P		**P**	**15 14 20.3**	**+0.1**
	baz=272,SNR=10							
L26K	**Log Cabin Wild**	**91.38**	**27**	P		**P**	**15 14 21.5**	**+0.7**
	baz=272							
M26K	**Nabesna, AK**	**91.57**	**28**	P		**P**	**15 14 22.2**	**+0.4**
	baz=272							
K27K	**Chicken**	**91.90**	**26**	P		**P**	**15 14 24.2**	**+1.1**
	baz=273							
L27K	**Beaver Creek,**	**92.07**	**27**	P		**P**	**15 14 24.8**	**+0.8**
L27K				IAmb		IAmb	15 14 25.8	
	comp=Z,4.7nm,0.7s							
L27K	**Beaver Creek,**	**92.07**	**27**	P		**P**	**15 14 25.0**	**+1.0**
	baz=274,SNR=11							
BCAR	**Beaver Creek A**	**92.09**	**27**	P		**P**	**15 14 25.4**	**+1.3**
M27K	**Edge Creek, AK**	**92.09**	**28**	P		**P**	**15 14 24.8**	**+0.6**
	baz=274							
MESA	**MESA**	**92.19**	**30**	P		**P**	**15 14 22.8**	**-2.0**
YAH	**Yahtse**	**92.28**	**30**	P		**P**	**15 14 25.3**	**0.0**
CTG	**Chitna Glacier**	**92.44**	**29**	P		**P**	**15 14 27.0**	**+1.1**
	baz=274,SNR=7.6							
CTGM	**Chitina Glacie**	**92.44**	**29**	P		**P**	**15 14 25.6**	**-0.3**
BVCY	**Beaver Creek**	**92.56**	**28**	P		**P**	**15 14 27.0**	**+0.7**
	baz=274							
YUK3	**Moose Creek**	**92.80**	**28**	P		**P**	**15 14 28.1**	**+0.5**
	baz=275							
PINM	**Pinnacle**	**93.04**	**30**	P		**P**	**15 14 29.3**	**+0.7**
	baz=275							
DAWY	**Dawson**	**93.08**	**26**	P		**P**	**15 14 27.8**	**-0.8**
DAWY				IAmb		IAmb	15 14 30.6	
	comp=Z,6.8nm,1.2s							
DAWY	**Dawson**	**93.08**	**26**	P		**P**	**15 14 29.5**	**+0.8**
	baz=276							
YUK8	**Steele Glacier**	**93.17**	**29**	P		**P**	**15 14 29.6**	**+0.2**
	baz=275							
ARCES	**ARCESS Array B**	**93.23**	**340**	P		**P**	**15 14 27.5**	**-1.7**
	comp=Z,2.4nm,0.8s,baz=90,slow=6.1,SNR=4.1							
	comp=Z,2.4nm,0.8s							
MBAR	**Mbarara**	**93.34**	**269**	LR		LR	15 58 07.7	
	comp=Z,44nm,19.2s,baz=70,slow=36							
I29M	**Ogilvie Camp,**	**93.40**	**25**	P		**P**	**15 14 29.8**	**-0.2**
I29M				IAmb		IAmb	15 14 31.7	
	comp=Z,10.0nm,0.9s							
I29M	**Ogilvie Camp,**	**93.40**	**25**	P		**P**	**15 14 30.9**	**+0.8**
	baz=277							
PNL	**Peninsula**	**93.51**	**30**	P		**P**	**15 14 31.5**	**+0.8**
	baz=276							
YUK4	**Talbot Arm**	**93.70**	**29**	P		**P**	**15 14 32.7**	**+0.9**
	baz=276							
YUK6	**Outpost Mounta**	**93.89**	**29**	P		**P**	**15 14 33.5**	**+0.9**
	baz=276							
FINES	**FINESS Array B**	**94.04**	**332**	P		**P**	**15 14 32.0**	**-1.0**
	comp=Z,0.5nm,0.6s,baz=126,slow=7.2,SNR=1.4							
	comp=Z,0.5nm,0.6s							
HYT	**Haines Junctio**	**94.32**	**29**	P		**P**	**15 14 35.9**	**+1.4**
HYT				IAmb		IAmb	15 14 36.6	
	comp=Z,8.6nm,0.8s							
HYT	**Haines Junctio**	**94.32**	**29**	P		**P**	**15 14 35.3**	**+0.8**
	baz=277							
M30M	**Minto, Yukon**	**94.42**	**27**	P		**P**	**15 14 34.9**	**+0.1**
M30M				IAmb		IAmb	15 14 37.3	
	comp=Z,7.6nm,1.0s							
M30M	**Minto, Yukon**	**94.42**	**27**	P		**P**	**15 14 35.8**	**+1.0**
	baz=278							
N30M	**Aishikik Lake**	**94.43**	**28**	P		**P**	**15 14 35.9**	**+1.0**
	baz=278							
INK	**Inuvik**	**94.80**	**21**	P		**P**	**15 14 36.7**	**+0.4**
	baz=282							
O30N	**Mendenhall**	**95.01**	**29**	P		**P**	**15 14 38.6**	**+1.0**
	baz=278							
N31M	**Braeburn, Yuko**	**95.05**	**28**	P		**P**	**15 14 37.7**	**-0.1**
N31M	**Braeburn, Yuko**	**95.05**	**28**	P		**P**	**15 14 38.7**	**+1.0**
	baz=279							
PLBC	**Pleasant Camp**	**95.06**	**30**	P		**P**	**15 14 38.6**	**+0.8**
	baz=278							
MATP	**Matopo**	**95.15**	**250**	P		**P**	**15 14 38.1**	**-1.1**
	comp=Z,0.9nm,0.4s,baz=77,slow=3.2,SNR=2.5							
	comp=Z,0.9nm,0.4s							
M31M	**Drury Creek, Y**	**95.58**	**27**	P		**P**	**15 14 39.8**	**-0.3**
M31M				IAmb		IAmb	15 14 42.0	
	comp=Z,4.2nm,1.1s							
M31M	**Drury Creek, Y**	**95.58**	**27**	P		**P**	**15 14 40.9**	**+0.8**
	baz=280							
SKAG	**Skagway**	**95.59**	**30**	P		**P**	**15 14 39.3**	**-0.8**
SKAG	**Skagway**	**95.59**	**30**	P		**P**	**15 14 41.0**	**+0.9**
	baz=279							
LSZ	**Lusaka**	**95.62**	**255**	LR		LR	15 55 53.1	
	comp=Z,56nm,18.3s,baz=122,slow=34							
FARO	**Faro, Yukon**	**96.06**	**27**	P		**P**	**15 14 43.3**	**+1.0**
	baz=281							
A36M	**Sachs Harbour**	**96.53**	**17**	P		**P**	**15 14 44.9**	**+0.7**
	baz=290							
P33M	**Teslin, Yukon**	**96.70**	**29**	P		**P**	**15 14 45.8**	**+0.4**
	baz=281							
MMPY	**Sheldon Lake,**	**96.93**	**27**	P		**P**	**15 14 46.7**	**+0.4**
	baz=283							
BOSA	**Boshof**	**97.64**	**241**	LR		LR	16 00 57.4	
	comp=Z,53nm,18.1s,baz=30,slow=37							
C36M	**Paulatuk**	**97.81**	**19**	P		Pdif	15 14 50.3	+0.3
	baz=290							
S34M	**Telegraph Cree**	**98.03**	**31**	P		Pdif	15 14 51.9	+0.6
	baz=282							
DLBC	**Dease Lake**	**98.48**	**31**	P		Pdif	15 14 53.7	+0.3
	baz=284							
HFS	**Hagfors**	**100.25**	**332**	P		**Pdif**	**15 14 58.9**	**-2.2**
	comp=Z,0.4nm,0.4s,baz=58,slow=3.8,SNR=1.4							
YKA	**Yellowknife Ar**	**104.18**	**24**	Pdiff		**Pdif**	**15 15 19.1**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=293,slow=4.8,SNR=2.0							
YKA				PKiKP		**PKiKP**	**15 19 34.9**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=313,slow=1.9,SNR=3.9							
NVAR	**Mina Array Bea**	**111.51**	**48**	PKiKP		**PKiKP**	**15 19 51.0**	**+1.2**
	comp=Z,0.3nm,0.7s,baz=268,slow=2.5,SNR=2.6							
BW06	**Boulder Array**	**116.06**	**41**	P		**PKPdf**	**15 19 57.8**	**-0.5**
	baz=296							
PDAR	**Pinedale Array**	**116.06**	**41**	PKP		**PKiKP**	**15 19 58.5**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=12,slow=4.8,SNR=2.6							
RSSD	**Black Hills**	**118.92**	**38**	P		**PKPdf**	**15 20 03.2**	**-0.6**
	baz=302							
ULM	**Lac du Bonnet**	**119.69**	**28**	PKP		**PKPdf**	**15 20 04.3**	**-0.4**
	comp=Z,1.6nm,0.6s,baz=336,slow=2.6,SNR=3.6							
ISCO	**Idaho Springs**	**120.06**	**43**	P		**PKPdf**	**15 20 05.7**	**-0.5**
	baz=298							
S22A	**4UR Ranch, Cre**	**120.15**	**45**	P		**PKPdf**	**15 20 05.4**	**-1.1**
	baz=296							
Q24A	**Divide**	**120.77**	**43**	P		**PKPdf**	**15 20 07.0**	**-0.7**
	baz=298							
SDCO	**Great Sand Dun**	**121.09**	**45**	P		**PKPdf**	**15 20 08.0**	**-0.2**
	baz=297							
TORD	**Torodi Ar. Bea**	**121.51**	**285**	PKP		**PKPdf**	**15 20 09.1**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=72,slow=1.6,SNR=8.6							
TORD				PKiKPbc		**PKKPab**	**15 30 11.7**	**+1.2**
	comp=Z,0.3nm,0.5s,baz=259,slow=4.2,SNR=4.5							
TORD				PKPPKP		**P'P'df**	**15 38 53.5**	**-3.3**
	comp=Z,1.2nm,0.7s,baz=320,slow=1.1,SNR=6.7							
TORD	**Torodi Ar. Bea**	**121.51**	**285**	PKPdf		**P'P'df**	**15 38 53.7**	**-3.1**
121A	**Cookes Peak, D**	**121.59**	**51**	P		**PKPdf**	**15 20 08.3**	**-0.9**
	baz=293							
EYMN	**Ely**	**123.36**	**28**	P		**PKPdf**	**15 20 11.8**	**-0.1**
	baz=316							
ECSD	**EROS Data Cent**	**123.53**	**35**	P		**PKPdf**	**15 20 12.0**	**-0.3**
	baz=309							
SCHQ	**Schefferville**	**124.85**	**8**	PKP		**PKiKP**	**15 20 15.5**	**+0.6**
	comp=Z,1.6nm,0.3s,baz=27,slow=2.3,SNR=2.1							
TXAR	**Lajitas Array**	**126.09**	**53**	PKP		**PKiKP**	**15 20 18.9**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=211,slow=1.5,SNR=4.9							
JFWS	**Jewell Farm**	**127.55**	**32**	P		**PKPdf**	**15 20 19.3**	**-0.8**
	baz=315							
GLMI	**Grayling**	**128.84**	**26**	P		**PKPdf**	**15 20 21.7**	**-0.7**
	baz=322							
L44A	**Lac County Fo**	**129.28**	**31**	P		**PKPdf**	**15 20 23.1**	**-0.3**
	baz=317							
CCM	**Cathedral Cave**	**130.28**	**37**	P		**PKPdf**	**15 20 25.7**	**+0.3**
	baz=311							
U40A	**Yellville**	**130.37**	**40**	P		**PKPdf**	**15 20 26.1**	**+0.4**
	baz=308							
W39A	**Magazine**	**130.46**	**41**	P		**PKPdf**	**15 20 26.2**	**+0.4**
	baz=306							
MIAR	**Mount Ida**	**130.98**	**42**	P		**PKiKP**	**15 20 27.4**	**-0.4**
	baz=306							
NATX	**Nacogdoches**	**131.80**	**46**	P		**PKPdf**	**15 20 28.7**	**+0.2**
	baz=303							
LBNH	**Lisbon**	**133.93**	**16**	P		**PKiKP**	**15 20 33.0**	**-0.5**
	baz=338							
BINY	**Binghamton**	**134.48**	**21**	P		**PKPdf**	**15 20 33.7**	**+0.4**
	baz=331							
LRAL	**Lakeview Retre**	**136.19**	**39**	P		**PKiKP**	**15 20 37.7**	**-0.6**
	baz=312							
KMSC	**Kings Mountain**	**137.95**	**32**	P		**PKiKP**	**15 20 41.4**	**-0.5**
	baz=320							

NEIC ***02*** *15:19:35.6±2.0,32.°81S±0.°06×179.°48E±0.°09, h346km±5km, mb4.8/106, Error ellipse: s-maj=11.1km s-min=8.8km az=99.0*

NOU ***02*** *15:19:36.6, 32.°91S×179.°72E, h374km, mb4.9/73, South of Kermadec Islands*

WEL ***02*** *15:19:38.3±0.7, 33.°3S±6.°4×18.°0W±1.°2, h340km±9km, M5.3/37, mB5.7/33, ML6.0/31, MLv5.8/37, Mw(mB)5.3/33, Error ellipse: s-maj=0.0km s-min=0.0km az=111.6*

IDC ***02*** *15:19:39.9±1.1, 32.°69S×179.°38E, h392km±10km, mb4.2/17, mbtmp4.9/19, Error ellipse: s-maj=8.9km s-min=8.5km az=3.0*

ISC 02 15:19:37.2±0.4, 32.°81S±0.°04×179.°60E±0.°05, h372km±3km, h372km:pP-P, n367, σ1.°70/401, mb4.8/69, South of

Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.13**	**32**	P	**Pn**	**15 20 47.9**	**-1.0**
GLKZ				S	**S**	**15 21 43.4**	**-3.4**
RAO	**Raoul Island**	**4.14**	**32**	P	**Pn**	**15 20 46.9**	**-2.0**
	1μm,0.3s,baz=253,slow=19,SNR=27						
RAO				S	**S**	**15 21 42.5**	**-4.5**
	3μm,0.3s,baz=73,slow=19,SNR=7.9						
RAO	**Raoul Island**	**4.14**	**32**	Pn	**Pn**	**15 20 44.4**	**-4.5**
RAO	**Raoul Island**	**4.14**	**32**	P	**Pn**	**15 20 48.2**	**-0.8**
RIZ	**Raoul Island**	**4.14**	**32**	P	**Pn**	**15 20 47.8**	**-1.2**
RIZ				S	**S**	**15 21 45.0**	**-2.0**
MXZ	**Matakaoa Point**	**4.86**	**192**	Pn	**Pn**	**15 20 54.6**	**-1.5**
MXZ	**Matakaoa Point**	**4.86**	**192**	P	**Pn**	**15 20 55.1**	**-1.1**
MXZ				S	**S**	**15 21 57.6**	**-2.6**
KUZ	**Kuaotunu**	**5.06**	**218**	P	**Pn**	**15 21 01.7**	**+3.4**
WMGZ	**Waiomatatini S**	**5.09**	**191**	P	**Pn**	**15 20 58.2**	**-0.4**
WMGZ				S	**S**	**15 22 05.1**	**+0.4**
WSRZ	**White Island S**	**5.10**	**202**	P	**Pn**	**15 21 01.6**	**+2.9**
WIZ	**White Island**	**5.10**	**202**	P	**Pn**	**15 21 00.5**	**+1.7**
WIZ				S	**S**	**15 22 07.6**	**+2.7**
HAZ	**Te Kaha**	**5.15**	**196**	P	**Pn**	**15 20 57.9**	**-1.4**
HAZ				S	**S**	**15 22 02.2**	**-3.8**
PKGZ	**Pakihiroa**	**5.22**	**193**	P	**Pn**	**15 20 58.9**	**-1.2**
PKGZ				S	**S**	**15 22 03.4**	**-3.9**
WCZ	**Waipu Caves**	**5.35**	**233**	P	**Pn**	**15 21 03.6**	**+2.2**
PUZ	**Puketiti**	**5.36**	**191**	P	**Pn**	**15 21 00.3**	**-1.3**
PUZ				S	**S**	**15 22 08.5**	**-1.7**
RUGZ	**Raukumara Rang**	**5.38**	**196**	P	**Pn**	**15 21 00.3**	**-3.6**
RUGZ				S	**S**	**15 22 06.8**	**-3.9**
WIAZ	**Waiheke Island**	**5.41**	**221**	P	**Pn**	**15 21 04.6**	**+2.5**
ABAZ	**Army Bay**	**5.45**	**225**	P	**Pn**	**15 21 05.6**	**+3.0**
WHRZ	**Whale Island**	**5.47**	**202**	P	**Pn**	**15 21 05.8**	**+3.0**
WHRZ				S	**S**	**15 22 12.6**	**+0.3**
TWGZ	**Tauwhareparae**	**5.51**	**193**	P	**Pn**	**15 21 02.3**	**-1.0**
TWGZ				S	**S**	**15 22 12.6**	**-0.6**
OUZ	**Omahuta**	**5.53**	**243**	P	**Pn**	**15 21 05.6**	**+2.1**
MKAZ	**Moumakai**	**5.62**	**219**	P	**Pn**	**15 21 07.0**	**+2.6**
ETAZ	**East Tamaki Re**	**5.64**	**222**	P	**Pn**	**15 21 07.0**	**+2.4**
MARZ	**Manawahe**	**5.69**	**204**	P	**Pn**	**15 21 06.7**	**+1.5**
MWZ	**Matawai**	**5.76**	**196**	P	**Pn**	**15 21 04.6**	**-1.4**
MWZ				S	**S**	**15 22 15.2**	**-3.1**
CNGZ	**Carnagh Statio**	**5.77**	**191**	P	**Pn**	**15 21 05.3**	**-0.7**
CNGZ				S	**S**	**15 22 21.0**	**+2.6**
EDRZ	**Edgecumbe**	**5.78**	**203**	P	**Pn**	**15 21 07.5**	**+1.3**
EDRZ				S	**S**	**15 22 21.0**	**+2.4**
TKGZ	**Te Karaka**	**5.79**	**194**	P	**Pn**	**15 21 04.9**	**-1.5**
TKGZ				S	**S**	**15 22 15.2**	**-3.6**
URZ	**Urewera**	**5.80**	**200**	P	**Pn**	**15 21 04.4**	**-2.0**
	1μm,0.4s,baz=0.8,slow=3.6,SNR=139						
URZ				S	**S**	**15 22 14.6**	**-4.3**
	803nm,0.7s,baz=30,slow=20,SNR=10.0						
URZ	**Urewera**	**5.80**	**200**	Pn	**Pn**	**15 21 03.7**	**-2.7**
URZ	**Urewera**	**5.80**	**200**	P	**Pn**	**15 21 04.6**	**-1.8**
URZ				S	**S**	**15 22 16.0**	**-3.0**
URZ	**Urewera**	**5.80**	**200**	P	**Pn**	**15 21 05.0**	**-1.4**
LIRZ	**Lichensteins R**	**5.81**	**206**	P	**Pn**	**15 21 10.1**	**+3.7**
MKRZ	**Makatiti**	**5.90**	**205**	P	**Pn**	**15 21 11.8**	**+4.2**
OMRZ	**Omania**	**5.90**	**206**	P	**Pn**	**15 21 09.7**	**+2.1**
NGRZ	**Ngongotaha**	**5.97**	**207**	P	**Pn**	**15 21 10.4**	**+2.1**
TARZ	**Mount Tarawera**	**5.97**	**204**	P	**Pn**	**15 21 09.1**	**+0.7**
UTU	**Utuhina**	**6.03**	**206**	P	**Pn**	**15 21 11.4**	**+2.5**
HLRZ	**Highlands Stat**	**6.04**	**205**	P	**Pn**	**15 21 10.5**	**+1.4**
RRRZ	**Republican Roa**	**6.06**	**204**	P	**Pn**	**15 21 11.4**	**+2.0**
RIGZ	**Rimuhau**	**6.07**	**194**	P	**Pn**	**15 21 07.7**	**-1.7**
RIGZ				S	**S**	**15 22 21.9**	**-2.6**
MUGZ	**Murupara**	**6.10**	**201**	P	**Pn**	**15 21 08.3**	**-1.5**
HSRZ	**Hossack Road**	**6.13**	**206**	P	**Pn**	**15 21 12.3**	**+2.2**
RTZ	**Ruatahuna**	**6.17**	**199**	P	**Pn**	**15 21 08.5**	**-2.1**
HRRZ	**Handcock Road**	**6.19**	**205**	P	**Pn**	**15 21 12.3**	**+1.5**
GRRZ	**Galatos Road**	**6.21**	**206**	P	**Pn**	**15 21 13.7**	**+2.6**
SNGZ	**Shannon Statio**	**6.23**	**196**	P	**Pn**	**15 21 09.6**	**-1.7**
PRRZ	**Plateau Road**	**6.25**	**204**	P	**Pn**	**15 21 10.7**	**-0.7**
PRGZ	**Paritu Road**	**6.26**	**192**	P	**Pn**	**15 21 10.9**	**-0.6**
ALRZ	**Allen Road**	**6.32**	**204**	P	**Pn**	**15 21 11.5**	**-0.8**
WPRZ	**Whakapapatarin**	**6.34**	**205**	P	**Pn**	**15 21 13.5**	**+1.0**
KNZ	**Kokohu**	**6.39**	**194**	P	**Pn**	**15 21 12.6**

CAN Canberra 25.42 256 P **P** **15 24 33.6 +1.0**
CAN IAmb IAmb 15 24 35.5
comp=Z,26nm,0.8s
CAN Canberra 25.42 256 P **P** **15 24 34.5 +1.9**
EIDS Eidsvold 25.94 279 P **P** **15 24 36.5 -0.8**
EIDS IAmb IAmb 15 25 13.2
comp=Z,43nm,1.7s
MCQ Macquarie Isla 26.14 208 P **P** **15 24 37.8 -0.8**
MCQ IAmb IAmb 15 24 58.5
comp=Z,139nm,1.1s
GLAD Gladstone 26.44 243 P **P** **15 24 43.6 +2.1**
TAU Tasmania Unive 27.26 239 P **P** **15 24 49.5 +0.8**
TAU IAmb IAmb 15 24 51.9
comp=Z,41nm,1.2s
TAU Tasmania Unive 27.26 239 P **P** **15 24 49.2 +0.5**
MOO Moorlands 27.27 240 P **P** **15 24 50.0 +1.2**
RMQ Roma 27.47 275 P **P** **15 24 51.7 +0.9**
TOO Toolangi 28.18 251 P **P** **15 24 58.0 +1.0**
TOO IAmb IAmb 15 24 59.9
comp=Z,33nm,1.0s
TOO Toolangi 28.18 251 P **P** **15 24 58.7 +1.7**
CMSA Cobar Meteorol 28.66 263 P **P** **15 25 02.6 +1.4**
TBI Tubuai 28.80 79 *e*LR LR 15 31 16.5
comp=Z,53nm,28.2s
TBI Tubuai 28.80 79 *e*T T 15 54 25.5
comp=Z,32nm,0.3s
BRAT Ballarat 29.42 251 P **P** **15 25 10.1 +2.3**
HNR Honiara 29.51 318 P **P** **15 25 07.7 -1.2**
ARPS Mount Arapiles 31.13 252 P **P** **15 25 24.2 +1.5**
PAE Paea 31.56 69 *e*T T 15 57 35.3
comp=Z,8.8nm,0.2s
PPT2 Papeete2 31.60 69 *e*LR LR 15 32 12.7
comp=Z,96nm,29.5s
PPT2 Papeete2 31.60 69 *e*T T 15 57 48.9
comp=Z,6.3nm,0.3s
PPTF Pamatai, Papee 31.61 69 P **P** **15 25 29.0 +1.8**
PPTF IAmb IAmb 15 25 31.7
comp=Z,60nm,0.9s
PPTF Pamatai, Papee 31.61 69 P **P** **15 25 26.9 -0.3**
PPT Papeete 31.61 69 P **P** **15 25 29.4 +2.2**
comp=Z,27nm,0.5s,baz=139,slow=17,SNR=9.7
comp=Z,27nm,0.5s
STKA Stephens Creek 32.01 261 P **P** **15 25 31.3 +0.9**
comp=Z,31nm,0.8s,baz=102,slow=10,SNR=91
comp=Z,31nm,0.8s
STKA Stephens Creek 32.01 261 **P** **15 25 31.3 +0.9**
STKA Stephens Creek 32.01 261 P **P** **15 25 31.6 +1.1**
CTA Charters Tower 32.29 285 P **P** **15 25 33.8 +0.8**
comp=Z,8.7nm,0.5s,baz=111,slow=9.8,SNR=35
comp=Z,8.7nm,0.5s
CTA Charters Tower 32.29 285 P **P** **15 25 34.0 +0.9**
CTAO Charters Tower 32.29 285 P **P** **15 25 33.9 +0.9**
CTAO Charters Tower 32.29 285 P **P** **15 25 34.1 +1.1**
INKA Innaminka 33.80 268 P **P** **15 25 37.3 +1.5**
HTT Hallett 33.92 258 P **P** **15 25 47.5 +0.6**
TWOA Tennyson Woods 33.94 255 P **P** **15 25 48.0 +1.0**
VAH Vaihoa 34.48 67 *e*T T 16 00 44.4
comp=Z,16nm,0.2s
TARA Tarawa 34.56 348 P **P** **15 25 51.3 -1.1**
TARA Tarawa 34.56 348 P **P** **15 25 51.8 -0.6**
NAPP Napperby 34.60 258 P **P** **15 25 53.7 +1.1**
MTSU Mount Surprise 34.86 286 P **P** **15 25 55.7 +0.7**
WHYH Whyalla 35.10 258 P **P** **15 25 57.7 +0.9**
LCRK Leigh Creek 35.16 262 P **P** **15 25 57.9 +0.6**
BBOO Buckleboo 36.40 258 P **P** **15 26 07.1 -0.7**
BBOO IAmb IAmb 15 26 08.3
comp=Z,52nm,0.7s
BBOO Buckleboo 36.40 258 P **P** **15 26 07.4 -0.4**
QIS Mount Isa 37.55 279 P **P** **15 26 17.7 +0.2**
PMG Port Moresby 37.92 301 P **P** **15 26 20.6 0.0**
comp=Z,20nm,0.7s,baz=91,slow=5.0,SNR=7.5
comp=Z,20nm,0.7s
PMG Port Moresby 37.92 301 P **P** **15 26 20.6 0.0**
PMG IAmb IAmb 15 26 21.4
comp=Z,18nm,0.7s
PMG Port Moresby 37.92 301 P **P** **15 26 21.1 +0.5**
PMG Port Moresby 37.92 301 P **P** **15 26 20.8 +0.2**
OOD Oodnadatta 38.03 266 P **P** **15 26 22.4 +1.0**
COEN Coen 38.08 291 P **P** **15 26 22.3 +0.4**
COEN Coen 38.08 291 P **P** **15 26 22.4 +0.5**
KRVT Keravat (AS076 38.31 312 P **P** **15 26 22.9 -0.9**
comp=Z,324nm,0.8s,baz=183,slow=1.1,SNR=57
RABL Rabaul 38.32 312 P **P** **15 26 23.7 -0.2**
RABL IAmb IAmb 15 26 29.7
comp=Z,93nm,0.8s
MULG Mulgathing 38.66 261 P **P** **15 26 26.6 0.0**
XMAS Kiritimati 40.90 37 P **P** **15 26 45.1 +0.2**
XMAS IAmb IAmb 15 26 48.4
comp=Z,167nm,1.8s
AS31 Alice Springs 41.01 271 P **P** **15 26 45.3 -0.5**
ASAR Alice Springs 41.01 271 P **P** **15 26 45.5 -0.3**
comp=Z,17nm,0.7s,baz=108,slow=7.9,SNR=410
ASAR pP **pwP** **15 28 00.8 -1.1**
comp=Z,2.5nm,0.6s,baz=114,slow=6.9,SNR=1.6
ASAR ScP **ScP** **15 31 49.6 -1.7**
comp=Z,0.8nm,0.5s,baz=110,slow=3.8,SNR=3.6
ASAR S **S** **15 32 26.9 -3.0**
comp=Z,4.3nm,0.8s,baz=116,slow=15,SNR=15
comp=Z,17nm,0.7s
ASAR Alice Springs 41.01 271 P **P** **15 26 45.4 -0.4**
DRV Dumont d'Urvil 41.13 203 P **P** **15 26 46.2 +0.1**
WR0 Warramunga Arr 42.05 276 P **P** **15 26 53.5 -0.7**
WB2 Warramunga Arr 42.21 276 P **P** **15 26 54.6 -0.9**
WRAB Tennant Creek 42.22 276 P **P** **15 26 54.8 -0.6**
WRAB Tennant Creek 42.22 276 P **P** **15 26 55.1 -0.4**
WRAB Tennant Creek 42.22 276 P **P** **15 26 54.9 -0.6**
WRA Warramunga Arr 42.22 276 P **P** **15 26 54.8 -0.8**
comp=Z,9.3nm,0.5s,baz=113,slow=7.9,SNR=259
WRA ScP **ScP** **15 31 53.8 -2.4**
comp=Z,1.3nm,0.6s,baz=116,slow=3.7,SNR=6.0
WRA S **S** **15 32 44.0 -3.6**
comp=Z,5.9nm,0.9s,baz=113,slow=13,SNR=12
comp=Z,9.3nm,0.5s
WRA Warramunga Arr 42.22 276 P **P** **15 26 53.6 -1.9**
WB0 Warramunga Arr 42.26 276 P **P** **15 26 55.1 -0.7**
MANU Manus Island 43.03 309 P **P** **15 27 01.0 -0.9**
FORT Forrest 43.50 258 P **P** **15 27 04.6 -0.8**
FORT IAmb IAmb 15 27 05.7
comp=Z,95nm,0.8s
FORT Forrest 43.50 258 P **P** **15 27 05.0 -0.5**
WRKA Warakurna 45.20 266 P **P** **15 27 18.0 -1.0**
SBA Scott Base 45.49 184 P **P** **15 27 23.6 +3.3**
SBA IAmb IAmb 15 27 24.9
comp=Z,40nm,0.8s
SBA PcP **PcP** **15 28 53.9 +2.0**
SBA Scott Base 45.49 184 P **P** **15 27 23.8 +3.4**
SBA pP **PcP** **15 28 53.9 +2.0**
VNDA Vanda 45.51 185 P **P** **15 27 22.5 +2.0**
comp=Z,5.8nm,0.6s,baz=2.0,slow=8.4,SNR=74
VNDA ScP **ScP** **15 32 08.0 -0.5**
comp=Z,1.7nm,0.8s,baz=354,slow=4.7,SNR=3.9
comp=Z,5.8nm,0.6s
VNDA Vanda 45.51 185 P **P** **15 27 22.5 +2.0**
VNDA PcP **PcP** **15 28 52.1 +0.1**
VNDA Vanda 45.51 185 P **P** **15 27 22.5 +2.0**
VNDA pP **PcP** **15 28 53.9 +1.6**
MTN Manton Dam 48.41 283 P **P** **15 27 42.9 -0.7**
KNRA Kununurra 48.92 278 P **P** **15 27 46.7 -0.6**
KNRA Kununurra 48.92 278 P **P** **15 27 47.5 +0.2**
comp=Z,12nm,0.9s
CCD Concordia, Ant 50.07 196 P **P** **15 27 55.9 +0.3**
CCD pP **PcP** **15 29 08.9 -0.1**
JOHN Johnston Islan 50.35 14 P **P** **15 27 59.4 +1.6**
JOHN IAmb IAmb 15 28 43.7
comp=Z,120nm,0.9s
JOHN Johnston Islan 50.35 14 P **P** **15 27 58.7 +0.9**
NWAO Narrogin (SRO) 51.66 252 P **P** **15 28 08.6 +1.1**
NWAO IAmb IAmb 15 28 36.3
comp=Z,68nm,1.8s
KLBR Kellerberrin 51.66 254 P **P** **15 28 06.4 -1.1**
CASY Casey 52.05 209 P **P** **15 28 09.2 -0.6**
CASY **PcP** **15 29 15.5 -0.6**
MUN Mundaring 52.78 253 P **P** **15 28 15.2 -0.5**
BLDU Ballidu 52.83 254 P **P** **15 28 16.2 +0.1**
WAKE Wake Island 53.26 345 P **P** **15 28 18.9 -0.1**
WAKE IAmb IAmb 15 28 25.7
comp=Z,84nm,0.9s
FAKI Fak Fak 53.34 294 P **P** **15 28 19.2 -0.7**
FAKI IAmb IAmb 15 28 20.1
comp=Z,23nm,1.0s
FAKI **PcP** **15 29 23.3 +1.4**
PSA00 Pilbara Seismi 53.70 266 P **P** **15 28 20.9 -1.5**
PSA00 Pilbara Seismi 53.70 266 P **P** **15 28 21.0 -1.4**
PSA00 IAmb IAmb 15 28 23.1
comp=Z,3.9nm,1.0s
PSA00 Pilbara Seismi 53.70 266 P **P** **15 28 21.6 -0.8**
MORW Morawa 53.92 256 P **P** **15 28 23.1 -0.7**
MORW PcP **PcP** **15 29 25.2 +1.3**
MORW Morawa 53.92 256 P **P** **15 28 23.7 -0.2**
MBWA Marble Bar 53.98 266 P **P** **15 28 23.4 -1.0**
MBWA Marble Bar 53.98 266 P **P** **15 28 23.5 -0.9**
MBWA Marble Bar 53.98 266 P **P** **15 28 23.1 -1.3**
MBWA pP **pwP** **15 29 47.7 +2.8**
SOEI Soe 55.74 281 P **P** **15 28 38.3 +1.2**
SOEI IAmb IAmb 15 28 39.4
comp=Z,31nm,1.1s
KHLU Kahalu`u 57.13 28 P **P** **15 28 48.1 +1.5**
MWH Moku'aweowe 57.16 28 P **P** **15 28 48.1 +0.9**
MWH IAmb IAmb 15 29 21.1
comp=Z,126nm,1.3s
PUH Pauahi 57.21 29 P **P** **15 28 47.5 +0.4**
PUH IAmb IAmb 15 28 49.4
comp=Z,55nm,0.7s
MLOA Mauna Loa Obse 57.21 28 P **P** **15 28 47.3 -0.2**
HUH Hualalai 57.24 28 P **P** **15 28 48.9 +1.4**
MLH Mauna Loa 57.25 28 P **P** **15 28 48.9 +1.4**
QSPA South Pole Qui 57.30 180 P **P** **15 28 49.6 +2.4**
comp=Z,242nm,0.8s,baz=350,slow=0.5,SNR=1108
QSPA South Pole Qui 57.30 180 P **P** **15 28 49.7 +2.4**
QSPA South Pole Qui 57.30 180 P **P** **15 28 49.6 +2.4**
QSPA pP **pwP** **15 30 07.9 -0.2**
HMH Humu'ula Sheep 57.31 28 P **P** **15 28 49.8 +1.8**
POHA Pohakuloa 57.43 28 P **P** **15 28 49.3 +0.5**
MHA Mahukona 57.67 27 P **P** **15 28 52.3 +2.2**
GIRL Giralia 57.94 262 P **P** **15 28 52.4 +0.3**
GIRL IAmb IAmb 15 28 53.2
comp=Z,80nm,1.1s
GIRL Giralia 57.94 262 P **P** **15 28 52.2 0.0**
KEKH Kekaha 57.96 23 P **P** **15 28 52.9 +0.8**
SANI Sanana 58.77 290 P **P** **15 28 57.6 -0.3**
BELA Belgrano 2 67.67 173 P **P** **15 29 55.5 +0.7**
MAW Mawson 69.33 201 P **P** **15 30 05.3 +0.3**
comp=Z,18nm,0.7s,baz=130,slow=8.7,SNR=19
comp=Z,18nm,0.7s
MAW Mawson 69.33 201 P **P** **15 30 05.3 +0.3**
KSM Kuching 73.50 283 P **P** **15 30 30.1 -0.5**
KSM IAmb IAmb 15 30 44.8
comp=Z,19nm,1.3s
GO10 Punta Arenas 74.78 144 P **P** **15 30 39.5 +2.2**
USHA Ushuaia 75.07 146 P **P** **15 30 41.2 +2.4**
comp=Z,9.5nm,0.8s,baz=215,slow=4.6,SNR=5.4
comp=Z,9.5nm,0.8s
GO09 Cerro Castillo 75.19 142 P **P** **15 30 41.2 +1.5**
GO09 IAmb IAmb 15 30 42.9
comp=Z,15nm,0.8s
TROLL Troll, Antarti 75.45 181 P **P** **15 30 41.8 +0.9**
DSPA Despedida 75.67 146 P **P** **15 30 43.7 +1.4**
SNAA Sanae 75.80 179 P **P** **15 30 43.7 +1.0**
SNAA Sanae 75.80 179 P **P** **15 30 43.7 +1.0**
MG02 Cerro Sombrero 75.90 144 P **P** **15 30 45.9 +2.4**
VNA3 Neumayer Olymp 76.03 177 P **P** **15 30 45.1 +1.1**
VNA2 Neumayer--Watz 76.44 178 P **P** **15 30 47.7 +1.4**
baz=192,slow=6.0
VNA1 Neumayer--Stat 76.68 177 P **P** **15 30 49.0 +1.4**
COYC Coyhaique 78.59 137 P **P** **15 30 59.7 +1.2**
COYC IAmb IAmb 15 31 02.3
comp=Z,31nm,0.7s
JGF Kuroka 78.72 326 P **P** **15 30 58.5 -0.8**
JGF IAmb IAmb 15 31 46.5
comp=Z,63nm,1.7s
AY01 Puyuhuapi 78.92 136 P **P** **15 31 02.5 +2.2**
AY01 IAmb IAmb 15 31 03.6
comp=Z,12nm,0.9s
MJAR Matsushiro Arr 79.10 327 P **P** **15 30 59.7 -1.6**
comp=Z,3.0nm,1.1s,baz=166,slow=6.5,SNR=4.1
comp=Z,3.0nm,1.1s
TPUB Ta-pu 79.22 307 P **P** **15 31 02.2 0.0**
LL02 Futaleuf 80.11 135 P **P** **15 31 09.0 +2.2**
LL02 IAmb IAmb 15 31 10.0
comp=Z,20nm,0.8s
JHS Saijyo 80.32 323 P **P** **15 31 08.0 +0.3**
JHS IAmb IAmb 15 31 38.8
comp=Z,59nm,1.7s
LL04 Puerto Octay 81.11 133 P **P** **15 31 13.0 +1.0**
LL04 IAmb IAmb 15 31 15.0
comp=Z,18nm,1.1s
LC02 Puerto Saavedr 81.73 131 P **P** **15 31 16.9 +1.7**
EFI East Falkland 81.87 148 P **P** **15 31 16.6 +0.9**
EFI IAmb IAmb 15 31 23.6
comp=Z,50nm,1.1s
PLCA Paso Flores 82.34 134 P **P** **15 31 20.8 +2.3**
comp=Z,7.8nm,0.6s,baz=239,slow=4.5,SNR=22
comp=Z,7.8nm,0.6s
PLCA Paso Flores 82.34 134 P **P** **15 31 21.0 +2.5**
PLCA IAmb IAmb 15 31 22.0
comp=Z,34nm,1.4s
JKA Kamikawa-asahi 83.67 334 P **P** **15 31 25.3 +0.6**
GSI Gunungsitoli 83.99 275 P **P** **15 31 26.2 -0.9**
KSRS Korea Array 84.89 321 P **P** **15 31 31.2 +0.3**
comp=Z,2.3nm,0.7s,baz=139,slow=5.8,SNR=13
comp=Z,2.3nm,0.7s
KSAR Wonju Array Be 84.90 321 P **P** **15 31 32.3 +1.3**
MT09 Talagante 86.26 128 P **P** **15 31 38.8 +0.7**
MT09 IAmb IAmb 15 31 40.8
comp=Z,12nm,0.9s
NJ2 Nanjing 86.29 312 *e*P **P** **15 31 40.2 +2.3**
NJ2 pmax pmax
comp=Z,4.0nm,0.5s
LMEL Las Melosas 86.73 129 P **P** **15 31 42.5 +2.0**
LMEL IAmb IAmb 15 31 47.0
comp=Z,8.5nm,0.8s
PETK Petropavlovsk- 87.66 347 P **P** **15 31 44.1 +0.2**
comp=Z,33nm,0.8s,baz=120,slow=7.2,SNR=72
comp=Z,33nm,0.8s
USRK Ussuriysk Ar. 88.07 328 P **P** **15 31 46.1 +0.1**
comp=Z,3.0nm,0.9s,baz=157,slow=5.4,SNR=5.1
comp=Z,3.0nm,0.9s
ISA Isabella, Lake 89.45 46 P **P** **15 31 55.0 +2.2**
ISA IAmb IAmb 15 31 56.1
comp=Z,15nm,1.6s
KMPM Mount Pierce 89.51 39 P **P** **15 31 54.7 +1.7**
GLA Glamis 90.02 50 P **P** **15 31 57.8 +2.3**
GLA IAmb IAmb 15 31 59.6
comp=Z,9.6nm,0.8s
GSC Goldstone, Bar 90.23 47 P **P** **15 31 57.6 +1.1**
EMB Emerald Bay 90.72 43 P **P** **15 31 59.3 +0.5**
EMB IAmb IAmb 15 32 01.8
comp=Z,5.5nm,0.7s
CN2 Changchun 90.85 324 *e*P **P** **15 31 58.8 -0.2**
CN2 Changchun 90.85 324 *e*S **S** **15 42 23.5 +0.7**
CN2 pmax pmax
comp=Z,10.0nm,1.2s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=N,100nm,13.0s
CN2 LR LR
comp=E,100nm,13.0s
CN2 LR LR
comp=Z,100nm,15.1s
LCH Last Change Ra 90.99 45 P **P** **15 32 01.4 +1.4**
GRAC Grapevine Rang 91.00 46 P **P** **15 32 01.0 +1.1**
GRAC IAmb IAmb 15 32 03.1
comp=Z,5.4nm,0.7s
PNTR Pine Nut 91.09 43 P **P** **15 32 01.7 +1.2**
PNTR IAmb IAmb 15 32 04.2
comp=Z,7.7nm,0.7s
LHV Little Huntoon 91.16 44 P **P** **15 32 02.6 +2.1**
YBH Yreka Blue Hor 91.19 39 P **P** **15 32 02.3 +1.6**
YBH IAmb IAmb 15 32 04.1
comp=Z,9.9nm,1.6s
NVAR Mina Array Bea 91.39 44 P **P** **15 32 03.9 +1.9**
comp=Z,2.0nm,0.6s,baz=222,slow=7.6,SNR=24
NVAR pP **pwP** **15 33 29.3 -1.9**
comp=Z,0.9nm,0.8s,baz=216,slow=8.7,SNR=5.8
comp=Z,2.0nm,0.6s
NVAR Mina Array Bea 91.39 44 P **P** **15 32 03.1 +1.2**
PAHR Pah Rah Range 91.63 42 P **P** **15 32 04.2 +1.3**
TPNV Topopah Spring 91.64 46 P **P** **15 32 04.2 +1.1**
TPNV IAmb IAmb 15 32 06.0
comp=Z,3.4nm,0.6s
HUMO Hull Mountain 91.67 39 P **P** **15 32 05.0 +2.1**
HUMO IAmb IAmb 15 32 06.5
comp=Z,28nm,1.6s
L04D Klamath Falls 91.75 39 P **P** **15 32 04.9 +1.5**
L04D IAmb IAmb 15 32 06.1
comp=Z,29nm,1.5s
TPH Tonopah 91.80 45 P **P** **15 32 04.7 +0.9**
KVN Kaiserville 91.93 44 P **P** **15 32 05.6 +1.2**
MOD Modoc Plateau 92.61 40 P **P** **15 32 08.7 +1.3**
MOD IAmb IAmb 15 32 10.6
comp=Z,6.4nm,1.1s
K05A Summer Lake 92.85 39 P **P** **15 32 10.4 +1.9**
K05A IAmb IAmb 15 32 11.6
comp=Z,28nm,1.5s
PINE Pine Mountain 93.56 39 P **P** **15 32 12.7 +0.9**
PINE IAmb IAmb 15 32 15.5
comp=Z,7.3nm,0.8s
U15A North Rim 93.76 49 P **P** **15 32 14.3 +1.3**
WVOR Wild Horse Val 93.88 41 P **P** **15 32 13.9 +0.7**
WVOR IAmb IAmb 15 32 15.2
comp=Z,7.6nm,1.5s
I07A Izee 94.52 39 P **P** **15 32 17.6 +1.6**
I07A IAmb IAmb 15 32 19.5
comp=Z,8.8nm,1.6s
PZH PanZhiHua 94.62 298 P **P** **15 32 18.8 +1.9**
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,120nm,8.2s
O18K Koktuh Hills 94.64 12 P **P** **15 32 15.8 -0.3**
O18K IAmb IAmb 15 32 16.7
comp=Z,7.5nm,0.9s
TXAR Lajitas Array 95.40 59 P **P** **15 32 21.0 +0.6**
comp=Z,0.3nm,0.6s,baz=226,slow=5.9,SNR=2.8
comp=Z,0.3nm,0.6s
XLT XiLinHaoTe 95.81 319 *e*P **P** **15 32 24.7 +2.9**
XLT pP pP 15 33 46.2 -1.3
XLT sP sP 15 34 19.5 -6.0
XLT pmax pmax
comp=Z,11nm,0.9s
XLT pmax pmax
comp=Z,74nm,4.8s
HHC Hu-ho-hao-te 96.45 315 *e*P **P** **15 32 25.5 +0.6**
HHC pmax pmax
comp=Z,33nm,0.9s
HHC pmax pmax
comp=Z,78nm,5.1s
ILAR Eielson Array 100.74 14 P **Pdif** **15 32 44.1 +0.8**
comp=Z,0.7nm,0.8s,baz=225,slow=6.0,SNR=6.8
ILAR PP **PP** **15 36 53.6 -3.1**
comp=Z,0.7nm,0.9s,baz=227,slow=7.2,SNR=4.1
YKA Yellowknife Ar 108.50 27 PKiKP **PKiKP** **15 37 20.8 -0.4**
comp=Z,0.6nm,0.6s,baz=266,slow=1.4,SNR=6.3
YKA PKKPbc **PKKPbc** **15 48 31.0 -2.7**
comp=Z,1.0nm,0.7s,baz=50,slow=3.3,SNR=8.2
WMQ Urumqi 113.10 308 *e*P **PKiKP** **15 37 32.0 +1.4**
BOSA Boshof 114.23 205 PKP **PKiKP** **15 37 33.5 0.0**
comp=Z,1.4nm,0.5s,baz=160,slow=4.2,SNR=4.7
BOSA PKKPab **PKKPab** **15 48 22.3 -3.0**
comp=Z,2.0nm,0.7s,baz=346,slow=3.3,SNR=3.8
MKAR Makanchi Array 117.74 310 PKP **PKPdf** **15 37 38.1 -1.3**
comp=Z,0.6nm,0.5s,baz=135,slow=1.0,SNR=14
MKAR PKKPbc **PKKPab** **15 48 03.5 -0.6**
comp=Z,0.8nm,0.4s,baz=285,slow=2.6,SNR=15
MKAR Makanchi Array 117.74 310 PKPdf **PKPdf** **15 37 37.9 -1.5**
ZALV Zalesovo Beam 118.45 318 PKP **PKPdf** **15 37 38.6 -1.9**
comp=Z,0.7nm,0.4s,baz=117,slow=1.7,SNR=3.8
KK31 Karatay Array 124.67 303 **PKPdf** **15 37 51.9 -1.0**
KKAR Karatay Array 124.67 303 **PKPdf** **15 37 51.4 -1.4**
SCHQ Schefferville 129.40 43 SKPbc SKPab 15 40 46.8 -0.5
comp=Z,8.9nm,0.9s,baz=264,slow=3.1,SNR=6.5
KMBO Kilima Mbogo 131.00 234 SKPbc **SKPbc** **15 40 53.7 -1.4**
comp=Z,6.3nm,0.9s,baz=130,slow=4.2,SNR=8.4
GEYT Alibeck 132.68 293 SKPbc **SKPbc** **15 40 57.5 -2.4**
comp=Z,2.9nm,0.7s,baz=143,slow=5.0,SNR=4.9
SPITS Spitsbergen Ar 133.94 355 PKP **PKiKP** **15 38 10.4 -0.4**
comp=Z,2.9nm,0.5s,baz=79,slow=5.2,SNR=9.1
SPITS SKPbc **SKPbc** **15 41 02.1 -0.7**
comp=Z,2.0nm,0.4s,baz=76,slow=6.1,SNR=12
ARA0 ARCESS Array S 140.47 346 *e* **PKPdf** **15 38 15.1 -6.5**
ARA0 *e*PKPdf **PKiKP** **15 38 22.9 -1.5**
ARCES ARCESS Array B 140.47 346 PKhKP PKPpre 15 38 15.2
comp=Z,1.7nm,0.6s,baz=39,slow=2.2,SNR=14
ARCES PKP **PKPdf** **15 38 23.0 +1.3**
comp=Z,3.1nm,0.6s,baz=18,slow=1.7,SNR=12
ARCES SKPbc **SKPbc** **15 41 20.9 -1.2**
comp=Z,6.0nm,0.9s,baz=15,slow=3.7,SNR=4.9
ARCES ARCESS Array B 140.47 346 PKPpre PKPpre 15 38 14.1
KTK1 Karatsukeino 141.35 347 PKPdf **PKPdf** **15 38 23.5 +0.2**
STEI Steigen 143.68 350 *e*PKPbc PKPab 15 38 25.4 0.0
LOF Lofoten 143.73 351 *e*PKPbc PKPab 15 38 25.6 0.0
FAUS Fauske 144.18 350 *e*PKPbc **PKPab** **15 38 26.8 -0.5**
GEVA Gevas 144.47 291 PKPbc 15 38 28.7 -0.8
KBZ Khabaz 144.66 301 PKP PKPbc 15 38 29.1 -0.6
comp=Z,3.5nm,0.8s,baz=109,slow=2.6,SNR=11
KONS Konsvik 145.32 351 *e*PKPdf **PKPbc** **15 38 30.6 -0.3**
MOR8 Moi Rana 145.44 349 *e*PKPdf **PKPdf** **15 38 30.1 -0.4**
FINES FINESS Array B 146.63 337 PKPbc **PKPbc** **15 38 33.9 -0.9**
comp=Z,8.8nm,0.4s,baz=47,slow=4.0,SNR=51
NSS Namsos 147.35 350 *e*PKPbc **PKPab** **15 38 39.1 -0.5**
MEF Metsahovi 148.09 337 *e*P **PKPbc** **15 38 38.1 -0.6**
RAF Rauma 148.30 340 *e*P **PKPbc** **15 38 38.7 -1.1**
VSU Vasula 148.50 333 *e*P **PKPbc** **15 38 39.7 -0.2**
ASF Jabal al Asfar 148.63 279 PKPbc **PKPbc** **15 38 40.6 -0.6**
comp=Z,2.2nm,0.6s,baz=100,slow=4.7,SNR=4.7
TBLU Trondheim 148.80 351 *e*PKPbc **PKPbc** **15 38 40.0 -0.5**
MTSE Matsula 149.41 335 *e*P **PKPbc** **15 38 42.0 0.0**
EIL Elat 149.69 274 PKPbc **PKPbc** **15 38 43.5 -0.2**
comp=Z,6.2nm,0.7s,baz=14,slow=4.2,SNR=4.6
DOMB Dombas 150.12 351 *e*PKPbc **PKPbc** **15 38 43.5 -0.3**
AKN Aaknes 150.23 353 *e*PKPbc **PKiKP** **15 38 44.6 -0.1**
UPP Uppsala 150.42 342 *e*P **PKPbc** **15 38 44.0 -0.4**
IDID Didziasalis 150.56 328 *e*P **PKiKP** **15 38 45.3 -0.2**
ISAL Salakas 150.67 329 *e*P **PKiKP** **15 38 45.8 +0.2**
NB2 NORSAR Subarra 150.76 348 *e* **PKPbc** **15 38 44.8 -0.5**
baz=15,slow=2.6
NB2 NORSAR Subarra 150.76 348 PKP **PKPbc** **15 38 44.8 -0.5**
comp=Z,7.3nm,0.5s,baz=15,slow=2.6
NOA NORSAR Array B 150.76 348 PKPbc **PKPbc** **15 38 44.8 -0.5**
comp=Z,7.5nm,0.5s,baz=14,slow=4.1,SNR=57
IIGN Ignalina 150.77 328 *e*P **PKiKP** **15 38 46.2 +0.3**
FOO Floro 150.98 355 *e*PKPbc **PKPbc** **15 38 45.8 +0.1**
NC602 NORSAR Array S 150.99 348 *e*PKPbc **PKPbc** **15 38 45.3 -0.4**
HFS Hagfors 151.12 345 PKPbc **PKPbc** **15 38 45.4 -0.7**
comp=Z,14nm,0.6s,baz=72,slow=4.8,SNR=38
HFS PKPab **PKPab** **15 38 55.1 -0.3**
comp=Z,6.2nm,0.7s,baz=72,slow=4.7,SNR=6.4
HYA Hoyanger 151.31 353 *e*PKPbc **PKPbc** **15 38 46.5 +0.1**
SKAR Skarslia 151.54 351 *e*PKPbc **PKiKP** **15 38 47.4 0.0**
SUE Sulen 151.54 355 *e*PKPbc **PKiKP** **15 38 47.8 +0.5**
PABE Paberze 151.63 330 *e*P **PKPbc** **15 38 47.1 -0.3**
BRTR Keskin Array B 151.82 294 PKPbc **PKPbc** **15 38 47.5 -1.0**
comp=Z,2.0nm,0.5s,baz=135,slow=3.8,SNR=13
BRTR pPKPab **pPKPab** **15 40 28.9 +3.0**
comp=Z,1.6nm,0.9s,baz=128,slow=4.4,SNR=3.6
VIKU Vikbolandet 151.83 341 *e*P **PKPbc** **15 38 47.6 -0.1**
AKASG Malin Array Be 151.85 318 PKPbc **PKPbc** **15 38 47.2 -0.8**
comp=Z,2.0nm,0.5s,baz=61,slow=2.8,SNR=14
AKASG PKPab **PKPab** **15 38 57.8 -0.9**
comp=Z,0.5nm,0.4s,baz=55,slow=3.8,SNR=4.8
AKASG pPKPab **pPKPab** **15 40 27.3 +1.8**
comp=Z,2.9nm,0.8s,baz=48,slow=2.7,SNR=3.0
AKASG Malin Array Be 151.85 318 **PKPbc** **15 38 47.5 -0.5**
ASK Askoy 152.07 354 *e*PKPbc **PKPbc** **15 38 48.3 +0.1**
BER Bergen 152.16 354 *e*PKPbc **PKPbc** **15 38 48.4 0.0**
KONO Kongsberg 152.34 349 *e*PKPbc **PKiKP** **15 38 49.0 0.0**
BLS5 Blasjo 152.99 352 *e*PKPbc **PKiKP** **15 38 50.8 +0.4**
LIC Lamto 153.20 170 *e*P **PKiKP** **15 38 53.4 +1.2**
comp=Z,28nm,0.6s
KMY Karmoy 153.32 354 *e*PKPbc **PKiKP** **15 38 51.3 +0.3**
KIC Kosan Boka 153.38 170 *e*PKIKP **PKiKP** **15 38 53.1 +0.5**
comp=Z,24nm,0.6s
TIC Toumodi 153.61 170 *e*PKIKP **PKPbc** **15 38 52.7 -0.3**
comp=Z,43nm,0.2s
DBIC Dimbokro 153.66 170 PKPbc **PKiKP** **15 38 53.5 +0.4**
comp=Z,6.6nm,0.6s,baz=180,slow=3.3,SNR=11
DBIC PKPab **PKPab** **15 39 08.3 +1.0**
comp=Z,9.2nm,0.7s,baz=160,slow=2.6,SNR=9.4
HOMB Homborsund 153.83 349 *e*PKPbc **PKPbc** **15 38 52.0 0.0**
SNART Snartemo 153.95 351 *e*PKPbc **PKPbc** **15 38 52.2 -0.1**
EKA Eskdalemuir Ar 157.40 4 PKPab **PKPab** **15 39 21.6 -0.7**
comp=Z,1.8nm,0.5s,baz=330,slow=2.6,SNR=8.8
CLL Collm 159.07 336 *e*PKPdf **PKPdf** **15 38 55.0 +4.2**
CLL *i* PKPab **PKPab** **15 39 28.8 -0.9**
comp=Z,8.0nm,0.8s
VRAC Vranov 159.20 327 PKPab **PKPab** **15 39 30.1 -0.3**
comp=Z,1.4nm,0.5s,baz=328,slow=3.4,SNR=3.8
TORD Torodi Ar. Bea 160.33 186 PKPab **PKPab** **15 39 36.0 -0.1**
comp=Z,11nm,0.6s,baz=170,slow=4.2,SNR=30
TORD PP **PP** **15 43 15.1 -3.2**
comp=Z,1.6nm,0.9s,baz=185,slow=4.6,SNR=3.9
TORD Torodi Ar. Bea 160.33 186 PKPab **PKPab** **15 39 36.1 +0.1**
GERES GERESS Array B 160.80 331 PKPab **PKPab** **15 39 35.9 -1.7**

comp=Z,0.6nm,0.7s,baz=38,slow=5.0,SNR=6.6
DAVOX Davos/Dischmat 163.99 334 PKPab **PKPab 15 39 51.3 -0.4**
comp=Z,0.9nm,0.4s,baz=85,slow=3.4,SNR=4.6
ESDC Sonseca Array 172.57 22 PKPab **PKPab 15 40 29.3 -0.4**
comp=Z,1.1nm,0.8s,baz=342,slow=4.1,SNR=8.5

*MAN **02** 15:21:47.4, 9.°29N×125.°57E, h13km, mb5.2, ML4.1, MS4.2*
*IDC **02** 15:21:47.2±1.2, 9.°47N×125.°52E, h0km, mb3.7/4, mbtmp3.8/6, ML3.9/2, MS3.4/14, Error ellipse: s-maj=40.3km s-min=15.7km az=81.0*
*NEIC **02** 15:21:49.2±1.6, 9.°36N±0.°08×125.°35E±0.°10, h43km±3km, mb4.6/13, Error ellipse: s-maj=14.2km s-min=11.8km az=79.0*

ISC 02 15:21:45.5±1.1, 9.°25N±0.°02×125.°54E±0.°03, h17km±7km, n64, σ2$07/61, mb4.1/7, MS3.6/12, 10C-5D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BUTP	**Butuan**	**0.29**	**164**	*i*P		**Pb**	**15 21 53.0**	**+0.8**
BUTP				*e*S		**Sn**	**15 21 59.1**	**-1.7**
SCPH	**Surigao**	**0.54**	**355**	*e*P		**Pn**	**15 21 57.8**	**-0.6**
SCPH				*i* S		**Sn**	**15 22 07.3**	**+0.3**
GLSP	**General Luna,**	**0.79**	**47**	*e*P		**Pg**	**15 22 01.0**	**+0.1**
GLSP				*e*S		**Sg**	**15 22 11.6**	**+0.2**
MSLP	**Maasin**	**1.11**	**323**	*e*P		**Pg**	**15 22 07.9**	**+0.9**
MSLP				*e*S		**Sn**	**15 22 21.6**	**+0.4**
BIPH	**Bislig**	**1.33**	**142**	*i*P		**Pn**	**15 22 09.1**	**-0.2**
BIPH				*i* S		**Sn**	**15 22 25.1**	**-1.5**
TBP	**Tagbilaran**	**1.71**	**285**	*e*P		**Pb**	**15 22 16.2**	**-0.3**
TBP				*i* S		**Sb**	**15 22 36.9**	**-1.0**
LLP	**Lapu-Lapu**	**1.88**	**305**	*i*P		**Pb**	**15 22 19.9**	**+0.4**
LLP				*i* S		**Sg**	**15 22 48.5**	**+2.3**
OCLP	**Ormoc**	**2.02**	**333**	*e*P		Pn	15 22 08.8	-10
OCLP				*e*S		**Sg**	**15 22 50.3**	**-0.2**
DAV	**Davao City (W)**	**2.16**	**179**	Pn		**Pg**	**15 22 27.3**	**+0.3**
	39nm,0.3s,baz=11,slow=5.2,SNR=8.6							
DAV				Lg		Lg	15 23 03.9	
	68nm,0.3s,baz=60,slow=22,SNR=8.3							
	222nm,0.4s							
DAV	**Davao City (W)**	**2.16**	**179**			**Pn**	**15 22 21.7**	**+1.0**
DCPH	**Dipolog City**	**2.26**	**253**	*e*P		**Pb**	**15 22 25.4**	**-0.5**
DCPH				*e*S		**Sb**	**15 22 53.5**	**0.0**
KCP	**Kidapawan**	**2.27**	**191**	*i*P		**Pb**	**15 22 24.9**	**-1.1**
KCP				*i* S		**Sg**	**15 22 57.7**	**-0.8**
SNPH	**Sibulan**	**2.28**	**273**	*i*P		**Pb**	**15 22 26.0**	**-0.1**
SNPH				*i* S		**Sb**	**15 22 52.5**	**-1.6**
CTBH	**Cotabato--PC H**	**2.38**	**213**	*e*P		**Pb**	**15 22 27.1**	**-0.9**
CTBH				*i* S		**Sg**	**15 23 00.2**	**-2.1**
MATI	**Mati**	**2.39**	**163**	*e*P		**Pb**	**15 22 27.1**	**-1.0**
MATI				*e*S		**Sg**	**15 23 00.6**	**-1.9**
PAGZ	**Pagadian**	**2.55**	**237**	*e*P		**Pb**	**15 22 29.6**	**-1.1**
PAGZ				*e*S		**Sb**	**15 23 03.3**	**+1.5**
CNOP	**Candoni, Negro**	**2.92**	**282**	*e*P		**Pb**	**15 22 34.2**	**-2.9**
CNOP				*e*S		**Sg**	**15 23 22.1**	**+2.8**
DDMP	**Don Marcelino,**	**3.12**	**177**	*e*P		**Pn**	**15 22 34.1**	**+0.1**
DDMP				*e*S		**Sb**	**15 23 15.6**	**-2.9**
RCP	**Roxas**	**3.58**	**310**	*e*P		**Pb**	**15 22 44.9**	**-3.6**
JAP	**San Jose, Anti**	**3.84**	**293**	*e*P		**Pb**	**15 22 48.8**	**-4.1**
MYLDM	**Lahad Datu**	**8.07**	**240**	Pn		**Pn**	**15 23 41.9**	**-0.1**
SIJI	**Sorong**	**11.55**	**150**	Pn		**Pn**	**15 24 34.2**	**+4.4**
	0.5nm,0.3s,baz=338,slow=19,SNR=4.5							
SIJI				LR		LR	15 29 56.9	
	comp=Z,48nm,20.0s,baz=11,slow=42							
	6.9nm,0.6s							
SBUM	**Sibu**	**14.87**	**244**			**P**	**15 25 19.7**	**-1.0**
JOW	**Kunigami**	**17.68**	**8**	LR		LR	15 32 27.9	
	comp=Z,67nm,20.1s,baz=179,slow=37							
MTN	**Manton Dam**	**22.64**	**166**			**P**	**15 26 47.4**	**+1.6**
LEM	**Lembang**	**23.96**	**229**	LR		LR	15 37 58.6	
	comp=Z,289nm,18.1s,baz=292,slow=40							
KNRA	**Kununurra**	**24.97**	**173**	P		**P**	**15 27 09.6**	**+1.3**
JHJ	**Hachijo jima 2**	**27.15**	**27**	LR		LR	15 40 53.2	
	comp=Z,22nm,18.2s,baz=262,slow=42							
CMAR	**Chiang Mai Arr**	**27.36**	**292**	P		**P**	**15 27 33.8**	**+3.7**
	0.2nm,0.3s,baz=104,slow=7.5,SNR=4.2							
CMAR				LR		LR	15 39 31.9	
	comp=Z,51nm,18.7s,baz=85,slow=39							
	0.2nm,0.3s							
CMAR	**Chiang Mai Arr**	**27.36**	**292**	P		**P**	**15 27 28.3**	**-1.8**
KSAR	**Wonju Array Be**	**28.15**	**4**	P		**P**	**15 27 33.5**	**-3.3**
KSRS	**Korea Array**	**28.17**	**4**	LR		LR	15 37 33.8	
	comp=Z,48nm,21.8s,baz=160,slow=34							
KS19	**Wonju Array Si**	**28.21**	**4**	P		**P**	**15 27 33.4**	**-4.1**
MJAR	**Matsushiro Arr**	**29.51**	**21**	LR		LR	15 38 51.4	
	comp=Z,50nm,19.7s,baz=210,slow=35							
MBWA	**Marble Bar**	**30.75**	**191**	P		**P**	**15 28 00.4**	**+0.3**
PSA00	**Pilbara Seismi**	**31.13**	**190**	P		**P**	**15 28 04.2**	**+0.7**
H11S3	**WAKE ISLAND Hy**	**40.91**	**72**	T		T	16 12 29.3	
	baz=262,slow=75,SNR=17							
H11S1	**WAKE ISLAND Hy**	**40.92**	**72**	T		T	16 12 31.8	
	baz=262,slow=75,SNR=11							
H11S2	**WAKE ISLAND Hy**	**40.92**	**72**	T		T	16 12 30.9	
	baz=262,slow=75,SNR=9.3							
H11N1	**WAKE ISLAND Hy**	**41.27**	**71**	T		T	16 12 47.1	
	baz=264,slow=74,SNR=9.0							
H11N2	**WAKE ISLAND Hy**	**41.27**	**71**	T		T	16 12 48.8	
	baz=264,slow=74,SNR=5.0							
H11N3	**WAKE ISLAND Hy**	**41.28**	**71**	T		T	16 12 56.4	
	baz=264,slow=74,SNR=6.9							
SONM	**Songino Array**	**41.73**	**341**	LR		LR	15 48 37.8	
	comp=Z,93nm,18.1s,baz=252,slow=39							
BBOO	**Buckleboo**	**43.01**	**167**	P		**P**	**15 29 46.3**	**+2.2**
BBOO				IAmb		IAmb	15 29 50.9	
	comp=Z,19nm,1.3s							
KOUNC	**Koumac, New Ca**	**48.26**	**128**	P		**P**	**15 30 26.9**	**+1.1**
MKAR	**Makanchi Array**	**52.41**	**324**	P		**P**	**15 30 59.3**	**+2.2**
	comp=Z,0.4nm,0.6s,baz=132,slow=8.0,SNR=5.1							
	comp=Z,0.4nm,0.6s							
MKAR	**Makanchi Array**	**52.41**	**324**	P		**P**	**15 30 55.0**	**-2.0**
ZALV	**Zalesovo Beam**	**55.18**	**332**	LR		LR	15 57 00.7	
	comp=Z,68nm,18.6s,baz=132,slow=38							
AAK	**Ala-Archa**	**55.55**	**316**	LR		LR	15 57 03.0	
	comp=Z,107nm,20.4s,baz=128,slow=38							
WHZ	**Wether Hill Ro**	**66.74**	**149**	P		**P**	**15 32 36.7**	**+0.9**
BKZ	**Black Stump Fm**	**67.48**	**139**	P		**P**	**15 32 41.7**	**+1.0**
AKTO	**Aktyubinsk**	**68.65**	**321**	LR		LR	16 04 35.9	
	comp=Z,60nm,19.6s,baz=135,slow=38							
BELG	**Belogornoye**	**75.36**	**322**	LR		LR	16 08 16.7	
	comp=Z,34nm,19.4s,baz=155,slow=37							
CASY	**Casey**	**76.13**	**186**	P		**P**	**15 33 29.0**	**-3.0**
CASY				IAmb		IAmb	15 33 37.6	
	comp=Z,6.8nm,1.2s							
ILAR	**Eielson Array**	**80.67**	**26**	P		**P**	**15 34 01.2**	**+3.9**
	comp=Z,0.3nm,0.7s,baz=267,slow=4.5,SNR=1.8							
	comp=Z,0.3nm,0.7s							
LVZ	**Lovozero**	**81.84**	**338**	P		**P**	**15 33 59.9**	**-3.6**
OBN	**Obninsk**	**81.90**	**325**	LR		LR	16 14 20.1	
	comp=Z,12nm,19.0s,baz=66,slow=39							
SNH	**Sunshine Point**	**82.86**	**30**	P		**P**	**15 34 09.2**	**+0.2**
CTGM	**Chitina Glacie**	**83.51**	**29**	P		**P**	**15 34 13.5**	**+1.0**
CTGM				IAmb		IAmb	15 35 04.6	
	comp=Z,5.1nm,1.1s							
NOA	**NORSAR Array B**	**93.35**	**334**	LR		LR	16 19 18.9	
	comp=Z,17nm,21.4s,baz=65,slow=37							
YKA	**Yellowknife Ar**	**94.98**	**24**	P		**P**	**15 35 11.3**	**+4.4**
	comp=Z,0.6nm,0.8s,baz=300,slow=4.9,SNR=3.8							
	comp=Z,0.6nm,0.8s							
PQI	**Presque Isle**	**123.03**	**11**			**PKPdf**	**15 40 40.8**	**-0.5**
F64A	**Sherman**	**123.74**	**12**			**PKPdf**	**15 40 39.9**	**-2.8**
G65A	**Princeton**	**124.53**	**11**			**PKPdf**	**15 40 42.0**	**-2.2**

GUC 02 15:40:40.5±0.6, 24.°10S×66.°90W, h202km±6km, ML4.0, 4C-1D, Salta Province

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SLA	**San Lorenzo**	**1.41**	**116**	*i*P		Pn	15 41 13.3	-0.5
SLA				*i* S		S	15 41 38.6	-0.7
LVC	**Limon Verde**	**2.38**	**308**	*e*P		Pn	15 41 24.0	+0.4
LVC				*e*S		S	15 41 55.9	-0.6
PB15	**IPOC Station P**	**2.52**	**290**	*i*P		Pn	15 41 25.6	+0.5
PB15				*e*S		S	15 41 58.0	-1.1
GO02	**Mina Guanaco**	**2.67**	**246**	*i*P		Pn	15 41 26.9	+0.2
GO02				*e*S		S	15 42 03.0	+0.7
GO02				IAML			15 42 04.8	
	comp=E,286nm,0.1s							
PB06	**IPOC Station P**	**2.83**	**299**	*i*P		Pn	15 41 28.7	+0.3
PB06				*e*S		S	15 42 04.3	-0.9
PB06				IAML			15 42 07.0	
	comp=N,235nm,0.2s							
PB09	**IPOC Station P**	**3.15**	**316**	*e*P		Pn	15 41 33.2	+0.8
PB09				*e*S		S	15 42 12.3	+0.2
AC02	**Maricunga**	**3.39**	**216**	*e*P		Pn	15 41 36.0	+0.6
PB10	**IPOC Station P**	**3.40**	**279**	*e*P		Pn	15 41 35.2	+0.1
PB10				*e*S		S	15 42 13.2	-4.0
PB04	**IPOC Station P**	**3.47**	**300**	*e*P		Pn	15 41 36.2	+0.1
PB04				*e*S		S	15 42 17.3	-1.7
PB07	**IPOC Station P**	**3.63**	**310**	*e*P		Pn	15 41 37.7	-0.4
PB07				*e*S		S	15 42 20.4	-2.1
PB01	**IPOC Station P**	**3.88**	**321**	*e*P		Pn	15 41 40.4	-0.6
PB01				*e*S		S	15 42 25.6	-2.3
PB02	**IPOC Station P**	**3.92**	**314**	*e*P		Pn	15 41 41.0	-0.5
PB02				*e*S		S	15 42 25.9	-2.9
AC01	**Pan de Azucar**	**3.93**	**238**	*e*P		Pn	15 41 40.2	-1.3
AC01				*i* S		S	15 42 26.6	-2.1
PATCX	**Punta Patache**	**4.45**	**317**	*e*P		Pn	15 41 47.2	-0.9
PATCX				*e*S		S	15 42 37.2	-3.5
PB08	**IPOC Station P**	**4.46**	**332**	*e*P		Pn	15 41 48.9	+0.3
PB08				*e*S		S	15 42 40.5	-1.1
TA01	**Diego Aracena**	**4.65**	**319**	*e*P		Pn	15 41 49.7	-0.9
TA01				*i* S		S	15 42 41.6	-3.7
HMBC	**Humberstone**	**4.71**	**323**	*e*P		Pn	15 41 49.6	-1.9
HMBC				*i* S		S	15 42 42.8	-4.1
PB11	**IPOC Station P**	**5.03**	**329**	*e*P		Pn	15 41 53.8	-1.7
PB11				*e*S		S	15 42 50.4	-3.8

*IDC **02** 15:53:10.2±0.6, 35.°49N×140.°81E, h0km, mb4.0/20, mbtmp4.0/24, ML4.2/4, MS3.4/20, Error ellipse: s-maj=18.5km s-min=12.5km az=109.0*
*NIED **02** 15:53:15.3, 35.°52N×140.°94E, h40km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr=0.41; Mθθ=0.40; Mϕϕ=-0.81; Mrθ=-2.48; Mθϕ=0.07; Mϕr=1.81; Fault plane solution: M₀3.14000×10¹⁵ NP1: ϕs=205.00000°, δ11.00000°, λ167.00000°. NP2: ϕs=308.00000°, δ87.00000°, λ79.00000°.*
*NEIC **02** 15:53:15.4±2.1, 35.°48N±0.°04×140.°92E±0.°09, h36km±6km, mb4.4/41, Mwr4.3/21 Error ellipse: s-maj=9.9km s-min=5.9km az=89.0*
*NEIC **02** 15:53:15.4, 35.°49N×140.°93E, h44km, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr=1.24; Mθθ=0.17; Mϕϕ 1.42; Mrθ=-2.31; Mϕθ=-1.11; Mϕr 1.58; Fault plane solution: M₀3.30000×10¹⁵ NP1:ϕs=42.84000°, δ22.84000°, λ=-34.50000°. NP2:ϕs=126.73000°, δ77.30000°, λ=-109.14000°. Principal axes: T 3.4186, Plg30.0000°, Azm232.0000°; N -0.2591, Plg19.0000°, Azm131.0000°; P -3.1595, Plg54.0000°, Azm14.0000°;*
*JMA **02** 15:53:15.3±0.2, 35.°5N±0.°6×14.°1E±.°, h40km±1km, MV3.8/34, NEAR CHOSHI CITY*
JMA Felt I J1 at NEAR CHOSHI CITY .
ISC 02 15:53:14.5±0.4, 35.°45N±0.°04×141.°00E±0.°06, h33km, n118, σ1$40/103, mb4.3/41, MS3.5/17, 5D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CHOJ	**Chosi**	**0.28**	**335**	P		**Pb**	**15 53 22.4**	**+0.5**
CHOJ				S		**Sb**	**15 53 27.6**	**+0.6**
JSMT	**Sammumatsuo**	**0.49**	**293**	*i*P		**Pn**	**15 53 25.2**	**0.0**
KTR	**Katsuura**	**0.64**	**242**	↓P		**Pb**	**15 53 27.8**	**+0.4**
JIHU	**Itakohorinouch**	**0.64**	**323**	P		**Pn**	**15 53 27.4**	**+0.1**
JCN	**Nagara**	**0.66**	**267**	*i*P		**Pn**	**15 53 28.5**	**+1.1**
BSO4	**Boso 4**	**0.71**	**230**	*i* P		**Pb**	**15 53 29.2**	**+0.7**
BSO3	**Boso 3**	**0.77**	**212**	*i*P		**Pb**	**15 53 29.9**	**+0.6**
BSO1	**Boso 1**	**0.80**	**182**	P		**Pb**	**15 53 30.6**	**+1.0**
JYT	**Yasato**	**1.01**	**320**			**Pn**	**15 53 31.5**	**-0.9**
JYT	**Yasato**	**1.01**	**320**	*i*P		**Pn**	**15 53 31.9**	**-0.6**
JMM	**Marumori**	**2.41**	**356**			**Pn**	**15 53 51.0**	**-0.7**
MJAR	**Matsushiro Arr**	**2.51**	**296**	Pn		**Pn**	**15 53 52.9**	**-0.1**
	2.5nm,0.3s,baz=143,slow=9.6,SNR=93							
MJAR	**Matsushiro Arr**	**2.51**	**296**			**Pn**	**15 53 53.3**	**+0.2**
MAJO	**Matsushiro**	**2.52**	**296**	Pn		**Pn**	**15 53 53.6**	**+0.6**
MJB9	**Matsu-Tunnel**	**2.52**	**296**			**Pn**	**15 53 53.8**	**+0.6**
JHJ2	**Mitsune**	**2.53**	**203**	Pn		**Pn**	**15 53 54.3**	**+1.0**
JHJ	**Hachijo jima 2**	**2.54**	**204**	Pn		**Pn**	**15 53 54.3**	**+0.9**
	31nm,0.3s,baz=323,slow=22,SNR=18							
JHJ				Sn		**Sn**	**15 54 21.6**	**-1.5**
	58nm,0.3s,baz=80,slow=23,SNR=4.4							
JHJ				LR		LR	15 55 02.9	
	comp=Z,591nm,18.9s,baz=77,slow=45							
	72nm,0.3s							
JGF	**Kuroka**	**2.98**	**274**	Pn		**Pn**	**15 54 00.1**	**+0.7**
INU	**Inuyama**	**3.26**	**269**	Pn		**Pn**	**15 54 02.0**	**-1.2**
JSD	**Sado**	**3.39**	**320**	Pn		**Pn**	**15 54 04.5**	**-0.6**
JTM	**Tenmabayashi**	**5.33**	**1**	Pn		**Pn**	**15 54 31.8**	**+0.2**
JHS	**Saijyo**	**6.47**	**268**	Pn		**Pn**	**15 54 49.7**	**+2.2**
ERM	**Erimo**	**6.76**	**14**	Pn		**Pn**	**15 54 49.6**	**-1.8**
JEW	**Eniwo**	**7.38**	**3**	Pn		**Pn**	**15 54 59.3**	**-0.6**
JCJ	**Chichijima**	**8.39**	**173**	Pn		**Pn**	**15 55 13.6**	**-0.3**
	15nm,0.3s,baz=284,slow=22,SNR=4.8							
JCJ				Sn		**Sn**	**15 56 42.2**	**-5.2**
	9.5nm,0.3s,baz=277,slow=18,SNR=1.6							
	53nm,0.4s							
JCJ	**Chichijima**	**8.39**	**173**			**Pn**	**15 55 13.4**	**-0.4**
JNU	**Nakatsue**	**8.70**	**257**	Pn		**Pn**	**15 55 15.2**	**-2.8**
	1.5nm,0.3s,baz=13,slow=3.8,SNR=3.6							
	12nm,0.6s							
ASAJ	**Asahikawa**	**8.74**	**8**	Pn		**Pn**	**15 55 16.6**	**-1.9**
	4.4nm,0.3s,baz=215,slow=9.1,SNR=34							
ASAJ				Sn		**Sn**	**15 56 50.0**	**-5.8**
	0.1nm,0.3s,baz=11,slow=32,SNR=1.6							
	10nm,0.4s							
JKA	**Kamikawa-asahi**	**8.74**	**8**			**Pn**	**15 55 16.6**	**-1.9**
JTU	**Tsushima**	**9.57**	**268**	Pn		**Pn**	**15 55 28.9**	**-1.0**
KSRS	**Korea Array**	**10.72**	**285**	Pn		**Pn**	**15 55 48.5**	**+2.7**
	0.2nm,0.3s,baz=94,slow=15,SNR=7.1							
KSAR	**Wonju Array Be**	**10.75**	**284**	Pn		Pn	15 55 40.8	-5.3
YSS	**Yuzh-Sakhalins**	**11.56**	**6**	Pn		**Pn**	**15 55 54.3**	**-2.9**
JOW	**Kunigami**	**13.87**	**235**	LR		LR	16 01 25.3	
	comp=Z,91nm,21.1s,baz=54,slow=36							
KLR	**Kul'dur**	**15.36**	**337**	Pn		**Pn**	**15 56 50.0**	**+1.3**
	0.2nm,0.3s,baz=153,slow=6.8,SNR=2.8							
KLR				LR		LR	16 02 13.6	
	comp=Z,79nm,22.0s,baz=159,slow=36							
PETK	**Petropavlovsk-**	**21.22**	**29**	P		**P**	**15 57 58.3**	**+0.9**
	4.5nm,0.9s,baz=196,slow=10,SNR=3.3							
PETK				LR		LR	16 05 48.8	
	comp=Z,75nm,21.7s,baz=238,slow=36							
	4.5nm,0.9s							
MA2	**Magadan**	**24.96**	**12**	P		**P**	**15 58 35.0**	**+0.3**
	6.0nm,0.8s,baz=174,slow=10,SNR=2.3							
MA2				LR		LR	16 08 23.3	
	comp=Z,84nm,21.8s,baz=152,slow=37							
	6.0nm,0.8s							
ENH	**Enshi**	**26.91**	**268**	P		**P**	**15 58 49.9**	**-2.7**
ENH				IAmb		IAmb	15 58 52.0	
	comp=Z,9.3nm,0.7s							
YAK	**Yakutsk**	**27.54**	**348**	P		**P**	**15 58 57.5**	**-0.4**
	comp=Z,2.4nm,0.4s,baz=166,slow=3.7,SNR=4.4							
YAK				LR		LR	16 09 42.5	
	comp=Z,106nm,21.9s,baz=18,slow=36							
	comp=Z,2.4nm,0.4s							
YAK	**Yakutsk**	**27.54**	**348**	P		**P**	**15 58 56.9**	**-1.0**
YAK				IAmb		IAmb	15 59 08.2	
	comp=Z,8.5nm,0.9s							
H11N2	**WAKE ISLAND Hy**	**27.67**	**118**	T		T	16 28 10.4	
	baz=310,slow=75,SNR=43							
H11N1	**WAKE ISLAND Hy**	**27.67**	**118**	T		T	16 28 07.5	
	baz=310,slow=75,SNR=36							
H11N3	**WAKE ISLAND Hy**	**27.68**	**118**	T		T	16 28 18.1	
	baz=310,slow=75,SNR=38							
H11S3	**WAKE ISLAND Hy**	**28.32**	**120**	T		T	16 28 52.0	
	baz=312,slow=76,SNR=71							
H11S1	**WAKE ISLAND Hy**	**28.32**	**120**	T		T	16 28 54.8	
	baz=312,slow=76,SNR=87							
H11S2	**WAKE ISLAND Hy**	**28.34**	**120**	T		T	16 28 53.2	
	baz=312,slow=76,SNR=71							
SEY	**Seymchan**	**28.40**	**11**	P		**P**	**15 59 07.0**	**+1.4**
	comp=Z,1.6nm,0.7s,baz=232,slow=9.1,SNR=5.8							
SEY				LR		LR	16 10 34.1	
	comp=Z,145nm,20.6s,baz=209,slow=37							
	comp=Z,1.6nm,0.7s							
SONM	**Songino Array**	**28.43**	**306**	P		**P**	**15 59 05.1**	**-1.0**
	comp=Z,0.4nm,0.5s,baz=108,slow=9.3,SNR=2.1							
	comp=Z,0.4nm,0.5s							
SHEM	**Shemya Is, Ala**	**29.03**	**43**	LR		LR	16 08 29.0	
	comp=Z,57nm,20.5s,baz=256,slow=32							
TIXI	**Tiksi**	**36.82**	**354**	P		**P**	**16 00 19.0**	**+0.1**
	comp=Z,1.4nm,0.6s,baz=262,slow=22,SNR=4.6							
TIXI				LR		LR	16 15 59.6	
	comp=Z,83nm,21.0s,baz=181,slow=37							
	comp=Z,1.4nm,0.6s							
TIXI	**Tiksi**	**36.82**	**354**	P		**P**	**16 00 18.9**	**-0.1**
TIXI				IAmb		IAmb	16 00 19.7	
	comp=Z,2.2nm,0.6s							
FAKI	**Fak Fak**	**39.04**	**194**	P		**P**	**16 00 38.9**	**+0.6**
CHTO	**Chiang Mai**	**40.60**	**257**	P		**P**	**16 00 51.1**	**-0.1**
CMAR	**Chiang Mai Arr**	**40.79**	**257**	P		**P**	**16 00 52.9**	**0.0**
	comp=Z,1.0nm,0.8s,baz=51,slow=7.3,SNR=9.4							
CMAR				LR		LR	16 19 45.8	
	comp=Z,47nm,21.6s,baz=185,slow=39							
	comp=Z,1.0nm,0.8s							
ZAA0	**Zalesovo Array**	**42.75**	**314**	P		**P**	**16 01 07.8**	**-0.6**
ZALV	**Zalesovo Beam**	**42.75**	**314**	P		**P**	**16 01 07.2**	**-1.2**
	comp=Z,0.7nm,0.4s,baz=79,slow=7.6,SNR=3.5							
	comp=Z,0.7nm,0.4s							
MK31	**Makanchi Array**	**44.69**	**303**	P		**P**	**16 01 23.6**	**-0.7**
MKAR	**Makanchi Array**	**44.69**	**303**	P		**P**	**16 01 23.7**	**-0.5**
	comp=Z,13nm,0.4s,baz=84,slow=9.5,SNR=2.6							
KURK	**Kurchatov**	**46.66**	**309**	P		**P**	**16 01 38.3**	**-1.3**
KURK				IAmb		IAmb	16 01 50.9	
	comp=Z,4.5nm,0.8s							
SVW2	**Sparrevohn**	**46.98**	**36**	P		**P**	**16 01 41.5**	**-0.6**
SVW2				IAmb		IAmb	16 01 58.2	
	comp=Z,7.5nm,1.3s							
SOEI	**Soe**	**47.66**	**203**	P		**P**	**16 01 46.2**	**-1.8**
K20K	**Telida**	**47.82**	**33**	P		**P**	**16 01 47.2**	**-1.4**
K20K				IAmb		IAmb	16 02 28.5	
	comp=Z,8.6nm,1.6s							
J20K	**Nowinta River**	**47.85**	**32**	P		**P**	**16 01 48.6**	**-0.1**
J20K				IAmb		IAmb	16 02 30.8	
	comp=Z,4.8nm,1.3s							
KDAK	**Kodiak Island**	**48.50**	**41**	P		**P**	**16 01 54.2**	**+0.4**
	comp=Z,6.5nm,0.9s,baz=343,slow=8.8,SNR=4.1							
	comp=Z,6.5nm,0.9s							
KDAK	**Kodiak Island**	**48.50**	**41**	IAmb		IAmb	16 01 56.1	
	comp=Z,16nm,1.1s							
MTN	**Manton Dam**	**48.93**	**193**	P		**P**	**16 01 57.8**	**+0.2**
KDJ	**Kajisay**	**49.17**	**298**	P		**P**	**16 02 01.5**	**+2.0**
KDJ				IAmb		IAmb	16 02 13.4	
	comp=Z,1.8nm,0.7s							
COEN	**Coen**	**49.18**	**177**	P		**P**	**16 01 59.5**	**0.0**
MLY	**Manley**	**49.37**	**31**	P		**P**	**16 02 01.8**	**+1.3**
MLY				IAmb		IAmb	16 02 03.5	
	comp=Z,1.9nm,0.8s							
H23K	**Yukon River**	**49.89**	**30**	P		**P**	**16 02 05.5**	**+1.0**
H23K				IAmb		IAmb	16 02 08.2	
	comp=Z,2.2nm,0.8s							
MDM	**Murphy Dome**	**50.43**	**31**	P		**P**	**16 02 10.2**	**+1.7**
MDM				IAmb		IAmb	16 02 11.7	
	comp=Z,4.5nm,0.8s							
SML	**Sawmill**	**50.46**	**36**	P		**P**	**16 02 10.2**	**+1.3**
SML				IAmb		IAmb	16 02 19.1	
	comp=Z,5.1nm,0.9s							
WRH	**Wood River Hil**	**50.49**	**32**	P		**P**	**16 02 09.8**	**+0.8**
H24K	**Noodor Dome**	**50.58**	**30**	P		**P**	**16 02 11.5**	**+1.8**
H24K				IAmb		IAmb	16 02 12.3	
	comp=Z,6.7nm,1.4s							
IL31		**51.01**	**32**	P		**P**	**16 02 13.1**	**+0.3**
IL31				IAmb		IAmb	16 02 14.9	
	comp=Z,3.4nm,0.8s							
ILAR	**Eielson Array**	**51.01**	**32**	P		**P**	**16 02 14.1**	**+1.2**
	comp=Z,2.0nm,0.7s,baz=268,slow=6.2,SNR=19							
ILAR				LR		LR	16 26 16.1	
	comp=Z,39nm,18.8s,baz=309,slow=39							
	comp=Z,2.0nm,0.7s							
ILAR	**Eielson Array**	**51.01**	**32**	P		**P**	**16 02 13.4**	**+0.6**
Q23K	**Middleton Isla**	**51.63**	**38**	P		**P**	**16 02 16.9**	**-0.6**
KNRA	**Kununurra**	**52.16**	**195**	P		**P**	**16 02 22.0**

ISC 02 15:53:34.5±1.0, 18°43N±0′06×105°37W±0′06, h10km, n87, σ1°63/92, mb3.8/9, MS3.4/6, Off coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CJM	**Chamela**	**1.11**	**16**	*i* P	**Pb**	**15 53 54.6**	**-1.2**
CJM				*i* S	**Sg**	**15 54 09.4**	**-0.9**
CDAR	**Ciudad de Arme**	**1.39**	**68**	*i* P	**Pn**	**15 53 58.7**	**-1.3**
CDAR				*i* S	**Sn**	**15 54 17.2**	**-1.2**
R15V		**1.51**	**61**		**Pn**	**15 54 00.9**	**-0.8**
R15V		**1.51**	**61**	*i* P	**Pn**	**15 54 00.9**	**-0.8**
R15V				*eS*	**Sn**	**15 54 21.9**	**+0.4**
COIG	**Colima**	**1.76**	**65**	*i* P	**Pn**	**15 54 04.9**	**-0.3**
COIG				*i* S	**Sn**	**15 54 27.8**	**0.0**
MMIG	**Aquila**	**1.93**	**94**		**Pn**	**15 54 07.7**	**+0.2**
MMIG					**Sn**	**15 54 28.0**	**-3.8**
MMIG	**Aquila**	**1.93**	**94**	*eP*	**Pn**	**15 54 07.7**	**+0.2**
MMIG				*eS*	**Sn**	**15 54 28.0**	**-3.8**
MNGA	**Volcan de Coli**	**1.95**	**58**	*i* P	**Pn**	**15 54 08.4**	**+0.4**
MNGA				*i* S	**Sb**	**15 54 34.8**	**-0.1**
EZ5V		**1.97**	**58**		**Pn**	**15 54 09.1**	**+0.8**
EZ5V		**1.97**	**58**	*i* P	**Pn**	**15 54 09.1**	**+0.8**
EZ5V				*i* S	**Sb**	**15 54 36.2**	**+0.7**
INCO	**Volcan de Coli**	**2.00**	**57**	*i* P	**Pn**	**15 54 09.5**	**+0.7**
INCO				*eS*	**Sb**	**15 54 37.7**	**+1.3**
JUBC	**Volcan de Coli**	**2.02**	**57**	*i* P	**Pn**	**15 54 09.8**	**+0.8**
JUBC				*i* S	**Sn**	**15 54 35.8**	**+1.4**
ANIG	**Ahuacatlan**	**2.73**	**17**		**Pn**	**15 54 18.7**	**+0.1**
ANIG					**Sn**	**15 54 53.0**	**+1.3**
ANIG	**Ahuacatlan**	**2.73**	**17**	*eP*	**Pn**	**15 54 18.7**	**+0.1**
ANIG				*eS*	**Sn**	**15 54 53.0**	**+1.3**
MOIG	**Morelia**	**4.15**	**72**	Pn	**Pn**	**15 54 37.2**	**-1.0**
ARIG	**Puente Sto Nin**	**4.78**	**91**		**Pn**	**15 54 48.7**	**+2.0**
ARIG					**Sn**	**15 55 46.4**	**+4.3**
ARIG	**Puente Sto Nin**	**4.78**	**91**	*eP*	**Pn**	**15 54 48.7**	**+2.0**
ARIG				*i* S	**Sn**	**15 55 46.4**	**+4.3**
ZAIG	**Zacatecas**	**5.05**	**31**	Pn	**Pn**	**15 54 51.2**	**+0.5**
H06E1	**SOCORRO T-PHAS** SNR=350	**5.28**	**275**	T	T	16 00 07.6	
TLIG	**Tlapa**	**6.53**	**97**	Pn	**Pn**	**15 55 09.6**	**-1.3**
SLBS	**Sierra La Lagu**	**6.75**	**322**	Pn	**Pn**	**15 55 15.0**	**+1.1**
LPIG	**La Paz** comp=Z,208nm,19.8s,baz=157,slow=32	**7.28**	**322**	LR	LR	15 57 32.0	
CMIG	**Matias Romero** 0.7nm,0.3s,baz=269,slow=9.1,SNR=5.9 1.5nm,0.3s	**10.08**	**96**	Pn	**Pn**	**15 56 02.8**	**+3.3**
SRIG	**Santa Rosalia**	**10.88**	**326**	Pn	**Pn**	**15 56 08.6**	**-1.7**
TX31	**Lajitas Ar. Si**	**10.97**	**8**	Pn	**Pn**	**15 56 11.2**	**-0.4**
TX32	**Lajitas Array**	**10.97**	**8**	Pn	**Pn**	**15 56 11.3**	**-0.3**
TXAR	**Lajitas Array** 0.1nm,0.3s,baz=186,slow=14,SNR=4.2	**10.97**	**8**	Pn	Pn	15 56 17.9	+6.2
TXAR	comp=Z,75nm,19.5s,baz=180,slow=38 0.4nm,0.6s			LR	LR	16 00 38.6	
TXAR	**Lajitas Array**	**10.97**	**8**	Pn	**Pn**	**15 56 10.9**	**-0.8**
319A	**Douglas**	**13.37**	**345**	Pn	**Pn**	**15 56 42.6**	**-1.9**
121A	**Cookes Peak, D**	**14.21**	**352**	Pn	**Pn**	**15 56 54.3**	**-1.7**
TUC	**Tucson**	**14.66**	**342**		**Pn**	**15 57 01.7**	**-0.4**
ABTX	**Abilene, Hawle**	**15.04**	**18**	P	**Pn**	**15 57 04.2**	**-3.1**
214A	**Organ Pipe Nat**	**15.05**	**335**	P	**Pn**	**15 57 05.2**	**-2.2**
214A	comp=Z,10.0nm,1.2s			IAmb	IAmb	15 57 17.4	
WHTX	**Lake Whitney,**	**15.28**	**26**	P	**Pn**	**15 57 08.4**	**-2.0**
MSTX	**Muleshoe**	**15.65**	**8**	P	**Pn**	**15 57 14.4**	**-1.0**
BNM	**Barren Site**	**15.70**	**356**	P	**Pn**	**15 57 17.1**	**+1.1**
113A	**Mohawk Valley,**	**16.15**	**334**	P	**Pn**	**15 57 22.5**	**+0.9**
113A	comp=Z,13nm,1.3s			IAmb	IAmb	15 57 29.8	
ANMO	**Albuquerque** comp=Z,0.1nm,0.3s,baz=175,slow=13,SNR=3.1 comp=Z,2.0nm,0.9s	**16.48**	**357**	Pn	**P**	**15 57 30.1**	**+1.3**
ANMO	**Albuquerque**	**16.48**	**357**	P	**P**	**15 57 27.3**	**-1.5**
Z35A	**Perchaven, San**	**16.53**	**25**	P	**Pn**	**15 57 27.3**	**+0.8**
AMTX	**Amarillo**	**16.71**	**11**	P	**Pn**	**15 57 29.1**	**+0.2**
AMTX	comp=Z,14nm,0.8s			IAmb	IAmb	15 57 37.2	
X16A	**Lo Mia Camp, P**	**16.82**	**342**		**Pn**	**15 57 30.5**	**+0.1**
YUH	**Yuha Desert**	**17.04**	**328**	P	**P**	**15 57 34.0**	**-0.8**
YUH	comp=Z,28nm,1.9s			IAmb	IAmb	15 57 40.4	
W18A	**Petrified Fore**	**17.07**	**348**	P	**Pn**	**15 57 33.6**	**0.0**
RMX	**La Rumorosa**	**17.09**	**328**	P	**Pn**	**15 57 34.0**	**+0.3**
WMOK	**Wichita Mounta**	**17.27**	**19**		**P**	**15 57 37.8**	**+0.5**
WMOK	comp=Z,11nm,1.1s			IAmb	IAmb	15 58 23.4	
X34A	**Smith Ranch, M**	**17.45**	**21**		**Pn**	**15 57 38.6**	**+0.5**
WUAZ	**Wupatki**	**17.83**	**344**	P	**Pn**	**15 57 42.7**	**-0.3**
PFO	**Pinyon Flats O**	**18.09**	**329**	P	**Pn**	**15 57 45.8**	**-0.3**
X37A	**Clayton**	**18.39**	**27**	P	**Pn**	**15 57 51.2**	**+1.5**
X37A	comp=Z,8.8nm,1.1s			IAmb	IAmb	15 57 53.0	
T25A	**Trinidad**	**18.66**	**2**	P	**P**	**15 57 51.9**	**-0.9**
U32A	**Winter Ranch,**	**18.74**	**16**	P	**Pn**	**15 57 54.2**	**+0.1**
U32A	comp=Z,12nm,0.8s			IAmb	IAmb	15 57 58.9	
MVCO	**Mesa Verde**	**18.91**	**352**	P	**P**	**15 57 55.0**	**-0.6**
MVCO	comp=Z,10nm,1.6s			IAmb	IAmb	15 58 12.4	
U15A	**North Rim**	**18.94**	**343**	P	**Pn**	**15 57 57.4**	**+0.8**
SDCO	**Great Sand Dun**	**19.25**	**360**	P	**Pn**	**15 57 59.7**	**-0.7**
GSC	**Goldstone, Bar**	**19.63**	**331**	P	**P**	**15 58 02.3**	**-1.1**
LCMT	**Little Creek M**	**19.76**	**341**	P	**P**	**15 58 03.5**	**-1.5**
SHPR	**Sheep Range**	**19.97**	**336**	P	**P**	**15 58 04.9**	**-2.3**
SHPR	comp=Z,8.0nm,1.4s			IAmb	IAmb	15 58 11.8	
T35A	**Sooner Cattle**	**20.00**	**21**	P	**P**	**15 58 06.3**	**-1.0**
PV23	**Carpenter Ridg**	**20.20**	**352**	P	**P**	**15 58 07.5**	**-2.3**
PV23	comp=Z,11nm,1.2s			IAmb	IAmb	15 58 25.4	
QSM	**Queen of Sheba**	**20.21**	**332**	P	**P**	**15 58 08.7**	**-0.9**
QSM	comp=Z,6.1nm,1.3s			IAmb	IAmb	15 58 14.0	
PRN	**Pahroc Range**	**20.73**	**338**	P	**P**	**15 58 15.3**	**-0.1**
PRN	comp=Z,5.4nm,1.2s			IAmb	IAmb	15 58 33.9	
TPNV	**Topopah Spring**	**20.78**	**335**	P	**P**	**15 58 16.7**	**+0.7**
TPNV	comp=Z,5.6nm,1.1s			IAmb	IAmb	15 58 20.9	
DUNO	**Dulce Nombre,**	**20.96**	**111**	P	**P**	**15 58 16.4**	**-1.5**
U40A	**Yellville**	**21.00**	**29**	P	**P**	**15 58 18.3**	**+0.1**
U40A	comp=Z,15nm,1.8s			IAmb	IAmb	15 58 22.6	
Q16A	**Castle Valley**	**21.03**	**347**	P	**P**	**15 58 20.3**	**+1.6**
Q16A	comp=Z,4.8nm,1.0s			IAmb	IAmb	15 58 30.6	
P17A	**Butcher Ranch,**	**21.48**	**349**	P	**P**	**15 58 25.5**	**+2.0**
P17A	comp=Z,3.8nm,0.8s			IAmb	IAmb	15 58 36.9	
P18A	**Preston Nutter**	**21.54**	**350**	P	**P**	**15 58 23.8**	**-0.5**
LCAR	**Lake Charles**	**21.60**	**33**	P	**P**	**15 58 24.6**	**0.0**
LCAR	comp=Z,6.7nm,1.0s			IAmb	IAmb	15 58 31.3	
LCH	**Last Change Ra**	**21.61**	**333**	P	**P**	**15 58 26.3**	**+1.4**
R11A	**Troy Canyon, C**	**21.75**	**338**	P	**P**	**15 58 25.9**	**-0.6**
S39A	**Bolivar**	**21.90**	**26**	P	**P**	**15 58 28.9**	**+1.1**
S39A	comp=Z,9.0nm,0.9s			IAmb	IAmb	15 58 34.5	
MGMO	**Mountain Grove**	**21.92**	**29**	P	**P**	**15 58 30.0**	**+1.9**
MGMO	comp=Z,5.1nm,0.8s			IAmb	IAmb	15 58 36.9	
NVAR	**Mina Array Bea** comp=Z,0.6nm,0.8s,baz=154,slow=11,SNR=5.6 comp=Z,0.6nm,0.8s	**22.90**	**333**	P	**P**	**15 58 43.0**	**+4.2**
KVN	**Kaiserville**	**23.33**	**334**	P	**P**	**15 58 42.5**	**-0.7**
KVN	comp=Z,4.9nm,1.2s			IAmb	IAmb	15 58 47.6	
ELK	**Elko** comp=Z,43nm,18.9s,baz=232,slow=37	**23.80**	**341**	LR	LR	16 08 28.6	
W50A	**Signal Mountai**	**24.41**	**43**	P	**P**	**15 58 50.7**	**-2.6**
PDAR	**Pinedale Array** comp=Z,0.4nm,0.5s,baz=167,slow=12,SNR=2.2 comp=Z,0.4nm,0.5s	**24.52**	**353**	P	**P**	**15 58 58.3**	**+3.8**
REDW	**Red Top Meadow**	**25.28**	**351**	P	**P**	**15 58 59.5**	**-1.9**
LOHW	**Long Hollow**	**25.49**	**351**	P	**P**	**15 59 05.3**	**+2.1**
KMPM	**Mount Pierce**	**27.21**	**328**	P	**P**	**15 59 16.2**	**-2.5**
YBH	**Yreka Blue Hor** comp=Z,52nm,19.9s,baz=258,slow=36	**27.54**	**331**	LR	LR	16 10 02.8	
NEW	**Newport** comp=Z,79nm,21.2s,baz=29,slow=34	**31.26**	**345**	LR	LR	16 11 30.1	
SADO	**Sadowa** comp=Z,67nm,18.1s,baz=112,slow=38	**34.19**	**34**	LR	LR	16 15 30.0	
FRB	**Frobisher Bay** comp=Z,57nm,20.4s,baz=18,slow=35	**51.73**	**20**	LR	LR	16 24 10.9	
INK	**Inuvik**	**52.92**	**347**	LR	LR	16 26 45.0	
ILAR	**Eielson Array** comp=Z,58nm,18.9s,baz=133,slow=37 comp=Z,0.6nm,0.9s,baz=148,slow=7.0,SNR=4.3	**53.94**	**339**	P	**P**	**16 02 59.4**	**+1.2**

*IDC **02** 15:54:12.9±3.0, 24°02S×67°00W, h179km±25km, mb3.5/2, mbtmp3.9/6, Error ellipse: s-maj=49.1km s-min=21.4km az=166.0*
*GUC **02** 15:54:14.1±0.7, 24°07S×67°28W, h202km±7km, ML4.2*

ISC 02 15:54:12.9±0.8, 24°03S±0′05×67°16W±0′05, h195km±7km, n28, σ1°65/47, 11C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AF01	**San Pedro de A**	**1.42**	**319**	*eP*	**Pn**	**15 54 47.0**	**+1.1**
AF01				*eS*	**Sn**	**15 55 11.6**	**+0.3**
SLA	**San Lorenzo**	**1.66**	**115**	*eP*	**Pn**	**15 54 47.8**	**0.0**
SLA				*i* S	**Sn**	**15 55 13.9**	**-1.0**
LVC	**Limon Verde** 106nm,0.3s,baz=116,slow=8.4,SNR=188	**2.14**	**311**	P	**Pn**	**15 54 54.1**	**+1.2**
LVC	122nm,0.3s,baz=10,slow=22,SNR=10			S	**Sn**	**15 55 24.1**	**+0.1**
LVC	**Limon Verde**	**2.14**	**311**	*iP*	**Pn**	**15 54 54.0**	**+1.2**
LVC				*eS*	**Sn**	**15 55 24.6**	**+0.6**
PB15	**IPOC Station P**	**2.27**	**291**	*iP*	**Pn**	**15 54 55.3**	**+1.2**
PB15				*i* S	**Sn**	**15 55 26.4**	**+0.3**
GO02	**Mina Guanaco**	**2.48**	**242**	*iP*	**Pn**	**15 54 57.2**	**+0.7**
GO02				*eS*	**Sn**	**15 55 30.1**	**-0.5**
GO02	comp=N,1μm,0.3s			IAML		15 55 31.7	
PB06	**IPOC Station P**	**2.58**	**300**	*iP*	**Pn**	**15 54 58.7**	**+1.2**
PB06				*eS*	**Sn**	**15 55 31.9**	**-0.4**
PB06	comp=E,612nm,0.1s			IAML		15 55 34.6	
PB09	**IPOC Station P**	**2.94**	**319**	*iP*	**Pn**	**15 55 03.2**	**+1.4**
PB09				*eS*	**Sn**	**15 55 40.1**	**+0.3**
PB09	comp=N,245nm,0.5s			IAML		15 55 42.1	
PB10	**IPOC Station P**	**3.15**	**279**	*iP*	**Pn**	**15 55 04.9**	**+0.9**
PB10				*eS*	**Sn**	**15 55 42.9**	**-1.1**
PB10	comp=N,242nm,0.5s			IAML		15 55 45.6	
PB04	**IPOC Station P**	**3.23**	**301**	*iP*	**Pn**	**15 55 05.8**	**+0.6**
PB04				*i* S	**Sn**	**15 55 45.2**	**-0.7**
AC02	**Maricunga**	**3.31**	**212**	*i* P	**Pn**	**15 55 07.1**	**+0.6**
PB07	**IPOC Station P**	**3.40**	**312**	*iP*	**Pn**	**15 55 07.9**	**+0.6**
PB07				*eS*	**Sn**	**15 55 48.1**	**-1.7**
PB01	**IPOC Station P**	**3.67**	**324**	*eP*	**Pn**	**15 55 10.8**	**+0.3**
PB01				*eS*	**Sn**	**15 55 54.3**	**-1.4**
PB02	**IPOC Station P**	**3.69**	**316**	*eP*	**Pn**	**15 55 11.1**	**+0.2**
PB02				*i* S	**Sn**	**15 55 53.3**	**-2.9**
AC01	**Pan de Azucar**	**3.76**	**235**	*eP*	**Pn**	**15 55 10.7**	**-0.8**
AC01				*eS*	**Sn**	**15 55 54.3**	**-3.2**
PATCX	**Punta Patache**	**4.22**	**319**	*eP*	**Pn**	**15 55 17.6**	**+0.1**
PATCX				*eS*	**Sn**	**15 56 03.2**	**-4.9**
PB08	**IPOC Station P**	**4.29**	**334**	*iP*	**Pn**	**15 55 19.6**	**+1.0**
PB08				*eS*	**Sn**	**15 56 09.1**	**-1.0**
GO03	**Copiap**	**4.50**	**217**	*eP*	**Pn**	**15 55 19.6**	**-1.3**
GO03				*eS*	**Sn**	**15 56 11.0**	**-3.4**
HMBC	**Humberstone**	**4.51**	**325**	*eP*	**Pn**	**15 55 20.2**	**-0.9**
HMBC				*eS*	**Sn**	**15 56 09.8**	**-4.8**
LPAZ	**La Paz** comp=N,1.6nm,0.3s,baz=159,slow=9.1,SNR=8.8	**7.76**	**353**	P	**Pn**	**15 56 04.5**	**+0.8**
LPAZ	comp=N,1.4nm,0.6s,baz=311,slow=21,SNR=2.3			S	**Sn**	**15 57 29.1**	**-2.4**
SIV	**San Ignacio** comp=N,1.3nm,0.4s,baz=212,slow=16,SNR=3.8	**9.83**	**37**	P	**Pn**	**15 56 28.4**	**-1.8**
BDFB	**Brasilia** comp=N,5.7nm,0.7s,baz=252,slow=12,SNR=7.1	**19.84**	**69**	P	**P**	**15 58 29.1**	**-0.1**
TORD	**Torodi Ar. Bea** comp=N,0.6nm,0.5s,baz=255,slow=5.8,SNR=5.0 comp=N,0.6nm,0.5s	**76.72**	**69**	P	**P**	**16 05 43.4**	**+0.3**
YKA	**Yellowknife Ar** comp=N,0.2nm,0.5s,baz=130,slow=3.2,SNR=2.5 comp=N,0.2nm,0.5s	**94.10**	**340**	P	**P**	**16 07 10.7**	**+2.0**
ASAR	**Alice Springs** comp=N,0.4nm,1.0s,baz=144,slow=1.8,SNR=6.2	**128.37**	**205**	PKP	**PKiKP**	**16 12 58.5**	**+0.8**
WRA	**Warramunga Arr** comp=N,0.3nm,0.5s,baz=151,slow=1.8,SNR=8.0	**131.53**	**207**	PKP	**PKiKP**	**16 13 04.8**	**+0.7**
ZALV	**Zalesovo Beam** comp=N,0.6nm,0.5s,baz=336,slow=3.2,SNR=2.1	**143.49**	**28**	PKP	**PKPdf**	**16 13 23.3**	**-0.6**
MKAR	**Makanchi Array** comp=N,0.9nm,0.7s,baz=293,slow=3.6,SNR=7.1	**146.64**	**39**	PKPbc	**PKPab**	**16 13 33.2**	**+0.1**

*NEIC **02** 15:56:32.9±2.1, 52°04N±0°2×178°4E±0°1, h126km±10km, mb3.9/41, ML3.2/22(AEIC), Error ellipse: s-maj=36.3km s-min=9.4km az=186.0*
*IDC **02** 15:56:32.4±2.8, 52°04N×178°49E, h111km±25km, mb3.3/8, mbtmp3.8/11, Error ellipse: s-maj=33.9km s-min=15.1km az=154.0*
*AEIC **02** 15:56:33±2.2, 51°9N±0°1×178°4E±0°1, h123km±8km, Error ellipse: s-maj=21.3km s-min=6.1km az=201.0*

ISC 02 15:56:32.6±0.7, 52°1N±0°1×178°39E±0°05, h113km, n85, σ1°23/82, mb3.7/18, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GASW	**Gareloi Southw**	**1.73**	**99**		**Pn**	**15 57 03.7**	**+1.4**
GASW					**Sn**	**15 57 25.7**	**+0.7**
GALA0	**Gareloi North**	**1.75**	**97**		**Pn**	**15 57 03.8**	**+1.2**
GALAA	**Gareloi Lava P**	**1.79**	**99**		**Pn**	**15 57 04.3**	**+1.3**
GALAI	**Gareloi-Kavalg**	**1.81**	**106**		**Pn**	**15 57 03.9**	**+0.6**
TANO	**Tanaga North**	**2.16**	**93**		**Pn**	**15 57 08.9**	**+1.2**
TASE	**Tanaga Southea**	**2.22**	**95**		**Pn**	**15 57 09.5**	**+0.9**
TAFP	**Tanaga Falls P**	**2.25**	**93**		**Pn**	**15 57 09.5**	**+0.7**
TAFP					**Sn**	**15 57 38.1**	**+1.5**
TAFL	**Tanaga Flats**	**2.32**	**97**		**Pn**	**15 57 10.4**	**+0.7**
TAPA	**Tanaga Point A**	**2.36**	**95**		**Pn**	**15 57 11.1**	**+0.7**
SHEM	**Shemya Is, Ala** 63nm,0.3s,baz=108,slow=3.9,SNR=34	**2.71**	**286**	P	**Pn**	**15 57 15.1**	**+0.3**
SHEM	30nm,0.3s,baz=303,slow=22,SNR=6.9			S	**Sn**	**15 57 49.3**	**+2.1**
SMY	**Shemya**	**2.71**	**286**		**Pn**	**15 57 14.7**	**0.0**
KIMD	**Kanaga Island**	**2.73**	**95**		**Pn**	**15 57 15.6**	**+0.5**
KICM	**Kanaga Island**	**2.73**	**92**		**Pn**	**15 57 16.2**	**+1.1**
KIKV	**Kanaga Island**	**2.75**	**92**		**Pn**	**15 57 16.5**	**+1.1**
KIWB	**Kanaga Island**	**2.77**	**93**		**Pn**	**15 57 15.1**	**-0.4**
ADK	**Adak**	**3.05**	**92**		**Pn**	**15 57 19.4**	**+0.1**
GSTD	**Great Sitkin T**	**3.37**	**88**		**Pn**	**15 57 24.1**	**+0.5**
ATKA	**Atka Island**	**4.57**	**86**		**Pn**	**15 57 39.9**	**+0.3**
NIKH	**Nikolski High**	**7.83**	**78**		**Pn**	**15 58 21.0**	**-2.7**
UNV	**Unalaska Valle**	**9.29**	**73**		**Pn**	**15 58 42.1**	**-1.2**
AKUT	**Akutan**	**9.74**	**72**	Pn	**Pn**	**15 58 47.3**	**-2.2**
ISLZ	**Isanotski Laza**	**11.01**	**69**		**Pn**	**15 59 05.8**	**-0.8**
PEA0B	**Petropavlovsk-**	**12.62**	**283**	Pn	**Pn**	**15 59 24.1**	**-3.9**
PETK	**Petropavlovsk-** 4.1nm,0.8s,baz=94,slow=16,SNR=8.0	**12.62**	**283**	P	**Pn**	**15 59 29.8**	**+1.8**
SDPT	**Sand Point**	**12.92**	**67**	Pn	**Pn**	**15 59 30.9**	**-0.9**
CHIR	**Chirikof Islan**	**15.71**	**66**	Pn	**Pn**	**16 00 05.6**	**-1.7**
N18K	**Kilae Creek**	**16.54**	**49**	P	**P**	**16 00 19.9**	**+1.8**
N18K	comp=Z,4.0nm,0.7s			IAmb	IAmb	16 00 25.6	
SII	**Sitkinak Islan**	**16.56**	**63**	Pn	**Pn**	**16 00 15.5**	**-2.3**
O18K	**Koktuh Hills**	**16.61**	**52**	P	**P**	**16 00 19.4**	**+0.5**
SVW2	**Sparrevohn**	**16.83**	**47**		**P**	**16 00 23.0**	**+1.7**
SVW2	comp=Z,4.6nm,1.0s			IAmb	IAmb	16 00 29.8	
Q19K	**Cape Douglas,**	**17.16**	**55**	P	**Pn**	**16 00 25.9**	**+0.7**
Q19K	comp=Z,13nm,1.1s			IAmb	IAmb	16 00 41.0	
N19K	**Bonanza Creek**	**17.24**	**49**	P	**Pn**	**16 00 27.2**	**+1.1**
N19K	comp=Z,7.1nm,0.8s			IAmb	IAmb	16 00 32.8	
TTA	**Tatalina**	**17.38**	**41**	P	**Pn**	**16 00 28.5**	**+0.6**
KDAK	**Kodiak Island** comp=Z,2.1nm,0.3s,baz=292,slow=4.6,SNR=16	**17.54**	**60**	P	**P**	**16 00 27.8**	**-1.3**
KDAK	**Kodiak Island**	**17.54**	**60**	P	**P**	**16 00 26.1**	**-3.0**
L19K	**White Mountain**	**17.55**	**44**	P	**Pn**	**16 00 29.9**	**0.0**
M19K	**Big River Lodg**	**17.65**	**46**	P	**P**	**16 00 29.6**	**-0.8**
M19K	comp=Z,13nm,1.6s			IAmb	IAmb	16 00 36.2	
K20K	**Telida**	**18.36**	**41**	P	**Pn**	**16 00 39.8**	**+0.2**
K20K	comp=Z,7.3nm,1.4s			IAmb	IAmb	16 01 01.2	
RDOG	**Red Dog Mine**	**18.40**	**22**	P	**P**	**16 00 39.0**	**+0.5**
CNPM	**China Poot**	**18.49**	**54**	P	**P**	**16 00 40.1**	**+0.4**
J20K	**Nowinta River**	**18.70**	**39**	P	**Pn**	**16 00 43.1**	**-0.3**
J20K	comp=Z,7.6nm,1.5s			IAmb	IAmb	16 01 06.3	
BRLK	**Bradley Lake**	**18.71**	**54**	P	**P**	**16 00 42.3**	**+0.3**
BRLK	comp=Z,9.2nm,0.9s			IAmb	IAmb	16 00 42.8	
SUA	**Susitna One**	**19.16**	**49**	P	**P**	**16 00 46.6**	**-0.4**
SUA	comp=Z,7.9nm,1.0s			IAmb	IAmb	16 00 54.9	
O22K	**Cooper Landing**	**19.42**	**52**	P	**P**	**16 00 49.8**	**+0.1**
IMAR	**Indian Mountai**	**19.74**	**34**	P	**P**	**16 00 53.3**	**+0.3**
H21K	**Melozitna Rive**	**19.91**	**36**	P	**P**	**16 00 54.2**	**-0.7**
BPAW	**Bear Paw Mtn.**	**19.92**	**41**	P	**P**	**16 00 53.2**	**-1.9**
BPAW	comp=Z,8.9nm,1.6s			IAmb	IAmb	16 01 29.0	
PMR	**Palmer**	**19.94**	**49**	P	**P**	**16 00 52.6**	**-2.6**
PMR	comp=Z,5.1nm,1.0s			IAmb	IAmb	16 00 53.6	
MLY	**Manley**	**20.39**	**39**	P	**P**	**16 01 00.9**	**+0.7**
SCM	**Sheep Creek Mo**	**20.84**	**49**	P	**P**	**16 01 01.8**	**-3.2**
DHY	**Denali Highway**	**21.11**	**45**	P	**P**	**16 01 09.6**	**+1.6**
DHY	comp=Z,13nm,1.6s			IAmb	IAmb	16 01 13.2	
WRH	**Wood River Hil**	**21.23**	**41**	P	**P**	**16 01 09.7**	**+0.6**
WRH	comp=Z,6.1nm,1.6s			IAmb	IAmb	16 01 19.4	
MDM	**Murphy Dome**	**21.35**	**40**	P	**P**	**16 01 09.8**	**-0.6**
MDM	comp=Z,4.8nm,1.4s			IAmb	IAmb	16 01 33.8	
CCB	**Clear Creek Bu**	**21.41**	**41**	P	**P**	**16 01 11.6**	**+0.6**
M24K	**Tolsona, Glenn**	**21.42**	**48**	P	**P**	**16 01 11.0**	**-0.3**
H24K	**Noodor Dome**	**21.82**	**38**	P	**P**	**16 01 14.4**	**-1.0**
IL31		**21.82**	**41**	P	**P**	**16 01 14.7**	**-0.6**
IL31	comp=Z,4.8nm,1.4s			IAmb	IAmb	16 01 50.4	
ILAR	**Eielson Array** comp=Z,0.2nm,0.4s,baz=246,slow=8.8,SNR=4.3 comp=Z,0.2nm,0.4s	**21.82**	**41**	P	**P**	**16 01 14.5**	**-0.9**
RIDG	**Independent Ri**	**22.38**	**44**	P	**P**	**16 01 21.2**	**-0.1**
RIDG	comp=Z,5.3nm,1.3s			IAmb	IAmb	16 01 30.3	
GLB	**Gilahina Butte**	**22.42**	**51**	P	**P**	**16 01 21.8**	**+0.1**
VRDI	**Verde Repeater**	**22.57**	**51**	P	**P**	**16 01 22.1**	**-1.2**
VRDI	comp=Z,11nm,1.5s			IAmb	IAmb	16 01 32.0	
SNH	**Sunshine Point**	**22.78**	**54**	P	**P**	**16 01 24.4**	**-0.8**
SCRK	**Sand Creek**	**22.81**	**44**	P	**P**	**16 01 25.1**	**-0.5**
J26L	**Joseph Creek**	**23.12**	**43**	P	**P**	**16 01 27.2**	**-1.3**
GRNC	**Granite Creek**	**23.35**	**53**	P	**P**	**16 01 30.6**	**-0.3**
GRNC	comp=Z,6.9nm,1.1s			IAmb	IAmb	16 01 35.8	
M27K	**Edge Creek, AK**	**23.45**	**49**	P	**P**	**16 01 32.5**	**+0.9**
M27K	comp=Z,4.8nm,1.2s			IAmb	IAmb	16 01 33.8	
CTGM	**Chitina Glacie**	**23.57**	**52**	P	**P**	**16 01 31.9**	**-0.9**
CTGM	comp=Z,12nm,1.6s			IAmb	IAmb	16 01 35.7	
L27K	**Beaver Creek,**	**23.58**	**47**	P	**P**	**16 01 32.6**	**-0.1**
BCAR	**Beaver Creek A**	**23.60**	**47**	P	**P**	**16 01 31.8**	**-1.0**
BMAR	**Burnt Mountain**	**23.64**	**35**	P	**P**	**16 01 33.7**	**+0.4**
K27K	**Chicken**	**23.64**	**44**	P	**P**	**16 01 33.0**	**-0.2**
K27K	comp=Z,4.0nm,1.2s			IAmb	IAmb	16 02 03.9	
H11N2	**WAKE ISLAND Hy** baz=13	**33.52**	**200**	T	T	16 38 33.6	
H11N3	**WAKE ISLAND Hy** baz=13,slow=74	**33.53**	**200**	T	T	16 38 33.4	
H11N1	**WAKE ISLAND Hy** baz=13,slow=74	**33.53**	**200**	T	T	16 38 42.6	
H11S1	**WAKE ISLAND Hy** baz=10	**34.74**	**200**	T	T	16 40 14.3	
H11S2	**WAKE ISLAND Hy** baz=10	**34.76**	**200**	T	T	16 40 07.2	
H11S3	**WAKE ISLAND Hy** baz=10	**34.76**	**200**	T	T	16 40 09.9	
YKA	**Yellowknife Ar** comp=Z,0.3nm,0.5s,baz=278,slow=7.9,SNR=1.8 comp=Z,0.3nm,0.5s	**36.02**	**47**	P	**P**	**16 03 23.0**	**+0.7**
NVAR	**Mina Array Bea** comp=Z,0.3nm,0.6s,baz=284,slow=8.3,SNR=2.6 comp=Z,0.3nm,0.6s	**45.19**	**82**	P	**P**	**16 04 38.5**	**+0.3**
PDAR	**Pinedale Array** comp=Z,0.2nm,0.5s,baz=328,slow=4.3,SNR=1.5 comp=Z,0.2nm,0.5s	**47.75**	**71**	P	**P**	**16 04 57.3**	**-0.9**
SPITS	**Spitsbergen Ar** comp=Z,4.2nm,0.8s,baz=50,slow=12,SNR=5.1 comp=Z,4.2nm,0.8s	**49.54**	**355**	P	**P**	**16 05 11.0**	**-0.1**
WRA	**Warramunga Arr** comp=Z,0.7nm,0.6s,baz=32,slow=6.3,SNR=5.6 comp=Z,0.7nm,0.6s	**81.35**	**221**	P	**P**	**16 08 35.6**	**-0.8**
ASAR	**Alice Springs** comp=Z

WRA	**Warramunga Arr**	**32.68**	**251**	P	P	16 04 33.9	-0.5
	0.5nm,0.8s,baz=83,slow=9.2,SNR=2.5						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**33.86**	**245**	P	P	16 04 45.1	+0.4
	0.6nm,0.8s,baz=74,slow=9.8,SNR=4.2						
	0.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**73.71**	**293**	P	P	16 09 36.5	0.0
	0.9nm,0.8s,baz=118,slow=5.3,SNR=7.1						
	0.9nm,0.8s						
ILAR	**Eielson Array**	**83.62**	**18**	P	P	16 10 30.1	0.0
	0.7nm,0.6s,baz=239,slow=4.9,SNR=9.8						
	0.7nm,0.6s						

*TIR **02** 15:58:25.7,41˚.89N×19˚.58E,h20km±13km,Md2.6,MI1.8*
ISC 02 15:58:25.9±1.1,41˚.88N±0˚.05×19˚.58E±0˚.04,h16km±8km, n7,σ1§22/14,Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SDA	**Shkodra**	**0.18**	**341**	P	**Pg**	**15 58 30.4**	**+0.1**
	baz=340						
SDA				S	**Sg**	**15 58 33.4**	**+0.2**
	baz=340						
TIR	**Tirane**	**0.58**	**158**	P	**Pb**	**15 58 37.5**	**-0.1**
	baz=158						
TIR				S	**Sb**	**15 58 46.5**	**+0.9**
	baz=158						
TIR				AMP			
	comp=E,0.1nm,0.2s,baz=158						
BCI	**Bajram Curri**	**0.60**	**37**	P	**Pb**	**15 58 38.0**	**-0.1**
	baz=36						
BCI				S	**Sb**	**15 58 47.1**	**+0.7**
	baz=36						
BCI				AMP			
	comp=N,0.3nm,0.5s,baz=36						
PHP	**Peshkopia**	**0.68**	**107**	P	**Pb**	**15 58 39.5**	**+0.2**
	baz=107						
PHP				S	**Sn**	**15 58 49.2**	**-1.8**
	baz=107						
PHP				AMP			
	comp=N,0.2nm,0.2s,baz=107						
STON	**Ston**	**1.71**	**306**	*e*Pn	**Pg**	**15 58 58.4**	**-0.3**
STON				Sn	**Sb**	**15 59 19.4**	**+1.4**
LSTV	**Lastovo**	**2.18**	**295**	*e*Pn	**Pb**	**15 59 05.0**	**+0.1**
LSTV				Sn	**Sb**	**15 59 31.0**	**-0.6**
KIJV	**Kijevo**	**3.15**	**313**	*e*Pn	**Pb**	**15 59 19.4**	**-2.0**
KIJV				Sn	**Sn**	**15 59 54.0**	**+1.9**

*ISK **02** 16:10:12.5,38˚.40N×43˚.25E,h5km,ML2.5/8*
*DDA **02** 16:10:13.1±0.0,38˚.28N×43˚.25E,h7km±3km,ML2.0*
ISC 02 16:10:12.9±1.0,38˚33N±0˚.04×43˚26E±0˚.03,h9km±9km, n13,σ1§12/18,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GEVA	**Gevas**	**0.16**	**263**	P	**Pg**	**16 10 16.1**	**-0.4**
GEVA				S	**Sg**	**16 10 19.6**	**+0.7**
AKDM	**Akdamar-Van**	**0.22**	**270**	PG	**Pg**	**16 10 17.2**	**-0.3**
AKDM				SG	**Sg**	**16 10 22.2**	**+1.6**
VANB	**Van**	**0.28**	**21**	PG	**Pg**	**16 10 16.4**	**-2.2**
OZAP	**Van, Ozalp-Mer**	**0.66**	**60**	P	**Pb**	**16 10 26.9**	**+0.1**
OZAP				*i* AML	AML	16 10 53.0	
	comp=E,68nm,0.6s						
OZAP				*i* AML	AML	16 10 53.0	
	comp=N,48nm,0.6s						
PERV	**Siirt/Pervari-**	**0.68**	**236**	P	**Pg**	**16 10 24.6**	**-1.5**
PERV				S	**Sb**	**16 10 36.2**	**-0.5**
PERV				*i* AML	AML	16 10 42.0	
	comp=N,183nm,0.4s						
PERV				*i* AML	AML	16 10 43.0	
	comp=E,193nm,0.4s						
HAKT	**HAKKARI**	**0.85**	**155**	P	**Pg**	**16 10 28.3**	**-0.9**
HAKT				S	**Sg**	**16 10 40.5**	**+0.2**
HAKT				*i* AML	AML	16 10 46.0	
	comp=E,79nm,0.3s						
HAKT				*i* AML	AML	16 10 46.0	
	comp=N,63nm,0.4s						
BLIS	**Bitlis-Merkez**	**0.90**	**276**	P	**Pb**	**16 10 30.5**	**-0.4**
BLIS				*i* AML	AML	16 10 47.0	
	comp=E,45nm,0.5s						
BLIS				*i* AML	AML	16 10 49.0	
	comp=N,38nm,0.3s						
CLDR	**Caldiran**	**0.96**	**32**	PG	**Pg**	**16 10 31.5**	**+0.1**
GURO	**Guroymak-BITLI**	**0.99**	**283**	PG	**Pb**	**16 10 32.1**	**-0.2**
GURO				SG	**Sn**	**16 10 46.6**	**-0.7**
CUKT	**Cukurca**	**1.12**	**166**	PN	**Pn**	**16 10 36.6**	**+1.7**
AGRB	**Hanur-Agry**	**1.26**	**351**	PN	**Pg**	**16 10 36.6**	**-0.5**
SVAN	**Silvan-Diyarba**	**1.63**	**264**	PN	**Pg**	**16 10 43.6**	**-0.6**
MAZI	**Mazidag**	**2.39**	**250**	PN	**Pb**	**16 10 55.1**	**-1.1**

*TUL **02** 16:20:56.5±1.2,36˚.65N±0˚.01×97˚.71W±0˚.01,h7km±4km, ML2.7,mb_Lg2.6/45(NEIC),Error ellipse: s-maj=1.7km s-min=1.5km az=100.0*
NEIC 02 16:20:56.3±1.0,36˚.644N±0˚.008×97˚.70W±0˚.01, h10km±5km,Error ellipse: s-maj=1.7km s-min=0.4km az=48.0,Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T35A	**Sooner Cattle**	**0.99**	**74**	Pg	Pg	16 21 15.2	-0.1
T35A				Sg	Sg	16 21 28.3	0.0
U32A	**Winter Ranch,**	**1.08**	**256**	Pg	Pg	16 21 16.6	-0.5
U32A				Sg	Sg	16 21 31.2	+0.1
OKCFA	**Oklahoma City**	**1.24**	**171**		Pn	16 21 19.5	-0.2
OKCFA				Sn	Sn	16 21 36.6	0.0
OKCSW	**OKLAHOMA CITY**	**1.25**	**170**		Pb	16 21 20.1	0.0
FNO	**Franklin**	**1.41**	**170**		Pb	16 21 22.3	-0.3
TUL1	**Leonard**	**1.71**	**115**		Pn	16 21 26.9	+0.8
TUL1				IAmb_Lg		16 21 51.5	
	comp=Z,27nm,0.8s						
R32A	**Long Quarter,**	**1.95**	**336**	Pn	Pn	16 21 29.7	+0.2
R32A				IAmb_Lg		16 21 57.5	
	comp=Z,24nm,0.7s						
X34A	**Smith Ranch, M**	**2.04**	**183**		Pn	16 21 31.6	+0.8
WMOK	**Wichita Mounta**	**2.10**	**205**	Pn	Pn	16 21 32.3	+0.8
KSU1	**Kansas State U**	**2.60**	**19**	Pn	Pn	16 21 37.6	-0.8
CBKS	**Cedar Bluff**	**2.70**	**324**	Pn	Pn	16 21 40.5	+0.7
CBKS				IAmb_Lg		16 22 28.0	
	comp=Z,18nm,0.7s						
X37A	**Clayton**	**2.79**	**137**		Pn	16 21 41.9	+0.9
HHAR	**Hobbs**	**3.05**	**96**		Pn	16 21 45.4	+0.8
Z35A	**Perchaven, San**	**3.33**	**174**	Pn	Pn	16 21 49.3	+0.9
W39A	**Magazine**	**3.49**	**113**	IAmb_Lg		16 22 52.6	
	comp=Z,12nm,0.8s						
S39A	**Bolivar**	**3.65**	**72**		Pn	16 21 52.7	-0.1
AMTX	**Amarillo**	**3.68**	**243**	Pn	Pn	16 21 54.9	+1.5
AMTX				IAmb_Lg		16 22 58.8	
	comp=Z,16nm,0.8s						
U40A	**Yellville**	**3.92**	**93**		Pn	16 21 56.7	+0.2
U40A				IAmb_Lg		16 23 10.3	
	comp=Z,13nm,0.7s						
MIAR	**Mount Ida**	**3.96**	**121**	Pn	Pn	16 21 56.2	-0.9
MIAR				IAmb_Lg		16 23 10.5	
	comp=Z,8.8nm,0.8s						
MGMO	**Mountain Grove**	**4.38**	**82**	Pn	Pn	16 22 02.5	-0.4
MGMO				IAmb_Lg		16 23 14.2	
	comp=Z,13nm,0.8s						
P38A	**Dawn**	**4.43**	**47**		Pn	16 22 04.0	+0.4
N35A	**Tabor**	**4.51**	**20**	Pn	Pn	16 22 04.2	-0.4
X40A	**Basin Creek Fa**	**4.51**	**117**		Pn	16 22 05.5	+0.8
KSCO	**Kaye Shedlock'**	**4.56**	**303**	Pn	Pn	16 22 05.6	+0.1
KSCO				IAmb_Lg		16 23 24.1	
	comp=Z,12nm,0.9s						
FCAR	**Ozark Folk Cen**	**4.57**	**98**	Pn	Pn	16 22 05.2	-0.2
WHAR	**Wooly Hollow**	**4.59**	**106**	Pn	Pn	16 22 04.7	-1.1
WHAR				IAmb_Lg		16 23 23.4	
	comp=Z,11nm,1.0s						
R40A	**Maddies Statio**	**4.62**	**68**	Pn	Pn	16 22 04.5	-1.7
R40A				IAmb_Lg		16 23 23.4	
	comp=Z,10nm,0.7s						
WHTX	**Lake Whitney,**	**4.64**	**177**	Pn	Pn	16 22 07.0	+0.4
W41B	**Gary Mavity, V**	**4.66**	**107**	Pn	Pn	16 22 05.3	-1.5
W41B				IAmb_Lg		16 23 29.3	
	comp=Z,9.6nm,1.2s						
MSTX	**Muleshoe**	**4.93**	**239**	Pn	Pn	16 22 08.8	-1.8
MSTX				IAmb_Lg		16 23 41.4	
	comp=Z,8.0nm,1.0s						
P40A	**Paris**	**5.31**	**55**	Pn	Pn	16 22 13.5	-2.1
LCAR	**Lake Charles**	**5.31**	**94**	Pn	Pn	16 22 11.3	-4.4
CCM	**Cathedral Cave**	**5.33**	**73**	Pn	Pn	16 22 14.1	-1.8
CCM				IAmb_Lg		16 23 45.3	
	comp=Z,8.8nm,0.8s						

T25A	**Trinidad**	**5.40**	**277**	Pn	Pn	16 22 13.9	-3.2
T25A				IAmb_Lg		16 23 54.2	
	comp=Z,6.3nm,0.8s						
L34A	**Svendsen Farm,**	**5.41**	**11**	IAmb_Lg		16 23 54.3	
	comp=Z,8.6nm,0.9s						
N38A	**Joes South For**	**5.42**	**39**	Pn	Pn	16 22 13.3	-3.8
PBMO	**Poplar Bluff**	**5.84**	**87**	IAmb_Lg		16 23 59.2	
	comp=Z,5.7nm,0.8s						
FVM	**French Village**	**5.95**	**75**	Pn	Pn	16 22 25.0	+0.5
FVM				IAmb_Lg		16 24 09.7	
	comp=Z,9.3nm,0.7s						
GNAR	**Gosnell**	**6.24**	**94**	Pn	Pn	16 22 26.9	-1.5
SCIA	**State Center**	**6.30**	**32**	IAmb_Lg		16 24 32.1	
	comp=Z,13nm,0.9s						
SDCO	**Great Sand Dun**	**6.32**	**282**	Pn	Pn	16 22 27.3	-2.6
GLAT	**Glass**	**6.79**	**91**	Pn	Pn	16 22 35.3	-0.7
PHWY	**Pilot Hill**	**7.62**	**310**	IAmb_Lg		16 25 01.2	
	comp=Z,4.7nm,0.9s						
N23A	**Red Feather La**	**7.71**	**306**	IAmb_Lg		16 25 18.6	
	comp=Z,7.5nm,0.9s						
RSSD	**Black Hills**	**8.89**	**329**	IAmb_Lg		16 25 47.2	
	comp=Z,6.4nm,1.1s						

MAN 02 16:21:50.3,6˚.67N×126˚.63E,h15km,mb3.8,ML2.5,MS2.0, Mindanao

*IDC **02** 16:22:58.0±1.5,6˚.72N×126˚.96E,h0km,mb3.5/4, mbtmp3.9/6,ML4.4/2,MS3.2/6,Error ellipse: s-maj=34.1km s-min=13.7km az=34.0*
*NEIC **02** 16:23:03.3±2.7,6˚.67N±0˚.09×126˚.81E±0˚.06,h37km±8km, mb4.2/14,Error ellipse: s-maj=13.0km s-min=8.5km az=194.0*
*DJA **02** 16:23:04.9±0.8,7˚.N±5˚×12˚.7E±˚,h10km,M4.5/6,mb4.6/6, mB5.3/2,MLv4.4/6,Mw(mB)4.7/2*
*MAN **02** 16:23:06.8,6˚.75N×126˚.26E,h12km,mb5.0,ML3.9,MS3.9*
ISC 02 16:23:02.5±0.7,6.72N±0˚.06×126˚.86E±0˚.09,h35km,n42, σ1§75/41,mb4.1/9,MS3.2/6,2C,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**1.32**	**285**	Pg	**Pn**	**16 23 24.7**	**+0.3**
	30nm,0.3s,baz=99,slow=19,SNR=5.3						
DAV				Lg	Lg	16 23 43.1	
	92nm,0.3s,baz=50,slow=22,SNR=12						
DAV				LR	LR	16 24 00.8	
	comp=Z,478nm,21.6s,baz=59,slow=44						
DAV	**Davao City (W)**	**1.32**	**285**		**Pn**	**16 23 24.1**	**-0.3**
BIPH	**Bislig**	**1.54**	**341⇑**	*e*P	**Pn**	**16 23 28.4**	**+1.0**
BIPH				*e*S	**Sn**	**16 23 46.8**	**+0.6**
KCP	**Kidapawan**	**1.78**	**279⇑**	*i*P	**Pn**	**16 23 29.8**	**-1.0**
KCP				*i* S	**Pn**	**16 23 29.8**	**-1.0**
SGSI	**Sangihe**	**3.29**	**204**	P	**Pn**	**16 23 52.0**	**+0.4**
SGSI				S	**Sn**	**16 24 31.5**	**+2.0**
LBMI	**Labuha**	**7.33**	**175**	P	**Pn**	**16 24 50.7**	**+3.5**
	0.1nm21nm,0.9s						
MRSI	**Marisa**	**7.91**	**219**	P	**Pn**	**16 24 55.7**	**+0.7**
	0.2nm2µm64nm,0.8s						
TOLI2	**Tolitoli**	**8.23**	**228**	Pn	**Pn**	**16 24 56.1**	**-3.4**
MYLDM	**Lahad Datu**	**8.45**	**260**	Pn	**Pn**	**16 25 05.2**	**+2.6**
LUWI	**Luwuk**	**8.72**	**208**		**Pn**	**16 25 09.7**	**+3.4**
LUWI	**Luwuk**	**8.72**	**208**	P	**Pn**	**16 25 08.8**	**+2.6**
	2µm48nm,0.9s						
SIJI	**Sorong**	**8.73**	**150**	Pn	**Pn**	**16 25 08.2**	**+1.9**
	1.1nm,0.3s,baz=324,slow=16,SNR=7.4						
SIJI				Sn	**Sn**	**16 26 43.2**	**-0.3**
	0.8nm,0.3s,baz=222,slow=23,SNR=7.4						
SANI	**Sanana**	**8.75**	**186**	P	**Pn**	**16 25 05.2**	**-1.5**
FAKI	**Fak Fak**	**10.98**	**150**	Pn	**Pn**	**16 25 37.2**	**-0.1**
TTSI	**Tana Toraja**	**11.98**	**216**	P	**Pn**	**16 25 55.0**	**+4.2**
KAPI	**Kappang**	**13.64**	**211**	Pn	**Pn**	**16 26 13.8**	**+0.2**
	1.3nm,0.3s,baz=12,slow=4.8,SNR=8.1						
	5.5nm,0.3s						
KAPI	**Kappang**	**13.64**	**211**		**Pn**	**16 26 13.2**	**-0.4**
SBUM	**Sibu**	**15.19**	**254**	P	**P**	**16 26 39.7**	**+0.5**
SBUM				IAmb	IAmb	16 26 47.5	
	comp=Z,6.5nm,0.8s						
SOEI	**Soe**	**16.57**	**189**	Pn	**Pn**	**16 26 52.1**	**-0.3**
SOEI				IAmb	IAmb	16 27 22.6	
	comp=Z,22nm,1.1s						
BATI	**Baumata**	**17.11**	**191**	P	**P**	**16 27 00.8**	**+0.2**
	comp=Z,1.8nm,0.3s,baz=95,slow=0.6,SNR=7.4						
	comp=Z,15nm,0.6s						
MTN	**Manton Dam**	**19.89**	**168**	P	**P**	**16 27 30.6**	**-0.5**
MTN				IAmb	IAmb	16 27 46.0	
	comp=Z,19nm,1.4s						
KNRA	**Kununurra**	**22.33**	**175**	P	**P**	**16 27 57.2**	**-0.1**
KNRA				IAmb	IAmb	16 28 05.5	
	comp=Z,9.8nm,0.9s						
WB0	**Warramunga Arr**	**27.34**	**164**	P	**P**	**16 28 42.2**	**-2.2**
WB0				IAmb	IAmb	16 29 13.8	
	comp=Z,2.9nm,0.7s						
RABL	**Rabaul**	**27.49**	**113**	P	**P**	**16 28 45.7**	**-0.1**
WRAB	**Tennant Creek**	**27.49**	**165**	P	**P**	**16 28 44.6**	**-1.1**
WRAB				IAmb	IAmb	16 29 04.7	
	comp=Z,11nm,1.5s						
WRA	**Warramunga Arr**	**27.50**	**165**	P	**P**	**16 28 45.5**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=343,slow=10,SNR=15						
WRA				LR	LR	16 41 18.4	
	comp=Z,79nm,18.5s,baz=171,slow=40						
	comp=Z,0.4nm,0.8s						
WRA	**Warramunga Arr**	**27.50**	**165**	IAmb	IAmb	16 28 46.8	
	comp=Z,0.4nm,1.4s						
WR0	**Warramunga Arr**	**27.57**	**164**	P	**P**	**16 28 45.0**	**-1.4**
WR0				IAmb	IAmb	16 29 10.6	
	comp=Z,12nm,1.4s						
JHJ	**Hachijo jima 2**	**28.88**	**23**	LR	LR	16 40 21.7	
	comp=Z,22nm,20.4s,baz=125,slow=36						
PSA00	**Pilbara Seismi**	**28.95**	**194**	P	**P**	**16 28 56.0**	**-2.7**
PSA00				IAmb	IAmb	16 29 04.8	
	comp=Z,3.8nm,0.8s						
AS31	**Alice Springs**	**30.97**	**167**	P	**P**	**16 29 15.1**	**-1.6**
ASAR	**Alice Springs**	**30.97**	**167**	P	**P**	**16 29 16.6**	**-0.1**
	comp=Z,0.1nm,0.4s,baz=345,slow=7.0,SNR=19						
ASAR				PcP	**PcP**	**16 32 13.2**	**+0.7**
	comp=Z,0.8nm,1.2s,baz=349,slow=2.8,SNR=2.1						
	comp=Z,0.1nm,0.4s						
ASAR	**Alice Springs**	**30.97**	**167**	P	**P**	**16 29 15.9**	**-0.7**
MJAR	**Matsushiro Arr**	**31.45**	**18**	LR	LR	16 45 37.3	
	comp=Z,39nm,18.2s,baz=198,slow=43						
FORT	**Forrest**	**37.30**	**178**	P	**P**	**16 30 09.3**	**-2.1**
ASAJ	**Asahikawa**	**39.72**	**18**	LR	LR	16 49 46.5	
	comp=Z,30nm,18.5s,baz=246,slow=40						
BBOO	**Buckleboo**	**40.27**	**168**	P	**P**	**16 30 34.0**	**-2.3**
STKA	**Stephens Creek**	**40.88**	**161**	P	**P**	**16 30 42.5**	**+1.2**
	comp=Z,1.2nm,0.7s,baz=327,slow=9.8,SNR=1.5						
	comp=Z,1.2nm,0.7s						
STKA	**Stephens Creek**	**40.88**	**161**	P	**P**	**16 30 39.1**	**-2.2**
KLR	**Kul'dur**	**42.57**	**5**	LR	LR	16 50 29.2	
	comp=Z,36nm,19.0s,baz=176,slow=39						
MKAR	**Makanchi Array**	**55.21**	**324**	P	**P**	**16 32 32.9**	**+0.9**
	comp=Z,0.6nm,0.7s,baz=120,slow=7.2,SNR=4.2						
	comp=Z,0.6nm,0.7s						
YAK	**Yakutsk**	**55.24**	**2**	LR	LR	16 56 54.6	
	comp=Z,42nm,19.8s,baz=280,slow=37						

*IDC **02** 17:07:01.8±0.6,22˚.30N×143˚.63E,h117km±4km,mb4.1/30, mbtmp4.5/33,MS3.3/15,Error ellipse: s-maj=13.4km s-min=8.3km az=87.0*
*NEIC **02** 17:07:03.7±1.4,22˚.39N±0˚.04×143˚.7E±0˚.1,h124km±5km, mb4.6/196,Error ellipse: s-maj=16.0km s-min=4.0km az=77.0*
*JMA **02** 17:07:06.9±0.3,23˚N±1˚×14˚4E±˚,h136km,IOTO ISLANDS REGION*
ISC 02 17:07:02.5±0.3,22˚43N±0˚.04×143˚62E±0˚.07,h118km, n439,σ1§17/439,mb4.6/127,1C-1D,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHH2	**Haha-jima-NKT2**	**4.39**	**343**	P	**Pn**	**17 08 08.9**	**+1.7**
JHH2				S	**Sn**	**17 08 57.6**	**+0.2**
JHH2	**Haha-jima-NKT2**	**4.39**	**343**	A	A	17 08 08.9	
	comp=E,24nm,0.4s,comp=E,15nm,0.4s						
JCJ	**Chichijima**	**4.83**	**345**	P	**Pn**	**17 08 13.8**	**+0.7**
	535nm,0.4s,baz=162,slow=5.7,SNR=74						
JCJ				S	**Sn**	**17 09 05.5**	**-2.4**
	1µm,0.5s,baz=126,slow=22,SNR=17						
JCJ	**Chichijima**	**4.83**	**345**	Pn	**Pn**	**17 08 14.3**	**+1.3**
CBIJ	**Chichi jima**	**4.83**	**345**	P	**Pn**	**17 08 14.7**	**+1.6**
CBIJ				*e*S	**Sn**	**17 09 07.5**	**-0.4**

GUMO	**Guam**	**8.87**	**172**	P		**Pn**	**17 09 09.2**	**+1.4**
	92nm,1.1s,baz=276,slow=7.9,SNR=8.5							
GUMO				LR		LR	17 11 29.3	
	comp=Z,176nm,19.9s,baz=14,slow=31							
GUMO	**Guam**	**8.87**	**172**			**Pn**	**17 09 09.1**	**+1.3**
JHCJ	**Hachijojimakas**	**11.13**	**343**	*e*P		**Pn**	**17 09 37.8**	**-0.3**
JHCJ				*e*S		**Sn**	**17 11 34.8**	**-5.8**
JHJ2	**Mitsune**	**11.16**	**343**	Pn		**Pn**	**17 09 40.4**	**+1.9**
JHJ	**Hachijo jima 2**	**11.18**	**343**	P		**Pn**	**17 09 40.7**	**+1.9**
	86nm,0.6s,baz=90,slow=20,SNR=2.1							
JHJ				S		**Sn**	**17 11 36.4**	**-5.4**
	85nm,0.6s,baz=81,slow=22,SNR=1.6							
JMKN	**Mikurajimanish**	**11.96**	**344**	P		**Pn**	**17 09 51.0**	**+1.9**
BSO1	**Boso 1**	**12.40**	**350**	*e*P		**Pn**	**17 09 55.9**	**+1.6**
BSO3	**Boso 3**	**12.62**	**348**	P		**Pn**	**17 09 59.4**	**+1.8**
BSO4	**Boso 4**	**12.84**	**348**	*e*P		**Pn**	**17 10 02.4**	**+1.9**
JTNC	**Tanabenakahech**	**13.36**	**330**	*e*P		**Pn**	**17 10 09.1**	**+1.7**
JOD2	**Odawara 2**	**13.39**	**344**	*e*P		**Pn**	**17 10 07.1**	**-0.6**
JOD2				*e*S		**Sn**	**17 12 30.3**	**-4.9**
JHU	**Hanno**	**13.90**	**345**	P		**Pn**	**17 10 13.2**	**-1.1**
JHU				*e*S		**Sn**	**17 12 39.8**	**-7.8**
JYT	**Yasato**	**14.07**	**349**	Pn		**Pn**	**17 10 17.1**	**+0.6**
JYT	**Yasato**	**14.07**	**349**	*e*P		**Pn**	**17 10 17.9**	**+1.4**
INU	**Inuyama**	**14.11**	**337**			**Pn**	**17 10 17.7**	**+0.7**
JRY	**Ryogami san**	**14.15**	**344**	P		**Pn**	**17 10 16.9**	**-0.6**
JRY				S		**Sn**	**17 12 46.6**	**-7.1**
JGF	**Kuroka**	**14.22**	**339**	Pn		**Pn**	**17 10 18.3**	**-0.1**
JHO	**Hitachi**	**14.38**	**350**	P		**Pn**	**17 10 21.1**	**+0.6**
JAG	**Ashikaga**	**14.41**	**346**	*e*P		**Pn**	**17 10 19.8**	**-1.0**
MJAR	**Matsushiro Arr**	**14.83**	**343**	P		**Pn**	**17 10 24.9**	**-1.2**
	6.5nm,0.7s,baz=161,slow=9.0,SNR=19							
MJAR				S		**Sn**	**17 13 02.2**	**-7.8**
	0.9nm,0.5s,baz=166,slow=19,SNR=2.3							
MJAR	**Matsushiro Arr**	**14.83**	**343**	Pn		**Pn**	**17 10 26.4**	**+0.3**
MAJO	**Matsushiro**	**14.83**	**343**	Pn		**Pn**	**17 10 25.8**	**-0.4**
MJB9	**Matsu-Tunnel**	**14.83**	**343**	P		**Pn**	**17 10 26.2**	**0.0**
JHS	**Saijyo**	**15.53**	**326**	P		**Pn**	**17 10 35.6**	**+0.5**
JHS	**Saijyo**	**15.53**	**326**	*e*P		**P**	**17 10 39.4**	**+2.6**
JMM	**Marumori**	**15.58**	**352**	P		**P**	**17 10 36.1**	**-1.1**
JSD	**Sado**	**16.23**	**345**	Pn		**Pn**	**17 10 41.8**	**-1.7**
JSD				IAmb		IAmb	17 10 46.4	
	comp=Z,24nm,0.8s							
NAWB	**Namwon**	**19.18**	**316**	P		**P**	**17 11 18.0**	**+1.1**
KSRS	**Korea Array**	**20.18**	**321**	P		**P**	**17 11 27.9**	**+0.2**
	comp=Z,2.8nm,0.8s,baz=140,slow=9.9,SNR=42							
KSRS				LR		LR	17 18 43.4	
	comp=Z,31nm,19.2s,baz=230,slow=35							
	comp=Z,2.8nm,0.8s							
KSAR	**Wonju Array Be**	**20.20**	**321**	P		**P**	**17 11 28.6**	**+0.7**
KS19	**Wonju Array Si**	**20.25**	**321**	P		**P**	**17 11 29.6**	**+1.2**
KS19				IAmb		IAmb	17 11 33.7	
	comp=Z,13nm,0.6s							
JEW	**Eniwo**	**20.43**	**355**	P		Pn	17 11 32.3	-1.3
SEHB	**SEOHWA**	**20.57**	**324**	P		**P**	**17 11 33.5**	**+1.6**
SEHB				IAmb		IAmb	17 11 39.6	
	comp=Z,26nm,1.4s							
YULB	**Yu-li**	**20.58**	**277**	P		**P**	**17 11 33.6**	**+1.4**
YULB				IAmb		IAmb	17 11 42.6	
	comp=Z,20nm,1.1s							
SSLB	**Suanglung**	**20.89**	**278**	P		**P**	**17 11 36.8**	**+1.3**
PATS	**Pohnpei**	**21.00**	**135**	P		**P**	**17 11 36.0**	**-0.7**
JKA	**Kamikawa-asahi**	**21.65**	**358**	P		**P**	**17 11 45.8**	**+2.5**
ASAJ	**Asahikawa**	**21.65**	**358**	P		**P**	**17 11 45.8**	**+2.5**
	comp=Z,6.5nm,0.5s,baz=234,slow=14,SNR=9.0							
	comp=Z,6.5nm,0.5s							
H11N1	**WAKE ISLAND Hy**	**21.88**	**93**	T		T	17 36 15.2	
	baz=282,slow=74							
H11N2	**WAKE ISLAND Hy**	**21.88**	**93**	T		T	17 36 15.3	
	baz=282							
H11N3	**WAKE ISLAND Hy**	**21.90**	**93**	T		T	17 36 16.4	
	baz=282,slow=74							
H11S3	**WAKE ISLAND Hy**	**21.96**	**96**	T		T	17 35 25.7	
	baz=284,slow=75,SNR=97							
H11S1	**WAKE ISLAND Hy**	**21.97**	**96**	T		T	17 35 20.6	
	baz=284,slow=75,SNR=37							
H11S2	**WAKE ISLAND Hy**	**21.98**	**96**	T		T	17 35 01.5	
	baz=284,slow=75,SNR=44							
DAV	**Davao City (W)**	**23.14**	**231**	LR		LR	17 19 32.7	
	comp=Z,21nm,21.2s,baz=334,slow=33							
USA0B	**Ussuriysk Arra**	**23.74**	**339**	P		**P**	**17 12 05.5**	**+1.7**
USA0B				IAmb		IAmb	17 12 07.3	
	comp=Z,22nm,0.9s							
USRK	**Ussuriysk Ar.**	**23.74**	**339**	P		**P**	**17 12 05.8**	**+2.1**
	comp=Z,20nm,0.8s,baz=153,slow=9.7,SNR=38							
	comp=Z,20nm,0.8s							
USRK	**Ussuriysk Ar.**	**23.74**	**339**	P		**P**	**17 12 05.6**	**+1.8**
NJ2	**Nanjing**	**23.97**	**299**	*e*P		**P**	**17 12 04.2**	**-1.8**
NJ2				pmax		pmax		
	comp=Z,6.

comp=Z,0.5nm,0.6s,baz=63,slow=7.4,SNR=5.1
CMAR ScP **ScP** 17 20 12.7 -2.2
comp=Z,0.3nm,0.3s,baz=139,slow=2.0,SNR=4.4
comp=Z,0.5nm,0.6s
CTA Charters Tower 42.34 176 P **P** 17 14 43.9 -1.1
comp=Z,18nm,0.9s,baz=358,slow=9.7,SNR=17
comp=Z,18nm,0.9s
CTAO Charters Tower 42.34 176 P **P** 17 14 43.8 -1.1
CTAO IAmb IAmb 17 14 44.9
comp=Z,18nm,0.8s
ADK Adak 42.36 36 P **P** 17 14 45.2 +0.5
WRAB Tennant Creek 43.07 193 P **P** 17 14 49.5 -1.3
WRAB IAmb IAmb 17 15 17.9
comp=Z,11nm,1.1s
WB2 Warramunga Arr 43.08 193 P **P** 17 14 49.9 -1.0
WB2 IAmb IAmb 17 15 18.0
comp=Z,9.5nm,0.9s
WRA Warramunga Arr 43.08 193 P **P** 17 14 49.1 -1.8
comp=Z,3.2nm,0.4s,baz=13,slow=8.9,SNR=76
WRA pP **pP** 17 15 16.5 -0.4
comp=Z,7.1nm,0.9s,baz=16,slow=8.9,SNR=9.3
WRA ScP **ScP** 17 20 17.6 -1.7
comp=Z,2.5nm,1.0s,baz=3.2,slow=3.8,SNR=7.0
comp=Z,3.2nm,0.4s
WRA Warramunga Arr 43.08 193 P **P** 17 14 50.1 -0.8
GOMU GeErMu 44.28 299 P **P** 17 15 02.2 +1.3
GOMU pP pP 17 15 28.8 +1.7
GOMU sP sP 17 15 42.1 +2.1
GOMU pmax pmax
comp=Z,10.0nm,0.7s
AS31 Alice Springs 46.78 192 P **P** 17 15 18.8 -1.5
ASAR Alice Springs 46.78 192 P **P** 17 15 18.4 -1.8
comp=Z,0.9nm,0.3s,baz=13,slow=12,SNR=43
ASAR ScP **ScP** 17 20 31.8 -2.7
comp=Z,0.7nm,0.8s,baz=7.7,slow=3.6,SNR=4.7
comp=Z,0.9nm,0.3s
BILL Bilibino 47.73 11 P **P** 17 15 27.8 +0.7
BILL IAmb IAmb 17 15 28.9
comp=Z,8.9nm,0.7s
DZM Mont Dzumac 49.51 152 P **P** 17 15 39.9 -1.4
comp=Z,6.8nm,0.9s,baz=36,slow=16,SNR=1.6
comp=Z,6.8nm,0.9s
TIXI Tiksi 49.97 354 P **P** 17 15 43.8 -0.3
TIXI IAmb IAmb 17 15 47.3
comp=Z,5.5nm,0.9s
WMQ Urumqi 50.43 309 *e***P** **P** 17 15 50.3 +2.2
WMQ pmax pmax
comp=Z,16nm,1.3s
GAMB Gambell 50.79 24 P **P** 17 15 51.3 +1.0
baz=237
SDPT Sand Point 52.58 37 P **P** 17 16 02.8 -1.0
SDPT Sand Point 52.58 37 P **P** 17 16 03.4 -0.3
baz=255,SNR=6.4
CNBA Chernabura Isl 52.94 37 P **P** 17 16 06.6 +0.1
CHNA Chernabura Isl 52.94 37 P **P** 17 16 06.6 +0.1
baz=256
TNA Tin City 53.11 23 P **P** 17 16 08.8 +1.3
baz=240
ZAA0 Zalesovo Array 53.89 321 P **P** 17 16 12.5 -0.9
ZAA0 IAmb IAmb 17 16 14.2
comp=Z,4.8nm,0.7s
ZALV Zalesovo Beam 53.89 321 P **P** 17 16 13.2 -0.2
comp=Z,2.9nm,0.5s,baz=108,slow=7.7,SNR=14
comp=Z,2.9nm,0.5s
ZALV Zalesovo Beam 53.89 321 P **P** 17 16 12.9 -0.5
STKA Stephens Creek 54.03 182 P **P** 17 16 12.4 -2.3
comp=Z,3.9nm,0.5s,baz=352,slow=7.6,SNR=19
comp=Z,3.9nm,0.5s
STKA Stephens Creek 54.03 182 P **P** 17 16 12.8 -1.8
MK31 Makanchi Array 54.50 312 P **P** 17 16 18.4 +0.3
MK31 IAmb IAmb 17 16 19.9
comp=Z,7.0nm,0.9s
MKAR Makanchi Array 54.50 312 P **P** 17 16 18.9 +0.9
comp=Z,6.8nm,0.6s,baz=91,slow=8.9,SNR=66
MKAR pP **pP** 17 16 45.3 +0.5
comp=Z,6.1nm,0.7s,baz=92,slow=9.1,SNR=9.4
comp=Z,6.8nm,0.6s
MKAR Makanchi Array 54.50 312 P **P** 17 16 18.4 +0.3
MAKZ Makanchi 54.72 312 P **P** 17 16 20.3 +0.7
N16K Nishlik Lake 54.90 31 P **P** 17 16 21.5 +0.9
baz=253,SNR=14
FORT Forrest 54.97 196 P **P** 17 16 21.0 -0.5
P17K Kvichak River 55.68 33 P **P** 17 16 26.7 +0.5
baz=256
SII Sitkinak Islan 56.30 36 P **P** 17 16 31.2 +0.5
baz=260
N18K Kilae Creek 56.32 31 P **P** 17 16 30.7 -0.1
N18K IAmb IAmb 17 16 32.9
comp=Z,13nm,1.1s
N18K Kilae Creek 56.32 31 P **P** 17 16 31.7 +0.9
baz=255,SNR=5.3
P18K Big Mountain, 56.33 33 P **P** 17 16 30.9 0.0
baz=257
O18K Koktuh Hills 56.45 32 P **P** 17 16 32.4 +0.7
O18K Koktuh Hills 56.45 32 P **P** 17 16 32.7 +0.9
baz=256,SNR=16
SVW2 Sparrevohn 56.57 31 P **P** 17 16 33.5 +0.9
SVW2 IAmb IAmb 17 16 34.6
comp=Z,14nm,1.2s
TTA Tatalina 56.87 28 P **P** 17 16 35.1 +0.4
TTA IAmb IAmb 17 16 36.5
comp=Z,6.7nm,1.1s
TTA Tatalina 56.87 28 P **P** 17 16 35.3 +0.6
baz=254
OHAK Old Harbor 56.90 35 P **P** 17 16 34.9 +0.1
baz=260
N19K Bonanza Creek 57.02 31 P **P** 17 16 36.5 +0.6
N19K Bonanza Creek 57.02 31 P **P** 17 16 36.9 +1.0
baz=257,SNR=9.5
Q19K Cape Douglas, 57.03 33 P **P** 17 16 35.3 -0.6
baz=258
L19K White Mountain 57.18 29 P **P** 17 16 37.6 +0.7
L19K IAmb IAmb 17 16 38.8
comp=Z,7.5nm,0.9s
L19K White Mountain 57.18 29 P **P** 17 16 37.8 +0.9
baz=255,SNR=5.6
M19K Big River Lodg 57.33 30 P **P** 17 16 38.6 +0.8
M19K Big River Lodg 57.33 30 P **P** 17 16 38.8 +0.9
baz=256
KDAK Kodiak Island 57.37 35 P **P** 17 16 38.3 +0.1
comp=Z,5.9nm,0.4s,baz=290,slow=6.0,SNR=21
KDAK LR LR 17 40 12.8
comp=Z,56nm,20.2s,baz=251,slow=35
comp=Z,5.9nm,0.4s
KDAK Kodiak Island 57.37 35 P **P** 17 16 38.2 +0.1
KDAK Kodiak Island 57.37 35 P **P** 17 16 38.3 +0.1
baz=260
NRIK Noril'sk 57.45 340 P **P** 17 16 38.8 +0.1
comp=Z,2.3nm,0.4s,baz=123,slow=10,SNR=3.7
comp=Z,2.3nm,0.4s
NRIK Noril'sk 57.45 340 IAmb IAmb 17 17 07.2
comp=Z,4.0nm,0.9s
Q20K Shuyak Island 57.61 34 P **P** 17 16 39.8 -0.1
baz=260
L20K Farewell, AK 57.70 29 P **P** 17 16 41.4 +0.9
baz=256
O20K Slope Mountain 57.77 32 P **P** 17 16 42.1 +1.1
baz=259
K20K Telida 57.83 28 P **P** 17 16 42.6 +1.2
K20K Telida 57.83 28 P **P** 17 16 42.7 +1.3
baz=255,SNR=9.9
M20K Styx River 57.90 30 P **P** 17 16 42.9 +0.9
baz=257
J20K Nowinta River 58.01 27 P **P** 17 16 43.5 +1.0
J20K Nowinta River 58.01 27 P **P** 17 16 44.0 +1.4
baz=255,SNR=13
KDJ Kajisay 58.09 307 P **P** 17 16 44.8 +1.1
PPLA Purkeypile 58.55 29 P **P** 17 16 47.2 +0.6
baz=257
BRLK Bradley Lake 58.57 33 P **P** 17 16 46.1 -0.5
BRSE Bradley Lake S 58.64 33 P **P** 17 16 46.5 -0.6
baz=261
IMAR Indian Mountai 58.65 25 P **P** 17 16 47.5 +0.5
SKT Skwentna 58.66 30 P **P** 17 16 46.7 -0.5
SKT IAmb IAmb 17 16 48.0
comp=Z,10nm,1.0s
SKT Skwentna 58.66 30 P **P** 17 16 47.1 -0.1
baz=259
CAST Castle Rocks 58.71 28 P **P** 17 16 48.2 +0.6
CAST Castle Rocks 58.71 28 P **P** 17 16 48.4 +0.8
baz=257,SNR=9.6
CHUM Lake Minchumin 58.72 28 P **P** 17 16 48.6 +1.1
baz=257
SUA Susitna One 58.93 31 P **P** 17 16 49.3 +0.1
baz=260
H21K Melozitna Rive 58.94 26 P **P** 17 16 49.9 +0.8
H21K Melozitna Rive 58.94 26 P **P** 17 16 50.3 +1.2
baz=255,SNR=12
I21K Tanana 59.16 26 P **P** 17 16 51.0 +0.4
I21K Tanana 59.16 26 P **P** 17 16 51.8 +1.2
baz=256,SNR=7.4
KTH Kantishna Hill 59.25 28 P **P** 17 16 51.5 +0.1
M22K Willow 59.28 30 P **P** 17 16 51.2 -0.2
M22K Willow 59.28 30 P **P** 17 16 51.7 +0.3
baz=260
BPAW Bear Paw Mtn. 59.34 28 P **P** 17 16 52.2 +0.4
BPAW Bear Paw Mtn. 59.34 28 P **P** 17 16 52.5 +0.7
baz=258,SNR=16
SEW Seward 59.34 32 P **P** 17 16 51.9 +0.1
baz=262
RC01 Rabbit Creek A 59.35 31 P **P** 17 16 51.9 0.0
RC01 Rabbit Creek A 59.35 31 P **P** 17 16 51.5 -0.4
baz=261
TRF Thorofare Moun 59.51 28 P **P** 17 16 53.2 0.0
TRF Thorofare Moun 59.51 28 P **P** 17 16 53.2 0.0
baz=259,SNR=9.4
MLY Manley 59.64 27 P **P** 17 16 54.9 +1.0
MLY IAmb IAmb 17 16 55.8
comp=Z,8.5nm,1.0s
MLY Manley 59.64 27 P **P** 17 16 54.7 +0.8
baz=258,SNR=12
PMR Palmer 59.72 31 P **P** 17 16 53.9 -0.5
baz=261
KNK Knik Glacier 60.01 31 P **P** 17 16 56.6 +0.1
KNK Knik Glacier 60.01 31 P **P** 17 16 56.4 -0.1
baz=262
SML Sawmill 60.12 31 P **P** 17 16 56.7 -0.6
SML Sawmill 60.12 31 P **P** 17 16 57.3 0.0
baz=262,SNR=7.3
RND Reindeer 60.14 29 P **P** 17 16 57.0 -0.4
RND IAmb IAmb 17 16 57.8
comp=Z,2.8nm,0.7s
MCK McKinley 60.16 28 P **P** 17 16 57.1 -0.4
MCK IAmb IAmb 17 16 57.7
comp=Z,8.5nm,0.9s
MCK McKinley 60.16 28 P **P** 17 16 57.2 -0.2
baz=260
WAT1 Susitna Watana 60.18 29 P **P** 17 16 57.2 -0.5
baz=261
I23K Minto, Yukon-K 60.23 27 P **P** 17 16 58.4 +0.6
I23K IAmb IAmb 17 16 59.2
comp=Z,8.1nm,1.1s
I23K Minto, Yukon-K 60.23 27 P **P** 17 16 58.5 +0.6
baz=259
NEA2 Nenana 60.25 27 P **P** 17 16 58.5 +0.4
NEA2 IAmb IAmb 17 16 59.6
comp=Z,9.1nm,1.0s
NEA2 Nenana 60.25 27 P **P** 17 16 58.7 +0.7
baz=259,SNR=6.6
H23K Yukon River 60.29 26 P **P** 17 16 59.4 +1.1
H23K Yukon River 60.29 26 P **P** 17 16 59.5 +1.1
baz=258,SNR=16
COLD Coldfoot 60.34 24 P **P** 17 16 59.5 +0.9
COLD Coldfoot 60.34 24 P **P** 17 16 60.0 +1.4
baz=257,SNR=5.7
M23K Glacier View 60.41 31 P **P** 17 16 59.3 +0.1
baz=262
WAT6 Susitna Watana 60.51 30 P **P** 17 16 60.0 -0.1
baz=262,SNR=8.3
GLI Glacier Island 60.60 32 P **P** 17 17 00.8 +0.3
GLI Glacier Island 60.60 32 P **P** 17 17 00.5 +0.1
baz=263
SCM Sheep Creek Mo 60.60 31 P **P** 17 17 00.8 +0.3
SCM Sheep Creek Mo 60.60 31 P **P** 17 17 00.9 +0.3
baz=263,SNR=7.7
WRH Wood River Hil 60.65 28 P **P** 17 17 00.6 -0.1
MDM Murphy Dome 60.67 27 P **P** 17 17 00.9 0.0
MDM IAmb IAmb 17 17 02.6
comp=Z,5.9nm,1.0s
DHY Denali Highway 60.75 29 P **P** 17 17 01.7 +0.1
DHY Denali Highway 60.75 29 P **P** 17 17 01.6 0.0
baz=262
CCB Clear Creek Bu 60.80 27 P **P** 17 17 01.5 -0.2
FID Port Fidalgo 60.88 32 P **P** 17 17 02.4 0.0
TOLK Toolik Lake Re 60.89 23 P **P** 17 17 03.4 +1.0
TOLK Toolik Lake Re 60.89 23 P **P** 17 17 03.5 +1.1
baz=257,SNR=13
H24K Noodor Dome 60.97 26 P **P** 17 17 03.8 +0.8
H24K IAmb IAmb 17 17 04.8
comp=Z,6.4nm,0.8s
H24K Noodor Dome 60.97 26 P **P** 17 17 03.8 +0.8
baz=260,SNR=9.1
HDA Harding Lake 61.13 28 P **P** 17 17 03.6 -0.3
HDA IAmb IAmb 17 17 04.1
comp=Z,7.1nm,1.0s
HDA Harding Lake 61.13 28 P **P** 17 17 03.1 -0.9
baz=262,SNR=6.2
M24K Tolsona, Glenn 61.17 30 P **P** 17 17 04.9 +0.5
baz=264
IL31 61.21 27 P **P** 17 17 03.3 -1.1
IL31 IAmb IAmb 17 17 04.6
comp=Z,6.1nm,0.8s
ILAR Eielson Array 61.21 27 P **P** 17 17 03.6 -0.9
comp=Z,4.5nm,0.7s,baz=260,slow=5.5,SNR=36
ILAR pP **pP** 17 17 32.3 +0.5
comp=Z,2.1nm,1.0s,baz=257,slow=5.5,SNR=3.6
comp=Z,4.5nm,0.7s
ILAR Eielson Array 61.21 27 P **P** 17 17 03.4 -1.1
EYAK Cordova Ski Ar 61.22 32 P **P** 17 17 05.0 +0.4
EYAK Cordova Ski Ar 61.22 32 P **P** 17 17 05.0 +0.4
baz=265
KLU Klutina 61.23 31 P **P** 17 17 05.1 +0.3
KLU Klutina 61.23 31 P **P** 17 17 05.3 +0.5
baz=264,SNR=5.1
K24K Donnelly Dome 61.55 28 P **P** 17 17 07.1 +0.2
baz=263
PAX Paxson 61.59 29 P **P** 17 17 07.6 +0.3
PAX IAmb IAmb 17 17 08.0
comp=Z,3.5nm,0.6s
PAX Paxson 61.59 29 P **P** 17 17 07.5 +0.2
baz=264,SNR=5.7
HARP HAARP 61.68 30 P **P** 17 17 08.1 +0.3
baz=264
BMRM Bremner River 61.82 32 P **P** 17 17 09.4 +0.7
BMRM Bremner River 61.82 32 P **P** 17 17 09.3 +0.5
baz=266,SNR=5.4
J25K Salcha River, 61.83 28 P **P** 17 17 08.0 -0.8
J25K Salcha River, 61.83 28 P **P** 17 17 07.8 -1.0
baz=263
N25K Chitina, Valde 61.87 31 P **P** 17 17 10.3 +1.2
N25K IAmb IAmb 17 17 33.2
comp=Z,7.3nm,1.1s
N25K Chitina, Valde 61.87 31 P **P** 17 17 09.3 +0.2
baz=265
RIDG Independent Ri 61.96 29 P **P** 17 17 09.5 -0.2
RIDG Independent Ri 61.96 29 P **P** 17 17 09.5 -0.2
baz=264,SNR=8.4
GLB Gilahina Butte 62.23 31 P **P** 17 17 11.9 +0.3
GLB IAmb IAmb 17 17 13.0
comp=Z,16nm,1.4s
SCRK Sand Creek 62.36 28 P **P** 17 17 12.5 +0.1
SCRK Sand Creek 62.36 28 P **P** 17 17 12.3 -0.1
baz=264,SNR=17
VRDI Verde Repeater 62.39 31 P **P** 17 17 13.2 +0.4
VRDI IAmb IAmb 17 17 13.4
comp=Z,6.1nm,1.0s
BRVK Borovoye 62.45 319 P **P** 17 17 13.7 +0.7
BMAR Burnt Mountain 62.52 24 P **P** 17 17 14.6 +1.3
L26K Log Cabin Wild 62.56 29 P **P** 17 17 13.9 +0.3
baz=266
J26L Joseph Creek 62.59 28 P **P** 17 17 14.0 0.0
J26L Joseph Creek 62.59 28 P **P** 17 17 13.6 -0.3
baz=265,SNR=17
MCARA McCarthy VSAT 62.61 31 P **P** 17 17 14.1 +0.1
baz=267
SNH Sunshine Point 62.64 33 P **P** 17 17 15.1 +0.8
WAX Waxell Ridge 62.65 32 P **P** 17 17 15.1 +0.8
M26K Nabesna, AK 62.68 30 P **P** 17 17 14.6 +0.1
baz=266
ISLE Juniper Island 62.90 32 P **P** 17 17 16.2 +0.1
ISLE IAmb IAmb 17 17 18.0
comp=Z,12nm,1.1s
KK31 Karatay Array 62.92 308 P **P** 17 17 17.3 +0.9
KK31 IAmb IAmb 17 17 45.7
comp=Z,5.2nm,1.0s
KKAR Karatay Array 62.92 308 P **P** 17 17 17.0 +0.6
KKAR Karatay Array 62.92 308 P **P** 17 17 17.3 +0.9
KKAR IAmb IAmb 17 17 45.7
comp=Z,5.2nm,1.0s
GRNC Granite Creek 63.20 32 P **P** 17 17 18.7 +0.5
GRNC IAmb IAmb 17 17 19.3
comp=Z,10nm,1.0s
M27K Edge Creek, AK 63.20 30 P **P** 17 17 18.4 +0.4
M27K IAmb IAmb 17 17 18.9
comp=Z,4.2nm,0.8s
M27K Edge Creek, AK 63.20 30 P **P** 17 17 18.4 +0.4
baz=267
L27K Beaver Creek, 63.26 29 P **P** 17 17 18.9 +0.7
L27K IAmb IAmb 17 17 19.2
comp=Z,4.8nm,0.7s
L27K Beaver Creek, 63.26 29 P **P** 17 17 18.7 +0.4
baz=267,SNR=6.8
BCAR Beaver Creek A 63.28 29 P **P** 17 17 18.8 +0.4
CTG Chitna Glacier 63.41 32 P **P** 17 17 19.9 +0.5
baz=268
CTGM Chitina Glacie 63.41 32 P **P** 17 17 19.7 +0.2
CTGM IAmb IAmb 17 17 20.9
comp=Z,6.3nm,1.0s
TABL Table Mountain 63.49 32 P **P** 17 17 19.5 -0.5
GAR Garm 63.58 304 P **P** 17 17 21.6 +0.7
BVCY Beaver Creek 63.68 30 P **P** 17 17 21.1 +0.1
baz=268
YUK3 Moose Creek 63.85 31 P **P** 17 17 22.7 +0.3
baz=269,SNR=5.4
PINM Pinnacle 63.93 33 P **P** 17 17 23.2 +0.4
baz=270
YUK8 Steele Glacier 64.18 31 P **P** 17 17 25.2 +0.6
baz=270
DAWY Dawson 64.39 28 P **P** 17 17 26.2 +0.6
DAWY IAmb IAmb 17 17 26.8
comp=Z,4.5nm,0.8s
DAWY Dawson 64.39 28 P **P** 17 17 26.2 +0.6
baz=269,SNR=5.2
CHGR Chuyangaron 64.53 303 P **P** 17 17 27.6 +0.4
YUK4 Talbot Arm 64.72 31 P **P** 17 17 29.3 +1.3
baz=271,SNR=7.6
YUK6 Outpost Mounta 64.86 32 P **P** 17 17 30.1 +1.1
baz=271
I29M Ogilvie Camp, 64.88 27 P **P** 17 17 29.0 +0.2
I29M IAmb IAmb 17 17 30.4
comp=Z,14nm,1.4s
I29M Ogilvie Camp, 64.88 27 P **P** 17 17 29.0 +0.2
baz=269
HYT Haines Junctio 65.28 32 P **P** 17 17 32.5 +0.9
HYT IAmb IAmb 17 17 33.9
comp=Z,13nm,1.2s
HYT Haines Junctio 65.28 32 P **P** 17 17 32.7 +1.1
baz=272,SNR=5.6
KBL Kabul 65.34 299 P **P** 17 17 33.2 +0.7
KBL IAmb IAmb 17 17 33.8
comp=Z,7.6nm,0.8s
N30M Aishikik Lake 65.46 31 P **P** 17 17 33.5 +0.8
baz=272,SNR=6.3
M30M Minto, Yukon 65.56 30 P **P** 17 17 33.9 +0.6
M30M IAmb IAmb 17 17 34.7
comp=Z,4.0nm,0.7s
M30M Minto, Yukon 65.56 30 P **P** 17 17 34.0 +0.6
baz=272
PLBC Pleasant Camp 65.92 33 P **P** 17 17 36.5 +0.9
baz=274,SNR=5.5
O30N Mendenhall 65.98 32 P **P** 17 17 36.6 +0.6
baz=273
N31M Braeburn, Yuko 66.09 31 P **P** 17 17 37.6 +0.9
N31M IAmb IAmb 17 17 38.8
comp=Z,14nm,1.1s
N31M Braeburn, Yuko 66.09 31 P **P** 17 17 37.3 +0.7
baz=273
SKAG Skagway 66.44 33 P **P** 17 17 39.3 +0.4
SKAG IAmb IAmb 17 17 40.9
comp=Z,6.7nm,1.0s
SKAG Skagway 66.44 33 P **P** 17 17 39.1 +0.3
baz=274
WHY Whitehorse 66.58 32 P **P** 17 17 40.6 +0.7
baz=274
M31M Drury Creek, Y 66.70 30 P **P** 17 17 41.5 +1.0
M31M IAmb IAmb 17 17 42.1
comp=Z,7.1nm,1.0s
M31M Drury Creek, Y 66.70 30 P **P** 17 17 41.1 +0.6
baz=274,SNR=6.4
INK Inuvik 66.74 24 P **P** 17 17 40.5 0.0
INK IAmb IAmb 17 17 41.7
comp=Z,12nm,1.1s
INK Inuvik 66.74 24 P **P** 17 17 40.8 +0.2
baz=272,SNR=5.8
FARO Faro, Yukon 67.19 30 P **P** 17 17 44.2 +0.6
baz=275
P33M Teslin, Yukon 67.64 32 P **P** 17 17 47.1 +0.6
P33M IAmb IAmb 17 17 48.3
comp=Z,8.0nm,1.1s
P33M Teslin, Yukon 67.64 32 P **P** 17 17 47.0 +0.5
baz=276
CRAG Craig 68.06 38 P **P** 17 17 49.7 +0.5
baz=278
MMPY Sheldon Lake, 68.11 30 P **P** 17 17 50.2 +0.7
baz=276
S34M Telegraph Cree 68.80 35 P **P** 17 17 54.5 +0.8
baz=278
ARU Arti 68.92 324 P **P** 17 17 54.0 -0.5
ARU IAmb IAmb 17 17 55.2
comp=Z,8.4nm,0.9s
A36M Sachs Harbour 69.22 19 P **P** 17 17 55.6 -0.4
baz=278
DLBC Dease Lake 69.29 34 P **P** 17 17 58.3 +1.4
DLBC IAmb IAmb 17 17 59.1
comp=Z,14nm,1.1s
DLBC Dease Lake 69.29 34 P **P** 17 17 57.9 +1.1
baz=279,SNR=5.6
ABKAR Akbulak array 69.31 316 P **P** 17 17 56.5 -0.5
ABKAR Akbulak array 69.31 316 P **P** 17 17 56.8 -0.2
ABKAR IAmb IAmb 17 17 57.8
comp=Z,10nm,0.7s
TGTN Hyland Airport 69.66 31 P **P** 17 17 59.9 +0.9
baz=280
C36M Paulatuk 70.03 22 P **P** 17 18 01.9 +0.8
baz=280
YKA Yellowknife Ar 75.62 28 P **P** 17 18 34.2 0.0
comp=Z,3.2nm,0.6s,baz=292,slow=5.4,SNR=22
YKA pP **pP** 17 19 02.5 -0.2
comp=Z,0.9nm,0.6s,baz=294,slow=5.4,SNR=3.1
comp=Z,3.2nm,0.6s
YKA Yellowknife Ar 75.62 28 P **P** 17 18 33.3 -0.9
D03D Eldon 75.94 44 P **P** 17 18 37.5 +1.2
baz=288
RES Resolute Bay 76.27 13 LR LR 17 56 53.5
comp=Z,19nm,18.6s,baz=144,slow=39
E04D Cinebar 76.58 45 P **P** 17 18 40.1 +0.1
baz=288
J01E Myrtle Point 76.72 49 P **P** 17 18 42.0 +1.1
baz=288
I03D Drain, OR 76.96 48 P **P** 17 18 43.1 +1.0
baz=288
K02D Willamette Mer 77.06 49 P **P** 17 18 42.8 0.0
baz=288
L02F Cave Junction 77.31 50 P **P** 17 18 44.9 +0.7
baz=289
H04A Detroit Lake 77.43 47 P **P** 17 18 45.4 +0.5
H04A IAmb IAmb 17 18 46.4
comp=Z,8.8nm,0.9s
I04A Tendick Farm, 77.57 48 P **P** 17 18 46.0 +0.3
baz=289
HUMO Hull Mountain 77.58 49 P **P** 17 18 46.5 +0.8
G05D Wamic, OR 77.83 46 P **P** 17 18 47.9 +0.9
baz=290
J04D Umpqua Nationa 77.96 48 P **P** 17 18 48.7 +0.7
J04D Umpqua Nationa 77.96 48 P **P** 17 18 48.8 +0.7
baz=289
YBH Yreka Blue Hor 78.04 50 P **P** 17 18 49.1 +0.8
YBH IAmb IAmb 17 18 50.3
comp=Z,12nm,1.4s
B08A Colville Reser 78.06 43 P **P** 17 18 48.4 +0.2
B08A IAmb IAmb 17 18 49.5
comp=Z,8.0nm,1.1s
L04D Klamath Falls 78.16 49 P **P** 17 18 48.6 -0.5
L04D IAmb IAmb 17 18 50.2
comp=Z,6.6nm,0.7s
L04D Klamath Falls 78.16 49 P **P** 17 18 49.5 +0.4
baz=290
ARCES ARCESS Array B 78.36 342 P **P** 17 18 49.4 -0.1
comp=Z,3.5nm,0.7s,baz=77,slow=8.1,SNR=11
ARCES LR LR 17 58 44.3
comp=Z,47nm,18.1s,baz=110,slow=40
comp=Z,3.5nm,0.7s
J05D Fort Rock, OR 78.55 48 P **P** 17 18 51.8 +0.6
baz=290
PINE Pine Mountain 78.58 47 P **P** 17 18 52.1 +0.7
PINE IAmb IAmb 17 18 53.4
comp=Z,13nm,0.8s
C09A Chrisman Ranch 78.92 43 P **P** 17 18 52.6 -0.4
C09A IAmb IAmb 17 18 54.3
comp=Z,17nm,1.4s

K05A	**Summer Lake**	**78.97**	**48**	P	**P**	**17 18 54.7**	**+1.1**
K05A				IAmb	IAmb	17 18 55.5	
	comp=Z,22nm,1.4s						
G08A	**Pilot Rock**	**79.38**	**45**	P	**P**	**17 18 56.2**	**+0.6**
E09A	**Wood Farm, Sta**	**79.47**	**44**	P	**P**	**17 18 56.4**	**+0.5**
E09A				IAmb	IAmb	17 18 57.4	
	comp=Z,7.1nm,0.5s						
NEW	**Newport**	**79.47**	**42**	P	**P**	**17 18 56.3**	**+0.3**
NEW	**Newport**	**79.47**	**42**	P	**P**	**17 18 56.2**	**+0.3**
	baz=292						
ORV	**Oroville**	**79.64**	**52**	P	**P**	**17 18 56.9**	**-0.1**
ORV				IAmb	IAmb	17 18 58.0	
	comp=Z,11nm,1.4s						
MOD	**Modoc Plateau**	**79.67**	**49**	P	**P**	**17 18 57.4**	**0.0**
MOD				IAmb	IAmb	17 18 58.7	
	comp=Z,10nm,1.4s						
EDM	**Edmonton**	**79.77**	**37**	P	**P**	**17 18 56.8**	**-0.7**
EDM				IAmb	IAmb	17 18 58.2	
	comp=Z,6.3nm,0.8s						
BEKR	**Beckworth**	**80.36**	**51**	P	**P**	**17 19 00.6**	**-0.5**
BEKR				IAmb	IAmb	17 19 02.2	
	comp=Z,9.5nm,0.9s						
J08A	**Circle Bar Ran**	**80.41**	**47**	P	**P**	**17 19 01.3**	**+0.1**
J08A				IAmb	IAmb	17 19 02.7	
	comp=Z,9.7nm,1.2s						
BMO	**Blue Mountains**	**80.63**	**45**	P	**P**	**17 19 02.1**	**-0.3**
WVOR	**Wild Horse Val**	**80.64**	**48**	P	**P**	**17 19 02.1**	**-0.4**
MPK	**Martis Peak**	**80.80**	**51**	P	**P**	**17 19 02.7**	**-0.9**
MPK				IAmb	IAmb	17 19 05.2	
	comp=Z,15nm,1.2s						
EMB	**Emerald Bay**	**80.86**	**52**	P	**P**	**17 19 03.9**	**0.0**
EMB				IAmb	IAmb	17 19 05.3	
	comp=Z,11nm,1.3s						
CMB	**Columbia Colle**	**81.00**	**53**	P	**P**	**17 19 04.3**	**-0.1**
CMB				IAmb	IAmb	17 19 05.2	
	comp=Z,6.1nm,0.7s						
PAHR	**Pah Rah Range**	**81.12**	**51**	P	**P**	**17 19 04.4**	**-0.7**
YERR	**Yerington**	**81.49**	**51**	P	**P**	**17 19 07.8**	**+0.6**
YERR				IAmb	IAmb	17 19 08.7	
	comp=Z,13nm,1.4s						
KBZ	**Khabaz**	**82.15**	**314**	P	**P**	**17 19 10.7**	**+0.4**
	comp=Z,9.8nm,0.8s,baz=116,slow=1.9,SNR=24						
	comp=Z,9.8nm,0.8s						
MFID	**Camas Ranch**	**82.17**	**46**	P	**P**	**17 19 11.1**	**+0.5**
MFID				IAmb	IAmb	17 19 12.0	
	comp=Z,11nm,1.2s						
OMMB	**Old Mammoth Mi**	**82.17**	**53**	P	**P**	**17 19 11.1**	**+0.1**
KIV	**Kislovodsk**	**82.20**	**314**	P	**P**	**17 19 10.9**	**+0.3**
KIV				IAmb	IAmb	17 19 13.5	
	comp=Z,10.0nm,1.0s						
KVN	**Kaiserville**	**82.28**	**51**	P	**P**	**17 19 11.7**	**+0.3**
LHV	**Little Huntoon**	**82.30**	**52**	P	**P**	**17 19 12.0**	**+0.9**
NVAR	**Mina Array Bea**	**82.37**	**52**	P	**P**	**17 19 12.2**	**+0.4**
	comp=Z,3.5nm,0.7s,baz=275,slow=5.6,SNR=36						
NVAR				pP	**pP**	**17 19 42.0**	**+1.0**
	comp=Z,0.9nm,0.7s,baz=302,slow=4.1,SNR=2.2						
	comp=Z,3.5nm,0.7s						
NVAR	**Mina Array Bea**	**82.37**	**52**	P	**P**	**17 19 12.0**	**+0.1**
NV11	**Mina Array Sit**	**82.48**	**52**	P	**P**	**17 19 12.4**	**+0.1**
PKM	**Mcpherson Peak**	**82.59**	**55**	P	**P**	**17 19 13.1**	**+0.1**
	baz=292						
FIA1	**FINESS Array S**	**82.70**	**335**	P	**P**	**17 19 12.5**	**-0.2**
FINES	**FINESS Array B**	**82.70**	**335**	P	**P**	**17 19 11.6**	**-1.1**
	comp=Z,2.7nm,0.3s,baz=64,slow=4.8,SNR=42						
FINES				pP	**pP**	**17 19 43.5**	**+2.1**
	comp=Z,1.5nm,0.3s,baz=63,slow=4.6,SNR=4.1						
FINES				LR	LR	17 58 10.4	
	comp=Z,28nm,19.2s,baz=77,slow=37						
	comp=Z,2.7nm,0.3s						
HLID	**Hailey**	**83.05**	**46**	P	**P**	**17 19 15.4**	**+0.2**
	baz=294						
TPH	**Tonopah**	**83.30**	**52**	P	**P**	**17 19 16.9**	**+0.3**
LCH	**Last Change Ra**	**83.32**	**53**	P	**P**	**17 19 16.7**	**+0.1**
LRM	**Limekiln Ridge**	**83.37**	**43**	P	**P**	**17 19 16.6**	**-0.3**
ELK	**Elko**	**83.64**	**49**	P	**P**	**17 19 18.1**	**-0.3**
EDW2	**Edwards Air Fo**	**83.97**	**55**	P	**P**	**17 19 19.7**	**-0.2**
	baz=293						
LRMC	**Laurel Mtn Rad**	**83.97**	**54**	P	**P**	**17 19 20.1**	**+0.1**
	baz=293						
BOZ	**Bozeman (W)**	**83.99**	**43**	P	**P**	**17 19 20.3**	**+0.4**
BOZ	**Bozeman (W)**	**83.99**	**43**	P	**P**	**17 19 19.9**	**0.0**
	baz=296						
FURC	**Furnace Creek,**	**84.19**	**53**	P	**P**	**17 19 21.3**	**+0.5**
	baz=294						
GEVA	**Gevas**	**84.21**	**309**	P	**P**	**17 19 19.8**	**-1.4**
R11A	**Troy Canyon, C**	**84.37**	**51**	P	**P**	**17 19 21.2**	**-0.8**
R11A	**Troy Canyon, C**	**84.37**	**51**	P	**P**	**17 19 22.3**	**+0.3**
	baz=294						
QSM	**Queen of Sheba**	**84.39**	**54**	P	**P**	**17 19 22.1**	**+0.2**
QSM				IAmb	IAmb	17 19 23.1	
	comp=Z,7.1nm,1.0s						
GWY	**Greenwater Val**	**84.45**	**53**	P	**P**	**17 19 20.5**	**-2.0**
GWY				IAmb	IAmb	17 19 23.5	
	comp=Z,12nm,1.4s						
TPNV	**Topopah Spring**	**84.45**	**52**	P	**P**	**17 19 22.5**	**0.0**
TPNV				IAmb	IAmb	17 19 23.7	
	comp=Z,9.1nm,1.2s						
TPNV	**Topopah Spring**	**84.45**	**52**	P	**P**	**17 19 22.6**	**+0.2**
	baz=294						
YHL	**Hebgen Lake**	**84.60**	**44**	P	**P**	**17 19 23.9**	**+0.7**
GSC	**Goldstone, Bar**	**84.70**	**54**	P	**P**	**17 19 22.2**	**-1.5**
GSC				IAmb	IAmb	17 19 24.3	
	comp=Z,3.6nm,0.6s						
GSC	**Goldstone, Bar**	**84.70**	**54**	P	**P**	**17 19 24.0**	**+0.4**
	baz=294						
HVU	**Hansel Valley**	**84.89**	**47**	P	**P**	**17 19 25.1**	**+0.6**
HVU				IAmb	IAmb	17 19 26.2	
	comp=Z,7.6nm,1.3s						
GCMT	**Greycliff**	**85.13**	**42**	P	**P**	**17 19 26.2**	**+0.5**
PRN	**Pahroc Range**	**85.14**	**52**	P	**P**	**17 19 26.2**	**+0.3**
SUMG	**Summit**	**85.23**	**1**	P	**P**	**17 19 26.6**	**+0.7**
SUMG				IAmb	IAmb	17 19 27.4	
	comp=Z,6.1nm,1.0s						
HEC	**Hector,Ludlow**	**85.24**	**54**	P	**P**	**17 19 26.4**	**0.0**
	baz=294						
TUQ	**Turquoise Moun**	**85.31**	**54**	P	**P**	**17 19 26.8**	**+0.1**
	baz=294						
SHPR	**Sheep Range**	**85.43**	**52**	P	**P**	**17 19 27.9**	**+0.6**
LOHW	**Long Hollow**	**85.53**	**45**	P	**P**	**17 19 27.6**	**-0.2**
PSUT	**Pine Spring**	**85.53**	**50**	P	**P**	**17 19 28.1**	**+0.3**
PSUT				IAmb	IAmb	17 19 28.9	
	comp=Z,5.8nm,1.0s						
DUG	**Dugway, Tooele**	**85.55**	**48**	P	**P**	**17 19 27.9**	**+0.2**
DUG				IAmb	IAmb	17 19 28.5	
	comp=Z,5.9nm,0.7s						
DUG	**Dugway, Tooele**	**85.55**	**48**	P	**P**	**17 19 28.0**	**+0.2**
	baz=296						
PFO	**Pinyon Flats O**	**85.64**	**56**	LR	LR	17 54 39.9	
	comp=Z,32nm,19.4s,baz=58,slow=33						
PFO	**Pinyon Flats O**	**85.64**	**56**	P	**P**	**17 19 28.1**	**-0.3**
	baz=294						
TPFO	**Pinon Flats**	**85.65**	**56**	P	**P**	**17 19 28.4**	**0.0**
	baz=294						
RLMT	**Red Lodge**	**85.69**	**43**	P	**P**	**17 19 29.4**	**+0.9**
RLMT				IAmb	IAmb	17 19 30.3	
	comp=Z,7.1nm,0.7s						
RLMT	**Red Lodge**	**85.69**	**43**	P	**P**	**17 19 29.4**	**+0.9**
	baz=298						
GMRC	**Granite Mounta**	**85.77**	**54**	P	**P**	**17 19 29.0**	**0.0**
	baz=294						
BELC	**Belle Mtn. Jos**	**85.83**	**55**	P	**P**	**17 19 29.1**	**-0.3**
	baz=294						
MONP2	**Monument Peak**	**85.96**	**56**	P	**P**	**17 19 30.0**	**-0.1**
	baz=294						
CCUT	**Cedar City**	**86.30**	**51**	P	**P**	**17 19 31.1**	**-0.6**
JLU	**Jordanelle**	**86.31**	**47**	P	**P**	**17 19 31.4**	**-0.3**
JLU				IAmb	IAmb	17 19 32.8	
	comp=Z,5.3nm,0.7s						
BC3	**Big Chuckawall**	**86.39**	**55**	P	**P**	**17 19 32.0**	**-0.1**
	baz=294						
IRM	**Iron Mountain**	**86.42**	**55**	P	**P**	**17 19 31.9**	**-0.1**
	baz=295						
YUH	**Yuha Desert**	**86.45**	**56**	P	**P**	**17 19 31.8**	**-0.4**
YUH				IAmb	IAmb	17 19 32.5	
	comp=Z,12nm,1.4s						
BW06	**Boulder Array**	**86.59**	**45**	P	**P**	**17 19 33.2**	**+0.2**
	baz=298						
PD31	**Pinedale Array**	**86.59**	**45**	P	**P**	**17 19 32.5**	**-0.5**
PDAR	**Pinedale Array**	**86.59**	**45**	P	**P**	**17 19 32.4**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=309,slow=0.9,SNR=6.1						
PDAR				LR	LR	17 55 30.4	
	comp=Z,21nm,18.3s,baz=320,slow=34						
	comp=Z,0.6nm,0.5s						
PDAR	**Pinedale Array**	**86.59**	**45**	P	**P**	**17 19 32.5**	**-0.5**
LCMT	**Little Creek M**	**86.61**	**51**	P	**P**	**17 19 33.6**	**+0.5**
LCMT				IAmb	IAmb	17 19 34.6	
	comp=Z,5.5nm,1.0s						
MSU	**Marysvale**	**86.72**	**50**	P	**P**	**17 19 33.9**	**+0.1**
MTPU	**Mount Pierson**	**86.93**	**50**		**P**	**17 19 35.7**	**+0.8**
W13A	**Hualapai Mount**	**86.96**	**53**	P	**P**	**17 19 35.4**	**+0.5**
PDMCI	**Parker Dam,Lak**	**87.11**	**54**	P	**P**	**17 19 35.6**	**+0.3**
	baz=295						
GLA	**Glamis**	**87.12**	**55**	P	**P**	**17 19 35.8**	**+0.3**
	baz=295						
AKASG	**Malin Array Be**	**87.15**	**325**	P	**P**	**17 19 33.6**	**-1.6**
	comp=Z,1.3nm,0.4s,baz=49,slow=5.4,SNR=12						
	comp=Z,1.3nm,0.4s						
AKASG	**Malin Array Be**	**87.15**	**325**	IAmb	IAmb	17 19 40.4	
	comp=Z,3.1nm,1.4s						
AKBB	**Malin Array Si**	**87.15**	**325**	P	**P**	**17 19 33.2**	**-2.0**
AKBB				IAmb	IAmb	17 19 34.4	
	comp=Z,4.7nm,0.9s						
Q16A	**Castle Valley**	**87.25**	**49**	P	**P**	**17 19 36.5**	**+0.3**
Q16A				IAmb	IAmb	17 19 38.5	
	comp=Z,4.5nm,0.8s						
P17A	**Butcher Ranch,**	**87.30**	**48**	P	**P**	**17 19 36.5**	**+0.1**
U15A	**North Rim**	**87.56**	**52**	P	**P**	**17 19 38.3**	**+0.4**
U15A				IAmb	IAmb	17 19 39.3	
	comp=Z,4.3nm,0.9s						
P18A	**Preston Nutter**	**87.57**	**48**	P	**P**	**17 19 38.1**	**+0.2**
SRU	**San Rafael Swe**	**87.61**	**49**	P	**P**	**17 19 38.0**	**0.0**
SRU				IAmb	IAmb	17 19 38.6	
	comp=Z,10nm,1.4s						
113A	**Mohawk Valley,**	**88.05**	**55**	P	**P**	**17 19 40.3**	**+0.4**
113A				IAmb	IAmb	17 19 41.0	
	comp=Z,7.9nm,1.3s						
Y14A	**Wickenburg**	**88.12**	**54**	P	**P**	**17 19 40.5**	**+0.2**
Y14A				IAmb	IAmb	17 19 41.6	
	comp=Z,7.2nm,1.0s						
NB2	**NORSAR Subarra**	**88.41**	**339**	P	**P**	**17 19 39.4**	**-1.7**
	comp=Z,0.4nm,0.5s,baz=55,slow=4.8						
NOA	**NORSAR Array B**	**88.41**	**339**	P	**P**	**17 19 39.2**	**-1.9**
	comp=Z,0.9nm,0.7s,baz=51,slow=4.2,SNR=3.9						
NOA				LR	LR	18 01 11.5	
	comp=Z,11nm,20.2s,baz=90,slow=37						
	comp=Z,0.9nm,0.7s						
WUAZ	**Wupatki**	**88.63**	**52**	P	**P**	**17 19 43.3**	**+0.5**
WUAZ				IAmb	IAmb	17 19 44.3	
	comp=Z,5.8nm,0.9s						
WUAZ	**Wupatki**	**88.63**	**52**	P	**P**	**17 19 43.3**	**+0.5**
	baz=297						
O20A	**White River Ci**	**88.70**	**47**	P	**P**	**17 19 43.2**	**+0.1**
	baz=298						
PV23	**Carpenter Ridg**	**88.97**	**49**	P	**P**	**17 19 44.1**	**-0.4**
PV23				IAmb	IAmb	17 19 45.5	
	comp=Z,6.6nm,0.9s						
214A	**Organ Pipe Nat**	**89.12**	**56**	P	**P**	**17 19 45.5**	**+0.5**
	baz=296						
SMCO	**Snowmass**	**90.02**	**47**	P	**P**	**17 19 49.6**	**0.0**
SMCO				IAmb	IAmb	17 19 50.8	
	comp=Z,3.0nm,0.8s						
BRTR	**Keskin Array B**	**90.13**	**314**	P	**P**	**17 19 48.0**	**-1.8**
	comp=Z,1.3nm,0.7s,baz=98,slow=3.7,SNR=8.1						
	comp=Z,1.3nm,0.7s						
SFJD	**Kangerlussuaq**	**90.21**	**6**	LR	LR	18 00 36.0	
	comp=Z,20nm,20.2s,baz=354,slow=36						
ULM	**Lac du Bonnet**	**90.61**	**34**	P	**P**	**17 19 51.0**	**-0.5**
	comp=Z,3.1nm,0.8s,baz=338,slow=5.4,SNR=4.2						
	comp=Z,3.1nm,0.8s						
ISCO	**Idaho Springs**	**90.62**	**46**	P	**P**	**17 19 52.7**	**+0.5**
	baz=300						
S22A	**4UR Ranch, Cre**	**90.81**	**48**	P	**P**	**17 19 53.3**	**+0.1**
	baz=299						
Q24A	**Divide**	**91.36**	**47**	P	**P**	**17 19 55.5**	**-0.1**
	baz=300						
SDCO	**Great Sand Dun**	**91.73**	**48**	P	**P**	**17 19 57.2**	**-0.2**
	baz=300						
AGMN	**Agassiz Nation**	**91.80**	**35**	P	**P**	**17 19 56.6**	**-0.4**
	baz=307						
ANMO	**Albuquerque**	**92.45**	**51**	P	**P**	**17 20 00.7**	**+0.1**
	baz=300						
121A	**Cookes Peak, D**	**92.65**	**53**	P	**P**	**17 20 02.0**	**+0.5**
	baz=299						
T25A	**Trinidad**	**92.78**	**48**	P	**P**	**17 20 02.4**	**+0.2**
	baz=301						
ECSD	**EROS Data Cent**	**94.11**	**39**	P	**P**	**17 20 07.6**	**-0.2**
	baz=306						
TXAR	**Lajitas Array**	**97.30**	**54**	P	**P**	**17 20 22.7**	**-0.1**
	comp=Z,0.2nm,0.7s,baz=295,slow=4.2,SNR=3.4						
TXAR				LR	LR	18 01 11.2	
	comp=Z,22nm,19.3s,baz=320,slow=33						
	comp=Z,0.2nm,0.7s						
TROLL	**Troll, Antarti**	**125.75**	**194**	PKPdf	**PKPdf**	**17 25 50.0**	**+0.4**
SNAA	**Sanae**	**127.15**	**193**	PKPdf	**PKPdf**	**17 25 52.2**	**+0.1**
TORD	**Torodi Ar. Bea**	**128.59**	**310**	PKP	**PKPdf**	**17 25 55.5**	**-1.1**
	comp=Z,0.3nm,0.5s,baz=65,slow=1.4,SNR=7.6						
VNA2	**Neumayer--Watz**	**128.63**	**192**	PKPdf	**PKPdf**	**17 25 55.8**	**+0.9**
	baz=134,slow=1.0						
VNA3	**Neumayer Olymp**	**128.78**	**191**	PKPdf	**PKPdf**	**17 25 55.9**	**+0.7**
PLCA	**Paso Flores**	**145.93**	**130**	PKPbc	**PKPdf**	**17 26 28.0**	**+0.4**
	comp=Z,3.4nm,0.5s,baz=183,slow=2.7,SNR=12						
PLCA	**Paso Flores**	**145.93**	**130**		**PKPdf**	**17 26 28.4**	**+0.8**
LPAZ	**La Paz**	**149.47**	**84**	PKPbc	**PKPbc**	**17 26 39.0**	**-0.4**
	comp=Z,1.7nm,0.4s,baz=285,slow=1.9,SNR=8.9						
LPAZ	**La Paz**	**149.47**	**84**		**PKPbc**	**17 26 39.0**	**-0.4**

DJA 02 17:08:35.9±1.2, 9°S±7.7°×11°6E±°, h12km±9km, M4.0/19, mb4.1/6, MLv3.9/19, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGBI	**Denpasar**	**1.21**	**297**	P	Pn	17 08 57.8	-0.8
DNP	**Denpasar**	**1.23**	**305**	P	Pb	17 08 59.0	0.0
PLAI	**Plampang**	**1.62**	**70**	P	Pn	17 09 04.2	-0.1
SRBI	**Singaraja**	**1.63**	**322**	P	Pn	17 09 04.9	+0.4
JAGI	**Jajag, Banyuwa**	**2.24**	**294**	P	Pn	17 09 12.7	-0.2
ABJI	**Asem Bagus**	**2.52**	**308**	P	Pn	17 09 16.8	+0.1
GMJI	**Gumukmas**	**2.96**	**292**	P	Pn	17 09 23.0	+0.2
BLJI	**Banyuglugur**	**3.07**	**302**	P	Pn	17 09 24.4	+0.1
WBSI	**Waikabubak, Su**	**3.13**	**95**	P	Pn	17 09 25.0	-0.1
KMMI	**Kalianget**	**3.22**	**316**	P	Pn	17 09 27.0	+0.7
BASI	**Baing, Sumba**	**4.37**	**101**	P	Pn	17 09 42.0	-0.1
GRJI	**Gresik**	**4.45**	**303**	P	Pn	17 09 42.9	-0.3
PWJI	**Pagerwojo**	**4.58**	**287**	P	Pn	17 09 44.9	-0.1
PCJI	**Pacitan**	**5.13**	**283**	P	Pn	17 09 52.1	-0.5
	0.3nm40nm,1.4s						
BSSI	**Bau Bau, Buton**	**5.31**	**53**	P	Pn	17 09 55.1	0.0
	0.1nm20nm,1.3s						
EDFI	**Ende, Flores**	**5.43**	**84**	P	Pn	17 09 56.6	-0.2
	0.1nm11nm,0.7s						
WOJI	**Wonogiri, Jawa**	**5.47**	**286**	P	Pn	17 09 58.0	+0.8
	0.2nm23nm,1.3s						
BKSI	**Bulukumba**	**5.58**	**44**	P	Pn	17 09 58.7	-0.1
	0.0nm9.3nm,0.5s						
UGM	**Wanagama**	**5.83**	**284**	P	Pn	17 10 02.2	0.0
	0.7nm123nm,2.0s						
MMRI	**Maumere**	**5.98**	**83**	P	Pn	17 10 04.4	+0.1

*NEIC **02** 18:02:25.4±2.7, 9°S±7.7°×117°E±0.7°, h107km±6km, mb4.4/45, Error ellipse: s-maj=9.9km s-min=7.8km az=188.0*

*DJA **02** 18:02:26.4±0.2, 9°S±3°×11°E±°, h95km±5km, M4.5/20, mB4.7/5, mb4.5/12, MLv4.7/20, Mw(mB)3.9/5*

*IDC **02** 18:02:26.7±1.8, 9.01S×118.00E, h119km±14km, mb3.9/16, mbtmp4.3/20, Error ellipse: s-maj=19.5km s-min=10.3km az=65.0*

ISC 02 18:02:26.4±0.3, 9°19S±0.04×117°99E±0.04, h121km, n150, σ1976/157, mb4.4/41, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**0.41**	**329**	P	**Pn**	**18 02 41.2**	**-2.8**
PLAI	**Plampang**	**0.41**	**329**	P	**Pn**	**18 02 42.1**	**-1.9**
WBSI	**Waikabubak, Su**	**1.46**	**108**	P	**Pn**	**18 02 51.3**	**-2.1**
BASI	**Baing, Sumba**	**2.75**	**112**	P	**Pn**	**18 03 07.9**	**-1.6**
DNP	**Denpasar**	**2.79**	**280**	P	**Pn**	**18 03 10.6**	**+0.6**
IGBI	**Denpasar**	**2.83**	**277**	P	**Pn**	**18 03 10.6**	**+0.1**
SRBI	**Singaraja**	**2.96**	**292**	P	**Pn**	**18 03 12.2**	**+0.1**
EDFI	**Ende, Flores**	**3.68**	**84**	P	**Pn**	**18 03 21.2**	**-0.6**
JAGI	**Jajag, Banyuwa**	**3.86**	**280**		**Pn**	**18 03 22.9**	**-1.2**
JAGI				Sn	**Sn**	**18 04 05.2**	**-3.6**
JAGI	**Jajag, Banyuwa**	**3.86**	**280**	P	**Pn**	**18 03 23.3**	**-0.8**
JAGI	**Jajag, Banyuwa**	**3.86**	**280**	P	**Pn**	**18 03 23.0**	**-1.1**
BSSI	**Bau Bau, Buton**	**3.91**	**40**	P	**Pn**	**18 03 24.9**	**+0.1**
ABJI	**Asem Bagus**	**3.96**	**290**	P	**Pn**	**18 03 26.9**	**+1.4**
MMRI	**Maumere**	**4.23**	**83**		**Pn**	**18 03 28.9**	**-0.2**
MMRI	**Maumere**	**4.23**	**83**	P	**Pn**	**18 03 29.0**	**-0.1**
MMRI	**Maumere**	**4.23**	**83**	P	**Pn**	**18 03 29.5**	**+0.4**
BKSI	**Bulukumba**	**4.38**	**29**	P	**Pn**	**18 03 31.5**	**+0.4**

KAPI	**Kappang**	**4.50**	**23**	P	**Pn**	**18 03 31.8**	**-0.8**
	9.5nm,0.4s,baz=213,slow=13,SNR=7.4						
KAPI				S	**Sn**	**18 04 21.4**	**-2.7**
	116nm,0.3s,baz=272,slow=23,SNR=42						
KAPI	**Kappang**	**4.50**	**23**	P	**Pn**	**18 03 33.3**	**+0.7**
KAPI				Sn	**Sn**	**18 04 22.0**	**-2.1**
KAPI	**Kappang**	**4.50**	**23**	P	**Pn**	**18 03 34.9**	**+2.2**
KMMI	**Kalianget**	**4.51**	**298**	P	**Pn**	**18 03 35.2**	**+2.4**
BLJI	**Banyuglugur**	**4.58**	**288**	P	**Pn**	**18 03 34.4**	**+0.7**
GMJI	**Gumukmas**	**4.58**	**281**	P	**Pn**	**18 03 33.2**	**-0.6**
BNSI	**Bone**	**5.20**	**24**	P	**Pn**	**18 03 44.4**	**+2.3**
	0.5nm951nm46nm,0.8s						
BATI	**Baumata**	**5.69**	**101**	P	**Pn**	**18 03 48.4**	**-0.3**
	80nm,0.5s,baz=289,slow=2.0,SNR=47						
BATI				S	**Sn**	**18 04 50.1**	**-2.7**
	129nm,0.3s,baz=29,slow=23,SNR=23						
BATI	**Baumata**	**5.69**	**101**	P	**Pn**	**18 03 48.3**	**-0.3**
	0.7nm1µm55nm,0.6s						
BBSI	**Bau Bau**	**5.84**	**51**	P	**Pn**	**18 03 52.5**	**+1.7**
	0.1nm222nm27nm,0.9s						
SOEI	**Soe**	**6.22**	**96**		**Pn**	**18 03 55.4**	**-0.5**
SOEI	**Soe**	**6.22**	**96**	P	**Pn**	**18 03 56.1**	**+0.2**
	1.0nm98nm,0.7s						
SOEI	**Soe**	**6.22**	**96**	P	**Pn**	**18 03 55.8**	**-0.1**
BBKI	**Banjar Baru**	**6.49**	**331**	P	**Pn**	**18 04 02.6**	**+3.1**
	0.3nm30nm,0.8s						
UGM	**Wanagama**	**7.49**	**279**	Pn	**Pn**	**18 04 11.0**	**-2.1**
UGM	**Wanagama**	**7.49**	**279**	P	**Pn**	**18 04 14.4**	**+1.3**
MTKI	**Muara Teweh, K**	**8.75**	**339**	P	**Pn**	**18 04 33.0**	**+3.0**
	0.1nm33nm,0.8s						
LEM	**Lembang**	**10.53**	**282**	S	**Sn**	**18 06 46.1**	**-4.4**
	7.6nm,0.4s,baz=344,slow=21,SNR=1.4						
SANI	**Sanana**	**10.66**	**49**	P	**Pn**	**18 04 58.0**	**+2.2**
	18nm,1.4s						
SANI	**Sanana**	**10.66**	**49**	P	**Pn**	**18 04 58.8**	**+3.0**
MBWA	**Marble Bar**	**12.02**	**172**	Pn	**Pn**	**18 05 11.7**	**-2.2**
MBWA	**Marble Bar**	**12.02**	**172**	P	**Pn**	**18 05 12.1**	**-1.8**
KNRA	**Kununurra**	**12.34**	**123**		**Pn**	**18 05 17.0**	**-1.0**
KNRA	**Kununurra**	**12.34**	**123**	P	**Pn**	**18 05 17.5**	**-0.6**
PSA00	**Pilbara Seismi**	**12.45**	**172**	Pn	**Pn**	**18 05 17.4**	**-2.0**
PSA00	**Pilbara Seismi**	**12.45**	**172**		**Pn**	**18 05 17.5**	**-1.9**
PSA00	**Pilbara Seismi**	**12.45**	**172**	P	**Pn**	**18 05 18.0**	**-1.4**
BNDI	**Bandanaira**	**12.70**	**69**	P	**Pn**	**18 05 25.9**	**+3.1**
LBMI	**Labuha**	**12.72**	**49**	P	**P**	**18 05 32.5**	**+3.1**
SBUM	**Sibu**	**12.91**	**333**	Pn	**Pn**	**18 05 26.5**	**+1.0**
KSM	**Kuching**	**13.06**	**324**	P	**P**	**18 05 31.8**	**-1.4**
MTN	**Manton Dam**	**13.40**	**107**	Pn	**Pn**	**18 05 29.9**	**-2.0**
MTN	**Manton Dam**	**13.40**	**107**	P	**Pn**	**18 05 30.5**	**-1.4**
GIRL	**Giralia**	**13.86**	**195**	Pn	**Pn**	**18 05 37.1**	**-0.6**
GIRL	**Giralia**	**13.86**	**195**	P	**Pn**	**18 05 38.3**	**+0.6**
KDU	**Kakadu**	**14.64**	**105**	P	**Pn**	**18 05 46.9**	**-0.8**
FAKI	**Fak Fak**	**15.48**	**67**	Pn	**Pn**	**18 05 54.9**	**-3.4**
FAKI				IAmb	IAmb	18 05 58.6	
	comp=Z,17nm,0.7s						
SIJI	**Sorong**	**15.59**	**59**	P	**Pn**	**18 05 57.0**	**-2.6**
	comp=Z,6.0nm,0.4s,baz=194,slow=18,SNR=12						
DSRI	**Dabo**	**15.91**	**302**	P	**P**	**18 06 07.3**	**+2.5**
	comp=Z,7.1nm,0.5s						
MYKOM	**Kota Tinggi**	**17.81**	**307**	P	**Pn**	**18 06 27.3**	**+0.5**
WRKA	**Warakurna**	**18.57**	**149**	P	**Pn**	**18 06 36.8**	**+1.0**
WB0	**Warramunga Arr**	**19.03**	**125**	P	**Pn**	**18 06 40.4**	**-0.8**
WB0				IAmb	IAmb	18 06 47.1	
	comp=Z,7.1nm,0.6s						
WRA	**Warramunga Arr**	**19.08**	**126**	P	**P**	**18 06 40.4**	**+0.7**
	comp=Z,2.1nm,0.3s,baz=300,slow=12,SNR=145						
WRA				S	**S**	**18 10 03.7**	**-6.1**
	comp=Z,2.4nm,0.8s,baz=304,slow=24,SNR=6.8						
WRA				ScP	**ScP**	**18 14 24.5**	**+0.1**
	comp=Z,0.8nm,0.8s,baz=304,slow=1.7,

comp=Z,8.1nm,0.6s
KSRS Korea Array 47.32 11 P **P** 18 10 47.3 -0.5
comp=Z,1.0nm,0.6s,baz=186,slow=9.9,SNR=5.8
comp=Z,1.0nm,0.6s
GUN Gumba 48.22 321 *eP* **P** 18 10 54.5 -0.9
PKI Pulchoki 48.28 320 *eP* **P** 18 10 54.2 -1.7
comp=Z,6.0nm,0.4s
PKIN Phulchoki 48.29 320 *eP* **P** 18 10 54.3 -1.6
comp=Z,7.8nm,0.4s
DMN Daman 48.49 320 *eP* **P** 18 10 55.8 -1.7
GKN Gorkha 49.07 320 *eP* **P** 18 11 00.4 -1.3
comp=Z,11nm,0.3s
DANN Dangsing 49.86 320 *eP* **P** 18 11 06.5 -1.4
comp=Z,16nm,0.4s
HHC Hu-ho-hao-te 50.14 354 *eP* P 18 11 15.0 +5.5
HHC pmax pmax
comp=Z,31nm,1.0s
PYUN Piuthan 50.19 319 *eP* **P** 18 11 08.7 -1.6
comp=Z,13nm,0.7s
USA0B Ussuriysk Arra 54.63 12 P **P** 18 11 42.3 -0.1
USRK Ussuriysk Ar. 54.63 12 P **P** 18 11 41.8 -0.7
comp=Z,3.8nm,0.5s,baz=198,slow=6.4,SNR=9.1
comp=Z,3.8nm,0.5s
USRK Ussuriysk Ar. 54.63 12 P **P** 18 11 42.4 0.0
SONM Songino Array 57.69 351 P **P** 18 12 03.8 -0.6
comp=Z,2.5nm,0.7s,baz=166,slow=7.5,SNR=16
comp=Z,2.5nm,0.7s
SONM Songino Array 57.69 351 P **P** 18 12 04.5 +0.1
SONM IAmb IAmb 18 12 06.1
comp=Z,2.0nm,0.7s
LTZ Lake Taylor 57.88 135 P **P** 18 12 05.7 -0.1
KLR Kul'dur 59.41 10 P **P** 18 12 15.5 -0.5
comp=Z,0.7nm,0.4s,baz=274,slow=3.8,SNR=5.3
comp=Z,0.7nm,0.4s
WMQ Urumqi 59.49 335 *eP* **P** 18 12 18.2 +1.4
WMQ pmax pmax
comp=Z,17nm,0.9s
KDJ Kajisay 63.26 327 P **P** 18 12 42.5 +0.1
KBL Kabul 63.52 316 P **P** 18 12 42.8 -1.6
KBL IAmb IAmb 18 12 43.7
comp=Z,5.1nm,0.9s
MK31 Makanchi Array 64.17 334 P **P** 18 12 47.2 -0.9
MKAR Makanchi Array 64.17 334 P **P** 18 12 47.5 -0.6
comp=Z,1.4nm,0.4s,baz=147,slow=7.8,SNR=29
comp=Z,1.4nm,0.4s
MKAR Makanchi Array 64.17 334 P **P** 18 12 47.0 -1.1
BOOM Boomskoye usch 64.18 327 P **P** 18 12 47.5 -0.9
BOOM IAmb IAmb 18 12 48.5
comp=Z,3.7nm,0.8s
MAKZ Makanchi 64.32 333 P **P** 18 12 47.7 -1.4
DRK Karamyk 64.62 322 P **P** 18 12 51.2 -0.3
AAK Ala-Archa 65.07 326 P **P** 18 12 53.7 -0.5
AAK IAmb IAmb 18 12 55.1
comp=Z,3.7nm,0.8s
GAR Garm 65.25 321 P **P** 18 12 54.5 -0.9
BTK Batken 65.57 322 P **P** 18 12 57.2 -0.2
BTK IAmb IAmb 18 12 57.6
comp=Z,4.9nm,0.6s
CHGR Chuyangaron 65.78 320 P **P** 18 12 56.9 -1.9
CRZF Crozet Islands 66.99 223 P **P** 18 13 06.6 +0.4
SOCY Socotra 67.05 287 P **P** 18 13 07.5 +0.2
KK31 Karatay Array 67.62 324 P **P** 18 13 09.2 -1.0
KKAR Karatay Array 67.62 324 P **P** 18 13 09.4 -0.9
KKAR Karatay Array 67.62 324 P **P** 18 13 09.2 -1.0
KKAR IAmb IAmb 18 13 10.8
comp=Z,1.7nm,0.7s
ZAA0 Zalesovo Array 68.86 340 P **P** 18 13 16.4 -1.4
ZAA0 IAmb IAmb 18 13 18.4
comp=Z,2.6nm,0.6s
ZALV Zalesovo Beam 68.86 340 P **P** 18 13 16.1 -1.6
comp=Z,2.4nm,0.5s,baz=148,slow=4.8,SNR=12
comp=Z,2.4nm,0.5s
ZALV Zalesovo Beam 68.86 340 P **P** 18 13 16.5 -1.2
YAK Yakutsk 71.58 6 P **P** 18 13 32.6 -1.5
comp=Z,2.4nm,0.6s,baz=168,slow=1.6,SNR=4.1
comp=Z,2.4nm,0.6s
VNDA Vanda 71.96 171 P **P** 18 13 38.3 +2.0
comp=Z,0.2nm,0.4s,baz=308,slow=10,SNR=1.6
comp=Z,0.2nm,0.4s
BRVK Borovoye 74.06 332 P **P** 18 13 48.1 -0.9
BRVK IAmb IAmb 18 13 49.1
comp=Z,4.2nm,1.1s
SEY Seymchan 76.60 15 P **P** 18 14 02.4 -0.9
comp=Z,0.9nm,0.6s,baz=247,slow=4.7,SNR=4.3
comp=Z,0.9nm,0.6s
ABKAR Akbulak array 77.14 325 P **P** 18 14 06.1 -0.5
ABKAR Akbulak array 77.14 325 P **P** 18 14 06.2 -0.5
ABKAR IAmb IAmb 18 14 06.8
comp=Z,3.8nm,0.7s
RAYN Ar Rayn 77.89 296 P **P** 18 14 11.7 +0.3
TIXI Tiksi 80.98 3 P **P** 18 14 26.6 -0.5
comp=Z,0.9nm,0.3s,baz=91,slow=22,SNR=4.1
comp=Z,0.9nm,0.3s
TIXI Tiksi 80.98 3 IAmb IAmb 18 14 28.9
comp=Z,3.3nm,1.1s
BOSA Boshof 88.04 241 P **P** 18 15 04.5 +0.7
comp=Z,1.9nm,0.9s,baz=137,slow=6.1,SNR=2.2
comp=Z,1.9nm,0.9s
BOSA Boshof 88.04 241 IAmb IAmb 18 15 16.2
comp=Z,4.7nm,1.1s
TORD Torodi Ar. Bea 117.51 280 PKP **PKiKP** 18 20 59.2 +0.2
comp=Z,0.4nm,0.7s,baz=68,slow=2.3,SNR=2.5

*TUL **02** 18:03:21.3±1.2,36˚42N±0˚01×98˚14W±0˚01,h7km±2km, ML3.2,mb_Lg2.8/50(NEIC), Error ellipse: s-maj=1.6km s-min=1.3km az=153.0*
*ANF **02** 18:03:21.4±0.3,36˚40N×98˚12W,h7km,ML3.3/5,Error ellipse: s-maj=3.5km s-min=2.9km az=81.0*
*NEIC **02** 18:03:21.2±1.1,36˚41N±0˚01×98˚131W±0˚006,h5km±2km, Error ellipse: s-maj=3.0km s-min=1.9km az=255.0*
ISC 02 18:03:21.0±0.8,36˚42N±0˚03×98˚12W±0˚04,h10km,n48, σ1§40/35,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
U32A	**Winter Ranch,**	**0.71**	**267**	Pg	**Pg**	**18 03 34.6**	**-0.2**
U32A	**Winter Ranch,**	**0.71**	**267**	P	**Pg**	**18 03 34.6**	**-0.2**
baz=87							
OKCFA	**Oklahoma City**	**1.14**	**151**		**Pb**	**18 03 42.4**	**-0.5**
OKCFA	**Oklahoma City**	**1.14**	**151**	P	**Pb**	**18 03 42.6**	**-0.3**
baz=331							
OKCFA				S	**Sb**	**18 03 58.1**	**+0.4**
baz=331							
OKCSW	**OKLAHOMA CITY**	**1.16**	**151**	Pn	**Pb**	**18 03 42.7**	**-0.4**
FNO	**Franklin**	**1.30**	**153**		**Pn**	**18 03 43.6**	**-1.7**
T35A	**Sooner Cattle**	**1.39**	**69**		**Pn**	**18 03 46.5**	**0.0**
T35B	**Sooner Cattle**	**1.39**	**69**	P	**Pn**	**18 03 47.3**	**+0.8**
baz=250							
T35B				S	**Sn**	**18 04 06.1**	**+1.3**
baz=250							
WMOK	**Wichita Mounta**	**1.77**	**198**		**Pn**	**18 03 52.3**	**+0.6**
WMOK	**Wichita Mounta**	**1.77**	**198**	P	**Pn**	**18 03 52.4**	**+0.7**
baz=17							
WMOK				S	**Sb**	**18 04 16.1**	**+0.4**
baz=17							
X34A	**Smith Ranch, M**	**1.83**	**173**		**Pb**	**18 03 54.3**	**-0.4**
X34A				IAmb_Lg		18 04 22.7	
comp=Z,42nm,0.7s							
TUL1	**Leonard**	**1.95**	**104**		**Pn**	**18 03 56.1**	**+1.9**
TUL1	**Leonard**	**1.95**	**104**	P	**Pn**	**18 03 55.7**	**+1.5**
baz=286							
R32A	**Long Quarter,**	**2.05**	**347**		**Pb**	**18 03 57.9**	**-0.5**
R32A	**Long Quarter,**	**2.05**	**347**	P	**Pn**	**18 03 57.6**	**+2.0**
baz=167							
R32A				Sb	**Sb**	**18 04 26.1**	**+2.1**
baz=167							
CBKS	**Cedar Bluff**	**2.71**	**332**	Pn	**Pn**	**18 04 04.5**	**-0.2**
X37A	**Clayton**	**2.89**	**128**		**Pn**	**18 04 06.3**	**-0.8**
KSU1	**Kansas State U**	**2.93**	**24**	IAmb_Lg		18 05 00.3	
comp=Z,37nm,0.9s							
AMTX	**Amarillo**	**3.28**	**243**		**Pn**	**18 04 12.7**	**+0.1**
AMTX				IAmb_Lg		18 05 09.6	
comp=Z,22nm,0.7s							
HHAR	**Hobbs**	**3.38**	**91**		**Pn**	**18 04 13.4**	**-0.5**
W39A	**Magazine**	**3.73**	**108**		**Pb**	**18 04 28.7**	**+1.7**
W39A				IAmb_Lg		18 05 24.0	
comp=Z,21nm,0.8s							
ABTX	**Abilene, Hawle**	**3.99**	**199**	Pg	**Pb**	**18 04 31.2**	**-0.3**
S39A	**Bolivar**	**4.04**	**70**		**Pb**	**18 04 33.5**	**+1.2**
S39A				IAmb_Lg		18 05 32.7	
comp=Z,24nm,0.8s							
Z38A	**Mt. Pleasant**	**4.08**	**140**	IAmb_Lg		18 05 38.3	
comp=Z,16nm,0.7s							
MIAR	**Mount Ida**	**4.15**	**115**	IAmb_Lg		18 05 36.8	
comp=Z,21nm,0.9s							
U40A	**Yellville**	**4.25**	**89**		**Pb**	**18 04 35.7**	**-0.2**
U40A				IAmb_Lg		18 05 36.0	
comp=Z,25nm,1.0s							
KSCO	**Kaye Shedlock'**	**4.41**	**307**	IAmb_Lg		18 05 45.9	
comp=Z,15nm,0.7s							
MSTX	**Muleshoe**	**4.53**	**239**	Pg	**Pb**	**18 04 40.7**	**0.0**
X40A	**Basin Creek Fa**	**4.73**	**113**	IAmb_Lg		18 05 55.1	
comp=Z,17nm,0.8s							
WHAR	**Wooly Hollow**	**4.87**	**102**	Pn	**Pn**	**18 04 34.3**	**0.0**
WHAR				IAmb_Lg		18 05 57.5	
comp=Z,15nm,0.9s							
WLAR	**White Oak Lake**	**4.93**	**122**	IAmb_Lg		18 06 08.0	
comp=Z,16nm,0.7s							
W41B	**Gary Mavity, V**	**4.93**	**103**	Pn	**Pn**	**18 04 35.0**	**-0.2**
W41B				IAmb_Lg		18 06 01.4	
comp=Z,12nm,0.8s							
UALR	**University of**	**4.99**	**108**	IAmb_Lg		18 06 05.6	
comp=Z,19nm,1.1s							
R40A	**Maddies Statio**	**5.02**	**66**	IAmb_Lg		18 06 08.6	
comp=Z,12nm,0.9s							
T25A	**Trinidad**	**5.10**	**280**	IAmb_Lg		18 06 02.4	
comp=Z,14nm,0.8s							
OGNE	**Ogallala**	**5.46**	**327**	Pn	**Pn**	**18 04 44.2**	**+1.7**
OGNE				IAmb_Lg		18 06 21.3	
comp=Z,16nm,0.7s							
P40A	**Paris**	**5.71**	**55**	IAmb_Lg		18 06 26.6	
comp=Z,17nm,0.8s							
CCM	**Cathedral Cave**	**5.72**	**71**	IAmb_Lg		18 06 22.1	
comp=Z,11nm,0.8s							
Q24A	**Divide**	**6.12**	**297**	IAmb_Lg		18 06 35.5	
comp=Z,10nm,0.8s							
PBMO	**Poplar Bluff**	**6.20**	**84**	IAmb_Lg		18 06 52.6	
comp=Z,9.5nm,0.7s							
ISCO	**Idaho Springs**	**6.80**	**302**	IAmb_Lg		18 07 04.9	
comp=Z,7.6nm,0.7s							
S44A	**Carbondale**	**7.20**	**77**	IAmb_Lg		18 07 17.9	
comp=Z,10nm,0.8s							
SIUC	**Southern Illin**	**7.24**	**77**	IAmb_Lg		18 07 15.3	
comp=Z,8.5nm,0.8s							
BNM	**Barren Site**	**7.32**	**254**	Pg	**Pb**	**18 05 31.9**	**+3.7**
N23A	**Red Feather La**	**7.58**	**308**	Pg	**Pg**	**18 05 43.5**	**-2.5**
N23A				IAmb_Lg		18 07 27.1	
comp=Z,12nm,0.8s							
JFWS	**Jewell Farm**	**8.88**	**41**	IAmb_Lg		18 08 14.5	
comp=Z,10nm,0.7s							
RSSD	**Black Hills**	**8.92**	**331**	Pn	**Pn**	**18 05 27.7**	**-2.4**
K22A	**Casper**	**8.99**	**316**	Pn	**Pn**	**18 05 28.3**	**-2.7**

*DDA **02** 18:06:24.1±0.0,37˚47N×26˚70E,h7km±2km,ML2.4*
*ISK **02** 18:06:24.1,37˚48N×26˚67E,h15km,ML2.6/22*
*THE **02** 18:06:24.9,37˚48N×26˚76E,h12km±1km,ML2.6/3,Error ellipse: s-maj=2.5km s-min=0.7km az=75.0*
ISC 02 18:06:24.3±1.1,37˚47N±0˚02×26˚70E±0˚03,h13km±8km, n40,σ0§53/59,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.26**	**24**	P	**Pg**	**18 06 29.8**	**0.0**
SMG				S	**Sg**	**18 06 33.9**	**+0.4**
3µm,0.2s							
DDIM	**Aydin, Didim**	**0.43**	**92**	P	**Pb**	**18 06 33.3**	**-0.3**
DDIM				S	**Sb**	**18 06 39.4**	**-0.6**
GCAM	**G?zelcaml?**	**0.48**	**61**	PG	**Pb**	**18 06 34.0**	**-0.5**
GCAM	**G?zelcaml?**	**0.48**	**61**	P	**Pg**	**18 06 33.9**	**+0.1**
GCAM				S	**Sb**	**18 06 40.8**	**-0.7**
GCAM				*i* AML	AML	18 06 42.0	
comp=E,318nm,0.6s							
GCAM				*i* AML	AML	18 06 45.0	
comp=N,367nm,0.2s							
DGB	**zmir**	**0.60**	**14**	P	**Pg**	**18 06 35.8**	**-0.2**
DGB				*i* AML	AML	18 06 47.0	
comp=E,278nm,0.5s							
DGB				*i* AML	AML	18 06 47.0	
comp=N,129nm,0.4s							
GMLD	**Gumuldur**	**0.63**	**16**	PG	**Pb**	**18 06 37.1**	**0.0**
BODT	**Bodrum**	**0.64**	**130**	P	**Pg**	**18 06 36.5**	**-0.1**
BODT				S	**Sb**	**18 06 45.9**	**-0.1**
BODT	**Bodrum**	**0.64**	**130**	PG	**Pb**	**18 06 37.2**	**0.0**
BDRM	**Kayabasi**	**0.72**	**124**	P	**Pg**	**18 06 37.7**	**-0.5**
BDRM				S	**Sb**	**18 06 48.5**	**+0.2**
BDRM				*i* AML	AML	18 06 56.0	
comp=N,158nm,0.5s							
KOSK	**Kos Island**	**0.75**	**163**	P	**Pb**	**18 06 39.5**	**+0.3**
KOSK				S	**Sb**	**18 06 50.1**	**+0.8**
690nm,0.4s							
KOSK	**Kos Island**	**0.75**	**163**	PG	**Pb**	**18 06 39.4**	**+0.3**
KOSK				SG	**Sb**	**18 06 50.5**	**+1.2**
ZEYE	**Izmir, Urla-Ze**	**0.78**	**348**	P	**Pg**	**18 06 39.0**	**-0.5**
ZEYE				S	**Sb**	**18 06 50.9**	**+0.7**
ZEYE				*i* AML	AML	18 06 52.0	
comp=E,244nm,0.2s							
MLSB	**Milas**	**0.87**	**101**	PG	**Pn**	**18 06 41.9**	**-0.4**
MLSB				SG	**Sn**	**18 06 55.4**	**+0.6**
URLA	**Izmir**	**0.89**	**355**	PG	**Pb**	**18 06 41.7**	**+0.1**
URLA				SG	**Sn**	**18 06 54.4**	**-0.9**
URLA	**Izmir**	**0.89**	**355**	P	**Pg**	**18 06 41.2**	**-0.3**
URLA				S	**Sb**	**18 06 54.2**	**+0.8**
URLA				*i* AML	AML	18 06 58.0	
URLA	comp=E,134nm,0.3s			*i* AML	AML	18 06 58.0	
comp=N,173nm,0.8s							
NISR	**Nisiros**	**0.92**	**158**	P	**Pn**	**18 06 43.0**	**+0.1**
NISR				S	**Sn**	**18 06 56.1**	**+0.1**
NIS1	**Nisyros Isl.**	**0.95**	**156**	PG	**Pn**	**18 06 43.3**	**+0.1**
BLCB	**Balcova**	**0.95**	**16**	P	**Pg**	**18 06 42.3**	**-0.3**
BLCB				S	**Sn**	**18 06 56.0**	**-0.7**
BLCB	**Balcova**	**0.95**	**16**	PG	**Pb**	**18 06 42.8**	**+0.2**
BLCB				SG	**Sn**	**18 06 56.0**	**-0.7**
AYDN	**Tasoluk**	**0.95**	**78**	P	**Pg**	**18 06 42.6**	**-0.2**
AYDN				S	**Sb**	**18 06 55.8**	**+0.6**
AYDN				*i* AML	AML	18 06 59.0	
AYDN	comp=N,80nm,0.3s			*i* AML	AML	18 07 00.0	
comp=E,95nm,0.2s							
DAT	**Datca**	**1.02**	**136**	P	**Pb**	**18 06 42.3**	**-1.5**
DAT				S	**Sg**	**18 06 56.8**	**-0.5**
DAT	**Datca**	**1.02**	**136**	PG	**Pg**	**18 06 44.1**	**+0.2**
DAT	**Datca**	**1.02**	**136**	P	**Pg**	**18 06 43.9**	**-0.1**
DAT				S	**Sn**	**18 06 58.4**	**-0.2**
DAT				*i* AML	AML	18 07 02.0	
comp=N,73nm,0.5s							
CHOS	**Chios island**	**1.05**	**331**	P	**Pb**	**18 06 43.9**	**-0.4**
CHOS				S	**Sn**	**18 06 59.0**	**-0.2**
155nm,0.2s							
CHOS	**Chios island**	**1.05**	**331**	PG	**Pg**	**18 06 44.2**	**-0.3**
CHOS				SG	**Sn**	**18 06 59.3**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**1.06**	**63**	PG	**Pn**	**18 06 45.3**	**+0.5**
FOCM	**Foa**	**1.24**	**1**	PN	**Pb**	**18 06 47.3**	**-0.2**
YER	**Yerkesik**	**1.30**	**104**	PN	**Pb**	**18 06 48.7**	**+0.1**
MULA	**Mugla, Merkez-**	**1.31**	**99**	P	**Pg**	**18 06 49.5**	**0.0**
TURN	**Turunc**	**1.42**	**119**	PN	**Pb**	**18 06 50.2**	**-0.3**
TURN	**Turunc**	**1.42**	**119**	P	**Pn**	**18 06 48.9**	**-0.7**
SANT	**Santorini**	**1.48**	**223**	PN	**Pn**	**18 06 50.2**	**-0.4**
DKL	**Dikili**	**1.60**	**6**	PN	**Pn**	**18 06 52.7**	**+0.4**
DALY	**Dalyan (Mula)**	**1.69**	**112**	PN	**Pb**	**18 06 54.4**	**-0.8**
ARG	**Arkhangelos**	**1.70**	**137**	PN	**Pn**	**18 06 54.0**	**+0.5**
TAVA	**DENIZLI_Tavas**	**1.76**	**90**	P	**Pg**	**18 06 58.4**	**+0.4**
KULA	**Kula-Manisa**	**1.86**	**55**	PN	**Pn**	**18 06 56.8**	**+0.9**
KARP	**Karpathos**	**1.96**	**169**	PN	**Pn**	**18 06 57.4**	**+0.3**
FETY	**Fethiye**	**2.08**	**113**	PN	**Pn**	**18 06 59.7**	**+0.9**
CAME	**Cameli-Denizli**	**2.14**	**103**	PN	**Pn**	**18 07 00.7**	**+0.9**

*IDC **02** 18:20:34.5±0.6,20˚46N×120˚52E,h0km,mb3.9/16, mbtmp4.0/17,ML3.6/1,MS3.4/18,Error ellipse: s-maj=24.6km s-min=12.8km az=69.0*
*MAN **02** 18:20:36.1,20˚61N×120˚51E,h32km,mb5.1,ML4.0, MS4.1*
*NEIC **02** 18:20:37.2±2.1,20˚61N±0˚06×120˚53E±0˚09,h10km±1km, mb4.5/49,Error ellipse: s-maj=13.9km s-min=10.1km az=100.0*
ISC 02 18:20:38.7±0.4,20˚55N±0˚04×120˚63E±0˚06,h26km,n113, σ1§37/100,mb4.4/41,MS3.5/17,6C-1D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**2.30**	**10**		**Pn**	**18 21 13.9**	**-1.1**
SGCP	**Gonzaga**	**2.65**	**150**	*eP*	**Pn**	**18 21 19.4**	**-0.4**
SGCP				*eS*	**Sn**	**18 21 51.6**	**+0.4**
TPUB	**Ta-pu**	**2.74**	**360**		**Pn**	**18 21 19.0**	**-2.1**
YULB	**Yu-li**	**2.90**	**12**		**Pn**	**18 21 23.2**	**0.0**
SSLB	**Suanglung**	**3.24**	**5**		**Pn**	**18 21 26.7**	**-1.3**
SAMP	**Sagada Mountai**	**3.46**	**176**	*eP*	**Pn**	**18 21 29.8**	**-1.2**
SAMP				*eS*	**Sn**	**18 22 09.0**	**-2.1**
NACB	**Ninganchiao**	**3.72**	**14**	Pn	**Pn**	**18 21 34.6**	**+0.1**
CAUP	**Cauayan**	**3.76**	**162**	*eP*	**Pn**	**18 21 36.9**	**+1.9**
YHNB	**Yeheng**	**4.16**	**9**		**Pn**	**18 21 40.9**	**+0.2**
SMPP	**San Manuel, Pa**	**4.38**	**179**	*eP*	**Pn**	**18 21 41.6**	**-1.9**
SMPP				*eS*	**Sn**	**18 22 33.4**	**-0.3**
KNMB	**Chin-men Tao**	**4.42**	**332**	Pn	**Pn**	**18 21 40.4**	**-3.7**
BALP	**Baler**	**4.87**	**169**	*eP*	**Pn**	**18 21 50.1**	**-0.2**
BALP				*eS*	**Sn**	**18 22 47.6**	**+1.8**
PCPH	**Palayan**	**4.98**	**175**	*eP*	**Pn**	**18 21 52.0**	**+0.2**
HKPS	**Hong Kong Po S**	**6.29**	**287**	Pn	**Pn**	**18 22 08.1**	**-1.7**
TGY	**Tagaytay City**	**6.42**	**177**	Pn	**Pn**	**18 22 12.8**	**+1.1**
18nm,0.3s,baz=167,slow=14,SNR=1.5							
QIZ	**Qiongzhong**	**10.27**	**263**	Pn	**Pn**	**18 23 03.4**	**-1.1**
QIZ	**Qiongzhong**	**10.27**	**263**	P	**Pn**	**18 23 08.0**	**+3.5**
QIZ				S	**Sn**	**18 25 03.2**	**+4.3**
QIZ				pmax	pmax		
QIZ	comp=Z,190nm,8.3s			LR	LR		
comp=N,460nm,13.5s							
QIZ				LR	LR		
comp=E,340nm,11.2s							
QIZ				LR	LR		
comp=Z,410nm,11.8s							
DAV	**Davao City (W)**	**14.23**	**160**	LR	LR	18 30 02.2	
comp=Z,122nm,19.1s,baz=339,slow=40							
XAN	**Xi'an**	**16.98**	**325**	P	P	18 24 44.4	+8.2
XAN				pP	sP	18 24 52.0	+6.4
XAN				pmax	pmax		
comp=Z,10.0nm,1.5s							
HNS	**HongShan**	**17.57**	**344**	P	**P**	**18 24 44.2**	**+1.6**
HNS				S	**Sn**	**18 27 55.8**	**-0.8**
HNS				pmax	pmax		
comp=Z,12nm,1.1s							
HNS				LR	LR		
comp=Z,170nm,13.9s							
HNS				LR	LR		
comp=Z,240nm,12.9s							
HNS				LR	LR		
comp=Z,230nm,15.1s							
KSRS	**Korea Array**	**18.00**	**19**	P	**P**	**18 24 47.2**	**-0.2**
comp=Z,0.2nm,0.3s,baz=200,slow=11,SNR=13							
KSRS				LR	LR	18 33 20.2	
comp=Z,68nm,18.4s,baz=205,slow=42							
comp=Z,2.6nm,0.6s							
PZH	**PanZhiHua**	**18.30**	**292**	P	**P**	**18 24 51.7**	**+0.7**
PZH				pmax	pmax		
comp=Z,10.0nm,1.0s							
PZH				pmax	pmax		
comp=Z,120nm,8.0s							
SBUM	**Sibu**	**19.77**	**206**	P	**P**	**18 25 06.2**	**-0.9**
CHTO	**Chiang Mai**	**20.50**	**269**	P	**P**	**18 25 14.9**	**-0.1**
CM31	**Chiang Mai Arr**	**20.55**	**268**	P	**P**	**18 25 13.7**	**-1.9**
CMAR	**Chiang Mai Arr**	**20.55**	**268**	P	**P**	**18 25 13.6**	**-1.9**
comp=Z,0.7nm,0.8s,baz=67,slow=10,SNR=6.6							
CMAR				LR	LR	18 33 18.5	
comp=Z,110nm,18.4s,baz=85,slow=37							
comp=Z,0.7nm,0.8s							
JHJ	**Hachijo jima 2**	**21.14**	**50**	LR	LR	18 32 01.8	
comp=Z,59nm,18.7s,baz=284,slow=32							
LUWI	**Luwuk**	**21.56**	**174**	P	**P**	**18 25 25.4**	**-0.9**
HHC	**Hu-ho-hao-te**	**21.66**	**341**	*eP*	**P**	**18 25 28.2**	**+0.8**
HHC				pmax	pmax		
comp=Z,18nm,0.9s							
HHC				pmax	pmax		
comp=Z,140nm,5.5s							
HHC				LR	LR		
comp=Z,630nm,14.6s							
HHC				LR	LR		
comp=Z,310nm,14.6s							
HHC				LR	LR		
comp=Z,500nm,14.6s							
MJAR	**Matsushiro Arr**	**22.13**	**40**	P	**P**	**18 25 33.2**	**+0.8**
comp=Z,2.5nm,0.8s,baz=213,slow=8.2,SNR=4.9							
comp=Z,2.5nm,0.8s							
MJAR	**Matsushiro Arr**	**22.13**	**40**	P	**P**	**18 25 32.5**	**+0.1**
XLT	**XiLinHaoTe**	**23.59**	**352**	*eP*	**P**	**18 25 45.8**	**-1.7**
XLT				pP	pP	18 25 49.4	-5.0
XLT				sP	pwP	18 25 52.0	-5.1
XLT				pmax	pmax		
comp=Z,6.0nm,0.9s							
XLT				pmax	pmax		
comp=Z,97nm,3.7s							
SIJI	**Sorong**	**23.70**	**153**	P	**P**	**18 25 48.2**	**-0.5**
comp=Z,12nm,0.8s,baz=41,slow=3.6,SNR=8.3							
SIJI				LR	LR	18 36 48.2	
comp=Z,83nm,18.4s,baz=242,slow=41							
comp=Z,12nm,0.8s							
GUMO	**Guam**	**24.16**	**103**	LR	LR	18 33 11.7	
comp=Z,25nm,21.3s,baz=272,slow=31							
KAPI	**Kappang**	**25.42**	**182**	P	**P**	**18 26 03.6**	**-0.8**
comp=Z,3.9nm,0.6s,baz=218,slow=7.9,SNR=2.2							
KAPI				LR	LR	18 35 46.1	
comp=Z,80nm,20.6s,baz=218,slow=36							
comp=Z,3.9nm,0.6s							
GOMU	**GeErMu**	**27.43**	**310**	P	**P**	**18 26 22.9**	**-0.1**
GOMU				pmax	pmax		
comp=Z,3.0nm,0.8s							
LSA	**Lhasa**	**28.14**	**295**	P	**P**	**18 26 29.2**	**-0.2**
LSA				IAmb	IAmb	18 26 44.5	
comp=Z,6.3nm,0.4s							
ULN	**Ulaanbaatar**	**29.38**	**341**	P	**P**	**18 26 39.3**	**-0.6**
ULN				IAmb	IAmb	18 26 49.3	
comp=Z,15nm,1.8s							
SONM	**Songino Array**	**29.56**	**340**	P	**P**	**18 26 41.2**	**-0.3**
comp=Z,0.5nm,0.6s,baz=165,slow=8.4,SNR=4.4							
SONM				LR	LR	18 39 05.1	
comp=Z,113nm,20.1s,baz=162,slow=38							
comp=Z,0.5nm,0.6s							
SONM	**Songino Array**	**29.56**	**340**	IAmb	IAmb	18 26 44.9	
comp=Z,4.7nm,1.6s							
ASAJ	**Asahikawa**	**29.77**	**33**	LR	LR	18 39 42.9	
comp=Z,54nm,20.3s,baz=222,slow=38							
KLR	**Kul'dur**	**29.97**	**15**	LR	LR	18 38 21.2	
comp=Z,90nm,19.9s,baz=191,slow=36							
MTN	**Manton Dam**	**34.75**	**162**	P	**P**	**18 27 27.3**	**+0.2**
MTN				IAmb	IAmb	18 27 51.7	
comp=Z,8.8nm,1.1s							
WMQ	**Urumqi**	**35.90**	**318**	*eP*	**P**	**18 27 40.1**	**+3.3**
KNRA	**Kununurra**	**36.87**	**167**	P	**P**	**18 27 45.2**	**-0.1**
KNRA				IAmb	IAmb	18 27 47.5	
comp=Z,24nm,1.7s							
MK31	**Makanchi Array**	**40.66**	**319**	P	**P**	**18 28 16.8**	**0.0**
MKAR	**Makanchi Array**	**40.66**	**319**	P	**P**	**18 28 17.2**	**+0.3**
comp=Z,1.0nm,0.7s,baz=112,slow=9.7,SNR=11							
comp=Z,1.0nm,0.7s							
MKAR	**Makanchi Array**	**40.66**	**319**	P	**P**	**18 28 16.4**	**-0.4**
PALK	**Pallekele**	**40.82**	**257**	LR

H11S3	**WAKE ISLAND Hy**	**43.35**	**85**	T	T	19 15 15.8		
	baz=281,slow=74,SNR=14							
H11S1	**WAKE ISLAND Hy**	**43.36**	**84**	T	T	19 15 15.9		
	baz=281,slow=74,SNR=18							
H11S2	**WAKE ISLAND Hy**	**43.37**	**85**	T	T	19 15 13.8		
	baz=281,slow=74,SNR=14							
KURK	**Kurchatov**	**44.60**	**323**	P	**P**	**18 28 48.4**	**-0.4**	
KURK	**Kurchatov**	**44.60**	**323**	IAmb	IAmb	18 29 00.0		
	comp=Z,20nm,1.8s							
KURBB	**Kurchatov Array**	**44.61**	**323**	P	**P**	**18 28 48.4**	**-0.4**	
	comp=Z,1.6nm,0.9s,baz=123,slow=7.6,SNR=16							
	comp=Z,1.6nm,0.9s							
DRK	**Karamyk**	**45.70**	**306**		**P**	**18 28 56.3**	**-1.7**	
AS31	**Alice Springs**	**45.81**	**163**	P	**P**	**18 28 57.6**	**-1.0**	
ASAR	**Alice Springs**	**45.81**	**163**	P	**P**	**18 28 58.0**	**-0.6**	
	comp=Z,3.9nm,0.9s,baz=334,slow=7.0,SNR=24							
	comp=Z,3.9nm,0.9s							
ASAR	**Alice Springs**	**45.81**	**163**	P	**P**	**18 28 57.2**	**-1.4**	
BTK	**Batken**	**46.54**	**306**	P	**P**	**18 29 04.3**	**-0.1**	
BTK				IAmb	IAmb	18 29 15.5		
	comp=Z,4.6nm,1.1s							
GAR	**Garm**	**46.77**	**305**	P	**P**	**18 29 06.1**	**-0.1**	
KK31	**Karatay Array**	**47.34**	**310**	P	**P**	**18 29 09.0**	**-1.5**	
KK31				IAmb	IAmb	18 29 21.5		
	comp=Z,4.4nm,1.2s							
KKAR	**Karatay Array**	**47.34**	**310**	P	**P**	**18 29 10.7**	**+0.2**	
KKAR	**Karatay Array**	**47.34**	**310**	P	**P**	**18 29 08.8**	**-1.6**	
KKAR				IAmb	IAmb	18 29 21.5		
	comp=Z,4.4nm,1.2s							
KBL	**Kabul**	**47.34**	**298**	P	**P**	**18 29 09.4**	**-1.5**	
KBL				IAmb	IAmb	18 29 20.8		
	comp=Z,4.6nm,1.0s							
BRVK	**Borovoye**	**50.27**	**323**	P	**P**	**18 29 33.3**	**+0.5**	
BRVK				IAmb	IAmb	18 29 45.2		
	comp=Z,3.5nm,0.8s							
KAAM	**Kaadhehdhoo**	**50.62**	**253**	P	**P**	**18 29 36.2**	**+0.3**	
TIXI	**Tiksi**	**51.34**	**3**	P	**P**	**18 29 39.6**	**-0.9**	
NRIK	**Noril'sk**	**52.78**	**346**	P	**P**	**18 29 52.0**	**+0.8**	
NRIK				IAmb	IAmb	18 30 17.4		
	comp=Z,4.6nm,1.0s							
ABKAR	**Akbulak array**	**55.65**	**316**	P	**P**	**18 30 12.0**	**-0.5**	
STKA	**Stephens Creek**	**55.87**	**158**	P	**P**	**18 30 13.0**	**-1.2**	
	comp=Z,1.4nm,0.7s,baz=350,slow=9.7,SNR=3.6							
	comp=Z,1.4nm,0.7s							
STKA	**Stephens Creek**	**55.87**	**158**	P	**P**	**18 30 14.3**	**+0.1**	
ARU	**Artí**	**57.73**	**325**	P	**P**	**18 30 26.7**	**-0.4**	
ARU				IAmb	IAmb	18 30 42.3		
	comp=Z,2.8nm,0.9s							
KBZ	**Khabaz**	**67.38**	**310**	P	**P**	**18 31 31.9**	**0.0**	
	comp=Z,1.6nm,0.9s,baz=195,slow=2.8,SNR=2.6							
	comp=Z,1.6nm,0.9s							
RAYN	**Ar Rayn**	**68.95**	**288**	P	**P**	**18 31 40.2**	**-1.9**	
RAYN				IAmb	IAmb	18 31 51.8		
	comp=Z,4.1nm,1.1s							
MLY	**Manley**	**71.01**	**27**	P	**P**	**18 31 56.8**	**+2.7**	
BPAW	**Bear Paw Mtn.**	**71.03**	**28**	P	**P**	**18 31 53.6**	**-0.5**	
H23K	**Yukon River**	**71.39**	**26**	P	**P**	**18 31 58.0**	**+1.6**	
H23K				IAmb	IAmb	18 32 03.0		
	comp=Z,8.9nm,1.4s							
MDM	**Murphy Dome**	**72.07**	**27**	P	**P**	**18 32 02.0**	**+1.6**	
ILAR	**Eielson Array**	**72.67**	**27**	P	**P**	**18 32 05.3**	**+1.4**	
	comp=Z,0.6nm,0.8s,baz=277,slow=4.9,SNR=4.8							
ILAR				LR	LR	19 06 11.6		
	comp=Z,38nm,19.4s,baz=123,slow=38							
	comp=Z,0.6nm,0.8s							
J26L	**Joseph Creek**	**74.13**	**27**	P	**P**	**18 32 15.6**	**+2.9**	
J26L				IAmb	IAmb	18 32 31.4		
	comp=Z,3.8nm,1.1s							
FINES	**FINESS Array B**	**74.32**	**330**	P	**P**	**18 32 14.9**	**+1.2**	
	comp=Z,0.8nm,0.9s,baz=108,slow=7.6,SNR=1.1							
	comp=Z,0.8nm,0.9s							
M26K	**Nabesna, AK**	**74.91**	**29**	P	**P**	**18 32 18.4**	**+1.2**	
M26K				IAmb	IAmb	18 32 29.2		
	comp=Z,3.4nm,0.8s							
AKASG	**Malin Array Be**	**75.25**	**319**	P	**P**	**18 32 18.6**	**-0.7**	
	comp=Z,0.3nm,0.4s,baz=58,slow=5.5,SNR=0.9							
	comp=Z,0.3nm,0.4s							
L27K	**Beaver Creek,**	**75.25**	**28**	P	**P**	**18 32 20.7**	**+1.5**	
L27K				IAmb	IAmb	18 32 24.0		
	comp=Z,5.2nm,1.0s							
BCAR	**Beaver Creek A**	**75.27**	**28**	P	**P**	**18 32 20.5**	**+1.2**	
DAWY	**Dawson**	**76.00**	**27**	P	**P**	**18 32 25.0**	**+1.6**	
DAWY				IAmb	IAmb	18 32 34.7		
	comp=Z,3.9nm,0.9s							
CTGM	**Chitina Glacie**	**76.07**	**30**	P	**P**	**18 32 25.5**	**+1.5**	
LOGN	**Logan Glacier**	**76.27**	**30**	P	**P**	**18 32 25.7**	**+0.5**	
M30M	**Minto, Yukon**	**77.59**	**28**	P	**P**	**18 32 33.6**	**+1.1**	
HYT	**Haines Junctio**	**77.89**	**29**	P	**P**	**18 32 35.9**	**+1.7**	
M31M	**Drury Creek, Y**	**78.77**	**27**	P	**P**	**18 32 40.3**	**+1.3**	
M31M				IAmb	IAmb	18 34 29.0		
	comp=Z,15nm,1.8s							
HFS	**Hagfors**	**80.48**	**331**	LR	LR	19 11 35.8		
	comp=Z,35nm,18.2s,baz=90,slow=38							
NOA	**NORSAR Array B**	**81.19**	**332**	LR	LR	19 11 47.7		
	comp=Z,34nm,19.0s,baz=85,slow=38							
CLL	**Collm**	**84.64**	**323**	**eP**	**P**	**18 33 11.0**	**+1.0**	
YKA	**Yellowknife Ar**	**86.51**	**22**	P	**P**	**18 33 19.6**	**+0.5**	
	comp=Z,1.2nm,0.9s,baz=311,slow=5.1,SNR=8.6							
	comp=Z,1.2nm,0.9s							
YKA	**Yellowknife Ar**	**86.51**	**22**	P	**P**	**18 33 19.4**	**+0.3**	
DAVOX	**Davos/Dischmat**	**88.55**	**320**	LR	LR	19 14 13.3		
	comp=Z,35nm,18.9s,baz=78,slow=36							
BORG	**Borgarnes**	**90.08**	**345**	LR	LR	19 17 03.6		
	comp=Z,16nm,19.2s,baz=31,slow=38							

INET ***02*** *18:45:41.3±0.7, 12°.73N×88°.99W, h15km±27km, MW3.4*
GCG ***02*** *18:45:50.1±0.5, 12°.78N×89°.72W, h0km±66km, MD3.8*

ISC 02 18:45:40.5±1.7, 12°.79N±0°.06×88°.90W±0.03, h12km±13km, n50, σ0°.47/69, 2C, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JUCU	**Jucuarįn**	**0.79**	**54**	*eP*	**Pn**	**18 45 57.4**	**-0.1**
JUCU				*eS*	**Sn**	**18 46 08.7**	**-0.6**
JUCU	**Jucuarįn**	**0.79**	**54**	*eP*	**Pn**	**18 45 57.4**	**-0.1**
JUCU				*eS*	**Sn**	**18 46 08.7**	**-0.6**
JUCU	**Jucuarįn**	**0.79**	**54**	*eP*	**Pn**	**18 45 57.8**	**+0.2**
COEB	**Comit de Eme**	**0.79**	**27**	*eP*	**Pn**	**18 45 57.7**	**0.0**
COEB	**Comit de Eme**	**0.79**	**27**	*eP*	**Pn**	**18 45 57.7**	**0.0**
COEB	**Comit de Eme**	**0.79**	**27**	*eP*	**Pn**	**18 45 57.9**	**+0.2**
COEG	**Centro de Oper**	**0.83**	**1**	*eP*	**Pn**	**18 45 58.0**	**-0.2**
COEG				*eS*	**Sn**	**18 46 09.2**	**-1.1**
COEG	**Centro de Oper**	**0.83**	**1**	*eP*	**Pn**	**18 45 58.0**	**-0.2**
COEG				*eS*	**Sn**	**18 46 09.2**	**-1.1**
SJTE	**Alcalda de S**	**0.83**	**353**	*eP*	**Pn**	**18 45 58.0**	**-0.2**
SJTE	**Alcalda de S**	**0.83**	**353**	*eP*	**Pn**	**18 45 58.0**	**-0.2**
LFRS	**El Faro**	**0.84**	**349**	*eP*	**Pn**	**18 45 58.1**	**-0.4**
LFRS	**El Faro**	**0.84**	**349**	*eP*	**Pn**	**18 45 58.1**	**-0.4**
PACA	**Pacayal**	**0.88**	**40**	*eP*	**Pn**	**18 45 59.3**	**+0.4**
PACA	**Pacayal**	**0.88**	**40**	*eP*	**Pn**	**18 45 59.3**	**+0.4**
PACA	**Pacayal**	**0.88**	**40**	*eP*	**Pn**	**18 45 59.4**	**+0.4**
PAVA	**Las Pavas**	**0.92**	**358**	*eP*	**Pn**	**18 45 59.6**	**+0.2**
PAVA				*eS*	**Sn**	**18 46 12.3**	**-0.4**
PAVA	**Las Pavas**	**0.92**	**358**	*eP*	**Pn**	**18 45 59.6**	**+0.2**
PAVA				*eS*	**Sn**	**18 46 12.3**	**-0.4**
PAVA	**Las Pavas**	**0.92**	**358**	*eP*	**Pn**	**18 45 59.7**	**+0.2**
SCLA	**Alcaldia de Sa**	**0.92**	**10**	*eP*	**Pn**	**18 46 00.2**	**+0.7**
SCLA				*eS*	**Sn**	**18 46 12.9**	**+0.2**
SCLA	**Alcaldia de Sa**	**0.92**	**10**	*eP*	**Pn**	**18 46 00.2**	**+0.7**
SCLA				*eS*	**Sn**	**18 46 12.9**	**+0.2**
SNET	**Serv Nac Est T**	**0.95**	**340**	*eP*	**Pn**	**18 45 59.9**	**+0.1**
BOQS	**Boqueron**	**1.01**	**339**	*eP*	**Pn**	**18 46 01.0**	**+0.2**
BOQS	**Boqueron**	**1.01**	**339**	*eP*	**Pn**	**18 46 01.0**	**+0.2**
JAYA	**Jayaque - finc**	**1.01**	**328**	*eP*	**Pb**	**18 46 00.9**	**+0.7**
JAYA				*eS*	**Sb**	**18 46 14.0**	**+0.5**
JAYA	**Jayaque - finc**	**1.01**	**328**	*eP*	**Pb**	**18 46 00.9**	**+0.7**
JAYA				*eS*	**Sb**	**18 46 14.0**	**+0.5**
LCND	**La Caada**	**1.11**	**62**	*eP*	**Sn**	**18 46 02.2**	**+0.2**
LCND				*eS*	**Sn**	**18 46 17.0**	**-0.3**
LCND	**La Caada**	**1.11**	**62**	*eP*	**Pn**	**18 46 02.2**	**+0.2**
LCND				*eS*	**Sn**	**18 46 17.0**	**-0.3**
CNCH	**Conchagua**	**1.15**	**65**	*eP*	**Pb**	**18 46 02.5**	**+0.1**
CNCH	**Conchagua**	**1.15**	**65**	*eP*	**Pb**	**18 46 02.5**	**+0.1**
CNCH	**Conchagua**	**1.15**	**65**	*eP*	**Pb**	**18 46 02.6**	**+0.1**
CNCH				*eS*	**Sb**	**18 46 17.9**	**+0.5**
FAGO	**Alcalda de S**	**1.19**	**41**	⇑*iP*	**Pb**	**18 46 03.1**	**0.0**
FAGO				*eS*	**Sn**	**18 46 18.9**	**-0.3**
FAGO	**Alcalda de S**	**1.19**	**41**	⇑*iP*	**Pb**	**18 46 03.1**	**0.0**
FAGO				*eS*	**Sn**	**18 46 18.9**	**-0.3**
FAGO	**Alcalda de S**	**1.19**	**41**	*eP*	**Pb**	**18 46 03.1**	**0.0**
CEVE	**Cerro Verde**	**1.25**	**326**	*eP*	**Pg**	**18 46 04.4**	**-0.3**
CEVE	**Cerro Verde**	**1.25**	**326**	*eP*	**Pg**	**18 46 04.4**	**-0.3**
SBLS	**San Blas**	**1.26**	**326**	*eP*	**Pb**	**18 46 04.6**	**+0.2**
SBLS	**San Blas**	**1.26**	**326**	*eP*	**Pb**	**18 46 04.6**	**+0.2**
RTR	**El Retiro**	**1.32**	**327**	*eP*	**Pb**	**18 46 05.7**	**+0.3**
RTR	**El Retiro**	**1.32**	**327**	*eP*	**Pb**	**18 46 05.7**	**+0.3**
NUBE	**Las Nubes**	**1.40**	**322**	*eP*	**Pn**	**18 46 06.2**	**+0.1**
NUBE				*eS*	**Sb**	**18 46 23.7**	**-0.9**
NUBE	**Las Nubes**	**1.40**	**322**	*eP*	**Pn**	**18 46 06.2**	**+0.1**
NUBE				*eS*	**Sb**	**18 46 23.7**	**-0.9**
CRIN	**San Cristobal**	**1.81**	**93**	*eP*	**Pn**	**18 46 12.4**	**+0.8**
CRIN				*eS*	**Sn**	**18 46 34.6**	**0.0**
TGUH	**Tegucigalpa,Un**	**2.02**	**51**	*eP*	**Pn**	**18 46 15.3**	**+0.7**
TELN	**Telica**	**2.03**	**95**	*eP*	**Pn**	**18 46 14.9**	**+0.2**
CNGN	**Cerro Negro**	**2.17**	**97**	*eP*	**Pn**	**18 46 16.8**	**+0.3**
NBG	**Las Nubes**	**2.27**	**322**	*eS*	**Sb**	**18 46 51.4**	**+1.4**
COPN	**Copaltepe**	**2.33**	**105**	*eP*	**Pn**	**18 46 18.4**	**-0.4**
MOMN	**Momotombo**	**2.34**	**99**	*eP*	**Pn**	**18 46 18.7**	**-0.2**
FUG	**Fuego 3**	**2.51**	**311**	*eP*	**Pb**	**18 46 25.4**	**-0.3**
FUG				*eS*	**Sn**	**18 46 52.6**	**+0.6**
STG3	**Santiaguito 3,**	**3.22**	**307**	*eS*	**Sn**	**18 47 09.2**	**-0.5**

WEL 02 18:52:48.0±0.4, 45°.5S×3°.×16°.9E±°, h5km, M3.9/11, ML4.0/11, MLv3.9/11, Error ellipse: s-maj=0.0km s-min=0.0km az=160.6, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WKZ	**Wanaka**	**0.39**	**222**	P	Pg	18 52 56.5	+0.9
WKZ				S	Sg	18 53 01.7	+1.0
LBZ	**Lake Benmore**	**0.59**	**75**	P	Pb	18 53 00.3	-0.6
LBZ				S	Sg	18 53 07.7	+0.6
JCZ	**Jackson Bay**	**0.64**	**317**	P	Pb	18 53 01.0	-0.7
JCZ				S	Sg	18 53 08.8	+0.3
EAZ	**Earnscleugh**	**0.69**	**185**	P	Pg	18 53 01.8	+0.4
ODZ	**Otahua Downs**	**1.03**	**120**	P	Pg	18 53 07.7	0.0
ODZ				S	Sg	18 53 20.4	-0.6
MSZ	**Milford Sound**	**1.05**	**262**	P	Pg	18 53 08.0	-0.1
MSZ				S	Sb	18 53 22.5	-0.2
FOZ	**Fox Glacier**	**1.05**	**17**	P	Pg	18 53 07.4	-0.8
TMZ	**Timaru**	**1.17**	**83**	P	Pb	18 53 10.8	0.0
TMZ				S	Sb	18 53 26.3	+0.1
MLZ	**Mavora Lakes**	**1.22**	**227**	P	Pg	18 53 11.3	-0.2
MLZ				S	Sg	18 53 26.9	-0.4
GCSZ	**Gaunt Creek Bo**	**1.40**	**29**	P	Pn	18 53 13.3	+0.9
ARCZ	**Arundel**	**1.42**	**66**	P	Pn	18 53 14.1	-0.4
ARCZ				S	Sb	18 53 32.9	-0.4
TUZ	**Tuapeka**	**1.42**	**173**	P	Pn	18 53 14.0	-0.5
RPZ	**Rata Peaks**	**1.46**	**56**	P	Pn	18 53 15.0	-0.1
HHSZ	**Highcliff Hill**	**1.59**	**148**	P	Pn	18 53 17.2	+0.3
WHZ	**Wether Hill Ro**	**1.69**	**216**	P	Pn	18 53 17.9	-0.4
WVZ	**Waitaha Valley**	**1.76**	**34**	P	Pb	18 53 20.4	-0.4
DCZ	**Deep Cove**	**1.83**	**239**	P	Pn	18 53 21.0	+0.9
WACZ	**Wakanui South**	**1.86**	**72**	P	Pn	18 53 20.0	-0.6
SYZ	**Scrubby Hill**	**2.00**	**185**	P	Pn	18 53 21.8	-0.7
RACZ	**Rakaia**	**2.14**	**69**	P	Pb	18 53 26.2	-1.1
OXZ	**Oxford**	**2.27**	**59**	P	Pn	18 53 25.2	-1.0
INZ	**Inchbonnie**	**2.35**	**40**	P	Pn	18 53 27.3	0.0
APZ	**The Paps**	**2.49**	**203**	P	Pn	18 53 28.9	-0.4
MQZ	**McQueen's Vall**	**2.50**	**72**	P	Pn	18 53 28.4	-0.8
AKCZ	**Akaroa Harbour**	**2.62**	**76**	P	Pn	18 53 30.3	-0.7
AMCZ	**Amberley**	**2.72**	**61**	P	Pn	18 53 35.0	-2.2
LTZ	**Lake Taylor**	**2.73**	**51**	P	Pn	18 53 31.9	-0.7
OKCZ	**Okains Bay**	**2.77**	**74**	P	Pn	18 53 32.7	-0.3
GVZ	**Greta Valley S**	**3.08**	**61**	P	Pn	18 53 36.7	-0.6
DSZ	**Denniston Nort**	**3.31**	**33**	P	Pn	18 53 40.0	-0.5
KHZ	**Kahutara**	**3.69**	**56**	P	Pn	18 53 45.5	-0.2
THZ	**Tophouse**	**3.79**	**44**	P	Pn	18 53 46.4	-0.7
MRNZ	**Matariki Terra**	**4.00**	**39**	P	Pn	18 53 52.3	+2.4
QRZ	**Quartz Range**	**4.38**	**33**	P	Pn	18 53 55.0	-0.2
NNZ	**Nelson**	**4.43**	**43**	P	Pn	18 53 57.5	+1.6
TCW	**Tory Channel**	**4.90**	**49**	P	Pb	18 54 08.3	-6.0
DUWZ	**D'Urville Isla**	**5.01**	**43**	P	Pn	18 54 06.6	+2.7
NBEZ	**Newall Road No**	**6.24**	**34**	P	Pn	18 54 22.3	+1.6
KHEZ	**Kahui Hut**	**6.28**	**35**	P	Pn	18 54 23.1	+1.8
PREZ	**Palmer Road**	**6.30**	**36**	P	Pn	18 54 23.9	+2.4
NEZ	**North Egmont**	**6.33**	**35**	P	Pn	18 54 24.7	+2.7
PKE	**Pukeiti**	**6.35**	**34**	P	Pn	18 54 25.1	+2.8

IDC 02 19:14:56.6±4.0, 46°.88N×149°.88E, h117km±56km, mb2.9/1, mbtmp3.4/4, Error ellipse: s-maj=116.6km s-min=27.6km az=144.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAJ	**Asahikawa**	**5.82**	**244**	P	Pn	19 16 20.6	+0.1
	9.5nm,0.9s,baz=72,slow=16,SNR=6.2						
PETK	**Petropavlovsk-**	**9.01**	**36**	P	Pn	19 16 50.0	0.0
	1.2nm,0.5s,baz=219,slow=11,SNR=1.6						
KSRS	**Korea Array**	**18.75**	**248**	P	P	19 19 06.5	+0.2
	1.1nm,0.8s,baz=59,slow=11,SNR=5.8						
H11N2	**WAKE ISLAND Hy**	**30.45**	**147**	T	T	19 51 52.2	
	baz=340,slow=76,SNR=177						
H11N1	**WAKE ISLAND Hy**	**30.46**	**147**	T	T	19 51 53.1	
	baz=340,slow=76,SNR=148						
H11N3	**WAKE ISLAND Hy**	**30.47**	**147**	T	T	19 51 53.4	
	baz=340,slow=76,SNR=96						
H11S1	**WAKE ISLAND Hy**	**31.50**	**148**	T	T	19 53 11.2	
	baz=340,slow=76,SNR=128						
H11S3	**WAKE ISLAND Hy**	**31.51**	**148**	T	T	19 53 12.5	
	baz=340,slow=76,SNR=119						
H11S2	**WAKE ISLAND Hy**	**31.52**	**148**	T	T	19 53 12.6	
	baz=340,slow=76,SNR=115						
ASAR	**Alice Springs**	**71.69**	**195**	P	P	19 26 05.7	+0.1
	0.2nm,0.8s,baz=20,slow=6.9,SNR=1.9						
	0.2nm,0.8s						

IDC 02 19:15:17.1±2.8, 8°.42S×149°.20E, h0km, mb3.5/2, mbtmp3.5/3, ML1.2/1, Error ellipse: s-maj=58.7km s-min=39.8km az=151.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**2.25**	**244**	Pn	Pn	19 15 56.1	+0.6
	6.6nm,0.3s,baz=57,slow=6.2,SNR=23						
PMG				Sn	Sn	19 16 23.9	-0.1
	26nm,0.3s,baz=173,slow=22,SNR=12						
	30nm,0.5s						
KRVT	**Keravat (AS076**	**4.95**	**35**	Sn	Sn	19 17 24.1	-6.7
	14nm,0.3s,baz=137,slow=18,SNR=9.6						
ASAR	**Alice Springs**	**21.09**	**222**	P	P	19 20 03.0	-0.3
	0.7nm,0.7s,baz=58,slow=8.6,SNR=16						
	0.7nm,0.7s						
STKA	**Stephens Creek**	**24.39**	**196**	P	P	19 20 37.3	+0.1
	1.9nm,0.8s,baz=7.5,slow=12,SNR=5.8						
	1.9nm,0.8s						
TORD	**Torodi Ar. Bea**	**147.75**	**281**	PKPbc	PKPbc	19 35 04.3	-0.7
	0.3nm,0.5s,baz=56,slow=2.5,SNR=2.8						

IDC ***02*** *19:17:03.9±0.6, 40°.39N×71°.69E, h0km, mb4.0/24, mbtmp4.0/31, ML3.3/7, MS3.2/6, Error ellipse: s-maj=12.7km s-min=8.6km az=163.0*
MOS ***02*** *19:17:06.9±1.2, 40°.34N×71°.59E, h29km, mb4.3/10, Error ellipse: s-maj=5.8km s-min=3.6km az=55.7*
KRNET ***02*** *19:17:06.9±0.1, 40°.54N×71°.69E, h17km, mb4.4*
SOME ***02*** *19:17:06.0, 40°.60N×71°.70E, h5km, MS3.6*
ISU ***02*** *19:17:07.1, 40°.37N×71°.74E, h16km*
NNC ***02*** *19:17:09.8±1.9, 40°.59N×71°.70E, h0km, mb4.6, mpv4.3, Error ellipse: s-maj=16.6km s-min=7.4km az=8.0*
NEIC ***02*** *19:17:09.2±1.8, 40°.54N±0°.06×71°.54E±0°.07, h27km±5km, mb4.3/32, Error ellipse: s-maj=10.4km s-min=6.1km az=140.0*
BJI ***02*** *19:17:09.0±0.0, 40°.40N×71°.50E, h30km, mb4.1/15, mB4.6/8, ML3.8/3, Ms3.8/3, Ms7 3.7/3*

ISC 02 19:17:07.3±0.5, 40°.47N±0°.02×71°.57E±0°.01, h17km±3km, n311, σ2°.17/375, mb4.2/41, MS3.1/5, 36C-33D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FRG	**Fergana**	**0.19**	**120**	P	**Pg**	**19 17 12.5**	**+0.4**
FRG				S	**Sg**	**19 17 14.9**	**-0.4**
CHMI	**Chimion**	**0.20**	**190**	P	**Pb**	**19 17 14.1**	**+1.5**
CHMI				S	**Sb**	**19 17 17.7**	**+1.5**
MINT	**Mingtut**	**0.45**	**270**	P	**Pn**	**19 17 19.2**	**+0.1**
MINT				S	**Sn**	**19 17 27.5**	**+0.7**
NAM	**Namangan**	**0.53**	**7**	P	**Pg**	**19 17 18.3**	**+0.4**
NAM				S	**Sb**	**19 17 26.8**	**+1.4**
ANR	**Andizhan**	**0.67**	**64**	P	**Pg**	**19 17 20.0**	**-0.5**
ANR				S	**Sg**	**19 17 29.7**	**+0.4**
TSTA	**Tashata**	**0.70**	**81**	P	**Pb**	**19 17 19.4**	**-1.7**
TSTA				S	**Sg**	**19 17 28.3**	**-2.1**
BTK	**Batken**	**0.71**	**235**	⇑*iP*	**Pn**	**19 17 22.4**	**-0.2**
	baz=34						
BTK				⇑*iS*	**Sn**	**19 17 33.9**	**+0.7**
	baz=34						
BTK	**Batken**	**0.71**	**235**	Pn	**Pn**	**19 17 22.6**	**0.0**
BTK				Sn	**Sn**	**19 17 33.8**	**+0.6**
BTK	**Batken**	**0.71**	**235**	PG	**Pn**	**19 17 22.6**	**0.0**
BTK						19 17 33.8	
BTK	**Batken**	**0.71**	**235**	P	**Pn**	**19 17 22.8**	**+0.2**
BTK				S	**Sn**	**19 17 33.4**	**+0.2**
OHH	**Osh**	**0.93**	**86**	⇑*iP*	**Pb**	**19 17 22.7**	**-2.3**
	baz=91						
OHH				⇑*iS*	**Sb**	**19 17 34.4**	**-2.7**
	baz=91						
OHH	**Osh**	**0.93**	**86**	*i* PG	**Pb**	**19 17 22.7**	**-2.3**
OHH				*i* S	**Sb**	**19 17 34.4**	**-2.7**
OHH	**Osh**	**0.93**	**86**	P	**Pb**	**19 17 22.9**	**-2.1**
OHH				S	**Sb**	**19 17 33.9**	**-3.2**
DRK	**Karamyk**	**1.00**	**170**	⇓*iP*	**Pn**	**19 17 27.1**	**+0.2**
	baz=75						
DRK				⇓*iS*	**Sn**	**19 17 42.0**	**+1.2**
	baz=75						
TRKS	**Terek-Say**	**1.11**	**343**	⇓*iP*	**Pb**	**19 17 26.4**	**-1.7**
	baz=37						
TRKS				⇓*iS*	**Sb**	**19 17 40.5**	**-1.9**
	baz=37						
ARK	**Arkit**	**1.36**	**12**	⇓*iP*	**Pn**	**19 17 31.1**	**-0.5**
	baz=9.0						
ARK				⇓*iS*	**Sn**	**19 17 48.9**	**-0.4**
	baz=9.0						
YBZ	**Yangibazar**	**1.72**	**300**	P	**Pg**	**19 17 40.5**	**+0.1**
YBZ				S	**Sg**	**19 18 06.0**	**+3.2**
GAR	**Garm**	**1.76**	**214**	⇓*iP*	**Pg**	**19 17 41.2**	**+0.1**
	baz=15						
GAR				⇓*iS*	**Sg**	**19 18 06.6**	**+2.6**
	baz=15						
GAR	**Garm**	**1.76**	**214**		**Pg**	**19 17 41.4**	**+0.3**
GAR	**Garm**	**1.76**	**214**	*i* PN	**Pg**	**19 17 41.2**	**+0.1**
GAR				*i* S	**Sg**	**19 18 06.6**	**+2.6**
TAS	**Tashkent**	**1.92**	**297**	⇓*iP*	**Pg**	**19 17 43.1**	**-1.2**
	baz=94						
TAS				⇓*iS*	**Sg**	**19 18 09.5**	**+0.2**
	baz=94						
TAS	**Tashkent**	**1.92**	**297**		**Pg**	**19 17 42.7**	**-1.6**
TAS	**Tashkent**	**1.92**	**297**	PN	**Pg**	**19 17 42.7**	**-1.6**
TAS	**Tashkent**	**1.92**	**297**	P	**Pg**	**19 17 44.2**	**-0.1**
TAS				S	**Sg**	**19 18 12.7**	**+3.4**
NZBK	**Nazarbek**	**2.01**	**293**	P	**Pg**	**19 17 46.6**	**+0.7**
NZBK				S	**Sg**	**19 18 15.6**	**+3.7**
IUG	**luzhnay**	**2.04**	**326**	*e*PN	**Pb**	**19 17 43.7**	**-0.2**
IUG	**luzhnay**	**2.04**	**326**	*e*P	**Pg**	**19 17 45.8**	**-0.7**
	39µm,0.6s						
IUG				*e*S	**Sg**	**19 18 13.3**	**+0.3**
	3µm,0.4s						
IUG	**luzhnay**	**2.04**	**326**	*e*Pg	**Pb**	**19 17 43.8**	**-0.2**
	baz=324						
IUG				*e*Lg	Lg	19 18 13.3	
	baz=324						
IUG	**luzhnay**	**2.04**	**326**	P	**Pg**	**19 17 46.2**	**-0.3**
	39µm,0.6s						
IUG				S	**Sb**	**19 18 09.2**	**+0.1**
	3µm,0.4s						
AML	**Almayashu**	**2.31**	**43**	P	**Pn**	**19 17 46.1**	**+1.3**
	SNR=71

KBK Karagaybulak 3.35 48 P Pn 19 18 01.4 +2.4
SNR=40
KBK Karagaybulak 3.35 48⇓ *e*P Pn 19 18 01.0 +2.0
baz=48
KBK ⇓ *i*S Sn 19 18 40.2 +1.8
baz=48
KBK Karagaybulak 3.35 48 *i* PN Pn 19 18 01.0 +2.0
KBK *i* S Sn 19 18 40.2 +1.8
CHMS Chumysh 3.47 42 P Pn 19 18 02.5 +1.9
SNR=25
CHMS Chumysh 3.47 42⇓ *i*P Pn 19 18 02.4 +1.8
baz=42
CHMS ⇓ *i*S Sn 19 18 42.9 +1.6
baz=42
CHMS Chumysh 3.47 42 *i* PN Pn 19 18 02.4 +1.8
CHMS *i* S Sn 19 18 42.9 +1.6
KSH Kashi 3.51 104 Pn Pn 19 18 01.8 +0.5
KSH Sn Sn 19 18 41.4 -1.1
KSH smax smax
comp=N,320nm,0.6s
KSH smax smax
comp=E,330nm,0.8s
USP Ospenovka 3.55 37 P Pn 19 18 03.3 +1.6
SNR=74
USP Ospenovka 3.55 37⇑ *i*P Pn 19 18 03.2 +1.6
baz=37
USP ⇑ *i*S Sn 19 18 44.9 +1.7
baz=37
USP Ospenovka 3.55 37 *i* PN Pn 19 18 03.2 +1.6
USP *i* S Sn 19 18 44.9 +1.7
SAM Samarkand 3.60 259 P Pb 19 18 05.8 -4.8
SGDS Sogindy 3.75 36 *e*PN Pn 19 18 05.9 +1.5
SGDS *e* 19 18 16.4
SGDS Sogindy 3.75 36 *e*P Pb 19 18 13.1 -0.1
24nm,0.2s
SGDS *e*S Sb 19 19 01.9 +3.5
202nm,0.4s
SGDS Sogindy 3.75 36 *e*Pn Pn 19 18 06.0 +1.5
baz=37
SGDS *e*Pg Pb 19 18 16.4 +3.3
baz=37
SGDS *e*Lg Lg 19 19 03.0
baz=37
SGDS Sogindy 3.75 36 Pg Pb 19 18 15.9 +2.7
24nm,0.2s
SGDS Lg Lg 19 18 59.0
202nm,0.4s
KTAB Kitab 3.85 251 P Pn 19 18 09.0 +3.2
BOOM Boomskoye usch 3.85 57⇓ *i*P Pn 19 18 08.0 +2.0
baz=57
BOOM ⇓ *i*S Sn 19 18 52.6 +1.7
baz=57
BOOM Boomskoye usch 3.85 57 Pn Pn 19 18 07.4 +1.4
BOOM Boomskoye usch 3.85 57 PN Pn 19 18 07.4 +1.4
TKM2 Tokmak 2 3.88 50 P Pn 19 18 08.4 +1.9
SNR=76
TKM2 Tokmak 2 3.88 50⇑ *i*P Pn 19 18 08.3 +1.9
baz=50
TKM2 ⇑ *i*S Sn 19 18 53.3 +1.6
baz=50
TKM2 Tokmak 2 3.88 50 *i* PN Pn 19 18 08.3 +1.9
TKM2 *i* S Sn 19 18 53.3 +1.6
TKM2 Tokmak 2 3.88 50⇑ Pn Pn 19 18 08.1 +1.7
59nm,0.5s
TKM2 ⇑Lg Lg 19 19 06.5
128nm,0.5s
ULHL Ulahol 3.94 62 P Pn 19 18 08.9 +1.7
SNR=27
ULHL Ulahol 3.94 62⇑ *i*P Pn 19 18 08.4 +1.2
baz=62
ULHL ⇑ *i*S Sn 19 18 54.6 +1.5
baz=62
ULHL Ulahol 3.94 62 *i* PN Pn 19 18 08.4 +1.2
ULHL *i* S Sn 19 18 54.6 +1.5
KST Kastek 4.17 51 *e*P Pb 19 18 21.9 +1.6
37nm,0.4s
KST *e*S Sb 19 19 16.1 +5.6
367nm,0.6s
KST Kastek 4.17 51 Pg Pg 19 18 25.6 -1.6
37nm,0.4s
KST Lg Lg 19 19 16.1
367nm,0.6s
PKMR Pachkamar 4.45 246 P Pn 19 18 17.3 +3.3
MTBS Maitube 4.50 52 *e*P Pb 19 18 27.6 +1.7
14nm,0.4s
MTBS *e*S Sb 19 19 26.0 +6.1
115nm,0.4s
MTBS Maitube 4.50 52 Pg Pg 19 18 31.4 -2.2
21nm,0.3s
MTBS Lg Lg 19 19 26.0
115nm,0.4s
KDJ Kajisay 4.54 67⇓ *i*P Pn 19 18 17.2 +1.8
baz=67
KDJ ⇓ *i*S Sn 19 19 09.2 +1.3
baz=67
KDJ Kajisay 4.54 67 Pn 19 18 16.2 +0.9
KDJ Kajisay 4.54 67 PN Pn 19 18 16.3 +0.9
TNSS Tian-Shan 4.77 56 *e*PN Pn 19 18 20.9 +2.1
TNSS *e* 19 18 33.7
TNSS Tian-Shan 4.77 56 *e*P Pb 19 18 32.1 +1.4
19nm,0.4s
TNSS *e*S Sb 19 19 34.2 +6.3
60nm,0.6s
TNSS Tian-Shan 4.77 56 *e*Pn Pn 19 18 20.9 +2.1
baz=56
TNSS *e*Pg Pb 19 18 33.8 +3.1
baz=56
TNSS *e*Lg Lg 19 19 37.3
baz=56
TNSS Tian-Shan 4.77 56 Pg Pg 19 18 36.3 -2.4
13nm,0.4s
TNSS Lg Lg 19 19 34.2
60nm,0.6s
AAA Alma-Ata 4.84 54 *e*PN Pn 19 18 21.4 +2.0
AAA Alma-Ata 4.84 54 *e*P Pb 19 18 32.9 +1.2
40nm,0.2s
AAA *e*S Sb 19 19 36.3 +6.7
266nm,0.5s
AAA Alma-Ata 4.84 54 *e*Pn Pn 19 18 21.4 +2.0
baz=54
AAA *e*Lg Lg 19 19 39.3
baz=54
AAA Alma-Ata 4.84 54 Pg Pg 19 18 37.2 -2.8
40nm,0.2s
AAA Lg Lg 19 19 36.3
266nm,0.5s
KNDC Almaty 4.88 54 PN Pn 19 18 22.4 +2.5
KNDC 19 19 38.0
KNDC Almaty 4.88 54 ⇑Pn Pn 19 18 22.4 +2.5
49nm,0.5s
KNDC ⇓Lg Lg 19 19 38.0
238nm,0.6s
MDOK Medeo 4.90 55 *e*PN Pn 19 18 21.4 +1.1
MDOK Medeo 4.90 55 *e*P Pb 19 18 34.0 +1.2
17nm,0.4s
MDOK *e*S Sb 19 19 38.6 +7.2
132nm,0.8s
MDOK Medeo 4.90 55 *e*Pn Pn 19 18 21.5 +1.1
baz=55
MDOK *e*Lg Lg 19 19 42.6
baz=55
MDOK Medeo 4.90 55 ⇑Pn Pn 19 18 22.5 +2.2
37nm,0.6s
MDOK Pg Pg 19 18 38.7 -2.4
14nm,0.4s
MDOK ⇑Lg Lg 19 19 38.5
142nm,0.7s
MDOK Lg Lg 19 19 38.6
132nm,0.8s
BTLS Baital 4.92 21 *e*PN Pn 19 18 21.3 +0.9
BTLS *e* 19 18 36.8
BTLS Baital 4.92 21 *e*P Pb 19 18 33.9 +0.9
41nm,0.6s
BTLS *e*S Sb 19 19 37.6 +5.9
211nm,0.5s
BTLS Baital 4.92 21 *e*Pn Pn 19 18 21.3 +0.9
baz=21
BTLS *e*Pg Pb 19 18 36.9 +3.9
baz=21
BTLS *e*Lg Lg 19 19 40.9
baz=21
BTLS Baital 4.92 21 Pg Pg 19 18 38.0 -3.5
41nm,0.6s
BTLS Lg Lg 19 19 37.6
211nm,0.5s
KUU Kurty 4.92 44 *e*PN Pn 19 18 21.4 +0.9
KUU *e* 19 18 35.9

KUU Kurty 4.92 44 *e*P Pb 19 18 34.0 +0.9
9.8nm,0.3s
KUU *e*S Sb 19 19 38.3 +6.3
126nm,0.6s
KUU Kurty 4.92 44 *e*Pn Pn 19 18 21.4 +0.9
baz=45
KUU *e*Pg Pb 19 18 36.0 +2.9
baz=45
KUU *e*Lg Lg 19 19 40.0
baz=45
KUU Kurty 4.92 44 Pg Pg 19 18 38.5 -3.1
9.8nm,0.3s
KUU Lg Lg 19 19 38.3
126nm,0.6s
ANVS Anan'yevo 5.12 61⇓ *i*P Pn 19 18 25.4 +2.0
baz=61
ANVS ⇓ *i*S Sn 19 19 23.0 +0.8
baz=61
CHKK Chushkaly 5.26 48 *e*PN Pn 19 18 26.1 +1.0
CHKK Chushkaly 5.26 48 *e*P Pb 19 18 39.5 +0.8
8.6nm,0.3s
CHKK *e*S Sb 19 19 48.5 +6.9
138nm,0.5s
CHKK Chushkaly 5.26 48 *e*Pn Pn 19 18 26.1 +1.0
baz=49
CHKK *e*Lg Lg 19 19 49.4
baz=49
CHKK Chushkaly 5.26 48 Pg Pg 19 18 44.4 -3.6
8.6nm,0.3s
CHKK Lg Lg 19 19 48.5
138nm,0.5s
PRZ Przheval'sk 5.51 66⇑ *i*P Pn 19 18 30.7 +2.0
baz=67
PRZ ⇑ *i*S Sn 19 19 32.0 +0.2
baz=67
PRZ Przheval'sk 5.51 66 *i* PN Pn 19 18 30.7 +2.0
SATY Saty 5.73 61 *e*PN Pn 19 18 32.6 +1.0
SATY *e* 19 18 51.0
SATY Saty 5.73 61 *e*P Pb 19 18 48.6 +1.7
5.2nm,0.3s
SATY *e*S Sb 19 20 03.5 +8.2
60nm,1.0s
SATY Saty 5.73 61 *e*Pn Pn 19 18 32.7 +1.0
baz=61
SATY *e*Pg Pb 19 18 51.0 +4.2
baz=61
SATY *e*Lg Lg 19 20 08.0
baz=61
SATY Saty 5.73 61 Pg Pg 19 18 53.3 -3.7
5.2nm,0.3s
SATY Lg Lg 19 20 03.5
60nm,1.0s
KURS Kuram 5.77 56 *e*P Pb 19 18 52.2 +4.7
14nm,0.7s
KURS *e*S Sg 19 20 09.5 -2.9
55nm,1.0s
KURS Kuram 5.77 56 Pg Pg 19 18 56.8 -1.0
14nm,0.7s
KURS Lg Lg 19 20 09.5
55nm,1.0s
KPKS Kokpek 6.09 58 *e*PN Pn 19 18 38.2 +1.7
KPKS *e* 19 18 57.4
KPKS Kokpek 6.09 58 *e*P Pb 19 18 56.4 +3.4
12nm,0.4s
KPKS *e*S Sg 19 20 15.8 -6.9
90nm,0.8s
KPKS Kokpek 6.09 58 *e*Pn Pn 19 18 38.3 +1.7
baz=59
KPKS *e*Pg Pb 19 18 57.4 +4.4
baz=59
KPKS *e*Lg Lg 19 20 18.2
baz=59
KPKS Kokpek 6.09 58 Pg Pg 19 19 00.4 -3.5
12nm,0.4s
KPKS Lg Lg 19 20 15.8
90nm,0.8s
UZB Uzynbulak 6.18 62 *e*PN Pn 19 18 38.0 +0.2
UZB *e* 19 19 01.2
UZB Uzynbulak 6.18 62 *e*Pn Pn 19 18 38.0 +0.2
baz=62
UZB *e*Pg Pg 19 19 01.2 -4.3
baz=62
UZB *e*Lg Lg 19 20 20.1
baz=62
KBL Kabul 6.25 200 Pn 19 18 41.0 +2.1
KBL Kabul 6.25 200 PN Pn 19 18 41.1 +2.1
BLB Baldybastay 6.28 52 *e*P Pb 19 18 59.1 +2.9
24nm,0.6s
BLB *e*S Sb 19 20 20.5 +10
76nm,0.7s
BLB Baldybastay 6.28 52 Pg Pg 19 19 03.3 -4.1
24nm,0.6s
BLB Lg Lg 19 20 20.5
76nm,0.7s
SHLS Shalkode 6.48 63 *e*PN Pn 19 18 46.7 +4.8
SHLS *e* 19 19 11.6
SHLS Shalkode 6.48 63 *e*P Pg 19 19 06.9 -4.4
7.1nm,0.6s
SHLS *e*S Sg 19 20 34.0 -1.1
31nm,0.7s
SHLS Shalkode 6.48 63 *e*Pn Pn 19 18 46.8 +4.8
baz=64
SHLS *e*Pg Pg 19 19 11.6 +0.3
baz=64
SHLS *e*Lg Lg 19 20 38.6
baz=64
SHLS Shalkode 6.48 63 Pg Pg 19 19 11.2 -0.1
7.1nm,0.6s
SHLS Lg Lg 19 20 34.0
31nm,0.7s
PDGK Podgornoye 6.56 62 PN Pn 19 18 43.4 +0.3
PDGK 19 20 28.9
PDGK Podgornoye 6.56 62 Pg Pg 19 19 08.5 -4.4
3.3nm,0.8s
PDGK Lg Lg 19 20 29.6
22nm,0.7s
PDGK Podgornoye 6.56 62 ⇓Pn Pn 19 18 43.5 +0.3
3.0nm,0.7s
PDGK ⇓Lg Lg 19 20 28.9
41nm,0.8s
CEP Cherat 6.64 178 P Pn 19 18 47.8 +3.6
CEP S Sn 19 20 05.0 +5.4
TDK Taldyqorghan 6.77 46 *e*PN Pn 19 18 46.6 +0.7
TDK Taldyqorghan 6.77 46 *e*P Pb 19 19 07.5 +3.0
27nm,0.4s
TDK *e*S Sb 19 20 34.4 +9.4
207nm,0.5s
TDK Taldyqorghan 6.77 46 *e*Pn Pn 19 18 46.6 +0.7
baz=46
TDK *e*Lg Lg 19 20 39.1
baz=46
TDK Taldyqorghan 6.77 46 Pg Pb 19 19 11.4 +6.9
27nm,0.4s
TDK Lg Lg 19 20 34.4
207nm,0.5s
CHCP Chirah Chowk 6.93 168 P Pn 19 18 52.4 +4.2
DJR Jarkent 7.20 55 *e*P Pb 19 19 16.0 +4.1
3.7nm,0.3s
DJR *e*S Sg 19 20 49.9 -8.5
31nm,1.2s
DJR Jarkent 7.20 55 Pg Pg 19 19 20.2 -5.0
3.7nm,0.3s
DJR Lg Lg 19 20 49.8
31nm,1.2s
KAPS Kapalarasan 7.47 47 *e*P Pb 19 19 18.3 +1.8
3.5nm,0.7s
KAPS *e*S Sb 19 20 53.2 +7.9
36nm,1.1s
KAPS Kapalarasan 7.47 47 Pg Pb 19 19 22.2 +5.7
3.5nm,0.7s
KAPS Lg Lg 19 20 53.2
36nm,1.1s
THW Thamme Wali 7.66 179 P Pn 19 19 01.7 +3.5
OTUK Ortayu 7.79 4 P Pn 19 19 00.6 +0.7
OTUK Ortayu 7.79 4 ⇑Pn Pn 19 19 00.7 +0.7
1.4nm,0.5s
OTUK ⇑Lg Lg 19 21 11.2
124nm,0.8s
HRA Herat 9.58 234 Pn Pn 19 19 25.0 +0.4
MAKZ Makanchi 9.85 47 Pn Pn 19 19 28.0 0.0
MAKZ Makanchi 9.85 47 P Pn 19 19 28.0 0.0
MK31 Makanchi Array 10.01 47 Pn 19 19 30.7 +0.4
MK31 Makanchi Array 10.01 47 *d* iP Pn 19 19 31.0 +0.7
MK31 Makanchi Array 10.01 47 Pn Pn 19 19 30.4 +0.1
2.1nm,0.5s,baz=230,slow=14,SNR=42
MK31 ⇓Lg Lg 19 22 21.4
6.3nm,0.5s

MKAR Makanchi Array 10.01 47 Pn Pn 19 19 30.2 -0.2
0.5nm,0.3s,baz=234,slow=14,SNR=44
MKAR Lg Lg 19 22 17.7
0.7nm,0.3s,baz=238,slow=26,SNR=3.6
MKAR LR LR 19 23 29.8
comp=Z,81nm,18.3s,baz=211,slow=39
3.6nm,0.6s
MKAR Makanchi Array 10.01 47 Pn Pn 19 19 30.6 +0.3
MKAR Makanchi Array 10.01 47 *i* P Pn 19 19 30.7 +0.3
MKAR pmax pmax
comp=Z,4.0nm,0.6s
GEYT Alibeck 10.74 261 Pn Pn 19 19 40.4 0.0
comp=Z,0.5nm,0.3s,baz=108,slow=4.8,SNR=5.5
comp=Z,2.4nm,0.5s
GEYT Alibeck 10.74 261 Pn Pn 19 19 40.8 +0.4
GYA0 ALIBECK ARRAY 10.74 261 P Pn 19 19 39.9 -0.5
GYA0B ALIBECK ARRAY 10.74 261 Pn Pn 19 19 41.0 +0.6
GYA0B ALIBECK ARRAY 10.74 261 ⇑Pn Pn 19 19 39.9 -0.5
KURBB Kurchatov Arra 11.26 23 Pn Pn 19 19 45.8 -1.5
comp=Z,0.2nm,0.3s,baz=216,slow=13,SNR=26
KURBB Lg Lg 19 22 58.6
comp=Z,0.3nm,0.3s,baz=205,slow=32,SNR=6.0
comp=Z,1.5nm,0.6s
KURBB Kurchatov Arra 11.26 23 P Pn 19 19 45.5 -1.8
KURBB Kurchatov Arra 11.26 23 ⇓Pn Pn 19 19 45.5 -1.8
comp=Z,3.6nm,0.5s
KURBB ⇑Lg Lg 19 23 00.1
comp=Z,78nm,0.7s
KURK Kurchatov 11.37 23 Pn 19 19 46.2 -2.5
KURK Kurchatov 11.37 23 P Pn 19 19 46.3 -2.5
SEM Semipalatinsk 11.65 29 *e*P Pn 19 19 54.7 +1.8
SEM Semipalatinsk 11.65 29 *e*Pn Pn 19 19 54.8 +1.8
baz=29
SEM *e*Lg Lg 19 23 12.7
baz=29
AB31 Akbulak array 12.04 321 P Pn 19 19 56.8 -1.2
AB31 Akbulak array 12.04 321 Pn Pn 19 19 56.8 -1.2
comp=Z,1.1nm,0.3s,baz=128,slow=13,SNR=97
ABKAR Akbulak array 12.04 321 Pn 19 19 56.6 -1.3
ABKAR Akbulak array 12.04 321 Pn 19 19 56.8 -1.2
WMQ Urumqi 12.43 69 *e*P Pn 19 20 08.4 +5.0
WMQ pP P 19 20 12.1 -3.2
WMQ sP 19 20 14.7
WMQ pmax pmax
comp=Z,19nm,0.7s
BRVK Borovoye 12.62 356 Pn Pn 19 20 04.7 -1.2
BRVK Borovoye 12.62 356⇑ *e*P Pn 19 20 08.5 +2.5
BRVK Borovoye 12.62 356 ⇑Pn Pn 19 20 04.7 -1.2
comp=Z,2.6nm,0.8s
AKTO Aktyubinsk 13.75 321 Pn Pn 19 20 20.7 -0.7
comp=Z,0.5nm,0.3s,baz=129,slow=15,SNR=5.3
AKTO Sn Sn 19 22 48.9 -4.7
comp=Z,0.6nm,0.3s,baz=155,slow=22,SNR=2.5
AKTO Lg Lg 19 24 29.6
comp=Z,0.4nm,0.3s,baz=72,slow=20,SNR=1.4
AKTO LR LR 19 26 22.4
comp=Z,52nm,18.6s,baz=147,slow=40
comp=Z,0.9nm,0.3s
AKTO Aktyubinsk 13.75 321 ⇓Pn Pn 19 20 20.8 -0.6
comp=Z,3.4nm,0.4s
PYUN Piuthan 15.52 139 *e*P Pn 19 20 42.6 -2.9
DANN Dangsing 15.71 137 *e*P Pn 19 20 44.4 -3.7
KOLN Koldanda 16.09 138 *e*P Pn 19 20 50.8 -2.2
ZAA0 Zalesovo Array 16.17 29 Pn Pn 19 20 53.3 -0.3
ZALV Zalesovo Beam 16.17 29 Pn Pn 19 20 52.1 -1.5
comp=Z,0.3nm,0.3s,baz=210,slow=9.3,SNR=9.5
ZALV Sn Sn 19 23 57.4 +5.0
comp=Z,0.2nm,0.3s,baz=215,slow=19,SNR=1.9
ZALV Lg Lg 19 25 33.8
baz=221,slow=22
comp=Z,3.0nm,0.4s
ZALV Zalesovo Beam 16.17 29 *e*P P 19 20 56.3 -0.4
ZALV pmax pmax
comp=Z,1.0nm,0.3s
GKN Gorkha 16.45 135 *e*P Pn 19 20 53.6 -3.9
KKN Kakani 16.97 134 *e*P Pn 19 21 01.3 -2.8
PKIN Phulchoki 17.20 134 *e*P Pn 19 21 04.0 -3.0
GUN Gumba 17.21 132 *e*P Pn 19 21 03.7 -3.5
comp=Z,7.2nm,0.3s
PKI Pulchoki 17.21 134 *e*P Pn 19 21 04.2 -3.0
comp=Z,7.8nm,0.2s
JIRN Jiri 17.57 132 *e*P Pn 19 21 07.9 -3.9
comp=Z,11nm,0.3s
LKRN Lenkeran, Azer 17.65 272 P Pn 19 21 12.1 -0.2
ARU Arti 18.10 336 P Pn 19 21 17.3 -0.4
baz=167,slow=16,SNR=4.6
ARU Lg Lg 19 26 38.6
baz=160,slow=23,SNR=2.0
ARU LR LR 19 28 49.2
comp=Z,66nm,19.4s,baz=140,slow=39
comp=Z,1.1nm,0.3s
ARU Arti 18.10 336 Pn 19 21 16.9 -0.8
ARU Arti 18.10 336 *c* iP Pn 19 21 17.5 -0.2
ARU S Sn 19 24 40.7 +1.6
ARU pmax pmax
comp=Z,6.0nm,1.0s
RAMN Ramite 18.35 133 *e*P P 19 21 18.4 -2.9
comp=Z,9.5nm,0.4s
SEKA Sheki 18.45 280 P P 19 21 20.3 -1.7
MNGR Mingechevir, A 18.58 279 P P 19 21 22.7 -0.7
TAPN Taplejung 18.69 129 *e*P P 19 21 23.0 -2.0
GOMU GeErMu 18.71 96 P P 19 21 22.6 -2.7
GOMU sP pP 19 21 31.3 +1.0
GOMU pmax pmax
comp=Z,4.0nm,0.8s
ODAN Odare 18.87 131 *e*P P 19 21 25.3 -1.7
GANJ Ganja 19.17 279 P P 19 21 29.2 -0.8
NAX Nakhchivan 20.05 275 P P 19 21 38.9 -0.7
BELG Belogornoye 20.25 314 P P 19 21 41.0 -0.6
comp=Z,8.0nm,0.7s,baz=328,slow=22,SNR=2.2
comp=Z,8.0nm,0.7s
GNI Garni 20.44 278 P Pn 19 21 44.5 -1.6
comp=Z,4.2nm,0.7s,baz=175,slow=15,SNR=2.2
comp=Z,4.2nm,0.7s
GNI Garni 20.44 278 P Pn 19 21 44.6 -1.5
GNI IAmb IAmb 19 21 55.6
comp=Z,9.7nm,0.8s
GNI Garni 20.44 278⇑ *e*P Pn 19 21 46.0 -0.1
GNI pmax pmax
comp=Z,9.0nm,0.7s
ZEI Tsey 20.78 286 *e*P Pn 19 21 50.0 -0.1
ZEI pmax pmax
comp=Z,5.0nm,0.7s
KBZ Khabaz 21.48 288 P P 19 21 55.1 +0.2
comp=Z,1.5nm,0.6s,baz=131,slow=7.5,SNR=4.5
KBZ LR LR 19 32 47.4
comp=Z,61nm,18.2s,baz=58,slow=44
comp=Z,1.5nm,0.6s
KVAR Kislovodsk Arr 21.62 289 P P 19 21 56.5 0.0
comp=Z,1.0nm,0.4s,baz=270,slow=20,SNR=1.9
comp=Z,1.0nm,0.4s
KIV Kislovodsk 21.62 289 P P 19 21 56.4 -0.2
KIV IAmb IAmb 19 22 15.9
comp=Z,9.9nm,0.9s
KIV Kislovodsk 21.62 289 *e*P P 19 21 56.7 +0.1
KIV *e*S S 19 25 56.3 +0.8
KIV pmax pmax
comp=Z,9.0nm,1.1s
KIV MLR MLR
comp=Z,17nm,14.0s
GTA Gaotai 21.65 84 *e*P P 19 21 57.2 +0.3
GTA pP sP 19 22 06.6 +2.3
GTA sP pP 19 22 10.6 +8.6
GTA pmax pmax
comp=Z,4.0nm,1.1s
SHL Shillong 22.53 125 P P 19 22 05.8 -0.7
SHL Shillong 22.53 125 P P 19 22 05.8 -0.7
SHL pmax pmax
comp=Z,5.0nm,0.9s
ZAK Zakamensk 24.20 55 *e*P P 19 22 22.8 -0.1
ZAK pmax pmax
comp=Z,5.0nm,0.9s
VORR Voronezh 24.89 308 *e*P P 19 22 34.8 +5.9
VORR pmax pmax
comp=Z,50nm,0.4s
SONM Songino Array 25.88 62 P P 19 22 37.6 -0.6
comp=Z,1.1nm,0.6s,baz=261,slow=9.4,SNR=4.4
comp=Z,1.1nm,0.6s
SONM Songino Array 25.88 62 P P 19 22 39.0 +0.7
ULN Ulaanbaatar 26.33 62 P P 19 22 41.1 -1.2
ULN IAmb IAmb 19 22 49.9
comp=Z,2.9nm,0.6s
ULN Ulaanbaatar 26.33 62 P P 19 22 41.1 -1.2
ULN pmax pmax
comp=Z,3.0nm,0.6s
OBN Obninsk 27.35 314 *i* P P 19 22 51.5 +0.3

OBN				pmax	pmax			
	comp=Z,5.0nm,0.8s							
OBN				MLR	MLR			
	comp=Z,33nm,14.0s							
PZH	**PanZhiHua**	**28.60**	**110**	P	**P**	**19 23 05.4**	**+2.6**	
PZH				pmax	pmax			
	comp=Z,10.0nm,0.8s							
PZH				pmax	pmax			
	comp=Z,110nm,8.8s							
BR131	**Keskin Array S**	**28.88**	**281**	P	**P**	**19 23 05.3**	**+0.2**	
BR131				IAmb	IAmb	19 23 08.0		
	comp=Z,3.7nm,0.6s							
BR131	**Keskin Array S**	**28.88**	**281**	P	**P**	**19 23 05.4**	**+0.2**	
BR131				pmax	pmax			
	comp=Z,4.0nm,0.6s							
BRTR	**Keskin Array B**	**28.88**	**281**	P	**P**	**19 23 06.1**	**+0.9**	
	comp=Z,2.3nm,0.7s,baz=88,slow=7.6,SNR=15							
	comp=Z,2.3nm,0.7s							
BRTR	**Keskin Array B**	**28.88**	**281**	P	**P**	**19 23 05.6**	**+0.4**	
BRTR	**Keskin Array B**	**28.88**	**281**	P	**P**	**19 23 05.6**	**+0.4**	
AKASG	**Malin Array Be**	**30.96**	**304**	P	**P**	**19 23 23.5**	**+0.2**	
	comp=Z,0.2nm,0.3s,baz=78,slow=8.2,SNR=4.4							
AKASG				LR	LR	19 38 31.3		
	comp=Z,52nm,18.1s,baz=102,slow=41							
	comp=Z,0.2nm,0.3s							
CMAR	**Chiang Mai Arr**	**32.17**	**125**	P	**P**	**19 23 32.1**	**-2.1**	
	comp=Z,0.3nm,0.5s,baz=124,slow=23,SNR=1.3							
	comp=Z,0.3nm,0.5s							
MLR	**Muntele Rosu**	**33.40**	**294**	P	**P**	**19 23 48.1**	**+3.1**	
MLR				IAmb	IAmb	19 23 55.4		
	comp=Z,8.2nm,1.1s							
MLR	**Muntele Rosu**	**33.40**	**294**	P	**P**	**19 23 48.1**	**+3.1**	
MLR				pmax	pmax			
	comp=Z,8.0nm,1.1s							
FIA1	**FINESS Array S**	**34.52**	**323**	P	**P**	**19 23 55.0**	**+0.7**	
FINES	**FINESS Array B**	**34.52**	**323**	P	**P**	**19 23 55.0**	**+0.8**	
	comp=Z,2.0nm,0.4s,baz=113,slow=9.7,SNR=39							
	comp=Z,2.0nm,0.4s							
FINES	**FINESS Array B**	**34.52**	**323**	P	**P**	**19 23 54.6**	**+0.3**	
FINES	**FINESS Array B**	**34.52**	**323**	P	**P**	**19 23 54.6**	**+0.3**	
KARP	**Karpathos**	**35.05**	**276**	P	**P**	**19 24 00.1**	**+0.8**	
IDI	**Anoyia**	**36.87**	**277**	P	**P**	**19 24 15.1**	**+0.2**	
IDI				IAmb	IAmb	19 24 42.2		
	comp=Z,13nm,1.5s							
ARCES	**ARCESS Array B**	**37.69**	**336**	P	**P**	**19 24 21.8**	**+0.5**	
	comp=Z,0.9nm,0.5s,baz=109,slow=8.1,SNR=9.8							
	comp=Z,0.9nm,0.5s							
ARCES	**ARCESS Array B**	**37.69**	**336**	IAmb	IAmb	19 24 23.3		
	comp=Z,4.9nm,1.3s							
ARCES	**ARCESS Array B**	**37.69**	**336**	P	**P**	**19 24 21.8**	**+0.5**	
ARCES				pmax	pmax			
	comp=Z,5.0nm,1.3s							
ITM	**Ithomi**	**38.41**	**282**	P	**P**	**19 24 27.3**	**-0.5**	
YAK	**Yakutsk**	**40.52**	**38**	*eP*	**P**	**19 24 45.8**	**+0.8**	
YAK				pmax	pmax			
	comp=Z,5.0nm,0.6s							
GEC2	**GERESS Array S**	**41.11**	**302**	P	**P**	**19 24 52.0**	**+1.7**	
GERES	**GERESS Array B**	**41.11**	**302**	P	**P**	**19 24 50.5**	**+0.2**	
	comp=Z,0.7nm,0.4s,baz=63,slow=6.4,SNR=12							
	comp=Z,0.7nm,0.4s							
GERES	**GERESS Array B**	**41.11**	**302**	P	**P**	**19 24 50.4**	**+0.1**	
GERES	**GERESS Array B**	**41.11**	**302**	*eP*	**P**	**19 24 52.0**	**+1.7**	
GERES				pmax	pmax			
	comp=Z,1.0nm,0.6s							
KHC	**Kasperske Hory**	**41.14**	**302**	P	**P**	**19 24 50.3**	**-0.1**	
KHC	**Kasperske Hory**	**41.14**	**302**	*eP*	**P**	**19 24 52.1**	**+1.7**	
KHC				pmax	pmax			
	comp=Z,5.0nm,0.9s							
KHC	**Kasperske Hory**	**41.14**	**302**	*eP*	**P**	**19 24 51.6**	**+1.2**	
CLL	**Collm**	**41.15**	**306**	*eP*	**P**	**19 24 51.0**	**+0.6**	
CLL				*eP*	**sP**	**19 24 59.0**	**+0.9**	
NB2	**NORSAR Subarra**	**41.55**	**320**	P	**P**	**19 24 53.5**	**-0.1**	
	comp=Z,1.5nm,0.6s,baz=93,slow=8.6							
NOA	**NORSAR Array B**	**41.55**	**320**	P	**P**	**19 24 53.2**	**-0.4**	
	comp=Z,0.8nm,0.5s,baz=91,slow=8.0,SNR=8.7							
NOA				LR	LR	19 43 04.5		
	comp=Z,35nm,19.6s,baz=120,slow=38							
	comp=Z,0.8nm,0.5s							
TIXI	**Tiksi**	**41.95**	**24**	P	**P**	**19 24 56.1**	**-0.5**	
TIXI				IAmb	IAmb	19 24 57.1		
	comp=Z,3.0nm,0.8s							
TIXI	**Tiksi**	**41.95**	**24**	*iP*	**P**	**19 24 56.5**	**-0.1**	
TIXI				pmax	pmax			
	comp=Z,3.0nm,0.7s							
KSRS	**Korea Array**	**43.29**	**75**	P	**P**	**19 25 06.6**	**-1.4**	
	comp=Z,0.5nm,0.5s,baz=264,slow=7.4,SNR=2.7							
	comp=Z,0.5nm,0.5s							
ASAJ	**Asahikawa**	**51.16**	**61**	P	**P**	**19 26 08.2**	**-1.1**	
	comp=Z,3.8nm,0.8s,baz=213,slow=18,SNR=5.2							
	comp=Z,3.8nm,0.8s							
ASAJ	**Asahikawa**	**51.16**	**61**	P	**P**	**19 26 08.2**	**-1.1**	
ASAJ				pmax	pmax			
	comp=Z,59nm,1.4s							
JKA	**Kamikawa-asahi**	**51.16**	**61**	P	**P**	**19 26 08.2**	**-1.1**	
JKA	**Kamikawa-asahi**	**51.16**	**61**	IAmb	IAmb	19 26 13.8		
	comp=Z,59nm,1.4s							
MJAR	**Matsushiro Arr**	**51.18**	**72**	P	**P**	**19 26 07.5**	**-2.0**	
	comp=Z,2.8nm,0.9s,baz=299,slow=6.9,SNR=4.7							
	comp=Z,2.8nm,0.9s							
MJAR	**Matsushiro Arr**	**51.18**	**72**	IAmb	IAmb	19 26 21.6		
	comp=Z,4.9nm,1.4s							
MJAR	**Matsushiro Arr**	**51.18**	**72**	P	**P**	**19 26 07.5**	**-2.0**	
MJAR				pmax	pmax			
	comp=Z,5.0nm,1.4s							
MJA0	**Matsu Arr-Jizo**	**51.21**	**72**	*eP*	**P**	**19 26 08.8**	**-1.0**	
MJA0				pmax	pmax			
	comp=Z,3.0nm,0.8s							
ESDC	**Sonseca Array**	**56.07**	**296**	P	**P**	**19 26 45.6**	**+0.2**	
	comp=Z,0.8nm,0.9s,baz=68,slow=7.7,SNR=5.3							
	comp=Z,0.8nm,0.9s							
ESDC	**Sonseca Array**	**56.07**	**296**	IAmb	IAmb	19 26 53.2		
	comp=Z,1.1nm,1.1s							
TOA0	**Torodi Ar. Sit**	**66.31**	**267**	P	**P**	**19 27 54.9**	**-0.2**	
TOA0				IAmb	IAmb	19 27 55.5		
	comp=Z,3.1nm,0.7s							
TORD	**Torodi Ar. Bea**	**66.31**	**267**	P	**P**	**19 27 54.5**	**-0.6**	
	comp=Z,2.0nm,0.5s,baz=60,slow=5.4,SNR=27							
	comp=Z,2.0nm,0.5s							
TORD	**Torodi Ar. Bea**	**66.31**	**267**	P	**P**	**19 27 55.0**	**-0.1**	
TORD				IAmb	IAmb	19 27 55.5		
	comp=Z,2.2nm,0.8s							
TOLK	**Toolik Lake Re**	**66.98**	**15**	P	**P**	**19 27 58.7**	**+0.1**	
TOLK				IAmb	IAmb	19 27 59.7		
	comp=Z,4.7nm,1.1s							
IMAR	**Indian Mountai**	**68.26**	**18**	P	**P**	**19 28 06.2**	**-0.5**	
ILAR	**Eielson Array**	**70.85**	**16**	P	**P**	**19 28 21.2**	**-1.4**	
	comp=Z,0.6nm,0.6s,baz=326,slow=5.4,SNR=8.3							
	comp=Z,0.6nm,0.6s							
ILAR	**Eielson Array**	**70.85**	**16**	P	**P**	**19 28 22.2**	**-0.4**	
ILAR	**Eielson Array**	**70.85**	**16**	*eP*	**P**	**19 28 22.1**	**-0.6**	
ILAR				pmax	pmax			
	comp=Z,1.0nm,0.6s							
SCRK	**Sand Creek**	**72.16**	**16**	P	**P**	**19 28 30.7**	**0.0**	
SCRK				IAmb	IAmb	19 28 31.2		
	comp=Z,1.4nm,0.8s							
DHY	**Denali Highway**	**72.21**	**17**	P	**P**	**19 28 30.9**	**-0.2**	
DHY				IAmb	IAmb	19 28 32.3		
	comp=Z,1.8nm,0.7s							
BCAR	**Beaver Creek A**	**73.42**	**15**	P	**P**	**19 28 38.3**	**+0.2**	
DBIC	**Dimbokro**	**75.38**	**266**	P	**P**	**19 28 50.3**	**+0.1**	
	comp=Z,1.5nm,0.5s,baz=272,slow=14,SNR=1.8							
	comp=Z,1.5nm,0.5s							
CTGM	**Chitina Glacie**	**75.41**	**16**	P	**P**	**19 28 50.3**	**+0.5**	
YKA	**Yellowknife Ar**	**77.26**	**3**	P	**P**	**19 29 00.2**	**+0.1**	
	comp=Z,2.9nm,0.7s,baz=351,slow=5.9,SNR=18							
	comp=Z,2.9nm,0.7s							
P33M	**Teslin, Yukon**	**77.69**	**12**	P	**P**	**19 29 03.1**	**+0.4**	
P33M				IAmb	IAmb	19 29 03.4		
	comp=Z,3.7nm,0.9s							
SCHQ	**Schefferville**	**78.62**	**337**	P	**P**	**19 29 07.6**	**-0.3**	
	comp=Z,2.0nm,0.8s,baz=205,slow=17,SNR=1.8							
	comp=Z,2.0nm,0.8s							
BOSA	**Boshof**	**81.07**	**220**	P	**P**	**19 29 21.4**	**-0.1**	
	comp=Z,1.1nm,0.6s,baz=56,slow=3.6,SNR=5.3							
	comp=Z,1.1nm,0.6s							
WRA	**Warramunga Arr**	**83.73**	**123**	P	**P**	**19 29 34.5**	**-1.0**	
	comp=Z,0.5nm,0.5s,baz=298,slow=2.1,SNR=5.3							
	comp=Z,0.5nm,0.5s							
WRAB	**Tennant Creek**	**83.73**	**123**	P	**P**	**19 29 34.5**	**-1.0**	
WRAB	**Tennant Creek**	**83.73**	**123**	P	**P**	**19 29 34.5**	**-1.0**	
WRAB				pmax	pmax			
	comp=Z,5.0nm,1.2s							
WB2	**Warramunga Arr**	**83.74**	**123**	P	**P**	**19 29 34.6**	**-0.9**	
AS31	**Alice Springs**	**86.17**	**126**	P	**P**	**19 29 46.3**	**-1.4**	
ASAR	**Alice Springs**	**86.17**	**126**	P	**P**	**19 29 46.6**	**-1.1**	
	comp=Z,0.9nm,0.7s,baz=320,slow=5.0,SNR=19							
	comp=Z,0.9nm,0.7s							
FORT	**Forrest**	**88.09**	**134**	P	**P**	**19 29 56.2**	**-0.5**	
PLCA	**Paso Flores**	**151.38**	**257**	PKPbc	**PKPbc**	**19 36 59.2**	**-0.7**	
	comp=Z,1.5nm,0.4s,baz=170,slow=12,SNR=3.7							

*IDC **02** 19:23:16.5±0.9, 43.°62N×105.°46W, h0km, mb4.0/2, mbtmp3.5/7, ML3.0/4, MS3.1/8, Error ellipse: s-maj=21.5km s-min=8.6km az=148.0*
*NEIC **02** 19:23:18.2±1.8, 43.°59N±0.°05×105.°20W±0.°06, h0km±2km, ML3.0/2, Error ellipse: s-maj=9.3km s-min=5.3km az=214.0*
ISC 02 19:23:17.1±0.7, 43.°64N±0.°04×105.°16W±0.°05, h0km, n72, σ1s23/64, MS3.4/5, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.94**	**59**	Pg	**Pb**	**19 23 37.1**	**+0.6**
RSSD				IAML		19 24 01.3	
	357nm,0.5s						
RSSD				IAML		19 24 05.3	
	444nm,0.6s						
K22A	**Casper**	**1.41**	**226**		**Pg**	**19 23 41.7**	**-2.3**
PHWY	**Pilot Hill**	**2.35**	**186**		**Pn**	**19 23 57.6**	**+0.4**
RWWY	**Rawlins**	**2.47**	**219**		**Pn**	**19 23 59.9**	**+1.1**
N23A	**Red Feather La**	**2.80**	**192**	Pn	**Pn**	**19 24 04.2**	**+0.8**
LAO	**LASA Array**	**3.14**	**346**	Pn	**Pn**	**19 24 09.7**	**+1.8**
RLMT	**Red Lodge**	**3.30**	**298**	Pn	**Pn**	**19 24 10.4**	**+0.2**
BW06	**Boulder Array**	**3.33**	**256**		**Pn**	**19 24 10.4**	**-0.2**
PD31	**Pinedale Array**	**3.33**	**256**		**Pn**	**19 24 10.4**	**-0.2**
PDAR	**Pinedale Array**	**3.33**	**256**	Pn	**Pn**	**19 24 10.3**	**-0.4**
	5.1nm,0.3s,baz=74,slow=13,SNR=53						
PDAR				Lg	Lg	19 24 54.6	
	18nm,0.3s,baz=78,slow=34,SNR=2.1						
PDAR	**Pinedale Array**	**3.33**	**256**		**Pn**	**19 24 10.0**	**-0.7**
OGNE	**Ogallala**	**3.55**	**138**	Pn	**Pn**	**19 24 15.3**	**+1.8**
ISCO	**Idaho Springs**	**3.85**	**185**		**Pn**	**19 24 18.7**	**+0.8**
GCMT	**Greycliff**	**3.87**	**305**		**Pn**	**19 24 18.2**	**+0.2**
LOHW	**Long Hollow**	**3.96**	**271**		**Pn**	**19 24 19.6**	**+0.4**
MOOW	**Moose Ponds**	**4.05**	**273**	Pn	**Pn**	**19 24 21.8**	**+1.2**
YPP	**Pitchstone Pla**	**4.13**	**281**	Pn	**Pn**	**19 24 22.6**	**+0.9**
YFT	**Old Faithful**	**4.17**	**283**		**Pn**	**19 24 22.3**	**0.0**
O20A	**White River Ci**	**4.19**	**214**		**Pn**	**19 24 22.5**	**+0.1**
TPAW	**Teton Pass**	**4.21**	**270**		**Pn**	**19 24 23.8**	**+1.0**
YMR	**Madison River**	**4.30**	**286**		**Pn**	**19 24 24.6**	**+0.6**
E28A	**Huff**	**4.31**	**46**		**Pn**	**19 24 25.9**	**+2.0**
AHID	**Auburn Hatcher**	**4.43**	**261**		**Pn**	**19 24 26.9**	**+1.1**
RDMU	**Red Mountain**	**4.49**	**228**		**Pn**	**19 24 27.6**	**+1.0**
YHL	**Hebgen Lake**	**4.50**	**288**		**Pn**	**19 24 28.2**	**+1.5**
ECR	**Eagle Creek**	**4.57**	**265**		**Pn**	**19 24 28.1**	**+0.4**
SMCO	**Snowmass**	**4.66**	**198**	Pg	**Pb**	**19 24 41.5**	**+1.5**
QLMT	**Earthquake Lak**	**4.66**	**287**		**Pn**	**19 24 29.1**	**+0.1**
Q24A	**Divide**	**4.67**	**180**		**Pn**	**19 24 28.8**	**-0.3**
DGMT	**Dagmar**	**4.88**	**8**	Pn	**Pn**	**19 24 34.7**	**+3.0**
BOZ	**Bozeman (W)**	**5.02**	**295**		**Pn**	**19 24 34.9**	**+1.2**
HWUT	**Hardware Ranch**	**5.15**	**249**		**Pn**	**19 24 35.1**	**-0.4**
EGMT	**Eagleton**	**5.44**	**325**		**Pn**	**19 24 41.3**	**+1.9**
P18A	**Preston Nutter**	**5.53**	**225**	Pn	**Pn**	**19 24 40.5**	**-0.4**
JLU	**Jordanelle**	**5.58**	**239**		**Pn**	**19 24 41.1**	**-0.4**
HRY	**Holter Researc**	**5.63**	**305**		**Pn**	**19 24 43.0**	**+0.9**
LRM	**Limekiln Ridge**	**5.64**	**295**		**Pn**	**19 24 43.8**	**+1.9**
MDND	**Maddock**	**5.73**	**41**	Pg	**Pg**	**19 25 04.8**	**-1.9**
PV07	**Paradox Valley**	**5.83**	**208**		**Pn**	**19 24 46.2**	**+1.3**
PV15	**Paradox Valley**	**5.86**	**207**		**Pn**	**19 24 42.3**	**-3.1**
SDCO	**Great Sand Dun**	**5.89**	**183**		**Pn**	**19 24 45.4**	**-0.5**
P17A	**Butcher Ranch,**	**5.90**	**227**	Pn	**Pn**	**19 24 46.4**	**+0.4**
HVU	**Hansel Valley**	**5.91**	**254**	Pn	**Pn**	**19 24 47.6**	**+1.5**
PV23	**Carpenter Ridg**	**5.94**	**211**		**Pn**	**19 24 47.4**	**+0.8**
PV10	**Paradox Valley**	**6.02**	**210**	Pn	**Pn**	**19 24 47.7**	**0.0**
PV11	**David Mesa, Pa**	**6.03**	**209**		**Pn**	**19 24 47.1**	**-0.6**
SRU	**San Rafael Swe**	**6.06**	**224**		**Pn**	**19 24 48.3**	**+0.2**
PV13	**Radium Mtn., P**	**6.14**	**208**		**Pn**	**19 24 49.0**	**-0.2**
ECSD	**EROS Data Cent**	**6.20**	**86**	Pn	**Pn**	**19 24 50.5**	**+0.7**
TMUT	**Trail Mountain**	**6.28**	**228**		**Pn**	**19 24 50.8**	**-0.5**
NLU	**North Lily Min**	**6.35**	**237**	Pn	**Pn**	**19 24 48.4**	**-3.6**
Q16A	**Castle Valley**	**6.54**	**226**		**Pn**	**19 24 54.9**	**+0.2**
DUG	**Dugway, Tooele**	**6.67**	**242**	Pn	**Pn**	**19 24 56.0**	**-0.4**
HLID	**Hailey**	**6.72**	**273**	Pn	**Pn**	**19 24 58.1**	**+0.9**
AGMN	**Agassiz Nation**	**7.97**	**51**	Pn	**Pn**	**19 25 15.3**	**+1.1**
ELK	**Elko**	**8.03**	**252**	Pn	**Pn**	**19 25 12.9**	**-2.2**
	baz=58,slow=9.5,SNR=1.9						
ELK				Pg	**Pb**	**19 25 38.2**	**+1.1**
	0.4nm,0.3s,baz=12,slow=20,SNR=4.2						
	0.3nm,0.4s						
PSUT	**Pine Spring**	**8.31**	**235**	Pn	**Pn**	**19 25 19.5**	**+0.4**
ANMO	**Albuquerque**	**8.74**	**187**	Lg	Lg	19 27 52.3	
	baz=184,slow=14,SNR=1.4						
ANMO				LR	LR	19 28 38.3	
	comp=Z,26nm,18.6s,baz=340,slow=37						
I10CA	**LAC DU BONNET**	**9.06**	**40**	*i*		20 26 20.0	
	baz=230,slow=294,SNR=2.2						
ULM	**Lac du Bonnet**	**9.16**	**41**	Pn	**Pn**	**19 25 30.1**	**-0.3**
	2.2nm,0.3s,baz=232,slow=11,SNR=13						
ULM				Lg	Lg	19 28 02.5	
	0.4nm,0.3s,baz=298,slow=20,SNR=1.1						
ULM				LR	LR	19 29 06.2	
	comp=Z,106nm,21.9s,baz=188,slow=38						
	4.0nm,0.3s						
ULM	**Lac du Bonnet**	**9.16**	**41**	Pn	**Pn**	**19 25 29.6**	**-0.8**
NEW	**Newport**	**9.53**	**303**	LR	LR	19 29 43.5	
	comp=Z,112nm,19.6s,baz=116,slow=41						
PFO	**Pinyon Flats O**	**13.34**	**225**	LR	LR	19 32 07.0	
	comp=Z,42nm,22.0s,baz=120,slow=40						
TXAR	**Lajitas Array**	**14.33**	**175**	Pn	**Pn**	**19 26 42.4**	**+1.1**
	baz=357,slow=9.3,SNR=1.7						
TXAR				Pg	Pg	19 27 42.0	
	baz=5.3,slow=13,SNR=2.3						
TXAR				Lg	Lg	19 30 42.3	
	baz=353,slow=33,SNR=2.7						
	0.1nm,0.7s						
TKL	**Tuckaleechee C**	**18.26**	**109**	Lg	Lg	19 32 47.2	
	0.6nm,0.3s,baz=313,slow=18,SNR=6.4						
YKA	**Yellowknife Ar**	**19.68**	**347**	P	**Pn**	**19 27 48.3**	**-0.5**
	0.1nm,0.3s,baz=167,slow=9.8,SNR=3.6						
	0.2nm,0.5s						
SCHQ	**Schefferville**	**27.07**	**52**	LR	LR	19 39 54.6	
	comp=Z,67nm,20.8s,baz=108,slow=37						
FRB	**Frobisher Bay**	**28.94**	**33**	LR	LR	19 40 56.1	
	comp=Z,120nm,18.9s,baz=0.0,slow=36						
SFJD	**Kangerlussuaq**	**37.07**	**32**	LR	LR	19 45 16.8	
	comp=Z,40nm,18.4s,baz=262,slow=36						
ARCES	**ARCESS Array B**	**61.49**	**18**	P	**P**	**19 33 34.6**	**-0.4**
	2.5nm,0.8s,baz=335,slow=6.2,SNR=5.4						
ARCES				LR	LR	19 59 55.9	
	comp=Z,25nm,18.7s,baz=124,slow=36						
	2.5nm,0.8s						
FINES	**FINESS Array B**	**68.09**	**23**	P	**P**	**19 34 17.5**	**-0.6**
	1.1nm,0.9s,baz=316,slow=5.8,SNR=3.8						
	1.1nm,0.9s						
JNU	**Nakatsue**	**88.07**	**316**	LR	LR	20 17 33.4	
	comp=Z,167nm,19.7s,baz=255,slow=37						

WEL 02 19:26:02.1±0.5, 42.°S±3.°×17.°2E±.°, h81km±5km, M2.8/19, ML2.7/8, MLv2.8/19, Error ellipse: s-maj=0.0km s-min=0.0km az=124.0, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DSZ	**Denniston Nort**	**0.28**	**316**	P	Pn	19 26 16.0	+1.5
DSZ				S	Sn	19 26 25.9	+2.4
THZ	**Tophouse**	**0.65**	**74**	P	Pn	19 26 18.7	+1.3
THZ				S	Sn	19 26 31.0	+2.1
MRNZ	**Matariki Terra**	**0.75**	**44**	P	Pn	19 26 19.3	+0.8
MRNZ				S	Sn	19 26 31.8	+1.3
LTZ	**Lake Taylor**	**0.85**	**170**	P	Pn	19 26 20.9	+1.4
LTZ				S	Sn	19 26 34.0	+1.5
INZ	**Inchbonnie**	**0.90**	**210**	P	Pn	19 26 21.3	+1.2
INZ				S	Sn	19 26 35.2	+1.7
QRZ	**Quartz Range**	**1.17**	**17**	P	Pn	19 26 23.8	+0.5
QRZ				S	Sn	19 26 39.2	-0.1
KHZ	**Kahutara**	**1.19**	**114**	P	Pn	19 26 24.2	+0.6
KHZ				S	Sn	19 26 40.0	+0.4
NNZ	**Nelson**	**1.23**	**54**	P	Pn	19 26 23.8	-0.2
NNZ				S	Sn	19 26 41.2	+0.8
GVZ	**Greta Valley S**	**1.25**	**145**	P	Pn	19 26 25.2	+0.9
GVZ				S	Sn	19 26 41.4	+0.5
AMCZ	**Amberley**	**1.30**	**161**	P	Pn	19 26 25.9	+0.9
AMCZ				S	Sn	19 26 42.6	+0.4
BSWZ	**Blackbirch Sta**	**1.37**	**81**	P	Pn	19 26 27.1	+1.3
OXZ	**Oxford**	**1.38**	**181**	P	Pn	19 26 26.0	0.0
OXZ				S	Sn	19 26 43.5	-0.4
WVZ	**Waitaha Valley**	**1.50**	**221**	P	Pn	19 26 27.9	+0.5
WVZ				S	Sn	19 26 46.4	-0.1
TUWZ	**Tuamarina**	**1.50**	**70**	P	Pn	19 26 29.3	+1.9
TUWZ				S	Sn	19 26 47.4	+0.9
RACZ	**Rakaia**	**1.78**	**178**	P	Pn	19 26 31.0	-0.1
DUWZ	**D'Urville Isla**	**1.81**	**51**	P	Pn	19 26 32.2	+0.8
MQZ	**McQueen's Vall**	**1.81**	**166**	P	Pn	19 26 31.1	-0.4
TCW	**Tory Channel**	**1.81**	**67**	P	Pn	19 26 31.9	+0.3
GCSZ	**Gaunt Creek Bo**	**1.88**	**223**	P	Pn	19 26 32.7	+0.3
RPZ	**Rata Peaks**	**1.92**	**202**	P	Pn	19 26 32.8	-0.1
OKCZ	**Okains Bay**	**1.92**	**158**	P	Pn	19 26 33.0	0.0
WACZ	**Wakanui South**	**2.00**	**185**	P	Pn	19 26 33.9	-0.1
AKCZ	**Akaroa Harbour**	**2.02**	**162**	P	Pn	19 26 34.3	-0.1
ARCZ	**Arundel**	**2.10**	**198**	P	Pn	19 26 34.9	-0.6
FOZ	**Fox Glacier**	**2.29**	**226**	P	Pn	19 26 37.9	0.0
KIW	**Kapiti Island**	**2.40**	**64**	P	Pn	19 26 38.9	-0.4
CAW	**Cannon Point**	**2.40**	**71**	P	Pn	19 26 38.1	-1.4
PLWZ	**Palliser**	**2.42**	**82**	P	Pn	19 26 37.8	-1.9
TMZ	**Timaru**	**2.56**	**197**	P	Pn	19 26 40.8	-0.7
OGWZ	**Otaki Gorge**	**2.59**	**65**	P	Pn	19 26 41.4	-0.5
MTW	**Mount Morrison**	**2.70**	**74**	P	Pn	19 26 41.1	-2.3
HOWZ	**Holdsworth Sta**	**2.80**	**69**	P	Pn	19 26 43.6	-1.1
KHEZ	**Kahui Hut**	**3.04**	**30**	P	Pn	19 26 48.3	+0.3
NEZ	**North Egmont**	**3.09**	**31**	P	Pn	19 26 45.6	-3.1
PKE	**Pukeiti**	**3.11**	**29**	P	Pn	19 26 46.0	-3.0
JCZ	**Jackson Bay**	**3.21**	**227**	P	Pn	19 26 50.0	-0.4
ODZ	**Otahua Downs**	**3.27**	**198**	P	Pn	19 26 50.0	-1.1
VRZ	**Vera Road**	**3.49**	**37**	P	Pn	19 26 54.7	+0.6
OTVZ	**Oturere**	**3.90**	**46**	P	Pn	19 27 01.3	+1.4
HIZ	**Hauiti**	**4.04**	**33**	P	Pn	19 27 01.4	-0.2
KWHZ	**Kaweka Forest**	**4.16**	**54**	P	Pn	19 27 05.0	+1.7

*LDG **02** 19:46:27.8±0.4, 36.°38N×3.°51E, h2km, Ml3.0/9, Error ellipse: s-maj=9.5km s-min=4.0km az=156.0*
*CRAAG **02** 19:46:29.0, 36.°35N×3.°44E, Ml3.4, Hypocentre not reviewed by the ISC*
*MDD **02** 19:46:30.1±0.9, 36.°29N×3.°52E, h0km, Mb4.1/14, M_mb3.4/15, Error ellipse: s-maj=7.9km s-min=3.8km az=137.0*
ISC 02 19:46:38.6±2.1, 37.°18N±0.°09×3.°24E±0.°05, h10km, n36, σ3s02/53, 10C, Western Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ADJB	**Djebel Djouab**	**1.03**	**171**	P		19 46 34.2	
AKET	**Djebel Ketaf**	**1.24**	**155**	P		19 46 39.1	
DFRA	**Djebel Bou Aff**	**2.21**	**106**	P		19 47 06.7	
EIBI	**Ibiza**	**2.37**	**322**	P	**Pn**	**19 47 20.0**	**+2.3**
EIBI				⇑*i*Vmb_V		19 47 23.1	
	376nm,SNR=3.3						
EIBI				S	**Sg**	**19 47 55.6**	**+0.7**
ETOS	**Mallorca**	**2.60**	**353**	P	**Pn**	**19 47 23.6**	**+2.7**
ETOS				⇑*i*Vmb_V		19 47 29.8	
	255nm,SNR=3.0						
ETOS				S	**Sg**	**19 48 02.5**	**+0.2**
MAHO	**Mahon**	**2.83**	**16**	P	**Pn**	**19 47 25.7**	**+1.9**
MAHO				S	**Sb**	**19 48 02.7**	**-1.2**
ECOL	**Islas Columbre**	**3.37**	**324**	P	**Pn**	**19 47 33.7**	**+2.3**
ECOL				S	**Sn**	**19 48 14.2**	**+2.7**
CMAH	**Djebel Manchou**	**3.40**	**98**	P		19 47 19.3	
EMUR	**La Murta**	**3.62**	**282**	P	**Pn**	**19 47 34.7**	**-0.2**
EMUR				⇑*i*Vmb

KUR				smax	smax			
	comp=N,2µm,0.5s							
KUR				smax	smax			
	comp=E,815nm,0.2s							
KUR	**Kuril'sk**	**1.34**	**314**	*i* P		**Pb**	**20 09 05.2**	**-1.1**
KUR				AMB	AMB		20 09 06.0	
	comp=E,740nm,0.4s							
KUR				*i* S		**Sb**	**20 09 20.3**	**-3.6**
KUR				A	A		20 09 23.4	
	comp=E,1µm,0.4s							
KUR				A	A		20 09 23.4	
	comp=E,1µm,0.4s							
SHO	**Shikotan**	**1.79**	**256**	*e*PN		**Pn**	**20 09 12.9**	**+0.5**
SHO				*e*S		**Sn**	**20 09 34.4**	**-1.2**
SHO				pmax	pmax			
	comp=Z,47nm,0.3s							
SHO				pmax	pmax			
	comp=E,48nm,0.4s							
SHO				pmax	pmax			
	comp=N,26nm,0.3s							
SHO				smax	smax			
	comp=E,264nm,0.3s							
SHO				smax	smax			
	comp=N,241nm,0.2s							
SHO	**Shikotan**	**1.79**	**256**	*e*P		**Pb**	**20 09 13.4**	**-0.6**
SHO				AMB	AMB		20 09 17.7	
	comp=N,40nm,0.2s							
SHO				*e*S		**Sn**	**20 09 34.5**	**-1.2**
SHO				A	A		20 09 40.5	
	comp=N,360nm,0.3s							
SHO				A	A		20 09 40.5	
	comp=N,370nm,0.3s							
YUK	**Yuzh-Kuril'sk**	**2.44**	**265**	*e*PN		**Pb**	**20 09 23.4**	**-1.7**
YUK				*e*S		**Sn**	**20 09 52.4**	**+0.6**
YUK				pmax	pmax			
	comp=Z,194nm,0.1s							
YUK				pmax	pmax			
	comp=N,114nm,0.2s							
YUK				pmax	pmax			
	comp=E,92nm,0.4s							
YUK				smax	smax			
	comp=N,392nm,0.4s							
YUK				smax	smax			
	comp=E,336nm,0.5s							
YUK	**Yuzh-Kuril'sk**	**2.44**	**265**	*e*P		**Pb**	**20 09 23.4**	**-1.7**
YUK				AMB	AMB		20 09 25.1	
	comp=E,130nm,0.2s							
YUK				*e*S		**Sn**	**20 09 52.4**	**+0.6**
YUK				A	A		20 09 57.0	
	comp=E,290nm,0.3s							
YUK				A	A		20 09 57.0	
	comp=E,380nm,0.3s							
NEM2	**Nemuro 2**	**2.70**	**251**	*e*P		**Pn**	**20 09 25.9**	**+1.0**
NEM2				*e*S		**Sn**	**20 09 57.0**	**-1.2**
NMR	**Nemuro--Hokkai**	**2.71**	**251**	*e*PN		**Pn**	**20 09 26.4**	**+1.4**
NMR				*e*S		**Sn**	**20 09 58.8**	**+0.4**
NMR	**Nemuro--Hokkai**	**2.71**	**251**	*e*P		**Pn**	**20 09 26.4**	**+1.4**
NMR				*e*S		**Sn**	**20 09 58.8**	**+0.4**
GLVR	**Golovnino**	**2.74**	**259**	*e*PN		**Pn**	**20 09 26.9**	**+1.4**
GLVR				*e*S		**Sn**	**20 09 59.5**	**+0.3**
GLVR				smax	smax			
	comp=N,240nm,0.5s							
GLVR				smax	smax			
	comp=E,232nm,0.4s							
GLVR	**Golovnino**	**2.74**	**259**	*e*P		**Pn**	**20 09 26.9**	**+1.4**
GLVR				*e*S		**Sn**	**20 09 59.5**	**+0.3**
GLVR				A	A		20 10 02.6	
	comp=E,240nm,0.5s							
GLVR				A	A		20 10 02.6	
	comp=E,230nm,0.5s							
RUSJ	**Misakicho**	**2.88**	**267**	*e*PN		**Pn**	**20 09 28.3**	**+1.0**
RUSJ				*e*S		**Sn**	**20 10 02.0**	**-0.5**
JRA	**Rausu**	**2.99**	**264**	*e*P		**Pn**	**20 09 31.0**	**+2.2**
JRA				*e*S		**Sn**	**20 10 06.3**	**+1.1**
JNK	**Nakash**	**3.34**	**259**	*e*P		**Pn**	**20 09 35.4**	**+1.6**
AKK	**Akkeshi**	**3.44**	**249**	*e*P		**Pn**	**20 09 37.7**	**+2.6**
AKK				*e*S		**Sn**	**20 10 17.7**	**+1.2**
JAK	**Akkeshi**	**3.55**	**250**	*e*P		**Pn**	**20 09 38.2**	**+1.6**
JTKR	**Abashiri--Toko**	**3.85**	**267**	*e*P		**Pn**	**20 09 43.9**	**+3.2**
JAR	**Ashorobuto**	**4.09**	**257**	*e*P		**Pn**	**20 09 46.8**	**+2.8**
JAR				*e*S		**Sn**	**20 10 33.6**	**+1.2**
JOB	**Onbets**	**4.17**	**252**	*e*P		**Pn**	**20 09 47.3**	**+2.2**
JCH	**Churui**	**4.60**	**250**	*e*P		**Pn**	**20 09 52.9**	**+1.8**
JKK2	**Kamakawa 2**	**4.69**	**267**	*e*P		**Pn**	**20 09 56.3**	**+3.9**
JKA	**Kamikawa-asahi**	**4.77**	**270**	*e*P		**Pn**	**20 09 56.7**	**+3.3**
ASAJ	**Asahikawa**	**4.78**	**270**	Pn		**Pn**	**20 09 56.7**	**+3.2**
	comp=E,1.6nm,0.3s,baz=66,slow=14,SNR=13							
ASAJ				Sn		**Sb**	**20 11 05.9**	**+3.0**
	comp=E,0.8nm,0.3s,baz=53,slow=20,SNR=1.1							
ASAJ				LR	LR		20 11 49.9	
	comp=E,72nm,20.6s,baz=148,slow=34							
	comp=E,3.1nm,0.3s							
JNBK	**Urakawa-nobuka**	**5.15**	**249**	*e*P		**Pn**	**20 10 00.9**	**+2.3**
JANG	**Nango**	**6.94**	**238**	*e*P		**Pn**	**20 10 24.9**	**+1.6**
JANG				*e*S		**Sn**	**20 11 35.7**	**-7.1**
JTH	**Tanohata**	**7.01**	**234**	*e*S		**Sn**	**20 11 37.5**	**-6.9**
MJAR	**Matsushiro Arr**	**11.43**	**231**	Pn		**Pn**	20 11 40.1	+15
	baz=42,slow=15,SNR=4.1							
	comp=E,1.8nm,0.8s							
KLR	**Kul'dur**	**12.95**	**298**	LR	LR	LR	20 16 21.3	
	comp=E,67nm,18.3s,baz=206,slow=37							
H11N2	**WAKE ISLAND Hy 28.60**		**143**	T		T	20 45 26.8	
	baz=334,slow=75,SNR=121							
H11N1	**WAKE ISLAND Hy 28.61**		**143**	T		T	20 45 27.6	
	baz=334,slow=75,SNR=95							
H11N3	**WAKE ISLAND Hy 28.62**		**143**	T		T	20 45 27.9	
	baz=334,slow=75,SNR=127							
H11S1	**WAKE ISLAND Hy 29.61**		**145**	T		T	20 46 48.5	
	baz=335,slow=76,SNR=126							
H11S3	**WAKE ISLAND Hy 29.61**		**145**	T		T	20 46 44.0	
	baz=335,slow=76,SNR=80							
H11S2	**WAKE ISLAND Hy 29.62**		**145**	T		T	20 46 46.0	
	baz=335,slow=76,SNR=75							
SONM	**Songino Array**	**29.65**	**292**	LR		LR	20 26 25.9	
	comp=E,77nm,18.4s,baz=205,slow=36							
ARCES	**ARCESS Array B**	**59.23**	**340**	LR		LR	20 45 25.0	
	comp=E,39nm,18.2s,baz=132,slow=39							
WRA	**Warramunga Arr**	**65.38**	**195**	P		**P**	**20 19 25.7**	**+1.2**
	comp=E,0.4nm,0.8s,baz=13,slow=6.9,SNR=2.4							
	comp=E,0.4nm,0.8s							
ASAR	**Alice Springs**	**69.09**	**195**	P		**P**	**20 19 48.9**	**+1.0**
	comp=E,0.2nm,0.7s,baz=12,slow=5.7,SNR=2.5							
	comp=E,0.2nm,0.7s							
H03N2	**Juan Fernandez**	**141.46**	**91**	T		T	23 06 07.1	
	baz=304,slow=77,SNR=5.6							
H03N3	**Juan Fernandez**	**141.47**	**91**	T		T	23 06 06.5	
	baz=304,slow=77,SNR=4.1							
H03N1	**Juan Fernandez**	**141.48**	**90**	T		T	23 06 07.1	
	baz=304,slow=77,SNR=2.8							

MAN 02 20:09:20.3, 9.72N×122.63E, h25km, mb4.1, ML2.9, MS2.5, Negros

*IDC **02** 20:15:07.1±1.8, 40.51S×175.71E, h0km, mb3.6/3, mbtmp3.5/5, ML2.7/2, Error ellipse: s-maj=38.1km s-min=23.5km az=117.0*

*WEL **02** 20:15:11.8±0.7, 41.3S×17.6E±, h33km±6km, M3.3/13, ML3.7/13, MLv3.3/13, Error ellipse: s-maj=0.0km s-min=0.0km az=139.3*

ISC 02 20:15:12.1±0.9, 40.65S±0.03×175.87E±0.03, h50km±5km, n103, σ1§13/113, mb3.5/3, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TIWZ	**Tintock**	**0.12**	**174**	P		**Pn**	**Pn**	**20 15 19.9**	**-0.2**
TIWZ				S		**Sn**	**Sn**	**20 15 25.5**	**-0.3**
PRWZ	**Pori Road**	**0.13**	**38**	P		**Pn**	**Pn**	**20 15 19.7**	**-0.4**
PRWZ				S		**Sn**	**Sn**	**20 15 25.0**	**-0.7**
MRZ	**Mangatainoka R**	**0.22**	**268**	P		**Pn**	**Pn**	**20 15 20.0**	**-0.7**
MRZ				S		**Sn**	**Sn**	**20 15 25.1**	**-1.6**
POWZ	**Post Office Ro**	**0.27**	**344**	P		**Pn**	**Pn**	**20 15 20.1**	**-1.0**
POWZ				S		**Sn**	**Sn**	**20 15 25.4**	**-2.0**
BFZ	**Birch Farm**	**0.29**	**96**	P		**Pn**	**Pn**	**20 15 21.2**	**+0.1**
BFZ				S		**Sn**	**Sn**	**20 15 27.9**	**+0.3**
CPWZ	**Castlepoint**	**0.36**	**135**	P		**Pn**	**Pn**	**20 15 22.9**	**+1.1**
HOWZ	**Holdsworth Sta**	**0.36**	**228**	P		**Pn**	**Pn**	**20 15 21.9**	**0.0**
HOWZ				S		**Sn**	**Sn**	**20 15 28.5**	**-0.4**
DVHZ	**Dannevirke**	**0.42**	**33**	P		**Pn**	**Pn**	**20 15 21.9**	**-0.6**
DVHZ				S		**Sn**	**Sn**	**20 15 29.2**	**-0.7**
TMWZ	**Te Maipa**	**0.45**	**178**	P		**Pn**	**Pn**	**20 15 23.6**	**+0.7**
TMWZ				S		**Sn**	**Sn**	**20 15 31.8**	**+1.3**
ANWZ	**Angora Road**	**0.50**	**67**	P		**Pn**	**Pn**	**20 15 23.7**	**+0.3**
ANWZ				S		**Sn**	**Sn**	**20 15 32.6**	**+1.2**
OGWZ	**Otaki Gorge**	**0.56**	**253**	P		**Pn**	**Pn**	**20 15 24.0**	**0.0**
OGWZ				S		**Sn**	**Sn**	**20 15 32.2**	**-0.4**
MTW	**Mount Morrison**	**0.57**	**209**	P		**Pn**	**Pn**	**20 15 24.7**	**+0.3**
TSZ	**Takapari Road**	**0.60**	**7**	P		**Pn**	**Pn**	**20 15 24.2**	**-0.5**
OHWZ	**Ohakea**	**0.62**	**317**	P		**Pn**	**Pn**	**20 15 25.0**	**+0.3**
PRHZ	**Porangahau**	**0.70**	**57**	P		**Pn**	**Pn**	**20 15 26.0**	**+0.1**
WPHZ	**Waipukurau**	**0.73**	**37**	P		**Pn**	**Pn**	**20 15 26.6**	**+0.3**
TRWZ	**Traveller**	**0.76**	**190**	P		**Pn**	**Pn**	**20 15 27.2**	**+0.6**
KIW	**Kapiti Island**	**0.76**	**254**	P		**Pn**	**Pn**	**20 15 26.9**	**+0.3**
CAW	**Cannon Point**	**0.76**	**233**	P		**Pn**	**Pn**	**20 15 26.9**	**+0.3**
PNHZ	**Pukenui**	**0.78**	**19**	P		**Pn**	**Pn**	**20 15 26.8**	**-0.2**
PAWZ	**Paruwai Farm**	**0.80**	**205**	P		**Pn**	**Pn**	**20 15 27.6**	**+0.3**
MSWZ	**Moikau Station**	**0.89**	**211**	P		**Pn**	**Pn**	**20 15 28.5**	**+0.1**
PXZ	**Pawanui**	**0.98**	**51**	P		**Pn**	**Pn**	**20 15 29.5**	**-0.1**
PLWZ	**Palliser**	**1.02**	**207**	P		**Pn**	**Pn**	**20 15 30.3**	**+0.1**
WEL	**Wellington**	**1.04**	**233**	P		**Pn**	**Pn**	**20 15 30.7**	**+0.2**
BHW	**Baring Head**	**1.07**	**225**	P		**Pn**	**Pn**	**20 15 30.7**	**0.0**
KRHZ	**Kereru**	**1.08**	**21**	P		**Pn**	**Pn**	**20 15 30.9**	**-0.1**
WAZ	**Wanganui**	**1.12**	**323**	P		**Pn**	**Pn**	**20 15 32.5**	**+1.0**
KAHZ	**Kahuranaki**	**1.16**	**42**	P		**Pn**	**Pn**	**20 15 32.0**	**0.0**
BHHZ	**Black Hill Sta**	**1.17**	**7**	P		**Pn**	**Pn**	**20 15 32.5**	**+0.3**
MOVZ	**Moawhango**	**1.25**	**356**	P		**Pn**	**Pn**	**20 15 33.4**	**+0.1**
KWHZ	**Kaweka Forest**	**1.30**	**19**	P		**Pn**	**Pn**	**20 15 33.9**	**-0.1**
MTVZ	**Mangateitei**	**1.30**	**346**	P		**Pn**	**Pn**	**20 15 34.7**	**+0.7**
TCW	**Tory Channel**	**1.33**	**245**	P		**Pn**	**Pn**	**20 15 34.2**	**-0.1**
WNVZ	**Wahianoa**	**1.34**	**351**	P		**Pn**	**Pn**	**20 15 35.1**	**+0.4**
CKHZ	**Cape Kidnapper**	**1.36**	**43**	P		**Pn**	**Pn**	**20 15 34.4**	**-0.3**
MCHZ	**McNeill Hill**	**1.36**	**28**	P		**Pn**	**Pn**	**20 15 34.8**	**0.0**
TRVZ	**Turoa**	**1.38**	**350**	P		**Pn**	**Pn**	**20 15 35.8**	**+0.7**
WHVZ	**Whangaehu Hut**	**1.39**	**351**	P		**Pn**	**Pn**	**20 15 36.1**	**+0.8**
TUVZ	**Tukino**	**1.39**	**353**	P		**Pn**	**Pn**	**20 15 36.4**	**+1.0**
FWVZ	**Far West T-bar**	**1.42**	**350**	P		**Pn**	**Pn**	**20 15 36.3**	**+0.5**
PKVZ	**Pokaka**	**1.42**	**343**	P		**Pn**	**Pn**	**20 15 36.4**	**+0.8**
SNVZ	**South Ngauruho**	**1.48**	**353**	P		**Pn**	**Pn**	**20 15 37.3**	**+0.8**
DUWZ	**D'Urville Isla**	**1.49**	**264**	P		**Pn**	**Pn**	**20 15 36.8**	**+0.4**
NGZ	**Ngauruhoe**	**1.49**	**352**	P		**Pn**	**Pn**	**20 15 37.6**	**+1.0**
OTVZ	**Oturere**	**1.50**	**354**	P		**Pn**	**Pn**	**20 15 37.4**	**+0.6**
ETVZ	**East Tongariro**	**1.52**	**355**	P		**Pn**	**Pn**	**20 15 37.9**	**+0.9**
NNVZ	**North Ngauruho**	**1.53**	**353**	P		**Pn**	**Pn**	**20 15 38.0**	**+0.7**
TMVZ	**Te Maari**	**1.54**	**355**	P		**Pn**	**Pn**	**20 15 37.9**	**+0.6**
WTVZ	**West Tongariro**	**1.55**	**352**	P		**Pn**	**Pn**	**20 15 38.1**	**+0.7**
NTVZ	**North Tongarir**	**1.56**	**354**	P		**Pn**	**Pn**	**20 15 38.1**	**+0.6**
BKZ	**Black Stump Fm**	**1.56**	**18**	P		**Pn**	**Pn**	**20 15 37.1**	**-0.4**
KRVZ	**Karewarewa**	**1.57**	**354**	P		**Pn**	**Pn**	**20 15 38.4**	**+0.8**
TWVZ	**Taurewa**	**1.62**	**348**	P		**Pn**	**Pn**	**20 15 38.8**	**+0.5**
ARHZ	**Aropaoanui**	**1.64**	**32**	P		**Pn**	**Pn**	**20 15 38.1**	**-0.4**
LREZ	**Lake Rotokare**	**1.64**	**316**	P		**Pn**	**Pn**	**20 15 40.2**	**+1.7**
TUWZ	**Tuamarina**	**1.65**	**241**	P		**Pn**	**Pn**	**20 15 38.1**	**-0.6**
CMWZ	**Cape Campbell**	**1.66**	**228**	P		**Pn**	**Pn**	**20 15 39.5**	**+0.7**
RITZ	**Rihia Road**	**1.68**	**360**	P		**Pn**	**Pn**	**20 15 39.7**	**+0.6**
KATZ	**Kakaramea**	**1.68**	**355**	P		**Pn**	**Pn**	**20 15 39.9**	**+0.7**
NMHZ	**Naumai**	**1.71**	**25**	P		**Pn**	**Pn**	**20 15 39.4**	**-0.2**
VRZ	**Vera Road**	**1.75**	**330**	P		**Pn**	**Pn**	**20 15 40.8**	**+0.7**
RATZ	**Rangitukua**	**1.79**	**358**	P		**Pn**	**Pn**	**20 15 41.0**	**+0.4**
BSWZ	**Blackbirch Sta**	**1.84**	**234**	P		**Pn**	**Pn**	**20 15 40.9**	**-0.4**
PREZ	**Palmer Road**	**1.85**	**314**	P		**Pn**	**Pn**	**20 15 43.2**	**+1.7**
MRHZ	**Matea Rd**	**1.87**	**13**	P		**Pn**	**Pn**	**20 15 41.3**	**-0.4**
NEZ	**North Egmont**	**1.94**	**315**	P		**Pn**	**Pn**	**20 15 44.2**	**+1.5**
WATZ	**Wairara**	**1.95**	**357**	P		**Pn**	**Pn**	**20 15 42.8**	**0.0**
MTHZ	**Maungataniwha**	**1.95**	**23**	P		**Pn**	**Pn**	**20 15 42.2**	**-0.6**
KHEZ	**Kahui Hut**	**1.97**	**313**	P		**Pn**	**Pn**	**20 15 44.7**	**+1.6**
NMEZ	**Namu Road**	**1.97**	**308**	P		**Pn**	**Pn**	**20 15 44.7**	**+1.7**
NNZ	**Nelson**	**1.97**	**253**	P		**Pn**	**Pn**	**20 15 43.4**	**+0.4**
RAHZ	**Arahi**	**1.97**	**29**	P		**Pn**	**Pn**	**20 15 42.4**	**-0.7**
PKE	**Pukeiti**	**2.05**	**315**	P		**Pn**	**Pn**	**20 15 46.5**	**+2.2**
SNQZ	**Shannon Statio**	**2.19**	**32**	P		**Pn**	**Pn**	**20 15 45.1**	**-0.9**
PRRZ	**Plateau Road**	**2.19**	**11**	P		Pn	20 15 51.4	+5.3
HIZ	**Hauiti**	**2.28**	**340**	P		**Pn**	**Pn**	**20 15 48.0**	**+0.7**
PRGZ	**Paritu Road**	**2.32**	**43**	P		**Pn**	**Pn**	**20 15 47.1**	**-0.9**
RIGZ	**Rimuhau**	**2.43**	**38**	P		**Pn**	**Pn**	**20 15 48.0**	**-1.4**
MRNZ	**Matariki Terra**	**2.47**	**251**	P		**Pn**	**Pn**	**20 15 50.1**	**+0.3**
KHZ	**Kahutara**	**2.48**	**224**	P		**Pn**	**Pn**	**20 15 48.8**	**-1.2**
THZ	**Tophouse**	**2.50**	**243**	P		**Pn**	**Pn**	**20 15 49.5**	**-0.8**
QRZ	**Quartz Range**	**2.54**	**265**	P		**Pn**	**Pn**	**20 15 49.3**	**-1.6**
URZ	**Urewera**	**2.58**	**22**	Pn		**Pn**	**Pn**	**20 15 49.6**	**-1.7**
	1.7nm,0.3s,baz=229,slow=9.3,SNR=2.0								
URZ				Sn		**Sn**	**20 16 19.4**	**-2.1**	
	5.7nm,0.3s,baz=347,slow=3.9,SNR=16								
	3.5nm,0.3s								
URZ	**Urewera**	**2.58**	**22**	P		**Pn**	**20 15 49.6**	**-1.7**	
MWZ	**Matawai**	**2.65**	**30**	P		**Pn**	**20 15 50.7**	**-1.7**	
TOZ	**Tahuroa Road**	**2.93**	**354**	P		**Pn**	**20 15 56.1**	**-0.1**	
TWGZ	**Tauwhareparae**	**2.97**	**34**	P		**Pn**	**20 15 55.0**	**-1.8**	
RUGZ	**Raukumara Rang**	**3.03**	**28**	P		**Pn**	**20 15 55.8**	**-1.9**	
PKGZ	**Pakihiroa**	**3.25**	**33**	P		**Pn**	**20 15 58.7**	**-2.0**	
HAZ	**Te Kaha**	**3.25**	**28**	P		**Pn**	**20 15 59.1**	**-1.6**	
DSZ	**Denniston Nort**	**3.25**	**249**	P		Pn	20 16 06.2	+5.5	
LTZ	**Lake Taylor**	**3.43**	**231**	P		**Pn**	**20 16 01.7**	**-1.4**	
WMGZ	**Waiomatatini S**	**3.45**	**36**	P		**Pn**	**20 16 01.1**	**-2.3**	
OKCZ	**Okains Bay**	**3.71**	**213**	P		**Pn**	**20 16 05.2**	**-1.7**	
INZ	**Inchbonnie**	**3.91**	**237**	P		**Pn**	**20 16 08.0**	**-1.5**	
RPZ	**Rata Peaks**	**4.71**	**228**	Pn		**Pn**	**20 16 19.2**	**-1.3**	
	0.3nm,0.3s,baz=252,slow=21,SNR=1.6								
RPZ				Sn		**Sn**	**20 17 08.5**	**-5.3**	
	1.7nm,0.3s,baz=180,slow=5.6,SNR=22								
	7.8nm,0.9s								
ARCZ	**Arundel**	**4.79**	**225**	P		**Pn**	**20 16 20.1**	**-1.6**	
TMZ	**Timaru**	**5.18**	**222**	P		**Pn**	**20 16 25.4**	**-1.7**	
CTZ	**Chatham Island**	**6.37**	**121**	P		**Pn**	**20 16 43.8**	**+0.4**	
VNDA	**Vanda**	**37.44**	**185**	P		**P**	**20 22 22.6**	**+2.6**	
	0.2nm,0.3s,baz=40,slow=5.0,SNR=1.7								
	0.2nm,0.3s								
ASAR	**Alice Springs**	**38.95**	**283**	P		**P**	**20 22 33.6**	**+0.2**	
	0.3nm,0.4s,baz=125,slow=6.9,SNR=13								
	0.3nm,0.4s								
WRA	**Warramunga Arr**	**40.90**	**288**	P		**P**	**20 22 49.8**	**+0.2**	
	0.5nm,0.4s,baz=125,slow=8.4,SNR=11								
	0.5nm,0.4s								

*MDD **02** 20:16:25.5±0.7, 36.58N×11.19W, h30km, mb_Lg3.2/13, Error ellipse: s-maj=5.9km s-min=4.0km az=75.0*

*IGIL **02** 20:16:27.6, 36.64N×11.05W, h22km, ML2.2*

*CNRM **02** 20:16:28.4, 36.40N×10.63W, h73km, ml2.4*

*INMG **02** 20:16:28.4±1.0, 36.72N×10.93W, h10km, ML2.4, Error ellipse: s-maj=4.3km s-min=2.9km az=75.0*

ISC 02 20:16:25.0±2.1, 36.59N±0.06×11.1W±0.1, h35km, n55, σ2§17/98, 1C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**1.87**	**72**	*i* P		**Pn**	**Pn**	**20 16 56.6**	**+2.2**
PFVI				*e*Sn		**Sn**	**Sn**	**20 17 17.6**	**+0.8**
PFVI				A		A	A	20 17 18.1	
	21nm,0.5s								
PFVI	**Vila Bisbo**	**1.87**	**72**	P		**Pn**	**Pn**	**20 16 55.8**	**+1.4**
PFVI				S		**Sn**	**Sn**	**20 17 16.0**	**-0.8**
MORF	**Marmelete**	**2.05**	**69**	*e*P		**Pn**	**Pn**	**20 16 59.2**	**+2.1**
MORF				*e*S		**Sn**	**Sn**	**20 17 22.1**	**+0.6**
MORF				IAML				20 17 23.9	
	comp=N,28nm,0.2s								
MORF	**Marmelete**	**2.05**	**69**	*e*Pn		**Pn**	**Pn**	**20 16 59.2**	**+2.1**
MORF				*e*Sn		**Sn**	**Sn**	**20 17 22.3**	**+0.8**
MORF				A		A	A	20 17 24.6	
	comp=N,15nm,0.1s								
PTEO	**Sao Teotonio**	**2.09**	**62**	*e*Pn		**Pn**	**Pn**	**20 17 00.0**	**+2.5**
PTEO				*e*Sn		**Sn**	**Sn**	**20 17 23.4**	**+1.0**
PTEO				A		A	A	20 17 25.9	
	comp=N,11nm,0.3s								
PNCL	**Nicolau / Gran**	**2.52**	**52**	*e*Pn		**Pn**	**Pn**	**20 17 05.9**	**+2.5**
PNCL				*e*Sn		**Sn**	**Sn**	**20 17 33.3**	**+0.4**
PNCL				A		A	A	20 17 35.9	
	comp=N,12nm,0.1s								
MESJ	**Messejana**	**2.58**	**60**	*e*P		**Pn**	**Pn**	**20 17 06.0**	**+1.8**
MESJ				*e*S		**Sn**	**Sn**	**20 17 34.4**	**-0.1**
MESJ				IAML				20 17 35.9	
	comp=N,7.3nm,0.1s								
MESJ	**Messejana**	**2.58**	**60**	*e*Pn		**Pn**	**Pn**	**20 17 06.1**	**+1.8**
MESJ				*e*Sn		**Sn**	**Sn**	**20 17 34.9**	**+0.4**
MESJ				A		A	A	20 17 38.5	
	comp=N,6.8nm,0.1s								
PBDV	**Barranco-do-Ve**	**2.59**	**74**	*e*Pn		**Pn**	**Pn**	**20 17 06.9**	**+2.5**
PBDV				*e*Sn		**Sn**	**Sn**	**20 17 35.4**	**+0.8**
PBDV				A		A	A	20 17 42.4	
	comp=N,5.9nm,0.2s								
PMST	**Lisbon--Monsan**	**2.61**	**34**	*e*Sn		**Sn**	**Sn**	**20 17 35.2**	**+0.1**
PMST				A		A	A	20 17 38.0	
	comp=N,24nm,0.4s								
PMAFR	**Mafra**	**2.75**	**30**	*e*Pn		**Pn**	**Pn**	**20 17 07.9**	**+1.3**
PMAFR				*e*Sn		**Sn**	**Sn**	**20 17 38.2**	**-0.4**
PMAFR				A		A	A	20 17 39.5	
	comp=N,44nm,0.2s								
PVAQ	**Vaqueiros**	**2.79**	**72**	*e*Pn		**Pn**	**Pn**	**20 17 09.6**	**+2.4**
PVAQ				*e*Sn		**Sn**	**Sn**	**20 17 40.2**	**+0.6**
PVAQ				A		A	A	20 17 43.4	
	comp=N,10nm,0.1s								
PVAQ	**Vaqueiros**	**2.79**	**72**	P		**Pn**	**Pn**	**20 17 07.1**	**-0.1**
PVAQ				S		**Sn**	**Sn**	**20 17 37.3**	**-2.3**
PACT	**Alcochete**	**2.80**	**38**	*e*Pn		**Pn**	**Pn**	**20 17 09.3**	**+2.0**
PACT				*e*Sn		**Sn**	**Sn**	**20 17 41.3**	**+1.5**
PACT				A		A	A	20 17 44.3	
	comp=N,24nm,0.4s								
PBEJ	**Beja**	**2.92**	**60**	*e*Sn		**Sn**	**Sn**	**20 17 42.6**	**-0.2**
PBEJ				A		A	A	20 17 45.3	
	comp=N,4.9nm,0.2s								
EGRO	**El Granado**	**3.01**	**71**	P		**Pn**	**Pn**	**20 17 12.5**	**+2.4**
EGRO				S		**Sn**	**Sn**	**20 17 45.4**	**+0.4**
EGRO				*i* Vmb_Lg				20 17 47.1	
EVO	**Evora**	**3.10**	**50**	P		**Pn**	**Pn**	**20 17 14.0**	**+2.6**
EVO				S		**Sn**	**Sn**	**20 17 46.0**	**-1.2**
EVO	**Evora**	**3.10**	**50**	*e*Pn		**Pn**	**Pn**	**20 17 14.0**	**+2.6**
EVO				*e*Sn		**Sn**	**Sn**	**20 17 46.7**	**-0.5**
EVO				A		A	A	20 17 48.6	
	comp=N,13nm,0.1s								
PMTG	**Montargil**	**3.34**	**41**	*e*Pn		**Pn**	**Pn**	**20 17 16.0**	**+1.3**
PMTG				*e*Sn		**Sn**	**Sn**	**20 17 52.4**	**-0.7**
PMTG				A		A	A	20 17 55.6	
	comp=N,7.6nm,0.1s								
PSBE	**So Bento**	**3.42**	**31**	*e*Pn		**Pn**	**Pn**	**20 17 17.6**	**+1.7**
PSBE				*e*Sn		**Sn**	**Sn**	**20 17 55.7**	**+0.5**
PSBE				A		A	A	20 18 03.8	
	comp=N,12nm,0.6s								
PESTR	**Estremoz**	**3.57**	**49**	*e*Pn		**Pn**	**Pn**	**20 17 22.2**	**+4.4**
PESTR				*e*Sn		**Sn**	**Sn**	**20 17 58.3**	**-0.4**
PESTR				A		A	A	20 17 59.1	
	comp=N,5.0nm,0.4s								
PESTR	**Estremoz**	**3.57**	**49**	P		**Pn**	**Pn**	**20 17 18.4**	**+0.6**
PESTR				S		**Sn**	**Sn**	**20 17 56.6**	**-2.1**
PBAR	**Barrancos**	**3.57**	**62**	*e*Pn		**Pn**	**Pn**	**20 17 20.0**	**+2.2**
PBAR				*e*Sn		**Sn**	**Sn**	**20 17 58.2**	**-0.6**
EMIN	**Mina Concepcio**	**3.69**	**70**	P		**Pn**	**Pn**	**20 17 21.2**	**+1.7**
EMIN				S		**Sn**	**Sn**	**20 18 01.1**	**-0.7**
EMI

DGAR Diego Garcia 12.51 34 Pn **Pn** **21 21 03.0 -1.8**
MSEY Mahe Island 16.45 322 Pn **Pn** **21 21 57.2 -0.6**
MSEY IAmb IAmb 21 22 06.6
comp=Z,27nm,0.8s
ABPO Ambohimpanom 17.34 264 Pn **Pn** **21 22 08.1 -1.0**
OPO Ambohidratompo 17.38 265 P **Pn** **21 22 08.8 -0.9**
comp=Z,0.2nm,0.3s,baz=87,slow=9.7,SNR=13
comp=Z,3.5nm,0.5s
VOI Vohitsoka 18.00 254 Pn **Pn** **21 22 16.2 -1.0**
KAAM Kaadhehdhoo 19.79 23 P **P** **21 22 36.3 -0.9**
MNCI Minicoy 27.15 17 P **P** **21 23 48.9 -1.2**
PALK Pallekele 29.25 32 LR LR 21 31 46.6
comp=Z,139nm,18.8s,baz=302,slow=28
PAF Port-aux-Franc 31.53 174 P **P** **21 24 28.6 0.0**
SOCY Socotra 32.05 338 P **P** **21 24 35.2 +1.6**
KMBO Kilima Mbogo 32.39 298 LR LR 21 35 34.9
comp=Z,338nm,18.2s,baz=94,slow=32
LSZ Lusaka 35.80 269 LR LR 21 37 45.5
comp=Z,247nm,20.1s,baz=118,slow=33
LSZ Lusaka 35.80 269 P **P** **21 25 06.7 +0.3**
LSZ IAmb IAmb 21 25 14.8
comp=Z,6.9nm,1.0s
LODK Lodwar 36.52 303 P **P** **21 25 12.2 -0.3**
ATD Arta Tunnel 36.87 321 LR LR 21 39 10.0
comp=Z,100nm,18.9s,baz=136,slow=34
LBTB Lobatse 37.66 252 P **P** **21 25 22.3 +0.1**
LBTB LR LR 21 38 04.0
comp=Z,274nm,21.5s,baz=88,slow=32
comp=Z,4.0nm,0.7s
LBTB Lobatse 37.66 252 P **P** **21 25 22.8 +0.6**
LBTB IAmb IAmb 21 25 27.2
comp=Z,9.8nm,1.0s
MBAR Mbarara 38.26 293 LR LR 21 39 25.2
comp=Z,317nm,18.3s,baz=98,slow=34
MBAR Mbarara 38.26 293 P **P** **21 25 26.6 -0.8**
BOSA Boshof 38.27 246 LR LR 21 38 08.5
comp=Z,151nm,21.3s,baz=82,slow=32
WSAR Wadi Sarin 41.51 350 LR LR 21 39 26.9
comp=Z,103nm,18.6s,baz=188,slow=31
LEM Lembang 42.52 80 LR LR 21 39 50.7
comp=Z,221nm,20.4s,baz=234,slow=31
MYKOM Kota Tinggi 42.58 66 P **P** **21 26 02.0 -1.0**
MYKOM IAmb IAmb 21 26 09.0
comp=Z,13nm,1.3s
SUR Sutherland 42.59 242 LR LR 21 42 32.7
comp=Z,187nm,18.9s,baz=81,slow=34
TSUM Tsumeb 45.30 261 LR LR 21 43 42.8
comp=Z,181nm,19.9s,baz=90,slow=34
RAYN Ar Rayn 45.63 334 P **P** **21 26 28.2 +0.9**
H01W2 Cape Leeuwin H 46.25 121 T T 22 16 17.7
baz=278,slow=75,SNR=336
H01W3 Cape Leeuwin H 46.25 121 T T 22 16 22.4
baz=278,slow=75,SNR=152
H01W1 Cape Leeuwin H 46.26 121 T T 22 16 23.6
baz=278,slow=75,SNR=334
CM31 Chiang Mai Arr 48.92 44 P **P** **21 26 53.4 +0.4**
CMAR Chiang Mai Arr 48.92 44 P **P** **21 26 52.7 -0.3**
comp=Z,8.7nm,1.0s,baz=234,slow=8.0,SNR=25
CMAR LR LR 21 45 58.5
comp=Z,78nm,19.1s,baz=200,slow=34
comp=Z,8.7nm,1.0s
CMAR Chiang Mai Arr 48.92 44 P **P** **21 26 53.0 0.0**
CHTO Chiang Mai 49.17 44 P **P** **21 26 55.6 +0.6**
CHTO IAmb IAmb 21 26 58.1
comp=Z,5.9nm,1.1s
MAW Mawson 49.63 181 P **P** **21 26 59.3 +1.6**
comp=Z,2.6nm,0.6s,baz=344,slow=7.4,SNR=7.4
MAW LR LR 21 43 53.7
comp=Z,66nm,18.9s,baz=8.0,slow=31
comp=Z,2.6nm,0.6s
MAW Mawson 49.63 181 P **P** **21 26 58.8 +1.1**
SBUM Sibu 50.31 71 P **P** **21 27 03.9 +0.1**
SBUM IAmb IAmb 21 27 07.6
comp=Z,10nm,1.0s
SHL Shillong 50.34 31 P **P** **21 27 04.3 +0.4**
SHL IAmb IAmb 21 27 06.7
comp=Z,16nm,1.0s
MBWA Marble Bar 51.02 103 P **P** **21 27 08.8 -0.2**
MBWA IAmb IAmb 21 27 09.3
comp=Z,13nm,1.4s
PSA00 Pilbara Seismi 51.08 103 P **P** **21 27 10.2 +0.8**
PSA00 IAmb IAmb 21 27 35.6
comp=Z,12nm,1.4s
PSA00 Pilbara Seismi 51.08 103 P **P** **21 27 09.5 +0.1**
PSA00 IAmb IAmb 21 27 35.6
comp=Z,4.4nm,1.2s
KBL Kabul 52.34 4 P **P** **21 27 19.8 +1.0**
KBL IAmb IAmb 21 27 35.9
comp=Z,5.4nm,0.9s
KAPI Kappang 54.53 83 LR LR 21 47 22.9
comp=Z,65nm,21.0s,baz=262,slow=32
EIL Elat 55.78 328 LR LR 21 48 00.2
comp=Z,87nm,21.5s,baz=111,slow=32
PZH PanZhiHua 56.53 39 P **P** **21 27 50.7 +1.4**
PZH pmax pmax
comp=Z,20nm,1.1s
PZH pmax pmax
comp=Z,100nm,4.9s
GAR Garm 56.86 4 P **P** **21 27 51.6 +0.1**
GAR IAmb IAmb 21 28 05.9
comp=Z,5.5nm,0.9s
MYLDM Lahad Datu 57.13 71 P **P** **21 27 53.3 -0.4**
SOEI Soe 57.46 90 P **P** **21 27 55.0 -1.3**
TOLI2 Tolitoli 57.60 77 P **P** **21 27 57.3 +0.3**
TOLI2 IAmb IAmb 21 28 06.3
comp=Z,8.6nm,0.9s
BTK Batken 57.95 5 P **P** **21 28 00.2 +1.2**
KSH Kashi 58.03 10 P **P** **21 27 57.9 -1.8**
KSH pP pP 21 28 02.2 -2.1
KSH pmax pmax
comp=Z,5.0nm,1.0s
KSH LR LR
comp=N,170nm,16.5s
KSH LR LR
comp=E,170nm,15.8s
KSH LR LR
comp=Z,290nm,18.2s
LUWI Luwuk 58.68 80 P **P** **21 28 04.4 -0.3**
KNRA Kununurra 60.36 98 P **P** **21 28 16.7 +0.5**
GURO Guroymak-BITLI 60.38 339 P **P** **21 28 16.5 +0.5**
GURO IAmb IAmb 21 28 32.8
comp=Z,3.5nm,1.0s
GOMU GeErMu 60.61 27 P **P** **21 28 18.7 +0.8**
GOMU pmax pmax
comp=Z,2.0nm,0.7s
KDJ Kajisay 60.78 10 P **P** **21 28 19.9 +1.2**
CSS Mathiatis 60.87 330 P **P** **21 28 18.1 -1.2**
CSS IAmb IAmb 21 28 37.0
comp=Z,11nm,1.2s
AAK Ala-Archa 60.88 8 LR LR 21 53 04.7
comp=Z,76nm,18.3s,baz=180,slow=35
AAK Ala-Archa 60.88 8 P **P** **21 28 19.3 -0.1**
AAK IAmb IAmb 21 28 34.1
comp=Z,2.7nm,0.7s
BOOM Boomskoye usch 60.94 9 P **P** **21 28 20.2 +0.5**
BOOM IAmb IAmb 21 28 39.6
comp=Z,4.0nm,1.1s
KK31 Karatay Array 60.95 4 P **P** **21 28 19.8 +0.1**
KKAR Karatay Array 60.95 4 P **P** **21 28 19.9 +0.2**
KKAR Karatay Array 60.95 4 P **P** **21 28 19.4 -0.3**
KKAR IAmb IAmb 21 28 37.6
comp=Z,2.0nm,0.8s
CD2 Chengdu 60.96 38 P **P** **21 28 21.9 +1.8**
GNI Garni 60.97 342 LR LR 21 53 51.1
comp=Z,42nm,18.6s,baz=154,slow=35
GNI Garni 60.97 342 P **P** **21 28 20.3 +0.2**
PRZ Przheval'sk 61.33 11 P **P** **21 28 22.7 +0.3**
PRZ IAmb IAmb 21 28 27.5
comp=Z,13nm,1.5s
ASAR Alice Springs 63.68 108 P **P** **21 28 38.4 -0.1**
comp=Z,2.5nm,0.9s,baz=269,slow=6.0,SNR=12
ASAR LR LR 21 52 15.8
comp=Z,525nm,20.9s,baz=301,slow=32
comp=Z,2.5nm,0.9s
ASAR Alice Springs 63.68 108 P **P** **21 28 37.9 -0.6**
AS31 Alice Springs 63.68 108 P **P** **21 28 38.1 -0.5**
TOKA Tokat 63.98 336 P **P** **21 28 41.6 +1.6**
ENH Enshi 64.00 42 P **P** **21 28 40.8 +0.5**
BBOO Buckleboo 64.41 118 P **P** **21 28 43.3 +0.2**
KARP Karpathos 64.45 326 P **P** **21 28 43.4 +0.2**
BRTR Keskin Array B 64.64 333 P **P** **21 28 42.4 -2.1**
comp=Z,0.2nm,0.4s,baz=152,slow=7.6,SNR=2.1
BRTR LR LR 21 55 16.0
comp=Z,100nm,19.5s,baz=139,slow=35
comp=Z,0.2nm,0.4s

WRA Warramunga Arr 64.72 104 P **P** **21 28 45.3 -0.1**
comp=Z,5.9nm,1.0s,baz=264,slow=5.5,SNR=20
WRA LR LR 21 55 39.0
comp=Z,197nm,18.3s,baz=176,slow=35
comp=Z,5.9nm,1.0s
WRA Warramunga Arr 64.72 104 P **P** **21 28 44.5 -0.9**
WB2 Warramunga Arr 64.74 104 P **P** **21 28 45.1 -0.3**
WRAB Tennant Creek 64.74 104 P **P** **21 28 45.5 0.0**
TROLL Troll, Antarti 64.78 198 P **P** **21 28 43.1 -1.9**
WMQ Urumqi 64.78 18 *eP* **P** **21 28 48.2 +3.0**
WMQ LR LR
comp=N,160nm,17.7s
WMQ LR LR
comp=Z,140nm,18.5s
KBZ Khabaz 64.80 342 P **P** **21 28 43.9 -1.3**
comp=Z,1.3nm,0.8s,baz=135,slow=4.2,SNR=2.1
KBZ LR LR 21 55 58.9
comp=Z,58nm,19.8s,baz=166,slow=35
comp=Z,1.3nm,0.8s
WB0 Warramunga Arr 64.81 104 P **P** **21 28 45.6 -0.3**
WB0 IAmb IAmb 21 28 46.5
comp=Z,7.5nm,1.1s
WR0 Warramunga Arr 64.91 104 P **P** **21 28 46.5 0.0**
WR0 IAmb IAmb 21 28 50.1
comp=Z,5.8nm,1.0s
KIV Kislovodsk 65.07 342 P **P** **21 28 47.9 +0.8**
KIV IAmb IAmb 21 28 57.5
comp=Z,9.8nm,1.2s
GTA Gaotai 65.49 29 *eP* **P** **21 28 51.2 +1.2**
GTA pP pwP 21 29 01.6 +4.5
GTA sP sP 21 29 07.3 +11
GTA pmax pmax
comp=Z,5.0nm,1.2s
GTA pmax pmax
comp=Z,57nm,7.6s
GTA LR LR
comp=N,92nm,15.3s
GTA LR LR
comp=E,98nm,17.4s
GTA LR LR
comp=Z,91nm,17.8s
IDI Anoyia 65.49 324 P **P** **21 28 49.8 -0.2**
IDI IAmb IAmb 21 28 57.8
comp=Z,5.8nm,0.9s
MAKZ Makanchi 66.18 12 P **P** **21 28 53.8 -0.4**
MK31 Makanchi Array 66.23 13 P **P** **21 28 54.2 -0.3**
MKAR Makanchi Array 66.23 13 P **P** **21 28 53.3 -1.2**
comp=Z,1.0nm,0.8s,baz=217,slow=8.3,SNR=9.7
MKAR LR LR 21 54 53.4
comp=Z,65nm,20.0s,baz=185,slow=33
comp=Z,1.0nm,0.8s
MKAR Makanchi Array 66.23 13 P **P** **21 28 54.6 +0.1**
XAN Xi'an 66.24 39 P **P** **21 28 55.8 +0.9**
XAN pP sP 21 29 01.1 -0.5
XAN pmax pmax
comp=Z,8.0nm,1.2s
SNAA Sanae 66.28 199 P **P** **21 28 55.6 +1.0**
SNAA Sanae 66.28 199 P **P** **21 28 54.0 -0.6**
comp=Z,2.5nm,0.7s,baz=89,slow=6.6,SNR=3.7
SNAA LR LR 21 52 07.1
comp=Z,73nm,20.8s,baz=126,slow=31
comp=Z,2.5nm,0.7s
SNAA Sanae 66.28 199 P **P** **21 28 54.9 +0.3**
SNAA IAmb IAmb 21 28 59.3
comp=Z,3.4nm,0.8s
SIJI Sorong 66.74 83 LR LR 21 55 40.2
comp=Z,39nm,21.9s,baz=60,slow=34
ABKAR Akbulak array 67.11 356 P **P** **21 28 58.8 -1.2**
ABKAR Akbulak array 67.11 356 P **P** **21 28 58.5 -1.6**
ABKAR IAmb IAmb 21 29 07.0
comp=Z,3.4nm,0.8s
WHN Wuhan 67.36 45 ⇓P **P** **21 29 03.9 +1.9**
VNA2 Neumayer--Watz 67.55 200 P **P** **21 29 03.4 +0.8**
baz=72,slow=7.0
VNA3 Neumayer Olymp 68.33 200 P **P** **21 29 09.1 +1.6**
AKTO Aktyubinsk 68.43 355 LR LR 21 58 21.4
comp=Z,50nm,19.1s,baz=150,slow=35
STKA Stephens Creek 69.17 118 P **P** **21 29 13.0 -0.5**
comp=Z,3.0nm,0.8s,baz=274,slow=6.1,SNR=6.1
STKA LR LR 21 56 00.8
comp=Z,107nm,18.4s,baz=215,slow=33
comp=Z,3.0nm,0.8s
KURBB Kurchatov Arra 69.26 9 LR LR 21 56 38.6
comp=Z,60nm,20.3s,baz=151,slow=34
KURK Kurchatov 69.37 9 P **P** **21 29 14.6 +0.5**
KURK IAmb IAmb 21 29 17.6
comp=Z,5.8nm,1.2s
TORD Torodi Ar. Bea 70.11 292 P **P** **21 29 17.7 -1.8**
comp=Z,1.3nm,1.0s,baz=119,slow=9.0,SNR=4.6
TORD LR LR 21 58 49.5
comp=Z,97nm,19.4s,baz=222,slow=35
comp=Z,1.3nm,1.0s
TORD Torodi Ar. Bea 70.11 292 P **P** **21 29 18.0 -1.4**
TORD IAmb IAmb 21 29 28.3
comp=Z,6.7nm,1.3s
LIT Litokhoron 70.30 326 P **P** **21 29 19.2 -0.9**
LIT IAmb IAmb 21 29 22.2
comp=Z,6.2nm,1.2s
BRVK Borovoye 70.86 3 P **P** **21 29 23.3 +0.1**
BRVK IAmb IAmb 21 29 26.7
comp=Z,4.4nm,0.9s
NJ2 Nanjing 71.33 46 *eP* **P** **21 29 25.7 -0.8**
NJ2 pmax pmax
comp=Z,9.0nm,0.6s
BTO Baotou 71.48 34 *eP* P 21 29 39.5 +12
VTS Vitosha 71.75 328 P **P** **21 29 29.6 +0.5**
TAU Tasmania Unive 72.10 130 P **P** **21 29 30.1 -1.0**
QSPA South Pole Qui 72.12 180 P **P** **21 29 31.4 +0.4**
comp=Z,7.9nm,1.0s,baz=277,slow=3.5,SNR=12
QSPA LR LR 21 56 21.2
comp=Z,87nm,21.8s,baz=304,slow=32
comp=Z,7.9nm,1.0s
QSPA South Pole Qui 72.12 180 P **P** **21 29 31.1 +0.1**
QSPA IAmb IAmb 21 29 35.8
comp=Z,12nm,1.1s
HHC Hu-ho-hao-te 72.49 35 *eP* **P** **21 29 36.1 +2.6**
HHC pmax pmax
comp=Z,16nm,0.8s
HHC pmax pmax
comp=Z,130nm,5.3s
MLR Muntele Rosu 72.65 332 P **P** **21 29 34.4 +0.1**
MLR IAmb IAmb 21 29 48.0
comp=Z,6.2nm,1.2s
ZAA0 Zalesovo Array 73.54 12 P **P** **21 29 39.7 +0.5**
ZAA0 IAmb IAmb 21 29 56.5
comp=Z,9.3nm,1.4s
ZALV Zalesovo Beam 73.54 12 P **P** **21 29 37.8 -1.5**
comp=Z,2.4nm,0.9s,baz=197,slow=4.5,SNR=4.9
ZALV LR LR 21 59 36.8
comp=Z,51nm,21.5s,baz=184,slow=34
comp=Z,2.4nm,0.9s
ZALV Zalesovo Beam 73.54 12 P **P** **21 29 38.7 -0.5**
DBIC Dimbokro 73.58 283 P **P** **21 29 39.7 -0.7**
comp=Z,4.0nm,0.9s,baz=112,slow=5.4,SNR=2.8
DBIC LR LR 22 01 13.2
comp=Z,88nm,18.4s,baz=162,slow=35
comp=Z,4.0nm,0.9s
PDG Podgorica 73.67 326 P **P** **21 29 38.8 -1.4**
PDG IAmb IAmb 21 29 49.7
comp=Z,9.0nm,1.1s
VNDA Vanda 73.95 167 P **P** **21 29 42.1 +0.6**
comp=Z,0.8nm,0.5s,baz=271,slow=7.0,SNR=5.2
VNDA LR LR 21 58 16.6
comp=Z,80nm,21.9s,baz=276,slow=33
comp=Z,0.8nm,0.5s
ARU Arti 74.35 356 LR LR 22 00 13.7
comp=Z,55nm,18.7s,baz=148,slow=34
ARU Arti 74.35 356 P **P** **21 29 43.8 -0.1**
ARU IAmb IAmb 21 29 48.0
comp=Z,9.9nm,1.2s
DIVS Divibare 74.46 328 IAmb IAmb 21 29 48.3
comp=Z,10.0nm,1.4s
BURAR Bucovina Array 74.61 333 P **P** **21 29 45.8 0.0**
BUR08 Bucovina Ar. S 74.64 333 P **P** **21 29 45.9 0.0**
BUR08 IAmb IAmb 21 30 02.0
comp=Z,6.0nm,1.4s
BELA Belgrano 2 74.66 192 P **P** **21 29 46.1 +0.5**
CAN Canberra 74.67 123 P **P** **21 29 47.2 +0.7**
SONM Songino Array 75.06 27 P **P** **21 29 49.2 +0.8**
comp=Z,2.7nm,0.8s,baz=225,slow=5.2,SNR=13
SONM LR LR 22 01 31.0
comp=Z,98nm,20.0s,baz=226,slow=35
comp=Z,2.7nm,0.8s
SONM Songino Array 75.06 27 P **P** **21 29 49.3 +0.9**
SONM IAmb IAmb 21 29 56.6
comp=Z,3.3nm,0.9s
KEST Kesra 75.34 316 LR LR 22 05 12.6
comp=Z,95nm,18.1s,baz=272,slow=38
ULN Ulaanbaatar 75.37 28 P **P** **21 29 48.5 -1.8**
AKASG Malin Array Be 75.45 337 P **P** **21 29 49.0 -1.4**
comp=Z,0.5nm,0.4s,baz=135,slow=4.8,SNR=2.0
comp=Z,0.5nm,0.4s
AKBB Malin Array Si 75.45 337 P **P** **21 29 50.3 0.0**
AKBB IAmb IAmb 21 30 02.7
comp=Z,4.8nm,0.8s
CTA Charters Tower 75.63 107 LR LR 22 01 59.6
comp=Z,159nm,18.3s,baz=268,slow=35
KWP Kalwaria Pacla 77.22 333 P **P** **21 30 02.1 +1.6**
PSZ Piszkesteto 77.23 330 P **P** **21 30 00.9 +0.2**
ARMA Armidale 77.89 118 P **P** **21 30 03.5 -1.5**
ARMA IAmb IAmb 21 30 25.4
comp=Z,10nm,1.1s
RONA Rosalia, Austr 78.81 329 *eP* **P** **21 30 11.8 +2.3**
comp=Z,5.1nm,0.9s
ARSA Arzberg 78.90 328 *eP* **P** **21 30 13.5 +3.6**
comp=Z,3.4nm,0.8s
OJC Ojcow 78.93 332 P **P** **21 30 09.5 -0.5**
OJC IAmb IAmb 21 30 19.1
comp=Z,4.6nm,0.9s
CONA Conrad Observa 79.18 329 *eP* **P** **21 30 11.4 -0.1**
comp=Z,8.7nm,1.6s
MORC Moravsky Berou 79.64 331 P **P** **21 30 12.9 -1.0**
VRAC Vranov 79.77 330 LR LR 22 05 01.5
comp=Z,22nm,20.7s,baz=136,slow=35
MOA Molln 79.93 328 *eP* **P** **21 30 17.6 +2.0**
comp=Z,6.0nm,1.3s
ABTA Abfaltersbach 80.13 326 *eP* P 21 30 21.2 +4.5
comp=Z,5.2nm,0.8s
JNU Nakatsue 80.46 51 P **P** **21 30 19.8 +1.0**
KSAR Wonju Array Be 80.49 46 P **P** **21 30 18.1 -0.6**
KSRS Korea Array 80.52 46 P **P** **21 30 16.5 -2.4**
comp=Z,3.8nm,1.0s,baz=231,slow=5.7,SNR=8.9
comp=Z,3.8nm,1.0s
GERES GERESS Array B 80.87 328 P **P** **21 30 19.1 -1.5**
comp=Z,0.1nm,0.4s,baz=119,slow=8.0,SNR=1.9
comp=Z,0.1nm,0.4s
WTTA Wattenberg 80.92 326 *eP* **P** **21 30 22.9 +1.8**
comp=Z,5.0nm,0.9s
WATA Walderalm 81.00 326 *eP* **P** **21 30 23.9 +2.5**
comp=Z,8.4nm,1.6s
DAVOX Davos/Dischmat 81.57 325 LR LR 22 07 14.5
comp=Z,26nm,19.8s,baz=138,slow=36
TUE Stuetta 81.67 325 P **P** **21 30 25.6 +0.5**
TUE IAmb IAmb 21 30 42.7
comp=Z,12nm,1.4s
BNI Bardonecchia 82.35 322 P **P** **21 30 26.3 -2.4**
BNI IAmb IAmb 21 30 38.0
comp=Z,5.3nm,0.9s
SENIN Lac Senin/Sane 82.75 324 P **P** **21 30 30.9 +0.1**
SENIN IAmb IAmb 21 30 39.1
comp=Z,4.3nm,0.8s
CLL Collm 82.82 330 *eP* **P** **21 30 32.0 +1.3**
CLL *eS* **S** **21 40 53.0 +4.8**
CLL *eSS* **SS** **21 46 12.0 +0.5**
CLL *eSSS* SSS 21 50 00.0
CART Cartagena 83.38 313 P **P** **21 30 30.4 -3.5**
MDT Midelt 83.83 307 LR LR 22 06 32.8
comp=Z,70nm,21.2s,baz=136,slow=35
ORCD Orcadas 83.94 208 P **P** **21 30 37.2 +0.8**
FINES FINESS Array B 85.16 342 P **P** **21 30 41.6 -0.8**
comp=Z,1.4nm,1.0s,baz=129,slow=5.7,SNR=2.0
FINES LR LR 22 08 10.5
comp=Z,50nm,18.2s,baz=124,slow=35
comp=Z,1.4nm,1.0s
ESDC Sonseca Array 86.40 314 P **P** **21 30 48.2 -1.0**
comp=Z,2.7nm,1.0s,baz=107,slow=3.6,SNR=14
ESDC LR LR 22 09 13.9
comp=Z,49nm,20.4s,baz=122,slow=36
comp=Z,2.7nm,1.0s
ESDC Sonseca Array 86.40 314 P **P** **21 30 47.8 -1.4**
ESDC IAmb IAmb 21 30 58.0
comp=Z,3.9nm,0.9s
PAB San Pablo 86.61 313 P **P** **21 30 52.1 +1.9**
PAB IAmb IAmb 21 30 59.1
comp=Z,4.8nm,0.8s
MJAR Matsushiro Arr 87.38 50 P **P** **21 30 54.3 +0.3**
comp=Z,5.2nm,0.8s,baz=227,slow=4.9,SNR=1.8
comp=Z,5.2nm,0.8s
MJAR Matsushiro Arr 87.38 50 P **P** **21 30 54.6 +0.6**
MJAR IAmb IAmb 21 30 57.4
comp=Z,7.8nm,1.1s
NRIK Noril'sk 88.50 8 LR LR 22 09 20.9
comp=Z,59nm,19.6s,baz=201,slow=35
PMSA Palmer Station 88.99 199 LR LR 22 05 02.2
comp=Z,40nm,18.6s,baz=140,slow=32
ARCES ARCESS Array B 91.76 347 LR LR 22 14 59.5
comp=Z,40nm,18.4s,baz=166,slow=37
DZM Mont Dzumac 93.06 114 LR LR 22 10 02.3
comp=Z,188nm,20.6s,baz=222,slow=34
YAK Yakutsk 94.32 25 LR LR 22 13 24.5
comp=Z,74nm,19.7s,baz=268,slow=35
URZ Urewera 94.99 133 LR LR 22 07 34.8
comp=Z,51nm,18.6s,baz=211,slow=31
RCBR Riachuelo 98.97 261 LR LR 22 09 47.9
comp=Z,113nm,21.6s,baz=285,slow=31
SPITS Spitsbergen Ar 99.89 351 LR LR 22 17 55.9
comp=Z,34nm,19.6s,baz=56,slow=36
IMAR Indian Mountai 125.57 19 PKPdf **PKPdf** **21 37 06.7 -0.7**
YKA Yellowknife Ar 135.53 0 PKP **PKiKP** **21 37 27.3 -0.6**
comp=Z,0.8nm,1.0s,baz=345,slow=2.0,SNR=3.5
ULM Lac du Bonnet 144.51 339 PKP **PKPdf** **21 37 43.4 +0.4**
comp=Z,1.7nm,0.8s,baz=48,slow=3.1,SNR=1.9
PDAR Pinedale Array 154.93 351 PKPbc **PKiKP** **21 38 10.1 +1.4**
comp=Z,0.3nm,0.5s,baz=76,slow=3.8,SNR=2.6
NVAR Mina Array Bea 159.36 8 PKPab **PKPab** **21 38 44.5 +1.4**
comp=Z,0.7nm,0.6s,baz=354,slow=2.7,SNR=6.3
TXAR Lajitas Array 164.96 321 PKPab **PKPab** **21 39 07.1 -0.7**
comp=Z,0.8nm,0.9s,baz=82,slow=2.0,SNR=4.3

NEIC ***02*** *21:27:22.6±2.2, 19.9°S±0.1°×177.4°W±0.1, h403km±9km, mb4.1/29, Error ellipse: s-maj=17.6km s-min=13.2km az=165.0*

IDC ***02*** *21:27:40.4±17.0, 20.20°S×178.12°W, h596km±222km, mb3.1/6, mbtmp4.1/6, Error ellipse: s-maj=103.8km s-min=72.2km az=132.0*

ISC 02 21:27:22.1±0.6, 20.1°S±0.1°×177.38°W±0.09, h400km, n41, σ1s47/40, mb3.9/17, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.90**	**297**	Pn	**Pn**	**21 28 43.7**	**+0.4**
NIUE	**Niue**	**7.09**	**83**		**P**	**21 29 07.9**	**+0.5**
AFI	**Afiamalu**	**8.12**	**42**	P	**P**	**21 29 19.6**	**+0.6**
MARNC	**Mare, Loyalty**	**13.73**	**261**	P	**Pn**	**21 30 25.9**	**+2.6**
OUENC	**Ouen Island, N**	**14.90**	**258**	P	**P**	**21 30 31.8**	**-1.8**
DZM	**Mont Dzumac**	**15.24**	**260**	P	**P**	**21 30 37.0**	**-0.3**
DZM				IAmb	IAmb	21 30 43.2	
	comp=Z,7.6nm,0.9s						
ONTNC	**Ouen Toro**	**15.25**	**259**	P	**P**	**21 30 36.6**	**-0.7**
OUZ	**Omahuta**	**17.09**	**206**	P	**P**	**21 30 58.4**	**+1.6**
OUZ				IAmb	IAmb	21 31 01.9	
	comp=Z,9.9nm,1.1s						
MXZ	**Matakaoa Point**	**17.85**	**191**	P	**P**	**21 31 06.0**	**+1.1**
KNTN	**Kanton**	**18.04**	**19**	P	**P**	**21 31 06.6**	**-0.5**
BKZ	**Black Stump Fm**	**19.77**	**194**	P	**P**	**21 31 25.3**	**+0.9**
BKZ				IAmb	IAmb	21 31 34.8	
	comp=Z,9.2nm,1.2s						
MSWZ	**Moikau Station**	**22.20**	**195**	P	**P**	**21 31 50.6**	**+4.1**
THZ	**Tophouse**	**23.16**	**199**	P	**P**	**21 31 53.4**	**-1.8**
THZ				IAmb	IAmb	21 31 57.5	
	comp=Z,22nm,1.2s						
LBZ	**Lake Benmore**	**26.39**	**200**	P	**P**	**21 32 23.0**	**-0.9**
LBZ				IAmb	IAmb	21 32 37.0	
	comp=Z,18nm,1.1s						
DCZ	**Deep Cove**	**28.39**	**203**	P	**P**	**21 32 42.9**	**+1.4**
DCZ				IAmb	IAmb	21 33 00.9	
	comp=Z,20nm,1.2s						
EIDS	**Eidsvold**	**29.53**	**254**	P	**P**	**21 32 52.1**	**+0.2**
EIDS				IAmb	IAmb	21 32 58.2	
	comp=Z,8.9nm,1.1s						
CTA	**Charters Tower**	**34.12**	**264**	P	**P**	**21 33 31.7**	**+0.2**
	comp=Z,4.9nm,0.5s,baz=94,slow=10.0,SNR=10						
	comp=Z,4.9nm,0.5s						
CTAO	**Charters Tower**	**34.12**	**264**	P	**P**	**21 33 31.9**	**+0.4**
CTAO				IAmb	IAmb	21 33 32.2	
	comp=Z,5.5nm,0.5s						
STKA	**Stephens Creek**	**38.51**	**244**	P	**P**	**21 34 07.1**	**-1.0**
	comp=Z,0.7nm,0.4s,baz=91,slow=14,SNR=3.7						
	comp=Z,0.7nm,0.4s						
STKA	**Stephens Creek**	**38.51**	**244**	P	**P**	**21 34 07.2**	**-0.9**
BBOO	**Buckleboo**	**43.27**	**243**	P	**P**	**21 34 44.3**	**-2.0**
BBOO				IAmb	IAmb	21 34 47.1	

comp=Z,7.1nm,1.1s
WR0 Warramunga Arr 45.05 261 P P 21 34 59.7 -0.8
AS31 Alice Springs 45.19 256 P P 21 35 00.6 -1.0
AS31 IAmb IAmb 21 35 01.4
comp=Z,1.3nm,0.4s
ASAR Alice Springs 45.19 256 P P 21 35 00.2 -1.3
comp=Z,1.4nm,0.4s,baz=93,slow=7.6,SNR=43
comp=Z,1.4nm,0.4s
WB0 Warramunga Arr 45.22 262 P P 21 35 00.5 -1.3
WB2 Warramunga Arr 45.23 261 P P 21 35 00.5 -1.4
WRAB Tennant Creek 45.24 261 P P 21 35 00.6 -1.3
WRA Warramunga Arr 45.24 261 P P 21 35 00.5 -1.5
comp=Z,1.0nm,0.3s,baz=97,slow=7.5,SNR=92
comp=Z,1.0nm,0.3s
MTN Manton Dam 49.75 270 P P 21 35 35.7 -0.4
MTN IAmb IAmb 21 35 52.1
comp=Z,8.0nm,1.0s
FORT Forrest 50.01 246 P P 21 35 36.3 -1.6
FORT IAmb IAmb 21 35 51.6
comp=Z,13nm,0.9s
PSA00 Pilbara Seismi 58.34 257 P P 21 36 38.0 +0.6
QSPA South Pole Qui 70.02 180 P P 21 37 59.6 +7.9
MDPB Devils Postpil 79.34 43 P P 21 38 44.4 -0.8
I02E Swisshome, OR 80.43 36 P P 21 38 48.9 -1.5
I07A Izee 82.87 38 P P 21 39 02.0 -1.2
I07A IAmb IAmb 21 39 03.3
comp=Z,3.8nm,1.0s
J08A Circle Bar Ran 83.05 39 P P 21 39 05.4 +1.3
J08A IAmb IAmb 21 39 14.5
comp=Z,2.4nm,0.9s
M20K Styx River 83.92 11 P P 21 39 07.6 -0.4
M20K IAmb IAmb 21 39 26.3
comp=Z,0.5nm,0.4s
HIN Hinchinbrook I 83.98 15 P P 21 39 08.8 +0.6
DSPA Despedida 84.67 146 P P 21 39 09.9 -2.1
ILAR Eielson Array 87.75 13 P P 21 39 27.4 +1.1
comp=Z,0.2nm,0.4s,baz=220,slow=5.3,SNR=4.2
comp=Z,0.2nm,0.4s
PDAR Pinedale Array 88.23 43 P P 21 39 32.4 +2.9
comp=Z,0.3nm,0.6s,baz=190,slow=4.6,SNR=2.1
comp=Z,0.3nm,0.6s

IDC 02 21:40:11.9±1.8, 6°86S×128°37E, h0km, mb3.7/1, mbtmp3.4/4, ML3.4/3, Error ellipse: s-maj=62.9km s-min=29.6km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SIJI	**Sorong**	**6.62**	**26**	Pn		Pn	21 41 52.0	+1.4
	0.6nm,0.3s,baz=253,slow=23,SNR=1.3							
SIJI				Sn		Sn	21 42 52.1	-15
	1.5nm,0.3s,baz=281,slow=24,SNR=6.7							
	1.6nm,0.3s							
WRA	**Warramunga Arr**	**14.24**	**157**	Pn		Pn	21 43 35.2	+0.3
	0.2nm,0.3s,baz=342,slow=13,SNR=18							
WRA				Sn		Sn	21 46 00.3	-13
	0.2nm,0.3s,baz=336,slow=24,SNR=2.4							
	0.3nm,0.7s							
ASAR	**Alice Springs**	**17.54**	**163**	P		Pn	21 44 18.0	0.0
	0.1nm,0.3s,baz=346,slow=10,SNR=7.9							
	0.4nm,0.6s							
MKAR	**Makanchi Array**	**67.23**	**328**	P		P	21 51 07.8	-0.3
	0.4nm,0.5s,baz=111,slow=8.2,SNR=5.7							
	0.4nm,0.5s							

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*IDC **02** 21:45:18.0±1.7, 18°12S×169°08E, h0km, mb3.7/3, mbtmp3.7/5, ML5.0/1, MS3.1/1, Error ellipse: s-maj=43.7km s-min=28.5km az=146.0*
*NEIC **02** 21:45:23.6±1.6, 18°25S±0°1×169°25E±0°09, h35km±2km, mb4.5/10, Error ellipse: s-maj=20.2km s-min=12.1km az=154.0*
ISC 02 21:45:22.9±0.9, 18°21S±0°09×169°23E±0°09, h35km, n22, σ0§72/25, mb4.3/9, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**3.45**	**199**	Pn		**Pn**	**21 46 13.7**	**-0.4**
MARNC				Sn		**Sn**	**21 46 53.8**	**0.0**
DZM	**Mont Dzumac**	**4.65**	**214**	Pn		**Pn**	**21 46 30.5**	**-0.3**
	8.7nm,0.7s,baz=47,slow=15,SNR=7.2							
DZM				Sn		**Sn**	**21 47 23.6**	**-0.1**
	3.1nm,0.3s,baz=325,slow=22,SNR=7.9							
DZM				LR		LR	21 48 02.2	
	comp=Z,187nm,19.3s,baz=50,slow=35							
PINNC	**Pines Island,**	**4.69**	**201**	Pn		**Pn**	**21 46 31.7**	**+0.4**
PINNC				Sn		**Sn**	**21 47 24.8**	**+0.3**
OUENC	**Ouen Island, N**	**4.75**	**208**	Pn		**Pn**	**21 46 31.2**	**-1.0**
ONTNC	**Ouen Toro**	**4.84**	**212**	Pn		**Pn**	**21 46 33.1**	**-0.2**
KOUNC	**Koumac, New Ca**	**5.22**	**243**	Pn		**Pn**	**21 46 39.1**	**+0.6**
MSVF	**Nonsavu**	**8.41**	**88**	Pn		**Pn**	**21 47 23.0**	**+0.6**
	0.7nm,0.3s,baz=270,slow=20,SNR=4.0							
	2.4nm,0.4s							
MSVF	**Nonsavu**	**8.41**	**88**			**Pn**	**21 47 21.9**	**-0.5**
THZ	**Tophouse**	**23.69**	**173**	P		**P**	**21 50 31.9**	**+0.4**
THZ				IAmb		IAmb	21 50 36.1	
	comp=Z,17nm,1.1s							
OXZ	**Oxford**	**25.15**	**175**	P		**P**	**21 50 45.5**	**+0.6**
OXZ				IAmb		IAmb	21 50 46.4	
	comp=Z,13nm,0.6s							
WB0	**Warramunga Arr**	**32.95**	**262**	P		**P**	**21 51 54.1**	**-0.4**
WB2	**Warramunga Arr**	**32.98**	**261**	P		**P**	**21 51 55.2**	**+0.4**
WB2				IAmb		IAmb	21 51 55.6	
	comp=Z,6.4nm,1.4s							
WRAB	**Tennant Creek**	**32.98**	**261**	P		**P**	**21 51 56.8**	**+2.0**
WRAB				IAmb		IAmb	21 52 10.3	
	comp=Z,7.2nm,1.5s							
WRA	**Warramunga Arr**	**32.99**	**261**	P		**P**	**21 51 53.8**	**-1.1**
	comp=Z,0.4nm,0.8s,baz=92,slow=9.4,SNR=4.7							
	comp=Z,0.4nm,0.8s							
BBOO	**Buckleboo**	**33.12**	**237**	P		**P**	**21 51 56.2**	**+0.3**
AS31	**Alice Springs**	**33.38**	**254**	P		**P**	**21 51 58.0**	**-0.3**
ASAR	**Alice Springs**	**33.38**	**254**	P		**P**	**21 51 57.3**	**-1.0**
	comp=Z,2.4nm,0.8s,baz=82,slow=9.0,SNR=20							
	comp=Z,2.4nm,0.8s							
ASAR	**Alice Springs**	**33.38**	**254**	P		**P**	**21 51 57.6**	**-0.7**
KNRA	**Kununurra**	**38.74**	**267**	P		**P**	**21 52 43.2**	**-0.9**
KNRA				IAmb		IAmb	21 52 57.4	
	comp=Z,10nm,1.3s							
FAKI	**Fak Fak**	**39.28**	**288**	P		**P**	**21 52 48.5**	**-0.2**
FAKI				IAmb		IAmb	21 52 57.2	
	comp=Z,18nm,1.2s							
FORT	**Forrest**	**39.29**	**243**	P		**P**	**21 52 49.0**	**+0.4**
SONM	**Songino Array**	**86.39**	**323**	P		**P**	**21 58 01.6**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=138,slow=5.0,SNR=4.0							
	comp=Z,0.4nm,0.6s							

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*IDC **02** 22:10:57.4±0.8, 0°52S×120°25E, h0km, mb4.0/7, mbtmp4.1/8, ML4.5/1, MS3.3/7, Error ellipse: s-maj=51.9km s-min=14.7km az=66.0*
*DJA **02** 22:11:00.5±0.2, 1°S±2°×12°0E±°, h10km, M4.4/13, mb4.6/3, mB5.4/2, MLv4.3/13, Mw(mB)4.8/2*
*NEIC **02** 22:11:05.3±1.8, 0°63S±0°03×120°10E±0°06, h60km±8km, mb4.4/27, Error ellipse: s-maj=9.9km s-min=1.8km az=110.0*
ISC 02 22:11:03.4±0.5, 0°58S±0°04×119°94E±0°05, h45km, n66, σ1§37/65, mb4.3/22, MS3.4/5, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MPSI	**Mapaga**	**0.91**	**357**	P		**Pn**	**22 11 17.3**	**-2.5**
MPSI				S		**Sn**	**22 11 30.4**	**-1.4**
APSI	**Ampana**	**1.74**	**101**	P		**Pn**	**22 11 30.8**	**-0.4**
APSI				S		**Sn**	**22 11 54.3**	**+2.1**
TOLI2	**Tolitoli**	**1.88**	**27**			**Pn**	**22 11 33.4**	**+0.4**
TOLI2				Sn		**Sn**	**22 11 56.8**	**+1.3**
MRSI	**Marisa**	**2.26**	**62**	P		**Pn**	**22 11 38.2**	**-0.1**
MRSI				S		**Sn**	**22 12 07.0**	**+2.1**
TTSI	**Tana Toraja**	**2.46**	**183**	P		**Pn**	**22 11 40.7**	**-0.3**
LUWI	**Luwuk**	**2.87**	**99**	Pn		**Pn**	**22 11 45.3**	**-1.4**
LUWI	**Luwuk**	**2.87**	**99**	P		**Pn**	**22 11 47.5**	**+0.8**
BKB	**Balikpapan**	**3.12**	**257**	Pn		**Pn**	**22 11 53.1**	**+3.0**
BKB	**Balikpapan**	**3.12**	**257**	P		**Pn**	**22 11 48.1**	**-2.0**
SPSI	**Sidrap Palu**	**3.37**	**183**	P		**Pn**	**22 11 52.4**	**-1.2**
BNSI	**Bone**	**3.80**	**177**	P		**Pn**	**22 11 59.0**	**-0.5**
KMSI	**Cibinong**	**4.20**	**74**	P		**Pn**	**22 12 06.9**	**+1.9**
KAPI	**Kappang**	**4.41**	**182**	Pn		**Pn**	**22 12 07.2**	**-0.7**
	22nm,0.3s,baz=335,slow=7.6,SNR=32							
KAPI				Sn		**Sn**	**22 13 01.1**	**+3.1**
	5.5nm,0.3s,baz=185,slow=21,SNR=5.7							
KAPI				LR		LR	22 13 42.4	
	comp=Z,86nm,18.5s,baz=338,slow=37							
	96nm,0.5s							
KAPI	**Kappang**	**4.41**	**182**			**Pn**	**22 12 07.6**	**-0.3**
BKSI	**Bulukumba**	**4.72**	**178**	P		**Pn**	**22 12 11.6**	**-0.5**
MTKI	**Muara Teweh, K**	**5.06**	**266**	P		**Pn**	**22 12 15.7**	**-1.0**
BSSI	**Bau Bau, Buton**	**5.56**	**174**	P		**Pn**	**22 12 22.5**	**-1.1**
	0.2nm54nm,1.3s							
MYLDM	**Lahad Datu**	**5.90**	**346**			**Pn**	**22 12 31.2**	**+2.9**
SANI	**Sanana**	**6.22**	**104**	P		**Pn**	**22 12 30.0**	**-2.7**
DAV	**Davao City (W)**	**9.45**	**36**	LR		LR	22 16 53.6	
	comp=Z,114nm,20.1s,baz=239,slow=39							
WB0	**Warramunga Arr**	**23.75**	**144**	P		**P**	**22 16 10.5**	**-1.3**
WRAB	**Tennant Creek**	**23.86**	**145**	P		**P**	**22 16 11.9**	**-0.9**
WRAB				IAmb		IAmb	22 16 27.2	
	comp=Z,12nm,1.4s							
WRA	**Warramunga Arr**	**23.86**	**145**	P		**P**	**22 16 10.8**	**-2.0**
	comp=Z,2.1nm,0.9s,baz=324,slow=11,SNR=13							
	comp=Z,2.1nm,0.9s							
WB2	**Warramunga Arr**	**23.86**	**145**	P		**P**	**22 16 12.2**	**-0.7**
WR0	**Warramunga Arr**	**23.99**	**144**	P		**P**	**22 16 13.0**	**-1.0**
ASAR	**Alice Springs**	**26.65**	**150**	P		**P**	**22 16 37.6**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=321,slow=8.2,SNR=14							
ASAR				PcP		**PcP**	**22 20 00.2**	**-1.2**
	comp=Z,0.2nm,0.5s,baz=336,slow=1.8,SNR=1.9							
	comp=Z,0.8nm,0.6s							
ASAR	**Alice Springs**	**26.65**	**150**	P		**P**	**22 16 37.4**	**-0.8**
CMAR	**Chiang Mai Arr**	**28.00**	**314**	P		**P**	**22 16 52.1**	**+1.9**
	comp=Z,0.8nm,0.3s,baz=138,slow=7.7,SNR=5.5							
	comp=Z,0.8nm,0.3s							
JNU	**Nakatsue**	**35.07**	**16**	LR		LR	22 34 26.5	
	comp=Z,130nm,19.0s,baz=228,slow=40							
STKA	**Stephens Creek**	**37.26**	**149**	P		**P**	**22 18 10.9**	**-0.1**
	comp=Z,1.9nm,0.7s,baz=330,slow=11,SNR=4.5							
	comp=Z,1.9nm,0.7s							
STKA	**Stephens Creek**	**37.26**	**149**	P		**P**	**22 18 10.1**	**-0.9**
SHL	**Shillong**	**37.56**	**316**	P		**P**	**22 18 14.5**	**+0.7**
SHL				IAmb		IAmb	22 18 15.3	
	comp=Z,3.7nm,0.8s							
JHJ	**Hachijo jima 2**	**38.38**	**27**	LR		LR	22 33 26.7	
	comp=Z,43nm,18.8s,baz=184,slow=35							
KSAR	**Wonju Array Be**	**38.54**	**10**	P		**P**	**22 18 22.4**	**+0.7**
INU	**Inuyama**	**39.14**	**22**	P		**P**	**22 18 27.1**	**+0.4**
INU				IAmb		IAmb	22 18 39.6	
	comp=Z,6.7nm,1.1s							
BJT	**Baijiatuan**	**40.55**	**356**	P		**P**	**22 18 39.1**	**+0.7**
BJT				IAmb		IAmb	22 18 41.8	
	comp=Z,7.2nm,1.1s							
ASAJ	**Asahikawa**	**48.87**	**22**	LR		LR	22 41 22.1	
	comp=Z,26nm,19.5s,baz=218,slow=38							
ULN	**Ulaanbaatar**	**49.53**	**349**	P		**P**	**22 19 51.1**	**+1.2**
ULN				IAmb		IAmb	22 19 52.7	
	comp=Z,2.3nm,0.8s							
SONM	**Songino Array**	**49.64**	**348**	P		**P**	**22 19 52.0**	**+1.4**
	comp=Z,1.3nm,0.6s,baz=168,slow=8.6,SNR=13							
	comp=Z,1.3nm,0.6s							
SONM	**Songino Array**	**49.64**	**348**	P		**P**	**22 19 52.0**	**+1.4**
HIA	**Hailar**	**49.65**	**360**	P		**P**	**22 19 48.8**	**-1.7**
ONTNC	**Ouen Toro**	**50.13**	**119**	P		P	22 19 49.3	-5.4
KSH	**Kashi**	**56.61**	**320**	P		**P**	**22 20 44.7**	**+2.6**
KSH				pmax		pmax		
	comp=Z,5.0nm,0.6s							
PRZ	**Przheval'sk**	**56.84**	**324**	P		**P**	**22 20 44.7**	**+0.9**
PRZ				IAmb		IAmb	22 20 47.0	
	comp=Z,4.5nm,0.7s							
KDJ	**Kajisay**	**57.35**	**323**	P		**P**	**22 20 47.7**	**+0.3**
KDJ				IAmb		IAmb	22 20 50.8	
	comp=Z,1.9nm,0.7s							
MK31	**Makanchi Array**	**57.54**	**330**	P		**P**	**22 20 49.0**	**+0.6**
MKAR	**Makanchi Array**	**57.54**	**330**	P		**P**	**22 20 49.7**	**+1.3**
	comp=Z,2.1nm,0.9s,baz=131,slow=7.9,SNR=14							
	comp=Z,2.1nm,0.9s							
MKAR	**Makanchi Array**	**57.54**	**330**	P		**P**	**22 20 49.6**	**+1.2**
MAKZ	**Makanchi**	**57.71**	**330**	P		**P**	**22 20 49.8**	**+0.2**
MAKZ				IAmb		IAmb	22 20 50.4	
	comp=Z,3.7nm,1.2s							
BOOM	**Boomskoye usch**	**58.31**	**323**	P		**P**	**22 20 54.0**	**-0.1**
BOOM				IAmb		IAmb	22 20 56.3	
	comp=Z,1.2nm,0.7s							
KBL	**Kabul**	**59.00**	**312**	P		**P**	**22 20 58.5**	**-0.6**
KBL				IAmb		IAmb	22 21 00.3	
	comp=Z,5.1nm,0.7s							
OUZ	**Omahuta**	**60.60**	**131**	P		**P**	**22 21 08.7**	**-1.1**
CHGR	**Chuyangaron**	**60.74**	**316**	P		**P**	**22 21 10.7**	**-0.1**
CHGR				IAmb		IAmb	22 21 11.9	
	comp=Z,4.8nm,0.6s							
MLZ	**Mavora Lakes**	**61.50**	**143**	P		**P**	**22 21 15.3**	**-0.5**
ZAA0	**Zalesovo Array**	**61.61**	**337**	P		**P**	**22 21 16.5**	**+0.2**
ZAA0				IAmb		IAmb	22 21 17.9	
	comp=Z,1.9nm,0.6s							
ZALV	**Zalesovo Beam**	**61.61**	**337**	P		**P**	**22 21 15.9**	**-0.4**
	comp=Z,1.6nm,0.6s,baz=121,slow=6.6,SNR=7.4							
	comp=Z,1.6nm,0.6s							
ZALV	**Zalesovo Beam**	**61.61**	**337**	P		**P**	**22 21 16.5**	**+0.2**
KURK	**Kurchatov**	**61.98**	**332**	P		**P**	**22 21 19.3**	**+0.5**
KURK				IAmb		IAmb	22 21 21.0	
	comp=Z,4.7nm,0.8s							
KKAR	**Karatay Array**	**62.00**	**321**	P		**P**	**22 21 20.1**	**+1.0**
PLWZ	**Palliser**	**64.31**	**137**	P		**P**	**22 21 34.5**	**0.0**
SOCY	**Socotra**	**66.65**	**283**	P		**P**	**22 21 49.7**	**-0.5**
BRVK	**Borovoye**	**67.50**	**330**	P		**P**	**22 21 55.1**	**+0.5**
BRVK				IAmb		IAmb	22 21 56.3	
	comp=Z,2.0nm,0.7s							
NIUE	**Niue**	**71.06**	**110**	P		**P**	**22 22 14.6**	**-2.8**
ABKAR	**Akbulak array**	**71.33**	**323**	P		**P**	**22 22 19.0**	**+0.5**
MLR	**Muntele Rosu**	**93.22**	**315**	LR		LR	23 15 34.6	
	comp=Z,41nm,18.1s,baz=75,slow=42							
IDI	**Anoyia**	**94.46**	**305**	LR		LR	23 12 09.2	
	comp=Z,16nm,21.9s,baz=88,slow=39							

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*GII **02** 22:29:30.6±0.0, 35°98N×31°11E, h10km, Mm2.7/6*
*IDC **02** 22:29:31.5±1.4, 36°21N×30°93E, h0km, mb3.4/2, mbtmp3.4/7, ML3.3/5, Error ellipse: s-maj=23.1km s-min=21.6km az=75.0*
*ISK **02** 22:29:33.3, 35°95N×31°12E, h9km, ML3.1/29*
*NIC **02** 22:29:34.8±0.0, 35°93N×31°08E, h16km±4km, Ml3.3/6*
*DDA **02** 22:29:36.3±0.0, 36°03N×31°13E, h17km, ML3.2*
*THE **02** 22:29:39.0, 35°98N×30°87E, h17km±33km, ML2.9/4, Error ellipse: s-maj=41.8km s-min=3.0km az=101.0*
ISC 02 22:29:33.8±1.2, 35°93N±0°03×31°09E±0°02, h18km±9km, n110, σ1§71/148, Cyprus region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AKUM	**Antalya-Kumluc**	**0.72**	**303**	P		**Pg**	**22 29 50.1**	**+2.1**
AKUM				S		**Sn**	**22 30 02.5**	**+2.8**
ANTB	**Antalya**	**1.03**	**340**	PG		**Pg**	**22 29 53.2**	**-0.6**
ANTB				SG		**Sg**	**22 30 07.9**	**+0.5**
GAZI	**Gazipasa**	**1.04**	**72**	PG		**Pg**	**22 29 53.5**	**-0.4**
GAZI				SG		**Sg**	**22 30 07.0**	**-0.5**
GAZI	**Gazipasa**	**1.04**	**72**	P		**Pg**	**22 29 53.7**	**-0.2**
GAZI				S		**Sg**	**22 30 06.2**	**-1.3**
GAZI				*i*	AML	AML	22 30 07.0	
	comp=E,1000nm,0.9s							
GAZI				*i*	AML	AML	22 30 08.0	
	comp=N,517nm,0.5s							
KEPZ	**Antalya-Kepez**	**1.06**	**23**	P		**Pg**	**22 29 53.4**	**-0.9**
KEPZ				S		**Sg**	**22 30 05.9**	**-2.3**
KEPZ				*i*	AML	AML	22 30 08.0	
	comp=N,493nm,0.5s							
KORT	**Korkueli**	**1.23**	**331**	PN		**Pn**	**22 29 57.2**	**+1.0**
KORT				SN		**Sb**	**22 30 14.5**	**+2.4**
KORT	**Korkueli**	**1.23**	**331**	P		**Pn**	**22 29 56.8**	**+0.7**
AKAS	**Kas**	**1.24**	**285**	PN		**Pn**	**22 29 57.6**	**+1.3**
AKAS	**Kas**	**1.24**	**285**	P		**Pn**	**22 29 57.7**	**+1.3**
ELL	**Elmali**	**1.26**	**311**	PN		**Pn**	**22 29 57.8**	**+1.2**
ELL				SN		**Sb**	**22 30 15.3**	**+2.3**
ELL	**Elmali**	**1.26**	**311**	P		**Pn**	**22 29 57.7**	**+1.2**
ELL				S		**Sb**	**22 30 15.0**	**+2.0**
AKMS	**Akamas**	**1.36**	**131**	P		**Pn**	**22 29 59.9**	**+2.0**
AKMS				S		**Sn**	**22 30 19.3**	**+3.8**
AKMS				AML		AML	22 30 25.3	
	1.1nm,0.7s							
AKMS				AML		AML	22 30 25.3	
	1.1nm,0.7s							
AKMS				AML		AML	22 30 27.5	
	1.9nm,0.3s							
AKMS				AML		AML	22 30 27.5	
	1.9nm,0.3s							
ALFC	**Alefka**	**1.45**	**122**	P		**Pn**	**22 30 00.2**	**+1.1**
ALFC				S		**Sn**	**22 30 19.5**	**+1.8**
ALFC				AML		AML	22 30 31.9	
	1.2nm,0.6s							
ALFC				AML		AML	22 30 31.9	
	1.0nm,0.3s							
ALFC				AML		AML	22 30 31.9	
	1.0nm,0.3s							
BUCA	**Burdur, Bucak-**	**1.46**	**343**	P		**Pn**	**22 30 01.3**	**+1.9**
HDMB	**Hadim**	**1.53**	**47**	PN		**Pn**	**22 30 01.3**	**+0.9**
SUTC	**Sutluce-Ispart**	**1.55**	**357**	PN		**Pn**	**22 30 01.2**	**+0.6**
SEYD	**Seydisehir-KON**	**1.59**	**22**	PN		**Pn**	**22 30 02.1**	**+0.9**
SEDI	**Konya, Seydise**	**1.61**	**19**	P		**Pn**	**22 30 02.3**	**+0.9**
SEDI				S		**Sn**	**22 30 21.2**	**-0.6**
ERMK	**Ermenek**	**1.63**	**64**	P		**Pn**	**22 30 03.2**	**+1.4**
ERMK				S		**Sn**	**22 30 23.5**	**+1.1**
ERMK				*i*	AML	AML	22 30 32.0	
	comp=E,260nm,0.4s							
ERMK				*i*	AML	AML	22 30 33.0	
	comp=N,299nm,0.7s							
TEKE	**Tekeli-Mersin**	**1.65**	**82**	PN		**Pn**	**22 30 03.2**	**+1.3**
LEF	**Lefka**	**1.67**	**118**	PN		**Pn**	**22 30 02.9**	**+0.8**
LEF	**Lefka**	**1.67**	**118**	P		**Pn**	**22 30 03.5**	**+1.4**
CAME	**Cameli-Denizli**	**1.76**	**306**	PN		**Pn**	**22 30 04.9**	**+1.3**
FETY	**Fethiye**	**1.77**	**294**	PN		**Pn**	**22 30 05.0**	**+1.5**
FETY	**Fethiye**	**1.77**	**294**	P		**Pn**	**22 30 06.2**	**+2.7**
BERE	**Bereket-Mersin**	**1.77**	**76**	PN		**Pn**	**22 30 04.9**	**+1.2**
GOLH	**Golhisar**	**1.80**	**317**	P		**Pn**	**22 30 06.1**	**+2.1**
GOLH				S		**Sn**	**22 30 28.6**	**+2.2**
CAEL	**Denizli, Camel**	**1.86**	**310**	P		**Pn**	**22 30 06.8**	**+1.9**
ISP	**Isparta**	**1.95**	**347**	Pn		Pn	22 30 03.1	-2.9
KKBE	**Karaman, Kazim**	**1.97**	**49**	P		**Pn**	**22 30 09.2**	**+2.9**
KKBE				S		**Sn**	**22 30 32.2**	**+1.6**
KKBE				*i*	AML	AML	22 30 36.0	
	comp=N,243nm,1.0s							
TEVE	**Tevekalti-Mers**	**1.97**	**74**	PN		**Pn**	**22 30 07.6**	**+1.3**
AKK1	**Akkuyu-Mersin**	**2.00**	**83**	PN		**Pn**	**22 30 07.9**	**+1.3**
AKK2	**Akkuyu-Mersin**	**2.00**	**83**	PN		**Pn**	**22 30 08.1**	**+1.5**
GULN	**MERSIN_Gulnar**	**2.00**	**82**	P		**Pn**	**22 30 08.5**	**+1.9**
GULN				S		**Sn**	**22 30 32.9**	**+1.6**
GULN				*i*	AML	AML	22 30 34.0	
	comp=N,178nm,0.5s							
GULN				*i*	AML	AML	22 30 35.0	
	comp=E,197nm,0.6s							
AKKU	**Akkuyu-Mersin**	**2.00**	**83**	PN		**Pn**	**22 30 08.1**	**+1.4**
CSS	**Mathiatis**	**2.06**	**117**	P		**Pn**	**22 30 08.3**	**+0.8**
CSS				S		**Sn**	**22 30 36.2**	**+3.3**
CSS	**Mathiatis**	**2.06**	**117**	Pn		**Pn**	**22 30 07.5**	**-0.1**
BAGO	**Egridir - ISPA**	**2.07**	**353**	P		**Pn**	**22 30 08.8**	**+1.1**
BAGO				S		**Sn**	**22 30 33.7**	**+0.5**
KMER	**Konya-Meram**	**2.10**	**29**	P		**Pn**	**22 30 09.7**	**+1.5**
KMER				S		**Sn**	**22 30 34.4**	**+0.5**
TISA	**Tisan-Mersin**	**2.11**	**83**	PN		**Pn**	**22 30 09.7**	**+1.6**
APMY	**Acipayam-Deniz**	**2.11**	**317**	PN		**Pn**	**22 30 09.9**	**+1.7**
KARG	**Kargicak-Mersi**	**2.14**	**82**	P		**Pn**	**22 30 10.1**	**+1.6**
KRMN	**Karaman**	**2.15**	**54**	PN		**Pn**	**22 30 10.1**	**+1.4**
BASM	**Basmaki-Afyon**	**2.16**	**338**	PN		**Pn**	**22 30 10.3**	**+1.4**
DALY	**Dalyan (Mula)**	**2.16**	**295**	PN		**Pn**	**22 30 10.1**	**+1.3**
DOGA	**KONYA_Doganhis**	**2.22**	**12**	P		**Pn**	**22 30 11.5**	**+1.6**
KONT	**Konya--Tatoy**	**2.25**	**26**	PN		**Pn**	**22 30 11.5**	**+1.3**
KONT	**Konya--Tatoy**	**2.25**	**26**	P		**Pn**	**22 30 11.6**	**+1.3**
TAVA	**DENIZLI_Tavas**	**2.33**	**312**	P		**Pn**	**22 30 12.3**	**+1.1**
TAVA				*i*	AML	AML	22 30 57.0	
	comp=N,119nm,1.4s							
YVAC	**Isparta, Yalva**	**2.34**	**3**	P		**Pn**	**22 30 12.9**	**+1.4**
ARG	**Arkhangelos**	**2.42**	**278**	P		**Pn**	**22 30 13.5**	**+1.1**
ARG				S		**Sn**	**22 30 39.8**	**-1.8**
	52nm,0.3s							
ARG	**Arkhangelos**	**2.42**	**278**	PN		**Pn**	**22 30 12.9**	**+0.5**
ARG	**Arkhangelos**	**2.42**	**278**	S		**Sn**	**22 30 41.7**	**+0.2**
OSC1	**CSNet OBS 1**	**2.43**	**176**	S		**Sn**	**22 30 44.4**	**+2.7**
KZIL	**AFYON_Kizioren**	**2.45**	**342**	P		**Pn**	**22 30 14.3**	**+1.4**
KZIL				S		**Sn**	**22 30 42.2**	**-0.2**
TURN	**Turunc**	**2.45**	**291**	PN		**Pn**	**22 30 14.7**	**+1.9**
TURN	**Turunc**	**2.45**	**291**	P		**Pn**	**22 30 13.1**	**+0.3**
TURN				S		**Sn**	**22 30 39.4**	**-2.9**
LADK	**Ladik-KONYA**	**2.49**	**24**	PN		**Pn**	**22 30 14.4**	**+1.0**
EREN	**Erenkoy**	**2.54**	**98**	P		**Pn**	**22 30 16.3**	**+2.3**
EREN				S		**Sn**	**22 30 44.4**	**0.0**
EREN				*i*	AML	AML	22 30 52.0	
	comp=E,132nm,0.5s							
EREN				*i*	AML	AML	22 30 59.0	
	comp=N,90nm,0.7s							
YER	**Yerkesik**	**2.56**	**299**	P		**Pn**	**22 30 16.3**	**+1.8**
YER				S		**Sn**	**22 30 43.9**	**-1.3**
YER	**Yerkesik**	**2.56**	**299**	PN		**Pn**	**22 30 16.3**	**+1.8**
SHUT	**Suhut-Afyon**	**2.66**	**351**	PN		**Pn**	**

0.3nm,0.3s,baz=333,slow=9.7,SNR=2.5
ASF Sn **Sn** **22 32 19.9 +7.4**
0.2nm,0.3s,baz=154,slow=20,SNR=1.4
0.8nm,0.3s
PRNI Paran 6.46 148 Pn **Pn** **22 31 06.9 -1.0**
KRMI Paran Flat 6.55 151 Pn **Pn** **22 31 07.8 -1.4**
KRMI Sn **Sn** **22 32 23.5 +0.1**
HRFI Mount Harif 6.74 149 Sn **Sn** **22 32 27.8 -0.5**
MBRI Mt Berech 6.91 151 Pn **Pn** **22 31 12.5 -1.7**
MBRI Sn **Sn** **22 32 32.4 0.0**
EIL Elat 7.03 151 Pn **Pn** **22 31 18.5 +2.7**
0.3nm,0.3s,baz=330,slow=14,SNR=2.2
EIL Sn **Sn** **22 32 34.5 -0.8**
0.4nm,0.3s,baz=288,slow=12,SNR=2.4
2.3nm,0.6s
EIL Elat 7.03 151 Pn **Pn** **22 31 14.8 -1.1**
FINES FINESS Array B 25.73 354 P **P** **22 34 59.1 -3.8**
0.5nm,0.5s,baz=153,slow=9.8,SNR=5.8
0.5nm,0.5s
ESDC Sonseca Array 27.84 288 P **P** **22 35 20.9 -1.3**
0.3nm,0.7s,baz=82,slow=9.2,SNR=2.7
0.3nm,0.7s

TUL ***02*** *22:41:15.5±0.4, 36˚.14N±0˚.01×97˚.82W±0˚.01, h6km±1km, ML2.7, mb_Lg2.4/35(NEIC), Error ellipse: s-maj=2.0km s-min=1.4km az=221.0*

NEIC 02 22:41:16.1±0.4, 36˚.136N±0˚.010×97˚.824W±0˚.009, h5km±4km, Error ellipse: s-maj=1.6km s-min=0.9km az=148.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKCFA	**Oklahoma City**	**0.78**	**157**	Pg	Pg	22 41 29.9	-1.2
OKCFA				IAmb_Lg		22 41 41.4	
	comp=Z,32nm,1.0s						
OKCSW	**OKLAHOMA CITY**	**0.79**	**157**	Pg	Pg	22 41 30.3	-1.0
FNO	**Franklin**	**0.94**	**158**	Pg	Pg	22 41 33.2	-1.0
U32A	**Winter Ranch,**	**0.98**	**285**	Pg	Pg	22 41 34.2	-0.7
T35A	**Sooner Cattle**	**1.31**	**53**	Pg	Pn	22 41 39.8	-1.4
X34A	**Smith Ranch, M**	**1.53**	**180**		Pn	22 41 44.3	+0.1
WMOK	**Wichita Mounta**	**1.60**	**210**		Pn	22 41 44.2	-0.9
TUL1	**Leonard**	**1.66**	**97**	Pn	Pn	22 41 45.0	-1.0
TUL1				IAmb_Lg		22 42 09.7	
	comp=Z,25nm,0.9s						
R32A	**Long Quarter,**	**2.39**	**343**	Pn	Pn	22 41 54.8	-1.2
X37A	**Clayton**	**2.53**	**127**	Pn	Pn	22 41 57.3	-0.6
X37A				IAmb_Lg		22 42 38.8	
	comp=Z,13nm,0.8s						
Z35A	**Perchaven, San**	**2.84**	**170**	Pn	Pn	22 42 00.9	-1.2
Z38A	**Mt. Pleasant**	**3.70**	**140**	IAmb_Lg		22 43 18.6	
	comp=Z,13nm,0.7s						
MIAR	**Mount Ida**	**3.82**	**113**	Pn	Pn	22 42 15.4	-0.2
MIAR				IAmb_Lg		22 43 26.1	
	comp=Z,8.9nm,0.8s						
S39A	**Bolivar**	**3.93**	**65**	Pn	Pn	22 42 16.5	-0.6
S39A				Pg	Pb	22 42 26.6	+0.8
U40A	**Yellville**	**4.02**	**85**	Pg	Pb	22 42 28.5	+1.0
WLAR	**White Oak Lake**	**4.58**	**121**	IAmb_Lg		22 43 46.7	
	comp=Z,8.1nm,0.7s						
MGMO	**Mountain Grove**	**4.58**	**76**	IAmb_Lg		22 43 51.7	
	comp=Z,7.7nm,0.8s						
FCAR	**Ozark Folk Cen**	**4.63**	**91**	IAmb_Lg		22 43 50.1	
	comp=Z,6.7nm,0.8s						
W41B	**Gary Mavity, V**	**4.64**	**100**	IAmb_Lg		22 43 54.1	
	comp=Z,6.2nm,0.7s						
KSCO	**Kaye Shedlock'**	**4.77**	**308**	IAmb_Lg		22 43 55.1	
	comp=Z,8.9nm,0.7s						
P38A	**Dawn**	**4.86**	**43**	IAmb_Lg		22 43 54.8	
	comp=Z,6.9nm,0.8s						
R40A	**Maddies Statio**	**4.93**	**62**	Pn	Pn	22 42 30.1	-0.8
T25A	**Trinidad**	**5.39**	**283**	IAmb_Lg		22 44 09.2	
	comp=Z,8.3nm,0.8s						
CCM	**Cathedral Cave**	**5.60**	**68**	IAmb_Lg		22 44 18.5	
	comp=Z,4.7nm,0.8s						
P40A	**Paris**	**5.69**	**52**	Pn	Pn	22 42 40.0	-1.3
OGNE	**Ogallala**	**5.83**	**327**	Pn	Pn	22 42 41.6	-1.7
OGNE				IAmb_Lg		22 44 28.2	
	comp=Z,9.6nm,0.8s						
PBMO	**Poplar Bluff**	**5.99**	**82**	IAmb_Lg		22 44 30.5	
	comp=Z,8.4nm,0.7s						
S44A	**Carbondale**	**7.04**	**75**	IAmb_Lg		22 44 59.9	
	comp=Z,6.4nm,0.8s						
N41A	**Harden Midland**	**7.12**	**48**	IAmb_Lg		22 45 04.9	
	comp=Z,8.3nm,0.9s						
N23A	**Red Feather La**	**7.94**	**309**	IAmb_Lg		22 45 41.2	
	comp=Z,3.6nm,0.8s						

IDC ***02*** *22:41:27.6±0.5, 12˚.84N×58˚.09E, h0km, mb4.2/27, mbtmp4.2/28, ML4.5/1, MS3.7/43, Error ellipse: s-maj=14.1km s-min=12.4km az=133.0*

NEIC ***02*** *22:41:29.3±2.1, 12˚.77N±0˚.05×58˚.01E±0˚.07, h10km±1km, mb4.6/97, Error ellipse: s-maj=12.2km s-min=8.9km az=89.0*

GCMT ***02*** *22:41:29.3±0.4, 12˚.93N±0˚.02×57˚.83E±0˚.04, h14km±1km, MW4.7/75, Moment Tensor Solution. s15,c17; s75,c107; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=1.36±.13; $M_{\theta\theta}$=1.29±.09; $M_{\phi\phi}$=0.06±.07; $M_{r\theta}$=0.75±.17; $M_{\theta\phi}$=-0.26±.04; $M_{r\phi}$=0.28±.21; Best double couple: M_0=1.56900×10^{16} NP1:ϕs=115.00000°, δ33.00000°, λ=-66.00000°. NP2: ϕs=266.00000°, δ60.00000°, λ=-105.00000°. Principal axes: T 1.5100, Plg14.0000°, Azm7.0000°; N 0.1140, Plg13.0000°, Azm274.0000°; P -1.6270, Plg71.0000°, Azm143.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

OMAN ***02*** *22:41:31.8±0.8, 12˚.92N×58˚.36E, h33km, mb4.5/25, ms3.6/23 Error ellipse: s-maj=16.3km s-min=4.4km az=107.0*

DSN ***02*** *22:41:37.3±1.6, 13˚.29N×56˚.97E, h10km, mb5.2/3, Error ellipse: s-maj=26.5km s-min=16.3km az=109.0*

ISC 02 22:41:29.8±0.4, 12.87N±0.06×58.05E±0.05, h16km, n294, σ1s25/285, mb4.6/89, MS3.8/47, 27C-6D, Fault plane solution: NP1:ϕs180.09183°, δ30.38481°, λ0.80521°. **NP2:**ϕs89.39720°, δ89.59273°, λ120.38234°. **Principal axes:** T Plg37.9527°, Azm26.3688°; N Plg30.3815°, Azm269.1584°; P Plg37.2258°, Azm152.7086°; **Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOCY	**Socotra**	**4.02**	**261**	Pn	**Pn**	**22 42 28.4**	**-2.5**
SHAO	**Shalim**	**5.63**	**336**	P	**Pn**	**22 42 52.6**	**-0.4**
	SNR=35						
SHAO	**Shalim**	**5.63**	**336**	P	**Pn**	**22 42 51.3**	**-1.7**
DMTO	**DMTO**	**5.67**	**329**	P	**Pn**	**22 42 53.6**	**+0.1**
	SNR=62						
RBK	**Rabkut**	**5.92**	**322**	P	Pn	22 43 01.1	+4.1
ABTO	**Aybut**	**6.40**	**315**	P	**Pn**	**22 43 05.9**	**+2.3**
WHFO	**Wadi Hawf**	**6.50**	**321**	P	**Pn**	**22 43 06.7**	**+1.8**
DOK	**Doka**	**6.85**	**327**	P	**Pn**	**22 43 10.4**	**+0.7**
DOK				P	**Pn**	**22 43 10.4**	**+0.7**
DQM	**DQM**	**7.04**	**356**	P	**Pn**	**22 43 12.8**	**+0.5**
	SNR=8.3						
DQM				P	**Pn**	**22 43 12.8**	**+0.5**
	SNR=8.3						
MHTO	**MHTO**	**8.07**	**359**	P	**Pn**	**22 43 26.0**	**-0.5**
	SNR=15						
MHTO				P	**Pn**	**22 43 26.0**	**-0.5**
	SNR=15						
JLN	**Jalan Bani Buh**	**9.32**	**8**	P	**Pn**	**22 43 42.9**	**-0.8**
	SNR=13						
JLN				P	**Pn**	**22 43 42.9**	**-0.8**
	SNR=13						
JMDO	**Jabal Madar**	**9.45**	**0**	P	**Pn**	**22 43 46.0**	**+0.6**
	SNR=44						
WBK	**Wadi Bani Khal**	**9.73**	**5**	P	**Pn**	**22 43 49.0**	**-0.3**
	SNR=141						
WBK				P	**Pn**	**22 43 49.0**	**-0.3**
	SNR=141						
BSY	**Bisya**	**9.86**	**355**	P	**Pn**	**22 43 51.4**	**+0.4**
	SNR=8.5						
BSY				P	**Pn**	**22 43 51.4**	**+0.4**
	SNR=8.5						
SMDO	**Samad**	**10.13**	**360**	P	**Pn**	**22 43 55.0**	**+0.1**
	SNR=15						
SMDO				P	**Pn**	**22 43 55.0**	**+0.1**
	SNR=15						
UMZA	**Um Al Zommool**	**10.17**	**345**	P	**Pn**	**22 43 56.0**	**+0.7**
UMZA				P	**Pn**	**22 43 56.0**	**+0.7**
WSAR	**Wadi Sarin**	**10.33**	**3**	Pn	**Pn**	**22 43 57.4**	**-0.1**
	4.2nm,0.3s,baz=236,slow=12,SNR=64						
WSAR				Sn	**Sn**	**22 45 47.2**	**-5.8**
	baz=106,slow=18						
WSAR				LR	LR	22 47 30.7	
	comp=Z,1μm,20.3s,baz=215,slow=35						
	10nm,0.4s						
WSAR	**Wadi Sarin**	**10.33**	**3**	P	**Pn**	**22 43 57.5**	**+0.1**
	SNR=47						
ARQ	**Araqi**	**10.51**	**352**	P	**Pn**	**22 44 01.6**	**+1.6**
	SNR=6.6						
ARQ				P	**Pn**	**22 44 01.6**	**+1.6**
	SNR=6.6						
BIDO	**Bidbid**	**10.60**	**0**	P	**Pn**	**22 44 01.4**	**+0.3**
	SNR=7.8						
BIDO				P	**Pn**	**22 44 01.4**	**+0.3**
	SNR=7.8						
HOQ	**Hoqain**	**10.68**	**356**	P	**Pn**	**22 44 03.0**	**+0.8**
	SNR=10						
HOQ				P	**Pn**	**22 44 03.0**	**+0.8**
	SNR=10						
MZR	**Muzera**	**10.97**	**337**	P	**Pn**	**22 44 08.3**	**+2.0**
MZR				P	**Pn**	**22 44 08.3**	**+2.0**
MZR	**Muzera**	**10.97**	**337**	P	**Pn**	**22 44 05.9**	**-0.4**
ALNE	**Al Ain**	**11.34**	**349**	P	**Pn**	**22 44 13.4**	**+2.1**
ALNE				P	**Pn**	**22 44 13.4**	**+2.1**
MZWR	**Madinat Zayed**	**11.53**	**341**	P	**Pn**	**22 44 14.9**	**+1.0**
MZWR				P	**Pn**	**22 44 14.9**	**+1.0**
ASHO	**Ashiyiah**	**11.90**	**351**	P	**Pn**	**22 44 19.5**	**+0.5**
	SNR=8.8						
ASHO				P	**Pn**	**22 44 19.5**	**+0.5**
	SNR=8.8						
ASHO	**Ashiyiah**	**11.90**	**351**	P	**Pn**	**22 44 19.0**	**0.0**
ASUD	**Al Ashush, Dub**	**11.97**	**348**	P	**Pn**	**22 44 21.5**	**+1.6**
HATD	**Hatta, Dubai**	**12.03**	**352**	P	**Pn**	**22 44 21.7**	**+1.0**
HATD				P	**Pn**	**22 44 21.7**	**+1.0**
HATD	**Hatta, Dubai**	**12.03**	**352**	P	**Pn**	**22 44 21.4**	**+0.7**
FAQ	**Al Faqa, Dubai**	**12.04**	**349**	P	**Pn**	**22 44 22.9**	**+2.0**
FAQ				P	**Pn**	**22 44 22.9**	**+2.0**
GHWR	**Ruwais**	**12.07**	**337**	P	**Pn**	**22 44 23.8**	**+2.5**
GHWR				P	**Pn**	**22 44 23.8**	**+2.5**
UOSS	**Minazif**	**12.14**	**352**	Pn	**Pn**	**22 44 21.6**	**-0.6**
UOSS	**Minazif**	**12.14**	**352**	P	**Pn**	**22 44 22.6**	**+0.3**
UOSS				P	**Pn**	**22 44 22.6**	**+0.3**
UOSS	**Minazif**	**12.14**	**352**	P	**Pn**	**22 44 21.8**	**-0.4**
NAZ	**Nazwa, Dubai**	**12.27**	**350**	P	**Pn**	**22 44 25.8**	**+1.8**
NAZ				P	**Pn**	**22 44 25.8**	**+1.8**
NAZ	**Nazwa, Dubai**	**12.27**	**350**	P	**Pn**	**22 44 25.8**	**+1.8**
MASF	**Masafi**	**12.56**	**352**	P	**Pn**	**22 44 28.9**	**+0.8**
BANOM	**Banah**	**13.09**	**353**	P	**Pn**	**22 44 36.3**	**+1.1**
BANOM	**Banah**	**13.09**	**353**	P	**Pn**	**22 44 35.9**	**+0.6**
SHME	**Shamm**	**13.23**	**352**	P	**Pn**	**22 44 37.7**	**+0.5**
ATD	**Arta Tunnel**	**14.92**	**267**	Pn	**Pn**	**22 44 57.4**	**-2.9**
MNCI	**Minicoy**	**15.44**	**106**	Pn	**Pn**	**22 45 04.2**	**-2.9**
RAYN	**Ar Rayn**	**15.94**	**313**	Pn	**Pn**	**22 45 12.4**	**-1.2**
RAYN	**Ar Rayn**	**15.94**	**313**	P	**Pn**	**22 45 10.6**	**-3.0**
HRA	**Herat**	**21.76**	**9**	P	**P**	**22 46 19.1**	**-1.9**
PALK	**Pallekele**	**22.98**	**102**	LR	LR	22 53 41.4	
	comp=Z,117nm,18.1s,baz=6.7,slow=32						
PALK	**Pallekele**	**22.98**	**102**	P	**P**	**22 46 34.6**	**+0.5**
PALK				IAmb	IAmb	22 46 47.6	
	comp=Z,43nm,1.3s						
KBL	**Kabul**	**23.77**	**23**	P	**P**	**22 46 44.2**	**+2.2**
KBL				IAmb	IAmb	22 46 54.7	
	comp=Z,20nm,1.1s						
LODK	**Lodwar**	**24.32**	**249**	P	**P**	**22 46 47.2**	**+0.1**
LODK				IAmb	IAmb	22 46 58.3	
	comp=Z,41nm,1.5s						
LODK	**Lodwar**	**24.32**	**249**	P	**P**	**22 46 50.7**	**+3.6**
	SNR=5.8						
DGAR	**Diego Garcia**	**24.71**	**144**	P	**P**	**22 46 50.6**	**+0.1**
KMBO	**Kilima Mbogo**	**24.88**	**238**	P	**P**	**22 46 53.8**	**+1.4**
	comp=Z,6.4nm,0.9s,baz=44,slow=14,SNR=10						
	comp=Z,6.4nm,0.9s						
KMBO	**Kilima Mbogo**	**24.88**	**238**	P	**P**	**22 46 50.6**	**-1.8**
KMBO				IAmb	IAmb	22 46 57.2	
	comp=Z,10nm,1.1s						
KMBO	**Kilima Mbogo**	**24.88**	**238**	P	**P**	**22 46 53.5**	**+1.1**
KIBK	**Kibwezi**	**24.95**	**234**	P	**P**	**22 46 52.9**	**0.0**
KIBK				IAmb	IAmb	22 47 02.6	
	comp=Z,17nm,1.2s						
KIBK	**Kibwezi**	**24.95**	**234**	P	**P**	**22 46 54.8**	**+1.9**
	SNR=5.6						
GEYT	**Alibeck**	**24.96**	**0**	P	**P**	**22 46 54.5**	**+1.9**
	comp=Z,4.6nm,0.8s,baz=230,slow=21,SNR=6.8						
GEYT				LR	LR	22 57 20.5	
	comp=Z,71nm,19.3s,baz=174,slow=38						
	comp=Z,4.6nm,0.8s						
GEYT	**Alibeck**	**24.96**	**0**	P	**P**	**22 46 54.1**	**+1.4**
GEYT				IAmb	IAmb	22 47 03.4	
	comp=Z,12nm,0.9s						
GYA0B	**ALIBECK ARRAY**	**24.96**	**0**	P	**P**	**22 46 53.7**	**+1.1**
GYA0B				IAmb	IAmb	22 47 03.3	
	comp=Z,17nm,0.9s						
EIL	**Elat**	**27.17**	**312**	P	**P**	**22 47 13.5**	**+0.8**
	comp=Z,2.0nm,0.6s,baz=350,slow=13,SNR=2.4						
EIL				LR	LR	22 58 13.3	
	comp=Z,361nm,18.3s,baz=124,slow=37						
	comp=Z,2.0nm,0.6s						
ASF	**Jabal al Asfar**	**27.30**	**318**	P	**P**	**22 47 16.5**	**+2.5**
	comp=Z,1.5nm,0.6s,baz=123,slow=4.4,SNR=6.1						
	comp=Z,1.5nm,0.6s						
GHAJ	**Ghor Haditha**	**27.66**	**315**	P	**P**	**22 47 16.7**	**-0.4**
GHAJ				IAmb	IAmb	22 47 27.3	
	comp=Z,23nm,1.4s						
MMAI	**Mount Meron Ar**	**28.81**	**318**	LR	LR	22 59 42.2	
	comp=Z,216nm,18.2s,baz=286,slow=38						
DRK	**Karamyk**	**29.16**	**22**	P	**P**	**22 47 31.3**	**+0.6**
DRK				IAmb	IAmb	22 47 41.0	
	comp=Z,6.8nm,0.9s						
GURO	**Guroymak-BITLI**	**29.27**	**334**	P	**P**	**22 47 32.1**	**+0.6**
BTK	**Batken**	**29.33**	**20**	P	**P**	**22 47 33.7**	**+1.8**
BTK				IAmb	IAmb	22 47 42.8	
	comp=Z,14nm,1.0s						
GNI	**Garni**	**29.59**	**339**	P	**P**	**22 47 36.7**	**+2.3**
	comp=Z,4.0nm,0.8s,baz=7.3,slow=20,SNR=6.1						
GNI				LR	LR	23 01 03.0	
	comp=Z,242nm,18.3s,baz=142,slow=40						
	comp=Z,4.0nm,0.8s						
GNI	**Garni**	**29.59**	**339**	P	**P**	**22 47 34.5**	**+0.1**
GNI				IAmb	IAmb	22 47 45.8	
	comp=Z,10nm,0.8s						
GNI	**Garni**	**29.59**	**339**	P	**P**	**22 47 37.1**	**+2.7**
KSH	**Kashi**	**30.91**	**28**	P	**P**	**22 47 44.4**	**-1.6**
KSH				pP	pP	22 47 46.8	-3.0
KSH				sP	sP	22 47 51.6	+0.4
KSH				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KSH				LR	LR		
	comp=N,120nm,21.6s						
KSH				LR	LR		
	comp=E,230nm,21.3s						
KSH				LR	LR		
	comp=Z,300nm,22.3s						
KK31	**Karatay Array**	**32.00**	**17**	P	**P**	**22 47 57.2**	**+1.9**
KKAR	**Karatay Array**	**32.00**	**17**	P	**P**	**22 47 57.0**	**+1.6**
KKAR	**Karatay Array**	**32.00**	**17**	P	**P**	**22 47 56.7**	**+1.3**
KKAR				IAmb	IAmb	22 48 05.7	
	comp=Z,3.7nm,0.8s						
AML	**Almayashu**	**32.17**	**22**	P	P	22 48 08.4	+11
AAK	**Ala-Archa**	**32.91**	**23**	LR	LR	23 02 44.4	
	comp=Z,228nm,20.8s,baz=195,slow=39						
AAK	**Ala-Archa**	**32.91**	**23**	P	**P**	**22 48 05.3**	**+1.7**
AAK				IAmb	IAmb	22 48 15.2	
	comp=Z,7.7nm,0.9s						
AAK	**Ala-Archa**	**32.91**	**23**	P	P	22 48 14.7	+11
OPO	**Ambohidratompo**	**33.03**	**199**	LR	LR	22 58 01.3	
	comp=Z,157nm,21.8s,baz=176,slow=30						
BOOM	**Boomskoye usch**	**33.35**	**24**	P	**P**	**22 48 09.0**	**+1.6**
BOOM				IAmb	IAmb	22 48 18.7	
	comp=Z,16nm,1.4s						
KBZ	**Khabaz**	**33.40**	**340**	P	**P**	**22 48 09.5**	**+1.9**
	comp=Z,3.2nm,0.9s,baz=151,slow=8.3,SNR=5.9						
	comp=Z,3.2nm,0.9s						
KDJ	**Kajisay**	**33.56**	**26**	P	**P**	**22 48 10.2**	**+0.9**
KDJ				IAmb	IAmb	22 48 19.6	
	comp=Z,6.1nm,1.1s						
KIV	**Kislovodsk**	**33.67**	**340**	P	**P**	**22 48 11.5**	**+1.3**
KIV				IAmb	IAmb	22 48 27.1	
	comp=Z,9.6nm,1.2s						
BRTR	**Keskin Array B**	**34.34**	**326**	P	**P**	**22 48 17.4**	**+1.4**
	comp=Z,0.4nm,0.6s,baz=150,slow=13,SNR=4.4						
	comp=Z,0.4nm,0.6s						
BRTR	**Keskin Array B**	**34.34**	**326**	P	**P**	**22 48 16.1**	**+0.1**
PRZ	**Przheval'sk**	**34.38**	**27**	P	**P**	**22 48 18.2**	**+1.8**
PRZ				IAmb	IAmb	22 48 27.0	
	comp=Z,8.3nm,0.7s						
AKAS	**Kas**	**34.56**	**317**	P	**P**	**22 48 18.6**	**+0.6**
AKAS				IAmb	IAmb	22 48 40.0	
	comp=Z,9.9nm,0.8s						
ELL	**Elmali**	**34.66**	**318**	P	**P**	**22 48 19.8**	**+0.9**
ANTO	**Ankara**	**34.91**	**325**	P	**P**	**22 48 21.7**	**+0.8**
ANTO				IAmb	IAmb	22 48 47.8	
	comp=Z,6.1nm,0.7s						
ILGA	**Ilgaz**	**35.23**	**327**	P	**P**	**22 48 23.7**	**-0.1**
KARP	**Karpathos**	**35.85**	**314**	P	**P**	**22 48 28.9**	**-0.1**
ABKAR	**Akbulak array**	**36.31**	**2**	P	**P**	**22 48 33.8**	**+1.1**
ABKAR	**Akbulak array**	**36.31**	**2**	P	**P**	**22 48 34.2**	**+1.5**
ABKAR				IAmb	IAmb	22 48 43.2	
	comp=Z,29nm,1.4s						
IDI	**Anoyia**	**37.33**	**312**	↑P	**P**	**22 48 43.7**	**+2.0**
IDI	**Anoyia**	**37.33**	**312**	P	**P**	**22 48 43.4**	**+1.7**
SANT	**Santorini**	**37.46**	**314**	P	**P**	**22 48 42.8**	**+0.1**
AKTO	**Aktyubinsk**	**37.46**	**360**	LR	LR	23 05 14.5	
	comp=Z,72nm,20.3s,baz=172,slow=38						
LHMI	**Lhok Sumawe**	**39.12**	**98**	P	**P**	**22 48 53.3**	**-3.6**
MAKZ	**Makanchi**	**39.37**	**26**	P	**P**	**22 49 00.1**	**+1.6**
MAKZ				IAmb	IAmb	22 49 08.8	
	comp=Z,9.1nm,0.8s						
MK31	**Makanchi Array**	**39.49**	**26**	P	**P**	**22 49 00.8**	**+1.2**
MKAR	**Makanchi Array**	**39.49**	**26**	P	**P**	**22 49 00.9**	**+1.3**
	comp=Z,1.1nm,0.5s,baz=213,slow=9.4,SNR=23						
MKAR				LR	LR	23 06 29.4	
	comp=Z,140nm,21.4s,baz=206,slow=38						
	comp=Z,1.1nm,0.5s						
MKAR	**Makanchi Array**	**39.49**	**26**	P	**P**	**22 49 00.5**	**+0.8**
ALN	**Alexandroupoli**	**39.53**	**321**	P	**P**	**22 49 00.5**	**+0.5**
CM31	**Chiang Mai Arr**	**39.70**	**77**	P	**P**	**22 49 02.0**	**+0.3**
CMAR	**Chiang Mai Arr**	**39.70**	**77**	P	**P**	**22 49 03.0**	**+1.3**
	comp=Z,2.8nm,0.9s,baz=276,slow=8.9,SNR=15						
CMAR				PcP	**PcP**	**22 51 08.6**	**+0.1**
	comp=Z,0.8nm,0.3s,baz=268,slow=4.9,SNR=4.3						
CMAR				LR	LR	23 04 48.5	
	comp=Z,60nm,18.4s,baz=265,slow=35						
	comp=Z,2.8nm,0.9s						
CMAR	**Chiang Mai Arr**	**39.70**	**77**	P	**P**	**22 49 02.6**	**+0.8**
WMQ	**Urumqi**	**39.99**	**34**	*e*P	**P**	**22 49 06.4**	**+2.5**
RDO	**Rodhopi**	**39.99**	**321**	P	**P**	**22 49 04.3**	**+0.5**
ITM	**Ithomi**	**40.33**	**313**	P	**P**	**22 49 07.5**	**+0.7**
ITM				IAmb	IAmb	22 49 17.0	
	comp=Z,27nm,1.3s						
GOMU	**GeErMu**	**40.36**	**48**	P	**P**	**22 49 09.1**	**+1.7**
GOMU				pP	pwP	22 49 26.8	+10
GOMU				sP	sP	22 49 35.0	+22
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TIRR	**Tirgusor**	**40.41**	**327**	P	**P**	**22 49 07.7**	**+0.5**
TIRR				IAmb	IAmb	22 49 29.3	
	comp=Z,26nm,1.2s						
LSZ	**Lusaka**	**40.69**	**227**	P	**P**	**22 49 11.6**	**+1.5**
	comp=Z,2.7nm,0.6s,baz=51,slow=5.5,SNR=5.3						
LSZ				LR	LR	23 03 30.1	
	comp=Z,93nm,21.6s,baz=78,slow=32						
	comp=Z,2.7nm,0.6s						
LSZ	**Lusaka**	**40.69**	**227**	P	**P**	**22 49 09.1**	**-0.9**
HARR	**Harsova**	**40.82**	**327**	↑P	**P**	**22 49 12.1**	**+1.5**
SRIT	**Nakonsritamara**	**41.01**	**92**	P	**P**	**22 49 12.4**	**-0.2**
SRIT				IAmb	IAmb	22 49 15.2	
	comp=Z,15nm,1.0s						
KURBB	**Kurchatov Arra**	**41.19**	**20**	LR	LR	23 07 51.0	
	comp=Z,98nm,21.9s,baz=180,slow=38						
BRVK	**Borovoye**	**41.26**	**11**	P	**P**	**22 49 15.1**	**+0.9**
KURK	**Kurchatov**	**41.30**	**20**	P	**P**	**22 49 15.8**	**+1.3**
KURK				IAmb	IAmb	22 49 23.9	
	comp=Z,6.6nm,0.8s						
NEHR	**Nehoiu**	**42.18**	**326**	↑P	**P**	**22 49 22.9**	**+1.1**
VRI	**Vrincioaia**	**42.23**	**327**	↑P	**P**	**22 49 24.5**	**+2.2**
VTS	**Vitosha**	**42.24**	**321**	↑P	**P**	**22 49 23.7**	**+1.2**
VTS	**Vitosha**	**42.24**	**321**	P	**P**	**22 49 22.9**	**+0.4**
PLOR	**Plostina**	**42.26**	**327**	↑P	**P**	**22 49 24.8**	**+2.2**
MLR	**Muntele Rosu**	**42.41**	**326**	↑P	**P**	**22 49 26.2**	**+2.3**
MLR	**Muntele Rosu**	**42.41**	**326**	P	**P**	**22 49 25.2**	**+1.4**
FNA	**Florina**	**42.44**	**318**	P	**P**	**22 49 24.1**	**0.0**
COVR	**Voineasa-Covas**	**42.50**	**327**	↑P	**P**	**22 49 26.2**	**+1.8**
KBN	**Korca**	**42.75**	**317**	P	**P**	**22 49 27.4**	**+0.7**
KBN				IAmb	IAmb	22 49 36.7	
	comp=Z,24nm,1.5s						
VOIR		**42.86**	**326**	↑P	**P**	**22 49 29.3**	**+1.8**
SORM	**Soroca**	**42.97**	**331**	↑P	**P**	**22 49 28.5**	**+0.4**
DOPR	**Dopca**	**43.01**	**327**	↑P	**P**	**22 49 30.0**	**+1.4**
ARR	**Arges**	**43.05**	**325**	↑P	**P**	**22 49 30.3**	**+1.4**
GIRR	**Girov**	**43.07**	**328**	↑P	**P**	**22 49 30.5**	**+1.4**
PZH	**PanZhiHua**	**43.11**	**65**	P	**P**	**22 49 30.8**	**+1.0**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,120nm,8.2s						
ARU	**Arti**	**43.47**	**0**	P	**P**	**22 49 32.1**	**0.0**
LOT	**Lotru**	**43.58**	**325**	↑P	**P**	**22 49 34.2**	**+0.9**
HERR	**Herculane**	**44.02**	**323**	↑P	**P**	**22 49 37.2**	**+0.5**
MATP	**Matopo**	**44.04**	**222**	P	**P**	**22 49 38.1**	**+0.9**
	comp=Z,9.7nm,1.1s,baz=37,slow=6.4,SNR=11						
	comp=Z,9.7nm,1.1s						
GZR	**Gura Zlata**	**44.11**	**324**	↓P	**P**	**22 49 37.8**	**

comp=E,8.0nm,18.4s
MNK *i* LRM MLR 23 12 14.8
MNK *i* LRM MLR 23 12 34.1
comp=Z,85nm,18.7s
VYHS Vyhne 48.10 326 *eP* **P 22 50 09.8 +1.0**
LANS Liptovska Anna 48.13 327 *eP* **P 22 50 10.2 +1.1**
KOLL Kolacno 48.38 325 *eP* **P 22 50 11.9 +0.9**
NACGM Naroch 48.54 336 *eP* **P 22 50 13.2 +1.1**
OJC Ojcow 48.58 328 P **P 22 50 11.8 -0.8**
OJC IAmb IAmb 22 50 13.2
comp=Z,7.2nm,1.2s
IDID Didziasalis 48.86 337 *eP* **P 22 50 15.8 +1.2**
NRCA Norcia 48.87 316 P **P 22 50 15.4 +0.4**
NRCA IAmb IAmb 22 50 37.7
comp=Z,10nm,1.4s
MODS Modra-Piesok 48.90 325 *eP* **P 22 50 15.2 +0.2**
SOP Sopron 48.95 324 P **P 22 50 16.2 +0.8**
IIGN Ignalina 49.09 337 *eP* **P 22 50 17.5 +1.2**
RONA Rosalia, Austr 49.11 323 *eP* **P 22 50 16.9 +0.2**
comp=Z,4.3nm,0.7s
MAUC Maruska 49.14 326 *eP* **P 22 50 17.5 +0.7**
LBTB Lobatse 49.19 220 P **P 22 50 19.0 +1.4**
comp=Z,4.2nm,0.7s,baz=48,slow=7.8,SNR=5.8
LBTB LR LR 23 09 19.4
comp=Z,136nm,19.6s,baz=42,slow=34
comp=Z,4.2nm,0.7s
LBTB Lobatse 49.19 220 P **P 22 50 16.8 -0.8**
LBTB IAmb IAmb 22 50 21.2
comp=Z,10nm,1.1s
KEST Kesra 49.28 306 LR LR 23 12 26.7
comp=Z,58nm,19.6s,baz=310,slow=38
KEST Kesra 49.28 306 P **P 22 50 17.8 -0.5**
KEST IAmb IAmb 22 50 43.9
comp=Z,5.1nm,1.1s
ISAL Salakas 49.29 337 *eP* **P 22 50 19.2 +1.4**
ARSA Arzberg 49.34 323 P **P 22 50 19.1 +0.7**
comp=Z,3.7nm,0.9s
SOKA Soboth 49.35 322 *eP* **P 22 50 19.3 +0.7**
comp=Z,2.2nm,0.8s
SUW Suwalki 49.39 334 P **P 22 50 18.4 -0.3**
SUW Suwalki 49.39 334 *eP* **P 22 50 19.6 +1.0**
MURB Monte Urbino 49.44 317 P **P 22 50 18.5 -0.8**
MURB IAmb IAmb 22 50 23.1
comp=Z,12nm,1.2s
CONA Conrad Observa 49.48 324 *eP* **P 22 50 19.5 0.0**
comp=Z,7.6nm,1.0s
MORC Moravsky Berou 49.52 326 ⇑P **P 22 50 20.3 +0.5**
MORC Moravsky Berou 49.52 326 P **P 22 50 19.7 0.0**
MORC IAmb IAmb 22 50 20.9
comp=Z,4.9nm,0.8s
MORC Moravsky Berou 49.52 326 *eP* **P 22 50 19.6 -0.2**
KRUC Moravsky 49.76 325 *eP* **P 22 50 21.2 -0.4**
KRLC Kraliky 50.09 326 *eP* **P 22 50 23.8 -0.3**
PABE Paberze 50.09 335 P **P 22 50 23.9 0.0**
MYKA Terra Mystica 50.17 321 *eP* **P 22 50 25.3 +0.5**
comp=Z,4.3nm,0.8s
MOA Molln 50.37 323 *eP* **P 22 50 26.4 +0.1**
comp=Z,4.2nm,0.7s
TREC Trest 50.39 325 *eP* **P 22 50 26.6 +0.2**
DPC Dobruska-Polom 50.49 326 *eP* **P 22 50 26.6 -0.5**
STAL STALIGIAL 50.58 320 P **P 22 50 27.5 -0.4**
STAL IAmb IAmb 22 50 28.5
comp=Z,10nm,1.2s
XAN Xi'an 50.63 56 P **P 22 50 28.3 -0.2**
XAN pP pwP 22 50 36.0 -1.8
XAN pmax pmax
comp=Z,5.0nm,0.9s
OSTC Ostas 50.66 327 *eP* **P 22 50 28.4 0.0**
CHVC Chvalec 50.76 327 *eP* **P 22 50 29.0 -0.2**
TSUM Tsumeb 51.04 232 LR LR 23 13 58.7
comp=Z,81nm,18.1s,baz=359,slow=38
CTI Castel Tesino 51.16 320 P **P 22 50 31.6 -0.7**
CTI IAmb IAmb 22 50 32.4
comp=Z,14nm,1.5s
GEC2 GERESS Array S 51.18 324 P **P 22 50 32.3 -0.1**
GERES GERESS Array B 51.18 324 P **P 22 50 31.6 -0.9**
comp=Z,0.8nm,0.8s,baz=120,slow=7.8,SNR=4.1
comp=Z,0.8nm,0.8s
VSU Vasula 51.23 339 *eP* **P 22 50 33.1 +0.6**
PRU Pruhonice 51.28 325 *eP* **P 22 50 32.9 -0.1**
KHC Kasperske Hory 51.39 324 P **P 22 50 33.3 -0.7**
KHC Kasperske Hory 51.39 324 *eP* **P 22 50 33.4 -0.5**
KHC *ep*P **sP 22 50 40.5 +1.3**
PRMA PARMA 51.50 318 P **P 22 50 35.2 +0.5**
WTTA Wattenberg 51.69 321 *eP* **P 22 50 36.0 -0.4**
comp=Z,5.0nm,0.6s
WATA Walderalm 51.75 321 *eP* **P 22 50 36.1 -0.7**
comp=Z,4.0nm,0.6s
SQTA Sankt Quirin 51.93 321 *i* P **P 22 50 37.1 -1.0**
comp=Z,6.8nm,0.6s
BOSA Boshof 52.02 217 LR LR 23 10 28.4
comp=Z,168nm,20.6s,baz=14,slow=34
MOTA Moosalm 52.05 321 *eP* **P 22 50 38.2 -0.8**
comp=Z,8.1nm,0.8s
SLIT Slitere, Latvi 52.24 337 *eP* **P 22 50 40.5 +0.5**
RETA Reutte 52.32 321 *eP* **P 22 50 40.0 -1.0**
comp=Z,3.3nm,0.6s
MTSE Matsula 52.45 338 *eP* **P 22 50 42.4 +0.9**
NKC Novy Kostel 52.57 325 *eP* **P 22 50 42.8 +0.1**
DAVOX Davos/Dischmat 52.57 320 LR LR 23 14 53.3
comp=Z,46nm,20.9s,baz=94,slow=38
DAVA Damuels 52.78 320 *eP* **P 22 50 43.9 -0.6**
comp=Z,7.3nm,0.6s
CLL Collm 52.79 326 P **P 22 50 45.2 +1.0**
CLL Collm 52.79 326 *eP* **P 22 50 43.0 -1.2**
CLL Lm MLR 23 17 00.0
comp=Z,100nm,18.1s
LEM Lembang 52.99 109 LR LR 23 10 54.9
comp=Z,139nm,18.2s,baz=180,slow=33
GRFO Grafenberg 53.02 324 P **P 22 50 45.1 -0.9**
GRFO IAmb IAmb 22 50 46.0
comp=Z,8.7nm,0.9s
BTO Baotou 53.07 49 *eP* **P 22 50 48.6 +2.0**
SONM Songino Array 53.11 39 P **P 22 50 48.5 +1.6**
comp=Z,1.8nm,0.6s,baz=242,slow=7.9,SNR=13
comp=Z,1.8nm,0.6s
SONM Songino Array 53.11 39 P **P 22 50 48.3 +1.4**
SONM IAmb IAmb 22 50 56.2
comp=Z,6.2nm,1.0s
MEF Metsahovi 53.34 340 *eP* **P 22 50 49.0 +0.9**
ULN Ulaanbaatar 53.53 39 P **P 22 50 50.7 +0.8**
ULN pwP **pwP 22 50 58.3 -1.1**
ULN IAmb IAmb 22 50 58.8
comp=Z,5.2nm,0.9s
FIA1 FINESS Array S 53.73 342 P **P 22 50 51.2 +0.2**
FINES FINESS Array B 53.73 342 P **P 22 50 50.9 -0.1**
comp=Z,4.8nm,0.7s,baz=137,slow=8.2,SNR=20
FINES LR LR 23 17 17.2
comp=Z,44nm,19.8s,baz=150,slow=40
comp=Z,4.8nm,0.7s
SENIN Lac Senin/Sane 54.06 319 P **P 22 50 53.4 -0.6**
SENIN IAmb IAmb 22 50 55.4
comp=Z,4.2nm,0.9s
HHC Hu-ho-hao-te 54.26 49 *eP* **P 22 50 57.2 +1.8**
HHC pmax pmax
comp=Z,16nm,1.0s
TORD Torodi Ar. Bea 54.81 277 P **P 22 51 00.1 +0.5**
comp=Z,1.4nm,0.8s,baz=78,slow=8.0,SNR=6.7
TORD PcP **PcP 22 52 01.1 -0.8**
comp=Z,1.2nm,0.9s,baz=62,slow=3.4,SNR=2.2
comp=Z,1.4nm,0.8s
HFS Hagfors 57.28 335 LR LR 23 18 29.2
comp=Z,73nm,20.4s,baz=122,slow=39
SUR Sutherland 57.38 217 LR LR 23 13 16.3
comp=Z,160nm,21.5s,baz=50,slow=33
BJT Baijiatuau 57.50 51 P **P 22 51 19.0 +0.5**
BJT IAmb IAmb 22 51 27.2
comp=Z,6.7nm,0.7s
XLT XiLinHaoTe 58.25 46 *eP* **P 22 51 26.6 +2.8**
XLT pP sP 22 51 30.4 +1.1
XLT sP pwP 22 51 33.8 +0.6
XLT pmax pmax
comp=Z,9.0nm,0.8s
XLT pmax pmax
comp=Z,69nm,4.4s
NC602 NORSAR Array S 58.50 335 P **P 22 51 24.8 -0.3**
NJ2 Nanjing 58.61 60 *eP* P 22 51 32.0 +5.6
NJ2 pmax pmax
comp=Z,12nm,1.1s
NB2 NORSAR Subarra 58.80 335 P **P 22 51 26.1 -1.2**
comp=Z,7.7nm,0.9s,baz=122,slow=7.4
NOA NORSAR Array B 58.80 335 P **P 22 51 26.6 -0.7**
comp=Z,1.0nm,0.7s,baz=119,slow=8.6,SNR=5.2
NOA LR LR 23 19 37.0
comp=Z,46nm,21.4s,baz=105,slow=39
comp=Z,1.0nm,0.7s
NRIK Noril'sk 59.46 12 P **P 22 51 31.1 -0.5**
comp=Z,1.2nm,0.6s,baz=236,slow=7.2,SNR=1.8
comp=Z,1.2nm,0.6s
NRIK Noril'sk 59.46 12 IAmb IAmb 22 51 40.3
comp=Z,3.9nm,0.8s
MDT Midelt 60.23 300 LR LR 23 19 55.5
comp=Z,99nm,18.7s,baz=148,slow=38
ARCES ARCESS Array B 60.24 347 P **P 22 51 36.7 -0.3**
comp=Z,3.3nm,0.6s,baz=144,slow=6.6,SNR=16
ARCES LR LR 23 20 31.6
comp=Z,45nm,20.7s,baz=166,slow=39
comp=Z,3.3nm,0.6s
ESDC Sonseca Array 60.40 308 P **P 22 51 37.7 -1.0**
comp=Z,2.0nm,0.8s,baz=86,slow=6.0,SNR=19
ESDC LR LR 23 19 57.4
comp=Z,31nm,18.3s,baz=92,slow=38
comp=Z,2.0nm,0.8s
ESDC Sonseca Array 60.40 308 P **P 22 51 37.6 -1.1**
YULB Yu-li 60.62 70 P **P 22 51 41.9 +1.6**
DBIC Dimbokro 62.18 271 P **P 22 51 50.1 -1.0**
comp=Z,4.6nm,0.9s,baz=74,slow=7.4,SNR=3.4
comp=Z,4.6nm,0.9s
CN2 Changchun 64.91 48 *eP* **P 22 52 08.2 -0.5**
CN2 *eS* **S 23 00 49.1 -0.6**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=N,100nm,16.0s
CN2 LR LR
comp=E,100nm,16.0s
CN2 LR LR
comp=Z,100nm,17.0s
KSAR Wonju Array Be 66.33 55 P **P 22 52 17.5 -0.4**
KSRS Korea Array 66.36 55 P **P 22 52 17.3 -0.8**
comp=Z,1.7nm,0.8s,baz=263,slow=7.4,SNR=6.5
comp=Z,1.7nm,0.8s
USRK Ussuriysk Ar. 69.65 47 P **P 22 52 38.3 -0.4**
comp=Z,0.9nm,0.5s,baz=251,slow=17,SNR=1.9
comp=Z,0.9nm,0.5s
USRK Ussuriysk Ar. 69.65 47 P **P 22 52 39.7 +1.0**
KLR Kul'dur 69.72 42 LR LR 23 24 43.0
comp=Z,68nm,21.2s,baz=248,slow=37
MORW Morawa 69.78 128 P **P 22 52 39.1 -0.6**
YAK Yakutsk 70.12 28 LR LR 23 25 27.5
comp=Z,80nm,20.2s,baz=268,slow=38
JMIC Jan Mayen 70.35 341 LR LR 23 26 43.0
comp=Z,45nm,19.0s,baz=254,slow=39
H01W3 Cape Leeuwin H 71.26 134 T T 00 10 23.8
baz=302,slow=75,SNR=33
H01W2 Cape Leeuwin H 71.26 134 T T 00 10 24.3
baz=302,slow=75,SNR=35
H01W1 Cape Leeuwin H 71.28 134 T T 00 10 22.7
baz=302,slow=75,SNR=31
TIXI Tiksi 71.86 18 LR LR 23 28 14.8
comp=Z,84nm,18.4s,baz=323,slow=39
TIXI Tiksi 71.86 18 P **P 22 52 51.5 -0.1**
BORG Borgarnes 73.92 334 LR LR 23 30 33.8
comp=Z,34nm,18.2s,baz=87,slow=40
DAG Danmarks Havn 74.51 347 *i* P **P 22 53 07.0 -0.2**
DBG Daneborg 74.52 344 *i* P **P 22 53 07.5 +0.2**
MAJO Matsushiro 74.61 55 P **P 22 53 08.2 -0.4**
MJAR Matsushiro Arr 74.61 55 LR LR 23 28 03.8
comp=Z,41nm,18.2s,baz=246,slow=38
SCO Scoresbysund 74.61 340 P **P 22 53 08.3 +0.5**
SCO IAmb IAmb 22 53 10.1
comp=Z,5.5nm,0.8s
SCO Scoresbysund 74.61 340 *i* P **P 22 53 08.4 +0.5**
JHJ Hachijo jima 2 76.23 59 LR LR 23 30 01.6
comp=Z,30nm,18.8s,baz=94,slow=38
ASAJ Asahikawa 77.28 47 LR LR 23 28 19.9
comp=Z,41nm,19.1s,baz=6.5,slow=36
SOEG Soedalen 77.94 338 *eP* P 22 53 15.5 -11
MAW Mawson 80.33 178 LR LR 23 22 49.5
comp=Z,45nm,18.8s,baz=7.0,slow=31
MA2 Magadan 80.39 31 LR LR 23 32 01.1
comp=Z,48nm,18.9s,baz=338,slow=38
WB0 Warramunga Arr 81.81 112 P **P 22 53 47.8 -1.0**
WB0 IAmb IAmb 22 53 48.8
comp=Z,5.5nm,0.8s
WRA Warramunga Arr 81.81 113 P **P 22 53 48.1 -0.7**
comp=Z,4.5nm,0.7s,baz=297,slow=4.3,SNR=73
comp=Z,4.5nm,0.7s
WRA Warramunga Arr 81.81 113 P **P 22 53 47.0 -1.8**
WRAB Tennant Creek 81.82 113 P **P 22 53 47.5 -1.3**
WB2 Warramunga Arr 81.82 113 P **P 22 53 47.8 -1.0**
WR0 Warramunga Arr 82.00 113 P **P 22 53 47.9 -1.8**
WR0 IAmb IAmb 22 53 57.8
comp=Z,10nm,1.1s
ASAR Alice Springs 82.52 116 P **P 22 53 51.8 -0.6**
comp=Z,5.7nm,0.6s,baz=291,slow=4.9,SNR=62
comp=Z,5.7nm,0.6s
ASAR Alice Springs 82.52 116 P **P 22 53 51.4 -1.0**
AS31 Alice Springs 82.52 116 P **P 22 53 51.8 -0.7**
AS31 IAmb IAmb 22 54 00.4
comp=Z,2.8nm,0.7s
SFJD Kangerlussuaq 85.37 338 LR LR 23 34 13.2
comp=Z,34nm,19.5s,baz=54,slow=37
RES Resolute Bay 91.00 353 LR LR 23 43 03.4
comp=Z,37nm,18.0s,baz=72,slow=41
SNAA Sanae 93.43 196 LR LR 23 28 25.8
comp=Z,25nm,21.8s,baz=118,slow=30
SHEM Shemya Is, Ala 94.86 33 LR LR 23 39 46.1
comp=Z,34nm,21.7s,baz=62,slow=37
INK Inuvik 98.61 4 LR LR 23 45 41.1
comp=Z,41nm,18.0s,baz=200,slow=39
CLTN Cedars of Leba 120.82 327 PKPdf **PKPdf 23 00 19.5 -2.3**
PDAR Pinedale Array 123.48 349 PKP **PKPdf 23 00 26.6 -0.5**
comp=Z,0.3nm,0.6s,baz=99,slow=5.6,SNR=2.3
NVAR Mina Array Bea 128.86 356 PKP **PKiKP 23 00 38.4 +0.2**
comp=Z,0.6nm,0.7s,baz=63,slow=1.1,SNR=6.4

*IDC **02** 22:52:53.5±1.9, 18°.51S×69°.30W, h132km±18km, mb3.4/3, mbtmp3.7/5 Error ellipse: s-maj=40.4km s-min=15.3km az=97.0*
*GUC **02** 22:52:53.9±0.8, 18°.40S×69°.19W, h125km±3km, ML3.4*
ISC 02 22:52:53.4±0.9, 18°.49S±0°.04×69°.29W±0°.09, h135km±8km, n20, σ1°35/35, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB16	**IPOC Station P**	**0.26**	**307**	*eP*	**Pn**	**22 53 12.5**	**-0.3**
PB16				*i* S	**Sn**	**22 53 26.5**	**-0.8**
PB16				IAML		22 53 27.3	
	comp=E,909nm,0.3s						
PB18	**Visviri**	**0.92**	**348**	*eP*	**Pn**	**22 53 17.0**	**+0.4**
PB18				*i* S	**Sn**	**22 53 35.6**	**+1.4**
PB12	**IPOC Station P**	**1.00**	**263**	*eP*	**Pn**	**22 53 16.5**	**-0.3**
PB12				*i* S	**Sn**	**22 53 34.1**	**-0.5**
PB12				IAML		22 53 34.6	
	comp=N,702nm,0.2s						
AP01	**Chacalluta**	**1.01**	**277**	*eP*	**Pn**	**22 53 16.8**	**-0.1**
AP01				*i* S	**Sn**	**22 53 34.5**	**-0.1**
AP01				IAML		22 53 36.2	
	comp=N,2μm,0.3s						
PB11	**IPOC Station P**	**1.31**	**195**	*eP*	**Pn**	**22 53 20.5**	**+0.5**
PB11				*i* S	**Sn**	**22 53 40.9**	**+0.7**
PB11				IAML		22 53 42.4	
	comp=N,593nm,0.4s						
PB08	**IPOC Station P**	**1.64**	**176**	*eP*	**Pn**	**22 53 24.8**	**+0.9**
PB08				*i* S	**Sn**	**22 53 48.6**	**+1.4**
PB08				IAML		22 53 50.9	
	comp=E,206nm,0.2s						
HMBC	**Humberstone**	**1.86**	**198**	*eP*	**Pn**	**22 53 26.4**	**+0.3**
HMBC				*i* S	**Sn**	**22 53 51.9**	**+0.6**
HMBC				IAML		22 53 54.8	
	comp=E,227nm,0.2s						
TA01	**Diego Aracena**	**2.23**	**202**	*eP*	**Pn**	**22 53 30.8**	**+0.4**
TA01				*i* S	**Sn**	**22 53 58.5**	**-0.4**
TA01				IAML		22 54 06.8	
	comp=N,116nm,0.3s						
LPAZ	**La Paz**	**2.45**	**27**	P	**Pn**	**22 53 33.7**	**-0.2**
	comp=N,10nm,0.3s,baz=211,slow=8.3,SNR=102						
PATCX	**Punta Patache**	**2.46**	**199**	*eP*	**Pn**	**22 53 33.9**	**+0.5**
PATCX				*i* S	**Sn**	**22 54 02.8**	**-1.3**
PATCX				IAML		22 54 10.7	
	comp=E,94nm,0.4s						
PB01	**IPOC Station P**	**2.54**	**184**	*eP*	**Pn**	**22 53 35.4**	**+0.9**
PB01				*i* S	**Sn**	**22 54 06.1**	**0.0**
PB01				IAML		22 54 06.9	
	comp=N,183nm,0.3s						
PB02	**IPOC Station P**	**2.87**	**191**	*eP*	**Pn**	**22 53 39.3**	**+0.7**
PB02				*i* S	**Sn**	**22 54 13.4**	**-0.1**
PB02				IAML		22 54 23.5	
	comp=E,143nm,0.2s						
PB07	**IPOC Station P**	**3.27**	**190**	*eP*	**Pn**	**22 53 44.4**	**+0.6**
PB07				*i* S	**Sn**	**22 54 21.6**	**-1.2**
PB07				IAML		22 54 36.5	
	comp=E,70nm,0.5s						
PB09	**IPOC Station P**	**3.29**	**179**	*eP*	**Pn**	**22 53 45.4**	**+1.3**
PB09				*i* S	**Sn**	**22 54 18.7**	**-4.6**
PB04	**IPOC Station P**	**3.91**	**192**	*eP*	**Pn**	**22 53 52.6**	**+0.4**
PB04				*i* S	**Sn**	**22 54 35.1**	**-2.7**
LVC	**Limon Verde**	**4.11**	**175**	P	**Pn**	**22 53 56.5**	**+1.4**
	comp=E,2.2nm,0.3s,baz=14,slow=7.7,SNR=19						
LVC				S	**Sn**	**22 54 42.4**	**-0.5**
	comp=E,6.4nm,0.3s,baz=194,slow=21,SNR=19						
SIV	**San Ignacio**	**8.23**	**74**	P	**Pn**	**22 54 46.8**	**-3.3**
	comp=E,1.4nm,0.4s,baz=267,slow=9.5,SNR=14						
BDFB	**Brasilia**	**20.53**	**85**	P	**P**	**22 57 22.4**	**+1.0**
	comp=E,2.4nm,0.5s,baz=233,slow=9.7,SNR=4.1						
	comp=E,2.4nm,0.5s						
TORD	**Torodi Ar. Bea**	**76.70**	**71**	P	**P**	**23 04 30.3**	**+0.1**
	comp=E,0.5nm,0.5s,baz=253,slow=5.7,SNR=3.2						
	comp=E,0.5nm,0.5s						
YKA	**Yellowknife Ar**	**88.25**	**341**	P	**P**	**23 05 29.4**	**+0.3**
	comp=E,0.2nm,0.4s,baz=148,slow=4.1,SNR=5.1						
	comp=E,0.2nm,0.4s						

TIR 02 22:53:43.6, 40°.67N×20°.78E, h19km±9km, Md0.1, Ml0.8, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBN	**Korca**	**0.05**	**174**	P	Pg	22 53 45.7	-1.4
	baz=173						
KBN				S	Sg	22 53 46.0	-3.5
	baz=173						
KBN				AMP			
	comp=E,2.8nm,0.1s,baz=173						
FNA	**Florina**	**0.47**	**76**	P	Pb	22 53 53.4	+0.2
	baz=76						
FNA				S	Sb	22 54 01.0	+1.2
	baz=76						
LSK	**Leskovik**	**0.54**	**195**	P	Pg	22 53 55.0	+0.5
	baz=195						
LSK				S	Sg	22 54 03.2	+1.4
	baz=195						
LSK				AMP			
	comp=E,0.1nm,0.3s,baz=195						

*NEIC **02** 22:54:30.8±0.8, 19°.07N±0°.05×66°.86W±0°.04, h36km±51km, Error ellipse: s-maj=9.4km s-min=3.0km az=153.0*
*RSPR **02** 22:54:31.8, 19°.09N×66°.84W, h42km±5km, MD3.1/16*
*OSPL **02** 22:54:31.7±0.5, 19°.01N×66°.81W, h18km±2km, ML3.0*
ISC 02 22:54:29.6±1.5, 19°.06N±0°.06×66°.79W±0°.03, h20km±7km, n55, σ0°.47/67, 14C-4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EMPR	**Esperanza - Ma**	**0.63**	**157**	⇓*eP*	**Pn**	**22 54 44.1**	**+0.7**
EMPR	**Esperanza - Ma**	**0.63**	**157**	*eS*	**Sn**	**22 54 53.7**	**+0.8**
EMPR	**Esperanza - Ma**	**0.63**	**157**		**Pn**	**22 54 44.0**	**+0.6**
EMPR					**Sn**	**22 54 53.6**	**+0.8**
EMPR				IAML		22 54 57.7	
	comp=N,853nm,0.3s						
AGPR	**Aguadilla, PR**	**0.66**	**207**	⇓*eP*	**Pg**	**22 54 43.0**	**+0.2**
AGPR	**Aguadilla, PR**	**0.66**	**207**	*eS*	**Sg**	**22 54 52.1**	**+0.5**
AGPR	**Aguadilla, PR**	**0.66**	**207**		**Pg**	**22 54 42.9**	**+0.2**
AGPR				Sn	**Sg**	**22 54 52.0**	**+0.5**
AGPR				IAML		22 54 56.9	
	comp=N,1μm,0.3s						
AGPR	**Aguadilla, PR**	**0.66**	**207**	*i* P	**Pg**	**22 54 42.9**	**+0.2**
AGPR				*eS*	**Sb**	**22 54 50.7**	**-0.5**
AGPR				IAML		22 54 56.1	
	comp=Z,569nm,0.3s						
AOPR	**Arecibo Observ**	**0.71**	**177**	⇑*eP*	**Pn**	**22 54 44.4**	**-0.1**
AOPR	**Arecibo Observ**	**0.71**	**177**	*eS*	**Sn**	**22 54 54.6**	**-0.3**
AOPR	**Arecibo Observ**	**0.71**	**177**		**Pn**	**22 54 44.2**	**-0.3**
AOPR				Sn	**Sn**	**22 54 54.4**	**-0.5**
AOPR				IAML		22 55 09.0	
	comp=N,1μm,0.3s						
PRSN	**Puerto Rico Se**	**0.90**	**202**		**Pb**	**22 54 46.5**	**-0.1**
LSP	**Las Mesas**	**0.92**	**198**	⇑*eP*	**Pb**	**22 54 47.1**	**+0.2**
LSP	**Las Mesas**	**0.92**	**198**	*eS*	**Sn**	**22 55 00.2**	**+0.1**
IDE	**Isla Desecheo**	**0.93**	**224**	⇑*eP*	**Pb**	**22 54 46.7**	**-0.4**
IDE	**Isla Desecheo**	**0.93**	**224**	*eS*	**Sn**	**22 55 00.6**	**+0.3**
CELP	**Cerrillos**	**1.00**	**168**		**Pg**	**22 54 48.7**	**-0.3**
CELP				IAML		22 55 02.6	
	comp=N,511nm,0.3s						
CELP				IAML		22 55 06.9	
	comp=E,368nm,0.3s						
GCPR	**Guaynabo City**	**1.00**	**138**	⇑*eP*	**Pg**	**22 54 48.7**	**-0.4**
GCPR	**Guaynabo City**	**1.00**	**138**	*eS*	**Sg**	**22 55 03.0**	**+0.6**
GCPR	**Guaynabo City**	**1.00**	**138**		**Pn**	**22 54 48.3**	**-0.2**
GCPR					**Sg**	**22 55 02.8**	**+0.5**
GCPR				IAML		22 55 03.9	
	comp=N,295nm,0.3s						
OBIP	**Obispado Ponce**	**1.02**	**170**	⇑*eP*	**Pg**	**22 54 49.4**	**-0.2**
OBIP	**Obispado Ponce**	**1.02**	**170**	*eS*	**Sn**	**22 55 02.7**	**+0.1**
OBIP	**Obispado Ponce**	**1.02**	**170**	Pn	**Pg**	**22 54 49.3**	**-0.3**
OBIP				Sn	**Sn**	**22 55 02.5**	**-0.2**
OBIP				IAML		22 55 03.3	
	comp=N,639nm,0.4s						
GBPR	**Guanica, Bosqu**	**1.08**	**184**	⇑*eP*	**Pg**	**22 54 50.1**	**-0.5**
GBPR	**Guanica, Bosqu**	**1.08**	**184**	*eS*	**Sn**	**22 55 04.3**	**+0.3**
CRPR	**Cabo Rojo, PR**	**1.09**	**196**	⇑*eP*	**Pn**	**22 54 49.7**	**-0.1**
CRPR	**Cabo Rojo, PR**	**1.09**	**196**	Pn	**Pn**	**22 54 49.4**	**-0.3**
CRPR					**Sb**	**22 55 03.1**	**-0.4**
CRPR				IAML		22 55 07.0	
	comp=E,387nm,0.3s						
CRPR				IAML		22 55 07.7	
	comp=N,357nm,0.3s						
CRPR	**Cabo Rojo, PR**	**1.09**	**196**	*i* P	**Pn**	**22 54 49.4**	**-0.3**
CRPR				*eS*	**Sb**	**22 55 03.1**	**-0.4**
CRPR				IAML		22 55 05.7	
	comp=Z,295nm,0.2s						
MLPR	**Magueyes Islan**	**1.11**	**192**	⇑*eP*	**Pb**	**22 54 50.1**	**-0.1**
MLPR	**Magueyes Islan**	**1.11**	**192**	*eS*	**Sb**	**22 55 04.3**	**+0.2**
MLPR	**Magueyes Islan**	**1.11**	**192**	Pn	**Pb**	**22 54 50.0**	**-0.1**
MLPR				Sn	**Sb**	**22 55 03.6**	**-0.5**
MLPR				IAML		22 55 13.2	
	comp=E,266nm,0.5s						
SJG	**San Juan**	**1.12**	**147**		**Pb**	**22 54 50.5**	**+0.2**
SJG				IAML		22 55 11.1	
	comp=E,254nm,0.2s						
SJG				IAML		22 55 12.4	
	comp=E,315nm,0.3s						
CBYP	**Canovanas**	**1.18**	**131**	⇑*eP*	**Pb**	**22 54 51.4**	**0.0**
CBYP	**Canovanas**	**1.18**	**131**	*eS*	**Sg**	**22 55 07.3**	**-0.8**
CBYP	**Canovanas**	**1.18**	**131**	Pn	**Pb**	**22 54 51.1**	**-0.3**
CBYP					**Sg**	**22 55 07.8**	**-0.3**
ICMP	**Isla Caja de M**	**1.19**	**168**	Pn	**Pg**	**22 54 52.1**	**-0.6**
ICMP				IAML		22 55 16.1	
	comp=N,249nm,0.5s						
IGPR	**InterUniversit**	**1.27**	**149**	⇓*eP*	**Pb**	**22 54 52.9**	**+0.1**
IGPR	**InterUniversit**	**1.27**	**149**	*eS*	**Sb**	**22 55 09.2**	**+0.6**
PDPR	**Patillas Dam,**	**1.27**	**145**	⇑*eP*	**Pb**	**22 54 52.8**	**0.0**
PDPR	**Patillas Dam,**	**1.27**	**145**	Pn	**Pb**	**22 54 52.6**	**-0.2**
PDPR				IAML		22 55 14.4	
	comp=E,192nm,0.2s						
HUMP	**Col San Antoni**	**1.28**	**135**	⇑*eP*	**Pb**	**22 54 53.0**	**0.0**
HUMP	**Col San Antoni**	**1.28**	**135**	*eS*	**Sb**	**22 55 09.4**	**+0.5**
HUMP	**Col San Antoni**	**1.28**	**135**	Pn	**Pb**	**22 54 52.6**	**-0.4**
HUMP				IAML		22 55 15.8	
	comp=N,184nm,0.3s						
MTP	**Monte Pirata**	**1.52**	**129**	⇓*eP*	**Pb**	**22 54 56.1**	**-1.0**
MTP				*eS*	**Sb**	**22 55 15.6**	**-0.2**
MTP	**Monte Pirata**	**1.52**	**129**	Pn	**Pb**	**22 54 55.9**	**-1.1**
CUPR	**Culebra, Puert**	**1.61**	**117**	⇑*eP*	**Pn**	**22 54 57.0**	**+0.1**
CUPR	**Culebra, Puert**	**1.61**	**117**	Pn	**Pn**	**22 54 57.0**	**+0.1**
STVI	**Saint Thomas**	**1.88**	**112**	Pn	**Pn**	**22 55 00.8**	**+0.2**
SJVI	**Gifft Hill Sch**	**2.05**	**110**	⇑*eP*	**Pn**	**22 55 03.5**	**+0.5**
SJVI	**Gifft Hill Sch**	**2.05**	**110**	*eS*	**Sn**	**22 55 28.0**	**+0.1**
SJVI	**Gifft Hill Sch**	**2.05**	**110**		**Pn**	**22 55 03.5**	**+0.5**
SJVI					**Sn**	**22 55 28.0**	**+0.1**
CDVI	**St. Croix**	**2.32**	**124**	Pn	**Pn**	**22 55 08.0**	**+1.3**
CDVI				IAML		22 55 53.4	
	comp=E,161nm,0.6s						
DR12	**Loma Pena Alta**	**2.46**	**264**	⇑*eP*	**Pn**	**22 55 08.9**	**+0.1**
DR12	**Loma Pena Alta**	**2.46**	**264**	Pn	**Pn**	**22 55 07.9**	**-0.8**
BANI	**BANI**	**3.44**	**260**	*i* P	**Pn**	**22 55 22.8**	**+0.5**
BANI

SDDR IAML 22 56 49.0
comp=Z,33nm,0.7s

DDA ***02*** *22:54:42.1±0.0,38.˚76N×27.˚83E,h9km±1km,ML1.8*
ISK 02 22:54:42.0,38.˚76N×27.˚80E,h6km,ML2.0/14,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOMA	**Golmarmara-Man**	**0.10**	**120**	PG	Pg	22 54 45.0	+0.8
GOMA				SG	Sg	22 54 47.0	+1.3
AKHS	**Akhisar**	**0.12**	**4**	P	Pg	22 54 44.6	+0.1
AKHS				*i* AML	AML	22 54 47.0	
	comp=E,702nm,0.3s						
AKHS				S	Sg	22 54 47.1	+0.9
AKS	**Akhisar**	**0.12**	**4**	PG	Pg	22 54 45.0	+0.5
AKS				SG	Sg	22 54 47.0	+0.8
ZEDA	**zmir-Bergama**	**0.60**	**290**	P	Pb	22 54 54.5	-0.5
ZEDA				S	Sb	22 55 03.3	-0.4
ZEDA				*i* AML	AML	22 55 04.0	
	comp=N,42nm,0.2s						
STEP	**BALIKESIR_Sava**	**0.62**	**354**	P	Pg	22 54 54.5	+0.6
STEP				S	Sb	22 55 03.5	-0.8
BLCB	**Balcova**	**0.70**	**238**	PG	Pg	22 54 56.1	+0.6
KULA	**Kula-Manisa**	**0.72**	**110**	PG	Pg	22 54 56.1	+0.3
DKL	**Dikili**	**0.77**	**294**	PG	Pb	22 54 57.4	-0.4
DKL				SG	Sb	22 55 08.3	-0.1
DEMI	**Demirci**	**0.77**	**68**	P	Pg	22 54 56.9	+0.2
DEMI				S	Sg	22 55 06.8	+0.1
DEMI				*i* AML	AML	22 55 12.0	
	comp=E,38nm,0.7s						
AYDB	**Zeytinkoy-Aydi**	**0.81**	**175**	PG	Pg	22 54 57.8	+0.1
AYDB				SG	Sg	22 55 09.0	+0.8
BALB	**Balikesir**	**0.88**	**4**	PG	Pb	22 54 59.7	0.0
BUHA	**Balikesir, Bur**	**0.93**	**323**	P	Pb	22 55 00.5	-0.1
BUHA				*i* AML	AML	22 55 17.0	
	comp=E,28nm,0.6s						
USAK	**Uak-Merkez**	**0.95**	**92**	P	Pg	22 54 59.8	-0.5
SIMA	**Simav-Kutahya**	**0.98**	**70**	PG	Pg	22 55 01.0	+0.3
BALY	**Balya**	**0.99**	**352**	P	Pb	22 55 01.4	-0.3
BALY				S	Sb	22 55 14.9	-0.1
BALY				*i* AML	AML	22 55 18.0	
	comp=N,18nm,0.2s						
DURS	**Dursunbey**	**0.99**	**32**	P	Pb	22 55 01.9	+0.3
DURS				S	Sb	22 55 15.1	+0.1
DURS				*i* AML	AML	22 55 16.0	
	comp=E,42nm,0.3s						
DURS				*i* AML	AML	22 55 18.0	
	comp=N,31nm,0.4s						
DGB	**zmir**	**1.01**	**226**	P	Pb	22 55 01.9	0.0
DGB				*i* AML	AML	22 55 19.0	
	comp=E,19nm,0.2s						
AYVA	**Ayvalik**	**1.02**	**303**	P	Pb	22 55 02.4	+0.2
AYVA				*i* AML	AML	22 55 22.0	
	comp=N,19nm,0.6s						
URLA	**Izmir**	**1.03**	**247**	PG	Pb	22 55 02.1	-0.1
URLA	**Izmir**	**1.03**	**247**	P	Pb	22 55 02.1	-0.1
ZEYE	**Izmir, Urla-Ze**	**1.14**	**243**	P	Pb	22 55 04.3	+0.1
ZEYE				*i* AML	AML	22 55 23.0	
	comp=N,23nm,0.3s						
GCAM	**G?zelcaml?**	**1.15**	**203**	PN	Pb	22 55 04.2	-0.1
CHOS	**Chios island**	**1.42**	**255**	PN	Pb	22 55 09.0	0.0
TVSB	**Tavsanli**	**1.46**	**61**	PN	Pb	22 55 09.6	-0.1
EDC	**Edincik**	**1.58**	**2**	PN	Pn	22 55 11.2	+0.5
BOZC	**Bozcaada**	**1.73**	**309**	PN	Pb	22 55 13.7	-0.6
BODT	**Bodrum**	**1.74**	**193**	PN	Pb	22 55 13.8	-0.6
ARMT	**Armutlu**	**1.98**	**24**	PN	Pn	22 55 16.9	+0.8

IDC ***02*** *22:58:10.4±1.1,32.˚70N×130.˚64E,h0km,mb3.7/8, mbtmp3.6/11,ML2.9/3,MS3.0/3,Error ellipse: s-maj=21.8km s-min=8.3km az=123.0*
JMA ***02*** *22:58:13.1±0.0,32.˚75N±0.˚08×130.˚8E±0.˚1,h16km, MV3.9/20,NW KUMAMOTO PREF*
JMA Felt III J1 at NW KUMAMOTO PREF .
NIED ***02*** *22:58:13.1,32.˚75N×130.˚78E,h16km,MW3.8,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr-3.28; Mθθ0.87; Mφφ2.40; Mrθ0.31; Mθφ3.16; Mφr-3.36; Fault plane solution: M₀5.47000×10¹⁴ NP1: φs248.00000°,δ38.00000°,λ-39.00000°. NP2:φs10.00000°, δ67.00000°,λ-121.00000°.*
ISC 02 22:58:12.9±1.3,32.˚72N±0.˚05×130.˚77E±0.˚09,h16km±9km, n17,σ1s02/18,mb3.8/8,Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIU3	**Izumi3**	**0.17**	**169**	*i* P	**Pb**	**22 58 17.9**	**+0.2**
JIU3				S	**Sb**	**22 58 21.4**	**+0.5**
JTA	**Tamana**	**0.32**	**320**	*i* P	**Pg**	**22 58 19.3**	**-0.3**
JNU	**Nakatsue**	**0.41**	**12**	Pg	**Pg**	**22 58 19.9**	**-1.3**
	390nm,0.3s,baz=206,slow=2.3,SNR=886						
JNU				Lg	Lg	22 58 25.1	
	3µm,0.3s,baz=315,slow=16,SNR=116						
JTZ	**Takazaki**	**0.86**	**162**	*i* P	**Pb**	**22 58 30.2**	**+0.8**
JTZ				S	**Sb**	**22 58 41.9**	**+1.3**
KSRS	**Korea Array**	**5.27**	**334**	Pn	**Pn**	**22 59 31.9**	**+1.0**
	0.3nm,0.3s,baz=153,slow=14,SNR=2.3						
KSRS				Pg	**Pb**	**22 59 46.2**	**+1.6**
	0.7nm,0.3s,baz=150,slow=17,SNR=16						
KSRS				Lg	Lg	23 00 54.4	
	0.8nm,0.3s,baz=159,slow=25,SNR=6.8 0.5nm,0.3s						
MJAR	**Matsushiro Arr**	**7.22**	**56**	Pn	**Pn**	**22 59 59.5**	**+1.7**
	0.2nm,0.3s,baz=246,slow=14,SNR=8.6						
MJAR				LR	LR	23 03 02.9	
	comp=Z,108nm,18.4s,baz=272,slow=40 2.7nm,0.5s						
JHJ	**Hachijo jima 2**	**7.59**	**85**	LR	LR	23 02 28.3	
	comp=Z,29nm,20.6s,baz=153,slow=33						
KLR	**Kul'dur**	**16.51**	**2**	Pn	**P**	**23 02 05.7**	**-0.6**
	0.1nm,0.3s,baz=162,slow=11,SNR=6.6 2.2nm,0.9s						
SONM	**Songino Array**	**23.82**	**316**	P	**P**	**23 03 25.9**	**+0.8**
	0.8nm,0.7s,baz=128,slow=9.7,SNR=4.5 0.8nm,0.7s						
MKAR	**Makanchi Array**	**39.22**	**306**	P	**P**	**23 05 40.3**	**0.0**
	0.2nm,0.5s,baz=87,slow=9.2,SNR=1.7 0.2nm,0.5s						
ASAR	**Alice Springs**	**56.15**	**177**	P	**P**	**23 07 51.4**	**-0.4**
	0.4nm,0.8s,baz=357,slow=7.4,SNR=5.3 0.4nm,0.8s						
BELG	**Belogornoye**	**60.87**	**316**	LR	LR	23 34 17.4	
	comp=Z,41nm,19.5s,baz=132,slow=36						
KBZ	**Khabaz**	**66.85**	**308**	P	**P**	**23 09 03.5**	**-0.5**
	1.4nm,0.8s,baz=90,slow=1.0,SNR=3.8 1.4nm,0.8s						
FINES	**FINESS Array B**	**68.34**	**330**	P	**P**	**23 09 12.4**	**-0.7**
	0.8nm,0.5s,baz=62,slow=5.9,SNR=14 0.8nm,0.5s						
AKASG	**Malin Array Be**	**72.07**	**319**	P	**P**	**23 09 34.7**	**-1.4**
	0.5nm,0.4s,baz=61,slow=6.5,SNR=1.8 0.5nm,0.4s						
BRTR	**Keskin Array B**	**74.83**	**308**	P	**P**	**23 09 52.7**	**-0.1**
	0.8nm,0.7s,baz=133,slow=5.4,SNR=5.5 0.8nm,0.7s						
GERES	**GERESS Array B**	**81.35**	**325**	P	**P**	**23 10 28.7**	**-0.1**
	0.2nm,0.3s,baz=72,slow=4.3,SNR=4.3 0.2nm,0.3s						

ISK ***02*** *23:00:13.1,35.˚53N×31.˚69E,h7km,ML3.0/21*
GII ***02*** *23:00:14.0±0.0,35.˚44N×31.˚62E,h5km,MD2.9/2,Mm2.6/5*
NIC ***02*** *23:00:14.7±0.0,35.˚63N×31.˚83E,h16km±2km,Ml3.0/5*
DDA ***02*** *23:00:16.0±0.0,35.˚81N×31.˚51E,h21km±1km,ML2.7*
ISC 02 23:00:14.1±1.3,35.˚57N±0.˚02×31.˚70E±0.˚03,h12km±10km, n78,σ1s03/104,Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKMS	**Akamas**	**0.75**	**136**	P	**Pg**	**23 00 28.4**	**-0.3**
AKMS				S	**Sb**	**23 00 40.1**	**+0.6**
AKMS				AML	AML	23 00 47.4	
	3.7nm,0.4s						
AKMS				AML	AML	23 00 47.4	
	3.7nm,0.4s						
AKMS				AML	AML	23 00 47.4	
	3.1nm,0.6s						
AKMS				AML	AML	23 00 47.4	
	3.1nm,0.6s						
GAZI	**Gazipasa**	**0.83**	**37**	PG	**Pb**	**23 00 30.2**	**-0.4**
GAZI				SG	**Sb**	**23 00 42.6**	**+0.8**
GAZI	**Gazipasa**	**0.83**	**37**	P	**Pb**	**23 00 30.7**	**+0.1**
GAZI				S	**Sb**	**23 00 42.4**	**+0.6**
GAZI				*i* AML	AML	23 00 44.0	
	comp=E,275nm,0.2s						
GAZI				*i* AML	AML	23 00 47.0	
	comp=N,274nm,0.6s						
ALFC	**Alefka**	**0.84**	**119**	P	**Pb**	**23 00 30.2**	**-0.5**
ALFC				S	**Sg**	**23 00 41.5**	**+0.2**
ALFC				AML	AML	23 00 43.8	
	1.5nm,0.3s						
ALFC				AML	AML	23 00 43.8	
	1.5nm,0.3s						
ALFC				AML	AML	23 00 50.9	
	2.1nm,0.3s						
ALFC				AML	AML	23 00 50.9	
	2.1nm,0.3s						
NATA	**Nata**	**1.06**	**138**	P	**Pn**	**23 00 35.1**	**+0.3**
NATA				AML	AML	23 00 53.9	
	2.8nm,0.8s						
NATA				AML	AML	23 00 56.4	
	2.5nm,0.4s						
AKDN	**Akdeniz- Kıbrı**	**1.07**	**104**	PG	**Pb**	**23 00 34.3**	**-0.2**
LEF	**Lefka**	**1.07**	**114**	PG	**Pb**	**23 00 33.0**	**-1.6**
LEF	**Lefka**	**1.07**	**114**	P	**Pb**	**23 00 33.1**	**-1.4**
SZAC	**Souni**	**1.26**	**130**	P	**Pb**	**23 00 38.3**	**+0.4**
SZAC				AML	AML	23 01 00.9	
	0.9nm,0.6s						
SZAC				AML	AML	23 01 01.0	
	1.0nm,0.5s						
TEKE	**Tekeli-Mersin**	**1.28**	**63**	PN	**Pn**	**23 00 38.4**	**+0.5**
KEPZ	**Antalya-Kepez**	**1.33**	**357**	P	**Pn**	**23 00 36.9**	**-1.8**
KEPZ				S	**Sn**	**23 00 52.2**	**-4.2**
KEPZ				*i* AML	AML	23 00 54.0	
	comp=N,256nm,0.5s						
AKUM	**Antalya-Kumluc**	**1.33**	**305**	P	**Pn**	**23 00 36.9**	**-1.7**
ATHAL	**Athalassa**	**1.45**	**107**	P	**Pn**	**23 00 39.4**	**-0.7**
ERMK	**Ermenek**	**1.45**	**42**	P	**Pg**	**23 00 42.4**	**+0.4**
BERE	**Bereket-Mersin**	**1.46**	**57**	PN	**Pn**	**23 00 40.9**	**+0.4**
CSS	**Mathiatis**	**1.46**	**114**	PN	**Pn**	**23 00 40.2**	**-0.2**
CSS	**Mathiatis**	**1.46**	**114**	P	**Pn**	**23 00 39.2**	**-1.2**
CSS	**Mathiatis**	**1.46**	**114**	Pn	**Pn**	**23 00 39.5**	**-0.9**
HDMB	**Hadim**	**1.53**	**24**	PN	**Pn**	**23 00 42.0**	**+0.5**
AKKU	**Akkuyu-Mersin**	**1.61**	**68**	PN	**Pn**	**23 00 43.1**	**+0.7**
AKKU				SN	**Sb**	**23 01 04.9**	**+0.7**
GULN	**MERSIN_Gulnar**	**1.62**	**67**	P	**Pb**	**23 00 43.6**	**-0.3**
GULN				S	**Sg**	**23 01 06.3**	**+0.1**
TEVE	**Tevekalti-Mers**	**1.66**	**58**	PN	**Pn**	**23 00 43.9**	**+0.8**
MVOU	**Mavrovouni**	**1.67**	**109**	P	**Pn**	**23 00 42.0**	**-1.2**
MVOU				AML	AML	23 01 04.8	
	0.4nm,0.4s						
MVOU				AML	AML	23 01 17.6	
	0.3nm,0.7s						
KORT	**Korkueli**	**1.80**	**323**	PN	**Pn**	**23 00 46.0**	**+0.9**
KORT	**Korkueli**	**1.80**	**323**	P	**Pb**	**23 00 47.2**	**+0.1**
AKAS	**Kas**	**1.83**	**292**	PN	**Pn**	**23 00 45.9**	**+0.4**
AKAS	**Kas**	**1.83**	**292**	P	**Pn**	**23 00 46.1**	**+0.6**
SEYD	**Seydisehir-KON**	**1.84**	**3**	PN	**Pn**	**23 00 45.5**	**-0.2**
ELL	**Elmali**	**1.87**	**310**	PN	**Pn**	**23 00 46.6**	**+0.5**
ELL	**Elmali**	**1.87**	**310**	P	**Pn**	**23 00 46.5**	**+0.4**
SEDI	**Konya, Seydise**	**1.88**	**1**	P	**Pn**	**23 00 46.2**	**0.0**
SEDI				*i* AML	AML	23 01 16.0	
	comp=E,118nm,0.6s						
SEDI				*i* AML	AML	23 01 19.0	
	comp=N,104nm,0.5s						
KKBE	**Karaman, Kazim**	**1.93**	**31**	P	**Pb**	**23 00 48.6**	**-0.7**
KKBE				S	**Sb**	**23 01 13.8**	**+0.4**
BUCA	**Burdur, Bucak-**	**1.98**	**333**	P	**Pb**	**23 00 51.4**	**+1.2**
SUTC	**Sutluce-Ispart**	**1.99**	**344**	PN	**Pn**	**23 00 48.2**	**+0.5**
EREN	**Erenkoy**	**2.01**	**90**	PN	**Pn**	**23 00 49.1**	**+1.2**
KRMN	**Karaman**	**2.04**	**38**	PN	**Pn**	**23 00 48.9**	**+0.5**
KMER	**Konya-Meram**	**2.26**	**14**	P	**Pn**	**23 00 53.5**	**+2.0**
KMER				S	**Sn**	**23 01 19.0**	**-0.3**
KMER				*i* AML	AML	23 01 32.0	
	comp=E,58nm,0.6s						
FETY	**Fethiye**	**2.37**	**297**	P	**Pn**	**23 00 53.9**	**+1.0**
CAME	**Cameli-Denizli**	**2.38**	**306**	PN	**Pn**	**23 00 54.1**	**+1.0**
GOLH	**Golhisar**	**2.40**	**315**	P	**Pn**	**23 00 55.1**	**+1.8**
GOLH				*i* AML	AML	23 01 39.0	
	comp=E,48nm,1.1s						
KONT	**Konya--Tatoy**	**2.43**	**12**	PN	**Pn**	**23 00 55.2**	**+1.5**
KONT	**Konya--Tatoy**	**2.43**	**12**	P	**Pb**	**23 00 56.5**	**-1.4**
ISP	**Isparta**	**2.44**	**338**	Pn	**Pn**	**23 00 55.4**	**+1.5**
BAGO	**Egridir - ISPA**	**2.53**	**343**	P	**Pb**	**23 00 58.9**	**-0.6**
OSC2	**CSNet OBS 4**	**2.53**	**169**	P	**Pn**	**23 00 56.1**	**+1.1**
DOGA	**KONYA_Doganhis**	**2.53**	**359**	P	**Pn**	**23 00 56.7**	**+1.5**
DOGA				S	**Sn**	**23 01 26.6**	**+0.5**
DOGA				*i* AML	AML	23 01 35.0	
	comp=N,68nm,0.5s						
DOGA				*i* AML	AML	23 01 36.0	
	comp=E,45nm,0.5s						
MERS	**Mersin**	**2.62**	**60**	PN	**Pn**	**23 00 57.3**	**+0.9**
LADK	**Ladik-KONYA**	**2.68**	**11**	PN	**Pn**	**23 00 58.4**	**+1.2**
KERG	**Konya-Eregli**	**2.69**	**46**	P	**Pb**	**23 01 00.3**	**-1.9**
KERG				S	**Sb**	**23 01 33.4**	**-1.8**
KERG				*i* AML	AML	23 01 38.0	
	comp=N,36nm,0.4s						
KERG				*i* AML	AML	23 01 45.0	
	comp=E,31nm,0.7s						
BASM	**Basmaki-Afyon**	**2.70**	**331**	PN	**Pn**	**23 00 57.9**	**+0.5**
YVAC	**Isparta, Yalva**	**2.72**	**352**	P	**Pn**	**23 00 57.4**	**-0.5**
YVAC				S	**Sn**	**23 01 28.9**	**-1.9**
ALIN	**Konya, Altinte**	**2.88**	**19**	P	**Pn**	**23 01 01.8**	**+1.8**
TAVA	**DENİZLİ_Tavas**	**2.94**	**311**	P	**Pn**	**23 01 01.8**	**+1.0**
KZIL	**AFYON_Kizioren**	**2.96**	**336**	P	**Pn**	**23 01 02.3**	**+1.2**
KDHN	**Kadinhani**	**2.97**	**6**	P	**Pb**	**23 01 05.7**	**-1.3**
SULT	**Sultanhani-AKS**	**3.00**	**28**	PN	**Pn**	**23 01 02.9**	**+1.3**
KARA	**Karaisali**	**3.19**	**57**	PN	**Pn**	**23 01 06.0**	**+1.9**
PASA	**Karahalli, USA**	**3.29**	**328**	P	**Pn**	**23 01 06.8**	**+1.2**
PASA				S	**Sn**	**23 01 44.9**	**+0.1**
CMRD	**Camardi-Nigde**	**3.37**	**51**	PN	**Pn**	**23 01 08.6**	**+1.9**
HNTI	**Hanita**	**3.79**	**130**	Pn	**Pn**	**23 01 12.8**	**+0.4**
HNTI				Sn	**Sn**	**23 01 57.9**	**+0.9**
OFRI	**`Ofer**	**4.01**	**136**	Pn	**Pn**	**23 01 15.0**	**-0.4**
OFRI				Sn	**Sn**	**23 02 02.3**	**0.0**
GEM	**Giv'at Ha'Em**	**4.03**	**125**	Pn	**Pn**	**23 01 16.3**	**+0.6**
GEM				Sn	**Sn**	**23 02 04.0**	**+1.1**
NATI	**Neve Ativ**	**4.05**	**123**	Pn	**Pn**	**23 01 17.2**	**+1.3**
NATI				Sn	**Sn**	**23 02 05.1**	**+1.8**
KSHT	**Keshet**	**4.27**	**126**	Pn	**Pn**	**23 01 19.9**	**+0.9**
SLTI	**Sal'it**	**4.33**	**139**	Pn	**Pn**	**23 01 20.1**	**+0.4**
SLTI				Sn	**Sn**	**23 02 10.0**	**-0.1**
MMLI	**Mount Malkishu**	**4.39**	**134**	Pn	**Pn**	**23 01 20.9**	**+0.2**
MMLI				Sn	**Sn**	**23 02 12.4**	**+0.6**
SALP	**Salfit**	**4.54**	**139**	Pn	**Pn**	**23 01 22.9**	**+0.2**
SALP				Sn	**Sn**	**23 02 16.3**	**+0.8**
HMDT	**Nahal Hemdat**	**4.59**	**135**	Pn	**Pn**	**23 01 24.0**	**+0.7**
AMAZ	**Amatzia**	**4.84**	**145**	Pn	**Pn**	**23 01 26.4**	**-0.4**
AMAZ				Sn	**Sn**	**23 02 22.9**	**+0.1**
DSI	**Dead Sea**	**5.03**	**141**	Pn	**Pn**	**23 01 29.6**	**+0.2**
DSI				Sn	**Sn**	**23 02 27.5**	**0.0**
YTIR	**Yattir**	**5.07**	**145**	Pn	**Pn**	**23 01 29.7**	**-0.4**
YTIR				Sn	**Sn**	**23 02 28.4**	**-0.3**
KZIT	**Kziot**	**5.17**	**153**	Pn	**Pn**	**23 01 31.0**	**-0.3**
KZIT				Sn	**Sn**	**23 02 29.9**	**-1.0**
MDBI	**Mazsada**	**5.23**	**143**	Pn	**Pn**	**23 01 31.0**	**-1.1**
GHAJ	**Ghor Haditha**	**5.34**	**142**	Pn	**Pn**	**23 01 33.1**	**-0.5**
PRNI	**Paran**	**5.89**	**151**	Pn	**Pn**	**23 01 41.2**	**-0.1**
HRFI	**Mount Harif**	**6.19**	**152**	Pn	**Pn**	**23 01 45.3**	**-0.1**
HRFI				Sn	**Sn**	**23 02 56.0**	**-0.1**
MBRI	**Mt Berech**	**6.36**	**154**	Pn	**Pn**	**23 01 47.7**	**-0.1**
MBRI				Sn	**Sn**	**23 03 00.1**	**-0.3**
EIL	**Elat**	**6.49**	**154**	Pn	**Pn**	**23 01 49.1**	**-0.3**

IASPEI ***02*** *23:06:15.3±0.8,34.˚17N±0.˚02×117.˚29W±0.˚02,h16km±5km, Error ellipse: s-maj=3.1km s-min=2.9km az=178.0,GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
PAS ***02*** *23:06:15.9±1.4,34.˚18N±0.˚01×117.˚29W±0.˚01,h9km±3km, ML3.1/346,ML2.9/78(NEIC),Error ellipse: s-maj=1.9km s-min=1.7km az=210.0*
ANF ***02*** *23:06:15.0±0.1,34.˚17N×117.˚30W,h14km,ML3.1/28, Error ellipse: s-maj=0.7km s-min=0.7km az=14.0*
NEIC ***02*** *23:06:15.7±1.8,34.˚17N±0.˚02×117.˚30W±0.˚02,h18km±2km, Error ellipse: s-maj=2.5km s-min=2.4km az=106.0*
ISC 02 23:06:15.5±0.8,34.˚16N±0.˚02×117.˚30W±0.˚02,h15km±5km, n80,σ0s73/111,Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFSC	**Central Fire S**	**0.06**	**167**		**Pg**	**23 06 18.2**	**-0.1**
CFSC					**Sg**	**23 06 20.4**	**+0.2**
RSBC	**Riverside Bore**	**0.19**	**187**		**Pb**	**23 06 20.2**	**-0.5**
RSBC					**Sb**	**23 06 23.2**	**-1.0**
BFSC	**Mount Baldy Ra**	**0.31**	**284**	P	**Pg**	**23 06 21.9**	**0.0**
	baz=101,SNR=1000						
BFSC				S	**Sg**	**23 06 26.3**	**-0.1**
	baz=101						
BBRC	**Big Bear Solar**	**0.33**	**72**	P	**Pg**	**23 06 22.1**	**-0.2**
	baz=255,SNR=105						
BBRC				S	**Sg**	**23 06 26.7**	**-0.4**
	baz=255						
ELS	**Elsinore Mount**	**0.53**	**192**		**Pg**	**23 06 25.9**	**+0.1**
ELS				Sg	**Sg**	**23 06 33.0**	**+0.2**
ELS				IAML		23 06 33.4	
	comp=N,691nm,0.4s						
ELS				IAML		23 06 33.6	
	comp=E,868nm,0.3s						
MURC	**Murrieta**	**0.57**	**171**	P	**Pn**	**23 06 26.6**	**-0.1**
	baz=352,SNR=25						
MURC				S	**Sg**	**23 06 34.5**	**+0.3**
	baz=352						
CBCC	**Caltech Broad**	**0.69**	**268**		**Sb**	**23 06 38.3**	**-0.2**
GVRC	**Garvey Reservo**	**0.69**	**261**		**Pb**	**23 06 29.1**	**-0.1**
GVDA	**Garner Valley**	**0.72**	**133**		**Pb**	**23 06 29.1**	**-0.7**
GVDA					**Sb**	**23 06 38.4**	**-1.1**
PASC	**Pasadena Art C**	**0.73**	**271**		**Pb**	**23 06 29.6**	**-0.5**
PASC				Sg	**Sb**	**23 06 39.3**	**-0.7**
RRX	**Edison Barstow**	**0.75**	**19**	P	**Pb**	**23 06 29.7**	**-0.7**
	baz=199,SNR=8.7						
RRX				S	**Sb**	**23 06 39.7**	**-0.8**
	baz=199						
GR2C	**Griffith Obs.**	**0.83**	**267**		**Pb**	**23 06 31.4**	**-0.2**
DECC	**Green Verdugo**	**0.86**	**276**	P	**Pb**	**23 06 31.9**	**-0.3**
	baz=95,SNR=7.3						
DECC				S	**Sb**	**23 06 43.6**	**0.0**
	baz=95						
PFO	**Pinyon Flats O**	**0.89**	**128**		**Pb**	**23 06 32.3**	**-0.4**
PFO				Sg	**Sb**	**23 06 44.1**	**-0.4**
PFO	**Pinyon Flats O**	**0.89**	**128**	P	**Pb**	**23 06 32.3**	**-0.4**
	baz=310,SNR=35						
PFO				S	**Sb**	**23 06 43.9**	**-0.5**
	baz=310						
EDW2	**Edwards Air Fo**	**0.92**	**322**	P	**Pb**	**23 06 32.5**	**-0.7**
	baz=140,SNR=100						
EDW2				S	**Sb**	**23 06 44.2**	**-1.0**
	baz=140						
FMP	**Fort Macarthur**	**0.94**	**242**	P	**Pb**	**23 06 33.2**	**-0.3**
	baz=60						
FMP				S	**Sb**	**23 06 46.0**	**+0.2**
	baz=60						
HEC	**Hector,Ludlow**	**1.04**	**50**	P	**Pb**	**23 06 34.7**	**-0.5**
	baz=231,SNR=77						
HEC				S	**Sg**	**23 06 48.8**	**-0.3**
	baz=231						
BELC	**Belle Mtn. Jos**	**1.09**	**98**	P	**Pb**	**23 06 36.1**	**-0.1**
	baz=280,SNR=255						
BELC				S	**Sn**	**23 06 50.6**	**-0.7**
	baz=280						
CCAC	**Calif City Air**	**1.15**	**329**		**Pn**	**23 06 36.7**	**-0.5**
CCAC				Sg	**Sb**	**23 06 51.7**	**-0.3**
CIS	**Catalina Islan**	**1.20**	**231**	P	**Pn**	**23 06 37.6**	**-0.2**
	baz=50,SNR=24						
CIS				S	**Sn**	**23 06 54.0**	**+0.1**
	baz=50						
GSC	**Goldstone, Bar**	**1.21**	**20**		**Pn**	**23 06 37.6**	**-0.3**
GSC				Sg	**Sb**	**23 06 53.1**	**-0.4**
GSC	**Goldstone, Bar**	**1.21**	**20**	P	**Pn**	**23 06 37.7**	**-0.2**
	baz=200,SNR=148						
GSC				S	**Sn**	**23 06 53.5**	**-0.6**
	baz=200						
OSI	**Oeito Audit: C**	**1.26**	**291**	S	**Sb**	**23 06 54.9**	**-0.2**
	baz=110						
109C	**Camp Elliot, M**	**1.28**	**173**		**Pn**	**23 06 38.6**	**-0.3**
109C				IAML		23 06 57.9	
	comp=N,303nm,0.2s						
109C				IAML		23 06 58.0	
	comp=E,260nm,0.2s						
109C	**Camp Elliot, M**	**1.28**	**173**	P	**Pn**	**23 06 38.6**	**-0.3**
	baz=353						
109C				S	**Sn**	**23 06 55.2**	**-0.5**
	baz=353						
LRMC	**Laurel Mtn Rad**	**1.35**	**347**	Pg	**Pb**	**23 06 40.9**	**+0.3**
	baz=166						
LRMC				S	**Sb**	**23 06 57.8**	**+0.1**
	baz=166						
MONP2	**Monument Peak**	**1.46**	**150**	Pb	**Pb**	**23 06 42.3**	**-0.2**
	baz=331						
MONP2				Sb	**Sb**	**23 07 02.0**	**+1.0**
	baz=331						
GMRC	**Granite Mounta**	**1.49**	**65**	P	**Pn**	**23 06 41.5**	**-0.4**
	baz=246,SNR=87						
GMRC				Sb	**Sb**	**23 07 02.4**	**+0.6**
	baz=246						
BAR	**Barrett**	**1.57**	**160**	Pn	**Pn**	**23 06 43.3**	**+0.4**
BAR				IAML		23 07 04.3	
	comp=N,222nm,0.2s						
SCI2	**San Clemente I**	**1.57**	**222**	Pg	**Pg**	**23 06 45.6**	**-0.1**
	baz=41						
SCI2				Sb	**Sg**	**23 07 05.7**	**-0.4**
	baz=41						
ARVC	**Arvin**	**1.59**	**308**	Sb	**Sb**	**23 07 05.2**	**+0.8**
	baz=126						
BC3	**Big Chuckawall**	**1.62**	**108**	P	**Pn**	**23 06 43.4**	**-0.2**
	baz=290,SNR=30						
BC3				Sb	**Sg**	**23 07 06.7**	**-0.8**
	baz=290						
TUQ	**Turquoise Moun**	**1.70**	**41**	P	**Pn**	**23 06 44.3**	**-0.4**
	baz=222,SNR=30						
TUQ				Sb	**Sb**	**23

	comp=E,28nm,1.8s							
PAGB					IAML		23 08 05.2	
	comp=N,24nm,1.4s							
TPNV	**Topopah Spring**	**2.91**	**17**	Pn	**Pn**	**23 07 02.5**	**+1.1**	
TPNV				IAML		23 07 48.9		
	comp=N,66nm,0.7s							
SHPR	**Sheep Range**	**2.92**	**36**		**Pn**	**23 07 02.6**	**+1.1**	
W13A	**Hualapai Mount**	**2.96**	**71**		**Pn**	**23 07 02.7**	**+0.4**	
W13A				IAML		23 07 50.1		
	comp=N,22nm,0.3s							
LCH	**Last Change Ra**	**3.08**	**355**	Pn	**Pn**	**23 07 04.8**	**+1.0**	
113A	**Mohawk Valley,**	**3.26**	**114**	Pn	**Pn**	**23 07 05.3**	**-0.8**	
PMPB	**Monarch Peak**	**3.52**	**307**	Pn	**Pn**	**23 07 10.5**	**+0.7**	
PMPB				IAML		23 07 49.9		
	comp=E,25nm,4.0s							
PMPB				IAML		23 09 19.8		
	comp=N,30nm,3.8s							
Y14A	**Wickenburg**	**3.57**	**92**	Pn	**Pn**	**23 07 10.7**	**+0.3**	
Y14A				IAML		23 07 55.9		
	comp=N,29nm,0.1s							
Y14A				IAML		23 08 15.6		
	comp=E,21nm,0.8s							
OMMB	**Old Mammoth Mi**	**3.71**	**339**	Pn	**Pn**	**23 07 13.7**	**+1.1**	
OMMB				IAML		23 08 16.2		
	comp=N,13nm,0.5s							
OMMB				IAML		23 08 16.6		
	comp=E,12nm,0.7s							
PRN	**Pahroc Range**	**3.72**	**29**	Pn	**Pn**	**23 07 13.2**	**+0.7**	
PRN				IAML		23 08 17.3		
	comp=N,33nm,0.4s							
PRN				IAML		23 08 17.6		
	comp=E,27nm,0.8s							
MDPB	**Devils Postpil**	**3.75**	**338**	Pn	**Pn**	**23 07 13.4**	**+0.3**	
MDPB				IAML		23 08 13.8		
	comp=E,17nm,0.7s							
MDPB				IAML		23 08 26.3		
	comp=N,20nm,1.5s							
LHV	**Little Huntoon**	**4.20**	**347**	Pn	**Pn**	**23 07 19.5**	**+0.6**	
NVAR	**Mina Array Bea**	**4.33**	**350**	Pn	**Pn**	**23 07 20.7**	**-0.4**	
LCMT	**Little Creek M**	**4.36**	**48**		**Pn**	**23 07 22.5**	**+1.1**	
214A	**Organ Pipe Nat**	**4.36**	**119**	Pn	**Pn**	**23 07 22.2**	**+0.9**	
R11A	**Troy Canyon, C**	**4.40**	**18**	Pn	**Pn**	**23 07 23.9**	**+1.9**	
R11A				IAML		23 08 34.8		
	comp=E,6.1nm,1.0s							
RYN	**Ryan**	**4.56**	**348**	Pn	**Pn**	**23 07 23.5**	**-0.7**	
CMB	**Columbia Colle**	**4.60**	**328**	Pn	**Pn**	**23 07 23.1**	**-1.5**	
CCUT	**Cedar City**	**4.65**	**42**	Pn	**Pn**	**23 07 25.5**	**+0.1**	
U15A	**North Rim**	**4.68**	**60**	Pn	**Pn**	**23 07 26.8**	**+0.9**	
SZCU	**Shurtz Canyon**	**4.84**	**44**	Pn	**Pn**	**23 07 29.5**	**+1.5**	
X16A	**Lo Mia Camp, P**	**4.86**	**85**	Pn	**Pn**	**23 07 29.0**	**+0.8**	
KVN	**Kaiserville**	**4.92**	**353**	Pn	**Pn**	**23 07 29.9**	**+0.8**	
WUAZ	**Wupatki**	**5.06**	**73**	Pn	**Pn**	**23 07 33.1**	**+2.2**	
WUAZ				IAML		23 09 01.0		
	comp=E,7.1nm,0.5s							
WUAZ				IAML		23 09 41.0		
	comp=E,6.5nm,2.4s							
PSUT	**Pine Spring**	**5.17**	**32**	Pn	**Pn**	**23 07 33.9**	**+1.3**	
PKCU	**Pink Cliffs**	**5.21**	**50**	Pn	**Pn**	**23 07 32.5**	**-0.7**	
PNTR	**Pine Nut**	**5.25**	**340**	Pn	**Pn**	**23 07 33.8**	**+0.1**	

*IDC **02** 23:08:48.4±1.3,21.˚05S×68.˚87W,h107km±13km,mb3.8/4, mbtmp4.2/7,Error ellipse: s-maj=25.3km s-min=14.9km az=106.0*

*GUC **02** 23:08:48.7±0.6,21.˚11S×68.˚91W,h113km±3km,ML4.1*

*NEIC **02** 23:08:48.4,21.˚13S×68.˚97W,h97km,Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=0.68; $M_{\theta\theta}$=0.12; $M_{\phi\phi}$=0.80; $M_{r\theta}$=0.47; $M_{r\phi}$=-0.33; $M_{\theta\phi}$=-1.15; Fault plane solution: $M_0$1.48000×10^{15} NP1:ϕ_s338.11000°, δ73.68000°,λ-93.17000°. NP2:ϕ_s169.25000°,δ16.61000°, λ-79.31000°. Principal axes: T 1.5825, Plg29.0000°, Azm71.0000°; N -0.2225, Plg3.0000°, Azm339.0000°; P -1.3600, Plg61.0000°, Azm243.0000°;*

*NEIC **02** 23:08:48.3±1.7,21.˚14S±0.˚02×68.˚95W±0.˚07,h107km±5km, mb4.2/20,Mwr4.0/24,ML4.0(GUC) Error ellipse: s-maj=10.1km s-min=1.8km az=77.0*

*VAO **02** 23:08:49.8±0.5,21.˚10S×68.˚84W,h114km,mb4.4*

ISC 02 23:08:48.3±0.6,21.˚12S±0.˚03×68.˚97W±0.˚05,h116km±6km, n132,σ1$23/149,mb4.0/6,12C-1D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB01	**IPOC Station P**	**0.49**	**279**		**Pn**	**23 09 05.6**	**-0.2**
PB01				Sn	**Sn**	**23 09 18.4**	**-0.6**
PB01	**IPOC Station P**	**0.49**	**279**	⇑*iP*	**Pn**	**23 09 05.5**	**-0.2**
PB01				*i* S	**Sn**	**23 09 18.5**	**-0.6**
PB01				IAML		23 09 19.7	
	comp=N,15μm,0.3s						
PB09	**IPOC Station P**	**0.72**	**200**		**Pn**	**23 09 07.9**	**+0.3**
PB09				Sn	**Sn**	**23 09 22.9**	**+0.8**
PB09	**IPOC Station P**	**0.72**	**200**	⇑*iP*	**Pn**	**23 09 07.8**	**+0.2**
PB09				*e*S	**Sn**	**23 09 23.0**	**+0.8**
PB09				IAML		23 09 25.4	
	comp=N,4μm,0.3s						
PB02	**IPOC Station P**	**0.89**	**257**		**Pn**	**23 09 08.9**	**0.0**
PB02				Sn	**Sn**	**23 09 24.4**	**-0.2**
PB02	**IPOC Station P**	**0.89**	**257**	⇑*iP*	**Pn**	**23 09 09.2**	**+0.2**
PB02				*e*S	**Sn**	**23 09 24.7**	**+0.1**
PB02				IAML		23 09 25.5	
	comp=N,10μm,0.4s						
PB08	**IPOC Station P**	**0.99**	**350**		**Pn**	**23 09 10.5**	**+0.2**
PB08	**IPOC Station P**	**0.99**	**350**	⇑*eP*	**Pn**	**23 09 10.5**	**+0.2**
PB08				*e*S	**Sn**	**23 09 27.0**	**+0.1**
PB08				IAML		23 09 28.4	
	comp=E,3μm,0.2s						
PB07	**IPOC Station P**	**1.04**	**235**		**Pn**	**23 09 10.4**	**-0.2**
PB07	**IPOC Station P**	**1.04**	**235**	⇑*iP*	**Pn**	**23 09 10.7**	**+0.1**
PB07				*e*S	**Sn**	**23 09 27.5**	**0.0**
PB07				IAML		23 09 28.4	
	comp=N,3μm,0.2s						
PATCX	**Punta Patache**	**1.14**	**285**		**Pn**	**23 09 11.7**	**+0.2**
PATCX	**Punta Patache**	**1.14**	**285**	⇑*iP*	**Pn**	**23 09 11.8**	**+0.2**
PATCX				*e*S	**Sn**	**23 09 29.2**	**+0.1**
PATCX				IAML		23 09 31.4	
	comp=N,6μm,0.3s						
HMBC	**Humberstone**	**1.20**	**314**	⇑*iP*	**Pn**	**23 09 12.0**	**-0.2**
HMBC				*e*S	**Sn**	**23 09 28.9**	**-1.4**
HMBC				IAML		23 09 31.4	
	comp=E,5μm,0.4s						
TA01	**Diego Aracena**	**1.26**	**296**	Pn	**Pn**	**23 09 12.5**	**-0.2**
TA01	**Diego Aracena**	**1.26**	**296**	⇑*iP*	**Pn**	**23 09 12.7**	**0.0**
TA01				*e*S	**Sn**	**23 09 30.8**	**-0.4**
TA01				IAML		23 09 34.5	
	comp=E,5μm,0.4s						
TA02	**Huaiquique**	**1.38**	**308**		**Pn**	**23 09 13.8**	**-0.2**
TA02	**Huaiquique**	**1.38**	**308**	*e*P	**Pn**	**23 09 13.8**	**-0.2**
TA02				*e*S	**Sn**	**23 09 32.9**	**-0.6**
TA02				IAML		23 09 38.3	
	comp=N,6μm,0.1s						
LVC	**Limon Verde**	**1.48**	**178**	P	**Pn**	**23 09 16.4**	**+0.7**
	comp=N,117nm,0.3s,baz=33,slow=10,SNR=549						
LVC				S	**Sn**	**23 09 37.0**	**+0.6**
	comp=N,580nm,0.3s,baz=263,slow=16,SNR=18						
LVC	**Limon Verde**	**1.48**	**178**	Pn	**Pn**	**23 09 16.0**	**+0.4**
LVC	**Limon Verde**	**1.48**	**178**	*e*P	**Pn**	**23 09 15.9**	**+0.2**
LVC				*e*S	**Sn**	**23 09 37.2**	**+0.8**
LVC	**Limon Verde**	**1.48**	**178**	*e*P	**Pn**	**23 09 16.4**	**+0.7**
PB11	**IPOC Station P**	**1.50**	**335**		**Pn**	**23 09 15.6**	**-0.1**
PB11	**IPOC Station P**	**1.50**	**335**	⇑*iP*	**Pn**	**23 09 15.5**	**-0.1**
PB11				*e*S	**Sn**	**23 09 36.1**	**-0.2**
PB11				IAML		23 09 37.4	
	comp=N,3μm,0.1s						
PB04	**IPOC Station P**	**1.63**	**222**		**Pn**	**23 09 17.0**	**-0.2**
PB04	**IPOC Station P**	**1.63**	**222**	⇑*iP*	**Pn**	**23 09 17.3**	**+0.1**
PB04				*e*S	**Sn**	**23 09 37.6**	**-1.5**
PB04				IAML		23 09 44.7	
	comp=N,2μm,0.2s						
PB06	**IPOC Station P**	**1.67**	**199**		**Pn**	**23 09 17.8**	**+0.1**
PB06	**IPOC Station P**	**1.67**	**199**	⇑*iP*	**Pn**	**23 09 18.0**	**+0.3**
PB06				*e*S	**Sn**	**23 09 40.3**	**+0.2**
PB06				IAML		23 09 44.2	
	comp=N,2μm,0.2s						
AF01	**San Pedro de A**	**1.97**	**158**		**Pn**	**23 09 22.5**	**+1.1**
AF01	**San Pedro de A**	**1.97**	**158**	⇓*eP*	**Pn**	**23 09 22.9**	**+1.5**
AF01				*e*S	**Sn**	**23 09 45.8**	**-0.9**
AF01				IAML		23 10 06.6	
	comp=E,995nm,0.3s						
PB15	**IPOC Station P**	**2.13**	**192**		**Pn**	**23 09 23.5**	**+0.1**
PB15	**IPOC Station P**	**2.13**	**192**	*e*P	**Pn**	**23 09 23.7**	**+0.3**
PB15				*e*S	**Sn**	**23 09 51.0**	**+0.8**
PB10	**IPOC Station P**	**2.80**	**211**		**Pn**	**23 09 30.9**	**-0.9**
PB10	**IPOC Station P**	**2.80**	**211**	*e*P	**Pn**	**23 09 31.1**	**-0.6**
PB10				*e*S	**Sn**	**23 09 59.5**	**-5.7**
PB10				IAML		23 10 05.6	
	comp=E,312nm,0.2s						
PB12	**IPOC Station P**	**2.80**	**333**	Pn	**Pn**	**23 09 31.0**	**-1.0**
PB12	**IPOC Station P**	**2.80**	**333**	⇑*iP*	**Pn**	**23 09 30.8**	**-1.1**
PB12				*e*S	**Sn**	**23 10 02.7**	**-2.8**
PB16	**IPOC Station P**	**2.82**	**350**	Pn	**Pn**	**23 09 33.6**	**+1.0**
PB16	**IPOC Station P**	**2.82**	**350**	*e*P	**Pn**	**23 09 33.4**	**+0.8**
PB16				*e*S	**Sn**	**23 10 05.6**	**-1.0**
AP01	**Chacalluta**	**3.02**	**335**	Pn	**Pn**	**23 09 34.8**	**0.0**
AP01	**Chacalluta**	**3.02**	**335**	*e*P	**Pn**	**23 09 34.6**	**-0.2**
AP01				*e*S	**Sn**	**23 10 10.4**	**-0.3**
AP01				IAML		23 10 32.3	
	comp=N,903nm,0.4s						
PB18	**Visviri**	**3.54**	**352**		**Pn**	**23 09 43.3**	**+1.1**
PB14	**IPOC Station P**	**3.73**	**200**		**Pn**	**23 09 43.3**	**-1.2**
GO02	**Mina Guanaco**	**4.06**	**188**		**Pn**	**23 09 48.4**	**-0.5**
GO02	**Mina Guanaco**	**4.06**	**188**	*e*P	**Pn**	**23 09 48.2**	**-0.6**
GO02				*e*S	**Sn**	**23 10 34.2**	**-1.6**
LPAZ	**La Paz**	**4.87**	**10**	P	**Pn**	**23 10 00.6**	**+0.5**
	comp=N,7.7nm,0.3s,baz=202,slow=7.4,SNR=53						
LPAZ				S	Sn	23 10 45.5	-10
	comp=N,12nm,0.7s,baz=164,slow=9.3,SNR=6.1						
LPAZ	**La Paz**	**4.87**	**10**		**Pn**	**23 10 01.4**	**+1.3**
LPAZ	**La Paz**	**4.87**	**10**	*e*P	**Pn**	**23 10 00.3**	**+0.3**
AC01	**Pan de Azucar**	**5.22**	**196**		**Pn**	**23 10 02.0**	**-2.2**
AC02	**Maricunga**	**5.69**	**181**	Pn	**Pn**	**23 10 10.6**	**-0.4**
AC06	**Mina Casimiro**	**6.34**	**191**		**Pn**	**23 10 17.3**	**-2.0**
GO03	**Copiap**	**6.55**	**190**	Pn	**Pn**	**23 10 19.4**	**-2.7**
AC04	**Llanos de Chal**	**7.31**	**195**	Pn	**Pn**	**23 10 27.8**	**-4.6**
LCO	**Las Campanas**	**8.01**	**191**	Pn	**Pn**	**23 10 41.1**	**-1.0**
CO01	**Juntas del Tor**	**8.88**	**186**	Pn	**Pn**	**23 10 51.4**	**-2.4**
SIV	**San Ignacio**	**9.06**	**57**	P	**Pn**	**23 10 52.9**	**-3.3**
	comp=N,25nm,0.5s,baz=243,slow=9.3,SNR=112						
SIV				S	**Sn**	**23 12 30.0**	**-6.5**
	comp=N,1.3nm,0.8s,baz=55,slow=21,SNR=0.8						
GO04	**Tololo Observa**	**9.16**	**190**	Pn	**Pn**	**23 10 54.7**	**-3.0**
CO03	**El Pedregal**	**9.80**	**189**	Pn	**Pn**	**23 11 02.1**	**-4.1**
CO06	**Fray Jorge**	**9.81**	**194**	Pn	**Pn**	**23 11 06.0**	**-0.2**
ETMB	**Extrema**	**11.55**	**14**	*e*P	**Pn**	**23 11 31.2**	**+1.5**
VA03	**San Esteban**	**11.68**	**187**	Pn	**Pn**	**23 11 30.2**	**-1.2**
MT02	**Curacav**	**12.24**	**189**	Pn	**Pn**	**23 11 38.4**	**-0.4**
BO04	**La Punta**	**12.90**	**186**		**Pn**	**23 11 47.2**	**-0.2**
SAML	**Samuel**	**13.33**	**26**	Pn	**Pn**	**23 11 53.3**	**+0.4**
SAML				P	**P**	**23 11 58.2**	**-0.2**
BO01	**Tunca**	**13.35**	**188**	Pn	**Pn**	**23 11 53.6**	**+0.4**
ML02	**Panimavida**	**14.74**	**188**	Pn	**Pn**	**23 12 12.0**	**+1.0**
H03N1	**Juan Fernandez**	**15.11**	**214**	T	T	23 27 49.7	
	baz=34						
H03N2	**Juan Fernandez**	**15.12**	**214**	T	T	23 27 50.9	
	baz=34,slow=74						
H03N3	**Juan Fernandez**	**15.13**	**214**	T	T	23 27 49.0	
	baz=34,slow=74						
TRCB	**Terra Rica**	**15.25**	**99**	P	**P**	**23 12 19.4**	**-0.4**
CLDB	**Colider**	**16.24**	**53**	*e*P	**Pn**	**23 12 29.0**	**-0.9**
PCMB	**Pacaembu**	**16.51**	**95**	*e*P	**Pn**	**23 12 33.0**	**-0.1**
ITAB	**Concordia**	**16.52**	**115**		**P**	**23 12 33.5**	**-0.2**
ITAB	**Concordia**	**16.52**	**115**	*e*P	**Pn**	**23 12 32.9**	**-0.3**
CPSB	**Cacapava Do Su**	**16.75**	**127**	*e*P	**Pn**	**23 12 35.7**	**-0.3**
ITRB	**Iturama**	**17.50**	**89**	*e*P	**P**	**23 12 44.6**	**-0.1**
LC02	**Puerto Saavedr**	**18.02**	**191**	P	**P**	**23 12 48.9**	**-1.2**
FRTB	**Fartura**	**18.11**	**101**	*e*P	**P**	**23 12 50.9**	**-0.4**
CNLB	**Canela**	**18.30**	**120**	*e*P	**P**	**23 12 53.6**	**+0.2**
TIJ01	**Guaruva-PR**	**18.82**	**107**	*e*P	**P**	**23 12 59.2**	**+0.1**
MACA	**Manacapuru-AM**	**19.59**	**25**	*e*P	**P**	**23 13 08.3**	**+0.9**
PLCA	**Paso Flores**	**19.60**	**184**	P	**Pn**	**23 13 09.2**	**-0.6**
	comp=N,5.4nm,0.8s,baz=9,slow=11,SNR=12						
PLCA	**Paso Flores**	**19.60**	**184**		**P**	**23 13 07.5**	**+0.1**
PLCA				IAmb	IAmb	23 13 13.5	
	comp=Z,4.6nm,0.8s						
PLCA	**Paso Flores**	**19.60**	**184**	*e*P	**Pn**	**23 13 09.5**	**-0.3**
IPMB	**Ipameri, GO**	**19.81**	**85**	*e*P	**P**	**23 13 09.1**	**-0.8**
LL04	**Puerto Octay**	**19.94**	**188**	P	**P**	**23 13 11.2**	**+0.2**
LL04				IAmb	IAmb	23 13 13.0	
	comp=Z,9.9nm,0.8s						
RCLB	**Rio Claro- Sao**	**19.95**	**98**	*e*P	**P**	**23 13 10.7**	**-0.7**
BOSC	**San Juan Bosco**	**20.12**	**331**	P	**P**	**23 13 13.6**	**+0.2**
BOSC				IAmb	IAmb	23 13 18.5	
	comp=Z,13nm,0.5s						
LL03	**Petrohue**	**20.17**	**188**	P	**P**	**23 13 13.3**	**-0.1**
LL03				IAmb	IAmb	23 13 16.0	
	comp=Z,13nm,0.8s						
BDFB	**Brasilia**	**20.61**	**78**	P	**P**	**23 13 17.6**	**-1.0**
	comp=Z,7.4nm,0.4s,baz=270,slow=11,SNR=16						
	comp=Z,7.4nm,0.4s						
BDFB	**Brasilia**	**20.61**	**78**	P	**P**	**23 13 17.9**	**-0.7**
BDFB				IAmb	IAmb	23 13 21.3	
	comp=Z,9.4nm,0.5s						
BDFB	**Brasilia**	**20.61**	**78**	*e*P	**P**	**23 13 18.1**	**-0.5**
COHC	**Cochancay**	**21.07**	**330**	P	**P**	**23 13 24.3**	**+0.9**
PEXB	**Peixe**	**21.72**	**69**	*e*P	**P**	**23 13 29.6**	**-0.8**
AY01	**Puyuhuapi**	**23.44**	**187**	P	**P**	**23 13 47.0**	**0.0**
VAS01	**Vassouras-RJ**	**23.74**	**97**	*e*P	**P**	**23 13 50.9**	**+0.8**
PRPB	**Parauapebas**	**23.77**	**54**	*e*P	**P**	**23 13 49.1**	**-1.2**
MALB	**Monte Alegre**	**23.92**	**39**	*e*P	**P**	**23 13 51.2**	**-0.4**
SMTB	**Santa Maria do**	**23.94**	**63**	*e*P	**P**	**23 13 51.8**	**-0.1**
JANB	**Januaria**	**24.19**	**80**	*e*P	**P**	**23 13 53.9**	**-0.3**
SDBA	**SAO DESIDERIO**	**24.59**	**73**	*e*P	**P**	**23 13 57.5**	**-0.4**
BOAV	**Boa Vista**	**24.79**	**20**	*e*P	**P**	**23 13 60.0**	**+0.4**
SJMB	**Sao Joao De Ma**	**26.22**	**90**	*e*P	**P**	**23 14 12.4**	**-0.2**
MCPB	**Macapa, AP**	**26.43**	**41**	*e*P	**P**	**23 14 14.7**	**+0.3**
RIB01	**Linhares ES**	**26.86**	**91**	*e*P	**P**	**23 14 18.0**	**-0.3**
NAN01	**Guarapari, ES**	**27.37**	**88**	*e*P	**P**	**23 14 22.6**	**-0.3**
GUA01	**Guaratinga, BA**	**27.95**	**86**	*e*P	**P**	**23 14 27.7**	**-0.2**
GDU01	**Gurupa, PA**	**28.96**	**80**	*e*P	**P**	**23 14 36.3**	**-0.8**
NBPN	**Ponto Novo - B**	**29.44**	**74**	*e*P	**P**	**23 14 41.0**	**-0.3**
NBLA	**Lagarto - SE**	**31.55**	**76**	*e*P	**P**	**23 14 59.1**	**-0.7**
NBMA	**Muriti-CE**	**32.23**	**69**	*e*P	**P**	**23 15 06.0**	**+0.2**
NBPB	**Pedra_Branca-C**	**32.42**	**66**	*e*P	**P**	**23 15 07.3**	**-0.2**
NBAN	**Anadia - AL**	**33.44**	**75**	*e*P	**P**	**23 15 16.0**	**-0.4**
RCBR	**Riachuelo**	**35.46**	**69**	P	**P**	**23 15 33.0**	**-0.8**
RCBR	**Riachuelo**	**35.46**	**69**	*e*P	**P**	**23 15 34.6**	**+0.8**
TX31	**Lajitas Ar. Si**	**60.29**	**325**	P	**P**	**23 18 45.4**	**+0.5**
TX31				IAmb	IAmb	23 19 02.1	
	comp=Z,1.9nm,1.2s						
TX32	**Lajitas Array**	**60.29**	**325**	P	**P**	**23 18 45.8**	**+1.0**
TXAR	**Lajitas Array**	**60.29**	**325**	P	**P**	**23 18 45.1**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=156,slow=8.0,SNR=5.8						
	comp=Z,0.3nm,0.6s						
TXAR	**Lajitas Array**	**60.29**	**325**	P	**P**	**23 18 45.0**	**+0.2**
MNTX	**Cornudas Mount**	**63.05**	**325**	P	**P**	**23 19 03.4**	**+0.1**
QSPA	**South Pole Qui**	**69.07**	**180**	P	**P**	**23 19 42.0**	**+0.5**
TORD	**Torodi Ar. Bea**	**77.28**	**70**	P	**P**	**23 20 31.5**	**+1.1**
	comp=Z,4.1nm,0.5s,baz=258,slow=5.1,SNR=18						
	comp=Z,4.1nm,0.5s						
TORD	**Torodi Ar. Bea**	**77.28**	**70**	P	**P**	**23 20 31.3**	**+0.9**
TORD				IAmb	IAmb	23 20 37.0	
	comp=Z,2.9nm,0.6s						
MFID	**Camas Ranch**	**77.30**	**327**	P	**P**	**23 20 30.6**	**+0.6**
MFID				IAmb	IAmb	23 20 55.0	
	comp=Z,4.5nm,1.1s						
ORV	**Oroville**	**77.77**	**321**	P	**P**	**23 20 34.0**	**+1.4**
ORV				IAmb	IAmb	23 20 42.4	
	comp=Z,1.7nm,0.8s						
YKA	**Yellowknife Ar**	**90.81**	**341**	P	**P**	**23 21 38.6**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=127,slow=4.5,SNR=5.2						
	comp=Z,0.4nm,0.6s						
H11S2	**WAKE ISLAND Hyl**	**27.77**	**277**	T	T	01 47 43.6	
	baz=102,slow=75,SNR=29						
H11S1	**WAKE ISLAND Hyl**	**27.78**	**277**	T	T	01 47 44.3	
	baz=102,slow=75,SNR=17						
H11S3	**WAKE ISLAND Hyl**	**27.79**	**277**	T	T	01 47 50.8	
	baz=102,slow=75,SNR=15						
H11N3	**WAKE ISLAND Hyl**	**27.84**	**279**	T	T	01 47 49.6	
	baz=103,slow=74,SNR=5.6						
H11N2	**WAKE ISLAND Hyl**	**27.86**	**279**	T	T	01 47 52.0	
	baz=103,slow=74,SNR=5.7						
H11N1	**WAKE ISLAND Hyl**	**27.86**	**279**	T	T	01 47 50.7	
	baz=103,slow=74,SNR=3.2						
WRA	**Warramunga Arr**	**133.25**	**211**	PKP	**PKiKP**	**23 27 52.3**	**-0.3**
	comp=Z,0.3nm,0.9s,baz=143,slow=1.2,SNR=1.5						
ZALV	**Zalesovo Beam**	**141.64**	**25**	PKP	**PKPdf**	**23 28 06.1**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=300,slow=2.8,SNR=1.6						

*IDC **02** 23:25:25.0±1.4,27.˚85N×85.˚52E,h0km,mb3.6/7, mbtmp3.6/8,ML3.5/1,MS3.5/1,Error ellipse: s-maj=52.7km s-min=20.4km az=62.0*

ISC 02 23:25:27.9±1.6,27.˚9N±0.˚2×85.˚5E±0.˚4,h18km,n9,σ0$20/8, mb3.7/7,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.07**	**353**	P	**P**	**23 29 49.5**	**+0.2**
	0.1nm,0.3s,baz=173,slow=11,SNR=3.8						
	0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**23.34**	**349**	P	**P**	**23 30 35.2**	**+0.1**
	0.3nm,0.2s,baz=164,slow=10,SNR=2.5						
	0.3nm,0.2s						
SONM	**Songino Array**	**25.72**	**34**	P	**P**	**23 30 57.2**	**-0.1**
	0.8nm,0.6s,baz=216,slow=9.7,SNR=6.3						
	0.8nm,0.6s						
ZALV	**Zalesovo Beam**	**26.07**	**359**	P	**P**	**23 31 00.0**	**-0.2**
	0.5nm,0.3s,baz=174,slow=7.7,SNR=1.7						
	0.5nm,0.3s						
KIRV	**Kirov**	**39.58**	**331**	LR	LR	23 50 18.5	
	comp=Z,69nm,21.7s,baz=107,slow=38						
FINES	**FINESS Array B**	**51.39**	**328**	P	**P**	**23 34 31.1**	**-0.2**
	0.5nm,0.5s,baz=113,slow=7.4,SNR=9.1						
	0.5nm,0.5s						
ARCES	**ARCESS Array B**	**53.78**	**338**	P	**P**	**23 34 49.1**	**+0.1**
	0.7nm,0.5s,baz=104,slow=8.2,SNR=7.2						
	0.7nm,0.5s						
WRA	**Warramunga Arr**	**67.00**	**130**	P	**P**	**23 36 19.9**	**-0.1**
	0.3nm,0.5s,baz=322,slow=6.5,SNR=7.6						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**69.30**	**133**	P	**P**	**23 36 34.6**	**+0.2**
	0.2nm,0.3s,baz=313,slow=6.0,SNR=2.0						
	0.2nm,0.3s						

*CRAAG **02** 23:31:29.2,36.˚34N×3.˚47E,Ml2.8,Hypocentre not reviewed by the ISC*

MDD 02 23:31:32.8±1.0,36.˚42N×3.˚34E,h0km,Mb3.8/7, M_mb3.1/7,6C,Error ellipse: s-maj=9.4km s-min=5.0km az=141.0,Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ADJB	**Djebel Djouab**	**0.27**	**163**	P		23 31 34.5	
ABA	**Alger-Bouzarea**	**0.46**	**328**	P		23 31 41.6	
AKET	**Djebel Ketaf**	**0.57**	**130**	P		23 31 39.8	
EIBI	**Ibiza**	**3.05**	**329**	P	Pn	23 32 20.9	-1.4
EIBI				⇑*i*Vmb_V		23 32 23.3	
	286nm,SNR=2.3						
EIBI				S	Sn	23 32 55.6	-3.9
ETOS	**Mallorca**	**3.37**	**353**	P	Pn	23 32 24.0	-2.7
ETOS				⇑*i*Vmb_V		23 32 30.1	
	128nm,SNR=1.6						
ETOS				S	Sn	23 33 04.0	-3.5
EMUR	**La Murta**	**3.93**	**293**	P	Pn	23 32 32.8	-1.6
EMUR				⇑*i*Vmb_V		23 32 37.8	
	60nm,SNR=1.0						
ECOL	**Islas Columbre**	**4.06**	**330**	P	Pn	23 32 34.3	-1.8
ECOL				S	Sn	23 33 20.5	-3.8
EZAR	**Zarzadilla de**	**4.28**	**291**	P	Pn	23 32 38.1	-1.1
ETOB	**Tobarra**	**4.48**	**301**	P	Pn	23 32 41.0	-0.9
ETOB				⇑*i*Vmb_V		23 32 41.6	
	91nm,SNR=1.5						
ETOB				S	Sn	23 33 32.0	-2.8
ECHE	**Chera**	**4.65**	**314**	P	Pn	23 32 43.6	-0.7
ECHE				⇑*i*Vmb_V		23 32 49.1	
	198nm,SNR=1.4						
EMOS	**Mosqueruela**	**4.95**	**324**	P	Pn	23 32 47.4	-1.2
EMOS				⇑*i*Vmb_V		23 32 52.6	
	87nm,SNR=1.7						
EMOS				S	Sn	23 33 41.0	-5.6
ERTA	**Horta de San J**	**5.11**	**334**	S	Sn	23 33 44.9	-5.3
EJON	**La Jonquera**

CEVE Cerro Verde 1.31 345 *eP* **Pn 23 39 43.8 -1.2**
CEVE IAML 23 40 11.8
comp=Z,13µm,0.3s
SBLS San Blas 1.32 345 *eP* **Pn 23 39 43.9 -1.3**
SBLS San Blas 1.32 345 *eP* **Pn 23 39 43.9 -1.3**
RTR El Retiro 1.38 345 *eP* **Pn 23 39 44.8 -1.1**
RTR El Retiro 1.38 345 *eP* **Pn 23 39 44.8 -1.1**
NUBE Las Nubes 1.43 340 *eP* **Pn 23 39 45.0 -1.5**
NUBE Las Nubes 1.43 340 *eP* **Pn 23 39 45.0 -1.5**
LCND La Caada 1.54 61 *eP* **Pn 23 39 47.0 -0.9**
LCND La Caada 1.54 61 *eP* **Pn 23 39 47.0 -0.9**
SLIZ Alcaldia de Sa 1.54 341 *eP* **Pn 23 39 47.7 -1.0**
CNCH Conchagua 1.57 63 *eP* **Pn 23 39 47.7 -0.7**
CNCH Conchagua 1.57 63 *eP* **Pn 23 39 47.7 -0.7**
CNCH Conchagua 1.57 63 *eP* **Pn 23 39 47.3 -1.1**
FAGO Alcalda de S 1.60 45 *eP* **Pn 23 39 47.9 -0.8**
FAGO Alcalda de S 1.60 45 *eP* **Pn 23 39 47.9 -0.8**
FAGO Alcalda de S 1.60 45 *eP* **Pn 23 39 47.9 -0.8**
ESQI Esquipulas 1.99 358 Pn **Pn 23 39 54.2 0.0**
CRIN San Cristobal 2.17 86 Pn **Pn 23 39 55.6 -0.9**
CRIN San Cristobal 2.17 86 *eP* **Pn 23 39 55.7 -0.9**
CRIN IAML 23 40 43.6
comp=N,5µm,0.6s
NBG Las Nubes 2.27 333 *eP* **Pn 23 39 59.4 +1.3**
FUG Fuego 3 2.42 321 *eP* **Pn 23 40 00.1 -0.1**
TGUH Tegucigalpa,Un 2.45 52 Pn **Pn 23 40 00.3 -0.2**
TGUH Tegucigalpa,Un 2.45 52 *eP* **Pn 23 40 00.7 +0.2**
CNGN Cerro Negro 2.51 91 Pn **Pn 23 40 00.4 -1.1**
CNGN Cerro Negro 2.51 91 *eP* **Pn 23 40 00.4 -0.8**
MRL Marmol 2.54 351 *eP* **Pn 23 40 04.3 +2.5**
MRL *eS* Sn 23 40 42.5 +11
COPN Copaltepe 2.65 98 *eP* **Pn 23 40 01.4 -1.6**
MOMN Momotombo 2.67 93 *eP* **Pn 23 40 01.1 -2.4**
MOMN *eS* **Sn 23 40 35.5 +0.9**
HUEN 3.04 94 *eP* **Pn 23 40 06.7 -1.7**
RTAL Retalhuleu 3.06 310 Pn **Pn 23 40 09.3 +0.5**
STG3 Santiaguito 3, 3.10 314 *eP* **Pn 23 40 09.2 -0.2**
MATN Matagalpa 3.29 83 Pn **Pn 23 40 10.5 -1.4**
MATN Matagalpa 3.29 83 *eP* **Pn 23 40 09.7 -2.2**
HUEH Huehuetenango 3.50 322 Pn **Pn 23 40 14.6 -0.3**
BOAB BOACO BROADBAN 3.52 91 Pn **Pn 23 40 13.1 -2.0**
CONN Concepcion 3.70 105 *eP* **Pn 23 40 15.7 -1.9**
HZTE Horizontes, Gu 4.04 117 Pn **Pn 23 40 21.3 -0.9**
HZTE Horizontes, Gu 4.04 117 *eP* **Pn 23 40 21.0 -1.2**
ACON Acoyapa 4.05 98 Pn **Pn 23 40 21.4 -0.9**
GBS3 Finca Las Img 4.13 115 *eP* **Pn 23 40 23.1 -0.3**
LAPC Finca la Perla 4.16 115 *eP* **Pn 23 40 23.5 -0.4**
BUAI Buenos Aires 4.20 113 *eP* **Pn 23 40 22.7 -1.7**
GPS2 Hotel Rincn d 4.24 115 *eP* **Pn 23 40 24.8 -0.2**
ORTG Ortega, Santa 4.33 120 Pn **Pn 23 40 25.1 -1.1**
ORTG Ortega, Santa 4.33 120 *eP* **Pn 23 40 25.5 -0.7**
GUAI GUAI 4.33 121 *eP* **Pn 23 40 25.5 -0.7**
LIM1 Limonal 4.35 115 *eP* **Pn 23 40 26.1 -0.3**
PETF Flores 4.37 353 Pn **Pn 23 40 25.3 -1.4**
PETF Pg 23 40 43.8
COLC Colonia 4.41 115 *eP* **Pn 23 40 27.1 -0.2**
HORNC Hornillas 4.41 114 *eP* **Pn 23 40 27.0 -0.3**
VMAR Armenia, Volca 4.42 113 *eP* **Pn 23 40 27.2 -0.2**
CUI Cuipilapa 4.45 115 *eP* **Pn 23 40 27.4 -0.4**
DUNO Dulce Nombre, 4.45 123 Pn **Pn 23 40 25.9 -1.9**
DUNO Dulce Nombre, 4.45 123 *eP* **Pn 23 40 26.3 -1.5**
INDI Punta indio, G 4.56 125 *eP* **Pn 23 40 28.2 -1.2**
ACAL Aguas Claras 4.57 114 *eP* **Pn 23 40 29.9 +0.4**
PTEN Parque Tenorio 4.58 113 *eP* **Pn 23 40 29.6 0.0**
CCIG Comitan 4.63 323 Pn **Pn 23 40 30.8 +0.4**
JTS Las Juntas de 4.80 118 P **Pn 23 40 32.2 -0.4**
comp=N,14nm,0.3s,baz=12,slow=22,SNR=31
JTS S **Sn 23 41 23.3 -3.6**
comp=N,39nm,0.5s,baz=354,slow=20,SNR=1.7
comp=N,32nm,0.4s
JTS Las Juntas de 4.80 118 Pn **Pn 23 40 31.7 -0.9**
JTS Las Juntas de 4.80 118 *eP* **Pn 23 40 32.9 +0.4**
JTS Las Juntas de 4.80 118 *eP* **Pn 23 40 31.6 -1.0**
LAFE Finca La Fe, P 5.08 122 *eP* **Pn 23 40 35.3 -1.1**
LAFE Finca La Fe, P 5.08 122 *eP* **Pn 23 40 35.2 -1.2**
JACO JACO, Garabito 5.36 122 Pn **Pn 23 40 38.7 -1.6**
JACO JACO, Garabito 5.36 122 *eP* **Pn 23 40 41.9 +1.6**
HDC Heredia 5.66 116 Pn **Pn 23 40 44.4 -0.2**
LCR2 La Lucha 2 5.88 118 *eP* **Pn 23 40 49.7 +2.1**
RIMA Rio Macho 5.99 117 Pn **Pn 23 40 48.3 -0.8**
RIMA Rio Macho 5.99 117 *eP* **Pn 23 40 51.8 +2.7**
CDM Cerro de Muert 6.17 118 *eP* **Pn 23 40 52.8 +0.9**
BATAN Batan 6.28 112 Pn **Pn 23 40 52.4 -0.5**
PEZE Perez Zeledon, 6.33 119 Pn **Pn 23 40 53.1 -0.7**
SRBA San Rafael, Bu 6.68 119 Pn **Pn 23 40 58.2 -0.3**
SRBA San Rafael, Bu 6.68 119 *eP* **Pn 23 40 59.0 +0.5**
DRK0 Durika 6.76 118 Pn **Pn 23 40 60.0 +0.2**
CMIG Matias Romero 7.05 310 P **Pn 23 41 02.8 -0.7**
comp=N,1.9nm,0.3s,baz=164,slow=10,SNR=24
CMIG S **Sn 23 42 19.5 -3.0**
comp=N,20nm,0.7s,baz=37,slow=17,SNR=1.3
comp=N,5.8nm,0.2s
CDITO Canoas 7.43 122 Pn **Pn 23 41 08.8 +0.1**
BRU2 Volcan 7.47 119 Pn **Pn 23 41 07.9 -1.5**
BRU2 Volcan 7.47 119 *eP* **Pn 23 41 10.9 +1.5**
PRVC Isla de Provid 7.75 83 Pn **Pn 23 41 10.4 -2.7**
CACAO El Cacao, Vera 9.77 121 *eP* Pn 23 41 44.1 +3.4
BCIP Isla Barro Col 9.86 109 *eP* **Pn 23 41 42.2 +0.2**
AZU Azuero 10.04 117 *eP* **Pn 23 41 45.1 +0.6**
TLIG Tlapa 10.26 300 Pn **Pn 23 41 47.3 -0.3**
CBCY The Bluff, Cay 11.59 51 Pn **Pn 23 42 03.7 -2.0**
MOIG Morelia 13.46 303 Pn **Pn 23 42 31.3 -0.1**
SJCC San Jacinto, C 14.07 99 Pn **Pn 23 42 37.9 -1.7**
YOTC Yotoco, Valle 15.36 123 *eP* **Pn 23 42 55.5 -1.0**
NORC Norcasia 15.82 115 *eP* **P 23 43 06.9 +1.5**
POPC Popayan, Colom 15.96 128 *eP* **P 23 43 06.6 -0.5**
ZAIG Zacatecas 16.22 311 Pn **Pn 23 43 06.5 -1.2**
SOTA Rioblanco 16.27 129 *eP* **P 23 43 14.1 +3.3**
OTAV Otavalo 16.28 138 P **Pn 23 43 09.4 +0.8**
PCON Cinco Dias 16.30 128 *eP* **P 23 43 13.0 +1.7**
ORTC Ortega, Tolima 16.31 121 *eP* **P 23 43 10.7 -0.2**
GCUF Volcan Galeras 16.32 133 *eP* **Pn 23 43 09.2 0.0**
MARP Paez Belalcaza 16.34 125 *eP* **P 23 43 15.5 +4.1**
TULM Tulcn-Chalpat 16.37 135 **Pn 23 43 07.9 -1.9**
ROSC El Rosal 16.64 116 P **P 23 43 15.6 +0.8**
comp=N,9.1nm,0.4s,baz=82,slow=20,SNR=3.0
ROSC El Rosal 16.64 116 P **Pn 23 43 12.8 -0.3**
060A Indiantown 16.65 29 Pn **Pn 23 43 11.9 -0.9**
060A IAmb IAmb 23 43 36.7
comp=Z,78nm,0.8s
PRAC Prado 16.72 120 *eP* **Pn 23 43 14.2 +0.4**
SLOR San Lorenzo - 16.99 140 P **Pn 23 43 16.3 -1.3**
DWPF Disney Wildern 17.12 24 P **P 23 43 22.1 +2.4**
CHIC Chingaza 17.26 116 *eP* **P 23 43 24.3 +2.6**
RUSC La Rusia 17.29 111 *eP* **Pn 23 43 14.4 -6.9**
FLOC Florencia 17.35 128 *eP* **P 23 43 22.2 -0.1**
PORT Chimborazo Vol 17.40 142 **Pn 23 43 21.9 -0.8**
545A Edgard 17.44 356 Pn **Pn 23 43 20.2 -2.3**
656A Willston 17.86 20 **Pn 23 43 27.6 -0.1**
COHC Cochancay 17.94 146 **Pn 23 43 28.4 -0.3**
735A Kenedy 18.06 335 **Pn 23 43 30.4 +0.2**
553A Crawfordville 18.11 14 P **P 23 43 29.4 -1.2**
451A Vernon 18.27 10 **P 23 43 32.4 +0.1**
451A IAmb IAmb 23 43 55.6
comp=Z,85nm,1.4s
833A Chaparral WMA, 18.31 330 P **P 23 43 32.9 +0.1**
833A Chaparral WMA, 18.31 330 P **P 23 43 32.6 -0.2**
baz=147
HKT Hockley 18.35 342 P **P 23 43 33.6 +0.5**
BRAL Brewton 18.64 6 P **Pn 23 43 37.4 +0.3**
SDV Santo Domingo 18.67 99 P **Pn 23 43 37.5 -0.4**
comp=Z,3.7nm,0.3s,baz=342,slow=13,SNR=1.3
SDV LR LR 23 52 06.2
comp=Z,429nm,21.0s,baz=294,slow=41
SDV Santo Domingo 18.67 99 P **P 23 43 35.9 -1.2**
SDV IAmb IAmb 23 43 52.4
comp=Z,10nm,0.6s
346A Big Creek Wild 18.74 359 P **P 23 43 36.6 -0.9**
346A IAmb IAmb 23 43 54.1
comp=Z,58nm,1.1s
344A Westbrook Farm 18.86 356 P **P 23 43 38.9 +0.2**
344A IAmb IAmb 23 43 49.2
comp=Z,49nm,0.8s
BOSC San Juan Bosco 18.93 145 **P 23 43 38.9 -1.0**
342A Flagon Creek P 18.94 352 P **P 23 43 40.1 +0.5**
352A Blakely 19.25 11 P **Pn 23 43 44.4 -0.1**
352A IAmb IAmb 23 43 48.9
comp=Z,48nm,0.8s
TIGA Tifton 19.51 15 P **Pn 23 43 47.0 -0.5**
TIGA IAmb IAmb 23 43 53.4
comp=Z,50nm,0.8s
TIGA Tifton 19.51 15 P **Pn 23 43 47.2 -0.3**
baz=196
250A Grady 19.53 8 P **P 23 43 46.9 +0.8**
VBMS Vicksburg 19.60 357 P **P 23 43 48.0 +1.1**
VBMS Vicksburg 19.60 357 P **Pn 23 43 48.8 +0.2**
baz=176
435B Jarrell 19.70 338 P **P 23 43 47.8 -0.2**
435B Jarrell 19.70 338 P **P 23 43 48.4 +0.4**
baz=155
NATX Nacogdoches 19.75 346 P **P 23 43 49.2 +0.7**
NATX IAmb IAmb 23 43 51.7
comp=Z,52nm,0.9s
NATX Nacogdoches 19.75 346 P **P 23 43 49.3 +0.7**
baz=164
146A Union 19.99 1 P **P 23 43 52.0 +0.9**
146A IAmb IAmb 23 44 07.1
comp=Z,41nm,0.8s
143A Socs Landing, 20.15 355 P **P 23 43 53.9 +1.0**
143A IAmb IAmb 23 44 03.7
comp=Z,44nm,1.0s
237A Washetta, Mont 20.27 344 P **P 23 43 54.7 +0.6**
237A IAmb IAmb 23 44 07.4
comp=Z,38nm,0.9s
255A Hazlehurst 20.27 17 **P 23 43 54.0 -0.1**
255A IAmb IAmb 23 44 07.2
comp=Z,66nm,1.4s
JCT Junction City 20.32 333 IAmb IAmb 23 44 03.2
comp=Z,31nm,0.8s
JCT Junction City 20.32 333 P **P 23 43 54.0 -0.8**
baz=149,SNR=12
152A Waverly Hall 20.45 11 P **P 23 43 56.5 +0.4**
152A IAmb IAmb 23 44 03.1
comp=Z,26nm,0.9s
LRAL Lakeview Retre 20.49 5 **P 23 43 57.6 +1.1**
LRAL Lakeview Retre 20.49 5 P **P 23 43 57.3 +0.8**
baz=186,SNR=12
Z47A Carrollton 20.58 3 P **P 23 43 58.4 +0.9**
Z47A IAmb IAmb 23 44 01.5
comp=Z,29nm,0.8s
154A Montrose 20.75 15 P **P 23 44 00.5 +1.2**
WHTX Lake Whitney, 20.76 340 P **P 23 43 59.4 0.0**
baz=157,SNR=21
Z41A Richland Creek 20.86 352 P **P 23 44 01.0 +0.5**
Z41A IAmb IAmb 23 44 08.5
comp=Z,39nm,0.9s
Z41A Richland Creek 20.86 352 P Pn 23 44 02.6 -0.9
baz=170
Z51A Franklin 21.00 10 P **P 23 44 03.2 +1.1**
Z51A IAmb IAmb 23 44 08.9
comp=Z,27nm,0.9s
HPIG 21.00 315 P **P 23 44 03.8 +1.4**
HPIG IAmb IAmb 23 44 06.8
comp=Z,25nm,1.0s
BAUV El Baul 21.16 98 P **P 23 44 01.9 -2.0**
BAUV IAmb IAmb 23 44 17.1
comp=Z,46nm,1.3s
Y45A Yeager Farm, C 21.21 359 **P 23 44 05.3 +1.0**
Z38A Mt. Pleasant 21.26 347 P **P 23 44 06.0 +1.2**
Z38A IAmb IAmb 23 44 18.4
comp=Z,32nm,1.0s
WLAR White Oak Lake 21.32 351 P **P 23 44 07.5 +2.0**
Y49A Blount Mountai 21.36 7 P **P 23 44 06.2 +0.3**
Y49A IAmb IAmb 23 44 08.8
comp=Z,34nm,1.5s
CCAR Cane Creek 21.39 354 P **P 23 44 08.6 +2.5**
TX32 Lajitas Array 21.40 323 IAmb IAmb 23 44 10.6
comp=Z,24nm,1.1s
TXAR Lajitas Array 21.40 323 P **P 23 44 07.6 +1.2**
comp=Z,7.9nm,0.7s,baz=146,slow=9.9,SNR=78
comp=Z,7.9nm,0.7s
TXAR Lajitas Array 21.40 323 P **P 23 44 07.5 +1.0**
TX31 Lajitas Ar. Si 21.40 323 P **P 23 44 07.5 +1.0**
GOGA Godfrey 21.43 13 IAmb IAmb 23 44 11.2
comp=Z,15nm,0.8s
GOGA Godfrey 21.43 13 P **P 23 44 07.3 +0.7**
baz=195,SNR=8.8
Y52A Lilburn 21.74 12 P **P 23 44 10.5 +0.6**
H06E1 SOCORRO T-PHAS 21.74 289 T T 00 06 32.9
SNR=15
OXF Oxford 21.86 360 P **P 23 44 12.2 +1.0**
OXF Oxford 21.86 360 P **P 23 44 12.2 +1.0**
baz=179,SNR=9.3
Z35A Perchaven, San 21.93 342 IAmb IAmb 23 44 13.8
comp=Z,51nm,1.0s
X40A Basin Creek Fa 22.07 352 P **P 23 44 14.6 +1.1**
X40A IAmb IAmb 23 44 21.0
comp=Z,20nm,0.9s
X40A Basin Creek Fa 22.07 352 P **P 23 44 14.8 +1.2**
baz=170,SNR=12
NHSC New Hope 22.08 21 P **P 23 44 14.4 +0.7**
NHSC New Hope 22.08 21 P **P 23 44 15.2 +1.5**
baz=204
ABTX Abilene, Hawle 22.12 336 IAmb IAmb 23 44 24.8
comp=Z,42nm,1.1s
ABTX Abilene, Hawle 22.12 336 P **P 23 44 14.4 +0.2**
baz=152,SNR=15
MIAR Mount Ida 22.24 351 P **P 23 44 16.0 +0.7**
baz=169,SNR=57
X51A Calhoun 22.27 10 P **P 23 44 16.8 +1.1**
X51A IAmb IAmb 23 44 43.0
comp=Z,48nm,1.5s
ATAH Atahualpa 22.35 150 P **P 23 44 19.7 +2.6**
comp=Z,5.3nm,0.8s,baz=323,slow=6.4,SNR=5.9
ATAH LR LR 23 51 50.7
comp=Z,435nm,18.1s,baz=334,slow=33
comp=Z,5.3nm,0.8s
PLAL Pickwick Lake 22.35 3 P **P 23 44 15.9 -0.6**
W45A Hickory Valley 22.50 0 IAmb IAmb 23 44 29.6
comp=Z,43nm,0.9s
HODGE Hodges 22.50 15 P **P 23 44 18.5 +0.3**
HODGE IAmb IAmb 23 44 21.4
comp=Z,22nm,0.9s
SLBS Sierra La Lagu 22.52 302 P **P 23 44 20.1 +1.6**
SLBS IAmb IAmb 23 44 24.5
comp=Z,22nm,1.1s
W41B Gary Mavity, V 22.68 354 IAmb IAmb 23 44 24.0
comp=Z,41nm,1.1s
W41B Gary Mavity, V 22.68 354 P **P 23 44 20.5 +0.5**
baz=172,SNR=16
WHAR Wooly Hollow 22.80 354 P **P 23 44 21.1 -0.1**
WHAR IAmb IAmb 23 44 27.8
comp=Z,39nm,1.1s
JSC Jenkinsville 22.82 17 P **P 23 44 17.3 -4.3**
W50A Signal Mountai 22.83 8 P **P 23 44 21.6 0.0**
Y57A Sumter 22.84 19 P **P 23 44 22.2 +0.5**
W39A Magazine 22.91 350 IAmb IAmb 23 44 26.4
comp=Z,38nm,0.9s
W39A Magazine 22.91 350 P **P 23 44 22.7 +0.3**
baz=168,SNR=24
HBAR Harrisburg 22.93 357 P **P 23 44 22.9 +0.2**
W52A Murphy 22.95 11 P **P 23 44 22.4 -0.6**
W52A IAmb IAmb 23 44 47.2
comp=Z,20nm,1.3s
Y58A Scranton 22.98 21 P **P 23 44 23.1 -0.1**
BG3 Lake Jocassee 23.07 13 P **P 23 44 24.5 +0.5**
BG3 IAmb IAmb 23 44 38.7
comp=Z,26nm,1.4s
PAULI Pauline 23.18 16 P **P 23 44 25.2 +0.1**
PAULI IAmb IAmb 23 44 27.5
comp=Z,14nm,0.8s
V48A Smith Brothers 23.19 5 P **P 23 44 25.1 -0.2**
HUMP Col San Antoni 23.25 73 P **P 23 44 26.6 +0.7**
HUMP IAmb IAmb 23 44 33.6
comp=Z,20nm,1.1s
GNAR Gosnell 23.32 358 P **P 23 44 27.2 +0.8**
BIRD Birdtown, Kers 23.40 19 P **P 23 44 28.1 +0.8**
BIRD IAmb IAmb 23 44 47.5
comp=Z,34nm,1.5s
LNXT Lenox 23.44 360 P **P 23 44 28.8 +1.1**
PEBM Pemiscott Bayo 23.46 359 P **P 23 44 28.7 +0.9**
LCAR Lake Charles 23.47 356 IAmb IAmb 23 44 30.9
comp=Z,22nm,0.8s
WVT Waverly 23.51 3 P **P 23 44 27.9 -0.3**
WVT Waverly 23.51 3 P **P 23 44 28.8 +0.5**
baz=183
TKL Tuckaleechee C 23.53 11 P **P 23 44 28.1 -0.4**
comp=Z,15nm,0.8s,baz=182,slow=12,SNR=16
TKL LR LR 23 53 55.5
comp=Z,547nm,21.6s,baz=205,slow=38
comp=Z,15nm,0.8s
TKL Tuckaleechee C 23.53 11 IAmb IAmb 23 44 32.0
comp=Z,17nm,0.9s
V51A Loudon 23.57 10 P **P 23 44 29.0 +0.1**
V51A IAmb IAmb 23 44 34.6
comp=Z,19nm,1.2s
CLTN Cedars of Leba 23.58 6 P **P 23 44 28.6 -0.4**
KMSC Kings Mountain 23.61 16 IAmb IAmb 23 44 32.7
comp=Z,156nm,0.8s
KMSC Kings Mountain 23.61 16 P **P 23 44 28.9 -0.3**
baz=199,SNR=6.7
WMOK Wichita Mounta 23.71 340 **P 23 44 29.2 -1.0**
WMOK IAmb IAmb 23 44 31.3
comp=Z,27nm,0.9s
WMOK Wichita Mounta 23.71 340 P **P 23 44 28.7 -1.5**
baz=156,SNR=26
V53A Saluda 23.74 13 IAmb IAmb 23 44 37.5
comp=Z,27nm,1.1s
FNO Franklin 23.77 343 P **P 23 44 29.6 -1.1**
HICK Hickman 23.88 0 P **P 23 44 32.5 +0.8**
U40A Yellville 23.92 353 IAmb IAmb 23 44 36.1
comp=Z,33nm,0.9s
U40A Yellville 23.92 353 P **P 23 44 31.8 -0.2**
baz=171,SNR=30
OKCSW OKLAHOMA CITY 23.92 343 P **P 23 44 32.1 0.0**
OKCFA Oklahoma City 23.93 343 P **P 23 44 32.3 +0.1**
OKCFA IAmb IAmb 23 44 34.5
comp=Z,39nm,1.0s
TUL1 Leonard 23.99 347 P **P 23 44 33.1 +0.5**
TUL1 IAmb IAmb 23 44 34.7
comp=Z,18nm,0.9s
TUL1 Leonard 23.99 347 P **P 23 44 32.1 -0.6**
baz=164
HHAR Hobbs 24.00 351 IAmb IAmb 23 44 58.9
comp=Z,17nm,1.0s
W57A Gilead 24.02 19 P **P 23 44 33.8 +0.8**
W57A IAmb IAmb 23 44 51.6
comp=Z,36nm,1.4s
U49A Red Boiling Sp 24.06 7 IAmb IAmb 23 44 35.5
comp=Z,17nm,0.8s
STVI Saint Thomas 24.12 73 P **P 23 44 35.0 +0.9**
STVI IAmb IAmb 23 44 44.3
comp=Z,39nm,1.3s
MNTX Cornudas Mount 24.14 325 P **P 23 44 33.6 -0.6**
MNTX IAmb IAmb 23 44 36.9
comp=Z,16nm,1.0s
MNTX Cornudas Mount 24.14 325 P **P 23 44 33.3 -0.8**
baz=138,SNR=18
V55A Taylorsville 24.31 16 IAmb IAmb 23 44 38.2
comp=Z,13nm,0.9s
TZTN Tazewell 24.43 11 P **P 23 44 34.9 -1.8**
baz=193
MSTX Muleshoe 24.61 332 P **P 23 44 37.8 -0.7**
baz=147,SNR=14
U54A Nelsons Funny 24.79 14 IAmb IAmb 23 44 44.2
comp=Z,31nm,0.8s
V58A Windy Hill, Pi 24.89 20 IAmb IAmb 23 44 44.4
comp=Z,20nm,0.8s
AMTX Amarillo 24.91 335 P **P 23 44 40.7 -0.6**
AMTX Amarillo 24.91 335 P **P 23 44 41.2 -0.1**
baz=150
U56A King 25.00 17 P **P 23 44 42.5 +0.5**
U56A IAmb IAmb 23 45 08.6
comp=Z,24nm,1.1s
S44A Carbondale 25.03 0 IAmb IAmb 23 44 44.7
comp=Z,32nm,0.9s
T35A Sooner Cattle 25.11 346 P **P 23 44 43.3 +0.3**
T35A IAmb IAmb 23 44 52.7
comp=Z,14nm,0.9s
U32A Winter Ranch, 25.29 341 P **P 23 44 44.6 +0.1**
U32A IAmb IAmb 23 44 47.8
comp=Z,19nm,0.9s
S39A Bolivar 25.29 352 IAmb IAmb 23 44 48.9
comp=Z,26nm,1.1s
FVM French Village 25.34 358 IAmb IAmb 23 44 49.5
comp=Z,14nm,0.8s
CCM Cathedral Cave 25.45 356 P **P 23 44 44.8 -1.3**
CCM Cathedral Cave 25.45 356 P **P 23 44 45.2 -0.8**
baz=175
S51A Beattyville 25.49 11 P **P 23 44 46.6 +0.2**
R40A Maddies Statio 25.77 355 IAmb IAmb 23 44 54.2
comp=Z,19nm,0.8s
BLA Blacksburg 25.80 16 P **P 23 44 49.8 +0.5**
BLA IAmb IAmb 23 45 15.1
comp=Z,25nm,1.2s
BLA Blacksburg 25.80 16 P **P 23 44 48.4 -0.9**
baz=200
U59A Littleton 25.85 22 P **P 23 44 51.1 +1.5**
U59A IAmb IAmb 23 45 15.3
comp=Z,25nm,1.4s
R49A Shelbyville 25.89 7 P **P 23 44 49.5 -0.4**
T57A Hurt 25.95 19 IAmb IAmb 23 44 53.7
comp=Z,12nm,0.9s
HSIG 25.98 312 P **P 23 44 53.0 +2.0**
SLM Saint Louis 25.99 358 P **P 23 44 52.1 +1.3**
R50A Paris 26.00 9 P **P 23 44 51.3 +0.4**
SRIG Santa Rosalia 26.05 308 P **P 23 44 53.4 +1.9**
SRIG IAmb IAmb 23 45 05.7
comp=Z,25nm,1.0s
S54A Dingess, Beckl 26.12 14 P **P 23 44 53.1 +1.0**
121A Cookes Peak, D 26.14 322 IAmb IAmb 23 44 59.9
comp=Z,17nm,0.9s
121A Cookes Peak, D 26.14 322 P **P 23 44 52.9 +0.3**
baz=135,SNR=17
319A Douglas 26.28 319 P **P 23 44 55.4 +1.7**
319A IAmb IAmb 23 45 22.9
comp=Z,12nm,1.0s
R53A Hurricane 26.48 13 P **P 23 44 56.3 +0.9**
T59A Double "B" Far 26.49 21 IAmb IAmb 23 44 58.9
comp=Z,20nm,0.9s
CRNM Carthage 26.58 326 P **P 23 44 57.5 +1.0**
BLO Bloomington 26.62 5 P **P 23 44 56.5 -0.1**
LENM Lemitar 26.87 326 P **P 23 45 00.7 +1.6**
Q51A Peebles 26.88 10 P **P 23 44 57.9 -1.0**
Q51A IAmb IAmb 23 45 00.4
comp=Z,34nm,1.5s
R55A Marlinton 26.89 16 P **P 23 44 59.4 +0.4**
R55A IAmb IAmb 23 45 04.7
comp=Z,14nm,1.1s
T60A Surry 26.94 23 P **P 23 44 59.4 0.0**
P40A Paris 26.98 355 IAmb IAmb 23 45 01.6
comp=Z,22nm,0.9s
P43A Skaggs, Pawnee 26.98 360 P **P 23 44 59.7 0.0**
P43A IAmb IAmb 23 45 02.4
comp=Z,22nm,0.9s
JSRW J. Sargeant Re 27.02 20 P **P 23 44 60.0 -0.2**
R32A Long Quarter, 27.10 344 P **P 23 45 00.8 -0.1**
R32A IAmb IAmb 23 45 03.0
comp=Z,19nm,0.9s
P49A Miami Univ. Ec 27.17 8 P **P 23 45 01.2 -0.3**
P49A Miami Univ. Ec 27.17 8 P **P 23 45 00.9 -0.6**
baz=190
ANMO Albuquerque 27.19 328 P **P 23 45 03.0 +1.0**
comp=Z,0.3nm,0.3s,baz=140,slow=14,SNR=3.7
comp=Z,0.3nm,0.3s
ANMO Albuquerque 27.19 328 P **P 23 45 01.6 -0.5**
baz=141
P38A Dawn 27.22 353 IAmb IAmb 23 45 08.3
comp=Z,14nm,0.9s
KSU1 Kansas State U 27.23 347 P **P 23 45 01.8 -0.2**
KSU1 Kansas State U 27.23 347 P **P 23 45 01.6 -0.4**
baz=164
NNA Nana 27.33 153 LR LR 23 53 55.8
comp=Z,192nm,19.4s,baz=310,slow=32
Q54A Coxs Mills 27.37 14 IAmb IAmb 23 45 06.8
comp=Z,22nm,1.0s
CBN Corbin Frederi 27.66 20 P **P 23 45 06.0 +0.2**
CBN IAmb IAmb 23 45 08.9
comp=Z,28nm,0.9s
CBN Corbin Frederi 27.66 20 P **P 23 45 05.1 -0.7**
baz=206
ILAM Ilet Lapin Mar 27.67 82 P **P 23 45 03.5 -2.8**
P52A Corning 27.70 12 P **P 23 45 06.3 +0.1**
P52A IAmb IAmb 23 45 11.0
comp=Z,12nm,1.0s
P52A Corning 27.70 12 P **P 23 45 04.9 -1.3**
baz=195
P53A Whipple 27.72 13 IAmb IAmb 23 45 10.0
comp=Z,17nm,0.9s
CBKS Cedar Bluff 27.75 342 P **P 23 45 07.0 +0.2**
CBKS IAmb IAmb 23 45 09.1
comp=Z,25nm,1.1s
CBKS Cedar Bluff 27.75 342 P **P 23 45 06.6 -0.2**
baz=158
SFIN Lafayette 27.78 4 P **P 23 45 06.0 -0.9**
SFIN IAmb IAmb 23 45 09.3
comp=Z,7.7nm,0.8s
SFIN Lafayette 27.78 4 P **P 23 45 06.7 -0.2**
baz=184
O48B Farmland 27.83 7 P **P 23 45 07.1 -0.3**
baz=188
Q56A Snyder Ridge, 27.85 17 P **P 23 45 08.5 +0.9**
TUC Tucson 27.86 318 P **P 23 45 09.5 +1.6**

TUC IAmb IAmb 23 45 16.5
comp=Z,10nm,0.9s
TUC Tucson 27.86 318 P **P** **23 45 07.6 -0.2**
baz=130
O49A Covington 27.86 8 P **P** **23 45 07.7 0.0**
O49A IAmb IAmb 23 45 10.2
comp=Z,10nm,0.9s
HDIL Hopedale 27.89 360 P **P** **23 45 08.1 +0.1**
HDIL IAmb IAmb 23 45 09.8
comp=Z,13nm,0.6s
HDIL Hopedale 27.89 360 P **P** **23 45 08.2 +0.3**
baz=180
T25A Trinidad 27.99 334 IAmb IAmb 23 45 13.9
comp=Z,14nm,0.9s
T25A Trinidad 27.99 334 P **P** **23 45 09.2 +0.1**
baz=147,SNR=14
ACSO Alum Creek Sta 28.12 10 P **P** **23 45 10.3 +0.3**
ACSO IAmb IAmb 23 45 13.0
comp=Z,9.3nm,0.8s
ACSO Alum Creek Sta 28.12 10 P **P** **23 45 10.3 +0.3**
baz=193
TOSP Speyside 28.14 89 P **P** **23 45 09.9 -0.5**
O52A Adamsville 28.22 12 P **P** **23 45 10.9 0.0**
O52A IAmb IAmb 23 45 13.6
comp=Z,10nm,0.8s
MCWV Mont Chateau 28.25 15 P **P** **23 45 11.5 +0.4**
baz=200
N38A Joes South For 28.34 354 P **P** **23 45 12.3 +0.3**
O53A New Philadelph 28.48 13 IAmb IAmb 23 45 16.0
comp=Z,14nm,1.0s
O53A New Philadelph 28.48 13 P **P** **23 45 13.2 0.0**
baz=196
N49A Columbus Grove 28.61 8 P **P** **23 45 14.9 +0.6**
N49A IAmb IAmb 23 45 18.6
comp=Z,9.9nm,0.9s
P57A Homestead Farm 28.61 18 IAmb IAmb 23 45 23.7
comp=Z,33nm,1.5s
O54A Avella 28.61 14 IAmb IAmb 23 45 17.5
comp=Z,13nm,0.9s
M44A Midewin, Midew 28.74 2 P **P** **23 45 16.6 +1.1**
M44A IAmb IAmb 23 45 38.0
comp=Z,14nm,1.2s
N35A Tabor 28.75 350 P **P** **23 45 16.5 +0.9**
KSCO Kaye Shedlock' 28.89 338 P **P** **23 45 17.9 +0.9**
KSCO Kaye Shedlock' 28.89 338 P **P** **23 45 17.2 +0.2**
baz=152
BBGH Gun Hill 28.97 86 P **P** **23 45 17.9 0.0**
SDCO Great Sand Dun 28.97 333 P **P** **23 45 18.8 +0.8**
SDCO Great Sand Dun 28.97 333 P **P** **23 45 18.1 +0.1**
baz=146
N33A J Bar K, Exete 28.98 347 P **P** **23 45 17.7 +0.1**
214A Organ Pipe Nat 28.99 316 P **P** **23 45 19.7 +1.8**
N53A Lisbon 29.10 13 IAmb IAmb 23 45 20.8
comp=Z,17nm,1.1s
W18A Petrified Fore 29.12 324 P **P** **23 45 21.4 +2.3**
M50A Fremont 29.25 10 IAmb IAmb 23 45 22.3
comp=Z,16nm,0.7s
SCIA State Center 29.44 354 P **P** **23 45 22.1 +0.3**
SCIA IAmb IAmb 23 45 23.4
comp=Z,30nm,1.3s
S22A 4UR Ranch, Cre 29.59 331 P **P** **23 45 24.0 +0.6**
S22A 4UR Ranch, Cre 29.59 331 P **P** **23 45 23.7 +0.3**
baz=143
X16A Lo Mia Camp, P 29.65 321 P **P** **23 45 25.5 +1.6**
PAGS Pennsylvania G 29.70 20 P **P** **23 45 25.1 +1.1**
PAGS IAmb IAmb 23 45 27.0
comp=Z,10nm,0.8s
SSPA Standing Stone 29.71 18 P **P** **23 45 25.1 +1.1**
SSPA IAmb IAmb 23 45 27.0
comp=Z,15nm,1.4s
M53A WI Miller and 29.74 13 P **P** **23 45 24.9 +0.5**
M53A IAmb IAmb 23 45 26.0
comp=Z,11nm,1.0s
M53A WI Miller and 29.74 13 P **P** **23 45 24.3 0.0**
baz=197
Q24A Divide 29.84 335 P **P** **23 45 26.3 +0.7**
L34A Svendsen Farm, 29.95 349 P **P** **23 45 26.9 +0.6**
MVCO Mesa Verde 29.99 328 P **P** **23 45 28.3 +1.3**
MVCO Mesa Verde 29.99 328 P **P** **23 45 26.5 -0.5**
baz=140
K43A Burlington 30.05 1 P **P** **23 45 27.3 +0.3**
ALLY Alegheny Colle 30.06 14 P **P** **23 45 27.2 0.0**
ALLY IAmb IAmb 23 45 30.1
comp=Z,19nm,1.0s
113A Mohawk Valley, 30.12 316 P **P** **23 45 29.0 +1.2**
M55A Ridgway 30.23 16 P **P** **23 45 29.1 +0.3**
M55A IAmb IAmb 23 45 30.7
comp=Z,13nm,1.0s
JFWS Jewell Farm 30.26 359 P **P** **23 45 28.2 -0.7**
baz=178,SNR=8.1
Y14A Wickenburg 30.33 318 P **P** **23 45 31.3 +1.5**
WUAZ Wupatki 30.35 323 P **P** **23 45 31.4 +1.4**
WUAZ Wupatki 30.35 323 P **P** **23 45 29.9 -0.2**
baz=133
OGNE Ogallala 30.41 341 P **P** **23 45 31.2 +0.8**
OGNE Ogallala 30.41 341 P **P** **23 45 31.6 +1.1**
baz=155
LUPA Lehigh Univers 30.49 21 P **P** **23 45 32.3 +1.3**
LUPA IAmb IAmb 23 45 36.5
comp=Z,6.6nm,0.7s
ERPA Erie 30.54 14 P **P** **23 45 32.4 +1.0**
ERPA IAmb IAmb 23 45 34.3
comp=Z,15nm,0.8s
ERPA Erie 30.54 14 P **P** **23 45 32.2 +0.8**
baz=198
ISCO Idaho Springs 30.73 335 P **P** **23 45 34.8 +1.2**
ISCO IAmb IAmb 23 45 43.8
comp=Z,12nm,1.4s
ISCO Idaho Springs 30.73 335 P **P** **23 45 33.7 +0.2**
baz=147
SMCO Snowmass 30.81 333 P **P** **23 45 35.5 +1.2**
SMCO IAmb IAmb 23 45 45.5
comp=Z,11nm,1.4s
PV15 Paradox Valley 30.85 330 P **P** **23 45 35.9 +1.3**
PV13 Radium Mtn., P 30.88 329 P **P** **23 45 35.7 +1.0**
PV13 IAmb IAmb 23 45 46.5
comp=Z,12nm,1.3s
PV07 Paradox Valley 31.01 330 P **P** **23 45 37.5 +1.7**
GLA Glamis 31.01 315 P **P** **23 45 37.6 +1.8**
GLA IAmb IAmb 23 45 50.6
comp=Z,6.5nm,0.8s
GLA Glamis 31.01 315 P **P** **23 45 36.9 +1.1**
baz=125
PV11 David Mesa, Pa 31.01 329 P **P** **23 45 37.0 +1.1**
PV11 IAmb IAmb 23 45 46.6
comp=Z,10nm,1.0s
PV20 West Nyswonger 31.09 329 P **P** **23 45 37.8 +1.1**
WVNY West Valley, N 31.15 15 IAmb IAmb 23 45 38.6
comp=Z,11nm,0.8s
PV10 Paradox Valley 31.16 329 P **P** **23 45 36.5 -0.8**
PV10 IAmb IAmb 23 45 52.3
comp=Z,8.2nm,0.9s
PV23 Carpenter Ridg 31.20 329 P **P** **23 45 38.4 +0.8**
PV23 IAmb IAmb 23 45 42.0
comp=Z,10.0nm,0.9s
BLYC Blythe 31.21 317 P **P** **23 45 38.8 +1.3**
I40A Norwalk 31.25 358 IAmb IAmb 23 45 41.1
comp=Z,16nm,1.0s
PDMCI Parker Dam,Lak 31.30 318 P **P** **23 45 39.4 +1.2**
baz=128
U15A North Rim 31.52 323 P **P** **23 45 42.4 +1.9**
YUH Yuha Desert 31.55 314 P **P** **23 45 42.9 +2.4**
W13A Hualapai Mount 31.62 319 P **P** **23 45 41.3 -0.1**
MMNY Mt. Morris Dam 31.64 16 P **P** **23 45 40.8 -0.3**
MMNY IAmb IAmb 23 45 47.5
comp=Z,20nm,1.4s
IKP In-Ko-Pah, Jac 31.68 314 P **P** **23 45 40.3 -1.4**
baz=123
ECSD EROS Data Cent 31.70 350 P **P** **23 45 40.1 -1.6**
ECSD IAmb IAmb 23 45 50.1
comp=Z,10nm,1.1s
ECSD EROS Data Cent 31.70 350 P **P** **23 45 41.3 -0.3**
baz=166,SNR=5.7
BINY Binghamton 31.72 19 P **P** **23 45 42.6 +0.7**
BINY IAmb IAmb 23 45 47.0
comp=Z,12nm,1.3s
BINY Binghamton 31.72 19 P **P** **23 45 41.8 0.0**
baz=205
BC3 Big Chuckawall 31.79 316 P **P** **23 45 43.8 +1.1**
baz=125
N23A Red Feather La 31.79 336 P **P** **23 45 44.0 +1.2**
N23A IAmb IAmb 23 45 54.1
comp=Z,8.5nm,1.0s
N23A Red Feather La 31.79 336 P **P** **23 45 43.9 +1.0**
baz=148

IRM Iron Mountain 31.87 317 P **P** **23 45 42.7 -0.6**
baz=126
O20A White River Ci 32.16 332 P **P** **23 45 46.8 +0.9**
O20A IAmb IAmb 23 45 59.4
comp=Z,7.1nm,0.9s
O20A White River Ci 32.16 332 P **P** **23 45 46.8 +0.9**
baz=143
BELC Belle Mtn. Jos 32.36 316 P **P** **23 45 48.8 +1.1**
baz=125
J56A Wolcott 32.44 17 P **P** **23 45 48.6 +0.6**
TPFO Pinon Flats 32.45 315 P **P** **23 45 48.8 +0.3**
baz=124
PFO Pinyon Flats O 32.45 315 P **P** **23 45 48.6 0.0**
comp=Z,2.1nm,0.8s,baz=80,slow=14,SNR=2.4
comp=Z,2.1nm,0.8s
PFO Pinyon Flats O 32.45 315 IAmb IAmb 23 46 00.6
comp=Z,12nm,1.4s
PFO Pinyon Flats O 32.45 315 P **P** **23 45 48.8 +0.3**
baz=124
SRU San Rafael Swe 32.47 328 P **P** **23 45 49.7 +1.0**
LCMT Little Creek M 32.48 323 P **P** **23 45 50.8 +2.1**
GMRC Granite Mounta 32.59 317 P **P** **23 45 49.8 +0.1**
baz=126
SPMN Marine on St. 32.70 355 P **P** **23 45 48.8 -1.6**
SPMN Marine on St. 32.70 355 P **P** **23 45 49.0 -1.3**
baz=174,SNR=15
P17A Butcher Ranch, 32.85 329 IAmb IAmb 23 46 03.7
comp=Z,7.5nm,1.1s
SADO Sadowa 33.25 13 P **P** **23 45 53.8 -1.4**
comp=Z,7.3nm,0.7s,baz=204,slow=8.7,SNR=7.0
SADO LR LR 00 00 28.3
comp=Z,359nm,18.3s,baz=182,slow=38
comp=Z,7.3nm,0.7s
SADO Sadowa 33.25 13 IAmb IAmb 23 45 56.3
comp=Z,10nm,0.9s
DELO Deloro Mine 33.38 15 IAmb IAmb 23 46 05.6
comp=Z,16nm,1.4s
F36A Milaca 33.39 355 IAmb IAmb 23 45 59.9
comp=Z,12nm,1.4s
K22A Casper 33.51 337 P **P** **23 45 58.7 +0.9**
baz=148
F33A 5 Mile Ranch, 33.70 351 IAmb IAmb 23 46 00.1
comp=Z,10nm,0.6s
CIS Catalina Islan 33.72 313 P **P** **23 46 00.7 +1.2**
baz=121
E43A Lone Tree Farm 33.76 3 IAmb IAmb 23 46 08.8
comp=Z,15nm,1.0s
RSSD Black Hills 33.92 341 P **P** **23 46 01.9 +0.7**
RSSD IAmb IAmb 23 46 04.4
comp=Z,8.8nm,0.9s
RSSD Black Hills 33.92 341 P **P** **23 46 02.3 +1.1**
baz=153
QSM Queen of Sheba 34.08 318 IAmb IAmb 23 46 06.3
comp=Z,7.1nm,1.2s
EDW2 Edwards Air Fo 34.22 315 P **P** **23 46 05.8 +2.0**
baz=123
TPNV Topopah Spring 34.27 320 IAmb IAmb 23 46 15.8
comp=Z,9.2nm,1.1s
TPNV Topopah Spring 34.27 320 P **P** **23 46 05.1 +0.7**
baz=128
LONY Lake Ozonia 34.34 19 P **P** **23 46 04.7 0.0**
baz=206
S11A Rachel 34.40 321 IAmb IAmb 23 46 15.5
comp=Z,15nm,0.9s
DUG Dugway, Tooele 34.46 327 P **P** **23 46 07.1 +1.2**
baz=136
MPMC Manual Prospec 34.54 317 P **P** **23 46 07.6 +0.8**
baz=126,SNR=5.7
R11A Troy Canyon, C 34.75 322 P **P** **23 46 08.8 +0.3**
baz=131
PDAR Pinedale Array 34.86 333 P **P** **23 46 08.8 -0.7**
comp=Z,1.2nm,0.9s,baz=138,slow=8.4,SNR=2.9
PDAR PcP **PcP** **23 48 42.3 +0.6**
comp=Z,0.3nm,0.3s,baz=119,slow=5.2,SNR=2.2
PDAR LR LR 00 03 30.2
comp=Z,183nm,21.0s,baz=136,slow=42
comp=Z,1.2nm,0.9s
HWUT Hardware Ranch 34.88 330 IAmb IAmb 23 46 23.2
comp=Z,9.4nm,1.2s
ARVC Arvin 34.92 315 P **P** **23 46 10.7 +0.9**
baz=123
ISA Isabella, Lake 34.97 316 P **P** **23 46 10.6 +0.3**
EYMN Ely 35.33 357 P **P** **23 46 11.2 -2.0**
baz=176,SNR=7.9
LPAZ La Paz 35.48 143 LR LR 00 00 49.4
comp=Z,254nm,18.9s,baz=335,slow=36
AHID Auburn Hatcher 35.55 332 IAmb IAmb 23 46 27.0
comp=Z,10nm,1.2s
B35A Bob, Littlefor 35.89 355 IAmb IAmb 23 46 30.9
comp=Z,14nm,1.2s
SNOW Snow King Moun 35.94 333 P **P** **23 46 20.0 +1.2**
LOHW Long Hollow 35.99 333 IAmb IAmb 23 46 26.5
comp=Z,5.1nm,0.8s
AGMN Agassiz Nation 36.05 353 P **P** **23 46 17.7 -1.6**
baz=169,SNR=13
ELK Elko 36.16 326 P **P** **23 46 20.0 -0.6**
comp=Z,1.8nm,0.7s,baz=172,slow=5.6,SNR=7.7
ELK PcP **PcP** **23 48 46.9 +1.4**
comp=Z,0.9nm,0.3s,baz=104,slow=6.3,SNR=5.9
ELK LR LR 00 04 20.7
comp=Z,300nm,18.3s,baz=138,slow=42
comp=Z,1.8nm,0.7s
PAGB Antelope Grade 36.23 315 IAmb IAmb 23 46 36.1
comp=Z,17nm,1.2s
MDND Maddock 36.23 348 P **P** **23 46 20.6 -0.3**
baz=163
PB16 IPOC Station P 36.37 147 P **P** **23 46 23.5 +0.5**
NVAR Mina Array Bea 36.47 320 P **P** **23 46 23.7 +0.4**
comp=Z,6.7nm,1.0s,baz=138,slow=8.3,SNR=27
NVAR PcP **PcP** **23 48 48.2 +1.7**
comp=Z,3.3nm,0.9s,baz=135,slow=4.1,SNR=7.6
NVAR LR LR 00 02 57.7
comp=Z,464nm,19.7s,baz=133,slow=39
comp=Z,6.7nm,1.0s
LHV Little Huntoon 36.48 320 IAmb IAmb 23 46 38.6
comp=Z,9.4nm,0.8s
MDPB Devils Postpil 36.49 318 P **P** **23 46 25.3 +1.8**
H17A Grant Village 36.61 334 P **P** **23 46 25.6 +1.2**
H17A IAmb IAmb 23 46 28.8
comp=Z,9.9nm,0.9s
H17A Grant Village 36.61 334 P **P** **23 46 26.3 +1.9**
baz=143
KVN Kaiserville 36.72 321 P **P** **23 46 26.7 +1.3**
RYN Ryan 36.72 320 P **P** **23 46 27.4 +2.0**
LAO LASA Array 36.91 340 P **P** **23 46 27.7 +1.0**
LAO IAmb IAmb 23 46 37.4
comp=Z,20nm,1.1s
LAO LASA Array 36.91 340 P **P** **23 46 27.7 +1.0**
baz=152
YMR Madison River 36.99 334 P **P** **23 46 29.2 +1.5**
YMR IAmb IAmb 23 46 42.1
comp=Z,12nm,0.8s
BMN Battle Mountai 37.07 324 P **P** **23 46 29.4 +1.1**
EMMW East Machias 37.08 26 P **P** **23 46 29.5 +1.4**
EMMW IAmb IAmb 23 46 31.6
comp=Z,16nm,1.0s
YHL Hebgen Lake 37.23 334 P **P** **23 46 32.3 +2.5**
YHL IAmb IAmb 23 46 41.9
comp=Z,10.0nm,1.2s
LATQ La Tuque 37.37 19 IAmb IAmb 23 46 32.4
comp=Z,7.4nm,0.7s
YERR Yerington 37.38 320 P **P** **23 46 32.8 +1.7**
G65A Princeton 37.43 25 P **P** **23 46 31.8 +0.7**
CMB Columbia Colle 37.57 318 P **P** **23 46 33.9 +1.5**
HLID Hailey 37.73 330 P **P** **23 46 36.0 +2.1**
HLID Hailey 37.73 330 P **P** **23 46 35.1 +1.2**
baz=137
DGMT Dagmar 37.90 344 P **P** **23 46 35.7 +0.7**
baz=156
EMB Emerald Bay 37.92 319 P **P** **23 46 37.7 +2.1**
EMB IAmb IAmb 23 46 40.5
comp=Z,14nm,1.0s
ULM Lac du Bonnet 37.97 353 P **P** **23 46 33.7 -1.9**
comp=Z,7.5nm,0.7s,baz=162,slow=8.9,SNR=12
ULM LR LR 00 04 24.6
comp=Z,475nm,20.9s,baz=171,slow=40
comp=Z,7.5nm,0.7s
ULM Lac du Bonnet 37.97 353 IAmb IAmb 23 46 44.1
comp=Z,9.8nm,0.8s
BOZ Bozeman (W) 38.02 334 P **P** **23 46 37.0 +0.8**
baz=143
DLMT Dillon 38.25 333 P **P** **23 46 39.3 +1.0**
MFID Camas Ranch 38.34 328 P **P** **23 46 39.6 +0.7**
LRM Limekiln Ridge 38.55 334 P **P** **23 46 42.2 +1.3**
BEKR Beckworth 38.60 320 P **P** **23 46 43.1 +1.7**
LMN Caledonia Moun 39.14 27 IAmb IAmb 23 46 47.7
comp=Z,14nm,0.9s

ORV Oroville 39.14 319 P **P** **23 46 46.9 +1.3**
WVOR Wild Horse Val 39.18 325 P **P** **23 46 47.1 +1.1**
EGMT Eagleton 39.27 338 P **P** **23 46 46.8 +0.1**
EGMT IAmb IAmb 23 46 51.0
comp=Z,14nm,0.9s
EGMT Eagleton 39.27 338 P **P** **23 46 46.9 +0.3**
baz=147
J08A Circle Bar Ran 39.70 326 P **P** **23 46 50.5 +0.2**
SIV San Ignacio 39.78 135 P **P** **23 46 51.3 +0.1**
comp=Z,10nm,1.1s,baz=308,slow=8.9,SNR=18
SIV LR LR 00 02 27.3
comp=Z,195nm,18.9s,baz=306,slow=35
comp=Z,10nm,1.1s
MOD Modoc Plateau 39.80 323 P **P** **23 46 51.8 +0.5**
MSO Missoula 39.98 334 P **P** **23 46 53.6 +0.9**
MSO Missoula 39.98 334 P **P** **23 46 53.5 +0.9**
baz=141
BMO Blue Mountains 40.11 329 P **P** **23 46 53.6 -0.1**
LVC Limon Verde 40.24 150 LR LR 00 03 38.3
comp=Z,98nm,18.3s,baz=304,slow=36
F10A Beach Ranch, E 40.86 330 P **P** **23 46 58.9 -0.9**
YBH Yreka Blue Hor 41.14 321 LR LR 00 08 10.7
comp=Z,358nm,18.1s,baz=150,slow=42
L04D Klamath Falls 41.18 322 P **P** **23 47 03.6 +1.0**
L04D IAmb IAmb 23 47 30.4
comp=Z,15nm,1.4s
L04D Klamath Falls 41.18 322 P **P** **23 47 03.8 +1.2**
baz=126
WALA Waterton Lakes 41.71 336 P **P** **23 47 08.7 +1.8**
WALA IAmb IAmb 23 47 16.2
comp=Z,17nm,1.4s
NEW Newport 42.48 332 LR LR 00 09 10.7
comp=Z,254nm,18.2s,baz=280,slow=42
J01E Myrtle Point 42.70 322 P **P** **23 47 16.9 +2.0**
J01E IAmb IAmb 23 47 25.2
comp=Z,32nm,1.2s
J01E Myrtle Point 42.70 322 P **P** **23 47 16.8 +2.0**
baz=125
HOOD Mount Hood Mea 42.71 326 P **P** **23 47 16.5 +1.4**
HOOD IAmb IAmb 23 47 24.4
comp=Z,18nm,0.8s
AC02 Maricunga 43.77 154 P **P** **23 47 25.0 +0.8**
AC02 IAmb IAmb 23 47 28.6
comp=Z,13nm,1.4s
E04D Cinebar 43.98 327 P **P** **23 47 26.7 +1.6**
E04D IAmb IAmb 23 47 27.8
comp=Z,21nm,1.4s
EDM Edmonton 44.88 340 P **P** **23 47 30.9 -1.3**
EDM IAmb IAmb 23 47 34.2
comp=Z,17nm,1.0s
LCO Las Campanas 45.05 157 P **P** **23 47 34.9 +0.7**
LCO IAmb IAmb 23 47 37.5
comp=Z,14nm,1.1s
SCHQ Schefferville 45.71 18 P **P** **23 47 36.7 -2.0**
comp=Z,14nm,0.7s,baz=213,slow=6.5,SNR=23
SCHQ PcP **PcP** **23 49 15.9 0.0**
comp=Z,2.9nm,0.7s,baz=24,slow=14,SNR=1.5
SCHQ LR LR 00 08 48.5
comp=Z,427nm,18.6s,baz=202,slow=39
comp=Z,14nm,0.7s
SCHQ Schefferville 45.71 18 P **P** **23 47 37.0 -1.7**
LLLB Lillooet 46.33 332 P **P** **23 47 44.8 +1.1**
LLLB IAmb IAmb 23 47 53.8
comp=Z,5.7nm,1.0s
H03N2 Juan Fernandez 46.79 168 T T 00 38 02.2
baz=347,slow=76,SNR=13
H03N1 Juan Fernandez 46.80 168 T T 00 38 02.2
baz=347,slow=76,SNR=8.2
H03N3 Juan Fernandez 46.81 168 T T 00 38 00.4
baz=347,slow=76,SNR=15
CO02 Combarbal 46.91 158 P **P** **23 47 48.6 0.0**
CO02 IAmb IAmb 23 47 59.8
comp=Z,15nm,1.2s
ZON Zonda 48.09 156 P **P** **23 47 58.6 +0.9**
ZON IAmb IAmb 23 48 02.2
comp=Z,18nm,1.3s
VA03 San Esteban 48.49 159 P **P** **23 48 00.9 +0.2**
VA03 IAmb IAmb 23 48 04.2
comp=Z,13nm,0.9s
MT03 Universidad Ad 49.16 159 P **P** **23 48 06.8 +0.9**
MT03 IAmb IAmb 23 48 09.8
comp=Z,14nm,1.1s
CPUP Villa Florida 49.59 141 LR LR 00 10 10.1
comp=Z,98nm,18.1s,baz=226,slow=37
LMEL Las Melosas 49.59 159 P **P** **23 48 10.8 +1.6**
LMEL IAmb IAmb 23 48 26.3
comp=Z,18nm,1.5s
BO01 Tunca 49.79 160 P **P** **23 48 10.7 +0.1**
BO01 IAmb IAmb 23 48 13.6
comp=Z,12nm,1.2s
GO05 Huala 50.08 161 P **P** **23 48 13.2 +0.4**
GO05 IAmb IAmb 23 48 15.6
comp=Z,9.3nm,1.1s
BBB Bella Bella 50.32 330 P **P** **23 48 16.5 +2.1**
ML02 Panimavida 50.94 161 P **P** **23 48 19.2 0.0**
ML02 IAmb IAmb 23 48 25.2
comp=Z,16nm,0.9s
YKA Yellowknife Ar 53.05 346 P **P** **23 48 33.8 -0.8**
comp=Z,7.3nm,0.9s,baz=143,slow=7.8,SNR=43
comp=Z,7.3nm,0.9s
FRB Frobisher Bay 53.16 11 P **P** **23 48 33.4 -1.9**
comp=Z,5.4nm,0.5s,baz=219,slow=8.8,SNR=19
FRB LR LR 00 11 39.1
comp=Z,320nm,20.2s,baz=198,slow=37
comp=Z,5.4nm,0.5s
TAOE Nuku Hiva Isla 54.84 250 *e*LR LR 00 03 56.4
comp=Z,211nm,26.5s
DLBC Dease Lake 55.06 335 P **P** **23 48 48.4 -1.0**
comp=Z,2.5nm,0.6s,baz=156,slow=24,SNR=2.7
DLBC LR LR 00 17 11.6
comp=Z,157nm,18.2s,baz=125,slow=41
comp=Z,2.5nm,0.6s
DLBC Dease Lake 55.06 335 P **P** **23 48 50.0 +0.6**
baz=129
PLCA Paso Flores 55.78 163 P **P** **23 48 54.2 -0.6**
comp=Z,3.3nm,0.9s,baz=332,slow=7.8,SNR=6.8
PLCA LR LR 00 07 32.8
comp=Z,75nm,20.7s,baz=346,slow=30
comp=Z,3.3nm,0.9s
PLCA Paso Flores 55.78 163 P **P** **23 48 54.6 -0.2**
PLCA IAmb IAmb 23 48 56.3
comp=Z,8.4nm,1.1s
RCBR Riachuelo 56.10 106 LR LR 00 16 09.8
comp=Z,249nm,18.4s,baz=90,slow=40
RCBR Riachuelo 56.10 106 P **P** **23 48 57.8 +0.3**
LL02 Futaleuf 57.72 165 P **P** **23 49 09.4 +1.1**
LL02 IAmb IAmb 23 49 11.8
comp=Z,11nm,1.3s
MMPY Sheldon Lake, 58.19 339 P **P** **23 49 12.1 +0.6**
baz=130
WHY Whitehorse 58.37 336 P **P** **23 49 11.7 -1.2**
HYT Haines Junctio 59.54 335 P **P** **23 49 22.4 +1.4**
HYT IAmb IAmb 23 49 43.0
comp=Z,4.6nm,1.2s
HYT Haines Junctio 59.54 335 P **P** **23 49 22.6 +1.6**
baz=122
COYC Coyhaique 59.91 166 P **P** **23 49 25.1 +1.6**
COYC IAmb IAmb 23 49 28.9
comp=Z,12nm,1.2s
M30M Minto, Yukon 60.21 337 P **P** **23 49 26.0 +0.5**
baz=124
YUK8 Steele Glacier 60.72 335 P **P** **23 49 31.4 +2.1**
baz=120
M27K Edge Creek, AK 62.12 335 P **P** **23 49 39.0 +0.5**
baz=119
BCAR Beaver Creek A 62.42 336 P **P** **23 49 41.3 +0.8**
L27K Beaver Creek, 62.44 336 IAmb IAmb 23 49 50.4
comp=Z,7.9nm,1.4s
L27K Beaver Creek, 62.44 336 P **P** **23 49 40.9 +0.4**
baz=119
INK Inuvik 62.58 343 P **P** **23 49 39.5 -1.7**
comp=Z,3.5nm,1.0s,baz=106,slow=6.0,SNR=3.8
INK LR LR 00 22 35.7
comp=Z,231nm,18.5s,baz=122,slow=42
comp=Z,3.5nm,1.0s
INK Inuvik 62.58 343 P **P** **23 49 42.0 +0.7**
INK IAmb IAmb 23 49 43.0
comp=Z,7.3nm,1.2s
INK Inuvik 62.58 343 P **P** **23 49 41.6 +0.3**
baz=130
M26K Nabesna, AK 62.60 335 P **P** **23 49 43.2 +1.6**
M26K IAmb IAmb 23 49 51.0
comp=Z,7.2nm,1.4s
M26K Nabesna, AK 62.60 335 P **P** **23 49 42.4 +0.8**
baz=118
N25K Chitina, Valde 62.92 334 P **P** **23 49 44.9 +1.1**
baz=116

K27K	**Chicken**	**63.01**	**337**	P		**P**	**23 49 44.9**	**+0.7**
	baz=119							
KLU	**Klutina**	**63.45**	**333**	P		**P**	**23 49 47.3**	**0.0**
	baz=114							
SCRK	**Sand Creek**	**63.73**	**336**	P		**P**	**23 49 50.0**	**+0.9**
	baz=117							
J26L	**Joseph Creek**	**63.81**	**337**	P		**P**	**23 49 49.3**	**-0.3**
J26L				IAmb		IAmb	23 49 52.0	
	comp=Z,4.6nm,1.1s							
J26L	**Joseph Creek**	**63.81**	**337**	P		**P**	**23 49 50.6**	**+1.0**
	baz=118							
RIDG	**Independent Ri**	**63.96**	**336**	P		**P**	**23 49 50.4**	**-0.2**
RIDG				IAmb		IAmb	23 50 01.1	
	comp=Z,6.6nm,1.2s							
RIDG	**Independent Ri**	**63.96**	**336**	P		**P**	**23 49 50.3**	**-0.3**
	baz=116							
PMOR	**Pomariorio Ree**	**64.17**	**246**	*e*T		T	00 59 58.6	
	comp=Z,2.8nm,0.2s							
SCM	**Sheep Creek Mo**	**64.20**	**333**	P		**P**	**23 49 54.8**	**+2.6**
J25K	**Salcha River,**	**64.55**	**337**	IAmb		IAmb	23 49 57.1	
	comp=Z,4.0nm,1.0s							
J25K	**Salcha River,**	**64.55**	**337**	P		**P**	**23 49 55.3**	**+0.8**
	baz=116							
WAT6	**Susitna Watana**	**64.67**	**334**	P		**P**	**23 49 55.8**	**+0.4**
	baz=113							
HDA	**Harding Lake**	**65.08**	**336**	P		**P**	**23 49 58.3**	**+0.4**
	baz=114							
IL31		**65.21**	**337**	IAmb		IAmb	23 50 00.7	
	comp=Z,7.3nm,1.3s							
ILAR	**Eielson Array**	**65.21**	**337**	P		**P**	**23 49 58.1**	**-0.5**
	comp=Z,3.0nm,1.0s,baz=120,slow=5.0,SNR=22							
ILAR				PP		**PP**	**23 52 21.6**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=113,slow=6.9,SNR=2.4							
	comp=Z,3.0nm,1.0s							
ILAR	**Eielson Array**	**65.21**	**337**	P		**P**	**23 49 59.0**	**+0.3**
RND	**Reindeer**	**65.46**	**335**	IAmb		IAmb	23 50 03.5	
	comp=Z,6.1nm,0.8s							
BMAR	**Burnt Mountain**	**65.56**	**340**	P		**P**	**23 50 01.1**	**+0.2**
SUA	**Susitna One**	**65.58**	**332**	P		**P**	**23 50 02.5**	**+1.2**
SUA				IAmb		IAmb	23 50 05.8	
	comp=Z,9.9nm,1.1s							
NEA2	**Nenana**	**66.00**	**336**	P		**P**	**23 50 04.4**	**+0.6**
	baz=112							
H24K	**Noodor Dome**	**66.03**	**337**	P		**P**	**23 50 05.6**	**+1.5**
H24K	**Noodor Dome**	**66.03**	**337**	P		**P**	**23 50 04.6**	**+0.6**
	baz=114							
TRF	**Thorofare Moun**	**66.07**	**335**	P		**P**	**23 50 06.3**	**+1.8**
TRF				IAmb		IAmb	23 50 30.4	
	comp=Z,6.6nm,1.2s							
TRF	**Thorofare Moun**	**66.07**	**335**	P		**P**	**23 50 04.5**	**0.0**
	baz=111							
I23K	**Minto, Yukon-K**	**66.33**	**336**	P		**P**	**23 50 07.1**	**+1.3**
I23K				IAmb		IAmb	23 50 08.3	
	comp=Z,6.2nm,0.9s							
BPAW	**Bear Paw Mtn.**	**66.59**	**335**	IAmb		IAmb	23 50 09.6	
	comp=Z,5.2nm,1.0s							
BPAW	**Bear Paw Mtn.**	**66.59**	**335**	P		**P**	**23 50 07.2**	**-0.5**
	baz=110							
PPT	**Papeete**	**66.63**	**245**	LR		LR	00 13 16.2	
	comp=Z,94nm,19.7s,baz=6.0,slow=30							
PPT2	**Papeete2**	**66.64**	**244**	*e*LR		LR	00 09 28.4	
	comp=Z,205nm,25.5s							
CAST	**Castle Rocks**	**66.82**	**334**	P		**P**	**23 50 08.9**	**-0.1**
	baz=109							
MLY	**Manley**	**66.82**	**336**	IAmb		IAmb	23 50 11.6	
	comp=Z,4.5nm,0.8s							
MLY	**Manley**	**66.82**	**336**	P		**P**	**23 50 08.0**	**-1.1**
	baz=111,SNR=5.1							
SUMG	**Summit**	**66.93**	**15**	P		**P**	**23 50 10.1**	**0.0**
L20K	**Farewell, AK**	**67.31**	**333**	P		**P**	**23 50 11.7**	**-0.5**
	baz=107							
I21K	**Tanana**	**67.37**	**336**	P		**P**	**23 50 12.4**	**0.0**
	baz=110							
M19K	**Big River Lodg**	**67.37**	**332**	P		**P**	**23 50 12.2**	**-0.4**
	baz=106							
COLD	**Coldfoot**	**67.44**	**338**	P		**P**	**23 50 14.6**	**+1.7**
COLD				IAmb		IAmb	23 50 15.7	
	comp=Z,4.5nm,1.1s							
COLD	**Coldfoot**	**67.44**	**338**	P		**P**	**23 50 14.1**	**+1.2**
	baz=112							
EUNU	**Eureka**	**67.53**	**1**	P		**P**	**23 50 12.1**	**-1.2**
EUNU				IAmb		IAmb	23 50 23.6	
	comp=Z,4.7nm,0.8s							
K20K	**Telida**	**67.65**	**334**	P		**P**	**23 50 13.8**	**-0.5**
K20K	**Telida**	**67.65**	**334**	P		**P**	**23 50 14.1**	**-0.3**
	baz=107							
L19K	**White Mountain**	**67.66**	**332**	P		**P**	**23 50 14.8**	**+0.4**
	baz=106							
N18K	**Kilae Creek**	**67.74**	**331**	P		**P**	**23 50 15.2**	**+0.2**
	baz=104							
TOLK	**Toolik Lake Re**	**67.78**	**340**	P		**P**	**23 50 15.9**	**+0.8**
	baz=114							
TBI	**Tubuai**	**68.84**	**239**	*e*LR		LR	00 10 24.8	
	comp=Z,158nm,27.0s							
BORG	**Borgarnes**	**69.37**	**25**	LR		LR	00 20 30.9	
	comp=Z,55nm,18.9s,baz=266,slow=36							
JMIC	**Jan Mayen**	**75.20**	**20**	LR		LR	00 22 36.0	
	comp=Z,76nm,21.6s,baz=245,slow=35							
RAR	**Rarotonga**	**76.92**	**245**	LR		LR	00 15 32.1	
	comp=Z,72nm,21.7s,baz=340,slow=28							
EKA	**Eskdalemuir Ar**	**77.58**	**36**	LR		LR	00 25 31.1	
	comp=Z,49nm,18.6s,baz=276,slow=36							
ESDC	**Sonseca Array**	**78.52**	**52**	P		**P**	**23 51 17.1**	**-1.9**
	comp=Z,0.5nm,0.6s,baz=291,slow=5.8,SNR=4.2							
ESDC				LR		LR	00 22 32.9	
	comp=Z,178nm,18.7s,baz=268,slow=33							
	comp=Z,0.5nm,0.6s							
MDT	**Midelt**	**78.87**	**59**	LR		LR	00 19 52.6	
	comp=Z,166nm,21.3s,baz=300,slow=31							
PMSA	**Palmer Station**	**79.44**	**169**	LR		LR	00 21 38.8	
	comp=Z,93nm,18.8s,baz=5.0,slow=32							
SPITS	**Spitsbergen Ar**	**80.96**	**12**	LR		LR	00 29 04.5	
	comp=Z,167nm,18.9s,baz=257,slow=37							
DBIC	**Dimbokro**	**83.15**	**85**	LR		LR	00 22 24.4	
	comp=Z,69nm,21.6s,baz=300,slow=31							
NOA	**NORSAR Array B**	**84.13**	**29**	LR		LR	00 25 09.9	
	comp=Z,89nm,21.7s,baz=275,slow=33							
HFS	**Hagfors**	**85.56**	**29**	LR		LR	00 26 53.1	
	comp=Z,104nm,20.9s,baz=280,slow=33							
ARCES	**ARCESS Array B**	**86.66**	**19**	P		**P**	**23 52 00.4**	**-0.3**
	comp=Z,3.6nm,1.0s,baz=316,slow=5.0,SNR=1.6							
ARCES				LR		LR	00 30 25.4	
	comp=Z,102nm,18.1s,baz=326,slow=35							
	comp=Z,3.6nm,1.0s							
DAVOX	**Davos/Dischmat**	**87.12**	**43**	LR		LR	00 25 19.4	
	comp=Z,110nm,21.6s,baz=274,slow=32							
CLL	**Collm**	**87.83**	**38**	*e*P		**P**	**23 52 08.0**	**+1.3**
CLL				*e*S		**S**	**00 02 42.0**	**-3.6**
CLL				Lm		MLR	00 30 00.0	
	comp=N,100nm,19.0s							
CLL				Lm		MLR	00 30 00.0	
	comp=E,100nm,19.0s							
CLL				Lm		MLR	00 30 00.0	
	comp=Z,100nm,18.9s							
TORD	**Torodi Ar. Bea**	**88.12**	**77**	P		**P**	**23 52 06.6**	**-2.2**
	comp=Z,0.3nm,0.6s,baz=250,slow=2.9,SNR=1.9							
TORD				LR		LR	00 27 24.6	
	comp=Z,59nm,21.4s,baz=214,slow=33							
	comp=Z,0.3nm,0.6s							
GERES	**GERESS Array B**	**89.00**	**40**	P		**P**	**23 52 11.6**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=348,slow=6.0,SNR=3.6							
GERES				LR		LR	00 27 23.8	
	comp=Z,157nm,21.9s,baz=248,slow=32							
	comp=Z,0.3nm,0.6s							
KEST	**Kesra**	**89.62**	**54**	LR		LR	00 26 47.1	
	comp=Z,54nm,18.6s,baz=276,slow=32							
VRAC	**Vranov**	**90.65**	**39**	LR		LR	00 31 21.9	
	comp=Z,119nm,18.6s,baz=282,slow=34							
FINES	**FINESS Array B**	**90.65**	**26**	P		**P**	**23 52 18.7**	**-1.0**
	comp=Z,1.9nm,1.0s,baz=305,slow=4.9,SNR=2.6							
FINES				LR		LR	00 31 11.0	
	comp=Z,88nm,20.6s,baz=292,slow=34							
	comp=Z,1.9nm,1.0s							
SEY	**Seymchan**	**91.14**	**336**	LR		LR	00 39 47.6	
	comp=Z,80nm,18.5s,baz=16,slow=40							
TIXI	**Tiksi**	**92.20**	**349**	LR		LR	00 36 36.6	
	comp=Z,133nm,21.3s,baz=359,slow=37							
VAE	**Valguarnera**	**93.03**	**51**	LR		LR	00 30 49.1	
	comp=Z,217nm,19.1s,baz=330,slow=33							
MA2	**Magadan**	**93.57**	**334**	LR		LR	00 38 28.6	
	comp=Z,75nm,18.8s,baz=77,slow=38							
MSVF	**Nonsavu**	**96.25**	**253**	LR		LR	00 29 40.8	
	comp=Z,85nm,18.3s,baz=175,slow=31							
AKASG	**Malin Array Be**	**97.44**	**34**	LR		LR	00 36 08.3	
	comp=Z,108nm,19.6s,baz=285,slow=35							
NRIK	**Noril'sk**	**98.28**	**1**	LR		LR	00 38 38.2	
	comp=Z,189nm,21.0s,baz=348,slow=36							
DZM	**Mont Dzumac**	**107.71**	**251**	*e*LR		LR	00 28 29.7	
	comp=Z,108nm,23.4s							
KSRS	**Korea Array**	**119.22**	**327**	PKP		**PKPdf**	**23 58 06.7**	**-0.1**
	comp=Z,1.1nm,0.8s,baz=354,slow=1.6,SNR=4.6							
KSAR	**Wonju Array Be**	**119.25**	**327**	PKPdf		**PKiKP**	**23 58 09.2**	**+2.3**
MKAR	**Makanchi Array**	**120.44**	**7**	PKP		**PKPdf**	**23 58 08.2**	**-0.7**
	comp=Z,0.2nm,0.6s,baz=360,slow=2.6,SNR=1.5							
MKAR	**Makanchi Array**	**120.44**	**7**	PKPdf		**PKiKP**	**23 58 10.9**	**+1.9**
KSH	**Kashi**	**126.40**	**14**	PKP		**PKiKP**	**23 58 25.1**	**+4.0**
WRA	**Warramunga Arr**	**137.59**	**254**	PKP		**PKPdf**	**23 58 41.9**	**-0.2**
	comp=Z,1.3nm,0.9s,baz=84,slow=2.2,SNR=6.8							
ASAR	**Alice Springs**	**137.65**	**249**	PKP		**PKPdf**	**23 58 42.5**	**+0.4**
	comp=Z,1.1nm,1.0s,baz=105,slow=1.9,SNR=5.5							
PZH	**PanZhiHua**	**139.72**	**345**	PKP		**PKPdf**	**23 58 45.1**	**-1.0**
CHTO	**Chiang Mai**	**147.79**	**345**	PKPbc		**PKPbc**	**23 59 03.7**	**+0.7**
CM31	**Chiang Mai Arr**	**148.13**	**345**	PKPbc		**PKiKP**	**23 59 05.6**	**-0.1**
CMAR	**Chiang Mai Arr**	**148.13**	**345**	PKPbc		**PKPbc**	**23 59 03.1**	**-0.8**
	comp=Z,6.6nm,0.8s,baz=336,slow=2.9,SNR=1.8							
PSA00	**Pilbara Seismi**	**150.80**	**248**	PKPbc		**PKiKP**	**23 59 11.9**	**+0.8**

*IDC **03** 23:59:38.5±1.1,8˚.36S×149˚.24E, h0km, mb3.7/5, mbtmp3.8/8, ML4.1/2, MS3.2/5, Error ellipse: s-maj=41.2km s-min=19.9km az=119.0*

ISC 02 23:59:43.0±0.9, 8˚.3S±0˚.2×149˚.2E±0˚.2, h35km, n13, σ1§39/11, mb3.7/5, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PMG	**Port Moresby**	**2.29**	**240**	Pn		**Pn**	**00 00 18.2**	**-0.1**
	72nm,0.3s,baz=45,slow=11,SNR=20							
PMG				Sn		**Sn**	**00 00 43.2**	**-2.1**
	120nm,0.3s,baz=159,slow=14,SNR=15							
PMG				LR		LR	00 01 26.6	
	comp=Z,312nm,18.4s,baz=158,slow=47							
KRVT	**Keravat (AS076**	**4.85**	**36**	Pn		**Pn**	**00 00 52.4**	**-1.3**
	15nm,0.3s,baz=340,slow=2.1,SNR=5.5							
KRVT				Sn		**Sn**	**00 01 47.3**	**-1.3**
	14nm,0.3s,baz=128,slow=20,SNR=8.8							
	58nm,0.5s							
CTA	**Charters Tower**	**12.09**	**193**	LR		LR	00 06 17.3	
	comp=Z,84nm,18.5s,baz=52,slow=33							
WRA	**Warramunga Arr**	**18.46**	**230**	P		**P**	**00 03 55.3**	**-0.7**
	0.4nm,0.3s,baz=54,slow=11,SNR=33							
	2.0nm,0.5s							
SIJI	**Sorong**	**19.29**	**291**	LR		LR	00 13 50.3	
	comp=Z,53nm,19.0s,baz=76,slow=44							
ASAR	**Alice Springs**	**21.18**	**222**	P		**P**	**00 04 25.1**	**-0.4**
	1.5nm,0.6s,baz=52,slow=8.0,SNR=19							
	1.5nm,0.6s							
STKA	**Stephens Creek**	**24.53**	**196**	P		**P**	**00 04 59.4**	**0.0**
	3.7nm,0.6s,baz=350,slow=9.5,SNR=13							
	3.7nm,0.6s							
KAPI	**Kappang**	**29.39**	**274**	LR		LR	00 18 17.7	
	comp=Z,76nm,18.3s,baz=325,slow=38							
SONM	**Songino Array**	**67.42**	**330**	P		**P**	**00 10 36.8**	**+1.6**
	0.2nm,0.4s,baz=134,slow=4.2,SNR=1.6							
	2.2nm,0.4s							
VNDA	**Vanda**		**69.54**	**177**	P	**P**	**00 10 48.2**	**+0.4**
	0.4nm,0.5s,baz=312,slow=8.3,SNR=2.3							
	0.4nm,0.5s							
MAW	**Mawson**	**81.00**	**203**	LR		LR	00 46 44.7	
	comp=Z,28nm,18.1s,baz=233,slow=35							
ILAR	**Eielson Array**	**86.72**	**23**	P		**P**	**00 12 24.8**	**+1.8**
	0.3nm,0.7s,baz=278,slow=5.2,SNR=5.0							
	0.3nm,0.7s							
TORD	**Torodi Ar. Bea**	**147.69**	**281**	PKPbc		**PKiKP**	**00 19 25.9**	**-1.2**
	0.8nm,0.6s,baz=47,slow=3.0,SNR=10							

*IDC **03** 00:16:09.2±1.1,30˚.14S×71˚.46W, h0km, mb3.9/4, mbtmp3.9/6, ML3.4/2, MS3.3/2, Error ellipse: s-maj=43.8km s-min=22.2km az=150.0*

*NEIC **03** 00:16:15.4±1.9, 30˚.05S±0˚.04×71˚.64W±0˚.08, h39km±6km, mb4.4/9, Mwr3.9/30, ML4.1(GUC), Error ellipse: s-maj=10.1km s-min=5.3km az=98.0*

*NEIC **03** 00:16:15.3, 30˚.04S×71˚.65W, h45km, Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr4.79; Mθθ-2.15; Mϕϕ-2.64; Mrθ-1.46; Mrϕ-2.07; Mθϕ-7.21; Fault plane solution: M₀8.69000×10¹⁴ NP1:ϕ₀197.31000°, δ74.72000°, λ78.62000°. NP2:ϕ₀54.70000°, δ18.97000°, λ125.85000°. Principal axes: T 9.1842, Plg59.0000°, Azm92.0000°; N -1.0799, Plg11.0000°, Azm200.0000°; P -8.1044, Plg29.0000°, Azm296.0000°;*

*GUC **03** 00:16:16.3±0.7, 30˚.19S×71˚.37W, h39km±3km, ML4.1*

ISC 03 00:16:14.1±1.0, 30˚.04S±0˚.03×71˚.78W±0˚.04, h34km±2km, n77, σ1§73/102, mb4.2/8, 6C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CO05	**La Serena**	**0.48**	**76**			**Pn**	**00 16 24.7**	**+0.1**
CO05						**Sb**	**00 16 31.1**	**-0.4**
CO05	**La Serena**	**0.48**	**76**	⇑*i*	P	**Pn**	**00 16 24.7**	**+0.1**
CO05				*i*	S	**Sb**	**00 16 31.2**	**-0.4**
CO05					IAML		00 16 31.6	
	comp=E,22μm,0.3s							
CO06	**Fray Jorge**	**0.64**	**169**			**Pb**	**00 16 28.1**	**+1.1**
CO06					Sn	**Sb**	**00 16 37.4**	**+1.5**
CO06	**Fray Jorge**	**0.64**	**169**	⇓*i*	P	**Pn**	**00 16 28.1**	**+1.1**
CO06				*e*	S	**Sb**	**00 16 36.5**	**+0.5**
CO06					IAML		00 16 39.3	
	comp=E,9μm,0.2s							
GO04	**Tololo Observa**	**0.86**	**99**			**Pn**	**00 16 28.6**	**-1.4**
GO04					Sn	**Sn**	**00 16 38.6**	**-2.8**
GO04	**Tololo Observa**	**0.86**	**99**	*e*	P	**Pn**	**00 16 28.6**	**-1.4**
GO04				*e*	S	**Sn**	**00 16 37.1**	**-4.4**
GO04					IAML		00 16 39.3	
	comp=E,33μm,0.4s							
CO02	**Combarbal**	**1.34**	**150**			**Pn**	**00 16 36.8**	**+0.3**
CO02					Sn	**Sn**	**00 16 52.2**	**-1.0**
CO02	**Combarbal**	**1.34**	**150**	⇑*i*	P	**Pn**	**00 16 36.8**	**+0.3**
CO02				*e*	S	**Sn**	**00 16 52.0**	**-1.3**
CO02					IAML		00 16 54.7	
	comp=E,12μm,0.3s							
LCO	**Las Campanas**	**1.39**	**43**	Pn		**Pn**	**00 16 37.7**	**+0.4**
LCO					Sn	**Sn**	**00 16 54.4**	**-0.3**
LCO	**Las Campanas**	**1.39**	**43**	*e*P		**Pn**	**00 16 37.8**	**+0.4**
LCO				*e*	S	**Sn**	**00 16 54.0**	**-0.6**
CO01	**Juntas del Tor**	**1.46**	**88**			**Pn**	**00 16 37.8**	**-0.6**
CO01	**Juntas del Tor**	**1.46**	**88**	⇓*i*	P	**Pn**	**00 16 37.7**	**-0.6**
CO01				*e*	S	**Sn**	**00 16 54.0**	**-2.4**
AC04	**Llanos de Chal**	**1.93**	**19**			**Pn**	**00 16 46.1**	**+1.6**
AC04	**Llanos de Chal**	**1.93**	**19**	⇓*i*	P	**Pn**	**00 16 46.0**	**+1.5**
AC04				*e*	S	**Sn**	**00 17 08.0**	**+0.4**
VA06	**Catapilco**	**2.55**	**171**			**Pn**	**00 16 53.8**	**+0.8**
VA06	**Catapilco**	**2.55**	**171**	⇑*e*	P	**Pn**	**00 16 53.8**	**+0.8**
VA06				*e*	S	**Sn**	**00 17 22.5**	**-0.3**
VA06					IAML		00 17 39.3	
	comp=E,1μm,0.5s							
GO03	**Copiap**	**2.79**	**29**			**Pn**	**00 16 58.0**	**+1.6**
GO03	**Copiap**	**2.79**	**29**	*e*P		**Pn**	**00 16 57.4**	**+1.0**
GO03				*e*	S	**Sn**	**00 17 31.4**	**+2.5**
GO03					IAML		00 17 47.3	
	comp=E,463nm,0.3s							
VA03	**San Esteban**	**2.91**	**159**			**Pn**	**00 16 59.6**	**+1.5**
VA03	**San Esteban**	**2.91**	**159**	*e*P		**Pn**	**00 16 59.4**	**+1.2**
VA03				*e*	S	**Sn**	**00 17 33.3**	**+1.3**
VA03					IAML		00 17 47.5	
	comp=E,1μm,0.5s							
AC06	**Mina Casimiro**	**2.95**	**25**			**Pn**	**00 16 60.0**	**+1.4**
VA01	**Torpederas**	**2.98**	**178**	Pn		**Pn**	**00 16 58.7**	**-0.2**
ROCH	**El Roble**	**3.00**	**168**	⇑*i*	P	**Pn**	**00 17 00.3**	**+0.9**
ROCH				⇑*e*	P	**Pn**	**00 17 00.3**	**+0.9**
ROCH				*e*	S	**Sn**	**00 17 31.7**	**-2.6**
ROCH				*e*	S	**Sn**	**00 17 34.5**	**+0.2**
ROCH					IAML		00 17 51.0	
	comp=N,828nm,0.7s							
ROCH					IAML		00 17 53.5	
	comp=E,708nm,0.6s							
ROC1	**El Roble**	**3.00**	**168**			**Pn**	**00 17 00.3**	**+0.9**
ZON	**Zonda**	**3.06**	**120**	Pn		**Pn**	**00 17 01.0**	**+0.9**
PEL	**Peldehue**	**3.23**	**164**			**Pn**	**00 17 03.5**	**+1.0**
MT02	**Curacav**	**3.25**	**171**			**Pn**	**00 17 03.1**	**+0.3**
MT02	**Curacav**	**3.25**	**171**	*e*P		**Pn**	**00 17 03.1**	**+0.3**
MT02				*e*	S	**Sn**	**00 17 39.0**	**-1.4**
MT02					IAML		00 17 56.2	
	comp=E,256nm,0.3s							
MT05	**Renca**	**3.46**	**165**			**Pn**	**00 17 06.8**	**+1.2**
MT05	**Renca**	**3.46**	**165**	*e*P		**Pn**	**00 17 06.6**	**+1.0**
MT05				*e*	S	**Sn**	**00 17 44.8**	**-0.6**
MT05					IAML		00 18 09.0	
	comp=E,686nm,0.5s							
MT03	**Universidad Ad**	**3.61**	**163**			**Pn**	**00 17 09.0**	**+1.3**
MT03				*e*	P	**Pn**	**00 17 09.0**	**+1.3**
MT03				*e*	S	**Sn**	**00 17 49.2**	**0.0**
MT03				IAML			00 18 07.6	
	comp=E,498nm,0.2s							
VA05	**Santo Domingo**	**3.61**	**178**			**Pn**	**00 17 08.3**	**+0.8**
MT09	**Talagante**	**3.79**	**170**			**Pn**	**00 17 11.1**	**+0.9**
MT09	**Talagante**	**3.79**	**170**	⇑*i*	P	**Pn**	**00 17 11.2**	**+1.0**
MT09				*e*	S	**Sn**	**00 17 53.0**	**-0.6**
MT09				IAML			00 18 14.1	
	comp=N,302nm,0.3s							
AC02	**Maricunga**	**3.95**	**37**	Pn		**Pn**	**00 17 14.2**	**+1.4**
AC01	**Pan de Azucar**	**4.01**	**15**	Pn		**Pn**	**00 17 13.4**	**+0.2**
LMEL	**Las Melosas**	**4.03**	**161**	Pn		**Pn**	**00 17 15.4**	**+1.9**
BO04	**La Punta**	**4.06**	**166**			**Pn**	**00 17 14.9**	**+1.0**
BO01	**Tunca**	**4.38**	**172**	Pn		**Pn**	**00 17 18.6**	**+0.4**
GO05	**Huala**	**4.96**	**181**			**Pn**	**00 17 25.8**	**-0.4**
GO02	**Mina Guanaco**	**5.23**	**22**	Pn		**Pn**	**00 17 30.6**	**+0.3**
PB14	**IPOC Station P**	**5.53**	**13**	Pn		**Pn**	**00 17 33.3**	**-1.1**
BI05	**Punta Hualpn**	**6.79**	**190**	Pn		**Pn**	**00 17 50.9**	**-0.5**
H03N1	**Juan Fernandez**	**6.96**	**239**	Pn		**Pn**	**00 17 56.0**	**+2.6**
	baz=111,slow=18							
H03N1				Sn		**Sn**	**00 19 07.5**	**-3.8**
	baz=246,slow=74							
H03N1				T		T	00 25 21.8	
	baz=66,slow=72,SNR=1795							
H03N2	**Juan Fernandez**	**6.97**	**239**	Pn		**Pn**	**00 17 55.8**	**+2.2**
	baz=111,slow=18							
H03N2				Sn		**Sn**	**00 19 07.5**	**-4.0**
	baz=16,slow=74							
H03N2				T		T	00 25 21.8	
	baz=66,slow=72,SNR=1699							
H03N3	**Juan Fernandez**	**6.97**	**239**	Pn		**Pn**	**00 17 55.8**	**+2.1**
	baz=111,slow=18							
H03N3				Sn		**Sn**	**00 19 07.1**	**-4.6**
H03N3				T		T	00 25 24.1	
	baz=66,slow=72,SNR=1638							
H03S3	**Juan Fernandez**	**7.14**	**236**	Pn		**Pn**	**00 17 56.1**	**+0.2**
H03S3				Sn		**Sn**	**00 19 09.9**	**-5.8**
H03S1	**Juan Fernandez**	**7.15**	**236**	Pn		**Pn**	**00 17 56.7**	**+0.7**
H03S1				Sn		**Sn**	**00 19 09.9**	**-6.0**
H03S2	**Juan Fernandez**	**7.16**	**236**	Pn		**Pn**	**00 17 56.6**	**+0.5**
H03S2				Sn		**Sn**	**00 19 11.0**	**-5.1**
LVC	**Limon Verde**	**7.83**	**20**	Pn		**Pn**	**00 18 04.9**	**-1.1**
	comp=N,0.3nm,0.3s,baz=264,slow=10,SNR=2.4							
LVC				Sn		**Sn**	**00 19 30.8**	**-2.9**
	comp=N,0.6nm,0.3s,baz=146,slow=13,SNR=1.4							
LVC				LR		LR	00 21 11.6	
	comp=N,69nm,18.8s,baz=291,slow=39							
	comp=N,2.1nm,0.6s							
LL04	**Puerto Octay**	**10.86**	**183**	Pn		**Pn**	**00 18 45.4**	**-1.7**
ITQB	**Itaqui**	**13.16**	**92**	Pn		**Pn**	**00 19 17.1**	**-1.5**
AY01	**Puyuhuapi**	**14.37**	**183**			**P**	**00 19 41.6**	**0.0**
PLTB	**Pedras Altas**	**15.70**	**101**	Pn		**Pn**	**00 19 53.4**	**+0.7**
SIV	**San Ignacio**	**17.09**	**37**	P		**Pn**	**00 20 10.0**	**-0.5**
	baz=216,slow=10,SNR=10							
	comp=N,1.5nm,0.5s							
BDFB	**Brasilia**	**26.10**	**62**	P		**P**	**00 21 42.9**	**-2.1**
	comp=N,0.8nm,0.4s,baz=250,slow=6.5,SNR=3.0							
	comp=N,0.8nm,0.4s							
VNA3	**Neumayer Olymp**	**52.95**	**159**	P		**P**	**00 25 26.4**	**-0.4**
VNA2	**Neumayer--Watz**	**53.58**	**158**	P		**P**	**00 25 30.7**	**-0.6**
	baz=286,slow=8.0							
SNAA	**Sanae**	**55.17**	**159**	P		**P**	**00 25 42.3**	**-0.8**
SNAA	**Sanae**	**55.17**	**159**	P		**P**	**00 25 42.2**	**-0.8**
SNAA				IAmb		IAmb	00 25 43.0	
	comp=Z,2.4nm,0.7s							
TROLL	**Troll, Antarti**	**56.88**	**159**	P		**P**	**00 25 54.6**	**-0.8**
QSPA	**South Pole Qui**	**60.19**	**180**	P		**P**	**00 26 18.4**	**+0.1**
QSPA				IAmb		IAmb	00 26 32.5	
	comp=Z,1.9nm,0.9s							
TXAR	**Lajitas Array**	**66.42**	**330**	P		**P**	**00 27 01.4**	**+1.4**
	comp=Z,0.2nm,0.6s,baz=144,slow=8.2,SNR=4.3							
	comp=Z,0.2nm,0.6s							
DBIC

MTN	**Manton Dam**	**12.97**	**224**		**Pn**	00 34 19.6	-0.2
KNRA	**Kununurra**	**16.59**	**223**	P	**Pn**	00 35 07.6	-0.1
KNRA				IAmb	IAmb	00 35 26.1	
	comp=Z,17nm,0.9s						
WB0	**Warramunga Arr**	**17.12**	**199**	P	**Pn**	00 35 14.2	-0.2
WB0				IAmb	IAmb	00 35 26.8	
	comp=Z,13nm,1.2s						
SOEI	**Soe**	**17.13**	**248**		**Pn**	00 35 14.3	-0.4
SOEI	**Soe**	**17.13**	**248**	P	**P**	00 35 16.2	+0.3
WR0	**Warramunga Arr**	**17.25**	**199**		**Pn**	00 35 15.3	-0.7
WR0				IAmb	IAmb	00 35 24.5	
	comp=Z,7.6nm,0.7s						
WRAB	**Tennant Creek**	**17.29**	**199**		**Pn**	00 35 16.7	+0.2
WRAB				IAmb	IAmb	00 35 33.6	
	comp=Z,12nm,1.0s						
WB2	**Warramunga Arr**	**17.30**	**199**	P	**Pn**	00 35 17.2	+0.7
WB2				IAmb	IAmb	00 35 35.6	
	comp=Z,9.7nm,0.8s						
WRA	**Warramunga Arr**	**17.30**	**199**	P	**Pn**	00 35 15.1	-1.5
	comp=Z,0.4nm,0.3s,baz=16,slow=13,SNR=17						
WRA				S	**Sn**	00 38 21.9	-6.4
	comp=Z,1.1nm,0.7s,baz=17,slow=24,SNR=3.4						
	comp=Z,1.7nm,0.6s						
WRA	**Warramunga Arr**	**17.30**	**199**	P	**P**	00 35 17.6	-0.1
TOLI2	**Tolitoli**	**20.13**	**283**	P	**P**	00 35 47.5	-1.2
TOLI2				IAmb	IAmb	00 35 54.1	
	comp=Z,10nm,0.7s						
PATS	**Pohnpei**	**20.68**	**60**		Pn	00 35 58.3	+1.0
PATS				IAmb	IAmb	00 36 13.0	
	comp=Z,32nm,1.3s						
AS31	**Alice Springs**	**20.93**	**197**	P	Pn	00 35 59.8	-0.4
ASAR	**Alice Springs**	**20.93**	**197**	P	**P**	00 35 58.3	+0.9
	comp=Z,4.8nm,0.6s,baz=28,slow=10,SNR=44						
ASAR				S	**S**	00 39 50.2	+1.5
	comp=Z,1.0nm,0.8s,baz=9.9,slow=28,SNR=5.0						
	comp=Z,4.8nm,0.6s						
ASAR	**Alice Springs**	**20.93**	**197**	P	Pn	00 35 59.7	-0.5
EIDS	**Eidsvold**	**23.99**	**156**	P	**P**	00 36 31.1	+2.1
EIDS				IAmb	IAmb	00 36 44.3	
	comp=Z,8.4nm,1.1s						
MBWA	**Marble Bar**	**26.62**	**227**	P	**P**	00 36 52.5	-0.5
MBWA				IAmb	IAmb	00 36 56.9	
	comp=Z,11nm,1.5s						
PSA00	**Pilbara Seismi**	**26.79**	**226**	P	**P**	00 36 53.1	-1.4
JMZ	**Minamidaito 2**	**30.54**	**344**	P	**P**	00 37 26.8	-1.0
JMZ				IAmb	IAmb	00 37 42.3	
	comp=Z,0.3nm,0.9s						
JMZ	**Minamidaito 2**	**30.54**	**344**	P	**P**	00 37 26.7	-1.0
OUENC	**Ouen Island, N**	**31.76**	**128**	P	**P**	00 37 38.5	-0.1
MORW	**Morawa**	**34.30**	**220**	P	**P**	00 38 01.5	+0.7
KSRS	**Korea Array**	**42.43**	**345**	P	**P**	00 39 07.4	-1.5
	comp=Z,0.6nm,0.5s,baz=157,slow=8.4,SNR=4.4						
	comp=Z,0.6nm,0.5s						
THZ	**Tophouse**	**47.88**	**147**	P	**P**	00 39 51.2	-1.0
USA0B	**Ussuriysk Arra**	**48.15**	**352**	P	**P**	00 39 56.0	+1.9
USA0B				IAmb	IAmb	00 40 05.8	
	comp=Z,4.2nm,0.7s						
MLZ	**Mavora Lakes**	**48.19**	**154**	P	**P**	00 39 57.3	+2.8
SONM	**Songino Array**	**59.21**	**334**	P	**P**	00 41 13.1	-2.2
	comp=Z,0.2nm,0.4s,baz=128,slow=9.3,SNR=1.9						
	comp=Z,0.2nm,0.4s						
KIWB	**Kanaga Island**	**65.92**	**27**	P	**P**	00 41 59.7	-0.1
MKAR	**Makanchi Array**	**71.48**	**322**	P	**P**	00 42 33.9	-0.7
	comp=Z,0.4nm,0.7s,baz=143,slow=8.4,SNR=1.9						
	comp=Z,0.4nm,0.7s						
MKAR	**Makanchi Array**	**71.48**	**322**	P	**P**	00 42 33.8	-0.9
VNDA	**Vanda**	**74.78**	**175**	P	**P**	00 42 54.9	+1.4
	comp=Z,1.3nm,0.9s,baz=307,slow=5.7,SNR=5.7						
	comp=Z,1.3nm,0.9s						
VNDA	**Vanda**	**74.78**	**175**	P	**P**	00 42 55.5	+1.9
SDPT	**Sand Point**	**76.02**	**30**	P	**P**	00 43 02.4	+1.4
NRIK	**Noril'sk**	**81.01**	**343**	P	**P**	00 43 27.1	-1.1
	comp=Z,1.2nm,0.7s,baz=95,slow=6.5,SNR=4.0						
	comp=Z,1.2nm,0.7s						
NRIK	**Noril'sk**	**81.01**	**343**	P	**P**	00 43 29.5	+1.3
NRIK				IAmb	IAmb	00 43 46.5	
	comp=Z,3.7nm,1.4s						
L19K	**White Mountain**	**81.67**	**25**	P	**P**	00 43 31.8	-0.1
L19K				IAmb	IAmb	00 43 45.5	
	comp=Z,1.9nm,1.0s						
MAW	**Mawson**	**81.96**	**202**	P	**P**	00 43 33.7	+0.4
J20K	**Nowinta River**	**82.78**	**24**	P	**P**	00 43 39.4	+1.8
J20K				IAmb	IAmb	00 43 41.9	
	comp=Z,3.9nm,1.3s						
IMAR	**Indian Mountai**	**83.66**	**22**	P	**P**	00 43 43.2	+1.1
MLY	**Manley**	**84.46**	**23**	P	**P**	00 43 46.6	+0.3
MLY				IAmb	IAmb	00 43 59.5	
	comp=Z,1.8nm,1.0s						
ILAR	**Eielson Array**	**85.93**	**24**	P	**P**	00 43 53.0	-0.6
	comp=Z,0.8nm,0.7s,baz=246,slow=4.3,SNR=6.0						
	comp=Z,0.8nm,0.7s						

*IDC **03** 00:49:34.3±1.7,6°.96S×129°.64E,h0km,mb4.1/1, mbtmp4.1/4,ML4.2/3,Error ellipse: s-maj=68.7km s-min=28.2km az=79.0*
*DJA **03** 00:49:43.0±0.6,7°.5±3°×13°.0E±°,h144km±19km,M4.3/9, mb4.3/5,mB5.0/2,MLv4.4/9,Mw(mB)4.3/2*
ISC 03 00:49:43.0±1.0,6.77S±0.06×130.5E±0.1,h100km,n9, σ2§20/10,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.47**	**145**	P	**Pn**	**00 50 11.5**	**+2.6**
MSAI	**Masohi**	**3.72**	**336**	P	**Pn**	**00 50 40.2**	**+1.7**
FAKI	**Fak Fak**	**4.23**	**25**	P	**Pn**	**00 50 46.4**	**+1.1**
SIJI	**Sorong**	**5.92**	**8**	Pn	**Pn**	**00 51 08.8**	**+0.5**
	3.3nm,0.3s,baz=218,slow=22,SNR=15						
SIJI				Sn	**Sn**	**00 52 11.8**	**-3.0**
	3.7nm,0.3s,baz=223,slow=22,SNR=6.5						
	11nm,0.3s						
SOEI	**Soe**	**6.79**	**244**	P	**Pn**	**00 51 20.0**	**-0.2**
	0.3nm28nm,0.6s						
BATI	**Baumata**	**7.53**	**243**	P	**Pn**	**00 51 29.8**	**-0.3**
WRA	**Warramunga Arr**	**13.63**	**164**	Pn	**Pn**	**00 52 49.1**	**-3.1**
	1.4nm,0.3s,baz=345,slow=12,SNR=61						
	1.4nm,0.3s						
ASAR	**Alice Springs**	**17.12**	**169**	P	**Pn**	**00 53 36.1**	**-0.1**
	0.8nm,0.3s,baz=350,slow=8.9,SNR=34						
	0.8nm,0.3s						
MKAR	**Makanchi Array**	**68.28**	**327**	P	**P**	**01 00 35.2**	**+2.0**
	1.0nm,0.5s,baz=118,slow=8.1,SNR=10						
	1.0nm,0.5s						

*NNC **03** 01:07:22.6±1.6,42°.56N×78°.71E,h0km,mb2.8,mpv2.7, Error ellipse: s-maj=11.9km s-min=5.1km az=164.0*
*KRNET **03** 01:07:25.5±0.1,42°.64N×78°.67E,h20km,mb2.3*
*SOME **03** 01:07:25.3,42°.63N×78°.65E,h10km*
ISC 03 01:07:24.4±0.9,42°.64N±0°.03×78°.66E±0°.02,h10km,n43, σ1§02/83,11C-5D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**0.24**	**231**	⇓*i*P	**Pg**	**01 07 31.2**	**+1.7**
PRZ	baz=35			⇓*i*S	**Sg**	**01 07 34.7**	**+1.8**
SATY	**Saty**	**0.46**	**337**	*e*P	**Pb**	**01 07 34.3**	**-0.4**
SATY	baz=35			*e*S	**Sg**	**01 07 41.1**	**+1.6**
SATY	**Saty**	**0.46**	**337**	*e*P	**Pb**	**01 07 34.2**	**-0.4**
	3.5nm,0.3s						
SATY	49nm,0.1s			*e*S	**Sg**	**01 07 41.0**	**+1.6**
SATY	**Saty**	**0.46**	**337**	P	**Pb**	**01 07 34.2**	**-0.4**
	3.5nm,0.3s						
SATY	49nm,0.1s			S	**Sg**	**01 07 41.0**	**+1.6**
UZB	**Uzynbulak**	**0.57**	**28**	*e*P	**Pb**	**01 07 36.2**	**-0.5**
UZB	baz=27			*e*S	**Sb**	**01 07 44.2**	**-0.8**
UZB	**Uzynbulak**	**0.57**	**28**	*e*P	**Pb**	**01 07 36.2**	**-0.5**
	2.3nm,0.1s						
UZB	6.8nm,0.1s			*e*S	**Sb**	**01 07 44.2**	**-0.8**
UZB	**Uzynbulak**	**0.57**	**28**	P	**Pb**	**01 07 36.2**	**-0.5**
	2.3nm,0.1s						
UZB	6.8nm,0.1s			S	**Sb**	**01 07 44.2**	**-0.8**
ANVS	**Anan'yevo**	**0.74**	**282**	⇑*i*P	**Pn**	**01 07 40.1**	**-1.0**
	baz=82						
ANVS	baz=82			⇑*i*S	**Sb**	**01 07 50.1**	**+0.3**
SHLS	**Shalkode**	**0.79**	**49**	*e*P	**Pn**	**01 07 43.1**	**+1.4**
	2.9nm,0.1s						
SHLS	3.9nm,0.2s			*e*S	**Sn**	**01 07 56.0**	**+2.4**
SHLS	**Shalkode**	**0.79**	**49**	P	**Pn**	**01 07 43.1**	**+1.4**
	2.9nm,0.2s						
SHLS	3.9nm,0.2s			S	**Sn**	**01 07 56.0**	**+2.4**
KPKS	**Kokpek**	**0.83**	**1**	*e*P	**Pb**	**01 07 40.9**	**0.0**
	baz=1.0						
KPKS	baz=1.0			*e*S	**Sg**	**01 07 52.4**	**+1.2**
KPKS	**Kokpek**	**0.83**	**1**	*e*P	**Pb**	**01 07 40.9**	**0.0**
	5.0nm,0.1s						
KPKS	11nm,0.1s			*e*S	**Sg**	**01 07 52.4**	**+1.2**
KPKS	**Kokpek**	**0.83**	**1**	P	**Pb**	**01 07 40.9**	**0.0**
	5.0nm,0.1s						
KPKS	11nm,0.3s			S	**Sg**	**01 07 52.4**	**+1.2**
KURS	**Kuram**	**0.92**	**337**	*e*P	**Pn**	**01 07 43.2**	**-0.3**
	baz=37						
KURS	baz=37			*e*S	**Sb**	**01 07 56.2**	**+1.4**
KURS	**Kuram**	**0.92**	**337**	*e*P	**Pn**	**01 07 43.2**	**-0.3**
	3.9nm,0.3s						
KURS	5.3nm,0.3s			*e*S	**Sb**	**01 07 56.2**	**+1.4**
KURS	**Kuram**	**0.92**	**337**	P	**Pn**	**01 07 43.2**	**-0.3**
	3.9nm,0.3s						
KURS	5.4nm,0.8s			S	**Sb**	**01 07 56.2**	**+1.4**
PDGK	**Podgornoye**	**0.92**	**41**	P	**Pn**	**01 07 42.0**	**-1.6**
	0.3nm,0.2s						
PDGK	1.9nm,0.4s			S	**Sb**	**01 07 54.3**	**-0.7**
PDGK	**Podgornoye**	**0.92**	**41**	⇓P	**Pg**	**01 07 39.5**	**-2.6**
	0.6nm,0.5s						
PDGK	1.9nm,0.5s			⇑S	**Sb**	**01 07 54.2**	**-0.7**
KDJ	**Kajisay**	**1.21**	**246**	⇑*e*P	**Pg**	**01 07 47.8**	**+0.3**
	baz=45						
KDJ	baz=45			⇑*i*S	**Sn**	**01 08 03.8**	**-0.2**
MDOK	**Medeo**	**1.29**	**294**	*e*P	**Pg**	**01 07 49.0**	**-0.2**
	baz=94						
MDOK	baz=94			*e*S	**Sn**	**01 08 06.2**	**+0.1**
MDOK	**Medeo**	**1.29**	**294**	*e*P	**Pg**	**01 07 49.0**	**-0.2**
	2.1nm,0.2s						
MDOK	6.6nm,0.2s			*e*S	**Sn**	**01 08 06.2**	**+0.1**
MDOK	**Medeo**	**1.29**	**294**	Pg	**Pg**	**01 07 49.0**	**-0.2**
	2.1nm,0.2s						
MDOK	1.4nm,0.5s			P	**Pb**	**01 07 49.1**	**+0.2**
MDOK	2.2nm,0.5s			S	**Sb**	**01 08 03.7**	**-1.8**
MDOK	6.6nm,0.4s			Lg	Lg	01 08 06.2	
TNSS	**Tian-Shan**	**1.32**	**288**	*e*P	**Pg**	**01 07 50.0**	**+0.3**
	baz=88						
TNSS	baz=88			*e*S	**Sg**	**01 08 08.2**	**+1.3**
TNSS	**Tian-Shan**	**1.32**	**288**	*e*P	**Pg**	**01 07 50.0**	**+0.3**
	1.9nm,0.2s						
TNSS	2.3nm,0.2s			*e*S	**Sg**	**01 08 08.2**	**+1.3**
TNSS	**Tian-Shan**	**1.32**	**288**	P	**Pg**	**01 07 50.0**	**+0.3**
	1.9nm,0.2s						
TNSS	2.3nm,0.2s			S	**Sg**	**01 08 08.2**	**+1.3**
BLB	**Baldybastay**	**1.46**	**355**	*e*P	**Pg**	**01 07 52.5**	**+0.1**
	8.8nm,0.1s						
BLB	9.0nm,0.2s			*e*S	**Sg**	**01 08 12.3**	**+0.8**
BLB	**Baldybastay**	**1.46**	**355**	P	**Pg**	**01 07 52.5**	**+0.1**
	9.0nm,0.2s						
BLB	9.0nm,0.2s			S	**Sg**	**01 08 12.3**	**+0.8**
CHKK	**Chushkaly**	**1.72**	**315**	*e*P	**Pg**	**01 07 57.6**	**+0.2**
	5.6nm,0.2s						
CHKK	6.9nm,0.1s			*e*S	**Sg**	**01 08 20.7**	**+1.0**
CHKK	**Chushkaly**	**1.72**	**315**	P	**Pg**	**01 07 57.6**	**+0.2**
	5.6nm,0.2s						
CHKK	7.1nm,0.3s			S	**Sg**	**01 08 20.7**	**+1.0**
KTBS	**Karatobe**	**1.80**	**307**	*e*P	**Pg**	**01 07 58.5**	**-0.3**
	5.1nm,0.2s						
KTBS	13nm,0.3s			*e*S	**Sg**	**01 08 22.6**	**+0.4**
KTBS	**Karatobe**	**1.80**	**307**	P	**Pg**	**01 07 58.5**	**-0.3**
	5.1nm,0.2s						
KTBS	13nm,0.3s			S	**Sg**	**01 08 22.6**	**+0.4**
ULHL	**Ulahol**	**1.83**	**258**	⇓*e*P	**Pg**	**01 07 58.6**	**-0.9**
	baz=58						
ULHL	baz=58			⇓*i*S	**Sg**	**01 08 22.7**	**-0.5**
DJR	**Jarkent**	**1.88**	**26**	*e*P	**Pg**	**01 07 59.8**	**-0.8**
	1.8nm,0.1s						
DJR	14nm,0.1s			*e*S	**Sg**	**01 08 25.0**	**0.0**
DJR	**Jarkent**	**1.88**	**26**	P	**Pg**	**01 07 59.7**	**-0.8**
	1.8nm,0.2s						
DJR	14nm,0.3s			S	**Sg**	**01 08 25.0**	**0.0**
BOOM	**Boomskoye usch**	**2.01**	**267**	⇑*e*P	**Pg**	**01 08 01.6**	**-1.3**
	baz=67						
BOOM	baz=67			⇑*i*S	**Sb**	**01 08 26.3**	**0.0**
KST	**Kastek**	**2.02**	**282**	*e*P	**Pg**	**01 08 02.3**	**-0.8**
	2.1nm,0.5s						
KST	4.0nm,0.1s			*e*S	**Sg**	**01 08 29.0**	**-0.3**
KST	**Kastek**	**2.02**	**282**	Pg	**Pg**	**01 08 02.3**	**-0.8**
	2.1nm,0.5s						
KST	3.8nm,0.5s			Lg	Lg	01 08 29.0	
KUU	**Kurty**	**2.11**	**307**	*e*P	**Pg**	**01 08 03.9**	**-0.8**
	2.6nm,0.2s						
KUU	6.6nm,0.1s			*e*S	**Sg**	**01 08 31.9**	**-0.1**
KUU	**Kurty**	**2.11**	**307**	Pg	**Pg**	**01 08 03.9**	**-0.8**
	2.6nm,0.2s						
KUU	6.6nm,0.1s			Lg	Lg	01 08 31.9	
TKM2	**Tokmak 2**	**2.27**	**278**	⇑*e*P	**Pb**	**01 08 05.0**	**-0.6**
	baz=78						
TKM2	baz=78			⇑*i*S	**Sb**	**01 08 32.6**	**-1.2**
TKM2	**Tokmak 2**	**2.27**	**278**	⇑Pn	**Pn**	**01 08 00.2**	**-2.0**
	1.1nm,0.9s						
TKM2	3.0nm,0.5s			⇑Lg	Lg	01 08 36.9	
KRBS	**Karabastau**	**2.42**	**297**	*e*P	**Pg**	**01 08 09.4**	**-1.4**
	1.1nm,0.0s						
KRBS	7.6nm,0.2s			*e*S	**Sg**	**01 08 41.2**	**-1.1**
KRBS	**Karabastau**	**2.42**	**297**	Pg	**Pb**	**01 08 08.9**	**+0.8**
	3.2nm,0.3s						
KRBS	7.3nm,0.3s			Lg	Lg	01 08 41.2	

*MAN **03** 01:16:55.1,5°.26N×126°.30E,h66km,mb4.8,ML3.7,MS3.7*
*IDC **03** 01:16:59.6±2.1,5°.77N×126°.36E,h118km±14km,mb3.5/5, mbtmp3.8/5,Error ellipse: s-maj=150.0km s-min=15.5km az=65.0*
ISC 03 01:16:59.7±1.0,5°.6N±0°.1×126°.0E±0°.2,h116km,n8, σ0§31/10,mb3.9/5,2D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**1.12**	**295**	⇓*i*P	Pn	01 17 34.2	+11
GSPH				*i* S	**Sn**	**01 17 40.2**	**-0.1**
DAV	**Davao City (W)**	**1.50**	**345**	P	**Pn**	**01 17 26.6**	**-0.4**
	169nm,0.4s,baz=56,slow=2.1,SNR=1.3						
DAV	248nm,0.5s,baz=210,slow=10.0,SNR=1.2			S	**Sn**	**01 17 47.8**	**+0.2**
KCP	**Kidapawan**	**1.64**	**328**	⇓*i*P	**Pn**	**01 17 28.6**	**-0.1**
KCP				*i* S	**Sn**	**01 17 51.0**	**+0.2**
WRA	**Warramunga Arr**	**26.69**	**162**	P	**P**	**01 22 27.8**	**-0.4**
	0.4nm,0.5s,baz=343,slow=10,SNR=6.7						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**30.11**	**165**	P	**P**	**01 22 59.0**	**+0.4**
	0.8nm,0.6s,baz=344,slow=7.2,SNR=13						
	0.8nm,0.6s						
STKA	**Stephens Creek**	**40.14**	**159**	P	**P**	**01 24 24.4**	**-0.1**
	1.9nm,0.7s,baz=342,slow=8.2,SNR=4.2						
	1.9nm,0.7s						
MKAR	**Makanchi Array**	**55.59**	**325**	P	**P**	**01 26 23.7**	**+0.3**
	0.6nm,0.4s,baz=123,slow=8.5,SNR=10						
	0.6nm,0.4s						
KURBB	**Kurchatov Arra**	**59.76**	**327**	P	**P**	**01 26 52.4**	**-0.1**
	0.7nm,0.6s,baz=127,slow=6.3,SNR=4.2						
	0.7nm,0.6s						

*IDC **03** 01:18:22.7±5.8,35°.90N×71°.59E,h66km±46km,mb3.5/8, mbtmp3.8/12,ML3.6/4,MS3.4/1,Error ellipse: s-maj=49.3km s-min=33.1km az=151.0*
*NNC **03** 01:18:29.9±3.2,36°.97N×70°.85E,h0km,mb4.2,mpv4.0, Error ellipse: s-maj=25.5km s-min=22.1km az=177.0*
ISC 03 01:18:29.0±1.8,36°.4N±0°.2×71°.4E±0°.2,h100km,n26, σ1§29/26,mb3.8/7,1C-6D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**6.00**	**16**	P	**Pn**	**01 19 56.1**	**+0.4**
	SNR=31						
UCH	**Uchtor**	**6.31**	**21**	P	**Pn**	**01 20 00.1**	**+0.2**
	SNR=11						
EKS2	**Erkin-Say**	**6.53**	**16**	P	**Pn**	**01 20 03.1**	**+0.6**
	SNR=11						
AAK	**Ala-Archa**	**6.68**	**20**	P	**Pn**	**01 20 05.6**	**+1.0**
	SNR=5.7						
AAK	**Ala-Archa**	**6.68**	**20**	P	**Pn**	**01 20 04.4**	**-0.3**
	5.8nm,0.3s,baz=174,slow=6.3,SNR=17						
AAK				S	**Sn**	**01 21 18.3**	**-1.0**
	2.7nm,0.4s,baz=163,slow=18,SNR=5.5						
	11nm,0.3s						
KK31	**Karatay Array**	**6.74**	**354**	P	**Pn**	**01 20 04.2**	**-1.2**
	11nm,0.4s,baz=179,slow=12,SNR=79						
KK31				⇓S	Sn	01 21 14.2	-6.5
	5.7nm,0.5s,baz=182,slow=21,SNR=6.1						
CHMS	**Chumysh**	**7.09**	**20**	P	**Pn**	**01 20 10.8**	**+0.7**
	SNR=5.2						
CHMS	**Chumysh**	**7.09**	**20**	⇓P	**Pn**	**01 20 10.4**	**+0.3**
	5.2nm,0.4s						
CHMS	5.1nm,0.7s			⇓S	**Sn**	**01 21 28.1**	**-0.9**
TKM2	**Tokmak 2**	**7.28**	**25**	P	**Pn**	**01 20 13.6**	**+0.7**
	SNR=12						
TKM2	**Tokmak 2**	**7.28**	**25**	⇑P	**Pn**	**01 20 13.3**	**+0.4**
	4.7nm,0.6s						
TKM2	3.7nm,1.0s			⇓S	**Sn**	**01 21 34.8**	**+0.9**
MDOK	**Medeo**	**8.04**	**31**	⇓P	**Pn**	**01 20 23.3**	**+0.2**
	2.4nm,0.8s						
GEYT	**Alibeck**	**10.72**	**282**	S	Sn	01 22 46.3	-11
	1.3nm,0.4s,baz=96,slow=12,SNR=2.6						
MKAR	**Makanchi Array**	**13.19**	**35**	P	**Pn**	**01 21 31.2**	**-1.1**
	0.1nm,0.3s,baz=215,slow=12,SNR=2.4						
	0.9nm,0.9s						
KURBB	**Kurchatov Arra**	**15.12**	**18**	P	**P**	**01 21 58.5**	**-1.4**
	0.1nm,0.3s,baz=206,slow=11,SNR=7.5						
	0.4nm,0.5s						
AB31	**Akbulak array**	**15.34**	**331**	P	**Pn**	**01 21 55.8**	**-4.1**
	0.5nm,0.3s,baz=143,slow=12,SNR=38						
AB31				⇓S	Sn	01 24 38.7	-11
	0.8nm,0.6s,baz=149,slow=24,SNR=4.0						
AKTO	**Aktyubinsk**	**17.04**	**330**	P	**Pn**	**01 22 21.2**	**+0.2**
	0.5nm,0.3s,baz=129,slow=11,SNR=10						
	1.7nm,0.4s						
ZALV	**Zalesovo Beam**	**19.88**	**24**	P	Pn	01 22 52.2	-2.5
	1.6nm,0.4s,baz=237,slow=9.6,SNR=8.4						
	1.6nm,0.4s						
ARU	**Arti**	**21.85**	**341**	P	**P**	**01 23 15.2**	**+2.0**
	2.8nm,0.5s,baz=282,slow=19,SNR=6.3						
	2.8nm,0.5s						
AKASG	**Malin Array Be**	**33.27**	**309**	P	**P**	**01 24 57.5**	**+0.8**
	0.7nm,0.4s,baz=81,slow=7.0,SNR=4.5						
	0.7nm,0.4s						
FINES	**FINESS Array B**	**37.76**	**326**	P	**P**	**01 25 36.0**	**+1.0**
	0.5nm,0.4s,baz=118,slow=9.8,SNR=14						
	0.5nm,0.4s						
ARCES	**ARCESS Array B**	**41.38**	**338**	P	**P**	**01 26 06.1**	**+1.3**
	1.3nm,0.6s,baz=106,slow=7.7,SNR=10						
	1.3nm,0.6s						
YAK	**Yakutsk**	**43.87**	**35**	LR	LR	01 47 47.8	
	comp=Z,42nm,18.7s,baz=278,slow=40						
NB2	**NORSAR Subarra**	**44.67**	**323**	P	**P**	**01 26 32.1**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=97,slow=7.9						
NOA	**NORSAR Array B**	**44.67**	**323**	P	**P**	**01 26 32.4**	**+0.8**
	comp=Z,0.7nm,0.5s,baz=98,slow=7.7,SNR=7.0						
	comp=Z,0.7nm,0.5s						
TORD	**Torodi Ar. Bea**	**66.05**	**269**	P	**P**	**01 29 03.7**	**-1.8**
	comp=Z,0.5nm,0.5s,baz=48,slow=5.6,SNR=12						
	comp=Z,0.5nm,0.5s						
YKA	**Yellowknife Ar**	**81.34**	**3**	P	**P**	**01 30 34.3**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=354,slow=5.1,SNR=5.7						
	comp=Z,0.1nm,0.3s						

*IDC **03** 01:28:47.1±1.2,38°.64N×24°.57E,h0km,mb3.5/6, mbtmp3.4/10,ML3.2/4,MS3.2/4,Error ellipse: s-maj=22.0km s-min=18.7km az=100.0*
*TIR **03** 01:28:48.0,38°.67N×24°.49E,h20km±31km,MI3.3*
*ISK **03** 01:28:48.8,38°.66N×24°.46E,h11km,ML3.4/25*
*ATH **03** 01:28:49.5,38°.62N×24°.45E,h16km±1km,ML3.5/27,Error ellipse: s-maj=1.7km s-min=0.8km az=340.0*
*THE **03** 01:28:49.8,38°.60N×24°.47E,h12km,ML3.5/18,Error ellipse: s-maj=0.9km s-min=0.5km az=139.0*
*DDA **03** 01:28:51.8±0.0,38°.70N×24°.63E,h18km±1km,ML3.3*
ISC 03 01:28:49.6±0.8,38°.62N±0°.02×24°.48E±0°.02,h17km±6km, n197,σ1§34/251,mb3.4/6,MS3.2/3,20C-3D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKY	**Skiros Island**	**0.27**	**12**	P	**Pg**	**01 28 55.7**	**+0.1**
SKY				S	**Sg**	**01 28 58.8**	**-0.8**
SKY	comp=E,75379µm,0.3s			AML	AML	01 29 00.3	
SKY	comp=N,76105µm,0.3s			AML	AML	01 29 00.4	
SKY	**Skiros Island**	**0.27**	**12**	P	**Pg**	**01 28 55.6**	**+0.1**
SKY	comp=N,38µm,0.3s			S	**Sg**	**01 28 59.9**	**+0.3**
KYMI	**Kymi, Euboea I**	**0.29**	**274**	P	**Pg**	**01 28 55.9**	**-0.1**
KYMI				S	**Sg**	**01 28 59.9**	**-0.4**
KYMI	comp=E,25042µm,0.2s			AML	AML	01 29 01.0	
KYMI	comp=N,26765µm,0.3s			AML	AML	01 29 01.2	
KYMI	**Kymi, Euboea I**	**0.29**	**274**	P	**Pg**	**01 28 55.9**	**-0.1**
KYMI	comp=N,13µm,0.3s			S	**Sb**	**01 29 00.6**	**-0.5**
KARY	**Karystos**	**0.58**	**183**	P	**Pg**	**01 29 00.4**	**-0.8**
KARY	**Karystos**	**0.58**	**183**	P	**Pg**	**01 29 00.4**	**-0.8**
DION	**Dionisos Attik**	**0.69**	**219**	P	**Pg**	**01 29 02.3**	**-0.8**
DION				S	**Sg**	**01 29 11.8**	**-0.5**
DION	**Dionisos Attik**	**0.69**	**219**	P	**Pg**	**01 29 02.3**	**-0.8**
DION				S	**Sg**	**01

comp=N,6848µm,0.2s
ATH Athens Observa 0.88 223 P Pb 01 29 05.8 -0.5
ATH S **Sb 01 29 18.4 +0.6**
comp=N,5µm,0.4s
VLY Voula,Athens 0.93 215 P Pb 01 29 06.5 -0.8
VLY S **Sb 01 29 18.2 -1.2**
VLY AML AML 01 29 21.8
comp=E,10873µm,0.4s
VLY AML AML 01 29 21.9
comp=N,12831µm,0.4s
VLY Voula,Athens 0.93 215 P Pb 01 29 06.7 -0.6
VLY S **Sb 01 29 19.5 +0.1**
comp=N,6µm,0.4s
EFSA Agios Efstrati 1.01 23 P Pg 01 29 09.5 +0.3
EFSA AML AML 01 29 26.3
comp=E,5540µm,0.4s
EFSA AML AML 01 29 26.9
comp=N,5469µm,0.4s
VILL Villia 1.02 244 P Pb 01 29 08.2 -0.7
VILL S **Sn 01 29 23.6 +0.5**
VIL2 Platees 1.03 247 P Pb 01 29 08.3 -0.7
VIL2 S **Sb 01 29 22.7 +0.4**
VIL2 AML AML 01 29 24.6
comp=E,14205µm,0.6s
VIL2 AML AML 01 29 24.7
comp=N,17369µm,0.6s
ATAL Atalanti 1.14 274 P Pb 01 29 10.3 -0.6
ATAL S **Sg 01 29 26.3 -0.3**
ATAL AML AML 01 29 31.1
comp=N,3747µm,0.5s
ATAL AML AML 01 29 34.5
comp=E,2313µm,0.4s
ATAL Atalanti 1.14 274 P Pb 01 29 10.3 -0.6
ATAL S **Sg 01 29 26.3 -0.3**
comp=E,2µm,0.5s
LKR Lokris 1.16 272 P Pb 01 29 09.6 -1.6
LKR S **Sb 01 29 26.2 +0.3**
comp=E,2µm,0.2s
NEO Neokhori 1.20 306 P Pn 01 29 11.6 0.0
NEO AML AML 01 29 30.7
comp=E,4701µm,0.5s
NEO AML AML 01 29 31.9
comp=N,3452µm,0.5s
NEO Neokhori 1.20 306 P Pn 01 29 11.7 0.0
NEO S **Sg 01 29 28.9 +0.5**
comp=N,2µm,0.3s
TNSA Tinos 1.20 153 P Pn 01 29 11.3 -0.3
SIGR SIGRI 1.23 61 P Pn 01 29 11.9 -0.1
SIGR S **Sb 01 29 28.3 +0.3**
SIGR AML AML 01 29 34.2
comp=E,2203µm,0.5s
SIGR AML AML 01 29 35.4
comp=N,2506µm,0.4s
SIGR SIGRI 1.23 61 P Pn 01 29 11.9 -0.1
SIGR S **Sb 01 29 28.5 +0.5**
comp=N,1µm,0.4s
XOR Xorichti 1.25 307 P Pn 01 29 12.3 -0.1
XOR S **Sg 01 29 29.6 -0.5**
comp=N,2µm,0.6s
CHOS Chios island 1.26 100 P Pn 01 29 12.9 +0.3
CHOS AML AML 01 29 34.5
comp=N,1205µm,0.4s
CHOS AML AML 01 29 41.0
comp=E,2347µm,0.5s
CHOS Chios island 1.26 100 P Pn 01 29 12.9 +0.3
CHOS Chios island 1.26 100 PN Pn 01 29 12.8 +0.3
LTK Loutraki 1.33 244 P Pn 01 29 13.3 -0.1
LTK S **Sb 01 29 30.6 -0.2**
LTK AML AML 01 29 35.9
comp=E,33414µm,0.6s
LTK AML AML 01 29 36.7
comp=N,22684µm,0.5s
LTK Loutraki 1.33 244 P Pn 01 29 13.6 +0.2
LTK S **Sn 01 29 31.2 +0.5**
LIA Limnos Island 1.39 23 P Pn 01 29 14.1 -0.1
LIA S **Sn 01 29 31.8 -0.5**
LIA AML AML 01 29 36.9
comp=E,1716µm,0.4s
LIA AML AML 01 29 37.2
comp=N,2009µm,0.4s
LIA Limnos Island 1.39 23 P Pn 01 29 14.2 -0.1
LIA S **Sn 01 29 32.4 +0.1**
comp=N,920nm,0.4s
PAIG Paliouri 1.45 335 P Pn 01 29 15.2 +0.1
PAIG AML AML 01 29 41.2
comp=N,2887µm,0.6s
PAIG AML AML 01 29 41.7
comp=E,1792µm,0.7s
PAIG Paliouri 1.45 335 P Pn 01 29 15.3 +0.2
PAIG S **Sg 01 29 36.2 -0.2**
comp=E,1µm,0.6s
EPID Epidavros 1.46 227 P Pn 01 29 15.4 +0.2
EPID Epidavros 1.46 227 P Pn 01 29 15.5 +0.2
EPID S **Sn 01 29 33.6 -0.5**
comp=E,1µm,0.2s
YDRA Hydra 1.50 213 P Pn 01 29 15.5 -0.1
YDRA AML AML 01 29 42.3
comp=N,2543µm,0.4s
YDRA AML AML 01 29 42.5
comp=E,3370µm,0.4s
PRK Paraskevi 1.54 65 P Pb 01 29 18.3 +0.7
PRK AML AML 01 29 51.8
comp=N,2176µm,0.8s
PRK AML AML 01 29 52.0
comp=E,2624µm,0.6s
PRK Paraskevi 1.54 65 P Pb 01 29 18.3 +0.7
THAL Thalero 1.54 249 P Pn 01 29 17.3 +1.1
THAL AML AML 01 29 43.1
comp=N,6873µm,0.5s
THAL AML AML 01 29 49.3
comp=E,4573µm,0.5s
THAL Thalero 1.54 249 P Pn 01 29 17.4 +1.1
THAL S **Sb 01 29 37.3 +0.5**
comp=E,3µm,0.5s
DLFA Delphi 1.56 266 P Pn 01 29 16.6 0.0
DLFA AML AML 01 29 42.9
comp=N,1677µm,0.7s
DLFA AML AML 01 29 47.1
comp=E,1996µm,0.5s
KOCA Canakkale, Ayv 1.57 55 P Pn 01 29 16.6 -0.2
KOCA S **Sn 01 29 35.2 -1.4**
KRND KRANIDI 1.61 221 P Pn 01 29 17.3 0.0
KRND KRANIDI 1.61 221 P Pn 01 29 17.3 0.0
ZEYE Izmir, Urla-Ze 1.64 103 P Pn 01 29 18.0 +0.4
URLA Izmir 1.68 98 PN Pn 01 29 18.8 +0.5
URLA Izmir 1.68 98 P Pn 01 29 18.7 +0.4
BOZC Bozcaada 1.73 45 PN Pn 01 29 18.9 -0.1
BOZC Bozcaada 1.73 45 P Pn 01 29 18.8 -0.2
BOZC S **Sn 01 29 39.8 -0.9**
OUR Ouranopolis 1.76 348 P Pn 01 29 19.0 -0.4
OUR AML AML 01 29 49.8
comp=N,1434µm,0.5s
OUR AML AML 01 29 49.8
comp=E,1326µm,0.7s
OUR Ouranopolis 1.76 348 P Pn 01 29 18.9 -0.4
OUR S **Sn 01 29 41.3 0.0**
comp=E,685nm,0.6s
OUR Ouranopolis 1.76 348 PN Pn 01 29 19.4 +0.1
OUR SN **Sn 01 29 41.5 +0.2**
AYVA Ayvalik 1.86 67 P Pn 01 29 21.0 +0.3
AYVA S **Sn 01 29 42.8 -1.0**
AYVA *i* AML AML 01 30 00.0
comp=E,286nm,0.6s
MAKR Makrakomi, Fth 1.87 283 P Pn 01 29 22.2 +1.2
MAKR AML AML 01 29 52.0
comp=N,2259µm,0.6s
MAKR AML AML 01 29 55.0
comp=E,963µm,0.4s
MAKR Makrakomi, Fth 1.87 283 P Pn 01 29 22.2 +1.2
EZN Ezine 1.88 49 P Pn 01 29 20.0 -0.9
EZN Ezine 1.88 49 PN Pn 01 29 20.4 -0.5
KLV Kalavryta, Ach 1.92 253 P Pn 01 29 22.1 +0.5
KLV AML AML 01 29 54.1
comp=N,662µm,0.8s
KLV AML AML 01 29 58.6
comp=E,501µm,0.6s
KLV Kalavryta, Ach 1.92 253 P Pn 01 29 22.1 +0.5
KLV S **Sn 01 29 45.5 +0.2**
comp=E,292nm,0.7s

GADA Gvkgeada 1.92 35 PN Pn 01 29 21.5 -0.1
MHLO Agia Marina, M 1.92 182 P Pn 01 29 21.9 +0.3
GOKA anakkale-Gk 1.93 35 P Pn 01 29 21.9 +0.3
GOKA S **Sn 01 29 45.2 -0.2**
GOKA *i* AML AML 01 30 04.0
comp=E,437nm,0.6s
PLG Polygyros 1.93 336 P Pn 01 29 21.7 0.0
ECEA Canakkale, Ece 1.94 42 P Pn 01 29 22.9 +1.1
ECEA S **Sn 01 29 43.5 -2.3**
ECEA *i* AML AML 01 29 58.0
comp=E,358nm,0.5s
ECEA AML AML 01 30 03.0
comp=E,345nm,0.7s
DKL Dikili 1.95 76 PN Pn 01 29 22.6 +0.7
BAYC CANAKKALE_Bayr 1.96 54 P Pn 01 29 21.3 -0.9
BAYC S **Sn 01 29 45.0 -1.4**
DGB zmir 1.98 106 P Pn 01 29 22.9 +0.7
LAKA Lakka 2.00 260 P Pn 01 29 23.8 +1.1
LAKA Lakka 2.00 260 P Pn 01 29 23.8 +1.1
THAS Thassos island 2.00 5 P Pn 01 29 22.2 -0.4
ANX Ano Chora 2.00 270 P Pn 01 29 23.9 +1.1
ANX AML AML 01 30 03.9
comp=N,2241µm,0.6s
ANX AML AML 01 30 04.7
comp=E,1560µm,0.6s
ANX Ano Chora 2.00 270 P Pn 01 29 23.9 +1.1
ANX S **Sn 01 29 48.3 +0.8**
comp=E,950nm,0.6s
EFP Efpalio 2.02 265 P Pn 01 29 24.1 +1.1
EFP AML AML 01 29 58.4
comp=N,826µm,0.8s
EFP AML AML 01 30 06.4
comp=E,1359µm,0.9s
EFP Efpalio 2.02 265 P Pn 01 29 23.9 +0.9
SMTH Samothraki Isl 2.02 23 P Pn 01 29 22.4 -0.6
BLCB Balcova 2.03 96 PN Pn 01 29 24.5 +1.5
ZEDA zmir-Bergama 2.06 79 P Pn 01 29 24.1 +0.6
ZEDA S **Sn 01 29 43.9 -5.0**
SMG Samos 2.07 115 P Pn 01 29 24.0 +0.4
EVR Evrytania 2.11 279 P Pn 01 29 25.5 +1.3
EVR Evrytania 2.11 279 P Pn 01 29 25.4 +1.2
THL Klokotos Trika 2.14 297 P Pn 01 29 25.5 +1.0
THL Klokotos Trika 2.14 297 P Pn 01 29 25.5 +1.0
LIT Litokhoron 2.14 315 P Pn 01 29 25.2 +0.6
LIT Litokhoron 2.14 315 P Pn 01 29 25.1 +0.6
BUHA Balikesir, Bur 2.21 66 P Pn 01 29 25.4 -0.1
BUHA *i* AML AML 01 30 06.0
comp=E,150nm,0.6s
KOKK Kokkinochori, 2.23 351 P Pn 01 29 26.1 +0.3
HORT Hortiatis 2.25 332 P Pn 01 29 27.0 +0.9
HORT Hortiatis 2.25 332 PN Pn 01 29 26.4 +0.3
VLI Veliai 2.25 213 P Pn 01 29 26.3 +0.2
DRO Drossia 2.27 254 P Pn 01 29 27.7 +1.2
DRO AML AML 01 30 08.9
comp=N,1260µm,0.6s
DRO AML AML 01 30 14.8
comp=E,593µm,0.6s
DRO Drossia 2.27 254 P Pn 01 29 27.6 +1.2
PVO Paravola 2.31 271 P Pn 01 29 28.8 +1.9
PVO Paravola 2.31 271 P Pn 01 29 28.4 +1.5
THE Thessaloniki 2.33 330 P Pn 01 29 28.8 +1.6
baz=330
THE S **Sn 01 29 56.1 +0.7**
baz=330
GCAM G?zelcaml? 2.36 112 PN Pn 01 29 28.8 +1.3
SOH Sokhos 2.37 339 P Pn 01 29 28.7 +0.9
SANT Santorini 2.37 160 ⇑P Pb 01 29 33.7 +1.8
SANT ⇑S **Sg 01 30 06.6 +0.6**
KAVA Kavala 2.38 1 P Pn 01 29 27.6 -0.2
RLS Riolos of Patr 2.43 258 P Pn 01 29 30.4 +1.9
CAVK Edirne/Enez-Ca 2.45 32 P Pb 01 29 34.1 +0.9
ITM Ithomi 2.47 235 P Pn 01 29 30.7 +1.5
ENEZ Enez 2.48 31 PN Pn 01 29 29.4 +0.1
ALN Alexandroupoli 2.58 27 P Pn 01 29 30.5 -0.1
ALN Alexandroupoli 2.58 27 PN Pn 01 29 31.6 +1.0
ERIK Erikli-Kesan 2.59 37 PN Pn 01 29 31.3 +0.6
SRS Serrai 2.59 345 P Pn 01 29 31.3 +0.5
SRS S **Sn 01 30 02.1 +0.2**
KTHA Kythira Island 2.61 206 P Pn 01 29 31.2 +0.2
KTHA S **Sn 01 30 02.7 +0.4**
comp=E,322nm,0.9s
KTHR Kythira 2.63 207 P Pn 01 29 32.3 +1.0
STEP BALIKESIR_Sava 2.64 72 P Pn 01 29 33.7 +2.2
STEP *i* AML AML 01 30 22.0
comp=E,242nm,0.9s
STEP *i* AML AML 01 30 26.0
comp=E,162nm,0.9s
RDO Rodhopi 2.66 18 P Pn 01 29 31.5 -0.2
RDO Rodhopi 2.66 18 PN Pn 01 29 32.4 +0.7
BALY Balya 2.69 64 P Pb 01 29 35.8 -1.5
KZN Kozani 2.69 310 P Pn 01 29 33.4 +1.2
BODT Bodrum 2.73 124 P Pn 01 29 33.8 +1.1
BODT Bodrum 2.73 124 PN Pn 01 29 34.1 +1.4
PYL PYLOS 2.76 232 P Pn 01 29 35.4 +2.2
AYDB Zeytinkoy-Aydi 2.77 103 PN Pn 01 29 35.3 +2.0
NVR Nevrokopi 2.77 350 P Pn 01 29 33.9 +0.6
KESN Edirne-Kesan 2.79 37 P Pn 01 29 32.5 -1.3
KESN *i* AML AML 01 30 07.0
comp=E,89nm,0.6s
KESN *i* AML AML 01 30 07.0
comp=E,186nm,0.3s
KRBG Karabiga-Canak 2.81 50 PN Pn 01 29 34.1 +0.3
KNT Kendrikon 2.82 335 P Pn 01 29 35.1 +1.2
GRG Griva 2.83 326 P Pn 01 29 35.2 +1.1
BALB Balikesir 2.84 68 PN Pn 01 29 35.8 +1.6
KNL Balikesir 2.88 54 P Pb 01 29 43.1 +2.5
SART Tekirdag 2.94 44 P Pn 01 29 36.5 +0.9
SART S **Sn 01 30 11.7 +1.1**
MAR6 Marsite Statio 3.00 45 PN Pn 01 29 37.8 +1.4
JAN Janina 3.00 291 P Pn 01 29 38.2 +1.7
UKOP Uzunkopru-Edir 3.01 33 PN Pn 01 29 37.6 +1.1
MAR3 Marsite Statio 3.04 45 PN Pn 01 29 37.2 +0.2
GZKV Gazikoy-Tekird 3.06 45 PN Pn 01 29 38.1 +0.9
FSK Fiskardo 3.07 268 P Pn 01 29 40.7 +3.3
VLS Valsamata 3.08 263 P Pn 01 29 40.5 +2.9
DAT Datca 3.10 126 P Pn 01 29 37.4 -0.5
PSDA Pessada-Kefalo 3.10 262 P Pn 01 29 40.3 +2.6
MRMT Marmara Adasi 3.12 50 PN Pn 01 29 39.6 +1.5
EDC Edincik 3.14 56 PN Pn 01 29 39.6 +1.3
FNA Florina 3.23 313 P Pn 01 29 41.1 +1.5
FNA Florina 3.23 313 P Pn 01 29 41.0 +1.5
baz=313
FNA S **Sb 01 30 22.2 -3.3**
baz=313
DURS Dursunbey 3.26 71 P Pn 01 29 41.1 +1.0
KEF3 Kipouria, Keph 3.27 264 P Pn 01 29 42.5 +2.4
KULA Kula-Manisa 3.28 90 PN Pn 01 29 42.3 +1.9
IDI Anoyia 3.34 174 ⇑P Pn 01 29 40.0 -1.1
IDI Anoyia 3.34 174 Pn Pn 01 29 41.3 +0.1
comp=E,2.5nm,0.3s,baz=281,slow=6.0,SNR=28
IDI Sn **Sn 01 30 18.1 -2.3**
comp=E,4.2nm,0.3s,baz=75,slow=21,SNR=7.4
comp=E,6.5nm,0.4s
IDI Anoyia 3.34 174 P Pn 01 29 41.2 +0.1
IGT Igoumenitsa 3.35 287 P Pn 01 29 44.5 +3.3
IGT Igoumenitsa 3.35 287 P Pn 01 29 44.7 +3.5
baz=287
IGT S **Sb 01 30 25.5 -3.6**
baz=287
YER Yerkesik 3.35 115 P Pn 01 29 43.4 +2.1
LSK Leskovik 3.37 298 P Pn 01 29 44.3 +2.7
LSK Leskovik 3.37 298 P Pn 01 29 44.2 +2.7
baz=298
LSK S **Sb 01 30 26.0 -3.8**
baz=298
LSK AMP
comp=N,0.5nm,0.6s,baz=298
KBN Korca 3.48 306 P Pn 01 29 44.5 +1.4
KBN Korca 3.48 306 P Pn 01 29 44.5 +1.4
baz=306
KBN S **Sb 01 30 29.5 -3.5**
baz=306
KBN AMP
comp=E,0.2nm,0.9s,baz=306
CRLT Corlu 3.55 44 PN Pn 01 29 45.9 +2.0
SIMA Simav-Kutahya 3.55 81 PN Pn 01 29 45.9 +1.9
EDRB Edirne 3.67 28 P Pn 01 29 45.9 +0.4
SRN Sarande 3.70 291 P Pn 01 29 49.4 +3.5
baz=291
SRN S **Sn 01 30 32.9 +3.8**
baz=291
SRN AMP
comp=N,0.1nm,1.1s,baz=291

KIRK Kırklareli 3.75 32 P Pn 01 29 49.8 +3.2
ZKR Zakros 3.76 158 P Pn 01 29 48.5 +1.6
KEK Kerkira 3.80 288 P Pn 01 29 50.5 +3.1
ARMT Armutlu 3.91 59 PN Pn 01 29 51.2 +2.3
VIZE Kirklareli, Vi 3.93 40 P Pn 01 29 48.6 -0.5
ARMN Kirklareli, Me 3.95 34 P Pn 01 29 49.1 -0.4
VTS Vitosha 4.11 347 ⇑P Pn 01 29 53.4 +1.6
VTS ⇑S **Sn 01 30 39.7 +0.2**
PHP Peshkopia 4.35 316 P Pn 01 29 57.7 +2.7
baz=316
PDG Podgorica 5.51 315 ⇓P Pn 01 30 14.8 +4.0
ICOR Ion Corvin 6.04 23 ⇑P Pn 01 30 20.0 +1.9
TIP Timpagrande 6.05 278 ⇑P Pn 01 30 19.9 +1.6
TIP ⇑S **Sn 01 31 26.1 -1.1**
MATE Matera 6.33 291 ⇑P Pn 01 30 23.2 +1.0
HERR Herculane 6.45 347 ⇓P Pn 01 30 23.7 -0.1
MDVR Moldovita 6.50 342 ⇑P Pn 01 30 24.5 0.0
TIRR Tirgusor 6.54 26 ⇑P Pn 01 30 25.5 +0.5
TIRR ⇑S **Sn 01 31 36.1 -3.1**
HARR Harsova 6.60 22 ⇑P Pn 01 30 28.3 +2.5
ARR Arges 6.75 1 ⇓P Pn 01 30 28.8 +0.8
LOT Lotru 6.85 356 ⇑P Pn 01 30 29.9 +0.6
GZR Gura Zlata 6.89 350 ⇑P Pn 01 30 30.4 +0.5
MLR Muntele Rosu 6.96 9 ⇑P Pn 01 30 31.6 +0.7
MLR Muntele Rosu 6.96 9 Pn Pn 01 30 30.7 -0.2
comp=N,0.2nm,0.3s,baz=138,slow=18,SNR=2.7
comp=N,1.4nm,0.5s
BRTR Keskin Array B 7.21 78 Pn Pn 01 30 35.8 +1.5
comp=N,0.1nm,0.3s,baz=265,slow=14,SNR=3.4
BRTR LR LR 01 33 48.9
comp=N,69nm,18.1s,baz=232,slow=42
comp=N,0.4nm,0.6s
VRI Vrincioaia 7.44 12 ⇑P Pn 01 30 40.1 +2.8
DRGR 8.27 352 ⇑P Pn 01 30 51.6 +2.7
MORH Mrgy, Hungar 8.73 332 ⇑P Pn 01 30 56.3 +1.2
BURAR Bucovina Array 9.01 3 ⇑P Pn 01 31 00.2 +1.2
GERES GERESS Array B 12.84 326 Pn Pn 01 31 52.0 +0.7
comp=N,0.1nm,0.3s,baz=134,slow=17,SNR=6.5
comp=N,0.6nm,0.8s
ESDC Sonseca Array 22.05 282 P P 01 33 43.6 +0.1
comp=N,1.7nm,0.8s,baz=78,slow=10,SNR=14
comp=N,1.7nm,0.8s
FINES FINESS Array B 22.88 2 P P 01 33 52.0 0.0
comp=N,0.6nm,0.6s,baz=189,slow=11,SNR=3.3
comp=N,0.6nm,0.6s
NOA NORSAR Array B 23.93 344 P P 01 34 03.1 +0.5
comp=N,0.9nm,0.8s,baz=149,slow=9.8,SNR=3.7
comp=N,0.9nm,0.8s
EKA Eskdalemuir Ar 24.96 321 P P 01 34 12.1 +0.2
comp=N,1.3nm,0.6s,baz=120,slow=9.8,SNR=4.8
comp=N,1.3nm,0.6s
AKTO Aktyubinsk 26.44 53 LR LR 01 49 46.8
comp=N,42nm,18.1s,baz=144,slow=48
ARCES ARCESS Array B 30.99 1 LR LR 01 49 35.8
comp=N,52nm,18.5s,baz=166,slow=40
TORD Torodi Ar. Bea 32.43 225 P P 01 35 19.8 +0.9
comp=N,0.5nm,0.6s,baz=31,slow=8.6,SNR=5.8
comp=N,0.5nm,0.6s
MKAR Makanchi Array 42.41 60 P P 01 36 41.4 -1.8
comp=N,0.5nm,0.8s,baz=291,slow=5.7,SNR=2.5
comp=N,0.5nm,0.8s
YAK Yakutsk 63.18 31 LR LR 02 10 00.6
comp=N,48nm,18.3s,baz=89,slow=39

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*SNET **03** 01:29:24.1±0.8, 12°.47N×89°.30W, h20km±7km, ML3.6*
*UCR **03** 01:29:24.1±0.8, 12°.47N×89°.30W, h20km±7km, ML3.5*
ISC 03 01:29:24.1±3.7, 12°.4N±0°.2×89°.3W±0°.1, h47km, n19,
σ0s41/23, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SJTE	**Alcalda de S**	**1.26**	**15**	*eP*		**Pn**	**01 29 44.6**		**-0.9**
SJTE				*eS*		**Sn**	**01 30 01.6**		**+0.2**
SJTE	**Alcalda de S**	**1.26**	**15**	*eP*		**Pn**	**01 29 44.6**		**-0.9**
SJTE				*eS*		**Sn**	**01 30 01.6**		**+0.2**
JAYA	**Jayaque - finc**	**1.27**	**355**	*eP*		**Pn**	**01 29 45.3**		**-0.3**
JAYA				*eS*		**Sn**	**01 30 01.4**		**-0.1**
JAYA				IAML			01 30 06.6		
	comp=Z,605nm,0.2s								
JAYA	**Jayaque - finc**	**1.27**	**355**	*eP*		**Pn**	**01 29 45.3**		**-0.3**
JAYA				*eS*		**Sn**	**01 30 01.4**		**-0.1**
JAYA				IAML			01 30 06.6		
	comp=Z,605nm,0.2s								
COEG	**Centro de Oper**	**1.31**	**20**	*eP*		**Pn**	**01 29 46.1**		**0.0**
COEG	**Centro de Oper**	**1.31**	**20**	*eP*		**Pn**	**01 29 46.1**		**0.0**
PAVA	**Las Pavas**	**1.38**	**17**	*eP*		**Pn**	**01 29 47.5**		**+0.4**
PAVA	**Las Pavas**	**1.38**	**17**	*eP*		**Pn**	**01 29 47.5**		**+0.4**
CEDA	**San Andres**	**1.41**	**358**	*eP*		**Pn**	**01 29 47.7**		**+0.2**
CEDA	**San Andres**	**1.41**	**358**	*eP*		**Pn**	**01 29 47.7**		**+0.2**
SCLA	**Alcaldia de Sa**	**1.44**	**25**	*eP*		**Pn**	**01 29 47.8**		**0.0**
SCLA	**Alcaldia de Sa**	**1.44**	**25**	*eP*		**Pn**	**01 29 47.8**		**0.0**
CEVE	**Cerro Verde**	**1.46**	**349**	*eP*		**Pn**	**01 29 48.8**		**+0.4**
CEVE				IAML			01 30 15.8		
	comp=Z,1µm,0.3s								
CEVE	**Cerro Verde**	**1.46**	**349**	*eP*		**Pn**	**01 29 48.8**		**+0.4**
CEVE				IAML			01 30 15.8		
	comp=Z,1µm,0.3s								
NUBE	**Las Nubes**	**1.57**	**344**	*eP*		**Pn**	**01 29 49.2**		**-0.5**
NUBE	**Las Nubes**	**1.57**	**344**	*eP*		**Pn**	**01 29 49.2**		**-0.5**
SLOZ	**Alcaldia de Sa**	**1.69**	**345**	*eP*		**Pn**	**01 29 51.8**		**+0.6**
LCND	**La Caada**	**1.69**	**57**	*eP*		**Pn**	**01 29 51.2**		**0.0**
LCND	**La Caada**	**1.69**	**57**	*eP*		**Pn**	**01 29 51.2**		**0.0**

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*IDC **03** 01:32:06.0±4.2, 5°.42S×149°.96E, h125km±34km, mb3.4/5, mbtmp3.9/7, MS3.5/1, Error ellipse: s-maj=49.1km s-min=25.6km az=104.0*
ISC 03 01:32:07.2±1.1, 5°.4S±0°.2×149°.9E±0°.3, h135km, n9,
σ0s85/10, mb3.6/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.80**	**214**	P		**Pn**	**01 33 18.0**		**+0.2**
	27nm,0.3s,baz=10,slow=12,SNR=8.8								
PMG				S		**Sn**	**01 34 11.8**		**-0.9**
	175nm,0.8s,baz=336,slow=23,SNR=14								
CTA	**Charters Tower**	**15.01**	**193**	P		**Pn**	**01 35 33.2**		**+0.7**
	3.8nm,0.8s,baz=18,slow=9.6,SNR=1.8								
WRA	**Warramunga Arr**	**20.92**	**225**	P		**P**	**01 36 39.0**		**-0.2**
	3.1nm,0.6s,baz=50,slow=10,SNR=66								
WRA				PcP		**PcP**	**01 40 42.0**		**+0.1**
	0.4nm,0.7s,baz=36,slow=1.8,SNR=5.0								
	3.1nm,0.6s								
ASAR	**Alice Springs**	**23.80**	**219**	P		**P**	**01 37 08.2**		**+0.5**
	1.2nm,0.5s,baz=55,slow=8.7,SNR=30								
	1.2nm,0.5s								
RPZ	**Rata Peaks**	**42.47**	**157**	LR		LR	01 55 05.9		
	comp=Z,51nm,18.3s,baz=240,slow=32								
SONM	**Songino Array**	**65.33**	**329**	P		**P**	**01 42 36.0**		**+1.0**
	0.6nm,0.5s,baz=152,slow=5.2,SNR=4.2								
	0.6nm,0.5s								
VNDA	**Vanda**	**72.35**	**177**	P		**P**	**01 43 18.0**		**+0.2**
	0.5nm,0.5s,baz=339,slow=4.0,SNR=2.1								
	0.5nm,0.5s								
ILAR	**Eielson Array**	**83.82**	**23**	P		**P**	**01 44 20.3**		**-0.9**
	0.4nm,0.6s,baz=249,slow=5.9,SNR=6.8								
	0.4nm,0.6s								
TORD	**Torodi Ar. Bea**	**147.71**	**286**	PKPbc		**PKPbc**	**01 51 35.8**		**-1.2**
	0.2nm,0.3s,baz=94,slow=2.4,SNR=8.3								

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*IDC **03** 01:45:45.7±1.8, 12°.94N×88°.99W, h0km, mb3.6/5, mbtmp3.6/7, ML3.2/2, MS3.4/1, Error ellipse: s-maj=47.6km s-min=26.9km az=37.0*
*SNET **03** 01:45:47.0±1.0, 12°.47N×89°.33W, h27km±45km, ML3.5*
ISC 03 01:45:47.5±1.0, 12°.42N±0°.09×89°.35W±0°.08, h35km, n24,
σ1s41/27, mb3.8/5, 1C, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**1.06**	**2**	*eP*		**Pn**	**01 46 05.5**		**-0.4**
LALI				*eS*		**Sn**	**01 46 20.2**		**+0.7**
LFRS	**El Faro**	**1.23**	**13**	*eP*		**Pn**	**01 46 07.9**		**-0.4**
JAYA	**Jayaque - finc**	**1.23**	**356**	*eP*		**Pn**	**01 46 07.7**		**-0.7**
JAYA				IAML			01 46 31.5		
	comp=Z,995nm,0.3s								
SJTE	**Alcalda de S**	**1.23**	**16**	*eP*		**Pn**	**01 46 07.7**		**-0.7**
BOQS	**Boqueron**	**1.31**	**3**	*eP*		**Pn**	**01 46 09.4**		**-0.1**
BOQS				*eS*		**Sn**	**01 46 26.5**		**+0.6**
PAVA	**Las Pavas**	**1.35**	**17**	*eP*		**Pn**	**01 46 09.7**		**-0.2**
SCLA	**Alcaldia de Sa**	**1.41**	**25**	*eP*		**Pn**	**01 46 10.3**		**-0.5**
CEVE	**Cerro Verde**	**1.42**	**349**	*eP*		**Pn**	**01 46 10.8**		**-0.3**
SBLS	**San Blas**	**1.43**	**349**	*eP*		**Pn**	**01 46 12.0**		**+0.7**
PACA	**Pacayal**	**1.45**	**44**	*eP*		**Pn**	**01 46 11.7**		**+0.3**

NUBE	**Las Nubes**	**1.53**	**344**↑	*eP*		**Pn**	**01 46 11.9**	**-0.6**
LCND	**La Caada**	**1.68**	**58**	*eP*		**Pn**	**01 46 14.2**	**-0.2**
LCND				IAML			01 46 44.8	
	comp=Z,432nm,0.3s							
CNCH	**Conchagua**	**1.71**	**60**	*eP*		**Pn**	**01 46 14.4**	**-0.5**
FAGO	**Alcalda de S**	**1.75**	**44**	*eP*		**Pn**	**01 46 15.1**	**-0.3**
JTS	**Las Juntas de**	**4.81**	**116**	Pn		**Pn**	**01 46 59.7**	**+2.3**
	comp=Z,1.7nm,0.3s,baz=9.0,slow=19,SNR=7.6							
JTS				Sn		**Sn**	**01 47 50.9**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=5.4,slow=21,SNR=1.9							
	comp=Z,3.7nm,0.3s							
CMIG	**Matias Romero**	**7.08**	**312**	Pn		**Pn**	**01 47 30.0**	**+1.3**
	comp=Z,0.3nm,0.3s,baz=182,slow=9.6,SNR=5.6							
CMIG				Sn		**Sn**	**01 48 45.3**	**-2.8**
	comp=Z,0.3nm,0.3s,baz=153,slow=12,SNR=1.1							
	comp=Z,0.8nm,0.4s							
TXAR	**Lajitas Array**	**21.46**	**324**	P		**P**	**01 50 35.3**	**+2.3**
	comp=Z,1.3nm,0.7s,baz=144,slow=10,SNR=17							
	comp=Z,1.3nm,0.7s							
TKL	**Tuckaleechee C**	**23.68**	**11**	P		**P**	**01 50 55.0**	**-1.0**
	comp=Z,2.6nm,0.8s,baz=177,slow=9.7,SNR=4.8							
	comp=Z,2.6nm,0.8s							
NVAR	**Mina Array Bea**	**36.52**	**320**	P		**P**	**01 52 51.4**	**+1.4**
	comp=Z,0.3nm,0.7s,baz=129,slow=9.4,SNR=2.0							
	comp=Z,0.3nm,0.7s							
SCHQ	**Schefferville**	**45.86**	**18**	P		**P**	**01 54 03.8**	**-2.4**
	comp=Z,1.8nm,0.8s,baz=208,slow=4.8,SNR=5.3							
	comp=Z,1.8nm,0.8s							
YKA	**Yellowknife Ar**	**53.16**	**346**	P		**P**	**01 55 01.0**	**-0.7**
	comp=Z,0.9nm,0.8s,baz=144,slow=7.7,SNR=7.0							
	comp=Z,0.9nm,0.8s							
RCBR	**Riachuelo**	**56.14**	**106**	LR		LR	02 23 35.1	
	comp=Z,32nm,21.3s,baz=301,slow=41							
WRA	**Warramunga Arr**	**127.45**	**254**	PKP		**PKiKP**	**02 05 14.1**	**+3.7**
	comp=Z,0.3nm,0.9s,baz=91,slow=2.4,SNR=4.5							
CMAR	**Chiang Mai Arr**	**148.24**	**345**	PKPbc		**PKiKP**	**02 05 32.3**	**-0.3**
	comp=Z,0.8nm,0.4s,baz=333,slow=3.6,SNR=4.9							

IDC 03 01:47:14.2±1.6, 51°03'S×161°94'E, h0km, mb3.6/4, mbtmp3.7/5, ML3.1/1, MS3.3/1, Error ellipse: s-maj=46.0km s-min=26.1km az=70.0, North of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPZ	**Rata Peaks**	**9.57**	**44**	Pn	Pn	01 49 33.3	+0.1
	0.2nm,0.3s,baz=268,slow=7.9,SNR=1.9						
RPZ				Sn	Sn	01 51 14.3	-7.1
	0.2nm,0.3s,baz=225,slow=5.7,SNR=1.8						
	13nm,1.1s						
URZ	**Urewera**	**16.68**	**46**	LR	LR	01 57 55.2	
	comp=Z,94nm,18.3s,baz=211,slow=38						
STKA	**Stephens Creek**	**24.32**	**314**	P	P	01 52 33.1	-0.4
	0.4nm,0.5s,baz=132,slow=15,SNR=1.4						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**34.86**	**311**	P	P	01 54 07.3	+0.2
	0.6nm,0.9s,baz=151,slow=7.7,SNR=3.0						
	0.6nm,0.9s						
H01W1	**Cape Leeuwin H**	**37.78**	**276**	T	T	02 34 19.9	
	baz=130,slow=75,SNR=219						
H01W2	**Cape Leeuwin H**	**37.79**	**276**	T	T	02 34 20.6	
	baz=130,slow=75,SNR=216						
H01W3	**Cape Leeuwin H**	**37.80**	**276**	T	T	02 34 21.1	
	baz=130,slow=75,SNR=207						
WRA	**Warramunga Arr**	**37.87**	**315**	P	P	01 54 32.8	-0.1
	0.6nm,0.8s,baz=144,slow=8.2,SNR=4.8						
	0.6nm,0.8s						
QSPA	**South Pole Qui**	**39.09**	**180**	P	P	01 54 42.7	-0.1
	2.1nm,1.0s,baz=341,slow=2.2,SNR=7.5						
	2.1nm,1.0s						
H03S2	**Juan Fernandez**	**79.99**	**132**	T	T	03 27 58.0	
	baz=212,SNR=87						
H03S1	**Juan Fernandez**	**79.99**	**132**	T	T	03 27 59.3	
	baz=212,SNR=83						
H03S3	**Juan Fernandez**	**80.00**	**132**	T	T	03 27 58.6	
	baz=212,SNR=95						
H03N3	**Juan Fernandez**	**80.30**	**132**	T	T	03 28 21.6	
	baz=219,slow=77,SNR=43						
H03N2	**Juan Fernandez**	**80.31**	**132**	T	T	03 28 20.2	
	baz=219,slow=77,SNR=71						
H03N1	**Juan Fernandez**	**80.32**	**132**	T	T	03 28 17.7	
	baz=219,slow=77,SNR=21						
H08S2	**Diego Garcia H**	**83.77**	**266**	T	T	03 31 43.9	
	baz=140,slow=76,SNR=85						
H08S1	**Diego Carcia H**	**83.78**	**266**	T	T	03 31 44.9	
	baz=140,slow=76,SNR=61						
H08S3	**Diego Garcia H**	**83.79**	**266**	T	T	03 31 43.3	
	baz=140,slow=76,SNR=86						

IDC 03 01:48:08.8±2.0, 28°37'N×86°09'E, h0km, mb3.5/4, mbtmp3.5/5, ML2.7/1, Error ellipse: s-maj=120.8km s-min=25.2km az=59.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**18.63**	**352**	P	P	01 52 27.6	-0.4
	baz=177,slow=12,SNR=2.5						
	1.0nm,1.1s						
KURBB	**Kurchatov Arra**	**22.95**	**348**	P	P	01 53 14.4	-0.2
	0.1nm,0.3s,baz=170,slow=11,SNR=1.9						
	0.1nm,0.3s						
FINES	**FINESS Array B**	**51.23**	**328**	P	P	01 57 13.3	-0.6
	0.8nm,0.8s,baz=87,slow=8.8,SNR=4.8						
	0.8nm,0.8s						
ARCES	**ARCESS Array B**	**53.51**	**338**	P	P	01 57 31.4	+0.7
	1.8nm,0.9s,baz=104,slow=8.0,SNR=5.4						
	1.8nm,0.9s						
WRA	**Warramunga Arr**	**66.93**	**130**	P	P	01 59 03.3	-0.1
	0.4nm,1.0s,baz=322,slow=6.4,SNR=7.0						
	0.4nm,1.0s						

*GII **03** 01:57:10.5±0.0, 33°02N×37°13E, h1km, MD2.1/8, Mm2.4/3*
*GRAL **03** 01:57:14.3±0.4, 32°81N×36°93E, h2km±6km, MD3.2*
ISC 03 01:57:11.9±2.2, 32°93N±0°04×37°06E±0°09, h6km±12km, n18, σ0°84/32, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NATI	**Neve Ativ**	**1.16**	**287**	Pg	**Pb**	**01 57 32.9**	**-1.4**
NATI				Sg	**Sn**	**01 57 51.0**	**+0.3**
SHBL	**Chebaa**	**1.18**	**291**	*eP*	**Pn**	**01 57 34.7**	**-0.4**
SHBL				*eS*	**Sb**	**01 57 49.8**	**-0.6**
GEM	**Giv'at Ha'Em**	**1.21**	**284**	Pg	**Pb**	**01 57 34.8**	**-0.3**
GEM				Sg	**Sn**	**01 57 52.2**	**+0.3**
QRWL	**Qaraoun**	**1.31**	**298**	*eP*	**Pg**	**01 57 37.0**	**0.0**
MMA0B	**Mount Meron ar**	**1.40**	**274**	Pn	**Pg**	**01 57 38.7**	**0.0**
MMA0B				Sn	**Sg**	**01 57 58.6**	**+1.8**
HMDT	**Nahal Hemdat**	**1.46**	**243**	Pn	**Pb**	**01 57 38.9**	**-0.6**
HMDT				Sn	**Sg**	**01 57 59.3**	**+0.4**
DQRL	**Deir Qamar**	**1.47**	**302**	*eP*	**Pg**	**01 57 39.9**	**-0.2**
MMLI	**Mount Malkishu**	**1.47**	**251**	Pn	**Pb**	**01 57 39.2**	**-0.4**
MMLI				Sn	**Sg**	**01 58 00.9**	**+1.8**
BHL	**Bhannes**	**1.52**	**310**	*eP*	**Pg**	**01 57 41.2**	**0.0**
BLGI	**Bet Lehem HaGe**	**1.59**	**263**	Pn	**Pn**	**01 57 40.4**	**-0.1**
BLGI				Sn	**Sg**	**01 58 03.5**	**+0.6**
HWQ	**Hawqa**	**1.63**	**326**	*eP*	**Pg**	**01 57 43.5**	**+0.3**
HWQ				*eS*	**Sg**	**01 58 05.2**	**+0.7**
OFRI	**`Ofer**	**1.78**	**261**	Pn	**Pb**	**01 57 43.9**	**-0.9**
OFRI				Sn	**Sg**	**01 58 08.5**	**-0.5**
SLTI	**Sal'it**	**1.84**	**249**	Pn	**Pb**	**01 57 44.5**	**-1.4**
SLTI				Sn	**Sg**	**01 58 10.2**	**-0.8**
DSI	**Dead Sea**	**1.97**	**227**	Pn	**Pn**	**01 57 46.3**	**+0.6**
DSI				Sn	**Sg**	**01 58 13.6**	**-1.5**
GHAJ	**Ghor Haditha**	**2.06**	**218**	Pn	**Pn**	**01 57 46.8**	**-0.2**
GHAJ				Sn	**Sb**	**01 58 15.5**	**0.0**
YTIR	**Yattir**	**2.27**	**227**	Pn	**Pn**	**01 57 50.7**	**+0.7**
YTIR				Sn	**Sb**	**01 58 22.2**	**+0.5**
AMAZ	**Amatzia**	**2.29**	**233**	Pn	**Pn**	**01 57 51.0**	**+0.8**
AMAZ				Sn	**Sb**	**01 58 22.7**	**+0.5**
PRNI	**Paran**	**3.11**	**215**	Pn	**Pn**	**01 58 02.5**	**+1.0**

*IDC **03** 02:04:26.9±1.4, 0°02N×126°74E, h0km, mb3.7/4, mbtmp3.8/4, Error ellipse: s-maj=139.8km s-min=22.5km az=69.0*
*DJA **03** 02:04:40.6±1.2, 0°N±5°×12°7E±°, h19km±12km, M4.4/11, mb4.6/2, mB5.1/1, MLv4.3/11, Mw(mB)4.5/1*
ISC 03 02:04:37.7±1.0, 0°15N±0°07×127°08E±0°08, h70km, n12, σ3°54/13, mb3.7/4, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**0.88**	**152**	P	**Pn**	**02 04 57.4**	**+2.6**
LBMI				S	**Sn**	**02 05 10.0**	**+2.5**
SANI	**Sanana**	**2.44**	**207**	P	**Pn**	**02 05 17.7**	**+2.3**
KMSI	**Cibinong**	**3.13**	**278**	P	**Pn**	**02 05 28.1**	**+3.4**
SGSI	**Sangihe**	**3.84**	**336**	P	**Pn**	**02 05 39.0**	**+4.5**
MSAI	**Masohi**	**3.93**	**152**	P	**Pn**	**02 05 39.9**	**+4.3**
AAI	**Ambon**	**3.97**	**164**	P	**Pn**	**02 05 39.3**	**+3.1**
LUWI	**Luwuk**	**4.47**	**255**	P	**Pn**	**02 05 45.9**	**+2.9**
APSI	**Ampana**	**5.54**	**259**	P	**Pn**	**02 06 00.8**	**+3.2**
WRA	**Warramunga Arr**	**21.19**	**161**	P	**P**	**02 09 14.7**	**-3.0**
	2.8nm,0.4s,baz=338,slow=11,SNR=83						
	2.8nm,0.4s						
ASAR	**Alice Springs**	**24.58**	**165**	P	**P**	**02 09 48.2**	**-3.2**
	2.0nm,0.6s,baz=345,slow=12,SNR=34						
	2.0nm,0.6s						
SONM	**Songino Array**	**50.79**	**342**	P	**P**	**02 13 28.8**	**-2.3**
	0.3nm,0.3s,baz=134,slow=10,SNR=2.0						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**60.70**	**326**	P	**P**	**02 14 39.9**	**-2.0**
	0.2nm,0.3s,baz=122,slow=7.9,SNR=4.2						
	0.2nm,0.3s						

*IDC **03** 02:46:47.7±3.3, 59°06N×146°29W, h0km, mb3.0/1, mbtmp3.2/3, ML3.4/2, Error ellipse: s-maj=54.1km s-min=21.3km az=62.0*
*ANF **03** 02:46:51.8±0.4, 59°34N×144°96W, h18km±3km, ML3.5/51, ML3.5/50, Error ellipse: s-maj=2.4km s-min=1.2km az=177.0*
*NEIC **03** 02:46:51.7±0.8, 59°32N±0°04×145°00W±0°05, h22km±9km, Error ellipse: s-maj=6.4km s-min=3.3km az=154.0*
*AEIC **03** 02:46:51±0.9, 59°32N±0°04×144°98W±0°04, h5km±6km, ML3.1, ML3.3/134(NEIC), Error ellipse: s-maj=5.5km s-min=2.9km az=161.0*
ISC 03 02:46:51.7±1.3, 59°35N±0°04×144°96W±0°03, h13km±9km, n261, σ0°72/248, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MID	**Middleton Isla**	**0.71**	**277**		**Pb**	**02 47 06.2**	**+0.3**
MID					**Sb**	**02 47 16.1**	**+0.6**
MID	**Middleton Isla**	**0.71**	**277**	IAML		02 47 18.6	
	comp=N,2µm,0.4s						
Q23K	**Middleton Isla**	**0.72**	**277**		**Pg**	**02 47 05.1**	**-0.5**
Q23K					**Sb**	**02 47 16.1**	**+0.4**
Q23K	**Middleton Isla**	**0.72**	**277**	IAML		02 47 19.6	
	comp=E,2µm,0.8s						
Q23K	**Middleton Isla**	**0.72**	**277**	P	**Pg**	**02 47 05.1**	**-0.5**
	baz=97						
Q23K				S	**Sb**	**02 47 15.6**	**-0.1**
	baz=97						
SUCK	**Suckling Hills**	**0.94**	**39**		**Pb**	**02 47 09.1**	**-0.6**
SUCK					**Sg**	**02 47 23.2**	**+1.2**
SUCK	**Suckling Hills**	**0.94**	**39**	IAML		02 47 25.1	
	comp=N,1µm,0.5s						
NICHA	**Nichawak Mount**	**1.02**	**29**		**Pb**	**02 47 10.4**	**-0.7**
NICHA					**Sg**	**02 47 25.4**	**+0.8**
HMT	**Hamilton**	**1.05**	**19**		**Pb**	**02 47 11.0**	**-0.7**
HMT					**Sn**	**02 47 27.0**	**+0.5**
BGLC	**Bering Glacier**	**1.14**	**47**		**Pn**	**02 47 12.7**	**-0.6**
BGLC	**Bering Glacier**	**1.14**	**47**	P	**Pn**	**02 47 12.5**	**-0.8**
	baz=228						
GRIN	**Grindle Hills**	**1.25**	**41**		**Pn**	**02 47 14.2**	**-0.6**
EYAK	**Cordova Ski Ar**	**1.27**	**342**		**Pn**	**02 47 13.8**	**-1.2**
EYAK					**Sb**	**02 47 31.7**	**+0.2**
EYAK	**Cordova Ski Ar**	**1.27**	**342**	P	**Pn**	**02 47 13.8**	**-1.2**
	baz=162,SNR=65						
EYAK				S	**Sb**	**02 47 31.7**	**+0.2**
	baz=162						
HIN	**Hinchinbrook I**	**1.31**	**324**		**Pn**	**02 47 14.6**	**-1.0**
SNH	**Sunshine Point**	**1.35**	**51**		**Pn**	**02 47 15.6**	**-0.7**
SNH					**Sn**	**02 47 33.4**	**-0.7**
KHIT	**Khitrov Hills**	**1.39**	**37**		**Pn**	**02 47 15.9**	**-0.9**
P23K	**Montague Islan**	**1.40**	**299**	P	**Pn**	**02 47 15.9**	**-1.0**
	baz=118,SNR=29						
P23K				S	**Sn**	**02 47 34.9**	**-0.3**
	baz=118						
CYK	**Cape Yakataga**	**1.45**	**59**		**Pn**	**02 47 16.8**	**-0.7**
CYK					**Sn**	**02 47 36.1**	**-0.3**
WAX	**Waxell Ridge**	**1.53**	**43**		**Pn**	**02 47 17.9**	**-0.8**
FID	**Port Fidalgo**	**1.60**	**332**		**Pn**	**02 47 18.8**	**-0.8**
FID					**Sn**	**02 47 39.3**	**-0.7**
FID	**Port Fidalgo**	**1.60**	**332**	IAML		02 47 41.6	
	comp=N,519nm,1.2s						
BMRM	**Bremner River**	**1.63**	**6**		**Pn**	**02 47 19.5**	**-0.6**
BMRM	**Bremner River**	**1.63**	**6**	IAML		02 47 41.7	
	comp=E,437nm,0.7s						
BMRM				IAML		02 47 42.2	
	comp=N,364nm,0.5s						
BMRM	**Bremner River**	**1.63**	**6**	P	**Pn**	**02 47 19.5**	**-0.6**
	baz=187,SNR=76						
BMRM				S	**Sn**	**02 47 40.1**	**-0.8**
	baz=187						
MESA	**MESA**	**1.73**	**60**		**Pn**	**02 47 20.6**	**-1.1**
MESA	**MESA**	**1.73**	**60**	IAML		02 47 45.2	
	comp=E,509nm,0.7s						
MESA	**MESA**	**1.73**	**60**	P	**Pn**	**02 47 20.5**	**-1.1**
	baz=242,SNR=44						
TGL	**Tana Glacier**	**1.77**	**36**		**Pn**	**02 47 21.5**	**-0.5**
TGL					**Sn**	**02 47 43.2**	**-1.2**
TGL	**Tana Glacier**	**1.77**	**36**	IAML		02 47 45.4	
	comp=N,293nm,0.6s						
ISLE	**Juniper Island**	**1.82**	**45**		**Pn**	**02 47 21.9**	**-0.8**
ISLE	**Juniper Island**	**1.82**	**45**	IAML		02 47 55.1	
	comp=N,295nm,0.7s						
ISLE				IAML		02 48 07.8	
	comp=E,272nm,1.0s						
DIV	**Divide**	**1.83**	**347**		**Pn**	**02 47 22.0**	**-0.8**
BAGL	**Bagley Icefiel**	**1.84**	**50**		**Pn**	**02 47 22.2**	**-0.7**
GLI	**Glacier Island**	**1.87**	**326**		**Pn**	**02 47 22.2**	**-1.1**
GLI	**Glacier Island**	**1.87**	**326**	P	**Pn**	**02 47 22.2**	**-1.1**
	baz=145,SNR=23						
GLI				S	**Sn**	**02 47 46.3**	**-0.5**
	baz=145						
VMT	**TAPS Tl Valdez**	**1.87**	**339**		**Pn**	**02 47 22.5**	**-0.8**
JPK	**Jack Peak**	**1.90**	**335**		**Pn**	**02 47 22.7**	**-1.0**
YAH	**Yahtse**	**1.91**	**57**		**Pn**	**02 47 23.2**	**-0.9**
YAH	**Yahtse**	**1.91**	**57**	IAML		02 47 50.0	
	comp=E,235nm,0.7s						
VRDI	**Verde Repeater**	**2.02**	**21**		**Pn**	**02 47 25.1**	**-0.6**
VRDI	**Verde Repeater**	**2.02**	**21**	IAML		02 47 56.9	
	comp=N,220nm,0.5s						
VRDI				IAML		02 47 59.5	
	comp=E,212nm,0.9s						
CHX	**Chaix Hills**	**2.07**	**68**		**Pn**	**02 47 25.8**	**-0.4**
GRNC	**Granite Creek**	**2.12**	**48**		**Pn**	**02 47 26.2**	**-0.7**
GRNC	**Granite Creek**	**2.12**	**48**	IAML		02 48 05.8	
	comp=N,154nm,0.7s						
PS12	**TAPS Pump St12**	**2.13**	**358**		**Pn**	**02 47 26.7**	**-0.3**
BALM	**Baldy**	**2.13**	**37**		**Pn**	**02 47 26.5**	**-0.6**
GLB	**Gilahina Butte**	**2.17**	**15**		**Pn**	**02 47 27.0**	**-0.5**
GLB	**Gilahina Butte**	**2.17**	**15**	IAML		02 47 58.8	
	comp=E,147nm,0.6s						
KLU	**Klutina**	**2.20**	**348**		**Pn**	**02 47 27.5**	**-0.4**
KLU	**Klutina**	**2.20**	**348**	IAML		02 47 56.5	
	comp=E,135nm,0.7s						
KLU				IAML		02 48 05.6	
	comp=N,206nm,0.8s						
KLU	**Klutina**	**2.20**	**348**	P	**Pn**	**02 47 26.9**	**-1.0**
	baz=167,SNR=30						
KLU				S	**Sn**	**02 47 54.1**	**-0.9**
	baz=167						
TABL	**Table Mountain**	**2.21**	**59**		**Pn**	**02 47 27.5**	**-0.7**
TABL	**Table Mountain**	**2.21**	**59**	IAML		02 47 59.0	
	comp=E,218nm,0.6s						
TABL				IAML		02 47 59.0	
	comp=N,181nm,0.6s						
PTPK	**Patty Peak**	**2.22**	**33**		**Pn**	**02 47 28.0**	**-0.3**
MCARA	**McCarthy VSAT**	**2.25**	**24**		**Pn**	**02 47 28.2**	**-0.4**
MCARA	**McCarthy VSAT**	**2.25**	**24**	P	**Pn**	**02 47 28.1**	**-0.5**
	baz=206,SNR=32						
MCARA				S	**Sn**	**02 47 55.6**	**-0.6**
	baz=206						
SAMH	**Samovar Hills**	**2.25**	**68**		**Pn**	**02 47 28.1**	**-0.6**
N25K	**Chitina, Valde**	**2.27**	**4**		**Pn**	**02 47 28.7**	**-0.2**
N25K	**Chitina, Valde**	**2.27**	**4**	IAML		02 47 58.2	
	comp=E,246nm,0.6s						
N25K				IAML		02 47 59.2	
	comp=N,130nm,0.7s						
N25K	**Chitina, Valde**	**2.27**	**4**	P	**Pn**	**02 47 28.5**	**-0.4**
	baz=185,SNR=40						
N25K				S	**Sn**	**02 47 55.7**	**-1.0**
	baz=185						
BARN	**Barnard Glacie**	**2.37**	**42**		**Pn**	**02 47 30.1**	**-0.4**
BARN	**Barnard Glacie**	**2.37**	**42**	IAML		02 48 03.0	
	comp=E,154nm,0.6s						
SEW	**Seward**	**2.40**	**290**		**Pn**	**02 47 29.3**	**-1.3**
SEW	**Seward**	**2.40**	**290**	P	**Pn**	**02 47 29.3**	**-1.3**
	baz=107						
CTG	**Chitna Glacier**	**2.42**	**47**	P	**Pn**	**02 47 30.5**	**-0.6**
	baz=230,SNR=18						
CTG				S	**Sn**	**02 47 59.2**	**-1.4**
	baz=230						
CTGM	**Chitina Glacie**	**2.43**	**47**		**Pn**	**02 47 30.6**	**-0.5**
CTGM	**Chitina Glacie**	**2.43**	**47**	IAML		02 48 20.6	
	comp=N,106nm,1.0s						
LOGN	**Logan Glacier**	**2.47**	**52**		**Pn**	**02 47 30.9**	**-0.8**
LOGN	**Logan Glacier**	**2.47**	**52**	IAML		02 48 21.1	
	comp=E,102nm,0.7s						
LOGN				IAML		02 48 23.8	
	comp=N,128nm,0.7s						
PCA	**Pinnacle**	**2.49**	**71**		**Pn**	**02 47 31.3**	**-0.6**
PINM	**Pinnacle**	**2.50**	**71**	P	**Pn**	**02 47 31.2**	**-0.8**
	baz=254						
O22K	**Cooper Landing**	**2.66**	**297**		**Pn**	**02 47 33.2**	**-0.9**
KNK	**Knik Glacier**	**2.70**	**321**		**Pn**	**02 47 34.2**	**-0.6**
KNK	**Knik Glacier**	**2.70**	**321**	IAML		02 48 17.3	
	comp=E,134nm,0.9s						
KNK				IAML		02 48 17.7	
	comp=N,172nm,1.0s						
KNK	**Knik Glacier**	**2.70**	**321**	P	**Pn**	**02 47 34.5**	**-0.3**
	baz=139,SNR=7.2						
KNK				S	**Sn**	**02 48 07.3**	**0.0**
	baz=139						
PS11	**TAPS Pump St11**	**2.75**	**355**		**Pn**	**02 47 35.1**	**-0.3**
SCM	**Sheep Creek Mo**	**2.75**	**336**		**Pn**	**02 47 35.0**	**-0.5**
SCM	**Sheep Creek Mo**	**2.75**	**336**	IAML		02 48 10.1	
	comp=E,153nm,0.8s						
SCM				IAML		02 48 22.7	
	comp=N,122nm,0.7s						
SCM	**Sheep Creek Mo**	**2.75**	**336**	P	**Pn**	**02 47 35.0**	**-0.5**
	baz=154,SNR=12						
SCM				S	**Sn**	**02 48 08.6**	**0.0**
	baz=154						
BCPM	**Bancas Point**	**2.77**	**75**		**Pn**	**02 47 35.0**	**-0.6**
BCPM	**Bancas Point**	**2.77**	**75**	IAML		02 48 31.4	
	comp=N,86nm,1.0s						
BCPM				IAML		02 48 44.7	
	comp=E,88nm,0.7s						
M23K	**Glacier View**	**2.80**	**332**		**Pn**	**02 47 35.8**	**-0.4**
M23K	**Glacier View**	**2.80**	**332**	P	**Pn**	**02 47 35.7**	**-0.5**
	baz=150,SNR=14						
M23K				S	**Sn**	**02 48 09.7**	**-0.1**
	baz=150						
M24K	**Tolsona, Glenn**	**2.83**	**348**		**Pn**	**02 47 36.4**	**-0.2**
M24K	**Tolsona, Glenn**	**2.83**	**348**	IAML		02 48 30.6	
	comp=N,132nm,1.2s						
M24K				IAML		02 48 38.3	
	comp=E,144nm,0.9s						
M24K	**Tolsona, Glenn**	**2.83**	**348**	P	**Pn**	**02 47 36.3**	**-0.2**
	baz=168,SNR=18						
M24K				S	**Sn**	**02 48 11.5**	**+1.0**
	baz=168						
PNL	**Peninsula**	**2.85**	**81**		**Pn**	**02 47 35.7**	**-1.1**
PNL	**Peninsula**	**2.85**	**81**	P	**Pn**	**02 47 35.8**	**-1.0**
	baz=266						
SLKM	**Skilak Lake**	**2.89**	**296**		**Pn**	**02 47 36.2**	**-1.2**
RC01	**Rabbit Creek A**	**2.95**	**308**		**Pn**	**02 47 37.3**	**-0.9**
RC01	**Rabbit Creek A**	**2.95**	**308**	IAML		02 48 29.9	
	comp=N,150nm,0.6s						
RC01	**Rabbit Creek A**	**2.95**	**308**	P	**Pn**	**02 47 37.4**	**-0.8**
	baz=124						
RC01				S	**Sn**	**02 48 13.3**	**-0.2**
	baz=124						
BRSE	**Bradley Lake S**	**2.97**	**280**		**Pn**	**02 47 36.9**	**-1.6**
BRSE	**Bradley Lake S**	**2.97**	**280**	P	**Pn**	**02 47 38.5**	**0.0**
	baz=96						
SML	**Sawmill**	**2.97**	**327**		**Pn**	**02 47 38.3**	**-0.2**
SML	**Sawmill**	**2.97**	**327**	P	**Pn**	**02 47 38.3**	**-0.2**
	baz=145						
BRLK	**Bradley Lake**	**3.05**	**280**		**Pn**	**02 47 38.5**	**-1.1**
PMR	**Palmer**	**3.05**	**319**		**Pn**	**02 47 39.1**	**-0.4**
PMR	**Palmer**	**3.05**	**319**	IAML		02 48 26.7	
	comp=N,79nm,0.8s						
PMR				IAML		02 48 28.6	
	comp=E,75nm,1.1s						
PMR	**Palmer**	**3.05**	**319**	P	**Pn**	**02 47 39.2**	**-0.4**
	baz=136						
HARP	**HAARP**	**3.06**	**358**		**Pn**	**02 47 39.5**	**-0.1**
HARP	**HAARP**	**3.06**	**358**	P	**Pn**	**02 47 39.5**	**-0.1**
	baz=178						
GHO	**Glory Hole Cre**	**3.12**	**323**		**Pn**	**02 47 40.3**	**-0.2**
YUK2	**White River**	**3.17**	**38**		**Pn**	**02 47 41.4**	**0.0**
M26K	**Nabesna, AK**	**3.21**	**17**		**Pn**	**02 47 41.7**	**0.0**
M26K	**Nabesna, AK**	**3.21**	**17**	P	**Pn**	**02 47 41.6**	**-0.1**
	baz=198,SNR=17						
CNPM	**Chinu Pnt**	**3.21**	**276**		**Pn**	**02 47 41.4**	**-0.3**
YUK8	**Steele Glacier**	**3.23**	**51**	P	**Pn**	**02 47 43.0**	**+0.7**
	baz=235,SNR=60						
YUK3	**Moose Creek**	**3.29**	**40**		**Pn**	**02 47 43.6**	**+0.5**
YUK3	**Moose Creek**	**3.29**	**40**	P	**Pn**	**02 47 43.7**	**+0.7**
	baz=224,SNR=44						
M27K	**Edge Creek, AK**	**3.37**	**25**		**Pn**	**02 47 44.2**	**+0.2**
M27K	**Edge Creek, AK**	**3.37**	**25**	IAML		02 48 33.8	
	comp=E,50nm,0.7s						
M27K				IAML		02 48 39.6	
	comp=N,51nm,0.8s

KDAK	Kodiak Island	4.29	252			Pn		02 47 55.0	-1.5
KDAK	Kodiak Island	4.29	252	P		Pn		02 47 55.5	-1.1
	baz=66								
DOT	Dot Lake	4.33	5			Pn		02 47 57.0	-0.2
PLBC	Pleasant Camp	4.39	85			Pn		02 47 57.2	-0.7
PLBC	Pleasant Camp	4.39	85	P		Pn		02 47 57.2	-0.7
	baz=272,SNR=7.5								
RIDG	Independent Ri	4.40	1			Pn		02 47 57.8	-0.4
RIDG	Independent Ri	4.40	1	IAML				02 49 15.3	
	comp=E,50nm,1.1s								
RIDG				IAML				02 49 16.5	
	comp=N,30nm,1.1s								
RIDG	Independent Ri	4.40	1	P		Pn		02 47 58.7	+0.5
	baz=181,SNR=17								
N30M	Aishikik Lake	4.44	58			Pn		02 47 58.0	-0.6
N30M	Aishikik Lake	4.44	58	P		Pn		02 47 58.1	-0.6
	baz=245								
RND	Reindeer	4.48	337			Pn		02 47 58.7	-0.5
RND	Reindeer	4.48	337	IAML				02 49 14.6	
	comp=E,31nm,0.9s								
RND				IAML				02 49 27.9	
	comp=N,32nm,1.3s								
K24K	Donnelly Dome	4.48	355			Pn		02 47 59.8	+0.5
K24K	Donnelly Dome	4.48	355	P		Pn		02 47 59.9	+0.7
	baz=175,SNR=31								
Q19K	Cape Douglas,	4.50	268			Pn		02 47 59.6	+0.2
Q19K	Cape Douglas,	4.50	268	P		Pn		02 47 59.5	+0.2
	baz=81								
O30N	Mendenhall	4.66	68	P		Pn		02 48 01.3	-0.4
	baz=256,SNR=6.5								
SCRK	Sand Creek	4.66	5			Pn		02 48 01.9	+0.1
SCRK	Sand Creek	4.66	5	P		Pn		02 48 01.9	+0.1
	baz=186,SNR=22								
M20K	Styx River	4.76	306			Pn		02 48 02.6	-0.4
M20K	Styx River	4.76	306	IAML				02 49 20.1	
	comp=E,18nm,0.9s								
M20K				IAML				02 49 26.0	
	comp=N,17nm,0.8s								
M20K	Styx River	4.76	306	P		Pn		02 48 02.9	-0.1
	baz=119								
MCK	McKinley	4.79	338			Pn		02 48 03.0	-0.4
MCK	McKinley	4.79	338	IAML				02 49 02.3	
	comp=E,28nm,0.6s								
MCK	McKinley	4.79	338	P		Pn		02 48 03.4	-0.1
	baz=155								
TRF	Thorofare Moun	4.84	330			Pn		02 48 03.7	-0.6
TRF	Thorofare Moun	4.84	330	IAML				02 49 35.2	
	comp=N,35nm,0.9s								
TRF				IAML				02 49 41.3	
	comp=E,37nm,1.4s								
TRF	Thorofare Moun	4.84	330	P		Pn		02 48 04.1	-0.2
	baz=146,SNR=13								
OHAK	Old Harbor	4.89	248			Pn		02 48 03.6	-1.2
OHAK	Old Harbor	4.89	248	IAML				02 49 01.3	
	comp=E,23nm,2.7s								
OHAK				IAML				02 49 23.0	
	comp=N,22nm,3.1s								
OHAK	Old Harbor	4.89	248	P		Pn		02 48 03.6	-1.2
	baz=61								
K27K	Chicken	4.89	15			Pn		02 48 04.3	-0.5
K27K	Chicken	4.89	15	P		Pn		02 48 04.7	0.0
	baz=198								
N19K	Bonanza Creek	4.99	291			Pn		02 48 05.2	-1.1
N19K	Bonanza Creek	4.99	291	P		Pn		02 48 06.1	-0.2
	baz=103								
PPLA	Purkeypile	4.99	318			Pn		02 48 05.7	-0.7
PPLA	Purkeypile	4.99	318	P		Pn		02 48 07.0	+0.7
	baz=132								
N31M	Braeburn, Yuko	5.03	61			Pn		02 48 06.9	+0.2
N31M				IAML				02 49 37.3	
	comp=N,24nm,1.2s								
N31M				IAML				02 49 43.1	
	comp=E,20nm,1.0s								
KTH	Kantishna Hill	5.09	328			Pn		02 48 06.9	-0.7
M30M	Minto, Yukon	5.12	47			Pn		02 48 07.5	-0.6
M30M	Minto, Yukon	5.12	47	P		Pn		02 48 07.8	-0.2
	baz=234,SNR=12								
HDA	Harding Lake	5.16	350			Pn		02 48 07.7	-0.8
HDA	Harding Lake	5.16	350	IAML				02 49 44.7	
	comp=N,18nm,1.0s								
HDA				IAML				02 49 45.7	
	comp=E,29nm,1.3s								
HDA	Harding Lake	5.16	350	P		Pn		02 48 07.6	-0.8
	baz=169								
J26L	Joseph Creek	5.21	7			Pn		02 48 09.4	+0.2
J26L	Joseph Creek	5.21	7	P		Pn		02 48 09.4	+0.2
	baz=188,SNR=37								
WHY	Whitehorse	5.22	71			Pn		02 48 09.1	-0.4
WHY	Whitehorse	5.22	71	P		Pn		02 48 09.0	-0.5
	baz=260								
O18K	Koktuh Hills	5.23	280			Pn		02 48 08.1	-1.4
O18K	Koktuh Hills	5.23	280	IAML				02 49 32.7	
	comp=N,12nm,2.4s								
O18K				IAML				02 49 34.6	
	comp=E,13nm,2.6s								
PS08	TAPS Pump Stn8	5.28	351			Pn		02 48 09.4	-0.8
J25K	Salcha River,	5.28	358			Pn		02 48 09.8	-0.4
J25K	Salcha River,	5.28	358	IAML				02 49 50.3	
	comp=N,11nm,1.2s								
J25K	Salcha River,	5.28	358	P		Pn		02 48 09.8	-0.4
	baz=178,SNR=34								
BESE	Bessie Mountai	5.29	94			Pn		02 48 09.4	-0.8
M19K	Big River Lodg	5.30	303			Pn		02 48 10.2	-0.3
M19K				IAML				02 49 49.0	
	comp=E,12nm,2.5s								
CAST	Castle Rocks	5.33	323	Pn		Pn		02 48 11.5	+0.7
CAST				IAML				02 49 15.1	
	comp=N,20nm,2.9s								
CAST				IAML				02 49 43.3	
	comp=E,27nm,1.3s								
WRH	Wood River Hil	5.35	345			Pn		02 48 10.3	-0.8
WRH	Wood River Hil	5.35	345	IAML				02 49 45.4	
	comp=E,17nm,0.9s								
WRH				IAML				02 49 48.5	
	comp=N,20nm,1.3s								
L20K	Farewell, AK	5.36	310			Pn		02 48 10.5	-0.8
L20K	Farewell, AK	5.36	310	P		Pn		02 48 12.0	+0.7
	baz=122								
DAWY	Dawson	5.42	27			Pn		02 48 11.9	-0.2
DAWY	Dawson	5.42	27	P		Pn		02 48 12.2	+0.1
	baz=212,SNR=13								
CCB	Clear Creek Bu	5.48	347			Pn		02 48 11.7	-1.2
IL31		5.51	351			Pn		02 48 12.3	-1.0
ILAR	Eielson Array	5.51	351	Pn		Pn		02 48 12.1	-1.2
	comp=N,0.6nm,0.3s,baz=178,slow=13,SNR=30								
ILAR				Sn		Sn		02 49 15.8	-0.7
	comp=N,0.4nm,0.3s,baz=170,slow=24,SNR=5.4 comp=N,1.7nm,0.5s								
BPAW	Bear Paw Mtn.	5.56	332			Pn		02 48 13.5	-0.5
BPAW	Bear Paw Mtn.	5.56	332	P		Pn		02 48 13.2	-0.7
	baz=146,SNR=8.4								
SVW2	Sparrevohn	5.58	293	Pn		Pn		02 48 14.5	+0.2
NEA2	Nenana	5.60	342			Pn		02 48 13.5	-1.1
NEA2	Nenana	5.60	342	P		Pn		02 48 13.2	-1.3
	baz=158								
L19K	White Mountain	5.62	305			Pn		02 48 13.7	-1.1
L19K	White Mountain	5.62	305	P		Pn		02 48 15.0	+0.2
	baz=116								
N18K	Kilae Creek	5.64	288			Pn		02 48 13.8	-1.3
N18K	Kilae Creek	5.64	288	P		Pn		02 48 13.4	-1.7
	baz=99								
CHUM	Lake Minchumin	5.74	325			Pn		02 48 15.9	-0.5
CHUM	Lake Minchumin	5.74	325	P		Pn		02 48 16.1	-0.3
	baz=139,SNR=15								
MDM	Murphy Dome	5.83	346			Pn		02 48 16.8	-0.9
POKR	Poker Flat Res	5.90	350			Pn		02 48 17.7	-1.0
M31M	Drury Creek, Y	5.91	57			Pn		02 48 18.0	-0.8
M31M	Drury Creek, Y	5.91	57	P		Pn		02 48 18.8	-0.1
	baz=246,SNR=7.1								
K20K	Telida	5.94	316			Pn		02 48 18.2	-1.0
K20K	Telida	5.94	316	P		Pn		02 48 19.3	+0.1
	baz=129,SNR=10								
MLY	Manley	6.31	337			Pn		02 48 23.5	-0.7
MLY	Manley	6.31	337	P		Pn		02 48 23.3	-0.9
	baz=152								
TT01	Tatalina	6.43	308			Pn		02 48 25.1	-0.9
TTA	Tatalina	6.44	309	Pn		Pn		02 48 26.7	+0.6
TTA	Tatalina	6.44	309	P		Pn		02 48 26.2	0.0
	baz=119								
J20K	Nowinta River	6.51	322			Pn		02 48 26.6	-0.4
J20K	Nowinta River	6.51	322	P		Pn		02 48 26.8	-0.2
	baz=134								
H24K	Noodor Dome	6.65	350			Pn		02 48 28.2	-0.7
H24K	Noodor Dome	6.65	350	P		Pn		02 48 27.6	-1.3
	baz=167								
I21K	Tanana	6.70	334			Pn		02 48 28.7	-0.9
I21K	Tanana	6.70	334	P		Pn		02 48 29.0	-0.6
	baz=148,SNR=8.7								
I29M	Ogilvie Camp,	6.77	24			Pn		02 48 30.8	+0.1
H23K	Yukon River	6.83	344			Pn		02 48 30.3	-1.1
N16K	Nishlik Lake	7.04	285	P		Pn		02 48 32.7	-1.6
	baz=93								
H21K	Melozitna Rive	7.29	334			Pn		02 48 36.9	-0.8
H21K	Melozitna Rive	7.29	334	P		Pn		02 48 36.8	-1.0
	baz=147,SNR=5.2								
IM03		7.78	332			Pn		02 48 43.7	-0.7
IMAR	Indian Mountai	7.78	332	Pn		Pn		02 48 44.4	0.0
DLBC	Dease Lake	7.79	90	Pn		Pn		02 48 44.6	0.0
DLBC	Dease Lake	7.79	90	P		Pn		02 48 44.3	-0.3
	baz=283								
BM03	Burnt Mountain	8.10	1			Pn		02 48 48.0	-0.8
BMAR	Burnt Mountain	8.11	1	Pn		Pn		02 48 48.0	-0.9
YKA	Yellowknife Ar	15.01	65	Pn		P		02 50 29.5	+0.9
	comp=N,0.2nm,0.3s,baz=270,slow=9.9,SNR=31 comp=N,0.6nm,0.5s								
TXAR	Lajitas Array	41.00	119	P		P		02 54 35.5	+1.3
	comp=N,0.1nm,0.6s,baz=328,slow=6.6,SNR=2.5 comp=N,0.1nm,0.6s								

*IDC **03** 02:54:53.0±0.9,54.˚16N×169.˚22E, h0km, mb3.6/7, mbtmp3.6/9,ML3.2/2, MS3.4/4, Error ellipse: s-maj=29.6km s-min=20.5km az=163.0*

*KRSC **03** 02:54:55.4±2.2,53.˚81N×168.˚67E, h17km±24km, ML3.8*

ISC 03 02:54:56.6±0.8, 54˚0N±0.˚1×169˚21E±0.˚06, h25km, n24, σ1§62/18, mb3.7/7, MS3.3/4, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BKI	Bering	2.22	303	*eP*		Pn		02 55 31.6	-0.2
BKI				*eS*		Sn		02 56 56.8	-1.6
SHEM	Shemya Is, Ala	3.20	112	Pn		Pn		02 55 44.8	-0.5
	12nm,0.3s,baz=21,slow=4.5,SNR=16								
SHEM				LR		LR		02 56 19.8	
	comp=Z,29nm,19.6s,baz=96,slow=27								
SHEM				Sn		Sn		02 56 22.6	0.0
	24nm,0.3s,baz=272,slow=21,SNR=9.8 39nm,0.5s								
KBTR	Krutoberegovo	4.27	303	*eP*		Pn		02 56 01.0	+1.1
KBTR				*eS*		Sn		02 56 50.6	+1.7
TUMR	Tumrok	5.41	287	*eP*		Pn		02 56 17.6	+1.9
TUMR				*eS*		Sn		02 57 18.2	+1.0
SPN	Mys Shipunski	5.56	264	*eS*		Sn		02 57 16.3	-4.3
PETK	Petropavlovsk-	6.92	267	Pn		Pn		02 56 37.7	+1.4
	0.5nm,0.3s,baz=96,slow=19,SNR=2.0 1.0nm,0.3s								
KDAK	Kodiak Island	21.54	64	LR		LR		03 08 08.3	
	comp=Z,100nm,18.0s,baz=345,slow=37								
ILAR	Eielson Array	24.25	46	P		P		03 00 10.1	-1.1
	0.3nm,0.6s,baz=250,slow=6.7,SNR=5.2 0.3nm,0.6s								
USRK	Ussuriysk Ar.	25.99	263	LR		LR		03 12 55.6	
	comp=Z,54nm,18.4s,baz=139,slow=42								
H11N2	WAKE ISLAND Hy	34.29	184	T		T		03 37 59.9	
	baz=2.6,slow=76,SNR=83								
H11N3	WAKE ISLAND Hy	34.30	184	T		T		03 38 00.9	
	baz=2.6,slow=76,SNR=75								
H11N1	WAKE ISLAND Hy	34.30	184	T		T		03 38 01.3	
	baz=2.6,slow=76,SNR=88								
H11S1	WAKE ISLAND Hy	35.51	184	T		T		03 39 31.7	
	baz=2.7,slow=76,SNR=34								
H11S3	WAKE ISLAND Hy	35.52	184	T		T		03 39 32.2	
	baz=2.7,slow=76,SNR=29								
H11S2	WAKE ISLAND Hy	35.53	184	T		T		03 39 32.1	
	baz=2.7,slow=76,SNR=45								
YKA	Yellowknife Ar	38.69	46	P		P		03 02 17.3	-0.5
	0.2nm,0.6s,baz=297,slow=8.2,SNR=2.0 0.2nm,0.6s								
NEW	Newport	44.63	66	LR		LR		03 21 47.7	
	comp=Z,34nm,18.4s,baz=304,slow=36								
MKAR	Makanchi Array	52.52	300	P		P		03 04 06.0	-1.4
	0.4nm,0.7s,baz=31,slow=8.7,SNR=1.7 0.4nm,0.7s								
ARCES	ARCESS Array B	53.94	345	P		P		03 04 17.0	-0.4
	5.5nm,0.9s,baz=30,slow=7.3,SNR=2.3 5.5nm,0.9s								
TXAR	Lajitas Array	65.20	74	P		P		03 05 36.2	+0.5
	0.7nm,0.5s,baz=305,slow=5.1,SNR=18 0.7nm,0.5s								
CTA	Charters Tower	76.42	202	LR		LR		03 39 49.7	
	comp=Z,50nm,19.4s,baz=258,slow=35								
WRA	Warramunga Arr	79.54	213	P		P		03 07 02.4	+1.4
	0.7nm,0.9s,baz=30,slow=6.1,SNR=3.9 0.7nm,0.9s								
ASAR	Alice Springs	83.16	212	P		P		03 07 20.9	+0.7
	0.3nm,0.5s,baz=25,slow=7.8,SNR=4.2 0.3nm,0.5s								
MAW	Mawson	144.04	219	PKP		PKPab		03 14 26.9	+1.1
	3.7nm,1.1s,baz=12,slow=15,SNR=2.5								

*MOS **03** 02:55:13.2±0.8, 35.˚75N×138.˚34E, h207km, mb4.0/19, Error ellipse: s-maj=11.3km s-min=6.6km az=100.3*

*NEIC **03** 02:55:14.9±1.5, 35.˚70N±0.˚06×138.˚11E±0.˚07, h200km±5km, mb4.2/28, Error ellipse: s-maj=10.3km s-min=6.9km az=136.0*

*IDC **03** 02:55:14.7±0.4, 35.˚71N×138.˚17E, h199km±2km, mb3.5/19, mbtmp4.1/25, Error ellipse: s-maj=13.8km s-min=7.0km az=70.0*

*JMA **03** 02:55:15.3±0.2, 35.˚7N±0.˚8×138.˚1E±0.˚9, h202km±1km, MV4.1/38, AKAISHI MOUNTAINS REG*

*NIED **03** 02:55:15.3, 35.˚72N×138.˚11E, h202km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^15^Nm; Mrr=0.65; Mθθ=0.74; Mφφ=-0.09; Mrθ=-0.06; Mθφ=0.74; Mφr=0.70; Fault plane solution: M0=1.24000×10^15^ NP1: φs=274.00000°, δ=46.00000°, λ=-32.00000°. NP2:φs=27.00000°, δ=68.00000°, λ=-131.00000°.*

ISC 03 02:55:14.9±0.6, 35.˚74N±0.˚05×138.˚16E±0.˚05, h203km±4km, n130, σ1§02/143, mb4.1/47, 5C-18D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JNT	Takato	0.14	355	⇓P		Pn		02 55 41.9	+0.3
JNT				⇓S		S		02 56 02.1	-0.6
JYN	Shimodo	0.40	127	⇓*iP*		Pn		02 55 42.6	+0.5
JGF	Kuroka	0.66	259			Pn		02 55 42.5	-0.6
JGF				Sn		S		02 03.4	-1.5
JRY	Ryogami san	0.67	65	⇓*iP*		Pn		02 55 44.1	+1.0
JFNN	Fujinakano	0.69	141	⇓P		Pn		02 55 44.3	+1.1
MJAR	Matsushiro Arr	0.81	3	P		Pn		02 55 43.2	-0.5
	566nm,0.4s,baz=184,slow=7.0,SNR=652								
MJAR				S		S		02 56 06.2	-0.1
	229nm,0.8s,baz=186,slow=12,SNR=26								
MJAR	Matsushiro Arr	0.81	3			Pn		02 55 43.4	-0.5
MJAR				Sn		S		02 56 04.3	-2.0
MJAR	Matsushiro Arr	0.81	3	P		Pn		02 55 43.4	-0.4
MJAR								02 56 04.3	
MAJO	Matsushiro	0.81	3			Pn		02 55 44.4	+0.5
MAJO				Sn		S		02 56 06.7	+0.4
MAO	Matsushiro	0.81	3	*dP*		Pn		02 55 44.3	+0.5
MAT	Matsushiro	0.81	3	*iP*		Pn		02 55 44.4	+0.6
MAT				S		S		02 56 06.6	+0.2
MJB9	Matsu-Tunnel	0.81	3			Pn		02 55 44.4	+0.6
MJB9				Sn		S		02 56 06.7	+0.3
JOD2	Odawara 2	0.90	121	⇓*iP*		Pn		02 55 45.0	+0.6
INU	Inuyama	1.00	248			Pn		02 55 44.5	-0.6
INU				Sn		S		02 56 05.8	-2.3
JYTA	Yamagatataniai	1.16	263	*i* P		Pn		02 55 45.8	-0.4
JYTA				S		S		02 56 08.3	-1.7
JAG	Ashikaga	1.26	56	⇓*iP*		Pn		02 55 47.1	+0.2
JKG	Kaga	1.57	291	*i* P		Pn		02 55 49.8	+0.3
JKG				S		S		02 56 16.3	+0.4
JYT	Yasato	1.73	73			Pn		02 55 51.0	+0.1
JIE	Ise	1.79	222	P		Pn		02 55 51.9	+0.4
JIE				S		S		02 56 19.7	+0.1
TK02	Tokai 2	1.81	190	P		Pn		02 55 52.3	+0.7
JSZ	Suzu	1.82	340	*i* P		Pn		02 55 52.3	+0.5
JSZ				S		S		02 56 20.9	+0.7
JWT	Wachi	2.29	259	P		Pn		02 55 56.6	-0.1
JWT				S		S		02 56 28.4	-0.1
JSD	Sado	2.30	2	Pn		Pn		02 55 56.5	-0.2
TTO1	TONANKAI O.B.S	2.39	209	P		Pn		02 55 58.6	+1.1
BSO1	Boso 1	2.55	114	*i* P		Pn		02 55 59.1	+0.1
JHJ	Hachijo jima 2	2.94	152	P		Pn		02 56 04.3	+0.3
	54nm,0.3s,baz=336,slow=19,SNR=13								
JHJ				S		S		02 56 42.2	+0.5
	325nm,0.5s,baz=69,slow=8.9,SNR=11								
JHJ2	Mitsune	2.96	152	Pn		Pn		02 56 04.9	+0.7
JMM	Marumori	3.00	44			Pn		02 56 04.8	+0.1
JHS	Saijyo	4.18	261	Pn		Pn		02 56 19.0	-0.1
JNU	Nakatsue	6.55	249	P		Pn		02 56 48.7	-0.7
	7.9nm,0.7s,baz=31,slow=7.0,SNR=3.9								
ERM	Erimo	7.38	30	Pn		Pn		02 56 58.1	-1.9
ERM	Erimo	7.38	30	*de*P		Pn		02 56 58.1	-1.9
JEW	Eniwo	7.54	19	Pn		Pn		02 57 00.9	-1.1
KSRS	Korea Array	8.41	285	P		Pn		02 57 14.7	+1.3
	3.2nm,0.6s,baz=98,slow=14,SNR=11								
ASAJ	Asahikawa	9.04	21	P		Pn		02 57 19.7	-1.8
	13nm,0.4s,baz=230,slow=11,SNR=17								
JKA	Kamikawa-asahi	9.04	21	Pn		Pn		02 57 19.8	-1.7
JCJ	Chichijima	9.27	157	P		Pn		02 57 19.4	-5.4
	87nm,0.3s,baz=344,slow=21,SNR=19								
JCJ				S		S		02 58 56.0	-13
	60nm,0.3s,baz=284,slow=19,SNR=6.4								
NMR	Nemuro--Hokkai	9.60	35	*eP*		Pn		02 57 26.0	-2.9
NMR				*eS*		S		02 59 04.0	-12
USRK	Ussuriysk Ar.	9.69	333	P		Pn		02 57 30.3	+0.4
	7.5nm,0.8s,baz=160,slow=14,SNR=10.0								
RUSJ	Misakicho	9.97	31	*eP*		Pn		02 57 31.8	-1.8
RUSJ				*eS*		S		02 59 14.7	-10
SHO	Shikotan	10.51	37	*eP*		Pn		02 57 37.8	-2.7
SHO				*eS*		S		02 59 25.6	-13
YSS	Yuzh-Sakhalins	11.73	16	Pn		Pn		02 57 54.1	-1.9
YSS	Yuzh-Sakhalins	11.73	16	⇓*eP*		Pn		02 57 54.0	-2.1
CN2	Changchun	12.66	313	*eP*		P		02 58 11.4	-0.1
CN2				pmax		pmax			
	comp=Z,10.0nm,0.5s								
BNX	BinXian	12.88	324	⇓P		Pn		02 58 11.3	+0.6
KLR	Kul'dur	14.28	343	P		Pn		02 58 26.9	-1.2
	comp=Z,28nm,0.5s,baz=150,slow=11,SNR=139								
KLR	Kul'dur	14.28	343	*d* iP		Pn		02 58 26.4	-1.6
KLR				pmax		pmax			
	comp=Z,21nm,0.6s								
NJ2	Nanjing	16.44	263	*eP*		P		02 58 53.2	-0.3
NJ2				pmax		pmax			
	comp=Z,12nm,0.5s								
XLT	XiLinHaoTe	18.78	302	*eP*		Pn		02 59 25.8	+3.9
XLT				pmax		pmax			
	comp=Z,9.0nm,0.8s								
XLT				pmax		pmax			
	comp=Z,53nm,8.8s								
HHC	Hu-ho-hao-te	21.45	292	*eP*		P		02 59 48.8	+1.4
HHC				pmax		pmax			
	comp=Z,26nm,1.1s								
HHC				pmax		pmax			
	comp=Z,140nm,4.7s								
GUMO	Guam	22.86	163	P		P		02 59 59.8	-1.1
	comp=Z,15nm,0.2s,baz=167,slow=24,SNR=1.7								
ENH	Enshi	24.60	265	P		P		03 00 15.1	-1.5
SONM	Songino Array	26.40	307	P		P		03 00 32.7	0.0
	comp=Z,1.1nm,0.5s,baz=113,slow=10,SNR=4.8 comp=Z,1.1nm,0.5s								
SONM	Songino Array	26.40	307	P		P		03 00 31.9	-0.8
PZH	PanZhiHua	32.35	264	P		P		03 01 25.7	+0.3
PZH				pmax		pmax			
	comp=Z,10.0nm,0.7s								
PZH				pmax		pmax			
	comp=Z,100nm,5.3s								
TIXI	Tiksi	36.31	355	P		P		03 01 58.8	+0.2
	comp=Z,1.4nm,0.3s,baz=271,slow=23,SNR=4.5 comp=Z,1.4nm,0.3s								
TIXI	Tiksi	36.31	355	IAmb		IAmb		03 02 04.8	
	comp=Z,1.8nm,0.5s								
TIXI	Tiksi	36.31	355	⇑*eP*		P		03 01 58.7	0.0
TIXI				pmax		pmax			
	comp=Z,6.0nm,2.3s								
WMQ	Urumqi	39.10	298	*eP*		P		03 02 24.3	+1.8
ZAA0	Zalesovo Array	40.87	314	P		P		03 02 36.6	-0.3
ZAA0				IAmb		IAmb		03 02 37.9	
	comp=Z,3.8nm,0.5s								
ZALV	Zalesovo Beam	40.87	314	P		P		03 02 37.0	+0.1
	comp=Z,3.5nm,0.4s,baz=105,slow=9.0,SNR=13								
ZALV				PcP		PcP		03 04 33.1	-0.3
	comp=Z,1.9nm,0.5s,baz=104,slow=2.1,SNR=4.8 comp=Z,3.5nm,0.4s								
ZALV	Zalesovo Beam	40.87	314	P		P		03 02 36.6	-0.3
ZALV	Zalesovo Beam	40.87	314	*i* P		P		03 02 37.2	+0.4
ZALV				pmax		pmax			
	comp=Z,4.0nm,0.4s								
MK31	Makanchi Array	42.59	303	P		P		03 02 50.3	-0.7
MK31	Makanchi Array	42.59	303	*de*P		P		03 02 51.3	+0.4
MKAR	Makanchi Array	42.59	303	P		P		03 02 51.1	+0.2
	comp=Z,3.1nm,0.7s,baz=88,slow=9.9,SNR=19 comp=Z,3.1nm,0.7s								
MAKZ	Makanchi	42.81	303	P		P		03 02 52.5	-0.1
MAKZ				IAmb		IAmb		03 02 53.9	
	comp=Z,7.2nm,1.1s								
MAKZ	Makanchi	42.81	303	P		P		03 02 52.5	-0.1
MAKZ				pmax		pmax			
	comp=Z,7.0nm,1.2s								
NRIK	Noril'sk	43.38	336	P		P		03 02 57.8	+1.0
NRIK	Noril'sk	43.38	336	⇓*eP*		P		03 02 57.5	+0.7
NRIK				pmax		pmax			
	comp=Z,7.0nm,1.5s								
TAPN	Taplejung	43.40	274	*eP*		P		03 02 57.1	-0.

ARU						03 06 33.6		
ARU				S	**S**	**03 12 00.8**	**+2.2**	
ARU				SS	**SS**	**03 15 42.9**	**-3.3**	
ARU				pmax	pmax			
	comp=Z,10.0nm,1.1s							
BCPM	**Bancas Point**	**56.09**	**37**	P	**P**	**03 04 32.0**	**-0.7**	
ABKAR	**Akbulak array**	**56.76**	**310**	P	**P**	**03 04 37.8**	**+0.3**	
ABKAR				IAmb	IAmb	03 04 38.6		
	comp=Z,5.0nm,0.8s							
AS31	**Alice Springs**	**59.21**	**185**	P	**P**	**03 04 53.2**	**-1.6**	
ASAR	**Alice Springs**	**59.22**	**185**	P	**P**	**03 04 54.7**	**-0.2**	
	comp=Z,0.8nm,0.4s,baz=354,slow=4.6,SNR=26							
	comp=Z,0.8nm,0.4s							
KIRV	**Kirov**	**59.69**	**323**⇑	*eP*	**P**	**03 04 57.3**	**-0.3**	
HRA	**Herat**	**60.62**	**293**	P	**P**	**03 05 04.9**	**+0.2**	
HRA				IAmb	IAmb	03 05 06.0		
	comp=Z,3.6nm,0.7s							
GEYT	**Alibeck**	**62.15**	**298**	P	**P**	**03 05 14.9**	**+0.2**	
	comp=Z,2.2nm,0.5s,baz=28,slow=2.1,SNR=4.0							
	comp=Z,2.2nm,0.5s							
GEYT	**Alibeck**	**62.15**	**298**	IAmb	IAmb	03 05 20.6		
	comp=Z,3.5nm,0.9s							
ARCES	**ARCESS Array B**	**64.27**	**339**	P	**P**	**03 05 28.7**	**+0.7**	
	comp=Z,2.8nm,0.8s,baz=51,slow=6.4,SNR=4.8							
	comp=Z,2.8nm,0.8s							
ARCES	**ARCESS Array B**	**64.27**	**339**	IAmb	IAmb	03 05 31.0		
	comp=Z,18nm,1.4s							
YKA	**Yellowknife Ar**	**66.23**	**29**	P	**P**	**03 05 40.0**	**-0.7**	
	comp=Z,0.3nm,0.8s,baz=294,slow=6.6,SNR=2.2							
	comp=Z,0.3nm,0.8s							
FINES	**FINESS Array B**	**68.72**	**331**	P	**P**	**03 05 56.6**	**+0.4**	
	comp=Z,1.6nm,0.3s,baz=55,slow=6.7,SNR=31							
	comp=Z,1.6nm,0.3s							
KBZ	**Khabaz**	**69.73**	**310**	P	**P**	**03 06 03.9**	**+1.1**	
	comp=Z,2.5nm,0.7s,baz=283,slow=1.9,SNR=8.0							
	comp=Z,2.5nm,0.7s							
KIV	**Kislovodsk**	**69.75**	**310**	*eP*	**P**	**03 06 04.7**	**+1.7**	
KIV				pmax	pmax			
	comp=Z,3.0nm,1.0s							
AKASG	**Malin Array Be**	**73.69**	**321**	P	**P**	**03 06 26.2**	**0.0**	
	comp=Z,0.4nm,0.3s,baz=50,slow=6.3,SNR=4.1							
	comp=Z,0.4nm,0.3s							
AKASG	**Malin Array Be**	**73.69**	**321**	*ce*P	**P**	**03 06 26.2**	**0.0**	
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.4s							
NB2	**NORSAR Subarra**	**74.34**	**336**	P	**P**	**03 06 30.1**	**+0.2**	
	comp=Z,1.0nm,0.6s,baz=44,slow=5.9							
NOA	**NORSAR Array B**	**74.34**	**336**	P	**P**	**03 06 29.5**	**-0.4**	
	comp=Z,0.6nm,0.6s,baz=44,slow=5.7,SNR=4.6							
	comp=Z,0.6nm,0.6s							
BR131	**Keskin Array S**	**77.71**	**310**⇑	*e*P	**P**	**03 06 49.4**	**0.0**	
BRTR	**Keskin Array B**	**77.71**	**310**	P	**P**	**03 06 50.3**	**+0.8**	
	comp=Z,0.7nm,0.7s,baz=98,slow=5.1,SNR=6.8							
	comp=Z,0.7nm,0.7s							
BRTR	**Keskin Array B**	**77.71**	**310**	P	**P**	**03 06 50.0**	**+0.5**	
NVAR	**Mina Array Bea**	**77.86**	**51**	P	**P**	**03 06 52.1**	**+1.6**	
	comp=Z,0.3nm,0.7s,baz=301,slow=6.2,SNR=2.3							
	comp=Z,0.3nm,0.7s							
RAYN	**Ar Rayn**	**78.69**	**291**	P	**P**	**03 06 53.4**	**-1.5**	
RAYN				IAmb	IAmb	03 06 56.0		
	comp=Z,4.1nm,0.8s							
RAYN	**Ar Rayn**	**78.69**	**291**	P	**P**	**03 06 53.4**	**-1.5**	
RAYN				pmax	pmax			
	comp=Z,4.0nm,0.9s							
PDAR	**Pinedale Array**	**80.44**	**44**	P	**P**	**03 07 05.0**	**+0.7**	
	comp=Z,0.2nm,0.3s,baz=300,slow=1.8,SNR=2.2							
	comp=Z,0.2nm,0.3s							
CLL	**Collm**	**80.87**	**329**	*i* P	**P**	**03 07 06.7**	**+0.6**	
CLL				pmax	pmax			
	comp=Z,4.0nm,0.9s							
CLL	**Collm**	**80.87**	**329**	*i* P	**P**	**03 07 06.7**	**+0.6**	
	comp=Z,4.0nm,0.9s							
GERES	**GERESS Array B**	**82.39**	**327**	P	**P**	**03 07 14.2**	**0.0**	
	comp=Z,0.3nm,0.5s,baz=46,slow=4.2,SNR=2.7							
	comp=Z,0.3nm,0.5s							
SMCO	**Snowmass**	**84.27**	**45**	P	**P**	**03 07 24.3**	**-0.1**	
TXAR	**Lajitas Array**	**92.98**	**50**	P	**P**	**03 08 06.7**	**+1.2**	
	comp=Z,0.2nm,0.6s,baz=301,slow=2.2,SNR=4.0							
	comp=Z,0.2nm,0.6s							
LPAZ	**La Paz**	**149.61**	**57**	PKPbc	**PKPbc**	**03 14 41.5**	**-0.1**	
	comp=Z,0.7nm,0.6s,baz=216,slow=4.8,SNR=4.0							

*OTT **03** 03:03:21.7±0.4, 74.°54N×74.°65W, h18km, ML3.5/2, Baffin Bay Seismic Zone. 231km northeast from Pond Inlet, Nu*

ISC 03 03:03:18.6±1.0, 74.°57N±0.°06×74.°49W±0.°07, h10km, n6, σ2s04/9, Baffin Bay

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
TULEG	**Thule**	**2.43**	**33**	*i* P		**Pb**		**03 04 01.0**	**-1.3**
TULEG				*i* S		**Sn**		**03 04 28.0**	**-0.1**
CLRN	**Clyde River**	**4.49**	**154**	PN		**Pn**		**03 04 25.9**	**-0.5**
CLRN				SN		**Sn**		**03 05 18.0**	**-0.6**
RES	**Resolute Bay**	**5.42**	**281**	PN		**Pn**		**03 04 41.1**	**+1.8**
RES				SN		**Sn**		**03 05 38.5**	**-3.0**
RES				Trac				03 06 11.2	
	comp=Z,20nm,0.8s								
EUNU	**Eureka**	**6.08**	**340**	PN		**Pn**		**03 04 50.3**	**+1.9**
EUNU				SN		**Sn**		**03 05 55.6**	**-2.3**
EUNU				Trac				03 06 07.5	
	comp=Z,18nm,1.5s								
CB31	**Cambridge Bay**	**10.87**	**255**	PN		**Pn**		**03 05 55.0**	**+1.1**
CB31				SN		Sn		03 07 47.5	-7.9
FRB	**Frobisher Bay**	**11.07**	**166**	SN		Sn		03 07 51.5	-8.8

*SOME **03** 03:04:58.5, 38.°58N×72.°15E, h15km*
*NNC **03** 03:05:04.1±9.4, 38.°35N×72.°52E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=74.2km s-min=57.6km az=178.0*

ISC 03 03:04:53.5±3.9, 38.°4N±0.°2×72.°30E±0.°08, h10km, n6, σ2s00/11, 2C-3D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
IUG	**Iuzhnay**	**4.11**	**336**	*eP*		**Pg**		**03 06 12.0**	**-0.1**
	6.9nm,0.0s								
IUG				*e*S		**Sg**		**03 07 04.5**	**-0.8**
	70nm,0.1s								
MRKS	**Merke**	**4.38**	**9**	*eP*		**Pg**		**03 06 17.9**	**+0.6**
	20nm,0.3s								
MRKS				*e*S		**Sg**		**03 07 14.9**	**+0.8**
	35nm,0.2s								
KK31	**Karatay Array**	**4.87**	**344**	P		**Pb**		**03 06 20.1**	**+1.2**
	0.6nm,0.2s,baz=148,slow=10,SNR=40								
KK31				⇓S		**Sb**		**03 07 20.4**	**+2.9**
	3.7nm,0.3s,baz=171,slow=23,SNR=19								
CHMS	**Chumysh**	**4.94**	**21**	⇑P		**Pb**		**03 06 19.7**	**-0.4**
	8.1nm,0.7s								
CHMS				⇑S		**Sb**		**03 07 15.9**	**-3.6**
	4.7nm,0.7s								
BRLS	**Borolday**	**4.97**	**339**	*eP*		**Pb**		**03 06 20.1**	**-0.5**
	2.1nm,0.0s								
BRLS				*e*S		**Sb**		**03 07 18.1**	**-2.3**
	31nm,0.4s								
TKM2	**Tokmak 2**	**5.15**	**28**	⇓P		Pb		03 06 22.4	-1.4
	5.6nm,0.5s								
TKM2				⇓S		**Sb**		**03 07 27.2**	**+1.5**
	2.0nm,0.7s								

MAN 03 03:13:58.4, 9.°49N×126.°09E, h27km, mb4.7, ML3.6, MS3.5, 2C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
SCPH	**Surigao**	**0.66**	**297**⇑	*i*P		Pb		03 14 12.2	+0.2
SCPH				*i* S		Sn		03 14 23.1	+0.8
BIPH	**Bislig**	**1.32**	**168**⇑	*e*P		Pn		03 14 18.6	-0.2
BIPH				*i* S		Sn		03 14 34.4	-0.5
MSLP	**Maasin**	**1.37**	**298**⇓	*e*P		Pb		03 14 24.6	+0.7
MSLP				*e*S		Sn		03 14 34.9	-4.9
BUKP	**Musuan**	**1.89**	**213**⇓	*e*P		Pb		03 14 29.7	-1.9
BUKP				*e*S		Sb		03 14 56.2	+0.8
LLP	**Lapu-Lapu**	**2.25**	**292**	*e*P		Pn		03 14 33.7	+0.1
LLP				*e*S		Sb		03 15 05.2	-2.4
KCP	**Kidapawan**	**2.65**	**202**⇓	*i*P		Pn		03 14 39.8	+1.8
KCP				*i* S		Sn		03 15 12.1	+2.7
CTBH	**Cotabato--PC H**	**2.90**	**219**	*e*P		Pn		03 14 43.3	+1.5
RCP	**Roxas**	**3.88**	**302**⇓	*e*P		Pn		03 14 59.4	+3.3
RCP				*e*S		Sn		03 15 44.4	+2.6

IDC 03 03:43:34.7±6.6, 22.°17N×143.°79E, h134km±41km, mb3.1/3, mbtmp3.7/4, MS2.9/1, Error ellipse: s-maj=225.0km s-min=23.0km az=86.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
JCJ	**Chichijima**	**5.12**	**344**	P		Pn		03 44 50.9	+1.5
	32nm,0.5s,baz=245,slow=23,SNR=6.3								
JCJ				S		Sn		03 45 47.0	-0.7
	37nm,0.5s,baz=253,slow=19,SNR=1.4								
JCJ				LR		LR		03 46 28.4	
	comp=Z,136nm,21.6s,baz=100,slow=34								
WRA	**Warramunga Arr**	**42.86**	**193**	P		P		03 51 19.5	-0.4
	0.2nm,0.3s,baz=16,slow=9.1,SNR=19								
	0.2nm,0.3s								
ASAR	**Alice Springs**	**46.56**	**193**	P		P		03 51 49.2	0.0
	0.1nm,0.3s,baz=9.5,slow=7.9,SNR=1.9								
	0.1nm,0.3s								
FINES	**FINESS Array B**	**83.00**	**335**	P		P		03 55 44.9	+0.2
	0.7nm,0.7s,baz=72,slow=4.5,SNR=5.4								
	0.7nm,0.7s								

IDC 03 03:49:37.8±11.0, 14.°90N×121.°35E, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=374.5km s-min=30.5km az=38.0, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
CMAR	**Chiang Mai Arr**	**21.75**	**282**	P		P		03 54 31.0	-0.1
	2.0nm,0.3s,baz=103,slow=13,SNR=11								
	2.0nm,0.3s								
WRA	**Warramunga Arr**	**36.91**	**159**	P		P		03 56 48.9	+0.4
	0.7nm,0.9s,baz=343,slow=9.2,SNR=4.2								
	0.7nm,0.9s								
ASAR	**Alice Springs**	**40.25**	**162**	P		P		03 57 15.9	-0.6
	0.1nm,0.3s,baz=344,slow=6.4,SNR=2.4								
	0.1nm,0.3s								

*GUC **03** 04:12:20.9±0.6, 16.°87S×70.°59W, h5km±2km, ML3.6*
*ARE **03** 04:12:20±2.6, 16.°83S±0.°05×70.°60W±0.°09, h10km±5km, Error ellipse: s-maj=12.4km s-min=7.5km az=90.0*
*NEIC **03** 04:12:26.3±2.4, 16.°95S±0.°06×70.°40W±0.°10, h48km±11km, mb4.4/23, ML4.1(ARE), Error ellipse: s-maj=13.3km s-min=8.1km az=99.0*
*IDC **03** 04:12:29.7±2.7, 16.°99S×70.°45W, h89km±27km, mb3.4/6, mbtmp3.7/8, MS3.1/6, Error ellipse: s-maj=30.1km s-min=14.2km az=107.0*

ISC 03 04:12:24.5±0.5, 16.°84S±0.°05×70.°47W±0.°06, h33km, n63, σ1s28/60, mb4.3/16, 1C-2D, Southern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
PB18	**Visviri**	**1.21**	**129**			**Pn**		**04 12 44.5**	**-1.0**
PB18	**Visviri**	**1.21**	**129**	*e*P		**Pn**		**04 12 45.8**	**+0.3**
AP01	**Chacalluta**	**1.53**	**176**			**Pn**		**04 12 48.8**	**-0.7**
AP01	**Chacalluta**	**1.53**	**176**	*e*P		**Pn**		**04 12 48.0**	**-1.5**
AP01				*i* S		**Sn**		**04 13 09.0**	**+0.7**
AP01				IAML				04 13 09.8	
	comp=N,2μm,0.4s								
PB16	**IPOC Station P**	**1.75**	**149**	Pn		**Pn**		**04 12 51.7**	**-1.4**
PB16	**IPOC Station P**	**1.75**	**149**⇓	*i*P		**Pn**		**04 12 52.6**	**-0.5**
PB16				*i* S		**Sb**		**04 13 17.7**	**-0.5**
PB12	**IPOC Station P**	**1.77**	**176**	Pn		**Pn**		**04 12 51.8**	**-1.2**
PB12	**IPOC Station P**	**1.77**	**176**⇓	*i*P		**Pn**		**04 12 51.8**	**-1.2**
PB12				*i* S		**Sn**		**04 13 15.4**	**+1.0**
PB12				IAML				04 13 16.5	
	comp=E,560nm,0.2s								
LPAZ	**La Paz**	**2.31**	**77**	P		**Pb**		**04 13 05.1**	**-0.7**
	comp=E,103nm,0.7s,baz=255,slow=14,SNR=380								
LPAZ				S		**Sb**		**04 13 36.8**	**+2.6**
	comp=E,26nm,0.5s,baz=188,slow=7.1,SNR=1.1								
LPAZ				LR		LR		04 14 17.1	
	comp=E,467nm,19.8s,baz=249,slow=46								
LPAZ	**La Paz**	**2.31**	**77**			**Pb**		**04 13 04.3**	**-1.5**
LPAZ	**La Paz**	**2.31**	**77**⇑	*i*P		**Pb**		**04 13 04.7**	**-1.1**
PB11	**IPOC Station P**	**3.01**	**165**			**Pn**		**04 13 11.2**	**+1.2**
TA02	**Huaiquique**	**3.43**	**175**			**Pn**		**04 13 16.5**	**+0.8**
PB08	**IPOC Station P**	**3.52**	**159**			**Pn**		**04 13 20.2**	**+3.0**
TA01	**Diego Aracena**	**3.72**	**176**	Pn		**Pn**		**04 13 20.2**	**+0.6**
PATCX	**Punta Patache**	**3.98**	**176**			**Pn**		**04 13 23.7**	**+0.5**
PB01	**IPOC Station P**	**4.29**	**168**			**Pn**		**04 13 28.7**	**+1.2**
PB02	**IPOC Station P**	**4.49**	**173**			**Pn**		**04 13 31.6**	**+1.2**
PB07	**IPOC Station P**	**4.90**	**174**			**Pn**		**04 13 36.2**	**+0.2**
PB04	**IPOC Station P**	**5.48**	**177**			**Pn**		**04 13 44.7**	**+0.7**
PB06	**IPOC Station P**	**5.90**	**172**	Pn		**Pn**		**04 13 50.6**	**+0.8**
LVC	**Limon Verde**	**5.93**	**166**	P		**Pn**		**04 13 52.2**	**+1.9**
	comp=E,8.1nm,0.4s,baz=339,slow=7.8,SNR=11								
LVC				S		**Sn**		**04 15 00.1**	**+2.8**
	comp=E,6.5nm,0.6s,baz=286,slow=17,SNR=1.4								
LVC	**Limon Verde**	**5.93**	**166**	Pn		**Pn**		**04 13 52.8**	**+2.5**
PB15	**IPOC Station P**	**6.41**	**172**	Pn		**Pn**		**04 13 57.8**	**+1.0**
NNA	**Nana**	**7.83**	**307**	LR		LR		04 17 52.2	
	comp=E,70nm,20.2s,baz=146,slow=41								
GO02	**Mina Guanaco**	**8.33**	**174**	Pn		**Pn**		**04 14 22.3**	**-0.9**
SIV	**San Ignacio**	**9.06**	**86**	P		**Pn**		**04 14 34.2**	**+1.2**
	comp=E,1.8nm,0.5s,baz=269,slow=15,SNR=9.8								
SIV				LR		LR		04 18 29.2	
	comp=E,167nm,18.4s,baz=288,slow=40								
ZON	**Zonda**	**14.74**	**174**	Pn		**Pn**		**04 15 51.7**	**+1.1**
CPUP	**Villa Florida**	**15.44**	**130**	LR		LR		04 23 46.2	
	comp=E,38nm,18.9s,baz=312,slow=44								
BOSC	**San Juan Bosco**	**15.72**	**329**	Pn		**Pn**		**04 16 04.7**	**+0.9**
VA03	**San Esteban**	**15.86**	**180**	Pn		**Pn**		**04 16 03.6**	**-1.8**
ARNL	**Arenillas**	**16.22**	**323**	Pn		**Pn**		**04 16 10.8**	**+0.8**
ARNL				IAmb		IAmb		04 16 16.5	
	comp=Z,12nm,0.9s								
COHC	**Cochancay**	**16.69**	**328**	Pn		**P**		**04 16 17.9**	**-0.1**
MT09	**Talagante**	**16.88**	**181**	Pn		**Pn**		**04 16 17.3**	**-1.0**
MT09				IAmb		IAmb		04 16 24.9	
	comp=Z,16nm,1.2s								
H03N1	**Juan Fernandez**	**18.20**	**203**	T		T		04 34 14.5	
	baz=27,slow=73,SNR=50								
H03N2	**Juan Fernandez**	**18.21**	**203**	T		T		04 34 14.2	
	baz=27,slow=73,SNR=37								
H03N3	**Juan Fernandez**	**18.22**	**203**	T		T		04 34 13.3	
	baz=27,slow=73,SNR=28								
OTAV	**Otavalo**	**18.70**	**334**	P		**Pn**		**04 16 41.8**	**+0.6**
PLCA	**Pan de Flores**	**23.81**	**180**	P		**P**		**04 17 33.0**	**-1.5**
	comp=Z,1.2nm,0.8s,baz=352,slow=12,SNR=13								
	comp=Z,1.2nm,0.8s								
LL04	**Puerto Octay**	**24.05**	**184**	P		**P**		**04 17 38.1**	**+1.6**
LL04				IAmb		IAmb		04 17 51.7	
	comp=Z,7.7nm,1.1s								
BAUV	**El Baul**	**25.73**	**6**	P		**P**		**04 17 51.7**	**-0.3**
BAUV				IAmb		IAmb		04 17 54.2	
	comp=Z,14nm,0.8s								
MDP	**Montagnes des**	**28.03**	**40**	LR		LR		04 31 35.0	
	comp=Z,56nm,18.3s,baz=240,slow=41								
JTS	**Las Juntas de**	**30.52**	**331**	LR		LR		04 31 20.4	
	comp=Z,49nm,18.5s,baz=216,slow=37								
DSPA	**Despedida**	**37.08**	**178**	P		**P**		**04 19 30.9**	**-0.5**
TXAR	**Lajitas Array**	**55.98**	**325**	P		**P**		**04 21 59.4**	**-0.6**
	comp=Z,0.7nm,1.0s,baz=168,slow=7.4,SNR=4.1								
	comp=Z,0.7nm,1.0s								
PBMO	**Poplar Bluff**	**56.56**	**341**	P		**P**		**04 22 04.9**	**+1.1**
PBMO				IAmb		IAmb		04 22 05.1	
	comp=Z,3.8nm,0.8s								
CCM	**Cathedral Cave**	**57.98**	**341**	P		**P**		**04 22 14.1**	**+0.3**
S39A	**Bolivar**	**58.34**	**339**	P		**P**		**04 22 15.6**	**-0.8**
S39A				IAmb		IAmb		04 22 16.9	
	comp=Z,2.1nm,0.7s								
R40A	**Maddies Statio**	**58.53**	**340**	IAmb		IAmb		04 22 17.8	
	comp=Z,2.6nm,0.8s								
MSTX	**Muleshoe**	**59.16**	**329**	P		**P**		**04 22 22.6**	**+0.3**
MSTX				IAmb		IAmb		04 22 24.0	
	comp=Z,8.0nm,1.1s								
SDCO	**Great Sand Dun**	**63.50**	**329**	P		**P**		**04 22 51.1**	**-0.7**
SDCO				IAmb		IAmb		04 22 54.5	
	comp=Z,3.1nm,1.1s								
ECSD	**EROS Data Cent**	**64.86**	**339**	P		**P**		**04 23 00.3**	**+0.1**
ECSD				IAmb		IAmb		04 23 01.2	
	comp=Z,7.7nm,1.2s								
MVU	**Marysvale**	**67.53**	**326**	P		**P**		**04 23 18.2**	**+0.3**
MVU				IAmb		IAmb		04 23 21.2	
	comp=Z,9.6nm,1.1s								
AGMN	**Agassiz Nation**	**68.69**	**342**	P		**P**		**04 23 24.8**	**+0.3**
AGMN				IAmb		IAmb		04 23 26.5	
	comp=Z,8.0nm,1.4s								
PDAR	**Pinedale Array**	**69.35**	**330**	P		**P**		**04 23 28.6**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=182,slow=6.3,SNR=1.9								
	comp=Z,0.2nm,0.4s								
MDND	**Maddock**	**69.47**	**340**	P		**P**		**04 23 29.9**	**+0.5**
NVAR	**Mina Array Bea**	**70.93**	**322**	P		**P**		**04 23 40.3**	**+1.4**
	comp=Z,0.4nm,0.8s,baz=132,slow=6.3,SNR=2.6								
	comp=Z,0.4nm,0.8s								
TORD	**Torodi Ar. Bea**	**77.25**	**72**	P		**P**		**04 24 13.2**	**-2.8**
	comp=Z,0.9nm,0.9s,baz=245,slow=6.1,SNR=3.7								
	comp=Z,0.9nm,0.9s								
YKA	**Yellowknife Ar**	**86.32**	**341**	P		**P**		**04 25 01.7**	**-1.0**
	comp=Z,2.0nm,1.1s,baz=136,slow=4.7,SNR=13								
	comp=Z,2.0nm,1.1s								
VRDI	**Verde Repeater**	**96.68**	**332**	P		**P**		**04 25 52.6**	**+1.3**
WRA	**Warramunga Arr**	**136.07**	**215**	PKP		**PKPdf**		**04 31 41.1**	**-2.1**
	comp=Z,0.5nm,1.0s,baz=145,slow=1.7,SNR=2.4								
MJAR	**Matsushiro Arr**	**147.32**	**313**	PKPbc		**PKPdf**		**04 32 05.0**	**+1.3**
	comp=Z,1.0nm,0.4s,baz=108,slow=3.5,SNR=5.7								
SONM	**Songino Array**	**148.98**	**4**	PKPbc		**PKPbc**		**04 32 09.7**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=302,slow=1.4,SNR=1.9								

MAN 03 04:12:28.6, 9.°65N×123.°90E, h36km, mb4.1, ML2.9, MS2.5, Negros

*IDC **03** 04:40:34.8±1.0, 28.°23N×143.°01E, h0km, mb3.5/6, mbtmp3.5/7, ML2.8/1, Error ellipse: s-maj=34.3km s-min=15.7km az=105.0*

ISC 03 04:40:38.1±0.9, 28.°25N±0.°09×143.°0E±0.°2, h22km, n9, σ0s60/11, mb3.5/7, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
JCJ	**Chichijima**	**1.34**	**211**	Pn		**Pn**		**04 41 01.2**	**-0.3**
	36nm,0.3s,baz=304,slow=23,SNR=22								
JCJ				S		**Sn**		**04 41 18.6**	**-0.1**
	58nm,0.3s,baz=122,slow=24,SNR=8.7								
MJAR	**Matsushiro Arr**	**9.20**	**335**	Pn		**Pn**		**04 42 48.9**	**-0.5**
	0.1nm,0.3s,baz=149,slow=10,SNR=5.0								
	0.8nm,0.4s								
SONM	**Songino Array**	**34.38**	**315**	P		**P**		**04 47 24.9**	**+1.3**
	0.4nm,0.6s,baz=123,slow=8.2,SNR=2.4								
	0.4nm,0.6s								
BATI	**Baumata**	**42.55**	**209**	P		**P**		**04 48 32.6**	**+0.3**
	29nm,0.4s,baz=350,slow=11,SNR=5.4								
WRA	**Warramunga Arr**	**48.63**	**191**	P		**P**		**04 49 20.7**	**+0.3**
	3.1nm,0.6s,baz=12,slow=8.4,SNR=69								
WRA				PcP		**PcP**		**04 50 46.0**	**+0.3**
	0.2nm,0.5s,baz=9.9,slow=3.8,SNR=1.5								
	3.1nm,0.6s								
MKAR	**Makanchi Array**	**50.29**	**309**	P		**P**		**04 49 32.2**	**-0.7**
	0.1nm,0.4s,baz=86,slow=7.4,SNR=2.4								
	0.1nm,0.4s								
ASAR	**Alice Springs**	**52.35**	**191**	P		**P**		**04 49 48.1**	**-0.4**
	0.2nm,0.5s,baz=4.1,slow=5.8,SNR=5.5								
	0.2nm,0.5s								
ILAR	**Eielson Array**	**56.37**	**29**	P		**P**		**04 50 17.2**	**-0.1**
	0.3nm,0.6s,baz=263,slow=6.3,SNR=4.3								
	0.3nm,0.6s								
YKA	**Yellowknife Ar**	**70.80**	**29**	P		**P**		**04 51 52.5**	**0.0**
	0.2nm,0.7s,baz=293,slow=6.1,SNR=2.9								
	0.2nm,0.7s								

TAP 03 05:02:11.6, 24.°26N×121.°79E, h6km, ML1.2, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
EHP	**Heping Village**	**0.06**	**318**	*eP*		Pg		05 02 13.4	+0.2
	baz=322								
ENA	**Nanau**	**0.17**	**346**	P		Pg		05 02 15.5	+0.5
	baz=348								
ENA				S		Sg		05 02 18.9	+1.5
	baz=348								
ETL	**Fush Village**	**0.18**	**235**	S		Sg		05 02 19.7	+2.1
	baz=235								
EWUT	**Wuta**	**0.18**	**357**	*eP*		Pg		05 02 16.5	+1.2
	baz=357								
EWUT				*e*S		Sg		05 02 20.0	+2.3
	baz=357								
NACB	**Ninganchiao**	**0.20**	**243**	P		Pg		05 02 16.4	+0.9
	baz=243								
NACB				S		Sg		05 02 19.8	+1.7
	baz=243								
TWD	**Chiawan**	**0.25**	**224**	*eP*		Pb		05 02 17.6	-0.9
	baz=222								
TWD				S		Sb		05 02 22.1	-1.1
	baz=222								
ETLH	**Xiulin Townshi**	**0.28**	**259**	*eP*		Pb		05 02 18.3	-0.8
	baz=258								
ETLH				*e*S		Sb		05 02 23.2	-1.0
	baz=258								
HWA	**Hwalien**	**0.33**	**210**	*e*S		Sb		05 02 24.8	-0.6
	baz=208								
LATG	**Datong**	**0.36**	**319**	*eP*		Pb		05 02 20.0	-0.4
	baz=318								
LATG				*e*S		Sb		05 02 26.5	+0.1
	baz=318								
**ND

PB01 IAML 05 25 00.5
comp=E,54nm,0.1s
PB04 IPOC Station P 2.27 273 ⇑ *i* P **Pn** **05 24 26.6 +0.9**
PB04 *i* S **Sn** **05 24 55.9 -0.6**
PB04 IAML 05 24 59.3
comp=E,206nm,0.1s
PB04 IPOC Station P 2.27 273 P **Pn** **05 24 26.6 +0.9**
PB04 IAML 05 25 00.8
comp=E,65nm,0.2s
MOCB Mochara 2.27 58 P **Pn** **05 24 27.1 +1.1**
MOCB S **Sn** **05 24 53.3 -3.8**
MOCB IAML 05 24 58.1
comp=E,31nm,0.3s
PB02 IPOC Station P 2.33 299 ⇓ *i* P **Pn** **05 24 27.1 +0.8**
PB02 *i* S **Sn** **05 24 56.6 -1.2**
PB02 IAML 05 25 02.5
comp=E,230nm,0.2s
PB02 IPOC Station P 2.33 299 P **Pn** **05 24 27.3 +0.9**
PB02 S **Sn** **05 24 53.8 -4.0**
PB02 IAML 05 25 04.3
comp=E,108nm,0.2s
PB08 IPOC Station P 2.68 329 ⇑ *i* P **Pn** **05 24 32.1 +1.4**
PB08 *i* S **Sn** **05 25 06.5 +0.9**
PB08 IAML 05 25 09.6
comp=N,75nm,0.7s
PB08 IPOC Station P 2.68 329 P **Pn** **05 24 32.1 +1.4**
PATCX Punta Patache 2.80 305 *e*P **Pn** **05 24 32.3 +0.4**
PATCX *i* S **Sn** **05 25 06.1 -1.7**
PATCX IAML 05 25 09.8
comp=E,127nm,0.1s
PB10 IPOC Station P 2.83 248 *e*P **Pn** **05 24 32.6 +0.6**
PB10 *i* S **Sn** **05 25 06.2 -1.9**
PB10 IPOC Station P 2.83 248 P **Pn** **05 24 32.7 +0.6**
PB10 S **Sn** **05 25 03.6 -4.5**
TA01 Diego Aracena 2.98 309 *e*P **Pn** **05 24 34.3 +0.3**
TA01 *i* S **Sn** **05 25 09.7 -1.8**
TA01 IAML 05 25 11.6
comp=E,95nm,0.2s
GO02 Mina Guanaco 3.19 212 ⇑ *i* P **Pn** **05 24 38.0 +1.1**
GO02 *i* S **Sn** **05 25 16.6 -0.1**
PB11 IPOC Station P 3.25 326 ⇓ *i* P **Pn** **05 24 37.7 +0.3**
PB11 *i* S **Sn** **05 25 16.6 -1.0**
PB11 IPOC Station P 3.25 326 P **Pn** **05 24 37.8 +0.3**
PB11 IAML 05 25 21.2
comp=E,31nm,0.2s
PB16 IPOC Station P 4.44 337 P **Pn** **05 24 54.3 +1.2**
BBOD La Paz, Gloria 5.86 352 P **Pn** **05 25 13.1 +1.6**
LPAZ La Paz 6.16 356 P **Pn** **05 25 17.2 +1.7**

IDC 03 05:30:54.1±3.2,**54°52N**×**86°20E**,**h0**km,**mbtmp2.6**/2,
ML2.4/2,**Error ellipse: s-maj=23.9km s-min=15.0km az=46.0**,**Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.99**	**235**	*i*		05 38 10.0	
	baz=53,slow=313,SNR=1.5						
ZALV	**Zalesovo Beam**	**0.99**	**235**	Pg	Pg	05 31 11.5	-1.7
	0.3nm,0.3s,baz=56,slow=17,SNR=2.9						
ZALV				Lg	Lg	05 31 27.3	
	1.5nm,0.3s,baz=56,slow=28,SNR=8.6						
KURBB	**Kurchatov Arra**	**6.09**	**233**	Pn	Pn	05 32 26.2	+0.9
	baz=48,slow=14,SNR=4.9						
KURBB				Lg	Lg	05 34 06.9	
	baz=48,slow=30,SNR=1.9						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**8.12**	**199**	Pn	Pn	05 32 54.1	+0.9
	0.1nm,0.3s,baz=19,slow=13,SNR=2.1						
	0.1nm,0.3s						

*IDC **03** 05:32:33.5±0.7,15°.32S×173°.18W,h0km,mb4.1/12,*
mbtmp4.1/12,MS3.5/20,Error ellipse: s-maj=36.1km
s-min=14.8km az=134.0
*NEIC **03** 05:32:35.0±1.3,15°.51S±0°.07×173°.0W±0°.1,h10km±1km,*
mb4.4/11,Error ellipse: s-maj=22.5km s-min=11.8km
az=282.0

ISC 03 05:32:37.4±0.6,**15°47S**±0°.07×**172°9W**±0°.1,**h29**km,**n44,**
σ1s38/27,**mb4.2**/18,**MS3.6**/21,**Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.91**	**36**	Pn	**Pn**	**05 33 07.8**	**-0.2**
	165nm,0.3s,baz=184,slow=1.7,SNR=130						
AFI				Sn	**Sn**	05 33 27.6	**-3.6**
	411nm,0.3s,baz=170,slow=23,SNR=17						
AFI				LR	LR	05 33 49.9	
	comp=Z,412nm,21.4s,baz=199,slow=39						
NIUE	**Niue**	**4.59**	**142**		**Pn**	**05 33 43.3**	**-1.6**
MSVF	**Nonsavu**	**8.94**	**254**	LR	LR	05 37 41.3	
	comp=Z,188nm,18.9s,baz=156,slow=35						
KNTN	**Kanton**	**12.67**	**5**		**Pn**	**05 35 35.6**	**-0.2**
DZM	**Mont Dzumac**	**20.60**	**248**	LR	LR	05 44 05.8	
	comp=Z,94nm,18.4s,baz=74,slow=34						
DZM	**Mont Dzumac**	**20.60**	**248**	*e*LR	LR	05 42 37.2	
PPT	**Papeete**	**22.48**	**99**	LR	LR	05 43 36.5	
	comp=Z,28nm,20.4s,baz=126,slow=29						
PPT2	**Papeete2**	**22.48**	**99**	*e*LR	LR	05 42 20.0	
	comp=Z,78nm,26.5s						
TBI	**Tubuai**	**23.45**	**113**	*e*T	T	06 01 58.1	
	3.2nm,0.3s						
URZ	**Urewera**	**24.34**	**199**	P	**P**	**05 37 54.0**	**+1.2**
	16nm,0.6s,baz=332,slow=1.2,SNR=15						
URZ				S	**S**	**05 42 08.7**	**-1.7**
	7.6nm,0.8s,baz=295,slow=19,SNR=2.2						
URZ				LR	LR	05 45 53.9	
	comp=Z,116nm,18.1s,baz=31,slow=33						
	16nm,0.6s						
URZ	**Urewera**	**24.34**	**199**	P	**P**	**05 37 53.2**	**+0.4**
URZ				IAmb	IAmb	05 38 01.0	
	comp=Z,15nm,0.6s						
RPZ	**Rata Peaks**	**31.29**	**203**	LR	LR	05 50 30.5	
	comp=Z,172nm,18.0s,baz=344,slow=34						
TAOE	**Nuku Hiva Isla**	**32.68**	**82**	*e*LR	LR	05 47 00.4	
	comp=Z,62nm,26.4s						
TAOE	**Nuku Hiva Isla**	**32.68**	**82**	*e*T	T	06 13 40.5	
	comp=Z,9.8nm,0.2s						
STKA	**Stephens Creek**	**44.40**	**240**	P	**P**	**05 40 44.2**	**-1.5**
	comp=Z,2.1nm,0.6s,baz=100,slow=12,SNR=6.3						
	comp=Z,2.1nm,0.6s						
BBOO	**Buckleboo**	**49.17**	**240**	P	**P**	**05 41 21.7**	**-1.4**
WB0	**Warramunga Arr**	**50.24**	**257**	P	**P**	**05 41 30.4**	**-1.0**
WB0				IAmb	IAmb	05 41 59.3	
	comp=Z,4.2nm,1.1s						
WB2	**Warramunga Arr**	**50.26**	**257**	P	**P**	**05 41 30.6**	**-1.0**
WB2				IAmb	IAmb	05 41 38.6	
	comp=Z,6.7nm,1.4s						
WRA	**Warramunga Arr**	**50.27**	**257**	P	**P**	**05 41 30.1**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=93,slow=7.0,SNR=7.3						
WRA				PcP	**PcP**	**05 42 51.0**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=91,slow=4.2,SNR=2.0						
	comp=Z,0.2nm,0.3s						
AS31	**Alice Springs**	**50.52**	**252**	P	**P**	**05 41 32.2**	**-1.4**
AS31				IAmb	IAmb	05 41 47.1	
	comp=Z,1.5nm,1.0s						
ASAR	**Alice Springs**	**50.52**	**252**	P	**P**	**05 41 32.4**	**-1.2**
	comp=Z,2.8nm,0.5s,baz=88,slow=7.8,SNR=49						
ASAR				LR	LR	06 01 25.1	
	comp=Z,94nm,18.3s,baz=343,slow=34						
	comp=Z,2.8nm,0.5s						
SBA	**Scott Base**	**63.22**	**185**	P	**P**	**05 43 04.8**	**+2.2**
SBA				IAmb	IAmb	05 43 05.8	
	comp=Z,1.1nm,0.6s						
VNDA	**Vanda**	**63.35**	**186**	P	**P**	**05 43 04.9**	**+1.5**
	comp=Z,1.2nm,0.9s,baz=6.6,slow=5.8,SNR=5.0						
	comp=Z,1.2nm,0.9s						
SHEM	**Shemya Is, Ala**	**68.84**	**352**	LR	LR	06 07 44.3	
	comp=Z,30nm,20.3s,baz=34,slow=31						
ASAJ	**Asahikawa**	**71.84**	**328**	LR	LR	06 13 45.9	
	comp=Z,19nm,18.0s,baz=122,slow=34						
PFO	**Pinyon Flats O**	**72.63**	**47**	LR	LR	06 09 12.2	
	comp=Z,30nm,18.6s,baz=239,slow=30						
YBH	**Yreka Blue Hor**	**73.38**	**37**	LR	LR	06 07 29.6	
	comp=Z,33nm,21.1s,baz=248,slow=29						
NVAR	**Mina Array Bea**	**74.08**	**42**	P	**P**	**05 44 12.1**	**+0.9**
	comp=Z,2.2nm,0.9s,baz=225,slow=8.9,SNR=8.4						
	comp=Z,2.2nm,0.9s						
QSPA	**South Pole Qui**	**74.57**	**180**	P	**P**	**05 44 14.1**	**+0.6**
QSPA				IAmb	IAmb	05 44 16.7	
	comp=Z,9.8nm,1.4s						
KDAK	**Kodiak Island**	**74.90**	**11**	P	**P**	**05 44 15.7**	**+0.5**
	comp=Z,3.5nm,0.8s,baz=275,slow=12,SNR=2.1						
	comp=Z,3.5nm,0.8s						
PINE	**Pine Mountain**	**75.69**	**36**	P	**P**	**05 44 21.9**	**+1.6**
PINE				IAmb	IAmb	05 44 23.6	
	comp=Z,5.2nm,0.9s						
ELK	**Elko**	**77.33**	**41**	LR	LR	06 12 19.0	
	comp=Z,39nm,19.6s,baz=245,slow=31						
TXAR	**Lajitas Array**	**80.27**	**56**	P	**P**	**05 44 47.3**	**+1.2**
	comp=Z,1.1nm,1.0s,baz=224,slow=6.2,SNR=10.0						
TXAR				LR	LR	06 11 43.6	
	comp=Z,31nm,18.8s,baz=302,slow=29						
	comp=Z,1.1nm,1.0s						
ANMO	**Albuquerque**	**80.50**	**50**	LR	LR	06 12 08.1	
	comp=Z,28nm,20.1s,baz=276,slow=30						
NEW	**Newport**	**80.51**	**34**	P	**P**	**05 44 47.1**	**+0.3**
	comp=Z,0.7nm,0.4s,baz=357,slow=3.3,SNR=2.1						
NEW				LR	LR	06 16 58.3	
	comp=Z,27nm,18.8s,baz=291,slow=33						
	comp=Z,0.7nm,0.4s						
PDAR	**Pinedale Array**	**82.01**	**42**	P	**P**	**05 44 55.6**	**+0.4**
	comp=Z,0.9nm,0.8s,baz=212,slow=5.3,SNR=4.6						
PDAR				LR	LR	06 17 20.2	
	comp=Z,34nm,18.8s,baz=291,slow=33						
	comp=Z,0.9nm,0.8s						
ILAR	**Eielson Array**	**82.43**	**11**	P	**P**	**05 44 57.2**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=221,slow=6.2,SNR=4.9						
	comp=Z,0.4nm,0.7s						
CMIG	**Matias Romero**	**83.47**	**70**	LR	LR	06 13 52.0	
	comp=Z,21nm,20.1s,baz=265,slow=30						
INK	**Inuvik**	**88.23**	**14**	LR	LR	06 21 04.2	
	comp=Z,35nm,18.8s,baz=212,slow=33						
YAK	**Yakutsk**	**89.36**	**337**	LR	LR	06 25 31.0	
	comp=Z,18nm,19.1s,baz=110,slow=36						
YKA	**Yellowknife Ar**	**89.98**	**23**	P	**P**	**05 45 34.2**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=239,slow=5.0,SNR=5.7						
	comp=Z,0.3nm,0.6s						
ULM	**Lac du Bonnet**	**93.70**	**39**	LR	LR	06 20 09.1	
	comp=Z,31nm,20.1s,baz=313,slow=30						
TKL	**Tuckaleechee C**	**98.17**	**55**	LR	LR	06 25 56.8	
	comp=Z,23nm,18.1s,baz=195,slow=33						
BRTR	**Keskin Array B**	**146.50**	**321**	PKPbc	**PKPbc**	**05 52 16.1**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=88,slow=4.2,SNR=4.8						

*IDC **03** 05:34:49.8±0.7,26°.93N×126°.77E,h0km,mb4.0/12,*
mbtmp4.0/13,ML3.3/1,MS3.5/19,Error ellipse:
s-maj=19.5km s-min=14.3km az=50.0
*NEIC **03** 05:34:50.3±1.6,26°.5N±0°.1×126°.70E±0°.07,h17km±7km,*
mb4.2/10,Error ellipse: s-maj=18.2km s-min=8.0km
az=164.0
*JMA **03** 05:34:51.4±0.2,26°.9N±0°.8×126°.7E±0°.7,h20km±2km,*
MV3.9/11,NW OFF OKINAWAJIMA IS
JMA Felt I J1 at NW OFF OKINAWAJIMA IS .
*NIED **03** 05:34:51.4,26°.94N×126°.71E,h20km,MW4.1,Moment*
Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm;
Mrr-1.59; Mθθ1.00; Mφφ0.59; Mrθ-0.34; Mθφ0.86; Mφr-0.77;
Fault plane solution: M₀1.84000×10¹⁵ NP1:
φs244.00000°,δ34.00000°,λ-69.00000°. NP2:φs39.00000°,
δ59.00000°,λ-104.00000°.

ISC 03 05:34:53.0±0.6,**26°87N**±0°.06×**126°76E**±0°.06,**h21**km±4km,
n56,σ1s02/49,mb4.1/17,MS3.7/16,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAGN	**Aguni-jima**	**0.51**	**123**	P	**Pb**	**05 35 02.7**	**-0.6**
JAGN				*e*S	**Sb**	**05 35 10.9**	**+0.5**
JKE	**Kume jima 2**	**0.54**	**177**	P	**Pb**	**05 35 03.2**	**-0.7**
JKE				S	**Sb**	**05 35 11.6**	**+0.3**
JIH	**Iheya**	**1.09**	**81**	P	**Pn**	**05 35 11.8**	**-1.3**
JIH				S	**Sn**	**05 35 27.3**	**-0.2**
JJT3	**Tamagusuku3**	**1.17**	**128**	P	**Pb**	**05 35 14.4**	**-0.1**
JJT3				S	**Sn**	**05 35 31.1**	**+1.6**
JNTH	**Nagotoyohara**	**1.18**	**107**	P	**Pn**	**05 35 13.8**	**-0.6**
JNTH				S	**Sb**	**05 35 29.5**	**-0.1**
JOW	**Kunigami**	**1.35**	**91**	Pn	**Pn**	**05 35 16.4**	**-0.4**
	147nm,0.3s,baz=142,slow=17,SNR=100						
JOW				Sn	**Sb**	**05 35 34.4**	**-0.2**
	211nm,0.3s,baz=144,slow=26,SNR=8.5						
JOW	**Kunigami**	**1.35**	**91**	P	**Pn**	**05 35 16.2**	**-0.5**
JOW				*e*S	**Sb**	**05 35 34.5**	**-0.1**
JYRO	**Yoronjima**	**1.52**	**84**	P	**Pn**	**05 35 18.2**	**-0.7**
JYRO				*e*S	**Sb**	**05 35 39.2**	**-0.1**
JOKE	**Okinoerabujima**	**1.69**	**73**	*e*P	**Pn**	**05 35 20.7**	**-0.6**
JTK	**Tokunoshima**	**2.15**	**64**	*e*P	**Pn**	**05 35 26.9**	**-0.8**
YOJ	**Yonaguni jima**	**4.14**	**236**	Pn	Pn	05 35 49.0	-6.1
JSU	**Suzuyama**	**5.64**	**34**		**Pn**	**05 36 19.3**	**+3.6**
JNU	**Nakatsue**	**7.18**	**29**	Pn	**Pn**	**05 36 37.3**	**+0.4**
	0.5nm,0.3s,baz=144,slow=22,SNR=5.0						
	15nm,0.7s						
KSRS	**Korea Array**	**10.60**	**5**	Pn	**Pn**	**05 37 26.6**	**+2.9**
	0.1nm,0.3s,baz=182,slow=14,SNR=4.5						
KSRS				LR	LR	05 41 34.6	
	comp=Z,110nm,19.2s,baz=190,slow=38						
MJAR	**Matsushiro Arr**	**13.70**	**42**	Pn	**P**	**05 38 14.4**	**-0.2**
	0.1nm,0.3s,baz=218,slow=8.8,SNR=9.6						
MJAR				LR	LR	05 43 04.0	
	comp=Z,55nm,19.6s,baz=227,slow=36						
USRK	**Ussuriysk Ar.**	**17.80**	**12**		**P**	**05 39 00.4**	**+0.3**
DAV	**Davao City (W)**	**19.72**	**183**	LR	LR	05 46 43.7	
	comp=Z,53nm,21.3s,baz=2.0,slow=36						
GUMO	**Guam**	**21.49**	**124**	LR	LR	05 46 51.9	
	comp=Z,38nm,18.9s,baz=304,slow=34						
KLR	**Kul'dur**	**22.66**	**9**	P	**P**	**05 39 50.6**	**-2.1**
	1.1nm,0.5s,baz=177,slow=8.9,SNR=4.8						
KLR				LR	LR	05 47 52.5	
	comp=Z,61nm,19.0s,baz=189,slow=35						
	1.1nm,0.5s						
ULN	**Ulaanbaatar**	**26.03**	**329**	P	**P**	**05 40 25.1**	**+0.3**
SONM	**Songino Array**	**26.31**	**328**	P	**P**	**05 40 27.9**	**+0.6**
	1.9nm,0.9s,baz=148,slow=8.5,SNR=7.0						
SONM				LR	LR	05 51 45.7	
	comp=Z,82nm,20.1s,baz=130,slow=39						
	1.9nm,0.9s						
SONM	**Songino Array**	**26.31**	**328**	P	**P**	**05 40 26.7**	**-0.7**
SONM				IAmb	IAmb	05 40 33.4	
	comp=Z,7.1nm,1.2s						
MA2	**Magadan**	**36.66**	**20**	LR	LR	05 56 59.2	
	comp=Z,26nm,18.1s,baz=212,slow=36						
MK31	**Makanchi Array**	**40.13**	**312**	P	**P**	**05 42 27.1**	**-0.3**
MK31				IAmb	IAmb	05 42 27.9	
	comp=Z,3.1nm,0.7s						
MKAR	**Makanchi Array**	**40.13**	**312**	P	**P**	**05 42 27.0**	**-0.3**
	comp=Z,3.7nm,0.6s,baz=99,slow=10,SNR=58						
	comp=Z,3.7nm,0.6s						
MKAR	**Makanchi Array**	**40.13**	**312**	P	**P**	**05 42 26.8**	**-0.5**
ZAA0	**Zalesovo Array**	**40.95**	**323**	P	**P**	**05 42 32.9**	**-1.0**
ZALV	**Zalesovo Beam**	**40.95**	**323**	P	**P**	**05 42 33.3**	**-0.6**
	comp=Z,2.5nm,0.6s,baz=97,slow=7.4,SNR=8.5						
ZALV				LR	LR	06 00 54.6	
	comp=Z,73nm,19.5s,baz=144,slow=38						
	comp=Z,2.5nm,0.6s						
ZALV	**Zalesovo Beam**	**40.95**	**323**	P	**P**	**05 42 32.6**	**-1.3**
KURK	**Kurchatov**	**43.45**	**316**	P	**P**	**05 42 53.4**	**-1.0**
KURK				IAmb	IAmb	05 42 59.8	
	comp=Z,5.7nm,1.1s						
KURBB	**Kurchatov Arra**	**43.48**	**316**	P	**P**	**05 42 54.1**	**-0.6**
	comp=Z,2.0nm,0.7s,baz=104,slow=8.7,SNR=13						
	comp=Z,2.0nm,0.7s						
TIXI	**Tiksi**	**44.84**	**1**	LR	LR	06 02 25.6	
	comp=Z,104nm,18.0s,baz=182,slow=37						
WRA	**Warramunga Arr**	**47.11**	**170**	P	**P**	**05 43 23.6**	**-0.1**
	comp=Z,1.1nm,0.8s,baz=351,slow=8.5,SNR=8.5						
	comp=Z,1.1nm,0.8s						
ASAR	**Alice Springs**	**50.71**	**172**	P	**P**	**05 43 52.0**	**+0.7**
	comp=Z,0.7nm,0.5s,baz=355,slow=8.1,SNR=11						
	comp=Z,0.7nm,0.5s						
ABKAR	**Akbulak array**	**55.25**	**313**	P	**P**	**05 44 24.0**	**-0.6**
ABKAR	**Akbulak array**	**55.25**	**313**	P	**P**	**05 44 23.8**	**-0.7**
ABKAR				IAmb	IAmb	05 44 46.0	
	comp=Z,3.2nm,1.4s						
ARU	**Arti**	**56.08**	**322**	LR	LR	06 10 52.4	
	comp=Z,137nm,18.2s,baz=106,slow=39						
AKTO	**Aktyubinsk**	**56.45**	**314**	LR	LR	06 09 38.6	
	comp=Z,44nm,19.9s,baz=133,slow=37						
STKA	**Stephens Creek**	**60.11**	**165**	P	**P**	**05 44 59.4**	**+0.6**
	comp=Z,1.9nm,0.7s,baz=292,slow=9.6,SNR=4.4						
	comp=Z,1.9nm,0.7s						
SVW2	**Sparrevohn**	**60.95**	**33**	P	**P**	**05 45 04.0**	**-0.3**
CAST	**Castle Rocks**	**62.40**	**30**	P	**P**	**05 45 14.9**	**+0.8**
CAST				IAmb	IAmb	05 45 35.6	
	comp=Z,2.1nm,1.0s						
KDAK	**Kodiak Island**	**62.79**	**36**	P	**P**	**05 45 15.8**	**-0.9**
	comp=Z,3.0nm,0.7s,baz=259,slow=9.7,SNR=4.2						
	comp=Z,3.0nm,0.7s						
M26K	**Nabesna, AK**	**66.67**	**30**	P	**P**	**05 45 41.8**	**-0.3**
VRDI	**Verde Repeater**	**66.73**	**32**	P	**P**	**05 45 41.9**	**-0.8**
VRDI				IAmb	IAmb	05 45 48.2	
	comp=Z,3.2nm,1.1s						
BCAR	**Beaver Creek A**	**67.05**	**30**	P	**P**	**05 45 44.6**	**+0.2**
KBZ	**Khabaz**	**67.73**	**309**	LR	LR	06 19 31.7	
	comp=Z,30nm,20.6s,baz=70,slow=40						
FINES	**FINESS Array B**	**71.66**	**330**	LR	LR	06 21 25.8	
	comp=Z,65nm,18.1s,baz=73,slow=39						
MMAI	**Mount Meron Ar**	**76.94**	**300**	LR	LR	06 27 52.3	
	comp=Z,62nm,18.4s,baz=216,slow=41						
HFS	**Hagfors**	**77.64**	**332**	LR	LR	06 24 20.5	
	comp=Z,52nm,19.3s,baz=76,slow=38						
NOA	**NORSAR Array B**	**78.16**	**333**	LR	LR	06 24 54.3	
	comp=Z,32nm,19.6s,baz=30,slow=38						
YKA	**Yellowknife Ar**	**78.50**	**25**	P	**P**	**05 46 51.6**	**-0.7**
	comp=Z,0.8nm,0.7s,baz=302,slow=5.3,SNR=9.3						
	comp=Z,0.8nm,0.7s						
EIL	**Elat**	**78.65**	**297**	LR	LR	06 25 12.2	
	comp=Z,44nm,19.3s,baz=87,slow=38						
VRAC	**Vranov**	**82.05**	**322**	LR	LR	06 26 54.7	
	comp=Z,36nm,18.2s,baz=69,slow=38						
DAVOX	**Davos/Dischmat**	**87.19**	**322**	LR	LR	06 29 59.3	
	comp=Z,57nm,19.7s,baz=74,slow=38						
NVAR	**Mina Array Bea**	**91.01**	**45**	P	**P**	**05 47 57.8**	**+1.6**
	comp=Z,0.4nm,0.8s,baz=270,slow=5.1,SNR=3.6						
	comp=Z,0.4nm,0.8s						
PDAR	**Pinedale Array**	**93.48**	**38**	P	**P**	**05 48 07.6**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=343,slow=2.8,SNR=4.0						
	comp=Z,0.6nm,0.6s						

*NEIC **03** 05:35:13.0±1.5,51°.7N±0°.2×178°.46E±0°.05,h93km±7km,*
mb4.0/50,ML3.5(AEIC),Error ellipse: s-maj=22.6km
s-min=1.0km az=191.0
*AEIC **03** 05:35:13±2.6,52°.0N±0°.2×178°.55E±0°.09,h91km±6km,*
Error ellipse: s-maj=23.9km s-min=7.2km az=188.0
*IDC **03** 05:35:14.2±0.9,51°.91N×178°.56E,h103km±6km,mb3.8/16,*
mbtmp4.2/18,MS3.1/5,Error ellipse: s-maj=18.3km
s-min=8.3km az=180.0

ISC 03 05:35:13.4±0.7,**51°7N**±0°.1×**178°54E**±0°.04,**h105**km±5km,
n210,σ1s12/210,mb4.0/31,Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GASW	**Gareloi Southw**	**1.62**	**88**		**Pn**	**05 35 41.3**	**0.0**
GASW					**Sn**	**05 36 02.8**	**+0.2**
GANO	**Gareloi North**	**1.65**	**86**		**Pn**	**05 35 41.6**	**-0.1**
GANO					**Sn**	**05 36 03.0**	**-0.3**
GAKI	**Gareloi-Kavalg**	**1.66**	**95**		**Pn**	**05 35 41.8**	**0.0**
GALAA	**Gareloi Lava P**	**1.67**	**88**		**Pn**	**05 35 42.2**	**+0.2**
GAEA	**Gareloi East**	**1.69**	**87**		**Pn**	**05 35 42.4**	**+0.3**
TASE	**Tanaga Southea**	**2.13**	**86**		**Pn**	**05 35 47.8**	**0.0**
TASE					**Sn**	**05 36 15.5**	**+1.4**
TAFP	**Tanaga Falls P**	**2.17**	**84**		**Pn**	**05 35 48.0**	**-0.2**
TAPA	**Tanaga Point A**	**2.27**	**87**		**Pn**	**05 35 49.6**	**0.0**
TAPA					**Sn**	**05 36 18.5**	**+1.2**
KIMD	**Kanaga Island**	**2.63**	**88**		**Pn**	**05 35 54.2**	**0.0**
KICM	**Kanaga Island**	**2.65**	**84**		**Pn**	**05 35 54.9**	**+0.4**
KIKV	**Kanaga Island**	**2.67**	**85**		**Pn**	**05 35 54.9**	**+0.1**
KIWB	**Kanaga Island**	**2.68**	**86**		**Pn**	**05 35 54.9**	**0.0**
SHEM	**Shemya Is, Ala**	**2.90**	**292**	P	**Pn**	**05 35 56.9**	**-0.9**
	121nm,0.3s,baz=48,slow=4.1,SNR=46						
SHEM				S	**Sn**	**05 36 32.4**	**+0.3**
	89nm,0.3s,baz=264,slow=22,SNR=7.2						
SHEM				LR	LR	05 36 48.6	
	comp=Z,147nm,18.4s,baz=102,slow=33						
SMY	**Shemya**	**2.90**	**292**		**Pn**	**05 35 56.5**	**-1.3**
SMY	**Shemya**	**2.90**	**292**		**Sn**	**05 36 30.9**	**-1.2**
ADK	**Adak**	**2.97**	**85**		**Pn**	**05 35 57.8**	**-0.9**
GSCK	**Great Sitkin C**	**3.30**	**83**		**Pn**	**05 36 02.9**	**-0.2**
GSTD	**Great Sitkin T**	**3.31**	**82**		**Pn**	**05 36 03.1**	**-0.2**
GSMY	**Great Sitkin M**	**3.36**	**83**		**Pn**	**05 36 03.8**	**-0.2**
GSTR	**Great Sitkin T**	**3.36**	**82**		**Pn**	**05 36 03.6**	**-0.4**
ATKA	**Atka Island**	**4.52**	**81**		**Pn**	**05 36 19.9**	**+0.4**
KOKL	**Mount Kliuchef**	**4.52**	**80**		**Pn**	**05 36 19.9**	**+0.3**
KOFP	**Korovin Flat P**	**4.58**	**80**		**Pn**	**05 36 20.8**	**+0.4**
NIKH	**Nikolski High**	**7.82**	**76**	Pn	**Pn**	**05 37 05.6**	**+1.4**
NIKH	**Nikolski High**	**7.82**	**76**	P	**Pn**	**05 37 05.3**	**+1.1**
	baz=268						
OKFG	**Magazine Ridge**	**8.42**	**73**		**Pn**	**05 37 14.6**	**+2.2**
SPIA	**Saint Paul Isl**	**8.50**	**46**	Pn	**Pn**	**05 37 15.7**	**+2.3**
SPIA	**Saint Paul Isl**	**8.50**	**46**	P	**Pn**	**05 37 14.6**	**+1.2**
	baz=236						
MNAT	**Makushin Natee**	**9.21**	**71**		**Pn**	**05 37 24.4**	**+1.4**
UNV	**Unalaska Valle**	**9.31**	**71**		**Pn**	**05 37 24.4**	**0.0**
UNV	**Unalaska Valle**	**9.31**	**71**	P	**Pn**	**05 37 23.9**	**-0.5**
	baz=265						
AKGG	**Akutan Green G**	**9.65**	**69**		**Pn**	**05 37 31.7**	**+2.6**
PETK	**Petropavlovsk-**	**12.79**	**284**	LR	LR	05 43 59.9	
	comp=Z,36nm,18.5s,baz=66,slow=41						
SDPT	**Sand Point**	**12.98**	**66**	Pn	**Pn**	**05 38 11.8**	**-1.8**
SDPT	**Sand Point**	**12.98**	**66**	P	**Pn**	**05 38 11.9**	**-1.7**
	baz=264						
CHNA	**Chernabura Isl**	**13.43**	**68**	P	**Pn**	**05 38 16.7**	**-2.7**
	baz=267						
O16K	**Kokwok River B**	**15.28**	**50**	P	**Pn**	**05 38 44.1**	**+1.0**
	baz=250						
N16K	**Nishlik Lake**	**15.31**	**46**	P	**Pn**

BPAW	**Bear Paw Mtn.**	**20.12**	**40**	P	**P**	**05 39 39.5**	**+0.9**
	baz=247							
H21K	**Melozitna Rive**	**20.13**	**35**	P	**P**	**05 39 40.0**	**+1.3**
H21K				IAmb	IAmb	05 39 40.9		
	comp=Z,5.2nm,0.8s							
H21K	**Melozitna Rive**	**20.13**	**35**	P	**P**	**05 39 40.0**	**+1.3**
	baz=240,SNR=7.2							
TRF	**Thorofare Moun**	**20.16**	**42**	P	**P**	**05 39 40.1**	**+1.0**
TRF				IAmb	IAmb	05 39 42.9		
	comp=Z,6.0nm,0.7s							
TRF	**Thorofare Moun**	**20.16**	**42**	P	**P**	**05 39 39.9**	**+0.7**
	baz=250							
I21K	**Tanana**	**20.20**	**37**	P	**P**	**05 39 40.0**	**+0.6**
I21K				IAmb	IAmb	05 39 41.8		
	comp=Z,6.1nm,0.8s							
I21K	**Tanana**	**20.20**	**37**	P	**P**	**05 39 40.3**	**+1.0**
	baz=243,SNR=7.0							
KNK	**Knik Glacier**	**20.37**	**49**	P	**P**	**05 39 41.0**	**-0.3**
	baz=257							
SML	**Sawmill**	**20.53**	**48**	P	**P**	**05 39 43.8**	**+0.8**
SML				IAmb	IAmb	05 39 46.4		
	comp=Z,6.2nm,0.7s							
SML	**Sawmill**	**20.53**	**48**	P	**P**	**05 39 42.6**	**-0.4**
	baz=256							
MLY	**Manley**	**20.61**	**38**	P	**P**	**05 39 45.3**	**+1.5**
MLY	**Manley**	**20.61**	**38**	P	**P**	**05 39 44.0**	**+0.2**
	baz=245							
P23K	**Montague Islan**	**20.61**	**53**	P	**P**	**05 39 43.6**	**-0.3**
	baz=262							
M23K	**Glacier View**	**20.80**	**48**	P	**P**	**05 39 45.9**	**0.0**
	baz=257							
GLI	**Glacier Island**	**20.91**	**51**	P	**P**	**05 39 47.2**	**+0.1**
GLI	**Glacier Island**	**20.91**	**51**	P	**P**	**05 39 46.3**	**-0.7**
	baz=260							
WAT6	**Susitna Watana**	**20.99**	**46**	P	**P**	**05 39 47.7**	**-0.4**
	baz=255,SNR=6.1							
SCM	**Sheep Creek Mo**	**21.00**	**48**	P	**P**	**05 39 48.4**	**+0.4**
SCM				IAmb	IAmb	05 39 50.4		
	comp=Z,16nm,1.1s							
SCM	**Sheep Creek Mo**	**21.00**	**48**	P	**P**	**05 39 48.5**	**+0.4**
	baz=257,SNR=7.6							
NEA2	**Nenana**	**21.08**	**40**	P	**P**	**05 39 49.0**	**+0.1**
	baz=248							
FID	**Port Fidalgo**	**21.18**	**51**	P	**P**	**05 39 49.5**	**-0.5**
EYAK	**Cordova Ski Ar**	**21.51**	**52**	P	**P**	**05 39 53.3**	**-0.1**
	baz=262							
MDM	**Murphy Dome**	**21.55**	**39**	P	**P**	**05 39 54.6**	**+0.6**
MDM				IAmb	IAmb	05 40 18.9		
	comp=Z,6.1nm,1.0s							
KLU	**Klutina**	**21.58**	**49**	P	**P**	**05 39 55.2**	**+1.0**
KLU	**Klutina**	**21.58**	**49**	P	**P**	**05 39 54.1**	**-0.1**
	baz=260							
M24K	**Tolsona, Glenn**	**21.59**	**48**	P	**P**	**05 39 55.6**	**+1.3**
M24K	**Tolsona, Glenn**	**21.59**	**48**	P	**P**	**05 39 54.6**	**+0.2**
	baz=258							
CCB	**Clear Creek Bu**	**21.61**	**40**	P	**P**	**05 39 55.4**	**+0.9**
HDA	**Harding Lake**	**21.88**	**41**	P	**P**	**05 39 58.3**	**+0.9**
HDA	**Harding Lake**	**21.88**	**41**	P	**P**	**05 39 57.2**	**-0.2**
	baz=252							
POKR	**Poker Flat Res**	**21.93**	**39**	P	**P**	**05 39 57.0**	**-0.9**
	baz=249							
ILAR	**Eielson Array**	**22.02**	**40**	P	**P**	**05 39 57.7**	**-1.1**
	comp=Z,0.8nm,0.5s,baz=238,slow=8.1,SNR=15							
ILAR				PcP	**PcP**	**05 43 52.9**	**+0.4**
	comp=Z,0.4nm,1.0s,baz=232,slow=4.4,SNR=2.3							
ILAR				ScP	**ScP**	**05 47 20.1**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=265,slow=3.2,SNR=6.3							
	comp=Z,0.8nm,0.5s							
H24K	**Noodor Dome**	**22.03**	**37**	P	**P**	**05 39 59.4**	**+0.4**
H24K				IAmb	IAmb	05 40 24.8		
	comp=Z,5.6nm,0.9s							
H24K	**Noodor Dome**	**22.03**	**37**	P	**P**	**05 39 59.1**	**+0.1**
	baz=247							
PAX	**Paxson**	**22.10**	**46**	P	**P**	**05 40 00.7**	**+0.9**
PAX				IAmb	IAmb	05 40 01.7		
	comp=Z,5.8nm,1.0s							
PAX	**Paxson**	**22.10**	**46**	P	**P**	**05 39 59.5**	**-0.3**
	baz=257,SNR=5.9							
HARP	**HAARP**	**22.11**	**47**	P	**P**	**05 39 59.6**	**-0.3**
	baz=258							
BMRM	**Bremner River**	**22.12**	**51**	P	**P**	**05 39 59.4**	**-0.6**
	baz=263							
K24K	**Donnelly Dome**	**22.18**	**43**	P	**P**	**05 40 00.2**	**-0.3**
	baz=254							
N25K	**Chitina, Valde**	**22.23**	**49**	P	**P**	**05 40 00.2**	**-0.9**
	baz=261							
RIDG	**Independent Ri**	**22.57**	**44**	P	**P**	**05 40 04.5**	**0.0**
	baz=256,SNR=5.2							
GLB	**Gilahina Butte**	**22.57**	**50**	P	**P**	**05 40 03.9**	**-0.7**
GLB				IAmb	IAmb	05 40 07.5		
	comp=Z,7.7nm,1.0s							
J25K	**Salcha River,**	**22.59**	**41**	P	**P**	**05 40 03.2**	**-1.5**
J25K	**Salcha River,**	**22.59**	**41**	P	**P**	**05 40 04.0**	**-0.8**
	baz=253							
TOLK	**Toolik Lake Re**	**22.76**	**30**	P	**P**	**05 40 07.5**	**+1.1**
TOLK				IAmb	IAmb	05 40 09.0		
	comp=Z,4.3nm,0.7s							
TOLK	**Toolik Lake Re**	**22.76**	**30**	P	**P**	**05 40 06.7**	**+0.3**
	baz=238							
DOT	**Dot Lake**	**22.88**	**44**	P	**P**	**05 40 08.1**	**+0.5**
DOT				IAmb	IAmb	05 40 09.2		
	comp=Z,4.7nm,0.8s							
MCARA	**McCarthy VSAT**	**22.94**	**50**	P	**P**	**05 40 06.7**	**-1.4**
	baz=263							
SCRK	**Sand Creek**	**23.00**	**43**	P	**P**	**05 40 07.8**	**-1.0**
SCRK	**Sand Creek**	**23.00**	**43**	P	**P**	**05 40 07.4**	**-1.4**
	baz=256							
L26K	**Log Cabin Wild**	**23.06**	**46**	P	**P**	**05 40 10.6**	**+1.3**
L26K	**Log Cabin Wild**	**23.06**	**46**	P	**P**	**05 40 09.1**	**-0.3**
	baz=259,SNR=5.8							
M26K	**Nabesna, AK**	**23.10**	**48**	P	**P**	**05 40 09.0**	**-0.8**
	baz=261							
ISLE	**Juniper Island**	**23.19**	**52**	P	**P**	**05 40 10.4**	**-0.3**
ISLE				IAmb	IAmb	05 40 17.8		
	comp=Z,7.4nm,0.8s							
J26L	**Joseph Creek**	**23.31**	**42**	P	**P**	**05 40 11.2**	**-0.6**
J26L	**Joseph Creek**	**23.31**	**42**	P	**P**	**05 40 10.9**	**-0.8**
	baz=255,SNR=7.1							
MESA	**MESA**	**23.35**	**53**	P	**P**	**05 40 12.6**	**+0.3**
MESA	**MESA**	**23.35**	**53**	P	**P**	**05 40 11.3**	**-1.0**
	baz=267							
GRNC	**Granite Creek**	**23.49**	**52**	P	**P**	**05 40 13.9**	**+0.4**
BARN	**Barnard Glacie**	**23.56**	**51**	P	**P**	**05 40 14.4**	**+0.2**
M27K	**Edge Creek, AK**	**23.61**	**48**	P	**P**	**05 40 16.0**	**+1.4**
M27K				IAmb	IAmb	05 40 16.9		
	comp=Z,5.2nm,1.0s							
M27K	**Edge Creek, AK**	**23.61**	**48**	P	**P**	**05 40 14.8**	**+0.3**
	baz=262,SNR=5.1							
CTG	**Chitna Glacier**	**23.71**	**51**	P	**P**	**05 40 15.3**	**-0.1**
	baz=266,SNR=6.5							
CTGM	**Chitina Glacie**	**23.71**	**51**	P	**P**	**05 40 15.3**	**-0.2**
BCAR	**Beaver Creek A**	**23.77**	**46**	P	**P**	**05 40 16.8**	**+0.9**
K27K	**Chicken**	**23.83**	**44**	P	**P**	**05 40 16.0**	**-0.3**
	baz=258							
LOGN	**Logan Glacier**	**23.86**	**52**	P	**P**	**05 40 16.4**	**-0.4**
PCA	**Pinnacle**	**24.19**	**54**	P	**P**	**05 40 19.6**	**-0.2**
PCA				IAmb	IAmb	05 40 21.4		
	comp=Z,12nm,0.8s							
PINM	**Pinnacle**	**24.20**	**54**	P	**P**	**05 40 19.2**	**-0.6**
	baz=269							
YUK3	**Moose Creek**	**24.20**	**50**	P	**P**	**05 40 19.5**	**-0.4**
	baz=265,SNR=17							
YUK8	**Steele Glacier**	**24.49**	**51**	P	**P**	**05 40 23.0**	**+0.3**
	baz=267,SNR=10							
PNL	**Peninsula**	**24.62**	**55**	P	**P**	**05 40 22.8**	**-0.8**
	baz=270							
DAWY	**Dawson**	**24.99**	**44**	P	**P**	**05 40 27.9**	**+1.0**
DAWY				IAmb	IAmb	05 40 51.9		
	comp=Z,5.6nm,0.8s							
DAWY	**Dawson**	**24.99**	**44**	P	**P**	**05 40 27.1**	**+0.2**
	baz=261,SNR=6.7							
YUK4	**Talbot Arm**	**25.04**	**51**	P	**P**	**05 40 27.4**	**-0.1**
	baz=267							
YUK6	**Outpost Mounta**	**25.16**	**52**	P	**P**	**05 40 28.1**	**-0.6**
	baz=269							
HYT	**Haines Junctio**	**25.57**	**52**	P	**P**	**05 40 32.5**	**+0.2**
	baz=270,SNR=7.0							
I29M	**Ogilvie Camp,**	**25.68**	**41**	P	**P**	**05 40 32.8**	**-0.3**
	baz=259							
N30M	**Aishikik Lake**	**25.79**	**51**	P	**P**	**05 40 33.5**	**-0.6**
	baz=269,SNR=6.5							
M30M	**Minto, Yukon**	**25.98**	**48**	P	**P**	**05 40 35.9**	**0.0**
	baz=267							
P33M	**Teslin, Yukon**	**27.91**	**53**	P	**P**	**05 40 52.1**	**-1.0**
	baz=275							
INK	**Inuvik**	**28.13**	**36**	LR	LR	05 52 16.5		
	comp=Z,38nm,18.3s,baz=180,slow=36							

KLR	**Kul'dur**	**29.48**	**284**	P	**P**	**05 41 08.4**	**+1.3**
	comp=Z,1.0nm,0.4s,baz=91,slow=5.5,SNR=3.5							
	comp=Z,1.0nm,0.4s							
DLBC	**Dease Lake**	**29.54**	**57**	P	**P**	**05 41 08.3**	**+0.6**
	comp=Z,2.0nm,0.8s,baz=243,slow=4.6,SNR=3.6							
	comp=Z,2.0nm,0.8s							
DLBC	**Dease Lake**	**29.54**	**57**	IAmb	IAmb	05 41 12.2		
	comp=Z,2.7nm,0.9s							
H11N2	**WAKE ISLAND Hy**	**33.23**	**200**	T	T	06 17 05.3		
	baz=11,slow=76,SNR=34							
H11N3	**WAKE ISLAND Hy**	**33.23**	**200**	T	T	06 17 07.8		
	baz=11,slow=76,SNR=28							
H11N1	**WAKE ISLAND Hy**	**33.24**	**200**	T	T	06 17 08.1		
	baz=11,slow=76,SNR=28							
H11S1	**WAKE ISLAND Hy**	**34.45**	**200**	T	T	06 18 47.6		
	baz=19							
H11S2	**WAKE ISLAND Hy**	**34.47**	**200**	T	T	06 18 46.0		
	baz=19,slow=74							
H11S3	**WAKE ISLAND Hy**	**34.47**	**200**	T	T	06 18 47.2		
	baz=19,slow=74							
YKA	**Yellowknife Ar**	**36.19**	**46**	P	**P**	**05 42 05.8**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=282,slow=9.1,SNR=22							
YKA				pP	**pP**	**05 42 28.6**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=282,slow=8.1,SNR=4.0							
YKA				PcP	**PcP**	**05 44 27.9**	**-0.3**
	comp=Z,0.2nm,0.8s,baz=297,slow=2.7,SNR=1.8							
YKA				ScP	**ScP**	**05 48 03.2**	**-1.5**
	comp=Z,0.3nm,0.8s,baz=266,slow=3.0,SNR=2.8							
	comp=Z,0.4nm,0.3s							
YKA	**Yellowknife Ar**	**36.19**	**46**	P	**P**	**05 42 05.1**	**-0.1**
D03D	**Eldon**	**37.16**	**73**	P	**P**	**05 42 11.9**	**-1.9**
	baz=299							
NEW	**Newport**	**40.31**	**69**	P	**P**	**05 42 39.7**	**-0.4**
	comp=Z,1.4nm,0.5s,baz=291,slow=6.2,SNR=6.9							
	comp=Z,1.4nm,0.5s							
NEW	**Newport**	**40.31**	**69**	IAmb	IAmb	05 42 42.0		
	comp=Z,1.3nm,0.6s							
NEW	**Newport**	**40.31**	**69**	P	**P**	**05 42 38.2**	**-1.9**
	baz=300							
HLID	**Hailey**	**44.43**	**73**	P	**P**	**05 43 11.4**	**-2.3**
	baz=306							
BOZ	**Bozeman (W)**	**44.91**	**69**	P	**P**	**05 43 15.3**	**-2.1**
	baz=305							
NVAR	**Mina Array Bea**	**45.15**	**81**	P	**P**	**05 43 20.6**	**+1.1**
	comp=Z,2.2nm,0.6s,baz=296,slow=7.3,SNR=27							
NVAR				pP	**pP**	**05 43 45.0**	**+1.3**
	comp=Z,0.9nm,0.7s,baz=311,slow=8.2,SNR=4.3							
	comp=Z,2.2nm,0.6s							
NVAR	**Mina Array Bea**	**45.15**	**81**	P	**P**	**05 43 20.4**	**+0.9**
HHC	**Hu-ho-hao-te**	**45.99**	**284**	eP	**P**	**05 43 23.6**	**-2.3**
HHC				pmax	pmax			
	comp=Z,15nm,0.8s							
HHC				pmax	pmax			
	comp=Z,160nm,7.8s							
R11A	**Troy Canyon, C**	**46.86**	**80**	P	**P**	**05 43 29.8**	**-3.1**
	baz=309,SNR=5.1							
TPNV	**Topopah Spring**	**47.34**	**81**	P	**P**	**05 43 34.3**	**-2.4**
	baz=310,SNR=6.0							
DUG	**Dugway, Tooele**	**47.40**	**76**	P	**P**	**05 43 35.2**	**-1.8**
	baz=309							
LRMC	**Laurel Mtn Rad**	**47.41**	**84**	P	**P**	**05 43 34.5**	**-2.6**
	baz=311							
BW06	**Boulder Array**	**47.77**	**71**	P	**P**	**05 43 37.3**	**-2.6**
	baz=308							
PDAR	**Pinedale Array**	**47.77**	**71**	P	**P**	**05 43 39.8**	**-0.1**
	comp=Z,1.2nm,0.6s,baz=315,slow=3.4,SNR=11							
	comp=Z,1.2nm,0.6s							
SHOC	**Shoshone, Teco**	**48.01**	**83**	P	**P**	**05 43 38.8**	**-2.8**
	baz=311							
GSC	**Goldstone, Bar**	**48.07**	**84**	P	**P**	**05 43 39.3**	**-2.8**
	baz=311,SNR=6.0							
GMRC	**Granite Mounta**	**49.11**	**83**	P	**P**	**05 43 48.1**	**-2.1**
	baz=312							
XAN	**Xi'an**	**51.96**	**279**	P	**P**	**05 44 13.3**	**+1.8**
XAN				pP	pP	05 44 27.5	-8.9
XAN				pmax	pmax			
	comp=Z,7.0nm,1.1s							
ZALV	**Zalesovo Beam**	**52.56**	**312**	PcP	**PcP**	**05 45 24.0**	**-0.4**
	comp=Z,1.2nm,0.6s,baz=45,slow=2.2,SNR=4.0							
TUC	**Tucson**	**53.78**	**82**	P	**P**	**05 44 22.9**	**-2.1**
	baz=314							
KURK	**Kurchatov**	**57.56**	**312**	P	**P**	**05 44 52.9**	**+1.4**
KURK	**Kurchatov**	**57.56**	**312**		**PcP**	**05 45 44.7**	**+1.0**
KURK	**Kurchatov**	**57.56**	**312**	IAmb	IAmb	05 44 54.0		
	comp=Z,3.1nm,0.5s							
KURBB	**Kurchatov Arra**	**57.66**	**312**	P	**P**	**05 44 52.9**	**+0.6**
	comp=Z,2.0nm,0.6s,baz=41,slow=6.7,SNR=17							
KURBB				pP	**pP**	**05 45 16.9**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=43,slow=6.7,SNR=2.8							
KURBB				PcP	**PcP**	**05 45 44.7**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=50,slow=3.1,SNR=6.0							
	comp=Z,2.0nm,0.6s							
WMQ	**Urumqi**	**57.74**	**301**	eP	**P**	**05 44 54.7**	**+1.7**
MK31	**Makanchi Array**	**58.50**	**307**	P	**P**	**05 44 57.9**	**-0.3**
MK31				IAmb	IAmb	05 45 04.1		
	comp=Z,1.8nm,1.4s							
MKAR	**Makanchi Array**	**58.50**	**307**	P	**P**	**05 44 58.2**	**0.0**
	comp=Z,0.6nm,0.4s,baz=54,slow=5.6,SNR=8.4							
	comp=Z,0.6nm,0.4s							
TXAR	**Lajitas Array**	**60.23**	**79**	P	**P**	**05 45 11.3**	**+0.9**
	comp=Z,0.9nm,0.6s,baz=304,slow=5.1,SNR=15							
	comp=Z,0.9nm,0.6s							
ARU	**Arti**	**61.41**	**327**	P	**P**	**05 45 18.3**	**+0.5**
	comp=Z,2.2nm,0.4s,baz=360,slow=6.4,SNR=3.8							
	comp=Z,2.2nm,0.4s							
ARU	**Arti**	**61.41**	**327**	IAmb	IAmb	05 45 19.6		
	comp=Z,3.7nm,0.5s							
PZH	**PanZhiHua**	**61.65**	**278**	P	**P**	**05 45 18.7**	**-1.4**
PZH				pmax	pmax			
	comp=Z,7.0nm,0.9s							
PZH				pmax	pmax			
	comp=Z,100nm,5.1s							
MIAR	**Mount Ida**	**62.55**	**68**	P	**P**	**05 45 24.1**	**-1.7**
	baz=316							
AKTO	**Aktyubinsk**	**66.41**	**323**	P	**P**	**05 45 51.7**	**+0.9**
	comp=Z,4.3nm,0.7s,baz=62,slow=8.3,SNR=11							
	comp=Z,4.3nm,0.7s							
ABKAR	**Akbulak array**	**66.63**	**321**	P	**P**	**05 45 53.3**	**+1.2**
ABKAR	**Akbulak array**	**66.63**	**321**	P	**P**	**05 45 53.5**	**+1.3**
ABKAR				IAmb	IAmb	05 45 55.2		
	comp=Z,1.2nm,0.7s							
BELG	**Belogornoye**	**68.33**	**330**	LR	LR	06 19 25.0		
	comp=Z,35nm,18.4s,baz=192,slow=39							
CMAR	**Chiang Mai Arr**	**69.33**	**274**	P	**P**	**05 46 10.6**	**+1.1**
	comp=Z,0.7nm,0.3s,baz=21,slow=6.8,SNR=4.5							
	comp=Z,0.7nm,0.3s							
WRA	**Warramunga Arr**	**81.15**	**222**	P	**P**	**05 47 18.2**	**+1.2**
	comp=Z,1.4nm,0.5s,baz=32,slow=6.0,SNR=24							
	comp=Z,1.4nm,0.5s							
ASAR	**Alice Springs**	**84.66**	**220**	P	**P**	**05 47 36.9**	**+1.8**
	comp=Z,1.7nm,0.7s,baz=25,slow=5.5,SNR=17							
	comp=Z,1.7nm,0.7s							
STKA	**Stephens Creek**	**89.36**	**211**	P	**P**	**05 47 59.9**	**+2.4**
	comp=Z,2.6nm,0.6s,baz=338,slow=6.9,SNR=8.9							
	comp=Z,2.6nm,0.6s							
TORD	**Torodi Ar. Bea**	**115.33**	**357**	PKP	**PKiKP**	**05 53 42.2**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=342,slow=3.4,SNR=5.0							
MAW	**Mawson**	**145.75**	**218**	PKPbc	**PKPab**	**05 54 39.9**	**+0.8**
	comp=Z,3.6nm,0.9s,baz=61,slow=8.7,SNR=3.6							
BOSA	**Boshof**	**149.48**	**309**	PKPbc	**PKiKP**	**05 54 51.2**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=90,slow=1.6,SNR=6.3							

TAP 03 05:36:03.6, 24.26N×121.67E, h7km, ML1.6, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.08**	**55**	eP	Pg	05 36 06.3	+0.7
	baz=59					2.9nm,0.7s	
NACB	**Ninganchiao**	**0.11**	**217**		Pg	05 36 06.8	+0.7
NACB	**Ninganchiao**	**0.11**	**217**	eP	Pg	05 36 06.8	+0.6
	baz=217						
NACB				eS	Sg	05 36 09.1	+1.3
	baz=217						
ENA	**Nanau**	**0.18**	**22**	P	Pg	05 36 07.9	+0.6
	baz=24						
ENA				eS	Sg	05 36 11.1	+1.4
	baz=24						
ETLH	**Xiulin Townshi**	**0.18**	**252**	P	Pg	05 36 08.3	+0.9
	baz=251						
ETLH				S	Sg	05 36 11.6	+1.8
	baz=251						
TWD	**Chiawan**	**0.20**	**200**	eS	Sg	05 36 12.2	+2.0
	baz=197						
LATG	**Datong**	**0.30**	**334**	P	Pb	05 36 10.9	-0.6
	baz=334						
LATG				eS	Sb	05 36 16.2	-0.4
	baz=334						
NNSB	**Datong**	**0.31**	**302**	P	Pb	05 36 10.8	-0.8
	baz=302						
NNSB				eS	Sb	05 36 16.0	-0.9
	baz=302						
NDS	**Dongshan**	**0.37**	**7**	eP	Pg	05 36 11.4	+0.5
	baz=6.0						
NDS				eS	Sb	05 36 17.8	-0.8
	baz=6.0						
TWC	**Suao**	**0.38**	**25**	eS	Sb	05 36 18.7	-0.2
	baz=26						
FUSS	**Fushou**	**0.39**	**268**	eS	Sb	05 36 18.0	-1.3
	baz=267						
TWT	**Tachien**	**0.45**	**269**	eS	Sb	05 36 21.4	+0.3
	baz=268						
TDCB	**Techi**	**0.47**	**269**	eS	Sb	05 36 22.2	+0.7
	baz=268						
YHNB	**Yeheng**	**0.48**	**327**	eP	Pb	05 36 14.4	-0.1
	baz=326						
YHNB				S	Sb	05 36 22.2	+0.2
	baz=326						
CHGB	**Renai**	**0.50**	**246**	eP	Pb	05 36 14.7	-0.2
	baz=245						
CHGB				eS	Sb	05 36 22.0	-0.4
	baz=245						
NSK	**Sanguang**	**0.50**	**325**	eP	Pb	05 36 14.6	-0.2
	baz=325						
NSK				eS	Sb	05 36 21.9	-0.4
	baz=325						
NWLT	**Wulai**	**0.53**	**344**	eP	Pb	05 36 15.6	+0.2
	baz=343						
NWLT				eS	Sb	05 36 23.5	+0.2
	baz=343						
WUSB	**Renai**	**0.57**	**242**	eS	Sb	05 36 24.9	+0.4
	baz=241						
SSLB	**Suanglung**	**0.81**	**234**	eP	Pb	05 36 20.0	0.0
	baz=234						

*SNET **03** 05:47:23.7±1.3, 12°.26N×89°.22W, h10km±20km, ML3.5*
*INET **03** 05:47:24.5±3.6, 12°.15N×89°.35W, h15km, MW3.0*
*IDC **03** 05:47:27.6±1.3, 13°.08N×88°.95W, h0km, mb3.6/6, mbtmp3.6/8, ML2.9/2, Error ellipse: s-maj=40.0km s-min=21.8km az=58.0*

ISC 03 05:47:27.8±0.9, 12°.59N±0°.07×89°.22W±0°.06, h10km, n28, σ2s01/28, mb3.7/6, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**0.90**	**353**	eP	**Pg**	**05 47 46.2**	**+1.0**
LALI				eS	**Sn**	**05 48 02.5**	**+2.8**
SJTE	**Alcalda de S**	**1.04**	**11**	eP	**Pg**	**05 47 47.4**	**-0.5**
COEG	**Centro de Oper**	**1.07**	**18**	eP	**Pg**	**05 47 48.6**	**0.0**
COEG				IAML		05 48 14.6	
	comp=Z,655nm,0.4s						
JAYA	**Jayaque - finc**	**1.08**	**348**	eP	**Pg**	**05 47 47.8**	**-0.9**
JAYA				IAML		05 48 07.9	
	comp=Z,823nm,0.2s						
SNET	**Serv Nac Est T**	**1.09**	**359**	eP	**Pg**	**05 47 50.2**	**+1.4**
COEB	**Comit de Eme**	**1.12**	**36**	eP	**Pg**	**05 47 49.0**	**-0.5**
PAVA	**Las Pavas**	**1.15**	**14**	eP	**Pg**	**05 47 49.9**	**-0.1**
PAVA	**Las Pavas**	**1.15**	**14**	eP	**Pg**	**05 47 50.9**	**+0.9**
SCLA	**Alcaldia de Sa**	**1.20**	**23**	eP	**Pb**	**05 47 50.1**	**-0.7**
CEDA	**San Andres**	**1.22**	**352**	eP	**Pb**	**05 47 51.8**	**+0.7**
CEDA				IAML		05 48 23.2	
	comp=Z,952nm,0.5s						
CEDA	**San Andres**	**1.22**	**352**	eP	**Pb**	**05 47 51.7**	**+0.7**
PACA	**Pacayal**	**1.23**	**45**	eP	**Pn**	**05 47 53.4**	**+2.1**
CEVE	**Cerro Verde**	**1.29**	**342**	eP	**Pn**	**05 47 52.9**	**+0.7**
NUBE	**Las Nubes**	**1.42**	**337**	eP	**Pn**	**05 47 52.5**	**-1.3**
NUBE				IAML		05 48 18.3	
	comp=Z,445nm,0.5s						
LCND	**La Caada**	**1.48**	**61**	eP	**Pn**	**05 47 52.8**	**-1.8**
SLOZ	**Alcaldia de Sa**	**1.53**	**339**	eP	**Pn**	**05 47 54.9**	**-0.4**
FAGO	**Alcalda de S**	**1.54**	**44**	eP	**Pn**	**05 47 54.1**	**-1.3**
CRIN	**San Cristobal**	**2.12**	**87**	eP	**Pn**	**05 48 02.3**	**-1.1**
CNGN	**Cerro Negro**	**2.46**	**92**	eP	Pn	05 48 03.5	-4.6
JTS	**Las Juntas de**	**4.76**	**118**	Pn	**Pn**	**05 48 41.3**	**+1.5**
	comp=Z,0.7nm,0.3s,baz=45,slow=23,SNR=2.0						
JTS				Sn	**Sn**	**05 49 33.1**	**-2.0**
	comp=Z,0.7nm,0.3s,baz=328,slow=17,SNR=4.1						
	comp=Z,1.9nm,0.3s						
CMIG	**Matias Romero**	**7.08**	**310**	Pn	**Pn**	**05 49 11.9**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=192,slow=5.1,SNR=1.6						
CMIG				Sn	**Sn**	**05 50 26.7**	**-5.4**
	comp=Z,0.2nm,0.3s,baz=355,slow=5.8,SNR=1.3						
	comp=Z,0.9nm,0.4s						
TXAR	**Lajitas Array**	**21.40**	**323**	P	**P**	**05 52 14.2**	**-1.8**
	comp=Z,1.1nm,0.7s,baz=130,slow=11,SNR=18						
	comp=Z,1.1nm,0.7s						
TKL	**Tuckaleechee C**	**23.49**	**11**	P	**P**	**05 52 34.4**	**-3.5**
	comp=Z,2.9nm,0.8s,baz=181,slow=12,SNR=4.7						
	comp=Z,2.9nm,0.8s						
NVAR	**Mina Array Bea**	**36.48**	**320**	P	**P**	**05 54 34.1**	**+0.6**
	comp=Z,0.4nm,0.8s,baz=144,slow=6.3,SNR

ASAR	**Alice Springs**	**56.82**	**188**	P		**P**	**06 01 53.7**	**-0.8**
	0.4nm,0.4s,baz=3.0,slow=6.9,SNR=13							
	0.4nm,0.4s							
YKA	**Yellowknife Ar**	**67.48**	**29**	P		**P**	**06 03 05.3**	**-0.2**
	0.2nm,0.5s,baz=298,slow=6.2,SNR=4.1							
	0.2nm,0.5s							
TXAR	**Lajitas Array**	**92.93**	**52**	P		**P**	**06 05 23.7**	**+0.4**
	0.3nm,0.6s,baz=300,slow=3.2,SNR=6.1							
	0.3nm,0.6s							

*MDD **03** 05:57:19.9±0.3,35˚.64N×3˚.63W, h0km, mb_Lg2.4/12, Error ellipse: s-maj=3.5km s-min=2.4km az=20.0*
*SFS **03** 05:57:19.0,35˚.63N×3˚.63W, ML2.4, ALBORAN SUR*
*IGIL **03** 05:57:20.3,35˚.64N×3˚.63W, h1km*
*CNRM **03** 05:57:20.4,35˚.65N×3˚.62W, h31km, ml2.8*
*INMG **03** 05:57:20.4±1.1,35˚.58N×3˚.64W, h10km, ML2.0, Error ellipse: s-maj=3.7km s-min=2.0km az=29.0*

ISC 03 05:57:18.1±1.2,35˚.64N±0˚.02×3˚.64W±0˚.02, h4km±10km, n45, σ1§34/76, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.49**	**210**	P	**Pn**	**05 57 31.0**	**-0.9**
PALE	**Palemas**	**0.49**	**210**	*e*P	**Pn**	**05 57 31.0**	**-0.9**
PALE				S	**Sb**	**05 57 38.1**	**+1.4**
EALB	**Alboran**	**0.57**	**58**	Pg	**Pb**	**05 57 31.4**	**+0.7**
EALB				Sg	**Sb**	**05 57 39.7**	**+0.5**
EALB				*i* Vmb_Lg		05 57 40.7	
WMELI	**Melilla**	**0.65**	**120**	P	**Pb**	**05 57 32.3**	**+0.4**
WMELI				S	**Sg**	**05 57 40.1**	**+1.2**
EMEL	**Melilla**	**0.65**	**121**	Pg	**Pb**	**05 57 32.3**	**+0.3**
EMEL				Sg	**Sb**	**05 57 40.7**	**-0.8**
GOG	**Mont Gurugu**	**0.67**	**128**	P	**Pb**	**05 57 33.0**	**+0.6**
GOG	**Mont Gurugu**	**0.67**	**128**	P	**Pb**	**05 57 33.0**	**+0.6**
GOG				S	**Sb**	**05 57 41.3**	**-0.7**
PVLZ	**Peæn de**	**0.71**	**229**	P	**Pn**	**05 57 34.4**	**-0.5**
PVLZ				S	**Sb**	**05 57 44.6**	**+1.4**
CHAS	**Isla Isabel II**	**1.09**	**114**	P	**Pg**	**05 57 38.2**	**-0.8**
CHAS				S	**Sg**	**05 57 53.0**	**0.0**
ELGU	**Los Guajares,**	**1.23**	**0**	Pg	**Pg**	**05 57 41.3**	**-0.3**
ELGU				Sg	**Sg**	**05 57 56.9**	**-0.6**
ELGU				*i* Vmb_Lg		05 58 03.5	
TAF	**Taforalt**	**1.30**	**129**	P	**Pg**	**05 57 42.4**	**-0.6**
TAF	**Taforalt**	**1.30**	**129**	P	**Pg**	**05 57 42.0**	**-1.0**
TAF				S	**Sg**	**05 57 59.7**	**-0.1**
EMIJ	**Mijas**	**1.30**	**315**	Pg	**Pn**	**05 57 42.7**	**-0.4**
EMIJ				Sg	**Sg**	**05 57 59.2**	**-0.8**
EMIJ				*i* Vmb_Lg		05 58 00.2	
EBER	**Berja**	**1.39**	**26**	Pn	**Pn**	**05 57 44.2**	**-0.3**
EBER				Sn	**Sg**	**05 58 02.4**	**-0.5**
EBER				*i* Vmb_Lg		05 58 04.8	
SMIR	**Smir Dam**	**1.42**	**272**	P	**Pn**	**05 57 44.0**	**-0.7**
SMIR	**Smir Dam**	**1.42**	**272**	P	**Pn**	**05 57 43.1**	**-1.6**
SMIR				S	**Sb**	**05 58 01.9**	**-1.7**
CEU	**Ceuta**	**1.43**	**281**	P	**Pn**	**05 57 40.9**	**-4.0**
CEU				S	**Sb**	**05 58 00.3**	**-3.6**
CHEFC	**Chefchaouen**	**1.49**	**250**	P	**Pg**	**05 57 47.0**	**+0.3**
CHEFC				S	**Sg**	**05 58 07.9**	**+1.9**
EGOR	**Sierra Gorda,**	**1.52**	**346**	Pn	**Pb**	**05 57 46.6**	**-0.2**
EGOR				Sn	**Sg**	**05 58 07.7**	**+0.9**
EGOR				*i* Vmb_Lg		05 58 12.0	
JBK	**JBK**	**1.57**	**146**	P	**Pn**	**05 57 46.2**	**-0.7**
JBK	**JBK**	**1.57**	**146**	P	**Pn**	**05 57 46.3**	**-0.7**
JBK				S	**Sn**	**05 58 04.0**	**-3.8**
ENIJ	**Nijar**	**1.76**	**41**	Sn	**Sn**	**05 58 11.5**	**-0.7**
IFR	**Ifrane**	**2.45**	**211**	P	**Pn**	**05 57 59.5**	**+0.5**
IFR				S	**Sn**	**05 58 29.0**	**-0.4**
EADA	**Adamuz**	**2.63**	**344**	Pn	**Pn**	**05 58 03.2**	**+1.8**
EADA				*i* Vmb_Lg		05 58 43.1	
ECAB	**El Cabril**	**2.82**	**330**	Pn	**Pn**	**05 58 05.9**	**+1.9**
ECAB				Sn	**Sn**	**05 58 39.9**	**+1.5**
ECAB				Sg	**Sg**	**05 58 47.2**	**-1.4**
MD31	**MD31**	**2.92**	**199**	P	**Pn**	**05 58 06.8**	**+1.5**
MD31				S	**Sn**	**05 58 42.2**	**+1.4**
MDT	**Midelt**	**2.93**	**196**	P	**Pn**	**05 58 05.8**	**+0.2**
MDT				S	**Sn**	**05 58 42.6**	**+1.4**
EMIN	**Mina Concepcio**	**3.23**	**312**	Pn	**Pn**	**05 58 10.6**	**+1.0**
EMIN				Sn	**Sn**	**05 58 47.8**	**-0.7**
ZHG	**ZHG**	**3.31**	**229**	P	**Pn**	**05 58 10.7**	**0.0**
ZHG				S	**Sn**	**05 58 53.2**	**+2.8**
ETOB	**Tobarra**	**3.43**	**28**	Pn	**Pn**	**05 58 14.1**	**+1.7**
ETOB				*i* Vmb_Lg		05 58 28.7	
EGRO	**El Granado**	**3.63**	**303**	Pn	**Pn**	**05 58 15.9**	**+0.9**
EGRO				Sn	**Sn**	**05 58 58.1**	**-0.1**
EGRO				*i* Vmb_Lg		05 59 01.2	
PBAR	**Barrancos**	**3.72**	**314**	*e*Sn	**Sn**	**05 58 59.8**	**-0.7**
PVAQ	**Vaqueiros**	**3.73**	**299**	*e*Pn	**Pn**	**05 58 17.4**	**+1.0**
PVAQ				*e*Sn	**Sn**	**05 59 00.2**	**-0.5**
PVAQ				A	A	05 59 06.2	
	2.2nm,0.5s						
PBDV	**Barranco-do-Ve**	**3.81**	**296**	*e*Pn	**Pn**	**05 58 18.1**	**+0.5**
PBDV				*e*Sn	**Sn**	**05 59 01.8**	**-1.1**
PBDV				A	A	05 59 06.3	
	3.1nm,0.6s						
PAB	**San Pablo**	**3.94**	**352**	Pn	**Pn**	**05 58 20.7**	**+1.3**
PAB				*i* Vmb_Lg		05 59 46.3	
PCVE	**Castro Verde**	**4.06**	**301**	*e*Pn	**Pn**	**05 58 21.9**	**+0.9**
EBAD	**Badajoz**	**4.11**	**320**	Pn	**Pn**	**05 58 22.9**	**+1.2**
EBAD				Sn	**Sn**	**05 59 10.0**	**-0.3**
EBAD				*i* Vmb_Lg		05 59 12.5	
MESJ	**Messejana**	**4.29**	**302**	*e*P	**Pn**	**05 58 24.8**	**+0.8**
EVO	**Evora**	**4.53**	**311**	*e*Pn	**Pn**	**05 58 29.1**	**+1.6**
EVO				*e*Sn	**Sn**	**05 59 19.9**	**-0.7**
EVO				A	A	05 59 22.5	
	2.2nm,0.4s						
PNCL	**Nicolau / Gran**	**4.63**	**304**	*e*Pn	**Pn**	**05 58 29.7**	**+0.9**
PNCL				*e*Sn	**Sn**	**05 59 21.9**	**-1.1**
PMRV	**Marv??o**	**4.82**	**323**	*e*Pn	**Pn**	**05 58 33.7**	**+2.3**
PMRV				*e*Sn	**Sn**	**05 59 26.9**	**-0.7**
PMTG	**Montargil**	**5.01**	**314**	*e*Pn	**Pn**	**05 58 35.1**	**+1.1**
PMTG				*e*Sn	**Sn**	**05 59 32.0**	**-0.2**
TZRR	**Tazzarine**	**5.11**	**199**	S	**Sn**	**05 59 34.4**	**-0.5**
TZRR	**Tazzarine**	**5.11**	**199**	S	**Sn**	**05 59 34.4**	**-0.5**
PCBR	**Castelo Branco**	**5.18**	**325**	*e*Pn	**Pn**	**05 58 39.2**	**+2.9**

*IDC **03** 06:07:11.6±3.2,54˚.46N×87˚.11E, h0km, mbtmp2.8/2, ML2.5/2, Error ellipse: s-maj=28.7km s-min=20.7km az=48.0*

NNC 03 06:07:07.0±2.6,54˚.64N×87˚.28E, h0km, mb3.0, mpv2.7, 5C-3D, Error ellipse: s-maj=16.4km s-min=11.4km az=65.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.60**	**245**	*i*		06 15 38.3	
	baz=68,slow=318,SNR=3.6						
ZAA0	**Zalesovo Array**	**1.60**	**245**	⇑P	Pn	06 07 36.1	-0.5
	0.2nm,0.3s,baz=64,slow=17						
ZAA0				⇑S	Sg	06 07 58.4	0.0
	0.7nm,0.3s,baz=63,slow=27						
ZALV	**Zalesovo Beam**	**1.60**	**245**	Pg	Pn	06 07 36.4	-0.2
	1.3nm,0.3s,baz=68,slow=16,SNR=12						
ZALV				Lg	Lg	06 07 57.7	
	0.9nm,0.3s,baz=71,slow=26,SNR=4.7						
KURK	**Kurchatov**	**6.57**	**237**	⇑Pn	Pn	06 08 45.4	+0.6
	2.7nm,1.1s						
KURK				⇓Sn	Sn	06 09 59.7	-0.7
	1.9nm,1.2s						
KURK				⇑Lg	Lg	06 10 33.9	
	1.9nm,1.4s						
KURBB	**Kurchatov Arra**	**6.67**	**236**	Pn	Pn	06 08 49.0	+2.8
	0.1nm,0.3s,baz=54,slow=14,SNR=9.3						
KURBB				Lg	Lg	06 10 36.7	
	baz=57,slow=32,SNR=2.9						
	0.9nm,0.5s						
KURBB	**Kurchatov Arra**	**6.67**	**236**	⇓Pn	Pn	06 08 46.8	+0.5
	1.4nm,0.7s						
KURBB				⇑Sn	Sn	06 10 02.3	-0.7
	2.4nm,0.8s						
KURBB				⇓Lg	Lg	06 10 37.4	
	2.9nm,0.8s						
MKAR	**Makanchi Array**	**8.47**	**204**	Pn	Pn	06 09 14.0	+3.0
	0.1nm,0.3s,baz=25,slow=15,SNR=3.1						
	0.2nm,0.4s						

*IPEC **03** 06:42:09.0±0.2,50˚.36N×18˚.84E, h1km, ML3.1/4, Error ellipse: s-maj=2.3km s-min=1.1km az=169.0*

*PRU **03** 06:42:09.8±0.0,50˚.32N×18˚.78E, h0km*
*VIE **03** 06:42:09.0±1.1,50˚.35N×18˚.74E, h0km, mb2.4/5, ml3.1/5, Error ellipse: s-maj=8.9km s-min=5.8km az=174.0 21 km WNW of Katowice Suspected Mining induced.*
*IDC **03** 06:42:09.9±0.7,50˚.27N×18˚.69E, h0km, mb3.1/2, mbtmp3.3/10, ML3.0/8, MS3.2/2, Error ellipse: s-maj=13.0km s-min=6.3km az=155.0*
*BGR **03** 06:42:09.5±0.3,50˚.31N×18˚.77E, h1km, ML3.6/13, Error ellipse: s-maj=8.9km s-min=2.2km az=13.0*
*MCSM **03** 06:42:09.9±0.3,50˚N±6˚×1˚9E±˚, h3km±3km, ML3.6*

ISC 03 06:42:08.6±0.6, 50˚.34N±0˚.03×18˚.80E±0˚.02, h0km, n90, σ1§41/136, 9C-4D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.65**	**100**	*e*Pg	**Pg**	**06 42 21.3**	**+0.2**
OJC				*e*Sg	**Sg**	**06 42 30.1**	**+0.6**
OJC	**Ojcow**	**0.65**	**100**	*e*Pg	**Pg**	**06 42 21.5**	**+0.4**
OJC				*e*Sg	**Sg**	**06 42 30.4**	**+0.9**
OKC	**Ostrava-Krasne**	**0.65**	**220**	*e*PG	**Pb**	**06 42 22.8**	**0.0**
OKC				*e*SG	**Sb**	**06 42 31.3**	**-1.2**
	comp=Z,182nm,0.5s						
MORC	**Moravsky Berou**	**0.98**	**236**	*e*Pg	**Pb**	**06 42 28.7**	**+0.2**
	baz=54						
MORC				*e*Sg	**Sg**	**06 42 41.1**	**+0.9**
	411nm,0.5s,baz=54						
MORC	**Moravsky Berou**	**0.98**	**236**	*e*PG	**Pb**	**06 42 28.7**	**+0.2**
MORC				*e*SG	**Sg**	**06 42 41.1**	**+0.9**
MORC	**Moravsky Berou**	**0.98**	**236**	Pg	**Pb**	**06 42 28.6**	**+0.1**
LANS	**Liptovska Anna**	**1.27**	**160**	*e*PG	**Pb**	**06 42 33.6**	**+0.3**
LANS				*e*SG	**Sn**	**06 42 51.1**	**-0.2**
LANS				eLG	Lg	06 42 55.5	
KRLC	**Kraliky**	**1.32**	**259**	*e*PG	**Pg**	**06 42 34.2**	**+0.3**
KRLC				*e*SG	**Sb**	**06 42 51.9**	**+0.1**
NIE	**Niedzica**	**1.34**	**133**	*e*Pg	**Pg**	**06 42 34.3**	**+0.1**
NIE				*e*Sg	**Sb**	**06 42 53.1**	**+0.8**
NIE	**Niedzica**	**1.34**	**133**	*e*Pn	**Pg**	**06 42 34.3**	**+0.1**
NIE				*e*Sg	**Sn**	**06 42 53.3**	**+0.3**
DPC	**Dobruska-Polom**	**1.59**	**271**	*e*PG	**Pn**	**06 42 38.7**	**+0.7**
DPC				*e*SG	**Sg**	**06 43 00.5**	**+1.0**
	comp=Z,120nm,0.6s						
DPC	**Dobruska-Polom**	**1.59**	**271**	Pn	**Pn**	**06 42 38.4**	**+0.4**
JAVC	**Velka Javorina**	**1.65**	**207**	*e*Pn	**Pn**	**06 42 39.6**	**+0.7**
	baz=26						
JAVC	**Velka Javorina**	**1.65**	**207**	*e*PN	**Pn**	**06 42 39.6**	**+0.7**
OSTC	**Ostas**	**1.67**	**279**	*e*PG	**Pn**	**06 42 39.6**	**+0.6**
OSTC				*e*SG	**Sg**	**06 43 02.7**	**+0.6**
	comp=Z,158nm,0.7s						
OSTC	**Ostas**	**1.67**	**279**	Pn	**Pn**	**06 42 39.9**	**+0.9**
KSP	**Ksiaz**	**1.68**	**289**	*e*Pb	**Pn**	**06 42 39.7**	**+0.5**
KSP				*e*Pg	**Pg**	**06 42 41.5**	**+0.8**
KSP				*e*Sb	**Sn**	**06 43 02.0**	**+0.7**
KSP				*e*Sg	**Sg**	**06 43 03.8**	**+1.4**
KSP	**Ksiaz**	**1.68**	**289**	Pn	**Pn**	**06 42 40.1**	**+0.9**
KSP	**Ksiaz**	**1.68**	**289**	*e*Pn	**Pn**	**06 42 39.9**	**+0.8**
KSP				*e*Sg	**Sg**	**06 43 02.9**	**+0.6**
VRAC	**Vranov**	**1.76**	**235**	Pg	**Pn**	**06 42 40.9**	**+0.6**
	6.7nm,0.3s,baz=60,slow=15,SNR=34						
VRAC				Lg	Lg	06 43 05.1	
	31nm,0.3s,baz=142,slow=22,SNR=22						
VRAC	**Vranov**	**1.76**	**235**	*e*Pn	**Pn**	**06 42 40.9**	**+0.6**
	baz=53						
VRAC				*e*Sg	**Sg**	**06 43 05.3**	**+0.2**
	136nm,0.5s,baz=53						
VRAC	**Vranov**	**1.76**	**235**	*e*PN	**Pn**	**06 42 41.0**	**+0.6**
VRAC				*e*SG	**Sg**	**06 43 05.4**	**+0.3**
CHVC	**Chvalec**	**1.77**	**279**	*e*PG	**Pb**	**06 42 41.9**	**0.0**
CHVC				*e*SG	**Sg**	**06 43 05.5**	**+0.1**
	comp=Z,127nm,0.5s						
CHVC	**Chvalec**	**1.77**	**279**	Pn	**Pn**	**06 42 41.4**	**+0.9**
UPC	**Upice**	**1.79**	**277**	*e*SG	**Sg**	**06 43 06.5**	**+0.4**
	comp=Z,119nm,0.5s						
VYHS	**Vyhne**	**1.85**	**179**	*e*PN	**Pn**	**06 42 41.9**	**+0.4**
VYHS				*e*SN	**Sn**	**06 43 05.8**	**+0.2**
VYHS				eLG	Lg	06 43 12.1	
KRUC	**Moravsky**	**2.02**	**232**	*e*Pn	**Pn**	**06 42 44.2**	**+0.4**
	baz=50						
KRUC				*e*Sg	**Sg**	**06 43 13.1**	**-0.2**
	92nm,0.5s,baz=50						
KRUC	**Moravsky**	**2.02**	**232**	*e*PN	**Pn**	**06 42 44.2**	**+0.4**
KRUC				*e*SG	**Sg**	**06 43 13.1**	**-0.2**
KECS	**Kecovo**	**2.16**	**149**	*e*PN	**Pn**	**06 42 45.7**	**-0.1**
KECS				*e*PG	**Pg**	**06 42 50.6**	**+0.7**
KECS				*e*SN	**Sn**	**06 43 12.0**	**-1.3**
MODS	**Modra-Piesok**	**2.20**	**207**	*e*PN	**Pn**	**06 42 47.3**	**+0.9**
MODS				*e*PG	**Pg**	**06 42 53.5**	**+2.7**
CRVS	**Cervenica-Dubn**	**2.25**	**129**	*e*PN	**Pn**	**06 42 47.0**	**-0.1**
CRVS				*e*PG	**Pg**	**06 42 52.1**	**+0.4**
CRVS				*e*SN	**Sn**	**06 43 17.2**	**+1.7**
CRVS				eLG	Lg	06 43 24.5	
PSZ	**Piszkesteto**	**2.53**	**163**	⇑P	**Pn**	**06 42 51.7**	**+0.7**
PSZ				⇑S	**Sn**	**06 43 17.1**	**-5.3**
PSZ	**Piszkesteto**	**2.53**	**163**	P	**Pn**	**06 42 51.2**	**+0.3**
PSZ	**Piszkesteto**	**2.53**	**163**	PG	**Pg**	**06 42 57.7**	**+0.7**
PSZ	**Piszkesteto**	**2.53**	**163**	Pn	**Pn**	**06 42 51.2**	**+0.3**
KOLS	**Kolonicke sedl**	**2.66**	**121**	*e*Pn	**Pn**	**06 42 53.3**	**+0.6**
KOLS				*e*SN	**Sn**	**06 43 25.9**	**+0.2**
PRU	**Pruhonice**	**2.76**	**264**	*e*SG	**Sg**	**06 43 36.4**	**-0.8**
	comp=Z,63nm,0.7s						
CONA	**Conrad Observa**	**3.09**	**220**	*i* Pn	**Pn**	**06 42 59.4**	**+0.8**
	0.9nm,0.2s						
CONA				*e*Sn	**Sn**	**06 43 36.7**	**+0.4**
	14nm,0.3s						
RONA	**Rosalia, Austr**	**3.11**	**213**	*i* Pn	**Pn**	**06 42 60.0**	**+1.1**
	4.8nm,0.5s						
RONA				*i* Sn	**Sn**	**06 43 36.9**	**0.0**
	6.7nm,0.3s						
BRG	**Berggiesshubel**	**3.14**	**282**	Pg	**Pg**	**06 43 07.5**	**-1.2**
BRG				Sg	**Sg**	**06 43 49.3**	**-0.1**
BRG				Amp		06 43 51.7	
	comp=Z,61nm,0.6s						
BRG	**Berggiesshubel**	**3.14**	**282**	*e*Pg	**Pg**	**06 43 07.6**	**-1.1**
BRG				*e*Sg	**Sg**	**06 43 49.6**	**+0.2**
MPLH	**Magyarpolny**	**3.28**	**195**	P	**Pn**	**06 43 02.1**	**+0.9**
CKRC	**Cesky Krumlov**	**3.29**	**244**	*e*PN	**Pn**	**06 43 02.3**	**+0.9**
CKRC				*e*PG	**Pb**	**06 43 09.0**	**+1.1**
CKRC				*e*SG	**Sg**	**06 43 52.0**	**-2.3**
	comp=Z,67nm,0.6s						
FBE	**Freiberg**	**3.52**	**282**	*e*Sg	**Sg**	**06 44 01.0**	**-0.5**
KHC	**Kasperske Hory**	**3.59**	**252**	*e*PN	**Pn**	**06 43 06.1**	**+0.5**
KHC				*e*PG	**Pg**	**06 43 17.5**	**+0.1**
KHC				*e*SG	**Sg**	**06 44 01.7**	**-2.3**
	comp=Z,74nm,0.6s						
GEC2	**GERESS Array S**	**3.64**	**248**	*e*Sg	**Sg**	**06 44 04.1**	**-1.2**
GERES	**GERESS Array B**	**3.64**	**248**	Pn	**Pn**	**06 43 06.7**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=57,slow=14,SNR=5.9						
GERES				Pg	**Pb**	**06 43 13.1**	**-0.7**
	comp=Z,2.2nm,0.3s,baz=71,slow=15,SNR=18						
GERES				Lg	Lg	06 44 04.4	
	comp=Z,5.4nm,0.3s,baz=69,slow=30,SNR=7.2						
	comp=Z,0.6nm,0.3s						
ARSA	**Arzberg**	**3.77**	**216**	*e*Pn	**Pn**	**06 43 08.9**	**+0.9**
	comp=Z,2.0nm,0.3s						
ARSA				*e*Sg	**Sg**	**06 44 12.0**	**+2.3**
	comp=Z,14nm,0.5s						
CLL	**Collm**	**3.80**	**287**	*e*Pn	**Pn**	**06 43 10.0**	**+1.7**
CLL				*e*Pg	**Pg**	**06 43 23.0**	**+1.6**
CLL				*e*Sg	**Sg**	**06 44 11.0**	**+0.4**
	comp=Z,53nm,0.7s						
CLL	**Collm**	**3.80**	**287**	*e*Pg	**Pb**	**06 43 18.9**	**+2.4**
CLL				*e*Sg	**Sg**	**06 44 10.1**	**-0.5**
MOA	**Molln**	**3.88**	**232**	*e*Pn	**Pn**	**06 43 10.7**	**+1.1**
	comp=Z,0.6nm,0.2s						
MOA				*e*Sg	**Sg**	**06 44 11.7**	**-1.5**
	comp=Z,37nm,0.7s						
WET	**Wettzell**	**4.02**	**255**	*e*Sg	**Sg**	**06 44 15.4**	**-2.3**
TANN	**Tannenbergstha**	**4.06**	**274**	*e*Sg	**Sg**	**06 44 16.4**	**-2.4**
MULD	**Muldenberg**	**4.09**	**273**	*e*Sg	**Sg**	**06 44 19.7**	**-0.3**
SCHF	**Schoenfels**	**4.10**	**277**	*e*Sg	**Sg**	**06 44 19.1**	**-1.0**
MORH	**Mrgy, Hungar**	**4.13**	**181**	⇑P	**Pn**	**06 43 13.2**	**+0.4**
MORH	**Mrgy, Hungar**	**4.13**	**181**	P	**Pn**	**06 43 13.3**	**+0.5**
GUNZ	**Gunzen**	**4.14**	**273**	*e*Sg	**Sg**	**06 44 19.7**	**-1.8**
ROHR	**Rohrbach**	**4.16**	**271**	*e*Sg	**Sg**	**06 44 20.6**	**-1.5**
HKWD	**Heukewalde**	**4.19**	**279**	*e*Sg	**Sg**	**06 44 22.6**	**-0.5**
KOVH	**Kovagotottos**	**4.28**	**187**	P	**Pn**	**06 43 16.0**	**+1.1**
BIOA	**Bad Ischl, Aus**	**4.31**	**234**	*e*Sg	**Sg**	**06 44 26.7**	**-0.1**
	comp=Z,31nm,0.4s						
DRGR		**4.40**	**142**	⇑P	**Pn**	**06 43 16.3**	**-0.3**
DRGR				⇑S	**Sn**	**06 44 04.3**	**-4.3**
SIRR	**Siria**	**4.50**	**154**	⇑P	**Pn**	**06 43 18.1**	**+0.1**
MOX	**Moxa**	**4.60**	**277**	*e*Sg	**Sg**	**06 44 36.8**	**+0.6**
BURAR	**Bucovina Array**	**5.03**	**120**	⇓P	**Pn**	**06 43 26.5**	**+1.1**
BURAR				⇓S	**Sn**	**06 44 22.1**	**-2.1**
BZS	**Buzias**	**5.09**	**157**	⇑P	**Pn**	**06 43 26.1**	**0.0**
BZS				⇑S	**Sn**	**06 44 20.6**	**-4.9**
FRGS	**Fruska Gora**	**5.23**	**172**	⇑P	**Pn**	**06 43 28.8**	**+0.9**
KMPD	**K-Podol'skiy**	**5.30**	**107**	Pn	**Pn**	**06 43 30.7**	**+1.7**
GZR	**Gura Zlata**	**5.62**	**150**	⇓P	**Pn**	**06 43 33.9**	**+0.4**
GZR				⇓S	**Sn**	**06 44 34.1**	**-4.7**
LUBAR	**Lubar, Ukraine**	**5.78**	**91**	Pn	**Pn**	**06 43 36.5**	**+1.0**
LUBAR				pP	Pb	06 43 37.4	-13
MI29	**MI29, Kamyanyy**	**5.79**	**86**	Pn	**Pn**	**06 43 36.7**	**+1.0**
MI29				pP	Pb	06 43 37.5	-13
MI30	**MI30,Zelenitsa**	**6.00**	**82**	Pn	**Pn**	**06 43 39.3**	**+0.7**
MI30				pP	Pb	06 43 40.3	-14
AK04	**Malin Array Si**	**6.62**	**83**	Pn	**Pn**	**06 43 47.9**	**+0.8**
AK06	**Malin Array Si**	**6.65**	**84**	Pn	**Pn**	**06 43 48.2**	**+0.8**
AK02	**Malin Array Si**	**6.65**	**83**	Pn	**Pn**	**06 43 48.5**	**+1.0**
AK01	**Malin Array Si**	**6.65**	**83**	Pn	**Pn**	**06 43 48.2**	**+0.7**
AKASG	**Malin Array Be**	**6.66**	**83**	Pn	**Pn**	**06 43 47.4**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=269,slow=12,SNR=3.2						
AKASG				Pg	**Pb**	**06 44 07.3**	**+2.1**
	comp=Z,0.7nm,0.3s,baz=270,slow=14,SNR=5.8						
AKASG				Sn	**Sn**	**06 44 60.0**	**-4.2**
	comp=Z,1.7nm,0.3s,baz=263,slow=23,SNR=5.7						
AKASG				Lg	Lg	06 45 41.7	
	comp=Z,2.3nm,0.3s,baz=277,slow=25,SNR=7.1						
	comp=Z,0.2nm,0.3s						
AKBB	**Malin Array Si**	**6.66**	**83**	Pn	**Pn**	**06 43 48.6**	**+1.0**
MLR	**Muntele Rosu**	**6.82**	**133**	Pn	**Pn**	**06 43 51.9**	**+1.9**
	comp=Z,0.2nm,0.3s,baz=205,slow=14,SNR=1.7						
	comp=Z,0.6nm,0.3s						
DAVOX	**Davos/Dischmat**	**6.91**	**242**	Pn	**Pn**	**06 43 50.8**	**-0.4**
	comp=Z,0.6nm,0.3s,baz=51,slow=9.4,SNR=2.4						
DAVOX				Lg	Lg	06 45 46.3	
	comp=Z,0.8nm,0.3s,baz=9.5,slow=12,SNR=2.3						
	comp=Z,1.4nm,0.3s						
HFS	**Hagfors**	**10.24**	**345**	Pn	**Pn**	**06 44 36.5**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=170,slow=9.5,SNR=6.0						
NOA	**NORSAR Array B**	**11.54**	**341**	Pn	**Pn**	**06 44 51.5**	**-2.9**
	baz=164,slow=12,SNR=2.4						
	comp=Z,0.3nm,0.5s						
FINES	**FINESS Array B**	**11.85**	**17**	Pn	**Pn**	**06 44 55.4**	**-3.2**
	comp=Z,0.6nm,0.3s,baz=189,slow=12,SNR=17						
FINES				Sn	Sn	06 46 59.6	-12
	comp=Z,0.3nm,0.3s,baz=190,slow=21,SNR=6.1						
	comp=Z,2.9nm,0.5s						
BRTR	**Keskin Array B**	**14.89**	**130**	Pn	**Pn**	**06 45 43.1**	**+2.7**
	comp=Z,0.1nm,0.3s,baz=308,slow=14,SNR=2.0						
	comp=Z,0.4nm,0.4s						
ESDC	**Sonseca Array**	**19.23**	**245**	LR	LR	06 54 48.2	
	comp=Z,42nm,19.9s,baz=228,slow=40						
ARCES	**ARCESS Array B**	**19.53**	**7**	Pn	**P**	**06 46 34.7**	**-2.5**
	comp=Z,0.2nm,0.3s,baz=192,slow=11,SNR=8.4						
	comp=Z,1.0nm,0.6s						
GEYT	**Alibeck**	**30.46**	**99**	LR	LR	07 04 53.0	
	comp=Z,58nm,18.2s,baz=156,slow=45						
TORD	**Torodi Ar. Bea**	**39.63**	**207**	P	**P**	**06 49 42.7**	**+0.7**
	comp=Z,0.2nm,0.4s,baz=0.8,slow=7.8,SNR=2.0						
	comp=Z,0.2nm,0.4s						
MKAR	**Makanchi Array**	**41.03**	**69**	P	**P**	**06 49 55.3**	**+1.9**
	comp=Z,0.1nm,0.5s,baz=280,slow=8.5,SNR=2.0						
	comp=Z,0.1nm,0.5s						

*MOS **03** 07:01:16.2±0.9,55˚.66N×158˚.70W, h22km, mb4.6/24, Error ellipse: s-maj=13.6km s-min=7.1km az=95.8*
*ANF **03** 07:01:19.2±0.5,55˚.43N×158˚.43W, h23km±5km, ML4.9/16, Error ellipse: s-maj=3.1km s-min=2.1km az=

comp=N,1µm,1.0s
Q19K Cape Douglas, 4.29 35 P **Pn 07 02 24.4 +1.5**
baz=218,SNR=30
AKSA Akutan Strait 4.43 255 **Pn 07 02 25.2 +0.4**
AKSA **Sn 07 03 18.2 +3.2**
AKUT Akutan 4.47 255 **Pn 07 02 24.8 -0.5**
AKUT IAML 07 03 37.7
comp=N,901nm,0.9s
Q20K Shuyak Island 4.52 44 P **Pn 07 02 27.1 +1.2**
baz=228,SNR=7.2
HSB Akutan Spr's B 4.53 256 **Pn 07 02 26.3 +0.1**
AKBBA Akutan Broad B 4.57 255 **Pn 07 02 27.1 +0.3**
O18K Koktuh Hills 4.67 20 **Pn 07 02 30.2 +2.1**
O18K IAML 07 03 55.4
comp=E,313nm,1.1s
O18K Koktuh Hills 4.67 20 P **Pn 07 02 30.6 +2.4**
baz=202,SNR=61
AUQ Augustine Qik' 4.70 33 **Pn 07 02 31.0 +2.4**
N16K Nishlik Lake 4.97 358 P **Pn 07 02 34.7 +2.5**
baz=178,SNR=392
N16K S **Sn 07 03 30.4 +2.1**
baz=178
UNV Unalaska Valle 4.98 254 **Pn 07 02 31.9 -0.4**
UNV Unalaska Valle 4.98 254 P **Pn 07 02 31.9 -0.4**
baz=69
MTBL Makushin Table 5.03 255 **Pn 07 02 33.1 0.0**
MNAT Makushin Natee 5.06 254 **Pn 07 02 33.3 -0.2**
MSW Makushin Switc 5.11 255 **Pn 07 02 34.1 0.0**
O19K Port Alsworth 5.17 23 **Pn 07 02 37.6 +2.7**
O19K Port Alsworth 5.17 23 IAML 07 03 39.8
comp=N,382nm,0.5s
O19K IAML 07 04 09.6
comp=E,500nm,0.7s
O19K Port Alsworth 5.17 23 P **Pn 07 02 37.2 +2.3**
baz=206
N18K Kilae Creek 5.34 14 **Pn 07 02 39.4 +2.0**
N18K Kilae Creek 5.34 14 P **Pn 07 02 39.3 +2.0**
baz=195,SNR=32
N18K S **Sn 07 03 39.2 +1.7**
baz=195
IVE Iliamna Volcan 5.35 30 **Pn 07 02 39.6 +2.1**
HOM Homer 5.52 39 **Pn 07 02 41.3 +1.5**
HOM Homer 5.52 39 P **Pn 07 02 41.3 +1.5**
baz=223
O20K Slope Mountain 5.52 32 **Pn 07 02 41.8 +2.0**
O20K Slope Mountain 5.52 32 P **Pn 07 02 41.9 +2.0**
baz=216,SNR=26
CNPM China Poot 5.58 41 **Pn 07 02 41.0 +0.5**
N19K Bonanza Creek 5.70 20 **Pn 07 02 44.4 +2.1**
N19K Bonanza Creek 5.70 20 P **Pn 07 02 44.8 +2.6**
baz=202,SNR=64
RED Redoubt Volcan 5.76 29 **Pn 07 02 45.2 +2.1**
SVW2 Sparrevohn 5.79 14 **Pn 07 02 44.9 +1.5**
RDSO Redoubt South 5.79 29 **Pn 07 02 45.6 +2.0**
RDWB Redoubt West 5.79 29 **Pn 07 02 46.0 +2.4**
RSO Redoubt South 5.80 29 **Pn 07 02 45.5 +1.8**
NCT North Crescent 5.83 28 **Pn 07 02 46.3 +2.1**
RDJH Redoubt Jeurge 5.89 28 **Pn 07 02 47.2 +2.2**
BRSE Bradley Lake S 5.91 41 **Pn 07 02 45.5 +0.5**
BRSE Bradley Lake S 5.91 41 P **Pn 07 02 45.4 +0.3**
baz=226,SNR=15
DFR Drift River 5.92 29 **Pn 07 02 47.7 +2.4**
SPCR Spurr Chakacha 6.56 27 P **Pn 07 02 55.9 +1.8**
baz=212,SNR=14
SPBG Spurr Blockage 6.57 26 **Pn 07 02 56.4 +2.2**
SPU Mount Spurr 6.59 28 **Pn 07 02 56.0 +1.6**
NIKH Nikolski High 6.62 252 **Pn 07 02 53.9 -1.0**
NIKH Nikolski High 6.62 252 P **Pn 07 02 54.5 -0.4**
baz=65
SLKM Skilak Lake 6.63 38 **Pn 07 02 55.3 +0.4**
SEW Seward 6.64 43 **Pn 07 02 54.5 -0.5**
SEW Seward 6.64 43 P **Pn 07 02 54.9 -0.1**
baz=229
SPCG Spurr Capps Gl 6.69 28 **Pn 07 02 58.0 +2.2**
M19K Big River Lodg 6.73 17 **Pn 07 02 59.1 +2.7**
M19K Big River Lodg 6.73 17 P **Pn 07 02 58.9 +2.5**
baz=199
SPIA Saint Paul Isl 6.78 289 **Pn 07 02 58.4 +1.5**
SPIA Saint Paul Isl 6.78 289 P **Pn 07 02 58.5 +1.5**
baz=100,SNR=5.3
O22K Cooper Landing 6.79 39 **Pn 07 02 58.8 +1.8**
O22K Cooper Landing 6.79 39 P **Pn 07 02 59.1 +2.0**
baz=226
L19K White Mountain 6.93 14 **Pn 07 03 01.2 +2.1**
L19K White Mountain 6.93 14 P **Pn 07 03 01.2 +2.1**
baz=196,SNR=55
M20K Styx River 6.95 21 **Pn 07 03 02.3 +3.0**
M20K Styx River 6.95 21 P **Pn 07 03 02.3 +3.0**
baz=205
SUA Susitna One 7.18 31 **Pn 07 03 04.1 +1.5**
SUA Susitna One 7.18 31 P **Pn 07 03 04.1 +1.5**
baz=216
SUA S **Sn 07 04 22.1 -0.7**
baz=216
RC01 Rabbit Creek A 7.21 36 **Pn 07 03 03.9 +0.9**
RC01 Rabbit Creek A 7.21 36 P **Pn 07 03 03.8 +0.9**
baz=222,SNR=6.3
RC01 S **Sn 07 04 22.9 -0.5**
baz=222
L20K Farewell, AK 7.36 17 **Pn 07 03 07.8 +2.8**
L20K Farewell, AK 7.36 17 P **Pn 07 03 07.7 +2.8**
baz=200,SNR=71
SKT Skwentna 7.40 26 **Pn 07 03 06.7 +1.2**
SKT Skwentna 7.40 26 P **Pn 07 03 06.7 +1.2**
baz=211,SNR=16
P23K Montague Islan 7.40 48 P **Pn 07 03 06.8 +1.3**
baz=236
TT01 Tatalina 7.51 8 **Pn 07 03 08.8 +1.9**
TTA Tatalina 7.53 8 **Pn 07 03 09.4 +2.0**
TTA Tatalina 7.53 8 P **Pn 07 03 09.1 +1.7**
baz=190,SNR=43
TTA S **Sn 07 04 32.4 +1.1**
baz=190
Q23K Middleton Isla 7.59 54 Pn **Pn 07 03 09.0 +0.9**
Q23K Middleton Isla 7.59 54 P **Pn 07 03 09.2 +1.1**
baz=243
M22K Willow 7.60 31 **Pn 07 03 09.4 +1.2**
MID Middleton Isla 7.60 54 **Pn 07 03 08.9 +0.7**
PMR Palmer 7.78 35 P **Pn 07 03 11.1 +0.4**
baz=222,SNR=7.2
KNK Knik Glacier 7.88 37 **Pn 07 03 13.9 +1.8**
KNK Knik Glacier 7.88 37 P **Pn 07 03 12.4 +0.3**
baz=225,SNR=12
HIN Hinchinbrook I 8.00 47 **Pn 07 03 14.1 +0.3**
GLI Glacier Island 8.03 43 **Pn 07 03 14.8 +0.6**
GLI Glacier Island 8.03 43 P **Pn 07 03 13.2 -1.0**
baz=232
PPLA Purkeypile 8.05 21 **Pn 07 03 18.6 +4.0**
PPLA Purkeypile 8.05 21 P **Pn 07 03 18.5 +4.0**
baz=206,SNR=25
K20K Telida 8.16 14 **Pn 07 03 17.7 +1.8**
K20K Telida 8.16 14 P **Pn 07 03 17.5 +1.6**
baz=197,SNR=15
SML Sawmill 8.20 36 **Pn 07 03 17.0 +0.5**
SML Sawmill 8.20 36 P **Pn 07 03 17.3 +0.8**
baz=224,SNR=16
FID Port Fidalgo 8.20 45 **Pn 07 03 15.8 -0.7**
JPK Jack Peak 8.33 43 **Pn 07 03 18.6 +0.2**
EYAK Cordova Ski Ar 8.39 48 **Pn 07 03 18.9 -0.1**
EYAK Cordova Ski Ar 8.39 48 P **Pn 07 03 19.0 -0.1**
baz=238,SNR=11
M23K Glacier View 8.39 37 P **Pn 07 03 19.8 +0.7**
baz=225,SNR=20
CAST Castle Rocks 8.55 20 **Pn 07 03 24.2 +3.0**
CAST Castle Rocks 8.55 20 P **Pn 07 03 23.2 +2.0**
baz=204,SNR=40
SCM Sheep Creek Mo 8.56 38 **Pn 07 03 21.8 +0.3**
SCM Sheep Creek Mo 8.56 38 P **Pn 07 03 21.6 +0.1**
baz=226,SNR=24
DIV Divide 8.70 45 **Pn 07 03 23.6 +0.2**
KLU Klutina 8.86 42 **Pn 07 03 26.1 +0.5**
KLU Klutina 8.86 42 P **Pn 07 03 25.7 +0.2**
baz=232,SNR=42
WAT1 Susitna Watana 8.90 31 P **Pn 07 03 26.0 -0.1**
baz=218
KTH Kantishna Hill 8.90 22 **Pn 07 03 27.6 +1.5**
CHUM Lake Minchumin 8.93 18 P **Pn 07 03 28.5 +2.1**
baz=202,SNR=9.1
HMT Hamilton 8.94 52 **Pn 07 03 27.4 +0.8**
J20K Nowinta River 8.94 12 **Pn 07 03 29.0 +2.4**
J20K Nowinta River 8.94 12 P **Pn 07 03 27.9 +1.3**
baz=196,SNR=16
TRF Thorofare Moun 8.96 24 **Pn 07 03 27.8 +0.9**
TRF Thorofare Moun 8.96 24 P **Pn 07 03 27.6 +0.7**
baz=210,SNR=22

WAT6 Susitna Watana 8.96 33 **Pn 07 03 26.4 -0.5**
WAT6 Susitna Watana 8.96 33 P **Pn 07 03 26.1 -0.8**
baz=222,SNR=17
NICHA Nichawak Mount 9.03 53 **Pn 07 03 28.3 +0.5**
SUCK Suckling Hills 9.05 54 **Pn 07 03 28.7 +0.7**
BMRM Bremner River 9.09 48 **Pn 07 03 30.1 +1.3**
BMRM Bremner River 9.09 48 P **Pn 07 03 28.5 -0.2**
baz=238
M24K Tolsona, Glenn 9.15 39 **Pn 07 03 30.4 +0.9**
M24K Tolsona, Glenn 9.15 39 P **Pn 07 03 29.6 +0.1**
baz=228,SNR=14
RND Reindeer 9.28 28 **Pn 07 03 31.5 +0.3**
GCSA Galena City Sc 9.29 4 **Pn 07 03 32.5 +1.3**
GCSA Galena City Sc 9.29 4 P **Pn 07 03 32.7 +1.5**
baz=185
GRIN Grindle Hills 9.34 53 **Pn 07 03 32.1 0.0**
BPAW Bear Paw Mtn. 9.38 20 **Pn 07 03 33.3 +0.8**
BPAW Bear Paw Mtn. 9.38 20 P **Pn 07 03 32.9 +0.4**
baz=206,SNR=12
KHIT Khitrov Hills 9.44 52 **Pn 07 03 33.5 0.0**
N25K Chitina, Valde 9.44 44 P **Pn 07 03 33.7 +0.2**
baz=235,SNR=9.8
MCK McKinley 9.52 26 **Pn 07 03 36.1 +1.5**
MCK McKinley 9.52 26 P **Pn 07 03 34.7 +0.2**
baz=214,SNR=9.0
SNH Sunshine Point 9.52 54 **Pn 07 03 35.8 +1.2**
WAX Waxell Ridge 9.62 53 **Pn 07 03 36.2 +0.2**
GLB Gilahina Butte 9.67 46 **Pn 07 03 36.4 -0.2**
HARP HAARP 9.70 39 **Pn 07 03 37.7 +0.6**
HARP HAARP 9.70 39 P **Pn 07 03 37.6 +0.5**
baz=230,SNR=13
ANM Nome 9.71 342 **Pn 07 03 38.5 +1.5**
ANM Nome 9.71 342 P **Pn 07 03 37.4 +0.4**
baz=156
VRDI Verde Repeater 9.71 48 **Pn 07 03 37.9 +0.6**
ISLE Juniper Island 9.91 53 **Pn 07 03 40.9 +0.9**
MESA MESA 9.93 55 **Pn 07 03 40.8 +0.5**
MESA MESA 9.93 55 P **Pn 07 03 40.9 +0.5**
baz=248,SNR=5.3
MCARA McCarthy VSAT 9.97 48 **Pn 07 03 42.0 +1.4**
MCARA McCarthy VSAT 9.97 48 P **Pn 07 03 41.1 +0.5**
baz=240
PAX Paxson 9.97 36 **Pn 07 03 41.5 +0.8**
PAX Paxson 9.97 36 P **Pn 07 03 41.2 +0.4**
baz=227,SNR=46
YAH Yahtse 10.10 54 **Pn 07 03 42.7 +0.2**
I21K Tanana 10.19 16 P **Pn 07 03 45.1 +1.4**
baz=201,SNR=14
NEA2 Nenana 10.21 23 **Pn 07 03 44.1 +0.1**
NEA2 Nenana 10.21 23 P **Pn 07 03 43.4 -0.6**
baz=211,SNR=14
GRNC Granite Creek 10.23 53 **Pn 07 03 44.5 +0.1**
MLY Manley 10.26 19 **Pn 07 03 45.2 +0.5**
MLY Manley 10.26 19 P **Pn 07 03 44.6 -0.1**
baz=205,SNR=20
BARN Barnard Glacie 10.41 51 **Pn 07 03 48.0 +1.2**
K24K Donnelly Dome 10.46 32 P **Pn 07 03 47.7 +0.4**
baz=223,SNR=18
CTG Chitna Glacier 10.51 52 P **Pn 07 03 48.4 +0.2**
baz=246,SNR=15
CTGM Chitina Glacie 10.51 52 **Pn 07 03 49.2 +1.0**
M26K Nabesna, AK 10.51 43 **Pn 07 03 49.6 +1.5**
M26K Nabesna, AK 10.51 43 P **Pn 07 03 48.7 +0.5**
baz=235,SNR=18
H21K Melozitna Rive 10.53 13 **Pn 07 03 50.4 +2.1**
H21K Melozitna Rive 10.53 13 P **Pn 07 03 50.1 +1.8**
baz=197,SNR=37
HDA Hardluck Lake 10.59 28 **Pn 07 03 48.5 -0.5**
HDA Harding Lake 10.59 28 P **Pn 07 03 47.7 -1.3**
baz=217,SNR=28
LOGN Logan Glacier 10.61 53 **Pn 07 03 50.1 +0.6**
GAMB Gambell 10.63 326 Pn **Pn 07 03 51.0 +1.4**
I23K Minto, Yukon-K 10.63 21 **Pn 07 03 50.0 +0.3**
I23K Minto, Yukon-K 10.63 21 P **Pn 07 03 48.5 -1.2**
baz=209,SNR=20
RIDG Independent Ri 10.71 34 **Pn 07 03 51.9 +1.2**
RIDG Independent Ri 10.71 34 P **Pn 07 03 51.0 +0.2**
baz=225,SNR=18
PCA Pinnacle 10.71 57 **Pn 07 03 51.8 +1.0**
PINM Pinnacle 10.71 57 P **Pn 07 03 51.5 +0.7**
baz=252,SNR=10
MDM Murphy Dome 10.72 24 **Pn 07 03 50.1 -0.8**
TCOL CIGO, UAF Yank 10.73 25 P **Pn 07 03 50.2 -0.9**
baz=214
COLA College 10.73 25*c i* P **Pn 07 03 49.1 -1.9**
COLA College 10.73 25 P **Pn 07 03 50.1 -0.9**
baz=214
IMAR Indian Mountai 10.74 10 **Pn 07 03 53.0 +1.9**
L26K Log Cabin Wild 10.75 40 **Pn 07 03 52.6 +1.3**
L26K Log Cabin Wild 10.75 40 P **Pn 07 03 52.0 +0.7**
baz=232,SNR=17
IL31 10.89 27 **Pn 07 03 52.1 -1.0**
ILAR Eielson Array 10.89 27 P **Pn 07 03 51.8 -1.4**
comp=E,1.4nm,0.3s,baz=220,slow=13,SNR=80
ILAR S **Sn 07 05 45.6 -7.9**
comp=E,1.7nm,0.5s,baz=161,slow=26,SNR=2.7
ILAR LR LR 07 08 02.8
comp=E,158nm,20.8s,baz=226,slow=37
comp=E,6.1nm,0.6s
DOT Dot Lake 10.90 36 **Pn 07 03 54.1 +0.7**
M27K Eek Creek, AK 10.93 44 P **Pn 07 03 53.6 -0.3**
baz=236
BCPM Bancas Point 10.96 58 **Pn 07 03 55.0 +0.8**
PNL Peninsula 11.01 60 P **Pn 07 03 55.3 +0.5**
baz=255,SNR=23
POKR Poker Plat Res 11.04 25 P **Pn 07 03 54.4 -0.8**
baz=214,SNR=8.9
TNA Tin City 11.08 339 Pn **Pn 07 03 58.3 +2.5**
SCRK Sand Creek 11.14 35 **Pn 07 03 57.3 +0.5**
SCRK Sand Creek 11.14 35 P **Pn 07 03 56.3 -0.6**
baz=227,SNR=16
J25K Salcha River, 11.18 30 **Pn 07 03 56.6 -0.6**
J25K Salcha River, 11.18 30 P **Pn 07 03 56.0 -1.2**
baz=221,SNR=15
H23K Yukon River 11.20 19 P **Pn 07 03 56.8 -0.6**
baz=206,SNR=15
YUK3 Moose Creek 11.24 49 P **Pn 07 03 59.1 +1.0**
baz=243,SNR=20
YUK8 Steele Glacier 11.34 52 P **Pn 07 04 00.7 +1.1**
baz=247,SNR=26
BCAR Beer Creek A 11.35 42 **Pn 07 03 59.9 +0.4**
H24K Noodor Dome 11.54 22 **Pn 07 04 01.1 -1.1**
H24K Noodor Dome 11.54 22 P **Pn 07 04 00.1 -2.0**
baz=211
J26L Joseph Creek 11.64 33 **Pn 07 04 03.0 -0.5**
J26L Joseph Creek 11.64 33 P **Pn 07 04 02.9 -0.7**
baz=226,SNR=21
K27K Chicken 11.82 37 **Pn 07 04 07.0 +1.1**
K27K Chicken 11.82 37 P **Pn 07 04 05.3 -0.5**
baz=231
YUK6 Outpost Mounta 11.86 55 P **Pn 07 04 07.4 +0.8**
baz=251
YUK4 Talbot Arm 11.86 53 P **Pn 07 04 08.8 +2.0**
baz=248
HYT Haines Junctio 12.22 56 P **Pn 07 04 10.0 -1.6**
baz=253
COLD Coldfoot 12.37 15 Pn **Pn 07 04 16.9 +3.5**
COLD Coldfoot 12.37 15 P **Pn 07 04 12.2 -1.2**
baz=202
PLBC Pleasant Camp 12.48 63 P **Pn 07 04 15.8 +0.9**
baz=260,SNR=20
N30M Aishikik Lake 12.61 53 P **Pn 07 04 17.2 +0.5**
baz=251
RDOG Red Dog Mine 12.75 352 P **Pn 07 04 18.4 -0.1**
baz=168,SNR=11
DAWY Dawson 12.80 40 **Pn 07 04 20.0 +0.7**
DAWY Dawson 12.80 40 P **Pn 07 04 19.9 +0.6**
baz=236,SNR=16
O30N Mendenhall 12.88 57 P **Pn 07 04 20.9 +0.5**
baz=255
SIT Sitka 12.91 74 P **Pn 07 04 20.1 -0.6**
baz=272
SKAG Skagway 13.01 63 **Pn 07 04 22.8 +0.8**
SKAG Skagway 13.01 63 P **Pn 07 04 23.7 +1.6**
baz=262,SNR=18
M30M Minto, Yukon 13.13 49 **Pn 07 04 25.0 +1.1**
M30M Minto, Yukon 13.13 49 P **Pn 07 04 25.2 +1.3**
baz=247,SNR=7.2
N31M Braeburn, Yuko 13.21 54 **Pn 07 04 26.6 +1.6**
N31M Braeburn, Yuko 13.21 54 P **Pn 07 04 26.0 +1.0**
baz=253
JIS Juneau Island 13.40 68 **Pn 07 04 29.1 +1.6**
WHY Whitehorse 13.43 58 P **Pn 07 04 28.5 +0.5**
baz=257
TOLK Toolik Lake Re 13.78 14 P **Pn 07 04 33.2 +0.6**

baz=201,SNR=6.3
I29M Ogilvie Camp, 13.92 37 P **Pn 07 04 34.0 -0.5**
baz=234,SNR=62
M31M Drury Creek, Y 14.06 52 P **Pn 07 04 35.8 -0.6**
baz=252,SNR=20
CRAG Craig 14.32 80 P **Pn 07 04 40.1 +0.2**
baz=280
P33M Teslin, Yukon 14.36 60 P **Pn 07 04 41.4 +0.8**
baz=262,SNR=18
FARO Faro, Yukon 14.53 52 P **Pn 07 04 44.0 +1.2**
baz=253,SNR=45
WRAK Wrangell Islan 14.60 76 P **Pn 07 04 43.8 +0.1**
baz=277
MMPY Sheldon Lake, 15.57 52 P **Pn 07 04 58.2 +1.8**
baz=255,SNR=37
T35M Bob Quinn 15.68 73 P **Pn 07 04 58.8 +1.0**
baz=276,SNR=6.1
DLBC Dease Lake 15.70 68 P **Pn 07 04 59.1 +1.0**
comp=E,1.0nm,0.3s,baz=281,slow=10.0,SNR=15
DLBC S **Sn 07 07 48.1 -2.6**
comp=E,1.6nm,0.6s,baz=209,slow=11,SNR=1.2
DLBC LR LR 07 10 31.5
comp=E,185nm,19.1s,baz=281,slow=35
comp=E,6.0nm,0.9s
DLBC Dease Lake 15.70 68 P **Pn 07 04 59.5 +1.4**
baz=271,SNR=11
A21K Barrow 15.88 2 **P 07 05 03.5 +0.2**
A21K IAmb IAmb 07 05 31.5
comp=E,66nm,0.8s
SHEM Shemya Is, Ala 16.30 272 P **Pn 07 05 03.5 -2.2**
comp=E,1.5nm,0.3s,baz=36,slow=7.3,SNR=2.7
SHEM LR LR 07 10 49.8
comp=E,226nm,20.8s,baz=88,slow=35
comp=E,18nm,0.7s
TGTN Hyland Airport 16.74 57 P **Pn 07 05 12.5 +1.3**
baz=262,SNR=10
INK Inuvik 17.18 32 P **Pn 07 05 15.7 -0.9**
comp=E,4.5nm,0.3s,baz=222,slow=17,SNR=36
INK S **Sn 07 08 26.0 -0.3**
comp=E,4.5nm,1.1s,baz=216,slow=14,SNR=2.0
INK LR LR 07 12 52.2
comp=E,162nm,19.9s,baz=211,slow=40
comp=E,15nm,0.5s
INK Inuvik 17.18 32 P **Pn 07 05 16.7 +0.2**
baz=234,SNR=15
BBB Bella Bella 18.12 88 LR LR 07 10 27.9
comp=E,219nm,21.5s,baz=292,slow=30
BILL Bilibino 20.49 322 P **P 07 05 54.3 +0.4**
BILL Bilibino 20.49 322*ǁ eP* **P 07 05 53.2 -0.7**
BILL *e* 07 06 11.7
BILL pmax pmax
comp=E,12nm,1.3s
BILL MLR MLR
comp=E,195nm,17.0s
C36M Paulatuk 20.67 35 P **P 07 05 56.4 +0.6**
C36M Paulatuk 20.67 35 P **P 07 05 56.6 +0.8**
baz=245,SNR=22
A36M Sachs Harbour 21.59 28 P **P 07 06 05.6 0.0**
A36M IAmb IAmb 07 06 21.4
comp=E,41nm,1.0s
A36M Sachs Harbour 21.59 28 P **P 07 06 05.5 -0.2**
baz=238
NLWA Neilton Lookou 22.82 96 P **P 07 06 21.9 +2.9**
NLWA IAmb IAmb 07 06 24.7
comp=E,34nm,1.1s
D03D Eldon 23.18 95 P **P 07 06 23.9 +1.2**
baz=303,SNR=5.6
YKA Yellowknife Ar 23.21 55 P **P 07 06 22.9 +0.1**
comp=E,1.1nm,0.3s,baz=272,slow=7.6,SNR=27
YKA PcP **PcP 07 10 08.3 -0.8**
comp=E,0.5nm,0.7s,baz=265,slow=2.2,SNR=3.9
YKA ScP **ScP 07 13 41.5 -1.7**
comp=E,0.6nm,0.9s,baz=265,slow=2.8,SNR=5.0
YKA LR LR 07 15 14.3
comp=E,147nm,20.4s,baz=272,slow=36
comp=E,1.1nm,0.3s
E03A Lebam 23.47 98 P **P 07 06 26.7 +1.2**
E03A IAmb IAmb 07 06 29.6
comp=E,29nm,0.9s
D04E Lakebay 23.56 96 P **P 07 06 27.7 +1.5**
baz=304
B06A Marblemount 23.57 92 P **P 07 06 26.9 +0.6**
B06A IAmb IAmb 07 06 29.8
comp=E,14nm,0.8s
D05A Enumclaw 24.00 95 P **P 07 06 31.6 +1.2**
D05A IAmb IAmb 07 06 34.9
comp=E,26nm,0.9s
E04D Cinebar 24.02 97 P **P 07 06 33.4 +2.8**
E04D Cinebar 24.02 97 P **P 07 06 33.7 +3.1**
baz=305,SNR=14
F04A Amboy 24.47 98 P **P 07 06 36.0 +1.3**
LTY Liberty 24.70 94 P **P 07 06 39.0 +2.0**
B08A Colville Reser 24.87 90 P **P 07 06 40.8 +2.4**
B08A IAmb IAmb 07 06 42.0
comp=E,15nm,0.8s
H04D Lebanon 25.15 101 P **P 07 06 42.3 +1.4**
baz=308
HOOD Mount Hood Mea 25.27 98 P **P 07 06 44.0 +1.9**
H04A Detroit Lake 25.36 100 P **P 07 06 45.5 +2.7**
H04A IAmb IAmb 07 06 48.4
comp=E,17nm,1.0s
J01E Myrtle Point 25.36 105 P **P 07 06 44.6 +1.8**
baz=311
PETK Petropavlovsk- 25.39 283 P **P 07 06 41.4 -1.6**
comp=E,10nm,0.7s,baz=94,slow=12,SNR=12
PETK LR LR 07 16 31.7
comp=E,122nm,21.7s,baz=76,slow=36
comp=E,10nm,0.7s
G05D Wamic, OR 25.51 98 P **P 07 06 46.1 +2.0**
baz=307
E07A Sunnyside 25.56 94 P **P 07 06 47.3 +2.7**
SEY Seymchan 25.65 307 P **P 07 06 44.0 -1.2**
comp=E,11nm,0.7s,baz=98,slow=8.0,SNR=24
SEY ScP **ScP 07 13 50.1 +0.2**
comp=E,1.1nm,0.4s,baz=13,slow=1.3,SNR=5.0
SEY LR LR 07 17 51.9
comp=E,208nm,19.6s,baz=81,slow=39
comp=E,11nm,0.7s
SEY Seymchan 25.65 307*ce* P **P 07 06 43.9 -1.3**
SEY pmax pmax
comp=E,9.0nm,0.6s
I04A Tendick Farm, 25.79 102 P **P 07 06 49.2 +2.4**
baz=310
HAWA Hanford 25.84 94 P **P 07 06 49.6 +2.5**
HAWA IAmb IAmb 07 06 50.8
comp=E,20nm,0.9s
F07A Phinny Hill Vi 25.90 96 P **P 07 06 50.0 +2.3**
F07A IAmb IAmb 07 06 51.6
comp=E,13nm,0.8s
EDM Edmonton 26.01 76 P **P 07 06 50.2 +1.5**
I05D Terrebonne, OR 26.05 100 P **P 07 06 50.6 +1.5**
baz=308
NEW Newport 26.18 89 P **P 07 06 52.2 +2.0**
comp=E,15nm,0.9s,baz=304,slow=7.4,SNR=27
NEW LR LR 07 15 43.0
comp=E,153nm,21.0s,baz=298,slow=33
comp=E,15nm,0.9s
NEW Newport 26.18 89 P **P 07 06 52.0 +1.8**
baz=301,SNR=22
J04D Umpqua Nationa 26.32 103 P **P 07 06 54.2 +2.5**
baz=310
J05D Fort Rock, OR 26.78 102 P **P 07 06 57.2 +1.4**
baz=310,SNR=8.1
L04D Klamath Falls 26.89 104 P **P 07 06 58.2 +1.5**
baz=312
YBH Yreka Blue Hor 26.99 106 P **P 07 07 00.1 +2.4**
comp=E,1.7nm,0.8s,baz=315,slow=2.9,SNR=3.8
YBH LR LR 07 15 19.9
comp=E,276nm,21.2s,baz=310,slow=31
comp=E,1.7nm,0.8s
MA2 Magadan 27.00 300 LR LR 07 19 12.0
comp=Z,15nm,18.0s,baz=103,slow=40
J08A Circle Bar Ran 28.27 99 P **P 07 07 11.4 +2.2**
MSO Missoula 28.77 89 P **P 07 07 15.0 +1.5**
baz=304
MPK Martis Peak 30.15 106 P **P 07 07 28.2 +2.2**
MPK IAmb IAmb 07 07 29.5
comp=E,15nm,1.2s
LRM Limekiln Ridge 30.19 89 P **P 07 07 28.0 +1.8**
HLID Hailey 30.44 94 P **P 07 07 29.6 +1.2**
baz=306,SNR=14
PNTR Pine Nut 30.54 106 P **P 07 07 31.4 +2.0**
PNTR IAmb IAmb 07 07 50.3
comp=E,11nm,0.8s
MCMT McKenzie Canyo 30.55 91 P **P 07 07 31.5 +2.0**
RES Resolute Bay 30.64 28 LR LR 07 22 07.2
comp=Z,68nm,18.4s,baz=274,slow=41

BOZ Bozeman (W) 30.79 89 P **P** **07 07 32.9 +1.5**
baz=306,SNR=6.3
YHL Hebgen Lake 31.48 90 P **P** **07 07 40.0 +2.3**
YHL IAmb IAmb 07 07 41.0
comp=Z,11nm,0.8s
NVAR Mina Array Bea 31.71 106 P **P** **07 07 42.0 +2.3**
comp=Z,2.9nm,0.7s,baz=302,slow=8.4,SNR=27
NVAR PcP **PcP** **07 10 31.2 +0.8**
comp=Z,0.6nm,0.6s,baz=276,slow=3.5,SNR=4.3
NVAR LR LR 07 18 15.2
comp=Z,199nm,21.7s,baz=272,slow=32
comp=Z,2.9nm,0.7s
ELK Elko 31.81 99 LR LR 07 18 10.5
comp=Z,138nm,20.8s,baz=324,slow=32
H17A Grant Village 32.11 90 P **P** **07 07 46.2 +3.0**
H17A IAmb IAmb 07 07 47.8
comp=Z,14nm,0.8s
H17A Grant Village 32.11 90 P **P** **07 07 44.0 +0.9**
baz=307,SNR=11
FLWY Flagg Ranch 32.23 90 P **P** **07 07 46.7 +2.5**
MOOW Moose Ponds 32.41 91 P **P** **07 07 47.8 +2.0**
RLMT Red Lodge 32.41 88 P **P** **07 07 48.5 +2.7**
RLMT IAmb IAmb 07 07 49.4
comp=Z,12nm,0.9s
RLMT Red Lodge 32.41 88 P **P** **07 07 47.3 +1.6**
baz=306,SNR=13
VES Vestal, Richgr 33.19 110 P **P** **07 07 53.3 +0.9**
baz=319
LAO LASA Array 33.22 83 P **P** **07 07 52.6 -0.1**
baz=305
GRAC Grapevine Rang 33.26 107 P **P** **07 07 54.6 +1.5**
baz=317
R11A Troy Canyon, C 33.27 103 P **P** **07 07 54.6 +1.3**
baz=315,SNR=16
CWC Cottonwood Cre 33.28 108 P **P** **07 07 55.5 +2.1**
baz=318
TIXI Tiksi 33.51 327 P **P** **07 07 54.2 -0.6**
comp=Z,3.8nm,0.3s,baz=89,slow=24,SNR=6.7
TIXI LR LR 07 23 33.3
comp=Z,101nm,19.9s,baz=181,slow=40
comp=Z,3.8nm,0.3s
TIXI Tiksi 33.51 327 P **P** **07 07 53.7 -1.0**
TIXI IAmb IAmb 07 08 08.3
comp=Z,9.3nm,1.1s
TIXI Tiksi 33.51 327 *ce*P **P** **07 07 53.8 -1.0**
TIXI pmax pmax
comp=Z,4.0nm,0.8s
PKM Mcpherson Peak 33.52 112 P **P** **07 07 55.6 0.0**
baz=320
DUG Dugway, Tooele 33.54 98 P **P** **07 07 57.5 +1.9**
DUG IAmb IAmb 07 07 59.1
comp=Z,13nm,1.0s
DUG Dugway, Tooele 33.54 98 P **P** **07 07 57.5 +1.9**
baz=312,SNR=13
ISA Isabella, Lake 33.65 109 P **P** **07 07 57.5 +0.9**
baz=319
BW06 Boulder Array 33.70 91 P **P** **07 07 58.4 +1.3**
BW06 IAmb IAmb 07 07 59.8
comp=Z,7.2nm,0.7s
BW06 Boulder Array 33.70 91 P **P** **07 07 58.5 +1.5**
baz=309,SNR=11
PD31 Pinedale Array 33.70 91 P **P** **07 07 58.7 +1.6**
PD31 IAmb IAmb 07 07 59.7
comp=Z,6.4nm,0.7s
PDAR Pinedale Array 33.70 91 P **P** **07 07 58.6 +1.6**
comp=Z,6.0nm,0.6s,baz=308,slow=5.1,SNR=59
PDAR LR LR 07 20 49.7
comp=Z,34nm,18.1s,baz=303,slow=35
comp=Z,6.0nm,0.6s
PDAR Pinedale Array 33.70 91 P **P** **07 07 58.8 +1.8**
MPMC Manual Prospec 33.89 108 P **P** **07 08 00.6 +1.9**
baz=318,SNR=5.5
TPNV Topopah Spring 33.91 105 P **P** **07 08 00.6 +1.7**
TPNV IAmb IAmb 07 08 18.7
comp=Z,11nm,1.1s
TPNV Topopah Spring 33.91 105 P **P** **07 08 00.8 +2.0**
baz=317,SNR=10.0
FURC Furnace Creek, 33.92 107 P **P** **07 08 00.8 +2.0**
baz=317
PSUT Pine Spring 34.10 101 P **P** **07 08 02.6 +2.1**
PSUT IAmb IAmb 07 08 03.9
comp=Z,8.5nm,1.3s
NLU North Lily Min 34.12 97 P **P** **07 08 02.2 +1.5**
NLU IAmb IAmb 07 08 03.7
comp=Z,6.3nm,0.8s
LRMC Laurel Mtn Rad 34.22 109 P **P** **07 08 02.7 +1.3**
baz=319
GWY Greenwater Val 34.24 107 P **P** **07 08 03.5 +1.8**
GSC Goldstone, Bar 34.82 108 P **P** **07 08 08.6 +1.9**
GSC IAmb IAmb 07 08 25.8
comp=Z,11nm,1.4s
GSC Goldstone, Bar 34.82 108 P **P** **07 08 07.4 +0.8**
baz=318
MSU Marysvale 35.06 99 P **P** **07 08 11.4 +2.5**
CCUT Cedar City 35.07 102 P **P** **07 08 10.9 +2.0**
SZCU Shurtz Canyon 35.19 101 P **P** **07 08 11.4 +1.4**
SZCU IAmb IAmb 07 08 13.1
comp=Z,7.7nm,1.1s
P17A Butcher Ranch, 35.20 97 P **P** **07 08 11.7 +1.7**
P17A IAmb IAmb 07 08 13.2
comp=Z,5.2nm,0.8s
Q16A Castle Valley 35.34 98 P **P** **07 08 12.7 +1.5**
P18A Preston Nutter 35.38 96 P **P** **07 08 13.2 +1.6**
P18A IAmb IAmb 07 08 21.2
comp=Z,7.0nm,0.9s
K22A Casper 35.50 89 P **P** **07 08 13.3 +0.8**
K22A IAmb IAmb 07 08 15.1
comp=Z,15nm,1.1s
K22A Casper 35.50 89 P **P** **07 08 13.4 +0.9**
baz=309,SNR=6.5
LCMT Little Creek M 35.52 102 P **P** **07 08 14.1 +1.4**
SRU San Rafael Swe 35.57 97 P **P** **07 08 15.3 +2.1**
RWWY Rawlins 35.73 91 P **P** **07 08 16.0 +1.4**
GMRC Granite Mounta 35.83 107 P **P** **07 08 16.1 +0.7**
baz=319
RSSD Black Hills 35.99 85 P **P** **07 08 17.6 +0.9**
RSSD IAmb IAmb 07 08 19.4
comp=Z,9.5nm,0.8s
RSSD Black Hills 35.99 85 P **P** **07 08 17.9 +1.2**
baz=308
YAK Yakutsk 36.03 310 LR LR 07 24 08.1
comp=Z,96nm,20.6s,baz=88,slow=38
YAK Yakutsk 36.03 310 *i*P **P** **07 08 15.1 -1.5**
YAK pmax pmax
comp=Z,20nm,0.6s
O20A White River Ci 36.17 94 P **P** **07 08 19.6 +1.3**
O20A White River Ci 36.17 94 P **P** **07 08 19.7 +1.4**
baz=312,SNR=27
BELC Belle Mtn. Jos 36.24 109 P **P** **07 08 19.4 +0.6**
baz=319
MDND Maddock 36.27 77 P **P** **07 08 19.3 +0.5**
MDND Maddock 36.27 77 P **P** **07 08 19.4 +0.5**
baz=304
PFO Pinyon Flats O 36.29 109 LR LR 07 20 25.2
comp=Z,134nm,18.5s,baz=298,slow=31
PFO Pinyon Flats O 36.29 109 P **P** **07 08 20.0 +0.7**
baz=320
TPFO Pinon Flats 36.29 109 P **P** **07 08 20.5 +1.1**
baz=320
U15A North Rim 36.47 102 P **P** **07 08 22.9 +1.9**
W13A Hualapai Mount 36.56 105 P **P** **07 08 22.7 +0.9**
IRM Iron Mountain 36.58 107 P **P** **07 08 23.6 +1.9**
baz=319,SNR=7.5
N23A Red Feather La 36.97 91 P **P** **07 08 25.6 +0.5**
baz=311
ULM Lac du Bonnet 36.97 71 P **P** **07 08 25.9 +1.1**
comp=Z,12nm,0.9s,baz=297,slow=7.9,SNR=11
ULM LR LR 07 23 35.7
comp=Z,112nm,18.4s,baz=297,slow=36
comp=Z,12nm,0.9s
PDMCI Parker Dam,Lak 37.02 106 P **P** **07 08 26.4 +1.1**
baz=319
PV11 David Mesa, Pa 37.06 97 P **P** **07 08 26.8 +0.8**
PV07 Paradox Valley 37.10 96 P **P** **07 08 27.5 +1.2**
PV07 IAmb IAmb 07 08 28.8
comp=Z,7.2nm,0.7s
PV13 Radium Mtn., P 37.19 97 P **P** **07 08 27.4 +0.4**
BLYC Blythe 37.23 107 P **P** **07 08 28.1 +1.0**
BLYC IAmb IAmb 07 08 30.3
comp=Z,20nm,1.5s
PV15 Paradox Valley 37.26 96 P **P** **07 08 28.6 +0.9**
PV15 IAmb IAmb 07 08 30.3
comp=Z,12nm,0.8s
WUAZ Wupatki 37.65 102 P **P** **07 08 32.5 +1.6**
WUAZ IAmb IAmb 07 08 34.2
comp=Z,11nm,0.9s

WUAZ Wupatki 37.65 102 P **P** **07 08 32.7 +1.8**
baz=317,SNR=5.5
ISCO Idaho Springs 37.89 92 P **P** **07 08 33.7 +0.6**
ISCO Idaho Springs 37.89 92 P **P** **07 08 34.1 +1.1**
baz=312
MVCO Mesa Verde 38.04 97 P **P** **07 08 34.7 +0.4**
MVCO IAmb IAmb 07 08 36.6
comp=Z,9.6nm,0.8s
MVCO Mesa Verde 38.04 97 P **P** **07 08 35.1 +0.8**
baz=315,SNR=10
AGMN Agassiz Nation 38.07 74 P **P** **07 08 34.4 +0.3**
AGMN Agassiz Nation 38.07 74 P **P** **07 08 34.0 -0.1**
baz=305,SNR=11
113A Mohawk Valley, 38.38 107 P **P** **07 08 37.6 +0.7**
X16A Lo Mia Camp, P 38.42 103 P **P** **07 08 38.9 +1.6**
X16A IAmb IAmb 07 08 41.1
comp=Z,7.9nm,0.9s
ASAJ Asahikawa 38.58 278 LR LR 07 24 05.6
comp=Z,72nm,19.1s,baz=10,slow=36
S22A 4UR Ranch, Cre 38.61 95 P **P** **07 08 39.0 -0.1**
baz=314
SUSD Miller 38.66 81 P **P** **07 08 40.0 +0.9**
baz=308
Q24A Divide 38.72 93 P **P** **07 08 41.1 +1.1**
Q24A Divide 38.72 93 P **P** **07 08 40.1 +0.1**
baz=313
X18A Snowflake 39.16 102 P **P** **07 08 45.8 +2.1**
B35A Bob, Littlefor 39.20 73 P **P** **07 08 43.8 +0.3**
B35A IAmb IAmb 07 08 45.2
comp=Z,11nm,0.8s
SDCO Great Sand Dun 39.36 94 P **P** **07 08 46.5 +1.2**
SDCO Great Sand Dun 39.36 94 P **P** **07 08 47.3 +2.0**
baz=314,SNR=14
214A Organ Pipe Nat 39.52 107 P **P** **07 08 47.7 +1.3**
214A Organ Pipe Nat 39.52 107 P **P** **07 08 47.8 +1.3**
baz=320,SNR=5.6
KSCO Kaye Shedlock' 40.12 90 P **P** **07 08 51.5 0.0**
KSCO Kaye Shedlock' 40.12 90 P **P** **07 08 52.5 +1.0**
baz=313
TUC Tucson 40.36 105 P **P** **07 08 54.1 +0.7**
TUC Tucson 40.36 105 P **P** **07 08 54.9 +1.4**
baz=319
T25A Trinidad 40.40 94 P **P** **07 08 55.4 +1.4**
T25A IAmb IAmb 07 08 57.1
comp=Z,13nm,0.9s
T25A Trinidad 40.40 94 P **P** **07 08 55.3 +1.4**
baz=315,SNR=9.3
ECSD EROS Data Cent 40.41 80 P **P** **07 08 53.3 -0.5**
ECSD EROS Data Cent 40.41 80 P **P** **07 08 54.0 +0.2**
baz=309,SNR=7.7
EYMN Ely 40.65 72 P **P** **07 08 55.9 +0.3**
EYMN Ely 40.65 72 P **P** **07 08 56.0 +0.4**
baz=306,SNR=24
ANMO Albuquerque 40.81 98 LR LR 07 24 00.8
comp=Z,77nm,19.6s,baz=300,slow=33
ANMO Albuquerque 40.81 98 *ce*P **P** **07 08 58.1 +0.8**
ANMO pmax pmax
comp=Z,4.0nm,1.3s
ANMO Albuquerque 40.81 98 P **P** **07 08 57.4 +0.1**
baz=317
LENM Lemitar 41.09 99 P **P** **07 09 00.8 +1.2**
BNM Barren Site 41.30 99 P **P** **07 09 02.4 +1.0**
CRNM Carthage 41.38 99 P **P** **07 09 03.5 +1.5**
E38A The Farm, Brul 41.42 73 P **P** **07 09 02.2 +0.3**
KLR Kul'dur 41.43 292 LR LR 07 26 27.8
comp=Z,110nm,19.7s,baz=54,slow=36
KLR Kul'dur 41.43 292 *i*P **P** **07 08 58.4 -3.6**
KLR pmax pmax
comp=Z,2.0nm,0.9s
NOR Nord 41.59 8 *i*P **P** **07 09 03.0 +0.1**
SPMN Marine on St. 41.60 76 P **P** **07 09 03.8 +0.4**
baz=309,SNR=5.9
121A Cookes Peak, D 41.85 102 P **P** **07 09 06.6 +0.7**
121A Cookes Peak, D 41.85 102 P **P** **07 09 05.9 +0.1**
baz=319,SNR=8.3
CBKS Cedar Bluff 41.90 88 P **P** **07 09 05.9 -0.1**
CBKS IAmb IAmb 07 09 08.8
comp=Z,19nm,1.1s
CBKS Cedar Bluff 41.90 88 P **P** **07 09 06.8 +0.8**
baz=313
I37A Lemond, Waseca 42.03 78 P **P** **07 09 07.7 +0.7**
FRB Frobisher Bay 42.50 41 LR LR 07 27 59.8
comp=Z,177nm,18.6s,baz=344,slow=38
N35A Tabor 42.83 83 P **P** **07 09 14.0 +0.5**
G40A Rib Lake 43.00 74 P **P** **07 09 15.2 +0.4**
G40A IAmb IAmb 07 09 16.4
comp=Z,9.8nm,0.8s
AMTX Amarillo 43.56 94 P **P** **07 09 20.0 +0.4**
AMTX IAmb IAmb 07 09 22.0
comp=Z,11nm,1.1s
AMTX Amarillo 43.56 94 P **P** **07 09 20.2 +0.7**
baz=316
MSTX Muleshoe 43.60 96 P **P** **07 09 20.3 +0.4**
MSTX Muleshoe 43.60 96 P **P** **07 09 20.8 +0.8**
baz=317
I40A Norwalk 43.65 76 P **P** **07 09 20.4 +0.3**
MNTX Cornudas Mount 43.82 100 P **P** **07 09 23.1 +1.5**
MNTX Cornudas Mount 43.82 100 P **P** **07 09 22.0 +0.5**
baz=319,SNR=15
USRK Ussuriysk Ar. 44.43 286 LR LR 07 29 21.6
comp=Z,57nm,18.8s,baz=57,slow=38
JFWS Jewell Farm 44.49 77 P **P** **07 09 26.4 -0.4**
baz=311,SNR=7.5
WMOK Wichita Mounta 45.31 92 P **P** **07 09 34.2 +0.7**
WMOK IAmb IAmb 07 09 35.5
comp=Z,8.8nm,0.8s
WMOK Wichita Mounta 45.31 92 P **P** **07 09 33.4 -0.1**
baz=316,SNR=7.3
DAG Danmarks Havn 45.53 12 *i*P **P** **07 09 34.0 -0.6**
DAG IAmb IAmb 07 09 40.0
comp=Z,4.8nm,0.9s
SUMG Summit 45.67 21 *i*P **P** **07 09 36.9 +0.6**
MAJO Matsushiro 46.14 273 *i*P **P** **07 09 39.5 -0.4**
MAJO pmax pmax
comp=Z,16nm,1.0s
MJAR Matsushiro Arr 46.14 273 P **P** **07 09 38.5 -1.4**
comp=Z,2.0nm,0.4s,baz=41,slow=6.8,SNR=6.1
MJAR LR LR 07 29 32.2
comp=Z,29nm,21.1s,baz=83,slow=37
comp=Z,2.0nm,0.4s
TUL1 Leonard 46.17 88 P **P** **07 09 40.1 -0.1**
baz=316
GLMI Grayling 46.31 71 P **P** **07 09 40.4 -0.8**
baz=311
ABTX Abilene, Hawle 46.37 94 P **P** **07 09 42.2 +0.4**
baz=318
SFJD Kangerlussuaq 46.52 31 LR LR 07 30 39.8
comp=Z,55nm,18.8s,baz=318,slow=38
TX32 Lajitas Array 46.57 101 P **P** **07 09 44.7 +1.1**
TX32 IAmb IAmb 07 09 46.1
comp=Z,5.4nm,0.9s
TXAR Lajitas Array 46.57 101 P **P** **07 09 45.1 +1.6**
comp=Z,4.8nm,0.8s,baz=308,slow=5.9,SNR=57
TXAR pP **pP** **07 09 56.8 +0.9**
comp=Z,1.7nm,0.7s,baz=309,slow=6.5,SNR=8.6
TXAR PcP **PcP** **07 11 17.6 +0.5**
comp=Z,0.8nm,0.7s,baz=182,slow=1.0,SNR=3.9
TXAR LR LR 07 27 48.7
comp=Z,125nm,19.8s,baz=312,slow=34
comp=Z,4.8nm,0.8s
TXAR Lajitas Array 46.57 101 P **P** **07 09 44.6 +1.1**
HDIL Hopedale 46.60 78 P **P** **07 09 43.0 -0.5**
baz=313,SNR=12
NRIK Noril'sk 46.62 334 P **P** **07 09 43.5 +0.3**
comp=Z,5.1nm,0.5s,baz=67,slow=5.3,SNR=11
comp=Z,5.1nm,0.5s
NRIK Noril'sk 46.62 334 *ce*P **P** **07 09 43.3 +0.1**
NRIK pmax pmax
comp=Z,15nm,1.5s
LPIG La Paz 47.08 112 LR LR 07 27 01.1
comp=Z,32nm,19.7s,baz=354,slow=33
CCM Cathedral Cave 47.23 82 P **P** **07 09 47.3 -1.1**
baz=314
DBG Daneborg 47.46 14 *i*P **P** **07 09 48.2 -1.5**
U40A Yellville 47.52 85 P **P** **07 09 50.2 -0.6**
baz=315
HIA Hailar 47.59 299 *i*P **P** **07 09 49.8 -1.3**
HIA pmax pmax
comp=Z,5.0nm,0.9s
JHJ Hachijo jima 2 47.71 269 LR LR 07 27 55.1
comp=Z,41nm,21.7s,baz=92,slow=34
W39A Magazine 47.82 87 P **P** **07 09 52.7 -0.4**
baz=316
JCT Junction City 47.88 96 P **P** **07 09 54.2 +0.6**
JCT Junction City 47.88 96 P **P** **07 09 53.9 +0.3**
baz=319,SNR=6.8

SFIN Lafayette 47.94 77 P **P** **07 09 54.0 +0.1**
baz=313,SNR=6.5
ICESG Greenland Ices 47.97 25 *i*P **P** **07 09 53.8 -0.4**
ICESG IAmb IAmb 07 09 55.5
comp=Z,25nm,1.2s
WHTX Lake Whitney, 48.07 93 P **P** **07 09 55.7 +0.7**
baz=318
CN2 Changchun 48.23 290 *e*P **P** **07 09 54.8 -1.3**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
MIAR Mount Ida 48.41 88 P **P** **07 09 57.9 +0.3**
baz=316,SNR=7.5
SCHQ Schefferville 48.56 50 P **P** **07 09 58.4 -0.2**
comp=Z,6.2nm,0.9s,baz=332,slow=7.1,SNR=10.0
SCHQ LR LR 07 29 37.5
comp=Z,105nm,19.6s,baz=190,slow=35
comp=Z,6.2nm,0.9s
W41B Gary Mavity, V 48.71 86 P **P** **07 10 00.1 +0.2**
baz=316
X40A Basin Creek Fa 48.87 87 P **P** **07 10 00.7 -0.5**
baz=316
O48B Farmland 49.10 76 P **P** **07 10 01.9 -1.0**
baz=314
SADO Sadowa 49.26 67 LR LR 07 30 11.3
comp=Z,63nm,19.4s,baz=329,slow=35
833A Chaparral WMA, 49.74 98 P **P** **07 10 08.4 +0.5**
baz=320
P49A Miami Univ. Ec 49.84 76 P **P** **07 10 07.6 -0.9**
baz=314,SNR=5.0
ACSO Alum Creek Sta 50.31 74 P **P** **07 10 10.8 -1.2**
baz=314
T47A Sharon Grove 50.31 80 P **P** **07 10 12.2 +0.1**
WVT Waverly 50.52 82 P **P** **07 10 13.5 -0.2**
baz=316
HKT Hockley 50.52 93 *i*P **P** **07 10 12.7 -1.0**
HKT pmax pmax
comp=Z,7.0nm,1.2s
SOEG Soedalen 50.57 23 *i*P **P** **07 10 14.2 +0.5**
ERPA Erie 50.62 71 P **P** **07 10 14.7 +0.3**
baz=314
M53A WI Miller and 50.72 72 P **P** **07 10 14.6 -0.6**
baz=314
OXF Oxford 50.80 84 P **P** **07 10 16.0 +0.2**
OXF Oxford 50.80 84 P **P** **07 10 15.5 -0.3**
baz=317,SNR=5.8
P52A Corning 51.20 74 P **P** **07 10 18.6 -0.2**
baz=315
O53A New Philadelph 51.27 73 P **P** **07 10 18.1 -1.1**
baz=315
KSRS Korea Array 51.28 282 P **P** **07 10 19.9 +0.6**
comp=Z,6.0nm,0.8s,baz=47,slow=7.3,SNR=24
KSRS LR LR 07 33 14.1
comp=Z,14nm,19.0s,baz=240,slow=37
comp=Z,6.0nm,0.8s
KSRS Korea Array 51.28 282 P **P** **07 10 20.0 +0.6**
KSAR Wonju Array Be 51.31 282 P **P** **07 10 19.4 -0.2**
LONY Lake Ozonia 51.73 65 P **P** **07 10 22.0 -0.7**
baz=314
JMIC Jan Mayen 51.98 12 LR LR 07 35 07.2
comp=Z,21nm,18.8s,baz=14,slow=39
TJN Taejon 52.37 281 *ce*P **P** **07 10 25.5 -1.9**
MCWV Mont Chateau 52.42 73 P **P** **07 10 28.0 +0.1**
baz=315
TZTN Tazewell 52.62 78 P **P** **07 10 28.8 -0.5**
baz=316
BINY Binghamton 52.69 68 P **P** **07 10 29.7 -0.1**
baz=315
SSPA Standing Stone 52.79 70 P **P** **07 10 30.4 -0.2**
baz=315
XLT XiLinHaoTe 53.08 296 *e*P **P** **07 10 30.1 -2.7**
XLT pmax pmax
comp=Z,23nm,0.6s
XLT pmax pmax
comp=Z,110nm,5.7s
TKL Tuckaleechee C 53.13 79 LR LR 07 32 31.3
comp=Z,88nm,18.7s,baz=334,slow=35
LBNH Lisbon 53.35 63 P **P** **07 10 34.8 +0.1**
baz=315
BLA Blacksburg 53.87 75 P **P** **07 10 38.0 -0.6**
baz=316
ZAK Zakamensk 54.59 309 *e*P **P** **07 10 43.2 -0.5**
ZAK pmax pmax
comp=Z,4.0nm,1.3s
BRAL Brewton 54.60 85 P **P** **07 10 43.0 -0.9**
baz=318
PAL Palisades 54.64 67 P **P** **07 10 42.6 -1.4**
baz=316
ULN Ulaanbaatar 54.69 305 *ce*P **P** **07 10 44.0 -0.6**
ULN pmax pmax
comp=Z,4.0nm,1.0s
GOGA Godfrey 54.95 81 P **P** **07 10 45.5 -1.0**
baz=318
SONM Songino Array 55.02 305 P **P** **07 10 47.1 +0.2**
comp=Z,4.9nm,0.6s,baz=48,slow=6.7,SNR=24
SONM PcP **PcP** **07 11 48.9 +0.9**
comp=Z,1.1nm,0.5s,baz=22,slow=3.6,SNR=2.4
SONM LR LR 07 36 00.1
comp=Z,117nm,18.5s,baz=84,slow=38
comp=Z,4.9nm,0.6s
SONM Songino Array 55.02 305 P **P** **07 10 47.2 +0.3**
SONM IAmb IAmb 07 10 48.0
comp=Z,5.6nm,0.9s
ARCES ARCESS Array B 55.22 358 P **P** **07 10 48.0 +0.1**
comp=Z,2.6nm,0.5s,baz=20,slow=6.9,SNR=23
comp=Z,2.6nm,0.5s
ARCES ARCESS Array B 55.22 358 P **P** **07 10 48.0 +0.1**
BORG Borgarnes 55.64 21 LR LR 07 37 44.4
comp=Z,36nm,18.5s,baz=336,slow=39
HHC Hu-ho-hao-te 57.60 296 *e*P **P** **07 11 06.3 +1.0**
HHC pmax pmax
comp=Z,16nm,1.1s
HHC pmax pmax
comp=Z,130nm,5.0s
HNS HongShan 58.52 291 ⇓P **P** **07 11 12.3 +0.7**
HNS *e*S **S** **07 19 12.9 +1.1**
HNS pmax pmax
comp=Z,18nm,0.8s
HNS LR LR
comp=N,110nm,17.5s
HNS LR LR
comp=E,120nm,17.5s
HNS LR LR
comp=Z,170nm,21.1s
ZAA0 Zalesovo Array 59.19 322 P **P** **07 11 16.5 +0.4**
ZAA0 IAmb IAmb 07 11 17.9
comp=Z,4.3nm,0.7s
ZALV Zalesovo Beam 59.19 322 P **P** **07 11 16.1 0.0**
comp=Z,4.1nm,0.7s,baz=24,slow=6.6,SNR=13
ZALV LR LR 07 37 55.6
comp=Z,90nm,21.6s,baz=54,slow=37
comp=Z,4.1nm,0.7s
ZALV Zalesovo Beam 59.19 322 P **P** **07 11 16.3 +0.2**
ZALV Zalesovo Beam 59.19 322 *i*P **P** **07 11 16.5 +0.4**
ZALV pmax pmax
comp=Z,4.0nm,0.7s
NJ2 Nanjing 60.29 284 *e*P **P** **07 11 23.2 -0.7**
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
GUMO Guam 60.29 249 LR LR 07 34 44.3
comp=Z,20nm,20.0s,baz=102,slow=33
CMIG Matias Romero 61.15 102 LR LR 07 36 38.7
comp=Z,44nm,19.9s,baz=328,slow=35
PRGR Permogore 61.66 347 *e*P **P** **07 11 32.5 -0.3**
PRGR *e*SP **pP** **07 11 46.1 +0.6**
LYN LuoYang 61.85 291 ⇑*i*P **P** **07 11 34.5 0.0**
LYN pmax pmax
comp=Z,20nm,0.6s
FINES FINESS Array B 63.32 358 P **P** **07 11 43.8 -0.1**
comp=Z,2.4nm,0.4s,baz=0.8,slow=8.9,SNR=30
comp=Z,2.4nm,0.4s
NB2 NORSAR Subarra 63.49 6 P **P** **07 11 45.2 +0.1**
comp=Z,1.6nm,0.6s,baz=355,slow=6.9
NOA NORSAR Array B 63.49 6 P **P** **07 11 45.3 +0.2**
comp=Z,1.2nm,0.6s,baz=359,slow=7.1,SNR=8.6
comp=Z,1.2nm,0.6s
RAF Rauma 63.80 360 *e*P **P** **07 11 47.9 +0.9**
KURK Kurchatov 64.00 324 P **P** **07 11 49.0 +0.4**
KURK IAmb IAmb 07 11 49.8
comp=Z,6.9nm,0.7s
KURK Kurchatov 64.00 324 *ce*P **P** **07 11 48.3 -0.2**
KURK pmax pmax
comp=Z,7.0nm,1.3s
KIRV Kirov 64.07 344 *ce*P **P** **07 11 47.5 -1.3**
KURBB Kurchatov Arra 64.11 324 P **P** **07 11 49.5 +0.3**
comp=Z,1.5nm,0.4s,baz=24,slow=6.1,SNR=14
KURBB pP **pP** **07 12 01.2 -0.9**
comp=Z,2.8nm,0.9s,baz=23,slow=6.9,SNR=6.0

KURBB				LR	LR	07 44 17.8	
	comp=Z,58nm,18.4s,baz=51,slow=40						
	comp=Z,1.5nm,0.4s						
XAN	**Xi'an**	**64.12**	**293**	P	**P**	**07 11 49.3**	**-0.4**
XAN				pP	pP	07 12 01.6	-0.9
XAN				pmax	pmax		
	comp=Z,15nm,0.8s						
ARU	**Arti**	**64.43**	**338**	P	**P**	**07 11 51.5**	**+0.2**
	comp=Z,7.4nm,0.5s,baz=35,slow=3.2,SNR=5.0						
ARU				pP	**pP**	**07 12 03.4**	**-0.7**
	comp=Z,4.3nm,0.5s,baz=345,slow=6.2,SNR=2.3						
ARU				LR	LR	07 42 03.5	
	comp=Z,47nm,18.5s,baz=20,slow=38						
	comp=Z,7.4nm,0.5s						
ARU	**Arti**	**64.43**	**338**	IAmb	IAmb	07 11 52.2	
	comp=Z,7.4nm,0.7s						
ARU	**Arti**	**64.43**	**338***c*	*i*P	**P**	**07 11 51.1**	**-0.1**
ARU				*PP	**pP**	**07 12 03.0**	**-1.1**
ARU						07 14 07.7	
ARU				S	**S**	**07 20 27.8**	**+1.6**
ARU				SS	**SS**	**07 24 34.0**	**-1.6**
ARU				pmax	pmax		
	comp=Z,7.0nm,0.6s						
GTA	**Gaotai**	**64.51**	**303**	*e*P	**P**	**07 11 52.0**	**-0.2**
GTA				pP	pP	07 12 00.8	-4.3
GTA				sP	sP	07 12 05.5	-4.7
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,32nm,4.7s						
GTA				LR	LR		
	comp=N,90nm,17.8s						
GTA				LR	LR		
	comp=E,420nm,17.8s						
GTA				LR	LR		
	comp=Z,120nm,17.8s						
BRVK	**Borovoye**	**64.57**	**330**	P	**P**	**07 11 52.6**	**+0.3**
BRVK				IAmb	IAmb	07 11 53.5	
	comp=Z,7.1nm,0.9s						
BRVK	**Borovoye**	**64.57**	**330***c*	*e*P	**P**	**07 11 51.8**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
AAL	**Aland**	**64.64**	**1**	*e*P	**P**	**07 11 52.7**	**+0.2**
LZH	**Lanzhou**	**65.14**	**298**	*e*P	**P**	**07 11 56.9**	**+0.5**
LZH				pP	pP	07 12 06.1	-3.2
LZH				sP	sP	07 12 10.4	-4.0
LZH				pmax	pmax		
	comp=Z,28nm,1.1s						
LZH				LR	LR		
	comp=N,130nm,12.7s						
LZH				LR	LR		
	comp=E,180nm,13.8s						
LZH				LR	LR		
	comp=Z,110nm,14.1s						
MK31	**Makanchi Array**	**66.01**	**319**	P	**P**	**07 12 01.1**	**-0.6**
MK31	**Makanchi Array**	**66.01**	**319**	*i* P	**P**	**07 12 01.4**	**-0.3**
MKAR	**Makanchi Array**	**66.01**	**319**	P	**P**	**07 12 01.2**	**-0.5**
	comp=Z,2.0nm,0.7s,baz=50,slow=6.3,SNR=12						
MKAR				pP	**pP**	**07 12 13.7**	**-0.8**
	comp=Z,2.7nm,0.7s,baz=46,slow=7.0,SNR=9.0						
MKAR				LR	LR	07 40 56.6	
	comp=Z,78nm,19.2s,baz=32,slow=36						
	comp=Z,2.0nm,0.7s						
MKAR	**Makanchi Array**	**66.01**	**319**	P	**P**	**07 12 01.4**	**-0.3**
MTSE	**Matsula**	**66.10**	**359**	*e*P	**P**	**07 12 02.2**	**+0.2**
VIKU	**Vikbolandet**	**66.26**	**3**	*e*P	**P**	**07 12 03.4**	**+0.4**
WMQ	**Urumqi**	**66.36**	**314**	*e*P	**P**	**07 12 08.0**	**+3.9**
SLIT	**Slitere, Latvi**	**67.20**	**360**	*e*P	**P**	**07 12 09.4**	**+0.3**
DEL	**Delary**	**68.19**	**5**	*e*P	**P**	**07 12 16.0**	**+0.7**
OBN	**Obninsk**	**69.04**	**351**	*de*	P	**P**	**07 12 21.0**	**+0.4**
OBN				*e*			07 14 50.6	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CD2	**Chengdu**	**69.27**	**294**	P	**P**	**07 12 22.7**	**+0.2**
CD2				pmax	pmax		
	comp=Z,30nm,1.0s						
PABE	**Paberze**	**69.31**	**359**	*e*P	**P**	**07 12 22.6**	**+0.4**
GOMU	**GeErMu**	**69.45**	**304**	P	**P**	**07 12 23.4**	**-0.5**
GOMU				sP	pP	07 12 29.0	-7.9
GOMU				pmax	pmax		
	comp=Z,4.0nm,0.7s						
AKTO	**Aktyubinsk**	**70.13**	**336**	P	**P**	**07 12 27.4**	**-0.1**
	comp=Z,4.9nm,0.6s,baz=35,slow=6.3,SNR=20						
	comp=Z,4.9nm,0.6s						
BELG	**Belogornoye**	**70.31**	**343**	P	**P**	**07 12 27.8**	**-0.7**
	comp=Z,14nm,0.5s,baz=336,slow=3.9						
	comp=Z,14nm,0.5s						
BELG	**Belogornoye**	**70.31**	**343**	*i* P	**P**	**07 12 27.9**	**-0.5**
BELG				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GYA	**Guiyang**	**71.28**	**289**	⇓P	**P**	**07 12 35.4**	**+0.4**
GYA				pmax	pmax		
	comp=Z,11nm,1.1s						
BOOM	**Boomskoye usch**	**72.03**	**321**	P	**P**	**07 12 39.4**	**+0.1**
BOOM				IAmb	IAmb	07 12 54.4	
	comp=Z,8.1nm,0.8s						
JTS	**Las Juntas de**	**72.23**	**98**	LR	LR	07 47 13.4	
	comp=Z,46nm,18.2s,baz=28,slow=38						
AAK	**Ala-Archa**	**72.41**	**322**	P	**P**	**07 12 42.2**	**+0.6**
AAK				*e*PP	**pP**	**07 12 59.0**	**-0.5**
CLL	**Collm**	**73.30**	**6**	*e*P	**P**	**07 12 47.0**	**+0.6**
CLL				*e*PP	**pP**	**07 12 59.0**	**-0.5**
CLL	**Collm**	**73.30**	**6**	*e*P	**P**	**07 12 47.0**	**+0.6**
CLL				*e*pP	**pP**	**07 12 59.0**	**-0.5**
KK31	**Karatay Array**	**73.35**	**325**	P	**P**	**07 12 47.3**	**+0.4**
KK31				IAmb	IAmb	07 13 01.7	
	comp=Z,10nm,0.9s						
KKAR	**Karatay Array**	**73.35**	**325**	P	**P**	**07 12 47.0**	**+0.1**
PZH	**PanZhiHua**	**73.85**	**293**	P	**P**	**07 12 51.3**	**+1.0**
PZH				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,110nm,5.3s						
AKASG	**Malin Array Be**	**73.95**	**355**	P	**P**	**07 12 50.0**	**-0.3**
	comp=Z,7.3nm,0.4s,baz=9.4,slow=5.9,SNR=40						
AKASG				pP	**pP**	**07 13 02.2**	**-1.1**
	comp=Z,3.2nm,0.5s,baz=7.1,slow=5.9,SNR=4.2						
	comp=Z,7.3nm,0.4s						
AKBB	**Malin Array Si**	**73.95**	**355**	P	**P**	**07 12 49.8**	**-0.5**
AKBB	**Malin Array Si**	**73.95**	**355***ce*	P	**P**	**07 12 49.9**	**-0.4**
DPC	**Dobruska-Polom**	**74.40**	**3**	*e*P	**P**	**07 12 53.9**	**+0.9**
DPC				*e*		07 13 05.1	
DPC	**Dobruska-Polom**	**74.40**	**3**	*e*P	**P**	**07 12 53.9**	**+0.9**
DPC				*e*pP	**PcP**	**07 13 05.1**	**-2.4**
KSH	**Kashi**	**74.62**	**319**	P	**P**	**07 12 58.8**	**+4.3**
KSH				PcP	**pP**	**07 13 12.2**	**+4.6**
KSH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KRLC	**Kraliky**	**74.69**	**3**	*e*P	**P**	**07 12 56.0**	**+1.3**
KRLC				*e*		07 13 08.2	
KRLC	**Kraliky**	**74.69**	**3**	*e*P	**P**	**07 12 56.0**	**+1.3**
KRLC				*e*pP	**PcP**	**07 13 08.2**	**-0.5**
KHC	**Kasperske Hory**	**75.50**	**5**	*e*P	**P**	**07 13 00.3**	**+1.0**
KHC	**Kasperske Hory**	**75.50**	**5**	*e*P	**P**	**07 13 00.3**	**+1.0**
GEC2	**GERESS Array S**	**75.79**	**5**	P	**P**	**07 13 01.7**	**+0.6**
GERES	**GERESS Array B**	**75.79**	**5**	P	**P**	**07 13 01.1**	**0.0**
	comp=Z,0.7nm,0.5s,baz=353,slow=4.4,SNR=7.8						
	comp=Z,0.7nm,0.5s						
GERES	**GERESS Array B**	**75.79**	**5**	P	**P**	**07 13 01.4**	**+0.3**
BTK	**Batken**	**75.97**	**323**	P	**P**	**07 13 02.2**	**0.0**
BTK				IAmb	IAmb	07 13 17.2	
	comp=Z,8.9nm,0.9s						
DAV	**Davao City (W)**	**76.28**	**262**	LR	LR	07 49 59.4	
	comp=Z,26nm,18.1s,baz=348,slow=38						
LSA	**Lhasa**	**76.54**	**303**	P	**P**	**07 13 06.3**	**+0.3**
LSA				IAmb	IAmb	07 13 21.3	
	comp=Z,9.2nm,0.8s						
SJG	**San Juan**	**76.55**	**78**	LR	LR	07 47 54.0	
	comp=Z,23nm,19.0s,baz=249,slow=36						
GAR	**Garm**	**77.09**	**323**	P	**P**	**07 13 09.1**	**+0.5**
BUR08	**Bucovina Ar. S**	**77.16**	**357**	P	**P**	**07 13 09.3**	**+0.4**
CHGR	**Chuyangaron**	**77.80**	**324**	P	**P**	**07 13 12.8**	**+0.2**
PMG	**Port Moresby**	**78.88**	**235**	LR	LR	07 50 06.1	
	comp=Z,50nm,18.5s,baz=330,slow=37						
KIV	**Kislovodsk**	**79.29**	**345**	*e*P	**P**	**07 13 18.6**	**-2.1**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KBZ	**Khabaz**	**79.48**	**344**	P	**P**	**07 13 22.4**	**+0.9**
	comp=Z,4.1nm,0.9s,baz=318,slow=1.3,SNR=8.9						
KBZ				LR	LR	07 54 25.1	
	comp=Z,16nm,18.8s,baz=34,slow=40						
	comp=Z,4.1nm,0.9s						
KBZ	**Khabaz**	**79.48**	**344***ce*	P	**P**	**07 13 22.7**	**+1.2**
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TAPN	**Taplejung**	**80.14**	**304**	*e*P	**P**	**07 13 26.1**	**+0.3**
ZEI	**Tsey**	**80.24**	**344**	*e*P	**P**	**07 13 26.7**	**+0.7**
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GUN	**Gumba**	**80.51**	**306**	*e*P	**P**	**07 13 28.2**	**+0.3**
	comp=Z,18nm,0.5s						
JIRN	**Jiri**	**80.58**	**306**	*e*P	**P**	**07 13 28.6**	**+0.3**
	comp=Z,48nm,0.5s						
RAMN	**Ramite**	**81.00**	**305**	*e*P	**P**	**07 13 30.2**	**-0.1**
	comp=Z,23nm,0.6s						
GKN	**Gorkha**	**81.00**	**307**	*e*P	**P**	**07 13 30.6**	**+0.4**
PKI	**Pulchoki**	**81.02**	**306**	*e*P	**P**	**07 13 30.5**	**0.0**
	comp=Z,11nm,0.5s						
PKIN	**Phulchoki**	**81.02**	**306**	*e*P	**P**	**07 13 30.5**	**0.0**
	comp=Z,18nm,0.5s						
DANN	**Dangsing**	**81.10**	**308**	*e*P	**P**	**07 13 31.1**	**+0.2**
	comp=Z,49nm,0.7s						
DMN	**Daman**	**81.12**	**306**	*e*P	**P**	**07 13 31.1**	**+0.1**
	comp=Z,26nm,0.5s						
PYUN	**Piuthan**	**81.66**	**308**	*e*P	**P**	**07 13 33.9**	**+0.1**
	comp=Z,14nm,0.6s						
GEYT	**Alibeck**	**81.82**	**332**	P	**P**	**07 13 35.1**	**+0.8**
	comp=Z,1.7nm,0.4s,baz=9.5,slow=4.4,SNR=2.6						
GEYT				pP	**pP**	**07 13 47.5**	**+0.1**
	comp=Z,3.9nm,0.7s,baz=25,slow=5.6,SNR=2.7						
	comp=Z,1.7nm,0.4s						
CMAR	**Chiang Mai Arr**	**81.90**	**291**	P	**P**	**07 13 35.1**	**+0.2**
	comp=Z,4.7nm,0.4s,baz=13,slow=5.5,SNR=26						
CMAR				pP	**pP**	**07 13 47.6**	**-0.5**
	comp=Z,6.1nm,0.7s,baz=13,slow=5.4,SNR=4.4						
CMAR				LR	LR	07 51 28.1	
	comp=Z,15nm,20.2s,baz=65,slow=37						
	comp=Z,4.7nm,0.4s						
CMAR	**Chiang Mai Arr**	**81.90**	**291**	P	**P**	**07 13 35.4**	**+0.5**
CMAR	**Chiang Mai Arr**	**81.90**	**291***ce*	P	**P**	**07 13 35.4**	**+0.5**
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ESDC	**Sonseca Array**	**82.70**	**20**	P	**P**	**07 13 40.0**	**+1.2**
	comp=Z,1.4nm,0.8s,baz=343,slow=4.3,SNR=9.2						
ESDC				LR	LR	07 51 29.0	
	comp=Z,7.2nm,21.7s,baz=0.0,slow=36						
	comp=Z,1.4nm,0.8s						
BR131	**Keskin Array S**	**84.56**	**351**	P	**P**	**07 13 49.3**	**+0.8**
BR131				IAmb	IAmb	07 14 05.2	
	comp=Z,5.4nm,0.9s						
BR131	**Keskin Array S**	**84.56**	**351**	*i* P	**P**	**07 13 47.4**	**-1.1**
BRTR	**Keskin Array B**	**84.56**	**351**	P	**P**	**07 13 49.5**	**+1.0**
	comp=Z,1.5nm,0.7s,baz=32,slow=2.4,SNR=8.4						
BRTR				pP	**pP**	**07 14 00.1**	**-1.7**
	comp=Z,2.7nm,0.9s,baz=54,slow=3.2,SNR=4.0						
	comp=Z,1.5nm,0.7s						
BRTR	**Keskin Array B**	**84.56**	**351**	P	**P**	**07 13 49.3**	**+0.8**
MDT	**Midelt**	**89.20**	**22**	LR	LR	07 58 38.1	
	comp=Z,16nm,18.1s,baz=116,slow=39						
ATAH	**Atahualpa**	**90.22**	**102**	LR	LR	07 51 56.6	
	comp=Z,19nm,19.6s,baz=340,slow=34						
WRA	**Warramunga Arr**	**94.12**	**240**	P	**P**	**07 14 32.6**	**-1.1**
	comp=Z,0.4nm,0.7s,baz=32,slow=5.1,SNR=6.0						
	comp=Z,0.4nm,0.7s						
WRA	**Warramunga Arr**	**94.12**	**240**	*i* P	**P**	**07 14 33.0**	**-0.8**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ASAR	**Alice Springs**	**97.48**	**239**	P	**P**	**07 14 49.4**	**+0.4**
	comp=Z,0.3nm,0.8s,baz=0.0,slow=10,SNR=2.7						
ASAR				LR	LR	07 51 47.2	
	comp=Z,41nm,20.6s,baz=338,slow=31						
	comp=Z,0.3nm,0.8s						
BOSA	**Boshof**	**152.98**	**353**	PKPbc	**PKPbc**	**07 21 11.9**	**-0.4**
	comp=Z,1.2nm,0.4s,baz=32,slow=3.6,SNR=6.9						

IDC 03 07:06:53.0±3.1, 53.74N×88.05E, h0km, mbtmp3.1/2, ML2.9/2 Error ellipse: s-maj=26.0km s-min=18.3km az=49.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.93**	**277**	*i*		07 19 34.8	
	0.1nm,0.8s,baz=92,slow=323,SNR=7.7						
ZALV	**Zalesovo Beam**	**1.93**	**277**	Pg	Pn	07 07 27.1	+0.1
	2.4nm,0.3s,baz=96,slow=15,SNR=22						
ZALV				Lg	Lg	07 07 53.5	
	3.5nm,0.3s,baz=97,slow=26,SNR=14						
KURBB	**Kurchatov Arra**	**6.63**	**246**	Pn	Pn	07 08 32.3	+0.7
	0.2nm,0.3s,baz=62,slow=14,SNR=12						
KURBB				Sn	Sn	07 09 48.4	+0.5
	baz=65,slow=33,SNR=1.6						
KURBB				Lg	Lg	07 10 22.7	
	baz=60,slow=29,SNR=5.4						
	0.8nm,0.3s						
MKAR	**Makanchi Array**	**7.87**	**210**	Pn	Pn	07 08 49.8	+1.1
	0.2nm,0.3s,baz=25,slow=13,SNR=3.2						
MKAR				Lg	Lg	07 11 00.4	
	baz=27,slow=36						
	0.2nm,0.2s						

*IDC **03** 07:19:29.0±0.7, 29.70N×142.17E, h0km, mb3.8/13, mbtmp3.8/14, ML3.2/2, Error ellipse: s-maj=27.1km s-min=16.3km az=84.0*

ISC 03 07:19:32.7±0.6, 29.69N±0.07×142.3E±0.1, h24km, n16, σ1§10/18, mb3.9/13, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**2.59**	**182**	Pn	**Pn**	**07 20 14.0**	**+0.9**
	6.0nm,0.3s,baz=281,slow=19,SNR=1.6						
JCJ				Sn	**Sn**	**07 20 42.2**	**-1.6**
	18nm,0.3s,baz=270,slow=20,SNR=6.8						
MJAR	**Matsushiro Arr**	**7.63**	**335**	Pn	**Pn**	**07 21 21.1**	**-1.3**
	0.3nm,0.3s,baz=159,slow=10,SNR=16						
	4.6nm,0.6s						
KSRS	**Korea Array**	**14.24**	**307**	Pn	**Pn**	**07 22 54.6**	**+1.9**
	baz=109,slow=12						
KLR	**Kul'dur**	**21.10**	**341**	P	**P**	**07 24 15.1**	**-0.2**
	1.4nm,0.7s,baz=179,slow=9.4,SNR=5.6						
	1.4nm,0.7s						
SONM	**Songino Array**	**32.94**	**313**	P	**P**	**07 26 05.2**	**-0.2**
	1.7nm,0.9s,baz=119,slow=8.5,SNR=5.4						
	1.7nm,0.9s						
MKAR	**Makanchi Array**	**48.91**	**308**	P	**P**	**07 28 16.4**	**-0.3**
	0.8nm,0.6s,baz=91,slow=9.5,SNR=9.8						
	0.8nm,0.6s						
WRA	**Warramunga Arr**	**49.93**	**190**	P	**P**	**07 28 24.2**	**-0.5**
	1.9nm,0.7s,baz=7.6,slow=7.9,SNR=42						
WRA				PcP	**PcP**	**07 29 45.2**	**+0.5**
	0.4nm,0.8s,baz=358,slow=3.9,SNR=1.8						
	1.9nm,0.7s						
ASAR	**Alice Springs**	**53.66**	**190**	P	**P**	**07 28 52.2**	**-0.3**
	1.1nm,1.0s,baz=5.6,slow=5.6,SNR=8.7						
	1.1nm,1.0s						
ILAR	**Eielson Array**	**55.42**	**29**	P	**P**	**07 29 04.4**	**-0.3**
	0.3nm,0.8s,baz=268,slow=6.9,SNR=2.4						
	0.3nm,0.8s						
YKA	**Yellowknife Ar**	**69.84**	**29**	P	**P**	**07 30 43.1**	**+2.1**
	0.3nm,0.7s,baz=294,slow=5.9,SNR=3.0						
	0.3nm,0.7s						
KBZ	**Khabaz**	**76.31**	**313**	P	**P**	**07 31 19.7**	**+0.1**
	2.2nm,0.9s,baz=67,slow=1.2,SNR=4.2						
	2.2nm,0.9s						
NVAR	**Mina Array Bea**	**78.87**	**52**	P	**P**	**07 31 34.4**	**0.0**
	0.1nm,0.3s,baz=279,slow=8.1,SNR=2.8						
	0.1nm,0.3s						
NOA	**NOAR Array B**	**81.24**	**338**	P	**P**	**07 31 45.0**	**-1.5**
	1.0nm,0.9s,baz=94,slow=6.3,SNR=2.0						
	1.0nm,0.9s						
BRTR	**Keskin Array B**	**84.30**	**313**	P	**P**	**07 32 01.7**	**-1.2**
	1.2nm,0.7s,baz=78,slow=5.2,SNR=5.1						
	1.2nm,0.7s						
ULM	**Lac du Bonnet**	**85.24**	**33**	P	**P**	**07 32 07.9**	**+0.7**
	1.4nm,0.7s,baz=315,slow=2.9,SNR=2.1						
	1.4nm,0.7s						
TXAR	**Lajitas Array**	**93.99**	**53**	P	**P**	**07 32 49.2**	**+0.1**
	0.3nm,0.8s,baz=270,slow=1.3,SNR=4.3						
	0.3nm,0.8s						

*REN **03** 07:19:41.8±1.3, 39.59N±0.04×115.84W±0.05, h11km±4km, Mwr3.6, ML3.7/80(NEIC), Error ellipse: s-maj=5.7km s-min=5.1km az=169.0*

*NEIC **03** 07:19:42.3±1.3, 39.59N±0.03×115.85W±0.04, h5km±6km, Error ellipse: s-maj=5.2km s-min=4.5km az=225.0*

*IDC **03** 07:19:42.5±0.7, 39.59N×115.88W, h0km, mb3.1/1, mbtmp3.2/7, ML3.7/5, Error ellipse: s-maj=10.6km s-min=4.7km az=129.0*

*NEIC **03** 07:19:43, 39.59N×115.84W, h10km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=2.64; $M_{\theta\theta}$1.07; $M_{\phi\phi}$1.58; $M_{r\theta}$-0.50; $M_{\theta\phi}$1.43; $M_{\phi r}$-0.91; Fault plane solution: $M_0$2.90000×10^{14} NP1:ϕ_s36.00000°, δ55.00000°, λ-95.00000°. NP2:ϕ_s224.00000°, δ35.00000°, λ-83.00000°. Principal axes: T 2.9599, Plg10.0000°, Azm129.0000°; N -0.1169, Plg4.0000°, Azm39.0000°; P -2.8430, Plg79.0000°, Azm288.0000°;*

ISC 03 07:19:42.2±0.8, 39.56N±0.04×115.80W±0.04, h9km, n63, σ1§35/66, Nevada

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
R11A	**Troy Canyon, C**	**1.22**	**172**		**Pn**	**07 20 05.8**	**+0.1**
R11A					IAML	07 20 24.6	
	comp=E,1μm,0.3s						
R11A					IAML	07 20 25.1	
	comp=N,1μm,0.4s						
ELK	**Elko**	**1.26**	**20**	Pg	**Pn**	**07 20 06.3**	**0.0**
	comp=N,102nm,0.3s,baz=212,slow=14,SNR=841						
ELK				Lg	Lg	07 20 22.4	
	comp=N,314nm,0.3s,baz=90,slow=23,SNR=38						
ELK	**Elko**	**1.26**	**20**		**Pn**	**07 20 06.1**	**-0.1**
ELK	**Elko**	**1.26**	**20**		**Sb**	**07 20 22.2**	**-0.5**
Q09A	**Carvers**	**1.30**	**236**		**Pb**	**07 20 07.1**	**+0.2**
Q09A					IAML	07 20 42.5	
	comp=N,2μm,0.7s						
BMN	**Battle Mountai**	**1.39**	**309**		**Pn**	**07 20 07.7**	**-0.4**
BMN						**Sg**	**07 20 26.5**	**-0.7**
BMN	**Battle Mountai**	**1.39**	**309**		IAML	07 20 29.9	
	comp=E,1μm,0.5s						
PSUT	**Pine Spring**	**1.83**	**124**		**Pn**	**07 20 14.6**	**+0.5**
PSUT						**Sb**	**07 20 40.0**	**+0.9**
PSUT	**Pine Spring**	**1.83**	**124**		IAML	07 20 42.2	
	comp=N,1μm,0.4s						
TPH	**Tonopah**	**1.85**	**217**		**Pn**	**07 20 14.5**	**+0.1**
KVN	**Kaiserville**	**1.86**	**255**		**Pn**	**07 20 14.2**	**-0.2**
KVN					IAML	07 20 42.6	
	comp=N,778nm,0.7s						
KVN					IAML	07 20 43.2	
	comp=E,559nm,0.6s						
S11A	**Rachel**	**1.92**	**179**		**Pn**	**07 20 15.7**	**+0.5**
NV11	**Mina Array Sit**	**2.15**	**239**		**Pn**	**07 20 18.4**	**-0.1**
PRN	**Pahroc Range**	**2.23**	**164**		**Pn**	**07 20 21.0**	**+1.5**
NVAR	**Mina Array Bea**	**2.25**	**241**	Pn	**Pn**	**07 20 20.3**	**+0.4**
	comp=E,10nm,0.3s,baz=56,slow=13,SNR=231						
NVAR				Pg	**Pb**	**07 20 24.2**	**+0.9**
	comp=E,26nm,0.3s,baz=61,slow=37,SNR=47						
NVAR				Lg	Lg	07 20 50.7	
	comp=E,51nm,0.3s,baz=61,slow=46,SNR=3.3						
	comp=E,23nm,0.4s						
NVAR	**Mina Array Bea**	**2.25**	**241**		**Pn**	**07 20 19.7**	**-0.2**
RYN	**Ryan**	**2.31**	**247**		**Pn**	**07 20 20.2**	**-0.5**
RYN					IAML	07 20 57.0	
	comp=E,400nm,0.5s						
RYN					IAML	07 21 06.5	
	comp=N,463nm,0.7s						
DUG	**Dugway, Tooele**	**2.38**	**74**		**Pn**	**07 20 22.8**	**+1.2**
DUG					IAML	07 20 59.8	
	comp=N,404nm,0.8s						
DUG					IAML	07 21 01.0	
	comp=N,315nm,0.8s						
LHV	**Little Huntoon**	**2.48**	**239**		**Pn**	**07 20 23.1**	**+0.2**
LHV					IAML	07 21 08.5	
	comp=N,453nm,0.8s						
LHV					IAML	07 21 09.6	
	comp=E,503nm,0.8s						
BGU	**Big Grassy Mou**	**2.52**	**56**		**Pn**	**07 20 23.2**	**-0.3**
BGU					IAML	07 21 04.7	
	comp=E,250nm,0.4s						
TPNV	**Topopah Spring**	**2.63**	**188**		**Pn**	**07 20 26.0**	**+0.9**
YERR	**Yerington**	**2.73**	**259**		**Pn**	**07 20 26.3**	**-0.1**
YERR					IAML	07 21 11.0	
	comp=E,493nm,1.0s						
YERR					IAML	07 21 11.1	
	comp=N,404nm,0.8s						
LCH	**Last Change Ra**	**2.74**	**212**		**Pn**	**07 20 27.4**	**+0.9**
LCH					IAML	07 21 22.4	
	comp=E,205nm,0.5s						
PAHR	**Pah Rah Range**	**2.77**	**274**		**Pn**	**07 20 27.4**	**+0.5**
PAHR					IAML	07 21 16.6	
	comp=N,214nm,1.2s						
CCUT	**Cedar City**	**2.77**	**136**		**Pn**	**07 20 27.6**	**+0.6**
CCUT					IAML	07 21 11.6	
	comp=N,391nm,0.5s						
CCUT					IAML	07 21 13.5	
	comp=E,320nm,0.6s						
TCRU	**Three Creeks R**	**2.78**	**109**		**Pn**	**07 20 27.6**	**+0.5**
TCRU					IAML	07 21 19.2	
	comp=E,267nm,0.8s						
TCRU					IAML	07 21 20.6	
	comp=N,211nm,1.0s						
ICU	**Indian Springs**	**2.83**	**148**		**Pn**	**07 20 29.1**	**+1.4**
GRAC	**Grapevine Rang**	**2.84**	**206**		**Pn**	**07 20 28.6**	**+0.8**
PNTR	**Pine Nut**	**2.98**	**262**		**Pn**	**07 20 30.1**	**+0.1**
MVU	**Marysvale**	**2.99**	**110**		**Pn**	**07 20 31.7**	**+1.7**
VCNR	**Virginia City**	**2.99**	**266**		**Pn**	**07 20 29.9**	**-0.2**
VCNR					IAML	07 21 20.3	
	comp=N,267nm,0.6s						
VCNR					IAML	07 21 28.1	
	comp=E,324nm,0.8s						
MSU	**Marysvale**	**3.01**	**109**		**Pn**	**07 20 31.8**	**+1.5**
SHPR	**Sheep Range**	**3.09**	**170**		**Pn**	**07 20 32.4**	**+1.0**
HVU	**Hansel Valley**	**3.19**	**45**		**Pn**	**07 20 33.5**	**+0.7**
HVU					IAML	07 21 29.3	
	comp=N,184nm,0.5s						
HVU					IAML	07 21 39.4	
	comp=E,153nm,0.6s						
MTPU	**Mount Pierson**	**3.21**	**117**		**Pn**	**07 20 34.6**	**+1.5**
MPK	**Martis Peak**	**3.29**	**267**	Pn	**Pn**	**07 20 34.6**	**+0.4**
MPK					IAML	07 21 32.0	
	comp=N,172nm,0.6s						
MPK

H04A	**Detroit Lake**	**6.98**	**319**		**Pn**	**07 21 24.1**	**-0.6**
NEW	**Newport**	**8.75**	**354**	Pn	**Pn**	**07 21 51.9**	**+3.0**
	comp=N,0.2nm,0.3s,baz=205,slow=12,SNR=2.8 comp=N,0.9nm,0.5s						
ANMO	**Albuquerque**	**8.76**	**119**	Pn	**Pn**	**07 21 53.1**	**+3.9**
	comp=N,0.1nm,0.3s,baz=312,slow=11,SNR=2.3						
ANMO				Pg	**Pg**	**07 22 26.6**	**-3.3**
	comp=N,0.2nm,0.3s,baz=312,slow=14,SNR=7.6						
ANMO				Lg	Lg	07 24 18.5	
	comp=N,0.1nm,0.3s,baz=242,slow=18,SNR=2.9 comp=N,0.4nm,0.3s						
YKA	**Yellowknife Ar**	**22.97**	**1**	P	**P**	**07 24 46.5**	**-0.3**
	comp=N,0.5nm,0.8s,baz=181,slow=11,SNR=5.7 comp=N,0.5nm,0.8s						

TRN 03 07:21:55.6, 14.29N×59.46W, h42km, MD3.7, Windward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BBGH	**Gun Hill**	**1.15**	**185**	*eP*	Pn	07 22 16.8	+1.6
BBGH	**Gun Hill**	**1.15**	**185**	*e*	Pn	07 22 26.8	+12
BBSP	**Saint Philip**	**1.18**	**180**	*eP*	Pn	07 22 17.0	+1.3
BBSP	**Saint Philip**	**1.18**	**180**	*e*	Pn	07 22 26.8	+11
MPOM	**Morne Pois Mar**	**1.37**	**277**	*iP*	Pn	07 22 19.6	+1.3
MPOM				*eS*	Sn	07 22 36.6	+1.5
MVM	**Montagne Vaucl**	**1.42**	**281**	*eP*	Pn	07 22 20.9	+2.0
SLAC	**Saint Lucia, A**	**1.45**	**254**	*eP*	Pn	07 22 20.4	+1.0
SLAC				*eS*	Sn	07 22 38.9	+1.7
ILAM	**Ilet Lapin Mar**	**1.45**	**289**	*eP*	Pn	07 22 20.8	+1.4
ILAM				*eS*	Sn	07 22 39.0	+1.7
SLW	**Petit Monier**	**1.46**	**260**	*eP*	Pn	07 22 20.5	+1.0
SLW				*eS*	Sn	07 22 39.7	+2.1
LPMF	**Morne Lapointe**	**1.49**	**281**	*eP*	Pn	07 22 21.5	+1.6
SLBI	**Saint Lucia, B**	**1.50**	**260**	*eP*	Pn	07 22 20.9	+0.9
SLBI				*eS*	Sn	07 22 40.6	+2.3
SLCP	**Castries, St.**	**1.51**	**259**	*eP*	Pn	07 22 22.2	+2.0
SLCP				*eS*	Sn	07 22 40.4	+1.6
ZAM	**Aeronautique**	**1.55**	**281**	*eP*	Pn	07 22 22.5	+1.8
MCLT	**Moule a Chique**	**1.55**	**248**	*eP*	Pn	07 22 21.5	+0.7
MCLT				*eS*	Sn	07 22 40.8	+1.1
TRMF	**Trois Ilets**	**1.56**	**279**	*eP*	Pn	07 22 22.9	+2.0
BIM	**Bigot**	**1.58**	**278**	*eP*	Pn	07 22 23.1	+1.9
BIM				*eS*	Sn	07 22 42.9	+2.5
SLB	**Belfond**	**1.60**	**253**	*eP*	Pn	07 22 23.6	+2.1
SLB				*eS*	Sn	07 22 42.9	+1.7
FDF	**Fort de France**	**1.70**	**285**	*eP*	Pn	07 22 24.5	+1.7
FDF				*eS*	Sn	07 22 45.4	+2.0
BAMF	**Morne Balai**	**1.72**	**288**	*eP*	Pn	07 22 25.8	+2.7
GBMF	**Grand Be**	**1.73**	**287**	*eP*	Pn	07 22 25.9	+2.6
CXM	**Morne La Croix**	**1.74**	**288**	*eP*	Pn	07 22 25.7	+2.3
PML	**Morne Lenard**	**1.74**	**286**	*eP*	Pn	07 22 26.2	+2.8
SVN	**Savane Anatole**	**1.74**	**288**	*eP*	Pn	07 22 26.0	+2.5
PCM	**Pelee Case Pet**	**1.78**	**287**	*eP*	Pn	07 22 26.4	+2.5
SVV	**Soufriere Volc**	**1.96**	**241**	*eP*	Pn	07 22 28.6	+2.2
SVV				*eS*	Sn	07 22 51.8	+1.9
SVOC	**Richmond Hill,**	**2.05**	**237**	*eP*	Pn	07 22 29.8	+2.1
SVOC				*eS*	Sn	07 22 54.6	+2.5
MDN	**Morne-Daniel**	**2.13**	**299**	*eP*	Pn	07 22 30.8	+2.1
MDN				*eS*	Sn	07 22 55.7	+1.7
DSLB	**Salisbury**	**2.21**	**301**	*eP*	Pn	07 22 31.7	+1.8
DSLB				*eS*	Sn	07 22 58.6	+2.5
MDCT	**Cottage Hill,**	**2.34**	**304**	*eP*	Pn	07 22 33.7	+2.0
MDCT				*eS*	Sn	07 23 01.3	+2.0
MAGL	**Barre de l'ile**	**2.41**	**313**	*eP*	Pn	07 22 34.2	+1.5
MAGL				*eS*	Sn	07 23 02.9	+2.0
TDBA	**Terre de Bas,**	**2.61**	**307**	*eP*	Pn	07 22 37.1	+1.7
TDBA				*eS*	Sn	07 23 06.9	+1.1
TBG	**Guadaloupe-3**	**2.62**	**307**	*eP*	Pn	07 22 37.0	+1.5
TBG				*eS*	Sn	07 23 08.8	+2.7
GCMP	**Grenada, Carri**	**2.63**	**227**	*eP*	Pn	07 22 36.4	+0.9
GCMP				*eS*	Sn	07 23 08.0	+1.8
CBE	**Ff, Capester**	**2.73**	**311**	*eP*	Pn	07 22 38.9	+1.9
CBE				*eS*	Sn	07 23 11.1	+2.4
ABD	**La Joyeuse, An**	**2.92**	**318**	*eS*	Sn	07 23 15.1	+1.5
GRGR	**Grenville**	**3.03**	**225**	*eP*	Pn	07 22 43.1	+1.9
GRGR				*eS*	Sn	07 23 17.5	+1.3
GRFF	**Grenada Fort F**	**3.15**	**225**	*eP*	Pn	07 22 44.0	+1.3
GRFF				*eS*	Sn	07 23 21.1	+2.0
TOSP	**Speyside**	**3.16**	**200**	*eP*	Pn	07 22 44.5	+1.6
ANBD	**Bethesda, Anti**	**3.53**	**321**	*eP*	Pn	07 22 49.3	+1.4
ANBD				*eS*	Sn	07 23 29.6	+1.2
MLYT	**Lee's Yard**	**3.58**	**313**	*eP*	Pn	07 22 51.0	+2.4
MLYT				*eS*	Sn	07 23 31.9	+2.3
BPA	**Boggy Peak**	**3.58**	**320**	*eP*	Pn	07 22 49.8	+1.0
BPA				*eS*	Sn	07 23 29.7	-0.2
MBFL	**Flemmings, Mon**	**3.61**	**313**	*eP*	Pn	07 22 50.2	+1.2
MBFL				*eS*	Sn	07 23 31.9	+1.4
ANDO	**Antigua, Disas**	**3.62**	**321**	*eS*	Sn	07 23 31.6	+1.0
ANWB	**Willy Bob**	**4.04**	**327**	*eP*	Pn	07 22 56.2	+1.3
ANWB	**Willy Bob**	**4.04**	**327**	*eS*	Sn	07 23 41.2	+0.3
TRN	**Trinidad (W)**	**4.09**	**208**	*eP*	Pn	07 22 57.4	+1.7
TRN	**Trinidad (W)**	**4.09**	**208**	*eS*	Sn	07 23 44.0	+1.7

*DJA **03** 07:47:22.3±0.8, 5°S±6°×10°3E±°, h37km±14km, M4.4/9, MLv4.4/9*
*NEIC **03** 07:47:24.5±1.7, 4°.83S±0°.08×103°.07E±0°.09, h72km±8km, mb4.6/20, Error ellipse: s-maj=14.8km s-min=9.7km az=47.0*
*IDC **03** 07:47:26.7±4.0, 4°.72S×103°.19E, h90km±34km, mb4.1/15, mbtmp4.4/16, MS3.7/2, Error ellipse: s-maj=26.5km s-min=13.0km az=56.0*

ISC 03 07:47:22.4±0.5, 4°.90S±0°.07×103°.02E±0°.07, h59km, n66, σ1°§03/61, mb4.5/24, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LWLI	**Liwa**	**1.04**	**97**	P	**Pn**	**07 47 41.7**	**+0.7**
LWLI				S	**Sn**	**07 47 54.8**	**-0.1**
MDSI	**Maura Dua**	**1.22**	**71**	P	**Pn**	**07 47 44.6**	**+1.3**
KASI	**Kota Agung**	**1.60**	**113**	P	**Pn**	**07 47 48.3**	**-0.1**
KASI				S	**Sn**	**07 48 06.8**	**-1.2**
KLI	**Kotabumi**	**1.83**	**89**	P	**Pn**	**07 47 52.1**	**+0.6**
BLSI	**Bandar Lampung**	**2.26**	**102**	P	**Pn**	**07 47 58.0**	**+0.5**
PMBI	**Palembang**	**2.62**	**42**	Pn	**Pn**	**07 48 02.5**	**+0.1**
PPSI	**Pulau Pagai**	**3.68**	**305**	P	**Pn**	**07 48 16.8**	**0.0**
PPBI	**Pangkal Pinang**	**4.13**	**49**	P	**Pn**	**07 48 24.2**	**+1.2**
DSRI	**Dabo**	**4.66**	**20**	P	**Pn**	**07 48 32.0**	**+1.8**
CNJI	**Cibinong**	**4.74**	**121**	P	**Pn**	**07 48 31.1**	**-0.2**
LEM	**Lembang**	**4.96**	**113**	P	Pn	07 48 38.9	+4.4
	22nm,0.5s,baz=319,slow=20,SNR=2.4						
LEM				S	**Sn**	**07 49 31.9**	**+1.2**
	23nm,0.4s,baz=342,slow=20,SNR=1.8						
BKNI	**Bangkinang**	**5.55**	**339**	Pn	**Pn**	**07 48 46.5**	**+4.0**
XMIS	**Christmas Isla**	**6.13**	**155**	Pn	**Pn**	**07 48 53.1**	**+2.7**
MYKOM	**Kota Tinggi**	**6.69**	**7**	Pn	**Pn**	**07 49 00.2**	**+2.1**
UGM	**Wanagama**	**8.03**	**112**	Pn	**Pn**	**07 49 17.0**	**+0.5**
GSI	**Gunungsitoli**	**8.22**	**318**	Pn	**Pn**	**07 49 19.7**	**+0.7**
BATI	**Baumata**	**21.12**	**106**	LR	LR	08 03 01.8	
	comp=Z,268nm,18.3s,baz=208,slow=44						
CMAR	**Chiang Mai Arr**	**23.55**	**350**	*iP*	**P**	**07 52 27.3**	**-0.4**
	2.2nm,0.7s,baz=182,slow=8.7,SNR=13						
CMAR				LR	LR	08 01 08.4	
	comp=Z,103nm,19.6s,baz=125,slow=35 2.2nm,0.7s						
KNRA	**Kununurra**	**27.46**	**115**	P	**P**	**07 53 02.2**	**-1.0**
H08S2	**Diego Garcia H**	**30.46**	**263**	T	T	08 24 40.5	
	baz=88,slow=74						
H08S3	**Diego Garcia H**	**30.47**	**263**	T	T	08 24 42.6	
	baz=88,slow=74						
H08S1	**Diego Carcia H**	**30.48**	**263**	T	T	08 24 45.2	
	baz=88						
H01W3	**Cape Leeuwin H**	**31.56**	**162**	T	T	08 27 04.2	
	baz=338,slow=76						
H01W2	**Cape Leeuwin H**	**31.58**	**162**	T	T	08 27 05.3	
	baz=338,slow=76						
H01W1	**Cape Leeuwin H**	**31.58**	**162**	T	T	08 27 04.7	
	baz=338,slow=76						
WB0	**Warramunga Arr**	**33.93**	**119**	P	**P**	**07 54 00.1**	**-0.2**
WB0				IAmb	IAmb	07 54 01.6	
	comp=Z,3.9nm,0.5s						
WRA	**Warramunga Arr**	**33.95**	**119**	P	**P**	**07 54 00.6**	**+0.2**
	comp=Z,1.2nm,0.4s,baz=304,slow=8.9,SNR=85						
WRA				PcP	**PcP**	**07 56 37.7**	**0.0**
	comp=Z,0.8nm,0.5s,baz=298,slow=1.9,SNR=6.6 comp=Z,1.2nm,0.4s						
WRA	**Warramunga Arr**	**33.95**	**119**	P	**P**	**07 54 00.2**	**-0.2**
WR0	**Warramunga Arr**	**34.13**	**119**	P	**P**	**07 54 01.8**	**-0.2**
WR0				IAmb	IAmb	07 54 03.2	
	comp=Z,4.8nm,0.5s						

AS31	**Alice Springs**	**35.12**	**125**	P	**P**	**07 54 11.2**	**+0.6**
AS31				IAmb	IAmb	07 54 12.6	
	comp=Z,2.0nm,0.5s						
ASAR	**Alice Springs**	**35.12**	**125**	P	**P**	**07 54 11.2**	**+0.6**
	comp=Z,2.5nm,0.3s,baz=297,slow=7.5,SNR=68						
ASAR				PcP	**PcP**	**07 56 41.3**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=306,slow=2.4,SNR=9.2 comp=Z,2.5nm,0.3s						
ASAR	**Alice Springs**	**35.12**	**125**	P	**P**	**07 54 10.6**	**+0.1**
BBOO	**Buckleboo**	**41.48**	**136**	P	**P**	**07 55 04.2**	**+0.4**
BBOO				IAmb	IAmb	07 55 19.4	
	comp=Z,13nm,1.4s						
CTAO	**Charters Tower**	**44.66**	**114**	P	**P**	**07 55 30.6**	**+0.9**
CTAO				IAmb	IAmb	07 55 31.1	
	comp=Z,7.8nm,0.8s						
STKA	**Stephens Creek**	**44.98**	**131**	P	**P**	**07 55 33.2**	**+1.2**
	comp=Z,2.9nm,0.4s,baz=313,slow=6.4,SNR=16 comp=Z,2.9nm,0.4s						
STKA	**Stephens Creek**	**44.98**	**131**	P	**P**	**07 55 33.1**	**+1.0**
GUMO	**Guam**	**45.42**	**66**	P	**P**	**07 55 33.2**	**-2.5**
	comp=Z,11nm,0.4s,baz=194,slow=12,SNR=1.7 comp=Z,11nm,0.4s						
GUMO	**Guam**	**45.42**	**66**	IAmb	IAmb	07 55 38.8	
	comp=Z,36nm,1.1s						
KSRS	**Korea Array**	**48.10**	**27**	P	**P**	**07 55 56.1**	**-0.1**
	comp=Z,1.2nm,0.6s,baz=228,slow=6.9,SNR=7.6 comp=Z,1.2nm,0.6s						
JHS	**Saijyo**	**48.75**	**33**	P	**P**	**07 56 01.6**	**+0.2**
JHS				IAmb	IAmb	07 56 10.8	
	comp=Z,5.6nm,0.9s						
KDJ	**Kajisay**	**52.38**	**336**	P	**P**	**07 56 29.1**	**+0.2**
SONM	**Songino Array**	**52.59**	**3**	P	**P**	**07 56 30.9**	**+0.6**
	comp=Z,3.2nm,0.6s,baz=183,slow=9.8,SNR=19						
SONM				PcP	**PcP**	**07 57 39.4**	**-0.3**
	comp=Z,0.9nm,0.3s,baz=192,slow=5.0,SNR=4.6 comp=Z,3.2nm,0.6s						
SONM	**Songino Array**	**52.59**	**3**	IAmb	IAmb	07 56 31.5	
	comp=Z,2.4nm,0.7s						
MJAR	**Matsushiro Arr**	**52.73**	**36**	P	**P**	**07 56 30.2**	**-1.1**
	comp=Z,0.8nm,0.4s,baz=208,slow=5.0,SNR=2.5 comp=Z,0.8nm,0.4s						
GAR	**Garm**	**53.12**	**328**	P	**P**	**07 56 33.6**	**-0.7**
GAR				IAmb	IAmb	07 56 35.5	
	comp=Z,3.9nm,0.6s						
BOOM	**Boomskoye usch**	**53.19**	**335**	P	**P**	**07 56 34.3**	**-0.5**
BOOM				IAmb	IAmb	07 56 35.4	
	comp=Z,3.5nm,0.7s						
MK31	**Makanchi Array**	**54.64**	**343**	P	**P**	**07 56 44.4**	**-0.8**
MKAR	**Makanchi Array**	**54.64**	**343**	P	**P**	**07 56 44.9**	**-0.3**
	comp=Z,3.0nm,0.7s,baz=147,slow=8.1,SNR=20 comp=Z,3.0nm,0.7s						
MKAR	**Makanchi Array**	**54.64**	**343**	P	**P**	**07 56 44.1**	**-1.1**
USRK	**Ussuriysk Ar.**	**55.38**	**25**	P	**P**	**07 56 50.0**	**-0.5**
	comp=Z,4.8nm,0.7s,baz=211,slow=7.1,SNR=13 comp=Z,4.8nm,0.7s						
ZAA0	**Zalesovo Array**	**60.59**	**348**	P	**P**	**07 57 25.7**	**-1.0**
ZALV	**Zalesovo Beam**	**60.59**	**348**	P	**P**	**07 57 26.2**	**-0.6**
ABKAR	**Akbulak array**	**65.62**	**331**	P	**P**	**07 57 59.5**	**-0.7**
ARU	**Arti**	**71.06**	**336**	P	**P**	**07 58 33.9**	**-0.1**
	comp=Z,5.2nm,0.2s,baz=248,slow=5.4,SNR=3.2 comp=Z,5.2nm,0.2s						
ARU	**Arti**	**71.06**	**336**	IAmb	IAmb	07 58 42.2	
	comp=Z,7.7nm,1.3s						
KBZ	**Khabaz**	**72.46**	**319**	P	**P**	**07 58 43.4**	**+0.7**
	comp=Z,2.7nm,0.9s,baz=158,slow=4.1,SNR=5.7 comp=Z,2.7nm,0.9s						
ASF	**Jabal al Asfar**	**72.72**	**306**	P	**P**	**07 58 46.2**	**+1.6**
	comp=Z,2.3nm,0.8s,baz=163,slow=6.3,SNR=3.9 comp=Z,2.3nm,0.8s						
BKZ	**Black Stump Fm**	**74.11**	**129**	P	**P**	**07 58 52.6**	**-0.1**
BKZ				IAmb	IAmb	07 59 04.0	
	comp=Z,20nm,1.5s						
BRTR	**Keskin Array B**	**77.49**	**312**	P	**P**	**07 59 11.9**	**-0.2**
	comp=Z,1.3nm,0.7s,baz=138,slow=7.6,SNR=7.3 comp=Z,1.3nm,0.7s						
KARP	**Karpathos**	**81.41**	**307**	P	**P**	**07 59 34.3**	**+1.0**
FIA1	**FINESS Array S**	**88.06**	**332**	P	**P**	**08 00 06.1**	**-0.1**
FINES	**FINESS Array B**	**88.06**	**332**	P	**P**	**08 00 06.2**	**+0.1**
ARCES	**ARCESS Array B**	**90.21**	**340**	P	**P**	**08 00 15.8**	**-0.3**
	comp=Z,1.7nm,0.7s,baz=108,slow=5.8,SNR=4.2 comp=Z,1.7nm,0.7s						
NVAR	**Mina Array Bea**	**129.81**	**42**	PKP	**PKiKP**	**08 06 26.5**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=289,slow=3.5,SNR=2.4						
BDFB	**Brasilia**	**144.80**	**234**	PKPbc	**PKPdf**	**08 06 54.5**	**+0.7**
	comp=Z,0.6nm,0.3s,baz=160,slow=5.3,SNR=3.7						
TXAR	**Lajitas Array**	**144.95**	**43**	PKP	**PKPdf**	**08 06 53.7**	**-0.1**
	comp=Z,1.5nm,0.5s,baz=268,slow=0.8,SNR=61						

IDC 03 07:49:54.3±10.0, 27°.71S×66°.15E, h0km, mb3.5/2, mbtmp3.5/2, Error ellipse: s-maj=559.3km s-min=52.0km az=34.0, Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**20.84**	**18**	T	T	08 15 43.8	
	baz=195						
H08S2	**Diego Garcia H**	**20.84**	**18**	T	T	08 15 45.9	
	baz=195						
H08S3	**Diego Garcia H**	**20.86**	**18**	T	T	08 15 46.8	
	baz=195						
ASAR	**Alice Springs**	**60.51**	**103**	P	P	08 00 06.5	-0.1
	0.6nm,0.9s,baz=246,slow=6.6,SNR=5.7 0.6nm,0.9s						
WRA	**Warramunga Arr**	**62.18**	**99**	P	P	08 00 18.1	+0.1
	0.7nm,1.0s,baz=252,slow=6.7,SNR=2.9 0.7nm,1.0s						
YKA	**Yellowknife Ar**	**145.21**	**1**	PKPbc	PKPbc	08 09 32.0	-0.8
	0.9nm,0.7s,baz=345,slow=3.6,SNR=14						

*IDC **03** 07:53:25.9±1.8, 15°.16S×72°.22W, h127km±19km, mb3.1/3, mbtmp3.7/8, Error ellipse: s-maj=28.3km s-min=17.0km az=29.0*

ISC 03 07:53:24.3±0.8, 15°.30S±0°.10×72°.36W±0°.09, h108km, n8, σ1°§75/11, mb3.3/3, Southern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**4.18**	**104**	P	**Pn**	**07 54 29.4**	**+2.8**
	13nm,0.5s,baz=293,slow=11,SNR=69						
LPAZ				S	**Sn**	**07 55 15.2**	**+0.2**
	3.6nm,0.6s,baz=204,slow=20,SNR=1.4						
NNA	**Nana**	**5.46**	**306**	P	**Pn**	**07 54 45.1**	**+1.7**
	28nm,0.4s,baz=130,slow=11,SNR=25						
NNA				S	**Sn**	**07 55 43.8**	**-1.3**
	11nm,0.5s,baz=209,slow=16,SNR=2.6						
LVC	**Limon Verde**	**7.97**	**156**	P	**Pn**	**07 55 19.7**	**+2.0**
	1.4nm,0.3s,baz=2.4,slow=8.4,SNR=18						
LVC				S	**Sn**	**07 56 44.9**	**-1.6**
	5.8nm,0.3s,baz=209,slow=19,SNR=12						
SIV	**San Ignacio**	**10.89**	**95**	P	**Pn**	**07 55 55.9**	**-1.2**
	1.4nm,0.6s,baz=285,slow=12,SNR=8.8						
CPUP	**Villa Florida**	**17.81**	**130**	P	**Pn**	**07 57 25.7**	**+0.4**
	1.1nm,0.8s,baz=2.4,slow=17,SNR=1.8						
PLCA	**Paso Flores**	**25.39**	**177**	P	**P**	**07 58 42.5**	**+0.8**
	0.8nm,1.0s,baz=301,slow=13,SNR=1.6 0.8nm,1.0s						
TORD	**Torodi Ar. Bea**	**78.52**	**73**	P	**P**	**08 05 12.5**	**-1.8**
	0.3nm,0.4s,baz=267,slow=5.6,SNR=2.4 0.3nm,0.4s						
YKA	**Yellowknife Ar**	**84.29**	**342**	P	**P**	**08 05 43.1**	**-0.5**
	0.3nm,0.7s,baz=138,slow=5.8,SNR=4.2 0.3nm,0.7s						

MAN 03 07:58:34.2, 15.54N×121.66E, h5km, mb4.2, ML3.0, MS2.6, 1C-4D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BALP	**Baler**	**0.22**	**338**	*ePg*	Pg	07 58 38.6	+1.1
BALP				*eS*		07 58 43.0	
PCPH	**Palayan**	**0.54**	**272**	*ePn*	Pn	07 58 45.9	+1.0
PCPH				*eS*		07 58 55.3	
SMPP	**San Manuel, Pa**	**1.12**	**303**	*ePn*	Pn	07 58 55.2	0.0
SMPP				*eS*		07 59 11.1	
CAUP	**Cauayan**	**1.41**	**6**	*ePn*	Pn	07 58 58.8	+1.3
CAUP				*eS*		07 59 19.4	
JCNP	**Jose Panganiba**	**1.60**	**141**	*ePn*	Pn	07 59 02.9	+0.5
JCNP				*eS*		07 59 24.4	

*IDC **03** 08:00:22.0±0.5, 26°.91N×130°.23E, h0km, mb4.4/23, mbtmp4.4/27, ML3.8/4, MS3.8/31, Error ellipse: s-maj=15.7km s-min=12.6km az=79.0*
*BJI **03** 08:00:23.1±0.0, 26°.68N×130°.28E, h28km, mb4.4/45, mB4.5/28, Ms4.2/42, Ms7 4.0/40*
*NIED **03** 08:00:24.6, 26°.88N×130°.24E, h55km, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr=6.72; Mθθ2.39; Mφφ4.33; Mrθ1.95; Mθφ3.86; Mφr-4.08; Fault plane solution: M0 8.31000×10¹⁵ NP1: φs240.00000°, δ42.00000°, λ-51.00000°. NP2: φs13.00000°, δ59.00000°, λ-119.00000°.*
*JMA **03** 08:00:24.6±0.1, 26°.9N±0°.4×130°.2E±0°.5, h55km, MD4.4/27, MW4.6/27, NEAR MINAMI-DAITOJIMA IS*
*MOS **03** 08:00:25.0±1.1, 26°.92N×130°.32E, h31km, mb4.9/34, Error ellipse: s-maj=10.8km s-min=5.8km az=105.8*
*NEIC **03** 08:00:27.9±1.8, 26°.95N±0°.07×130°.13E±0°.07, h35km±5km, mb4.7/68, Error ellipse: s-maj=10.8km s-min=8.1km az=150.0*

ISC 03 08:00:24.1±2.0, 26°.87N±0°.03×130°.28E±0°.04, h16km±12km, n267, σ1°§51/266, mb4.7/89, MS3.9/37, 14C-4D, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKDJ	**Kitadaitoujima**	**1.30**	**135**	*iP*	**Pn**	**08 00 47.2**	**-0.4**
JKDJ				*eS*	**Sb**	**08 01 03.4**	**-1.1**
JKDJ	**Kitadaitoujima**	**1.30**	**135**	A	A	08 00 47.2	
	comp=E,13nm,3.1s,comp=E,20nm,7.2s						
JMZ	**Minamidaito 2**	**1.35**	**141**	*iP*	**Pn**	**08 00 48.0**	**-0.3**
JMZ				S	**Sb**	**08 01 04.4**	**-1.6**
JMZ	**Minamidaito 2**	**1.35**	**141**	A	A	08 00 48.0	
	comp=E,13nm,4.3s,comp=E,17nm,4.0s						
JZK	**Kikaishima**	**1.46**	**349**	P	**Pn**	**08 00 49.5**	**-0.4**
JZK	**Kikaishima**	**1.46**	**349**	A	A	08 00 49.5	
	comp=E,12nm,0.4s,comp=E,18nm,0.4s						
JTK	**Tokunoshima**	**1.49**	**308**	*iP*	**Pn**	**08 00 49.3**	**-0.9**
JTK				S	**Sn**	**08 01 07.2**	**-2.2**
JTK	**Tokunoshima**	**1.49**	**308**	A	A	08 00 49.3	
	comp=E,8.0nm,3.2s,comp=E,7.0nm,2.5s						
JOKE	**Okinoerabujima**	**1.60**	**288**	*iP*	**Pn**	**08 00 50.9**	**-0.8**
JOKE				*eS*	**Sn**	**08 01 09.4**	**-2.6**
JOKE	**Okinoerabujima**	**1.60**	**288**	A	A	08 00 50.9	
	comp=E,13nm,2.3s,comp=E,7.0nm,0.3s						
JYRO	**Yoronjima**	**1.64**	**276**	*iP*	**Pn**	**08 00 51.4**	**-0.8**
JYRO				*eS*	**Sn**	**08 01 10.9**	**-2.1**
JYRO	**Yoronjima**	**1.64**	**276**	A	A	08 00 51.4	
	comp=E,9.0nm,1.3s,comp=E,10.0nm,1.6s						
JAM	**Amami Oshima**	**1.65**	**339**	*iP*	**Pn**	**08 00 51.5**	**-0.8**
JAM				*eS*	**Sn**	**08 01 10.6**	**-2.6**
JAM	**Amami Oshima**	**1.65**	**339**	A	A	08 00 51.5	
	comp=E,4.0nm,8.1s,comp=E,11nm,0.9s						
JAMN	**Amaminishikomi**	**1.68**	**325**	*iP*	**Pn**	**08 00 51.7**	**-1.1**
JAMN				S	**Sn**	**08 01 10.7**	**-3.3**
JAMN	**Amaminishikomi**	**1.68**	**325**	A	A	08 00 51.7	
	comp=E,5.0nm,0.7s,comp=E,8.0nm,0.6s						
JOW	**Kunigami**	**1.79**	**269**	Pn	**Pn**	**08 00 53.6**	**-0.7**
	271nm,0.3s,baz=152,slow=25,SNR=982						
JOW				Sn	**Sn**	**08 01 14.0**	**-2.7**
	1μm,0.3s,baz=154,slow=29,SNR=12						
JOW	**Kunigami**	**1.79**	**269**	*iP*	**Pn**	**08 00 53.6**	**-0.7**
JOW				S	**Sn**	**08 01 14.4**	**-2.4**
JOW	**Kunigami**	**1.79**	**269**	A	A	08 00 53.6	
	comp=E,13nm,0.8s,comp=E,20nm,1.7s						
JNTH	**Nagotoyohara**	**2.05**	**261**	*iP*	**Pn**	**08 00 56.7**	**-1.1**
JNTH				S	**Sn**	**08 01 20.1**	**-3.0**
JNTH	**Nagotoyohara**	**2.05**	**261**	A	A	08 00 56.7	
	comp=E,4.0nm,1.5s,comp=E,6.0nm,1.2s						
JIH	**Iheya**	**2.07**	**275**	P	**Pn**	**08 00 57.5**	**-0.7**
JIH				S	**Sn**	**08 01 21.2**	**-2.4**
JIH	**Iheya**	**2.07**	**275**	A	A	08 00 57.5	
	comp=E,7.0nm,1.4s,comp=E,8.0nm,0.5s						
JJT3	**Tamagusuku3**	**2.35**	**253**	P	**Pn**	**08 01 01.5**	**-0.5**
JJT3				S	**Sn**	**08 01 28.6**	**-1.9**
JTAJ	**Takarajima**	**2.46**	**338**	P	**Pn**	**08 01 02.4**	**-1.2**
JTAJ				S	**Sn**	**08 01 29.0**	**-4.4**
JAGN	**Aguni-jima**	**2.73**	**265**	P	**Pn**	**08 01 06.3**	**-1.0**
JAGN				S	**Sn**	**08 01 37.2**	**-2.7**
JAGN	**Aguni-jima**	**2.73**	**265**	A	A	08 01 06.3	
	comp=E,7.0nm,2.0s,comp=E,9.0nm,1.4s						
JNN	**Nakanoshima**	**2.98**	**353**	P	**Pn**	**08 01 09.8**	**-0.9**
JNN				S	**Sn**	**08 01 42.5**	**-3.7**
JKE	**Kume jima 2**	**3.17**	**261**	P	**Pn**	**08 01 11.9**

comp=N,350nm,11.4s
LYN LR LR
comp=E,690nm,13.7s
LYN LR LR
comp=Z,690nm,14.7s
CN2 Changchun 17.34 348 *eP* **P 08 04 32.8 +6.1**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 LR LR
comp=N,400nm,14.0s
CN2 LR LR
comp=E,200nm,14.0s
CN2 LR LR
comp=Z,300nm,15.0s
USRK Ussuriysk Ar. 17.35 4 LR LR 08 11 50.1
comp=Z,82nm,18.2s,baz=180,slow=40
BJT Baijiatuau 17.59 322 P **Pn 08 04 29.0 +0.4**
BJT Baijiatuau 17.59 322 P **Pn 08 04 29.0 +0.4**
BJT pmax pmax
comp=Z,29nm,0.9s
BJI Beijing 17.60 322 P **Pn 08 04 29.5 +0.8**
BJI S **Sn 08 07 46.8 +2.4**
BJI pmax pmax
comp=Z,7.0nm,1.0s
BJI LR LR
comp=Z,300nm,12.2s
BJI LR LR
comp=Z,240nm,12.4s
BJI LR LR
comp=Z,380nm,13.0s
ENH Enshi 18.57 285 P **P 08 04 38.2 -2.2**
GUMO Guam 19.00 131 LR LR 08 11 08.0
comp=Z,142nm,18.2s,baz=276,slow=34
XAN Xi'an 19.73 296 P **P 08 04 52.7 -0.4**
XAN pP pwP 08 05 04.9 +2.3
XAN pmax pmax
comp=Z,7.0nm,0.9s
ASAJ Asahikawa 19.88 27 LR LR 08 13 08.6
comp=Z,196nm,18.5s,baz=351,slow=39
DAV Davao City (W) 20.19 194 LR LR 08 12 59.3
comp=Z,123nm,18.1s,baz=346,slow=37
QIZ Qiongzhong 20.35 252 P **P 08 04 58.1 -1.9**
QIZ S **S 08 08 48.2 +0.5**
QIZ LR LR
comp=Z,310nm,19.9s
QIZ LR LR
comp=Z,190nm,16.7s
QIZ LR LR
comp=Z,160nm,15.9s
XLT XiLinHaoTe 20.51 330 *eP* **P 08 04 58.5 -3.1**
XLT pP Pn 08 05 06.4 +2.6
XLT sP pwP 08 05 11.9 +0.1
XLT S **S 08 08 49.3 -1.2**
XLT pmax pmax
comp=Z,19nm,0.8s
XLT pmax pmax
comp=Z,90nm,3.6s
XLT LR LR
comp=N,22nm,14.1s
XLT LR LR
comp=E,270nm,14.3s
XLT LR LR
comp=Z,280nm,15.4s
HHC Hu-ho-hao-te 20.82 317 *eP* **P 08 05 06.6 +1.6**
HHC sP pwP 08 05 19.6 +4.6
HHC S **S 08 08 57.1 +0.3**
HHC sS Sn 08 09 03.3 +1.1
HHC pmax pmax
comp=Z,20nm,1.0s
HHC pmax pmax
comp=Z,110nm,5.3s
HHC LR LR
comp=Z,320nm,15.2s
HHC LR LR
comp=Z,510nm,15.7s
HHC LR LR
comp=Z,680nm,14.1s
GYA Guiyang 21.10 274 ⇓P **P 08 05 09.1 +0.9**
GYA pmax pmax
comp=Z,8.0nm,0.9s
BTO Baotou 21.64 314 *eP* **P 08 05 18.5 +4.6**
YSS Yuzh-Sakhalins 22.34 23 *eP* **P 08 05 19.6 -1.5**
YSS *e* 08 05 29.9
YSS MLR MLR
comp=Z,400nm,14.0s
YSS MLR MLR
comp=E,300nm,12.0s
KLR Kul'dur 22.35 3 P **P 08 05 21.2 -0.1**
comp=E,3.6nm,0.8s,baz=191,slow=6.0,SNR=14
KLR LR LR 08 14 42.0
comp=E,74nm,18.2s,baz=174,slow=38
comp=E,3.6nm,0.8s
KLR Kul'dur 22.35 3*ceP* **P 08 05 21.0 -0.3**
KLR pmax pmax
comp=Z,7.0nm,0.9s
CD2 Chengdu 23.54 286 P **P 08 05 33.3 -0.5**
CD2 pmax pmax
comp=Z,10.0nm,1.0s
CD2 LR LR
comp=Z,600nm,12.8s
CD2 LR LR
comp=Z,510nm,16.2s
MYLDM Lahad Datu 24.32 210 P **P 08 05 42.1 +0.9**
MYLDM IAmb IAmb 08 05 59.6
comp=Z,31nm,1.3s
KMI Kunming 24.80 272 ⇑P **P 08 05 51.1 +5.4**
KMI pP pwP 08 06 00.8 +4.5
KMI pmax pmax
comp=Z,17nm,1.0s
KMI LR LR
comp=N,320nm,12.0s
KMI LR LR
comp=E,490nm,16.0s
KMI LR LR
comp=Z,570nm,15.5s
ZEA Zeya 26.93 356 *eP* **P 08 06 07.4 +2.9**
ZEA pmax pmax
comp=Z,20nm,0.7s
ULN Ulaanbaatar 27.73 325 *i* P **P 08 06 13.1 +1.1**
ULN pmax pmax
comp=Z,5.0nm,1.4s
SONM Songino Array 28.05 325 P **P 08 06 15.6 +0.8**
comp=Z,1.9nm,0.8s,baz=134,slow=8.6,SNR=7.9
SONM PcP **PcP 08 09 30.7 +1.5**
comp=Z,0.5nm,0.5s,baz=125,slow=2.3,SNR=2.6
comp=Z,1.9nm,0.8s
GTA Gaotai 28.27 304 *eP* **P 08 06 15.8 -1.0**
GTA pP pwP 08 06 24.3 -3.1
GTA sP sP 08 06 30.3 +9.1
GTA pmax pmax
comp=Z,4.0nm,0.6s
GTA pmax pmax
comp=Z,54nm,5.1s
GTA LR LR
comp=Z,390nm,15.6s
GTA LR LR
comp=Z,630nm,18.2s
GTA LR LR
comp=Z,350nm,18.5s
CMAR Chiang Mai Arr 30.04 260 P **P 08 06 33.0 +0.4**
comp=Z,0.9nm,0.5s,baz=44,slow=9.2,SNR=1.2
CMAR PcP **PcP 08 09 36.0 +1.5**
comp=Z,0.8nm,0.4s,baz=25,slow=1.4,SNR=5.3
CMAR LR LR 08 20 34.6
comp=Z,105nm,18.5s,baz=190,slow=40
comp=Z,0.9nm,0.5s
GOMU GeErMu 31.48 296 P **P 08 06 45.7 +0.1**
GOMU pmax pmax
comp=Z,4.0nm,0.7s
GOMU LR LR
comp=Z,140nm,15.7s
GOMU LR LR
comp=Z,96nm,16.1s
GOMU LR LR
comp=Z,110nm,17.9s
PETK Petropavlovsk- 33.21 30 LR LR 08 20 29.0
comp=Z,86nm,18.6s,baz=227,slow=36
YAK Yakutsk 35.16 360 LR LR 08 23 05.6
comp=Z,77nm,18.2s,baz=174,slow=39
MA2 Magadan 35.63 18 LR LR 08 23 18.0
comp=Z,60nm,18.1s,baz=164,slow=39
ODAN Odare 38.12 280 *eP* P 08 07 34.4 -8.5
WMQ Urumqi 38.16 308 *eP* **P 08 07 44.9 +2.1**
WMQ LR LR
comp=Z,590nm,15.5s
WMQ LR LR
comp=Z,390nm,14.7s
WMQ LR LR
comp=Z,180nm,20.7s
SEY Seymchan 38.89 16 LR LR 08 24 56.7
comp=Z,69nm,18.1s,baz=181,slow=38
SEY Seymchan 38.89 16*ceP* **P 08 07 48.7 +0.2**
SEY pmax pmax
comp=Z,4.0nm,0.9s
GUN Gumba 39.27 282 *eP* **P 08 07 53.8 +1.1**
comp=Z,29nm,0.7s
MTN Manton Dam 39.49 179 P **P 08 07 53.7 -0.3**
PKI Pulchoki 39.74 282 *eP* **P 08 07 54.7 -1.8**
comp=Z,28nm,0.8s
DANN Dangsing 41.05 283 *eP* **P 08 08 07.6 +0.3**
comp=Z,24nm,0.6s
KOLN Koldanda 41.28 282 *eP* **P 08 08 07.5 -1.7**
PYUN Piuthan 41.76 283 *eP* **P 08 08 13.8 +0.7**
comp=Z,25nm,0.6s
KNRA Kununurra 42.32 182 P **P 08 08 17.4 +0.1**
KNRA IAmb IAmb 08 08 18.6
comp=Z,13nm,0.8s
COEN Coen 42.48 161 P **P 08 08 19.1 +0.5**
MK31 Makanchi Array 42.49 311 P **P 08 08 18.6 +0.1**
MK31 Makanchi Array 42.49 311 *i* P **P 08 08 18.9 +0.3**
MKAR Makanchi Array 42.49 311 P **P 08 08 19.0 +0.4**
comp=Z,3.4nm,0.7s,baz=102,slow=9.3,SNR=30
comp=Z,3.4nm,0.7s
MKAR Makanchi Array 42.49 311 P **P 08 08 18.6 +0.1**
MKAR Makanchi Array 42.49 311 *i* P **P 08 08 19.2 +0.6**
MKAR pmax pmax
comp=Z,4.0nm,0.7s
MAKZ Makanchi 42.70 311 P **P 08 08 20.8 +0.5**
MAKZ Makanchi 42.70 311 P **P 08 08 20.8 +0.5**
MAKZ pmax pmax
comp=Z,3.0nm,0.9s
ZAA0 Zalesovo Array 42.86 322 P **P 08 08 21.7 +0.2**
ZALV Zalesovo Beam 42.86 322 P **P 08 08 21.8 +0.3**
comp=Z,3.9nm,0.6s,baz=107,slow=8.6,SNR=12
ZALV PcP **PcP 08 10 11.9 -0.3**
comp=Z,0.6nm,0.3s,baz=132,slow=2.1,SNR=1.9
comp=Z,3.9nm,0.6s
ZALV Zalesovo Beam 42.86 322 P **P 08 08 22.0 +0.5**
ZALV Zalesovo Beam 42.86 322 P **P 08 08 22.0 +0.5**
TIXI Tiksi 44.82 359 LR LR 08 28 30.8
comp=Z,129nm,18.3s,baz=181,slow=38
TIXI Tiksi 44.82 359 P **P 08 08 36.3 -0.6**
TIXI Tiksi 44.82 359*ceP* **P 08 08 36.2 -0.7**
TIXI pmax pmax
comp=Z,3.0nm,0.8s
KURK Kurchatov 45.63 316 P **P 08 08 42.8 -0.9**
KURK Kurchatov 45.63 316*ceP* **P 08 08 43.4 -0.2**
KURK pmax pmax
comp=Z,9.0nm,1.7s
KURBB Kurchatov Arra 45.66 316 P **P 08 08 43.9 0.0**
comp=Z,3.1nm,0.6s,baz=102,slow=8.7,SNR=22
comp=Z,3.1nm,0.6s
BILL Bilibino 46.50 18 P **P 08 08 50.2 0.0**
BILL IAmb IAmb 08 09 06.1
comp=Z,8.9nm,1.2s
BILL Bilibino 46.50 18*ceP* **P 08 08 50.2 0.0**
BILL *e* 08 10 39.0
BILL pmax pmax
comp=Z,8.0nm,1.3s
BILL MLR MLR
comp=Z,79nm,18.0s
WB0 Warramunga Arr 46.53 175 P **P 08 08 50.8 -0.3**
WB0 IAmb IAmb 08 08 52.4
comp=Z,7.1nm,0.7s
WRAB Tennant Creek 46.69 175 P **P 08 08 52.3 0.0**
WRAB IAmb IAmb 08 08 53.3
comp=Z,7.7nm,0.8s
WRAB Tennant Creek 46.69 175*ceP* **P 08 08 52.1 -0.2**
WRAB pmax pmax
comp=Z,5.0nm,0.6s
WRA Warramunga Arr 46.70 175 P **P 08 08 52.8 +0.4**
comp=Z,5.8nm,0.7s,baz=354,slow=8.5,SNR=109
WRA PcP **PcP 08 10 26.2 +0.3**
comp=Z,0.5nm,0.7s,baz=354,slow=9.2,SNR=2.6
comp=Z,5.8nm,0.7s
WRA Warramunga Arr 46.70 175 P **P 08 08 52.8 +0.4**
WRA Warramunga Arr 46.70 175 *i* P **P 08 08 52.7 +0.3**
WRA pmax pmax
comp=Z,6.0nm,0.6s
WB2 Warramunga Arr 46.70 175 P **P 08 08 52.8 +0.4**
WB2 IAmb IAmb 08 08 53.9
comp=Z,8.8nm,0.7s
WR0 Warramunga Arr 46.74 174 P **P 08 08 52.8 +0.2**
AAK Ala-Archa 47.62 304 P **P 08 08 58.4 -1.1**
comp=Z,1.2nm,0.3s,baz=31,slow=15,SNR=1.6
AAK LR LR 08 30 43.5
comp=Z,137nm,19.0s,baz=26,slow=38
comp=Z,1.2nm,0.3s
AAK Ala-Archa 47.62 304 *i* P **P 08 09 01.5 +1.9**
AAK pmax pmax
comp=Z,1.0nm,0.6s
CTAO Charters Tower 49.19 160 P **P 08 09 12.6 +1.0**
CTAO Charters Tower 49.19 160 P **P 08 09 12.6 +1.0**
CTAO pmax pmax
comp=Z,21nm,1.0s
PSA00 Pilbara Seismi 49.21 193 P **P 08 09 11.6 -0.1**
PSA00 IAmb IAmb 08 09 13.3
comp=Z,5.9nm,0.8s
NRIK Noril'sk 49.22 341 P **P 08 09 10.4 -0.9**
comp=Z,4.0nm,0.8s,baz=117,slow=9.5,SNR=6.3
NRIK LR LR 08 30 16.8
comp=Z,63nm,18.1s,baz=156,slow=36
comp=Z,4.0nm,0.8s
NRIK Noril'sk 49.22 341 P **P 08 09 10.6 -0.7**
NRIK Noril'sk 49.22 341*ceP* **P 08 09 10.6 -0.7**
NRIK pmax pmax
comp=Z,5.0nm,0.9s
AS31 Alice Springs 50.36 176 P **P 08 09 20.8 +0.3**
ASAR Alice Springs 50.36 176 P **P 08 09 21.4 +0.8**
comp=Z,4.6nm,0.7s,baz=6.5,slow=13,SNR=84
ASAR PcP **PcP 08 10 39.3 +0.3**
comp=Z,1.0nm,0.8s,baz=8.6,slow=12,SNR=3.0
comp=Z,4.6nm,0.7s
ASAR Alice Springs 50.36 176 P **P 08 09 20.7 +0.1**
ASAR Alice Springs 50.36 176 P **P 08 09 20.7 +0.1**
KKAR Karatay Array 50.54 305 P **P 08 09 21.5 -0.3**
KKAR Karatay Array 50.54 305 P **P 08 09 21.5 -0.3**
KKAR pmax pmax
comp=Z,4.0nm,1.3s
PALK Pallekele 50.86 257 LR LR 08 31 24.8
comp=Z,47nm,20.0s,baz=157,slow=37
GAR Garm 50.93 300 P **P 08 09 25.1 +0.2**
GAR IAmb IAmb 08 09 28.8
comp=Z,11nm,0.9s
BRVK Borovoye 51.09 318 P **P 08 09 26.1 +0.3**
BRVK Borovoye 51.09 318*ceP* **P 08 09 26.1 +0.3**
BRVK pmax pmax
comp=Z,4.0nm,0.8s
CHGR Chuyangaron 51.87 299 P **P 08 09 31.9 0.0**
CHGR Chuyangaron 51.87 299 P **P 08 09 31.9 0.0**
CHGR pmax pmax
comp=Z,13nm,0.7s
KBL Kabul 52.51 294 P **P 08 09 37.5 +0.6**
KBL Kabul 52.51 294 P **P 08 09 37.5 +0.6**
KBL pmax pmax
comp=Z,21nm,1.2s
ABKAR Akbulak array 57.55 313 P **P 08 10 12.9 +0.1**
ABKAR IAmb IAmb 08 10 14.3
comp=Z,5.3nm,0.8s
ABKAR Akbulak array 57.55 313 P **P 08 10 12.3 -0.5**
ARU Arti 58.03 322 LR LR 08 37 57.2
comp=Z,116nm,19.0s,baz=136,slow=39
ARU Arti 58.03 322*di* P **P 08 10 16.8 +0.7**
ARU 08 12 20.3
ARU S **S 08 18 18.3 +2.4**
ARU SS **SS 08 22 11.8 +5.0**
ARU pmax pmax
comp=Z,13nm,1.3s
AKTO Aktyubinsk 58.69 315 LR LR 08 36 46.7
comp=Z,67nm,20.3s,baz=85,slow=37
STKA Stephens Creek 59.41 169 P **P 08 10 26.7 +0.9**
comp=Z,1.9nm,0.7s,baz=334,slow=9.5,SNR=5.8
comp=Z,1.9nm,0.7s
H21K Melozitna Rive 60.47 28 P **P 08 10 33.8 +1.0**
H21K IAmb IAmb 08 10 35.3
comp=Z,6.9nm,1.1s
GEYT Alibeck 60.55 300 LR LR 08 39 30.4
comp=Z,97nm,19.7s,baz=102,slow=39
I21K Tanana 60.82 28 P **P 08 10 36.3 +1.1**
I21K IAmb IAmb 08 10 42.4
comp=Z,9.0nm,1.2s
CAST Castle Rocks 60.82 30 P **P 08 10 36.7 +1.4**
CAST IAmb IAmb 08 10 37.6
comp=Z,5.5nm,0.8s
MLY Manley 61.35 28 P **P 08 10 39.6 +0.8**
SUA Susitna One 61.55 32 P **P 08 10 41.2 +0.8**
H23K Yukon River 61.81 27 P **P 08 10 42.9 +0.9**
H23K IAmb IAmb 08 10 44.8
comp=Z,6.2nm,0.9s
NEA2 Nenana 62.09 29 P **P 08 10 44.3 +0.5**
RND Reindeer 62.27 30 P **P 08 10 44.9 -0.3**
RND Reindeer 62.27 30 P **P 08 10 44.9 -0.3**
RND pmax pmax
comp=Z,10.0nm,0.8s
MDM Murphy Dome 62.41 28 P **P 08 10 46.7 +0.6**
MDM IAmb IAmb 08 10 48.1
comp=Z,8.5nm,1.0s
H24K Noodor Dome 62.49 27 P **P 08 10 48.0 +1.5**
H24K IAmb IAmb 08 10 53.8
comp=Z,11nm,1.4s
COLA College 62.58 28 P **P 08 10 48.3 +1.3**
COLA IAmb IAmb 08 10 49.7
comp=Z,4.9nm,0.8s
COLA College 62.58 28 *i* P **P 08 10 47.0 -0.1**
COLA pmax pmax
comp=Z,4.0nm,0.8s
KIRV Kirov 62.79 324 LR LR 08 41 03.6
comp=Z,160nm,18.3s,baz=68,slow=39
KIRV Kirov 62.79 324 *i* P **P 08 10 50.0 +1.5**
ILAR Eielson Array 63.00 29 P **P 08 10 49.5 -0.4**
comp=Z,1.1nm,0.8s,baz=258,slow=5.9,SNR=14
comp=Z,1.1nm,0.8s
MSVF Nonsavu 64.15 128 LR LR 08 37 11.2
comp=Z,317nm,18.2s,baz=53,slow=34
SCRK Sand Creek 64.36 29 P **P 08 10 59.4 +0.4**
DOT Dot Lake 64.38 30 P **P 08 10 59.2 +0.2**
DOT IAmb IAmb 08 11 00.1
comp=Z,7.1nm,0.9s
J26L Joseph Creek 64.46 29 P **P 08 10 59.5 -0.1**
J26L IAmb IAmb 08 11 00.5
comp=Z,5.3nm,0.8s
BMRM Bremner River 64.56 33 P **P 08 11 00.9 +0.6**
BMRM IAmb IAmb 08 11 01.6
comp=Z,6.4nm,0.8s
MENT Mentasta 64.64 30 P **P 08 11 01.3 +0.5**
MENT IAmb IAmb 08 11 02.9
comp=Z,4.8nm,0.8s
BELG Belogornoye 64.83 318 LR LR 08 41 19.1
comp=Z,88nm,18.9s,baz=152,slow=38
M26K Nabesna, AK 65.06 31 P **P 08 11 04.6 +1.0**
M26K IAmb IAmb 08 11 05.6
comp=Z,8.9nm,1.1s
VRDI Verde Repeater 65.07 32 P **P 08 11 04.3 +0.5**
VRDI IAmb IAmb 08 11 05.3
comp=Z,4.7nm,0.7s
K27K Chicken 65.18 29 P **P 08 11 05.4 +1.2**
K27K IAmb IAmb 08 11 20.4
comp=Z,8.9nm,1.4s
BCAR Beaver Creek A 65.49 30 P **P 08 11 07.3 +1.0**
INK Inuvik 67.57 24 P **P 08 11 19.3 -0.1**
comp=Z,2.1nm,0.6s,baz=333,slow=3.4,SNR=6.0
comp=Z,2.1nm,0.6s
INK Inuvik 67.57 24 IAmb IAmb 08 11 22.7
comp=Z,6.8nm,1.1s
ZEI Tsey 69.77 308 *eP* **P 08 11 33.3 -0.6**
ZEI pmax pmax
comp=Z,10.0nm,1.0s
GNI Garni 70.00 306*ceP* **P 08 11 35.6 +0.3**
GNI pmax pmax
comp=Z,9.0nm,1.0s
VORR Voronezh 70.04 319 *eP* **P 08 11 35.4 +0.3**
VORR pmax pmax
comp=Z,70nm,0.4s
ARCES ARCESS Array B 70.08 339 P **P 08 11 34.1 -1.0**
comp=Z,3.9nm,0.9s,baz=56,slow=9.9,SNR=2.1
comp=Z,3.9nm,0.9s
KBZ Khabaz 70.17 310 P **P 08 11 36.8 +0.8**
comp=Z,8.7nm,0.8s,baz=101,slow=3.7,SNR=19
KBZ LR LR 08 45 05.9
comp=Z,56nm,18.6s,baz=69,slow=38
comp=Z,8.7nm,0.8s
KBZ Khabaz 70.17 310*ceP* **P 08 11 36.2 +0.2**
KBZ pmax pmax
comp=Z,11nm,0.9s
KIV Kislovodsk 70.24 310 *eP* **P 08 11 37.3 +0.7**
KIV pmax pmax
comp=Z,9.0nm,1.0s
KIV MLR MLR
comp=Z,47nm,18.0s
OBN Obninsk 70.44 323*deP* **P 08 11 38.9 +1.5**
OBN *e* 08 11 57.8
OBN *e* 08 14 16.8
OBN *eS* **S 08 20 43.3 -6.3**
OBN pmax pmax
comp=Z,5.0nm,0.6s
OBN MLR MLR
comp=Z,134nm,15.0s
NOR Nord 70.45 355 *i* P **P 08 11 36.5 -0.7**
NOR IAmb IAmb 08 11 38.1
comp=Z,2.3nm,0.8s
FINES FINESS Array B 73.20 331 P **P 08 11 53.9 0.0**
comp=Z,5.5nm,0.7s,baz=68,slow=6.8,SNR=19
comp=Z,5.5nm,0.7s
VSU Vasula 74.19 328 *eP* **P 08 12 00.1 +0.3**
MEF Metsahovi 74.48 330 *eP* **P 08 12 01.4 0.0**
DAG Danmarks Havn 74.85 353 *i* P **P 08 12 02.3 -1.1**
DAG IAmb IAmb 08 12 04.1
comp=Z,4.5nm,0.8s
RAF Rauma 75.25 331 *eP* **P 08 12 06.3 +0.4**
RAYN Ar Rayn 75.34 289 P **P 08 12 07.1 -0.1**
RAYN IAmb IAmb 08 12 08.9
comp=Z,9.6nm,1.0s
RAYN Ar Rayn 75.34 289 P **P 08 12 07.1 -0.1**
RAYN pmax pmax
comp=Z,10.0nm,1.0s
MTSE Matsula 75.44 329 *eP* **P 08 12 07.2 +0.2**
AKASG Malin Array Be 76.23 320 P **P 08 12 11.4 -0.2**
comp=Z,3.7nm,0.6s,baz=53,slow=6.8,SNR=19
AKASG LR LR 08 48 19.7
comp=Z,103nm,19.4s,baz=66,slow=38
comp=Z,3.7nm,0.6s
AKBB Malin Array Si 76.23 320 P **P 08 12 11.1 -0.6**
AKBB IAmb IAmb 08 12 12.4
comp=Z,7.6nm,0.8s
AKBB Malin Array Si 76.23 320*ceP* **P 08 12 10.7 -1.0**
SLIT Slitere, Latvi 76.67 328 *eP* **P 08 12 13.6 -0.4**
PABE Paberze 76.88 326 *eP* **P 08 12 15.8 +0.5**
YKA Yellowknife Ar 77.17 26 P **P 08 12 17.3 +0.5**
comp=Z,1.8nm,0.7s,baz=299,slow=5.3,SNR=18
comp=Z,1.8nm,0.7s
DBG Daneborg 77.23 352 *i* P **P 08 12 14.4 -2.6**
UPP Uppsala 77.61 332 *eP* **P 08 12 18.9 -0.4**
BR131 Keskin Array S 78.08 308 P **P 08 12 22.4 -0.2**
BR131 Keskin Array S 78.08 308 *i* P **P 08 12 21.9 -0.6**
BRTR Keskin Array B 78.08 308 P **P 08 12 22.9 +0.4**
comp=Z,5.7nm,0.8s,baz=94,slow=5.2,SNR=28
comp=Z,5.7nm,0.8s
BRTR Keskin Array B 78.08 308 P **P 08 12 22.5 0.0**
BRTR Keskin Array B 78.08 308 *i* P **P 08 12 22.8 +0.3**
BRTR pmax pmax
comp=Z,6.0nm,0.8s
VIKU Vikbolandet 78.75 331 *eP* **P 08 12 25.4 -0.2**
HFS Hagfors 79.10 333 LR LR 08 52 09.1
comp=Z,61nm,19.7s,baz=40,slow=39
NB201 NORSAR Array S 79.50 334 P **P 08 12 29.2 -0.6**
NB2 NORSAR Subarra 79.54 334 P **P 08 12 28.9 -1.1**
comp=Z,3.7nm,0.7s,baz=49,slow=5.6
NOA NORSAR Array B 79.54 334 P **P 08 12 29.4 -0.6**
comp=Z,4.7nm,0.7s,baz=50,slow=5.4,SNR=24
NOA LR LR 08 51 56.6
comp=Z,59nm,18.1s,baz=30,slow=39
comp=Z,4.7nm,0.7s
RPZ Rata Peaks 79.58 151 LR LR 08 48 40.6
comp=Z,117nm,18.4s,baz=8.5,slow=36
BUR08 Bucovina Ar. S 79.97 318 P **P 08 12 32.4 -0.3**
BUR08 IAmb IAmb 08 12 54.9
comp=Z,5.3nm,0.7s
BORA Eskisehir 80.22 310 P **P 08 12 34.1 -0.1**
KWP Kalwaria Pacla 80.43 321 *eP* **P 08 12 36.0 +1.0**
SUMG Summit 80.52 357 *i* P **P 08 12 35.0 -0.5**
SUMG IAmb IAmb 08 12 37.5
comp=Z,6.7nm,0.8s
GKP Gorka Klasztor 81.40 326 *eP* **P 08 12 41.2 +1.2**
OJC Ojcow 81.73 323 *eP* **P 08 12 42.8 +0.9**
NIE Niedzica 81.88 322 *eP* **P 08 12 44.4 +1.6**
MPEP Malo Peshtene 82.99 315 *eP* **P 08 12 49.1 +0.5**
MORC Moravsky Berou 83.19 323 *eP* **P 08 12 50.4 +0.8**
VYHS Vyhne 83.19 321 *eP* **P 08 12 50.7 +1.1**
VYHS pmax pmax

comp=Z,3.0nm,0.7s
VYHS **Vyhne** 83.19 321 *e*P P 08 12 50.7 +1.1
KSP **Ksiaz** 83.25 324 *e*P P 08 12 50.7 +0.9
JAVC **Velka Javorina** 83.64 322 *e*P P 08 12 54.1 +2.2
VTS **Vitosha** 83.68 315 *e*P P 08 12 51.1 -1.3
SMOL **Smolenice** 83.96 322 *e*P P 08 12 55.3 +1.8
SMOL pmax pmax
comp=Z,11nm,1.7s
SMOL **Smolenice** 83.96 322 *e*P P 08 12 55.3 +1.8
VRAC **Vranov** 83.97 323 LR LR 08 52 17.0
comp=Z,74nm,20.9s,baz=70,slow=37
VRAC **Vranov** 83.97 323 *e*P P 08 12 54.8 +1.2
MODS **Modra-Piesok** 84.12 322 *e*P P 08 12 56.0 +1.6
MODS pmax pmax
comp=Z,20nm,1.2s
MODS **Modra-Piesok** 84.12 322 *e*P P 08 12 56.0 +1.6
KKB **Krupnik** 84.16 314 *e*P P 08 12 55.5 +0.8
KRUC **Moravsky** 84.22 323 *e*P P 08 12 56.0 +1.2
CLL **Collm** 84.66 326 P P 08 12 56.9 -0.1
CLL **Collm** 84.66 326 *e*P P 08 12 58.0 +1.0
CLL pmax pmax
comp=Z,10.0nm,1.0s
CLL **Collm** 84.66 326 *e*P P 08 12 58.0 +1.0
comp=Z,10.0nm,1.0s
CLL LmH 08 48 00.0
comp=N,200nm,18.7s
CLL LmH 08 48 00.0
comp=E,200nm,19.9s
GERES **GERESS Array B** 85.78 324 P P 08 13 03.4 +0.5
comp=E,1.6nm,0.7s,baz=62,slow=6.2,SNR=14
comp=E,1.6nm,0.7s
J08A **Circle Bar Ran** 85.90 43 P P 08 13 04.7 +1.2
J08A IAmb IAmb 08 13 06.2
comp=Z,6.2nm,0.9s
BEKR **Beckworth** 86.61 47 P P 08 13 07.7 +0.5
BEKR IAmb IAmb 08 13 09.0
comp=Z,4.8nm,0.9s
DLMT **Dillon** 88.18 39 P P 08 13 16.3 +1.7
BOZ **Bozeman (W)** 88.58 38 P P 08 13 16.8 +0.3
BOZ IAmb IAmb 08 13 33.5
comp=Z,4.8nm,1.3s
BOZ **Bozeman (W)** 88.58 38 P P 08 13 16.8 +0.3
BOZ pmax pmax
comp=Z,5.0nm,1.3s
NVAR **Mina Array Bea** 88.73 47 P P 08 13 18.6 +1.2
comp=Z,1.2nm,0.8s,baz=287,slow=5.2,SNR=10
comp=Z,1.2nm,0.8s
EKA **Eskdalemuir Ar** 88.97 335 LR LR 08 58 10.4
comp=Z,48nm,19.1s,baz=358,slow=39
DAVOX **Davos/Dischmat** 89.08 324 LR LR 08 56 48.9
comp=Z,60nm,18.5s,baz=83,slow=38
HVU **Hansel Valley** 90.25 42 P P 08 13 25.9 +1.5
HVU IAmb IAmb 08 13 42.0
comp=Z,6.9nm,1.2s
HVU **Hansel Valley** 90.25 42 P P 08 13 25.9 +1.5
HVU pmax pmax
comp=Z,7.0nm,1.2s
DUG **Dugway, Tooele** 91.18 43 P P 08 13 29.6 +0.8
DUG **Dugway, Tooele** 91.18 43 P P 08 13 29.6 +0.8
DUG pmax pmax
comp=Z,4.0nm,0.9s
PDAR **Pinedale Array** 91.51 40 P P 08 13 31.1 +0.7
comp=Z,1.8nm,0.9s,baz=321,slow=1.9,SNR=11
comp=Z,1.8nm,0.9s
PDAR **Pinedale Array** 91.51 40 P P 08 13 30.5 +0.1
NLU **North Lily Min** 91.78 43 P P 08 13 32.6 +0.9
NLU IAmb IAmb 08 13 34.4
comp=Z,4.2nm,1.0s
PFO **Pinyon Flats O** 92.68 50 P P 08 13 36.7 +0.9
PFO **Pinyon Flats O** 92.68 50 P P 08 13 36.7 +0.9
PFO pmax pmax
comp=Z,7.0nm,1.1s
LCMT **Little Creek M** 92.83 46 P P 08 13 36.9 +0.4
LCMT IAmb IAmb 08 13 39.2
comp=Z,3.4nm,1.0s
BLYC **Blythe** 93.92 49 P P 08 13 41.0 -0.3
TXAR **Lajitas Array** 103.88 47 Pdiff Pdif 08 14 26.1 -0.3
comp=Z,0.3nm,0.8s,baz=316,slow=2.5,SNR=3.6
TORD **Torodi Ar. Bea** 116.17 302 PKP PKPdf 08 19 06.2 -1.2
comp=Z,0.3nm,0.6s,baz=51,slow=3.3,SNR=1.9
QSPA **South Pole Qui** 116.65 180 PKPdf PKPdf 08 19 06.5 -0.3
NNA **Nana** 150.54 65 PKPbc PKPbc 08 20 16.2 +0.2
comp=Z,6.0nm,0.5s,baz=276,slow=2.6,SNR=5.1
SIV **San Ignacio** 164.88 47 PKP PKPdf 08 20 29.5 +1.3
comp=Z,0.4nm,0.3s,baz=28,slow=4.8,SNR=6.4

IDC 03 08:13:38.3±1.5, 13°21.N×117°38.E, h0km, mb3.5/3, mbtmp3.7/4, ML4.8/1, Error ellipse: s-maj=64.5km s-min=24.0km az=57.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	18.95	288	P	P	08 18 01.0	-0.1
	1.0nm,0.3s,baz=100,slow=12,SNR=24						
	5.5nm,0.6s						
SONM	**Songino Array**	35.83	347	P	P	08 20 39.6	0.0
	0.7nm,0.8s,baz=148,slow=8.5,SNR=2.2						
	0.7nm,0.8s						
WRA	**Warramunga Arr**	36.71	154	P	P	08 20 45.9	-1.4
	0.4nm,0.7s,baz=333,slow=10,SNR=6.2						
	0.4nm,0.7s						
ASAR	**Alice Springs**	39.86	157	P	P	08 21 15.0	+1.1
	0.3nm,0.6s,baz=342,slow=15,SNR=7.7						
	0.3nm,0.6s						

*JMA **03** 08:14:43.6±0.1, 26°.9N±0°.4×130°.2E±0°.4, h53km, MD4.2/21, MV4.0/21, NEAR MINAMI-DAITOJIMA IS*
*NIED **03** 08:14:43.6, 26°.88N×130°.23E, h53km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; M_{rr}-1.76; $M_{\theta\theta}$0.66; $M_{\phi\phi}$ 1.10; $M_{r\theta}$0.36; $M_{\theta\phi}$ 1.06; $M_{\phi r}$-1.24; Fault plane solution: $M_0$2.26000×10¹⁵ NP1: ϕ_s241.00000°, δ39.00000°, λ-50.00000°. NP2:ϕ_s14.00000°, δ61.00000°, λ-117.00000°.*
*IDC **03** 08:14:46.7±0.7, 26°.99N×130°.08E, h43km±7km, mb3.5/14, mbtmp3.8/17, ML3.6/3, MS3.2/5 Error ellipse: s-maj=13.8km s-min=7.4km az=175.0*

ISC 03 08:14:44.1±1.1, 26°.90N±0°.04×130°.22E±0°.04, h27km±8km, n40, σ1$01/52, mb3.8/14, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKDJ	**Kitadaitoujima**	1.35	134	P	Pn	08 15 06.4	-0.8
JKDJ				*e*S	Sn	08 15 23.0	-1.2
JMZ	**Minamidaito 2**	1.40	140	P	Pn	08 15 06.8	-1.0
JMZ				S	Sn	08 15 23.8	-1.6
JTK	**Tokunoshima**	1.44	308	P	Pn	08 15 08.1	-0.3
JOKE	**Okinoerabujima**	1.54	288	P	Pn	08 15 09.7	-0.1
JOKE				*e*S	Sn	08 15 28.4	-0.5
JYRO	**Yoronjima**	1.58	275	*i* P	Pn	08 15 10.3	-0.1
JYRO				S	Sn	08 15 28.8	-1.2
JAM	**Amami Oshima**	1.60	340	P	Pn	08 15 10.4	-0.3
JAM				*e*S	Sn	08 15 29.5	-1.0
JAMN	**Amaminishikomi**	1.63	326	*e*P	Pn	08 15 10.9	-0.1
JAMN				*e*S	Sn	08 15 30.0	-1.2
JOW	**Kunigami**	1.74	268	P	Pn	08 15 11.8	-0.7
	307nm,0.3s,baz=108,slow=16,SNR=101						
JOW				S	Sn	08 15 32.6	-1.3
	864nm,0.5s,baz=90,slow=20,SNR=55						
JOW	**Kunigami**	1.74	268	P	Pn	08 15 12.1	-0.5
JOW				*e*S	Sn	08 15 33.2	-0.6
JOW	**Kunigami**	1.74	268	A	A	08 15 12.1	
	comp=E,5.0nm,0.7s,comp=E,7.0nm,1.7s						
JNTH	**Nagotoyohara**	2.00	260	P	Pn	08 15 15.5	-0.6
JNTH				*e*S	Sn	08 15 38.9	-1.4
JIH	**Iheya**	2.02	274	P	Pn	08 15 16.5	+0.2
JIH				S	Sn	08 15 40.3	-0.3
JIH	**Iheya**	2.02	274	A	A	08 15 16.5	
	comp=E,3.0nm,1.2s,comp=E,2.0nm,0.6s						
JJT3	**Tamagusuku3**	2.31	252	P	Pn	08 15 20.3	0.0
JJT3				*e*S	Sn	08 15 47.3	-0.6
JTAJ	**Takarajima**	2.42	338	*e*P	Pn	08 15 21.5	-0.4
JTAJ				*e*S	Sn	08 15 48.4	-2.3
JAGN	**Aguni-jima**	2.68	264	P	Pn	08 15 25.4	-0.1
JAGN				S	Sn	08 15 56.0	-1.0
JAGN	**Aguni-jima**	2.68	264	A	A	08 15 25.4	
	comp=E,3.0nm,2.1s,comp=E,3.0nm,3.2s						
JKE	**Kume jima 2**	3.13	260	P	Pn	08 15 30.6	-1.0
JYAK	**Yakushimahirau**	3.34	4	P	Pn	08 15 34.9	+0.4
JYAK				S	Sn	08 16 11.2	-2.1
JMTN	**Minamitane**	3.54	10	*e*P	Pn	08 15 37.5	+0.1
JMTN				*e*S	Sn	08 16 16.7	-1.6
JNU	**Nakatsue**	6.23	5	P	Pn	08 16 14.1	-0.2
	1.1nm,0.3s,baz=188,slow=11,SNR=18						
	4.4nm,0.4s						
JHJ	**Hachijo jima 2**	10.35	51	P	Pn	08 17 13.2	+2.5
	7.0nm,0.3s,baz=321,slow=12,SNR=2.5						
JHJ				LR	LR	08 20 45.8	
	comp=Z,146nm,18.9s,baz=257,slow=34						
	108nm,0.8s						
KSRS	**Korea Array**	10.71	350	P	Pn	08 17 15.2	-0.4
	0.2nm,0.3s,baz=169,slow=15,SNR=2.2						
KSRS				LR	LR	08 21 59.2	
	comp=Z,69nm,18.5s,baz=195,slow=41						
	0.5nm,0.3s						
GUMO	**Guam**	19.06	131	LR	LR	08 24 54.8	
	comp=Z,46nm,20.2s,baz=295,slow=32						
ASAJ	**Asahikawa**	19.88	27	LR	LR	08 26 51.8	
	comp=Z,76nm,18.9s,baz=190,slow=36						
KLR	**Kul'dur**	22.33	3	P	P	08 19 39.4	-0.3
	1.7nm,0.8s,baz=175,slow=12,SNR=6.3						
	1.7nm,0.8s						
SONM	**Songino Array**	28.00	325	LR	LR	08 32 50.9	
	comp=Z,83nm,18.3s,baz=91,slow=39						
MKAR	**Makanchi Array**	42.43	311	P	P	08 22 35.0	-1.5
	0.3nm,0.7s,baz=115,slow=6.5,SNR=4.8						
	0.3nm,0.7s						
ZALV	**Zalesovo Beam**	42.81	322	P	P	08 22 37.8	-1.6
	0.9nm,0.5s,baz=96,slow=10,SNR=2.3						
	0.9nm,0.5s						
WRA	**Warramunga Arr**	46.73	175	P	P	08 23 11.4	+0.4
	1.3nm,0.8s,baz=354,slow=8.4,SNR=11						
WRA				pP	pwP	08 23 24.4	-0.4
	1.5nm,0.7s,baz=351,slow=8.3,SNR=7.1						
	1.3nm,0.8s						
ASAR	**Alice Springs**	50.39	176	P	P	08 23 40.2	+1.1
	0.7nm,0.7s,baz=5.1,slow=13,SNR=14						
ASAR				pP	pwP	08 23 53.6	+0.6
	1.6nm,0.7s,baz=6.5,slow=9.3,SNR=9.2						
	0.7nm,0.7s						
ILAR	**Eielson Array**	63.01	29	P	P	08 25 08.4	+0.1
	0.1nm,0.4s,baz=236,slow=6.4,SNR=1.9						
	0.1nm,0.4s						
KBZ	**Khabaz**	70.11	310	P	P	08 25 53.2	-0.8
	1.0nm,0.5s,baz=39,slow=6.5,SNR=3.7						
	1.0nm,0.5s						
FINES	**FINESS Array B**	73.16	331	P	P	08 26 13.0	+1.0
	1.3nm,0.9s,baz=67,slow=5.0,SNR=4.3						
	1.3nm,0.9s						
AKASG	**Malin Array Be**	76.18	320	P	P	08 26 30.4	+0.6
	0.2nm,0.3s,baz=52,slow=6.5,SNR=4.7						
AKASG				pP	PcP	08 26 41.6	-0.1
	0.9nm,0.7s,baz=54,slow=5.9,SNR=2.2						
	0.2nm,0.3s						
YKA	**Yellowknife Ar**	77.17	26	P	P	08 26 36.3	+1.2
	0.5nm,0.8s,baz=292,slow=5.0,SNR=4.5						
	0.5nm,0.8s						
BRTR	**Keskin Array B**	78.02	308	P	P	08 26 41.1	+0.6
	1.6nm,0.9s,baz=104,slow=4.0,SNR=6.8						
	1.6nm,0.9s						
NOA	**NORSAR Array B**	79.50	334	P	P	08 26 47.5	-0.6
	0.7nm,0.7s,baz=58,slow=5.1,SNR=3.1						
	0.7nm,0.7s						
NVAR	**Mina Array Bea**	88.75	47	P	P	08 27 37.1	+1.3
	0.1nm,0.3s,baz=274,slow=4.4,SNR=1.6						
	0.1nm,0.3s						
PDAR	**Pinedale Array**	91.52	40	P	P	08 27 48.7	0.0
	0.2nm,0.4s,baz=252,slow=0.6,SNR=1.8						
	0.2nm,0.4s						

*NEIC **03** 08:28:54.9±1.9, 16°.24S±0°.09×175°.89W±0°.08, h328km±7km, mb4.9/84, Error ellipse: s-maj=13.5km s-min=11.3km az=157.0*
*IDC **03** 08:28:57.0±0.5, 16°.34S×176°.00W, h353km±4km, mb3.9/19, mbtmp4.6/22, Error ellipse: s-maj=12.8km s-min=8.7km az=144.0*
*NOU **03** 08:28:56.2, 16°.30S×175°.74W, h359km, mb5.0/83, Tonga Islands*
*GCMT **03** 08:28:59.9±0.2, 16°.15S±0°.02×175°.75W±0°.02, h362km±1km, MW5.6/127, Moment Tension Solution. s127,c212; Duration: 1$5 Moment tensor: Scale 10¹⁷ Nm; M_{rr}-0.62±.04; $M_{\theta\theta}$0.82±.08; $M_{\phi\phi}$-0.19±.07; $M_{r\theta}$0.34±.06; $M_{\theta\phi}$2.79±.06; $M_{\phi r}$-1.51±.06; Best double couple: $M_0$3.27600×10¹⁷ NP1:ϕ_s272.00000°, δ62.00000°, λ-13.00000°. NP2:ϕ_s8.00000°, δ79.00000°, λ-151.00000°. Principal axes: T 3.2840, Plg11.0000°, Azm137.0000°; N -0.0180, Plg59.0000°, Azm28.0000°; P -3.2670, Plg28.0000°, Azm234.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 03 08:28:56.5±0.3, 16°.27S±0°.05×175°.86W±0°.05, h350km, n352, σ1$40/364, mb4.8/85, 18C-7D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LKBA	**Tubou, Lakemba**	3.44	235	P	Pn	08 30 01.6	+1.6
DGTI	**Dogotuki**	4.23	269	P	Pn	08 30 08.5	+0.5
AFI	**Afiamalu**	4.58	60	P	Pn	08 30 09.2	-2.6
	3μm,1.1s,baz=236,slow=10,SNR=122						
AFI				S	S	08 31 08.0	-4.5
	176nm,0.3s,baz=268,slow=22,SNR=0.8						
AFI	**Afiamalu**	4.58	60	Pn	Pn	08 30 08.9	-2.9
AFI	**Afiamalu**	4.58	60	P	Pn	08 30 09.7	-2.1
MSVF	**Nonsavu**	6.01	255	P	Pn	08 30 28.1	+0.5
	205nm,0.8s,baz=90,slow=11,SNR=73						
MSVF	**Nonsavu**	6.01	255	Pn	Pn	08 30 27.4	-0.2
MSVF	**Nonsavu**	6.01	255	P	Pn	08 30 28.9	+1.3
NIUE	**Niue**	6.30	117	P	Pn	08 30 30.0	-0.9
	baz=6.4,SNR=25						
NIUE	**Niue**	6.30	117	Pn	Pn	08 30 30.3	-0.5
NIUE	**Niue**	6.30	117	P	Pn	08 30 31.7	+0.8
FUNA	**Funafuti**	9.08	327	Pn	Pn	08 31 03.0	-0.7
FUNA	**Funafuti**	9.08	327	P	P	08 31 04.8	-1.1
RAO	**Raoul Island**	13.06	188	S	S	08 34 05.7	-7.7
	180nm,0.3s,baz=293,slow=22,SNR=6.3						
KNTN	**Kanton**	14.01	17	P	P	08 31 59.1	-1.3
RAR	**Rarotonga**	16.00	110	P	P	08 32 23.2	+1.1
	96nm,1.1s,baz=259,slow=5.4,SNR=7.7						
RAR	**Rarotonga**	16.00	110	P	P	08 32 22.8	+0.6
RAR	**Rarotonga**	16.00	110	P	P	08 32 22.5	+0.4
MARNC	**Mare, Loyalty**	16.10	249	P	P	08 32 22.2	-1.1
MARNC	**Mare, Loyalty**	16.10	249	P	P	08 32 22.1	-1.1
PINNC	**Pines Island,**	16.96	246	P	P	08 32 31.7	-0.8
PINNC	**Pines Island,**	16.96	246	P	Pn	08 32 33.6	-2.6
YATNC	**Mamie plateau,**	17.28	248	P	P	08 32 36.6	+0.7
OUENC	**Ouen Island, N**	17.43	247	P	P	08 32 35.4	-2.1
OUENC	**Ouen Island, N**	17.43	247	P	P	08 32 38.6	+1.1
DZM	**Mont Dzumac**	17.68	248	P	P	08 32 38.5	-1.8
	34nm,0.6s,baz=58,slow=19,SNR=29						
DZM	**Mont Dzumac**	17.68	248	*e*P	P	08 32 40.2	-0.1
	300nm,1.6s						
DZM				*e*LR	LR	08 37 34.7	
	comp=Z,586nm,22.7s						
DZM	**Mont Dzumac**	17.68	248	P	P	08 32 39.4	-0.9
DZM				IAmb	IAmb	08 32 45.5	
	comp=Z,73nm,0.9s						
DZM	**Mont Dzumac**	17.68	248	P	P	08 32 39.0	-1.3
ONTNC	**Ouen Toro**	17.74	247	P	P	08 32 39.0	-1.8
ONTNC	**Ouen Toro**	17.74	247	P	P	08 32 40.0	-0.8
NOUC	**Port Laguerre**	17.82	248	P	P	08 32 42.3	+0.7
KOUNC	**Koumac, New Ca**	19.32	254	P	P	08 32 55.3	-2.3
KOUNC	**Koumac, New Ca**	19.32	254	P	P	08 32 57.5	-0.1
OUZ	**Omahuta**	21.10	205	P	P	08 33 14.6	0.0
OUZ	**Omahuta**	21.10	205	P	P	08 33 15.2	+0.7
GRZ	**Great Barrier**	21.35	200	P	P	08 33 10.2	-6.5
WCZ	**Waipu Caves**	21.45	202	P	P	08 33 18.0	+0.3
KUZ	**Kuaotunu**	21.73	199	P	P	08 33 20.9	+0.7
MXZ	**Matakaoa Point**	21.83	193	P	P	08 33 22.1	+1.0
MXZ				S	S	08 36 53.0	-4.0
WIAZ	**Waiheke Island**	21.95	200	P	P	08 33 22.9	+0.7
MBAZ	**Motutapu North**	22.01	200	P	P	08 33 23.1	+0.3
WMGZ	**Waiomatatini S**	22.06	192	P	P	08 33 24.1	+0.9
WMGZ				S	S	08 37 18.5	+18
HAZ	**Te Kaha**	22.13	193	P	P	08 33 23.4	-0.5
HAZ				S	S	08 37 06.9	+5.0
ETAZ	**East Tamaki Re**	22.17	200	P	P	08 33 23.7	-0.5
PKGZ	**Pakihiroa**	22.19	193	P	P	08 33 22.6	-1.9
MKAZ	**Moumakai**	22.23	199	P	P	08 33 25.3	+0.5
PUZ	**Puketiti**	22.33	192	P	P	08 33 26.2	+0.4
PUZ				S	S	08 37 21.4	+16
RUGZ	**Raukumara Rang**	22.36	194	P	P	08 33 24.4	-1.6
RUGZ				S	S	08 37 14.6	+8.9
TWGZ	**Tauwhareparae**	22.49	193	P	P	08 33 27.4	+0.2
TOZ	**Tahuroa Road**	22.70	198	P	P	08 33 29.7	+0.6
URZ	**Urewera**	22.77	194	P	P	08 33 27.3	-2.3
	comp=Z,27nm,0.6s,baz=333,slow=2.1,SNR=33						
	comp=Z,27nm,0.6s						
URZ	**Urewera**	22.77	194	P	P	08 33 27.2	-1.4
URZ				S	S	08 37 26.7	+15
URZ	**Urewera**	22.77	194	P	P	08 33 28.2	-1.4
HIZ	**Hauiti**	23.62	198	P	P	08 33 37.4	+0.1
BKZ	**Black Stump Fm**	23.78	195	P	P	08 33 37.9	-0.9
PPT2	**Papeete2**	25.17	97	*e*LR	LR	08 38 45.0	
	comp=Z,2μm,29.5s						
TBI	**Tubuai**	25.79	110	*e*LR	LR	08 39 25.3	
	comp=Z,2μm,27.5s						
TBI	**Tubuai**	25.79	110	*e*T	T	08 59 00.0	
	comp=Z,3.0nm,0.3s						
QRZ	**Quartz Range**	26.46	200	P	P	08 34 01.8	-0.9
TUWZ	**Tuamarina**	26.58	197	P	P	08 34 02.0	-1.7
THZ	**Tophouse**	27.19	199	P	P	08 34 07.9	-1.4
THZ				IAmb	IAmb	08 34 10.6	
	comp=Z,106nm,1.6s						
LHI	**Lord Howe Isla**	27.41	232	P	P	08 34 10.0	-1.3
	baz=27,SNR=3.7						
KHZ	**Kahutara**	27.60	197	P	P	08 34 12.7	-0.1
RPZ	**Rata Peaks**	29.54	199	P	P	08 34 28.7	-1.2
	comp=Z,8.3nm,0.6s,baz=5.3,slow=3.5,SNR=9.7						
	comp=Z,8.3nm,0.6s						
RPZ	**Rata Peaks**	29.54	199	P	P	08 34 29.4	-0.5
RPZ				IAmb	IAmb	08 35 12.5	
	comp=Z,84nm,1.5s						
MLZ	**Mavora Lakes**	31.98	202	P	P	08 34 50.3	-0.9
MLZ				IAmb	IAmb	08 34 52.4	
	comp=Z,28nm,0.7s						
EIDS	**Eidsvold**	32.13	248	P	P	08 34 50.2	-2.5
	baz=32,SNR=9.1						
EIDS	**Eidsvold**	32.13	248	P	P	08 34 51.5	-1.3
EIDS	**Eidsvold**	32.13	248	P	P	08 34 51.8	-0.9
DCZ	**Deep Cove**	32.41	203	P	P	08 34 53.6	-1.2
WHZ	**Wether Hill Ro**	32.50	201	P	P	08 34 55.2	-0.4
ARMA	**Armidale**	32.87	239	P	P	08 34 58.6	-0.6
	baz=33,SNR=5.3						
ARMA	**Armidale**	32.87	239	P	P	08 34 58.2	-1.0
ARMA				IAmb	IAmb	08 35 00.8	
	comp=Z,38nm,0.6s						
ARMA	**Armidale**	32.87	239	P	P	08 34 59.2	0.0
NTLH	**Newcastle Hard**	33.65	235	P	P	08 35 06.6	+0.9
MGCD	**Mangrove Creek**	34.23	234	P	P	08 35 10.4	-0.2
	baz=34,SNR=23						
MGCD	**Mangrove Creek**	34.23	234	P	P	08 35 10.5	-0.2
RMQ	**Roma**	34.38	247	P	P	08 35 10.9	-1.2
	baz=34,SNR=40						
RMQ	**Roma**	34.38	247	P	P	08 35 11.6	-0.5
TAOE	**Nuku Hiva Isla**	35.58	82	*e*LR	LR	08 43 19.0	
	comp=Z,327nm,27.9s						
CTA	**Charters Tower**	36.15	258	P	P	08 35 24.8	-2.2
	comp=Z,9.7nm,0.5s,baz=77,slow=9.4,SNR=21						
	comp=Z,9.7nm,0.5s						
CTAO	**Charters Tower**	36.15	258	P	P	08 35 25.4	-1.7
CNB	**Canberra Magne**	36.36	232	P	P	08 35 28.1	-0.6
	baz=36,SNR=211						
CNB	**Canberra Magne**	36.36	232	P	P	08 35 28.4	-0.3
CAN	**Canberra**	36.63	232	P	P	08 35 30.4	-0.6
CAN	**Canberra**	36.63	232	P	P	08 35 30.5	-0.5
CAN	**Canberra**	36.63	232	P	P	08 35 30.4	-0.6
PMG	**Port Moresby**	36.66	276	P	P	08 35 30.7	-0.6
	comp=Z,28nm,0.5s,baz=67,slow=10.0,SNR=9.9						
	comp=Z,28nm,0.5s						
PMG	**Port Moresby**	36.66	276	P	P	08 35 31.3	-0.1
PMG	**Port Moresby**	36.66	276	P	P	08 35 32.1	+0.8
PMG	**Port Moresby**	36.66	276	P	P	08 35 32.2	+0.9
PMG	**Port Moresby**	36.66	276	P	P	08 35 31.9	+0.6
MTSU	**Mount Surprise**	38.04	261	P	P	08 35 42.2	-0.7
CMSA	**Cobar Meteorol**	38.08	239	P	P	08 35 41.5	-1.5
	baz=38,SNR=206						
CMSA	**Cobar Meteorol**	38.08	239	P	P	08 35 41.9	-1.1
QLP	**Quilpie**	38.41	248	P	P	08 35 44.0	-1.7
	baz=38,SNR=14						
QLP	**Quilpie**	38.41	248	P	P	08 35 44.3	-1.4
COEN	**Coen**	39.58	268	P	P	08 35 55.2	-0.3
	baz=39,SNR=27						
COEN	**Coen**	39.58	268	P	P	08 35 54.9	-0.6
COEN				IAmb	IAmb	08 35 57.5	
	comp=Z,117nm,1.4s						
COEN	**Coen**	39.58	268	P	P	08 35 55.5	0.0
GLAD	**Gladstone**	39.73	224	P	P	08 35 55.6	-0.7
TOO	**Toolangi**	40.09	230	P	P	08 35 58.8	-0.7
	baz=40,SNR=59						
TOO	**Toolangi**	40.09	230	P	P	08 35 59.0	-0.5
TOO	**Toolangi**	40.09	230	P	P	08 35 58.9	-0.5
CORO	**Coronation Par**	40.52	224	P	P	08 36 03.0	+0.3
	comp=Z,125nm,1.2s						
MLBS	**Spotswood, Mel**	40.63	230	P	P	08 36 05.2	+1.5
	comp=Z,69nm,0.5s						
MOO	**Moorlands**	40.95	223	P	P	08 36 05.9	-0.3
	baz=41,SNR=4.9						
MOO	**Moorlands**	40.95	223	P	P	08 36 06.4	+0.2
TAU	**Tasmania Unive**	41.09	222	P	P	08 36 06.5	-0.8
TAU				IAmb	IAmb	08 36 08.7	
	comp=Z,143nm,1.7s						
TAU	**Tasmania Unive**	41.09	222	P	P	08 36 07.3	0.0
GEXS	**Deakin Univers**	41.20	230	P	P	08 36 09.0	+0.6
BRAT	**Ballarat**	41.25	231	P	P	08 36 08.9	+0.2
STKA	**Stephens Creek**	41.56	240	P	P	08 36 10.3	-0.9
	comp=Z,16nm,0.5s,baz=90,slow=11,SNR=50						
	comp=Z,16nm,0.5s						
STKA	**Stephens Creek**	41.56	240	P	P	08 36 10.4	-0.9
	baz=41,SNR=76						
STKA	**Stephens Creek**	41.56	240	P	P	08 36 10.5	-0.9
STKA	**Stephens Creek**	41.56	240	P	P	08 36 10.8	-0.5
INKA	**Innaminka**	41.63	246	P	P	08 36 12.0	+0.1
QIS	**Mount Isa**	42.38	257	P	P	08 36 16.5	-1.6
	baz=42,SNR=10						
QIS	**Mount Isa**	42.38	257	P	P	08 36 18.6	+0.5
ARPS	**Mount Arapiles**	42.58	233	P	P	08 36 18.2	-1.2
	baz=42,SNR=9.8						
ARPS	**Mount Arapiles**	42.58	233	P	P	08 36 19.4	-0.1
HTT	**Hallett**	44.08	239	P	P	08 36 30.2	-1.2
	baz=44,SNR=43						
HTT	**Hallett**	44.08	239	P	P	08 36 30.7	-0.7
LCRK	**Leigh Creek**

baz=52,SNR=667
WRKA Warakurna 52.68 251 P **P** 08 37 35.6 -0.9
FAKI Fak Fak 52.70 279 P **P** 08 37 35.5 -1.2
FORT Forrest 52.92 244 P **P** 08 37 36.2 -1.9
baz=53,SNR=104
FORT Forrest 52.92 244 P **P** 08 37 36.4 -1.7
FORT Forrest 52.92 244 P **P** 08 37 36.6 -1.5
KNRA Kununurra 53.10 262 P **P** 08 37 38.1 -1.5
baz=53,SNR=23
KNRA Kununurra 53.10 262 P **P** 08 37 38.8 -0.8
KNRA Kununurra 53.10 262 P **P** 08 37 38.9 -0.8
SIJI Sorong 54.28 281 P **P** 08 37 47.4 -0.8
comp=Z,64nm,0.7s,baz=63,slow=7.2,SNR=12
SWI Sorong 54.29 281 P **P** 08 37 49.0 +0.8
comp=Z,2µmcomp=Z,129nm,0.7s
DRV Dumont d'Urvil 58.00 199 P **P** 08 38 13.8 +0.5
SOEI Soe 58.53 268 P **P** 08 38 18.2 +0.1
SOEI Soe 58.53 268 P **P** 08 38 20.0 +2.0
comp=Z,173nm,1.1s
SOEI Soe 58.53 268 P **P** 08 38 20.0 +2.0
comp=Z,174nm,1.4s
SANI Sanana 58.91 278 P **P** 08 38 20.4 -0.1
comp=Z,846nmcomp=Z,16nm,0.4s
SANI Sanana 58.91 278 P **P** 08 38 20.4 -0.1
comp=Z,17nm,0.5s
PSA00 Pilbara Seismi 60.69 254 P **P** 08 38 31.1 -1.3
PSA00 Pilbara Seismi 60.69 254 P **P** 08 38 31.3 -1.1
MMRI Maumere 60.74 269 P **P** 08 38 34.5 +1.7
MBWA Marble Bar 60.85 255 P **P** 08 38 32.4 -1.0
MBWA Marble Bar 60.85 255 P **P** 08 38 32.5 -1.0
MBWA Marble Bar 60.85 255 P **P** 08 38 32.0 -1.4
EDFI Ende, Flores 61.24 269 P **P** 08 38 34.8 -1.5
comp=Z,471nmcomp=Z,51nm,0.8s
KLBR Kellerberrin 61.74 243 P **P** 08 38 37.8 -1.4
baz=61,SNR=51
KLBR Kellerberrin 61.74 243 P **P** 08 38 38.0 -1.2
NWAO Narrogin (SRO) 62.13 241 P **P** 08 38 41.0 -0.8
NWAO Narrogin (SRO) 62.13 241 P **P** 08 38 41.8 0.0
SBA Scott Base 62.21 184 P **P** 08 38 43.6 +2.2
SBA IAmb IAmb 08 38 46.0
comp=Z,26nm,1.0s
SBA Scott Base 62.21 184 P **P** 08 38 44.2 +2.7
LUWI Luwuk 62.28 278 P P 08 38 36.8 -6.2
VNDA Vanda 62.29 185 P **P** 08 38 42.6 +0.6
comp=Z,10nm,1.0s,baz=355,slow=6.1,SNR=28
comp=Z,10nm,1.0s
VNDA Vanda 62.29 185 P **P** 08 38 43.3 +1.3
VNDA Vanda 62.29 185 P **P** 08 38 43.8 +1.8
BLDU Ballidu 62.69 244 P **P** 08 38 44.1 -1.4
baz=62,SNR=47
BLDU Ballidu 62.69 244 P **P** 08 38 44.4 -1.1
MUN Mundaring 63.04 242 P **P** 08 38 47.0 -0.8
baz=63,SNR=8.4
MUN Mundaring 63.04 242 P **P** 08 38 47.1 -0.7
MORW Morawa 63.38 245 P **P** 08 38 48.6 -1.4
baz=63,SNR=13
MORW Morawa 63.38 245 P **P** 08 38 48.9 -1.0
MORW Morawa 63.38 245 P **P** 08 38 49.0 -1.0
APSI Ampana 63.39 277 P **P** 08 38 51.6 +1.3
comp=Z,768nmcomp=Z,52nm,1.3s
BNSI Bone 63.87 273 P **P** 08 38 54.0 +0.6
comp=Z,34nm,1.3s
KAPI Kappang 64.04 272 P **P** 08 38 54.7 +0.2
comp=Z,6.5nm,0.4s,baz=90,slow=6.1,SNR=3.7
comp=Z,6.5nm,0.4s
PLAI Plampang 64.98 268 P P 08 39 07.2 +6.7
PLAI Plampang 64.98 268 P **P** 08 39 01.4 +0.9
GIRL Giralia 65.71 252 P **P** 08 39 05.6 +0.6
baz=65,SNR=8.3
GIRL Giralia 65.71 252 P **P** 08 39 04.8 -0.2
GIRL Giralia 65.71 252 P **P** 08 39 05.3 +0.3
SRBI Singaraja 67.62 268 P **P** 08 39 17.9 +0.8
comp=Z,71nm,1.3s
MJAR Matsushiro Arr 68.10 321 P **P** 08 39 18.8 -0.9
comp=Z,0.6nm,0.4s,baz=136,slow=8.8,SNR=2.0
comp=Z,0.6nm,0.4s
JAGI Jajag, Banyuwa 68.54 267 P **P** 08 39 22.5 -0.3
comp=Z,36nm,1.5s
JAGI Jajag, Banyuwa 68.54 267 P **P** 08 39 22.5 -0.3
comp=Z,35nm,1.5s
CASY Casey 68.64 205 P **P** 08 39 22.9 +0.5
CASY IAmb IAmb 08 39 24.5
comp=Z,26nm,1.2s
PWJI Pagerwojo 70.90 267 P P 08 39 42.0 +4.9
PCJI Pacitan 71.46 267 P **P** 08 39 41.6 +1.2
comp=Z,143nm,1.3s
SBUM Sibu 73.39 278 P **P** 08 39 50.6 -1.1
QSPA South Pole Qui 73.78 180 P **P** 08 39 54.0 +0.9
QSPA IAmb IAmb 08 39 56.3
comp=Z,40nm,1.1s
KSM Kuching 74.92 276 P **P** 08 39 59.5 -1.0
KSM Kuching 74.92 276 P **P** 08 40 01.5 +1.0
comp=Z,31nm,1.7s
KSRS Korea Array 75.14 317 P **P** 08 40 01.9 +0.7
comp=Z,0.5nm,0.3s,baz=135,slow=6.4,SNR=6.2
comp=Z,0.5nm,0.3s
KSAR Wonju Array Be 75.16 317 P **P** 08 40 01.4 +0.1
YBH Yreka Blue Hor 75.72 38 P **P** 08 40 05.5 +1.0
GSC Goldstone, Bar 75.88 46 P **P** 08 40 05.4 -0.1
GSC IAmb IAmb 08 41 29.5
comp=Z,38nm,1.9s
PNTR Pine Nut 76.09 42 P **P** 08 40 08.1 +1.3
PNTR IAmb IAmb 08 41 32.0
comp=Z,31nm,1.3s
YERR Yerington 76.26 42 P **P** 08 40 08.7 +0.9
YERR IAmb IAmb 08 41 32.9
comp=Z,60nm,1.8s
LCH Last Change Ra 76.34 44 P **P** 08 40 09.1 +0.9
NVAR Mina Array Bea 76.56 43 P **P** 08 40 11.1 +1.6
comp=Z,1.4nm,0.8s,baz=225,slow=8.5,SNR=11
NVAR pP **pwP** 08 41 29.7 -1.2
comp=Z,12nm,1.2s,baz=227,slow=8.5,SNR=6.8
comp=Z,1.4nm,0.8s
113A Mohawk Valley, 76.77 50 P **P** 08 40 11.5 +1.1
113A IAmb IAmb 08 41 35.6
comp=Z,46nm,1.8s
JO4D Umpqua Nationa 76.99 37 P **P** 08 40 13.0 +1.3
JO4D IAmb IAmb 08 41 48.0
comp=Z,19nm,1.1s
KVN Kaiserville 77.04 43 P **P** 08 40 13.1 +1.1
KVN IAmb IAmb 08 41 37.3
comp=Z,33nm,1.6s
TPNV Topopah Spring 77.13 45 P **P** 08 40 13.8 +1.2
TPNV IAmb IAmb 08 41 37.2
comp=Z,31nm,1.6s
319A Douglas 79.49 53 P **P** 08 40 26.2 +0.8
319A IAmb IAmb 08 41 50.8
comp=Z,32nm,1.5s
ELK Elko 79.80 42 P **P** 08 40 28.1 +1.1
WUAZ Wupatki 79.83 48 P **P** 08 40 29.0 +1.8
WUAZ IAmb IAmb 08 41 53.6
comp=Z,46nm,1.6s
KLR Kul'dur 79.98 328 P **P** 08 40 28.1 +0.7
comp=Z,0.6nm,0.7s,baz=148,slow=6.5,SNR=1.8
comp=Z,0.6nm,0.7s
G08A Pilot Rock 80.03 37 P **P** 08 40 29.2 +1.2
BNX BinXian 80.20 324 ⇓P **P** 08 40 29.5 +0.8
BNX pmax pmax
comp=Z,20nm,1.3s
BNX pmax pmax
comp=Z,68nm,4.0s
CN2 Changchun 80.25 321 *e*P **P** 08 40 28.8 -0.2
CN2 S **S** 08 50 06.9 +2.4
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,5.0s
HAWA Hanford 80.34 36 P **P** 08 40 30.5 +1.1
BMO Blue Mountains 80.75 38 P **P** 08 40 33.1 +1.3
DIV Divide 80.80 14 P **P** 08 40 32.5 +0.9
BMRM Bremner River 80.94 15 P **P** 08 40 33.0 +0.7
BMRM IAmb IAmb 08 42 00.3
comp=Z,15nm,1.0s
K20K Telida 81.16 10 P **P** 08 40 33.0 -0.4
K20K IAmb IAmb 08 42 01.8
comp=Z,19nm,1.5s
TABL Table Mountain 81.39 17 P **P** 08 40 37.2 +2.3
TABL IAmb IAmb 08 43 04.2
comp=Z,42nm,1.8s
VRDI Verde Repeater 81.45 15 P **P** 08 40 36.5 +1.4
GLB Gilahina Butte 81.54 15 P **P** 08 40 35.2 -0.3
GLB IAmb IAmb 08 41 59.3
comp=Z,24nm,1.7s
HLID Hailey 81.80 40 P **P** 08 40 38.5 +1.1
J20K Nowinta River 81.92 9 P **P** 08 40 37.0 -0.3

MNTX Cornudas Mount 82.64 54 P **P** 08 40 41.6 -0.2
MNTX IAmb IAmb 08 42 08.6
comp=Z,32nm,1.8s
BNM Barren Site 82.71 51 P **P** 08 40 42.3 0.0
HYT Haines Junctio 82.74 18 P **P** 08 40 42.1 +0.3
M27K Edge Creek, AK 82.81 15 P **P** 08 40 43.5 +1.5
M27K IAmb IAmb 08 42 10.9
comp=Z,16nm,1.1s
PV13 Radium Mtn., P 82.87 47 P **P** 08 40 43.1 +0.1
PV13 IAmb IAmb 08 42 12.4
comp=Z,25nm,1.7s
TXAR Lajitas Array 83.06 57 P **P** 08 40 45.9 +1.8
comp=Z,1.4nm,0.9s,baz=210,slow=7.3,SNR=14
TXAR pP **pwP** 08 42 06.1 -0.7
comp=Z,4.1nm,1.1s,baz=235,slow=4.4,SNR=6.4
comp=Z,1.4nm,0.9s
WRH Wood River Hil 83.26 12 P **P** 08 40 44.1 0.0
WRH IAmb IAmb 08 42 14.5
comp=Z,28nm,1.3s
DOT Dot Lake 83.39 14 P **P** 08 40 44.8 -0.1
DOT IAmb IAmb 08 42 10.4
comp=Z,21nm,1.5s
BCAR Beaver Creek A 83.43 15 P **P** 08 40 45.4 +0.3
HDA Harding Lake 83.43 12 P **P** 08 40 46.1 +1.1
HDA IAmb IAmb 08 42 10.6
comp=Z,22nm,1.6s
BELA Belgrano 2 83.47 172 P **P** 08 40 46.2 +1.0
BELA IAmb IAmb 08 40 47.4
comp=Z,14nm,0.9s
H21K Melozitna Rive 83.51 9 P **P** 08 40 46.0 +0.5
H21K IAmb IAmb 08 42 15.9
comp=Z,35nm,1.9s
I23K Minto, Yukon-K 83.63 11 P **P** 08 40 46.0 0.0
TCOL CIGO, UAF Yank 83.66 12 P **P** 08 40 45.6 -0.5
TCOL IAmb IAmb 08 41 05.1
comp=Z,14nm,0.7s
COLA College 83.67 12 P **P** 08 40 45.3 -0.8
COLA IAmb IAmb 08 41 05.1
comp=Z,14nm,0.7s
SCRK Sand Creek 83.69 14 P **P** 08 40 47.4 +0.9
SCRK IAmb IAmb 08 42 12.3
comp=Z,30nm,1.8s
IL31 83.76 12 P **P** 08 40 47.0 +0.3
IL31 IAmb IAmb 08 40 55.2
comp=Z,25nm,1.7s
ILAR Eielson Array 83.76 12 P **P** 08 40 45.6 -1.0
comp=Z,1.3nm,0.5s,baz=223,slow=5.6,SNR=14
ILAR pP **pwP** 08 42 08.2 -1.1
comp=Z,2.3nm,1.1s,baz=236,slow=5.0,SNR=2.5
comp=Z,1.3nm,0.5s
J25K Salcha River, 83.94 13 P **P** 08 40 47.5 -0.1
J25K IAmb IAmb 08 42 13.4
comp=Z,26nm,1.6s
BJI Beijing 84.36 314 P **P** 08 40 51.0 +0.8
BJI pmax pmax
comp=Z,5.0nm,0.9s
PDAR Pinedale Array 84.49 43 P **P** 08 40 51.7 +0.6
comp=Z,1.4nm,0.9s,baz=239,slow=4.3,SNR=6.8
PDAR pP **pP** 08 42 12.8 +1.3
comp=Z,2.3nm,0.9s,baz=197,slow=2.5,SNR=3.2
comp=Z,1.4nm,0.9s
IPM Ipoh 84.66 276 P P 08 40 53.6 +1.3
comp=Z,28nm,1.1s
DAWY Dawson 84.86 15 P **P** 08 40 53.1 +0.9
DAWY IAmb IAmb 08 42 21.3
comp=Z,16nm,1.2s
XLT XiLinHaoTe 86.16 318 *e*P **P** 08 40 59.8 +0.7
XLT pmax pmax
comp=Z,10.0nm,1.3s
XLT pmax pmax
comp=Z,94nm,4.9s
MAW Mawson 86.21 199 P **P** 08 40 59.4 +0.5
comp=Z,16nm,1.0s,baz=128,slow=5.7,SNR=16
comp=Z,16nm,1.0s
MAW Mawson 86.21 199 P **P** 08 41 00.0 +1.2
baz=86,SNR=11
MAW Mawson 86.21 199 P **P** 08 40 59.0 +0.1
GYA Guiyang 86.37 299 ⇑P **P** 08 41 02.3 +1.7
GYA pP pP 08 42 18.5 -2.7
GYA SKS **SKSac** 08 50 55.1 +1.8
GYA S **S** 08 51 08.3 +1.9
GYA pmax pmax
comp=Z,12nm,1.0s
GYA pmax pmax
comp=Z,93nm,5.3s
GYA LR LR
comp=Z,120nm,4.1s
GYA LR LR
comp=Z,96nm,3.8s
GYA LR LR
comp=Z,120nm,6.5s
HHC Hu-ho-hao-te 87.89 314 *e*P **P** 08 41 09.1 +1.7
HHC S **S** 08 51 23.8 +3.6
HHC SS **SS** 08 57 17.6 +0.2
HHC pmax pmax
comp=Z,22nm,1.0s
HHC pmax pmax
comp=Z,120nm,5.2s
LL02 Futaleuf 88.86 135 P **P** 08 41 12.4 +0.4
KMI Kunming 89.28 296 ⇑P **P** 08 41 16.9 +2.5
KMI pmax pmax
comp=Z,9.0nm,1.6s
PZH PanZhiHua 90.56 297 P **P** 08 41 21.3 +1.1
PZH pmax pmax
comp=Z,8.0nm,0.9s
PZH pmax pmax
comp=Z,90nm,4.1s
CMAR Chiang Mai Arr 90.65 289 P **P** 08 41 20.8 +0.1
comp=Z,2.7nm,0.9s,baz=108,slow=2.1,SNR=18
comp=Z,2.7nm,0.9s
CMAR Chiang Mai Arr 90.65 289 P **P** 08 41 20.2 -0.4
YKA Yellowknife Ar 91.84 24 P **P** 08 41 26.7 +1.6
comp=Z,0.6nm,0.8s,baz=238,slow=4.9,SNR=6.0
YKA pP **pwP** 08 42 48.1 -1.1
comp=Z,6.2nm,1.2s,baz=238,slow=4.2,SNR=5.1
comp=Z,0.6nm,0.8s
LZH Lanzhou 91.84 307 *e*P **P** 08 41 27.6 +1.6
LZH pmax pmax
comp=Z,16nm,1.0s
TROLL Troll, Antarti 91.94 179 P **P** 08 41 25.2 -0.5
SNAA Sanae 92.15 178 P **P** 08 41 27.1 +0.5
SNAA Sanae 92.15 178 P **P** 08 41 27.5 +0.9
SNAA IAmb IAmb 08 41 28.7
comp=Z,16nm,1.4s
VNA3 Neumayer Olymp 92.20 176 P **P** 08 41 27.7 +0.9
VNA2 Neumayer--Watz 92.67 176 P **P** 08 41 29.9 +0.9
baz=200,slow=4.0
VNA1 Neumayer--Stat 92.88 176 P **P** 08 41 32.4 +2.5
SONM Songino Array 93.92 319 P **P** 08 41 34.9 -0.4
comp=Z,0.3nm,0.5s,baz=150,slow=6.7,SNR=1.6
comp=Z,0.3nm,0.5s
ARCES ARCESS Array B 125.11 351 PKP **PKPdf** 08 47 14.6 -0.5
comp=Z,3.3nm,1.0s,baz=310,slow=4.3,SNR=4.6
FINES FINESS Array B 132.24 346 PKP **PiKiP** 08 47 29.7 -0.2
comp=Z,0.8nm,0.7s,baz=342,slow=2.4,SNR=4.7
AKASG Malin Array Be 140.18 335 PKP **PKPdf** 08 47 42.8 -1.1
comp=Z,0.2nm,0.3s,baz=0.0,slow=0.4,SNR=1.3
KMBO Kilima Mbogo 143.03 245 PKP **PKPdf** 08 47 48.0 -2.4
comp=Z,2.6nm,0.3s,baz=76,slow=5.2,SNR=9.9
OJC Ojcow 143.85 343 *e*PKP PKPbc 08 47 49.4 +0.2
KSP Ksiaz 144.15 347 *e*PKP **PKPdf** 08 47 50.2 -0.7
BURAR Bucovina Array 144.23 335 ⇑P **PKPdf** 08 47 50.6 -0.7
CLL Collm 144.33 350 *e*PKPdf **PKPab** 08 47 50.0 -0.4
comp=Z,9.0nm,1.2s
BIZ Bicaz 144.40 334 ⇑P **PKPdf** 08 47 51.4 -0.1
NIE Niedzica 144.42 342 *e*PKP **PKPdf** 08 47 51.5 0.0
OSTC Ostas 144.44 347 *e*PKP **PKPdf** 08 47 51.2 -0.3
CHVC Chvalec 144.44 347 *e*PKP **PKPdf** 08 47 51.1 -0.4
CRVS Cervenica-Dubn 144.51 340 *e*PKP **PKPdf** 08 47 51.7 +0.1
BRG Berggiesshubel 144.59 349 *e*PKP PKPbc 08 47 50.7 -0.6
BRG Amp 08 47 53.2
comp=Z,9.7nm,1.3s
BRG Amp 08 55 12.0
comp=E,0.1nm,14.6s
BRG Amp 08 55 14.0
comp=N,0.1nm,12.0s
BRG Amp 08 55 17.0
comp=Z,0.2nm,16.4s
DPC Dobruska-Polom 144.61 347 *e*PKP **PKPdf** 08 47 51.8 0.0
KRLC Kraliky 144.76 346 *e*PKP PKPbc 08 47 51.3 -0.6
CFR Carcaliu 144.83 330 ⇑P **PKPab** 08 47 52.5 +0.1
MORC Moravsky Berou 144.85 345 ⇓P **PKPab** 08 47 52.7 +0.2
MORC Moravsky Berou 144.85 345 *e*PKP **PKPab** 08 47 52.0 -0.5
TPGR Topolog 144.93 329 ⇑P **PKPab** 08 47 52.7 -0.2
PLOR Plostina 145.01 332 ⇑P **PKPab** 08 47 52.6 -0.6
MAUC Maruska 145.16 344 *e*PKP **PKPdf** 08 47 52.2 -0.6

COVR Voineasa-Covas 145.21 333 ⇑P **PKPab** 08 47 53.7 -0.3
TIRR Tirgusor 145.22 329 ⇓P **PKPdf** 08 47 52.0 -1.0
BRTR Keskin Array B 145.28 318 PKPbc **PKPdf** 08 47 52.9 -0.5
comp=Z,4.8nm,0.8s,baz=126,slow=2.1,SNR=19
BRTR pPKPbc **pPKPdf** 08 49 20.5 +1.1
comp=Z,2.3nm,1.0s,baz=121,slow=0.7,SNR=2.6
HARR Harsova 145.28 330 ⇑P **PKPbc** 08 47 52.9 -0.7
PRU Pruhonice 145.32 348 *e*PKP **PKPab** 08 47 54.6 +0.4
DOPR Dopca 145.47 334 ⇓P **PKPab** 08 47 55.2 +0.2
VRAC Vranov 145.52 346 *e*PKP **PKPbc** 08 47 53.9 -0.3
MLR Muntele Rosu 145.60 332 ⇑P **PKPab** 08 47 54.8 -0.9
JAVC Velka Javorina 145.66 344 *e*PKP **PKPab** 08 47 55.0 -0.7
BTNL Ternell 145.73 358 *d*PKP **PKPbc** 08 47 54.9 +0.1
KRUC Moravsky 145.80 346 *e*PKP **PKPbc** 08 47 54.8 -0.2
DRGR 145.88 337 ⇑P **PKPab** 08 47 55.7 -0.9
BMRD Maredsous 146.05 359 *d*PKPdf **PKPdf** 08 47 53.3 -0.8
MODS Modra-Piesok 146.21 344 *e*PKP **PKPab** 08 47 57.5 -0.3
ARR Arges 146.27 334 ⇑P **PKPbc** 08 47 56.5 -0.1
KHC Kasperske Hory 146.33 349 *e*PKP **PKPbc** 08 47 56.7 +0.1
GERES GERESS Array B 146.58 349 PKPbc **PKPbc** 08 47 56.4 -1.0
comp=Z,0.4nm,0.3s,baz=46,slow=5.8,SNR=11
GERES pPKPbc pPKPab 08 49 23.4 +0.9
comp=Z,1.2nm,0.8s,baz=74,slow=4.9,SNR=2.6
SIRR Siria 146.71 338 ⇑P **PKPbc** 08 47 57.3 -0.5
CONA Conrad Observa 146.98 345 *e*P **PKiKP** 08 47 59.9 -0.8
comp=Z,15nm,1.3s
GZR Gura Zlata 147.02 336 ⇑P **PKPbc** 08 47 58.7 0.0
RONA Rosalia, Austr 147.09 345 *i* P **PKiKP** 08 48 00.1 -0.8
comp=Z,12nm,1.2s,SNR=6.4
MPLH Magyarpolny 147.25 343 PKP **PKPab** 08 48 01.2 -0.6
BZS Buzias 147.28 337 ⇑P **PKPbc** 08 47 59.5 +0.3
HERR Herculane 147.58 335 ⇑P **PKPbc** 08 47 59.7 -0.4
ARSA Arzberg 147.90 345 *i* P **PKPbc** 08 47 59.9 -0.5
comp=Z,3.1nm,1.0s
MORH Mrgy, Hungar 147.78 341 PKP **PKiKP** 08 48 01.2 -1.0
MDVR Moldovita 147.94 336 ⇑P **PKPdf** 08 47 52.5 -5.1
KOVH Kovagotottos 148.06 342 PKP **PKiKP** 08 48 02.1 -0.7
MPEP Malo Peshtene 148.26 332 *e*P **PKiKP** 08 48 02.6 -0.7
MPEP Malo Peshtene 148.26 332 *e*P **PKiKP** 08 48 02.6 -0.7
SOKA Soboth 148.35 346 *e*P **PKPbc** 08 48 02.4 +0.3
comp=Z,8.8nm,1.3s
RETA Reutte 148.39 351 *i* P **PKiKP** 08 48 03.0 -0.6
comp=Z,7.0nm,1.0s
WATA Walderalm 148.41 350 *e*P **PKiKP** 08 48 03.6 -0.1
comp=Z,5.2nm,0.7s
WTTA Wattenberg 148.47 350 *e*P **PKiKP** 08 48 03.6 -0.3
comp=Z,9.3nm,1.0s
MOTA Moosalm 148.48 351 *e*P **PKiKP** 08 48 03.6 -0.3
comp=Z,15nm,1.6s
SQTA Sankt Quirin 148.58 351 *e*P **PKiKP** 08 48 04.1 +0.1
comp=Z,7.4nm,1.0s
DAVA Damuels 148.71 352 *e*P **PKPbc** 08 48 03.4 +0.3
comp=Z,12nm,1.2s
MYKA Terra Mystica 148.71 347 *i* P **PKPbc** 08 48 02.8 -0.2
comp=Z,4.5nm,0.6s
ABTA Abfaltersbach 148.82 349 *i* P **PKPbc** 08 48 02.5 -0.9
comp=Z,10nm,1.1s
FETA Feichten 148.85 351 *i* P **PKiKP** 08 48 04.5 -0.1
comp=Z,11nm,1.0s,SNR=6.4
VTS Vitosha 149.07 332 ⇓P **PKPdf** 08 48 00.7 +1.1
VTS Vitosha 149.07 332 *e*P **PKiKP** 08 48 04.9 -0.3
VTS Vitosha 149.07 332 *e*P **PKiKP** 08 48 04.9 -0.3
MMB Musomiste 149.64 330 *e*P **PKiKP** 08 48 05.5 -0.8
MMB Musomiste 149.64 330 *e*P **PKiKP** 08 48 05.5 -0.8
KKB Krupnik 149.73 331 *e*P **PKiKP** 08 48 06.2 -0.2
KKB Krupnik 149.73 331 *e*P **PKiKP** 08 48 06.2 -0.2
PDG Podgorica 150.88 337 ⇑P **PKPbc** 08 48 05.3 -2.9
ESDC Sonseca Array 155.63 15 PKPab **PKPab** 08 48 35.4 -1.8
comp=Z,0.3nm,0.4s,baz=29,slow=9.7,SNR=2.0
ESDC pPKPab **pPKPab** 08 50 01.7 +2.1
comp=Z,3.9nm,1.2s,baz=322,slow=4.0,SNR=9.3
TORD Torodi Ar. Bea 176.10 142 PKP **PKPdf** 08 48 25.1 -0.9
comp=Z,1.4nm,1.0s,baz=281,slow=1.8,SNR=5.5
TORD pPKP **pPKPdf** 08 49 55.0 +2.2
comp=Z,0.4nm,0.8s,baz=139,slow=9.4,SNR=1.9
TORD pPKPab **pPKPab** 08 51 32.8 +3.1
comp=Z,0.7nm,0.9s,baz=163,slow=2.4,SNR=2.9

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*NNC **03** 08:38:35.9±2.9, 54.°51N×87.°28E, h0km, mb3.3, mpv3.0, Error ellipse: s-maj=27.2km s-min=15.0km az=1.0, Suspected Mining explosion.*

*IDC **03** 08:38:37.1±2.9, 54.°51N×87.°22E, h0km, mbtmp3.1/2, ML2.5/2, Error ellipse: s-maj=23.3km s-min=18.2km az=48.0*

ISC 03 08:38:39.2±4.6, 54.°4N±0.°2×87.°0E±0.°2, h0km, n9, σ1s54/14, 8C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.35**	**250**	*i*			08 47 00.0	
	baz=65,slow=316,SNR=4.0							
ZAA0	**Zalesovo Array**	**1.35**	**250**	⇑P		**Pg**	**08 39 03.0**	**-2.1**
	0.5nm,0.7s							
ZAA0				⇑S		**Sn**	**08 39 25.5**	**+1.6**
	6.6nm,0.9s							
ZALV	**Zalesovo Beam**	**1.35**	**250**	Pg		**Pg**	**08 39 03.2**	**-1.9**
	0.7nm,0.3s,baz=67,slow=14,SNR=12							
ZALV				Lg		Lg	08 39 24.9	
	0.7nm,0.3s,baz=69,slow=30,SNR=10							
KURK	**Kurchatov**	**6.30**	**237**	⇑Pn		**Pn**	**08 40 14.5**	**+1.2**
	2.5nm,0.9s							
KURK				⇑Lg		Lg	08 41 59.3	
	9.6nm,1.1s							
KURBB	**Kurchatov Arra**	**6.41**	**237**	Pn		**Pn**	**08 40 15.7**	**+1.0**
	baz=53,slow=14,SNR=17							
KURBB				Pg		**Pb**	**08 40 31.4**	**-0.1**
	baz=53,slow=14,SNR=6.3							
KURBB				Sn		**Sn**	**08 41 30.8**	**+2.3**
	baz=44,slow=4.4,SNR=1.4							
KURBB				Lg		Lg	08 42 04.6	
	baz=47,slow=31,SNR=5.9							
KURBB	**Kurchatov Arra**	**6.41**	**237**	⇑Pn		**Pn**	**08 40 14.9**	**+0.2**
	3.4nm,0.8s							
KURBB				⇑Lg		Lg	08 42 03.4	
	13nm,1.0s							
MK31	**Makanchi Array**	**8.20**	**203**	⇑Pn		**Pn**	**08 40 41.9**	**+2.5**
	1.7nm,1.1s,baz=28,slow=14,SNR=9.4							
MK31				⇓Sn		**Sn**	**08 42 11.6**	**-1.0**
	3.0nm,1.2s,baz=33,slow=27,SNR=7.2							
MK31				Lg		Lg	08 43 03.9	
	2.7nm,0.8s,baz=28,slow=33,SNR=4.5							
MKAR	**Makanchi Array**	**8.20**	**203**	Pn		**Pn**	**08 40 40.0**	**+0.6**
	0.1nm,0.3s,baz=28,slow=14,SNR=6.7							
MKAR				Sn		**Sn**	**08 42 12.9**	**+0.3**
	baz=26,slow=30,SNR=10.0							
MKAR				Lg		Lg	08 43 00.4	
	baz=28,slow=28,SNR=4.1							
	0.3nm,0.5s							
MAKZ	**Makanchi**	**8.26**	**205**	⇓Pn		**Pn**	**08 40 40.1**	**0.0**
	1.0nm,1.0s							
MAKZ				⇓Sn		**Sn**	**08 42 14.3**	**+0.2**
	2.3nm,1.2s							
MAKZ				⇑Lg		Lg	08 43 03.7	
	8.5nm,1.2s							

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*NOU **03** 08:56:39.4, 14.°77S×167.°25E, h111km, MLv4.6/11, Vanuatu Islands*

*IDC **03** 08:56:41.3±13.0, 15.°28S×165.°79E, h0km, mb3.8/3, mbtmp3.8/4, ML3.8/1, Error ellipse: s-maj=225.0km s-min=36.4km az=56.0*

ISC 03 08:56:38.0±2.5, 14.°8S±0.°2×166.°7E±0.°2, h36km, n10, σ1s19/11, mb3.9/3, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**3.21**	**154**	P		**Pn**	**08 57 26.6**	**+0.7**
MARNC	**Mare, Loyalty**	**6.74**	**170**	P		**Pn**	**08 58 13.8**	**-0.6**
	0.9nm,1.7s							
YATNC	**Mamie plateau,**	**7.21**	**179**	P		**Pn**	**08 58 21.6**	**+0.8**
DZM	**Mont Dzumac**	**7.22**	**182**	Pn		**Pn**	**08 58 22.3**	**+1.2**
	1.6nm,0.3s,baz=353,slow=17,SNR=30							
DZM				Sn		**Sn**	**08 59 40.6**	**-1.3**
	1.0nm,0.3s,baz=288,slow=20,SNR=1.3							
	4.1nm,0.3s							
DZM	**Mont Dzumac**	**7.22**	**182**	P		**Pn**	**08 58 22.5**	**+1.4**
OUENC	**Ouen Island, N**	**7.56**	**179**	P		**Pn**	**08 58 27.5**	**+1.8**
PINNC	**Pines Island,**	**7.79**	**175**	P		**Pn**	**08 58 29.8**	**+1.1**
STKA	**Stephens Creek**	**28.54**	**229**	P		**P**	**09 02 30.1**	**-0.2**
	1.7nm,0.5s,baz=45,slow=9.7,SNR=10							
	1.7nm,0.5s							
WRA	**Warramunga Arr**	**31.30**	**256**	P		**P**	**09 02 54.6**	**-0.4**
	0.2nm,0.5s,baz=85,slow=9.4,SNR=4.7							

0.2nm,0.5s
ASAR Alice Springs 32.15 249 P **P** **09 03 02.1 -0.3**
0.9nm,0.6s,baz=81,slow=9.2,SNR=21
0.9nm,0.6s

IDC 03 09:00:10.0±2.6, 54°.13N×86°.51E, h0km, mbtmp3.2/2, ML3.1/2, Error ellipse: s-maj=21.6km s-min=13.9km az=52.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.01**	**260**	*i*		09 06 40.0	
	baz=80,slow=320,SNR=2.1						
ZALV	**Zalesovo Beam**	**1.01**	**260**	Pg	Pg	09 00 28.0	-1.4
	0.8nm,0.3s,baz=76,slow=17,SNR=2.3						
ZALV				Lg	Lg	09 00 43.8	
	3.4nm,0.3s,baz=81,slow=29,SNR=8.4						
KURBB	**Kurchatov Arra**	**6.02**	**238**	Pn	Pn	09 01 41.0	+0.7
	0.2nm,0.3s,baz=54,slow=13,SNR=11						
KURBB				Lg	Lg	09 03 21.4	
	baz=54,slow=30,SNR=5.0						
	1.1nm,0.5s						
MKAR	**Makanchi Array**	**7.82**	**202**	Pn	Pn	09 02 06.1	+1.1
	0.5nm,0.3s,baz=24,slow=13,SNR=14						
MKAR				Lg	Lg	09 04 19.9	
	0.1nm,0.3s,baz=24,slow=23,SNR=2.7						
	0.7nm,0.3s						

IDC 03 09:18:27.0±302.0, 53°.17N×33°.28E, h0km, Error ellipse: s-maj=108.8km s-min=69.6km az=1.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**4.22**	**31**	*i*		09 45 15.7	
	baz=215,slow=320,SNR=0.7						
I26DE	**FREYUNG INFRAS**	**13.05**	**259**	*i*		10 26 40.0	
	baz=62,slow=324,SNR=3.4						
I37NO	**I37NO**	**17.37**	**342**	*i*		11 09 50.0	
	baz=149,slow=334,SNR=0.7						
I48TN	**KESRA INFRASON**	**24.18**	**234**	*i*		11 45 20.0	
	baz=36,slow=327,SNR=0.7						
I46RU	**ZALESOVO INFRA**	**30.07**	**67**	*i*		12 22 40.0	
	baz=285,slow=324,SNR=1.6						

IDC 03 09:19:13.2±4.6, 18°.93S×171°.94W, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=295.5km s-min=32.3km az=153.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**39.35**	**261**	P	P	09 26 45.3	+0.7
	1.5nm,0.4s,baz=88,slow=9.0,SNR=6.7						
	1.5nm,0.4s						
ASAR	**Alice Springs**	**50.44**	**255**	P	P	09 28 11.7	-1.3
	0.4nm,0.6s,baz=96,slow=7.5,SNR=5.3						
	0.4nm,0.6s						
WRA	**Warramunga Arr**	**50.49**	**259**	P	P	09 28 13.6	+0.2
	0.4nm,0.4s,baz=95,slow=8.3,SNR=19						
	0.4nm,0.4s						
NVAR	**Mina Array Bea**	**76.04**	**41**	P	P	09 31 02.8	+0.1
	0.2nm,0.7s,baz=216,slow=5.6,SNR=2.3						
	0.2nm,0.7s						

*IDC **03** 09:19:15.7±1.1, 0°.90N×125°.39E, h0km, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=140.0km s-min=19.4km az=66.0*
*DJA **03** 09:19:25.0±2.2, 1°.N±4°×12°.6E±°, h27km±23km, M4.0/10, mb3.9/1, MLv4.0/10*
ISC 03 09:19:26.6±0.8, 0°.99N±0°.07×125°.91E±0°.06, h100km, n13, σ1s94/15, mb3.6/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.48**	**99**	P	**Pn**	**09 19 50.8**	**-1.8**
TNTI				S	**Sn**	**09 20 10.4**	**-1.9**
KMSI	**Cibinong**	**1.97**	**258**	P	**Pn**	**09 19 56.3**	**-2.5**
LBMI	**Labuha**	**2.27**	**135**	P	**Pn**	**09 20 01.4**	**-1.4**
SGSI	**Sangihe**	**2.70**	**352**	P	**Pn**	**09 20 06.3**	**-2.2**
SANI	**Sanana**	**3.02**	**178**	P	**Pn**	**09 20 09.9**	**-2.8**
LUWI	**Luwuk**	**3.73**	**237**	P	**Pn**	**09 20 20.6**	**-1.6**
MRSI	**Marisa**	**4.00**	**263**	P	**Pn**	**09 20 24.2**	**-1.6**
APSI	**Ampana**	**4.66**	**246**	P	**Pn**	**09 20 33.5**	**-1.3**
WRA	**Warramunga Arr**	**22.39**	**159**	P	**P**	**09 24 16.9**	**-0.1**
	1.0nm,0.4s,baz=336,slow=10,SNR=37						
	1.0nm,0.4s						
ASAR	**Alice Springs**	**25.71**	**163**	P	**P**	**09 24 48.3**	**+0.5**
	0.7nm,0.4s,baz=342,slow=11,SNR=30						
ASAR				PcP	**PcP**	**09 28 18.1**	**+2.4**
	0.3nm,0.4s,baz=350,slow=2.3,SNR=7.2						
	0.7nm,0.4s						
STKA	**Stephens Creek**	**35.91**	**157**	P	**P**	**09 26 19.2**	**+1.8**
	0.7nm,0.4s,baz=342,slow=8.0,SNR=4.3						
	0.7nm,0.4s						
SONM	**Songino Array**	**49.63**	**343**	P	**P**	**09 28 09.2**	**+1.1**
	0.3nm,0.5s,baz=148,slow=8.5,SNR=1.9						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**59.35**	**327**	P	**P**	**09 29 18.1**	**-0.2**
	0.3nm,0.3s,baz=122,slow=7.1,SNR=9.2						
	0.3nm,0.3s						

*IDC **03** 09:19:31.9±2.5, 54°.33N×86°.08E, h0km, mbtmp3.1/2, ML2.9/2, Error ellipse: s-maj=19.5km s-min=12.1km az=50.0*
NNC 03 09:19:30.8±3.2, 54°.28N×86°.15E, h0km, mb3.7, mpv2.6, 5C-2D, Error ellipse: s-maj=17.6km s-min=9.9km az=66.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.85**	**247**	*i*		09 25 10.0	
	baz=64,slow=315,SNR=0.3						
ZAA0	**Zalesovo Array**	**0.85**	**247**	⇑P	Pg	09 19 46.7	-0.4
	0.2nm,0.3s,baz=65,slow=17						
ZAA0				⇓S	Sg	09 19 59.1	+1.0
	0.6nm,0.2s,baz=67,slow=30						
ZALV	**Zalesovo Beam**	**0.85**	**247**	Pg	Pg	09 19 46.5	-0.6
	1.6nm,0.3s,baz=59,slow=17,SNR=13						
ZALV				Lg	Lg	09 19 59.7	
	4.6nm,0.3s,baz=65,slow=28,SNR=7.5						
KURK	**Kurchatov**	**5.82**	**235**	⇑Pn	Pn	09 20 59.2	+0.9
	4.5nm,1.2s						
KURK				⇑Lg	Lg	09 22 37.0	
	1.1nm,0.5s						
KURBB	**Kurchatov Arra**	**5.93**	**235**	Pn	Pn	09 21 01.8	+2.0
	0.2nm,0.3s,baz=51,slow=13,SNR=6.9						
KURBB				Lg	Lg	09 22 41.0	
	0.2nm,0.3s,baz=43,slow=28,SNR=6.4						
	0.7nm,0.3s						
KURBB	**Kurchatov Arra**	**5.93**	**235**	⇓Pn	Pn	09 21 02.8	+3.1
	1.0nm,0.4s						
KURBB				⇑Sn	Sn	09 22 11.6	+3.4
	0.9nm,0.4s						
KURBB				⇑Lg	Lg	09 22 43.7	
	1.8nm,0.5s						
MKAR	**Makanchi Array**	**7.89**	**200**	Pn	Pn	09 21 29.0	+2.2
	0.3nm,0.3s,baz=23,slow=14,SNR=11						
MKAR				Sn	Sn	09 22 58.9	+2.2
	0.1nm,0.3s,baz=16,slow=21,SNR=2.7						
	0.4nm,0.3s						

IDC 03 09:30:06.4±2.1, 10°.16S×126°.86E, h0km, mb3.4/1, mbtmp3.1/3, ML2.8/2, Error ellipse: s-maj=122.4km s-min=29.3km az=58.0, Timor Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**12.11**	**144**	Pn	Pn	09 32 59.2	-1.2
	0.1nm,0.3s,baz=322,slow=14,SNR=7.4						
WRA				Sn	Sn	09 35 19.6	+3.2
	0.1nm,0.3s,baz=320,slow=25,SNR=1.5						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**15.03**	**154**	Pn	Pn	09 33 41.0	+0.8
	baz=328,slow=11,SNR=2.4						
	0.2nm,0.7s						
MKAR	**Makanchi Array**	**69.23**	**329**	P	P	09 41 15.3	+0.1
	0.1nm,0.3s,baz=151,slow=6.6,SNR=2.1						
	0.1nm,0.3s						

*KRNET **03** 09:35:42.0±0.1, 40°.98N×69°.63E, h30km, mb2.7*
ISC 03 09:35:42.2±2.0, 40°.98N±0°.05×69°.66E±0°.06, h16km±17km, n6, σ0s91/11, 4C-7D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TAS	**Tashkent**	**0.44**	**321**	⇓*i*P	**Pb**	**09 35 50.8**	**-0.8**
	baz=25						
TAS				⇓*i*S	**Sb**	**09 35 57.6**	**-0.4**
	baz=25						
TRKS	**Terek-Say**	**1.24**	**63**	⇓*i*P	**Pn**	**09 36 05.3**	**+0.3**
	baz=67						
TRKS				⇓*i*S	**Sn**	**09 36 22.3**	**+0.8**
	baz=67						
BTK	**Batken**	**1.27**	**136**	⇑*i*P	**Pn**	**09 36 05.9**	**+0.5**
	baz=35						
BTK				⇑*i*S	**Sn**	**09 36 22.6**	**+0.5**
	baz=35						
ARK	**Arkit**	**1.91**	**64**	⇓*i*P	**Pb**	**09 36 15.3**	**-1.5**
	baz=64						
ARK				⇓*e*S	**Sb**	**09 36 40.3**	**-0.1**
	baz=64						
GAR	**Garm**	**2.04**	**166**	⇑*i*P	**Pn**	**09 36 16.6**	**+0.7**
	baz=65						
GAR				⇑*i*S	**Sb**	**09 36 43.3**	**-0.8**
	baz=65						
KK31	**Karatay Array**	**2.21**	**16**	⇓Pn	**Pg**	**09 36 25.4**	**+0.7**
	0.6nm,0.2s,baz=200,slow=23,SNR=62						
KK31				Lg	Lg	09 36 58.6	
	0.9nm,0.2s,baz=195,slow=31,SNR=8.9						

*IDC **03** 09:40:24.8±1.0, 29°.51N×141°.86E, h0km, mb3.6/6, mbtmp3.6/8, ML3.0/3, MS2.7/1, Error ellipse: s-maj=41.6km s-min=19.5km az=80.0*
ISC 03 09:40:29.8±0.8, 29°.42N±0°.09×141°.7E±0°.2, h46km, n9, σ3s07/11, mb3.7/6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**2.36**	**169**	Pn	**Pn**	**09 41 04.4**	**-1.7**
	1.6nm,0.3s,baz=285,slow=23,SNR=1.0						
JCJ				Sn	**Sn**	**09 41 28.3**	**-5.6**
	4.4nm,0.3s,baz=106,slow=22,SNR=1.3						
JHJ	**Hachijo jima 2**	**4.02**	**337**	Pn	**Pn**	**09 41 26.5**	**-2.4**
	8.7nm,0.3s,baz=99,slow=20,SNR=1.4						
JHJ				Sn	**Sn**	**09 42 11.3**	**-3.5**
	4.1nm,0.3s,baz=76,slow=13,SNR=1.9						
JHJ				LR	LR	09 43 13.4	
	comp=Z,87nm,19.4s,baz=166,slow=42						
	16nm,0.3s						
MJAR	**Matsushiro Arr**	**7.67**	**339**	Pn	**Pn**	**09 42 17.5**	**-1.5**
	0.2nm,0.3s,baz=162,slow=12,SNR=5.6						
	0.8nm,0.3s						
WRA	**Warramunga Arr**	**49.58**	**189**	P	**P**	**09 49 18.9**	**+2.3**
	0.9nm,0.7s,baz=7.7,slow=7.9,SNR=18						
	0.9nm,0.7s						
KURBB	**Kurchatov Arra**	**51.10**	**313**	P	**P**	**09 49 29.7**	**+2.0**
	0.9nm,0.7s,baz=92,slow=6.9,SNR=4.3						
	0.9nm,0.7s						
ASAR	**Alice Springs**	**53.31**	**189**	P	**P**	**09 49 46.9**	**+2.5**
	0.1nm,0.4s,baz=5.9,slow=6.2,SNR=2.0						
	0.1nm,0.4s						
NVAR	**Mina Array Bea**	**79.45**	**52**	P	**P**	**09 52 33.1**	**+1.3**
	0.3nm,0.8s,baz=286,slow=7.4,SNR=2.2						
	0.3nm,0.8s						
BRTR	**Keskin Array B**	**84.09**	**312**	P	**P**	**09 52 57.8**	**+1.6**
	0.4nm,0.6s,baz=62,slow=3.4,SNR=3.0						
	0.4nm,0.6s						
TXAR	**Lajitas Array**	**94.57**	**53**	P	**P**	**09 53 46.1**	**0.0**
	0.1nm,0.3s,baz=246,slow=3.8,SNR=2.3						
	0.1nm,0.3s						

*IDC **03** 09:45:08.4±2.4, 54°.39N×86°.06E, h0km, mbtmp3.9/2, ML3.6/2, Error ellipse: s-maj=18.6km s-min=11.3km az=50.0*
NNC 03 09:45:08.0±2.1, 54°.39N×86°.09E, h0km, mb3.9, mpv3.2, 8C-6D, Error ellipse: s-maj=24.9km s-min=11.4km az=160.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.86**	**240**	*i*		09 50 40.0	
	baz=61,slow=315,SNR=6.1						
ZAA0	**Zalesovo Array**	**0.86**	**240**	⇑P	Pg	09 45 24.2	-0.4
	1.2nm,0.3s						
ZAA0				⇓S	Sb	09 45 37.1	-0.9
	4.3nm,0.3s						
ZALV	**Zalesovo Beam**	**0.86**	**240**	Pg	Pg	09 45 22.8	-1.8
	11nm,0.3s,baz=57,slow=22,SNR=83						
ZALV				Lg	Lg	09 45 36.8	
	56nm,0.3s,baz=57,slow=28,SNR=13						
KURK	**Kurchatov**	**5.85**	**234**	⇑Pn	Pn	09 46 38.0	+2.0
	1.3nm,0.4s						
KURK				⇓Sn	Sn	09 47 43.4	-0.3
	2.1nm,0.8s						
KURK				⇑Lg	Lg	09 48 14.2	
	3.3nm,0.5s						
KURBB	**Kurchatov Arra**	**5.96**	**234**	Pn	Pn	09 46 39.0	+1.7
	1.0nm,0.3s,baz=51,slow=14,SNR=33						
KURBB				Lg	Lg	09 48 17.8	
	0.2nm,0.3s,baz=41,slow=31,SNR=5.1						
	6.9nm,0.4s						
KURBB	**Kurchatov Arra**	**5.96**	**234**	⇑Pn	Pn	09 46 39.7	+2.3
	4.5nm,0.2s						
KURBB				⇑Sn	Sn	09 47 48.5	+2.3
	3.4nm,0.4s						
KURBB				⇑Lg	Lg	09 48 17.8	
	6.5nm,0.6s						
MK31	**Makanchi Array**	**7.97**	**199**	⇓Pn	Pn	09 47 07.1	+2.0
	0.7nm,0.3s,baz=28,slow=14,SNR=58						
MK31				⇓Sn	Sn	09 48 36.9	+1.0
	0.4nm,0.4s,baz=261,slow=53,SNR=4.8						
MK31				⇓Lg	Lg	09 49 19.3	
	0.9nm,0.6s,baz=151,slow=16,SNR=4.4						
MKAR	**Makanchi Array**	**7.97**	**199**	Pn	Pn	09 47 05.7	+0.6
	1.2nm,0.3s,baz=18,slow=12,SNR=43						
MKAR				Sn	Sn	09 48 37.2	+1.2
	0.4nm,0.3s,baz=26,slow=28,SNR=4.1						
MKAR				Lg	Lg	09 49 20.5	
	0.2nm,0.3s,baz=23,slow=32,SNR=2.7						
	2.4nm,0.4s						
MAKZ	**Makanchi**	**8.02**	**201**	⇑Pn	Pn	09 47 08.3	+2.5
	0.6nm,0.3s						
MAKZ				⇓Sn	Sn	09 48 35.9	-1.2
	0.7nm,0.6s						
MAKZ				⇑Lg	Lg	09 49 19.9	
	0.6nm,0.5s						

*LDG **03** 09:59:49.9±0.5, 36°.11N×12°.96E, h8km, Ml3.4/3, Error ellipse: s-maj=12.6km s-min=4.3km az=16.0*
*IDC **03** 09:59:49.9±1.4, 36°.10N×12°.97E, h0km, mb3.5/3, mbtmp3.5/10, ML3.4/7, MS3.2/5, Error ellipse: s-maj=28.5km s-min=17.6km az=134.0*
*ROM **03** 09:59:50.7±0.4, 36°.166N±0°.010×13°.03E±0°.02, h9km±2km, ML4.0/39, Error ellipse: s-maj=1.4km s-min=0.5km az=115.0*
*MED_RC **03** 09:59:52.0±1.0, 36°.07N×13°.04E, h12km±6km, MW4.1/8, Moment Tensor Solution. Mantle waves: s8, c9; Duration: 1s0 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.80±.56; $M_{\theta\theta}$-0.37±.38; $M_{\phi\phi}$ 1.17±.69; $M_{r\theta}$-0.99±1.28; $M_{\theta\phi}$-0.92±.23; $M_{\phi r}$0.33±.81; Best double couple: $M_0$1.73000×10^{15} NP1: ϕ_s121.00000°, δ72.00000°, λ-131.00000°. NP2: ϕ_s11.00000°, δ44.00000°, λ-27.00000°. Principal axes: T 1.8200, Plg17.0000°, Azm240.0000°; N -0.1800, Plg38.0000°, Azm136.0000°; P -1.6400, Plg47.0000°, Azm349.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*
ISC 03 09:59:51.0±1.4, 36°.14N±0°.04×12°.99E±0°.04, h12km±10km, n83, σ1s70/100, mb3.6/3, 25C-6D, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPDG	**Lampedusa Capo**	**0.68**	**206**	⇑P	**Pb**	**10 00 04.9**	**0.0**
LPDG				S	**Sb**	**10 00 15.4**	**+1.3**
LPDG				AML	AML		
	comp=E,9755μm,1.1s						
LPDG				AML	AML		
	comp=N,13800μm,1.0s						
FAVR	**Favara**	**1.25**	**25**	P	**Pn**	**10 00 14.6**	**+0.3**
FAVR				AML	AML		
	comp=N,5735μm,0.8s						
FAVR				AML	AML		
	comp=E,7800μm,0.7s						
WDD	**Wied Dalam**	**1.28**	**103**	⇓P	**Pn**	**10 00 13.7**	**-0.9**
WDD				S	**Sg**	**10 00 31.0**	**-1.2**
WDD				AML	AML		
	comp=E,9865μm,0.4s						
WDD				AML	AML		
	comp=N,16500μm,0.4s						
WDD				AML	AML		
	comp=E,10850μm,0.4s						
WDD				AML	AML		
	comp=E,9855μm,0.4s						
WDD				AML	AML		
	comp=N,16500μm,0.4s						
CLTA	**Licata**	**1.28**	**37**	⇑P	**Pn**	**10 00 14.3**	**-0.4**
CLTB	**Caltabellotta**	**1.45**	**7**	P	**Pn**	**10 00 16.1**	**-1.0**
CLTB				AML	AML		
	comp=E,5915μm,0.6s						
CLTB				AML	AML		
	comp=N,10215μm,0.6s						
CMDO	**Montedoro**	**1.48**	**26**	⇑P	**Pg**	**10 00 19.1**	**-0.4**
MMGO	**Monte Magaggia**	**1.52**	**360**	⇑P	**Pn**	**10 00 16.8**	**-1.2**
RAFF	**Raffo Rosso**	**1.54**	**45**	⇑P	**Pn**	**10 00 17.9**	**-0.5**
RAFF				AML	AML		
	comp=N,3720μm,0.6s						
RAFF				AML	AML		
	comp=E,3320μm,0.4s						
MFNL	**Monte Finestre**	**1.65**	**358**	P	**Pn**	**10 00 18.4**	**-1.4**
HMDC	**Modica**	**1.66**	**60**	⇑P	**Pn**	**10 00 18.9**	**-1.0**
HMDC				S	**Sn**	**10 00 41.0**	**-0.2**
HMDC				AML	AML		
	comp=E,4900μm,0.7s						
HMDC				AML	AML		
	comp=N,3780μm,0.5s						
ALJA	**Alia**	**1.72**	**21**	⇑P	**Pn**	**10 00 21.7**	**+0.9**
ALJA				AML	AML		
	comp=N,1245μm,0.5s						
ALJA				AML	AML		
	comp=N,1525μm,1.5s						
ALJA				AML	AML		
	comp=E,1760μm,1.4s						
HVZN	**Vizzini**	**1.73**	**53**	⇑P	**Pn**	**10 00 20.1**	**-0.9**
VAE	**Valguarnera**	**1.76**	**40**	Pn	**Pn**	**10 00 21.7**	**+0.4**
	comp=E,102nm,0.3s,baz=184,slow=13,SNR=36						
VAE				Sn	**Sg**	**10 00 47.8**	**+0.2**
	comp=E,66nm,0.3s,baz=56,slow=2.4,SNR=5.6						
HPAC	**Pachino**	**1.80**	**71**	P	**Pn**	**10 00 21.0**	**-0.8**
HPAC				S	**Sb**	**10 00 45.5**	**-0.8**
HPAC				AML	AML		
	comp=E,9075μm,0.5s						
HPAC				AML	AML		
	comp=N,11100μm,0.5s						
HPAC				AML	AML		
	comp=E,9080μm,0.5s						
MEU	**Monte Lauro**	**1.83**	**58**	⇑P	**Pn**	**10 00 20.9**	**-1.4**
MEU				S	**Sn**	**10 00 44.0**	**-1.6**
MEU				AML	AML		
	comp=E,6070μm,1.0s						
MEU				AML	AML		
	comp=N,7180μm,0.4s						
HAVL	**Avola**	**1.90**	**64**	⇑P	**Pn**	**10 00 22.3**	**-1.0**
HAVL				S	**Sn**	**10 00 47.2**	**0.0**
HAVL				AML	AML		
	comp=E,3145μm,1.5s						
HAVL				AML	AML		
	comp=N,4610μm,0.8s						
CAGR	**Agira**	**1.91**	**39**	P	**Pb**	**10 00 25.2**	**-0.6**
PETRA	**Petralia Sopra**	**1.92**	**28**	⇑P	**Pn**	**10 00 24.6**	**+1.0**
PETRA				S	**Sn**	**10 00 49.1**	**+1.4**
PETRA				AML	AML		
	comp=E,2085μm,0.5s						
PETRA				AML	AML		
	comp=N,1760μm,0.7s						
ERC	**Erice**	**1.93**	**350**	P	**Pn**	**10 00 20.9**	**-2.7**
HLNI	**Lentini**	**1.94**	**51**	⇑P	**Pn**	**10 00 22.9**	**-0.8**
HLNI				S	**Sn**	**10 00 47.7**	**-0.2**
HLNI				AML	AML		
	comp=N,2795μm,0.5s						
HLNI				AML	AML		
	comp=E,1895μm,1.4s						
SSY	**Sortino**	**1.96**	**58**	⇑P	**Pn**	**10 00 23.4**	**-0.6**
SSY				AML	AML		
	comp=E,5265μm,0.5s						
SSY				AML	AML		
	comp=N,8725μm,0.9s						
CSLB	**Castelbuono**	**1.99**	**25**	⇑P	**Pn**	**10 00 25.0**	**+0.5**
CSLB				S	**Sn**	**10 00 50.4**	**+1.1**
CSLB				AML	AML		
	comp=N,1750μm,0.6s						
CSLB				AML	AML		
	comp=E,1076μm,0.6s						
SOLUN	**Solunto**	**2.00**	**12**	⇑P	**Pn**	**10 00 24.7**	**+0.1**
SOLUN				S	**Sn**	**10 00 49.1**	**-0.3**
SOLUN				AML	AML		
	comp=N,946μm,1.1s						
SOLUN				AML	AML		
	comp=E,1235μm,0.5s						
GALF	**Gagliano Caste**	**2.02**	**38**	P	**Pb**	**10 00 26.5**	**-1.1**
GIB	**Gibilmanna**	**2.03**	**24**	⇑P	**Pn**	**10 00 25.7**	**+0.6**
GIB				S	**Sn**	**10 00 52.1**	**+1.8**
GIB				AML	AML		
	comp=N,12000μm,0.6s						
GIB				AML	AML		
	comp=E,7245μm,0.7s						
MPG	**Monte Pellegri**	**2.04**	**8**	P	**Pn**	**10 00 25.5**	**+0.3**
MPG				S	**Sn**	**10 00 49.7**	**-0.9**
MPG				AML	AML		
	comp=E,547μm,0.5s						
MPG				AML	AML		
	comp=N,680μm,0.6s						
PLLN	**Pollina**	**2.07**	**26**	P	**Pn**	**10 00 26.8**	**+1.2**
PLLN				S	**Sb**	**10 00 54.6**	**+0.4**
PLLN				AML	AML		
	comp=N,5950μm,0.6s						
PLLN				AML	AML		
	comp=E,2665μm,0.7s						
HAGA	**Augusta**	**2.08**	**56**	P	**Pn**	**10 00 25.4**	**-0.3**
HAGA				AML	AML		
	comp=N,3990μm,0.6s						
HAGA				AML	AML		
	comp=E,3155μm,0.7s						
ESML	**S. M. di Licod**	**2.11**	**45**	P	**Pn**	**10 00 27.6**	**+1.4**
ESML				AML	AML		
	comp=N,2180μm,0.9s						
ESML				AML	AML		
	comp=E,2100μm,0.8s						
AGST	**Augusta-Monte**	**2.12**	**57**	P	**Pn**	**10 00 26.6**	**+0.5**
EPZF	**Pizzo Felice**	**2.25**	**41**	⇑P	**Pn**	**10 00 29.4**	**+1.3**
EPZF				AML	AML		
	comp=E,2965μm,0.6s						
EPZF				AML	AML		
	comp=N,3385μm,0.5s						
MSFR	**San Fratello**	**2.28**	**34**	⇑P	**Pn**	**10 00 29.7**	**+1.2**
MSFR				S	**Sn**	**10 00 58.6**	**+2.0**
MSFR				AML	AML		
	comp=E,616μm,1.5s						
MSFR				AML	AML		
	comp=N,1020μm,0.8s						
NOV	**Novara**	**2.55**	**42**	P	**Pn**	**10 00 32.8**	**+0.6**
NOV				AML	AML		
	comp=E,1365μm,0.6s						
NOV				AML	AML		
	comp=N,1370μm,0.8s						
AIO	**Antillo**	**2.56**	**44**	⇓P	**Pn**	**10 00 33.2**	**+0.8**
AIO				AML	AML		
	comp=N,632μm,0.5s						
AIO				AML	AML		
	comp=E,758μm,1.1s						
USI	**Ustica**	**2.57**	**3**	⇑P	**Pn**	**10 00 32.4**	**-0.1**
IACL	**Alicudi**	**2.63**	**24**	⇑P	**Pn**	**10 00 33.1**	**-0.1**
IACL				S	**Sn**	**10 01 03.5**	**-1.5**
IACL				AML	AML		
	comp=E,1685μm,0.7s						
IACL				AML	AML		
	comp=N,1380μm,0.5s						
IFIL	**Filicudi I Eol**	**2.73**	**27**	⇑P	**Pn**	**10 00 34.3**	**-0.3**
IFIL				S	**Sn**	**10 01 05.8**	**-1.7**
IFIL				AML	AML		
	comp=N,1880μm,0.5s						
IFIL				AML	AML		
	comp=E,5645μm,0.6s						
VPL	**Vulcano Piano**	**2.75**	**35**	P	**Pn**	**10 00 34.9**	**0.0**
VPL				AML	AML		
	comp=N,3235μm,0.5s						
VPL				AML	AML		

comp=E,2935μm,0.6s
MPNC Port Mandanici 2.75 43 ⇑P **Pn 10 00 35.4 +0.5**
MILZ Milazzo 2.78 39 P **Pn 10 00 36.1 +0.8**
LLI Lipari 2.78 34 P **Pn 10 00 35.8 +0.4**
LLI S **Sn 10 01 09.7 +0.8**
LLI AML AML
comp=E,7670μm,0.8s
LLI AML AML
comp=N,11500μm,0.5s
MTTG Motta San Giov 2.85 48 ⇓P **Pn 10 00 37.4 +1.1**
MTTG AML AML
comp=N,937μm,0.8s
MTTG AML AML
comp=E,676μm,1.4s
MSRU Castanea 2.92 43 ⇑P **Pn 10 00 38.1 +0.8**
MSRU AML AML
comp=E,1110μm,0.9s
MSRU AML AML
comp=N,776μm,0.9s
KEST Kesra 2.99 263 Pn **Pn 10 00 38.3 +0.1**
comp=N,3.3nm,0.3s,baz=47,slow=2.7,SNR=28
KEST Sn **Sn 10 01 11.8 -2.2**
comp=N,3.4nm,0.3s,baz=37,slow=20,SNR=5.5
comp=N,23nm,0.7s
SOI Samo 3.12 51 P **Pn 10 00 40.8 +0.8**
CEL Celeste 3.14 47 ⇑P **Pn 10 00 41.1 +0.8**
TAMR Tamra 3.25 287 P **Pn 10 00 42.1 +0.3**
TAMR AML AML
comp=E,249μm,0.9s
TAMR AML AML
comp=N,236μm,0.7s
JOPP Joppolo 3.38 42 ⇓P **Pn 10 00 44.1 +0.6**
JOPP AML AML
comp=N,160μm,1.5s
JOPP AML AML
comp=E,140μm,0.8s
PLAC Placanica 3.59 49 P **Pn 10 00 47.1 +0.6**
PLAC AML AML
comp=N,214μm,0.9s
PLAC AML AML
comp=E,246μm,0.7s
CAR1 CAROLEI 4.03 38 P **Pn 10 00 52.8 +0.3**
TATN Tataouine 4.09 211 ⇓P **Pn 10 00 50.5 -2.9**
TATN AML AML
comp=N,502μm,0.3s
TATN AML AML
comp=E,655μm,0.8s
SERS Sersale 4.12 44 ⇑P **Pn 10 00 54.8 +0.9**
TIP Timpagrande 4.26 43 P **Pn 10 00 56.8 +1.1**
TIP AML AML
comp=N,69μm,0.8s
TIP AML AML
comp=E,66μm,1.0s
CELI Celico 4.29 39 P **Pn 10 00 56.7 +0.6**
CELI AML AML
comp=N,240μm,1.0s
CELI AML AML
comp=E,171μm,1.6s
CGL Cagliari Serpe 4.35 319 P **Pn 10 00 57.4 +0.4**
CGL AML AML
comp=E,51μm,1.2s
CGL AML AML
comp=N,36μm,1.5s
BULG Bulgheria - Ca 4.36 25 ⇓P **Pn 10 00 57.4 +0.3**
TDS Terranova Siba 4.40 36 P **Pn 10 00 57.8 +0.2**
VSL Villasalto 4.41 321 P **Pn 10 00 57.7 0.0**
VSL AML AML
comp=E,30μm,1.2s
VSL AML AML
comp=N,33μm,0.5s
CUC Castrocucco 4.45 29 P **Pn 10 00 58.5 +0.2**
CUC AML AML
comp=N,56μm,0.7s
CUC AML AML
comp=E,61μm,0.6s
LADO San Nicola del 4.46 44 P **Pn 10 01 00.6 +2.2**
PGF Pioggiola 7.11 335 *e*Pn **Pn 10 01 32.0 -2.9**
PGF Pioggiola 7.11 335 *e*P **Pn 10 01 37.2 +2.3**
PGF *e*Sn **Sn 10 02 48.3 -7.3**
comp=E,5.6nm,0.5s
LMR La Mourre 8.75 327 *e*P **Pn 10 01 59.2 +1.9**
SBF Sospel 8.81 333 *e*Pn **Pn 10 01 55.3 -2.9**
SBF *e*Sn Sn 10 03 28.7 -8.8
comp=E,1.3nm,0.2s
SMRF Simiane la Rot 9.67 326 *e*P **Pn 10 02 12.9 +3.0**
IDI Anoyia 9.71 92 Pn **Pn 10 02 13.0 +2.4**
comp=E,0.3nm,0.3s,baz=310,slow=16,SNR=1.0
IDI Sn **Sn 10 03 53.0 -6.7**
comp=E,0.7nm,0.3s,baz=291,slow=9.8,SNR=3.1
comp=E,2.8nm,0.6s
MBDF Montbardon 9.80 333 *e*P **Pn 10 02 14.4 +2.6**
ORIF Oris-en-Rattie 10.30 331 *e*Pn **Pn 10 02 15.5 -3.1**
ORIF Oris-en-Rattie 10.30 331 *e*P **Pn 10 02 22.0 +3.4**
LPL La Plagne 10.50 335 *e*P **Pn 10 02 24.1 +2.7**
VIVF Saint-Julien-l 10.76 327 *e*P **Pn 10 02 28.2 +3.3**
DAVOX Davos/Dischmat 10.89 349 Pn **Pn 10 02 29.0 +2.3**
comp=E,0.1nm,0.3s,baz=158,slow=22,SNR=2.0
DAVOX LR LR 10 06 40.1
comp=E,80nm,19.2s,baz=260,slow=38
comp=E,2.9nm,0.6s
GERES GERESS Array B 12.71 2 Pn **Pn 10 02 52.9 +1.3**
comp=E,0.1nm,0.3s,baz=156,slow=20,SNR=1.1
comp=E,0.2nm,0.2s
MLR Muntele Rosu 13.53 42 LR LR 10 09 28.7
comp=E,71nm,19.8s,baz=272,slow=43
ESDC Sonseca Array 13.85 290 Pn **Pn 10 03 08.8 +1.7**
comp=E,0.1nm,0.3s,baz=48,slow=19,SNR=1.7
comp=E,0.3nm,0.5s
MDT Midelt 14.89 262 LR LR 10 09 46.2
comp=E,47nm,21.8s,baz=74,slow=40
BRTR Keskin Array B 16.68 71 Pn **P 10 03 47.3 +0.4**
comp=E,0.1nm,0.3s,baz=243,slow=13,SNR=2.7
comp=E,0.5nm,0.7s
AKASG Malin Array Be 18.67 34 P **P 10 04 08.0 -0.7**
comp=E,0.2nm,0.3s,baz=230,slow=10.0,SNR=1.5
comp=E,0.2nm,0.3s
HFS Hagfors 24.02 1 P **P 10 05 06.4 +1.0**
comp=E,0.7nm,0.4s,baz=198,slow=12,SNR=1.7
comp=E,0.7nm,0.4s
TORD Torodi Ar. Bea 25.05 207 P **P 10 05 15.6 +0.4**
comp=E,0.6nm,0.8s,baz=19,slow=6.1,SNR=4.2
comp=E,0.6nm,0.8s
FINES FINESS Array B 26.65 14 P **P 10 05 29.1 -0.2**
comp=E,0.9nm,0.7s,baz=226,slow=7.6,SNR=1.6
comp=E,0.9nm,0.7s
DBIC Dimbokro 33.58 213 LR LR 10 20 02.5
comp=E,68nm,18.5s,baz=50,slow=36
SFJD Kangerlussuaq 47.06 331 LR LR 10 27 39.9
comp=E,36nm,18.1s,baz=54,slow=36

IDC ***03*** *10:01:54.5±0.7,26°.08N×99°.66E,h0km,mb3.8/17, mbtmp3.9/18,ML4.4/1,MS3.5/26,Error ellipse: s-maj=24.6km s-min=13.6km az=64.0*
BJI ***03*** *10:01:56.0±0.0,26°.12N×99°.58E,h10km,mb4.2/14, mB4.2/2,ML4.0/11,Ms3.9/15,Ms7 3.7/16*

NEIC ***03*** *10:01:58.0±2.0,26°.23N±0°.08×99°.75E±0°.06,h35km±2km, mb4.3/24,Error ellipse: s-maj=13.9km s-min=8.6km az=191.0*

ISC 03 10:01:54.8±0.4,26°.14N±0°.05×99°.56E±0°.03,h10km,n92, σ2s10/85,mb4.2/28,MS3.5/26,3C,Yunnan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PZH	**PanZhiHua**	**2.00**	**79**	Pg	**Pn**	**10 02 30.5**	**+1.8**
PZH				Sg	**Sb**	**10 02 56.2**	**-0.1**
PZH				smax	smax		
	comp=N,1μm,0.8s						
PZH				smax	smax		
	comp=E,1μm,0.8s						
KMI	**Kunming**	**3.05**	**109**	⇑Pn	**Pn**	**10 02 45.3**	**+2.0**
KMI				Pg	**Pg**	**10 02 54.1**	**+0.9**
KMI				Sn	**Sb**	**10 03 25.6**	**-1.0**
KMI				Sg	**Sg**	**10 03 33.1**	**+0.4**
KMI				smax	smax		
	comp=N,1μm,0.8s						
KMI				smax	smax		
	comp=E,1μm,0.9s						
LKP	**Lekhapani**	**3.52**	**291**	*e*P	**Pb**	**10 02 56.9**	**-0.4**
LKP				*e*S	**Sb**	**10 03 38.7**	**-1.5**
LKP				IAML		10 03 48.9	
	comp=E,409nm,1.1s						
LKP				IAML		10 03 49.5	
	comp=N,320nm,0.7s						
MOKO	**MOKOCHONG**	**4.53**	**273**	*e*P	**Pn**	**10 03 06.1**	**+2.4**
KOHI	**KOHIMA**	**4.92**	**266**	*e*P	**Pn**	**10 03 10.9**	**+1.9**
CD2	**Chengdu**	**6.02**	**37**	Pn	**Pn**	**10 03 27.0**	**+3.0**
CD2				Pg	**Pg**	**10 03 47.8**	**-2.4**
CD2				Sg	**Sg**	**10 05 04.2**	**-4.0**
CD2				smax	smax		
	comp=N,220nm,1.3s						
TEZP	**TEZPUR**	**6.08**	**276**	*e*P	**Pn**	**10 03 26.3**	**+1.6**
GYA	**Guiyang**	**6.39**	**86**	⇑Pg	Pg	10 03 53.1	-4.1
GYA				Sn	**Sn**	**10 04 41.2**	**-1.0**
GYA				Sg	**Sg**	**10 05 22.8**	**+2.8**
GYA				smax	smax		
	comp=N,26nm,1.0s						
GYA				smax	smax		
	comp=N,36nm,0.9s						
SHL	**Shillong**	**6.94**	**267**	Pn	**Pn**	**10 03 38.7**	**+2.0**
SHL	**Shillong**	**6.94**	**267**	*e*P	**Pn**	**10 03 35.9**	**-0.8**
SHL				*e*S	**Sn**	**10 04 49.1**	**-6.8**
SHL				IAML		10 05 00.8	
	comp=E,134nm,0.4s						
CHTO	**Chiang Mai**	**7.31**	**185**	Pn	**Pn**	**10 03 42.8**	**+1.1**
CM31	**Chiang Mai Arr**	**7.66**	**184**	Pn	**Pn**	**10 03 47.4**	**+0.9**
CMAR	**Chiang Mai Arr**	**7.66**	**184**	Pn	**Pn**	**10 03 48.2**	**+1.7**
	comp=E,1.5nm,0.3s,baz=2.9,slow=13,SNR=16						
CMAR				Pg	Pg	10 04 16.1	-5.6
	comp=E,1.4nm,0.3s,baz=356,slow=18,SNR=18						
CMAR				Lg	Lg	10 05 56.1	
	comp=E,0.3nm,0.3s,baz=346,slow=17,SNR=4.0						
CMAR				LR	LR	10 07 10.8	
	comp=E,91nm,19.1s,baz=340,slow=42						
	comp=E,3.8nm,0.4s						
CMAR	**Chiang Mai Arr**	**7.66**	**184**		**Pn**	**10 03 47.7**	**+1.2**
LSA	**Lhasa**	**8.24**	**297**	Pn	**Pn**	**10 03 57.3**	**+2.4**
LSA	**Lhasa**	**8.24**	**297**	P	Pn	10 04 01.5	+6.6
LSA				LR	LR		
	comp=E,480nm,15.7s						
LSA				LR	LR		
	comp=E,260nm,14.9s						
LSA				LR	LR		
	comp=E,160nm,10.0s						
ENH	**Enshi**	**9.68**	**63**	Pn	**Pn**	**10 04 13.7**	**-0.5**
TAPN	**Taplejung**	**10.66**	**279**	*e*P	**Pn**	**10 04 28.2**	**+0.3**
	comp=E,12nm,0.4s						
GOMU	**GeErMu**	**10.82**	**339**	P	**Pn**	**10 04 30.4**	**+0.3**
GOMU				S	**Sn**	**10 06 37.2**	**+5.7**
GOMU				pmax	pmax		
	comp=E,3.0nm,0.8s						
GOMU				LR	LR		
	comp=E,190nm,7.4s						
GOMU				LR	LR		
	comp=E,150nm,9.0s						
GOMU				LR	LR		
	comp=E,230nm,7.8s						
ODAN	**Odare**	**10.92**	**276**	*e*P	**Pn**	**10 04 32.0**	**+0.5**
	comp=E,13nm,0.6s						
XAN	**Xi'an**	**11.30**	**44**	P	**Pn**	**10 04 37.7**	**+1.3**
XAN				pP		10 04 45.4	
XAN				pmax	pmax		
	comp=E,6.0nm,0.7s						
RAMN	**Ramite**	**11.63**	**277**	*e*P	**Pn**	**10 04 41.7**	**+0.5**
	comp=E,20nm,0.5s						
QIZ	**Qiongzhong**	**11.84**	**125**	P	**Pn**	**10 04 41.5**	**-2.4**
QIZ				S	**Sn**	**10 06 57.2**	**+1.1**
QIZ				LR	LR		
	comp=N,550nm,12.7s						
QIZ				LR	LR		
	comp=E,500nm,14.3s						
QIZ				LR	LR		
	comp=E,280nm,8.0s						
PKI	**Pulchoki**	**12.71**	**280**	*e*P	**Pn**	**10 04 54.8**	**-1.2**
	comp=Z,8.0nm,0.4s						
LYN	**LuoYang**	**13.94**	**50**	*e*P	**Pn**	**10 05 13.1**	**+0.6**
LYN				S	**Sn**	**10 07 45.8**	**-1.5**
LYN				LR	LR		
	comp=Z,580nm,11.7s						
LYN				LR	LR		
	comp=Z,530nm,12.4s						
LYN				LR	LR		
	comp=Z,650nm,14.9s						
PYUN	**Piuthan**	**14.88**	**281**	*e*P	Pn	10 05 22.2	-3.4
TIA	**Tai'an**	**18.05**	**52**	⇑P	**Pn**	**10 06 06.6**	**+0.8**
TIA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
TIA				LR	LR		
	comp=Z,220nm,10.6s						
TIA				LR	LR		
	comp=Z,260nm,11.8s						
TIA				LR	LR		
	comp=Z,420nm,12.0s						
SONM	**Songino Array**	**22.32**	**12**	P	**P**	**10 06 53.9**	**+1.3**
	comp=Z,0.3nm,0.3s,baz=205,slow=13,SNR=2.0						
SONM				LR	LR	10 16 53.2	
	comp=Z,100nm,19.0s,baz=192,slow=40						
	comp=Z,0.3nm,0.3s						
SONM	**Songino Array**	**22.32**	**12**	P	**P**	**10 06 50.5**	**-2.1**
PRZ	**Przheval'sk**	**23.80**	**319**	P	**P**	**10 07 07.9**	**-0.1**
KSH	**Kashi**	**23.80**	**310**	P	**P**	**10 07 14.4**	**+6.4**
KSH				pP	sP	10 07 18.4	+4.8
KSH				sP	pP	10 07 20.8	+8.9
KSH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KDJ	**Kajisay**	**24.34**	**317**	P	**P**	**10 07 11.8**	**-1.2**
KDJ				IAmb	IAmb	10 07 27.0	
	comp=Z,7.7nm,0.8s						
MK31	**Makanchi Array**	**24.75**	**331**	P	**P**	**10 07 15.9**	**-0.7**
MK31				IAmb	IAmb	10 07 26.5	
	comp=Z,5.4nm,0.8s						
MKAR	**Makanchi Array**	**24.75**	**331**	P	**P**	**10 07 18.3**	**+1.7**
	comp=Z,5.3nm,0.7s,baz=140,slow=9.6,SNR=17						
	comp=Z,5.3nm,0.7s						
MKAR	**Makanchi Array**	**24.75**	**331**	P	**P**	**10 07 18.4**	**+1.8**
MAKZ	**Makanchi**	**24.90**	**330**	P	**P**	**10 07 16.4**	**-1.5**
BOOM	**Boomskoye usch**	**25.30**	**316**	P	**P**	**10 07 20.2**	**-1.6**
BOOM				IAmb	IAmb	10 07 36.0	
	comp=Z,4.9nm,0.9s						
BKNI	**Bangkinang**	**25.70**	**177**	P	**P**	**10 07 23.9**	**-1.4**
PALK	**Pallekele**	**25.97**	**227**	LR	LR	10 18 26.1	
	comp=Z,100nm,20.0s,baz=160,slow=38						
AAK	**Ala-Archa**	**26.29**	**315**	P	**P**	**10 07 34.0**	**+3.3**
	comp=Z,2.0nm,0.4s,baz=146,slow=10,SNR=4.8						
AAK				LR	LR	10 19 43.2	
	comp=Z,75nm,18.4s,baz=90,slow=40						
	comp=Z,2.0nm,0.4s						
AAK	**Ala-Archa**	**26.29**	**315**	P	**P**	**10 07 31.1**	**+0.4**
AAK				IAmb	IAmb	10 07 49.3	
	comp=Z,6.1nm,1.2s						
KSAR	**Wonju Array Be**	**26.49**	**58**	P	**P**	**10 07 30.8**	**-1.5**
KSRS	**Korea Array**	**26.52**	**58**	P	**P**	**10 07 33.7**	**+1.1**
	comp=Z,0.9nm,0.5s,baz=261,slow=11,SNR=5.0						
	comp=Z,0.9nm,0.5s						
CN2	**Changchun**	**27.41**	**43**	*e*P	**P**	**10 07 44.5**	**+3.9**
CN2				LR	LR		
	comp=Z,100nm,14.0s						
CN2				LR	LR		
	comp=Z,100nm,15.0s						
KBL	**Kabul**	**27.55**	**295**	P	**P**	**10 07 42.4**	**+0.1**
KBL				IAmb	IAmb	10 07 51.9	
	comp=Z,7.9nm,1.0s						
BTK	**Batken**	**27.65**	**307**	P	**P**	**10 07 42.4**	**-0.5**
BTK				IAmb	IAmb	10 08 05.5	
	comp=Z,3.7nm,0.8s						
GAR	**Garm**	**27.65**	**305**	P	**P**	**10 07 41.3**	**-1.7**
GAR				IAmb	IAmb	10 07 51.9	
	comp=Z,7.7nm,0.9s						
CHGR	**Chuyangaron**	**28.41**	**304**	P	**P**	**10 07 48.0**	**-1.6**
JMZ	**Minamidaito 2**	**28.43**	**84**	P	**P**	**10 07 46.6**	**-3.3**
KKAR	**Karatay Array**	**29.09**	**313**	P	**P**	**10 07 53.7**	**-1.8**
KURBB	**Kurchatov Arra**	**29.28**	**332**	P	**P**	**10 07 58.7**	**+1.5**
	comp=Z,0.4nm,0.6s,baz=131,slow=10,SNR=2.6						
KURBB				LR	LR	10 21 07.8	
	comp=Z,101nm,21.3s,baz=120,slow=39						
	comp=Z,0.4nm,0.6s						
KURK	**Kurchatov**	**29.32**	**332**	P	**P**	**10 07 56.7**	**-0.8**
ZALV	**Zalesovo Beam**	**29.86**	**342**	P	**P**	**10 08 03.4**	**+1.2**
	comp=Z,1.7nm,0.6s,baz=147,slow=11,SNR=6.1						
ZALV				LR	LR	10 21 19.7	
	comp=Z,28nm,21.5s,baz=90,slow=39						
	comp=Z,1.7nm,0.6s						
ZALV	**Zalesovo Beam**	**29.86**	**342**	P	**P**	**10 08 01.2**	**-1.0**
DAV	**Davao City (W)**	**31.21**	**123**	LR	LR	10 19 46.6	
	comp=Z,90nm,20.3s,baz=330,slow=34						
USRK	**Ussuriysk Ar.**	**31.78**	**47**	LR	LR	10 22 19.5	
	comp=Z,110nm,18.2s,baz=222,slow=39						
KLR	**Kul'dur**	**33.95**	**39**	LR	LR	10 22 44.4	
	comp=Z,53nm,18.8s,baz=228,slow=37						
MJB9	**Matsu-Tunnel**	**34.40**	**63**	P	**P**	**10 08 39.3**	**-3.0**
MAJO	**Matsushiro**	**34.40**	**63**	P	**P**	**10 08 39.5**	**-2.9**
MJAR	**Matsushiro Arr**	**34.40**	**63**	LR	LR	10 24 15.4	
	comp=Z,88nm,18.6s,baz=240,slow=39						
BRVK	**Borovoye**	**34.65**	**329**	P	**P**	**10 08 43.3**	**-1.0**
BRVK				IAmb	IAmb	10 08 50.1	
	comp=Z,4.3nm,1.1s						
JHJ	**Hachijo jima 2**	**35.49**	**69**	LR	LR	10 23 05.7	
	comp=Z,46nm,19.8s,baz=44,slow=36						
ABKAR	**Akbulak array**	**38.31**	**318**	P	**P**	**10 09 14.8**	**-0.7**
ASAJ	**Asahikawa**	**39.00**	**51**	LR	LR	10 24 47.9	
	comp=Z,39nm,18.4s,baz=149,slow=35						
AKTO	**Aktyubinsk**	**39.91**	**319**	P	**P**	**10 09 31.4**	**+2.5**
	comp=Z,1.3nm,0.7s,baz=112,slow=12,SNR=4.8						
AKTO				LR	LR	10 28 00.3	
	comp=Z,72nm,19.9s,baz=137,slow=39						
	comp=Z,1.3nm,0.7s						
ARU	**Arti**	**42.16**	**327**	LR	LR	10 30 33.7	
	comp=Z,39nm,18.4s,baz=158,slow=41						
BATI	**Baumata**	**43.07**	**144**	LR	LR	10 32 29.4	
	comp=Z,286nm,18.5s,baz=241,slow=43						
GUMO	**Guam**	**44.20**	**97**	LR	LR	10 27 28.8	
	comp=Z,31nm,20.7s,baz=220,slow=35						
GNI	**Garni**	**47.28**	**301**	LR	LR	10 32 32.8	
	comp=Z,49nm,19.3s,baz=211,slow=39						
TIXI	**Tiksi**	**48.41**	**12**	P	**P**	**10 10 37.2**	**+0.5**
	comp=Z,1.6nm,0.4s,baz=127,slow=9.4,SNR=6.5						
	comp=Z,1.6nm,0.4s						
BRTR	**Keskin Array B**	**55.82**	**302**	P	**P**	**10 11 33.9**	**+1.3**
	comp=Z,0.3nm,0.6s,baz=142,slow=7.3,SNR=2.5						
	comp=Z,0.3nm,0.6s						
WB0	**Warramunga Arr**	**56.80**	**140**	P	**P**	**10 11 39.6**	**+0.1**
WRA	**Warramunga Arr**	**56.91**	**140**	P	**P**	**10 11 40.3**	**0.0**
	comp=Z,2.9nm,0.8s,baz=327,slow=7.8,SNR=38						
	comp=Z,2.9nm,0.8s						
WRA	**Warramunga Arr**	**56.91**	**140**	P	**P**	**10 11 39.8**	**-0.5**
WB2	**Warramunga Arr**	**56.91**	**140**	P	**P**	**10 11 39.4**	**-1.0**
WB2				IAmb	IAmb	10 11 44.1	
	comp=Z,3.8nm,0.8s						
WR0	**Warramunga Arr**	**57.04**	**140**	P	**P**	**10 11 40.2**	**-1.0**
WR0				IAmb	IAmb	10 11 45.0	
	comp=Z,4.7nm,1.1s						
AKASG	**Malin Array Be**	**57.96**	**315**	P	**P**	**10 11 47.4**	**0.0**
	comp=Z,0.4nm,0.4s,baz=71,slow=6.8,SNR=1.3						
	comp=Z,0.4nm,0.4s						
FINES	**FINESS Array B**	**59.53**	**328**	P	**P**	**10 11 59.2**	**+1.1**
	comp=Z,1.2nm,0.8s,baz=110,slow=16,SNR=1.8						
FINES				LR	LR	10 38 01.8	
	comp=Z,45nm,19.7s,baz=132,slow=36						
	comp=Z,1.2nm,0.8s						
ASAR	**Alice Springs**	**59.63**	**143**	P	**P**	**10 11 59.6**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=327,slow=6.8,SNR=19						
	comp=Z,0.7nm,0.6s						
HFS	**Hagfors**	**65.68**	**327**	P	**P**	**10 12 40.3**	**+1.0**
	comp=Z,0.9nm,0.7s,baz=46,slow=6.2,SNR=2.1						
	comp=Z,0.9nm,0.7s						
VRAC	**Vranov**	**66.21**	**315**	LR	LR	10 45 18.6	
	comp=Z,40nm,20.6s,baz=78,slow=39						
NOA	**NORSAR Array B**	**66.71**	**328**	P	**P**	**10 12 49.1**	**+3.3**
	comp=Z,0.2nm,0.5s,baz=84,slow=5.0,SNR=1.4						
NOA				LR	LR	10 43 11.1	
	comp=Z,26nm,19.0s,baz=100,slow=37						
	comp=Z,0.2nm,0.5s						
GERES	**GERESS Array B**	**68.17**	**315**	P	**P**	**10 12 59.0**	**+3.6**
	comp=Z,0.3nm,0.5s,baz=89,slow=8.9,SNR=1.8						
GERES				LR	LR	10 46 28.5	
	comp=Z,46nm,19.7s,baz=61,slow=39						
	comp=Z,0.3nm,0.5s						
DAVOX	**Davos/Dischmat**	**71.23**	**313**	LR	LR	10 49 37.2	
	comp=Z,32nm,19.2s,baz=82,slow=40						
IMAR	**Indian Mountai**	**72.90**	**24**	P	**P**	**10 13 22.3**	**-1.6**
TOLK	**Toolik Lake Re**	**73.12**	**21**	P	**P**	**10 13 23.6**	**-1.6**
TOLK				IAmb	IAmb	10 13 30.4	
	comp=Z,3.3nm,0.8s						
ILAR	**Eielson Array**	**76.00**	**24**	LR	LR	10 50 26.8	
	comp=Z,86nm,18.6s,baz=276,slow=38						
YKA	**Yellowknife Ar**	**87.55**	**15**	P	**P**	**10 14 45.6**	**+2.8**
	comp=Z,0.4nm,0.6s,baz=335,slow=5.2,SNR=6.5						
	comp=Z,0.4nm,0.6s						
YKA	**Yellowknife Ar**	**87.55**	**15**	P	**P**	**10 14 41.1**	**-1.6**
FRB	**Frobisher Bay**	**89.93**	**355**	LR	LR	10 56 53.7	
	comp=Z,37nm,18.9s,baz=280,slow=37						
SUR	**Sutherland**	**94.88**	**236**	LR	LR	10 57 01.8	
	comp=Z,36nm,19.0s,baz=94,slow=35						
NEW	**Newport**	**98.96**	**24**	LR	LR	11 03 35.1	
	comp=Z,56nm,21.6s,baz=326,slow=37						

IDC 03 09:59:56.3±2.7,30°.09S×177°.33W,h0km,mb3.8/4, mbtmp3.8/4,MS2.6/1,Error ellipse: s-maj=51.4km s-min=25.1km az=85.0,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.98**	**328**	LR	LR	10 00 11.5	
	comp=Z,116nm,18.1s,baz=136,slow=15						
RAO				Pn	Pn	10 00 18.4	+1.0
	98nm,0.3s,baz=96,slow=19,SNR=12						
RAO				Sn	Sn	10 00 31.4	-0.6
	177nm,0.3s,baz=184,slow=19,SNR=7.6						
AFI	**Afiamalu**	**16.90**	**19**	LR	LR	10 10 26.4	
	comp=Z,23nm,20.7s,baz=181,slow=37						
CTA	**Charters Tower**	**34.33**	**278**	P	P	10 06 46.3	+1.4
	3.0nm,0.8s,baz=121,slow=19,SNR=1.9						
	3.0nm,0.8s						
STKA	**Stephens Creek**	**35.11**	**256**	P	P	10 06 52.7	+1.1
	0.4nm,0.3s,baz=104,slow=15,SNR=3.3						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**43.71**	**266**	P	P	10 08 02.7	-0.7
	0.3nm,0.7s,baz=106,slow=7.5,SNR=6.8						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	**44.67**	**271**	P	P	10 08 09.7	-1.4
	0.5nm,0.4s,baz=110,slow=7.9,SNR=16						
	0.5nm,0.4s						
FINES	**FINESS Array B**	**145.05**	**341**	PKPbc	PKPbc	10 19 33.1	-1.2
	1.7nm,0.7s,baz=46,slow=3.9,SNR=7.8						

NAO ***03*** *10:18:46.7±1.3,67°.62N×33°.81E,ML2.3*
HEL 03 10:18:46.9±0.2,68°.03N×33°.61E,h0km,ML1.8, Explosion,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVZ	**Lovozero**	**0.41**	**108**	PG	Pg	10 18 54.5	-0.3
APZ9	**Apatity**	**0.47**	**190**	Pg	Pg	10 18 50.2	-5.7
APZ9				Lg	Lg	10 18 52.5	
APZ9				Rg	Rg	10 18 53.6	
APZ9	**Apatity**	**0.47**	**190**	Pg	Pg	10 18 50.2	-5.7
APZ9				Sg	Sg	10 18 52.5	-9.4
APA0	**Apatity Array**	**0.49**	**209**	Pg	Pg	10 18 52.7	-3.5
	baz=84,slow=16						
APA0				Lg	Lg	10 18 56.7	
	baz=82,slow=37						
APA0				Rg	Rg	10 18 57.9	
	baz=89,slow=37						
APA0	**Apatity Array**	**0.49**	**209**	Pg	Pg	10 18 52.7	-3.5
	baz=84,slow=16						
APA0				Sg	Sg	10 18 56.7	-5.8
	baz=82,slow=37						
VRF	**Varrio**	**1.54**	**261**	PN	Pn	10 19 15.6	0.0
	baz=75						
VRF				MSG		10 19 33.0	
	comp=Z,7.6nm,0.2s						
VRF				SN	Sn	10 19 35.5	-0.8
KU6	**Riekki**	**2.49**	**218**	PN	Pn	10 19 27.2	-1.4
KU6				MSG		10 20 00.2	
	comp=Z,3.3nm,0.2s						
SGF	**Sodankyl**	**2.76**	**261**	PG	Pb	10 19 36.1	-1.0
SGF				SG	Sb	10 20 12.0	+0.6
MSF	**Maaselka**	**2.79**	**222**	PN	Pn	10 19 32.5	-0.2
MSF				SN	Sn	10 20 07.0	0.0
KEV	**Kevo**	**2.95**	**309**	Pn	Pb	10 19 39.6	-0.6
KEV				Sn	Sb	10 20 17.9	+1.1
KEV				Lg	Lg	10 20 28.4	
KEV	**Kevo**	**2.95**	**309**	Pn	Pb	10 19 39.6	-0.6
KEV				Sg	Sg	10 20 28.4	+6.8
KEV	**Kevo**	**2.95**	**309**	PG	Pb	10 19 40.0	-0.3
KEV				MSG		10 20 13.7	
	comp=Z,2.5nm,0.2s						
RNF	**Rovaniemi**	**3.27**	**248**	PN	Pn	10 19 38.8	-0.6
RNF				SN	Sn	10 20 17.8	-1.0

ARA0				Sn	Sn	10 20 23.5	+3.6
	baz=120,slow=28						
ARA0				Sg	Sg	10 20 36.0	+2.9
	baz=112,slow=37						
ARA0	**ARCESS Array S**	**3.31**	**301**	PB	Pb	10 19 43.3	-3.1
ARA0				SG	Sb	10 20 27.0	-0.2
KLF	**Kolari**	**3.77**	**262**	PG	Pb	10 19 55.2	+1.0
TOF	**Tornio**	**4.13**	**246**	PG	Pb	10 20 00.8	+0.4
TOF				SG	Sb	10 20 54.0	+3.3
PAJU	**Pajala**	**4.16**	**261**	PG	Pb	10 20 01.7	+0.9
	baz=74						
PAJU				SN	Sn	10 20 40.6	-0.1
OUL	**Oulu**	**4.27**	**230**	SG	Sb	10 20 55.8	+1.0
KALU	**Kalix**	**4.58**	**246**	SG	Sb	10 21 07.8	+4.1
ERTU	**Ertsjaerv**	**4.67**	**257**	SN	Sn	10 20 51.5	-1.8
SPA0	**Spitsbergen Ar**	**11.28**	**342**	Pn	Pn	10 21 31.6	+2.6
	baz=144,slow=14						

HEL 03 10:19:43.1±0.3, 60.71N×28.86E, h0km, ML1.7, Explosion, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VJF	**Virojoki**	**0.67**	**255**	*e*P	Pg	10 19 55.1	-0.7
VJF				*e*S	Sg	10 20 04.4	-0.1
RUFX	**Ruokolahti**	**0.72**	**3**	*e*P	Pg	10 19 56.0	-0.9
RUFX				*e*S	Sg	10 20 05.0	-1.2
PVF	**Pernaja**	**1.49**	**265**	*e*P	Pn	10 20 09.2	-1.9
FIA1	**FINESS Array S**	**1.54**	**300**	*e*P	Pn	10 20 09.8	-2.0
FIA1				*e*S	Sn	10 20 30.5	-2.0
FIA0	**FINESS Array S**	**1.54**	**300**	*e*P	Pn	10 20 10.0	-1.7
FIA0				*e*S	Sn	10 20 30.5	-1.9
KAF	**Kangasniemi**	**1.87**	**320**	*e*P	Pn	10 20 16.1	-0.1
KAF				*e*S	Sn	10 20 40.3	-0.2
KAF				MSG		10 20 43.2	
	comp=Z,5.4nm,0.2s						
NUR	**Nurmijrvi**	**2.09**	**266**	*e*P	Pn	10 20 19.4	+0.1
NUR				*e*SB	Sn	10 20 46.2	+0.2
SUF	**Sumiainen**	**2.39**	**328**	*e*P	Pn	10 20 24.4	+0.9
SUF				*e*SB	Sb	10 20 55.4	-1.6
SUF				MSG		10 20 58.9	
	comp=Z,2.2nm,0.2s						
KEF	**Keuruu**	**2.41**	**309**	*e*P	Pn	10 20 24.0	+0.3
KEF				*e*SB	Sn	10 20 54.8	+0.9

*EAF **03** 10:25:56.8±1.4, 21.°70S×33.°84E, h10km, MD3.3*
BUL 03 10:25:56.8±1.3, 21.°73S×33.°83E, h10km, MD3.4, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOPA	**Mopani**	**2.86**	**231**	*i* P	Pn	10 26 43.3	+0.7
MOPA				*i* S	Sn	10 27 16.3	-0.8
MOPA	**Mopani**	**2.86**	**231**	*i* P	Pn	10 26 43.3	+0.7
MOPA				*i* S	Sn	10 27 16.3	-0.8
BLWY	**Bulawayo**	**5.13**	**287**	*i* P	Pn	10 27 13.9	0.0
BLWY				*i* S	Sn	10 28 09.2	-4.0
BLWY	**Bulawayo**	**5.13**	**287**	*i* P	Pn	10 27 13.9	0.0
BLWY				*i* S	Sn	10 28 09.2	-4.0
MATP	**Matopo**	**5.14**	**284**	*i* P	Pn	10 27 11.5	-2.6
MATP				*i* S	Sn	10 28 09.5	-4.0
MATP	**Matopo**	**5.14**	**284**	*i* P	Pn	10 27 11.5	-2.6
MATP				*i* S	Sn	10 28 09.5	-4.0
LBTB	**Lobatse**	**8.24**	**245**	*i* P	Pn	10 27 55.2	-1.3
LBTB				*i* S	Sn	10 29 20.8	-9.0
LBTB	**Lobatse**	**8.24**	**245**	*i* P	Pn	10 27 55.2	-1.3
LBTB				*i* S	Sn	10 29 20.8	-9.0
BOSA	**Boshof**	**10.35**	**227**	*i* P	Pn	10 28 23.3	-2.2
BOSA				*i* S	Sn	10 30 09.3	-12
BOSA	**Boshof**	**10.35**	**227**	*i* P	Pn	10 28 23.3	-2.2
BOSA				*i* S	Sn	10 30 09.3	-12

JMA 03 10:34:24.8±0.2, 24.°8N±0.°7×123.°8E±0.°4, h0km, MV1.3/7, NW OFF ISHIGAKIJIMA IS, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.47**	**193**	P	Pg	10 34 34.4	+0.6
JISG	**Ishigakijimahi**	**0.47**	**116**	*e*P	Pg	10 34 34.5	+0.6
JISG				*e*S	Sg	10 34 41.7	+1.7
JIJ	**Ishigaki jima**	**0.51**	**147**	P	Pg	10 34 34.9	+0.3
JIJ				*e*S	Sg	10 34 42.2	+1.1
JKRS	**Kuro-shima**	**0.57**	**165**	P	Pg	10 34 36.5	+0.6
JKRS				*e*S	Sg	10 34 44.8	+1.6
HATJ	**Hateruma jima**	**0.73**	**183**	P	Pg	10 34 39.4	+0.5
HATJ				*e*S	Sg	10 34 49.7	+1.2
JTJ	**Tarama**	**0.80**	**101**	*e*P	Pg	10 34 40.6	+0.5
JTJ				*e*S	Sb	10 34 52.3	-0.6

TAP 03 10:35:21.5, 24.°27N×121.°70E, h12km, ML2.0, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.05**	**44**	*e*P	Pg	10 35 24.6	+0.8
	baz=51						
EHP				*e*S	Sg	10 35 26.5	+1.1
	baz=51						
ETL	**Fush Village**	**0.14**	**213**	P	Pb	10 35 25.5	-0.5
	baz=212						
ETL				S	Sg	10 35 28.4	+1.2
	baz=212						
NACB	**Ninganchiao**	**0.14**	**225**	P	Pb	10 35 25.6	-0.5
	baz=224						
NACB				S	Sg	10 35 28.1	+0.9
	baz=224						
ENA	**Nanau**	**0.16**	**13**	P	Pb	10 35 25.9	-0.5
	baz=15						
ENA				S	Sg	10 35 28.5	+0.9
	baz=15						
EWUT	**Wuta**	**0.18**	**22**	P	Pb	10 35 26.2	-0.6
	baz=21						
EWUT				S	Sg	10 35 29.0	+0.6
	baz=21						
ETLH	**Xiulin Townshi**	**0.21**	**252**	P	Pb	10 35 27.1	-0.2
	baz=251						
ETLH				S	Sg	10 35 30.4	+1.2
	baz=251						
TWD	**Chiawan**	**0.22**	**207**	P	Pb	10 35 26.9	-0.5
	baz=205						
TWD				S	Sg	10 35 30.0	+0.8
	baz=205						
LATG	**Datong**	**0.31**	**328**	P	Pb	10 35 29.0	0.0
	baz=328						
LATG				S	Sb	10 35 33.6	-0.5
	baz=328						
HWA	**Hwalien**	**0.31**	**197**	*e*P	Pb	10 35 28.5	-0.4
	baz=195						
HWA				*e*S	Sb	10 35 33.7	-0.3
	baz=195						
NNSB	**Datong**	**0.33**	**298**	P	Pb	10 35 29.7	+0.3
	baz=297						
NNSB				S	Sb	10 35 34.2	-0.6
	baz=297						
NNS	**Nan Shan**	**0.34**	**299**	P	Pb	10 35 29.9	+0.2
	baz=298						
NNS				S	Sb	10 35 34.8	-0.3
	baz=298						
NDS	**Dongshan**	**0.36**	**2**	P	Pb	10 35 29.6	-0.2
	baz=1.0						
NDS				S	Sb	10 35 34.6	-0.8
	baz=1.0						
TWC	**Suao**	**0.36**	**22**	*e*P	Pb	10 35 29.4	-0.5
	baz=23						
TWC				*e*S	Sg	10 35 34.2	+0.7
	baz=23						
ENTT	**Nioudou**	**0.39**	**341**	P	Pb	10 35 30.4	+0.1
	baz=341						
ENTT				S	Sb	10 35 35.9	-0.3
	baz=341						
FUSS	**Fushou**	**0.42**	**267**	*e*P	Pb	10 35 31.4	+0.4
	baz=266						
FUSS				*e*S	Sb	10 35 37.2	-0.2
	baz=266						
WHF	**Hehuan Shan**	**0.42**	**252**	P	Pb	10 35 30.9	-0.2
	baz=251						
WHF				S	Sb	10 35 37.0	-0.6
	baz=251						
TWE	**Neicheng**	**0.45**	**356**	P	Pb	10 35 31.4	+0.1
	baz=357						
TWE				*e*S	Sb	10 35 37.8	-0.2
	baz=357						
TWT	**Tachien**	**0.48**	**268**	*e*P	Pb	10 35 31.9	-0.1
	baz=267						
TWT				*e*S	Sb	10 35 39.5	+0.4
	baz=267						
YHNB	**Yeheng**	**0.49**	**323**	*e*P	Pb	10 35 32.6	+0.4
	baz=322						
YHNB				*e*S	Sb	10 35 39.6	+0.2
	baz=322						
FUSB	**Fushanzhiwuyua**	**0.49**	**348**	*e*P	Pb	10 35 32.1	-0.1
	baz=347						
FUSB				*e*S	Sb	10 35 39.2	-0.3
	baz=347						
TDCB	**Techi**	**0.50**	**268**	*e*P	Pb	10 35 31.9	-0.4
	baz=267						
TDCB				*e*S	Sb	10 35 39.5	-0.1
	baz=267						
NSK	**Sanguang**	**0.51**	**322**	*e*P	Pb	10 35 32.7	+0.3
	baz=322						
NSK				*e*S	Sb	10 35 39.8	0.0
	baz=322						
ESL	**Shilin**	**0.52**	**208**	P	Pg	10 35 32.0	+0.3
	baz=207						
ESL				*e*S	Sb	10 35 39.6	-0.5
	baz=207						
CHGB	**Renai**	**0.53**	**246**	P	Pb	10 35 33.1	+0.3
	baz=246						
CHGB				S	Sb	10 35 39.9	-0.7
	baz=246						
NWLT	**Wulai**	**0.53**	**340**	*e*P	Pb	10 35 32.9	+0.1
	baz=339						
NWLT				*e*S	Sb	10 35 40.5	0.0
	baz=339						
OWD	**Renai**	**0.58**	**237**	P	Pb	10 35 33.9	+0.3
	baz=236						
OWD				*e*S	Sb	10 35 41.6	-0.2
	baz=236						
WUSB	**Renai**	**0.60**	**242**	*e*P	Pb	10 35 34.1	+0.1
	baz=242						
WUSB				*e*S	Sb	10 35 43.0	+0.4
	baz=242						
EGS		**0.61**	**20**	*e*P	Pb	10 35 33.9	-0.2
	baz=21						
EGS				*e*S	Sb	10 35 43.1	+0.6
	baz=21						
NFF	**Wufeng Townshi**	**0.64**	**304**	*e*P	Pb	10 35 34.8	+0.1
	baz=303						
NFF				*e*S	Sb	10 35 44.2	+0.5
	baz=303						
EGFH	**Guangfu**	**0.65**	**203**	*e*P	Pb	10 35 34.8	-0.1
	baz=202						
EGFH				S	Sb	10 35 44.6	+0.7
	baz=202						
WHP	**Taichung City**	**0.69**	**270**	*e*S	Sb	10 35 45.5	+0.4
	baz=270						
TIPB	**Shuangxi**	**0.70**	**9**	*e*P	Pb	10 35 35.6	-0.1
	baz=9.0						
TIPB				*e*S	Sb	10 35 45.7	+0.3
	baz=9.0						
LIOB	**Emei**	**0.73**	**301**	*e*P	Pb	10 35 36.1	0.0
	baz=300						
LIOB				*e*S	Sb	10 35 47.0	+0.9
	baz=300						
VWDT	**VWDT**	**0.73**	**225**	*e*P	Pb	10 35 36.0	-0.1
	baz=224						
VWDT				*e*S	Sb	10 35 46.7	+0.6
	baz=224						
NSTT	**Nanjuang**	**0.73**	**299**	*e*S	Sb	10 35 46.7	+0.5
	baz=299						
TWB1	**Santiao Chiao**	**0.78**	**19**	*e*P	Pb	10 35 37.0	+0.1
	baz=20						
HGSD	**Ruisui**	**0.82**	**198**	*e*P	Pb	10 35 37.5	-0.1
	baz=198						
HGSD				*e*S	Sb	10 35 49.7	+1.0
	baz=198						
SXI1	**Grass Mountain**	**0.83**	**11**	*e*P	Pb	10 35 37.9	-0.1
	baz=10.0						
SXI1				*e*S	Sb	10 35 49.8	+0.7
	baz=10.0						
SSLB	**Suanglung**	**0.84**	**235**	*e*P	Pb	10 35 38.2	+0.2
	baz=234						
SSLB				*e*S	Sb	10 35 50.1	+0.8
	baz=234						
YULB	**Yu-li**	**0.95**	**203**	*e*P	Pb	10 35 40.0	0.0
	baz=202						
YULB				*e*S	Sn	10 35 53.8	-0.5
	baz=202						

*IDC **03** 10:38:01.2±1.6, 7.°42S×128.°71E, h154km±17km, mb3.4/5, mbtmp4.1/9, Error ellipse: s-maj=19.9km s-min=12.9km az=106.0*
ISC 03 10:38:01.5±0.7, 7.°41S±0.°07×128.°71E±0.°09, h151km, n24, σ1§01/25, mb3.7/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**4.98**	**242**	P	Pn	10 39 03.4	-11
BATI	**Baumata**	**5.71**	**241**	P	**Pn**	**10 39 24.9**	**+0.4**
	114nm,0.5s,baz=83,slow=4.9,SNR=21						
BATI				S	**Sn**	**10 40 28.9**	**-0.4**
	124nm,0.4s,baz=41,slow=20,SNR=12						
MTN	**Manton Dam**	**5.90**	**156**	P	**Pn**	**10 39 28.0**	**+1.0**
KDU	**Kakadu**	**6.42**	**145**	P	**Pn**	**10 39 34.8**	**+1.0**
SlJI	**Sorong**	**6.98**	**22**	P	**Pn**	**10 39 42.7**	**+1.3**
	12nm,0.2s,baz=225,slow=5.7,SNR=29						
SlJI				S	**Sn**	**10 40 58.3**	**-1.4**
	12nm,0.4s,baz=275,slow=23,SNR=2.8						
KNRA	**Kununurra**	**8.22**	**180**	P	**Pn**	**10 39 57.3**	**-0.5**
WRA	**Warramunga Arr**	**13.60**	**157**	P	**Pn**	**10 41 06.1**	**-2.4**
	2.0nm,0.5s,baz=338,slow=13,SNR=62						
WRA				S	Sn	10 43 27.2	-12
	8.5nm,0.6s,baz=335,slow=22,SNR=13						
QIS	**Mount Isa**	**16.79**	**142**	P	**Pn**	**10 41 49.3**	**+1.3**
ASAR	**Alice Springs**	**16.91**	**163**	P	**P**	**10 41 49.2**	**+0.3**
	6.1nm,0.4s,baz=343,slow=11,SNR=209						
ASAR				S	S	10 44 46.7	-11
	1.4nm,0.6s,baz=334,slow=20,SNR=7.3						
WRKA	**Warakurna**	**17.53**	**181**	P	**Pn**	**10 41 57.4**	**+0.6**
OOD	**Oodnadatta**	**21.32**	**163**	P	**P**	**10 42 37.4**	**+0.8**
FORT	**Forrest**	**23.26**	**181**	P	**P**	**10 42 56.1**	**+0.5**
MULG	**Mulgathing**	**23.30**	**168**	P	**P**	**10 42 56.9**	**+0.9**
LCRK	**Leigh Creek**	**24.59**	**160**	P	**P**	**10 43 08.7**	**+1.0**
MORW	**Morawa**	**24.64**	**207**	P	**P**	**10 43 07.8**	**-0.3**
BLDU	**Ballidu**	**25.68**	**204**	P	**P**	**10 43 17.3**	**-0.3**
KLBR	**Kellerberrin**	**26.14**	**202**	P	**P**	**10 43 21.9**	**+0.2**
BBOO	**Buckleboo**	**26.18**	**166**	P	**P**	**10 43 22.7**	**+0.7**
STKA	**Stephens Creek**	**27.15**	**155**	P	**P**	**10 43 30.4**	**-0.3**
	1.1nm,0.5s,baz=8.9,slow=7.3,SNR=3.3						
	1.1nm,0.5s						
NWAO	**Narrogin (SRO)**	**27.54**	**201**	P	**P**	**10 43 34.1**	**-0.1**
SONM	**Songino Array**	**58.44**	**343**	P	**P**	**10 47 42.2**	**+0.7**
	0.6nm,0.6s,baz=134,slow=4.2,SNR=2.0						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**67.88**	**327**	P	**P**	**10 48 43.0**	**-0.7**
	0.6nm,0.5s,baz=121,slow=9.1,SNR=6.7						
	0.6nm,0.5s						
ZALV	**Zalesovo Beam**	**71.39**	**334**	P	**P**	**10 49 03.2**	**-1.7**
	0.7nm,0.5s,baz=129,slow=3.4,SNR=1.7						
	0.7nm,0.5s						
VNDA	**Vanda**	**72.20**	**173**	P	**P**	**10 49 08.5**	**-1.0**
	0.3nm,0.4s,baz=351,slow=4.4,SNR=6.5						
	0.3nm,0.4s						

DJA 03 10:42:38.8±1.9, 7.°S±9.°×127.°3E±.°, h542km±25km, M3.7/9, mb3.7/2, mB5.2/1, MLv3.6/9, Mw(mB)4.5/1, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDFI	**Ende, Flores**	**1.90**	**222**	P	P	10 43 46.9	-0.6
SOEI	**Soe**	**2.71**	**152**	P	P	10 43 51.8	+0.2
BSSI	**Bau Bau, Buton**	**2.75**	**295**	P	P	10 43 52.2	+0.5
BATI	**Baumata**	**2.92**	**167**	P	P	10 43 52.8	0.0
BASI	**Baing, Sumba**	**3.72**	**220**	P	P	10 43 58.3	+0.2
WBSI	**Waikabubak, Su**	**4.23**	**237**	P	P	10 44 01.5	-0.5
PLAI	**Plampang**	**5.37**	**254**	P	P	10 44 11.3	-0.1
	0.2nm36nm,1.1s						
LUWI	**Luwuk**	**6.26**	**358**	P	P	10 44 19.4	-0.1

*SSNC **03** 10:51:26.5±1.3, 19.°80N×73.°64W, h5km±7km, MD3.5, ML3.4, MW3.5*
*OSPL **03** 10:51:28.0±1.1, 20.°10N×73.°59W, h26km±7km, ML3.2*
ISC 03 10:51:22.2±1.3, 20.°02N±0.°05×73.°52W±0.°03, h14km±11km, n16, σ1§27/28, 1D, Haiti region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MASC	**Masc**	**0.68**	**283**	*i* P	**Pn**	**10 51 39.0**	**+1.4**
MASC				*e*S	**Sn**	**10 51 47.7**	**-0.3**
MASC				IAML		10 51 49.0	
	comp=E,1μm,0.2s						
MASC				IAML		10 51 50.1	
	comp=N,2μm,0.2s						
MASC	**Masc**	**0.68**	**283**	*i* P	**Pn**	**10 51 38.9**	**+1.4**
MASC				*e*S	**Sn**	**10 51 47.4**	**-0.6**
MASC				IAML		10 51 48.5	
	comp=Z,1μm,0.1s						
MOAC	**Moa**	**1.49**	**295**	*e*P	**Pg**	**10 51 51.5**	**+0.6**
MOAC				*e*S	**Sg**	**10 52 10.2**	**-0.1**
MOAC				IAML		10 52 13.3	
	comp=N,1μm,0.3s						
MOAC				IAML		10 52 15.1	
	comp=E,500nm,0.3s						
GTBY	**Guantanamo Bay**	**1.50**	**267**	*e*P	**Pb**	**10 51 50.5**	**+0.7**
GTBY				*e*S	**Sn**	**10 52 08.6**	**+0.5**
GTBY	**Guantanamo Bay**	**1.50**	**267**	*i* P	**Pg**	**10 51 50.8**	**-0.2**
GTBY				*e*S	**Sn**	**10 52 07.8**	**-0.3**
GTBY				IAML		10 52 12.7	
	comp=Z,207nm,0.2s						
LODA1	**ITESIL, Dajabo**	**1.77**	**105**	*i* P	**Pg**	**10 51 56.2**	**-0.1**
LODA1				*e*S	**Sb**	**10 52 17.2**	**+0.5**
LODA1				IAML		10 52 20.1	
	comp=Z,826nm,1.0s						
JAKH	**Jacmel**	**2.01**	**152**	*i* P	**Pg**	**10 52 00.0**	**-0.8**
JAKH				*e*S	**Sb**	**10 52 24.5**	**+0.9**
JAKH				IAML		10 52 30.7	
	comp=Z,145nm,0.5s						
RCC	**Rio Carpintero**	**2.04**	**270**	*e*P	**Pb**	**10 51 58.2**	**-1.0**
RCC				*e*S	**Sn**	**10 52 21.4**	**-0.2**
RCC				IAML		10 52 26.7	
	comp=N,235nm,0.3s						
RCC				IAML		10 52 28.0	
	comp=E,258nm,0.3s						
SDDR	**Presa de Saban**	**2.35**	**116**	*e*P	**Pb**	**10 52 04.5**	**+0.1**
SDDR	**Presa de Saban**	**2.35**	**116**	*i* P	**Pb**	**10 52 04.5**	**+0.1**
SDDR				*e*S	**Sb**	**10 52 32.2**	**-1.0**
SDDR				IAML		10 52 46.3	
	comp=Z,118nm,0.4s						
LONE2	**Loma La Sidra**	**2.42**	**127**	*i* P	**Pb**	**10 52 06.0**	**+0.3**
LONE2				IAML		10 52 49.4	
	comp=Z,122nm,0.4s						
LOPE2	**Hotel El Peder**	**2.60**	**139**	*i* P	**Pb**	**10 52 08.8**	**+0.2**
GRTK	**Grand Turk**	**2.68**	**56**	*i* P	**Pb**	**10 52 09.0**	**-1.0**
GRTK				*e*S	**Sn**	**10 52 38.2**	**+0.9**
GRTK				IAML		10 52 57.8	
	comp=Z,104nm,0.7s						
LMGC	**Las Mercedes**	**3.28**	**271**	*e*P	**Pn**	**10 52 15.8**	**+2.6**
LMGC				*e*S	**Sn**	**10 52 51.9**	**-0.1**
LMGC				IAML		10 52 56.8	
	comp=N,74nm,0.1s						
LMGC				IAML		10 52 57.2	
	comp=E,48nm,0.2s						
CCCC	**Cccc**	**4.14**	**287**	*e*P	**Pn**	**10 52 22.5**	**-2.7**
MTDJ	**Mount Denham**	**4.20**	**245**	*e*P	**Pn**	**10 52 27.0**	**+1.1**
MTDJ				*e*S	**Sn**	**10 53 11.4**	**-3.5**

IDC 03 11:01:27.5±7.7, 51.°29N×108.°06E, h0km, mbtmp2.5/1, ML2.5/1, Error ellipse: s-maj=61.5km s-min=53.1km az=108.0, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**3.62**	**198**	Pn	Pn	11 02 25.2	+0.3
	0.4nm,0.3s,baz=15,slow=13,SNR=7.4						
SONM				Pg	Pb	11 02 33.2	+0.8
	0.6nm,0.3s,baz=16,slow=13,SNR=7.7						
SONM				Sn	Sn	11 03 12.2	+3.8
	0.6nm,0.3s,baz=19,slow=26,SNR=11						
SONM				Lg	Lg	11 03 22.6	
	1.5nm,0.3s,baz=14,slow=28,SNR=12						
SONM				Rg	Rg	11 03 42.3	
	15nm,0.8s,baz=14,slow=26,SNR=4.6						
	1.0nm,0.5s						
I34MN	**SONGINO INFRAS**	**3.65**	**198**	*i*		11 25 40.0	
	baz=19,slow=322,SNR=1.5						
I46RU	**ZALESOVO INFRA**	**14.35**	**290**	*i*		12 23 10.0	
	baz=92,slow=318,SNR=2.2						

*UCR **03** 11:27:36.5±1.4, 9.°20N×85.°71W, h5km, MW3.6*
*INET **03** 11:27:36.5±1.0, 9.°15N×85.°50W, h3km±17km, MW2.8*
ISC 03 11:27:35.7±2.7, 9.°2N±0.°1×85.°7W±0.°1, h10km, n24, σ1§34/26, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAJU	**San Juanillo,**	**0.87**	**1**	*e*P	**Pb**	**11 27 53.5**	**+0.5**
DUNO	**Dulce Nombre,**	**0.91**	**15**	*e*P	**Pb**	**11 27 54.1**	**+0.5**
DUNO				*e*S	**Sn**	**11 28 07.9**	**+0.1**
LAFE	**Finca La Fe, P**	**1.01**	**53**	*e*P	**Pg**	**11 27 55.7**	**+0.5**
GUAI	**GUAI**	**1.09**	**11**	*e*P	**Pg**	**11 27 54.1**	**-2.7**
JACO	**JACO, Garabito**	**1.15**	**66**	*e*P	Pn	11 28 04.6	+6.7
JTS	**Las Juntas de**	**1.33**	**35**	*e*P	**Pn**	**11 28 00.8**	**+0.4**
JTS				*e*S	**Sn**	**11 28 18.8**	**+0.5**
HZTE	**Horizontes, Gu**	**1.52**	**5**	*e*P	**Pn**	**11 28 03.8**	**+0.8**
HZTE	**Horizontes, Gu**	**1.52**	**5**	*e*P	**Pn**	**11 28 03.0**	**0.0**
LIM1	**Limonal**	**1.57**	**17**	*e*P	**Pn**	**11 28 01.6**	**-2.1**
CASO	**Castillo**	**1.58**	**38**	*e*P	**Pb**	**11 28 05.0**	**0.0**
ACAL	**Aguas Claras**	**1.59**	**25**	*e*P	**Pn**	**11 28 05.0**	**+1.1**
ACAL				*e*S	**Sb**	**11 28 26.1**	**+0.7**
LAPC	**Finca la Perla**	**1.59**	**10**	*e*P	**Pn**	**11 28 01.6**	**-2.4**
GBS3	**Finca Las Img**	**1.60**	**10**	*e*P	**Pn**	**11 28 04.7**	**+0.5**
BUEV	**Buena Vista**	**1.63**	**11**	*e*P	**Pn**	**11 28 04.4**	**-0.1**
GB1A	**Borinquen Arri**	**1.65**	**11**	*e*P	**Pn**	**11 28 02.7**	**-2.2**
VMAR	**Armenia, Volca**	**1.72**	**20**	*e*P	**Pn**	**11 28 07.0**	**+1.2**
BUAI	**Buenos Aires**	**1.72**	**13**	*e*P	**Pn**	**11 28 06.7**	**+0.9**
LCR2	**La Lucha 2**	**1.79**	**72**	*e*P	**Pn**	**11 28 07.4**	**+0.6**
RIMA	**Rio Macho**	**1.93**	**73**	*e*P	**Pn**	**11 28 09.7**	**+1.0**
RIMA	**Rio Macho**	**1.93**	**73**	*e*P	**Pn**	**11 28 06.9**	**-1.9**
CDM	**Cerro de Muert**	**1.97**	**79**	*e*P	**Pn**	**11 28 10.5**	**+0.9**
CDM	**Cerro de Muert**	**1.97**	**79**	*e*P	**Pn**	**11 28 07.5**	**-2.0**
ACON	**Acoyapa**	**2.81**	**11**	*e*P	**Pn**	**11 28 21.7**	**+0.9**
COPN	**Copaltepe**	**3.09**	**344**	*e*P	**Pn**	**11 28 26.2**	**+1.6**

IDC 03 11:37:43.2±1.9, 1.°12N×124.°76E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=192.6km s-min=26.8km az=63.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.94**	**156**	P	P	11 42 49.1	-0.2
	1.0nm,0.4s,baz=334,slow=10,SNR=28						
	1.0nm,0.4s						
ASAR	**Alice Springs**	**26.19**	**161**	P	P	11 43 19.7	-0.1
	0.1nm,0.4s,baz=338,slow=7.0,SNR=1.8						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**58.61**	**327**	P	P	11 47 42.3	+0.2
	0.2nm,0.3s,baz=121,slow=7.7,SNR=4.3						
	0.2nm,0.3s						

*JMA **03** 11:50:12.0±0.6, 21.°N±3.°×12.°1E±.°, h0km, M

moment-rate function
ISC 03 11:50:13.1±0.3,**20°54N**±0°03×**120°47E**±0°04,**h26**km,**n475**,
σ1**955**/455,**mb4.8**/119,**MS3.9**/63,**29C-56D**,**Fault plane solution: NP1**:ϕs313.30978°,δ59.59426°,λ-119.42017°.
NP2:ϕs181.40245°,δ41.30204°,λ-50.06880°. **Principal axes:** T Plg9.9813°, Azm63.9609°; N Plg25.0653°, Azm329.2395°; P Plg62.7589°, Azm173.9497°;
Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWG	**Pinlang**	**2.34**	**14**		**Pn**	**11 50 48.6**	**-1.3**
SIPP	**Brgy, Tapao**	**2.61**	**180**	⇓*i*P	**Pn**	**11 50 52.3**	**-1.3**
TPUB	**Ta-pu**	**2.75**	**3**		**Pn**	**11 50 53.9**	**-1.7**
TPUB	**Ta-pu**	**2.75**	**3**	P	**Pn**	**11 50 54.3**	**-1.3**
YULB	**Yu-li**	**2.94**	**15**		**Pn**	**11 50 56.1**	**-2.1**
SSLB	**Suanglung**	**3.26**	**8**	Pn	**Pn**	**11 51 01.4**	**-1.3**
SSLB	**Suanglung**	**3.26**	**8**	P	**Pn**	**11 51 01.7**	**-1.0**
NACB	**Ninganchiao**	**3.76**	**16**		**Pn**	**11 51 08.3**	**-1.2**
YHNB	**Yeheng**	**4.19**	**11**		**Pn**	**11 51 15.2**	**-0.3**
YHNB	**Yeheng**	**4.19**	**11**	P	**Pn**	**11 51 15.8**	**+0.3**
KNMB	**Chin-men Tao**	**4.35**	**334**		**Pn**	**11 51 15.1**	**-2.5**
TATO	**Taipei**	**4.51**	**12**		**Pn**	**11 51 21.1**	**+1.3**
JYNG	**Yonaguni jima**	**4.51**	**30**	P	**Pn**	**11 51 19.6**	**-0.2**
JYNG				*e*S	**Sn**	**11 52 09.0**	**-2.5**
YOJ	**Yonaguni jima**	**4.55**	**31**	Pn	**Pn**	**11 51 18.0**	**-2.4**
YOJ	**Yonaguni jima**	**4.55**	**31**	P	**Pn**	**11 51 20.7**	**+0.3**
YOJ	**Yonaguni jima**	**4.55**	**31**	P	**Pn**	**11 51 20.3**	**-0.1**
YOJ				*e*S	**Sn**	**11 52 10.6**	**-1.9**
HATJ	**Hateruma jima**	**4.67**	**41**	P	**Pn**	**11 51 22.0**	**0.0**
HATJ				*e*S	**Sn**	**11 52 14.0**	**-1.3**
QZH	**Quanzhou**	**4.71**	**339**	Pn	**Pn**	**11 51 20.0**	**-2.5**
QZH				Sn	**Sn**	**11 52 10.2**	**-6.1**
QZH				LR	LR		
	comp=N,1μm,10.4s						
QZH				LR	LR		
	comp=E,2μm,11.4s						
QZH				LR	LR		
	comp=Z,2μm,10.9s						
IRIF	**Iriomote-Funau**	**4.83**	**38**	P	**Pn**	**11 51 24.3**	**+0.1**
IRIF				S	**Sn**	**11 52 18.4**	**-1.0**
JKRS	**Kuro-shima**	**4.93**	**41**	P	**Pn**	**11 51 25.8**	**+0.3**
JKRS				S	**Sn**	**11 52 21.2**	**-0.5**
PCPH	**Palayan**	**4.99**	**173**	⇓*e*P	**Pn**	**11 51 27.0**	**+0.6**
JIJ	**Ishigaki jima**	**5.10**	**41**	P	**Pn**	**11 51 27.5**	**-0.4**
JIJ				*e*S	**Sn**	**11 52 24.6**	**-1.4**
JISG	**Ishigakijimahi**	**5.37**	**41**	P	**Pn**	**11 51 31.2**	**-0.4**
JISG				*e*S	**Sn**	**11 52 31.5**	**-1.1**
JTJ	**Tarama**	**5.65**	**43**	P	**Pn**	**11 51 35.6**	**+0.1**
JTJ				*e*S	**Sn**	**11 52 37.8**	**-1.8**
JIRB	**Irabujima**	**6.09**	**45**	*e*P	**Pn**	**11 51 41.1**	**-0.4**
JIRB				*e*S	**Sn**	**11 52 48.2**	**-2.2**
HKPS	**Hong Kong Po S**	**6.14**	**287**		**Pn**	**11 51 39.7**	**-2.5**
JMJ	**Miyako jima 2**	**6.16**	**45**	P	**Pn**	**11 51 41.7**	**-0.8**
JOGS	**Gusukube**	**6.20**	**46**	*e*P	**Pn**	**11 51 42.3**	**-0.7**
TGY	**Tagaytay City**	**6.42**	**176**	Pn	**Pn**	**11 51 46.1**	**0.0**
	24nm,0.3s,baz=342,slow=3.2,SNR=6.0						
	132nm,0.3s						
GZH	**Guangzhou**	**7.08**	**292**	Pn	**Pn**	**11 51 52.3**	**-2.9**
GZH				Sn	**Sn**	**11 53 10.0**	**-4.9**
GZH				smax	smax		
	comp=N,120nm,0.7s						
GZH				smax	smax		
	comp=E,120nm,0.7s						
QIZ	**Qiongzhong**	**10.11**	**263**	Pn	**Pn**	**11 52 34.7**	**-2.1**
QIZ	**Qiongzhong**	**10.11**	**263**	P	**Pn**	**11 52 34.6**	**-2.1**
QIZ				S	**Sn**	**11 54 29.0**	**-0.4**
QIZ				LR	LR		
	comp=N,1μm,12.4s						
QIZ				LR	LR		
	comp=E,620nm,16.7s						
QIZ				LR	LR		
	comp=Z,2μm,9.0s						
QIZ	**Qiongzhong**	**10.11**	**263**	P	**Pn**	**11 52 35.0**	**-1.8**
SSE	**Sheshan**	**10.53**	**3**	P	Pn	11 52 51.0	+8.6
SSE				S	Sn	11 54 49.2	+10
SSE				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SSE				pmax	pmax		
	comp=Z,84nm,3.5s						
SSE				LR	LR		
	comp=N,280nm,13.3s						
SSE				LR	LR		
	comp=E,370nm,10.5s						
WHN	**Wuhan**	**11.38**	**332**	⇑P	Pn	11 52 48.6	-5.5
NJ2	**Nanjing**	**11.55**	**353**	*e*P	**Pn**	**11 52 58.8**	**+2.4**
NJ2				pmax	pmax		
	comp=E,8.0nm,0.5s						
NJ2				LR	LR		
	comp=E,950nm,12.3s						
NJ2				LR	LR		
	comp=E,2μm,10.9s						
NJ2				LR	LR		
	comp=E,960nm,10.9s						
GYA	**Guiyang**	**13.96**	**298**	⇓P	**Pn**	**11 53 28.8**	**-0.7**
GYA				S	**Sn**	**11 56 05.2**	**+1.5**
GYA				pmax	pmax		
	comp=E,15nm,0.8s						
GYA				pmax	pmax		
	comp=E,93nm,3.8s						
GYA				LR	LR		
	comp=E,670nm,10.6s						
GYA				LR	LR		
	comp=E,700nm,12.2s						
GYA				LR	LR		
	comp=E,890nm,12.6s						
DAV	**Davao City (W)**	**14.28**	**159**	LR	LR	11 59 48.0	
	comp=E,309nm,18.6s,baz=339,slow=40						
MYLDM	**Lahad Datu**	**15.39**	**187**	Pn	**Pn**	**11 53 48.5**	**-0.2**
MYLDM				IAmb	IAmb	11 53 52.4	
	comp=Z,91nm,1.4s						
JNU	**Nakatsue**	**15.59**	**34**	Pn	**Pn**	**11 53 51.0**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=230,slow=4.9,SNR=5.1						
	comp=Z,49nm,1.0s						
JNU	**Nakatsue**	**15.59**	**34**	Pn	**Pn**	**11 53 48.9**	**-2.2**
JNU				IAmb	IAmb	11 53 59.8	
	comp=Z,66nm,0.8s						
JNU	**Nakatsue**	**15.59**	**34**	P	**Pn**	**11 53 51.3**	**+0.1**
LYN	**LuoYang**	**15.64**	**335**	*e*P	**P**	**11 54 00.4**	**+4.6**
LYN				pP	pwP	11 54 09.3	+3.3
LYN				S	**S**	**11 56 54.5**	**-4.6**
LYN				SS	SnSn	11 57 17.0	+19
LYN				pmax	pmax		
	comp=Z,20nm,0.5s						
LYN				LR	LR		
	comp=N,900nm,8.3s						
LYN				LR	LR		
	comp=E,870nm,10.5s						
LYN				LR	LR		
	comp=Z,930nm,10.5s						
TIA	**Tai'an**	**15.88**	**350**	⇑P	**P**	**11 54 02.8**	**+4.3**
TIA				S	**S**	**11 57 01.4**	**-2.6**
TIA				pmax	pmax		
	comp=Z,30nm,0.9s						
TIA				pmax	pmax		
	comp=Z,63nm,4.1s						
TIA				LR	LR		
	comp=N,690nm,10.8s						
TIA				LR	LR		
	comp=E,520nm,9.8s						
TIA				LR	LR		
	comp=Z,1μm,10.6s						
JTU	**Tsushima**	**16.01**	**28**	Pn	**Pn**	**11 53 54.1**	**-2.5**
NAWB	**Namwon**	**16.03**	**21**	Pn	**Pn**	**11 53 54.5**	**-2.2**
TJN	**Taejon**	**16.89**	**19**	Pn	**Pn**	**11 54 06.0**	**-1.8**
TJN				IAmb	IAmb	11 54 13.9	
	comp=Z,74nm,0.9s						
XAN	**Xi'an**	**16.89**	**325**	P	**P**	**11 54 13.6**	**+3.9**
XAN				pP	pwP	11 54 19.8	-0.1
XAN				S	**S**	**11 57 33.7**	**+8.9**
XAN				SS	SbSb	11 58 13.1	-14
XAN				pmax	pmax		
	comp=Z,16nm,1.2s						
XAN				LR	LR		
	comp=N,1μm,13.6s						
XAN				LR	LR		
	comp=E,620nm,16.3s						
XAN				LR	LR		
	comp=Z,2μm,12.2s						
KMI	**Kunming**	**16.96**	**289**	⇑P	**P**	**11 54 13.4**	**+2.7**
KMI				pP	pP	11 54 17.0	+0.2
KMI				sP	pwP	11 54 23.1	+1.8
KMI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KMI				LR	LR		
	comp=Z,310nm,7.9s						
KMI				LR	LR		
	comp=Z,620nm,9.6s						
KMI				LR	LR		
	comp=Z,370nm,9.6s						
HNS	**HongShan**	**17.53**	**345**	⇑P	**P**	**11 54 17.2**	**+0.6**
HNS				PP	pwP	11 54 35.7	+8.8
HNS				pmax	pmax		
	comp=Z,47nm,1.2s						
HNS				LR	LR		
	comp=Z,500nm,12.7s						
HNS				LR	LR		
	comp=Z,790nm,12.2s						
HNS				LR	LR		
	comp=Z,590nm,14.9s						
KSCHJ	**Chungju**	**17.54**	**20**		**Pn**	**11 54 15.9**	**0.0**
INCN	**Inchon**	**17.71**	**16**		**Pn**	**11 54 16.5**	**-1.5**
KSAR	**Wonju Array Be**	**18.03**	**19**	Pn	**Pn**	**11 54 18.8**	**-3.2**
KSRS	**Korea Array**	**18.06**	**19**	P	**Pn**	**11 54 21.5**	**-0.7**
	comp=Z,1.6nm,0.3s,baz=200,slow=11,SNR=92						
KSRS				LR	LR	12 01 14.1	
	comp=Z,200nm,22.0s,baz=205,slow=37						
	comp=Z,18nm,0.7s						
KS19	**Wonju Array Si**	**18.08**	**19**	P	**Pn**	**11 54 22.1**	**-0.4**
PZH	**PanZhiHua**	**18.16**	**293**	P	**P**	**11 54 25.7**	**+1.9**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,110nm,5.8s						
JHS	**Saijyo**	**18.21**	**35**	P	**Pn**	**11 54 22.2**	**-2.0**
CD2	**Chengdu**	**18.23**	**308**	P	**P**	**11 54 27.8**	**+3.3**
CD2				pmax	pmax		
	comp=Z,40nm,1.3s						
CD2				LR	LR		
	comp=Z,1μm,12.1s						
CD2				LR	LR		
	comp=Z,990nm,11.4s						
SEHB	**SEOHWA**	**18.91**	**19**	P	**P**	**11 54 32.0**	**+0.2**
TOLI2	**Tolitoli**	**19.32**	**179**	P	**P**	**11 54 35.5**	**-0.9**
TOLI2	**Tolitoli**	**19.32**	**179**	P	**Pn**	**11 54 38.8**	**+1.2**
SBUM	**Sibu**	**19.70**	**205**	P	**P**	**11 54 41.2**	**+0.5**
BJT	**Baijiatuau**	**19.76**	**350**		**P**	**11 54 40.0**	**-1.1**
BJT				IAmb	IAmb	11 54 54.9	
	comp=Z,82nm,1.3s						
BJI	**Beijing**	**19.78**	**350**	P	**Pn**	**11 54 42.7**	**-0.2**
BJI				S	**Sn**	**11 58 25.0**	**+0.6**
BJI				pmax	pmax		
	comp=Z,16nm,1.2s						
BJI				LR	LR		
	comp=Z,230nm,13.9s						
BJI				LR	LR		
	comp=Z,610nm,15.1s						
BJI				LR	LR		
	comp=Z,620nm,11.8s						
MRSI	**Marisa**	**19.99**	**176**	P	**Pn**	**11 54 45.7**	**0.0**
	comp=Z,654nmcomp=Z,59nm,0.6s						
MPSI	**Mapaga**	**20.09**	**182**	P	Pn	11 54 49.5	+2.7
	comp=Z,3μmcomp=Z,23nm,1.3s						
KMSI	**Cibinong**	**20.14**	**170**	P	Pn	11 54 55.9	+8.5
CHTO	**Chiang Mai**	**20.34**	**269**	P	**P**	**11 54 46.9**	**-0.7**
CMAR	**Chiang Mai Arr**	**20.39**	**268**	P	**P**	**11 54 49.0**	**+0.7**
	comp=Z,3.9nm,0.8s,baz=75,slow=9.3,SNR=21						
CMAR				PcP	**PcP**	**11 59 01.5**	**+1.0**
	comp=Z,1.9nm,0.6s,baz=292,slow=0.2,SNR=9.9						
CMAR				LR	LR	12 03 22.2	
	comp=Z,481nm,18.0s,baz=85,slow=39						
	comp=Z,3.9nm,0.8s						
CMAR	**Chiang Mai Arr**	**20.39**	**268**	P	**P**	**11 54 47.6**	**-0.7**
CM31	**Chiang Mai Arr**	**20.39**	**268**	P	**P**	**11 54 47.9**	**-0.4**
INU	**Inuyama**	**20.72**	**41**	P	**P**	**11 54 49.5**	**-2.1**
INU				IAmb	IAmb	11 54 57.7	
	comp=Z,69nm,0.9s						
INU	**Inuyama**	**20.72**	**41**	P	Pn	11 54 53.6	-0.5
TNTI	**Ternate**	**20.77**	**160**	P	**P**	**11 54 51.8**	**-0.5**
TNTI	**Ternate**	**20.77**	**160**	P	Pn	11 55 02.4	+7.6
JCJ	**Chichijima**	**20.90**	**68**	P	**P**	**11 54 51.9**	**-1.7**
	comp=Z,80nm,0.7s,baz=292,slow=16,SNR=5.3						
JCJ				LR	LR	12 02 12.4	
	comp=Z,244nm,21.3s,baz=128,slow=35						
	comp=Z,80nm,0.7s						
JCJ	**Chichijima**	**20.90**	**68**	P	**P**	**11 54 52.1**	**-1.5**
JCJ	**Chichijima**	**20.90**	**68**	P	**P**	**11 54 53.8**	**+0.2**
JGF	**Kuroka**	**21.10**	**41**	P	**P**	**11 54 55.2**	**-0.5**
LZH	**Lanzhou**	**21.26**	**320**	*e*P	**P**	**11 54 59.2**	**+1.6**
LZH				sP	pwP	11 55 09.1	+1.2
LZH				PP	**PnPn**	**11 55 26.0**	**+8.5**
LZH				S	**S**	**11 58 51.5**	**-1.2**
LZH				pmax	pmax		
	comp=Z,27nm,1.0s						
LZH				pmax	pmax		
	comp=Z,190nm,4.6s						
LZH				LR	LR		
	comp=Z,750nm,10.6s						
LZH				LR	LR		
	comp=Z,650nm,10.6s						
LZH				LR	LR		
	comp=Z,780nm,11.4s						
JHJ	**Hachijo jima 2**	**21.27**	**50**	P	**P**	**11 54 56.5**	**-1.0**
	comp=Z,158nm,0.8s,baz=202,slow=5.4,SNR=3.2						
JHJ				LR	LR	12 02 23.5	
	comp=Z,240nm,21.8s,baz=287,slow=34						
	comp=Z,158nm,0.8s						
APSI	**Ampana**	**21.35**	**177**	P	**P**	**11 55 01.3**	**+2.8**
	comp=Z,1μmcomp=Z,105nm,1.1s						
KSM	**Kuching**	**21.39**	**209**	P	**P**	**11 54 58.6**	**-0.4**
KSM	**Kuching**	**21.39**	**209**	P	**P**	**11 55 00.5**	**+1.5**
LUWI	**Luwuk**	**21.57**	**174**	P	**P**	**11 55 00.6**	**-0.3**
LUWI	**Luwuk**	**21.57**	**174**	P	**P**	**11 55 05.5**	**+4.6**
	comp=Z,3μmcomp=Z,237nm,1.2s						
HHC	**Hu-ho-hao-te**	**21.62**	**341**	*e*P	**P**	**11 55 07.7**	**+6.4**
HHC				pP	pwP	11 55 12.3	+0.6
HHC				pmax	pmax		
	comp=Z,49nm,0.8s						
HHC				pmax	pmax		
	comp=Z,300nm,4.9s						
HHC				LR	LR		
	comp=Z,2μm,12.5s						
HHC				LR	LR		
	comp=Z,1μm,12.5s						
HHC				LR	LR		
	comp=Z,1μm,13.5s						
BTO	**Baotou**	**21.89**	**338**	*e*P	P	11 55 15.5	+11
BKB	**Balikpapan**	**21.95**	**190**	P	**P**	**11 55 03.7**	**-1.3**
BKB	**Balikpapan**	**21.95**	**190**	P	**P**	**11 55 08.4**	**+3.5**
	comp=Z,338nm,0.9s						
MTKI	**Muara Teweh, K**	**22.04**	**195**	P	**P**	**11 55 07.3**	**+1.4**
LBMI	**Labuha**	**22.15**	**161**	P	**P**	**11 55 08.2**	**+1.1**
	comp=Z,956nmcomp=Z,98nm,0.9s						
STKI	**Sintang**	**22.17**	**204**	P	**P**	**11 55 07.8**	**+0.5**
MAJO	**Matsushiro**	**22.23**	**40**	P	**P**	**11 55 06.1**	**-1.8**
MAJO				IAmb	IAmb	11 55 15.4	
	comp=Z,47nm,1.1s						
MAJO	**Matsushiro**	**22.23**	**40**	P	**P**	**11 55 07.1**	**-0.8**
MJB9	**Matsu-Tunnel**	**22.23**	**40**	P	**P**	**11 55 06.2**	**-1.7**
MJB9				IAmb	IAmb	11 55 15.4	
	comp=Z,47nm,1.1s						
MJAR	**Matsushiro Arr**	**22.23**	**40**	P	**P**	**11 55 07.6**	**-0.4**
	comp=Z,12nm,0.8s,baz=218,slow=8.2,SNR=32						
	comp=Z,12nm,0.8s						
MJAR	**Matsushiro Arr**	**22.23**	**40**	P	**P**	**11 55 06.0**	**-2.0**
MJAR				IAmb	IAmb	11 55 16.1	
	comp=Z,33nm,1.1s						
SANI	**Sanana**	**23.09**	**166**	P	**P**	**11 55 15.0**	**-2.1**
	comp=Z,927nmcomp=Z,109nm,0.9s						
JSD	**Sado**	**23.27**	**38**	P	**P**	**11 55 15.1**	**-3.6**
JYT	**Yasato**	**23.29**	**44**	P	**P**	**11 55 15.6**	**-3.3**
JYT				IAmb	IAmb	11 55 22.0	
	comp=Z,29nm,0.9s						
SRIT	**Nakonsritamara**	**23.39**	**243**	P	**P**	**11 55 17.1**	**-3.0**
SRIT				IAmb	IAmb	11 55 26.4	
	comp=Z,36nm,1.2s						
TTSI	**Tana Toraja**	**23.45**	**182**	P	**P**	**11 55 25.1**	**+4.5**
	comp=Z,27nm,0.8s						
CN2	**Changchun**	**23.56**	**9**	*e*P	**P**	**11 55 21.6**	**+0.1**
CN2				S	**S**	**11 59 32.2**	**-1.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,600nm,13.0s						
CN2				LR	LR		
	comp=Z,300nm,13.0s						
CN2				LR	LR		
	comp=Z,700nm,15.0s						
XLT	**XiLinHaoTe**	**23.58**	**352**	*e*P	**P**	**11 55 23.0**	**+1.2**
XLT				sP	sP	11 55 30.1	-1.2
XLT				S	**S**	**11 59 35.8**	**+1.3**
XLT				sS	pS	11 59 40.8	-0.6
XLT				SS	**SnSn**	**12 00 19.6**	**+7.3**
XLT				pmax	pmax		
	comp=Z,29nm,1.2s						
XLT				LR	LR		
	comp=Z,43nm,13.1s						
XLT				LR	LR		
	comp=Z,370nm,12.9s						
XLT				LR	LR		
	comp=Z,380nm,12.8s						
SWI	**Sorong**	**23.75**	**152**	P	**P**	**11 55 24.7**	**+1.1**
	comp=Z,1μmcomp=Z,99nm,0.9s						
SIJI	**Sorong**	**23.76**	**152**	P	**P**	**11 55 23.8**	**+0.1**
	comp=Z,59nm,0.7s,baz=28,slow=3.6,SNR=24						
	comp=Z,59nm,0.7s						
GUMO	**Guam**	**24.31**	**103**	P	**P**	**11 55 27.9**	**-0.9**
	comp=Z,194nm,1.1s,baz=209,slow=7.1,SNR=14						
GUMO				LR	LR	12 02 59.1	
	comp=Z,114nm,20.9s,baz=268,slow=32						
GUMO	**Guam**	**24.31**	**103**	P	**P**	**11 55 27.3**	**-1.5**
GUMO	**Guam**	**24.31**	**103**	P	**P**	**11 55 29.4**	**+0.6**
SPSI	**Sidrap Palu**	**24.36**	**182**	P	**P**	**11 55 30.7**	**+1.5**
	comp=Z,30nm,1.0s						
BBKI	**Banjar Baru**	**24.49**	**194**	P	**P**	**11 55 31.5**	**+1.1**
	comp=Z,48nm,1.0s						
KULM	**Kulim**	**24.50**	**234**	P	**P**	**11 55 30.8**	**+0.2**
KULM				IAmb	IAmb	11 55 41.6	
	comp=Z,21nm,0.9s						
JMM	**Marumori**	**24.67**	**41**	P	**P**	**11 55 31.3**	**-0.5**
JMM				IAmb	IAmb	11 55 36.6	
	comp=Z,42nm,1.1s						
MYKOM	**Kota Tinggi**	**24.71**	**223**	P	**P**	**11 55 32.6**	**+0.1**
MYKOM				IAmb	IAmb	11 55 33.9	
	comp=Z,21nm,0.8s						
IPM	**Ipoh**	**24.75**	**232**	P	**P**	**11 55 32.5**	**-0.3**
IPM				IAmb	IAmb	11 55 33.8	
	comp=Z,41nm,1.0s						
MSAI	**Masohi**	**25.15**	**160**	P	**P**	**11 55 38.9**	**+2.5**
	comp=Z,1μmcomp=Z,23nm,1.0s						
MDJ	**Mudanjiang**	**25.17**	**15**	P	**P**	**11 55 36.7**	**+0.4**
MDJ				IAmb	IAmb	11 55 39.5	
	comp=Z,33nm,0.8s						
MDJ	**Mudanjiang**	**25.17**	**15**	P	**P**	**11 55 36.7**	**+0.4**
MDJ				S	**S**	**12 00 03.5**	**+3.6**
MDJ				sS	pS	12 00 07.6	+0.2
MDJ				pmax	pmax		
	comp=Z,16nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,160nm,4.2s						
MDJ				LR	LR		
	comp=Z,340nm,17.1s						
MDJ				LR	LR		
	comp=Z,260nm,15.7s						
MDJ				LR	LR		
	comp=Z,420nm,18.5s						
AAI	**Ambon**	**25.25**	**162**	P	**P**	**11 55 39.7**	**+2.5**
	comp=Z,4μmcomp=Z,89nm,0.9s						
KAPI	**Kappang**	**25.41**	**182**	P	**P**	**11 55 38.6**	**-0.1**
	comp=Z,23nm,0.8s,baz=352,slow=14,SNR=9.9						
KAPI				LR	LR	12 06 06.3	
	comp=Z,160nm,18.7s,baz=8.5,slow=38						
	comp=Z,23nm,0.8s						
KAPI	**Kappang**	**25.41**	**182**	P	**P**	**11 55 38.7**	**+0.1**
KAPI				IAmb	IAmb	11 55 43.0	
	comp=Z,31nm,0.8s						
USA0B	**Ussuriysk Arra**	**25.47**	**20**	P	**P**	**11 55 38.4**	**-0.7**
USRK	**Ussuriysk Ar.**	**25.47**	**20**	P	**P**	**11 55 38.9**	**-0.1**
	comp=Z,10nm,0.9s,baz=216,slow=8.3,SNR=12						
USRK				LR	LR	12 06 05.3	
	comp=Z,108nm,20.3s,baz=211,slow=37						
	comp=Z,10nm,0.9s						
USRK	**Ussuriysk Ar.**	**25.47**	**20**	P	**P**	**11 55 37.4**	**-1.6**
BKSI	**Bulukumba**	**25.70**	**181**	P	**P**	**11 55 44.9**	**+3.5**
	comp=Z,17nm,0.7s						
GTA	**Gaotai**	**25.85**	**321**	⇑P	**P**	**11 55 43.9**	**+1.2**
GTA				pP	pP	11 55 49.6	+0.2
GTA				sP	pwP	11 55 54.1	+0.5
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,36nm,4.7s						
GTA				LR	LR		
	comp=Z,310nm,14.9s						
GTA				LR	LR		
	comp=Z,300nm,16.0s						
GTA				LR	LR		
	comp=Z,440nm,14.5s						
FAKI	**Fak Fak**	**26.02**	**152**	P	**P**	**11 55 43.6**	**-0.8**
FAKI	**Fak Fak**	**26.02**	**152**	P	**P**	**11 55 45.8**	**+1.5**
	comp=Z,590nmcomp=Z,74nm,0.8s						
FAKI	**Fak Fak**	**26.02**	**152**	P	**P**	**11 55 45.4**	**+1.1**
BAKI	**Biak**	**26.48**	**143**	P	**P**	**11 55 51.3**	**+2.8**
	comp=Z,39nm,1.5s						
JTM	**Tenmabayashi**	**26.73**	**36**	P	**P**	**11 55 49.5**	**-1.1**
GOMU	**GeErMu**	**27.32**	**310**	⇓*i*P	**P**	**11 55 58.1**	**+1.8**
GOMU				pP	pP	11 56 01.1	-2.0
GOMU				S	**S**	**12 00 33.2**	**-1.6**
GOMU				pmax	pmax		
	comp=Z,12nm,1.0s						
GOMU				pmax	pmax		
	comp=Z,65nm,5.9s						
GOMU				LR	LR		
	comp=Z,380nm,14.8s						
GOMU				LR	LR		
	comp=Z,300nm,14.1s						
GOMU				LR	LR		
	comp=Z,310nm,15.1s						
PSI	**Prapat**	**27.42**	**233**	P	**P**	**11 55 56.9**	**-0.3**
	comp=Z,23nm,1.0s,baz=19,slow=5.5,SNR=6.9						
PSI				LR	LR	12 05 39.1	
	comp=Z,278nm,18.4s,baz=47,slow=34						
	comp=Z,23nm,1.0s						
RPSI	**Rantau Prapat**	**27.49**	**233**	P	**P**	**11 55 56.9**	**-0.7**
LSA	**Lhasa**	**28.00**	**295**	P	**P**	**11 56 02.4**	**-0.2**
LSA				IAmb	IAmb	11 56 05.5	
	comp=Z,13nm,0.8s						
LSA	**Lhasa**	**28.00**	**295**	P	**P**	**11 56 04.0**	**+1.4**
LSA				S	**S**	**12 00 45.0**	**-0.8**
LSA				pmax	pmax		
	comp=Z,21nm,0.9s						
LSA				LR	LR		
	comp=Z,200nm,13.5s						
LSA				LR	LR		
	comp=Z,290nm,11.4s						
LSA				LR	LR		
	comp=Z,310nm,11.4s						
MNSI	**Mandailing Nat**	**28.32**	**229**	P	**P**	**11 56 04.9**	**-0.1**
	comp=Z,86nm,0.9s						
JEW	**Eniwo**	**28.36**	**34**	P	**P**	**11 56 02.6**	**-2.5**
MMRI	**Maumere**	**29.05**	**176**	P	**P**	**11 56 09.3**	**-2.1**
MMRI	**Maumere**	**29.05**	**176**	P	**P**	**11 56 14.6**	**+3.2**
	comp=Z,32nm,0.7s						
EDFI	**Ende, Flores**	**29.13**	**178**	P	**P**	**11 56 12.0**	**-0.3**
	comp=Z,24nm,1.4s						
ULN	**Ulaanbaatar**	**29.34**	**341**	P	**P**	**11 56 11.0**	**-2.9**
ULN				IAmb	IAmb	11 56 22.7	
	comp=Z,10nm,0.8s						
GSI	**Gunungsitoli**	**29.42**	**232**	P	**P**	**11 56 12.1**	**-2.7**
SONM	**Songino Array**	**29.51**	**341**	P	**P**	**11 56 16.0**	**+0.5**
	comp=Z,1.8nm,0.7s,baz=159,slow=9.4,SNR=9.3						
SONM				LR	LR	12 08 28.8	
	comp=Z,199nm,19.5s,

RAMN **Ramite** 31.58 288 *e*P P 11 56 35.2 +1.1
comp=Z,57nm,0.9s
YSS **Yuzh-Sakhalins** 31.99 29 P P 11 56 35.0 -2.1
JIRN **Jiri** 32.01 290 *e*P P 11 56 39.0 +1.0
GUN **Gumba** 32.30 290 *e*P P 11 56 41.4 +0.9
comp=Z,109nm,0.9s
PKI **Pulchoki** 32.69 289 *e*P P 11 56 44.1 +0.2
GKN **Gorkha** 33.41 290 *e*P P 11 56 50.0 0.0
DANN **Dangsing** 34.21 290 *e*P P 11 56 57.4 +0.3
KOLN **Koldanda** 34.30 289 *e*P P 11 56 57.5 -0.3
MTN **Manton Dam** 34.80 162 P P 11 56 59.8 -2.1
MTN IAmb IAmb 11 57 02.9
comp=Z,12nm,0.7s
PYUN **Piuthan** 34.86 290 *e*P P 11 57 03.2 +0.5
comp=Z,26nm,0.7s
KDU **Kakadu** 35.07 159 P P 11 57 03.0 -1.2
WMQ **Urumqi** 35.80 318 *e*P P 11 57 09.0 -1.4
WMQ pP pP 11 57 16.6 -0.6
WMQ pmax pmax
comp=Z,24nm,0.6s
WMQ LR LR
comp=Z,420nm,14.9s
WMQ LR LR
comp=Z,200nm,18.3s
WMQ LR LR
comp=Z,130nm,16.3s
KNRA **Kununurra** 36.90 167 P P 11 57 18.8 -1.1
KNRA IAmb IAmb 11 57 20.9
comp=Z,24nm,1.1s
KNRA **Kununurra** 36.90 167 P P 11 57 18.9 -1.0
PMG **Port Moresby** 39.69 136 P P 11 57 42.4 -1.0
comp=Z,18nm,0.8s,baz=27,slow=5.3,SNR=5.6
comp=Z,18nm,0.8s
PMG **Port Moresby** 39.69 136 P P 11 57 43.1 -0.3
PMG IAmb IAmb 11 57 44.6
comp=Z,18nm,0.8s
MK31 **Makanchi Array** 40.57 319 P P 11 57 51.8 +1.3
MKAR **Makanchi Array** 40.57 319 P P 11 57 51.2 +0.7
comp=Z,3.5nm,0.6s,baz=115,slow=9.2,SNR=47
MKAR PcP PcP 11 59 52.7 +0.3
comp=Z,2.0nm,0.9s,baz=91,slow=5.0,SNR=3.7
comp=Z,3.5nm,0.6s
MKAR **Makanchi Array** 40.57 319 P P 11 57 51.8 +1.3
PALK **Pallekele** 40.66 257 LR LR 12 15 07.2
comp=Z,121nm,18.1s,baz=162,slow=37
MAKZ **Makanchi** 40.77 319 P P 11 57 52.1 0.0
COEN **Coen** 40.91 145 P P 11 57 53.4 -0.1
COEN IAmb IAmb 11 57 55.4
comp=Z,12nm,0.7s
COEN **Coen** 40.91 145 P P 11 57 54.1 +0.6
MBWA **Marble Bar** 41.45 181 P P 11 57 57.0 -0.8
MBWA IAmb IAmb 11 57 57.7
comp=Z,27nm,1.3s
MBWA **Marble Bar** 41.45 181 P P 11 57 56.8 -1.1
PSA00 **Pilbara Seismi** 41.86 181 P P 11 57 59.8 -1.5
PSA00 **Pilbara Seismi** 41.86 181 P P 11 58 00.5 -0.7
YAK **Yakutsk** 41.95 6 LR LR 12 18 36.4
comp=Z,180nm,18.2s,baz=266,slow=41
KDJ **Kajisay** 42.22 311 P P 11 58 03.3 -1.0
WB0 **Warramunga Arr** 42.32 160 P P 11 58 03.8 -1.2
WB0 IAmb IAmb 11 58 05.3
comp=Z,31nm,0.9s
KSH **Kashi** 42.42 307 P P 11 58 10.6 +4.7
KSH sP pwP 11 58 20.5 +3.7
KSH pmax pmax
comp=Z,7.0nm,1.0s
KSH LR LR
comp=Z,270nm,14.1s
WRAB **Tennant Creek** 42.46 160 P P 11 58 05.5 -0.6
WRAB **Tennant Creek** 42.46 160 P P 11 58 05.6 -0.6
WRA **Warramunga Arr** 42.47 160 P P 11 58 05.5 -0.8
comp=Z,27nm,0.9s,baz=343,slow=9.0,SNR=98
WRA PcP PcP 11 59 58.9 0.0
comp=Z,2.5nm,0.5s,baz=348,slow=3.6,SNR=5.8
WRA S S 12 04 25.1 -1.7
comp=Z,1.5nm,0.9s,baz=346,slow=15,SNR=6.6
comp=Z,27nm,0.9s
WRA **Warramunga Arr** 42.47 160 P P 11 58 04.8 -1.4
WB2 **Warramunga Arr** 42.47 160 P P 11 58 05.2 -1.0
WR0 **Warramunga Arr** 42.55 160 P P 11 58 06.2 -0.6
ZAA0 **Zalesovo Array** 42.98 330 P P 11 58 10.6 +0.5
ZAA0 IAmb IAmb 11 58 22.2
comp=Z,22nm,1.1s
ZALV **Zalesovo Beam** 42.98 330 P P 11 58 10.4 +0.4
comp=Z,11nm,0.7s,baz=116,slow=7.7,SNR=42
ZALV LR LR 12 16 45.0
comp=Z,84nm,20.9s,baz=117,slow=37
comp=Z,11nm,0.7s
ZALV **Zalesovo Beam** 42.98 330 P P 11 58 10.6 +0.5
PETK **Petropavlovsk-** 43.27 32 P P 11 58 11.6 -0.8
comp=Z,3.9nm,0.6s,baz=215,slow=8.0,SNR=6.1
PETK LR LR 12 16 21.1
comp=Z,108nm,21.0s,baz=240,slow=36
comp=Z,3.9nm,0.6s
PETK **Petropavlovsk-** 43.27 32 P P 11 58 10.5 -1.9
GIRL **Giralia** 43.35 188 P P 11 58 13.5 +0.2
H11N1 **WAKE ISLAND Hy** 43.48 83 T T 12 44 49.6
baz=278,slow=75,SNR=3.9
H11N2 **WAKE ISLAND Hy** 43.49 83 T T 12 44 49.7
baz=278,slow=75,SNR=3.4
H11N3 **WAKE ISLAND Hy** 43.50 83 T T 12 44 52.2
baz=278,slow=75,SNR=5.4
H11S3 **WAKE ISLAND Hy** 43.50 84 T T 12 44 51.6
baz=281,slow=74,SNR=14
H11S1 **WAKE ISLAND Hy** 43.51 84 T T 12 44 48.0
baz=281,slow=74,SNR=9.1
H11S2 **WAKE ISLAND Hy** 43.52 84 T T 12 44 49.5
baz=281,slow=74,SNR=14
AAK **Ala-Archa** 44.27 311 P P 11 58 20.2 -0.6
KURK **Kurchatov** 44.51 323 P P 11 58 22.4 0.0
KURK IAmb IAmb 11 58 35.2
comp=Z,27nm,1.2s
KURBB **Kurchatov Arra** 44.52 323 LR LR 12 16 44.4
comp=Z,99nm,18.3s,baz=137,slow=36
MA2 **Magadan** 44.59 21 LR LR 12 18 36.9
comp=Z,65nm,18.8s,baz=284,slow=38
QIS **Mount Isa** 44.94 154 P P 11 58 26.4 +0.3
MTSU **Mount Surprise** 44.99 147 P P 11 58 27.8 +1.2
AS31 **Alice Springs** 45.85 163 P P 11 58 33.3 0.0
ASAR **Alice Springs** 45.85 163 P P 11 58 33.0 -0.3
comp=Z,10nm,0.5s,baz=347,slow=7.0,SNR=198
ASAR PcP PcP 12 00 10.2 -0.3
comp=Z,1.4nm,0.6s,baz=349,slow=2.8,SNR=1.4
ASAR S S 12 05 18.1 +2.0
comp=Z,0.9nm,0.9s,baz=353,slow=23,SNR=6.6
comp=Z,10nm,0.5s
ASAR **Alice Springs** 45.85 163 P P 11 58 33.5 +0.2
WRKA **Warakurna** 45.94 170 P P 11 58 33.8 -0.2
GAR **Garm** 46.64 305 P P 11 58 39.1 -0.5
KBL **Kabul** 47.21 298 P P 11 58 43.8 -0.5
KBL IAmb IAmb 11 58 57.0
comp=Z,19nm,1.2s
KK31 **Karatay Array** 47.22 310 P P 11 58 43.6 -0.3
KK31 IAmb IAmb 11 58 56.9
comp=Z,18nm,1.1s
KKAR **Karatay Array** 47.22 310 P P 11 58 43.8 -0.2
KKAR IAmb IAmb 11 58 56.9
comp=Z,18nm,1.1s
KKAR **Karatay Array** 47.22 310 P P 11 58 43.6 -0.3
CHGR **Chuyangaron** 47.49 304 P P 11 58 45.9 -0.3
SEY **Seymchan** 47.62 19 LR LR 12 19 49.1
comp=Z,75nm,18.4s,baz=206,slow=37
CTA **Charters Tower** 47.62 146 P P 11 58 48.5 +1.3
CTAO **Charters Tower** 47.62 146 P P 11 58 47.0 -0.2
CTAO **Charters Tower** 47.62 146 P P 11 58 48.7 +1.5
MORW **Morawa** 49.51 185 P P 11 59 01.2 -0.3
MORW **Morawa** 49.51 185 P P 11 59 01.0 -0.6
BRVK **Borovoye** 50.18 323 P P 11 59 06.4 -0.1
BRVK IAmb IAmb 11 59 20.5
comp=Z,11nm,1.0s
OOD **Oodnadatta** 50.26 162 P P 11 59 07.8 +0.5
BLDU **Ballidu** 50.99 184 P P 11 59 12.0 -0.8
TIXI **Tiksi** 51.35 3 LR LR 12 22 06.5
comp=Z,159nm,18.6s,baz=180,slow=37
TIXI **Tiksi** 51.35 3 P P 11 59 15.2 +0.2
FORT **Forrest** 51.55 172 P P 11 59 16.8 -0.1
FORT **Forrest** 51.55 172 P P 11 59 16.8 -0.1
KLBR **Kellerberrin** 51.90 183 P P 11 59 18.9 -0.7
SHEM **Shemya Is, Ala** 52.06 38 LR LR 12 24 14.0
comp=Z,32nm,18.6s,baz=124,slow=39
MULG **Mulgathing** 52.20 165 P P 11 59 22.0 +0.2
NRIK **Noril'sk** 52.74 346 P P 11 59 25.9 +0.5
comp=Z,3.2nm,0.7s,baz=137,slow=7.5,SNR=5.1
comp=Z,3.2nm,0.7s
NRIK **Noril'sk** 52.74 346 P P 11 59 24.6 -0.8
NRIK IAmb IAmb 11 59 38.3
comp=Z,12nm,0.9s
HRA **Herat** 52.82 298 P P 11 59 27.0 +0.2
NWAO **Narrogin (SRO)** 53.26 183 P P 11 59 29.4 -0.2
LCRK **Leigh Creek** 53.49 161 P P 11 59 32.0 +0.6
BBOO **Buckleboo** 55.11 164 P P 11 59 43.4 +0.3
BBOO **Buckleboo** 55.11 164 P P 11 59 43.3 +0.2
BILL **Bilibino** 55.32 19 P P 11 59 44.8 +0.5
BILL IAmb IAmb 11 59 55.5
comp=Z,7.9nm,0.7s
ABKAR **Akbulak array** 55.55 316 P P 11 59 47.1 +0.9
ABKAR **Akbulak array** 55.55 316 P P 11 59 47.1 +0.9
ABKAR IAmb IAmb 11 59 58.4
comp=Z,12nm,1.1s
STKA **Stephens Creek** 55.92 158 P P 11 59 48.5 -0.4
comp=Z,10nm,0.8s,baz=342,slow=7.6,SNR=24
comp=Z,10nm,0.8s
STKA **Stephens Creek** 55.92 158 P P 11 59 49.8 +0.8
NAPP **Napperby** 56.03 162 P P 11 59 50.7 +1.0
GYA0B **ALIBECK ARRAY** 56.12 302 P P 11 59 50.0 -0.6
GYA0B IAmb IAmb 12 00 03.4
comp=Z,19nm,1.1s
HTT **Hallett** 56.49 161 P P 11 59 53.7 +0.6
AKTO **Aktyubinsk** 56.95 317 LR LR 12 24 11.1
comp=Z,117nm,18.3s,baz=105,slow=36
CMSA **Cobar Meteorol** 57.16 154 P P 11 59 59.0 +1.2
ARU **Arti** 57.64 325 LR LR 12 25 59.1
comp=Z,89nm,20.0s,baz=108,slow=37
ARU **Arti** 57.64 325 P P 12 00 00.2 -0.8
ARU IAmb IAmb 12 00 02.4
comp=Z,16nm,1.1s
TWOA **Tennyson Woods** 57.88 162 P P 12 00 03.9 +1.1
ARPS **Mount Arapiles** 60.47 160 P P 12 00 21.4 +0.7
DZM **Mont Dzumac** 61.72 131 P P 12 00 29.4 -0.2
comp=Z,6.0nm,0.8s,baz=33,slow=9.1,SNR=1.6
DZM LR LR 12 25 01.3
comp=Z,54nm,18.9s,baz=227,slow=34
comp=Z,6.0nm,0.8s
TOO **Toolangi** 62.42 158 P P 12 00 35.0 +1.0
TOO **Toolangi** 62.42 158 P P 12 00 35.3 +1.4
BELG **Belogornoye** 63.57 319 LR LR 12 31 14.3
comp=Z,83nm,18.2s,baz=357,slow=39
GNI **Garni** 66.35 306 LR LR 12 32 35.6
comp=Z,53nm,18.6s,baz=48,slow=38
KBZ **Khabaz** 67.26 310 P P 12 01 06.0 +0.5
comp=Z,11nm,0.9s,baz=101,slow=3.2,SNR=19
KBZ LR LR 12 32 29.0
comp=Z,45nm,19.7s,baz=80,slow=38
comp=Z,11nm,0.9s
KVAR **Kislovodsk Arr** 67.38 310 LR LR 12 32 48.1
comp=Z,83nm,19.7s,slow=38
KIV **Kislovodsk** 67.38 310 P P 12 01 07.8 +1.4
TAU **Tasmania Unive** 67.81 159 P P 12 01 07.9 -0.8
N16K **Nishlik Lake** 67.82 32 P P 12 01 08.3 -0.5
baz=273
MSVF **Nonsavu** 68.09 120 LR LR 12 28 23.9
comp=Z,54nm,19.4s,baz=185,slow=34
O16K **Kokwok River B** 68.20 33 P P 12 01 10.3 -0.9
baz=274
GURO **Guroymak-BITLI** 68.66 304 P P 12 01 16.3 +1.6
GURO IAmb IAmb 12 01 17.5
comp=Z,11nm,1.2s
RAYN **Ar Rayn** 68.80 288 P P 12 01 16.3 +0.7
TTA **Tatalina** 68.99 29 P P 12 01 16.4 +0.3
TTA IAmb IAmb 12 01 25.2
comp=Z,13nm,1.4s
TTA **Tatalina** 68.99 29 P P 12 01 15.6 -0.5
baz=274
N18K **Kilae Creek** 69.22 32 P P 12 01 17.2 -0.4
baz=275
L19K **White Mountain** 69.58 30 P P 12 01 20.3 +0.6
L19K IAmb IAmb 12 01 31.3
comp=Z,9.8nm,1.1s
L19K **White Mountain** 69.58 30 P P 12 01 19.4 -0.4
baz=275
O18K **Koktuh Hills** 69.64 32 P P 12 01 21.1 +1.0
O18K IAmb IAmb 12 01 33.5
comp=Z,12nm,1.0s
O18K **Koktuh Hills** 69.64 32 P P 12 01 19.1 -1.1
baz=276
J20K **Nowinta River** 69.72 28 P P 12 01 22.3 +1.8
J20K IAmb IAmb 12 01 33.6
comp=Z,8.6nm,1.1s
J20K **Nowinta River** 69.72 28 P P 12 01 20.1 -0.4
baz=275
IMAR **Indian Mountai** 69.73 26 P P 12 01 22.5 +2.0
M19K **Big River Lodg** 69.83 30 P P 12 01 20.3 -0.9
baz=276
K20K **Telida** 69.83 29 P P 12 01 19.9 -1.3
baz=276
MARD **Mardin** 69.86 303 P P 12 01 23.5 +1.5
N19K **Bonanza Creek** 69.90 31 P P 12 01 20.9 -0.9
baz=276
L20K **Farewell, AK** 70.01 30 P P 12 01 21.4 -0.9
baz=276
O19K **Port Alsworth** 70.05 32 P P 12 01 21.8 -0.8
O19K IAmb IAmb 12 01 28.3
comp=Z,18nm,1.2s
H21K **Melozitna Rive** 70.15 26 P P 12 01 23.2 +0.1
H21K IAmb IAmb 12 01 28.8
comp=Z,11nm,1.1s
H21K **Melozitna Rive** 70.15 26 P P 12 01 22.5 -0.6
baz=276
M20K **Styx River** 70.42 30 P P 12 01 24.7 -0.2
M20K IAmb IAmb 12 01 38.4
comp=Z,8.3nm,1.0s
M20K **Styx River** 70.42 30 P P 12 01 24.2 -0.8
baz=277
CHUM **Lake Minchumin** 70.55 28 P P 12 01 25.0 -0.6
baz=277
SII **Sitkinak Islan** 70.58 36 P P 12 01 25.4 -0.5
baz=278
CAST **Castle Rocks** 70.71 28 P P 12 01 25.8 -0.9
CAST IAmb IAmb 12 01 37.8
comp=Z,11nm,0.9s
CAST **Castle Rocks** 70.71 28 P P 12 01 26.2 -0.5
baz=277
PPLA **Purkeypile** 70.73 29 P P 12 01 25.7 -1.2
baz=277
TOLK **Toolik Lake Re** 71.05 23 P P 12 01 28.6 -0.1
TOLK IAmb IAmb 12 01 41.0
comp=Z,6.3nm,0.8s
TOLK **Toolik Lake Re** 71.05 23 P P 12 01 27.9 -0.7
baz=278
MLY **Manley** 71.08 27 P P 12 01 28.7 -0.2
MLY IAmb IAmb 12 01 34.8
comp=Z,7.2nm,0.8s
MLY **Manley** 71.08 27 P P 12 01 27.5 -1.4
baz=278,SNR=7.1
BPAW **Bear Paw Mtn.** 71.11 28 P P 12 01 29.8 +0.8
BPAW IAmb IAmb 12 01 35.7
comp=Z,17nm,1.3s
BPAW **Bear Paw Mtn.** 71.11 28 P P 12 01 27.7 -1.4
baz=278,SNR=6.8
SKT **Skwentna** 71.16 30 P P 12 01 27.9 -1.4
SKT **Skwentna** 71.16 30 P P 12 01 28.0 -1.4
baz=278
KDAK **Kodiak Island** 71.26 34 LR LR 12 32 57.8
comp=Z,41nm,20.3s,baz=236,slow=36
H23K **Yukon River** 71.46 26 P P 12 01 33.0 +1.9
H23K IAmb IAmb 12 01 37.0
comp=Z,9.4nm,0.8s
H23K **Yukon River** 71.46 26 P P 12 01 29.8 -1.3
baz=279,SNR=13
TRF **Thorofare Moun** 71.51 28 P P 12 01 29.7 -1.9
baz=279
SUA **Susitna One** 71.61 30 P P 12 01 33.5 +1.3
SUA **Susitna One** 71.61 30 P P 12 01 30.4 -1.9
baz=279
I23K **Minto, Yukon-K** 71.64 26 P P 12 01 30.9 -1.3
I23K **Minto, Yukon-K** 71.64 26 P P 12 01 30.5 -1.6
baz=279
NEA2 **Nenana** 71.86 27 P P 12 01 33.9 +0.4
NEA2 IAmb IAmb 12 01 38.9
comp=Z,9.2nm,0.8s
NEA2 **Nenana** 71.86 27 P P 12 01 31.8 -1.7
baz=280,SNR=6.4
M22K **Willow** 71.86 30 P P 12 01 32.8 -0.7
M22K **Willow** 71.86 30 P P 12 01 32.1 -1.4
baz=280
BRSE **Bradley Lake S** 71.89 32 P P 12 01 32.7 -1.1
baz=280
MCK **McKinley** 72.06 28 P P 12 01 33.9 -0.8
MCK IAmb IAmb 12 01 39.8
comp=Z,16nm,1.1s
MCK **McKinley** 72.06 28 P P 12 01 34.0 -0.8
baz=280
H24K **Noodor Dome** 72.14 26 P P 12 01 34.5 -0.7
H24K IAmb IAmb 12 01 48.5
comp=Z,6.8nm,0.9s
H24K **Noodor Dome** 72.14 26 P P 12 01 34.3 -0.9
baz=280
MDM **Murphy Dome** 72.15 27 P P 12 01 34.9 -0.4
RND **Reindeer** 72.15 28 P P 12 01 35.1 -0.2
WRH **Wood River Hil** 72.29 27 P P 12 01 36.5 +0.4
WRH IAmb IAmb 12 01 41.5
comp=Z,5.5nm,0.7s
TCOL **CIGO, UAF Yank** 72.32 27 P P 12 01 35.5 -0.7
baz=280
COLA **College** 72.32 27 P P 12 01 35.1 -1.1
baz=280
PMR **Palmer** 72.35 30 P P 12 01 35.6 -0.8
PMR IAmb IAmb 12 01 47.5
comp=Z,10nm,1.1s
PMR **Palmer** 72.35 30 P P 12 01 35.7 -0.8
baz=280
CCB **Clear Creek Bu** 72.38 27 P P 12 01 36.4 -0.2
ARCES **ARCESS Array B** 72.66 338 P P 12 01 38.4 +0.2
comp=Z,4.5nm,1.0s,baz=14,slow=8.4,SNR=4.0
ARCES LR LR 12 35 19.3
comp=Z,62nm,18.9s,baz=82,slow=37
comp=Z,4.5nm,1.0s
ARCES **ARCESS Array B** 72.66 338 IAmb IAmb 12 01 52.3
comp=Z,15nm,1.2s
SML **Sawmill** 72.68 30 P P 12 01 37.9 -0.6
SML IAmb IAmb 12 01 45.5
comp=Z,8.7nm,0.8s
KNK **Knik Glacier** 72.70 30 P P 12 01 37.1 -1.5
baz=281
IL31 72.75 27 P P 12 01 38.3 -0.4
ILAR **Eielson Array** 72.75 27 P P 12 01 38.8 -0.1
comp=Z,1.4nm,0.7s,baz=296,slow=4.4,SNR=16
ILAR LR LR 12 37 48.7
comp=Z,42nm,18.3s,baz=212,slow=39
comp=Z,1.4nm,0.7s
HDA **Harding Lake** 72.79 27 P P 12 01 39.6 +0.5
HDA **Harding Lake** 72.79 27 P P 12 01 37.7 -1.4
baz=281
WAT6 **Susitna Watana** 72.81 29 P P 12 01 38.3 -1.1
baz=281
DHY **Denali Highway** 72.87 28 P P 12 01 40.8 +1.0
SPITS **Spitsbergen Ar** 72.89 348 LR LR 12 40 02.9
comp=Z,58nm,18.0s,baz=39,slow=41
M23K **Glacier View** 72.97 30 P P 12 01 39.5 -0.7
baz=282
BMAR **Burnt Mountain** 73.11 24 P P 12 01 41.5 +0.5
SCM **Sheep Creek Mo** 73.14 30 P P 12 01 42.4 +1.1
SCM **Sheep Creek Mo** 73.14 30 P P 12 01 40.3 -1.0
baz=282
BNN **Bunyan** 73.35 306 P P 12 01 43.9 +0.9
J25K **Salcha River,** 73.42 27 P P 12 01 44.1 +1.2
J25K **Salcha River,** 73.42 27 P P 12 01 41.7 -1.2
baz=283
K24K **Donnelly Dome** 73.42 28 P P 12 01 41.9 -1.0
baz=283,SNR=7.4
GLI **Glacier Island** 73.46 31 P P 12 01 42.4 -0.7
baz=282
P23K **Montague Islan** 73.50 32 P P 12 01 42.3 -1.0
baz=282
M24K **Tolsona, Glenn** 73.62 29 P P 12 01 43.3 -0.8
M24K **Tolsona, Glenn** 73.62 29 P P 12 01 43.5 -0.6
baz=283
PAX **Paxson** 73.74 28 P P 12 01 43.9 -0.9
PAX **Paxson** 73.74 28 P P 12 01 44.4 -0.5
baz=283
FID **Port Fidalgo** 73.78 31 P P 12 01 43.8 -1.2
FID IAmb IAmb 12 01 50.0
comp=Z,16nm,1.1s
RIDG **Independent Ri** 73.84 27 P P 12 01 45.2 -0.2
RIDG IAmb IAmb 12 01 50.0
comp=Z,12nm,1.0s
RIDG **Independent Ri** 73.84 27 P P 12 01 44.1 -1.2
baz=284,SNR=6.2
KLU **Klutina** 73.87 30 P P 12 01 44.4 -1.3
baz=283
HARP **HAARP** 74.02 29 P P 12 01 46.5 +0.1
baz=284
DIV **Divide** 74.03 30 P P 12 01 46.3 -0.3
DIV IAmb IAmb 12 01 54.0
comp=Z,13nm,1.0s
SCRK **Sand Creek** 74.15 27 P P 12 01 48.5 +1.3
SCRK **Sand Creek** 74.15 27 P P 12 01 46.3 -1.0
baz=284,SNR=5.6
EYAK **Cordova Ski Ar** 74.17 31 P P 12 01 46.2 -1.0
baz=284
J26L **Joseph Creek** 74.20 27 P P 12 01 47.5 0.0
J26L IAmb IAmb 12 01 59.2
comp=Z,8.6nm,0.8s
J26L **Joseph Creek** 74.20 27 P P 12 01 46.9 -0.6
baz=284,SNR=13
FIA1 **FINESS Array S** 74.25 330 P P 12 01 47.7 +0.1
FIA1 IAmb IAmb 12 01 59.2
comp=Z,17nm,1.1s
FINES **FINESS Array B** 74.25 330 P P 12 01 47.8 +0.2
comp=Z,2.7nm,0.8s,baz=46,slow=5.5,SNR=5.6
FINES LR LR 12 35 51.1
comp=Z,64nm,18.9s,baz=86,slow=37
comp=Z,2.7nm,0.8s
FINES **FINESS Array B** 74.25 330 P P 12 01 46.4 -1.3
N25K **Chitina, Valde** 74.46 30 P P 12 01 47.9 -1.2
N25K **Chitina, Valde** 74.46 30 P P 12 01 47.9 -1.2
baz=284
MENT **Mentasta** 74.53 28 P P 12 01 48.5 -0.8
MENT IAmb IAmb 12 02 03.7
comp=Z,9.0nm,0.9s
ATD **Arta Tunnel** 74.56 277 LR LR 12 34 15.7
comp=Z,35nm,20.4s,baz=85,slow=35
BMRM **Bremner River** 74.62 30 P P 12 01 49.4 -0.6
baz=284
L26K **Log Cabin Wild** 74.67 28 P P 12 01 48.8 -1.4
L26K **Log Cabin Wild** 74.67 28 P P 12 01 50.0 -0.2
baz=285,SNR=5.3
BR131 **Keskin Array S** 74.81 307 P P 12 01 52.2 +0.6
BR131 IAmb IAmb 12 01 53.2
comp=Z,9.6nm,1.1s
BRTR **Keskin Array B** 74.81 307 P P 12 01 51.8 +0.2
comp=Z,1.2nm,0.6s,baz=108,slow=7.9,SNR=11
BRTR LR LR 12 38 46.9
comp=Z,39nm,18.6s,baz=93,slow=39
comp=Z,1.2nm,0.6s
BRTR **Keskin Array B** 74.81 307 P P 12 01 52.1 +0.6
AFI **Afiamalu** 74.86 111 LR LR 12 33 57.4
comp=Z,28nm,18.9s,baz=182,slow=35
GLB **Gilahina Butte** 74.87 30 P P 12 01 51.7 +0.3
GLB IAmb IAmb 12 01 59.5
comp=Z,12nm,1.1s
K27K **Chicken** 74.95 27 P P 12 01 53.7 +2.0
K27K IAmb IAmb 12 01 57.6
comp=Z,12nm,0.9s
K27K **Chicken** 74.95 27 P P 12 01 52.1 +0.3
baz=286
M26K **Nabesna, AK** 74.99 29 P P 12 01 50.6 -1.4
M26K IAmb IAmb 12 01 57.4
comp=Z,14nm,0.8s
M26K **Nabesna, AK** 74.99 29 P P 12 01 51.8 -0.2
baz=285,SNR=9.6
AKASG **Malin Array Be** 75.15 319 P P 12 01 52.4 -0.7
comp=Z,2.2nm,0.7s,baz=56,slow=5.2,SNR=9.3
AKASG LR LR 12 36 31.3
comp=Z,61nm,19.0s,baz=54,slow=37
comp=Z,2.2nm,0.7s
AKASG **Malin Array Be** 75.15 319 IAmb IAmb 12 01 54.9
comp=Z,4.1nm,1.0s
MCARA **McCarthy VSAT** 75.25 30 P P 12 01 53.3 -0.3
baz=286
BCAR **Beaver Creek A** 75.34 28 P P 12 01 55.1 +1.1
GHAJ **Ghor Haditha** 75.42 298 P P 12 01 56.8 +1.8
GHAJ IAmb IAmb 12 02 08.2
comp=Z,13nm,1.0s
M27K **Edge Creek, AK** 75.50 29 P P 12 01 54.8 -0.3
M27K **Edge Creek, AK** 75.50 29 P P 12 01 54.8 -0.3
baz=286
NACGM **Naroch** 75.52 323 *e*P P 12 01 55.3 +0.2
baz=74
BVCY **Beaver Creek** 75.94 28 P P 12 01 57.1 -0.4
baz=287,SNR=5.5
DAWY **Dawson** 76.07 26 P P 12 01 59.9 +1.7
DAWY IAmb IAmb 12 02 03.4
comp=Z,12nm,0.8s
DAWY **Dawson** 76.07 26 P P 12 01 57.8 -0.4
baz=288
I29M **Ogilvie Camp,** 76.10 25 P P 12 01 58.7 +0.4
I29M IAmb IAmb 12 02 03.1

comp=Z,7.9nm,0.8s
I29M Ogilvie Camp, 76.10 25 P **P 12 01 58.5 +0.2**
baz=289
CTG Chitna Glacier 76.15 30 P **P 12 01 58.7 -0.1**
baz=287,SNR=6.7
CTGM Chitina Glacie 76.16 30 P **P 12 01 59.6 +0.7**
YUK3 Moose Creek 76.31 29 P **P 12 01 59.5 -0.3**
baz=288,SNR=5.9
EIL Elat 76.37 297 LR LR 12 39 28.3
comp=Z,75nm,20.0s,baz=88,slow=39
EPYK Eagle Plains 76.38 24 P **P 12 02 00.1 +0.2**
baz=290
YUK8 Steele Glacier 76.78 29 P **P 12 02 01.8 -0.7**
baz=288
INK Inuvik 76.84 22 LR LR 12 37 43.9
comp=Z,31nm,20.4s,baz=229,slow=37
INK Inuvik 76.84 22 P **P 12 02 01.7 -0.7**
INK IAmb IAmb 12 02 14.5
comp=Z,22nm,1.5s
INK Inuvik 76.84 22 P **P 12 02 02.0 -0.4**
baz=292
PINM Pinnacle 76.93 31 P **P 12 02 02.4 -0.8**
baz=288
YUK4 Talbot Arm 77.27 29 P **P 12 02 05.6 +0.4**
baz=289
PNL Peninsula 77.48 31 P **P 12 02 06.3 +0.1**
baz=289
YUK6 Outpost Mounta 77.54 29 P **P 12 02 07.1 +0.3**
baz=290
M30M Minto, Yukon 77.67 28 P **P 12 02 07.4 +0.1**
baz=291
N30M Aishikik Lake 77.94 29 P **P 12 02 09.0 +0.2**
baz=291,SNR=6.3
HYT Haines Junctio 77.97 29 P **P 12 02 09.2 +0.1**
baz=290,SNR=6.1
ELL Elmali 78.44 305 P **P 12 02 11.8 -0.3**
N31M Braeburn, Yuko 78.51 28 P **P 12 02 12.3 +0.4**
N31M IAmb IAmb 12 02 17.3
comp=Z,9.7nm,0.9s
N31M Braeburn, Yuko 78.51 28 P **P 12 02 12.3 +0.4**
baz=292
O30N Mendenhall 78.64 29 P **P 12 02 13.1 +0.4**
baz=292
M31M Drury Creek, Y 78.85 27 P **P 12 02 14.6 +0.9**
M31M IAmb IAmb 12 02 18.4
comp=Z,6.8nm,0.8s
M31M Drury Creek, Y 78.85 27 P **P 12 02 13.2 -0.6**
baz=293
PLBC Pleasant Camp 79.00 30 P **P 12 02 14.7 +0.1**
baz=292
FARO Faro, Yukon 79.29 27 P **P 12 02 16.5 +0.3**
baz=294
C36M Paulatuk 79.44 19 P **P 12 02 16.7 -0.1**
baz=301
SKAG Skagway 79.49 30 P **P 12 02 16.1 -1.1**
baz=292
MMPY Sheldon Lake, 80.01 26 P **P 12 02 19.6 -0.5**
baz=295
P33M Teslin, Yukon 80.35 29 P **P 12 02 21.0 -1.0**
P33M IAmb IAmb 12 02 27.6
comp=Z,17nm,1.4s
P33M Teslin, Yukon 80.35 29 P **P 12 02 21.6 -0.4**
baz=294
HFS Hagfors 80.41 331 LR LR 12 39 23.4
comp=Z,88nm,19.3s,baz=72,slow=37
MPEP Malo Peshtene 80.88 313 *e*P **P 12 02 26.0 +0.9**
NB2 NORSAR Subarra 81.12 332 P **P 12 02 25.5 -0.6**
comp=Z,5.6nm,1.4s,baz=65,slow=5.6
NOA NORSAR Array B 81.12 332 P **P 12 02 24.4 -1.6**
comp=Z,1.1nm,0.7s,baz=68,slow=5.9,SNR=4.7
NOA LR LR 12 41 23.5
comp=Z,112nm,18.4s,baz=60,slow=38
comp=Z,1.1nm,0.7s
VTS Vitosha 81.47 312 P **P 12 02 29.5 +1.0**
VTS IAmb IAmb 12 02 30.7
comp=Z,17nm,1.1s
VTS Vitosha 81.47 312 *e*P **P 12 02 29.7 +1.2**
KKB Krupnik 81.84 312 *e*P **P 12 02 30.9 +0.7**
JMIC Jan Mayen 82.16 345 LR LR 12 43 15.1
comp=Z,35nm,18.2s,baz=76,slow=39
WTLY Watson Lake, Y 82.20 28 P **P 12 02 31.0 -0.8**
baz=298
RES Resolute Bay 82.35 9 LR LR 12 40 32.1
comp=Z,35nm,21.6s,baz=327,slow=37
DLBC Dease Lake 82.41 30 P **P 12 02 32.6 -0.4**
baz=297
IDI Anoyia 82.75 305 LR LR 12 45 36.4
comp=Z,14nm,19.8s,baz=340,slow=40
VRAC Vranov 83.30 320 LR LR 12 40 42.8
comp=Z,72nm,18.2s,baz=62,slow=36
FNA Florina 83.42 311 P **P 12 02 37.2 -1.4**
FNA IAmb IAmb 12 02 38.5
comp=Z,5.4nm,0.8s
KMBO Kilima Mbogo 84.04 267 LR LR 12 39 29.0
comp=Z,57nm,19.2s,baz=90,slow=35
BRG Berggiesshubel 84.20 322 *e*(P) **P 12 02 44.7 +2.4**
BRG Amp 12 02 47.0
comp=Z,5.4nm,1.3s
CLL Collm 84.55 323 *e*P **P 12 02 45.0 +1.0**
GERES GERESS Array B 85.22 321 P **P 12 02 47.5 0.0**
comp=Z,1.1nm,0.7s,baz=79,slow=7.2,SNR=7.7
comp=Z,1.1nm,0.7s
YKA Yellowknife Ar 86.57 22 P **P 12 02 54.5 +0.7**
comp=Z,5.7nm,0.8s,baz=314,slow=4.6,SNR=50
comp=Z,5.7nm,0.8s
YKA Yellowknife Ar 86.57 22 P **P 12 02 53.9 +0.1**
CASY Casey 86.88 184 P **P 12 02 56.1 +1.1**
CASY IAmb IAmb 12 02 56.3
comp=Z,8.8nm,1.0s
DAVOX Davos/Dischmat 88.46 320 LR LR 12 43 57.6
comp=Z,42nm,19.1s,baz=82,slow=36
MBAR Mbarara 89.95 269 LR LR 12 43 11.0
comp=Z,42nm,20.5s,baz=80,slow=35
EKA Eskdalemuir Ar 90.59 332 LR LR 12 47 06.0
comp=Z,85nm,18.7s,baz=80,slow=38
D03D Eldon 91.50 37 P **P 12 03 16.9 -0.5**
baz=303
EDM Edmonton 93.09 29 P **P 12 03 24.9 +0.2**
EDM IAmb IAmb 12 03 31.8
comp=Z,6.5nm,0.9s
I04A Tendick Farm, 93.95 40 P **P 12 03 29.2 +0.3**
baz=303
NEW Newport 94.36 34 LR LR 12 46 54.6
comp=Z,22nm,19.3s,baz=312,slow=36
YBH Yreka Blue Hor 94.89 42 LR LR 12 45 03.3
comp=Z,20nm,19.5s,baz=264,slow=35
FRB Frobisher Bay 95.69 4 LR LR 12 52 33.0
comp=Z,37nm,18.0s,baz=8.5,slow=39
PPT Papeete 95.97 106 LR LR 12 37 51.1
comp=Z,28nm,19.4s,baz=210,slow=30
TXAR Lajitas Array 114.67 42 PKP **PKiKP 12 08 51.6 -0.3**
comp=Z,0.1nm,0.5s,baz=340,slow=0.8,SNR=6.1
TROLL Troll, Antarti 117.91 198 PKPdf **PKPdf 12 08 56.6 -0.3**
VNA2 Neumayer--Watz 121.23 198 PKPdf **PKPdf 12 09 03.1 0.0**
baz=99,slow=2.0
VNA1 Neumayer--Stat 121.62 198 PKPdf **PKiKP 12 09 04.3 +0.4**
VNA3 Neumayer Olymp 121.70 197 PKPdf **PKPdf 12 09 03.4 -0.6**
OCAC Ocana 148.35 27 *e*P **PKPbc 12 09 57.4 -0.9**
CBOC Ciudad Bolivar 149.16 33 *e*P **PKiKP 12 10 01.2 -0.5**
PTBC PUERTO BERRIO 149.35 30 *e*P **PKPdf 12 09 56.4 0.0**
PLMC San Jos del P 149.83 35 *e*P **PKPbc 12 10 02.2 +0.2**
BARC Barichara 149.88 28 *e*P **PKPbc 12 10 02.2 -0.1**
SPBC San Pablo de B 150.31 30 *e*P **PKPbc 12 10 02.2 -1.0**
SPBC *e*P **pPKPdf 12 10 07.0 +1.3**
RUSC La Rusia 150.55 28 *e*P **PKPbc 12 10 02.2 -2.1**
YOTC Yotoco, Valle 150.57 36 *e*P **PKPdf 12 10 00.2 +1.8**
ANIL Santa Ana 150.65 34 *e*P **PKPbc 12 10 02.2 -2.1**
CHIC Chingaza 151.36 31 *e*P **PKiKP 12 10 09.8 +3.3**
POPC Popayan, Colom 151.56 38 *e*P **PKPbc 12 10 06.0 -0.3**
LPAZ La Paz 170.81 64 PKP **PKPdf 12 10 21.9 +1.2**
comp=Z,1.7nm,1.0s,baz=358,slow=1.0,SNR=4.1
LPAZ La Paz 170.81 64 **PKPdf 12 10 18.1 -2.5**

*DRS **03** 11:51:05.5±1.0, 41°.83N±0°.03×46°.74E±0°.02, **h12**km±8km,*
n25,σ1°08/49, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LGD	**Lagodekhi**	**0.37**	**270**	P		**Pg**	**11 51 12.4**	**-0.6**
LGD				S		**Sg**	**11 51 18.1**	**0.0**
KMKR	**Kumukh**	**0.40**	**42**	*i* Pg		**Pg**	**11 51 13.3**	**-0.2**
	388nm,0.2s							
KMKR				*i* Sg		**Sg**	**11 51 19.6**	**+0.7**
	1μm,0.2s							
GNBR	**Gunib**	**0.58**	**16**	*i* Pg		**Pg**	**11 51 16.8**	**-0.1**
	79nm,0.2s							
GNBR				*i* Sg		**Sg**	**11 51 25.2**	**+0.7**
	332nm,0.8s							
DDFL	**Dedoflistskaro**	**0.61**	**231**	P		**Pn**	**11 51 20.5**	**+0.4**
DDFL				S		**Sn**	**11 51 33.7**	**+3.8**
XNZR	**Khunzakh**	**0.71**	**358**	*e*Pg		**Pg**	**11 51 19.3**	**0.0**
	56nm,0.7s							
XNZR				*e*Sg		**Sg**	**11 51 29.2**	**+0.6**
	64nm,0.2s							
URKR	**Urkarakh**	**0.74**	**63**	*e*Pg		**Pg**	**11 51 19.8**	**-0.1**
	56nm,0.1s							
URKR				*i* Sg		**Sb**	**11 51 30.6**	**0.0**
	322nm,0.3s							
ARKR	**Arakani**	**0.79**	**14**	*e*Pg		**Pg**	**11 51 20.6**	**-0.2**
	72nm,0.2s							
ARKR				*e*Sg		**Sg**	**11 51 31.7**	**+0.5**
	187nm,0.3s							
AKT	**Akhty**	**0.82**	**115**	*e*Pg		**Pg**	**11 51 20.6**	**-0.8**
	72nm,0.2s							
AKT				*e*Sg		**Sg**	**11 51 32.0**	**-0.1**
	442nm,0.4s							
UNCR	**Uncukul**	**0.88**	**2**	*e*Pg		**Pb**	**11 51 22.4**	**-0.4**
	87nm,0.3s							
UNCR				*i* Sg		**Sb**	**11 51 34.6**	**0.0**
	302nm,0.3s							
BTLR	**Botlikh**	**0.92**	**335**	*e*Pg		**Pb**	**11 51 22.7**	**-0.7**
	14nm,0.1s							
BTLR				*e*Sg		**Sb**	**11 51 35.0**	**-0.6**
	226nm,0.6s							
SGKR	**Sergokala**	**0.92**	**47**	*e*Pg		**Pb**	**11 51 23.1**	**-0.4**
	2.0nm,0.4s							
SGKR				*e*Sg		**Sg**	**11 51 36.6**	**+1.1**
	64nm,0.2s							
KRNR	**Karanay**	**1.00**	**7**	*e*Pg		**Pb**	**11 51 24.5**	**-0.4**
	29nm,0.2s							
KRNR				*e*Sg		**Sb**	**11 51 38.1**	**+0.1**
	234nm,0.4s							
BUJR	**Buynaksk**	**1.03**	**15**	*e*Pg		**Pb**	**11 51 25.4**	**+0.1**
	59nm,0.3s							
BUJR				*e*Sg		**Sn**	**11 51 40.0**	**-0.1**
	230nm,0.4s							
KSMR	**Kasumkent**	**1.06**	**102**	*e*Pg		**Pb**	**11 51 25.7**	**-0.2**
	52nm,0.3s							
KSMR				*e*Sg		**Sn**	**11 51 40.9**	**-0.1**
DGRG	**David-gareji**	**1.10**	**250**	P		**Pg**	**11 51 27.2**	**+0.5**
DGRG				S		**Sn**	**11 51 44.4**	**+2.6**
DBC	**Dubki**	**1.19**	**3**	*e*Pg		**Pn**	**11 51 28.0**	**-0.1**
	30nm,0.5s							
DBC				*e*Sg		**Sg**	**11 51 44.6**	**+0.7**
	287nm,0.3s							
DRN	**Derbent**	**1.20**	**80**	*e*Pg		**Pn**	**11 51 27.9**	**-0.3**
	43nm,0.1s							
DRN				*e*Sg		**Sg**	**11 51 44.8**	**+0.6**
	241nm,0.5s							
DLMR	**Dylym**	**1.24**	**356**	*e*Pg		**Pb**	**11 51 29.3**	**+0.4**
	64nm,0.2s							
DLMR				*e*Sg		**Sg**	**11 51 46.6**	**+1.1**
	300nm,0.6s							
MAK	**Makhachkala**	**1.26**	**26**	*e*Pg		**Pn**	**11 51 28.6**	**-0.3**
	236nm,0.2s							
MAK				*e*Sg		**Sn**	**11 51 46.0**	**+0.2**
	168nm,0.5s							
SEAG	**Tbilisi Sea**	**1.45**	**268**	P		**Pn**	**11 51 30.8**	**-0.8**
SEAG				S		**Sg**	**11 51 51.9**	**-0.4**
BTNK	**Botanikuri**	**1.46**	**265**	P		Pn	11 51 26.8	-5.0
BTNK				S		**Sn**	**11 51 46.5**	**-4.4**
KANR	**Karaman**	**1.47**	**22**	*e*Pg		**Pn**	**11 51 32.3**	**+0.5**
	442nm,0.4s							
KANR				*e*Sg		**Sg**	**11 51 52.6**	**-0.2**
PNSH	**Pansheti**	**1.77**	**298**	P		**Pb**	**11 51 37.6**	**-0.5**
PNSH				S		**Sg**	**11 52 03.7**	**+1.2**
DMNI	**Dmanisi**	**1.98**	**256**	P		**Pn**	**11 51 39.2**	**+0.2**
DMNI				S		**Sb**	**11 52 05.8**	**-0.5**
TRLG	**Trialeti**	**2.00**	**262**	P		**Pn**	**11 51 39.5**	**+0.1**
TRLG				S		**Sb**	**11 52 06.3**	**-0.5**

TAP 03 12:05:45.1, 24°.59N×121°.66E, h6km±1km, ML1.4, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NDS	**Dongshan**	**0.07**	**47**	*e*P		Pg	12 05 46.9	0.0
	baz=46							
NDS				*i* S		Sg	12 05 48.1	0.0
	baz=46							
ENTT	**Nioudou**	**0.10**	**301**	P		Pg	12 05 47.2	-0.2
	baz=301							
ENTT				S		Sg	12 05 48.7	-0.3
	baz=301							
LATG	**Datong**	**0.13**	**247**	P		Pg	12 05 48.0	0.0
	baz=247							
LATG				*e*S		Sg	12 05 50.0	0.0
	baz=247							
TWE	**Neicheng**	**0.13**	**2**	*e*P		Pg	12 05 47.9	0.0
	baz=8.0							
TWE				*i* S		Sg	12 05 50.0	+0.2
	baz=8.0							
TWC	**Suao**	**0.17**	**83**	P		Pg	12 05 48.7	+0.1
	baz=83							
TWC				S		Sg	12 05 51.4	+0.5
	baz=83							
ENA	**Nanau**	**0.17**	**156**	*i* P		Pg	12 05 48.5	-0.2
	baz=153							
ENA				S		Sg	12 05 51.6	+0.6
	baz=153							
EWUT	**Wuta**	**0.18**	**143**	*e*P		Pg	12 05 48.9	+0.2
	baz=143							
EWUT				*e*S		Sg	12 05 51.3	+0.2
	baz=143							
FUSB	**Fushanzhiwuyua**	**0.18**	**339**	*e*P		Pg	12 05 48.9	0.0
	baz=338							
FUSB				S		Sg	12 05 51.5	+0.1
	baz=338							
ILA	**Ilan**	**0.19**	**24**	*e*P		Pg	12 05 47.5	-1.5
	baz=25							
NWLT	**Wulai**	**0.24**	**323**	P		Pg	12 05 49.9	+0.1
	baz=322							
NWLT				*e*S		Sg	12 05 52.9	-0.2
	baz=322							
YHNB	**Yeheng**	**0.27**	**288**	P		Pg	12 05 50.5	0.0
	baz=287							
YHNB				*e*S		Sg	12 05 53.9	-0.3
	baz=287							
NSK	**Sanguang**	**0.29**	**288**	P		Pg	12 05 50.8	-0.1
	baz=287							
NSK				S		Sg	12 05 54.8	+0.1
	baz=287							
NNSB	**Datong**	**0.30**	**238**	P		Pg	12 05 50.7	-0.3
	baz=238							

*IDC **03** 12:28:23.4±2.5, 29°.04N×143°.79E, h0km, mb3.6/4, mbtmp3.6/6, ML3.1/2, Error ellipse: s-maj=77.7km s-min=21.5km az=78.0*
ISC 03 12:28:29.1±2.6, 29°.0N±0°.1×143°.5E±0°.5, h35km, n6, σ0°.43/6, mb3.8/4, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JCJ	**Chichijima**	**2.27**	**212**	Pn		**Pn**	**12 29 04.0**	**0.0**
	10nm,0.3s,baz=37,slow=20,SNR=6.0							
JCJ				Sn		Sn	12 29 19.9	-11
	29nm,0.3s,baz=264,slow=23,SNR=9.3							
	39nm,0.5s							
MJAR	**Matsushiro Arr**	**8.74**	**330**	Pn		**Pn**	**12 30 32.6**	**-0.4**
	0.1nm,0.3s,baz=147,slow=10,SNR=7.3							
	1.5nm,0.6s							
WRA	**Warramunga Arr**	**49.48**	**191**	P		**P**	**12 37 16.1**	**-0.1**
	1.1nm,0.6s,baz=13,slow=8.5,SNR=20							
	1.1nm,0.6s							
MKAR	**Makanchi Array**	**50.20**	**308**	P		**P**	**12 37 21.7**	**+0.3**
	0.4nm,0.6s,baz=91,slow=8.9,SNR=5.4							
	0.4nm,0.6s							
KURBB	**Kurchatov Arra**	**52.57**	**313**	P		**P**	**12 37 39.6**	**+0.6**
	1.0nm,0.7s,baz=90,slow=7.8,SNR=11							
	1.0nm,0.7s							
ASAR	**Alice Springs**	**53.20**	**191**	P		**P**	**12 37 43.9**	**-0.1**
	0.2nm,0.7s,baz=5.2,slow=6.6,SNR=4.6							
	0.2nm,0.7s							

AWI 03 12:28:29.0, 74°.85S×100°.20W, Antarctica

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VNA3	**Neumayer Olymp**	**24.20**	**128**	P		P	12 33 44.2	-2.5
VNA2	**Neumayer--Watz**	**24.92**	**129**	P		P	12 33 50.6	-2.5
	baz=225,slow=9.0							
VNA1	**Neumayer--Stat**	**24.95**	**128**	P		P	12 33 50.9	-2.5
SNAA	**Sanae**	**25.24**	**133**	P		P	12 33 53.7	-2.4
TROLL	**Troll, Antarti**	**25.97**	**136**	P		P	12 34 00.3	-2.5

TAP 03 12:38:17.0, 24°.19N×121°.64E, h17km, ML1.0, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ETL	**Fush Village**	**0.04**	**204**	P		Pg	12 38 20.5	+0.3
	baz=203							
ETL				S		Sg	12 38 23.0	+0.7
	baz=203							
NACB	**Ninganchiao**	**0.04**	**246**	P		Pg	12 38 20.4	+0.2
	baz=245							
NACB				S		Sg	12 38 23.1	+0.8
	baz=245							
TWD	**Chiawan**	**0.12**	**199**	*i* P		Pb	12 38 21.4	+0.6
	baz=195							
TWD				S		Sg	12 38 24.3	+0.9
	baz=195							
ETLH	**Xiulin Townshi**	**0.14**	**276**	*e*P		Pb	12 38 21.7	+0.4
	baz=275							
ETLH				*e*S		Sb	12 38 25.6	+1.4
	baz=275							
HWA	**Hwalien**	**0.22**	**188**	*e*P		Pb	12 38 22.7	+0.2
	baz=186							
HWA				S		Sb	12 38 26.9	+0.7
	baz=186							
ENA	**Nanau**	**0.25**	**22**	*e*S		Sb	12 38 28.2	+0.9
	baz=23							
EWUT	**Wuta**	**0.28**	**27**	*e*P		Pb	12 38 23.6	-0.1
	baz=26							
EWUT				*e*S		Sb	12 38 29.0	+0.9
	baz=26							
NNSB	**Datong**	**0.33**	**315**	*e*P		Pb	12 38 25.4	+0.8
	baz=315							
NNSB				*e*S		Sb	12 38 30.4	+0.8
	baz=315							
WHF	**Hehuan Shan**	**0.34**	**262**	*e*P		Pb	12 38 24.9	-0.1
	baz=261							
WHF				*e*S		Sb	12 38 30.4	+0.1
	baz=261							
NNS	**Nan Shan**	**0.35**	**316**	*e*P		Pb	12 38 24.7	-0.1
	baz=316							
NNS				*e*S		Sb	12 38 30.2	+0.1
	baz=316							
LATG	**Datong**	**0.36**	**343**	*e*S		Sb	12 38 31.0	+0.6
	baz=343							
ESL	**Shilin**	**0.42**	**207**	*e*S		Sb	12 38 33.2	+1.1
	baz=205							

JMA 03 12:38:50.8±0.1, 24°.8N±0°.5×123°.8E±0°.3, h0km, MV1.9/9, NW OFF ISHIGAKIJIMA IS, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.49**	**191**	P		Pg	12 39 00.8	+0.7
IRIF				S		Sg	12 39 07.6	+1.2
JISG	**Ishigakijimahi**	**0.49**	**117**	P		Pg	12 39 00.9	+0.7
JISG				*e*S		Sg	12 39 08.1	+1.5
JIJ	**Ishigaki jima**	**0.53**	**148**	P		Pg	12 39 01.2	+0.3
JIJ				S		Sg	12 39 08.5	+0.6
JKRS	**Kuro-shima**	**0.60**	**164**	P		Pg	12 39 02.8	+0.6
JKRS				S		Sg	12 39 10.9	+0.9
HATJ	**Hateruma jima**	**0.75**	**182**	P		Pg	12 39 05.8	+0.6
HATJ				S		Sg	12 39 16.0	+0.9
JTJ	**Tarama**	**0.81**	**102**	P		Pg	12 39 07.0	+0.7
JTJ				S		Sb	12 39 18.6	-0.6
YOJ	**Yonaguni jima**	**0.83**	**245**	P		Pg	12 39 06.9	+0.2

MAN 03 12:56:20.9, 13°.65N×120°.61E, h75km, mb4.0, ML2.8, MS2.4, 1C-7D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LUBP	**Lubang**	**0.36**	**284↓**	*e*P		Pn	12 56 34.8	+7.2
LUBP				*e*S			12 56 44.6	
PGP	**Puerto Galera**	**0.36**	**113↑**	*e*P		Pn	12 56 34.1	+2.8
PGP				*i* S			12 56 44.3	
MACP	**Maragondon, Ca**	**0.62**	**10↓**	*e*P		Pn	12 56 36.9	+3.7
MACP				*e*S			12 56 48.0	
BOAC	**Boac**	**1.22**	**99↓**	*e*P		Pb	12 56 44.0	+0.7
BOAC				*e*S			12 57 03.4	
SJMP	**San Jose**	**1.28**	**157↓**	*e*P		Pb	12 56 45.0	+0.2
SJMP				*e*S			12 57 01.5	
BALP	**Baler**	**2.28**	**24↓**	*e*P		Pn	12 56 57.5	+1.2
ENPP	**El Nido**	**2.69**	**206↓**	*e*P		Pn	12 57 02.9	+1.9
ENPP				*e*S			12 57 32.7	
CUYO	**Cuyo Island**	**2.81**	**172↓**	*e*P		Pn	12 57 04.2	+0.5

*IDC **03** 13:17:14.2±0.9, 17°.33S×176°.75W, h0km, mb4.2/11, mbtmp4.2/12, ML5.4/1, MS3.9/22, Error ellipse: s-maj=35.3km s-min=17.8km az=143.0*
*NEIC **03** 13:17:18.8±1.9, 17°.3S±0°.1×176°.7W±0°.2, h29km±6km, mb4.6/21, Error ellipse: s-maj=28.2km s-min=19.3km az=115.0*
ISC 03 13:17:19.8±0.5, 17°.4S±0°.1×176°.82W±0°.07, h35km, n80, σ1°44/63, mb4.5/21, MS3.9/18, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**4.91**	**265**	Pn		**Pn**	**13 18 29.7**	**-1.4**
	4.9nm,0.3s,baz=329,slow=19,SNR=31							
MSVF				Sn		**Sn**	**13 19 24.9**	**-1.9**
	3.3nm,0.3s,baz=216,slow=21,SNR=4.7							
MSVF				LR		LR	13 20 08.0	
	comp=Z,3μm,19.4s,baz=81,slow=35							
	11nm,0.4s							
NIUE	**Niue**	**6.77**	**106**			**Pn**	**13 18 54.9**	**-1.9**
RAO	**Raoul Island**	**11.89**	**185**	LR		LR	13 23 56.2	
	comp=Z,849nm,21.8s,baz=48,slow=34							
DZM	**Mont Dzumac**	**16.44**	**251**	LR		LR	13 26 18.9	
	comp=Z,654nm,19.9s,baz=50,slow=33							
RAR	**Rarotonga**	**16.55**	**106**	LR		LR	13 26 03.5	
	comp=Z,334nm,20.8s,baz=290,slow=32							
URZ	**Urewera**	**21.50**	**193**	P		**P**	**13 22 05.3**	**-0.2**
	16nm,1.0s,baz=38,slow=11,SNR=4.3							
URZ				LR		LR	13 29 16.6	
	comp=Z,550nm,21.1s,baz=31,slow=34							
	16nm,1.0s							
URZ	**Urewera**	**21.50**	**193**	P		**P**	**13 22 05.5**	**0.0**
URZ				IAmb		IAmb	13 22 09.9	
	comp=Z,19nm,1.0s							
BKZ	**Black Stump Fm**	**22.50**	**194**	P		**P**	**13 22 16.1**	**-0.3**
BKZ				IAmb		IAmb	13 22 37.6	
	comp=Z,27nm,1.3s							
HNR	**Honiara**	**23.91**	**286**	LR		LR	13 30 29.6	
	comp=Z,376nm,20.1s,baz=124,slow=33							
TUWZ	**Tuamarina**	**25.27**	**196**	P		**P**	**13 22 43.9**	**+1.2**
PPT	**Papeete**	**25.98**	**95**	LR		LR	13 30 21.5	
	comp=Z,156nm,20.1s,baz=292,slow=30							
LTZ	**Lake Taylor**	**27.00**	**198**	P		**P**	**13 22 59.7**	**+1.3**
LTZ				IAmb		IAmb	13 23 17.7	
	comp=Z,16nm,1.2s							
KRVT	**Keravat (AS076**	**33.16**	**289**	LR		LR	13 36 03.8	
	comp=Z,262nm,19.0s,baz=253,slow=34							
CTA	**Charters Tower**	**35.03**	**260**	LR		LR	13 36 56.9	
	comp=Z,343nm,18.4s,baz=100,slow=34							
CTAO	**Charters Tower**	**35.03**	**260**	P		**P**	**13 24 09.1**	**-0.4**
CTAO				IAmb		IAmb	13 24 37.4	
	comp=Z,14nm,1.1s							
PMG	**Port Moresby**	**35.87**	**278**	LR		LR	13 37 51.2	
	comp=Z,161nm,18.9s,baz=108,slow=34							
STKA	**Stephens Creek**	**40.22**	**241**	P		**P**	**13 24 53.4**	**+0.2**
	comp=Z,3.5nm,0.9s,baz=33,slow=6.2,SNR=4.8							
	comp=Z,3.5nm,0.9s							
STKA	**Stephens Creek**	**40.22**	**241**	P		**P**	**13 24 51.9**	**-1.3**
BBOO	**Buckleboo**	**45.00**	**241**	P		**P**	**13 25 32.0**	**0.0**
WR0	**Warramunga Arr**	**46.03**	**259**	P		**P**	**13 25 39.8**	**-0.6**
WR0				IAmb		IAmb	13 25 42.1	
	comp=Z,12nm,1.5s							
WB0	**Warramunga Arr**	**46.19**	**259**	P		**P**	**13 25 42.3**	**+0.7**
WRA	**Warramunga Arr**	**46.22**	**259**	P		**P**	**13 25 41.3**	**-0.6**
	comp=Z,2.5nm,1.1s,baz=93,slow=7.8,SNR=8.0							
	comp=Z,2.5nm,1.1s							
WRA	**Warramunga Arr**	**46.22**	**259**	P		**P**	**13 25 40.8**	**-1.1**
AS31	**Alice Springs**	**46.40**	**254**	P		**P**	**13 25 43.5**	**+0.3**
AS31				IAmb		IAmb	13 25 49.0	
	comp=Z,3.6nm,0.8s							
ASAR	**Alice Springs**	**46.40**	**254**	P		**P**	**13 25 43.2**	**-0.1**

comp=Z,8.8nm,0.8s,baz=86,slow=8.2,SNR=65
comp=Z,8.8nm,0.8s

FORT	**Forrest**	**51.61**	**244**	P		**P**	**13 26 23.7**	**+0.6**
KNRA	**Kununurra**	**52.05**	**263**	P		**P**	**13 26 25.2**	**-1.3**
KNRA				IAmb		IAmb	13 26 33.5	

comp=Z,7.9nm,1.0s

PSA00	**Pilbara Seismi**	**59.51**	**255**	P		**P**	**13 27 23.0**	**+3.0**
PSA00				IAmb		IAmb	13 27 31.8	

comp=Z,9.3nm,1.1s

CASY	**Casey**	**67.27**	**205**	P		**P**	**13 28 11.6**	**+1.1**
CASY				IAmb		IAmb	13 28 37.2	

comp=Z,6.1nm,1.1s

MJAR	**Matsushiro Arr**	**68.38**	**322**	P		**P**	**13 28 18.9**	**+0.9**

comp=Z,3.0nm,1.0s,baz=159,slow=7.1,SNR=5.9
comp=Z,3.0nm,1.0s

SHEM	**Shemya Is, Ala**	**70.23**	**354**	LR		LR	13 56 17.0	

comp=Z,57nm,18.4s,baz=117,slow=33

ASAJ	**Asahikawa**	**71.53**	**330**	LR		LR	13 55 20.9	

comp=Z,36nm,19.1s,baz=184,slow=32

QSPA	**South Pole Qui**	**72.70**	**180**	P		**P**	**13 28 45.5**	**+1.4**
QSPA				IAmb		IAmb	13 28 59.0	

comp=Z,5.8nm,1.1s

PETK	**Petropavlovsk-**	**73.55**	**344**	P		**P**	**13 28 48.3**	**-0.6**

comp=Z,8.8nm,1.0s,baz=116,slow=6.6,SNR=2.8

PETK				LR		LR	13 56 40.8	

comp=Z,47nm,20.1s,baz=159,slow=32
comp=Z,8.8nm,1.0s

PETK	**Petropavlovsk-**	**73.55**	**344**	P		**P**	**13 28 47.5**	**-1.4**
YBH	**Yreka Blue Hor**	**77.15**	**38**	LR		LR	13 54 44.8	

comp=Z,67nm,20.9s,baz=250,slow=29

KDAK	**Kodiak Island**	**77.52**	**13**	LR		LR	13 55 33.8	

comp=Z,108nm,21.9s,baz=224,slow=30

NVAR	**Mina Array Bea**	**77.98**	**43**	P		**P**	**13 29 14.6**	**-0.3**

comp=Z,0.9nm,0.8s,baz=226,slow=8.5,SNR=6.2
comp=Z,0.9nm,0.8s

MA2	**Magadan**	**81.07**	**344**	LR		LR	14 04 26.9	

comp=Z,37nm,18.6s,baz=126,slow=35

J20K	**Nowinta River**	**83.14**	**10**	P		**P**	**13 29 40.6**	**-1.0**
J20K				IAmb		IAmb	13 29 46.7	

comp=Z,5.4nm,1.0s

TRF	**Thorofare Moun**	**83.16**	**12**	P		**P**	**13 29 41.0**	**-1.0**
SEY	**Seymchan**	**83.59**	**346**	LR		LR	14 00 14.2	

comp=Z,48nm,21.6s,baz=151,slow=31

NEW	**Newport**	**84.18**	**35**	LR		LR	13 59 28.7	

comp=Z,45nm,20.0s,baz=252,slow=30

TXAR	**Lajitas Array**	**84.42**	**57**	P		**P**	**13 29 48.8**	**-0.4**

comp=Z,1.2nm,1.1s,baz=258,slow=2.3,SNR=6.5
comp=Z,1.2nm,1.1s

ANMO	**Albuquerque**	**84.57**	**51**	LR		LR	14 01 43.1	

comp=Z,52nm,18.2s,baz=238,slow=32

CCB	**Clear Creek Bu**	**84.72**	**12**	P		**P**	**13 29 48.3**	**-1.4**
DLBC	**Dease Lake**	**84.73**	**23**	LR		LR	13 59 41.9	

comp=Z,124nm,21.2s,baz=252,slow=30

MAW	**Mawson**	**84.89**	**199**	P		**P**	**13 29 48.6**	**-2.0**
IMAR	**Indian Mountai**	**84.89**	**9**	P		**P**	**13 29 50.3**	**-0.2**
ILAR	**Eielson Array**	**85.02**	**12**	P		**P**	**13 29 49.9**	**-1.3**

comp=Z,6.0nm,1.2s,baz=227,slow=5.9,SNR=16

ILAR				LR		LR	14 00 04.9	

comp=Z,65nm,21.8s,baz=227,slow=30
comp=Z,6.0nm,1.2s

ILAR	**Eielson Array**	**85.02**	**12**	P		**P**	**13 29 51.9**	**+0.7**
J25K	**Salcha River,**	**85.20**	**13**	P		**P**	**13 29 51.3**	**-0.9**
PDAR	**Pinedale Array**	**85.92**	**43**	P		**P**	**13 29 56.2**	**-0.3**

comp=Z,0.3nm,0.5s,baz=207,slow=5.8,SNR=2.4
comp=Z,0.3nm,0.5s

DAWY	**Dawson**	**86.14**	**16**	P		**P**	**13 29 56.4**	**-0.5**
BMAR	**Burnt Mountain**	**87.80**	**12**	P		**P**	**13 30 04.7**	**-0.2**
INK	**Inuvik**	**90.96**	**15**	LR		LR	14 03 28.2	

comp=Z,47nm,21.6s,baz=188,slow=30

YKA	**Yellowknife Ar**	**93.20**	**24**	P		**P**	**13 30 29.7**	**-0.4**

comp=Z,0.8nm,0.9s,baz=243,slow=4.1,SNR=2.1
comp=Z,0.8nm,0.9s

DPC	**Dobruska-Polom**	**145.43**	**345**	*e*PKP		**PKiKP**	**13 36 59.4**	**+1.3**
BRTR	**Keskin Array B**	**145.45**	**316**	PKPbc		**PKPab**	**13 36 54.8**	**-0.1**

comp=Z,15nm,1.1s,baz=122,slow=4.5,SNR=25

KRLC	**Kralky**	**145.57**	**344**	*e*PKP		**PKiKP**	**13 36 59.7**	**+1.3**
MORC	**Moravsky Berou**	**145.64**	**343**	*e*PKP		**PKiKP**	**13 37 00.2**	**+1.7**
MAUC	**Maruska**	**145.93**	**343**	*e*PKP		**PKiKP**	**13 37 01.3**	**+2.2**
PRU	**Pruhonice**	**146.18**	**347**	*e*PKP		**PKiKP**	**13 37 01.5**	**+1.9**
VRAC	**Vranov**	**146.32**	**344**	*e*PKP		**PKiKP**	**13 37 02.4**	**+2.5**
JAVC	**Velka Javorina**	**146.44**	**343**	*e*PKP		**PKiKP**	**13 37 02.7**	**+2.5**
KRUC	**Moravsky**	**146.60**	**344**	*e*PKP		**PKiKP**	**13 37 01.7**	**+1.2**
KHC	**Kasperske Hory**	**147.20**	**347**	*e*PKP		**PKiKP**	**13 37 05.1**	**+3.4**
GERES	**GERESS Array B**	**147.44**	**347**	PKPbc		**PKPbc**	**13 36 59.5**	**-0.7**

comp=Z,0.2nm,0.2s,baz=344,slow=3.3,SNR=1.5

CONA	**Conrad Observa**	**147.78**	**344**	*e*P		**PKPab**	**13 37 07.0**	**+3.5**

comp=Z,7.2nm,1.1s

RONA	**Rosalia, Austr**	**147.87**	**343**	*i* P		**PKPab**	**13 37 07.2**	**+3.4**

comp=Z,7.7nm,1.1s

MOA	**Molln**	**148.25**	**346**	*i* P		**PKPab**	**13 37 07.9**	**+2.7**

comp=Z,7.6nm,1.1s

BIOA	**Bad Ischl, Aus**	**148.55**	**346**	*i* P		**PKPab**	**13 37 08.3**	**+1.8**

comp=Z,4.3nm,0.8s

SOKA	**Soboth**	**149.15**	**344**	*e*P		**PKPab**	**13 37 09.8**	**+0.8**

comp=Z,8.9nm,1.6s

RETA	**Reutte**	**149.31**	**350**	*i* P		**PKPab**	**13 37 10.4**	**+0.8**

comp=Z,7.5nm,1.3s

WATA	**Walderalm**	**149.31**	**349**	*e*P		**PKPab**	**13 37 10.7**	**+1.0**

comp=Z,4.0nm,0.8s

WTTA	**Wattenberg**	**149.37**	**349**	*i* P		**PKPab**	**13 37 10.8**	**+0.8**

comp=Z,4.8nm,0.7s

MOTA	**Moosalm**	**149.39**	**349**	*e*P		**PKPab**	**13 37 10.6**	**+0.6**

comp=Z,8.1nm,1.2s

DAVA	**Damuels**	**149.64**	**351**	*e*P		**PKPab**	**13 37 11.6**	**+0.5**

comp=Z,10nm,1.1s

ABTA	**Abfaltersbach**	**149.69**	**347**	*i* P		**PKPab**	**13 37 10.3**	**-0.9**

comp=Z,8.3nm,1.1s

FETA	**Feichten**	**149.76**	**350**	*e*P		**PKPab**	**13 37 11.1**	**-0.5**

comp=Z,11nm,1.1s

*TEH **03** 13:20:01.9, 33.02N×47.34E, h8km, ML3.1*
*ISN **03** 13:20:02.5±0.8, 32.91N×47.36E, h10km±5km, ML3.0*
ISC 03 13:20:02.8±1.3**, 32.99N**±0.04×**47.29E**±0.04**, h9**km±12km**, n35, σ1.18/42, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
DHL1	**Dehloran**	**0.31**	**182**	*e*Sg		**Sg**	**13 20 14.3**	**+1.3**
DHL1				*e*Pg		**Pg**	**13 20 08.4**	**-0.5**
DHL1				*e*			13 20 19.6	

comp=Z,93μm,0.5s

IKFM	**Kafar-mosalman**	**0.71**	**41**	*e*Pg		**Pb**	**13 20 14.8**	**-2.5**
IDOB	**Doab**	**1.09**	**43**	*e*Pg		**Pb**	**13 20 22.2**	**-1.7**
IDOB				*e*Sg		**Sb**	**13 20 37.3**	**-1.0**
IBDR	**Badra**	**1.15**	**276**	*e*Pg		**Pn**	**13 20 25.0**	**-0.1**
IBDR				*e*Sg		**Sb**	**13 20 41.0**	**+1.1**
IBDR				AML		AML	13 20 53.5	

comp=E,223nm,0.9s

IBDR				AML		AML	13 21 06.2	

comp=N,203nm,0.7s

IKOM	**Komasi**	**1.20**	**9**	*e*Pg		**Pn**	**13 20 24.7**	**-1.2**
IKOM				*e*Sg		**Sb**	**13 20 41.7**	**+0.3**
IKOM				*e*			13 20 46.9	

comp=Z,6μm,0.4s

KCHF	**Cheshme Sefid,**	**1.30**	**351**	*e*Pg		**Pn**	**13 20 26.8**	**-0.5**
KCHF				*e*			13 20 28.4	

comp=Z,3μm,0.3s

KCHF				*e*Sg		**Sn**	**13 20 44.8**	**-0.2**
KER	**Kermanshah**	**1.40**	**355**	*e*Pg		**Pn**	**13 20 28.1**	**-0.6**
KER				*e*			13 20 55.2	

comp=Z,2μm,0.4s

IGHG	**Ghaleghazi**	**1.47**	**336**	*e*Pg		**Pn**	**13 20 30.0**	**+0.3**
IGHG				*e*			13 21 02.0	

comp=Z,3μm,0.9s

IBZA	**Bozab**	**1.55**	**18**	*e*Pg		**Pn**	**13 20 31.1**	**+0.2**
IBZA				*e*			13 20 36.8	

comp=Z,3μm,0.3s

RAFI	**Al-Rafai**	**1.61**	**219**	*e*Pn		**Pn**	**13 20 31.0**	**-0.4**
RAFI				*e*Sn		**Sn**	**13 20 51.0**	**-1.3**
RAFI				AML		AML	13 21 11.2	

comp=E,322nm,0.5s

HSAM	**Samen**	**1.64**	**42**	*e*Pg		**Pn**	**13 20 32.1**	**0.0**
IDHR	**Dehrash**	**1.86**	**336**	*e*Pn		**Pn**	**13 20 36.1**	**+1.0**
IDHR				*e*			13 21 06.2	

comp=Z,3μm,0.4s

ILIN	**Lien**	**1.94**	**352**	*e*Pg		**Pb**	**13 20 39.3**	**+0.7**
ILIN				*e*			13 21 11.9	

comp=Z,891nm,0.6s

AMIS	**Naft Sefid**	**2.14**	**128**	*e*Pn		**Pn**	**13 20 39.9**	**+1.1**
KHMZ	**Khomeyn**	**2.35**	**71**	*e*Pn		**Pn**	**13 20 43.0**	**+1.1**
HAGD	**Aghdareh**	**2.39**	**40**	*e*Pn		**Pn**	**13 20 43.2**	**+0.9**
HAGD				*e*			13 21 22.4	

comp=Z,1μm,0.6s

ASAO	**Ashtian**	**2.76**	**55**	*e*Pn		**Pn**	**13 20 49.0**	**+1.6**
IPIR	**Pirpir**	**3.04**	**95**	*e*Pn		**Pn**	**13 20 52.3**	**+0.9**
IPIR				*e*			13 21 37.6	

comp=Z,448nm,0.5s

SHK1	**Shahrekord**	**3.10**	**101**	*e*Pn		**Pn**	**13 20 52.2**	**0.0**
IRAZ	**Razeghan**	**3.25**	**41**	*e*Pn		**Pn**	**13 20 55.8**	**+1.6**
IRAZ				*e*			13 21 07.6	

comp=Z,615nm,0.5s

IKRK	**Kirkuk**	**3.43**	**315**	*e*Pn		**Pn**	**13 20 57.0**	**+0.5**
IKRK				*e*Sn		**Sn**	**13 21 38.0**	**+0.7**
IKRK				AML		AML	13 21 42.7	

comp=N,66nm,0.5s

IKRK				AML		AML	13 21 43.9	

comp=E,49nm,0.4s

QAMS	**Qamsar**	**3.51**	**77**	*e*Pn		**Pn**	**13 20 59.2**	**+1.3**
QAMS				*e*			13 21 57.1	

comp=Z,380nm,0.5s

IKLH	**Kolahrood**	**3.61**	**84**	*e*Pn		**Pn**	**13 21 01.3**	**+2.1**
IQOM	**Qom**	**3.64**	**58**	*e*Pn		**Pn**	**13 21 00.4**	**+0.8**
IQOM				*e*			13 21 13.0	

comp=Z,424nm,0.4s

GHVR	**GHOM**	**3.65**	**65**	*e*Pn		**Pn**	**13 21 00.4**	**+0.8**
ZNJK	**Zanjan**	**3.85**	**17**	*e*Pn		**Pn**	**13 21 04.8**	**+2.4**
KLNJ	**Kolanjah**	**4.15**	**117**	*e*Pn		**Pn**	**13 21 08.1**	**+1.4**
KRSH	**Karshahi**	**4.16**	**75**	*e*Pn		**Pn**	**13 21 06.6**	**-0.1**
IZEF	**Zefreh**	**4.24**	**90**	*e*Pn		**Pn**	**13 21 08.7**	**+0.9**
CHTH	**Charan**	**4.30**	**46**	*e*Pn		**Pn**	**13 21 10.7**	**+2.0**
ISFB	**Sefidab**	**4.34**	**70**	*e*Pn		**Pn**	**13 21 09.9**	**+0.8**
IRAM	**Ramesheh**	**4.46**	**104**	*e*Pn		**Pn**	**13 21 11.8**	**+0.9**
NASN	**Na'in**	**4.64**	**91**	*e*Pn		**Pn**	**13 21 13.9**	**+0.4**
ANAR	**Anarak**	**5.41**	**86**	*e*Pn		**Pn**	**13 21 25.0**	**+1.2**
YZKH	**Yazd**	**6.18**	**94**	*e*Pn		**Pn**	**13 21 35.1**	**+0.7**

*IDC **03** 13:40:11.9±0.5, 49.25S×148.25E, h0km, mb4.8/19, mbtmp4.9/21, ML4.3/2, MS4.3/38, Error ellipse: s-maj=17.4km s-min=13.3km az=77.0*
*NEIC **03** 13:40:12.2±2.8, 49.24S±0.07×148.5E±0.1, h10km±1km, mb5.2/59, Mww5.2, Error ellipse: s-maj=13.5km s-min=11.8km az=57.0*
*GCMT **03** 13:40:15.1±0.1, 49.31S±0.01×147.85E±0.02, h17km, MW5.2/110, Moment Tensor Solution. s70, c105; s110, c207; Duration: 18 Moment tensor: Scale 10^16 Nm; Mrr1.07±.16; Mθθ-4.23±.14; Mϕϕ3.16±.14; Mrθ-0.39±.33; Mrϕ-6.43±.12; Mθϕ1.90±.37; Best double couple: M07.70500×10^16 NP1:ϕs284.00000°, δ76.00000°, λ171.00000°. NP2:ϕs16.00000°, δ81.00000°, λ14.00000°. Principal axes: T 7.4150, Plg16.0000°, Azm241.0000°; N 0.5790, Plg73.0000°, Azm46.0000°; P -7.9940, Plg4.0000°, Azm149.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **03** 13:40:18, 49.17S×148.34E, h24km, Moment Tensor Solution. Duration: 120 Moment tensor: Scale 10^16Nm; Mrr1.26; Mθθ-5.66; Mϕϕ4.40; Mrθ-2.21; Mrϕ-6.93; Mθϕ-1.08; Fault plane solution: M08.98000×10^16 NP1:ϕs17.00000°, δ81.00000°, λ-8.00000°. NP2:ϕs109.00000°, δ81.00000°, λ-170.00000°. Principal axes: T 7.9374, Plg0.0000°, Azm243.0000°; N 1.8069, Plg77.0000°, Azm151.0000°; P -9.7443, Plg13.0000°, Azm333.0000°;*
ISC 03 13:40:12.2±0.3**, 49.17S**±0.04×**148.67E**±0.04**, h10**km**, n315, σ2.27/288, mb5.2/62, MS4.3/40, 11C-49D, Fault plane solution: NP1:**ϕs112.43526°, δ61.58004°, λ-174.38747°. **NP2:**ϕs19.75746°, δ85.06567°, λ-28.53536°. **Principal axes:** T Plg16.0045°, Azm69.4974°; N Plg61.0765°, Azm190.7686°; P Plg23.4129°, Azm332.3629°; **South of Tasmania**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
TAU	**Tasmania Unive**	**6.33**	**351**		Pn	**Pn**	**13 41 46.2**	**+0.7**
TAU					Sn	**Sn**	**13 42 51.7**	**-6.0**
MOO	**Moorlands**	**6.80**	**351**	P		**Pn**	**13 41 52.6**	**+0.6**

baz=6.9,SNR=312

MOO				S		**Sn**	**13 43 03.4**	**-6.1**

baz=6.9

MCQ	**Macquarie Isla**	**8.31**	**134**	P		**Pn**	**13 42 12.7**	**+0.1**

baz=8.3,SNR=30

MCQ				S		**Sn**	**13 43 41.6**	**-4.8**

baz=8.3

MCQ	**Macquarie Isla**	**8.31**	**134**	Pn		**Pn**	**13 42 12.7**	**+0.1**
TOO	**Toolangi**	**11.82**	**348**	P		**Pn**	**13 43 02.4**	**+1.8**

baz=12,SNR=104

TOO	**Toolangi**	**11.82**	**348**	Pn		**Pn**	**13 43 02.5**	**+1.8**
MILA	**Mila**	**12.11**	**2**	P		**Pn**	**13 43 09.4**	**+4.6**

baz=12

MILA				S		Sn	13 45 10.3	-9.5

baz=12

DCZ	**Deep Cove**	**13.07**	**81**	Pn		**Pn**	**13 43 17.9**	**+0.2**
DCZ	**Deep Cove**	**13.07**	**81**	P		**Pn**	**13 43 18.6**	**+0.9**
APZ	**The Paps**	**13.15**	**87**	P		**Pn**	**13 43 21.2**	**+2.4**
ARPS	**Mount Arapiles**	**13.35**	**336**	P		**Pn**	**13 43 21.1**	**-0.6**

baz=13,SNR=33

WHZ	**Wether Hill Ro**	**13.43**	**83**	Pn		**Pn**	**13 43 24.2**	**+1.6**
MLZ	**Mavora Lakes**	**13.74**	**81**	Pn		**Pn**	**13 43 29.6**	**+2.8**
MLZ	**Mavora Lakes**	**13.74**	**81**	P		**Pn**	**13 43 29.7**	**+2.8**
CAN	**Canberra**	**13.84**	**1**			**Pn**	**13 43 29.0**	**+0.6**
CNB	**Canberra Magne**	**13.85**	**2**	P		**P**	**13 43 34.7**	**-2.3**

baz=14

MSZ	**Milford Sound**	**13.90**	**78**	P		**Pn**	**13 43 30.5**	**+1.5**
SYZ	**Scrubby Hill**	**13.99**	**87**	P		**Pn**	**13 43 33.1**	**+2.8**
TUZ	**Tuapeka**	**14.51**	**85**	P		**Pn**	**13 43 40.7**	**+3.4**
WKZ	**Wanaka**	**14.54**	**80**	Pn		**Pn**	**13 43 39.1**	**+1.2**
WKZ	**Wanaka**	**14.54**	**80**	P		**Pn**	**13 43 40.7**	**+2.9**
JCZ	**Jackson Bay**	**14.72**	**77**	P		**Pn**	**13 43 42.4**	**+2.0**
LBZ	**Lake Benmore**	**15.48**	**80**			**Pn**	**13 43 51.4**	**+1.0**
ODZ	**Otahua Downs**	**15.51**	**83**			**Pn**	**13 43 52.2**	**+1.4**
ODZ	**Otahua Downs**	**15.51**	**83**	P		**Pn**	**13 43 50.9**	**+0.1**
FOZ	**Fox Glacier**	**15.63**	**77**			**Pn**	**13 43 53.5**	**+1.1**
FOZ	**Fox Glacier**	**15.63**	**77**	P		**Pn**	**13 43 53.5**	**+1.1**
MGCD	**Mangrove Creek**	**16.05**	**7**	P		**P**	**13 44 08.1**	**+6.8**

baz=16

MGCD				S		**Sn**	**13 46 50.9**	**-4.8**

baz=16

RPZ	**Rata Peaks**	**16.34**	**79**	Pn		**P**	**13 44 04.4**	**0.0**

2.9nm,0.3s,baz=222,slow=8.2,SNR=16

RPZ				Sn		**Sn**	**13 47 01.7**	**-1.1**

1.1nm,0.3s,baz=351,slow=16,SNR=1.6

RPZ				LR		LR	13 49 22.0	

comp=Z,2μm,19.1s,baz=246,slow=33
37nm,0.8s

RPZ	**Rata Peaks**	**16.34**	**79**	Pn		**Pn**	**13 44 01.6**	**0.0**
OXZ	**Oxford**	**17.15**	**79**	P		**P**	**13 44 13.4**	**0.0**
OXZ	**Oxford**	**17.15**	**79**	P		**P**	**13 44 16.4**	**+2.9**
HTT	**Hallett**	**17.32**	**332**	P		**Pn**	**13 44 13.9**	**-0.1**

baz=17,SNR=50

MQZ	**McQueen's Vall**	**17.38**	**81**	P		**P**	**13 44 16.4**	**+0.5**
MQZ				IAmb		IAmb	13 44 24.5	

comp=Z,233nm,1.2s

LTZ	**Lake Taylor**	**17.56**	**78**	P		**P**	**13 44 19.4**	**+1.3**
CMSA	**Cobar Meteorol**	**17.75**	**352**	P		**P**	**13 44 25.3**	**+5.2**

baz=18,SNR=15

STKA	**Stephens Creek**	**18.07**	**340**	P		**P**	**13 44 23.7**	**0.0**

comp=Z,0.4nm,0.3s,baz=160,slow=14,SNR=34

STKA				LR		LR	13 50 30.1	

comp=Z,1μm,21.3s,baz=154,slow=34
comp=Z,40nm,1.1s

STKA	**Stephens Creek**	**18.07**	**340**	P		**P**	**13 44 27.4**	**+3.7**

baz=18,SNR=16

STKA	**Stephens Creek**	**18.07**	**340**	P		**Pn**	**13 44 23.0**	**-0.3**
THZ	**Tophouse**	**18.49**	**76**			**Pn**	**13 44 32.2**	**+3.8**
THZ	**Tophouse**	**18.49**	**76**	P		**Pn**	**13 44 34.9**	**+6.5**
THZ				S		**Sn**	**13 47 51.1**	**-3.8**
KHZ	**Kahutara**	**18.56**	**78**			**P**	**13 44 27.9**	**-1.0**
KHZ				IAmb		IAmb	13 44 37.5	

comp=Z,166nm,1.4s

KHZ	**Kahutara**	**18.56**	**78**	P		**Pn**	**13 44 35.3**	**+6.2**
MRNZ	**Matariki Terra**	**18.59**	**74**	P		**Pn**	**13 44 35.9**	**+6.3**
MRNZ				S		**Sn**	**13 47 51.3**	**-6.0**
QRZ	**Quartz Range**	**18.76**	**73**			**P**	**13 44 29.8**	**-1.4**
QRZ				IAmb		IAmb	13 44 40.1	

comp=Z,340nm,1.4s

QRZ	**Quartz Range**	**18.76**	**73**	P		**Pn**	**13 44 37.0**	**+5.4**
QRZ				S		**Sn**	**13 47 53.7**	**-7.7**
ARMA	**Armidale**	**18.86**	**8**			**P**	**13 44 30.5**	**-1.9**
BBOO	**Buckleboo**	**18.87**	**325**	P		**P**	**13 44 31.1**	**-1.3**

baz=19,SNR=26

BBOO	**Buckleboo**	**18.87**	**325**	P		**P**	**13 44 29.9**	**-2.6**
BBOO				IAmb		IAmb	13 44 43.0	

comp=Z,165nm,1.2s

NNZ	**Nelson**	**19.08**	**75**	P		**Pn**	**13 44 36.4**	**+0.9**
NNZ				IAmb		IAmb	13 44 44.6	

comp=Z,123nm,1.3s

NNZ	**Nelson**	**19.08**	**75**	P		**Pn**	**13 44 41.8**	**+6.3**
NNZ				S		**Sn**	**13 48 02.7**	**-6.4**
BSWZ	**Blackbirch Sta**	**19.13**	**77**	P		**P**	**13 44 33.4**	**-1.9**
TUWZ	**Tuamarina**	**19.32**	**76**	P		**P**	**13 44 33.8**	**-3.5**
TUWZ	**Tuamarina**	**19.32**	**76**	P		**Pn**	**13 44 42.0**	**+3.6**
TUWZ				S		**Sn**	**13 48 14.6**	**-0.4**
DUWZ	**D'Urville Isla**	**19.65**	**74**	P		**Pn**	**13 44 46.9**	**+4.5**
DUWZ				S		**S**	**13 48 17.0**	**-5.6**
SNZO	**South Karori**	**19.87**	**77**	P		**P**	**13 44 38.1**	**-5.3**
SNZO				IAmb		IAmb	13 44 53.9	

comp=Z,140nm,1.1s

BHW	**Baring Head**	**19.93**	**77**	P		**P**	**13 44 39.0**	**-5.0**
PLWZ	**Palliser**	**20.09**	**78**	P		**P**	**13 44 44.4**	**-1.4**
PLWZ	**Palliser**	**20.09**	**78**	P		Pn	13 44 52.7	+5.1
MSWZ	**Moikau Station**	**20.17**	**77**	P		**P**	**13 44 45.1**	**-1.5**
CAW	**Cannon Point**	**20.21**	**76**	P		Pn	13 44 54.1	+5.1
PAWZ	**Paruwai Farm**	**20.30**	**78**	P		Pn	13 44 54.6	+4.6
MTW	**Mount Morrison**	**20.46**	**77**	P		Pn	13 44 56.5	+4.6
HOWZ	**Holdsworth Sta**	**20.61**	**77**	P		Pn	13 44 57.4	+3.7
NEZ	**North Egmont**	**20.64**	**71**	P		Pn	13 44 56.3	+2.2
BFZ	**Birch Farm**	**21.20**	**77**	P		**P**	**13 45 04.3**	**+6.6**
BFZ				IAmb		IAmb	13 45 07.7	

comp=Z,167nm,0.9s

OUZ	**Omahuta**	**23.00**

SOEI IAmb IAmb 13 48 54.1
comp=Z,70nm,1.0s
SOEI Soe 44.26 324 P **P** **13 48 24.4 +2.5**
comp=Z,75nm,1.4s
MAW Mawson 44.34 213 P **P** **13 48 21.2 -0.7**
comp=Z,5.6nm,0.9s,baz=99,slow=13,SNR=7.1
comp=Z,5.6nm,0.9s
MAW Mawson 44.34 213 P **P** **13 48 20.7 -1.2**
baz=44,SNR=11
MAW Mawson 44.34 213 P **P** **13 48 20.2 -1.7**
KRVT Keravat (AS076 44.79 5 LR LR 14 07 01.7
comp=Z,271nm,18.4s,baz=318,slow=36
MMRI Maumere 46.07 322 P **P** **13 48 33.3 -2.9**
MMRI Maumere 46.07 322 P **P** **13 48 38.0 +1.8**
comp=Z,94nm,1.3s
EDFI Ende, Flores 46.19 322 P **P** **13 48 38.0 +0.7**
comp=Z,18nm,1.0s
MANU Manus Island 46.96 358 P **P** **13 48 43.2 0.0**
MANU IAmb IAmb 13 48 56.7
comp=Z,12nm,0.8s
SMPI Sarmi 47.77 346 P P 13 48 57.7 +8.3
AFI Afiamalu 47.80 57 P **P** **13 48 53.6 +3.7**
comp=Z,48nm,1.0s,baz=216,slow=22,SNR=3.7
AFI LR LR 14 05 36.7
comp=Z,404nm,21.3s,baz=247,slow=32
comp=Z,48nm,1.0s
AFI Afiamalu 47.80 57 P **P** **13 48 51.1 +1.2**
FAKI Fak Fak 48.17 338 P **P** **13 48 52.7 +0.1**
FAKI Fak Fak 48.17 338 P P 13 49 00.3 +7.7
MSAI Masohi 48.66 333 P P 13 49 05.9 +10
RAR Rarotonga 49.30 75 LR LR 14 08 30.2
comp=Z,119nm,18.0s,baz=221,slow=34
KAPI Kappang 50.37 321 P **P** **13 49 10.2 +0.8**
comp=Z,23nm,1.0s,baz=150,slow=8.1,SNR=2.9
KAPI LR LR 14 11 13.9
comp=Z,256nm,18.9s,baz=164,slow=37
comp=Z,23nm,1.0s
KAPI Kappang 50.37 321 P **P** **13 49 09.2 -0.2**
KAPI IAmb IAmb 13 49 15.9
comp=Z,64nm,1.4s
SIJI Sorong 50.38 337 P **P** **13 49 10.2 +0.7**
comp=Z,4.9nm,0.7s,baz=195,slow=9.2,SNR=2.4
SIJI LR LR 14 11 40.7
comp=Z,588nm,18.1s,baz=166,slow=38
comp=Z,4.9nm,0.7s
SWI Sorong 50.39 337 P P 13 49 23.0 +13
BNSI Bone 50.78 322 P **P** **13 49 14.3 +1.8**
comp=Z,32nm,1.0s
SANI Sanana 50.80 330 P **P** **13 49 12.1 -0.5**
comp=Z,485nmcomp=Z,53nm,1.5s
SPSI Sidrap Palu 51.31 322 P **P** **13 49 17.6 +1.1**
comp=Z,35nm,1.7s
PWJI Pagerwojo 51.34 310 P **P** **13 49 16.3 -0.5**
comp=Z,18nm,1.4s
LBMI Labuha 51.65 333 P **P** **13 49 21.2 +2.1**
comp=Z,656nmcomp=Z,28nm,1.6s
TTSI Tana Toraja 52.13 322 P **P** **13 49 23.3 +0.7**
comp=Z,49nm,1.3s
LUWI Luwuk 52.84 327 P P 13 49 35.1 +7.2
BELA Belgrano 2 53.21 179 P **P** **13 49 28.3 -1.7**
BELA IAmb IAmb 13 49 47.0
comp=Z,31nm,0.7s
APSI Ampana 53.38 326 P P 13 49 39.5 +7.7
BBKI Banjar Baru 53.88 317 P **P** **13 49 36.4 +0.9**
comp=Z,45nm,1.2s
KMSI Cibinong 53.92 329 P P 13 49 48.8 +13
CNJI Cibinong 54.36 306 P **P** **13 49 37.9 -1.2**
comp=Z,89nm,0.9s
LEM Lembang 54.51 307 P **P** **13 49 40.6 +0.3**
comp=Z,36nm,0.8s,baz=144,slow=17,SNR=3.5
LEM LR LR 14 09 50.2
comp=Z,450nm,21.8s,baz=158,slow=33
comp=Z,36nm,0.8s
LEM Lembang 54.51 307 P **P** **13 49 42.5 +2.2**
comp=Z,56nm,0.8s
MRSI Marisa 54.55 326 P **P** **13 49 40.7 +0.3**
comp=Z,616nmcomp=Z,53nm,0.8s
SKJI Sukabumi 54.92 306 P **P** **13 49 47.0 +3.9**
comp=Z,4µmcomp=Z,239nm,0.5s
MPSI Mapaga 55.19 324 P P 13 49 50.0 +5.0
TOLI2 Tolitoli 55.56 325 P **P** **13 49 47.2 -0.5**
MTKI Muara Teweh, K 56.09 318 P **P** **13 49 53.0 +1.4**
TROLL Troll, Antarti 56.79 192 pP **P** **13 49 55.9 -0.2**
KASI Kota Agung 57.26 304 P **P** **13 50 00.2 +0.3**
comp=Z,34nm,1.9s
SNAA Sanae 57.78 190 pP **P** **13 50 02.3 -0.6**
SNAA Sanae 57.78 190 LR LR 14 13 16.8
comp=Z,321nm,20.1s,baz=166,slow=34
SNAA Sanae 57.78 190 P **P** **13 50 01.7 -1.3**
PPT Papeete 58.49 80 LR LR 14 12 34.4
comp=Z,133nm,18.1s,baz=206,slow=33
STKI Sintang 58.53 315 P **P** **13 50 10.2 +1.4**
comp=Z,4µmcomp=Z,20nm,0.4s
VNA3 Neumayer Olymp 58.90 188 pP **P** **13 50 09.8 -1.0**
VNA2 Neumayer--Watz 58.99 189 pP **P** **13 50 10.5 -0.8**
baz=161,slow=7.0
PPBI Pangkal Pinang 59.23 308 P **P** **13 50 13.9 +0.3**
comp=Z,18µmcomp=Z,25nm,0.5s
VNA1 Neumayer--Stat 59.34 189 pP **P** **13 50 13.3 -0.4**
DAV Davao City (W) 59.53 333 LR LR 14 17 57.6
comp=Z,166nm,18.2s,baz=150,slow=38
SBUM Sibu 60.30 317 P **P** **13 50 19.5 -1.4**
SBUM IAmb IAmb 13 50 32.3
comp=Z,22nm,1.1s
KSM Kuching 60.31 314 P **P** **13 50 19.3 -1.8**
KSM IAmb IAmb 13 50 32.4
comp=Z,23nm,0.8s
PSI Prapat 67.23 304 P **P** **13 51 06.0 -0.8**
comp=Z,14nm,0.9s,baz=167,slow=8.2,SNR=8.6
PSI LR LR 14 19 38.3
comp=Z,134nm,18.6s,baz=126,slow=35
comp=Z,14nm,0.9s
KULM Kulim 68.40 307 P **P** **13 51 13.2 -0.9**
KULM IAmb IAmb 13 51 23.7
comp=Z,20nm,1.0s
KCSI Kotacane, Aceh 68.46 304 P P 13 51 24.2 +10
H08S2 Diego Garcia H 75.22 275 T T 15 13 53.8
baz=139,slow=76,SNR=5.7
H08S1 Diego Garcia H 75.23 275 T T 15 13 36.4
baz=139,slow=76,SNR=3.7
H08S3 Diego Garcia H 75.24 275 T T 15 13 58.1
baz=139,slow=76,SNR=6.8
JCJ Chichijima 76.14 354 LR LR 14 25 58.6
comp=Z,200nm,19.2s,baz=103,slow=36
QIZ Qiongzhong 76.16 322 P **P** **13 52 03.4 +3.1**
QIZ S **S** **14 01 48.2 +4.1**
QIZ LR LR
comp=Z,240nm,9.8s
QIZ LR LR
comp=Z,210nm,12.7s
QIZ LR LR
comp=Z,270nm,44.6s
JOW Kunigami 77.82 341 LR LR 14 27 25.7
comp=Z,191nm,19.3s,baz=136,slow=36
CMAR Chiang Mai Arr 80.48 313 P **P** **13 52 25.0 +0.8**
comp=Z,5.0nm,1.0s,baz=169,slow=5.2,SNR=20
CMAR LR LR 14 28 12.9
comp=Z,95nm,19.4s,baz=135,slow=36
comp=Z,5.0nm,1.0s
CMAR Chiang Mai Arr 80.48 313 P **P** **13 52 24.6 +0.4**
CHTO Chiang Mai 80.79 313 P **P** **13 52 23.9 -2.0**
CHTO IAmb IAmb 13 52 38.5
comp=Z,22nm,1.0s
PALK Pallekele 81.41 292 LR LR 14 20 59.2
comp=Z,128nm,20.9s,baz=238,slow=30
JHJ Hachijo jima 2 82.30 352 LR LR 14 28 05.5
comp=Z,140nm,20.0s,baz=91,slow=35
PLCA Paso Flores 84.03 151 P **P** **13 52 44.8 +2.0**
comp=Z,2.6nm,1.1s,baz=190,slow=6.1,SNR=2.3
PLCA LR LR 14 21 36.2
comp=Z,102nm,21.3s,baz=195,slow=30
comp=Z,2.6nm,1.1s
GYA Guiyang 84.09 323 ⇓P **P** **13 52 45.8 +2.7**
GYA PP **PP** **13 55 53.6 -4.0**
GYA S **S** **14 03 09.6 +2.0**
GYA pmax pmax
comp=Z,13nm,0.9s
GYA pmax pmax
comp=Z,91nm,3.5s
GYA LR LR
comp=Z,130nm,3.8s
GYA LR LR
comp=Z,64nm,3.9s
GYA LR LR
comp=Z,59nm,4.9s
KMI Kunming 84.53 319 ⇓P **P** **13 52 48.0 +2.5**
KMI pP pwP 13 52 51.5 -1.3
KMI sP PcP 13 52 56.1 +7.1
KMI SKS **SKSac** **14 03 01.5 -7.9**
KMI S **SKKSac** **14 03 14.4 -0.7**
KMI pmax pmax
comp=Z,13nm,1.3s
KMI pmax pmax
comp=Z,140nm,5.6s
KMI LR LR
comp=Z,200nm,12.8s
KMI LR LR
comp=Z,120nm,9.7s
KMI LR LR
comp=Z,220nm,16.1s
MJAR Matsushiro Arr 85.84 352 P **P** **13 52 53.0 +1.5**
comp=Z,1.4nm,0.8s,baz=171,slow=7.4,SNR=5.0
MJAR LR LR 14 28 15.0
comp=Z,46nm,21.8s,baz=154,slow=34
comp=Z,1.4nm,0.8s
PZH PanZhiHua 86.17 319 P **P** **13 52 57.5 +4.0**
PZH pmax pmax
comp=Z,7.0nm,0.8s
PZH pmax pmax
comp=Z,90nm,5.7s
SUR Sutherland 86.49 222 LR LR 14 23 48.8
comp=Z,187nm,21.1s,baz=152,slow=30
H03S2 Juan Fernandez 87.15 142 T T 15 30 14.9
baz=208
H03S1 Juan Fernandez 87.15 142 T T 15 30 16.7
baz=208
H03S3 Juan Fernandez 87.17 142 T T 15 30 12.1
baz=208
H03N3 Juan Fernandez 87.48 142 T T 15 30 27.0
baz=207,slow=72,SNR=13
H03N2 Juan Fernandez 87.50 142 T T 15 30 37.3
baz=207,slow=72,SNR=10
H03N1 Juan Fernandez 87.50 142 T T 15 30 27.1
baz=207,slow=72,SNR=7.1
BOSA Boshof 87.61 227 P **P** **13 53 02.0 +1.2**
comp=Z,5.8nm,0.9s,baz=159,slow=4.8,SNR=4.7
BOSA LR LR 14 24 06.4
comp=Z,197nm,21.8s,baz=169,slow=30
comp=Z,5.8nm,0.9s
KSAR Wonju Array Be 88.18 344 **P** **13 53 04.9 +2.1**
KSRS Korea Array 88.19 344 P **P** **13 53 05.2 +2.4**
comp=Z,3.6nm,0.8s,baz=161,slow=6.0,SNR=14
KSRS LR LR 14 30 37.7
comp=Z,90nm,21.4s,baz=155,slow=34
comp=Z,3.6nm,0.8s
CD2 Chengdu 89.20 323 P **P** **13 53 10.1 +2.2**
CD2 pmax pmax
comp=Z,10.0nm,0.9s
XAN Xi'an 90.07 328 P **P** **13 53 14.0 +2.1**
XAN pP pwP 13 53 18.4 -0.8
XAN pmax pmax
comp=Z,7.0nm,1.0s
LBTB Lobatse 90.44 229 LR LR 14 25 31.2
comp=Z,150nm,21.3s,baz=146,slow=30
HYBB Hyderabad (bro 90.65 296 *e*P **P** **13 53 14.6 -0.3**
HNS HongShan 91.30 334 ⇓P **P** **13 53 20.5 +3.1**
HNS LR LR
comp=Z,110nm,21.0s
HNS LR LR
comp=Z,140nm,21.1s
MATP Matopo 92.73 234 LR LR 14 28 41.7
comp=Z,212nm,18.5s,baz=60,slow=32
ASAJ Asahikawa 93.05 356 LR LR 14 36 28.5
comp=Z,41nm,19.3s,baz=186,slow=36
LZH Lanzhou 93.75 325 *e*P P 13 53 34.2 +5.2
LZH pP pwP 13 53 40.9 +4.5
LZH pmax pmax
comp=Z,13nm,1.1s
USRK Ussuriysk Ar. 94.12 348 LR LR 14 35 48.7
comp=Z,79nm,19.0s,baz=160,slow=35
HHC Hu-ho-hao-te 95.42 333 *e*P **P** **13 53 38.4 +1.9**
LSZ Lusaka 97.11 237 LR LR 14 32 15.6
comp=Z,238nm,18.6s,baz=160,slow=32
GTA Gaotai 98.19 324 *e*P Pdif 13 53 51.2 +2.1
GTA pP pwP 13 53 57.1 +0.6
GTA sP sP 13 54 01.3 +10
GTA pmax pmax
comp=Z,1.0nm,0.9s
GTA pmax pmax
comp=Z,49nm,6.5s
GTA LR LR
comp=Z,87nm,17.5s
GTA LR LR
comp=Z,97nm,15.6s
GTA LR LR
comp=Z,150nm,17.8s
KLR Kul'dur 99.09 349 LR LR 14 39 21.7
comp=Z,39nm,18.0s,baz=158,slow=36
TXAR Lajitas Array 122.79 82 PKP **PKiKP** **13 59 09.8 +1.4**
comp=Z,1.1nm,0.8s,baz=194,slow=5.4,SNR=12
MNTX Cornudas Mount 123.24 79 **PKiKP** **13 59 09.9 +0.8**
NEA2 Nenana 123.28 27 **PKiKP** **13 59 08.8 +0.6**
G08A Pilot Rock 123.61 58 **PKiKP** **13 59 10.6 +1.0**
HDA Harding Lake 123.80 28 **PKiKP** **13 59 09.7 +0.5**
ILAR Eielson Array 124.07 28 PKP **PKiKP** **13 59 10.7 +1.0**
comp=Z,0.9nm,0.6s,baz=280,slow=2.9,SNR=11
ILAR Eielson Array 124.07 28 **PKiKP** **13 59 10.0 +0.3**
J25K Salcha River, 124.43 29 **PKiKP** **13 59 11.5 +1.0**
PDAR Pinedale Array 127.52 65 PKP **PKiKP** **13 59 19.4 +1.9**
comp=Z,0.3nm,0.5s,baz=299,slow=3.1,SNR=3.8
DBIC Dimbokro 132.12 217 PKP **PKiKP** **13 59 28.7 +1.3**
comp=Z,9.2nm,1.1s,baz=180,slow=1.0,SNR=3.2
W41B Gary Mavity, V 133.95 84 **PKPdf** **13 59 29.5 +0.4**
BRTR Keskin Array B 133.98 284 PKP **PKPdf** **13 59 30.0 +0.7**
comp=Z,0.6nm,0.7s,baz=154,slow=5.4,SNR=3.0
WHAR Wooly Hollow 133.99 84 **PKPdf** **13 59 30.1 +0.8**
U40A Yellville 134.26 82 **PKPdf** **13 59 30.1 +0.4**
YKA Yellowknife Ar 134.74 40 PKhKP PKPpre 13 59 23.1
comp=Z,0.9nm,1.0s,baz=247,slow=2.3,SNR=4.6
TORD Torodi Ar. Bea 134.96 229 PKP **PKPdf** **13 59 31.5 -0.1**
comp=Z,1.7nm,0.8s,baz=118,slow=1.8,SNR=5.3
TORD Torodi Ar. Bea 134.96 229 **PKPdf** **13 59 30.9 -0.7**
LCAR Lake Charles 135.20 84 **PKPdf** **13 59 31.9 +0.5**
AKASG Malin Array Be 141.95 296 PKhKP PKPpre 13 59 41.9
comp=Z,0.9nm,0.5s,baz=71,slow=2.8,SNR=6.0
EUNU Eureka 143.93 14 PKPbc 13 59 44.9 +0.9
O53A New Philadelph 144.02 85 **PKPdf** **13 59 46.6 -0.8**
O54A Avella 144.53 86 **PKPdf** **13 59 48.1 -0.1**
IDID Didzisalis 144.83 303 *e*P **PKPdf** **13 59 49.5 +1.3**
DIVS Divibare 144.96 282 **PKPab** **13 59 47.4 -0.9**
IIGN Ignalina 145.12 303 *e*P **PKiKP** **13 59 50.8 -1.8**
ISAL Salakas 145.23 303 *e*P **PKPdf** **13 59 50.8 +1.9**
KOLS Kolonicke sedl 145.49 290 *e*PKP **PKPab** **13 59 50.5 +0.5**
VSU Vasula 145.52 308 *e*P **PKPab** **13 59 50.8 +1.1**
CRVS Cervenica-Dubn 145.97 290 *e*PKP **PKPab** **13 59 51.7 -0.1**
FINES FINESS Array B 146.25 313 PKPbc **PKPbc** **13 59 52.0 +0.4**
comp=Z,12nm,0.7s,baz=105,slow=4.4,SNR=39
FINES FINESS Array B 146.25 313 **PKPdf** **13 59 51.1 +0.6**
ARCES ARCESS Array B 146.36 328 PKPbc **PKPab** **13 59 52.4 -0.2**
comp=Z,6.5nm,0.8s,baz=85,slow=3.7,SNR=22
PABE Paberze 146.41 302 *e*P **PKPab** **13 59 54.1 +0.9**
SUW Suwalki 146.50 299 *e*PKP **PKPab** **13 59 53.3 -0.3**
SUW Suwalki 146.50 299 *e*P **PKPbc** **13 59 52.8 +0.2**
PSZ Piszkesteto 146.59 288 PKP **PKPab** **13 59 55.0 +0.7**
MORH Mrgy, Hungar 146.72 284 PKP **PKPbc** **13 59 53.2 -0.3**
NIE Niedzica 146.87 290 *e*PKP **PKPbc** **13 59 54.0 +0.1**
MEF Metsahovi 146.95 311 *e*P **PKPab** **13 59 55.0 -0.2**
KOVH Kovagotottos 147.02 284 PKP **PKPbc** **13 59 54.1 -0.3**
MTSE Matsula 147.07 308 *e*P **PKPab** **13 59 55.0 -0.7**
NOR Nord 147.10 356 *i* P **PKPbc** **13 59 53.7 +0.1**
NOR IAmb IAmb 13 59 55.1
comp=Z,3.0nm,0.7s
LANS Liptovska Anna 147.29 290 *e*PKP **PKPbc** **13 59 55.8 +0.7**
OJC Ojcow 147.44 292 *e*PKP **PKPbc** **13 59 55.5 +0.2**
VYHS Vyhne 147.46 288 *e*PKP **PKPbc** **13 59 55.9 +0.4**
KEST Kesra 147.53 261 PKPbc **PKPbc** **13 59 56.6 +0.4**
comp=Z,18nm,0.8s,baz=301,slow=2.8,SNR=17
SLIT Slitere, Latvi 147.71 306 *e*P **PKPbc** **13 59 55.7 -0.1**
MPLH Magyarpolny 147.79 285 PKP **PKPbc** **13 59 57.1 +0.6**
RAF Rauma 148.31 312 *e*P **PKiKP** **13 59 59.5 +0.6**
JAVC Velka Javorina 148.31 288 *e*PKP **PKPbc** **13 59 57.7 -0.1**
KOGS Kog 148.34 283 *i* PKPbc **PKPbc** **13 59 57.9 0.0**
MAUC Maruska 148.38 289⇑ *e*PKP **PKPab** **14 00 05.9 +4.6**
MODS Modra-Piesok 148.39 287 *e*PKP **PKPbc** **13 59 57.6 -0.4**
BOJS Bojanci 148.61 281 *i* PKPbc **PKPbc** **13 59 58.6 0.0**
MORC Moravsky Berou 148.68 290 **PKPbc** **13 59 58.9 +0.1**
MORC Moravsky Berou 148.68 290 *e*PKP **PKPbc** **13 59 57.8 -1.0**
RONA Rosalia, Austr 148.77 286 *i* P **PKPbc** **13 59 58.8 -0.3**
comp=Z,16nm,1.2s,SNR=6.1
ARSA Arzberg 149.10 285 *i* P **PKPbc** **13 59 59.9 0.0**
comp=Z,0.2nm,0.3s,SNR=5.8
VRAC Vranov 149.12 289 *e*PKP **PKPbc** **14 00 00.0 +0.1**
CONA Conrad Observa 149.13 286 *i* P **PKPbc** **13 59 59.6 -0.4**
comp=Z,20nm,1.9s,SNR=5.8
PERS Pernice 149.13 283 *i* PKPbc **PKPbc** **14 00 00.1 +0.1**
KRUC Moravsky 149.17 288 *e*PKP **PKPbc** **14 00 00.0 0.0**
SOKA Soboth 149.20 283 *i* P **PKPbc** **14 00 00.4 +0.1**
comp=Z,21nm,0.9s,SNR=13
KRLC Kraliky 149.24 290⇑ *e*PKP **PKPbc** **14 00 00.5 +0.3**
LJU Ljubljana 149.29 282 *i* PKPbc **PKPbc** **14 00 00.6 +0.2**
OBKA Obir 149.45 283 *i* P **PKPbc** **14 00 00.6 -0.2**
comp=Z,0.2nm,0.3s
DPC Dobruska-Polom 149.60 291⇑ *e*PKP **PKiKP** **14 00 01.9 -0.2**
OSTC Ostas 149.73 291⇑ *e*PKP **PKiKP** **14 00 02.3 0.0**
OSTC *ex* x 14 00 10.2
KSP Ksiaz 149.76 292 *e*PKP **PKPbc** **14 00 01.6 +0.3**
CHVC Chvalec 149.83 291⇑ *e*PKP **PKPbc** **14 00 01.3 -0.3**
MYKA Terra Mystica 150.08 282 *i* P **PKPbc** **14 00 02.4 0.0**
comp=Z,22nm,1.3s
MOA Molln 150.11 285 *i* P **PKPbc** **14 00 01.7 -0.6**
comp=Z,14nm,1.3s
UPP Uppsala 150.32 310 *e*P **PKPbc** **14 00 02.6 +0.3**
CKRC Cesky Krumlov 150.40 287⇑ *e*PKP **PKPbc** **14 00 03.0 0.0**
KBA Koelnbreinsper 150.43 283 *e*P **PKPbc** **14 00 02.5 -0.8**
comp=Z,9.0nm,1.1s,SNR=5.6
BIOA Bad Ischl, Aus 150.45 284 *i* P **PKPbc** **14 00 02.5 -0.7**
comp=Z,10nm,1.0s
VIKU Vikbolandet 150.76 307 *e*P **PKPbc** **14 00 03.1 -0.4**
GERES GERESS Array B 150.79 287 PKPbc **PKPbc** **14 00 03.9 -0.1**
comp=Z,3.8nm,0.9s,baz=321,slow=1.9,SNR=12
GERES GERESS Array B 150.79 287 **PKPbc** **14 00 03.7 -0.3**
GERES PKPab **pPKPab** **14 00 12.9 -0.3**
QUA2 Belchertown 150.83 88 **PKPdf** **13 59 56.7 -1.9**
ABTA Abfaltersbach 150.84 282 *e*P **PKPbc** **14 00 03.8 -0.4**
comp=Z,16nm,1.2s,SNR=7.8
KHC Kasperske Hory 150.95 287⇑ *e*PKP **PKPbc** **14 00 03.8 -0.5**
KHC *e*pPKP **sPKPbc** **14 00 09.5 +2.5**
KHC *ex* x 14 00 20.5
BRG Berggiesshubel 151.20 291 *e*PKP **PKiKP** **14 00 05.4 +0.1**
BRG Amp 14 00 07.0
comp=Z,17nm,1.4s
BRG *ex* x 14 00 22.2
BRG Amp 14 00 23.2
comp=Z,33nm,1.5s
BRG *ex* x 14 00 47.8
BRG Amp 14 00 49.1
comp=Z,8.6nm,1.0s
WTTA Wattenberg 151.59 283 *e*P **PKPbc** **14 00 05.8 -0.3**
comp=Z,22nm,1.1s,SNR=6.8
WATA Walderalm 151.65 283 *i* P **PKPbc** **14 00 05.7 -0.4**
comp=Z,16nm,1.1s,SNR=5.6
DAG Danmarks Havn 151.84 354 *i* P **PKPbc** **14 00 04.9 -0.6**
DAG IAmb IAmb 14 00 06.1
comp=Z,4.7nm,0.7s
SQTA Sankt Quirin 151.84 282 *i* P **PKPbc** **14 00 06.4 -0.2**
comp=Z,16nm,0.9s,SNR=5.4
CLL Collm 151.88 291 *i* PKPbc **PKPbc** **14 00 06.0 -0.3**
comp=Z,23nm,1.6s
CLL *i* pPKPbc **sPKPbc** **14 00 10.4 +1.4**
CLL *i* PKPab **PKPab** **14 00 15.1 -0.5**
comp=Z,23nm,1.5s
CLL *i* x x 14 00 22.2
CLL *e*SKPdf **SKPdf** **14 03 33.0 0.0**
CLL *e*(PP) 14 03 56.0
MOTA Moosalm 151.95 283 *i* P **PKPbc** **14 00 06.5 -0.4**
comp=Z,11nm,1.0s
FETA Feichten 152.09 282 *i* P **PKPbc** **14 00 07.1 -0.1**
comp=Z,22nm,1.1s,SNR=8.5
RETA Reutte 152.22 283 *i* P **PKPbc** **14 00 07.0 -0.3**
comp=Z,3.5nm,0.6s
DAVA Damuels 152.72 282 *i* P **PKPbc** **14 00 08.4 -0.1**
comp=Z,13nm,0.9s
NB2 NORSAR Subarra153.43 313 PKP **PKPbc** **14 00 09.3 -0.2**
comp=Z,5.2nm,1.0s,baz=75,slow=4.1
NOA NORSAR Array B153.43 313 PKPbc **PKPbc** **14 00 09.6 +0.1**
comp=Z,1.9nm,0.8s,baz=255,slow=3.1,SNR=7.2
SENIN Lac Senin/Sane 154.07 279 PKPdf **PKPdf** **14 00 02.5 -1.0**
SENIN **PKPab** **14 00 22.7 -2.6**
ESDC Sonseca Array 158.38 254 PKPbc PKPdf 14 00 20.7 +12
comp=Z,0.5nm,0.8s,baz=80,slow=2.9,SNR=4.4
ESDC PKPab **PKPab** **14 00 43.6 -0.2**
comp=Z,2.4nm,0.8s,baz=117,slow=3.1,SNR=11

IDC ***03*** *13:45:16.0±0.8,2.°41S×77.°18W,h0km,mb3.7/8, mbtmp4.0/12,ML3.6/4,MS3.3/7 Error ellipse: s-maj=28.3km s-min=19.4km az=65.0*
NEIC ***03*** *13:45:17.6±2.7,2.°63S±0.°05×77.°48W±0.°07,h7km±5km, mb4.4/5, Error ellipse: s-maj=10.9km s-min=7.4km az=105.0*
IGQ ***03*** *13:45:22±0.5,2.°S×3.°×7.°8W×.°,h10km*
ISC 03 13:45:17.7±0.5,2.°53S±0.°04×77.°49W±0.°05,h13km,n92,
σ1s31/91,mb3.7/9,MS3.2/3,Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h	m	s	Res ISC
BOSC	**San Juan Bosco**	**1.18**	**238**		**Pb**	**13**	**45**	**39.6**	**-0.6**
BOSC	**San Juan Bosco**	**1.18**	**238**	P	**Pb**	**13**	**45**	**39.0**	**-1.2**
BOSC				S	**Sn**	**13**	**45**	**57.0**	**+0.8**
ARRY	**Arrayan**	**1.40**	**316**	P	**Pn**	**13**	**45**	**43.0**	**-0.3**
BRUN	**Tungurahua Vol**	**1.44**	**320**	P	**Pn**	**13**	**45**	**44.0**	**+0.2**
BRUN				S	**Sn**	**13**	**46**	**02.0**	**-0.7**
RETU	**Refugio**	**1.44**	**318**	P	**Pn**	**13**	**45**	**44.0**	**+0.1**
IGUA	**Igualata**	**1.54**	**312**	P	**Pn**	**13**	**45**	**46.0**	**+0.5**
TAMH	**Tambohuasha Ch**	**1.62**	**307**	P	**Pn**	**13**	**45**	**47.0**	**+0.5**
PORT	**Chimborazo Vol**	**1.66**	**309**		**Pb**	**13**	**45**	**48.7**	**+0.1**
COHC	**Cochancay**	**1.77**	**272**	Pn	**Pb**	**13**	**45**	**49.7**	**-0.3**
VCES	**Cotopaxi**	**1.94**	**332**	P	**Pn**	**13**	**45**	**52.0**	**+1.1**
BRRN	**Barrancas-Volc**	**1.99**	**330**	P	**Pb**	**13**	**45**	**53.0**	**-1.2**
BMOR	**Cotopaxi Volca**	**2.03**	**331**	P	**Pb**	**13**	**45**	**54.0**	**-0.9**
SLOR	**San Lorenzo -**	**2.05**	**330**	Pn	**Pb**	**13**	**45**	**55.0**	**-0.1**
SLOR	**San Lorenzo -**	**2.05**	**330**	P	**Pb**	**13**	**45**	**54.0**	**-1.1**
BTAM	**Cotopaxi Volca**	**2.05**	**334**	P	**Pb**	**13**	**45**	**54.0**	**-1.2**
SRAM	**San Ramn-Vol**	**2.07**	**328**	P	**Pb**	**13**	**45**	**55.0**	**-0.4**
BVC2	**Cotopaxi Volca**	**2.07**	**333**	P	**Pb**	**13**	**45**	**55.0**	**-0.6**
BREF	**Cotopaxi Volca**	**2.08**	**333**	P	**Pb**	**13**	**45**	**55.0**	**-0.7**
VC1	**Cotopaxi 1**	**2.08**	**334**	P	**Pb**	**13**	**45**	**55.0**	**-0.7**
BNAS	**Cotopaxi Volca**	**2.09**	**332**	P	**Pb**	**13**	**45**	**55.0**	**-0.9**
CAMI	**Rancho Maria**	**2.10**	**331**	P	**Pb**	**13**	**45**	**55.0**	**-1.0**
ANTM	**Antisana-La Mi**	**2.11**	**340**	P	**Pb**	**13**	**45**	**55.0**	**-1.2**
NAS2	**Nasa**	**2.11**	**332**	P	**Pb**	**13**	**45**	**56.0**	**-0.2**
ANTS	**Antisana-Sarah**	**2.13**	**341**	P	**Pb**	**13**	**45**	**56.0**	**-0.5**
ANTG	**Antisana-Guama**	**2.15**	**339**	P	**Pn**	**13**	**45**	**55.0**	**+1.2**
PAST	**Pastocalle**	**2.15**	**328**	P	**Pb**	**13**	**45**	**57.0**	**+0.1**
ANTI	**Antisana**	**2.17**	**342**	P	**Pn**	**13**	**45**	**55.0**	**+0.9**
ILLI	**Illinizas Sur**	**2.19**	**325**	P	**Pb**	**13**	**45**	**57.0**	**-0.5**
TOMA	**Boca Toma-Volc**	**2.23**	**335**	P	**Pb**	**13**	**45**	**57.0**	**-1.1**
APS4	**Papallacta**	**2.23**	**344**	P	**Pb**	**13**	**45**	**58.0**	**-0.1**
CONE	**Cono NE Rev Vo**	**2.44**	**356**	P	**Pn**	**13**	**45**	**59.0**	**+1.3**
JUA2	**San Juan 2**	**2.56**	**334**	P	**Pb**	**13**	**46**	**04.0**	**+0.3**
CAYR	**Refugio Cayamb**	**2.58**	**348**	P	**Pn**	**13**	**46**	**02.0**	**+2.2**
GGPC	**Guagua Pichinc**	**2.58**	**335**	P	**Pb**	**13**	**46**	**04.0**	**-0.3**
TERV	**Terraza Guagua**	**2.59**	**334**	P	**Pb**	**13**	**46**	**05.0**	**+0.6**
PINO	**Pino**	**2.61**	**334**	P	**Pb**	**13**	**46**	**05.0**	**+0.3**
ANGU	**Angureal**	**2.61**	**348**	P	**Pb**	**13**	**46**	**05.0**	**+0.3**
YANA	**Yana**	**2.63**	**336**	P	**Pb**	**13**	**46**	**05.0**	**0.0**
CAYA	**Cayambe**	**2.63**	**349**	P	**Pb**	**13**	**46**	**04.0**	**-1.0**
ISPG	**Isla Puna-Puer**	**2.72**	**261**	P	**Pb**	**13**	**46**	**05.0**	**-1.3**
ARNL	**Arenillas**	**2.77**	**248**	Pn	**Pn**	**13**	**46**	**04.0**	**+2.1**
ARNL	**Arenillas**	**2.77**	**248**	P	**Pn**	**13**	**46**	**04.0**	**+2.1**
ZUMB	**Zumba**	**2.85**	**215**	P	**Pn**	**13**	**46**	**05.0**	**+1.9**
OTAV	**Otavalo**	**2.91**	**341**		**Pb**	**13**	**46**	**07.9**	**-1.9**
CUSW	**Cuicocha Oeste**	**2.92**	**343**	P	**Pb**	**13**	**46**	**10.0**	**0.0**
YAHU	**Yahuarcocha**	**2.94**	**348**	P	**Pb**	**13**	**46**	**10.0**	**-0.2**
CUIC	**Cuicocha-Domo**	**2.94**	**343**	P	**Pb**	**13**	**46**	**11.0**	**+0.7**
CUSE	**Cuicocha Este**	**2.96**	**342**	P	**Pb**	**13**	**46**	**11.0**	**+0.4**
BONI	**La Bonita**	**2.96**	**359**	P	**Pn**	**13**	**46**	**06.0**	**+1.3**
COTA	**Cotacachi**	**2.97**	**343**	P	**Pn**	**13**	**46**	**06.0**	**+1.0**
URCU	**Urcuqui**	**3.04**	**345**	P	**Pb**	**13**	**46**	**12.0**	**-0.1**
FLF1	**Flavio Alfaro-**	**3.19**	**312**	P	**Pb**	**13**	**46**	**13.0**	**-1.4**
TULM	**Tulcn-Chalpat**	**3.23**	**355**	Pn	**Pn**	**13**	**46**	**11.6**	**+2.9**
TULM	**Tulcn-Chalpat**	**3.23**	**355**	P	**Pn**	**13**	**46**	**12.0**	**+3.3**
LNGL	**El Angel-Carch**	**3.29**	**351**	P	**Pn**	**13**	**46**	**12.0**	**+2.6**
CHL1	**Volcjn Chiles**	**3.33**	**352**	P	**Pb**	**13**	**46**	**14.0**	**-3.0**
ECEN	**Cerro Negro**	**3.36**	**352**	P	**Pn**	**13**	**46**	**14.0**	**+3.5**
CHMA	**Chilma**	**3.42**	**350**	P	**Pb**	**13**	**46**	**18.0**	**-0.3**
PPLP	**Puerto Lpez**	**3.43**	**286**	P	**Pn**	**13**	**46**	**12.0**	**+1.1**
CABP	**Cabo Pasado**	**3.63**	**306**	P	**Pb**	**13**	**46**	**21.0**	**-0.8**
ISPT	**Isla de la Pla**	**3.80**	**289**	P	**Pn**	**13**	**46**	**18.0**	**+2.0**
TUMC	**Tumaco**	**4.

88nm,0.5s
ROSC **El Rosal** 7.97 23 Pn **Pn** 13 47 11.9 -1.8
2.7nm,0.3s,baz=36,slow=24,SNR=1.8
7.1nm,0.4s
ROSC **El Rosal** 7.97 23 Pn **Pn** 13 47 13.0 -0.7
NNA **Nana** 9.42 176 Pn **Pn** 13 47 35.0 +1.7
2.5nm,0.3s,baz=350,slow=11,SNR=2.3
NNA LR LR 13 51 35.8
comp=Z,138nm,19.4s,baz=323,slow=40
6.6nm,0.3s
NNA Nana 9.42 176 **Pn** 13 47 34.5 +1.2
SDV **Santo Domingo** 13.23 31 Pn **Pn** 13 48 22.5 -3.2
5.8nm,0.3s,baz=4.9,slow=10.0,SNR=3.6
15nm,0.4s
JTS **Las Juntas de** 14.74 330 LR LR 13 53 22.0
comp=Z,64nm,19.5s,baz=235,slow=33
BAUV **El Baul** 14.78 39 **Pn** 13 48 48.0 +1.4
LPAZ **La Paz** 16.49 147 LR LR 13 57 15.1
comp=Z,64nm,20.4s,baz=227,slow=44
SIV **San Ignacio** 20.98 131 P **P** 13 49 58.8 -2.2
1.5nm,0.5s,baz=317,slow=12,SNR=1.3
SIV LR LR 13 59 11.4
comp=Z,78nm,19.3s,baz=310,slow=40
1.5nm,0.5s
MDP **Montagnes des** 25.95 73 LR LR 14 01 07.8
comp=Z,69nm,18.1s,baz=319,slow=37
CMIG **Matias Romero** 25.98 319 LR LR 14 00 01.0
comp=Z,80nm,19.7s,baz=210,slow=34
TXAR **Lajitas Array** 40.40 324 P **P** 13 52 57.6 +1.6
0.3nm,0.7s,baz=148,slow=7.4,SNR=3.8
TXAR PcP **PcP** 13 54 59.8 +0.8
0.7nm,0.8s,baz=146,slow=5.6,SNR=7.6
0.3nm,0.7s
TXAR Lajitas Array 40.40 324 P **P** 13 52 57.3 +1.4
LCAR **Lake Charles** 40.46 343 P **P** 13 52 55.8 -0.3
LCAR IAmb IAmb 13 52 56.3
comp=Z,7.7nm,0.9s
U40A **Yellville** 41.25 341 P **P** 13 53 02.3 -0.4
MGMO **Mountain Grove** 41.80 342 P **P** 13 53 07.0 -0.2
MGMO IAmb IAmb 13 53 07.5
comp=Z,7.8nm,0.9s
PDAR **Pinedale Array** 53.57 331 P **P** 13 54 39.1 +0.3
comp=Z,0.2nm,0.5s,baz=164,slow=4.5,SNR=1.4
comp=Z,0.2nm,0.5s
NVAR **Mina Array Bea** 55.48 321 P **P** 13 54 54.0 +1.3
comp=Z,0.6nm,0.8s,baz=136,slow=8.8,SNR=4.9
comp=Z,0.6nm,0.8s
YKA **Yellowknife Ar** 70.67 343 P **P** 13 56 32.5 -0.3
comp=Z,0.3nm,0.6s,baz=137,slow=5.6,SNR=4.8
comp=Z,0.3nm,0.6s
DBIC **Dimbokro** 73.07 82 P **P** 13 56 46.5 -1.8
comp=Z,3.6nm,0.8s,baz=229,slow=9.3,SNR=2.2
comp=Z,3.6nm,0.8s
TORD **Torodi Ar. Bea** 80.05 76 P **P** 13 57 27.1 -0.8
comp=Z,0.4nm,0.4s,baz=281,slow=5.5,SNR=7.2
comp=Z,0.4nm,0.4s
SNAA **Sanae** 82.81 162 P **P** 13 57 41.5 0.0
ILAR **Eielson Array** 83.62 336 P **P** 13 57 45.8 +0.1
comp=Z,1.3nm,0.9s,baz=127,slow=4.0,SNR=13
comp=Z,1.3nm,0.9s
BMAR **Burnt Mountain** 83.70 339 P **P** 13 57 46.9 +0.8
ZALV **Zalesovo Beam** 126.72 13 PKP **PKPdf** 14 04 20.7 -0.3
comp=Z,0.9nm,0.5s,baz=112,slow=4.0,SNR=4.4
ZALV **Zalesovo Beam** 126.72 13 **PKiKP** 14 04 21.4 -0.1
ASAR **Alice Springs** 139.86 228 PKhKP PKPpre 14 04 40.4
comp=Z,0.4nm,1.0s,baz=116,slow=3.3,SNR=2.0
ASAR PKP **PKPdf** 14 04 46.2 -0.4
comp=Z,0.5nm,0.8s,baz=110,slow=2.5,SNR=5.0
ASAR Alice Springs 139.86 228 **PKPdf** 14 04 45.8 -0.8
WRA **Warramunga Arr** 141.60 233 PKhKP PKPpre 14 04 44.3
comp=Z,0.5nm,0.9s,baz=123,slow=2.8,SNR=4.7
WRA PKP **PKPdf** 14 04 50.3 +0.5
comp=Z,0.3nm,0.6s,baz=112,slow=2.5,SNR=5.5

*GUC **03** 13:46:53.9±0.7, 18.°97S×70.°12W, h52km±5km, ML4.1*
*NEIC **03** 13:46:53.6±1.1, 19.°04S±0.°04×70.°3W±0.°1, h40km±8km, mb4.2/5, ML4.1(GUC), Error ellipse: s-maj=18.8km s-min=5.6km az=79.0*
ISC 03 13:46:53.6±0.9, 19.°01S±0.°03×70.°23W±0.°07, h46km±10km, n32, σ0°96/46, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB12	**IPOC Station P**	**0.40**	**346**		**Pn**	**13 47 03.1**	**-0.5**
PB12	**IPOC Station P**	**0.40**	**346**	*e*P	**Pn**	**13 47 03.9**	**+0.3**
PB12				*i*S	**Sn**	**13 47 11.3**	**+0.7**
PB12				IAML		13 47 11.8	
	comp=N,38μm,0.2s						
AP01	**Chacalluta**	**0.64**	**350**		**Pn**	**13 47 06.7**	**+0.2**
AP01	**Chacalluta**	**0.64**	**350**	*e*P	**Pn**	**13 47 06.7**	**+0.2**
AP01				*i*S	**Sn**	**13 47 16.4**	**+0.8**
AP01				IAML		13 47 17.5	
	comp=N,27μm,0.3s						
PB11	**IPOC Station P**	**0.93**	**144**		**Pn**	**13 47 09.7**	**-0.7**
PB11	**IPOC Station P**	**0.93**	**144**	*e*P	**Pn**	**13 47 10.0**	**-0.4**
PB11				*i*S	**Sn**	**13 47 22.7**	**0.0**
PB11				IAML		13 47 23.2	
	comp=N,12μm,0.2s						
PB16	**IPOC Station P**	**0.96**	**46**	*e*P	**Pn**	**13 47 10.7**	**-0.5**
PB16				*i*S	**Sn**	**13 47 23.4**	**-0.6**
PB16				IAML		13 47 24.1	
	comp=N,4μm,0.4s						
TA02	**Huaiquique**	**1.26**	**176**		**Pn**	**13 47 14.2**	**-0.6**
TA02	**Huaiquique**	**1.26**	**176**	*e*P	**Pn**	**13 47 14.7**	**-0.1**
TA02				*i*S	**Sn**	**13 47 31.3**	**+0.7**
TA02				IAML		13 47 34.5	
	comp=E,8μm,0.3s						
HMBC	**Humberstone**	**1.30**	**166**	*e*P	**Pn**	**13 47 15.1**	**-0.4**
HMBC				*i*S	**Sn**	**13 47 32.1**	**+0.2**
HMBC				IAML		13 47 36.6	
	comp=E,4μm,0.4s						
PB08	**IPOC Station P**	**1.52**	**138**	*e*P	**Pn**	**13 47 18.8**	**+0.1**
PB08				*i*S	**Sn**	**13 47 37.6**	**+0.2**
PB08				IAML		13 47 42.0	
	comp=N,4μm,0.3s						
TA01	**Diego Aracena**	**1.55**	**178**	*e*P	**Pn**	**13 47 18.5**	**-0.3**
TA01				*i*S	**Sn**	**13 47 38.6**	**+0.9**
TA01				IAML		13 47 41.4	
	comp=N,2μm,0.3s						
PATCX	**Punta Patache**	**1.81**	**178**		**Pn**	**13 47 22.3**	**-0.1**
PATCX	**Punta Patache**	**1.81**	**178**	*e*P	**Pn**	**13 47 22.3**	**-0.1**
PATCX				*i*S	**Sn**	**13 47 45.2**	**+1.1**
PATCX				IAML		13 48 02.5	
	comp=E,1μm,0.4s						
PB01	**IPOC Station P**	**2.14**	**161**	*e*P	**Pn**	**13 47 26.7**	**-0.3**
PB01				*i*S	**Sn**	**13 47 52.8**	**+0.4**
PB01				IAML		13 47 57.9	
	comp=N,1μm,0.2s						
PB02	**IPOC Station P**	**2.32**	**172**	*e*P	**Pn**	**13 47 29.6**	**+0.1**
PB02				*i*S	**Sn**	**13 47 57.6**	**+0.7**
PB02				IAML		13 48 11.4	
	comp=E,2μm,0.4s						
PB07	**IPOC Station P**	**2.73**	**173**	*e*P	**Pn**	**13 47 35.5**	**+0.4**
PB07				*i*S	**Sn**	**13 48 07.7**	**+0.8**
PB07				IAML		13 48 18.0	
	comp=N,653nm,0.3s						
PB09	**IPOC Station P**	**2.93**	**162**	*e*P	**Pn**	**13 47 38.8**	**+0.9**
PB09				*i*S	**Sn**	**13 48 15.0**	**+3.2**
PB09				IAML		13 48 27.9	
	comp=N,663nm,0.5s						
PB04	**IPOC Station P**	**3.31**	**179**	*e*P	**Pn**	**13 47 43.3**	**+0.2**
PB04				*i*S	**Sn**	**13 48 22.2**	**+0.8**
PB04				IAML		13 48 44.8	
	comp=E,562nm,0.7s						
LPAZ	**La Paz**	**3.36**	**37**	Pn	**Pn**	**13 47 46.7**	**+2.4**
LVC	**Limon Verde**	**3.79**	**161**		**Pn**	**13 47 51.5**	**+1.6**
LVC	**Limon Verde**	**3.79**	**161**	*e*P	**Pn**	**13 47 50.6**	**+0.7**
LVC				*i*S	**Sn**	**13 48 34.5**	**+1.1**
GO02	**Mina Guanaco**	**6.16**	**175**	Pn	**Pn**	**13 48 21.2**	**-1.1**
AC01	**Pan de Azucar**	**7.12**	**183**	Pn	**Pn**	**13 48 32.8**	**-2.4**
MT02	**Curacav**	**14.22**	**183**	Pn	**Pn**	**13 50 11.6**	**-0.7**
ITAB	**Concordia**	**18.54**	**120**	P	**P**	**13 51 06.6**	**+0.2**
ITAB				IAmb	IAmb	13 51 13.7	
	comp=Z,22nm,1.1s						
SNAA	**Sanae**	**65.03**	**161**	P	**P**	**13 57 29.2**	**+0.5**
QSPA	**South Pole Qui**	**71.17**	**180**	IAmb	IAmb	13 58 18.7	
	comp=Z,2.0nm,1.1s						
QSPA	**South Pole Qui**	**71.17**	**180**		**P**	**13 58 06.5**	**-0.9**
QSPA				IAmb	IAmb	13 58 18.7	
	comp=Z,2.0nm,1.1s						
QSPA	**South Pole Qui**	**71.17**	**180**		**P**	**13 58 06.5**	**-0.9**
TOA0	**Torodi Ar. Sit**	**77.71**	**71**	P	**P**	**13 58 45.8**	**-0.3**
TOA0				IAmb	IAmb	13 58 54.8	
	comp=Z,3.7nm,1.2s						
TORD	**Torodi Ar. Bea**	**77.71**	**71**	P	**P**	**13 58 46.2**	**+0.1**

*IDC **03** 13:53:12.1±33.0, 8.°15S×111.°83E, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=548.9km s-min=160.6km az=129.0*
*DJA **03** 13:53:30.7±0.3, 8.°3S±4.°×111.°2E±.°, h177km±3km, M3.8/21, mb4.2/6, mB5.1/1, MLv3.5/21, Mw(mB)4.4/1*
ISC 03 13:53:31.2±1.0, 7.°87S±0.°09×112.°18E±0.°06, h178km±8km, n24, σ0°78/29, mb3.4/3, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PWJI	**Pagerwojo**	**0.40**	**248**	P	**Pn**	**13 53 55.3**	**-0.1**
PWJI				S	**Sn**	**13 54 13.5**	**-0.5**
GRJI	**Gresik**	**0.99**	**17**	P	**Pn**	**13 53 59.2**	**+0.5**
GRJI				S	**Sn**	**13 54 20.9**	**+0.9**
PCJI	**Pacitan**	**1.04**	**252**	P	**Pn**	**13 53 59.2**	**+0.2**
PCJI				S	**Sn**	**13 54 19.8**	**-0.7**
WOJI	**Wonogiri, Jawa**	**1.24**	**271**	P	**Pn**	**13 54 00.4**	**-0.3**
GMJI	**Gumukmas**	**1.31**	**108**	P	**Pn**	**13 54 01.4**	**+0.1**
BLJI	**Banyuglugur**	**1.41**	**85**	P	**Pn**	**13 54 03.2**	**+1.1**
UGM	**Wanagama**	**1.64**	**268**	P	**Pn**	**13 54 04.5**	**+0.1**
UGM				S	**Sn**	**13 54 30.6**	**+0.5**
YOGI	**Yogyakarta**	**1.87**	**272**	P	**Pn**	**13 54 06.8**	**+0.1**
KMMI	**Kalianget**	**1.95**	**65**	P	**Pn**	**13 54 06.4**	**-1.2**
ABJI	**Asem Bagus**	**2.04**	**88**	P	**Pn**	**13 54 09.9**	**+1.3**
JAGI	**Jajag, Banyuwa**	**2.04**	**107**	P	**Pn**	**13 54 08.3**	**-0.3**
JAGI				S	**Sn**	**13 54 36.9**	**-0.7**
SRBI	**Singaraja**	**3.01**	**94**	P	**Pn**	**13 54 20.0**	**+0.1**
IGBI	**Denpasar**	**3.08**	**108**	P	**Pn**	**13 54 20.9**	**+0.1**
DNP	**Denpasar**	**3.10**	**105**	P	**Pn**	**13 54 21.2**	**+0.1**
CNJI	**Cibinong**	**5.04**	**276**	P	**Pn**	**13 54 44.9**	**-0.8**
	0.3nm49nm,1.2s						
BBKI	**Banjar Baru**	**5.12**	**31**	P	**Pn**	**13 54 45.1**	**-1.6**
PLAI	**Plampang**	**5.62**	**100**	P	**Pn**	**13 54 53.2**	**-0.1**
	0.2nm32nm,0.9s						
SKJI	**Sukabumi**	**5.64**	**278**	P	**Pn**	**13 54 53.3**	**-0.3**
	1.6nm182nm,0.6s						
WBSI	**Waikabubak, Su**	**7.34**	**104**	P	**Pn**	**13 55 15.0**	**-1.0**
	0.2nm29nm,0.9s						
EDFI	**Ende, Flores**	**9.45**	**96**	P	**Pn**	**13 55 42.4**	**-1.4**
APSI	**Ampana**	**11.70**	**54**	P	**Pn**	**13 56 13.6**	**+0.7**
WRA	**Warramunga Arr**	**24.59**	**121**	P	**P**	**13 58 34.7**	**-0.4**
	0.6nm,0.8s,baz=295,slow=9.8,SNR=9.2						
	0.6nm,0.8s						
ASAR	**Alice Springs**	**26.09**	**129**	P	**P**	**13 58 48.8**	**+0.2**
	0.4nm,0.5s,baz=306,slow=8.0,SNR=13						
	0.4nm,0.5s						
STKA	**Stephens Creek**	**36.32**	**135**	P	**P**	**14 00 19.1**	**+1.0**
	0.7nm,0.4s,baz=312,slow=9.4,SNR=3.2						
	0.7nm,0.4s						

*TUL **03** 14:22:54.3±1.1, 36.°13N±0.°01×97.°82W±0.°02, h6km±1km, ML2.5, mb_Lg2.2/17(NEIC), Error ellipse: s-maj=1.9km s-min=1.6km az=50.0*
NEIC 03 14:22:54±1.0, 36.°14N±0.°01×97.°82W±0.°01, h5km±6km, Error ellipse: s-maj=1.8km s-min=1.2km az=200.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FNO	**Franklin**	**0.94**	**159**	Pg	Pg	14 23 11.3	-0.8
U32A	**Winter Ranch,**	**0.98**	**284**		Pg	14 23 12.6	-0.2
U32A				Sg	Sg	14 23 26.1	+0.6
T35A	**Sooner Cattle**	**1.31**	**53**	Pn	Pn	14 23 18.8	-0.2
X34A	**Smith Ranch, M**	**1.54**	**180**		Pb	14 23 22.8	-0.1
WMOK	**Wichita Mounta**	**1.60**	**209**	Pn	Pn	14 23 23.1	+0.1
TUL1	**Leonard**	**1.66**	**97**	Pn	Pn	14 23 24.1	+0.3
X37A	**Clayton**	**2.53**	**127**		Pn	14 23 35.3	-0.5
X37A				IAmb_Lg		14 24 19.5	
	comp=Z,7.5nm,0.8s						
AMTX	**Amarillo**	**3.39**	**249**	IAmb_Lg		14 24 39.1	
	comp=Z,5.7nm,1.0s						
W39A	**Magazine**	**3.42**	**105**		Pn	14 23 48.8	+0.8
MIAR	**Mount Ida**	**3.82**	**113**		Pn	14 23 53.2	-0.3
MIAR				IAmb_Lg		14 25 04.9	
	comp=Z,4.7nm,0.8s						
S39A	**Bolivar**	**3.92**	**65**		Pn	14 23 55.4	+0.4
MGMO	**Mountain Grove**	**4.58**	**76**	IAmb_Lg		14 25 16.7	
	comp=Z,3.7nm,0.8s						
WHAR	**Wooly Hollow**	**4.58**	**99**	Pn	Pn	14 24 02.2	-1.8
FCAR	**Ozark Folk Cen**	**4.63**	**91**	Pn	Pn	14 24 03.3	-1.3
W41B	**Gary Mavity, V**	**4.64**	**100**	Pn	Pn	14 24 03.6	-1.1
T25A	**Trinidad**	**5.39**	**283**	Pn	Pn	14 24 13.0	-2.3
T25A				IAmb_Lg		14 25 48.0	
	comp=Z,7.9nm,1.1s						
LCAR	**Lake Charles**	**5.40**	**89**	IAmb_Lg		14 25 52.5	
	comp=Z,4.0nm,1.1s						
CCM	**Cathedral Cave**	**5.60**	**68**	Pn	Pn	14 24 17.0	-0.8
P40A	**Paris**	**5.69**	**52**	IAmb_Lg		14 25 54.3	
	comp=Z,6.5nm,0.8s						
JCT	**Junction City**	**5.88**	**197**	IAmb_Lg		14 26 13.6	
	comp=Z,6.4nm,0.9s						
SDCO	**Great Sand Dun**	**6.35**	**287**	Pn	Pn	14 24 27.3	-1.3
ECSD	**EROS Data Cent**	**7.64**	**7**	IAmb_Lg		14 26 55.3	
	comp=Z,2.0nm,1.2s						

*NOU **03** 14:23:28.4, 24.°03S×179.°64W, h539km, mb4.1/11, South of Fiji Islands*
*IDC **03** 14:23:29.2±1.6, 24.°14S×179.°89E, h505km±17km, mb3.1/7, mbtmp4.0/10, Error ellipse: s-maj=20.0km s-min=18.0km az=173.0*
ISC 03 14:23:29.0±0.8, 24.°26S±0.°07×180.°0E±0.°1, h500km, n40, σ1°85/51, mb3.5/6, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**5.33**	**160**	P	**P**	**14 25 01.9**	**+3.1**
GLKZ				S	**S**	**14 26 10.9**	**-1.3**
MSVF	**Nonsavu**	**6.74**	**344**	P	**P**	**14 25 11.7**	**-1.0**
	5.1nm,0.4s,baz=232,slow=22,SNR=22						
MSVF	**Nonsavu**	**6.74**	**344**	P	**P**	**14 25 11.7**	**-1.0**
DGTI	**Dogotuki**	**7.92**	**358**	P	**P**	**14 25 24.0**	**-0.7**
MARNC	**Mare, Loyalty**	**11.34**	**282**	P	**P**	**14 26 02.3**	**+1.7**
PINNC	**Pines Island,**	**11.61**	**276**	P	**P**	**14 26 07.0**	**+3.6**
DZM	**Mont Dzumac**	**12.63**	**277**	P	**P**	**14 26 13.8**	**-0.5**
	13nm,1.1s,baz=86,slow=19,SNR=2.2						
DZM	**Mont Dzumac**	**12.63**	**277**	P	**P**	**14 26 17.9**	**+3.6**
HAZ	**Te Kaha**	**13.58**	**187**	P	**P**	**14 26 27.4**	**+3.4**
PKGZ	**Pakihiroa**	**13.68**	**186**	P	**P**	**14 26 28.0**	**+2.9**
RUGZ	**Raukumara Rang**	**13.80**	**188**	P	**P**	**14 26 29.3**	**+2.8**
URZ	**Urewera**	**14.16**	**189**	P	**P**	**14 26 31.5**	**+1.4**
	2.5nm,0.3s,baz=297,slow=3.4,SNR=8.6						
URZ				S	**S**	**14 28 57.5**	**-2.1**
	3.5nm,0.5s,baz=81,slow=18,SNR=1.5						
URZ	**Urewera**	**14.16**	**189**	P	**P**	**14 26 32.6**	**+2.5**
URZ				S	**S**	**14 28 57.8**	**-1.8**
URZ	**Urewera**	**14.16**	**189**	P	**P**	**14 26 32.1**	**+1.9**
MWZ	**Matawai**	**14.18**	**188**	P	**P**	**14 26 33.2**	**+2.8**
MWZ				S	**S**	**14 28 55.9**	**-4.2**
BKZ	**Black Stump Fm**	**15.15**	**190**	P	**P**	**14 26 40.5**	**-0.1**
BKZ				S	**S**	**14 29 16.3**	**-2.3**
BKZ	**Black Stump Fm**	**15.15**	**190**	P	**P**	**14 26 42.2**	**+1.6**
TMVZ	**Te Maari**	**15.24**	**193**	P	**P**	**14 26 43.1**	**+1.5**
ETVZ	**East Tongariro**	**15.26**	**193**	P	**P**	**14 26 43.2**	**+1.3**
OTVZ	**Oturere**	**15.29**	**193**	P	**P**	**14 26 42.9**	**+0.7**
MCHZ	**McNeill Hill**	**15.39**	**190**	P	**P**	**14 26 45.1**	**+2.1**
MCHZ				S	**S**	**14 29 21.8**	**-1.4**
TUVZ	**Tukino**	**15.40**	**193**	P	**P**	**14 26 44.3**	**+1.0**
KWHZ	**Kaweka Forest**	**15.41**	**190**	P	**P**	**14 26 44.4**	**+1.1**
KWHZ				S	**S**	**14 29 21.9**	**-1.8**
KAHZ	**Kahuranaki**	**15.70**	**189**	P	**P**	**14 26 46.9**	**+0.6**
KAHZ				S	**S**	**14 29 26.9**	**-2.4**
BFZ	**Birch Farm**	**16.67**	**190**	P	**P**	**14 26 56.3**	**-0.1**
QRZ	**Quartz Range**	**17.65**	**199**	P	**P**	**14 27 06.9**	**+1.0**
KHZ	**Kahutara**	**18.87**	**195**	P	**P**	**14 27 17.7**	**+0.6**
RPZ	**Rata Peaks**	**20.74**	**198**	P	**P**	**14 27 33.8**	**-0.2**
	1.9nm,0.4s,baz=35,slow=5.5,SNR=1.1						
	1.9nm,0.4s						
RPZ	**Rata Peaks**	**20.74**	**198**	P	**P**	**14 27 34.7**	**+0.6**
STKA	**Stephens Creek**	**34.56**	**249**	P	**P**	**14 29 35.8**	**+0.6**
	0.7nm,0.4s,baz=74,slow=7.4,SNR=3.7						
	0.7nm,0.4s						
ASAR	**Alice Springs**	**41.94**	**261**	P	**P**	**14 30 35.2**	**-0.4**
	0.5nm,0.4s,baz=88,slow=8.4,SNR=34						
ASAR				PcP	**PcP**	**14 32 18.6**	**-1.0**
	0.3nm,0.6s,baz=100,slow=4.1,SNR=2.2						
ASAR				ScP	**ScP**	**14 35 22.4**	**+0.3**
	0.4nm,0.9s,baz=115,slow=3.8,SNR=4.3						
ASAR				S	**S**	**14 36 15.8**	**-1.8**
	0.2nm,0.7s,baz=101,slow=15,SNR=4.7						
	0.5nm,0.4s						
WRA	**Warramunga Arr**	**42.35**	**267**	P	**P**	**14 30 37.9**	**-0.9**
	0.7nm,0.3s,baz=101,slow=8.5,SNR=74						
	0.7nm,0.3s						
VNDA	**Vanda**	**54.02**	**185**	P	**P**	**14 32 06.0**	**+0.9**
	0.7nm,0.7s,baz=9.6,slow=6.8,SNR=4.5						
	0.7nm,0.7s						
MAW	**Mawson**	**77.40**	**200**	P	**P**	**14 34 31.9**	**+0.4**
	1.5nm,0.5s,baz=168,slow=6.0,SNR=2.6						
	1.5nm,0.5s						
TROLL	**Troll, Antarti**	**83.97**	**181**	P	**P**	**14 35 04.7**	**-1.1**
SNAA	**Sanae**	**84.31**	**179**	P	**P**	**14 35 05.3**	**-2.1**
VNA3	**Neumayer Olymp**	**84.52**	**177**	P	**P**	**14 35 06.8**	**-1.6**
VNA2	**Neumayer--Watz**	**84.93**	**178**	P	**P**	**14 35 09.5**	**-0.8**
	baz=189,slow=4.0						
TXAR	**Lajitas Array**	**90.65**	**58**	P	**P**	**14 35 37.5**	**-0.5**
	0.5nm,0.7s,baz=208,slow=7.3,SNR=7.8						
	0.5nm,0.7s						
AKASG	**Malin Array Be**	**145.26**	**327**	PKPbc	**PKPdf**	**14 42 07.9**	**-1.2**
	0.6nm,0.3s,baz=48,slow=4.3,SNR=4.4						

*IDC **03** 14:54:09.7±11.0, 15.°07S×164.°73E, h0km, mb4.1/3, mbtmp4.0/4, ML3.4/1, MS3.3/1, Error ellipse: s-maj=205.7km s-min=34.0km az=50.0*
*NEIC **03** 14:54:12.0±1.3, 15.°1S±0.°2×164.°8E±0.°1, h16km±8km, mb4.3/13, Error ellipse: s-maj=27.0km s-min=16.8km az=204.0*
ISC 03 14:54:12.2±2.6, 14.°9S±0.°2×165.°0E±0.°3, h35km, n20, σ0°98/20, mb4.1/9, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**7.31**	**169**	Pn	**Pn**	**14 55 55.7**	**-0.9**
	0.6nm,0.3s,baz=342,slow=20,SNR=20						
DZM				Sn	**Sn**	**14 57 19.5**	**+1.1**
	0.4nm,0.3s,baz=110,slow=19,SNR=1.6						
	4.3nm,0.5s						
DZM	**Mont Dzumac**	**7.31**	**169**		**Pn**	**14 55 55.4**	**-1.2**
EIDS	**Eidsvold**	**16.70**	**229**	P	**Pn**	**14 58 03.9**	**+0.3**
EIDS				IAmb	IAmb	14 58 17.6	
	comp=Z,23nm,1.4s						
STKA	**Stephens Creek**	**27.24**	**228**	P	**P**	**14 59 52.7**	**-0.4**
	comp=Z,1.9nm,0.4s,baz=59,slow=8.9,SNR=9.8						
	comp=Z,1.9nm,0.4s						
STKA	**Stephens Creek**	**27.24**	**228**	P	**P**	**14 59 52.2**	**-1.0**
WR0	**Warramunga Arr**	**29.45**	**256**	P	**P**	**15 00 12.3**	**-0.7**
WR0				IAmb	IAmb	15 00 23.6	
	comp=Z,5.2nm,1.4s						
WB0	**Warramunga Arr**	**29.57**	**256**	P	**P**	**15 00 14.2**	**+0.1**
WB0				IAmb	IAmb	15 00 40.8	
	comp=Z,3.2nm,1.1s						
WB2	**Warramunga Arr**	**29.63**	**256**	P	**P**	**15 00 14.5**	**-0.1**
WB2				IAmb	IAmb	15 00 18.6	
	comp=Z,6.3nm,1.4s						
WRA	**Warramunga Arr**	**29.64**	**256**	P	**P**	**15 00 14.8**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=85,slow=9.1,SNR=20						
	comp=Z,0.7nm,0.6s						
WRA	**Warramunga Arr**	**29.64**	**256**	P	**P**	**15 00 13.9**	**-0.7**
AS31	**Alice Springs**	**30.55**	**249**	P	**P**	**15 00 22.8**	**+0.1**
ASAR	**Alice Springs**	**30.55**	**249**	P	**P**	**15 00 22.6**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=80,slow=9.1,SNR=74						
	comp=Z,1.0nm,0.5s						
ASAR	**Alice Springs**	**30.55**	**249**	P	**P**	**15 00 21.8**	**-0.9**
BBOO	**Buckleboo**	**31.76**	**231**	P	**P**	**15 00 31.9**	**-1.3**
MTN	**Manton Dam**	**32.90**	**269**	P	**P**	**15 00 41.2**	**-2.2**
MTN				IAmb	IAmb	15 00 43.0	
	comp=Z,9.2nm,1.2s						
SAUI	**Saumlaki**	**33.67**	**278**	P	**P**	**15 00 51.0**	**+0.9**
RAR	**Rarotonga**	**34.06**	**106**	LR	LR	15 13 10.6	
	comp=Z,39nm,18.1s,baz=258,slow=33						
KNRA	**Kununurra**	**34.91**	**264**	P		**15 01 01.5**	**+0.6**
KNRA				IAmb	IAmb	15 01 28.3	
	comp=Z,12nm,1.4s						
MORW	**Morawa**	**47.21**	**244**	P	**P**	**15 02 43.0**	**+1.1**
QSPA	**South Pole Qui**	**75.17**	**180**	P	**P**	**15 05 51.7**	**+0.8**
QSPA				IAmb	IAmb	15 05 55.7	
	comp=Z,5.8nm,1.4s						

IDC 03 14:56:26.8±5.4, 8.°24S×157.°61E, h0km, mb3.5/3, mbtmp3.5/4, ML3.3/1, MS3.1/1, Error ellipse: s-maj=121.0km s-min=32.9km az=5.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**2.60**	**117**	Pn	Pn	14 57 10.1	0.0
	6.2nm,0.3s,baz=295,slow=10,SNR=1.5						
HNR				Sn	Sn	14 57 37.9	-4.5
	26nm,0.3s,baz=6.2,slow=5.8,SNR=4.1						
	18nm,0.3s						
CTA	**Charters Tower**	**16.11**	**222**	LR	LR	15 05 27.2	
	comp=Z,61nm,18.5s,baz=228,slow=34						
WRA	**Warramunga Arr**	**25.35**	**240**	P	P	15 01 55.6	-0.2
	1.0nm,1.0s,baz=68,slow=9.6,SNR=7.2						
	1.0nm,1.0s						
ASAR	**Alice Springs**	**27.40**	**233**	P	P	15 02 14.3	-0.1
	0.2nm,0.9s,baz=66,slow=9.2,SNR=1.7						
	0.2nm,0.9s						
STKA	**Stephens Creek**	**27.84**	**210**	P	P	15 02 18.4	+0.3
	1.4nm,0.7s,baz=22,slow=11,SNR=3.7						
	1.4nm,0.7s						

*INET **03** 15:02:00.6±0.7, 12.°26N×87.°78W, h15km±14km, MW3.0*
*SNET **03** 15:02:04.1±0.5, 13.°80N×87.°24W, h31km±999km, ML3.2*
**ISC 03

LCAR	**Lake Charles**	**4.99**	**88**	lAmb_Lg		15 09 07.4
	comp=Z,3.8nm,0.7s					
CCM	**Cathedral Cave**	**5.23**	**66**	lAmb_Lg		15 09 19.9
	comp=Z,5.4nm,0.8s					
N38A	**Joes South For**	**5.68**	**33**	lAmb_Lg		15 09 21.6
	comp=Z,4.7nm,0.8s					
JCT	**Junction City**	**5.97**	**201**	lAmb_Lg		15 09 38.4
	comp=Z,5.0nm,0.8s					

*IDC **03** 15:08:45.0±1.0, 42°.38N×139°.03E, h0km, mb3.6/5, mbtmp3.7/6, ML2.8/2, Error ellipse: s-maj=38.1km s-min=19.9km az=124.0*
*NIED **03** 15:08:47.5, 42°.36N×139°.12E, h27km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}3.29; $M_{\theta\theta}$-0.14; $M_{\phi\phi}$-3.15; $M_{r\theta}$-0.58; $M_{\theta\phi}$-0.42; $M_{\phi r}$-0.41; Fault plane solution: $M_0$3.33000×10^{14} NP1: ϕ_s360.00000°, δ41.00000°, λ77.00000°. NP2: ϕ_s196.00000°, δ50.00000°, λ101.00000°.*
*JMA **03** 15:08:47.5±0.2, 42°.4N±0°.5×139°.1E±1°.0, h27km±1km, MV3.8/40, SW OFF HOKKAIDO*
JMA Felt I J1 at SW OFF HOKKAIDO .
ISC 03 15:08:46.8±2.3, 42°.36N±0°.05×139°.19E±0°.05, h10km±15km, n19, σ1^{9}04/27, mb3.8/6, 8D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOSM	**Okushiri--Mats**	**0.35**	**143**	⇓*i*P	**Pb**	**15 08 55.7**	**+0.6**
JOSM				⇓*e*S	**Sb**	**15 09 00.8**	**+0.1**
JHST	**Hiyamasetana**	**0.51**	**83**	⇓*i*P	**Pn**	**15 08 58.9**	**-1.3**
JHST				⇓*e*S	**Sb**	**15 09 06.5**	**+1.1**
JSH	**Shimam**	**0.69**	**66**	⇓P	**Pb**	**15 09 01.1**	**+0.1**
JSH				⇓*e*S	**Sb**	**15 09 10.3**	**-0.3**
JYM2	**Yakumo 2**	**0.91**	**105**	P	**Pn**	**15 09 05.3**	**-0.4**
JYM2				*e*S	**Sb**	**15 09 18.2**	**+1.4**
JOMM	**Oshimamatsumae**	**1.04**	**144**	P	**Pb**	**15 09 06.2**	**-0.6**
JOMM				*e*S	**Sg**	**15 09 19.7**	**-0.5**
JSR	**Shiriuchi**	**1.24**	**132**	*e*P	**Pb**	**15 09 10.2**	**-0.1**
JSK	**Shakotan**	**1.37**	**43**	*e*P	**Pn**	**15 09 10.7**	**-1.2**
JNB	**Noboribetsu**	**1.37**	**85**	⇓*e*P	**Pn**	**15 09 11.2**	**-0.9**
JNB				⇓*e*S	**Sb**	**15 09 28.6**	**-1.6**
JKB	**Kayabe**	**1.45**	**108**	*e*P	**Pb**	**15 09 13.3**	**-0.6**
JKB				*e*S	**Sb**	**15 09 32.8**	**+0.4**
JSI2	**Shiura 2**	**1.59**	**145**	*e*P	**Pn**	**15 09 14.4**	**-0.7**
JSI2				*e*S	**Sn**	**15 09 34.1**	**-1.6**
ASAJ	**Asahikawa**	**3.04**	**54**	Pn	**Pn**	**15 09 35.9**	**+0.8**
	0.5nm,0.3s,baz=168,slow=23,SNR=1.9						
USRK	**Ussuriysk Ar.**	**5.57**	**292**	Pn	**Pn**	**15 10 07.8**	**-1.9**
	8.1nm,0.3s,baz=103,slow=14,SNR=124 19nm,0.3s						
KSRS	**Korea Array**	**9.94**	**244**	Pn	**Pn**	**15 11 11.8**	**+2.1**
	1.0nm,0.3s,baz=52,slow=14,SNR=12						
SHEM	**Shemya Is, Ala**	**25.50**	**54**	P	**P**	**15 14 16.2**	**+1.1**
	23nm,0.6s,baz=293,slow=12,SNR=4.3						
ILAR	**Eielson Array**	**46.01**	**35**	P	**P**	**15 17 09.6**	**-0.4**
	0.3nm,0.9s,baz=282,slow=5.7,SNR=4.1 0.3nm,0.9s						
WRA	**Warramunga Arr**	**62.15**	**185**	P	**P**	**15 19 07.6**	**-0.5**
	0.6nm,0.6s,baz=3.5,slow=7.3,SNR=8.0 0.6nm,0.6s						
ASAR	**Alice Springs**	**65.88**	**185**	P	**P**	**15 19 32.7**	**+0.1**
	0.5nm,0.7s,baz=359,slow=4.7,SNR=9.0 0.5nm,0.7s						
NVAR	**Mina Array Bea**	**73.17**	**53**	P	**P**	**15 20 18.3**	**+0.3**
	0.5nm,0.6s,baz=313,slow=5.6,SNR=5.5 0.5nm,0.6s						
PDAR	**Pinedale Array**	**75.15**	**45**	P	**P**	**15 20 29.5**	**0.0**
	0.6nm,0.7s,baz=353,slow=3.4,SNR=3.9 0.6nm,0.7s						

*INET **03** 15:10:31.1±0.9, 12°.38N×87°.77W, h17km±15km, MW3.3*
*SNET **03** 15:10:32.1±0.9, 12°.44N×87°.84W, h31km±33km, ML4.1*
*UCR **03** 15:10:32.3±0.8, 12°.45N×87°.82W, h56km±18km, ML4.0*
ISC 03 15:10:26.8±1.6, 12°.25N±0°.07×87°.90W±0°.04, h12km±12km, n48, σ0^{8}82/69, 4D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**0.95**	**62**	*e*P	**Pn**	**15 10 46.6**	**+0.6**
CRIN				*e*S	**Sb**	**15 10 58.0**	**+0.2**
CNCH	**Conchagua**	**1.03**	**4**	*i* P	**Pn**	**15 10 47.9**	**+0.8**
CNCH				⇓*i*P	**Pn**	**15 10 48.0**	**+0.8**
CNCH				*e*S	**Sn**	**15 11 00.5**	**-1.0**
CNCH				*e*S	**Sb**	**15 11 00.6**	**+0.6**
CNCH				lAML		15 11 03.1	
	comp=Z,15μm,0.2s						
CNCH	**Conchagua**	**1.03**	**4**	*i* P	**Pn**	**15 10 47.9**	**+0.8**
CNCH				⇓*i*P	**Pn**	**15 10 48.0**	**+0.8**
CNCH				*e*S	**Sn**	**15 11 00.5**	**-1.0**
CNCH				*e*S	**Sb**	**15 11 00.6**	**+0.6**
CNCH				lAML		15 11 03.1	
	comp=Z,15μm,0.2s						
LCND	**La Caada**	**1.06**	**1**	*i* P	**Pn**	**15 10 48.3**	**+0.8**
LCND				*e*S	**Sb**	**15 11 00.6**	**-0.3**
LCND				lAML		15 11 03.6	
	comp=Z,3μm,0.3s						
LCND	**La Caada**	**1.06**	**1**	*i* P	**Pn**	**15 10 48.3**	**+0.8**
LCND				*e*S	**Sb**	**15 11 00.6**	**-0.3**
LCND				lAML		15 11 03.6	
	comp=Z,3μm,0.3s						
TELN	**Telica**	**1.11**	**71**	*e*P	**Pg**	**15 10 48.4**	**+0.3**
CNGN	**Cerro Negro**	**1.20**	**78**	*e*P	**Pb**	**15 10 49.4**	**-0.1**
VSM	**San Miguel**	**1.23**	**343**	*e*P	**Pn**	**15 10 51.5**	**+1.4**
VSM	**San Miguel**	**1.23**	**343**	*e*P	**Pn**	**15 10 51.5**	**+1.4**
LCY	**Lacayo**	**1.23**	**342**	*e*P	**Pn**	**15 10 51.4**	**+1.5**
LCY	**Lacayo**	**1.23**	**342**	*e*P	**Pn**	**15 10 51.4**	**+1.5**
PACA	**Pacayal**	**1.28**	**341**	*e*P	**Pg**	**15 10 52.4**	**+0.9**
PACA				*e*S	**Sn**	**15 11 07.9**	**0.0**
PACA	**Pacayal**	**1.28**	**341**	*e*P	**Pg**	**15 10 52.4**	**+0.9**
PACA				*e*S	**Sn**	**15 11 07.9**	**0.0**
PACA	**Pacayal**	**1.28**	**341**	*e*P	**Pg**	**15 10 52.2**	**+0.7**
COPN	**Copaltepe**	**1.28**	**93**	*e*P	**Pn**	**15 10 51.0**	**+0.5**
MOMN	**Momotombo**	**1.34**	**83**	*e*P	**Pn**	**15 10 51.6**	**+0.2**
FAGO	**Alcalda de S**	**1.45**	**352**	*e*P	**Pb**	**15 10 53.5**	**-0.3**
FAGO				*e*S	**Sb**	**15 11 10.2**	**-2.1**
FAGO	**Alcalda de S**	**1.45**	**352**	*e*P	**Pb**	**15 10 53.5**	**-0.3**
FAGO				*e*S	**Sb**	**15 11 10.2**	**-2.1**
PQSS	**Presa 15 de Se**	**1.51**	**335**	*e*S	**Sb**	**15 11 13.7**	**-0.3**
PQSS	**Presa 15 de Se**	**1.51**	**335**	*e*S	**Sb**	**15 11 13.7**	**-0.3**
APYN	**Apoyeque**	**1.52**	**90**	*e*P	**Pn**	**15 10 54.6**	**+0.8**
CAHU	**Cacacuatique**	**1.54**	**349**	*e*P	**Pb**	**15 10 55.3**	**-0.2**
CAHU	**Cacacuatique**	**1.54**	**349**	*e*P	**Pb**	**15 10 55.3**	**-0.2**
TISN	**Laguna Tiscapa**	**1.60**	**94**	*e*P	**Pn**	**15 10 55.8**	**+0.8**
MGAN	**Managua**	**1.62**	**93**	*e*P	**Pn**	**15 10 55.8**	**+0.6**
SCLA	**Alcaldia de Sa**	**1.66**	**331**	*e*P	**Pg**	**15 10 58.1**	**-0.5**
SCLA				*e*S	**Sb**	**15 11 18.1**	**-0.1**
SCLA	**Alcaldia de Sa**	**1.66**	**331**	*e*P	**Pg**	**15 10 58.1**	**-0.5**
SCLA				*e*S	**Sb**	**15 11 18.1**	**-0.1**
COEG	**Centro de Oper**	**1.66**	**325**	*e*P	**Pg**	**15 10 58.1**	**-0.7**
COEG				*e*S	**Sb**	**15 11 17.5**	**-0.9**
COEG				lAML		15 11 24.6	
	comp=Z,2μm,0.2s						
COEG	**Centro de Oper**	**1.66**	**325**	*e*P	**Pg**	**15 10 58.1**	**-0.7**
COEG				*e*S	**Sb**	**15 11 17.5**	**-0.9**
COEG				lAML		15 11 24.6	
	comp=Z,2μm,0.2s						
SJTE	**Alcalda de S**	**1.73**	**322**	*e*P	**Pb**	**15 10 59.0**	**+0.4**
SJTE				*e*S	**Sb**	**15 11 19.7**	**-0.7**
SJTE	**Alcalda de S**	**1.73**	**322**	*e*P	**Pb**	**15 10 59.0**	**+0.4**
SJTE				*e*S	**Sb**	**15 11 19.7**	**-0.7**
PAVA	**Las Pavas**	**1.77**	**325**	*e*P	**Pg**	**15 10 59.9**	**-0.9**
PAVA				*e*S	**Sb**	**15 11 20.8**	**-0.8**
PAVA	**Las Pavas**	**1.77**	**325**	*e*P	**Pg**	**15 10 59.9**	**-0.9**
PAVA				*e*S	**Sb**	**15 11 20.8**	**-0.8**
LFRS	**El Faro**	**1.77**	**321**	⇓*i*P	**Pb**	**15 10 59.6**	**+0.3**
LFRS	**El Faro**	**1.77**	**321**	⇓*i*P	**Pb**	**15 10 59.6**	**+0.3**
TGUH	**Tegucigalpa,Un**	**1.90**	**19**	*e*P	**Pn**	**15 10 59.9**	**+0.7**
TGUH	**Tegucigalpa,Un**	**1.90**	**19**	*e*P	**Pn**	**15 10 59.9**	**+0.7**
BOQS	**Boqueron**	**2.00**	**318**	*e*P	**Pb**	**15 11 02.6**	**-0.6**
BOQS	**Boqueron**	**2.00**	**318**	*e*P	**Pb**	**15 11 02.6**	**-0.6**
MATN	**Matagalpa**	**2.05**	**70**	*e*P	**Pn**	**15 11 00.1**	**-1.1**
JAYA	**Jayaque - finc**	**2.06**	**313**	*e*P	**Pb**	**15 11 03.8**	**-0.4**
JAYA	**Jayaque - finc**	**2.06**	**313**	*e*P	**Pb**	**15 11 03.8**	**-0.4**
CEVE	**Cerro Verde**	**2.30**	**313**	*e*P	**Pb**	**15 11 07.7**	**-0.7**
CEVE				lAML		15 11 44.5	
	comp=Z,897nm,0.5s						
CEVE	**Cerro Verde**	**2.30**	**313**	*e*P	**Pb**	**15 11 07.7**	**-0.7**
CEVE				lAML		15 11 44.5	
	comp=Z,897nm,0.5s						
SBLS	**San Blas**	**2.31**	**314**	*e*P	**Pb**	**15 11 08.2**	**-0.3**
SBLS	**San Blas**	**2.31**	**314**	*e*P	**Pb**	**15 11 08.2**	**-0.3**
NUBE	**Las Nubes**	**2.46**	**312**	*e*S	**Sn**	**15 11 38.2**	**+1.2**
NUBE	**Las Nubes**	**2.46**	**312**	*e*S	**Sn**	**15 11 38.2**	**+1.2**

*IDC **03** 15:19:32.6±2.1, 5°.52N×126°.42E, h0km, mb3.3/4, mbtmp3.3/4, Error ellipse: s-maj=193.5km s-min=23.3km az=66.0*
*MAN **03** 15:19:37.5, 5°.52N×126°.53E, h19km, mb4.8, ML3.7, MS3.7*
ISC 03 15:19:40.8±1.3, 5°.5N±0°.1×126°.4E±0°.2, h66km, n6, σ0^{9}90/7, mb3.3/4, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCP	**Kidapawan**	**2.01**	**319**	⇓*e*P	**Pn**	**15 20 11.9**	**-0.6**
BIPH	**Bislig**	**2.67**	**359**	⇓*e*P	**Pn**	**15 20 20.6**	**-0.9**
BIPH				*e*S	**Sn**	**15 20 53.6**	**+0.8**
WRA	**Warramunga Arr**	**26.45**	**163**	P	**P**	**15 25 11.9**	**+0.2**
	0.4nm,0.8s,baz=342,slow=10,SNR=5.2 0.4nm,0.8s						
ASAR	**Alice Springs**	**29.89**	**166**	P	**P**	**15 25 42.4**	**0.0**
	0.1nm,0.5s,baz=346,slow=7.2,SNR=1.4 0.1nm,0.5s						
MKAR	**Makanchi Array**	**55.95**	**325**	P	**P**	**15 29 13.3**	**+1.1**
	0.4nm,0.6s,baz=126,slow=8.2,SNR=4.7 0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**60.10**	**327**	P	**P**	**15 29 40.8**	**-0.4**
	0.6nm,0.6s,baz=125,slow=7.0,SNR=6.9 0.6nm,0.6s						

*IDC **03** 15:30:59.5±2.8, 38°.83N×141°.25E, h0km, mb3.1/2, mbtmp3.0/3, ML2.1/1, Error ellipse: s-maj=55.0km s-min=38.8km az=93.0*
*JMA **03** 15:31:03.6±0.1, 38°.2N±0°.3×141°.7E±0°.5, h84km, MV3.2/38, E OFF MIYAGI PREF*
ISC 03 15:31:03.6±1.7, 38°.15N±0°.05×141°.79E±0°.10, h79km±8km, n24, σ0^{9}78/33, 22D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**0.30**	**303**	⇓*i*P	**Pn**	**15 31 16.3**	**+0.5**
JIKH				⇓S	**Sn**	**15 31 25.3**	**+0.5**
JIO	**Ouri**	**0.46**	**312**	⇓*i*P	**Pn**	**15 31 17.3**	**+0.3**
JIO				⇓*i*S	**Sn**	**15 31 27.1**	**+0.3**
JKMT	**Kesennumamotoy**	**0.71**	**340**	⇓*i*P	**Pn**	**15 31 19.5**	**+0.2**
JKMT				⇓S	**Sn**	**15 31 31.1**	**+0.2**
JOFO	**Osakifurukawao**	**0.83**	**304**	P	**Pn**	**15 31 20.5**	**-0.1**
JOFO				S	**Sn**	**15 31 33.7**	**+0.5**
JMM	**Marumori**	**0.83**	**251**	⇓*i*P	**Pn**	**15 31 20.4**	**-0.3**
JMM				⇓S	**Sn**	**15 31 32.9**	**-0.5**
JOU	**Okura**	**0.91**	**284**	⇓*i*P	**Pn**	**15 31 21.3**	**-0.3**
JOU				⇓S	**Sn**	**15 31 34.8**	**-0.3**
JMK	**Ichinoseki**	**0.92**	**331**	⇓*i*P	**Pn**	**15 31 21.6**	**0.0**
JMK				⇓S	**Sn**	**15 31 35.1**	**0.0**
JFK	**Kawauchi**	**1.06**	**223**	⇓*i*P	**Pn**	**15 31 23.1**	**-0.4**
JFK				⇓S	**Sn**	**15 31 37.3**	**-0.9**
JFT	**Otama**	**1.31**	**242**	⇓*i*P	**Pn**	**15 31 26.3**	**-0.2**
JFT				⇓S	**Sn**	**15 31 43.2**	**-0.5**
JYS	**Shirataka**	**1.36**	**274**	⇓*i*P	**Pn**	**15 31 26.9**	**-0.2**
JYS				⇓S	**Sn**	**15 31 44.9**	**+0.1**
JYK	**Kaneyama**	**1.36**	**305**	⇓*i*P	**Pn**	**15 31 26.8**	**-0.3**
JYK				⇓S	**Sn**	**15 31 44.6**	**-0.2**
JOM	**Ohasama**	**1.38**	**344**	*i* P	**Pn**	**15 31 27.4**	**0.0**
JOM				S	**Sn**	**15 31 45.5**	**+0.2**
JRG	**Rokugo**	**1.54**	**324**	P	**Pn**	**15 31 29.6**	**+0.1**
JRG				S	**Sn**	**15 31 48.9**	**0.0**
JYA	**Atsumi**	**1.69**	**286**	⇓P	**Pn**	**15 31 31.1**	**-0.2**
JYA				⇓S	**Sn**	**15 31 52.3**	**-0.2**
JAW	**Awa shima**	**2.02**	**280**	P	**Pn**	**15 31 36.0**	**+0.3**
JAW				S	**Sn**	**15 32 00.6**	**+0.3**
MJAR	**Matsushiro Arr**	**3.27**	**242**	Pn	**Pn**	**15 31 52.6**	**0.0**
	0.2nm,0.3s,baz=53,slow=14,SNR=11						
MJAR				Sn	**Sn**	**15 32 34.3**	**+3.8**
	0.2nm,0.3s,baz=89,slow=15,SNR=4.8 0.8nm,0.3s						
H11N2	**WAKE ISLAND Hy**	**28.48**	**123**	T	T	16 07 15.1	
	baz=316,slow=75,SNR=12						
H11N1	**WAKE ISLAND Hy**	**28.49**	**123**	T	T	16 07 19.7	
	baz=316,slow=75,SNR=9.7						
H11N3	**WAKE ISLAND Hy**	**28.50**	**123**	T	T	16 07 19.1	
	baz=316,slow=75,SNR=11						
H11S1	**WAKE ISLAND Hy**	**29.23**	**125**	T	T	16 08 14.2	
	baz=318,slow=76,SNR=6.5						
H11S3	**WAKE ISLAND Hy**	**29.23**	**125**	T	T	16 08 14.7	
	baz=318,slow=76,SNR=7.5						
H11S2	**WAKE ISLAND Hy**	**29.25**	**125**	T	T	16 08 17.7	
	baz=318,slow=76,SNR=9.1						
MKAR	**Makanchi Array**	**43.79**	**301**	P	**P**	**15 39 01.0**	**-0.4**
	0.2nm,0.5s,baz=77,slow=7.6,SNR=2.7 0.2nm,0.5s						
WRA	**Warramunga Arr**	**58.20**	**188**	P	P	15 40 59.5	+10
	0.2nm,0.9s,baz=1.0,slow=7.5,SNR=2.1 0.2nm,0.9s						

DJA 03 15:46:42.6±0.4, 9°S±5°×11°9E±°, h33km±9km, M4.0/18, mb4.3/8, mB5.2/1, MLv3.9/18, Mw(mB)4.6/1, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WBSI	**Waikabubak, Su**	**0.33**	**175**	P	Pn	15 46 52.1	+0.9
PLAI	**Plampang**	**1.64**	**287**	P	Pn	15 47 09.2	+0.1
EDFI	**Ende, Flores**	**2.37**	**77**	P	Pn	15 47 19.2	-0.1
MMRI	**Maumere**	**2.92**	**77**	P	Pn	15 47 27.3	+0.5
BSSI	**Bau Bau, Buton**	**3.34**	**20**	P	Pn	15 47 32.6	0.0
BKSI	**Bukukumba**	**4.03**	**11**	P	Pn	15 47 41.9	-0.2
IGBI	**Denpasar**	**4.19**	**276**	P	Pn	15 47 44.4	+0.2
SRBI	**Singaraja**	**4.28**	**286**	P	Pn	15 47 45.2	-0.2
BATI	**Baumata**	**4.33**	**102**	P	Pn	15 47 46.0	-0.3
SOEI	**Soe**	**4.86**	**96**	P	Pn	15 47 52.8	-0.8
BNSI	**Bone**	**4.93**	**9**	P	Pn	15 47 54.2	-0.3
BBSI	**Bau Bau**	**4.96**	**40**	P	Pn	15 47 54.7	-0.1
JAGI	**Jajag, Banyuwa**	**5.21**	**279**	P	Pn	15 47 58.5	+0.2
	0.2nm15nm,1.4s						
KMMI	**Kalianget**	**5.79**	**292**	P	Pn	15 48 07.0	+0.7
	0.2nm3?nm,1.2s						
BLJI	**Banyuglugur**	**5.91**	**285**	P	Pn	15 48 08.3	+0.4
	0.2nm17nm,0.8s						
GMJI	**Gumukmas**	**5.94**	**280**	P	Pn	15 48 08.9	+0.6
	0.2nm37nm,0.8s						
TTSI	**Tana Toraja**	**6.24**	**4**	P	Pn	15 48 12.5	+0.1
	0.1nm15nm,1.4s						
GRJI	**Gresik**	**7.22**	**289**	P	Pn	15 48 25.9	+0.1

*JMA **03** 15:48:00.8±0.1, 32°.9N±0°.1×130°.8E±0°.1, h12km, MV3.7/20, NW KUMAMOTO PREF*
JMA Felt III J1 at NW KUMAMOTO PREF .
*IDC **03** 15:48:00.1±1.4, 32°.90N×130°.81E, h0km, mb3.4/1, mbtmp3.3/3, ML2.7/2, Error ellipse: s-maj=15.3km s-min=7.9km az=102.0*
*NIED **03** 15:48:00.8, 32°.94N×130°.81E, h12km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.60; $M_{\theta\theta}$2.24; $M_{\phi\phi}$-2.84; $M_{r\theta}$-0.67; $M_{\theta\phi}$0.14; $M_{\phi r}$0.08; Fault plane solution: $M_0$2.67000×10^{14} NP1: ϕ_s222.00000°, δ75.00000°, λ167.00000°. NP2: ϕ_s315.00000°, δ78.00000°, λ15.00000°.*
ISC 03 15:48:01.3±1.0, 32°.97N±0°.04×130°.79E±0°.05, h12km, n7, σ1^{9}69/11, 2D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNU	**Nakatsue**	**0.17**	**26**	Pg	**Pg**	**15 48 04.5**	**-0.8**
	3μm,0.3s,baz=193,slow=11,SNR=7608						
JNU				Lg	Lg	15 48 07.5	
	4μm,0.3s,baz=134,slow=8.4,SNR=62						
JNU	**Nakatsue**	**0.17**	**26**	*i* P	**Pg**	**15 48 05.2**	**-0.1**
JNU				S	**Sg**	**15 48 08.1**	**+0.1**
JTA	**Tamana**	**0.21**	**270**	⇓P	**Pg**	**15 48 06.0**	**+0.1**
JTA				⇓*e*S	**Sg**	**15 48 09.4**	**+0.4**
JIU3	**Izumi3**	**0.42**	**177**	*i* P	**Pg**	**15 48 08.5**	**-1.0**
JIU3				*e*S	**Sg**	**15 48 14.2**	**-0.9**
KSRS	**Korea Array**	**5.05**	**333**	Pn	**Pn**	**15 49 19.1**	**+2.2**
	0.2nm,0.3s,baz=152,slow=14,SNR=2.6						
KSRS				Pg	**Pg**	**15 49 34.5**	**-3.6**
	0.8nm,0.3s,baz=149,slow=17,SNR=12						
KSRS				Lg	Lg	15 50 40.9	
	1.5nm,0.3s,baz=152,slow=31,SNR=9.7 0.6nm,0.5s						
MJAR	**Matsushiro Arr**	**7.07**	**58**	Pn	**Pn**	**15 49 46.1**	**+1.4**
	0.2nm,0.3s,baz=244,slow=14,SNR=12 2.7nm,0.5s						
ASAR	**Alice Springs**	**56.39**	**177**	P	**P**	**15 57 42.4**	**-0.2**
	0.5nm,1.1s,baz=9.0,slow=13,SNR=8.7 0.5nm,1.1s						

*IDC **03** 15:51:47.6±0.8, 52°.61N×33°.39W, h0km, mb4.3/21, mbtmp4.3/25, ML3.4/3, MS3.6/60, Error ellipse: s-maj=22.2km s-min=11.3km az=15.0*
*NEIC **03** 15:51:49.4±1.1, 52°.74N±0°.07×33°.3W±0°.2, h10km±1km, mb4.7/51, Error ellipse: s-maj=21.0km s-min=6.8km az=239.0*
*GCMT **03** 15:51:50.4±0.4, 52°.57N±0°.03×33°.22W±0°.03, h24km±2km, MW4.8/76, Moment Tensor Solution. s13,c15; s76,c96; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.74±.19; $M_{\theta\theta}$0.21±.12; $M_{\phi\phi}$0.53±.12; $M_{r\theta}$0.47±.14; $M_{\theta\phi}$-1.53±.07; $M_{\phi r}$0.37±.13; Best double couple: $M_0$1.74700×10^{16} NP1:ϕs177.00000°, δ65.00000°, λ-26.00000°. NP2: ϕ_s279.00000°, δ67.00000°, λ-153.00000°. Principal axes: T 1.9100, Plg1.0000°, Azm48.0000°; N -0.3260, Plg55.0000°, Azm317.0000°; P -1.5850, Plg35.0000°, Azm138.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 03 15:51:50.1±0.6, 52°.89N±0°.08×33°.37W±0°.06, h10km, n210, σ1^{9}46/174, mb4.6/71, MS3.6/60, 4C-7D, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRS	**Narsarsuaq**	**10.56**	**326**	Pn	**Pn**	**15 54 19.2**	**-2.1**
BORG	**Borgarnes**	**13.39**	**23**	Pn	**Pn**	**15 55 02.9**	**+3.0**
	0.7nm,0.3s,baz=210,slow=10,SNR=4.6						
BORG				Sn	**Sn**	**15 57 23.8**	**-4.8**
	0.5nm,0.3s,baz=65,slow=14,SNR=2.2 7.6nm,0.8s						
DSB	**Dublin**	**16.19**	**78**		**Pn**	**15 55 33.9**	**-3.6**
SFJD	**Kangerlussuaq**	**16.48**	**336**	Pn	**P**	**15 55 44.3**	**+0.6**
	0.6nm,0.3s,baz=139,slow=11,SNR=7.2						
SFJD				LR	LR	16 00 56.0	
	comp=Z,300nm,21.4s,baz=147,slow=33 19nm,0.8s						
SFJD	**Kangerlussuaq**	**16.48**	**336**		**Pn**	**15 55 39.5**	**-1.6**
ESK	**Eskdalemuir**	**17.78**	**70**	P	**Pn**	**15 55 56.7**	**-0.8**
ESK				lAmb	lAmb	15 56 00.7	
	comp=Z,42nm,1.0s						
EKA	**Eskdalemuir Ar**	**17.81**	**70**	P	**Pn**	**15 55 57.9**	**+0.1**
	comp=Z,20nm,0.7s,baz=270,slow=10,SNR=53						
EKA				LR	LR	16 01 56.2	
	comp=Z,97nm,19.1s,baz=276,slow=34						
SCHQ	**Schefferville**	**19.73**	**289**	P	**P**	**15 56 19.1**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=82,slow=11,SNR=5.1						
SCHQ				LR	LR	16 02 42.6	
	comp=Z,247nm,20.2s,baz=86,slow=33 comp=Z,3.1nm,0.8s						
PGAV	**Gavieira, Arco**	**20.08**	**113**	*e*P	**P**	**15 56 24.4**	**+0.7**
	comp=Z,47nm,1.8s						
PGAV				*e*S	Sn	16 00 12.7	+1.4
POLO	**Lamas de Olo**	**20.74**	**113**	*e*P	**P**	**15 56 30.5**	**-0.3**
	comp=Z,24nm,1.7s						
POLO				*e*S	Sn	16 00 26.2	-1.0
PBRG	**Braganca**	**21.05**	**111**	*e*P	**P**	**15 56 33.5**	**-0.6**
	comp=Z,24nm,1.3s						
FRB	**Frobisher Bay**	**21.13**	**315**	P	**P**	**15 56 35.9**	**+1.2**
	comp=Z,17nm,0.8s,baz=101,slow=10,SNR=12						
FRB				LR	LR	16 03 16.4	
	comp=Z,119nm,18.0s,baz=142,slow=32 comp=Z,17nm,0.8s						
PVIS	**Viseu**	**21.14**	**115**	*e*P	**P**	**15 56 33.8**	**-1.2**
	comp=Z,26nm,1.0s						
PCAS	**Casmilo, Conde**	**21.27**	**117**	*e*S	**S**	**16 00 34.0**	**+1.4**
JMIC	**Jan Mayen**	**21.29**	**22**	LR	LR	16 02 21.4	
	comp=Z,54nm,20.5s,baz=174,slow=29						
MVO	**Moncorvo**	**21.31**	**113**	*e*P	**P**	**15 56 37.6**	**+0.7**
	comp=Z,24nm,1.5s						
MVO				*e*S	**S**	**16 00 33.9**	**+0.4**
MTE	**Manteigas**	**21.55**	**115**	*e*P	**P**	**15 56 37.9**	**-1.6**
	comp=Z,24nm,1.5s						
MTE				*e*S	Sn	16 00 43.3	-3.2
PCBR	**Castelo Branco**	**21.98**	**116**	*e*P	**P**	**15 56 44.6**	**+0.6**
	comp=Z,25nm,1.6s						
SUE	**Sulen**	**22.04**	**53**	*e*P	**P**	**15 56 45.2**	**+0.8**
PMTG	**Montargil**	**22.13**	**119**	*e*P	**P**	**15 56 46.0**	**+0.4**
	comp=Z,19nm,1.1s						
ASK	**Askoy**	**22.22**	**55**	*e*P	**P**	**15 56 46.6**	**+0.2**
KMY	**Karmoy**	**22.22**	**58**

RETA	**Reutte**	**28.41**	**83**	*eP*		**P**	**15 57 44.3**	**-0.3**
	comp=Z,9.6nm,0.9s,SNR=6.0							
UPP	**Uppsala**	**28.45**	**55**	*eP*		**P**	**15 57 45.3**	**+0.6**
FETA	**Feichten**	**28.61**	**84**	*eP*		**P**	**15 57 46.6**	**+0.1**
	comp=Z,6.2nm,0.7s							
MOTA	**Moosalm**	**28.68**	**83**	*eP*		**P**	**15 57 46.3**	**-0.8**
	comp=Z,11nm,0.8s,SNR=5.7							
SQTA	**Sankt Quirin**	**28.80**	**83**	*eP*		**P**	**15 57 48.0**	**-0.1**
	comp=Z,19nm,0.9s,SNR=8.5							
BRG	**Berggiesshubel**	**28.86**	**75**	*eP*		**P**	**15 57 48.0**	**-0.5**
BRG					Amp		15 57 50.0	
	comp=Z,9.1nm,1.5s							
WATA	**Walderalm**	**28.97**	**83**	*eP*		**P**	**15 57 49.3**	**-0.4**
	comp=Z,15nm,1.0s							
WTTA	**Wattenberg**	**29.04**	**83**	*i* P		**P**	**15 57 50.0**	**-0.4**
	comp=Z,15nm,1.2s							
KHC	**Kasperske Hory**	**29.36**	**78**	*eP*		**P**	**15 57 52.4**	**-0.6**
KHC					AMS	AMS	16 12 00.0	
	comp=Z,100nm,13.5s							
GERES	**GERESS Array B**	**29.56**	**79**	P		**P**	**15 57 54.2**	**-0.6**
	comp=Z,2.7nm,0.9s,baz=300,slow=7.8,SNR=16							
	comp=Z,2.7nm,0.9s							
GERES	**GERESS Array B**	**29.56**	**79**	P		**P**	**15 57 53.8**	**-1.0**
PRU	**Pruhonice**	**29.57**	**76**	AMS		AMS	16 09 50.0	
	comp=Z,200nm,15.5s							
CTI	**Castel Tesino**	**29.64**	**85**	P		**P**	**15 57 54.1**	**-1.4**
ABTA	**Abfaltersbach**	**29.81**	**83**	*eP*		**P**	**15 57 56.1**	**-1.0**
	comp=Z,4.3nm,1.1s							
CKRC	**Cesky Krumlov**	**29.93**	**78**	*eP*		**P**	**15 57 57.0**	**-1.0**
BIOA	**Bad Ischl, Aus**	**30.04**	**81**	*eP*		**P**	**15 57 58.4**	**-0.6**
	comp=Z,5.9nm,0.9s							
KBA	**Koelnbreinsper**	**30.15**	**82**	*i* P		**P**	**15 57 59.9**	**-0.3**
	comp=Z,4.1nm,0.6s							
STAL	**STALIGIAL**	**30.17**	**84**	P		**P**	**15 57 59.2**	**-1.0**
STAL					IAmb	IAmb	15 58 00.3	
	comp=Z,11nm,0.8s							
MOA	**Molln**	**30.34**	**80**	*eP*		**P**	**15 58 01.0**	**-0.7**
	comp=Z,6.7nm,1.4s							
MYKA	**Terra Mystica**	**30.55**	**83**	*eP*		**P**	**15 58 03.4**	**-0.2**
	comp=Z,20nm,0.7s,SNR=8.3							
SADO	**Sadowa**	**30.75**	**273**	LR		LR	16 09 58.5	
	comp=Z,131nm,18.6s,baz=75,slow=36							
CADS	**Cadrg**	**30.80**	**83**	*i* P		**P**	**15 58 04.8**	**-0.9**
CADS				*ep*	P	**pwP**	**15 58 15.7**	**+3.9**
KRLC	**Kraliky**	**30.84**	**75**	*eP*		**P**	**15 58 06.1**	**0.0**
VRAC	**Vranov**	**31.06**	**76**	LR		LR	16 09 59.0	
	comp=Z,85nm,18.3s,baz=292,slow=35							
OBKA	**Obir**	**31.15**	**82**	*eP*		**P**	**15 58 07.9**	**-1.0**
	comp=Z,12nm,0.7s,SNR=7.9							
JAVS	**Javornik**	**31.17**	**84**	*i* P		**P**	**15 58 08.6**	**-0.5**
JAVS				*i* pP		**pwP**	**15 58 19.3**	**+4.3**
ARCES	**ARCESS Array B**	**31.25**	**35**	P		**P**	**15 58 09.7**	**+0.2**
	comp=Z,2.0nm,0.6s,baz=279,slow=8.1,SNR=6.4							
ARCES					LR	LR	16 08 44.7	
	comp=Z,42nm,18.1s,baz=42,slow=32							
	comp=Z,2.0nm,0.6s							
CONA	**Conrad Observa**	**31.25**	**79**	*eP*		**P**	**15 58 10.3**	**+0.5**
	comp=Z,1.1nm,0.6s							
SOKA	**Soboth**	**31.36**	**82**	*eP*		**P**	**15 58 09.5**	**-1.2**
	comp=Z,6.1nm,0.7s,SNR=6.5							
LJU	**Ljubljana**	**31.37**	**83**	*i* P		**P**	**15 58 10.1**	**-0.7**
LJU				*i* pP		**pwP**	**15 58 21.0**	**+4.3**
ARSA	**Arzberg**	**31.37**	**80**	*eP*		**P**	**15 58 08.7**	**-2.1**
	comp=Z,6.9nm,0.7s							
MORC	**Moravsky Berou**	**31.42**	**75**	P		**P**	**15 58 10.3**	**-0.9**
MORC					IAmb	IAmb	15 58 23.1	
	comp=Z,11nm,1.4s							
RONA	**Rosalia, Austr**	**31.62**	**79**	*eP*		**P**	**15 58 11.2**	**-1.7**
	comp=Z,3.6nm,1.1s							
VISS	**Visnje**	**31.68**	**83**	*i* P		**P**	**15 58 12.7**	**-0.8**
MAUC	**Maruska**	**31.76**	**75**	*eP*		**P**	**15 58 14.2**	**0.0**
MTSE	**Matsula**	**31.79**	**56**	*eP*		**P**	**15 58 14.6**	**+0.4**
FINES	**FINESS Array B**	**32.25**	**51**	P		**P**	**15 58 18.6**	**+0.3**
	comp=Z,8.4nm,0.8s,baz=284,slow=7.7,SNR=14							
FINES					LR	LR	16 09 51.6	
	comp=Z,119nm,21.4s,baz=250,slow=33							
	comp=Z,8.4nm,0.8s							
FINES	**FINESS Array B**	**32.25**	**51**	P		**P**	**15 58 18.1**	**-0.2**
FIA1	**FINESS Array S**	**32.26**	**51**	P		**P**	**15 58 18.6**	**+0.2**
RES	**Resolute Bay**	**32.47**	**334**	P		**P**	**15 58 21.6**	**+1.6**
	comp=Z,11nm,0.8s,baz=101,slow=9.1,SNR=12							
RES					LR	LR	16 10 06.4	
	comp=Z,86nm,19.4s,baz=41,slow=34							
	comp=Z,11nm,0.8s							
MPLH	**Magyarpolny**	**32.62**	**79**	P		**P**	**15 58 21.2**	**-0.5**
VSVD	**Vaisvydziai**	**32.65**	**61**	*eP*		**P**	**15 58 22.8**	**+1.0**
LANS	**Liptovska Anna**	**32.82**	**75**	*eP*		**P**	**15 58 24.4**	**+0.9**
PABE	**Paberze**	**32.83**	**62**	P		**P**	**15 58 22.8**	**-0.6**
PABE	**Paberze**	**32.83**	**62**	*eP*		**P**	**15 58 24.0**	**+0.6**
SUW	**Suwalki**	**32.93**	**65**	P		**P**	**15 58 23.4**	**-0.9**
SUW	**Suwalki**	**32.93**	**65**	*eP*		**P**	**15 58 24.0**	**-0.3**
VSU	**Vasula**	**33.33**	**56**	*eP*		**P**	**15 58 27.6**	**-0.1**
KOVH	**Kovagotottos**	**33.49**	**81**	P		**P**	**15 58 28.3**	**-1.0**
MORH	**Mrgy, Hungar**	**33.75**	**80**	⇓P		**P**	**15 58 30.2**	**-1.4**
MORH	**Mrgy, Hungar**	**33.75**	**80**	P		**P**	**15 58 30.0**	**-1.5**
ISAL	**Salakas**	**33.95**	**61**	*eP*		**P**	**15 58 33.6**	**+0.4**
IIGN	**Ignalina**	**34.09**	**62**	*eP*		**P**	**15 58 35.0**	**+0.6**
KEST	**Kesra**	**34.44**	**103**	P		**P**	**15 58 36.5**	**-1.2**
	comp=Z,10nm,0.9s,baz=207,slow=6.8,SNR=6.4							
	comp=Z,10nm,0.9s							
KEST	**Kesra**	**34.44**	**103**	P		**P**	**15 58 36.2**	**-1.5**
KEST					IAmb	IAmb	15 58 48.1	
	comp=Z,12nm,0.8s							
NACGM	**Naroch**	**34.55**	**62**	⇓*eP*		**P**	**15 58 38.4**	**0.0**
	baz=292							
FRGS	**Fruska Gora**	**35.00**	**81**	⇓P		**P**	**15 58 42.0**	**-0.4**
BZS	**Buzias**	**35.84**	**79**	⇑P		**P**	**15 58 49.3**	**-0.3**
DRGR		**35.87**	**77**	⇑P		**P**	**15 58 50.4**	**+0.5**
PDG	**Podgorica**	**36.19**	**85**	P		**P**	**15 58 51.2**	**-1.4**
PDG					IAmb	IAmb	15 59 03.5	
	comp=Z,15nm,1.1s							
MDVR	**Moldovita**	**36.34**	**80**	⇑P		**P**	**15 58 53.3**	**-0.7**
GZR	**Gura Zlata**	**36.64**	**79**	⇑P		**P**	**15 58 56.1**	**-0.5**
ARCR	**ARCALIA**	**36.68**	**75**	⇓P		**P**	**15 58 57.5**	**+0.7**
HERR	**Herculane**	**36.71**	**80**	⇓P		**P**	**15 58 56.3**	**-0.7**
BUR08	**Bucovina Ar. S**	**36.89**	**74**	P		**P**	**15 58 59.4**	**+0.7**
BURAR	**Bucovina Array**	**36.92**	**74**	⇓P		**P**	**15 58 59.5**	**+0.6**
BURAR	**Bucovina Array**	**36.92**	**74**	P		**P**	**15 58 58.8**	**-0.1**
AKASG	**Malin Array De**	**37.69**	**67**	P		**P**	**15 59 04.5**	**-0.7**
	comp=Z,5.1nm,0.7s,baz=304,slow=8.0,SNR=28							
AKASG					LR	LR	16 13 58.2	
	comp=Z,58nm,19.1s,baz=306,slow=35							
	comp=Z,5.1nm,0.7s							
AKASG	**Malin Array Be**	**37.69**	**67**	P		**P**	**15 59 03.7**	**-1.5**
AKBB	**Malin Array Si**	**37.69**	**67**	P		**P**	**15 59 04.4**	**-0.9**
AKBB					IAmb	IAmb	15 59 05.5	
	comp=Z,15nm,0.8s							
BIZ	**Bicaz**	**37.78**	**74**	⇓P		**P**	**15 59 07.0**	**+0.9**
ULM	**Lac du Bonnet**	**37.86**	**292**	LR		LR	16 13 18.5	
	comp=Z,101nm,18.6s,baz=92,slow=34							
TKL	**Tuckaleechee C**	**39.09**	**264**	LR		LR	16 15 13.4	
	comp=Z,143nm,19.2s,baz=66,slow=36							
LIT	**Litokhoron**	**39.53**	**86**	P		**P**	**15 59 17.6**	**-3.3**
OBN	**Obninsk**	**39.59**	**58**	LR		LR	16 15 09.8	
	comp=Z,20nm,21.3s,baz=326,slow=35							
YKA	**Yellowknife Ar**	**41.63**	**316**	P		**P**	**15 59 38.3**	**+0.4**
	comp=Z,2.5nm,0.8s,baz=62,slow=8.9,SNR=11							
YKA					PcP	**PcP**	**16 01 38.2**	**+3.7**
	comp=Z,0.5nm,0.5s,baz=62,slow=3.7,SNR=6.0							
YKA					LR	LR	16 14 52.5	
	comp=Z,36nm,21.9s,baz=345,slow=33							
	comp=Z,2.5nm,0.8s							
SJG	**San Juan**	**43.09**	**229**	LR		LR	16 13 39.5	
	comp=Z,48nm,20.9s,baz=244,slow=31							
KIRV	**Kirov**	**44.15**	**48**	LR		LR	16 17 10.0	
	comp=Z,63nm,19.1s,baz=318,slow=34							
INK	**Inuvik**	**45.67**	**329**	LR		LR	16 18 40.9	
	comp=Z,144nm,18.2s,baz=44,slow=35							
BR131	**Keskin Array S**	**46.45**	**78**	P		**P**	**16 00 16.6**	**-0.5**
BRTR	**Keskin Array B**	**46.45**	**78**	P		**P**	**16 00 17.3**	**+0.2**
	comp=Z,5.6nm,0.8s,baz=302,slow=5.8,SNR=24							
	comp=Z,5.6nm,0.8s							
BRTR	**Keskin Array B**	**46.45**	**78**	P		**P**	**16 00 16.7**	**-0.4**
BELG	**Belogornoye**	**46.62**	**56**	LR		LR	16 18 27.4	
	comp=Z,63nm,19.7s,baz=11,slow=34							
TOA0	**Torodi Ar. Sit**	**48.48**	**132**	P		**P**	**16 00 29.8**	**-3.0**
TOA0					IAmb	IAmb	16 00 41.9	
	comp=Z,6.9nm,0.9s							
TORD	**Torodi Ar. Bea**	**48.48**	**132**	P		**P**	**16 00 30.2**	**-2.7**
	comp=Z,2.7nm,0.8s,baz=329,slow=7.1,SNR=13							
	comp=Z,2.7nm,0.8s							
TORD	**Torodi Ar. Bea**	**48.48**	**132**	P		**P**	**16 00 30.1**	**-2.8**
TORD					IAmb	IAmb	16 00 42.4	
	comp=Z,7.2nm,1.1s							
I29M	**Ogilvie Camp,**	**48.95**	**328**	P		**P**	**16 00 36.6**	**+0.7**
I29M					IAmb	IAmb	16 00 37.3	
	comp=Z,4.6nm,0.7s							
KBZ	**Khabaz**	**49.29**	**68**	P		**P**	**16 00 39.3**	**+0.5**
	comp=Z,3.4nm,0.9s,baz=294,slow=9.7,SNR=6.8							
KBZ					LR	LR	16 21 13.7	
	comp=Z,48nm,20.3s,baz=267,slow=36							
	comp=Z,3.4nm,0.9s							
ARU	**Arti**	**49.45**	**47**	LR		LR	16 20 47.2	
	comp=Z,122nm,18.8s,baz=277,slow=35							
ARU	**Arti**	**49.45**	**47**	P		**P**	**16 00 39.5**	**-0.3**
ARU					IAmb	IAmb	16 00 41.3	
	comp=Z,14nm,1.1s							
PDAR	**Pinedale Array**	**49.86**	**291**	P		**P**	**16 00 41.9**	**-1.6**
	comp=Z,0.2nm,0.4s,baz=51,slow=10,SNR=2.1							
PDAR					LR	LR	16 20 24.9	
	comp=Z,92nm,19.4s,baz=60,slow=34							
	comp=Z,0.2nm,0.4s							
DAWY	**Dawson**	**50.14**	**327**	P		**P**	**16 00 45.7**	**+0.6**
MDP	**Montagnes des**	**50.21**	**205**	LR		LR	16 17 06.9	
	comp=Z,43nm,19.1s,baz=288,slow=30							
DLBC	**Dease Lake**	**50.24**	**317**	LR		LR	16 20 22.2	
	comp=Z,62nm,18.6s,baz=153,slow=34							
NEW	**Newport**	**50.51**	**301**	LR		LR	16 20 19.5	
	comp=Z,61nm,18.1s,baz=36,slow=34							
DBIC	**Dimbokro**	**51.63**	**143**	LR		LR	16 20 15.5	
	comp=Z,85nm,19.0s,baz=352,slow=33							
SCRK	**Sand Creek**	**51.70**	**328**	P		**P**	**16 00 58.1**	**+1.2**
SCRK					IAmb	IAmb	16 00 59.4	
	comp=Z,7.9nm,1.0s							
MMAI	**Mount Meron Ar**	**51.99**	**84**	LR		LR	16 23 21.1	
	comp=Z,33nm,18.8s,baz=50,slow=36							
ILAR	**Eielson Array**	**52.04**	**330**	P		**P**	**16 01 00.1**	**+0.8**
	comp=Z,1.2nm,0.7s,baz=45,slow=5.6,SNR=14							
ILAR					LR	LR	16 22 50.2	
	comp=Z,62nm,18.1s,baz=84,slow=36							
	comp=Z,1.2nm,0.7s							
ILAR	**Eielson Array**	**52.04**	**330**	P		**P**	**16 00 58.8**	**-0.5**
GNI	**Garni**	**52.65**	**71**	LR		LR	16 24 00.2	
	comp=Z,46nm,19.5s,baz=342,slow=37							
AKTO	**Aktyubinsk**	**52.97**	**53**	LR		LR	16 22 30.6	
	comp=Z,83nm,21.9s,baz=309,slow=35							
MLY	**Manley**	**52.98**	**332**	P		**P**	**16 01 07.2**	**+0.8**
ANMO	**Albuquerque**	**53.25**	**281**	LR		LR	16 23 14.1	
	comp=Z,147nm,18.0s,baz=46,slow=35							
MESA	**MESA**	**53.66**	**324**	P		**P**	**16 01 12.3**	**+0.7**
ELK	**Elko**	**54.39**	**292**	LR		LR	16 23 32.4	
	comp=Z,90nm,18.2s,baz=50,slow=35							
ABKAR	**Akbulak array**	**54.69**	**53**	P		**P**	**16 01 18.7**	**-0.2**
ABKAR	**Akbulak array**	**54.69**	**53**	P		**P**	**16 01 18.4**	**-0.5**
ABKAR					IAmb	IAmb	16 01 20.3	
	comp=Z,6.1nm,1.1s							
TIXI	**Tiksi**	**55.12**	**7**			**P**	**16 01 23.7**	**+1.9**
TIXI					IAmb	IAmb	16 01 33.8	
	comp=Z,6.5nm,0.7s							
WVOR	**Wild Horse Val**	**55.13**	**296**	P		**P**	**16 01 23.0**	**+0.5**
TXAR	**Lajitas Array**	**55.52**	**274**	P		**P**	**16 01 25.2**	**-0.2**
	comp=Z,0.2nm,0.7s,baz=54,slow=4.6,SNR=1.6							
TXAR					LR	LR	16 26 44.7	
	comp=Z,43nm,18.6s,baz=46,slow=38							
BRVK	**Borovoye**	**56.77**	**45**	P		**P**	**16 01 34.7**	**+0.9**
BRVK					IAmb	IAmb	16 01 35.7	
	comp=Z,6.7nm,0.8s							
NVAR	**Mina Array Bea**	**57.70**	**292**	P		**P**	**16 01 40.4**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=60,slow=7.4,SNR=2.4							
NVAR					LR	LR	16 24 42.0	
	comp=Z,62nm,18.9s,baz=100,slow=34							
	comp=Z,0.2nm,0.4s							
YBH	**Yreka Blue Hor**	**57.81**	**298**	LR		LR	16 25 38.5	
	comp=Z,53nm,19.9s,baz=44,slow=35							
O18K	**Koktuh Hills**	**58.30**	**330**	P		**P**	**16 01 43.2**	**-1.3**
O18K					IAmb	IAmb	16 01 45.5	
	comp=Z,8.5nm,0.8s							
ROSC	**El Rosal**	**58.49**	**230**	LR		LR	16 24 22.6	
	comp=Z,35nm,21.4s,baz=258,slow=34							
KDAK	**Kodiak Island**	**59.12**	**327**	LR		LR	16 27 24.1	
	comp=Z,60nm,19.9s,baz=89,slow=36							
JTS	**Las Juntas de**	**59.22**	**244**	LR		LR	16 25 13.7	
	comp=Z,24nm,20.2s,baz=98,slow=34							
CMIG	**Matias Romero**	**59.42**	**258**	LR		LR	16 28 45.5	
	comp=Z,70nm,18.5s,baz=18,slow=37							
GEYT	**Alibeck**	**61.67**	**64**	LR		LR	16 28 47.4	
	comp=Z,37nm,18.9s,baz=9.0,slow=36							
ZALV	**Zalesovo Beam**	**61.80**	**36**	P		**P**	**16 02 10.0**	**+1.4**
	comp=Z,0.8nm,0.6s,baz=317,slow=7.9,SNR=2.0							
	comp=Z,0.8nm,0.6s							
KURK	**Kurchatov**	**61.97**	**42**	P		**P**	**16 02 09.4**	**-0.4**
KURK					IAmb	IAmb	16 02 11.0	
	comp=Z,4.7nm,0.8s							
LPIG	**La Paz**	**63.38**	**275**	LR		LR	16 28 35.2	
	comp=Z,49nm,21.3s,baz=27,slow=35							
SEY	**Seymchan**	**64.43**	**357**	LR		LR	16 30 03.3	
	comp=Z,39nm,18.1s,baz=94,slow=36							
YAK	**Yakutsk**	**64.64**	**9**	LR		LR	16 29 01.5	
	comp=Z,55nm,18.2s,baz=253,slow=34							
MAKZ	**Makanchi**	**66.42**	**43**			**P**	**16 02 39.0**	**-0.2**
MAKZ					IAmb	IAmb	16 02 40.5	
	comp=Z,7.2nm,1.1s							
AAK	**Ala-Archa**	**66.44**	**50**	LR		LR	16 31 18.3	
	comp=Z,66nm,18.3s,baz=354,slow=36							
MK31	**Makanchi Array**	**66.56**	**42**	P		**P**	**16 02 40.0**	**0.0**
MK31					IAmb	IAmb	16 02 41.2	
	comp=Z,5.1nm,0.6s							
MKAR	**Makanchi Array**	**66.56**	**42**	P		**P**	**16 02 40.5**	**+0.5**
	comp=Z,5.3nm,0.6s,baz=331,slow=5.7,SNR=73							
	comp=Z,5.3nm,0.6s							
MKAR	**Makanchi Array**	**66.56**	**42**			**P**	**16 02 39.7**	**-0.3**
KSH	**Kashi**	**69.58**	**51**	P		**P**	**16 03 02.0**	**+2.8**
KSH					pmax	pmax		
	comp=Z,7.0nm,1.3s							
ATAH	**Atahualpa**	**70.93**	**228**	LR		LR	16 32 53.9	
	comp=Z,19nm,21.7s,baz=12,slow=35							
SIV	**San Ignacio**	**72.65**	**208**	LR		LR	16 31 03.1	
	comp=Z,54nm,18.1s,baz=60,slow=32							
SONM	**Songino Array**	**73.96**	**27**	P		**P**	**16 03 26.1**	**+0.6**
	comp=Z,1.7nm,0.9s,baz=323,slow=4.8,SNR=8.2							
	comp=Z,1.7nm,0.9s							
SONM	**Songino Array**	**73.96**	**27**	P		**P**	**16 03 25.5**	**0.0**
PETK	**Petropavlovsk-**	**73.97**	**353**	LR		LR	16 36 44.9	
	comp=Z,44nm,19.2s,baz=38,slow=36							
NNA	**Nana**	**74.57**	**224**	LR		LR	16 35 35.4	
	comp=Z,20nm,19.5s,baz=15,slow=35							
MBAR	**Mbarara**	**75.15**	**111**	LR		LR	16 35 08.3	
	comp=Z,52nm,19.0s,baz=339,slow=35							
LPAZ	**La Paz**	**75.15**	**215**	LR		LR	16 35 08.1	
	comp=Z,33nm,18.0s,baz=60,slow=35							
GTA	**Gaotai**	**79.52**	**35**	*eP*		**P**	**16 03 57.3**	**+0.3**
GTA					pP	PcP	16 04 07.5	+2.5
GTA					sP	pwP	16 04 11.9	+9.1
GTA					pmax	pmax		
	comp=Z,4.0nm,0.9s							
LVC	**Limon Verde**	**81.29**	**213**	LR		LR	16 37 50.3	
	comp=Z,25nm,19.0s,baz=290,slow=34							
LSZ	**Lusaka**	**85.97**	**122**	LR		LR	16 41 47.7	
	comp=Z,52nm,18.2s,baz=110,slow=35							
NJ2	**Nanjing**	**92.01**	**23**	*eP*		**P**	**16 04 54.8**	**-4.2**
NJ2					pmax	pmax		
	comp=Z,5.0nm,0.5s							
LBTB	**Lobatse**	**92.93**	**129**	LR		LR	16 44 58.5	
	comp=Z,22nm,19.0s,baz=148,slow=34							
BOSA	**Boshof**	**95.83**	**131**	LR		LR	16 47 42.1	
	comp=Z,34nm,18.4s,baz=14,slow=35							
SUR	**Sutherland**	**97.12**	**136**	LR		LR	16 47 16.3	
	comp=Z,30nm,18.0s,baz=349,slow=34							
CMAR	**Chiang Mai Arr**	**97.86**	**45**	LR		LR	16 52 19.1	
	comp=Z,30nm,18.8s,baz=275,slow=37							
WRA	**Warramunga Arr**	**145.76**	**21**	PKPbc		**PKPdf**	**16 11 28.4**	**-0.4**
	comp=Z,1.7nm,0.7s,baz=342,slow=3.5,SNR=10							

IDC ***03*** *16:01:19.6±0.8,37.°28N×142.°11E, h0km, mb3.9/8, mbtmp4.0/15, ML3.4/6, MS2.9/4, Error ellipse: s-maj=20.1km s-min=14.8km az=94.0*

JMA ***03*** *16:01:23.7±0.2,37.°4N±0.°4×141.°9E±0.°9, h39km±3km, MD4.2/39, MV4.4/39, E OFF FUKUSHIMA PREF*

JMA Felt I J1 at E OFF FUKUSHIMA PREF .

NIED ***03*** *16:01:23.7, 37.°37N×141.°93E, h39km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr0.17; Mθθ-0.61; Mφφ0.44; Mrθ0.15; Mφr0.88; Mrr-0.14; Fault plane solution: M0 1.04000×10^15 NP1: φs254.00000°, δ81.00000°, λ-4.00000°. NP2:φs345.00000°, δ86.00000°, λ-171.00000°.*

NEIC ***03*** *16:01:24.7±1.9, 37.°36N±0.°05×142.°00E±0.°06, h32km±7km, mb4.4/9 Error ellipse: s-maj=9.1km s-min=4.7km az=224.0*

ISC 03 16:01:20.3±2.1, 37.°34N±0.°04×142.°05E±0.°05, h5km±13km,

n72, σ1s33/67, mb4.2/14, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.93**	**272**	P		**Pb**	**16 01 39.3**	**+0.3**
JFK				S		**Sg**	**16 01 49.9**	**-0.4**
JFK	**Kawauchi**	**0.93**	**272**	A		A	16 01 39.3	
	comp=E,5.0nm,0.4s,comp=E,7.0nm,1.4s							
JMST	**Minamisoumatoc**	**1.00**	**293**	*i* P		**Pb**	**16 01 40.1**	**0.0**
JMST				*eS*		**Sg**	**16 01 51.6**	**-0.8**
JMST	**Minamisoumatoc**	**1.00**	**293**	A		A	16 01 40.1	
	comp=E,4.0nm,0.5s,comp=E,6.0nm,0.3s							
ONAJ	**Iwakimizuishiy**	**1.02**	**257**	*i* P		**Pb**	**16 01 40.6**	**0.0**
ONAJ				S		**Sg**	**16 01 52.2**	**-1.0**
ONAJ	**Iwakimizuishiy**	**1.02**	**257**	A		A	16 01 40.6	
	comp=E,46nm,0.3s,comp=E,15nm,0.3s							
JIKH	**Ishinomakibobu**	**1.07**	**335**	*i* P		**Pb**	**16 01 41.6**	**+0.2**
JIKH				S		**Sg**	**16 01 54.0**	**-0.8**
JMM	**Marumori**	**1.12**	**298**			**Pb**	**16 01 41.9**	**-0.4**
JMM	**Marumori**	**1.12**	**298**	*i* P		**Pb**	**16 01 42.1**	**-0.1**
JIO	**Ouri**	**1.24**	**334**	*i* P		**Pb**	**16 01 44.1**	**-0.2**
JIO				S		**Sg**	**16 01 58.1**	**-2.1**
JFT	**Otama**	**1.37**	**278**	*i* P		**Pb**	**16 01 46.5**	**0.0**
JFT				S		**Sg**	**16 02 02.6**	**-1.8**
JOU	**Okura**	**1.50**	**314**	*i* P		**Pn**	**16 01 48.1**	**+0.2**
JOU				*eS*		**Sb**	**16 02 06.0**	**-1.9**
JOU	**Okura**	**1.50**	**314**	A		A	16 01 48.1	
	comp=E,7.0nm,0.6s,comp=E,8.0nm,1.7s							
JOFO	**Osakifurukawao**	**1.55**	**325**	A		A	16 01 48.5	
	comp=E,19nm,2.4s,comp=E,13nm,1.8s							
JYAR	**Yonezawaarcadi**	**1.61**	**291**	A		A	16 01 49.2	
	comp=E,8.0nm,1.1s,comp=E,9.0nm,1.4s							
JMK	**Ichinoseki**	**1.74**	**338**	*i* P		**Pn**	**16 01 51.7**	**+0.6**
JMK				S		**Sn**	**16 02 11.3**	**-2.4**
JSB	**Shiboa**	**1.74**	**258**	A		A	16 01 51.2	
	comp=E,8.0nm,0.8s,comp=E,10.0nm,1.2s							
JYS	**Shirataka**	**1.80**	**300**	P		**Pn**	**16 01 52.4**	**+0.4**
JYS				*eS*		**Sn**	**16 02 14.8**	**-0.5**
JYT	**Yasato**	**1.85**	**234**	Pn		**Pn**	**16 01 52.4**	**-0.4**
JFY	**Yanaizu**	**1.87**	**273**	P		**Pn**	**16 01 53.3**	**+0.4**
JFY				*eS*		**Sn**	**16 02 15.4**	**-1.5**
JYK	**Kaneyama**	**2.06**	**320**	*i* P		**Pn**	**16 01 56.2**	**+0.6**
JSD	**Sado**	**3.08**	**284**	Pn		**Pn**	**16 02 09.2**	**-0.4**
MJAR	**Matsushiro Arr**	**3.17**	**257**	Pn		**Pn**	**16 02 12.4**	**+1.4**
	0.8nm,0.3s,baz=92,slow=16,SNR=39							
MJAR						Sn	**Sn**	**16 02 50.1**	**+0.8**
	2.8nm,0.3s,baz=91,slow=9.7,SNR=2.8							
	5.4nm,0.3s							
MJAR	**Matsushiro Arr**	**3.17**	**257**	Pn		**Pn**	**16 02 11.6**	**+0.6**
MAJO	**Matsushiro**	**3.18**	**257**	Pn		**Pn**	**16 02 12.6**	**+1.6**
MJB9	**Matsu-Tunnel**	**3.18**	**257**			**Pn**	**16 02 12.8**	**+1.8**
JTM	**Tenmabayashi**	**3.53**	**348**	Pn		**Pn**	**16 02 17.6**	**+1.8**
JGF	**Kuroka**	**4.16**	**247**	Pn		**Pn**	**16 02 27.1**	**+2.6**
INU	**Inuyama**	**4.52**	**245**			**Pn**	**16 02 30.5**	**+

n145,σ0.89/239,mb3.5/5,37C-23D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
TWD	**Chiawan** baz=267	**0.10**	**283**	⇑*iP*		**Pg**	**16 01 56.1**	**-0.2**
TWD				*i*	S	**Sg**	**16 01 57.7**	**-0.2**
HWA	**Hwalien** baz=208	**0.12**	**229**	⇑*iP*		**Pg**	**16 01 57.4**	**+0.8**
HWA				*eS*		**Sg**	**16 02 00.3**	**+1.9**
ETL	**Fush Village** baz=326	**0.13**	**324**	⇓*iP*		**Pg**	**16 01 56.5**	**-0.2**
ETL				*i*	S	**Sg**	**16 01 58.4**	**-0.3**
NACB	**Ninganchiao** baz=320	**0.15**	**319**	⇓*iP*		**Pg**	**16 01 56.9**	**-0.3**
NACB				*i*	S	**Sg**	**16 01 59.1**	**-0.3**
TEYL	**Yanliau Villag** baz=201	**0.21**	**208**	⇑P		**Pg**	**16 01 58.7**	**+0.5**
TEYL				*eS*		**Sg**	**16 02 03.5**	**+2.4**
ETM	**Tongmen** baz=235	**0.21**	**245**	⇑*eP*		**Pg**	**16 01 58.4**	**+0.1**
ETM				*eS*		**Sg**	**16 02 01.5**	**+0.3**
ETLH	**Xiulin Townshi** baz=304	**0.25**	**306**	⇑*eP*		**Pg**	**16 01 58.9**	**-0.2**
ETLH				*eS*		**Sg**	**16 02 02.4**	**0.0**
EHP	**Heping Village** baz=16	**0.26**	**7**	*iP*		**Pg**	**16 01 59.1**	**0.0**
EHP				S		**Sg**	**16 02 02.8**	**+0.3**
ESL	**Shilin** baz=218	**0.35**	**226**	⇑*iP*		**Pg**	**16 02 00.9**	**+0.1**
ESL				*eS*		**Sb**	**16 02 06.8**	**-1.3**
ENA	**Nanau** baz=11	**0.37**	**5**	⇓*iP*		**Pg**	**16 02 01.2**	**0.0**
ENA				*eS*		**Sg**	**16 02 06.4**	**+0.2**
TEGC	**Jichi Village** baz=198	**0.38**	**204**	⇑P		**Pb**	**16 02 03.2**	**+0.3**
TEGC				*eS*		**Sb**	**16 02 11.4**	**+2.4**
EWUT	**Wuta** baz=14	**0.39**	**10**	⇓*iP*		**Pg**	**16 02 01.6**	**0.0**
EWUT				*i*	S	**Sg**	**16 02 07.0**	**+0.2**
WHF	**Hehuan Shan** baz=279	**0.41**	**282**	⇑*iP*		**Pg**	**16 02 02.0**	**-0.1**
WHF				S		**Sg**	**16 02 07.8**	**+0.2**
EGFH	**Guangfu** baz=209	**0.46**	**213**	⇑*iP*		**Pb**	**16 02 03.3**	**-1.1**
EGFH				*eS*		**Sb**	**16 02 11.8**	**+0.3**
FUSS	**Fushou** baz=292	**0.46**	**294**	⇑*iP*		**Pg**	**16 02 03.2**	**+0.2**
FUSS				*i*	S	**Sg**	**16 02 09.5**	**+0.3**
NNSB	**Datong** baz=322	**0.47**	**322**	⇓*iP*		**Pg**	**16 02 03.3**	**+0.1**
NNSB				S		**Sg**	**16 02 09.7**	**+0.2**
CHGB	**Renai** baz=267	**0.48**	**271**	⇑*iP*		**Pg**	**16 02 03.7**	**+0.3**
CHGB				*eS*		**Sg**	**16 02 10.4**	**+0.6**
NNS	**Nan Shan** baz=322	**0.49**	**322**	⇓*iP*		**Pg**	**16 02 03.5**	**+0.1**
NNS				S		**Sg**	**16 02 10.2**	**+0.3**
OWD	**Renai** baz=254	**0.49**	**258**	⇑*iP*		**Pg**	**16 02 03.7**	**+0.2**
OWD				*i*	S	**Sg**	**16 02 10.4**	**+0.3**
LATG	**Datong** baz=343	**0.50**	**341**	⇓*iP*		**Pg**	**16 02 03.7**	**0.0**
LATG				*eS*		**Sg**	**16 02 10.9**	**+0.5**
TWT	**Tachien** baz=289	**0.52**	**292**	⇑P		**Pg**	**16 02 04.7**	**+0.6**
TWT				*eS*		**Sg**	**16 02 12.1**	**+1.1**
TDCB	**Techi** baz=289	**0.54**	**292**	⇑*iP*		**Pg**	**16 02 04.7**	**+0.3**
TDCB				*eS*		**Sg**	**16 02 12.0**	**+0.6**
WUSB	**Renai** baz=260	**0.54**	**263**	⇑P		**Pg**	**16 02 04.8**	**+0.4**
WUSB				*eS*		**Sg**	**16 02 12.1**	**+0.6**
TWC	**Suao** baz=18	**0.57**	**13**	⇓*iP*		**Pg**	**16 02 05.0**	**0.0**
TWC				*eS*		**Sg**	**16 02 13.2**	**+0.9**
NDT	**Datong Townshi** baz=344	**0.57**	**342**	⇓*eP*		**Pg**	**16 02 05.3**	**+0.3**
NDT				*eS*		**Sg**	**16 02 12.8**	**+0.3**
NDS	**Dongshan** baz=4.0	**0.57**	**1**	⇓*iP*		**Pg**	**16 02 05.2**	**+0.1**
NDS				*eS*		**Sg**	**16 02 12.9**	**+0.3**
ENTT	**Nioudou** baz=350	**0.59**	**348**	⇓*iP*		**Pg**	**16 02 05.7**	**+0.2**
ENTT				S		**Sg**	**16 02 13.7**	**+0.4**
VWDT	**VWDT** baz=236	**0.60**	**240**	⇑*iP*		**Pb**	**16 02 05.9**	**-0.9**
VWDT				*eS*		**Sb**	**16 02 15.1**	**-0.3**
HGSD	**Ruisui** baz=201	**0.62**	**205**	⇑P		**Pb**	**16 02 07.1**	**0.0**
HGSD				*eS*		**Sn**	**16 02 20.4**	**+1.1**
EHY	**Hungye** baz=209	**0.65**	**213**	⇑P		**Pg**	**16 02 06.7**	**+0.1**
EHY				*eS*		**Sn**	**16 02 18.1**	**-2.1**
TWE	**Neicheng**	**0.66**	**357**	⇓*iP*		**Pg**	**16 02 07.0**	**+0.2**
TWE				*eS*		**Sg**	**16 02 16.1**	**+0.6**
YHNB	**Yeheng**	**0.68**	**334**	P		**Pg**	**16 02 07.5**	**+0.4**
YHNB	**Yeheng** baz=335	**0.68**	**334**	⇓*iP*		**Pg**	**16 02 07.5**	**+0.4**
YHNB				*eS*		**Sg**	**16 02 15.9**	**-0.2**
WPL	**Puli Township** baz=264	**0.69**	**266**	⇑P		**Pb**	**16 02 07.7**	**-0.6**
WPL				*eS*		**Sb**	**16 02 16.9**	**-1.0**
NSK	**Sanguang** baz=334	**0.69**	**333**	⇓*iP*		**Pg**	**16 02 07.7**	**+0.3**
NSK				S		**Sg**	**16 02 16.8**	**+0.4**
ILA	**Ilan** baz=6.0	**0.71**	**3**	*eP*		**Pg**	**16 02 08.0**	**+0.4**
ILA				*eS*		**Sg**	**16 02 17.8**	**+0.9**
FUSB	**Fushanzhiwuyua** baz=353	**0.71**	**351**	⇓*iP*		**Pg**	**16 02 07.9**	**+0.2**
FUSB				*eS*		**Sg**	**16 02 17.1**	**+0.1**
DPDB	**Guoxing** baz=266	**0.71**	**268**	⇑*iP*		**Pb**	**16 02 08.3**	**-0.4**
DPDB				*eS*		**Sg**	**16 02 17.6**	**+0.6**
WCS	**Beigang Elemen** baz=268	**0.72**	**270**	⇑*iP*		**Pb**	**16 02 08.4**	**-0.5**
WCS				*eS*		**Sb**	**16 02 19.1**	**0.0**
WHP	**Taichung City** baz=286	**0.73**	**288**	⇑P		**Pb**	**16 02 08.7**	**-0.3**
WHP				*eS*		**Sb**	**16 02 18.5**	**-0.7**
SSLB	**Suanglung**	**0.74**	**249**	P		**Pg**	**16 02 08.4**	**+0.2**
SSLB	**Suanglung** baz=246	**0.74**	**249**	⇑*iP*		**Pg**	**16 02 08.4**	**+0.2**
SSLB				*eS*		**Sg**	**16 02 18.1**	**+0.3**
NWLT	**Wulai** baz=347	**0.74**	**346**	⇓*iP*		**Pg**	**16 02 08.5**	**+0.3**
NWLT				*eS*		**Sg**	**16 02 17.9**	**-0.1**
SMLT	**Sun Moon Lake** baz=254	**0.76**	**257**	⇑*iP*		**Pb**	**16 02 09.0**	**-0.5**
SMLT				*eS*		**Sb**	**16 02 19.5**	**-0.6**
YULB	**Yu-li** baz=207	**0.76**	**210**	⇑P		**Pb**	**16 02 08.7**	**-0.8**
YULB				*eS*		**Sn**	**16 02 21.6**	**-1.2**
NFF	**Wufeng Townshi** baz=317	**0.79**	**317**	⇑P		**Pb**	**16 02 09.7**	**-0.3**
NFF				*eS*		**Sg**	**16 02 19.6**	**+0.3**
EYUL	**Yuli** baz=204	**0.79**	**207**	*eP*		**Pb**	**16 02 09.3**	**-0.7**
EYUL				*eS*		**Sn**	**16 02 23.8**	**+0.3**
TYC	**Yuchr** baz=256	**0.79**	**259**	⇑P		**Pg**	**16 02 09.4**	**+0.2**
TYC				*eS*		**Sg**	**16 02 19.8**	**+0.3**
TWF1	**Yuli** baz=205	**0.79**	**208**	*eP*		**Pg**	**16 02 09.2**	**-0.1**
NTC	**Toucheng** baz=10.0	**0.80**	**8**	⇓P		**Pg**	**16 02 09.5**	**+0.1**
NTC				*eS*		**Sg**	**16 02 19.9**	**0.0**
EGS		**0.81**	**15**	*eP*		**Pg**	**16 02 10.0**	**+0.4**
LIOB	**Emei** baz=313	**0.86**	**313**	⇑P		**Pb**	**16 02 11.4**	**+0.2**
LIOB				*eS*		**Sb**	**16 02 23.0**	**0.0**
NSTT	**Nanjuang** baz=312	**0.86**	**312**	⇑P		**Pb**	**16 02 11.2**	**0.0**
NSTT				*eS*		**Sg**	**16 02 21.9**	**+0.1**
YUS	**Yu-Shan** baz=228	**0.89**	**231**	⇑P		**Pb**	**16 02 11.4**	**-0.6**
YUS				*eS*		**Sn**	**16 02 25.0**	**-1.8**
TWQ1	**Liyutan** baz=288	**0.90**	**289**	*eP*		**Pn**	**16 02 12.3**	**-0.7**
TWQ1				*eS*		**Sb**	**16 02 24.8**	**+0.7**
NHDH	**Xindian Distri** baz=351	**0.92**	**350**	*eP*		**Pg**	**16 02 12.0**	**+0.4**
NHDH				*eS*		**Sg**	**16 02 23.5**	**-0.1**
TIPB	**Shuangxi** baz=9.0	**0.92**	**7**	⇓P		**Pg**	**16 02 11.7**	**0.0**
TIPB				*eS*		**Sg**	**16 02 23.2**	**-0.4**
WWF	**Wufeng** baz=267	**0.92**	**269**	*eP*		**Pn**	**16 02 13.2**	**-0.1**
WJS	**Zhushan** baz=253	**0.92**	**256**	*eP*		**Pb**	**16 02 12.2**	**-0.1**
WJS				*eS*		**Sb**	**16 02 25.2**	**+0.4**
TWA	**Mucha** baz=355	**0.93**	**353**	⇓*eP*		**Pg**	**16 02 12.1**	**+0.3**
TWA				*eS*		**Sg**	**16 02 23.8**	**-0.1**
FULB	**Fuli** baz=202	**0.93**	**204**	*eP*		**Pb**	**16 02 12.2**	**-0.3**
FULB				*eS*		**Sn**	**16 02 27.4**	**+0.3**
NSY	**Sanyi** baz=292	**0.93**	**293**	*eP*		**Pn**	**16 02 13.4**	**-0.1**
NSY				*eS*		**Sn**	**16 02 27.1**	**0.0**
TATO	**Taipei** baz=350	**0.94**	**348**	⇓*eP*		**Pg**	**16 02 12.3**	**+0.3**
TATO				*eS*		**Sg**	**16 02 24.0**	**-0.2**
TCU	**Taichung** baz=274	**0.94**	**276**	*eP*		**Pn**	**16 02 13.7**	**0.0**
WNT1	**Nantou City** baz=259	**0.95**	**261**	*eP*		**Pn**	**16 02 13.9**	**+0.2**
WNT	**Mingjian** baz=257	**0.95**	**259**	*eP*		**Pn**	**16 02 13.7**	**0.0**
HSN1	**Hsinchu** baz=319	**0.95**	**319**	*eP*		**Pn**	**16 02 14.1**	**+0.3**
NMLH	**Miaoli** baz=299	**0.96**	**300**	*eP*		**Pn**	**16 02 13.9**	**+0.1**
NMLH				*eS*		**Sn**	**16 02 27.6**	**-0.2**
TWB1	**Santiao Chiao** baz=18	**0.98**	**15**	*iP*		**Pg**	**16 02 12.8**	**-0.1**
TWB1				*eS*		**Sg**	**16 02 25.6**	**0.0**
SBCB	**Hsinchu** baz=318	**0.98**	**318**	*eP*		**Pb**	**16 02 13.3**	**-0.1**
ALS	**Alishan** baz=234	**0.99**	**237**	⇑P		**Pb**	**16 02 13.4**	**-0.2**
ALS				*eS*		**Sn**	**16 02 28.1**	**-0.8**
HSN	**Hsinchu** baz=321	**1.00**	**318**	*eP*		**Pn**	**16 02 15.0**	**+0.6**
HSN				*eS*		**Sn**	**16 02 28.5**	**-0.2**
CHKT	**Chengkung** baz=196	**1.00**	**198**	*eP*		**Pg**	**16 02 12.8**	**-0.4**
CHKT				*eS*		**Sn**	**16 02 29.7**	**+1.0**
NWF	**Wu-fen Shan** baz=6.0	**1.01**	**4**	⇓*eP*		**Pb**	**16 02 13.8**	**-0.1**
NWF				*eS*		**Sg**	**16 02 27.1**	**+0.5**
WFSB	**Wu-fen Shan** baz=5.0	**1.01**	**4**	⇓*eP*		**Pb**	**16 02 13.8**	**0.0**
WFSB				*eS*		**Sg**	**16 02 27.1**	**+0.5**
NCUH	**Zhongli** baz=333	**1.02**	**333**	*eP*		**Pn**	**16 02 15.1**	**+0.3**
NCU	**National Centr** baz=333	**1.02**	**333**	*eP*		**Pn**	**16 02 14.9**	**+0.2**
WYL	**Yuanlin Townsh** baz=263	**1.03**	**265**	*eP*		**Pn**	**16 02 15.6**	**+0.7**
SXI1	**Grass Mountain** baz=10.0	**1.04**	**9**	⇓*eP*		**Pg**	**16 02 14.2**	**+0.2**
SXI1				*eS*		**Sg**	**16 02 27.9**	**+0.2**
CHN5	**Tsauling** baz=242	**1.05**	**244**	*eP*		**Pn**	**16 02 15.1**	**-0.1**
CHN5				*eS*		**Sn**	**16 02 31.0**	**+1.0**
WCHH	**Zhanghua** baz=270	**1.05**	**271**	*eP*		**Pn**	**16 02 15.6**	**+0.5**
ECS	**Chishang** baz=203	**1.05**	**205**	*eP*		**Pg**	**16 02 13.9**	**-0.4**
ELDTW	**Lidau** baz=214	**1.07**	**216**	*eP*		**Pg**	**16 02 13.7**	**-0.8**
TWS1	**Kuangyinshan** baz=347	**1.07**	**346**	*eP*		**Pn**	**16 02 15.7**	**+0.3**
TWS1				*eS*		**Sn**	**16 02 31.5**	**+0.9**
TNOU	**National Taiwa** baz=5.0	**1.09**	**3**	*eP*		**Pg**	**16 02 15.2**	**+0.2**
YM01	**YM01** baz=355	**1.09**	**354**	*eP*		**Pn**	**16 02 15.4**	**-0.3**
YM01				*eS*		**Sb**	**16 02 30.0**	**+0.3**
WGK	**Gukeng** baz=249	**1.11**	**251**	*eP*		**Pn**	**16 02 16.4**	**+0.5**
NTST	**Danshui** baz=349	**1.13**	**348**	*eP*		**Pn**	**16 02 16.7**	**+0.6**
WDLH	**Douliu** baz=249	**1.13**	**251**	*eP*		**Pn**	**16 02 16.8**	**+0.6**
YM08	**YM08** baz=356	**1.13**	**355**	*eP*		**Pn**	**16 02 15.8**	**-0.1**
ANP	**Anpu** baz=353	**1.14**	**352**	*eP*		**Pn**	**16 02 16.4**	**0.0**
ANP				*eS*		**Sn**	**16 02 31.9**	**-0.4**
EDH	**Donghe** baz=197	**1.14**	**199**	*eP*		**Pb**	**16 02 14.8**	**-1.1**
EDH				*eS*		**Sn**	**16 02 33.4**	**+1.3**
JYNG	**Yonagunijimaku**	**1.20**	**71**	*eP*		**Pg**	**16 02 17.3**	**+0.3**
JYNG				*eS*		**Sn**	**16 02 35.1**	**+1.4**
TWY	**Chenhua** baz=357	**1.22**	**356**	*eP*		**Pg**	**16 02 17.9**	**+0.5**
WRL	**Guolierlin Hig** baz=261	**1.22**	**263**	*eP*		**Pg**	**16 02 18.0**	**+0.5**
STYH	**Taoyuan** baz=222	**1.23**	**224**	⇑*eP*		**Pg**	**16 02 17.3**	**-0.3**
STYH				*eS*		**Sn**	**16 02 35.2**	**+0.9**
TPUB	**Ta-pu** baz=231	**1.24**	**233**	P		**Pg**	**16 02 18.6**	**+0.8**
TPUB	**Ta-pu** baz=231	**1.24**	**233**	⇑*eP*		**Pg**	**16 02 18.4**	**+0.6**
TPUB				*eS*		**Sn**	**16 02 36.0**	**+1.3**
CHN2	**Minshiung** baz=243	**1.24**	**245**	*eP*		**Pg**	**16 02 19.3**	**+1.5**
CHN2				*eS*		**Sn**	**16 02 36.9**	**+2.2**
STYT	**Tauyuan** baz=222	**1.24**	**225**	⇑*eP*		**Pg**	**16 02 17.7**	**-0.1**
STYT				*eS*		**Sn**	**16 02 36.6**	**+1.8**
YOJ	**Yonaguni jima**	**1.26**	**71**	P		**Pg**	**16 02 19.1**	**+1.0**
YOJ	**Yonaguni jima** baz=72	**1.26**	**71**	P		**Pg**	**16 02 18.2**	**+0.1**
YOJ				*eS*		**Sn**	**16 02 37.7**	**+2.5**
YOJ	**Yonaguni jima**	**1.26**	**71**	P		**Pg**	**16 02 18.6**	**+0.5**
YOJ				*eS*		**Sn**	**16 02 37.6**	**+2.5**
LONT	**Longtian** baz=203	**1.26**	**205**	*eP*		**Pn**	**16 02 16.4**	**-1.6**
WTK	**Tuku** baz=251	**1.26**	**253**	*eP*		**Pg**	**16 02 18.5**	**+0.3**
WTP	**Ta-pu** baz=229	**1.28**	**231**	⇑*eP*		**Pg**	**16 02 19.0**	**+0.3**
WTP				*eS*		**Sn**	**16 02 37.5**	**+1.6**
CHY	**Chiayi** baz=243	**1.30**	**245**	*eP*		**Pg**	**16 02 19.6**	**+0.7**
WTCT	**Ta-ch'eng** baz=260	**1.32**	**262**	*eP*		**Pg**	**16 02 19.7**	**+0.4**
WTCT				*eS*		**Sg**	**16 02 38.4**	**+2.0**
TWG	**Pinlang** baz=204	**1.36**	**205**	*eP*		**Pn**	**16 02 17.5**	**-1.8**
TWG				*eS*		**Sb**	**16 02 36.2**	**-1.1**
TWGBT	**Beinan** baz=204	**1.36**	**205**	⇑*eP*		**Pn**	**16 02 17.4**	**-2.0**
TWK	**Hsinying** baz=233	**1.36**	**235**	⇑*eP*		**Pg**	**16 02 20.4**	**+0.2**
TWK				*eS*		**Sg**	**16 02 40.3**	**+2.4**
CHN1	**Nanshi** baz=230	**1.39**	**231**	*eP*		**Pg**	**16 02 20.7**	**+0.2**
CHN1				*eS*		**Sg**	**16 02 42.0**	**+3.5**
SNST	**Tainan City** baz=231	**1.39**	**233**	*eP*		**Pg**	**16 02 20.9**	**+0.3**
LDUT	**Ludao** baz=188	**1.39**	**189**	*eP*		**Pn**	**16 02 17.4**	**-2.4**
TTN	**Taitung** baz=200	**1.39**	**202**	*eP*		**Pn**	**16 02 18.9**	**-0.9**
WSF	**Szhu** baz=251	**1.42**	**253**	*eP*		**Pg**	**16 02 20.9**	**-0.3**
WSF				*eS*		**Sg**	**16 02 41.3**	**+1.7**
WSL	**Shuilin Townsh** baz=247	**1.45**	**249**	*eP*		**Pg**	**16 02 22.1**	**+0.2**
WSL				*eS*		**Sg**	**16 02 43.2**	**+2.5**
ICHU	**Yijhu** baz=241	**1.48**	**242**	*eP*		**Pg**	**16 02 22.5**	**+0.2**
ICHU				*eS*		**Sg**	**16 02 41.8**	**+0.2**
CHN8	**Yiju** baz=241	**1.54**	**243**	*eP*		**Pg**	**16 02 23.3**	**-0.3**
CHN8				*eS*		**Sg**	**16 02 45.5**	**+2.0**
PCYT	**Pengchaiyu** baz=13	**1.60**	**12**	*eP*		**Pb**	**16 02 24.1**	**+0.2**
ECL	**Taimali** baz=204	**1.61**	**206**	*eP*		**Pn**	**16 02 20.6**	**-2.2**
ECL				*eS*		**Sg**	**16 02 48.2**	**+2.5**
SCST	**Cishan** baz=222	**1.61**	**224**	*eP*		**Pb**	**16 02 24.0**	**0.0**
SHHT	**Tainan City** baz=229	**1.62**	**231**	*eP*		**Pg**	**16 02 24.4**	**-0.6**
SSD	**Sandimen** baz=216	**1.64**	**217**	*eP*		**Pb**	**16 02 23.3**	**-1.1**
TWM1	**Shoushan** baz=222	**1.70**	**224**	*eP*		**Pg**	**16 02 27.2**	**+0.6**
MASBT	**Mashibuluo** baz=213	**1.74**	**215**	*eP*		**Pn**	**16 02 24.6**	**-0.1**
MASBT				*eS*		**Sg**	**16 02 50.6**	**+0.6**
EAST	**Anshuo** baz=204	**1.84**	**206**	*eP*		**Pn**	**16 02 24.7**	**-1.4**
IRIF	**Iriomote-Funau**	**1.87**	**81**	*eP*		**Pb**	**16 02 27.9**	**-0.5**
SSPT	**Xinbi** baz=213	**1.88**	**214**	*eP*		**Pb**	**16 02 27.5**	**-1.2**
HATJ	**Hateruma jima**	**1.92**	**90**	*eP*		**Pb**	**16 02 28.6**	**-0.7**
SCZT	**Fangliau** baz=209	**1.95**	**211**	*eP*		**Pb**	**16 02 28.3**	**-1.6**
SCZT				*eS*		**Sg**	**16 02 56.7**	**-0.1**
PHUB	**P'eng-hu** baz=253	**2.03**	**255**	*eP*		**Pn**	**16 02 29.2**	**+0.7**
PHUB				*eS*		**Sg**	**16 02 57.6**	**-1.5**
PNG	**Penghu** baz=255	**2.03**	**257**	*eP*		**Pb**	**16 02 29.5**	**-1.6**
WDGT	**Dungji** baz=246	**2.04**	**247**	*eP*		**Pb**	**16 02 29.9**	**-1.4**
JKRS	**Kuro-shima**	**2.11**	**85**	*eP*		**Pb**	**16 02 32.0**	**-0.6**
JKRS				*eS*		**Sg**	**16 03 00.1**	**-1.8**
JIJ	**Ishigaki jima**	**2.25**	**82**	P		**Pn**	**16 02 32.5**	**+0.9**
JIJ				*eS*		**Sb**	**16 03 02.5**	**-0.4**
VCHM	**Qimei** baz=247	**2.25**	**248**	*eP*		**Pn**	**16 02 32.7**	**+1.1**
VWUC	**VWUC** baz=294	**2.26**	**295**	*eP*		**Pn**	**16 02 31.4**	**-0.3**
VWUC				*eS*		**Sn**	**16 02 58.5**	**-1.3**
JISG	**Ishigakijimahi** baz=294	**2.44**	**77**	P		**Pn**	**16 02 34.9**	**+0.8**
KSRS	**Korea Array** 0.1nm,0.3s,baz=200,slow=11,SNR=7.3 1.4nm,0.6s	**14.38**	**20**	P		**P**	**16 05 25.0**	**0.0**
MKAR	**Makanchi Array** 0.5nm,0.7s,baz=113,slow=9.3,SNR=4.6 0.5nm,0.7s	**38.76**	**316**	P		**P**	**16 09 19.9**	**+0.9**
WRA	**Warramunga Arr** 0.4nm,0.6s,baz=345,slow=8.8,SNR=3.1 0.4nm,0.6s	**45.43**	**163**	P		**P**	**16 10 11.9**	**-1.8**
ASAR	**Alice Springs** 0.1nm,0.5s,baz=341,slow=6.9,SNR=6.8 0.1nm,0.5s	**48.89**	**165**	P		**P**	**16 10 41.2**	**+0.6**
ILAR	**Eielson Array** 0.2nm,0.5s,baz=274,slow=6.0,SNR=1.8 0.2nm,0.5s	**69.11**	**27**	P		**P**	**16 12 59.0**	**-1.5**
YKA	**Yellowknife Ar** 0.3nm,0.6s,baz=311,slow=4.9,SNR=2.6 0.3nm,0.6s	**82.90**	**23**	P		**P**	**16 14 19.7**	**+0.5**

*NOU **03** 16:02:26.1,37.20S×177.84E,h211km,mb3.9/9,Off E. Coast of N. Island, N.Z.*
*WEL **03** 16:02:31.2±0.8,37°S±5°×17°8E±°,h138km±7km,M3.1/30, ML3.3/30,MLv3.1/30,Error ellipse: s-maj=0.0km s-min=0.0km az=47.7*

ISC 03 16:02:25.9±2.4,37.10S±0.09×177.60E±0.08, h188km±12km,n79,σ2.8/03/91,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
HAZ	**Te Kaha**	**0.68**	**168**	P		**Pn**	**16 02 52.9**	**+0.6**
HAZ				S		**Sn**	**16 03 09.8**	**-3.1**
MXZ	**Matakaoa Point**	**0.73**	**130**	P		**Pn**	**16 02 53.6**	**+1.0**
MXZ				S		**Sn**	**16 03 11.1**	**-2.2**
RUGZ	**Raukumara Rang**	**0.87**	**176**	P		**Pn**	**16 02 54.0**	**+0.4**
RUGZ				S		**Sn**	**16 03 11.1**	**-4.2**
PKGZ	**Pakihiroa**	**0.88**	**155**	P		**Pn**	**16 02 55.0**	**+1.5**
PKGZ				S		**Sn**	**16 03 13.8**	**-1.4**
WMGZ	**Waiomatatini S**	**0.97**	**138**	P		**Pn**	**16 02 55.8**	**+1.7**
WMGZ				S		**Sn**	**16 03 15.7**	**-0.4**
PUZ	**Puketiti**	**1.10**	**152**	P		**Pn**	**16 02 56.8**	**+1.7**
PUZ				S		**Sn**	**16 03 16.2**	**-1.7**
TWGZ	**Tauwhareparae**	**1.12**	**165**	P		**Pn**	**16 02 56.8**	**+1.5**
TWGZ				S		**Sn**	**16 03 17.9**	**-0.3**
MARZ	**Manawahe**	**1.15**	**219**	P		**Pn**	**16 02 56.9**	**+1.3**
URZ	**Urewera**	**1.23**	**198**	P		**Pn**	**16 02 57.3**	**+1.3**
URZ				S		**Sn**	**16 03 17.6**	**-2.0**
URZ	**Urewera**	**1.23**	**198**	P		**Pn**	**16 02 57.5**	**+1.5**
MWZ	**Matawai**	**1.24**	**183**	P		**Pn**	**16 02 58.0**	**+1.7**

MWZ			S		**Sn**	**16 03 18.8**	**-1.1**
TGRZ	**Tauranga**	**1.24 239**	P		**Pn**	**16 02 57.4**	**+1.2**
TKGZ	**Te Karaka**	**1.36 172**	P		**Pn**	**16 02 59.2**	**+2.1**
TKGZ			S		**Sn**	**16 03 21.1**	**-0.4**
RAGZ	**Rawiri**	**1.41 186**	P		**Pn**	**16 02 59.7**	**+2.0**
RAGZ			S		**Sn**	**16 03 22.7**	**+0.1**
KARZ	**Kaharoa**	**1.42 229**	P		**Pn**	**16 02 59.5**	**+1.7**
TARZ	**Mount Tarawera**	**1.43 217**	P		**Pn**	**16 03 00.3**	**+2.3**
CNGZ	**Carnagh Statio**	**1.47 161**	P		**Pn**	**16 03 00.9**	**+2.8**
RRRZ	**Republican Roa**	**1.51 214**	P		**Pn**	**16 03 00.4**	**+1.8**
KMRZ	**Kaimai**	**1.52 240**	P		**Pn**	**16 03 00.4**	**+1.7**
MUGZ	**Murupara**	**1.53 205**	P		**Pn**	**16 03 00.4**	**+1.6**
MUGZ			S		**Sn**	**16 03 22.9**	**-1.5**
KUZ	**Kuaotunu**	**1.55 282**	P		**Pn**	**16 02 59.4**	**+0.5**
RTZ	**Ruatahuna**	**1.60 198**	P		**Pn**	**16 03 00.8**	**+1.4**
RIGZ	**Rimuhau**	**1.61 176**	P		**Pn**	**16 03 01.9**	**+2.3**
HSRZ	**Hossack Road**	**1.62 221**	P		**Pn**	**16 03 02.4**	**+2.7**
HRRZ	**Handcock Road**	**1.66 219**	P		**Pn**	**16 03 02.3**	**+2.3**
SNGZ	**Shannon Statio**	**1.70 187**	P		**Pn**	**16 03 02.3**	**+2.0**
PRRZ	**Plateau Road**	**1.70 214**	P		**Pn**	**16 03 02.3**	**+1.9**
ALRZ	**Allen Road**	**1.77 214**	P		**Pn**	**16 03 03.2**	**+2.1**
TOZ	**Tahuroa Road**	**1.79 249**	P		**Pn**	**16 03 03.3**	**+2.1**
WPRZ	**Whakapapatarin**	**1.82 218**	P		**Pn**	**16 03 04.1**	**+2.4**
PRGZ	**Paritu Road**	**1.84 173**	P		**Pn**	**16 03 04.7**	**+2.9**
MTHZ	**Maungataniwha**	**1.85 199**	P		**Pn**	**16 03 03.5**	**+1.6**
RAHZ	**Arahi**	**1.86 192**	P		**Pn**	**16 03 04.3**	**+2.2**
GRZ	**Great Barrier**	**1.92 295**	P		**Pn**	**16 03 03.6**	**+1.0**
MKAZ	**Moumakai**	**1.95 269**	P		**Pn**	**16 03 04.9**	**+2.0**
MRHZ	**Matea Rd**	**1.97 208**	P		**Pn**	**16 03 04.9**	**+1.7**
KUTZ	**Kaahu Road**	**1.98 225**	P		**Pn**	**16 03 06.0**	**+2.7**
WIAZ	**Waiheke Island**	**2.00 278**	P		**Pn**	**16 03 04.3**	**+0.9**
WHTZ	**Whakaora**	**2.04 219**	P		**Pn**	**16 03 06.9**	**+3.0**
TLZ	**Tolley Road**	**2.05 232**	P		**Pn**	**16 03 06.6**	**+2.6**
MHGZ	**Mahia Peninsul**	**2.07 173**	P		**Pn**	**16 03 07.0**	**+2.8**
NMHZ	**Naumai**	**2.10 197**	P		**Pn**	**16 03 07.1**	**+2.6**
WATZ	**Wairara**	**2.19 222**	P		**Pn**	**16 03 08.2**	**+2.7**
MBAZ	**Motutapu North**	**2.19 278**	P		**Pn**	**16 03 07.7**	**+2.2**
ARHZ	**Aropaoanui**	**2.22 192**	P		**Pn**	**16 03 08.1**	**+2.3**
BKZ	**Black Stump Fm**	**2.25 203**	P		**Pn**	**16 03 07.7**	**+1.6**
BKZ	**Black Stump Fm**	**2.25 203**	P		**Pn**	**16 03 08.0**	**+1.8**
RATZ	**Rangitukua**	**2.28 219**	P		**Pn**	**16 03 09.4**	**+2.8**
RITZ	**Rihia Road**	**2.33 216**	P		**Pn**	**16 03 09.8**	**+2.7**
RVAZ	**Riverhead Bore**	**2.44 277**	P		**Pn**	**16 03 10.9**	**+2.6**
MCHZ	**McNeill Hill**	**2.45 197**	P		**Pn**	**16 03 10.9**	**+2.5**
KWHZ	**Kaweka Forest**	**2.50 201**	P		**Pn**	**16 03 11.0**	**+2.0**
NTVZ	**North Tongarir**	**2.51 217**	P		**Pn**	**16 03 11.7**	**+2.5**
TMVZ	**Te Maari**	**2.51 216**	P		**Pn**	**16 03 11.6**	**+2.4**
ETVZ	**East Tongariro**	**2.52 216**	P		**Pn**	**16 03 11.6**	**+2.2**
NNVZ	**North Ngauruho**	**2.57 217**	P		**Pn**	**16 03 12.5**	**+2.6**
WTVZ	**West Tongariro**	**2.57 218**	P		**Pn**	**16 03 12.1**	**+2.2**
OTVZ	**Oturere**	**2.57 216**	P		**Pn**	**16 03 12.2**	**+2.3**
CKHZ	**Cape Kidnapper**	**2.59 189**	P		**Pn**	**16 03 12.1**	**+2.1**
HIZ	**Hauiti**	**2.59 236**	P		**Pn**	**16 03 13.5**	**+3.4**
SNVZ	**South Ngauruho**	**2.60 216**	P		**Pn**	**16 03 12.6**	**+2.3**
TWVZ	**Taurewa**	**2.61 220**	P		**Pn**	**16 03 12.6**	**+2.3**
TUVZ	**Tukino**	**2.66 215**	P		**Pn**	**16 03 13.0**	**+2.1**
BHHZ	**Black Hill Sta**	**2.68 206**	P		**Pn**	**16 03 12.6**	**+1.5**
FWVZ	**Far West T-bar**	**2.69 216**	P		**Pn**	**16 03 13.5**	**+2.1**
KRHZ	**Kereru**	**2.72 200**	P		**Pn**	**16 03 13.1**	**+1.5**
MOVZ	**Moawhango**	**2.73 212**	P		**Pn**	**16 03 13.1**	**+1.4**
TRVZ	**Turoa**	**2.73 216**	P		**Pn**	**16 03 13.9**	**+2.0**
KAHZ	**Kahuranaki**	**2.75 192**	P		**Pn**	**16 03 14.0**	**+2.1**
PKVZ	**Pokaka**	**2.82 218**	P		**Pn**	**16 03 14.9**	**+2.1**
MTVZ	**Mangateitei**	**2.84 216**	P		**Pn**	**16 03 15.1**	**+2.2**
PXZ	**Pawanui**	**2.99 191**	P		**Pn**	**16 03 16.3**	**+1.6**
PNHZ	**Pukenui**	**3.02 201**	P		**Pn**	**16 03 16.4**	**+1.2**
BFZ	**Birch Farm**	**3.73 196**	P		**Pn**	**16 03 24.8**	**+1.0**
SNZO	**South Karori**	**4.77 207**	P		**Pn**	**16 03 36.6**	**+0.4**
QRZ	**Quartz Range**	**5.43 225**	P		**Pn**	**16 03 45.5**	**0.0**
KHZ	**Kahutara**	**6.17 209**	P		**Pn**	**16 03 54.4**	**-0.6**
RPZ	**Rata Peaks**	**8.28 215**	P		**Pn**	**16 04 22.6**	**-0.2**
ODZ	**Otahua Downs**	**9.52 211**	P		**Pn**	**16 04 38.4**	**-0.5**

DJA 03 16:06:52.6±0.5,**8°S**±4′×**12°4E**±′,**h99**km±11km,**M3.4**/12, **mb4.0/6,MLv3.1/12,Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**1.27**	**261**	P	Pn	16 07 15.6	-0.5
SOEI	**Soe**	**1.51**	**150**	P	Pn	16 07 19.1	0.0
BATI	**Baumata**	**1.77**	**175**	P	Pn	16 07 21.9	-0.4
EDFI	**Ende, Flores**	**1.83**	**260**	P	Pn	16 07 23.2	+0.2
BBSI	**Bau Bau**	**3.07**	**342**	P	Pn	16 07 38.7	-0.6
BASI	**Baing, Sumba**	**3.40**	**238**	P	Pn	16 07 43.7	0.0
BSSI	**Bau Bau, Buton**	**3.76**	**307**	P	Pn	16 07 48.8	+0.2
BNSI	**Bone** 0.1nm12nm,1.2s	**5.24**	**320**	P	Pn	16 08 09.0	+0.4
SPSI	**Sidrap Palu** 0.1nm8.9nm,1.1s	**5.79**	**320**	P	Pn	16 08 15.7	-0.4
APSI	**Ampana** 0.1nm14nm,0.4s	**7.70**	**346**	P	Pn	16 08 42.2	+0.2
SRBI	**Singaraja** 27nm,1.1s	**8.22**	**272**	P	Pn	16 08 49.6	+0.5
PCI	**Palu** 75nm,1.0s	**8.32**	**334**	P	Pn	16 08 50.0	-0.6
LBMI	**Labuha**	**8.70**	**27**	P	Pn	16 08 55.8	+0.1

*DJA **03** 16:24:17.2*±*0.2,9°S*±*2′×12°1E*±*′,h189km*±*2km, M4.1/18, mb4.2/17,mB5.2/1,MLv4.1/18,Mw(mB)4.6/1*
*NEIC **03** 16:24:18.6*±*1.8,8.40S*±*0.08×120.9E*±*0.1,h198km*±*7km, mb4.3/13,Error ellipse: s-maj=16.9km s-min=10.3km az=61.0*
*IDC **03** 16:24:18.9*±*1.3,7.16S×122.68E,h200km*±*14km,mb3.4/6, mbtmp4.0/10,Error ellipse: s-maj=48.0km s-min=11.2km az=58.0*

ISC 03 16:24:17.2±0.6,**8°55S**±0.04×**120°82E**±0.04,**h188**km±6km, **n83,**σ1§**62**/96,**mb4.1**/10,**Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDFI	**Ende, Flores**	**0.89**	**103**	P	**Pn**	**16 24 45.4**	**+0.3**
EDFI				S	**Sn**	**16 25 05.6**	**-1.0**
MMRI	**Maumere**	**1.41**	**94**	Pn	**Pn**	**16 24 49.5**	**+0.4**
MMRI	**Maumere**	**1.41**	**94**	P	**Pn**	**16 24 49.5**	**+0.4**
MMRI				S	**Sn**	**16 25 13.9**	**+0.2**
MMRI	**Maumere**	**1.41**	**94**	P	**Pn**	**16 24 49.7**	**+0.6**
BASI	**Baing, Sumba**	**1.67**	**188**	P	**Pn**	**16 24 52.2**	**+0.6**
BASI				S	**Sn**	**16 25 18.1**	**-0.3**
WBSI	**Waikabubak, Su**	**1.78**	**232**	P	**Pn**	**16 24 53.1**	**+0.5**
WBSI				S	**Sn**	**16 25 19.3**	**-0.8**
BSSI	**Bau Bau, Buton**	**2.41**	**352**	P	**Pn**	**16 25 00.0**	**+0.5**
BSSI				S	**Sn**	**16 25 31.0**	**-1.4**
PLAI	**Plampang**	**3.02**	**265**	P	**Pn**	**16 25 01.9**	**+1.4**
PLAI				S	**Sn**	**16 25 44.5**	**-0.4**
PLAI	**Plampang**	**3.02**	**265**	P	**Pn**	**16 25 08.2**	**+1.7**
BATI	**Baumata** 166nm,0.4s,baz=288,slow=9.6,SNR=72	**3.26**	**121**	P	**Pn**	**16 25 10.3**	**+0.8**
BATI	98nm,0.3s,baz=274,slow=19,SNR=7.9			S	**Sn**	**16 25 49.0**	**-1.2**
BATI	**Baumata**	**3.26**	**121**	P	**Pn**	**16 25 10.2**	**+0.8**
BATI				S	**Sn**	**16 25 51.6**	**+1.4**
BKSI	**Bulukumba**	**3.28**	**348**	P	**Pn**	**16 25 10.1**	**+0.4**
BKSI				S	**Sn**	**16 25 52.6**	**+1.8**
BBSI	**Bau Bau**	**3.51**	**30**	P	**Pn**	**16 25 14.2**	**+1.7**
SOEI	**Soe**	**3.61**	**110**	Pn	**Pn**	**16 25 14.3**	**+0.4**
SOEI	**Soe**	**3.61**	**110**	P	**Pn**	**16 25 14.5**	**+0.6**
SOEI	**Soe**	**3.61**	**110**	P	**Pn**	**16 25 14.7**	**+0.8**
KAPI	**Kappang** 55nm,0.6s,baz=172,slow=9.2,SNR=19	**3.67**	**343**	P	**Pn**	**16 25 16.0**	**+1.5**
KAPI	16nm,0.3s,baz=173,slow=15,SNR=2.2			S	**Sn**	**16 26 03.1**	**+3.7**
KAPI	**Kappang**	**3.67**	**343**		**Pn**	**16 25 16.1**	**+1.5**
BNSI	**Bone**	**4.18**	**350**	P	**Pn**	**16 25 23.2**	**+2.2**
SPSI	**Sidrap Palu**	**4.67**	**347**	P	**Pn**	**16 25 28.0**	**+0.8**
DNP	**Denpasar** 2.8nm166nm,0.9s	**5.54**	**268**	P	**Pn**	**16 25 39.7**	**+1.2**
TTSI	**Tana Toraja** 0.1nm15nm,1.0s	**5.56**	**350**	P	**Pn**	**16 25 39.5**	**+0.8**
SRBI	**Singaraja** 0.2nm28nm,0.8s	**5.56**	**274**	P	**Pn**	**16 25 39.9**	**+1.2**
IGBI	**Denpasar** 0.7nm70nm,0.4s	**5.61**	**267**	P	**Pn**	**16 25 41.0**	**+1.7**
JAGI	**Jajag, Banyuwa** 0.4nm21nm,0.7s	**6.59**	**270**	P	**Pn**	**16 25 50.2**	**-1.9**
JAGI	0.4nm21nm,0.7s			S	**Sn**	**16 27 00.7**	**-6.4**
JAGI	**Jajag, Banyuwa**	**6.59**	**270**	P	**Pn**	**16 25 50.6**	**-1.5**
PWJI	**Pagerwojo** 32nm,1.1s	**8.93**	**273**	P	**Pn**	**16 26 24.4**	**+1.6**
PCJI	**Pacitan** 41nm,0.6s	**9.54**	**271**	P	**Pn**	**16 26 31.4**	**+0.6**
LBMI	**Labuha** 9.6nm,0.8s	**10.30**	**41**	P	**Pn**	**16 26 39.3**	**-1.4**
KNRA	**Kununurra**	**10.51**	**133**		**Pn**	**16 26 41.8**	**-1.5**
KNRA	**Kununurra**	**10.51**	**133**	P	**Pn**	**16 26 42.4**	**-1.0**
PBKI	**Pangkalan Bun**	**10.79**	**302**	P	**P**	**16 26 54.3**	**0.0**
MTN	**Manton Dam**	**11.00**	**114**	Pn	**Pn**	**16 26 48.8**	**-0.9**
MTN	**Manton Dam**	**11.00**	**114**	P	**Pn**	**16 26 49.1**	**-0.6**
KDU	**Kakadu**	**12.17**	**111**	P	**Pn**	**16 27 04.1**	**-0.6**
MBWA	**Marble Bar**	**12.58**	**185**	Pn	**P**	**16 27 13.1**	**-1.0**
FAKI	**Fak Fak**	**12.67**	**64**	Pn	**Pn**	**16 27 09.2**	**-2.0**
FAKI	**Fak Fak** 11nm,1.4s	**12.67**	**64**	P	**Pn**	**16 27 08.7**	**-2.4**
FAKI	**Fak Fak**	**12.67**	**64**	P	**Pn**	**16 27 10.2**	**-0.9**
SWI	**Sorong** 22nm,0.8s	**12.90**	**54**	P	**Pn**	**16 27 12.4**	**-1.6**
PSA00	**Pilbara Seismi**	**12.98**	**184**	Pn	**Pn**	**16 27 17.0**	**+2.0**
SGSI	**Sangihe** 14nm,0.4s	**13.03**	**21**	P	**Pn**	**16 27 15.9**	**+0.2**
CNJI	**Cibinong** 54nm,1.4s	**13.61**	**274**	P	**Pn**	**16 27 22.9**	**0.0**
CBJI	**Citeko**	**14.01**	**278**	P	**Pn**	**16 27 26.1**	**-1.8**
TPI	**Tanjungpandan** 7.3nm,1.0s	**14.30**	**293**	P	**Pn**	**16 27 31.5**	**0.0**
GIRL	**Giralia**	**15.37**	**204**	P	**P**	**16 27 47.2**	**+2.1**
WB0	**Warramunga Arr**	**17.24**	**132**	P	**P**	**16 28 06.1**	**+0.5**
WB0	comp=Z,5.4nm,0.8s			IAmb	IAmb	16 28 07.7	
WRA	**Warramunga Arr** comp=Z,2.7nm,0.6s,baz=308,slow=13,SNR=46	**17.31**	**132**	P	**P**	**16 28 06.0**	**-0.4**
WRA	comp=Z,4.1nm,0.8s,baz=310,slow=23,SNR=6.2			S	**S**	**16 31 13.4**	**-3.6**
WRA				ScP	**ScP**	**16 35 53.3**	**-3.2**
WRA	**Warramunga Arr** comp=Z,0.2nm,0.9s,baz=318,slow=2.5,SNR=1.4	**17.31**	**132**	P	**P**	**16 28 06.3**	**-0.1**
WRAB	**Tennant Creek**	**17.31**	**132**	P	**P**	**16 28 07.3**	**+0.9**
WB2	**Warramunga Arr**	**17.32**	**132**	P	**P**	**16 28 07.0**	**+0.4**
WB2	comp=Z,7.1nm,0.8s			IAmb	IAmb	16 28 14.1	
WR0	**Warramunga Arr**	**17.46**	**132**	P	**P**	**16 28 08.8**	**+0.6**
WR0	comp=Z,6.2nm,0.6s			IAmb	IAmb	16 28 10.4	
WRKA	**Warakurna**	**17.88**	**157**	P	**Pn**	**16 28 14.8**	**+0.2**
AS31	**Alice Springs**	**19.57**	**142**	P	**P**	**16 28 32.1**	**+1.1**
ASAR	**Alice Springs** comp=Z,3.9nm,0.7s,baz=326,slow=12,SNR=46	**19.57**	**142**	P	**P**	**16 28 32.3**	**+1.3**
ASAR	comp=Z,1.4nm,0.9s,baz=318,slow=20,SNR=6.5			S	**S**	**16 31 58.9**	**-3.0**
ASAR	comp=Z,0.2nm,0.6s,baz=326,slow=2.0,SNR=0.9			ScP	**ScP**	**16 35 59.4**	**-2.1**
ASAR	**Alice Springs**	**19.57**	**142**	P	**P**	**16 28 32.7**	**+1.7**
MORW	**Morawa**	**20.90**	**192**	P	**P**	**16 28 46.5**	**+1.4**
QIS	**Mount Isa**	**21.72**	**125**	P	**P**	**16 28 54.6**	**+0.7**
BLDU	**Ballidu**	**22.29**	**189**	P	**P**	**16 29 00.1**	**+1.4**
COEN	**Coen**	**22.57**	**106**	P	**P**	**16 29 02.2**	**+0.2**
COEN	comp=Z,6.9nm,0.7s			IAmb	IAmb	16 29 04.7	
COEN	**Coen**	**22.57**	**106**	P	**P**	**16 29 03.4**	**+1.4**
FORT	**Forrest**	**23.13**	**164**	P	**P**	**16 29 08.1**	**+1.2**
FORT	**Forrest**	**23.13**	**164**	P	**P**	**16 29 08.7**	**+1.9**
OOD	**Oodnadatta**	**23.74**	**146**	P	**P**	**16 29 14.9**	**+2.5**
MTSU	**Mount Surprise**	**24.74**	**115**	P	**P**	**16 29 23.2**	**+1.5**
MULG	**Mulgathing**	**24.92**	**152**	P	**P**	**16 29 24.7**	**+1.6**
LHMI	**Lhok Sumawe**	**27.46**	**299**	P	**P**	**16 29 44.7**	**-1.4**
BBOO	**Buckleboo**	**27.96**	**152**	P	**P**	**16 29 51.4**	**+1.0**
BBOO	comp=Z,19nm,1.4s			IAmb	IAmb	16 30 10.6	
BBOO	**Buckleboo**	**27.96**	**152**	P	**P**	**16 29 51.9**	**+1.5**
QLP	**Quilpie**	**28.54**	**132**	P	**P**	**16 29 58.6**	**+3.0**
STKA	**Stephens Creek** comp=Z,1.1nm,0.5s,baz=316,slow=8.9,SNR=5.4	**30.19**	**143**	P	**P**	**16 30 11.0**	**+0.9**
STKA	**Stephens Creek** comp=Z,1.1nm,0.5s	**30.19**	**143**	P	**P**	**16 30 10.7**	**+0.7**
GUMO	**Guam**	**32.47**	**48**	P	**P**	**16 30 30.9**	**+0.8**
CMAR	**Chiang Mai Arr** comp=Z,0.6nm,0.5s,baz=155,slow=7.1,SNR=5.0 comp=Z,0.6nm,0.5s	**34.44**	**321**	P	**P**	**16 30 47.7**	**+0.6**
BRAT	**Ballarat**	**35.65**	**148**	P	**P**	**16 30 59.3**	**+2.0**
KSRS	**Korea Array** comp=Z,1.6nm,0.8s,baz=183,slow=8.0,SNR=5.3 comp=Z,1.6nm,0.8s	**46.24**	**8**	P	P	16 32 10.0	-14
SONM	**Songino Array** comp=Z,0.4nm,0.5s,baz=168,slow=11,SNR=2.1 comp=Z,0.4nm,0.5s	**57.57**	**349**	P	P	16 33 42.5	-4.9
MKAR	**Makanchi Array** comp=Z,1.6nm,0.7s,baz=140,slow=7.3,SNR=18 comp=Z,1.6nm,0.7s	**64.89**	**332**	P	**P**	**16 34 35.1**	**-1.3**
MKAR	**Makanchi Array**	**64.89**	**332**	P	**P**	**16 34 35.5**	**-1.0**
ZALV	**Zalesovo Beam** comp=Z,1.8nm,0.4s,baz=127,slow=5.0,SNR=8.3 comp=Z,1.8nm,0.4s	**69.28**	**338**	P	**P**	**16 35 01.3**	**-2.6**
ZALV	**Zalesovo Beam**	**69.28**	**338**	P	**P**	**16 35 01.1**	**-2.8**
MAW	**Mawson**	**70.27**	**200**	P	**P**	**16 35 10.0**	**+0.3**
MAW	comp=Z,2.1nm,0.5s			IAmb	IAmb	16 37 43.4	
SBA	**Scott Base**	**73.14**	**171**	P	**P**	**16 35 28.0**	**+1.3**
SBA	comp=Z,23nm,1.9s			IAmb	IAmb	16 37 40.3	

*IDC **03** 16:32:53.6*±*1.7,20.09S×177.79W,h516km*±*25km, mb2.7/4, mbtmp3.9/7,Error ellipse: s-maj=35.6km s-min=27.8km az=16.0*

ISC 03 16:32:52.1±0.9,**20°2S**±0.1×**177°6W**±0.1,**h500**km,**n7,** σ1§**97**/9,**mb3.2**/4,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu** 6.5nm,0.5s,baz=122,slow=19,SNR=10.0	**4.78**	**300**	P	**P**	**16 34 19.1**	**+1.8**
AFI	**Afiamalu** 23nm,0.6s,baz=229,slow=9.3,SNR=2.4	**8.33**	**43**	P	**P**	**16 34 53.8**	**+1.7**
AFI	9.1nm,0.4s,baz=272,slow=20,SNR=1.9			S	**S**	**16 36 27.7**	**-2.8**
URZ	**Urewera** 11nm,1.0s,baz=42,slow=5.4,SNR=2.0	**18.62**	**193**	P	**P**	**16 36 36.9**	**-1.0**
STKA	**Stephens Creek** 0.9nm,0.8s,baz=96,slow=14,SNR=1.6 0.9nm,0.8s	**38.29**	**244**	P	**P**	**16 39 28.4**	**-0.8**
ASAR	**Alice Springs** 1.4nm,0.7s,baz=98,slow=8.0,SNR=28	**44.98**	**256**	P	**P**	**16 40 21.4**	**-1.0**
ASAR	0.3nm,0.8s,baz=106,slow=1.6,SNR=4.9 1.4nm,0.7s			PcP	**PcP**	**16 41 52.4**	**-0.8**
WRA	**Warramunga Arr** 0.5nm,0.9s,baz=96,slow=7.9,SNR=11 0.5nm,0.9s	**45.03**	**262**	P	**P**	**16 40 21.1**	**-1.7**
VNDA	**Vanda** 0.5nm,0.7s,baz=33,slow=2.7,SNR=2.2 0.5nm,0.7s	**58.29**	**185**	P	**P**	**16 41 59.5**	**+1.7**

WEL 03 16:41:39.0±1.2,**34°S**±18′×**18°0W**±3′3,**h325**km±15km, **M4.2/2,mB4.2/1,MLv4.2/2,Mw(mB)3.3/1,Error ellipse: s-maj=0.0km s-min=0.0km az=116.3,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.16**	**201**	S	S	16 43 43.4	-0.2
WMGZ	**Waiomatatini S**	**4.36**	**199**	P	Pn	16 42 51.1	+0.8
WMGZ				S	S	16 43 48.8	+1.1
HAZ	**Te Kaha**	**4.50**	**205**	P	Pn	16 42 52.3	+0.5
HAZ				S	S	16 43 51.0	+0.5
PKGZ	**Pakihiroa**	**4.53**	**202**	P	Pn	16 42 51.6	-0.6
PKGZ				S	S	16 43 51.8	+0.7
PUZ	**Puketiti**	**4.64**	**199**	P	Pn	16 42 54.3	+1.0
PUZ				S	S	16 43 54.8	+1.4
RUGZ	**Raukumara Rang**	**4.73**	**205**	P	Pn	16 42 54.2	-0.2
RUGZ				S	S	16 43 54.0	-1.2
URZ	**Urewera**	**5.20**	**208**	P	Pn	16 42 59.1	-0.5
URZ				S	S	16 44 04.0	-0.7
HIZ	**Hauiti**	**6.47**	**221**	P	Pn	16 43 16.9	+2.5
OTVZ	**Oturere**	**6.57**	**213**	P	Pn	16 43 15.4	-0.3
SNVZ	**South Ngauruho**	**6.60**	**213**	P	Pn	16 43 15.9	-0.2
BFZ	**Birch Farm**	**7.65**	**203**	P	Pn	16 43 28.6	+0.1
BFZ				S	S	16 44 59.1	+1.6
TIWZ	**Tintock**	**7.86**	**205**	P	Pn	16 43 30.5	-0.5
TIWZ				S	S	16 45 02.2	+0.1
MRZ	**Mangatainoka R**	**7.87**	**207**	P	Pn	16 43 29.9	-1.2
MRZ				S	S	16 45 03.0	+0.8
OGWZ	**Otaki Gorge**	**8.16**	**208**	P	Pn	16 43 33.2	-1.3
OGWZ				S	S	16 45 09.8	+1.1

*SNET **03** 16:43:02.4*±*1.1,12.38N×89.37W,h13km*±*5km, ML3.6*
*UCR **03** 16:43:02.6*±*1.3,12.37N×89.37W,h18km*±*6km, ML3.5*

ISC 03 16:43:00.6±3.9,**12°4N**±0.2×**89°39W**±0.08,**h5**km±28km,**n17,** σ0§**49**/26,**Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**1.12**	**3**	*e*P	**Pb**	**16 43 22.5**	**0.0**
LALI				*e*S	**Sb**	**16 43 37.8**	**+0.4**
LALI	**Alcalda de L**	**1.12**	**3**	*e*P	**Pb**	**16 43 22.5**	**0.0**
LALI				*e*S	**Sb**	**16 43 37.8**	**+0.4**
SJTE	**Alcalda de S**	**1.30**	**17**	*e*P	**Pn**	**16 43 25.0**	**-0.4**
SJTE	**Alcalda de S**	**1.30**	**17**	*e*P	**Pn**	**16 43 25.0**	**-0.4**
COEG	**Centro de Oper**	**1.34**	**21**	*e*P	**Pn**	**16 43 26.1**	**0.0**
COEG	**Centro de Oper**	**1.34**	**21**	*e*P	**Pn**	**16 43 26.1**	**0.0**
PAVA	**Las Pavas**	**1.41**	**18**	*e*P	**Pn**	**16 43 26.6**	**-0.5**
PAVA				*e*S	**Sn**	**16 43 45.8**	**-0.3**
PAVA	**Las Pavas**	**1.41**	**18**	*e*P	**Pn**	**16 43 26.6**	**-0.5**
PAVA				*e*S	**Sn**	**16 43 45.8**	**-0.3**
JUCU	**Jucuarįn**	**1.42**	**51**	*e*S	**Sb**	**16 43 46.6**	**+0.6**
JUCU	**Jucuarįn**	**1.42**	**51**	*e*S	**Sb**	**16 43 46.6**	**+0.6**
CEVE	**Cerro Verde** comp=Z,1µm,0.4s	**1.48**	**351**	IAML		16 43 60.0	
CEVE	**Cerro Verde** comp=Z,1µm,0.4s	**1.48**	**351**	IAML		16 43 60.0	
NUBE	**Las Nubes**	**1.58**	**346**	*e*P	**Pn**	**16 43 29.0**	**-0.4**
NUBE				*e*S	**Sn**	**16 43 49.9**	**-0.3**
NUBE	**Las Nubes**	**1.58**	**346**	*e*P	**Pn**	**16 43 29.0**	**-0.4**
NUBE				*e*S	**Sn**	**16 43 49.9**	**-0.3**
SLOZ	**Alcaldia de Sa**	**1.70**	**347**	*e*P	**Pn**	**16 43 31.9**	**+1.0**
SLOZ				*e*S	**Sb**	**16 43 54.2**	**+0.1**
LCND	**La Caada**	**1.74**	**57**	*e*P	**Pn**	**16 43 31.3**	**-0.1**
LCND				*e*S	**Sb**	**16 43 54.4**	**-0.7**
LCND				*e*S	**Sn**	**16 43 54.5**	**+0.6**
LCND	comp=Z,408nm,0.3s			IAML		16 43 58.8	
LCND	**La Caada**	**1.74**	**57**	*e*P	**Pn**	**16 43 31.3**	**-0.1**
LCND				*e*S	**Sb**	**16 43 54.4**	**-0.7**
LCND				*e*S	**Sn**	**16 43 54.5**	**+0.6**
LCND	comp=Z,408nm,0.3s			IAML		16 43 58.8	

*IDC **03** 16:45:47.4*±*0.9,31.60S×68.66W,h98km*±*7km, mb3.8/8, mbtmp4.2/13,MS2.7/1,Error ellipse: s-maj=23.5km s-min=14.8km az=88.0*
*NEIC **03** 16:45:49.0*±*2.7,31.67S*±*0.06×69.0W*±*0.2,h132km*±*8km, mb4.3/10,Md4.0(SJA),Error ellipse: s-maj=19.7km s-min=8.9km az=91.0*

ISC 03 16:45:47.6±0.6,**31°57S**±0.05×**68°77W**±0.06,**h107**km±5km, **n89,**σ1§**95**/103,**mb4.2**/11,**14C-1D,San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZON	**Zonda**	**0.08**	**76**		**Pn**	**16 46 03.6**	**+1.2**
RTLL	**Cerro Villicun**	**0.34**	**47**	⇓*i*P	**Pn**	**16 46 04.4**	**+1.2**
RTLL				*i* S	**Sn**	**16 46 16.2**	**+1.2**
VA03	**San Esteban**	**1.93**	**231**		**Pn**	**16 46 21.6**	**+2.0**
VA03	**San Esteban**	**1.93**	**231**	⇑*i*P	**Pn**	**16 46 21.5**	**+2.0**
VA03				*e*S	**Sn**	**16 46 46.9**	**+2.9**
VA03	comp=N,2µm,0.6s			IAML		16 46 48.2	
CO02	**Combarbal**	**1.94**	**280**		**Pn**	**16 46 22.2**	**+2.4**
CO02	**Combarbal**	**1.94**	**280**	⇑*i*P	**Pn**	**16 46 22.1**	**+2.4**
CO02				*e*S	**Sn**	**16 46 47.9**	**+3.5**
CO02	comp=E,4µm,0.3s			IAML		16 46 51.4	
CO01	**Juntas del Tor**	**1.95**	**324**		**Pn**	**16 46 23.7**	**+3.6**
CO01	**Juntas del Tor**	**1.95**	**324**	⇑*i*P	**Pn**	**16 46 23.9**	**+3.8**
CO01				*i* S	**Sn**	**16 46 49.6**	**+4.8**
CO01	comp=E,789nm,0.2s			IAML		16 46 51.1	
FCH	**Farellones**	**2.18**	**216**	⇑*i*P	**Pn**	**16 46 24.9**	**+1.9**
FCH				*i* S	**Sn**	**16 46 53.

SIV San Ignacio 17.02 26 P **Pn** **16 49 37.8 -1.3**
comp=Z,11nm,1.0s,baz=200,slow=10,SNR=20

GO08 Villa O'Higgin 17.12 189 P **P** **16 49 37.5 -2.6**
GO09 Cerro Castillo 19.86 187 P **P** **16 50 07.9 -2.1**
GO09 IAmb IAmb 16 50 13.0
comp=Z,13nm,1.1s

MG03 Isla Dawson 22.30 183 P **P** **16 50 33.6 -2.4**
DSPA Despedida 22.38 179 P **P** **16 50 34.5 -2.2**
USHA Ushuaia 23.26 180 P **P** **16 50 46.2 +0.8**
comp=Z,19nm,0.8s,baz=347,slow=8.8,SNR=7.3
comp=Z,19nm,0.8s

SNAA Sanae 52.82 159 P **P** **16 54 52.0 +0.4**
comp=Z,1.3nm,0.8s,baz=333,slow=10,SNR=7.0
SNAA pP **pP** **16 55 16.2 -1.1**
comp=Z,1.7nm,0.8s,baz=299,slow=8.5,SNR=3.3
comp=Z,1.3nm,0.8s

TXAR Lajitas Array 69.06 328 P **P** **16 56 43.5 +1.6**
comp=Z,0.7nm,0.6s,baz=154,slow=9.2,SNR=9.8
comp=Z,0.7nm,0.6s
TXAR Lajitas Array 69.06 328 P **P** **16 56 40.4 -1.5**
TX31 Lajitas Ar. Si 69.06 328 P **P** **16 56 41.4 -0.6**
TX31 IAmb IAmb 16 56 44.3
comp=Z,5.1nm,0.9s

WVT Waverly 69.67 344 P **P** **16 56 45.5 0.0**
WVT IAmb IAmb 16 56 47.0
comp=Z,5.6nm,1.0s
LCAR Lake Charles 70.48 341 P **P** **16 56 49.5 -0.9**
LCAR IAmb IAmb 16 56 52.3
comp=Z,5.4nm,0.8s

DBIC Dimbokro 71.78 70 P **P** **16 56 59.2 +0.5**
comp=Z,4.0nm,1.0s,baz=136,slow=13,SNR=1.9
comp=Z,4.0nm,1.0s
ANMO Albuquerque 75.06 329 P **P** **16 57 19.2 +1.4**
comp=Z,1.4nm,1.0s,baz=137,slow=3.6,SNR=2.3
comp=Z,1.4nm,1.0s
TORD Torodi Ar. Bea 80.77 68 P **P** **16 57 50.0 +0.4**
comp=Z,2.7nm,0.7s,baz=278,slow=6.6,SNR=15
TORD pP **pP** **16 58 15.8 -1.5**
comp=Z,0.8nm,0.6s,baz=272,slow=5.6,SNR=3.5
comp=Z,2.7nm,0.7s
TORD Torodi Ar. Bea 80.77 68 P **P** **16 57 48.2 -1.4**
PDAR Pinedale Array 82.91 331 P **P** **16 58 02.0 +1.5**
comp=Z,2.4nm,0.5s,baz=134,slow=5.2,SNR=2.7
comp=Z,0.4nm,0.5s
NVAR Mina Array Bea 83.53 323 P **P** **16 58 05.8 +2.0**
comp=Z,0.5nm,0.7s,baz=146,slow=5.2,SNR=4.4
comp=Z,0.5nm,0.7s
ASAR Alice Springs 120.95 204 PKP **PKiKP** **17 04 27.2 -0.9**
comp=Z,0.4nm,0.4s,baz=133,slow=1.5,SNR=10.0
WRA Warramunga Arr 124.19 207 PKP **PKiKP** **17 04 33.9 -0.7**
comp=Z,1.5nm,0.6s,baz=162,slow=1.6,SNR=24
WRA pPKP **pPKPdf** **17 05 01.9 -2.3**
comp=Z,0.4nm,0.7s,baz=164,slow=1.7,SNR=2.7
ZALV Zalesovo Beam 150.70 32 PKPbc **PKiKP** **17 05 27.6 +0.4**
comp=Z,4.9nm,0.4s,baz=310,slow=3.1,SNR=22
MKAR Makanchi Array 153.09 47 PKPbc **PKiKP** **17 05 33.1 +0.6**
comp=Z,1.1nm,0.7s,baz=291,slow=2.3,SNR=10
MKAR PKPab **PKPab** **17 05 45.2 +0.8**
comp=Z,1.2nm,0.6s,baz=294,slow=3.7,SNR=11

IDC 03 16:45:48.2±417.0, 57.87N×29.58E, h0km, Error ellipse: s-maj=128.1km s-min=80.9km az=153.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON 4.30 102**			*i*		17 15 58.6	
	0.4nm,1.5s,baz=284,slow=304,SNR=16						
I37NO	**I37NO 12.24 341**			*i*		17 57 00.0	
	baz=150,slow=333,SNR=1.2						
I26DE	**FREYUNG INFRAS13.06 233**			*i*		18 04 30.0	
	baz=39,slow=324,SNR=2.1						

MAN 03 16:50:58.1, 16.99N×121.52E, h26km, mb3.8, ML2.5, MS2.1, Luzon

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IDC 03 16:55:39.3±11.0, 23.54S×179.71W, h495km±45km, mb3.2/3, mbtmp4.1/4, Error ellipse: s-maj=166.4km s-min=43.0km az=62.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera 14.92 190**			P	P	16 58 49.2	+0.6
	5.8nm,0.8s,baz=21,slow=15,SNR=1.8						
URZ				S	S	17 01 21.1	-3.6
	5.4nm,1.0s,baz=358,slow=23,SNR=1.3						
STKA	**Stephens Creek 35.10 248**			P	P	17 01 50.8	+0.3
	0.9nm,0.7s,baz=86,slow=13,SNR=1.8						
	0.9nm,0.7s						
ASAR	**Alice Springs 42.36 260**			P	P	17 02 49.5	-0.1
	1.3nm,0.4s,baz=96,slow=7.6,SNR=82						
ASAR				ScP	ScP	17 07 34.6	-0.5
	0.7nm,0.9s,baz=104,slow=4.5,SNR=8.2						
	1.3nm,0.4s						
WRA	**Warramunga Arr 42.70 266**			P	P	17 02 52.0	-0.3
	2.4nm,0.5s,baz=96,slow=8.3,SNR=86						
	2.4nm,0.5s						

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*SOME **03** 17:08:04.2, 50.55N×86.00E, h20km*
*ASRS **03** 17:08:07.6±0.4, 50.2°×8.8E°, h10km, MLh3.0/7, Error ellipse: s-maj=4.2km s-min=3.1km az=6.7, confirmed*
*NNC **03** 17:08:11.2±1.4, 50.23N×87.53E, h0km, mb3.3, mpv2.9, Error ellipse: s-maj=12.8km s-min=5.3km az=101.0*
ISC 03 17:08:08.4±1.3, 50.22N±0.03×87.94E±0.03, h1km±12km, n22, σ1°85/40, 9C-9D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CUR	**Chagan-Uzun 0.29 115**			⇓Pg	**Pg**	**17 08 13.9**	**-0.1**
CUR				Sg	**Sb**	**17 08 19.3**	**-2.8**
CHBI	**Chibit, Altay 0.29 288**			⇓Pg	**Pg**	**17 08 13.3**	**-0.7**
CHBI				Sg	**Sg**	**17 08 16.9**	**-1.0**
ULGR	**Ulagan, Altay 0.40 2**			⇓Pg	**Pg**	**17 08 17.2**	**+1.1**
ULGR				Sg	**Sg**	**17 08 23.4**	**+2.0**
ARTR	**Artybash 1.63 346**			Pg	**Pn**	**17 08 37.8**	**-0.6**
ARTR				Sg	**Sg**	**17 09 02.4**	**+1.6**
UKR	**Ust'-Kan 2.14 291**			Pg	**Pn**	**17 08 46.7**	**+1.3**
UKR				Sg	**Sb**	**17 09 15.5**	**+0.3**
GALT	**Gorno-Altaysk, 2.15 325**			Pg	**Pn**	**17 08 46.9**	**+1.5**
GALT				Sg	**Sg**	**17 09 18.1**	**+0.8**
TASR	**Tashtagol 2.54 359**			Pg	**Pb**	**17 08 54.1**	**-0.8**
TASR				Sg	**Sg**	**17 09 29.2**	**-0.8**
ELT	**Eltsovka 3.22 342**			Pn	**Pn**	**17 09 02.3**	**+2.1**
ELT				Pg	**Pb**	**17 09 07.8**	**+1.4**
ELT				Sg	**Sg**	**17 09 50.0**	**-1.9**
DJO	**Djoy, Khakassi 3.28 37**			Pg	**Pg**	**17 09 10.8**	**-0.5**
DJO				Sg	**Sg**	**17 09 53.3**	**-0.5**
DJOS	**Djoyskaya Sosn 3.36 39**			Sg	**Sg**	**17 09 59.2**	**+2.8**
CERR	**Cheremushki 3.41 38**			Sg	**Sg**	**17 10 00.6**	**+2.6**
ZSN	**Zaisan 3.44 217**			*eP*	**Pn**	**17 09 04.2**	**+1.1**
	2.7nm,0.2s						
ZSN				*eS*	**Sn**	**17 09 48.2**	**+3.6**
	16nm,0.3s						
ZAA0	**Zalesovo Array 4.20 334**			⇑Pn	**Pn**	**17 09 13.5**	**0.0**
	0.2nm,0.5s						
ZAA0				⇓Sn	**Sn**	**17 10 05.1**	**+1.9**
	0.6nm,0.5s						
ZAA0				⇑Lg	Lg	17 10 20.0	
	2.2nm,0.9s						
ERNS	**Erzin 4.63 87**			Pg	**Pb**	**17 09 31.7**	**+1.2**
ERNS				Sg	**Sg**	**17 10 36.8**	**-0.4**
SEM	**Semipalatinsk 4.93 275**			*eP*	Pn	17 09 11.0	-13
	3.6nm,0.1s						
SEM				*eS*	Sn	17 09 57.7	-24
	5.2nm,0.1s						
MK31	**Makanchi Array 5.08 230**			⇑Pn	**Pn**	**17 09 26.6**	**+0.8**
	2.1nm,0.5s,baz=51,slow=13,SNR=105						
MK31				⇓Sn	**Sn**	**17 10 25.0**	**-0.2**
	0.5nm,0.3s,baz=53,slow=30,SNR=6.0						
MK31				⇓Lg	Lg	17 10 44.4	
	2.9nm,0.6s,baz=51,slow=28,SNR=5.6						
MAKZ	**Makanchi 5.23 231**			⇑Pn	**Pn**	**17 09 28.5**	**+0.7**
	2.0nm,0.6s						
MAKZ				⇑Sn	**Sn**	**17 10 27.7**	**-1.0**
	2.4nm,0.7s						
MAKZ				⇑Lg	Lg	17 10 49.5	
	3.4nm,0.8s						
BRCR	**Berchikul' 5.43 2**			Pg	**Pg**	**17 09 50.4**	**-2.1**
BRCR				Sg	**Sg**	**17 10 59.6**	**-3.2**
NVS	**Novosibirsk 5.44 330**			Sg	**Sg**	**17 11 07.4**	**+4.3**
KURK	**Kurchatov 5.97 278**			⇓Pn	**Pn**	**17 09 37.1**	**-0.8**
	0.8nm,0.6s						
KURK				⇓Sn	**Sn**	**17 10 44.4**	**-2.6**
	1.1nm,0.7s						
KURK				⇑Lg	Lg	17 11 09.7	
	5.9nm,0.8s						
KURBB	**Kurchatov Arra 6.03 277**			⇑Pn	**Pn**	**17 09 37.7**	**-1.0**
	1.0nm,0.6s						
KURBB				⇓Sn	**Sn**	**17 10 46.7**	**-1.6**
	2.8nm,0.5s						
KURBB				⇑Lg	Lg	17 11 13.1	
	10nm,0.6s						
MINR	**Mina 6.04 37**			Pg	**Pg**	**17 10 01.1**	**-3.1**
MINR				Sg	**Sg**	**17 11 22.9**	**+0.5**

IDC 03 17:11:10.3±3.8, 30.78N×102.03E, h0km, mb3.3/1, mbtmp3.4/3, ML3.5/2, Error ellipse: s-maj=93.3km s-min=36.8km az=91.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr 12.59 194**			Pn	Pn	17 14 10.7	0.0
	0.1nm,0.3s,baz=5.1,slow=10,SNR=3.0						
	0.6nm,0.8s						
SONM	**Songino Array 17.36 10**			P	Pn	17 15 14.1	+0.1
	0.2nm,0.3s,baz=200,slow=11,SNR=2.2						
	0.6nm,0.6s						
MKAR	**Makanchi Array 22.09 322**			P	P	17 16 07.0	0.0
	1.3nm,0.9s,baz=131,slow=10,SNR=8.9						
	1.3nm,0.9s						

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*MAN **03** 17:13:35.8, 12.82N×125.85E, h88km, mb4.9, ML3.8, MS3.8*
*NEIC **03** 17:13:35.3±1.9, 12.78N±0.07×125.86E±0.10, h10km±1km, mb4.6/86, Error ellipse: s-maj=16.0km s-min=11.5km az=84.0*
*IDC **03** 17:13:38.9±3.2, 12.69N×125.94E, h44km±33km, mb4.0/20, mbtmp4.3/23, ML4.2/3, MS3.2/14, Error ellipse: s-maj=21.2km s-min=11.1km az=84.0*
*DJA **03** 17:13:47.0±0.9, 13°N±4°×12°5E±°, h94km±9km, M4.6/35, mB5.3/6, mb4.5/35, Mw(mB)4.7/6*
ISC 03 17:13:38.8±0.3, 12.76N±0.03×125.84E±0.05, h40km, n177, σ1°72/182, mb4.5/66, MS3.1/10, 2C-19D, Samar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PVCP	**Virac 1.84 297**			⇓*eP*	**Pn**	**17 14 06.0**	**-2.0**
OCLP	**Ormoc 2.08 216**			⇓*eP*	**Pn**	**17 14 10.8**	**-0.5**
MMPH	**Masbate 2.20 260**			⇑*iP*	**Pn**	**17 14 13.2**	**+0.3**
MMPH				*i* S	**Sn**	**17 14 36.1**	**-2.8**
MSLP	**Maasin 2.78 200**			⇓*eP*	**Pn**	**17 14 20.4**	**-0.5**
GLSP	**General Luna, 2.97 175**			⇓*eP*	**Pn**	**17 14 19.6**	**-3.8**
LLP	**Lapu-Lapu 3.04 217**			⇓*eP*	**Pn**	**17 14 23.6**	**-0.8**
LLP				*eS*	**Sn**	**17 14 55.9**	**-3.8**
RCP	**Roxas 3.25 249**			⇓*eP*	**Pn**	**17 14 27.7**	**+0.3**
RCP				*eS*	**Sn**	**17 15 04.8**	**0.0**
JCNP	**Jose Panganiba 3.42 297**			⇓*eP*	**Pn**	**17 14 28.7**	**-0.9**
TBP	**Tagbilaran 3.61 213**			*eP*	**Pn**	**17 14 31.3**	**-1.0**
TBP				*i* S	Sn	17 15 28.1	+14
GUIM	**Jordan 3.83 237**			⇓*eP*	**Pn**	**17 14 34.9**	**-0.3**
GUIM				*eS*	**Sn**	**17 15 17.9**	**-1.1**
SNPH	**Sibulan 4.25 217**			⇓*eP*	**Pn**	**17 14 40.6**	**-0.5**
SNPH				*eS*	Sn	17 15 15.3	-14
CNOP	**Candoni, Negro 4.28 228**			⇓*eP*	**Pn**	**17 14 41.0**	**-0.5**
CNOP				*eS*	**Sn**	**17 15 27.9**	**-2.3**
BIPH	**Bislig 4.57 174**			⇓*eP*	**Pn**	**17 14 42.0**	**-3.5**
BIPH				*eS*	**Sn**	**17 15 33.3**	**-4.1**
SJMP	**San Jose 4.62 267**			⇓*eP*	**Pn**	**17 14 45.6**	**-0.5**
CUYO	**Cuyo Island 5.09 249**			⇓*eP*	**Pn**	**17 14 53.1**	**+0.5**
BALP	**Baler 5.09 306**			⇓*eP*	**Pn**	**17 14 49.6**	**-3.0**
BALP				*eS*	Sn	17 15 40.9	-9.3
PCPH	**Palayan 5.38 302**			⇓*eP*	**Pn**	**17 14 53.2**	**-3.4**
PCPH				*eS*	**Sn**	**17 15 52.4**	**-5.0**
PALP	**Palanan 5.41 323**			⇓*eP*	**Pn**	**17 14 54.8**	**-2.2**
DAV	**Davao City (W) 5.66 183**			LR	LR	17 18 01.2	
	comp=Z,263nm,18.7s,baz=353,slow=47						
CAUP	**Cauayan 5.70 317**			⇓*eP*	**Pn**	**17 14 58.5**	**-2.4**
SMPP	**San Manuel, Pa 6.03 305**			⇓*eP*	**Pn**	**17 15 03.0**	**-2.5**
SMPP				*eS*	**Sn**	**17 16 05.1**	**-8.3**
SAMP	**Sagada Mountai 6.42 313**			⇓*eP*	**Pn**	**17 15 10.5**	**-0.4**
YULB	**Yu-li 11.43 338**			Pn	**Pn**	**17 16 16.8**	**-2.7**
TPUB	**Ta-pu 11.60 335**			Pn	**Pn**	**17 16 21.1**	**-0.8**
SSLB	**Suanglung 11.91 338**			Pn	**Pn**	**17 16 25.2**	**-0.9**
YOJ	**Yonaguni jima 11.95 347**			Pn	**Pn**	**17 16 25.8**	**-0.8**
TNTI	**Ternate 12.00 173**			Pn	**Pn**	**17 16 26.9**	**-0.5**
KMSI	**Cibinong 12.24 189**			P	Pn	17 16 35.8	+5.1
YHNB	**Yeheng 12.58 341**			Pn	**Pn**	**17 16 35.4**	**+0.1**
TOLI2	**Tolitoli 12.61 204**			Pn	**P**	**17 16 42.3**	**-4.1**
JOW	**Kunigami 14.19 9**			P	**Pn**	**17 16 57.2**	**0.0**
	2.4nm,0.3s,baz=149,slow=22,SNR=19						
JOW				LR	LR	17 21 18.1	
	comp=Z,106nm,20.0s,baz=174,slow=32						
	8.3nm,0.2s						
APSI	**Ampana 14.20 197**			P	**Pn**	**17 17 00.2**	**+2.8**
	19nm,1.1s						
SWI	**Sorong 14.56 158**			P	**P**	**17 17 08.3**	**+0.2**
	13nm,0.7s						
SIJI	**Sorong 14.57 158**			P	**Pn**	**17 17 01.3**	**-1.1**
	0.8nm,0.3s,baz=274,slow=22,SNR=2.9						
	2.6nm,0.4s						
MSAI	**Masohi 16.29 169**			P	**P**	**17 17 29.7**	**+2.4**
	125nm7.6nm,0.7s						
AAI	**Ambon 16.50 172**			P	**P**	**17 17 31.8**	**+2.1**
	12nm,0.4s						
BKB	**Balikpapan 16.52 213**			P	**P**	**17 17 29.1**	**-0.7**
	62nm,0.9s						
TTSI	**Tana Toraja 16.80 201**			P	**P**	**17 17 33.9**	**+0.9**
	759nm86nm,1.1s						
FAKI	**Fak Fak 16.82 157**			Pn	**Pn**	**17 17 31.0**	**-0.6**
FAKI	**Fak Fak 16.82 157**			P	**P**	**17 17 37.2**	**+4.0**
	15nm,0.9s						
SBUM	**Sibu 16.93 234**			P	**Pn**	**17 17 33.0**	**+0.1**
BAKI	**Biak 17.20 143**			P	**P**	**17 17 43.7**	**+6.3**
	27nm,1.4s						
MTKI	**Muara Teweh, K 17.41 219**			P	**Pn**	**17 17 37.5**	**-1.4**
SPSI	**Sidrap Palu 17.67 200**			P	**P**	**17 17 44.8**	**+2.2**
	44nm,0.9s						
SRPI	**Serui, Papua 17.82 144**			P	**P**	**17 17 49.3**	**+5.0**
	13nm,0.4s						
BNSI	**Bone 17.97 199**			P	**P**	**17 17 49.5**	**+3.6**
	70nm,1.0s						
BBSI	**Bau Bau 18.41 190**			P	**Pn**	**17 17 55.1**	**+4.0**
	4.6nm,1.0s						
GUMO	**Guam 18.55 85**			LR	LR	17 25 48.0	
	comp=Z,28nm,18.3s,baz=254,slow=40						
KAPI	**Kappang 18.66 199**			P	**P**	**17 17 53.6**	**+0.1**
	0.7nm,0.3s,baz=49,slow=6.0,SNR=5.8						
KAPI				LR	LR	17 25 20.0	
	comp=Z,58nm,18.5s,baz=30,slow=38						
	24nm,0.9s						
BKSI	**Bukumba 18.84 198**			P	**P**	**17 17 55.7**	**+0.2**
	28nm,1.9s						
STKI	**Sintang 19.02 230**			P	**P**	**17 17 56.6**	**-0.9**
	3µm6.4nm,0.9s						
BBKI	**Banjar Baru 19.47 215**			P	**P**	**17 18 01.7**	**-0.7**
BSSI	**Bau Bau, Buton 19.52 196**			P	**Pn**	**17 18 04.5**	**+0.1**
	40nm,1.3s						
PBKI	**Pangkalan Bun 20.83 223**			P	**P**	**17 18 15.7**	**-1.5**
	59nm,0.5s						
GENI	**Genyem 20.86 136**			P	Pn	17 18 23.1	+3.0
	15nm,0.9s						
MMRI	**Maumere 21.55 190**			P	**P**	**17 18 24.3**	**-0.6**
MMRI					IAmb	IAmb	17 18 33.7
	comp=Z,24nm,0.9s						
EDFI	**Ende, Flores 21.76 191**			P	P	17 18 35.4	+8.1
JTU	**Tsushima 21.91 8**			P	**P**	**17 18 26.9**	**-1.7**
JTU					IAmb	IAmb	17 18 35.9
	comp=Z,22nm,1.1s						
SOEI	**Soe 22.42 184**			P	**P**	**17 18 33.2**	**-1.2**
SOEI					IAmb	IAmb	17 18 51.5
	comp=Z,30nm,0.7s						
SOEI	**Soe 22.42 184**			P	**P**	**17 18 34.1**	**-0.3**
	comp=Z,46nm,1.0s						
BATI	**Baumata 22.92 186**			P	**P**	**17 18 38.7**	**-0.8**
	comp=Z,34nm,0.4s,baz=93,slow=4.0,SNR=8.4						
	comp=Z,34nm,0.4s						
BATI	**Baumata 22.92 186**			P	**P**	**17 18 37.4**	**-2.1**
JHS	**Saijyo 23.10 15**			P	**P**	**17 18 41.2**	**0.0**
TJN	**Taejon 23.56 3**			P	**P**	**17 18 47.0**	**+1.4**
JHJ	**Hachijo jima 2 23.94 30**			LR	LR	17 28 08.2	
	comp=Z,46nm,19.6s,baz=42,slow=36						
JAGI	**Jajag, Banyuwa 24.08 209**			P	**P**	**17 18 50.3**	**-0.4**
JAGI	**Jajag, Banyuwa 24.08 209**			P	**P**	**17 18 52.9**	**+2.2**
	comp=Z,53nm,1.2s						

KSAR Wonju Array Be 24.65 4 P **P** **17 18 55.5 -0.2**
INU Inuyama 24.66 22 P **P** **17 18 55.3 -0.5**
KSRS Korea Array 24.66 4 P **P** **17 18 55.9 0.0**
comp=Z,3.8nm,0.7s,baz=181,slow=10,SNR=20
KSRS LR LR 17 27 25.6
comp=Z,36nm,21.9s,baz=165,slow=34
comp=Z,3.8nm,0.7s
KS19 Wonju Array Si 24.71 4 P **P** **17 18 55.1 -1.1**
KS19 IAmb IAmb 17 19 06.3
comp=Z,14nm,1.1s
LYN LuoYang 24.86 333 ⇓*iP* **P** **17 19 00.3 +2.6**
LYN pmax pmax
comp=Z,20nm,1.1s
SMRI Semarang 24.93 219 P **P** **17 18 58.4 -0.1**
WOJI Wonogiri, Jawa 25.27 217 P **P** **17 19 02.7 +1.2**
comp=Z,44nm,2.0s
SEHB SEOHWA 25.50 4 P **P** **17 19 03.9 +0.5**
SEHB IAmb IAmb 17 19 37.4
comp=Z,29nm,1.5s
MTN Manton Dam 25.97 168 P **P** **17 19 06.8 -1.0**
MTN IAmb IAmb 17 19 29.5
comp=Z,9.5nm,0.5s
MJAR Matsushiro Arr 26.16 23 P **P** **17 19 09.1 -0.4**
comp=Z,0.9nm,0.8s,baz=274,slow=15,SNR=1.7
MJAR LR LR 17 28 55.3
comp=Z,49nm,18.6s,baz=202,slow=35
comp=Z,0.9nm,0.8s
MJAR Matsushiro Arr 26.16 23 P **P** **17 19 08.2 -1.2**
CM31 Chiang Mai Arr 26.50 286 P **P** **17 19 12.0 -0.8**
CMAR Chiang Mai Arr 26.50 286 P **P** **17 19 12.6 -0.1**
comp=Z,3.2nm,0.7s,baz=100,slow=7.9,SNR=30
CMAR LR LR 17 29 24.3
comp=Z,27nm,21.3s,baz=220,slow=36
comp=Z,3.2nm,0.7s
CMAR Chiang Mai Arr 26.50 286 P **P** **17 19 12.2 -0.6**
LEM Lembang 26.58 224 P **P** **17 19 14.8 +1.1**
comp=Z,6.4nm,0.4s,baz=17,slow=18,SNR=1.7
LEM LR LR 17 32 21.5
comp=Z,139nm,20.6s,baz=324,slow=42
comp=Z,6.4nm,0.4s
KNRA Kununurra 28.40 174 P **P** **17 19 30.3 +0.7**
KNRA IAmb IAmb 17 19 37.4
comp=Z,12nm,0.9s
COEN Coen 31.61 147 P **P** **17 19 56.7 -1.4**
COEN IAmb IAmb 17 20 11.4
comp=Z,13nm,1.4s
USRK Ussuriysk Ar. 31.77 8 P **P** **17 19 59.1 -0.2**
comp=Z,3.8nm,0.8s,baz=190,slow=7.2,SNR=5.8
comp=Z,3.8nm,0.8s
WB0 Warramunga Arr 33.40 165 P **P** **17 20 11.7 -2.0**
WRA Warramunga Arr 33.55 165 P **P** **17 20 12.9 -2.2**
comp=Z,1.3nm,0.7s,baz=344,slow=9.4,SNR=15
WRA PcP **PcP** **17 22 55.2 -0.1**
comp=Z,0.5nm,1.1s,baz=343,slow=2.6,SNR=1.8
comp=Z,1.3nm,0.7s
WB2 Warramunga Arr 33.56 165 P **P** **17 20 13.2 -1.9**
WB2 IAmb IAmb 17 20 27.0
comp=Z,6.7nm,1.2s
WR0 Warramunga Arr 33.62 165 P **P** **17 20 13.7 -1.9**
WR0 IAmb IAmb 17 20 27.5
comp=Z,7.0nm,1.2s
MBWA Marble Bar 34.23 190 P **P** **17 20 18.6 -2.3**
MBWA IAmb IAmb 17 20 26.1
comp=Z,10nm,1.2s
ASAJ Asahikawa 34.40 22 LR LR 17 34 11.3
comp=Z,31nm,18.8s,baz=196,slow=36
PSA00 Pilbara Seismi 34.62 190 P **P** **17 20 22.1 -2.2**
GTA Gaotai 35.12 324 *eP* **P** **17 20 30.0 +1.3**
GTA pP pP 17 20 39.4 +1.7
GTA sP pwP 17 20 44.3 -2.6
GTA pmax pmax
comp=Z,3.0nm,1.1s
GOMU GeErMu 36.37 315 P **P** **17 20 41.7 +2.0**
GOMU pP pwP 17 20 57.6 -0.6
GOMU sP sP 17 21 06.6 +14
GOMU pmax pmax
comp=Z,6.0nm,0.8s
KLR Kul'dur 36.69 6 LR LR 17 37 58.1
comp=Z,24nm,18.8s,baz=192,slow=40
AS31 Alice Springs 37.05 168 P **P** **17 20 43.5 -1.6**
ASAR Alice Springs 37.05 168 P **P** **17 20 44.2 -0.9**
comp=Z,2.3nm,0.6s,baz=351,slow=7.5,SNR=95
comp=Z,2.3nm,0.6s
ASAR Alice Springs 37.05 168 P **P** **17 20 44.4 -0.7**
ULN Ulaanbaatar 38.36 340 P **P** **17 20 57.1 +0.9**
SONM Songino Array 38.56 339 P **P** **17 20 58.3 +0.5**
comp=Z,2.3nm,0.7s,baz=157,slow=9.2,SNR=9.3
SONM LR LR 17 38 23.0
comp=Z,42nm,18.8s,baz=56,slow=38
comp=Z,2.3nm,0.7s
SONM Songino Array 38.56 339 IAmb IAmb 17 20 59.3
comp=Z,2.2nm,0.9s
KWAJ Kwajalein Atol 41.19 91 P **P** **17 21 21.9 +2.0**
MORW Morawa 42.64 193 P **P** **17 21 32.0 +0.5**
MORW IAmb IAmb 17 21 46.3
comp=Z,25nm,1.6s
FORT Forrest 43.34 177 P **P** **17 21 39.8 +2.7**
BBOO Buckleboo 46.35 168 P **P** **17 22 01.1 0.0**
STKA Stephens Creek 46.88 162 P **P** **17 22 04.0 -1.3**
comp=Z,3.0nm,0.7s,baz=347,slow=6.0,SNR=8.7
comp=Z,3.0nm,0.7s
STKA Stephens Creek 46.88 162 P **P** **17 22 05.2 0.0**
PEA0B Petropavlovsk- 47.57 26 P **P** **17 22 09.0 -1.4**
PETK Petropavlovsk- 47.57 26 P **P** **17 22 11.4 +1.0**
comp=Z,4.4nm,1.0s,baz=227,slow=3.3,SNR=6.7
PETK LR LR 17 41 56.2
comp=Z,36nm,19.0s,baz=219,slow=36
comp=Z,4.4nm,1.0s
YAK Yakutsk 49.28 2 LR LR 17 44 04.0
comp=Z,28nm,18.8s,baz=270,slow=37
YAK Yakutsk 49.28 2 P **P** **17 22 22.8 -0.5**
YAK IAmb IAmb 17 22 24.6
comp=Z,8.7nm,0.8s
ARMA Armidale 49.58 150 P **P** **17 22 25.8 -0.5**
MK31 Makanchi Array 49.82 322 P **P** **17 22 28.5 +0.7**
MK31 IAmb IAmb 17 22 30.2
comp=Z,5.3nm,0.8s
MKAR Makanchi Array 49.82 322 P **P** **17 22 29.2 +1.4**
comp=Z,5.0nm,0.7s,baz=113,slow=8.7,SNR=61
MKAR PcP **PcP** **17 23 48.2 0.0**
comp=Z,0.9nm,0.7s,baz=102,slow=6.8,SNR=2.2
comp=Z,5.0nm,0.7s
MKAR Makanchi Array 49.82 322 P **P** **17 22 28.9 +1.1**
MKAR PcP **PcP** **17 23 48.4 +0.3**
MAKZ Makanchi 50.01 322 P **P** **17 22 30.3 +1.0**
MAKZ IAmb IAmb 17 22 31.7
comp=Z,10nm,1.2s
MAKZ PcP **PcP** **17 23 49.5 +0.7**
KDJ Kajisay 51.25 314 P **P** **17 22 38.5 -0.4**
KDJ IAmb IAmb 17 22 41.4
comp=Z,6.6nm,0.9s
KSH Kashi 51.28 311 P **P** **17 22 42.7 +3.6**
KSH pmax pmax
comp=Z,4.0nm,0.8s
ZAA0 Zalesovo Array 52.26 331 P **P** **17 22 46.4 +0.4**
ZALV Zalesovo Beam 52.26 331 P **P** **17 22 46.5 +0.6**
comp=Z,2.7nm,0.6s,baz=118,slow=8.5,SNR=12
comp=Z,2.7nm,0.6s
KURK Kurchatov 53.80 325 P **P** **17 22 57.8 +0.4**
BTK Batken 55.26 310 P **P** **17 23 07.6 -0.7**
BTK IAmb IAmb 17 23 11.1
comp=Z,6.0nm,1.3s
GAR Garm 55.40 309 P **P** **17 23 09.0 -0.4**
CHGR Chuyangaron 56.22 308 P **P** **17 23 15.7 +0.5**
CHGR IAmb IAmb 17 23 30.3
comp=Z,8.9nm,1.0s
KK31 Karatay Array 56.23 314 P **P** **17 23 15.4 +0.3**
KK31 IAmb IAmb 17 23 17.0
comp=Z,5.4nm,1.0s
KK31 PcP **PcP** **17 24 12.1 -0.4**
KKAR Karatay Array 56.23 314 P **P** **17 23 15.6 +0.5**
KK

HRA	**Herat**	**61.18**	**302**	P		**P**	**17 23 50.0**	**0.0**
NRIK	**Noril'sk**	**61.52**	**346**	P		**P**	**17 23 51.4**	**+0.1**
	comp=Z,4.4nm,0.8s,baz=114,slow=6.1,SNR=10							
	comp=Z,4.4nm,0.8s							
NRIK	**Noril'sk**	**61.52**	**346**	P		**P**	**17 23 51.8**	**+0.5**
NRIK				IAmb		IAmb	17 23 53.0	
	comp=Z,8.0nm,1.1s							
JOHN	**Johnston Islan**	**62.40**	**78**	P		**P**	**17 23 57.8**	**-0.3**
ABKAR	**Akbulak array**	**64.74**	**319**	P		**P**	**17 24 13.3**	**+0.3**
ABKAR				IAmb		IAmb	17 24 14.6	
	comp=Z,3.7nm,0.8s							
ABKAR				PcP		**PcP**	**17 24 46.6**	**+0.2**
ABKAR	**Akbulak array**	**64.74**	**319**	P		**P**	**17 24 13.1**	**+0.1**
ABKAR				PcP		**PcP**	**17 24 46.1**	**-0.3**
GEYT	**Alibeck**	**64.74**	**306**	P		**P**	**17 24 13.3**	**0.0**
	comp=Z,1.5nm,0.5s,baz=167,slow=13,SNR=2.3							
	comp=Z,1.5nm,0.5s							
GEYT	**Alibeck**	**64.74**	**306**	P		**P**	**17 24 13.7**	**+0.3**
GEYT				IAmb		IAmb	17 24 15.3	
	comp=Z,3.0nm,1.0s							
GYA0B	**ALIBECK ARRAY**	**64.74**	**306**	P		**P**	**17 24 14.0**	**+0.7**
GYA0B				IAmb		IAmb	17 24 17.9	
	comp=Z,4.1nm,0.7s							
ARU	**Arti**	**66.94**	**326**	P		**P**	**17 24 26.8**	**-0.3**
AKUT	**Akutan**	**67.12**	**36**	P		**P**	**17 24 28.1**	**-0.1**
BKZ	**Black Stump Fm**	**69.95**	**140**	P		**P**	**17 24 44.9**	**-1.3**
CHIR	**Chirikof Islan**	**73.11**	**35**			**P**	**17 25 06.3**	**+1.4**
SVW2	**Sparrevohn**	**73.40**	**30**	P		**P**	**17 25 08.2**	**+1.6**
P18K	**Big Mountain,**	**73.48**	**32**	P		**P**	**17 25 07.5**	**+0.4**
P18K				IAmb		IAmb	17 25 15.4	
	comp=Z,8.2nm,1.1s							
O18K	**Koktuh Hills**	**73.51**	**31**	P		**P**	**17 25 08.6**	**+1.4**
L19K	**White Mountain**	**73.82**	**29**	P		**P**	**17 25 10.6**	**+1.5**
K20K	**Telida**	**74.24**	**27**	P		**P**	**17 25 12.1**	**+0.6**
K20K				IAmb		IAmb	17 25 37.7	
	comp=Z,6.4nm,1.5s							
J20K	**Nowinta River**	**74.25**	**27**	P		**P**	**17 25 12.9**	**+1.4**
J20K				IAmb		IAmb	17 25 44.5	
	comp=Z,7.1nm,1.4s							
Q19K	**Cape Douglas,**	**74.28**	**32**	P		**P**	**17 25 11.3**	**-0.5**
Q19K				IAmb		IAmb	17 25 34.7	
	comp=Z,10nm,0.9s							
OHAK	**Old Harbor**	**74.44**	**34**	P		**P**	**17 25 12.6**	**-0.1**
IMAR	**Indian Mountai**	**74.53**	**25**	P		**P**	**17 25 13.9**	**+0.8**
KDAK	**Kodiak Island**	**74.82**	**33**	P		**P**	**17 25 15.0**	**+0.1**
KDAK				IAmb		IAmb	17 25 41.2	
	comp=Z,13nm,1.2s							
CNPM	**China Poot**	**75.52**	**31**	P		**P**	**17 25 18.5**	**-0.5**
BPAW	**Bear Paw Mtn.**	**75.64**	**27**	P		**P**	**17 25 20.4**	**+0.9**
BPAW				IAmb		IAmb	17 25 21.4	
	comp=Z,5.7nm,0.9s							
KTH	**Kantishna Hill**	**75.66**	**27**	P		**P**	**17 25 19.5**	**-0.2**
KTH				IAmb		IAmb	17 25 20.5	
	comp=Z,5.7nm,1.2s							
MLY	**Manley**	**75.75**	**26**	P		**P**	**17 25 20.5**	**+0.3**
MLY				IAmb		IAmb	17 25 22.2	
	comp=Z,2.8nm,0.7s							
KBZ	**Khabaz**	**76.23**	**312**	P		**P**	**17 25 23.1**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=30,slow=13,SNR=2.7							
	comp=Z,0.6nm,0.3s							
RAYN	**Ar Rayn**	**76.27**	**291**	P		**P**	**17 25 24.1**	**+0.2**
RAYN				IAmb		IAmb	17 25 25.9	
	comp=Z,3.9nm,1.1s							
NEA2	**Nenana**	**76.47**	**26**	P		**P**	**17 25 23.9**	**-0.3**
NEA2				IAmb		IAmb	17 25 26.4	
	comp=Z,3.1nm,0.8s							
MCK	**McKinley**	**76.55**	**27**	P		**P**	**17 25 25.1**	**+0.3**
MCK				IAmb		IAmb	17 25 25.8	
	comp=Z,4.9nm,0.7s							
ILAR	**Eielson Array**	**77.40**	**26**	P		**P**	**17 25 28.8**	**-0.7**
	comp=Z,0.4nm,0.7s,baz=236,slow=5.6,SNR=5.4							
	comp=Z,0.4nm,0.7s							
M24K	**Tolsona, Glenn**	**77.89**	**29**	P		**P**	**17 25 31.3**	**-1.0**
M24K				IAmb		IAmb	17 25 43.2	
	comp=Z,6.6nm,0.9s							
PAX	**Paxson**	**78.15**	**28**	P		**P**	**17 25 33.5**	**-0.3**
BMAR	**Burnt Mountain**	**78.16**	**23**	P		**P**	**17 25 34.5**	**+0.8**
RIDG	**Independent Ri**	**78.36**	**27**	P		**P**	**17 25 34.6**	**-0.3**
GLB	**Gilahina Butte**	**79.07**	**29**	P		**P**	**17 25 39.6**	**+0.7**
K27K	**Chicken**	**79.55**	**27**	P		**P**	**17 25 43.2**	**+1.9**
K27K				IAmb		IAmb	17 25 44.0	
	comp=Z,6.4nm,1.1s							
CASY	**Casey**	**79.63**	**186**			**P**	**17 25 43.9**	**+2.4**
CASY				IAmb		IAmb	17 25 44.9	
	comp=Z,3.6nm,0.7s							
CTGM	**Chitina Glacie**	**80.32**	**30**	P		**P**	**17 25 47.8**	**+2.1**
CTGM				IAmb		IAmb	17 25 48.1	
	comp=Z,5.3nm,0.8s							
M30M	**Minto, Yukon**	**82.15**	**28**	P		**P**	**17 25 57.4**	**+2.1**
FINES	**FINESS Array B**	**83.52**	**332**	P		**P**	**17 26 02.4**	**+0.1**
	comp=Z,1.4nm,0.8s,baz=95,slow=10,SNR=4.1							
	comp=Z,1.4nm,0.8s							
BRTR	**Keskin Array B**	**83.64**	**309**	P		**P**	**17 26 02.9**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=103,slow=6.4,SNR=2.4							
	comp=Z,0.3nm,0.4s							
AKASG	**Malin Array Be**	**84.39**	**321**	P		**P**	**17 26 06.7**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=56,slow=5.6,SNR=4.2							
	comp=Z,0.2nm,0.3s							
AKASG	**Malin Array Be**	**84.39**	**321**	IAmb		IAmb	17 26 13.5	
	comp=Z,4.0nm,1.4s							

*GCG **03** 17:15:22.7±0.7, 13°.45N×90°.71W, h109km±29km, MD3.7*
*SNET **03** 17:15:24.4±1.0, 13°.33N×90°.42W, h22km±6km, ML3.1*
ISC 03 17:15:22.4±2.7,13°.2N±0°.2×90°.56W±0°.08,h35km,n10,
σ1=17/16,1D,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NUBE	**Las Nubes**	**1.05**	**46**	*e*P		**Pn**	**17 15 39.6**	**-1.1**
CEVE	**Cerro Verde**	**1.12**	**54**	*i* P		**Pn**	**17 15 41.5**	**-0.3**
CEVE				*e*S		**Sn**	**17 15 54.8**	**-1.3**
CEVE				IAML			17 16 01.0	
	comp=Z,537nm,0.2s							
SLOZ	**Alcaldia de Sa**	**1.13**	**42**	⇓*i*P		**Pn**	**17 15 41.3**	**-0.6**
SLOZ				*e*S		**Sn**	**17 15 55.0**	**-1.1**
JAYA	**Jayaque - finc**	**1.18**	**66**	*e*P		**Pn**	**17 15 42.2**	**-0.4**
JAYA				*e*S		**Sn**	**17 15 56.6**	**-0.9**
JAYA				IAML			17 16 02.3	
	comp=Z,418nm,0.2s							
FUG	**Fuego 3**	**1.29**	**348**	*e*P		**Pn**	**17 15 44.1**	**-0.1**
FUG				*e*S		**Sn**	**17 16 01.7**	**+1.3**
NBG	**Las Nubes**	**1.42**	**8**	*e*P		**Pn**	**17 15 46.8**	**+0.9**
NBG				*e*S		**Sn**	**17 16 05.7**	**+2.1**
SJTE	**Alcalda de S**	**1.57**	**74**	*e*S		**Sn**	**17 16 07.5**	**+0.4**
COEG	**Centro de Oper**	**1.69**	**75**	*e*S		**Sn**	**17 16 10.6**	**+0.6**
STG3	**Santiaguito 3,**	**1.81**	**327**	*e*P		**Pn**	**17 15 51.0**	**-0.4**
STG3				*e*S		**Sn**	**17 16 11.8**	**-1.5**
SCLA	**Alcaldia de Sa**	**1.86**	**73**	*e*P		**Pn**	**17 15 53.4**	**+1.6**

*NEIC **03** 17:24:31.9±1.5, 48°.55S±0°.10×107°.3E±0°.2, h15km±5km, mb4.6/25, Error ellipse: s-maj=22.9km s-min=11.6km az=115.0*
*IDC **03** 17:24:32.6±1.4, 48°.88S×108°.12E, h0km, mb4.0/5, mbtmp4.0/5, MS3.8/17, Error ellipse: s-maj=67.3km s-min=19.4km az=114.0*
ISC 03 17:24:31.3±0.7,48°.59S±0°.10×107°.4E±0°.1,h10km,n56,
σ1=38/40,mb4.5/15,MS3.8/17,Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**14.57**	**23**	T		T	17 42 46.8	
	baz=198,slow=74,SNR=82							
H01W1	**Cape Leeuwin H**	**14.58**	**23**	T		T	17 42 48.4	
	baz=198,slow=74,SNR=124							
H01W3	**Cape Leeuwin H**	**14.59**	**23**	T		T	17 42 50.3	
	baz=198,slow=74,SNR=113							
CASY	**Casey**	**17.81**	**176**	P		**Pn**	**17 28 35.2**	**-3.7**
MORW	**Morawa**	**20.60**	**22**	P		**P**	**17 29 07.9**	**-2.6**
MORW				IAmb		IAmb	17 29 33.0	
	comp=Z,34nm,1.6s							
FORT	**Forrest**	**23.74**	**49**	P		**P**	**17 29 42.5**	**-1.1**
FORT				IAmb		IAmb	17 29 55.4	
	comp=Z,28nm,1.2s							
GIRL	**Giralia**	**26.46**	**14**	P		**P**	**17 30 07.3**	**-1.1**
BBOO	**Buckleboo**	**26.65**	**64**	P		**P**	**17 30 11.8**	**+1.8**
BBOO				IAmb		IAmb	17 30 18.1	
	comp=Z,7.0nm,0.8s							
TAU	**Tasmania Unive**	**28.20**	**94**	P		**P**	**17 30 23.8**	**-0.2**
TAU				IAmb		IAmb	17 30 42.8	
	comp=Z,28nm,1.2s							
PSA00	**Pilbara Seismi**	**28.75**	**25**	P		**P**	**17 30 27.1**	**-1.8**
TOO	**Toolangi**	**29.64**	**83**	P		**P**	**17 30 36.4**	**-0.5**
TOO				IAmb		IAmb	17 30 56.2	
	comp=Z,25nm,1.4s							
STKA	**Stephens Creek**	**30.67**	**70**	LR		LR	17 40 44.5	
	comp=Z,150nm,21.7s,baz=205,slow=32							
MCQ	**Macquarie Isla**	**32.00**	**120**	P		**P**	**17 30 57.5**	**+0.1**
ASAR	**Alice Springs**	**32.52**	**50**	P		**P**	**17 31 03.5**	**+1.2**
	comp=Z,1.2nm,1.0s,baz=211,slow=8.1,SNR=12							
ASAR				PcP		**PcP**	**17 33 50.1**	**+1.2**
	comp=Z,0.2nm,0.6s,baz=192,slow=3.2,SNR=1.9							
ASAR				LR		LR	17 41 44.4	
	comp=Z,102nm,20.4s,baz=218,slow=32							
	comp=Z,1.2nm,1.0s							
ASAR	**Alice Springs**	**32.52**	**50**	P		**P**	**17 31 03.3**	**+0.9**
AS31	**Alice Springs**	**32.53**	**50**	P		**P**	**17 31 02.4**	**0.0**
CAN	**Canberra**	**33.25**	**82**	P		**P**	**17 31 07.8**	**-0.8**
VNDA	**Vanda**	**35.53**	**162**	P		**P**	**17 31 27.2**	**-0.7**
	comp=Z,1.2nm,0.8s,baz=285,slow=8.2,SNR=8.2							
VNDA				LR		LR	17 45 08.8	
	comp=Z,218nm,18.1s,baz=303,slow=35							
	comp=Z,1.2nm,0.8s							
VNDA	**Vanda**	**35.53**	**162**	IAmb		IAmb	17 31 35.2	
	comp=Z,7.3nm,1.6s							
WRA	**Warramunga Arr**	**35.88**	**47**	P		**P**	**17 31 31.4**	**0.0**
	comp=Z,1.3nm,0.7s,baz=210,slow=8.5,SNR=10							
WRA				PcP		**PcP**	**17 34 02.2**	**+3.6**
	comp=Z,0.3nm,0.7s,baz=221,slow=2.7,SNR=1.7							
	comp=Z,1.3nm,0.7s							
WRA	**Warramunga Arr**	**35.88**	**47**	P		**P**	**17 31 31.9**	**+0.4**
WB2	**Warramunga Arr**	**35.88**	**47**	P		**P**	**17 31 32.1**	**+0.6**
WRAB	**Tennant Creek**	**35.89**	**47**	P		**P**	**17 31 31.4**	**-0.1**
WRAB				IAmb		IAmb	17 31 38.3	
	comp=Z,6.9nm,0.8s							
WR0	**Warramunga Arr**	**35.96**	**47**	P		**P**	**17 31 32.0**	**-0.1**
WR0				IAmb		IAmb	17 31 41.8	
	comp=Z,3.8nm,0.8s							
WB0	**Warramunga Arr**	**36.05**	**47**	P		**P**	**17 31 33.6**	**+0.7**
CRZF	**Crozet Islands**	**36.86**	**252**	P		**P**	**17 31 38.3**	**-1.3**
WKZ	**Wanaka**	**41.43**	**109**	P		**P**	**17 32 17.6**	**-0.2**
WKZ				IAmb		IAmb	17 32 30.5	
	comp=Z,32nm,1.1s							
QSPA	**South Pole Qui**	**41.54**	**180**	P		**P**	**17 32 19.3**	**+0.6**
	comp=Z,2.0nm,0.9s,baz=304,slow=1.9,SNR=6.6							
QSPA				LR		LR	17 48 12.3	
	comp=Z,222nm,20.0s,baz=336,slow=34							
	comp=Z,2.0nm,0.9s							
QSPA	**South Pole Qui**	**41.54**	**180**	IAmb		IAmb	17 32 22.7	
	comp=Z,5.7nm,1.3s							
LEM	**Lembang**	**41.62**	**0**	LR		LR	17 50 01.4	
	comp=Z,154nm,18.0s,baz=170,slow=36							
CTA	**Charters Tower**	**42.17**	**61**	LR		LR	17 48 53.2	
	comp=Z,72nm,19.9s,baz=256,slow=35							
MQZ	**McQueen's Vall**	**44.25**	**109**	P		**P**	**17 32 40.8**	**+0.2**
KAPI	**Kappang**	**44.69**	**18**	LR		LR	17 49 28.3	
	comp=Z,67nm,18.7s,baz=200,slow=33							
TROLL	**Troll, Antarti**	**48.86**	**204**	P		**P**	**17 33 17.4**	**+0.8**
FAKI	**Fak Fak**	**50.25**	**33**	P		**P**	**17 33 27.0**	**-0.7**
FAKI				IAmb		IAmb	17 33 28.8	
	comp=Z,14nm,1.1s							
SNAA	**Sanae**	**50.45**	**203**	P		**P**	**17 33 29.6**	**+1.0**
SNAA	**Sanae**	**50.45**	**203**	P		**P**	**17 33 29.5**	**+1.0**
	comp=Z,3.1nm,0.8s,baz=105,slow=11,SNR=14							
	comp=Z,3.1nm,0.8s							
SNAA	**Sanae**	**50.45**	**203**	P		**P**	**17 33 29.2**	**+0.6**
SNAA				IAmb		IAmb	17 33 35.4	
	comp=Z,10nm,1.2s							
PMG	**Port Moresby**	**51.33**	**54**	LR		LR	17 54 18.7	
	comp=Z,82nm,18.3s,baz=210,slow=35							
PMG	**Port Moresby**	**51.33**	**54**	P		**P**	**17 33 35.4**	**-0.4**
PMG				IAmb		IAmb	17 33 47.6	
	comp=Z,21nm,1.4s							
BELA	**Belgrano 2**	**51.66**	**190**	P		**P**	**17 33 37.6**	**0.0**
BELA				IAmb		IAmb	17 33 43.4	
	comp=Z,5.2nm,0.8s							
PSI	**Prapat**	**51.71**	**349**	LR		LR	17 52 27.8	
	comp=Z,105nm,18.8s,baz=234,slow=32							
VNA2	**Neumayer--Watz**	**52.06**	**202**	P		**P**	**17 33 41.7**	**+1.0**
	baz=131,slow=6.0							
VNA3	**Neumayer Olymp**	**52.42**	**201**	P		**P**	**17 33 43.7**	**+0.4**
VNA1	**Neumayer--Stat**	**52.46**	**202**	P		**P**	**17 33 45.6**	**+2.1**
DAV	**Davao City (W)**	**57.69**	**22**	LR		LR	18 00 21.2	
	comp=Z,26nm,18.2s,baz=180,slow=37							
PALK	**Pallekele**	**60.36**	**329**	LR		LR	17 55 09.0	
	comp=Z,97nm,21.0s,baz=247,slow=30							
BOSA	**Boshof**	**64.13**	**255**	LR		LR	17 58 14.2	
	comp=Z,49nm,18.3s,baz=182,slow=31							
SUR	**Sutherland**	**64.39**	**249**	LR		LR	17 57 18.1	
	comp=Z,48nm,18.4s,baz=160,slow=30							
PMSA	**Palmer Station**	**66.78**	**184**	LR		LR	18 06 41.5	
	comp=Z,58nm,18.3s,baz=156,slow=38							
CMAR	**Chiang Mai Arr**	**67.17**	**351**	LR		LR	18 01 48.7	
	comp=Z,46nm,19.3s,baz=185,slow=33							
USHA	**Ushuaia**	**76.89**	**182**	LR		LR	18 08 39.6	
	comp=Z,89nm,19.6s,baz=262,slow=34							
PLCA	**Paso Flores**	**91.04**	**182**	LR		LR	18 17 38.5	
	comp=Z,35nm,19.7s,baz=174,slow=35							
NVAR	**Mina Array Bea**	**145.81**	**90**	PKPbc		**PKPab**	**17 44 11.8**	**+0.9**
	comp=Z,1.8nm,0.7s,baz=214,slow=6.7,SNR=7.9							
TXAR	**Lajitas Array**	**149.45**	**118**	PKPbc		**PKPbc**	**17 44 21.2**	**+0.7**
	comp=Z,1.9nm,0.7s,baz=191,slow=6.1,SNR=12							
YKA	**Yellowknife Ar**	**153.06**	**43**	PKP		**PKPdf**	**17 44 23.1**	**+2.7**
	comp=Z,0.4nm,0.7s,baz=274,slow=1.7,SNR=1.9							
YKA				PKPbc		**sPKPbc**	**17 44 32.3**	**+1.4**
	comp=Z,0.4nm,0.7s,baz=291,slow=1.9,SNR=1.8							

*IDC **03** 17:35:46.9±3.0, 36°.15N×71°.00E, h161km±26km, mb3.6/13, mbtmp4.1/18, Error ellipse: s-maj=20.7km s-min=14.9km az=21.0*
*MOS **03** 17:35:51.2±0.9, 36°.55N×70°.96E, h198km, mb4.2/6, Error ellipse: s-maj=12.1km s-min=4.3km az=78.4*
*NEIC **03** 17:35:52.0±2.7, 36°.56N±0°.06×70°.88E±0°.09, h201km±6km, mb4.2/17, Error ellipse: s-maj=11.5km s-min=8.6km az=119.0*
*NNC **03** 17:35:57.4±3.1, 37°.24N×71°.17E, h0km, mb4.7, mpv4.7, Error ellipse: s-maj=23.7km s-min=19.3km az=15.0*
ISC 03 17:35:50.2±0.6,36°.54N±0°.04×71°.03E±0°.04,h181km±7km,
n150,σ2=52/173,mb3.9/22,8C-9D,
Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**2.52**	**347**			**Pn**	**17 36 36.4**	**+3.1**
GAR					Sn	**Sn**	**17 37 07.3**	**+0.4**
KBL	**Kabul**	**2.57**	**220**			**Pn**	**17 36 37.1**	**+3.1**
KBL					Sn	**Sn**	**17 37 09.0**	**+0.9**
CHGR	**Chuyangaron**	**2.58**	**325**			**Pn**	**17 36 36.5**	**+2.5**
CHGR					Sn	**Sn**	**17 37 08.2**	**+0.1**
CEP	**Cherat**	**2.81**	**165**	P		**Pn**	**17 36 40.9**	**+4.2**
CEP				S		**Sn**	**17 37 17.0**	**+4.1**
DRK	**Karamyk**	**3.00**	**11**			**Pn**	**17 36 42.8**	**+3.7**
DRK					Sn	**Sn**	**17 37 19.0**	**+1.7**
CHCP	**Chirah Chowk**	**3.41**	**147**	P		**Pn**	**17 36 48.4**	**+4.4**
BTK	**Batken**	**3.52**	**357**			**Pn**	**17 36 48.9**	**+3.7**
BTK	**Batken**	**3.52**	**357**	PN		**Pn**	**17 36 48.9**	**+3.7**
THW	**Thamme Wali**	**3.78**	**171**	P		**Pn**	**17 36 52.2**	**+3.5**
SARP	**Sargodha**	**4.80**	**163**	P		**Pn**	**17 37 04.5**	**+2.8**
KSH	**Kashi**	**4.90**	**51**	Pn		**Pn**	**17 37 02.6**	**-0.4**
KSH				Sn		**Sn**	**17 37 55.6**	**-4.6**
KSH				smax		smax		
	comp=N,230nm,0.7s							
KSH				smax		smax		
	comp=E,120nm,0.7s							
TAS	**Tashkent**	**4.96**	**345**			**Pn**	**17 37 06.0**	**+2.3**
TAS	**Tashkent**	**4.96**	**345**	PN		**Pn**	**17 37 06.0**	**+2.3**
THN	**Thein Dam**	**5.63**	**135**	*e*P		**Pn**	**17 37 16.6**	**+4.1**
THN				*e*S		**Sn**	**17 38 18.8**	**+1.7**
IUG	**luzhnay**	**5.65**	**352**	*d i*PN		**Pn**	**17 37 15.3**	**+2.6**
IUG				*e*S		**Sn**	**17 38 17.1**	**-0.5**
IUG	**luzhnay**	**5.65**	**352**	⇓*i*P		**Pn**	**17 37 15.3**	**+2.6**
	baz=354							
IUG				*e*S		**Sn**	**17 38 17.1**	**-0.5**
	baz=354							
AML	**Almayashu**	**5.95**	**19**	P		**Pn**	**17 37 19.3**	**+2.4**
	SNR=398							
UCH	**Uchtor**	**6.29**	**24**	P		**Pn**	**17 37 23.7**	**+2.4**
	SNR=58							
DZA	**Taraz**	**6.35**	**2**	*e*PN		**Pn**	**17 37 23.8**	**+2.1**
DZA	**Taraz**	**6.35**	**2**	*e*P		**Pn**	**17 37 23.8**	**+2.1**
	baz=2.9							
DZA				*e*S		**Sn**	**17 38 33.1**	**-0.8**
	baz=2.9							
EKS2	**Erkin-Say**	**6.47**	**18**	P		**Pn**	**17 37 25.9**	**+2.5**
	SNR=112							
BRLS	**Boroldoy**	**6.54**	**352**	*e*PN		**Pn**	**17 37 23.0**	**-1.2**
BRLS				pmax		pmax		
	comp=Z,3.0nm,0.2s							
BRLS	**Boroldoy**	**6.54**	**352**	*e*P		**Pn**	**17 37 23.1**	**-1.2**
	comp=Z,2.8nm,0.2s,baz=352							
BRLS				*e*S		**Sn**	**17 38 30.6**	**-8.0**
	baz=352							
KK31	**Karatay Array**	**6.57**	**357**			**Pn**	**17 37 26.2**	**+1.7**
KK31	**Karatay Array**	**6.57**	**357**	PN		**Pn**	**17 37 26.4**	**+1.9**
KK31	**Karatay Array**	**6.57**	**357**	P		**Pn**	**17 37 26.4**	**+1.9**
	comp=Z,9.8nm,0.2s,baz=182,slow=12,SNR=232							
KK31				⇓S		**Sn**	**17 38 36.1**	**-3.0**
	comp=Z,23nm,0.4s,baz=184,slow=22,SNR=11							
KKAR	**Karatay Array**	**6.57**	**357**			**Pn**	**17 37 26.4**	**+1.9**
KKAR	**Karatay Array**	**6.57**	**357**	Pn		**Pn**	**17 37 26.2**	**+1.6**
KKAR	**Karatay Array**	**6.57**	**357**	PN		**Pn**	**17 37 26.4**	**+1.9**
AAK	**Ala-Archa**	**6.65**	**23**	P		**Pn**	**17 37 28.5**	**+2.7**
SNR=30								
AAK	**Ala-Archa**	**6.65**	**23**	P		**Pn**	**17 37 28.0**	**+2.3**
	comp=Z,29nm,0.3s,baz=218,slow=4.8,SNR=51							
AAK				S		**Sn**	**17 38 41.8**	**+0.6**
	comp=Z,11nm,0.4s,baz=114,slow=20,SNR=6.7							
AAK	**Ala-Archa**	**6.65**	**23**	Pn		**Pn**	**17 37 28.1**	**+2.4**
AAK	**Ala-Archa**	**6.65**	**23**	*ce*PN		**Pn**	**17 37 28.2**	**+2.4**
AAK				pmax		pmax		
	comp=Z,37nm,0.8s							
BHK	**Bhakra**	**6.79**	**137**	*e*P		**Pn**	**17 37 27.6**	**-0.1**
BHK				*e*S		**Sn**	**17 38 44.5**	**-0.1**
KBK	**Karagaybulak**	**6.81**	**25**	P		**Pn**	**17 37 30.9**	**+3.0**
SNR=30								
FRU1	**Bishkek**	**6.85**	**23**	Pn		**Pn**	**17 37 31.2**	**+2.9**
FRU1	**Bishkek**	**6.85**	**23**	PN		**Pn**	**17 37 31.2**	**+2.9**
ULHL	**Ulahol**	**6.98**	**34**	P		**Pn**	**17 37 32.4**	**+2.2**
SNR=17								
BOOM	**Boomskoye usch**	**7.05**	**31**	Pn		**Pn**	**17 37 32.7**	**+1.7**
BOOM	**Boomskoye usch**	**7.05**	**31**	PN		**Pn**	**17 37 32.7**	**+1.7**
CHMS	**Chumysh**	**7.06**	**23**	P		**Pn**	**17 37 33.1**	**+2.1**
SNR=34								
CHMS	**Chumysh**	**7.06**	**23**	PN		**Pn**	**17 37 32.7**	**+1.7**
CHMS	**Chumysh**	**7.06**	**23**	⇓P		**Pn**	**17 37 32.7**	**+1.7**
	comp=Z,27nm,0.5s							
CHMS				⇓S		**Sn**	**17 38 47.0**	**-3.7**
	comp=Z,6.5nm,0.6s							
USP	**Ospenovka**	**7.23**	**21**	P		**Pn**	**17 37 34.8**	**+1.6**
SNR=43								
TKM2	**Tokmak 2**	**7.28**	**27**	P		**Pn**	**17 37 36.5**	**+2.5**
SNR=121								
TKM2	**Tokmak 2**	**7.28**	**27**	PN		**Pn**	**17 37 36.4**	**+2.3**
TKM2	**Tokmak 2**	**7.28**	**27**	⇑P		**Pn**	**17 37 36.4**	**+2.3**
	comp=Z,74nm,0.6s							
TKM2				⇑S		**Sn**	**17 38 53.6**	**-2.6**
	comp=Z,11nm,0.9s							
KDJ	**Kajisay**	**7.34**	**39**			**Pn**	**17 37 36.9**	**+2.1**
KDJ	**Kajisay**	**7.34**	**39**	PN		**Pn**	**17 37 36.9**	**+2.1**
SMLA	**Simla**	**7.43**	**135**	*e*P		**Pn**	**17 37 38.3**	**+2.3**
SMLA				*e*S		**Sn**	**17 38 57.6**	**-2.0**
SMLA				IAML			17 39 01.7	
	comp=N,211nm,0.4s							
SMLA				IAML			17 39 03.5	
	comp=E,227nm,0.6s							
SGDS	**Sogindy**	**7.43**	**21**	*d i*PN		**Pn**	**17 37 37.2**	**+1.2**
SGDS				pmax		pmax		
	comp=Z,7.0nm,0.5s							
SGDS	**Sogindy**	**7.43**	**21**	⇓*i*P		**Pn**	**17 37 37.2**	**+1.2**
	comp=Z,6.8nm,0.5s,baz=21							
HRA	**Herat**	**7.49**	**256**	Pn		**Pn**	**17 37 36.5**	**-0.4**
TNSS	**Tian-Shan**	**7.92**	**33**	*e*PN		**Pn**	**17 37 44.6**	**+1.8**
TNSS	**Tian-Shan**	**7.92**	**33**	*e*P		**Pn**	**17 37 44.6**	**+1.8**
baz=34								
AAA	**Alma-Ata**	**8.05**	**32**	*e*PN		**Pn**	**17 37 46.4**	**+2.4**
AAA	**Alma-Ata**	**8.05**	**32**	*e*P		**Pn**	**17 37 46.5**	**+2.4**
baz=33								
MDOK	**Medeo**	**8.07**	**33**	*e*PN		**Pn**	**

comp=Z,1.6nm,0.2s,baz=221,slow=10,SNR=11
comp=Z,1.6nm,0.2s
ZALV Zalesovo Beam 19.87 24 P P 17 40 05.8 -1.3
ARU Arti 21.60 341 P P 17 40 27.2 +1.6
comp=Z,1.0nm,0.3s,baz=188,slow=8.4,SNR=3.3
comp=Z,1.0nm,0.3s
ARU Arti 21.60 341 P P 17 40 23.6 -2.0
ARU IAmb IAmb 17 40 36.6
comp=Z,5.7nm,1.3s
ARU Arti 21.60 341 P P 17 40 26.5 +0.9
KIV Kislovodsk 22.79 298 P P 17 40 33.9 -3.4
BELG Belogornoye 22.87 321 P P 17 40 38.6 +0.9
comp=Z,5.6nm,0.4s,baz=58,slow=1.5,SNR=5.2
comp=Z,5.6nm,0.4s
BRTR Keskin Array B 29.45 288 P P 17 41 40.6 +3.5
comp=Z,0.3nm,0.6s,baz=99,slow=8.9,SNR=2.3
AKASG Malin Array Be 32.94 309 P P 17 42 08.1 +0.8
comp=Z,0.8nm,0.5s,baz=78,slow=7.0,SNR=7.5
comp=Z,0.8nm,0.5s
AKASG Malin Array Be 32.94 309 ceP P 17 42 08.1 +0.8
AKASG pmax pmax
comp=Z,2.0nm,0.5s
MNK Minsk 34.49 315 i P P 17 42 36.5 +16
MNK i *PP sP 17 43 17.9 -2.0
MNK pmax pmax
comp=E,3.0nm,0.9s
MNK pmax pmax
comp=N,7.0nm,0.9s
MNK pmax pmax
comp=Z,6.0nm,0.7s
MNK MLR MLR
comp=Z,205nm,22.0s
MNK MLR MLR
comp=N,429nm,20.0s
MNK MLR MLR
comp=E,4.0nm,13.0s
FIA1 FINESS Array S 37.46 326 P P 17 42 47.1 +1.3
FIA1 IAmb IAmb 17 43 16.8
comp=Z,8.5nm,1.1s
FINES FINESS Array B 37.46 326 P P 17 42 47.2 +1.4
comp=Z,1.1nm,0.3s,baz=118,slow=8.3,SNR=16
comp=Z,1.1nm,0.3s
FINES FINESS Array B 37.46 326 P P 17 42 47.0 +1.2
FINES FINESS Array B 37.46 326 i P P 17 42 47.4 +1.6
FINES pmax pmax
comp=Z,1.0nm,0.3s
LHMI Lhok Sumawe 39.19 136 P P 17 42 59.6 -1.1
comp=Z,93nm,1.4s
KEV Kevo 40.77 338 P P 17 43 11.6 -1.5
KEV Kevo 40.77 338 P P 17 43 11.6 -1.5
KEV pmax pmax
comp=Z,35nm,1.3s
ARCES ARCESS Array B 41.12 338 P P 17 43 17.3 +1.4
comp=Z,1.4nm,0.4s,baz=112,slow=6.9,SNR=10.0
comp=Z,1.4nm,0.4s
ARCES ARCESS Array B 41.12 338 P P 17 43 17.5 +1.6
ARCES ARCESS Array B 41.12 338 P P 17 43 17.5 +1.6
YAK Yakutsk 43.92 35 P P 17 43 37.8 -0.7
YAK Yakutsk 43.92 35 i P P 17 43 42.1 +3.6
YAK pmax pmax
comp=Z,6.0nm,0.6s
NC602 NORSAR Array S 44.17 323 P P 17 43 40.4 -0.2
NC602 IAmb IAmb 17 44 14.0
comp=Z,24nm,1.6s
NC303 NORSAR Array S 44.30 323 P P 17 43 43.0 +1.4
NC303 IAmb IAmb 17 43 56.6
comp=Z,18nm,1.5s
NB201 NORSAR Array S 44.32 323 P P 17 43 42.8 +0.9
NB201 IAmb IAmb 17 44 16.8
comp=Z,23nm,1.4s
NB2 NORSAR Subarra 44.36 323 P P 17 43 42.9 +0.7
comp=Z,1.6nm,0.6s,baz=96,slow=7.9
NOA NORSAR Array B 44.36 323 P P 17 43 43.1 +0.9
comp=Z,1.6nm,0.6s,baz=97,slow=7.8,SNR=9.4
comp=Z,1.6nm,0.6s
TIXI Tiksi 45.73 22 P P 17 43 54.5 +1.8
TIXI Tiksi 45.73 22 i P P 17 43 52.6 -0.1
TIXI pmax pmax
comp=Z,1.0nm,0.9s
JOW Kunigami 49.04 84 P P 17 44 18.8 -0.1
TORD Torodi Ar. Bea 65.74 269 P P 17 46 14.1 -1.7
comp=Z,1.0nm,0.6s,baz=52,slow=5.6,SNR=13
comp=Z,1.0nm,0.6s
TORD Torodi Ar. Bea 65.74 269 IAmb IAmb 17 46 14.9
comp=Z,3.3nm,1.4s
INK Inuvik 73.86 9 P P 17 47 06.2 +1.7
comp=Z,2.9nm,0.7s,baz=0.5,slow=3.9,SNR=3.4
comp=Z,2.9nm,0.7s
INK Inuvik 73.86 9 IAmb IAmb 17 47 06.9
comp=Z,3.6nm,0.8s
ILAR Eielson Array 74.73 16 P P 17 47 10.5 +0.9
comp=Z,0.2nm,0.5s,baz=328,slow=3.2,SNR=3.2
comp=Z,0.2nm,0.5s
YKA Yellowknife Ar 81.20 3 P P 17 47 46.5 +1.2
comp=Z,1.1nm,0.4s,baz=351,slow=5.4,SNR=14
comp=Z,1.1nm,0.4s
YKA Yellowknife Ar 81.20 3 ceP P 17 47 47.2 +1.9
YKA pmax pmax
comp=Z,1.0nm,0.4s
WRA Warramunga Arr 81.99 122 P P 17 47 46.8 -3.3
comp=Z,0.7nm,0.5s,baz=325,slow=4.9,SNR=25
comp=Z,0.7nm,0.5s
WRA Warramunga Arr 81.99 122 P P 17 47 49.5 -0.6
WRA Warramunga Arr 81.99 122 i P P 17 47 50.0 -0.1
WRA pmax pmax
comp=Z,1.0nm,0.5s
ASAR Alice Springs 84.26 125 P P 17 48 01.1 -0.5
comp=Z,0.9nm,0.5s,baz=312,slow=4.7,SNR=41
comp=Z,0.9nm,0.5s

*PRE **03** 18:14:52.1±0.9, 10°.71S×26°.60E, h10km, ML3.9*
*NEIC **03** 18:14:53.7±2.9, 10°.75S±0°.08×26°.48E±0°.05, h10km±1km, mb4.5/10, Error ellipse: s-maj=13.1km s-min=8.7km az=163.0*
*LSZ **03** 18:14:57.1±0.3, 12°.12S×27°.24E, h10km, MD4.0*
*IDC **03** 18:14:58.7±0.9, 10°.87S×26°.69E, h30km±6km, mb3.4/4, mbtmp3.9/10, ML3.9/5, MS2.2/5, Error ellipse: s-maj=27.1km s-min=14.8km az=88.0*
ISC 03 18:14:54.3±0.5, **10°.89S**±0°.04×**26°.69E**±0°.05, **h10km**, **n60**, σ**2.84**/84, **mb4.2**/8, **Zaire**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KSMZ Kasama 4.52 81 i P Pn 18 16 03.7 +0.7
KSMZ i 18 16 03.7
baz=243,slow=18
KSMZ i S Sn 18 16 52.3 -3.4
KSMZ Kasama 4.52 81 i P Pn 18 16 03.7 +0.7
KSMZ i 18 16 03.7
baz=243,slow=18
KSMZ i S Sn 18 16 52.3 -3.4
KSMZ Kasama 4.52 81 i P Pn 18 16 03.7 +0.7
KSMZ i 18 16 03.7
baz=243,slow=18
KSMZ i S Sn 18 16 52.3 -3.4
LSZ Lusaka 4.59 162 Pn Pn 18 16 08.7 +4.7
3.2nm,0.3s,baz=353,slow=11,SNR=16
LSZ Sn Sn 18 16 56.4 -1.1
11nm,0.3s,baz=32,slow=21,SNR=5.9
LSZ Lg Lg 18 17 25.2
24nm,0.3s,baz=281,slow=17,SNR=7.0
LSZ LR LR 18 18 12.2
comp=Z,198nm,19.4s,baz=360,slow=42
8.0nm,0.3s
LSZ Lusaka 4.59 162 Pn 18 16 08.3 +4.3
LSZ Sn Sn 18 16 58.9 +1.4
TETE Tete 8.49 129 eP Pn 18 16 59.0 +1.6
TETE eS Sn 18 18 30.9 -2.6
TETE IAML 18 19 34.6
comp=Z,127nm,0.7s
BLWY Bulawayo 9.38 169 eP Pn 18 17 12.3 +2.6
BLWY eS Sn 18 18 53.7 -1.7
BLWY IAML 18 20 12.0
comp=Z,60nm,0.6s
BLWY Bulawayo 9.38 169 i P Pn 18 17 09.0 -0.7
BLWY Bulawayo 9.38 169 i P Pn 18 17 09.0 -0.7
BLWY Bulawayo 9.38 169 i P Pn 18 17 09.0 -0.7
MATP Matopo 9.64 170 eP Pn 18 17 15.9 +2.7
MATP eS Sn 18 18 59.7 -2.0
MATP IAML 18 20 32.8
comp=Z,610nm,0.6s
MATP Matopo 9.64 170 Pn Pn 18 17 15.8 +2.5
comp=Z,2.5nm,0.3s,baz=350,slow=14,SNR=45
MATP Sn Sn 18 18 58.9 -2.8
comp=Z,2.0nm,0.3s,baz=61,slow=18,SNR=3.8
MATP Lg Lg 18 20 05.4
comp=Z,1.8nm,0.3s,baz=251,slow=20,SNR=3.8
comp=Z,10nm,0.4s
MATP Matopo 9.64 170 i P Pn 18 17 13.1 -0.1
MATP Matopo 9.64 170 i P Pn 18 17 13.1 -0.1
MATP Matopo 9.64 170 i P Pn 18 17 13.1 -0.1
MBAR Mbarara 10.99 22 Sn Sn 18 19 30.1 -4.9
comp=Z,0.8nm,0.3s,baz=128,slow=21,SNR=3.7
MBAR Lg Lg 18 20 30.9
comp=Z,0.8nm,0.3s,baz=279,slow=20,SNR=6.5
MBAR LR LR 18 21 43.4
comp=Z,119nm,18.3s,baz=186,slow=37
MBAR Mbarara 10.99 22 Pn Pn 18 17 28.6 -3.3
MBAR Mbarara 10.99 22 eP Pn 18 17 35.5 +3.7
MBAR eS Sn 18 20 26.6 +52
TSUM Tsumeb 12.06 226 eP Pn 18 17 47.4 +1.0
TSUM eS Sn 18 19 53.1 -8.0
TSUM IAML 18 21 45.0
comp=Z,114nm,0.7s
TSUM Tsumeb 12.06 226 Pn Pn 18 17 46.8 +0.3
comp=Z,2.4nm,0.4s,baz=70,slow=6.9,SNR=3.6
TSUM Sn Sn 18 19 56.1 -5.0
comp=Z,1.5nm,0.3s,baz=285,slow=23,SNR=5.1
TSUM LR LR 18 22 59.7
comp=Z,177nm,18.3s,baz=60,slow=40
TSUM Tsumeb 12.06 226 Pn 18 17 45.4 -1.0
MOPA Mopani 13.33 161 eP Pn 18 18 05.2 +1.5
MOPA eS Sn 18 20 27.7 -4.4
MOPA IAML 18 22 05.0
comp=Z,8.9nm,0.6s
MOPA Mopani 13.33 161 i P Pn 18 18 04.5 +0.7
MOPA Mopani 13.33 161 i P Pn 18 18 04.5 +0.7
MOPA Mopani 13.33 161 i P Pn 18 18 04.5 +0.7
LBTB Lobatse 14.08 184 eP Pn 18 18 15.3 +1.2
LBTB IAML 18 21 29.7
comp=Z,6.3nm,0.7s
LBTB Lobatse 14.08 184 Pn Pn 18 18 16.7 +2.6
comp=Z,0.4nm,0.3s,baz=11,slow=13,SNR=5.4
LBTB Lg Lg 18 22 26.0
comp=Z,0.2nm,0.3s,baz=277,slow=21,SNR=2.2
LBTB LR LR 18 23 58.1
comp=Z,118nm,18.1s,baz=18,slow=38
comp=Z,1.6nm,0.4s
LBTB Lobatse 14.08 184 Pn 18 18 15.5 +1.5
LBTB Lobatse 14.08 184 i P Pn 18 18 15.8 +1.8
LBTB i S Sn 18 20 51.3 +0.7
LBTB Lobatse 14.08 184 i P Pn 18 18 15.8 +1.8
LBTB i S Sn 18 20 51.3 +0.7
LBTB Lobatse 14.08 184 i P Pn 18 18 15.8 +1.8
LBTB i S Sn 18 20 51.3 +0.7
KIBK Kibwezi 14.12 54 Pn 18 18 11.9 -2.7
KMBO Kilima Mbogo 14.29 48 Pn Pn 18 18 18.5 +1.4
comp=Z,0.2nm,0.3s,baz=217,slow=17,SNR=2.4
KMBO Sn Sn 18 20 56.1 +0.2
comp=Z,0.8nm,0.3s,baz=333,slow=23,SNR=3.7
KMBO Lg Lg 18 22 18.5
comp=Z,0.5nm,0.3s,baz=123,slow=17,SNR=6.2
comp=Z,2.5nm,0.6s
KMBO Kilima Mbogo 14.29 48 Pn 18 18 12.5 -4.6
KSR Koster 14.88 179 eP Pn 18 18 27.0 +2.0
KSR eS Sn 18 21 04.7 -5.4
KSR IAML 18 23 15.0
comp=Z,10nm,0.6s
HRAO HartRAO 14.95 177 eP P 18 18 30.0 -1.6
HRAO eS Sn 18 21 06.3 -5.4
HRAO IAML 18 23 06.4
comp=Z,7.0nm,0.6s
SNKL Senekal, Frees 17.32 177 eP P 18 19 02.5 +4.6
SNKL eS Sn 18 22 03.9 -5.6
SNKL IAML 18 24 21.3
comp=Z,14nm,0.8s
BOSA Boshof 17.68 184 eP P 18 19 04.4 +2.6
BOSA eS Sn 18 22 11.1 -7.0
BOSA IAML 18 24 45.8
comp=Z,4.5nm,0.8s
BOSA Boshof 17.68 184 P P 18 19 02.9 +1.0
comp=Z,0.2nm,0.3s,baz=5.8,slow=12,SNR=7.5
BOSA LR LR 18 26 17.3
comp=Z,70nm,18.2s,baz=10,slow=38
comp=Z,4.5nm,0.8s
BOSA Boshof 17.68 184 P Pn 18 18 59.9 -1.0
BOSA Boshof 17.68 184 i P P 18 19 02.8 +1.0
BOSA i S Sn 18 22 18.7 +0.7
BOSA Boshof 17.68 184 i P P 18 19 02.8 +1.0
BOSA i S Sn 18 22 18.7 +0.7
BOSA Boshof 17.68 184 i P P 18 19 02.8 +1.0
BOSA i S Sn 18 22 18.7 +0.7
VOI Vohitsoka 22.15 122 P P 18 19 52.5 +1.9
VOI IAmb IAmb 18 20 04.7
comp=Z,23nm,1.3s
SHEL Horse Pasture 31.92 257 P P 18 21 17.3 -3.1
TOA0 Torodi Ar. Sit 34.44 313 P P 18 21 39.4 -2.9
TOA0 IAmb IAmb 18 22 12.2
comp=Z,12nm,1.6s
TORD Torodi Ar. Bea 34.44 313 P P 18 21 43.5 +1.2
comp=Z,0.9nm,0.6s,baz=125,slow=7.9,SNR=7.1
TORD pP sP 18 21 53.4 +6.1
comp=Z,1.0nm,0.5s,baz=131,slow=7.1,SNR=5.5
comp=Z,0.9nm,0.6s
TORD Torodi Ar. Bea 34.44 313 P P 18 21 37.5 -4.9
BRTR Keskin Array B 50.77 7 P P 18 23 55.5 +0.7
comp=Z,0.3nm,0.6s,baz=175,slow=7.2,SNR=2.1
BRTR pP sP 18 24 05.3 +5.5
comp=Z,0.7nm,0.8s,baz=166,slow=6.9,SNR=3.6
comp=Z,0.3nm,0.6s
BRTR Keskin Array B 50.77 7 P P 18 23 55.7 +0.9
GEC2 GERESS Array S 60.57 350 P P 18 25 00.9 -4.1
GEC2 IAmb IAmb 18 25 07.5
comp=Z,2.1nm,0.9s
GERES GERESS Array B 60.57 350 P P 18 25 06.3 +1.3
comp=Z,0.7nm,0.7s,baz=152,slow=6.0,SNR=8.2
GERES pP sP 18 25 15.4 +5.4
comp=Z,0.6nm,0.7s,baz=138,slow=10,SNR=3.6
comp=Z,0.7nm,0.7s
GERES GERESS Array B 60.57 350 P P 18 25 01.9 -3.1
KHC Kasperske Hory 60.87 350 P P 18 25 05.9 -1.1
KHC IAmb IAmb 18 25 09.0
comp=Z,2.9nm,0.9s
KHC Kasperske Hory 60.87 350 eP P 18 25 08.0 +1.0
KHC ex x 18 25 18.0
MORC Moravsky Berou 60.94 353 P P 18 25 05.4 -2.1
MORC IAmb IAmb 18 25 10.6
comp=Z,8.0nm,1.6s
GRA1 Grafenberg Arr 61.84 349 P P 18 25 11.3 -2.2
GRFO Grafenberg 61.84 349 P P 18 25 11.0 -2.4
MKAR Makanchi Array 75.83 36 P P 18 26 41.8 +1.1
comp=Z,0.3nm,0.8s,baz=222,slow=7.6,SNR=2.7
MKAR pP PcP 18 26 51.2 -2.1
comp=Z,0.6nm,0.7s,baz=235,slow=5.8,SNR=5.6
comp=Z,0.3nm,0.8s
MKAR Makanchi Array 75.83 36 P P 18 26 39.6 -1.1

*KRSC **03** 18:23:06.5±1.9, 53°.95N×169°.36E, h17km±28km, ML5.5*
*AEIC **03** 18:23:07±2.4, 54°.14N±0°.08×169°.15E±0°.08, h25km±3km, Error ellipse: s-maj=11.2km s-min=7.0km az=186.0*
*MOS **03** 18:23:09.8±1.1, 54°.05N×169°.32E, h22km, mb5.4/61, MS4.6/30, Error ellipse: s-maj=4.6km s-min=3.6km az=121.1*
*IDC **03** 18:23:09.2±0.4, 54°.19N×169°.30E, h0km, mb5.0/34, mbtmp5.0/37, ML4.5/3, MS4.5/93, Error ellipse: s-maj=12.5km s-min=9.0km az=167.0*
*BJI **03** 18:23:09.0±0.0, 54°.10N×169°.40E, h13km, mb5.0/82, mB5.1/60, Ms5.2/85, Ms7 4.9/81*
*NEIC **03** 18:23:10.8±1.6, 54°.16N±0°.07×169°.35E±0°.08, h15km±3km, mb5.3/381, Mww5.3, ML4.8/17(AEIC), Error ellipse: s-maj=10.9km s-min=7.0km az=188.0*
*NEIC **03** 18:23:12, 53°.95N×169°.41E, h12km, Moment Tensor Solution. Duration: 2s0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.89; $M_{\theta\theta}$-0.08; $M_{\phi\phi}$0.96; $M_{r\theta}$0.29; $M_{r\phi}$-0.36; $M_{\theta\phi}$-0.63; Fault plane solution: $M_0$1.21000×10^{17} NP1: ϕ_s169.00000°, δ28.00000°, λ-79.00000°. NP2: ϕ_s338.00000°, δ63.00000°, λ-95.00000°. Principal axes: T 1.2901, Plg17.0000°, Azm72.0000°; N -0.1815, Plg5.0000°, Azm340.0000°; P -1.1086, Plg72.0000°, Azm235.0000°;*
*GCMT **03** 18:23:12.8±0.1, 54°.29N±0°.01×169°.36E±0°.01, h12km, MW5.3/149, Moment Tensor Solution. s118,c212; s149,c291; Duration: 1s1 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.00±.01; $M_{\theta\theta}$0.03±.01; $M_{\phi\phi}$0.97±.01; $M_{r\theta}$0.31±.03; $M_{r\phi}$-0.45±.01; $M_{\theta\phi}$0.29±.03; Best double couple: $M_0$1.16500×10^{17} NP1: ϕ_s318.00000°, δ45.00000°, λ-121.00000°. NP2: ϕ_s178.00000°, δ53.00000°, λ-63.00000°. Principal axes: T 1.1640, Plg4.0000°, Azm250.0000°; N 0.0020, Plg21.0000°, Azm341.0000°; P -1.1660, Plg68.0000°, Azm149.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 03 18:23:10.8±0.5, **54°.08N**±0°.03×**169°.33E**±0°.02, **h13km**±2km, **h13km:pP-P**, **n1441**, σ**1.54**/1542, **mb5.3**/378, **MS4.7**/140, **157C-170D**, **Fault plane solution:** **NP1:**ϕ_s142.43942°, δ65.37096°, λ-78.23137°. **NP2:**ϕ_s295.87781°, δ27.13723°, λ-113.98388°. **Principal axes:** T Plg19.5473°, Azm223.6362°; N Plg10.6847°, Azm317.4772°; P Plg67.5101°, Azm74.5892°; **Fault plane solution:** **NP1:**ϕ_s204.07918°, δ49.54607°, λ-68.18462°. **NP2:** ϕ_s352.40775°, δ45.05442°, λ-113.54837°. **Principal axes:** T Plg2.3342°, Azm278.8316°; N Plg16.4258°, Azm9.5201°; P Plg73.3998°, Azm180.9728°;
Komandorsky Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
BKI Bering 2.26 301 PN Pn 18 23 46.9 -0.9
BKI S Sn 18 24 12.8 -2.6
BKI Bering 2.26 301 eP Pn 18 23 46.9 -0.9
BKI eS Sn 18 24 12.8 -2.6
SHEM Shemya Is, Ala 3.16 113 Pn Pn 18 23 60.0 -0.2
460nm,0.3s,baz=14,slow=4.2,SNR=120
SHEM LR LR 18 24 37.4
comp=Z,5µm,21.2s,baz=294,slow=27
SHEM Sn Sn 18 24 38.9 +1.3
144nm,0.3s,baz=341,slow=3.0,SNR=3.8
2µm,0.4s
SMY Shemya 3.16 113 Pn Pn 18 23 58.8 -1.4
SMY Shemya 3.16 113 PN Pn 18 23 58.8 -1.4
SMY 18 24 37.4
SMY Shemya 3.16 113 eP Pn 18 23 58.9 -1.3
SMY eS Sn 18 24 34.7 -3.0
KBTR Krutoberegovo 4.30 302 PN Pn 18 24 16.0 +0.1
KBTR Krutoberegovo 4.30 302 eP Pn 18 24 16.0 +0.1
KBG Krutoberegovo 4.38 303 PN Pn 18 24 17.5 +0.5
KBG Krutoberegovo 4.38 303 eP Pn 18 24 17.5 +0.5
MKZ Mys Kozlova 4.48 279 PN Pn 18 24 18.0 -0.3
MKZ Mys Kozlova 4.48 279 eP Pn 18 24 18.0 -0.3
SMKR Semkarok 5.14 302 PN Pn 18 24 29.4 +1.9
SMKR S Sn 18 25 30.1 +3.4
SMKR Semkarok 5.14 302 eP Pn 18 24 29.4 +1.9
SMKR eS Sn 18 25 30.1 +3.4
BDR Baidarnaya 5.27 302 PN Pn 18 24 31.4 +2.2
BDR S Sn 18 25 33.4 +3.6
BDR Baidarnaya 5.27 302 eP Pn 18 24 31.4 +2.2
BDR eS Sn 18 25 33.4 +3.6
SRKR Sorokina 5.32 302 PN Pn 18 24 31.1 +1.1
SRKR Sorokina 5.32 302 eP Pn 18 24 31.1 +1.1
BZWR Bezymyannyi-We 5.42 294 PN Pn 18 24 32.7 +1.2
BZWR S Sn 18 25 36.7 +2.9
BZWR Bezymyannyi-We 5.42 294 eP Pn 18 24 32.7 +1.2
BZWR eS Sn 18 25 36.7 +2.9
KLY Klyuchi 5.45 298 PN Pn 18 24 31.7 0.0
KLY Klyuchi 5.45 298 eP Pn 18 24 31.7 0.0
KLY eS Sn 18 25 31.6 -2.6
TUMR Tumrok 5.46 287 PN Pn 18 24 32.6 +0.6
TUMR Tumrok 5.46 287 eP Pn 18 24 32.6 +0.6
TUMR eS Sn 18 25 35.4 +0.7
KIRR Kirishev 5.50 294 PN Pn 18 24 33.9 +1.4
KIRR Kirishev 5.50 294 eP Pn 18 24 33.9 +1.4
KIRR eS Sn 18 25 36.6 +0.9
KMNR Kamenistaya 5.51 291 PN Pn 18 24 32.5 -0.1
KMNR Kamenistaya 5.51 291 eP Pn 18 24 32.5 -0.1
SPN Mys Shipunski 5.63 264 PN Pn 18 24 32.8 -1.3
SPN Mys Shipunski 5.63 264 eP Pn 18 24 32.8 -1.3
KII Karymskiy 5.82 274 PN Pn 18 24 36.8 0.0
KII Karymskiy 5.82 274 eP Pn 18 24 36.8 0.0
NLC Nalytchevo 6.01 265 PN Pn 18 24 38.5 -0.8
NLC Nalytchevo 6.01 265 eP Pn 18 24 38.5 -0.8
OSSR Ossora 6.23 329 PN Pn 18 24 42.8 +0.4
OSSR Ossora 6.23 329 eP Pn 18 24 42.8 +0.4
SDLR Sedlovina 6.26 267 PN Pn 18 24 42.2 -0.7
SDLR Sedlovina 6.26 267 eP Pn 18 24 42.2 -0.7
UGLR Uglovaya 6.31 266 PN Pn 18 24 43.3 -0.3
UGLR Uglovaya 6.31 266 eP Pn 18 24 43.3 -0.3
UGLR eS Sn 18 25 54.0 -1.5
SMAR Somma 6.31 267 PN Pn 18 24 43.0 -0.7
SMAR Somma 6.31 267 eP Pn 18 24 43.0 -0.7
KRER Koryakskii 6.33 267 PN Pn 18 24 43.6 -0.4
KRER Koryakskii 6.33 267 eP Pn 18 24 43.6 -0.4
AVH Avacha 6.35 267 PN Pn 18 24 43.9 -0.2
AVH Avacha 6.35 267 eP Pn 18 24 43.9 -0.2
KRX Arik 6.38 268 PN Pn 18 24 44.3 -0.3
KRX Arik 6.38 268 eP Pn 18 24 44.3 -0.3
DALK Dalny 6.39 265 PN Pn 18 24 44.5 -0.1
DALK Dalny 6.39 265 eP Pn 18 24 44.5 -0.1
ESO Esso 6.39 291 PN Pn 18 24 45.6 +1.0
ESO Esso 6.39 291 eP Pn 18 24 45.6 +1.0
KOK Koryaka 6.40 267 PN Pn 18 24 44.3 -0.5
KOK Koryaka 6.40 267 eP Pn 18 24 44.3 -0.5
PET Petropavlovsk 6.45 265 Sn 18 25 54.2 -4.6
PET Petropavlovsk 6.45 265 Pn Pn 18 24 45.3 0.0
PET Petropavlovsk 6.45 265 ePN Pn 18 24 45.8 +0.4
PET pmax pmax
comp=Z,282nm,0.5s
PET MLR MLR
comp=Z,7µm,15.0s
PET MLR MLR
comp=Z,8µm,16.0s
PET Petropavlovsk 6.45 265 eP Pn 18 24 45.4 0.0
TILK Tilichiki 6.62 346 PN Pn 18 24 47.9 +0.3
TILK Tilichiki 6.62 346 eP Pn 18 24 47.9 +0.3
RUS Russkaya 6.70 260 PN Pn 18 24 48.0 -0.8
RUS Russkaya 6.70 260 eP Pn 18 24 48.0 -0.8
GNL Ganaly 6.75 271 PN Pn 18 24 50.2 +0.6
GNL Ganaly 6.75 271 eP Pn 18 24 50.2 +0.6
KRMR Karymshinskiy 6.81 264 PN Pn 18 24 50.2 -0.1
KRMR Karymshinskiy 6.81 264 eP Pn 18 24 50.2 -0.1
MTVR Mutnovka 6.87 261 PN Pn 18 24 50.8 -0.5
MTVR Mutnovka 6.87 261 eP Pn 18 24 50.8 -0.5
GRL Gorelyy 6.92 262 PN Pn 18 24 52.5 +0.6
GRL Gorelyy 6.92 262 eP Pn 18 24 52.5 +0.6
PEA0B Petropavlovsk- 6.99 267 Pn 18 24 53.4 +0.5
PEA0B Petropavlovsk- 6.99 267 i PN Pn 18 24 52.7 -0.2
PETK Petropavlovsk- 6.99 267 Pn Pn 18 24 52.9 0.0
comp=Z,23nm,0.3s,baz=98,slow=20,SNR=183
PETK Sn Sn 18 26 10.6 -1.6
comp=Z,32nm,0.3s,baz=113,slow=15,SNR=8.2
PETK LR LR 18 27 37.7
comp=Z,8µm,21.3s,baz=90,slow=38
comp=Z,61nm,0.5s
PETK Petropavlovsk- 6.99 267 Pn Pn 18 24 52.0 -0.9
ASAK Asacha 7.07 261 PN Pn 18 24 54.1 +0.1
ASAK Asacha 7.07 261 eP Pn 18 24 54.1 +0.1
KDTR Khodutka, Kamc 7.17 256 PN Pn 18 24 54.9 -0.3
KDTR Khodutka, Kamc 7.17 256 eP Pn 18 24 54.9 -0.3
PALN Palana 7.21 318 PN Pn 18 24 58.0 +2.3
PALN Palana 7.21 318 eP Pn 18 24 58.0 +2.3
APC Apacha 7.35 266 PN Pn 18 24 59.0 +1.2
APC Apacha 7.35 266 eP Pn 18 24 59.0 +1.2
TASE Tanaga Southea 7.95 101 Pn 18 25 05.7 -0.4
TAFP Tanaga Falls P 7.96 101 Pn 18 25 05.4 -0.7
TAFP Sn 18 26 35.9 -0.1
PAU Pauzhetka 8.03 256 PN Pn 18 25 07.6 +0.6
PAU Pauzhetka 8.03 256 eP Pn 18 25 07.6 +0.6
TAPA Tanaga Point A 8.09 101 Pn 18 25 07.2 -0.7
KICM Kanaga Island 8.41 99 Pn 18 25 12.3 0.0
KIKV Kanaga Island 8.44 100 Pn 18 25 12.8 0.0
KIMD Kanaga Island 8.45 100 Pn 18 25 12.2 -0.5
KIWB Kanaga Island 8.46 100 Pn Pn 18 25 11.3 -1.6
KMSK Kamenskaya 8.57 350 PN Pn 18 25 15.0 +0.5
KMSK Kamenskaya 8.57 350 eP Pn 18 25 15.0 +0.5
ADK Adak 8.72 99 Pn Pn 18 25 15.1 -1.4
ADK Adak 8.72 99 Pn Pn 18 25 15.1 -1.4
SKR Severo-Kuril's 8.77 253 ePN Pn 18 25 16.9 -0.2
SKR MLR MLR
comp=Z,3µm,18.0s
SKR Severo-Kuril's 8.77 253 eP Pn 18 25 16.7 -0.4
GSTD Great Sitkin T 8.98 97 Pn 18 25 20.0 -0.1
GSCK Great Sitkin C 8.98 97 Pn 18 25 19.7 -0.5
GSTR Great Sitkin T 9.02 97 Pn Pn 18 25 18.5 -2.2
KOKL Mount Kliuchef 10.04 93 Pn 18 25 34.5 -0.2
ATKA Atka Island 10.08 94 Pn 18 25 35.0 -0.1

MA2	**Magadan**	**11.54**	**306**	Pn	**Pn**	**18 25 56.2**	**+1.1**		
	comp=Z,0.2nm,0.3s,baz=84,slow=8.4,SNR=3.7								
MA2				LR	LR	18 30 26.1			
	comp=Z,2μm,18.4s,baz=111,slow=38								
	comp=Z,12nm,1.0s								
MA2	**Magadan**	**11.54**	**306**	Pn	**Pn**	**18 25 54.5**	**-0.6**		
MA2	**Magadan**	**11.54**	**306**	*i* PN	**Pn**	**18 25 53.2**	**-2.0**		
MA2				pmax	pmax				
	comp=Z,33nm,1.3s								
SPIA	**Saint Paul Isl**	**11.94**	**67**	Pn	**Pn**	**18 26 00.4**	**-0.1**		
SPIA	**Saint Paul Isl**	**11.94**	**67**	P	**Pn**	**18 25 59.8**	**-0.8**		
	baz=264								
SEY	**Seymchan**	**12.50**	**322**	Pn	**Pn**	**18 26 09.2**	**+1.0**		
	comp=Z,0.2nm,0.3s,baz=126,slow=15,SNR=15								
SEY				LR	LR	18 30 52.8			
	comp=Z,2μm,18.2s,baz=126,slow=37								
SEY	**Seymchan**	**12.50**	**322**	*i* PN	**Pn**	**18 26 07.8**	**-0.4**		
SEY				pmax	pmax				
	comp=Z,37nm,1.4s								
NIKH	**Nikolski High**	**13.02**	**86**		**Pn**	**18 26 15.0**	**-0.3**		
NIKH	**Nikolski High**	**13.02**	**86**	P	**Pn**	**18 26 15.1**	**-0.3**		
	baz=284								
GAMB	**Gambell**	**13.74**	**37**		**Pn**	**18 26 23.9**	**-1.1**		
GAMB	**Gambell**	**13.74**	**37**	P	**Pn**	**18 26 23.5**	**-1.5**		
	baz=234								
BILL	**Bilibino**	**14.09**	**355**	Pn	**Pn**	**18 26 30.4**	**+0.6**		
BILL	**Bilibino**	**14.09**	**355**	*ce*P	**Pn**	**18 26 29.8**	**0.0**		
BILL				*e*S	**Sn**	**18 29 05.6**	**-0.2**		
BILL				pmax	pmax				
	comp=Z,52nm,1.3s								
BILL				MLR	MLR				
	comp=Z,1μm,14.0s								
UNV	**Unalaska Valle**	**14.21**	**81**		**Pn**	**18 26 28.4**	**-3.2**		
UNV	**Unalaska Valle**	**14.21**	**81**	P	**Pn**	**18 26 31.6**	**0.0**		
	baz=281,SNR=8.9								
UNV				S	**Sn**	**18 29 15.7**	**+6.8**		
	baz=281								
AKUT	**Akutan**	**14.59**	**80**	P	**Pn**	**18 26 32.0**	**-4.7**		
OKH	**Okha**	**15.57**	**279**	*c* P	**P**	**18 26 53.8**	**-0.2**		
OKH				*i* S	**Sn**	**18 29 39.0**	**-3.0**		
OKH				pmax	pmax				
	comp=Z,400nm,12.0s								
OKH				smax	smax				
	comp=E,1μm,10.6s								
OKH				MLR	MLR				
	comp=N,6μm,16.0s								
OKH				MLR	MLR				
	comp=E,5μm,17.0s								
OKH				MLR	MLR				
	comp=Z,2μm,17.0s								
FALS	**False Pass**	**15.83**	**76**	P	**Pn**	**18 26 53.1**	**0.0**		
FALS				IAmb	IAmb	18 27 10.9			
	comp=Z,169nm,1.0s								
FALS	**False Pass**	**15.83**	**76**	P	**Pn**	**18 26 52.5**	**-0.6**		
	baz=279								
TNA	**Tin City**	**16.10**	**35**	P	**P**	**18 26 56.9**	**-3.0**		
TNA				IAmb	IAmb	18 27 13.5			
	comp=Z,235nm,1.0s								
TNA	**Tin City**	**16.10**	**35**	P	**Pn**	**18 26 56.1**	**-0.4**		
	baz=236,SNR=5.8								
TNA				S	**S**	**18 30 11.0**	**+2.9**		
	baz=236								
KUR	**Kuril'sk**	**16.42**	**246**	*d i* P	**P**	**18 27 04.1**	**+0.6**		
KUR				*e*S	**Sn**	**18 30 10.4**	**+7.7**		
KUR				pmax	pmax				
	comp=Z,92nm,0.7s								
KUR				pmax	pmax				
	comp=N,77nm,0.6s								
KUR				pmax	pmax				
	comp=Z,2μm,5.0s								
KUR				smax	smax				
	comp=E,2μm,4.8s								
KUR				smax	smax				
	comp=N,2μm,4.3s								
KUR				MLR	MLR				
	comp=Z,4μm,18.0s								
KUR				MLR	MLR				
	comp=N,3μm,12.0s								
KUR				MLR	MLR				
	comp=E,3μm,10.0s								
ANM	**Nome**	**16.51**	**40**	Pn	**Pn**	**18 27 00.8**	**-1.0**		
ANM				IAmb	IAmb	18 27 18.3			
	comp=Z,219nm,1.0s								
ANM	**Nome**	**16.51**	**40**	P	**Pn**	**18 27 00.8**	**-1.0**		
ANM				pmax	pmax				
	comp=Z,219nm,1.0s								
ANM	**Nome**	**16.51**	**40**	P	**Pn**	**18 27 01.0**	**-0.8**		
	baz=243								
TYV	**Tymovskoe**	**16.53**	**270**	*e*P	**P**	**18 27 05.4**	**+0.7**		
TYV				pmax	pmax				
	comp=Z,32nm,1.5s								
TYV				pmax	pmax				
	comp=Z,300nm,2.9s								
TYV				MLR	MLR				
	comp=N,3μm,21.0s								
TYV				MLR	MLR				
	comp=E,2μm,21.0s								
TYV				MLR	MLR				
	comp=Z,2μm,25.0s								
NKL	**Nikolayevsk**	**16.98**	**279**	*e*P	**Pn**	**18 27 04.2**	**-3.6**		
NKL				*e*S	**Sn**	**18 30 12.6**	**-3.5**		
NKL				pmax	pmax				
	comp=E,3.0nm,1.0s								
NKL				pmax	pmax				
	comp=N,2.0nm,1.3s								
NKL				smax	smax				
	comp=E,5.0nm,1.3s								
NKL				smax	smax				
	comp=N,1.0nm,1.0s								
NKL				MLR	MLR				
	comp=Z,1μm,15.0s								
SDPT	**Sand Point**	**17.43**	**74**	P	**Pn**	**18 27 12.9**	**-0.5**		
SDPT	**Sand Point**	**17.43**	**74**	P	**Pn**	**18 27 11.7**	**-1.7**		
	baz=279								
SDPT				S	**S**	**18 30 37.3**	**+1.9**		
	baz=279								
UGL	**Uglegorsk**	**17.61**	**265**	*e*P	**P**	**18 27 18.8**	**+2.2**		
UGL				*e*S	**Sn**	**18 30 26.5**	**-4.9**		
UGL				pmax	pmax				
	comp=Z,169nm,1.1s								
UGL				pmax	pmax				
	comp=Z,2μm,6.6s								
UGL				smax	smax				
	comp=N,2μm,6.9s								
UGL				smax	smax				
	comp=E,5μm,9.6s								
UGL				MLR	MLR				
	comp=Z,2μm,13.0s								
UGL				MLR	MLR				
	comp=N,1μm,11.0s								
UGL				MLR	MLR				
	comp=E,3μm,19.0s								
CHNA	**Chernabura Isl**	**18.02**	**75**	P	**Pn**	**18 27 18.7**	**-2.0**		
	baz=281								
CNBA	**Chernabura Isl**	**18.02**	**75**	P	**Pn**	**18 27 20.5**	**-0.2**		
N16K	**Nishlik Lake**	**18.26**	**57**	P	**Pn**	**18 27 21.7**	**-2.0**		
	baz=264,SNR=18								
N16K				S	**S**	**18 30 53.2**	**+1.0**		
	baz=264								
YSS	**Yuzh-Sakhalins**	**18.27**	**258**	P	**Pn**	**18 27 23.6**	**-0.1**		
YSS	**Yuzh-Sakhalins**	**18.27**	**258**	*e*P	**Pn**	**18 27 23.6**	**-0.1**		
YSS				*e*S	**Sn**	**18 30 44.9**	**-2.4**		
YSS				pmax	pmax				
	comp=Z,50nm,0.9s								
YSS				pmax	pmax				
	comp=Z,1μm,7.9s								
YSS				smax	smax				
	comp=N,2μm,7.4s								
YSS				smax	smax				
	comp=E,1μm,6.7s								
YSS				MLR	MLR				
	comp=Z,3μm,19.0s								
YSS				MLR	MLR				
	comp=E,2μm,20.0s								
YUK	**Yuzh-Kuril'sk**	**18.29**	**246**	*e*P	**Pn**	**18 27 22.6**	**-1.4**		
YUK				*e*S	**Sn**	**18 30 52.2**	**+4.3**		
YUK				pmax	pmax				
	comp=Z,305nm,1.3s								
YUK				pmax	pmax				
	comp=N,155nm,1.1s								
YUK				pmax	pmax				
	comp=E,276nm,1.1s								
YUK				MLR	MLR				
	comp=Z,3μm,17.0s								
YUK				MLR	MLR				
	comp=N,2μm,16.0s								
O16K	**Kokwok River B**	**18.53**	**60**	P	**Pn**	**18 27 25.9**	**-1.0**		
	baz=267,SNR=19								
O16K				S	**S**	**18 30 58.5**	**+1.0**		
	baz=267								
P16K	**Nushagak River**	**18.56**	**61**	P	**P**	**18 27 26.2**	**-0.8**		
	baz=269								
O17K	**Koliganek Bris**	**19.04**	**59**	P	**P**	**18 27 30.4**	**-1.9**		
	baz=268								
RDOG	**Red Dog Mine**	**19.15**	**32**	P	**P**	**18 27 30.5**	**-3.0**		
RDOG	**Red Dog Mine**	**19.15**	**32**	P	**P**	**18 27 31.7**	**-1.8**		
	baz=237,SNR=6.0								
RDOG				S	**S**	**18 31 11.2**	**+1.2**		
	baz=237								
P17K	**Kvichak River**	**19.36**	**61**	P	**Pn**	**18 27 35.7**	**-1.2**		
	baz=270,SNR=18								
P17K				S	**S**	**18 31 17.3**	**+3.0**		
	baz=270								
N18K	**Kilae Creek**	**19.69**	**56**	P	**P**	**18 27 38.7**	**-0.8**		
N18K	**Kilae Creek**	**19.69**	**56**	P	**Pn**	**18 27 39.9**	**-1.1**		
	baz=266,SNR=23								
N18K				S	**S**	**18 31 24.3**	**+3.2**		
	baz=266								
SVW2	**Sparrevohn**	**19.88**	**55**	P	**P**	**18 27 41.1**	**-0.4**		
TTA	**Tatalina**	**19.92**	**50**	P	**Pn**	**18 27 42.2**	**-1.4**		
TTA				IAmb	IAmb	18 27 45.8			
	comp=Z,175nm,0.9s								
TTA	**Tatalina**	**19.92**	**50**	P	**Pn**	**18 27 42.3**	**-1.4**		
TTA				pmax	pmax				
	comp=Z,175nm,0.9s								
TTA	**Tatalina**	**19.92**	**50**	P	**P**	**18 27 41.0**	**-1.0**		
	baz=260,SNR=118								
TTA				S	**Sn**	**18 31 30.5**	**+3.2**		
	baz=260								
GCSA	**Galena City Sc**	**19.97**	**44**	P	**Pn**	**18 27 42.2**	**-1.9**		
	baz=254,SNR=16								
GCSA				S	**Sn**	**18 31 29.3**	**+1.1**		
	baz=254								
P18K	**Big Mountain,**	**19.98**	**60**	P	**Pn**	**18 27 43.3**	**-1.1**		
P18K				IAmb	IAmb	18 27 58.0			
	comp=Z,148nm,1.2s								
P18K	**Big Mountain,**	**19.98**	**60**	P	**Pn**	**18 27 43.6**	**-0.8**		
	baz=270,SNR=35								
P18K				S	**Sn**	**18 31 29.9**	**+1.2**		
	baz=270								
O18K	**Koktuh Hills**	**20.00**	**59**	P	**P**	**18 27 42.7**	**-0.1**		
O18K				IAmb	IAmb	18 27 56.0			
	comp=Z,226nm,1.6s								
O18K	**Koktuh Hills**	**20.00**	**59**	P	**P**	**18 27 42.6**	**-0.2**		
	baz=269,SNR=30								
O18K				S	**Sn**	**18 31 29.7**	**+0.7**		
	baz=269								
JKA	**Kamikawa-asahi**	**20.02**	**251**	P	**P**	**18 27 43.8**	**+0.6**		
ASAJ	**Asahikawa**	**20.03**	**251**	P	**P**	**18 27 44.4**	**+1.1**		
	comp=Z,19nm,0.7s,baz=67,slow=8.6,SNR=20								
ASAJ				S	**S**	**18 31 27.2**	**-0.6**		
	comp=Z,10nm,1.1s,baz=164,slow=19,SNR=1.7								
ASAJ				LR	LR	18 34 11.1			
	comp=Z,2μm,22.0s,baz=36,slow=33								
	comp=Z,19nm,0.7s								
ASAJ	**Asahikawa**	**20.03**	**251**	P	**P**	**18 27 43.8**	**+0.6**		
ASAJ				pmax	pmax				
	comp=Z,47nm,0.9s								
CHIR	**Chirikof Islan**	**20.08**	**71**	P	**P**	**18 27 43.6**	**0.0**		
CHIR				IAmb	IAmb	18 27 56.6			
	comp=Z,193nm,1.3s								
CHIR	**Chirikof Islan**	**20.08**	**71**	P	**P**	**18 27 44.0**	**+0.3**		
	baz=280								
GRNR	**Gornyy**	**20.23**	**274**	⇓ *i* P	Pn	18 27 47.7	+0.3		
GRNR				pmax	pmax				
	comp=E,10.0nm,0.9s								
GRNR				pmax	pmax				
	comp=N,9.0nm,0.6s								
GRNR				pmax	pmax				
	comp=Z,20nm,0.8s								
GRNR				MLR	MLR				
	comp=E,1μm,19.0s								
GRNR				MLR	MLR				
	comp=N,1μm,17.0s								
GRNR				MLR	MLR				
	comp=Z,1μm,17.0s								
L19K	**White Mountain**	**20.34**	**52**	P	Pn	18 27 47.1	-1.5		
L19K	**White Mountain**	**20.34**	**52**	P	Pn	18 27 47.4	-1.2		
	baz=263,SNR=272								
L19K				S	Sn	18 31 34.2	-3.0		
	baz=263								
N19K	**Bonanza Creek**	**20.39**	**56**	P	**P**	**18 27 47.3**	**+0.1**		
N19K				IAmb	IAmb	18 27 50.6			
	comp=Z,122nm,0.9s								
N19K	**Bonanza Creek**	**20.39**	**56**	P	Pn	18 27 47.5	-1.8		
	baz=267,SNR=79								
N19K				S	Sn	18 31 37.3	-1.3		
	baz=267								
O19K	**Port Alsworth**	**20.45**	**58**	P	Pn	18 27 48.1	-1.7		
O19K				IAmb	IAmb	18 27 51.0			
	comp=Z,144nm,1.0s								
O19K	**Port Alsworth**	**20.45**	**58**	P	**P**	**18 27 47.8**	**+0.1**		
	baz=269								
O19K				S	Sn	18 31 38.8	-1.1		
	baz=269								
M19K	**Big River Lodg**	**20.52**	**53**	P	**P**	**18 27 48.6**	**+0.1**		
M19K				IAmb	IAmb	18 28 14.8			
	comp=Z,118nm,1.1s								
M19K	**Big River Lodg**	**20.52**	**53**	P	Pn	18 27 49.3	-1.4		
	baz=264								
M19K				S	Sn	18 31 41.2	-0.4		
	baz=264								
SII	**Sitkinak Islan**	**20.75**	**68**	P	**P**	**18 27 50.0**	**-1.1**		
SII				IAmb	IAmb	18 27 57.5			
	comp=Z,104nm,0.8s								
SII	**Sitkinak Islan**	**20.75**	**68**	P	**P**	**18 27 50.4**	**-0.7**		
	baz=279								
Q19K	**Cape Douglas,**	**20.81**	**62**	P	**P**	**18 27 50.9**	**-0.7**		
Q19K	**Cape Douglas,**	**20.81**	**62**	P	**P**	**18 27 51.5**	**-0.2**		
	baz=273,SNR=34								
Q19K				S	**S**	**18 31 42.7**	**-0.6**		
	baz=273								
L20K	**Farewell, AK**	**20.82**	**51**	P	Pn	18 27 52.4	-1.9		
	baz=263,SNR=50								
L20K				S	Sn	18 31 47.0	-1.9		
	baz=263								
K20K	**Telida**	**20.86**	**49**	P	**P**	**18 27 52.1**	**-0.1**		
K20K				IAmb	IAmb	18 27 55.3			
	comp=Z,137nm,0.8s								
K20K	**Telida**	**20.86**	**49**	P	Pn	18 27 52.8	-1.9		
	baz=261,SNR=139								
K20K				S	Sn	18 31 45.3	-4.5		
	baz=261								
J20K	**Nowinta River**	**20.98**	**47**	P	**P**	**18 27 53.2**	**-0.2**		
J20K				IAmb	IAmb	18 27 58.2			
	comp=Z,136nm,0.9s								
J20K	**Nowinta River**	**20.98**	**47**	P	**P**	**18 27 53.5**	**+0.1**		
	baz=259,SNR=109								
J20K				S	**S**	**18 31 46.5**	**0.0**		
	baz=259								
ERM	**Erimo**	**21.11**	**246**	P	**P**	**18 27 56.0**	**+1.1**		
ERM	**Erimo**	**21.11**	**246**	*ce*P	**P**	**18 27 56.4**	**+1.4**		
ERM				pmax	pmax				
	comp=Z,79nm,1.3s								
M20K	**Styx River**	**21.11**	**53**	P	**P**	**18 27 55.3**	**+0.3**		
M20K	**Styx River**	**21.11**	**53**	P	**P**	**18 27 54.8**	**-0.1**		
	baz=266								
OHAK	**Old Harbor**	**21.15**	**66**	P	**P**	**18 27 54.1**	**-1.2**		
OHAK				IAmb	IAmb	18 27 56.1			
	comp=Z,154nm,0.8s								
OHAK	**Old Harbor**	**21.15**	**66**	P	**P**	**18 27 53.9**	**-1.4**		
	baz=278,SNR=51								
OHAK				S	**S**	**18 31 48.5**	**-1.5**		
	baz=278								
RSO	**Redoubt South**	**21.23**	**57**	P	**P**	**18 27 56.7**	**+0.3**		
O20K	**Slope Mountain**	**21.30**	**58**	P	**P**	**18 27 57.2**	**+0.3**		
	baz=271,SNR=9.7								
O20K				S	**S**	**18 31 53.4**	**+0.3**		
	baz=271								
KDAK	**Kodiak Island**	**21.46**	**65**	P	**P**	**18 27 58.0**	**-0.6**		
	comp=Z,12nm,0.4s,baz=280,slow=5.6,SNR=35								
KDAK				LR	LR	18 36 02.3			
	comp=Z,3μm,20.9s,baz=272,slow=36								
	comp=Z,12nm,0.4s								
KDAK	**Kodiak Island**	**21.46**	**65**	P	**P**	**18 27 57.2**	**-1.3**		
KDAK	**Kodiak Island**	**21.46**	**65**	P	**P**	**18 27 57.3**	**-1.3**		
KDAK				pmax	pmax				
	comp=Z,67nm,1.1s								
KDAK	**Kodiak Island**	**21.46**	**65**	P	**P**	**18 27 58.2**	**-0.4**		
	baz=277								
KDAK				S	**S**	**18 31 56.4**	**+0.3**		
	baz=277								
Q20K	**Shuyak Island**	**21.48**	**62**	P	**P**	**18 27 58.4**	**-0.4**		
	baz=275,SNR=18								
Q20K				S	**S**	**18 31 54.1**	**-2.4**		
	baz=275								
JEW	**Eniwo**	**21.49**	**250**	P	**P**	**18 27 59.2**	**+0.2**		
JEW				IAmb	IAmb	18 28 18.3			
	comp=Z,240nm,1.5s								
SPCR	**Spurr Chakacha**	**21.52**	**55**	P	**P**	**18 28 00.3**	**+1.1**		
	baz=268,SNR=21								
SPCR				S	**S**	**18 31 57.8**	**+0.5**		
	baz=268								
IMAR	**Indian Mountai**	**21.57**	**42**	P	**P**	**18 27 59.1**	**-0.6**		
SPU	**Mount Spurr**	**21.59**	**55**	P	**P**	**18 28 00.2**	**+0.2**		
PPLA	**Purkeypile**	**21.65**	**51**	P	**P**	**18 28 00.4**	**-0.4**		
PPLA	**Purkeypile**	**21.65**	**51**	P	**P**	**18 28 02.0**	**+1.2**		
	baz=264,SNR=43								
PPLA				S	**S**	**18 31 60.0**	**0.0**		
	baz=264								
CHUM	**Lake Minchumin**	**21.72**	**48**	P	**P**	**18 28 02.2**	**+0.9**		
	baz=262,SNR=17								
CHUM				S	**S**	**18 32 00.8**	**-0.3**		
	baz=262								
CAST	**Castle Rocks**	**21.76**	**49**	P	**P**	**18 28 02.0**	**+0.2**		
CAST	**Castle Rocks**	**21.76**	**49**	P	**P**	**18 28 02.4**	**+0.6**		
	baz=263,SNR=34								
HOM	**Homer**	**21.80**	**59**	P	**P**	**18 28 02.5**	**+0.3**		
HOM	**Homer**	**21.80**	**59**	P	**P**	**18 28 01.8**	**-0.4**		
	baz=273,SNR=6.9								
H21K	**Melozitna Rive**	**21.86**	**43**	P	**P**	**18 28 02.7**	**-0.2**		
H21K				IAmb	IAmb	18 28 20.1			
	comp=Z,197nm,1.3s								
H21K	**Melozitna Rive**	**21.86**	**43**	P	**P**	**18 28 03.0**	**+0.1**		
	baz=257,SNR=91								
H21K				S	**S**	**18 32 04.4**	**+0.5**		
	baz=257								
SKT	**Skwentna**	**21.88**	**53**	P	**P**	**18 28 03.0**	**-0.1**		
SKT	**Skwentna**	**21.88**	**53**	P	**P**	**18 28 03.4**	**+0.3**		
	baz=267,SNR=48								
SKT				S	**S**	**18 32 05.4**	**+1.2**		
	baz=267								
CNPM	**China Poot**	**22.02**	**60**	P	**P**	**18 28 04.4**	**-0.2**		
CNPM				IAmb	IAmb	18 28 08.2			
	comp=Z,111nm,1.0s								
I21K	**Tanana**	**22.09**	**45**	P	**P**	**18 28 04.6**	**-0.8**		
I21K				IAmb	IAmb	18 28 22.5			
	comp=Z,126nm,1.1s								
I21K	**Tanana**	**22.09**	**45**	P	**P**	**18 28 05.4**	**+0.1**		
	baz=259,SNR=17								
I21K				S	**S**	**18 32 08.5**	**+0.2**		
	baz=259								
YAK	**Yakutsk**	**22.12**	**307**	P	**P**	**18 28 03.9**	**-1.7**		
	comp=Z,193nm,0.9s,baz=89,slow=3.8,SNR=44								
YAK				S	**S**	**18 32 02.0**	**-6.8**		
	comp=Z,6.2nm,0.7s,baz=340,slow=5.1,SNR=3.3								
YAK				LR	LR	18 36 10.8			
	comp=Z,879nm,20.4s,baz=108,slow=36								
	comp=Z,193nm,0.9s								
YAK	**Yakutsk**	**22.12**	**307**	P	**P**	**18 28 03.5**	**-2.1**		
YAK	**Yakutsk**	**22.12**	**307**	*e*P	**P**	**18 28 02.8**	**-2.8**		
YAK				*e**PP	**pwP**	**18 28 12.7**	**+1.8**		
YAK				*e*PPP	PPP	18 28 30.9			
YAK				*e*S	**S**	**18 32 04.9**	**-3.9**		
YAK				*e*SS	**SnSn**	**18 32 35.5**	**+0.5**		
YAK				pmax	pmax				
	comp=Z,313nm,0.9s								
YAK				pmax	pmax				
	comp=N,41nm,0.9s								
YAK				pmax	pmax				
	comp=E,43nm,0.9s								
YAK				smax	smax				
	comp=E,985nm,4.1s								
YAK				smax	smax				
	comp=N,762nm,3.5s								
YAK				MLR	MLR				
	comp=Z,1μm,12.0s								
YAK				MLR	MLR				
	comp=N,1μm,11.0s								
YAK				MLR	MLR				
	comp=E,1μm,11.0s								
BRLK	**Bradley Lake**	**22.18**	**59**	P	**P**	**18 28 05.0**	**-1.4**		
BRLK				IAmb	IAmb	18 28 20.5			
	comp=Z,102nm,1.0s								
SUA	**Susitna One**	**22.23**	**55**	P	**P**	**18 28 06.6**	**-0.3**		
SUA				IAmb	IAmb	18 28 20.5			
	comp=Z,117nm,0.9s								
SUA	**Susitna One**	**22.23**	**55**	P	**P**	**18 28 07.4**	**+0.4**		
	baz=269,SNR=43								
SUA				S	**S**	**18 32 10.8**	**-0.3**		
	baz=269								
BRSE	**Bradley Lake S**	**22.26**	**59**	P	**P**	**18 28 06.2**	**-1.0**		
	baz=273,SNR=10.0								
BRSE				S	**S**	**18 32 11.1**	**-0.4**		
	baz=273								
KTH	**Kantishna Hill**	**22.29**	**49**	P	**P**	**18 28 07.0**	**-0.6**		
KTH				IAmb	IAmb	18 28 23.3			
	comp=Z,118nm,1.0s								
BPAW	**Bear Paw Mtn.**	**22.33**	**48**	P	**P**	**18 28 06.0**	**-1.9**		
BPAW				IAmb	IAmb	18 28 28.8			
	comp=Z,81nm,1.0s								
BPAW	**Bear Paw Mtn.**	**22.33**	**48**	P	**P**	**18 28 08.5**	**+0.5**		
	baz=262,SNR=33								
BPAW				S	**S**	**18 32 13.6**	**+0.7**		
	baz=262								
CUT	**Chulitna**	**22.49**	**52**	P	**P**	**18 28 08.5**	**-1.1**		
CUT				IAmb	IAmb	18 28 12.2			
	comp=Z,99nm,0.8s								
CUT	**Chulitna**	**22.49**	**52**	P	**P**	**18 28 08.9**	**-0.7**		
	baz=267,SNR=13								
M22K	**Willow**	**22.53**	**54**	P	**P**	**18 28 09.1**	**-1.0**		
M22K				IAmb	IAmb	18 28 27.0			
	comp=Z,123nm,0.9s								
TRF	**Thorofare Moun**	**22.56**	**49**	P	**P**	**18 28 09.9**	**-0.7**		
TRF				IAmb	IAmb	18 28 23.7			
	comp=Z,159nm,0.9s								
TRF	**Thorofare Moun**	**22.56**	**49**	P	**P**	**18 28 10.7**	**+0.1**		
	baz=265,SNR=102								
TRF				S	**S**	**18 32 15.6**	**-1.8**		
	baz=265								
MLY	**Manley**	**22.58**	**45**	P	**P**	**18 28 07.4**	**-3.3**		
MLY				IAmb	IAmb	18 28 29.1			
	comp=Z,83nm,1.1s								
MLY	**Manley**	**22.58**	**45**	P	**P**	**18 28 09.8**	**-0.9**		
	baz=260,SNR=25								
MLY				S	**S**	**18 32 17.5**	**-0.1**		
	baz=260								
RC01	**Rabbit Creek A**	**22.71**	**56**	P	**P**	**18 28 10.0**	**-2.0**		
RC01	**Rabbit Creek A**	**22.71**	**56**	P	**P**	**18 28 12.3**	**+0.3**		
	baz=271,SNR=7.7								
RC01				S	**S**	**18 32 18.1**	**-1.8**		
	baz=271								
O22K	**Cooper Landing**	**22.73**	**57**	P	**P**	**18 28 09.5**	**-2.7**		
O22K	**Cooper Landing**	**22.73**	**57**	P	**P**	**18 28 11.5**	**-0.7**		
	baz=272,SNR=6.0								
A21K	**Barrow**	**22.76**	**28**	P	**P**	**18 28 09.0**	**-3.4**		
A21K	**Barrow**	**22.76**	**28**	P	**P**	**18 28 10.7**	**-1.7**		
	baz=239,SNR=8.4								
A21K				S	**S**	**18 32 19.0**	**-1.5**		
	baz=239								
SEW	**Seward**	**22.89**	**58**	P	**P**	**18 28 12.1**	**-1.7**		
SEW				IAmb	IAmb	18 28 25.4			
	comp=Z,111nm,0.9s								
SEW	**Seward**	**22.89**	**58**	P	**P**	**18 28 12.0**	**-1.7**		
	baz=273,SNR=13								
SEW				S	**

MCK pmax pmax
comp=Z,75nm,0.9s
MCK McKinley 23.19 49 P **P** **18 28 15.7 -1.3**
MCK baz=265,SNR=32 S **S** **18 32 26.4 -1.7**
baz=265
RND Reindeer 23.20 50 P **P** **18 28 15.1 -2.0**
RND IAmb IAmb 18 28 28.2
comp=Z,119nm,1.0s
RND Reindeer 23.20 50 P **P** **18 28 15.1 -2.0**
RND pmax pmax
comp=Z,119nm,1.0s
H23K Yukon River 23.22 43 P **P** **18 28 15.4 -1.8**
H23K IAmb IAmb 18 28 44.4
comp=Z,82nm,1.1s
H23K Yukon River 23.22 43 P **P** **18 28 16.8 -0.4**
H23K baz=260,SNR=21 S **S** **18 32 27.9 -0.6**
baz=260
NEA2 Nenana 23.22 47 P **P** **18 28 16.0 -1.2**
NEA2 Nenana 23.22 47 P **P** **18 28 16.6 -0.7**
NEA2 baz=263,SNR=26 S **S** **18 32 28.9 +0.2**
baz=263
COLD Coldfoot 23.26 40 P **P** **18 28 16.5 -1.1**
COLD Coldfoot 23.26 40 P **P** **18 28 15.0 -2.6**
COLD baz=256 S **S** **18 32 27.6 -1.7**
baz=256
WAT1 Susitna Watana 23.30 51 P **P** **18 28 15.8 -2.4**
baz=268
KNK Knik Glacier 23.33 55 P **P** **18 28 16.3 -2.0**
KNK IAmb IAmb 18 28 29.4
comp=Z,135nm,1.0s
KNK Knik Glacier 23.33 55 P **P** **18 28 17.2 -1.2**
KNK baz=271,SNR=37 S **S** **18 32 29.6 -0.9**
baz=271
SML Sawmill 23.39 54 P **P** **18 28 16.0 -3.0**
SML Sawmill 23.39 54 P **P** **18 28 17.5 -1.4**
SML baz=270,SNR=70 S **S** **18 32 29.7 -1.7**
baz=270
KLR Kul'dur 23.61 274 P **P** **18 28 21.4 +0.1**
comp=Z,16nm,0.8s,baz=43,slow=10,SNR=37
KLR PcP **PcP** **18 32 06.0 +0.4**
comp=Z,6.5nm,0.9s,baz=52,slow=5.3,SNR=4.7
KLR S **S** **18 32 36.8 +1.6**
comp=Z,1.5nm,0.9s,baz=274,slow=10,SNR=1.2
KLR LR LR 18 37 27.7
comp=Z,2µm,21.9s,baz=64,slow=36
comp=Z,16nm,0.8s
KLR Kul'dur 23.61 274 *ce* P **P** **18 28 20.2 -1.1**
KLR pmax pmax
comp=Z,82nm,1.7s
MDM Murphy Dome 23.63 46 P **P** **18 28 20.4 -0.9**
WRH Wood River Hil 23.63 47 P **P** **18 28 20.3 -1.0**
WRH IAmb IAmb 18 28 33.1
comp=Z,173nm,1.3s
WAT6 Susitna Watana 23.67 52 P **P** **18 28 20.2 -1.7**
baz=269,SNR=44
WAT6 S **S** **18 32 34.8 -1.4**
baz=269
M23K Glacier View 23.67 54 P **P** **18 28 21.1 -0.7**
baz=271,SNR=31
M23K S **S** **18 32 35.3 -0.7**
baz=271
CCB Clear Creek Bu 23.77 47 P **P** **18 28 20.4 -2.2**
CCB IAmb IAmb 18 28 34.4
comp=Z,208nm,1.5s
TCOL CIGO, UAF Yank 23.77 46 P **P** **18 28 22.1 -0.5**
TCOL CIGO, UAF Yank 23.77 46 P **P** **18 28 22.3 -0.3**
TCOL baz=264 S **S** **18 32 35.8 -1.6**
baz=264
COLA College 23.78 46 P **P** **18 28 22.1 -0.5**
COLA College 23.78 46 *c i* P **P** **18 28 22.4 -0.3**
COLA pmax pmax
comp=Z,84nm,0.9s
COLA College 23.78 46 P **P** **18 28 21.7 -0.9**
baz=264
COLA S **S** **18 32 36.6 -0.8**
baz=264
DHY Denali Highway 23.85 51 P **P** **18 28 22.0 -1.6**
DHY Denali Highway 23.85 51 P **P** **18 28 23.1 -0.5**
baz=268
SCM Sheep Creek Mo 23.86 54 P **P** **18 28 22.3 -1.3**
SCM Sheep Creek Mo 23.86 54 P **P** **18 28 22.3 -1.3**
SCM pmax pmax
comp=Z,239nm,1.2s
SCM Sheep Creek Mo 23.86 54 P **P** **18 28 22.5 -1.2**
baz=271,SNR=41
SCM S **S** **18 32 37.0 -2.1**
baz=271
TOLK Toolik Lake Re 23.88 37 P **P** **18 28 23.0 -0.6**
TOLK Toolik Lake Re 23.88 37 P **P** **18 28 23.4 -0.2**
baz=253,SNR=276
TOLK S **S** **18 32 38.0 -1.2**
baz=253
H24K Noodor Dome 23.89 44 P **P** **18 28 23.2 -0.7**
H24K IAmb IAmb 18 28 43.0
comp=Z,64nm,1.0s
H24K Noodor Dome 23.89 44 P **P** **18 28 23.6 -0.3**
baz=262,SNR=40
H24K S **S** **18 32 40.6 +1.2**
baz=262
P23K Montague Islan 23.92 58 P **P** **18 28 23.0 -1.1**
baz=275
P23K S **S** **18 32 40.1 +0.3**
baz=275
POKR Poker Plat Res 23.98 45 P **P** **18 28 23.1 -1.6**
POKR IAmb IAmb 18 28 35.0
comp=Z,83nm,1.1s
POKR Poker Plat Res 23.98 45 P **P** **18 28 24.4 -0.3**
baz=264,SNR=11
POKR S **S** **18 32 38.9 -1.9**
baz=264
GLI Glacier Island 24.01 56 P **P** **18 28 24.1 -0.9**
GLI IAmb IAmb 18 28 34.9
comp=Z,101nm,1.1s
GLI Glacier Island 24.01 56 P **P** **18 28 23.6 -1.3**
baz=274,SNR=13
GLI S **S** **18 32 39.2 -2.1**
baz=274
HDA Harding Lake 24.12 47 P **P** **18 28 24.2 -1.8**
HDA Harding Lake 24.12 47 P **P** **18 28 24.9 -1.1**
baz=266,SNR=16
HDA S **S** **18 32 47.3 +4.3**
baz=266
HDA S **S** **18 32 47.3 +4.3**
baz=266
IL31 24.18 46 P **P** **18 28 24.9 -1.6**
IL31 IAmb IAmb 18 28 38.8
comp=Z,59nm,0.9s
ILAR Eielson Array 24.18 46 P **P** **18 28 25.2 -1.3**
comp=Z,34nm,1.0s,baz=248,slow=7.3,SNR=96
ILAR LR LR 18 38 30.3
comp=Z,3µm,18.3s,baz=239,slow=38
comp=Z,34nm,1.0s
ILAR Eielson Array 24.18 46 P **P** **18 28 25.1 -1.4**
FID Port Fidalgo 24.32 56 IAmb IAmb 18 28 34.2
comp=Z,88nm,1.1s
HIN Hinchinbrook I 24.33 57 P **P** **18 28 27.2 -0.7**
HIN IAmb IAmb 18 28 35.5
comp=Z,69nm,0.8s
M24K Tolsona, Glenn 24.40 53 P **P** **18 28 27.9 -0.7**
M24K Tolsona, Glenn 24.40 53 P **P** **18 28 28.8 +0.1**
baz=272,SNR=109
M24K S **S** **18 32 53.3 +5.6**
baz=272
Q23K Middleton Isla 24.51 59 P **P** **18 28 28.2 -1.3**
MID Middleton Isla 24.52 59 P **P** **18 28 29.9 +0.4**
MID Middleton Isla 24.52 59 P **P** **18 28 30.0 +0.4**
MID pmax pmax
comp=Z,162nm,0.8s
ZEA Zeya 24.53 286 *eP* **P** **18 28 28.7 -1.1**
ZEA *eS* **S** **18 32 43.6 -6.2**
ZEA pmax pmax
comp=E,20nm,1.2s
ZEA pmax pmax
comp=Z,30nm,1.4s
ZEA pmax pmax
comp=E,200nm,4.3s
ZEA pmax pmax
comp=Z,300nm,4.9s
ZEA smax smax
comp=E,1µm,12.9s

ZEA MLR MLR
comp=N,800nm,16.0s
ZEA MLR MLR
comp=E,700nm,16.0s
ZEA MLR MLR
comp=Z,800nm,20.0s
KLU Klutina 24.54 54 P **P** **18 28 29.2 -0.7**
KLU IAmb IAmb 18 28 38.5
comp=Z,87nm,0.8s
KLU Klutina 24.54 54 P **P** **18 28 29.3 -0.7**
KLU baz=273,SNR=56 S **S** **18 32 50.4 +0.3**
baz=273
K24K Donnelly Dome 24.60 49 P **P** **18 28 29.5 -0.9**
baz=268,SNR=18
K24K S **S** **18 32 55.0 +4.3**
baz=268
DIV Divide 24.64 55 P **P** **18 28 29.8 -1.0**
DIV IAmb IAmb 18 28 58.2
comp=Z,67nm,1.0s
EYAK Cordova Ski Ar 24.69 57 P **P** **18 28 30.4 -0.8**
EYAK IAmb IAmb 18 28 33.3
comp=Z,70nm,0.8s
EYAK Cordova Ski Ar 24.69 57 P **P** **18 28 30.9 -0.3**
baz=275,SNR=24
EYAK S **S** **18 32 53.4 +1.2**
baz=275
PAX Paxson 24.72 51 P **P** **18 28 30.2 -1.3**
PAX IAmb IAmb 18 28 44.3
comp=Z,117nm,1.1s
PAX Paxson 24.72 51 P **P** **18 28 30.2 -1.3**
PAX pmax pmax
comp=Z,117nm,1.1s
PAX Paxson 24.72 51 P **P** **18 28 31.1 -0.4**
baz=270,SNR=70
PAX S **S** **18 32 53.2 +0.3**
baz=270
TIXI Tiksi 24.73 331 P **P** **18 28 31.2 -0.2**
comp=Z,38nm,0.7s,baz=95,slow=23,SNR=77
TIXI PcP **PcP** **18 32 07.9 +0.3**
comp=Z,5.9nm,0.5s,baz=102,slow=7.3,SNR=7.1
TIXI ScP **ScP** **18 35 45.6 -0.2**
comp=Z,4.6nm,1.0s,baz=93,slow=22,SNR=5.4
TIXI LR LR 18 38 10.3
comp=Z,742nm,18.3s,baz=181,slow=37
comp=Z,38nm,0.7s
TIXI Tiksi 24.73 331 P **P** **18 28 30.1 -1.3**
TIXI IAmb IAmb 18 28 35.1
comp=Z,119nm,1.2s
TIXI Tiksi 24.73 331 *ce* P **P** **18 28 30.9 -0.5**
TIXI pmax pmax
comp=Z,153nm,1.7s
TIXI MLR MLR
comp=Z,940nm,17.0s
J25K Salcha River, 24.82 47 P **P** **18 28 30.1 -2.3**
J25K IAmb IAmb 18 28 43.6
comp=Z,42nm,0.7s
J25K Salcha River, 24.82 47 P **P** **18 28 30.7 -1.7**
baz=267,SNR=46
J25K S **S** **18 32 58.2 +3.9**
baz=267
HARP HAARP 24.87 52 P **P** **18 28 31.4 -1.4**
baz=272,SNR=24
HARP S **S** **18 33 01.7 +6.5**
baz=272
RIDG Independent Ri 25.01 49 P **P** **18 28 31.5 -2.6**
RIDG IAmb IAmb 18 28 40.3
comp=Z,83nm,1.1s
RIDG Independent Ri 25.01 49 P **P** **18 28 32.1 -1.9**
baz=269,SNR=21
RIDG S **S** **18 33 04.6 +7.2**
baz=269
N25K Chitina, Valde 25.17 54 IAmb IAmb 18 28 49.7
comp=Z,67nm,0.8s
N25K Chitina, Valde 25.17 54 P **P** **18 28 34.9 -0.6**
baz=274,SNR=36
N25K S **S** **18 33 01.9 +1.8**
baz=274
BMRM Bremner River 25.21 56 P **P** **18 28 35.1 -0.9**
baz=275,SNR=22
BMRM S **S** **18 33 01.5 +0.7**
baz=275
DOT Dot Lake 25.36 49 P **P** **18 28 35.4 -1.8**
SCRK Sand Creek 25.39 48 IAmb IAmb 18 28 44.0
comp=Z,74nm,1.0s
SCRK Sand Creek 25.39 48 P **P** **18 28 35.9 -1.8**
baz=269,SNR=46
SCRK S **S** **18 33 11.4 +7.8**
baz=269
MENT Mentasta 25.52 51 P **P** **18 28 37.8 -0.9**
MENT IAmb IAmb 18 28 51.5
comp=Z,104nm,1.2s
GLB Gilahina Butte 25.56 54 IAmb IAmb 18 28 54.5
comp=Z,78nm,0.8s
J26L Joseph Creek 25.59 47 P **P** **18 28 37.7 -1.7**
baz=269,SNR=24
L26K Log Cabin Wild 25.69 51 P **P** **18 28 39.3 -0.9**
L26K Log Cabin Wild 25.69 51 P **P** **18 28 39.6 -0.6**
baz=272,SNR=22
L26K S **S** **18 33 09.5 +1.3**
baz=272
M26K Nabesna, AK 25.88 52 P **P** **18 28 40.3 -1.6**
baz=274,SNR=32
M26K S **S** **18 33 12.5 +1.3**
baz=274
MCARA McCarthy VSAT 25.94 54 P **P** **18 28 41.1 -1.4**
baz=276,SNR=7.0
MCARA S **S** **18 33 12.2 +0.1**
baz=276
USA0B Ussuriysk Arra 26.07 263 P **P** **18 28 42.8 -1.0**
USA0B Ussuriysk Arra 26.07 263 P **P** **18 28 42.8 -1.0**
USA0B pmax pmax
comp=Z,45nm,1.2s
USRK Ussuriysk Ar. 26.07 263 P **P** **18 28 44.7 +1.0**
comp=Z,27nm,0.8s,baz=56,slow=8.3,SNR=32
USRK PcP **PcP** **18 32 12.2 +1.1**
comp=Z,6.0nm,0.8s,baz=50,slow=2.2,SNR=5.3
USRK LR LR 18 38 49.0
comp=Z,2µm,21.5s,baz=47,slow=36
comp=Z,27nm,0.8s
USRK Ussuriysk Ar. 26.07 263 P **P** **18 28 42.9 -0.8**
USRK **PcP** **18 32 09.9 -1.2**
USRK Ussuriysk Ar. 26.07 263 P **P** **18 28 42.9 -0.8**
USRK 18 32 09.9
TGL Tana Glacier 26.10 56 P **P** **18 28 43.4 -0.7**
TGL IAmb IAmb 18 28 58.6
comp=Z,93nm,0.9s
K27K Chicken 26.23 48 P **P** **18 28 44.1 -1.0**
baz=271
M27K Edge Creek, AK 26.40 52 P **P** **18 28 47.2 +0.4**
baz=275,SNR=83
M27K S **S** **18 33 18.0 -1.6**
baz=275
JSD Sado 26.58 246 P **P** **18 28 48.2 -0.2**
JSD IAmb IAmb 18 29 12.3
comp=Z,80nm,1.1s
MESA MESA 26.61 57 P **P** **18 28 46.2 -2.6**
MESA MESA 26.61 57 P **P** **18 28 47.2 -1.6**
baz=279
VLA Vladivostok 26.77 261 *i* P **P** **18 28 50.3 +0.2**
VLA pmax pmax
comp=Z,33nm,0.8s
CTG Chitna Glacier 26.80 55 P **P** **18 28 49.1 -1.3**
baz=278
BVCY Beaver Creek 26.87 52 P **P** **18 28 50.2 -0.7**
baz=275,SNR=7.0
LOGN Logan Glacier 26.98 55 P **P** **18 28 50.8 -1.3**
LOGN IAmb IAmb 18 29 08.1
comp=Z,80nm,1.0s
YUK3 Moose Creek 27.12 53 P **P** **18 28 51.3 -2.0**
baz=277,SNR=26
YUK3 S **S** **18 33 30.4 -0.8**
baz=277
MDJ Mudanjiang 27.23 266 P **P** **18 28 53.9 -0.4**
MDJ PcP **PcP** **18 32 14.1 +0.2**
MDJ S **S** **18 33 31.6 -1.2**
MDJ sS sS 18 33 41.8 +3.0
MDJ pmax pmax
comp=Z,37nm,1.0s
MDJ pmax pmax
comp=Z,370nm,10.3s
MDJ LR LR
comp=Z,2µm,17.4s
MDJ LR LR
comp=Z,2µm,18.4s
MDJ LR LR
comp=Z,3µm,21.4s

DAWY Dawson 27.41 48 P **P** **18 28 55.6 -0.2**
baz=273,SNR=31
DAWY S **S** **18 33 36.8 +1.3**
baz=273
PINM Pinnacle 27.46 57 P **P** **18 28 55.4 -0.9**
baz=280
YUK8 Steele Glacier 27.51 54 P **P** **18 28 55.4 -1.5**
baz=278,SNR=8.4
YUK8 S **S** **18 33 36.8 -0.6**
baz=278
MJAR Matsushiro Arr 27.72 243 P **P** **18 29 00.5 +1.8**
comp=Z,8.2nm,0.7s,baz=8.6,slow=10.0,SNR=24
MJAR PcP **PcP** **18 32 15.8 +0.6**
comp=Z,5.3nm,0.8s,baz=87,slow=2.6,SNR=6.7
MJAR LR LR 18 39 42.5
comp=Z,1µm,21.6s,baz=41,slow=36
comp=Z,8.2nm,0.7s
MJAR Matsushiro Arr 27.72 243 PcP **PcP** **18 32 16.1 +0.9**
MJB9 Matsu-Tunnel 27.72 244 P **P** **18 28 58.7 0.0**
MJB9 IAmb IAmb 18 29 04.9
comp=Z,59nm,0.8s
MAJO Matsushiro 27.72 243 P **P** **18 28 58.0 -0.7**
MAJO IAmb IAmb 18 29 04.9
comp=Z,61nm,0.8s
MAJO PcP **PcP** **18 32 15.7 +0.5**
MAJO Matsushiro 27.72 243 *d i* P **P** **18 28 59.9 +1.2**
MAJO pmax pmax
comp=Z,66nm,0.8s
I29M Ogilvie Camp, 27.83 45 P **P** **18 28 58.2 -1.2**
I29M Ogilvie Camp, 27.83 45 P **P** **18 28 59.1 -0.4**
baz=272
BNX BinXian 27.90 270 ⇓ P **P** **18 29 00.1 -0.1**
BNX PcP **PcP** **18 32 15.6 +0.2**
BNX S **S** **18 33 34.7 -8.6**
BNX pmax pmax
comp=Z,70nm,0.6s
BNX pmax pmax
comp=Z,350nm,4.8s
BNX LR LR
comp=Z,2µm,10.8s
BNX LR LR
comp=Z,2µm,12.0s
BNX LR LR
comp=Z,3µm,12.3s
PNL Peninsula 27.96 58 P **P** **18 28 59.6 -1.1**
baz=282
YUK4 Talbot Arm 28.04 54 P **P** **18 29 00.6 -1.0**
baz=279,SNR=13
YUK6 Outpost Mounta 28.24 55 P **P** **18 29 03.3 -0.1**
baz=280,SNR=8.6
YUK6 S **S** **18 33 50.8 +2.0**
baz=280
EPYK Eagle Plains 28.46 43 P **P** **18 29 04.1 -1.0**
baz=271,SNR=43
HYT Haines Junctio 28.67 55 P **P** **18 29 05.2 -2.0**
baz=281,SNR=24
HYT S **S** **18 33 55.5 +0.1**
baz=281
M30M Minto, Yukon 28.72 51 P **P** **18 29 06.5 -1.0**
M30M Minto, Yukon 28.72 51 P **P** **18 29 07.6 +0.1**
baz=278,SNR=8.2
M30M S **S** **18 34 00.6 +4.5**
baz=278
N30M Aishikik Lake 28.76 53 P **P** **18 29 06.8 -1.0**
baz=280
INU Inuyama 29.25 243 P **P** **18 29 13.6 +1.2**
O30N Mendenhall 29.36 55 P **P** **18 29 13.0 -0.2**
baz=282,SNR=7.6
O30N S **S** **18 34 04.6 -1.5**
baz=282
N31M Braeburn, Yuko 29.37 53 P **P** **18 29 14.4 +1.2**
baz=281
PLBC Pleasant Camp 29.52 57 P **P** **18 29 14.5 0.0**
baz=284
JHJ Hachijo jima 2 29.59 237 LR LR 18 43 26.2
comp=Z,130nm,18.6s,baz=96,slow=41
INK Inuvik 29.67 39 P **P** **18 29 16.3 +0.6**
comp=Z,26nm,0.9s,baz=262,slow=6.3,SNR=19
INK LR LR 18 41 37.2
comp=Z,1µm,21.5s,baz=258,slow=37
comp=Z,26nm,0.9s
INK Inuvik 29.67 39 P **P** **18 29 15.2 -0.5**
INK IAmb IAmb 18 29 26.0
comp=Z,37nm,0.9s
INK Inuvik 29.67 39 P **P** **18 29 15.3 -0.5**
INK pmax pmax
comp=Z,37nm,1.0s
INK Inuvik 29.67 39 P **P** **18 29 15.4 -0.4**
baz=271,SNR=24
INK S **S** **18 34 08.5 -2.2**
baz=271
M31M Drury Creek, Y 29.89 51 P **P** **18 29 17.0 -0.8**
baz=281,SNR=35
SKAG Skagway 30.03 57 P **P** **18 29 18.5 -0.5**
SKAG Skagway 30.03 57 P **P** **18 29 19.6 +0.6**
baz=285
SKAG S **S** **18 34 20.6 +4.1**
baz=285
CN2 Changchun 30.14 268 *eP* **P** **18 29 19.7 -0.4**
CN2 PcP **PcP** **18 32 19.9 -1.2**
CN2 S **S** **18 34 15.1 -3.4**
CN2 pmax pmax
comp=Z,30nm,0.9s
CN2 pmax pmax
comp=Z,200nm,6.0s
CN2 LR LR
comp=Z,1µm,14.0s
CN2 LR LR
comp=Z,1µm,14.0s
CN2 LR LR
comp=Z,2µm,14.0s
FARO Faro, Yukon 30.36 51 P **P** **18 29 20.8 -1.2**
baz=281
BOD Bodaibo 30.47 300 *eP* **P** **18 29 20.9 -2.0**
BOD pmax pmax
comp=Z,45nm,1.9s
HIA Hailar 30.61 282 *i* P **P** **18 29 22.9 -1.4**
HIA pmax pmax
comp=Z,10.0nm,0.7s
SIT Sitka 30.71 62 P **P** **18 29 23.2 -1.8**
baz=289
JIS Juneau Island 30.82 59 IAmb IAmb 18 29 34.8
comp=Z,55nm,0.9s
P33M Teslin, Yukon 31.07 55 P **P** **18 29 27.6 -0.6**
P33M IAmb IAmb 18 29 42.3
comp=Z,68nm,1.0s
P33M Teslin, Yukon 31.07 55 P **P** **18 29 27.9 -0.4**
baz=285,SNR=36
MMPY Sheldon Lake, 31.24 50 P **P** **18 29 28.1 -1.6**
baz=282,SNR=21
JHS Saijyo 31.61 248 P **P** **18 29 33.4 +0.2**
JHS PcP **PcP** **18 32 26.2 +1.0**
CRAG Craig 32.41 64 P **P** **18 29 40.8 +0.8**
CRAG IAmb IAmb 18 29 43.6
comp=Z,73nm,1.2s
CRAG Craig 32.41 64 P **P** **18 29 39.8 -0.2**
baz=292
SNY Shenyang 32.42 267 ⇑ P **P** **18 29 40.9 +0.7**
SNY S **S** **18 34 59.7 +5.5**
SNY pmax pmax
comp=Z,57nm,1.0s
SNY LR LR
comp=Z,3µm,18.8s
SNY LR LR
comp=Z,2µm,19.2s
SNY LR LR
comp=Z,3µm,20.0s
A36M Sachs Harbour 32.43 32 P **P** **18 29 39.5 -0.4**
baz=272,SNR=8.4
WRAK Wrangell Islan 32.47 62 P **P** **18 29 40.8 +0.2**
WRAK IAmb IAmb 18 29 50.0
comp=Z,51nm,0.9s
WRAK Wrangell Islan 32.47 62 P **P** **18 29 41.0 +0.5**
baz=291
WRAK S **S** **18 34 54.6 -0.1**
baz=291
KS19 Wonju Array Si 32.76 257 IAmb IAmb 18 29 48.0
comp=Z,29nm,0.9s
KSRS Korea Array 32.76 257 P **P** **18 29 45.1 +1.9**
comp=Z,20nm,0.9s,baz=45,slow=8.8,SNR=55
KSRS PcP **PcP** **18 32 29.1 +0.8**
comp=Z,6.3nm,1.0s,baz=31,slow=2.0,SNR=9.0
KSRS ScP **ScP** **18 36 12.7 +1.0**
comp=Z,1.8nm,0.9s,baz=58,slow=3.1,SNR=5.6
KSRS LR LR 18 43 10.6
comp=Z,694nm,21.2s,baz=50,slow=37
comp=Z,20nm,0.9s

KSAR	**Wonju Array Be**	**32.79**	**257**	PcP	**PcP**	**18 32 28.7**	**+0.4**
KSAR				ScP	**ScP**	**18 36 12.5**	**+0.8**
CIT	**Chita**	**32.86**	**290**	*e*P	**P**	**18 29 44.2**	**+0.1**
CIT				*e*		18 29 52.8	
CIT				pmax	pmax		
	comp=Z,104nm,1.2s						
TGTN	**Hyland Airport**	**32.87**	**51**	P	**P**	**18 29 44.5**	**+0.5**
	baz=286						
DLBC	**Dease Lake**	**32.96**	**57**	LR	LR	18 43 16.3	
	comp=Z,2μm,21.1s,baz=308,slow=37						
DLBC	**Dease Lake**	**32.96**	**57**	P	**P**	**18 29 45.0**	**+0.1**
	baz=290,SNR=18						
DLBC				S	**S**	**18 35 02.5**	**+0.2**
	baz=290						
C36M	**Paulatuk**	**33.03**	**37**	P	**P**	**18 29 44.8**	**-0.5**
C36M	**Paulatuk**	**33.03**	**37**	P	**P**	**18 29 45.1**	**-0.2**
	baz=277,SNR=30						
C36M				S	**S**	**18 35 03.0**	**0.0**
	baz=277						
T35M	**Bob Quinn**	**33.35**	**60**	P	**P**	**18 29 49.2**	**+0.9**
	baz=291,SNR=7.9						
INCN	**Inchon**	**33.48**	**258**	P	**P**	**18 29 50.3**	**+0.7**
INCN				IAmb	IAmb	18 29 57.3	
	comp=Z,47nm,1.4s						
INCN	**Inchon**	**33.48**	**258**	P	**P**	**18 29 50.3**	**+0.7**
INCN				pmax	pmax		
	comp=Z,47nm,1.4s						
JCJ	**Chichijima**	**33.54**	**227**	LR	LR	18 40 26.5	
	comp=Z,748nm,21.7s,baz=58,slow=31						
TJN	**Taejon**	**33.83**	**256**	P	**P**	**18 29 52.6**	**0.0**
TJN	**Taejon**	**33.83**	**256** *ce*	P	**P**	**18 29 53.9**	**+1.3**
JNU	**Nakatsue**	**34.24**	**248**	LR	LR	18 45 12.5	
	comp=Z,398nm,19.9s,baz=56,slow=39						
JNU	**Nakatsue**	**34.24**	**248**	P	**P**	**18 29 55.7**	**-0.5**
H11N2	**WAKE ISLAND Hy**	**34.33**	**184**	T	T	19 06 17.9	
	baz=2.5,slow=76,SNR=2557						
H11N3	**WAKE ISLAND Hy**	**34.35**	**184**	T	T	19 06 22.1	
	baz=2.5,slow=76,SNR=4499						
H11N1	**WAKE ISLAND Hy**	**34.35**	**184**	T	T	19 06 19.2	
	baz=2.5,slow=76,SNR=4874						
DL2	**Dalian**	**35.43**	**264**	P	**P**	**18 30 07.4**	**+1.0**
DL2				S	**S**	**18 35 42.2**	**+1.4**
DL2				pmax	pmax		
	comp=Z,26nm,1.0s						
DL2				LR	LR		
	comp=Z,2μm,21.6s						
DL2				LR	LR		
	comp=Z,1μm,20.9s						
DL2				LR	LR		
	comp=Z,2μm,24.7s						
H11S1	**WAKE ISLAND Hy**	**35.56**	**184**	T	T	19 07 49.7	
	baz=2.6,slow=76,SNR=7317						
H11S3	**WAKE ISLAND Hy**	**35.57**	**184**	T	T	19 07 50.7	
	baz=2.6,slow=76,SNR=5755						
H11S2	**WAKE ISLAND Hy**	**35.57**	**184**	T	T	19 07 51.4	
	baz=2.6,slow=76,SNR=7859						
XLT	**XiLinHaoTe**	**35.60**	**276**	*e*P	**P**	**18 30 07.8**	**-0.1**
XLT				pP	pwP	18 30 11.5	-0.1
XLT				sP	sP	18 30 15.6	+2.5
XLT				S	**S**	**18 35 41.6**	**-1.8**
XLT				sS	sS	18 35 54.6	+5.1
XLT				SS	**SnSn**	**18 37 58.0**	**-5.8**
XLT				pmax	pmax		
	comp=Z,16nm,0.9s						
XLT				pmax	pmax		
	comp=Z,210nm,3.6s						
XLT				LR	LR		
	comp=Z,2μm,14.3s						
XLT				LR	LR		
	comp=Z,2μm,15.5s						
JSU	**Suzuyama**	**35.71**	**247**	P	**P**	**18 30 09.9**	**+1.0**
JSU				IAmb	IAmb	18 30 13.6	
	comp=Z,56nm,1.0s						
BBB	**Bella Bella**	**36.50**	**67**	LR	LR	18 43 31.9	
	comp=Z,2μm,21.2s,baz=286,slow=34						
IRK	**Irkutsk**	**37.82**	**295**	*e*P	**P**	**18 30 28.6**	**+1.9**
IRK				pmax	pmax		
	comp=Z,48nm,2.1s						
BJI	**Beijing**	**37.91**	**271**	P	**P**	**18 30 28.9**	**+1.4**
BJI				pP	**sP**	**18 30 30.3**	**-2.4**
BJI				PcP	**PcP**	**18 32 44.2**	**+0.9**
BJI				S	**S**	**18 36 18.9**	**+0.4**
BJI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BJI				pmax	pmax		
	comp=Z,120nm,3.7s						
BJI				LR	LR		
	comp=Z,2μm,14.7s						
BJI				LR	LR		
	comp=Z,2μm,17.2s						
BJI				LR	LR		
	comp=Z,2μm,13.5s						
NRIK	**Noril'sk**	**38.26**	**325**	P	**P**	**18 30 30.0**	**-0.1**
	comp=Z,10nm,0.9s,baz=85,slow=7.4,SNR=17						
NRIK				LR	LR	18 47 45.8	
	comp=Z,883nm,19.2s,baz=78,slow=39						
	comp=Z,10nm,0.9s						
NRIK	**Noril'sk**	**38.26**	**325**	P	**P**	**18 30 29.1**	**-1.0**
NRIK	**Noril'sk**	**38.26**	**325** *ce*	P	**P**	**18 30 29.2**	**-0.9**
NRIK				pmax	pmax		
	comp=Z,35nm,1.4s						
ULN	**Ulaanbaatar**	**38.56**	**287**	P	**P**	**18 30 32.4**	**-0.8**
ULN				ScP	**ScP**	**18 36 33.7**	**+0.9**
ULN	**Ulaanbaatar**	**38.56**	**287** *ce*	P	**P**	**18 30 33.3**	**+0.1**
ULN				pmax	pmax		
	comp=Z,27nm,1.0s						
YKA	**Yellowknife Ar**	**38.61**	**46**	P	**P**	**18 30 33.5**	**+0.3**
	comp=Z,19nm,0.9s,baz=297,slow=8.0,SNR=38						
YKA				PcP	**PcP**	**18 32 45.5**	**+0.4**
	comp=Z,2.0nm,0.7s,baz=295,slow=3.4,SNR=6.1						
YKA				LR	LR	18 48 15.6	
	comp=Z,1μm,18.1s,baz=290,slow=39						
	comp=Z,19nm,0.9s						
YKA	**Yellowknife Ar**	**38.61**	**46**	*i* P	**P**	**18 30 33.5**	**+0.3**
YKA				pmax	pmax		
	comp=Z,18nm,0.9s						
SONM	**Songino Array**	**38.95**	**287**	P	**P**	**18 30 36.8**	**+0.4**
	comp=Z,10nm,0.8s,baz=61,slow=9.0,SNR=25						
SONM				PcP	**PcP**	**18 32 47.3**	**+0.7**
	comp=Z,8.4nm,0.9s,baz=63,slow=2.4,SNR=6.6						
SONM				ScP	**S**	**18 36 34.4**	**-0.1**
	comp=Z,4.9nm,1.0s,baz=28,slow=3.1,SNR=7.1						
SONM				LR	LR	18 47 59.1	
	comp=Z,2μm,18.1s,baz=58,slow=38						
	comp=Z,10nm,0.8s						
SONM	**Songino Array**	**38.95**	**287**	P	**P**	**18 30 35.8**	**-0.6**
SONM				PcP	**PcP**	**18 32 47.4**	**+0.7**
ZAK	**Zakamensk**	**39.30**	**293**	*e*P	**P**	**18 30 38.8**	**-0.5**
ZAK				*e*		18 32 46.6	
ZAK				pmax	pmax		
	comp=Z,15nm,1.3s						
MOY	**Mondy**	**39.86**	**295**	*e*P	**P**	**18 30 43.7**	**-0.2**
MOY				pmax	pmax		
	comp=Z,35nm,1.8s						
TIA	**Tai'an**	**39.89**	**265**	P	**P**	**18 30 44.0**	**-0.2**
TIA				S	S	18 36 59.0	+10
TIA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TIA				pmax	pmax		
	comp=Z,130nm,3.8s						
TIA				LR	LR		
	comp=Z,1μm,20.6s						
TIA				LR	LR		
	comp=Z,2μm,18.6s						
TIA				LR	LR		
	comp=Z,3μm,21.4s						
HHC	**Hu-ho-hao-te**	**40.11**	**275**	*e*P	**P**	**18 30 48.5**	**+2.5**
HHC				S	**S**	**18 36 48.7**	**-3.2**
HHC				sS	sS	18 37 07.6	+10
HHC				SS	**SS**	**18 39 49.0**	**-0.1**
HHC				pmax	pmax		
	comp=Z,60nm,1.0s						
HHC				pmax	pmax		
	comp=Z,220nm,5.1s						
HHC				LR	LR		
	comp=Z,3μm,16.3s						
HHC				LR	LR		
	comp=Z,4μm,14.7s						
HHC				LR	LR		
	comp=Z,2μm,15.8s						
RES	**Resolute Bay**	**40.26**	**24**	LR	LR	18 48 20.6	
	comp=Z,383nm,21.7s,baz=298,slow=38						
RES	**Resolute Bay**	**40.26**	**24**	P	**P**	**18 30 46.5**	**-0.3**
RES	**Resolute Bay**	**40.26**	**24**	P	**P**	**18 30 46.5**	**-0.3**
RES				pmax	pmax		
	comp=Z,24nm,1.0s						

HNS	**HongShan**	**40.51**	**269**	⇓P	**P**	**18 30 49.9**	**+0.7**
HNS				S	**S**	**18 36 58.1**	**+0.5**
HNS				pmax	pmax		
	comp=Z,54nm,1.1s						
HNS				LR	LR		
	comp=Z,710nm,15.9s						
HNS				LR	LR		
	comp=Z,2μm,15.7s						
HNS				LR	LR		
	comp=Z,1μm,15.2s						
JOW	**Kunigami**	**40.55**	**245**	LR	LR	18 47 13.7	
	comp=Z,597nm,21.8s,baz=82,slow=36						
JOW	**Kunigami**	**40.55**	**245**	P	**P**	**18 30 48.8**	**-1.0**
JOW				IAmb	IAmb	18 30 54.3	
	comp=Z,102nm,1.2s						
PGC	**Sidney**	**40.88**	**69**	P	**P**	**18 30 51.5**	**-0.7**
KIP	**Kipapa**	**40.92**	**130**	P	**P**	**18 30 55.5**	**+2.8**
KIP	**Kipapa**	**40.92**	**130** *ce*	P	**P**	**18 30 55.0**	**+2.3**
KIP				pmax	pmax		
	comp=Z,125nm,1.0s						
BTO	**Baotou**	**41.17**	**276**	*e*P	**P**	**18 30 54.5**	**-0.3**
BTO				S	**S**	**18 37 09.3**	**+1.7**
BTO				LR	LR		
	comp=Z,7μm,20.6s						
BTO				LR	LR		
	comp=Z,9μm,15.2s						
B04A	**Port Angeles**	**41.19**	**70**	P	**P**	**18 30 53.2**	**-1.5**
SSE	**Sheshan**	**41.19**	**256**	P	**P**	**18 30 57.9**	**+3.0**
SSE				S	**S**	**18 37 09.3**	**+1.4**
SSE				pmax	pmax		
	comp=Z,12nm,0.8s						
SSE				pmax	pmax		
	comp=Z,120nm,3.5s						
SSE				LR	LR		
	comp=Z,190nm,20.0s						
SSE				LR	LR		
	comp=Z,260nm,17.7s						
WISH	**Wishkah**	**41.58**	**71**	P	**P**	**18 30 56.2**	**-1.8**
WISH				IAmb	IAmb	18 31 20.1	
	comp=Z,51nm,1.0s						
TIY	**Taiyuan**	**41.64**	**271**	*e*P	**P**	**18 31 01.6**	**+3.0**
TIY				S	**S**	**18 37 16.4**	**+1.8**
TIY				pmax	pmax		
	comp=Z,160nm,3.6s						
TIY				LR	LR		
	comp=Z,2μm,15.5s						
TIY				LR	LR		
	comp=Z,1μm,14.8s						
TIY				LR	LR		
	comp=Z,1μm,16.5s						
D03D	**Eldon**	**41.72**	**70**	P	**P**	**18 31 00.3**	**+1.2**
	baz=305,SNR=16						
D03D				S	**S**	**18 37 17.6**	**+2.2**
	baz=305						
NJ2	**Nanjing**	**41.83**	**259**	*e*P	**P**	**18 31 01.5**	**+1.4**
NJ2				pP	**sP**	**18 31 03.5**	**-1.9**
NJ2				S	**S**	**18 37 18.5**	**+1.2**
NJ2				sS	**sS**	**18 37 25.8**	**+2.3**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
NJ2				LR	LR		
	comp=Z,1μm,13.7s						
NJ2				LR	LR		
	comp=Z,850nm,13.0s						
NJ2				LR	LR		
	comp=Z,1μm,13.3s						
B06A	**Marblemount**	**42.04**	**68**	P	**P**	**18 31 00.7**	**-0.9**
D04E	**Lakebay**	**42.10**	**71**	P	**P**	**18 31 04.4**	**+2.2**
	baz=306						
KNGR	**Kungurtug, Tuv**	**42.28**	**296**	*i* P	**P**	**18 31 03.8**	**0.0**
KNGR				pmax	pmax		
	comp=Z,23nm,1.1s						
D05A	**Enumclaw**	**42.53**	**70**	P	**P**	**18 31 05.6**	**-0.1**
D05A				IAmb	IAmb	18 31 31.8	
	comp=Z,47nm,1.0s						
E04D	**Cinebar**	**42.58**	**71**	P	**P**	**18 31 07.2**	**+1.1**
	baz=306,SNR=12						
F04D	**Rainier, OR**	**42.61**	**72**	P	**P**	**18 31 05.3**	**-1.1**
	baz=307						
MHA	**Mahukona**	**42.95**	**128**	P	**P**	**18 31 10.0**	**+0.6**
MHA	**Mahukona**	**42.95**	**128**	P	**P**	**18 31 10.0**	**+0.6**
G03D	**McMinnville, O**	**42.99**	**73**	P	**P**	**18 31 08.7**	**-0.7**
	baz=307						
F04A	**Amboy**	**43.03**	**72**	P	**P**	**18 31 08.7**	**-1.1**
LTY	**Liberty**	**43.22**	**69**	P	**P**	**18 31 10.5**	**-0.9**
B08A	**Colville Reser**	**43.30**	**67**	P	**P**	**18 31 10.6**	**-1.4**
I02E	**Swisshome, OR**	**43.33**	**75**	P	**P**	**18 31 11.5**	**-0.7**
	baz=308						
COR	**Corvallis**	**43.34**	**74**	P	**P**	**18 31 11.7**	**-0.6**
COR				IAmb	IAmb	18 31 15.6	
	comp=Z,41nm,0.8s						
COR	**Corvallis**	**43.34**	**74**	P	**P**	**18 31 11.7**	**-0.6**
COR				pmax	pmax		
	comp=Z,41nm,0.8s						
POHA	**Pohakuloa**	**43.50**	**128**	P	**P**	**18 31 12.3**	**-1.8**
EDM	**Edmonton**	**43.67**	**58**	P	**P**	**18 31 14.1**	**-0.8**
EDM				IAmb	IAmb	18 31 22.3	
	comp=Z,51nm,0.9s						
EDM	**Edmonton**	**43.67**	**58**	P	**P**	**18 31 14.1**	**-0.8**
EDM				pmax	pmax		
	comp=Z,51nm,0.9s						
H04D	**Lebanon**	**43.70**	**74**	P	**P**	**18 31 13.0**	**-2.2**
H04D	**Lebanon**	**43.70**	**74**	P	**P**	**18 31 14.7**	**-0.5**
	baz=308,SNR=6.8						
MWH	**Moku'aweowe**	**43.71**	**128**	P	**P**	**18 31 15.8**	**-0.3**
LYN	**LuoYang**	**43.78**	**267**	*i* P	**P**	**18 31 16.7**	**+0.7**
LYN				PP	**PcP**	**18 33 04.9**	**+2.5**
LYN				S	**S**	**18 37 47.6**	**+1.6**
LYN				pmax	pmax		
	comp=Z,30nm,1.0s						
LYN				pmax	pmax		
	comp=Z,220nm,5.1s						
LYN				LR	LR		
	comp=Z,1μm,18.4s						
LYN				LR	LR		
	comp=Z,1μm,17.6s						
LYN				LR	LR		
	comp=Z,2μm,21.7s						
I03D	**Drain, OR**	**43.87**	**75**	P	**P**	**18 31 15.9**	**-0.7**
	baz=308,SNR=5.8						
J01E	**Myrtle Point**	**43.87**	**76**	P	**P**	**18 31 15.7**	**-0.8**
	baz=309						
H04A	**Detroit Lake**	**43.92**	**73**	P	**P**	**18 31 15.7**	**-1.3**
PUH	**Pauahi**	**43.98**	**128**	P	**P**	**18 31 16.3**	**-1.6**
G05D	**Wamic, OR**	**44.06**	**72**	P	**P**	**18 31 17.0**	**-1.2**
	baz=308,SNR=9.0						
K02D	**Willamette Mer**	**44.31**	**76**	P	**P**	**18 31 19.8**	**-0.4**
	baz=309						
I04A	**Tendick Farm,**	**44.34**	**74**	P	**P**	**18 31 19.1**	**-1.3**
	baz=309,SNR=8.8						
NEW	**Newport**	**44.55**	**66**	LR	LR	18 50 08.6	
	comp=Z,1μm,19.5s,baz=241,slow=36						
NEW	**Newport**	**44.55**	**66**	P	**P**	**18 31 20.5**	**-1.6**
NEW	**Newport**	**44.55**	**66**	P	**P**	**18 31 20.5**	**-1.6**
NEW				pmax	pmax		
	comp=Z,19nm,0.9s						
NEW	**Newport**	**44.55**	**66**	P	**P**	**18 31 22.0**	**0.0**
	baz=307,SNR=13						
NEW				S	**S**	**18 37 56.8**	**-0.3**
	baz=307						
I05D	**Terrebonne, OR**	**44.61**	**73**	P	**P**	**18 31 22.3**	**-0.3**
	baz=308						
L02F	**Cave Junction**	**44.73**	**77**	P	**P**	**18 31 23.0**	**-0.5**
	baz=310,SNR=6.6						
GUMO	**Guam**	**44.75**	**215**	LR	LR	18 48 02.5	
	comp=Z,420nm,20.6s,baz=30,slow=33						
J04D	**Umpqua Nationa**	**44.85**	**75**	P	**P**	**18 31 22.6**	**-2.2**
J04D	**Umpqua Nationa**	**44.85**	**75**	P	**P**	**18 31 23.6**	**-1.2**
	baz=309,SNR=8.8						
PINE	**Pine Mountain**	**45.17**	**73**		PP	18 33 09.3	-3.3
JCC	**Jacoby Creek,**	**45.30**	**79**	IAmb	IAmb	18 31 31.3	
	comp=Z,37nm,0.9s						
J05D	**Fort Rock, OR**	**45.32**	**74**	P	**P**	**18 31 29.3**	**+0.9**
	baz=309,SNR=35						
G08A	**Pilot Rock**	**45.35**	**70**	P	**P**	**18 31 26.9**	**-1.7**
L04D	**Klamath Falls**	**45.39**	**76**	P	**P**	**18 31 28.6**	**-0.3**
	baz=310,SNR=28						
K04D	**Chiloquin, OR**	**45.45**	**75**	P	**P**	**18 31 29.4**	**0.0**
	baz=310						
YBH	**Yreka Blue Hor**	**45.47**	**77**	LR	LR	18 46 57.7	
	comp=Z,1μm,21.7s,baz=300,slow=31						
YBH	**Yreka Blue Hor**	**45.47**	**77**	P	**P**	**18 31 29.4**	**-0.1**
YBH				IAmb	IAmb	18 31 34.2	
	comp=Z,23nm,0.8s						
YBH	**Yreka Blue Hor**	**45.47**	**77**	P	**P**	**18 31 29.4**	**-0.1**
YBH				pmax	pmax		

	comp=Z,23nm,0.9s								
KMPM	**Mount Pierce**	**45.51**	**79**	IAmb	IAmb	18 31 33.3			
	comp=Z,45nm,0.8s								
WHN	**Wuhan**	**45.55**	**262**	⇑*i* P	**P**	**18 31 30.8**	**+0.7**		
WHN				pP	**pwP**	**18 31 35.0**	**+1.2**		
WHN				S	**S**	**18 38 15.2**	**+3.5**		
WHN				pmax	pmax				
	comp=Z,88nm,1.0s								
WHN				LR	LR				
	comp=Z,2μm,14.4s								
WHN				LR	LR				
	comp=Z,2μm,12.8s								
WHN				LR	LR				
	comp=Z,2μm,13.5s								
WALA	**Waterton Lakes**	**45.79**	**63**	P	**P**	**18 31 30.9**	**-1.1**		
WALA				IAmb	IAmb	18 31 34.2			
	comp=Z,45nm,0.9s								
K05A	**Summer Lake**	**45.87**	**74**	P	**P**	**18 31 32.6**	**-0.2**		
K05A				IAmb	IAmb	18 31 51.9			
	comp=Z,37nm,1.1s								
KMRM	**Mail Ridge**	**45.87**	**79**	P	**P**	**18 31 32.7**	**0.0**		
KMRM				IAmb	IAmb	18 31 36.2			
	comp=Z,30nm,0.8s								
XAN	**Xi'an**	**46.23**	**270**	P	**P**	**18 31 37.6**	**+2.1**		
XAN				pP	pwP	18 31 45.4	+6.1		
XAN				S	**S**	**18 38 25.7**	**+4.1**		
XAN				pmax	pmax				
	comp=Z,16nm,1.8s								
XAN				pmax	pmax				
	comp=Z,290nm,12.0s								
XAN				LR	LR				
	comp=Z,910nm,14.0s								
XAN				LR	LR				
	comp=Z,2μm,15.3s								
XAN				LR	LR				
	comp=Z,2μm,15.3s								
JTMT	**Jette**	**46.39**	**65**	P	**P**	**18 31 34.6**	**-2.1**		
JTMT				IAmb	IAmb	18 31 45.3			
	comp=Z,45nm,1.0s								
BMO	**Blue Mountains**	**46.54**	**70**	P	**P**	**18 31 36.1**	**-1.8**		
BMO	**Blue Mountains**	**46.54**	**70**	P	**P**	**18 31 36.1**	**-1.8**		
BMO				pmax	pmax				
	comp=Z,25nm,1.5s								
ZALV	**Zalesovo Beam**	**46.77**	**306**	P	**P**	**18 31 38.2**	**-1.2**		
	comp=Z,7.1nm,0.9s,baz=48,slow=4.8,SNR=13								
ZALV				PcP	**PcP**	**18 33 13.1**	**+0.6**		
	comp=Z,8.5nm,0.9s,baz=12,slow=3.6,SNR=5.6								
ZALV				ScP	**ScP**	**18 37 06.0**	**+0.5**		
	comp=Z,0.4nm,0.4s,baz=61,slow=8.9,SNR=2.8								
ZALV				LR	LR	18 53 23.1			
	comp=Z,740nm,18.4s,baz=53,slow=39								
	comp=Z,7.1nm,0.9s								
ZALV	**Zalesovo Beam**	**46.77**	**306**	P	**P**	**18 31 37.2**	**-2.2**		
ZALV				PcP	**PcP**	**18 33 11.6**	**-0.8**		
ZALV	**Zalesovo Beam**	**46.77**	**306**	P	**P**	**18 31 37.2**	**-2.2**		
ZALV						18 33 11.6			
SSLB	**Suanglung**	**46.95**	**250**	IAmb	IAmb	18 31 48.9			
	comp=Z,30nm,1.0s								
SPA0	**Spitsbergen Ar**	**46.98**	**353**	*e*P	**P**	**18 31 41.0**	**+0.2**		
SPITS	**Spitsbergen Ar**	**46.98**	**353**	LR	LR	18 50 11.9			
	comp=Z,342nm,20.7s,baz=343,slow=35								
SPITS	**Spitsbergen Ar**	**46.98**	**353**	P	**P**	**18 31 39.7**	**-1.1**		
SPITS				pmax	pmax				
	comp=Z,104nm,1.4s								
YULB	**Yu-li**	**47.08**	**249**	P	**P**	**18 31 41.5**	**-0.7**		
MSO	**Missoula**	**47.14**	**66**	P	**P**	**18 31 42.3**	**-0.3**		
	baz=309,SNR=13								
MSO				S	**S**	**18 38 33.2**	**-1.3**		
	baz=309								
QZH	**Quanzhou**	**47.36**	**253**	⇑*i* P	**P**	**18 31 47.4**	**+3.0**		
QZH				S	**S**	**18 38 42.7**	**+4.9**		
QZH				LR	LR				
	comp=Z,480nm,22.7s								
QZH				LR	LR				
	comp=Z,850nm,29.8s								
TPUB	**Ta-pu**	**47.52**	**249**	P	**P**	**18 31 45.6**	**-0.1**		
LZH	**Lanzhou**	**47.79**	**276**	*e*P	**P**	**18 31 47.6**	**-0.3**		
LZH				pP	pwP	18 31 52.7	+1.1		
LZH				sP	sP	18 31 55.9	+2.8		
LZH				S	**S**	**18 38 47.3**	**+3.2**		
LZH				sS	sS	18 38 55.2	+4.9		
LZH				pmax	pmax				
	comp=Z,78nm,1.0s								
LZH				pmax	pmax				
	comp=Z,230nm,4.1s								
LZH				LR	LR				
	comp=Z,3μm,15.7s								
LZH				LR	LR				
	comp=Z,2μm,14.4s								
LZH				LR	LR				
	comp=Z,2μm,17.3s								
GTA	**Gaotai**	**47.88**	**282**	⇓P	**P**	**18 31 48.3**	**-0.2**		
GTA				pP	pwP	18 31 55.2	+0.8		
GTA				sP	sP	18 32 00.0	+6.2		
GTA				S	**S**	**18 38 45.6**	**+0.3**		
GTA				sS	sS	18 38 53.3	+2.2		
GTA				pmax	pmax				
	comp=Z,11nm,1.0s								
GTA				pmax	pmax				
	comp=Z,170nm,5.8s								
GTA				LR	LR				
	comp=Z,2μm,14.9s								
GTA				LR	LR				
	comp=Z,2μm,16.0s								
GTA				LR	LR				
	comp=Z,2μm,20.0s								
CNSH	**ChangSha**	**48.13**	**261**	⇓P	**P**	**18 31 51.7**	**+1.4**		
CNSH				S	**S**	**18 38 55.1**	**+6.4**		
CNSH				pmax	pmax				
	comp=Z,60nm,1.0s								
CNSH				LR	LR				
	comp=Z,850nm,12.1s								
CNSH				LR	LR				
	comp=Z,650nm,17.1s								
MFID	**Camas Ranch**	**48.27**	**70**	P	**P**	**18 31 49.2**	**-2.2**		
EGMT	**Eagleton**	**48.60**	**62**	P	**P**	**18 31 53.1**	**-0.8**		
	baz=309								
MPK	**Martis Peak**	**48.61**	**77**	P	**P**	**18 31 53.1**	**-1.2**		
MPK				IAmb	IAmb	18 31 58.4			
	comp=Z,50nm,1.1s								
EMB	**Emerald Bay**	**48.78**	**78**	P	**P**	**18 31 54.0**	**-1.5**		
EMB				IAmb	IAmb	18 32 00.2			
	comp=Z,20nm,0.8s								
EMB				PcP	**PcP**	**18 33 18.8**	**-1.5**		
HLID	**Hailey**	**48.96**	**69**	ScP	**ScP**	**18 37 16.5**	**+1.3**		
HLID	**Hailey**	**48.96**	**69**	P	**P**	**18 31 56.9**	**+0.1**		
	baz=311,SNR=16								
BCYI	**Bear Canyon**	**49.03**	**68**	P	**P**	**18 31 56.4**	**-1.0**		
BOZ	**Bozeman (W)**	**49.16**	**66**	P	**P**	**18 31 58.2**	**-0.1**		
	baz=310,SNR=27								
BOZ				S	**S**	**18 39 06.4**	**+3.2**		
	baz=310								
DAG	**Danmarks Havn**	**49.32**	**2**	*i* P	**P**	**18 31 57.0**	**-1.9**		
DAG				IAmb	IAmb	18 31 59.5			
	comp=Z,6.5nm,0.8s								
SAO	**San Andreas Ge**	**49.51**	**81**	P	**P**	**18 32 00.2**	**-0.7**		
SAO	**San Andreas Ge**	**49.51**	**81**	P	**P**	**18 32 00.2**	**-0.7**		
SAO				pmax	pmax				
	comp=Z,12nm,0.8s								
UPNV	**Upernavik**	**49.60**	**16**	*i* P	**P**	**18 32 01.5**	**+0.5**		
YHL	**Hebgen Lake**	**49.88**	**66**	P	**P**	**18 32 03.2**	**-0.8**		
YHL				IAmb	IAmb	18 32 15.9			
	comp=Z,49nm,1.2s								
NVAR	**Mina Array Bea**	**50.19**	**77**	P	**P**	**18 32 07.3**	**+1.1**		
	comp=Z,25nm,0.7s,baz=296,slow=7.2,SNR=163								
NVAR				ScP	**ScP**	**18 37 21.4**	**+0.8**		
	comp=Z,0.2nm,0.3s,baz=343,slow=2.8,SNR=3.8								
NVAR				L

comp=Z,17nm,1.3s
ZSN Zaisan 50.81 299 eP P 18 32 09.6 -1.0
comp=Z,17nm,1.3s,baz=299
REDW Red Top Meadow 51.05 67 P P 18 32 10.3 -2.4
DGMT Dagmar 51.16 59 P P 18 32 13.7 +0.4
baz=311
TIN Tinemaha, Big 51.17 78 P P 18 32 14.7 +1.1
baz=314,SNR=5.9
SEM Semipalatinsk 51.18 305 eP P 18 32 10.6 -3.0
SEM Semipalatinsk 51.18 305 eP P 18 32 10.6 -3.0
baz=305
LAO LASA Array 51.30 61 P P 18 32 15.7 +1.3
baz=312
SMMC Simmler 51.36 81 P P 18 32 16.1 +1.2
baz=315
LCH Last Change Ra 51.39 78 P P 18 32 13.5 -1.7
CD2 Chengdu 51.51 271 P P 18 32 16.7 +0.6
CD2 S S 18 39 37.0 +1.1
CD2 SS SS 18 43 13.5 +1.9
CD2 pmax pmax
comp=Z,50nm,1.0s
CD2 pmax pmax
comp=Z,170nm,9.3s
CD2 LR LR
comp=Z,970nm,13.7s
CD2 LR LR
comp=Z,820nm,17.2s
VES Vestal, Richgr 51.52 80 P P 18 32 16.3 +0.2
baz=315,SNR=6.4
CWC Cottonwood Cre 51.69 79 P P 18 32 18.8 +1.3
baz=314
GRAC Grapevine Rang 51.71 78 P P 18 32 18.9 +1.4
baz=314,SNR=11
GRAC S S 18 39 29.4 -9.2
baz=314
WMQ Urumqi 51.72 294 eP P 18 32 18.3 +0.8
WMQ pP pwP 18 32 22.7 -1.6
WMQ PP PP 18 34 18.1 +3.2
WMQ S S 18 39 37.3 -1.3
WMQ pmax pmax
comp=Z,47nm,0.9s
WMQ pmax pmax
comp=Z,230nm,4.5s
WMQ LR LR
comp=Z,6μm,19.3s
WMQ LR LR
comp=Z,4μm,18.5s
WMQ LR LR
comp=Z,2μm,22.5s
DBG Daneborg 51.74 3 i P P 18 32 15.0 -2.2
DBG IAmb IAmb 18 32 18.0
comp=Z,8.0nm,0.9s
KURK Kurchatov 51.76 306 P P 18 32 15.0 -2.6
KURK IAmb IAmb 18 32 19.3
comp=Z,66nm,1.1s
KURK Kurchatov 51.76 306 ceP P 18 32 15.7 -1.9
KURK pmax pmax
comp=Z,60nm,1.0s
PKM Mcpherson Peak 51.77 81 P P 18 32 19.2 +1.1
baz=315,SNR=6.2
R11A Troy Canyon, C 51.80 75 P P 18 32 18.6 +0.3
baz=314,SNR=34
R11A S S 18 39 31.0 -9.1
baz=314
KURBB Kurchatov Arra 51.86 306 LR LR 18 55 12.5
comp=Z,719nm,19.4s,baz=32,slow=37
KURBB Kurchatov Arra 51.86 306 P P 18 32 16.2 -2.2
ISA Isabella, Lake 52.00 80 P P 18 32 20.4 +0.6
baz=315,SNR=12
DUG Dugway, Tooele 52.10 72 P P 18 32 21.1 +0.6
baz=313,SNR=18
DUG S S 18 39 37.5 -6.5
baz=313
BW06 Boulder Array 52.15 67 P P 18 32 21.2 +0.3
baz=313,SNR=11
BW06 S S 18 39 38.2 -6.6
baz=313
PDAR Pinedale Array 52.15 67 P P 18 32 21.5 +0.6
comp=Z,16nm,0.8s,baz=316,slow=4.1,SNR=82
comp=Z,16nm,0.8s
SUMG Summit 52.17 10 P P 18 32 19.9 -1.0
SUMG IAmb IAmb 18 32 24.5
comp=Z,48nm,1.2s
SUMG Summit 52.17 10 P P 18 32 19.9 -1.0
SUMG pmax pmax
comp=Z,48nm,1.2s
SUMG Summit 52.17 10 i P P 18 32 19.4 -1.5
MPMC Manual Prospec 52.29 79 P P 18 32 22.5 +0.5
baz=315,SNR=22
MPMC S S 18 39 48.0 +1.0
baz=315
FURC Furnace Creek, 52.37 78 P P 18 32 23.2 +0.9
baz=315,SNR=36
TPNV Topopah Spring 52.39 77 P P 18 32 22.5 -0.2
TPNV IAmb IAmb 18 32 25.9
comp=Z,42nm,0.8s
TPNV Topopah Spring 52.39 77 P P 18 32 22.5 -0.2
TPNV pmax pmax
comp=Z,42nm,0.9s
TPNV Topopah Spring 52.39 77 P P 18 32 23.4 +0.7
baz=314,SNR=67
MK31 Makanchi Array 52.56 300 i P P 18 32 20.9 -2.8
MKAR Makanchi Array 52.56 300 P P 18 32 21.8 -1.9
comp=Z,15nm,0.9s,baz=60,slow=7.2,SNR=64
MKAR ScP ScP 18 37 30.1 -0.4
comp=Z,1.2nm,1.0s,baz=54,slow=7.3,SNR=3.5
MKAR LR LR 18 55 29.3
comp=Z,1μm,18.8s,baz=36,slow=37
comp=Z,15nm,0.9s
MKAR Makanchi Array 52.56 300 P P 18 32 21.0 -2.7
MKAR Makanchi Array 52.56 300 i P P 18 32 21.7 -2.0
MKAR pmax pmax
comp=Z,15nm,0.9s
LRMC Laurel Mtn Rad 52.59 79 P P 18 32 25.0 +0.8
baz=315
OSI Osito Audit: C 52.59 81 P P 18 32 25.0 +0.9
baz=315
GWY Greenwater Val 52.68 78 P P 18 32 23.8 -1.1
GWY IAmb IAmb 18 32 27.3
comp=Z,26nm,0.7s
MAKZ Makanchi 52.71 300 P P 18 32 22.8 -2.0
MAKZ IAmb IAmb 18 32 25.8
comp=Z,27nm,1.0s
MAKZ Makanchi 52.71 300 P P 18 32 22.8 -2.0
MAKZ pmax pmax
comp=Z,27nm,1.0s
EDW2 Edwards Air Fo 52.83 80 P P 18 32 25.8 -0.1
baz=315,SNR=14
EDW2 S S 18 39 55.5 +1.5
baz=315
GOMU GeErMu 52.96 282 ⇑i P P 18 32 26.8 -0.4
GOMU PcP PcP 18 33 35.3 -0.7
GOMU S S 18 39 53.2 -3.3
GOMU ScS ScS 18 42 17.9 +1.1
GOMU SS SS 18 43 37.0 +2.0
GOMU pmax pmax
comp=Z,26nm,0.9s
GOMU pmax pmax
comp=Z,110nm,4.3s
GOMU LR LR
comp=Z,1μm,16.8s
GOMU LR LR
comp=Z,1μm,16.4s
GOMU LR LR
comp=Z,900nm,18.2s
DECC Green Verdugo 53.08 81 P P 18 32 28.9 +1.2
baz=316
GYA Guiyang 53.09 265 ⇓P P 18 32 29.4 +1.5
GYA pP pwP 18 32 33.2 +1.4
GYA PP PP 18 34 33.2 +5.6
GYA S S 18 39 56.2 -1.6
GYA pmax pmax
comp=Z,33nm,0.9s
GYA pmax pmax
comp=Z,350nm,3.5s
GYA LR LR
comp=Z,580nm,15.6s
GYA LR LR
comp=Z,750nm,24.2s
GYA LR LR
comp=Z,1μm,25.3s
SHOC Shoshone, Teco 53.10 78 P P 18 32 28.7 +0.8
baz=315,SNR=8.9
HAMF Hammerfest 53.17 346 eP P 18 32 27.6 -0.2
GSC Goldstone, Bar 53.22 79 P P 18 32 28.6 -0.2
GSC IAmb IAmb 18 32 31.8
comp=Z,34nm,1.1s
GSC Goldstone, Bar 53.22 79 P P 18 32 28.6 -0.2
GSC pmax pmax
comp=Z,33nm,1.1s
GSC Goldstone, Bar 53.22 79 P P 18 32 29.5 +0.7
baz=315,SNR=24
BFSC Mount Baldy Ra 53.48 80 P P 18 32 31.6 +0.9
baz=316
CCUT Cedar City 53.62 74 P P 18 32 32.5 +0.6
TUQ Turquoise Moun 53.63 78 P P 18 32 32.2 +0.3
baz=315,SNR=20
LVZ Lovozero 53.77 341 P P 18 32 31.7 -0.6
LVZ Lovozero 53.77 341 P P 18 32 31.7 -0.6
HEC Hector,Ludlow 53.83 79 P P 18 32 33.4 +0.1
baz=316,SNR=9.3
MDND Maddock 53.86 57 P P 18 32 34.4 +1.1
baz=313,SNR=14
MDND Maddock 53.86 57 P P 18 32 33.2 0.0
baz=313,SNR=14
K22A Casper 53.86 65 P P 18 32 34.2 +0.7
baz=314,SNR=9.5
K22A Casper 53.86 65 P P 18 32 33.6 +0.1
baz=314,SNR=9.5
Q16A Castle Valley 53.90 72 P P 18 32 32.8 -1.0
ARA0 ARCESS Array S 53.91 345 eP P 18 32 33.3 0.0
ARCES ARCESS Array B 53.91 345 P P 18 32 32.4 -1.0
comp=Z,7.6nm,0.5s,baz=18,slow=9.4,SNR=27
ARCES LR LR 18 56 37.7
comp=Z,342nm,20.9s,baz=1.0,slow=37
comp=Z,7.6nm,0.5s
ARCES ARCESS Array B 53.91 345 P P 18 32 32.9 -0.5
ARCES IAmb IAmb 18 32 36.8
comp=Z,47nm,1.1s
BRVK Borovoye 53.97 313 P P 18 32 32.2 -1.7
BRVK Borovoye 53.97 313 ceP P 18 32 33.1 -0.8
BRVK pmax pmax
comp=Z,79nm,1.0s
BRVK MLR MLR
comp=Z,817nm,18.0s
ULM Lac du Bonnet 54.00 52 P P 18 32 34.5 +0.3
comp=Z,14nm,0.7s,baz=309,slow=8.0,SNR=17
ULM LR LR 18 56 49.6
comp=Z,2μm,18.9s,baz=323,slow=38
comp=Z,14nm,0.7s
ELS Elsinore Mount 54.03 81 P P 18 32 33.9 -0.9
RWWY Rawlins 54.16 67 P P 18 32 34.6 -1.2
RSSD Black Hills 54.17 62 P P 18 32 36.4 +0.6
baz=314
E28A Huff 54.19 58 P P 18 32 36.4 +0.7
baz=314,SNR=7.5
MURC Murrieta 54.20 81 P P 18 32 37.2 +1.2
baz=316
GMRC Granite Mounta 54.25 78 P P 18 32 36.8 +0.4
baz=316,SNR=26
FRB Frobisher Bay 54.25 28 LR LR 18 57 44.2
comp=Z,571nm,20.3s,baz=317,slow=38
PKCU Pink Cliffs 54.28 74 IAmb IAmb 18 32 46.8
comp=Z,28nm,1.0s
APA Apatity 54.30 341 ⇓i P P 18 32 34.2 -1.9
APA pmax pmax
comp=Z,11nm,1.0s
APA MLR MLR
comp=Z,800nm,21.0s
BELC Belle Mtn. Jos 54.61 79 P P 18 32 39.0 -0.1
baz=316,SNR=15
JETT Jettan, Norway 54.62 347 eP P 18 32 38.3 -0.2
PFO Pinyon Flats O 54.62 80 LR LR 18 51 55.8
comp=Z,626nm,21.6s,baz=296,slow=32
PFO Pinyon Flats O 54.62 80 P P 18 32 38.4 -0.7
PFO Pinyon Flats O 54.62 80 P P 18 32 38.4 -0.7
PFO pmax pmax
comp=Z,6.0nm,0.8s
PFO Pinyon Flats O 54.62 80 P P 18 32 39.6 +0.5
baz=316
TPFO Pinon Flats 54.63 80 P P 18 32 39.7 +0.5
baz=316
O20A White River Ci 54.67 69 P P 18 32 39.7 +0.2
baz=314,SNR=9.3
KTK1 Kautokeino 54.73 346 eP P 18 32 38.6 -0.6
TRO Tromso 54.73 348 eP P 18 32 39.0 -0.2
109C Camp Elliot, M 54.77 81 P P 18 32 41.0 +1.0
baz=316
IRM Iron Mountain 54.99 79 P P 18 32 42.0 +0.3
baz=316,SNR=27
BRZS Berezniki 55.05 309 eP P 18 32 40.1 -1.7
BRZS pmax pmax
comp=Z,40nm,2.4s
BRZS Berezniki 55.05 309 eP P 18 32 40.2 -1.7
comp=Z,40nm,2.4s,baz=308
W13A Hualapai Mount 55.05 77 P P 18 32 41.7 -0.6
MONP2 Monument Peak 55.16 81 P P 18 32 43.2 0.0
baz=316,SNR=7.8
BC3 Big Chuckawall 55.17 79 P P 18 32 43.1 0.0
baz=316,SNR=13
SVE Sverdlovsk 55.18 321 ⇓eP P 18 32 42.3 -0.3
SVE eS S 18 40 28.1 +3.1
SVE pmax pmax
comp=Z,37nm,1.4s
SVE MLR MLR
comp=Z,679nm,15.0s
JMIC Jan Mayen 55.23 359 LR LR 18 57 00.2
comp=Z,176nm,20.1s,baz=308,slow=37
ICESG Greenland Ices 55.32 12 i P P 18 32 42.5 -1.4
N23A Red Feather La 55.39 67 P P 18 32 44.4 -0.4
N23A IAmb IAmb 18 32 47.5
comp=Z,22nm,0.8s
N23A Red Feather La 55.39 67 P P 18 32 45.3 +0.5
baz=315,SNR=15
PDMCI Parker Dam,Lak 55.47 78 P P 18 32 46.2 +1.1
baz=316,SNR=15
SCO Scoresbysund 55.48 5 P P 18 32 45.1 +0.5
SCO Scoresbysund 55.48 5 P P 18 32 45.1 +0.5
SCO pmax pmax
comp=Z,19nm,1.4s
SWSC Sam W. Stewart 55.48 80 P P 18 32 45.9 +0.7
baz=317
IKP In-Ko-Pah, Jac 55.52 81 P P 18 32 46.4 +0.8
baz=317,SNR=6.7
SFJD Kangerlussuaq 55.57 18 LR LR 18 59 52.1
comp=Z,425nm,19.4s,baz=326,slow=40
D32A Dogwood Acres, 55.62 56 P P 18 32 44.7 -1.2
D32A IAmb IAmb 18 32 47.3
comp=Z,29nm,0.8s
PV07 Paradox Valley 55.64 70 P P 18 32 46.6 +0.1
PV07 IAmb IAmb 18 32 51.0
comp=Z,31nm,0.9s
BLYC Blythe 55.64 78 P P 18 32 46.3 -0.1
BLYC IAmb IAmb 18 32 49.4
comp=Z,18nm,0.8s
TDK Taldyqorghan 55.76 301 eP P 18 32 45.0 -2.0
TDK Taldyqorghan 55.76 301 eP P 18 32 45.0 -2.0
baz=301
PZH PanZhiHua 55.95 269 ⇑P P 18 32 50.9 +2.2
PZH pP pwP 18 32 55.6 +3.0
PZH sP sP 18 32 58.9 +4.8
PZH S S 18 40 35.6 -0.8
PZH ScS ScS 18 42 37.2 -0.5
PZH pmax pmax
comp=Z,30nm,1.7s
PZH pmax pmax
comp=Z,140nm,6.3s
PZH LR LR
comp=Z,1μm,15.7s
PZH LR LR
comp=Z,900nm,14.3s
PZH LR LR
comp=Z,980nm,15.1s
GLA Glamis 55.97 79 P P 18 32 47.4 -1.4
GLA IAmb IAmb 18 32 51.4
comp=Z,25nm,0.8s
GLA Glamis 55.97 79 P P 18 32 47.4 -1.4
GLA pmax pmax
comp=Z,25nm,0.8s
GLA Glamis 55.97 79 P P 18 32 49.2 +0.5
baz=317,SNR=13
WUAZ Wupatki 56.18 75 P P 18 32 51.4 +1.0
baz=316,SNR=14
ARU Arti 56.24 321 LR LR 18 59 11.1
comp=Z,726nm,18.4s,baz=46,slow=38
ARU Arti 56.24 321 P P 18 32 48.9 -1.3
ARU Arti 56.24 321 c i P P 18 32 49.5 -0.8
ARU 18 33 45.7
ARU 18 34 51.6
ARU S S 18 40 40.8 +1.6
ARU 18 42 38.0
ARU SS SS 18 44 25.6 +0.6
ARU pmax pmax
comp=Z,46nm,0.9s
ARU MLR MLR
comp=Z,623nm,17.0s
B35A Bob, Littlefor 56.33 53 IAmb IAmb 18 32 52.3
comp=Z,18nm,0.8s
B35A Bob, Littlefor 56.33 53 P P 18 32 51.2 +0.2
baz=315,SNR=17
ISCO Idaho Springs 56.34 67 P P 18 32 52.8 +1.2
baz=315,SNR=30
ISCO Idaho Springs 56.34 67 P P 18 32 52.9 +1.3
baz=315,SNR=30
PRGR Permogore 56.38 332 ⇑i P P 18 32 53.1 +2.0
Y14A Wickenburg 56.38 77 P P 18 32 50.6 -1.1
KMI Kunming 56.40 267 ⇑P P 18 32 54.9 +2.8
KMI pP pwP 18 32 59.5 +3.5
KMI PP PP 18 35 02.6 +5.1
KMI S S 18 40 41.7 -0.9
KMI SS SS 18 44 26.0 -3.3
KMI pmax pmax
comp=Z,30nm,2.0s
KMI pmax pmax
comp=Z,170nm,3.5s
KMI LR LR
comp=Z,360nm,13.0s
KMI LR LR
comp=Z,1μm,19.5s
KMI LR LR
comp=Z,1μm,27.5s
OTUK Ortayu 56.43 307 P P 18 32 49.1 -2.7
SHLS Shalkode 56.52 299 eP P 18 32 50.4 -2.2
SHLS pmax pmax
comp=Z,12nm,0.9s
SHLS Shalkode 56.52 299 eP P 18 32 50.5 -2.2
comp=Z,12nm,0.9s,baz=298
SUSD Miller 56.56 59 P P 18 32 52.6 -0.1
baz=315
MVCO Mesa Verde 56.59 71 P P 18 32 54.2 +0.8
baz=316
ARXS Arharly 56.61 301 i P P 18 32 51.9 -1.3
KPKS Kokpek 56.70 299 eP P 18 32 52.3 -1.6
KPKS pmax pmax
comp=Z,23nm,2.0s
KPKS Kokpek 56.70 299 eP P 18 32 52.4 -1.6
comp=Z,23nm,2.0s,baz=299
UZB Uzynbulak 56.76 299 eP P 18 32 52.5 -1.8
UZB Uzynbulak 56.76 299 eP P 18 32 52.5 -1.8
baz=299
113A Mohawk Valley, 56.79 79 P P 18 32 54.0 -0.5
LOF Lofoten 56.79 349 eP P 18 32 53.8 -0.1
STEI Steigen 56.79 349 eP P 18 32 54.4 +0.4
DY2G Dye2 56.80 16 i P P 18 32 52.8 -1.6
DY2G IAmb IAmb 18 32 55.3
comp=Z,16nm,0.9s
F33A 5 Mile Ranch, 56.89 56 P P 18 32 55.1 +0.1
baz=316,SNR=7.9
QIZ Qiongzhong 56.98 256 P P 18 32 58.6 +2.6
QIZ PP PP 18 35 06.0 +3.5
QIZ S S 18 40 52.4 +2.5
QIZ SS SS 18 44 40.2 +2.0
QIZ pmax pmax
comp=Z,20nm,0.8s
QIZ pmax pmax
comp=Z,330nm,9.4s
QIZ LR LR
comp=Z,460nm,12.7s
QIZ LR LR
comp=Z,470nm,19.1s
QIZ LR LR
comp=Z,510nm,43.0s
SATY Saty 57.13 299 eP P 18 32 55.9 -1.1
SATY Saty 57.13 299 eP P 18 32 56.0 -1.1
baz=299
S22A 4UR Ranch, Cre 57.14 70 P P 18 32 57.6 +0.3
S22A IAmb IAmb 18 33 02.1
comp=Z,23nm,0.9s
S22A 4UR Ranch, Cre 57.14 70 P P 18 32 58.9 +1.6
baz=316,SNR=20
Q24A Divide 57.19 68 P P 18 32 58.9 +1.2
baz=316
CHKK Chushkaly 57.29 301 eP P 18 32 56.1 -1.8
CHKK Chushkaly 57.29 301 eP P 18 32 56.2 -1.8
baz=301
FAUS Fauske 57.31 348 eP P 18 32 57.5 -0.2
W18A Petrified Fore 57.40 74 P P 18 33 00.2 +1.2
baz=316,SNR=12
OGNE Ogallala 57.45 64 P P 18 32 59.0 -0.2
OGNE Ogallala 57.45 64 P P 18 33 00.4 +1.2
baz=316,SNR=5.5
OGNE Ogallala 57.45 64 P P 18 32 59.5 +0.3
baz=316,SNR=5.5
KUU Kurty 57.59 301 eP P 18 32 57.7 -2.3
KUU pmax pmax
comp=Z,35nm,1.6s
KUU Kurty 57.59 301 eP P 18 32 57.8 -2.3
comp=Z,35nm,1.6s,baz=301
EYMN Ely 57.66 52 P P 18 32 59.8 -0.7
EYMN IAmb IAmb 18 33 02.4
comp=Z,36nm,0.9s
EYMN Ely 57.66 52 P P 18 33 00.7 +0.2
baz=317,SNR=27
EYMN Ely 57.66 52 P P 18 33 00.2 -0.3
baz=317,SNR=27
X18A Snowflake 57.70 75 P P 18 33 00.5 -0.7
X18A IAmb IAmb 18 33 04.4
comp=Z,19nm,0.7s
KIRV Kirov 57.70 328 LR LR 18 59 18.5
comp=Z,442nm,21.5s,baz=43,slow=38
KIRV Kirov 57.70 328 ceP P 18 33 00.3 -0.3
MDOK Medeo 57.76 300 eP P 18 32 59.4 -2.0
MDOK pmax pmax
comp=Z,32nm,1.1s
MDOK Medeo 57.76 300 eP P 18 32 59.5 -2.0
comp=Z,32nm,1.1s,baz=300
AAA Alma-Ata 57.79 300 eP P 18 33 00.2 -1.3
AAA Alma-Ata 57.79 300 eP P 18 33 00.2 -1.3
baz=300
SDCO Great Sand Dun 57.87 69 P P 18 33 03.2 +0.8
baz=316,SNR=20
SDCO Great Sand Dun 57.87 69 P P 18 33 03.0 +0.6
baz=316,SNR=20
TNSS Tian-Shan 57.90 300 eP P 18 33 01.6 -1.1
TNSS Tian-Shan 57.90 300 eP P 18 33 01.6 -1.1
baz=300
BTLS Baital 57.91 304 eP P 18 33 00.7 -1.5
BTLS pmax pmax
comp=Z,12nm,1.3s
BTLS Baital 57.91 304 eP P 18 33 00.8 -1.5
comp=Z,12nm,1.3s,baz=303
214A Organ Pipe Nat 57.94 79 P P 18 33 03.3 +0.6
baz=317,SNR=32
F36A Milaca 58.22 55 P P 18 33 04.2 -0.2
baz=317,SNR=13
ECSD EROS Data Cent 58.24 58 IAmb IAmb 18 33 06.4
comp=Z,24nm,0.9s
ECSD EROS Data Cent 58.24 58 P P 18 33 04.5 -0.1
baz=316,SNR=20
ECSD EROS Data Cent 58.24 58 P P 18 33 03.8 -0.9
baz=316,SNR=20
KONS Konsvik 58.41 349 eP P 18 33 04.1 -1.3
KDJ Kajisay 58.43 299 P P 18 33 05.2 -1.0
KDJ IAmb IAmb 18 33 07.6
comp=Z,21nm,1.0s
KDJ Kajisay 58.43 299 P P 18 33 05.2 -1.0
KDJ pmax pmax
comp=Z,21nm,1.0s
KSCO Kaye Shedlock' 58.52 66 P P 18 33 07.8 +1.0
baz=316,SNR=7.2
KSCO Kaye Shedlock' 58.52 66 P P 18 33 06.5 -0.3
baz=317,SNR=7.2
MOR8 Moi Rana 58.57 348 eP P 18 33 05.4 -1.2
DAV Davao City (W) 58.58 234 LR LR 18 53 35.7
comp=Z,291nm,21.9s,baz=46,slow=31
E38A The Farm, Brul 58.61 53 P P 18 33 07.1 0.0
baz=317,SNR=6.3
TKM2 Tokmak 2 58.67 301 P P 18 33 07.7 -0.1
SNR=9.5
TKM2 Tokmak 2 58.67 301 P P 18 32 58.9 -9.0
SGDS Sogindy 58.77 302 eP P 18 33 07.4 -1.0
SGDS pmax pmax
comp=Z,10.0nm,1.0s
SGDS Sogindy 58.77 302 eP P 18 33 07.4 -1.0
comp=Z,9.6nm,1.0s,baz=302
MANU Manus Island 58.83 206 P P 18 33 08.8 -0.1
TUC Tucson 58.84 77 P P 18 33 09.2 +0.1
TUC Tucson 58.84 77 P P 18 33 09.2 +0.1
TUC pmax pmax

comp=Z,12nm,0.9s
TUC Tucson 58.84 77 P P 18 33 10.5 +1.4
baz=318
T25A Trinidad 58.91 69 P P 18 33 10.7 +1.1
baz=317
USP Ospenovka 58.97 302 P P 18 33 09.1 -0.7
SNR=26
SPMN Marine on St. 59.03 55 P P 18 33 10.8 +0.7
baz=317,SNR=6.0
SPMN Marine on St. 59.03 55 P P 18 33 09.3 -0.8
baz=317,SNR=6.0
CHMS Chumysh 59.04 301 P P 18 33 09.8 -0.5
SNR=9.3
BGNE Belgrade 59.15 61 P P 18 33 11.9 +1.0
baz=317
BGNE Belgrade 59.15 61 P P 18 33 11.8 +0.8
baz=317
KBK Karagaybulak 59.19 301 P P 18 33 10.8 -0.6
SNR=9.9
ANMO Albuquerque 59.37 72 LR LR 18 56 53.8
comp=Z,764nm,21.3s,baz=324,slow=34
ANMO Albuquerque 59.37 72 P P 18 33 12.2 -0.6
ANMO Albuquerque 59.37 72 *i* P **P 18 33 13.4 +0.6**
ANMO pmax pmax
comp=Z,10.0nm,0.8s
ANMO Albuquerque 59.37 72 P P 18 33 14.1 +1.2
baz=317,SNR=8.0
ANMO Albuquerque 59.37 72 P P 18 33 14.0 +1.2
baz=317
AAK Ala-Archa 59.43 301 P P 18 33 12.7 -0.4
SNR=9.6
AAK Ala-Archa 59.43 301 LR LR 18 59 35.1
comp=Z,664nm,19.4s,baz=41,slow=37
AAK Ala-Archa 59.43 301 P P 18 33 11.5 -1.5
AAK IAmb IAmb 18 33 18.6
comp=Z,30nm,1.1s
AAK Ala-Archa 59.43 301 *i* P **P 18 33 12.1 -1.0**
AAK pmax pmax
comp=Z,31nm,1.2s
AAK Ala-Archa 59.43 301 *i* P **P 18 33 12.5 -0.6**
SNR=12
I37B Waseca 59.63 56 P P 18 33 14.9 +0.7
baz=318,SNR=19
L34A Svendsen Farm, 59.65 60 P P 18 33 14.8 +0.5
baz=317,SNR=7.5
D41A Chassel 59.66 51 P P 18 33 15.0 +0.6
baz=318,SNR=5.2
UCH Uchtor 59.72 301 P P 18 33 15.1 -0.4
SNR=10
EKS2 Erkin-Say 59.77 302 P P 18 33 15.1 -0.3
SNR=25
LSA Lhasa 59.78 280 P P 18 33 16.8 +0.8
LSA pmax pmax
comp=Z,33nm,0.9s
LSA Lhasa 59.78 280 P P 18 33 16.6 +0.6
RABL Rabaul 59.81 200 P P 18 33 16.1 +0.5
KRVT Keravat (AS076 59.95 200 LR LR 18 54 19.5
comp=Z,468nm,21.2s,baz=153,slow=31
COWI Conover 60.12 52 IAmb IAmb 18 33 30.9
comp=Z,19nm,0.9s
COWI Conover 60.12 52 P P 18 33 16.6 -1.0
baz=318
AML Almayashu 60.20 301 P P 18 33 18.6 -0.1
SNR=11
AML Almayashu 60.20 301 *i* P **P 18 33 18.1 -0.6**
SNR=11
CBKS Cedar Bluff 60.21 64 P P 18 33 18.4 0.0
baz=318
G40A Rib Lake 60.24 53 P P 18 33 17.1 -1.3
G40A Rib Lake 60.24 53 P P 18 33 17.9 -0.5
baz=318,SNR=9.3
NSS Namsos 60.44 349 *e*P **P 18 33 19.4 -0.1**
F42A Maple Grove Fa 60.83 52 P P 18 33 23.2 +0.7
baz=319
N35A Tabor 60.83 60 P P 18 33 22.9 +0.4
baz=318,SNR=8.8
E43A Lone Tree Farm 60.89 50 P P 18 33 22.9 +0.1
baz=319,SNR=10
K38A Parkersburg 60.95 57 P P 18 33 23.5 +0.2
baz=318
KSH Kashi 60.97 298 P P 18 33 27.3 +3.7
KSH pP pwP 18 33 32.1 +1.7
KSH sP sP 18 33 34.9 +5.9
KSH S **S 18 41 45.6 +4.1**
KSH ScS **ScS 18 43 18.5 +4.2**
KSH pmax pmax
comp=Z,29nm,1.1s
KSH LR LR
comp=Z,1μm,20.3s
KSH LR LR
comp=Z,2μm,20.4s
KSH LR LR
comp=Z,740nm,25.4s
R32A Long Quarter, 61.04 64 P P 18 33 24.3 +0.3
baz=318
AKTO Aktyubinsk 61.04 317 LR LR 19 03 24.0
comp=Z,839nm,18.5s,baz=38,slow=40
AKTO Aktyubinsk 61.04 317 P P 18 33 21.6 -2.2
KK31 Karatay Array 61.06 304 IAmb IAmb 18 33 25.7
comp=Z,19nm,1.1s
KK31 Karatay Array 61.06 304 *i* P **P 18 33 22.6 -1.4**
KKAR Karatay Array 61.06 304 P P 18 33 22.4 -1.7
KKAR Karatay Array 61.06 304 IAmb IAmb 18 33 25.7
comp=Z,19nm,1.1s
KKAR Karatay Array 61.06 304 P P 18 33 22.4 -1.7
AB31 Akbulak array 61.17 315 P P 18 33 23.1 -1.6
ABKAR Akbulak array 61.17 315 P P 18 33 22.6 -2.0
ABKAR Akbulak array 61.17 315 IAmb IAmb 18 33 26.6
comp=Z,24nm,1.1s
FINES FINESS Array B 61.21 341 P P 18 33 24.3 -0.4
comp=Z,18nm,0.9s,baz=35,slow=7.0,SNR=20
FINES LR LR 19 05 46.2
comp=Z,425nm,18.2s,baz=44,slow=42
comp=Z,18nm,0.9s
FINES FINESS Array B 61.21 341 P P 18 33 23.6 -1.1
FINES FINESS Array B 61.21 341 *i* P **P 18 33 24.7 0.0**
FINES pmax pmax
comp=Z,18nm,0.9s
BORG Borgarnes 61.23 5 LR LR 19 00 02.0
comp=Z,182nm,19.9s,baz=346,slow=36
SCIA State Center 61.28 58 P P 18 33 25.4 -0.1
baz=318,SNR=6.8
SCIA State Center 61.28 58 P P 18 33 25.1 -0.4
baz=318,SNR=6.8
SMPI Sarmi 61.38 215 P P 18 33 28.3 +1.9
comp=Z,824nmcomp=Z,62nm,1.1s
GENI Genyem 61.46 214 P P 18 33 28.7 +1.8
comp=Z,1μmcomp=Z,95nm,0.9s
BAKI Biak 61.56 219 P P 18 33 28.3 +0.6
comp=Z,1μmcomp=Z,89nm,1.6s
KSU1 Kansas State U 61.64 62 P P 18 33 28.1 0.0
baz=318
SRIG Santa Rosalia 61.71 82 P P 18 33 27.6 -1.0
SRIG IAmb IAmb 18 33 31.8
comp=Z,13nm,0.6s
I42A Draeger Farm, 61.88 53 P P 18 33 29.4 -0.2
baz=319,SNR=8.2
H43A Windswept, Lux 61.98 52 P P 18 33 30.4 +0.2
baz=320
JFWS Jewell Farm 61.98 55 IAmb IAmb 18 33 30.7
comp=Z,17nm,0.7s
JFWS Jewell Farm 61.98 55 P P 18 33 29.7 -0.6
baz=319,SNR=5.4
JFWS Jewell Farm 61.98 55 P P 18 33 29.5 -0.7
baz=319,SNR=5.4
IUG luzhnay 62.01 304 *e*P **P 18 33 29.6 -1.0**
IUG luzhnay 62.01 304 *e*P **P 18 33 29.7 -1.0**
baz=304
SCHQ Schefferville 62.02 33 P P 18 33 30.1 -0.3
comp=Z,28nm,0.8s,baz=339,slow=7.1,SNR=28
SCHQ LR LR 19 02 28.9
comp=Z,575nm,19.8s,baz=322,slow=38
comp=Z,28nm,0.8s
SCHQ Schefferville 62.02 33 P P 18 33 29.0 -1.4
SCHQ IAmb IAmb 18 33 31.6
comp=Z,32nm,0.9s
AMTX Amarillo 62.06 68 P P 18 33 31.5 +0.4
baz=318
AMTX Amarillo 62.06 68 P P 18 33 31.4 +0.4
baz=318
E46A Sault Ste Mari 62.10 49 P P 18 33 30.5 -0.5
baz=320
MSTX Muleshoe 62.14 70 P P 18 33 32.4 +0.8
baz=318,SNR=12
MSTX Muleshoe 62.14 70 P P 18 33 31.6 0.0
baz=318,SNR=12
SRPI Serui, Papua 62.14 218 P P 18 33 33.0 +1.4
comp=Z,2μmcomp=Z,23nm,0.4s
L40A Anamosa 62.15 56 P P 18 33 31.0 -0.4
baz=319,SNR=18
MNTX Cornudas Mount 62.37 74 P P 18 33 32.7 -0.4
MNTX Cornudas Mount 62.37 74 P P 18 33 34.4 +1.4
baz=319,SNR=30
MNTX Cornudas Mount 62.37 74 P P 18 33 33.9 +0.9
baz=319,SNR=30
RAF Rauma 62.39 343 *e*P **P 18 33 33.1 +0.5**
U32A Winter Ranch, 62.40 66 P P 18 33 32.6 -0.7
baz=318
MEF Metsahovi 62.66 341 *e*P **P 18 33 35.0 +0.5**
P38A Dawn 62.83 59 IAmb IAmb 18 33 38.1
comp=Z,25nm,0.8s
P38A Dawn 62.83 59 P P 18 33 36.0 0.0
baz=319,SNR=5.6
L42A Oliver, Polo 62.95 55 P P 18 33 35.1 -1.7
L42A IAmb IAmb 18 33 43.6
comp=Z,22nm,0.7s
K43A Burlington 63.06 54 P P 18 33 36.6 -0.9
baz=320,SNR=6.1
SWI Sorong 63.14 224 P P 18 33 39.4 +1.2
comp=Z,2μmcomp=Z,150nm,1.1s
SIJI Sorong 63.14 224 LR LR 18 54 31.0
comp=Z,405nm,21.9s,baz=0.5,slow=30
WAMI Wamena 63.15 215 P P 18 33 41.0 +2.7
comp=Z,76nm,0.9s
DOMB Dombas 63.18 350 *e*P **P 18 33 37.8 -0.2**
BTK Batken 63.20 302 IAmb IAmb 18 33 40.5
comp=Z,36nm,1.0s
AKN Aaknes 63.26 351 *e*P **P 18 33 38.9 +0.4**
TNTI Ternate 63.32 228 P P 18 33 39.2 -0.2
comp=Z,523nmcomp=Z,30nm,0.9s
T35B Sooner Cattle 63.33 63 P P 18 33 39.2 -0.1
baz=319
BELG Belogornoye 63.34 324 LR LR 19 02 38.6
comp=Z,311nm,20.4s,baz=58,slow=38
BELG Belogornoye 63.34 324 *i* P **P 18 33 37.8 -1.3**
BELG pmax pmax
comp=Z,22nm,1.0s
N41A Harden Midland 63.35 57 P P 18 33 38.5 -1.0
N41A Harden Midland 63.35 57 P P 18 33 38.8 -0.6
baz=320,SNR=21
CHTO Chiang Mai 63.49 266 P P 18 33 39.7 -0.9
CHTO IAmb IAmb 18 33 44.0
comp=Z,34nm,1.0s
CHTO Chiang Mai 63.49 266 P P 18 33 39.7 -0.9
CHTO pmax pmax
comp=Z,34nm,1.0s
MOS Moscow 63.60 332 *e*P **P 18 33 41.8 +1.0**
MOS *e* 18 36 03.7
MOS pmax pmax
comp=Z,41nm,0.8s
VLDQ Val d'Or 63.64 43 IAmb IAmb 18 33 46.5
comp=Z,20nm,1.1s
P40A Paris 63.65 59 P P 18 33 41.0 -0.4
baz=320,SNR=34
L44A Lake County Fo 63.66 54 P P 18 33 40.5 -0.9
baz=320
MYLDM Lahad Datu 63.69 239 pP 18 33 45.3 -0.5
WMOK Wichita Mounta 63.75 67 P P 18 33 42.5 +0.3
baz=319,SNR=28
WMOK Wichita Mounta 63.75 67 P P 18 33 42.2 +0.1
baz=319,SNR=28
CM31 Chiang Mai Arr 63.77 265 P P 18 33 42.7 +0.2
CMAR Chiang Mai Arr 63.77 265 P P 18 33 43.4 +0.9
comp=Z,15nm,0.9s,baz=21,slow=7.0,SNR=46
CMAR PKPPKP **P'P'df**
comp=Z,0.8nm,1.0s,baz=234,slow=3.2,SNR=4.2
19 02 43.7 +6.4
CMAR LR LR 19 03 44.6
comp=Z,546nm,19.4s,baz=40,slow=38
comp=Z,15nm,0.9s
VSU Vasula 63.82 339 *i* P **P 18 33 41.0 -1.2**
VSU pmax pmax
comp=Z,47nm,1.0s
VSU Vasula 63.82 339 *e*P **P 18 33 42.7 +0.5**
NB201 NORSAR Array S 63.90 348 P P 18 33 41.7 -1.1
NB2 NORSAR Subarra 63.92 348 P P 18 33 41.9 -1.0
baz=16,slow=6.9
NB2 NORSAR Subarra 63.92 348 P P 18 33 41.9 -1.0
comp=Z,22nm,0.8s,baz=16,slow=6.9
NOA NORSAR Array B 63.92 348 P P 18 33 42.2 -0.7
comp=Z,13nm,0.8s,baz=15,slow=6.7,SNR=31
NOA LR LR 19 02 52.8
comp=Z,60nm,19.3s,baz=20,slow=37
comp=Z,13nm,0.8s
FOO Floro 64.00 352 *e*P **P 18 33 44.0 +0.7**
GUN Gumba 64.17 282 *e*P **P 18 33 44.6 -0.8**
comp=Z,224nm,1.0s
MTSE Matsula 64.17 341 *e*P **P 18 33 45.4 +0.9**
UPP Uppsala 64.18 345 *e*P **P 18 33 44.1 -0.3**
NC602 NORSAR Array S 64.18 348 *e*P **P 18 33 44.0 -0.6**
M44A Midewin, Midew 64.20 55 IAmb IAmb 18 33 46.1
comp=Z,24nm,0.8s
M44A Midewin, Midew 64.20 55 P P 18 33 44.3 -0.7
baz=320
HDIL Hopedale 64.23 56 P P 18 33 43.7 -1.5
HDIL Hopedale 64.23 56 P P 18 33 45.0 -0.2
baz=320,SNR=8.6
HDIL Hopedale 64.23 56 P P 18 33 44.9 -0.4
baz=320,SNR=8.6
HYA Hoyanger 64.33 351 *e*P **P 18 33 45.1 -0.3**
X34A Smith Ranch, M 64.37 66 P P 18 33 44.8 -1.5
X34A IAmb IAmb 18 33 59.2
comp=Z,27nm,1.1s
S39A Bolivar 64.40 61 P P 18 33 45.0 -1.4
baz=320,SNR=7.7
OBN Obninsk 64.44 332 LR LR 19 03 45.6
comp=Z,100nm,20.1s,baz=18,slow=38
OBN Obninsk 64.44 332 P P 18 33 46.1 -0.2
OBN Obninsk 64.44 332 *de*P **P 18 33 45.9 -0.4**
OBN *e* 18 34 18.9
OBN *e* 18 36 07.8
OBN *e*S S 18 42 13.2 -11
OBN pmax pmax
comp=Z,80nm,1.7s
OBN MLR MLR
comp=Z,428nm,17.0s
TUL1 Leonard 64.46 64 P P 18 33 46.0 -0.8
baz=320
TUL1 Leonard 64.46 64 P P 18 33 46.4 -0.4
baz=320
R40A Maddies Statio 64.48 60 P P 18 33 46.0 -0.9
baz=320,SNR=28
HFS Hagfors 64.48 347 LR LR 19 04 59.6
comp=Z,198nm,18.3s,baz=12,slow=39
LBMI Labuha 64.52 228 P P 18 33 48.0 +0.6
comp=Z,598nmcomp=Z,60nm,0.9s
SKAR Skarslia 64.60 350 *e*P **P 18 33 47.4 0.0**
FAKI Fak Fak 64.62 222 P P 18 33 47.6 -0.4
FAKI Fak Fak 64.62 222 P P 18 33 48.4 +0.4
comp=Z,888nmcomp=Z,86nm,0.8s
PKI Pulchoki 64.70 282 *e*P **P 18 33 47.9 -1.0**
comp=Z,121nm,1.0s
PKIN Phulchoki 64.70 282 *e*P **P 18 33 47.8 -1.0**
comp=Z,100nm,1.0s
GKN Gorkha 64.81 283 *e*P **P 18 33 48.4 -1.0**
comp=Z,94nm,1.0s
ABTX Abilene, Hawle 64.88 69 P P 18 33 48.4 -1.2
ABTX Abilene, Hawle 64.88 69 P P 18 33 50.2 +0.6
baz=320,SNR=12
ABTX Abilene, Hawle 64.88 69 P P 18 33 49.5 -0.1
baz=320,SNR=12
KMSI Cibinong 65.03 232 P P 18 33 52.2 +1.6
comp=Z,1μmcomp=Z,143nm,1.0s
OSL Oslo 65.05 348 *e*P **P 18 33 50.5 +0.3**
DANN Dangsing 65.05 284 *e*P **P 18 33 50.4 -0.7**
comp=Z,82nm,0.8s
ASK Askoy 65.09 351 *e*P **P 18 33 50.4 0.0**
TX31 Lajitas Ar. Si 65.12 74 P P 18 33 51.9 +0.6
baz=320,SNR=98
TXAR Lajitas Array 65.12 74 P P 18 33 51.8 +0.4
comp=Z,23nm,0.6s,baz=302,slow=4.5,SNR=264
TXAR PKPPKP **P'P'df**
comp=Z,0.5nm,1.0s,baz=123,slow=4.6,SNR=3.6
19 02 31.0 -6.7
comp=Z,23nm,0.6s
HHAR Hobbs 65.15 62 IAmb IAmb 18 33 52.4
comp=Z,17nm,1.0s
HHAR Hobbs 65.15 62 P P 18 33 49.9 -1.4
baz=320
CCM Cathedral Cave 65.18 59 P P 18 33 50.0 -1.4
CCM IAmb IAmb 18 33 52.3
comp=Z,18nm,0.9s
CCM Cathedral Cave 65.18 59 P P 18 33 50.0 -1.4
CCM pmax pmax
comp=Z,19nm,1.0s
CCM Cathedral Cave 65.18 59 P P 18 33 50.9 -0.5
baz=320,SNR=13
CCM Cathedral Cave 65.18 59 P P 18 33 50.6 -0.8
baz=320
LPIG La Paz 65.28 83 LR LR 18 56 26.0
comp=Z,269nm,21.8s,baz=250,slow=31
MGMO Mountain Grove 65.35 60 IAmb IAmb 18 33 52.6
comp=Z,14nm,0.8s
SFIN Lafayette 65.44 55 P P 18 33 52.4 -0.7
baz=321
KONO Kongsberg 65.47 349 P P 18 33 52.6 -0.3
KONO Kongsberg 65.47 349 ||P **P 18 33 52.8 -0.1**
KONO Kongsberg 65.47 349 *e*P **P 18 33 52.6 -0.3**
SADO Sadowa 65.61 47 LR LR 19 03 41.1
comp=Z,1μm,18.2s,baz=332,slow=37
VIKU Vikbolandet 65.62 345 *e*P **P 18 33 54.6 +0.7**
FVM French Village 65.65 59 P P 18 33 53.5 -1.0
FVM IAmb IAmb 18 33 57.6
comp=Z,19nm,0.8s
FVM French Village 65.65 59 P P 18 33 53.5 -1.0
FVM pmax pmax
comp=Z,19nm,0.8s
FVM French Village 65.65 59 P P 18 33 54.2 -0.2
baz=321,SNR=10
U40A Yellville 65.66 61 IAmb IAmb 18 33 55.3
comp=Z,23nm,0.8s
U40A Yellville 65.66 61 P P 18 33 53.9 -0.7
baz=320,SNR=21
U40A P **P 18 33 53.9 -0.7**
baz=320,SNR=21
U40A Yellville 65.66 61 P P 18 33 53.5 -1.1
baz=320,SNR=21
PYUN Piuthan 65.68 285 *e*P **P 18 33 53.9 -1.2**
comp=Z,75nm,0.9s
X37A Clayton 65.69 64 P P 18 33 55.1 +0.3
baz=320,SNR=8.6
PMG Port Moresby 65.96 204 LR LR 18 58 23.0
comp=Z,446nm,21.4s,baz=30,slow=32
PMG Port Moresby 65.96 204 P P 18 33 55.1 -1.4
PMG Port Moresby 65.96 204 *ce*P **P 18 33 56.2 -0.4**
PMG pmax pmax
comp=Z,38nm,1.0s
LPSR Galich'ya Gora 65.97 329 *e*P **P 18 33 55.9 -0.4**
LPSR pmax pmax
comp=Z,70nm,1.1s
LPSR MLR MLR
comp=Z,240nm,9.0s
W39A Magazine 66.06 63 IAmb IAmb 18 34 09.9
comp=Z,18nm,0.8s
W39A Magazine 66.06 63 P P 18 33 56.8 -0.4
baz=320,SNR=12
W39A Magazine 66.06 63 P P 18 33 56.6 -0.6
baz=320,SNR=12
MRSI Marisa 66.07 234 P P 18 33 57.8 +0.4
comp=Z,988nmcomp=Z,82nm,1.0s
TOLI2 Tolitoli 66.07 235 P P 18 33 57.2 -0.1
VRH Novokhopyorsk 66.31 327 *e*P **P 18 33 57.6 -0.9**
VRH pmax pmax
comp=Z,90nm,1.6s
VRH MLR MLR
comp=Z,840nm,20.0s
TRQ Mont Tremblant 66.34 43 IAmb IAmb 18 34 09.2
comp=Z,35nm,1.2s
KMY Karmoy 66.34 351 *e*P **P 18 33 59.0 +0.4**
MSAI Masohi 66.35 225 P P 18 34 01.6 +2.5
comp=Z,504nmcomp=Z,12nm,0.9s
N49A Columbus Grove 66.39 52 P P 18 33 59.0 -0.2
baz=322
N49A P **P 18 33 59.0 -0.2**
baz=322
JCT Junction City 66.42 70 P P 18 33 59.8 +0.2
baz=320,SNR=12
JCT Junction City 66.42 70 P P 18 33 58.9 -0.7
baz=320,SNR=12
SANI Sanana 66.44 228 P P 18 33 59.6 -0.2
comp=Z,1μmcomp=Z,83nm,0.9s
DELO Deloro Mine 66.46 46 P P 18 33 59.6 +0.1
DELO IAmb IAmb 18 34 15.9
comp=Z,26nm,1.5s
O48B Farmland 66.46 54 P P 18 33 58.7 -0.9
baz=322
S44A Carbondale 66.46 58 P P 18 33 59.3 -0.4
baz=321,SNR=10
WHTX Lake Whitney, 66.56 68 P P 18 34 00.2 -0.2
baz=320
PBMO Poplar Bluff 66.58 59 P P 18 34 00.5 0.0
baz=321
MIAR Mount Ida 66.67 63 IAmb IAmb 18 34 17.2
comp=Z,28nm,1.0s
MIAR Mount Ida 66.67 63 P P 18 34 00.9 -0.2
baz=321,SNR=21
MIAR Mount Ida 66.67 63 P P 18 34 00.5 -0.6
baz=321,SNR=21
VORR Voronezh 66.69 329 ||*i*P **P 18 34 01.3 +0.4**
VORR pmax pmax
comp=Z,55nm,1.8s
IDID Didziasalis 66.72 338 *e*P **P 18 34 01.4 +0.4**
LCAR Lake Charles 66.76 60 P P 18 34 01.3 -0.3
baz=321,SNR=6.5
WHAR Wooly Hollow 66.77 62 P P 18 34 00.7 -1.0
WHAR IAmb IAmb 18 34 02.2
comp=Z,16nm,0.8s
IIGN Ignalina 66.80 338 *e*P **P 18 34 01.8 +0.2**
W41B Gary Mavity, V 66.88 62 P P 18 34 01.4 -1.0
W41B IAmb IAmb 18 34 06.8
comp=Z,38nm,1.4s
W41B Gary Mavity, V 66.88 62 P P 18 34 01.7 -0.7
baz=321,SNR=16
W41B Gary Mavity, V 66.88 62 P P 18 34 01.3 -1.1
baz=321,SNR=16
P48A Milroy 66.96 54 IAmb IAmb 18 34 14.2
comp=Z,15nm,0.6s
P48A Milroy 66.96 54 P P 18 34 02.2 -0.6
baz=322
P48A P **P 18 34 02.2 -0.6**
baz=322
AAI Ambon 66.96 226 P P 18 34 04.4 +1.3
comp=Z,2μmcomp=Z,150nm,1.0s
LUWI Luwuk 67.01 232 P P 18 34 04.3 +0.9
comp=Z,4μmcomp=Z,99nm,0.8s
SNART Snartemo 67.01 350 *e*P **P 18 34 02.7 -0.2**
PBUR Paburge 67.06 341 *e*P **P 18 34 03.3 +0.1**
NACGM Naroch 67.08 338 ||*e*P **P 18 34 02.4 -1.0**
baz=23
VSR Storozhevoye 67.10 329 *e*P **P 18 34 03.7 +0.1**
VSR pmax pmax
comp=Z,60nm,1.0s
VSR MLR MLR
comp=Z,1μm,26.0s
X40A Basin Creek Fa 67.11 63 P P 18 34 04.2 +0.3
baz=321,SNR=8.2
X40A P **P 18 34 04.2 +0.3**
baz=321,SNR=8.2
X40A Basin Creek Fa 67.11 63 P P 18 34 03.2 -0.7
baz=321,SNR=8.2
PABE Paberze 67.13 339 P P 18 34 03.4 -0.3
PABE IAmb IAmb 18 34 05.6
comp=Z,32nm,0.9s
PABE Paberze 67.13 339 *e*P **P 18 34 04.2 +0.6**
MPSI Mapaga 67.17 236 P P 18 34 05.1 +0.7
comp=Z,610nmcomp=Z,48nm,1.0s
MNK Minsk 67.20 337 *e*P **P 18 34 05.0 +0.9**
MNK Minsk 67.20 337 *i* P **P 18 34 05.0 +0.9**
comp=E,3.0nm,0.6s
MNK *i* P **P 18 34 05.0 +0.9**
comp=N,11nm,1.0s
MNK *i* P **P 18 34 05.0 +0.9**
comp=Z,54nm,0.9s,baz=204
MNK *i* PcP **PcP 18 34 32.9 +0.8**
MNK *i* PP **PP 18 36 32.8 +1.2**
MNK *i* PPP PPP 18 38 09.0
MNK *i* S **S 18 42 59.2 +1.2**
MNK *i* SS **SS 18 47 21.3 +5.1**
MNK *i* SSS SSS 18 50 33.4
MNK *i* LR LR 19 00 42.7
MNK *i* LRM MLR 19 05 59.9
MNK *i* LRM MLR 19 05 59.9
MNK *i* LRM MLR 19 07 03.0
comp=Z,509nm,20.4s
N51A Ashland 67.24 51 P P 18 34 03.6 -0.9
N51A Ashland 67.24 51 P P 18 34 03.7 -0.9
baz=323
N51A P **P 18 34 03.7 -0.9**
baz=323
P49A Miami Univ. Ec 67.24 54 P P 18 34 03.2 -1.4
P49A IAmb IAmb 18 34 08.0
comp=Z,56nm,1.8s

P49A	**Miami Univ. Ec**	**67.24**	**54**	P		**P**	18 34 03.7	**-0.9**
	baz=322								
VORD	**Divnogorie**	**67.28**	**328**	*e*P		**P**	18 34 04.4	**-0.3**
VORD				pmax		pmax			
	comp=Z,40nm,1.2s								
J55A	**Hilton**	**67.38**	**47**	IAmb		IAmb	18 34 12.2		
	comp=Z,20nm,0.9s								
435B	**Jarrell**	**67.41**	**69**	P		**P**	18 34 06.2	**+0.3**
	baz=321								
APSI	**Ampana**	**67.42**	**233**	P		**P**	18 34 05.5	**-0.5**
	comp=Z,690nmcomp=Z,51nm,1.3s								
BMNY	**Brushton-Moira**	**67.49**	**44**	P		**P**	18 34 05.0	**-1.1**
	baz=325								
ACSO	**Alum Creek Sta**	**67.50**	**52**	P		**P**	18 34 06.2	**-0.1**
	baz=323								
ACSO	**Alum Creek Sta**	**67.50**	**52**	P		**P**	18 34 06.0	**-0.3**
	baz=323								
M53A	**WI Miller and**	**67.59**	**50**	P		**P**	18 34 05.6	**-1.2**
M53A	**WI Miller and**	**67.59**	**50**	P		**P**	18 34 05.6	**-1.2**
	baz=323,SNR=11								
LONY	**Lake Ozonia**	**67.64**	**44**	P		**P**	18 34 04.3	**-2.8**
	baz=325								
WVNY	**West Valley, N**	**67.74**	**48**	P		**P**	18 34 07.2	**-0.5**
	baz=324								
D62A	**Allapoint, All**	**67.75**	**39**	P		**P**	18 34 07.4	**-0.3**
D62A				IAmb		IAmb	18 34 14.8		
	comp=Z,20nm,0.9s								
MMNY	**Mt. Morris Dam**	**67.78**	**47**	IAmb		IAmb	18 34 14.6		
	comp=Z,26nm,0.8s								
J56A	**Wolcott**	**67.78**	**46**	P		**P**	18 34 06.1	**-1.9**
R49A	**Shelbyville**	**68.00**	**55**	P		**P**	18 34 08.9	**-0.6**
R49A				IAmb		IAmb	18 34 13.6		
	comp=Z,28nm,1.3s								
N53A	**Lisbon**	**68.03**	**50**	IAmb		IAmb	18 34 21.0		
	comp=Z,22nm,0.9s								
N53A	**Lisbon**	**68.03**	**50**	P		**P**	18 34 09.0	**-0.6**
	baz=323								
N53A				P		**P**	18 34 09.0	**-0.6**
	baz=323								
J57A	**Williamstown**	**68.04**	**46**	IAmb		IAmb	18 34 20.8		
	comp=Z,19nm,1.1s								
Z41A	**Richland Creek**	**68.08**	**63**	P		**P**	18 34 09.9	**0.0**
	baz=321								
T47A	**Sharon Grove**	**68.08**	**57**	P		**P**	18 34 10.3	**+0.3**
	baz=322,SNR=7.1								
O52A	**Adamsville**	**68.12**	**51**	P		**P**	18 34 09.5	**-0.7**
	baz=323,SNR=20								
O52A				P		**P**	18 34 09.5	**-0.7**
	baz=323,SNR=20								
NATX	**Nacogdoches**	**68.25**	**66**	P		**P**	18 34 11.7	**+0.6**
	baz=321								
Q51A	**Peebles**	**68.29**	**53**	P		**P**	18 34 10.3	**-1.0**
833A	**Chaparral WMA,**	**68.30**	**72**	P		**P**	18 34 12.2	**+0.7**
	baz=321								
O53A	**New Philadelph**	**68.30**	**51**	IAmb		IAmb	18 34 18.4		
	comp=Z,25nm,0.8s								
O53A	**New Philadelph**	**68.30**	**51**	P		**P**	18 34 11.0	**-0.3**
	baz=324								
KBL	**Kabul**	**68.34**	**299**	P		**P**	18 34 09.7	**-2.2**
KBL				IAmb		IAmb	18 34 12.5		
	comp=Z,31nm,1.0s								
KBL	**Kabul**	**68.34**	**299**	P		**P**	18 34 09.7	**-2.2**
KBL				pmax		pmax			
	comp=Z,31nm,1.0s								
P52A	**Corning**	**68.37**	**52**	P		**P**	18 34 11.2	**-0.5**
	baz=323								
K57A	**Scipio Center**	**68.37**	**46**	IAmb		IAmb	18 34 18.6		
	comp=Z,23nm,0.9s								
K57A	**Scipio Center**	**68.37**	**46**	P		**P**	18 34 10.9	**-0.9**
	baz=325								
J58A	**Remsen**	**68.38**	**45**	IAmb		IAmb	18 34 22.8		
	comp=Z,31nm,1.1s								
WVT	**Waverly**	**68.39**	**58**	P		**P**	18 34 11.0	**-1.0**
WVT				IAmb		IAmb	18 34 13.1		
	comp=Z,15nm,0.7s								
WVT	**Waverly**	**68.39**	**58**	P		**P**	18 34 11.0	**-1.0**
WVT				pmax		pmax			
	comp=Z,15nm,0.7s								
WVT	**Waverly**	**68.39**	**58**	P		**P**	18 34 11.7	**-0.2**
	baz=322,SNR=18								
WVT	**Waverly**	**68.39**	**58**	P		**P**	18 34 12.1	**+0.1**
	baz=322								
L56A	**Greenwood**	**68.41**	**47**	P		**P**	18 34 11.5	**-0.6**
	baz=324,SNR=13								
L56A				P		**P**	18 34 11.5	**-0.6**
	baz=324,SNR=13								
M55A	**Ridgway**	**68.42**	**49**	P		**P**	18 34 11.7	**-0.4**
	baz=324,SNR=12								
M55A				P		**P**	18 34 11.7	**-0.4**
	baz=324,SNR=12								
BATG	**Bathurst New B**	**68.67**	**37**	P		**P**	18 34 12.7	**-0.8**
BATG				IAmb		IAmb	18 34 20.1		
	comp=Z,19nm,0.9s								
SUW	**Suwalki**	**68.69**	**339**	*e*P		**P**	18 34 13.4	**-0.1**
SUW	**Suwalki**	**68.69**	**339**	*e*P		**P**	18 34 13.8	**+0.3**
G62A	**West of Eustis**	**68.75**	**41**	P		**P**	18 34 13.1	**-0.9**
	baz=327,SNR=7.4								
G62A				P		**P**	18 34 13.1	**-0.9**
	baz=327,SNR=7.4								
Q52A	**Bidwell**	**68.84**	**52**	IAmb		IAmb	18 34 27.4		
	comp=Z,17nm,0.8s								
OXF	**Oxford**	**68.86**	**60**	P		**P**	18 34 15.0	**+0.1**
	baz=322,SNR=8.9								
OXF	**Oxford**	**68.86**	**60**	P		**P**	18 34 14.0	**-0.8**
	baz=322,SNR=8.9								
HKT	**Hockley**	**69.01**	**68**	P		**P**	18 34 13.8	**-2.0**
HKT				IAmb		IAmb	18 34 57.0		
	comp=Z,34nm,1.8s								
HKT	**Hockley**	**69.01**	**68**	P		**P**	18 34 13.8	**-2.0**
HKT				pmax		pmax			
	comp=Z,34nm,1.8s								
LBNH	**Lisbon**	**69.02**	**42**	IAmb		IAmb	18 34 22.7		
	comp=Z,15nm,0.8s								
LBNH	**Lisbon**	**69.02**	**42**	P		**P**	18 34 15.2	**-0.6**
	baz=326								
LBNH	**Lisbon**	**69.02**	**42**	P		**P**	18 34 15.3	**-0.4**
	baz=327								
ACCN	**Adirondack Com**	**69.03**	**44**	IAmb		IAmb	18 34 26.8		
	comp=Z,17nm,1.1s								
ACCN	**Adirondack Com**	**69.03**	**44**	P		**P**	18 34 14.3	**-1.5**
	baz=326								
BINY	**Binghamton**	**69.03**	**46**	P		**P**	18 34 14.9	**-1.0**
	baz=325								
F64A	**Sherman**	**69.04**	**39**	P		**P**	18 34 14.0	**-1.8**
F64A				IAmb		IAmb	18 34 26.7		
	comp=Z,27nm,1.2s								
F64A	**Sherman**	**69.04**	**39**	P		**P**	18 34 14.8	**-1.0**
	baz=328								
F64A				P		**P**	18 34 14.8	**-1.0**
	baz=328								
H62A	**Milan**	**69.05**	**42**	P		**P**	18 34 15.6	**-0.3**
	baz=327,SNR=7.6								
H62A				P		**P**	18 34 15.6	**-0.3**
	baz=327,SNR=7.6								
U49A	**Red Boiling Sp**	**69.11**	**56**	P		**P**	18 34 16.5	**+0.1**
	baz=323,SNR=8.9								
T50A	**Nancy**	**69.17**	**55**	P		**P**	18 34 16.8	**0.0**
	baz=323								
T50A				P		**P**	18 34 16.8	**0.0**
	baz=323								
PLAL	**Pickwick Lake**	**69.17**	**59**	IAmb		IAmb	18 34 17.5		
	comp=Z,22nm,0.8s								
SMKI	**Samarinda**	**69.17**	**238**	P		**P**	18 34 20.0	**+3.0**
	comp=Z,107nm,0.5s								
PKME	**Peaks-Kenny Pk**	**69.19**	**40**	P		**P**	18 34 15.4	**-1.3**
	baz=328								
V48A	**Smith Brothers**	**69.20**	**58**	P		**P**	18 34 15.6	**-1.4**
V48A				IAmb		IAmb	18 34 33.4		
	comp=Z,20nm,0.9s								
V48A	**Smith Brothers**	**69.20**	**58**	P		**P**	18 34 17.1	**0.0**
	baz=322,SNR=6.3								
M57A	**Sunshine Farm,**	**69.25**	**48**	IAmb		IAmb	18 34 24.0		
	comp=Z,20nm,0.7s								
M57A	**Sunshine Farm,**	**69.25**	**48**	P		**P**	18 34 16.0	**-1.1**
	baz=325								
M57A				P		**P**	18 34 16.0	**-1.1**
	baz=325								
Y45A	**Yeager Farm, C**	**69.30**	**61**	P		**P**	18 34 15.9	**-1.7**
MCWV	**Mont Chateau**	**69.40**	**50**	P		**P**	18 34 17.6	**-0.6**
	baz=324								
L59A	**Walton**	**69.44**	**46**	IAmb		IAmb	18 34 29.0		
	comp=Z,29nm,1.1s								
L59A	**Walton**	**69.44**	**46**	P		**P**	18 34 17.3	**-1.2**
	baz=326								
L59A				P		**P**	18 34 17.3	**-1.2**
	baz=326								
SSPA	**Standing Stone**	**69.49**	**49**	P		**P**	18 34 17.7	**-0.9**
SSPA				IAmb		IAmb	18 34 25.6		
	comp=Z,16nm,0.8s								
SSPA	**Standing Stone**	**69.49**	**49**	P		**P**	18 34 18.6	**0.0**
	baz=325								
R53A	**Hurricane**	**69.50**	**53**	P		**P**	18 34 18.4	**-0.4**
	baz=324								
R53A				P		**P**	18 34 18.4	**-0.4**
	baz=324								
J61A	**Chester**	**69.52**	**43**	P		**P**	18 34 18.1	**-0.7**
J61A				IAmb		IAmb	18 34 29.1		
	comp=Z,31nm,1.4s								
J61A	**Chester**	**69.52**	**43**	P		**P**	18 34 17.8	**-1.0**
	baz=326								
J61A				P		**P**	18 34 17.8	**-1.0**
	baz=326								
AFI	**Afiamalu**	**69.61**	**160**	LR		LR	19 03 01.7		
	comp=Z,234nm,18.2s,baz=340,slow=34								
N58A	**Sunbury**	**69.83**	**48**	IAmb		IAmb	18 34 27.5		
	comp=Z,14nm,0.8s								
N58A	**Sunbury**	**69.83**	**48**	P		**P**	18 34 20.6	**-0.2**
	baz=325								
N58A				P		**P**	18 34 20.6	**-0.2**
	baz=325								
BKB	**Balikpapan**	**70.03**	**237**			pP	18 34 24.8	-1.3
BKB	**Balikpapan**	**70.03**	**237**	P		**P**	18 34 22.9	**+0.6**
	comp=Z,3µmcomp=Z,319nm,0.9s								
SWET	**Sewanee**	**70.06**	**57**	P		**P**	18 34 20.7	**-1.6**
SWET				IAmb		IAmb	18 34 35.2		
	comp=Z,15nm,0.8s								
X48A	**Hartselle**	**70.11**	**59**	IAmb		IAmb	18 34 25.4		
	comp=Z,11nm,0.6s								
X48A	**Hartselle**	**70.11**	**59**	P		**P**	18 34 21.5	**-1.1**
	baz=323,SNR=7.7								
TTSI	**Tana Toraja**	**70.16**	**234**	P		**P**	18 34 23.7	**+0.7**
	comp=Z,584nmcomp=Z,34nm,1.0s								
TZTN	**Tazewell**	**70.17**	**55**	P		**P**	18 34 23.2	**+0.3**
	baz=323,SNR=8.3								
TZTN	**Tazewell**	**70.17**	**55**	P		**P**	18 34 22.5	**-0.4**
	baz=324,SNR=8.3								
L61B	**Northampton**	**70.21**	**44**	P		**P**	18 34 21.6	**-1.5**
	baz=327								
AKASG	**Malin Array Be**	**70.37**	**334**	P		**P**	18 34 23.4	**-0.4**
	comp=Z,23nm,0.7s,baz=28,slow=6.5,SNR=48								
AKASG				PKPPKP		P'P'df	19 02 21.3	-11	
	comp=Z,1.9nm,0.8s,baz=213,slow=3.2,SNR=7.6								
AKASG				LR		LR	19 08 13.6		
	comp=Z,281nm,19.2s,baz=38,slow=38								
	comp=Z,23nm,0.7s								
AKASG	**Malin Array Be**	**70.37**	**334**	P		**P**	18 34 22.3	**-1.6**
AKASG	**Malin Array Be**	**70.37**	**334**	P		**P**	18 34 22.3	**-1.6**
AKBB	**Malin Array Si**	**70.37**	**334**	P		**P**	18 34 22.2	**-1.7**
AKBB				IAmb		IAmb	18 34 29.2		
	comp=Z,33nm,0.9s								
AKBB	**Malin Array Si**	**70.37**	**334**	*i* P		**P**	18 34 22.4	**-1.5**
P57A	**Homestead Farm**	**70.37**	**49**	P		**P**	18 34 23.8	**-0.3**
	baz=325								
P57A				P		**P**	18 34 23.8	**-0.3**
	baz=325								
V51A	**Loudon**	**70.37**	**56**	P		**P**	18 34 22.6	**-1.5**
V51A				IAmb		IAmb	18 34 25.6		
	comp=Z,27nm,0.9s								
V51A	**Loudon**	**70.37**	**56**	P		**P**	18 34 24.2	**+0.1**
	baz=323,SNR=8.6								
W50A	**Signal Mountai**	**70.38**	**57**	IAmb		IAmb	18 34 31.6		
	comp=Z,22nm,0.7s								
W50A	**Signal Mountai**	**70.38**	**57**	P		**P**	18 34 23.8	**-0.5**
	baz=323,SNR=9.8								
UNH	**University of**	**70.40**	**42**	P		**P**	18 34 23.3	**-1.0**
	baz=327								
Z47A	**Carrollton**	**70.58**	**60**	P		**P**	18 34 25.5	**+0.1**
	baz=323,SNR=6.1								
HRV	**Adam Dziewonsk**	**70.62**	**43**	P		**P**	18 34 27.3	**+1.7**
	baz=327								
V52A	**Sevierville**	**70.71**	**55**	P		**P**	18 34 25.8	**-0.4**
	baz=324								
FPAL	**Fort Paine**	**70.76**	**58**	IAmb		IAmb	18 34 33.5		
	comp=Z,20nm,0.8s								
MTKI	**Muara Teweh, K**	**70.76**	**239**	P		**P**	18 34 27.8	**+1.1**
	comp=Z,2µmcomp=Z,26nm,0.8s								
TKL	**Tuckaleechee C**	**70.77**	**56**	LR		LR	19 06 28.1		
	comp=Z,3µm,19.8s,baz=332,slow=37								
EKA	**Eskdalemuir Ar**	**70.78**	**355**	LR		LR	19 05 15.0		
	comp=Z,134nm,18.9s,baz=354,slow=36								
ESK	**Eskdalemuir**	**70.80**	**355**	P		**P**	18 34 25.9	**-0.5**
ESK				IAmb		IAmb	18 34 32.1		
	comp=Z,21nm,1.0s								
ESK	**Eskdalemuir**	**70.80**	**355**	P		**P**	18 34 25.9	**-0.5**
ESK				pmax		pmax			
	comp=Z,21nm,1.0s								
Y49A	**Blount Mountai**	**70.90**	**59**	IAmb		IAmb	18 34 42.9		
	comp=Z,16nm,0.9s								
Y49A	**Blount Mountai**	**70.90**	**59**	P		**P**	18 34 26.6	**-0.8**
	baz=323,SNR=8.5								
PAL	**Palisades**	**70.90**	**46**	P		**P**	18 34 29.9	**+2.7**
	baz=325								
GEYT	**Alibeck**	**70.98**	**309**	P		**P**	18 34 27.8	**-0.1**
	comp=Z,22nm,0.9s,baz=285,slow=2.3,SNR=23								
GEYT				LR		LR	19 08 39.5		
	comp=Z,516nm,18.9s,baz=55,slow=38								
	comp=Z,22nm,0.9s								
GEYT	**Alibeck**	**70.98**	**309**	P		**P**	18 34 27.6	**-0.4**
GEYT				IAmb		IAmb	18 34 30.3		
	comp=Z,22nm,1.0s								
SPSI	**Sidrap Palu**	**70.98**	**233**	P		**P**	18 34 28.7	**+0.6**
	comp=Z,37nm,1.0s								
U54A	**Nelsons Funny**	**71.01**	**54**	P		**P**	18 34 27.6	**-0.6**
U54A				IAmb		IAmb	18 34 45.8		
	comp=Z,22nm,0.9s								
U54A	**Nelsons Funny**	**71.01**	**54**	P		**P**	18 34 27.6	**-0.6**
	baz=324								
U54A				P		**P**	18 34 27.6	**-0.6**
	baz=324								
BBSI	**Bau Bau**	**71.03**	**230**	P		**P**	18 34 32.4	**+4.1**
	comp=Z,82nmcomp=Z,9.4nm,1.1s								
X51A	**Calhoun**	**71.11**	**57**	P		**P**	18 34 28.6	**-0.1**
	baz=323								
X51A				P		**P**	18 34 28.6	**-0.1**
	baz=323								
BLA	**Blacksburg**	**71.12**	**52**	P		**P**	18 34 27.5	**-1.3**
BLA				IAmb		IAmb	18 34 36.1		
	comp=Z,26nm,0.8s								
BLA	**Blacksburg**	**71.12**	**52**	P		**P**	18 34 27.5	**-1.3**
BLA				pmax		pmax			
	comp=Z,27nm,0.8s								
BLA	**Blacksburg**	**71.12**	**52**	P		**P**	18 34 28.3	**-0.5**
	baz=324								
BLA	**Blacksburg**	**71.12**	**52**	P		**P**	18 34 27.9	**-0.9**
	baz=324								
BNSI	**Bone**	**71.20**	**233**	P		**P**	18 34 31.7	**+2.3**
	comp=Z,46nm,1.0s								
V53A	**Saluda**	**71.22**	**55**	P		**P**	18 34 29.0	**-0.5**
V53A	**Saluda**	**71.22**	**55**	P		**P**	18 34 28.7	**-0.8**
	baz=324								
V53A				P		**P**	18 34 28.7	**-0.8**
	baz=324								
LRAL	**Lakeview Retre**	**71.26**	**60**	IAmb		IAmb	18 34 30.1		
	comp=Z,12nm,0.7s								
LRAL	**Lakeview Retre**	**71.26**	**60**	P		**P**	18 34 28.6	**-1.0**
	baz=323,SNR=9.2								
LRAL	**Lakeview Retre**	**71.26**	**60**	P		**P**	18 34 29.2	**-0.4**
	baz=323,SNR=9.2								
MAK	**Makhachkala**	**71.31**	**319**	*e*P		**P**	18 34 25.4	**-4.3**
MAK				*e*			18 37 07.4		
MAK				*e*S		**S**	18 43 40.6	**-6.2**
MAK				*e*SSS		SSS	18 51 31.7		
MAK				pmax		pmax			
	comp=Z,104nm,1.2s								
S57A	**Dark Hollow, R**	**71.35**	**51**	P		**P**	18 34 28.9	**-1.2**
S57A				IAmb		IAmb	18 34 42.5		
	comp=Z,21nm,0.9s								
S57A	**Dark Hollow, R**	**71.35**	**51**	P		**P**	18 34 30.0	**-0.1**
	baz=325								
S57A				P		**P**	18 34 30.0	**-0.1**
	baz=325								
STKI	**Sintang**	**71.67**	**243**	P		**P**	18 34 33.3	**+1.0**
	comp=Z,2µmcomp=Z,28nm,0.9s								
CASEE	**Lake Jocassee**	**71.71**	**55**	P		**P**	18 34 32.1	**-0.3**
	baz=324,SNR=8.9								
GROC	**Groznyy**	**71.76**	**320**	*e*P		**P**	18 34 33.5	**+1.0**
GROC				*e*			18 34 52.4		
GROC				*e*S		**S**	18 43 55.6	**+3.6**
GROC				pmax		pmax			
	comp=Z,20nm,0.6s								
T57A	**Hurt**	**71.83**	**52**	P		**P**	18 34 31.6	**-1.4**
T57A	**Hurt**	**71.83**	**52**	P		**P**	18 34 32.2	**-0.8**
	baz=325								
T57A				P		**P**	18 34 32.2	**-0.8**
	baz=325								
V55A	**Taylorsville**	**71.84**	**54**	P		**P**	18 34 33.1	**-0.1**
	baz=324								
V55A				P		**P**	18 34 33.1	**-0.1**
	baz=324								
HRA	**Herat**	**71.88**	**304**	IAmb		IAmb	18 34 35.7		
	comp=Z,28nm,0.9s								
MSVF	**Nonsawu**	**71.91**	**171**	LR		LR	19 00 26.0		
	comp=Z,171nm,21.5s,baz=328,slow=31								
KAPI	**Kappang**	**71.91**	**233**	LR		LR	19 02 49.1		
	comp=Z,56nm,19.8s,baz=17,slow=33								
Z51A	**Franklin**	**71.95**	**58**	P		**P**	18 34 32.2	**-1.6**
BKSI	**Bulukumba**	**72.00**	**232**	P		**P**	18 34 34.8	**+0.6**
	comp=Z,51nm,0.9s								
BTLR	**Botlikh**	**72.06**	**320**	*i* P		**P**	18 34 33.0	**-1.4**
Y52A	**Lilburn**	**72.06**	**57**	P		**P**	18 34 34.5	**+0.1**
	baz=324,SNR=5.7								
Y52A				P		**P**	18 34 34.5	**+0.1**
	baz=324,SNR=5.7								
KVAR	**Kislovodsk Arr**	**72.25**	**323**	LR		LR	19 09 11.8		
	comp=Z,441nm,21.3s,baz=272,slow=38								
KIV	**Kislovodsk**	**72.25**	**323**	⇓P		**P**	18 34 36.0	**+0.4**
KIV	**Kislovodsk**	**72.25**	**323**	P		**P**	18 34 35.0	**-0.6**
KIV				IAmb		IAmb	18 34 45.4		
	comp=Z,26nm,1.1s								
KIV	**Kislovodsk**	**72.25**	**323**	⇓P		**P**	18 34 36.0	**+0.4**
KIV	**Kislovodsk**	**72.25**	**323**	*i* P		**P**	18 34 36.3	**+0.7**
	SNR=8.5								
KMSC	**Kings Mountain**	**72.36**	**54**	P		**P**	18 34 36.0	**-0.2**
	baz=324								
KMSC	**Kings Mountain**	**72.36**	**54**	P		**P**	18 34 36.0	**-0.2**
	baz=324								
KBZ	**Khabaz**	**72.38**	**322**	P		**P**	18 34 36.1	**0.0**
	comp=Z,32nm,0.9s,baz=237,slow=1.3,SNR=46								
KBZ				LR		LR	19 09 45.5		
	comp=Z,516nm,21.3s,baz=26,slow=39								
	comp=Z,32nm,0.9s								
KBZ	**Khabaz**	**72.38**	**322**	*ce*P		**P**	18 34 35.6	**-0.5**
KBZ				pmax		pmax			
	comp=Z,41nm,1.0s								
LVV	**L'vov**	**72.44**	**337**	*e*P		**P**	18 34 37.8	**+1.3**
SHA1	**Shidzhatmaz**	**72.45**	**322**	*i* P		**P**	18 34 36.9	**0.0**
BSSI	**Bau Bau, Buton**	**72.56**	**232**	P		**P**	18 34 37.3	**-0.2**
	comp=Z,108nm,0.9s								
T59A	**Double "B" Far**	**72.63**	**51**			pP	18 34 42.3	+1.1
HODGE	**Hodges**	**72.65**	**55**	P		**P**	18 34 37.7	**-0.2**
	baz=324,SNR=11								
152A	**Waverly Hall**	**72.70**	**58**	P		**P**	18 34 36.3	**-2.0**
152A	**Waverly Hall**	**72.70**	**58**	P		**P**	18 34 37.1	**-1.1**
	baz=324,SNR=6.1								
GOGA	**Godfrey**	**72.72**	**57**	P		**P**	18 34 38.0	**-0.4**
	baz=324								
ZEI	**Tsey**	**72.82**	**321**	*e*P		**P**	18 34 37.9	**-1.2**
ZEI				pmax		pmax			
	comp=Z,25nm,1.1s								
V58A	**Windy Hill, Pi**	**72.88**	**52**	P		**P**	18 34 39.3	**0.0**
	baz=325								
V58A				P		**P**	18 34 39.3	**0.0**
	baz=325								
KWP	**Kalwaria Pacla**	**72.91**	**338**	*e*P		**P**	18 34 39.8	**+0.5**
BBKI	**Banjar Baru**	**72.95**	**238**	P		**P**	18 34 40.2	**+0.3**
	comp=Z,92nm,1.0s								
SORM	**Soroca**	**72.95**	**334**	⇑P		**P**	18 34 39.6	**+0.1**
SORM	**Soroca**	**72.95**	**334**	⇑P		**P**	18 34 39.6	**+0.1**
OJC	**Ojcow**	**72.97**	**340**	*e*P		**P**	18 34 40.2	**+0.6**
W57A	**Gilead**	**72.99**	**53**	P		**P**	18 34 37.9	**-2.1**
KSP	**Ksiaz**	**73.04**	**343**	*e*P		**P**	18 34 40.0	**0.0**
JSC	**Jenkinsville**	**73.09**	**55**	P		**P**	18 34 40.5	**-0.1**
	baz=325								
CLL	**Collm**	**73.13**	**345**	*i* P		**P**	18 34 40.2	**-0.3**
CLL				*e*S		**S**	18 44 04.0	**-3.5**
CLL				pmax		pmax			
	comp=Z,16nm,1.3s								
CLL	**Collm**	**73.13**	**345**	*i* P		**P**	18 34 40.2	**-0.3**
	comp=Z,16nm,1.3s								
CLL				*e*PP		**PP**	18 37 28.0	**+5.4**
CLL				*e*PPPP			18 40 06.0		
CLL				*e*S		**S**	18 44 04.0	**-3.5**
CLL				*e*PS		**PnS**	18 44 40.0	**+1.3**
CLL				*e*SS		SS	18 48 36.0	-11
CLL				*e*SSS		SSS	18 52 36.0		
CLL				LmV			19 17 00.0		
	comp=Z,200nm,19.1s								
BIRD	**Birdtown, Kers**	**73.18**	**54**	P		**P**	18 34 39.7	**-1.4**
BIRD				IAmb		IAmb	18 34 52.4		
	comp=Z,33nm,1.4s								
ANN	**Anapa**	**73.31**	**326**	*e*P		**P**	18 34 41.5	**-0.2**
ANN				*e*S		**S**	18 44 11.1	**+1.4**
ANN				pmax		pmax			
	comp=Z,33nm,1.0s								
ANN				MLR		MLR			
	comp=Z,394nm,14.0s								
CHVC	**Chvalec**	**73.32**	**343**	*e*P		**P**	18 34 42.4	**+0.7**
OSTC	**Ostas**	**73.33**	**342**	AMS		AMS	19 13 40.0		
	comp=Z,400nm,13.2s								
BRG	**Berggiesshubel**	**73.41**	**344**	*e*P		**P**	18 34 42.8	**+0.6**
BRG				Amp			18 34 44.6		
	comp=Z,17nm,1.5s								
BRG	**Berggiesshubel**	**73.41**	**344**	SS		SS	18 48 55.0	+3.5
BRG				Amp			19 16 34.0		
	comp=N,0.3nm,14.0s								
BRG				Amp			19 16 41.0		
	comp=E,0.2nm,15.0s								
BRG				Amp			19 16 44.0		
	comp=Z,0.4nm,15.5s								
BRG	**Berggiesshubel**	**73.41**	**344**	*e*P	

UZH *e* 18 35 03.8
MILM Milestii Mici 73.95 333 *e*P **P** **18 34 43.0 -2.4**
comp=Z,180nm,3.0s
MILM Milestii Mici 73.95 333 *e*PcP **PcP** **18 34 57.0 -3.7**
MILM *e*S S 18 44 26.0 +9.2
MILM *e*L L 19 08 24.0
MILM LRM MLR 19 12 09.0
comp=Z,400nm,13.0s
MILM Milestii Mici 73.95 333 ⇑P **P** **18 34 45.3 -0.1**
MILM Milestii Mici 73.95 333 ⇑P **P** **18 34 45.3 -0.1**
MMRI Maumere 73.97 229 P **P** **18 34 45.0 -0.8**
MMRI Maumere 73.97 229 P **P** **18 34 45.9 +0.1**
comp=Z,40nm,1.5s
LANS Liptovska Anna 74.05 340 *e*P **P** **18 34 48.1 +2.0**
LANS pmax pmax
comp=Z,20nm,0.9s
LANS Liptovska Anna 74.05 340 *e*P **P** **18 34 48.1 +2.0**
SOEI Soe 74.08 227 P **P** **18 34 46.6 0.0**
comp=Z,101nm,0.9s
PRU Pruhonice 74.16 343 *e*P **P** **18 34 47.6 +1.0**
PRU MLR MLR
comp=Z,400nm,12.7s
PRU Pruhonice 74.16 343 *e*P **P** **18 34 47.6 +1.0**
PRU AMS AMS 19 14 20.0
comp=Z,400nm,12.7s
AKH Akhalkalaki 74.17 321 ⇓P **P** **18 34 48.3 +1.3**
MAUC Maruska 74.17 341 *e*P **P** **18 34 47.6 +0.9**
BURAR Bucovina Array 74.22 336 P **P** **18 34 46.5 -0.6**
BURAR IAmb IAmb 18 34 49.2
comp=Z,26nm,0.8s
BUR01 Bucovina Ar. S 74.22 336 ⇑P **P** **18 34 47.4 +0.3**
SIM Simferopol' 74.23 329 *e*P **P** **18 34 46.6 -0.5**
SIM pmax pmax
comp=Z,215nm,1.0s
NKC Novy Kostel 74.26 345 *e*P **P** **18 34 47.8 +0.6**
NKC MLR MLR
comp=Z,400nm,14.6s
NKC Novy Kostel 74.26 345 *e*P **P** **18 34 47.8 +0.6**
NKC AMS AMS 19 17 50.0
comp=Z,400nm,14.6s
EDFI Ende, Flores 74.31 229 P P 18 34 44.0 -4.0
comp=Z,1µmcomp=Z,32nm,0.6s
255A Hazlehurst 74.41 57 P **P** **18 34 48.2 -0.1**
baz=325
VRAC Vranov 74.46 342 ⇓P **P** **18 34 49.1 +0.8**
VRAC Vranov 74.46 342 LR LR 19 13 13.0
comp=Z,205nm,18.1s,baz=36,slow=40
VRAC Vranov 74.46 342 ⇓P **P** **18 34 49.1 +0.8**
VRAC Vranov 74.46 342 *e*P **P** **18 34 48.4 0.0**
BIZ Bicaz 74.63 335 ⇑P **P** **18 34 50.2 +0.8**
BATM Batumi 74.66 322 ⇓P **P** **18 34 50.0 +0.3**
BATM Batumi 74.66 322 ⇓P **P** **18 34 50.0 +0.3**
TREC Trest 74.67 343 AMS AMS 19 14 20.0
comp=Z,400nm,17.5s
JAVC Velka Javorina 74.69 341 *e*P **P** **18 34 50.5 +0.7**
KRUC Moravsky 74.73 342 *e*P **P** **18 34 50.0 +0.1**
BATI Baumata 74.74 227 LR LR 19 12 40.3
comp=Z,150nm,18.4s,baz=25,slow=40
BATI Baumata 74.74 227 P **P** **18 34 50.5 +0.1**
comp=Z,30nm,1.1s
BTNL Ternell 74.76 349 *d*P **P** **18 34 50.2 +0.1**
comp=Z,7.6nm,1.1s
GNI Garni 74.78 319 LR LR 19 12 34.1
comp=Z,607nm,18.0s,baz=20,slow=40
GNI Garni 74.78 319 P **P** **18 34 51.5 +0.9**
GNI IAmb IAmb 18 35 17.7
comp=Z,39nm,0.9s
GNI Garni 74.78 319 *d* iP **P** **18 34 50.7 +0.1**
GNI pmax pmax
comp=Z,57nm,1.3s
GNI Garni 74.78 319 P **P** **18 34 51.6 +1.0**
VYHS Vyhne 74.81 340 *e*P **P** **18 34 51.8 +1.4**
VYHS pmax pmax
comp=Z,10.0nm,1.3s
VYHS Vyhne 74.81 340 *e*P **P** **18 34 51.8 +1.4**
KOLL Kolacno 74.81 340 *e*P **P** **18 34 51.6 +1.2**
GRFO Grafenberg 74.98 345 P **P** **18 34 51.1 -0.2**
GRFO IAmb IAmb 18 34 56.9
comp=Z,27nm,1.3s
GRFO Grafenberg 74.98 345 P **P** **18 34 51.1 -0.2**
GRFO pmax pmax
comp=Z,27nm,1.3s
SMOL Smolenice 75.06 341 *e*P **P** **18 34 53.8 +1.9**
SMOL pmax pmax
comp=Z,13nm,1.2s
SMOL Smolenice 75.06 341 *e*P **P** **18 34 53.8 +1.9**
PSZ Piszkesteto 75.14 339 ⇑P **P** **18 34 54.4 +2.0**
PSZ Piszkesteto 75.14 339 ⇑P **P** **18 34 54.4 +2.0**
PSZ Piszkesteto 75.14 339 P **P** **18 34 54.0 +1.6**
KHC Kasperske Hory 75.15 344 *i* P **P** **18 34 52.4 0.0**
KHC pmax pmax
comp=Z,59nm,1.2s
KHC Kasperske Hory 75.15 344 *e*P **P** **18 34 53.2 +0.8**
KHC *e*PCP **PcP** **18 35 04.5 -1.4**
KHC *ex* x 18 44 26.3
KHC AMS AMS 19 16 50.0
comp=Z,300nm,14.2s
LTVH Ltavrtes, Hu 75.21 338 P **P** **18 34 54.7 +2.0**
MODS Modra-Piesok 75.23 341 *e*P **P** **18 34 53.8 +1.0**
MODS pmax pmax
comp=Z,41nm,1.1s
MODS Modra-Piesok 75.23 341 *e*P **P** **18 34 53.8 +1.0**
CKRC Cesky Krumlov 75.33 343 *e*P **P** **18 34 54.1 +0.7**
CKRC AMS AMS 19 17 20.0
comp=Z,400nm,12.4s
GEC2 GERESS Array S 75.41 344 P **P** **18 34 52.8 -1.2**
GERES GERESS Array B 75.41 344 P **P** **18 34 54.4 +0.4**
comp=Z,6.7nm,0.9s,baz=45,slow=5.8,SNR=33
comp=Z,6.7nm,0.9s
ZST Bratislava 75.43 341 *e*P **P** **18 34 55.4 +1.4**
ZST pmax pmax
comp=Z,60nm,1.1s
ZST Bratislava 75.43 341 *e*P **P** **18 34 55.4 +1.4**
VRI Vrincioaia 75.47 334 ⇑P **P** **18 34 56.4 +2.1**
VRI Vrincioaia 75.47 334 ⇑P **P** **18 34 56.4 +2.1**
LHMI Lhok Sumawe 75.48 259 P **P** **18 34 57.0 +2.3**
comp=Z,136nm,0.9s
PLOR Plostina 75.51 334 ⇑P **P** **18 34 55.3 +0.8**
PLOR Plostina 75.51 334 ⇑P **P** **18 34 55.3 +0.8**
DRGR 75.59 337 ⇓P **P** **18 34 55.5 +0.5**
DRGR 75.59 337 ⇓P **P** **18 34 55.5 +0.5**
COVR Voineasa-Covas 75.63 334 ⇓P **P** **18 34 56.3 +1.1**
DOPR Dopca 75.72 335 ⇓P **P** **18 34 57.0 +1.3**
BUD Budapest 75.73 340 P **P** **18 34 57.7 +2.0**
CFR Carcaliu 75.74 333 ⇓P **P** **18 34 56.3 +0.5**
CFR Carcaliu 75.74 333 ⇓P **P** **18 34 56.3 +0.5**
DSRI Dabo 75.84 249 P **P** **18 34 57.2 +0.5**
comp=Z,31nm,1.1s
DZM Mont Dzumac 75.87 183 LR LR 19 03 51.1
comp=Z,236nm,19.3s,baz=24,slow=32
CONA Conrad Observa 75.92 342 *e*P **P** **18 34 57.7 +0.8**
comp=Z,28nm,1.2s,SNR=21
TSI Tuntungan 75.95 256 P **P** **18 34 57.7 +0.3**
comp=Z,130nm,0.9s
TPGR Topolog 75.96 332 ⇓P **P** **18 34 57.7 +0.6**
CSKK Cskako 76.00 340 P **P** **18 34 58.6 +1.4**
MLR Muntele Rosu 76.02 334 ⇑P **P** **18 34 57.2 -0.4**
MLR Muntele Rosu 76.02 334 ⇑P **P** **18 34 57.2 -0.4**
SOP Sopron 76.03 341 P **P** **18 34 59.3 +1.9**
RONA Rosalia, Austr 76.06 342 *e*P **P** **18 34 58.7 +1.1**
comp=Z,23nm,1.2s,SNR=12
TPI Tanjungpandan 76.07 245 P **P** **18 34 58.5 +0.5**
comp=Z,545nmcomp=Z,35nm,0.9s
EGYH Egyhazaskeszo 76.13 341 P **P** **18 34 59.6 +1.6**
PLAI Plampang 76.17 233 P **P** **18 34 57.4 -1.2**
comp=Z,125nm,1.0s
MOA Molln 76.28 343 *e*P **P** **18 34 60.0 +1.1**
comp=Z,16nm,1.2s
VOIR 76.30 335 ⇓P **P** **18 34 59.9 +0.8**
VOIR 76.30 335 ⇓P **P** **18 34 59.9 +0.8**
PSI Prapat 76.31 256 LR LR 19 09 45.6
comp=Z,193nm,20.1s,baz=28,slow=37
SIRR Siria 76.32 338 ⇑P **P** **18 35 00.6 +1.5**
MPLH Magyarpolny 76.33 341 P **P** **18 35 00.4 +1.3**
PPBI Pangkal Pinang 76.39 247 P **P** **18 35 00.8 +0.9**
ARR Arges 76.47 335 ⇑P **P** **18 35 01.3 +1.3**
KMMI Kalianget 76.47 237 P **P** **18 35 01.0 +0.8**
comp=Z,67nm,1.1s
CTA Charters Tower 76.48 202 LR LR 19 08 18.2
comp=Z,92nm,19.1s,baz=12,slow=35
CTAO Charters Tower 76.48 202 P **P** **18 35 01.2 +1.0**
CTAO Charters Tower 76.48 202 P **P** **18 35 01.2 +1.0**
CTAO pmax pmax
comp=Z,60nm,1.2s

TIH Tihany 76.52 340 P **P** **18 35 01.9 +1.7**
BIOA Bad Ischl, Aus 76.54 343 *e*P **P** **18 35 01.6 +1.2**
comp=Z,13nm,1.1s
HYBB Hyderabad (bro 76.54 281 *e*P P 18 34 54.3 -6.5
HYBB *ep*P *s*P 18 35 02.5 -3.7
HYBB *e*PP **PP** **18 37 46.1 -6.4**
HYBB *e*S **S** **18 44 38.8 -7.7**
ARSA Arzberg 76.63 342 *e*P **P** **18 35 02.8 +1.9**
comp=Z,26nm,1.4s,SNR=7.9
SRBI Singaraja 76.75 236 P **P** **18 35 01.7 -0.1**
comp=Z,53nm,1.0s
DIKM Dikmen 76.84 326 ⇓P **P** **18 35 03.2 +1.1**
GZR Gura Zlata 76.89 336 ⇑P **P** **18 35 03.0 +0.6**
GZR Gura Zlata 76.89 336 ⇑P **P** **18 35 03.0 +0.6**
BZS Buzias 76.95 337 ⇓P **P** **18 35 03.3 +0.7**
BZS Buzias 76.95 337 ⇓P **P** **18 35 03.3 +0.7**
RGRI Rengat 76.97 251 P **P** **18 35 04.9 +1.7**
comp=Z,19µmcomp=Z,32nm,0.5s
ABJI Asem Bagus 76.98 237 P **P** **18 35 03.8 +0.7**
comp=Z,38nm,1.1s
MORH Mrgy, Hungar 77.02 340 ⇑P **P** **18 35 03.7 +0.6**
MORH Mrgy, Hungar 77.02 340 *e*P **P** **18 35 02.5 -0.5**
MORH Mrgy, Hungar 77.02 340 P **P** **18 35 03.2 +0.1**
BKNI Bangkinang 77.14 252 P **P** **18 35 05.2 +1.1**
comp=Z,84nm,0.8s
BEHE Becsehely 77.15 341 *e*P **P** **18 35 05.6 +1.8**
KBA Koelnbreinsper 77.18 343 *e*P **P** **18 35 05.2 +1.1**
comp=Z,83nm,1.1s,SNR=58
WATA Walderalm 77.22 345 *e*P **P** **18 35 05.4 +1.0**
comp=Z,15nm,1.1s
KOVH Kovagotottos 77.25 340 P **P** **18 35 04.7 +0.4**
SOKA Soboth 77.27 342 *i* P **P** **18 35 05.1 +0.5**
comp=Z,33nm,0.9s,SNR=34
WTTA Wattenberg 77.28 345 *e*P **P** **18 35 05.1 +0.4**
comp=Z,21nm,1.1s
MOTA Moosalm 77.28 345 *e*P **P** **18 35 05.6 +0.9**
comp=Z,16nm,1.1s
PERS Pernice 77.30 342 *i* P **P** **18 35 05.6 +0.9**
SQTA Sankt Quirin 77.39 345 *e*P **P** **18 35 05.5 +0.3**
comp=Z,23nm,1.3s,SNR=6.8
IGBI Denpasar 77.42 235 P **P** **18 35 06.5 +0.9**
comp=Z,116nm,0.6s
OBKA Obir 77.52 342 *e*P **P** **18 35 06.7 +0.7**
comp=Z,33nm,0.9s,SNR=28
MYKA Terra Mystica 77.56 343 *e*P **P** **18 35 08.4 +2.2**
comp=Z,18nm,1.1s
MNSI Mandailing Nat 77.58 254 P **P** **18 35 05.0 -1.6**
comp=Z,22nm,0.5s
KNRA Kununurra 77.63 220 P **P** **18 35 05.1 -1.5**
ABTA Abfaltersbach 77.64 344 *e*P **P** **18 35 07.1 +0.5**
comp=Z,20nm,1.2s,SNR=10.0
FETA Feichten 77.65 345 *e*P **P** **18 35 08.0 +1.2**
comp=Z,11nm,1.0s,SNR=5.6
MDVR Moldovita 77.72 337 ⇑P **P** **18 35 07.9 +0.9**
FRGS Fruska Gora 77.78 338 ⇓P **P** **18 35 07.4 +0.1**
FRGS Fruska Gora 77.78 338 *e*P **P** **18 35 06.8 -0.6**
ROBS Robic 77.96 343 *i* P **P** **18 35 07.8 -0.5**
LJU Ljubljana 77.98 342 *e*P **P** **18 35 08.4 0.0**
DAVOX Davos/Dischmat 78.01 346 LR LR 19 10 17.5
comp=Z,158nm,21.9s,baz=40,slow=36
CRES Cresnjev 78.02 342 *e*P **P** **18 35 08.6 -0.1**
SZH Strazhica 78.10 334 *i* P **P** **18 35 09.0 -0.1**
SMRI Semarang 78.24 240 P **P** **18 35 10.7 +0.5**
CEY Cerknica 78.29 342 *e*P **P** **18 35 09.3 -0.9**
GSI Gunungsitoli 78.30 256 P **P** **18 35 11.0 +0.4**
comp=Z,48nm,0.9s
BOJS Bojanci 78.37 342 *i* P **P** **18 35 10.9 +0.3**
PWJI Pangerwojo 78.38 239 P **P** **18 35 10.0 -0.9**
comp=Z,73nm,1.0s
SKDS Skadanscina 78.55 343 *e*P **P** **18 35 10.1 -1.5**
BLKB Belogradchik 78.59 336 ⇑P **P** **18 35 11.3 -0.6**
WOJI Wonogiri, Jawa 78.67 239 P **P** **18 35 12.2 -0.3**
comp=Z,40nm,0.9s
BLY Banja Luka 78.72 340 *e*P **P** **18 35 12.6 +0.1**
DIVS Divibare 78.75 338 P **P** **18 35 11.6 -1.2**
DIVS IAmb IAmb 18 35 18.1
comp=Z,28nm,1.2s
DIVS Divibare 78.75 338 *e*P **P** **18 35 12.8 0.0**
KRJI Kerikil 78.90 251 P **P** **18 35 14.2 +0.2**
comp=Z,224nm,0.9s
UGM Wanagama 78.94 240 P **P** **18 35 14.7 +0.6**
comp=Z,161nm,2.0s
MGRS Mrkonjic Grad 79.06 340 *e*P **P** **18 35 16.0 +1.6**
BR131 Keskin Array S 79.10 327 P **P** **18 35 13.8 -1.1**
BR131 IAmb IAmb 18 35 17.3
comp=Z,21nm,0.8s
BR131 Keskin Array S 79.10 327 *i* P **P** **18 35 15.2 +0.3**
BRTR Keskin Array B 79.10 327 P **P** **18 35 15.2 +0.3**
comp=Z,12nm,0.8s,baz=50,slow=3.5,SNR=56
BRTR PKKPbc **PKKPbc** **18 54 05.3 +1.4**
comp=Z,1.2nm,0.9s,baz=177,slow=2.2,SNR=5.0
BRTR LR LR 19 12 57.1
comp=Z,308nm,21.1s,baz=50,slow=38
comp=Z,12nm,0.8s
BRTR Keskin Array B 79.10 327 *i* P **P** **18 35 15.1 +0.2**
BRTR pmax pmax
comp=Z,13nm,0.8s
BBLS Lazik#263;i 79.10 338 *e*P **P** **18 35 14.2 -0.5**
EDRB Edirne 79.21 332 P **P** **18 35 16.0 +0.8**
PGB Panagyurishte 79.23 335 *i* P P 18 35 20.0 +4.6
ANTO Ankara 79.24 327 P **P** **18 35 14.9 -0.6**
ANTO IAmb IAmb 18 35 19.1
comp=Z,53nm,1.1s
ANTO Ankara 79.24 327 P **P** **18 35 15.0 -0.6**
ANTO pmax pmax
comp=Z,53nm,1.2s
RUDO Rudo 79.35 338 *e*P **P** **18 35 15.7 -0.3**
SRKY Kupres RS 79.38 340 *e*P **P** **18 35 17.0 +0.7**
VTS Vitosha 79.40 335 ⇓P **P** **18 35 17.3 +0.8**
VTS Vitosha 79.40 335 ⇓P **P** **18 35 17.3 +0.8**
VTS Vitosha 79.40 335 *i* P **P** **18 35 17.0 +0.5**
WB0 Warramunga Arr 79.43 213 P **P** **18 35 16.3 -0.3**
LEM Lembang 79.52 243 P **P** **18 35 16.5 -0.9**
comp=Z,17nm,1.1s
SJES Sjenica 79.55 338 *e*P **P** **18 35 17.6 +0.3**
PPT Papeete 79.56 140 LR LR 19 06 53.5
comp=Z,178nm,18.2s,baz=345,slow=33
RAR Rarotonga 79.56 151 LR LR 19 07 09.0
comp=Z,192nm,18.1s,baz=338,slow=33
SISI Saibi 79.59 253 P **P** **18 35 18.3 +0.6**
comp=Z,49nm,1.2s
WRAB Tennant Creek 79.60 213 P **P** **18 35 17.5 +0.1**
WRAB Tennant Creek 79.60 213 *i* P **P** **18 35 17.6 +0.1**
WRAB pmax pmax
comp=Z,71nm,1.1s
WRA Warramunga Arr 79.61 213 P **P** **18 35 17.8 +0.2**
comp=Z,41nm,1.0s,baz=29,slow=5.9,SNR=96
WRA LR LR 19 07 37.8
comp=Z,247nm,21.9s,baz=28,slow=34
comp=Z,41nm,1.0s
WRA Warramunga Arr 79.61 213 P **P** **18 35 17.0 -0.5**
WRA Warramunga Arr 79.61 213 *i* P **P** **18 35 17.7 +0.2**
WRA pmax pmax
comp=Z,42nm,1.0s
CMIG Matias Romero 79.68 75 LR LR 19 07 13.8
comp=Z,269nm,21.4s,baz=314,slow=33
UPM Unac-Piva 79.84 338 *e*P **P** **18 35 18.5 -0.4**
KASI Kota Agung 80.08 246 P **P** **18 35 19.9 -0.4**
comp=Z,31nm,1.0s
KKB Krupnik 80.14 335 *i* P **P** **18 35 23.1 +2.7**
RDO Rodhopi 80.19 333 P **P** **18 35 20.7 +0.1**
RDO Rodhopi 80.19 333 P **P** **18 35 20.0 -0.5**
RDO IAmb IAmb 18 35 26.4
comp=Z,37nm,1.1s
BRY Bratogost 80.21 339 *e*P **P** **18 35 20.0 -0.9**
ZCCA Zocca 80.22 344 IAmb IAmb 18 35 51.7
comp=Z,50nm,1.2s
MMB Musomiste 80.24 335 *i* P **P** **18 35 23.6 +2.7**
ALN Alexandroupoli 80.28 333 P **P** **18 35 21.1 0.0**
STON Ston 80.42 339 *e*P **P** **18 35 20.6 -1.1**
TREB Trebinje 80.43 339 *e*P P 18 35 28.9 +7.0
NVR Nevrokopi 80.43 334 P **P** **18 35 22.9 +0.9**
PDG Podgorica 80.50 338 ⇑P **P** **18 35 22.6 +0.3**
PDG Podgorica 80.50 338 *e*P **P** **18 35 21.7 -0.5**
HCY Herceg Novi 80.66 339 *e*P **P** **18 35 23.0 -0.1**
SRS Serrai 80.72 334 P **P** **18 35 25.5 +2.0**
DRME Dracevica, Mon 80.75 338 *e*P **P** **18 35 24.1 +0.5**
KNT Kendrikon 80.85 335 P **P** **18 35 25.2 +1.0**
THAS Thassos island 80.91 333 P **P** **18 35 25.5 +1.1**
BALB Balikesir 80.94 331 P **P** **18 35 22.6 -2.1**
BALB IAmb IAmb 18 35 30.6
comp=Z,60nm,1.4s
GRG Griva 81.17 335 P **P** **18 35 28.3 +2.4**
FNA Florina 81.58 336 P **P** **18 35 26.8 -1.3**

FNA Florina 81.58 336 P **P** **18 35 26.8 -1.3**
FNA pmax pmax
comp=Z,15nm,1.1s
BANOM Banak 81.74 303 P **P** **18 35 27.2 -2.0**
AQU L'Aquila 81.75 342 pP 18 35 32.0 -0.6
UMQ Umm Al-Quwin 82.39 303 P **P** **18 35 30.6 -1.9**
UOSS Minazif 82.60 303 P **P** **18 35 32.4 -1.3**
UOSS IAmb IAmb 18 35 35.0
comp=Z,35nm,1.2s
UOSS Minazif 82.60 303 P **P** **18 35 32.4 -1.3**
HATD Hatta, Dubai 82.74 303 P **P** **18 35 33.3 -1.0**
WSAR Wadi Sarin 82.80 300 LR LR 19 15 03.5
comp=Z,663nm,20.5s,baz=78,slow=38
NAZ Nazwa, Dubai 82.83 303 P **P** **18 35 33.9 -1.0**
FAQ Al Faqa, Dubai 83.07 303 P **P** **18 35 35.1 -1.0**
AS31 Alice Springs 83.23 212 P **P** **18 35 36.9 +0.2**
ASAR Alice Springs 83.23 212 P **P** **18 35 37.5 +0.8**
comp=Z,39nm,0.9s,baz=23,slow=5.2,SNR=147
ASAR PKiKP **PKiKP** **18 40 53.9 -1.0**
comp=Z,0.7nm,0.9s,baz=20,slow=3.2,SNR=4.3
ASAR LR LR 19 09 20.4
comp=Z,169nm,21.8s,baz=26,slow=33
comp=Z,39nm,0.9s
PCHI Peechi 83.31 279 *e*P P 18 35 29.5 -7.9
PCHI *e*S S 18 45 47.1 -11
PALK Pallekele 83.36 273 LR LR 19 16 20.2
comp=Z,255nm,22.0s,baz=133,slow=38
PGAV Gavieira, Arco 84.31 358 *e*P **P** **18 35 41.6 -0.7**
comp=Z,58nm,1.5s
PGAV Gavieira, Arco 84.31 358 A A 19 18 56.1
comp=Z,202nm,18.0s
PBRG Braganca 84.44 357 *e*P **P** **18 35 43.0 +0.1**
MMAI Mount Meron Ar 84.57 323 LR LR 19 19 12.8
comp=Z,308nm,18.0s,baz=217,slow=40
POLO Lamas de Olo 84.89 358 *e*P **P** **18 35 45.8 +0.6**
comp=Z,12nm,1.5s
PVRL Vila Real 84.99 358 *e*P **P** **18 35 46.0 +0.3**
comp=Z,66nm,1.5s
MVO Moncorvo 85.08 357 *e*P **P** **18 35 46.5 +0.3**
comp=Z,42nm,1.3s
ARMA Armidale 85.53 195 P **P** **18 35 49.3 +1.1**
ARMA IAmb IAmb 18 35 53.0
comp=Z,34nm,1.1s
PVIS Viseu 85.55 358 *e*P **P** **18 35 49.8 +1.3**
comp=Z,31nm,1.3s
MZR Muzera 85.58 304 *i* P **P** **18 35 48.3 -0.5**
SNR=7.6
IDI Anoyia 85.85 332 LR LR 19 20 11.3
comp=Z,212nm,18.3s,baz=60,slow=40
MTE Manteigas 85.86 358 *e*P **P** **18 35 51.3 +1.3**
comp=Z,26nm,1.2s
MTE Manteigas 85.86 358 A A 19 25 18.5
comp=Z,186nm,20.0s
MBWA Marble Bar 86.18 225 P **P** **18 35 50.9 -0.7**
MBWA IAmb IAmb 18 35 54.0
comp=Z,34nm,1.1s
PCAS Casmilo, Conde 86.23 358 *e*P **P** **18 35 52.6 +0.8**
comp=Z,30nm,1.9s
VAE Valguarnera 86.28 340 LR LR 19 18 24.2
comp=Z,195nm,20.9s,baz=70,slow=38
PCBR Castelo Branco 86.42 358 *e*P **P** **18 35 53.6 +0.9**
ESBB Sonseca Array 86.44 355 IAmb IAmb 18 35 57.5
comp=Z,27nm,1.5s
ESDC Sonseca Array 86.44 355 P **P** **18 35 52.8 -0.2**
comp=Z,4.6nm,1.0s,baz=0.8,slow=4.6,SNR=20
comp=Z,4.6nm,1.0s
PSA00 Pilbara Seismi 86.50 225 IAmb IAmb 18 35 55.4
comp=Z,18nm,1.0s
PSA00 Pilbara Seismi 86.50 225 IAmb IAmb 18 35 55.4
comp=Z,14nm,1.1s
PAB San Pablo 86.59 355 P **P** **18 35 52.4 -1.3**
PAB San Pablo 86.59 355 P **P** **18 35 52.4 -1.3**
PAB pmax pmax
comp=Z,15nm,1.3s
PESTR Estremoz 87.39 358 *e*P **P** **18 35 58.2 +0.7**
comp=Z,25nm,1.5s
EVO Evora 87.73 358 *e*P **P** **18 35 59.4 +0.3**
comp=Z,15nm,1.7s
EIL Elat 87.75 321 LR LR 19 19 05.2
comp=Z,293nm,18.7s,baz=48,slow=38
RAYN Ar Rayn 88.88 310 P **P** **18 36 03.6 -1.3**
RAYN IAmb IAmb 18 36 07.1
comp=Z,19nm,1.1s
RAYN Ar Rayn 88.88 310 P **P** **18 36 03.6 -1.3**
RAYN pmax pmax
comp=Z,19nm,1.1s
RAYN Ar Rayn 88.88 310 *i* P **P** **18 36 04.7 -0.2**
SNR=15
KEST Kesra 88.90 344 P **P** **18 36 05.0 +0.1**
comp=Z,3.9nm,0.9s,baz=45,slow=8.0,SNR=3.3
KEST LR LR 19 20 06.6
comp=Z,178nm,18.9s,baz=346,slow=38
comp=Z,3.9nm,0.9s
STKA Stephens Creek 88.90 203 P **P** **18 36 05.6 +1.2**
comp=Z,36nm,0.8s,baz=347,slow=6.7,SNR=56
STKA LR LR 19 14 10.8
comp=Z,145nm,21.2s,baz=14,slow=34
comp=Z,36nm,0.8s
STKA Stephens Creek 88.90 203 P **P** **18 36 03.5 -0.9**
STKA Stephens Creek 88.90 203 P **P** **18 36 03.5 -0.9**
STKA pmax pmax
comp=Z,9.0nm,0.9s
JTS Las Juntas de 90.79 71 LR LR 19 19 21.0
comp=Z,149nm,20.8s,baz=24,slow=37
URZ Urewera 92.21 174 LR LR 19 15 28.5
comp=Z,134nm,18.4s,baz=31,slow=34
MDT Midelt 93.31 355 LR LR 19 17 38.3
comp=Z,67nm,21.9s,baz=348,slow=35
SJG San Juan 93.90 52 LR LR 19 22 21.5
comp=Z,499nm,18.9s,baz=302,slow=38
SDV Santo Domingo 99.64 60 LR LR 19 23 09.6
comp=Z,447nm,21.3s,baz=342,slow=36
TORD Torodi Ar. Bea 112.22 347 PKiKP **PKiKP** **18 41 48.5 +2.3**
comp=Z,0.9nm,0.9s,baz=10,slow=2.3,SNR=2.7
TORD PP **PP** **18 42 27.2 -2.7**
comp=Z,3.1nm,1.2s,baz=21,slow=6.3,SNR=4.7
TORD PKKPbc **PKKPbc** **18 52 38.1 +3.4**
comp=Z,1.0nm,0.9s,baz=264,slow=2.6,SNR=4.0
LPAZ La Paz 121.98 73 PKPdf **PKPdf** **18 42 05.5 -0.1**
comp=Z,2.2nm,0.8s,baz=17,slow=5.6,SNR=8.4
LPAZ PKKPab **PKKPab** **18 52 06.2 +2.5**
comp=Z,1.2nm,0.7s,baz=110,slow=2.8,SNR=4.0
LPAZ La Paz 121.98 73 PKPdf **PKPdf** **18 42 05.2 -0.4**
LPAZ La Paz 121.98 73 PKiKP **PKPdf** **18 42 05.2 -0.4**
VNDA Vanda 131.41 182 PKhKP PKPpre 18 42 16.3
comp=Z,0.6nm,0.7s,baz=331,slow=4.3,SNR=8.6
VNDA PKP **PKPdf** **18 42 22.1 +1.1**
comp=Z,2.5nm,0.9s,baz=285,slow=1.3,SNR=11
VNDA Vanda 131.41 182 PKPdf **PKPdf** **18 42 16.5 -4.6**
VNDA Vanda 131.41 182 PKiKP **PKPdf** **18 42 16.5 -4.6**
SBA Scott Base 131.67 181 PKPdf **PKPdf** **18 42 17.4 -4.1**
SBA Scott Base 131.67 181 PKiKP **PKPdf** **18 42 17.4 -4.1**
BDFB Brasilia 131.90 52 PKP **PKPdf** **18 42 24.5 +0.5**
comp=Z,3.0nm,0.7s,baz=94,slow=3.6,SNR=4.0
CPUP Villa Florida 136.00 70 PKP **PKPdf** **18 42 32.1 +0.9**
comp=Z,4.0nm,0.9s,baz=316,slow=7.3,SNR=5.5
PLCA Paso Flores 138.58 97 PKhKP PKPpre 18 42 27.0
comp=Z,0.9nm,0.7s,baz=272,slow=4.0,SNR=3.3
PLCA Paso Flores 138.58 97 PKPpre 18 42 24.7
PLCA PKPdf **PKPdf** **18 42 32.9 -2.8**
PLCA Paso Flores 138.58 97 PKHKP PKPpre 18 42 24.7
PLCA 18 42 32.9
LBTB Lobatse 140.43 303 PKPdf **PKPdf** **18 42 37.5 -2.1**
LBTB Lobatse 140.43 303 PKiKP **PKPdf** **18 42 37.5 -2.1**
GO09 Cerro Castillo 143.54 111 PKPdf PKPbc 18 42 45.5 +1.0
BOSA Boshof 143.56 300 PKhKP PKPpre 18 42 41.9
comp=Z,4.3nm,0.6s,baz=36,slow=2.3,SNR=13
QSPA South Pole Qui 143.82 180 PKhKP PKPpre 18 42 41.1
comp=Z,71nm,0.9s,baz=345,slow=1.1,SNR=134
MAW Mawson 144.12 219 PKP **PKPab** **18 42 43.2 +0.9**
comp=Z,94nm,0.9s,baz=48,slow=4.0,SNR=53
MAW Mawson 144.12 219 PKPdf **PKPab** **18 42 43.3 +1.1**
MG03 Isla Dawson 145.74 115 PKPdf **PKPdf** **18 42 48.2 +0.4**
ORCD Orcadas 160.65 124 PKPdf **PKPdf** **18 43 11.8 +2.9**
ORCD PKPab **PKPab** **18 43 51.4 +0.4**
TROLL Troll, Antarti 161.12 193 PKPab **PKPab** **18 43 53.6 +0.7**
TROLL Troll, Antarti 161.12 193 PKPdf **PKPdf** **18 43 08.2 -1.2**
SNAA Sanae 162.01 188 PKPab **PKPab** **18 43 54.9 -1.8**
SNAA Sanae 162.01 188 PKPdf **PKPdf** **18 43 16.8 +6.6**
SNAA Sanae 162.01 188 PKPab **PKPab** **18 43 55.6 -1.1**
comp=Z,24nm,1.1s,baz=169,slow=4.8,SNR=19
SNAA Sanae 162.01 188 PKPdf **PKPdf** **18 43 12.8 +2.5**
SNAA PKPab **PKPab** **18 43 56.4 -0.3**
VNA3 Neumayer Olymp 162.76 181 PKPab **PKPab** **18 43 58.6 -1.3**
VNA3 Neumayer Olymp 162.76 181 PKPdf **PKPdf** **18 43 10.0 -0.9**
VNA2 Neumayer--Watz 163.02 184 PKPab **PKPab** **18 44 00.3 -0.8**

baz=185,slow=4.0
VNA2 Neumayer--Watz 163.02 184 PKPdf **PKPdf 18 43 10.7 -0.5**
baz=196,slow=1.0
VNA1 Neumayer--Stat 163.33 183 PKPab **PKPab 18 44 01.7 -0.7**
VNA1 Neumayer--Stat 163.33 183 PKPdf **PKPdf 18 43 09.0 -2.4**

*INET **03** 18:25:54.0±0.8, 12°.98N×89°.01W, h44km±16km, ML3.3, MW3.2*
*SNET **03** 18:25:54.2±1.1, 13°.05N×89°.01W, h48km±9km, ML4.0*
*UCR **03** 18:25:54.4±1.1, 13°.05N×89°.01W, h49km±9km, ML4.0*
*GCG **03** 18:26:18.2±0.6, 15°.02N×90°.22W, h12km, MD3.9*
ISC 03 18:25:54.7±5.1, 13°.01N±0°.07×89°.01W±0°.03, h39km±14km, n70, σ0s63/110, 10D, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.56**	**328**	*eP*		**Pn**		**18 26 05.9**	**-0.5**
LALI				*eS*		**Sn**		**18 26 14.3**	**-0.3**
LALI	**Alcalda de L**	**0.56**	**328**	*eP*		**Pn**		**18 26 05.9**	**-0.5**
LALI				*eS*		**Sn**		**18 26 14.3**	**-0.3**
LALI	**Alcalda de L**	**0.56**	**328**	*eP*		**Pn**		**18 26 05.9**	**-0.5**
SJTE	**Alcalda de S**	**0.60**	**0**	*eP*		**Pn**		**18 26 06.3**	**-0.6**
SJTE				*eS*		**Sn**		**18 26 15.8**	**+0.2**
SJTE	**Alcalda de S**	**0.60**	**0**	*eP*		**Pn**		**18 26 06.3**	**-0.6**
SJTE				*eS*		**Sn**		**18 26 15.8**	**+0.2**
LFRS	**El Faro**	**0.61**	**355**	*i* P		**Pn**		**18 26 06.5**	**-0.7**
LFRS	**El Faro**	**0.61**	**355**	*i* P		**Pn**		**18 26 06.5**	**-0.7**
COEG	**Centro de Oper**	**0.62**	**12**	*eP*		**Pn**		**18 26 06.7**	**-0.5**
COEG				*eS*		**Sn**		**18 26 16.4**	**+0.4**
COEG				IAML				18 26 20.8	
	comp=Z,8μm,0.3s								
COEG	**Centro de Oper**	**0.62**	**12**	*eP*		**Pn**		**18 26 06.7**	**-0.5**
COEG				*eS*		**Sn**		**18 26 16.4**	**+0.4**
COEG				IAML				18 26 20.8	
	comp=Z,8μm,0.3s								
SNVI	**San Vicente**	**0.62**	**16**	*eP*		**Pn**		**18 26 06.9**	**-0.4**
SNVI	**San Vicente**	**0.62**	**16**	*eP*		**Pn**		**18 26 06.9**	**-0.4**
COEB	**Comit de Eme**	**0.68**	**44**	*eP*		**Pn**		**18 26 07.7**	**-0.3**
COEB				*eS*		**Sn**		**18 26 18.2**	**+0.8**
COEB				IAML				18 26 20.7	
	comp=Z,6μm,0.3s								
COEB	**Comit de Eme**	**0.68**	**44**	*eP*		**Pn**		**18 26 07.7**	**-0.3**
COEB				*eS*		**Sn**		**18 26 18.2**	**+0.8**
COEB				IAML				18 26 20.7	
	comp=Z,6μm,0.3s								
COEB	**Comit de Eme**	**0.68**	**44**	*eP*		**Pn**		**18 26 07.7**	**-0.3**
COEB				*eS*		**Sn**		**18 26 18.2**	**+0.8**
COEB				IAML				18 26 21.3	
	comp=Z,3μm,0.2s								
PAVA	**Las Pavas**	**0.70**	**6**	*i* P		**Pn**		**18 26 08.0**	**-0.4**
PAVA				*eS*		**Sn**		**18 26 18.7**	**+0.6**
PAVA	**Las Pavas**	**0.70**	**6**	*i* P		**Pn**		**18 26 08.0**	**-0.4**
PAVA				*eS*		**Sn**		**18 26 18.7**	**+0.6**
PAVA	**Las Pavas**	**0.70**	**6**	*eP*		**Pn**		**18 26 07.9**	**-0.4**
SNET	**Serv Nac Est T**	**0.71**	**342**	*i* P		**Pn**		**18 26 07.7**	**-0.7**
SNET				*eS*		**Sn**		**18 26 17.9**	**-0.2**
SNET				IAML				18 26 18.9	
	comp=Z,4μm,0.2s								
SNET	**Serv Nac Est T**	**0.71**	**342**	*i* P		**Pn**		**18 26 07.7**	**-0.7**
SNET				*eS*		**Sn**		**18 26 17.9**	**-0.2**
SNET				IAML				18 26 18.9	
	comp=Z,4μm,0.2s								
SNET	**Serv Nac Est T**	**0.71**	**342**	*eP*		**Pn**		**18 26 07.6**	**-0.7**
LBRS	**Las Brisas**	**0.73**	**358**	*eP*		**Pn**		**18 26 08.3**	**-0.3**
LBRS	**Las Brisas**	**0.73**	**358**	*eP*		**Pn**		**18 26 08.3**	**-0.3**
UEES	**Universidad Ev**	**0.74**	**343**	*i* P		**Pn**		**18 26 08.3**	**-0.5**
UEES				*eS*		**Sn**		**18 26 18.8**	**-0.1**
UEES				IAML				18 26 23.2	
	comp=Z,3μm,0.2s								
UEES	**Universidad Ev**	**0.74**	**343**	*i* P		**Pn**		**18 26 08.3**	**-0.5**
UEES				*eS*		**Sn**		**18 26 18.8**	**-0.1**
UEES				IAML				18 26 23.2	
	comp=Z,3μm,0.2s								
LFU	**La Fuente**	**0.74**	**352**	*eP*		**Pn**		**18 26 08.5**	**-0.3**
LFU	**La Fuente**	**0.74**	**352**	*eP*		**Pn**		**18 26 08.5**	**-0.3**
SCLA	**Alcaldia de Sa**	**0.74**	**22**	*i* P		**Pn**		**18 26 08.8**	**0.0**
SCLA				*eS*		**Sn**		**18 26 20.0**	**+1.1**
SCLA	**Alcaldia de Sa**	**0.74**	**22**	*i* P		**Pn**		**18 26 08.8**	**0.0**
SCLA				*eS*		**Sn**		**18 26 20.0**	**+1.1**
PQSS	**Presa 15 de Se**	**0.75**	**36**	*i* P		**Pn**		**18 26 08.8**	**-0.1**
PQSS				*eS*		**Sn**		**18 26 20.0**	**+0.9**
PQSS	**Presa 15 de Se**	**0.75**	**36**	*i* P		**Pn**		**18 26 08.8**	**-0.1**
PQSS				*eS*		**Sn**		**18 26 20.0**	**+0.9**
BOQS	**Boqueron**	**0.77**	**340**	*i* P		**Pn**		**18 26 08.9**	**-0.4**
BOQS				*eS*		**Sn**		**18 26 20.0**	**+0.2**
BOQS	**Boqueron**	**0.77**	**340**	*i* P		**Pn**		**18 26 08.9**	**-0.4**
BOQS				*eS*		**Sn**		**18 26 20.0**	**+0.2**
JAYA	**Jayaque - finc**	**0.77**	**327**	*eP*		**Pn**		**18 26 08.5**	**-0.7**
JAYA				*eS*		**Sn**		**18 26 19.6**	**-0.1**
JAYA				IAML				18 26 21.4	
	comp=Z,11μm,0.2s								
JAYA	**Jayaque - finc**	**0.77**	**327**	*eP*		**Pn**		**18 26 08.5**	**-0.7**
JAYA				*eS*		**Sn**		**18 26 19.6**	**-0.1**
JAYA				IAML				18 26 21.4	
	comp=Z,11μm,0.2s								
JUCU	**Jucuarįn**	**0.78**	**72**	*eP*		**Pn**		**18 26 08.6**	**-0.8**
JUCU				*eS*		**Sn**		**18 26 19.9**	**-0.1**
JUCU	**Jucuarįn**	**0.78**	**72**	*eP*		**Pn**		**18 26 08.6**	**-0.8**
JUCU				*eS*		**Sn**		**18 26 19.9**	**-0.1**
LCY	**Lacayo**	**0.81**	**59**	*eP*		**Pn**		**18 26 09.7**	**-0.1**
LCY	**Lacayo**	**0.81**	**59**	*eP*		**Pn**		**18 26 09.7**	**-0.1**
PACA	**Pacayal**	**0.81**	**56**	*i* P		**Pn**		**18 26 09.9**	**+0.1**
PACA				*eS*		**Sn**		**18 26 21.7**	**+1.0**
PACA	**Pacayal**	**0.81**	**56**	*i* P		**Pn**		**18 26 09.9**	**+0.1**
PACA				*eS*		**Sn**		**18 26 21.7**	**+1.0**
VSM	**San Miguel**	**0.83**	**60**	*i* P		**Pn**		**18 26 10.0**	**-0.2**
VSM	**San Miguel**	**0.83**	**60**	*i* P		**Pn**		**18 26 10.0**	**-0.2**
CEDA	**San Andres**	**0.87**	**335**	*eP*		**Pn**		**18 26 09.3**	**-1.3**
CEDA				*eS*		**Sn**		**18 26 21.6**	**-0.5**
CEDA	**San Andres**	**0.87**	**335**	*eP*		**Pn**		**18 26 09.3**	**-1.3**
CEDA				*eS*		**Sn**		**18 26 21.6**	**-0.5**
CEVE	**Cerro Verde**	**1.01**	**324**	*eP*		**Pn**		**18 26 12.3**	**-0.3**
CEVE				IAML				18 26 27.9	
	comp=Z,5μm,0.3s								
CEVE	**Cerro Verde**	**1.01**	**324**	*eP*		**Pn**		**18 26 12.3**	**-0.3**
CEVE				IAML				18 26 27.9	
	comp=Z,5μm,0.3s								
SBLS	**San Blas**	**1.02**	**324**	*eP*		**Pn**		**18 26 12.4**	**-0.4**
SBLS	**San Blas**	**1.02**	**324**	*eP*		**Pn**		**18 26 12.4**	**-0.4**
SNJE	**San Jose**	**1.03**	**326**	*i* P		**Pn**		**18 26 12.4**	**-0.5**
SNJE				*eS*		**Sn**		**18 26 26.1**	**-0.1**
SNJE	**San Jose**	**1.03**	**326**	*i* P		**Pn**		**18 26 12.4**	**-0.5**
SNJE				*eS*		**Sn**		**18 26 26.1**	**-0.1**
RTR	**El Retiro**	**1.08**	**325**	*eP*		**Pn**		**18 26 13.3**	**-0.2**
RTR	**El Retiro**	**1.08**	**325**	*eP*		**Pn**		**18 26 13.3**	**-0.2**
FAGO	**Alcalda de S**	**1.11**	**52**	*eP*		**Pn**		**18 26 12.4**	**-1.5**
FAGO				*eS*		**Sn**		**18 26 27.4**	**-0.6**
FAGO	**Alcalda de S**	**1.11**	**52**	*eP*		**Pn**		**18 26 12.4**	**-1.5**
FAGO				*eS*		**Sn**		**18 26 27.4**	**-0.6**
FAGO	**Alcalda de S**	**1.11**	**52**	*eP*		**Pn**		**18 26 12.3**	**-1.5**
LCND	**La Caada**	**1.13**	**75**	*eP*		**Pn**		**18 26 13.6**	**-0.5**
LCND				*eS*		**Sn**		**18 26 29.2**	**+0.8**
LCND	**La Caada**	**1.13**	**75**	*eP*		**Pn**		**18 26 13.6**	**-0.5**
LCND				*eS*		**Sn**		**18 26 29.2**	**+0.8**
NUBE	**Las Nubes**	**1.16**	**320**	*eP*		**Pn**		**18 26 14.0**	**-0.7**
NUBE				*eS*		**Sn**		**18 26 29.0**	**-0.3**
NUBE				IAML				18 26 31.0	
	comp=Z,2μm,0.3s								
NUBE	**Las Nubes**	**1.16**	**320**	*eP*		**Pn**		**18 26 14.0**	**-0.7**
NUBE				*eS*		**Sn**		**18 26 29.0**	**-0.3**
NUBE				IAML				18 26 31.0	
	comp=Z,2μm,0.3s								
CNCH	**Conchagua**	**1.18**	**77**	*i* P		**Pn**		**18 26 14.2**	**-0.6**
CNCH				*eS*		**Sn**		**18 26 29.8**	**0.0**
CNCH				IAML				18 26 36.7	
	comp=Z,4μm,0.6s								
CNCH	**Conchagua**	**1.18**	**77**	*i* P		**Pn**		**18 26 14.2**	**-0.6**
CNCH				*eS*		**Sn**		**18 26 29.8**	**0.0**
CNCH				IAML				18 26 36.7	
	comp=Z,4μm,0.6s								
SLOZ	**Alcaldia de Sa**	**1.26**	**324**	*eP*		**Pn**		**18 26 15.8**	**-0.1**
SLOZ				*eS*		**Sn**		**18 26 31.9**	**+0.3**
ESQI	**Esquipulas**	**1.57**	**348**	*eP*		**Pn**		**18 26 20.1**	**-0.1**
ESQI				*eS*		**Sn**		**18 26 38.7**	**-0.8**
TGUH	**Tegucigalpa,Un**	**1.99**	**58**	*i* P		**Pn**		**18 26 25.5**	**-0.5**
TGUH	**Tegucigalpa,Un**	**1.99**	**58**	*i* P		**Pn**		**18 26 25.5**	**-0.5**
TGUH	**Tegucigalpa,Un**	**1.99**	**58**	*eP*		**Pn**		**18 26 25.4**	**-0.6**
TGUH				IAML				18 27 25.5	
	comp=Z,290nm,0.8s								
NBG	**Las Nubes**	**2.04**	**321**	*eP*		**Pn**		**18 26 27.8**	**+1.0**
MRL	**Marmol**	**2.16**	**343**	*eP*		**Pn**		**18 26 29.1**	**+0.7**
FUG	**Fuego 3**	**2.28**	**309**	*eP*		Pn		18 26 34.5	+4.4
STG3	**Santiaguito 3,**	**3.01**	**305**	*eP*		**Pn**		**18 26 42.1**	**+2.1**

*NEIC **03** 18:40:43.5±2.4, 53°.5N±0°.1×168°.8E±0°.1, h36km±6km, mb4.2/66, Error ellipse: s-maj=20.8km s-min=9.7km az=181.0*
*IDC **03** 18:40:44.1±0.6, 54°.22N×169°.25E, h0km, mb4.0/20, mbtmp4.1/22, ML3.6/2, Error ellipse: s-maj=18.0km s-min=12.6km az=176.0*
*KRSC **03** 18:40:46.4±1.5, 53°.81N×168°.70E, h18km±25km, ML4.2*
*MOS **03** 18:40:46.0±1.4, 54°.05N×169°.28E, h31km, mb4.5/11, Error ellipse: s-maj=9.9km s-min=7.7km az=29.5*
ISC 03 18:40:45.6±0.5, 53°.99N±0°.07×169°.25E±0°.05, h17km, n155, σ1s46/148, mb4.2/50, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**2.26**	**304**	PN		**Pn**	**Pn**	**18 41 22.4**	**+0.2**
BKI				S		**Sn**	**Sn**	**18 41 48.6**	**-1.1**
BKI	**Bering**	**2.26**	**304**	*eP*		**Pn**	**Pn**	**18 41 22.4**	**+0.2**
BKI				*eS*		**Sn**	**Sn**	**18 41 48.6**	**-1.1**
SHEM	**Shemya Is, Ala**	**3.17**	**112**	Pn		**Pn**	**Pn**	**18 41 36.1**	**+1.5**
	20nm,0.3s,baz=53,slow=3.8,SNR=13								
SHEM				Sn			**Sn**	**18 42 12.5**	**+0.5**
	83nm,0.3s,baz=285,slow=22,SNR=12								
	51nm,0.3s								
SMY	**Shemya**	**3.17**	**112**	Pn		**Pn**	**Pn**	**18 41 33.6**	**-1.0**
SMY	**Shemya**	**3.17**	**112**	PN		**Pn**	**Pn**	**18 41 33.6**	**-1.0**
KBTR	**Krutoberegovo**	**4.31**	**304**	PN		**Pn**	**Pn**	**18 41 51.0**	**+0.6**
KBTR				S		**Sn**	**Sn**	**18 42 42.9**	**+2.7**
KBTR	**Krutoberegovo**	**4.31**	**304**	*eP*		**Pn**	**Pn**	**18 41 51.0**	**+0.6**
KBTR				*eS*		**Sn**	**Sn**	**18 42 42.9**	**+2.7**
MKZ	**Mys Kozlova**	**4.45**	**280**	PN		**Pn**	**Pn**	**18 41 53.1**	**+0.9**
MKZ	**Mys Kozlova**	**4.45**	**280**	*eP*		**Pn**	**Pn**	**18 41 53.1**	**+0.9**
SMKR	**Semkarok**	**5.15**	**303**	PN		**Pn**	**Pn**	**18 42 04.2**	**+2.2**
SMKR	**Semkarok**	**5.15**	**303**	*eP*		**Pn**	**Pn**	**18 42 04.2**	**+2.2**
SMKR				*eh*				18 43 06.5	
BDR	**Baidarnaya**	**5.28**	**303**	PN		**Pn**	**Pn**	**18 42 07.8**	**+4.2**
BDR	**Baidarnaya**	**5.28**	**303**	*eP*		**Pn**	**Pn**	**18 42 07.8**	**+4.2**
SRKR	**Sorokina**	**5.33**	**303**	PN		**Pn**	**Pn**	**18 42 07.6**	**+3.2**
SRKR	**Sorokina**	**5.33**	**303**	*eP*		**Pn**	**Pn**	**18 42 07.6**	**+3.2**
TUMR	**Tumrok**	**5.45**	**287**	PN		**Pn**	**Pn**	**18 42 07.8**	**+1.8**
TUMR	**Tumrok**	**5.45**	**287**	*eP*		**Pn**	**Pn**	**18 42 07.8**	**+1.8**
TUMR				*eS*		**Sn**	**Sn**	**18 43 07.6**	**-0.7**
SPN	**Mys Shipunski**	**5.58**	**265**	PN		**Pn**	**Pn**	**18 42 08.8**	**+1.1**
SPN	**Mys Shipunski**	**5.58**	**265**	*eP*		**Pn**	**Pn**	**18 42 08.8**	**+1.1**
SPN				*eS*		**Sn**	**Sn**	**18 43 07.7**	**-3.6**
SDLR	**Sedlovina**	**6.21**	**268**	PN		**Pn**	**Pn**	**18 42 17.3**	**+0.8**
SDLR	**Sedlovina**	**6.21**	**268**	P		**Pn**	**Pn**	**18 42 17.3**	**+0.8**
AVH	**Avacha**	**6.30**	**268**	PN		**Pn**	**Pn**	**18 42 18.5**	**+0.8**
AVH	**Avacha**	**6.30**	**268**	P		**Pn**	**Pn**	**18 42 18.5**	**+0.8**
KOK	**Koryaka**	**6.35**	**268**	PN		**Pn**	**Pn**	**18 42 19.1**	**+0.6**
KOK	**Koryaka**	**6.35**	**268**	*eP*		**Pn**	**Pn**	**18 42 19.1**	**+0.6**
PET	**Petropavlovsk**	**6.40**	**266**	Pn		Pn	Pn	18 42 12.9	-6.1
GNL	**Ganaly**	**6.70**	**272**	PN		**Pn**	**Pn**	**18 42 23.8**	**+0.5**
GNL	**Ganaly**	**6.70**	**272**	P		**Pn**	**Pn**	**18 42 23.8**	**+0.5**
KRMR	**Karymshinskiy**	**6.75**	**265**	PN		**Pn**	**Pn**	**18 42 24.7**	**+0.9**
KRMR	**Karymshinskiy**	**6.75**	**265**	P		**Pn**	**Pn**	**18 42 24.7**	**+0.9**
MTVR	**Mutnovka**	**6.81**	**262**	PN		**Pn**	**Pn**	**18 42 25.4**	**+0.5**
MTVR	**Mutnovka**	**6.81**	**262**	P		**Pn**	**Pn**	**18 42 25.4**	**+0.5**
PEA0B	**Petropavlovsk-**	**6.94**	**267**	Pn		Pn	Pn	18 42 19.7	-6.8
PEA0B	**Petropavlovsk-**	**6.94**	**267**	PN		Pn	Pn	18 42 19.7	-6.8
PETK	**Petropavlovsk-**	**6.94**	**267**	Pn		Pn	**Pn**	**18 42 27.4**	**+0.9**
	1.7nm,0.3s,baz=104,slow=16,SNR=13								
PETK				Sn			**Sn**	**18 43 44.3**	**-0.7**
	1.5nm,0.3s,baz=69,slow=29,SNR=2.6								
	4.9nm,0.5s								
PETK	**Petropavlovsk-**	**6.94**	**267**	Pn		Pn	Pn	18 42 19.2	-7.3
BILL	**Bilibino**	**14.17**	**355**			Pn	Pn	18 44 11.0	+5.8
N18K	**Kilae Creek**	**19.78**	**56**	P		**P**	**P**	**18 45 16.2**	**+1.6**
N18K				IAmb		IAmb	IAmb	18 45 30.0	
	comp=Z,9.9nm,1.3s								
SVW2	**Sparrevohn**	**19.96**	**55**	P		**P**	**P**	**18 45 17.8**	**+1.2**
TTA	**Tatalina**	**20.01**	**50**	P		**P**	**P**	**18 45 18.0**	**+0.8**
TTA	**Tatalina**	**20.01**	**50**	P		**P**	**P**	**18 45 18.0**	**+0.8**
TTA				pmax		pmax	pmax		
	comp=Z,7.0nm,1.0s								
P18K	**Big Mountain,**	**20.06**	**60**	P		**P**	**P**	**18 45 18.5**	**+0.7**
P18K				IAmb		IAmb	IAmb	18 45 33.3	
	comp=Z,7.1nm,0.9s								
O18K	**Koktuh Hills**	**20.08**	**59**	P		**P**	**P**	**18 45 19.0**	**+1.1**
CHIR	**Chirikof Islan**	**20.15**	**70**	P		**P**	**P**	**18 45 13.9**	**-4.7**
L19K	**White Mountain**	**20.43**	**52**	P		**P**	**P**	**18 45 22.2**	**+0.5**
L19K				IAmb		IAmb	IAmb	18 45 34.0	
	comp=Z,20nm,1.2s								
N19K	**Bonanza Creek**	**20.48**	**56**	P		**P**	**P**	**18 45 23.2**	**+0.8**
M19K	**Big River Lodg**	**20.61**	**53**	P		**P**	**P**	**18 45 23.8**	**+0.2**
M19K				IAmb		IAmb	IAmb	18 45 31.2	
	comp=Z,12nm,1.1s								
SII	**Sitkinak Islan**	**20.83**	**68**	P		**P**	**P**	**18 45 24.2**	**-1.8**
Q19K	**Cape Douglas,**	**20.89**	**61**	P		**P**	**P**	**18 45 26.8**	**0.0**
Q19K				IAmb		IAmb	IAmb	18 45 28.0	
	comp=Z,10nm,0.7s								
K20K	**Telida**	**20.95**	**49**	P		**P**	**P**	**18 45 27.8**	**+0.5**
K20K				IAmb		IAmb	IAmb	18 45 29.2	
	comp=Z,5.5nm,0.8s								
J20K	**Nowinta River**	**21.07**	**47**	P		**P**	**P**	**18 45 28.5**	**-0.1**
OHAK	**Old Harbor**	**21.23**	**66**	P		**P**	**P**	**18 45 27.7**	**-2.6**
OHAK				IAmb		IAmb	IAmb	18 45 35.4	
	comp=Z,11nm,1.0s								
KDAK	**Kodiak Island**	**21.54**	**64**	P		**P**	**P**	**18 45 33.5**	**-0.1**
	comp=Z,2.2nm,0.5s,baz=180,slow=23,SNR=5.8								
	comp=Z,2.2nm,0.5s								
KDAK	**Kodiak Island**	**21.54**	**64**	P		**P**	**P**	**18 45 32.6**	**-1.0**
KDAK				IAmb		IAmb	IAmb	18 45 38.0	
	comp=Z,14nm,1.4s								
IMAR	**Indian Mountai**	**21.66**	**42**	P		**P**	**P**	**18 45 34.6**	**-0.4**
PPLA	**Purkeypile**	**21.74**	**50**	P		**P**	**P**	**18 45 36.8**	**+0.9**
CAST	**Castle Rocks**	**21.85**	**49**	P		**P**	**P**	**18 45 37.8**	**+0.8**
H21K	**Melozitna Rive**	**21.96**	**43**	P		**P**	**P**	**18 45 39.5**	**+1.3**
SKT	**Skwentna**	**21.96**	**53**	P		**P**	**P**	**18 45 38.0**	**-0.2**
SKT				IAmb		IAmb	IAmb	18 45 51.3	
	comp=Z,9.0nm,1.0s								
CNPM	**China Poot**	**22.10**	**60**	P		**P**	**P**	**18 45 38.4**	**-1.3**
YAK	**Yakutsk**	**22.13**	**307**	P		**P**	**P**	**18 45 39.0**	**-0.9**
	comp=Z,12nm,0.7s,baz=52,slow=0.0,SNR=20								
	comp=Z,12nm,0.7s								
YAK	**Yakutsk**	**22.13**	**307**	P		**P**	**P**	**18 45 36.6**	**-3.4**
YAK	**Yakutsk**	**22.13**	**307**	*eP*		**P**	**P**	**18 45 38.9**	**-1.1**
YAK				pmax		pmax	pmax		
	comp=Z,23nm,0.8s								
BRLK	**Bradley Lake**	**22.27**	**59**	P		**P**	**P**	**18 45 41.3**	**-0.2**
BRLK				IAmb		IAmb	IAmb	18 46 14.6	
	comp=Z,14nm,1.1s								
KTH	**Kantishna Hill**	**22.38**	**49**	P		**P**	**P**	**18 45 43.0**	**+0.3**
KTH				IAmb		IAmb	IAmb	18 46 02.8	
	comp=Z,12nm,1.4s								
BPAW	**Bear Paw Mtn.**	**22.42**	**47**	P		**P**	**P**	**18 45 42.6**	**-0.5**
FIS	**Fire Island**	**22.57**	**55**	P		**P**	**P**	**18 45 45.3**	**+0.7**
TRF	**Thorofare Moun**	**22.65**	**49**	P		**P**	**P**	**18 45 45.4**	**-0.4**
TRF				IAmb		IAmb	IAmb	18 45 57.2	
	comp=Z,6.9nm,0.7s								
MLY	**Manley**	**22.68**	**45**	P		**P**	**P**	**18 45 45.9**	**0.0**
RND	**Reindeer**	**23.29**	**49**	P		**P**	**P**	**18 45 51.0**	**-1.2**
RND	**Reindeer**	**23.29**	**49**	P		**P**	**P**	**18 45 51.0**	**-1.2**
RND				pmax		pmax	pmax		
	comp=Z,4.0nm,0.8s								
H23K	**Yukon River**	**23.31**	**43**	P		**P**	**P**	**18 45 52.4**	**0.0**
KLR	**Kul'dur**	**23.57**	**274**	P		**P**	**P**	**18 45 55.9**	**+0.8**
	comp=Z,1.2nm,0.8s,baz=57,slow=7.9,SNR=4.0								
	comp=Z,1.2nm,0.8s								
MDM	**Murphy Dome**	**23.72**	**46**	P		**P**	**P**	**18 45 54.9**	**-1.5**
CCB	**Clear Creek Bu**	**23.86**	**46**	P		**P**	**P**	**18 45 57.5**	**-0.2**
CCB				IAmb		IAmb	IAmb	18 46 07.4	
	comp=Z,4.0nm,0.8s								
DHY	**Denali Highway**	**23.94**	**50**	P		**P**	**P**	**18 45 57.2**	**-1.4**
DHY				IAmb		IAmb	IAmb	18 46 15.8	
	comp=Z,11nm,1.4s								
SCM	**Sheep Creek Mo**	**23.95**	**53**	P		**P**	**P**	**18 45 58.2**	**-0.4**
SCM				IAmb		IAmb	IAmb	18 46 10.5	
	comp=Z,11nm,1.1s								
SCM	**Sheep Creek Mo**	**23.95**	**53**	P		**P**	**P**	**18 45 58.3**	**-0.4**
SCM				pmax		pmax	pmax		
	comp=Z,11nm,1.1s								
TOLK	**Toolik Lake Re**	**23.97**	**36**	P		**P**	**P**	**18 45 58.4**	**-0.3**
H24K	**Noodor Dome**	**23.99**	**44**	P		**P**	**P**	**18 45 58.4**	**-0.6**
IL31		**24.27**	**46**	P		**P**	**P**	**18 46 00.7**	**-0.8**
ILAR	**Eielson Array**	**24.27**	**46**	P		**P**	**P**	**18 46 00.5**	**-1.0**
	comp=Z,0.9nm,0.6s,baz=250,slow=6.9,SNR=19								
	comp=Z,0.9nm,0.6s								
M24K	**Tolsona, Glenn**	**24.49**	**53**	P		**P**	**P**	**18 46 03.4**	**-0.2**
TIXI	**Tiksi**	**24.78**	**331**	P		**P**	**P**	**18 46 06.1**	**+0.1**
	comp=Z,3.3nm,0.5s,baz=94,slow=22,SNR=30								
TIXI				PcP		**PcP**	**PcP**	**18 49 41.9**	**+0.1**
	comp=Z,1.0nm,0.6s,baz=272,slow=24,SNR=5.7								
	comp=Z,3.3nm,0.5s								
TIXI	**Tiksi**	**24.78**	**331**	P		**P**	**P**	**18 46 04.8**	**-1.2**
TIXI				IAmb		IAmb	IAmb	18 46 08.1	
	comp=Z,3.4nm,0.6s								
PAX	**Paxson**	**24.81**	**51**	P		**P**	**P**	**18 46 05.7**	**-0.8**
PAX	**Paxson**	**24.81**	**51**	P		**P**	**P**	**18 46 05.7**	**-0.8**
PAX				pmax		pmax	pmax		
	comp=Z,4.0nm,1.0s								
J25K	**Salcha River,**	**24.91**	**47**	P		**P**	**P**	**18 46 04.8**	**-2.6**
J25K				IAmb		IAmb	IAmb	18 46 17.5	
	comp=Z,2.5nm,0.5s								
SCRK	**Sand Creek**	**25.48**	**48**	P		**P**	**P**	**18 46 10.8**	**-1.8**
SCRK				IAmb		IAmb	IAmb	18 46 23.5	
	comp=Z,5.2nm,1.1s								
BMAR	**Burnt Mountain**	**25.53**	**40**	P		**P**	**P**	**18 46 12.6**	**-0.4**
GLB	**Gilahina Butte**	**25.64**	**54**	P		**P**	**P**	**18 46 12.3**	**-1.8**
GLB				IAmb		IAmb	IAmb	18 46 26.4	
	comp=Z,9.3nm,1.1s								
VRDI	**Verde Repeater**	**25.84**	**55**	P		**P**	**P**	**18 46 15.5**	**-0.5**
VRDI				IAmb		IAmb	IAmb	18 46 55.0	
	comp=Z,18nm,1.6s								
BCAR	**Beaver Creek A**	**26.49**	**50**	P		**P**	**P**	**18 46 20.0**	**-1.6**
M27K	**Edge Creek, AK**	**26.49**	**52**	P		**P**	**P**	**18 46 20.8**	**-1.0**
M27K				IAmb		IAmb	IAmb	18 46 36.0	
	comp=Z,6.8nm,1.0s								
HYT	**Haines Junctio**	**28.76**	**55**	P		**P**	**P**	**18 46 41.6**	**-0.5**
HYT				IAmb		IAmb	IAmb	18 46 54.8	
	comp=Z,4.1nm,1.0s								
M31M	**Drury Creek, Y**	**29.98**	**51**	P		**P**	**P**	**18 46 53.4**	**+0.7**
M31M				IAmb		IAmb	IAmb	18 47 05.2	
	comp=Z,8.2nm,1.3s								
KSAR	**Wonju Array Be**	**32.72**	**257**	P		P	P	18 47 08.1	-9.0
KSAR	**Wonju Array Be**	**

ASAR	**Alice Springs**	**83.14**	**212**	P	**P**	**18 53 12.7**	**+2.4**
	comp=Z,1.8nm,0.8s,baz=21,slow=5.1,SNR=25						
	comp=Z,1.8nm,0.8s						
STKA	**Stephens Creek**	**88.80**	**203**	P	**P**	**18 53 40.4**	**+2.3**
	comp=Z,4.0nm,0.9s,baz=7.5,slow=8.0,SNR=7.4						
	comp=Z,4.0nm,0.9s						
MAW	**Mawson**	**144.02**	**219**	PKP	PKPbc	19 00 17.6	+1.0
	comp=Z,3.1nm,0.6s,baz=109,slow=2.1,SNR=12						
SUR	**Sutherland**	**148.86**	**301**	PKPbc	**PKiKP**	**19 00 34.5**	**+1.1**
	comp=Z,6.9nm,0.9s,baz=0.0,slow=1.0,SNR=2.1						

*IDC **03** 18:46:21.8±2.4,49.°19S×108.°82E,h0km,mb3.8/3, mbtmp3.8/3,MS3.7/2,Error ellipse: s-maj=161.6km s-min=25.8km az=124.0*

*NEIC **03** 18:46:22.1±1.0,49.°3S±0.°2×108.°6E±0.°5,h15km±6km, mb4.3/11,Error ellipse: s-maj=55.6km s-min=12.3km az=127.0*

ISC 03 18:46:21.1±1.4,49.°4S±0.°3×108.°8E±0.°3,h10km,n20, σ1§22/15,mb4.2/9,Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.00**	**17**	T	T	19 04 31.0	
	baz=198,slow=74,SNR=109						
H01W1	**Cape Leeuwin H**	**15.01**	**17**	T	T	19 04 36.1	
	baz=198,slow=74,SNR=145						
H01W3	**Cape Leeuwin H**	**15.02**	**17**	T	T	19 04 36.4	
	baz=198,slow=74,SNR=167						
MAW	**Mawson**	**29.15**	**214**	P	**P**	**18 52 21.6**	**-0.4**
ASAR	**Alice Springs**	**32.36**	**47**	P	**P**	**18 52 51.6**	**+0.9**
	0.8nm,0.9s,baz=211,slow=7.4,SNR=12						
	0.8nm,0.9s						
AS31	**Alice Springs**	**32.36**	**47**	P	**P**	**18 52 51.0**	**+0.3**
AS31				IAmb	IAmb	18 53 00.9	
	comp=Z,1.1nm,1.1s						
VNDA	**Vanda**	**34.48**	**162**	LR	LR	19 06 57.3	
	comp=Z,107nm,18.1s,baz=303,slow=36						
WRA	**Warramunga Arr**	**35.77**	**44**	P	**P**	**18 53 20.4**	**+0.1**
	comp=Z,1.0nm,0.7s,baz=209,slow=9.3,SNR=6.2						
	comp=Z,1.0nm,0.7s						
WB2	**Warramunga Arr**	**35.77**	**44**	P	**P**	**18 53 20.4**	**+0.1**
WB2				IAmb	IAmb	18 53 30.0	
	comp=Z,6.2nm,1.1s						
WR0	**Warramunga Arr**	**35.85**	**44**	P	**P**	**18 53 20.4**	**-0.6**
WR0				IAmb	IAmb	18 53 34.0	
	comp=Z,3.1nm,1.0s						
WB0	**Warramunga Arr**	**35.95**	**44**	P	**P**	**18 53 21.1**	**-0.7**
WB0				IAmb	IAmb	18 53 30.9	
	comp=Z,5.7nm,1.2s						
ARMA	**Armidale**	**37.31**	**76**	P	**P**	**18 53 34.2**	**+0.7**
KNRA	**Kununurra**	**37.35**	**33**	P	**P**	**18 53 32.5**	**-1.2**
QSPA	**South Pole Qui**	**40.74**	**180**	LR	LR	19 10 01.1	
	comp=Z,92nm,20.2s,baz=326,slow=35						
QSPA	**South Pole Qui**	**40.74**	**180**	P	**P**	**18 53 59.6**	**-2.3**
QSPA				IAmb	IAmb	18 54 14.9	
	comp=Z,8.9nm,1.4s						
SNAA	**Sanae**	**50.07**	**203**	P	**P**	**18 55 18.4**	**+2.8**
	comp=Z,1.7nm,0.6s,baz=146,slow=13,SNR=7.8						
	comp=Z,1.7nm,0.6s						
SNAA	**Sanae**	**50.07**	**203**	P	**P**	**18 55 15.6**	**0.0**
SNAA				IAmb	IAmb	18 55 19.1	
	comp=Z,3.8nm,1.0s						
BELA	**Belgrano 2**	**51.03**	**189**	P	**P**	**18 55 23.6**	**+1.0**
BELA				IAmb	IAmb	18 55 28.1	
	comp=Z,7.3nm,1.5s						
NVAR	**Mina Array Bea**	**144.87**	**90**	PKP	**PKiKP**	**19 06 01.4**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=219,slow=4.2,SNR=1.3						
TXAR	**Lajitas Array**	**148.25**	**117**	PKPbc	**PKPab**	**19 06 10.3**	**0.0**
	comp=Z,1.1nm,0.7s,baz=192,slow=6.1,SNR=4.6						

*MOS **03** 18:46:32.3±1.6,54.°16N×169.°44E,h18km,mb4.7/5,Error ellipse: s-maj=12.9km s-min=11.4km az=97.0*

*IDC **03** 18:46:32.2±0.6,54.°18N×169.°32E,h0km,mb3.9/14, mbtmp3.9/16,ML3.5/2,Error ellipse: s-maj=19.6km s-min=15.1km az=0.0*

*NEIC **03** 18:46:33.5±2.0,54.°16N±0.°09×169.°34E±0.°10,h17km±4km, mb4.2/62,Error ellipse: s-maj=12.8km s-min=8.5km az=176.0*

*KRSC **03** 18:46:34.5±0.9,53.°75N×168.°39E,h3km±18km,ML4.2*

ISC 03 18:46:34.0±0.5,54.°11N±0.°08×169.°33E±0.°05,h17km,n116, σ1§52/112,mb4.2/39,Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**2.24**	**301**	PN	**Pn**	**18 47 10.5**	**+0.3**
BKI				S	**Sn**	**18 47 37.6**	**+0.2**
BKI	**Bering**	**2.24**	**301**	*e*P	**Pn**	**18 47 10.5**	**+0.3**
BKI				*e*S	**Sn**	**18 47 37.6**	**+0.2**
SHEM	**Shemya Is, Ala**	**3.17**	**114**	Pn	**Pn**	**18 47 23.9**	**+0.9**
	22nm,0.3s,baz=23,slow=3.9,SNR=10						
SHEM				Sn	**Sn**	**18 48 02.1**	**+1.7**
	13nm,0.3s,baz=295,slow=21,SNR=2.3						
	89nm,0.5s						
SMY	**Shemya**	**3.17**	**114**		**Pn**	**18 47 22.8**	**-0.2**
SMY	**Shemya**	**3.17**	**114**	PN	**Pn**	**18 47 22.8**	**-0.2**
KBTR	**Krutoberegovo**	**4.29**	**302**	PN	**Pn**	**18 47 41.8**	**+3.5**
KBTR				S	**Sn**	**18 48 29.6**	**+1.7**
KBTR	**Krutoberegovo**	**4.29**	**302**	*e*P	**Pn**	**18 47 41.8**	**+3.5**
KBTR				S	**Sn**	**18 48 29.6**	**+1.7**
MKZ	**Mys Kozlova**	**4.47**	**279**	S	**Sn**	**18 48 28.7**	**-3.7**
PET	**Petropavlovsk**	**6.45**	**265**	Pn	**Pn**	**18 48 04.9**	**-3.2**
PEA0B	**Petropavlovsk-**	**6.99**	**266**	Pn	**Pn**	**18 48 14.6**	**-0.9**
PEA0B	**Petropavlovsk-**	**6.99**	**266**	PN	**Pn**	**18 48 14.6**	**-0.9**
PETK	**Petropavlovsk-**	**6.99**	**266**	Pn	**Pn**	**18 48 16.7**	**+1.2**
	1.2nm,0.3s,baz=97,slow=19,SNR=2.1						
	1.3nm,0.3s						
PETK	**Petropavlovsk-**	**6.99**	**266**	Pn	**Pn**	**18 48 15.2**	**-0.3**
PETK	**Petropavlovsk-**	**6.99**	**266**	PN	**Pn**	**18 48 15.2**	**-0.3**
KIWB	**Kanaga Island**	**8.47**	**100**	Pn	**Pn**	**18 48 34.2**	**-1.5**
ADK	**Adak**	**8.73**	**99**	Pn	**Pn**	**18 48 37.8**	**-1.5**
ADK	**Adak**	**8.73**	**99**	PN	**Pn**	**18 48 37.8**	**-1.5**
BILL	**Bilibino**	**14.05**	**355**	Pn	**Pn**	**18 49 52.9**	**+0.9**
N18K	**Kilae Crest**	**19.68**	**56**	P	**P**	**18 51 00.7**	**-1.2**
TTA	**Tatalina**	**19.90**	**50**		**Pn**	**18 51 04.3**	**-1.7**
TTA				IAmb	IAmb	18 51 07.7	
	comp=Z,9.6nm,0.9s						
TTA	**Tatalina**	**19.90**	**50**	P	**Pn**	**18 51 04.3**	**-1.7**
TTA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
P18K	**Big Mountain,**	**19.97**	**60**		**P**	**18 51 03.8**	**-1.3**
O18K	**Koktuh Hills**	**19.98**	**59**	P	**P**	**18 51 04.0**	**-1.3**
CHIR	**Chirikof Islan**	**20.07**	**71**	P	Pn	18 51 07.1	-0.9
L19K	**White Mountain**	**20.32**	**52**		**P**	**18 51 08.3**	**-0.6**
L19K				IAmb	IAmb	18 51 14.0	
	comp=Z,14nm,0.9s						
N19K	**Bonanza Creek**	**20.38**	**56**	P	Pn	18 51 10.2	-1.5
N19K				IAmb	IAmb	18 51 19.7	
	comp=Z,10nm,1.1s						
M19K	**Big River Lodg**	**20.50**	**53**	P	**P**	**18 51 10.1**	**-0.8**
Q19K	**Cape Douglas,**	**20.80**	**62**	P	**P**	**18 51 13.7**	**-0.4**
K20K	**Telida**	**20.84**	**49**	P	**P**	**18 51 12.7**	**-1.8**
K20K				IAmb	IAmb	18 51 17.2	
	comp=Z,10nm,0.9s						
J20K	**Nowinta River**	**20.96**	**47**	P	**P**	**18 51 14.5**	**-1.2**
J20K				IAmb	IAmb	18 51 18.3	
	comp=Z,7.5nm,0.9s						
OHAK	**Old Harbor**	**21.14**	**66**	P	**P**	**18 51 15.2**	**-2.5**
RSO	**Redoubt South**	**21.22**	**57**	P	**P**	**18 51 17.4**	**-1.4**
KDAK	**Kodiak Island**	**21.45**	**65**	P	**P**	**18 51 19.6**	**-1.4**
KDAK				IAmb	IAmb	18 51 34.6	
	comp=Z,14nm,1.4s						
KDAK	**Kodiak Island**	**21.45**	**65**	P	**P**	**18 51 19.6**	**-1.4**
KDAK				pmax	pmax		
	comp=Z,14nm,1.4s						
IMAR	**Indian Mountai**	**21.55**	**42**	P	**P**	**18 51 22.0**	**-0.1**
CAST	**Castle Rocks**	**21.74**	**49**	P	**P**	**18 51 23.3**	**-0.8**
H21K	**Melozitna Rive**	**21.84**	**43**	P	**P**	**18 51 23.9**	**-1.4**
H21K				IAmb	IAmb	18 51 34.0	
	comp=Z,13nm,1.4s						
SKT	**Skwentna**	**21.86**	**53**	P	**P**	**18 51 24.8**	**-0.6**
SKT				IAmb	IAmb	18 51 32.2	
	comp=Z,7.5nm,1.0s						
CNPM	**China Poot**	**22.00**	**60**	P	**P**	**18 51 25.3**	**-1.7**
YAK	**Yakutsk**	**22.10**	**307**	P	**P**	**18 51 29.0**	**+1.0**
	comp=Z,3.0nm,0.5s,baz=140,slow=2.2,SNR=4.7						
	comp=Z,3.0nm,0.5s						
YAK	**Yakutsk**	**22.10**	**307**	P	**P**	**18 51 26.6**	**-1.3**
YAK				IAmb	IAmb	18 51 32.7	
	comp=Z,21nm,1.5s						
YAK	**Yakutsk**	**22.10**	**307**	P	**P**	**18 51 29.0**	**+1.0**
SUA	**Susitna One**	**22.21**	**55**	P	**P**	**18 51 28.1**	**-1.3**
SUA				IAmb	IAmb	18 51 38.7	
	comp=Z,12nm,1.2s						
KTH	**Kantishna Hill**	**22.27**	**49**	P	**P**	**18 51 29.1**	**-0.8**
BPAW	**Bear Paw Mtn.**	**22.31**	**48**	P	**P**	**18 51 29.8**	**-0.5**
FIS	**Fire Island**	**22.46**	**55**	P	**P**	**18 51 31.1**	**-0.8**
TRF	**Thorofare Moun**	**22.54**	**49**	P	**P**	**18 51 32.9**	**-0.1**
TRF				IAmb	IAmb	18 51 42.3	
	comp=Z,12nm,1.3s						
MLY	**Manley**	**22.56**	**45**	P	**P**	**18 51 32.3**	**-0.7**
MLY				IAmb	IAmb	18 51 45.9	
	comp=Z,10.0nm,1.5s						
H23K	**Yukon River**	**23.19**	**43**	P	**P**	**18 51 39.6**	**+0.1**
KNK	**Knik Glacier**	**23.31**	**55**	P	**P**	**18 51 39.4**	**-1.3**
KNK				IAmb	IAmb	18 51 49.0	
	comp=Z,12nm,1.4s						
SML	**Sawmill**	**23.37**	**54**	P	**P**	**18 51 39.9**	**-1.5**
SML				IAmb	IAmb	18 51 48.8	
	comp=Z,8.5nm,0.9s						
MDM	**Murphy Dome**	**23.61**	**46**	P	**P**	**18 51 43.4**	**-0.2**
WRH	**Wood River Hil**	**23.61**	**47**	P	**P**	**18 51 40.4**	**-3.3**
WRH				IAmb	IAmb	18 51 47.9	
	comp=Z,15nm,1.5s						
CCB	**Clear Creek Bu**	**23.75**	**47**	P	**P**	**18 51 44.5**	**-0.5**
CCB				IAmb	IAmb	18 51 59.7	
	comp=Z,8.2nm,1.4s						
SCM	**Sheep Creek Mo**	**23.84**	**54**	P	**P**	**18 51 45.6**	**-0.4**
SCM				IAmb	IAmb	18 52 04.7	
	comp=Z,11nm,1.1s						
SCM	**Sheep Creek Mo**	**23.84**	**54**	P	**P**	**18 51 45.6**	**-0.4**
SCM				pmax	pmax		
	comp=Z,11nm,1.1s						
TOLK	**Toolik Lake Re**	**23.85**	**37**	P	**P**	**18 51 46.0**	**+0.1**
H24K	**Noodor Dome**	**23.87**	**44**	P	**P**	**18 51 45.1**	**-1.1**
H24K				IAmb	IAmb	18 51 53.0	
	comp=Z,8.7nm,1.6s						
HDA	**Harding Lake**	**24.10**	**47**	P	**P**	**18 51 48.2**	**-0.1**
IL31		**24.16**	**46**	P	**P**	**18 51 47.7**	**-1.0**
ILAR	**Eielson Array**	**24.16**	**46**	P	**P**	**18 51 48.9**	**0.0**
	comp=Z,1.5nm,0.9s,baz=255,slow=8.3,SNR=12						
	comp=Z,1.5nm,0.9s						
ILAR	**Eielson Array**	**24.16**	**46**	P	**P**	**18 51 47.6**	**-1.2**
FID	**Port Fidalgo**	**24.30**	**56**	P	**P**	**18 51 48.5**	**-1.7**
FID				IAmb	IAmb	18 52 15.2	
	comp=Z,11nm,1.2s						
M24K	**Tolsona, Glenn**	**24.38**	**53**	P	**P**	**18 51 50.6**	**-0.4**
TIXI	**Tiksi**	**24.70**	**331**	P	**P**	**18 51 54.2**	**+0.6**
	comp=Z,2.1nm,0.5s,baz=95,slow=22,SNR=15						
TIXI				PcP	**PcP**	**18 55 30.5**	**+0.5**
	comp=Z,0.9nm,0.5s,baz=91,slow=22,SNR=6.2						
	comp=Z,2.1nm,0.5s						
TIXI	**Tiksi**	**24.70**	**331**	P	**P**	**18 51 52.6**	**-1.0**
TIXI				IAmb	IAmb	18 52 05.1	
	comp=Z,3.7nm,0.8s						
PAX	**Paxson**	**24.70**	**51**	P	**P**	**18 51 51.1**	**-2.7**
PAX				IAmb	IAmb	18 52 03.1	
	comp=Z,4.7nm,1.0s						
PAX	**Paxson**	**24.70**	**51**	P	**P**	**18 51 51.2**	**-2.7**
PAX				pmax	pmax		
	comp=Z,5.0nm,1.0s						
J25K	**Salcha River,**	**24.79**	**47**	P	**P**	**18 51 51.9**	**-2.8**
DOT	**Dot Lake**	**25.34**	**49**	P	**P**	**18 51 58.3**	**-1.2**
SCRK	**Sand Creek**	**25.37**	**49**	P	**P**	**18 51 58.7**	**-1.3**
BMAR	**Burnt Mountain**	**25.41**	**40**	P	**P**	**18 51 58.8**	**-1.5**
HMT	**Hamilton**	**25.43**	**57**	P	**P**	**18 52 00.5**	**0.0**
MENT	**Mentasta**	**25.50**	**51**	P	**P**	**18 51 60.0**	**-1.1**
MENT				IAmb	IAmb	18 52 08.9	
	comp=Z,12nm,1.4s						
GLB	**Gilahina Butte**	**25.54**	**54**	P	**P**	**18 51 59.8**	**-1.7**
GLB				IAmb	IAmb	18 52 09.4	
	comp=Z,6.9nm,1.1s						
J26L	**Joseph Creek**	**25.57**	**47**	P	**P**	**18 51 59.5**	**-2.3**
M26K	**Nabesna, AK**	**25.86**	**52**	P	**P**	**18 52 04.3**	**0.0**
M26K				IAmb	IAmb	18 52 35.9	
	comp=Z,7.2nm,1.4s						
WAX	**Waxell Ridge**	**26.11**	**57**	P	**P**	**18 52 05.3**	**-1.3**
ISLE	**Juniper Island**	**26.34**	**56**	P	**P**	**18 52 06.5**	**-2.4**
ISLE				IAmb	IAmb	18 52 16.7	
	comp=Z,8.1nm,1.0s						
BCAR	**Beaver Creek A**	**26.38**	**51**	P	**P**	**18 52 06.2**	**-2.8**
M27K	**Edge Creek, AK**	**26.38**	**52**	P	**P**	**18 52 06.4**	**-2.8**
M27K				IAmb	IAmb	18 52 19.5	
	comp=Z,5.7nm,0.9s						
GRNC	**Granite Creek**	**26.61**	**56**	P	**P**	**18 52 08.3**	**-3.0**
GRNC				IAmb	IAmb	18 52 23.0	
	comp=Z,6.1nm,0.8s						
BARN	**Barnard Glacie**	**26.61**	**55**	P	**P**	**18 52 09.0**	**-2.3**
BARN				IAmb	IAmb	18 52 18.4	
	comp=Z,6.0nm,1.1s						
YAH	**Yahtse**	**26.67**	**57**	P	**P**	**18 52 09.4**	**-2.5**
CTGM	**Chitina Glacie**	**26.78**	**55**	P	**P**	**18 52 11.1**	**-1.7**
CTGM				IAmb	IAmb	18 52 24.9	
	comp=Z,6.0nm,1.0s						
PCA	**Pinnacle**	**27.44**	**57**	P	**P**	**18 52 17.1**	**-1.6**
HYT	**Haines Junctio**	**28.65**	**55**	P	**P**	**18 52 29.5**	**0.0**
HYT				IAmb	IAmb	18 52 37.4	
	comp=Z,5.9nm,1.1s						
INK	**Inuvik**	**29.65**	**39**	P	**P**	**18 52 36.3**	**-1.8**
INK	**Inuvik**	**29.65**	**39**	P	**P**	**18 52 36.3**	**-1.8**
INK				pmax	pmax		
	comp=Z,14nm,1.6s						
KSRS	**Korea Array,**	**32.76**	**257**	P	**P**	**18 53 07.9**	**+2.1**
	comp=Z,1.4nm,0.8s,baz=49,slow=8.7,SNR=5.7						
	comp=Z,1.4nm,0.8s						
C36M	**Paulatuk**	**33.01**	**37**	P	**P**	**18 53 07.7**	**+0.1**
H11N2	**WAKE ISLAND Hy**	**34.37**	**184**	T	T	19 29 36.9	
	baz=2.6,slow=76,SNR=42						
H11N3	**WAKE ISLAND Hy**	**34.38**	**184**	T	T	19 29 38.4	
	baz=2.6,slow=76,SNR=44						
H11N1	**WAKE ISLAND Hy**	**34.38**	**184**	T	T	19 29 38.7	
	baz=2.6,slow=76,SNR=22						
H11S1	**WAKE ISLAND Hy**	**35.59**	**184**	T	T	19 31 12.9	
	baz=2.6,slow=76,SNR=23						
H11N3	**WAKE ISLAND Hy**	**35.60**	**184**	T	T	19 31 12.1	
	baz=2.6,slow=76,SNR=18						
H11S2	**WAKE ISLAND Hy**	**35.61**	**184**	T	T	19 31 12.5	
	baz=2.6,slow=76,SNR=23						
YKA	**Yellowknife Ar**	**38.59**	**46**	P	**P**	**18 53 55.2**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=305,slow=10,SNR=2.5						
	comp=Z,0.5nm,0.5s						
HHC	**Hu-ho-hao-te**	**40.10**	**275**	*e*P	**P**	**18 54 07.7**	**-0.8**
HHC				pmax	pmax		
	comp=Z,23nm,0.9s						
SPITS	**Spitsbergen Ar**	**46.94**	**353**	P	**P**	**18 55 00.9**	**-2.2**
SPITS				pmax	pmax		
	comp=Z,51nm,1.3s						
NVAR	**Mina Array Bea**	**50.18**	**77**	P	**P**	**18 55 30.2**	**+1.5**
	comp=Z,0.4nm,0.5s,baz=301,slow=7.2,SNR=4.4						
	comp=Z,0.4nm,0.5s						
WMQ	**Urumqi**	**51.71**	**294**	*e*P	**P**	**18 55 41.1**	**+1.1**
MKAR	**Makanchi Array**	**52.54**	**300**	P	**P**	**18 55 45.5**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=38,slow=6.7,SNR=3.7						
	comp=Z,0.4nm,0.7s						
PZH	**PanZhiHua**	**55.95**	**269**	P	**P**	**18 56 10.4**	**-0.8**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,5.4s						
NB2	**NORSAR Subarra**	**63.89**	**348**	P	**P**	**18 57 05.5**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=15,slow=6.9						
NOA	**NORSAR Array B**	**63.89**	**348**	P	**P**	**18 57 05.8**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=16,slow=6.6,SNR=4.0						
	comp=Z,0.8nm,0.6s						
TXAR	**Lajitas Array**	**65.11**	**74**	P	**P**	**18 57 15.4**	**+1.6**
	comp=Z,1.0nm,0.5s,baz=309,slow=4.9,SNR=16						
	comp=Z,1.0nm,0.5s						
TXAR	**Lajitas Array**	**65.11**	**74**	P	**P**	**18 57 14.5**	**+0.7**
AKASG	**Malin Array Be**	**70.34**	**334**	P	**P**	**18 57 46.5**	**+0.2**
	comp=Z,1.2nm,0.5s,baz=26,slow=6.3,SNR=4.8						
	comp=Z,1.2nm,0.5s						
AKASG	**Malin Array Be**	**70.34**	**334**	IAmb	IAmb	18 58 08.0	
	comp=Z,3.6nm,1.4s						
BRTR	**Keskin Array B**	**79.07**	**327**	P	**P**	**18 58 37.8**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=348,slow=6.3,SNR=1.7						
	comp=Z,0.3nm,0.4s						
WRA	**Warramunga Arr**	**79.64**	**213**	P	**P**	**18 58 41.1**	**+0.9**
	comp=Z,1.2nm,0.9s,baz=34,slow=6.1,SNR=6.2						
	comp=Z,1.2nm,0.9s						
WRA	**Warramunga Arr**	**79.64**	**213**	IAmb	IAmb	18 58 42.2	
	comp=Z,0.2nm,1.1s						
ASAR	**Alice Springs**	**83.26**	**212**	P	**P**	**18 59 00.8**	**+1.5**
	comp=Z,1.1nm,0.7s,baz=20,slow=5.0,SNR=26						
	comp=Z,1.1nm,0.7s						
STKA	**Stephens Creek**	**88.93**	**203**	P	**P**	**18 59 28.2**	**+1.2**
	comp=Z,1.8nm,0.7s,baz=23,slow=2.4,SNR=3.9						
	comp=Z,1.8nm,0.7s						
MAW	**Mawson**	**144.14**	**219**	PKP	**PKPdf**	**19 06 06.2**	**-0.9**
	comp=Z,2.1nm,0.7s,baz=40,slow=5.3,SNR=2.7						

NEIC 03 18:51:40.4±0.6,36.°03N±0.°01×96.°781W±0.°008,h4km±3km, mb_Lg2.2/5,Error ellipse: s-maj=2.2km s-min=0.7km az=165.0,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK005	**Luther M Schoo**	**0.50**	**221**	Pg	Pg	18 51 49.9	-0.1
TUL1	**Leonard**	**0.81**	**98**	Pg	Pg	18 51 55.3	-0.6
TUL1				Sg	Sg	18 52 06.3	-0.2
T35A	**Sooner Cattle**	**0.91**	**14**		Pg	18 51 57.0	-0.7
T35A				Sg	Sg	18 52 08.7	-0.8
FNO	**Franklin**	**0.93**	**213**	Pg	Pg	18 51 56.9	-1.2
FNO				Sg	Sg	18 52 10.0	-0.1
X34A	**Smith Ranch, M**	**1.67**	**211**	Pn	Pn	18 52 09.8	-0.6
X37A	**Clayton**	**1.85**	**141**	Pn	Pn	18 52 12.4	-0.4
WMOK	**Wichita Mounta**	**2.08**	**232**	Pn	Pn	18 52 16.2	+0.1
HHAR	**Hobbs**	**2.31**	**83**	Pn	Pn	18 52 19.3	0.0
W39A	**Magazine**	**2.58**	**108**	Pn	Pn	18 52 23.1	+0.1
R32A	**Long Quarter,**	**2.84**	**328**	Pn	Pn	18 52 25.6	-0.9
MIAR	**Mount Ida**	**3.01**	**119**	Pn	Pn	18 52 28.8	0.0
U40A	**Yellville**	**3.19**	**83**	Pn	Pn	18 52 30.7	-0.7
S39A	**Bolivar**	**3.23**	**58**	Pn	Pn	18 52 31.0	-0.8
WHAR	**Wooly Hollow**	**3.73**	**100**	IAmb_Lg		18 53 42.1	
	comp=Z,9.7nm,1.3s						
W41B	**Gary Mavity, V**	**3.79**	**102**	Pn	Pn	18 52 39.7	+0.1
MGMO	**Mountain Grove**	**3.80**	**72**	IAmb_Lg		18 53 50.8	
	comp=Z,5.7nm,1.1s						
NATX	**Nacogdoches**	**4.61**	**157**	Pn	Pn	18 52 49.0	-1.8
N33A	**J Bar K, Exete**	**4.73**	**354**	Pn	Pn	18 52 50.8	-1.6
W45A	**Hickory Valley**	**6.25**	**96**	Pn	Pn	18 53 10.4	-3.0

*NNC **03** 19:06:39.9±1.9,41.°95N×80.°78E,h0km,mb2.6,mpv2.2, Error ellipse: s-maj=14.1km s-min=9.3km az=4.0*

*SOME **03** 19:06:41.7,42.°32N×81.°00E,h10km*

ISC 03 19:06:42.7±3.1,42.°1N±0.°1×80.°71E±0.°09,h4km±17km,n10, σ2§74/19,6C-2D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**1.40**	**319**	*e*P	Pn	19 07 03.7	-5.4
	2.1nm,0.2s						
SHLS				*e*S	**Sb**	**19 07 19.4**	**-8.3**
	5.8nm,0.1s						
PDGK	**Podgornoye**	**1.52**	**324**	⇑P	**Pn**	**19 07 09.8**	**-1.0**
	0.3nm,0.2s						
PDGK				⇑S	**Sg**	**19 07 33.5**	**+1.9**
	5.4nm,0.7s						
SATY	**Saty**	**1.95**	**300**	*e*P	**Pg**	**19 07 19.9**	**-0.2**
	2.5nm,0.1s						
SATY				*e*S	**Sg**	**19 07 47.6**	**+2.3**
	6.7nm,0.1s						
KPKS	**Kokpek**	**2.02**	**313**	*e*P	**Pb**	**19 07 19.6**	**-0.4**
	5.1nm,0.2s						
KPKS				*e*S	**Sb**	**19 07 46.7**	**+1.1**
	9.1nm,0.2s						
DJR	**Jarkent**	**2.33**	**344**	*e*P	**Pb**	**19 07 22.7**	**-2.6**
	0.6nm,0.1s						
DJR				*e*S	**Sb**	**19 07 52.0**	**-2.4**
	2.7nm,0.0s						
BLB	**Baldybastay**	**2.58**	**321**	*e*P	**Pb**	**19 07 28.3**	**-1.2**
	2.1nm,0.1s						
BLB				*e*S	**Sb**	**19 08 02.3**	**+0.7**
	7.2nm,0.4s						
ARXS	**Arharly**	**2.98**	**316**	*e*P	**Pb**	**19 07 36.3**	**-0.1**
	1.0nm,0.2s						
ARXS				*e*S	**Sb**	**19 08 14.9**	**+1.7**
	2.8nm,0.2s						
KAPS	**Kapalarasan**	**3.33**	**343**	*e*P	**Pb**	**19 07 40.8**	**-1.5**
	0.6nm,0.1s						
KAPS				*e*S	**Sb**	**19 08 23.7**	**+0.5**
	3.9nm,0.1s						
MAKZ	**Makanchi**	**4.79**	**11**	⇓Pn	**Pn**	**19 07 56.5**	**+0.9**
	0.8nm,1.1s						
MAKZ				⇑Sn	**Sn**	**19 08 53.6**	**+2.0**
	0.3nm,0.7s						
MAKZ				⇑Lg	Lg	19 09 15.0	
	0.8nm,1.4s						
MK31	**Makanchi Array**	**4.83**	**13**	⇓Pn	**Pn**	**19 07 56.3**	**+0.2**
	0.1nm,0.2s,baz=200,slow=13,SNR=9.1						
MK31				⇑Sn	**Sn**	**19 08 55.1**	**+2.6**
	0.2nm,0.4s,baz=185,slow=24,SNR=6.3						
MK31				⇑Lg	Lg	19 09 16.2	
	0.9nm,0.8s,baz=194,slow=29,SNR=3.6						

**DJA 03 19:11:59.7±0.6,4.°N±4.°×12.°6

0.7nm132nm,1.8s
SMRI Semarang 5.32 94 Pn **Pn** **19 28 56.6 +0.8**
SMRI Semarang 5.32 94 P **Pn** **19 28 56.2 +0.4**
0.6nm96nm,1.0s
UGM Wanagama 5.51 102 Pn **Pn** **19 29 00.2 +1.8**
UGM Wanagama 5.51 102 P **Pn** **19 28 58.7 +0.3**
1.0nm92nm,1.1s
UGM Wanagama 5.51 102 P **Pn** **19 29 00.4 +2.0**
UWJI Ujung Watu 5.83 87 P **Pn** **19 29 03.7 +1.0**
0.5nm102nm,0.7s
KRJI Kerinci 5.87 322 P **Pn** **19 29 04.8 +1.4**
0.9nm232nm,0.8s
WOJI Wonogiri, Jawa 5.89 101 P **Pn** **19 29 03.8 +0.3**
0.2nm29nm,1.3s
PCJI Pacitan 6.21 104 P **Pn** **19 29 08.6 +0.7**
0.6nm72nm,0.8s
DSRI Dabo 6.25 355 P **Pn** **19 29 10.8 +2.3**
0.1nm510nm26nm,0.5s
PPSI Pulau Pagai 6.42 308 P **Pn** **19 29 11.2 +0.3**
1.1nm257nm,1.1s
PWJI Pagerwojo 6.78 101 P **Pn** **19 29 17.6 +1.9**
0.3nm73nm,0.7s
TPRI Tanjung Pinang 7.64 356 P **Pn** **19 29 28.8 +1.3**
0.3nm2µm47nm,0.7s
PBKI Pangkalan Bun 7.69 59 P **Pn** **19 29 29.2 +1.0**
3.2nm4µm81nm,0.8s
GMJI Gumukmas 8.42 101 P **Pn** **19 29 35.8 -2.4**
48nm,0.8s
MYKOM Kota Tinggi 8.57 352 Pn **Pn** **19 29 40.4 +0.2**
KMMI Kalianget 8.82 92 P **Pn** **19 29 44.0 +0.3**
46nm,1.0s
JAGI Jajag, Banyuwa 9.15 101 Pn **Pn** **19 29 48.9 +0.7**
JAGI Jajag, Banyuwa 9.15 101 P **Pn** **19 29 48.8 +0.6**
108nm,0.9s
JAGI Jajag, Banyuwa 9.15 101 P **Pn** **19 29 49.3 +1.1**
STKI Sintang 9.30 44 P **Pn** **19 29 51.4 +1.2**
22nm,0.6s
KSM Kuching 9.69 33 Pn **Pn** **19 29 55.1 -0.4**
KSM Kuching 9.69 33 P **Pn** **19 29 56.5 +0.9**
COCO West Island 9.77 236 Pn Pn 19 29 52.3 -4.4
SRBI Singaraja 10.13 98 P **Pn** **19 30 03.1 +1.5**
91nm,0.7s
GSI Gunungsitoli 10.96 317 **Pn** **19 30 08.9 -4.1**
GSI Gunungsitoli 10.96 317 P **Pn** **19 30 10.8 -2.2**
46nm,0.5s
GSI Gunungsitoli 10.96 317 P **Pn** **19 30 13.6 +0.6**
PSI Prapat 11.31 327 LR LR 19 35 21.7
comp=Z,260nm,18.1s,baz=138,slow=42
IPM Ipoh 11.87 340 Pn **Pn** **19 30 22.9 -2.4**
PLAI Plampang 12.74 100 P **Pn** **19 30 37.8 +0.5**
WBSI Waikabubak, Su 14.45 102 P **Pn** **19 30 57.0 -3.2**
51nm,0.7s
KAPI Kappang 14.69 84 LR LR 19 37 19.7
comp=Z,202nm,18.4s,baz=250,slow=40
KAPI Kappang 14.69 84 Pn **Pn** **19 31 04.6 +1.3**
BKSI Bulukumba 15.02 85 P **Pn** **19 31 09.6 +2.0**
28nm,1.3s
BNSI Bone 15.13 82 P **Pn** **19 31 09.4 +0.4**
28nm,1.5s
TTSI Tana Toraja 15.13 77 P **Pn** **19 31 10.2 +1.1**
12nm,1.1s
BSSI Bau Bau, Buton 15.32 89 P **Pn** **19 31 09.4 -2.1**
1µm39nm,1.6s
BASI Baing, Sumba 15.70 104 P **Pn** **19 31 17.5 +1.1**
90nm,0.6s
MPSI Mapaga 16.37 65 P **P** **19 31 27.9 +1.2**
374nm36nm,0.7s
EDFI Ende, Flores 16.57 98 P **Pn** **19 31 23.3 -4.2**
16nm,0.5s
MMRI Maumere 17.10 97 P **Pn** **19 31 31.1 -2.8**
MMRI IAmb IAmb 19 31 36.3
comp=Z,40nm,0.6s
MMRI Maumere 17.10 97 P **Pn** **19 31 32.5 -1.4**
comp=Z,65nm,0.5s
MMRI Maumere 17.10 97 P **P** **19 31 35.7 +0.9**
BBSI Bau Bau 17.43 87 P **Pn** **19 31 36.7 -1.3**
comp=Z,4.3nm,1.0s
TOLI2 Tolitoli 17.50 64 P **P** **19 31 39.8 +0.5**
APSI Ampana 17.51 71 P **P** **19 31 39.9 +0.6**
comp=Z,19nm,0.9s
MYLDM Lahad Datu 17.88 49 P **P** **19 31 44.0 +0.6**
GIRL Giralia 18.10 152 P **P** **19 31 44.5 -1.3**
GIRL IAmb IAmb 19 32 22.5
comp=Z,179nm,1.4s
GIRL Giralia 18.10 152 P **P** **19 31 46.3 +0.5**
LUWI Luwuk 18.53 73 **Pn** **19 31 51.0 -0.3**
LUWI IAmb IAmb 19 32 04.6
comp=Z,40nm,0.8s
LUWI Luwuk 18.53 73 P **Pn** **19 31 52.5 +1.2**
BATI Baumata 18.69 102 P **Pn** **19 31 53.6 +0.3**
comp=Z,63nm,0.3s,baz=335,slow=3.2,SNR=44
BATI S **S** **19 35 23.4 +1.3**
comp=Z,30nm,0.4s,baz=130,slow=16,SNR=8.7
BATI Baumata 18.69 102 P **Pn** **19 31 54.4 +1.0**
comp=Z,769nmcomp=Z,62nm,0.4s
SOEI Soe 19.21 100 P **P** **19 31 57.8 -0.5**
SOEI IAmb IAmb 19 32 10.6
comp=Z,86nm,0.8s
SOEI **S** **19 35 29.3 -3.7**
SOEI Soe 19.21 100 P **P** **19 31 58.8 +0.6**
comp=Z,117nm,0.7s
SOEI Soe 19.21 100 P **P** **19 31 59.5 +1.3**
MBWA Marble Bar 20.15 137 P **P** **19 32 08.6 +0.3**
PSA00 Pilbara Seismi 20.51 137 P **P** **19 32 08.4 -3.8**
PSA00 Pilbara Seismi 20.51 137 P **P** **19 32 11.3 -0.8**
PSA00 IAmb IAmb 19 32 40.2
comp=Z,36nm,1.6s
TNTI Ternate 23.45 72 P **P** **19 32 40.2 -2.9**
TNTI IAmb IAmb 19 32 45.6
comp=Z,37nm,0.8s
DAV Davao City (W) 24.62 57 LR LR 19 42 54.1
comp=Z,96nm,19.9s,baz=250,slow=37
KNRA Kununurra 24.84 113 P **P** **19 32 54.7 -1.0**
KNRA Kununurra 24.84 113 P **P** **19 32 57.3 +1.6**
CM31 Chiang Mai Arr 25.77 346 P **P** **19 33 01.5 -2.6**
CMAR Chiang Mai Arr 25.77 346 P **P** **19 33 02.0 -2.1**
comp=Z,2.1nm,0.6s,baz=181,slow=8.9,SNR=23
CMAR LR LR 19 43 50.3
comp=Z,82nm,19.9s,baz=160,slow=38
comp=Z,2.1nm,0.6s
CHTO Chiang Mai 26.11 347 P **P** **19 33 06.5 -0.7**
CHTO Chiang Mai 26.11 347 P **P** **19 33 08.3 +1.1**
MTN Manton Dam 26.36 105 P **P** **19 33 08.6 -1.0**
MTN Manton Dam 26.36 105 P **P** **19 33 10.8 +1.2**
SIJI Sorong 26.75 78 P **P** **19 33 12.4 -0.8**
comp=Z,7.7nm,0.8s,baz=284,slow=9.5,SNR=6.4
comp=Z,7.7nm,0.8s
FAKI Fak Fak 27.33 83 P **P** **19 33 17.7 -0.6**
FAKI IAmb IAmb 19 33 22.6
comp=Z,14nm,0.8s
FAKI Fak Fak 27.33 83 P **P** **19 33 21.4 +3.1**
KDU Kakadu 27.62 104 P **P** **19 33 22.6 +1.8**
WRKA Warakurna 28.70 132 P **P** **19 33 32.9 +2.4**
H01W3 Cape Leeuwin H 29.22 165 T T 20 04 02.1
baz=344,slow=76,SNR=144
H01W1 Cape Leeuwin H 29.23 165 T T 20 04 25.5
baz=344,slow=76,SNR=118
H01W2 Cape Leeuwin H 29.23 165 T T 20 04 05.0
baz=344,slow=76,SNR=177
WB0 Warramunga Arr 31.25 117 P **P** **19 33 52.7 -0.4**
WB0 IAmb IAmb 19 33 54.5
comp=Z,30nm,1.9s
WRA Warramunga Arr 31.27 118 P **P** **19 33 53.7 +0.5**
comp=Z,3.0nm,0.6s,baz=288,slow=11,SNR=74
WRA PcP **PcP** **19 36 47.9 +1.3**
comp=Z,1.4nm,0.6s,baz=306,slow=1.8,SNR=6.0
comp=Z,3.0nm,0.6s
WRA Warramunga Arr 31.27 118 P **P** **19 33 53.2 0.0**
WRAB Tennant Creek 31.27 118 P **P** **19 33 53.1 -0.2**
WRAB IAmb IAmb 19 33 54.7
comp=Z,6.7nm,0.6s
WRAB Tennant Creek 31.27 118 P **P** **19 33 54.1 +0.8**
WRAB Tennant Creek 31.27 118 P **P** **19 33 54.0 +0.7**
WRAB pP **pP** **19 34 05.5 -2.7**
WB2 Warramunga Arr 31.28 118 P **P** **19 33 53.1 -0.2**
WB2 IAmb IAmb 19 33 54.6
comp=Z,6.5nm,0.6s
WR0 Warramunga Arr 31.45 118 P **P** **19 33 55.1 +0.3**
WR0 IAmb IAmb 19 33 56.4
comp=Z,8.2nm,0.5s
KMI Kunming 31.76 356 ⇑P P 19 34 02.6 +4.9
KMI pmax pmax
comp=Z,4.0nm,1.1s
FORT Forrest 32.18 141 P **P** **19 34 01.3 +0.3**
FORT IAmb IAmb 19 34 34.3
comp=Z,29nm,1.1s
FORT Forrest 32.18 141 P **P** **19 34 02.5 +1.5**
H08S2 Diego Garcia H 32.34 266 T T 20 08 06.3
baz=91,slow=76,SNR=39
H08S3 Diego Garcia H 32.35 266 T T 20 08 07.0
baz=91,slow=76,SNR=194
H08S1 Diego Garcia H 32.36 266 T T 20 08 07.7
baz=91,slow=76,SNR=9.2
ASAR Alice Springs 32.39 124 P **P** **19 34 04.0 +0.9**
comp=Z,1.5nm,0.6s,baz=289,slow=7.4,SNR=32
ASAR PcP **PcP** **19 36 51.1 +1.5**
comp=Z,1.0nm,0.5s,baz=303,slow=2.3,SNR=10
ASAR S **S** **19 39 13.1 -0.2**
comp=Z,0.6nm,0.8s,baz=301,slow=15,SNR=4.9
ASAR LR LR 19 49 05.2
comp=Z,73nm,18.6s,baz=306,slow=40
comp=Z,1.5nm,0.6s
ASAR Alice Springs 32.39 124 P **P** **19 34 02.9 -0.1**
AS31 Alice Springs 32.39 124 P **P** **19 34 01.7 -1.4**
PZH PanZhiHua 33.21 355 P P 19 34 14.8 +4.6
PZH pmax pmax
comp=Z,8.0nm,0.7s
PZH pmax pmax
comp=Z,90nm,5.1s
OOD Oodnadatta 35.76 129 P **P** **19 34 33.6 +1.4**
MULG Mulgathing 35.89 134 P **P** **19 34 34.9 +1.7**
QIS Mount Isa 36.14 116 P **P** **19 34 37.8 +2.2**
COEN Coen 38.11 104 P **P** **19 34 51.9 -0.4**
COEN IAmb IAmb 19 34 57.0
comp=Z,8.6nm,0.8s
COEN Coen 38.11 104 P **P** **19 34 56.0 +3.7**
LSA Lhasa 38.64 340 P **P** **19 34 55.9 -1.2**
BBOO Buckleboo 38.73 136 P **P** **19 34 57.9 +0.5**
BBOO IAmb IAmb 19 35 02.8
comp=Z,52nm,1.9s
BBOO Buckleboo 38.73 136 P **P** **19 34 58.5 +1.2**
LCRK Leigh Creek 39.00 131 P **P** **19 35 01.9 +2.3**
PKI Pulchoki 39.07 332 *eP* **P** **19 35 00.1 -0.4**
comp=Z,9.4nm,0.6s
PKIN Phulchoki 39.08 332 *eP* **P** **19 34 59.9 -0.6**
GUN Gumba 39.14 333 *eP* **P** **19 35 01.0 -0.1**
comp=Z,23nm,0.4s
INKA Innaminka 39.71 126 P **P** **19 35 08.5 +3.0**
GKN Gorkha 39.80 331 *eP* **P** **19 35 06.3 -0.1**
comp=Z,14nm,0.3s
MTSU Mount Surprise 39.85 110 P **P** **19 35 09.3 +2.4**
JOW Kunigami 40.24 33 LR LR 19 52 52.1
comp=Z,46nm,19.4s,baz=220,slow=38
NAPP Napperby 40.39 135 P **P** **19 35 13.2 +2.1**
DANN Dangsing 40.51 330 *eP* **P** **19 35 11.8 -0.6**
comp=Z,68nm,0.6s
PYUN Piuthan 40.69 329 *eP* **P** **19 35 13.8 0.0**
comp=Z,36nm,0.4s
NJ2 Nanjing 40.76 18 *eP* **P** **19 35 15.7 +1.7**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
HTT Hallett 41.07 135 P **P** **19 35 18.6 +1.8**
PMG Port Moresby 41.72 97 P **P** **19 35 22.6 +0.3**
PMG Port Moresby 41.72 97 P **P** **19 35 23.1 +0.8**
PMG Port Moresby 41.72 97 P **P** **19 35 23.2 +0.9**
PMG Port Moresby 41.72 97 P **P** **19 35 22.9 +0.6**
PMG pP **pP** **19 35 37.6 0.0**
CTA Charters Tower 42.05 113 LR LR 19 51 57.0
comp=Z,56nm,21.6s,baz=269,slow=35
CTAO Charters Tower 42.05 113 P **P** **19 35 25.9 +1.0**
CTAO IAmb IAmb 19 36 33.7
comp=Z,30nm,1.4s
QLP Quilpie 42.13 123 P **P** **19 35 27.8 +2.4**
STKA Stephens Creek 42.23 131 P **P** **19 35 28.1 +2.0**
comp=Z,33nm,0.7s,baz=303,slow=8.2,SNR=92
STKA PcP **PcP** **19 37 20.9 +1.5**
comp=Z,2.9nm,0.7s,baz=305,slow=4.5,SNR=2.9
comp=Z,33nm,0.7s
STKA Stephens Creek 42.23 131 P **P** **19 35 27.5 +1.3**
STKA IAmb IAmb 19 35 29.0
comp=Z,6.6nm,0.6s
STKA Stephens Creek 42.23 131 P **P** **19 35 28.2 +2.0**
CMSA Cobar Meteorol 45.20 128 P **P** **19 35 53.2 +3.1**
RMQ Roma 45.92 121 P **P** **19 35 58.3 +2.4**
GTA Gaotai 46.18 354 *eP* **P** **19 35 57.4 -0.4**
GTA pP pP 19 36 05.3 -7.9
GTA sP sP 19 36 08.1 -12
GTA PcP **PcP** **19 37 34.2 +1.4**
GTA pmax pmax
comp=Z,2.0nm,0.8s
GTA pmax pmax
comp=Z,30nm,4.4s
GTA LR LR
comp=N,65nm,14.5s
GTA LR LR
comp=E,67nm,15.3s
GTA LR LR
comp=Z,100nm,17.4s
JTU Tsushima 47.04 28 P **P** **19 36 02.5 -2.0**
JTU IAmb IAmb 19 36 31.8
comp=Z,26nm,1.2s
EIDS Eidsvold 47.63 118 P **P** **19 36 09.1 -0.1**
BJI Beijing 47.67 12 P **P** **19 36 11.6 +2.4**
BJI pmax pmax
comp=Z,6.0nm,0.5s
HHC Hu-ho-hao-te 47.74 7 *eP* **P** **19 36 10.8 +1.0**
HHC pmax pmax
comp=Z,26nm,1.0s
HHC pmax pmax
comp=Z,230nm,5.8s
KSRS Korea Array 48.87 24 P **P** **19 36 18.1 -0.3**
comp=Z,1.2nm,0.6s,baz=217,slow=8.2,SNR=8.7
comp=Z,1.2nm,0.6s
JHS Saijyo 49.23 31 P **P** **19 36 20.4 -0.9**
JHS IAmb IAmb 19 36 23.5
comp=Z,12nm,0.7s
CAN Canberra 49.29 132 P **P** **19 36 24.2 +2.3**
ARMA Armidale 49.54 125 P **P** **19 36 26.7 +2.7**
ARMA Armidale 49.54 125 P **P** **19 36 26.5 +2.5**
MGCD Mangrove Creek 50.08 128 P **P** **19 36 30.7 +2.9**
JHJ2 Mitsune 51.57 38 P **P** **19 36 39.4 +0.4**
WMQ Urumqi 52.74 344 *eP* **P** **19 36 49.1 +1.5**
WMQ pP pP 19 37 02.0 -1.4
WMQ pmax pmax
comp=Z,9.0nm,0.9s
MJAR Matsushiro Arr 53.08 33 P **P** **19 36 47.5 -2.7**
comp=Z,1.1nm,0.6s,baz=209,slow=8.8,SNR=4.3
comp=Z,1.1nm,0.6s
KSH Kashi 53.33 332 P **P** **19 36 51.3 -0.8**
KSH pmax pmax
comp=Z,6.0nm,0.7s
KBL Kabul 53.34 323 P **P** **19 36 50.4 -2.0**
KBL IAmb IAmb 19 36 53.1
comp=Z,29nm,1.9s
WSAR Wadi Sarin 54.30 305 LR LR 19 59 28.6
comp=Z,65nm,18.7s,baz=206,slow=35
HNR Honiara 54.34 97 P **P** **19 36 59.1 -0.7**
SONM Songino Array 54.36 1 P **P** **19 36 58.3 -1.2**
comp=Z,2.3nm,0.5s,baz=174,slow=9.0,SNR=12
SONM PcP **PcP** **19 38 03.3 +0.6**
comp=Z,2.4nm,0.6s,baz=176,slow=4.3,SNR=8.9
comp=Z,2.3nm,0.5s
SONM Songino Array 54.36 1 P **P** **19 36 58.8 -0.6**
ULN Ulaanbaatar 54.41 2 P **P** **19 36 58.3 -1.5**
PRZ Przheval'sk 54.70 336 P **P** **19 37 00.4 -1.7**
PRZ IAmb IAmb 19 38 52.5
comp=Z,15nm,1.1s
KDJ Kajisay 54.91 335 P **P** **19 37 03.3 -0.4**
KDJ IAmb IAmb 19 37 10.9
comp=Z,6.2nm,0.8s
DRK Karamyk 55.35 329 P **P** **19 37 05.6 -1.3**
DRK IAmb IAmb 19 37 16.0
comp=Z,9.7nm,0.6s
MDJ Mudanjiang 55.69 21 P **P** **19 37 09.0 0.0**
MDJ IAmb IAmb 19 37 15.6
comp=Z,36nm,1.7s
GAR Garm 55.77 327 P **P** **19 37 08.6 -1.2**
GAR IAmb IAmb 19 37 09.5
comp=Z,9.6nm,0.6s
BNX BinXian 55.94 19 ⇓P **P** **19 37 10.7 0.0**
BNX pmax pmax
comp=Z,22nm,0.7s
BNX pmax pmax
comp=Z,190nm,3.9s
CHGR Chuyangaron 56.15 326 P **P** **19 37 10.9 -1.5**
USA0B Ussuriysk Arra 56.23 23 P **P** **19 37 12.1 -0.6**
USRK Ussuriysk Ar. 56.23 23 P **P** **19 37 12.3 -0.4**
comp=Z,12nm,0.5s,baz=200,slow=6.1,SNR=31
comp=Z,12nm,0.5s
BTK Batken 56.28 329 P **P** **19 37 11.9 -1.5**
BTK IAmb IAmb 19 37 14.4
comp=Z,5.4nm,0.7s
MK31 Makanchi Array 57.03 341 P **P** **19 37 17.3 -1.1**
MKAR Makanchi Array 57.03 341 P **P** **19 37 17.6 -0.9**
comp=Z,1.7nm,0.4s,baz=152,slow=9.0,SNR=55
comp=Z,1.7nm,0.4s
MKAR Makanchi Array 57.03 341 P **P** **19 37 17.3 -1.2**
MAKZ Makanchi 57.14 341 P **P** **19 37 17.4 -1.9**
HRA Herat 57.55 318 P **P** **19 37 21.0 -1.6**
KK31 Karatay Array 58.70 331 P **P** **19 37 28.4 -1.9**
KK31 IAmb IAmb 19 37 52.8
comp=Z,12nm,2.0s
KKAR Karatay Array 58.70 331 P **P** **19 37 28.7 -1.6**
KKAR IAmb IAmb 19 37 52.9
comp=Z,12nm,2.0s
ERM Erimo 59.68 32 P **P** **19 37 36.2 -0.8**
KLR Kul'dur 60.42 20 P **P** **19 37 41.1 -0.9**
comp=Z,3.3nm,0.5s,baz=217,slow=6.0,SNR=24
KLR LR LR 20 04 31.3
comp=Z,51nm,18.0s,baz=302,slow=37
comp=Z,3.3nm,0.5s
ASAJ Asahikawa 60.89 30 P **P** **19 37 44.1 -1.2**
comp=Z,3.6nm,0.5s,baz=261,slow=9.0,SNR=8.1
comp=Z,3.6nm,0.5s
KURK Kurchatov 61.63 341 P **P** **19 37 49.2 -0.9**
GEYT Alibeck 62.32 319 P **P** **19 37 56.0 +0.8**
comp=Z,6.2nm,0.6s,baz=88,slow=9.3,SNR=12
comp=Z,6.2nm,0.6s
GEYT Alibeck 62.32 319 P **P** **19 37 53.2 -1.9**
GEYT IAmb IAmb 19 37 56.5
comp=Z,4.5nm,0.6s
GYA0B ALIBECK ARRAY 62.32 319 P **P** **19 37 52.7 -2.4**
GYA0B IAmb IAmb 19 37 56.4
comp=Z,6.3nm,0.6s
MARNC Mare, Loyalty 62.40 111 P **P** **19 37 53.5 -2.4**
ZAA0 Zalesovo Array 62.84 347 P **P** **19 37 56.9 -1.2**
ZALV Zalesovo Beam 62.84 347 P **P** **19 37 57.0 -1.1**
comp=Z,2.8nm,0.5s,baz=155,slow=4.6,SNR=14
ZALV LR LR 20 07 37.8
comp=Z,65nm,19.1s,baz=146,slow=38
comp=Z,2.8nm,0.5s
ZALV Zalesovo Beam 62.84 347 P **P** **19 37 56.1 -2.0**
YSS Yuzh-Sakhalins 63.03 28 P **P** **19 37 58.4 -1.2**
KWAJ Kwajalein Atol 64.21 77 P **P** **19 38 06.2 -1.7**
RAYN Ar Rayn 65.47 300 P **P** **19 38 17.9 +1.8**
RAYN sP **sP** **19 38 37.7 -0.8**
BRVK Borovoye 66.47 338 P **P** **19 38 21.1 -0.7**
KIBK Kibwezi 66.93 270 P **P** **19 38 22.4 -3.3**
KIBK IAmb IAmb 19 39 32.1
comp=Z,7.8nm,1.3s
MAW Mawson 67.06 196 P **P** **19 38 28.4 +3.0**
comp=Z,1.1nm,0.7s,baz=87,slow=12,SNR=1.7
comp=Z,1.1nm,0.7s
FOZ Fox Glacier 67.14 134 P **P** **19 38 25.0 -1.3**
ODZ Otahua Downs 68.06 136 P **P** **19 38 29.8 -2.3**
ABKAR Akbulak array 68.24 330 P **P** **19 38 32.6 -0.4**
ABKAR Akbulak array 68.24 330 P **P** **19 38 33.0 -0.1**
ABKAR IAmb IAmb 19 38 34.2
comp=Z,29nm,0.7s
SNZO South Karori 70.28 131 P P 19 38 41.5 -4.5
SNZO pP pP 19 38 57.8 -4.7
YAK Yakutsk 71.17 12 P **P** **19 38 49.4 -1.4**
comp=Z,2.9nm,0.4s,baz=249,slow=1.4,SNR=5.3
comp=Z,2.9nm,0.4s
YAK Yakutsk 71.17 12 P **P** **19 38 49.6 -1.2**
YAK IAmb IAmb 19 38 50.5
comp=Z,9.1nm,0.6s
ARU Arti 73.59 335 LR LR 20 15 53.3
comp=Z,23nm,18.8s,baz=348,slow=39
ARU Arti 73.59 335 P **P** **19 39 04.5 -0.9**
ARU IAmb IAmb 19 39 06.8
comp=Z,17nm,1.1s
GURO Guroymak-BITLI 73.71 313 P **P** **19 39 06.4 -0.4**
GURO IAmb IAmb 19 39 09.4
comp=Z,7.9nm,1.0s
PEA0B Petropavlovsk- 74.31 30 P **P** **19 39 09.2 -0.5**
PETK Petropavlovsk- 74.31 30 P **P** **19 39 09.2 -0.5**
comp=Z,3.7nm,0.6s,baz=149,slow=2.9,SNR=13
comp=Z,3.7nm,0.6s
PETK Petropavlovsk- 74.31 30 P **P** **19 39 08.6 -1.0**
PET Petropavlovsk 74.74 30 P **P** **19 39 11.0 -1.1**
KBZ Khabaz 75.20 318 P **P** **19 39 15.9 +0.9**
comp=Z,7.6nm,0.9s,baz=110,slow=6.4,SNR=15
comp=Z,7.6nm,0.9s
KIV Kislovodsk 75.43 319 P **P** **19 39 15.5 -0.9**
EIL Elat 76.34 303 LR LR 20 13 25.2
comp=Z,34nm,18.0s,baz=254,slow=36
VNDA Vanda 76.56 169 P **P** **19 39 24.1 +1.9**
comp=Z,0.8nm,0.8s,baz=324,slow=6.1,SNR=3.8
comp=Z,0.8nm,0.8s
NRIK Noril'sk 76.88 354 P **P** **19 39 23.8 -0.3**
comp=Z,4.1nm,0.4s,baz=136,slow=4.4,SNR=6.8
comp=Z,4.1nm,0.4s
NRIK Noril'sk 76.88 354 P **P** **19 39 23.6 -0.4**
NRIK IAmb IAmb 19 39 25.3
comp=Z,13nm,1.3s
MMAI Mount Meron Ar 76.91 306 LR LR 20 15 08.1
comp=Z,32nm,19.6s,baz=246,slow=37
SBA Scott Base 77.65 169 P **P** **19 39 29.1 +0.8**
SBA IAmb IAmb 19 40 27.4
comp=Z,27nm,1.9s
BOSA Boshof 77.89 242 P **P** **19 39 31.4 +0.7**
SEY Seymchan 78.21 20 P **P** **19 39 31.4 -0.2**
comp=Z,2.4nm,0.6s,baz=220,slow=6.4,SNR=15
comp=Z,2.4nm,0.6s
CSS Mathiatis 79.12 307 P **P** **19 39 37.2 0.0**
CSS IAmb IAmb 19 39 40.2
comp=Z,7.0nm,0.8s
TIXI Tiksi 79.80 7 P **P** **19 39 38.8 -1.3**
comp=Z,4.6nm,0.7s,baz=269,slow=22,SNR=26
comp=Z,4.6nm,0.7s
TIXI Tiksi 79.80 7 P **P** **19 39 38.7 -1.3**
TIXI IAmb IAmb 19 39 39.8
comp=Z,4.9nm,0.7s
BR131 Keskin Array S 80.25 312 P **P** **19 39 42.9 -0.5**
BR131 IAmb IAmb 19 39 45.1
comp=Z,6.5nm,0.7s
BRTR Keskin Array B 80.25 312 P **P** **19 39 44.5 +1.1**
comp=Z,3.6nm,0.7s,baz=141,slow=6.9,SNR=22
BRTR LR LR 20 15 28.6
comp=Z,30nm,22.0s,baz=137,slow=36
comp=Z,3.6nm,0.7s
BRTR Keskin Array B 80.25 312 P **P** **19 39 42.3 -1.1**
QSPA South Pole Qui 83.24 180 P **P** **19 40 00.4 +1.8**
comp=Z,1.1nm,0.5s,baz=242,slow=0.9,SNR=17
QSPA LR LR 20 14 58.5
comp=Z,71nm,20.6s,baz=204,slow=34
comp=Z,1.1nm,0.5s
QSPA South Pole Qui 83.24 180 IAmb IAmb 19 40 01.6
comp=Z,8.5nm,1.4s
BILL Bilibino 85.88 19 P **P** **19 40 10.6 -1.1**
BILL IAmb IAmb 19 40 11.7
comp=Z,3.2nm,0.6s
IDI Anoyia 85.92 306 LR LR 20 19 20.0
comp=Z,16nm,22.0s,baz=82,slow=36
AKASG Malin Array Be 86.32 322 P **P** **19 40 14.9 +0.7**
comp=Z,0.2nm,0.3s,baz=74,slow=3.9,SNR=5.6
comp=Z,0.2nm,0.3s
AKASG Malin Array Be 86.32 322 P **P** **19 40 11.8 -2.4**
BUR08 Bucovina Ar. S 88.17 318 P **P** **19 40 24.9 +1.5**
BUR08 IAmb IAmb 19 40 43.4
comp=Z,3.6nm,1.1s
FINES FINESS Array B 90.65 332 P **P** **19 40 35.5 +1.0**
comp=Z,2.2nm,0.6s,baz=115,slow=5.0,SNR=15
comp=Z,2.2nm,0.6s
ARCES ARCESS Array B 92.64 340 P **P** **19 40 44.2 +0.6**
comp=Z,6.8nm,1.0s,baz=66,slow=6.8,SNR=4.9
comp=Z,6.8nm,1.0s
NVAR Mina Array Bea 129.72 45 PKP **PKiKP** **19 46 44.0 +1.2**
comp=Z,0.4nm,0.5s,baz=290,slow=1.6,SNR=4.9
ELK Elko 130.63 40 PKP **PKiKP** **19 46 44.7 +0.2**
comp=Z,1.3nm,0.6s,baz=312,slow=1.8,SNR=6.8
PDAR Pinedale Array 132.90 35 PKP **PKiKP** **19 46 49.1 +0.1**
comp=Z,0.5nm,0.6s,baz=337,slow=3.4,SNR=4.3
TXAR Lajitas Array 144.80 47 PKP **PKPdf** **19 47 10.3 +0.5**
comp=Z,8.1nm,0.6s,baz=282,slow=1.1,SNR=115
TXAR Lajitas Array 144.80 47 PKPdf **PKPdf** **19 47 09.8 0.0**
BDFB Brasilia 145.29 230 PKPbc **PKPab** **19 47 13.4 +2.5**
comp=Z,1.1nm,0.3s,baz=123,slow=6.5,SNR=4.4
TKL Tuckaleechee C 150.10 15 PKPbc **PKPbc** **19 47 23.4 +0.1**
comp=Z,5.1nm,0.4s,baz=176,slow=4.7,SNR=4.5

*KRSC **03** 19:33:57.7ₛ 1.3,53.°88Nₖ 169.°23E, h19ᵏᵐ,21ᵏᵐ, ML3.6*
*IDC **03** 19:33:59.9ₛ 1.9,54.°15Nₖ 169.°31E, h0ᵏᵐ, mb3.3/2,*
mbtmp3.3/4, ML3.1/2, Error ellipse: s-maj=51.1km
s-min=28.0km az=9.0

ISC 03 19:34:02.1±1.1, 54°1N±0°2×169°29E±0°09, h17km, n15, σ1§09/11, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**2.22**	**301**	*eP*	**Pn**	**19 34 36.8**	**-1.2**
BKI				*eS*	**Sn**	**19 35 05.0**	**0.0**
SHEM	**Shemya Is, Ala**	**3.19**	**114**	Pn	**Pn**	**19 34 51.9**	**+0.5**
	8.6nm,0.3s,baz=41,slow=2.4,SNR=8.4						
SHEM				Sn	**Sn**	**19 35 30.3**	**+1.3**
	9.1nm,0.3s,baz=184,slow=16,SNR=9.9						
	19nm,0.4s						
SMY	**Shemya**	**3.19**	**114**	*eS*	**Sn**	**19 35 26.8**	**-2.2**
KBTR	**Krutoberegovo**	**4.27**	**302**	*eP*	**Pn**	**19 35 06.7**	**+0.5**
TUMR	**Tumrok**	**5.43**	**286**	*eP*	**Pn**	**19 35 22.8**	**+0.5**
KOK	**Koryaka**	**6.38**	**267**	*eP*	**Pn**	**19 35 34.6**	**-0.6**
PETK	**Petropavlovsk-**	**6.97**	**266**	Pn	**Pn**	**19 35 43.5**	**+0.3**
	0.4nm,0.3s,baz=102,slow=19,SNR=9.7						
	1.3nm,0.6s						
ILAR	**Eielson Array**	**24.18**	**46**	P	**P**	**19 39 16.9**	**-0.2**
	0.2nm,0.6s,baz=249,slow=7.6,SNR=4.2						
	0.2nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**34.36**	**184**	T	T	20 17 05.5	
	baz=2.5,slow=76,SNR=18						
H11N3	**WAKE ISLAND Hy**	**34.37**	**184**	T	T	20 17 14.5	
	baz=2.5,slow=76,SNR=16						
H11N1	**WAKE ISLAND Hy**	**34.38**	**184**	T	T	20 17 09.5	
	baz=2.5,slow=76,SNR=13						
H11S1	**WAKE ISLAND Hy**	**35.58**	**184**	T	T	20 18 42.6	
	baz=2.4,slow=76,SNR=8.9						
H11S3	**WAKE ISLAND Hy**	**35.60**	**184**	T	T	20 18 47.7	
	baz=2.4,slow=76,SNR=9.1						
H11S2	**WAKE ISLAND Hy**	**35.60**	**184**	T	T	20 18 38.1	
	baz=2.4,slow=76,SNR=7.9						
TXAR	**Lajitas Array**	**65.14**	**74**	P	**P**	**19 44 42.4**	**+0.4**
	0.5nm,0.6s,baz=311,slow=4.9,SNR=6.6						
	0.5nm,0.6s						

WEL 03 19:36:23.4±0.9, 37°S±7°×17°8E±°, h69km±10km, M3.5/20, ML3.8/21, MLv3.5/20, Error ellipse: s-maj=0.0km s-min=0.0km az=31.8, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WSRZ	**White Island S**	**0.65**	**216**	P	Pn	19 36 39.2	+1.6
WSRZ				S	Sn	19 36 49.9	+1.8
WIZ	**White Island**	**0.65**	**215**	P	Pn	19 36 37.9	+0.3
HAZ	**Te Kaha**	**0.77**	**173**	P	Pn	19 36 38.5	-0.5
HAZ				S	Sn	19 36 51.1	+0.7
MXZ	**Matakaoa Point**	**0.77**	**138**	P	Pn	19 36 38.4	-0.6
MXZ				S	Sn	19 36 53.0	+2.5
PKGZ	**Pakihiroa**	**0.95**	**160**	P	Pn	19 36 41.2	-0.1
PKGZ				S	Sn	19 36 57.7	+3.2
RUGZ	**Raukumara Rang**	**0.97**	**179**	P	Pn	19 36 41.9	-0.7
RUGZ				S	Sn	19 36 55.0	-0.1
WHRZ	**Whale Island**	**1.02**	**212**	P	Pn	19 36 42.4	+0.3
WMGZ	**Waiomatatini S**	**1.02**	**144**	P	Pn	19 36 42.0	-0.1
WMGZ				S	Sn	19 36 57.9	+2.0
MYRZ	**Mayor Island**	**1.17**	**255**	P	Pn	19 36 44.9	+1.0
PUZ	**Puketiti**	**1.18**	**156**	P	Pn	19 36 43.2	-0.9
TWGZ	**Tauwhareparae**	**1.21**	**168**	P	Pn	19 36 44.7	+0.1
TWGZ				S	Sn	19 37 02.6	+2.2
MARZ	**Manawahe**	**1.26**	**218**	P	Pn	19 36 45.4	+0.2
EDRZ	**Edgecumbe**	**1.33**	**213**	P	Pn	19 36 46.1	-0.1
TGRZ	**Tauranga**	**1.33**	**236**	P	Pn	19 36 46.5	+0.4
URZ	**Urewera**	**1.33**	**199**	P	Pn	19 36 45.6	-0.5
URZ				S	Sn	19 37 02.9	-0.3
URZ	**Urewera**	**1.33**	**199**	P	Pn	19 36 45.8	-0.3
MWZ	**Matawai**	**1.34**	**184**	P	Pn	19 36 45.7	-0.6
LIRZ	**Lichensteins R**	**1.43**	**225**	P	Pn	19 36 47.0	-0.4
TKGZ	**Te Karaka**	**1.45**	**174**	P	Pn	19 36 47.0	-0.7
MKRZ	**Makatiti**	**1.48**	**219**	P	Pn	19 36 48.9	+0.8
OMRZ	**Omania**	**1.51**	**222**	P	Pn	19 36 48.6	+0.1
RAGZ	**Rawiri**	**1.51**	**187**	P	Pn	19 36 48.3	-0.2
KARZ	**Kaharoa**	**1.52**	**227**	P	Pn	19 36 48.8	+0.2
TARZ	**Mount Tarawera**	**1.54**	**216**	P	Pn	19 36 49.1	+0.2
CNGZ	**Carnagh Statio**	**1.55**	**164**	P	Pn	19 36 48.1	-0.8
KUZ	**Kuaotunu**	**1.57**	**279**	P	Pn	19 36 49.4	+0.2
NGRZ	**Ngongotaha**	**1.61**	**226**	P	Pn	19 36 50.0	+0.2
KMRZ	**Kaimai**	**1.61**	**238**	P	Pn	19 36 50.0	+0.2
RRRZ	**Republican Roa**	**1.62**	**214**	P	Pn	19 36 50.0	0.0
HLRZ	**Highlands Stat**	**1.63**	**219**	P	Pn	19 36 50.2	+0.2
MUGZ	**Murupara**	**1.64**	**205**	P	Pn	19 36 49.7	-0.5
RTZ	**Ruatahuna**	**1.71**	**198**	P	Pn	19 36 50.6	-0.5
RIGZ	**Rimuhau**	**1.71**	**177**	P	Pn	19 36 49.8	-1.4
HRRZ	**Handcock Road**	**1.77**	**218**	P	Pn	19 36 52.2	+0.2
SNGZ	**Shannon Statio**	**1.80**	**188**	P	Pn	19 36 51.5	-0.9
PRRZ	**Plateau Road**	**1.81**	**213**	P	Pn	19 36 52.2	-0.2
GRRZ	**Galatos Road**	**1.81**	**232**	P	Pn	19 36 52.9	+0.2
TOZ	**Tahuroa Road**	**1.87**	**146**	P	Pn	19 36 53.6	+0.4
ALRZ	**Allen Road**	**1.88**	**213**	P	Pn	19 36 53.4	-0.1
GRZ	**Great Barrier**	**1.92**	**292**	P	Pn	19 36 54.8	+0.8
WPRZ	**Whakapapatarin**	**1.93**	**217**	P	Pn	19 36 54.3	+0.2
PRGZ	**Paritu Road**	**1.93**	**175**	P	Pn	19 36 52.4	-1.8
MTHZ	**Maungataniwha**	**1.96**	**199**	P	Pn	19 36 53.5	-1.1
RAHZ	**Arahi**	**1.97**	**193**	P	Pn	19 36 53.7	-1.0
MKAZ	**Moumakai**	**2.00**	**266**	P	Pn	19 36 55.7	+0.6
KNZ	**Kokohu**	**2.02**	**180**	P	Pn	19 36 53.2	-2.1
WIAZ	**Waiheke Island**	**2.04**	**275**	P	Pn	19 36 56.3	+0.8
MRHZ	**Matea Rd**	**2.08**	**208**	P	Pn	19 36 55.6	-0.6
KUTZ	**Kaahu Road**	**2.08**	**224**	P	Pn	19 36 56.5	+0.3
WHTZ	**Whakaora**	**2.14**	**218**	P	Pn	19 36 57.9	+0.9
TLZ	**Tolley Road**	**2.15**	**231**	P	Pn	19 36 57.2	+0.1
MHGZ	**Mahia Peninsul**	**2.16**	**175**	P	Pn	19 36 55.3	-2.0
ETAZ	**East Tamaki Re**	**2.19**	**270**	P	Pn	19 36 57.8	+0.3
NMHZ	**Naumai**	**2.20**	**198**	P	Pn	19 36 57.2	-0.7
MBAZ	**Motutapu North**	**2.23**	**275**	P	Pn	19 36 59.0	+1.0
ABAZ	**Army Bay**	**2.30**	**279**	P	Pn	19 37 00.3	+1.2
ARHZ	**Aropaoanui**	**2.32**	**193**	P	Pn	19 36 57.8	-1.6
BKZ	**Black Stump Fm**	**2.35**	**203**	P	Pn	19 36 58.5	-1.4
BKZ	**Black Stump Fm**	**2.35**	**203**	P	Pn	19 36 59.0	-0.9
RATZ	**Rangitukua**	**2.39**	**218**	P	Pn	19 37 01.1	+0.8
RITZ	**Rihia Road**	**2.44**	**215**	P	Pn	19 37 01.2	+0.3
KATZ	**Kakaramea**	**2.51**	**218**	P	Pn	19 37 03.5	+1.4
MCHZ	**McNeill Hill**	**2.56**	**197**	P	Pn	19 37 00.9	-1.7
KWHZ	**Kaweka Forest**	**2.61**	**202**	P	Pn	19 37 01.6	-1.8
TMVZ	**Te Maari**	**2.62**	**216**	P	Pn	19 37 03.4	-0.1
ETVZ	**East Tongariro**	**2.63**	**215**	P	Pn	19 37 03.4	-0.3
KRVZ	**Karewarewa**	**2.63**	**217**	P	Pn	19 37 03.9	+0.2
WTVZ	**West Tongariro**	**2.67**	**217**	P	Pn	19 37 04.3	+0.1
NNVZ	**North Ngauruho**	**2.67**	**216**	P	Pn	19 37 04.5	+0.1
OTVZ	**Oturere**	**2.68**	**215**	P	Pn	19 37 03.9	-0.4
HIZ	**Hauiti**	**2.69**	**235**	P	Pn	19 37 05.5	+1.2
HIZ	**Hauiti**	**2.69**	**235**	P	Pn	19 37 05.6	+1.2
CKHZ	**Cape Kidnapper**	**2.70**	**190**	P	Pn	19 37 01.8	-2.7
SNVZ	**South Ngauruho**	**2.71**	**215**	P	Pn	19 37 04.4	-0.3
TWVZ	**Taurewa**	**2.71**	**220**	P	Pn	19 37 05.2	+0.4
NGZ	**Ngauruhoe**	**2.72**	**216**	P	Pn	19 37 04.8	-0.1
TUVZ	**Tukino**	**2.77**	**214**	P	Pn	19 37 04.9	-0.6
BHHZ	**Black Hill Sta**	**2.79**	**206**	P	Pn	19 37 03.9	-1.9
FWVZ	**Far West T-bar**	**2.80**	**216**	P	Pn	19 37 05.6	-0.5
WHVZ	**Whangaehu Hut**	**2.81**	**215**	P	Pn	19 37 05.4	-0.7
KRHZ	**Kereru**	**2.83**	**201**	P	Pn	19 37 03.7	-2.6
MOVZ	**Moawhango**	**2.84**	**211**	P	Pn	19 37 04.9	-1.6
TRVZ	**Turoa**	**2.84**	**215**	P	Pn	19 37 06.4	-0.2
WNVZ	**Wahianoa**	**2.84**	**214**	P	Pn	19 37 05.5	-1.0
KAHZ	**Kahuranaki**	**2.86**	**192**	P	Pn	19 37 04.0	-2.7
PKVZ	**Pokaka**	**2.93**	**218**	P	Pn	19 37 07.8	+0.2
MTVZ	**Mangateitei**	**2.94**	**215**	P	Pn	19 37 06.9	-0.9
PXZ	**Pawanui**	**3.10**	**191**	P	Pn	19 37 06.1	-3.8
VRZ	**Vera Road**	**3.12**	**226**	P	Pn	19 37 11.5	+1.2
PNHZ	**Pukenui**	**3.13**	**201**	P	Pn	19 37 07.1	-3.3
WPHZ	**Waipukurau**	**3.21**	**197**	P	Pn	19 37 08.0	-3.5
TSZ	**Takapari Road**	**3.34**	**203**	P	Pn	19 37 09.7	-3.5
PRHZ	**Porangahau**	**3.36**	**193**	P	Pn	19 37 09.6	-4.0
WAZ	**Wanganui**	**3.46**	**217**	P	Pn	19 37 14.4	-0.6
DVHZ	**Dannevirke**	**3.50**	**199**	P	Pn	19 37 11.3	-4.2
NEZ	**North Egmont**	**3.61**	**230**	P	Pn	19 37 19.5	+2.5
PKE	**Pukeiti**	**3.63**	**232**	P	Pn	19 37 20.6	+3.3
KHEZ	**Kahui Hut**	**3.68**	**230**	P	Pn	19 37 20.1	+2.2
POWZ	**Post Office Ro**	**3.70**	**203**	P	Pn	19 37 14.6	-3.5
OUZ	**Omahuta**	**3.74**	**297**	P	Pn	19 37 19.8	+1.2
PRWZ	**Pori Road**	**3.79**	**200**	P	Pn	19 37 16.0	-3.4
BFZ	**Birch Farm**	**3.84**	**196**	P	Pn	19 37 15.3	-4.8
BFZ	**Birch Farm**	**3.84**	**196**	P	Pn	19 37 16.1	-4.0
MRZ	**Mangatainoka R**	**4.00**	**203**	P	Pn	19 37 17.6	-4.7
TIWZ	**Tintock**	**4.02**	**200**	P	Pn	19 37 18.1	-4.4
HOWZ	**Holdsworth Sta**	**4.24**	**203**	P	Pn	19 37 20.4	-5.1
OGWZ	**Otaki Gorge**	**4.28**	**206**	P	Pn	19 37 21.6	-4.4
TMWZ	**Te Maipa**	**4.33**	**198**	P	Pn	19 37 21.5	-5.3
KIW	**Kapiti Island**	**4.42**	**208**	P	Pn	19 37 23.4	-4.5
MTW	**Mount Morrison**	**4.48**	**201**	P	Pn	19 37 23.4	-5.4
CAW	**Cannon Point**	**4.58**	**205**	P	Pn	19 37 25.1	-5.0
TRWZ	**Traveller**	**4.66**	**199**	P	Pn	19 37 25.6	-5.6
PAWZ	**Paruwai Farm**	**4.71**	**201**	P	Pn	19 37 26.2	-5.7
DUWZ	**D'Urville Isla**	**4.79**	**216**	P	Pn	19 37 28.7	-4.4
MSWZ	**Moikau Station**	**4.79**	**202**	P	Pn	19 37 27.2	-5.9
PLWZ	**Palliser**	**4.93**	**201**	P	Pn	19 37 28.7	-6.3
TCW	**Tory Channel**	**4.96**	**211**	P	Pn	19 37 30.9	-4.5
TUWZ	**Tuamarina**	**5.29**	**212**	P	Pn	19 37 34.7	-5.0
NNZ	**Nelson**	**5.37**	**217**	P	Pn	19 37 36.9	-4.0
QRZ	**Quartz Range**	**5.53**	**225**	P	Pn	19 37 39.6	-3.6
QRZ	**Quartz Range**	**5.53**	**225**	P	Pn	19 37 40.4	-2.8
BSWZ	**Blackbirch Sta**	**5.55**	**211**	P	Pn	19 37 38.2	-5.2
MRNZ	**Matariki Terra**	**5.82**	**219**	P	Pn	19 37 42.9	-4.2
THZ	**Tophouse**	**6.02**	**216**	P	Pn	19 37 44.9	-5.0
KHZ	**Kahutara**	**6.28**	**209**	P	Pn	19 37 47.4	-5.9
KHZ	**Kahutara**	**6.28**	**209**	P	Pn	19 37 49.0	-4.3
DSZ	**Denniston Nort**	**6.56**	**222**	P	Pn	19 37 52.6	-4.7
GVZ	**Greta Valley S**	**6.94**	**209**	P	Pn	19 37 55.6	-6.8
LTZ	**Lake Taylor**	**7.11**	**214**	P	Pn	19 37 57.8	-6.9
INZ	**Inchbonnie**	**7.45**	**218**	P	Pn	19 38 04.2	-5.2
OKCZ	**Okains Bay**	**7.58**	**206**	P	Pn	19 38 04.2	-7.0
OXZ	**Oxford**	**7.65**	**212**	P	Pn	19 38 06.4	-5.6
TMZ	**Timaru**	**8.94**	**212**	P	Pn	19 38 22.8	-6.9
ODZ	**Otahua Downs**	**9.63**	**211**	P	Pn	19 38 32.2	-6.9

*MAN **03** 19:49:40.0, 8°.34N×126°.58E, h14km, mb4.0, ML2.8, MS2.4*
MAN 03 19:49:40.2, 8°.33N×126°.57E, h17km, mb4.0, ML2.8, MS2.4, 1C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BIPH	**Bislig**	**0.25**	**235**	*iP*	Pb	19 49 47.9	+0.6
BIPH				*i* S		19 49 52.9	
BUTP	**Butuan**	**1.13**	**304**	*eP*	Pn	19 50 00.4	+0.2
BUTP				*eS*		19 50 16.8	
MATI	**Mati**	**1.41**	**193**	*eP*	Pn	19 50 05.5	+1.2
MATI				*eS*		19 50 22.6	
GLSP	**General Luna,**	**1.51**	**343**	*eP*	Pn	19 50 04.8	+0.4
GLSP				*eS*		19 50 25.7	
DDMP	**Don Marcelino,**	**2.37**	**201**	*eP*	Pb	19 50 21.9	+1.9
DDMP				*eS*		19 50 52.3	

MAN 03 19:50:02.4, 12°.07N×121°.02E, h23km, mb4.0, ML2.7, MS2.3, 4D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SJMP	**San Jose**	**0.40**	**15**	*eP*	Pn	19 50 12.2	+0.2
SJMP				*eS*		19 50 20.5	
CUYO	**Cuyo Island**	**1.22**	**180**	*eP*	Pn	19 50 22.8	+0.8
CUYO				*eS*		19 50 40.6	
PGP	**Puerto Galera**	**1.42**	**358**	*eP*	Pb	19 50 27.5	+0.5
PGP				*i* S		19 50 45.5	
LUBP	**Lubang**	**1.81**	**336**	*eP*	Pn	19 50 31.8	+0.1
LUBP				*eS*		19 50 52.7	

MAN 03 20:13:45.5, 9°.64N×126°.15E, h25km, mb4.1, ML2.9, MS2.5, Mindanao

*IDC **03** 20:17:05.7±0.7, 19°.88S×63°.05W, h572km±7km, mb3.8/19, mbtmp4.8/26, Error ellipse: s-maj=10.2km s-min=8.2km az=73.0*
*NEIC **03** 20:17:05.5±1.9, 19°.96S±0°.08×63°.2W±0°.1, h584km±5km, mb4.5/75, Error ellipse: s-maj=15.7km s-min=12.2km az=84.0*
*SCB **03** 20:17:15.5±17.0, 19°.84S×63°.30W, h4km±168km, ML4.3/3, Error ellipse: s-maj=94.9km s-min=60.9km az=1.0*
ISC 03 20:17:04.6±0.5, 19°.90S±0°.04×63°.23W±0°.06, h573km±5km, n240, σ1§47/273, mb4.5/70, 3D, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MOCB	**Mochara**	**2.63**	**239**	P	**P**	**20 18 22.5**	**+2.5**
YJA	**Yavi**	**3.11**	**223**	P	**P**	**20 18 25.0**	**+2.3**
SIV	**San Ignacio**	**4.39**	**28**	P	**P**	**20 18 32.7**	**+1.4**
	56nm,0.4s,baz=212,slow=6.8,SNR=216						
SIV				S	**S**	**20 19 41.5**	**-0.2**
	20nm,0.8s,baz=294,slow=22,SNR=13						
SIV	**San Ignacio**	**4.39**	**28**	P	**P**	**20 18 32.6**	**+1.4**
SLA	**San Lorenzo**	**5.24**	**203**	P	**P**	**20 18 40.2**	**+2.2**
BBOE	**La Paz, Chanca**	**5.46**	**303**	P	**P**	**20 18 43.1**	**+2.7**
AF01	**San Pedro de A**	**5.52**	**236**	P	**P**	**20 18 40.2**	**-0.4**
AF01	**San Pedro de A**	**5.52**	**236**	*eP*	**P**	**20 18 41.4**	**+0.9**
PB08	**IPOC Station P**	**5.58**	**267**	P	**P**	**20 18 41.6**	**+0.5**
PB08	**IPOC Station P**	**5.58**	**267**	*iP*	**P**	**20 18 42.3**	**+1.2**
PB08				*i* S	**S**	**20 19 59.1**	**-0.9**
PB08	**IPOC Station P**	**5.58**	**267**	P	**P**	**20 18 42.5**	**+1.4**
LPAZ	**La Paz**	**5.88**	**307**	P	**P**	**20 18 45.9**	**+1.7**
	89nm,0.6s,baz=118,slow=6.8,SNR=252						
LPAZ				S	**S**	**20 20 05.1**	**-0.2**
	118nm,0.7s,baz=351,slow=23,SNR=19						
LPAZ	**La Paz**	**5.88**	**307**	P	**P**	**20 18 46.1**	**+1.9**
LPAZ				S	**S**	**20 19 58.2**	**-7.1**
LPAZ				IAML		20 20 07.7	
	15nm,0.5s						
PB09	**IPOC Station P**	**5.93**	**250**		**P**	**20 18 45.4**	**+1.4**
PB09	**IPOC Station P**	**5.93**	**250**	*eP*	**P**	**20 18 45.4**	**+1.4**
PB09				*i* S	**S**	**20 20 04.6**	**-0.6**
PB09	**IPOC Station P**	**5.93**	**250**	P	**P**	**20 18 45.4**	**+1.4**
LVC	**Limon Verde**	**5.95**	**242**	P	**P**	**20 18 45.2**	**+0.9**
	81nm,0.4s,baz=62,slow=6.3,SNR=3.6						
LVC				S	**S**	**20 20 05.5**	**-0.3**
	228nm,0.9s,baz=240,slow=21,SNR=58						
LVC	**Limon Verde**	**5.95**	**242**		**P**	**20 18 44.5**	**+0.2**
LVC	**Limon Verde**	**5.95**	**242**	*eP*	**P**	**20 18 45.5**	**+1.2**
LVC				*i* S	**S**	**20 20 04.7**	**-1.0**
PB01	**IPOC Station P**	**5.98**	**258**	P	**P**	**20 18 44.2**	**-0.1**
PB01	**IPOC Station P**	**5.98**	**258**	*eP*	**P**	**20 18 45.7**	**+1.4**
PB01				*eS*	**S**	**20 20 04.4**	**-1.4**
PB01	**IPOC Station P**	**5.98**	**258**	P	P	20 18 38.0	-6.3
BBOD	**La Paz, Gloria**	**6.04**	**302**	P	**P**	**20 18 47.7**	**+2.2**
PB11	**IPOC Station P**	**6.05**	**270**	P	**P**	**20 18 45.1**	**0.0**
PB11	**IPOC Station P**	**6.05**	**270**	*eP*	**P**	**20 18 44.8**	**-0.2**
PB11				*i* S	**S**	**20 20 04.9**	**-2.3**
PB11	**IPOC Station P**	**6.05**	**270**	P	**P**	**20 18 45.1**	**0.0**
PB16	**IPOC Station P**	**6.14**	**284**	P	**P**	**20 18 47.5**	**+1.5**
PB16	**IPOC Station P**	**6.14**	**284**	*eP*	**P**	**20 18 47.7**	**+1.4**
PB16				*i* S	**S**	**20 20 09.3**	**+0.1**
PB16	**IPOC Station P**	**6.14**	**284**	P	**P**	**20 18 48.0**	**+1.7**
HMBC	**Humberstone**	**6.27**	**265**	*eP*	**P**	**20 18 46.7**	**-0.3**
HMBC				*i* S	**S**	**20 20 07.8**	**-2.8**
HMBC	**Humberstone**	**6.27**	**265**	P	**P**	**20 18 47.0**	**0.0**
PB02	**IPOC Station P**	**6.40**	**256**	P	**P**	**20 18 47.7**	**-0.4**
PB02	**IPOC Station P**	**6.40**	**256**	*eP*	**P**	**20 18 48.8**	**+0.7**
PB02				*eS*	**S**	**20 20 11.6**	**-1.2**
PB02	**IPOC Station P**	**6.40**	**256**	P	**P**	**20 18 48.9**	**+0.8**
PB07	**IPOC Station P**	**6.49**	**253**	P	**P**	**20 18 48.9**	**0.0**
PB07	**IPOC Station P**	**6.49**	**253**	P	**P**	**20 18 49.8**	**+0.8**
PB07				S	**S**	**20 20 13.2**	**-1.1**
PB07				IAML		20 20 17.8	
	298nm,0.4s						
TA02	**Huaiquique**	**6.50**	**266**	P	**P**	**20 18 48.2**	**-0.7**
PB06	**IPOC Station P**	**6.54**	**244**	P	**P**	**20 18 47.7**	**-1.7**
PB06	**IPOC Station P**	**6.54**	**244**	*eP*	**P**	**20 18 49.3**	**-0.1**
PB06				*eS*	**S**	**20 20 13.8**	**-1.4**
PB06	**IPOC Station P**	**6.54**	**244**	P	**P**	**20 18 50.8**	**+1.4**
PATCX	**Punta Patache**	**6.56**	**261**	P	**P**	**20 18 47.6**	**-1.9**
PATCX	**Punta Patache**	**6.56**	**261**	*eP*	**P**	**20 18 50.5**	**+0.9**
PATCX				*eS*	**S**	**20 20 12.5**	**-2.9**
TA01	**Diego Aracena**	**6.56**	**263**	P	**P**	**20 18 49.5**	**0.0**
TA01	**Diego Aracena**	**6.56**	**263**	*eP*	**P**	**20 18 49.0**	**-0.4**
TA01				*i* S	**S**	**20 20 11.7**	**-3.5**
PB15	**IPOC Station P**	**6.68**	**239**	P	**P**	**20 18 50.8**	**0.0**
PB15	**IPOC Station P**	**6.68**	**239**	P	**P**	**20 18 49.7**	**-1.0**
PB12	**IPOC Station P**	**6.83**	**280**	P	**P**	**20 18 52.1**	**0.0**
PB12	**IPOC Station P**	**6.83**	**280**	*eP*	**P**	**20 18 51.9**	**-0.2**
PB12				*i* S	**S**	**20 20 16.7**	**-3.3**
AP01	**Chacalluta**	**6.89**	**282**	P	**P**	**20 18 52.9**	**+0.3**
AP01					**S**	**20 20 18.4**	**-2.4**
PB04	**IPOC Station P**	**6.90**	**248**	P	**P**	**20 18 53.1**	**+0.3**
PB04	**IPOC Station P**	**6.90**	**248**	P	**P**	**20 18 53.1**	**+0.3**
PB10	**IPOC Station P**	**7.70**	**241**	P	**P**	**20 19 00.7**	**+0.5**
PB10					**S**	**20 20 35.4**	**+0.5**
PB10	**IPOC Station P**	**7.70**	**241**	P	**P**	**20 19 00.9**	**+0.7**
PB10				S	**S**	**20 20 37.0**	**+2.1**
PB10				IAML		20 20 41.4	
	63nm,0.6s						
GO02	**Mina Guanaco**	**7.88**	**227**	P	**P**	**20 19 02.2**	**+0.1**
CPUP	**Villa Florida**	**8.39**	**141**	P	**P**	**20 19 06.6**	**-0.2**
	75nm,0.5s,baz=331,slow=8.5,SNR=148						
CPUP				S	**S**	**20 20 44.4**	**-2.7**
	4.1nm,0.5s,baz=52,slow=20,SNR=1.3						
CPUP	**Villa Florida**	**8.39**	**141**	P	**P**	**20 19 06.8**	**0.0**
AC02	**Maricunga**	**8.78**	**217**	P	**P**	**20 19 11.7**	**+0.6**
AC02					**S**	**20 20 54.8**	**-0.1**
AC01	**Pan de Azucar**	**9.21**	**226**	P	**P**	**20 19 15.6**	**+0.7**
AC01					**S**	**20 20 60.0**	**-1.9**
AC06	**Mina Casimiro**	**9.89**	**220**	P	**P**	**20 19 22.1**	**+0.4**
AC06					**S**	**20 21 13.5**	**-0.8**
GO03	**Copiap**	**9.99**	**219**	P	**P**	**20 19 23.4**	**+0.6**
GO03					**S**	**20 21 15.5**	**-0.8**
AC04	**Llanos de Chal**	**10.94**	**219**	P	**P**	**20 19 33.2**	**+0.9**
LCO	**Las Campanas**	**11.34**	**215**	P	**P**	**20 19 36.7**	**0.0**
CO01	**Juntas del Tor**	**11.81**	**210**	P	**P**	**20 19 42.0**	**+0.6**
GO04	**Tololo Observa**	**12.31**	**212**	P	**P**	**20 19 46.6**	**0.0**
ZON	**Zonda**	**12.59**	**202**	P	**P**	**20 19 49.5**	**+0.2**
ZON					**S**	**20 22 03.4**	**-1.4**
CO06	**Fray Jorge**	**13.14**	**214**	P	**P**	**20 19 54.9**	**0.0**
CO02	**Combarbal**	**13.26**	**210**	P	**P**	**20 19 56.0**	**-0.2**
VA03	**San Esteban**	**14.39**	**206**	P	**P**	**20 20 06.9**	**-0.7**
VA06	**Catapilco**	**14.53**	**208**	P	**P**	**20 20 07.8**	**-1.1**
ROC1	**El Roble**	**14.77**	**207**	P	**P**	**20 20 09.4**	**-2.1**
PEL	**Peldehue**	**14.78**	**205**	P	**P**	**20 20 09.7**	**-1.7**
MT05	**Renca**	**15.01**	**205**	P	**P**	**20 20 11.2**	**-2.5**
MT03	**Universidad Ad**	**15.02**	**204**	P	**P**	**20 20 12.1**	**-1.6**
MT02	**Curacav**	**15.06**	**206**	P	**P**	**20 20 14.2**	**+0.2**
MT02					IAmb	IAmb	20 20 21.4
	comp=Z,17nm,1.3s						
BDFB	**Brasilia**	**15.10**	**76**	P	**P**	**20 20 13.7**	**-1.1**
	comp=Z,14nm,0.5s,baz=251,slow=11,SNR=26						
BDFB	**Brasilia**	**15.10**	**76**	P	**P**		
BDFB					IAmb	IAmb	20 20 14.2
	comp=Z,15nm,0.5s						
NNA	**Nana**	**15.26**	**299**	P	**P**	**20 20 18.2**	**+1.8**
	comp=Z,26nm,0.5s,baz=152,slow=7.6,SNR=13						
NNA	**Nana**	**15.26**	**299**	P	**P**	**20 20 17.6**	**+1.3**
MT09	**Talagante**	**15.45**	**205**	P	**P**	**20 20 16.9**	**-1.1**
BO04	**La Punta**	**15.49**	**204**	P	**P**	**20 20 16.0**	**-2.3**
VA05	**Santo Domingo**	**15.61**	**207**	P	**P**	**20 20 17.6**	**-1.7**
VA05					IAmb	IAmb	20 20 42.5
	comp=Z,13nm,0.9s						
BO01	**Tunca**	**16.03**	**204**	P	**P**	**20 20 22.0**	**-1.4**
BO01					IAmb	IAmb	20 20 25.2
	comp=Z,13nm,1.1s						
**ATAH

TX31	**Lajitas Ar. Si**	**62.58**	**320**		P	**P**	**20 26 34.0**	**+0.2**
TX31					PcP	**PcP**	**20 27 02.5**	**-3.8**
TX32	**Lajitas Array**	**62.58**	**320**		P	**P**	**20 26 34.3**	**+0.6**
M55A	**Ridgway**	**62.73**	**347**		P	**P**	**20 26 35.0**	**+0.6**
M55A	comp=Z,8.3nm,0.7s				IAmb	IAmb	20 26 36.1	
M55A					PcP	**PcP**	**20 27 02.4**	**-4.1**
L56A	**Greenwood**	**63.13**	**348**		P	**P**	**20 26 37.8**	**+0.8**
L56A	comp=Z,14nm,0.9s				IAmb	IAmb	20 26 38.7	
M53A	**WI Miller and**	**63.13**	**345**		P	**P**	**20 26 37.6**	**+0.7**
M53A	comp=Z,13nm,0.8s				IAmb	IAmb	20 26 38.5	
DBIC	**Dimbokro**	**63.18**	**71**		P	**P**	**20 26 37.8**	**-0.1**
DBIC	comp=Z,16nm,0.7s,baz=262,slow=2.6,SNR=28 comp=Z,5.0nm,0.6s,baz=212,slow=0.7,SNR=4.8 comp=Z,16nm,0.7s				PcP	**PcP**	**20 27 09.3**	**+0.3**
DBIC	**Dimbokro**	**63.18**	**71**		IAmb	IAmb	20 26 38.6	
WVNY	**West Valley, N**	**63.60**	**347**		P	**P**	**20 26 40.9**	**+1.0**
WVNY	comp=Z,18nm,0.7s				IAmb	IAmb	20 26 41.8	
ERPA	**Erie**	**63.62**	**346**		P	**P**	**20 26 41.0**	**+1.0**
ERPA	comp=Z,35nm,0.7s				IAmb	IAmb	20 26 41.7	
TROLL	**Troll, Antarti**	**63.79**	**162**		P	**P**	**20 26 41.7**	**+0.8**
J59A	**Piesco**	**63.90**	**351**		P	**P**	**20 26 42.6**	**+0.9**
J59A	comp=Z,16nm,0.7s				IAmb	IAmb	20 26 43.8	
PECO	**Prince Edward**	**64.76**	**349**		P	**P**	**20 26 47.2**	**+0.1**
LONY	**Lake Ozonia**	**65.04**	**351**		P	**P**	**20 26 48.8**	**-0.1**
TRQ	**Mont Tremblant**	**66.60**	**351**		P	**P**	**20 26 58.5**	**-0.2**
TRQ	comp=Z,10nm,0.9s				IAmb	IAmb	20 26 60.0	
D62A	**Allapoint, All**	**66.87**	**356**		P	**P**	**20 27 00.8**	**+0.6**
D62A	comp=Z,12nm,0.7s				IAmb	IAmb	20 27 01.8	
QSPA	**South Pole Qui**	**70.29**	**180**		P	**P**	**20 27 22.7**	**+1.9**
	comp=Z,8.2nm,0.5s,baz=337,slow=1.0,SNR=107 comp=Z,8.2nm,0.5s							
QSPA	**South Pole Qui**	**70.29**	**180**		P	**P**	**20 27 22.2**	**+1.4**
QSPA	comp=Z,14nm,1.0s				IAmb	IAmb	20 27 23.6	
TOA0	**Torodi Ar. Sit**	**71.82**	**68**		P	**P**	**20 27 30.1**	**-0.4**
TORD	**Torodi Ar. Bea**	**71.82**	**68**		P	**P**	**20 27 30.2**	**-0.3**
	comp=Z,49nm,0.6s,baz=253,slow=5.7,SNR=622							
TORD	**Torodi Ar. Bea**	**71.82**	**68**		P	**P**	**20 27 30.1**	**-0.4**
SCHQ	**Schefferville**	**74.49**	**358**		P	**P**	**20 27 45.3**	**+0.4**
	comp=Z,9.0nm,0.6s,baz=189,slow=4.7,SNR=27 comp=Z,9.0nm,0.6s							
SCHQ	**Schefferville**	**74.49**	**358**		IAmb	IAmb	20 27 46.0	
TSUM	**Tsumeb**	**75.37**	**105**		P	**P**	**20 27 49.6**	**-1.3**
TSUM	comp=Z,16nm,0.8s				IAmb	IAmb	20 27 52.2	
PDAR	**Pinedale Array**	**75.55**	**327**		P	**P**	**20 27 52.8**	**+1.4**
	comp=Z,0.5nm,0.4s,baz=117,slow=8.9,SNR=4.4 comp=Z,0.5nm,0.4s							
ULM	**Lac du Bonnet**	**75.56**	**339**		P	**P**	**20 27 51.4**	**+0.4**
	comp=Z,3.5nm,0.5s,baz=144,slow=6.9,SNR=5.2 comp=Z,3.5nm,0.5s							
PFVI	**Vila Bisbo**	**76.44**	**42**	*eP*	P	**P**	**20 27 56.7**	**+0.6**
PTEO	**Sao Teotonio**	**76.76**	**42**	*eP*	P	**P**	**20 28 00.1**	**+2.3**
	comp=Z,75nm,1.5s							
PNCL	**Nicolau / Gran**	**77.23**	**41**	*eP*	P	**P**	**20 28 01.7**	**+1.3**
PCVE	**Castro Verde**	**77.25**	**42**	*eP*	P	**P**	**20 28 01.8**	**+1.3**
	comp=Z,31nm,1.6s							
MESJ	**Messejana**	**77.26**	**42**	*eP*	P	**P**	**20 28 01.8**	**+1.3**
	comp=Z,22nm,1.6s							
NVAR	**Mina Array Bea**	**77.66**	**319**		P	**P**	**20 28 05.1**	**+2.1**
	comp=Z,0.2nm,0.5s,baz=164,slow=7.4,SNR=4.1							
PMTG	**Montargil**	**78.01**	**41**	*eP*	P	**P**	**20 28 05.5**	**+1.0**
PCAS	**Casmilo, Conde**	**78.45**	**40**	*eP*	P	**P**	**20 28 07.3**	**+0.4**
	comp=Z,27nm,0.9s							
PMRV	**Marv??o**	**78.74**	**41**	*eP*	P	**P**	**20 28 09.0**	**+0.5**
PCBR	**Castelo Branco**	**78.94**	**40**	*eP*	P	**P**	**20 28 10.1**	**+0.6**
	comp=Z,17nm,1.8s							
MTE	**Manteigas**	**79.24**	**40**	*eP*	P	**P**	**20 28 12.3**	**+1.1**
VNDA	**Vanda**	**79.30**	**189**		P	**P**	**20 28 12.8**	**+2.0**
	comp=Z,1.9nm,0.7s,baz=130,slow=5.2,SNR=13 comp=Z,1.9nm,0.7s							
BOSA	**Boshof**	**79.45**	**117**		P	**P**	**20 28 12.5**	**-0.3**
	comp=Z,4.4nm,0.7s,baz=257,slow=4.6,SNR=19 comp=Z,4.4nm,0.7s							
BOSA	**Boshof**	**79.45**	**117**		IAmb	IAmb	20 28 35.0	
	comp=Z,21nm,1.5s							
PVRL	**Vila Real**	**79.67**	**39**	*eP*	P	**P**	**20 28 14.6**	**+1.2**
POLO	**Lamas de Olo**	**79.69**	**39**	*eP*	P	**P**	**20 28 14.4**	**+0.9**
PCAB	**Cabril**	**79.76**	**39**	*eP*	P	**P**	**20 28 14.5**	**+0.7**
PGAV	**Gavieira, Arco**	**79.77**	**38**	*eP*	P	**P**	**20 28 14.8**	**+0.8**
	comp=Z,26nm,2.0s							
MVO	**Moncorvo**	**80.02**	**40**	*eP*	P	**P**	**20 28 16.0**	**+0.8**
	comp=Z,21nm,0.9s							
PBRG	**Braganca**	**80.58**	**39**	*eP*	P	**P**	**20 28 18.9**	**+0.8**
	comp=Z,21nm,1.6s							
PAB	**San Pablo**	**80.71**	**42**		P	**P**	**20 28 19.4**	**+0.5**
PAB	comp=Z,13nm,0.8s				IAmb	IAmb	20 28 20.4	
ESDC	**Sonseca Array**	**81.02**	**42**		P	**P**	**20 28 21.2**	**+0.7**
	comp=Z,3.9nm,0.6s,baz=251,slow=4.9,SNR=38 comp=Z,3.9nm,0.6s							
ESDC	**Sonseca Array**	**81.02**	**42**		P	**P**	**20 28 21.2**	**+0.7**
ESBB	**Sonseca Array**	**81.03**	**42**		P	**P**	**20 28 20.4**	**-0.1**
MAW	**Mawson**	**84.26**	**162**		P	**P**	**20 28 37.4**	**+1.3**
	comp=Z,5.0nm,0.8s,baz=200,slow=6.9,SNR=7.0 comp=Z,5.0nm,0.8s							
MAW	**Mawson**	**84.26**	**162**		P	**P**	**20 28 36.2**	**+0.1**
KEST	**Kesra**	**88.13**	**51**		P	**P**	**20 28 56.2**	**+0.9**
	comp=Z,2.1nm,0.5s,baz=262,slow=9.8,SNR=3.7 comp=Z,2.1nm,0.5s							
KEST	**Kesra**	**88.13**	**51**		IAmb	IAmb	20 29 00.1	
	comp=Z,3.2nm,0.7s							
YKA	**Yellowknife Ar**	**91.54**	**339**		P	**P**	**20 29 10.8**	**+0.6**
	comp=Z,1.1nm,0.4s,baz=128,slow=4.7,SNR=15							
YKA					pP	**pP**	**20 31 17.4**	**+1.5**
	comp=Z,1.4nm,0.9s,baz=117,slow=4.9,SNR=4.7 comp=Z,1.1nm,0.4s							
DAVA	**Damuels**	**93.54**	**41**	*i* P		**P**	**20 29 20.5**	**+0.5**
	comp=Z,4.6nm,0.7s							
SUMG	**Summit**	**93.74**	**7**	P		**P**	**20 29 21.2**	**+0.6**
FETA	**Feichten**	**93.95**	**41**	*i* P		**P**	**20 29 22.3**	**+0.4**
	comp=Z,6.4nm,1.2s							
RETA	**Reutte**	**94.16**	**41**	*i* P		**P**	**20 29 23.2**	**+0.4**
	comp=Z,3.7nm,0.6s							
MOTA	**Moosalm**	**94.31**	**41**	*i* P		**P**	**20 29 23.8**	**+0.3**
	comp=Z,3.3nm,0.6s							
SQTA	**Sankt Quirin**	**94.33**	**41**	*i* P		**P**	**20 29 24.0**	**+0.5**
	comp=Z,8.3nm,0.6s							
WATA	**Walderalm**	**94.60**	**41**	*i* P		**P**	**20 29 25.1**	**+0.3**
	comp=Z,4.5nm,0.7s							
WTTA	**Wattenberg**	**94.61**	**41**	*i* P		**P**	**20 29 25.5**	**+0.6**
	comp=Z,8.0nm,0.9s							
ABTA	**Abfaltersbach**	**94.95**	**42**	*eP*		**P**	**20 29 26.7**	**+0.4**
	comp=Z,2.3nm,0.7s							
KBA	**Koelnbreinsper**	**95.60**	**42**	*i* P		**P**	**20 29 29.4**	**0.0**
	comp=Z,1.6nm,0.5s							
MYKA	**Terra Mystica**	**95.61**	**42**	*i* P		**P**	**20 29 29.9**	**+0.6**
	comp=Z,2.7nm,0.5s							
BIOA	**Bad Ischl, Aus**	**96.03**	**41**	*i* P		**P**	**20 29 31.0**	**-0.1**
	comp=Z,2.8nm,0.7s							
OBKA	**Obir**	**96.15**	**43**	*eP*		**P**	**20 29 32.3**	**+0.5**
	comp=Z,3.1nm,1.1s							
MOA	**Molln**	**96.48**	**41**	*eP*		**P**	**20 29 33.3**	**+0.2**
	comp=Z,2.6nm,0.6s							
GERES	**GERESS Array B**	**96.51**	**40**	P		**P**	**20 29 33.3**	**0.0**
	comp=Z,0.5nm,0.6s,baz=241,slow=4.1,SNR=7.0 comp=Z,0.5nm,0.6s							
ARSA	**Arzberg**	**97.04**	**42**	*eP*		Pdif	20 29 35.8	+0.2
	comp=Z,3.1nm,0.8s							
RONA	**Rosalia, Austr**	**97.69**	**42**	*i* P		Pdif	20 29 38.9	+0.3
	comp=Z,1.5nm,0.7s							
KBZ	**Khabaz**	**114.99**	**50**		PKP	**PKiKP**	**20 34 41.8**	**+0.8**
	comp=Z,1.4nm,0.8s,baz=254,slow=3.5,SNR=4.3							
STKA	**Stephens Creek**	**123.29**	**205**		PKP	**PKiKP**	**20 34 58.2**	**+0.4**
	comp=Z,1.6nm,0.7s,baz=257,slow=10,SNR=4.2							
ARU	**Arti**	**123.83**	**35**			**PKiKP**	**20 34 58.3**	**+0.3**
ABKAR	**Akbulak array**	**126.37**	**43**			**PKPdf**	**20 35 02.6**	**-0.1**
ABKAR	**Akbulak array**	**126.37**	**43**			**PKPdf**	**20 35 02.9**	**+0.2**
HRA	**Herat**	**129.93**	**61**			**PKPdf**	**20 35 08.4**	**-1.9**
CTA	**Charters Tower**	**130.88**	**218**		SKPbc	**SKPab**	**20 37 45.1**	**+0.8**
	comp=Z,6.3nm,0.7s,baz=129,slow=3.4,SNR=8.3							
BRVK	**Borovoye**	**131.36**	**36**			**PKPdf**	**20 35 10.3**	**-1.8**
ASAR	**Alice Springs**	**133.59**	**202**		PKhKP	PKPpre	20 35 04.7	
ASAR	comp=Z,0.3nm,0.7s,baz=152,slow=2.7,SNR=6.5 comp=Z,2.1nm,0.6s,baz=137,slow=2.0,SNR=26				PKP	**PKiKP**	**20 35 18.1**	**-0.7**
ASAR					SKPbc	**SKPbc**	**20 37 53.6**	**+0.7**
	comp=Z,2.8nm,0.9s,baz=145,slow=4.1,SNR=12							
PETK	**Petropavlovsk-**	**134.31**	**326**		SKPbc	**SKPbc**	**20 37 55.1**	**+1.0**
	comp=Z,2.0nm,0.8s,baz=72,slow=4.8,SNR=4.0							
WRA	**Warramunga Arr**	**136.83**	**205**		PKhKP	PKPpre	20 35 12.8	
	comp=Z,0.4nm,0.4s,baz=154,slow=2.4,SNR=14							
WRA					PKP	**PKiKP**	**20 35 24.4**	**-0.9**
	comp=Z,2.4nm,0.5s,baz=163,slow=1.6,SNR=18							
WRA					SKPbc	**SKPbc**	**20 38 03.2**	**+0.3**
	comp=Z,3.0nm,0.9s,baz=165,slow=2.4,SNR=12							
WRA	**Warramunga Arr**	**136.83**	**205**		PKPpre	PKPpre	20 35 11.6	
WRA						**PKPdf**	**20 35 18.8**	**-4.6**
KURK	**Kurchatov**	**137.02**	**35**			**PKPdf**	**20 35 21.4**	**-1.3**
ZAA0	**Zalesovo Array**	**138.15**	**28**			**PKPdf**	**20 35 22.1**	**-2.6**
ZALV	**Zalesovo Beam**	**138.15**	**28**		PKhKP	PKPpre	20 35 22.8	
	comp=Z,3.7nm,0.5s,baz=313,slow=1.5,SNR=15							
ZALV					SKPbc	**SKPbc**	**20 38 06.8**	**+1.2**
	comp=Z,0.7nm,0.3s,baz=316,slow=3.5,SNR=3.0							
ZALV	**Zalesovo Beam**	**138.15**	**28**			**PKPdf**	**20 35 20.9**	**-3.9**
MAKZ	**Makanchi**	**140.96**	**38**			**PKPdf**	**20 35 25.9**	**-4.2**
MKAR	**Makanchi Array**	**141.15**	**38**		PKhKP	PKPpre	20 35 25.8	
	comp=Z,0.9nm,0.6s,baz=309,slow=3.3,SNR=11							
MKAR					SKPbc	**SKiKP**	**20 38 14.6**	**-0.9**
	comp=Z,0.6nm,0.7s,baz=323,slow=3.0,SNR=4.2							
MKAR	**Makanchi Array**	**141.15**	**38**		PKPdf	**PKPdf**	**20 35 25.3**	**-5.1**
MTN	**Manton Dam**	**144.53**	**205**		PKPdf	**PKPdf**	**20 35 30.8**	**-6.5**
SOEI	**Soe**	**149.62**	**195**			**PKPab**	**20 35 56.6**	**-2.0**
SONM	**Songino Array**	**150.89**	**14**		PKP	**PKPdf**	**20 35 48.7**	**+1.8**
	comp=Z,5.3nm,0.4s,baz=48,slow=2.2,SNR=3.8							
SONM					PKPbc	**PKiKP**	**20 35 54.3**	**+0.8**
	comp=Z,6.7nm,0.4s,baz=282,slow=1.1,SNR=29							
SONM					PKPab	**PKPab**	**20 36 04.2**	**+1.1**
	comp=Z,2.3nm,0.6s,baz=318,slow=3.8,SNR=5.6							
SONM	**Songino Array**	**150.89**	**14**		PKPdf	**PKPdf**	**20 35 44.5**	**-2.3**
SONM					PKPbc	**PKiKP**	**20 35 54.2**	**+0.6**
SONM					PKPab	**PKPab**	**20 36 03.8**	**+0.7**
ULN	**Ulaanbaatar**	**151.01**	**14**		PKPdf	**PKPdf**	**20 35 46.0**	**-1.1**
ULN					PKPbc	**PKiKP**	**20 35 54.4**	**+0.5**
ULN					PKPab	**PKPab**	**20 36 04.4**	**+0.8**
USRK	**Ussuriysk Ar.**	**152.64**	**336**		PKPbc	**PKiKP**	**20 35 58.0**	**+1.0**
	comp=Z,3.1nm,0.6s,baz=205,slow=2.3,SNR=3.8							
USRK	**Ussuriysk Ar.**	**152.64**	**336**		PKPdf	**PKPdf**	**20 35 47.8**	**-1.5**
RPSI	**Rantau Prapat**	**155.58**	**132**			**PKPab**	**20 36 25.2**	**+1.3**
PSI	**Prapat**	**155.66**	**132**		PKPab	**PKPab**	**20 36 25.2**	**+0.8**
	comp=Z,5.9nm,0.4s,baz=196,slow=15,SNR=6.0							
CMAR	**Chiang Mai Arr**	**163.10**	**92**		PKPab	**PKPab**	**20 36 56.9**	**+0.1**
	comp=Z,2.6nm,0.7s,baz=258,slow=6.4,SNR=15							
PZH	**PanZhiHua**	**164.71**	**62**		PKP	**PKPdf**	**20 36 00.7**	**-3.4**

*NNC **03** 20:17:00.7±2.4,41°.33N×80°.67E,h0km,mb2.9,mpv2.4,*
Error ellipse: s-maj=17.3km s-min=14.9km az=16.0
*SOME **03** 20:17:15.4,42°.33N×81°.23E,h15km*
ISC 03 20:17:13.8±3.1,**42°.1N**±0°.1×**81°.00E**±0°.08,**h8**km±13km,**n10,**
σ3938/19,3C-5D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**1.54**	**313**	*eP*		**Pn**	**20 17 39.2**	**-2.5**
	1.7nm,0.2s							
SHLS				*eS*		**Sn**	**20 17 56.3**	**-5.6**
	6.1nm,0.2s							
PDGK	**Podgornoye**	**1.65**	**318**	⇓Pn		Pn	20 17 37.8	-5.3
	1.0nm,0.7s							
PDGK				⇑Sn		**Sg**	**20 18 07.3**	**+0.6**
	2.9nm,0.7s							
UZB	**Uzynbulak**	**1.79**	**306**	*eP*		**Pg**	**20 17 49.6**	**+1.6**
	2.7nm,0.2s							
UZB				*eS*		**Sg**	**20 18 14.6**	**+3.4**
	4.0nm,0.1s							
SATY	**Saty**	**2.13**	**297**	*eP*		**Pg**	**20 17 55.7**	**+1.0**
	1.3nm,0.0s							
SATY				*eS*		**Sg**	**20 18 24.6**	**+2.3**
	6.2nm,0.0s							
KPKS	**Kokpek**	**2.17**	**309**	*eP*		**Pg**	**20 17 55.2**	**-0.2**
	4.7nm,0.1s							
KPKS				*eS*		**Sg**	**20 18 23.9**	**+0.2**
	8.4nm,0.1s							
DJR	**Jarkent**	**2.39**	**339**	*eP*		**Pg**	**20 17 57.5**	**-2.0**
	0.4nm,0.1s							
DJR				*eS*		**Sb**	**20 18 27.5**	**+0.9**
	3.0nm,0.1s							
BLB	**Baldybastay**	**2.71**	**318**	*eP*		**Pg**	**20 18 02.6**	**-3.1**
	1.3nm,0.2s							
BLB				*eS*		**Sb**	**20 18 36.9**	**+0.9**
	7.2nm,0.1s							
ARXS	**Arharly**	**3.13**	**313**	*eP*		**Pg**	**20 18 10.9**	**-2.8**
	0.9nm,0.1s							
ARXS				*eS*		**Sb**	**20 18 50.5**	**+2.5**
	3.2nm,0.1s							
MAKZ	**Makanchi**	**4.75**	**8**	⇑Pn		**Pn**	**20 18 25.3**	**-0.3**
	1.3nm,1.2s							
MAKZ				⇓Sn		**Sn**	**20 19 28.9**	**+8.1**
	0.4nm,0.7s							
MAKZ				⇓Lg		Lg	20 19 58.8	
	1.2nm,1.3s							
MK31	**Makanchi Array**	**4.77**	**11**	⇓Pn		**Pn**	**20 18 26.5**	**+0.6**
	0.1nm,0.2s,baz=201,slow=13,SNR=6.3							
MK31				⇑Sn		**Sb**	**20 19 31.1**	**-4.1**
	0.1nm,0.3s,baz=186,slow=22,SNR=5.7							
MK31				⇓Lg		Lg	20 19 59.3	
	0.7nm,0.7s,baz=194,slow=29,SNR=3.7							

*DJA **03** 20:20:20.8±0.3,7°.S±3°×12°.3E±°,h630km±4km,M3.8/25,*
mb4.2/25,mB4.4/13,MLv4.1/22,Mw(mB)3.6/13
*IDC **03** 20:20:22.9±0.9,7°.02S×123°.46E,h634km±13km,mb3.0/10,*
mbtmp4.0/14,Error ellipse: s-maj=23.0km s-min=10.5km
az=77.0
ISC 03 20:20:22.3±0.5,**7°.03S**±0°.06×**123°.46E**±0°.09,**h632**km,**n75,**
σ1939/83,mb3.5/10,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
BBSI	**Bau Bau**	**1.77**	**330**		P	**P**	**20 21 41.0**	**+2.2**
BBSI					S	**S**	**20 22 40.7**	**-0.2**
MMRI	**Maumere**	**2.00**	**217**		P	**P**	**20 21 38.3**	**-1.2**
MMRI	**Maumere**	**2.00**	**217**		P	**P**	**20 21 40.1**	**+0.6**
EDFI	**Ende, Flores**	**2.44**	**226**		P	**P**	**20 21 39.7**	**-1.8**
EDFI					S	**S**	**20 22 41.7**	**-4.3**
SOEI	**Soe**	**2.82**	**164**		P	**P**	**20 21 42.7**	**-0.7**
SOEI					S	**S**	**20 22 47.1**	**-2.3**
SOEI	**Soe**	**2.82**	**164**		P	**P**	**20 21 43.0**	**-0.4**
BSSI	**Bau Bau, Buton**	**3.08**	**287**		P	**P**	**20 21 44.7**	**+0.1**
BATI	**Baumata**	**3.16**	**176**		P	**P**	**20 21 45.1**	**+0.1**
	375nm,0.4s,baz=33,slow=1.2,SNR=162							
BATI					S	**S**	**20 22 49.7**	**-2.7**
	120nm,0.6s,baz=54,slow=23,SNR=12							
BATI	**Baumata**	**3.16**	**176**		P	**P**	**20 21 45.1**	**+0.1**
BATI					S	**S**	**20 22 47.1**	**-5.4**
BKSI	**Bulukumba**	**3.73**	**297**		P	**P**	**20 21 48.4**	**0.0**
KAPI	**Kappang**	**4.20**	**298**		P	**P**	**20 21 52.7**	**+1.2**
	20nm,0.5s,baz=166,slow=4.5,SNR=10							
BNSI	**Bone**	**4.24**	**308**		P	**P**	**20 21 52.5**	**+0.7**
SPSI	**Sidrap Palu**	**4.77**	**310**		P	**P**	**20 21 55.5**	**-0.1**
WBSI	**Waikabubak, Su**	**4.79**	**237**		P	**P**	**20 21 53.6**	**-2.1**
TTSI	**Tana Toraja**	**5.37**	**317**		P	**P**	**20 21 59.9**	**-0.2**
	0.1nm21nm,1.0s							
SANI	**Sanana**	**5.56**	**27**		P	**P**	**20 22 00.9**	**-0.7**
	0.3nm990nm92nm,0.8s							
SANI	**Sanana**	**5.56**	**27**		P	**P**	**20 22 01.8**	**+0.2**
AAI	**Ambon**	**5.77**	**55**		P	**P**	**20 22 01.8**	**-1.5**
	0.3nm1μm71nm,0.6s							
PLAI	**Plampang**	**5.90**	**252**		P	**P**	**20 22 02.6**	**-1.8**
	0.4nm120nm,0.7s							
PLAI	**Plampang**	**5.90**	**252**		P	**P**	**20 22 03.0**	**-1.4**
LUWI	**Luwuk**	**5.99**	**353**		P	**P**	**20 22 03.9**	**-1.3**
	0.1nm763nm29nm,0.7s							
LUWI	**Luwuk**	**5.99**	**353**		P	**P**	**20 22 06.2**	**+1.0**
APSI	**Ampana**	**6.34**	**343**		P	**P**	**20 22 07.6**	**-0.5**
	0.1nm23nm,1.2s							
MSAI	**Masohi**	**6.56**	**56**		P	**P**	**20 22 08.8**	**-1.2**
LBMI	**Labuha**	**7.53**	**33**		P	**P**	**20 22 18.7**	**+0.2**
	0.4nm1μm99nm,0.5s							
KMSI	**Cibinong**	**7.58**	**4**		P	**P**	**20 22 19.6**	**+0.6**
	0.3nm1μm75nm,0.5s							
MRSI	**Marisa**	**7.61**	**348**		P	**P**	**20 22 18.0**	**-1.3**
	0.2nm421nm43nm,0.7s							
IGBI	**Denpasar**	**8.42**	**257**		P	**P**	**20 22 24.7**	**-2.0**
	57nm,0.9s							
TOLI2	**Tolitoli**	**8.52**	**342**		P	**P**	**20 22 27.8**	**+0.1**
TNTI	**Ternate**	**8.68**	**27**		P	**P**	**20 22 28.3**	**-0.9**
	25nm,0.7s							
TNTI	**Ternate**	**8.68**	**27**		P	**P**	**20 22 28.9**	**-0.3**
BKB	**Balikpapan**	**8.70**	**311**		P	**P**	**20 22 29.7**	**+0.3**
	57nm,1.5s							
ABJI	**Asem Bagus**	**9.18**	**265**		P	**P**	**20 22 31.9**	**-2.0**
	37nm,0.9s							
JAGI	**Jajag, Banyuwa**	**9.33**	**261**		P	**P**	**20 22 35.3**	**-0.1**
KMMI	**Kalianget**	**9.42**	**269**		P	**P**	**20 22 34.6**	**-1.6**
	29nm,1.7s							
MTN	**Manton Dam**	**9.51**	**128**		P	**P**	**20 22 37.2**	**+0.1**
FAKI	**Fak Fak**	**9.66**	**65**		P	**P**	**20 22 37.6**	**-1.0**
	749nm63nm,0.5s							
FAKI	**Fak Fak**	**9.66**	**65**		P	**P**	**20 22 37.8**	**-0.8**
SWI	**Sorong**	**9.90**	**52**		P	**P**	**20 22 40.5**	**-0.4**
	67nm,0.9s							
SIJI	**Sorong**	**9.91**	**52**		P	**P**	**20 22 40.8**	**-0.1**
	30nm,0.7s,baz=309,slow=6.3,SNR=24							
SIJI					S	**S**	**20 24 33.2**	**-1.5**
	5.8nm,0.8s,baz=108,slow=22,SNR=5.7							
KNRA	**Kununurra**	**10.04**	**149**		P	**P**	**20 22 42.5**	**+0.4**
MTKI	**Muara Teweh, K**	**10.46**	**305**		P	**P**	**20 22 45.1**	**-1.3**
	780nm9.5nm,0.5s							
BWJI	**Bawean**	**10.80**	**276**		P	**P**	**20 22 46.9**	**-2.7**
MBWA	**Marble Bar**	**14.50**	**194**		P	**P**	**20 23 25.2**	**+0.6**
PSA00	**Pilbara Seismi**	**14.87**	**193**		P	**P**	**20 23 28.4**	**+0.4**
WRA	**Warramunga Arr**	**16.62**	**142**		P	**P**	**20 23 44.9**	**+0.9**
	0.8nm,0.5s,baz=312,slow=12,SNR=28							
WRAB	**Tennant Creek**	**16.62**	**142**		P	**P**	**20 23 46.0**	**+2.0**
GIRL	**Giralia**	**17.88**	**209**		P	**P**	**20 23 56.6**	**+1.2**
WRKA	**Warakurna**	**18.49**	**166**		P	**P**	**20 24 02.0**	**+1.0**
ASAR	**Alice Springs**	**19.34**	**150**		P	**P**	**20 24 09.7**	**+0.9**
	0.4nm,0.3s,baz=329,slow=8.8,SNR=19							
ASAR					S	**S**	**20 27 10.7**	**-1.0**
	1.4nm,0.9s,baz=342,slow=24,SNR=9.1							
ASAR					ScP	**ScP**	**20 30 36.4**	**-0.7**
	0.6nm,0.7s,baz=337,slow=2.4,SNR=6.8							
QIS	**Mount Isa**	**20.63**	**132**		P	**P**	**20 24 21.3**	**+1.0**
MORW	**Morawa**	**23.01**	**197**		P	**P**	**20 24 42.3**	**+1.0**
OOD	**Oodnadatta**	**23.68**	**152**		P	**P**	**20 24 48.8**	**+1.5**
FORT	**Forrest**	**24.01**	**170**		P	**P**	**20 24 51.1**	**+0.9**
BLDU	**Ballidu**	**24.30**	**194**		P	**P**	**20 24 53.0**	**+0.3**
KLBR	**Kellerberrin**	**25.01**	**192**		P	**P**	**20 24 59.3**	**+0.3**
MULG	**Mulgathing**	**25.18**	**158**		P	**P**	**20 25 01.6**	**+1.1**
MUN	**Mundaring**	**25.72**	**194**		P	**P**	**20 25 06.1**	**+0.9**
NWAO	**Narrogin (SRO)**	**26.41**	**192**		P	**P**	**20 25 11.8**	**+0.6**
LCRK	**Leigh Creek**	**27.10**	**151**		P	**P**	**20 25 18.6**	**+1.3**
BBOO	**Buckleboo**	**28.20**	**157**		P	**P**	**20 25 27.6**	**+0.8**
HTT	**Hallett**	**29.92**	**153**		P	**P**	**20 25 43.3**	**+1.6**
STKA	**Stephens Creek**	**29.95**	**148**		P	**P**	**20 25 43.3**	**+1.4**
	0.7nm,0.3s,baz=329,slow=9.5,SNR=8.2 0.7nm,0.3s							
STKA	**Stephens Creek**	**29.95**	**148**		P	**P**	**20 25 43.3**	**+1.4**
CMSA	**Cobar Meteorol**	**32.02**	**142**		P	**P**	**20 26 01.6**	**+2.1**
KSRS	**Korea Array**	**44.45**	**5**		P	**P**	**20 27 40.7**	**+1.4**
	1.7nm,0.7s,baz=178,slow=9.2,SNR=8.4 1.7nm,0.7s							
MJAR	**Matsushiro Arr**	**45.50**	**17**		P	**P**	**20 27 47.5**	**+0.

IUG	**Iuzhnay**	**3.89**	**315**	*eP*		**Pn**	**20 35 19.8**	**+3.8**
	comp=E,71nm,0.2s									
IUG				*eS*		**Sb**	**20 36 09.2**	**-2.8**
	comp=E,20nm,0.2s									
IUG	**Iuzhnay**	**3.89**	**315**	Pg		**Pn**	**20 35 19.8**	**+3.8**
	comp=E,71nm,0.1s									
IUG				Lg		Lg	20 36 08.9			
	comp=E,20nm,0.2s									
KST	**Kastek**	**3.95**	**24**	*eP*		**Pb**	**20 35 27.0**	**+1.4**
	comp=E,2.8nm,0.1s									
KST				*eS*		**Sg**	**20 36 22.1**	**0.0**
	comp=E,18nm,0.0s									
KST	**Kastek**	**3.95**	**24**	Pg		**Pb**	**20 35 27.0**	**+1.4**
	comp=E,3.8nm,0.4s									
KST				Lg		Lg	20 36 22.4			
	comp=E,17nm,0.4s									
SGDS	**Sogindy**	**4.04**	**9**	*eP*		**Pb**	**20 35 29.0**	**+1.9**
	comp=E,1.9nm,0.1s									
SGDS				*eS*		**Sg**	**20 36 25.3**	**+0.3**
	comp=E,4.2nm,0.1s									
SGDS	**Sogindy**	**4.04**	**9**	Pg		**Pb**	**20 35 29.0**	**+1.9**
	comp=E,1.9nm,0.2s									
SGDS				Lg		Lg	20 36 25.0			
	comp=E,7.5nm,0.5s									
TNSS	**Tian-Shan**	**4.31**	**33**	*eP*		**Pb**	**20 35 33.0**	**+1.1**
	comp=E,1.3nm,0.1s									
TNSS				*eS*		**Sg**	**20 36 32.4**	**-1.4**
	comp=E,3.2nm,0.5s									
KK31	**Karatay Array**	**4.38**	**327**	⇑Pn		**Pn**	**20 35 26.8**	**+4.2**
	comp=E,0.3nm,0.3s,baz=124,slow=13,SNR=31									
KK31				⇓Pg		**Pb**	**20 35 34.7**	**+2.0**
	comp=E,1.5nm,0.5s,baz=149,slow=16,SNR=9.6									
KK31				⇓Lg		Lg	20 36 32.9			
	comp=E,2.3nm,0.5s,baz=149,slow=25,SNR=3.8									
MDOK	**Medeo**	**4.46**	**33**	*eP*		**Pb**	**20 35 37.0**	**+2.8**
	comp=E,0.8nm,0.1s									
MDOK				*eS*		**Sg**	**20 36 39.5**	**+1.1**
	comp=E,8.6nm,0.1s									
MDOK	**Medeo**	**4.46**	**33**	Pn		**Pn**	**20 35 27.0**	**+3.1**
	comp=E,5.9nm,1.3s									
MDOK				⇑Lg		Lg	20 36 38.4			
	comp=E,16nm,1.1s									
KRBS	**Karabastau**	**4.47**	**18**	*eP*		**Pb**	**20 35 36.1**	**+1.7**
	comp=E,1.6nm,0.1s									
KRBS				*eS*		**Sg**	**20 36 37.7**	**-1.1**
	comp=E,6.4nm,0.6s									
KRBS	**Karabastau**	**4.47**	**18**	Pg		**Pb**	**20 35 36.1**	**+1.7**
	comp=E,2.8nm,0.3s									
KRBS				Lg		Lg	20 36 38.2			
	comp=E,6.4nm,0.6s									
BRLS	**Borolday**	**4.62**	**322**	*eP*		**Pb**	**20 35 36.1**	**-0.8**
	comp=E,1.1nm,0.2s									
BRLS				*eS*		**Sg**	**20 36 37.8**	**-5.7**
	comp=E,7.2nm,0.5s									
BRLS	**Borolday**	**4.62**	**322**	Pg		**Pb**	**20 35 34.5**	**-2.4**
	comp=E,1.1nm,0.3s									
BRLS				Lg		Lg	20 36 35.0			
	comp=E,7.2nm,0.5s									
KTBS	**Karatobe**	**4.79**	**27**	*eP*		**Pb**	**20 35 42.3**	**+2.5**
	comp=E,0.5nm,0.1s									
KTBS				*eS*		**Sg**	**20 36 48.1**	**-0.7**
	comp=E,16nm,0.4s									
KTBS	**Karatobe**	**4.79**	**27**	Pg		**Pb**	**20 35 42.3**	**+2.5**
	comp=E,1.6nm,0.4s									
KTBS				Lg		Lg	20 36 48.6			
	comp=E,16nm,0.4s									
KUU	**Kurty**	**4.84**	**23**	*eP*		**Pb**	**20 35 42.9**	**+2.3**
	comp=E,2.2nm,0.3s									
KUU				*eS*		**Sg**	**20 36 49.4**	**-1.1**
	comp=E,12nm,0.2s									
KUU	**Kurty**	**4.84**	**23**	Pg		**Pb**	**20 35 42.9**	**+2.3**
	comp=E,2.2nm,0.3s									
KUU				Lg		Lg	20 36 49.4			
	comp=E,12nm,0.6s									
KPKS	**Kokpek**	**5.46**	**41**	*eP*		**Pb**	**20 35 55.1**	**+3.8**
	comp=E,2.9nm,0.1s									
KPKS				*eS*		**Sg**	**20 37 10.2**	**-0.2**
	comp=E,5.5nm,0.1s									

HLW ***03*** *20:37:03.9,26°.82N×35°.02E,h10km±1km,Md2.1*
GII ***03*** *20:37:05.4±0.0,27°.11N×35°.15E,h1km±1km,Mm2.5/2*
ISC 03 20:37:02.0±1.1,26°.81N±0°.04×34°.90E±0°.08,h12km,n15,
σ1§20/22,Red Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HHRG	**Al Ghardaqah**	**1.26**	**289**	P	**Pg**	**20 37 27.6**	**+1.4**
	baz=281						
HHRG				S	**Sg**	**20 37 43.5**	**+1.0**
	baz=281						
TR1	**Tor 1**	**1.46**	**325**	P	**Pg**	**20 37 30.3**	**+0.2**
	baz=322						
NADB	**Abo Dabab**	**1.51**	**194**	P	**Pg**	**20 37 31.0**	**0.0**
	baz=198						
HKAT	**Jabal Katrina**	**1.89**	**335**	P	**Pb**	**20 37 36.3**	**-0.2**
	baz=333						
HKAT				S	**Sb**	**20 37 59.5**	**-0.6**
	baz=333						
GRB	**Gharib**	**2.38**	**308**	P	**Pb**	**20 37 44.4**	**-0.4**
	baz=307						
HAGS	**Hagol**	**2.42**	**178**	P	**Pn**	**20 37 42.8**	**+1.3**
	baz=181						
EIL	**Elat**	**2.85**	**1**	Pn	**Pn**	**20 37 47.9**	**+0.6**
EIL				Sn	**Sn**	**20 38 21.0**	**-0.6**
MBRI	**Mt Berech**	**2.97**	**0**	Pn	**Pn**	**20 37 50.7**	**+1.6**
ASUT		**3.03**	**282**	P	**Pb**	**20 37 55.3**	**-0.7**
	baz=282						
HRFI	**Mount Harif**	**3.21**	**2**	Pn	**Pn**	**20 37 52.8**	**+0.4**
HRFI				Sn	**Sn**	**20 38 30.0**	**-0.7**
KRMI	**Paran Flat**	**3.30**	**357**	Pn	**Pn**	**20 37 54.6**	**+1.1**
KRMI				Sn	**Sn**	**20 38 31.8**	**-0.9**
PRNI	**Paran**	**3.53**	**1**	Pn	**Pn**	**20 37 57.9**	**+1.2**
PRNI				Sn	**Sn**	**20 38 37.0**	**-1.4**
TAMRE	**El Minia**	**3.65**	**285**	P	**Pb**	**20 38 03.5**	**-3.0**
	baz=285						
ZFRI	**Zfri**	**3.74**	**4**	Pn	**Pn**	**20 38 00.7**	**+1.2**
ZFRI				Sn	**Sn**	**20 38 42.2**	**-1.2**
GHAJ	**Ghor Haditha**	**4.51**	**7**	Pn	**Pn**	**20 38 11.0**	**+0.8**

NEIC ***03*** *20:40:21.4±2.3,0°.04N±0°.07×123°.59E±0°.07,h128km±6km,*
mb4.5/44,Error ellipse: s-maj=10.3km s-min=9.8km
az=155.0
IDC ***03*** *20:40:22.0±1.4,0°.05N×123°.58E,h138km±13km,mb3.8/15,*
mbtmp4.2/17,Error ellipse: s-maj=14.3km s-min=10.5km
az=80.0
DJA ***03*** *20:40:22.7±0.2,0°.S±2°.×12°.4E±°,h112km±4km,M4.4/24,*
mb4.3/12,mB4.9/7,MLv4.6/24,Mw(mB)4.2/7
ISC 03 20:40:21.8±0.6,0°.04S±0°.04×123°.65E±0°.04,h139km±5km,
n106,σ1§37/123,mb4.3/36,1C,Minahassa Peninsula,
Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.70**	**28**	P	**Pn**	**20 40 43.8**	**+0.7**
KMSI				S	**Sn**	**20 41 00.6**	**+1.3**
LUWI	**Luwuk**	**1.32**	**222**		**Pn**	**20 40 48.3**	**-0.5**
LUWI	**Luwuk**	**1.32**	**222**	P	**Pn**	**20 40 48.3**	**-0.5**
LUWI				S	**Sn**	**20 41 07.1**	**-2.1**
LUWI	**Luwuk**	**1.32**	**222**	P	**Pn**	**20 40 48.2**	**-0.5**
MRSI	**Marisa**	**1.79**	**287**	P	**Pn**	**20 40 53.1**	**-0.7**
MRSI				S	**Sn**	**20 41 16.5**	**-1.8**
APSI	**Ampana**	**2.18**	**247**	P	**Pn**	**20 40 58.8**	**+0.3**
APSI				S	**Sn**	**20 41 25.7**	**-0.9**
SANI	**Sanana**	**3.07**	**130**	P	**Pn**	**20 41 07.8**	**-1.9**
SANI				S	**Sn**	**20 41 41.7**	**-5.0**
SANI	**Sanana**	**3.07**	**130**	P	**Pn**	**20 41 08.3**	**-1.4**
TOLI2	**Tolitoli**	**3.09**	**292**		**Pn**	**20 41 10.2**	**+0.3**
TOLI2	**Tolitoli**	**3.09**	**292**	P	**Pn**	**20 41 11.8**	**+1.8**
MPSI	**Mapaga**	**3.77**	**276**	P	**Pn**	**20 41 20.1**	**+1.3**
TNTI	**Ternate**	**3.80**	**78**		**Pn**	**20 41 18.7**	**-0.5**
TNTI	**Ternate**	**3.80**	**78**	P	**Pn**	**20 41 18.7**	**-0.5**
TNTI				S	**Sn**	**20 42 01.1**	**-2.6**
TNTI	**Ternate**	**3.80**	**78**	P	**Pn**	**20 41 19.2**	**0.0**
LBMI	**Labuha**	**3.89**	**99**	P	**Pn**	**20 41 19.6**	**-0.8**
LBMI				S	**Sn**	**20 42 03.2**	**-2.7**
SGSI	**Sangihe**	**4.15**	**27**	P	**Pn**	**20 41 25.3**	**+1.4**
TTSI	**Tana Toraja**	**4.85**	**232**	P	**Pn**	**20 41 34.0**	**+0.8**
SPSI	**Sidrap Palu**	**5.50**	**225**	P	**Pn**	**20 41 43.2**	**+1.5**
	0.8nm1μm61nm,0.6s						
BBSI	**Bau Bau**	**5.51**	**191**	P	**Pn**	**20 41 41.3**	**-0.7**
	0.0nm4.8nm,0.5s						
BNSI	**Bone**	**5.59**	**219**	P	**Pn**	**20 41 44.2**	**+1.2**
	0.3nm46nm,0.6s						

AAI	**Ambon**	**5.80**	**129**	P		**Pn**	**20 41 44.9**	**-1.0**
	0.2nm27nm,0.9s									
SGKI	**Sangatta, Kali**	**6.07**	**265**	P		**Pn**	**20 41 51.6**	**+2.2**
	0.7nm171nm,1.1s									
SGKI				S		**Sn**	**20 42 59.5**	**+1.7**
	0.7nm171nm,1.1s									
MSAI	**Masohi**	**6.21**	**122**	P		**Pn**	**20 41 51.3**	**0.0**
	0.1nm39nm6.6nm,0.5s									
KAPI	**Kappang**	**6.29**	**218**	P		**Pn**	**20 41 54.4**	**+2.1**
	16nm,0.3s,baz=86,slow=3.0,SNR=9.5									
KAPI				S		**Sn**	**20 43 03.1**	**0.0**
	27nm,0.3s,baz=179,slow=19,SNR=8.7									
KAPI	**Kappang**	**6.29**	**218**			**Pn**	**20 41 54.2**	**+1.9**
KAPI	**Kappang**	**6.29**	**218**	P		**Pn**	**20 41 55.1**	**+2.7**
BKSI	**Bulukumba**	**6.32**	**214**	P		**Pn**	**20 41 52.7**	**0.0**
	0.3nm29nm,0.7s									
BKSI				S		**Sn**	**20 43 06.9**	**+3.1**
	0.3nm29nm,0.7s									
BSSI	**Bau Bau, Buton**	**6.83**	**207**	P		**Pn**	**20 41 59.9**	**+0.3**
	0.2nm50nm,0.5s									
BKB	**Balikpapan**	**6.86**	**260**	Pn		**Pn**	**20 41 58.3**	**-1.8**
KCP	**Kidapawan**	**7.15**	**12**	⇑*eP*		**Pn**	**20 42 07.4**	**+3.4**
MYLDM	**Lahad Datu**	**7.31**	**315**	Pn		Pn	20 42 01.5	-4.5
SWI	**Sorong**	**7.65**	**96**	P		**Pn**	**20 42 10.4**	**-0.2**
	0.1nm1μm18nm,1.1s									
SIJI	**Sorong**	**7.66**	**96**	P		**Pn**	**20 42 10.6**	**-0.1**
	9.1nm,0.4s,baz=295,slow=23,SNR=11									
SIJI				S		**Sn**	**20 43 38.8**	**+2.6**
	4.7nm,0.4s,baz=233,slow=23,SNR=3.7									
MMRI	**Maumere**	**8.65**	**189**	Pn		**Pn**	**20 42 22.4**	**-1.7**
EDFI	**Ende, Flores**	**8.87**	**193**	P		**Pn**	**20 42 28.0**	**+0.9**
FAKI	**Fak Fak**	**9.05**	**108**	Pn		**Pn**	**20 42 28.9**	**-0.6**
FAKI	**Fak Fak**	**9.05**	**108**	P		**Pn**	**20 42 28.7**	**-0.8**
SAUI	**Saumlaki**	**10.97**	**136**	Pn		**Pn**	**20 42 52.6**	**-2.4**
JAGI	**Jajag, Banyuwa**	**12.63**	**228**	Pn		**Pn**	**20 43 16.4**	**-0.5**
KSM	**Kuching**	**13.43**	**276**	Pn		**Pn**	**20 43 25.1**	**-1.9**
MTN	**Manton Dam**	**14.72**	**150**			**P**	**20 43 45.3**	**-0.6**
UGM	**Wanagama**	**15.24**	**239**	Pn		**Pn**	**20 43 48.5**	**-1.5**
KNRA	**Kununurra**	**16.33**	**162**			**P**	**20 44 04.9**	**+1.3**
KNRA				IAmb		IAmb	20 44 08.7			
	comp=Z,16nm,1.2s									
MBWA	**Marble Bar**	**21.33**	**190**	P		**P**	**20 44 58.5**	**+0.5**
PSA00	**Pilbara Seismi**	**21.72**	**190**	P		**P**	**20 45 03.2**	**+1.1**
PSA00				IAmb		IAmb	20 45 09.3			
	comp=Z,15nm,1.2s									
PSA00	**Pilbara Seismi**	**21.72**	**190**	P		**P**	**20 45 01.1**	**-1.0**
PSA00				IAmb		IAmb	20 45 04.2			
	comp=Z,7.9nm,1.5s									
WB0	**Warramunga Arr**	**22.25**	**152**	P		**P**	**20 45 07.4**	**-0.2**
WRAB	**Tennant Creek**	**22.37**	**153**	P		**P**	**20 45 09.3**	**+0.6**
WRA	**Warramunga Arr**	**22.38**	**153**	P		**P**	**20 45 09.0**	**+0.2**
	comp=Z,0.9nm,0.4s,baz=329,slow=8.5,SNR=34									
WRA				ScP		**ScP**	**20 52 23.9**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=331,slow=2.3,SNR=6.9									
	comp=Z,0.9nm,0.4s									
WRA	**Warramunga Arr**	**22.38**	**153**	P		**P**	**20 45 08.2**	**-0.6**
WB2	**Warramunga Arr**	**22.38**	**153**	P		**P**	**20 45 09.5**	**+0.6**
WB2				IAmb		IAmb	20 45 40.5			
	comp=Z,11nm,1.4s									
WR0	**Warramunga Arr**	**22.48**	**152**	P		**P**	**20 45 09.8**	**-0.1**
TPUB	**Ta-pu**	**23.39**	**353**	P		**P**	**20 45 19.1**	**+0.8**
TPUB				IAmb		IAmb	20 45 22.1			
	comp=Z,26nm,1.0s									
YULB	**Yu-li**	**23.41**	**355**	P		**P**	**20 45 17.0**	**-1.5**
YULB				IAmb		IAmb	20 45 19.7			
	comp=Z,16nm,1.2s									
COEN	**Coen**	**23.76**	**126**	P		**P**	**20 45 22.4**	**+0.7**
SSLB	**Suanglung**	**23.83**	**354**	P		**P**	**20 45 22.8**	**+0.5**
SSLB				IAmb		IAmb	20 45 57.4			
	comp=Z,26nm,1.3s									
GIRL	**Giralia**	**24.26**	**202**	P		**P**	**20 45 27.4**	**+1.3**
ASAR	**Alice Springs**	**25.50**	**158**	P		**P**	**20 45 39.8**	**+2.3**
	comp=Z,0.4nm,0.4s,baz=347,slow=13,SNR=18									
ASAR				pP		**pP**	**20 46 07.2**	**+0.7**
	comp=Z,0.9nm,0.6s,baz=335,slow=8.5,SNR=9.7									
ASAR				PcP		**PcP**	**20 49 06.7**	**+1.0**
	comp=Z,0.7nm,0.4s,baz=346,slow=2.1,SNR=12									
ASAR				ScP		**ScP**	**20 52 32.6**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=337,slow=2.7,SNR=6.7									
	comp=Z,0.4nm,0.4s									
ASAR	**Alice Springs**	**25.50**	**158**	P		**P**	**20 45 39.4**	**+1.9**
GSI	**Gunungsitoli**	**26.11**	**273**	P		**P**	**20 45 43.8**	**+0.7**
MORW	**Morawa**	**29.76**	**194**	P		**P**	**20 46 15.6**	**+0.2**
MORW				IAmb		IAmb	20 46 27.3			
	comp=Z,17nm,1.2s									
CMAR	**Chiang Mai Arr**	**30.45**	**308**	P		**P**	**20 46 22.3**	**+0.6**
	comp=Z,0.9nm,0.8s,baz=142,slow=7.2,SNR=8.0									
	comp=Z,0.9nm,0.8s									
JCJ	**Chichijima**	**32.34**	**32**	P		**P**	**20 46 37.5**	**-0.5**
BBOO	**Buckleboo**	**34.63**	**161**	P		**P**	**20 46 58.8**	**+0.9**
BBOO				IAmb		IAmb	20 47 28.8			
	comp=Z,11nm,1.4s									
STKA	**Stephens Creek**	**35.92**	**153**	P		**P**	**20 47 10.5**	**+1.6**
	comp=Z,1.9nm,0.4s,baz=321,slow=9.4,SNR=7.5									
STKA				PcP		**PcP**	**20 49 32.6**	**-0.4**
	comp=Z,1.1nm,0.5s,baz=324,slow=11,SNR=3.5									
	comp=Z,1.9nm,0.4s									
STKA	**Stephens Creek**	**35.92**	**153**	P		**P**	**20 47 10.4**	**+1.5**
JHS	**Saijyo**	**35.97**	**13**	P		**P**	**20 47 09.6**	**+0.3**
JHS				IAmb		IAmb	20 47 19.3			
	comp=Z,16nm,1.3s									
JGF	**Kuroka**	**37.69**	**18**	P		**P**	**20 47 23.1**	**-0.8**
JGF				IAmb		IAmb	20 47 37.5			
	comp=Z,19nm,1.5s									
MAJO	**Matsushiro**	**38.83**	**19**	P		**P**	**20 47 32.1**	**-1.3**
MAJO				IAmb		IAmb	20 47 37.4			
	comp=Z,3.2nm,0.8s									
MJAR	**Matsushiro Arr**	**38.83**	**19**	P		**P**	**20 47 32.8**	**-0.6**
	comp=Z,2.0nm,0.6s,baz=188,slow=9.1,SNR=8.6									
	comp=Z,2.0nm,0.6s									
MJAR	**Matsushiro Arr**	**38.83**	**19**	P		**P**	**20 47 31.3**	**-2.1**
JSD	**Sado**	**40.22**	**18**	P		**P**	**20 47 45.2**	**+0.4**
JSD				IAmb		IAmb	20 48 12.9			
	comp=Z,9.2nm,1.0s									
ARMA	**Armidale**	**40.25**	**141**	P		**P**	**20 47 47.6**	**+2.3**
ARMA				IAmb		IAmb	20 48 00.9			
	comp=Z,29nm,1.4s									
JMM	**Marumori**	**40.90**	**21**	P		**P**	**20 47 50.9**	**+0.4**
JMM				IAmb		IAmb	20 48 09.1			
	comp=Z,21nm,1.2s									
CAN	**Canberra**	**42.31**	**149**	P		**P**	**20 48 05.0**	**+2.9**
JTM	**Tenmabayashi**	**43.61**	**19**	P		**P**	**20 48 12.7**	**+0.3**
JTM				IAmb		IAmb	20 48 13.8			
	comp=Z,34nm,1.4s									
USA0B	**Ussuriysk Arra**	**44.67**	**9**	P		**P**	**20 48 20.3**	**-0.5**
USA0B				IAmb		IAmb	20 48 49.9			
	comp=Z,5.7nm,0.9s									
USRK	**Ussuriysk Ar.**	**44.67**	**9**	P		**P**	**20 48 21.1**	**+0.3**
	comp=Z,2.0nm,0.4s,baz=195,slow=7.5,SNR=6.9									
	comp=Z,2.0nm,0.4s									
USRK	**Ussuriysk Ar.**	**44.67**	**9**	P		**P**	**20 48 20.0**	**-0.8**
GTA	**Gaotai**	**44.92**	**334**	*eP*		**P**	**20 48 24.4**	**+1.4**
GTA				pmax		pmax				
	comp=Z,3.0nm,1.0s									
GTA				pmax		pmax				
	comp=Z,45nm,4.4s									
GTA				LR		LR				
	comp=N,560nm,16.0s									
GTA				LR		LR				
	comp=E,400nm,17.5s									
GTA				LR		LR				
	comp=Z,270nm,14.9s									
ERM	**Erimo**	**45.42**	**20**	P		**P**	**20 48 27.6**	**+0.9**
ASAJ	**Asahikawa**	**47.10**	**19**	P		**P**	**20 48 40.6**	**+0.8**
	comp=Z,4.7nm,0.7s,baz=190,slow=7.9,SNR=4.6									
	comp=Z,4.7nm,0.7s									
SONM	**Songino Array**	**50.00**	**345**	P		**P**	**20 49 02.2**	**+0.1**
	comp=Z,1.1nm,0.7s,baz=153,slow=9.7,SNR=3.0									
	comp=Z,1.1nm,0.7s									
SONM	**Songino Array**	**50.00**	**345**	IAmb		IAmb	20 49 11.7			
	comp=Z,2.3nm,1.4s									
MK31	**Makanchi Array**	**58.99**	**328**	P		**P**	**20 50 06.4**	**-0.5**
MK31				IAmb		IAmb	20 50 08.4			
	comp=Z,1.4nm,0.6s									
MK31				PcP		**PcP**	**20 50 53.6**	**-0.9**
MKAR	**Makanchi Array**	**58.99**	**328**	P		**P**	**20 50 06.6**	**-0.3**
	comp=Z,2.0nm,0.6s,baz=124,slow=8.2,SNR=26									
MKAR				PcP		**PcP**	**20 50 53.8**	**-0.7**
	comp=Z,1.0nm,0.4s,baz=156,slow=3.0,SNR=11									
	comp=Z,2.0nm,0.6s									
MKAR	**Makanchi Array**	**58.99**	**328**	P		**P**	**20 50 06.4**	**-0.5**
MKAR				PcP		**PcP**	**20 50 53.5**	**-1.0**
MAKZ	**Makanchi**	**59.17**	**328**	P		**P**	**20 50 07.5**	**-0.6**
MAKZ				IAmb		IAmb	20 50 09.4			
	comp=Z,1.2nm,0.6s									
MAKZ				PcP		**PcP**	**20 50 53.8**	**-1.4**

PEA0B	**Petropavlovsk-**	**60.07**	**23**	P		**P**	**20 50 14.9**	**+0.8**
PETK	**Petropavlovsk-**	**60.07**	**23**	P		**P**	**20 50 14.6**	**+0.4**
	comp=Z,3.0nm,0.7s,baz=200,slow=3.9,SNR=8.3									
	comp=Z,3.0nm,0.7s									
PETK	**Petropavlovsk-**	**60.07**	**23**	P		**P**	**20 50 14.9**	**+0.7**
THZ	**Tophouse**	**60.74**	**139**	P		**P**	**20 50 20.2**	**+1.3**
THZ				IAmb		IAmb	20 50 30.9			
	comp=Z,17nm,1.3s									
BKZ	**Black Stump Fm**	**61.96**	**135**	P		**P**	**20 50 28.9**	**+1.6**
URZ	**Urewera**	**62.02**	**134**	P		**P**	**20 50 28.0**	**+0.4**
YAK	**Yakutsk**	**62.09**	**3**	P		**P**	**20 50 25.9**	**-1.6**
YAK				IAmb		IAmb	20 50 28.0			
	comp=Z,9.6nm,0.7s									
ZALV	**Zalesovo Beam**	**62.62**	**335**	P		**P**	**20 50 29.4**	**-1.8**
	comp=Z,1.1nm,0.6s,baz=117,slow=5.3,SNR=5.2									
	comp=Z,1.1nm,0.6s									
MA2	**Magadan**	**63.11**	**15**	P		**P**	**20 50 35.2**	**+0.8**
KURK	**Kurchatov**	**63.34**	**330**	P		**P**	**20 50 35.1**	**-1.0**
KURK				IAmb		IAmb	20 50 37.2			
	comp=Z,4.4nm,0.7s									
ABKAR	**Akbulak array**	**73.16**	**322**	P		**P**	**20 51 36.1**	**-1.3**
NRIK	**Noril'sk**	**73.38**	**347**	P		**P**	**20 51 36.9**	**-1.3**
	comp=Z,2.7nm,0.7s,baz=123,slow=3.8,SNR=3.7									
	comp=Z,2.7nm,0.7s									
NRIK	**Noril'sk**	**73.38**	**347**	IAmb		IAmb	20 51 38.3			
	comp=Z,2.9nm,0.6s									
VNDA	**Vanda**	**80.11**	**172**	P		**P**	**20 52 17.0**	**+1.1**
	comp=Z,0.4nm,0.6s,baz=316,slow=7.9,SNR=2.1									
	comp=Z,0.4nm,0.6s									
ARCES	**ARCESS Array B**	**92.90**	**340**	P		**P**	**20 53 16.9**	**-1.8**
	comp=Z,6.9nm,1.0s,baz=38,slow=6.1,SNR=5.4									
	comp=Z,6.9nm,1.0s									
FINES	**FINESS Array B**	**93.67**	**331**	P		**P**	**20 53 20.2**	**-2.1**
	comp=Z,2.8nm,1.0s,baz=110,slow=11,SNR=5.3									
	comp=Z,2.8nm,1.0s									
TORD	**Torodi Ar. Bea**	**121.05**	**285**	PKP		**PKiKP**	**20 58 58.9**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=99,slow=2.0,SNR=11									
SCHQ	**Schefferville**	**124.72**	**7**	PKP		**PKiKP**	**20 59 05.4**	**0.0**
	comp=Z,1.1nm,0.8s,baz=290,slow=2.2,SNR=5.8									

IDC ***03*** *20:47:07.0±2.0,32°.36S×71°.10W,h0km,mb4.3/2,*
mbtmp3.9/5,ML3.6/3,MS3.0/1,Error ellipse: s-maj=69.3km
s-min=42.4km az=107.0
SJA ***03*** *20:47:08.7±0.6,31°.48S×71°.94W,h15km±4km,ML4.0,*
MW3.9
NEIC ***03*** *20:47:09.4±2.4,31°.481S±0°.009×71°.97W±0°.07,h9km±5km,*
Error ellipse: s-maj=8.2km s-min=1.3km az=89.0
GUC ***03*** *20:47:12.1±0.6,31°.47S×71°.73W,h26km±5km,ML4.0*
ISC 03 20:47:07.9±1.3,31°.47S±0°.02×71°.94W±0°.04,h5km±9km,
n109,σ1§64/144,3C-3D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.84**	**18**		**Pn**	**20 47 27.1**	**+0.7**
CO06				Sg	**Sb**	**20 47 36.9**	**+0.3**
CO02	**Combarbal**	**0.84**	**72**		**Pg**	**20 47 24.9**	**+0.8**
CO02				Sg	**Sg**	**20 47 32.6**	**-2.5**
CO02	**Combarbal**	**0.84**	**72**	⇓*iP*	**Pg**	**20 47 25.1**	**+1.0**
CO02				*eS*	**Sg**	**20 47 34.3**	**-0.8**
CO02				IAML		20 47 36.9	
	comp=N,11μm,0.2s						
CO02				IAML		20 47 42.3	
	comp=E,11μm,0.4s						
VA06	**Catapilco**	**1.21**	**154**		**Pg**	**20 47 32.3**	**+1.1**
VA06					**Sb**	**20 47 46.3**	**-1.1**
VA06	**Catapilco**	**1.21**	**154**	⇓*iP*	**Pg**	**20 47 32.4**	**+1.1**
VA06				*i* S	**Sn**	**20 47 47.4**	**-1.0**
VA06				IAML		20 47 50.0	
	comp=E,9μm,0.5s						
VA01	**Torpederas**	**1.56**	**171**	Pn	**Pb**	**20 47 37.6**

ACCO	**Cerro Coronel**	**2.62**	**71**	*eP*		**Pb**	**20 47 54.5**	**-1.0**
ACCO				*eS*		**Sb**	**20 48 28.0**	**-0.1**
LCO	**Las Campanas**	**2.68**	**24**	Pn		**Pn**	**20 47 53.0**	**+1.0**
LCO	**Las Campanas**	**2.68**	**24**	*eP*		**Pn**	**20 47 52.9**	**+0.9**
LCO	**Las Campanas**	**2.68**	**24**	*eP*		**Pn**	**20 47 53.2**	**+1.2**
BO04	**La Punta**	**2.75**	**156**			**Pn**	**20 47 54.7**	**+2.0**
BO04	**La Punta**	**2.75**	**156**	*eP*		**Pn**	**20 47 54.8**	**+2.0**
ACDV	**Cuesta del Vie**	**2.75**	**63**	*eP*		**Pb**	**20 47 56.5**	**-1.2**
ACDV				*eS*		**Sb**	**20 48 31.6**	**-0.2**
ACDV				IAML			20 48 37.0	
	comp=Z,357nm,0.5s							
ZON	**Zonda**	**2.78**	**92**	Pn		**Pb**	**20 47 56.3**	**-1.9**
ZON	**Zonda**	**2.78**	**92**	*eP*		**Pb**	**20 47 56.7**	**-1.5**
ZON				*eS*		**Sb**	**20 48 33.7**	**+1.1**
ZON				IAML			20 48 36.0	
	comp=Z,305nm,0.9s							
RTLL	**Cerro Villicun**	**2.96**	**88||**	*eP*		**Pn**	**20 47 57.8**	**+2.1**
RTLL	**Cerro Villicun**	**2.96**	**88**	*eP*		**Pb**	**20 47 58.7**	**-2.6**
RTLL				*eS*		**Sb**	**20 48 34.2**	**-3.6**
BO01	**Tunca**	**3.00**	**166**			**Pn**	**20 47 57.5**	**+1.4**
BO01	**Tunca**	**3.00**	**166**	*eP*		**Pn**	**20 47 58.0**	**+1.9**
BO01	**Tunca**	**3.00**	**166**	*eP*		**Pn**	**20 47 58.3**	**+2.2**
BO01				IAML			20 48 46.0	
	comp=Z,306nm,0.8s							
BO03	**Pichilemu**	**3.01**	**180**	*eP*		**Pn**	**20 47 57.3**	**+1.0**
AC04	**Llanos de Chal**	**3.34**	**13**	Pn		**Pn**	**20 48 03.0**	**+2.1**
AC04	**Llanos de Chal**	**3.34**	**13**	*eP*		**Pn**	**20 48 01.3**	**+0.4**
AC04	**Llanos de Chal**	**3.34**	**13**	*eP*		**Pn**	**20 48 03.4**	**+2.5**
AC04				*eS*		**Sn**	**20 48 43.7**	**+2.7**
AC04				IAML			20 49 01.0	
	comp=Z,183nm,0.5s							
GO05	**Huala**	**3.53**	**180**			**Pn**	**20 48 03.3**	**-0.1**
GO05	**Huala**	**3.53**	**180**	*eP*		**Pn**	**20 48 05.1**	**+1.7**
AVFE	**Valle Fertil**	**3.93**	**79**	*eP*		**Pn**	**20 48 11.3**	**+2.3**
AVFE				*eS*		**Sn**	**20 48 57.7**	**+2.2**
AVFE				IAML			20 49 06.6	
	comp=Z,340nm,0.5s							
GO03	**Copiap**	**4.14**	**21**			**Pn**	**20 48 12.6**	**+0.6**
GO03	**Copiap**	**4.14**	**21**	*eP*		**Pn**	**20 48 13.1**	**+1.1**
GO03	**Copiap**	**4.14**	**21**	*eP*		**Pn**	**20 48 01.0**	**+3.1**
GO03				*eS*		**Sb**	**20 49 07.7**	**-4.0**
AC06	**Mina Casimiro**	**4.33**	**19**			**Pn**	**20 48 15.3**	**+0.8**
AC06	**Mina Casimiro**	**4.33**	**19**	*eP*		**Pn**	**20 48 16.2**	**+1.7**
RFA	**San Rafael**	**4.39**	**139**	*eP*		**Pn**	**20 48 18.2**	**+2.9**
RFA				*eP*		Pb	20 48 18.3	-7.3
RFA				*eS*		**Sb**	**20 49 21.2**	**+2.3**
ACHE	**Chepes**	**4.52**	**87**	*eP*		**Pn**	**20 48 19.1**	**+1.9**
ACHE				*eS*		**Sn**	**20 49 12.9**	**+2.6**
ACLC	**CERRO LA CRUZ**	**4.76**	**66**	*eP*		**Pn**	**20 48 23.0**	**+2.4**
ACLC				*eS*		**Sn**	**20 49 18.2**	**+1.9**
ACLC				IAML			20 49 29.4	
	comp=Z,264nm,0.5s							
APLL	**PUNTA DE LOS L**	**4.77**	**78**	*eP*		**Pn**	**20 48 22.7**	**+2.2**
APLL				*eS*		**Sn**	**20 49 19.2**	**+3.0**
APLL				IAML			20 49 26.8	
	comp=Z,215nm,0.5s							
AC02	**Maricunga**	**5.23**	**29**	Pn		**Pn**	**20 48 27.8**	**+0.5**
AC02	**Maricunga**	**5.23**	**29**	*eP*		**Pn**	**20 48 28.4**	**+1.1**
AC02	**Maricunga**	**5.23**	**29**	*eP*		**Pn**	**20 48 29.4**	**+2.1**
AC02				*eS*		**Sb**	**20 49 44.2**	**+0.6**
AC02				IAML			20 49 58.9	
	comp=Z,94nm,0.7s							
BI05	**Punta Hualpn**	**5.36**	**191**	Pn		**Pn**	**20 48 28.4**	**-0.2**
MRA	**San Martin**	**5.37**	**102**	*eP*		**Pn**	**20 48 30.6**	**+1.7**
MRA				*eS*		**Sn**	**20 49 34.5**	**+3.3**
AC01	**Pan de Azucar**	**5.43**	**13**	Pn		**Pn**	**20 48 29.9**	**+0.2**
H03N1	**Juan Fernandez**	**6.21**	**250**	Pn		**Pn**	**20 48 43.5**	**+3.4**
	baz=225,slow=74							
H03N1				T		T	20 55 26.1	
	baz=78,slow=73,SNR=4863							
H03N3	**Juan Fernandez**	**6.23**	**250**	Pn		**Pn**	**20 48 44.0**	**+3.7**
	baz=225,slow=74							
H03N3				T		T	20 55 25.5	
	baz=78,slow=73,SNR=3966							
H03N2	**Juan Fernandez**	**6.23**	**250**	Pn		**Pn**	**20 48 43.7**	**+3.4**
	baz=225,slow=74							
H03N2				T		T	20 55 26.3	
	baz=78,slow=73,SNR=4709							
H03S3	**Juan Fernandez**	**6.33**	**246**	T		T	20 55 38.3	
	baz=78,SNR=6.9							
H03S1	**Juan Fernandez**	**6.33**	**246**	T		T	20 55 47.1	
	baz=78,SNR=5.9							
H03S2	**Juan Fernandez**	**6.35**	**246**	T		T	20 55 42.6	
	baz=78,SNR=12							
GO02	**Mina Guanaco**	**6.62**	**19**			**Pn**	**20 48 45.4**	**-0.9**
PB14	**IPOC Station P**	**6.96**	**12**	Pn		**Pn**	**20 48 50.7**	**-0.2**
PB10	**IPOC Station P**	**8.02**	**9**	Pn		**Pn**	**20 49 05.8**	**+0.5**
PB15	**IPOC Station P**	**8.52**	**15**			**Pn**	**20 49 11.1**	**-1.1**
PB06	**IPOC Station P**	**8.98**	**14**			**Pn**	**20 49 16.2**	**-2.5**
LVC	**Limon Verde**	**9.23**	**18**	Pn		Pn	20 49 31.8	+10
	comp=Z,0.5nm,0.3s,baz=171,slow=10,SNR=2.1							
LVC				Sn		Sn	20 51 29.1	+22
	comp=Z,1.1nm,0.3s,baz=8.4,slow=16,SNR=4.7 comp=Z,1.7nm,0.3s							
LVC	**Limon Verde**	**9.23**	**18**	Pn		**Pn**	**20 49 19.6**	**-2.5**
PB04	**IPOC Station P**	**9.24**	**10**	Pn		Pn	20 49 16.9	-5.2
PB07	**IPOC Station P**	**9.88**	**11**	Pn		**Pn**	**20 49 32.6**	**+1.7**
LL05	**Los Muermos**	**9.99**	**187**	Pn		**Pn**	**20 49 32.5**	**+0.4**
CPUP	**Villa Florida**	**13.78**	**72**	LR		LR	20 56 04.8	
	comp=Z,66nm,20.3s,baz=253,slow=40							
LPAZ	**La Paz**	**15.51**	**14**	Pn		**P**	**20 50 57.0**	**+4.4**
	comp=Z,0.1nm,0.3s,baz=210,slow=8.1,SNR=2.5 comp=Z,0.6nm,0.5s							
SIV	**San Ignacio**	**18.32**	**35**	P		**P**	**20 51 26.8**	**+3.6**
	baz=186,slow=10,SNR=1.5 comp=Z,0.9nm,0.4s							
BDFB	**Brasilia**	**26.91**	**60**	P		**P**	**20 52 47.0**	**-3.3**
	comp=Z,3.5nm,0.9s,baz=195,slow=8.0,SNR=3.5 comp=Z,3.5nm,0.9s							
TORD	**Torodi Ar. Bea**	**83.27**	**70**	P		**P**	**20 59 35.5**	**-0.6**
	comp=Z,1.9nm,0.8s,baz=263,slow=4.8,SNR=10 comp=Z,1.9nm,0.8s							
H11S2	**WAKE ISLAND Hyl**	**25.86**	**271**	T		T	23 25 06.8	
	baz=117,slow=75,SNR=24							
H11S1	**WAKE ISLAND Hyl**	**25.87**	**271**	T		T	23 25 09.2	
	baz=117,slow=75,SNR=33							
H11S3	**WAKE ISLAND Hyl**	**25.87**	**271**	T		T	23 25 08.5	
	baz=117,slow=75,SNR=25							
H11N3	**WAKE ISLAND Hyl**	**26.21**	**272**	T		T	23 25 31.7	
	baz=116,slow=75,SNR=20							
H11N1	**WAKE ISLAND Hyl**	**26.22**	**272**	T		T	23 25 31.7	
	baz=116,slow=75,SNR=6.2							
H11N2	**WAKE ISLAND Hyl**	**26.22**	**272**	T		T	23 25 33.3	
	baz=116,slow=75,SNR=30							
KURBB	**Kurchatov Arra**	**150.93**	**40**	PKPbc		**PKiKP**	**21 07 00.8**	**-1.2**
	comp=Z,1.0nm,0.7s,baz=299,slow=2.7,SNR=12							
KURK	**Kurchatov**	**150.94**	**40**			**PKiKP**	**21 07 00.8**	**-1.2**
ZALV	**Zalesovo Beam**	**152.02**	**30**	PKPbc		**PKiKP**	**21 07 04.0**	**-0.1**
	comp=Z,3.7nm,0.5s,baz=304,slow=3.6,SNR=16							
ZALV	**Zalesovo Beam**	**152.02**	**30**			**PKiKP**	**21 07 03.7**	**-0.4**
MKAR	**Makanchi Array**	**154.98**	**45**	PKPbc		**PKiKP**	**21 07 10.1**	**-0.5**
	comp=Z,0.3nm,0.7s,baz=333,slow=1.4,SNR=3.5							

IDC 03 20:52:16.6±5.7, 12°.80N×143°.67E, h49km±75km, mb2.9/3, mbtmp3.1/3, Error ellipse: s-maj=63.6km s-min=28.5km az=98.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GUMO	**Guam**	**1.41**	**56**	P		Pn	20 52 39.8	-0.1
	46nm,0.3s,baz=81,slow=3.5,SNR=16							
GUMO				S		Sn	20 52 57.3	0.0
	134nm,0.3s,baz=322,slow=4.8,SNR=9.3							
WRA	**Warramunga Arr**	**33.80**	**196**	P		P	20 58 52.9	-1.3
	0.3nm,0.6s,baz=20,slow=9.9,SNR=5.3 0.3nm,0.6s							
ASAR	**Alice Springs**	**37.48**	**195**	P		P	20 59 27.0	+1.3
	0.1nm,0.6s,baz=26,slow=12,SNR=1.8 0.1nm,0.6s							
MKAR	**Makanchi Array**	**61.25**	**317**	P		P	21 02 26.6	-0.2
	0.1nm,0.3s,baz=93,slow=7.2,SNR=1.6 0.1nm,0.3s							

*NOU **03** 20:56:15.6, 39°.58S×174°.02E, h223km, MLv3.9/9, North Island, New Zealand*
*WEL **03** 20:56:19.1±1.1, 40°.5S±5°.4×17°.4E±°, h189km±7km, M3.4/115, ML2.6/7, MLv3.4/115, Error ellipse: s-maj=0.0km s-min=0.0km az=100.8*

ISC 03 20:56:14.6±1.6, 39°.65S±0°.05×174°.06E±0°.05, h223km±9km, n134, σ1§42/150, North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NMEZ	**Namu Road**	**0.27**	**329**	P		**Pn**	**20 56 45.0**	**+1.2**
NMEZ				S		**S**	**20 57 05.8**	**-0.7**
PREZ	**Palmer Road**	**0.31**	**14**	P		**Pn**	**20 56 45.3**	**+1.4**
LREZ	**Lake Rotokare**	**0.32**	**55**	P		**Pn**	**20 56 45.3**	**+1.5**
LREZ				S		**S**	**20 57 06.2**	**-0.5**
KHEZ	**Kahui Hut**	**0.35**	**354**	P		**Pn**	**20 56 45.3**	**+1.2**
KHEZ				S		**S**	**20 57 06.4**	**-0.7**
NEZ	**North Egmont**	**0.38**	**4**	P		**Pn**	**20 56 45.4**	**+1.3**
NEZ				S		**S**	**20 57 06.9**	**-0.2**
NBEZ	**Newall Road No**	**0.41**	**339**	P		**Pn**	**20 56 45.5**	**+1.4**
PKE	**Pukeiti**	**0.46**	**353**	P		**Pn**	**20 56 45.6**	**+1.3**
PKE				S		**S**	**20 57 06.7**	**-0.7**
WAZ	**Wanganui**	**0.72**	**99**	P		**Pn**	**20 56 47.3**	**+2.1**
WAZ				S		**S**	**20 57 08.8**	**-0.3**
VRZ	**Vera Road**	**0.75**	**46**	P		**Pn**	**20 56 46.1**	**+0.8**
VRZ				S		**S**	**20 57 07.2**	**-2.1**
PKVZ	**Pokaka**	**1.06**	**71**	P		**Pn**	**20 56 48.2**	**+1.0**
PKVZ				S		**S**	**20 57 10.4**	**-2.1**
OHWZ	**Ohakea**	**1.12**	**120**	P		**Pn**	**20 56 49.5**	**+2.1**
OHWZ				S		**S**	**20 57 12.1**	**-0.9**
MTVZ	**Mangateitei**	**1.12**	**77**	P		**Pn**	**20 56 48.9**	**+1.4**
MTVZ				S		**S**	**20 57 10.9**	**-2.3**
DUWZ	**D'Urville Isla**	**1.16**	**185**	P		**Pn**	**20 56 49.2**	**+1.5**
DUWZ				S		**S**	**20 57 12.1**	**-1.6**
TRVZ	**Turoa**	**1.20**	**74**	P		**Pn**	**20 56 49.6**	**+1.3**
TRVZ				S		**S**	**20 57 12.0**	**-2.5**
TWVZ	**Taurewa**	**1.21**	**62**	P		**Pn**	**20 56 49.1**	**+0.8**
FWVZ	**Far West T-bar**	**1.22**	**72**	P		**Pn**	**20 56 49.6**	**+1.2**
FWVZ				S		**S**	**20 57 11.8**	**-2.9**
WNVZ	**Wahianoa**	**1.23**	**75**	P		**Pn**	**20 56 49.8**	**+1.3**
WNVZ				S		**S**	**20 57 12.9**	**-1.9**
WHVZ	**Whangaehu Hut**	**1.24**	**73**	P		**Pn**	**20 56 49.8**	**+1.2**
NGZ	**Ngauruhoe**	**1.28**	**69**	P		**Pn**	**20 56 50.3**	**+1.4**
HIZ	**Hauiti**	**1.29**	**29**	P		**Pn**	**20 56 49.5**	**+0.8**
HIZ	**Hauiti**	**1.29**	**29**	P		**Pn**	**20 56 49.5**	**+0.8**
TUVZ	**Tukino**	**1.29**	**73**	P		**Pn**	**20 56 50.5**	**+1.6**
WTVZ	**West Tongariro**	**1.30**	**66**	P		**Pn**	**20 56 50.2**	**+1.3**
SNVZ	**South Ngauruho**	**1.31**	**70**	P		**Pn**	**20 56 50.6**	**+1.6**
NNVZ	**North Ngauruho**	**1.31**	**67**	P		**Pn**	**20 56 50.5**	**+1.4**
MOVZ	**Moawhango**	**1.33**	**80**	P		**Pn**	**20 56 50.1**	**+1.0**
OTVZ	**Oturere**	**1.33**	**69**	P		**Pn**	**20 56 50.7**	**+1.5**
KRVZ	**Karewarewa**	**1.34**	**66**	P		**Pn**	**20 56 50.5**	**+1.3**
KIW	**Kapiti Island**	**1.38**	**152**	P		**Pn**	**20 56 50.7**	**+1.4**
ETVZ	**East Tongariro**	**1.38**	**69**	P		**Pn**	**20 56 51.2**	**+1.7**
TMVZ	**Te Maari**	**1.38**	**68**	P		**Pn**	**20 56 51.3**	**+1.7**
KATZ	**Kakaramea**	**1.44**	**63**	P		**Pn**	**20 56 51.7**	**+1.7**
OGWZ	**Otaki Gorge**	**1.45**	**144**	P		**Pn**	**20 56 51.4**	**+1.6**
POWZ	**Post Office Ro**	**1.51**	**120**	P		**Pn**	**20 56 51.9**	**+1.5**
TSZ	**Takapari Road**	**1.52**	**106**	P		**Pn**	**20 56 52.0**	**+1.5**
RATZ	**Rangitukua**	**1.54**	**52**	P		**Pn**	**20 56 52.3**	**+1.6**
MRZ	**Mangatainoka R**	**1.55**	**131**	P		**Pn**	**20 56 52.0**	**+1.4**
RITZ	**Rihia Road**	**1.55**	**65**	P		**Pn**	**20 56 52.4**	**+1.7**
BHHZ	**Black Hill Sta**	**1.56**	**85**	P		**Pn**	**20 56 51.7**	**+0.8**
TCW	**Tory Channel**	**1.57**	**174**	P		**Pn**	**20 56 52.7**	**+1.8**
TCW				S		**S**	**20 57 18.2**	**-1.1**
WATZ	**Wairara**	**1.60**	**55**	P		**Pn**	**20 56 52.1**	**+0.8**
CAW	**Cannon Point**	**1.65**	**153**	P		**Pn**	**20 56 53.0**	**+1.5**
NNZ	**Nelson**	**1.65**	**198**	P		**Pn**	**20 56 53.0**	**+1.5**
QRZ	**Quartz Range**	**1.66**	**224**	P		**Pn**	**20 56 52.6**	**+1.0**
QRZ				S		**S**	**20 57 18.3**	**-2.2**
QRZ	**Quartz Range**	**1.66**	**224**	P		**Pn**	**20 56 52.6**	**+1.0**
PNHZ	**Pukenui**	**1.67**	**100**	P		**Pn**	**20 56 53.3**	**+1.5**
HOWZ	**Holdsworth Sta**	**1.67**	**139**	P		**Pn**	**20 56 53.1**	**+1.3**
WEL	**Wellington**	**1.72**	**162**	P		**Pn**	**20 56 53.5**	**+1.4**
PRWZ	**Pori Road**	**1.73**	**122**	P		**Pn**	**20 56 54.1**	**+1.9**
SNZO	**South Karori**	**1.73**	**164**	P		**Pn**	**20 56 53.6**	**+1.4**
DVHZ	**Dannevirke**	**1.75**	**113**	P		**Pn**	**20 56 54.0**	**+1.5**
TLZ	**Tolley Road**	**1.75**	**42**	P		**Pn**	**20 56 53.2**	**+0.7**
TUWZ	**Tuamarina**	**1.78**	**183**	P		**Pn**	**20 56 54.3**	**+1.6**
KRHZ	**Kereru**	**1.79**	**91**	P		**Pn**	**20 56 54.3**	**+1.5**
KUTZ	**Kaahu Road**	**1.79**	**50**	P		**Pn**	**20 56 54.2**	**+1.3**
TIWZ	**Tintock**	**1.80**	**129**	P		**Pn**	**20 56 54.4**	**+1.5**
KWHZ	**Kaweka Forest**	**1.84**	**84**	P		**Pn**	**20 56 55.2**	**+1.8**
MTW	**Mount Morrison**	**1.87**	**144**	P		**Pn**	**20 56 54.8**	**+1.3**
WPHZ	**Waipukurau**	**1.88**	**104**	P		**Pn**	**20 56 55.4**	**+1.7**
BKZ	**Black Stump Fm**	**1.95**	**76**	P		**Pn**	**20 56 55.4**	**+1.1**
BKZ	**Black Stump Fm**	**1.95**	**76**	P		**Pn**	**20 56 55.4**	**+1.1**
BFZ	**Birch Farm**	**1.97**	**122**	P		**Pn**	**20 56 55.9**	**+1.5**
BFZ	**Birch Farm**	**1.97**	**122**	P		**Pn**	**20 56 56.0**	**+1.5**
MSWZ	**Moikau Station**	**1.99**	**153**	P		**Pn**	**20 56 55.8**	**+1.1**
MRHZ	**Matea Rd**	**2.00**	**67**	P		**Pn**	**20 56 55.5**	**+0.6**
MRNZ	**Matariki Terra**	**2.01**	**209**	P		**Pn**	**20 56 56.1**	**+1.2**
TMWZ	**Te Maipa**	**2.02**	**137**	P		**Pn**	**20 56 56.4**	**+1.4**
PAWZ	**Paruwai Farm**	**2.02**	**149**	P		**Pn**	**20 56 56.3**	**+1.3**
ANWZ	**Angora Road**	**2.02**	**114**	P		**Pn**	**20 56 56.4**	**+1.9**
MCHZ	**McNeil Hill**	**2.05**	**85**	P		**Pn**	**20 56 57.5**	**+2.2**
CPWZ	**Castlepoint**	**2.07**	**128**	P		**Pn**	**20 56 57.5**	**+2.1**
BSWZ	**Blackbirch Sta**	**2.07**	**184**	P		**Pn**	**20 56 57.2**	**+1.7**
PRHZ	**Porangahau**	**2.08**	**108**	P		**Pn**	**20 56 57.4**	**+1.9**
CMWZ	**Cape Campbell**	**2.10**	**177**	P		**Pn**	**20 56 58.5**	**+2.7**
PLWZ	**Palliser**	**2.13**	**155**	P		**Pn**	**20 56 57.1**	**+1.0**
TRWZ	**Traveller**	**2.15**	**145**	P		**Pn**	**20 56 57.6**	**+1.3**
KAHZ	**Kahuranaki**	**2.18**	**95**	P		**Pn**	**20 56 58.7**	**+2.1**
PXZ	**Pawanui**	**2.19**	**101**	P		**Pn**	**20 56 58.3**	**+1.7**
NMHZ	**Naumai**	**2.20**	**76**	P		**Pn**	**20 56 59.0**	**+2.1**
TOZ	**Tahuroa Road**	**2.22**	**31**	P		**Pn**	**20 56 58.0**	**+1.0**
THZ	**Tophouse**	**2.29**	**202**	P		**Pn**	**20 56 59.1**	**+1.4**
MTHZ	**Maungataniwha**	**2.30**	**71**	P		**Pn**	**20 56 58.8**	**+0.9**
ARHZ	**Aropaoanui**	**2.31**	**81**	P		**Pn**	**20 56 59.8**	**+2.0**
CKHZ	**Cape Kidnapper**	**2.33**	**91**	P		**Pn**	**20 57 00.2**	**+2.1**
MUGZ	**Murupara**	**2.41**	**62**	P		**Pn**	**20 56 59.6**	**+0.6**
RAHZ	**Arahi**	**2.46**	**74**	P		**Pn**	**20 57 01.0**	**+1.5**
RTZ	**Ruatahuna**	**2.50**	**67**	P		**Pn**	**20 57 00.6**	**+0.7**
AWAZ	**Awhitu Peninsu**	**2.62**	**10**	P		**Pn**	**20 57 03.3**	**+2.1**
MKAZ	**Moumakai**	**2.68**	**19**	P		**Pn**	**20 57 03.8**	**+1.8**
SNGZ	**Shannon Statio**	**2.69**	**72**	P		**Pn**	**20 57 03.3**	**+1.2**
DSZ	**Denniston Nort**	**2.71**	**219**	P		**Pn**	**20 57 03.5**	**+1.4**
URZ	**Urewera**	**2.75**	**61**	P		**Pn**	**20 57 02.9**	**+0.3**
URZ	**Urewera**	**2.75**	**61**	P		**Pn**	**20 57 03.1**	**+0.4**
KHZ	**Kahutara**	**2.79**	**188**	P		**Pn**	**20 57 04.6**	**+1.6**
KHZ	**Kahutara**	**2.79**	**188**	P		**Pn**	**20 57 05.1**	**+2.1**
RAGZ	**Rawiri**	**2.85**	**67**	P		**Pn**	**20 57 04.8**	**+0.9**
KNZ	**Kokohu**	**2.87**	**79**	P		**Pn**	**20 57 05.3**	**+1.4**
MBAZ	**Motutapu North**	**2.95**	**13**	P		**Pn**	**20 57 07.1**	**+2.2**
WIAZ	**Waiheke Island**	**2.97**	**17**	P		**Pn**	**20 57 07.4**	**+2.2**
MWZ	**Matawai**	**3.00**	**65**	P		**Pn**	**20 57 06.1**	**+0.6**
MHGZ	**Mahia Peninsul**	**3.02**	**82**	P		**Pn**	**20 57 07.5**	**+1.8**
RIGZ	**Rimuhau**	**3.03**	**73**	P		**Pn**	**20 57 07.1**	**+1.3**
PRGZ	**Paritu Road**	**3.06**	**78**	P		**Pn**	**20 57 07.5**	**+1.4**
KUZ	**Kuautunu**	**3.15**	**25**	P		**Pn**	**20 57 07.2**	**+1.7**
TKGZ	**Te Karaka**	**3.19**	**69**	P		**Pn**	**20 57 08.8**	**+1.2**
RUGZ	**Raukumara Rang**	**3.29**	**60**	P		**Pn**	**20 57 08.6**	**-0.3**
TWGZ	**Tauwhareparae**	**3.39**	**66**	P		**Pn**	**20 57 11.1**	**+1.1**
GVZ	**Greta Valley S**	**3.41**	**193**	P		**Pn**	**20 57 11.0**	**+0.9**
LTZ	**Lake Taylor**	**3.41**	**203**	P		**Pn**	**20 57 11.3**	**+1.2**
CNGZ	**Carnagh Statio**	**3.43**	**72**	P		**Pn**	**20 57 12.2**	**+1.8**
HAZ	**Te Kaha**	**3.47**	**58**	P		**Pn**	**20 57 10.6**	**-0.3**
PKGZ	**Pakihiroa**	**3.60**	**62**	P		**Pn**	**20 57 13.0**	**+0.5**
PUZ	**Puketiti**	**3.63**	**66**	P		**Pn**	**20 57 13.5**	**+0.6**
INZ	**Inchbonnie**	**3.65**	**212**	P		**Pn**	**20 57 14.0**	**+1.1**
AMCZ	**Amberley**	**3.68**	**196**	P		**Pn**	**20 57 14.3**	**+1.0**
WMGZ	**Waiomatatini S**	**3.86**	**63**	P		**Pn**	**20 57 15.9**	**+0.3**
MXZ	**Matakaoa Point**	**3.92**	**59**	P		**Pn**	**20 57 16.8**	**+0.5**
OXZ	**Oxford**	**3.98**	**202**	P		**Pn**	**20 57 17.6**	**+0.7**
OKCZ	**Okains Bay**	**4.14**	**190**	P		**Pn**	**20 57 19.5**	**+0.7**
MQZ	**McQueen's Vall**	**4.19**	**194**	P		**Pn**	**20 57 19.4**	**-0.1**
WVZ	**Waitaha Valley**	**4.24**	**215**	P		**Pn**	**20 57 21.7**	**+1.6**
RACZ	**Rakaia**	**4.32**	**199**	P		**Pn**	**20 57 21.8**	**+0.7**
WACZ	**Wakanui South**	**4.60**	**200**	P		**Pn**	**20 57 25.3**	**+0.8**
GCSZ	**Gaunt Creek Bo**	**4.62**	**216**	P		**Pn**	**20 57 25.2**	**+0.5**
RPZ	**Rata Peaks**	**4.65**	**208**	P		**Pn**	**20 57 25.7**	**+0.7**
RPZ	**Rata Peaks**	**4.65**	**208**	P		**Pn**	**20 57 26.1**	**+1.0**
ARCZ	**Arundel**	**4.81**	**206**	P		**Pn**	**20 57 27.6**	**+0.5**
FOZ	**Fox Glacier**	**5.02**	**218**	P		**Pn**	**20 57 30.6**	**+1.0**
TMZ	**Timaru**	**5.25**	**205**	P		**Pn**	**20 57 33.7**	**+1.1**
LBZ	**Lake Benmore**	**5.54**	**210**	P		**Pn**	**20 57 36.9**	**+0.6**
JCZ	**Jackson Bay**	**5.92**	**220**	P		**Pn**	**20 57 41.4**	**+0.2**
ODZ	**Otahua Downs**	**5.96**	**204**	P		**Pn**	**20 57 42.4**	**+0.9**
ODZ	**Otahua Downs**	**5.96**	**204**	P		**Pn**	**20 57 42.9**	**+1.4**
WKZ	**Wanaka**	**6.39**	**214**	P		**Pn**	**20 57 47.1**	**+0.1**

*IDC **03** 20:57:00.7±2.6, 5°.63S×148°.72E, h197km±23km, mb3.6/4, mbtmp4.1/6, MS3.6/1, Error ellipse: s-maj=25.6km s-min=23.7km az=119.0*
*NEIC **03** 20:57:00.5±1.4, 5°.59S±0°.06×148°.78E±0°.08, h191km±9km, mb4.4/17, Error ellipse: s-maj=11.9km s-min=6.7km az=62.0*

ISC 03 20:57:00.0±0.7, 5°.57S±0°.07×148°.80E±0°.09, h200km, n33, σ1§19/34, mb4.5/10, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RABL	**Rabaul**	**3.62**	**68**	Pn		**Pn**	**20 57 55.9**	**-1.4**
MANU	**Manus Island**	**3.78**	**338**			**Pn**	**20 57 59.2**	**0.0**
PMG	**Port Moresby**	**4.14**	**203**	P		**Pn**	**20 58 04.5**	**+0.9**
	41nm,0.5s,baz=192,slow=22,SNR=9.9							
PMG				S		**Sn**	**20 58 51.5**	**-2.3**
	27nm,0.5s,baz=279,slow=23,SNR=3.1							
PMG	**Port Moresby**	**4.14**	**203**			**Pn**	**20 58 04.1**	**+0.5**
PMG				Sn		**Sn**	**20 58 49.7**	**-4.1**
COEN	**Coen**	**10.01**	**213**	Pn		**Pn**	**20 59 18.9**	**-0.5**
CTA	**Charters Tower**	**14.64**	**189**	P		**P**	**21 00 20.2**	**+1.2**
	5.1nm,1.1s,baz=24,slow=7.2,SNR=5.7							
CTAO	**Charters Tower**	**14.64**	**189**			**P**	**21 00 19.6**	**+0.5**
MTN	**Manton Dam**	**18.87**	**246**			**P**	**21 01 05.7**	**+0.3**
MTN				IAmb		IAmb	21 01 08.5	
	comp=Z,6.7nm,0.5s							
EIDS	**Eidsvold**	**19.81**	**174**	P		**P**	**21 01 16.7**	**+1.3**
WB0	**Warramunga Arr**	**19.89**	**224**	P		**P**	**21 01 16.6**	**+0.2**
WR0	**Warramunga Arr**	**19.92**	**223**			**P**	**21 01 16.9**	**+0.1**
WR0				IAmb		IAmb	21 01 53.5	
	comp=Z,12nm,1.6s							
WB2	**Warramunga Arr**	**20.04**	**223**			**P**	**21 01 17.6**	**-0.4**
WB2				IAmb		IAmb	21 01 57.9	
	comp=Z,15nm,1.5s							
WRA	**Warramunga Arr**	**20.05**	**223**	P		**P**	**21 01 18.2**	**+0.1**
	comp=Z,1.7nm,0.3s,baz=50,slow=10,SNR=35							
WRA

baz=227
CNPM China Poot 11.68 45 Pn Pn 21 01 11.9 +1.4
M19K Big River Lodg 11.98 32 Pn Pn 21 01 15.6 +0.9
L19K White Mountain 12.04 30 Pn Pn 21 01 16.0 +0.5
TTA Tatalina 12.31 26 Pn Pn 21 01 19.9 +0.7
SUA Susitna One 12.97 38 Pn Pn 21 01 27.8 -0.5
SKT Skwentna 13.01 36 Pn Pn 21 01 28.6 -0.1
RC01 Rabbit Creek A 13.15 41 Pn Pn 21 01 27.7 -2.9
K20K Telida 13.18 28 Pn Pn 21 01 31.4 +0.4
PPLA Purkeypile 13.41 32 Pn Pn 21 01 32.0 -2.3
J20K Nowinta River 13.81 25 Pn Pn 21 01 41.6 +2.0
J20K Nowinta River 13.81 25 P Pn 21 01 40.8 +1.3
baz=217
CAST Castle Rocks 13.82 30 21 01 42.5 +2.7
CAST Castle Rocks 13.82 30 P Pn 21 01 42.0 +2.2
baz=224
HIN Hinchinbrook I 14.19 47 Pn Pn 21 01 44.6 -0.2
M23K Glacier View 14.35 41 P Pn 21 01 46.4 -0.6
baz=238
SCM Sheep Creek Mo 14.53 41 Pn 21 01 48.9 -0.6
SCM Sheep Creek Mo 14.53 41 P Pn 21 01 49.2 -0.3
baz=239
WAT1 Susitna Watana 14.62 37 P Pn 21 01 50.5 -0.3
baz=233
BPAW Bear Paw Mtn. 14.65 30 Pn Pn 21 01 51.5 +0.4
BPAW Bear Paw Mtn. 14.65 30 P Pn 21 01 51.6 +0.5
baz=224
WAT6 Susitna Watana 14.78 38 P Pn 21 01 53.1 +0.1
baz=235
KLU Klutina 14.94 44 Pn 21 01 54.1 -1.0
KLU Klutina 14.94 44 P Pn 21 01 54.4 -0.7
baz=242
M24K Tolsona, Glenn 15.13 41 Pn 21 01 57.0 -0.6
M24K Tolsona, Glenn 15.13 41 P Pn 21 01 57.0 -0.6
baz=240
I21K Tanana 15.18 26 Pn 21 01 59.3 +1.2
I21K IAmb IAmb 21 02 05.4
comp=Z,6.8nm,0.8s
I21K Tanana 15.18 26 P P 21 02 01.8 -1.4
baz=220
HMT Hamilton 15.19 49 Pn 21 01 56.7 -1.6
DHY Denali Highway 15.20 37 Pn 21 01 57.9 -0.7
BMRM Bremner River 15.28 46 Pn 21 01 57.7 -1.8
BMRM IAmb IAmb 21 02 35.1
comp=Z,6.0nm,1.0s
BMRM Bremner River 15.28 46 P Pn 21 01 59.7 +0.2
baz=246
H21K Melozitna Rive 15.34 24 Pn 21 01 58.5 -1.8
H21K IAmb IAmb 21 02 07.7
comp=Z,9.8nm,0.8s
H21K Melozitna Rive 15.34 24 P Pn 21 02 01.8 +1.4
baz=217
IMAR Indian Mountai 15.39 22 Pn 21 02 00.3 -0.6
MLY Manley 15.41 28 Pn 21 02 02.1 +0.9
MLY IAmb IAmb 21 02 07.2
comp=Z,8.3nm,1.0s
MLY Manley 15.41 28 P Pn 21 02 02.5 +1.3
baz=222
N25K Chitina, Valde 15.55 44 Pn 21 02 02.8 -0.4
N25K IAmb IAmb 21 02 11.6
comp=Z,15nm,1.6s
N25K Chitina, Valde 15.55 44 P Pn 21 02 02.9 -0.3
baz=244
HARP HAARP 15.69 41 P Pn 21 02 05.8 +0.8
baz=241
GLB Gilahina Butte 15.82 45 Pn 21 02 05.4 -1.2
GLB IAmb IAmb 21 02 16.4
comp=Z,7.5nm,1.2s
WRH Wood River Hil 15.82 32 Pn 21 02 05.3 -1.3
PAX Paxson 15.86 39 Pn 21 02 05.7 -1.5
PAX Paxson 15.86 39 P Pn 21 02 07.8 +0.6
baz=238
WAX Waxell Ridge 15.88 49 Pn 21 02 05.4 -2.1
I23K Minto, Yukon-K 15.89 29 Pn 21 02 06.8 -0.7
I23K IAmb IAmb 21 02 13.7
comp=Z,6.6nm,1.0s
I23K Minto, Yukon-K 15.89 29 P Pn 21 02 07.0 -0.5
baz=225
VRDI Verde Repeater 15.89 46 Pn 21 02 06.0 -1.7
VRDI IAmb IAmb 21 02 16.1
comp=Z,8.4nm,1.4s
TGL Tana Glacier 16.00 48 P Pn 21 02 09.0 0.0
CCB Clear Creek Bu 16.03 32 Pn Pn 21 02 06.6 -2.7
MDM Murphy Dome 16.11 31 P Pn 21 02 08.8 -1.5
MDM IAmb IAmb 21 02 15.0
comp=Z,9.2nm,1.5s
HDA Harding Lake 16.16 33 P Pn 21 02 10.1 -0.9
HDA Harding Lake 16.16 33 P Pn 21 02 11.9 +0.9
baz=232
MESA MESA 16.22 51 P Pn 21 02 11.9 0.0
H23K Yukon River 16.33 27 P Pn 21 02 13.0 -0.2
H23K IAmb IAmb 21 02 21.4
comp=Z,5.5nm,0.9s
H23K Yukon River 16.33 27 P Pn 21 02 14.5 +1.3
baz=223,SNR=8.1
IL31 16.41 33 P Pn 21 02 13.5 -0.6
ILAR Eielson Array 16.41 33 Pn Pn 21 02 13.4 -0.7
comp=Z,0.1nm,0.3s,baz=241,slow=11,SNR=7.0
comp=Z,0.6nm,0.7s
GRNC Granite Creek 16.49 49 P Pn 21 02 14.8 -0.5
GRNC IAmb IAmb 21 02 30.8
comp=Z,12nm,1.1s
RIDG Independent Ri 16.52 37 P Pn 21 02 14.0 -1.6
RIDG IAmb IAmb 21 02 24.7
comp=Z,8.2nm,1.3s
MENT Mentasta 16.54 41 P Pn 21 02 16.2 +0.4
M26K Nabesna, AK 16.58 43 P Pn 21 02 15.3 -1.1
M26K IAmb IAmb 21 02 22.8
comp=Z,12nm,1.4s
M26K Nabesna, AK 16.58 43 P Pn 21 02 16.3 -0.1
baz=244
TABL Table Mountain 16.68 50 P Pn 21 02 18.2 +0.3
TABL IAmb IAmb 21 02 33.4
comp=Z,13nm,0.8s
L26K Log Cabin Wild 16.73 41 P Pn 21 02 18.8 +0.6
L26K IAmb IAmb 21 02 22.4
comp=Z,11nm,1.3s
L26K Log Cabin Wild 16.73 41 P Pn 21 02 18.3 +0.1
baz=242,SNR=6.1
CTG Chitna Glacier 16.75 49 P Pn 21 02 17.8 -0.9
baz=251
CTGM Chitina Glacie 16.76 49 P Pn 21 02 18.8 +0.1
CTGM IAmb IAmb 21 02 24.7
comp=Z,8.1nm,0.8s
H24K Noodor Dome 16.82 29 P Pn 21 02 19.0 -0.4
H24K Noodor Dome 16.82 29 P Pn 21 02 18.5 -0.8
baz=226
J25K Salcha River, 16.83 34 P Pn 21 02 18.9 -0.7
J25K Salcha River, 16.83 34 P Pn 21 02 19.2 -0.3
baz=234,SNR=7.0
SCRK Sand Creek 16.97 37 P Pn 21 02 20.4 -0.9
SCRK Sand Creek 16.97 37 P Pn 21 02 20.6 -0.7
baz=238,SNR=6.1
PCA Pinnacle 17.01 52 P Pn 21 02 21.4 -0.4
PCA IAmb IAmb 21 02 48.5
comp=Z,11nm,0.7s
M27K Edge Creek, AK 17.04 44 P Pn 21 02 20.3 -1.9
M27K IAmb IAmb 21 02 30.4
comp=Z,11nm,1.3s
M27K Edge Creek, AK 17.04 44 P Pn 21 02 21.3 -1.0
baz=246
BCAR Beaver Creek A 17.38 42 P Pn 21 02 25.4 -0.9
J26L Joseph Creek 17.41 36 P Pn 21 02 25.4 -1.3
J26L IAmb IAmb 21 02 29.3
comp=Z,5.8nm,0.6s
J26L Joseph Creek 17.41 36 P Pn 21 02 25.7 -1.1
baz=237,SNR=11
YUK3 Moose Creek 17.43 46 P Pn 21 02 26.6 -0.7
baz=250
YUK8 Steele Glacier 17.58 48 P Pn 21 02 29.9 +0.7
baz=252
K27K Chicken 17.72 39 P Pn 21 02 29.9 -0.6
YUK4 Talbot Arm 18.11 49 P P 21 02 37.6 +1.6
baz=253
YUK6 Outpost Mounta 18.14 50 P P 21 02 37.3 +1.0
baz=255
TOLK Toolik Lake Re 18.50 21 P P 21 02 39.6 -0.4
TOLK IAmb IAmb 21 02 48.5
comp=Z,7.5nm,1.4s
TOLK Toolik Lake Re 18.50 21 P Pn 21 02 40.5 +0.4
baz=217
HYT Haines Junctio 18.51 51 P P 21 02 40.6 +0.3
HYT IAmb IAmb 21 03 01.5
comp=Z,6.8nm,0.7s
HYT Haines Junctio 18.51 51 P Pn 21 02 41.4 +0.9
baz=256
DAWY Dawson 18.78 40 P P 21 02 43.1 -0.1
DAWY IAmb IAmb 21 02 46.1
comp=Z,4.6nm,0.9s
N30M Aishikik Lake 18.87 49 P P 21 02 42.6 -1.6
baz=255,SNR=7.2
BMAR Burnt Mountain 18.87 28 P 21 02 42.9 -1.2
O30N Mendenhall 19.18 51 P Pn 21 02 49.4 +1.0
baz=258
M30M Minto, Yukon 19.32 46 P P 21 02 48.1 -0.9
M30M Minto, Yukon 19.32 46 P Pn 21 02 50.6 +0.5
baz=252
N31M Braeburn, Yuko 19.48 49 P P 21 02 48.8 -2.1
N31M Braeburn, Yuko 19.48 49 P P 21 02 50.8 -0.1
baz=257
FARO Faro, Yukon 20.77 48 P Pn 21 03 07.1 -0.2
baz=258
EPYK Eagle Plains 20.82 36 P P 21 03 03.9 -1.4
EPYK Eagle Plains 20.82 36 P P 21 03 04.6 -0.7
baz=243
PETK Petropavlovsk- 20.89 286 P P 21 03 06.6 +0.5
comp=Z,3.2nm,0.7s,baz=80,slow=14,SNR=7.6
comp=Z,3.2nm,0.7s
MMPY Sheldon Lake, 21.81 48 P P 21 03 15.1 -0.9
baz=259
INK Inuvik 22.82 33 P P 21 03 25.0 -1.6
comp=Z,1.9nm,0.4s,baz=221,slow=17,SNR=5.7
comp=Z,1.9nm,0.4s
INK Inuvik 22.82 33 IAmb IAmb 21 04 04.2
comp=Z,7.4nm,1.4s
INK Inuvik 22.82 33 P P 21 03 25.0 -1.6
baz=243
SEY Seymchan 23.48 312 P P 21 03 33.0 -0.4
comp=Z,1.4nm,0.5s,baz=100,slow=9.1,SNR=5.9
comp=Z,1.4nm,0.5s
MIDW Midway 25.15 201 P P 21 03 47.8 -1.3
A36M Sachs Harbour 26.97 28 P P 21 04 02.5 -2.8
baz=246
PNTR Pine Nut 35.41 92 P P 21 05 18.1 -2.1
EGMT Eagleton 36.48 73 P P 21 05 28.3 -0.8
NVAR Mina Array Bea 36.61 92 P P 21 05 29.8 -0.7
comp=Z,0.1nm,0.4s,baz=312,slow=8.4,SNR=1.5
comp=Z,0.1nm,0.4s
H11N2 WAKE ISLAND Hy 38.09 221 T T 21 46 50.9
baz=24,slow=76,SNR=19
H11N3 WAKE ISLAND Hy 38.09 221 T T 21 46 48.2
baz=24,slow=76,SNR=18
H11N1 WAKE ISLAND Hy 38.11 221 T T 21 46 52.4
baz=24,slow=76,SNR=16
H11S1 WAKE ISLAND Hy 39.27 220 T T 21 48 24.8
baz=24,slow=76,SNR=12
H11S2 WAKE ISLAND Hy 39.28 220 T T 21 48 33.8
baz=24,slow=76,SNR=7.7
H11S3 WAKE ISLAND Hy 39.29 220 T T 21 48 21.0
baz=24,slow=76,SNR=7.9
PDAR Pinedale Array 39.38 80 P P 21 05 55.6 +1.8
comp=Z,0.2nm,0.3s,baz=326,slow=4.7,SNR=1.5
comp=Z,0.2nm,0.3s
KSRS Korea Array 46.45 278 P P 21 06 51.5 +0.6
comp=Z,1.5nm,0.8s,baz=53,slow=8.3,SNR=5.5
comp=Z,1.5nm,0.8s
TXAR Lajitas Array 51.70 90 P P 21 07 33.5 +2.3
comp=Z,0.3nm,0.7s,baz=324,slow=6.2,SNR=3.5
comp=Z,0.3nm,0.7s
SFJD Kangerlussuaq 51.96 26 LR LR 21 32 14.8
comp=Z,43nm,18.0s,baz=293,slow=39
ZALV Zalesovo Beam 58.16 318 P P 21 08 17.2 -0.4
comp=Z,0.7nm,0.4s,baz=35,slow=7.1,SNR=2.1
comp=Z,0.7nm,0.4s
FINES FINESS Array B 66.06 353 P P 21 09 09.8 -0.6
comp=Z,3.9nm,0.6s,baz=22,slow=7.5,SNR=30
comp=Z,3.9nm,0.6s
NB2 NORSAR Subarra 66.99 1 P P 21 09 15.9 -0.6
comp=Z,2.9nm,1.0s,baz=1.2,slow=6.5
NOA NORSAR Array B 66.99 1 P P 21 09 15.3 -1.2
comp=Z,0.6nm,0.7s,baz=0.2,slow=6.3,SNR=4.9
comp=Z,0.6nm,0.7s
VSU Vasula 68.96 352 eP P 21 09 27.9 -0.9
VIKU Vikbolandet 69.48 358 eP P 21 09 30.8 -1.2
ISAL Salakas 71.87 352 eP P 21 09 45.4 -1.2
IDID Didziasalis 72.07 351 eP P 21 09 46.6 -1.2
IGN Ignalina 72.08 352 eP P 21 09 46.9 -1.0
PABE Paberze 72.11 353 eP P 21 09 47.8 -0.2
AKASG Malin Array Be 76.37 349 P P 21 10 12.3 -0.6
comp=Z,2.4nm,0.6s,baz=16,slow=6.1,SNR=13
comp=Z,2.4nm,0.6s
AKASG Malin Array Be 76.37 349 IAmb IAmb 21 10 31.9
comp=Z,0.8nm,0.5s
CMAR Chiang Mai Arr 77.65 284 P P 21 10 21.2 +0.5
comp=Z,0.5nm,0.5s,baz=30,slow=7.7,SNR=3.7
comp=Z,0.5nm,0.5s
GERES GERESS Array B 79.21 359 P P 21 10 29.7 +0.7
comp=Z,0.6nm,0.7s,baz=45,slow=5.8,SNR=6.4
comp=Z,0.6nm,0.7s
BRTR Keskin Array B 86.48 344 P P 21 11 08.2 +1.2
comp=Z,0.7nm,0.8s,baz=46,slow=5.3,SNR=3.6
comp=Z,0.7nm,0.8s
ESDC Sonseca Array 87.29 13 P P 21 11 11.0 +0.2
comp=Z,0.5nm,0.7s,baz=348,slow=5.1,SNR=5.2
comp=Z,0.5nm,0.7s

*IDC **03** 21:00:29.2±0.5,24˚.42N×126˚.54E,h0km,mb4.0/23, mbtmp4.0/25,ML3.8/2,MS3.7/29,Error ellipse: s-maj=18.2km s-min=11.3km az=86.0*
*BJI **03** 21:00:30.2±0.0,24˚.22N×126˚.43E,h15km,mb4.2/42, mB4.5/26,Ms4.4/40,Ms7 4.1/39*
*NEIC **03** 21:00:31.3±1.3,24˚.38N±0˚.07×126˚.49E±0˚.07,h10km±1km, mb4.7/96,Error ellipse: s-maj=13.9km s-min=7.8km az=134.0*
*JMA **03** 21:00:32.3±0.1,24˚N±1˚×126˚.5E±0˚.8,h86km±2km, MV3.9/28,NEAR MIYAKOJIMA ISLAND*
ISC 03 21:00:29.7±1.3,24˚.34N±0˚.04×126˚.58E±0˚.03,h5km±8km, n212,σ1§67/214,mb4.6/83,MS3.9/35,1C-2D,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOGS	**Gusukube**	**1.15**	**291**	*i* P	**Pg**	**21 00 52.5**	**+0.7**
JOGS				*e*S	**Sn**	**21 01 07.2**	**-1.3**
JMJ2	**Miyako jima3**	**1.21**	**289**	P	**Pg**	**21 00 53.0**	**+0.1**
JMJ2				S	**Sn**	**21 01 08.4**	**-1.6**
JIKM	**Ikemajima**	**1.34**	**296**	P	**Pb**	**21 00 54.8**	**-0.5**
JIKM				*e*S	**Sg**	**21 01 11.8**	**-1.2**
JIRB	**Irabujima**	**1.37**	**291**	P	**Pb**	**21 00 55.1**	**-0.7**
JIRB				*e*S	**Sn**	**21 01 11.7**	**-2.2**
JTJ	**Tarama**	**1.74**	**280**	P	**Pn**	**21 01 00.1**	**-0.3**
JKE	**Kume jima 2**	**1.98**	**5**	*i* P	**Pn**	**21 01 03.4**	**-0.4**
JKE				*e*S	**Sn**	**21 01 26.7**	**-2.4**
JISG	**Ishigakijimahi**	**2.08**	**277**	*i* P	**Pn**	**21 01 04.7**	**-0.5**
JISG				*e*S	**Sn**	**21 01 29.3**	**-2.3**
JJT3	**Tamagusuku3**	**2.10**	**31**	P	**Pn**	**21 01 05.4**	**0.0**
JJT3				*e*S	**Sn**	**21 01 30.4**	**-1.6**
JIJ	**Ishigaki jima**	**2.23**	**271**	*i* P	**Pn**	**21 01 06.8**	**-0.4**
JIJ				*e*S	**Sn**	**21 01 32.9**	**-2.2**
JAGN	**Aguni-jima**	**2.31**	**15**	P	**Pn**	**21 01 08.5**	**+0.1**
JKRS	**Kuro-shima**	**2.35**	**268**	P	**Pn**	**21 01 08.8**	**-0.1**
JNTH	**Nagotoyohara**	**2.53**	**31**	P	**Pn**	**21 01 11.2**	**-0.2**
HATJ	**Hateruma jima**	**2.55**	**264**	P	**Pn**	**21 01 11.1**	**-0.5**
HATJ				S	**Sn**	**21 01 41.2**	**-1.9**
IRIF	**Iriomote-Funau**	**2.60**	**270**	P	**Pn**	**21 01 12.1**	**-0.3**
JOW	**Kunigami**	**2.91**	**31**	Pn	**Pn**	**21 01 16.2**	**-0.4**
	46nm,0.3s,baz=186,slow=12,SNR=62						
JOW				Sn	**Sn**	**21 01 51.0**	**-1.1**
	51nm,0.3s,baz=136,slow=29,SNR=7.8						
	112nm,0.4s						
JOW	**Kunigami**	**2.91**	**31**	Pn	**Pn**	**21 01 16.3**	**-0.4**
JOW					**Sn**	**21 01 51.6**	**-0.5**
JOW	**Kunigami**	**2.91**	**31**	P	**Pn**	**21 01 16.8**	**+0.1**
JOW				*e*S	**Sn**	**21 01 50.7**	**-1.3**
JIH	**Iheya**	**2.96**	**25**	P	**Pn**	**21 01 16.6**	**-0.7**
JIH				*e*S	**Sn**	**21 01 50.6**	**-2.5**
JYRO	**Yoronjima**	**3.16**	**32**	P	**Pn**	**21 01 20.3**	**+0.3**
JYRO				*e*S	**Sn**	**21 01 55.4**	**-2.6**
YOJ	**Yonaguni jima**	**3.26**	**273**		**Pn**	**21 01 20.3**	**-1.1**
YOJ	**Yonaguni jima**	**3.26**	**273**	*e*P	**Pn**	**21 01 20.3**	**-1.1**
JYNG	**Yonagunijimaku**	**3.32**	**273**	*e*P	**Pn**	**21 01 21.7**	**-0.5**
JOKE	**Okinoerabujima**	**3.50**	**30**	P	**Pn**	**21 01 25.0**	**+0.3**
JTK	**Tokunoshima**	**4.04**	**31**	P	**Pn**	**21 01 32.3**	**+0.2**
JTK				*e*S	**Sn**	**21 02 15.2**	**-4.6**
JMZ	**Minamidaito 2**	**4.46**	**70**	P	**Pn**	**21 01 36.4**	**-1.5**
JMZ				S	**Sn**	**21 02 22.8**	**-7.3**
JAMN	**Amaminishikomi**	**4.53**	**30**	P	**Pn**	**21 01 38.5**	**-0.3**
NACB	**Ninganchiao**	**4.55**	**269**		**Pn**	**21 01 37.6**	**-1.7**
JKDJ	**Kitadaitoujima**	**4.56**	**68**	*i* P	**Pn**	**21 01 37.8**	**-1.6**
JKDJ				S	**Sn**	**21 02 27.3**	**-5.5**
TATO	**Taipei**	**4.68**	**279**	Pn	**Pn**	**21 01 41.5**	**+0.6**
YHNB	**Yeheng**	**4.75**	**275**		**Pn**	**21 01 41.8**	**-0.2**
YULB	**Yu-li**	**4.93**	**260**		**Pn**	**21 01 42.0**	**-2.4**
SSLB	**Suanglung**	**5.17**	**265**		**Pn**	**21 01 46.3**	**-1.5**
TWG	**Pinlang**	**5.28**	**254**		**Pn**	**21 01 46.9**	**-2.3**
TPUB	**Ta-pu**	**5.55**	**260**		**Pn**	**21 01 52.1**	**-0.9**
KNMB	**Chin-men Tao**	**7.47**	**273**	Pn	**Pn**	**21 02 17.9**	**-1.4**
JSU	**Suzuyama**	**7.91**	**25**	Pn	**Pn**	**21 02 26.5**	**+1.0**
KSRS	**Korea Array**	**13.12**	**5**	Pn	**Pn**	**21 03 36.6**	**0.0**
	0.2nm,0.3s,baz=180,slow=14,SNR=8.3						
KSRS				LR	LR	21 08 54.0	
	comp=Z,201nm,20.1s,baz=170,slow=39						
	2.2nm,0.9s						
JGF	**Kuroka**	**14.58**	**37**	Pn	**Pn**	**21 03 58.2**	**+1.5**
DL2	**Dalian**	**15.12**	**345**	P	P	21 04 16.4	+7.2
DL2				pmax	pmax		
	comp=Z,24nm,0.9s						
DL2				LR	LR		
	comp=N,920nm,11.6s						
DL2				LR	LR		
	comp=E,800nm,10.7s						
DL2				LR	LR		
	comp=Z,1μm,11.4s						
MAJO	**Matsushiro**	**15.74**	**37**	Pn	**Pn**	**21 04 13.6**	**+1.5**
MJAR	**Matsushiro Arr**	**15.74**	**37**	Pn	**P**	**21 04 17.7**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=209,slow=8.0,SNR=17						
MJAR				LR	LR	21 10 10.1	
	comp=Z,114nm,19.9s,baz=226,slow=37						
MJAR	**Matsushiro Arr**	**15.74**	**37**		**Pn**	**21 04 13.2**	**+1.1**
MJB9	**Matsu-Tunnel**	**15.74**	**37**		**Pn**	**21 04 13.5**	**+1.3**
LYN	**LuoYang**	**15.94**	**313**	⇓P	**P**	**21 04 18.0**	**-0.4**
LYN				S	**Sn**	**21 07 15.9**	**+4.1**
LYN				pmax	pmax		
	comp=Z,10.0nm,1.3s						
LYN				LR	LR		
	comp=Z,2μm,15.9s						
LYN				LR	LR		
	comp=Z,1μm,15.9s						
LYN				LR	LR		
	comp=Z,730nm,15.9s						
ENH	**Enshi**	**16.30**	**295**	Pn	**Pn**	**21 04 18.2**	**-1.1**
QIZ	**Qiongzhong**	**16.43**	**254**	P	**Pn**	**21 04 17.2**	**-3.8**
QIZ				S	**Sn**	**21 07 24.3**	**+0.5**
QIZ				pmax	pmax		
	comp=Z,170nm,8.0s						
QIZ				LR	LR		
	comp=Z,420nm,17.5s						
QIZ				LR	LR		
	comp=Z,220nm,20.7s						
QIZ				LR	LR		
	comp=Z,250nm,12.7s						
HNS	**HongShan**	**16.51**	**325**	⇓P	**P**	**21 04 27.2**	**+2.5**
HNS				S	**S**	**21 07 35.0**	**-2.7**
HNS				pmax	pmax		
	comp=Z,13nm,0.8s						
HNS				LR	LR		
	comp=Z,450nm,12.4s						
HNS				LR	LR		
	comp=Z,590nm,13.3s						
HNS				LR	LR		
	comp=Z,700nm,12.5s						
JYT	**Yasato**	**16.67**	**42**	Pn	**Pn**	**21 04 25.0**	**+1.0**
JSD	**Sado**	**16.89**	**33**	Pn	**Pn**	**21 04 25.7**	**-1.1**
DAV	**Davao City (W)**	**17.20**	**183**	LR	LR	21 10 11.7	
	comp=Z,121nm,19.9s,baz=8.0,slow=34						
BJT	**Baijiatuao**	**17.92**	**333**		**P**	**21 04 39.2**	**-1.1**
BJI	**Beijing**	**17.94**	**333**	P	**P**	**21 04 40.4**	**0.0**
BJI				S	**Sn**	**21 08 00.0**	**-0.1**
BJI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BJI				LR	LR		
	comp=Z,350nm,19.3s						
BJI				LR	LR		
	comp=Z,610nm,19.8s						
BJI				LR	LR		
	comp=Z,540nm,14.3s						
JMM	**Marumori**	**18.13**	**39**	Pn	**Pn**	**21 04 41.7**	**-0.5**
XAN	**Xi'an**	**18.17**	**306**	P	P	21 04 51.0	+7.8
XAN				pP	pwP	21 04 56.4	+9.4
XAN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CN2	**Changchun**	**19.43**	**358**	*e*P	**Pn**	**21 04 59.1**	**+1.1**
CN2				S	**Sn**	**21 08 32.3**	**-3.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,300nm,10.0s						
CN2				LR	LR		
	comp=Z,400nm,10.0s						
CN2				LR	LR		
	comp=Z,300nm,10.0s						
USRK	**Ussuriysk Ar.**	**20.30**	**11**	P	Pn	21 05 07.5	-0.7
	comp=Z,2.5nm,0.8s,baz=167,slow=7.1,SNR=3.3						
	comp=Z,2.5nm,0.8s						
MDJ	**Mudanjiang**	**20.37**	**6**	P	Pn	21 05 11.2	+2.1
MDJ				S	**S**	**21 08 49.8**	**-5.9**
MDJ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,86nm,3.5s						
MDJ				LR	LR		
	comp=Z,320nm,19.2s						
MDJ				LR	LR		
	comp=Z,710nm,16.4s						
MDJ				LR	LR		
	comp=Z,590nm,15.0s						
JTM	**Tenmabayashi**	**20.40**	**33**	P	**P**	**21 05 06.7**	**-0.7**
JTM				IAmb	IAmb	21 05 20.5	
	comp=Z,39nm,1.3s						
SGSI	**Sangihe**	**20.56**	**183**	P	**P**	**21 05 08.7**	**-0.6**
	comp=Z,3μmcomp=Z,33nm,0.7s						
MYLDM	**Lahad Datu**	**20.58**	**203**	P	Pn	21 05 11.4	-0.3
HHC	**Hu-ho-hao-te**	**20.71**	**326**	*e*P	Pn	21 05 12.3	-0.9
HHC				sP	pwP	21 05 21.3	+6.5
HHC				S	**S**	**21 09 01.8**	**-0.9**
HHC				SS	**SnSn**	**21 09 32.2**	**+10**
HHC				pmax	pmax		
	comp=Z,32nm,0.9s						
HHC				pmax	pmax		
	comp=Z,130nm,4.2s						
HHC				LR	LR		
	comp=Z,1μm,11.6s						
HHC				LR	LR		
	comp=Z,480nm,11.2s						
HHC				LR	LR		
	comp=Z,950nm,10.4s						
CD2	**Chengdu**	**21.23**	**293**	P	**P**	**21 05 16.4**	**-0.2**
CD2				pmax	pmax		
	comp=Z,20nm,1.0s						
CD2				LR	LR		
	comp=Z,510nm,8.8s						
CD2				LR	LR		
	comp=Z,520nm,10.2s						
XLT	**XiLinHaoTe**	**21.32**	**339**	*e*P	**P**	**21 05 22.6**	**+5.1**
XLT				pP	pwP	21 05 26.8	+5.5
XLT				sP	sP	21 05 29.2	+10
XLT				pmax	pmax		
	comp=Z,14nm,0.8s						
XLT				pmax	pmax		
	comp=Z,87nm,4.2s						
XLT				LR	LR		
	comp=Z,630nm,12.0s						
XLT				LR	LR		
	comp=Z,770nm,11.6s						
KMI	**Kunming**	**21.67**	**277**	⇑P	**P**	**21 05 23.5**	**+2.0**
KMI				sP	pwP	21 05 30.7	+5.4
KMI				S	**S**	**21 09 17.3**	**-4.7**
KMI				sS	sS	21 09 24.9	+1.4
KMI				pmax	pmax		
	comp=Z,13nm,1.2s						
KMI				pmax	pmax		
	comp=Z,170nm,9.4s						
KMI				LR	LR		
	comp=Z,340nm,11.9s						
KMI				LR	LR		
	comp=Z,440nm,12.6s						
KMI				LR	LR		
	comp=Z,410nm,13.3s						
ERM	**Erimo**	**22.36**	**34**	P	**P**	**21 05 28.4**	**0.0**
ERM				IAmb	IAmb	21 05 29.4	
	comp=Z,33nm,0.9s						
PZH	**PanZhiHua**	**22.53**	**281**	P	**P**	**21 05 31.2**	**+0.6**

PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,90nm,5.5s
LZH Lanzhou 22.81 306 *eP* P 21 05 32.1 -1.5
LZH sP pwP 21 05 42.0 +4.6
LZH pmax pmax
comp=Z,11nm,1.1s
LZH LR LR
comp=Z,370nm,10.8s
LZH LR LR
comp=Z,700nm,11.7s
LZH LR LR
comp=Z,810nm,12.7s
TNTI Ternate 23.44 178 P P 21 05 41.1 +1.1
TNTI IAmb IAmb 21 05 50.3
comp=Z,22nm,0.8s
TNTI Ternate 23.44 178 P P 21 05 41.1 +1.1
comp=Z,35nm,1.1s
ASAJ Asahikawa 23.68 30 P P 21 05 41.4 -0.7
comp=Z,6.6nm,0.7s,baz=242,slow=16,SNR=8.7
comp=Z,6.6nm,0.7s
JKA Kamikawa-asahi 23.68 30 IAmb IAmb 21 05 50.6
comp=Z,21nm,1.1s
KMSI Cibinong 23.76 186 P P 21 05 43.2 +0.1
comp=Z,41nm,0.8s
TOLI2 Tolitoli 23.77 195 P P 21 05 43.1 -0.1
MRSI Marisa 24.15 191 P P 21 05 44.9 -1.9
comp=Z,441nmcomp=Z,25nm,1.4s
MPSI Mapaga 24.73 196 P P 21 05 52.7 +0.6
comp=Z,13nm,1.0s
LBMI Labuha 24.85 178 P P 21 05 53.6 +0.4
comp=Z,19nm,1.0s
KLR Kul'dur 25.17 8 P P 21 05 54.5 -1.4
comp=Z,2.4nm,0.8s,baz=210,slow=5.7,SNR=9.8
comp=Z,2.4nm,0.8s
SIJI Sorong 25.47 169 P P 21 05 59.7 +0.9
comp=Z,5.0nm,0.6s,baz=29,slow=13,SNR=4.1
SIJI LR LR 21 14 21.6
comp=Z,138nm,20.7s,baz=187,slow=33
comp=Z,5.0nm,0.6s
YSS Yuzh-Sakhalins 26.01 26 P P 21 06 05.1 +1.7
SANI Sanana 26.24 181 P P 21 06 05.5 -0.3
comp=Z,19nm,0.8s
CHTO Chiang Mai 26.26 263 P P 21 06 05.9 -0.1
CM31 Chiang Mai Arr 26.36 263 P P 21 06 07.1 +0.1
CMAR Chiang Mai Arr 26.36 263 P P 21 06 08.1 +1.1
comp=Z,2.6nm,0.9s,baz=63,slow=8.4,SNR=15
CMAR LR LR 21 17 57.6
comp=Z,177nm,18.0s,baz=90,slow=40
comp=Z,2.6nm,0.9s
CMAR Chiang Mai Arr 26.36 263 P P 21 06 07.7 +0.7
GTA Gaotai 27.11 310 *eP* P 21 06 12.8 -0.9
GTA pP pwP 21 06 19.9 +2.3
GTA sP sP 21 06 24.5 +9.5
GTA pmax pmax
comp=Z,2.0nm,0.9s
GTA pmax pmax
comp=Z,35nm,5.8s
GTA LR LR
comp=Z,560nm,16.4s
GTA LR LR
comp=Z,400nm,17.1s
GTA LR LR
comp=Z,230nm,15.3s
FAKI Fak Fak 27.65 168 P P 21 06 18.8 +0.3
comp=Z,16nm,0.9s
AAI Ambon 27.91 177 P P 21 06 19.9 -0.9
comp=Z,18nm,0.7s
TTSI Tana Toraja 28.01 195 P P 21 06 19.8 -1.9
comp=Z,6.7nm,1.2s
ULN Ulaanbaatar 28.13 331 P P 21 06 23.6 +0.9
ULN IAmb IAmb 21 06 33.7
comp=Z,22nm,1.2s
STKI Sintang 28.23 213 P P 21 06 23.0 -0.7
comp=Z,8.4nm,1.1s
SONM Songino Array 28.39 331 P P 21 06 25.4 +0.4
comp=Z,1.0nm,0.4s,baz=144,slow=9.9,SNR=4.3
comp=Z,1.0nm,0.4s
SONM Songino Array 28.39 331 P P 21 06 25.6 +0.5
SONM IAmb IAmb 21 06 36.2
comp=Z,20nm,1.4s
BBSI Bau Bau 29.91 188 P P 21 06 37.9 -0.7
comp=Z,120nmcomp=Z,3.5nm,1.1s
KAPI Kappang 29.93 194 LR LR 21 20 08.8
comp=Z,64nm,18.3s,baz=5.5,slow=39
IPM Ipoh 31.55 235 P 21 06 52.6 -0.5
IPM IAmb IAmb 21 07 11.8
comp=Z,13nm,1.2s
BATI Baumata 34.46 185 P P 21 07 17.4 -1.1
comp=Z,25nm,0.6s,baz=316,slow=3.3,SNR=5.2
PETK Petropavlovsk- 37.08 31 P P 21 07 40.8 +0.1
comp=Z,2.4nm,0.9s,baz=174,slow=2.9,SNR=1.5
PETK LR LR 21 24 08.8
comp=Z,58nm,18.3s,baz=243,slow=38
comp=Z,2.4nm,0.9s
PETK Petropavlovsk- 37.08 31 P P 21 07 41.5 +0.9
WMQ Urumqi 37.18 311 *eP* P 21 07 43.4 +1.6
WMQ pP pwP 21 07 48.1 +2.5
WMQ pmax pmax
comp=Z,11nm,0.7s
WMQ LR LR
comp=Z,630nm,14.3s
WMQ LR LR
comp=Z,220nm,16.7s
WMQ LR LR
comp=Z,200nm,15.5s
MTN Manton Dam 37.23 173 P P 21 07 41.9 -0.3
PMG Port Moresby 39.10 147 LR LR 21 26 46.2
comp=Z,30nm,18.1s,baz=313,slow=40
KNRA Kununurra 39.83 177 P P 21 08 04.5 +0.4
KNRA IAmb IAmb 21 08 05.8
comp=Z,17nm,1.0s
COEN Coen 41.37 155 P 21 08 17.5 +0.6
COEN IAmb IAmb 21 08 19.6
comp=Z,18nm,0.9s
MK31 Makanchi Array 41.72 314 P P 21 08 18.7 -0.8
MKAR Makanchi Array 41.72 314 P P 21 08 18.5 -1.0
comp=Z,1.0nm,0.4s,baz=99,slow=10.0,SNR=35
MKAR LR LR 21 25 58.8
comp=Z,84nm,19.1s,baz=106,slow=37
comp=Z,1.0nm,0.4s
MKAR Makanchi Array 41.72 314 P P 21 08 18.8 -0.8
MAKZ Makanchi 41.93 314 P P 21 08 20.5 -0.8
SEY Seymchan 42.25 17 LR LR 21 27 26.5
comp=Z,183nm,18.3s,baz=227,slow=38
ZAA0 Zalesovo Array 42.88 325 P P 21 08 27.9 -1.0
ZALV Zalesovo Beam 42.88 325 P P 21 08 27.9 -0.9
comp=Z,1.2nm,0.4s,baz=110,slow=8.8,SNR=6.4
ZALV LR LR 21 27 03.1
comp=Z,72nm,18.1s,baz=108,slow=37
comp=Z,1.2nm,0.4s
WB0 Warramunga Arr 44.50 169 P P 21 08 42.3 +0.1
WB0 IAmb IAmb 21 08 43.6
comp=Z,11nm,0.8s
WRAB Tennant Creek 44.65 170 P P 21 08 44.0 +0.5
WRAB IAmb IAmb 21 08 45.5
comp=Z,13nm,0.8s
WRA Warramunga Arr 44.66 170 P P 21 08 44.4 +0.9
comp=Z,7.4nm,0.7s,baz=351,slow=8.7,SNR=52
comp=Z,7.4nm,0.7s
WRA Warramunga Arr 44.66 170 P P 21 08 43.2 -0.3
WB2 Warramunga Arr 44.66 170 P P 21 08 43.1 -0.4
WR0 Warramunga Arr 44.71 169 P P 21 08 44.0 +0.1
WR0 IAmb IAmb 21 08 45.4
comp=Z,9.6nm,0.8s
KSH Kashi 44.97 302 P P 21 08 50.4 +4.4
KSH sP pwP 21 08 57.6 +7.7
KSH LR LR
comp=Z,320nm,15.5s
KSH LR LR
comp=Z,310nm,15.1s
KSH LR LR
comp=Z,180nm,17.5s
KURK Kurchatov 45.20 318 P P 21 08 46.7 -0.7
KURBB Kurchatov Arra 45.22 318 P P 21 08 46.8 -0.9
comp=Z,0.4nm,0.4s,baz=108,slow=9.4,SNR=12
comp=Z,0.4nm,0.4s
MBWA Marble Bar 45.72 189 P P 21 08 51.7 -0.2
MBWA IAmb IAmb 21 08 53.0
comp=Z,8.8nm,1.0s
PSA00 Pilbara Seismi 46.11 189 P P 21 08 54.8 -0.1
PSA00 IAmb IAmb 21 08 56.1
comp=Z,7.7nm,1.0s
PSA00 Pilbara Seismi 46.11 189 P P 21 08 55.1 +0.2
PSA00 IAmb IAmb 21 08 56.1
comp=Z,15nm,0.9s

AAK Ala-Archa 46.35 306 LR LR 21 31 45.1
comp=Z,150nm,18.3s,baz=108,slow=40
TIXI Tiksi 47.35 1 LR LR 21 29 57.2
comp=Z,126nm,18.6s,baz=180,slow=37
TIXI Tiksi 47.35 1 P P 21 09 03.8 -0.3
TIXI IAmb IAmb 21 09 12.5
comp=Z,8.2nm,1.3s
CTA Charters Tower 48.14 155 LR LR 21 30 08.6
comp=Z,44nm,19.5s,baz=274,slow=37
DRK Karamyk 48.19 302 P P 21 09 10.9 -0.6
DRK IAmb IAmb 21 09 27.0
comp=Z,4.9nm,0.7s
AS31 Alice Springs 48.25 171 P P 21 09 12.6 +1.0
ASAR Alice Springs 48.25 171 P P 21 09 13.1 +1.4
comp=Z,2.7nm,0.8s,baz=358,slow=7.6,SNR=32
ASAR PcP **PcP 21 10 39.5 +0.7**
comp=Z,1.0nm,0.9s,baz=345,slow=2.2,SNR=5.3
ASAR LR LR 21 31 11.9
comp=Z,42nm,19.0s,baz=7.0,slow=38
comp=Z,2.7nm,0.8s
ASAR Alice Springs 48.25 171 P P 21 09 12.3 +0.6
BTK Batken 48.96 303 P P 21 09 16.9 -0.3
KK31 Karatay Array 49.31 307 P P 21 09 19.6 -0.1
KKAR Karatay Array 49.31 307 P P 21 09 20.0 +0.3
KKAR Karatay Array 49.31 307 P P 21 09 19.8 +0.1
KKAR IAmb IAmb 21 09 33.6
comp=Z,4.0nm,1.2s
GAR Garm 49.34 301 P P 21 09 20.0 -0.1
BILL Bilibino 49.92 18 P P 21 09 26.1 +2.2
BILL IAmb IAmb 21 09 36.4
comp=Z,10.0nm,1.3s
CHGR Chuyangaron 50.24 301 P P 21 09 26.6 -0.4
CHGR IAmb IAmb 21 09 47.4
comp=Z,13nm,1.0s
KBL Kabul 50.54 296 P P 21 09 28.9 -0.6
KBL IAmb IAmb 21 09 39.4
comp=Z,5.7nm,0.8s
NRIK Noril'sk 50.60 343 P P 21 09 29.4 +0.3
comp=Z,1.9nm,0.4s,baz=118,slow=5.5,SNR=2.0
comp=Z,1.9nm,0.4s
NRIK Noril'sk 50.60 343 P P 21 09 28.5 -0.6
NRIK IAmb IAmb 21 09 38.5
comp=Z,16nm,1.3s
FORT Forrest 54.83 178 P P 21 10 01.4 +0.7
ABKAR Akbulak array 56.86 314 P P 21 10 14.8 -0.5
ABKAR IAmb IAmb 21 10 23.7
comp=Z,4.8nm,0.9s
ABKAR Akbulak array 56.86 314 P P 21 10 14.8 -0.5
BBOO Buckleboo 57.55 171 P P 21 10 20.9 +0.7
BBOO IAmb IAmb 21 10 45.5
comp=Z,12nm,1.1s
STKA Stephens Creek 57.72 165 P P 21 10 22.6 +1.2
comp=Z,2.5nm,0.7s,baz=310,slow=6.1,SNR=5.9
STKA LR LR 21 36 28.2
comp=Z,46nm,19.5s,baz=42,slow=37
comp=Z,2.5nm,0.7s
ARU Arti 57.96 323 LR LR 21 35 27.4
comp=Z,81nm,18.8s,baz=89,slow=36
ARU Arti 57.96 323 P P 21 10 22.5 -0.4
ARU IAmb IAmb 21 10 33.2
comp=Z,5.1nm,0.8s
GEYT Alibeck 58.96 301 P P 21 10 30.1 -0.2
GEYT IAmb IAmb 21 10 39.9
comp=Z,8.4nm,1.4s
GYA0B ALIBECK ARRAY 58.96 301 P P 21 10 29.6 -0.6
GYA0B IAmb IAmb 21 10 39.9
comp=Z,13nm,1.4s
DZM Mont Dzumac 60.24 137 LR LR 21 34 26.2
comp=Z,93nm,18.8s,baz=26,slow=34
SVW2 Sparrevohn 63.15 32 P P 21 10 59.7 +1.4
J20K Nowinta River 63.71 29 P P 21 11 03.4 +1.5
J20K IAmb IAmb 21 11 18.2
comp=Z,4.4nm,0.9s
IMAR Indian Mountai 63.84 27 P P 21 11 04.0 +1.3
H21K Melozitna Rive 64.23 27 P P 21 11 06.1 +0.7
H21K IAmb IAmb 21 11 09.0
comp=Z,9.7nm,1.4s
PPLA Purkeypile 64.65 30 P P 21 11 08.7 +0.4
CAST Castle Rocks 64.67 29 P P 21 11 09.1 +0.9
CAST IAmb IAmb 21 11 16.9
comp=Z,4.9nm,1.1s
BPAW Bear Paw Mtn. 65.10 29 P P 21 11 12.5 +1.5
BPAW IAmb IAmb 21 11 20.1
comp=Z,5.1nm,1.1s
MLY Manley 65.14 28 P P 21 11 11.9 +0.6
MLY IAmb IAmb 21 11 27.3
comp=Z,9.4nm,1.3s
MSVF Nonsavu 65.33 125 P P 21 11 13.8 +0.6
TOLK Toolik Lake Re 65.34 24 P P 21 11 13.7 +1.1
TOLK IAmb IAmb 21 11 25.0
comp=Z,7.4nm,1.1s
H23K Yukon River 65.57 27 P P 21 11 16.1 +2.0
NEA2 Nenana 65.89 28 P P 21 11 16.9 +0.8
NEA2 IAmb IAmb 21 11 32.5
comp=Z,4.2nm,0.7s
RND Reindeer 66.11 29 IAmb IAmb 21 11 33.0
comp=Z,4.7nm,0.9s
KNK Knik Glacier 66.55 31 P P 21 11 21.5 +1.0
ILAR Eielson Array 66.80 28 P P 21 11 22.6 +0.7
comp=Z,0.2nm,0.4s,baz=283,slow=5.7,SNR=2.0
comp=Z,0.2nm,0.4s
BMAR Burnt Mountain 67.34 25 P P 21 11 27.4 +2.0
SCRK Sand Creek 68.17 28 P P 21 11 32.7 +1.9
SCRK IAmb IAmb 21 11 46.3
comp=Z,6.7nm,1.4s
GNI Garni 68.75 306 LR LR 21 43 57.1
comp=Z,51nm,18.2s,baz=76,slow=38
GNI Garni 68.75 306 P P 21 11 34.3 -0.6
M26K Nabesna, AK 68.92 30 P P 21 11 37.3 +1.8
M26K IAmb IAmb 21 11 52.0
comp=Z,6.0nm,1.0s
K27K Chicken 68.98 28 P P 21 11 37.8 +2.0
KBZ Khabaz 69.20 310 P P 21 11 38.0 +0.6
comp=Z,1.3nm,0.6s,baz=52,slow=8.9,SNR=4.2
comp=Z,1.3nm,0.6s
KIV Kislovodsk 69.30 310 P P 21 11 38.3 +0.2
KIV IAmb IAmb 21 11 47.8
comp=Z,4.8nm,0.8s
INK Inuvik 71.20 23 LR LR 21 45 58.0
comp=Z,38nm,18.2s,baz=206,slow=38
KOPT Kop Dagi 71.92 306 P P 21 11 54.5 0.0
NOR Nord 72.67 355 *i* P P 21 12 01.4 +3.5
RAYN Ar Rayn 72.99 289 P P 21 12 00.6 -0.3
RAYN IAmb IAmb 21 12 09.8
comp=Z,6.1nm,1.1s
FINES FINESS Array B 73.77 331 P P 21 12 04.4 -0.2
comp=Z,2.0nm,0.9s,baz=98,slow=3.9,SNR=8.1
comp=Z,2.0nm,0.9s
JIS Juneau Island 74.20 33 P P 21 12 08.9 +1.8
BNN Bunyan 75.70 306 P P 21 12 16.5 0.0
AKASG Malin Array Be 75.99 319 P P 21 12 17.2 -0.5
comp=Z,0.5nm,0.5s,baz=51,slow=6.1,SNR=7.9
AKASG LR LR 21 49 26.6
comp=Z,58nm,19.4s,baz=22,slow=39
comp=Z,0.5nm,0.5s
AKBB Malin Array Si 75.99 319 P 21 12 17.5 -0.2
AKBB IAmb IAmb 21 12 26.0
comp=Z,13nm,1.5s
DAG Danmarks Havn 76.92 352 *i* P P **21 12 22.5 0.0**
DAG IAmb IAmb 21 12 32.4
comp=Z,4.5nm,1.0s
BR131 Keskin Array S 77.01 308 P P 21 12 23.9 0.0
BR131 IAmb IAmb 21 12 32.7
comp=Z,12nm,1.1s
BRTR Keskin Array B 77.01 308 P P 21 12 24.2 +0.3
comp=Z,2.9nm,1.0s,baz=101,slow=5.2,SNR=11
BRTR LR LR 21 47 58.6
comp=Z,36nm,20.7s,baz=63,slow=37
comp=Z,2.9nm,1.0s
MXZ Matakaoa Point 78.45 140 P P 21 12 31.6 +0.1
GHAJ Ghor Haditha 78.58 299 P P 21 12 32.8 +0.2
GHAJ IAmb IAmb 21 12 42.0
comp=Z,6.7nm,1.1s
DBG Daneborg 79.24 351 *i* P P **21 12 38.8 +3.4**
BUR08 Bucovina Ar. S 79.61 318 P P 21 12 37.7 -0.4
BUR08 IAmb IAmb 21 12 39.3
comp=Z,10nm,1.5s
BURAR Bucovina Array 79.62 318 P P 21 12 37.8 -0.4
EIL Elat 79.67 298 LR LR 21 50 44.3
comp=Z,42nm,18.9s,baz=86,slow=38
BBB Bella Bella 79.94 37 P P 21 12 39.8 +0.2
MLR Muntele Rosu 80.04 315 LR LR 21 50 00.1
comp=Z,74nm,18.3s,baz=76,slow=37
MLR Muntele Rosu 80.04 315 P P 21 12 39.9 -0.6
KWP Kalwaria Pacla 80.26 320 P P 21 12 41.6 +0.2
NB2 NORSAR Subarra 80.33 334 P P 21 12 41.0 -0.7
comp=Z,0.7nm,0.6s,baz=54,slow=5.6
NOA NORSAR Array B 80.33 334 P P 21 12 41.4 -0.3
comp=Z,0.7nm,0.7s,baz=56,slow=5.3,SNR=3.3
NOA LR LR 21 49 59.1
comp=Z,46nm,18.2s,baz=55,slow=37
comp=Z,0.7nm,0.7s
YKA Yellowknife Ar 80.86 24 P P 21 12 44.9 +0.6
comp=Z,0.5nm,0.7s,baz=300,slow=4.9,SNR=1.9
comp=Z,0.5nm,0.7s
SCO Scoresbysund 82.84 350 P P 21 12 54.9 +0.3
SCO IAmb IAmb 21 12 58.1
comp=Z,10nm,1.5s
VTS Vitosha 83.04 314 P P 21 12 56.5 0.0
VTS IAmb IAmb 21 13 05.5
comp=Z,3.9nm,0.9s
VRAC Vranov 83.92 322 LR LR 21 51 44.7
comp=Z,62nm,20.5s,baz=60,slow=37
DIVS Divibare 84.46 316 P P 21 13 03.3 -0.3
DIVS IAmb IAmb 21 13 13.1
comp=Z,9.7nm,1.5s
BRG Berggiesshubel 84.57 324 *eP* P 21 13 05.3 +1.4
BRG Amp 21 13 06.8
comp=Z,4.7nm,1.4s
LIT Litokhoron 84.69 312 P P 21 13 04.3 -0.5
LIT IAmb IAmb 21 13 13.7
comp=Z,5.4nm,1.0s
CLL Collm 84.83 325 P P 21 13 05.2 0.0
CLL IAmb IAmb 21 13 13.6
comp=Z,5.1nm,1.2s
CLL Collm 84.83 325 *eP* P 21 13 06.0 +0.8
CLL *eS* **S 21 23 38.0 +4.0**
CLL *eSS* SS 21 29 30.0 +25
WISH Wishkah 84.84 40 P P 21 13 04.7 -0.7
GERES GERESS Array B 85.79 322 P P 21 13 10.7 +0.4
comp=Z,0.5nm,0.8s,baz=77,slow=4.4,SNR=6.8
comp=Z,0.5nm,0.8s
DAVOX Davos/Dischmat 89.08 322 LR LR 21 55 54.1
comp=Z,88nm,19.0s,baz=49,slow=37
EKA Eskdalemuir Ar 89.82 334 LR LR 21 58 53.2
comp=Z,86nm,18.3s,baz=2.0,slow=39
NVAR Mina Array Bea 92.89 45 P P 21 13 45.3 +1.1
comp=Z,0.1nm,0.2s,baz=282,slow=4.5,SNR=2.0
comp=Z,0.1nm,0.2s
ULM Lac du Bonnet 96.76 26 LR LR 22 02 06.4
comp=Z,39nm,18.1s,baz=290,slow=38

*CRAAG **03** 21:06:04.3, 36°.34N×3°.48E, Ml2.8, Hypocentre not reviewed by the ISC*
MDD 03 21:06:08.1±1.2, 36°.47N×3°.37E, h0km, Mb3.8/4, M_mb3.1/5, 4C, Error ellipse: s-maj=11.0km s-min=5.7km az=139.0, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ADJB	**Djebel Djouab**	**0.32**	**169**	P			21 06 09.4	
ABA	**Alger-Bouzarea**	**0.43**	**321**	P			21 06 16.5	
AKET	**Djebel Ketaf**	**0.59**	**135**	P			21 06 14.3	
EIBI	**Ibiza**	**3.02**	**329**	Pn		Pn	21 06 55.7	-1.3
EIBI				⇑*iVmb_V*			21 06 58.7	
	232nm,SNR=1.4							
EIBI				Sn		Sn	21 07 29.5	-4.4
ETOS	**Mallorca**	**3.32**	**353**	Pn		Pn	21 06 59.1	-2.2
ETOS				⇑*iVmb_V*			21 07 08.3	
	150nm,SNR=1.2							
ETOS				Sn		Sn	21 07 36.3	-5.3
ECOL	**Islas Columbre**	**4.02**	**329**	Pn		Pn	21 07 09.4	-1.5
ECOL				Sn		Sn	21 07 55.1	-3.6
EZAR	**Zarzadilla de**	**4.28**	**291**	Pn		Pn	21 07 13.0	-1.6
ETOB	**Tobarra**	**4.47**	**301**	Pn		Pn	21 07 15.8	-1.3
ETOB				Sn		Sn	21 08 07.8	-2.0
EMOS	**Mosqueruela**	**4.92**	**323**	Pn		Pn	21 07 22.6	-0.8
EMOS				⇑*iVmb_V*			21 07 25.9	
	112nm,SNR=1.4							
EMOS				Sn		Sn	21 08 17.0	-4.1
EJON	**La Jonquera**	**5.98**	**357**	Pn		Pn	21 07 37.3	-0.6
EJON				⇑*iVmb_V*			21 07 42.2	
	54nm,SNR=1.3							

*REN **03** 21:17:37.8±2.7, 39°.59N±0°.02×115°.84W±0°.02, h13km±5km, ML3.0/9, ML2.5/92(NEIC), Error ellipse: s-maj=3.6km s-min=1.2km az=215.0*
NEIC 03 21:17:37.0±2.8, 39°.61N±0°.02×115°.79W±0°.03, h3km±5km, Error ellipse: s-maj=3.9km s-min=1.3km az=136.0, Nevada

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ELK	**Elko**	**1.21**	**20**			Pn	21 18 01.1	+0.1
ELK						Sn	21 18 17.9	-0.1
R11A	**Troy Canyon, C**	**1.27**	**173**			Pg	21 18 01.3	+0.1
R11A						Sg	21 18 17.2	-0.3
R11A					IAML		21 18 19.9	
	comp=E,96nm,0.3s							
Q09A	**Carvers**	**1.33**	**235**		Pn	Pg	21 18 00.9	-1.6
Q09A					Sn	Sn	21 18 20.8	-0.1
Q09A					IAML		21 18 23.3	
	comp=E,96nm,0.3s							
Q09A					IAML		21 18 25.3	
	comp=N,102nm,0.5s							
BMN	**Battle Mountai**	**1.38**	**307**			Pn	21 18 03.0	-0.2
BMN						Sb	21 18 21.7	+0.2
BMN	**Battle Mountai**	**1.38**	**307**		IAML		21 18 25.2	
	comp=E,121nm,0.4s							
PSUT	**Pine Spring**	**1.85**	**125**			Pb	21 18 10.8	-0.6
PSUT						Sn	21 18 34.2	+0.6
PSUT					IAML		21 18 39.6	
	comp=E,54nm,0.4s							
KVN	**Kaiserville**	**1.88**	**254**	Pn		Pn	21 18 09.7	-0.4
TPH	**Tonopah**	**1.90**	**217**			Pn	21 18 09.6	-0.7
TPH						Sb	21 18 37.0	+0.6
S11A	**Rachel**	**1.96**	**179**			Pn	21 18 10.6	-0.6
NV11	**Mina Array Sit**	**2.19**	**238**			Pn	21 18 12.2	-2.1
PRN	**Pahroc Range**	**2.27**	**165**			Pn	21 18 14.3	-1.1
NVAR	**Mina Array Bea**	**2.29**	**240**			Pn	21 18 14.4	-1.3
RYN	**Ryan**	**2.34**	**246**			Pn	21 18 16.4	-0.1
RYN					IAML		21 18 55.4	
	comp=E,25nm,0.6s							
RYN					IAML		21 18 57.1	
	comp=N,30nm,0.9s							
DUG	**Dugway, Tooele**	**2.36**	**75**			Pn	21 18 17.0	+0.3
DUG					IAML		21 18 54.9	
	comp=N,17nm,0.6s							
BGU	**Big Grassy Mou**	**2.49**	**57**	Pn		Pn	21 18 18.4	0.0
LHV	**Little Huntoon**	**2.52**	**238**			Pn	21 18 17.3	-1.3
LHV					IAML		21 19 03.8	
	comp=N,30nm,0.9s							
LHV					IAML		21 19 05.2	
	comp=E,31nm,0.8s							
TPNV	**Topopah Spring**	**2.68**	**188**			Pn	21 18 21.9	+0.8
YERR	**Yerington**	**2.75**	**258**			Pg	21 18 32.4	+2.7
YERR					IAML		21 19 08.0	
	comp=N,19nm,0.7s							
PAHR	**Pah Rah Range**	**2.78**	**273**	Pg		Pg	21 18 30.1	-0.1
TCRU	**Three Creeks R**	**2.78**	**110**	Pn		Pn	21 18 22.1	-0.5
TCRU						Pg	21 18 32.9	+2.7
TCRU					IAML		21 19 16.7	
	comp=E,14nm,0.9s							
LCH	**Last Change Ra**	**2.78**	**212**			Pg	21 18 30.3	0.0
LCH					IAML		21 19 07.7	
	comp=E,19nm,0.4s							
LCH					IAML		21 19 09.4	
	comp=N,13nm,0.4s							
CCUT	**Cedar City**	**2.80**	**136**	Pg		Pg	21 18 30.5	0.0
CCUT					IAML		21 19 06.6	
	comp=N,15nm,0.5s							
CCUT					IAML		21 19 06.6	
	comp=E,22nm,0.5s							
NLU	**North Lily Min**	**2.88**	**82**	Pn		Pn	21 18 24.1	+0.2
SZCU	**Shurtz Canyon**	**2.92**	**133**			Pg	21 18 33.2	+0.4
SZCU					IAML		21 19 12.6	
	comp=N,25nm,0.3s							
PNTR	**Pine Nut**	**3.00**	**261**	Pn		Pn	21 18 24.2	-1.4
PNTR						Pg	21 18 34.3	-0.2
PNTR					Sg	Sg	21 19 14.6	+1.2
PNTR					IAML		21 19 18.0	
	comp=N,19nm,0.9s							
PNTR					IAML		21 19 18.9	
	comp=E,16nm,0.8s							
VCNR	**Virginia City**	**3.01**	**265**	Pn		Pn	21 18 23.4	-2.2
MSU	**Marysvale**	**3.01**	**110**			Pb	21 18 32.4	+1.0
SHPR	**Sheep Range**	**3.13**	**171**	Pn		Pn	21 18 26.2	-1.1
HVU	**Hansel Valley**	**3.15**	**46**	Pn		Pn	21 18 27.2	-0.4

HVU					IAML			21 19 21.0	
	comp=E,8.4nm,0.4s								
HVU					IAML			21 19 23.6	
	comp=N,11nm,0.5s								
MTPU	**Mount Pierson**	**3.22**	**118**			Pg		21 18 38.1	-0.5
JLU	**Jordanelle**	**3.47**	**72**	Pn		Pn		21 18 31.6	-0.5
JLU					IAML			21 19 14.8	
	comp=E,6.5nm,3.8s								
JLU					IAML			21 19 30.7	
	comp=N,7.6nm,0.6s								
PKCU	**Pink Cliffs**	**3.48**	**127**			Pn		21 18 32.3	+0.1
GWY	**Greenwater Val**	**3.48**	**192**			Pn		21 18 31.7	-0.4
GWY					IAML			21 19 29.8	
	comp=N,15nm,0.6s								
GWY					IAML			21 19 33.1	
	comp=E,14nm,0.6s								
BEKR	**Beckworth**	**3.54**	**276**	Pn		Pn		21 18 32.0	-0.9
WVOR	**Wild Horse Val**	**3.55**	**324**	Pn		Pn		21 18 32.9	-0.2
WVOR					IAML			21 19 43.5	
	comp=E,6.4nm,0.8s								
TMUT	**Trail Mountain**	**3.56**	**94**	Pn		Pn		21 18 31.6	-1.7
TMUT					IAML			21 19 36.3	
	comp=E,8.3nm,0.5s								
TMUT					IAML			21 20 45.1	
	comp=N,8.5nm,1.3s								
Q16A	**Castle Valley**	**3.65**	**99**	Pn		Pn		21 18 32.5	-2.0
Q16A					IAML			21 20 40.8	
	comp=E,6.5nm,4.2s								
Q16A					IAML			21 20 49.2	
	comp=N,6.3nm,3.4s								
QSM	**Queen of Sheba**	**3.73**	**194**	Pn		Pn		21 18 34.9	-0.6
QSM					IAML			21 19 36.6	
	comp=E,6.1nm,0.7s								
QSM					IAML			21 19 39.5	
	comp=N,6.8nm,0.7s								
HWUT	**Hardware Ranch**	**3.78**	**57**	Pn		Pn		21 18 35.5	-0.9
HWUT					IAML			21 19 44.9	
	comp=N,5.4nm,4.2s								
MFID	**Camas Ranch**	**3.81**	**360**	Pn		Pn		21 18 35.5	-1.0
MFID					IAML			21 19 42.6	
	comp=N,12nm,1.8s								
HLID	**Hailey**	**4.08**	**14**	Pn		Pn		21 18 39.9	-0.5
HLID					IAML			21 19 50.6	
	comp=N,4.1nm,0.7s								
HLID					IAML			21 19 53.2	
	comp=N,4.6nm,0.9s								
SRU	**San Rafael Swe**	**4.11**	**95**	Pn		Pn		21 18 39.3	-1.5
SRU					IAML			21 19 49.3	
	comp=N,4.0nm,1.4s								
SRU					IAML			21 19 51.5	
	comp=E,4.8nm,0.6s								
MOD	**Modoc Plateau**	**4.13**	**305**	Pg		Pg		21 18 55.8	-0.2
MOD					IAML			21 19 53.4	
	comp=E,8.5nm,0.6s								
MOD					IAML			21 19 55.4	
	comp=N,6.5nm,0.7s								
U15A	**North Rim**	**4.21**	**138**	Pg		Pg		21 18 56.4	-1.1
J08A	**Circle Bar Ran**	**4.26**	**333**			Pg		21 18 55.5	-3.0

*VIE **03** 21:22:01.4±0.5,50.°02N×19.°09E,h0km,mb2.2/3,ml2.2/2, Error ellipse: s-maj=9.0km s-min=3.3km az=157.0 27 km SSE of Katowice Suspected Mining induced.*
*IPEC **03** 21:22:01.2±0.2,50.°22N×19.°01E,h1km,ML2.2/4, Error ellipse: s-maj=2.6km s-min=1.1km az=166.0*
*PRU **03** 21:22:01.4±0.0,50.°31N×18.°97E,h0km*
*IDC **03** 21:22:04.1±2.7,50.°32N×18.°77E,h0km,mbtmp3.8/2, ML2.5/3, Error ellipse: s-maj=49.8km s-min=10.8km az=133.0*

ISC 03 21:22:00.4±0.7,**50.°18N**±0.°03×**18.°96E**±0.°02,**h0**km,**n32,**
σ0**87**/58,**Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.54**	**85**	*e*Pg	**Pg**	**21 22 11.4**	**+0.7**
OJC				*e*Sg	**Sg**	**21 22 18.9**	**+1.2**
OKC	**Ostrava-Krasne**	**0.63**	**237**	*e*PG	**Pb**	**21 22 14.9**	**+0.6**
OKC				*e*SG	**Sb**	**21 22 23.8**	**+0.2**
	comp=Z,22nm,0.3s						
MORC	**Moravsky Berou**	**1.00**	**247**	*e*Pg	**Pb**	**21 22 20.9**	**+0.3**
	baz=64						
MORC				*e*Sg	**Sb**	**21 22 34.1**	**-0.3**
	31nm,0.3s,baz=64						
MORC	**Moravsky Berou**	**1.00**	**247**	*e*PG	**Pb**	**21 22 21.0**	**+0.3**
MORC				*e*SG	**Sb**	**21 22 34.1**	**-0.3**
LANS	**Liptovska Anna**	**1.08**	**162**	*e*PG	**Pn**	**21 22 23.0**	**+0.1**
LANS				*e*SG	**Sn**	**21 22 38.4**	**-0.2**
LANS				*e*LG	Lg	21 22 42.2	
MAUC	**Maruska**	**1.10**	**223**	*e*PG	**Pn**	**21 22 23.7**	**+0.6**
MAUC				*e*SG	**Sn**	**21 22 40.5**	**+1.5**
NIE	**Niedzica**	**1.15**	**131**	*e*Pg	**Pb**	**21 22 23.9**	**+0.6**
NIE				*e*Sg	**Sn**	**21 22 41.4**	**+1.0**
KRLC	**Kraliky**	**1.41**	**267**	*e*PG	**Pg**	**21 22 27.3**	**-0.1**
KRLC				*e*SG	**Sn**	**21 22 46.9**	**+0.2**
	comp=Z,18nm,0.2s						
JAVC	**Velka Javorina**	**1.57**	**213**	*e*PN	**Pg**	**21 22 30.5**	**+0.1**
VYHS	**Vyhne**	**1.69**	**183**	*e*PN	**Pb**	**21 22 32.2**	**-0.2**
VYHS				*e*SN	**Sg**	**21 22 54.4**	**-0.2**
VYHS				*e*LG	Lg	21 22 57.5	
DPC	**Dobruska-Polom**	**1.70**	**277**	*e*PG	**Pn**	**21 22 32.1**	**+0.7**
DPC				*e*SG	**Sg**	**21 22 56.1**	**+1.0**
	comp=Z,16nm,0.3s						
VRAC	**Vranov**	**1.77**	**241**	*e*Pn	**Pb**	**21 22 33.5**	**-0.2**
	baz=59						
VRAC				*e*Sg	**Sg**	**21 22 57.9**	**+0.7**
	19nm,0.3s,baz=59						
VRAC	**Vranov**	**1.77**	**241**	*e*PN	**Pb**	**21 22 33.5**	**-0.2**
VRAC				*e*SG	**Sg**	**21 22 57.9**	**+0.7**
OSTC	**Ostas**	**1.80**	**283**	*e*PG	**Pn**	**21 22 33.5**	**+0.8**
OSTC				*e*SG	**Sb**	**21 22 57.8**	**+0.4**
KSP	**Ksiaz**	**1.83**	**292**	*e*Pg	**Pg**	**21 22 35.8**	**+0.3**
KSP				*e*Sg	**Sg**	**21 23 00.0**	**+0.8**
CHVC	**Chvalec**	**1.91**	**283**	*e*PG	**Pn**	**21 22 34.9**	**+0.7**
UPC	**Upice**	**1.92**	**281**	*e*SG	**Sg**	**21 23 01.9**	**-0.1**
KECS	**Kecovo**	**1.97**	**149**	*e*PN	**Pn**	**21 22 35.8**	**+0.8**
KECS				*e*SN	**Sn**	**21 23 00.3**	**-0.1**
KRUC	**Moravsky**	**2.01**	**237**	*e*Pn	**Pn**	**21 22 36.2**	**+0.7**
	baz=55						
KRUC				*e*Sg	**Sg**	**21 23 05.6**	**+0.6**
	10nm,0.4s,baz=55						
KRUC	**Moravsky**	**2.01**	**237**	*e*PN	**Pn**	**21 22 36.3**	**+0.7**
KRUC				*e*SG	**Sg**	**21 23 05.7**	**+0.7**
CRVS	**Cervenica-Dubn**	**2.07**	**127**	*e*PG	**Pg**	**21 22 40.5**	**+0.5**
MODS	**Modra-Piesok**	**2.12**	**212**	*e*PN	**Pb**	**21 22 39.3**	**-0.4**
KOLS	**Kolonicke sedl**	**2.49**	**119**	*e*PN	**Pn**	**21 22 42.7**	**+0.5**
KOLS				*e*SN	**Sn**	**21 23 13.7**	**+0.4**
PRU	**Pruhonice**	**2.85**	**268**	*e*SG	**Sg**	**21 23 31.9**	**-0.2**
	comp=Z,3.2nm,0.3s						
CONA	**Conrad Observa**	**3.04**	**223**	Pn	**Pn**	**21 22 48.9**	**-0.9**
	0.6nm,0.2s						
CONA				*e*Sn	**Sn**	**21 23 26.8**	**-0.2**
	2.3nm,0.4s						
BRG	**Berggiesshubel**	**3.28**	**284**	Pg	**Pg**	**21 23 03.4**	**+0.1**
BRG				Sg	**Sg**	**21 23 46.2**	**+0.5**
BRG				Amp		21 23 49.5	
	comp=Z,3.4nm,0.5s						
CKRC	**Cesky Krumlov**	**3.33**	**248**	*e*PN	**Pn**	**21 22 55.1**	**+1.4**
CKRC				*e*PG	**Pb**	**21 23 00.6**	**+0.4**
CKRC				*e*SG	**Sg**	**21 23 45.6**	**-1.6**
KHC	**Kasperske Hory**	**3.65**	**255**	*e*PN	**Pn**	**21 22 59.0**	**+0.8**
KHC				*e*PG	**Pg**	**21 23 11.5**	**+1.1**
KHC				*e*SG	**Sg**	**21 23 57.9**	**+0.2**
	comp=Z,7.2nm,0.5s						
GERES	**GERESS Array B**	**3.68**	**251**	Pn	**Pn**	**21 23 00.7**	**+2.1**
	comp=Z,0.2nm,0.3s,baz=68,slow=13,SNR=2.6						
GERES				Pg	**Pg**	**21 23 10.1**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=62,slow=19,SNR=9.3						
GERES				Lg	Lg	21 23 56.0	
	comp=Z,0.8nm,0.3s,baz=67,slow=29,SNR=3.7						
MOA	**Molln**	**3.87**	**235**	*i* Pn	**Pn**	**21 23 02.3**	**+1.1**
	comp=Z,0.3nm,0.2s						
MOA				*e*Sn	**Sn**	**21 23 49.0**	**+1.6**
	comp=Z,1.1nm,0.5s						
FINES	**FINESS Array B**	**11.97**	**17**	Pn	**Pn**	**21 24 48.9**	**-3.1**
	comp=Z,0.1nm,0.3s,baz=198,slow=13,SNR=7.6						
FINES				Sn	Sn	21 26 54.2	-12
	comp=Z,0.1nm,0.3s,baz=202,slow=22,SNR=2.9						
	comp=Z,3.5nm,1.0s						
ARCES	**ARCESS Array B**	**19.67**	**7**	Pn	**P**	**21 26 30.3**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=188,slow=13,SNR=1.5						
	comp=Z,2.2nm,0.9s						

*KRSC **03** 21:39:04.2±0.7,48.°96N×156.°06E,h113km±13km,ML4.2*
*IDC **03** 21:39:07.2±2.5,49.°57N×154.°72E,h159km±26km,mb2.9/4, mbtmp3.5/6, Error ellipse: s-maj=41.9km s-min=20.0km az=134.0*

ISC 03 21:39:06.2±1.1,**49.°4N**±0.°2×**154.°9E**±0.°2,**h150**km,**n22,**
σ0**90**/20,**mb3.0**/4,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.47**	**31**	P	**Pn**	**21 39 35.5**	**+0.2**
SKR				S	**Sn**	**21 39 57.9**	**+0.2**
PAU	**Pauzhetka**	**2.37**	**30**	P	**Pn**	**21 39 46.0**	**+0.4**
PAU				S	**Sn**	**21 40 16.6**	**+0.6**
KDTR	**Khodutka, Kamc**	**3.11**	**39**	P	**Pn**	**21 39 54.3**	**-0.6**
KDTR				S	**Sn**	**21 40 31.0**	**-1.6**
ASAK	**Asacha**	**3.50**	**31**	P	**Pn**	**21 40 00.5**	**+0.5**
MTVR	**Mutnovka**	**3.68**	**33**	P	**Pn**	**21 40 02.2**	**-0.1**
MTVR				S	**Sn**	**21 40 46.7**	**+0.7**
GRL	**Gorelyy**	**3.70**	**31**	P	**Pn**	**21 40 03.3**	**+0.7**
RUS	**Russkaya**	**3.76**	**36**	P	**Pn**	**21 40 02.9**	**-0.3**
PETK	**Petropavlovsk-**	**4.07**	**24**	P	**Pn**	**21 40 07.7**	**+0.4**
	10nm,0.6s,baz=193,slow=12,SNR=22						
KOK	**Koryaka**	**4.51**	**30**	P	**Pn**	**21 40 14.6**	**+1.5**
SDLR	**Sedlovina**	**4.58**	**31**	P	**Pn**	**21 40 15.1**	**+1.1**
SPN	**Mys Shipunski**	**4.87**	**39**	P	**Pn**	**21 40 17.1**	**-0.6**
ASAJ	**Asahikawa**	**9.98**	**242**	P	**Pn**	**21 41 26.2**	**+0.3**
	3.0nm,0.4s,baz=70,slow=11,SNR=9.7						
H11N2	**WAKE ISLAND Hy**	**31.15**	**158**	T	T	22 17 51.0	
	baz=341						
H11N1	**WAKE ISLAND Hy**	**31.17**	**158**	T	T	22 17 37.5	
	baz=341						
H11N3	**WAKE ISLAND Hy**	**31.17**	**158**	T	T	22 18 34.3	
	baz=341						
H11S1	**WAKE ISLAND Hy**	**32.28**	**159**	T	T	22 19 34.4	
	baz=345,slow=76,SNR=15						
H11S3	**WAKE ISLAND Hy**	**32.29**	**159**	T	T	22 19 28.8	
	baz=345,slow=76,SNR=20						
H11S2	**WAKE ISLAND Hy**	**32.30**	**159**	T	T	22 19 28.8	
	baz=345,slow=76,SNR=9.9						
ILAR	**Eielson Array**	**33.71**	**41**	P	**P**	**21 45 32.7**	**+0.1**
	0.6nm,0.8s,baz=258,slow=8.8,SNR=5.8						
	0.6nm,0.8s						
MKAR	**Makanchi Array**	**46.82**	**296**	P	**P**	**21 47 18.8**	**-1.8**
	0.1nm,0.5s,baz=64,slow=6.6,SNR=2.6						
	0.1nm,0.5s						
WRA	**Warramunga Arr**	**71.45**	**200**	P	**P**	**21 50 10.4**	**+0.3**
	0.1nm,0.5s,baz=19,slow=6.6,SNR=1.7						
	0.1nm,0.5s						
ASAR	**Alice Springs**	**75.14**	**200**	P	**P**	**21 50 32.9**	**+1.2**
	0.2nm,0.4s,baz=17,slow=6.8,SNR=2.2						
	0.2nm,0.4s						

MAN 03 21:43:25.1,9.°85N×122.°84E,h30km,mb3.9,ML2.7,MS2.2, Negros

*TUL **03** 21:46:58.5±0.9,35.°83N±0.°02×98.°76W±0.°02,h4km±7km, ML2.5,mb_Lg2.3/25(NEIC), Error ellipse: s-maj=3.2km s-min=2.2km az=192.0*

NEIC 03 21:46:59.8±1.0,**35.°84N**±0.°02×**98.°72W**±0.°02,**h13**km±8km,
Error ellipse: s-maj=2.9km s-min=2.2km az=195.0,
Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
U32A	**Winter Ranch,**	**0.58**	**337**	Pg	Pg	21 47 09.7	-1.5
U32A				Sg	Sg	21 47 18.5	-0.5
WMOK	**Wichita Mounta**	**1.10**	**183**		Pb	21 47 18.6	-2.1
OKCFA	**Oklahoma City**	**1.12**	**112**	Pg	Pb	21 47 19.1	-1.8
X34A	**Smith Ranch, M**	**1.44**	**149**		Pn	21 47 24.9	-0.5
T35A	**Sooner Cattle**	**2.08**	**58**	Pn	Pn	21 47 35.2	+0.9
TUL1	**Leonard**	**2.38**	**88**	Pn	Pn	21 47 38.9	+0.5
R32A	**Long Quarter,**	**2.57**	**0**	Pn	Pn	21 47 40.9	-0.2
AMTX	**Amarillo**	**2.60**	**249**	Pn	Pn	21 47 41.1	-0.6
AMTX				IAmb_Lg		21 48 23.1	
	comp=Z,9.4nm,0.7s						
X37A	**Clayton**	**3.01**	**114**		Pn	21 47 48.1	+1.0
ABTX	**Abilene, Hawle**	**3.30**	**194**	IAmb_Lg		21 48 50.7	
	comp=Z,5.2nm,1.1s						
HHAR	**Hobbs**	**3.90**	**82**	IAmb_Lg		21 49 08.1	
	comp=Z,8.3nm,0.9s						
WHTX	**Lake Whitney,**	**3.98**	**164**	IAmb_Lg		21 49 03.5	
	comp=Z,5.2nm,0.8s						
W39A	**Magazine**	**4.08**	**98**	Pn	Pn	21 48 02.1	+0.3
W39A				IAmb_Lg		21 49 12.7	
	comp=Z,8.3nm,0.9s						
MIAR	**Mount Ida**	**4.40**	**106**	Pn	Pn	21 48 07.6	+1.4
MIAR				IAmb_Lg		21 49 22.9	
	comp=Z,7.3nm,1.1s						
S39A	**Bolivar**	**4.71**	**65**	Pn	Pn	21 48 12.2	+1.7
S39A				IAmb_Lg		21 49 35.8	
	comp=Z,8.6nm,0.8s						
T25A	**Trinidad**	**4.77**	**287**	IAmb_Lg		21 49 41.8	
	comp=Z,8.5nm,0.9s						
U40A	**Yellville**	**4.78**	**82**	Pn	Pn	21 48 11.8	+0.4
U40A				IAmb_Lg		21 49 42.5	
	comp=Z,6.2nm,0.8s						
MGMO	**Mountain Grove**	**5.36**	**74**	IAmb_Lg		21 49 58.2	
	comp=Z,6.9nm,0.8s						
JCT	**Junction City**	**5.43**	**190**	IAmb_Lg		21 50 03.3	
	comp=Z,7.7nm,0.9s						
P38A	**Dawn**	**5.58**	**46**	IAmb_Lg		21 50 03.6	
	comp=Z,6.7nm,0.8s						

*KRSC **03** 21:53:16.4±1.7,53.°96N×169.°23E,h16km±25km,ML4.6*
*MOS **03** 21:53:17.6±0.9,54.°03N×169.°37E,h11km,mb4.5/9, Error ellipse: s-maj=7.6km s-min=6.1km az=33.7*
*IDC **03** 21:53:18.1±0.6,54.°24N×169.°33E,h0km,mb4.0/27, mbtmp4.0/29,ML3.9/2,MS3.4/29, Error ellipse: s-maj=17.0km s-min=11.8km az=170.0*
*NEIC **03** 21:53:20.8±1.9,54.°18N±0.°07×169.°3E±0.°1,h18km±3km, mb4.3/111, Error ellipse: s-maj=10.7km s-min=8.5km az=192.0*

ISC 03 21:53:20.5±0.3,**54.°08N**±0.°05×**169.°35E**±0.°04,**h17**km,**n360,**
σ1**9**/**07**/342,**mb4.3**/84,**MS3.4**/25,**11C-1D,Komandorsky**
Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**2.26**	**301**	PN	**Pn**	**21 53 55.5**	**-1.5**
BKI				S	**Sn**	**21 54 22.7**	**-1.7**
BKI	**Bering**	**2.26**	**301**	*e*P	**Pn**	**21 53 55.5**	**-1.5**
BKI				*e*S	**Sn**	**21 54 22.7**	**-1.7**
SHEM	**Shemya Is, Ala**	**3.15**	**114**	Pn	**Pn**	**21 54 08.3**	**-1.0**
	39nm,0.3s,baz=341,slow=5.4,SNR=36						
SHEM				Sn	**Sn**	**21 54 47.7**	**+1.3**
	55nm,0.3s,baz=244,slow=20,SNR=10						
SHEM				LR	LR	21 55 26.8	
	comp=Z,499nm,19.9s,baz=289,slow=40						
	158nm,0.5s						
SMY	**Shemya**	**3.15**	**114**	Pn	**Pn**	**21 54 08.3**	**-1.0**
SMY	**Shemya**	**3.15**	**114**	PN	**Pn**	**21 54 07.9**	**-1.4**
SMY				S	**Sn**	**21 54 47.1**	**+0.6**
SMY	**Shemya**	**3.15**	**114**	*e*P	**Pn**	**21 54 07.9**	**-1.4**
SMY				*e*S	**Sn**	**21 54 47.1**	**+0.6**
KBTR	**Krutoberegovo**	**4.31**	**302**	PN	**Pn**	**21 54 24.5**	**-0.6**
KBTR	**Krutoberegovo**	**4.31**	**302**	*e*P	**Pn**	**21 54 24.5**	**-0.6**
SMKR	**Semkarok**	**5.15**	**302**	PN	**Pn**	**21 54 37.9**	**+1.2**
SMKR	**Semkarok**	**5.15**	**302**	*e*P	**Pn**	**21 54 37.9**	**+1.2**
BDR	**Baidarnaya**	**5.27**	**301**	PN	**Pn**	**21 54 40.0**	**+1.6**
BDR	**Baidarnaya**	**5.27**	**301**	*e*P	**Pn**	**21 54 40.0**	**+1.6**
SRKR	**Sorokina**	**5.33**	**302**	PN	**Pn**	**21 54 40.0**	**+0.8**
SRKR	**Sorokina**	**5.33**	**302**	*e*P	**Pn**	**21 54 40.0**	**+0.8**
KRSR	**Krestovskiy**	**5.47**	**297**	PN	**Pn**	**21 54 41.9**	**+0.7**
KRSR	**Krestovskiy**	**5.47**	**297**	*e*P	**Pn**	**21 54 41.9**	**+0.7**
TUMR	**Tumrok**	**5.47**	**286**	PN	**Pn**	**21 54 41.1**	**-0.1**
TUMR	**Tumrok**	**5.47**	**286**	*e*P	**Pn**	**21 54 41.1**	**-0.1**
KIRR	**Kirishev**	**5.51**	**294**	PN	**Pn**	**21 54 43.1**	**+1.3**
KIRR	**Kirishev**	**5.51**	**294**	*e*P	**Pn**	**21 54 43.1**	**+1.3**
KMNR	**Kamenistaya**	**5.51**	**291**	PN	**Pn**	**21 54 42.1**	**+0.3**
KMNR	**Kamenistaya**	**5.51**	**291**	*e*P	**Pn**	**21 54 42.1**	**+0.3**
KMNR				*e*S	**Sn**	**21 55 44.8**	**0.0**
KII	**Karymskiy**	**5.83**	**274**	PN	**Pn**	**21 54 46.0**	**-0.1**
KII	**Karymskiy**	**5.83**	**274**	*e*P	**Pn**	**21 54 46.0**	**-0.1**
OSSR	**Ossora**	**6.23**	**329**	PN	**Pn**	**21 54 53.0**	**+1.5**
OSSR	**Ossora**	**6.23**	**329**	*e*P	**Pn**	**21 54 53.0**	**+1.5**
SDLR	**Sedlovina**	**6.27**	**267**	PN	**Pn**	**21 54 51.1**	**-1.1**
SDLR	**Sedlovina**	**6.27**	**267**	*e*P	**Pn**	**21 54 51.1**	**-1.1**
UGLR	**Uglovaya**	**6.32**	**266**	PN	**Pn**	**21 54 51.8**	**-1.1**
UGLR	**Uglovaya**	**6.32**	**266**	*e*P	**Pn**	**21 54 51.8**	**-1.1**

SMAR	**Somma**	**6.32**	**267**	PN		**Pn**		**21 54 52.2**	**-0.8**
SMAR	**Somma**	**6.32**	**267**	*e*P		**Pn**		**21 54 52.2**	**-0.8**
AVH	**Avacha**	**6.36**	**267**	PN		**Pn**		**21 54 52.9**	**-0.5**
AVH	**Avacha**	**6.36**	**267**	*e*P		**Pn**		**21 54 52.9**	**-0.5**
ESO	**Esso**	**6.40**	**291**	PN		**Pn**		**21 54 55.4**	**+1.6**
ESO	**Esso**	**6.40**	**291**	*e*P		**Pn**		**21 54 55.4**	**+1.6**
PET	**Petropavlovsk**	**6.46**	**265**	Pn		**Pn**		**21 54 55.3**	**+0.7**
PET	**Petropavlovsk**	**6.46**	**265**	*e*PN		**Pn**		**21 54 57.1**	**+2.4**
PET					pmax	pmax			
	comp=Z,30nm,0.4s								
PET					MLR	MLR			
	comp=Z,500nm,13.0s								
RUS	**Russkaya**	**6.71**	**260**	PN		**Pn**		**21 54 58.6**	**+0.5**
RUS	**Russkaya**	**6.71**	**260**	*e*P		**Pn**		**21 54 58.6**	**+0.5**
GNL	**Ganaly**	**6.75**	**271**	PN		**Pn**		**21 54 59.1**	**+0.3**
GNL	**Ganaly**	**6.75**	**271**	*e*P		**Pn**		**21 54 59.1**	**+0.3**
KRMR	**Karymshinskiy**	**6.81**	**264**	PN		**Pn**		**21 54 59.9**	**+0.3**
KRMR	**Karymshinskiy**	**6.81**	**264**	*e*P		**Pn**		**21 54 59.9**	**+0.3**
MTVR	**Mutnovka**	**6.88**	**261**	PN		**Pn**		**21 55 00.7**	**+0.1**
MTVR	**Mutnovka**	**6.88**	**261**	*e*P		**Pn**		**21 55 00.7**	**+0.1**
GRL	**Gorelyy**	**6.93**	**262**	PN		**Pn**		**21 55 01.7**	**+0.5**
GRL	**Gorelyy**	**6.93**	**262**	*e*P		**Pn**		**21 55 01.7**	**+0.5**
PEA0B	**Petropavlovsk-**	**7.00**	**267**	Pn		**Pn**		**21 55 01.8**	**-0.4**
PEA0B	**Petropavlovsk-**	**7.00**	**267**	PN		**Pn**		**21 55 01.8**	**-0.4**
PETK	**Petropavlovsk-**	**7.00**	**267**	Pn		**Pn**		**21 55 01.9**	**-0.3**
	comp=Z,3.1nm,0.3s,baz=100,slow=18,SNR=23								
PETK					Sn	**Sn**		**21 56 17.5**	**-3.8**
	comp=Z,2.0nm,0.3s,baz=83,slow=25,SNR=4.3								
PETK					LR	LR		21 57 44.8	
	comp=Z,218nm,21.5s,baz=93,slow=38								
	comp=Z,5.0nm,0.5s								
PETK	**Petropavlovsk-**	**7.00**	**267**	Pn		**Pn**		**21 55 01.8**	**-0.3**
PETK						**Sn**		**21 56 19.1**	**-2.2**
ASAK	**Asacha**	**7.08**	**261**	PN		**Pn**		**21 55 02.7**	**-0.6**
ASAK	**Asacha**	**7.08**	**261**	*e*P		**Pn**		**21 55 02.7**	**-0.6**
KIWB	**Kanaga Island**	**8.45**	**100**	Pn		**Pn**		**21 55 21.9**	**-0.1**
ADK	**Adak**	**8.71**	**99**	Pn		**Pn**		**21 55 24.8**	**-0.8**
ADK	**Adak**	**8.71**	**99**	PN		**Pn**		**21 55 24.8**	**-0.8**
MA2	**Magadan**	**11.55**	**306**	LR		LR		22 00 21.7	
	comp=Z,57nm,20.6s,baz=47,slow=37								
SEY	**Seymchan**	**12.50**	**322**	LR		LR		22 01 00.6	
	comp=Z,148nm,18.3s,baz=218,slow=37								
GAMB	**Gambell**	**13.72**	**37**	P		**Pn**		**21 56 34.0**	**0.0**
	baz=234								
BILL	**Bilibino**	**14.08**	**355**	Pn		**Pn**		**21 56 39.1**	**+0.2**
BILL	**Bilibino**	**14.08**	**355**	*e*P		**Pn**		**21 56 39.5**	**+0.6**
BILL					pmax	pmax			
	comp=Z,7.0nm,1.6s								
BILL					MLR	MLR			
	comp=Z,95nm,15.0s								
AKUT	**Akutan**	**14.58**	**80**	P		**P**		**21 56 50.6**	**-1.5**
SDPT	**Sand Point**	**17.42**	**74**	P		**Pn**		**21 57 23.6**	**+1.3**
	baz=279								
CNBA	**Chernabura Isl**	**18.01**	**75**			**Pn**		**21 57 29.3**	**-0.4**
N16K	**Nishlik Lake**	**18.25**	**57**	P		**Pn**		**21 57 32.8**	**+0.2**
	baz=264								
N18K	**Kilae Creek**	**19.68**	**56**	P		**Pn**		**21 57 50.0**	**+0.1**
N18K	**Kilae Creek**	**19.68**	**56**	P		**P**		**21 57 48.9**	**+0.5**
	baz=266								
SVW2	**Sparrevohn**	**19.86**	**55**	P		**P**		**21 57 51.4**	**+1.0**
TTA	**Tatalina**	**19.91**	**50**	P		**Pn**		**21 57 52.3**	**-0.4**
TTA					IAmb	IAmb		21 57 53.4	
	comp=Z,16nm,1.0s								
TTA	**Tatalina**	**19.91**	**50**	P		**Pn**		**21 57 52.3**	**-0.4**
TTA					pmax	pmax			
	comp=Z,16nm,1.0s								
TTA	**Tatalina**	**19.91**	**50**	P		**P**		**21 57 51.6**	**+0.6**
	baz=260,SNR=13								
P18K	**Big Mountain,**	**19.97**	**60**	P		**P**		**21 57 52.1**	**+0.5**
P18K					IAmb	IAmb		21 57 57.7	
	comp=Z,24nm,1.5s								
P18K	**Big Mountain,**	**19.97**	**60**	P		**P**		**21 57 52.3**	**+0.7**
	baz=270								
O18K	**Koktuh Hills**	**19.98**	**59**	P		**P**		**21 57 52.3**	**+0.6**
O18K	**Koktuh Hills**	**19.98**	**59**	P		**Pn**		**21 57 53.1**	**-0.4**
	baz=269								
CHIR	**Chirikof Islan**	**20.07**	**71**	P		**P**		**21 57 51.8**	**-0.8**
L19K	**White Mountain**	**20.32**	**52**	P		**P**		**21 57 56.3**	**+0.8**
L19K	**White Mountain**	**20.32**	**52**	P		**P**		**21 57 56.3**	**+0.8**
	baz

comp=Z,11nm,1.1s
SUA Susitna One 22.22 55 P P 21 58 15.4 -0.5
baz=269
BRSE Bradley Lake S 22.24 59 P P 21 58 16.5 +0.4
baz=273
KTH Kantishna Hill 22.28 49 P P 21 58 16.4 -0.1
KTH IAmb IAmb 21 58 35.5
comp=Z,6nm,0.9s
BPAW Bear Paw Mtn. 22.32 48 P P 21 58 16.9 +0.1
BPAW Bear Paw Mtn. 22.32 48 P P 21 58 16.7 -0.2
baz=262
TRF Thorofare Moun 22.55 49 P P 21 58 19.4 -0.1
TRF IAmb IAmb 21 58 33.3
comp=Z,10nm,0.8s
TRF Thorofare Moun 22.55 49 P P 21 58 18.3 -1.2
baz=264,SNR=6.3
MLY Manley 22.57 45 P P 21 58 19.4 -0.1
MLY Manley 22.57 45 P P 21 58 19.8 +0.2
baz=260
A21K Barrow 22.75 28 P P 21 58 21.1 -0.2
baz=239
I23K Minto, Yukon-K 23.16 45 P P 21 58 24.9 -0.8
I23K IAmb IAmb 21 58 31.4
comp=Z,12nm,1.5s
I23K Minto, Yukon-K 23.16 45 P P 21 58 25.3 -0.4
baz=262
MCK McKinley 23.18 49 P P 21 58 24.9 -1.0
MCK IAmb IAmb 21 58 39.1
comp=Z,4.2nm,0.6s
MCK McKinley 23.18 49 P P 21 58 24.9 -1.0
MCK pmax pmax
comp=Z,4.0nm,0.6s
MCK McKinley 23.18 49 P P 21 58 25.7 -0.2
baz=265
RND Reindeer 23.19 50 P P 21 58 24.8 -1.2
RND Reindeer 23.19 50 P P 21 58 24.8 -1.2
RND pmax pmax
comp=Z,6.0nm,1.0s
H23K Yukon River 23.20 43 P P 21 58 24.7 -1.5
H23K IAmb IAmb 21 58 30.9
comp=Z,10nm,1.2s
H23K Yukon River 23.20 43 P P 21 58 25.2 -1.0
baz=260
NEA2 Nenana 23.21 47 P P 21 58 25.0 -1.2
NEA2 Nenana 23.21 47 P P 21 58 25.3 -0.9
baz=263
COLD Coldfoot 23.25 40 P P 21 58 25.9 -0.7
KNK Knik Glacier 23.32 55 P P 21 58 25.5 -1.8
KNK IAmb IAmb 21 58 33.2
comp=Z,11nm,0.9s
KNK Knik Glacier 23.32 55 P P 21 58 27.0 -0.3
baz=271
SML Sawmill 23.37 54 P P 21 58 26.8 -1.1
SML IAmb IAmb 21 58 29.4
comp=Z,9.9nm,0.8s
SML Sawmill 23.37 54 P P 21 58 27.7 -0.2
baz=270
MDM Murphy Dome 23.61 46 P P 21 58 29.1 -1.1
WRH Wood River Hil 23.62 47 P P 21 58 29.5 -0.7
KLR Kul'dur 23.62 274 P P 21 58 30.8 +0.4
comp=Z,2.2nm,0.8s,baz=68,slow=10,SNR=7.4
KLR LR LR 22 07 22.6
comp=Z,67nm,19.8s,baz=48,slow=36
comp=Z,2.2nm,0.8s
KLR Kul'dur 23.62 274 *ce* P P 21 58 32.1 +1.7
KLR pmax pmax
comp=Z,11nm,2.5s
WAT6 Susitna Watana 23.66 52 P P 21 58 29.4 -1.4
baz=269
M23K Glacier View 23.66 54 P P 21 58 30.5 -0.2
baz=271
CCB Clear Creek Bu 23.76 47 P P 21 58 30.7 -0.8
DHY Denali Highway 23.84 51 IAmb IAmb 21 58 35.7
comp=Z,15nm,1.5s
DHY Denali Highway 23.84 51 P P 21 58 32.0 -0.5
baz=268
SCM Sheep Creek Mo 23.85 54 P P 21 58 32.1 -0.4
SCM IAmb IAmb 21 58 35.5
comp=Z,8.2nm,0.8s
SCM Sheep Creek Mo 23.85 54 P P 21 58 32.1 -0.4
SCM pmax pmax
comp=Z,8.0nm,0.8s
SCM Sheep Creek Mo 23.85 54 P P 21 58 31.4 -1.2
baz=271
TOLK Toolik Lake Re 23.86 37 P P 21 58 32.0 -0.6
TOLK Toolik Lake Re 23.86 37 P P 21 58 32.1 -0.5
baz=253,SNR=14
H24K Noodor Dome 23.88 44 P P 21 58 31.6 -1.2
H24K IAmb IAmb 21 58 48.4
comp=Z,13nm,1.5s
H24K Noodor Dome 23.88 44 P P 21 58 32.0 -0.8
baz=261
P23K Montague Islan 23.91 58 P P 21 58 32.1 -0.9
baz=275
POKR Poker Plat Res 23.97 46 P P 21 58 33.2 -0.4
baz=264
GLI Glacier Island 24.00 56 P P 21 58 31.9 -1.9
GLI IAmb IAmb 21 58 34.4
comp=Z,11nm,1.1s
GLI Glacier Island 24.00 56 P P 21 58 33.8 0.0
baz=273
HDA Harding Lake 24.11 47 P P 21 58 33.0 -1.8
HDA Harding Lake 24.11 47 P P 21 58 34.6 -0.2
baz=266
IL31 24.16 46 P P 21 58 34.3 -1.0
IL31 IAmb IAmb 21 58 38.1
comp=Z,12nm,1.3s
ILAR Eielson Array 24.16 46 P P 21 58 34.2 -1.2
comp=Z,3.5nm,1.0s,baz=250,slow=7.6,SNR=22
ILAR LR LR 22 09 43.6
comp=Z,42nm,18.3s,baz=254,slow=41
comp=Z,3.5nm,1.0s
ILAR Eielson Array 24.16 46 P P 21 58 34.5 -0.9
FID Port Fidalgo 24.30 56 P P 21 58 36.8 0.0
FID IAmb IAmb 21 58 43.4
comp=Z,13nm,1.1s
M24K Tolsona, Glenn 24.39 53 P P 21 58 37.0 -0.6
M24K Tolsona, Glenn 24.39 53 P P 21 58 37.3 -0.2
baz=272,SNR=9.7
KLU Klutina 24.53 54 P P 21 58 38.6 -0.2
KLU IAmb IAmb 21 58 43.6
comp=Z,7.8nm,0.9s
KLU Klutina 24.53 54 P P 21 58 37.6 -1.3
baz=273
K24K Donnelly Dome 24.58 49 P P 21 58 37.5 -1.8
baz=268
EYAK Cordova Ski Ar 24.68 57 P P 21 58 40.4 +0.3
baz=275
PAX Paxson 24.71 51 P P 21 58 39.5 -1.0
PAX IAmb IAmb 21 58 44.3
comp=Z,11nm,1.1s
PAX Paxson 24.71 51 P P 21 58 39.5 -1.0
PAX pmax pmax
comp=Z,11nm,1.1s
PAX Paxson 24.71 51 P P 21 58 39.9 -0.6
baz=270,SNR=11
TIXI Tiksi 24.72 331 P P 21 58 39.9 -0.5
comp=Z,5.5nm,0.6s,baz=92,slow=22,SNR=15
comp=Z,5.5nm,0.6s
TIXI Tiksi 24.72 331 P P 21 58 39.5 -0.8
TIXI IAmb IAmb 21 58 43.9
comp=Z,5.9nm,0.7s
TIXI Tiksi 24.72 331 *ce* P P 21 58 40.4 0.0
TIXI pmax pmax
comp=Z,21nm,2.5s
J25K Salcha River, 24.80 47 P P 21 58 39.9 -1.3
J25K Salcha River, 24.80 47 P P 21 58 40.2 -1.1
baz=267
HARP HAARP 24.86 52 P P 21 58 40.4 -1.4
baz=272
RIDG Independent Ri 25.00 49 P P 21 58 43.1 +0.1
RIDG IAmb IAmb 21 58 57.1
comp=Z,4.6nm,0.8s
RIDG Independent Ri 25.00 49 P P 21 58 42.1 -0.9
baz=269
N25K Chitina, Valde 25.16 54 P P 21 58 42.8 -1.7
baz=274
BMRM Bremner River 25.20 56 P P 21 58 44.2 -0.6
BMRM IAmb IAmb 21 58 54.4
comp=Z,7.8nm,0.9s
BMRM Bremner River 25.20 56 P P 21 58 44.9 0.0
baz=275
DOT Dot Lake 25.34 49 P P 21 58 46.0 -0.1
SCRK Sand Creek 25.38 48 P P 21 58 45.3 -1.3
SCRK IAmb IAmb 21 58 48.6
comp=Z,5.8nm,1.0s
SCRK Sand Creek 25.38 48 P P 21 58 45.0 -1.6
baz=269,SNR=6.4
BMAR Burnt Mountain 25.43 40 P P 21 58 47.1 +0.3
MENT Mentasta 25.51 51 P P 21 58 48.5 +0.9
MENT IAmb IAmb 21 58 52.6
comp=Z,4.6nm,0.8s
GLB Gilahina Butte 25.55 54 P P 21 58 47.9 -0.1
GLB IAmb IAmb 21 58 51.7
comp=Z,15nm,1.5s
J26L Joseph Creek 25.58 47 P P 21 58 47.5 -0.8
J26L Joseph Creek 25.58 47 P P 21 58 46.6 -1.7
baz=269
L26K Log Cabin Wild 25.67 51 P P 21 58 49.4 +0.3
L26K IAmb IAmb 21 58 58.4
comp=Z,10nm,1.4s
VRDI Verde Repeater 25.74 55 P P 21 58 49.3 -0.6
VRDI IAmb IAmb 21 58 52.1
comp=Z,9.2nm,1.1s
M26K Nabesna, AK 25.86 52 P P 21 58 51.0 +0.1
M26K Nabesna, AK 25.86 52 P P 21 58 51.0 +0.1
baz=274
MCARA McCarthy VSAT 25.93 54 P P 21 58 50.8 -0.6
baz=276
USRK Ussuriysk Ar. 26.08 263 LR LR 22 09 38.1
comp=Z,77nm,18.3s,baz=45,slow=38
K27K Chicken 26.22 48 IAmb IAmb 21 58 58.8
comp=Z,7.3nm,1.1s
K27K Chicken 26.22 48 P P 21 58 53.5 -0.6
baz=271
ISLE Juniper Island 26.35 56 P P 21 58 54.1 -1.2
ISLE IAmb IAmb 21 58 58.8
comp=Z,5.3nm,0.9s
L27K Beaver Creek, 26.36 51 P P 21 58 55.1 -0.3
L27K IAmb IAmb 21 58 58.8
comp=Z,6.2nm,1.2s
L27K Beaver Creek, 26.36 51 P P 21 58 55.6 +0.2
baz=273
BCAR Beaver Creek A 26.38 51 P P 21 58 55.1 -0.5
M27K Edge Creek, AK 26.39 52 P P 21 58 56.5 +0.8
M27K IAmb IAmb 21 59 00.2
comp=Z,11nm,1.0s
M27K Edge Creek, AK 26.39 52 P P 21 58 55.1 -0.6
baz=274,SNR=8.4
GRNC Granite Creek 26.61 56 P P 21 58 57.7 -0.2
GRNC IAmb IAmb 21 59 05.8
comp=Z,13nm,1.1s
BARN Barnard Glacie 26.62 55 P P 21 58 57.9 0.0
BARN IAmb IAmb 21 59 05.7
comp=Z,8.8nm,1.0s
YUK3 Moose Creek 27.11 53 P P 21 59 02.1 -0.2
baz=277
MDJ Mudanjiang 27.24 266 P P 21 59 02.7 -0.7
DAWY Dawson 27.40 48 P P 21 59 04.5 -0.2
baz=273
MJB9 Matsu-Tunnel 27.73 244 P P 21 59 08.1 +0.2
MJB9 IAmb IAmb 21 59 11.8
comp=Z,4.5nm,0.7s
MAJO Matsushiro 27.73 243 P P 21 59 08.2 +0.4
MAJO IAmb IAmb 21 59 11.8
comp=Z,4.6nm,0.7s
MAJO Matsushiro 27.73 243 P P 21 59 08.3 +0.4
MAJO pmax pmax
comp=Z,5.0nm,0.7s
BCPM Bancas Point 27.78 57 P P 21 59 08.6 +0.5
EPYK Eagle Plains 28.45 43 P P 21 59 13.8 -0.3
EPYK IAmb IAmb 21 59 14.8
comp=Z,5.9nm,0.9s
EPYK Eagle Plains 28.45 43 P P 21 59 13.5 -0.5
baz=271
HYT Haines Junctio 28.66 55 P P 21 59 16.1 0.0
HYT IAmb IAmb 21 59 28.4
comp=Z,3.9nm,0.8s
HYT Haines Junctio 28.66 55 P P 21 59 15.9 -0.2
baz=281
INK Inuvik 29.66 39 P P 21 59 24.4 -0.3
comp=Z,1.8nm,0.6s,baz=272,slow=4.8,SNR=2.5
comp=Z,1.8nm,0.6s
M31M Drury Creek, Y 29.88 52 P P 21 59 27.5 +0.8
M31M IAmb IAmb 21 59 29.6
comp=Z,3.6nm,0.7s
M31M Drury Creek, Y 29.88 52 P P 21 59 26.7 0.0
baz=281
P33M Teslin, Yukon 31.06 55 P P 21 59 37.5 +0.3
baz=285
MMPY Sheldon Lake, 31.22 50 P P 21 59 39.0 +0.4
baz=282
KSRS Korea Array 32.77 257 P P 21 59 54.5 +2.2
comp=Z,1.3nm,0.7s,baz=48,slow=9.1,SNR=6.4
KSRS LR LR 22 13 37.1
comp=Z,25nm,18.1s,baz=255,slow=37
comp=Z,1.3nm,0.7s
KSAR Wonju Array Be 32.80 257 P P 21 59 53.2 +0.6
KSAR Wonju Array Be 32.80 257 P P 21 59 53.2 +0.6
DLBC Dease Lake 32.95 57 P P 21 59 54.7 +0.9
comp=Z,3.6nm,0.8s,baz=298,slow=12,SNR=4.4
comp=Z,3.6nm,0.8s
DLBC Dease Lake 32.95 57 P P 21 59 54.1 +0.3
DLBC IAmb IAmb 21 59 56.2
comp=Z,4.9nm,0.9s
C36M Paulatuk 33.02 37 P P 21 59 53.8 -0.4
baz=277
H11N2 WAKE ISLAND Hy 34.34 184 T T 22 36 29.3
baz=2.6,slow=76,SNR=874
H11N3 WAKE ISLAND Hy 34.36 184 T T 22 36 30.3
baz=2.6,slow=76,SNR=796
H11N1 WAKE ISLAND Hy 34.36 184 T T 22 36 30.6
baz=2.6,slow=76,SNR=1226
H11S1 WAKE ISLAND Hy 35.57 184 T T 22 38 01.0
baz=2.7,slow=76,SNR=361
H11S3 WAKE ISLAND Hy 35.58 184 T T 22 38 02.6
baz=2.7,slow=76,SNR=124
H11S2 WAKE ISLAND Hy 35.58 184 T T 22 38 02.3
baz=2.7,slow=76,SNR=399
NRIK Noril'sk 38.26 325 *ce* P P 22 00 41.5 +2.4
ULN Ulaanbaatar 38.57 287 P P 22 00 41.9 -0.3
ULN Ulaanbaatar 38.57 287 *ce* P P 22 00 44.5 +2.3
ULN pmax pmax
comp=Z,6.0nm,2.5s
YKA Yellowknife Ar 38.59 46 P P 22 00 42.1 +0.1
comp=Z,1.0nm,0.7s,baz=290,slow=7.9,SNR=5.4
comp=Z,1.0nm,0.7s
SONM Songino Array 38.96 287 LR LR 22 18 23.6
comp=Z,96nm,18.8s,baz=220,slow=39
SONM Songino Array 38.96 287 P P 22 00 45.3 -0.1
SONM Songino Array 38.96 287 P P 22 00 45.3 -0.1
SONM pmax pmax
comp=Z,2.0nm,1.0s
HHC Hu-ho-hao-te 40.12 275 *eP* P 22 00 53.8 -1.3
HHC pmax pmax
comp=Z,25nm,0.9s
HHC pmax pmax
comp=Z,110nm,5.6s
C03A Quillayute Air 40.65 71 P P 22 00 59.5 +0.2
LTY Liberty 43.20 69 P P 22 01 20.0 -0.3
EDM Edmonton 43.66 58 P P 22 01 24.0 +0.1
EDM IAmb IAmb 22 01 36.1
comp=Z,5.3nm,0.9s
EDM Edmonton 43.66 58 P P 22 01 24.0 +0.1
EDM pmax pmax
comp=Z,5.0nm,0.9s
NEW Newport 44.54 66 LR LR 22 19 30.7
comp=Z,42nm,18.6s,baz=301,slow=35
J05D Fort Rock, OR 45.31 74 P P 22 01 37.3 -0.1
baz=309
YBH Yreka Blue Hor 45.46 77 LR LR 22 18 02.4
comp=Z,68nm,18.3s,baz=292,slow=33
GTA Gaotai 47.89 282 *eP* P 22 01 57.5 -0.1
GTA pP pwP 22 02 07.6 +3.0
GTA sP sP 22 02 14.3 +10
GTA pmax pmax
comp=Z,2.0nm,0.9s
PNTR Pine Nut 48.98 77 P P 22 02 05.2 -0.9
NVAR Mina Array Bea 50.18 77 P P 22 02 14.5 -0.7
comp=Z,0.8nm,0.7s,baz=296,slow=6.9,SNR=7.8
comp=Z,0.8nm,0.7s
NVAR Mina Array Bea 50.18 77 P P 22 02 15.2 0.0
ELK Elko 50.35 73 LR LR 22 20 23.8
comp=Z,39nm,21.1s,baz=308,slow=32
WMQ Urumqi 51.73 294 *eP* P 22 02 29.1 +2.5
KURK Kurchatov 51.76 306 P P 22 02 24.9 -1.7
KURK IAmb IAmb 22 02 31.1
comp=Z,3.0nm,1.0s
KURK Kurchatov 51.76 306 *ce* P P 22 02 26.2 -0.4
KURK pmax pmax
comp=Z,5.0nm,1.3s
R11A Troy Canyon, C 51.79 75 P P 22 02 27.4 +0.2
baz=314
KURBB Kurchatov Arra 51.86 306 P P 22 02 26.3 -1.1
comp=Z,1.5nm,0.7s,baz=52,slow=7.5,SNR=9.9
comp=Z,1.5nm,0.7s
PD31 Pinedale Array 52.13 67 P P 22 02 29.7 -0.1
PDAR Pinedale Array 52.13 67 P P 22 02 29.8 -0.1
comp=Z,0.6nm,0.7s,baz=306,slow=5.4,SNR=4.3
PDAR LR LR 22 24 28.2
comp=Z,22nm,18.1s,baz=352,slow=36
comp=Z,0.6nm,0.7s
PDAR Pinedale Array 52.13 67 P P 22 02 28.9 -1.0
FURC Furnace Creek, 52.36 78 P P 22 02 32.4 +1.1
baz=315
TPNV Topopah Spring 52.38 77 P P 22 02 32.4 +0.8
TPNV IAmb IAmb 22 02 39.2
comp=Z,3.4nm,0.9s
TPNV Topopah Spring 52.38 77 P P 22 02 32.4 +0.8
TPNV pmax pmax
comp=Z,3.0nm,0.9s
TPNV Topopah Spring 52.38 77 P P 22 02 32.4 +0.8
baz=314
MK31 Makanchi Array 52.56 300 P P 22 02 31.3 -1.4
MK31 Makanchi Array 52.56 300 P P 22 02 31.3 -1.4
MK31 pmax pmax
comp=Z,2.0nm,1.3s
MKAR Makanchi Array 52.56 300 P P 22 02 31.1 -1.6
comp=Z,0.3nm,0.6s,baz=60,slow=8.5,SNR=4.3
comp=Z,0.3nm,0.6s
MKAR Makanchi Array 52.56 300 P P 22 02 31.6 -1.1
MKAR Makanchi Array 52.56 300 P P 22 02 31.6 -1.1
ARCES ARCESS Array B 53.91 345 P P 22 02 39.4 -2.8
comp=Z,5.1nm,0.8s,baz=13,slow=6.5,SNR=5.8
comp=Z,5.1nm,0.8s
BRVK Borovoye 53.97 313 P P 22 02 41.7 -1.3
BRVK IAmb IAmb 22 02 46.0
comp=Z,3.7nm,0.7s
BRVK Borovoye 53.97 313 *ce* P P 22 02 43.1 +0.2
BRVK pmax pmax
comp=Z,7.0nm,1.3s
RSSD Black Hills 54.16 62 P P 22 02 43.4 -1.3
baz=314
PFO Pinyon Flats O 54.61 80 LR LR 22 24 25.6
comp=Z,42nm,18.3s,baz=172,slow=34
AGMN Agassiz Nation 55.35 54 P P 22 02 52.3 -0.7
baz=315
PV13 Radium Mtn., P 55.73 71 P P 22 02 55.8 -0.4
PZH PanZhiHua 55.96 269 P P 22 02 59.2 +1.4
PZH pmax pmax
comp=Z,7.0nm,0.8s
PZH pmax pmax
comp=Z,100nm,5.6s
ARU Arti 56.24 321 LR LR 22 28 58.5
comp=Z,43nm,18.5s,baz=46,slow=38
ARU Arti 56.24 321 P P 22 02 58.6 -0.7
ARU IAmb IAmb 22 03 04.9
comp=Z,4.4nm,0.8s
ARU Arti 56.24 321 *di* P P 22 03 00.4 +1.1
ARU 22 03 56.4
ARU 22 05 03.2
ARU S S 22 10 52.5 +4.7
ARU SS SS 22 14 30.5 -3.1
ARU pmax pmax
comp=Z,6.0nm,0.9s
ISCO Idaho Springs 56.33 67 P P 22 03 00.4 -0.2
baz=315
S22A 4UR Ranch, Cre 57.13 70 P P 22 03 04.2 -2.0
baz=316
Q24A Divide 57.18 68 P P 22 03 03.7 -2.9
baz=316
EYMN Ely 57.65 52 P P 22 03 08.6 -0.8
baz=317
SDCO Great Sand Dun 57.86 69 P P 22 03 10.6 -0.8
baz=316
214A Organ Pipe Nat 57.92 79 P P 22 03 11.2 -0.4
baz=317
TUC Tucson 58.83 77 P P 22 03 17.7 -0.3
baz=318
ANMO Albuquerque 59.36 72 LR LR 22 26 59.5
comp=Z,29nm,20.4s,baz=335,slow=34
ANMO Albuquerque 59.36 72 P P 22 03 20.4 -1.3
baz=317
AAK Ala-Archa 59.43 301 LR LR 22 29 10.9
comp=Z,51nm,18.9s,baz=84,slow=36
I37A Lemond, Waseca 59.62 56 P P 22 03 22.8 -0.3
KSH Kashi 60.97 298 P P 22 03 36.5 +3.9
KSH pmax pmax
comp=Z,3.0nm,0.7s
AKTO Aktyubinsk 61.04 317 LR LR 22 33 21.8
comp=Z,34nm,18.3s,baz=37,slow=40
KKAR Karatay Array 61.06 304 P P 22 03 31.9 -1.1
KKAR Karatay Array 61.06 304 P P 22 03 32.1 -1.1
KKAR IAmb IAmb 22 03 35.7
comp=Z,1.1nm,0.8s
KKAR Karatay Array 61.06 304 P P 22 03 32.0 -1.1
KKAR pmax pmax
comp=Z,1.0nm,0.8s
ABKAR Akbulak array 61.17 315 P P 22 03 32.6 -1.1
ABKAR IAmb IAmb 22 03 36.1
comp=Z,7.1nm,1.5s
ABKAR Akbulak array 61.17 315 P P 22 03 32.5 -1.1
FINES FINESS Array B 61.20 341 P P 22 03 32.2 -1.4
comp=Z,2.4nm,0.8s,baz=85,slow=6.5,SNR=4.3
FINES LR LR 22 34 09.8
comp=Z,31nm,18.1s,baz=82,slow=40
comp=Z,2.4nm,0.8s
FINES FINESS Array B 61.20 341 P P 22 03 32.8 -0.9
FINES FINESS Array B 61.20 341 *ce* P P 22 03 34.5 +0.8
FINES pmax pmax
comp=Z,2.0nm,0.8s
BORG Borgarnes 61.22 5 LR LR 22 29 09.9
comp=Z,18nm,19.2s,baz=330,slow=35
MNTX Cornudas Mount 62.36 74 P P 22 03 42.2 +0.2
MNTX Cornudas Mount 62.36 74 P P 22 03 42.5 +0.6
baz=319,SNR=5.4
BTK Batken 63.20 302 P P 22 03 46.6 -0.9
BTK Batken 63.20 302 P P 22 03 46.6 -0.9
BTK pmax pmax
comp=Z,9.0nm,1.4s
L44A Lake County Fo 63.65 54 P P 22 03 48.2 -2.1
baz=320
WMOK Wichita Mounta 63.74 67 P P 22 03 49.5 -1.6
baz=319
CMAR Chiang Mai Arr 63.78 265 P P 22 03 52.2 +0.8
comp=Z,0.6nm,0.3s,baz=29,slow=7.6,SNR=4.5
CMAR LR LR 22 32 20.9
comp=Z,20nm,19.6s,baz=180,slow=37
comp=Z,0.6nm,0.3s
CMAR Chiang Mai Arr 63.78 265 P P 22 03 51.0 -0.5
CMAR Chiang Mai Arr 63.78 265 *ce* P P 22 03 55.2 +3.7
CMAR pmax pmax
comp=Z,1.0nm,0.3s
NB201 NORSAR Array S 63.89 348 P P 22 03 50.6 -1.1
NB2 NORSAR Subarra 63.91 348 P P 22 03 51.0 -0.9
comp=Z,0.8nm,0.5s,baz=15,slow=6.9
NOA NORSAR Array B 63.91 348 P P 22 03 51.0 -0.9
comp=Z,1.5nm,0.7s,baz=16,slow=6.6,SNR=8.3
comp=Z,1.5nm,0.7s
HFS Hagfors 64.48 347 LR LR 22 34 15.9
comp=Z,23nm,18.1s,baz=350,slow=38
FAKI Fak Fak 64.63 222 P P 22 03 57.0 0.0
TX31 Lajitas Ar. Si 65.11 74 P P 22 04 00.3 +0.1
TXAR Lajitas Array 65.11 74 P P 22 04 00.6 +0.4
comp=Z,0.8nm,0.4s,baz=304,slow=4.6,SNR=14
TXAR LR LR 22 30 31.5
comp=Z,20nm,19.1s,baz=320,slow=34
comp=Z,0.8nm,0.4s
TXAR Lajitas Array 65.11 74 P P 22 04 00.2 -0.1
TXAR Lajitas Array 65.11 74 P P 22 04 00.2 -0.1
LPIG La Paz 65.27 83 LR LR 22 28 26.3
comp=Z,12nm,18.3s,baz=228,slow=32
U40A Yellville 65.65 61 P P 22 04 02.4 -1.1
baz=320
MIAR Mount Ida 66.66 63 P P 22 04 08.8 -1.2
baz=321
VORR Voronezh 66.69 329 *eP* P 22 04 12.6 +2.7
VORR pmax pmax
comp=Z,30nm,0.4s
W41B Gary Mavity, V 66.87 62 P P 22 04 10.1 -1.3
baz=321
M53A WI Miller and 67.58 50 P P 22 04 15.0 -0.8
baz=323
WVT Waverly 68.38 58 P P 22 04 20.0 -0.8
baz=322
SUW Suwalki 68.69 339 P P 22 04 22.5 0.0
SUW Suwalki 68.69 339 P P 22 04 22.5 0.0
SUW pmax pmax
comp=Z,32nm,1.5s

AKASG	**Malin Array Be**	**70.36**	**334**	P	**P**	**22 04 32.1**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=27,slow=6.3,SNR=7.7						
AKASG				LR	LR	22 37 19.3	
	comp=Z,25nm,18.2s,baz=6.5,slow=38						
	comp=Z,0.6nm,0.3s						
AKBB	**Malin Array Si**	**70.36**	**334** *ce*	**P**	**P**	**22 04 35.8**	**+2.9**
EKA	**Eskdalemuir Ar**	**70.77**	**355**	P	**P**	**22 04 35.1**	**-0.2**
	comp=Z,1.7nm,0.8s,baz=358,slow=5.0,SNR=3.9						
	comp=Z,1.7nm,0.8s						
GEYT	**Alibeck**	**70.98**	**309**	LR	LR	22 38 30.7	
	comp=Z,60nm,18.4s,baz=184,slow=38						
LRAL	**Lakeview Retre**	**71.24**	**60**	P	**P**	**22 04 37.4**	**-1.1**
	baz=323						
KBZ	**Khabaz**	**72.37**	**322**	P	**P**	**22 04 45.6**	**+0.6**
	comp=Z,0.7nm,0.5s,baz=45,slow=10.0,SNR=2.1						
	comp=Z,0.7nm,0.5s						
GNI	**Garni**	**74.78**	**319**	LR	LR	22 42 23.7	
	comp=Z,29nm,18.2s,baz=349,slow=40						
GERES	**GERESS Array B**	**75.40**	**344**	P	**P**	**22 05 02.9**	**0.0**
	comp=Z,0.6nm,0.9s,baz=40,slow=5.1,SNR=3.2						
	comp=Z,0.6nm,0.9s						
BRTR	**Keskin Array B**	**79.10**	**327**	P	**P**	**22 05 24.6**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=76,slow=5.2,SNR=6.2						
	comp=Z,0.5nm,0.5s						
BRTR	**Keskin Array B**	**79.10**	**327**	P	**P**	**22 05 24.7**	**+0.8**
BRTR	**Keskin Array B**	**79.10**	**327** *ce*	P	**P**	**22 05 27.7**	**+3.8**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TEOL	**Teolo**	**79.12**	**344**	P	**P**	**22 05 24.4**	**+0.7**
BNN	**Bunyan**	**79.16**	**325**	P	**P**	**22 05 23.8**	**-0.4**
ANTO	**Ankara**	**79.24**	**327**	P	**P**	**22 05 24.9**	**+0.4**
ANTO	**Ankara**	**79.24**	**327**	P	**P**	**22 05 24.9**	**+0.4**
ANTO				pmax	pmax		
	comp=Z,9.0nm,1.1s						
WRA	**Warramunga Arr**	**79.63**	**213**	P	**P**	**22 05 27.2**	**+0.6**
	comp=Z,2.3nm,0.9s,baz=15,slow=6.0,SNR=7.2						
	comp=Z,2.3nm,0.9s						
WRA	**Warramunga Arr**	**79.63**	**213**	IAmb	IAmb	22 05 34.2	
	comp=Z,0.1nm,1.2s						
EIDS	**Eidsvold**	**80.68**	**197**	P	**P**	**22 05 33.3**	**+1.2**
ASAR	**Alice Springs**	**83.25**	**212**	P	**P**	**22 05 47.0**	**+1.2**
	comp=Z,2.0nm,1.0s,baz=18,slow=4.8,SNR=12						
	comp=Z,2.0nm,1.0s						
ASAR	**Alice Springs**	**83.25**	**212**	P	**P**	**22 05 46.4**	**+0.7**
ASAR	**Alice Springs**	**83.25**	**212**	P	**P**	**22 05 46.4**	**+0.7**
CSS	**Mathiatis**	**83.53**	**325**	P	**P**	**22 05 48.0**	**+0.7**
KARP	**Karpathos**	**84.95**	**330**	P	**P**	**22 05 53.9**	**-0.6**
ESDC	**Sonseca Array**	**86.44**	**355**	P	**P**	**22 06 02.6**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=359,slow=5.1,SNR=3.8						
	comp=Z,0.6nm,0.8s						
STKA	**Stephens Creek**	**88.91**	**203**	P	**P**	**22 06 14.6**	**+1.1**
	comp=Z,1.7nm,0.7s,baz=25,slow=5.4,SNR=5.3						
	comp=Z,1.7nm,0.7s						
STKA	**Stephens Creek**	**88.91**	**203**	IAmb	IAmb	22 06 15.5	
	comp=Z,0.6nm,0.8s						
MAW	**Mawson**	**144.13**	**219**	PKP	**PKPab**	**22 12 52.0**	**+0.8**
	comp=Z,2.2nm,0.6s,baz=119,slow=6.0,SNR=7.8						

*IDC **03** 22:18:06.4±1.2, 34.71°N×24.86°E, h0km, mb3.4/4, mbtmp3.4/9, ML3.6/5, Error ellipse: s-maj=21.6km s-min=10.3km az=89.0*
*ATH **03** 22:18:07.9, 34.78°N×24.80°E, h23km±4km, ML3.6/4, Error ellipse: s-maj=5.4km s-min=1.2km az=357.0*
*ISK **03** 22:18:07.8, 34.84°N×24.78°E, h5km, ML3.4/18*
*THE **03** 22:18:08.8, 34.81°N×24.80°E, h14km±1km, ML3.3/10, Error ellipse: s-maj=1.9km s-min=0.6km az=341.0*
*GII **03** 22:18:12.9±0.0, 34.13°N×25.33°E, h2km, MD3.6/1, Mm3.5/2*

ISC 03 22:18:06.1±1.4, 34°68N±0.04°×24°93E±0.03°, h3km±10km, n70, σ2°8/98°, mb3.4/4, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIVA	**Sivas**	**0.35**	**344**	P	**Pb**	**22 18 13.8**	**-1.1**
SIVA				S	**Sb**	**22 18 17.8**	**-3.2**
SIVA	**Sivas**	**0.35**	**344**	P	**Pb**	**22 18 13.9**	**-1.1**
SIVA				S	**Sg**	**22 18 17.2**	**-0.3**
	53μm,0.6s						
TMBK	**Timbaki Herakl**	**0.41**	**341**	P	**Pb**	**22 18 15.1**	**-0.9**
TMBK				S	**Sb**	**22 18 20.1**	**-2.7**
TMBK	**Timbaki Herakl**	**0.41**	**341**	P	**Pb**	**22 18 15.2**	**-0.9**
TMBK				S	**Sb**	**22 18 19.9**	**-2.9**
	10μm,0.4s						
IDI	**Anoyia**	**0.61**	**357**	Pg	**Pb**	**22 18 18.0**	**-1.4**
	119nm,0.3s,baz=221,slow=9.8,SNR=629						
IDI				Lg	Lg	22 18 24.6	
	916nm,0.3s,baz=276,slow=22,SNR=60						
IDI				LR	LR	22 18 31.1	
	comp=Z,25nm,19.2s,baz=74,slow=43						
IDI	**Anoyia**	**0.61**	**357**	P	**Pb**	**22 18 18.0**	**-1.4**
IDI				S	**Sb**	**22 18 25.6**	**-2.8**
IDI				AML	AML	22 18 26.0	
	comp=E,21683μm,0.5s						
IDI				AML	AML	22 18 27.0	
	comp=N,12174μm,0.3s						
IDI	**Anoyia**	**0.61**	**357**	P	**Pb**	**22 18 18.0**	**-1.4**
IDI				S	**Sg**	**22 18 25.3**	**-0.4**
	comp=N,8μm,0.4s						
IDI	**Anoyia**	**0.61**	**357**	PG	**Pb**	**22 18 18.2**	**-1.2**
IDI				SG	**Sg**	**22 18 25.4**	**-0.3**
KSTL	**Kastelli Herak**	**0.64**	**11**	P	**Pb**	**22 18 20.4**	**+0.6**
KSTL				S	**Sb**	**22 18 29.4**	**+0.3**
KSTL				AML	AML	22 18 32.3	
	comp=E,4399μm,0.6s						
KSTL				AML	AML	22 18 32.7	
	comp=N,10287μm,0.3s						
KSTL	**Kastelli Herak**	**0.64**	**11**	P	**Pb**	**22 18 20.4**	**+0.6**
KSTL				S	**Sb**	**22 18 28.4**	**-0.7**
	comp=N,1μm,0.5s						
IACM	**Heraklion**	**0.64**	**11**	P	**Pb**	**22 18 19.8**	**-0.1**
IACM	**Heraklion**	**0.64**	**11**	P	**Pb**	**22 18 19.7**	**-0.1**
HRKL	**Herakleio**	**0.65**	**13**	P	**Pb**	**22 18 20.1**	**0.0**
HRKL				S	**Sb**	**22 18 29.0**	**-0.5**
HRKL				AML	AML	22 18 35.2	
	comp=N,42024μm,0.5s						
HRKL				AML	AML	22 18 39.8	
	comp=E,40452μm,0.9s						
HRKL	**Herakleio**	**0.65**	**13**	P	**Pb**	**22 18 20.0**	**0.0**
HRKL				S	**Sb**	**22 18 27.7**	**-1.8**
	comp=E,8μm,0.8s						
HRKL	**Herakleio**	**0.65**	**13**	PG	**Pb**	**22 18 19.9**	**-0.2**
HRKL				SG	**Sb**	**22 18 28.3**	**-1.2**
GVDS	**Gavdos**	**0.71**	**284**	P	**Pg**	**22 18 20.3**	**+0.6**
GVDS				S	**Sg**	**22 18 29.5**	**+0.6**
	comp=E,4μm,0.3s						
GVD	**Gavdhos**	**0.71**	**283**	P	**Pg**	**22 18 20.0**	**+0.3**
GVD	**Gavdhos**	**0.71**	**283**	P	**Pg**	**22 18 20.0**	**+0.3**
GVD				S	**Sg**	**22 18 29.3**	**+0.4**
	comp=E,7μm,0.5s						
GVD	**Gavdhos**	**0.71**	**283**	PG	**Pg**	**22 18 20.1**	**+0.4**
GVD				SG	**Sg**	**22 18 29.5**	**+0.6**
FRMA	**Ierapetra Chan**	**0.74**	**63**	P	**Pn**	**22 18 25.2**	**+1.8**
FRMA				S	**Sn**	**22 18 38.1**	**+2.8**
FRMA				AML	AML	22 18 43.2	
	comp=N,3747μm,0.3s						
FRMA				AML	AML	22 18 47.1	
	comp=E,3520μm,0.5s						
FRMA	**Ierapetra Chan**	**0.74**	**63**	P	**Pn**	**22 18 25.3**	**+1.8**
FRMA				S	**Sn**	**22 18 38.7**	**+3.4**
	comp=E,768nm,0.4s						
NPS	**Neapolis**	**0.81**	**44**	P	**Pn**	**22 18 23.7**	**-0.7**
NPS	**Neapolis**	**0.81**	**44**	P	**Pn**	**22 18 23.7**	**-0.7**
IMMV	**Iera Moni Meta**	**1.10**	**315**	P	**Pg**	**22 18 25.8**	**-1.5**
IMMV	**Iera Moni Meta**	**1.10**	**315**	P	**Pg**	**22 18 25.7**	**-1.5**
IMMV				S	**Sg**	**22 18 39.4**	**-2.1**
	comp=E,2μm,0.5s						
IMMV	**Iera Moni Meta**	**1.10**	**315**	PG	**Pg**	**22 18 26.0**	**-1.2**
CHAN	**Chania**	**1.11**	**319**	P	**Pg**	**22 18 26.5**	**-0.8**
ZKR	**Zakros**	**1.15**	**67**	P	**Pn**	**22 18 30.8**	**+1.7**
ZKR	**Zakros**	**1.15**	**67**	P	**Pn**	**22 18 30.6**	**+1.6**
ZKR	**Zakros**	**1.15**	**67**	PN	**Pn**	**22 18 31.3**	**+2.3**
ZKR				SN	**Sn**	**22 18 50.6**	**+5.3**
KNDR	**Palaiochora Ch**	**1.16**	**299**	P	**Pg**	**22 18 28.3**	**0.0**
KNDR	**Palaiochora Ch**	**1.16**	**299**	P	**Pg**	**22 18 28.3**	**0.0**
KNDR				S	**Sg**	**22 18 43.2**	**-0.2**
	comp=E,378nm,0.6s						
KNDR	**Palaiochora Ch**	**1.16**	**299**	PG	**Pg**	**22 18 28.4**	**0.0**
KNDR				SG	**Sb**	**22 18 44.1**	**-0.1**
SANT	**Santorini**	**1.74**	**14**	P	**Pn**	**22 18 37.1**	**-0.2**
SANT	**Santorini**	**1.74**	**14**	PN	**Pg**	**22 18 38.9**	**-0.6**
SANT				SN	**Sg**	**22 19 01.4**	**-0.8**
KARP	**Karpathos**	**2.03**	**64**	PN	**Pg**	**22 18 45.7**	**+0.7**
MHLO	**Agia Marina, M**	**2.05**	**348**	P	**Pn**	**22 18 40.8**	**-0.7**
NIS1	**Nisyros Isl.**	**2.66**	**43**	PN	**Pb**	**22 18 53.4**	**-0.9**
KOSK	**Kos Island**	**2.66**	**38**	PN	**Pb**	**22 18 53.3**	**-1.0**
DAT	**Datca**	**2.97**	**46**	PN	**Pn**	**22 18 56.9**	**+2.6**
ARG	**Arkhangelos**	**3.03**	**59**	PN	**Pb**	**22 18 59.4**	**-1.3**
BODT	**Bodrum**	**3.07**	**38**	PN	**Pb**	**22 18 59.1**	**-2.2**
TURN	**Turunc**	**3.42**	**51**	PN	**Pn**	**22 19 03.6**	**+3.4**
DION	**Dionisos Attik**	**3.49**	**347**	P	**Pn**	**22 19 02.3**	**+1.1**
ITM	**Ithomi**	**3.49**	**317**	PN	**Pn**	**22 19 02.9**	**+1.7**
YER	**Yerkesik**	**3.67**	**47**	P	**Pn**	**22 19 07.6**	**+3.9**
YER	**Yerkesik**	**3.67**	**47**	PN	**Pn**	**22 19 07.4**	**+3.7**
DALY	**Dalyan (Mula)**	**3.71**	**54**	PN	**Pn**	**22 19 07.9**	**+3.7**
CHOS	**Chios island**	**3.81**	**13**	PN	**Pn**	**22 19 07.4**	**+1.7**
URLA	**Izmir**	**3.91**	**20**	PN	**Pn**	**22 19 09.9**	**+2.8**
BRTR	**Keskin Array B**	**8.58**	**52**	Pn	Pn	22 20 16.7	+5.4
	comp=E,0.1nm,0.3s,baz=242,slow=14,SNR=3.2						
KZIT	**Kziot**	**8.81**	**113**	Pn	**Pn**	**22 20 14.1**	**-0.3**
KZIT				Sn	**Sn**	**22 21 49.6**	**-4.7**
MMAI	**Mount Meron Ar**	**8.87**	**98**	Pn	**Pn**	**22 20 15.2**	**-0.1**
	comp=E,0.5nm,0.3s,baz=286,slow=14,SNR=2.4						
MMAI				Sn	**Sn**	**22 21 53.8**	**-2.0**
	comp=E,1.1nm,0.3s,baz=268,slow=28,SNR=2.8						
	comp=E,0.1nm,0.2s						
MMLI	**Mount Malkishu**	**9.04**	**101**	Pn	**Pn**	**22 20 19.6**	**+2.1**
DSI	**Dead Sea**	**9.30**	**107**	Pn	**Pn**	**22 20 22.3**	**+1.3**
DSI				Sn	**Sn**	**22 22 02.4**	**-3.7**
KRMI	**Paran Flat**	**9.45**	**116**	Pn	**Pn**	**22 20 23.8**	**+0.7**
PRNI	**Paran**	**9.54**	**114**	Pn	**Pn**	**22 20 24.1**	**-0.3**
PRNI				Sn	**Sn**	**22 22 07.4**	**-4.7**
ZFRI	**Zfri**	**9.57**	**113**	Pn	**Pn**	**22 20 25.3**	**+0.5**
HRFI	**Mount Harif**	**9.72**	**116**	Pn	**Pn**	**22 20 27.8**	**+0.9**
HRFI				Sn	**Sn**	**22 22 11.6**	**-5.0**
MBRI	**Mt Berech**	**9.76**	**117**	Pn	**Pn**	**22 20 27.3**	**-0.1**
EIL	**Elat**	**9.85**	**118**	Pn	**Pn**	**22 20 29.0**	**+0.4**
	comp=E,0.8nm,0.3s,baz=338,slow=3.5,SNR=11						
EIL				Sn	**Sn**	**22 22 13.2**	**-6.5**
	comp=E,0.6nm,0.3s,baz=252,slow=19,SNR=5.3						
	comp=E,1.7nm,0.4s						
EIL	**Elat**	**9.85**	**118**	Pn	**Pn**	**22 20 28.6**	**0.0**
ASF	**Jabal al Asfar**	**10.31**	**101**	Pn	**Pn**	**22 20 39.6**	**+4.6**
	comp=E,0.2nm,0.3s,baz=219,slow=8.7,SNR=1.6						
ASF				Sn	**Sn**	**22 22 26.8**	**-4.3**
	comp=E,0.2nm,0.3s,baz=343,slow=18,SNR=1.8						
AKASG	**Malin Array Be**	**16.32**	**10**	Pn	**Pn**	**22 21 57.3**	**+1.2**
	comp=E,0.4nm,0.3s,baz=204,slow=11,SNR=5.7						
	comp=E,0.2nm,0.3s						
GERES	**GERESS Array B**	**16.42**	**333**	Pn	**Pn**	**22 21 59.1**	**+1.6**
	comp=E,0.1nm,0.3s,baz=151,slow=12,SNR=1.9						
	comp=E,0.3nm,0.5s						
KBZ	**Khabaz**	**16.58**	**52**	Pn	**P**	**22 22 04.0**	**+2.0**
	comp=E,0.2nm,0.3s,baz=229,slow=9.3,SNR=2.2						
	comp=E,1.0nm,0.4s						
ESDC	**Sonseca Array**	**23.50**	**291**	P	**P**	**22 23 17.1**	**-0.1**
	comp=E,0.2nm,0.4s,baz=80,slow=11,SNR=2.3						
	comp=E,0.2nm,0.4s						
TORD	**Torodi Ar. Bea**	**30.03**	**230**	P	**P**	**22 24 16.1**	**-0.3**
	comp=E,0.5nm,0.8s,baz=40,slow=9.8,SNR=3.3						
	comp=E,0.5nm,0.8s						
MKAR	**Makanchi Array**	**44.20**	**56**	P	**P**	**22 26 16.4**	**+0.1**
	comp=E,0.3nm,0.5s,baz=267,slow=8.3,SNR=5.8						
	comp=E,0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**45.48**	**46**	P	**P**	**22 26 28.7**	**+2.3**
	comp=E,0.6nm,0.5s,baz=261,slow=9.6,SNR=2.4						
	comp=E,0.6nm,0.5s						

IDC 03 22:18:24.7±3.4, 2°34S×133°93E, h0km, mb3.3/2, mbtmp3.3/3, ML2.8/1, Error ellipse: s-maj=165.7km s-min=29.8km az=77.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.50**	**179**	P	Pn	22 22 30.3	-0.1
	baz=357,slow=11,SNR=3.0						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**21.20**	**180**	P	P	22 23 12.1	-0.1
	0.8nm,0.7s,baz=5.7,slow=12,SNR=11						
	0.8nm,0.7s						
MKAR	**Makanchi Array**	**66.64**	**324**	P	P	22 29 17.3	+0.1
	0.2nm,0.5s,baz=113,slow=8.2,SNR=4.3						
	0.2nm,0.5s						

*IDC **03** 22:34:48.0±1.2, 34.75°N×24.93°E, h0km, mb3.6/5, mbtmp3.6/10, ML3.3/5, Error ellipse: s-maj=20.7km s-min=10.2km az=89.0*
*ISK **03** 22:34:48.2, 34.77°N×24.97°E, h9km, ML3.5/18*
*ATH **03** 22:34:48.2, 34.77°N×25.01°E, h25km±3km, ML3.6/4, Error ellipse: s-maj=4.6km s-min=1.2km az=2.0*
*THE **03** 22:34:49.0, 34.78°N×25.01°E, h13km±3km, ML3.4/9, Error ellipse: s-maj=3.8km s-min=0.9km az=340.0*
*GII **03** 22:34:52.0±0.0, 34.47°N×25.46°E, h5km, mb4.0/1, MD3.8/1, Mm3.6/1*

ISC 03 22:34:46.7±1.5, 34°66N±0.05°×25°04E±0.03°, h2km±9km, n76, σ1°94°/109°, mb3.6/6, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIVA	**Sivas**	**0.40**	**332**	P	**Pb**	**22 34 54.9**	**-1.5**
SIVA				S	**Sb**	**22 35 00.0**	**-3.0**
SIVA	**Sivas**	**0.40**	**332**	P	**Pb**	**22 34 55.0**	**-1.5**
SIVA				S	**Sb**	**22 35 00.1**	**-3.0**
	37μm,0.6s						
TMBK	**Timbaki Herakl**	**0.47**	**332**	P	**Pb**	**22 34 56.5**	**-1.0**
TMBK				S	**Sb**	**22 35 02.6**	**-2.4**
TMBK	**Timbaki Herakl**	**0.47**	**332**	P	**Pb**	**22 34 56.6**	**-1.0**
TMBK				S	**Sb**	**22 35 02.5**	**-2.4**
	10μm,0.5s						
IDI	**Anoyia**	**0.64**	**349**	Pg	**Pg**	**22 34 58.6**	**-0.3**
	134nm,0.3s,baz=214,slow=9.8,SNR=337						
IDI				Lg	Lg	22 35 05.7	
	646nm,0.3s,baz=101,slow=22,SNR=59						
IDI	**Anoyia**	**0.64**	**349**	P	**Pg**	**22 34 58.5**	**-0.3**
IDI				S	**Sg**	**22 35 06.5**	**-0.7**
IDI				AML	AML	22 35 07.4	
	comp=E,18765μm,0.4s						
IDI				AML	AML	22 35 07.5	
	comp=N,9865μm,0.2s						
IDI	**Anoyia**	**0.64**	**349**	P	**Pg**	**22 34 58.6**	**-0.3**
IDI				S	**Sg**	**22 35 06.2**	**-1.0**
	comp=N,7μm,0.5s						
IDI	**Anoyia**	**0.64**	**349**	PG	**Pb**	**22 34 59.2**	**-1.4**
IDI				SG	**Sg**	**22 35 06.4**	**-0.8**
KSTL	**Kastelli Herak**	**0.64**	**2**	P	**Pg**	**22 34 58.6**	**-0.4**
KSTL				S	**Sg**	**22 35 06.5**	**-0.8**
KSTL				AML	AML	22 35 08.8	
	comp=E,6750μm,0.3s						
KSTL				AML	AML	22 35 10.9	
	comp=N,20306μm,0.4s						
KSTL	**Kastelli Herak**	**0.64**	**2**	P	**Pg**	**22 34 58.6**	**-0.4**
KSTL				S	**Sg**	**22 35 06.9**	**-0.4**
	comp=N,2μm,0.4s						
IACM	**Heraklion**	**0.64**	**2**	P	**Pb**	**22 35 00.3**	**-0.2**
IACM	**Heraklion**	**0.64**	**2**	P	**Pb**	**22 35 00.4**	**-0.2**
IACM				S	**Sg**	**22 35 07.2**	**-0.2**
	comp=N,19μm,0.4s						
HRKL	**Herakleio**	**0.65**	**5**	P	**Pb**	**22 34 59.3**	**-1.4**
HRKL				S	**Sb**	**22 35 08.1**	**-2.1**
HRKL				AML	AML	22 35 14.3	
	comp=E,36385μm,0.5s						
HRKL				AML	AML	22 35 16.7	
	comp=N,45557μm,0.4s						
HRKL	**Herakleio**	**0.65**	**5**	P	**Pg**	**22 34 59.2**	**0.0**
HRKL				S	**Sg**	**22 35 07.6**	**0.0**
	comp=N,10μm,0.8s						
HRKL	**Herakleio**	**0.65**	**5**	PG	**Pb**	**22 34 59.4**	**-1.4**
HRKL				SG	**Sg**	**22 35 07.9**	**+0.3**
FRMA	**Ierapetra Chan**	**0.67**	**58**	P	**Pn**	**22 35 02.4**	**-0.7**
FRMA				S	**Sn**	**22 35 13.7**	**-0.5**
FRMA				AML	AML	22 35 19.1	
	comp=N,5231μm,0.5s						
FRMA				AML	AML	22 35 20.3	
	comp=E,5899μm,0.4s						
FRMA	**Ierapetra Chan**	**0.67**	**58**	P	**Pn**	**22 35 02.5**	**-0.7**
FRMA				S	**Sn**	**22 35 14.5**	**+0.2**
	comp=E,1μm,0.9s						
NPS	**Neapolis**	**0.76**	**38**	P	**Pg**	**22 35 01.7**	**+0.4**
NPS	**Neapolis**	**0.76**	**38**	P	**Pg**	**22 35 01.6**	**+0.3**
GVDS	**Gavdos**	**0.80**	**283**	P	**Pn**	**22 35 03.7**	**-1.3**
GVD	**Gavdhos**	**0.80**	**283**	P	**Pn**	**22 35 03.6**	**-1.4**
GVD	**Gavdhos**	**0.80**	**283**	P	**Pb**	**22 35 03.3**	**0.0**
GVD	**Gavdhos**	**0.80**	**283**	PG	**Pb**	**22 35 03.3**	**0.0**
ZKR	**Zakros**	**1.07**	**65**	P	**Pb**	**22 35 08.2**	**+0.3**
ZKR	**Zakros**	**1.07**	**65**	P	**Pb**	**22 35 07.8**	**-0.1**
ZKR				S	**Sn**	**22 35 24.0**	**-0.1**
	comp=E,1μm,0.8s						
ZKR	**Zakros**	**1.07**	**65**	PN	**Pn**	**22 35 08.5**	**-0.2**
ZKR				SN	**Sn**	**22 35 24.8**	**+0.7**
IMMV	**Iera Moni Meta**	**1.18**	**313**	P	**Pb**	**22 35 08.6**	**-1.1**
IMMV	**Iera Moni Meta**	**1.18**	**313**	P	**Pg**	**22 35 08.5**	**-0.8**
IMMV	**Iera Moni Meta**	**1.18**	**313**	PG	**Pg**	**22 35 08.5**	**-0.8**
IMMV				SG	**Sb**	**22 35 24.2**	**-1.2**
CHAN	**Chania**	**1.18**	**317**	P	**Pb**	**22 35 09.0**	**-0.8**
KNDR	**Palaiochora Ch**	**1.25**	**298**	P	**Pn**	**22 35 11.7**	**+0.6**
KNDR	**Palaiochora Ch**	**1.25**	**298**	P	**Pn**	**22 35 11.4**	**+0.3**
KNDR				S	**Sb**	**22 35 26.6**	**-0.8**
	comp=E,525nm,0.7s						
KNDR	**Palaiochora Ch**	**1.25**	**298**	PN	**Pn**	**22 35 11.3**	**+0.2**
KNDR				SN	**Sn**	**22 35 28.3**	**-0.2**
SANT	**Santorini**	**1.74**	**11**	PN	**Pn**	**22 35 17.9**	**0.0**
SANT				SN	**Sn**	**22 35 39.5**	**-1.2**
KARP	**Karpathos**	**1.95**	**63**	P	**Pg**	**22 35 24.7**	**+0.6**
KARP	**Karpathos**	**1.95**	**63**	PN	**Pb**	**22 35 22.8**	**-0.2**
NIS1	**Nisyros Isl.**	**2.60**	**41**	PN	**Pn**	**22 35 31.3**	**+1.5**
KOSK	**Kos Island**	**2.62**	**37**	PN	**Pn**	**22 35 31.3**	**+1.4**
ARG	**Arkhangelos**	**2.96**	**58**	PN	**Pn**	**22 35 36.9**	**+2.2**
BODT	**Bodrum**	**3.02**	**37**	PN	**Pn**	**22 35 36.9**	**+1.3**
TURN	**Turunc**	**3.35**	**50**	PN	**Pn**	**22 35 42.1**	**+2.0**
MLSB	**Milas**	**3.44**	**39**	PN	**Pn**	**22 35 42.8**	**+1.5**
GCAM	**G?zelcaml?**	**3.51**	**30**	PN	**Pn**	**22 35 44.0**	**+1.7**
YER	**Yerkesik**	**3.61**	**46**	PN	**Pn**	**22 35 45.1**	**+1.4**
DALY	**Dalyan (Mula)**	**3.64**	**53**	PN	**Pn**	**22 35 46.4**	**+2.4**
CHOS	**Chios island**	**3.81**	**12**	PN	**Pn**	**22 35 47.5**	**+1.1**
URLA	**Izmir**	**3.90**	**18**	PN	**Pn**	**22 35 49.1**	**+1.5**
AYDB	**Zeytinkoy-Aydi**	**4.01**	**34**	PN	**Pn**	**22 35 51.0**	**+1.8**
BRTR	**Keskin Array B**	**8.52**	**51**	Pn	Pn	22 36 54.9	+3.7
	comp=E,0.1nm,0.3s,baz=249,slow=12,SNR=5.4						
	comp=E,0.9nm,0.8s						
SLTI	**Sal'it**	**8.70**	**103**	Pn	**Pn**	**22 36 54.6**	**+1.0**
SLTI				Sn	**Sn**	**22 38 28.2**	**-4.0**
KZIT	**Kziot**	**8.72**	**113**	Pn	**Pn**	**22 36 54.3**	**+0.4**
KZIT				Sn	**Sn**	**22 38 27.9**	**-4.9**
MMA0B	**Mount Meron ar**	**8.78**	**98**	Pn	**Pn**	**22 36 55.6**	**+0.9**
MMAI	**Mount Meron Ar**	**8.78**	**98**	Pn	**Pn**	**22 36 54.7**	**0.0**
	comp=E,0.7nm,0.3s,baz=266,slow=20,SNR=5.1						
MMAI				Sn	**Sn**	**22 38 30.5**	**-3.8**
	comp=E,1.0nm,0.3s,baz=278,slow=33,SNR=2.4						
MMLI	**Mount Malkishu**	**8.95**	**101**	Pn	**Pn**	**22 36 57.1**	**+0.1**
NATI	**Neve Ativ**	**9.00**	**96**	Pn	**Pn**	**22 36 58.1**	**+0.5**
NATI				Sn	**Sn**	**22 38 35.7**	**-3.8**
HMDT	**Nahal Hemdat**	**9.09**	**102**	Pn	**Pn**	**22 36 59.1**	**+0.3**
HMDT				Sn	**Sn**	**22 38 38.4**	**-3.3**
DSI	**Dead Sea**	**9.21**	**107**	Pn	**Pn**	**22 37 00.3**	**-0.2**
DSI				Sn	**Sn**	**22 38 40.7**	**-3.9**
PRNI	**Paran**	**9.45**	**114**	Pn	**Pn**	**22 37 03.6**	**-0.2**
PRNI				Sn	**Sn**	**22 38 47.2**	**-3.5**
GHAJ	**Ghor Haditha**	**9.46**	**108**	Pn	**Pn**	**22 37 03.3**	**-0.6**
ZFRI	**Zfri**	**9.48**	**113**	Pn	**Pn**	**22 37 03.1**	**-1.1**
HRFI	**Mount Harif**	**9.63**	**116**	Pn	**Pn**	**22 37 06.1**	**-0.3**
HRFI				Sn	**Sn**	**22 38 52.2**	**-3.0**
MBRI	**Mt Berech**	**9.67**	**117**	Pn	**Pn**	**22 37 07.1**	**+0.2**
MBRI				Sn	**Sn**	**22 38 52.4**	**-3.8**
EIL	**Elat**	**9.76**	**118**	Pn	**Pn**	**22 37 07.8**	**-0.3**
	comp=E,0.4nm,0.3s,baz=351,slow=4.9,SNR=6.2						
EIL				Sn	**Sn**	**22 38 52.1**	**-6.2**
	comp=E,0.2nm,0.3s,baz=213,slow=22,SNR=1.4						
EIL	**Elat**	**9.76**	**118**	Pn	**Pn**	**22 37 07.6**	**-0.5**
EIL				Sn	**Sn**	**22 38 52.4**	**-6.0**
ASF	**Jabal al Asfar**	**10.22**	**101**	Pn	**Pn**	**22 37 18.9**	**+4.5**
	comp=E,0.2nm,0.3s,baz=320,slow=5.0,SNR=2.2						
ASF				Sn	**Sn**	**22 39 06.0**	**-3.6**
	comp=E,0.1nm,0.3s,baz=357,slow=23,SNR=1.3

comp=Z,6.7nm,1.1s
TOO Toolangi 34.57 237 P **P** **22 57 02.0 +0.3**
TOO IAmb IAmb 22 57 17.2
comp=Z,9.1nm,1.1s
STKA Stephens Creek 36.94 248 P **P** **22 57 22.0 +0.2**
comp=Z,0.9nm,0.5s,baz=60,slow=8.1,SNR=3.6
comp=Z,0.9nm,0.5s
STKA Stephens Creek 36.94 248 P **P** **22 57 22.0 +0.2**
BBOO Buckleboo 41.66 246 P **P** **22 58 01.0 +0.4**
AS31 Alice Springs 44.28 260 P **P** **22 58 21.9 +0.3**
ASAR Alice Springs 44.28 260 P **P** **22 58 21.6 0.0**
comp=Z,0.7nm,0.5s,baz=88,slow=8.4,SNR=8.4
ASAR PcP **PcP** **23 00 01.6 +1.4**
comp=Z,0.2nm,0.5s,baz=115,slow=4.2,SNR=1.7
comp=Z,0.7nm,0.5s
WR0 Warramunga Arr 44.44 265 P **P** **22 58 22.3 -0.6**
WR0 IAmb IAmb 22 58 23.8
comp=Z,1.4nm,0.6s
WB2 Warramunga Arr 44.62 265 P **P** **22 58 23.9 -0.3**
WB2 IAmb IAmb 22 58 24.4
comp=Z,2.9nm,0.6s
WB0 Warramunga Arr 44.62 265 P **P** **22 58 24.2 0.0**
WB0 IAmb IAmb 22 58 24.4
comp=Z,3.3nm,0.6s
WRA Warramunga Arr 44.63 265 P **P** **22 58 23.7 -0.6**
comp=Z,2.2nm,0.6s,baz=102,slow=8.2,SNR=36
comp=Z,2.2nm,0.6s
WRA Warramunga Arr 44.63 265 P **P** **22 58 23.9 -0.4**
CLL Collm 150.93 346 *i* PKPbc **PKiKP** **23 09 59.5 +1.3**

*IDC **03** 23:04:31.4±1.0,54˚25N×171˚82W,h0km,mb3.7/10, mbtmp3.7/12,ML3.5/2,MS3.2/11,Error ellipse: s-maj=40.8km s-min=14.9km az=176.0*
*NEIC **03** 23:04:32.7±1.8,54˚11N±0˚06×171˚75W±0˚07,h13km±2km, mb4.0/53,ML3.8/6,ML3.7/32(AEIC), Error ellipse: s-maj=9.4km s-min=6.0km az=173.0*
*AEIC **03** 23:04:33±3.3,54˚21N±0˚06×171˚78W±0˚08,h36km±6km, Error ellipse: s-maj=8.7km s-min=6.4km az=173.0*
*ANF **03** 23:04:36.0±2.4,54˚12N×171˚71W,h59km±12km,ML4.4/3, Error ellipse: s-maj=27.6km s-min=8.6km az=78.0*
ISC 03 23:04:35.8±0.5,54˚25N±0˚05×171˚82W±0˚04,h35km, n177,σ1§56/173,mb4.0/16,MS3.2/8,1D,Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**2.18**	**125**	Pn	**Pn**	**23 05 07.3**	**-2.2**
NIKH	**Nikolski High**	**2.18**	**125**	P	**Pn**	**23 05 07.4**	**-2.2**
baz=307,SNR=7.1							
NIKH				S	**Sn**	**23 05 37.3**	**+2.0**
baz=307							
KONE	**Korovin Northe**	**2.31**	**218**		**Pn**	**23 05 09.2**	**-2.2**
KONE					**Sn**	**23 05 36.4**	**-2.2**
KOSE	**Korovin Southe**	**2.33**	**216**		**Pn**	**23 05 09.2**	**-2.5**
OKSO	**Okmok South**	**2.35**	**111**		**Pn**	**23 05 09.8**	**-2.1**
KOKL	**Mount Kliuchef**	**2.40**	**218**		**Pn**	**23 05 10.4**	**-2.2**
KOFP	**Korovin Flat P**	**2.40**	**216**		**Pn**	**23 05 10.5**	**-2.2**
ATKA	**Atka Island**	**2.50**	**216**		**Pn**	**23 05 11.6**	**-2.3**
ATKA					**Sn**	**23 05 42.2**	**-0.9**
MSW	**Makushin Switc**	**2.99**	**94**		**Pn**	**23 05 18.1**	**-2.6**
MNAT	**Makushin Natee**	**3.05**	**95**		**Pn**	**23 05 18.8**	**-2.7**
MNAT					**Sn**	**23 05 54.8**	**-1.9**
SPIA	**Saint Paul Isl**	**3.07**	**16**		**Pn**	**23 05 19.9**	**-1.8**
SPIA	**Saint Paul Isl**	**3.07**	**16**	P	**Pn**	**23 05 20.0**	**-1.8**
baz=198							
SPIA				S	**Sn**	**23 05 53.4**	**-3.7**
baz=198							
UNV	**Unalaska Valle**	**3.16**	**95**	Pn	**Pn**	**23 05 24.7**	**+1.7**
UNV	**Unalaska Valle**	**3.16**	**95**	P	**Pn**	**23 05 23.4**	**+0.5**
baz=280,SNR=6.3							
GSTR	**Great Sitkin T**	**3.34**	**232**		**Pn**	**23 05 24.0**	**-1.6**
GSMY	**Great Sitkin M**	**3.37**	**231**		**Pn**	**23 05 23.8**	**-2.2**
GSTD	**Great Sitkin T**	**3.41**	**232**		**Pn**	**23 05 23.9**	**-2.6**
GSCK	**Great Sitkin C**	**3.44**	**231**		**Pn**	**23 05 24.2**	**-2.7**
AKBBA	**Akutan Broad B**	**3.46**	**90**		**Pn**	**23 05 24.6**	**-2.6**
AKUT	**Akutan**	**3.56**	**89**	Pn	**Pn**	**23 05 27.8**	**-0.6**
AKUT				IAML		23 06 53.3	
comp=N,101nm,0.9s							
ADK	**Adak**	**3.77**	**233**		**Pn**	**23 05 29.7**	**-1.7**
ADK	**Adak**	**3.77**	**233**		**Pn**	**23 05 31.1**	**-0.3**
ADK				IAML		23 06 19.9	
comp=N,163nm,0.5s							
ADK				IAML		23 06 21.1	
comp=N,160nm,0.4s							
KIWB	**Kanaga Island**	**4.01**	**235**	Pn	**Pn**	**23 05 33.4**	**-1.3**
KIMD	**Kanaga Island**	**4.11**	**235**		**Pn**	**23 05 34.1**	**-2.0**
WECS	**Westdahl Cape**	**4.13**	**83**		**Pn**	**23 05 33.7**	**-2.6**
TAFP	**Tanaga Falls P**	**4.40**	**240**		**Pn**	**23 05 38.0**	**-2.0**
TASE	**Tanaga Southea**	**4.46**	**240**		**Pn**	**23 05 39.1**	**-1.8**
GAEA	**Gareloi East**	**4.86**	**242**		**Pn**	**23 05 44.7**	**-1.6**
GALAA	**Gareloi Lava P**	**4.88**	**242**		**Pn**	**23 05 44.4**	**-2.3**
BLHA	**Black Hill**	**5.80**	**71**		**Pn**	**23 05 57.2**	**-2.1**
SDPT	**Sand Point**	**6.65**	**76**	Pn	**Pn**	**23 06 10.1**	**-0.8**
SDPT	**Sand Point**	**6.65**	**76**	P	**Pn**	**23 06 10.1**	**-0.8**
baz=265							
CNBA	**Chernabura Isl**	**7.14**	**80**	Pn	**Pn**	**23 06 17.0**	**-0.7**
P16K	**Nushagak River**	**8.99**	**52**	P	**Pn**	**23 06 42.6**	**-0.4**
baz=244							
O16K	**Kokwok River B**	**9.21**	**49**	P	**Pn**	**23 06 45.5**	**-0.5**
baz=240							
CHIR	**Chirikof Islan**	**9.43**	**74**	Pn	**Pn**	**23 06 47.6**	**-1.5**
P17K	**Kvichak River**	**9.79**	**53**	P	**Pn**	**23 06 53.0**	**-0.9**
baz=246							
P18K	**Big Mountain,**	**10.44**	**54**	Pn	**Pn**	**23 07 01.9**	**-1.0**
P18K	**Big Mountain,**	**10.44**	**54**	P	**Pn**	**23 07 02.8**	**-0.1**
baz=248							
O18K	**Koktuh Hills**	**10.63**	**51**	Pn	**Pn**	**23 07 05.2**	**-0.3**
O18K	**Koktuh Hills**	**10.63**	**51**	P	**Pn**	**23 07 04.6**	**-0.9**
baz=245							
N18K	**Kilae Creek**	**10.71**	**47**	Pn	**Pn**	**23 07 07.4**	**+0.9**
OHAK	**Old Harbor**	**10.86**	**67**	Pn	**Pn**	**23 07 08.4**	**-0.2**
Q19K	**Cape Douglas,**	**11.05**	**58**	Pn	**Pn**	**23 07 11.8**	**+0.6**
Q19K	**Cape Douglas,**	**11.05**	**58**	P	**Pn**	**23 07 10.5**	**-0.7**
baz=253							
SVW2	**Sparrevohn**	**11.05**	**45**	Pn	**Pn**	**23 07 10.5**	**-0.7**
KDAK	**Kodiak Island**	**11.32**	**64**	Pn	**Pn**	**23 07 16.6**	**+1.7**
comp=N,1.1nm,0.3s,baz=294,slow=9.1,SNR=14							
KDAK				LR	LR	23 11 01.1	
comp=N,67nm,20.5s,baz=254,slow=34							
comp=N,2.5nm,0.3s							
KDAK	**Kodiak Island**	**11.32**	**64**		**Pn**	**23 07 15.4**	**+0.5**
KDAK	**Kodiak Island**	**11.32**	**64**	P	**Pn**	**23 07 15.7**	**+0.8**
baz=260							
N19K	**Bonanza Creek**	**11.38**	**48**	Pn	**Pn**	**23 07 16.2**	**+0.4**
N19K	**Bonanza Creek**	**11.38**	**48**	P	**Pn**	**23 07 15.5**	**-0.3**
baz=242							
L19K	**White Mountain**	**11.93**	**41**	Pn	**Pn**	**23 07 22.8**	**-0.5**
TTA	**Tatalina**	**11.95**	**37**	Pn	**Pn**	**23 07 23.0**	**-0.5**
M19K	**Big River Lodg**	**11.96**	**43**	Pn	**Pn**	**23 07 25.0**	**+1.3**
CNPM	**China Poot**	**12.41**	**57**	Pn	**Pn**	**23 07 32.7**	**+2.9**
SPU	**Mount Spurr**	**12.61**	**49**	Pn	**Pn**	**23 07 33.1**	**+0.7**
K20K	**Telida**	**12.91**	**38**	Pn	**Pn**	**23 07 36.7**	**+0.1**
K20K	**Telida**	**12.91**	**38**	P	**Pn**	**23 07 36.1**	**-0.5**
baz=233							
SKT	**Skwentna**	**13.18**	**46**		**Pn**	**23 07 41.4**	**+1.1**
SUA	**Susitna One**	**13.30**	**49**	Pn	**Pn**	**23 07 41.6**	**-0.4**
SUA	**Susitna One**	**13.30**	**49**	P	**Pn**	**23 07 40.3**	**-1.6**
baz=247							
J20K	**Nowinta River**	**13.39**	**35**	Pn	**Pn**	**23 07 44.4**	**+1.2**
J20K	**Nowinta River**	**13.39**	**35**	P	**Pn**	**23 07 41.8**	**-1.3**
baz=230							
RC01	**Rabbit Creek A**	**13.61**	**51**	Pn	**Pn**	**23 07 43.6**	**-2.5**
M22K	**Willow**	**13.69**	**48**	Pn	**Pn**	**23 07 47.4**	**+0.2**
KTH	**Kantishna Hill**	**14.19**	**41**	P	**P**	**23 08 01.1**	**0.0**
TRF	**Thorofare Moun**	**14.38**	**42**		**P**	**23 08 01.8**	**-1.5**
BPAW	**Bear Paw Mtn.**	**14.46**	**39**	P	**P**	**23 08 03.2**	**-0.8**
BPAW	**Bear Paw Mtn.**	**14.46**	**39**	P	**Pn**	**23 07 57.2**	**-0.6**
baz=237							
SML	**Sawmill**	**14.50**	**49**		**P**	**23 08 02.5**	**-1.9**
IMAR	**Indian Mountai**	**14.74**	**30**	Pn	**Pn**	**23 08 03.5**	**+2.2**
I21K	**Tanana**	**14.75**	**34**	P	**P**	**23 08 08.1**	**+0.9**
I21K	**Tanana**	**14.75**	**34**	P	**Pn**	**23 07 60.0**	**-1.6**
baz=231							
H21K	**Melozitna Rive**	**14.80**	**32**	P	**P**	**23 08 09.9**	**+2.2**
H21K	**Melozitna Rive**	**14.80**	**32**	P	**Pn**	**23 08 02.6**	**+0.3**
baz=228							
RND	**Reindeer**	**14.93**	**43**		**P**	**23 08 09.1**	**-0.2**
RND				IAmb	IAmb	23 08 21.2	
comp=Z,6.8nm,0.8s							
SCM	**Sheep Creek Mo**	**14.95**	**50**	Pn	**Pn**	**23 08 03.8**	**-0.6**
MLY	**Manley**	**15.08**	**36**	P	**P**	**23 08 12.6**	**+1.7**
MLY				IAmb	IAmb	23 08 23.3	
comp=Z,7.3nm,0.9s							
MLY	**Manley**	**15.08**	**36**	P	**Pn**	**23 08 05.7**	**-0.4**
baz=234,SNR=5.6							
DHY	**Denali Highway**	**15.39**	**45**	P	**P**	**23 08 13.6**	**-0.8**
DHY				IAmb	IAmb	23 08 25.9	
comp=Z,11nm,0.8s							
I23K	**Minto, Yukon-K**	**15.63**	**37**		**P**	**23 08 22.4**	**+5.5**
I23K	**Minto, Yukon-K**	**15.63**	**37**	P	**Pn**	**23 08 12.0**	**-1.1**
baz=236,SNR=6.5							
WRH	**Wood River Hil**	**15.74**	**40**	P	**Pn**	**23 08 17.0**	**-1.1**
CCB	**Clear Creek Bu**	**15.93**	**40**	P	**P**	**23 08 23.5**	**+3.2**
MDM	**Murphy Dome**	**15.93**	**38**	IAmb	IAmb	23 08 36.0	
comp=Z,7.6nm,0.8s							
N25K	**Chitina, Valde**	**16.13**	**52**		**P**	**23 08 23.2**	**+0.6**
HDA	**Harding Lake**	**16.14**	**41**		**P**	**23 08 22.2**	**-0.4**
PAX	**Paxson**	**16.16**	**47**	P	**P**	**23 08 21.5**	**-1.4**
PAX	**Paxson**	**16.16**	**47**	P	**Pn**	**23 08 19.6**	**-0.4**
baz=249,SNR=5.7							
IL31		**16.34**	**40**	Pn	**Pn**	**23 08 21.7**	**-0.4**
ILAR	**Eielson Array**	**16.34**	**40**	Pn	**P**	**23 08 25.4**	**+0.6**
baz=232,slow=10,SNR=3.3							
ILAR				LR	LR	23 15 04.2	
comp=Z,48nm,20.1s,baz=160,slow=39							
ILAR	**Eielson Array**	**16.34**	**40**	P	**P**	**23 08 24.8**	**+0.1**
K24K	**Donnelly Dome**	**16.34**	**44**	P	**Pn**	**23 08 20.8**	**-1.5**
baz=246,SNR=6.6							
GLB	**Gilahina Butte**	**16.45**	**53**		**P**	**23 08 24.4**	**-1.8**
H24K	**Noodor Dome**	**16.53**	**36**		**P**	**23 08 26.1**	**-0.8**
H24K	**Noodor Dome**	**16.53**	**36**	P	**Pn**	**23 08 23.6**	**-1.0**
baz=237							
VRDI	**Verde Repeater**	**16.57**	**54**		**Pn**	**23 08 24.7**	**-0.7**
VRDI				IAmb	IAmb	23 08 35.3	
comp=Z,11nm,1.0s							
RIDG	**Independent Ri**	**16.70**	**45**	P	**P**	**23 08 28.3**	**-0.6**
RIDG				IAmb	IAmb	23 08 40.5	
comp=Z,10nm,0.8s							
RIDG	**Independent Ri**	**16.70**	**45**	P	**Pn**	**23 08 24.2**	**-2.6**
baz=248,SNR=6.4							
J25K	**Salcha River,**	**16.84**	**41**	P	**P**	**23 08 33.5**	**+3.0**
J25K	**Salcha River,**	**16.84**	**41**	P	**Pn**	**23 08 27.7**	**-1.0**
baz=244,SNR=8.3							
M26K	**Nabesna, AK**	**17.07**	**50**		**P**	**23 08 31.8**	**-1.1**
M26K				IAmb	IAmb	23 08 45.3	
comp=Z,11nm,1.1s							
M26K	**Nabesna, AK**	**17.07**	**50**	P	**Pn**	**23 08 29.3**	**-2.1**
baz=255,SNR=5.2							
L26K	**Log Cabin Wild**	**17.09**	**48**	Pn	**Pn**	**23 08 31.6**	**-0.1**
L26K				IAmb	IAmb	23 08 45.7	
comp=Z,14nm,1.1s							
L26K	**Log Cabin Wild**	**17.09**	**48**	P	**Pn**	**23 08 29.3**	**-2.4**
baz=252,SNR=5.1							
SCRK	**Sand Creek**	**17.14**	**44**		**Pn**	**23 08 32.5**	**0.0**
SCRK				IAmb	IAmb	23 08 45.3	
comp=Z,11nm,0.8s							
SCRK	**Sand Creek**	**17.14**	**44**	P	**Pn**	**23 08 29.9**	**-2.5**
baz=248,SNR=8.1							
BILL	**Bilibino**	**17.25**	**332**	Pn	**Pn**	**23 08 33.1**	**-0.5**
GRNC	**Granite Creek**	**17.30**	**56**		**P**	**23 08 34.6**	**-1.1**
GRNC				IAmb	IAmb	23 08 46.9	
comp=Z,14nm,0.9s							
BARN	**Barnard Glacie**	**17.40**	**55**	Pn	**Pn**	**23 08 35.4**	**-0.3**
J26L	**Joseph Creek**	**17.51**	**43**		**P**	**23 08 39.4**	**+1.6**
J26L				IAmb	IAmb	23 08 52.7	
comp=Z,14nm,0.7s							
J26L	**Joseph Creek**	**17.51**	**43**	P	**Pn**	**23 08 34.8**	**-2.1**
comp=Z,14nm,0.9s							
LOGN	**Logan Glacier**	**17.68**	**56**	Pn	**Pn**	**23 08 36.6**	**-2.5**
LOGN				IAmb	IAmb	23 08 51.1	
comp=Z,9.8nm,1.0s							
TOLK	**Toolik Lake Re**	**17.75**	**27**	P	**P**	**23 08 41.0**	**+0.6**
TOLK				IAmb	IAmb	23 08 53.9	
comp=Z,9.2nm,0.8s							
TOLK	**Toolik Lake Re**	**17.75**	**27**	P	**P**	**23 08 40.2**	**-0.2**
baz=227							
L27K	**Beaver Creek,**	**17.76**	**48**	P	**P**	**23 08 41.3**	**+0.7**
BCAR	**Beaver Creek A**	**17.78**	**48**		**P**	**23 08 40.8**	**0.0**
K27K	**Chicken**	**17.95**	**45**	P	**P**	**23 08 43.4**	**+0.8**
K27K				IAmb	IAmb	23 08 55.4	
comp=Z,18nm,1.0s							
PCA	**Pinnacle**	**17.96**	**58**		**P**	**23 08 44.0**	**+1.1**
PCA				IAmb	IAmb	23 08 54.1	
comp=Z,9.3nm,0.8s							
PEA0B	**Petropavlovsk-**	**18.03**	**279**		**Pn**	**23 08 43.1**	**-0.2**
PEA0B				IAmb	IAmb	23 09 02.9	
comp=Z,16nm,0.9s							
PETK	**Petropavlovsk-**	**18.03**	**279**	P	**P**	**23 08 44.2**	**+0.7**
comp=Z,0.2nm,0.3s,baz=81,slow=12,SNR=2.4							
PETK				LR	LR	23 14 56.9	
comp=Z,39nm,18.9s,baz=262,slow=35							
comp=Z,1.5nm,0.7s							
YUK3	**Moose Creek**	**18.09**	**53**	P	**Pn**	**23 08 42.4**	**-1.8**
baz=260							
BMAR	**Burnt Mountain**	**18.50**	**34**		**Pn**	**23 08 51.5**	**+2.6**
DAWY	**Dawson**	**19.09**	**46**	P	**Pn**	**23 08 56.9**	**+0.8**
HYT	**Haines Junctio**	**19.38**	**56**	P	**Pn**	**23 08 58.7**	**-1.0**
I29M	**Ogilvie Camp,**	**19.91**	**43**	P	**Pn**	**23 09 04.7**	**-1.2**
I29M				IAmb	IAmb	23 09 20.5	
comp=Z,9.7nm,1.0s							
M30M	**Minto, Yukon**	**19.92**	**51**	P	**Pn**	**23 09 05.7**	**-0.3**
M30M				IAmb	IAmb	23 09 17.7	
comp=Z,9.9nm,1.1s							
N31M	**Braeburn, Yuko**	**20.27**	**55**	P	Pn	23 09 09.7	-0.5
N31M				IAmb	IAmb	23 09 22.1	
comp=Z,12nm,1.1s							
SEY	**Seymchan**	**20.32**	**310**	P	**P**	**23 09 09.3**	**+0.8**
comp=Z,1.0nm,0.4s,baz=121,slow=9.1,SNR=4.4							
SEY				LR	LR	23 16 40.3	
comp=Z,34nm,19.5s,baz=185,slow=36							
comp=Z,1.0nm,0.4s							
EPYK	**Eagle Plains**	**20.85**	**41**	P	**P**	**23 09 14.7**	**+0.4**
EPYK				IAmb	IAmb	23 09 32.8	
comp=Z,10nm,0.9s							
M31M	**Drury Creek, Y**	**20.98**	**53**	P	**P**	**23 09 15.9**	**+0.2**
M31M				IAmb	IAmb	23 09 31.4	
comp=Z,6.6nm,1.0s							
P33M	**Teslin, Yukon**	**21.68**	**58**		**P**	**23 09 24.5**	**+1.2**
INK	**Inuvik**	**22.65**	**37**	P	**P**	**23 09 34.3**	**+0.9**
comp=Z,2.6nm,0.7s,baz=258,slow=10,SNR=3.1							
comp=Z,2.6nm,0.7s							
INK	**Inuvik**	**22.65**	**37**	P	**P**	**23 09 33.7**	**+0.3**
INK				IAmb	IAmb	23 09 44.8	
comp=Z,10nm,1.1s							
DLBC	**Dease Lake**	**23.25**	**63**	LR	LR	23 18 51.5	
comp=Z,100nm,18.6s,baz=61,slow=37							
YKA	**Yellowknife Ar**	**30.16**	**51**	P	**P**	**23 10 43.1**	**+1.1**
comp=Z,0.3nm,0.6s,baz=294,slow=8.0,SNR=2.0							
YKA				LR	LR	23 24 18.6	
comp=Z,55nm,18.2s,baz=283,slow=39							
comp=Z,0.3nm,0.6s							
ERM	**Erimo**	**31.89**	**266**	P	**P**	**23 10 57.4**	**-0.1**
KLR	**Kul'dur**	**34.50**	**285**	LR	LR	23 25 49.9	
comp=Z,30nm,18.4s,baz=360,slow=37							
G08A	**Pilot Rock**	**34.55**	**83**	P	**P**	**23 11 20.3**	**-0.5**
RES	**Resolute Bay**	**35.33**	**27**	LR	LR	23 29 22.0	
comp=Z,45nm,18.4s,baz=108,slow=42							
WVOR	**Wild Horse Val**	**36.42**	**87**	P	**P**	**23 11 35.3**	**-1.7**
HLID	**Hailey**	**38.20**	**82**	P	**P**	**23 11 51.5**	**-0.6**
HLID				IAmb	IAmb	23 12 04.4	
comp=Z,3.8nm,0.8s							
NVAR	**Mina Array Bea**	**39.17**	**91**	P	**P**	**23 12 00.7**	**+0.4**
comp=Z,0.3nm,0.7s,baz=285,slow=9.0,SNR=2.7							
comp=Z,0.3nm,0.7s							
R11A	**Troy Canyon, C**	**40.82**	**89**	P	**P**	**23 12 12.7**	**-1.2**
R11A				IAmb	IAmb	23 12 27.5	
comp=Z,2.6nm,1.1s							
DUG	**Dugway, Tooele**	**41.24**	**85**	P	**P**	**23 12 16.5**	**-0.9**
DUG	**Dugway, Tooele**	**41.24**	**85**	P	**P**	**23 12 14.0**	**-3.3**
baz=310,SNR=5.5							
PDAR	**Pinedale Array**	**41.50**	**80**	P	**P**	**23 12 20.5**	**+0.9**
comp=Z,0.4nm,0.4s,baz=319,slow=4.0,SNR=5.2							
comp=Z,0.4nm,0.4s							
PDAR	**Pinedale Array**	**41.50**	**80**	P	**P**	**23 12 19.1**	**-0.5**
KSRS	**Korea Array**	**43.78**	**273**	P	**P**	**23 12 39.4**	**+1.6**
comp=Z,4.4nm,1.0s,baz=47,slow=7.9,SNR=9.6							
comp=Z,4.4nm,1.0s							
O20A	**White River Ci**	**43.94**	**82**	P	**P**	**23 12 36.5**	**-2.8**
baz=311,SNR=7.4							
ULM	**Lac du Bonnet**	**44.58**	**63**	LR	LR	23 30 41.5	
comp=Z,27nm,19.3s,baz=304,slow=35							
PV11	**David Mesa, Pa**	**44.79**	**84**	P	**P**	**23 12 45.5**	**-0.6**
SDCO	**Great Sand Dun**	**47.12**	**82**	P	**P**	**23 13 03.2**	**-1.4**
SDCO	**Great Sand Dun**	**47.12**	**82**	P	**P**	**23 13 00.3**	**-4.4**
baz=313							
T25A	**Trinidad**	**48.17**	**82**	P	**P**	**23 13 10.0**	**-2.7**
baz=314							
HHC	**Hu-ho-hao-te**	**50.91**	**288**	*e*P	**P**	**23 13 33.2**	**-0.1**
HHC				pmax	pmax		
comp=Z,34nm,1.0s							
HHC				pmax	pmax		
comp=Z,90nm,4.7s							
MNTX	**Cornudas Mount**	**51.44**	**88**	P	**P**	**23 13 35.5**	**-1.9**
MNTX				IAmb	IAmb	23 13 40.3	
comp=Z,1.6nm,1.1s							
TXAR	**Lajitas Array**	**54.17**	**88**	P	**P**	**23 13 58.8**	**+1.2**
comp=Z,0.3nm,0.7s,baz=318,slow=3.9,SNR=2.7							
comp=Z,0.3nm,0.7s							
TXAR	**Lajitas Array**	**54.17**	**88**	P	**P**	**23 13 57.2**	**-0.5**
TKL	**Tuckaleechee C**	**60.91**	**69**	LR	LR	23 42 57.1	
comp=Z,29nm,18.1s,baz=316,slow=38							
WMQ	**Urumqi**	**61.23**	**306**	*e*P	P	23 14 51.9	+4.9
MKAR	**Makanchi Array**	**61.45**	**311**	P	**P**	**23 14 48.0**	**-0.5**
comp=Z,0.5nm,0.8s,baz=56,slow=5.7,SNR=5.4							
comp=Z,0.5nm,0.8s							
MKAR	**Makanchi Array**	**61.45**	**311**	P	**P**	**23 14 48.5**	**+0.1**
FINES	**FINESS Array B**	**63.78**	**351**	LR	LR	23 44 58.7	
comp=Z,23nm,18.3s,baz=68,slow=38							
257A	**Skidaway Islan**	**65.18**	**69**	P	**P**	**23 15 13.3**	**+0.1**
NC602	**NORSAR Array S**	**65.33**	**358**	P	**P**	**23 15 15.2**	**+1.5**
PRZ	**Przheval'sk**	**66.55**	**311**	P	**P**	**23 15 22.8**	**+0.6**
PZH	**PanZhiHua**	**66.92**	**284**	P	**P**	**23 15 25.5**	**+0.9**
PZH				pmax	pmax		
comp=Z,8.0nm,0.6s							
PZH				pmax	pmax		
comp=Z,90nm,4.6s							
KMI	**Kunming**	**67.41**	**282**	⇓P	**P**	**23 15 27.7**	**-0.2**
KMI				pmax	pmax		
comp=Z,4.0nm,1.3s							
CMAR	**Chiang Mai Arr**	**74.80**	**280**	P	**P**	**23 16 13.4**	**+1.0**
comp=Z,1.0nm,0.5s,baz=27,slow=6.2,SNR=6.2							
comp=Z,1.0nm,0.5s							
BRTR	**Keskin Array B**	**83.87**	**341**	P	**P**	**23 17 03.3**	**+1.5**
comp=Z,0.6nm,0.7s,baz=27,slow=3.5,SNR=2.4							
comp=Z,0.6nm,0.7s							
BRTR	**Keskin Array B**	**83.87**	**341**	P	**P**	**23 17 02.6**	**+0.8**
PSI	**Prapat**	**87.31**	**271**	P	**P**	**23 17 19.6**	**+0.5**
comp=Z,5.1nm,0.8s,baz=21,slow=8.6,SNR=5.0							
BOSA	**Boshof**	**151.52**	**327**	PKPbc	**PKiKP**	**23 24 26.8**	**+0.5**
comp=Z,2.4nm,0.9s,baz=21,slow=8.6,SNR=2.1							

*IDC **03** 23:10:45.7±0.6,7˚36S×120˚15E,h632km±6km,mb3.4/13, mbtmp4.4/16,Error ellipse: s-maj=26.1km s-min=9.4km az=60.0*
*NEIC **03** 23:10:45.4±1.4,7˚33S±0˚10×120˚2E±0˚1,h623km±7km, mb4.1/28,Error ellipse: s-maj=17.4km s-min=13.2km az=58.0*
*DJA **03** 23:10:46.1±0.2,8˚S±2˚×12˚0E±˚,h610km±2km,M4.2/24, mb4.2/24,mB4.9/7,MLv4.1/21,Mw(mB)4.2/7*
ISC 03 23:10:44.1±0.3,7˚46S±0˚05×120˚14E±0˚06,h600km,n136, σ2§12/142,mb4.1/24,Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSSI	**Bau Bau, Buton**	**1.35**	**15**	P	P	23 12 00.7	+4.4
EDFI	**Ende, Flores**	**2.00**	**130**	P	**P**	**23 12 00.9**	**+2.3**
EDFI				S	**S**	**23 13 00.4**	**+1.3**
BKSI	**Bulukumba**	**2.12**	**360**	P	P	23 12 03.7	+4.7
WSI	**Waingapu**	**2.20**	**176**	P	**P**	**23 12 02.2**	**+2.9**
WBSI	**Waikabubak, Su**	**2.29**	**199**	P	**P**	**23 12 03.4**	**+3.7**
WBSI				S	**S**	**23 13 04.2**	**+2.9**
MMRI	**Maumere**	**2.38**	**120**	P	**P**	**23 12 02.3**	**+2.2**
MMRI	**Maumere**	**2.38**	**120**	P	**P**	**23 12 02.3**	**+2.2**
MMRI	**Maumere**	**2.38**	**120**	P	**P**	**23 12 02.5**	**+2.4**
KAPI	**Kappang**	**2.46**	**351**	P	P	23 12 05.4	+4.9
68nm,0.5s,baz=194,slow=2.3,SNR=40							
KAPI				S	**S**	**23 13 08.7**	**+6.2**
11nm,0.8s,baz=137,slow=20,SNR=10							
KAPI	**Kappang**	**2.46**	**351**	P	P	23 12 04.9	+4.4
KAPI				S	**S**	**23 13 08.9**	**+6.4**
KAPI	**Kappang**	**2.46**	**351**	P	P	23 12 05.3	+4.8
PLAI	**Plampang**	**2.71**	**240**	P	**P**	**23 12 05.8**	**+4.1**
PLAI	**Plampang**	**2.71**	**240**	P	**P**	**23 12 05.0**	**+3.3**
BASI	**Baing, Sumba**	**2.78**	**171**	P	**P**	**23 12 06.5**	**+4.4**
BNSI	**Bone**	**3.04**	**359**	P	P	23 12 08.7	+5.1
BBSI	**Bau Bau**	**3.11**	**51**	P	**P**	**23 12 09.1**	**+5.1**
SPSI	**Sidrap Palu**	**3.49**	**354**

comp=Z,8.1nm,0.6s
WR0 Warramunga Arr 18.69 133 P **P** 23 14 26.9 +0.8
WRKA Warakurna 19.14 157 P **P** 23 14 31.3 +1.2
MMPI Merauke 20.07 94 P **P** 23 14 38.2 -0.5
AS31 Alice Springs 20.84 142 P **P** 23 14 46.1 +0.6
ASAR Alice Springs 20.84 142 P **P** 23 14 46.1 +0.6
comp=Z,6.0nm,0.3s,baz=321,slow=8.5,SNR=119
ASAR S **S** 23 17 56.6 -3.5
comp=Z,0.4nm,0.6s,baz=317,slow=13,SNR=1.7
ASAR PcP **PcP** 23 18 25.5 -1.9
comp=Z,0.7nm,0.5s,baz=339,slow=1.6,SNR=4.9
ASAR ScP **ScP** 23 21 03.7 -4.6
comp=Z,0.8nm,0.6s,baz=332,slow=2.2,SNR=7.7
comp=Z,6.0nm,0.3s
ASAR Alice Springs 20.84 142 P **P** 23 14 45.9 +0.4
MORW Morawa 21.84 190 P **P** 23 14 55.1 +0.8
MORW IAmb IAmb 23 14 56.2
comp=Z,11nm,1.1s
MORW Morawa 21.84 190 P **P** 23 14 54.8 +0.5
QIS Mount Isa 22.90 127 P **P** 23 15 04.4 +0.5
BLDU Ballidu 23.26 188 P **P** 23 15 07.6 +0.7
COEN Coen 23.52 108 P **P** 23 15 09.2 -0.3
COEN IAmb IAmb 23 15 10.1
comp=Z,7.1nm,0.9s
KLBR Kellerberrin 24.11 185 P **P** 23 15 15.2 +0.7
FORT Forrest 24.36 163 P **P** 23 15 17.4 +0.8
FORT Forrest 24.36 163 P **P** 23 15 17.6 +1.0
OOD Oodnadatta 25.02 146 P **P** 23 15 23.2 +0.7
NWAO Narrogin (SRO) 25.49 186 P **P** 23 15 27.5 +0.9
NWAO Narrogin (SRO) 25.49 186 P **P** 23 15 27.9 +1.4
MULG Mulgathing 26.19 152 P **P** 23 15 33.7 +0.9
INKA Innaminka 28.06 138 P **P** 23 15 49.6 +0.4
CTA Charters Tower 28.24 119 P **P** 23 15 51.4 +0.5
comp=Z,5.8nm,0.8s,baz=282,slow=8.6,SNR=4.5
comp=Z,5.8nm,0.8s
CTAO Charters Tower 28.24 119 P **P** 23 15 51.6 +0.7
CTAO IAmb IAmb 23 15 52.9
comp=Z,6.4nm,0.8s
LCRK Leigh Creek 28.46 146 P **P** 23 15 53.3 +0.7
BBOO Buckleboo 29.24 152 P **P** 23 15 60.0 +0.7
BBOO Buckleboo 29.24 152 P **P** 23 15 59.7 +0.4
QLP Quilpie 29.77 133 P **P** 23 16 05.4 +1.5
NAPP Napperby 30.56 149 P **P** 23 16 11.8 +1.2
HTT Hallett 31.15 149 P **P** 23 16 16.9 +1.2
STKA Stephens Creek 31.46 143 P **P** 23 16 19.2 +0.9
comp=Z,14nm,0.3s,baz=320,slow=8.8,SNR=58
comp=Z,14nm,0.3s
STKA Stephens Creek 31.46 143 P **P** 23 16 19.2 +0.9
STKA IAmb IAmb 23 16 19.6
comp=Z,3.4nm,0.5s
STKA Stephens Creek 31.46 143 P **P** 23 16 19.3 +0.9
CMAR Chiang Mai Arr 33.17 321 P **P** 23 16 33.0 +0.1
comp=Z,1.5nm,0.4s,baz=136,slow=7.0,SNR=2.1
CMAR PcP **PcP** 23 18 56.9 -0.7
comp=Z,0.4nm,0.3s,baz=177,slow=2.2,SNR=4.7
comp=Z,1.5nm,0.4s
CMSA Cobar Meteorol 33.79 139 P **P** 23 16 39.2 +1.2
EIDS Eidsvold 34.47 125 P **P** 23 16 43.7 0.0
ARPS Mount Arapiles 35.24 149 P **P** 23 16 50.7 +0.8
ARMA Armidale 37.30 132 P **P** 23 17 08.4 +1.3
ARMA IAmb IAmb 23 17 21.7
comp=Z,8.8nm,1.1s
PZH PanZhiHua 38.19 333 P **P** 23 17 15.6 +1.3
PZH pmax pmax
comp=Z,7.0nm,0.7s
PZH pmax pmax
comp=Z,90nm,4.2s
HHC Hu-ho-hao-te 48.71 351 *e*P **P** 23 18 34.1 -1.2
HHC pmax pmax
comp=Z,25nm,1.0s
HHC pmax pmax
comp=Z,90nm,4.9s
USRK Ussuriysk Ar. 52.52 11 P **P** 23 19 00.8 -1.9
comp=Z,1.3nm,0.4s,baz=195,slow=7.2,SNR=4.1
comp=Z,1.3nm,0.4s
SONM Songino Array 56.38 349 P **P** 23 19 28.3 -1.5
comp=Z,1.1nm,0.6s,baz=157,slow=4.7,SNR=2.4
comp=Z,1.1nm,0.6s
RPZ Rata Peaks 57.17 138 P **P** 23 19 35.1 -0.1
RPZ IAmb IAmb 23 19 39.8
comp=Z,16nm,1.2s
WMQ Urumqi 58.88 333 *e*P **P** 23 19 46.8 +0.1
BKZ Black Stump Fm 59.45 131 P **P** 23 19 49.8 -0.9
BKZ IAmb IAmb 23 20 03.4
comp=Z,8.0nm,1.2s
KSH Kashi 62.06 322 P **P** 23 20 07.6 -0.2
KSH pmax pmax
comp=Z,6.0nm,0.7s
MK31 Makanchi Array 63.62 332 P **P** 23 20 16.4 -1.1
MKAR Makanchi Array 63.62 332 P **P** 23 20 16.6 -0.9
comp=Z,2.3nm,0.5s,baz=142,slow=7.4,SNR=36
MKAR PcP **PcP** 23 20 45.5 -1.8
comp=Z,0.4nm,0.4s,baz=141,slow=4.6,SNR=5.2
comp=Z,2.3nm,0.5s
MKAR Makanchi Array 63.62 332 P **P** 23 20 16.2 -1.3
KBL Kabul 63.81 314 P **P** 23 20 17.5 -1.7
KBL IAmb IAmb 23 20 18.6
comp=Z,4.0nm,0.8s
DRK Karamyk 64.63 320 P **P** 23 20 23.1 -1.3
DRK IAmb IAmb 23 20 24.5
comp=Z,6.5nm,0.8s
GAR Garm 65.31 319 P **P** 23 20 27.2 -1.2
GAR IAmb IAmb 23 20 27.7
comp=Z,6.7nm,0.4s
KKAR Karatay Array 67.50 323 P **P** 23 20 40.1 -1.6
ZAA0 Zalesovo Array 68.02 338 P **P** 23 20 42.5 -2.1
ZAA0 IAmb IAmb 23 20 43.0
comp=Z,3.0nm,0.8s
ZALV Zalesovo Beam 68.02 338 P **P** 23 20 42.3 -2.2
comp=Z,2.8nm,0.4s,baz=135,slow=4.7,SNR=14
comp=Z,2.8nm,0.4s
ZALV Zalesovo Beam 68.02 338 P **P** 23 20 42.0 -2.5
KURK Kurchatov 68.13 333 P **P** 23 20 43.6 -1.7
PETK Petropavlovsk- 68.22 23 P **P** 23 20 45.1 -0.7
comp=Z,1.2nm,0.5s,baz=207,slow=4.8,SNR=1.8
comp=Z,1.2nm,0.5s
PETK Petropavlovsk- 68.22 23 P **P** 23 20 44.8 -1.0
SEY Seymchan 74.39 15 P **P** 23 21 20.7 -0.8
comp=Z,2.3nm,0.5s,baz=197,slow=19,SNR=8.0
comp=Z,2.3nm,0.5s
ABKAR Akbulak array 76.97 324 P **P** 23 21 34.1 -1.9
ABKAR Akbulak array 76.97 324 P **P** 23 21 34.0 -2.0
ABKAR IAmb IAmb 23 21 34.5
comp=Z,1.2nm,0.7s
RAYN Ar Rayn 79.05 296 P **P** 23 21 46.9 -0.9
TIXI Tiksi 79.16 3 P **P** 23 21 44.9 -2.4
comp=Z,1.0nm,0.4s,baz=270,slow=20,SNR=8.4
comp=Z,1.0nm,0.4s
TIXI Tiksi 79.16 3 P **P** 23 21 45.1 -2.1
QSPA South Pole Qui 82.53 180 P **P** 23 22 04.2 -0.8
BOSA Boshof 90.73 241 P **P** 23 22 43.6 -1.1
comp=Z,2.4nm,1.0s,baz=114,slow=5.3,SNR=5.9
comp=Z,2.4nm,1.0s
BRTR Keskin Array B 92.03 310 P **P** 23 22 47.9 -2.6
comp=Z,0.4nm,0.7s,baz=151,slow=3.3,SNR=2.3
comp=Z,0.4nm,0.7s
NVAR Mina Array Bea 119.17 50 PKP **PKPdf** 23 28 25.6 -1.0
comp=Z,0.4nm,0.6s,baz=216,slow=2.9,SNR=3.7
TORD Torodi Ar. Bea 119.29 281 PKP **PKPdf** 23 28 24.8 -2.4
comp=Z,0.5nm,0.6s,baz=45,slow=3.3,SNR=6.5
CLTN Cedars of Leba 142.62 36 **PKPdf** 23 29 06.6 -3.8
U49A Red Boiling Sp 142.65 35 **PKPdf** 23 29 06.3 -4.1
Q54A Coxs Mills 143.37 28 PKPab 23 29 08.7 -1.4
Z47A Carrollton 143.41 42 PKPab 23 29 09.0 -1.4
LPAZ La Paz 155.03 161 PKPab **PKPab** 23 29 59.2 0.0
comp=Z,0.7nm,0.6s,baz=220,slow=5.1,SNR=3.8

*NOU **03** 23:32:35.9, 23.°95S×179.°12E, h278km, mb4.6/19, South of Fiji Islands*
*IDC **03** 23:32:43.9±1.6, 23.°68S×179.°86W, h514km±17km, mb3.4/10, mbtmp4.2/12, Error ellipse: s-maj=18.9km s-min=16.9km az=132.0*
*NEIC **03** 23:32:44.6±1.8, 23.°8S±0.°1×179.°8W±0.°1, h525km±11km, mb4.5/43, Error ellipse: s-maj=18.8km s-min=17.7km az=148.0*
ISC 03 23:32:45.0±0.6, 23.°73S±0.°08×179.°84W±0.°09, h532km, n85, σ1°08/85, mb4.4/26, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**6.28**	**341**	P	**P**	**23 34 24.1**	**-1.4**
	4.6nm,0.6s,baz=106,slow=15,SNR=4.4						
MSVF	**Nonsavu**	**6.28**	**341**	P	**P**	**23 34 23.9**	**-1.7**
NIUE	**Niue**	**10.32**	**65**	P	**P**	**23 35 06.0**	**-0.1**
NIUE	**Niue**	**10.32**	**65**	P	**P**	**23 35 11.4**	**+5.3**
MARNC	**Mare, Loyalty**	**11.43**	**279**	P	**P**	**23 35 15.8**	**-1.8**
PINNC	**Pines Island,**	**11.75**	**273**	P	**P**	**23 35 21.5**	**+0.6**
DZM	**Mont Dzumac**	**12.75**	**275**	P	**P**	**23 35 32.1**	**+0.6**
OUZ	**Omahuta**	**12.80**	**205**	P	**P**	**23 35 30.2**	**-1.4**
URZ	**Urewera**	**14.72**	**189**	P	**P**	**23 35 50.8**	**-0.8**
	4.7nm,0.7s,baz=18,slow=6.1,SNR=2.7						
URZ				S	**S**	**23 38 23.7**	**-1.8**
	3.6nm,0.6s,baz=39,slow=23,SNR=2.3						
URZ	**Urewera**	**14.72**	**189**	P	**P**	**23 35 51.1**	**-0.5**
HIZ	**Hauiti**	**15.42**	**196**	P	**P**	**23 35 59.3**	**+0.4**
BKZ	**Black Stump Fm**	**15.71**	**191**	P	**P**	**23 36 00.4**	**-1.5**
BKZ				IAmb	IAmb	23 36 02.6	
	comp=Z,8.1nm,1.0s						
BFZ	**Birch Farm**	**17.23**	**190**	P	**P**	**23 36 15.4**	**-1.0**
BFZ	**Birch Farm**	**17.23**	**190**	P	**P**	**23 36 14.6**	**-1.8**
QRZ	**Quartz Range**	**18.22**	**199**	P	**P**	**23 36 26.2**	**+0.7**
QRZ	**Quartz Range**	**18.22**	**199**	P	**P**	**23 36 25.8**	**+0.3**
PLWZ	**Palliser**	**18.26**	**192**	P	**P**	**23 36 23.5**	**-2.5**
NNZ	**Nelson**	**18.34**	**196**	P	**P**	**23 36 26.3**	**-0.4**
NNZ				IAmb	IAmb	23 36 42.2	
	comp=Z,16nm,1.1s						
TUWZ	**Tuamarina**	**18.41**	**195**	P	**P**	**23 36 26.3**	**-0.9**
THZ	**Tophouse**	**18.98**	**197**	P	**P**	**23 36 32.5**	**0.0**
THZ				IAmb	IAmb	23 36 38.9	
	comp=Z,18nm,1.1s						
KHZ	**Kahutara**	**19.44**	**195**	P	**P**	**23 36 35.2**	**-1.4**
KHZ				IAmb	IAmb	23 36 49.3	
	comp=Z,17nm,1.1s						
KHZ	**Kahutara**	**19.44**	**195**	P	**P**	**23 36 35.2**	**-1.4**
LTZ	**Lake Taylor**	**20.10**	**197**	P	**P**	**23 36 42.3**	**-0.4**
OXZ	**Oxford**	**20.67**	**197**	P	**P**	**23 36 47.0**	**-0.8**
OXZ				IAmb	IAmb	23 36 47.5	
	comp=Z,21nm,1.2s						
MQZ	**McQueen's Vall**	**20.87**	**195**	P	**P**	**23 36 47.0**	**-2.5**
MQZ				IAmb	IAmb	23 36 52.6	
	comp=Z,11nm,1.0s						
RPZ	**Rata Peaks**	**21.30**	**198**	P	**P**	**23 36 54.1**	**+0.6**
	comp=Z,8.7nm,0.7s,baz=18,slow=4.5,SNR=5.9						
	comp=Z,8.7nm,0.7s						
RPZ	**Rata Peaks**	**21.30**	**198**	IAmb	IAmb	23 37 04.8	
	comp=Z,18nm,1.1s						
RPZ	**Rata Peaks**	**21.30**	**198**	P	**P**	**23 36 54.5**	**+1.0**
FOZ	**Fox Glacier**	**21.52**	**201**	P	**P**	**23 36 55.1**	**-0.3**
LBZ	**Lake Benmore**	**22.17**	**199**	P	**P**	**23 36 59.4**	**-1.9**
LBZ				IAmb	IAmb	23 37 03.4	
	comp=Z,14nm,1.1s						
ODZ	**Otahua Downs**	**22.64**	**198**	P	**P**	**23 37 03.4**	**-2.1**
WKZ	**Wanaka**	**22.93**	**201**	P	**P**	**23 37 06.9**	**-1.2**
WKZ				IAmb	IAmb	23 37 14.4	
	comp=Z,21nm,1.2s						
MLZ	**Mavora Lakes**	**23.71**	**201**	P	**P**	**23 37 16.3**	**+1.3**
MLZ				IAmb	IAmb	23 37 21.1	
	comp=Z,20nm,1.1s						
DCZ	**Deep Cove**	**24.12**	**203**	P	**P**	**23 37 18.2**	**-0.4**
DCZ				IAmb	IAmb	23 37 34.3	
	comp=Z,14nm,1.2s						
WHZ	**Wether Hill Ro**	**24.23**	**201**	P	**P**	**23 37 20.1**	**+0.5**
ARMA	**Armidale**	**26.22**	**249**	P	**P**	**23 37 38.5**	**+0.9**
ARMA				IAmb	IAmb	23 37 50.8	
	comp=Z,9.5nm,0.9s						
ARMA	**Armidale**	**26.22**	**249**	P	**P**	**23 37 38.8**	**+1.2**
EIDS	**Eidsvold**	**26.48**	**260**	P	**P**	**23 37 40.5**	**+0.7**
EIDS				IAmb	IAmb	23 37 41.2	
	comp=Z,9.2nm,0.5s						
EIDS	**Eidsvold**	**26.48**	**260**	P	**P**	**23 37 40.2**	**+0.4**
MGCD	**Mangrove Creek**	**27.16**	**243**	P	**P**	**23 37 45.6**	**-0.1**
RMQ	**Roma**	**28.54**	**258**	P	**P**	**23 37 57.8**	**0.0**
CAN	**Canberra**	**29.36**	**240**	P	**P**	**23 38 05.8**	**+0.9**
CAN				IAmb	IAmb	23 38 06.9	
	comp=Z,12nm,0.8s						
CAN	**Canberra**	**29.36**	**240**	P	**P**	**23 38 05.6**	**+0.7**
CMSA	**Cobar Meteorol**	**31.42**	**248**	P	**P**	**23 38 22.6**	**0.0**
CTA	**Charters Tower**	**31.62**	**270**	P	**P**	**23 38 25.1**	**+0.5**
CTAO	**Charters Tower**	**31.62**	**270**	P	**P**	**23 38 25.3**	**+0.7**
CTAO	**Charters Tower**	**31.62**	**270**	P	**P**	**23 38 25.1**	**+0.5**
TOO	**Toolangi**	**32.67**	**237**	P	**P**	**23 38 33.9**	**+0.6**
TOO				IAmb	IAmb	23 38 44.6	
	comp=Z,12nm,1.1s						
TOO	**Toolangi**	**32.67**	**237**	P	**P**	**23 38 34.0**	**+0.8**
BRAT	**Ballarat**	**33.86**	**237**	P	**P**	**23 38 44.9**	**+1.7**
STKA	**Stephens Creek**	**34.92**	**248**	P	**P**	**23 38 52.5**	**+0.2**
	comp=Z,3.9nm,0.6s,baz=86,slow=11,SNR=12						
	comp=Z,3.9nm,0.6s						
STKA	**Stephens Creek**	**34.92**	**248**	P	**P**	**23 38 52.8**	**+0.5**
ARPS	**Mount Arapiles**	**35.33**	**239**	P	**P**	**23 38 56.3**	**+0.7**
COEN	**Coen**	**36.23**	**279**	P	**P**	**23 39 03.6**	**+0.2**
HTT	**Hallett**	**37.28**	**246**	P	**P**	**23 39 12.0**	**+0.2**
BBOO	**Buckleboo**	**39.65**	**247**	P	**P**	**23 39 30.2**	**-0.8**
BBOO				IAmb	IAmb	23 39 30.8	
	comp=Z,8.1nm,0.5s						
AS31	**Alice Springs**	**42.21**	**260**	P	**P**	**23 39 51.4**	**-0.1**
ASAR	**Alice Springs**	**42.21**	**260**	P	**P**	**23 39 51.3**	**-0.2**
	comp=Z,11nm,0.7s,baz=100,slow=7.1,SNR=90						
ASAR				ScP	**ScP**	**23 44 36.1**	**+2.8**
	comp=Z,1.5nm,0.8s,baz=108,slow=4.8,SNR=8.1						
	comp=Z,11nm,0.7s						
ASAR	**Alice Springs**	**42.21**	**260**	P	**P**	**23 39 51.0**	**-0.5**
WR0	**Warramunga Arr**	**42.38**	**266**	P	**P**	**23 39 52.0**	**-0.8**
WR0				IAmb	IAmb	23 39 52.7	
	comp=Z,9.6nm,0.9s						
WB2	**Warramunga Arr**	**42.56**	**266**	P	**P**	**23 39 53.5**	**-0.8**
WB2				IAmb	IAmb	23 39 54.2	
	comp=Z,15nm,0.7s						
WB0	**Warramunga Arr**	**42.56**	**266**	P	**P**	**23 39 53.5**	**-0.7**
WRAB	**Tennant Creek**	**42.56**	**266**	P	**P**	**23 39 53.2**	**-1.1**
WRAB				IAmb	IAmb	23 39 54.1	
	comp=Z,17nm,0.9s						
WRA	**Warramunga Arr**	**42.57**	**266**	P	**P**	**23 39 53.5**	**-0.8**
	comp=Z,12nm,0.5s,baz=102,slow=8.4,SNR=188						
WRA				ScP	**ScP**	**23 44 37.0**	**+2.2**
	comp=Z,0.9nm,0.9s,baz=95,slow=4.5,SNR=5.2						
	comp=Z,12nm,0.5s						
WRA	**Warramunga Arr**	**42.57**	**266**	P	**P**	**23 39 53.5**	**-0.8**
FORT	**Forrest**	**46.51**	**249**	P	**P**	**23 40 24.0**	**-0.6**
MTN	**Manton Dam**	**47.59**	**274**	P	**P**	**23 40 32.1**	**-0.7**
MTN				IAmb	IAmb	23 40 32.6	
	comp=Z,6.0nm,0.6s						
KNRA	**Kununurra**	**48.84**	**270**	P	**P**	**23 40 41.7**	**-0.5**
KNRA				IAmb	IAmb	23 40 42.7	
	comp=Z,14nm,0.9s						
VNDA	**Vanda**	**54.56**	**185**	P	**P**	**23 41 24.0**	**+1.5**
	comp=Z,0.4nm,0.7s,baz=8.1,slow=8.3,SNR=2.2						
	comp=Z,0.4nm,0.7s						
VNDA	**Vanda**	**54.56**	**185**	P	**P**	**23 41 23.9**	**+1.4**
PSA00	**Pilbara Seismi**	**55.34**	**259**	P	**P**	**23 41 27.8**	**-1.0**
NWAO	**Narrogin (SRO)**	**55.44**	**245**	P	**P**	**23 41 28.9**	**-0.6**
MBWA	**Marble Bar**	**55.55**	**260**	P	**P**	**23 41 29.6**	**-0.7**
MORW	**Morawa**	**57.07**	**250**	P	**P**	**23 41 40.4**	**-0.3**
MORW				IAmb	IAmb	23 41 41.0	
	comp=Z,11nm,0.7s						
CASY	**Casey**	**60.33**	**206**	P	**P**	**23 42 01.8**	**-0.2**
TOLI2	**Tolitoli**	**62.68**	**284**	P	**P**	**23 42 18.6**	**+0.4**
TOLI2				IAmb	IAmb	23 42 19.3	
	comp=Z,7.1nm,0.6s						
QSPA	**South Pole Qui**	**66.36**	**180**	P	**P**	**23 42 41.6**	**+0.9**
	comp=Z,2.5nm,1.0s,baz=119,slow=1.0,SNR=5.7						
	comp=Z,2.5nm,1.0s						
QSPA	**South Pole Qui**	**66.36**	**180**	IAmb	IAmb	23 42 45.1	
	comp=Z,2.6nm,1.1s						
NVAR	**Mina Array Bea**	**84.52**	**44**	P	**P**	**23 44 22.2**	**0.0**
	comp=Z,0.2nm,0.5s,baz=234,slow=7.2,SNR=3.8						
	comp=Z,0.2nm,0.5s						
CMAR	**Chiang Mai Arr**	**89.61**	**290**	P	**P**	**23 44 48.2**	**+1.8**
	comp=Z,0.9nm,0.4s,baz=128,slow=3.2,SNR=5.9						
	comp=Z,0.9nm,0.4s						
TXAR	**Lajitas Array**	**90.21**	**58**	P	**P**	**23 44 49.7**	**+0.6**
	comp=Z,0.9nm,0.7s,baz=216,slow=5.9,SNR=6.9						
	comp=Z,0.9nm,0.7s						
PDAR	**Pinedale Array**	**92.46**	**44**	P	**P**	**23 44 59.3**	**0.0**
	comp=Z,0.3nm,0.6s,baz=234,slow=3.0,SNR=1.5						
	comp=Z,0.3nm,0.6s						
FINES	**FINESS Array B**	**138.33**	**342**	SKPbc	**SKPbc**	**23 53 53.4**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=25,slow=3.7,SNR=5.6						
BRTR	**Keskin Array B**	**147.59**	**307**	PKPbc	**PKPbc**	**23 51 29.4**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=72,slow=4.9,SNR=1.9						
TORD	**Torodi Ar. Bea**	**169.38**	**188**	PKPab	**PKPab**	**23 53 06.8**	**-1.5**
	comp=Z,0.5nm,0.9s,baz=183,slow=2.9,SNR=2.5						

*IDC **03** 23:37:51.6±2.8, 30.°73S×177.°81W, h0km, mb3.8/3, mbtmp3.7/4, ML2.9/1, Error ellipse: s-maj=67.2km s-min=24.7km az=113.0*
*NEIC **03** 23:37:53.9±0.5, 30.°68S±0.°04×177.°6W±0.°1, h22km±6km, mb4.2/13, Error ellipse: s-maj=15.8km s-min=5.1km az=82.0*
ISC 03 23:37:54.8±0.8, 30.°66S±0.°06×177.°6W±0.°1, h33km, n25, σ0°70/25, mb4.1/8, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.43**	**348**	Pn	**Pb**	**23 38 20.8**	**-0.1**
	42nm,0.3s,baz=162,slow=20,SNR=2.2						
RAO				Sn	**Sn**	**23 38 35.2**	**-0.9**
	90nm,0.3s,baz=62,slow=23,SNR=2.9						
RAO	**Raoul Island**	**1.43**	**348**		**Pn**	**23 38 18.8**	**+0.3**
RAO				Sg	**Sb**	**23 38 38.6**	**-0.2**
URZ	**Urewera**	**8.75**	**209**	Pn	**Pn**	**23 39 58.5**	**-0.5**
	0.2nm,0.3s,baz=0.0,slow=3.0,SNR=1.0						
URZ				Sn	**Sn**	**23 41 36.5**	**0.0**
	0.6nm,0.3s,baz=217,slow=20,SNR=1.7						
	1.7nm,0.6s						
MARNC	**Mare, Loyalty**	**15.81**	**302**	P	**P**	**23 41 39.2**	**+0.7**
RPZ	**Rata Peaks**	**15.84**	**212**	Pn	**Pn**	**23 41 35.1**	**-0.3**
RPZ				IAmb	IAmb	23 41 51.8	
	comp=Z,20nm,1.2s						
ONTNC	**Ouen Toro**	**16.52**	**296**	P	**P**	**23 41 47.6**	**+1.3**
ONTNC				IAmb	IAmb	23 41 48.3	
	comp=Z,26nm,0.8s						
ODZ	**Otahua Downs**	**17.08**	**209**	Pn	**Pn**	**23 41 49.3**	**-1.6**
RAR	**Rarotonga**	**18.56**	**64**	P	**P**	**23 42 08.8**	**-0.1**
ARMA	**Armidale**	**26.48**	**263**	P	**P**	**23 43 29.3**	**+0.2**
ARMA				IAmb	IAmb	23 43 42.4	
	comp=Z,13nm,1.1s						
STKA	**Stephens Creek**	**34.77**	**257**	P	**P**	**23 44 43.3**	**+1.1**
	comp=Z,1.0nm,0.4s,baz=105,slow=12,SNR=3.2						
	comp=Z,1.0nm,0.4s						
BBOO	**Buckleboo**	**39.24**	**254**	P	**P**	**23 45 21.1**	**+0.9**
ASAR	**Alice Springs**	**43.45**	**267**	P	**P**	**23 45 54.6**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=102,slow=7.7,SNR=2.0						
	comp=Z,0.2nm,0.4s						
WR0	**Warramunga Arr**	**44.28**	**272**	P	**P**	**23 46 01.5**	**-0.1**
WR0				IAmb	IAmb	23 46 19.6	
	comp=Z,4.0nm,1.1s						
WB2	**Warramunga Arr**	**44.45**	**272**	P	**P**	**23 46 02.6**	**-0.3**
WB2				IAmb	IAmb	23 46 13.7	
	comp=Z,4.1nm,1.1s						
WRA	**Warramunga Arr**	**44.46**	**272**	P	**P**	**23 46 02.3**	**-0.8**
	comp=Z,1.0nm,0.5s,baz=112,slow=7.6,SNR=10						
	comp=Z,1.0nm,0.5s						
WRA	**Warramunga Arr**	**44.46**	**272**	P	**P**	**23 46 03.0**	**0.0**
WB0	**Warramunga Arr**	**44.48**	**272**	P	**P**	**23 46 02.9**	**-0.4**
WB0				IAmb	IAmb	23 46 19.7	
	comp=Z,2.2nm,1.1s						
MORW	**Morawa**	**56.80**	**253**	P	**P**	**23 47 34.9**	**-1.2**
MIDW	**Midway**	**58.55**	**0**	P	**P**	**23 47 48.1**	**+0.1**
QSPA	**South Pole Qui**	**59.45**	**180**	P	**P**	**23 47 54.8**	**+0.6**
QSPA				IAmb	IAmb	23 48 09.7	
	comp=Z,1.4nm,1.0s						
TKX	**Tecate**	**85.35**	**48**	P	**P**	**23 50 28.8**	**0.0**
H10N3	**ASCENSION HYDR**	**138.42**	**154**	T	T	02 33 06.9	
	baz=203,slow=75,SNR=9.7						
H10N1	**ASCENSION HYDR**	**138.43**	**154**	T	T	02 32 54.2	
	baz=203,slow=75,SNR=9.2						
H10N2	**ASCENSION HYDR**	**138.44**	**154**	T	T	02 32 55.3	
	baz=203,slow=75,SNR=8.4						
FINES	**FINESS Array B**	**145.51**	**340**	PKPbc	**PKPab**	**23 57 29.6**	**+0.5**
	comp=Z,1.2nm,0.5s,baz=47,slow=4.1,SNR=16						

IDC 03 23:40:42.9±574.0, 74.°71N×11.°38E, h0km, Error ellipse: s-maj=231.8km s-min=23.1km az=155.0, Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I37NO	**I37NO**	**6.09**	**155**	*i*		00 18 20.0	
	0.1nm,0.6s,baz=342,slow=319,SNR=6.3						
I18DK	**QAANAAQ INFRAS**	**8.14**	**316**	*i*		01 34 20.0	
	baz=58,slow=332,SNR=2.5						
I26DE	**FREYUNG INFRAS**	**25.97**	**176**	*i*		02 20 00.0	
	baz=359,slow=329,SNR=0.9						

MAN 04 00:03:44.5, 13.°07N×120.°87E, h1km, mb4.2, ML3.1, MS2.8, 2C-2D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PGP	**Puerto Galera**	**0.44**	**111**	*e*P	Pb	00 03 53.5	+3.4
PGP				*i* S		00 04 01.1	
LUBP	**Lubang**	**0.90**	**318**	*e*P	Pn	00 04 02.2	+0.5
LUBP				*e*S		00 04 12.1	
TGY	**Tagaytay City**	**1.03**	**4**	*e*P	Pg	00 04 08.6	+0.2
MACP	**Maragondon, Ca**	**1.20**	**353**	*e*P	Pn	00 04 08.6	+0.4
MACP				*e*S		00 05 12.0	
SMPP	**San Manuel, Pa**	**3.07**	**357**	*e*P	Pn	00 04 34.2	+0.2

*IDC **04** 00:17:28.4±1.7, 36.°43N×29.°70E, h0km, mb3.2/2, mbtmp3.1/3, ML2.4/1, MS3.1/2, Error ellipse: s-maj=86.1km s-min=22.0km az=139.0*
*ISK **04** 00:17:28.8, 36.°88N×29.°31E, h4km, ML2.7/24*
*DDA **04** 00:17:29.4±0.0, 36.°86N×29.°31E, h7km±4km, ML2.3*
*IASPEI **04** 00:17:29.5±1.0, 36.°88N±0.°02×29.°30E±0.°02, h5km±7km, Error ellipse: s-maj=3.8km s-min=3.1km az=126.7, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
*THE **04** 00:17:30.2, 36.°86N×29.°33E, h0km±3km, ML2.5/2, Error ellipse: s-maj=7.8km s-min=1.8km az=85.0*
*GII **04** 00:17:32.0±0.0, 36.°42N×29.°14E, h5km*
ISC 04 00:17:29.5±1.0, 36.°87N±0.°02×29.°31E±0.°02, h4km±7km, n53, σ1°10/72, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAME	**Cameli-Denizli**	**0.07**	**358**	PG	**Pg**	**00 17 30.7**	**-0.5**
CAME				SG	**Sg**	**00 17 32.6**	**+0.2**
CAEL	**Denizli, Camel**	**0.25**	**3**	P	**Pg**	**00 17 34.2**	**-0.3**
CAEL				S	**Sg**	**00 17 39.5**	**+1.7**
FETY	**Fethiye**	**0.30**	**217**	PG	**Pg**	**00 17 35.3**	**+0.1**
FETY				SG	**Sg**	**00 17 40.3**	**+1.2**
FETY	**Fethiye**	**0.30**	**217**	P	**Pb**	**00 17 36.5**	**-0.9**
FET

BRDR	**BURDUR-Merkez**	**1.02**	**36**	P	**Pg**	**00 17 49.1**	**0.0**
BRDR				S	**Sn**	**00 18 05.2**	**-0.3**
BRDR				*i* AML	AML	00 18 12.0	
	comp=E,60nm,0.6s						
BRDR				*i* AML	AML	00 18 14.0	
	comp=N,81nm,0.8s						
ANTB	**Antalya**	**1.08**	**88**	PG	**Pg**	**00 17 50.0**	**-0.2**
ARG	**Arkhangelos**	**1.15**	**236**	P	**Pg**	**00 17 51.1**	**-0.5**
ARG				S	**Sn**	**00 18 09.6**	**+1.0**
	198nm,1.1s						
ARG	**Arkhangelos**	**1.15**	**236**	PN	**Pg**	**00 17 51.2**	**-0.4**
BASM	**Basmaki-Afyon**	**1.20**	**29**	PN	**Pg**	**00 17 52.3**	**-0.3**
MLSB	**Milas**	**1.29**	**290**	PN	**Pn**	**00 17 53.9**	**-0.5**
AYDN	**Tasoluk**	**1.39**	**305**	P	**Pg**	**00 17 56.4**	**+0.3**
AYDN				*i* AML	AML	00 18 19.0	
	comp=E,76nm,0.7s						
AYDN				*i* AML	AML	00 18 21.0	
	comp=N,50nm,0.8s						
DAT	**Datca**	**1.39**	**265**	P	**Pn**	**00 17 55.0**	**-0.9**
DAT				S	**Sn**	**00 18 16.2**	**+1.4**
DAT	**Datca**	**1.39**	**265**	PN	**Pn**	**00 17 55.9**	**0.0**
DAT	**Datca**	**1.39**	**265**	P	**Pg**	**00 17 57.4**	**+1.1**
DAT				S	**Sn**	**00 18 20.1**	**+5.3**
DAT				*i* AML	AML	00 18 22.0	
	comp=N,92nm,0.8s						
DAT				*i* AML	AML	00 18 23.0	
	comp=E,57nm,0.4s						
SUTC	**Sutluce-Ispart**	**1.48**	**65**	PN	**Pn**	**00 17 56.9**	**-0.2**
AYDB	**Zeytinkoy-Aydi**	**1.56**	**314**	PN	**Pn**	**00 17 57.9**	**-0.2**
BODT	**Bodrum**	**1.61**	**277**	P	**Pb**	**00 17 59.8**	**0.0**
BODT				S	**Sb**	**00 18 20.8**	**+0.3**
BODT	**Bodrum**	**1.61**	**277**	PN	**Pb**	**00 17 59.5**	**-0.3**
KULA	**Kula-Manisa**	**1.72**	**343**	P	**Pn**	**00 18 00.6**	**+0.3**
KULA	**Kula-Manisa**	**1.72**	**343**	PN	**Pn**	**00 17 59.8**	**-0.5**
NIS1	**Nisyros Isl.**	**1.73**	**262**	P	**Pb**	**00 18 01.1**	**-0.8**
NIS1	**Nisyros Isl.**	**1.73**	**262**	PN	**Pn**	**00 18 00.6**	**+0.2**
GCAM	**G?zelcami?**	**1.85**	**297**	PN	**Pn**	**00 18 02.3**	**+0.3**
KOSK	**Kos Island**	**1.87**	**267**	PN	**Pn**	**00 18 02.5**	**+0.2**
SHUT	**Suhut-Afyon**	**1.95**	**30**	PN	**Pn**	**00 18 03.6**	**+0.1**
SEYD	**Seydisehir-KON**	**2.09**	**74**	PN	**Pn**	**00 18 05.8**	**+0.3**
SMG	**Samos**	**2.14**	**294**	P	**Pn**	**00 18 06.4**	**+0.4**
SMG				S	**Sn**	**00 18 33.4**	**+0.4**
	58nm,0.4s						
GAZI	**Gazipasa**	**2.50**	**104**	PN	**Pn**	**00 18 11.6**	**+0.5**
HDMB	**Hadim**	**2.55**	**87**	PN	**Pn**	**00 18 12.3**	**+0.4**
BRTR	**Keskin Array B**	**4.44**	**49**	Pn	**Pn**	**00 18 39.8**	**+2.0**
	0.2nm,0.3s,baz=226,slow=17,SNR=9.6						
BRTR				Sn	**Sn**	**00 19 34.5**	**+4.5**
	0.1nm,0.3s,baz=225,slow=24,SNR=3.1 0.8nm,0.6s						
MMA0B	**Mount Meron ar**	**6.31**	**126**	Pn	**Pn**	**00 19 04.7**	**+1.2**
MMA0B				Sn	**Sn**	**00 20 16.4**	**+0.3**
NATI	**Neve Ativ**	**6.38**	**122**	Pn	**Pn**	**00 19 05.3**	**+1.0**
NATI				Sn	**Sn**	**00 20 17.1**	**-0.6**
MMLI	**Mount Malkishu**	**6.70**	**129**	Pn	**Pn**	**00 19 09.1**	**+0.3**
HMDT	**Nahal Hemdat**	**6.89**	**130**	Pn	**Pn**	**00 19 11.6**	**+0.2**
ASF	**Jabal al Asfar**	**7.82**	**125**	LR	LR	00 23 30.5	
	comp=Z,98nm,18.8s,baz=109,slow=50						
PRNI	**Paran**	**8.05**	**142**	Pn	**Pn**	**00 19 26.1**	**-1.2**
TORD	**Torodi Ar. Bea**	**34.19**	**233**	P	**P**	**00 24 15.7**	**-0.4**
	0.3nm,0.5s,baz=37,slow=7.9,SNR=5.8 0.3nm,0.5s						
MKAR	**Makanchi Array**	**40.02**	**59**	P	**P**	**00 25 04.3**	**-1.2**
	0.1nm,0.5s,baz=273,slow=8.5,SNR=1.8 0.1nm,0.5s						
LSZ	**Lusaka**	**51.88**	**181**	LR	LR	00 50 33.7	
	comp=Z,23nm,18.1s,baz=135,slow=39						

*NEIC **04** 00:35:32.9±2.0, 44°.00N±0°.04×125°.8W±0°.1, h10km±2km, ML2.8/58, Error ellipse: s-maj=12.4km s-min=7.0km az=279.0*
*ANF **04** 00:35:32.8±1.0, 43°.97N×125°.84W, h10km, ML2.9/12, Error ellipse: s-maj=9.0km s-min=4.7km az=81.0*
ISC 04 00:35:30.8±1.9, 43°.98N±0°.04×126°.01W±0°.09, h10km, n42, σ1§13/54, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I02E	**Swisshome, OR**	**1.56**	**85**		**Pn**	**00 35 58.3**	**-0.3**
I02E					**Sn**	**00 36 17.9**	**-1.0**
I02E				IAML		00 36 18.8	
	comp=E,94nm,0.3s						
I02E	**Swisshome, OR**	**1.56**	**85**	P	**Pn**	**00 35 58.3**	**-0.3**
	baz=266,SNR=56						
I02E				S	**Sb**	**00 36 18.4**	**-1.2**
	baz=266						
KEBM	**Edson Butte**	**1.65**	**132**	Pn	**Pn**	**00 35 59.7**	**-0.2**
KEBM				IAML		00 36 21.4	
	comp=E,113nm,0.4s						
KEBM				IAML		00 36 41.9	
	comp=N,83nm,1.3s						
J01E	**Myrtle Point**	**1.72**	**118**	Pn	**Pn**	**00 36 00.2**	**-0.5**
J01E				IAML		00 36 22.5	
	comp=E,146nm,0.3s						
J01E				IAML		00 36 28.3	
	comp=N,147nm,0.3s						
J01E	**Myrtle Point**	**1.72**	**118**	P	**Pn**	**00 36 00.5**	**-0.2**
	baz=302,SNR=19						
J01E				S	**Sn**	**00 36 21.9**	**-0.8**
	baz=302						
I03D	**Drain, OR**	**1.95**	**98**	P	**Pn**	**00 36 04.2**	**+0.3**
	baz=280,SNR=16						
I03D				S	**Sb**	**00 36 28.6**	**-2.0**
	baz=280						
HEBO	**Mount Hebo**	**2.03**	**52**	Pn	**Pn**	**00 36 04.0**	**-1.1**
HEBO				IAML		00 36 30.6	
	comp=E,92nm,1.7s						
HEBO				IAML		00 36 41.4	
	comp=N,80nm,1.6s						
COR	**Corvallis**	**2.04**	**72**		**Pn**	**00 36 05.3**	**+0.3**
COR				IAML		00 36 31.2	
	comp=N,49nm,0.6s						
COR				IAML		00 36 37.4	
	comp=N,53nm,1.1s						
K02D	**Willamette Mer**	**2.14**	**126**	P	**Pn**	**00 36 06.7**	**+0.1**
	baz=310,SNR=36						
K02D				S	**Sn**	**00 36 32.3**	**-1.0**
	baz=310						
BUCK	**Buck Mountain**	**2.19**	**83**		**Pn**	**00 36 08.0**	**+0.7**
BUCK				IAML		00 36 36.7	
	comp=N,61nm,0.4s						
BUCK				IAML		00 36 42.0	
	comp=E,64nm,0.6s						
KBO	**Bosley Butte**	**2.20**	**143**	Pn	**Pn**	**00 36 07.8**	**+0.3**
KBO				IAML		00 37 29.3	
	comp=N,66nm,1.9s						
G03D	**McMinnville, O**	**2.31**	**57**	Pn	**Pn**	**00 36 09.0**	**+0.1**
G03D				IAML		00 36 40.3	
	comp=E,67nm,0.4s						
G03D	**McMinnville, O**	**2.31**	**57**	P	**Pn**	**00 36 09.1**	**+0.1**
	baz=237,SNR=25						
G03D				S	**Sn**	**00 36 37.1**	**-0.3**
	baz=237						
H04D	**Lebanon**	**2.41**	**76**		**Pn**	**00 36 10.7**	**+0.4**
H04D				IAML		00 36 42.9	
	comp=E,57nm,0.5s						
H04D				IAML		00 36 43.6	
	comp=N,59nm,0.7s						
H04D	**Lebanon**	**2.41**	**76**	P	**Pn**	**00 36 11.3**	**+1.0**
	baz=258,SNR=29						
H04D				S	**Sn**	**00 36 40.6**	**+0.7**
	baz=258						
L02F	**Cave Junction**	**2.58**	**135**	P	**Pn**	**00 36 13.4**	**+0.8**
	baz=319						
L02F				S	**Sn**	**00 36 42.8**	**-1.2**
	baz=319						
I04A	**Tendick Farm,**	**2.61**	**93**	P	**Pn**	**00 36 14.3**	**+1.2**
	baz=276,SNR=8.8						
I04A				S	**Sn**	**00 36 45.8**	**+1.0**
	baz=276						
HUMO	**Hull Mountain**	**2.62**	**121**	Pn	**Pn**	**00 36 13.6**	**+0.4**
KSXB	**Camp Six Broad**	**2.66**	**143**	Pn	**Pn**	**00 36 15.0**	**+1.1**
H04A	**Detroit Lake**	**2.83**	**74**		**Pn**	**00 36 16.5**	**+0.4**
H04A				IAML		00 36 33.1	
	comp=N,45nm,0.3s						
J04D	**Umpqua Nationa**	**2.93**	**103**	Pn	**Pn**	**00 36 18.7**	**+1.1**
F04D	**Rainier, OR**	**2.99**	**44**	P	**Pn**	**00 36 19.6**	**+1.4**
	baz=225						
F04D				S	**Sn**	**00 36 55.1**	**+1.0**
	baz=225						
F04A	**Amboy**	**3.21**	**51**	Pn	**Pn**	**00 36 22.3**	**+1.1**
F04A				IAML		00 37 02.5	
	comp=N,37nm,0.3s						
L04D	**Klamath Falls**	**3.24**	**122**	Pn	**Pn**	**00 36 23.9**	**+2.1**
L04D				IAML		00 37 09.5	
	comp=E,27nm,1.7s						
L04D	**Klamath Falls**	**3.24**	**122**	P	**Pn**	**00 36 24.3**	**+2.6**
	baz=306						
L04D				S	**Sn**	**00 37 01.8**	**+1.4**
	baz=306						
YBH	**Yreka Blue Hor**	**3.31**	**132**	Pn	**Pn**	**00 36 24.1**	**+1.4**
HOOD	**Mount Hood Mea**	**3.38**	**65**		**Pn**	**00 36 25.9**	**+2.0**
E04D	**Cinebar**	**3.54**	**42**	P	**Pn**	**00 36 26.9**	**+1.2**
	baz=223,SNR=12						
G05D	**Wamic, OR**	**3.58**	**68**	P	**Pn**	**00 36 28.5**	**+2.1**
	baz=250,SNR=13						
PINE	**Pine Mountain**	**3.67**	**91**	Pn	**Pn**	**00 36 29.1**	**+1.3**
PINE				IAML		00 37 16.9	
	comp=N,14nm,4.0s						
NLWA	**Neilton Lookou**	**3.72**	**23**	Pn	**Pn**	**00 36 28.3**	**-0.1**
NLWA				IAML		00 37 11.4	
	comp=N,18nm,0.8s						
NLWA				IAML		00 37 12.9	
	comp=N,17nm,1.1s						
C03A	**Quillayute Air**	**4.09**	**14**	Pn	**Pn**	**00 36 33.5**	**+0.2**
D03D	**Eldon**	**4.10**	**29**	P	**Pn**	**00 36 35.0**	**+1.5**
	baz=210						
D03D				S	**Sn**	**00 37 20.8**	**-0.6**
	baz=210						
B04A	**Port Angeles**	**4.43**	**22**	Pn	**Pn**	**00 36 38.9**	**+0.8**
I07A	**Izee**	**4.69**	**87**		**Pn**	**00 36 43.4**	**+1.7**
I07A				IAML		00 38 19.6	
	comp=E,6.6nm,4.2s						
F07A	**Phinny Hill Vi**	**4.72**	**64**		**Pn**	**00 36 43.6**	**+1.6**
F07A				IAML		00 37 16.8	
	comp=E,7.7nm,0.4s						
F07A				IAML		00 37 24.9	
	comp=N,7.8nm,1.8s						
PGC	**Sidney**	**4.99**	**20**	Pn	**Pn**	**00 36 45.4**	**-0.3**
E07A	**Sunnyside**	**5.05**	**57**	Pn	**Pn**	**00 36 47.1**	**+0.6**
E07A				IAML		00 38 48.4	
	comp=N,7.6nm,4.5s						
E07A				IAML		00 39 42.4	
	comp=E,7.9nm,4.2s						
HAWA	**Hanford**	**5.17**	**60**	Pn	**Pn**	**00 36 49.4**	**+1.1**
HAWA				IAML		00 38 01.9	
	comp=E,4.8nm,4.2s						
HAWA				IAML		00 39 22.6	
	comp=E,6.9nm,4.8s						
G08A	**Pilot Rock**	**5.20**	**73**	Pn	**Pn**	**00 36 49.7**	**+1.0**
G08A				IAML		00 38 50.5	
	comp=E,4.0nm,4.5s						
E08A	**Dider Farm, El**	**5.51**	**61**		**Pn**	**00 36 54.1**	**+1.2**
BMO	**Blue Mountains**	**6.29**	**79**		**Pn**	**00 37 04.6**	**+0.9**

*IDC **04** 01:12:42.4±1.2, 38°.50N×71°.92E, h0km, mb3.8/7, mbtmp3.7/11, ML3.2/4, MS2.9/4, Error ellipse: s-maj=27.3km s-min=15.8km az=135.0*
*NNC **04** 01:12:44.2±3.9, 38°.47N×71°.82E, h0km, mb4.4, mpv4.1, Error ellipse: s-maj=31.3km s-min=21.1km az=166.0*
*NEIC **04** 01:12:44.0±2.4, 38°.58N±0°.04×72°.03E±0°.08, h10km±1km, mb4.1/6, Error ellipse: s-maj=10.7km s-min=6.7km az=84.0*
*SOME **04** 01:13:05.4, 39°.95N×71°.57E, h0km*
ISC 04 01:12:44.6±0.6, 38°.63N±0°.04×71°.99E±0°.04, h10km, n63, σ2§92/68, mb3.8/10, 1C-5D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**0.86**	**350**		**Pg**	**01 12 59.2**	**-2.0**
GAR	**Garm**	**1.36**	**286**		**Pn**	**01 13 07.4**	**-2.3**
BTK	**Batken**	**1.69**	**328**		**Pg**	**01 13 17.1**	**+0.1**
CHGR	**Chuyangaron**	**2.21**	**272**		**Pn**	**01 13 22.7**	**+1.2**
AML	**Almayashu**	**3.73**	**20**	P	**Pn**	**01 13 46.7**	**+4.1**
	SNR=72						
IUG	**Iuzhnay**	**3.82**	**338**	*e*P	**Pb**	**01 13 52.8**	**+0.7**
	530nm,1.0s						
IUG				*e*S	**Sn**	**01 14 31.0**	**+2.5**
	99nm,0.6s						
UCH	**Uchtor**	**4.08**	**27**	P	**Pb**	**01 13 52.1**	**-4.6**
	SNR=11						
CHM	**Chimkent**	**4.11**	**334**	*e*P	**Pb**	**01 13 59.5**	**+2.5**
	130nm,0.3s						
CHM				*e*S	**Sb**	**01 14 42.9**	**-3.8**
	167nm,0.3s						
MRKS	**Merke**	**4.22**	**13**	*e*P	**Pg**	**01 14 04.2**	**-1.1**
	48nm,0.6s						
MRKS				*e*S	**Sb**	**01 14 51.2**	**+1.4**
	103nm,0.5s						
EKS2	**Erkin-Say**	**4.25**	**18**	P	**Pn**	**01 13 53.9**	**+4.4**
	SNR=30						
DZA	**Taraz**	**4.29**	**354**	*e*P	**Pb**	**01 14 02.3**	**+2.3**
	76nm,0.1s						
DZA				*e*S	**Sb**	**01 14 47.6**	**-4.2**
	126nm,0.5s						
AAK	**Ala-Archa**	**4.43**	**25**	P	**Pn**	**01 13 56.4**	**+4.3**
	SNR=7.6						
AAK	**Ala-Archa**	**4.43**	**25**	Pn	**Pn**	**01 13 56.5**	**+4.4**
	4.2nm,0.3s,baz=196,slow=3.8,SNR=12						
AAK				Sn	**Sb**	**01 14 52.1**	**-4.1**
	2.5nm,0.3s,baz=125,slow=15,SNR=3.8						
AAK				LR	LR	01 15 52.7	
	comp=Z,114nm,19.9s,baz=222,slow=42 6.0nm,0.3s						
AAK	**Ala-Archa**	**4.43**	**25**		**Pn**	**01 13 53.3**	**+1.2**
KK31	**Karatay Array**	**4.61**	**346**		**Pn**	**01 13 57.6**	**+3.4**
KK31	**Karatay Array**	**4.61**	**346**	⇓P	**Pn**	**01 13 56.6**	**+2.4**
	12nm,0.5s,baz=163,slow=12,SNR=145						
KK31				⇓S	**Sn**	**01 14 53.9**	**+6.1**
	16nm,0.5s,baz=169,slow=24,SNR=2.8						
KKAR	**Karatay Array**	**4.61**	**346**	Pn	**Pn**	**01 13 57.3**	**+3.1**
KBK	**Karagaybulak**	**4.61**	**28**	P	**Pn**	**01 14 01.1**	**-4.5**
	SNR=8.8						
FRU1	**Bishkek**	**4.63**	**25**	Pn	**Pn**	**01 13 56.4**	**+1.7**
BRLS	**Boroldoy**	**4.69**	**340**	*e*P	**Pb**	**01 14 03.8**	**-3.1**
	16nm,1.0s						
BRLS				*e*S	**Sn**	**01 14 50.2**	**+0.4**
KBL	**Kabul**	**4.72**	**211**		**Pb**	01 14 00.9	-6.6
CHMS	**Chumysh**	**4.84**	**25**	P	**Pb**	01 14 03.9	-5.5
	SNR=5.2						
CHMS	**Chumysh**	**4.84**	**25**	⇓P	**Pn**	**01 14 01.5**	**+4.0**
	15nm,0.5s						
CHMS				⇓S	**Sn**	**01 15 00.8**	**+7.2**
	41nm,0.8s						
BOOM	**Boomskoye usch**	**4.89**	**37**		**Pn**	01 14 04.0	+5.7
USP	**Ospenovka**	**5.01**	**22**	P	**Pn**	**01 14 04.5**	**+4.7**
	SNR=26						
TKM2	**Tokmak 2**	**5.09**	**31**	P	**Pn**	01 14 06.2	+5.2
	SNR=15						
SGDS	**Sogindy**	**5.21**	**22**	*e*P	**Pg**	**01 14 23.6**	**-0.8**
	9.8nm,0.5s						
SGDS				*e*S	**Sg**	**01 15 26.1**	**-5.9**
	22nm,1.7s						
KDJ	**Kajisay**	**5.29**	**47**		**Pn**	**01 14 01.5**	**-2.2**
KST	**Kastek**	**5.34**	**33**	*e*P	**Pg**	**01 14 29.4**	**+2.6**
	9.9nm,0.7s						
KST				*e*S	**Sg**	**01 15 36.8**	**+0.8**
	24nm,0.9s						
PRZ	**Przheval'sk**	**6.22**	**50**	Pn	**Pn**	**01 14 15.5**	**-1.1**
SMLA	**Simla**	**8.61**	**149**	*e*P	**Pn**	**01 14 52.0**	**+2.8**
SMLA				*e*S	**Sn**	**01 16 27.1**	**+0.7**
SMLA				IAML		01 16 35.0	
	comp=E,24nm,0.4s						
SMLA				IAML		01 16 36.1	
	comp=N,20nm,0.5s						
HRA	**Herat**	**8.91**	**245**	Pn	**Pn**	**01 14 52.3**	**-1.2**
GEYT	**Alibeck**	**10.93**	**271**	Pn	**Pn**	**01 15 22.8**	**+1.8**
	comp=N,0.3nm,0.3s,baz=113,slow=11,SNR=3.9						
GEYT				Sn	**Sn**	**01 17 17.0**	**-6.3**
	comp=N,0.4nm,0.3s,baz=80,slow=34,SNR=3.3						
GYA0B	**ALIBECK ARRAY**	**10.93**	**271**	Pn	**Pn**	**01 15 21.1**	**+0.1**
MAKZ	**Makanchi**	**10.98**	**39**	Pn	**Pn**	**01 15 21.3**	**-0.4**
MKAR	**Makanchi Array**	**11.13**	**40**	Pn	**Pn**	**01 15 27.9**	**+4.2**
	comp=N,0.1nm,0.3s,baz=227,slow=14,SNR=12 comp=N,1.4nm,0.7s						
MKAR	**Makanchi Array**	**11.13**	**40**		**Pn**	**01 15 27.5**	**+3.8**
MK31	**Makanchi Array**	**11.13**	**40**		**Pn**	**01 15 27.8**	**+4.1**
KURBB	**Kurchatov Arra**	**12.86**	**19**	Pn	**Pn**	**01 15 47.1**	**-0.1**
	baz=214,slow=12,SNR=6.8 comp=N,0.4nm,0.7s						
KURK	**Kurchatov**	**12.96**	**19**		**Pn**	**01 15 47.1**	**-1.6**
AB31	**Akbulak array**	**13.70**	**325**	⇓P	**Pn**	**01 15 58.6**	**-0.1**
	comp=N,2.7nm,0.6s,baz=135,slow=13,SNR=21						
ABKAR	**Akbulak array**	**13.70**	**325**	Pn	**Pn**	**01 15 58.6**	**-0.1**
AKTO	**Aktyubinsk**	**15.41**	**324**	Pn	**Pn**	**01 16 23.6**	**+1.7**
	comp=N,0.3nm,0.3s,baz=138,slow=17,SNR=4.7						
AKTO				LR	LR	01 22 52.5	
	comp=N,30nm,19.3s,baz=147,slow=39						
AKTO	**Aktyubinsk**	**15.41**	**324**	⇑P	**P**	**01 16 25.4**	**-1.2**
	comp=N,8.6nm,0.8s						
ZAA0	**Zalesovo Array**	**17.66**	**26**		**P**	**01 16 50.9**	**-0.5**
ZALV	**Zalesovo Beam**	**17.66**	**26**	P	**P**	**01 16 51.5**	**+0.1**
	comp=N,0.9nm,0.3s,baz=215,slow=10,SNR=14						
ZALV				LR	LR	01 23 57.8	
	comp=N,38nm,19.3s,baz=161,slow=38 comp=N,2.7nm,0.5s						
ARU	**Arti**	**19.91**	**338**	P	**Pn**	**01 17 19.7**	**+1.9**
	comp=N,0.8nm,0.3s,baz=248,slow=8.0,SNR=3.7						
ARU	**Arti**	**19.91**	**338**	P	**P**	**01 17 15.1**	**-1.1**
ARU				IAmb	IAmb	01 17 23.3	
	comp=Z,4.4nm,1.1s						
GNI	**Garni**	**21.09**	**283**	P	**P**	**01 17 32.3**	**+3.1**
	comp=Z,2.0nm,0.5s,baz=157,slow=13,SNR=2.2						
BELG	**Belogornoye**	**21.79**	**317**	P	**P**	**01 17 39.2**	**+2.8**
	comp=Z,5.6nm,0.7s,baz=281,slow=5.2,SNR=1.8						
KBZ	**Khabaz**	**22.42**	**292**	P	**P**	**01 17 44.3**	**+1.1**
	comp=Z,0.7nm,0.4s,baz=132,slow=8.9,SNR=2.3 comp=Z,0.7nm,0.4s						
FINES	**FINESS Array B**	**36.18**	**324**	P	**P**	**01 19 47.3**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=113,slow=9.5,SNR=11 comp=Z,1.1nm,0.6s						
ARCES	**ARCESS Array B**	**39.49**	**336**	P	**P**	**01 20 15.2**	**+0.3**
	comp=Z,8.3nm,1.1s,baz=43,slow=2.3,SNR=4.9 comp=Z,8.3nm,1.1s						
ARCES	**ARCESS Array B**	**39.49**	**336**	IAmb	IAmb	01 20 40.7	
	comp=Z,9.0nm,1.1s						
KLR	**Kul'dur**	**43.27**	**56**	LR	LR	01 41 35.9	
	comp=Z,34nm,18.2s,baz=279,slow=40						
TORD	**Torodi Ar. Bea**	**66.56**	**268**	P	**P**	**01 23 33.7**	**-1.4**
	comp=Z,0.3nm,0.5s,baz=45,slow=5.9,SNR=8.5 comp=Z,0.3nm,0.5s						
TORD	**Torodi Ar. Bea**	**66.56**	**268**	IAmb	IAmb	01 23 56.4	
	comp=Z,1.2nm,1.1s						
TOLK	**Toolik Lake Re**	**68.66**	**15**	P	**P**	**01 23 48.8**	**+1.1**
TOLK				IAmb	IAmb	01 23 59.0	
	comp=Z,5.7nm,1.4s						
IMAR	**Indian Mountai**	**69.91**	**18**	P	**P**	**01 23 54.9**	**-0.4**
ILAR	**Eielson Array**	**72.52**	**16**	P	**P**	**01 24 10.9**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=312,slow=5.3,SNR=4.7 comp=Z,0.4nm,0.7s						
YKA	**Yellowknife Ar**	**79.08**	**3**	P	**P**	**01 24 48.5**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=351,slow=5.7,SNR=4.5 comp=Z,0.4nm,0.6s						
WRA	**Warramunga Arr**	**82.47**	**123**	P	**P**	**01 25 06.7**	**-0.7**
	comp=Z,0.4nm,0.8s,baz=322,slow=4.7,SNR=5.7 comp=Z,0.4nm,0.8s						
WRAB	**Tennant Creek**	**82.47**	**123**	P	**P**	**01 25 05.2**	**-2.2**

*IDC **04** 01:14:42.0±2.8, 38°.28N×72°.17E, h0km, mb3.9/3, mbtmp3.7/8, ML3.3/5, MS3.0/1, Error ellipse: s-maj=52.3km s-min=21.7km az=144.0*
ISC 04 01:14:43.7±0.8, 38°.25N±0°.06×71°.82E±0°.09, h10km, n14, σ1§90/13, mb3.8/3, 3C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**4.42**	**179**	P	**Pg**	**01 16 06.7**	**-1.7**
CEP				S	Sg	01 17 15.0	+9.4
CHCP	**Chirah Chowk**	**4.73**	**165**	P	**Pb**	**01 16 08.1**	**+1.4**
AAK	**Ala-Archa**	**4.83**	**24**	Pn	Pn	01 15 58.4	+1.8
	3.1nm,0.3s,baz=209,slow=13,SNR=1.0 5.4nm,0.3s						
KK31	**Karatay Array**	**4.95**	**349**	⇑Pn	**Pn**	**01 16 00.1**	**+2.1**
	21nm,0.5s,baz=169,slow=12,SNR=4.9						
KK31				⇑Sn	**Sn**	**01 16 54.8**	**-0.5**
	9.7nm,0.4s,baz=175,slow=24						
CHMS	**Chumysh**	**5.24**	**24**	⇓Pn	Pn	01 16 03.5	+1.4
	17nm,0.7s						
CHMS				⇑Sn	**Sn**	**01 17 04.9**	**+2.4**
	37nm,1.0s						
GEYT	**Alibeck**	**10.80**	**273**	Sn	**Sn**	**01 19 18.6**	**-0.8**
	0.5nm,0.3s,baz=87,slow=30,SNR=1.7						
MKAR	**Makanchi Array**	**11.51**	**39**	Pn	**Pn**	**01 17 27.2**	**-0.7**
	0.1nm,0.3s,baz=226,slow=12,SNR=2.9 0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**13.26**	**19**	Pn	**Pn**	**01 17 48.5**	**-3.3**
	baz=215,slow=12,SNR=4.6 0.4nm,0.7s						
AKTO	**Aktyubinsk**	**15.64**	**326**	Pn	**Pn**	**01 18 24.1**	**+0.1**
	0.3nm,0.3s,baz=133,slow=15,SNR=2.9 1.3nm,0.5s						
ZALV	**Zalesovo Beam**	**18.05**	**25**	P	**P**	**01 18 53.1**	**-1.8**
	0.7nm,0.3s,baz=212,slow=9.9,SNR=8.6 1.9nm,0.4s						
BRTR	**Keskin Array B**	**29.56**	**285**	LR	LR	01 36 37.9	
	comp=Z,26nm,18.3s,baz=132,slow=44						
FINES	**FINESS Array B**	**36.41**	**325**	P	**P**	**01 21 48.5**	**+0.4**
	1.7nm,0.7s,baz=115,slow=9.2,SNR=5.4 1.7nm,0.7s						
ARCES	**ARCESS Array B**	**39.79**	**337**	P	**P**	**01 22 15.4**	**-1.0**
	1.9nm,0.8s,baz=95,slow=7.6,SNR=1.3 1.9nm,0.8s						
TORD	**Torodi Ar. Bea**	**66.41**	**268**	P	**P**	**01 25 35.4**	**+2.2**
	0.3nm,0.4s,baz=46,slow=5.2,SNR=4.6 0.3nm,0.4s						

WEL 04 01:19:16.5, 43°.S±2°.×17°.3E±°, h13km±2km, M4.1/12, ML4.3/12, MLv4.1/12, Error ellipse: s-maj=0.0km s-min=0.0km az=33.6, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MQZ	**McQueen's Vall**	**0.24**	**194**	P	Pb	01 19 22.9	+0.2
MQZ				S	Sb	01 19 27.1	+0.2
AMCZ	**Amberley**	**0.30**	**348**	P	Pb	01 19 23.7	0.0
AMCZ				S	Sb	01 19 28.6	+0.1
OKCZ	**Okains Bay**	**

NMEZ	**Namu Road**	**4.14**	**12**	P		Pn	01 20 22.1	+2.7
WHZ	**Wether Hill Ro**	**4.19**	**233**	P		Pn	01 20 19.8	-0.2
LREZ	**Lake Rotokare**	**4.20**	**18**	P		Pb	01 20 25.2	-5.0
PREZ	**Palmer Road**	**4.26**	**15**	P		Pn	01 20 23.4	+2.4
KHEZ	**Kahui Hut**	**4.28**	**13**	P		Pn	01 20 23.3	+1.9
NBEZ	**Newall Road No**	**4.29**	**12**	P		Pn	01 20 23.2	+1.8
NEZ	**North Egmont**	**4.32**	**14**	P		Pn	01 20 23.7	+1.8
PKE	**Pukeiti**	**4.38**	**13**	P		Pn	01 20 24.2	+1.6
DREZ	**Durham Road**	**4.42**	**15**	P		Pn	01 20 25.0	+1.8
DCZ	**Deep Cove**	**4.47**	**242**	P		Pn	01 20 24.6	+0.8
VRZ	**Vera Road**	**4.60**	**20**	P		Pn	01 20 27.2	+1.5
PKVZ	**Pokaka**	**4.62**	**26**	P		Pn	01 20 27.5	+1.5
WNVZ	**Whanaoa**	**4.67**	**28**	P		Pn	01 20 28.2	+1.4
TRVZ	**Turoa**	**4.67**	**28**	P		Pn	01 20 28.3	+1.4
WHVZ	**Whangaehu Hut**	**4.70**	**28**	P		Pn	01 20 28.6	+1.3
FWVZ	**Far West T-bar**	**4.71**	**28**	P		Pn	01 20 29.0	+1.6
APZ	**The Paps**	**4.75**	**223**	P		Pn	01 20 28.1	+0.3
NGZ	**Ngauruhoe**	**4.80**	**28**	P		Pn	01 20 29.3	+0.7
TWVZ	**Taurewa**	**4.84**	**26**	P		Pn	01 20 30.0	+0.9
WTVZ	**West Tongariro**	**4.85**	**27**	P		Pn	01 20 29.9	+0.7
HIZ	**Hauiti**	**5.21**	**19**	P		Pn	01 20 34.7	+0.7
TLZ	**Tolley Road**	**5.56**	**23**	P		Pn	01 20 38.5	-0.4
SNGZ	**Shannon Statio**	**5.83**	**38**	P		Pn	01 20 44.1	+1.5
RAGZ	**Rawiri**	**6.10**	**37**	P		Pn	01 20 44.5	-1.8
URZ	**Urewera**	**6.17**	**34**	P		Pn	01 20 45.5	-1.8
MWZ	**Matawai**	**6.28**	**37**	P		Pn	01 20 46.9	-2.0
AWAZ	**Awhitu Peninsu**	**6.56**	**13**	P		Pn	01 20 53.5	+0.9
MKAZ	**Moumakai**	**6.62**	**17**	P		Pn	01 20 53.5	0.0
RUGZ	**Raukumara Rang**	**6.66**	**36**	P		Pn	01 20 54.0	0.0
PUZ	**Puketiti**	**6.83**	**40**	P		Pn	01 20 56.3	0.0
HAZ	**Te Kaha**	**6.88**	**36**	P		Pn	01 20 55.0	-1.9
PKGZ	**Pakihiroa**	**6.90**	**38**	P		Pn	01 20 56.1	-1.2
WIAZ	**Waiheke Island**	**6.92**	**16**	P		Pn	01 20 58.2	+0.6

IDC 04 01:46:00.7±2.5, 12°68S×163°52E, h0km, mb4.0/3, mbtmp3.9/3, Error ellipse: s-maj=216.7km s-min=35.6km az=151.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**28.89**	**252**	P	P	01 52 01.1	-0.4
	0.6nm,0.7s,baz=83,slow=8.9,SNR=6.3 0.6nm,0.7s						
ASAR	**Alice Springs**	**30.12**	**245**	P	P	01 52 12.9	+0.4
	0.8nm,0.8s,baz=68,slow=9.8,SNR=6.4 0.8nm,0.8s						
PDAR	**Pinedale Array**	**96.25**	**48**	P	P	01 59 31.4	-0.2
	0.8nm,0.8s,baz=274,slow=4.4,SNR=4.6 0.8nm,0.8s						

*ANF **04** 01:47:07.6±0.3, 36°29N×97°58W, h2km±3km, ML3.7/14, Error ellipse: s-maj=2.3km s-min=2.2km az=149.0*
*TUL **04** 01:47:08.1±1.0, 36°269N±0°009×97°57W±0°01, h5km±6km, ML3.2, mb_Lg3.1/92(NEIC), Error ellipse: s-maj=1.6km s-min=1.0km az=136.0*
*NEIC **04** 01:47:08.2±0.9, 36°269N±0°006×97°58W±0°01, h5km±6km, Error ellipse: s-maj=1.8km s-min=0.3km az=62.0*
ISC 04 01:47:07.9±1.2, 36°30N±0°03×97°60W±0°03, h1km±11km, n83, σ0°81/63, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKCFA	**Oklahoma City**	**0.89**	**172**		**Pg**	**01 47 24.4**	**-0.4**
OKCFA				Sg	**Sg**	**01 47 36.1**	**-0.2**
OKCFA	**Oklahoma City**	**0.89**	**172**	P	**Pg**	**01 47 24.5**	**-0.4**
	baz=353,SNR=8.4						
OKCFA				S	**Sg**	**01 47 36.3**	**-0.1**
	baz=353						
OKCSW	**OKLAHOMA CITY**	**0.90**	**172**	Sg	**Sg**	**01 47 36.5**	**-0.2**
FNO	**Franklin**	**1.05**	**171**	Pg	**Pg**	**01 47 27.3**	**-0.7**
T35A	**Sooner Cattle**	**1.07**	**54**		**Pg**	**01 47 28.3**	**-0.2**
T35B	**Sooner Cattle**	**1.07**	**54**	P	**Pg**	**01 47 28.3**	**-0.2**
	baz=233,SNR=83						
T35B				S	**Sg**	**01 47 42.4**	**0.0**
	baz=233						
U32A	**Winter Ranch,**	**1.14**	**275**	Pg	**Pg**	**01 47 29.7**	**+0.1**
U32A	**Winter Ranch,**	**1.14**	**275**	P	**Pg**	**01 47 29.7**	**+0.1**
	baz=95						
U32A				S	**Sb**	**01 47 46.0**	**+0.5**
	baz=95						
TUL1	**Leonard**	**1.51**	**104**	Pn	**Pn**	**01 47 35.0**	**-1.1**
TUL1	**Leonard**	**1.51**	**104**	P	**Pn**	**01 47 34.9**	**-1.1**
	baz=284						
TUL1				S	**Sb**	**01 47 55.5**	**-1.0**
	baz=284						
X34A	**Smith Ranch, M**	**1.70**	**186**		**Pn**	**01 47 38.3**	**-0.4**
X34A				IAmb_Lg		01 48 04.6	
	comp=Z,155nm,0.8s						
WMOK	**Wichita Mounta**	**1.83**	**212**		**Pn**	**01 47 39.9**	**-0.5**
WMOK	**Wichita Mounta**	**1.83**	**212**	P	**Pn**	**01 47 40.1**	**-0.3**
	baz=32,SNR=186						
R32A	**Long Quarter,**	**2.30**	**338**		**Pn**	**01 47 47.5**	**+0.5**
R32A	**Long Quarter,**	**2.30**	**338**	S	**Sn**	**01 48 16.9**	**+1.0**
	baz=157						
X37A	**Clayton**	**2.49**	**132**		**Pn**	**01 47 49.1**	**-0.4**
X37A				IAmb_Lg		01 48 31.6	
	comp=Z,63nm,0.7s						
X37A	**Clayton**	**2.49**	**132**	P	**Pn**	**01 47 49.6**	**+0.1**
	baz=314,SNR=40						
KSU1	**Kansas State U**	**2.91**	**15**		**Pb**	**01 47 59.5**	**-1.1**
HHAR	**Hobbs**	**2.96**	**89**		**Pn**	**01 47 55.6**	**-0.3**
Z35A	**Perchaven, San**	**2.97**	**174**	S	**Sn**	**01 48 33.1**	**+0.8**
	baz=355						
CBKS	**Cedar Bluff**	**3.03**	**327**	Pn	**Pn**	**01 47 56.2**	**-0.8**
CBKS				IAmb_Lg		01 48 53.5	
	comp=Z,40nm,0.8s						
W39A	**Magazine**	**3.29**	**108**		**Pn**	**01 48 00.2**	**-0.3**
W39A				IAmb_Lg		01 49 00.9	
	comp=Z,35nm,0.8s						
W39A	**Magazine**	**3.29**	**108**	P	**Pn**	**01 48 00.4**	**-0.2**
	baz=290,SNR=9.9						
AMTX	**Amarillo**	**3.61**	**248**	Pn	**Pn**	**01 48 04.9**	**-0.1**
AMTX				IAmb_Lg		01 49 13.0	
	comp=Z,43nm,0.8s						
S39A	**Bolivar**	**3.70**	**67**		**Pn**	**01 48 06.0**	**-0.1**
S39A				IAmb_Lg		01 49 08.4	
	comp=Z,48nm,0.7s						
S39A	**Bolivar**	**3.70**	**67**	P	**Pn**	**01 48 06.2**	**+0.1**
	baz=249,SNR=14						
Z38A	**Mt. Pleasant**	**3.71**	**144**	Pn	**Pn**	**01 48 05.9**	**-0.4**
MIAR	**Mount Ida**	**3.72**	**117**		**Pn**	**01 48 06.3**	**-0.1**
MIAR				IAmb_Lg		01 49 10.7	
	comp=Z,35nm,0.9s						
MIAR	**Mount Ida**	**3.72**	**117**	P	**Pn**	**01 48 06.5**	**0.0**
	baz=299,SNR=48						
U40A	**Yellville**	**3.83**	**88**		**Pn**	**01 48 07.2**	**-0.8**
U40A				IAmb_Lg		01 49 11.5	
	comp=Z,75nm,0.9s						
U40A	**Yellville**	**3.83**	**88**	P	**Pn**	**01 48 07.9**	**-0.1**
	baz=270,SNR=8.9						
U40A				P	**Pn**	**01 48 07.9**	**-0.1**
	baz=270,SNR=8.9						
X40A	**Basin Creek Fa**	**4.29**	**113**		**Pn**	**01 48 14.6**	**+0.3**
X40A				IAmb_Lg		01 49 25.6	
	comp=Z,39nm,0.8s						
X40A	**Basin Creek Fa**	**4.29**	**113**	P	**Pn**	**01 48 14.2**	**0.0**
	baz=296,SNR=15						
X40A				P	**Pn**	**01 48 14.2**	**0.0**
	baz=296,SNR=15						
WHTX	**Lake Whitney,**	**4.29**	**178**	Pn	**Pn**	**01 48 14.2**	**-0.1**
MGMO	**Mountain Grove**	**4.37**	**77**		**Pn**	**01 48 15.4**	**+0.1**
MGMO				IAmb_Lg		01 49 27.8	
	comp=Z,59nm,0.8s						
WHAR	**Wooly Hollow**	**4.43**	**102**		**Pn**	**01 48 15.9**	**-0.3**
WHAR				IAmb_Lg		01 49 34.0	
	comp=Z,39nm,1.0s						
FCAR	**Ozark Folk Cen**	**4.45**	**94**	Pn	**Pn**	**01 48 17.1**	**+0.6**
W41B	**Gary Mavity, V**	**4.50**	**103**		**Pn**	**01 48 16.3**	**-0.8**
W41B				IAmb_Lg		01 49 41.3	
	comp=Z,26nm,0.7s						
W41B	**Gary Mavity, V**	**4.50**	**103**	P	**Pn**	**01 48 16.5**	**-0.6**
	baz=286,SNR=18						
WLAR	**White Oak Lake**	**4.51**	**124**		**Pn**	**01 48 16.9**	**-0.4**
WLAR					Lg	01 49 33.6	
237A	**Washetta, Mont**	**4.53**	**160**	IAmb_Lg		01 49 28.1	
	comp=Z,22nm,0.8s						
UALR	**University of**	**4.55**	**108**	Pn	**Pn**	**01 48 16.9**	**-0.8**
UALR					LR	01 49 32.7	
UALR				IAmb_Lg		01 49 40.8	
	comp=Z,29nm,1.0s						
P38A	**Dawn**	**4.62**	**43**	IAmb_Lg		01 49 42.2	
	comp=Z,37nm,0.7s						
R40A	**Maddies Statio**	**4.70**	**63**		**Pn**	**01 48 19.8**	**-0.1**
R40A	**Maddies Statio**	**4.70**	**63**	P	**Pn**	**01 48 19.8**	**-0.1**
	baz=246,SNR=14						
N35A	**Tabor**	**4.81**	**18**		**Pn**	**01 48 20.5**	**-0.9**
N35A					Lg	01 49 43.8	
KSCO	**Kaye Shedlock'**	**4.82**	**306**	Pn	**Pn**	**01 48 22.4**	**+0.7**
MSTX	**Muleshoe**	**4.83**	**243**	Pn	**Pn**	**01 48 21.9**	**+0.1**
MSTX					LR	01 49 40.9	
Z41A	**Richland Creek**	**4.98**	**126**	Pn	**Pn**	**01 48 22.8**	**-0.9**
Z41A				IAmb_Lg		01 49 54.5	
	comp=Z,22nm,0.8s						
BGNE	**Belgrade**	**5.12**	**355**	IAmb_Lg		01 50 05.9	
	comp=Z,46nm,0.8s						
LCAR	**Lake Charles**	**5.22**	**91**	IAmb_Lg		01 50 04.1	
	comp=Z,19nm,0.9s						
CCAR	**Cane Creek**	**5.33**	**115**	IAmb_Lg		01 50 07.1	
	comp=Z,43nm,1.1s						
CCM	**Cathedral Cave**	**5.37**	**69**	Pg	**Pb**	**01 48 46.4**	**+3.9**
CCM				IAmb_Lg		01 50 06.3	
	comp=Z,48nm,0.8s						
P40A	**Paris**	**5.45**	**52**	IAmb_Lg		01 50 04.5	
	comp=Z,45nm,0.8s						
435B	**Jarrell**	**5.50**	**180**	IAmb_Lg		01 50 12.0	
	comp=Z,27nm,1.0s						
N38A	**Joes South For**	**5.64**	**36**	IAmb_Lg		01 50 10.8	
	comp=Z,54nm,0.8s						
L34A	**Svendsen Farm,**	**5.74**	**9**	IAmb_Lg		01 50 16.6	
	comp=Z,37nm,0.8s						
PBMO	**Poplar Bluff**	**5.79**	**83**	IAmb_Lg		01 50 20.4	
	comp=Z,36nm,0.9s						
OGNE	**Ogallala**	**5.80**	**325**	Pn	**Pn**	**01 48 35.2**	**+0.2**
OGNE					LR	01 50 15.4	
OGNE				IAmb_Lg		01 50 22.9	
	comp=Z,40nm,0.8s						
FVM	**French Village**	**5.97**	**71**	IAmb_Lg		01 50 22.3	
	comp=Z,46nm,0.8s						
JCT	**Junction City**	**6.08**	**198**	IAmb_Lg		01 50 38.1	
	comp=Z,23nm,0.9s						
PEBM	**Pemiscott Bayo**	**6.26**	**89**	IAmb_Lg		01 50 32.9	
	comp=Z,45nm,0.7s						
Q24A	**Divide**	**6.56**	**296**	IAmb_Lg		01 50 35.5	
	comp=Z,14nm,0.8s						
SCIA	**State Center**	**6.56**	**30**	IAmb_Lg		01 50 47.9	
	comp=Z,42nm,0.8s						
S44A	**Carbondale**	**6.82**	**76**	Pn	**Pn**	**01 48 48.4**	**-0.7**
S44A					**Sn**	**01 50 06.2**	**-1.2**
SIUC	**Southern Illin**	**6.86**	**76**	IAmb_Lg		01 50 44.4	
	comp=Z,43nm,0.9s						
OXF	**Oxford**	**6.92**	**102**	IAmb_Lg		01 51 05.9	
	comp=Z,20nm,1.1s						
W45A	**Hickory Valley**	**6.94**	**97**	IAmb_Lg		01 50 52.3	
	comp=Z,32nm,0.9s						
P43A	**Skaggs, Pawnee**	**7.20**	**60**	IAmb_Lg		01 51 01.8	
	comp=Z,40nm,0.7s						
ECSD	**EROS Data Cent**	**7.47**	**6**		**Pn**	**01 48 56.8**	**-1.1**
ECSD	**EROS Data Cent**	**7.47**	**6**	P	**Pn**	**01 48 56.7**	**-1.2**
	baz=186,SNR=16						
S22A	**4UR Ranch, Cre**	**7.52**	**284**	Pn	**Pn**	**01 48 57.2**	**-1.7**
L40A	**Anamosa**	**7.59**	**39**	IAmb_Lg		01 51 12.5	
	comp=Z,22nm,0.9s						
HDIL	**Hopedale**	**7.78**	**54**	Pn	**Pn**	**01 49 01.2**	**-1.1**
PLAL	**Pickwick Lake**	**7.87**	**97**	IAmb_Lg		01 51 18.7	
	comp=Z,11nm,1.1s						
WVT	**Waverly**	**7.90**	**88**	Pn	**Pn**	**01 49 03.3**	**-0.5**
PHWY	**Pilot Hill**	**7.91**	**312**	IAmb_Lg		01 51 28.5	
	comp=Z,12nm,0.9s						
MNTX	**Cornudas Mount**	**7.92**	**237**	IAmb_Lg		01 51 29.4	
	comp=Z,9.5nm,0.9s						
N23A	**Red Feather La**	**7.98**	**308**	IAmb_Lg		01 51 28.6	
	comp=Z,20nm,0.8s						
I37A	**Lemond, Waseca**	**8.35**	**21**	IAmb_Lg		01 51 44.9	
	comp=Z,22nm,1.2s						
M44A	**Midewin, Midew**	**9.02**	**53**	IAmb_Lg		01 51 52.6	
	comp=Z,18nm,0.8s						
I40A	**Norwalk**	**9.28**	**33**	IAmb_Lg		01 52 08.2	
	comp=Z,11nm,0.8s						
K43A	**Burlington**	**9.60**	**45**	IAmb_Lg		01 52 27.0	
	comp=Z,25nm,1.0s						

*IDC **04** 02:22:54.5±0.7, 35°57N×31°48E, h0km, mb4.2/20, mbtmp4.2/29, ML3.8/9, MS2.9/9, Error ellipse: s-maj=13.8km s-min=11.7km az=178.0*
*NIC **04** 02:22:54.4±0.0, 35°59N×31°44E, h2km±4km, Ml4.1/8*
*ISK **04** 02:22:55.4, 35°51N×31°69E, h5km, ML3.9/34*
*MOS **04** 02:22:56.2±1.1, 35°49N×31°53E, h25km, mb4.3/20, Error ellipse: s-maj=7.0km s-min=4.4km az=96.3*
*GII **04** 02:22:57.2±0.0, 35°42N×31°50E, h10km, MD3.6/2, Mm3.7/2*
*DDA **04** 02:22:57.5±0.0, 35°43N×31°61E, h6km±5km, MW4.0*
*NEIC **04** 02:22:58.5±2.3, 35°45N±0°06×31°59E±0°06, h27km±6km, mb4.1/43, ML3.9(ISK), ML4.1(NIC), Error ellipse: s-maj=8.5km s-min=6.2km az=207.0*
*THE **04** 02:23:01.9, 35°57N×31°40E, h26km±31km, ML3.9/2, Error ellipse: s-maj=32.8km s-min=2.6km az=118.0*
ISC 04 02:22:57.9±0.4, 35°56N±0°02×31°53E±0°02, h21km±2km, n308, σ1$59/339, mb4.2/47, MS3.0/4, 22C-11D, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKMS	**Akamas**	**0.85**	**129**	||P	**Pb**	**02 23 11.8**	**-2.1**
AKMS				S	**Sn**	**02 23 27.7**	**+1.3**
AKMS				AML	AML	02 23 31.0	
	23nm,0.9s						
AKMS				AML	AML	02 23 31.0	
	23nm,0.9s						
AKMS				AML	AML	02 23 37.1	
	23nm,0.8s						
AKMS				AML	AML	02 23 37.1	
	23nm,0.8s						
GAZI	**Gazipasa**	**0.93**	**43**	PG	**Pb**	**02 23 13.5**	**-1.8**
GAZI				SG	**Sb**	**02 23 26.5**	**-0.7**
ALFC	**Alefka**	**0.96**	**114**	||P	**Pb**	**02 23 13.4**	**-2.5**
ALFC				S	**Sn**	**02 23 31.0**	**+1.9**
ALFC				AML	AML	02 23 33.8	
	17nm,0.8s						
ALFC				AML	AML	02 23 33.8	
	17nm,0.8s						
ALFC				AML	AML	02 23 34.3	
	25nm,1.1s						
ALFC				AML	AML	02 23 34.3	
	25nm,1.1s						
NATA	**Nata**	**1.15**	**132**	||P	**Pb**	**02 23 19.2**	**+0.1**
NATA				S	**Sn**	**02 23 37.9**	**+4.0**
LEF	**Lefka**	**1.19**	**111**	PG	**Pn**	**02 23 16.3**	**-3.0**
LEF				SG	**Sb**	**02 23 31.3**	**-3.4**
LEF	**Lefka**	**1.19**	**111**	P	**Pn**	**02 23 16.9**	**-2.4**
AKUM	**Antalya-Kumluc**	**1.23**	**309**	P	**Pb**	**02 23 21.2**	**+0.7**
AKUM				S	**Sb**	**02 23 40.5**	**+4.6**
AKUM				*i* AML	AML	02 23 50.0	
	comp=E,953nm,0.7s						
AKUM				*i* AML	AML	02 23 53.0	
	comp=N,1μm,0.5s						
KEMT	**Kemer-ANTALYA**	**1.31**	**323**	PN	**Pb**	**02 23 23.6**	**+1.8**
SZAC	**Souni**	**1.36**	**126**	||P	**Pb**	**02 23 22.2**	**-0.5**
SZAC				S	**Sb**	**02 23 44.4**	**+4.7**
SZAC				AML	AML	02 23 47.0	
	8.7nm,0.7s						
SZAC				AML	AML	02 23 47.0	
	8.7nm,0.7s						
SZAC				AML	AML	02 23 49.6	
	8.4nm,0.5s						
SZAC				AML	AML	02 23 49.6	
	8.4nm,0.5s						
TEKE	**Tekeli-Mersin**	**1.41**	**65**	PN	**Pn**	**02 23 20.9**	**-1.4**
TEKE				SN	**Sb**	**02 23 41.0**	**-0.1**
ANTB	**Antalya**	**1.52**	**332**	PN	**Pb**	**02 23 26.4**	**+1.0**
ATHAL	**Athalassa**	**1.58**	**105**	P	**Pn**	**02 23 23.0**	**-1.6**
ATHAL				AML	AML	02 23 59.4	
	12nm,0.9s						
ATHAL				AML	AML	02 24 01.4	
	12nm,0.8s						
BERE	**Bereket-Mersin**	**1.58**	**60**	PN	**Pn**	**02 23 24.4**	**-0.4**
BERE				SN	**Sb**	**02 23 45.8**	**-0.3**
CSS	**Mathiatis**	**1.58**	**111**	PN	**Pn**	**02 23 23.2**	**-1.6**
CSS	**Mathiatis**	**1.58**	**111**	Pn	**Pn**	**02 23 23.5**	**-1.2**
CSS	**Mathiatis**	**1.58**	**111**	P	**Pn**	**02 23 22.6**	**-2.2**
CSS				S	**Sb**	**02 23 49.3**	**+3.2**
CSS				AML	AML	02 23 51.6	
	1.4nm,0.9s						
CSS				AML	AML	02 23 51.6	
	1.4nm,0.9s						
CSS				AML	AML	02 23 55.5	
	1.3nm,0.7s						
CSS				AML	AML	02 23 55.5	
	1.3nm,0.7s						
ASGA	**Asgata**	**1.60**	**118**	||P	**Pn**	**02 23 25.6**	**+0.7**
ASGA					AML	AML	02 23 55.8	
	9.0nm,0.9s						
ASGA					AML	AML	02 23 59.8	
	5.1nm,0.8s						
HDMB	**Hadim**	**1.60**	**28**	PN	**Pn**	**02 23 25.5**	**+0.3**
LFK	**Lefkose**	**1.66**	**99**	PN	**Pn**	**02 23 24.7**	**-1.1**
AKIN	**Akıncılar- Kıb**	**1.67**	**108**	PN	**Pn**	**02 23 25.0**	**-0.9**
AKAS	**Kas**	**1.71**	**294**	PN	**Pb**	**02 23 28.8**	**+0.2**
AKAS	**Kas**	**1.71**	**294**		**Pb**	**02 23 27.7**	**-0.9**
KORT	**Korkueli**	**1.73**	**327**	PN	**Pb**	**02 23 28.9**	**-0.2**
AKK1	**Akkuyu-Mersin**	**1.73**	**70**	PN	**Pn**	**02 23 26.6**	**-0.1**
AKK2	**Akkuyu-Mersin**	**1.74**	**70**	PN	**Pn**	**02 23 26.9**	**+0.1**
AKKU	**Akkuyu-Mersin**	**1.75**	**69**	PN	**Pn**	**02 23 26.4**	**-0.5**
GULN	**MERSİN_Gulnar**	**1.75**	**68**	P	**Pn**	**02 23 26.5**	**-0.5**
GULN				*i* AML	AML	02 23 58.0	
	comp=N,278nm,0.7s						
GULN				*i* AML	AML	02 24 02.0	
	comp=E,272nm,0.7s						
TEPK	**Tepekoy-MERSIN**	**1.76**	**67**	PN	**Pn**	**02 23 27.2**	**-0.1**
ELL	**Elmali**	**1.77**	**313**	PN	**Pb**	**02 23 30.7**	**+0.9**
ELL	**Elmali**	**1.77**	**313**		**Pb**	**02 23 29.8**	**0.0**
ELL	**Elmali**	**1.77**	**313**	P	**Pb**	**02 23 29.8**	**0.0**
TEVE	**Tevekalti-Mers**	**1.78**	**60**	PN	**Pn**	**02 23 27.3**	**-0.2**
TISA	**Tisan-Mersin**	**1.84**	**70**	PN	**Pn**	**02 23 28.0**	**-0.3**
SEYD	**Seydisehir-KON**	**1.86**	**7**	PN	**Pn**	**02 23 29.5**	**+0.8**
KARG	**Kargicak-Mersi**	**1.88**	**69**	PN	**Pn**	**02 23 28.4**	**-0.4**
SEDI	**Konya, Seydise**	**1.90**	**5**	P	**Pn**	**02 23 30.0**	**+0.8**
SEDI				S	**Sn**	**02 23 53.8**	**+1.2**
SEDI				*i* AML	AML	02 24 02.0	
	comp=E,735nm,0.6s						
SEDI				*i* AML	AML	02 24 04.0	
	comp=N,918nm,0.6s						
SUTC	**Sutluce-Ispart**	**1.96**	**347**	PN	**Pb**	**02 23 31.9**	**-1.2**
KEBE	**Keben-Mersin**	**1.98**	**63**	PN	**Pn**	**02 23 30.8**	**+0.6**
KKBE	**Karaman, Kazim**	**2.01**	**34**	P	**Pn**	**02 23 32.3**	**+1.6**
KKBE				S	**Sb**	**02 23 58.6**	**+0.1**
KKBE				*i* AML	AML	02 24 06.0	
	comp=N,383nm,0.5s						
KKBE				*i* AML	AML	02 24 11.0	
	comp=E,530nm,1.0s						
BCK	**Bucak**	**2.05**	**338**	PN	**Pb**	**02 23 33.6**	**-0.8**
SILI	**Silifke-Mersin**	**2.10**	**67**	PN	**Pn**	**02 23 31.7**	**-0.1**
KRMN	**Karaman**	**2.13**	**40**	PN	**Pn**	**02 23 33.1**	**+0.7**
EREN	**Erenkoy**	**2.15**	**90**	PN	**Pn**	**02 23 31.8**	**-0.7**
EREN	**Erenkoy**	**2.15**	**90**	P	**Pb**	**02 23 34.7**	**-1.4**
EREN				*i* AML	AML	02 24 09.0	
	comp=E,435nm,0.6s						
EREN				*i* AML	AML	02 24 09.0	
	comp=N,495nm,1.0s						
CAME	**Cameli-Denizli**	**2.27**	**308**	PN	**Pb**	**02 23 37.0**	**-1.3**
KMER	**Konya-Meram**	**2.31**	**17**	P	**Pb**	**02 23 37.3**	**-1.6**
KMER				*i* AML	AML	02 24 09.0	
	comp=N,439nm,0.6s						
KMER				*i* AML	AML	02 24 17.0	
	comp=E,312nm,0.6s						
ISP	**Isparta**	**2.40**	**341**	PN	**Pb**	**02 23 38.5**	**-2.1**
ISP	**Isparta**	**2.40**	**341**	Pn	**Pn**	**02 23 38.4**	**+2.3**
ISP	**Isparta**	**2.40**	**341**	P	**Pn**	**02 23 38.4**	**+2.3**
KONT	**Konya--Tatoy**	**2.48**	**15**	PN	**Pn**	**02 23 38.9**	**+1.9**
KONT	**Konya--Tatoy**	**2.48**	**15**	P	**Pb**	**02 23 39.6**	**-2.1**
KONT				S	**Sb**	**02 24 11.9**	**+0.2**
KONT				*i* AML	AML	02 24 25.0	
	comp=N,233nm,0.8s						
KONT				*i* AML	AML	02 24 30.0	
	comp=E,241nm,0.6s						
DOGA	**KONYA_Doganhis**	**2.55**	**2**	P	**Pn**	**02 23 39.8**	**+1.7**
DOGA				*i* AML	AML	02 24 21.0	
	comp=N,448nm,0.8s						
DOGA				*i* AML	AML	02 24 21.0	
	comp=E,335nm,0.9s						
OSC2	**CSNet OBS 4**	**2.55**	**166**	P	**Pn**	**02 23 38.1**	**+0.1**
OSC2				S	**Sn**	**02 24 10.1**	**+1.8**
OSC2				AML	AML	02 24 29.4	
	0.6nm,0.9s						
OSC2				AML	AML	02 24 29.4	
	0.6nm,0.9s						
OSC2				AML	AML	02 24 35.0	
	0.7nm,0.9s						
OSC2				AML	AML	02 24 35.0	
	0.7nm,0.9s						
BASM	**Basmaki-Afyon**	**2.64**	**334**	PN	**Pb**	**02 23 42.3**	**-2.3**
LADK	**Ladik-KONYA**	**2.72**	**14**	PN	**Pn**	**02 23 42.0**	**+1.5**
MERS	**Mersin**	**2.75**	**61**	PN	**Pn**	**02 23 41.2**	**+0.4**
ARG	**Arkhangelos**	**2.84**	**284**	Pn	**Pn**	**02 23 43.0**	**+0.9**
ARG	**Arkhangelos**	**2.84**	**284**	P	**Pn**	**02 23 43.0**	**+0.9**
ARG	**Arkhangelos**	**2.84**	**284**	P	**Pn**	**02 23 42.4**	**+0.3**
ARG				S	**Sn**	**02 24 14.1**	**-1.6**
KZIL	**AFYON_Kizioren**	**2.92**	**338**	P	**Pb**	**02 23 47.3**	**-2.0**
KZIL				S	**Sb**	**02 24 23.8**	**-0.8**
KZIL				*i* AML	AML	02 24 34.0	
	comp=E,150nm,0.6s						
KZIL				*i* AML	AML	02 24 36.0	
	comp=N,127nm,0.6s						
ALIN	**Konya, Altinte**	**2.94**	**21**	P	**Pn**	**02 23 45.7**	**+2.2**
ALIN				S	**Sb**	**02 24 22.9**	**-2.3**
ALIN				*i* AML	AML	02 24 35.0	

MMLI Mount Malkishu 4.48 133 Pn **Pn** 02 24 04.6 0.0
BRTR Keskin Array B 4.48 21 Pn **Pn** 02 24 06.4 +1.6
1.3nm,0.3s,baz=191,slow=16,SNR=32
BRTR Sn **Sn** 02 24 58.0 +1.7
1.6nm,0.3s,baz=212,slow=27,SNR=5.8
3.4nm,0.5s
BRTR Keskin Array B 4.48 21 Pn **Pn** 02 24 05.6 +0.8
BR131 Keskin Array S 4.49 21 Pn **Pn** 02 24 05.6 +0.8
BR131 Keskin Array S 4.49 21 Pn **Pn** 02 24 05.6 +0.8
HMDT Nahal Hemdat 4.68 134 Pn **Pn** 02 24 08.0 +0.7
HMDT Sn **Sn** 02 25 01.5 +0.6
BNN Bunyan 4.76 45 Pn **Pn** 02 24 08.8 +0.3
AMAZ Amatzia 4.91 144 Pn **Pn** 02 24 10.4 0.0
MDUB Mudurnu 4.91 357 **Pn** 02 24 11.8 +1.2
SANT Santorini 4.99 281 ⇑P **Pn** 02 24 10.7 -1.0
SANT ⇑S **Sn** 02 25 04.6 -4.1
BALB Balikesir 5.00 326 **Pn** 02 24 14.0 +2.3
THR3 Thira Island, 5.05 281 P **Pn** 02 24 12.5 +0.2
DSI Dead Sea 5.11 140 Pn **Pn** 02 24 13.7 +0.5
DSI Sn **Sn** 02 25 12.9 +1.3
YTIR Yattir 5.14 143 Pn **Pn** 02 24 13.8 0.0
YTIR Sn **Sn** 02 25 13.3 +0.8
KZIT Kziot 5.22 152 Pn **Pn** 02 24 14.1 -0.7
KZIT Sn **Sn** 02 25 14.2 -0.1
GHAJ Ghor Haditha 5.42 140 Pn **Pn** 02 24 16.1 -1.3
GHAJ Ghor Haditha 5.42 140 Pn **Pn** 02 24 17.6 +0.2
IDI Anoyia 5.43 269 ⇑P **Pn** 02 24 17.3 -0.5
IDI ⇑S **Sn** 02 25 15.4 -4.3
IDI Anoyia 5.43 269 Pn **Pn** 02 24 17.1 -0.6
3.2nm,0.3s,baz=4.3,slow=8.8,SNR=22
IDI Sn **Sn** 02 25 16.0 -3.6
12nm,0.3s,baz=308,slow=20,SNR=10
11nm,0.4s
IDI Anoyia 5.43 269 Pn **Pn** 02 24 18.0 +0.3
ASF Jabal al Asfar 5.59 126 Pn **Pn** 02 24 20.9 +1.0
0.9nm,0.3s,baz=319,slow=5.6,SNR=11
5.6nm,0.7s
ASF Jabal al Asfar 5.59 126 P **Pn** 02 24 21.0 +1.0
ZFRI Zfri 5.85 147 Pn **Pn** 02 24 22.7 -0.7
PRNI Paran 5.95 150 Pn **Pn** 02 24 24.9 +0.1
PRNI Sn **Sn** 02 25 33.7 +1.3
KRMI Paran Flat 6.05 153 Pn **Pn** 02 24 25.4 -0.8
HRFI Mount Harif 6.24 151 Pn **Pn** 02 24 28.5 -0.3
HRFI Sn **Sn** 02 25 41.1 +1.5
MBRI Mt Berech 6.41 153 Pn **Pn** 02 24 30.9 -0.3
EIL Elat 6.54 153 Pn **Pn** 02 24 32.6 -0.3
8.1nm,0.3s,baz=327,slow=7.3,SNR=129
EIL LR LR 02 27 22.9
comp=Z,98nm,20.1s,baz=16,slow=41
84nm,0.7s
EIL Elat 6.54 153 Pn **Pn** 02 24 32.2 -0.7
ALN Alexandroupoli 6.86 323 Pn **Pn** 02 24 39.9 +2.7
ALN Alexandroupoli 6.86 323 P **Pn** 02 24 39.9 +2.7
RDO Rodhopi 7.30 322 Pn **Pn** 02 24 44.6 +1.4
MARD Mardin 7.66 74 Pn **Pn** 02 24 48.6 +0.3
VTS Vitosha 9.55 320 ⇑P **Pn** 02 25 16.6 +2.3
VTS Vitosha 9.55 320 **Pn** 02 25 16.0 +1.7
VTS Vitosha 9.55 320 P **Pn** 02 25 16.0 +1.7
KBN Korca 9.86 304 Pn **Pn** 02 25 18.9 +0.4
KBN Korca 9.86 304 P **Pn** 02 25 18.9 +0.4
CFR Carcaliu 9.95 346 ⇑P **Pn** 02 25 22.6 +3.0
SOC Sochi 10.20 36 *eP* **Pn** 02 25 22.8 -0.2
SOC *e* 02 27 21.7
SOC MLR MLR
comp=Z,93nm,16.0s
MLR Muntele Rosu 10.79 339 ⇑P **Pn** 02 25 34.1 +2.8
MLR Muntele Rosu 10.79 339 Pn **Pn** 02 25 31.9 +0.7
comp=Z,0.1nm,0.3s,baz=180,slow=14,SNR=2.2
MLR LR LR 02 30 20.5
comp=Z,32nm,19.5s,baz=163,slow=41
comp=Z,1.2nm,0.5s
VRI Vrincioaia 10.92 342 ⇓P **Pn** 02 25 36.2 +3.3
PLOR Plostina 10.93 342 ⇓P **Pn** 02 25 37.2 +4.2
COVR Voineasa-Covas 11.04 340 ⇓P **Pn** 02 25 38.6 +4.1
ARR Arges 11.12 334 ⇑P **Pn** 02 25 39.1 +3.5
SCTE Santa Cesarea 11.27 297 **Pn** 02 25 37.5 -0.2
GNI Garni 11.40 62 LR LR 02 30 59.8
comp=Z,42nm,19.5s,baz=247,slow=42
GNI Garni 11.40 62 *i* P **Pn** 02 25 41.1 +1.5
LOT Lotru 11.51 332 ⇑P **Pn** 02 25 44.4 +3.4
HERR Herculane 11.62 326 ⇑P **Pn** 02 25 43.9 +1.4
GZR Gura Zlata 11.87 329 ⇑P **Pn** 02 25 48.1 +2.2
MDVR Moldovita 11.88 324 ⇑P **Pn** 02 25 47.7 +1.6
KIV Kislovodsk 11.99 42 *eP* **Pn** 02 25 48.8 +1.2
KIV pmax pmax
comp=Z,3.0nm,1.1s
KIV MLR MLR
comp=Z,12nm,11.0s
DIVS Divibare 12.30 317 **Pn** 02 25 51.7 -0.1
TIP Timpagrande 12.30 291 ⇑P **Pn** 02 25 49.5 -2.3
BZS Buzias 12.55 326 ⇓P **Pn** 02 25 56.8 +1.6
SORM Soroca 12.79 350 ⇑P **Pn** 02 26 03.0 +4.6
BURAR Bucovina Array 12.94 341 ⇓P **Pn** 02 26 03.8 +3.3
BURAR Bucovina Array 12.94 341 Pn **Pn** 02 26 01.2 +0.6
DRGR 13.03 332 ⇑P **Pn** 02 26 04.7 +2.9
CUC Castrocucco 13.20 294 Pn **Pn** 02 26 02.8 -1.3
PAOL Paolisi 14.40 297 Pn **Pn** 02 26 19.5 -0.9
MORH Mrgy, Hungar 14.42 322 ⇓P **Pn** 02 26 22.5 +1.8
MORH Mrgy, Hungar 14.42 322 P **P** 02 26 27.5 +0.2
KOLS Kolonicke sedl 15.01 336 *eP* **P** 02 26 35.8 +1.9
KOLS Kolonicke sedl 15.01 336 *eP* **P** 02 26 35.8 +1.9
AKASG Malin Array Be 15.23 354 Pn **Pn** 02 26 36.4 +0.1
comp=Z,1.4nm,0.3s,baz=177,slow=9.0,SNR=27
AKASG Malin Array Be 15.23 354 Pn **Pn** 02 26 31.2 -0.3
AKASG Malin Array Be 15.23 354 P **Pn** 02 26 31.2 -0.3
AKASG pmax pmax
comp=Z,3.0nm,0.8s
AKBB Malin Array Si 15.23 354 P **P** 02 26 34.4 -1.9
AKBB Malin Array Si 15.23 354 *i* P **P** 02 26 34.2 -2.2
MPLH Magyarpolny 15.62 322 P **P** 02 26 42.1 +1.3
AQU L'Aquila 15.64 301 IAmb IAmb 02 26 56.2
comp=Z,11nm,0.9s
LANS Liptovska Anna 16.22 331 *eP* **P** 02 26 49.4 +2.0
LANS Liptovska Anna 16.22 331 *eP* **P** 02 26 49.4 +2.0
MURB Monte Urbino 16.56 303 IAmb IAmb 02 27 06.4
comp=Z,19nm,1.1s
VSR Storozhevoye 16.59 17 *eP* **P** 02 26 51.8 +0.4
VSR pmax pmax
comp=Z,6.0nm,0.8s
RONA Rosalia, Austr 16.61 322 *eP* **P** 02 26 51.7 0.0
comp=Z,3.3nm,0.9s
SOKA Soboth 16.64 317 *eP* **P** 02 26 53.2 +1.1
comp=Z,2.9nm,0.7s
ARSA Arzberg 16.72 319 *eP* **Pn** 02 26 51.5 +0.7
comp=Z,3.0nm,0.6s
OBKA Obir 16.81 316 *eP* **P** 02 26 55.7 +1.6
comp=Z,4.0nm,0.7s
CONA Conrad Observa 16.98 322 *eP* **P** 02 26 59.1 +3.2
comp=Z,4.5nm,1.2s
VORR Voronezh 17.02 17 *eP* **Pn** 02 26 51.3 -3.2
VORR pmax pmax
comp=Z,30nm,0.4s
VRH Novokhopyorsk 17.28 22 *eP* **P** 02 26 59.4 +0.4
VRH pmax pmax
comp=Z,10.0nm,1.2s
OKC Ostrava-Krasne 17.30 330 *eP* P 02 27 06.8 +7.5
OKC Ostrava-Krasne 17.30 330 *ep* pP 02 27 06.8 +2.4
MYKA Terra Mystica 17.40 315 *eP* **P** 02 27 03.7 +3.2
comp=Z,4.6nm,0.8s
VRAC Vranov 17.57 326 P **P** 02 27 06.7 +4.4
comp=Z,1.9nm,0.6s,baz=122,slow=3.7,SNR=4.9
VRAC LR LR 02 35 13.0
comp=Z,28nm,20.8s,baz=127,slow=42
STAL STALIGIAL 17.75 313 Pn **Pn** 02 27 02.6 -1.1
MOA Molln 17.76 319 *eP* **P** 02 27 08.2 +3.8
comp=Z,3.9nm,1.1s
KBA Koelnbreinsper 17.82 316 *eP* **P** 02 27 07.5 +2.3
comp=Z,24nm,1.3s
LPSR Galich'ya Gora 17.83 15 *eP* **P** 02 27 05.4 +0.3
LPSR pmax pmax
comp=Z,10.0nm,1.6s
BIOA Bad Ischl, Aus 18.00 318 *eP* **P** 02 27 10.2 +3.1
comp=Z,2.6nm,0.7s
KEST Kesra 18.04 277 P **Pn** 02 27 06.2 -1.0
comp=Z,0.2nm,0.3s,baz=350,slow=2.0,SNR=6.7
comp=Z,3.9nm,0.7s
KEST Kesra 18.04 277 Pn **Pn** 02 27 05.2 -2.1
ABTA Abfaltersbach 18.12 314 *eP* **P** 02 27 09.8 +1.3
comp=Z,2.9nm,0.8s
CTI Castel Tesino 18.30 311 P **Pn** 02 27 09.9 -0.5
CTI Castel Tesino 18.30 311 P **Pn** 02 27 09.9 -0.5
CTI pmax pmax
comp=Z,5.0nm,0.7s
CKRC Cesky Krumlov 18.34 322 *eP* **Pn** 02 27 11.7 +0.8

DPC Dobruska-Polom 18.45 328 *eP* **P** 02 27 10.1 -2.0
DPC Dobruska-Polom 18.45 328 *eP* **P** 02 27 10.1 -2.0
GEC2 GERESS Array S 18.67 321 P **Pn** 02 27 15.4 +0.5
GERES GERESS Array B 18.67 321 P **Pn** 02 27 15.2 +0.3
comp=Z,0.3nm,0.3s,baz=132,slow=9.5,SNR=24
comp=Z,3.6nm,0.7s
CHVC Chvalec 18.75 328 *eP* **Pn** 02 27 18.1 +2.3
SALO Salr 18.81 309 P **Pn** 02 27 17.7 +1.2
SALO IAmb IAmb 02 27 38.3
comp=Z,6.6nm,0.7s
WTTA Wattenberg 18.90 314 *i* P **Pn** 02 27 19.0 +1.2
comp=Z,11nm,1.2s
KHC Kasperske Hory 18.91 321 IAmb IAmb 02 27 27.3
comp=Z,7.9nm,0.6s
KHC Kasperske Hory 18.91 321 *i* P **P** 02 27 17.0 -0.1
KHC Kasperske Hory 18.91 321 *eP* **Pn** 02 27 18.1 +0.3
KHC *ep* pP **sP** 02 27 24.5 -0.3
WATA Walderalm 18.97 314 *eP* **Pn** 02 27 19.4 +0.7
comp=Z,12nm,1.0s
SQTA Sankt Quirin 19.13 314 *eP* **Pn** 02 27 21.3 +0.7
comp=Z,6.4nm,0.6s
MOTA Moosalm 19.25 314 *eP* **Pn** 02 27 22.2 +0.1
comp=Z,12nm,1.1s
FETA Feichten 19.32 313 *i* P **Pn** 02 27 23.8 +1.0
comp=Z,16nm,1.1s
RETA Reutte 19.53 314 *eP* **P** 02 27 24.4 +0.5
comp=Z,6.7nm,1.2s
NACGM Naroch 19.63 352⇑ *eP* **Pn** 02 27 28.7 +2.4
baz=170
DAVOX Davos/Dischmat 19.72 311 P **Pn** 02 27 27.0 -0.6
comp=Z,0.4nm,0.3s,baz=132,slow=17,SNR=16
DAVOX LR LR 02 35 59.4
comp=Z,38nm,18.3s,baz=98,slow=40
comp=Z,6.3nm,0.7s
BRG Berggiesshubel 19.89 326 *eP* **Pn** 02 27 30.2 +0.8
BRG Amp 02 27 34.7
comp=Z,6.0nm,0.8s
BRG Berggiesshubel 19.89 326 *eP* **Pn** 02 27 30.2 +0.8
BRG pmax pmax
comp=Z,6.0nm,0.9s
TUE Stuetta 19.91 310 P **P** 02 27 26.7 -1.6
TUE IAmb IAmb 02 27 48.3
comp=Z,8.2nm,1.0s
DAVA Damuels 19.95 313 *eP* **P** 02 27 28.9 +0.2
comp=Z,10nm,0.6s
BELG Belogornoye 20.35 29 P **P** 02 27 32.8 +0.1
comp=Z,8.2nm,0.8s,baz=28,slow=8.0,SNR=4.8
comp=Z,8.2nm,0.8s
BELG Belogornoye 20.35 29 *i* P **P** 02 27 32.3 -0.4
BELG pmax pmax
comp=Z,3.0nm,1.0s
GRA1 Grafenberg Arr 20.48 320 P **P** 02 27 33.5 -0.6
GRA1 IAmb IAmb 02 27 46.3
comp=Z,7.9nm,0.7s
GRF Grafenberg Arr 20.48 320 P **P** 02 27 33.5 -0.6
GRF pmax pmax
comp=Z,8.0nm,0.7s
GRFO Grafenberg 20.48 320 P **P** 02 27 33.8 -0.3
GRFO IAmb IAmb 02 27 46.2
comp=Z,7.7nm,0.8s
GRFO Grafenberg 20.48 320 P **P** 02 27 33.8 -0.3
GRFO pmax pmax
comp=Z,8.0nm,0.8s
MOS Moscow 20.61 10 *eP* Pn 02 27 37.3 -0.6
CLL Collm 20.62 325 P **P** 02 27 34.9 -0.8
CLL IAmb IAmb 02 27 47.9
comp=Z,3.9nm,0.7s
CLL Collm 20.62 325 P **P** 02 27 34.9 -0.8
CLL pmax pmax
comp=Z,4.0nm,0.7s
CLL Collm 20.62 325 *eP* Pn 02 27 37.0 -1.0
CLL *i* pP sP 02 27 43.0 -0.3
CLL *i* sP pwP 02 27 47.1 +2.8
CLL *ep* PPP PPP 02 28 03.0
BNI Bardonecchia 21.13 304 P **P** 02 27 42.0 +0.7
BNI Bardonecchia 21.13 304 P **P** 02 27 42.1 +0.7
BNI pmax pmax
comp=Z,4.0nm,0.9s
SENIN Lac Senin/Sane 21.17 308 P **P** 02 27 42.0 +0.2
SENIN IAmb IAmb 02 27 58.4
comp=Z,8.2nm,0.8s
BFO Black Forest 21.37 314 P **P** 02 27 43.8 0.0
BFO IAmb IAmb 02 27 57.5
comp=Z,5.5nm,0.8s
BFO Black Forest 21.37 314 P **P** 02 27 43.8 0.0
BFO pmax pmax
comp=Z,6.0nm,0.8s
GEYT Alibeck 21.41 76 P **P** 02 27 46.4 +2.0
comp=Z,4.6nm,1.1s,baz=245,slow=30,SNR=4.6
comp=Z,4.6nm,1.1s
GYA0B ALIBECK ARRAY 21.41 76 P **P** 02 27 42.6 -1.8
GYA0B IAmb IAmb 02 27 47.4
comp=Z,14nm,1.4s
ECH Echery 22.01 313 IAmb IAmb 02 28 00.4
comp=Z,6.2nm,0.9s
AKTO Aktyubinsk 24.25 44 P **P** 02 28 13.5 +0.2
comp=Z,5.1nm,0.8s,baz=238,slow=9.4,SNR=17
comp=Z,5.1nm,0.8s
ABKAR Akbulak array 24.87 48 P **P** 02 28 18.5 -0.4
ABKAR IAmb IAmb 02 28 20.1
comp=Z,4.8nm,1.2s
HRA Herat 25.15 84 P **P** 02 28 22.5 +0.7
HRA IAmb IAmb 02 28 35.7
comp=Z,2.6nm,0.8s
KIRV Kirov 25.89 22 P **P** 02 28 26.8 -1.2
comp=Z,9.1nm,0.7s,baz=24,slow=15,SNR=3.7
comp=Z,9.1nm,0.7s
FINES FINESS Array B 26.14 354 P **P** 02 28 29.5 -0.7
comp=Z,2.3nm,0.5s,baz=155,slow=12,SNR=17
comp=Z,2.3nm,0.5s
FIA1 FINESS Array S 26.14 354 P **P** 02 28 29.3 -0.9
HFS Hagfors 27.17 340 P **P** 02 28 38.5 -1.0
comp=Z,1.4nm,0.7s,baz=91,slow=7.4,SNR=3.7
HFS LR LR 02 40 34.0
comp=Z,40nm,18.7s,baz=151,slow=39
comp=Z,1.4nm,0.7s
ARU Arti 27.76 33 P **P** 02 28 44.8 -0.2
comp=Z,1.6nm,0.3s,baz=226,slow=9.4,SNR=5.6
comp=Z,1.6nm,0.3s
ARU Arti 27.76 33 P **P** 02 28 44.7 -0.2
ARU IAmb IAmb 02 28 48.4
comp=Z,4.4nm,1.0s
ARU Arti 27.76 33 *c iP* **P** 02 28 45.0 +0.1
ARU 02 29 33.9
ARU S **S** 02 33 32.3 +6.0
ARU SS **SnSn** 02 34 46.0 +6.8
ARU pmax pmax
comp=Z,5.0nm,1.0s
ESDC Sonseca Array 28.30 289 P **P** 02 28 50.2 +0.2
comp=Z,1.5nm,0.7s,baz=82,slow=9.1,SNR=16
comp=Z,1.5nm,0.7s
NB2 NORSAR Subarra 28.61 339 P **P** 02 28 50.7 -1.8
comp=Z,1.6nm,0.8s,baz=141,slow=9.3
NOA NORSAR Array B 28.61 339 P **P** 02 28 51.3 -1.2
comp=Z,0.7nm,0.7s,baz=145,slow=8.5,SNR=4.6
NOA LR LR 02 42 00.3
comp=Z,12nm,21.7s,baz=140,slow=40
comp=Z,0.7nm,0.7s
SVE Sverdlovsk 28.93 34 *eP* **P** 02 28 55.1 -0.2
KK31 Karatay Array 30.86 64 P **P** 02 29 12.9 +0.3
KK31 IAmb IAmb 02 29 14.4
comp=Z,2.9nm,0.8s
KK31 Karatay Array 30.86 64 P **P** 02 29 12.9 +0.3
KK31 pmax pmax
comp=Z,3.0nm,0.8s
KKAR Karatay Array 30.86 64 P **P** 02 29 13.4 +0.8
KKAR IAmb IAmb 02 29 14.4
comp=Z,2.9nm,0.8s
KKAR Karatay Array 30.86 64 P **P** 02 29 13.4 +0.8
KKAR pmax pmax
comp=Z,3.0nm,0.8s
AAK Ala-Archa 33.79 65 *ce* P **P** 02 29 38.5 0.0
AAK pmax pmax
comp=Z,2.0nm,0.6s
ARCES ARCESS Array B 34.20 356 P **P** 02 29 40.4 -1.1
comp=Z,1.2nm,0.5s,baz=169,slow=7.3,SNR=9.3
comp=Z,1.2nm,0.5s
BOOM Boomskoye usch 34.87 65 P **P** 02 29 47.9 +0.1
BOOM Boomskoye usch 34.87 65 P **P** 02 29 47.9 +0.1
BOOM pmax pmax
comp=Z,6.0nm,1.3s
TOA0 Torodi Ar. Sit 34.93 238 P **P** 02 29 47.5 -0.8
TOA0 IAmb IAmb 02 29 49.2
comp=Z,3.2nm,1.1s
TORD Torodi Ar. Bea 34.93 238 P **P** 02 29 48.1 -0.2
comp=Z,1.2nm,0.8s,baz=37,slow=9.0,SNR=10
comp=Z,1.2nm,0.8s

TORD Torodi Ar. Bea 34.93 238 P **P** 02 29 47.6 -0.8
MBAR Mbarara 35.98 181 P **P** 02 29 57.5 0.0
MBAR IAmb IAmb 02 30 19.8
comp=Z,2.3nm,0.8s
MBAR Mbarara 35.98 181 P **P** 02 29 57.5 0.0
MBAR pmax pmax
comp=Z,2.0nm,0.8s
KURK Kurchatov 36.89 51 P **P** 02 30 04.8 0.0
KURK IAmb IAmb 02 30 07.0
comp=Z,5.7nm,1.2s
KURK Kurchatov 36.89 51 *ce* P **P** 02 30 04.8 0.0
KURK pmax pmax
comp=Z,1.0nm,0.7s
MAKZ Makanchi 38.98 57 P **P** 02 30 23.1 +0.6
MAKZ Makanchi 38.98 57 P **P** 02 30 23.1 +0.6
MAKZ pmax pmax
comp=Z,5.0nm,0.8s
MK31 Makanchi Array 39.19 57 P **P** 02 30 24.6 +0.3
MK31 Makanchi Array 39.19 57 *i* P **P** 02 30 25.2 +0.9
MKAR Makanchi Array 39.19 57 P **P** 02 30 25.4 +1.1
comp=Z,7.9nm,0.7s,baz=278,slow=6.5,SNR=78
comp=Z,7.9nm,0.7s
MKAR Makanchi Array 39.19 57 *ce* P **P** 02 30 25.3 +1.0
MKAR pmax pmax
comp=Z,8.0nm,0.7s
ZALV Zalesovo Beam 40.97 46 P **P** 02 30 39.0 +0.1
comp=Z,1.3nm,0.5s,baz=267,slow=9.6,SNR=6.2
comp=Z,1.3nm,0.5s
ZALV Zalesovo Beam 40.97 46 P **P** 02 30 38.6 -0.3
ZALV Zalesovo Beam 40.97 46 P **P** 02 30 38.6 -0.3
BORG Borgarnes 42.77 330 LR LR 02 50 31.8
comp=Z,15nm,20.2s,baz=89,slow=39
WMQ Urumqi 43.27 61 *eP* **P** 02 31 00.7 +2.7
PYUN Piuthan 43.94 85 *eP* **P** 02 31 04.3 +0.6
comp=Z,12nm,0.7s
DBIC Dimbokro 44.05 238 P **P** 02 31 03.4 -0.9
comp=Z,3.3nm,0.5s,baz=27,slow=5.6,SNR=3.5
comp=Z,3.3nm,0.5s
DANN Dangsing 44.46 84 *eP* **P** 02 31 09.2 +1.2
comp=Z,5.1nm,0.8s
SCO Scoresbysund 44.90 338 P **P** 02 31 13.0 +2.5
SCO Scoresbysund 44.90 338 P **P** 02 31 13.0 +2.5
SCO pmax pmax
comp=Z,4.0nm,0.9s
GKN Gorkha 45.31 84 *eP* **P** 02 31 15.2 +0.6
NRIK Noril'sk 45.34 24 *ce* P **P** 02 31 12.2 -1.8
NRIK pmax pmax
comp=Z,2.0nm,0.6s
DMN Daman 45.85 84 *eP* **P** 02 31 20.0 +1.0
comp=Z,30nm,0.6s
PKIN Phulchoki 46.10 84 *eP* **P** 02 31 21.6 +0.7
comp=Z,27nm,0.9s
PKI Pulchoki 46.11 84 *eP* **P** 02 31 21.7 +0.6
GUN Gumba 46.35 84 *eP* **P** 02 31 23.7 +0.7
comp=Z,12nm,0.5s
JIRN Jiri 46.71 84 *eP* **P** 02 31 26.5 +0.7
GOMU GeErMu 50.44 70 P **P** 02 31 54.1 -0.3
GOMU pP pP 02 31 57.5 -2.8
GOMU sP sP 02 31 59.5 -3.1
GOMU pmax pmax
comp=Z,2.0nm,0.5s
GOMU pmax pmax
comp=Z,32nm,3.6s
SONM Songino Array 55.16 52 P **P** 02 32 28.8 -0.1
comp=Z,2.8nm,0.5s,baz=288,slow=8.2,SNR=6.5
comp=Z,2.8nm,0.5s
SONM Songino Array 55.16 52 P **P** 02 32 29.2 +0.3
SONM IAmb IAmb 02 32 30.4
comp=Z,2.1nm,0.7s
ULN Ulaanbaatar 55.58 52 P **P** 02 32 31.7 -0.2
ULN Ulaanbaatar 55.58 52 *i* P **P** 02 32 32.3 +0.4
ULN pmax pmax
comp=Z,4.0nm,1.0s
TSUM Tsumeb 56.04 196 P **P** 02 32 34.6 -0.8
TIXI Tiksi 58.93 22 LR LR 03 00 43.0
comp=Z,21nm,18.5s,baz=184,slow=38
TIXI Tiksi 58.93 22 P **P** 02 32 55.6 +0.6
TIXI IAmb IAmb 02 32 59.1
comp=Z,2.5nm,1.0s
TIXI Tiksi 58.93 22 *i* P **P** 02 32 54.6 -0.4
TIXI pmax pmax
comp=Z,2.0nm,1.0s
PZH PanZhiHua 59.71 78 P **P** 02 33 02.7 +1.4
PZH pmax pmax
comp=Z,6.0nm,0.8s
PZH pmax pmax
comp=Z,100nm,4.4s
HHC Hu-ho-hao-te 61.03 59 *eP* **P** 02 33 11.1 +1.0
HHC pmax pmax
comp=Z,15nm,0.7s
HHC pmax pmax
comp=Z,130nm,9.0s
CHTO Chiang Mai 61.17 87 P **P** 02 33 10.0 -1.2
CHTO Chiang Mai 61.17 87 P **P** 02 33 10.0 -1.2
CHTO pmax pmax
comp=Z,6.0nm,1.2s
CMAR Chiang Mai Arr 61.35 87 P **P** 02 33 12.6 +0.1
comp=Z,2.2nm,0.3s,baz=293,slow=7.8,SNR=7.2
comp=Z,2.2nm,0.3s
CMAR Chiang Mai Arr 61.35 87 P **P** 02 33 10.7 -1.7
CMAR Chiang Mai Arr 61.35 87 *ce* P **P** 02 33 13.0 +0.6
CMAR pmax pmax
comp=Z,2.0nm,0.3s
SCHQ Schefferville 66.20 321 P **P** 02 33 42.1 -1.8
comp=Z,3.1nm,0.8s,baz=54,slow=7.9,SNR=4.1
comp=Z,3.1nm,0.8s
SCHQ Schefferville 66.20 321 IAmb IAmb 02 33 44.8
comp=Z,5.2nm,1.0s
USRK Ussuriysk Ar. 72.80 48 P **P** 02 34 24.3 -0.4
comp=Z,2.5nm,0.6s,baz=311,slow=4.5,SNR=7.3
comp=Z,2.5nm,0.6s
USRK Ussuriysk Ar. 72.80 48 P **P** 02 34 23.3 -1.5
KSAR Wonju Array Be 73.82 55 P **P** 02 34 30.9 0.0
KSAR Wonju Array Be 73.82 55 P **P** 02 34 30.9 0.0
KSRS Korea Array 73.84 55 P **P** 02 34 31.1 +0.2
comp=Z,0.9nm,0.5s,baz=302,slow=5.5,SNR=5.0
comp=Z,0.9nm,0.5s
YKA Yellowknife Ar 78.56 345 P **P** 02 34 56.9 -0.5
comp=Z,0.7nm,0.6s,baz=27,slow=5.3,SNR=4.1
comp=Z,0.7nm,0.6s

HLW ***04*** *02:26:45.6, 30°.41N×32°.05E, h8km±1km, Md2.6, Ml3.6*
GII ***04*** *02:26:48.7±0.0, 30°.32N×32°.16E, h8km, MD2.9/4, Mm2.9/4*
ISC 04 02:26:48.3±1.2, 30°.27N±0°.05×32°.00E±0°.04, h24km±11km, n28, σ0°51/41, Egypt

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HHAG	**Hagoal** baz=174	**0.33**	**165**	P	**Pb**		**02 26 55.5**	**-0.2**
HHAG				S	**Sb**		**02 27 01.1**	**+0.3**
KOT	**Kottamia** baz=202	**0.37**	**203**	P	**Pb**		**02 26 56.0**	**-0.4**
GLL	**Jalalah** baz=200	**0.74**	**200**	P	**Pb**		**02 27 02.1**	**-0.3**
HSAF	**As Saff** baz=209	**0.76**	**211**	P	**Pb**		**02 27 02.3**	**-0.6**
SUZ	**Suez** baz=129	**0.84**	**121**	P	**Pb**		**02 27 04.1**	**-0.2**
ZAF	**Zafarana** baz=158	**1.10**	**154**	P	**Pn**		**02 27 07.9**	**-0.3**
ZAF				S	**Sn**		**02 27 23.8**	**+1.3**
HMYD	**Mayadein** baz=242	**1.14**	**246**	P	**Pn**		**02 27 08.5**	**-0.3**
ZNM	**Zenema** baz=144	**1.17**	**139**	P	**Pn**		**02 27 09.3**	**+0.1**
HNAT	**Natroun** baz=239	**1.36**	**242**	P	**Pn**		**02 27 12.0**	**+0.2**
HNAT				S	**Sb**		**02 27 30.6**	**+0.6**
NBNS	**Bani Suef** baz=201	**1.75**	**201**	P	**Pn**		**02 27 17.2**	**0.0**
HRDS	**Abu Rudays** baz=146	**1.92**	**144**	P	**Pn**		**02 27 19.3**	**-0.2**
KZIT	**Kziot**	**2.16**	**72**	Pn	**Pn**		**02 27 22.8**	**0.0**
KZIT				Sn	**Sn**		**02 27 48.4**	**-0.5**
KRMI	**Paran Flat**	**2.37**	**93**	Pn	**Pn**		**02 27 54.2**	**+0.3**
KRMI				Sn	**Sn**		**02 27 54.2**	**+0.3**
HKAT	**Jabal Katrina** baz=137	**2.46**	**135**	P	**Pn**		**02 27 26.8**	**-0.3**
MBRI	**Mt Berech**	**2.57**	**100**	Pn	**Pn**		**02 27 28.7**	**+0.2**
PRNI	**Paran**	**2.60**	**88**	Pn	**Pn**		**02 27 28.9**	**0.0**
PRNI				Sn	**Sn**		**02 27 59.9**	**+0.2**

EIL	**Elat**	**2.63**	**102**	Pn	**Pn**	**02 27 29.2**	**-0.1**
EIL				Sn	**Sn**	**02 28 00.1**	**-0.4**
HRFI	**Mount Harif**	**2.64**	**94**	Pn	**Pn**	**02 27 29.5**	**+0.1**
HRFI				Sn	**Sn**	**02 28 01.3**	**+0.5**
TAMRE	**El Minia**	**2.75**	**200**	P	**Pn**	**02 27 31.1**	**+0.2**
	baz=201						
HDHB	**Dhahab**	**2.76**	**123**	P	**Pn**	**02 27 31.2**	**+0.2**
	baz=126						
ZFRI	**Zfri**	**2.76**	**83**	Pn	**Pn**	**02 27 30.5**	**-0.5**
ZFRI				Sn	**Sn**	**02 28 03.5**	**-0.1**
AMAZ	**Amatzia**	**2.81**	**63**	Pn	**Pn**	**02 27 32.4**	**+0.7**
AMAZ				Sn	**Sn**	**02 28 04.0**	**-0.8**
YTIR	**Yattir**	**2.89**	**67**	Pn	**Pn**	**02 27 33.6**	**+0.6**
YTIR				Sn	**Sn**	**02 28 06.7**	**-0.4**
DSI	**Dead Sea**	**3.18**	**65**	Pn	**Pn**	**02 27 37.3**	**+0.5**
GHAJ	**Ghor Haditha**	**3.24**	**71**	Pn	**Pn**	**02 27 37.6**	**0.0**
HMDT	**Nahal Hemdat**	**3.61**	**56**	Pn	**Pn**	**02 27 42.6**	**-0.1**
HMDT				Sn	**Sn**	**02 28 24.0**	**-0.6**
MMLI	**Mount Malkishu**	**3.64**	**53**	Pn	**Pn**	**02 27 44.0**	**+0.9**
NATI	**Neve Ativ**	**4.36**	**46**	Pn	**Pn**	**02 27 54.2**	**+1.2**
NATI				Sn	**Sn**	**02 28 42.1**	**-1.0**

*ATH **04** 02:35:08.9, 36°.29N×28°.93E, h65km±7km, ML2.8/3, Error ellipse: s-maj=19.7km s-min=5.7km az=275.0*
*ISK **04** 02:35:10.7, 36°.21N×28°.90E, h12km, ML3.0/29*
*DDA **04** 02:35:11.2±0.0, 36°.21N×28°.88E, h7km±3km, ML2.7*
*THE **04** 02:35:12.7, 36°.24N×28°.91E, h12km±3km, ML2.5/2, Error ellipse: s-maj=4.4km s-min=1.5km az=163.0*
*NIC **04** 02:35:13.3±0.0, 36°.00N×29°.10E, h55km±9km, Ml3.4/5*
*GII **04** 02:35:14.0±0.0, 35°.88N×29°.28E, h12km, Mm3.1/1*

ISC 04 02:35:10.9±1.1, 36°.14N±0°.03×28°.98E±0°.02, h32km±11km, n77, σ1.827/109, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKAS	**Kas**	**0.52**	**80**	PG	**Pn**	**02 35 22.1**	**0.0**
AKAS				SG	**Sn**	**02 35 30.7**	**+0.8**
AKAS	**Kas**	**0.52**	**80**	P	**Pn**	**02 35 22.1**	**0.0**
AKAS				S	**Sn**	**02 35 31.8**	**+1.9**
AKAS				*i* AML	AML	02 35 36.0	
	comp=E,846nm,0.3s						
AKAS				*i* AML	AML	02 35 37.0	
	comp=N,1μm,0.5s						
ARG	**Arkhangelos**	**0.69**	**277**	P	**Pb**	**02 35 24.4**	**-0.1**
ARG				S	**Sn**	**02 35 35.2**	**+1.1**
ARG				AML	AML	02 35 38.1	
	comp=E,1174μm,0.4s						
ARG				AML	AML	02 35 41.4	
	comp=N,611μm,0.5s						
ARG	**Arkhangelos**	**0.69**	**277**	P	**Pb**	**02 35 24.3**	**-0.3**
ARG				S	**Sn**	**02 35 35.2**	**+1.1**
	comp=N,448nm,0.4s						
ARG	**Arkhangelos**	**0.69**	**277**	PG	**Pb**	**02 35 24.2**	**-0.3**
DALY	**Dalyan (Mula)**	**0.72**	**339**	PG	**Pb**	**02 35 23.3**	**-1.8**
DALY				SG	**Sb**	**02 35 33.1**	**-1.7**
DEMR	**Demre-Antalya**	**0.76**	**82**	PG	**Pn**	**02 35 26.3**	**+1.0**
CAME	**Cameli-Denizli**	**0.84**	**18**	PG	**Pn**	**02 35 25.7**	**-1.0**
CAME				SG	**Sn**	**02 35 38.3**	**+0.3**
TURN	**Turunc**	**0.87**	**317**	PG	**Pn**	**02 35 26.2**	**-0.6**
TURN	**Turunc**	**0.87**	**317**	P	**Pn**	**02 35 26.2**	**-0.6**
TURN				S	**Sn**	**02 35 39.8**	**+1.5**
TURN				*i* AML	AML	02 35 40.0	
	comp=N,174nm,0.5s						
TURN				*i* AML	AML	02 35 40.0	
	comp=N,121nm,0.4s						
ELL	**Elmali**	**0.96**	**51**	PG	**Pb**	**02 35 29.6**	**+0.4**
ELL				SG	**Sn**	**02 35 43.9**	**+2.9**
ELL	**Elmali**	**0.96**	**51**	P	**Pb**	**02 35 29.2**	**0.0**
ELL				S	**Sn**	**02 35 45.1**	**+4.1**
CAEL	**Denizli, Camel**	**1.02**	**16**	P	**Pb**	**02 35 29.4**	**+0.3**
CAEL				S	**Sb**	**02 35 44.6**	**+1.4**
CAEL				*i* AML	AML	02 35 46.0	
	comp=N,218nm,0.3s						
CAEL				*i* AML	AML	02 35 49.0	
	comp=N,313nm,0.6s						
YER	**Yerkesik**	**1.14**	**331**	P	**Pn**	**02 35 30.9**	**+0.3**
YER				S	**Sn**	**02 35 45.9**	**+0.7**
YER	**Yerkesik**	**1.14**	**331**	PG	**Pn**	**02 35 31.0**	**+0.3**
YER				SG	**Sb**	**02 35 46.6**	**0.0**
GOLH	**Golhisar**	**1.19**	**23**	P	**Pb**	**02 35 32.9**	**-0.1**
GOLH				S	**Sb**	**02 35 50.5**	**+2.4**
GOLH				*i* AML	AML	02 35 51.0	
	comp=N,406nm,0.4s						
GOLH				*i* AML	AML	02 35 51.0	
	comp=N,406nm,0.3s						
MULA	**Mugla, Merkez-**	**1.23**	**335**	P	**Pb**	**02 35 32.9**	**-0.7**
MULA				S	**Sb**	**02 35 49.0**	**-0.3**
MULA				*i* AML	AML	02 35 50.0	
	comp=N,111nm,1.7s						
MULA				*i* AML	AML	02 35 52.0	
	comp=N,236nm,0.6s						
DAT	**Datca**	**1.27**	**298**	P	**Pn**	**02 35 33.6**	**+1.1**
DAT				S	**Sn**	**02 35 48.5**	**0.0**
DAT	**Datca**	**1.27**	**298**	PN	**Pn**	**02 35 33.5**	**+1.1**
DAT	**Datca**	**1.27**	**298**	P	**Pn**	**02 35 33.6**	**+1.1**
DAT				S	**Sb**	**02 35 50.9**	**+0.5**
DAT				*i* AML	AML	02 35 54.0	
	comp=N,119nm,0.4s						
DAT				*i* AML	AML	02 35 55.0	
	comp=N,119nm,0.6s						
TAVA	**DENIZLI_Tavas**	**1.32**	**358**	P	**Pb**	**02 35 34.3**	**-0.9**
TAVA				S	**Sb**	**02 35 51.7**	**-0.2**
TAVA				*i* AML	AML	02 35 52.0	
	comp=N,386nm,0.3s						
TAVA				*i* AML	AML	02 35 53.0	
	comp=N,234nm,0.3s						
APMY	**Acipayam-Deniz**	**1.35**	**11**	PN	**Pb**	**02 35 34.7**	**-1.0**
KORT	**Korkueli**	**1.40**	**52**	PN	**Pb**	**02 35 37.1**	**+0.6**
MLSB	**Milas**	**1.50**	**320**	PN	**Pb**	**02 35 37.2**	**-1.0**
NIS1	**Nisyros Isl.**	**1.52**	**288**	P	**Pn**	**02 35 36.8**	**+0.9**
NIS1				AML	AML	02 36 03.2	
	comp=N,957μm,0.8s						
NIS1				AML	AML	02 36 07.5	
	comp=E,1227μm,0.6s						
NIS1	**Nisyros Isl.**	**1.52**	**288**	PN	**Pb**	**02 35 37.5**	**-1.0**
BDRM	**Kayabasi**	**1.54**	**307**	P	**Pb**	**02 35 36.8**	**+0.7**
BDRM				S	**Sb**	**02 35 58.1**	**+0.1**
BDRM				*i* AML	AML	02 36 01.0	
	comp=E,89nm,0.5s						
BDRM				*i* AML	AML	02 36 02.0	
	comp=E,44nm,0.5s						
ANTB	**Antalya**	**1.55**	**60**	PN	**Pb**	**02 35 39.6**	**+0.7**
KARP	**Karpathos**	**1.59**	**249**	P	**Pb**	**02 35 39.2**	**-0.5**
KARP	**Karpathos**	**1.59**	**249**	P	**Pb**	**02 35 39.2**	**-0.5**
KARP	**Karpathos**	**1.59**	**249**	PN	**Pb**	**02 35 39.1**	**-0.5**
BODT	**Bodrum**	**1.63**	**305**	P	**Pn**	**02 35 37.9**	**+0.6**
BODT				S	**Sn**	**02 35 57.8**	**+0.6**
BODT	**Bodrum**	**1.63**	**305**	PN	**Pn**	**02 35 37.9**	**+0.6**
AYDN	**Tasoluk**	**1.75**	**330**	P	**Pb**	**02 35 41.0**	**-1.5**
AYDN				S	**Sb**	**02 36 02.7**	**-1.5**
BCK	**Bucak**	**1.85**	**44**	PN	**Pb**	**02 35 43.2**	**-0.9**
BASM	**Basmaki-Afyon**	**1.97**	**25**	PN	**Pb**	**02 35 44.9**	**-1.3**
AYDB	**Zeytinkoy-Aydi**	**2.00**	**335**	PN	**Pn**	**02 35 44.2**	**+1.6**
GCAM	**G?zelcami?**	**2.09**	**319**	PN	**Pn**	**02 35 44.8**	**+1.1**
GCAM	**G?zelcami?**	**2.09**	**319**	P	**Pn**	**02 35 44.8**	**+1.1**
GCAM				S	**Sn**	**02 36 09.9**	**+1.4**
GCAM				*i* AML	AML	02 36 10.0	
	comp=E,91nm,0.4s						
GCAM				*i* AML	AML	02 36 10.0	
	comp=E,48nm,0.4s						
SUTC	**Sutluce-Ispart**	**2.10**	**50**	PN	**Pb**	**02 35 47.5**	**-0.9**
SMG	**Samos**	**2.32**	**313**	P	**Pn**	**02 35 47.5**	**+0.6**
SMG				AML	AML	02 36 20.2	
	comp=N,189μm,0.4s						
SMG				AML	AML	02 36 21.1	
	comp=E,159μm,0.5s						
SMG	**Samos**	**2.32**	**313**	P	**Pn**	**02 35 47.4**	**+0.5**
SMG				S	**Sn**	**02 36 14.2**	**-0.1**
	comp=E,88nm,0.5s						
KULA	**Kula-Manisa**	**2.38**	**354**	P	**Pn**	**02 35 48.3**	**+0.5**
KULA	**Kula-Manisa**	**2.38**	**354**	PN	**Pn**	**02 35 48.8**	**+1.0**
ZKR	**Zakros**	**2.47**	**246**	P	**Pn**	**02 35 51.7**	**+2.8**
ZKR	**Zakros**	**2.47**	**246**	PN	**Pn**	**02 35 51.6**	**+2.7**
SEYD	**Seydisehir-KON**	**2.62**	**60**	PN	**Pb**	**02 35 54.9**	**-2.3**
SHUT	**Suhut-Afyon**	**2.71**	**27**	PN	**Pb**	**02 35 55.5**	**-3.3**
BLCB	**Balcova**	**2.72**	**326**	PN	**Pn**	**02 35 54.2**	**+1.9**
URLA	**Izmir**	**2.92**	**320**	PN	**Pn**	**02 35 56.4**	**+1.3**
SIMA	**Simav-Kutahya**	**2.94**	**0**	PN	**Pn**	**02 35 57.1**	**+1.7**
AKMS	**Akamas**	**2.96**	**111**	P	**Pn**	**02 35 56.4**	**+0.8**
AKMS				S	**Sn**	**02 36 29.3**	**-0.6**
AKMS				AML	AML	02 36 31.1	
	comp=E,0.7nm,0.5s						
AKMS				AML	AML	02 36 31.1	
	comp=E,0.7nm,0.5s						
AKMS				AML	AML	02 36 32.2	
	comp=E,0.3nm,0.3s						
AKMS				AML	AML	02 36 32.2	
	comp=E,0.3nm,0.3s						
ALFC	**Alefka**	**3.11**	**107**	P	**Pn**	**02 35 58.0**	**+0.3**
ALFC				S	**Sn**	**02 36 34.3**	**+0.6**
ALFC				AML	AML	02 36 34.9	
	comp=E,0.2nm,0.5s						
ALFC				AML	AML	02 36 34.9	
	comp=E,0.2nm,0.5s						
ALFC				AML	AML	02 36 36.3	
	comp=E,0.3nm,0.3s						
ALFC				AML	AML	02 36 36.3	
	comp=E,0.3nm,0.3s						
NATA	**Nata**	**3.23**	**114**	P	**Pn**	**02 36 00.5**	**+1.1**
NATA				AML	AML	02 36 41.8	
	comp=E,0.5nm,0.4s						
NATA				AML	AML	02 36 42.6	
	comp=E,0.3nm,0.4s						
CHOS	**Chios island**	**3.23**	**315**	PN	**Pn**	**02 36 01.1**	**+1.6**
OSC1	**CSNet OBS 1**	**3.24**	**144**	P	**Pn**	**02 36 00.0**	**+0.5**
OSC1				S	**Sn**	**02 36 36.8**	**-0.2**
SZAC	**Souni**	**3.47**	**112**	P	**Pn**	**02 36 03.5**	**+0.7**
SZAC				S	**Sn**	**02 36 43.0**	**+0.2**
SZAC				AML	AML	02 36 45.9	
	comp=E,0.3nm,0.3s						
SZAC				AML	AML	02 36 45.9	
	comp=E,0.3nm,0.3s						
SZAC				AML	AML	02 36 46.5	
	comp=E,0.3nm,0.2s						
SZAC				AML	AML	02 36 46.5	
	comp=E,0.3nm,0.2s						
ASGA	**Asgata**	**3.74**	**110**	P	**Pn**	**02 36 07.3**	**+1.0**
ASGA				AML	AML	02 36 52.3	
	comp=E,0.2nm,0.4s						
ASGA				AML	AML	02 36 52.9	
	comp=E,0.1nm,0.4s						
CSS	**Mathiatis**	**3.74**	**107**	P	**Pn**	**02 36 07.2**	**+0.9**
MVOU	**Mavrovouni**	**3.96**	**105**	P	**Pn**	**02 36 11.0**	**+1.7**
OSC2	**CSNet OBS 4**	**4.09**	**137**	S	**Sn**	**02 36 57.0**	**-0.8**
HNTI	**Hanita**	**5.95**	**119**	Pn	**Pn**	**02 36 37.1**	**+0.4**
HNTI				Sn	**Sn**	**02 37 41.8**	**-2.0**
MMA0B	**Mount Meron ar**	**6.15**	**119**	Pn	**Pn**	**02 36 40.6**	**+1.1**
GEM	**Giv'at Ha'Em**	**6.24**	**116**	Pn	**Pn**	**02 36 41.3**	**+0.7**
NATI	**Neve Ativ**	**6.26**	**115**	Pn	**Pn**	**02 36 42.1**	**+1.1**
NATI				Sn	**Sn**	**02 37 49.6**	**-1.8**
MMLI	**Mount Malkishu**	**6.49**	**123**	Pn	**Pn**	**02 36 44.7**	**+0.6**
HMDT	**Nahal Hemdat**	**6.67**	**124**	Pn	**Pn**	**02 36 47.4**	**+0.8**
HMDT				Sn	**Sn**	**02 37 59.5**	**-1.9**
AMAZ	**Amatzia**	**6.75**	**131**	Pn	**Pn**	**02 36 48.3**	**+0.6**
AMAZ				Sn	**Sn**	**02 38 00.8**	**-2.6**
KZIT	**Kziot**	**6.91**	**138**	Pn	**Pn**	**02 36 50.3**	**+0.4**
YTIR	**Yattir**	**6.99**	**131**	Pn	**Pn**	**02 36 51.6**	**+0.5**
DSI	**Dead Sea**	**7.01**	**129**	Pn	**Pn**	**02 36 52.2**	**+0.9**
DSI				Sn	**Sn**	**02 38 08.2**	**-1.6**
GHAJ	**Ghor Haditha**	**7.31**	**129**	Pn	**Pn**	**02 36 56.1**	**+0.8**
PRNI	**Paran**	**7.67**	**137**	Pn	**Pn**	**02 36 59.7**	**-0.6**
KRMI	**Paran Flat**	**7.70**	**140**	Pn	**Pn**	**02 37 01.6**	**+0.8**
HRFI	**Mount Harif**	**7.93**	**138**	Pn	**Pn**	**02 37 04.1**	**+0.2**
HRFI				Sn	**Sn**	**02 38 29.9**	**-2.6**
MBRI	**Mt Berech**	**8.06**	**140**	Pn	**Pn**	**02 37 06.6**	**+0.9**
EIL	**Elat**	**8.17**	**140**	Pn	**Pn**	**02 37 07.6**	**+0.3**

IDC 04 02:48:42.2±2.5, 54°.12N×169°.32E, h0km, mb3.0/2, mbtmp3.1/3, ML2.2/1, Error ellipse: s-maj=120.4km s-min=35.3km az=166.0, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PETK	**Petropavlovsk-**	**6.99**	**266**	Pn	Pn	02 50 26.0	+0.2
	0.2nm,0.3s,baz=92,slow=16,SNR=1.3						
	0.7nm,0.4s						
ILAR	**Eielson Array**	**24.14**	**46**	P	P	02 53 59.1	-0.4
	0.2nm,0.8s,baz=250,slow=6.6,SNR=1.9						
	0.2nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**34.38**	**184**	T	T	03 31 47.7	
	baz=2.6,slow=76,SNR=65						
H11N3	**WAKE ISLAND Hy**	**34.40**	**184**	T	T	03 31 53.3	
	baz=2.6,slow=76,SNR=50						
H11N1	**WAKE ISLAND Hy**	**34.40**	**184**	T	T	03 31 53.7	
	baz=2.6,slow=76,SNR=60						
H11S1	**WAKE ISLAND Hy**	**35.61**	**184**	T	T	03 33 25.3	
	baz=2.5,slow=76,SNR=31						
H11S3	**WAKE ISLAND Hy**	**35.62**	**184**	T	T	03 33 24.6	
	baz=2.5,slow=76,SNR=18						
H11S2	**WAKE ISLAND Hy**	**35.62**	**184**	T	T	03 33 25.5	
	baz=2.5,slow=76,SNR=26						
TXAR	**Lajitas Array**	**65.11**	**74**	P	P	02 59 24.9	+0.2
	0.3nm,0.6s,baz=299,slow=4.7,SNR=5.5						
	0.3nm,0.6s						

*MOS **04** 02:56:40.4±1.3, 35°.38N×26°.55E, h18km, mb4.4/4, Error ellipse: s-maj=7.6km s-min=4.7km az=92.7*
*IDC **04** 02:56:40.0±0.7, 35°.68N×26°.65E, h0km, mb4.1/14, mbtmp4.0/21, ML4.0/7, MS2.9/8, Error ellipse: s-maj=16.9km s-min=9.8km az=164.0*
*ISK **04** 02:56:42.6, 35°.63N×26°.52E, h10km, ML4.0/37*
*NEIC **04** 02:56:42.1±2.6, 35°.54N±0°.08×26°.52E±0°.06, h10km±1km, mb4.0/23, ML4.0(THE), Error ellipse: s-maj=13.6km s-min=7.8km az=179.0*
*ATH **04** 02:56:43.0, 35°.58N×26°.60E, h29km±2km, ML3.9/10, Error ellipse: s-maj=3.0km s-min=0.9km az=148.0*
*NIC **04** 02:56:44.0±0.0, 35°.37N×26°.71E, h22km, Ml4.6/6*
*HLW **04** 02:56:43.0, 35°.56N×26°.81E, h16km±13km, Md3.7, Ml3.9*
*THE **04** 02:56:43.5, 35°.55N×26°.60E, h3km±1km, ML4.0/10, Error ellipse: s-maj=1.5km s-min=0.4km az=144.0*
*DDA **04** 02:56:43.6±0.0, 35°.72N×26°.52E, h25km±4km, MW3.7*
*GII **04** 02:56:48.2±0.0, 34°.97N×27°.13E, h10km, mb4.1/4, MD3.8/5, Mm4.0/3*

ISC 04 02:56:43.8±0.8, 35°.48N±0°.02×26°.62E±0°.02, h31km±6km, n311, σ1.961/361, mb4.0/21, MS2.8/4, 9C-1D, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.45**	**82**	P	**Pb**	**02 56 53.4**	**0.0**
KARP				S	**Sb**	**02 56 59.6**	**-0.5**
KARP	**Karpathos**	**0.45**	**82**	P	**Pb**	**02 56 53.4**	**0.0**
KARP				S	**Sb**	**02 56 59.6**	**-0.5**
	30μm,0.4s						
KARP	**Karpathos**	**0.45**	**82**	PG	**Pb**	**02 56 53.5**	**+0.1**
KARP	**Karpathos**	**0.45**	**82**	Pg	**Pb**	**02 56 53.4**	**0.0**
KARP	**Karpathos**	**0.45**	**82**	↑P	**Pb**	**02 56 52.9**	**-0.5**
KARP				S	**Sb**	**02 56 59.2**	**-0.8**
ZKR	**Zakros**	**0.49**	**222**	P	**Pb**	**02 56 54.4**	**+0.3**
ZKR				S	**Sn**	**02 57 02.1**	**-0.2**
ZKR	**Zakros**	**0.49**	**222**	P	**Pb**	**02 56 54.5**	**+0.3**
ZKR				S	**Sn**	**02 57 02.1**	**-0.2**
	26μm,0.4s						
ZKR	**Zakros**	**0.49**	**222**	PG	**Pb**	**02 56 54.2**	**+0.1**
ZKR				SG	**Sn**	**02 57 02.3**	**0.0**
ZKR	**Zakros**	**0.49**	**222**	P	**Pb**	**02 56 53.8**	**-0.3**
ZKR				AML	AML	02 57 01.1	
	29nm,0.5s						
ZKR				AML	AML	02 57 01.1	
	29nm,0.5s						
ZKR				AML	AML	02 57 01.2	
	62nm,0.3s						
ZKR				AML	AML	02 57 01.2	
	62nm,0.3s						
ZKR				S	**Sb**	**02 57 01.5**	**+0.2**
NPS	**Neapolis**	**0.85**	**255**	P	**Pn**	**02 57 00.5**	**+0.9**
NPS				S	**Sn**	**02 57 13.0**	**+1.9**
NPS	**Neapolis**	**0.85**	**255**	P	**Pn**	**02 57 00.5**	**+0.9**
FRMA	**Ierapetra Chan**	**0.86**	**237**	P	**Pb**	**02 56 59.3**	**-1.0**
FRMA				S	**Sb**	**02 57 10.0**	**-1.4**
FRMA	**Ierapetra Chan**	**0.86**	**237**	P	**Pb**	**02 56 59.1**	**-1.1**
FRMA				S	**Sb**	**02 57 10.5**	**-1.0**
	7μm,0.4s						
NISR	**Nisiros**	**1.20**	**20**	P	**Pn**	**02 57 04.0**	**-0.4**
NISR				S	**Sb**	**02 57 20.3**	**-0.7**
NISR				AML	AML	02 57 28.6	
	comp=N,13708μm,0.5s						
NISR				AML	AML	02 57 29.0	
	comp=E,19355μm,0.3s						
NISR	**Nisiros**	**1.20**	**20**	P	**Pn**	**02 57 04.0**	**-0.4**
NISR				S	**Sb**	**02 57 22.0**	**+1.0**
	comp=E,12μm,0.3s						
NIS1	**Nisyros Isl.**	**1.20**	**22**	P	**Pn**	**02 57 04.4**	**-0.1**
NIS1				S	**Sb**	**02 57 20.0**	**-1.2**
NIS1				AML	AML	02 57 29.4	
	comp=N,13077μm,0.3s						
NIS1				AML	AML	02 57 32.2	
	comp=E,15668μm,0.4s						
NIS1	**Nisyros Isl.**	**1.20**	**22**	P	**Pn**	**02 57 04.4**	**-0.1**
NIS1	**Nisyros Isl.**	**1.20**	**22**	PN	**Pn**	**02 57 04.3**	**-0.2**
HRKL	**Herakleio**	**1.25**	**263**	P	**Pb**	**02 57 05.9**	**-0.9**
HRKL				S	**Sb**	**02 57 22.5**	**0.0**
HRKL	**Herakleio**	**1.25**	**263**	P	**Pb**	**02 57 06.0**	**-0.8**
HRKL	**Herakleio**	**1.25**	**263**	PN	**Pb**	**02 57 05.8**	**-0.9**
IACM	**Heraklion**	**1.28**	**262**	P	**Pb**	**02 57 06.9**	**-0.3**
IACM	**Heraklion**	**1.28**	**262**	P	**Pb**	**02 57 06.3**	**-0.9**
KSTL	**Kastelli Herak**	**1.28**	**262**	P	**Pn**	**02 57 04.6**	**-0.8**
KSTL				S	**Sn**	**02 57 19.9**	**-1.7**
KSTL	**Kastelli Herak**	**1.28**	**262**	P	**Pn**	**02 57 03.7**	**-1.8**
KSTL				S	**Sn**	**02 57 19.9**	**-1.7**
	comp=E,3μm,0.5s						
SANT	**Santorini**	**1.29**	**314**	P	**Pn**	**02 57 06.0**	**+0.3**
SANT				S	**Sn**	**02 57 21.4**	**-0.6**
SANT				AML	AML	02 57 29.3	
	comp=N,4260μm,0.3s						
SANT				AML	AML	02 57 29.8	
	comp=E,14680μm,0.4s						
SANT	**Santorini**	**1.29**	**314**	P	**Pn**	**02 57 06.0**	**+0.3**
SANT				S	**Sb**	**02 57 23.8**	**+0.1**
	comp=E,5μm,0.3s						
SANT	**Santorini**	**1.29**	**314**	PN	**Pn**	**02 57 05.7**	**0.0**
SANT	**Santorini**	**1.29**	**314**	Pn	**Pn**	**02 57 05.8**	**0.0**
KOSK	**Kos Island**	**1.30**	**13**	P	**Pn**	**02 57 05.6**	**-0.1**
KOSK				S	**Sn**	**02 57 21.5**	**-0.6**
KOSK	**Kos Island**	**1.30**	**13**	PN	**Pn**	**02 57 05.6**	**-0.1**
THR8	**Santorini-Mono**	**1.30**	**315**	P	**Pn**	**02 57 06.1**	**+0.2**
THR6	**Thira Island,**	**1.32**	**312**	P	**Pb**	**02 57 06.8**	**-1.1**
SFIR	**Foira Santorin**	**1.34**	**314**	P	**Pb**	**02 57 07.1**	**-1.3**
SNT5	**Nea Kammeni, S**	**1.35**	**313**	P	**Pn**	**02 57 06.9**	**+0.3**
THR3	**Thira Island,**	**1.35**	**313**	P	**Pn**	**02 57 06.9**	**+0.4**
THT2	**Imerovigli**	**1.36**	**315**	P	**Pb**	**02 57 07.0**	**+0.4**
THR5	**Thira Island,**	**1.39**	**312**	P	**Pb**	**02 57 07.8**	**-1.3**
CMBO	**Columbo, Santo**	**1.39**	**315**	P	**Pb**	**02 57 07.7**	**-1.4**
CMBO	**Columbo, Santo**	**1.39**	**315**	P	**Pn**	**02 57 07.4**	**+0.3**
SAP3	**Santorini-Thir**	**1.40**	**313**	P	**Pb**	**02 57 08.2**	**-1.2**
SAP3	**Santorini-Thir**	**1.40**	**313**	P	**Pb**	**02 57 07.9**	**-1.4**
ARG	**Arkhangelos**	**1.43**	**59**	P	**Pb**	**02 57 08.6**	**-1.1**
ARG				S	**Sb**	**02 57 26.1**	**-1.4**
ARG				AML	AML	02 57 29.2	
	comp=N,9795μm,0.5s						
ARG				AML	AML	02 57 32.5	
	comp=E,13233μm,0.6s						
ARG	**Arkhangelos**	**1.43**	**59**	P	**Pb**	**02 57 08.5**	**-1.1**
ARG				S	**Sb**	**02 57 27.6**	**+0.1**
	comp=E,6μm,0.5s						
ARG	**Arkhangelos**	**1.43**	**59**	PN	**Pb**	**02 57 08.6**	**-1.1**
ARG	**Arkhangelos**	**1.43**	**59**	Pn	**Pb**	**02 57 08.6**	**-1.1**
ARG	**Arkhangelos**	**1.43**	**59**	P	**Pb**	**02 57 08.6**	**-1.1**
ARG	**Arkhangelos**	**1.43**	**59**	↑P	**Pb**	**02 57 08.6**	**-1.1**
ARG				S	**Sb**	**02 57 27.5**	**0.0**
IDI	**Anoyia**	**1.43**	**263**	Pg	**Pn**	**02 57 08.2**	**+0.6**
	comp=E,63nm,0.3s,baz=39,slow=5.7,SNR=261						
IDI				Lg	Lg	02 57 29.5	
	comp=E,667nm,0.3s,baz=340,slow=19,SNR=18						
IDI				LR	LR	02 57 46.8	
	comp=E,384nm,21.0s,baz=239,slow=45						
IDI	**Anoyia**	**1.43**	**263**	P	**Pn**	**02 57 08.2**	**+0.6**
IDI				S	**Sb**	**02 57 28.9**	**+1.3**
IDI				AML	AML	02 57 30.9	
	comp=N,11858μm,0.5s						
IDI				AML	AML	02 57 32.7	
	comp=E,10676μm,0.4s						
IDI	**Anoyia**	**1.43**	**263**	P	**Pn**	**02 57 07.8**	**+0.2**
IDI				S	**Sb**	**02 57 27.9**	**+0.3**
	comp=E,6μm,0.5s						
IDI	**Anoyia**	**1.43**	**263**	PN	**Pn**	**02 57 07.9**	**+0.3**
IDI	**Anoyia**	**1.43**	**263**	Pn	**Pn**	**02 57 07.9**	**+0.3**
DAT	**Datca**	**1.47**	**32**	P	**Pn**	**02 57 07.9**	**-0.3**
DAT	**Datca**	**1.47**	**32**	PN	**Pn**	**02 57 07.9**	**-0.3**
DAT				SN	**Sb**	**02 57 28.1**	**-0.6**
DAT	**Datca**	**1.47**	**32**	P	**Pn**	**02 57 08.2**	**0.0**
DAT				S	**Sb**	**02 57 28.9**	**+0.1**
DAT				*i* AML	AML	02 57 34.0	
	comp=E,742nm,0.3s						
DAT				*i* AML	AML	02 57 36.0	
	comp=E,1μm,0.6s						
SIVA	**Sivas**	**1.55**	**253**	P	**Pb**	**02 57 12.0**	**+0.1**
SIVA				S	**Sb**	**02 57 30.8**	**-0.3**
SIVA	**Sivas**	**1.55**	**253**	P	**Pb**	**02 57 11.4**	**-0.5**
SIVA				S	**Sb**	**02 57 32.4**	**+1.3**
	comp=E,7μm,0.5s						
TMBK	**Timbaki Herakl**	**1.57**	**255**	P	**Pb**	**02 57 11.7**	**-0.4**
TMBK	**Timbaki Herakl**	**1.57**	**255**	P	**Pb**	**02 57 11.8**	**-0.4**
TMBK				S	**Sb**	**02 57 31.7**	**+0.1**
	comp=E,2μm,0.6s

AYDB	**Zeytinkoy-Aydi**	**2.66**	**22**	PN		**Pn**	**02 57 26.3**	**+1.6**
TAVA	**DENIZLI_Tavas**	**2.71**	**42**	P		**Pn**	**02 57 27.7**	**+2.4**
TAVA				S		**Sn**	**02 58 00.0**	**+3.0**
TAVA				*i* AML		AML	02 58 11.0	
	comp=E,266nm,0.4s							
TAVA				*i* AML		AML	02 58 13.0	
	comp=E,293nm,0.4s							
CAEL	**Denizli, Camel**	**2.73**	**52**	P		**Pb**	**02 57 28.8**	**-3.1**
CAEL				S		**Sb**	**02 58 13.0**	**+8.0**
ANKY	**Antikythira Is**	**2.73**	**279**	P		**Pn**	**02 57 25.8**	**+0.3**
ANKY				S		**Sn**	**02 57 59.6**	**+2.2**
ANKY				AML		AML	02 58 02.1	
	comp=N,1336µm,0.6s							
ANKY				AML		AML	02 58 10.3	
	comp=E,1097µm,0.5s							
ZEYE	**Izmir, Urla-Ze**	**2.75**	**358**	P		**Pn**	**02 57 25.5**	**-0.3**
ZEYE				S		Sb	02 58 14.1	+8.6
ZEYE				*i* AML		AML	02 58 18.0	
	comp=E,254nm,0.5s							
ZEYE				*i* AML		AML	02 58 21.0	
	comp=E,173nm,0.5s							
URLA	**Izmir**	**2.87**	**360**	PN		**Pn**	**02 57 27.2**	**-0.2**
URLA	**Izmir**	**2.87**	**360**	P		**Pn**	**02 57 27.2**	**-0.2**
URLA				S		Sb	02 58 18.8	+10
URLA				*i* AML		AML	02 58 23.0	
	comp=E,292nm,0.6s							
URLA				*i* AML		AML	02 58 26.0	
	comp=E,268nm,0.8s							
BLCB	**Balcova**	**2.92**	**7**	P		**Pn**	**02 57 27.7**	**-0.3**
BLCB	**Balcova**	**2.92**	**7**	PN		**Pn**	**02 57 28.1**	**+0.1**
CHOS	**Chios island**	**2.93**	**351**	P		**Pn**	**02 57 28.0**	**-0.3**
CHOS	**Chios island**	**2.93**	**351**	PN		**Pn**	**02 57 28.1**	**-0.3**
APMY	**Acipayam-Deniz**	**2.93**	**47**	PN		**Pn**	**02 57 30.3**	**+1.9**
ELL	**Elmali**	**2.95**	**64**	PN		**Pn**	**02 57 31.7**	**+3.1**
ELL	**Elmali**	**2.95**	**64**			**Pn**	**02 57 30.4**	**+1.8**
ELL	**Elmali**	**2.95**	**64**	P		**Pn**	**02 57 30.4**	**+1.8**
ELL	**Elmali**	**2.95**	**64**	P		**Pn**	**02 57 30.4**	**+1.8**
GOLH	**Golhisar**	**2.95**	**53**	P		**Pn**	**02 57 31.3**	**+2.7**
GOLH				S		**Sb**	**02 58 16.4**	**+5.0**
KTHA	**Kythira Island**	**2.99**	**286**	P		**Pn**	**02 57 29.9**	**+0.8**
KTHA				S		**Sn**	**02 58 04.1**	**+0.2**
KTHA				AML		AML	02 58 07.2	
	comp=E,1824µm,0.2s							
KTHA				AML		AML	02 58 11.7	
	comp=N,1103µm,0.3s							
KTHA	**Kythira Island**	**2.99**	**286**	P		**Pn**	**02 57 29.8**	**+0.8**
KTHR	**Kythira**	**3.04**	**286**	P		**Pn**	**02 57 30.2**	**+0.5**
KARY	**Karystos**	**3.09**	**326**	P		**Pn**	**02 57 31.5**	**+1.1**
VLI	**Veliai**	**3.23**	**294**	P		**Pn**	**02 57 33.1**	**+0.8**
VLY	**Voula,Athens**	**3.28**	**317**	P		**Pn**	**02 57 34.3**	**+1.3**
DION	**Dionisos Attik**	**3.37**	**321**	P		**Pn**	**02 57 35.8**	**+1.5**
KORT	**Korkueli**	**3.37**	**62**	PN		**Pn**	**02 57 37.2**	**+2.7**
KRND	**KRANIDI**	**3.38**	**305**	P		**Pn**	**02 57 36.2**	**+1.8**
PTL	**Penteli**	**3.38**	**320**	P		**Pn**	**02 57 36.0**	**+1.5**
KULA	**Kula-Manisa**	**3.44**	**28**	P		**Pn**	**02 57 37.3**	**+2.0**
KULA	**Kula-Manisa**	**3.44**	**28**	PN		**Pn**	**02 57 37.1**	**+1.8**
EPID	**Epidavros**	**3.53**	**308**	P		**Pn**	**02 57 38.2**	**+1.7**
ANTB	**Antalya**	**3.56**	**65**	PN		**Pn**	**02 57 39.9**	**+3.1**
DKL	**Dikili**	**3.59**	**4**	PN		**Pn**	**02 57 37.4**	**+0.2**
BASM	**Basmaki-Afyon**	**3.67**	**48**	PN		**Pn**	**02 57 40.2**	**+1.7**
KYMI	**Kymi, Euboea I**	**3.73**	**328**	P		**Pn**	**02 57 40.5**	**+1.2**
VILL	**Villia**	**3.77**	**316**	P		**Pn**	**02 57 41.3**	**+1.5**
SIGR	**SIGRI**	**3.77**	**351**	P		**Pn**	**02 57 39.9**	**+0.2**
ISP	**Isparta**	**3.91**	**52**	Pn		**Pn**	**02 57 42.2**	**+0.4**
ISP	**Isparta**	**3.91**	**52**	P		**Pn**	**02 57 42.2**	**+0.4**
SUTC	**Sutluce-Ispart**	**4.05**	**53**	PN		**Pn**	**02 57 46.7**	**+2.9**
SIMA	**Simav-Kutahya**	**4.06**	**27**	PN		**Pn**	**02 57 45.4**	**+1.0**
ITM	**Ithomi**	**4.15**	**295**	Pn		**Pn**	**02 57 45.1**	**+0.1**
SLUM	**Salum**	**4.15**	**197**	P		**Pn**	**02 57 47.0**	**+2.0**
	baz=199							
SLUM				S		**Sn**	**02 58 33.4**	**+0.9**
	baz=199							
GEDZ	**Gediz**	**4.19**	**31**	PN		**Pn**	**02 57 47.6**	**+1.9**
BALB	**Balikesir**	**4.27**	**13**			**Pn**	**02 57 47.9**	**+1.3**
OSC1	**CSNet OBS 1**	**4.33**	**116**	P		**Pn**	**02 57 47.5**	**+0.1**
OSC1				S		**Sn**	**02 58 36.9**	**+0.2**
BOZC	**Bozcaada**	**4.37**	**354**	PN		**Pn**	**02 57 48.0**	**0.0**
SHUT	**Suhut-Afyon**	**4.39**	**45**	PN		**Pn**	**02 57 50.6**	**+2.2**
KLV	**Kalavryta, Ach**	**4.40**	**307**	P		**Pn**	**02 57 51.2**	**+2.7**
TVSB	**Tavsanli**	**4.56**	**29**	PN		**Pn**	**02 57 52.9**	**+2.2**
SEYD	**Seydisehir-KON**	**4.62**	**64**	PN		**Pn**	**02 57 54.9**	**+3.3**
DRO	**Drossia**	**4.65**	**303**	P		**Pn**	**02 57 53.4**	**+1.5**
AKMS	**Akamas**	**4.70**	**94**	P		**Pn**	**02 57 53.2**	**+0.6**
AKMS				AML		AML	02 58 46.8	
	comp=N,2.3nm,0.4s							
AKMS				AML		AML	02 58 47.6	
	comp=N,1.6nm,0.2s							
EFP	**Efpalio**	**4.78**	**309**	P		**Pn**	**02 57 55.1**	**+1.4**
ALFC	**Alefka**	**4.90**	**92**	P		**Pn**	**02 57 56.0**	**+0.6**
ALFC				AML		AML	02 58 52.0	
	comp=N,1.8nm,0.6s							
ALFC				AML		AML	02 58 52.3	
	comp=N,1.9nm,0.7s							
NATA	**Nata**	**4.93**	**96**	P		**Pn**	**02 57 56.3**	**+0.6**
NATA				AML		AML	02 58 54.0	
	comp=N,4.4nm,0.5s							
NATA				AML		AML	02 58 54.1	
	comp=N,2.1nm,0.4s							
MAKR	**Makrakomi, Fth**	**5.02**	**316**	P		**Pn**	**02 58 00.6**	**+3.6**
SZAC	**Souni**	**5.18**	**96**	P		**Pn**	**02 57 59.9**	**+0.7**
SZAC				AML		AML	02 58 59.6	
	comp=N,1.6nm,0.6s							
SZAC				AML		AML	02 58 59.9	
	comp=N,1.4nm,0.3s							
ENEZ	**Enez**	**5.26**	**356**	P		**Pn**	**02 58 01.0**	**+0.8**
OSC2	**CSNet OBS 4**	**5.26**	**116**	P		**Pn**	**02 58 00.8**	**+0.6**
BORA	**Eskisehir**	**5.34**	**34**			**Pn**	**02 58 03.4**	**+2.0**
ALN	**Alexandroupoli**	**5.42**	**355**	Pn		**Pn**	**02 58 02.3**	**-0.1**
ALN	**Alexandroupoli**	**5.42**	**355**	P		**Pn**	**02 58 02.3**	**-0.1**
ASGA	**Asgata**	**5.48**	**95**	P		**Pn**	**02 58 03.1**	**-0.1**
ASGA				AML		AML	02 59 07.2	
	comp=N,1.5nm,0.6s							
ASGA				AML		AML	02 59 07.4	
	comp=N,0.9nm,0.8s							
CSS	**Mathiatis**	**5.52**	**93**	Pn		**Pn**	**02 58 05.2**	**+1.4**
CSS	**Mathiatis**	**5.52**	**93**	P		**Pn**	**02 58 04.4**	**+0.6**
RDO	**Rodhopi**	**5.72**	**352**			**Pn**	**02 58 06.0**	**-0.5**
MVOU	**Mavrovouni**	**5.76**	**93**	P		**Pn**	**02 58 07.5**	**+0.5**
SWA2		**6.30**	**189**	P		**Pn**	**02 58 17.1**	**+2.5**
	baz=191							
SWA2				S		**Sn**	**02 59 25.1**	**-0.4**
	baz=191							
ANTO	**Ankara**	**6.57**	**46**			**Pn**	**02 58 19.1**	**+0.9**
ANTO	**Ankara**	**6.57**	**46**	P		**Pn**	**02 58 19.1**	**+0.9**
FNA	**Florina**	**6.71**	**324**			**Pn**	**02 58 20.4**	**+0.1**
FNA	**Florina**	**6.71**	**324**	P		**Pn**	**02 58 20.4**	**+0.1**
BR131	**Keskin Array S**	**7.00**	**51**	Pn		**Pn**	**02 58 24.3**	**+0.1**
BR131	**Keskin Array S**	**7.00**	**51**	*i* P		**Pn**	**02 58 25.5**	**+1.3**
BRTR	**Keskin Array B**	**7.00**	**51**	Pn		**Pn**	**02 58 25.6**	**+1.3**
	comp=N,0.4nm,0.3s,baz=228,slow=15,SNR=14							
	comp=N,1.4nm,0.5s							
BRTR	**Keskin Array B**	**7.00**	**51**	*i* P		**Pn**	**02 58 25.8**	**+1.6**
BRTR				pmax		pmax		
	comp=Z,1.0nm,0.5s							
GLL	**Jalalah**	**7.29**	**142**	P		**Pn**	**02 58 28.7**	**+0.5**
	baz=143							
HNTI	**Hanita**	**7.47**	**106**	Pn		**Pn**	**02 58 31.2**	**+0.5**
OFRI	**`Ofer**	**7.51**	**110**	Pn		**Pn**	**02 58 32.1**	**+1.0**
DQRL	**Deir Qamar**	**7.59**	**341**	*eP*		**Pn**	**02 58 33.8**	**+1.5**
VTS	**Vitosha**	**7.59**	**341**	Pn		**Pn**	**02 58 32.9**	**+0.5**
VTS	**Vitosha**	**7.59**	**341**	P		**Pn**	**02 58 32.9**	**+0.5**
MMAI	**Mount Meron Ar**	**7.68**	**106**	Pn		**Pn**	**02 58 31.9**	**-1.6**
	comp=Z,4.8nm,0.3s,baz=145,slow=23,SNR=6.8							
MMAI					Sn	**Sn**	**02 59 56.3**	**-3.2**
	comp=Z,11nm,0.3s,baz=360,slow=22,SNR=10							
	comp=Z,0.7nm,0.2s							
SUZ	**Suez**	**7.69**	**135**	P		**Pn**	**02 58 34.7**	**+1.1**
	baz=136							
SLTI	**Sal'it**	**7.71**	**112**	Pn		**Pn**	**02 58 34.4**	**+0.4**
SLTI					Sn	**Sn**	**02 59 57.1**	**-3.2**
HWQ	**Hawqa**	**7.76**	**96**	*eP*		**Pn**	**02 58 35.1**	**+0.5**
GEM	**Giv'at Ha'Em**	**7.81**	**104**	Pn		**Pn**	**02 58 35.8**	**+0.5**
SHBL	**Chebaa**	**7.83**	**103**	*eP*		**Pn**	**02 58 35.2**	**-0.6**
NATI	**Neve Ativ**	**7.86**	**104**	Pn		**Pn**	**02 58 35.2**	**-0.7**
NATI					Sn	**Sn**	**03 00 01.8**	**-1.9**
SCTE	**Santa Cesarea**	**7.91**	**308**	Pn		**Pn**	**02 58 35.6**	**-1.0**
MMLI	**Mount Malkishu**	**7.92**	**110**	Pn		**Pn**	**02 58 36.9**	**+0.1**
MMLI					Sn	**Sn**	**03 00 02.0**	**-3.4**
KZIT	**Kziot**	**7.96**	**123**	Pn		**Pn**	**02 58 36.9**	**-0.4**
KZIT					Sn	**Sn**	**03 00 01.8**	**-4.5**
AMAZ	**Amatzia**	**7.97**	**117**	Pn		**Pn**	**02 58 37.5**	**0.0**
HMDT	**Nahal Hemdat**	**8.08**	**111**	Pn		**Pn**	**02 58 39.0**	**+0.1**
HMDT					Sn	**Sn**	**03 00 06.4**	**-2.8**

YTIR	**Yattir**	**8.20**	**118**	Pn		**Pn**	**02 58 40.7**	**-0.1**
YTIR					Sn	**Sn**	**03 00 08.7**	**-3.8**
DSI	**Dead Sea**	**8.29**	**116**	Pn		**Pn**	**02 58 41.8**	**-0.1**
DSI					Sn	**Sn**	**03 00 11.2**	**-3.2**
HFRF	**Wahat Farafira**	**8.44**	**170**	P		**Pn**	**02 58 45.4**	**+1.5**
	baz=170							
GHAJ	**Ghor Haditha**	**8.56**	**117**	Pn		**Pn**	**02 58 46.8**	**+1.2**
GHAJ	**Ghor Haditha**	**8.56**	**117**	Pn		**Pn**	**02 58 45.8**	**+0.2**
KRMI	**Paran Flat**	**8.67**	**126**	Pn		**Pn**	**02 58 46.5**	**-0.6**
KRMI					Sn	**Sn**	**03 00 18.1**	**-5.7**
TIP	**Timpagrande**	**8.68**	**298**	Pn		**Pn**	**02 58 46.2**	**-1.0**
ZFRI	**Zfri**	**8.71**	**122**	Pn		**Pn**	**02 58 46.6**	**-0.9**
ZFRI					Sn	**Sn**	**03 00 19.7**	**-4.9**
PRNI	**Paran**	**8.71**	**124**	Pn		**Pn**	**02 58 47.0**	**-0.6**
PRNI					Sn	**Sn**	**03 00 19.0**	**-5.8**
GRB	**Gharib**	**8.90**	**142**	P		**Pn**	**02 58 50.7**	**+0.5**
	baz=143							
HRFI	**Mount Harif**	**8.93**	**125**	Pn		**Pn**	**02 58 50.4**	**-0.2**
HRFI					Sn	**Sn**	**03 00 25.4**	**-4.8**
MBRI	**Mt Berech**	**9.00**	**127**	Pn		**Pn**	**02 58 51.8**	**+0.1**
EIL	**Elat**	**9.11**	**127**	Pn		**Pn**	**02 58 53.7**	**+0.6**
	comp=Z,1.5nm,0.3s,baz=302,slow=2.0,SNR=102								
EIL					Sn	**Sn**	**03 00 28.0**	**-6.6**
	comp=Z,3.5nm,0.3s,baz=307,slow=16,SNR=5.6								
	comp=Z,6.3nm,0.4s								
EIL	**Elat**	**9.11**	**127**	Pn		**Pn**	**02 58 53.2**	**+0.1**
EIL					Sn	**Sn**	**03 00 29.5**	**-5.1**
ASF	**Jabal al Asfar**	**9.16**	**108**	Pn		**Pn**	**02 58 54.9**	**+0.9**
	comp=Z,0.7nm,0.3s,baz=315,slow=5.8,SNR=8.9								
ASF					Sn	**Sn**	**03 00 35.0**	**-1.1**
	comp=Z,1.4nm,0.3s,baz=212,slow=21,SNR=6.4								
	comp=Z,1.8nm,0.3s								
HBST	**Basata**	**9.28**	**130**	P		**Pn**	**02 58 56.4**	**+0.9**
	baz=131								
HKAT	**Jabal Katrina**	**9.34**	**136**	P		**Pn**	**02 58 56.3**	**-0.2**
	baz=137								
HDHB	**Dhahab**	**9.56**	**133**	P		**Pn**	**02 59 00.8**	**+1.5**
	baz=133								
MLR	**Muntele Rosu**	**10.01**	**357**	LR		LR	03 03 56.7		
	comp=Z,91nm,18.1s,baz=183,slow=44								
VAE	**Valguarnera**	**10.03**	**285**	Pn		Pn	02 59 11.8	+6.1	
	comp=Z,0.7nm,0.3s,baz=0.0,slow=20,SNR=2.6								
VAE					Sn	**Sn**	**03 00 52.6**	**-4.6**	
	comp=Z,1.0nm,0.3s,baz=270,slow=20,SNR=1.8								
HHRG	**Al Ghardaqah**	**10.15**	**142**	P		**Pn**	**02 59 09.6**	**+2.1**	
	baz=143								
HDK1	**Dakhla**	**10.19**	**166**	P		**Pn**	**02 59 11.0**	**+3.0**	
	baz=166								
GTR	**Jabal at Tayr**	**10.51**	**160**	P		**Pn**	**02 59 12.9**	**+0.7**	
	baz=161								
SGRT	**San Giovanni R**	**10.56**	**310**			**Pn**	**02 59 11.1**	**-1.9**	
PAOL	**Paolisi**	**10.97**	**304**	Pn		**Pn**	**02 59 16.9**	**-1.7**	
NRCA	**Norcia**	**12.79**	**309**			**Pn**	**02 59 44.2**	**+0.8**	
KOLS	**Kolonicke sedl**	**13.82**	**348**	*eP*		**P**	**03 00 06.9**	**+1.5**	
KOLS	**Kolonicke sedl**	**13.82**	**348**	*eP*		**P**	**03 00 06.9**	**+1.5**	
KARS	**Kars**	**13.94**	**63**	Pn		**Pn**	**02 59 60.0**	**+0.7**	
KARS	**Kars**	**13.94**	**63**	P		**Pn**	**03 00 00.0**	**+0.7**	
KEST	**Kesra**	**14.06**	**276**			**Pn**	**03 00 08.9**	**+0.6**	
	comp=Z,0.2nm,0.3s,baz=77,slow=6.2,SNR=6.3								
KEST	**Kesra**	**14.06**	**276**			**Pn**	**02 59 57.1**	**-3.8**	
SOKA	**Soboth**	**14.17**	**326**	*eP*		**P**	**03 00 09.9**	**+0.4**	
	comp=Z,3.1nm,0.5s,SNR=5.3								
VYHS	**Vyhne**	**14.22**	**338**	*eP*		**P**	**03 00 10.9**	**+1.0**	
VYHS	**Vyhne**	**14.22**	**338**	*eP*		**P**	**03 00 10.9**	**+1.0**	
KOLL	**Kolacno**	**14.43**	**338**	*eP*		**P**	**03 00 13.2**	**+1.0**	
RONA	**Rosalia, Austr**	**14.43**	**331**	*eP*		**P**	**03 00 12.3**	**+0.1**	
	comp=Z,1.8nm,0.8s								
STHS	**Stebnicka Huta**	**14.47**	**346**	*eP*		P	03 00 17.5	+4.8	
LANS	**Liptovska Anna**	**14.63**	**341**	*eP*		**P**	**03 00 18.6**	**+4.1**	
LANS	**Liptovska Anna**	**14.63**	**341**	*eP*		**P**	**03 00 18.6**	**+4.1**	
KIV	**Kislovodsk**	**14.96**	**51**	Pn		**Pn**	**03 00 14.5**	**+1.4**	
KIV	**Kislovodsk**	**14.96**	**51**	*eP*		**P**	**03 00 16.2**	**-2.1**	
KIV					pmax	pmax			
	comp=Z,9.0nm,1.1s								
KIV					MLR	MLR			
	comp=Z,13nm,13.0s								
KBZ	**Khabaz**	**14.99**	**52**	Pn		**P**	**03 00 20.8**	**+2.4**	
	comp=Z,0.2nm,0.3s,baz=236,slow=7.9,SNR=12								
KBZ	**Khabaz**	**14.99**	**52**	*ceP*		**P**	**03 00 16.8**	**-1.6**	
KBZ					pmax	pmax			
	comp=Z,8.0nm,0.9s								
GNI	**Garni**	**15.06**	**67**	LR		LR	03 07 17.4		
	comp=Z,81nm,18.3s,baz=282,slow=43								
ZEI	**Tsey**	**15.25**	**56**	*eP*		**P**	**03 00 21.6**	**0.0**	
ZEI					pmax	pmax			
	comp=Z,5.0nm,1.0s								
KBA	**Koelnbreinsper**	**15.26**	**323**	*eP*		**P**	**03 00 22.0**	**+0.3**	
	comp=Z,2.5nm,0.5s								
MAUC	**Maruska**	**15.30**	**338**	*eP*		**P**	**03 00 22.5**	**+0.6**	
AKASG	**Malin Array Be**	**15.33**	**6**	Pn		**P**	**03 00 21.9**	**-0.3**	
	comp=Z,4.0nm,0.3s,baz=196,slow=10,SNR=23								
AKASG					LR	LR	03 05 53.3		
	comp=Z,26nm,21.1s,baz=178,slow=37								
AKASG	**Malin Array Be**	**15.33**	**6**	Pn		**Pn**	**03 00 15.9**	**-1.8**	
AKASG					IAmb	IAmb	03 00 21.7		
	comp=Z,2.2nm,0.5s								
AKASG	**Malin Array Be**	**15.33**	**6**	*ceP*		**P**	**03 00 20.7**	**-1.4**	
AKASG					pmax	pmax			
	comp=Z,6.0nm,0.5s								
AKBB	**Malin Array Si**	**15.33**	**6**	Pn		**Pn**	**03 00 18.7**	**+1.0**	
AKBB					IAmb	IAmb	03 00 22.9		
	comp=Z,6.1nm,1.0s								
AKBB	**Malin Array Si**	**15.33**	**6**	*ceP*		**Pn**	**03 00 19.5**	**+1.8**	
MOA	**Molln**	**15.40**	**327**	*eP*		**P**	**03 00 23.7**	**+0.7**	
	comp=Z,5.2nm,1.0s,SNR=5.0								
CTI	**Castel Tesino**	**15.46**	**318**	Pn		**Pn**	**03 00 20.3**	**+0.6**	
CTI	**Castel Tesino**	**15.46**	**318**	P		**Pn**	**03 00 20.3**	**+0.6**	
CTI					pmax	pmax			
	comp=Z,6.0nm,1.2s								
KRUC	**Moravsky**	**15.51**	**334**	*eP*		**P**	**03 00 23.8**	**-0.5**	
OJC	**Ojcow**	**15.54**	**343**	Pn		**Pn**	**03 00 19.6**	**-1.0**	
OJC					IAmb	IAmb	03 00 25.6		
	comp=Z,4.9nm,0.6s								
OJC	**Ojcow**	**15.54**	**343**	P		**Pn**	**03 00 19.6**	**-1.0**	
OJC					pmax	pmax			
	comp=Z,5.0nm,0.6s								
VRAC	**Vranov**	**15.65**	**335**	Pn		**Pn**	**03 00 22.7**	**+0.8**	
	comp=Z,0.5nm,0.3s,baz=141,slow=11,SNR=7.4								
VRAC					LR	LR	03 06 33.3		
	comp=Z,24nm,19.3s,baz=178,slow=38								
	comp=Z,2.7nm,0.5s								
VRAC	**Vranov**	**15.65**	**335**	*eP*		**P**	**03 00 25.6**	**-0.2**	
MORC	**Moravsky Berou**	**15.75**	**338**	Pn		**Pn**	**03 00 22.9**	**-0.4**	
MORC					IAmb	IAmb	03 00 27.8		
	comp=Z,5.8nm,0.7s								
MORC	**Moravsky Berou**	**15.75**	**338**	P		**Pn**	**03 00 22.9**	**-0.4**	
MORC					pmax	pmax			
	comp=Z,6.0nm,0.7s								
MORC	**Moravsky Berou**	**15.75**	**338**	*eP*		**P**	**03 00 27.1**	**+0.2**	
CKRC	**Cesky Krumlov**	**16.12**	**330**	*eP*		**P**	**03 00 31.7**	**+0.7**	
WTTA	**Wattenberg**	**16.24**	**321**	*eP*		**P**	**03 00 33.2**	**+0.6**	
	comp=Z,2.3nm,0.8s								
KRLC	**Kraliky**	**16.25**	**337**	*eP*		**P**	**03 00 31.8**	**-0.7**	
KRLC	**Kraliky**	**16.25**	**337**	*eP*		**P**	**03 00 31.8**	**-0.7**	
GEC2	**GERESS Array S**	**16.40**	**328**	Pn		**Pn**	**03 00 30.8**	**-0.8**	
GERES	**GERESS Array B**	**16.40**	**328**	Pn		**Pn**	**03 00 32.4**	**+0.8**	
	comp=Z,0.6nm,0.3s,baz=141,slow=13,SNR=28								
	comp=Z,3.0nm,0.7s								
GERES	**GERESS Array B**	**16.40**	**328**	Pn		**Pn**	**03 00 31.1**	**-0.5**	
GERES	**GERESS Array B**	**16.40**	**328**	P		**Pn**	**03 00 31.1**	**-0.5**	
DPC	**Dobruska-Polom**	**16.64**	**336**	*eP*		**P**	**03 00 36.0**	**-0.7**	
DPC	**Dobruska-Polom**	**16.64**	**336**	*eP*		**P**	**03 00 36.0**	**-0.7**	
KHC	**Kasperske Hory**	**16.67**	**329**	*eP*		**P**	**03 00 36.4**	**-0.7**	
KHC	**Kasperske Hory**	**16.67**	**329**	*eP*		**P**	**03 00 36.4**	**-0.7**	
KHC				*ex*		x	03 00 49.5		
RETA	**Reutte**	**16.84**	**320**	*eP*		**P**	**03 00 39.8**	**+0.8**	
	comp=Z,3.4nm,1.1s								
OSTC	**Ostas**	**16.85**	**337**	*eP*		**P**	**03 00 39.1**	**0.0**	
DAVOX	**Davos/Dischmat**	**16.88**	**317**	Pn		**Pn**	**03 00 37.2**	**-0.7**	
	comp=Z,1.0nm,0.3s,baz=150,slow=20,SNR=2.2								
	comp=Z,0.6nm,0.4s								
PRU	**Pruhonice**	**16.96**	**332**	*eP*		**P**	**03 00 40.2**	**-0.1**	
PRU	**Pruhonice**	**16.96**	**332**	*eP*		**P**	**03 00 40.2**	**-0.1**	
DAVA	**Damuels**	**17.19**	**318**	*i* P		**P**	**03 00 44.2**	**+1.2**	
	comp=Z,1.3nm,0.4s								
BRG	**Berggiesshubel**	**17.90**	**333**	*eP*		**P**	**03 00 51.8**	**+1.1**	
BRG					Amp		03 00 53.3		
	comp=Z,3.3nm,0.9s								
BRG	**Berggiesshubel**	**17.90**	**333**	*eP*		**P**	**03 00 51.8**	**+1.1**	
BRG					pmax	pmax			
	comp=Z,3.0nm,0.9s								
GRFO	**Grafenberg**	**18.12**	**326**			**Pn**	**03 00 52.2**	**-0.7**	
GRFO	**Grafenberg**	**18.12**	**326**	P		**Pn**	**03 00 52.2**	**-0.7**	
GRFO					pmax	pmax			
	comp=Z,6.0nm,1.0s								

SENIN	**Lac Senin/Sane**	**18.15**	**313**	Pn		**Pn**	**03 00 51.5**	**-2.1**	
CLL	**Collm**	**18.61**	**332**	P		**P**	**03 00 56.6**	**-1.8**	
CLL				IAmb		IAmb	03 01 05.2		
	comp=Z,15nm,1.9s								
CLL	**Collm**	**18.61**	**332**	*i* P		**Pn**	**03 01 00.4**	**+1.6**	
CLL	**Collm**	**18.61**	**332**	*i* P		**Pn**	**03 01 00.4**	**+1.6**	
CLL				*ex*		x	03 01 04.0		
CLL				*i* PP		**PnPn**	**03 01 09.7**	**-1.2**	
SUW	**Suwalki**	**18.68**	**354**	P		**P**	**03 00 58.4**	**-0.8**	
SUW				IAmb		IAmb	03 01 00.6		
	comp=Z,13nm,0.6s								
SUW	**Suwalki**	**18.68**	**354**	P		**P**	**03 00 58.4**	**-0.8**	
SUW				pmax		pmax			
	comp=Z,13nm,0.6s								
PABE	**Paberze**	**20.11**	**356**	P		**P**	**03 01 13.2**	**-1.6**	
OBN	**Obninsk**	**20.80**	**16**	*eP*		Pn	03 01 24.6	-0.2	
OBN				*e*			03 01 42.1		
OBN				*eS*		Sn	03 05 21.7	+3.2	
OBN				pmax		pmax			
	comp=Z,12nm,1.1s								
CLF	**Chambon-Foret**	**21.97**	**312**	P		**P**	**03 01 34.9**	**0.0**	
ESBB	**Sonseca Array**	**24.53**	**289**	P		**P**	**03 02 01.7**	**+1.1**	
ESBB				IAmb		IAmb	03 02 04.9		
	comp=Z,5.4nm,1.1s								
ESDC	**Sonseca Array**	**24.53**	**289**	P		**P**	**03 02 01.2**	**+0.6**	
	comp=Z,2.5nm,0.6s,baz=81,slow=9.6,SNR=35								
	comp=Z,2.5nm,0.6s								
ESDC	**Sonseca Array**	**24.53**	**289**	IAmb		IAmb	03 02 51.2		
	comp=Z,4.3nm,1.6s								
GEYT	**Alibeck**	**25.31**	**75**	P		**P**	**03 02 08.9**	**+1.2**	
	comp=Z,3.5nm,0.7s,baz=266,slow=14,SNR=4.5								
	comp=Z,3.5nm,0.7s								
GEYT	**Alibeck**	**25.31**	**75**	P		**P**	**03 02 08.9**	**+1.2**	
GEYT				IAmb		IAmb	03 02 11.3		
	comp=Z,3.0nm,0.8s								
FINES	**FINESS Array B**	**25.98**	**359**	P		**P**	**03 02 11.2**	**-2.2**	
	comp=Z,1.9nm,0.8s,baz=156,slow=11,SNR=6.5								
	comp=Z,1.9nm,0.8s								
HFS	**Hagfors**	**26.05**	**345**	P		**P**	**03 02 11.9**	**-2.2**	

KK31 ⇑Sn **Sn** **03 11 23.9 +3.1**
8.4nm,0.5s,baz=162,slow=24,SNR=4.4
KK31 ⇑Lg Lg 03 11 42.2
22nm,0.8s
BRLS Borolday 4.80 343 *eP* **Pb** **03 10 34.9 -3.5**
1.8nm,0.2s
BRLS *eS* **Sn** **03 11 27.8 +5.7**
7.0nm,0.5s
CHMS Chumysh 5.11 26 P **Pn** **03 10 33.4 +2.7**
SNR=5.7
CHMS Chumysh 5.11 26 ⇑Pn **Pn** **03 10 33.0 +2.3**
8.2nm,0.5s
CHMS ⇑Sn **Sn** **03 11 31.2 +1.6**
17nm,0.7s
CHMS ⇑Lg Lg 03 11 53.1
22nm,1.2s
USP Osepenovka 5.26 23 P **Pn** **03 10 35.4 +2.5**
SNR=6.3
TKM2 Tokmak 2 5.36 32 ⇓Pn **Pn** **03 10 35.5 +1.1**
3.2nm,0.8s
TKM2 ⇑Pg **Pb** **03 10 48.9 +0.9**
10nm,0.9s
TKM2 ⇓Lg Lg 03 12 03.2
13nm,1.1s
SGDS Sogindy 5.47 23 *eP* **Pb** **03 10 49.1 -0.8**
3.5nm,0.4s
SGDS *eS* **Sb** **03 11 52.8 -2.7**
8.3nm,0.8s
KST Kastek 5.62 34 *eP* **Pb** **03 10 51.6 -0.8**
3.5nm,0.4s
KST *eS* **Sb** **03 11 57.2 -2.6**
12nm,0.0s
MKAR Makanchi Array 11.41 40 Pn **Pn** **03 11 58.6 +1.4**
0.1nm,0.3s,baz=243,slow=13,SNR=6.5
0.5nm,0.6s
AB31 Akbulak array 13.73 326 Pn **Pn** **03 12 28.4 -0.3**
0.6nm,0.5s,baz=132,slow=13,SNR=17
AB31 ⇑Sn **Sn** **03 15 00.8 -0.4**
1.8nm,0.8s,baz=156,slow=23,SNR=2.6
AKTO Aktyubinsk 15.44 325 Pn **Pn** **03 12 53.4 +1.5**
0.4nm,0.3s,baz=137,slow=13,SNR=9.8
1.4nm,0.5s
ZALV Zalesovo Beam 17.92 26 P **Pn** **03 13 21.4 -1.9**
0.3nm,0.3s,baz=223,slow=11,SNR=5.2
1.3nm,0.4s
FINES FINESS Array B 36.22 324 P **P** **03 16 17.1 +0.3**
0.7nm,0.4s,baz=111,slow=6.8,SNR=8.5
0.7nm,0.4s
ARCES ARCESS Array B 39.58 337 P **P** **03 16 44.8 -0.3**
1.7nm,0.8s,baz=112,slow=9.8,SNR=0.8
1.7nm,0.8s
TORD Torodi Ar. Bea 66.34 268 P **P** **03 20 03.5 +0.3**
0.3nm,0.6s,baz=45,slow=5.1,SNR=6.5
0.3nm,0.6s
INK Inuvik 71.90 10 P **P** **03 20 35.9 -0.9**
2.5nm,0.7s,baz=338,slow=7.6,SNR=3.3
2.5nm,0.7s
ILAR Eielson Array 72.76 16 P **P** **03 20 41.2 -0.9**
0.4nm,0.9s,baz=312,slow=1.7,SNR=4.3
0.4nm,0.9s

MOS ***04*** *03:15:19.7±1.1,41.˚78N×143.˚27E,h28km,mb4.7/22,Error ellipse: s-maj=7.9km s-min=5.8km az=86.9*
NEIC ***04*** *03:15:21.6±1.4,41.˚73N±0.˚06×143.˚3E±0.˚1,h28km±2km, mb4.3/27,Error ellipse: s-maj=12.3km s-min=8.1km az=100.0*
JMA ***04*** *03:15:21.3±0.2,41.˚9N±0.˚7×143.˚4E±0.˚8,h19km±1km, MD4.3/30,MW4.2/30,SE OFF ERIMOMISAKI*
JMA Felt III J1 at SE OFF ERIMOMISAKI .
NIED ***04*** *03:15:21.3,41.˚86N×143.˚36E,h19km,MW4.3,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr=0.48; Mθθ0.26; Mφφ0.22; Mrθ1.17; Mθφ2.36; Mφr1.73; Fault plane solution: M₀2.97000×10¹⁵ NP1:φs95.00000°, δ54.00000°,λ3.00000°. NP2:φs4.00000°,δ87.00000°, λ144.00000°.*
IDC ***04*** *03:15:25.4±1.9,41.˚84N×143.˚21E,h60km±15km,mb3.7/17, mbtmp4.0/22,MS3.5/20 Error ellipse: s-maj=16.3km s-min=11.9km az=111.0*
ISC 04 03:15:20.5±0.5,**41.82N**±0.˚05×**143.˚34E**±0.˚05,**h22**km±2km, **n176,**σ1¶**28**/143,**mb4.3**/59,**MS3.6**/15,**2C,Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
ERM	**Erimo**	**0.24**	**326**			**Pb**	**03 15 26.5**	**0.0**
ERM	**Erimo**	**0.24**	**326**	*c*	*i* P	**Pb**	**03 15 26.5**	**0.0**
JEM	**Erimo**	**0.24**	**326**	*i*	P	**Pb**	**03 15 26.4**	**-0.1**
JEM					*eS*	**Sb**	**03 15 30.8**	**+0.1**
JEM	**Erimo**	**0.24**	**326**		A	A	03 15 26.4	
comp=E,33nm,1.0s,comp=E,32nm,1.2s								
JTHR	**Tokachihiroo**	**0.47**	**357**		P	**Pb**	**03 15 29.9**	**-0.3**
JTHR					*eS*	**Sb**	**03 15 36.7**	**0.0**
JTHR	**Tokachihiroo**	**0.47**	**357**		A	A	03 15 29.9	
comp=E,41nm,1.2s,comp=E,41nm,0.7s								
JNBK	**Urakawa-nobuka**	**0.64**	**317**	*i*	P	**Pb**	**03 15 33.3**	**+0.3**
JNBK	**Urakawa-nobuka**	**0.64**	**317**		A	A	03 15 33.3	
comp=E,22nm,1.2s,comp=E,16nm,1.7s								
JCH	**Churui**	**0.80**	**1**	*eP*		**Pb**	**03 15 35.4**	**-0.3**
JCH					*eS*	**Sb**	**03 15 46.5**	**+0.5**
JCH	**Churui**	**0.80**	**1**		A	A	03 15 35.4	
comp=E,19nm,2.3s,comp=E,11nm,0.7s								
JSHD	**Hidakashinhida**	**0.88**	**313**		P	**Pn**	**03 15 37.5**	**0.0**
JSHD	**Hidakashinhida**	**0.88**	**313**		A	A	03 15 37.5	
comp=E,20nm,1.9s,comp=E,18nm,1.4s								
JOB	**Onbets**	**1.15**	**19**	*eP*		**Pb**	**03 15 41.9**	**+0.3**
JOB	**Onbets**	**1.15**	**19**		A	A	03 15 41.9	
comp=E,22nm,3.8s,comp=E,29nm,1.2s								
JBT2	**Biratori 2**	**1.20**	**323**		A	A	03 15 42.6	
comp=E,6.0nm,2.2s,comp=E,6.0nm,2.4s								
JIAM	**Iburiatsuma**	**1.32**	**308**		A	A	03 15 44.7	
comp=E,39nm,1.5s,comp=E,20nm,1.0s								
JAR	**Ashorobuto**	**1.51**	**12**		A	A	03 15 47.1	
comp=E,21nm,0.7s,comp=E,12nm,2.0s								
JAK	**Akkeshi**	**1.55**	**40**		A	A	03 15 47.6	
comp=E,10.0nm,2.1s,comp=E,13nm,2.1s								
JAHD	**Aomorihigashid**	**1.60**	**250**		A	A	03 15 49.6	
comp=E,17nm,1.0s,comp=E,12nm,1.1s								
JARK	**Aomorirokkasho**	**1.69**	**242**		A	A	03 15 51.0	
comp=E,6.0nm,2.0s,comp=E,5.0nm,2.6s								
JKB	**Kayabe**	**1.72**	**273**		A	A	03 15 51.2	
comp=E,3.0nm,0.6s,comp=E,5.0nm,0.9s								
JEW	**Eniwo**	**1.73**	**307**			**Pb**	**03 15 52.0**	**+0.4**
JEW	**Eniwo**	**1.73**	**307**		A	A	03 15 50.9	
comp=E,10.0nm,1.2s,comp=E,9.0nm,2.8s								
JOT	**Ohata**	**1.77**	**257**		A	A	03 15 52.1	
comp=E,5.0nm,1.2s,comp=E,9.0nm,1.6s								
JNB	**Noboribetsu**	**1.83**	**292**		A	A	03 15 52.5	
comp=E,3.0nm,1.5s,comp=E,3.0nm,1.7s								
JAB	**Ashibetsu**	**1.88**	**334**		A	A	03 15 52.7	
comp=E,6.0nm,4.7s,comp=E,4.0nm,1.3s								
JTM	**Tenmabayashi**	**2.00**	**240**		Pn	**Pn**	**03 15 53.9**	**+1.0**
JTM	**Tenmabayashi**	**2.00**	**240**		A	A	03 15 55.5	
comp=E,7.0nm,1.4s,comp=E,8.0nm,3.8s								
JISS	**Ishikarishitsu**	**2.03**	**316**		A	A	03 15 55.2	
comp=E,7.0nm,6.4s,comp=E,7.0nm,1.2s								
JMP	**Maruseppu**	**2.19**	**0**		A	A	03 15 57.1	
comp=E,5.0nm,1.7s,comp=E,4.0nm,3.9s								
JTKR	**Abashiri--Toko**	**2.19**	**11**		A	A	03 15 57.1	
comp=E,4.0nm,1.7s,comp=E,4.0nm,3.3s								
JHR	**Hokuryu**	**2.26**	**329**		A	A	03 15 58.4	
comp=E,4.0nm,3.7s,comp=E,5.0nm,2.1s								
JNSB	**Nemuroshibetsu**	**2.31**	**32**		A	A	03 15 58.7	
comp=E,5.0nm,1.7s,comp=E,6.0nm,3.0s								
JSI2	**Shiura 2**	**2.33**	**252**		A	A	03 16 00.2	
comp=E,7.0nm,1.0s,comp=E,7.0nm,2.4s								
NMR	**Nemuro--Hokkai**	**2.35**	**48**	*eP*		**Pn**	**03 15 57.6**	**-0.2**
NMR					*eS*	**Sn**	**03 16 24.9**	**-1.0**
JKA	**Kamikawa-asahi**	**2.36**	**347**			**Pn**	**03 15 59.3**	**+1.4**
JKA	**Kamikawa-asahi**	**2.36**	**347**			**Sb**	**03 16 29.8**	**-1.2**
ASAJ	**Asahikawa**	**2.36**	**347**	P		**Pn**	**03 15 59.6**	**+1.7**
89nm,0.3s,baz=186,slow=14,SNR=64								
ASAJ					S	**Sb**	**03 16 29.8**	**-1.2**
466nm,0.9s,baz=334,slow=32,SNR=7.1								
ASAJ					LR	LR	03 17 07.3	
comp=Z,553nm,18.8s,baz=208,slow=44								
JRA	**Rausu**	**2.49**	**31**		A	A	03 16 01.4	
comp=E,4.0nm,4.4s,comp=E,3.0nm,5.1s								
GLVR	**Golovnino**	**2.50**	**39**	*eP*		**Pn**	**03 16 01.1**	**+1.2**
GLVR					*eS*	**Sn**	**03 16 30.9**	**+1.2**
GLVR					pmax	pmax		
comp=Z,757nm,0.6s								
GLVR					pmax	pmax		
comp=E,187nm,0.2s								
GLVR					pmax	pmax		
comp=N,358nm,0.3s								
GLVR					smax	smax		
comp=E,2μm,0.3s								
GLVR					smax	smax		
comp=N,304nm,0.2s								
JHHS	**Hirosakihyakuz**	**2.53**	**244**		A	A	03 16 03.1	
comp=N,9.0nm,0.8s,comp=N,6.0nm,1.5s								
RUSJ	**Misakicho**	**2.68**	**31**	*eP*		**Pn**	**03 16 04.5**	**+2.2**
RUSJ					*eS*	**Sb**	**03 16 38.3**	**-1.9**
JNTW	**Noshirotokiwa**	**2.86**	**238**		A	A	03 16 07.8	
comp=N,10.0nm,3.4s,comp=N,6.0nm,2.3s								
YUK	**Yuzh-Kuril'sk**	**2.89**	**39**	*eP*		**Pn**	**03 16 06.4**	**+1.2**
YUK					*eS*	**Sn**	**03 16 39.5**	**+0.3**
YUK					pmax	pmax		
comp=Z,356nm,0.2s								
YUK					pmax	pmax		
comp=N,80nm,0.3s								
YUK					smax	smax		
comp=N,1μm,0.5s								
YUK					smax	smax		
comp=E,2μm,0.5s								
SHO	**Shikotan**	**3.29**	**50**	*eP*		**Pn**	**03 16 10.3**	**-0.3**
SHO					*eS*	**Sn**	**03 16 47.8**	**-1.2**
SHO					pmax	pmax		
comp=Z,77nm,0.3s								
SHO					pmax	pmax		
comp=N,20nm,0.2s								
SHO					pmax	pmax		
comp=E,63nm,0.3s								
SHO					smax	smax		
comp=N,352nm,0.3s								
SHO					smax	smax		
comp=E,301nm,0.3s								
JMM	**Marumori**	**4.41**	**207**			**Pn**	**03 16 25.9**	**-0.1**
KUR	**Kuril'sk**	**4.74**	**42**		P	**Pn**	**03 16 33.3**	**+2.7**
KUR					*eS*	**Sn**	**03 17 28.1**	**+3.2**
KUR					pmax	pmax		
comp=Z,160nm,0.8s								
KUR					smax	smax		
comp=E,113nm,0.5s								
YSS	**Yuzh-Sakhalins**	**5.15**	**356**			**Pn**	**03 16 37.5**	**+1.2**
YSS	**Yuzh-Sakhalins**	**5.15**	**356**	*eP*		**Pn**	**03 16 39.4**	**+3.1**
YSS					*eS*	**Sn**	**03 17 35.7**	**+0.7**
YSS					pmax	pmax		
comp=Z,20nm,0.9s								
YSS					smax	smax		
comp=E,50nm,0.8s								
YSS					MLR	MLR		
comp=Z,300nm,15.0s								
JSD	**Sado**	**5.43**	**228**		Pn	**Pn**	**03 16 41.4**	**+1.3**
JYT	**Yasato**	**6.09**	**205**		Pn	**Pn**	**03 16 50.1**	**+0.9**
MJB9	**Matsu-Tunnel**	**6.60**	**219**			**Pn**	**03 16 55.3**	**-0.9**
MAJO	**Matsushiro**	**6.60**	**219**		Pn	**Pn**	**03 16 57.1**	**+0.8**
MAJO	**Matsushiro**	**6.60**	**219**	*i*	P	**Pn**	**03 16 57.8**	**+1.5**
MJAR	**Matsushiro Arr**	**6.60**	**219**		P	**Pn**	**03 16 58.3**	**+2.0**
comp=Z,7.6nm,0.7s,baz=41,slow=13,SNR=21								
MJAR					LR	LR	03 20 09.8	
comp=Z,254nm,18.0s,baz=104,slow=43								
MJAR	**Matsushiro Arr**	**6.60**	**219**		Pn	**Pn**	**03 16 56.9**	**+0.6**
JGF	**Kuroka**	**7.77**	**219**		Pn	**Pn**	**03 17 11.2**	**-1.1**
INU	**Inuyama**	**8.13**	**219**			**Pn**	**03 17 17.2**	**0.0**
USA0B	**Ussuriysk Arra**	**8.65**	**290**	*i*	P	**Pn**	**03 17 25.7**	**+1.4**
USRK	**Ussuriysk Ar.**	**8.65**	**290**		P	**Pn**	**03 17 28.3**	**+4.0**
comp=Z,8.4nm,0.8s,baz=94,slow=15,SNR=9.8								
USRK					LR	LR	03 21 09.0	
comp=Z,293nm,18.4s,baz=110,slow=40								
USRK	**Ussuriysk Ar.**	**8.65**	**290**		Pn	**Pn**	**03 17 26.4**	**+2.1**
JHJ	**Hachijo jima 2**	**9.13**	**199**		LR	LR	03 21 32.5	
comp=Z,106nm,21.3s,baz=94,slow=40								
KLR	**Kul'dur**	**10.99**	**316**		P	**Pn**	**03 17 58.8**	**+2.4**
comp=Z,12nm,1.0s,baz=121,slow=14,SNR=25								
KLR					LR	LR	03 22 29.3	
comp=Z,202nm,20.7s,baz=149,slow=39								
KSRS	**Korea Array**	**12.65**	**255**		P	**Pn**	**03 18 21.9**	**+2.9**
comp=Z,0.9nm,0.3s,baz=78,slow=13,SNR=5.8								
KSRS					LR	LR	03 23 03.8	
comp=Z,162nm,18.4s,baz=70,slow=36								
KSRS	**Korea Array**	**12.65**	**255**		P	**Pn**	**03 18 22.0**	**+2.9**
KSAR	**Wonju Array Be**	**12.69**	**255**		Pn	**Pn**	**03 18 18.7**	**-0.8**
KSAR	**Wonju Array Be**	**12.69**	**255**		P	**Pn**	**03 18 18.7**	**-0.8**
MA2	**Magadan**	**18.37**	**12**		LR	LR	03 27 07.1	
comp=Z,84nm,18.6s,baz=336,slow=38								
SEY	**Seymchan**	**21.82**	**11**		LR	LR	03 27 58.4	
comp=Z,73nm,21.9s,baz=128,slow=34								
YAK	**Yakutsk**	**21.84**	**343**		LR	LR	03 29 19.4	
comp=Z,104nm,18.9s,baz=102,slow=38								
YAK	**Yakutsk**	**21.84**	**343**	*eP*		**P**	**03 20 07.2**	**-3.9**
YAK					pmax	pmax		
comp=Z,23nm,0.9s								
YAK					pmax	pmax		
comp=N,4.0nm,1.0s								
YAK					pmax	pmax		
comp=E,2.0nm,1.0s								
ULN	**Ulaanbaatar**	**26.25**	**296**		P	**P**	**03 20 54.7**	**+0.6**
ULN	**Ulaanbaatar**	**26.25**	**296**	*i*	P	**P**	**03 20 52.7**	**-1.4**
ULN					pmax	pmax		
comp=Z,8.0nm,1.9s								
SONM	**Songino Array**	**26.70**	**296**		P	**P**	**03 20 58.2**	**+0.1**
comp=Z,2.4nm,0.8s,baz=67,slow=8.0,SNR=6.4								
comp=Z,2.4nm,0.8s								
SONM	**Songino Array**	**26.70**	**296**		P	**P**	**03 20 57.8**	**-0.3**
ZAK	**Zakamensk**	**28.77**	**301**	*eP*		**P**	**03 21 15.4**	**-1.2**
ZAK					pmax	pmax		
comp=Z,3.0nm,1.1s								
BILL	**Bilibino**	**29.02**	**18**	*eP*		**P**	**03 21 18.1**	**-0.4**
BILL					pmax	pmax		
comp=Z,1.0nm,0.8s								
H11N2	**WAKE ISLAND Hy**	**29.73**	**131**		T	T	03 52 43.5	
baz=324,slow=75,SNR=5824								
H11N1	**WAKE ISLAND Hy**	**29.74**	**131**		T	T	03 52 39.7	
baz=324,slow=75,SNR=5541								
H11N3	**WAKE ISLAND Hy**	**29.75**	**131**		T	T	03 52 43.8	
baz=324,slow=75,SNR=3611								
H11S1	**WAKE ISLAND Hy**	**30.60**	**132**		T	T	03 53 48.8	
baz=325,slow=76,SNR=6423								
H11S3	**WAKE ISLAND Hy**	**30.60**	**132**		T	T	03 53 50.8	
baz=325,slow=76,SNR=4607								
H11S2	**WAKE ISLAND Hy**	**30.62**	**132**		T	T	03 53 50.0	
baz=325,slow=76,SNR=4276								
NRIK	**Noril'sk**	**39.63**	**333**		LR	LR	03 40 18.1	
comp=Z,37nm,19.6s,baz=96,slow=38								
NRIK	**Noril'sk**	**39.63**	**333**	*i*	P	**P**	**03 22 47.4**	**-2.7**
NRIK					pmax	pmax		
comp=Z,5.0nm,1.4s								
ZAA0	**Zalesovo Array**	**39.96**	**308**		IAmb	IAmb	03 22 53.9	
comp=Z,7.5nm,0.8s								
ZALV	**Zalesovo Beam**	**39.96**	**308**		P	**P**	**03 22 53.1**	**+0.1**
comp=Z,5.5nm,0.7s,baz=86,slow=7.7,SNR=20								
ZALV					PcP	**PcP**	**03 24 58.9**	**+0.9**
comp=Z,1.5nm,0.8s,baz=56,slow=3.6,SNR=2.5								
ZALV					LR	LR	03 40 36.1	
comp=Z,89nm,18.9s,baz=85,slow=38								
comp=Z,5.5nm,0.7s								
IMAR	**Indian Mountai**	**41.81**	**33**		P	**P**	**03 23 10.2**	**+2.1**
KDAK	**Kodiak Island**	**42.61**	**45**		P	**P**	**03 23 15.2**	**+0.5**
comp=Z,2.4nm,0.6s,baz=269,slow=0.8,SNR=4.2								
KDAK					LR	LR	03 39 56.5	
comp=Z,50nm,22.0s,baz=244,slow=34								
comp=Z,2.4nm,0.6s								
KDAK	**Kodiak Island**	**42.61**	**45**		IAmb	IAmb	03 23 22.6	
comp=Z,5.4nm,0.8s								
MK31	**Makanchi Array**	**43.01**	**298**		IAmb	IAmb	03 23 19.0	
comp=Z,5.2nm,0.9s								
MK31	**Makanchi Array**	**43.01**	**298**	*i*	P	**P**	**03 23 17.7**	**-0.5**
MKAR	**Makanchi Array**	**43.01**	**298**		P	**P**	**03 23 18.1**	**-0.1**
comp=Z,5.0nm,0.9s,baz=80,slow=9.2,SNR=28								
MKAR					PcP	**PcP**	**03 25 08.4**	**+0.3**
comp=Z,0.7nm,0.9s,baz=72,slow=4.7,SNR=2.4								
comp=Z,5.0nm,0.9s								
MKAR	**Makanchi Array**	**43.01**	**298**		P	**P**	**03 23 17.9**	**-0.2**
MAKZ	**Makanchi**	**43.21**	**298**		P	**P**	**03 23 19.4**	**-0.4**
MAKZ					IAmb	IAmb	03 23 20.7	
comp=Z,6.9nm,0.9s								
MAKZ	**Makanchi**	**43.21**	**298**		P	**P**	**03 23 19.4**	**-0.4**
MAKZ					pmax	pmax		
comp=Z,7.0nm,1.0s								
NEA2	**Nenana**	**43.76**	**35**		IAmb	IAmb	03 23 45.8	
comp=Z,3.6nm,0.8s								
TCOL	**CIGO, UAF Yank**	**44.27**	**35**		P	**P**	**03 23 29.8**	**+1.8**
TCOL					IAmb	IAmb	03 23 50.0	
comp=Z,8.9nm,1.0s								
COLA	**College**	**44.27**	**35**	*i*	P	**P**	**03 23 27.1**	**-0.9**
COLA					pmax	pmax		
comp=Z,9.0nm,1.1s								
CMAR	**Chiang Mai Arr**	**44.27**	**252**		LR	LR	03 42 07.9	
comp=Z,40nm,18.0s,baz=180,slow=36								
KURK	**Kurchatov**	**44.30**	**305**		P	**P**	**03 23 28.1**	**-0.3**
KURK	**Kurchatov**	**44.30**	**305**	*i*	P	**P**	**03 23 27.7**	**-0.7**
KURK					pmax	pmax		
comp=Z,11nm,1.0s								
IL31		**44.69**	**35**		P	**P**	**03 23 31.8**	**+0.4**
IL31					IAmb	IAmb	03 23 47.6	
comp=Z,6.5nm,1.1s								
ILAR	**Eielson Array**	**44.69**	**35**		P	**P**	**03 23 31.4**	**0.0**
comp=Z,0.5nm,0.7s,baz=267,slow=6.3,SNR=21								
comp=Z,0.5nm,0.7s								
SCRK	**Sand Creek**	**46.03**	**36**		P	**P**	**03 23 43.2**	**+1.1**
SCRK					IAmb	IAmb	03 23 59.0	
comp=Z,3.4nm,1.1s								
K27K	**Chicken**	**46.85**	**36**		IAmb	IAmb	03 24 09.0	
comp=Z,6.0nm,1.4s								
L27K	**Beaver Creek,**	**47.12**	**37**		P	**P**	**03 23 51.9**	**+1.2**
L27K					IAmb	IAmb	03 24 12.9	
comp=Z,3.1nm,0.9s								
BCAR	**Beaver Creek A**	**47.14**	**37**		P	**P**	**03 23 52.0**	**+1.2**
BRVK	**Borovoye**	**48.61**	**310**		P	**P**	**03 24 02.8**	**+0.5**
BRVK					IAmb	IAmb	03 24 07.9	
comp=Z,6.8nm,1.1s								
BRVK	**Borovoye**	**48.61**	**310**	*i*	P	**P**	**03 24 02.6**	**+0.3**
BRVK					pmax	pmax		
comp=Z,5.0nm,1.0s								
BOOM	**Boomskoye usch**	**48.73**	**295**		P	**P**	**03 24 02.9**	**-0.7**
BOOM	**Boomskoye usch**	**48.73**	**295**		P	**P**	**03 24 02.9**	**-0.7**
BOOM					pmax	pmax		
comp=Z,6.0nm,1.0s								
AAK	**Ala-Archa**	**49.66**	**295**		LR	LR	03 47 01.0	
comp=Z,68nm,18.7s,baz=114,slow=38								
AAK	**Ala-Archa**	**49.66**	**295**	*i*	P	**P**	**03 24 09.4**	**-1.2**
AAK					pmax	pmax		
comp=Z,4.0nm,1.6s								
KK31	**Karatay Array**	**52.12**	**298**		P	**P**	**03 24 28.4**	**-0.6**
KK31	**Karatay Array**	**52.12**	**298**		P	**P**	**03 24 28.4**	**-0.6**
KK31					pmax	pmax		
comp=Z,2.0nm,0.8s								
KKAR	**Karatay Array**	**52.12**	**298**		P	**P**	**03 24 28.1**	**-0.9**
KKAR	**Karatay Array**	**52.12**	**298**		P	**P**	**03 24 28.1**	**-0.9**
KKAR					pmax	pmax		
comp=Z,2.0nm,0.8s								
SVE	**Sverdlovsk**	**52.62**	**317**	*eP*		**P**	**03 24 33.0**	**+0.6**
SVE					pmax	pmax		
comp=Z,11nm,0.9s								
ARU	**Arti**	**53.83**	**317**		P	**P**	**03 24 39.9**	**-1.4**
comp=Z,8.7nm,0.8s,baz=32,slow=6.6,SNR=8.9								
ARU					LR	LR	03 50 41.0	
comp=Z,68nm,18.5s,baz=72,slow=39								
comp=Z,8.7nm,0.8s								
ARU	**Arti**	**53.83**	**317**		P	**P**	**03 24 41.1**	**-0.2**
ARU	**Arti**	**53.83**	**317**	*c*	*i* P	**P**	**03 24 41.0**	**-0.4**
ARU							03 26 39.0	
ARU					S	**S**	**03 32 18.7**	**+4.0**
ARU					SS	**SKiKP**	**03 35 50.4**	**-2.9**
ARU					pmax	pmax		
comp=Z,8.0nm,0.8s								
ABKAR	**Akbulak array**	**56.07**	**308**		P	**P**	**03 24 57.6**	**-0.1**
YKA	**Yellowknife Ar**	**58.95**	**32**		P	**P**	**03 25 17.9**	**+0.3**
comp=Z,0.6nm,0.6s,baz=309,slow=6.2,SNR=5.1								
comp=Z,0.6nm,0.6s								
YKA	**Yellowknife Ar**	**58.95**	**32**		P	**P**	**03 25 18.0**	**+0.3**
ARCES	**ARCESS Array B**	**60.06**	**339**		LR	LR	03 56 31.8	
comp=Z,32nm,18.6s,baz=206,slow=41								
BELG	**Belogornoye**	**61.36**	**316**		LR	LR	03 54 54.4	
comp=Z,104nm,18.9s,baz=135,slow=39								
WRAB	**Tennant Creek**	**62.00**	**190**	*i*	P	**P**	**03 25 37.7**	**-1.3**
WRAB					pmax	pmax		
comp=Z,4.0nm,1.2s								
WRA	**Warramunga Arr**	**62.01**	**190**		P	**P**	**03 25 39.2**	**+0.2**
comp=Z,0.4nm,0.7s,baz=6.0,slow=6.9,SNR=7.9								
comp=Z,0.4nm,0.7s								
OBN	**Obninsk**	**65.18**	**323**	*eP*		**P**	**03 25 56.9**	**-2.7**
OBN					*e*		03 28 20.8	
OBN					pmax	pmax		
comp=Z,32nm,2.7s								
OBN					MLR	MLR		
comp=Z,52nm,14.0s								
FINES	**FINESS Array B**	**65.29**	**332**		P	**P**	**03 25 59.6**	**-0.6**
comp=Z,6.4nm,0.7s,baz=52,slow=9.0,SNR=25								
FINES					LR	LR	03 57 01.4	
comp=Z,54nm,20.2s,baz=69,slow=38								
comp=Z,6.4nm,0.7s								
ASAR	**Alice Springs**	**65.74**	**189**		P	**P**	**03 26 04.0**	**+0.4**
comp=Z,0.5nm,0.8s,baz=4.0,slow=5.6,SNR=6.0								
comp=Z,0.5nm,0.8s								
ASAR	**Alice Springs**	**65.74**	**189**		P	**P**	**03 26 04.0**	**+0.4**
KIV	**Kislovodsk**	**68.92**	**310**	*eP*		**P**	**03 26 22.1**	**-1.6**
KIV					pmax	pmax		
comp=Z,10.0nm,1.1s								
KIV					MLR	MLR		
comp=Z,31nm,17.0s								
KBZ	**Khabaz**	**68.94**	**310**	*i*	P	**P**	**03 26 23.1**	**-0.6**
KBZ					pmax	pmax		
comp=Z,4.0nm,1.1s								
BOZ	**Bozeman (W)**	**70.31**	**46**		P	**P**	**03 26 33.3**	**+0.9**
BOZ					IAmb	IAmb	03 26 56.5	
comp=Z,2.9nm,1.2s								
BOZ	**Bozeman (W)**	**70.31**	**46**		P	**P**	**03 26 33.3**	**+0.9**
BOZ					pmax	pmax		
comp=Z,3.0nm,1.2s								
NB2	**NORSAR Subarra**	**70.35**	**337**		P	**P**	**03 26 31.5**	**-0.7**
comp=Z,2.2nm,0.7s,baz=37,slow=6.2								
NOA	**NORSAR Array B**	**70.35**	**337**		P	**P**	**03 26 31.7**	**-0.5**
comp=Z,3.1nm,0.9s,baz=37,slow=6.1,SNR=8.5								
NOA					LR	LR	04 03 07.5	
comp=Z,28nm,18.0s,baz=10.0,slow=41								
comp=Z,3.1nm,0.9s						

WTTA	**Wattenberg**	**81.51**	**329**	*e*P		**P**	**03 27 37.4**	**+1.1**
	comp=Z,3.6nm,1.1s							
MOTA	**Moosalm**	**81.64**	**329**	*e*P		**P**	**03 27 37.8**	**+0.9**
	comp=Z,6.4nm,1.1s							
RETA	**Reutte**	**81.65**	**330**	*i* P		**P**	**03 27 37.9**	**+1.0**
	comp=Z,5.5nm,1.2s							
SQTA	**Sankt Quirin**	**81.70**	**329**	*i* P		**P**	**03 27 38.1**	**+0.9**
	comp=Z,1.1nm,0.4s							
FETA	**Feichten**	**82.05**	**329**	*e*P		**P**	**03 27 40.0**	**+0.9**
	comp=Z,2.5nm,0.8s							
DAVA	**Damuels**	**82.15**	**330**	*e*P		**P**	**03 27 40.5**	**+0.8**
	comp=Z,5.1nm,1.1s							
NRCA	**Norcia**	**84.55**	**326**	P		**P**	**03 27 52.0**	**+0.1**
TXAR	**Lajitas Array**	**86.06**	**54**	P		**P**	**03 28 00.9**	**+1.1**
	comp=Z,0.5nm,0.6s,baz=288,slow=3.6,SNR=9.1							
	comp=Z,0.5nm,0.6s							

*DJA **04** 03:18:41.3±0.2,2°S±2°×10°0E±°, h10km, M4.8/18, mb4.8/5, MLv4.8/18*
*NEIC **04** 03:18:44.5±2.0, 1°.57S±0°.07×100°.16E±0°.08, h41km±6km, mb4.6/35, Error ellipse: s-maj=12.1km s-min=9.1km az=59.0*
*IDC **04** 03:18:45.1±3.2, 1°.47S×100°.40E, h49km±30km, mb4.1/17, mbtmp4.3/20, ML4.3/3, MS3.5/10, Error ellipse: s-maj=21.6km s-min=11.9km az=54.0*

ISC 04 03:18:42.5±1.2, 1°.60S±0°.04×100°.17E±0°.04, h28km±9km, n97, σ1s36/96, mb4.5/37, MS3.7/8, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
SISI	**Saibi**	**1.11**	**284**	P			**Pn**	**03 19 00.9**	**-1.3**
SISI				S			**Sb**	**03 19 18.8**	**+1.5**
PPSI	**Pulau Pagai**	**1.17**	**188**	P			**Pb**	**03 19 04.3**	**+0.2**
PPSI				S			**Sb**	**03 19 20.7**	**+1.9**
KRJI	**Kerinci**	**1.38**	**111**	P			**Pn**	**03 19 06.8**	**+0.8**
KRJI				S			**Sb**	**03 19 25.5**	**+0.5**
BKNI	**Bangkinang**	**2.10**	**24**				**Pn**	**03 19 16.9**	**+1.1**
BKNI	**Bangkinang**	**2.10**	**24**	P			**Pn**	**03 19 17.0**	**+1.2**
BKNI				S			**Sn**	**03 19 42.0**	**+1.0**
MNSI	**Mandailing Nat**	**2.45**	**346**	P			**Pn**	**03 19 21.0**	**+0.4**
MNSI				S			**Sb**	**03 19 52.8**	**-2.8**
RGRI	**Rengat**	**2.49**	**60**	P			**Pn**	**03 19 19.7**	**-1.5**
RGRI				S			**Sb**	**03 19 55.4**	**-1.5**
GSI	**Gunungsitoli**	**3.88**	**318**	Pn			**Pn**	**03 19 40.0**	**-0.3**
GSI	**Gunungsitoli**	**3.88**	**318**	P			**Pn**	**03 19 39.7**	**-0.6**
MNAI	**Manna**	**3.91**	**135**	Pn			**Pn**	**03 19 42.4**	**+1.7**
MNAI	**Manna**	**3.91**	**135**	P			**Pn**	**03 19 43.1**	**+2.4**
RPSI	**Rantau Prapat**	**4.44**	**344**				**Pn**	**03 19 49.5**	**+1.5**
DSRI	**Dabo**	**4.54**	**76**	P			**Pn**	**03 19 48.6**	**-0.8**
PSI	**Prapat**	**4.54**	**344**	P			**Pn**	**03 19 49.5**	**0.0**
	4.2nm,0.3s,baz=164,slow=13,SNR=28								
PSI				S			**Sb**	**03 20 60.0**	**+3.9**
	63nm,0.9s,baz=262,slow=18,SNR=4.8								
	13nm,0.5s								
PMBI	**Palembang**	**4.78**	**106**	Pn			**Pn**	**03 19 53.6**	**+0.9**
MYKOM	**Kota Tinggi**	**4.99**	**48**	Pn			**Pn**	**03 19 55.0**	**-0.5**
TPRI	**Tanjung Pinang**	**5.02**	**60**	P			**Pn**	**03 19 56.3**	**+0.3**
LWLI	**Liwa**	**5.16**	**131**	P			**Pn**	**03 19 59.0**	**+1.0**
	1.4nm265nm,0.7s								
KCSI	**Kotacane, Aceh**	**5.62**	**335**	P			**Pn**	**03 20 05.4**	**+1.1**
	0.6nm91nm,0.8s								
KASI	**Kota Agung**	**5.82**	**132**	P			**Pn**	**03 20 06.7**	**-0.2**
	0.4nm87nm,0.7s								
IPM	**Ipoh**	**6.10**	**8**	Pn			**Pn**	**03 20 12.4**	**+1.6**
KULM	**Kulim**	**6.86**	**4**	Pn			**Pn**	**03 20 23.6**	**+2.3**
LEM	**Lembang**	**9.06**	**125**	LR			LR	03 24 37.6	
	comp=Z,308nm,21.4s,baz=281,slow=39								
SBUM	**Sibu**	**12.70**	**72**				**Pn**	**03 21 44.1**	**+2.8**
KAPI	**Kappang**	**19.84**	**100**	P			**P**	**03 23 11.5**	**+0.2**
	1.7nm,0.3s,baz=257,slow=13,SNR=7.4								
KAPI				LR			LR	03 30 55.3	
	comp=Z,117nm,19.4s,baz=263,slow=37								
	14nm,0.7s								
KAPI	**Kappang**	**19.84**	**100**	P			**Pn**	**03 23 12.3**	**-0.7**
KAPI				IAmb			IAmb	03 23 20.1	
	comp=Z,58nm,1.4s								
CM31	**Chiang Mai Arr**	**19.97**	**357**	P			**P**	**03 23 12.6**	**-0.1**
CMAR	**Chiang Mai Arr**	**19.97**	**357**	P			**P**	**03 23 12.2**	**-0.5**
	comp=Z,0.6nm,0.3s,baz=188,slow=9.6,SNR=10								
CMAR				LR			LR	03 30 46.5	
	comp=Z,95nm,18.6s,baz=175,slow=36								
	comp=Z,2.3nm,0.7s								
CMAR	**Chiang Mai Arr**	**19.97**	**357**	P			**P**	**03 23 11.6**	**-1.1**
CHTO	**Chiang Mai**	**20.32**	**357**	P			**P**	**03 23 16.4**	**-0.1**
TOLI2	**Tolitoli**	**20.78**	**83**	P			**P**	**03 23 21.3**	**-0.3**
TOLI2				IAmb			IAmb	03 23 31.8	
	comp=Z,32nm,1.3s								
H08S2	**Diego Garcia H**	**28.22**	**257**	T			T	03 53 19.1	
	baz=80,slow=76,SNR=93								
H08S3	**Diego Garcia H**	**28.23**	**257**	T			T	03 53 19.7	
	baz=80,slow=76,SNR=78								
H08S1	**Diego Garcia H**	**28.24**	**257**	T			T	03 53 16.6	
	baz=80,slow=76,SNR=72								
SIJI	**Sorong**	**31.10**	**89**	P			**P**	**03 24 57.5**	**-1.2**
	comp=Z,6.9nm,0.6s,baz=253,slow=19,SNR=4.1								
	comp=Z,6.9nm,0.6s								
MTN	**Manton Dam**	**32.63**	**111**	P			**P**	**03 25 13.0**	**+0.8**
MTN				IAmb			IAmb	03 25 32.4	
	comp=Z,9.2nm,1.4s								
NJ2	**Nanjing**	**37.86**	**26**	*e*P			**P**	**03 25 59.4**	**+2.4**
NJ2				pmax			pmax		
	comp=Z,7.0nm,0.7s								
GOMU	**GeErMu**	**37.93**	**353**	P			**P**	**03 25 56.5**	**-1.5**
GOMU				pP			pP	03 26 00.3	-5.7
GOMU				sP			sP	03 26 01.9	-7.3
GOMU				pmax			pmax		
	comp=Z,4.0nm,0.5s								
GOMU				pmax			pmax		
	comp=Z,63nm,5.2s								
WRA	**Warramunga Arr**	**38.05**	**121**	P			**P**	**03 25 57.1**	**-1.7**
	comp=Z,1.1nm,0.5s,baz=304,slow=9.2,SNR=24								
WRA				PcP			**PcP**	**03 28 13.7**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=318,slow=2.3,SNR=5.2								
	comp=Z,1.1nm,0.5s								
WRA	**Warramunga Arr**	**38.05**	**121**	P			**P**	**03 25 57.8**	**-1.1**
WR0	**Warramunga Arr**	**38.23**	**121**	P			**P**	**03 25 59.0**	**-1.3**
WR0				IAmb			IAmb	03 26 19.4	
	comp=Z,13nm,1.1s								
AS31	**Alice Springs**	**39.35**	**127**	P			**P**	**03 26 08.7**	**-1.1**
ASAR	**Alice Springs**	**39.35**	**127**	P			**P**	**03 26 08.8**	**-1.0**
	comp=Z,2.9nm,0.6s,baz=300,slow=8.0,SNR=18								
ASAR				PcP			**PcP**	**03 28 18.1**	**0.0**
	comp=Z,0.8nm,0.4s,baz=308,slow=2.5,SNR=5.8								
ASAR				LR			LR	03 44 19.8	
	comp=Z,46nm,19.5s,baz=336,slow=39								
	comp=Z,2.9nm,0.6s								
ASAR	**Alice Springs**	**39.35**	**127**	P			**P**	**03 26 08.6**	**-1.2**
HHC	**Hu-ho-hao-te**	**43.50**	**13**	*e*P			**P**	**03 26 47.4**	**+3.8**
HHC				PP			**PcP**	**03 28 31.4**	**+0.1**
HHC				S			**S**	**03 33 15.5**	**+4.7**
HHC				pmax			pmax		
	comp=Z,15nm,0.8s								
HHC				pmax			pmax		
	comp=Z,89nm,8.6s								
HHC				LR			LR		
	comp=N,200nm,14.5s								
HHC				LR			LR		
	comp=E,280nm,15.4s								
HHC				LR			LR		
	comp=Z,150nm,13.5s								
BJI	**Beijing**	**43.95**	**18**	P			**P**	**03 26 48.9**	**+1.8**
BJI				pmax			pmax		
	comp=Z,5.0nm,1.1s								
WMQ	**Urumqi**	**46.58**	**348**	*e*P			**P**	**03 27 08.5**	**+0.5**
WMQ				pmax			pmax		
	comp=Z,28nm,0.6s								
KSRS	**Korea Array**	**46.59**	**31**	P			**P**	**03 27 06.7**	**-1.4**
	comp=Z,1.6nm,0.7s,baz=224,slow=8.4,SNR=6.9								
	comp=Z,1.6nm,0.7s								
PMG	**Port Moresby**	**47.36**	**101**	LR			LR	03 49 12.0	
	comp=Z,85nm,18.2s,baz=228,slow=39								
KDJ	**Kajisay**	**48.24**	**337**	P			**P**	**03 27 19.5**	**-1.6**
KDJ				IAmb			IAmb	03 27 26.3	
	comp=Z,12nm,1.2s								
DRK	**Karamyk**	**48.46**	**331**	P			**P**	**03 27 21.1**	**-1.8**
GAR	**Garm**	**48.84**	**329**	P			**P**	**03 27 25.4**	**-0.3**
GAR				IAmb			IAmb	03 27 33.2	
	comp=Z,11nm,1.2s								
BOOM	**Boomskoye usch**	**49.04**	**336**	P			**P**	**03 27 25.9**	**-1.3**
BOOM				IAmb			IAmb	03 27 32.6	
	comp=Z,5.8nm,0.9s								
STKA	**Stephens Creek**	**49.29**	**132**	P			**P**	**03 27 28.9**	**-0.2**
	comp=Z,4.3nm,0.6s,baz=306,slow=7.8,SNR=9.8								
	comp=Z,4.3nm,0.6s								

STKA	**Stephens Creek**	**49.29**	**132**	P		**P**	**03 27 28.3**	**-0.8**
SONM	**Songino Array**	**49.53**	**6**	P		**P**	**03 27 30.1**	**-0.7**
	comp=Z,4.3nm,1.0s,baz=192,slow=7.6,SNR=6.7							
	comp=Z,4.3nm,1.0s							
SONM	**Songino Array**	**49.53**	**6**	P		**P**	**03 27 30.8**	**0.0**
SONM				IAmb		IAmb	03 27 34.3	
	comp=Z,2.9nm,0.8s							
ULN	**Ulaanbaatar**	**49.63**	**6**	P		**P**	**03 27 31.8**	**+0.2**
ULN				IAmb		IAmb	03 27 35.5	
	comp=Z,5.9nm,1.2s							
AAK	**Ala-Archa**	**49.75**	**335**	P		**P**	**03 27 32.4**	**-0.2**
AAK				IAmb		IAmb	03 27 45.2	
	comp=Z,2.6nm,0.8s							
MK31	**Makanchi Array**	**50.69**	**344**	P		**P**	**03 27 38.1**	**-1.4**
MK31				IAmb		IAmb	03 27 43.4	
	comp=Z,6.8nm,0.8s							
MKAR	**Makanchi Array**	**50.69**	**344**	P		**P**	**03 27 39.0**	**-0.6**
	comp=Z,4.7nm,0.4s,baz=161,slow=8.7,SNR=40							
	comp=Z,4.7nm,0.4s							
MKAR	**Makanchi Array**	**50.69**	**344**	P		**P**	**03 27 38.7**	**-0.8**
MAKZ	**Makanchi**	**50.79**	**344**	P		**P**	**03 27 39.1**	**-1.1**
MAKZ				IAmb		IAmb	03 27 44.0	
	comp=Z,5.4nm,0.8s							
KK31	**Karatay Array**	**51.88**	**333**	P		**P**	**03 27 48.9**	**+0.4**
KK31				IAmb		IAmb	03 28 07.1	
	comp=Z,3.6nm,1.2s							
KKAR	**Karatay Array**	**51.88**	**333**	P		**P**	**03 27 49.4**	**+1.0**
USRK	**Ussuriysk Ar.**	**53.72**	**28**	P		**P**	**03 27 59.7**	**-2.4**
	comp=Z,3.9nm,0.6s,baz=239,slow=4.7,SNR=6.3							
	comp=Z,3.9nm,0.6s							
USRK	**Ussuriysk Ar.**	**53.72**	**28**	P		**P**	**03 28 01.1**	**-1.0**
KURK	**Kurchatov**	**55.27**	**343**	P		**P**	**03 28 12.7**	**-0.5**
ZAA0	**Zalesovo Array**	**56.81**	**349**	P		**P**	**03 28 23.5**	**-0.6**
ZALV	**Zalesovo Beam**	**56.81**	**349**	P		**P**	**03 28 23.3**	**-0.8**
	comp=Z,6.6nm,0.8s,baz=163,slow=5.6,SNR=16							
	comp=Z,6.6nm,0.8s							
KLR	**Kul'dur**	**57.50**	**24**	LR		LR		
	comp=Z,42nm,18.8s,baz=255,slow=37							
BRVK	**Borovoye**	**59.93**	**340**	P		**P**	**03 28 46.2**	**+0.2**
BRVK				IAmb		IAmb	03 28 53.3	
	comp=Z,3.9nm,0.7s							
ABKAR	**Akbulak array**	**61.37**	**331**	P		**P**	**03 28 54.5**	**-1.3**
GURO	**Guroymak-BITLI**	**66.64**	**313**	P		**P**	**03 29 29.9**	**-1.0**
GURO				IAmb		IAmb	03 29 36.1	
	comp=Z,2.9nm,0.9s							
MARD	**Mardin**	**67.10**	**312**	P		**P**	**03 29 33.9**	**0.0**
MARD				IAmb		IAmb	03 29 38.8	
	comp=Z,6.9nm,0.8s							
YAK	**Yakutsk**	**67.31**	**15**	LR		LR	04 00 18.0	
	comp=Z,36nm,18.5s,baz=267,slow=37							
KBZ	**Khabaz**	**68.12**	**319**	P		**P**	**03 29 40.6**	**+0.7**
	comp=Z,2.8nm,0.7s,baz=154,slow=5.8,SNR=5.9							
	comp=Z,2.8nm,0.7s							
MBAR	**Mbarara**	**69.42**	**270**	LR		LR	03 56 25.3	
	comp=Z,25nm,19.8s,baz=70,slow=32							
EIL	**Elat**	**69.45**	**302**	LR		LR	04 00 52.7	
	comp=Z,53nm,18.2s,baz=90,slow=36							
MAW	**Mawson**	**70.71**	**194**	P		**P**	**03 29 56.9**	**+1.4**
	comp=Z,2.7nm,0.9s,baz=45,slow=13,SNR=3.6							
	comp=Z,2.7nm,0.9s							
NRIK	**Noril'sk**	**71.32**	**355**	P		**P**	**03 29 59.0**	**-0.1**
NRIK				IAmb		IAmb	03 30 01.5	
	comp=Z,3.4nm,0.8s							
BRTR	**Keskin Array B**	**73.18**	**312**	P		**P**	**03 30 12.1**	**+0.9**
	comp=Z,1.1nm,0.7s,baz=152,slow=8.0,SNR=6.3							
	comp=Z,1.1nm,0.7s							
BRTR	**Keskin Array B**	**73.18**	**312**	P		**P**	**03 30 10.2**	**-0.9**
RPZ	**Rata Peaks**	**75.14**	**135**	LR		LR	04 03 20.6	
	comp=Z,49nm,19.1s,baz=292,slow=36							
TIXI	**Tiksi**	**75.44**	**9**	P		**P**	**03 30 22.8**	**-0.6**
TIXI				IAmb		IAmb	03 30 26.2	
	comp=Z,3.5nm,0.5s							
BOSA	**Boshof**	**76.00**	**241**	P		**P**	**03 30 29.1**	**+1.4**
	comp=Z,3.9nm,1.0s,baz=123,slow=6.7,SNR=4.8							
	comp=Z,3.9nm,1.0s							
BOSA	**Boshof**	**76.00**	**241**	IAmb		IAmb	03 30 33.6	
	comp=Z,6.9nm,1.1s							
VNDA	**Vanda**	**82.52**	**169**	P		**P**	**03 31 02.0**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=318,slow=5.0,SNR=5.2							
	comp=Z,1.0nm,0.8s							
FINES	**FINESS Array B**	**83.84**	**332**	P		**P**	**03 31 08.4**	**-0.8**
	comp=Z,1.4nm,0.6s,baz=95,slow=4.6,SNR=6.1							
	comp=Z,1.4nm,0.6s							
ARCES	**ARCESS Array B**	**86.16**	**340**	P		**P**	**03 31 20.8**	**+0.1**
	comp=Z,3.6nm,0.9s,baz=92,slow=6.1,SNR=4.3							
	comp=Z,3.6nm,0.9s							
GERES	**GERESS Array B**	**88.86**	**319**	P		**P**	**03 31 36.0**	**+1.6**
	comp=Z,0.6nm,0.8s,baz=78,slow=7.0,SNR=6.0							
	comp=Z,0.6nm,0.8s							
STAL	**STALIGIAL**	**89.38**	**316**	P		**P**	**03 31 36.6**	**-0.1**
BDFB	**Brasilia**	**144.19**	**240**	PKP		**PKPdf**	**03 38 16.1**	**-0.8**
	comp=Z,0.8nm,0.4s,baz=128,slow=2.2,SNR=3.2							
TXAR	**Lajitas Array**	**144.28**	**37**	PKP		PKPbc	03 38 15.0	0.0
	comp=Z,2.1nm,0.7s,baz=220,slow=0.3,SNR=25							
TXAR	**Lajitas Array**	**144.28**	**37**	PKPdf		**PKPab**	**03 38 14.4**	**-0.2**
CPUP	**Villa Florida**	**144.74**	**217**	PKP		**PKPdf**	**03 38 17.5**	**0.0**
	comp=Z,8.2nm,0.9s,baz=133,slow=3.7,SNR=10							
CPUP	**Villa Florida**	**144.74**	**217**	PKPdf		**PKPdf**	**03 38 18.1**	**+0.6**

PRU 04 03:36:53.1±0.0, 50°.26N×19°.26E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
LANS	**Liptovska Anna**	**1.12**	**173**	*e*PG			Pg	03 37 13.1	-1.4
LANS				*e*SG			Sg	03 37 28.4	-0.6
LANS				*e*LG			Lg	03 37 30.0	
MAUC	**Maruska**	**1.29**	**227**	*e*PG			Pg	03 37 16.8	-1.0
MAUC				*e*SG			Sb	03 37 35.1	-0.3
KRLC	**Kraliky**	**1.60**	**264**	*e*PG			Pn	03 37 21.9	-0.8
KRLC				*e*SG			Sn	03 37 43.2	-1.0
KRLC	**Kraliky**	**1.60**	**264**	*e*			Pn	03 37 21.9	-0.8
KRLC	**Kraliky**	**1.60**	**264**	*e*			Sg	03 37 43.2	-1.4
VYHS	**Vyhne**	**1.79**	**189**	*e*PN			Pn	03 37 23.7	-1.5
VYHS				*e*SN			Sn	03 37 46.4	-2.3
DPC	**Dobruska-Polom**	**1.89**	**274**	*e*SG			Sg	03 37 53.6	-0.1
DPC	**Dobruska-Polom**	**1.89**	**274**	*e*			Sg	03 37 53.6	-0.1

*IDC **04** 03:43:30.2±1.1, 19°.52S×67°.25E, h0km, mb4.0/10, mbtmp4.0/10, MS3.4/6, Error ellipse: s-maj=40.3km s-min=21.6km az=61.0*

ISC 04 03:43:31.8±1.0, 19°.5S±0°.2×67°.2E±0°.3, h10km, n19, σ1s18/10, mb4.1/11, MS3.3/6, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
H08S1	**Diego Garcia H**	**12.87**	**24**	T			T	04 00 49.6	
	baz=204,slow=75,SNR=12								
H08S2	**Diego Garcia H**	**12.87**	**24**	T			T	04 00 41.0	
	baz=204,slow=75,SNR=8.8								
H08S3	**Diego Garcia H**	**12.88**	**24**	T			T	04 00 43.7	
	baz=204,slow=75,SNR=22								
PALK	**Pallekele**	**29.76**	**28**	LR		LR	LR	03 59 03.5	
	comp=Z,72nm,21.9s,baz=237,slow=31								
LSZ	**Lusaka**	**37.44**	**270**	LR		LR	LR	04 03 12.4	
	comp=Z,65nm,20.9s,baz=138,slow=32								
LBTB	**Lobatse**	**38.80**	**254**	LR		LR	LR	04 04 24.4	
	comp=Z,37nm,19.0s,baz=108,slow=32								
SUR	**Sutherland**	**43.34**	**243**	LR		LR	LR	04 08 04.7	
	comp=Z,54nm,18.1s,baz=108,slow=34								
TSUM	**Tsumeb**	**46.70**	**262**	LR		LR	LR	04 08 14.5	
	comp=Z,27nm,20.2s,baz=94,slow=32								
MAW	**Mawson**	**48.14**	**182**	P			**P**	**03 52 12.5**	**+0.8**
	2.0nm,0.8s,baz=321,slow=7.9,SNR=4.3								
	2.0nm,0.8s								
CMAR	**Chiang Mai Arr**	**48.93**	**41**	P			P	03 52 22.6	+4.1
	1.4nm,0.3s,baz=230,slow=7.3,SNR=5.4								
ASAR	**Alice Springs**	**61.64**	**107**	P			**P**	**03 53 49.6**	**-0.7**
	1.3nm,0.8s,baz=259,slow=6.9,SNR=9.2								
	1.3nm,0.8s								
WRA	**Warramunga Arr**	**62.75**	**103**	P			**P**	**03 53 57.8**	**-0.1**
	2.0nm,1.0s,baz=265,slow=6.0,SNR=7.9								
	2.0nm,1.0s								
BRTR	**Keskin Array B**	**66.77**	**332**	P			**P**	**03 54 23.2**	**-0.4**
	0.6nm,0.7s,baz=159,slow=4.5,SNR=2.8								
	0.6nm,0.7s								
STKA	**Stephens Creek**	**66.99**	**117**	P			**P**	**03 54 24.1**	**-1.1**
	1.0nm,0.7s,baz=353,slow=8.1,SNR=2.9								
STKA				LR			LR	04 19 30.5	
	comp=Z,37nm,18.3s,baz=206,slow=32								
	1.0nm,0.7s								
MKAR	**Makanchi Array**	**67.40**	**11**	P			**P**	**03 54 28.7**	**+1.3**
	1.4nm,1.0s,baz=190,slow=6.2,SNR=6.6								
	1.4nm,1.0s								
ZALV	**Zalesovo Beam**	**74.73**	**11**	P			**P**	**03 55 10.1**	**-1.5**
	1.4nm,0.6s,baz=217,slow=4.7,SNR=5.4								
	1.4nm,0.6s								

SONM	**Songino Array**	**75.69**	**26**	P		**P**	**03 55 17.9**	**+0.4**
	1.2nm,0.7s,baz=241,slow=3.1,SNR=5.0							
	1.2nm,0.7s							
AKASG	**Malin Array Be**	**77.52**	**336**	P		**P**	**03 55 26.9**	**-0.7**
	0.2nm,0.2s,baz=148,slow=3.1,SNR=4.6							
	0.2nm,0.2s							
MJAR	**Matsushiro Arr**	**87.10**	**50**	P		**P**	**03 56 19.7**	**+1.6**
	2.0nm,0.8s,baz=203,slow=4.6,SNR=5.0							
	2.0nm,0.8s							

*IDC **04** 03:53:06.7±1.6, 36°.29N×3°.63E, h0km, mb3.3/2, mbtmp3.4/5, ML3.5/3, MS3.1/3, Error ellipse: s-maj=36.9km s-min=23.1km az=126.0*
*CNRM **04** 03:53:06.5, 36°.42N×3°.44E, h0km, ml4.0*
*CRAAG **04** 03:53:07.6, 36°.31N×3°.41E, Ml3.8, Hypocentre not reviewed by the ISC*
*MDD **04** 03:53:07.2±0.6, 36°.25N×3°.57E, h0km, Mb4.3/25, M_mb3.7/19, Error ellipse: s-maj=5.3km s-min=3.0km az=143.0*
*LDG **04** 03:53:07.3±0.2, 36°.24N×3°.50E, h30km, Ml3.5/29, Error ellipse: s-maj=5.0km s-min=2.5km az=154.0*

ISC 04 03:53:09.0±0.9, 36°.48N±0°.06×3°.60E±0°.06, h18km, n102, σ2s56/112, 21C, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
ADJB	**Djebel Djouab**	**0.34**	**202**	P				03 53 12.0	
AKET	**Djebel Ketaf**	**0.49**	**152**	P				03 53 17.8	
ABA	**Alger-Bouzarea**	**0.56**	**306**	P				03 53 19.7	
SET	**Setif**	**1.48**	**100**	P				03 53 39.0	
EBNR	**Beni Rached**	**1.68**	**264**	P				03 53 40.0	
ECHA	**Ech Chlef**	**1.83**	**260**	P				03 53 43.0	
DFRA	**Djebel Bou Aff**	**1.84**	**87**	P				03 53 42.5	
EANR	**'Ain N'Sour**	**2.09**	**256**	P				03 53 45.0	
CASM	**Ain Smara**	**2.34**	**94**	P				03 53 57.0	
CKFL	**Kef-Lekhel**	**2.52**	**91**	P				03 54 01.0	
CMAH	**Djebel Manchou**	**3.08**	**86**	P				03 53 59.3	
EIBI	**Ibiza**	**3.11**	**326**	P			**Pn**	**03 53 58.6**	**+1.4**
EIBI				↑*i*Vmb_V				03 54 02.9	
	938nm,SNR=4.3								
EIBI				S			**Sn**	**03 54 34.6**	**+0.8**
ETOS	**Mallorca**	**3.34**	**350**	P			**Pn**	**03 54 01.3**	**+1.0**
ETOS				↑*i*Vmb_V				03 54 05.3	
	526nm,SNR=4.5								
ETOS				S			**Sn**	**03 54 40.0**	**+0.4**
ETRV	**Los Montesinos**	**3.81**	**295**	P			**Pn**	**03 54 05.5**	**-1.1**
ETRV				↑*i*Vmb_V				03 54 10.1	
	284nm,SNR=1.5								
ETRV				S			**Sn**	**03 54 50.4**	**-0.5**
CART	**Cartagena**	**3.84**	**288**	P			**Pn**	**03 54 03.2**	**-3.9**
CART				S			Sn	03 54 38.9	-13
CART	**Cartagena**	**3.84**	**288**	P			**Pn**	**03 54 05.2**	**-1.9**
AFON	**Font Roja**	**3.95**	**305**	P			**Pn**	**03 54 09.7**	**+0.9**
AFON				↑*i*Vmb_V				03 54 13.7	
	236nm,SNR=1.9								
AFON				S			**Sn**	**03 54 54.5**	**-0.2**
EMUR	**La Murta**	**4.10**	**291**	P			**Pn**	**03 54 10.4**	**-0.3**
EMUR				↑*i*Vmb_V				03 54 14.3	
	227nm,SNR=2.1								
EMUR				S			**Sn**	**03 54 58.3**	**0.0**
ECOL	**Islas Columbre**	**4.12**	**327**	P			**Pn**	**03 54 11.8**	**+0.9**
ETOB	**Tobarra**	**4.62**	**299**	P			**Pn**	**03 54 18.6**	**+0.6**
ETOB				↑*i*Vmb_V				03 54 24.3	
	408nm,SNR=4.3								
ETOB				S			**Sn**	**03 55 12.9**	**+1.6**
ENIJ	**Nijar**	**4.69**	**278**	P			**Pn**	**03 54 17.5**	**-1.3**
ENIJ				↑*i*Vmb_V				03 54 20.4	
	288nm,SNR=1.3								
ENIJ				S			**Sn

MDT	**Midelt**	**7.68**	**244**	P	**Pn**	**03 54 58.4**	**-1.7**
IFR	**Ifrane**	**7.74**	**250**	P	Pn	03 55 07.4	+6.4
IFR				S	**Sn**	**03 56 34.1**	**+5.9**
MD31	**MD31**	**7.77**	**245**	P	**Pn**	**03 55 00.1**	**-1.1**
SBF	**Sospel**	**7.94**	**21**	*e*Pn	**Pn**	**03 55 02.4**	**-1.1**
SBF	**Sospel**	**7.94**	**21**	*e*P	**Pn**	**03 55 07.3**	**+3.8**
SBF				*e*Sn	Sn	03 56 28.3	-4.6
	15nm,0.8s						
VIVF	**Saint-Julien-l**	**8.41**	**5**	*e*P	**Pn**	**03 55 12.8**	**+2.9**
VIVF				*e*Sn	Sn	03 56 38.9	-5.5
	5.6nm,0.6s						
CAF	**Calviac**	**8.52**	**353**	*e*P	**Pn**	**03 55 14.7**	**+3.2**
CAF				*e*Sn	Sn	03 56 41.2	-5.9
	1.8nm,0.3s						
MBDF	**Montbardon**	**8.59**	**15**	*e*Pn	**Pn**	**03 55 11.3**	**-1.2**
MBDF	**Montbardon**	**8.59**	**15**	*e*P	**Pn**	**03 55 15.3**	**+2.8**
MBDF				*e*Sn	**Sn**	**03 56 44.8**	**-4.1**
	29nm,1.4s						
ORIF	**Oris-en-Rattie**	**8.61**	**11**	*e*P	**Pn**	**03 55 16.4**	**+3.7**
ORIF				*e*Sn	Sn	03 56 42.4	-7.0
	2.2nm,0.5s						
ELAN	**Lanestosa**	**8.64**	**323**	P	**Pn**	**03 55 17.7**	**+4.6**
ELAN				⇑*i*Vmb_V		03 55 22.8	
	65nm,SNR=0.8						
LFF	**La Frestale**	**8.73**	**347**	*e*P	**Pn**	**03 55 17.5**	**+3.3**
LFF				*e*Sn	Sn	03 56 45.0	-7.1
	3.0nm,0.4s						
ZHG	**ZHG**	**8.93**	**253**	P	**Pn**	**03 55 15.7**	**-1.5**
RJF	**Les Rejaudoux**	**8.96**	**351**	*e*P	**Pn**	**03 55 20.8**	**+3.4**
RJF				*e*Sn	Sn	03 56 51.7	-6.2
	0.9nm,0.3s						
PMRV	**Marv??o**	**9.17**	**292**	*e*LR	LR	03 58 19.6	
	46nm,16.0s						
LPG	**La Plagne**	**9.32**	**14**	*e*P	**Pn**	**03 55 27.1**	**+4.4**
LPG				*e*Sn	Sn	03 57 01.8	-5.4
	0.6nm,0.2s						
LPL	**La Plagne**	**9.34**	**14**	*e*Pn	**Pn**	**03 55 21.4**	**-1.4**
LPL	**La Plagne**	**9.34**	**14**	*e*P	**Pn**	**03 55 26.8**	**+4.0**
LPL				*e*Sn	Sn	03 57 01.9	-5.5
	3.3nm,0.5s						
PCBR	**Castelo Branco**	**9.35**	**294**	*e*P	**Pn**	**03 55 25.1**	**+2.4**
	20nm,1.4s						
MVO	**Moncorvo**	**9.52**	**303**	*e*P	**Pn**	**03 55 26.7**	**+1.5**
MVO				*e*LR	LR	03 58 56.5	
	69nm,18.0s						
MTE	**Manteigas**	**9.58**	**298**	*e*LR	LR	03 58 42.0	
	87nm,16.0s						
PBRG	**Braganca**	**9.63**	**307**	*e*P	**Pn**	**03 55 27.9**	**+1.2**
	12nm,1.5s						
TCF	**Toulx Ste Croi**	**9.86**	**354**	*e*Pn	Pn	03 55 27.4	-2.4
TCF	**Toulx Ste Croi**	**9.86**	**354**	*e*P	**Pn**	**03 55 34.0**	**+4.2**
TCF				*e*Sn	Sn	03 57 13.8	-6.2
	1.7nm,0.5s						
PVRL	**Vila Real**	**10.04**	**302**	*e*P	**Pn**	**03 55 33.1**	**+0.9**
BGF	**Bois d'Agland**	**10.09**	**357**	*e*Pn	Pn	03 55 30.7	-2.2
BGF	**Bois d'Agland**	**10.09**	**357**	*e*P	**Pn**	**03 55 36.7**	**+3.8**
BGF				*e*Sn	Sn	03 57 18.0	-7.6
	4.8nm,0.5s						
POLO	**Lamas de Olo**	**10.13**	**302**	*e*P	**Pn**	**03 55 34.4**	**+0.8**
	6.4nm,1.5s						
SMF	**Signal de Mont**	**10.16**	**1**	*e*Pn	Pn	03 55 31.6	-2.3
SMF	**Signal de Mont**	**10.16**	**1**	*e*P	**Pn**	**03 55 37.9**	**+4.0**
SMF				*e*Sn	Sn	03 57 21.3	-6.1
	24nm,1.5s						
CABF	**La Chapelle**	**10.30**	**10**	*e*P	**Pn**	**03 55 39.4**	**+3.6**
CABF				*e*Sn	Sn	03 57 25.9	-4.9
	4.5nm,0.7s						
AVF	**Avril sur Loir**	**10.31**	**359**	*e*P	**Pn**	**03 55 39.8**	**+3.9**
AVF				*e*Sn	Sn	03 57 25.1	-5.8
	0.8nm,0.4s						
MFF	**Saint Martin d**	**10.50**	**346**	*e*Pn	**Pn**	**03 55 37.0**	**-1.5**
MFF	**Saint Martin d**	**10.50**	**346**	*e*P	**Pn**	**03 55 42.4**	**+3.9**
SSF	**Saint Saulge**	**10.58**	**360**	*e*P	**Pn**	**03 55 43.8**	**+4.2**
SSF				*e*Sn	Sn	03 57 30.3	-7.2
	2.2nm,0.6s						
PGAV	**Gavieira, Arco**	**10.71**	**304**	*e*LR	LR	03 59 16.9	
	86nm,18.0s						
LOR	**Lormes**	**10.79**	**1**	*e*Pn	**Pn**	**03 55 40.4**	**-2.1**
LOR	**Lormes**	**10.79**	**1**	*e*P	**Pn**	**03 55 46.5**	**+4.0**
	baz=180						
LOR				*e*Sn	Sn	03 57 36.0	-6.7
	1.8nm,0.6s						
DAVOX	**Davos/Dischmat**	**11.31**	**23**	LR	LR	04 00 01.6	
	comp=Z,75nm,20.4s,baz=244,slow=36						
HINF	**Hinteralfeld**	**11.59**	**11**	*e*P	**Pn**	**03 55 56.4**	**+3.0**
HAU	**Haudompre**	**11.70**	**9**	*e*Pn	**Pn**	**03 55 53.5**	**-1.5**
HAU	**Haudompre**	**11.70**	**9**	*e*P	**Pn**	**03 55 58.2**	**+3.2**
SFTF	**Sexfontaines**	**11.77**	**5**	*e*Pn	**Pn**	**03 55 54.1**	**-1.8**
SFTF	**Sexfontaines**	**11.77**	**5**	*e*P	**Pn**	**03 55 59.6**	**+3.7**
MEZF	**Maizieres J'vi**	**12.07**	**5**	*e*Sn	**Sn**	**03 58 10.0**	**-4.0**
	3.8nm,0.7s						
SAVF	**Savonnieres en**	**12.19**	**5**	*e*Sn	Sn	03 58 09.1	-7.7
	2.9nm,0.5s						
CDF	**Champ du Feu**	**12.23**	**12**	*e*Pn	Pn	03 56 00.1	-2.2
CDF	**Champ du Feu**	**12.23**	**12**	*e*P	**Pn**	**03 56 06.0**	**+3.7**
GRR	**Gorron**	**12.35**	**346**	*e*Pn	Pn	03 55 59.4	-4.4
LDF	**La Druitiere**	**12.41**	**348**	*e*P	**Pn**	**03 56 07.0**	**+2.3**
SGMF	**Saint Gilles**	**12.61**	**341**	*e*Pn	Pn	03 56 04.7	-2.7
SGMF	**Saint Gilles**	**12.61**	**341**	*e*P	**Pn**	**03 56 09.7**	**+2.3**
ROSF	**Rostrenen**	**12.89**	**339**	*e*Pn	**Pn**	**03 56 09.3**	**-1.8**
GIVF	**Givet**	**13.65**	**3**	*e*Pn	**Pn**	**03 56 20.4**	**-1.1**
GIVF	**Givet**	**13.65**	**3**	*e*P	**Pn**	**03 56 24.5**	**+3.0**
GIVF				*e*Sn	Sn	03 58 42.7	-10
	9.0nm,0.7s						
GERES	**GERESS Array B**	**14.41**	**28**	Pn	**Pn**	**03 56 35.1**	**+3.1**
	0.1nm,0.3s,baz=200,slow=11,SNR=10						
	1.0nm,0.8s						
AKASG	**Malin Array Be**	**23.23**	**44**	P	**P**	**03 58 15.9**	**+0.9**
	0.3nm,0.3s,baz=245,slow=10,SNR=3.5						
	0.3nm,0.3s						
TORD	**Torodi Ar. Bea**	**23.29**	**185**	P	**P**	**03 58 14.1**	**-1.7**
	1.0nm,1.0s,baz=1.7,slow=11,SNR=5.3						
	1.0nm,1.0s						
ARU	**Arti**	**41.48**	**43**	LR	LR	04 18 41.8	
	comp=Z,25nm,18.8s,baz=130,slow=37						
ZALV	**Zalesovo Beam**	**56.62**	**44**	LR	LR	04 27 25.9	
	comp=Z,14nm,19.5s,baz=232,slow=36						

*IDC **04** 03:53:40.6±1.5,22°.19N×122°.58E,h0km,mb3.7/3, mbtmp3.7/3,MS3.7/1,Error ellipse: s-maj=90.5km s-min=31.4km az=72.0*
*JMA **04** 03:53:59.5±0.2,24°.3N±0°.9×123°.4E±0°.4,h51km±1km, MV3.0/9,NEAR ISHIGAKIJIMA ISLAND*
ISC 04 03:53:59.1±1.2,**24°.3N**±0°.1×**123°.39E**±0°.05,**h53**km±9km, **n12**,σ0**942**/18,**mb3.7**/3,**Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.32**	**76**	*i* P	**Pn**	**03 54 08.5**	**-0.2**
IRIF				S	**Sn**	**03 54 15.3**	**-0.2**
YOJ	**Yonaguni jima**	**0.40**	**300**	*i* P	**Pn**	**03 54 09.8**	**+0.3**
YOJ				S	**Sn**	**03 54 17.3**	**+0.3**
HATJ	**Hateruma jima**	**0.43**	**118**	*i* P	**Pn**	**03 54 09.8**	**0.0**
HATJ				S	**Sn**	**03 54 17.5**	**+0.1**
JYNG	**Yonagunijimaku**	**0.45**	**295**	*i* P	**Pn**	**03 54 10.2**	**+0.2**
JYNG				S	**Sn**	**03 54 17.9**	**0.0**
JKRS	**Kuro-shima**	**0.56**	**92**	*i* P	**Pn**	**03 54 11.6**	**+0.3**
JKRS				S	**Sn**	**03 54 20.3**	**+0.2**
JIJ	**Ishigaki jima**	**0.69**	**81**	*i* P	**Pn**	**03 54 12.9**	**+0.1**
JIJ				S	**Sn**	**03 54 22.9**	**0.0**
JISG	**Ishigakijimahi**	**0.90**	**69**	*i* P	**Sn**	**03 54 15.0**	**-0.5**
JISG				*e*S	**Sn**	**03 54 27.4**	**-0.2**
JTJ	**Tarama**	**1.25**	**72**	P	**Pn**	**03 54 21.0**	**+0.8**
JTJ				*e*S	**Sn**	**03 54 37.0**	**+0.9**
ZALV	**Zalesovo Beam**	**41.29**	**326**	P	**P**	**04 01 38.7**	**-0.4**
	0.9nm,0.4s,baz=120,slow=9.5,SNR=3.8						
	0.9nm,0.4s						
WRA	**Warramunga Arr**	**45.21**	**165**	P	P	04 01 45.4	-26
	0.3nm,0.9s,baz=338,slow=9.6,SNR=5.1						
	0.3nm,0.9s						
WSAR	**Wadi Sarin**	**58.78**	**283**	LR	LR	04 31 10.3	
	comp=Z,57nm,18.1s,baz=96,slow=38						
YKA	**Yellowknife Ar**	**82.11**	**23**	P	**P**	**04 06 13.7**	**0.0**
	0.5nm,0.6s,baz=305,slow=5.3,SNR=5.4						
	0.5nm,0.6s						

*SSS **04** 04:03:09.5,12°.29N×89°.37W,h14km,ML3.5*
*SNET **04** 04:03:09.5±1.4,12°.29N×89°.37W,h14km±6km,ML3.5*
*UCR **04** 04:03:11.5±1.8,12°.51N×89°.29W,h0km±6km,ML3.4, mb4.2(NEIC)*
*IDC **04** 04:03:12.1±2.2,13°.24N×88°.75W,h0km,mb3.7/6,*

mbtmp3.7/8,ML3.3/2,MS3.1/2,Error ellipse: s-maj=59.4km s-min=27.1km az=35.0
*INET **04** 04:03:12.3±1.0,12°.51N×89°.28W,h1km±4km,MW3.4*
*NEIC **04** 04:03:16.8±1.1,12°.64N±0°.09×89°.21W±0°.06,h50km±11km, mb4.2/32,Error ellipse: s-maj=13.7km s-min=7.1km az=204.0*
*GCG **04** 04:03:22.9±4.7,13°.20N×89°.54W,h6km±89km,MD4.1*
ISC 04 04:03:15.7±1.3,**12°.56N**±0°.06×**89°.28W**±0°.05,**h56**km±12km, **n108**,σ1**950**/110,**mb4.0**/19,**4C**,**Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.93**	**358**	*e*P	**Pn**	**04 03 31.0**	**-1.7**
LALI				IAML		04 03 38.9	
	comp=Z,520nm,0.5s						
LALI	**Alcalda de L**	**0.93**	**358**	*e*P	**Pn**	**04 03 31.0**	**-1.7**
LALI				IAML		04 03 38.9	
	comp=Z,520nm,0.5s						
LALI	**Alcalda de L**	**0.93**	**358**	*e*P	**Pn**	**04 03 31.1**	**-1.5**
LFRS	**El Faro**	**1.08**	**11**	*e*P	**Pn**	**04 03 33.3**	**-1.5**
LFRS	**El Faro**	**1.08**	**11**	*e*P	**Pn**	**04 03 33.3**	**-1.5**
SJTE	**Alcalda de S**	**1.08**	**14**	*e*P	**Pn**	**04 03 33.3**	**-1.5**
SJTE	**Alcalda de S**	**1.08**	**14**	*e*P	**Pn**	**04 03 33.3**	**-1.5**
JAYA	**Jayaque - finc**	**1.10**	**351**	*e*P	**Pn**	**04 03 33.1**	**-2.0**
JAYA	**Jayaque - finc**	**1.10**	**351**	*e*P	**Pn**	**04 03 33.1**	**-2.0**
SNET	**Serv Nac Est T**	**1.12**	**2**		**Pn**	**04 03 34.0**	**-1.3**
SNET	**Serv Nac Est T**	**1.12**	**2**	*e*P	**Pn**	**04 03 33.9**	**-1.5**
SNET	**Serv Nac Est T**	**1.12**	**2**	*e*P	**Pn**	**04 03 33.9**	**-1.5**
SNET	**Serv Nac Est T**	**1.12**	**2**	*e*P	**Pn**	**04 03 34.1**	**-1.3**
COEG	**Centro de Oper**	**1.13**	**20**	*e*P	**Pn**	**04 03 33.9**	**-1.5**
COEG				IAML		04 04 05.5	
	comp=Z,857nm,0.3s						
COEG	**Centro de Oper**	**1.13**	**20**	*e*P	**Pn**	**04 03 33.9**	**-1.5**
COEG				IAML		04 04 05.5	
	comp=Z,857nm,0.3s						
LFU	**La Fuente**	**1.20**	**8**	*e*P	**Pn**	**04 03 35.8**	**-0.5**
LFU	**La Fuente**	**1.20**	**8**	*e*P	**Pn**	**04 03 35.8**	**-0.5**
PAVA	**Las Pavas**	**1.20**	**16**	⇑*e*P	**Pn**	**04 03 35.4**	**-1.0**
PAVA	**Las Pavas**	**1.20**	**16**	⇑*e*P	**Pn**	**04 03 35.4**	**-1.0**
PAVA	**Las Pavas**	**1.20**	**16**	*e*P	**Pn**	**04 03 35.4**	**-1.0**
CEDA	**San Andres**	**1.24**	**355**	*e*P	**Pn**	**04 03 36.7**	**-0.2**
CEDA	**San Andres**	**1.24**	**355**	*e*P	**Pn**	**04 03 36.7**	**-0.2**
CEDA	**San Andres**	**1.24**	**355**	*e*P	**Pn**	**04 03 36.4**	**-0.5**
PACA	**Pacayal**	**1.30**	**46**	*e*P	**Pn**	**04 03 37.7**	**0.0**
PACA	**Pacayal**	**1.30**	**46**	*e*P	**Pn**	**04 03 37.7**	**0.0**
PACA	**Pacayal**	**1.30**	**46**	*e*P	**Pn**	**04 03 37.4**	**-0.3**
CEVE	**Cerro Verde**	**1.31**	**345**	*e*P	**Pn**	**04 03 36.1**	**-1.8**
CEVE	**Cerro Verde**	**1.31**	**345**	*e*P	**Pn**	**04 03 36.1**	**-1.8**
SBLS	**San Blas**	**1.32**	**345**	*e*P	**Pn**	**04 03 36.8**	**-1.3**
SBLS	**San Blas**	**1.32**	**345**	*e*P	**Pn**	**04 03 36.8**	**-1.3**
SNJE	**San Jose**	**1.34**	**346**	*e*P	**Pn**	**04 03 37.3**	**-1.1**
SNJE				IAML		04 04 04.6	
	comp=Z,509nm,0.5s						
SNJE	**San Jose**	**1.34**	**346**	*e*P	**Pn**	**04 03 37.3**	**-1.1**
SNJE				IAML		04 04 04.6	
	comp=Z,509nm,0.5s						
RTR	**El Retiro**	**1.38**	**345**	*e*P	**Pn**	**04 03 38.4**	**-0.5**
RTR	**El Retiro**	**1.38**	**345**	*e*P	**Pn**	**04 03 38.4**	**-0.5**
NUBE	**Las Nubes**	**1.42**	**340**	*e*P	**Pn**	**04 03 37.3**	**-2.1**
NUBE				*e*	**Sn**	**04 03 59.4**	**+2.2**
NUBE				*e*S	**Sn**	**04 03 59.4**	**+2.2**
NUBE	**Las Nubes**	**1.42**	**340**	*e*P	**Pn**	**04 03 37.3**	**-2.1**
NUBE				*e*S	**Sn**	**04 03 59.4**	**+2.2**
NUBE				*e*		04 03 59.4	
SLOZ	**Alcaldia de Sa**	**1.54**	**342**	*e*P	**Pn**	**04 03 39.4**	**-1.5**
SLOZ				*e*S	**Sn**	**04 04 03.5**	**+3.6**
SLOZ				IAML		04 04 12.7	
	comp=Z,530nm,0.7s						
LCND	**La Caada**	**1.55**	**61**	*e*P	**Pn**	**04 03 39.8**	**-1.1**
LCND				*e*S	**Sn**	**04 04 02.0**	**+2.0**
LCND				IAML		04 04 08.7	
	comp=Z,596nm,0.3s						
LCND	**La Caada**	**1.55**	**61**	*e*P	**Pn**	**04 03 39.8**	**-1.1**
LCND				*e*S	**Sn**	**04 04 02.0**	**+2.0**
LCND				IAML		04 04 08.7	
	comp=Z,596nm,0.3s						
FAGO	**Alcalda de S**	**1.61**	**45**	*e*P	**Pn**	**04 03 40.1**	**-1.7**
FAGO	**Alcalda de S**	**1.61**	**45**	*e*P	**Pn**	**04 03 40.1**	**-1.7**
FAGO	**Alcalda de S**	**1.61**	**45**	*e*P	**Pn**	**04 03 40.6**	**-1.2**
CRIN	**San Cristobal**	**2.18**	**86**	Pn	**Pn**	**04 03 50.1**	**+0.4**
CRIN	**San Cristobal**	**2.18**	**86**	*e*P	**Pn**	**04 03 49.2**	**-0.4**
CRIN				*e*S	**Sn**	**04 04 20.0**	**+4.4**
NBG	**Las Nubes**	**2.27**	**333**	*e*P	**Pn**	**04 03 51.8**	**+0.8**
TEL3	**Telica 3**	**2.38**	**89**	*e*P	**Pn**	**04 03 51.0**	**-1.3**
FUG	**Fuego 3**	**2.42**	**321**	*e*P	**Pn**	**04 03 51.5**	**-1.5**
FUG				*e*S	**Sn**	**04 04 20.0**	**-1.5**
TGUH	**Tegucigalpa,Un**	**2.46**	**52**	Pn	**Pn**	**04 03 53.4**	**-0.1**
CNGN	**Cerro Negro**	**2.52**	**91**	Pn	**Pn**	**04 03 55.2**	**+0.9**
CNGN	**Cerro Negro**	**2.52**	**91**	*e*P	**Pn**	**04 03 53.4**	**-0.9**
MRL	**Marmol**	**2.54**	**351**	*e*P	**Pn**	**04 03 58.4**	**+3.7**
MRL				*e*S	**Sn**	**04 04 20.0**	**-4.6**
COPN	**Copaltepe**	**2.65**	**98**	*e*P	**Pn**	**04 03 54.2**	**-1.8**
RTAL	**Retalhuleu**	**3.06**	**310**	Pn	**Pn**	**04 04 02.5**	**+0.9**
MATN	**Matagalpa**	**3.29**	**83**	Pn	**Pn**	**04 04 02.3**	**-2.6**
HUEH	**Huehuetenango**	**3.49**	**322**	Pn	**Pn**	**04 04 08.1**	**+0.3**
BOAB	**BOACO BROADBAN**	**3.53**	**91**	Pn	**Pn**	**04 04 08.2**	**+0.2**
HZTE	**Horizontes, Gu**	**4.05**	**117**	*e*P	**Pn**	**04 04 14.5**	**-0.7**
SAJU	**San Juanillo,**	**4.29**	**125**	*e*P	**Pn**	**04 04 16.9**	**-1.6**
ORTG	**Ortega, Santa**	**4.33**	**120**		**Pn**	**04 04 18.9**	**-0.3**
PETF	**Flores**	**4.37**	**353**	Pn	**Pn**	**04 04 19.4**	**-0.2**
VMAR	**Armenia, Volca**	**4.43**	**113**	*e*P	**Pn**	**04 04 20.6**	**+0.2**
CUI	**Cuipilapa**	**4.45**	**115**	*e*P	**Pn**	**04 04 20.9**	**+0.1**
DUNO	**Dulce Nombre,**	**4.46**	**123**	*e*P	**Pn**	**04 04 19.8**	**-1.0**
CCIG	**Comitan**	**4.62**	**324**	Pn	**Pn**	**04 04 24.1**	**+0.9**
JTS	**Las Juntas de**	**4.80**	**118**	Pn	**Pn**	**04 04 25.4**	**-0.2**
	comp=Z,2.3nm,0.3s,baz=13,slow=22,SNR=14						
JTS				Sn	**Sn**	**04 05 15.6**	**-4.4**
	comp=Z,2.6nm,0.3s,baz=295,slow=14,SNR=4.5						
	comp=Z,5.5nm,0.3s						
JTS	**Las Juntas de**	**4.80**	**118**	Pn	**Pn**	**04 04 26.1**	**+0.6**
JTS	**Las Juntas de**	**4.80**	**118**	*e*P	**Pn**	**04 04 25.7**	**+0.1**
LAFE	**Finca La Fe, P**	**5.08**	**122**	*e*P	**Pn**	**04 04 28.3**	**-1.1**
JACO	**JACO, Garabito**	**5.37**	**122**	*e*P	**Pn**	**04 04 34.0**	**+0.7**
RIMA	**Rio Macho**	**6.00**	**117**		**Pn**	**04 04 42.4**	**+0.4**
RIMA	**Rio Macho**	**6.00**	**117**	*e*P	**Pn**	**04 04 42.9**	**+0.8**
CDM	**Cerro de Muert**	**6.18**	**118**	*e*P	**Pn**	**04 04 46.1**	**+1.2**
SRBA	**Sarah Rafael, Bu**	**6.69**	**119**	Pn	**Pn**	**04 04 52.0**	**+0.5**
DRK0	**Durika**	**6.77**	**118**		**Pn**	**04 04 53.9**	**+1.2**
CMIG	**Matias Romero**	**7.05**	**310**	Pn	**Pn**	**04 04 56.2**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=162,slow=11,SNR=6.8						
	comp=Z,1.0nm,0.3s						
342A	**Flagon Creek P**	**18.94**	**352**	P	**P**	**04 07 31.6**	**-0.6**
342A				IAmb	IAmb	04 07 35.5	
	comp=Z,10nm,0.8s						
435B	**Jarrell**	**19.70**	**338**	P	**P**	**04 07 40.7**	**+0.2**
435B				IAmb	IAmb	04 07 41.7	
	comp=Z,14nm,0.8s						
154A	**Montrose**	**20.75**	**15**	P	**P**	**04 07 52.3**	**+0.4**
154A				IAmb	IAmb	04 07 57.2	
	comp=Z,9.9nm,0.9s						
WHTX	**Lake Whitney,**	**20.75**	**340**	P	**P**	**04 07 51.8**	**-0.1**
TX31	**Lajitas Ar. Si**	**21.39**	**323**	P	**P**	**04 07 59.9**	**+1.0**
TX31				IAmb	IAmb	04 08 01.5	
	comp=Z,6.4nm,0.8s						
TXAR	**Lajitas Array**	**21.39**	**323**	P	**P**	**04 08 00.8**	**+1.9**
	comp=Z,1.5nm,0.7s,baz=142,slow=9.9,SNR=26						
	comp=Z,1.5nm,0.7s						
OXF	**Oxford**	**21.86**	**360**	P	**P**	**04 08 04.1**	**+0.4**
MIAR	**Mount Ida**	**22.24**	**351**	P	**P**	**04 08 08.1**	**+0.3**
MIAR				IAmb	IAmb	04 08 11.0	
	comp=Z,8.1nm,0.8s						
UALR	**University of**	**22.29**	**353**	P	**P**	**04 08 08.9**	**+0.5**
UALR				IAmb	IAmb	04 08 34.6	
	comp=Z,6.2nm,0.9s						
HODGE	**Hodges**	**22.50**	**15**	P	**P**	**04 08 10.5**	**-0.1**
WHAR	**Wooly Hollow**	**22.80**	**354**	P	**P**	**04 08 14.2**	**+0.4**
HBAR	**Harrisburg**	**22.93**	**357**	P	**P**	**04 08 15.3**	**+0.2**
LPIG	**La Paz**	**22.99**	**303**	LR	LR	04 18 05.6	
	comp=Z,43nm,20.7s,baz=196,slow=39						
FCAR	**Ozark Folk Cen**	**23.37**	**354**	IAmb	IAmb	04 08 21.9	
	comp=Z,5.2nm,0.9s						
WVT	**Waverly**	**23.51**	**3**	P	**P**	**04 08 22.2**	**+1.5**
TKL	**Tuckaleechee C**	**23.53**	**11**	P	**P**	**04 08 21.2**	**+0.3**
	comp=Z,2.3nm,0.6s,baz=186,slow=11,SNR=7.7						
TKL				LR	LR	04 16 48.7	
	comp=Z,47nm,20.5s,baz=242,slow=36						
CLTN	**Cedars of Leba**	**23.58**	**6**	P	**P**	**04 08 21.3**	**-0.2**
U40A	**Yellville**	**23.91**	**353**	IAmb	IAmb	04 08 26.8	
	comp=Z,4.5nm,0.8s						
T47A	**Sharon Grove**	**24.41**	**4**	IAmb	IAmb	04 08 29.9	
	comp=Z,7.8nm,0.8s						
MGMO	**Mountain Grove**	**24.64**	**354**	IAmb	IAmb	04 08 33.6	
	comp=Z,5.2nm,0.8s						
AMTX	**Amarillo**	**24.91**	**335**	IAmb	IAmb	04 08 35.3	
	comp=Z,5.0nm,0.9s						
CCM	**Cathedral Cave**	**25.45**	**356**	P	**P**	**04 08 38.6**	**+0.2**
CCM				IAmb	IAmb	04 08 41.2	
	comp=Z,8.1nm,0.7s						
R40A	**Maddies Statio**	**25.77**	**355**	IAmb	IAmb	04 08 44.9	
	comp=Z,4.3nm,0.8s						
L40A	**Anamosa**	**29.45**	**357**	IAmb	IAmb	04 09 15.2	
	comp=Z,5.2nm,0.8s						
I42A	**Draeger Farm,**	**31.23**	**1**	P	**P**	**04 09 30.1**	**+0.3**
SPMN	**Marine on St.**	**32.70**	**355**	P	**P**	**04 09 42.3**	**-0.4**
COWI	**Conover**	**33.43**	**0**	P	**P**	**04 09 47.8**	**-1.4**
AGMN	**Agassiz Nation**	**36.05**	**353**	P	**P**	**04 10 11.4**	**-0.3**
AGMN				IAmb	IAmb	04 10 11.7	
	comp=Z,4.0nm,0.8s						
NVAR	**Mina Array Bea**	**36.46**	**320**	P	**P**	**04 10 17.5**	**+1.8**
	comp=Z,0.5nm,0.8s,baz=140,slow=6.4,SNR=4.9						
	comp=Z,0.5nm,0.8s						
ULM	**Lac du Bonnet**	**37.97**	**353**	P	**P**	**04 10 26.6**	**-1.4**
	comp=Z,2.1nm,0.8s,baz=180,slow=10.0,SNR=3.4						
	comp=Z,2.1nm,0.8s						
SCHQ	**Schefferville**	**45.71**	**18**	P	**P**	**04 11 28.4**	**-2.7**
	comp=Z,2.0nm,0.5s,baz=234,slow=13,SNR=7.2						
	comp=Z,2.0nm,0.5s						
YKA	**Yellowknife Ar**	**53.05**	**346**	P	**P**	**04 12 26.4**	**-0.6**
	comp=Z,0.7nm,0.8s,baz=142,slow=7.8,SNR=6.0						
	comp=Z,0.7nm,0.8s						
ILAR	**Eielson Array**	**65.21**	**337**	P	**P**	**04 13 51.5**	**+0.5**
	comp=Z,0.4nm,0.9s,baz=130,slow=4.0,SNR=4.3						
	comp=Z,0.4nm,0.9s						

MAN 04 04:09:57.5,13°.01N×120°.76E,h31km,mb3.9,ML2.6, MS2.1,Mindoro

*JMA **04** 04:21:60.0±0.0,24°.4N±0°.6×122°.3E±0°.2,h21km±2km, TAIWAN REGION*
*TAP **04** 04:22:00.1,24°.45N×122°.29E,h12km,ML2.5,C*
ISC 04 04:21:59.5±1.0,**24°.45N**±0°.03×**122°.30E**±0°.02,**h16**km±9km, **n38**,σ0**956**/70,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.44**	**291**	*i* P	**Pg**	**04 22 07.2**	**-1.1**
	baz=291						
TWC				S	**Sg**	**04 22 14.9**	**+0.6**
	baz=291						
EWUT	**Wuta**	**0.47**	**270**	P	**Pg**	**04 22 08.9**	**-0.1**
	baz=269						
EWUT				S	**Sg**	**04 22 15.9**	**+0.5**
	baz=269						
ENA	**Nanau**	**0.51**	**268**	*e*P	**Pg**	**04 22 09.1**	**-0.5**
	baz=267						
ENA				*e*S	**Sg**	**04 22 16.4**	**0.0**
	baz=267						
EGS		**0.52**	**320**	*e*P	**Pg**	**04 22 10.0**	**+0.2**
	baz=321						
EGS				S	**Sg**	**04 22 17.1**	**+0.4**
	baz=321						
NDS	**Dongshan**	**0.56**	**289**	*e*P	**Pg**	**04 22 09.8**	**-0.8**
	baz=289						
NDS				*e*S	**Sg**	**04 22 18.6**	**+0.5**
	baz=289						
NTC	**Toucheng**	**0.58**	**314**	*e*P	**Pg**	**04 22 10.9**	**-0.

baz=249
CHGB eS Sb 04 22 35.0 +0.6
baz=249
WUSB Renai 1.17 247 eP Pb 04 22 21.6 +0.1
baz=246
WUSB eS Sb 04 22 36.2 -0.2
baz=246
IRIF Iriomote-Funau 1.31 95 eS Sb 04 22 40.1 -0.3
SSLB Suanglung 1.39 242 eP Pb 04 22 25.6 +0.4
baz=241
JKRS Kuro-shima 1.58 97 P Pn 04 22 27.1 +0.2
JKRS S Sn 04 22 46.2 -0.7
JIJ Ishigaki jima 1.69 93 eS Sn 04 22 48.3 -1.4

*NIC **04** 04:23:54.6±0.0,35°.67N×31°.52E, h9km±3km, Ml2.5/3*
*DDA **04** 04:23:55.5±0.0,35°.59N×31°.49E, h9km±5km, ML1.7*
ISC 04 04:23:54.7±2.1,**35°.51N**±0°.05×**31°.4E**±0°.1,**h11**km±12km,
n14,σ0°**92**/21,**Cyprus region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKMS	**Akamas**	**0.88**	**124**	P	**Pn**	**04 24 12.3**	**-0.8**
AKMS				S	**Sn**	**04 24 25.8**	**-0.1**
AKMS				AML	AML	04 24 30.2	
	0.6nm,0.7s						
AKMS				AML	AML	04 24 30.2	
	0.6nm,0.7s						
AKMS				AML	AML	04 24 32.1	
	0.8nm,0.3s						
AKMS				AML	AML	04 24 32.1	
	0.8nm,0.3s						
ALFC	**Alefka**	**1.01**	**110**	P	**Pg**	**04 24 13.9**	**-0.3**
ALFC				S	**Sn**	**04 24 29.1**	**-0.1**
ALFC				AML	AML	04 24 33.6	
	0.5nm,0.6s						
ALFC				AML	AML	04 24 33.6	
	0.5nm,0.6s						
ALFC				AML	AML	04 24 35.4	
	0.5nm,0.6s						
ALFC				AML	AML	04 24 35.4	
	0.5nm,0.6s						
GAZI	**Gazipasa**	**1.01**	**44**	P	**Pg**	**04 24 14.5**	**+0.2**
GAZI				*i* AML	AML	04 24 26.0	
	comp=E,33nm,0.3s						
GAZI				S	**Sb**	**04 24 26.5**	**-1.2**
GAZI				*i* AML	AML	04 24 29.0	
	comp=N,30nm,0.4s						
NATA	**Nata**	**1.18**	**128**	S	**Sn**	**04 24 36.0**	**+2.8**
LEF	**Lefka**	**1.25**	**108**	P	**Pn**	**04 24 17.2**	**-1.0**
KEPZ	**Antalya-Kepez**	**1.40**	**5**	P	**Pb**	**04 24 20.9**	**+0.1**
KEPZ				S	**Sn**	**04 24 37.7**	**-0.9**
KEPZ				*i* AML	AML	04 24 38.0	
	comp=N,30nm,0.3s						
KEPZ				*i* AML	AML	04 24 39.0	
	comp=E,26nm,0.2s						
SZAC	**Souni**	**1.40**	**122**	P	**Pg**	**04 24 21.6**	**0.0**
SZAC				AML	AML	04 24 47.7	
	0.2nm,0.7s						
SZAC				AML	AML	04 24 52.8	
	0.2nm,0.5s						
CSS	**Mathiatis**	**1.64**	**109**	P	**Pn**	**04 24 23.4**	**-0.1**
ERMK	**Ermenek**	**1.64**	**46**	P	**Pg**	**04 24 26.6**	**+0.4**
ASGA	**Asgata**	**1.65**	**115**	P	**Pb**	**04 24 25.2**	**+0.1**
GULN	**MERSIN_Gulnar**	**1.84**	**68**	P	**Pb**	**04 24 28.6**	**+0.3**
GULN				S	**Sn**	**04 24 49.1**	**-0.4**
GULN				*i* AML	AML	04 24 54.0	
	comp=N,9.5nm,0.5s						
GULN				*i* AML	AML	04 25 00.0	
	comp=E,7.0nm,0.4s						
MVOU	**Mavrovouni**	**1.86**	**105**	P	**Pn**	**04 24 26.1**	**-0.4**
SEDI	**Konya, Seydise**	**1.95**	**7**	P	**Pb**	**04 24 30.7**	**+0.3**
SEDI				S	**Sn**	**04 24 53.5**	**+0.9**
SEDI				*i* AML	AML	04 25 02.0	
	comp=E,9.6nm,0.7s						
SEDI				*i* AML	AML	04 25 04.0	
	comp=N,14nm,0.5s						
KKBE	**Karaman, Kazim**	**2.09**	**35**	P	**Pb**	**04 24 33.6**	**+0.8**
KKBE				S	**Sb**	**04 24 59.5**	**+0.7**
KKBE				*i* AML	AML	04 25 05.0	
	comp=E,6.3nm,0.4s						
KKBE				*i* AML	AML	04 25 07.0	
	comp=N,5.2nm,0.6s						

*TAP **04** 04:34:10.4,24°.02N×122°.61E, h21km±1km, ML2.5, D*
*JMA **04** 04:34:11.3±0.1,24°.N±2°×122°.6E±0°.5, h26km±3km,*
MV2.1/10, NW OFF ISHIGAKIJIMA IS
ISC 04 04:34:10.2±1.2,**24°.05N**±0°.03×**122°.58E**±0°.02,**h18**km±5km,
n39,σ0°**47**/76,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.52**	**40**	P	**Pb**	**04 34 20.5**	**-0.3**
JYNG				S	**Sg**	**04 34 26.9**	**-0.7**
YOJ	**Yonaguni jima**	**0.56**	**44**	P	**Pb**	**04 34 21.4**	**-0.2**
	baz=39						
YOJ				eS	**Sb**	**04 34 28.8**	**-0.5**
	baz=39						
YOJ	**Yonaguni jima**	**0.56**	**44**	P	**Pb**	**04 34 21.2**	**-0.4**
YOJ				eS	**Sb**	**04 34 28.8**	**-0.5**
EWUT	**Wuta**	**0.83**	**298**	eP	**Pn**	**04 34 27.0**	**0.0**
	baz=298						
EWUT				eS	**Sb**	**04 34 37.2**	**+0.2**
	baz=298						
ENA	**Nanau**	**0.85**	**296**	P	**Pb**	**04 34 26.6**	**0.0**
	baz=297						
ENA				S	**Sb**	**04 34 37.5**	**-0.1**
	baz=297						
TWC	**Suao**	**0.87**	**310**	eP	**Pb**	**04 34 26.3**	**-0.5**
	baz=310						
TWC				eS	**Sb**	**04 34 37.2**	**-0.9**
	baz=310						
NACB	**Ninganchiao**	**0.91**	**278**	P	**Pb**	**04 34 27.7**	**+0.2**
	baz=279						
NACB				S	**Sg**	**04 34 40.2**	**+0.1**
	baz=279						
NDS	**Dongshan**	**0.98**	**306**	eP	**Pb**	**04 34 28.7**	**0.0**
	baz=306						
NDS				eS	**Sb**	**04 34 40.8**	**-0.5**
	baz=306						
EGS		**0.99**	**323**	eP	**Pg**	**04 34 29.8**	**+0.4**
	baz=323						
EGS				eS	**Sg**	**04 34 42.4**	**-0.1**
	baz=323						
ETM	**Tongmen**	**1.00**	**265**	P	**Pb**	**04 34 28.6**	**-0.5**
	baz=266						
ETM				eS	**Sb**	**04 34 42.6**	**+0.7**
	baz=266						
ETLH	**Xiulin Townshi**	**1.02**	**279**	P	**Pb**	**04 34 29.4**	**+0.1**
	baz=280						
ETLH				eS	**Sb**	**04 34 43.0**	**+0.6**
	baz=280						
NTC	**Toucheng**	**1.05**	**320**	eP	**Pb**	**04 34 30.0**	**+0.1**
	baz=319						
NTC				eS	**Sn**	**04 34 44.0**	**-0.3**
	baz=319						
TWE	**Neicheng**	**1.07**	**309**	eP	**Pb**	**04 34 30.2**	**0.0**
	baz=309						
TWE				eS	**Sg**	**04 34 45.0**	**0.0**
	baz=309						
LATG	**Datong**	**1.08**	**297**	P	**Pn**	**04 34 30.7**	**+0.1**
	baz=297						
LATG				eS	**Sb**	**04 34 44.6**	**+0.3**
	baz=297						
IRIF	**Iriomote-Funau**	**1.08**	**75**	P	**Pn**	**04 34 30.7**	**+0.2**
IRIF				eS	**Sb**	**04 34 44.5**	**+0.2**
HATJ	**Hateruma jima**	**1.12**	**90**	P	**Pb**	**04 34 31.6**	**+0.5**
HATJ				eS	**Sn**	**04 34 46.4**	**+0.4**
NDT	**Datong Townshi**	**1.12**	**300**	eP	**Pn**	**04 34 31.1**	**0.0**
	baz=299						
NDT				S	**Sb**	**04 34 45.7**	**+0.4**
	baz=299						
TIPB	**Shuangxi**	**1.15**	**323**	eP	**Pg**	**04 34 32.4**	**-0.1**
	baz=322						
TIPB				eS	**Sb**	**04 34 46.2**	**0.0**
	baz=322						
FUSB	**Fushanzhiwuyua**	**1.15**	**308**	P	**Pb**	**04 34 31.7**	**+0.1**
	baz=308						
FUSB				S	**Sn**	**04 34 46.7**	**-0.1**
	baz=308						
NNSB	**Datong**	**1.16**	**289**	P	**Pb**	**04 34 32.2**	**+0.4**
	baz=289						
NNSB				S	**Sb**	**04 34 46.6**	**0.0**
	baz=289						
NNS	**Nan Shan**	**1.17**	**290**	eP	**Pn**	**04 34 31.9**	**0.0**
	baz=290						
NNS				eS	**Sn**	**04 34 47.6**	**+0.2**
	baz=290						
HGSD	**Ruisui**	**1.20**	**243**	P	**Pn**	**04 34 31.1**	**-1.0**
	baz=243						
HGSD				eS	**Sg**	**04 34 49.4**	**+0.2**
	baz=243						
WHF	**Hehuan Shan**	**1.21**	**275**	eP	**Pn**	**04 34 32.6**	**0.0**
	baz=275						
WHF				eS	**Sb**	**04 34 48.3**	**0.0**
	baz=275						
NWLT	**Wulai**	**1.22**	**306**	eP	**Pb**	**04 34 33.4**	**+0.5**
	baz=306						
NWLT				eS	**Sn**	**04 34 48.9**	**+0.4**
	baz=306						
SXI1	**Grass Mountain**	**1.22**	**328**	P	**Pn**	**04 34 32.3**	**-0.2**
	baz=327						
SXI1				eS	**Sn**	**04 34 48.8**	**+0.2**
	baz=327						
YHNB	**Yeheng**	**1.26**	**299**	P	**Pb**	**04 34 33.9**	**+0.3**
	baz=299						
YHNB				S	**Sn**	**04 34 50.4**	**+0.8**
	baz=299						
EHY	**Hungye**	**1.28**	**245**	P	**Pn**	**04 34 32.8**	**-0.4**
	baz=246						
EHY				eS	**Sn**	**04 34 49.4**	**-0.4**
	baz=246						
NSK	**Sanguang**	**1.28**	**299**	P	**Pb**	**04 34 34.6**	**+0.7**
	baz=299						
NSK				eS	**Sb**	**04 34 50.4**	**+0.4**
	baz=299						
CHGB	**Renai**	**1.29**	**271**	eP	**Pn**	**04 34 33.5**	**-0.1**
	baz=271						
CHGB				eS	**Sn**	**04 34 49.9**	**-0.6**
	baz=271						
OWD	**Renai**	**1.29**	**266**	eP	**Pn**	**04 34 33.4**	**-0.2**
	baz=266						
OWD				eS	**Sn**	**04 34 48.6**	**-1.8**
	baz=266						
JKRS	**Kuro-shima**	**1.32**	**82**	P	**Pb**	**04 34 34.7**	**+0.3**
WUSB	**Renai**	**1.34**	**268**	P	**Pn**	**04 34 34.3**	**+0.1**
	baz=268						
WUSB				eS	**Sn**	**04 34 51.2**	**-0.4**
	baz=268						
YULB	**Yu-li**	**1.35**	**241**	P	**Pn**	**04 34 33.8**	**-0.4**
	baz=242						
YULB				S	**Sn**	**04 34 50.7**	**-1.0**
	baz=242						
VWDT	**VWDT**	**1.35**	**258**	P	**Pn**	**04 34 34.4**	**+0.2**
	baz=258						
VWDT				eS	**Sn**	**04 34 51.7**	**0.0**
	baz=258						
YM01	**YM01**	**1.43**	**320**	eP	**Pb**	**04 34 36.6**	**+0.3**
	baz=319						
YM01				eS	**Sb**	**04 34 54.8**	**+0.6**
	baz=319						
JIJ	**Ishigaki jima**	**1.46**	**77**	P	**Pb**	**04 34 36.4**	**-0.4**
JIJ				eS	**Sn**	**04 34 54.1**	**-0.3**
JISG	**Ishigakijimahi**	**1.66**	**71**	eP	**Pn**	**04 34 38.8**	**+0.3**
JISG				eS	**Sn**	**04 34 59.5**	**+0.1**
STYH	**Taoyuan**	**1.88**	**242**	eP	**Pn**	**04 34 42.1**	**+0.7**
	baz=243						
STYH				eS	**Sn**	**04 35 04.7**	**+0.1**
	baz=243						
JTJ	**Tarama**	**2.02**	**73**	P	**Pn**	**04 34 44.3**	**+0.8**

*KRSC **04** 04:40:13.6±0.7,53°.87N×169°.00E, h7km±15km, ML3.8*
*IDC **04** 04:40:16.3±2.1,54°.38N×169°.28E, h0km, mb3.5/5,*
mbtmp3.5/6, ML2.7/1, MS3.5/1, Error ellipse: s-maj=83.1km
s-min=31.0km az=164.0
ISC 04 04:40:18.7±1.1,**54°.3N**±0°.2×**169°.22E**±0°.07,**h20**km,**n18**,
σ1°**39**/12,**mb3.4/5**,**Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**2.11**	**298**	eP	**Pn**	**04 40 51.9**	**-0.9**
BKI				eS	**Sb**	**04 41 20.2**	**-1.7**
TUMR	**Tumrok**	**5.35**	**285**	eP	**Pn**	**04 41 38.3**	**+0.9**
KMNR	**Kamenistaya**	**5.38**	**290**	eS	**Sn**	**04 42 41.5**	**+2.3**
SDLR	**Sedlovina**	**6.21**	**265**	eP	**Pn**	**04 41 47.5**	**-1.7**
KOK	**Koryaka**	**6.35**	**266**	eP	**Pn**	**04 41 50.3**	**-0.8**
PETK	**Petropavlovsk-**	**6.94**	**265**	Pn	**Pn**	**04 41 59.6**	**+0.5**
	0.7nm,0.3s,baz=97,slow=12,SNR=5.8						
	2.3nm,0.5s						
KDAK	**Kodiak Island**	**21.44**	**65**	P	**P**	**04 45 03.5**	**-1.7**
	1.3nm,0.7s,baz=304,slow=15,SNR=1.3						
	1.3nm,0.7s						
ILAR	**Eielson Array**	**24.10**	**47**	P	**P**	**04 45 31.9**	**-0.6**
	0.6nm,0.6s,baz=264,slow=11,SNR=9.3						
	0.6nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**34.51**	**184**	T	T	05 23 30.9	
	baz=2.3,slow=76,SNR=189						
H11N3	**WAKE ISLAND Hy**	**34.52**	**184**	T	T	05 23 31.9	
	baz=2.3,slow=76,SNR=172						
H11N1	**WAKE ISLAND Hy**	**34.53**	**184**	T	T	05 23 33.0	
	baz=2.3,slow=76,SNR=199						
H11S1	**WAKE ISLAND Hy**	**35.73**	**184**	T	T	05 25 03.4	
	baz=2.3,slow=76,SNR=112						
H11S3	**WAKE ISLAND Hy**	**35.75**	**184**	T	T	05 25 03.8	
	baz=2.3,slow=76,SNR=92						
H11S2	**WAKE ISLAND Hy**	**35.75**	**184**	T	T	05 25 04.7	
	baz=2.3,slow=76,SNR=156						
YKA	**Yellowknife Ar**	**38.53**	**46**	P	**P**	**04 47 39.7**	**+0.5**
	0.7nm,0.8s,baz=302,slow=6.3,SNR=4.4						
	0.7nm,0.8s						
SONM	**Songino Array**	**38.84**	**287**	LR	LR	05 04 13.2	
	comp=Z,64nm,18.4s,baz=50,slow=37						
NVAR	**Mina Array Bea**	**50.21**	**77**	P	**P**	**04 49 14.1**	**+0.9**
	0.2nm,0.5s,baz=307,slow=8.9,SNR=3.1						
	0.2nm,0.5s						
TXAR	**Lajitas Array**	**65.14**	**74**	P	**P**	**04 50 58.2**	**+0.1**
	0.7nm,0.6s,baz=295,slow=5.2,SNR=4.2						
	0.7nm,0.6s						

*TUL **04** 04:43:27±1.3,36°.54N±0°.04×98°.96W±0°.04, h6km±7km,*
ML3.1, mb_Lg3.0/82(NEIC), Error ellipse: s-maj=5.6km
s-min=4.7km az=159.0
*ANF **04** 04:43:27.6±0.3,36°.52N×98°.92W, h6km, ML4.0/13, Error*
ellipse: s-maj=3.8km s-min=3.1km az=85.0
*NEIC **04** 04:43:28.6±1.4,36°.56N±0°.04×98°.85W±0°.05, h13km±6km,*
Error ellipse: s-maj=6.4km s-min=5.4km az=158.0
ISC 04 04:43:27.1±1.8,**36°.54N**±0°.05×**98°.93W**±0°.05,**h3**km±17km,
n82,σ0°**67**/69,**Oklahoma**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
U32A	**Winter Ranch,**	**0.17**	**201**	P	**Pg**	**04 43 30.5**	**+0.1**
	baz=11,SNR=1000						
OKCFA	**Oklahoma City**	**1.64**	**133**		**Pn**	**04 43 56.9**	**+0.1**
OKCFA	**Oklahoma City**	**1.64**	**133**	P	**Pn**	**04 43 56.9**	**+0.1**
	baz=313,SNR=7.9						
OKCFA				S	**Sg**	**04 44 19.5**	**-0.2**
	baz=313						
OKCSW	**OKLAHOMA CITY**	**1.66**	**133**		**Pn**	**04 43 57.1**	**+0.1**
FNO	**Franklin**	**1.78**	**135**		**Pn**	**04 43 59.1**	**+0.4**
WMOK	**Wichita Mounta**	**1.80**	**176**		**Pn**	**04 43 58.6**	**-0.5**
WMOK	**Wichita Mounta**	**1.80**	**176**	P	**Pn**	**04 43 58.8**	**-0.2**
	baz=355,SNR=125						
R32A	**Long Quarter,**	**1.89**	**5**	Pn	**Pn**	**04 44 00.9**	**+0.6**
R32A	**Long Quarter,**	**1.89**	**5**	P	**Pn**	**04 44 01.2**	**+1.0**
	baz=186,SNR=24						
R32A				S	**Sb**	**04 44 26.7**	**+0.5**
	baz=186						
T35A	**Sooner Cattle**	**1.98**	**78**	Pn	**Pn**	**04 44 01.9**	**+0.5**
T35B	**Sooner Cattle**	**1.98**	**78**	P	**Pn**	**04 44 01.9**	**+0.5**
	baz=260,SNR=86						
T35B				Sb	**Sb**	**04 44 29.7**	**+1.0**
	baz=260						
X34A	**Smith Ranch, M**	**2.13**	**155**		**Pn**	**04 44 04.7**	**+1.2**
X34A				IAmb_Lg		04 44 37.9	
	comp=Z,80nm,0.7s						
CBKS	**Cedar Bluff**	**2.36**	**344**	Pn	**Pn**	**04 44 07.7**	**+0.9**
CBKS				IAmb_Lg		04 44 42.8	
	comp=Z,62nm,0.9s						
CBKS	**Cedar Bluff**	**2.36**	**344**	P	**Pn**	**04 44 07.1**	**+0.3**
	baz=165,SNR=34						
CBKS				S	**Sb**	**04 44 39.9**	**0.0**
	baz=165						
TUL1	**Leonard**	**2.61**	**103**		**Pn**	**04 44 10.1**	**0.0**
TUL1	**Leonard**	**2.61**	**103**	P	**Pn**	**04 44 10.1**	**0.0**
	baz=285,SNR=84						
AMTX	**Amarillo**	**2.78**	**234**	Pn	**Pn**	**04 44 14.0**	**+1.4**
AMTX	**Amarillo**	**2.78**	**234**	P	**Pn**	**04 44 13.6**	**+0.9**
	baz=52,SNR=12						
KSU1	**Kansas State U**	**3.15**	**35**	Pn	**Pn**	**04 44 17.1**	**-0.4**
KSU1					LR	04 45 08.5	
Z35A	**Perchaven, San**	**3.48**	**156**	Pn	**Pn**	**04 44 22.3**	**+0.2**
X37A	**Clayton**	**3.49**	**123**	Pn	**Pn**	**04 44 22.6**	**+0.3**
X37A				IAmb_Lg		04 45 26.4	
	comp=Z,69nm,0.9s						
X37A	**Clayton**	**3.49**	**123**	P	**Pn**	**04 44 22.4**	**+0.2**
	baz=305,SNR=52						
KSCO	**Kaye Shedlock'**	**3.83**	**311**	Pn	**Pn**	**04 44 27.4**	**+0.4**
KSCO				IAmb_Lg		04 45 29.0	
	comp=Z,40nm,0.7s						
ABTX	**Abilene, Hawle**	**3.95**	**189**	Pn	**Pn**	**04 44 28.8**	**+0.2**
HHAR	**Hobbs**	**4.03**	**92**		**Pn**	**04 44 29.9**	**+0.2**
HHAR				IAmb_Lg		04 45 40.5	
	comp=Z,26nm,0.9s						
MSTX	**Muleshoe**	**4.06**	**232**	Pn	**Pn**	**04 44 31.5**	**+1.4**
MSTX				IAmb_Lg		04 45 43.1	
	comp=Z,33nm,1.2s						
N33A	**J Bar K, Exete**	**4.35**	**15**	Pn	**Pn**	**04 44 33.3**	**-0.8**
W39A	**Magazine**	**4.39**	**106**		**Pn**	**04 44 34.0**	**-0.5**
W39A				IAmb_Lg		04 45 52.0	
	comp=Z,53nm,0.7s						
T25A	**Trinidad**	**4.44**	**279**		**Pn**	**04 44 35.7**	**+0.2**
T25A				IAmb_Lg		04 45 49.2	
	comp=Z,43nm,0.8s						
Z38A	**Mt. Pleasant**	**4.60**	**134**	Pn	**Pn**	**04 44 37.5**	**-0.1**
Z38A				Lg		04 45 56.9	
Z38A				IAmb_Lg		04 46 02.0	
	comp=Z,27nm,0.7s						
S39A	**Bolivar**	**4.62**	**74**		**Pn**	**04 44 37.5**	**-0.3**
S39A				IAmb_Lg		04 45 54.8	
	comp=Z,44nm,0.8s						
S39A	**Bolivar**	**4.62**	**74**	P	**Pn**	**04 44 38.0**	**+0.2**
	baz=257,SNR=22						
WHTX	**Lake Whitney,**	**4.70**	**165**	Pn	**Pn**	**04 44 39.6**	**+0.8**
MIAR	**Mount Ida**	**4.79**	**113**	Pn	**Pn**	**04 44 40.5**	**+0.3**
MIAR	**Mount Ida**	**4.79**	**113**	P	**Pn**	**04 44 40.4**	**+0.3**
	baz=296,SNR=16						
BGNE	**Belgrade**	**4.90**	**7**		**Pn**	**04 44 40.5**	**-1.2**
BGNE				IAmb_Lg		04 46 05.6	
	comp=Z,43nm,0.8s						
BGNE	**Belgrade**	**4.90**	**7**	P	**Pn**	**04 44 41.1**	**-0.6**
	baz=188,SNR=8.5						
U40A	**Yellville**	**4.90**	**90**		**Pn**	**04 44 41.0**	**-0.6**
U40A				IAmb_Lg		04 46 01.7	
	comp=Z,28nm,0.8s						
U40A	**Yellville**	**4.90**	**90**	P	**Pn**	**04 44 41.8**	**+0.1**
	baz=274,SNR=15						
U40A				P	**Pn**	**04 44 41.8**	**+0.1**
	baz=274,SNR=15						
N35A	**Tabor**	**5.02**	**30**	Pn	**Pn**	**04 44 42.7**	**-0.6**
OGNE	**Ogallala**	**5.03**	**332**	Pn	**Pn**	**04 44 44.4**	**+1.0**
OGNE				IAmb_Lg		04 46 17.9	
	comp=Z,33nm,0.8s						
237A	**Washetta, Mont**	**5.21**	**149**	IAmb_Lg		04 46 23.9	
	comp=Z,34nm,0.8s						
P38A	**Dawn**	**5.25**	**52**		**Pn**	**04 44 46.8**	**+0.3**
P38A				IAmb_Lg		04 46 21.1	
	comp=Z,35nm,0.8s						
P38A	**Dawn**	**5.25**	**52**	P	**Pn**	**04 44 47.0**	**+0.6**
	baz=236,SNR=8.3						
X40A	**Basin Creek Fa**	**5.37**	**111**	Pn	**Pn**	**04 44 49.0**	**+0.8**
MGMO	**Mountain Grove**	**5.38**	**81**	IAmb_Lg		04 46 20.3	
	comp=Z,34nm,0.7s						
SDCO	**Great Sand Dun**	**5.39**	**285**		**Pn**	**04 44 49.3**	**+0.7**
Q24A	**Divide**	**5.49**	**298**	Pn	**Pn**	**04 44 51.4**	**+1.4**
Q24A				IAmb_Lg		04 46 28.3	
	comp=Z,27nm,0.8s						
WHAR	**Woody Hollow**	**5.53**	**101**	Pn	**Pn**	**04 44 50.2**	**0.0**
WHAR				IAmb_Lg		04 46 28.6	
	comp=Z,32nm,0.9s						
FCAR	**Ozark Folk Cen**	**5.54**	**95**	Pn	**Pn**	**04 44 50.1**	**-0.3**
WLAR	**White Oak Lake**	**5.55**	**119**	IAmb_Lg		04 46 36.1	
	comp=Z,19nm,0.8s						
R40A	**Maddies Statio**	**5.58**	**70**		**Pn**	**04 44 50.9**	**0.0**
R40A				IAmb_Lg		04 46 34.7	
	comp=Z,21nm,0.7s						
W41B	**Gary Mavity, V**	**5.59**	**102**	Pn	**Pn**	**04 44 51.4**	**+0.3**
W41B				IAmb_Lg		04 46 38.5	
	comp=Z,19nm,0.8s						
UALR	**University of**	**5.64**	**106**	Pn	**Pn**	**04 44 51.8**	**0.0**
UALR				IAmb_Lg		04 46 32.1	
	comp=Z,18nm,0.9s						
L34A	**Svendsen Farm,**	**5.77**	**19**	Pn	**Pn**	**04 44 54.4**	**+0.8**
435B	**Jarrell**	**5.85**	**169**	IAmb_Lg		04 46 48.1	
	comp=Z,28nm,0.9s						
Z41A	**Richland Creek**	**6.00**	**121**	IAmb_Lg		04 46 51.8	
	comp=Z,20nm,0.9s						
K31A	**O'Neill**	**6.08**	**1**	IAmb_Lg		04 46 42.8	
	comp=Z,31nm,0.8s						
JCT	**Junction City**	**6.09**	**187**	IAmb_Lg		04 46 52.2	
	comp=Z,22nm,0.8s						
N38A	**Joes South For**	**6.15**	**45**	Pn	**Pn**	**04 44 58.0**	**-0.8**
ISCO	**Idaho Springs**	**6.19**	**304**		**Pn**	**04 44 59.4**	**-0.2**
ISCO				IAmb_Lg		04 46 45.5	
	comp=Z,16nm,0.8s						
P40A	**Paris**	**6.20**	**59**	Pn	**Pn**	**04 44 58.6**	**-0.8**
LCAR	**Lake Charles**	**6.29**	**92**	Pn	**Pn**	**04 45 00.6**	**-0.2**
LCAR				IAmb_Lg		04 46 51.0	
	comp=Z,18nm,1.1s						
CCM	**Cathedral Cave**	**6.31**	**74**	Pn	**Pn**	**04 45 00.5**	**-0.5**
CCM				IAmb_Lg		04 46 48.7	
	comp=Z,26nm,0.8s						
ANMO	**Albuquerque**	**6.33**	**258**	Pn	**Pn**	**04 45 00.7**	**-0.7**
PBMO	**Poplar Bluff**	**6.83**	**85**	IAmb_Lg		04 47 19.5	
	comp=Z,20nm,0.7s						
CRNM	**Carthage**	**6.89**	**250**	Pn	**Pn**	**04 45 08.4**	**-0.7**
SCIA	**State Center**	**6.96**	**38**	IAmb_Lg		04 47 15.3	
	comp=Z,24nm,0.7s						
PHWY	**Pilot Hill**	**6.96**	**315**	IAmb_Lg		04 47 08.4	
	comp=Z,20nm,0.8s						
N23A	**Red Feather La**	**7.00**	**311**	Pn	**Pn**	**04 45 10.3**	**-0.4**
MNTX	**Cornudas Mount**	**7.21**	**230**	Pn	**Pn**	**04 45 12.3**	**-1.0**
MNTX				IAmb_Lg		04 47 30.7	
	comp=Z,15nm,0.9s						
SLM	**Saint Louis**	**7.21**	**71**	IAmb_Lg		04 47 24.7	
	comp=Z,22nm,0.8s						
ECSD	**EROS Data Cent**	**7.40**	**13**	Pn	**Pn**	**04 45 14.4**	**-1.5**
ECSD	**EROS Data Cent**	**7.40**	**13**	P	**Pn**	**04 45 14.6**	**-1.4**
	baz=195,SNR=7.7						
OXF	**Oxford**	**8.02**	**102**	IAmb_Lg		04 47 58.2	
	comp=Z,18nm,1.2s						
PV11	**David Mesa, Pa**	**8.11**	**285**	IAmb_Lg		04 48 03.5	
	comp=Z,11nm,1.1s						
TX31	**Lajitas Ar. Si**	**8.21**	**210**	P	**Pn**	**04 45 26.6**	**-0.6**
	baz=28,SNR=7.8						
RWWY	**Rawlins**	**8.24**	**311**	IAmb_Lg		04 47 49.0	
	comp=Z,15nm,1.1s						
K22A	**Casper**	**8.46**	**318**	IAmb_Lg		04 48 18.2	
	comp=Z,23nm,0.9s						
RSSD	**Black Hills**	**8.52**	**334**	IAmb_Lg		04 48 03.3	
	comp=Z,10nm,0.7s						
JFWS	**Jewell Farm**	**9.23**	**44**	IAmb_Lg		04 48 22.9	
	comp=Z,18nm,0.7s						
I40A	**Norwalk**	**9.71**	**38**	IAmb_Lg	

SUR	**Sutherland**	**42.45**	**244**	LR	LR	05 19 47.9		
	comp=Z,231nm,18.1s,baz=83,slow=32							
TSUM	**Tsumeb**	**45.90**	**262**	LR	LR	05 23 22.2		
	comp=Z,182nm,20.4s,baz=99,slow=34							
MAW	**Mawson**	**47.60**	**182**	LR	LR	05 21 04.9		
	comp=Z,77nm,20.3s,baz=22,slow=30							
MAW	**Mawson**	**47.60**	**182**	P	**P**	**05 06 10.5**	**0.0**	
CMAR	**Chiang Mai Arr**	**49.80**	**42**	LR	LR	05 25 47.2		
	comp=Z,138nm,18.9s,baz=230,slow=34							
KAPI	**Kappang**	**53.90**	**81**	LR	LR	05 27 19.5		
	comp=Z,55nm,20.4s,baz=272,slow=33							
BATI	**Baumata**	**55.87**	**89**	LR	LR	05 29 06.2		
	comp=Z,97nm,18.0s,baz=270,slow=34							
EIL	**Elat**	**58.00**	**328**	LR	LR	05 28 35.1		
	comp=Z,67nm,21.2s,baz=250,slow=32							
GEYT	**Alibeck**	**58.19**	**352**	LR	LR	05 29 32.2		
	comp=Z,52nm,20.0s,baz=152,slow=33							
ASAR	**Alice Springs**	**62.20**	**107**	P	**P**	**05 07 57.0**	**+0.1**	
	2.2nm,0.9s,baz=252,slow=6.1,SNR=12							
ASAR				LR	LR	05 30 48.9		
	comp=Z,142nm,21.6s,baz=333,slow=32							
	2.2nm,0.9s							
ASAR	**Alice Springs**	**62.20**	**107**	P	**P**	**05 07 57.1**	**+0.2**	
AAK	**Ala-Archa**	**62.80**	**7**	LR	LR	05 31 55.9		
	comp=Z,69nm,20.7s,baz=174,slow=33							
AAK	**Ala-Archa**	**62.80**	**7**	P	**P**	**05 08 00.9**	**+0.3**	
AAK				IAmb	IAmb	05 08 07.9		
	comp=Z,4.7nm,1.2s							
BOOM	**Boomskoye usch**	**62.83**	**8**	P	**P**	**05 08 01.1**	**+0.3**	
BOOM				IAmb	IAmb	05 08 19.0		
	comp=Z,6.1nm,1.4s							
KK31	**Karatay Array**	**62.94**	**3**	P	**P**	**05 08 01.0**	**-0.3**	
KK31				IAmb	IAmb	05 08 07.8		
	comp=Z,4.0nm,1.4s							
KKAR	**Karatay Array**	**62.94**	**3**	P	**P**	**05 08 01.0**	**-0.3**	
KKAR				IAmb	IAmb	05 08 07.8		
	comp=Z,4.0nm,1.4s							
WRA	**Warramunga Arr**	**63.36**	**103**	P	**P**	**05 08 04.5**	**-0.2**	
	comp=Z,3.3nm,1.0s,baz=259,slow=6.6,SNR=9.1							
WRA				LR	LR	05 32 59.2		
	comp=Z,80nm,19.5s,baz=244,slow=34							
	comp=Z,3.3nm,1.0s							
WRA	**Warramunga Arr**	**63.36**	**103**	IAmb	IAmb	05 08 13.1		
	comp=Z,0.6nm,1.4s							
DAV	**Davao City (W)**	**64.08**	**71**	LR	LR	05 33 24.3		
	comp=Z,38nm,20.1s,baz=183,slow=34							
SNAA	**Sanae**	**64.63**	**199**	LR	LR	05 32 59.4		
	comp=Z,42nm,19.9s,baz=69,slow=33							
ENH	**Enshi**	**64.94**	**41**	P	**P**	**05 08 14.1**	**-0.7**	
MK31	**Makanchi Array**	**68.04**	**12**	P	**P**	**05 08 34.4**	**+0.1**	
MK31				IAmb	IAmb	05 08 57.1		
	comp=Z,2.7nm,1.2s							
MKAR	**Makanchi Array**	**68.04**	**12**	P	**P**	**05 08 33.2**	**-1.0**	
	comp=Z,0.9nm,0.8s,baz=203,slow=7.9,SNR=5.9							
	comp=Z,0.9nm,0.8s							
BORA	**Eskisehir**	**68.42**	**331**	P	**P**	**05 08 37.2**	**+0.4**	
ABKAR	**Akbulak array**	**69.23**	**355**	P	**P**	**05 08 41.5**	**0.0**	
KURBB	**Kurchatov Arra**	**71.16**	**8**	P	**P**	**05 08 53.1**	**-0.2**	
	comp=Z,1.0nm,0.9s,baz=202,slow=6.4,SNR=5.9							
KURBB				LR	LR	05 37 46.7		
	comp=Z,40nm,20.8s,baz=171,slow=34							
	comp=Z,1.0nm,0.9s							
KURK	**Kurchatov**	**71.26**	**8**	P	**P**	**05 08 53.1**	**-0.8**	
KURK				IAmb	IAmb	05 09 00.2		
	comp=Z,4.9nm,1.2s							
TORD	**Torodi Ar. Bea**	**71.72**	**292**	LR	LR	05 39 20.6		
	comp=Z,50nm,18.1s,baz=212,slow=35							
BRVK	**Borovoye**	**72.87**	**2**	P	**P**	**05 09 03.0**	**-0.5**	
BRVK				IAmb	IAmb	05 09 04.5		
	comp=Z,2.2nm,0.8s							
CTA	**Charters Tower**	**74.18**	**106**	LR	LR	05 39 45.0		
	comp=Z,78nm,18.2s,baz=261,slow=34							
DBIC	**Dimbokro**	**74.92**	**283**	LR	LR	05 40 11.8		
	comp=Z,42nm,20.9s,baz=132,slow=34							
ZAA0	**Zalesovo Array**	**75.37**	**11**	P	**P**	**05 09 18.5**	**+0.4**	
ZAA0				IAmb	IAmb	05 09 24.6		
	comp=Z,6.4nm,1.2s							
ZALV	**Zalesovo Beam**	**75.37**	**11**	P	**P**	**05 09 17.1**	**-1.0**	
	comp=Z,2.2nm,0.8s,baz=201,slow=6.2,SNR=7.0							
	comp=Z,2.2nm,0.8s							
ZALV	**Zalesovo Beam**	**75.37**	**11**	P	**P**	**05 09 17.5**	**-0.7**	
ARU	**Arti**	**76.46**	**356**	P	**P**	**05 09 26.2**	**+1.9**	
SONM	**Songino Array**	**76.48**	**26**	P	**P**	**05 09 25.2**	**+0.4**	
	comp=Z,1.6nm,0.8s,baz=238,slow=2.7,SNR=3.3							
	comp=Z,1.6nm,0.8s							
SONM	**Songino Array**	**76.48**	**26**	IAmb	IAmb	05 09 27.3		
	comp=Z,1.9nm,0.9s							
ULN	**Ulaanbaatar**	**76.78**	**27**	P	**P**	**05 09 27.2**	**+0.6**	
AKASG	**Malin Array Be**	**77.69**	**337**	P	**P**	**05 09 31.1**	**-0.3**	
	comp=Z,0.4nm,0.4s,baz=153,slow=3.3,SNR=4.8							
	comp=Z,0.4nm,0.4s							
AKASG	**Malin Array Be**	**77.69**	**337**	IAmb	IAmb	05 09 37.4		
	comp=Z,4.5nm,1.4s							
PMG	**Port Moresby**	**78.17**	**96**	LR	LR	05 41 14.9		
	comp=Z,55nm,20.4s,baz=213,slow=34							
MDT	**Midelt**	**85.80**	**307**	LR	LR	05 47 04.7		
	comp=Z,30nm,21.1s,baz=149,slow=35							
MJAR	**Matsushiro Arr**	**88.00**	**50**	P	**P**	**05 10 26.5**	**+1.3**	
	comp=Z,0.5nm,0.3s,baz=192,slow=2.9,SNR=5.1							
	comp=Z,0.5nm,0.3s							
MJAR	**Matsushiro Arr**	**88.00**	**50**	P	**P**	**05 10 25.0**	**-0.3**	
RCBR	**Riachuelo**	**99.53**	**260**	LR	LR	05 47 59.1		
	comp=Z,56nm,21.4s,baz=292,slow=30							
ULM	**Lac du Bonnet**	**146.79**	**339**	PKPbc	**PKPbc**	**05 17 15.8**	**-1.0**	
	comp=Z,1.6nm,0.8s,baz=28,slow=6.7,SNR=2.1							
EDM	**Edmonton**	**146.88**	**360**	PKPbc	**PKPbc**	**05 17 16.8**	**-0.4**	

*IDC **04** 04:57:37.4±1.5,31˚.79S×177˚.77W,h0km,mb4.3/4, mbtmp4.3/6,ML4.1/2,MS3.2/1,Error ellipse: s-maj=44.6km s-min=27.2km az=133.0*

*WEL **04** 04:57:41.0±0.7,32˚S±5˚×17˚8W±1˚6,h33km,M4.3/11, mB4.6/6,ML4.7/14,MLv4.7/11,Mw(mB)3.8/6,Error ellipse: s-maj=0.0km s-min=0.0km az=106.9*

*NEIC **04** 04:57:45.4±1.5,31˚.48S±0˚.08×178˚.0W±0˚.2,h42km±9km, mb4.3/9,Error ellipse: s-maj=21.3km s-min=10.7km az=107.0*

ISC 04 04:57:43.6±0.9,31˚.61S±0˚.07×178˚.2W±0˚.2,h35km,n55, σ2^{s}47/64,mb4.4/8,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.35**	**6**	P	**Pn**	**04 58 18.0**	**-1.8**
GLKZ				S	**Sn**	**04 58 42.0**	**-5.4**
RAO	**Raoul Island**	**2.37**	**6**	Pn	**Pn**	**04 58 20.1**	**+0.2**
	75nm,0.3s,baz=270,slow=20,SNR=3.2						
RAO				Sn	**Sn**	**04 58 44.4**	**-3.2**
	241nm,0.3s,baz=92,slow=21,SNR=6.4						
	265nm,0.3s						
RIZ	**Raoul Island**	**2.37**	**6**	P	**Pn**	**04 58 19.6**	**-0.4**
RIZ				S	**Sn**	**04 58 44.5**	**-3.3**
WMGZ	**Waiomatatini S**	**6.79**	**203**	P	**Pn**	**04 59 21.2**	**+0.5**
WMGZ				S	**Sn**	**05 00 36.9**	**+0.2**
HAZ	**Te Kaha**	**6.97**	**207**	P	**Pn**	**04 59 21.8**	**-1.3**
HAZ				S	**Sn**	**05 00 41.5**	**+0.4**
PKGZ	**Pakihiroa**	**6.97**	**205**	P	**Pn**	**04 59 20.7**	**-2.5**
PKGZ				S	**Sn**	**05 00 40.5**	**-0.8**
PUZ	**Puketiti**	**7.07**	**203**	P	**Pn**	**04 59 24.1**	**-0.5**
PUZ				S	**Sn**	**05 00 41.6**	**-2.1**
RUGZ	**Raukumara Rang**	**7.19**	**207**	P	**Pn**	**04 59 24.3**	**-2.0**
RUGZ				S	**Sn**	**05 00 45.4**	**-1.4**
WCZ	**Waipu Caves**	**7.56**	**233**	P	Pn	04 59 37.7	+6.4
MWZ	**Matawai**	**7.57**	**206**	P	**Pn**	**04 59 29.7**	**-1.7**
MWZ				S	**Sn**	**05 00 54.1**	**-1.9**
URZ	**Urewera**	**7.67**	**209**	Pn	**Pn**	**04 59 31.2**	**-1.5**
	1.7nm,0.3s,baz=241,slow=1.5,SNR=12						
URZ				Sn	**Sn**	**05 00 54.6**	**-3.8**
	1.3nm,0.3s,baz=180,slow=20,SNR=1.9						
	3.6nm,0.3s						
URZ	**Urewera**	**7.67**	**209**		**Pn**	**04 59 35.8**	**+3.1**
URZ	**Urewera**	**7.67**	**209**	P	**Pn**	**04 59 32.0**	**-0.7**
URZ				S	**Sn**	**05 00 57.5**	**-0.9**
OUZ	**Omahuta**	**7.75**	**240**		Pn	04 59 39.5	+5.7
OUZ	**Omahuta**	**7.75**	**240**	P	Pn	04 59 40.0	+6.2
RAGZ	**Rawiri**	**7.75**	**206**	P	**Pn**	**04 59 32.1**	**-1.8**
RAGZ				S	**Sn**	**05 00 58.9**	**-1.6**
RIGZ	**Rimuhau**	**7.81**	**204**	P	**Pn**	**04 59 33.1**	**-1.7**
RIGZ				S	**Sn**	**05 00 59.4**	**-2.5**
RTZ	**Ruatahuna**	**8.03**	**208**	P	**Pn**	**04 59 35.7**	**-2.0**
RTZ				S	**Sn**	**05 01 03.1**	**-4.1**
SNGZ	**Shannon Statio**	**8.03**	**206**	P	**Pn**	**04 59 36.8**	**-0.9**
SNGZ				S	**Sn**	**05 01 06.3**	**-1.0**
RAHZ	**Arahi**	**8.24**	**207**	S	**Sn**	**05 01 11.6**	**-1.0**
MTHZ	**Maungataniwha**	**8.29**	**208**	P	**Pn**	**04 59 41.1**	**-0.1**
MTHZ				S	**Sn**	**05 01 09.9**	**-3.7**

BKZ	**Black Stump Fm**	**8.69**	**208**	P	**Pn**	**04 59 44.2**	**-2.6**	
BKZ				S	**Sn**	**05 01 20.3**	**-3.3**	
KWHZ	**Kaweka Forest**	**8.94**	**208**	P	**Pn**	**04 59 48.1**	**-2.1**	
KWHZ				S	**Sn**	**05 01 27.1**	**-2.7**	
OTVZ	**Oturere**	**9.05**	**212**	P	**Pn**	**04 59 51.3**	**-0.5**	
OTVZ				S	**Sn**	**05 01 31.3**	**-1.2**	
SNVZ	**South Ngauruho**	**9.08**	**212**	P	**Pn**	**04 59 52.2**	**0.0**	
SNVZ				S	**Sn**	**05 01 32.3**	**-0.9**	
MRZ	**Mangatainoka R**	**10.34**	**207**	S	**Sn**	**05 01 55.5**	**-8.3**	
THZ	**Tophouse**	**12.39**	**213**	P	Pn	05 00 31.7	-5.7	
THZ				S	**Sn**	**05 02 45.5**	**-8.6**	
DZM	**Mont Dzumac**	**16.66**	**301**	LR	LR	05 06 44.3		
	comp=Z,86nm,20.0s,baz=214,slow=32							
CTA	**Charters Tower**	**33.85**	**281**	P	**P**	**05 04 25.7**	**+2.8**	
	3.6nm,0.6s,baz=123,slow=9.5,SNR=6.1							
	3.6nm,0.6s							
STKA	**Stephens Creek**	**34.06**	**259**	P	**P**	**05 04 27.1**	**+2.5**	
	2.3nm,0.8s,baz=129,slow=13,SNR=3.9							
	2.3nm,0.8s							
STKA	**Stephens Creek**	**34.06**	**259**	IAmb	IAmb	05 04 40.1		
	comp=Z,2.0nm,1.4s							
BBOO	**Buckleboo**	**38.49**	**256**	P	**P**	**05 05 03.4**	**+0.9**	
BBOO				IAmb	IAmb	05 05 27.0		
	comp=Z,11nm,1.3s							
COEN	**Coen**	**39.46**	**288**	P	**P**	**05 05 11.2**	**+0.6**	
COEN				IAmb	IAmb	05 05 12.7		
	comp=Z,8.7nm,1.2s							
AS31	**Alice Springs**	**42.89**	**268**	P	**P**	**05 05 40.9**	**+2.0**	
ASAR	**Alice Springs**	**42.89**	**268**	P	**P**	**05 05 39.9**	**+1.0**	
	comp=Z,1.9nm,0.7s,baz=104,slow=7.4,SNR=20							
	comp=Z,1.9nm,0.7s							
WR0	**Warramunga Arr**	**43.81**	**274**	P	**P**	**05 05 47.8**	**+1.5**	
WB2	**Warramunga Arr**	**43.98**	**274**	P	**P**	**05 05 49.3**	**+1.6**	
WB2				IAmb	IAmb	05 05 49.7		
	comp=Z,4.5nm,0.7s							
WRA	**Warramunga Arr**	**43.99**	**274**	P	**P**	**05 05 49.0**	**+1.2**	
	comp=Z,2.6nm,0.4s,baz=111,slow=7.9,SNR=65							
	comp=Z,2.6nm,0.4s							
WRA	**Warramunga Arr**	**43.99**	**274**	P	**P**	**05 05 49.3**	**+1.5**	
WB0	**Warramunga Arr**	**44.02**	**274**	P	**P**	**05 05 49.0**	**+1.0**	
WB0				IAmb	IAmb	05 05 51.9		
	comp=Z,5.3nm,0.8s							
QSPA	**South Pole Qui**	**58.50**	**180**	P	**P**	**05 07 38.6**	**+2.5**	
H03S2	**Juan Fernandez**	**79.94**	**123**	T	T	06 38 36.8		
	baz=236,SNR=3.8							
H03S1	**Juan Fernandez**	**79.95**	**123**	T	T	06 38 39.0		
	baz=236,SNR=4.3							
H03S3	**Juan Fernandez**	**79.95**	**123**	T	T	06 38 37.3		
	baz=236,SNR=3.0							
H03N3	**Juan Fernandez**	**80.14**	**123**	T	T	06 38 40.4		
	baz=240,slow=72,SNR=6.9							
H03N2	**Juan Fernandez**	**80.14**	**123**	T	T	06 38 39.4		
	baz=240,slow=72,SNR=5.5							
H03N1	**Juan Fernandez**	**80.15**	**123**	T	T	06 38 43.4		
	baz=240,slow=72,SNR=12							
MKAR	**Makanchi Array**	**118.42**	**310**	PKP	**PKPdf**	**05 16 26.9**	**-0.2**	
	comp=Z,0.3nm,0.5s,baz=106,slow=2.5,SNR=3.0							
KURK	**Kurchatov**	**121.76**	**313**		**PKPdf**	**05 16 33.2**	**-0.1**	
KURBB	**Kurchatov Arra**	**121.80**	**313**	PKP	**PKPdf**	**05 16 33.2**	**-0.2**	
	comp=Z,0.7nm,0.6s,baz=113,slow=1.7,SNR=6.7							
FINES	**FINESS Array B**	**146.22**	**339**	PKPbc	**PKPdf**	**05 17 19.2**	**+0.9**	
	comp=Z,3.2nm,0.5s,baz=57,slow=3.9,SNR=25							
NB2	**NORSAR Subarra**	**149.92**	**351**	PKP	**PKPbc**	**05 17 30.5**	**+1.1**	
	comp=Z,1.9nm,0.8s,baz=13,slow=4.3							
AKASG	**Malin Array Be**	**152.15**	**321**	PKPbc	**PKPbc**	**05 17 34.8**	**-0.1**	
	comp=Z,0.3nm,0.4s,baz=46,slow=2.3,SNR=6.2							
AKASG	**Malin Array Be**	**152.15**	**321**		**PKPbc**	**05 17 35.4**	**+0.5**	
BRTR	**Keskin Array B**	**153.01**	**296**	PKPbc	**PKPbc**	**05 17 38.0**	**+0.6**	
	comp=Z,0.5nm,0.5s,baz=142,slow=4.6,SNR=3.2							

*UPA **04** 04:59:33.5±0.8,7˚.61N×78˚.39W,h5km±2km,MW4.0*

*RSNC **04** 04:59:35.3±1.1,7˚.85N×78˚.35W,h0km±5km,ML2.5*

ISC 04 04:59:32.3±0.8,7˚.69N±0˚.04×78˚.39W±0˚.02,h10km,n26, σ1^{s}07/48,Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPC	**Capurgana**	**1.40**	**47**	*eP*	**Pn**	**04 59 57.2**	**-0.7**
CAPC				*eS*	**Sb**	**05 00 15.2**	**-1.3**
CAPC				*i*		05 00 16.2	
	comp=Z,186nm,0.1s						
TABO3	**Taboga, Panama**	**1.59**	**314**	*eP*	**Pb**	**05 00 01.9**	**0.0**
TABO3				*eS*	**Sg**	**05 00 23.5**	**-0.1**
CNTA3	**Canitas, Panam**	**1.60**	**342**	*eP*	**Pg**	**05 00 02.9**	**-0.2**
CHPO	**Chepo, Panama**	**1.64**	**334**	*eP*	**Pb**	**05 00 02.2**	**-0.5**
CHPO				*eS*	**Sg**	**05 00 24.8**	**-0.3**
FLAM	**Flamenco Islan**	**1.66**	**317**	*eP*	**Pb**	**05 00 03.0**	**-0.2**
FLAM				*eS*	**Sg**	**05 00 25.1**	**-0.8**
UPA	**Univ. de Panam**	**1.71**	**319**	*eP*	**Pb**	**05 00 03.5**	**-0.4**
UPA				*eS*	**Sg**	**05 00 26.6**	**-0.9**
UPA				*i*		05 00 29.1	
	comp=Z,21nm,0.4s						
UPA	**Univ. de Panam**	**1.71**	**319**	*eP*	**Pb**	**05 00 03.7**	**-0.3**
UPA				*eS*	**Sg**	**05 00 26.6**	**-0.9**
ARRA3	**Arraijan, Pana**	**1.78**	**316**	*eP*	**Pb**	**05 00 05.3**	**+0.1**
CHOR3	**La Chorrera**	**1.82**	**312**	*eP*	**Pb**	**05 00 05.7**	**0.0**
CHOR3				*eS*	**Sg**	**05 00 29.7**	**-1.1**
AZU	**Azuero**	**1.87**	**273**	*eP*	**Pb**	**05 00 05.7**	**-0.9**
AZU				*eS*	**Sb**	**05 00 30.3**	**+0.3**
AZU				*i*		05 00 33.9	
	comp=Z,65nm,0.2s						
AZU	**Azuero**	**1.87**	**273**	*eP*	**Pb**	**05 00 05.5**	**-1.0**
AZU				*eS*	**Sb**	**05 00 29.4**	**-0.6**
ZANG	**Zanguenga, Cho**	**1.93**	**311**	*eP*	**Pb**	**05 00 07.1**	**-0.5**
ZANG				*eS*	**Sb**	**05 00 32.8**	**+1.0**
GAMB1	**Gamboa**	**1.93**	**318**	*eP*	**Pb**	**05 00 06.3**	**-1.4**
GAMB1				*eS*	**Sb**	**05 00 32.1**	**+0.3**
VTON	**El Valle, Cocl**	**1.94**	**298**	*eP*	**Pb**	**05 00 07.0**	**-0.8**
VTON				*eS*	**Sb**	**05 00 31.9**	**-0.2**
FRIJ	**El Hiral**	**2.02**	**319**	*eP*	**Pb**	**05 00 08.2**	**-1.0**
CHIT3	**Chitre**	**2.02**	**278**	*eP*	**Pb**	**05 00 08.1**	**-1.2**
CHIT3				*eS*	**Sb**	**05 00 33.7**	**-0.8**
BCIP	**Isla Barro Col**	**2.05**	**316**	*eP*	**Pb**	**05 00 08.1**	**-1.6**
BCIP				*eS*	**Sb**	**05 00 35.3**	**0.0**
BCIP				*i*		05 00 38.9	
	comp=Z,33nm,0.2s						
BCIP	**Isla Barro Col**	**2.05**	**316**	*eP*	**Pb**	**05 00 08.7**	**-1.0**
BCIP				*eS*	**Sb**	**05 00 35.4**	**+0.1**
MLIR	**Monte Lirio**	**2.12**	**317**	*eP*	**Pb**	**05 00 09.7**	**-1.2**
DBBC	**Dabeiba**	**2.27**	**107**	*eP*	**Pb**	**05 00 12.1**	**-1.3**
DBBC				*eS*	**Sb**	**05 00 42.7**	**+1.1**
LCBC	**Los crdobas,**	**2.32**	**60**	*eP*	**Pb**	**05 00 13.7**	**-0.6**
LCBC				*eS*	**Sg**	**05 00 45.7**	**-1.1**
LCBC				*i*		05 00 50.8	
	comp=Z,23nm,0.3s						
CACAO	**El Cacao, Vera**	**2.47**	**262**	*eP*	**Pn**	**05 00 13.6**	**+0.9**
CACAO				*eS*	**Sn**	**05 00 45.9**	**+1.0**
URREC	**San Jos de Ur**	**2.83**	**88**	*eP*	**Pn**	**05 00 19.1**	**+1.4**
URREC				*eS*	**Sb**	**05 00 55.6**	**-2.3**
URREC				*i*		05 01 01.8	
	comp=Z,7.9nm,0.4s						
URREC	**San Jos de Ur**	**2.83**	**88**	*eP*	**Pn**	**05 00 19.3**	**+1.6**
URREC				*eS*	**Sn**	**05 00 53.0**	**+1.0**
CBOC	**Ciudad Bolivar**	**2.98**	**127**	*eP*	**Pn**	**05 00 19.5**	**-0.4**
CBOC				*eS*	**Sb**	**05 01 01.7**	**-0.4**
CBOC				*i*		05 01 12.3	
	comp=Z,5.1nm,0.5s						
OCAC	**Ocana**	**5.05**	**83**	*eP*	**Pn**	**05 00 50.9**	**+2.4**
OCAC				*eS*	**Sn**	**05 01 49.8**	**+2.8**
OCAC				*i*		05 01 56.9	
	comp=Z,12nm,0.6s						

*IDC **04** 05:00:02.0±0.6,0˚.77N×29˚.18W,h0km,mb4.2/18, mbtmp4.2/19,ML4.0/1,MS3.8/44,Error ellipse: s-maj=25.9km s-min=13.4km az=148.0*

*NEIC **04** 05:00:04.0±1.1,0˚.75N±0˚.07×29˚.2W±0˚.1,h10km±1km, mb4.8/63,Error ellipse: s-maj=22.3km s-min=4.7km az=121.0*

ISC 04 05:00:03.4±0.5,0˚.7N±0˚.1×29˚.25W±0˚.08,h10km,n141, σ1^{s}01/100,mb4.7/58,MS3.8/43,1C,Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**9.31**	**225**	Pn	**Pn**	**05 02 16.5**	**-1.4**
	1.4nm,0.3s,baz=172,slow=16,SNR=14						
RCBR				Sn	Sn	05 03 51.8	-11
	0.6nm,0.3s,baz=264,slow=19,SNR=1.9						
RCBR				LR	LR	05 05 03.9	
	comp=Z,833nm,19.4s,baz=194,slow=32						
	9.7nm,0.6s						

RCBR	**Riachuelo**	**9.31**	**225**		**Pn**	**05 02 16.7**	**-1.2**	
SACV	**Santiago Islan**	**15.20**	**21**	Pn	**Pn**	**05 03 35.7**	**-2.7**	
SACV				IAmb	IAmb	05 03 37.8		
	comp=Z,44nm,0.7s							
H10N3	**ASCENSION HYDR**	**17.00**	**120**	T	T	05 21 32.8		
	baz=300,slow=74,SNR=1000							
H10N2	**ASCENSION HYDR**	**17.00**	**120**	T	T	05 21 35.2		
	baz=300,slow=74,SNR=1038							
H10N1	**ASCENSION HYDR**	**17.02**	**120**	T	T	05 21 36.4		
	baz=300,slow=74,SNR=982							
H10S3	**ASCENSION HYDR**	**17.43**	**124**	T	T	05 22 07.1		
	baz=298,slow=74,SNR=1506							
H10S2	**ASCENSION HYDR**	**17.45**	**124**	T	T	05 22 08.6		
	baz=282,slow=74,SNR=2656							
MBO	**M'Bour**	**18.22**	**41**		**Pn**	**05 04 15.4**	**-1.2**	
MBO				IAmb	IAmb	05 04 19.8		
	comp=Z,104nm,1.4s							
MDP	**Montagnes des**	**23.76**	**281**	LR	LR	05 12 50.5		
	comp=Z,141nm,18.9s,baz=83,slow=32							
BDFB	**Brasilia**	**24.67**	**228**	P	**P**	**05 05 26.3**	**+1.4**	
	comp=Z,2.3nm,0.7s,baz=62,slow=11,SNR=4.8							
BDFB				LR	LR	05 14 05.8		
	comp=Z,296nm,19.4s,baz=139,slow=34							
	comp=Z,2.3nm,0.7s							
LIC	**Lamto**	**24.77**	**77**	*eP*	**P**	**05 05 27.2**	**+1.5**	
	comp=Z,82nm,1.4s							
TIC	**Toumodi**	**24.87**	**76**	*eP*	**P**	**05 05 27.5**	**+0.9**	
	comp=Z,123nm,1.4s							
DBIC	**Dimbokro**	**25.03**	**76**	P	**P**	**05 05 28.2**	**+0.1**	
	comp=Z,65nm,1.1s,baz=270,slow=12,SNR=17							
DBIC				LR	LR	05 13 47.0		
	comp=Z,367nm,18.1s,baz=256,slow=33							
	comp=Z,65nm,1.1s							
DBIC	**Dimbokro**	**25.03**	**76**	P	**P**	**05 05 27.0**	**-1.0**	
KIC	**Kosan Boka**	**25.08**	**77**	*eP*	**P**	**05 05 30.6**	**+2.1**	
	comp=Z,82nm,1.3s							
TOA0	**Torodi Ar. Sit**	**33.04**	**67**	P	**P**	**05 06 38.6**	**-0.8**	
TOA0				IAmb	IAmb	05 06 41.9		
	comp=Z,14nm,1.4s							
TORD	**Torodi Ar. Bea**	**33.04**	**67**	P	**P**	**05 06 38.0**	**-1.4**	
	comp=Z,3.6nm,1.1s,baz=254,slow=3.9,SNR=9.4							
TORD				LR	LR	05 18 37.0		
	comp=Z,200nm,18.6s,baz=232,slow=34							
	comp=Z,3.6nm,1.1s							
TORD	**Torodi Ar. Bea**	**33.04**	**67**	P	**P**	**05 06 38.3**	**-1.1**	
H05S1	**Guadeloupe/Mar**	**34.06**	**295**	T	T	05 42 25.4		
	SNR=39							
H05N1	**Guadeloupe/Mar**	**34.96**	**298**	T	T	05 43 30.3		
	SNR=9.0							
GDSD	**La Dsirade Is**	**34.97**	**298**	P	**P**	**05 06 56.2**	**0.0**	
SIV	**San Ignacio**	**35.55**	**241**	LR	LR	05 22 32.3		
	comp=Z,68nm,18.8s,baz=94,slow=38							
ANWB	**Willy Bob**	**36.14**	**300**	P	**P**	**05 07 07.2**	**+1.0**	
CPUP	**Villa Florida**	**38.18**	**223**	LR	LR	05 22 54.9		
	comp=Z,555nm,18.1s,baz=48,slow=36							
MDT	**Midelt**	**39.44**	**34**	LR	LR	05 21 58.5		
	comp=Z,135nm,21.3s,baz=232,slow=33							
BAUV	**El Baul**	**39.47**	**283**	P	**P**	**05 07 35.1**	**+0.6**	
SJG	**San Juan**	**40.14**	**298**	LR	LR	05 22 22.1		
	comp=Z,96nm,18.2s,baz=98,slow=33							
H09N1	**TRISTAN DA CUN**	**40.76**	**159**	T	T	05 51 21.6		
	SNR=51							
H09W1	**TRISTAN DA CUN**	**40.78**	**159**	T	T	05 51 22.1		
	SNR=18							
LPAZ	**La Paz**	**41.93**	**244**	P	**P**	**05 07 56.2**	**+0.8**	
	comp=Z,3.5nm,0.9s,baz=73,slow=4.5,SNR=14							
LPAZ				LR	LR	05 24 41.9		
	comp=Z,105nm,18.8s,baz=61,slow=35

DIVS					IAmb	IAmb	05 10 25.5		
	comp=Z,5.5nm,1.1s								
CLL	**Collm**	**61.67**	**29**	*eS*	**S**		**05 18 48.0**	**+3.9**	
BRG	**Berggiesshubel**	**61.85**	**29**	*eP*	**P**		**05 10 27.0**	**+4.2**	
BRG				Amp			05 10 28.7		
	comp=Z,6.4nm,1.4s								
MODS	**Modra-Piesok**	**62.08**	**33**	*eP*	**P**		**05 10 25.3**	**+0.9**	
SADO	**Sadowa**	**62.11**	**322**	LR	LR		05 31 44.7		
	comp=Z,65nm,19.8s,baz=129,slow=31								
VRAC	**Vranov**	**62.25**	**32**	P	**P**		**05 10 24.9**	**-0.6**	
	comp=Z,1.3nm,0.6s,baz=224,slow=8.5,SNR=3.5								
VRAC				LR	LR		05 35 20.0		
	comp=Z,30nm,19.1s,baz=240,slow=34								
	comp=Z,1.3nm,0.6s								
FPAL	**Fort Paine**	**62.33**	**309**	P	**P**		**05 10 26.1**	**-0.3**	
KRLC	**Kraliky**	**62.80**	**31**	*eP*	**P**		**05 10 29.8**	**+0.5**	
SWET	**Sewanee**	**62.80**	**310**	P	**P**		**05 10 30.4**	**+0.8**	
SWET				IAmb	IAmb		05 10 32.1		
	comp=Z,14nm,1.2s								
MORC	**Moravsky Berou**	**63.03**	**32**	P	**P**		**05 10 30.5**	**-0.3**	
MORC				IAmb	IAmb		05 10 32.1		
	comp=Z,11nm,1.5s								
U49A	**Red Boiling Sp**	**63.14**	**311**	P	**P**		**05 10 31.6**	**-0.2**	
U49A				IAmb	IAmb		05 10 34.4		
	comp=Z,13nm,1.3s								
PSZ	**Piszkesteto**	**63.29**	**35**	P	**P**		**05 10 32.9**	**+0.3**	
PSZ				IAmb	IAmb		05 10 37.7		
	comp=Z,13nm,1.2s								
Z47A	**Carrollton**	**63.83**	**307**	P	**P**		**05 10 36.2**	**-0.1**	
PLAL	**Pickwick Lake**	**64.39**	**309**	P	**P**		**05 10 39.7**	**-0.3**	
PLAL				IAmb	IAmb		05 10 41.9		
	comp=Z,8.6nm,1.3s								
MLR	**Muntele Rosu**	**65.76**	**39**	P	**P**		**05 10 49.7**	**+0.8**	
	comp=Z,7.0nm,1.1s,baz=194,slow=3.8,SNR=5.2								
	comp=Z,7.0nm,1.1s								
MLR	**Muntele Rosu**	**65.76**	**39**	P	**P**		**05 10 48.2**	**-0.7**	
143A	**Socs Landing,**	**66.38**	**306**	P	**P**		**05 10 53.6**	**+0.7**	
KMBO	**Kilima Mbogo**	**66.52**	**92**	LR	LR		05 37 07.9		
	comp=Z,145nm,18.2s,baz=242,slow=34								
CMIG	**Matias Romero**	**66.53**	**288**	LR	LR		05 42 26.8		
	comp=Z,28nm,18.3s,baz=110,slow=38								
LCAR	**Lake Charles**	**67.11**	**309**	P	**P**		**05 10 57.2**	**-0.3**	
NOA	**NORSAR Array B**	**67.58**	**20**	P	**P**		**05 10 58.2**	**-1.9**	
	comp=Z,1.6nm,1.0s,baz=223,slow=6.2,SNR=3.5								
NOA				LR	LR		05 36 31.1		
	comp=Z,55nm,20.0s,baz=235,slow=32								
	comp=Z,1.6nm,1.0s								
CCM	**Cathedral Cave**	**67.76**	**311**	P	**P**		**05 11 01.0**	**-0.6**	
CCM				IAmb	IAmb		05 11 02.9		
	comp=Z,9.6nm,1.4s								
HFS	**Hagfors**	**67.83**	**22**	LR	LR		05 37 04.3		
	comp=Z,66nm,19.5s,baz=242,slow=33								
MGMO	**Mountain Grove**	**68.28**	**310**	P	**P**		**05 11 04.1**	**-0.8**	
MGMO				IAmb	IAmb		05 11 06.4		
	comp=Z,9.0nm,1.2s								
BRTR	**Keskin Array B**	**68.92**	**47**	P	**P**		**05 11 09.2**	**+0.2**	
	comp=Z,1.3nm,0.9s,baz=287,slow=5.0,SNR=6.6								
	comp=Z,1.3nm,0.9s								
W39A	**Magazine**	**68.93**	**308**	P	**P**		**05 11 09.4**	**+0.3**	
W39A				IAmb	IAmb		05 11 19.0		
	comp=Z,9.2nm,1.4s								
FRB	**Frobisher Bay**	**69.17**	**342**	LR	LR		05 39 09.3		
	comp=Z,27nm,18.4s,baz=186,slow=34								
AKASG	**Malin Array Be**	**69.98**	**35**	P	**P**		**05 11 14.8**	**-0.4**	
	comp=Z,3.6nm,0.8s,baz=246,slow=6.2,SNR=14								
	comp=Z,3.6nm,0.8s								
AKASG	**Malin Array Be**	**69.98**	**35**	P	**P**		**05 11 14.5**	**-0.6**	
AKASG				IAmb	IAmb		05 11 19.1		
	comp=Z,8.7nm,1.2s								
AKBB	**Malin Array Si**	**69.98**	**35**	P	**P**		**05 11 14.8**	**-0.3**	
AKBB				IAmb	IAmb		05 11 20.0		
	comp=Z,17nm,1.3s								
PMSA	**Palmer Station**	**70.11**	**195**	LR	LR		05 35 44.8		
	comp=Z,52nm,20.9s,baz=46,slow=30								
NACGM	**Naroch**	**70.54**	**31**	⇑*eP*	**P**		**05 11 18.9**	**+0.4**	
	baz=242								
SPMN	**Marine on St.**	**71.11**	**318**	P	**P**		**05 11 21.4**	**-0.8**	
SPMN				IAmb	IAmb		05 11 23.2		
	comp=Z,9.3nm,1.2s								
JMIC	**Jan Mayen**	**71.42**	**7**	LR	LR		05 36 31.0		
	comp=Z,27nm,19.3s,baz=244,slow=31								
T35A	**Sooner Cattle**	**71.50**	**309**	P	**P**		**05 11 24.6**	**-0.1**	
T35A				IAmb	IAmb		05 11 26.4		
	comp=Z,13nm,1.1s								
FINES	**FINESS Array B**	**73.47**	**24**	P	**P**		**05 11 37.8**	**+1.9**	
	comp=Z,3.5nm,0.9s,baz=186,slow=5.7,SNR=3.7								
	comp=Z,3.5nm,0.9s								
ULM	**Lac du Bonnet**	**74.66**	**322**	LR	LR		05 38 59.3		
	comp=Z,66nm,21.6s,baz=108,slow=31								
MSTX	**Muleshoe**	**75.95**	**305**	P	**P**		**05 11 50.7**	**-0.4**	
MSTX				IAmb	IAmb		05 11 54.6		
	comp=Z,12nm,1.4s								
TX31	**Lajitas Ar. Si**	**76.07**	**300**	P	**P**		**05 11 52.5**	**+0.7**	
TX31				IAmb	IAmb		05 11 53.6		
	comp=Z,8.1nm,1.1s								
TXAR	**Lajitas Array**	**76.07**	**300**	P	**P**		**05 11 53.3**	**+1.4**	
	comp=Z,0.5nm,0.8s,baz=120,slow=6.0,SNR=7.3								
TXAR				LR	LR		05 42 56.3		
	comp=Z,22nm,20.5s,baz=73,slow=34								
	comp=Z,0.5nm,0.8s								
KBZ	**Khabaz**	**76.64**	**45**	P	**P**		**05 11 54.5**	**-0.1**	
	comp=Z,3.1nm,1.0s,baz=214,slow=7.3,SNR=1.8								
	comp=Z,3.1nm,1.0s								
KSCO	**Kaye Shedlock'**	**76.65**	**310**	P	**P**		**05 11 54.7**	**-0.3**	
GNI	**Garni**	**77.31**	**49**	LR	LR		05 47 24.6		
	comp=Z,30nm,20.1s,baz=199,slow=37								
ARCES	**ARCESS Array B**	**77.59**	**17**	LR	LR		05 40 26.2		
	comp=Z,59nm,20.2s,baz=205,slow=31								
T25A	**Trinidad**	**77.74**	**308**	P	**P**		**05 12 01.4**	**+0.2**	
MNTX	**Cornudas Mount**	**77.82**	**302**	P	**P**		**05 12 01.6**	**0.0**	
ANMO	**Albuquerque**	**79.10**	**305**	LR	LR		05 42 17.2		
	comp=Z,82nm,21.3s,baz=90,slow=32								
SPITS	**Spitsbergen Ar**	**80.98**	**9**	LR	LR		05 41 24.6		
	comp=Z,28nm,21.2s,baz=170,slow=31								
PV13	**Radium Mtn., P**	**81.34**	**308**	P	**P**		**05 12 21.4**	**+0.5**	
LPIG	**La Paz**	**81.53**	**294**	LR	LR		05 45 41.2		
	comp=Z,43nm,20.2s,baz=212,slow=34								
PDAR	**Pinedale Array**	**82.38**	**313**	LR	LR		05 44 03.1		
	comp=Z,94nm,21.3s,baz=108,slow=32								
X16A	**Lo Mia Camp, P**	**83.14**	**304**	P	**P**		**05 12 29.4**	**-1.0**	
WUAZ	**Wupatki**	**83.16**	**306**	P	**P**		**05 12 30.2**	**-0.1**	
WUAZ				IAmb	IAmb		05 12 34.6		
	comp=Z,7.3nm,1.2s								
EUNU	**Eureka**	**83.87**	**352**	P	**P**		**05 12 33.0**	**0.0**	
MTPU	**Mount Pierson**	**83.98**	**308**	P	**P**		**05 12 35.9**	**+1.2**	
MTPU				IAmb	IAmb		05 12 38.0		
	comp=Z,8.8nm,1.5s								
BGU	**Big Grassy Mou**	**84.81**	**311**	P	**P**		**05 12 39.6**	**+0.9**	
EDM	**Edmonton**	**85.87**	**323**	P	**P**		**05 12 44.1**	**+0.5**	
ELK	**Elko**	**86.48**	**311**	LR	LR		05 46 56.7		
	comp=Z,62nm,19.8s,baz=95,slow=32								
QSM	**Queen of Sheba**	**87.64**	**306**	P	**P**		**05 12 52.0**	**-0.5**	
QSM				IAmb	IAmb		05 12 56.5		
	comp=Z,8.0nm,1.4s								
TPH	**Tonopah**	**87.95**	**308**	P	**P**		**05 12 53.7**	**-0.6**	
NEW	**Newport**	**88.03**	**318**	LR	LR		05 49 50.3		
	comp=Z,83nm,18.1s,baz=98,slow=34								
ARU	**Arti**	**88.17**	**34**	LR	LR		05 50 17.6		
	comp=Z,42nm,21.3s,baz=246,slow=34								
NVAR	**Mina Array Bea**	**88.80**	**308**	P	**P**		**05 12 58.5**	**+0.2**	
	comp=Z,0.4nm,0.7s,baz=139,slow=3.7,SNR=5.1								
NVAR				LR	LR		05 50 23.4		
	comp=Z,41nm,18.8s,baz=108,slow=34								
	comp=Z,0.4nm,0.7s								
YBH	**Yreka Blue Hor**	**92.10**	**312**	LR	LR		05 50 28.6		
	comp=Z,56nm,18.4s,baz=76,slow=33								
ASAR	**Alice Springs**	**151.95**	**146**	PKPbc	**PKPbc**		**05 19 59.2**	**-0.6**	
	comp=Z,2.1nm,0.9s,baz=186,slow=1.7,SNR=12								

CRAAG ***04*** *05:21:21.5, 36˚.35N×3˚.49E, MlI4.1, Hypocentre not reviewed by the ISC*

IDC ***04*** *05:21:21.3±0.8, 36˚.38N×3˚.49E, h0km, mb3.9/11, mbtmp3.9/17, ML3.7/6, MS3.4/9, Error ellipse: s-maj=20.2km s-min=15.9km az=170.0*

CNRM ***04*** *05:21:21.7, 36˚.32N×3˚.46E, h0km, ml4.2*

LDG ***04*** *05:21:21.8±0.3, 36˚.25N×3˚.49E, h30km, Ml3.6/36, Error ellipse: s-maj=5.8km s-min=3.1km az=150.0*

MDD ***04*** *05:21:23.3±0.5, 36˚.24N×3˚.60E, h13km±8km, Mb4.6/24, M_mb4.0/24, Error ellipse: s-maj=8.6km s-min=2.5km az=142.0*

ISC 04 05:21:24.2±0.6, 36˚.42N±0˚.06×3˚.50E±0˚.05, h18km, n174, σ2≥18/197, mb4.0/11, MS3.4/9, 27C-3D, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
ADJB	**Djebel Djouab**	**0.27**	**191**	P		05 21 26.5	
ABMS	**Boumerdes**	**0.33**	**357**	P		05 21 31.1	
AKET	**Djebel Ketar**	**0.48**	**140**	P		05 21 31.4	
ABA	**Alger-Bouzarea**	**0.53**	**316**	P		05 21 33.6	
SET	**Setif**	**1.55**	**98**	P		05 21 52.0	
EBNR	**Beni Rached**	**1.59**	**266**	P		05 22 10.0	
ECHA	**Ech Chlef**	**1.74**	**262**	P		05 22 20.0	
DFRA	**Djebel Bou Aff**	**1.92**	**86**	P		05 21 56.0	
EANR	**'Ain N'Sour**	**2.00**	**257**	P		05 22 22.0	
CASM	**Ain Smara**	**2.42**	**93**	P		05 22 09.6	
CKFL	**Kef-Lekhel**	**2.60**	**89**	P		05 22 06.1	
OJBR	**Djebel Berber**	**2.69**	**253**	P		05 22 07.0	
EIBI	**Ibiza**	**3.11**	**327**	P	**Pn**	**05 22 12.8**	**+0.4**
EIBI				⇑*iVmb_V*		05 22 17.0	
	2μm,SNR=10						
EIBI				S	**Sn**	**05 22 48.6**	**-0.6**
ODJA	**Bouhanifia**	**3.16**	**251**	P		05 22 21.0	
CMAH	**Djebel Manchou**	**3.17**	**85**	P		05 22 12.6	
ABSA	**Djebel Ababsia**	**3.22**	**91**	P		05 22 16.2	
USTO	**Oran**	**3.35**	**259**	P		05 22 29.0	
ETOS	**Mallorca**	**3.39**	**351**	P	**Pn**	**05 22 16.2**	**0.0**
ETOS				⇑*iVmb_V*		05 22 17.4	
	1μm,SNR=11						
ETOS				S	**Sn**	**05 22 55.3**	**-0.6**
MAHO	**Mahon**	**3.52**	**10**	P	**Pn**	**05 22 17.0**	**-1.1**
MAHO				S	**Sn**	**05 22 55.4**	**-3.9**
ETRV	**Los Montesinos**	**3.76**	**296**	S	**Sn**	**05 23 05.5**	**+0.4**
CART	**Cartagena**	**3.79**	**289**	P	**Pn**	**05 22 20.9**	**-0.8**
CART				S	**Sn**	**05 23 01.1**	**-4.6**
CART	**Cartagena**	**3.79**	**289**	P	**Pn**	**05 22 21.0**	**-0.7**
AFON	**Font Roja**	**3.92**	**306**	P	**Pn**	**05 22 23.2**	**-0.4**
AFON				⇑*iVmb_V*		05 22 30.0	
	400nm,SNR=3.0						
AFON				S	**Sn**	**05 23 10.2**	**+1.0**
EMUR	**La Murta**	**4.04**	**292**	P	**Pn**	**05 22 24.9**	**-0.4**
EMUR				⇑*iVmb_V*		05 22 29.6	
	650nm,SNR=5.0						
EMUR				S	**Sn**	**05 23 13.3**	**+1.1**
ECOL	**Islas Columbre**	**4.12**	**328**	P	**Pn**	**05 22 26.4**	**+0.2**
ECOL				S	**Sn**	**05 23 13.3**	**-0.7**
EZAR	**Zarzadilla de**	**4.40**	**291**	P	**Pn**	**05 22 29.4**	**-0.7**
EZAR				S	**Sn**	**05 23 20.0**	**-0.9**
ETOB	**Tobarra**	**4.58**	**300**	P	**Pn**	**05 22 33.1**	**+0.4**
ETOB				⇑*iVmb_V*		05 22 39.9	
	659nm,SNR=8.9						
ETOB				S	**Sn**	**05 23 26.6**	**+1.0**
ENIJ	**Nijar**	**4.62**	**279**	P	**Pn**	**05 22 31.6**	**-1.6**
ENIJ				⇑*iVmb_V*		05 22 37.2	
	285nm,SNR=1.6						
ENIJ				S	**Sn**	**05 23 23.9**	**-2.4**
ECHE	**Chera**	**4.74**	**313**	P	**Pn**	**05 22 35.5**	**+0.6**
ECHE				⇑*iVmb_V*		05 22 39.1	
	776nm,SNR=7.6						
ECHE				S	**Sn**	**05 23 28.9**	**-0.4**
KEST	**Kesra**	**4.79**	**97**	Pn	**Pn**	**05 22 36.1**	**+0.6**
	2.3nm,0.3s,baz=123,slow=0.7,SNR=27						
KEST				Sn	**Sn**	**05 23 30.9**	**+0.4**
	1.2nm,0.3s,baz=13,slow=19,SNR=1.7						
	33nm,0.9s						
EMOS	**Mosqueruela**	**5.02**	**323**	P	**Pn**	**05 22 39.4**	**+0.6**
EMOS				⇑*iVmb_V*		05 22 43.5	
	683nm,SNR=8.2						
EMOS				S	**Sn**	**05 23 35.2**	**-1.4**
TAF	**Taforalt**	**5.08**	**253**	P	**Pn**	**05 22 38.2**	**-1.3**
EBER	**Berja**	**5.16**	**277**	P	**Pn**	**05 22 39.7**	**-1.1**
EBER				⇑*iVmb_V*		05 22 47.1	
	494nm,SNR=2.3						
EBER				S	**Sn**	**05 23 38.4**	**-1.5**
ERTA	**Horta de San J**	**5.16**	**332**	P	**Pn**	**05 22 42.1**	**+1.5**
ERTA				⇑*iVmb_V*		05 22 51.2	
	323nm,SNR=5.3						
ERTA				S	**Sn**	**05 23 37.4**	**-2.4**
EPOB	**Poblet**	**5.28**	**340**	P	**Pn**	**05 22 43.0**	**+0.7**
EPOB				S	**Sn**	**05 23 40.9**	**-1.7**
JBK	**JBK**	**5.37**	**249**	P	**Pn**	**05 22 43.2**	**-0.5**
GOG	**Mont Gurugu**	**5.41**	**259**	P	**Pn**	**05 22 42.6**	**-1.5**
VSL	**Villasalto**	**5.57**	**55**	P	**Pn**	**05 22 45.9**	**-0.3**
TDRA	**Tendrara**	**5.66**	**235**	P	**Pn**	**05 22 46.6**	**-1.1**
EMIR	**Miracle**	**5.70**	**345**	P	**Pn**	**05 22 49.9**	**+1.9**
EMIR				S	**Sn**	**05 23 52.0**	**-0.9**
ELGU	**Los Guajares,**	**5.75**	**277**	P	**Pn**	**05 22 48.1**	**-0.7**
ELGU				⇑*iVmb_V*		05 22 52.0	
	555nm,SNR=1.7						
ELGU				S	**Sn**	**05 23 52.2**	**-2.0**
FIGM	**Figuig**	**5.81**	**224**	P	**Pn**	**05 22 48.4**	**-1.3**
EJON	**La Jonquera**	**6.04**	**356**	P	**Pn**	**05 22 54.1**	**+1.4**
EJON				S	**Sn**	**05 24 01.3**	**0.0**
ESAC	**San Caprasio**	**6.13**	**331**	P	**Pn**	**05 22 56.6**	**+2.7**
ESAC				⇑*iVmb_V*		05 23 06.6	
	547nm,SNR=4.2						
ESAC				S	**Sn**	**05 24 05.2**	**+1.6**
EGOR	**Sierra Gorda,**	**6.15**	**279**	P	**Pn**	**05 22 56.0**	**+1.7**
EGOR				⇑*iVmb_V*		05 22 59.5	
	214nm,SNR=1.3						
EGOR				S	**Sn**	**05 24 06.0**	**+1.8**
ETOR	**Torete**	**6.18**	**317**	P	**Pn**	**05 22 57.1**	**+2.4**
ETOR				⇑*iVmb_V*		05 23 04.0	
	198nm,SNR=3.5						
ETOR				S	**Sn**	**05 24 09.1**	**+4.2**
AKLM	**AKL**	**6.30**	**255**	P	**Pn**	**05 22 56.2**	**-0.2**
UCM	**Universidad Co**	**6.57**	**308**	P	**Pn**	**05 23 02.1**	**+2.2**
UCM				S	**Sn**	**05 24 08.5**	**-5.9**
EMIJ	**Mijas**	**6.67**	**274**	P	**Pn**	**05 22 59.3**	**-2.0**
EMIJ				⇑*iVmb_V*		05 23 07.3	
	164nm,SNR=1.7						
EMIJ				S	**Sn**	**05 24 11.6**	**-5.2**
EADA	**Adamuz**	**6.67**	**288**	P	**Pn**	**05 23 01.1**	**-0.3**
ESDC	**Sonseca Array**	**6.72**	**301**	Pn	**Pn**	**05 23 02.1**	**0.0**
	1.0nm,0.3s,baz=113,slow=13,SNR=41						
ESDC				Sn	**Sn**	**05 24 16.0**	**-2.3**
	0.3nm,0.3s,baz=110,slow=22,SNR=4.2						
	5.5nm,0.5s						
ESDC	**Sonseca Array**	**6.72**	**301**	P	**Pn**	**05 23 03.4**	**+1.3**
ESDC				⇑*iVmb_V*		05 23 06.0	
	142nm,SNR=3.3						
ESDC				S	**Sn**	**05 24 14.7**	**-3.6**
ECHI	**Chisagues Biel**	**6.74**	**339**	P	**Pn**	**05 23 05.4**	**+3.0**
PAB	**San Pablo**	**6.94**	**299**	P	**Pn**	**05 23 04.9**	**-0.2**
PAB				⇑*iVmb_V*		05 23 09.3	
	156nm,SNR=4.0						
PAB	**San Pablo**	**6.94**	**299**	P	**Pn**	**05 23 05.2**	**+0.1**
MTLF	**Montolieu**	**6.98**	**352**	*eP*	**Pn**	**05 23 07.2**	**+1.6**
MTLF				*eSn*	**Sn**	**05 24 19.7**	**-4.8**
	17nm,0.8s						
EPF	**Esparros**	**7.04**	**341**	*eP*	**Pn**	**05 23 08.4**	**+2.0**
EPF				*eSn*	**Sn**	**05 24 20.5**	**-5.4**
	9.7nm,0.4s						
ETSF	**Etsaut**	**7.19**	**335**	*eP*	**Pn**	**05 23 10.0**	**+1.5**
ETSF				*eSn*	Sn	05 24 22.1	-7.6
	24nm,0.9s						
LMR	**La Mourre**	**7.28**	**18**	*eP*	Pn	05 23 06.0	-3.7
LMR	**La Mourre**	**7.28**	**18**	*eP*	**Pn**	**05 23 09.4**	**-0.3**
LMR				*eSn*	**Sn**	**05 24 26.1**	**-5.8**
	5.4nm,0.3s						
ECAB	**El Cabril**	**7.30**	**286**	P	**Pn**	**05 23 09.0**	**-1.0**
ECAB				⇑*iVmb_V*		05 23 14.6	
	104nm,SNR=2.5						
ECAB				S	**Sn**	**05 24 30.5**	**-2.0**
EORO	**Oroz-Betelu**	**7.45**	**332**	P	**Pn**	**05 23 13.9**	**+1.8**
EORO				⇑*iVmb_V*		05 23 19.9	
	142nm,SNR=3.1						
EORO				S	**Sn**	**05 24 34.7**	**-1.4**
PGF	**Pioggiola**	**7.45**	**33**	*eP*	**Pn**	**05 23 12.6**	**+0.5**
PGF				*eSn*	**Sn**	**05 24 31.1**	**-5.1**
	5.9nm,0.3s						
MDT	**Midelt**	**7.59**	**244**	Pn	**Pn**	**05 23 14.1**	**+0.1**
	0.4nm,0.3s,baz=83,slow=14,SNR=19						
	8.4nm,0.8s						
MDT	**Midelt**	**7.59**	**244**	P	**Pn**	**05 23 14.2**	**+0.1**
SJPF	**Ste Jean**	**7.61**	**333**	*eP*	**Pn**	**05 23 17.4**	**+3.2**
SJPF				*eSn*	Sn	05 24 33.0	-7.0
	13nm,0.4s						
IFR	**Ifrane**	**7.65**	**250**	P	**Pn**	**05 23 15.1**	**+0.1**
IFR				S	**Sn**	**05 24 36.5**	**-4.7**
LASF	**Ste Croix**	**7.65**	**2**	*eP*	**Pn**	**05 23 15.3**	**+0.5**
LASF				*eSn*	Sn	05 24 34.6	-6.4
	48nm,0.7s						
MD31	**MD31**	**7.67**	**245**	P	**Pn**	**05 23 14.2**	**-1.0**
SMRF	**Simiane la Rot**	**7.71**	**11**	*eP*	**Pn**	**05 23 17.1**	**+1.5**
EALK	**Alkurruntz**	**7.81**	**332**	P	**Pn**	**05 23 18.6**	**+1.6**
SBF	**Sospel**	**8.02**	**21**	*eP*	**Pn**	**05 23 20.0**	**+0.1**
SBF				*eSn*	Sn	05 24 42.3	-7.9
	12nm,0.5s						
EPLA	**Plasencia**	**8.37**	**299**	P	**Pn**	**05 23 25.3**	**+0.7**
VIVF	**Saint-Julien-l**	**8.47**	**6**	*eP*	**Pn**	**05 23 26.8**	**+0.7**
VIVF				*eSn*	Sn	05 24 53.6	-7.7
	8.5nm,0.5s						
CAF	**Calviac**	**8.57**	**353**	*eP*	**Pn**	**05 23 30.2**	**+2.8**
CAF				*eSn*	Sn	05 24 56.9	-6.6
	3.5nm,0.4s						
ELAN	**Lanestosa**	**8.64**	**324**	P	**Pn**	**05 23 31.4**	**+3.0**
ELAN				⇑*iVmb_V*		05 23 38.6	
	184nm,SNR=2.1						
MBDF	**Montbardon**	**8.66**	**16**	*eP*	**Pn**	**05 23 30.2**	**+1.4**
MBDF				*eSn*	Sn	05 24 59.7	-6.4
	4.4nm,0.5s						
ORIF	**Oris-en-Rattie**	**8.68**	**11**	*ePn*	Pn	05 23 25.3	-3.7
ORIF	**Oris-en-Rattie**	**8.68**	**11**	*eP*	**Pn**	**05 23 31.0**	**+2.0**
ORIF				*eSn*	Sn	05 24 59.1	-7.3
	2.6nm,0.5s						
LFF	**La Frestale**	**8.76**	**347**	*eP*	**Pn**	**05 23 34.1**	**+4.1**
LFF				*eSn*	Sn	05 25 00.7	-7.6
	9.0nm,0.6s						
ZHG	**ZHG**	**8.84**	**253**	P	**Pn**	**05 23 30.9**	**-0.3**
RJF	**Les Rejaudoux**	**9.00**	**351**	*eP*	**Pn**	**05 23 35.5**	**+2.2**
RJF				*eSn*	Sn	05 25 05.7	-8.5
	2.2nm,0.4s						
PVAQ	**Vaqueiros**	**9.04**	**280**	*eP*	**Pn**	**05 23 34.6**	**+0.8**
	22nm,1.7s						
PVAQ				*eLR*	LR	05 26 11.9	
	144nm,20.0s						
PMRV	**Marv??o**	**9.11**	**293**	*eP*	**Pn**	**05 23 37.5**	**+2.6**
	32nm,1.5s						
PMRV				*eLR*	LR	05 26 48.1	
	74nm,18.0s						
PBDV	**Barranco-do-Ve**	**9.20**	**279**	*eP*	**Pn**	**05 23 38.3**	**+2.2**
PCBR	**Castelo Branco**	**9.30**	**295**	*eP*	**Pn**	**05 23 40.7**	**+3.4**
	42nm,1.5s						
PCVE	**Castro Verde**	**9.31**	**281**	*eP*	**Pn**	**05 23 38.9**	**+1.4**
	18nm,0.9s						
EVO	**Evora**	**9.39**	**286**	*eP*	**Pn**	**05 23 40.4**	**+1.8**
	11nm,1.1s						
LPG	**La Plagne**	**9.40**	**14**	*eP*	**Pn**	**05 23 41.5**	**+2.6**
LPG				*eSn*	Sn	05 25 16.9	-7.3
	3.5nm,0.6s						
LPL	**La Plagne**	**9.41**	**14**	*eP*	**Pn**	**05 23 41.3**	**+2.2**
LPL				*eSn*	Sn	05 25 18.0	-6.5
	8.1nm,0.7s						
MESJ	**Messejana**	**9.47**	**282**	*eP*	**Pn**	**05 23 41.2**	**+1.5**
	33nm,1.3s						
MVO	**Moncorvo**	**9.48**	**303**	*eP*	**Pn**	**05 23 41.0**	**+1.0**
	24nm,0.9s						
MVO				*eLR*	LR	05 27 05.4	
	182nm,18.0s						
AVE	**Averroes**	**9.49**	**254**	P	**Pn**	**05 23 39.6**	**-0.4**
MTE	**Manteigas**	**9.53**	**298**	*eP*	**Pn**	**05 23 43.2**	**+2.6**
	10.0nm,0.9s						
MTE				*eLR*	LR	05 26 52.2	
	182nm,18.0s						
EARI	**Arriondas**	**9.59**	**318**	P	**Pn**	**05 23 43.6**	**+2.2**
EARI				S	**Sn**	**05 25 23.3**	**-5.4**
PBRG	**Braganca**	**9.60**	**307**	*eP*	**Pn**	**05 23 42.1**	**+0.5**
	14nm,1.0s						
ECAL	**Calabor**	**9.67**	**308**	P	**Pn**	**05 23 42.8**	**+0.3**
ECAL				⇑*iVmb_V*		05 23 46.3	
	260nm,SNR=3.8						
PVIS	**Viseu**	**9.90**	**299**	*eP*	**Pn**	**05 23 48.1**	**+2.5**
	14nm,1.9s						
TCF	**Toulx Ste Croi**	**9.91**	**355**	*eP*	**Pn**	**05 23 47.5**	**+1.8**
TCF				*eSn*	Sn	05 25 26.9	-10
	1.5nm,0.3s						
PVRL	**Vila Real**	**10.00**	**302**	*eP*	**Pn**	**05 23 49.6**	**+2.6**
	14nm,0.9s						
COI	**Coimbra**	**10.09**	**296**	*eP*	**Pn**	**05 23 52.2**	**+4.0**
POLO	**Lamas de Olo**	**10.09**	**303**	*eP*	**Pn**	**05 23 49.0**	**+0.6**
	8.4nm,2.3s						
PCAS	**Casmilo, Conde**	**10.11**	**295**	*eP*	**Pn**	**05 23 51.6**	**+3.1**

4.4nm,0.9s
CONA Conrad Observa 14.68 35 *e*P **Pn 05 24 53.1 +2.1**
5.9nm,1.0s
KHC Kasperske Hory 14.68 27 *e*P **Pn 05 24 51.8 +0.8**
KHC AMS AMS 05 31 50.0
comp=Z,100nm,18.3s
CKRC Cesky Krumlov 14.71 29 *e*P **Pn 05 24 53.0 +1.7**
RONA Rosalia, Austr 14.72 36 *i* P **Pn 05 24 53.6 +2.1**
11nm,1.1s
SOP Sopron 14.83 37 P **Pn 05 24 55.0 +2.0**
MPLH Magyarpolny 14.98 40 P **Pn 05 24 58.3 +3.4**
MORH Mrgy, Hungar 14.98 45 P **Pn 05 24 56.7 +1.7**
MODS Modra-Piesok 15.66 36 *e*P **P 05 25 10.4 +2.4**
CLL Collm 16.36 22 *e*P **Pn 05 25 14.0 +1.1**
CLL *ex* x 05 25 28.0
CLL Lm MLR 05 31 00.0
comp=Z,100nm,21.4s
PSZ Piszkesteto 16.69 41 P **Pn 05 25 18.8 +1.7**
KRLC Kraliky 16.69 31 *e*P **Pn 05 25 19.0 +1.8**
CHVC Chvalec 16.80 29 *e*P **P 05 25 22.5 +1.9**
DRGR 17.67 48 ⇓P **P 05 25 31.8 +1.5**
LOT Lotru 17.74 53 ⇑P **P 05 25 32.2 +1.2**
CRVS Cervenica-Dubn 18.11 41 *e*PN **Pn 05 25 29.8 -5.0**
CRVS Cervenica-Dubn 18.11 41 *e*P **P 05 25 38.6 +3.5**
ARR Arges 18.27 54 ⇑P **P 05 25 37.0 +0.1**
VOIR 18.57 54 ⇑P **Pn 05 25 42.2 +1.8**
MLR Muntele Rosu 19.17 55 ⇑P **Pn 05 25 48.3 +0.6**
MLR Muntele Rosu 19.17 55 P **Pn 05 25 48.4 +0.6**
comp=Z,0.1nm,0.3s,baz=74,slow=2.8,SNR=6.5
comp=Z,12nm,1.2s
EKA Eskdalemuir Ar 19.46 349 P **Pn 05 25 52.6 +1.6**
comp=Z,0.8nm,0.6s,baz=164,slow=13,SNR=3.4
BURAR Bucovina Array 19.57 48 ⇑P **Pn 05 25 52.7 +0.2**
VRI Vrincioaia 19.82 54 ⇑P **Pn 05 25 57.6 +2.2**
CFR Carcaliu 20.54 57 ⇓P **P 05 25 58.1 -3.4**
SORM Soroca 21.70 50 ⇓P **P 05 26 13.6 -0.5**
TORD Torodi Ar. Bea 23.23 184 P **P 05 26 29.7 -0.8**
comp=Z,4.0nm,0.6s,baz=358,slow=9.5,SNR=24
comp=Z,4.0nm,0.6s
AKASG Malin Array Be 23.32 44 P **P 05 26 29.4 -1.7**
comp=Z,4.0nm,0.9s,baz=244,slow=9.7,SNR=11
AKASG LR LR 05 36 41.5
comp=Z,60nm,18.7s,baz=206,slow=39
comp=Z,4.0nm,0.9s
BRTR Keskin Array B 23.90 73 P **P 05 26 37.6 +0.5**
comp=Z,0.6nm,0.7s,baz=241,slow=6.6,SNR=2.3
comp=Z,0.6nm,0.7s
HFS Hagfors 24.62 12 P **P 05 26 43.0 -0.3**
comp=Z,3.4nm,0.7s,baz=203,slow=14,SNR=6.6
comp=Z,3.4nm,0.7s
EIL Elat 27.13 95 LR LR 05 39 30.4
comp=Z,90nm,20.4s,baz=272,slow=40
BORG Borgarnes 32.01 340 LR LR 05 39 18.5
comp=Z,42nm,19.8s,baz=171,slow=34
KMBO Kilima Mbogo 48.78 132 LR LR 05 52 55.6
comp=Z,45nm,20.7s,baz=57,slow=39
FRB Frobisher Bay 50.21 327 LR LR 05 50 59.6
comp=Z,29nm,18.2s,baz=206,slow=35
SCHQ Schefferville 50.27 315 P **P 05 30 19.4 +0.1**
comp=Z,2.1nm,0.6s,baz=93,slow=4.9,SNR=3.5
comp=Z,2.1nm,0.6s
NRIK Noril'sk 54.39 26 LR LR 05 54 42.7
comp=Z,63nm,21.9s,baz=282,slow=37
ZALV Zalesovo Beam 56.72 44 LR LR 05 57 44.8
comp=Z,47nm,18.9s,baz=332,slow=38
MKAR Makanchi Array 57.51 53 P **P 05 31 10.8 -1.5**
comp=Z,0.4nm,0.6s,baz=276,slow=6.7,SNR=3.9
MKAR PcP **PcP 05 32 06.0 +0.3**
comp=Z,0.7nm,0.7s,baz=283,slow=3.8,SNR=3.8
comp=Z,0.4nm,0.6s
SADO Sadowa 60.76 306 LR LR 05 55 12.2
comp=Z,34nm,19.4s,baz=64,slow=33
ULM Lac du Bonnet 68.35 317 P **P 05 32 23.6 -0.7**
comp=Z,3.0nm,0.7s,baz=73,slow=4.4,SNR=5.3
comp=Z,3.0nm,0.7s
YKA Yellowknife Ar 69.69 334 P **P 05 32 32.8 +0.4**
comp=Z,1.4nm,0.7s,baz=53,slow=6.2,SNR=16
comp=Z,1.4nm,0.7s
ILAR Eielson Array 76.49 347 P **P 05 33 14.3 +1.7**
comp=Z,0.4nm,0.9s,baz=12,slow=4.9,SNR=4.6
comp=Z,0.4nm,0.9s
PDAR Pinedale Array 80.37 317 P **P 05 33 34.5 -0.3**
comp=Z,0.6nm,0.8s,baz=46,slow=6.4,SNR=4.9
comp=Z,0.6nm,0.8s
TXAR Lajitas Array 85.40 303 P **P 05 34 00.6 -0.3**
comp=Z,0.5nm,0.9s,baz=64,slow=5.8,SNR=5.1
TXAR LR LR 06 10 05.9
comp=Z,21nm,18.3s,baz=350,slow=34
comp=Z,0.5nm,0.9s
STKA Stephens Creek 145.22 95 PKPbc **PKPbc 05 41 00.0 -0.5**
comp=Z,2.3nm,0.8s,baz=304,slow=3.6,SNR=3.3

IDC 04 05:34:21.5±13.0, 20.31°S×66.03°E, h0km, mb4.0/4, mbtmp4.0/4, MS3.5/8, Error ellipse: s-maj=464.9km s-min=32.1km az=56.0, Mauritius-Reunion region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**14.05**	**27**	T	T	05 51 41.8	
	baz=205,slow=75,SNR=60						
H08S2	**Diego Garcia H**	**14.06**	**27**	T	T	05 51 43.6	
	baz=205,slow=75,SNR=34						
H08S3	**Diego Garcia H**	**14.07**	**27**	T	T	05 51 42.3	
	baz=205,slow=75,SNR=71						
LBTB	**Lobatse**	**37.50**	**255**	LR	LR	05 54 02.9	
	comp=Z,47nm,19.1s,baz=40,slow=32						
BOSA	**Boshof**	**37.88**	**249**	LR	LR	05 54 52.6	
	comp=Z,64nm,18.2s,baz=16,slow=32						
SUR	**Sutherland**	**41.98**	**244**	LR	LR	05 56 39.1	
	comp=Z,95nm,18.3s,baz=113,slow=32						
TSUM	**Tsumeb**	**45.48**	**263**	LR	LR	06 00 23.1	
	comp=Z,72nm,18.9s,baz=130,slow=34						
CMAR	**Chiang Mai Arr**	**50.26**	**42**	LR	LR	06 03 59.6	
	comp=Z,50nm,18.2s,baz=65,slow=35						
ASAR	**Alice Springs**	**62.50**	**107**	P	P	05 44 47.5	+0.2
	1.8nm,0.8s,baz=257,slow=6.6,SNR=13						
	1.8nm,0.8s						
WRA	**Warramunga Arr**	**63.69**	**103**	P	P	05 44 55.0	-0.3
	2.2nm,0.9s,baz=259,slow=6.0,SNR=10						
	2.2nm,0.9s						
MKAR	**Makanchi Array**	**68.39**	**12**	P	P	05 45 25.1	+0.2
	0.8nm,0.8s,baz=182,slow=5.7,SNR=5.5						
	0.8nm,0.8s						
DBIC	**Dimbokro**	**74.60**	**283**	LR	LR	06 17 09.6	
	comp=Z,39nm,18.1s,baz=143,slow=34						
ZALV	**Zalesovo Beam**	**75.70**	**11**	P	P	05 46 08.4	-0.1
	1.5nm,0.7s,baz=202,slow=6.4,SNR=6.5						
	1.5nm,0.7s						
KSRS	**Korea Array**	**81.78**	**45**	LR	LR	06 23 40.4	
	comp=Z,18nm,18.1s,baz=250,slow=36						
RCBR	**Riachuelo**	**99.10**	**260**	LR	LR	06 27 38.3	
	comp=Z,16nm,21.2s,baz=302,slow=32						

NEIC ***04*** *05:56:27.0±1.4, 31.80°N±0.03°×128.82°E±0.04, h2km±4km, mb4.8/70, Error ellipse: s-maj=5.4km s-min=2.8km az=59.0*

BJI ***04*** *05:56:27.1±0.0, 31.72°N×129.03°E, h23km, mb4.6/54, mB4.6/34, ML4.6/4, Ms4.6/63, Ms7 4.5/59*

NIED ***04*** *05:56:29.0, 31.83°N×128.86°E, h29km, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr-4.92; Mθθ5.35; Mφφ-0.43; Mrθ-1.55; Mθφ2.33; Mφr-2.43; Fault plane solution: M0 6.32000×10^15 NP1: φs271.00000°, δ37.00000°, λ-57.00000°. NP2: φs52.00000°, δ59.00000°, λ-113.00000°.*

MOS ***04*** *05:56:28.4±1.1, 31.88N×128.82E, h21km, mb5.0/29, MS4.6/9 Error ellipse: s-maj=8.6km s-min=4.7km az=108.8*

JMA ***04*** *05:56:29.0±0.1, 31.8N±0.6°×128.9E±0.8, h29km±2km, MD4.5/32, MW4.6/32, SW OFF KYUSHU*

JMA Felt III J1 at SW OFF KYUSHU .

IDC ***04*** *05:56:32.0±5.1, 31.89N×128.88E, h33km±38km, mb4.3/26, mbtmp4.5/29, ML4.1/3, MS3.6/46, Error ellipse: s-maj=17.5km s-min=12.6km az=82.0*

ISC 04 05:56:28.1±0.3, 31.84N±0.04°×128.88E±0.03, h11km, n392, σ1§42/369, mb4.7/106, MS3.9/62, 41C-20D, Northwest of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JSJ	**Shimokoshiki**	**0.73**	**102**	*e*P	**Pg**	**05 56 42.5**	**+0.3**
JSJ				*e*S	**Sb**	**05 56 52.8**	**-0.1**
JSJ	**Shimokoshiki**	**0.73**	**102**	A	A	05 56 42.5	
	comp=E,15nm,1.0s,comp=E,63nm,1.6s						
JFU	**Fukue jima 2**	**0.83**	**352**	P	**Pb**	**05 56 44.4**	**-0.1**
JFU				S	**Sb**	**05 56 55.2**	**-0.4**
JFU	**Fukue jima 2**	**0.83**	**352**	A	A	05 56 44.4	
	comp=E,75nm,0.9s,comp=E,150nm,0.4s						
NGSJ	**Nagasakinomoza**	**1.11**	**44**	⇓P	**Pb**	**05 56 48.8**	**-0.5**
NGSJ	**Nagasakinomoza**	**1.11**	**44**	A	A	05 56 48.8	
	comp=E,15nm,0.8s,comp=E,20nm,1.1s						
JHD	**Hondo**	**1.24**	**59**	⇓*i*P	**Pn**	**05 56 50.9**	**-0.4**
JHD	**Hondo**	**1.24**	**59**	A	A	05 56 50.9	
	comp=E,10.0nm,1.1s,comp=E,15nm,5.2s						
JSU	**Suzuyama**	**1.38**	**103**		**Pn**	**05 56 53.2**	**-0.1**
JSU				Sn	**Sg**	**05 57 12.8**	**+0.1**
JSU	**Suzuyama**	**1.38**	**103**	A	A	05 56 53.0	
	comp=E,18nm,0.7s,comp=E,26nm,1.1s						
JZO	**Okuchi**	**1.49**	**78**	A	A	05 56 54.7	
	comp=E,9.0nm,0.7s,comp=E,11nm,1.2s						
JUR	**Ureshino**	**1.55**	**36**	A	A	05 56 55.5	
	comp=E,14nm,2.2s,comp=E,14nm,2.6s						
JKC	**Kuchinoerabu**	**1.77**	**140**	A	A	05 56 58.7	
	comp=E,7.0nm,1.2s,comp=E,13nm,1.2s						
JIU3	**Izumi3**	**1.79**	**66**	P	**Pn**	**05 56 59.2**	**+0.3**
JTZ	**Takazaki**	**1.88**	**87**	P	**Pn**	**05 57 00.1**	**0.0**
JTZ	**Takazaki**	**1.88**	**87**	A	A	05 57 00.1	
	comp=E,9.0nm,2.9s,comp=E,8.0nm,3.9s						
JFI	**Itaya**	**2.04**	**38**	A	A	05 57 02.6	
	comp=E,6.0nm,1.8s,comp=E,7.0nm,1.1s						
JII	**Iki**	**2.08**	**20**	⇓P	**Pn**	**05 57 02.9**	**0.0**
JNU	**Nakatsue**	**2.12**	**52**	Pn	**Pb**	**05 57 07.1**	**+0.5**
	42nm,0.3s,baz=273,slow=5.8,SNR=61						
JNU				Sn	**Sg**	**05 57 36.8**	**+0.5**
	177nm,0.3s,baz=49,slow=20,SNR=3.6						
JNU	**Nakatsue**	**2.12**	**52**		**Pn**	**05 57 03.1**	**-0.5**
JNKG	**Nichinankitago**	**2.13**	**94**	A	A	05 57 04.0	
	comp=E,5.0nm,2.1s,comp=E,9.0nm,1.9s						
JTN	**Tanegashima 3**	**2.15**	**123**	A	A	05 57 04.1	
	comp=E,7.0nm,1.3s,comp=E,7.0nm,4.1s						
JTU	**Tsushima**	**2.72**	**9**	Pn	**Pn**	**05 57 11.6**	**0.0**
JHGM	**Hagimishima**	**3.50**	**32**	A	A	05 57 23.4	
	comp=E,6.0nm,4.4s,comp=E,5.0nm,3.4s						
NAWB	**Namwon**	**3.79**	**341**	Pn	**Pn**	**05 57 26.5**	**+0.1**
TJN	**Taejon**	**4.70**	**345**	Pn	**Pn**	**05 57 39.8**	**+0.8**
TJN	**Taejon**	**4.70**	**345**	P	**Pn**	**05 57 39.8**	**+0.8**
JHS	**Saijyo**	**4.74**	**47**		**Pn**	**05 57 40.2**	**+0.6**
KSCHJ	**Chungju**	**5.08**	**352**		**Pn**	**05 57 44.6**	**+0.4**
KSAR	**Wonju Array Be**	**5.65**	**352**	Pn	**Pn**	**05 57 52.6**	**+0.6**
KSAR	**Wonju Array Be**	**5.65**	**352**	P	**Pn**	**05 57 52.6**	**+0.6**
KSRS	**Korea Array**	**5.66**	**352**	Pn	**Pn**	**05 57 53.0**	**+0.9**
	9.3nm,0.3s,baz=174,slow=14,SNR=165						
KSRS				Sn	**Sn**	**05 58 56.7**	**-0.4**
	13nm,0.3s,baz=177,slow=24,SNR=3.6						
	45nm,0.5s						
KS19	**Wonju Array Si**	**5.71**	**352**		**Pn**	**05 57 52.6**	**-0.3**
INCN	**Inchon**	**5.93**	**342**		**Pn**	**05 57 56.1**	**+0.2**
INCH	**Inchon**	**5.93**	**342**	P	**Pn**	**05 57 56.1**	**+0.2**
SEHB	**SEOUNWA**	**6.44**	**356**		**Pn**	**05 58 03.3**	**+0.5**
SSE	**Sheshan**	**6.61**	**266**	Pn	**Pn**	**05 58 06.3**	**+1.1**
SSE				Sn	**Sn**	**05 59 20.0**	**-0.6**
SSE				smax	smax		
	comp=N,210nm,0.7s						
SSE				smax	smax		
	comp=E,160nm,0.9s						
SSE				LR	LR		
	comp=N,390nm,14.8s						
SSE				LR	LR		
	comp=E,790nm,13.9s						
INU	**Inuyama**	**7.64**	**61**	Pn	**Pn**	**05 58 21.6**	**+2.3**
JGF	**Kuroka**	**8.00**	**60**	Pn	**Pn**	**05 58 26.0**	**+1.7**
NJ2	**Nanjing**	**8.52**	**274**	*e*P	**Pn**	**05 58 33.6**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,27nm,0.8s						
NJ2				smax	smax		
	comp=N,250nm,0.6s						
NJ2				smax	smax		
	comp=E,100nm,0.7s						
NJ2				LR	LR		
	comp=N,2μm,7.7s						
NJ2				LR	LR		
	comp=E,2μm,7.2s						
NJ2				LR	LR		
	comp=Z,2μm,9.4s						
MAJO	**Matsushiro**	**9.04**	**56**	*i* P	**Pn**	**05 58 39.1**	**+0.5**
MJAR	**Matsushiro Arr**	**9.04**	**56**	Pn	Pn	05 58 44.0	+5.4
	0.1nm,0.3s,baz=232,slow=12,SNR=2.5						
MJAR				LR	LR	06 02 42.9	
	comp=Z,348nm,21.3s,baz=237,slow=41						
TIA	**Tai'an**	**10.69**	**297**	⇓P	Pn	05 59 06.4	+5.3
TIA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
TIA				LR	LR		
	comp=N,1μm,7.9s						
TIA				LR	LR		
	comp=E,2μm,10.2s						
TIA				LR	LR		
	comp=Z,3μm,9.8s						
CN2	**Changchun**	**12.25**	**348**	*e*P	**Pn**	**05 59 19.9**	**-2.5**
CN2				*e*PP	**PnPn**	**05 59 30.0**	**-0.3**
CN2				*e*S	**Sn**	**06 01 38.1**	**-0.8**
CN2				*es*S		06 01 43.2	
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				LR	LR		
	comp=N,4μm,11.0s						
CN2				LR	LR		
	comp=E,600nm,11.0s						
CN2				LR	LR		
	comp=Z,3μm,11.0s						
WHN	**Wuhan**	**12.51**	**268**	⇑P	P	05 59 32.6	-5.2
WHN				S	Sn	06 01 55.1	+10
WHN				LR	LR		
	comp=Z,2μm,10.7s						
WHN				LR	LR		
	comp=Z,3μm,13.7s						
WHN				LR	LR		
	comp=Z,4μm,13.2s						
JCJ	**Chichijima**	**12.52**	**109**	LR	LR	06 03 33.9	
	comp=Z,183nm,21.2s,baz=118,slow=34						
USRK	**Ussuriysk Ar.**	**12.58**	**10**	Pn	**P**	**05 59 34.6**	**-4.0**
	comp=Z,0.3nm,0.3s,baz=204,slow=10,SNR=2.7						
USRK	**Ussuriysk Ar.**	**12.58**	**10**		**Pn**	**05 59 29.9**	**+2.9**
USRK	**Ussuriysk Ar.**	**12.58**	**10**	P	**Pn**	**05 59 29.9**	**+2.9**
MDJ	**Mudanjiang**	**12.77**	**2**	P	**P**	**05 59 41.2**	**+0.5**
MDJ				pmax	pmax		
	comp=Z,7.0nm,0.5s						
MDJ				pmax	pmax		
	comp=Z,160nm,6.5s						
MDJ				LR	LR		
	comp=N,2μm,8.2s						
MDJ				LR	LR		
	comp=E,870nm,11.8s						
MDJ				LR	LR		
	comp=Z,2μm,8.4s						
HNS	**HongShan**	**12.92**	**299**	⇑P	**Pn**	**05 59 35.0**	**+3.4**
HNS				pmax	pmax		
	comp=Z,30nm,1.4s						
HNS				LR	LR		
	comp=Z,1μm,11.9s						
HNS				LR	LR		
	comp=Z,1μm,11.9s						
BJT	**Baijiatuan**	**13.13**	**312**	Pn	**Pn**	**05 59 36.4**	**+1.9**
BJT	**Baijiatuan**	**13.13**	**312**	P	**Pn**	**05 59 36.4**	**+1.9**
BJI	**Beijing**	**13.14**	**312**	P	**Pn**	**05 59 38.3**	**+3.7**
BJI				S	**Sn**	**06 02 03.9**	**+3.1**
BJI				pmax	pmax		
	comp=Z,21nm,0.9s						
BJI				LR	LR		
	comp=Z,1μm,10.9s						
BJI				LR	LR		
	comp=Z,2μm,10.9s						
BJI				LR	LR		
	comp=Z,2μm,11.4s						
BNX	**BinXian**	**13.93**	**356**	⇑P	**Pn**	**05 59 48.3**	**+2.9**
BNX				pmax	pmax		
	comp=Z,8.0nm,1.0s						
LYN	**LuoYang**	**14.01**	**286**	*e*P	**Pn**	**05 59 47.9**	**+1.4**
LYN				S	**Sn**	**06 02 29.3**	**+7.3**
LYN				LR	LR		
	comp=Z,2μm,11.8s						
LYN				LR	LR		
	comp=Z,2μm,11.6s						
ERM	**Erimo**	**15.26**	**44**	*i* P	**Pn**	**06 00 04.9**	**+1.4**
XLT	**XiLinHaoTe**	**15.70**	**324**	⇓*i*P	**Pn**	**06 00 10.5**	**+1.2**
XLT				S	**Sn**	**06 03 08.4**	**+5.2**
XLT				pmax	pmax		
	comp=Z,15nm,1.1s						
XLT				pmax	pmax		
	comp=Z,150nm,4.9s						
XLT				LR	LR		
	comp=Z,870nm,11.9s						
XLT				LR	LR		
	comp=Z,1μm,13.0s						
ASAJ	**Asahikawa**	**16.32**	**37**	Pn	**P**	**06 00 19.6**	**-0.5**
	comp=Z,0.9nm,0.3s,baz=204,slow=9.4,SNR=11						
ASAJ				LR	LR	06 06 13.4	
	comp=Z,303nm,18.3s,baz=230,slow=36						
	comp=Z,8.6nm,0.5s						
JKA	**Kamikawa-asahi**	**16.32**	**37**		**Pn**	**06 00 15.8**	**-1.4**
JKA				IAmb	IAmb	06 00 35.1	
	comp=Z,80nm,1.5s						
HHC	**Hu-ho-hao-te**	**16.58**	**308**	*e*P	**Pn**	**06 00 20.7**	**+0.1**
HHC				PP	**PnPn**	**06 00 34.7**	**+5.0**
HHC				S	**Sn**	**06 03 24.3**	**-0.3**
HHC				pmax	pmax		
	comp=Z,30nm,0.9s						
HHC				pmax	pmax		
	comp=Z,270nm,8.9s						
HHC				LR	LR		
	comp=Z,2μm,12.2s						
HHC				LR	LR		
	comp=Z,2μm,10.3s						
HHC				LR	LR		
	comp=Z,4μm,10.5s						
ENH	**Enshi**	**16.69**	**270**	P	**Pn**	**06 00 20.7**	**-1.3**
XAN	**Xi'an**	**16.90**	**283**	P	**P**	**06 00 27.3**	**+0.6**
XAN				pP	sP	06 00 39.2	+8.3
XAN				pmax	pmax		
	comp=Z,7.0nm,1.3s						
XAN	**Xi'an**	**16.90**	**283**	P	**P**	**06 00 27.2**	**+0.6**
XAN				S	**Sn**	**06 03 27.1**	**-5.3**
XAN				SS	**SnSn**	**06 03 49.3**	**+3.7**
XAN				pmax	pmax		
	comp=Z,7.0nm,1.3s						
XAN				pmax	pmax		
	comp=E,180nm,8.8s						
XAN				LR	LR		
	comp=Z,770nm,12.4s						
XAN				LR	LR		
	comp=Z,2μm,12.6s						
XAN				LR	LR		
	comp=Z,2μm,14.0s						
KLR	**Kul'dur**	**17.51**	**6**	P	**P**	**06 00 34.8**	**+1.6**
	comp=Z,0.8nm,0.3s,baz=191,slow=8.6,SNR=42						
KLR				LR	LR	06 06 44.9	
	comp=Z,64nm,18.7s,baz=256,slow=35						
	comp=Z,13nm,0.8s						
KLR	**Kul'dur**	**17.51**	**6**	*ce*P	**Pn**	**06 00 30.9**	**-1.2**
KLR				pmax	pmax		
	comp=Z,22nm,1.3s						
BTO	**Baotou**	**17.53**	**305**	*e*P	**P**	**06 00 36.0**	**+2.4**
BTO				LR	LR		
	comp=Z,3μm,11.0s						
BTO				LR	LR		
	comp=Z,3μm,13.5s						
YSS	**Yuzh-Sakhalins**	**18.48**	**31**	P	**P**	**06 00 42.2**	**-1.6**
YSS				IAmb	IAmb	06 00 56.5	
	comp=Z,40nm,1.0s						
YSS	**Yuzh-Sakhalins**	**18.48**	**31**	*e*P	**Pn**	**06 00 45.9**	**+1.9**
YSS				*e*S	**Sn**	**06 04 07.9**	**-2.4**
YSS				pmax	pmax		
	comp=Z,30nm,1.1s						
YSS				MLR	MLR		
	comp=Z,700nm,11.0s						
HIA	**Hailar**	**18.72**	**341**	P	**P**	**06 00 46.4**	**-0.2**
HIA	**Hailar**	**18.72**	**341**	P	**P**	**06 00 46.4**	**-0.2**
HIA				pmax	pmax		
	comp=Z,39nm,1.2s						
GYA	**Guiyang**	**20.12**	**260**	⇓P	Pn	06 01 04.8	+0.8
GYA				pP	sP	06 01 07.8	+1.4
GYA				S	**S**	**06 04 45.6**	**-2.5**
GYA				sS	pS	06 04 57.6	-2.1
GYA				pmax	pmax		
	comp=Z,26nm,1.4s						
GYA				pmax	pmax		
	comp=Z,110nm,3.5s						
GYA				LR	LR		
	comp=Z,390nm,12.6s						
GYA				LR	LR		
	comp=Z,430nm,11.0s						
GYA				LR	LR		
	comp=Z,580nm,13.4s						
LZH	**Lanzhou**	**21.17**	**288**	*e*P	**P**	**06 01 15.8**	**+2.2**
LZH				sP	sP	06 01 21.1	+3.2
LZH				ScP	**ScP**	**06 08 51.7**	**-4.3**
LZH				pmax	pmax		
	comp=Z,41nm,1.0s						
LZH				pmax	pmax		
	comp=Z,190nm,4.9s						
LZH				LR	LR		
	comp=Z,620nm,11.1s						
LZH				LR	LR		
	comp=Z,1μm,11.9s						
LZH				LR	LR		
	comp=Z,1μm,13.0s						
QIZ	**Qiongzhong**	**21.36**	**238**	P	**P**	**06 01 15.6**	**+0.1**
QIZ				S	**S**	**06 05 12.1**	**-0.6**
QIZ				LR	LR		
	comp=Z,460nm,9.6s						
QIZ				LR	LR		
	comp=Z,450nm,14.3s						
QIZ				LR	LR		
	comp=Z,340nm,11.2s						
CD2	**Chengdu**	**21.46**	**274**	P	**P**	**06 01 18.1**	**+1.5**
CD2				S	**S**	**06 05 15.3**	**+0.7**
CD2				pmax	pmax		
	comp=Z,40nm,1.1s						
CD2				LR	LR		
	comp=Z,1μm,10.4s						
CD2				LR	LR		
	comp=Z,1μm,10.6s						
ZEA	**Zeya**	**21.92**	**357**	*e*P	**P**	**06 01 22.1**	**+0.8**
ZEA				*e*		06 05 56.1	
ZEA				pmax	pmax		
	comp=N,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,100nm,4.6s						
ZEA				MLR	MLR		
	comp=N,700nm,9.0s						
ZEA				MLR	MLR		
	comp=Z,600nm,10.0s						
ULN	**Ulaanbaatar**	**23.06**	**320**	P	**P**	**06 01 32.7**	**-0.9**
ULN	**Ulaanbaatar**	**23.06**	**320**	*ce*P	**P**	**06 01 33.4**	**-0.2**
ULN				pmax	pmax		
	comp=Z,28nm,1.7s						
CIT	**Chita**	**23.08**	**335**	*e*P	P	06 01 17.0	-17
CIT				*e*		06 02 06.6	
GUMO	**Guam**	**23.34**	**137**	LR	LR	06 10 57.8	
	comp=Z,79nm,18.5s,baz=306,slow=37						
SONM	**Songino Array**	**23.40**	**320**	P	**P**	**06 01 36.7**	**-0.3**
	comp=Z,18nm,0.9s,baz=134,slow=9.1,SNR=27						
SONM				LR	LR	06 11 06.6	
	comp=Z,147nm,18.8s,baz=56,slow=37						
	comp=Z,18nm,0.9s						
SONM	**Songino Array**	**23.40**	**320**	P	**P**	**06 01 36.5**	**-0.5**
SONM				IAmb	IAmb	06 01 38.8	
	comp=Z,14nm,0.9s						
KMI	**Kunming**	**23.89**	**260**	⇑P	**P**	**06 01 43.0**	**+0.8**
KMI				sP	sP	06 01 49.6	+3.1
KMI				pmax	pmax		
	comp=Z,16nm,1.1s						
PZH	**PanZhiHua**	**24.25**	**264**	P	**P**	**06 01 45.9**	**+0.5**
PZH				pmax	pmax		
	comp=Z,9.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,120nm,5.8s						
GTA	**Gaotai**	**24.73**	**296**	*e*P	**P**	**06 01 49.4**	**-0.2**
GTA				pP	sP	06 01 54.0	0.0
GTA				sP	pP	06 01 56.8	+4.0
GTA				S	**S**	**06 06 10.1**	**-1.5**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,110nm,7.6s						
GTA				LR	LR		
	comp=Z,580nm,15.3s						
GTA				LR	LR		
	comp=Z,680nm,13.1s						
GTA				LR	LR		
	comp=Z,740nm,13.4s						
DAV	**Davao City (W)**	**24.83**	**188**	LR	LR	06 13 47.0	
	comp=Z,67nm,18.9s,baz=357,slow=42						
ZAK	**Zakamensk**	**26.53**	**322**	*e*P	P	06 02 13.1	+7.3

ZAK pmax pmax
comp=Z,20nm,1.3s
ZAK pmax pmax
comp=Z,5.0nm,1.1s
GOMU GeErMu 28.48 288 P **P** **06 02 24.9 +1.2**
GOMU pP sP 06 02 28.5 +0.4
GOMU pmax pmax
comp=Z,6.0nm,0.6s
GOMU pmax pmax
comp=Z,66nm,5.0s
GOMU LR LR
comp=Z,140nm,9.9s
GOMU LR LR
comp=Z,250nm,10.4s
GOMU LR LR
comp=Z,240nm,12.1s
PETK Petropavlovsk- 29.73 36 LR LR 06 14 17.0
comp=Z,125nm,18.1s,baz=204,slow=36
KNGR Kungurtug, Tuv 29.81 318 *i* P **P** **06 02 34.3 -0.8**
KNGR pmax pmax
comp=Z,3.0nm,0.7s
CMAR Chiang Mai Arr 30.08 251 P **P** **06 02 39.0 +1.3**
comp=Z,2.4nm,0.4s,baz=46,slow=6.8,SNR=12
comp=Z,2.4nm,0.4s
CMAR Chiang Mai Arr 30.08 251 P **P** **06 02 37.3 -0.3**
CMAR Chiang Mai Arr 30.08 251 P **P** **06 02 39.0 +1.3**
YAK Yakutsk 30.21 1 LR LR 06 13 52.5
comp=Z,75nm,21.8s,baz=94,slow=34
YAK Yakutsk 30.21 1 *e*P P 06 02 46.7 +8.4
YAK pmax pmax
comp=Z,16nm,0.9s
YAK pmax pmax
comp=N,4.0nm,1.0s
YAK pmax pmax
comp=E,2.0nm,0.9s
YAK MLR MLR
comp=Z,200nm,14.0s
YAK MLR MLR
comp=N,231nm,16.0s
SIJI Sorong 32.60 176 LR LR 06 16 00.3
comp=N,77nm,20.4s,baz=277,slow=36
WMQ Urumqi 34.33 302 *e*P **P** **06 03 17.2 +2.5**
WMQ LR LR
comp=N,460nm,12.1s
WMQ LR LR
comp=N,490nm,14.9s
WMQ LR LR
comp=N,140nm,18.3s
SEY Seymchan 34.53 19 LR LR 06 16 37.5
comp=N,98nm,18.0s,baz=178,slow=35
SEY Seymchan 34.53 19*ce*P **P** **06 03 18.0 +1.9**
SEY pmax pmax
comp=Z,17nm,0.9s
JIRN Jiri 37.12 275 *e*P **P** **06 03 40.1 +0.8**
GUN Gumba 37.31 275 *e*P **P** **06 03 41.7 +0.8**
comp=Z,120nm,1.0s
KAPI Kappang 37.66 195 LR LR 06 19 53.1
comp=Z,57nm,18.9s,baz=327,slow=37
PKI Pulchoki 37.81 275 *e*P **P** **06 03 45.5 +0.4**
comp=Z,90nm,1.1s
PKIN Phulchoki 37.82 275 *e*P **P** **06 03 45.6 +0.5**
DMN Daman 38.06 275 *e*P **P** **06 03 47.5 +0.4**
ZAA0 Zalesovo Array 38.28 318 P **P** **06 03 46.8 -1.5**
ZALV Zalesovo Beam 38.28 318 P **P** **06 03 47.8 -0.5**
comp=Z,2.7nm,0.9s,baz=101,slow=6.3,SNR=9.6
ZALV PcP **PcP** **06 06 01.9 -0.3**
comp=Z,1.8nm,0.6s,baz=101,slow=1.5,SNR=6.6
ZALV LR LR 06 20 21.4
comp=Z,106nm,18.7s,baz=114,slow=37
comp=Z,2.7nm,0.9s
ZALV Zalesovo Beam 38.28 318 P **P** **06 03 46.3 -2.0**
GKN Gorkha 38.34 276 *e*P **P** **06 03 49.6 +0.3**
comp=Z,63nm,1.3s
MK31 Makanchi Array 38.44 307 P **P** **06 03 48.3 -1.4**
MK31 Makanchi Array 38.44 307 *e*P **P** **06 03 49.4 -0.4**
MKAR Makanchi Array 38.44 307 P **P** **06 03 49.7 -0.1**
comp=Z,2.2nm,0.7s,baz=94,slow=11,SNR=15
MKAR PcP **PcP** **06 06 03.0 +0.1**
comp=Z,1.5nm,0.8s,baz=119,slow=1.5,SNR=4.4
MKAR LR LR 06 21 29.0
comp=Z,126nm,19.2s,baz=94,slow=39
comp=Z,2.2nm,0.7s
MKAR Makanchi Array 38.44 307 P **P** **06 03 48.0 -1.7**
SMY Shemya 38.62 44 P **P** **06 03 51.5 +0.4**
SMY Shemya 38.62 44 P **P** **06 03 51.5 +0.4**
SMY pmax pmax
comp=Z,320nm,1.5s
DANN Dangsing 38.98 277 *e*P **P** **06 03 55.8 +0.9**
comp=Z,106nm,1.1s
PYUN Piuthan 39.70 277 *e*P **P** **06 04 01.5 +0.7**
comp=Z,131nm,1.1s
TIXI Tiksi 39.87 360 LR LR 06 19 56.6
comp=Z,143nm,18.2s,baz=181,slow=35
TIXI Tiksi 39.87 360 P **P** **06 04 00.3 -1.0**
TIXI Tiksi 39.87 360*ce*P **P** **06 04 01.1 -0.2**
TIXI pmax pmax
comp=Z,17nm,1.7s
PDGK Podgornoye 40.25 301 P **P** **06 04 04.5 -0.6**
KURK Kurchatov 41.31 312 P **P** **06 04 12.3 -1.2**
KURK Kurchatov 41.31 312*ce*P **P** **06 04 11.4 -2.1**
KURK pmax pmax
comp=Z,2.0nm,0.8s
KURBB Kurchatov Arra 41.36 312 LR LR 06 22 03.8
comp=Z,160nm,19.8s,baz=82,slow=37
BILL Bilibino 42.21 20 P **P** **06 04 20.8 +0.2**
BILL IAmb IAmb 06 04 29.9
comp=Z,40nm,1.5s
BILL Bilibino 42.21 20*ce*P **P** **06 04 22.1 +1.5**
BILL *i* 06 04 29.3
BILL *e* 06 05 59.7
BILL *e*S **S** **06 10 43.1 +2.7**
BILL pmax pmax
comp=Z,20nm,1.7s
BILL MLR MLR
comp=Z,149nm,15.0s
TKM2 Tokmak 2 43.12 301 P **P** **06 04 29.5 +0.9**
KSH Kashi 43.13 296 P P 06 04 33.6 +4.9
KSH sP sP 06 04 42.8 +10
KSH ScP **ScP** **06 10 09.4 -0.2**
KSH pmax pmax
comp=Z,3.0nm,0.9s
KSH LR LR
comp=Z,310nm,16.1s
LEM Lembang 43.47 212 P **P** **06 04 34.5 +2.8**
comp=Z,27nm,0.6s,baz=314,slow=22,SNR=4.6
comp=Z,27nm,0.6s
AAK Ala-Archa 43.94 300 LR LR 06 24 24.2
comp=Z,95nm,18.1s,baz=84,slow=38
AAK Ala-Archa 43.94 300 P **P** **06 04 34.4 -0.8**
AAK Ala-Archa 43.94 300*ce*P **P** **06 04 34.6 -0.7**
AAK pmax pmax
comp=Z,6.0nm,1.7s
NRIK Noril'sk 44.14 340 P **P** **06 04 36.0 -0.2**
comp=Z,1.3nm,0.5s,baz=139,slow=5.6,SNR=4.5
comp=Z,1.3nm,0.5s
NRIK Noril'sk 44.14 340 P **P** **06 04 35.9 -0.3**
NRIK Noril'sk 44.14 340*ce*P **P** **06 04 34.9 -1.4**
NRIK pmax pmax
comp=Z,15nm,2.4s
MTN Manton Dam 44.48 177 P **P** **06 04 38.8 -0.7**
MTN IAmb IAmb 06 04 47.0
comp=Z,15nm,0.8s
OTUK Ortayu 45.24 308 P **P** **06 04 45.5 +0.1**
BRVK Borovoye 46.67 315 P **P** **06 04 55.2 -1.3**
BRVK IAmb IAmb 06 04 57.6
comp=Z,6.0nm,0.6s
BRVK Borovoye 46.67 315*ce*P **P** **06 04 55.5 -1.0**
BRVK pmax pmax
comp=Z,9.0nm,1.3s
KK31 Karatay Array 46.82 301 P **P** **06 04 58.3 +0.5**
KK31 IAmb IAmb 06 04 59.4
comp=Z,13nm,1.1s
KK31 Karatay Array 46.82 301 *i* P **P** **06 04 58.0 +0.1**
KKAR Karatay Array 46.82 301 P **P** **06 04 58.1 +0.2**
KKAR Karatay Array 46.82 301 P **P** **06 04 58.1 +0.2**
GAR Garm 47.55 296 P **P** **06 05 03.4 -0.4**
CHGR Chuyangaron 48.51 295 P **P** **06 05 10.9 -0.2**
CHGR Chuyangaron 48.51 295 P **P** **06 05 10.9 -0.2**
CHGR pmax pmax
comp=Z,32nm,0.8s
KBL Kabul 49.51 290 P **P** **06 05 18.8 -0.3**
KBL IAmb IAmb 06 05 25.9
comp=Z,5.3nm,0.7s
KBL Kabul 49.51 290 P **P** **06 05 18.8 -0.3**
KBL pmax pmax
comp=Z,5.0nm,0.7s

PALK Pallekele 51.02 252 LR LR 06 30 10.5
comp=Z,110nm,18.1s,baz=162,slow=40
WRA Warramunga Arr 51.75 173 P **P** **06 05 35.6 0.0**
comp=Z,1.1nm,0.9s,baz=353,slow=7.9,SNR=6.9
comp=Z,1.1nm,0.9s
WRA Warramunga Arr 51.75 173 IAmb IAmb 06 05 43.2
comp=Z,0.3nm,0.9s
SVE Sverdlovsk 52.27 320 *e*P **P** **06 05 39.7 +0.5**
SVE pmax pmax
comp=Z,18nm,1.1s
AB31 Akbulak array 53.34 310 *i* P **P** **06 05 47.3 0.0**
ABKAR Akbulak array 53.34 310 P **P** **06 05 47.2 -0.1**
ARU Arti 53.44 319 LR LR 06 29 32.6
comp=Z,79nm,21.0s,baz=96,slow=37
ARU Arti 53.44 319 P **P** **06 05 47.4 -0.4**
ARU IAmb IAmb 06 05 48.9
comp=Z,15nm,1.0s
ARU Arti 53.44 319*d i*P **P** **06 05 47.8 0.0**
ARU S **S** **06 13 23.4 +3.5**
ARU SS **SS** **06 16 58.9 -0.7**
ARU pmax pmax
comp=Z,18nm,1.1s
ARU MLR MLR
comp=Z,431nm,13.0s
CTA Charters Tower 54.25 160 LR LR 06 28 29.5
comp=Z,45nm,20.2s,baz=272,slow=35
AKTO Aktyubinsk 54.41 312 LR LR 06 29 27.5
comp=Z,76nm,20.3s,baz=82,slow=36
O16K Kokwok River B 54.67 37 P **P** **06 05 57.4 +0.7**
baz=274
HRA Herat 54.95 292 P **P** **06 06 00.1 +0.6**
HRA IAmb IAmb 06 06 01.7
comp=Z,11nm,1.1s
ASAR Alice Springs 55.40 174 P **P** **06 06 03.5 +1.0**
comp=Z,1.3nm,1.0s,baz=7.2,slow=9.6,SNR=8.5
ASAR PcP **PcP** **06 07 01.8 -0.9**
comp=Z,0.7nm,0.7s,baz=347,slow=4.0,SNR=4.2
ASAR LR LR 06 31 10.1
comp=Z,23nm,20.1s,baz=342,slow=38
comp=Z,1.3nm,1.0s
L19K White Mountain 56.06 33 P **P** **06 06 07.4 +0.6**
baz=275
J20K Nowinta River 56.23 31 P **P** **06 06 08.7 +0.8**
J20K IAmb IAmb 06 06 10.4
comp=Z,7.1nm,1.0s
J20K Nowinta River 56.23 31 P **P** **06 06 09.7 +1.7**
baz=274,SNR=7.6
IMAR Indian Mountai 56.28 29 P **P** **06 06 08.5 +0.2**
K20K Telida 56.32 32 P **P** **06 06 10.3 +1.6**
baz=275,SNR=6.5
L20K Farewell, AK 56.48 33 P **P** **06 06 11.6 +1.7**
baz=275
H21K Melozitna Rive 56.69 29 P **P** **06 06 11.5 +0.2**
H21K IAmb IAmb 06 06 20.3
comp=Z,6.2nm,1.1s
H21K Melozitna Rive 56.69 29 P **P** **06 06 12.4 +1.1**
baz=274,SNR=5.9
CHUM Lake Minchumin 57.05 31 P **P** **06 06 15.1 +1.3**
baz=276
I21K Tanana 57.07 30 P **P** **06 06 14.4 +0.5**
I21K IAmb IAmb 06 06 23.3
comp=Z,14nm,1.0s
I21K Tanana 57.07 30 P **P** **06 06 15.5 +1.6**
baz=275,SNR=11
CAST Castle Rocks 57.21 32 P **P** **06 06 15.1 +0.1**
CAST Castle Rocks 57.21 32 P **P** **06 06 16.1 +1.1**
baz=276
PPLA Purkeypile 57.22 32 P **P** **06 06 16.2 +1.0**
baz=276
OHAK Old Harbor 57.45 39 P **P** **06 06 17.1 +0.4**
baz=279
MLY Manley 57.61 30 P **P** **06 06 19.1 +1.3**
baz=276,SNR=7.5
BPAW Bear Paw Mtn. 57.61 31 P **P** **06 06 17.8 0.0**
BPAW Bear Paw Mtn. 57.61 31 P **P** **06 06 18.6 +0.7**
baz=277
TOLK Toolik Lake Re 57.71 25 P **P** **06 06 18.6 +0.2**
TOLK IAmb IAmb 06 06 27.1
comp=Z,11nm,1.4s
TOLK Toolik Lake Re 57.71 25 P **P** **06 06 19.0 +0.5**
baz=275
KDAK Kodiak Island 57.73 38 P **P** **06 06 18.8 +0.1**
baz=279
H23K Yukon River 58.02 29 P **P** **06 06 21.4 +0.7**
H23K IAmb IAmb 06 06 30.2
comp=Z,16nm,1.0s
H23K Yukon River 58.02 29 P **P** **06 06 21.3 +0.7**
baz=277,SNR=14
KIRV Kirov 58.08 323*ce*P **P** **06 06 19.0 -2.1**
NEA2 Nenana 58.38 30 P **P** **06 06 23.5 +0.4**
NEA2 IAmb IAmb 06 06 32.0
comp=Z,15nm,0.9s
NEA2 Nenana 58.38 30 P **P** **06 06 24.3 +1.2**
baz=278,SNR=12
RND Reindeer 58.65 31 P **P** **06 06 24.9 -0.2**
RND IAmb IAmb 06 06 33.1
comp=Z,7.8nm,0.9s
RND Reindeer 58.65 31 P **P** **06 06 24.9 -0.2**
RND pmax pmax
comp=Z,8.0nm,0.9s
MDM Murphy Dome 58.68 30 P **P** **06 06 25.6 +0.3**
H24K Noodor Dome 58.69 29 P **P** **06 06 26.8 +1.4**
baz=278,SNR=8.0
COLA College 58.85 30 *i* P **P** **06 06 27.1 +0.7**
COLA pmax pmax
comp=Z,13nm,2.0s
CCB Clear Creek Bu 58.91 30 P **P** **06 06 27.9 +1.1**
POKR Poker Plat Res 58.99 29 P **P** **06 06 28.2 +0.8**
POKR Poker Plat Res 58.99 29 P **P** **06 06 28.8 +1.4**
baz=279,SNR=5.7
IL31 59.28 30 P **P** **06 06 29.2 -0.1**
IL31 IAmb IAmb 06 06 38.7
comp=Z,4.4nm,0.9s
ILAR Eielson Array 59.28 30 P **P** **06 06 29.2 -0.2**
comp=Z,2.2nm,0.8s,baz=271,slow=5.8,SNR=30
ILAR LR LR 06 33 39.7
comp=Z,51nm,18.2s,baz=258,slow=38
comp=Z,2.2nm,0.8s
HDA Harding Lake 59.31 30 P **P** **06 06 29.6 0.0**
baz=280,SNR=5.6
PRGR Permogore 59.41 327 *e*P **P** **06 06 29.0 -1.3**
BMAR Burnt Mountain 59.73 26 P **P** **06 06 33.7 +1.2**
K24K Donnelly Dome 59.93 31 P **P** **06 06 34.3 +0.4**
baz=281
RIDG Independent Ri 60.35 31 P **P** **06 06 36.2 -0.7**
baz=282
BELG Belogornoye 60.39 316 LR LR 06 35 12.4
comp=Z,59nm,18.1s,baz=228,slow=38
BELG Belogornoye 60.39 316 *i* P **P** **06 06 35.5 -1.7**
BELG pmax pmax
comp=Z,3.0nm,0.9s
SCRK Sand Creek 60.67 30 P **P** **06 06 38.7 -0.4**
SCRK IAmb IAmb 06 06 47.1
comp=Z,11nm,1.2s
SCRK Sand Creek 60.67 30 P **P** **06 06 38.9 -0.2**
baz=283,SNR=6.9
J26L Joseph Creek 60.73 30 P **P** **06 06 39.2 -0.3**
baz=283
MENT Mentasta 61.02 31 P **P** **06 06 41.7 +0.3**
MENT IAmb IAmb 06 06 49.9
comp=Z,7.3nm,0.9s
K27K Chicken 61.48 30 P **P** **06 06 45.0 +0.6**
K27K IAmb IAmb 06 06 56.8
comp=Z,3.9nm,0.8s
K27K Chicken 61.48 30 P **P** **06 06 44.8 +0.4**
baz=284
M26K Nabesna, AK 61.48 32 P **P** **06 06 45.6 +1.1**
baz=284
L27K Beaver Creek, 61.83 31 P **P** **06 06 47.5 +0.6**
L27K IAmb IAmb 06 06 56.0
comp=Z,5.0nm,1.1s
L27K Beaver Creek, 61.83 31 P **P** **06 06 47.9 +1.1**
baz=285
BCAR Beaver Creek A 61.85 31 P **P** **06 06 47.0 0.0**
CTG Chitna Glacier 62.63 33 P **P** **06 06 53.2 +0.8**
baz=287
I29M Ogilvie Camp, 62.67 28 P **P** **06 06 53.1 +0.7**
baz=287
EPYK Eagle Plains 63.00 27 P **P** **06 06 55.1 +0.5**
baz=288
MAK Makhachkala 63.25 306 *e*P P 06 06 49.6 -7.0
MAK *e*S **S** **06 15 19.4 -8.8**
MAK *e*SS **SS** **06 19 28.0 -6.1**
MAK pmax pmax
comp=Z,196nm,1.5s
MAK MLR MLR
comp=Z,578nm,17.0s

INK Inuvik 63.55 24 LR LR 06 37 40.7
comp=Z,38nm,18.1s,baz=250,slow=39
YUK4 Talbot Arm 63.76 32 P **P** **06 07 00.7 +0.8**
baz=289
YUK6 Outpost Mounta 64.02 33 P **P** **06 07 02.2 +0.5**
baz=289
STKA Stephens Creek 64.50 168 P **P** **06 07 05.4 +0.6**
comp=Z,3.0nm,0.8s,baz=360,slow=6.0,SNR=5.6
comp=Z,3.0nm,0.8s
STKA Stephens Creek 64.50 168 IAmb IAmb 06 07 13.4
comp=Z,0.9nm,0.9s
MOS Moscow 65.02 321 *e*P **P** **06 07 07.1 -0.9**
ARCES ARCESS Array B 65.03 338 LR LR 06 40 54.8
comp=Z,78nm,18.0s,baz=3.5,slow=41
VORR Voronezh 65.56 317⇓ *i*P **P** **06 07 12.6 +1.0**
VORR pmax pmax
comp=Z,24nm,1.5s
ZEI Tsey 65.79 306 *e*P **P** **06 07 13.1 -0.4**
ZEI pmax pmax
comp=Z,7.0nm,0.9s
OBN Obninsk 65.80 321*ce*P **P** **06 07 13.4 +0.4**
OBN pmax pmax
comp=Z,43nm,1.7s
OBN MLR MLR
comp=Z,167nm,14.0s
FARO Faro, Yukon 65.80 31 P **P** **06 07 14.2 +1.2**
baz=292
KBZ Khabaz 66.12 308 P **P** **06 07 16.3 +1.0**
comp=Z,9.7nm,1.0s,baz=74,slow=3.1,SNR=11
KBZ LR LR 06 37 42.6
comp=Z,83nm,18.8s,baz=76,slow=37
comp=Z,9.7nm,1.0s
KBZ Khabaz 66.12 308*ce*P **P** **06 07 14.9 -0.4**
KBZ pmax pmax
comp=Z,18nm,1.1s
KIV Kislovodsk 66.18 308 *e*P **P** **06 07 16.0 +0.1**
KIV pmax pmax
comp=Z,24nm,1.1s
KIV MLR MLR
comp=Z,66nm,17.0s
GNI Garni 66.19 304 LR LR 06 39 11.3
comp=Z,34nm,18.4s,baz=110,slow=39
GNI Garni 66.19 304 *i* P **P** **06 07 16.5 +0.4**
GNI pmax pmax
comp=Z,7.0nm,0.8s
SHA1 Shidzhatmaz 66.28 308 *i* P **P** **06 07 16.2 -0.5**
C36M Paulatuk 66.28 22 P **P** **06 07 16.2 +0.3**
baz=297
AKH Akhalkalaki 66.58 305⇑ P **P** **06 07 19.9 +1.3**
MWH Moku'aweowe 67.99 80 P **P** **06 07 26.8 -1.5**
FINES FINESS Array B 68.30 330 P **P** **06 07 28.9 +0.1**
comp=Z,14nm,0.7s,baz=72,slow=6.0,SNR=76
FINES LR LR 06 39 23.4
comp=Z,62nm,18.2s,baz=38,slow=38
comp=Z,14nm,0.7s
FINES FINESS Array B 68.30 330 *i* P **P** **06 07 28.8 -0.1**
FINES pmax pmax
comp=Z,14nm,0.7s
VSU Vasula 69.36 327 *e*P **P** **06 07 36.4 +0.9**
MEF Metsahovi 69.60 329 *e*P **P** **06 07 37.4 +0.4**
RES Resolute Bay 69.96 11 LR LR 06 40 59.4
comp=Z,30nm,18.4s,baz=4.5,slow=38
MARD Mardin 70.16 302 P **P** **06 07 41.2 +0.2**
RAF Rauma 70.34 330 *e*P **P** **06 07 41.8 +0.4**
MTSE Matsula 70.59 328 *e*P **P** **06 07 41.6 -1.4**
NACGM Naroch 71.00 323⇑ *e*P **P** **06 07 46.5 +0.9**
baz=62
AKASG Malin Array Be 71.68 319 P **P** **06 07 49.8 0.0**
comp=Z,4.5nm,0.7s,baz=44,slow=6.5,SNR=27
AKASG LR LR 06 39 09.1
comp=Z,68nm,19.0s,baz=86,slow=36
comp=Z,4.5nm,0.7s
AKASG Malin Array Be 71.68 319 P **P** **06 07 50.2 +0.4**
AKASG IAmb IAmb 06 07 50.4
comp=Z,3.9nm,0.8s
AKASG Malin Array Be 71.68 319 P **P** **06 07 50.2 +0.4**
AKASG pmax pmax
comp=Z,4.0nm,0.9s
AKBB Malin Array Si 71.68 319 P **P** **06 07 49.6 -0.2**
AKBB IAmb IAmb 06 07 50.7
comp=Z,13nm,0.9s
AKBB Malin Array Si 71.68 319*ce*P **P** **06 07 48.9 -0.9**
PABE Paberze 72.12 325 *e*P **P** **06 07 52.7 +0.4**
RAYN Ar Rayn 72.64 287 P **P** **06 07 56.1 0.0**
RAYN IAmb IAmb 06 07 57.8
comp=Z,16nm,1.4s
RAYN Ar Rayn 72.64 287⇑ P **P** **06 07 56.1 0.0**
UPP Uppsala 72.69 330 *e*P **P** **06 07 55.8 +0.1**
JMIC Jan Mayen 73.10 347 LR LR 06 41 38.6
comp=Z,16nm,19.2s,baz=71,slow=37
YKA Yellowknife Ar 73.23 26 P **P** **06 07 59.3 +0.4**
comp=Z,1.5nm,0.9s,baz=307,slow=5.5,SNR=11
comp=Z,1.5nm,0.9s
YKA Yellowknife Ar 73.23 26*ce*P **P** **06 07 59.0 +0.1**
YKA pmax pmax
comp=Z,2.0nm,0.9s
SORM Soroca 73.41 317⇓ P **P** **06 08 00.1 0.0**
SORM Soroca 73.41 317⇓ P **P** **06 08 00.1 0.0**
VIKU Vikbolandet 73.86 330 *e*P **P** **06 08 03.1 +0.5**
BR131 Keskin Array S 74.09 307 P **P** **06 08 04.3 -0.2**
BR131 Keskin Array S 74.09 307 *i* P **P** **06 08 04.4 -0.2**
BRTR Keskin Array B 74.09 307 P **P** **06 08 05.3 +0.8**
comp=Z,11nm,0.9s,baz=96,slow=5.5,SNR=49
BRTR LR LR 06 43 25.4
comp=Z,44nm,19.8s,baz=92,slow=38
comp=Z,11nm,0.9s
BRTR Keskin Array B 74.09 307 P **P** **06 08 04.7 +0.2**
BRTR Keskin Array B 74.09 307*ce*P **P** **06 08 05.0 +0.5**
BRTR pmax pmax
comp=Z,11nm,0.9s
HFS Hagfors 74.15 332 P **P** **06 08 04.0 -0.3**
comp=Z,5.6nm,0.8s,baz=51,slow=10
HFS LR LR 06 42 36.3
comp=Z,42nm,20.2s,baz=58,slow=37
comp=Z,5.6nm,0.8s
NB2 NORSAR Subarra 74.56 333 P **P** **06 08 06.1 -0.6**
comp=Z,2.7nm,0.8s,baz=49,slow=5.9
NOA NORSAR Array B 74.56 333 P **P** **06 08 06.2 -0.5**
comp=Z,5.8nm,0.8s,baz=51,slow=5.9,SNR=17
NOA LR LR 06 46 40.3
comp=Z,40nm,19.2s,baz=50,slow=40
comp=Z,5.8nm,0.8s
BIZ Bicaz 75.32 316⇑ P **P** **06 08 11.8 +0.4**
BUR08 Bucovina Ar. S 75.49 317 P **P** **06 08 12.4 0.0**
BUR08 IAmb IAmb 06 08 14.2
comp=Z,7.3nm,1.0s
BURAR Bucovina Array 75.49 317⇑ P **P** **06 08 12.7 +0.2**
BURAR Bucovina Array 75.49 317 P **P** **06 08 12.3 -0.1**
BURAR IAmb IAmb 06 08 14.5
comp=Z,6.5nm,0.9s
BURAR Bucovina Array 75.49 317⇑ P **P** **06 08 12.7 +0.2**
VRI Vrincioaia 75.50 315⇑ P **P** **06 08 13.8 +1.4**
VRI Vrincioaia 75.50 315⇑ P **P** **06 08 13.8 +1.4**
KWP Kalwaria Pacla 75.84 320 *e*P **P** **06 08 15.5 +1.3**
BORA Eskisehir 76.16 308 P **P** **06 08 16.0 -0.4**
MLR Muntele Rosu 76.17 315⇑ P **P** **06 08 17.2 +0.8**
MLR Muntele Rosu 76.17 315 P **P** **06 08 17.2 +0.8**
comp=Z,6.3nm,1.0s,baz=115,slow=10,SNR=5.3
comp=Z,6.3nm,1.0s
DOPR Dopca 76.25 316⇓ P **P** **06 08 18.6 +1.9**
CRVS Cervenica-Dubn 76.92 320 *e*P **P** **06 08 23.6 +3.2**
CRVS Cervenica-Dubn 76.92 320 *e*P **P** **06 08 23.6 +3.2**
ARR Arges 77.02 315⇓ P **P** **06 08 22.3 +1.2**
OJC Ojcow 77.08 321 *e*P **P** **06 08 22.4 +1.1**
OJC Ojcow 77.08 321 P **P** **06 08 21.5 +0.2**
OJC Ojcow 77.08 321 P **P** **06 08 21.5 +0.2**
OJC pmax pmax
comp=Z,19nm,1.1s
NIE Niedzica 77.27 321 *e*P **P** **06 08 24.2 +1.9**
LOT Lotru 77.49 316⇑ P **P** **06 08 24.7 +0.9**
EIL Elat 78.01 297 LR LR 06 45 32.6
comp=Z,42nm,21.4s,baz=87,slow=38
GZR Gura Zlata 78.10 316⇑ P **P** **06 08 27.9 +0.7**
GZR Gura Zlata 78.10 316⇑ P **P** **06 08 27.9 +0.7**
MORC Moravsky Berou 78.53 322⇑ P **P** **06 08 30.6 +1.2**
MORC Moravsky Berou 78.53 322 P **P** **06 08 29.1 -0.3**
MORC IAmb IAmb 06 08 31.5
comp=Z,7.7nm,1.0s
MORC Moravsky Berou 78.53 322⇑ P **P** **06 08 30.6 +1.2**
MORC Moravsky Berou 78.53 322 *e*P **P** **06 08 30.7 +1.2**
KSP Ksiaz 78.54 323 *e*P **P** **06 08 30.1 +0.7**
VYHS Vyhne 78.59 320 *e*P **P** **06 08 31.1 +1.4**
VYHS pmax pmax
comp=Z,5.0nm,1.1s
VYHS Vyhne 78.59 320 *e*P **P** **06 08 31.1 +1.4**

HERR	Herculane	78.60	316	⇑P		P	06 08 30.8 +1.0
BZS	Buzias	78.66	317	⇑		P	06 08 30.6 +0.5
KRLC	Kraliky	78.75	323	*e*P		P	06 08 31.7 +1.1
KRLC				MLR		MLR	
	comp=Z,300nm,6.5s						
KRLC	Kraliky	78.75	323	*e*P		P	06 08 31.7 +1.1
KRLC				AMS		AMS	06 46 00.0
	comp=Z,300nm,6.5s						
OSTC	Ostas	78.75	323	*e*P		P	06 08 31.7 +1.1
OSTC				AMS		AMS	06 45 50.0
	comp=Z,400nm,12.5s						
CHVC	Chvalec	78.81	323	*e*P		P	06 08 31.5 +0.5
DPC	Dobruska-Polom	78.82	323	*e*P		P	06 08 32.2 +1.2
DPC				MLR		MLR	
	comp=Z,300nm,12.9s						
DPC	Dobruska-Polom	78.82	323	*e*P		P	06 08 32.2 +1.2
DPC				AMS		AMS	06 46 00.0
	comp=Z,300nm,12.9s						
UPC	Upice	78.88	323	AMS		AMS	06 46 00.0
	comp=Z,300nm,12.8s						
JAVC	Velka Javorina	79.00	321	*e*P		P	06 08 34.4 +2.3
MDVR	Moldovita	79.07	316	⇑P		P	06 08 32.8 +0.3
BLKB	Belogradchik	79.14	315	⇓P		P	06 08 33.0 +0.1
VRAC	Vranov	79.30	322	⇓P		P	06 08 35.1 +1.5
VRAC	Vranov	79.30	322	P		P	06 08 35.2 +1.5
	comp=Z,6.5nm,0.9s,baz=60,slow=5.4,SNR=8.8						
VRAC				LR		LR	06 44 30.6
	comp=Z,57nm,19.0s,baz=74,slow=36						
	comp=Z,6.5nm,0.9s						
VRAC	Vranov	79.30	322	*e*P		P	06 08 35.0 +1.4
SMOL	Smolenice	79.33	321	*e*P		P	06 08 35.9 +2.1
SMOL				pmax		pmax	
	comp=Z,8.0nm,1.1s						
SMOL	Smolenice	79.33	321	*e*P		P	06 08 35.9 +2.1
VTS	Vitosha	79.36	314	⇑P		P	06 08 35.5 +1.3
VTS	Vitosha	79.36	314	P		P	06 08 35.0 +0.7
VTS				IAmb		IAmb	06 08 36.5
	comp=Z,12nm,1.1s						
VTS	Vitosha	79.36	314	⇑P		P	06 08 35.5 +1.3
MODS	Modra-Piesok	79.50	321	*e*P		P	06 08 36.4 +1.7
MODS				pmax		pmax	
	comp=Z,25nm,1.2s						
MODS	Modra-Piesok	79.50	321	*e*P		P	06 08 36.4 +1.7
KRUC	Moravsky	79.56	322	*e*P		P	06 08 36.2 +1.2
PVCC	Panska Ves	79.60	324	AMS		AMS	06 48 00.0
	comp=Z,400nm,13.4s						
CLL	Collm	79.89	325	P		P	06 08 36.9 +0.1
CLL				IAmb		IAmb	06 08 38.4
	comp=Z,7.7nm,0.8s						
CLL	Collm	79.89	325	*i* P		P	06 08 37.3 +0.5
CLL				*i*			06 08 43.0
CLL				pmax		pmax	
	comp=Z,10.0nm,1.0s						
CLL	Collm	79.89	325	*i* P		P	06 08 37.3 +0.5
	comp=Z,10.0nm,1.0s						
CLL				*i* PcP		PcP	06 08 43.0 -1.4
CLL				*i* x		x	06 08 59.7
CLL				*e*PP		PP	06 11 33.0 -4.7
PRU	Pruhonice	79.95	323	*e*P		P	06 08 38.7 +1.6
PRU				MLR		MLR	
	comp=Z,300nm,15.0s						
PRU	Pruhonice	79.95	323	*e*P		P	06 08 38.7 +1.6
PRU				AMS		AMS	06 46 50.0
	comp=Z,300nm,15.0s						
FRGS	Fruska Gora	79.97	317	⇑P		P	06 08 38.0 +0.7
MORH	Mrgy, Hungar	80.02	319	⇑P		P	06 08 38.3 +0.8
RONA	Rosalia, Austr	80.43	321	*i* P		P	06 08 41.3 +1.5
	comp=Z,5.6nm,1.1s						
DIVS	Divibare	80.47	316	P		P	06 08 40.2 0.0
DIVS				IAmb		IAmb	06 08 41.5
	comp=Z,6.5nm,0.9s						
CONA	Conrad Observa	80.52	321	*e*P		P	06 08 42.0 +1.7
	comp=Z,11nm,1.1s						
CKRC	Cesky Krumlov	80.79	322	*e*P		P	06 08 42.3 +0.6
NEW	Newport	80.84	38	P		P	06 08 41.8 -0.2
	baz=308						
NKC	Novy Kostel	80.85	324	AMS		AMS	06 48 30.0
	comp=Z,400nm,14.2s						
BORG	Borgarnes	80.95	348	LR		LR	06 49 26.2
	comp=Z,24nm,19.1s,baz=341,slow=39						
KHC	Kasperske Hory	80.97	323	P		P	06 08 43.3 +0.6
KHC	Kasperske Hory	80.97	323	*e*P		P	06 08 43.5 +0.8
KHC				MLR		MLR	
	comp=Z,300nm,12.0s						
KHC	Kasperske Hory	80.97	323	*e*P		P	06 08 43.5 +0.8
KHC				AMS		AMS	06 48 50.0
	comp=Z,300nm,12.0s						
GEC2	GERESS Array S	81.09	323	P		P	06 08 43.3 -0.1
GERES	GERESS Array B	81.09	323	P		P	06 08 44.1 +0.7
	comp=Z,1.9nm,1.0s,baz=54,slow=6.8,SNR=13						
	comp=Z,1.9nm,1.0s						
ARSA	Arzberg	81.12	321	*e*P		P	06 08 45.0 +1.5
	comp=Z,2.7nm,0.7s						
MOA	Molin	81.42	322	*e*P		P	06 08 44.8 -0.3
	comp=Z,6.7nm,1.1s						
SFJD	Kangerlussuaq	81.48	360	LR		LR	06 46 32.6
	comp=Z,22nm,18.4s,baz=350,slow=37						
J05D	Fort Rock, OR	81.54	44	P		P	06 08 47.5 +1.6
	baz=306						
SOKA	Soboth	81.73	320	*e*P		P	06 08 47.6 +0.7
	comp=Z,12nm,1.3s,SNR=9.9						
BIOA	Bad Ischl, Aus	81.85	322	*i* P		P	06 08 48.7 +1.3
	comp=Z,3.6nm,0.6s						
PDG	Podgorica	81.88	315	⇑P		P	06 08 48.3 +0.8
PDG	Podgorica	81.88	315	P		P	06 08 47.4 -0.1
OBKA	Obir	82.10	321	*i* P		P	06 08 49.3 +0.5
	comp=Z,2.6nm,0.7s						
KBA	Koelnbreinsper	82.39	322	*e*P		P	06 08 50.5 +0.1
	comp=Z,5.2nm,1.3s						
ABTA	Abfaltersbach	83.04	322	*e*P		P	06 08 53.7 0.0
	comp=Z,7.1nm,1.2s						
WTTA	Wattenberg	83.17	322	*e*P		P	06 08 54.9 +0.5
	comp=Z,1.3nm,0.4s						
STAL	STALIGIAL	83.25	321	P		P	06 08 54.4 -0.3
STAL				IAmb		IAmb	06 08 55.4
	comp=Z,7.9nm,1.1s						
MOTA	Moosalm	83.39	323	*e*P		P	06 08 55.8 +0.2
	comp=Z,4.4nm,0.9s						
MSO	Missoula	83.42	38	P		P	06 08 55.2 -0.5
	baz=310						
RETA	Reutte	83.47	323	*e*P		P	06 08 56.8 +1.0
	comp=Z,8.5nm,1.3s						
BTNL	Ternell	83.63	327	*d*P		P	06 08 57.2 +0.7
MEM	Membach	83.67	327	*d*P		P	06 08 56.5 -0.2
FRB	Frobisher Bay	83.74	8	LR		LR	06 46 16.2
	comp=Z,30nm,21.6s,baz=344,slow=36						
FETA	Feichten	83.79	323	*e*P		P	06 08 58.2 +0.6
	comp=Z,4.8nm,1.0s						
CTI	Castel Tesino	83.95	321	P		P	06 08 58.1 -0.3
CTI				IAmb		IAmb	06 08 59.2
	comp=Z,11nm,1.0s						
CTI	Castel Tesino	83.95	321	P		P	06 08 58.1 -0.3
CTI				pmax		pmax	
	comp=Z,11nm,1.0s						
EKA	Eskdalemuir Ar	83.97	335	LR		LR	06 50 23.3
	comp=Z,56nm,18.2s,baz=357,slow=38						
DAVA	Damuels	84.06	323	*e*P		P	06 08 59.6 +0.6
	comp=Z,11nm,1.0s,SNR=5.3						
WLF	Walferdange	84.26	327	*d*P		P	06 09 01.0 +1.2
RCHB	Rochefort	84.34	327	*d*P		P	06 09 00.5 +0.4
DAVOX	Davos/Dischmat	84.39	323	P		P	06 09 01.4 +0.6
	comp=Z,7.0nm,0.8s,baz=38,slow=4.9,SNR=15						
DAVOX				LR		LR	06 50 44.9
	comp=Z,65nm,18.6s,baz=82,slow=39						
	comp=Z,7.0nm,0.8s						
BMRD	Maredsous	84.45	328	*d*P		P	06 09 01.1 +0.4
DOU	Dourbes	84.68	328	*d*P		P	06 09 01.3 -0.5
EGMT	Eagleton	84.74	35	P		P	06 09 02.7 +0.3
	baz=313						
TUE	Stuetta	84.87	323	P		P	06 09 03.2 0.0
MURB	Monte Urbino	85.27	319	P		P	06 09 06.3 +1.2
HLID	Hailey	85.27	41	P		P	06 09 05.7 +0.4
HLID				IAmb		IAmb	06 09 07.6
	comp=Z,5.0nm,1.3s						
HLID	Hailey	85.27	41	P		P	06 09 06.6 +1.4
	baz=310						
ZCCA	Zocca	85.42	321	P		P	06 09 05.3 -0.4
BOZ	Bozeman (W)	85.44	38	P		P	06 09 06.8 +0.8
	baz=312						
NVAR	Mina Array Bea	86.23	47	P		P	06 09 11.3 +1.1
	comp=Z,0.9nm,0.7s,baz=298,slow=5.2,SNR=8.8						
	comp=Z,0.9nm,0.7s						
RAR	Rarotonga	86.26	118	LR		LR	06 41 57.6
	comp=Z,24nm,21.9s,baz=112,slow=32						
H17A	Grant Village	86.80	38	P		P	06 09 14.8 +1.9
	baz=313						
R11A	Troy Canyon, C	87.95	45	P		P	06 09 19.0 +0.5
	baz=310						
RAFF	Raffo Rosso	88.04	313	P		P	06 09 19.1 +0.5
HWUT	Hardware Ranch	88.14	41	P		P	06 09 20.6 +1.3
HWUT				IAmb		IAmb	06 09 21.7
	comp=Z,5.3nm,1.1s						
PDAR	Pinedale Array	88.45	39	P		P	06 09 21.1 +0.3
	comp=Z,1.8nm,1.0s,baz=0.0,slow=1.5,SNR=6.5						
	comp=Z,1.8nm,1.0s						
ULM	Lac du Bonnet	89.17	27	P		P	06 09 23.9 +0.2
	comp=Z,8.7nm,1.0s,baz=318,slow=4.4,SNR=9.9						
ULM				LR		LR	06 52 01.5
	comp=Z,19nm,19.2s,baz=5.5,slow=37						
	comp=Z,8.7nm,1.0s						
KEST	Kesra	92.07	315	P		P	06 09 38.7 +1.1
	comp=Z,2.6nm,0.8s,baz=333,slow=6.8,SNR=3.5						
	comp=Z,2.6nm,0.8s						
SCHQ	Schefferville	92.63	9	LR		LR	06 54 26.3
	comp=Z,21nm,19.1s,baz=167,slow=38						
ECSD	EROS Data Cent	94.06	31	P		P	06 09 47.5 +0.9
	baz=323						
ESDC	Sonseca Array	96.48	325	P		P	06 09 57.0 -0.7
	comp=Z,0.7nm,0.9s,baz=23,slow=7.0,SNR=4.6						
ESDC				LR		LR	06 58 37.2
	comp=Z,54nm,18.9s,baz=30,slow=39						
	comp=Z,0.7nm,0.9s						

*IDC **04** 06:03:43.2±1.4,2°.16N×124°.29E,**h0**km,**mb3.7**/5,*
mbtmp3.7**/5,**MS3.7**/2,**Error ellipse: s-maj=182.0km
s-min=19.8km az=63.0,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	24.08	156	P	P	06 09 00.5	-0.1
	1.4nm,0.8s,baz=334,slow=11,SNR=16						
	1.4nm,0.8s						
ASAR	Alice Springs	27.32	161	P	P	06 09 31.9	+1.9
	0.2nm,0.6s,baz=352,slow=15,SNR=2.0						
	0.2nm,0.6s						
STKA	Stephens Creek	37.63	156	P	P	06 10 58.9	-1.0
	0.9nm,0.4s,baz=342,slow=9.6,SNR=2.1						
	0.9nm,0.4s						
DZM	Mont Dzumac	47.69	123	LR	LR	06 33 38.7	
	comp=Z,110nm,18.0s,baz=322,slow=38						
MKAR	Makanchi Array	57.49	327	P	P	06 13 34.4	+0.2
	0.3nm,0.3s,baz=119,slow=7.2,SNR=7.1						
	0.3nm,0.3s						
KURBB	Kurchatov Arra	61.77	329	P	P	06 14 02.9	-0.7
	0.6nm,0.6s,baz=129,slow=6.0,SNR=6.9						
	0.6nm,0.6s						
LBTB	Lobatse	98.79	245	LR	LR	07 01 03.8	
	comp=Z,22nm,20.8s,baz=78,slow=35						

*NOU **04** 06:19:43.2,41°.26S×172°.76E,h141km,MLv3.5/8,South*
Island, New Zealand
*WEL **04** 06:19:44.4±0.5,41°.5±3°.1×17°.3E±°,h128km±4km,M3.1/30,*
MLv3.1/30,Error ellipse: s-maj=0.0km s-min=0.0km
az=133.7

ISC 04 06:19:41.9±1.5,41°.32S±0°.04×172°.77E±0°.04,h153km±8km,
n97,σ1°09/115,South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRNZ	Matariki Terra	0.08	186	P	Pn	06 20 03.1	+0.7
MRNZ				S	Sn	06 20 16.7	-1.3
THZ	Tophouse	0.45	167	P	Pn	06 20 04.5	+1.0
THZ				S	Sn	06 20 19.6	-0.3
NNZ	Nelson	0.47	78	P	Pn	06 20 04.1	+0.7
NNZ				S	Sn	06 20 19.4	-0.3
QRZ	Quartz Range	0.53	340	P	Pn	06 20 04.3	+0.6
QRZ				S	Sn	06 20 18.5	-1.7
QRZ	Quartz Range	0.53	340	P	Pn	06 20 04.1	+0.4
DSZ	Denniston Nort	0.84	239	P	Pn	06 20 06.4	+0.7
DSZ				S	Sn	06 20 22.0	-1.9
TUWZ	Tuamarina	0.89	97	P	Pn	06 20 07.1	+1.1
TUWZ				S	Sn	06 20 23.8	-0.7
BSWZ	Blackbirch Sta	0.92	116	P	Pn	06 20 07.4	+1.1
BSWZ				S	Sn	06 20 24.8	-0.1
DUWZ	D'Urville Isla	1.01	60	P	Pn	06 20 08.2	+1.2
TCW	Tory Channel	1.14	85	P	Pn	06 20 09.3	+1.2
TCW				S	Sn	06 20 27.5	-0.7
CMWZ	Cape Campbell	1.17	112	P	Pn	06 20 09.8	+1.5
CMWZ				S	Sn	06 20 29.6	+1.0
KHZ	Kahutara	1.24	153	P	Pn	06 20 10.5	+1.5
KHZ				S	Sn	06 20 28.8	-1.1
KHZ	Kahutara	1.24	153	P	Pn	06 20 10.6	+1.6
SNZO	South Karori	1.46	90	P	Pn	06 20 12.2	+1.0
LTZ	Lake Taylor	1.51	194	P	Pn	06 20 13.2	+1.5
LTZ				S	Sn	06 20 32.9	-1.8
WEL	Wellington	1.51	89	P	Pn	06 20 12.6	+0.9
BHW	Baring Head	1.58	94	P	Pn	06 20 13.2	+0.7
BHW				S	Sn	06 20 34.6	-1.4
GVZ	Greta Valley S	1.66	173	P	Pn	06 20 15.1	+1.7
GVZ				S	Sn	06 20 36.6	-0.9
KIW	Kapiti Island	1.68	75	P	Pn	06 20 14.4	+0.8
KIW				S	Sn	06 20 37.3	-0.6
INZ	Inchbonnie	1.72	215	P	Pn	06 20 15.1	+1.2
INZ				S	Sn	06 20 37.0	-1.6
CAW	Cannon Point	1.75	84	P	Pn	06 20 14.9	+0.6
CAW				S	Sn	06 20 37.7	-1.5
AMCZ	Amberley	1.86	183	P	Pn	06 20 17.1	+1.5
MSWZ	Moikau Station	1.87	94	P	Pn	06 20 16.3	+0.6
MSWZ				S	Sn	06 20 40.1	-1.6
OGWZ	Otaki Gorge	1.88	75	P	Pn	06 20 16.5	+0.7
OGWZ				S	Sn	06 20 41.4	-0.5
PLWZ	Palliser	1.89	98	P	Pn	06 20 16.6	+0.7
PAWZ	Paruwai Farm	2.00	93	P	Pn	06 20 17.8	+0.5
MTW	Mount Morrison	2.07	86	P	Pn	06 20 18.4	+0.4
OXZ	Oxford	2.08	195	P	Pn	06 20 19.0	+1.0
NMEZ	Namu Road	2.08	24	P	Pn	06 20 19.8	+1.7
HOWZ	Holdsworth Sta	2.12	79	P	Pn	06 20 19.0	+0.4
NBEZ	Newall Road No	2.21	23	P	Pn	06 20 21.3	+1.6
MRZ	Mangatainoka R	2.23	74	P	Pn	06 20 20.0	+0.2
OHWZ	Ohakea	2.23	61	P	Pn	06 20 21.1	+1.2
KHEZ	Kahui Hut	2.24	26	P	Pn	06 20 21.7	+1.6
PREZ	Palmer Road	2.24	29	P	Pn	06 20 22.1	+2.0
NEZ	North Egmont	2.29	27	P	Pn	06 20 22.2	+1.5
WAZ	Wanganui	2.30	48	P	Pn	06 20 22.6	+1.8
WVZ	Waitaha Valley	2.31	220	P	Pn	06 20 21.9	+1.1
PKE	Pukeiti	2.32	24	P	Pn	06 20 22.6	+1.5
TMWZ	Te Maipa	2.37	86	P	Pn	06 20 22.2	+0.7
MQZ	McQueen's Vall	2.39	182	P	Pn	06 20 22.6	+0.9
DREZ	Durham Road	2.39	28	P	Pn	06 20 23.2	+1.3
OKCZ	Okains Bay	2.41	175	P	Pn	06 20 23.5	+1.5
TIWZ	Tintock	2.42	78	P	Pn	06 20 22.5	+0.3
RACZ	Rakaia	2.45	191	P	Pn	06 20 23.5	+1.0
POWZ	Post Office Ro	2.46	69	P	Pn	06 20 22.7	+0.1
AKCZ	Akaroa Harbour	2.55	178	P	Pn	06 20 24.9	+1.1
VRZ	Vera Road	2.67	35	P	Pn	06 20 26.5	+1.2
GCSZ	Gaunt Creek Bo	2.69	221	P	Pn	06 20 26.4	+0.9
BFZ	Birch Farm	2.71	78	P	Pn	06 20 26.1	+0.4
BFZ	Birch Farm	2.71	78	P	Pn	06 20 26.5	+0.8
RPZ	Rata Peaks	2.71	207	P	Pn	06 20 26.6	+1.0
RPZ	Rata Peaks	2.71	207	P	Pn	06 20 27.8	+2.1
WACZ	Wakanui South	2.71	194	P	Pn	06 20 26.9	+1.2
TSZ	Takapari Road	2.73	64	P	Pn	06 20 26.2	+0.1
DVHZ	Dannevirke	2.77	70	P	Pn	06 20 26.6	0.0
MTVZ	Mangateitei	2.83	48	P	Pn	06 20 28.4	+1.1
PKVZ	Pokaka	2.83	45	P	Pn	06 20 28.3	+1.0
ARCZ	Arundel	2.88	204	P	Pn	06 20 28.3	+0.5
TRVZ	Turoa	2.93	47	P	Pn	06 20 29.8	+1.1
ANWZ	Angora Road	2.94	74	P	Pn	06 20 29.3	+0.7
WNVZ	Wahianoa	2.94	48	P	Pn	06 20 29.6	+0.8
FWVZ	Far West T-bar	2.96	47	P	Pn	06 20 30.3	+1.2
PNHZ	Pukenui	2.97	63	P	Pn	06 20 28.9	-0.1
MOVZ	Moawhango	2.98	51	P	Pn	06 20 29.6	+0.4
TUVZ	Tukino	3.01	48	P	Pn	06 20 30.6	+0.9
TWVZ	Taurewa	3.04	43	P	Pn	06 20 30.8	+0.9
NGZ	Ngauruhoe	3.05	46	P	Pn	06 20 31.8	+1.6
SNVZ	South Ngauruho	3.06	47	P	Pn	06 20 31.4	+1.1
WPHZ	Waipukurau	3.06	67	P	Pn	06 20 30.3	+0.1
WTVZ	West Tongariro	3.08	45	P	Pn	06 20 31.6	+1.0
NNVZ	North Ngauruho	3.09	46	P	Pn	06 20 31.4	+0.8
OTVZ	Oturere	3.09	47	P	Pn	06 20 31.5	+0.8
FOZ	Fox Glacier	3.11	224	P	Pn	06 20 31.3	+0.6
BHHZ	Black Hill Sta	3.11	55	P	Pn	06 20 31.1	+0.2
PRHZ	Porangahau	3.12	72	P	Pn	06 20 31.2	+0.3
ETVZ	East Tongariro	3.13	47	P	Pn	06 20 31.9	+0.6
NTVZ	North Tongarir	3.14	46	P	Pn	06 20 33.1	+1.8
TMVZ	Te Maari	3.15	47	P	Pn	06 20 32.4	+1.0
KRHZ	Kereru	3.22	60	P	Pn	06 20 32.4	+0.2
HIZ	Hauiti	3.23	30	P	Pn	06 20 33.0	+0.6
HIZ	Hauiti	3.23	30	P	Pn	06 20 33.1	+0.8
TMZ	Timaru	3.33	202	P	Pn	06 20 34.2	+0.8
KWHZ	Kaweka Forest	3.37	57	P	Pn	06 20 34.8	+0.6
KAHZ	Kahuranaki	3.48	65	P	Pn	06 20 35.8	+0.2
MCHZ	McNeill Hill	3.54	59	P	Pn	06 20 36.5	+0.3
BKZ	Black Stump Fm	3.57	54	P	Pn	06 20 36.7	0.0
BKZ	Black Stump Fm	3.57	54	P	Pn	06 20 37.2	+0.5
JCZ	Jackson Bay	4.02	226	P	Pn	06 20 43.2	+0.6
ODZ	Otahua Downs	4.03	202	P	Pn	06 20 43.4	+0.8
ODZ	Otahua Downs	4.03	202	P	Pn	06 20 43.7	+1.1
MHGZ	Mahia Peninsul	4.49	63	P	Pn	06 20 50.8	+2.1
MKAZ	Moumakai	4.60	25	P	Pn	06 20 52.2	+2.0
RIGZ	Rimuhau	4.64	57	P	Pn	06 20 50.4	-0.2
MSZ	Milford Sound	4.88	225	P	Pn	06 20 54.4	+0.7
RUGZ	Raukumara Rang	5.06	50	P	Pn	06 20 54.6	-1.6
PKGZ	Pakihiroa	5.34	52	P	Pn	06 20 58.9	-1.1

*IDC **04** 06:31:33.5±2.2,20°.69S×177°.73W,h434km±24km,*
mb3.9/20,mbtmp4.7/22,Error ellipse: s-maj=16.7km
s-min=11.7km az=135.0
*NOU **04** 06:31:35.5,20°.66S×177°.44W,h504km,mb4.3/32,Fiji*
Islands Region
*NEIC **04** 06:31:36.7±2.4,20°.7S±0°.1×177°.8W±0°.1,h470km±7km,*
mb4.6/58,Error ellipse: s-maj=17.9km s-min=14.9km
az=121.0

ISC 04 06:31:38.8±0.4,20°.71S±0°.06×177°.78W±0°.08,h500km,
n356,σ1°51/375,mb4.5/60,13C-15D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKBA	Tubou, Lakemba	2.65	338	P	P	06 32 45.3	-2.3
TAVE	Taveuni	4.46	333	P	P	06 32 59.4	-1.8
MSVF	Nonsavu	4.93	306	P	P	06 33 03.8	-1.5
	69nm,0.4s,baz=109,slow=21,SNR=94						
MSVF	Nonsavu	4.93	306		P	06 33 04.0	-1.3
MSVF	Nonsavu	4.93	306	P	P	06 33 04.0	-1.3
DGTI	Dogotuki	4.97	331	P	P	06 33 04.1	-1.6
NIUE	Niue	7.56	79	P	P	06 33 28.1	-2.6
GLKZ	Green Lake	8.52	181	P	P	06 33 39.0	-1.5
GLKZ				S	S	06 35 16.5	-3.9
AFI	Afiamalu	8.86	41	P	P	06 33 37.6	-6.7
	79nm,0.5s,baz=55,slow=0.3,SNR=19						
AFI				S	S	06 35 15.0	-12
	29nm,0.6s,baz=40,slow=19,SNR=2.8						
AFI	Afiamalu	8.86	41	P	P	06 33 38.0	-6.4
AFI	Afiamalu	8.86	41	P	P	06 33 39.1	-5.3
MARNC	Mare, Loyalty	13.27	264	P	P	06 34 31.2	+0.4
OUZ	Omahuta	16.33	206	P	P	06 35 04.3	+1.5
OUZ	Omahuta	16.33	206	P	P	06 35 03.9	+1.2
OUZ	Omahuta	16.33	206	P	P	06 35 01.2	-1.6
WCZ	Waipu Caves	16.67	203	P	P	06 35 07.6	+1.3
KUZ	Kuaotunu	16.96	198	P	P	06 35 08.9	-0.3
MXZ	Matakaoa Point	17.14	191	P	P	06 35 07.7	-3.3
MXZ	Matakaoa Point	17.14	191	P	P	06 35 08.7	-2.3
WIAZ	Waiheke Island	17.18	200	P	P	06 35 11.3	-0.1
KMRZ	Kaimai	17.93	196	P	P	06 35 19.2	+0.8
TOZ	Tahuroa Road	17.94	198	P	P	06 35 18.6	+0.2
MWZ	Matawai	18.03	192	P	P	06 35 17.9	-1.5
MWZ				S	S	06 38 20.1	+0.9
URZ	Urewera	18.04	193	P	P	06 35 15.4	-4.0
	14nm,0.3s,baz=125,slow=23,SNR=33						
URZ	Urewera	18.04	193	P	P	06 35 18.0	-1.4
CNGZ	Carnagh Statio	18.05	190	P	P	06 35 19.4	-0.1
OMRZ	Omania	18.07	195	P	P	06 35 20.1	+0.4
TKGZ	Te Karaka	18.07	191	P	P	06 35 19.8	+0.1
RAGZ	Rawiri	18.21	192	P	P	06 35 16.8	-4.2
RAGZ				S	S	06 38 25.5	+3.2
RRRZ	Republican Roa	18.25	194	P	P	06 35 20.0	-1.4
HSRZ	Hossack Road	18.29	195	P	P	06 35 21.6	-0.1
MUGZ	Murupara	18.33	194	P	P	06 35 19.1	-2.9
RIGZ	Rimuhau	18.35	191	P	P	06 35 21.1	-1.2
RIGZ				S	S	06 38 22.9	-1.5
HRRZ	Handcock Road	18.36	195	P	P	06 35 21.5	-0.9
RTZ	Ruatahuna	18.41	193	P	P	06 35 20.6	-2.3
PRRZ	Plateau Road	18.43	195	P	P	06 35 21.6	-1.4
TLZ	Tolley Road	18.49	197	P	P	06 35 24.1	+0.6
SNGZ	Shannon Statio	18.50	192	P	P	06 35 22.1	-1.5
SNGZ				S	S	06 38 38.4	+11
ALRZ	Allen Road	18.50	195	P	P	06 35 22.5	-1.2
PRGZ	Paritu Road	18.54	191	P	P	06 35 23.8	-0.1
MTHZ	Maungataniwha	18.67	193	P	P	06 35 23.0	-2.2
MTHZ				S	S	06 38 35.0	+5.3
RAHZ	Arahi	18.68	193	P	P	06 35 23.9	-1.4
HIZ	Hauiti	18.85	198	P	P	06 35 27.9	+1.1
HIZ	Hauiti	18.85	198	P	P	06 35 24.9	-1.9
NMHZ	Naumai	18.91	193	P	P	06 35 26.2	-1.3
RATZ	Rangitukua	18.93	196	P	P	06 35 26.9	-0.7
BKZ

comp=Z,24nm,1.4s
CTAO Charters Tower 33.67 265 P P 06 37 37.9 +0.1
comp=Z,10nm,1.3s
CMSA Cobar Meteorol 34.38 244 P P 06 37 42.9 -0.7
comp=Z,16nm,1.9s
TOO Toolangi 35.94 234 P P 06 37 56.0 -0.6
TOO IAmb IAmb 06 39 29.4
comp=Z,32nm,1.4s
COEN Coen 37.80 274 P P 06 38 11.8 -0.3
STKA Stephens Creek 37.88 244 P P 06 38 12.7 0.0
comp=Z,2.6nm,0.4s,baz=77,slow=9.9,SNR=17
comp=Z,2.6nm,0.4s
STKA Stephens Creek 37.88 244 P P 06 38 12.5 -0.1
STKA Stephens Creek 37.88 244 P P 06 38 13.3 +0.7
HTT Hallett 40.31 242 P P 06 38 32.0 -0.3
LCRK Leigh Creek 40.65 247 P P 06 38 35.4 +0.4
TWOA Tennyson Woods 40.81 240 P P 06 38 35.5 -0.7
comp=Z,12nm,0.9s
BBOO Buckleboo 42.64 244 P P 06 38 49.9 -0.9
BBOO IAmb IAmb 06 38 51.4
comp=Z,58nm,1.6s
BBOO Buckleboo 42.64 244 P P 06 38 51.2 +0.4
OOD Oodnadatta 42.81 251 P P 06 38 52.2 +0.1
MULG Mulgathing 44.23 248 P P 06 39 03.0 -0.2
AS31 Alice Springs 44.67 257 P P 06 39 06.5 -0.3
ASAR Alice Springs 44.67 257 P P 06 39 06.5 -0.3
comp=Z,6.4nm,0.6s,baz=98,slow=7.8,SNR=108
ASAR PcP **PcP 06 40 39.2 +0.4**
comp=Z,1.9nm,0.7s,baz=100,slow=3.6,SNR=9.2
comp=Z,6.4nm,0.6s
ASAR Alice Springs 44.67 257 P P 06 39 06.2 -0.6
WB0 Warramunga Arr 44.76 262 P P 06 39 06.4 -1.0
WRAB Tennant Creek 44.77 262 P P 06 39 07.1 -0.4
WRA Warramunga Arr 44.78 262 P P 06 39 06.6 -1.0
comp=Z,1.9nm,0.3s,baz=97,slow=7.5,SNR=189
comp=Z,1.9nm,0.3s
WRA Warramunga Arr 44.78 262 P P 06 39 06.3 -1.3
KDU Kakadu 48.16 271 P P 06 39 33.0 -0.3
FORT Forrest 49.40 247 P P 06 39 41.9 -0.4
FORT Forrest 49.40 247 P P 06 39 41.3 -1.1
comp=Z,30nm,0.9s
WRKA Warakurna 49.61 254 P P 06 39 43.0 -1.0
comp=Z,18nm,0.6s
KNRA Kununurra 50.85 266 P P 06 39 52.3 -0.9
KNRA IAmb IAmb 06 39 53.7
comp=Z,74nm,1.9s
SBA Scott Base 57.68 184 P P 06 40 42.1 +1.8
VNDA Vanda 57.72 185 P P 06 40 42.6 +1.9
comp=Z,0.9nm,0.6s,baz=346,slow=7.4,SNR=6.4
comp=Z,0.9nm,0.6s
VNDA Vanda 57.72 185 P P 06 40 42.5 +1.8
MBWA Marble Bar 58.01 257 P P 06 40 42.8 -0.8
MBWA IAmb IAmb 06 40 43.9
comp=Z,15nm,0.7s
CASY Casey 63.87 205 P P 06 41 20.7 -0.6
CASY IAmb IAmb 06 43 07.9
comp=Z,14nm,1.6s
QSPA South Pole Qui 69.36 180 P P 06 41 56.6 +1.0
JGF Kuroka 70.30 322 P P 06 42 02.1 +0.5
JGF IAmb IAmb 06 42 03.2
comp=Z,34nm,1.8s
MJAR Matsushiro Arr 70.50 324 P P 06 42 02.8 +0.1
comp=Z,7.8nm,0.8s,baz=157,slow=5.9,SNR=18
comp=Z,7.8nm,0.8s
MAJO Matsushiro 70.50 324 P P 06 42 03.1 +0.4
MAJO IAmb IAmb 06 42 03.6
comp=Z,10nm,0.7s
ADK Adak 72.28 1 P P 06 42 12.3 -0.4
JHS Saijyo 72.39 319 P P 06 42 15.0 +1.1
JHS IAmb IAmb 06 42 15.7
comp=Z,20nm,0.9s
JKA Kamikawa-asahi 74.00 331 P P 06 42 24.4 +1.6
ASAJ Asahikawa 74.01 331 P P 06 42 24.7 +1.8
comp=Z,24nm,0.8s,baz=228,slow=5.7,SNR=16
comp=Z,24nm,0.8s
UNV Unalaska Valle 74.88 7 P P 06 42 26.5 -1.0
PEA0B Petropavlovsk- 76.52 345 P P 06 42 36.8 +0.1
PETK Petropavlovsk- 76.52 345 P P 06 42 37.1 +0.4
comp=Z,15nm,0.7s,baz=146,slow=8.6,SNR=16
comp=Z,15nm,0.7s
PETK Petropavlovsk- 76.52 345 P P 06 42 37.2 +0.5
KSRS Korea Array 77.18 318 P P 06 42 41.8 +1.1
comp=Z,3.6nm,0.7s,baz=134,slow=6.1,SNR=13
comp=Z,3.6nm,0.7s
SEHB SEOHWA 77.49 319 P P 06 42 44.0 +1.7
SEHB IAmb IAmb 06 42 44.7
comp=Z,10nm,0.8s
PMPB Monarch Peak 78.12 44 P P 06 42 47.2 +1.3
SMAI San Martin Ant 78.34 159 P P 06 42 47.6 +1.2
CHIR Chirikof Islan 78.51 13 P P 06 42 47.3 -0.1
ARVC Arvin 78.79 46 P P 06 42 50.9 +1.5
baz=235
VES Vestal, Richgr 79.03 45 P P 06 42 52.1 +1.4
baz=234
MURC Murrieta 79.04 48 P P 06 42 52.1 +1.3
baz=236
BFSC Mount Baldy Ra 79.08 47 P P 06 42 52.4 +1.3
baz=236
MONP2 Monument Peak 79.19 49 P P 06 42 53.8 +1.9
baz=237,SNR=6.1
EDW2 Edwards Air Fo 79.21 46 P P 06 42 53.5 +1.8
baz=235,SNR=14
USRK Ussuriysk Ar. 79.25 326 P P 06 42 53.6 +2.0
comp=Z,14nm,0.8s,baz=126,slow=2.7,SNR=17
comp=Z,14nm,0.8s
USRK Ussuriysk Ar. 79.25 326 P P 06 42 52.8 +1.2
IKP In-Ko-Pah, Jac 79.28 49 P P 06 42 54.0 +1.8
baz=237
ISA Isabella, Lake 79.33 45 P P 06 42 54.1 +1.8
baz=235
CMB Columbia Colle 79.47 43 P P 06 42 53.8 +0.8
SII Sitkinak Islan 79.50 13 P P 06 42 53.3 +0.6
baz=202
LRMC Laurel Mtn Rad 79.76 46 P P 06 42 55.8 +1.0
baz=235
CWC Cottonwood Cre 80.04 45 P P 06 42 57.5 +1.3
baz=235
BELC Belle Mtn. Jos 80.09 48 P P 06 42 58.1 +1.6
baz=237,SNR=6.0
NJ2 Nanjing 80.17 310 *e*P **P 06 42 57.5 +0.7**
NJ2 pmax pmax
comp=Z,14nm,0.6s
MPMC Manual Prospec 80.21 46 P P 06 42 58.3 +1.2
baz=236
GSC Goldstone, Bar 80.25 47 P P 06 42 58.7 +1.4
baz=236
BC3 Big Chuckawall 80.28 49 P P 06 42 59.5 +2.0
baz=237
OHAK Old Harbor 80.30 13 P P 06 42 57.2 +0.4
baz=203
HEC Hector Ludlow 80.31 47 P P 06 42 59.0 +1.4
baz=236
YBH Yreka Blue Hor 80.32 38 P P 06 42 59.0 +1.5
YBH IAmb IAmb 06 43 00.1
comp=Z,8.0nm,0.6s
MPK Martis Peak 80.45 42 P P 06 42 59.2 +0.8
MPK IAmb IAmb 06 43 00.8
comp=Z,13nm,0.9s
PNTR Pine Nut 80.59 42 P P 06 43 00.7 +1.6
PNTR IAmb IAmb 06 43 01.6
comp=Z,14nm,0.9s
GMRC Granite Mounta 80.75 47 P P 06 43 01.5 +1.6
baz=237
IRM Iron Mountain 80.77 48 P P 06 43 01.8 +1.9
baz=237
GRAC Grapevine Rang 80.83 45 P P 06 43 02.0 +1.9
baz=235
L04D Klamath Falls 80.86 38 P P 06 43 01.6 +1.3
baz=231
KDAK Kodiak Island 80.97 13 P P 06 43 00.7 +0.4
comp=Z,4.3nm,0.7s,baz=301,slow=5.9,SNR=6.3
comp=Z,4.3nm,0.7s
KDAK Kodiak Island 80.97 13 IAmb IAmb 06 43 01.8
comp=Z,39nm,1.8s
KDAK Kodiak Island 80.97 13 P P 06 43 00.8 +0.5
baz=204
NVAR Mina Array Bea 81.03 43 P P 06 43 02.9 +1.5
comp=Z,4.1nm,0.8s,baz=224,slow=9.0,SNR=13
comp=Z,4.1nm,0.8s
214A Organ Pipe Nat 81.28 51 P P 06 43 04.5 +1.9
baz=239
P17K Kvichak River 81.52 11 P P 06 43 03.0 -0.1
baz=200
TPNV Topopah Spring 81.54 45 P P 06 43 05.6 +1.6
baz=236,SNR=5.0
PDMCI Parker Dam,Lak 81.55 49 P P 06 43 05.8 +2.0
baz=238

J04D Umpqua Nationa 81.61 38 P P 06 43 06.5 +2.2
baz=231
O16K Kokwok River B 81.62 10 P P 06 43 03.0 -0.6
baz=199
I04A Tendick Farm, 81.79 37 P P 06 43 06.1 +1.2
baz=231
K05A Summer Lake 82.00 39 P P 06 43 07.7 +1.4
K05A IAmb IAmb 06 43 08.8
comp=Z,22nm,1.0s
J05D Fort Rock, OR 82.14 38 P P 06 43 08.6 +1.7
baz=232
Y14A Wickenburg 82.16 49 P P 06 43 08.2 +1.1
N16K Nishlik Lake 82.35 9 P P 06 43 08.5 +1.1
baz=198,SNR=6.0
O18K Koktuh Hills 82.36 11 P P 06 43 06.8 -0.6
baz=201
H04A Detroit Lake 82.47 36 P P 06 43 08.8 +0.4
H04A IAmb IAmb 06 43 10.2
comp=Z,9.8nm,0.8s
I05D Terrebonne, OR 82.73 37 P P 06 43 11.2 +1.5
baz=232
R11A Troy Canyon, C 82.75 45 P P 06 43 11.2 +1.1
baz=236
KLR Kul'dur 82.81 329 P P 06 43 11.3 +1.4
comp=Z,4.2nm,0.8s,baz=85,slow=4.4,SNR=15
comp=Z,4.2nm,0.8s
O19K Port Alsworth 82.85 12 P P 06 43 09.3 -0.5
O19K Port Alsworth 82.85 12 P P 06 43 09.8 0.0
baz=202
TUC Tucson 82.94 52 P P 06 43 13.5 +2.4
baz=240
F04A Amboy 83.13 35 P P 06 43 12.4 +0.8
F04A IAmb IAmb 06 43 13.6
comp=Z,14nm,1.0s
BRSE Bradley Lake S 83.15 13 P P 06 43 12.0 +0.6
baz=205
N19K Bonanza Creek 83.39 11 P P 06 43 12.5 -0.2
baz=202
MA2 Magadan 84.04 345 P P 06 43 15.5 -0.3
comp=Z,4.9nm,0.6s,baz=138,slow=14,SNR=2.1
comp=Z,4.9nm,0.6s
M19K Big River Lodg 84.42 11 P P 06 43 17.3 -0.4
baz=202
L19K White Mountain 84.60 11 P P 06 43 19.1 +0.5
baz=201
SUA Susitna One 84.72 13 P P 06 43 18.9 -0.4
baz=205
GLI Glacier Island 85.00 15 P P 06 43 20.4 -0.1
GLI IAmb IAmb 06 43 22.1
comp=Z,11nm,0.7s
GLI Glacier Island 85.00 15 P P 06 43 20.6 +0.1
baz=209,SNR=6.4
L20K Farewell, AK 85.05 11 P P 06 43 20.8 0.0
baz=202
M22K Willow 85.11 13 P P 06 43 20.7 -0.3
baz=206
TTA Tatalina 85.11 10 P P 06 43 21.4 +0.2
TTA Tatalina 85.11 10 P P 06 43 21.6 +0.5
baz=200
KNK Knik Glacier 85.16 14 P P 06 43 21.7 +0.4
baz=207
PMR Palmer 85.17 13 P P 06 43 21.3 0.0
baz=207
121A Cookes Peak, D 85.27 53 P P 06 43 24.5 +1.7
baz=242
GHO Glory Hole Cre 85.38 13 P P 06 43 22.1 -0.3
M23K Glacier View 85.66 14 P P 06 43 23.3 -0.4
baz=208
BMRM Bremner River 85.68 16 P P 06 43 24.3 +0.5
baz=211
SCM Sheep Creek Mo 85.78 14 P P 06 43 24.9 +0.5
SCM IAmb IAmb 06 43 25.4
comp=Z,10nm,0.7s
SCM Sheep Creek Mo 85.78 14 P P 06 43 24.8 +0.5
baz=208,SNR=6.4
K20K Telida 85.83 10 P P 06 43 24.8 +0.3
baz=202,SNR=5.8
HNS HongShan 85.84 312 ⇑P **P 06 43 26.6 +1.5**
HNS pmax pmax
comp=Z,15nm,0.9s
F10A Beach Ranch, E 86.04 37 P P 06 43 26.7 +0.7
F10A IAmb IAmb 06 43 27.7
comp=Z,16nm,0.8s
BJI Beijing 86.18 315 P P 06 43 27.8 +1.1
BJI pmax pmax
comp=Z,7.0nm,0.8s
N25K Chitina, Valde 86.23 15 P P 06 43 26.6 +0.1
N25K IAmb IAmb 06 43 27.8
comp=Z,33nm,1.8s
N25K Chitina, Valde 86.23 15 P P 06 43 27.2 +0.6
baz=211
CAST Castle Rocks 86.24 11 P P 06 43 25.4 -1.1
CAST IAmb IAmb 06 43 26.2
comp=Z,7.5nm,0.8s
CAST Castle Rocks 86.24 11 P P 06 43 25.3 -1.2
baz=204
HLID Hailey 86.35 41 P P 06 43 29.3 +1.6
baz=237,SNR=5.1
WAT6 Susitna Watana 86.35 13 P P 06 43 27.3 +0.1
baz=208,SNR=8.5
CTG Chitna Glacier 86.53 17 P P 06 43 28.7 +0.7
baz=214
J20K Nowinta River 86.58 10 P P 06 43 28.1 +0.1
baz=202
TRF Thorofare Moun 86.61 12 P P 06 43 27.6 -0.8
TRF IAmb IAmb 06 43 28.8
comp=Z,10.0nm,0.8s
TRF Thorofare Moun 86.61 12 P P 06 43 28.0 -0.3
baz=206,SNR=8.7
SEY Seymchan 86.62 347 P P 06 43 28.8 +0.6
comp=Z,10nm,0.7s,baz=150,slow=5.4,SNR=17
comp=Z,10nm,0.7s
CHUM Lake Minchumin 86.62 11 P P 06 43 27.5 -0.7
baz=204
MNTX Cornudas Mount 86.70 54 P P 06 43 31.2 +1.8
baz=243
RND Reindeer 86.85 13 P P 06 43 29.7 +0.3
RND IAmb IAmb 06 43 30.3
comp=Z,14nm,0.8s
TXAR Lajitas Array 86.99 57 P P 06 43 32.9 +1.9
comp=Z,1.8nm,0.7s,baz=218,slow=6.9,SNR=31
comp=Z,1.8nm,0.7s
TXAR Lajitas Array 86.99 57 P P 06 43 32.4 +1.4
MCK McKinley 87.13 12 P P 06 43 30.7 0.0
baz=207,SNR=5.2
PAX Paxson 87.20 14 P P 06 43 30.8 -0.3
baz=210
YUK8 Steele Glacier 87.22 17 P P 06 43 32.0 +0.5
baz=215
M26K Nabesna, AK 87.30 15 P P 06 43 32.3 +0.8
baz=212
ANMO Albuquerque 87.37 51 P P 06 43 33.8 +1.1
baz=242
NEW Newport 87.42 36 P P 06 43 33.0 +0.6
baz=235
YUK3 Moose Creek 87.44 17 P P 06 43 33.2 +0.8
baz=215,SNR=6.8
TROLL Troll, Antarti 87.53 180 P P 06 43 31.9 -0.8
M27K Edge Creek, AK 87.55 16 P P 06 43 33.7 +0.9
M27K IAmb IAmb 06 43 34.6
comp=Z,8.6nm,0.9s
M27K Edge Creek, AK 87.55 16 P P 06 43 33.2 +0.4
baz=213,SNR=8.8
SNAA Sanae 87.80 178 P P 06 43 33.6 -0.4
K24K Donnelly Dome 87.86 14 P P 06 43 34.6 +0.5
baz=210
BVCY Beaver Creek 87.86 16 P P 06 43 35.2 +1.0
baz=214,SNR=7.9
I21K Tanana 87.87 11 P P 06 43 34.2 +0.1
baz=204
NEA2 Nenana 87.87 12 P P 06 43 33.4 -0.7
baz=207
O30N Mendenhall 87.89 19 P P 06 43 35.4 +1.1
baz=218
VNA3 Neumayer Olymp 87.92 176 P P 06 43 34.4 0.0
MLY Manley 87.96 11 P P 06 43 33.9 -0.7
baz=205,SNR=8.8
RIDG Independent Ri 88.01 14 P P 06 43 34.9 +0.1
baz=211
HDA Harding Lake 88.14 13 P P 06 43 35.1 -0.2
baz=209,SNR=18
L27K Beaver Creek, 88.15 16 P P 06 43 35.5 0.0
L27K Beaver Creek, 88.15 16 P P 06 43 35.8 +0.3
baz=213
H21K Melozitna Rive 88.17 10 P P 06 43 34.9 -0.6
H21K Melozitna Rive 88.17 10 P P 06 43 36.0 +0.5
baz=203

I23K Minto, Yukon-K 88.32 12 P P 06 43 35.7 -0.5
baz=206
IMAR Indian Mountai 88.32 10 P P 06 43 36.5 +0.3
TCOL CIGO, UAF Yank 88.36 12 P P 06 43 36.3 -0.1
baz=208
VNA2 Neumayer--Watz 88.37 177 P P 06 43 36.6 +0.1
baz=179,slow=1.4
S22A 4UR Ranch, Cre 88.40 49 P P 06 43 38.8 +1.2
baz=242
SCRK Sand Creek 88.41 14 P P 06 43 37.2 +0.5
baz=211
XAN Xi'an 88.42 307 P P 06 43 39.0 +1.5
XAN pP PcP 06 43 50.3 +12
XAN pmax pmax
comp=Z,25nm,0.9s
ILAR Eielson Array 88.47 13 P P 06 43 36.3 -0.6
comp=Z,2.5nm,0.6s,baz=216,slow=5.5,SNR=31
comp=Z,2.5nm,0.6s
ILAR Eielson Array 88.47 13 P P 06 43 36.9 0.0
P33M Teslin, Yukon 88.50 21 P P 06 43 38.8 +1.5
baz=221
N31M Braeburn, Yuko 88.54 19 P P 06 43 38.6 +1.3
baz=219
VNA1 Neumayer--Stat 88.59 177 P P 06 43 37.4 -0.1
J25K Salcha River, 88.65 13 P P 06 43 38.2 +0.3
baz=210,SNR=9.3
POKR Poker Plat Res 88.66 12 P P 06 43 37.1 -0.7
baz=208
H23K Yukon River 88.89 11 P P 06 43 38.8 0.0
baz=206
K27K Chicken 88.90 15 P P 06 43 40.0 +1.1
baz=213
J26L Joseph Creek 88.96 14 P P 06 43 40.0 +0.7
baz=212,SNR=11
BW06 Boulder Array 88.97 43 P P 06 43 41.0 +0.9
baz=240
PDAR Pinedale Array 88.97 43 P P 06 43 40.6 +0.5
comp=Z,2.5nm,0.7s,baz=221,slow=3.1,SNR=20
comp=Z,2.5nm,0.7s
YHL Hebgen Lake 89.00 41 P P 06 43 41.9 +1.7
YHL IAmb IAmb 06 43 43.1
comp=Z,10nm,0.9s
M30M Minto, Yukon 89.10 18 P P 06 43 40.8 +0.8
baz=218,SNR=6.9
BOZ Bozeman (W) 89.11 40 P P 06 43 42.0 +1.5
baz=239,SNR=13
H17A Grant Village 89.14 41 P P 06 43 43.3 +2.5
baz=240
SDCO Great Sand Dun 89.33 49 P P 06 43 42.8 +0.8
baz=243
DAWY Dawson 89.60 16 P P 06 43 43.1 +0.9
baz=216
HHC Hu-ho-hao-te 89.64 314 *e*P **P 06 43 43.8 +0.7**
HHC pmax pmax
comp=Z,23nm,0.8s
HHC pmax pmax
comp=Z,160nm,9.9s
MSTX Muleshoe 89.67 53 P P 06 43 44.3 +1.0
baz=245
RLMT Red Lodge 90.31 41 P P 06 43 47.7 +1.5
baz=240
CMAR Chiang Mai Arr 90.38 289 P P 06 43 48.8 +2.0
comp=Z,3.8nm,0.4s,baz=119,slow=2.9,SNR=27
comp=Z,3.8nm,0.4s
N23A Red Feather La 90.46 46 P P 06 43 48.4 +1.4
baz=243
PZH PanZhiHua 90.99 298 P P 06 43 51.2 +1.6
PZH pmax pmax
comp=Z,8.0nm,0.9s
PZH pmax pmax
comp=Z,100nm,5.1s
LAO LASA Array 92.93 41 P P 06 43 59.6 +1.6
baz=243
LZH Lanzhou 93.06 307 *e*P **P 06 44 00.8 +1.8**
LZH pP PcP 06 44 07.3 +8.0
LZH pmax pmax
comp=Z,24nm,0.9s
RSSD Black Hills 93.16 44 P P 06 44 00.0 +0.7
baz=244
YKA Yellowknife Ar 96.61 25 P P 06 44 14.0 -0.2
comp=Z,0.5nm,0.7s,baz=238,slow=4.0,SNR=5.6
comp=Z,0.5nm,0.7s
GOMU GeErMu 99.93 305 Pdif **Pdif 06 44 31.4 +1.3**
GOMU AMB AMB
comp=Z,43nm,4.3s
MKAR Makanchi Array 111.49 313 PKiKP **PKiKP 06 49 15.4 -0.4**
comp=Z,0.5nm,0.6s,baz=192,slow=1.6,SNR=4.8
ARCES ARCESS Array B 129.16 350 PKP **PKiKP 06 49 49.3 -0.5**
comp=Z,5.4nm,1.0s,baz=34,slow=3.1,SNR=6.8
FINES FINESS Array B 136.03 344 PKP **PKiKP 06 50 02.0 -1.9**
comp=Z,1.6nm,0.8s,baz=57,slow=5.1,SNR=4.3
AKASG Malin Array Be 143.29 331 PKhKP PKPpre 06 50 13.1
comp=Z,5.5nm,0.7s,baz=34,slow=4.2,SNR=24
SORM Soroca 145.49 329 ⇑P **PKPab 06 50 20.7 -1.2**
BRTR Keskin Array B 147.13 312 PKPbc **PKiKP 06 50 25.9 -1.7**
comp=Z,2.3nm,0.6s,baz=137,slow=4.0,SNR=11
BURAR Bucovina Array 147.34 331 ⇓P **PKPab 06 50 27.2 -2.2**
BIZ Bicaz 147.41 329 ⇑P **PKPab 06 50 26.9 -2.7**
OJC Ojcow 147.43 339 *e*PKP **PKiKP 06 50 26.4 -1.3**
CFR Carcaliu 147.57 325 ⇓P **PKiKP 06 50 26.4 -1.6**
TPGR Topolog 147.62 324 ⇑P **PKPab 06 50 27.5 -3.1**
CRVS Cervenica-Dubn 147.93 336 *e*PKP **PKPab 06 50 28.3 -3.4**
CRVS *e* 06 50 32.5
KSP Ksiaz 147.95 343 *e*PKP **PKiKP 06 50 28.0 -0.6**
OSTC Ostas 148.23 343⇑*e*PKP **PKPab 06 50 29.0 -3.9**
CHVC Chvalec 148.24 343⇑*e*PKP **PKiKP 06 50 28.7 -0.6**
CLL Collm 148.31 347 ⇓*i*PKPbc **PKiKP 06 50 28.4 -1.0**
comp=Z,13nm,0.8s
CLL *e*PKPab **PKPab 06 50 33.0 -0.1**
DPC Dobruska-Polom 148.38 343⇑*e*PKP **PKiKP 06 50 29.2 -0.5**
DOPR Dopca 148.45 328 ⇓P **PKiKP 06 50 29.7 -0.2**
KRLC Kraliky 148.50 342⇑*e*PKP **PKiKP 06 50 29.5 -0.4**
KRLC *e*PKPAB **PKPab 06 50 34.5 +0.5**
MLR Muntele Rosu 148.51 327 ⇓P **PKiKP 06 50 28.3 -1.9**
BRG Berggiesshubel 148.51 346 *e*PKP **PKiKP 06 50 29.6 -0.2**
BRG Amp 06 50 31.3
comp=Z,5.4nm,0.7s
BRG *ex* x 06 50 34.1
BRG Amp 06 50 35.6
comp=Z,13nm,1.4s
MORC Moravsky Berou 148.54 341 ⇓P **PKiKP 06 50 29.5 -0.5**
MORC Moravsky Berou 148.54 341 *e*PKP **PKiKP 06 50 29.4 -0.6**
MORC *e* 06 50 35.0
PRU Pruhonice 149.19 344⇑*e*PKP **PKiKP 06 50 31.0 -0.3**
VYHS Vyhne 149.23 338 *e*PKP **PKiKP 06 50 29.7 -1.7**
VYHS *e* 06 50 38.8
VRAC Vranov 149.24 341 *e*PKP **PKiKP 06 50 31.5 +0.1**
VRAC *e* 06 50 37.6
ARR Arges 149.25 328 ⇓P **PKPab 06 50 32.5 -4.9**
JAVC Velka Javorina 149.30 340 *e*PKP **PKPab 06 50 32.6 -4.8**
JAVC *e* 06 50 39.5
KOLL Kolacno 149.30 339 *e*PKP **PKiKP 06 50 31.5 -0.1**
KRUC Moravsky 149.52 341 *e*PKP **PKiKP 06 50 31.8 -0.2**
KRUC *e* 06 50 38.7
SIRR Siria 149.95 333 ⇑P **PKiKP 06 50 32.9 -0.1**
BTNL Ternell 150.02 355 *d*PKiKP **PKiKP 06 50 33.0 0.0**
BSTI Sart Tilman 150.07 356 *d*PKiKP **PKiKP 06 50 32.7 -0.3**
GZR Gura Zlata 150.12 330 ⇓P **PKiKP 06 50 32.6 -0.9**
KHC Kasperske Hory 150.22 345⇑*e*PKP **PKiKP 06 50 33.3 -0.2**
KHC *e*PKPAB **PKPab 06 50 41.6 +0.4**
CKRC Cesky Krumlov 150.32 344⇑*e*PKP **PKiKP 06 50 33.8 +0.1**
BMRD Maredsous 150.40 357 *d*PKiKP **PKiKP 06 50 33.5 -0.2**
GERES GERESS Array B 150.45 345 PKP **PKPbc 06 50 28.6 -5.0**
comp=Z,0.1nm,0.3s,baz=2.9,slow=2.7,SNR=3.6
GERES PKPbc **PKiKP 06 50 34.0 0.0**
comp=Z,1.2nm,0.6s,baz=58,slow=3.3,SNR=18
BZS Buzias 150.48 332 ⇓P **PKiKP 06 50 33.4 -0.7**
DOU Dourbes 150.61 357 *d*PKiKP **PKiKP 06 50 34.4 +0.2**
HERR Herculane 150.67 330 ⇓P **PKiKP 06 50 34.2 -0.3**
CONA Conrad Observa 150.69 341 *e*P **PKPdf 06 50 28.0 -0.1**
comp=Z,7.7nm,0.9s,SNR=8.9
CONA *i* P **PKiKP 06 50 34.9 +0.3**
comp=Z,4.6nm,0.7s
CONA *i* P **PKPab 06 50 44.5 +1.2**
comp=Z,5.2nm,1.1s
RONA Rosalia, Austr 150.76 340 *i* P **PKPbc 06 50 29.2 -5.1**
comp=Z,0.6nm,0.5s,SNR=4.5
RONA *i* P **PKiKP 06 50 35.0 +0.3**
comp=Z,4.9nm,0.5s
RONA *e*P **PKPab 06 50 44.5 +1.0**
comp=Z,5.6nm,1.1s
MORH Mrgy, Hungar 151.22 336 ⇓P **PKiKP 06 50 35.2 -0.4**
MOA Molln 151.22 343 *i* P **PKiKP 06 50 35.5 -0.1**
comp=Z,3.1nm,1.2s
MOA *i* P **PKPab 06 50 46.3 +0.9**

comp=Z,3.1nm,0.8s
BLKB Belogradchik 151.48 328 ⇑P **PKiKP 06 50 36.1 -0.1**
BIOA Bad Ischl, Aus 151.54 344 *i* P **PKPab 06 50 47.6 +0.9**
comp=Z,5.9nm,0.9s
SOKA Soboth 152.06 341 *i* P **PKiKP 06 50 37.0 -0.4**
comp=Z,2.2nm,0.8s
SOKA *i* P **PKPab 06 50 49.3 +0.2**
comp=Z,5.0nm,1.3s
KBA Koelnbreinsper 152.18 344 *i* P **PKiKP 06 50 37.5 -0.2**
comp=Z,1.5nm,0.4s
KBA *i* P **PKPab 06 50 48.7 -1.0**
comp=Z,2.4nm,0.7s
OBKA Obir 152.36 341 *i* P **PKPab 06 50 50.3 0.0**
comp=Z,3.2nm,1.0s
RETA Reutte 152.40 347 *i* P **PKiKP 06 50 38.2 +0.1**
comp=Z,1.3nm,0.5s
RETA *i* P **PKPab 06 50 51.0 +0.5**
comp=Z,5.1nm,1.1s
WTTA Wattenberg 152.42 346 *i* P **PKiKP 06 50 38.4 +0.1**
comp=Z,4.5nm,0.7s
WTTA *i* P **PKPab 06 50 51.3 +0.6**
comp=Z,3.6nm,0.7s
MOTA Moosalm 152.46 347 *i* P **PKPab 06 50 51.4 +0.6**
comp=Z,3.5nm,0.7s
ABTA Abfaltersbach 152.70 344 *e*P **PKiKP 06 50 38.3 -0.5**
comp=Z,3.3nm,0.6s,SNR=4.6
ABTA *i* P **PKPab 06 50 51.3 -0.4**
comp=Z,4.8nm,1.0s
FETA Feichten 152.85 347 *e*P **PKiKP 06 50 39.3 +0.1**
comp=Z,2.2nm,0.7s
FETA *i* P **PKPab 06 50 53.1 +0.6**
comp=Z,3.1nm,0.9s
TORD Torodi Ar. Bea 172.47 176 PKP **PKPdf 06 50 50.5 -0.3**
comp=Z,1.2nm,0.9s,baz=307,slow=1.6,SNR=4.5

IDC 04 06:53:50.6±3.1, 2°45.N×95°28.E, h0km, mb3.6/4, mbtmp3.6/5, ML4.3/1, Error ellipse: s-maj=128.8km s-min=24.4km az=59.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**16.31**	**12**	Pn	Pn	06 57 41.3	+0.2
	0.4nm,0.3s,baz=198,slow=13,SNR=2.4 0.6nm,0.3s						
H08S2	**Diego Garcia H**	**24.84**	**246**	T	T	07 25 26.4	
	baz=67,slow=76,SNR=95						
H08S3	**Diego Garcia H**	**24.85**	**246**	T	T	07 25 28.1	
	baz=67,slow=76,SNR=138						
H08S1	**Diego Carcia H**	**24.86**	**246**	T	T	07 25 29.2	
	baz=67,slow=76,SNR=65						
H01W3	**Cape Leeuwin H**	**41.14**	**156**	T	T	07 45 34.6	
	baz=238,slow=75,SNR=175						
H01W2	**Cape Leeuwin H**	**41.15**	**156**	T	T	07 45 33.8	
	baz=239,slow=75,SNR=177						
H01W1	**Cape Leeuwin H**	**41.16**	**156**	T	T	07 45 35.1	
	baz=238,slow=75,SNR=192						
WRA	**Warramunga Arr**	**44.33**	**122**	P	P	07 02 02.4	-0.4
	0.9nm,1.2s,baz=297,slow=9.5,SNR=2.2 0.9nm,1.2s						
MKAR	**Makanchi Array**	**45.59**	**348**	P	P	07 02 12.5	0.0
	0.4nm,0.3s,baz=164,slow=8.2,SNR=11 0.4nm,0.3s						
ASAR	**Alice Springs**	**45.68**	**127**	P	P	07 02 13.8	+0.2
	0.2nm,0.5s,baz=300,slow=7.7,SNR=4.2 0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**52.05**	**352**	P	P	07 03 01.5	-0.4
	0.9nm,0.5s,baz=173,slow=8.2,SNR=4.4 0.9nm,0.5s						

*IDC **04** 07:05:33.8±1.9,54°.14N×169°.28E, h0km, mb3.3/2, mbtmp3.5/4, ML3.2/2, Error ellipse: s-maj=48.3km s-min=28.0km az=8.0*
*KRSC **04** 07:05:34.1±2.1,53°.60N×168°.55E, h5km±39km, ML3.9*
ISC 04 07:05:37.4±1.1, 54°.2N±0°.2×169°.16E±0°.09, h25km, n15, σ1ᵍ75/11, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**2.11**	**300**	*e*P	**Pn**	**07 06 12.1**	**+1.1**
BKI				*e*S	**Sb**	**07 06 40.6**	**0.0**
SHEM	**Shemya Is, Ala**	**3.29**	**114**	Pn	**Pn**	**07 06 25.0**	**-2.3**
	8.2nm,0.3s,baz=36,slow=4.5,SNR=7.3						
SHEM				Sn	**Sn**	**07 07 05.8**	**+0.2**
	5.6nm,0.3s,baz=269,slow=19,SNR=1.8 38nm,0.5s						
TUMR	**Tumrok**	**5.34**	**286**	P	**Pn**	**07 06 55.5**	**0.0**
KMNR	**Kamenistaya**	**5.38**	**291**	P	**Pn**	**07 06 59.0**	**+3.0**
SDLR	**Sedlovina**	**6.17**	**266**	P	**Pn**	**07 07 05.2**	**-1.7**
KOK	**Koryaka**	**6.31**	**266**	P	**Pn**	**07 07 06.6**	**-2.2**
PETK	**Petropavlovsk-**	**6.90**	**266**	Pn	**Pn**	**07 07 17.4**	**+0.6**
	0.6nm,0.3s,baz=79,slow=18,SNR=12 2.6nm,0.7s						
ILAR	**Eielson Array**	**24.17**	**47**	P	**P**	**07 10 50.4**	**-0.8**
	0.3nm,0.6s,baz=254,slow=6.7,SNR=11 0.3nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**34.44**	**184**	T	T	07 48 45.2	
	baz=2.5,slow=76,SNR=72						
H11N3	**WAKE ISLAND Hy**	**34.45**	**184**	T	T	07 48 46.2	
	baz=2.5,slow=76,SNR=47						
H11N1	**WAKE ISLAND Hy**	**34.46**	**184**	T	T	07 48 46.5	
	baz=2.5,slow=76,SNR=46						
H11S1	**WAKE ISLAND Hy**	**35.66**	**184**	T	T	07 50 17.0	
	baz=2.6,slow=76,SNR=31						
H11S3	**WAKE ISLAND Hy**	**35.68**	**184**	T	T	07 50 18.0	
	baz=2.6,slow=76,SNR=16						
H11S2	**WAKE ISLAND Hy**	**35.68**	**184**	T	T	07 50 19.6	
	baz=2.6,slow=76,SNR=21						
TXAR	**Lajitas Array**	**65.19**	**74**	P	**P**	**07 16 16.9**	**+0.5**
	0.3nm,0.5s,baz=312,slow=5.5,SNR=9.3 0.3nm,0.5s						

*MDD **04** 07:54:18.1±0.5, 44°.96N×13°.64W, h0km, Mb4.7/14, M_mb4.2/14, Error ellipse: s-maj=4.7km s-min=3.5km az=87.0*
*LDG **04** 07:54:21.9±0.4, 44°.75N×13°.03W, h10km, Ml4.2/33, Error ellipse: s-maj=8.2km s-min=4.7km az=95.0*
*IGIL **04** 07:54:21.6, 45°.15N×13°.67W, h27km, ML3.1*
*INMG **04** 07:54:22.5±1.8, 45°.14N×13°.70W, h10km, ML3.2, Error ellipse: s-maj=8.3km s-min=5.6km az=69.0*
*BGS **04** 07:54:25.5±2.5, 45°.27N×12°.71W, h10km, ML4.2*
ISC 04 07:54:22.2±1.1, 45°.06N±0°.03×12°.68W±0°.06, h10km, n110, σ2ᵍ72/173, 14C-4D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMAZ	**Mazaricos**	**3.41**	**127**	P	**Pn**	**07 55 19.1**	**+3.7**
EMAZ				S	**Sn**	**07 55 59.4**	**+3.6**
EAGO	**Agolada(Pontev**	**4.01**	**123**	P	**Pn**	**07 55 27.4**	**+3.6**
EAGO				⇑*i*Vmb_V		07 55 28.1	
	3μm,SNR=42						
EAGO				S	**Sn**	**07 56 14.2**	**+3.4**
EZAM	**Zamans**	**4.10**	**134**	P	**Pn**	**07 55 27.8**	**+2.8**
EZAM				S	**Sn**	**07 56 16.6**	**+3.5**
PGAV	**Gavieira, Arco**	**4.46**	**132**	⇓*i*Pn	**Pn**	**07 55 32.8**	**+2.9**
PGAV				*e*Sn	**Sn**	**07 56 24.4**	**+2.5**
PGAV				A	A	07 56 27.7	
	44nm,0.4s						
ELOB	**Lobios**	**4.63**	**132**	P	**Pn**	**07 55 35.1**	**+2.7**
ELOB				⇑*i*Vmb_V		07 55 35.5	
	1μm,SNR=23						
ELOB				S	**Sn**	**07 56 28.9**	**+2.6**
PCAB	**Cabril**	**4.76**	**133**	⇓*i*Pn	**Pn**	**07 55 36.8**	**+2.7**
PCAB				*e*Sn	**Sn**	**07 56 32.3**	**+2.9**
PCAB				A	A	07 56 34.6	
	67nm,0.1s						
PTO	**Porto**	**4.93**	**141**	*e*Pn	**Pn**	**07 55 37.5**	**+1.2**
PTO				*e*Sn	**Sn**	**07 56 35.1**	**+1.8**
POLO	**Lamas de Olo**	**5.13**	**134**	⇓*i*Pn	**Pn**	**07 55 41.5**	**+2.3**
POLO				*e*Sn	**Sn**	**07 56 40.3**	**+1.8**
POLO				A	A	07 56 43.6	
	14nm,0.4s						
PVRL	**Vila Real**	**5.24**	**134**	*e*Pn	**Pn**	**07 55 42.8**	**+2.1**
PVRL				*e*Sn	**Sn**	**07 56 43.1**	**+1.9**
PVRL				A	A	07 56 45.3	
	65nm,0.1s						
ECAL	**Calabor**	**5.33**	**124**	P	**Pn**	**07 55 45.5**	**+3.6**
ECAL				⇑*i*Vmb_V		07 55 46.6	
	1μm,SNR=19						
ECAL				S	**Sn**	**07 56 46.8**	**+3.4**
PBRG	**Braganca**	**5.41**	**125**	*e*Pn	**Pn**	**07 55 46.8**	**+3.8**
PBRG				*e*Sn	**Sn**	**07 56 49.1**	**+3.8**
PBRG				A	A	07 56 51.5	
	38nm,0.2s						
PVIS	**Viseu**	**5.59**	**139**	*e*Pn	**Pn**	**07 55 47.0**	**+1.6**
PVIS				*e*Sn	**Sn**	**07 56 51.3**	**+1.7**
PVIS				A	A	07 56 53.9	
	15nm,0.1s						
EARI	**Arriondas**	**5.65**	**106**	P	Pn	07 55 51.0	+4.7
EARI				⇑*i*Vmb_V		07 55 52.6	
	417nm,SNR=5.9						
EARI				S	**Sn**	**07 56 55.6**	**+4.4**
MVO	**Moncorvo**	**5.68**	**131**	⇓*e*Pn	**Pn**	**07 55 49.4**	**+2.7**
MVO				*e*Sn	**Sn**	**07 56 53.9**	**+1.9**
MVO				A	A	07 56 57.1	
	24nm,0.2s						
PCAS	**Casmilo, Conde**	**5.88**	**147**	*e*Pn	**Pn**	**07 55 49.9**	**+0.5**
PCAS				*e*Sn	**Sn**	**07 56 56.2**	**-0.6**
PCAS				A	A	07 57 10.2	
	5.9nm,0.7s						
MTE	**Manteigas**	**6.00**	**139**	*e*Pn	**Pn**	**07 55 52.8**	**+1.7**
MTE				*e*Sn	**Sn**	**07 57 00.0**	**+0.2**
MTE				A	A	07 57 14.8	
	15nm,0.6s						
PSBE	**So Bento**	**6.25**	**151**	*e*Pn	**Pn**	**07 55 54.1**	**-0.3**
PSBE				*e*Sn	**Sn**	**07 57 04.1**	**-1.8**
PCBR	**Castelo Branco**	**6.48**	**142**	*e*Pn	**Pn**	**07 55 58.9**	**+1.3**
PCBR				*e*Sn	**Sn**	**07 57 10.1**	**-1.5**
PCBR				A	A	07 57 14.1	
	6.7nm,0.3s						
PMAFR	**Mafra**	**6.60**	**156**	*e*Pn	**Pn**	**07 55 58.7**	**-0.6**
PMAFR				*e*Sn	**Sn**	**07 57 09.2**	**-5.5**
PMAFR				A	A	07 57 15.4	
	16nm,0.2s						
PMTG	**Montargil**	**6.84**	**150**	*e*Pn	**Pn**	**07 56 01.8**	**-0.8**
PMTG				*e*Sn	**Sn**	**07 57 18.2**	**-2.3**
PMTG				A	A	07 57 40.5	
	2.6nm,0.7s						
PMRV	**Marv??o**	**6.86**	**143**	*e*Pn	**Pn**	**07 56 03.2**	**+0.4**
PMRV				*e*Sn	**Sn**	**07 57 18.5**	**-2.5**
PMRV				A	A	07 57 25.4	
	6.8nm,0.3s						
ELAN	**Lanestosa**	**6.90**	**102**	P	Pn	07 56 08.0	+4.6
ELAN				⇑*i*Vmb_V		07 56 09.4	
	214nm,SNR=2.4						
ELAN				S	**Sn**	**07 57 25.3**	**+3.4**
EPLA	**Plasencia**	**6.97**	**133**	P	**Pn**	**07 56 06.7**	**+2.3**
EPLA				⇑*i*Vmb_V		07 56 08.2	
	340nm,SNR=8.5						
EPLA				S	**Sn**	**07 57 23.9**	**+0.1**
QUIF	**Quistinic**	**7.16**	**63**	*e*Pn	**Pn**	**07 56 09.2**	**+2.3**
QUIF				*e*Sn	**Sn**	**07 57 28.0**	**-0.3**
	25nm,0.2s						
CCA1	**Carnmenellis**	**7.18**	**42**	*e*P	**Pn**	**07 56 08.4**	**+1.2**
CCA1				IAmb	IAmb	07 56 09.8	
	comp=Z,11nm,0.6s						
CCA1				IAML		07 56 09.9	
	comp=Z,18nm,0.2s						
ROSF	**Rostrenen**	**7.25**	**60**	*e*Pn	**Pn**	**07 56 10.6**	**+2.5**
ROSF				*e*Sn	**Sn**	**07 57 29.3**	**-1.1**
	comp=Z,24nm,0.2s						
PESTR	**Estremoz**	**7.26**	**147**	*e*Pn	**Pn**	**07 56 08.2**	**-0.1**
PESTR				*e*Sn	**Sn**	**07 57 28.8**	**-1.9**
EVO	**Evora**	**7.39**	**150**	P	**Pn**	**07 56 09.2**	**-1.0**
EVO				S	**Sn**	**07 57 30.2**	**-3.9**
EVO	**Evora**	**7.39**	**150**	*e*Pn	**Pn**	**07 56 09.7**	**-0.5**
EVO				*e*Sn	**Sn**	**07 57 31.7**	**-2.4**
EVO				A	A	07 57 38.9	
	comp=Z,4.5nm,0.5s						
EBAD	**Badajoz**	**7.58**	**144**	P	**Pn**	**07 56 12.5**	**-0.2**
EBAD				⇑*i*Vmb_V		07 56 14.7	
	comp=Z,391nm,SNR=7.4						
EBAD				S	**Sn**	**07 57 36.5**	**-2.2**
PNCL	**Nicolau / Gran**	**7.61**	**154**	*e*Pn	**Pn**	**07 56 12.1**	**-1.0**
PNCL				*e*Sn	**Sn**	**07 57 33.0**	**-6.3**
PNCL				A	A	07 57 37.4	
	comp=Z,4.9nm,0.1s						
SGMF	**Saint Gilles**	**7.66**	**62**	*e*Pn	**Pn**	**07 56 16.0**	**+2.2**
SGMF				*e*Sn	**Sn**	**07 57 40.5**	**-0.1**
	comp=Z,12nm,0.2s						
PBEJ	**Beja**	**7.90**	**151**	*e*Pn	**Pn**	**07 56 17.4**	**+0.3**
PBEJ				*e*Sn	**Sn**	**07 57 42.9**	**-3.6**
PBEJ				A	A	07 57 45.4	
	comp=Z,2.8nm,0.3s						
MESJ	**Messejana**	**7.95**	**154**	*e*P	**Pn**	**07 56 17.6**	**-0.2**
MESJ				*e*S	**Sn**	**07 57 42.2**	**-5.6**
MESJ				IAML		07 57 46.0	
	comp=E,7.6nm,0.2s						
MESJ	**Messejana**	**7.95**	**154**	*e*Pn	**Pn**	**07 56 17.6**	**-0.2**
MESJ				*e*Sn	**Sn**	**07 57 41.7**	**-6.1**
MESJ				A	A	07 57 46.9	
	comp=E,3.1nm,0.2s						
DYA	**Yadsworthy**	**7.98**	**45**	*e*P	**Pn**	**07 56 19.8**	**+1.7**
DYA				IAmb	IAmb	07 56 20.9	
	comp=Z,25nm,0.3s						
DYA				IAML		07 56 21.0	
	comp=Z,30nm,0.3s						
DYA	**Yadsworthy**	**7.98**	**45**	P	**Pn**	**07 56 19.8**	**+1.7**
DYA				S	**Sn**	**07 57 47.5**	**-0.8**
PBAR	**Barrancos**	**8.07**	**147**	*e*Pn	**Pn**	**07 56 20.1**	**+0.7**
PBAR				*e*Sn	**Sn**	**07 57 48.6**	**-2.1**
PTEO	**Sao Teotonio**	**8.08**	**157**	*e*Pn	**Pn**	**07 56 19.0**	**-0.5**
PTEO				*e*Sn	**Sn**	**07 57 44.4**	**-6.4**
PTEO				A	A	07 57 50.8	
	comp=Z,8.0nm,0.4s						
HTL	**Hartland**	**8.08**	**40**	*e*P	**Pn**	**07 56 20.7**	**+1.2**
HTL				IAmb	IAmb	07 56 21.2	
	comp=Z,11nm,0.6s						
HTL				IAML		07 56 21.5	
	comp=Z,11nm,0.1s						
HTL	**Hartland**	**8.08**	**40**	P	**Pn**	**07 56 20.8**	**+1.2**
HTL				S	**Sn**	**07 57 48.0**	**-2.9**
PCVE	**Castro Verde**	**8.20**	**153**	*e*Pn	**Pn**	**07 56 21.0**	**-0.2**
EALK	**Alkurruntz**	**8.24**	**99**	P	**Pn**	**07 56 25.6**	**+3.7**
EALK				⇑*i*Vmb_V		07 56 35.5	
	comp=Z,310nm,SNR=1.3						
JVM	**Valle D.L. Mar**	**8.26**	**56**	*e*P	**Pn**	**07 56 24.5**	**+2.6**
JSA	**Saint Aubin**	**8.27**	**56**	*e*P	**Pn**	**07 56 24.7**	**+2.7**
JSA				IAML		07 56 25.6	
	comp=Z,11nm,0.1s						
JSA				IAmb	IAmb	07 56 28.5	
	comp=Z,7.2nm,0.7s						
JSA	**Saint Aubin**	**8.27**	**56**	P	**Pn**	**07 56 24.8**	**+2.7**
JSA				S	**Sn**	**07 57 55.8**	**+0.4**
PAB	**San Pablo**	**8.27**	**129**	P	**Pn**	**07 56 25.9**	**+3.6**
PAB				⇑*i*Vmb_V		07 56 26.8	
	comp=Z,160nm,SNR=4.8						
PAB				S	**Sn**	**07 57 57.8**	**+2.0**
MORF	**Marmelete**	**8.32**	**157**	*e*P	**Pn**	**07 56 22.0**	**-0.9**
MORF				*e*S	**Sn**	**07 57 49.9**	**-7.0**
MORF				IAML		07 57 53.3	
	comp=N,15nm,0.2s						
MORF	**Marmelete**	**8.32**	**157**	*e*Pn	**Pn**	**07 56 22.1**	**-0.8**
MORF				*e*Sn	**Sn**	**07 57 50.2**	**-6.7**
MORF				A	A	07 57 53.9	
	comp=N,9.0nm,0.1s						
JLP	**Les Platons**	**8.33**	**56**	*e*P	**Pn**	**07 56 25.6**	**+2.6**
ESDC	**Sonseca Araya**	**8.40**	**127**	P	**Pn**	**07 56 27.9**	**+3.9**
ESDC				⇑*i*Vmb_V		07 56 28.6	
	comp=N,99nm,SNR=2.4						
ESDC				S	**Sn**	**07 58 02.4**	**+3.5**
PFVI	**Vila Bisbo**	**8.44**	**159**	*e*Pn	**Pn**	**07 56 23.1**	**-1.4**
PFVI				*e*Sn	**Sn**	**07 57 51.4**	**-8.3**
PFVI				A	A	07 57 56.7	
	comp=N,5.4nm,0.1s						
SJPF	**Ste Jean**	**8.47**	**99**	*e*P	Pn	07 56 30.0	+5.0
SJPF				*e*Sn	**Sn**	**07 57 58.9**	**-1.7**
	comp=N,7.4nm,0.2s						
EGRO	**El Granado**	**8.47**	**151**	P	**Pn**	**07 56 25.0**	**+0.1**
EGRO				⇑*i*Vmb_V		07 56 27.0	
	comp=N,166nm,SNR=3.0						
EGRO				S	**Sn**	**07 57 58.9**	**-1.8**
EORO	**Oroz-Betelu**	**8.48**	**101**	P	Pn	07 56 30.0	+4.9
EORO				S	**Sn**	**07 58 08.0**	**+7.1**
PVAQ	**Vaqueiros**	**8.51**	**152**	*e*Pn	**Pn**	**07 56 25.4**	**-0.1**
PVAQ				*e*Sn	**Sn**	**07 57 55.5**	**-6.1**
PVAQ				A	A	07 57 58.8	
	comp=N,3.5nm,0.2s						
EMIN	**Mina Concepcio**	**8.57**	**146**	P	**Pn**	**07 56 26.9**	**+0.6**
EMIN				⇑*i*Vmb_V		07 56 29.0	
	comp=N,230nm,SNR=5.0						
EMIN				S	**Sn**	**07 58 01.1**	**-1.8**
RSBS	**Rosebush, Pemb**	**8.67**	**35**	*e*P	**Pn**	**07 56 27.4**	**-0.3**
RSBS				IAML		07 56 29.4	
	comp=Z,3.2nm,0.4s						
GRR	**Gorron**	**8.78**	**64**	*e*Pn	**Pn**	**07 56 31.8**	**+2.7**
GRR				*e*Sn	**Sn**	**07 58 09.0**	**+1.0**
	comp=Z,23nm,0.2s						
ECAB	**El Cabril**	**8.85**	**140**	P	**Pn**	**07 56 30.6**	**+0.5**
ECAB				⇑*i*Vmb_V		07 56 32.1	
	comp=Z,105nm,SNR=3.3						
ECAB				S	**Sn**	**07 58 09.2**	**-0.7**
ETOR	**Torete**	**8.87**	**115**	P	Pn	07 56 34.9	+4.4
ETOR				S	**Sn**	**07 58 14.8**	**+4.3**
MFF	**Saint Martin d**	**8.89**	**76**	*e*Pn	**Pn**	**07 56 32.9**	**+2.3**
MFF				*e*Sn	**Sn**	**07 58 09.0**	**-1.7**
	comp=Z,11nm,0.3s						
ETSF	**Etsaut**	**9.00**	**100**	*e*Pn	**Pn**	**07 56 31.2**	**-1.1**
ETSF	**Etsaut**	**9.00**	**100**	*e*P	Pn	07 56 37.0	+4.7
ETSF				*e*Sn	**Sn**	**07 58 09.7**	**-4.0**
	comp=Z,4.9nm,0.2s						
FLN	**La Foliniere**	**9.13**	**62**	*e*Pn	**Pn**	**07 56 36.4**	**+2.5**
	baz=239						
FLN				*e*Sn	**Sn**	**07 58 16.6**	**-0.1**
	comp=Z,20nm,0.3s,baz=220						
EADA	**Adamuz**	**9.18**	**136**	P	**Pn**	**07 56 36.4**	**+1.8**
EADA				⇑*i*Vmb_V		07 56 38.2	
	comp=Z,124nm,SNR=2.5						
EADA				S	**Sn**	**07 58 18.8**	**+0.8**
LDF	**La Druitiere**	**9.30**	**63**	*e*Pn	**Pn**	**07 56 39.1**	**+2.8**
LDF				*e*Sn	**Sn**	**07 58 20.7**	**-0.3**
	comp=Z,9.2nm,0.3s						
MONM	**Monmouth**	**9.43**	**40**	*e*P	**Pn**	**07 56 39.5**	**+1.5**
MONM				IAmb	IAmb	07 56 40.8	
	comp=Z,8.4nm,0.6s						
MONM				IAML		07 56 41.9	
	comp=Z,10.0nm,0.3s						
MCH1	**Michaelchurch**	**9.45**	**39**	*e*P	**Pn**	**07 56 39.6**	**+1.3**
MCH1				IAmb	IAmb	07 56 40.0	
	comp=Z,29nm,0.4s						
MCH1				IAML		07 56 40.1	
	comp=Z,26nm,0.3s						
MCH1	**Michaelchurch**	**9.45**	**39**	P	**Pn**	**07 56 39.1**	**+0.8**
MCH1				S	**Sn**	**07 58 22.2**	**-2.3**
LFF	**La Frestale**	**9.51**	**86**	*e*Sn	**Sn**	**07 58 24.5**	**-1.5**
	comp=Z,10nm,0.4s						
EPF	**Esparros**	**9.59**	**98**	*e*P	Pn	07 56 46.3	+5.9
EPF				*e*Sn	**Sn**	**07 58 25.6**	**-2.6**
	comp=Z,4.0nm,0.3s						
STRD	**Stroud**	**9.69**	**42**	*e*P	**Pn**	**07 56 43.1**	**+1.6**
STRD				IAmb	IAmb	07 56 44.1	
	comp=Z,58nm,1.4s						
STRD				IAML		07 56 47.3	
	comp=Z,21nm,0.4s						
SWN1	**Swindon**	**9.70**	**44**	*e*P	**Pn**	**07 56 45.1**	**+3.4**
SWN1				IAML		07 56 45.7	
	comp=Z,31nm,0.4s						
LLW	**Llanuwchllyn**	**9.79**	**34**	*e*P	**Pn**	**07 56 43.3**	**+0.4**
WLF1	**Llynfaes**	**9.85**	**30**	*e*P	**Pn**	**07 56 43.7**	**-0.1**
WLF1				IAmb	IAmb	07 56 44.8	
	comp=Z,10nm,0.5s						
WLF1				IAML		07 56 45.1	
	comp=Z,8.2nm,0.5s						
HLM1	**Long Mynd**	**9.87**	**37**	*e*P	**Pn**	**07 56 45.4**	**+1.4**
HLM1				IAML		07 56 47.1	
	comp=Z,3.6nm,0.2s						
FOEL	**Foel Wylfa**	**10.00**	**35**	*e*P	**Pn**	**07 56 46.0**	**+0.1**
FOEL				IAmb	IAmb	07 56 47.9	
	comp=Z,5.5nm,0.6s						
FOEL				IAML		07 56 49.5	
	comp=Z,5.5nm,0.3s						
RJF	**Les Rejaudoux**	**10.03**	**84**	*e*Pn	**Pn**	**07 56 47.8**	**+1.5**
RJF				*e*Sn	**Sn**	**07 58 38.5**	**-0.3**
	comp=Z,8.4nm,0.3s						
CAF	**Calviac**	**10.45**	**86**	*e*Pn	**Pn**	**07 56 55.5**	**+3.5**
CAF				*e*Sn	**Sn**	**07 58 46.5**	**-2.6**
	comp=Z,7.2nm,0.4s						
TCF	**Toulx Ste Croi**	**10.49**	**78**	*e*Pn	**Pn**	**07 56 55.0**	**+2.3**
TCF				*e*Sn	**Sn**	**07 58 49.1**	**-1.2**
	comp=Z,16nm,0.4s						
MTLF	**Montolieu**	**10.84**	**94**	*e*Pn	**Pn**	**07 56 58.4**	**+1.1**
MTLF				*e*Sn	**Sn**	**07 58 55.3**	**-3.3**
	comp=Z,5.2nm,0.3s						
HYF	**Humbligny**	**10.85**	**73**	*e*Sn	**Sn**	**07 58 56.6**	**-2.4**
	comp=Z,40nm,0.3s						
BGF	**Bois d'Agland**	**10.94**	**77**	*e*Pn	**Pn**	**07 57 00.6**	**+1.8**
BGF				*e*Sn	**Sn**	**07 58 59.3**	**-1.9**
	comp=Z,33nm,0.4s						
LBWR	**Ladybower, Pea**	**10.99**	**37**	*e*P	**Pn**	**07 57 00.4**	**+1.1**
LBWR				IAML		07 57 01.7	
	comp=Z,3.3nm,0.7s						
AVF	**Avril sur Loir**	**11.30**	**76**	*e*Pn	**Pn**	**07 57 05.4**	**+1.7**
AVF				*e*Sn	**Sn**	**07 59 08.3**	**-1.7**
	comp=Z,2.3nm,0.2s						
SSF	**Saint Saulge**	**11.42**	**74**	*e*Pn	**Pn**	**07 57 07.3**	**+2.0**
SSF	**Saint Saulge**	**11.42**	**74**	*e*P	Pn	07 57 11.7	+6.4
SSF				*e*Sn	**Sn**	**07 59 11.0**	**-2.0**
	comp=Z,5.1nm,0.2s						
WACR	**West Acre**	**11.63**	**44**	*e*P	**Pn**	**07 57 11.0**	**+2.9**
WACR				IAML		07 57 14.5	
	comp=Z,19nm,0.9s						
SMF	**Signal de Mont**	**11.63**	**76**	*e*Pn	**Pn**	**07 57 08.6**	**+0.4**
SMF	**Signal de Mont**	**11.63**	**76**	*e*P	Pn	07 57 14.8	+6.6
SMF				*e*Sn	**Sn**	**07 59 14.2**	**-3.9**
	comp=Z,1.6nm,0.2s						
LOR	**Lormes**	**11.68**	**73**	*e*Pn	**Pn**	**07 57 09.9**	**+1.0**
	baz=268						
LOR	**Lormes**	**11.68**	**73**	*e*P	Pn	07 57 15.6	+6.7
LOR				*e*Sn	**Sn**	**07 59 14.7**	**-4.6**
	comp=Z,5.6nm,0.2s						
LASF	**Ste Croix**	**11.84**	**89**	*e*Pn	**Pn**	**07 57 12.5**	**+1.4**
LASF	**Ste Croix**	**11.84**	**89**	*e*P	Pn	07 57 16.9	+5.8
LASF				*e*Sn	**Sn**	**07 59 20.0**	**-3.2**
	comp=Z,3.0nm,0.4s						
VIVF	**Saint-Julien-l**	**12.30**	**85**	*e*Pn	**Pn**	**07 57 18.4**	**+1.1**
VIVF				*e*Sn	**Sn**	**07 59 31.6**	**-2.8**
	comp=Z,2.2nm,0.3s						
BAIF	**Baives**	**12.45**	**60**	*e*Pn	**Pn**	**07 57 22.2**	**+2.9**
BAIF				*e*Sn	**Sn**	**07 59 36.0**	**-1.9**
	comp=Z,2.2nm,0.2s						
SFTF	**Sexfontaines**	**12.58

ATAB				S		Sg	08 13 15.4	+0.5	
ATAB				*i* AML		AML	08 13 16.0		
	comp=E,1μm,0.4s								
GZT	**Gaziantep**	**0.59**	**237**	P		Pb	08 13 21.4	+1.1	
GZT				S		Sb	08 13 29.1	+0.1	
AKCD	**Akcadag**	**0.65**	**341**	P		Pg	08 13 20.1	+0.2	
AKCD				S		Sg	08 13 28.3	+0.1	
SANL	**SANLIURFA_Merk**	**0.82**	**129**	P		Pg	08 13 22.6	-0.4	
SANL				S		Sg	08 13 33.4	-0.2	
KAHM	**Kahramanmaras,**	**0.97**	**260**	P		Pg	08 13 25.9	-0.1	
KAHM				S		Sg	08 13 38.3	-0.2	
KMRS	**Kahramanmaras**	**1.04**	**260**	PG		Pb	08 13 27.9	+0.1	
DARE	**Darende-Malaty**	**1.05**	**328**	PG		Pb	08 13 28.6	-0.1	
DARE				SG		Sb	08 13 42.6	+0.6	
ELBS	**KAHRAMANMARAS**	**1.05**	**308**	P		Pn	08 13 28.7	-0.1	
ELBS				S		Sg	08 13 41.1	-0.1	
HCB	**Kahramanmara**	**1.07**	**252**	P		Pb	08 13 28.5	+0.1	
HCB				S		Sg	08 13 42.2	+0.3	
SVRC	**Sivrice-ELAZID**	**1.12**	**52**	PN		Pn	08 13 29.6	-0.2	
SVRC				SN		Sn	08 13 46.1	+0.4	
HEKM	**Malatya_Hekimh**	**1.21**	**351**	P		Pg	08 13 30.0	-0.5	
HEKM				S		Sn	08 13 47.9	+0.1	
KUZU	**Kuzuini**	**1.27**	**225**	P		Pg	08 13 32.0	+0.3	
KUZU				S		Sg	08 13 47.8	-0.5	
KUZU				*i* AML		AML	08 13 53.0		
	comp=Z,114nm,0.2s								
KUZU				*i* AML		AML	08 13 54.0		
	comp=N,126nm,0.5s								
KUZU				*i* AML		AML	08 13 57.0		
	comp=E,151nm,0.3s								
KAMA	**Osmaniye**	**1.31**	**248**	P		Pg	08 13 32.6	+0.1	
KAMA				S		Sn	08 13 50.2	0.0	
ANDN	**Andirin**	**1.47**	**266**	P		Pn	08 13 34.1	-0.4	
ANDN				S		Sn	08 13 54.0	-0.1	
SARI	**SarD1z-Kayseri**	**1.57**	**298**	PN		Pb	08 13 36.8	-0.2	
KEMA	**Kemaliye**	**1.60**	**8**	P		Pn	08 13 36.6	+0.3	
KEMA				S		Sg	08 13 58.9	+0.1	
SAIM	**ADANA**	**1.69**	**281**	P		Pn	08 13 37.6	0.0	
SAIM				S		Sb	08 14 00.6	0.0	
SAIM				*i* AML		AML	08 14 06.0		
	comp=N,63nm,0.2s								
CUKAN	**kangal_SIVAS**	**1.73**	**341**	P		Pn	08 13 38.4	+0.3	
CUKAN				S		Sb	08 14 01.6	0.0	
KOZT	**Kozan**	**1.89**	**265**	PN		Pb	08 13 41.3	-1.0	
TAHT	**Tahtakopru-Hat**	**2.07**	**231**	PN		Pb	08 13 44.7	-0.6	

*IDC **04** 08:20:04.0±2.3,9.°92N×125.°58E,h0km,mb3.7/4, mbtmp3.7/4,Error ellipse: s-maj=230.8km s-min=25.1km az=67.0*

*MAN **04** 08:20:12.7,9.°98N×126.°02E,h16km,mb4.4, ML3.3,MS3.1*

ISC 04 08:20:09.6±1.2,10.°0N±0.°1×126.°27E±0.°10,h42km,n15, σ1=92/13,mb3.5/4,1C-4D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
SCPH	**Surigao**	**0.79**	**256**	↑*i*P	**Pn**	**08**	**20**	**24.3**	**-0.1**
SCPH				*i* S	**Sn**	**08**	**20**	**34.0**	**-1.1**
MSLP	**Maasin**	**1.40**	**277**	↓*e*P	**Pn**	**08**	**20**	**33.7**	**+1.1**
MSLP				*e*S	**Sn**	**08**	**20**	**46.7**	**-3.2**
LLP	**Lapu-Lapu**	**2.29**	**279**	↓*e*P	**Pn**	**08**	**20**	**46.1**	**+1.2**
LLP				*i* S	**Sn**	**08**	**21**	**13.9**	**+1.9**
TBP	**Tagbilaran**	**2.39**	**263**	↓*e*P	**Pn**	**08**	**20**	**47.9**	**+1.7**
TBP				*i* S	**Sn**	**08**	**21**	**14.6**	**+0.3**
RCP	**Roxas**	**3.80**	**295**	↓*e*P	**Pn**	**08**	**21**	**08.7**	**+3.0**
WRA	**Warramunga Arr**	**30.78**	**165**	P	**P**	**08**	**26**	**22.6**	**+1.3**
	0.2nm,0.6s,baz=342,slow=9.4,SNR=1.5 0.2nm,0.6s								
ASAR	**Alice Springs**	**34.26**	**168**	P	**P**	**08**	**26**	**52.8**	**+0.9**
	0.2nm,0.5s,baz=352,slow=6.8,SNR=7.0 0.2nm,0.5s								
H11S3	**WAKE ISLAND Hy**	**40.01**	**73**	T	T	09	10	18.9	
	baz=254,slow=75,SNR=11								
H11S1	**WAKE ISLAND Hy**	**40.02**	**73**	T	T	09	10	21.9	
	baz=254,slow=75,SNR=9.8								
H11S2	**WAKE ISLAND Hy**	**40.02**	**73**	T	T	09	10	21.4	
	baz=254,slow=75,SNR=15								
H11N1	**WAKE ISLAND Hy**	**40.35**	**71**	T	T	09	11	04.6	
	baz=265,slow=74,SNR=13								
H11N2	**WAKE ISLAND Hy**	**40.36**	**71**	T	T	09	11	04.4	
	baz=265,slow=74,SNR=9.3								
H11N3	**WAKE ISLAND Hy**	**40.37**	**71**	T	T	09	11	04.4	
	baz=265,slow=74,SNR=12								
MKAR	**Makanchi Array**	**52.26**	**323**	P	**P**	**08**	**29**	**14.9**	**-1.8**
	0.7nm,0.7s,baz=112,slow=9.3,SNR=5.0 0.7nm,0.7s								
FINES	**FINESS Array B**	**86.15**	**332**	P	**P**	**08**	**32**	**44.7**	**-1.4**
	5.1nm,1.1s,baz=90,slow=5.7,SNR=4.6 5.1nm,1.1s								

*IDC **04** 08:53:36.7±0.6,9.°99N×125.°61E,h0km,mb4.2/18, mbtmp4.2/19,ML4.5/1,MS3.0/9,Error ellipse: s-maj=33.0km s-min=14.2km az=71.0*

*NEIC **04** 08:53:38.9±1.5,9.°99N±0.°05×125.°6E±0.°2,h10km±1km, mb4.4/22,Error ellipse: s-maj=28.4km s-min=5.0km az=75.0*

*MAN **04** 08:53:44.3,9.°99N×126.°06E,h21km,mb4.8,ML3.7,MS3.6*

ISC 04 08:53:43.0±0.9,10.°04N±0.°04×126.°16E±0.°05,h45km±8km, n78,σ2=16/79,mb4.2/28,MS3.0/7,6C-13D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
GLSP	**General Luna,**	**0.25**	**188**	↓*e*P	**Pn**	**08**	**53**	**50.8**	**-0.5**
GLSP				*e*S	**Sn**	**08**	**53**	**55.7**	**-1.4**
SCPH	**Surigao**	**0.71**	**249**	↓*i*P	**Pn**	**08**	**53**	**56.3**	**-0.4**
SCPH				*i* S	**Sn**	**08**	**54**	**06.0**	**-0.6**
BUTP	**Butuan**	**1.19**	**207**	↑*e*P	**Pn**	**08**	**54**	**04.1**	**+0.9**
BUTP				*e*S	**Sn**	**08**	**54**	**23.9**	**+5.7**
MSLP	**Maasin**	**1.29**	**274**	↓*e*P	**Pn**	**08**	**54**	**06.0**	**+1.4**
MSLP				*e*S	**Sn**	**08**	**54**	**24.2**	**+3.6**
OCLP	**Ormoc**	**1.83**	**304**	↓*e*P	**Pn**	**08**	**54**	**14.8**	**+2.8**
BIPH	**Bislig**	**1.85**	**174**	↓*i*P	**Pn**	**08**	**54**	**12.7**	**+0.4**
BIPH				*i* S	**Sn**	**08**	**54**	**35.2**	**+0.7**
LLP	**Lapu-Lapu**	**2.18**	**278**	↑*i*P	**Pn**	**08**	**54**	**18.9**	**+2.1**
LLP				*i* S	**Sn**	**08**	**54**	**44.8**	**+2.2**
TBP	**Tagbilaran**	**2.29**	**262**	↓*e*P	**Pn**	**08**	**54**	**19.9**	**+1.6**
TBP				*i* S	**Sn**	**08**	**54**	**46.8**	**+1.4**
BUKP	**Musuan**	**2.40**	**207**	↑*e*P	**Pn**	**08**	**54**	**22.8**	**+2.9**
BUKP				*e*S	**Sn**	**08**	**54**	**52.7**	**+4.5**
SNPH	**Sibulan**	**2.96**	**257**	↓*e*P	**Pn**	**08**	**54**	**30.0**	**+2.4**
SNPH				*e*S	**Sn**	**08**	**55**	**03.3**	**+1.3**
DAV	**Davao City (W)**	**3.00**	**191**	Pn	**Pn**	**08**	**54**	**25.5**	**-2.6**
	64nm,0.3s,baz=17,slow=4.9,SNR=2.2								
DAV				Sn	Sn	08	54	50.8	-12
	71nm,0.3s,baz=208,slow=17,SNR=4.0 130nm,0.4s								
DAV	**Davao City (W)**	**3.00**	**191**	Pn	**Pn**	**08**	**54**	**24.5**	**-3.7**
DCPH	**Dipolog City**	**3.13**	**243**	↓*e*P	**Pn**	**08**	**54**	**31.2**	**+1.4**
DCPH				*e*S	**Sn**	**08**	**55**	**05.6**	**-0.3**
KCP	**Kidapawan**	**3.19**	**199**	↓*i*P	**Pn**	**08**	**54**	**33.9**	**+3.2**
KCP				*i* S	**Sn**	**08**	**55**	**10.9**	**+3.3**
CNOP	**Candoni, Negro**	**3.48**	**267**	↓*e*P	**Pn**	**08**	**54**	**36.8**	**+2.2**
CNOP				*e*S	**Sn**	**08**	**55**	**14.4**	**-0.1**
PAGZ	**Pagadian**	**3.50**	**232**	↓*e*P	**Pn**	**08**	**54**	**36.7**	**+1.7**
PAGZ				*e*S	Sn	08	54	40.2	-35
GUIM	**Jordan**	**3.56**	**280**	↑*e*P	**Pn**	**08**	**54**	**38.0**	**+2.2**
GUIM				*e*S	**Sn**	**08**	**55**	**17.6**	**+0.9**
RCP	**Roxas**	**3.68**	**295**	↑*e*P	**Pn**	**08**	**54**	**40.0**	**+2.5**
DDMP	**Don Marcelino,**	**3.93**	**187**	↓*e*P	**Pn**	**08**	**54**	**44.0**	**+3.1**
DDMP				*e*S	**Sn**	**08**	**55**	**29.3**	**+3.5**
PVCP	**Virac**	**4.05**	**331**	↓*e*P	**Pn**	**08**	**54**	**46.0**	**+3.5**
PVCP				*e*S	Sn	08	55	13.7	-15
ENPP	**El Nido**	**6.72**	**281**	↑*e*P	**Pn**	**08**	**55**	**21.7**	**+2.5**
SIJI	**Sorong**	**11.97**	**155**	LR	LR	09	03	04.2	
	comp=Z,27nm,18.2s,baz=355,slow=47								
FAKI	**Fak Fak**	**14.23**	**154**	Pn	**Pn**	**08**	**57**	**03.5**	**+1.6**
SAUI	**Saumlaki**	**18.62**	**164**	P	**P**	**08**	**57**	**56.5**	**-0.3**
GUMO	**Guam**	**18.65**	**77**	LR	LR	09	05	40.3	
	comp=Z,28nm,19.0s,baz=145,slow=38								
MTN	**Manton Dam**	**23.26**	**168**	P	**P**	**08**	**58**	**47.5**	**+0.8**
KNRA	**Kununurra**	**25.68**	**174**	P	**P**	**08**	**59**	**09.2**	**+0.3**
KNRA				IAmb	IAmb	08	59	12.4	
	comp=Z,6.8nm,0.9s								
KSRS	**Korea Array**	**27.34**	**3**	LR	LR	09	12	34.5	
	comp=Z,21nm,18.3s,baz=165,slow=42								
CMAR	**Chiang Mai Arr**	**27.65**	**291**	P	**P**	**08**	**59**	**22.3**	**-4.4**
	comp=Z,1.7nm,0.3s,baz=95,slow=7.4,SNR=1.4								
CMAR				LR	LR	09	09	13.9	
	comp=Z,40nm,19.3s,baz=195,slow=34 comp=Z,1.7nm,0.3s								

MJAR	**Matsushiro Arr**	**28.56**	**21**	LR	LR	09	09	23.9	
	comp=Z,20nm,20.9s,baz=212,slow=33								
WRAB	**Tennant Creek**	**30.85**	**165**	P	**P**	**08**	**59**	**55.1**	**0.0**
WRAB				IAmb	IAmb	09	00	16.8	
	comp=Z,9.8nm,1.5s								
WRA	**Warramunga Arr**	**30.86**	**165**	P	**P**	**08**	**59**	**56.5**	**+1.4**
	comp=Z,0.4nm,0.4s,baz=343,slow=9.2,SNR=5.5 comp=Z,0.4nm,0.4s								
WRA	**Warramunga Arr**	**30.86**	**165**	IAmb	IAmb	09	00	05.6	
	comp=Z,0.2nm,1.2s								
AS31	**Alice Springs**	**34.34**	**167**	P	**P**	**09**	**00**	**26.0**	**+0.4**
ASAR	**Alice Springs**	**34.34**	**167**	P	**P**	**09**	**00**	**25.8**	**+0.2**
	comp=Z,0.8nm,0.4s,baz=351,slow=7.0,SNR=19								
ASAR				LR	LR	09	16	32.7	
	comp=Z,38nm,20.6s,baz=352,slow=40 comp=Z,0.8nm,0.4s								
ASAJ	**Asahikawa**	**36.82**	**20**	LR	LR	09	18	18.1	
	comp=Z,12nm,18.1s,baz=234,slow=40								
H11N1	**WAKE ISLAND Hy**	**40.43**	**71**	T	T	09	44	36.4	
	baz=265,slow=74,SNR=83								
H11N2	**WAKE ISLAND Hy**	**40.44**	**71**	T	T	09	44	39.0	
	baz=265,slow=74,SNR=54								
H11N3	**WAKE ISLAND Hy**	**40.45**	**71**	T	T	09	44	37.8	
	baz=265,slow=74,SNR=101								
SONM	**Songino Array**	**41.20**	**340**	P	**P**	**09**	**01**	**20.7**	**-2.7**
	comp=Z,0.6nm,0.3s,baz=140,slow=9.1,SNR=2.2 comp=Z,0.6nm,0.3s								
BBOO	**Buckleboo**	**43.64**	**168**	P	**P**	**09**	**01**	**43.5**	**+0.3**
BBOO				IAmb	IAmb	09	02	06.5	
	comp=Z,12nm,1.2s								
STKA	**Stephens Creek**	**44.22**	**161**	P	**P**	**09**	**01**	**48.4**	**+0.5**
	comp=Z,0.7nm,0.3s,baz=353,slow=8.0,SNR=5.9 comp=Z,0.7nm,0.3s								
PALK	**Pallekele**	**45.00**	**270**	LR	LR	09	21	30.3	
	comp=Z,39nm,18.6s,baz=218,slow=38								
PETK	**Petropavlovsk-**	**49.89**	**24**	P	**P**	**09**	**02**	**34.8**	**+2.9**
	comp=Z,1.5nm,0.8s,baz=159,slow=1.7,SNR=4.1 comp=Z,1.5nm,0.8s								
PETK	**Petropavlovsk-**	**49.89**	**24**	P	**P**	**09**	**02**	**35.0**	**+3.1**
MK31	**Makanchi Array**	**52.15**	**323**	P	**P**	**09**	**02**	**47.9**	**-1.1**
MK31				IAmb	IAmb	09	02	49.2	
	comp=Z,2.2nm,0.8s								
MKAR	**Makanchi Array**	**52.15**	**323**	P	**P**	**09**	**02**	**48.4**	**-0.6**
	comp=Z,3.4nm,0.7s,baz=123,slow=8.3,SNR=29 comp=Z,3.4nm,0.7s								
MKAR	**Makanchi Array**	**52.15**	**323**	P	**P**	**09**	**02**	**47.7**	**-1.2**
MAKZ	**Makanchi**	**52.34**	**323**	P	**P**	**09**	**02**	**48.9**	**-1.5**
MAKZ				IAmb	IAmb	09	02	50.2	
	comp=Z,1.7nm,0.6s								
ZALV	**Zalesovo Beam**	**54.78**	**331**	P	**P**	**09**	**03**	**06.8**	**-1.3**
	comp=Z,2.0nm,0.7s,baz=116,slow=6.8,SNR=6.6 comp=Z,2.0nm,0.7s								
AAK	**Ala-Archa**	**55.42**	**315**	LR	LR	09	28	19.9	
	comp=Z,54nm,20.3s,baz=128,slow=38								
KURK	**Kurchatov**	**56.20**	**326**	P	**P**	**09**	**03**	**17.0**	**-1.4**
KURK				IAmb	IAmb	09	03	18.4	
	comp=Z,4.8nm,0.8s								
KURBB	**Kurchatov Arra**	**56.20**	**326**	P	**P**	**09**	**03**	**16.9**	**-1.5**
	comp=Z,2.5nm,0.6s,baz=126,slow=6.8,SNR=33 comp=Z,2.5nm,0.6s								
KKAR	**Karatay Array**	**58.34**	**315**	P	**P**	**09**	**03**	**32.2**	**-1.5**
TIXI	**Tiksi**	**61.59**	**1**	P	**P**	**09**	**03**	**56.1**	**+0.7**
TIXI				IAmb	IAmb	09	03	56.8	
	comp=Z,4.0nm,0.9s								
BRVK	**Borovoye**	**61.87**	**325**	P	**P**	**09**	**03**	**56.0**	**-1.6**
BRVK				IAmb	IAmb	09	03	58.0	
	comp=Z,2.8nm,0.9s								
ABKAR	**Akbulak array**	**66.98**	**319**	P	**P**	**09**	**04**	**28.9**	**-2.2**
BKZ	**Black Stump Fm**	**67.68**	**140**	P	**P**	**09**	**04**	**37.4**	**+1.7**
ARU	**Arti**	**69.36**	**327**	P	**P**	**09**	**04**	**44.3**	**-1.6**
	comp=Z,3.6nm,0.5s,baz=124,slow=6.0,SNR=7.8 comp=Z,3.6nm,0.5s								
ARU	**Arti**	**69.36**	**327**	IAmb	IAmb	09	04	45.0	
	comp=Z,4.0nm,0.6s								
SOCY	**Sonotra**	**70.66**	**279**	P	**P**	**09**	**04**	**52.7**	**-2.0**
O18K	**Koktuh Hills**	**75.67**	**31**	P	**P**	**09**	**05**	**25.5**	**+2.1**
IMAR	**Indian Mountai**	**76.86**	**24**	P	**P**	**09**	**05**	**32.0**	**+2.0**
RSO	**Redoubt South**	**76.94**	**30**	P	**P**	**09**	**05**	**34.3**	**+3.5**
BPAW	**Bear Paw Mtn.**	**77.91**	**26**	P	**P**	**09**	**05**	**37.4**	**+1.5**
BPAW				IAmb	IAmb	09	05	55.5	
	comp=Z,2.4nm,1.0s								
TOLK	**Toolik Lake Re**	**78.63**	**22**	P	**P**	**09**	**05**	**42.0**	**+2.1**
TOLK				IAmb	IAmb	09	05	53.1	
	comp=Z,2.0nm,0.9s								
ILAR	**Eielson Array**	**79.69**	**26**	P	**P**	**09**	**05**	**48.0**	**+2.3**
	comp=Z,0.4nm,0.7s,baz=234,slow=5.2,SNR=5.5 comp=Z,0.4nm,0.7s								
BMAR	**Burnt Mountain**	**80.52**	**23**	P	**P**	**09**	**05**	**52.5**	**+2.3**
SPITS	**Spitsbergen Ar**	**84.22**	**349**	P	**P**	**09**	**06**	**09.1**	**-0.2**
	comp=Z,14nm,1.1s,baz=96,slow=7.6,SNR=5.8 comp=Z,14nm,1.1s								
ARCES	**ARCESS Array B**	**84.37**	**340**	P	**P**	**09**	**06**	**09.7**	**-0.5**
	comp=Z,4.2nm,0.9s,baz=85,slow=5.7,SNR=4.9 comp=Z,4.2nm,0.9s								
BRTR	**Kein Array B**	**85.60**	**309**	P	**P**	**09**	**06**	**15.2**	**-2.0**
	comp=Z,1.0nm,0.8s,baz=93,slow=4.3,SNR=5.2 comp=Z,1.0nm,0.8s								
FIA1	**FINESS Array S**	**86.04**	**332**	P	**P**	**09**	**06**	**17.7**	**-0.9**
FINES	**FINESS Array B**	**86.05**	**332**	P	**P**	**09**	**06**	**17.9**	**-0.8**
	comp=Z,2.1nm,0.6s,baz=70,slow=4.6,SNR=20 comp=Z,2.1nm,0.6s								
AKASG	**Malin Array Be**	**86.68**	**321**	P	**P**	**09**	**06**	**20.6**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=53,slow=4.3,SNR=6.7 comp=Z,0.2nm,0.3s								
AKASG	**Malin Array Be**	**86.68**	**321**	IAmb	IAmb	09	06	21.2	
	comp=Z,1.4nm,0.8s								
YKA	**Yellowknife Ar**	**94.01**	**24**	P	**P**	**09**	**06**	**57.2**	**+1.2**
	comp=Z,0.4nm,0.7s,baz=302,slow=4.7,SNR=3.4 comp=Z,0.4nm,0.7s								
GERES	**GERESS Array B**	**96.81**	**322**	P	**P**	**09**	**07**	**07.9**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=54,slow=6.8,SNR=3.6 comp=Z,0.3nm,0.3s								
TORD	**Torodi Ar. Bea**	**120.25**	**292**	PKP	**PKPdf**	**09**	**12**	**28.2**	**-1.9**
	comp=Z,0.4nm,0.9s,baz=333,slow=1.6,SNR=1.8								

IDC 04 09:00:23.4±2.3,11.°41S×115.°90E,h0km,mb3.8/5, mbtmp3.7/6,ML3.2/1,Error ellipse: s-maj=155.7km s-min=20.0km az=49.0,South of Bali

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
WRA	**Warramunga Arr**	**19.66**	**118**	P	P	09	04	53.1	-0.9
	0.1nm,0.3s,baz=297,slow=12,SNR=5.2								
WRA				S	S	09	08	17.9	-19
	0.2nm,0.6s,baz=251,slow=26,SNR=5.6 0.4nm,0.7s								
ASAR	**Alice Springs**	**21.02**	**128**	P	P	09	05	08.5	-0.4
	0.9nm,0.6s,baz=300,slow=10.0,SNR=15 0.9nm,0.6s								
STKA	**Stephens Creek**	**31.24**	**135**	P	P	09	06	45.9	+1.0
	0.7nm,0.4s,baz=323,slow=15,SNR=3.6 0.7nm,0.4s								
MKAR	**Makanchi Array**	**65.28**	**335**	P	P	09	11	07.3	+0.3
	1.2nm,0.4s,baz=146,slow=7.3,SNR=22 1.2nm,0.4s								
KURBB	**Kurchatov Arra**	**69.83**	**336**	P	P	09	11	35.7	0.0
	0.4nm,0.6s,baz=151,slow=5.4,SNR=4.4 0.4nm,0.6s								
ZALV	**Zalesovo Beam**	**70.25**	**341**	P	P	09	11	37.6	-0.6
	0.4nm,0.4s,baz=156,slow=7.6,SNR=1.8 0.4nm,0.4s								

MAN 04 09:07:33.8,10.°12N×124.°25E,h5km,mb3.8,ML2.5,MS2.0, 2C-2D,Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
LLP	**Lapu-Lapu**	**0.34**	**305**	↓*i*P	Pg	09	07	40.8	+1.2
LLP				*i* S		09	07	46.0	
TBP	**Tagbilaran**	**0.57**	**222**	↓*i*P	Pg	09	07	45.0	+0.8
TBP				*i* S		09	07	53.4	
MSLP	**Maasin**	**0.60**	**89**	↑*e*P	Pn	09	07	46.6	+0.9
MSLP				*e*S		09	08	36.2	
OCLP	**Ormoc**	**0.99**	**211**	↑*e*P	Pg	09	07	46.6	+5.0

*IDC **04** 09:18:35.0±0.5,15.°53S×173.°12W,h0km,mb5.0/19, mbtmp5.0/20,ML5.4/1,MS4.4/63,Error ellipse: s-maj=21.0km s-min=12.2km az=126.0*

*MOS **04** 09:18:39.5±1.6,15.°55S×173.°17W,h33km,mb5.3/35, MS4.6/4,Error ellipse: s-maj=10.2km s-min=7.7km az=68.5*

*NEIC **04** 09:18:39.1±1.6,15.°55S±0.°07×173.°09W±0.°10,h25km±3km, mb5.4/417,Ms_20 4.9/189,Error ellipse: s-maj=14.0km s-min=9.7km az=100.0*

*BJI **04** 09:18:41.0±0.0,15.°60S×173.°10W,h50km,mb5.0/28, mB5.3/23,Ms4.9/16,Ms7 4.6/17*

*NOU **04** 09:18:42.5,15.°37S×172.°62W,h95km,mb5.3/61,Samoa Islands Region*

*GCMT **04** 09:18:46.1±0.1,15.°58S±0.°01×172.°70W±0.°01,h40km±1km, MW5.3/120,Moment Tensor Solution. s106,c163; s120,c205; Duration: 1!1 Moment tensor: Scale 10^17 Nm; Mrr=0.23±.02; Mθθ=0.43±.02; Mϕϕ=-0.20±.01; Mrθ=-0.42±.02; Mrϕ=-0.17±.01; Mθϕ=1.18±.04; Best double couple: Mo=1.30300×10^17 NP1:ϕ=257.00000°,δ16.00000°, λ=-168.00000°. NP2:ϕ=156.00000°,δ87.00000°, λ=-74.00000°. Principal axes: T 1.1910, Plg40.0000°, Azm231.0000°; N 0.2230, Plg16.0000°, Azm335.0000°; P -1.4150, Plg46.0000°, Azm82.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 09:18:39.0±0.2,15.°66S±0.°04×173.°07W±0.°05,h29km, n1052,σ1=27/785,mb5.4/244,MS4.8/165,121C-242D, Fault plane solution: NP1:ϕ=271.59204°,δ21.47991°, λ=-160.74428°. NP2:ϕ=163.58449°,δ83.06410°, λ=-69.62042°. Principal axes: T Plg34.9321°, Azm236.1055°; N Plg20.2239°, Azm341.0159°; P Plg48.0206°, Azm95.1860°; **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
AFI	**Afiamalu**	**2.14**	**36**	Pn	**Pn**	**09**	**19**	**10.2**	**-2.7**
	1μm,0.3s,baz=202,slow=2.6,SNR=2463								
AFI				LR	LR	09	19	26.2	
	comp=Z,2μm,19.2s,baz=286,slow=25								
AFI				Sn	**Sn**	**09**	**19**	**31.2**	**-7.3**
	4μm,0.3s,baz=243,slow=23,SNR=25 6μm,0.5s								
AFI	**Afiamalu**	**2.14**	**36**	P	**Pn**	**09**	**19**	**10.2**	**-2.7**
NIUE	**Niue**	**4.53**	**139**	P	**Pn**	**09**	**19**	**44.9**	**-0.7**
	baz=4.6,SNR=349								
NIUE	**Niue**	**4.53**	**139**	Pn	**Pn**	**09**	**19**	**45.0**	**-0.7**
NIUE	**Niue**	**4.53**	**139**	P	**Pn**	**09**	**19**	**45.3**	**-0.4**
LKBA	**Tubou, Lakemba**	**6.07**	**244**	P	Pb	09	20	15.6	-8.3
TAVE	**Taveuni**	**6.65**	**260**	P	Pb	09	20	24.8	-9.1
DGTI	**Dogotuki**	**6.95**	**264**	P	Pn	09	20	28.5	+10
MSVF	**Nonsavu**	**8.76**	**255**	Pn	Pn	09	20	54.0	+10
	4.1nm,0.3s,baz=96,slow=12,SNR=55								
MSVF	**Nonsavu**	**8.76**	**255**	P	Pn	09	20	53.8	+10
KNTN	**Kanton**	**12.87**	**6**	P	**Pn**	**09**	**21**	**37.3**	**-2.8**
RAR	**Rarotonga**	**13.77**	**116**	Pn	**Pn**	**09**	**21**	**50.0**	**-2.3**
	2.5nm,0.3s,baz=271,slow=9.6,SNR=20								
RAR				LR	LR	09	25	51.7	
	comp=Z,2μm,18.8s,baz=294,slow=32								
RAR	**Rarotonga**	**13.77**	**116**	Pn	**Pn**	**09**	**21**	**50.2**	**-2.1**
RAR	**Rarotonga**	**13.77**	**116**	P	**Pn**	**09**	**21**	**50.2**	**-2.1**
RAR	**Rarotonga**	**13.77**	**116**	P	**Pn**	**09**	**21**	**50.0**	**-2.3**
RAO	**Raoul Island**	**14.25**	**197**	Sn	**Sn**	**09**	**24**	**28.4**	**-7.5**
	52nm,0.3s,baz=98,slow=21,SNR=2.3								
MARNC	**Mare, Loyalty**	**18.82**	**249**	P	**P**	**09**	**22**	**56.6**	**+0.1**
MARNC	**Mare, Loyalty**	**18.82**	**249**	P	**Pn**	**09**	**22**	**57.8**	**+0.6**
PINNC	**Pines Island,**	**19.65**	**246**	P	**P**	**09**	**23**	**06.1**	**+0.5**
YATNC	**Mamie plateau,**	**19.99**	**248**	P	**Pn**	**09**	**23**	**12.6**	**+1.4**
OUENC	**Ouen Island, N**	**20.13**	**247**	P	Pn	09	23	12.3	-0.5
DZM	**Mont Dzumac**	**20.40**	**249**	P	**P**	**09**	**23**	**14.6**	**+0.8**
	28nm,0.8s,baz=75,slow=16,SNR=16 28nm,0.8s								
DZM	**Mont Dzumac**	**20.40**	**249**	*e*P	Pn	09	23	20.9	+4.9
	756nm,1.1s								
DZM			

comp=Z,88nm,0.7s
SNZO South Karori 27.67 200 P P 09 24 24.7 +0.4
BHW Baring Head 27.70 200 P P 09 24 25.0 +0.4
QRZ Quartz Range 28.02 204 P P 09 24 29.2 +1.7
TUWZ Tuamarina 28.03 201 P P 09 24 27.2 -0.4
NNZ Nelson 28.04 202 IAmb IAmb 09 24 32.4
comp=Z,76nm,0.7s
KHZ Kahutara 29.04 201 IAmb IAmb 09 24 45.6
comp=Z,62nm,0.8s
KHZ Kahutara 29.04 201 P P 09 24 37.6 +1.0
MQZ McQueen's Vall 30.49 201 IAmb IAmb 09 24 56.8
comp=Z,159nm,1.8s
RPZ Rata Peaks 31.06 203 P P 09 24 54.9 +0.4
comp=Z,38nm,0.5s,baz=300,slow=1.1,SNR=30
RPZ LR LR 09 37 20.4
comp=Z,861nm,21.3s,baz=28,slow=36
comp=Z,38nm,0.5s
RPZ Rata Peaks 31.06 203 IAmb IAmb 09 24 59.5
comp=Z,44nm,0.7s
RPZ Rata Peaks 31.06 203 P P 09 24 54.4 -0.1
LBZ Lake Benmore 31.96 203 IAmb IAmb 09 25 20.8
comp=Z,110nm,1.6s
ODZ Otahua Downs 32.36 202 P P 09 25 05.8 0.0
WKZ Wanaka 32.78 204 IAmb IAmb 09 25 17.6
comp=Z,115nm,1.4s
TAOE Nuku Hiva Isla 32.84 82 eLR LR 09 32 47.4
comp=Z,4µm,29.0s
TAOE Nuku Hiva Isla 32.84 82 eT T 09 59 38.0
comp=Z,105nm,0.2s
EIDS Eidsvold 34.84 248 P P 09 25 26.6 -1.1
baz=35,SNR=6.3
EIDS Eidsvold 34.84 248 P P 09 25 26.9 -0.9
EIDS IAmb IAmb 09 26 03.0
comp=Z,132nm,1.9s
EIDS Eidsvold 34.84 248 P P 09 25 26.8 -0.9
ARMA Armidale 35.48 239 P P 09 25 33.3 0.0
baz=36,SNR=12
ARMA Armidale 35.48 239 P P 09 25 33.3 0.0
ARMA IAmb IAmb 09 26 09.6
comp=Z,94nm,1.6s
ARMA Armidale 35.48 239 P P 09 25 32.9 -0.4
KRVT Keravat (AS076 36.11 284 LR LR 09 39 19.3
comp=Z,405nm,19.8s,baz=260,slow=34
RMQ Roma 37.08 247 P P 09 25 46.7 -0.3
baz=37,SNR=17
RMQ Roma 37.08 247 P P 09 25 46.5 -0.5
CNB Canberra Magne 38.85 233 P P 09 26 02.0 +0.2
baz=39,SNR=13
CNB Canberra Magne 38.85 233 P P 09 26 02.1 +0.3
CTA Charters Tower 38.90 257 LR LR 09 40 00.3
comp=Z,975nm,21.4s,baz=83,slow=33
CTA Charters Tower 38.90 257 P P 09 26 00.9 -1.4
CTAO Charters Tower 38.90 257 P P 09 26 01.1 -1.2
CTAO Charters Tower 38.90 257 P P 09 26 01.1 -1.2
CTAO pmax pmax
comp=Z,67nm,2.0s
CTAO Charters Tower 38.90 257 P P 09 26 00.9 -1.4
CAN Canberra 39.13 233 P P 09 26 04.0 -0.1
CAN IAmb IAmb 09 26 17.3
comp=Z,105nm,1.5s
CAN Canberra 39.13 233 P P 09 26 04.0 -0.1
CAN pmax pmax
comp=Z,105nm,1.5s
CAN Canberra 39.13 233 P P 09 26 05.5 +1.4
PMG Port Moresby 39.27 274 LR LR 09 40 43.3
comp=Z,427nm,20.0s,baz=102,slow=34
PMG Port Moresby 39.27 274 P P 09 26 04.8 -0.6
PMG Port Moresby 39.27 274 ceP P 09 26 06.1 +0.6
PMG pmax pmax
comp=Z,35nm,1.4s
H11S2 WAKE ISLAND Hy 39.35 329 T T 10 07 33.4
baz=147,slow=74,SNR=11
H11S3 WAKE ISLAND Hy 39.36 329 T T 10 07 31.0
baz=62,slow=74,SNR=11
HPAH Hawaii Prepara 39.36 26 P P 09 26 07.4 +1.3
HPAH IAmb IAmb 09 26 08.1
comp=Z,108nm,1.0s
H11S1 WAKE ISLAND Hy 39.37 329 T T 10 07 44.6
SNR=13
MHA Mahukona 39.42 26 P P 09 26 08.8 +2.3
MHA Mahukona 39.42 26 P P 09 26 08.8 +2.3
KIP Kipapa 39.70 22 P P 09 26 10.3 +1.5
KIP Kipapa 39.70 22 ceP P 09 26 10.0 +1.1
KIP pmax pmax
comp=Z,243nm,1.7s
HLK Haleakala 39.78 25 P P 09 26 11.3 +1.4
H11N3 WAKE ISLAND Hy 40.29 330 T T 10 08 57.9
baz=149,slow=76,SNR=99
H11N1 WAKE ISLAND Hy 40.30 330 T T 10 08 58.2
baz=149,slow=76,SNR=104
H11N2 WAKE ISLAND Hy 40.31 330 T T 10 08 55.0
baz=149,slow=76,SNR=17
CMSA Cobar Meteorol 40.70 240 P P 09 26 16.6 -0.6
baz=41,SNR=35
CMSA Cobar Meteorol 40.70 240 P P 09 26 16.6 -0.6
MTSU Mount Surprise 40.78 260 P P 09 26 17.3 -0.7
baz=41,SNR=30
QLP Quilpie 41.11 247 P P 09 26 19.8 -0.8
baz=41,SNR=3.5
QLP Quilpie 41.11 247 P P 09 26 21.5 +0.9
COEN Coen 42.28 266 P P 09 26 30.9 +0.5
baz=42,SNR=27
COEN Coen 42.28 266 P P 09 26 31.6 +1.2
COEN Coen 42.28 266 P P 09 26 30.9 +0.5
TOO Toolangi 42.55 231 P P 09 26 32.0 -0.3
baz=43,SNR=13
TOO Toolangi 42.55 231 P P 09 26 32.8 +0.5
TOO IAmb IAmb 09 26 33.3
comp=Z,94nm,1.5s
TOO Toolangi 42.55 231 P P 09 26 32.8 +0.5
TOO pmax pmax
comp=Z,94nm,1.5s
TOO Toolangi 42.55 231 P P 09 26 32.6 +0.3
TAU Tasmania Unive 43.34 223 P P 09 26 38.9 +0.3
TAU Tasmania Unive 43.34 223 P P 09 26 38.9 +0.3
TAU pmax pmax
comp=Z,84nm,1.7s
TAU Tasmania Unive 43.34 223 P P 09 26 38.7 +0.1
BRAT Ballarat 43.72 232 P P 09 26 41.9 +0.3
STKA Stephens Creek 44.18 240 P P 09 26 45.3 -0.2
comp=Z,38nm,0.6s,baz=91,slow=9.7,SNR=176
STKA LR LR 09 43 02.3
comp=Z,486nm,21.0s,baz=67,slow=33
comp=Z,38nm,0.6s
STKA Stephens Creek 44.18 240 P P 09 26 45.5 -0.1
baz=44,SNR=124
STKA Stephens Creek 44.18 240 P P 09 26 45.2 -0.3
STKA Stephens Creek 44.18 240 P P 09 26 45.2 -0.3
STKA pmax pmax
comp=Z,9.0nm,0.7s
STKA Stephens Creek 44.18 240 P P 09 26 45.4 -0.2
INKA Innaminka 44.33 246 P P 09 26 46.7 0.0
ARPS Mount Arapiles 45.09 233 P P 09 26 52.1 -0.6
baz=45,SNR=12
ARPS Mount Arapiles 45.09 233 P P 09 26 51.9 -0.8
QIS Mount Isa 45.12 256 P P 09 26 52.7 -0.5
baz=45,SNR=4.3
QIS Mount Isa 45.12 256 P P 09 26 52.8 -0.5
HTT Hallett 46.68 239 P P 09 27 05.1 -0.3
baz=47,SNR=35
HTT Hallett 46.68 239 P P 09 27 05.0 -0.3
LCRK Leigh Creek 46.83 243 P P 09 27 06.0 -0.5
NAPP Napperby 47.28 239 P P 09 27 10.2 +0.3
OOD Oodnadatta 48.80 247 P P 09 27 21.8 0.0
BBOO Buckleboo 48.96 240 P P 09 27 22.6 -0.4
baz=49,SNR=37
BBOO Buckleboo 48.96 240 P P 09 27 22.5 -0.5
BBOO Buckleboo 48.96 240 P P 09 27 22.3 -0.7
WR0 Warramunga Arr 49.90 257 P P 09 27 29.7 -0.7
WR0 IAmb IAmb 09 27 30.7
comp=Z,76nm,1.6s
WB0 Warramunga Arr 50.06 257 P P 09 27 30.4 -1.2
WB0 IAmb IAmb 09 27 31.6
comp=Z,90nm,1.6s
WB2 Warramunga Arr 50.08 257 P P 09 27 30.0 -1.8
WB2 IAmb IAmb 09 27 32.8
comp=Z,108nm,1.9s
WRAB Tennant Creek 50.09 257 P P 09 27 30.1 -1.7
WRAB Tennant Creek 50.09 257 deP P 09 27 30.9 -0.8
WRAB pmax pmax
comp=Z,24nm,1.5s
WRAB Tennant Creek 50.09 257 P P 09 27 30.7 -1.0
WRA Warramunga Arr 50.09 257 P P 09 27 30.4 -1.4
comp=Z,6.8nm,0.6s,baz=93,slow=6.9,SNR=145
WRA LR LR 09 47 52.8
comp=Z,690nm,18.8s,baz=50,slow=35
comp=Z,6.8nm,0.6s
WRA Warramunga Arr 50.09 257 P P 09 27 30.4 -1.4
WRA Warramunga Arr 50.09 257 P P 09 27 30.4 -1.4
WRA pmax pmax
comp=Z,5.0nm,1.5s
AS31 Alice Springs 50.33 252 P P 09 27 32.6 -1.0
AS31 IAmb IAmb 09 27 34.0
comp=Z,24nm,0.6s
ASAR Alice Springs 50.33 252 P P 09 27 32.8 -0.9
comp=Z,81nm,0.6s,baz=86,slow=7.9,SNR=1266
ASAR S S 09 34 40.1 -4.9
comp=Z,2.6nm,1.1s,baz=86,slow=15,SNR=6.5
ASAR LR LR 09 47 21.9
comp=Z,2µm,21.3s,baz=95,slow=34
comp=Z,81nm,0.6s
ASAR Alice Springs 50.33 252 P P 09 27 33.1 -0.5
MULG Mulgathing 50.39 244 P P 09 27 32.9 -1.0
GUMO Guam 50.74 303 LR LR 09 45 46.9
comp=Z,130nm,21.9s,baz=136,slow=32
KDU Kakadu 52.77 266 P P 09 27 51.6 -0.3
baz=53,SNR=12
MTN Manton Dam 54.03 265 P P 09 28 00.5 -0.6
baz=54,SNR=8.1
MTN Manton Dam 54.03 265 P P 09 28 00.5 -0.6
WRKA Warakurna 55.41 250 P P 09 28 10.5 -0.7
baz=56,SNR=128
WRKA Warakurna 55.41 250 P P 09 28 10.4 -0.7
FORT Forrest 55.58 243 P P 09 28 11.6 -0.6
baz=56,SNR=24
FORT Forrest 55.58 243 P P 09 28 11.5 -0.7
FORT Forrest 55.58 243 P P 09 28 11.3 -0.9
KNRA Kununurra 55.84 261 P P 09 28 13.6 -0.6
baz=56,SNR=8.0
KNRA Kununurra 55.84 261 P P 09 28 13.6 -0.6
KNRA Kununurra 55.84 261 P P 09 28 14.0 -0.2
SIJI Sorong 56.81 279 LR LR 09 51 52.6
comp=Z,659nm,22.0s,baz=170,slow=35
JCJ Chichijima 60.76 314 LR LR 09 51 28.8
comp=Z,91nm,19.0s,baz=100,slow=33
BATI Baumata 61.72 267 LR LR 09 54 01.8
comp=Z,660nm,20.1s,baz=116,slow=34
SBA Scott Base 63.02 185 P P 09 29 05.4 +2.6
SBA IAmb IAmb 09 29 07.6
comp=Z,28nm,0.9s
SBA Scott Base 63.02 185 P P 09 29 05.4 +2.6
SBA pmax pmax
comp=Z,28nm,1.0s
VNDA Vanda 63.15 186 P P 09 29 05.5 +1.8
comp=Z,11nm,1.0s,baz=7.9,slow=5.9,SNR=24
VNDA LR LR 09 51 54.7
comp=Z,97nm,21.4s,baz=24,slow=32
comp=Z,11nm,1.0s
VNDA Vanda 63.15 186 P P 09 29 05.5 +1.8
PSA00 Pilbara Seismi 63.44 253 P P 09 29 05.8 -0.8
PSA00 IAmb IAmb 09 29 07.5
comp=Z,54nm,1.6s
PSA00 Pilbara Seismi 63.44 253 IAmb IAmb 09 29 07.5
comp=Z,90nm,1.6s
PSA00 Pilbara Seismi 63.44 253 P P 09 29 05.9 -0.7
MBWA Marble Bar 63.59 254 P P 09 29 06.3 -1.3
MBWA Marble Bar 63.59 254 P P 09 29 07.1 -0.5
KLBR Kellerberrin 64.40 242 P P 09 29 13.0 +0.3
baz=64,SNR=6.5
KLBR Kellerberrin 64.40 242 P P 09 29 12.1 -0.7
NWAO Narrogin (SRO) 64.77 241 P P 09 29 15.7 +0.6
DAV Davao City (W) 64.81 286 LR LR 09 56 20.4
comp=Z,150nm,18.7s,baz=127,slow=35
BLDU Ballidu 65.36 243 P P 09 29 19.1 +0.1
baz=65,SNR=10.0
BLDU Ballidu 65.36 243 P P 09 29 18.8 -0.2
MUN Mundaring 65.69 242 P P 09 29 21.5 +0.4
baz=66,SNR=7.0
MUN Mundaring 65.69 242 P P 09 29 20.6 -0.5
MORW Morawa 66.06 245 P P 09 29 23.8 +0.2
baz=66,SNR=3.4
MORW Morawa 66.06 245 P P 09 29 23.7 +0.2
MORW Morawa 66.06 245 P P 09 29 23.6 0.0
JHJ Hachijo jima 2 66.17 318 LR LR 09 51 33.1
comp=Z,66nm,20.8s,baz=130,slow=30
KAPI Kappang 66.70 271 LR LR 09 57 52.2
comp=Z,147nm,20.0s,baz=91,slow=35
TOLI2 Tolitoli 67.40 278 P P 09 29 30.6 -1.7
TOLI2 IAmb IAmb 09 29 33.6
comp=Z,56nm,2.0s
SHEM Shemya Is, Ala 69.00 352 LR LR 09 54 17.1
comp=Z,165nm,20.7s,baz=128,slow=31
MJAR Matsushiro Arr 69.34 320 P P 09 29 43.0 -1.0
comp=Z,3.9nm,0.9s,baz=156,slow=6.5,SNR=11
MJAR LR LR 09 54 07.8
comp=Z,226nm,21.9s,baz=126,slow=31
comp=Z,3.9nm,0.9s
MJAR Matsushiro Arr 69.34 320 P P 09 29 43.0 -1.0
MJAR Matsushiro Arr 69.34 320 P P 09 29 43.0 -1.0
MAJO Matsushiro 69.34 320 deP P 09 29 45.0 +1.0
MAJO pmax pmax
comp=Z,12nm,1.1s
MJB9 Matsu-Tunnel 69.35 320 P P 09 29 44.3 +0.3
H06S1 SOCORRO T 70.04 63 T T 10 46 27.1
SNR=6.0
H06E1 SOCORRO T-PHAS 70.09 63 T T 10 46 29.7
SNR=3.1
CASY Casey 70.31 205 P P 09 29 50.3 +0.8
CASY IAmb IAmb 09 29 51.9
comp=Z,43nm,1.2s
SNCC San Nicolas Is 70.53 46 P P 09 29 52.8 +1.4
baz=235
MYLDM Lahad Datu 70.81 281 IAmb IAmb 09 30 09.8
comp=Z,38nm,1.2s
SCZ2 Santa Cruz Isl 70.88 45 P P 09 29 54.5 +0.9
baz=235,SNR=6.6
JOW Kugami 70.89 306 LR LR 09 56 08.4
comp=Z,151nm,20.9s,baz=234,slow=32
SCI2 San Clemente I 71.06 46 P P 09 29 54.4 -0.2
baz=236
SBC Santa Barbara 71.08 45 P P 09 29 56.3 +1.6
baz=235
JAGI Jajag, Banyuwa 71.25 266 P P 09 29 55.2 -1.0
PKM Mcpherson Peak 71.27 44 P P 09 29 57.2 +1.1
baz=235,SNR=18
CIS Catalina Islan 71.38 46 P P 09 29 57.0 +0.4
baz=236,SNR=6.0
SMMC Simmler 71.40 44 P P 09 29 57.9 +1.3
baz=234,SNR=19
PAGB Antelope Grade 71.47 43 IAmb IAmb 09 29 59.4
comp=Z,60nm,1.2s
FMP Fort Macarthur 71.64 46 P P 09 29 58.5 +0.4
baz=236
JHS Saijyo 71.71 316 P P 09 29 58.2 -0.3
JHS IAmb IAmb 09 30 01.1
comp=Z,37nm,1.2s
CCX Cicese 71.78 48 IAmb IAmb 09 30 00.8
comp=Z,44nm,1.2s
OSI Osito Audit: C 71.85 45 P P 09 30 00.3 +0.9
baz=236
DECC Green Verdugo 71.92 45 P P 09 30 00.2 +0.4
baz=236
ASAJ Asahikawa 71.93 328 LR LR 09 55 40.3
comp=Z,100nm,22.0s,baz=170,slow=31
PASC Pasadena Art C 71.97 45 P P 09 30 00.1 0.0
PASC IAmb IAmb 09 30 01.7
comp=Z,39nm,1.1s
109C Camp Elliot, M 72.02 47 IAmb IAmb 09 30 02.1
comp=Z,55nm,1.4s
109C Camp Elliot, M 72.02 47 P P 09 30 00.7 +0.3
baz=237
ARVC Arvin 72.07 44 P P 09 30 01.2 +0.5
baz=235,SNR=8.5
TKX Tecate 72.20 48 IAmb IAmb 09 30 03.1
comp=Z,86nm,1.8s
ELS Elsinore Mount 72.21 46 P P 09 30 01.4 -0.2
ELS IAmb IAmb 09 30 03.4
comp=Z,50nm,1.3s
BAR Barrett 72.21 48 P P 09 30 01.4 -0.2
VES Vestal, Richgr 72.31 44 P P 09 30 02.4 +0.4
baz=235,SNR=37
MURC Murrieta 72.34 46 P P 09 30 02.8 +0.5
baz=237,SNR=11
BFSC Mount Baldy Ra 72.37 46 P P 09 30 02.8 +0.1
baz=236,SNR=12
VOG Valley Oaks Go 72.39 43 P P 09 30 02.7 +0.2
baz=234
EDW2 Edwards Air Fo 72.50 45 P P 09 30 03.8 +0.5
baz=236,SNR=64
MONP2 Monument Peak 72.50 47 P P 09 30 04.0 +0.4
baz=238,SNR=18
IKP In-Ko-Pah, Jac 72.60 48 P P 09 30 04.5 +0.6
baz=238,SNR=12
ISA Isabella, Lake 72.61 44 IAmb IAmb 09 30 06.0
comp=Z,70nm,1.2s
ISA Isabella, Lake 72.61 44 P P 09 30 04.7 +0.7
baz=235,SNR=43
PET Petropavlovsk 72.62 343 P P 09 30 02.8 -0.7
PET Petropavlovsk 72.62 343 eP P 09 30 04.8 +1.4
PET pmax pmax
comp=Z,59nm,1.5s
CCAC Calif City Air 72.64 45 IAmb IAmb 09 30 06.2
comp=Z,56nm,1.2s
CMB Columbia Colle 72.75 41 IAmb IAmb 09 30 06.5
comp=Z,41nm,1.1s
CMB IAMs_20 IAMs_20 09 54 06.4
comp=Z,545nm,21.0s
SRIG Santa Rosalia 72.82 54 IAmb IAmb 09 30 06.8
comp=Z,30nm,1.0s
PFO Pinyon Flats O 72.86 47 LR LR 09 54 05.8
comp=Z,686nm,21.9s,baz=258,slow=29
PFO Pinyon Flats O 72.86 47 P P 09 30 05.2 -0.4
PFO IAmb IAmb 09 30 07.3
comp=Z,38nm,1.3s
PFO Pinyon Flats O 72.86 47 P P 09 30 05.2 -0.4
PFO pmax pmax
comp=Z,38nm,1.3s
PFO Pinyon Flats O 72.86 47 P P 09 30 06.0 +0.5
baz=237,SNR=19
BBRC Big Bear Solar 72.89 46 P P 09 30 06.5 +0.6
baz=237
LPIG La Paz 72.90 58 LR LR 09 53 41.7
comp=Z,509nm,21.2s,baz=208,slow=29
PEA0B Petropavlovsk- 72.97 342 eP P 09 30 07.2 +1.6
PETK Petropavlovsk- 72.97 342 P P 09 30 05.8 +0.2
comp=Z,9.0nm,0.7s,baz=250,slow=34,SNR=9.7
PETK LR LR 09 58 05.7
comp=Z,51nm,21.0s,baz=153,slow=32
comp=Z,9.0nm,0.7s
PETK Petropavlovsk- 72.97 342 P P 09 30 05.4 -0.2
PETK Petropavlovsk- 72.97 342 P P 09 30 05.4 -0.2
ORV Oroville 72.97 39 IAMs_20 IAMs_20 09 53 40.2
comp=Z,587nm,22.0s
SWSC Sam W. Stewart 72.97 48 P P 09 30 06.4 +0.3
baz=238,SNR=8.5
SLBS Sierra La Lagu 73.02 59 IAMs_20 IAMs_20 09 53 23.4
comp=Z,614nm,20.0s
LRMC Laurel Mtn Rad 73.05 45 P P 09 30 07.1 +0.5
baz=236,SNR=33
RRX Edison Barstow 73.18 45 P P 09 30 07.4 +0.2
baz=237
CWC Cottonwood Cre 73.32 44 P P 09 30 08.8 +0.6
baz=236
MDPB Devils Postpil 73.35 42 IAmb IAmb 09 30 10.4
comp=Z,45nm,1.1s
L02F Cave Junction 73.37 36 P P 09 30 09.4 +1.2
baz=230
OMMB Old Mammoth Mi 73.39 42 IAmb IAmb 09 30 10.8
comp=Z,40nm,1.3s
BELC Belle Mtn. Jos 73.40 47 P P 09 30 09.2 +0.5
baz=238,SNR=29
EMB Emerald Bay 73.49 40 IAmb IAmb 09 30 11.2
comp=Z,51nm,1.7s
MPMC Manual Prospec 73.50 44 P P 09 30 10.0 +0.6
baz=236,SNR=99
MLAC Mammoth, Mammo 73.50 42 P P 09 30 10.4 +1.0
baz=235,SNR=12
GSC Goldstone, Bar 73.54 45 IAmb IAmb 09 30 11.2
comp=Z,56nm,1.2s
GSC Goldstone, Bar 73.54 45 P P 09 30 09.9 +0.4
baz=237,SNR=38
TIN Tinemaha, Big 73.57 43 P P 09 30 10.7 +1.0
baz=235,SNR=5.2
BC3 Big Chuckawall 73.60 47 P P 09 30 10.7 +0.9
baz=238,SNR=14
HEC Hector,Ludlow 73.61 46 P P 09 30 10.4 +0.5
baz=237,SNR=8.6
YBH Yreka Blue Hor 73.61 37 LR LR 09 54 44.8
comp=Z,554nm,21.7s,baz=248,slow=30
YBH Yreka Blue Hor 73.61 37 IAmb IAmb 09 30 12.3
comp=Z,56nm,1.2s
K02D Willamette Mer 73.69 36 P P 09 30 11.8 +1.6
baz=230,SNR=7.3
GLA Glamis 73.73 48 IAmb IAmb 09 30 13.3
comp=Z,42nm,1.0s
GLA Glamis 73.73 48 P P 09 30 11.4 +0.8
baz=239,SNR=9.2
J01E Myrtle Point 73.84 35 IAmb IAmb 09 30 13.9
comp=Z,68nm,1.2s
BEKR Beckworth 73.86 40 IAmb IAmb 09 30 13.3
comp=Z,48nm,1.2s
YSS Yuzh-Sakhalins 73.86 330 P P 09 30 10.8 -0.1
YSS IAmb IAmb 09 30 13.7
comp=Z,67nm,1.4s
YSS Yuzh-Sakhalins 73.86 330 eP P 09 30 12.4 +1.4
YSS eS S 09 39 39.8 -0.9
YSS eSS SS 09 44 32.0 +6.4
YSS pmax pmax
comp=Z,20nm,1.0s
PNTR Pine Nut 73.87 41 IAmb IAmb 09 30 13.6
comp=Z,74nm,1.1s
VCNR Virginia City 73.96 40 IAmb IAmb 09 30 14.0
comp=Z,53nm,1.2s
HUMO Hull Mountain 74.03 36 IAmb IAmb 09 30 14.8
comp=Z,74nm,1.3s
HUMO IAMs_20 IAMs_20 09 54 23.8
comp=Z,647nm,20.0s
YERR Yerington 74.03 41 IAmb IAmb 09 30 14.3
comp=Z,57nm,1.2s
GMRC Granite Mounta 74.05 46 P P 09 30 12.8 +0.3
baz=238,SNR=30
LCH Last Change Ra 74.05 43 IAmb IAmb 09 30 14.3
comp=Z,36nm,1.2s
LHV Little Huntoon 74.08 42 IAmb IAmb 09 30 14.8
comp=Z,66nm,1.2s
IRM Iron Mountain 74.08 47 P P 09 30 13.2 +0.6
baz=238,SNR=36
GRAC Grapevine Rang 74.11 43 P P 09 30 13.7 +1.0
baz=236,SNR=39
GWY Greenwater Val 74.12 44 IAmb IAmb 09 30 14.5
comp=Z,56nm,1.3s
FURC Furnace Creek, 74.15 44 P P 09 30 13.5 +0.7
baz=236,SNR=42
L04D Klamath Falls 74.15 37 P P 09 30 13.9 +0.9
baz=231,SNR=19
TUQ Turquoise Moun 74.22 45 P P 09 30 14.1 +0.6
baz=237,SNR=42
SHOC Shoshone, Teco 74.23 45 P P 09 30 13.9 +0.5
baz=237,SNR=37
RYN Ryan 74.28 42 IAmb IAmb 09 30 15.8
comp=Z,46nm,1.1s
BLYC Blythe 74.31 48 IAmb IAmb 09 30 15.8
comp=Z,55nm,1.2s
NVAR Mina Array Bea 74.31 42 P P 09 30 14.6 +0.5
comp=Z,30nm,0.9s,baz=227,slow=9.2,SNR=141
NVAR LR LR 09 55 21.7
comp=Z,799nm,21.3s,baz=234,slow=30
comp=Z,30nm,0.9s
113A Mohawk Valley, 74.34 49 IAmb IAmb 09 30 15.9
comp=Z,48nm,1.2s
PAHR Pah Rah Range 74.37 40 IAmb IAmb 09 30 16.4
comp=Z,56nm,1.2s
QSPA South Pole Qui 74.39 180 LR LR 09 58 05.5
comp=Z,128nm,21.7s,baz=44,slow=32
QSPA South Pole Qui 74.39 180 P P 09 30 15.4 +1.4
QSPA IAmb IAmb 09 30 17.1
comp=Z,33nm,1.0s
OHAK Old Harbor 74.45 11 IAmb IAmb 09 30 31.3
comp=Z,49nm,1.6s
I03D Drain, OR 74.51 35 P P 09 30 16.1 +1.3
baz=230,SNR=13
HSIG 74.63 53 P P 09 30 15.3 -0.5
HSIG IAmb IAmb 09 30 17.2
comp=Z,72nm,1.8s
214A Organ Pipe Nat 74.64 50 IAmb IAmb 09 30 17.8
comp=Z,54nm,1.4s
214A Organ Pipe Nat 74.64 50 P P 09 30 16.5 +0.6
baz=240,SNR=15
K04D Chiloquin, OR 74.73 37 P P 09 30 17.3 +1.0
baz=231,SNR=5.8
NEE2 Needles Airpor 74.77 47 P P 09 30 17.1 +0.5
baz=238
KVN Kaiserville 74.80 41 IAmb IAmb 09 30 18.7
comp=Z,57nm,1.1s
TPNV Topopah Spring 74.82 44 IAmb IAmb 09 30 19.0
comp=Z,49nm,1.1s
TPNV Topopah Spring 74.82 44 P P 09 30 17.6 +0.5
baz=237,SNR=50
PDMCI Parker Dam,Lak 74.86 47 P P 09 30 17.7 +0.7
baz=239,SNR=19

J04D **Umpqua Nationa** **74.91** **36** P **P** **09 30 18.8 +1.3**
baz=231,SNR=9.2
I04A **Tendick Farm,** **75.09** **35** P **P** **09 30 19.2 +0.9**
baz=230,SNR=15
KDAK **Kodiak Island** **75.11** **11** LR LR 09 56 21.8
comp=Z,422nm,21.6s,baz=227,slow=30
KDAK **Kodiak Island** **75.11** **11** P **P** **09 30 17.6 -0.3**
KDAK IAmb IAmb 09 30 37.5
comp=Z,50nm,1.5s
KDAK **Kodiak Island** **75.11** **11** IAMs_20 IAMs_20 09 55 59.8
comp=Z,515nm,20.0s
KDAK **Kodiak Island** **75.11** **11** P **P** **09 30 17.6 -0.3**
KDAK pmax pmax
comp=Z,50nm,1.5s
KDAK **Kodiak Island** **75.11** **11** P **P** **09 30 18.9 +0.9**
baz=200
MOD **Modoc Plateau** **75.13** **38** IAMs_20 IAMs_20 09 55 34.1
comp=Z,685nm,19.0s
SHPR **Sheep Range** **75.32** **45** IAmb IAmb 09 30 22.1
comp=Z,71nm,1.2s
H04D **Lebanon** **75.38** **35** P **P** **09 30 20.8 +0.9**
baz=230,SNR=10
J05D **Fort Rock, OR** **75.44** **36** P **P** **09 30 21.4 +1.0**
baz=232,SNR=49
W13A **Hualapai Mount** **75.46** **47** IAmb IAmb 09 30 22.8
comp=Z,46nm,1.3s
Y14A **Wickenburg** **75.49** **48** IAmb IAmb 09 30 22.6
comp=Z,47nm,1.2s
G03D **McMinnville, O** **75.54** **34** P **P** **09 30 21.6 +0.9**
baz=230,SNR=6.8
S11A **Rachel** **75.54** **44** IAmb IAmb 09 30 23.0
comp=Z,58nm,1.1s
P17K **Kvichak River** **75.81** **9** P **P** **09 30 21.8 -0.2**
baz=197
PINE **Pine Mountain** **75.92** **36** P **P** **09 30 24.0 +0.8**
Q20K **Shuyak Island** **75.92** **11** P **P** **09 30 22.9 +0.3**
baz=201
O16K **Kokwok River B** **75.97** **8** P **P** **09 30 22.9 0.0**
baz=195
Q19K **Cape Douglas,** **76.00** **10** IAMs_20 IAMs_20 09 55 10.3
comp=Z,633nm,22.0s
R11A **Troy Canyon, C** **76.03** **43** IAmb IAmb 09 30 25.8
comp=Z,37nm,1.2s
R11A **Troy Canyon, C** **76.03** **43** P **P** **09 30 24.2 +0.2**
baz=237,SNR=45
I05D **Terrebonne, OR** **76.03** **35** P **P** **09 30 24.3 +0.6**
baz=231,SNR=27
BMN **Battle Mountai** **76.14** **41** IAmb IAmb 09 30 26.4
comp=Z,55nm,1.1s
P18K **Big Mountain,** **76.19** **9** P **P** **09 30 22.7 -1.4**
baz=198
F04D **Rainier, OR** **76.24** **33** P **P** **09 30 25.8 +1.1**
baz=230
O17K **Koliganek Bris** **76.28** **8** P **P** **09 30 24.4 -0.2**
baz=196
TUC **Tucson** **76.31** **50** P **P** **09 30 25.6 +0.1**
TUC IAmb IAmb 09 30 27.9
comp=Z,66nm,1.4s
TUC **Tucson** **76.31** **50** IAMs_20 IAMs_20 09 55 48.7
comp=Z,560nm,22.0s
TUC **Tucson** **76.31** **50** P **P** **09 30 25.6 +0.1**
TUC pmax pmax
comp=Z,66nm,1.4s
TUC **Tucson** **76.31** **50** P **P** **09 30 26.4 +0.9**
baz=241
WVOR **Wild Horse Val** **76.44** **38** IAmb IAmb 09 30 28.1
comp=Z,72nm,1.1s
F04A **Amboy** **76.46** **34** P **P** **09 30 25.9 -0.1**
F04A IAmb IAmb 09 30 27.8
comp=Z,76nm,1.2s
KSRS **Korea Array** **76.56** **315** P **P** **09 30 27.5 +0.8**
comp=Z,4.3nm,1.0s,baz=124,slow=6.1,SNR=14
KSRS LR LR 09 58 38.6
comp=Z,53nm,21.9s,baz=125,slow=31
comp=Z,4.3nm,1.0s
KSAR **Wonju Array Be** **76.58** **315** P **P** **09 30 26.8 0.0**
KSAR **Wonju Array Be** **76.58** **315** P **P** **09 30 26.8 0.0**
G05D **Wamic, OR** **76.61** **35** P **P** **09 30 27.8 +0.9**
baz=231,SNR=9.6
O18K **Koktuh Hills** **76.63** **9** IAmb IAmb 09 30 43.8
comp=Z,54nm,1.6s
O18K **Koktuh Hills** **76.63** **9** P **P** **09 30 27.2 +0.5**
baz=198
NLWA **Neilton Lookou** **76.65** **32** P **P** **09 30 27.0 -0.1**
NLWA IAmb IAmb 09 30 29.5
comp=Z,64nm,1.2s
E04D **Cinebar** **76.78** **33** P **P** **09 30 28.7 +1.0**
baz=230,SNR=18
X16A **Lo Mia Camp, P** **76.85** **48** IAmb IAmb 09 30 31.0
comp=Z,58nm,1.1s
LCMT **Little Creek M** **76.89** **45** IAmb IAmb 09 30 30.9
comp=Z,49nm,1.2s
I07A **Izee** **76.92** **37** IAmb IAmb 09 30 31.0
comp=Z,68nm,1.2s
CNPM **China Poot** **77.00** **11** IAMs_20 IAMs_20 09 57 20.6
comp=Z,671nm,20.0s
319A **Douglas** **77.00** **52** IAmb IAmb 09 30 31.7
comp=Z,89nm,1.4s
HOM **Homer** **77.05** **11** IAMs_20 IAMs_20 09 56 50.8
comp=Z,585nm,19.0s
D04E **Lakebay** **77.08** **33** P **P** **09 30 30.9 +1.5**
baz=230,SNR=7.4
CCUT **Cedar City** **77.09** **45** IAmb IAmb 09 30 32.5
comp=Z,58nm,1.2s
O19K **Port Alsworth** **77.09** **9** IAMs_20 IAMs_20 09 58 29.1
comp=Z,438nm,19.0s
O19K **Port Alsworth** **77.09** **9** P **P** **09 30 29.1 0.0**
baz=199
D03D **Eldon** **77.14** **32** P **P** **09 30 30.8 +1.1**
baz=229,SNR=15
PSUT **Pine Spring** **77.28** **44** IAmb IAmb 09 30 32.9
comp=Z,48nm,1.1s
B04A **Port Angeles** **77.28** **32** IAmb IAmb 09 30 33.0
comp=Z,58nm,1.3s
BRSE **Bradley Lake S** **77.29** **11** P **P** **09 30 30.1 -0.3**
baz=202
SZCU **Shurtz Canyon** **77.30** **45** IAmb IAmb 09 30 33.5
comp=Z,70nm,1.3s
WUAZ **Wupatki** **77.44** **47** IAmb IAmb 09 30 34.3
comp=Z,76nm,1.3s
WUAZ IAMs_20 IAMs_20 09 56 38.1
comp=Z,473nm,21.0s
WUAZ **Wupatki** **77.44** **47** P **P** **09 30 32.9 +1.0**
baz=240,SNR=30
KSM **Kuching** **77.53** **275** IAmb IAmb 09 30 34.8
comp=Z,44nm,1.3s
ELK **Elko** **77.57** **41** LR LR 09 57 11.7
comp=Z,647nm,21.9s,baz=220,slow=30
ELK **Elko** **77.57** **41** IAmb IAmb 09 30 34.4
comp=Z,44nm,1.2s
N19K **Bonanza Creek** **77.66** **9** P **P** **09 30 32.0 -0.5**
N19K **Bonanza Creek** **77.66** **9** P **P** **09 30 32.2 -0.3**
baz=198,SNR=8.8
PGC **Sidney** **77.69** **31** P **P** **09 30 33.5 +0.7**
PGC IAmb IAmb 09 30 34.8
comp=Z,58nm,1.1s
CBB **Campbell River** **77.70** **29** P **P** **09 30 33.0 +0.2**
CBB IAmb IAmb 09 30 35.0
comp=Z,43nm,1.1s
SVW2 **Sparrevohn** **77.77** **9** P **P** **09 30 31.8 -1.1**
USRK **Ussuriysk Ar.** **77.78** **323** P **P** **09 30 34.3 +0.9**
comp=Z,4.0nm,0.8s,baz=102,slow=6.2,SNR=8.3
USRK LR LR 09 58 09.9
comp=Z,239nm,22.0s,baz=115,slow=31
comp=Z,4.0nm,0.8s
USA0B **Ussuriysk Arra** **77.78** **323**⇑ *e*P **P** **09 30 35.0 +1.6**
F07A **Phinny Hill Vi** **77.78** **35** IAmb IAmb 09 30 35.3
comp=Z,57nm,1.2s
SEW **Seward** **77.88** **12** P P 09 30 27.0 -6.6
baz=203
HPIG **77.90** **57** IAmb IAmb 09 30 36.4
comp=Z,72nm,1.4s
LEM **Lembang** **77.93** **266** LR LR 10 05 19.5
comp=Z,301nm,19.9s,baz=168,slow=36
BBB **Bella Bella** **77.97** **26** LR LR 09 58 24.9
comp=Z,258nm,19.3s,baz=239,slow=31
X18A **Snowflake** **77.98** **49** IAmb IAmb 09 30 37.2
comp=Z,42nm,1.2s
LTY **Liberty** **78.23** **33** IAmb IAmb 09 30 37.6
comp=Z,50nm,1.4s
TCRU **Three Creeks R** **78.25** **44** IAmb IAmb 09 30 39.1
comp=Z,68nm,1.1s
HAWA **Hanford** **78.31** **35** IAmb IAmb 09 30 38.3
comp=Z,77nm,1.2s
SPCR **Spurr Chakacha** **78.39** **10** P **P** **09 30 35.9 -0.6**
baz=200
W18A **Petrified Fore** **78.42** **48** IAmb IAmb 09 30 39.6
comp=Z,39nm,1.2s
W18A **Petrified Fore** **78.42** **48** P **P** **09 30 38.2 +0.8**
baz=242,SNR=5.4
B06A **Marblemount** **78.60** **32** IAmb IAmb 09 30 39.3
comp=Z,53nm,1.5s
BMO **Blue Mountains** **78.64** **37** IAmb IAmb 09 30 39.9
comp=Z,59nm,1.2s
BMO IAMs_20 IAMs_20 09 58 50.9
comp=Z,473nm,20.0s
121A **Cookes Peak, D** **78.66** **52** IAmb IAmb 09 30 41.3
comp=Z,98nm,1.6s
121A **Cookes Peak, D** **78.66** **52** P **P** **09 30 39.9 +1.0**
baz=243
121A **Cookes Peak, D** **78.66** **52** P **P** **09 30 39.8 +1.0**
baz=243
MFID **Camas Ranch** **78.69** **39** IAmb IAmb 09 30 40.4
comp=Z,61nm,1.2s
M19K **Big River Lodg** **78.71** **9** P **P** **09 30 35.4 -2.8**
baz=198
RC01 **Rabbit Creek A** **78.73** **11** P **P** **09 30 38.0 -0.4**
RC01 IAMs_20 IAMs_20 09 58 32.4
comp=Z,418nm,18.0s
RC01 **Rabbit Creek A** **78.73** **11** P **P** **09 30 38.1 -0.2**
baz=203
DUG **Dugway, Tooele** **78.83** **43** IAmb IAmb 09 30 41.3
comp=Z,54nm,1.2s
DUG IAMs_20 IAMs_20 09 58 03.6
comp=Z,595nm,21.0s
DUG **Dugway, Tooele** **78.83** **43** P **P** **09 30 40.0 +0.5**
baz=238,SNR=49
ZAIG **Zacatecas** **78.84** **62** P **P** **09 30 39.7 -0.4**
M20K **Styx River** **78.88** **9** P **P** **09 30 39.3 +0.1**
baz=200
SUA **Susitna One** **78.89** **11** P **P** **09 30 36.4 -2.9**
baz=202
L19K **White Mountain** **78.91** **9** P **P** **09 30 39.2 -0.1**
baz=198
D08A **Wolman Farm,** **79.05** **34** P **P** **09 30 40.6 +0.2**
GLI **Glacier Island** **79.07** **13** IAMs_20 IAMs_20 09 58 23.4
comp=Z,580nm,19.0s
GLI **Glacier Island** **79.07** **13** P **P** **09 30 40.1 -0.1**
baz=206
FID **Port Fidalgo** **79.08** **13** IAMs_20 IAMs_20 09 57 49.6
comp=Z,708nm,21.0s
E09A **Wood Farm, Sta** **79.14** **35** IAmb IAmb 09 30 42.5
comp=Z,72nm,1.3s
SKT **Skwentna** **79.24** **10** IAMs_20 IAMs_20 09 58 24.8
comp=Z,54nm,21.0s
SKT **Skwentna** **79.24** **10** P **P** **09 30 40.6 -0.5**
baz=201
Q16A **Castle Valley** **79.27** **44** IAmb IAmb 09 30 44.6
comp=Z,48nm,1.1s
KNK **Knik Glacier** **79.28** **12** IAMs_20 IAMs_20 09 57 17.9
comp=Z,551nm,21.0s
KNK **Knik Glacier** **79.28** **12** P **P** **09 30 41.5 +0.2**
baz=204
M22K **Willow** **79.28** **11** IAmb IAmb 09 31 05.9
comp=Z,43nm,1.1s
M22K IAMs_20 IAMs_20 09 58 46.8
comp=Z,588nm,21.0s
M22K **Willow** **79.28** **11** P **P** **09 30 41.6 +0.4**
baz=202,SNR=6.1
KIDD **KIDD Seismic O** **79.29** **53** P **P** **09 30 42.9 +0.7**
baz=244
EPT **El Paso** **79.29** **53** IAMs_20 IAMs_20 09 58 05.4
comp=Z,536nm,20.0s
PMR **Palmer** **79.31** **11** P **P** **09 30 41.0 -0.3**
PMR **Palmer** **79.31** **11** P **P** **09 30 41.1 -0.3**
PMR pmax pmax
comp=Z,43nm,1.6s
PMR **Palmer** **79.31** **11** P **P** **09 30 41.3 -0.1**
baz=204,SNR=5.3
L20K **Farewell, AK** **79.33** **9** P **P** **09 30 41.3 -0.3**
baz=199,SNR=9.0
MDJ **Mudanjiang** **79.42** **322** P **P** **09 30 44.1 +1.6**
MDJ pmax pmax
comp=Z,22nm,1.1s
MDJ pmax pmax
comp=Z,230nm,3.6s
TTA **Tatalina** **79.47** **8** P **P** **09 30 43.4 +1.0**
baz=197,SNR=15
MPU **Maple Canyon** **79.52** **43** IAmb IAmb 09 30 45.4
comp=Z,37nm,1.2s
GRNR **Gornyy** **79.52** **330**⇑ *i*P **P** **09 30 44.1 +1.2**
GRNR pmax pmax
GRNR comp=Z,6.0nm,1.3s
GRNR comp=E,290nm,16.0s MLR MLR
GRNR comp=N,80nm,15.0s MLR MLR
GRNR MLR MLR
comp=Z,80nm,13.0s
PLID **Pearl Lake** **79.53** **37** IAmb IAmb 09 30 44.8
comp=Z,38nm,1.1s
B08A **Colville Reser** **79.62** **33** IAmb IAmb 09 30 44.7
comp=Z,53nm,1.2s
HLID **Hailey** **79.63** **39** IAmb IAmb 09 30 46.1
comp=Z,67nm,1.1s
HLID IAMs_20 IAMs_20 09 58 06.2
comp=Z,408nm,18.0s
HLID **Hailey** **79.63** **39** P **P** **09 30 44.7 +0.8**
baz=237,SNR=98
WAX **Waxell Ridge** **79.65** **15** IAmb IAmb 09 30 45.2
comp=Z,54nm,1.4s
SML **Sammill** **79.66** **12** P **P** **09 30 43.6 +0.2**
baz=204
HVU **Hansel Valley** **79.69** **41** IAmb IAmb 09 30 46.0
comp=Z,48nm,1.2s
BMRM **Bremner River** **79.69** **14** IAMs_20 IAMs_20 09 57 32.0
comp=Z,551nm,21.0s
BMRM **Bremner River** **79.69** **14** P **P** **09 30 44.1 +0.5**
baz=208,SNR=8.1
LLLB **Lillooet** **79.75** **30** P **P** **09 30 44.5 +0.4**
LLLB IAmb IAmb 09 30 45.7
comp=Z,49nm,1.2s
M23K **Glacier View** **79.77** **12** P **P** **09 30 43.5 -0.5**
baz=205
SRU **San Rafael Swe** **79.80** **45** IAmb IAmb 09 30 46.9
comp=Z,76nm,1.2s
C09A **Chrisman Ranch** **79.84** **34** IAmb IAmb 09 30 46.3
comp=Z,67nm,1.2s
CUT **Chulitna** **79.85** **11** P **P** **09 30 44.4 0.0**
CUT IAmb IAmb 09 30 45.4
CUT comp=Z,47nm,1.1s IAMs_20 IAMs_20 09 59 17.1
comp=Z,624nm,21.0s
CUT **Chulitna** **79.85** **11** P **P** **09 30 44.3 0.0**
baz=202
KLU **Klutina** **79.87** **13** IAMs_20 IAMs_20 09 58 28.6
comp=Z,595nm,21.0s
KLU **Klutina** **79.87** **13** P **P** **09 30 44.1 -0.5**
baz=207,SNR=5.7
PNL **Peninsula** **79.88** **17** P **P** **09 30 45.1 +0.5**
baz=213
SCM **Sheep Creek Mo** **79.88** **12** P **P** **09 30 44.5 -0.2**
baz=205
Y22A **Socorro** **79.90** **51** P **P** **09 30 46.1 +0.5**
baz=244
ISLE **Juniper Island** **79.91** **15** IAmb IAmb 09 30 46.3
comp=Z,42nm,1.3s
JLU **Jordanelle** **79.94** **43** IAmb IAmb 09 30 47.5
comp=Z,55nm,1.2s
Y22D **IRIS PASSCAL I** **79.99** **50** P **P** **09 30 47.2 +1.2**
baz=244
Y22D **IRIS PASSCAL I** **79.99** **50** P **P** **09 30 47.4 +1.4**
baz=244
MNTX **Cornudas Mount** **80.12** **53** IAmb IAmb 09 30 48.7
comp=Z,67nm,1.4s
MNTX IAMs_20 IAMs_20 09 59 20.0
comp=Z,468nm,20.0s
MNTX **Cornudas Mount** **80.12** **53** P **P** **09 30 47.2 +0.6**
baz=245
MNTX **Cornudas Mount** **80.12** **53** P **P** **09 30 47.2 +0.6**
baz=245
K20K **Telida** **80.14** **9** P **P** **09 30 46.8 +0.9**
baz=199,SNR=9.5
VRDI **Verde Repeater** **80.19** **14** IAMs_20 IAMs_20 09 59 07.0
comp=Z,528nm,20.0s
P18A **Preston Nutter** **80.25** **44** IAmb IAmb 09 30 49.6
comp=Z,51nm,1.3s
N25K **Chitina, Valde** **80.26** **13** IAMs_20 IAMs_20 09 57 07.0
comp=Z,570nm,22.0s
N25K **Chitina, Valde** **80.26** **13** P **P** **09 30 47.0 +0.3**
baz=208,SNR=6.4
MVCO **Mesa Verde** **80.29** **47** IAMs_20 IAMs_20 09 57 47.4
comp=Z,615nm,22.0s
MVCO **Mesa Verde** **80.29** **47** P **P** **09 30 48.2 +0.6**
baz=242,SNR=11
GLB **Gilahina Butte** **80.29** **14** IAmb IAmb 09 31 04.8
comp=Z,76nm,1.9s
GLB IAMs_20 IAMs_20 09 57 55.9
comp=Z,506nm,21.0s
M24K **Tolsona, Glenn** **80.37** **12** IAmb IAmb 09 30 49.2
comp=Z,52nm,1.2s
M24K **Tolsona, Glenn** **80.37** **12** P **P** **09 30 47.5 +0.2**
baz=206,SNR=6.7
MCARA **McCarthy VSAT** **80.42** **14** IAMs_20 IAMs_20 09 58 00.4
comp=Z,541nm,21.0s
MCARA **McCarthy VSAT** **80.42** **14** P **P** **09 30 48.2 +0.7**
baz=209
PV10 **Paradox Valley** **80.46** **46** IAmb IAmb 09 30 50.3
comp=Z,70nm,1.1s
CTG **Chitna Glacier** **80.47** **15** P **P** **09 30 48.3 +0.4**
baz=211,SNR=5.3
BARN **Barnard Glacie** **80.47** **15** IAmb IAmb 09 30 49.6
comp=Z,41nm,1.3s
BARN IAMs_20 IAMs_20 09 58 30.6
comp=Z,643nm,21.0s
WAT6 **Susitna Watana** **80.48** **12** P **P** **09 30 48.1 +0.1**
baz=205,SNR=8.7
TX31 **Lajitas Ar. Si** **80.49** **56** P **P** **09 30 49.0 +0.3**
TX31 **Lajitas Ar. Si** **80.49** **56** P **P** **09 30 49.3 +0.6**
baz=246
TX32 **Lajitas Array** **80.49** **56** IAmb IAmb 09 30 51.0
comp=Z,79nm,1.4s
TXAR **Lajitas Array** **80.49** **56** P **P** **09 30 49.4 +0.6**
comp=Z,25nm,1.1s,baz=224,slow=5.2,SNR=107
TXAR LR LR 09 58 32.8
comp=Z,434nm,20.8s,baz=231,slow=30
comp=Z,25nm,1.1s
CAST **Castle Rocks** **80.50** **9** P **P** **09 30 46.7 -1.1**
baz=200
MA2 **Magadan** **80.51** **342** LR LR 10 02 53.5
comp=Z,38nm,20.2s,baz=136,slow=33
MA2 **Magadan** **80.51** **342**⇓ *e*P **P** **09 30 48.9 +0.9**
MA2 pmax pmax
comp=Z,13nm,1.1s
PV13 **Radium Mtn., P** **80.51** **46** IAmb IAmb 09 30 50.8
comp=Z,74nm,1.2s
UNM **Universidad Na** **80.55** **67** IAMs_20 IAMs_20 09 57 42.5
comp=Z,534nm,19.0s
WAT1 **Susitna Watana** **80.56** **11** P **P** **09 30 48.3 +0.1**
baz=204
PLBC **Pleasant Camp** **80.57** **18** P **P** **09 30 48.5 +0.2**
baz=216
NJ2 **Nanjing** **80.57** **307** *e*P **P** **09 30 50.0 +1.0**
NJ2 pmax pmax
comp=Z,6.0nm,0.6s
ANMO **Albuquerque** **80.72** **50** LR LR 09 58 33.5
comp=Z,400nm,21.5s,baz=233,slow=30
ANMO **Albuquerque** **80.72** **50** P **P** **09 30 50.0 0.0**
ANMO **Albuquerque** **80.72** **50** IAMs_20 IAMs_20 09 58 21.6
comp=Z,434nm,20.0s
ANMO **Albuquerque** **80.72** **50** *d* *i*P **P** **09 30 50.7 +0.7**
ANMO pmax pmax
comp=Z,18nm,1.1s
ANMO **Albuquerque** **80.72** **50** P **P** **09 30 50.4 +0.4**
baz=244
ANMO **Albuquerque** **80.72** **50** P **P** **09 30 50.3 +0.4**
baz=244
NEW **Newport** **80.74** **34** LR LR 09 58 42.5
comp=Z,392nm,21.8s,baz=224,slow=30
NEW **Newport** **80.74** **34** IAMs_20 IAMs_20 09 58 43.3
comp=Z,484nm,21.0s
NEW **Newport** **80.74** **34** P **P** **09 30 49.0 -0.6**
baz=234,SNR=15
PV07 **Paradox Valley** **80.76** **46** IAmb IAmb 09 30 48.0
comp=Z,48nm,1.2s
KTH **Kantishna Hill** **80.81** **10** IAmb IAmb 09 31 06.8
comp=Z,58nm,1.7s
KTH IAMs_20 IAMs_20 09 59 17.4
comp=Z,516nm,22.0s
TRF **Thorofare Moun** **80.82** **10** P **P** **09 30 49.4 -0.4**
baz=202,SNR=7.3
PV15 **Paradox Valley** **80.83** **46** IAmb IAmb 09 30 52.4
comp=Z,66nm,1.2s
SKAG **Skagway** **80.89** **18** P **P** **09 30 50.4 +0.4**
baz=217
CHUM **Lake Minchumin** **80.90** **9** P **P** **09 30 49.7 -0.3**
baz=200,SNR=7.5
KLR **Kul'dur** **80.91** **327** LR LR 10 01 18.9
comp=Z,100nm,21.8s,baz=124,slow=32
KLR **Kul'dur** **80.91** **327** *e*P **P** **09 30 51.4 +1.0**
KLR pmax pmax
comp=Z,9.0nm,1.7s
J20K **Nowinta River** **80.91** **8** IAmb IAmb 09 31 09.4
comp=Z,36nm,1.2s
J20K **Nowinta River** **80.91** **8** P **P** **09 30 50.6 +0.5**
baz=198,SNR=14
DHY **Denali Highway** **81.00** **12** IAmb IAmb 09 31 08.6
comp=Z,58nm,1.8s
DHY **Denali Highway** **81.00** **12** P **P** **09 30 50.3 -0.5**
baz=205
RND **Reindeer** **81.03** **11** IAmb IAmb 09 31 08.8
comp=Z,72nm,1.6s
RND IAMs_20 IAMs_20 09 59 40.2
comp=Z,589nm,21.0s
YUK8 **Steele Glacier** **81.14** **16** P **P** **09 30 52.1 +0.4**
baz=212,SNR=7.3
RDMU **Red Mountain** **81.16** **44** IAmb IAmb 09 30 53.9
comp=Z,35nm,1.2s
YUK6 **Outpost Mounta** **81.23** **16** P **P** **09 30 49.6 -2.5**
baz=214
AHID **Auburn Hatcher** **81.26** **41** IAmb IAmb 09 30 54.5
comp=Z,50nm,1.2s
PAX **Paxson** **81.29** **12** IAmb IAmb 09 31 09.8
comp=Z,58nm,2.0s
PAX **Paxson** **81.29** **12** P **P** **09 30 51.9 -0.3**
baz=207,SNR=5.7
BPAW **Bear Paw Mtn.** **81.31** **10** P **P** **09 30 50.1 -2.2**
baz=202
MCK **McKinley** **81.32** **11** IAMs_20 IAMs_20 09 59 38.8
comp=Z,681nm,21.0s
MCK **McKinley** **81.32** **11** P **P** **09 30 52.1 -0.1**
baz=204,SNR=14
M26K **Nabesna, AK** **81.32** **14** IAMs_20 IAMs_20 09 58 52.1
comp=Z,502nm,22.0s
M26K **Nabesna, AK** **81.32** **14** P **P** **09 30 53.0 +0.7**
baz=209,SNR=16
BNX **BinXian** **81.33** **322** ⇓P **P** **09 30 53.7 +1.0**
BNX pP **sP** **09 31 08.4 +3.7**
BNX sP pP 09 31 15.3 +14
BNX S **S** **09 41 03.9 +2.3**
BNX pmax pmax
comp=Z,42nm,1.0s
BNX pmax pmax
comp=Z,410nm,3.5s
BNX LR LR
comp=Z,480nm,20.1s
HYT **Haines Junctio** **81.36** **17** P **P** **09 30 54.0 +1.3**
baz=215,SNR=6.6
YUK3 **Moose Creek** **81.39** **15** P **P** **09 30 53.1 +0.2**
baz=212,SNR=12
YUK4 **Talbot Arm** **81.49** **16** P **P** **09 30 54.3 +0.9**
baz=214
CN2 **Changchun** **81.49** **320** *e*P **P** **09 30 52.4 -1.2**
CN2 pP sP 09 31 09.2 +3.6
CN2 SKS **S** **09 41 02.3 -1.0**
CN2 sS ScS 09 41 27.1 +6.4
CN2 pmax pmax
comp=Z,20nm,0.9s
CN2 LR LR
comp=Z,90nm,16.0s
CN2 LR LR
comp=Z,190nm,16.0s
CN2 LR LR
comp=Z,160nm,17.0s
M27K **Edge Creek, AK** **81.54** **14** IAMs_20 IAMs_20 09 58 47.9
comp=Z,483nm,20.0s
M27K **Edge Creek, AK** **81.54** **14** P **P** **09 30 54.4 +0.8**
baz=210,SNR=14
MSO **Missoula** **81.70** **37** IAmb IAmb 09 30 56.6
comp=Z,82nm,1.3s
MSO **Missoula** **81.70** **37** P **P** **09 30 54.5 -0.3**
baz=237,SNR=44
S22A **4UR Ranch, Cre** **81.71** **47** P **P** **09 30 56.2 +0.9**
baz=243,SNR=68
O30N **Mendenhall** **81.72** **17** P **P** **09 30 55.0 +0.6**
baz=216,SNR=6.5
TPAW **Teton Pass** **81.72** **41** IAmb IAmb 09 30 57.2
comp=Z,65nm,1.2s
L26K **Log Cabin Wild** **81.79** **13** IAMs_20 IAMs_20 10 00 14.4
comp=Z,550nm,20.0s
L26K **Log Cabin Wild** **81.79** **13** P **P** **09 30 55.3 +0.5**
baz=209
DLBC **Dease Lake** **81.83** **21** LR LR 10 00 44.3
comp=Z,260nm,19.6s,baz=248,slow=31

DLBC	**Dease Lake**	81.83	21	P	**P**	09 30 54.8	-0.3		
	baz=222								
BVCY	**Beaver Creek**	81.83	15	P	**P**	09 30 54.7	-0.4		
	baz=211,SNR=7.2								
SNOW	**Snow King Moun**	81.83	41	P	**P**	09 30 56.1	+0.3		
SNOW				IAmb	IAmb	09 30 57.8			
	comp=Z,67nm,1.2s								
O20A	**White River Ci**	81.84	45	P	**P**	09 30 55.7	-0.1		
O20A				IAmb	IAmb	09 30 57.8			
	comp=Z,66nm,1.5s								
O20A	**White River Ci**	81.84	45	P	**P**	09 30 56.2	+0.3		
	baz=242,SNR=16								
K24K	**Donnelly Dome**	81.97	12	P	**P**	09 30 55.9	+0.2		
	baz=206,SNR=8.5								
MOOW	**Moose Ponds**	81.98	40	IAmb	IAmb	09 30 58.5			
	comp=Z,50nm,1.4s								
N30M	**Aishikik Lake**	82.00	17	P	**P**	09 30 55.3	-0.7		
	baz=215								
LOHW	**Long Hollow**	82.00	41	IAmb	IAmb	09 30 58.6			
	comp=Z,66nm,1.4s								
NEA2	**Nenana**	82.09	10	IAMs_20	IAMs_20	10 00 36.1			
	comp=Z,591nm,20.0s								
NEA2	**Nenana**	82.09	10	P	**P**	09 30 56.0	-0.3		
	baz=203,SNR=14								
RIDG	**Independent Ri**	82.11	12	IAMs_20	IAMs_20	09 59 40.7			
	comp=Z,588nm,21.0s								
RIDG	**Independent Ri**	82.11	12	P	**P**	09 30 56.4	-0.1		
	baz=207,SNR=7.7								
WRH	**Wood River Hil**	82.15	11	IAmb	IAmb	09 31 15.3			
	comp=Z,55nm,1.2s								
WRH				IAMs_20	IAMs_20	10 00 03.7			
	comp=Z,509nm,22.0s								
L27K	**Beaver Creek,**	82.16	14	P	**P**	09 30 56.1	-0.6		
	baz=210								
I21K	**Tanana**	82.17	9	P	**P**	09 30 56.7	+0.1		
	baz=200,SNR=6.9								
YPP	**Pitchstone Pla**	82.21	40	IAmb	IAmb	09 31 01.3			
	comp=Z,59nm,1.6s								
MLY	**Manley**	82.22	9	P	**P**	09 30 56.6	-0.4		
	baz=202,SNR=24								
BW06	**Boulder Array**	82.25	42	IAmb	IAmb	09 30 59.3			
	comp=Z,45nm,1.2s								
BW06				IAMs_20	IAMs_20	10 00 43.8			
	comp=Z,612nm,20.0s								
BW06	**Boulder Array**	82.25	42	P	**P**	09 30 57.8	-0.1		
	baz=240,SNR=25								
PD31	**Pinedale Array**	82.25	42	IAmb	IAmb	09 30 59.3			
	comp=Z,45nm,1.3s								
PDAR	**Pinedale Array**	82.25	42	P	**P**	09 30 57.9	0.0		
	comp=Z,15nm,1.0s,baz=211,slow=2.6,SNR=73								
PDAR				LR	LR	10 00 54.6			
	comp=Z,497nm,20.6s,baz=232,slow=31								
	comp=Z,15nm,1.0s								
P33M	**Teslin, Yukon**	82.26	19	P	**P**	09 30 57.7	+0.4		
	baz=219								
SMCO	**Snowmass**	82.26	46	IAmb	IAmb	09 31 00.4			
	comp=Z,70nm,1.2s								
HDA	**Harding Lake**	82.30	11	P	**P**	09 30 56.9	-0.4		
	baz=205,SNR=24								
CCB	**Clear Creek Bu**	82.36	11	IAMs_20	IAMs_20	10 00 10.2			
	comp=Z,516nm,22.0s								
N31M	**Braeburn, Yuko**	82.39	17	P	**P**	09 30 58.6	+0.6		
	baz=216								
BOZ	**Bozeman (W)**	82.39	38	P	**P**	09 30 58.4	-0.1		
BOZ				IAmb	IAmb	09 31 00.6			
	comp=Z,77nm,1.3s								
BOZ				IAMs_20	IAMs_20	10 00 53.4			
	comp=Z,496nm,20.0s								
BOZ	**Bozeman (W)**	82.39	38	P	**P**	09 30 58.4	-0.1		
BOZ				pmax	pmax				
	comp=Z,77nm,1.3s								
BOZ	**Bozeman (W)**	82.39	38	P	**P**	09 30 59.1	+0.5		
	baz=239,SNR=73								
H17A	**Grant Village**	82.42	40	IAmb	IAmb	09 31 01.9			
	comp=Z,39nm,1.2s								
H17A	**Grant Village**	82.42	40	P	**P**	09 30 59.9	+1.1		
	baz=240,SNR=27								
SCRK	**Sand Creek**	82.49	12	IAMs_20	IAMs_20	10 00 26.9			
	comp=Z,439nm,20.0s								
SCRK	**Sand Creek**	82.49	12	P	**P**	09 30 59.2	+0.6		
	baz=208,SNR=14								
H21K	**Melozitna Rive**	82.50	8	P	**P**	09 30 59.5	+1.0		
	baz=200,SNR=9.3								
YNR	**Norris Junctio**	82.52	40	IAmb	IAmb	09 31 03.2			
	comp=Z,76nm,1.4s								
I23K	**Minto, Yukon-K**	82.55	10	IAmb	IAmb	09 31 16.5			
	comp=Z,57nm,1.8s								
I23K				IAMs_20	IAMs_20	10 00 40.4			
	comp=Z,628nm,21.0s								
I23K	**Minto, Yukon-K**	82.55	10	P	**P**	09 30 58.9	+0.3		
	baz=203,SNR=10.0								
TCOL	**CIGO, UAF Yank**	82.55	11	IAmb	IAmb	09 30 59.7			
	comp=Z,28nm,0.9s								
TCOL				IAMs_20	IAMs_20	10 00 50.5			
	comp=Z,527nm,20.0s								
TCOL	**CIGO, UAF Yank**	82.55	11	P	**P**	09 30 58.8	+0.1		
	baz=204,SNR=8.8								
COLA	**College**	82.56	11	P	**P**	09 30 58.3	-0.3		
COLA				IAmb	IAmb	09 30 59.7			
	comp=Z,28nm,0.9s								
COLA	**College**	82.56	11	IAMs_20	IAMs_20	10 00 50.5			
	comp=Z,496nm,20.0s								
COLA	**College**	82.56	11	*d*	*i*P	**P**	09 30 58.2	-0.5	
COLA					pmax	pmax			
	comp=Z,25nm,0.9s								
MDM	**Murphy Dome**	82.57	10	IAmb	IAmb	09 31 16.7			
	comp=Z,60nm,1.6s								
MDM				IAMs_20	IAMs_20	10 00 28.9			
	comp=Z,588nm,21.0s								
IL31		82.64	11	P	**P**	09 30 58.8	-0.3		
IL31				IAmb	IAmb	09 31 17.1			
	comp=Z,69nm,1.9s								
ILAR	**Eielson Array**	82.64	11	P	**P**	09 30 58.7	-0.4		
	comp=Z,3.7nm,0.8s,baz=217,slow=5.7,SNR=32								
ILAR				PP	**PP**	09 34 09.7	+0.4		
	comp=Z,2.2nm,1.2s,baz=216,slow=8.5,SNR=4.1								
ILAR				LR	LR	10 00 50.9			
	comp=Z,160nm,21.7s,baz=198,slow=31								
	comp=Z,3.7nm,0.8s								
SDCO	**Great Sand Dun**	82.65	48	IAmb	IAmb	09 31 02.1			
	comp=Z,40nm,1.3s								
SDCO	**Great Sand Dun**	82.65	48	P	**P**	09 31 00.6	+0.3		
	baz=244								
SDCO	**Great Sand Dun**	82.65	48	P	**P**	09 31 00.5	+0.3		
	baz=244,SNR=38								
J25K	**Salcha River,**	82.78	12	IAmb	IAmb	09 31 18.2			
	comp=Z,76nm,1.9s								
J25K	**Salcha River,**	82.78	12	P	**P**	09 30 59.8	-0.2		
	baz=207,SNR=20								
SEY	**Seymchan**	82.85	345	*ce*	P	**P**	09 31 01.0	+0.7	
SEY					pmax	pmax			
	comp=Z,10.0nm,1.0s								
POKR	**Poker Plat Res**	82.85	11	IAmb	IAmb	09 31 01.4			
	comp=Z,33nm,0.9s								
POKR				IAMs_20	IAMs_20	10 00 46.8			
	comp=Z,486nm,21.0s								
POKR	**Poker Plat Res**	82.85	11	P	**P**	09 31 00.7	+0.4		
	baz=205,SNR=9.6								
WALA	**Waterton Lakes**	82.94	35	P	**P**	09 31 01.0	-0.2		
WALA				IAmb	IAmb	09 31 02.8			
	comp=Z,49nm,1.2s								
K27K	**Chicken**	82.95	13	IAmb	IAmb	09 31 19.9			
	comp=Z,67nm,2.0s								
K27K				IAMs_20	IAMs_20	10 00 59.0			
	comp=Z,432nm,20.0s								
K27K	**Chicken**	82.95	13	P	**P**	09 31 01.7	+0.9		
	baz=210								
M30M	**Minto, Yukon**	83.00	16	P	**P**	09 31 01.2	+0.1		
	baz=215,SNR=7.4								
J26L	**Joseph Creek**	83.04	12	IAmb	IAmb	09 31 20.4			
	comp=Z,91nm,2.0s								
J26L				IAMs_20	IAMs_20	10 00 41.5			
	comp=Z,578nm,20.0s								
J26L	**Joseph Creek**	83.04	12	P	**P**	09 31 02.5	+1.1		
	baz=209,SNR=17								
MSTX	**Muleshoe**	83.07	52	P	**P**	09 31 02.6	+0.3		
	baz=246								
MSTX	**Muleshoe**	83.07	52	P	**P**	09 31 02.4	+0.2		
	baz=246,SNR=26								
H23K	**Yukon River**	83.15	10	IAMs_20	IAMs_20	10 01 32.1			
	comp=Z,402nm,19.0s								
H23K	**Yukon River**	83.15	10	P	**P**	09 31 01.6	-0.2		
	baz=203								
T25A	**Trinidad**	83.17	49	IAmb	IAmb	09 31 04.5			
	comp=Z,42nm,1.3s								
T25A	**Trinidad**	83.17	49	P	**P**	09 31 03.0	+0.2		
	baz=245,SNR=13								
QIZ	**Qiongzhong**	83.30	292	P	**P**	09 31 02.3	-1.3		
QIZ				S	**S**	09 41 20.0	-2.8		
QIZ				LR	LR				
	comp=Z,180nm,15.9s								
QIZ				LR	LR				
	comp=Z,170nm,20.7s								
QIZ				LR	LR				
	comp=Z,210nm,26.3s								
M31M	**Drury Creek, Y**	83.36	17	IAMs_20	IAMs_20	10 00 34.2			
	comp=Z,596nm,20.0s								
M31M	**Drury Creek, Y**	83.36	17	P	**P**	09 31 03.0	0.0		
	baz=217								
H24K	**Noodor Dome**	83.43	10	P	**P**	09 31 02.0	-1.3		
	baz=204,SNR=6.1								
Q24A	**Divide**	83.44	47	P	**P**	09 31 04.8	+0.6		
	baz=244,SNR=19								
ISCO	**Idaho Springs**	83.48	46	IAmb	IAmb	09 31 06.5			
	comp=Z,41nm,1.4s								
ISCO	**Idaho Springs**	83.48	46	P	**P**	09 31 05.0	+0.5		
	baz=244								
ISCO	**Idaho Springs**	83.48	46	P	**P**	09 31 04.9	+0.4		
	baz=244,SNR=21								
833A	**Chaparral WMA,**	83.56	58	P	**P**	09 31 04.7	0.0		
833A	**Chaparral WMA,**	83.56	58	P	**P**	09 31 04.8	0.0		
	baz=248								
833A	**Chaparral WMA,**	83.56	58	P	**P**	09 31 04.9	+0.2		
	baz=248								
RLMT	**Red Lodge**	83.59	40	IAmb	IAmb	09 31 07.0			
	comp=Z,53nm,1.2s								
RLMT				IAMs_20	IAMs_20	10 00 36.2			
	comp=Z,433nm,20.0s								
RLMT	**Red Lodge**	83.59	40	P	**P**	09 31 05.6	+0.8		
	baz=240,SNR=28								
DAWY	**Dawson**	83.59	14	P	**P**	09 31 04.7	+0.5		
DAWY	**Dawson**	83.59	14	P	**P**	09 31 04.8	+0.6		
	baz=213,SNR=17								
CMIG	**Matias Romero**	83.67	70	LR	LR	09 59 47.5			
	comp=Z,469nm,20.6s,baz=244,slow=30								
FARO	**Faro, Yukon**	83.68	18	P	**P**	09 31 04.6	0.0		
	baz=218								
BELA	**Belgrano 2**	83.70	172	P	**P**	09 31 05.4	+0.8		
N23A	**Red Feather La**	83.75	45	IAmb	IAmb	09 31 07.7			
	comp=Z,54nm,1.2s								
N23A	**Red Feather La**	83.75	45	P	**P**	09 31 05.6	-0.2		
	baz=243,SNR=24								
PMSA	**Palmer Station**	83.81	156	LR	LR	10 02 08.6			
	comp=Z,69nm,18.5s,baz=250,slow=31								
JCT	**Junction City**	84.03	56	P	**P**	09 31 06.2	-0.9		
JCT				IAMs_20	IAMs_20	10 01 15.6			
	comp=Z,382nm,20.0s								
JCT	**Junction City**	84.03	56	P	**P**	09 31 06.3	-0.9		
JCT				pmax	pmax				
	comp=Z,12nm,1.2s								
JCT	**Junction City**	84.03	56	P	**P**	09 31 06.7	-0.4		
	baz=248								
JCT	**Junction City**	84.03	56	P	**P**	09 31 06.8	-0.4		
	baz=248								
K22A	**Casper**	84.16	43	P	**P**	09 31 07.9	+0.2		
	baz=243								
K22A	**Casper**	84.16	43	P	**P**	09 31 07.9	+0.2		
	baz=243,SNR=13								
PHWY	**Pilot Hill**	84.26	44	IAmb	IAmb	09 31 09.8			
	comp=Z,27nm,1.2s								
PHWY				IAMs_20	IAMs_20	10 01 11.5			
	comp=Z,400nm,20.0s								
AMTX	**Amarillo**	84.26	52	P	**P**	09 31 08.1	-0.2		
AMTX				IAMs_20	IAMs_20	10 02 32.3			
	comp=Z,496nm,20.0s								
AMTX	**Amarillo**	84.26	52	P	**P**	09 31 08.5	+0.2		
	baz=247								
AMTX	**Amarillo**	84.26	52	P	**P**	09 31 08.3	0.0		
	baz=247								
COLD	**Coldfoot**	84.35	9	IAmb	IAmb	09 31 27.3			
	comp=Z,31nm,1.4s								
COLD	**Coldfoot**	84.35	9	P	**P**	09 31 08.9	+1.0		
	baz=202,SNR=12								
MMPY	**Shadon Lake,**	84.60	18	P	**P**	09 31 09.9	+0.6		
	baz=220,SNR=11								
TGTN	**Hyland Airport**	84.71	20	P	**P**	09 31 10.4	+0.5		
	baz=223								
EGMT	**Eagleton**	84.74	37	P	**P**	09 31 10.4	-0.1		
EGMT				IAMs_20	IAMs_20	10 02 53.3			
	comp=Z,529nm,20.0s								
EGMT	**Eagleton**	84.74	37	P	**P**	09 31 10.6	+0.1		
	baz=240,SNR=27								
H03S2	**Juan Fernandez**	84.80	124	T	T	11 05 45.8			
	SNR=30								
BILL	**Bilibino**	84.81	352	P	**P**	09 31 10.4	+0.2		
BILL	**Bilibino**	84.81	352	*de*	P	**P**	09 31 10.7	+0.5	
BILL				*i*			09 31 28.5		
BILL					*i* S	**S**	09 41 40.8	+4.8	
BILL					*e*SS	**SS**	09 47 11.0	+2.0	
BILL					pmax	pmax			
	comp=Z,18nm,1.7s								
H03S1	**Juan Fernandez**	84.81	124	T	T	11 05 43.7			
	SNR=32								
H03S3	**Juan Fernandez**	84.81	124	T	T	11 05 40.1			
	SNR=24								
I29M	**Ogilvie Camp,**	84.94	14	P	**P**	09 31 10.9	0.0		
	baz=214,SNR=13								
ABTX	**Abilene, Hawle**	84.95	54	P	**P**	09 31 12.1	+0.3		
	baz=248								
ABTX	**Abilene, Hawle**	84.95	54	P	**P**	09 31 11.8	0.0		
	baz=248,SNR=19								
KSCO	**Kaye Shedlock'**	85.23	47	P	**P**	09 31 13.0	-0.1		
	baz=246								
KSCO	**Kaye Shedlock'**	85.23	47	P	**P**	09 31 13.7	+0.5		
	baz=246,SNR=6.1								
USHA	**Ushuaia**	85.53	146	LR	LR	10 00 08.5			
	comp=Z,222nm,20.0s,baz=185,slow=29								
EDM	**Edmonton**	85.54	31	P	**P**	09 31 13.9	-0.3		
EDM	**Edmonton**	85.54	31	P	**P**	09 31 13.9	-0.3		
EDM				pmax	pmax				
	comp=Z,125nm,1.7s								
TOLK	**Toolik Lake Re**	85.75	8	IAmb	IAmb	09 31 33.9			
	comp=Z,30nm,1.4s								
TOLK	**Toolik Lake Re**	85.75	8	P	**P**	09 31 15.8	+0.8		
	baz=203,SNR=5.1								
ZEA	**Zeya**	85.81	329	*e*	P	**P**	09 31 16.5	+1.0	
ZEA					pmax	pmax			
	comp=Z,10.0nm,0.9s								
HNS	**HongShan**	85.87	311	⇓	P	**P**	09 31 18.3	+2.1	
HNS					pmax	pmax			
	comp=Z,16nm,1.2s								
HNS					LR	LR			
	comp=Z,130nm,19.1s								
HNS					LR	LR			
	comp=Z,180nm,21.7s								
BJT	**Baijiatuau**	85.87	313		P	**P**	09 31 16.5	+0.4	
BJT					IAmb	IAmb	09 31 19.0		
	comp=Z,38nm,1.4s								
BJT	**Baijiatuau**	85.87	313		P	**P**	09 31 16.5	+0.4	
BJT					pmax	pmax			
	comp=Z,38nm,1.4s								
BJI	**Beijing**	85.88	313		P	**P**	09 31 17.0	+0.9	
BJI					pP	**sP**	09 31 27.2	-1.0	
BJI					pmax	pmax			
	comp=Z,19nm,1.5s								
BJI					pmax	pmax			
	comp=Z,160nm,3.5s								
435B	**Jarrell**	85.92	57	IAMs_20	IAMs_20	10 01 33.7			
	comp=Z,519nm,21.0s								
435B	**Jarrell**	85.92	57	P	**P**	09 31 16.8	+0.2		
	baz=249								
435B	**Jarrell**	85.92	57	P	**P**	09 31 17.2	+0.6		
	baz=249								
EPYK	**Eagle Plains**	86.14	14	P	**P**	09 31 17.1	+0.2		
EPYK				IAmb	IAmb	09 31 35.6			
	comp=Z,39nm,1.5s								
EPYK	**Eagle Plains**	86.14	14	P	**P**	09 31 17.2	+0.2		
	baz=215,SNR=7.8								
LAO	**LASA Array**	86.20	39	P	**P**	09 31 17.9	+0.2		
LAO	**LASA Array**	86.20	39	P	**P**	09 31 18.7	+1.0		
	baz=243								
LAO	**LASA Array**	86.20	39	P	**P**	09 31 18.5	+0.8		
	baz=243,SNR=16								
WMOK	**Wichita Mounta**	86.41	53	IAMs_20	IAMs_20	10 02 21.3			
	comp=Z,396nm,21.0s								
WMOK	**Wichita Mounta**	86.41	53	P	**P**	09 31 18.9	-0.1		
	baz=248								
WMOK	**Wichita Mounta**	86.41	53	P	**P**	09 31 18.8	-0.2		
	baz=248,SNR=7.6								
RSSD	**Black Hills**	86.44	42	P	**P**	09 31 18.2	-0.9		
RSSD				IAmb	IAmb	09 31 20.1			
	comp=Z,44nm,1.7s								
RSSD	**Black Hills**	86.44	42	P	**P**	09 31 18.2	-0.9		
RSSD				pmax	pmax				
	comp=Z,44nm,1.7s								
RSSD	**Black Hills**	86.44	42	P	**P**	09 31 18.5	-0.7		
	baz=244								
RSSD	**Black Hills**	86.44	42	P	**P**	09 31 18.3	-0.9		
	baz=244								
OGNE	**Ogallala**	86.44	46	IAMs_20	IAMs_20	10 02 05.6			
	comp=Z,440nm,22.0s								
WHTX	**Lake Whitney,**	86.45	56	P	**P**	09 31 19.0	-0.1		
WHTX	**Lake Whitney,**	86.45	56	P	**P**	09 31 19.4	+0.2		
	baz=249								
WHTX	**Lake Whitney,**	86.45	56	P	**P**	09 31 19.2	0.0		
	baz=249								
HKT	**Hockley**	87.05	58	IAMs_20	IAMs_20	10 02 06.9			
	comp=Z,418nm,21.0s								
HKT	**Hockley**	87.05	58	⇑	*e*P	**P**	09 31 22.9	+0.8	
HKT					pmax	pmax			
	comp=Z,30nm,1.7s								
Z35A	**Perchaven, San**	87.08	54	P	**P**	09 31 22.1	-0.2		
	baz=249								
CBKS	**Cedar Bluff**	87.22	49	P	**P**	09 31 23.2	+0.3		
	baz=248								
CBKS	**Cedar Bluff**	87.22	49	P	**P**	09 31 22.4	-0.5		
	baz=248								
IPM	**Ipoh**	87.26	275	IAmb	IAmb	09 31 25.7			
	comp=Z,20nm,0.8s								
XLT	**XiLinHaoTe**	87.53	317	⇓	*i*P	**P**	09 31 25.9	+1.6	
XLT					pP	sP	09 31 35.1	-1.3	
XLT					sP	pP	09 31 41.5	+8.3	
XLT					SKS	S	09 41 50.3	-14	
XLT					S	**ScS**	**09 42 06.2**	**-4.5**	
XLT					pmax	pmax			
	comp=Z,20nm,1.0s								
XLT					pmax	pmax			
	comp=Z,140nm,4.6s								
XLT					LR	LR			
	comp=Z,140nm,19.6s								
XLT					LR	LR			
	comp=Z,140nm,17.7s								
HIA	**Hailar**	87.59	323		P	**P**	09 31 24.6	+0.3	
HIA	**Hailar**	87.59	323	*de*	P	**P**	09 31 26.0	+1.6	
HIA					pmax	pmax			
	comp=Z,10.0nm,1.6s								
MAW	**Mawson**	87.65	199		P	**P**	09 31 26.1	+1.8	
	comp=Z,22nm,0.7s,baz=136,slow=6.2,SNR=61								
MAW					LR	LR	10 10 20.9		
	comp=Z,219nm,18.9s,baz=117,slow=35								
	comp=Z,22nm,0.7s								
MAW	**Mawson**	87.65	199		P	**P**	09 31 26.1	+1.8	
	baz=88,SNR=50								
MAW	**Mawson**	87.65	199		P	**P**	09 31 25.8	+1.5	
MAW	**Mawson**	87.65	199		P	**P**	09 31 25.8	+1.5	
MAW					pmax	pmax			
	comp=Z,20nm,1.4s								
237A	**Washetta, Mont**	87.76	56		P	**P**	09 31 26.4	+0.8	
	baz=250								
R32A	**Long Quarter,**	87.82	49		IAmb	IAmb	09 31 27.5		
	comp=Z,30nm,1.1s								
R32A	**Long Quarter,**	87.82	49		P	**P**	09 31 25.2	-0.6	
	baz=248								
LR03	**Panguipulli**	88.17	131		P	**P**	09 31 28.2	+0.7	
LR03					IAmb	IAmb	09 31 51.2		
	comp=Z,22nm,1.2s								
PETF	**Flores**	88.19	72		P	**P**	09 31 26.8	-1.1	
PETF					IAmb	IAmb	09 31 28.8		
	comp=Z,21nm,1.3s								
DGMT	**Dagmar**	88.23	38		IAmb	IAmb	09 31 29.1		
	comp=Z,29nm,1.1s								
DGMT	**Dagmar**	88.23	38		P	**P**	09 31 28.1	+0.6	
	baz=244								
DGMT	**Dagmar**	88.23	38		P	**P**	09 31 27.9	+0.4	
	baz=244								
INK	**Inuvik**	88.44	14		LR	LR	10 03 49.3		
	comp=Z,324nm,21.8s,baz=191,slow=31								
INK	**Inuvik**	88.44	14		P	**P**	09 31 27.3	-0.6	
INK	**Inuvik**	88.44	14		P	**P**	09 31 27.3	-0.6	
INK					pmax	pmax			
	comp=Z,12nm,1.2s								
INK	**Inuvik**	88.44	14		P	**P**	09 31 27.7	-0.2	
	baz=218								
GYA	**Guiyang**	88.44	298	⇓	P	**P**	09 31 29.2	+0.1	
GYA					pmax	pmax			
	comp=Z,13nm,1.2s								
NATX	**Nacogdoches**	88.60	57		IAMs_20	IAMs_20	10 03 17.8		
	comp=Z,476nm,21.0s								
NATX	**Nacogdoches**	88.60	57		P	**P**	09 31 30.9	+1.4	
	baz=251								
NATX	**Nacogdoches**	88.60	57		P	**P**	09 31 30.1	+0.5	
	baz=251								
PSI	**Prapat**	88.83	273		LR	LR	10 13 15.3		
	comp=Z,189nm,18.5s,baz=123,slow=37								
Z38A	**Mt. Pleasant**	88.84	55		IAmb	IAmb	09 31 32.8		
	comp=Z,43nm,1.4s								
Z38A	**Mt. Pleasant**	88.84	55		P	**P**	09 31 31.4	+0.8	
	baz=251								
T35B	**Sooner Cattle**	88.91	51		P	**P**	09 31 30.4	-0.5	
	baz=250								
PLCA	**Paso Flores**	89.10	132		LR	LR	10 02 29.1		
	comp=Z,204nm,21.7s,baz=253,slow=30								
TUL1	**Leonard**	89.11	52		IAMs_20	IAMs_20	10 03 26.3		
	comp=Z,380nm,21.0s								
TUL1	**Leonard**	89.11	52		P	**P**	09 31 31.6	-0.2	
	baz=250								
TUL1	**Leonard**	89.11	52		P	**P**	09 31 31.2	-0.6	
	baz=250								
BGNE	**Belgrade**	89.32	47		P	**P**	09 31 33.4	+0.7	
	baz=248								
K31A	**O'Neill**	89.36	45		IAmb	IAmb	09 31 35.6		
	comp=Z,42nm,1.2s								
HHC	**Hu-ho-hao-te**	89.44	313		*e*P	**P**	09 31 34.6	+1.2	
HHC					PP	**PP**	**09 35 08.1**	**+3.1**	
HHC					S	**S**	**09 42 20.3**	**-1.7**	
HHC					pmax	pmax			
	comp=Z,46nm,1.4s								
HHC					pmax	pmax			
	comp=Z,120nm,8.6s								
HHC					LR	LR			
	comp=

comp=Z,352nm,21.7s,baz=302,slow=28
JTS Las Juntas de 90.94 80 IAMs_20 IAMs_20 10 01 22.5
comp=Z,450nm,22.0s
JTS Las Juntas de 90.94 80 *ce*P P 09 31 42.5 +1.6
JTS pmax pmax
comp=Z,40nm,1.3s
ECSD EROS Data Cent 91.22 45 P P 09 31 40.3 -1.2
baz=250
ECSD EROS Data Cent 91.22 45 P P 09 31 40.4 -1.1
baz=250
UALR University of 91.40 54 P P 09 31 42.6 0.0
UALR IAmb IAmb 09 31 44.2
comp=Z,26nm,1.4s
U40A Yellville 91.50 53 IAmb IAmb 09 31 44.6
comp=Z,20nm,1.4s
U40A IAMs_20 IAMs_20 10 06 29.7
comp=Z,352nm,19.0s
U40A Yellville 91.50 53 P P 09 31 41.6 -1.4
baz=252
U40A P P 09 31 41.6 -1.4
baz=252
U40A Yellville 91.50 53 P P 09 31 41.7 -1.3
baz=252
143A Socs Landing, 91.52 57 P P 09 31 44.2 +1.1
baz=252
S39A Bolivar 91.56 51 P P 09 31 42.1 -1.2
baz=252
W41B Gary Mavity, V 91.60 54 IAmb IAmb 09 31 45.1
comp=Z,25nm,1.3s
W41B Gary Mavity, V 91.60 54 P P 09 31 44.0 +0.6
baz=252
W41B Gary Mavity, V 91.60 54 P P 09 31 43.6 +0.2
baz=252
WHAR Wooly Hollow 91.61 54 IAmb IAmb 09 31 44.8
comp=Z,28nm,1.3s
HDC Heredia 91.66 80 IAMs_20 IAMs_20 10 01 52.7
comp=Z,336nm,19.0s
FCAR Ozark Folk Cen 91.92 53 P P 09 31 44.4 -0.5
FCAR IAmb IAmb 09 31 46.6
comp=Z,24nm,1.4s
P38A Dawn 92.02 49 IAmb IAmb 09 31 46.6
comp=Z,20nm,1.5s
VBMS Vicksburg 92.09 57 P P 09 31 47.0 +1.3
baz=253
MGMO Mountain Grove 92.19 52 IAmb IAmb 09 31 47.2
comp=Z,31nm,1.2s
TROLL Troll, Antarti 92.50 179 P P 09 31 48.7 +1.6
R40A Maddies Statio 92.54 51 IAmb IAmb 09 31 48.5
comp=Z,30nm,1.2s
R40A Maddies Statio 92.54 51 P P 09 31 47.4 -0.4
baz=252
ATAH Atahualpa 92.57 98 LR LR 10 03 21.8
comp=Z,520nm,21.4s,baz=252,slow=29
VNA3 Neumayer Olymp 92.57 175 P P 09 31 48.5 +1.1
SNAA Sanae 92.63 177 P P 09 31 48.4 +0.7
SNAA Sanae 92.63 177 LR LR 10 08 59.6
comp=Z,99nm,19.1s,baz=139,slow=33
SNAA Sanae 92.63 177 P P 09 31 48.7 +1.0
SNAA Sanae 92.63 177 *de*P P 09 31 48.9 +1.2
SNAA pmax pmax
comp=Z,6.0nm,1.0s
PZH PanZhiHua 92.67 297 P P 09 31 50.7 +1.9
PZH S S 09 42 49.6 -2.6
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,90nm,4.7s
PZH LR LR
comp=Z,640nm,19.6s
PZH LR LR
comp=Z,580nm,18.6s
PZH LR LR
comp=Z,620nm,19.1s
NNA Nana 92.69 103 LR LR 10 03 19.5
comp=Z,113nm,21.9s,baz=258,slow=29
LCAR Lake Charles 92.72 53 IAmb IAmb 09 31 49.4
comp=Z,20nm,1.2s
SCIA State Center 92.97 47 P P 09 31 49.5 -0.1
baz=252
CMAR Chiang Mai Arr 93.00 288 P P 09 31 51.4 +1.0
comp=Z,1.0nm,0.3s,baz=106,slow=2.4,SNR=12
CMAR LR LR 10 09 02.1
comp=Z,94nm,22.0s,baz=95,slow=33
comp=Z,1.0nm,0.3s
CMAR Chiang Mai Arr 93.00 288 *i* P P 09 31 51.9 +1.6
CMAR pmax pmax
comp=Z,1.0nm,0.3s
VNA2 Neumayer--Watz 93.07 175 P P 09 31 51.0 +1.3
baz=181,slow=2.9
A36M Sachs Harbour 93.08 13 IAMs_20 IAMs_20 10 08 21.7
comp=Z,356nm,19.0s
CCM Cathedral Cave 93.24 52 P P 09 31 49.9 -1.1
CCM Cathedral Cave 93.24 52 IAMs_20 IAMs_20 10 07 16.6
comp=Z,420nm,20.0s
CCM Cathedral Cave 93.24 52 P P 09 31 49.9 -1.1
CCM pmax pmax
comp=Z,13nm,1.3s
CCM Cathedral Cave 93.24 52 P P 09 31 49.8 -1.1
baz=253
VNA1 Neumayer--Stat 93.27 175 P P 09 31 51.9 +1.4
AGMN Agassiz Nation 93.28 41 IAmb IAmb 09 31 51.0
comp=Z,36nm,1.8s
AGMN Agassiz Nation 93.28 41 P P 09 31 49.3 -1.6
baz=250
LZH Lanzhou 93.63 306 *e*P P 09 31 54.9 +1.8
LZH pmax pmax
comp=Z,19nm,1.1s
LZH LR LR
comp=Z,140nm,16.4s
LZH LR LR
comp=Z,140nm,17.2s
LZH LR LR
comp=Z,150nm,16.7s
OXF Oxford 93.64 55 IAMs_20 IAMs_20 10 07 06.5
comp=Z,465nm,21.0s
OXF Oxford 93.64 55 P P 09 31 49.3 -3.5
baz=254
FVM French Village 93.84 52 IAmb IAmb 09 31 54.5
comp=Z,26nm,1.3s
FVM French Village 93.84 52 P P 09 31 53.9 +0.1
baz=253
ULM Lac du Bonnet 93.93 39 P P 09 31 52.5 -1.4
comp=Z,1.3nm,0.4s,baz=244,slow=3.8,SNR=6.2
ULM LR LR 10 07 11.4
comp=Z,534nm,21.9s,baz=254,slow=31
comp=Z,1.3nm,0.4s
ULM Lac du Bonnet 93.93 39 P P 09 31 52.7 -1.2
ULM IAmb IAmb 09 31 54.0
comp=Z,36nm,1.8s
W45A Hickory Valley 93.99 55 IAmb IAmb 09 31 55.5
comp=Z,25nm,1.1s
W45A Hickory Valley 93.99 55 P P 09 31 54.8 +0.3
baz=254
SPMN Marine on St. 94.28 44 IAmb IAmb 09 31 56.3
comp=Z,20nm,1.2s
SPMN Marine on St. 94.28 44 P P 09 31 55.1 -0.6
baz=252
SPMN Marine on St. 94.28 44 P P 09 31 55.0 -0.6
baz=252
N41A Harden Midland 94.31 49 IAmb IAmb 09 31 56.4
comp=Z,25nm,1.1s
N41A Harden Midland 94.31 49 P P 09 31 55.4 -0.4
baz=253
L40A Anamosa 94.43 48 IAmb IAmb 09 31 56.9
comp=Z,30nm,1.2s
PLAL Pickwick Lake 94.82 55 IAMs_20 IAMs_20 10 07 41.9
comp=Z,331nm,20.0s
ULN Ulaanbaatar 94.83 318 ⇓ *e*P P 09 31 59.4 +1.1
ULN pmax pmax
comp=Z,7.0nm,2.5s
P43A Skaggs, Pawnee 94.98 50 IAmb IAmb 09 31 59.8
comp=Z,31nm,1.4s
SONM Songino Array 95.25 318 P P 09 31 59.3 -0.8
SONM Songino Array 95.25 318 P P 09 31 59.3 -0.8
SONM pmax pmax
comp=Z,40nm,1.0s
WVT Waverly 95.32 54 P P 09 31 60.0 -0.6
baz=255
TIXI Tiksi 95.34 344 ⇓ *e*P P 09 32 00.5 +0.7
TIXI pmax pmax
comp=Z,4.0nm,1.7s
JFWS Jewell Farm 95.37 47 IAmb IAmb 09 32 00.9
comp=Z,20nm,1.1s
JFWS Jewell Farm 95.37 47 P P 09 31 59.5 -1.1
baz=254
JFWS Jewell Farm 95.37 47 P P 09 31 59.4 -1.2
baz=254

I40A Norwalk 95.38 46 P P 09 31 59.9 -0.8
I40A IAmb IAmb 09 32 00.9
comp=Z,31nm,1.4s
HDIL Hopedale 95.40 50 P P 09 31 59.4 -1.4
baz=254
EYMN Ely 95.95 42 IAMs_20 IAMs_20 10 09 57.3
comp=Z,484nm,21.0s
EYMN Ely 95.95 42 P P 09 32 02.4 -0.8
baz=253
LVC Limon Verde 96.62 116 LR LR 10 06 45.5
comp=Z,104nm,21.5s,baz=247,slow=30
U49A Red Boiling Sp 97.02 54 P P 09 32 07.1 -1.2
baz=256
GTA Gaotai 97.59 309 *e*P Pdif 09 32 11.8 +0.8
GTA pP sP 09 32 29.2 +6.1
GTA pmax pmax
comp=Z,5.0nm,0.9s
GTA pmax pmax
comp=Z,64nm,5.1s
GTA LR LR
comp=Z,240nm,16.4s
GTA LR LR
comp=Z,170nm,18.2s
GTA LR LR
comp=Z,170nm,16.7s
TKL Tuckaleechee C 98.40 55 LR LR 10 09 36.1
comp=Z,394nm,21.9s,baz=255,slow=31
E43A Lone Tree Farm 98.50 44 IAmb IAmb 09 32 15.2
comp=Z,16nm,1.2s
P49A Miami Univ. Ec 98.55 51 IAMs_20 IAMs_20 10 08 02.1
comp=Z,384nm,21.0s
LPAZ La Paz 99.42 110 LR LR 10 07 30.2
comp=Z,125nm,22.0s,baz=253,slow=30
ROSC El Rosal 99.70 88 LR LR 10 07 36.0
comp=Z,270nm,21.8s,baz=256,slow=30
ACSO Alum Creek Sta 100.00 51 IAMs_20 IAMs_20 10 12 59.6
comp=Z,354nm,20.0s
GOMU GeErMu 100.75 305 P Pdif 09 32 26.8 +1.3
GOMU PP PP 09 36 30.8 -2.6
GOMU LR LR
comp=Z,69nm,12.2s
GOMU LR LR
comp=Z,79nm,12.8s
GOMU LR LR
comp=Z,85nm,12.0s
O53A New Philadelph 101.33 51 IAMs_20 IAMs_20 10 10 59.8
comp=Z,401nm,20.0s
BLA Blacksburg 101.37 54 IAMs_20 IAMs_20 10 11 38.0
comp=Z,468nm,21.0s
SSPA Standing Stone 103.90 51 IAMs_20 IAMs_20 10 12 16.7
comp=Z,433nm,22.0s
MKAR Makanchi Array 111.23 315 PKiKP PKiKP 09 37 09.3 -0.8
comp=Z,0.6nm,0.7s,baz=78,slow=2.7,SNR=5.8
MKAR Makanchi Array 111.23 315 PKiKP 09 37 10.2 +0.1
HYBB Hyderabad (bro 111.70 283 *e*PKiKP PKiKP 09 37 11.4 -0.4
HYBB *ep*PKiKP *p*PKiKP 09 37 19.5 -1.5
HYBB *e*PP PP 09 37 52.5 -1.7
HYBB *e*SKSac SKSac 09 43 48.8 -3.0
HYBB *e*SKKSac SKKSac 09 44 51.5 -3.6
SMRT St. Maarten 113.33 77 IAMs_20 IAMs_20 10 12 59.6
comp=Z,251nm,21.0s
KURK Kurchatov 113.54 319 ⇓ *i*PKiKP PKiKP 09 37 15.5 +1.2
KURK pmax pmax
comp=Z,5.0nm,1.7s
BRVK Borovoye 118.34 322 PKiKP 09 37 23.8 +0.3
BRVK Borovoye 118.34 322 PKiKP PKiKP 09 37 23.8 +0.3
ARU Arti 123.73 328 *i* PKiKP PKiKP 09 37 34.6 +0.6
ARU 09 39 20.1
ARU 09 44 46.1
ARCES ARCESS Array B 124.91 352 PKP PKPdf 09 37 35.4 -0.2
comp=Z,1.9nm,0.5s,baz=344,slow=2.4,SNR=17
ABKAR Akbulak array 125.62 320 PKiKP 09 37 38.8 +0.9
KIRV Kirov 126.91 334 *c i*PKiKP PKiKP 09 37 41.0 +0.8
FINES FINESS Array B 132.26 348 PKP PKPdf 09 37 49.9 +0.1
comp=Z,4.1nm,0.9s,baz=36,slow=2.9,SNR=14
BOSA Boshof 132.55 202 PKP PKiKP 09 37 54.5 +1.7
comp=Z,2.7nm,0.9s,baz=164,slow=8.3,SNR=3.3
NACGM Naroch 137.93 343 ⇑ *e*PKP PKiKP 09 38 02.4 -0.2
baz=29
KIV Kislovodsk 138.60 320 *i* PKiKP PKiKP 09 38 04.1 -0.4
KIV pmax pmax
comp=Z,5.0nm,1.1s
AKASG Malin Array Be 140.70 338 PKhKP PKPpre 09 38 01.4
comp=Z,1.2nm,0.7s,baz=30,slow=4.0,SNR=6.5
AKASG Malin Array Be 140.70 338 PKPdf 09 38 06.8 +1.0
AKASG Malin Array Be 140.70 338 PKiKP PKPdf 09 38 06.8 +1.0
AKBB Malin Array Si 140.70 338 ⇑ *i*PKiKP PKiKP 09 38 08.6 +0.2
LSZ Lusaka 142.77 215 PKPdf 09 38 07.4 -3.3
LSZ Lusaka 142.77 215 PKiKP PKPdf 09 38 07.4 -3.3
RAYN Ar Rayn 142.92 288 PKPdf 09 38 08.3 -2.3
RAYN Ar Rayn 142.92 288 ⇑ PKiKP PKPdf 09 38 07.3 -3.4
OJC Ojcow 143.99 346 *e*PKP PKPbc 09 38 10.2 +0.6
OJC Ojcow 143.99 346 PKPbc 09 38 10.3 +0.7
OJC Ojcow 143.99 346 PKiKP PKPbc 09 38 10.3 +0.8
KSP Ksiaz 144.10 350 *e*PKP PKPbc 09 38 09.8 0.0
CLL Collm 144.11 353 *i* PKiKP PKPdf 09 38 11.7 -0.1
CLL *e* 09 38 17.0
CLL pmax pmax
comp=Z,7.0nm,0.9s
CLL Collm 144.11 353 *i* PKPpre PKPpre 09 38 10.5
CLL *i* PKPdf PKPdf 09 38 11.7 -0.1
comp=Z,7.0nm,0.9s
CLL *e*PKiKP PKiKP 09 38 17.0 +1.6
CLL *ep*PKiKP pPKiKP 09 38 26.0 +1.4
CLL *e*PP PP 09 41 30.0 +4.7
CLL Lm MLR 10 46 00.0
comp=Z,100nm,20.0s
CHVC Chvalec 144.39 350 *e*PKP PKPdf 09 38 14.1 +1.7
OSTC Ostas 144.39 350 *e*PKP PKPbc 09 38 11.5 +0.7
KIBK Kibwezi 144.41 243 PKPdf 09 38 13.4 -0.2
BRG Berggiesshubel 144.42 352 *e*PKP PKiKP 09 38 15.1 -1.0
BRG Amp 09 38 17.0
comp=Z,4.1nm,1.0s
BRG Berggiesshubel 144.42 352 *e*PKiKP PKiKP 09 38 15.0 -1.0
BRG pmax pmax
comp=Z,4.0nm,1.0s
UPC Upice 144.47 350 AMS AMS 10 45 10.0
comp=Z,100nm,19.9s
KOLS Kolonicke sedl 144.52 343 *e*PKiKP PKPdf 09 38 12.8 +0.1
KOLS Kolonicke sedl 144.52 343 *e*PKP PKPdf 09 38 12.8 +0.1
DPC Dobruska-Polom 144.57 350 *e*PKiKP PKPbc 09 38 11.9 +0.5
DPC *e* 09 38 27.9
DPC Dobruska-Polom 144.57 350 *e*PKP PKPbc 09 38 11.9 +0.5
DPC *ex* x 09 38 27.9
NIE Niedzica 144.61 345 *e*PKP PKPdf 09 38 12.7 -0.1
BUR08 Bucovina Ar. S 144.71 338 PKPdf 09 38 13.2 +0.1
BURAR Bucovina Array 144.72 338 ⇓ P PKPdf 09 38 13.0 -0.2
BURAR Bucovina Array 144.72 338 PKPbc 09 38 12.4 +0.3
BURAR Bucovina Array 144.72 338 ⇓ PKiKP PKPdf 09 38 13.0 -0.2
KRLC Kraliky 144.75 349 *e*PKiKP PKPdf 09 38 12.6 -0.5
KRLC Kraliky 144.75 349 *e*PKP PKPdf 09 38 12.6 -0.5
CRVS Cervenica-Dubn 144.77 343 *e*PKiKP PKPdf 09 38 12.8 -0.3
CRVS Cervenica-Dubn 144.77 343 *e*PKP PKPdf 09 38 12.8 -0.3
UZH Uzhgorod 144.78 342 *e*PKiKP PKPab 09 38 10.5 -1.5
UZH *i* 09 38 18.3
MORC Moravsky Berou 144.89 348 ⇓ P PKPdf 09 38 13.8 +0.5
MORC Moravsky Berou 144.89 348 ⇓ PKiKP PKPdf 09 38 13.8 +0.5
MORC Moravsky Berou 144.89 348 *e*PKP PKPbc 09 38 12.5 0.0
BIZ Bicaz 144.97 337 ⇑ P PKPab 09 38 09.9 -2.8
LANS Liptovska Anna 145.06 346 *e*PKiKP PKPdf 09 38 14.8 +1.2
LANS Liptovska Anna 145.06 346 *e*PKP PKPdf 09 38 14.8 +1.2
MEM Membach 145.13 1 *d*PKP PKPab 09 38 13.2 0.0
BSTI Sart Tilman 145.15 2 *d*PKPdf PKPdf 09 38 13.6 0.0
BTNL Ternell 145.16 1 *d*PKP PKPab 09 38 13.5 +0.2
SNF Seneffe 145.17 3 *d*PKP PKPdf 09 38 13.7 +0.1
PRU Pruhonice 145.21 351 *e*PKiKP PKPdf 09 38 13.9 +0.1
PRU *e* 09 38 30.1
PRU MLR MLR
comp=Z,100nm,19.7s
PRU Pruhonice 145.21 351 *e*PKP PKPdf 09 38 13.9 +0.1
PRU *ex* x 09 38 30.1
PRU AMS AMS 10 46 20.0
comp=Z,100nm,19.7s
MAUC Maruska 145.23 347 *e*PKP PKPdf 09 38 14.4 +0.5
NKC Novy Kostel 145.23 354 *e*PKiKP PKPdf 09 38 14.1 +0.2
NKC Novy Kostel 145.23 354 *e*PKP PKPdf 09 38 14.1 +0.2
BMR Baia Mare 145.26 340 ⇑ P PKPdf 09 38 14.5 +0.5
BMR Baia Mare 145.26 340 ⇑ PKiKP PKPdf 09 38 14.5 +0.5
BGES Gesves 145.33 2 *d*PKP PKPbc 09 38 13.7 -0.1
BHOU Houvegnez 145.39 1 *d*PKP PKPab 09 38 14.5 +0.4
BMRD Maredsous 145.40 2 *d*PKP PKPbc 09 38 13.2 -0.8
KECS Kecovo 145.42 344 *e*PKiKP PKPab 09 38 16.1 +1.8
KECS Kecovo 145.42 344 *e*PKP PKPab 09 38 16.1 +1.8
IZVR Izvoarele 145.44 334 ⇑ P PKPab 09 38 15.9 +1.4

VRAC Vranov 145.53 349 ⇑ P PKPab 09 38 15.2 +0.5
VRAC Vranov 145.53 349 ⇑ PKiKP PKPab 09 38 15.2 +0.5
VRAC Vranov 145.53 349 *e*PKP PKPab 09 38 14.7 0.0
CFR Carcaliu 145.57 333 ⇑ P PKPab 09 38 16.5 +1.5
CFR Carcaliu 145.57 333 ⇑ PKiKP PKPab 09 38 16.5 +1.5
DOU Dourbes 145.60 3 *d*PKP PKPdf 09 38 14.2 -0.3
VRI Vrincioaia 145.61 335 ⇓ P PKPab 09 38 16.1 +1.0
VRI Vrincioaia 145.61 335 ⇓ PKiKP PKPab 09 38 16.2 +1.0
PLOR Plostina 145.66 335 ⇑ P PKPab 09 38 16.5 +1.1
PLOR Plostina 145.66 335 ⇑ PKP2 PKPab 09 38 16.5 +1.1
TPGR Topolog 145.70 332 ⇑ P PKPab 09 38 16.0 +0.4
KMBO Kilima Mbogo 145.71 244 PKPbc PKPab 09 38 17.4 +0.7
comp=Z,9.7nm,0.8s,baz=53,slow=3.8,SNR=22
KMBO Kilima Mbogo 145.71 244 PKP2 PKPab 09 38 18.1 +1.4
KMBO Kilima Mbogo 145.71 244 *ce*PKP2 PKPab 09 38 18.0 +1.2
TREC Trest 145.73 350 AMS AMS 10 46 30.0
comp=Z,200nm,20.5s
JAVC Velka Javorina 145.74 347 *e*PKP PKPab 09 38 16.7 +1.1
KRUC Moravsky 145.80 349 *e*PKP PKPbc 09 38 15.4 +0.1
VYHS Vyhne 145.82 346 *e*PKP2 PKPab 09 38 16.6 +0.7
VYHS Vyhne 145.82 346 *e*PKP PKPab 09 38 16.6 +0.7
COVR Voineasa-Covas 145.84 336 ⇑ P PKPab 09 38 17.1 +1.1
KOLL Kolacno 145.84 346 *e*PKP PKPab 09 38 17.4 +1.5
HARR Harsova 146.05 333 ⇑ P PKiKP 09 38 18.2 -1.3
HARR Harsova 146.05 333 ⇑ PKP2 PKiKP 09 38 18.2 -1.3
DOPR Dopca 146.05 337 ⇑ P PKPab 09 38 17.5 +0.7
WLF Walferdange 146.08 1 *d*PKPdf PKPab 09 38 16.8 0.0
PSZ Piszkesteto 146.10 344 ⇓ P PKiKP 09 38 19.4 -0.3
PSZ Piszkesteto 146.10 344 ⇓ PKP2 PKiKP 09 38 19.4 -0.3
KHC Kasperske Hory 146.18 352 *e*PKP2 PKPab 09 38 16.9 -0.3
KHC MLR MLR
comp=Z,200nm,15.9s
KHC Kasperske Hory 146.18 352 *e*PKP PKPab 09 38 16.9 -0.3
KHC *ep*PKP pPKPdf 09 38 22.5 -2.3
KHC *ex* x 09 38 33.5
KHC AMS AMS 10 47 10.0
comp=Z,200nm,15.9s
MFTR Murfatlar 146.22 332 ⇓ P PKPab 09 38 18.7 +1.2
MLR Muntele Rosu 146.23 336 ⇑ P PKPab 09 38 18.7 +1.0
MLR Muntele Rosu 146.23 336 IAMs_20 IAMs_20 10 47 51.8
comp=Z,178nm,18.0s
MLR Muntele Rosu 146.23 336 ⇑ PKP2 PKPab 09 38 18.7 +1.0
MODS Modra-Piesok 146.28 348 *e*PKP2 PKPab 09 38 17.7 +0.1
MODS Modra-Piesok 146.28 348 *e*PKP PKPab 09 38 17.7 +0.1
DRGR 146.29 340 ⇑ P PKPbc 09 38 17.1 +0.1
DRGR 146.29 340 ⇑ PKP2 PKPbc 09 38 17.1 +0.1
CKRC Cesky Krumlov 146.38 351 *e*PKP PKPbc 09 38 17.4 +0.3
CKRC AMS AMS 10 47 10.0
comp=Z,200nm,16.6s
GERES GERESS Array B 146.44 352 PKPbc PKPbc 09 38 17.8 +0.4
comp=Z,2.0nm,0.8s,baz=38,slow=2.4,SNR=22
BRTR Keskin Array B 146.56 321 PKPbc PKPab 09 38 18.9 -0.3
comp=Z,19nm,1.0s,baz=109,slow=2.0,SNR=41
BRTR Keskin Array B 146.56 321 PKPab 09 38 19.2 0.0
VOIR 146.63 337 ⇑ P PKPab 09 38 19.4 +0.3
VOIR 146.63 337 ⇑ PKP2 PKPab 09 38 19.4 +0.3
ARR Arges 146.84 337 ⇑ P PKPab 09 38 20.3 +0.3
CONA Conrad Observa 146.99 349 *i* P PKPab 09 38 20.1 -0.4
comp=Z,12nm,0.8s,SNR=12
DEV Deva 147.02 339 ⇑ P PKPab 09 38 20.4 -0.1
DEV Deva 147.02 339 ⇑ PKP2 PKPab 09 38 20.4 -0.1
SIRR Siria 147.09 341 ⇓ P PKPab 09 38 21.1 +0.3
RONA Rosalia, Austr 147.12 348 *i* P PKPab 09 38 20.3 -0.6
comp=Z,20nm,1.1s,SNR=9.6
MOA Molln 147.33 351 *i* P PKPbc 09 38 20.6 +0.7
comp=Z,15nm,1.2s,SNR=7.4
MPLH Magyarpolny 147.37 347 PKP PKPab 09 38 21.2 -0.6
BFO Black Forest 147.40 358 PKPab 09 38 21.1 -0.9
BFO Black Forest 147.40 358 PKP2 PKPab 09 38 21.1 -0.9
GZR Gura Zlata 147.49 339 ⇓ P PKPbc 09 38 20.0 -0.5
GZR Gura Zlata 147.49 339 ⇓ PKiKP PKPbc 09 38 20.0 -0.5
CLF Chambon-Foret 147.50 6 PKPab 09 38 21.4 -0.9
BIOA Bad Ischl, Aus 147.58 352 *i* P PKPbc 09 38 20.8 +0.2
comp=Z,7.7nm,0.7s
BZS Buzias 147.68 341 ⇑ P PKiKP 09 38 22.5 -0.4
BZS Buzias 147.68 341 ⇑ PKP2 PKiKP 09 38 22.5 -0.4
ARSA Arzberg 147.70 349 *i* P PKPbc 09 38 21.2 +0.2
comp=Z,5.3nm,0.9s
MORH Mrgy, Hungar 148.00 345 PKP PKPbc 09 38 22.1 +0.4
HERR Herculane 148.07 339 ⇓ P PKiKP 09 38 23.4 -0.3
RETA Reutte 148.10 355 *i* P PKPbc 09 38 22.4 +0.3
comp=Z,11nm,1.1s
WATA Walderalm 148.18 354 *i* P PKPbc 09 38 22.6 +0.3
comp=Z,6.2nm,0.7s
MOTA Moosalm 148.22 355 *i* P PKPbc 09 38 22.9 +0.4
comp=Z,16nm,0.9s
KBA Koelnbreinsper 148.22 352 *i* P PKPbc 09 38 22.5 0.0
comp=Z,6.3nm,0.8s
WTTA Wattenberg 148.25 354 *i* P PKPbc 09 38 23.2 +0.6
comp=Z,11nm,0.8s,SNR=6.7
KOVH Kovagotottos 148.25 345 PKP PKiKP 09 38 23.4 -0.7
BORA Eskisehir 148.32 324 PKPdf PKPdf 09 38 19.1 -0.4
SQTA Sankt Quirin 148.33 354 *i* P PKPbc 09 38 23.2 +0.5
comp=Z,10nm,1.0s
SOKA Soboth 148.34 349 *i* P PKPbc 09 38 22.7 0.0
comp=Z,19nm,1.6s,SNR=9.3
DAVA Damuels 148.37 356 *i* P PKPbc 09 38 23.6 +0.7
comp=Z,14nm,1.0s,SNR=6.0
MDVR Moldovita 148.39 340 ⇑ P PKiKP 09 38 24.1 -0.4
FETA Feichten 148.57 355 *i* P PKPbc 09 38 23.1 -0.3
comp=Z,0.5nm,0.5s,SNR=8.4
OBKA Obir 148.59 350 *i* P PKPbc 09 38 23.2 -0.1
comp=Z,8.6nm,1.6s
MYKA Terra Mystica 148.62 351 *i* P PKPbc 09 38 23.1 -0.3
comp=Z,8.1nm,0.9s
FRGS Fruska Gora 148.65 342 ⇓ P PKiKP 09 38 25.0 0.0
ABTA Abfaltersbach 148.66 353 *i* P PKPbc 09 38 23.5 -0.1
comp=Z,17nm,1.0s,SNR=12
MPEP Malo Peshtene 148.88 336 *i* P PKiKP 09 38 25.3 -0.2
LJU Ljubljana 149.04 350 *e*PKPbc PKiKP 09 38 25.2 -0.5
BLKB Belogradchik 149.06 337 ⇓ P PKPbc 09 38 25.2 +0.6
STAL STALIGIAL 149.11 352 PKPdf 09 38 21.2 +0.7
CEY Cerknica 149.36 350 *i* PKPbc PKiKP 09 38 26.0 -0.4
PGB Panagyurishte 149.39 335 *i* P PKiKP 09 38 26.1 -0.5
SENIN Lac Senin/Sane 149.39 359 PKiKP 09 38 26.7 0.0
BOVS Bovan 149.40 339 ⇑ P PKPbc 09 38 24.5 -0.9
BOJS Bojanci 149.43 348 *i* PKPbc PKiKP 09 38 26.4 -0.1
BOJS *i* 09 38 42.2
CTI Castel Tesino 149.45 354 PKPbc 09 38 25.8 +0.2
CTI Castel Tesino 149.45 354 PKP2 PKPbc 09 38 25.8 +0.2
LODK Lodwar 149.49 249 PKiKP 09 38 28.2 +0.5
CSS Mathiatis 149.51 314 PKPbc PKiKP 09 38 26.6 -0.4
KDZ Kurdzhali 149.58 332 *i* P PKiKP 09 38 26.5 -0.5
VTS Vitosha 149.71 336 ⇓ P PKiKP 09 38 27.5 +0.1
VTS Vitosha 149.71 336 PKiKP 09 38 27.8 +0.3
VTS Vitosha 149.71 336 ⇓ PKP2 PKiKP 09 38 27.5 +0.1
VTS Vitosha 149.71 336 *i* P PKiKP 09 38 27.2 -0.2
MMB Musomiste 150.36 334 *i* P PKPbc 09 38 28.2 +0.3
KKB Krupnik 150.40 335 *i* P PKiKP 09 38 28.4 -0.3
PCAB Cabril 151.00 23 *e*PKPbc PKiKP 09 38 30.0 0.0
PDG Podgorica 151.29 341 ⇑ P PKPbc 09 38 29.7 -0.3
PDG Podgorica 151.29 341 PKiKP 09 38 30.6 +0.2
POLO Lamas de Olo 151.38 24 *e*PKPbc PKiKP 09 38 31.1 +0.3
PBRG Braganca 151.40 22 *e*PKPbc PKPbc 09 38 30.5 +0.2
MBAR Mbarara 151.47 238 *c i*PKiKP PKiKP 09 38 33.5 +1.6
MBAR pmax pmax
comp=Z,10.0nm,1.0s
PVRL Vila Real 151.50 24 *e*PKPbc PKiKP 09 38 31.7 +0.7
MVO Moncorvo 151.85 23 *e*PKPbc PKiKP 09 38 32.0 +0.2
MVO Moncorvo 151.85 23 eLR LR 10 29 39.2
comp=Z,210nm,22.0s
PVIS Viseu 151.91 24 *e*PKPbc PKPbc 09 38 31.3 -0.2
PMOZ Porto Moniz, M 152.25 48 eLR LR 10 30 38.9
comp=Z,250nm,20.0s
MTE Manteigas 152.31 24 *e*PKPbc PKPbc 09 38 32.5 0.0
MTE Manteigas 152.31 24 eLR LR 10 29 58.4
comp=Z,143nm,20.0s
MTE Manteigas 152.31 24 PKPbc PKiKP 09 38 32.8 0.0
MTE PKPab 09 38 43.6 +1.2
NRCA Norcia 152.40 350 PKiKP 09 38 33.1 +0.3
PCBR Castelo Branco 152.82 25 *e*PKPbc PKiKP 09 38 33.8 +0.1
AQU L'Aquila 152.82 349 IAMs_20 IAMs_20 10 46 09.2
comp=Z,207nm,22.0s
PMTG Montargil 153.15 27 *e*PKPbc PKiKP 09 38 34.7 +0.3
PMRV Marv??o 153.20 25 *e*PKPbc PKiKP 09 38 34.7 +0.2
PMRV Marv??o 153.20 25 eLR LR 10 26 42.6
comp=Z,204nm,20.0s
MESJ Messejana 154.16 28 *e*PKPdf PKPdf 09 38 29.6 +1.3
ESDC Sonseca Array 154.25 20 PKP PKPdf 09 38 29.6 +1.1
comp=Z,0.3nm,0.5s,baz=341,slow=3.1,SNR=5.0
ESDC PKPbc PKiKP 09 38 37.0 +0.3
comp=Z,1.2nm,0.7s,baz=334,slow=2.8,SNR=12
ESDC PKPab PKPab 09 38 50.0 -0.4

comp=Z,3.2nm,1.1s,baz=327,slow=3.9,SNR=10
ESDC Sonseca Array 154.25 20 PKPdf **PKPdf 09 38 28.7 +0.2**
ESDC **PKiKP 09 38 36.9 +0.2**
ESDC **PKPab 09 38 51.0 +0.5**
PVAQ Vaqueiros 154.75 28 *e*LR LR 10 30 59.4
comp=Z,292nm,22.0s
TORD Torodi Ar. Bea 174.35 116 PKP **PKPdf 09 38 46.4 -0.4**
comp=Z,0.7nm,0.8s,baz=350,slow=2.4,SNR=4.0
TORD PKPab **PKPab 09 40 18.6 -0.7**
comp=Z,2.5nm,1.1s,baz=254,slow=4.9,SNR=5.1
TORD Torodi Ar. Bea 174.35 116 PKPdf **PKPdf 09 38 46.8 -0.1**
TORD **PKPab 09 40 19.0 -0.4**

KRSZO 04 09:31:39.2, 46.18N×18.29E, h0km, Explosion. GT info : GT2 explosion locality : Koml II., Hungary

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOVH	**Kovagotottos**	**0.16**	**237**	Pg	Pg	09 31 42.9	+0.7
KOVH				Lg	Lg	09 31 46.1	
KOVH	**Kovagotottos**	**0.16**	**237**	P	Pg	09 31 42.9	+0.7
KOVH				S	Sg	09 31 46.1	+1.8
MORH	**Mrgy, Hungar**	**0.25**	**81**	Pg	Pg	09 31 44.7	+0.8
MORH				Lg	Lg	09 31 49.2	
MORH	**Mrgy, Hungar**	**0.25**	**81**	P	Pg	09 31 44.7	+0.8
MORH				S	Sg	09 31 49.2	+2.1

*IDC **04** 09:54:13.8±0.9, 30.08N×57.57E, h0km, mb4.1/20, mbtmp4.2/26, ML3.9/6, MS3.7/23, Error ellipse: s-maj=18.4km s-min=14.3km az=162.0*
*THR **04** 09:54:13.6±0.5, 30.03N×57.66E, h6km±6km, ML4.6*
*TEH **04** 09:54:13.8, 30.06N×57.61E, h8km, ML4.7*
*NEIC **04** 09:54:15.4±1.8, 29.99N±0.04×57.64E±0.09, h10km±1km, Error ellipse: s-maj=13.4km s-min=6.7km az=83.0*
*MOS **04** 09:54:16.7±1.0, 30.18N×57.59E, h25km, mb4.5/16, Error ellipse: s-maj=7.2km s-min=4.9km az=96.8*
*OMAN **04** 09:54:19.3±1.1, 30.06N×57.44E, h10km, mb5.0/23, ml4.5/6, ms3.2/3, Error ellipse: s-maj=9.9km s-min=9.2km az=79.0*
*DSN **04** 09:54:35.8±1.9, 28.99N×57.45E, h10km, ML3.9/7, Error ellipse: s-maj=33.9km s-min=14.4km az=82.0*
ISC 04 09:54:14.9±0.3, 30.02N±0.02×57.56E±0.03, h10km, n293, σ2.508/267, mb4.3/50, MS3.7/22, 12C-6D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHMN	**Cheshme madani**	**0.16**	**187**	*e*Pg	**Pg**	**09 54 18.8**	**+0.2**
TVBK	**TV Kerman**	**0.69**	**268**	*e*Pg	**Pb**	**09 54 29.0**	**-0.3**
TVBK				*e*Sg	**Sb**	**09 54 38.7**	**-0.4**
TVBK				*e*		09 54 43.7	
comp=Z,84μm,0.6s							
KRBR	**Kerman**	**0.69**	**267**	*e*Pg	**Pb**	**09 54 29.0**	**-0.3**
KRBR	**Kerman**	**0.69**	**267**	*e*Pg	**Pb**	**09 54 29.0**	**-0.3**
KRBR				IAML		09 54 43.2	
comp=N,29μm,0.4s							
NGRK	**Negar Kerman**	**0.81**	**243**	*e*Pg	**Pb**	**09 54 31.5**	**+0.2**
NGRK				*e*Sg	**Sb**	**09 54 43.5**	**+1.0**
KHGB	**Koh Gabri**	**1.00**	**291**	*e*Pg	**Pg**	**09 54 33.3**	**-0.9**
KHGB				*e*		09 54 53.5	
comp=Z,31μm,0.4s							
KHNJ	**Kahnooj**	**2.07**	**176**	*e*Pn	**Pb**	**09 54 51.9**	**-0.6**
IBAF	**Bafgh**	**2.32**	**313**	*e*Pn	**Pb**	**09 54 55.2**	**-1.8**
IBAF				*e*		09 54 57.4	
comp=Z,80μm,0.4s							
NHDN	**Nehbandan**	**2.54**	**57**	*e*Pn	**Pb**	**09 54 56.7**	**-4.1**
IKOO	**Kooshah**	**2.70**	**27**	*e*Pn	**Pn**	**09 54 58.6**	**0.0**
IBND	**Bandar-abas**	**2.71**	**200**	*e*		09 55 55.6	
comp=Z,24μm,0.7s							
GENO	**Geno**	**2.88**	**205**	*e*Pn	**Pb**	**09 55 04.7**	**-1.8**
IMEH	**Mehriz**	**2.88**	**299**	*e*Pn	**Pb**	**09 55 03.3**	**-3.3**
IMEH				*e*		09 55 49.1	
comp=Z,37μm,0.5s							
ZHDN	**Zahedan**	**2.89**	**101**	*e*Pn	**Pn**	**09 55 02.0**	**+0.8**
ZHDN				*e*		09 55 51.6	
comp=Z,9μm,1.0s							
ITEG	**Tejag**	**3.04**	**19**	*e*Pn	**Pn**	**09 55 03.3**	**0.0**
TPRV	**Parvadeh(Tabas**	**3.09**	**346**	*e*Pn	**Pn**	**09 55 04.6**	**+0.7**
IDAH	**Dahanechah**	**3.35**	**35**	*e*Pn	**Pn**	**09 55 08.4**	**+0.8**
YZKH	**Yazd**	**3.47**	**314**	*e*Pn	**Pn**	**09 55 11.2**	**+2.1**
YZKH	**Yazd**	**3.47**	**314**	*e*Pn	**Pn**	**09 55 11.2**	**+2.1**
YZKH				IAML		09 56 11.5	
comp=N,1μm,0.4s							
YZKH				IAML		09 56 16.9	
comp=E,1μm,0.4s							
ICHK	**Chekchek**	**3.50**	**310**	*e*Pn	**Pn**	**09 55 11.5**	**+1.9**
TKDS	**Koohdasht(Taba**	**3.60**	**354**	*e*Pn	**Pn**	**09 55 11.7**	**+0.8**
AFRZ	**Afriz**	**3.62**	**20**	Pn	**Pn**	**09 55 10.9**	**-0.2**
AFRZ	**Afriz**	**3.62**	**20**	*e*Pn	**Pn**	**09 55 10.9**	**-0.2**
IMON	**Monand**	**3.64**	**29**	*e*Pn	**Pn**	**09 55 12.3**	**+0.8**
IMON				*e*		09 55 26.5	
comp=Z,20μm,0.4s							
TABS	**Tabas**	**3.64**	**354**	*e*Pn	**Pn**	**09 55 12.3**	**+0.9**
TABS	**Tabas**	**3.64**	**354**	*e*Pn	**Pn**	**09 55 12.3**	**+0.9**
TABS				IAML		09 56 17.2	
comp=E,712nm,0.5s							
TABS				IAML		09 56 18.0	
comp=N,1μm,0.5s							
LAR1	**LAR**	**3.64**	**231**	*e*Pn	**Pn**	**09 55 14.5**	**+3.1**
ISAD	**Sadrabad**	**3.83**	**301**	*e*Pn	**Pn**	**09 55 16.4**	**+2.2**
ISAD				*e*		09 56 21.3	
comp=Z,14μm,0.7s							
TNSJ	**Nastanj**	**4.02**	**349**	*e*Pn	**Pn**	**09 55 17.3**	**+0.7**
JASK	**Jask - Hormozg**	**4.14**	**176**	*e*Pn	**Pn**	**09 55 22.3**	**+4.1**
JASK	**Jask - Hormozg**	**4.14**	**176**	P	Pb	09 55 22.6	-5.3
SNR=22							
SHME	**Shamm**	**4.15**	**198**	P	Pb	09 55 23.1	-4.9
SNR=6.5							
SHME				S	**Sb**	**09 56 14.9**	**-3.2**
BANOM	**Banah**	**4.23**	**196**	P	Pn	09 55 24.1	+4.6
SNR=17							
BANOM				S	**Sb**	**09 56 16.4**	**-4.2**
BANOM	**Banah**	**4.23**	**196**	*i* P	**Pb**	**09 55 26.0**	**-3.4**
SNR=7.9							
QIR1	**Qir**	**4.23**	**250**	*e*Pn	**Pn**	**09 55 22.1**	**+2.6**
SHRT	**Shahrakht**	**4.30**	**32**	*e*Pn	**Pn**	**09 55 21.2**	**+0.7**
SHRT	**Shahrakht**	**4.30**	**32**	*e*Pn	**Pn**	**09 55 21.1**	**+0.7**
SHRT				IAML		09 56 34.1	
comp=E,268nm,0.5s							
SHRT				IAML		09 56 45.2	
comp=N,234nm,0.7s							
ANAR	**Anarak**	**4.55**	**315**	*e*Pn	**Pn**	**09 55 25.9**	**+2.0**
UMQ	**Umm Al-Quwin**	**4.78**	**201**	P	Pb	09 55 33.8	-4.9
MASF	**Masafi**	**4.79**	**195**	P	Pb	09 55 34.6	-4.4
SNR=7.6							
MASF				S	**Sb**	**09 56 30.3**	**-6.5**
IRAM	**Ramesheh**	**4.79**	**293**	*e*Pn	**Pn**	**09 55 30.6**	**+3.2**
NASN	**Na'in**	**4.92**	**306**	*e*Pn	**Pn**	**09 55 31.2**	**+2.0**
NASN	**Na'in**	**4.92**	**306**	*e*Pn	**Pn**	**09 55 31.2**	**+2.0**
NASN				IAML		09 56 57.9	
comp=N,290nm,0.6s							
NASN				IAML		09 56 58.6	
comp=E,278nm,0.6s							
SRVN	**Saravan**	**4.98**	**120**	*e*Pn	**Pn**	**09 55 31.1**	**+1.2**
CHBR	**Chabahar**	**5.11**	**149**	*e*Pn	**Pn**	**09 55 32.2**	**+0.7**
CHBR	**Chabahar**	**5.11**	**149**	*e*Pn	**Pn**	**09 55 32.2**	**+0.7**
UOSS	**Minazif**	**5.19**	**194**	Pn	**Pn**	**09 55 32.9**	**+0.2**
UOSS	**Minazif**	**5.19**	**194**	P	Pb	09 55 39.4	-6.5
UOSS				S	**Sn**	**09 56 39.2**	**+6.5**
KLNJ	**Kolanjah**	**5.24**	**282**	*e*Pn	**Pn**	**09 55 36.0**	**+2.3**
NAZ	**Nazwa, Dubai**	**5.29**	**199**	P	Pn	09 55 39.1	+5.1
SNR=17							
NAZ	**Nazwa, Dubai**	**5.29**	**199**	*i* P	Pb	09 55 42.0	-5.4
SNR=5.4							
IZEF	**Zefreh**	**5.31**	**304**	*e*Pn	**Pn**	**09 55 37.2**	**+2.7**
IZEF				*e*		09 57 10.8	
comp=Z,4μm,0.7s							
HATD	**Hatta, Dubai**	**5.33**	**194**	P	Pb	09 55 42.0	-6.1
ASHO	**Ashiyiah**	**5.48**	**194**	P	Pn	09 55 43.0	+6.4
SNR=15							
ASHO				S	**Sn**	**09 56 45.4**	**+5.7**
ASHO	**Ashiyiah**	**5.48**	**194**	*i* P	Pb	09 55 44.0	-6.7
SNR=15							
FAQ	**Al Faqa, Dubai**	**5.54**	**199**	P	**Pn**	**09 55 41.6**	**+4.2**
SNR=12							
FAQ				S	**Sn**	**09 56 48.8**	**+7.7**
FAQ	**Al Faqa, Dubai**	**5.54**	**199**	*i* P	Pb	09 55 45.0	-6.7
SNR=12							
TBHD	**Torbat heydari**	**5.56**	**14**	*e*Pn	**Pn**	**09 55 38.2**	**+0.3**
AHBU	**AHRAM**	**5.58**	**260**	*e*Pn	**Pn**	**09 55 40.5**	**+2.5**
NGCH	**Negor - Chabah**	**5.62**	**145**	*e*Pn	**Pn**	**09 55 39.5**	**+1.0**
ASUD	**Al Ashush, Dub**	**5.72**	**201**	P	Pn	09 55 45.0	+5.0
SNR=16							
ASUD				S	**Sn**	**09 56 54.1**	**+8.3**
ASUD	**Al Ashush, Dub**	**5.72**	**201**	*i* P	Pb	09 55 48.0	-6.9
SNR=13							
IBRJ	**Brojen**	**5.73**	**291**	*e*Pn	**Pn**	**09 55 42.6**	**+2.3**
TBJM	**Torbat-e-JAM**	**5.73**	**23**	*e*Pn	**Pn**	**09 55 40.5**	**+0.3**
HRA	**Herat**	**5.89**	**41**	Pn	**Pn**	**09 55 43.3**	**+0.8**
AJN	**Ajban**	**5.90**	**203**	P	Pn	09 55 49.6	+7.2
SNR=8.0							
AJN				S	**Sn**	**09 56 55.0**	**+5.0**
AJN	**Ajban**	**5.90**	**203**	*i* P	Pn	09 55 49.8	+7.5
SNR=5.2							
SOHO	**SOHO**	**5.93**	**189**	P	Pn	09 55 49.2	+6.4
SOHO	**SOHO**	**5.93**	**189**	*i* P	Pn	09 55 50.0	+7.2
SNR=9.1							
SOHO				*e*S	**Sn**	**09 56 48.0**	**-2.9**
SNR=10							
KRSH	**Karshahi**	**6.06**	**312**	*e*Pn	**Pn**	**09 55 47.1**	**+2.3**
SHRD	**Shahrood**	**6.10**	**348**	*e*Pn	**Pn**	**09 55 46.3**	**+1.1**
SHRO	**Shahrood**	**6.10**	**348**	*e*Pn	**Pn**	**09 55 46.3**	**+1.1**
SHK1	**Shahrekord**	**6.17**	**294**	*e*Pn	**Pn**	**09 55 49.3**	**+3.0**
IANJ	**Anjilo**	**6.24**	**331**	*e*Pn	**Pn**	**09 55 48.7**	**+1.4**
ISFB	**Sefidab**	**6.25**	**315**	*e*Pn	**Pn**	**09 55 49.5**	**+2.3**
IMOG	**Moghan**	**6.25**	**13**	*e*Pn	**Pn**	**09 55 48.2**	**+0.7**
IPIR	**Pirpir**	**6.29**	**297**	*e*Pn	**Pn**	**09 55 51.0**	**+2.9**
SBZV	**Sabzevar**	**6.35**	**0**	*e*Pn	**Pn**	**09 55 49.6**	**+0.8**
HOQ	**Hoqain**	**6.41**	**182**	P	Pn	09 55 54.2	+4.8
SNR=6.9							
HOQ				S	**Sn**	**09 57 07.3**	**+4.5**
QAMS	**Qamsar**	**6.42**	**307**	*e*Pn	**Pn**	**09 55 52.9**	**+3.1**
BIDO	**Bidbid**	**6.49**	**175**	P	Pn	09 55 55.7	+5.2
BIDO				S	**Sn**	**09 57 11.7**	**+7.0**
IPAY	**Payeh**	**6.53**	**10**	*e*Pn	**Pn**	**09 55 52.2**	**+1.0**
JRN	**Qarnain Island**	**6.56**	**221**	P	Pn	09 55 57.5	+6.0
JRN				S	**Sn**	**09 57 08.8**	**+2.5**
LAS	**Lasjerd**	**6.61**	**325**	*e*Pn	**Pn**	**09 55 54.0**	**+1.7**
IAKL	**Akhelmad**	**6.64**	**8**	*e*Pn	**Pn**	**09 55 53.7**	**+0.9**
IMYA	**Miami**	**6.66**	**18**	*e*Pn	**Pn**	**09 55 53.7**	**+0.8**
ARQ	**Araqi**	**6.72**	**188**	P	Pn	09 55 58.2	+4.5
SNR=16							
ISHM	**Shahmirzad**	**6.80**	**329**	*e*Pn	**Pn**	**09 55 56.4**	**+1.4**
WSAR	**Wadi Sarin**	**6.82**	**172**	Pn	**Pn**	**09 55 57.4**	**+2.3**
comp=Z,4.0nm,0.3s,baz=19,slow=8.3,SNR=20							
WSAR				Sn	**Sn**	**09 57 16.8**	**+4.0**
comp=Z,0.9nm,0.3s,baz=331,slow=20,SNR=4.5							
comp=Z,15nm,0.5s							
WSAR	**Wadi Sarin**	**6.82**	**172**	P	**Pn**	**09 55 58.0**	**+3.0**
SNR=11							
WSAR				S	**Sn**	**09 57 17.5**	**+4.8**
KHOR	**Al-Khor Airpor**	**6.92**	**232**	P	Pn	09 56 02.4	+6.0
KHOR				S	**Sn**	**09 57 18.4**	**+3.3**
GHVR	**GHOM**	**6.92**	**312**	*e*Pn	**Pn**	**09 55 59.4**	**+2.9**
GHVR	**GHOM**	**6.92**	**312**	*e*Pn	**Pn**	**09 55 59.4**	**+2.9**
IKRD	**Kardeh**	**6.94**	**13**	*e*Pn	**Pn**	**09 55 57.5**	**+0.7**
SMDO	**Samad**	**6.94**	**176**	P	Pn	**09 56 00.9**	**+4.1**
IVRN	**Varamin**	**6.99**	**317**	*e*Pn	**Pn**	**09 56 00.1**	**+2.7**
ISFR	**Sfrayin**	**7.03**	**3**	*e*Pn	**Pn**	**09 55 59.2**	**+1.1**
SHMA	**Al-Shehemyia**	**7.16**	**236**	P	Pn	**09 56 02.5**	**+2.9**
SHMA				S	**Sn**	**09 57 23.4**	**+2.4**
BSY	**Bisya**	**7.25**	**183**	P	Pn	09 56 07.7	+6.7
BSY				S	**Sn**	**09 57 29.8**	**+6.3**
IQOM	**Qom**	**7.30**	**313**	*e*Pn	**Pn**	**09 56 04.0**	**+2.2**
AMIS	**Naft Sefid**	**7.30**	**285**	*e*Pn	**Pn**	**09 56 03.3**	**+1.6**
GHWR	**Ruwais**	**7.33**	**216**	P	Pn	09 56 07.3	+5.2
GHWR				S	**Sn**	**09 57 26.6**	**+1.2**
SAKB	**Bahrain**	**7.40**	**239**	P	Pn	09 56 08.2	+5.3
SAKB				S	**Sn**	**09 57 28.7**	**+1.7**
KHMZ	**Khomeyn**	**7.45**	**302**	*e*Pn	**Pn**	09 56 08.2	+4.3
KHMZ	**Khomeyn**	**7.45**	**302**	*e*Pn	**Pn**	09 56 08.2	+4.3
WBK	**Wadi Bani Khal**	**7.48**	**170**	P	**Pn**	**09 56 07.8**	**+3.6**
UMZA	**Um Al Zommool**	**7.58**	**197**	P	Pn	09 56 10.6	+5.1
JMDO	**Jabal Madar**	**7.63**	**176**	P	Pn	09 56 12.8	+6.6
MRVT	**Maraveh tapeh**	**7.72**	**351**	*e*Pn	**Pn**	**09 56 08.4**	**+1.0**
MRVT	**Maraveh tapeh**	**7.72**	**351**	*e*Pn	**Pn**	**09 56 09.1**	**+1.7**
ASAO	**Ashtian**	**7.82**	**307**	*e*Pn	**Pn**	**09 56 11.3**	**+2.4**
ASAO	**Ashtian**	**7.82**	**307**	*e*Pn	**Pn**	**09 56 11.3**	**+2.4**
MZR	**Muzera**	**7.88**	**209**	P	**Pn**	**09 56 13.4**	**+3.8**
MZR				S	**Sn**	**09 57 43.2**	**+4.3**
SNR=6.1							
GEYT	**Alibeck**	**7.91**	**3**	Pn	**Pn**	**09 56 10.3**	**+0.3**
comp=Z,2.7nm,0.3s,baz=188,slow=19,SNR=11							
comp=Z,4.3nm,0.3s							
GEYT	**Alibeck**	**7.91**	**3**	Pn	**Pn**	**09 56 11.2**	**+1.3**
GYA0B	**ALIBECK ARRAY**	**7.91**	**3**	Pn	**Pn**	**09 56 11.2**	**+1.2**
SMRA	**Abu-Samra**	**7.96**	**230**	P	**Pn**	**09 56 13.5**	**+2.8**
SMRA				S	**Sn**	**09 57 43.3**	**+2.5**
CHTH	**Charan**	**7.98**	**319**	*e*Pn	**Pn**	**09 56 13.6**	**+2.4**
CHTH	**Charan**	**7.98**	**319**	*e*Pn	**Pn**	**09 56 13.6**	**+2.4**
JLN	**Jalan Bani Buh**	**8.01**	**168**	P	Pn	**09 56 13.6**	**+2.2**
JLN				P	**Pn**	**09 56 13.6**	**+2.2**
MHTO	**MHTO**	**9.00**	**178**	P	Pn	09 56 32.8	+7.8
SNR=9.9							
ZNJK	**Zanjan**	**9.95**	**314**	*e*Pn	**Pn**	**09 56 41.4**	**+3.2**
ZNJK	**Zanjan**	**9.95**	**314**	*e*Pn	**Pn**	**09 56 41.4**	**+3.2**
KBL	**Kabul**	**10.71**	**62**	Pn	**Pn**	**09 56 47.2**	**-1.3**
KBL	**Kabul**	**10.71**	**62**	P	**Pn**	**09 56 47.3**	**-1.3**
DOK	**Doka**	**11.77**	**196**	P	**Pn**	**09 57 04.6**	**+1.7**
SHAO	**Shalim**	**12.07**	**189**	P	Pn	09 57 12.0	+5.0
DMTO	**DMTO**	**12.48**	**192**	P	**Pn**	**09 57 15.1**	**+2.5**
WHFO	**Wadi Hawf**	**12.53**	**197**	P	**Pn**	**09 57 15.8**	**+2.5**
SNR=7.4							
RAYN	**Ar Rayn**	**12.56**	**242**	Pn	**Pn**	**09 57 12.7**	**-1.1**
RAYN	**Ar Rayn**	**12.56**	**242**	P	**Pn**	**09 57 12.7**	**-1.1**
CHGR	**Chuyangaron**	**12.88**	**45**	P	**Pn**	**09 57 16.9**	**-1.2**
CHGR	**Chuyangaron**	**12.88**	**45**	P	**Pn**	**09 57 16.9**	**-1.2**
ABTO	**Aybut**	**13.20**	**198**	P	**Pn**	**09 57 23.4**	**+0.9**
GAR	**Garm**	**13.80**	**46**		**Pn**	**09 57 30.4**	**-0.4**
AKT	**Akhty**	**13.94**	**328**	*e*P	**Pn**	**09 57 34.5**	**+2.0**
GNI	**Garni**	**14.55**	**317**	Pn	**P**	**09 57 48.8**	**+1.1**
comp=Z,1.7nm,0.3s,baz=180,slow=7.6,SNR=7.9							
GNI				LR	LR	10 03 59.6	
comp=Z,270nm,20.1s,baz=109,slow=40							
GNI	**Garni**	**14.55**	**317**	Pn	**Pn**	**09 57 41.5**	**+0.5**
GNI	**Garni**	**14.55**	**317**	*e*P	**Pn**	**09 57 40.7**	**-0.4**
BTK	**Batken**	**14.76**	**44**	Pn	**Pn**	**09 57 43.3**	**-0.5**
BTK	**Batken**	**14.76**	**44**	P	**Pn**	**09 57 43.3**	**-0.5**
GNBR	**Gunib**	**15.00**	**328**	*e*P	**P**	**09 57 48.8**	**-3.7**
MAK	**Makhachkala**	**15.22**	**331**	*e*P	**Pn**	**09 57 48.1**	**-1.8**
MAK				*e*S	**Sn**	**10 00 36.6**	**-1.9**
MAK				pmax	pmax		
comp=Z,230nm,1.1s							
MAK				MLR	MLR		
comp=Z,303nm,14.0s							
BTLR	**Botlikh**	**15.56**	**327**	*e*P	**Pn**	**09 57 55.2**	**+0.8**
MARD	**Mardin**	**15.74**	**302**		**Pn**	**09 57 57.4**	**+0.5**
MARD				IAmb	IAmb	09 58 09.1	
comp=Z,13nm,0.7s							
DVE	**Vedeno**	**15.83**	**328**	*e*P	**P**	**09 57 59.5**	**-2.2**
GROC	**Groznyy**	**16.18**	**328**	*e*P	**Pn**	**09 58 01.1**	**-1.1**
GROC				pmax	pmax		
comp=Z,13nm,0.4s							
GROC				MLR	MLR		
comp=Z,714nm,13.0s							
KK31	**Karatay Array**	**16.67**	**35**		**Pn**	**09 58 07.4**	**-1.2**
KK31	**Karatay Array**	**16.67**	**35**	P	**P**	**09 58 08.2**	**-2.8**
KKAR	**Karatay Array**	**16.67**	**35**	P	**Pn**	**09 58 07.3**	**-1.3**
KKAR	**Karatay Array**	**16.67**	**35**		**Pn**	**09 58 07.5**	**-1.1**
KKAR	**Karatay Array**	**16.67**	**35**	P	**Pn**	**09 58 07.5**	**-1.1**
ZEI	**Tsey**	**16.80**	**323**	*e*P	**P**	**09 58 15.4**	**+2.7**
ZEI				pmax	pmax		
comp=Z,38nm,1.4s							
KSH	**Kashi**	**17.82**	**53**	P	**Pn**	**09 58 20.8**	**-2.3**
KSH				PP	**PnPn**	**09 58 35.5**	**+1.7**
KSH				pmax	pmax		
comp=Z,9.0nm,1.0s							
KSH				LR	LR		
comp=N,990nm,14.4s							
KSH				LR	LR		
comp=E,450nm,13.9s							
KSH				LR	LR		
comp=Z,370nm,10.4s							
ASF	**Jabal al Asfar**	**17.83**	**282**	P	**P**	**09 58 23.1**	**-0.8**
comp=Z,0.6nm,0.3s,baz=116,slow=13,SNR=3.8							
comp=Z,2.7nm,0.5s							
KBZ	**Khabaz**	**17.99**	**324**	P	**P**	**09 58 26.1**	**+0.6**
comp=Z,0.1nm,0.3s,baz=120,slow=9.4,SNR=7.8							
comp=Z,2.2nm,0.8s							
KBZ	**Khabaz**	**17.99**	**324**	*e*P	**P**	**09 58 25.8**	**+0.4**
SHA1	**Shidzhatmaz**	**18.12**	**323**	*e*P	**P**	**09 58 27.5**	**+0.3**
KIV	**Kislovodsk**	**18.25**	**324**	*e*P	**Pn**	**09 58 26.1**	**-2.3**
KIV				pmax	pmax		
comp=Z,22nm,1.0s							
KIV				MLR	MLR		
comp=Z,50nm,14.0s							
AAK	**Ala-Archa**	**18.52**	**43**	P	**Pn**	**09 58 31.5**	**-0.3**
comp=Z,0.4nm,0.3s,baz=226,slow=13,SNR=8.1							
AAK				LR	LR	10 06 10.1	
comp=Z,292nm,18.3s,baz=242,slow=39							
comp=Z,1.9nm,0.3s							
AAK	**Ala-Archa**	**18.52**	**43**		**Pn**	**09 58 31.4**	**-0.3**
AAK	**Ala-Archa**	**18.52**	**43**	*ce*P	**Pn**	**09 58 32.1**	**+0.3**
AAK				pmax	pmax		
comp=Z,18nm,2.5s							
GHAJ	**Ghor Haditha**	**18.96**	**279**	P	**Pn**	**09 58 38.0**	**+1.0**
MMAI	**Mount Meron Ar**	**19.12**	**285**	LR	LR	10 07 41.6	
comp=Z,331nm,18.8s,baz=227,slow=42							
AB31	**Akbulak array**	**19.30**	**5**	*e*P	**Pn**	**09 58 40.1**	**-0.8**
ABKAR	**Akbulak array**	**19.30**	**5**	P	**Pn**	**09 58 40.4**	**-0.5**
ABKAR	**Akbulak array**	**19.30**	**5**	P	**Pn**	**09 58 40.5**	**-0.4**
ABKAR				IAmb	IAmb	09 58 41.6	
comp=Z,21nm,0.8s							
BOOM	**Boomskoye usch**	**19.31**	**45**	P	**Pn**	**09 58 40.2**	**-1.0**
BOOM	**Boomskoye usch**	**19.31**	**45**	P	**Pn**	**09 58 40.2**	**-1.0**
BOOM				pmax	pmax		
comp=Z,11nm,1.0s							
TKM2	**Tokmak 2**	**19.34**	**43**	P	**Pn**	**09 58 41.9**	**+0.2**
EIL	**Elat**	**19.61**	**275**	P	**Pn**	**09 58 45.1**	**+0.3**
comp=Z,0.2nm,0.3s,baz=47,slow=3.9,SNR=12							
comp=Z,16nm,0.9s							
KDJ	**Kajisay**	**19.89**	**47**	P	**Pn**	**09 58 50.8**	**+2.6**
KDJ				IAmb	IAmb	09 58 52.5	
comp=Z,23nm,1.1s							
KDJ	**Kajisay**	**19.89**	**47**	P	**Pn**	**09 58 50.8**	**+2.6**
KDJ				pmax	pmax		
comp=Z,23nm,1.1s							
MDOK	**Medeo**	**20.36**	**45**	P	Pn	09 58 52.0	-1.7
AKTO	**Aktyubinsk**	**20.40**	**1**	P	Pn	09 58 51.8	-2.1
comp=Z,10nm,0.7s,baz=179,slow=11,SNR=26							
AKTO				LR	LR	10 08 28.4	
comp=Z,215nm,18.1s,baz=179,slow=42							
comp=Z,10nm,0.7s							
PRZ	**Przheval'sk**	**20.84**	**48**	P	Pn	09 58 57.9	-1.5
PRZ				IAmb	IAmb	09 59 05.3	
comp=Z,20nm,1.1s							
PRZ	**Przheval'sk**	**20.84**	**48**	P	Pn	09 58 57.9	-1.5
PRZ				pmax	pmax		
comp=Z,20nm,1.2s							
OTUK	**Ortayu**	**21.44**	**28**	P	**P**	**09 59 02.3**	**-0.9**
ANN	**Anapa**	**21.67**	**318**	*e*P	**P**	**09 59 10.7**	**+5.1**
ANN				pmax	pmax		
comp=Z,61nm,1.5s							
BR131	**Keskin Array S**	**21.83**	**303**	P	**P**	**09 59 08.4**	**+0.8**
BR131				IAmb	IAmb	09 59 19.2	
comp=Z,13nm,0.9s							
BR131	**Keskin Array S**	**21.83**	**303**	*ce*P	**P**	**09 59 08.5**	**+0.9**
BR131	**Keskin Array S**	**21.83**	**303**	P	**P**	**09 59 09.2**	**+1.6**
SNR=5.5							
BRTR	**Keskin Array B**	**21.83**	**303**	P	**P**	**09 59 08.3**	**+0.8**
comp=Z,3.3nm,0.7s,baz=121,slow=13,SNR=18							
BRTR				LR	LR	10 08 21.6	
comp=Z,177nm,20.0s,baz=109,slow=39							
comp=Z,3.3nm,0.7s							
BRTR	**Keskin Array B**	**21.83**	**303**	P	**P**	**09 59 08.2**	**+0.6**
BRTR	**Keskin Array B**	**21.83**	**303**	P	**P**	**09 59 08.2**	**+0.6**
PDGK	**Podgornoye**	**21.96**	**47**	P	**P**	**09 59 08.8**	**-0.1**
ATD	**Arta Tunnel**	**22.92**	**220**	LR	LR	10 09 16.7	
comp=Z,73nm,21.4s,baz=26,slow=39							
BELG	**Belogornoye**	**23.53**	**345**	P	**P**	**09 59 24.6**	**-0.5**
comp=Z,6.2nm,0.6s,baz=345,slow=13,SNR=4.5							
BELG				LR	LR	10 11 08.2	
comp=Z,131nm,19.3s,baz=129,slow=43							
comp=Z,6.2nm,0.6s							
BRVK	**Borovoye**	**24.84**

MOA Molln 37.52 311 *i* P **P 10 01 29.4 +0.4**
comp=Z,2.6nm,0.6s
FINES FINESS Array B 37.63 336 P **P 10 01 29.6 -0.1**
comp=Z,2.2nm,0.5s,baz=115,slow=8.6,SNR=16
comp=Z,2.2nm,0.5s
FINES FINESS Array B 37.63 336 P **P 10 01 29.4 -0.3**
CKRC Cesky Krumlov 37.72 312 *eP* **P 10 01 32.4 +1.8**
BIOA Bad Ischl, Aus 37.91 310 *i* P **P 10 01 32.6 +0.4**
comp=Z,1.5nm,0.5s
KBA Koelnbreinsper 37.98 309 *i* P **P 10 01 33.4 +0.4**
comp=Z,2.4nm,0.8s
GEC2 GERESS Array S 38.11 312 P **P 10 01 34.5 +0.4**
GEC2 lAmb lAmb 10 01 38.3
comp=Z,6.0nm,1.0s
GERES GERESS Array B 38.11 312 P **P 10 01 34.1 +0.1**
comp=Z,2.3nm,0.7s,baz=104,slow=9.8,SNR=24
comp=Z,2.3nm,0.7s
GERES GERESS Array B 38.11 312 P **P 10 01 33.8 -0.2**
KHC Kasperske Hory 38.26 313 P **P 10 01 35.3 +0.1**
KHC lAmb lAmb 10 01 36.3
comp=Z,3.5nm,0.7s
KHC Kasperske Hory 38.26 313 *eP* **P 10 01 35.9 +0.7**
KHC Kasperske Hory 38.26 313 *eP* **P 10 01 35.9 +0.7**
ABTA Abfaltersbach 38.49 309 *i* P **P 10 01 37.5 +0.2**
comp=Z,3.7nm,0.7s
PZH PanZhiHua 38.90 84 P **P 10 01 42.0 +1.1**
PZH pmax pmax
comp=Z,7.0nm,0.8s
PZH pmax pmax
comp=Z,100nm,5.1s
LZH Lanzhou 38.98 69 *eP* P 10 01 32.7 -8.9
LZH pP pP 10 01 38.4 -6.9
LZH pmax pmax
comp=Z,16nm,1.4s
CLL Collm 39.16 316 P **P 10 01 43.9 +1.2**
CLL Collm 39.16 316 *i* P **P 10 01 43.9 +1.2**
CLL pmax pmax
comp=Z,5.0nm,1.0s
CLL MLR MLR
comp=Z,500nm,22.0s
CLL Collm 39.16 316 *i* Px Px 10 01 43.9
comp=Z,5.0nm,1.0s
CLL *i* x x 10 01 46.3
comp=Z,7.0nm,1.2s
CLL LmV 10 22 00.0
comp=Z,100nm,21.6s
WTTA Wattenberg 39.16 309 *i* P **P 10 01 42.9 0.0**
comp=Z,6.8nm,0.7s
WATA Walderalm 39.21 309 *eP* **P 10 01 43.0 -0.4**
comp=Z,1.1nm,1.0s
CMAR Chiang Mai Arr 39.26 97 LR LR 10 21 48.2
comp=Z,93nm,19.1s,baz=140,slow=42
SQTA Sankt Quirin 39.44 309 *eP* **P 10 01 44.8 -0.4**
comp=Z,6.3nm,0.6s
MOTA Moosalm 39.53 309 *i* P **P 10 01 45.3 -0.8**
comp=Z,5.1nm,0.8s
FETA Feichten 39.74 309 *i* P **P 10 01 47.7 -0.1**
comp=Z,6.2nm,0.8s
MBAR Mbarara 39.76 225 LR LR 10 20 22.2
comp=Z,103nm,18.0s,baz=138,slow=39
RETA Reutte 39.78 309 *i* P **P 10 01 47.5 -0.6**
comp=Z,3.4nm,0.6s
DAVA Damuels 40.35 309 *i* P **P 10 01 52.4 -0.5**
comp=Z,6.5nm,0.7s
SONM Songino Array 41.20 50 P **P 10 02 00.2 +0.4**
comp=Z,0.8nm,0.6s,baz=232,slow=7.3,SNR=4.3
comp=Z,0.8nm,0.6s
SONM Songino Array 41.20 50 P **P 10 01 59.8 0.0**
SONM Songino Array 41.20 50 P **P 10 01 59.8 0.0**
SONM pmax pmax
comp=Z,4.0nm,1.4s
ULN Ulaanbaatar 41.64 50⇑ *eP* **P 10 02 04.5 +1.0**
ULN pmax pmax
comp=Z,3.0nm,1.3s
SENIN Lac Senin/Sane 42.01 307 P **P 10 02 06.5 -0.1**
BNI Bardonecchia 42.35 305 P **P 10 02 09.1 -0.2**
BNI lAmb lAmb 10 02 09.6
comp=Z,5.1nm,0.8s
BNI Bardonecchia 42.35 305 P **P 10 02 09.1 -0.2**
BNI pmax pmax
comp=Z,5.0nm,0.8s
NRIK Noril'sk 42.95 15 P **P 10 02 13.4 -0.2**
comp=Z,3.7nm,0.6s,baz=184,slow=5.7,SNR=5.9
NRIK LR LR 10 23 25.1
comp=Z,228nm,18.1s,baz=181,slow=41
comp=Z,3.7nm,0.6s
NRIK Noril'sk 42.95 15 P **P 10 02 14.3 +0.7**
NRIK lAmb lAmb 10 02 15.4
comp=Z,8.3nm,1.1s
NRIK Noril'sk 42.95 15*de* **P 10 02 14.3 +0.7**
NRIK pmax pmax
comp=Z,8.0nm,1.1s
NB2 NORSAR Subarra 43.43 329 P **P 10 02 19.2 +1.5**
comp=Z,2.6nm,0.9s,baz=114,slow=8.6
NOA NORSAR Array B 43.43 329 P **P 10 02 17.1 -0.5**
comp=Z,0.6nm,0.7s,baz=112,slow=9.5,SNR=2.4
comp=Z,0.6nm,0.7s
HHC Hu-ho-hao-te 44.68 61 *eP* **P 10 02 28.5 +0.4**
HHC pmax pmax
comp=Z,17nm,1.0s
HHC pmax pmax
comp=Z,120nm,9.2s
ESDC Sonseca Array 50.53 298 P **P 10 03 13.3 -0.2**
comp=Z,1.9nm,0.9s,baz=65,slow=7.7,SNR=16
comp=Z,1.9nm,0.9s
TOA0 Torodi Ar. Sit 54.09 265 P **P 10 03 40.2 0.0**
TOA0 Torodi Ar. Sit 54.09 265 P **P 10 03 41.1 +0.9**
SNR=6.6
TORD Torodi Ar. Bea 54.09 265 P **P 10 03 40.8 +0.6**
comp=Z,7.8nm,0.6s,baz=62,slow=6.4,SNR=25
comp=Z,7.8nm,0.6s
TORD Torodi Ar. Bea 54.09 265 P **P 10 03 40.3 +0.2**
YAK Yakutsk 55.63 33 LR LR 10 29 56.2
comp=Z,130nm,18.7s,baz=268,slow=38
TIXI Tiksi 55.93 21 LR LR 10 31 14.9
comp=Z,103nm,18.1s,baz=181,slow=40
TIXI Tiksi 55.93 21 P **P 10 03 52.4 -0.2**
TIXI lAmb lAmb 10 03 57.7
comp=Z,3.0nm,0.9s
TIXI Tiksi 55.93 21⇑ *eP* **P 10 03 52.5 -0.2**
TIXI pmax pmax
comp=Z,2.0nm,0.9s
KSRS Korea Array 57.77 62 LR LR 10 32 34.2
comp=Z,35nm,18.4s,baz=245,slow=40
KLR Kul'dur 57.94 48 LR LR 10 31 36.7
comp=Z,104nm,18.3s,baz=278,slow=39
SEY Seymchan 65.84 30 LR LR 10 37 14.6
comp=Z,115nm,18.1s,baz=280,slow=39
RES Resolute Bay 74.01 353 LR LR 10 42 10.9
comp=Z,70nm,21.2s,baz=71,slow=39
INK Inuvik 81.63 4 P **P 10 06 31.2 -1.5**
comp=Z,2.3nm,1.1s,baz=356,slow=6.0,SNR=2.7
comp=Z,2.3nm,1.1s
INK Inuvik 81.63 4 P **P 10 06 32.1 -0.6**
INK Inuvik 81.63 4 P **P 10 06 32.1 -0.6**
INK pmax pmax
comp=Z,6.0nm,1.2s
H21K Melozitna Rive 81.79 12 P **P 10 06 34.6 +0.9**
H23K Yukon River 82.21 11 P **P 10 06 37.1 +1.2**
H23K lAmb lAmb 10 06 37.6
comp=Z,2.8nm,0.8s
H24K Noodor Dome 82.46 10 P **P 10 06 38.4 +1.2**
H24K lAmb lAmb 10 06 46.5
comp=Z,2.3nm,1.0s
ILAR Eielson Array 83.61 10 P **P 10 06 41.6 -1.5**
comp=Z,0.4nm,0.6s,baz=320,slow=4.0,SNR=6.8
comp=Z,0.4nm,0.6s
YKA Yellowknife Ar 87.60 356 P **P 10 07 02.3 -0.7**
comp=Z,0.7nm,0.7s,baz=0.4,slow=4.8,SNR=6.7
YKA LR LR 10 53 13.9
comp=Z,33nm,18.2s,baz=31,slow=40
comp=Z,0.7nm,0.7s
YKA Yellowknife Ar 87.60 356 P **P 10 07 02.6 -0.4**
YKA Yellowknife Ar 87.60 356 *i* P **P 10 07 03.2 +0.2**
YKA pmax pmax
comp=Z,1.0nm,0.7s
WRA Warramunga Arr 88.98 114 P **P 10 07 10.8 +0.6**
comp=Z,0.3nm,1.0s,baz=301,slow=3.6,SNR=2.6
comp=Z,0.3nm,1.0s

*IDC **04** 10:23:53.1±0.9,30.°57N×59.°98E,h0km,mb3.5/10, mbtmp3.6/13,ML3.3/3,Error ellipse: s-maj=22.6km s-min=19.4km az=146.0*
*TEH **04** 10:23:53.0,30.°75N×60.°06E,h8km,ML4.1*
ISC 04 10:23:54.4±0.8,30.°75N±0.°05×60.°09E±0.°06,h10km,n45,

σ1§31/45,mb3.5/10,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NHDN	**Nehbandan**	**0.64**	**357**	*e*Sg	**Sb**	**10 24 15.5**	**-1.4**
NHDN				*e*Pg	**Pg**	**10 24 05.8**	**-1.1**
NHDN				*e*		10 24 21.2	
	comp=Z,50μm,0.5s						
ZHDN	**Zahedan**	**1.48**	**155**	*e*Pn	**Pn**	**10 24 20.0**	**-1.3**
ZHDN				*e*		10 24 23.0	
	comp=N,20μm,0.2s						
IKOO	**Kooshah**	**1.91**	**331**	*e*Pn	**Pb**	**10 24 27.2**	**-2.2**
IKOO				*e*		10 24 30.9	
	comp=Z,16μm,0.2s						
IDAH	**Dahanechah**	**1.99**	**355**	*e*Pn	**Pb**	**10 24 29.3**	**-1.6**
IDAH				*e*		10 24 33.6	
	comp=Z,10μm,0.4s						
CHMN	**Cheshme madani**	**2.37**	**249**	*e*Pn	**Pn**	**10 24 33.6**	**-0.1**
CHMN				*e*		10 25 10.0	
	comp=Z,10μm,0.5s						
ITEG	**Tejag**	**2.42**	**332**	*e*Pn	**Pn**	**10 24 34.6**	**+0.3**
ITEG				*e*		10 25 15.4	
	comp=Z,10μm,0.6s						
IMON	**Monand**	**2.46**	**352**	*e*Pn	**Pb**	**10 24 35.5**	**-3.4**
AFRZ	**Afriz**	**2.82**	**341**	*e*Pn	**Pn**	**10 24 39.7**	**+0.1**
SHRT	**Shahrakht**	**2.90**	**3**	*e*Pn	**Pn**	**10 24 41.4**	**+0.8**
TVBK	**TV Kerman**	**2.97**	**256**	*e*Pn	**Pn**	**10 24 42.8**	**+0.9**
KRBR	**Kerman**	**2.97**	**256**	*e*Pn	**Pn**	**10 24 42.9**	**+1.0**
NGRK	**Negar Kerman**	**3.11**	**250**	*e*Pn	**Pn**	**10 24 44.3**	**+0.5**
NGRK				*e*		10 24 55.9	
	comp=Z,7μm,0.5s						
KHGB	**Koh Gabri**	**3.13**	**264**	*e*Pn	**Pn**	**10 24 44.4**	**+0.4**
KHGB				*e*		10 25 31.4	
	comp=Z,6μm,0.5s						
KHNJ	**Kahnooj**	**3.48**	**217**	*e*Pn	**Pn**	**10 24 49.9**	**+1.3**
TPRV	**Parvadeh(Tabas**	**3.68**	**309**	*e*Pn	**Pn**	**10 24 51.6**	**+0.2**
TKDS	**Koohdasht(Taba**	**3.80**	**319**	*e*Pn	**Pn**	**10 24 53.5**	**+0.4**
TABS	**Tabas**	**3.83**	**320**	*e*Pn	**Pn**	**10 24 54.6**	**+1.1**
SRVN	**Saravan**	**3.90**	**148**	*e*Pn	**Pn**	**10 24 56.2**	**+1.7**
SRVN				*e*		10 25 13.3	
	comp=Z,1μm,0.6s						
IBAF	**Bafgh**	**3.96**	**283**	*e*Pn	**Pn**	**10 24 55.9**	**+0.5**
IBAF				*e*		10 26 02.7	
	comp=Z,4μm,0.6s						
TNSJ	**Nastanj**	**4.35**	**318**	*e*Pn	**Pn**	**10 25 00.9**	**+0.3**
TBJM	**Torbat-e-JAM**	**4.51**	**3**	*e*Pn	**Pn**	**10 25 03.7**	**+0.8**
IMEH	**Mehriz**	**4.74**	**279**	*e*Pn	**Pn**	**10 25 06.7**	**+0.6**
IMEH				*e*		10 26 34.2	
	comp=Z,2μm,0.7s						
YZKH	**Yazd**	**4.97**	**291**	*e*Pn	**Pn**	**10 25 09.9**	**+0.8**
IMYA	**Miami**	**5.58**	**0**	*e*Pn	**Pn**	**10 25 18.6**	**+1.0**
ISAD	**Sadrabad**	**5.60**	**284**	*e*Pn	**Pn**	**10 25 17.3**	**-0.6**
ANAR	**Anarak**	**5.92**	**296**	*e*Pn	**Pn**	**10 25 23.2**	**+0.9**
SBZV	**Sabzevar**	**5.99**	**341**	*e*Pn	**Pn**	**10 25 24.0**	**+0.7**
IKRD	**Kardeh**	**6.03**	**356**	*e*Pn	**Pn**	**10 25 24.9**	**+1.0**
SHRO	**Shahrood**	**6.24**	**328**	*e*Pn	**Pn**	**10 25 28.2**	**+1.6**
NASN	**Na'in**	**6.53**	**290**	*e*Pn	**Pn**	**10 25 31.9**	**+1.2**
IZEF	**Zefreh**	**6.94**	**290**	*e*Pn	**Pn**	**10 25 37.1**	**+0.7**
GEYT	**Alibeck**	**7.35**	**348**	Pn	Pn	10 25 45.6	+3.9
	comp=Z,0.3nm,0.3s,baz=197,slow=23,SNR=1.8						
	comp=Z,1.2nm,0.4s						
WSAR	**Wadi Sarin**	**7.59**	**190**	Pn	**Pn**	**10 25 43.2**	**-1.9**
	comp=Z,0.9nm,0.3s,baz=46,slow=13,SNR=8.8						
	comp=Z,3.0nm,0.5s						
MRVT	**Maraveh tapeh**	**7.65**	**335**	*e*Pn	**Pn**	**10 25 48.3**	**+2.4**
AKTO	**Aktyubinsk**	**19.73**	**356**	P	**Pn**	**10 28 26.4**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=186,slow=13,SNR=3.6						
	comp=Z,0.8nm,0.6s						
EIL	**Elat**	**21.74**	**274**	P	**P**	**10 28 45.1**	**-0.8**
	comp=Z,1.2nm,0.4s,baz=66,slow=9.7,SNR=1.5						
	comp=Z,1.2nm,0.4s						
BRTR	**Keskin Array B**	**23.32**	**300**	P	**P**	**10 29 03.6**	**+0.8**
	comp=Z,0.7nm,0.8s,baz=263,slow=3.8,SNR=2.4						
	comp=Z,0.7nm,0.8s						
MKAR	**Makanchi Array**	**23.47**	**41**	P	**P**	**10 29 05.5**	**+1.5**
	comp=Z,0.4nm,0.7s,baz=228,slow=7.3,SNR=4.0						
	comp=Z,0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**24.16**	**29**	P	**P**	**10 29 13.0**	**+2.4**
	comp=Z,0.7nm,0.7s,baz=225,slow=8.8,SNR=7.9						
	comp=Z,0.7nm,0.7s						
ZALV	**Zalesovo Beam**	**29.24**	**30**	P	**P**	**10 29 59.0**	**+2.7**
	comp=Z,0.4nm,0.4s,baz=226,slow=47,SNR=1.8						
	comp=Z,0.4nm,0.4s						
GERES	**GERESS Array B**	**39.26**	**311**	P	**P**	**10 31 23.4**	**+0.3**
	comp=Z,0.2nm,0.2s,baz=89,slow=6.3,SNR=1.7						
	comp=Z,0.2nm,0.2s						
TORD	**Torodi Ar. Bea**	**56.32**	**266**	P	**P**	**10 33 35.0**	**-0.7**
	comp=Z,1.9nm,0.8s,baz=60,slow=7.1,SNR=15						
	comp=Z,1.9nm,0.8s						
ILAR	**Eielson Array**	**82.48**	**11**	P	**P**	**10 36 16.8**	**0.0**
	comp=Z,0.1nm,0.6s,baz=323,slow=33,SNR=1.6						
	comp=Z,0.1nm,0.6s						
WRA	**Warramunga Arr**	**87.29**	**115**	P	**P**	**10 36 42.0**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=317,slow=3.9,SNR=7.7						
	comp=Z,0.6nm,0.8s						
ASAR	**Alice Springs**	**89.03**	**118**	P	**P**	**10 36 50.8**	**+0.9**
	comp=Z,0.4nm,0.7s,baz=303,slow=4.0,SNR=3.4						
	comp=Z,0.4nm,0.7s						

*IPEC **04** 10:27:22.0±0.2,50.°20N×18.°99E,h2km±1km,ML2.2/3, Error ellipse: s-maj=2.4km s-min=1.1km az=168.0*
PRU 04 10:27:22.2±0.0,50.°22N×18.°92E,h0km,Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OJC	**Ojcow**	**0.56**	**90**	*e*Pg	Pg	10 27 32.0	-1.0
OJC				*e*Sg	Sg	10 27 39.3	-1.0
OKC	**Ostrava-Krasne**	**0.63**	**233**	*e*PG	Pb	10 27 35.3	-0.7
MORC	**Moravsky Berou**	**0.99**	**244**	*e*Pg	Pg	10 27 41.5	+0.3
	baz=65						
MORC				*e*Sg	Sg	10 27 54.1	0.0
	46nm,0.6s,baz=65						
MORC	**Moravsky Berou**	**0.99**	**244**	*e*PG	Pg	10 27 41.5	+0.3
MORC				*e*SG	Sg	10 27 54.2	+0.1
MAUC	**Maruska**	**1.11**	**220**	*e*PG	Pb	10 27 44.3	0.0
MAUC				*e*SG	Sb	10 27 58.8	-0.5
	comp=Z,51nm,0.6s						
LANS	**Liptovska Anna**	**1.13**	**161**	*e*PG	Pg	10 27 43.3	-0.5
LANS				*e*SG	Sg	10 27 59.1	+0.7
LANS				*e*LG	Lg	10 28 02.6	
NIE	**Niedzica**	**1.20**	**131**	*e*Pg	Pg	10 27 45.0	-0.2
NIE				*e*Sg	Sb	10 28 01.4	-0.5
KRLC	**Kraliky**	**1.38**	**265**	*e*PG	Pg	10 27 48.2	-0.5
KRLC				*e*SG	Sb	10 28 07.0	-0.2
	comp=Z,24nm,0.8s						
JAVC	**Velka Javorina**	**1.59**	**211**	*e*Pn	Pn	10 27 51.0	-0.6
	baz=32						
JAVC	**Velka Javorina**	**1.59**	**211**	*e*PN	Pn	10 27 51.0	-0.6
DPC	**Dobruska-Polom**	**1.67**	**275**	*e*PG	Pn	10 27 52.7	-0.1
DPC				*e*SG	Sb	10 28 15.5	0.0
	comp=Z,16nm,0.6s						
VYHS	**Vyhne**	**1.73**	**182**	*e*PN	Pn	10 27 52.8	-0.7
VYHS				*e*SN	Sn	10 28 15.6	-0.7
VYHS				*e*LG	Lg	10 28 21.7	
VRAC	**Vranov**	**1.76**	**240**	*e*Pn	Pn	10 27 54.1	+0.1
	baz=59						
VRAC				*e*Sg	Sb	10 28 18.1	0.0
	22nm,0.6s,baz=59						
VRAC	**Vranov**	**1.76**	**240**	*e*PN	Pn	10 27 54.1	+0.1
VRAC				*e*SG	Sb	10 28 18.2	+0.1
OSTC	**Ostas**	**1.76**	**282**	*e*PG	Pb	10 27 54.9	-0.5
OSTC				*e*SG	Sg	10 28 19.6	+0.8
	comp=Z,11nm,0.9s						
KSP	**Ksiaz**	**1.79**	**291**	*e*Pg	Pg	10 27 56.6	+0.1
KSP				*e*Sg	Sg	10 28 20.2	+0.6
CHVC	**Chvalec**	**1.87**	**282**	*e*PG	Pn	10 27 55.5	0.0
UPC	**Upice**	**1.88**	**280**	*e*SG	Sg	10 28 23.8	+1.1
KRUC	**Moravsky**	**2.01**	**236**	*e*Pn	Pn	10 27 57.3	-0.1
	baz=55						
KRUC				*e*Sg	Sb	10 28 25.5	+0.4
	11nm,0.8s,baz=55						
KRUC	**Moravsky**	**2.01**	**236**	*e*PN	Pn	10 27 57.4	0.0
KRUC				*e*SG	Sb	10 28 25.5	+0.4
KECS	**Kecovo**	**2.02**	**149**	*e*PN	Pn	10 27 57.1	-0.4
KECS				*e*SN	Sb	10 28 24.4	-1.0
CRVS	**Cervenica-Dubn**	**2.12**	**128**	*e*PN	Pb	10 28 00.4	-1.0
KOLS	**Kolonicke sedl**	**2.53**	**119**	*e*PG	Pb	10 28 08.8	+0.3
PRU	**Pruhonice**	**2.83**	**267**	*e*SG	Sg	10 28 51.6	-1.4
	comp=Z,3.8nm,0.5s						
BRG	**Berggiesshubel**	**3.24**	**284**	Pg	Pg	10 28 23.8	-0.4
BRG				Sg	Sg	10 29 06.3	0.0
BRG				Amp		10 29 10.5	
	comp=Z,3.8nm,0.4s						
CKRC	**Cesky Krumlov**	**3.31**	**247**	*e*SG	Sg	10 29 05.9	-2.7
	comp=Z,5.0nm,0.5s						
KHC	**Kasperske Hory**	**3.64**	**255**	*e*PN	Pn	10 28 20.0	+0.2
KHC				*e*PG	Pb	10 28 26.6	-0.7
KHC				*e*SG	Sg	10 29 16.9	-2.1

IDC 04 10:29:12.9±2.7,0.°13N×19.°84W,h0km,mb3.7/2, mbtmp3.9/3,ML4.1/1,Error ellipse: s-maj=86.4km s-min=49.3km az=123.0,Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H10N2	**ASCENSION HYDR**	**9.54**	**146**	T	T	10 41 08.7	
	SNR=20						
H10N3	**ASCENSION HYDR**	**9.54**	**146**	T	T	10 40 56.4	
	baz=243,slow=74,SNR=19						
H10N1	**ASCENSION HYDR**	**9.56**	**146**	T	T	10 40 36.0	
	baz=322,slow=74,SNR=19						
H10S3	**ASCENSION HYDR**	**10.39**	**150**	T	T	10 41 57.9	
	baz=255,slow=74,SNR=18						
H10S2	**ASCENSION HYDR**	**10.41**	**150**	T	T	10 41 54.7	
	baz=325,slow=74,SNR=6.4						
DBIC	**Dimbokro**	**16.30**	**66**	Pn	Pn	10 33 03.5	+0.1
	0.7nm,0.3s,baz=265,slow=15,SNR=9.7						
DBIC				Sn	Sn	10 35 41.3	-24
	0.2nm,0.3s,baz=109,slow=8.1,SNR=1.9						
	2.7nm,0.4s						
TORD	**Torodi Ar. Bea**	**24.96**	**58**	P	P	10 34 38.3	0.0
	2.4nm,0.6s,baz=235,slow=9.5,SNR=15						
	2.4nm,0.6s						
GERES	**GERESS Array B**	**56.48**	**26**	P	P	10 38 56.6	-0.1
	0.2nm,0.4s,baz=205,slow=5.9,SNR=3.5						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**145.41**	**134**	PKPbc	PKPbc	10 48 52.9	-0.8
	0.4nm,0.7s,baz=202,slow=3.3,SNR=7.0						

*IDC **04** 10:33:09.6±1.6,25.°35S×179.°66E,h479km±18km, mb3.7/16,mbtmp4.6/20,Error ellipse: s-maj=14.9km s-min=13.0km az=19.0*
*NOU **04** 10:33:10.5,25.°55S×179.°71E,h502km,mb4.4/23,South of Fiji Islands*
*NEIC **04** 10:33:12.9±1.5,25.°4S±0.°1×179.°6E±0.°1,h514km±6km, mb4.4/48,Error ellipse: s-maj=18.8km s-min=16.8km az=73.0*
ISC 04 10:33:11.7±0.4,25.°53S±0.°05×179.°66E±0.°08,h507km, n146,σ1§73/162,mb4.3/40,1D,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RIZ	**Raoul Island**	**4.28**	**150**	P	P	10 34 37.9	+5.3
RAO	**Raoul Island**	**4.29**	**150**	P	**P**	**10 34 29.4**	**-3.3**
	234nm,0.3s,baz=82,slow=23,SNR=6.1						
RAO	**Raoul Island**	**4.29**	**150**	P	**P**	**10 34 29.7**	**-3.1**
GLKZ	**Green Lake**	**4.30**	**151**	P	**P**	**10 34 35.8**	**+3.0**
LKBA	**Tubou, Lakemba**	**7.39**	**11**	P	**P**	**10 35 02.6**	**+0.4**
MSVF	**Nonsavu**	**7.90**	**349**	P	**P**	**10 35 06.7**	**-0.8**
TAVE	**Taveuni**	**8.79**	**3**	P	**P**	**10 35 17.4**	**+0.9**
DGTI	**Dogotuki**	**9.18**	**0**	P	**P**	**10 35 21.1**	**+0.4**
WCZ	**Waipu Caves**	**11.34**	**202**	P	**P**	**10 35 47.6**	**+4.6**
NIUE	**Niue**	**11.57**	**58**	P	**P**	**10 35 45.6**	**-0.2**
KUZ	**Kuaotunu**	**11.68**	**196**	P	**P**	**10 35 49.9**	**+3.3**
MXZ	**Matakaoa Point**	**12.05**	**185**	P	**P**	**10 35 53.3**	**+2.7**
MXZ				S	**S**	**10 38 04.1**	**+2.6**
MYRZ	**Mayor Island**	**12.07**	**193**	P	P	10 35 57.1	+6.2
HAZ	**Te Kaha**	**12.30**	**187**	P	**P**	**10 35 54.0**	**+0.9**
HAZ				S	**S**	**10 38 04.0**	**-2.2**
WMGZ	**Waiomatatini S**	**12.30**	**185**	P	**P**	**10 35 55.9**	**+2.7**
WMGZ				S	**S**	**10 38 04.5**	**-1.8**
PKGZ	**Pakihiroa**	**12.40**	**186**	P	**P**	**10 35 54.1**	**-0.2**
PKGZ				S	**S**	**10 38 04.5**	**-3.8**
RUGZ	**Raukumara Rang**	**12.51**	**187**	P	**P**	**10 35 54.7**	**-0.9**
RUGZ				S	**S**	**10 38 07.6**	**-3.1**
PUZ	**Puketiti**	**12.56**	**185**	P	**P**	**10 35 56.0**	**0.0**
PUZ				S	**S**	**10 38 07.6**	**-3.8**
TOZ	**Tahuroa Road**	**12.67**	**195**	P	**P**	**10 36 00.1**	**+3.0**
TWGZ	**Tauwhareparae**	**12.69**	**186**	P	**P**	**10 35 54.9**	**-2.4**
TWGZ				S	**S**	**10 38 11.7**	**-2.3**
URZ	**Urewera**	**12.88**	**189**	P	**P**	**10 35 58.1**	**-1.1**
	26nm,0.5s,baz=56,slow=2.6,SNR=35						
URZ				S	**S**	**10 38 16.5**	**-0.9**
	9.5nm,0.7s,baz=28,slow=19,SNR=3.1						
URZ	**Urewera**	**12.88**	**189**	P	**P**	**10 35 58.0**	**-1.3**
URZ	**Urewera**	**12.88**	**189**	P	**P**	**10 35 58.3**	**-0.9**
URZ				S	**S**	**10 38 15.9**	**-1.5**
URZ	**Urewera**	**12.88**	**189**	P	**P**	**10 35 58.3**	**-0.9**
MWZ	**Matawai**	**12.90**	**188**	P	**P**	**10 36 01.4**	**+1.9**
MWZ				S	**S**	**10 38 16.9**	**-1.0**
CNGZ	**Carnagh Statio**	**12.98**	**185**	P	**P**	**10 36 02.4**	**+2.1**
RAGZ	**Rawiri**	**13.07**	**188**	P	**P**	**10 36 00.3**	**-1.1**
RAGZ				S	**S**	**10 38 25.1**	**+3.8**
TLZ	**Tolley Road**	**13.23**	**194**	P	**P**	**10 36 05.7**	**+2.7**
RIGZ	**Rimuhau**	**13.24**	**187**	P	**P**	**10 36 01.5**	**-1.6**
RIGZ				S	**S**	**10 38 17.4**	**-7.1**
SNGZ	**Shannon Statio**	**13.36**	**188**	P	**P**	**10 36 03.0**	**-1.4**
SNGZ				S	**S**	**10 38 29.0**	**+2.2**
MTHZ	**Maungataniwha**	**13.50**	**189**	P	**P**	**10 36 03.4**	**-2.5**
MTHZ				S	**S**	**10 38 26.5**	**-3.0**
RAHZ	**Arahi**	**13.53**	**189**	P	**P**	**10 36 06.7**	**+0.6**
RAHZ				S	**S**	**10 38 29.8**	**-0.1**
HIZ	**Hauiti**	**13.57**	**196**	P	P	10 36 13.1	+6.5
NMHZ	**Naumai**	**13.74**	**189**	P	**P**	**10 36 08.2**	**-0.3**
NMHZ				S	**S**	**10 38 33.8**	**-0.4**
BKZ	**Black Stump Fm**	**13.86**	**190**	P	**P**	**10 36 08.3**	**-1.4**
BKZ				S	**S**	**10 38 31.0**	**-5.5**
BKZ	**Black Stump Fm**	**13.86**	**190**	P	**P**	**10 36 08.9**	**-0.8**
NTVZ	**North Tongariro**	**13.94**	**193**	P	**P**	**10 36 12.9**	**+2.3**
ETVZ	**East Tongariro**	**13.97**	**193**	P	**P**	**10 36 11.9**	**+1.0**
OTVZ	**Oturere**	**14.01**	**193**	P	**P**	**10 36 10.9**	**-0.4**
SNVZ	**South Ngauruho**	**14.03**	**193**	P	**P**	**10 36 12.7**	**+1.0**
AFI	**Afiamalu**	**14.08**	**36**	P	**P**	**10 36 09.1**	**-3.3**
	8.5nm,0.4s,baz=230,slow=18,SNR=1.5						
AFI	**Afiamalu**	**14.08**	**36**	P	**P**	**10 36 11.7**	**-0.7**
MCHZ	**McNeill Hill**	**14.10**	**189**	P	**P**	**10 36 13.4**	**+1.3**
MCHZ				S	**S**	**10 38 40.7**	**-0.2**
PKVZ	**Pokaka**	**14.20**	**194**	P	**P**	**10 36 14.8**	**+1.6**
BHHZ	**Black Hill Sta**	**14.25**	**191**	P	**P**	**10 36 11.3**	**-2.4**
BHHZ				S	**S**	**10 38 38.7**	**-5.3**
NEZ	**North Egmont**	**14.48**	**198**	P	P	10 36 21.4	+5.1
PXZ	**Pawanui**	**14.65**	**189**	P	**P**	**10 36 16.2**	**-1.7**
PXZ				S	**S**	**10 38 48.3**	**-3.2**
TSZ	**Takapari Road**	**14.82**	**191**	P	**P**	**10 36 19.5**	**-0.2**
TSZ				S	**S**	**10 38 48.1**	**

ASAR	**Alice Springs**	**41.49**	**263**	P		**P**	**10 40 14.2**	**0.0**	
	comp=Z,5.3nm,0.5s,baz=90,slow=6.6,SNR=123								
ASAR				PcP		**PcP**	**10 41 59.8**	**-0.3**	
	comp=Z,1.0nm,0.6s,baz=112,slow=3.7,SNR=4.2								
	comp=Z,5.3nm,0.5s								
ASAR	**Alice Springs**	**41.49**	**263**	P		**P**	**10 40 13.9**	**-0.3**	
WR0	**Warramunga Arr**	**41.83**	**268**	P		**P**	**10 40 16.6**	**-0.3**	
WR0				IAmb		IAmb	10 40 16.7		
	comp=Z,6.4nm,0.6s								
WB2	**Warramunga Arr**	**42.01**	**268**	P		**P**	**10 40 18.1**	**-0.2**	
WB2				IAmb		IAmb	10 40 18.6		
	comp=Z,12nm,0.9s								
WRAB	**Tennant Creek**	**42.01**	**268**	P		**P**	**10 40 17.9**	**-0.4**	
WRAB				IAmb		IAmb	10 40 18.1		
	comp=Z,9.4nm,0.6s								
WRAB	**Tennant Creek**	**42.01**	**268**	P		**P**	**10 40 17.7**	**-0.6**	
WRA	**Warramunga Arr**	**42.02**	**268**	P		**P**	**10 40 17.8**	**-0.6**	
	comp=Z,9.2nm,0.6s,baz=100,slow=7.5,SNR=205								
	comp=Z,9.2nm,0.6s								
WRA	**Warramunga Arr**	**42.02**	**268**	P		**P**	**10 40 18.0**	**-0.3**	
WB0	**Warramunga Arr**	**42.02**	**268**	P		**P**	**10 40 18.0**	**-0.3**	
FORT	**Forrest**	**45.48**	**251**	P		**P**	**10 40 44.7**	**-0.4**	
WRKA	**Warakurna**	**46.20**	**259**	P		**P**	**10 40 50.3**	**-0.5**	
KNRA	**Kununurra**	**48.40**	**271**	P		**P**	**10 41 07.4**	**+0.1**	
FAKI	**Fak Fak**	**50.78**	**288**	P		**P**	**10 41 24.4**	**-0.6**	
FAKI				IAmb		IAmb	10 41 24.6		
	comp=Z,7.4nm,0.8s								
SIJI	**Sorong**	**52.68**	**290**	P		**P**	**10 41 37.6**	**-1.2**	
	comp=Z,38nm,0.7s,baz=53,slow=8.0,SNR=24								
	comp=Z,38nm,0.7s								
PSA00	**Pilbara Seismi**	**54.59**	**261**	P		**P**	**10 41 51.2**	**-0.9**	
PSA00				IAmb		IAmb	10 41 60.0		
	comp=Z,20nm,1.5s								
MBWA	**Marble Bar**	**54.81**	**261**	P		**P**	**10 41 53.1**	**-0.7**	
MBWA				IAmb		IAmb	10 41 53.3		
	comp=Z,23nm,1.5s								
MORW	**Morawa**	**56.04**	**251**	P		**P**	**10 42 02.1**	**-0.2**	
MORW				IAmb		IAmb	10 42 24.6		
	comp=Z,28nm,1.4s								
TOLI2	**Tolitoli**	**62.70**	**286**	P		**P**	**10 42 45.9**	**-1.2**	
TOLI2				IAmb		IAmb	10 42 46.3		
	comp=Z,8.2nm,0.8s								
JAGI	**Jajag, Banyuwa**	**64.33**	**273**	P		**P**	**10 42 56.4**	**-1.1**	
QSPA	**South Pole Qui**	**64.56**	**180**	P		**P**	**10 42 59.9**	**+1.6**	
	comp=Z,3.8nm,0.6s,baz=245,slow=0.2,SNR=26								
	comp=Z,3.8nm,0.6s								
QSPA	**South Pole Qui**	**64.56**	**180**	P		**P**	**10 43 00.1**	**+1.8**	
JHJ2	**Mitsune**	**69.56**	**325**	P		**P**	**10 43 29.4**	**+0.1**	
SBUM	**Sibu**	**70.85**	**282**	P		**P**	**10 43 37.5**	**0.0**	
SBUM				IAmb		IAmb	10 43 38.2		
	comp=Z,9.6nm,1.3s								
KSM	**Kuching**	**72.09**	**281**	P		**P**	**10 43 44.5**	**-0.2**	
KSM				IAmb		IAmb	10 44 01.9		
	comp=Z,19nm,1.1s								
JGF	**Kuroka**	**72.77**	**325**	P		**P**	**10 43 47.8**	**-0.4**	
JGF				IAmb		IAmb	10 43 48.1		
	comp=Z,9.0nm,0.9s								
MJAR	**Matsushiro Arr**	**73.07**	**326**	P		**P**	**10 43 49.0**	**-0.9**	
	comp=Z,7.6nm,0.9s,baz=168,slow=5.2,SNR=17								
	comp=Z,7.6nm,0.9s								
MJAR	**Matsushiro Arr**	**73.07**	**326**	P		**P**	**10 43 48.6**	**-1.3**	
MAJO	**Matsushiro**	**73.07**	**326**	P		**P**	**10 43 48.6**	**-1.2**	
MAJO				IAmb		IAmb	10 43 49.9		
	comp=Z,16nm,0.9s								
MJB9	**Matsu-Tunnel**	**73.07**	**326**	P		**P**	**10 43 48.3**	**-1.5**	
MJB9				IAmb		IAmb	10 43 49.8		
	comp=Z,16nm,0.9s								
SMAI	**San Martin Ant**	**74.70**	**159**	P		**P**	**10 44 00.3**	**+1.7**	
SMAI				IAmb		IAmb	10 44 01.3		
	comp=Z,6.7nm,0.7s								
BELA	**Belgrano 2**	**74.86**	**173**	P		**P**	**10 44 00.2**	**+0.7**	
BELA				IAmb		IAmb	10 44 00.3		
	comp=Z,4.3nm,0.5s								
ADK	**Adak**	**77.14**	**2**	P		**P**	**10 44 11.9**	**-0.3**	
PMSA	**Palmer Station**	**77.54**	**157**	P		**P**	**10 44 15.9**	**+1.5**	
PMSA				IAmb		IAmb	10 44 23.4		
	comp=Z,22nm,1.4s								
KSRS	**Korea Array**	**79.30**	**321**	P		**P**	**10 44 24.4**	**+0.2**	
	comp=Z,4.1nm,0.7s,baz=135,slow=5.6,SNR=23								
	comp=Z,4.1nm,0.7s								
PEA0B	**Petropavlovsk-**	**80.61**	**347**	P		**P**	**10 44 30.3**	**-0.4**	
PETK	**Petropavlovsk-**	**80.61**	**347**	P		**P**	**10 44 30.1**	**-0.6**	
	comp=Z,3.3nm,0.6s,baz=170,slow=9.8,SNR=5.7								
	comp=Z,3.3nm,0.6s								
PETK	**Petropavlovsk-**	**80.61**	**347**	P		**P**	**10 44 30.4**	**-0.3**	
MG05	**Puerto Natales**	**80.61**	**143**	P		**P**	**10 44 31.9**	**+0.9**	
GO09	**Cerro Castillo**	**80.91**	**143**	P		**P**	**10 44 34.1**	**+1.5**	
GO09				IAmb		IAmb	10 44 41.2		
	comp=Z,28nm,1.5s								
USRK	**Ussuriysk Ar.**	**81.96**	**328**	P		**P**	**10 44 38.1**	**+0.2**	
	comp=Z,1.3nm,0.5s,baz=259,slow=1.9,SNR=4.4								
	comp=Z,1.3nm,0.5s								
SNAA	**Sanae**	**83.05**	**179**	P		**P**	**10 44 43.5**	**+0.3**	
ISA	**Isabella, Lake**	**84.37**	**46**	P		**P**	**10 44 50.9**	**+0.6**	
LL02	**Futaleuf**	**85.25**	**136**	P		**P**	**10 44 55.8**	**+1.3**	
LL02				IAmb		IAmb	10 44 56.4		
	comp=Z,5.9nm,0.7s								
NVAR	**Mina Array Bea**	**86.13**	**44**	P		**P**	**10 44 59.5**	**+0.5**	
	comp=Z,1.0nm,0.8s,baz=223,slow=8.3,SNR=11								
	comp=Z,1.0nm,0.8s								
TPNV	**Topopah Spring**	**86.57**	**46**	P		**P**	**10 45 01.8**	**+0.8**	
KVN	**Kaiserville**	**86.63**	**44**	P		**P**	**10 45 01.4**	**+0.1**	
ORCD	**Orcadas**	**86.78**	**160**	P		**P**	**10 45 02.1**	**+0.7**	
PLCA	**Paso Flores**	**87.35**	**134**	P		**P**	**10 45 06.1**	**+1.4**	
	comp=Z,0.6nm,0.5s,baz=154,slow=23,SNR=3.2								
	comp=Z,0.6nm,0.5s								
TUC	**Tucson**	**87.75**	**53**	P		**P**	**10 45 06.7**	**+0.2**	
ELK	**Elko**	**89.41**	**44**	P		**P**	**10 45 14.5**	**+0.3**	
	comp=Z,0.8nm,0.6s,baz=139,slow=1.2,SNR=4.0								
	comp=Z,0.8nm,0.6s								
CMAR	**Chiang Mai Arr**	**89.80**	**290**	P		**P**	**10 45 17.2**	**+0.9**	
	comp=Z,1.6nm,0.7s,baz=129,slow=2.8,SNR=10.0								
	comp=Z,1.6nm,0.7s								
CMAR	**Chiang Mai Arr**	**89.80**	**290**	P		**P**	**10 45 17.4**	**+1.1**	
MTPU	**Mount Pierson**	**89.86**	**47**	P		**P**	**10 45 16.4**	**-0.2**	
MTPU				IAmb		IAmb	10 45 19.3		
	comp=Z,3.9nm,1.1s								
TMUT	**Trail Mountain**	**91.18**	**46**	P		**P**	**10 45 23.6**	**+1.0**	
TMUT				IAmb		IAmb	10 45 24.8		
	comp=Z,9.7nm,1.4s								
SRU	**San Rafael Swe**	**91.53**	**47**	P		**P**	**10 45 23.7**	**-0.4**	
SRU				IAmb		IAmb	10 45 25.6		
	comp=Z,3.4nm,1.0s								
TX31	**Lajitas Ar. Si**	**91.55**	**58**	P		**P**	**10 45 24.5**	**+0.3**	
TX32	**Lajitas Array**	**91.55**	**58**	P		**P**	**10 45 24.5**	**+0.3**	
TXAR	**Lajitas Array**	**91.55**	**58**	P		**P**	**10 45 25.2**	**+1.0**	
	comp=Z,1.0nm,0.8s,baz=203,slow=6.5,SNR=9.8								
	comp=Z,1.0nm,0.8s								
FINES	**FINESS Array B**	**139.88**	**341**	PKhKP		PKPpre	10 51 32.7		
	comp=Z,3.2nm,0.9s,baz=90,slow=3.8,SNR=5.5								
FINES				PKP		sPdif	10 51 42.6	+0.7	
	comp=Z,2.3nm,0.9s,baz=64,slow=4.4,SNR=5.0								
NB2	**NORSAR Subarra**	**143.63**	**351**	PKP		PKPab	10 51 45.5	-1.1	
	comp=Z,3.3nm,0.6s,baz=16,slow=3.3								
NOA	**NORSAR Array B**	**143.63**	**351**	PKhKP		PKPpre	10 51 45.6		
	comp=Z,5.7nm,0.8s,baz=22,slow=3.8,SNR=22								
NAO01	**NORSAR Array S**	**143.87**	**351**			PKPbc	10 51 46.8	-0.6	
IDID	**Didziasalis**	**144.25**	**334**	*eP*		PKPbc	10 51 48.5	-0.2	
IIGN	**Ignalina**	**144.43**	**334**	*eP*		PKPbc	10 51 49.3	0.0	
VIKU	**Vikbolandet**	**144.92**	**344**	*eP*		**PKPdf**	**10 51 49.5**	**-0.7**	
PABE	**Paberze**	**145.18**	**336**			**PKPdf**	**10 51 51.0**	**+0.3**	
PABE	**Paberze**	**145.18**	**336**	*eP*		**PKPdf**	**10 51 50.6**	**-0.1**	
AKASG	**Malin Array Be**	**146.15**	**326**	PKPbc		**PKPdf**	**10 51 53.2**	**+0.7**	
	comp=Z,1.2nm,0.4s,baz=32,slow=4.3,SNR=9.9								
BR131	**Keskin Array S**	**148.28**	**305**			**PKPbc**	**10 52 00.2**	**-0.6**	
BR131						**PKPab**	**10 52 05.5**	**-0.2**	
BRTR	**Keskin Array B**	**148.28**	**305**	PKPbc		**PKPbc**	**10 52 00.1**	**-0.6**	
	comp=Z,1.1nm,0.6s,baz=134,slow=3.5,SNR=6.3								
BRTR	**Keskin Array B**	**148.28**	**305**			**PKPbc**	**10 52 00.2**	**-0.6**	
BRTR						**PKPab**	**10 52 05.5**	**-0.2**	
CLL	**Collm**	**152.31**	**342**	*i* PKPbc		**PKPbc**	**10 52 09.0**	**-0.5**	
	comp=Z,4.0nm,0.9s								
CLL				*i* PKPab		**PKPab**	**10 52 21.1**	**-0.8**	
	comp=Z,5.0nm,0.7s								
BRG	**Berggiesshubel**	**152.42**	**340**	*e*(P)		**PKPab**	**10 52 22.4**	**-0.1**	
BRG				Amp			10 52 23.0		
	comp=Z,4.4nm,0.7s								
GERES	**GERESS Array B**	**154.26**	**338**	PKPab		**PKPab**	**10 52 29.4**	**-1.1**	
	comp=Z,0.3nm,0.6s,baz=46,slow=3.9,SNR=4.1								

*BJI **04** 10:44:01.0±0.0,0.°40S×126.°53E,h14km,mb5.0/75, mB5.2/61,Ms4.9/78,Ms7 4.8/72*
*MOS **04** 10:44:08.9±1.1,0.°45N×126.°24E,h26km,mb5.5/65, MS4.7/12,Error ellipse: s-maj=7.8km s-min=4.2km*

az=113.1
*IDC **04** 10:44:08.8±2.4,0.°38N×126.°17E,h14km±14km,mb5.1/36, mbtmp5.2/37,ML4.7/1,MS4.5/42,Error ellipse: s-maj=13.9km s-min=8.4km az=72.0*
*NEIC **04** 10:44:08.9±1.8,0.°43N±0.°06×126.°33E±0.°04,h10km±1km, mb5.4/227,Mww5.4,Error ellipse: s-maj=10.8km s-min=6.9km az=168.0*
*GCMT **04** 10:44:12.9±0.1,0.°33N±0.°01×126.°26E±0.°01,h22km, MW5.5/133,Moment Tensor Solution. s133,c245; s133,c241; Duration: 1s4 Moment tensor: Scale 10¹⁷ Nm; Mrr2.02±.03; Mθθ-0.71±.02; Mφφ-1.32±.03; Mrθ-0.46±.04; Mθφ-1.25±.02; Mφr-0.18±.04; Best double couple: Mo2.21800×10¹⁷ NP1:φs30.00000°,δ40.00000°, λ78.00000°. NP2:φs226.00000°,δ51.00000°,λ100.00000°. Principal axes: T 2.0950, Plg80.0000°, Azm183.0000°; N 0.2400, Plg8.0000°, Azm39.0000°; P -2.3410, Plg6.0000°, Azm309.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DJA **04** 10:44:12.6±0.2,0.°N±1.°×12.°6E±.°,h55km±2km,M5.2/73, mB5.7/48,mb5.3/73,MLv5.3/20,Mw(mB)5.2/48, MwMwp5.2/29,Mwp5.4/29*
*NEIC **04** 10:44:15,0.°45N×126.°39E,h14km,Moment Tensor Solution. Duration: 10s6 Moment tensor: Scale 10¹⁷Nm; Mrr0.93; Mθθ-0.04; Mφφ-0.89; Mrθ-1.07; Mθφ-0.88; Mφr0.11; Fault plane solution: Mo1.66000×10¹⁷ NP1:φs1.00000°, δ44.00000°,λ34.00000°. NP2:φs245.00000°,δ67.00000°, λ129.00000°. Principal axes: T 1.7494, Plg52.0000°, Azm201.0000°; N -0.1998, Plg35.0000°, Azm48.0000°; P -1.5497, Plg13.0000°, Azm308.0000°;*
ISC 04 10:44:10.7±0.3,0.°36N±0.°03×126.°29E±0.°03,h26km±2km, h26km:pP-P,n966,σ1s60/1000,mb5.4/224,MS4.7/82, 54C-29D,Northern Moluccа Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.15**	**69**		Op	**Pn**	**10 44 29.8**	**-1.4**
TNTI				Sg		**Sn**	**10 44 44.8**	**-1.4**
TNTI	**Ternate**	**1.15**	**69**	P		**Pn**	**10 44 29.7**	**-1.5**
TNTI				S		**Sn**	**10 44 44.1**	**-2.1**
TNTI	**Ternate**	**1.57**	**69**	P		**Pn**	**10 44 31.1**	**-0.1**
LBMI	**Labuha**	**1.57**	**129**	P		**Pn**	**10 44 36.0**	**-1.0**
LBMI				S		**Sn**	**10 44 54.8**	**-1.7**
KMSI	**Cibinong**	**2.31**	**275**	P		**Pn**	**10 44 47.9**	**+0.7**
KMSI				S		**Sb**	**10 45 20.3**	**+0.3**
SANI	**Sanana**	**2.42**	**187**	P		**Pn**	**10 44 48.8**	**+0.2**
SANI				S		**Sn**	**10 45 19.0**	**+1.6**
SANI	**Sanana**	**2.42**	**187**	P		**Pn**	**10 44 49.2**	**+0.6**
SGSI	**Sangihe**	**3.39**	**347**	P		**Pn**	**10 45 03.4**	**+1.4**
LUWI	**Luwuk**	**3.78**	**248**	Pn		**Pn**	**10 45 09.6**	**+2.2**
LUWI	**Luwuk**	**3.78**	**248**	P		**Pn**	**10 45 09.4**	**+2.0**
LUWI	**Luwuk**	**3.78**	**248**	P		**Pn**	**10 45 11.9**	**+4.5**
MRSI	**Marisa**	**4.35**	**272**	P		**Pn**	**10 45 16.9**	**+1.7**
AAI	**Ambon**	**4.45**	**155**	P		**Pn**	**10 45 18.3**	**+1.7**
AAI				S		**Sn**	**10 46 08.7**	**+1.0**
MSAI	**Masohi**	**4.53**	**144**	P		**Pn**	**10 45 20.5**	**+2.7**
APSI	**Ampana**	**4.81**	**255**	P		**Pn**	**10 45 24.1**	**+2.6**
SWI	**Sorong**	**5.12**	**104**	P		**Pn**	**10 45 27.0**	**+1.2**
	1.4nm30µm5µm368nm,0.8s							
SIJI	**Sorong**	**5.13**	**104**	Pn		**Pn**	**10 45 27.1**	**+1.1**
	27nm,0.3s,baz=290,slow=9.0,SNR=87							
SIJI				Sn		**Sn**	**10 46 22.6**	**-1.8**
	baz=268,slow=15							
SIJI				LR		LR	10 47 49.8	
	comp=Z,16µm,19.4s,baz=275,slow=42							
	207nm,0.6s							
TOLI2	**Tolitoli**	**5.55**	**278**	Pn		**Pn**	**10 45 32.1**	**+0.3**
TOLI2	**Tolitoli**	**5.55**	**278**	P		**Pn**	**10 45 34.2**	**+2.4**
DDMP	**Don Marcelino,**	**5.73**	**354**	*eP*		**Pn**	**10 45 35.1**	**+0.9**
BNDI	**Bandanaira**	**6.05**	**143**	P		**Pn**	**10 45 39.9**	**+1.3**
MPSI	**Mapaga**	**6.39**	**270**	P		**Pn**	**10 45 46.1**	**+2.8**
	2.3nm20µm7µm260nm,1.0s							
DAV	**Davao City (W)**	**6.70**	**354**	Pn		**Pn**	**10 45 50.6**	**+3.1**
	40nm,0.3s,baz=74,slow=15,SNR=1.8							
KCP	**Kidapawan**	**6.71**	**350**	*iP*		**Pn**	**10 45 51.3**	**+3.6**
FAKI	**Fak Fak**	**6.79**	**119**	Pn		**Pn**	**10 45 48.4**	**-0.5**
FAKI	**Fak Fak**	**6.79**	**119**	P		**Pn**	**10 45 48.7**	**-0.1**
	0.9nm26µm3µm276nm,1.0s							
FAKI	**Fak Fak**	**6.79**	**119**	P		**Pn**	**10 45 49.1**	**+0.3**
BBSI	**Bau Bau**	**6.89**	**213**	P		**Pn**	**10 45 54.6**	**+4.4**
	0.3nm827nm111nm,0.9s							
TTSI	**Tana Toraja**	**7.30**	**242**	P		**Pn**	**10 45 58.4**	**+2.7**
	1.8nm9µm6µm496nm,0.8s							
BUKP	**Musuan**	**7.56**	**351**	*eP*		**Pn**	**10 46 00.3**	**+0.8**
BIPH	**Bislig**	**7.77**	**1**	*iP*		**Pn**	**10 46 03.5**	**+1.2**
BNSI	**Bone**	**7.78**	**232**	P		**Pn**	**10 46 05.2**	**+2.8**
	1.2nm9µm4µm267nm,0.7s							
SPSI	**Sidrap Palu**	**7.80**	**237**	P		**Pn**	**10 46 06.0**	**+3.3**
	3.2nm10µm11µm685nm,0.6s							
PAGZ	**Pagadian**	**7.98**	**339**	*eP*		**Pn**	**10 46 06.8**	**+1.7**
BKSI	**Bulukumba**	**8.35**	**227**	P		**Pn**	**10 46 13.7**	**+3.4**
	8µm4µm538nm,0.8s							
KAPI	**Kappang**	**8.43**	**231**	Pn		**Pn**	**10 46 14.0**	**+2.7**
	34nm,0.3s,baz=21,slow=4.6,SNR=73							
KAPI				Sn		**Sn**	**10 47 47.1**	**+1.3**
	2.9nm,0.3s,baz=239,slow=22,SNR=0.9							
KAPI	**Kappang**	**8.43**	**231**	Pn		**Pn**	**10 46 12.9**	**+1.5**
KAPI	**Kappang**	**8.43**	**231**	P		**Pn**	**10 46 12.9**	**+1.5**
KAPI	**Kappang**	**8.43**	**231**	P		**Pn**	**10 46 14.8**	**+3.4**
BUTP	**Butuan**	**8.57**	**356**	*eP*		**Pn**	**10 46 17.7**	**+4.4**
BSSI	**Bau Bau, Buton**	**8.67**	**222**	P		**Pn**	**10 46 17.3**	**+2.6**
	4µm1µm198nm,0.8s							
SMKI	**Samarinda**	**9.11**	**265**	P		**Pn**	**10 46 23.7**	**+3.0**
	13µm7µm70nm,0.9s							
MYLDM	**Lahad Datu**	**9.13**	**302**	Pn		**Pn**	**10 46 20.7**	**-0.2**
GLSP	**General Luna,**	**9.36**	**359**	*eP*		**Pn**	**10 46 27.1**	**+3.0**
BKB	**Balikpapan**	**9.53**	**260**	Pn		**Pn**	**10 46 25.8**	**-0.5**
TBP	**Tagbilaran**	**9.57**	**345**	*eP*		**Pn**	**10 46 31.3**	**+4.2**
SAUI	**Saumlaki**	**9.68**	**149**	Pn		**Pn**	**10 46 28.1**	**-0.4**
SAUI	**Saumlaki**	**9.68**	**149**	P		**Pn**	**10 46 29.9**	**+1.5**
	16µm367nm,0.9s							
SAUI	**Saumlaki**	**9.68**	**149**	P		**Pn**	**10 46 30.0**	**+1.5**
MMRI	**Maumere**	**9.81**	**204**			**Pn**	**10 46 31.1**	**+0.9**
MMRI	**Maumere**	**9.81**	**204**	P		**Pn**	**10 46 34.0**	**+3.8**
	6µm112nm,0.8s							
MMRI	**Maumere**	**9.81**	**204**	P		**Pn**	**10 46 32.7**	**+2.5**
CNOP	**Candoni, Negro**	**10.08**	**339**	*eP*		**Pn**	**10 46 37.4**	**+3.5**
EDFI	**Ende, Flores**	**10.14**	**207**	P		**Pn**	**10 46 36.8**	**+1.9**
	4µm1µm118nm,0.8s							
SRPI	**Serui, Papua**	**10.20**	**103**	P		**Pn**	**10 46 35.7**	**+0.1**
	9µm106nm,0.9s							
SOEI	**Soe**	**10.25**	**191**	P		**Pn**	**10 46 38.8**	**+2.4**
	11µm6µm460nm,0.9s							
BATI	**Baumata**	**10.82**	**194**	Pn		Pn	10 46 49.0	+4.9
	14nm,0.3s,baz=261,slow=1.6,SNR=17							
BATI	**Baumata**	**10.82**	**194**	P		**Pn**	**10 46 47.9**	**+3.8**
	5µm2µm164nm,1.0s							
MTKI	**Muara Teweh, K**	**11.46**	**263**	P		**Pn**	**10 46 55.5**	**+2.6**
	5µm4µm20nm,0.5s							
RCP	**Roxas**	**11.67**	**343**	*eP*		**Pn**	**10 47 00.0**	**+4.3**
BATP	**Bataraza**	**11.90**	**315**	*eP*		**Pn**	**10 46 59.3**	**+0.4**
BASI	**Baing, Sumba**	**11.95**	**208**	P		**Pn**	**10 47 02.3**	**+2.8**
	4µm2µm144nm,0.6s							
BBKI	**Banjar Baru**	**12.05**	**252**	P		Pn	10 47 05.9	+4.9
	4µm68nm,1.4s							
WBSI	**Waikabubak, Su**	**12.08**	**214**	P		**Pn**	**10 47 05.1**	**+3.7**
	2µm195nm,0.9s							
PLAI	**Plampang**	**12.46**	**223**	P		**Pn**	**10 47 08.9**	**+2.4**
	6µm2µm153nm,0.8s							
PLAI	**Plampang**	**12.46**	**223**	P		**Pn**	**10 47 09.2**	**+2.7**
PVCP	**Virac**	**13.32**	**351**	*eP*		**Pn**	**10 47 18.7**	**+0.5**
BOAC	**Boac**	**13.73**	**341**	*eP*		**P**	**10 47 32.5**	**+0.2**
SRBI	**Singaraja**	**13.87**	**233**	P		**Pn**	**10 47 27.3**	**+1.5**
	157nm,0.9s							
MTN	**Manton Dam**	**13.97**	**160**	P		**Pn**	**10 47 26.0**	**-1.2**
	baz=14,SNR=26							
MTN	**Manton Dam**	**13.97**	**160**	Pn		**Pn**	**10 47 26.4**	**-0.8**
MTN	**Manton Dam**	**13.97**	**160**	P		**Pn**	**10 47 26.6**	**-0.6**
GENI	**Genyem**	**14.19**	**102**	P		**Pn**	**10 47 30.6**	**+0.5**
	10µm6µm144nm,1.4s							
GENI	**Genyem**	**14.19**	**102**	P		**Pn**	**10 47 30.9**	**+0.8**
SBUM	**Sibu**	**14.21**	**279**			**Pn**	**10 47 31.7**	**+1.2**
DNP	**Denpasar**	**14.23**	**231**	P		**P**	**10 47 35.4**	**-2.4**
	652nm,0.9s							
JCNP	**Jose Panganiba**	**14.29**	**346**	*eP*		**Pn**	**10 47 32.6**	**+1.2**
KMMI	**Kalianget**	**14.33**	**239**	P		**P**	**10 47 36.2**	**-2.7**
	4µm243nm,1.8s							
KDU	**Kakadu**	**14.35**	**155**	P		**Pn**	**10 47 29.7**	**-2.6**
	baz=14,SNR=60							
KDU	**Kakadu**	**14.35**	**155**	P		**Pn**	**10 47 30.5**	**-1.8**

IGBI	**Denpasar**	**14.37**	**230**	P		**P**	**10 47 36.1**	**-3.2**	
	3µm101nm,0.9s								
ABJI	**Asem Bagus**	**14.49**	**236**	P		**P**	**10 47 40.2**	**-0.6**	
LUBP	**Lubang**	**14.57**	**336**	*eP*		**Pn**	**10 47 37.2**	**+1.8**	
TGY	**Tagaytay City**	**14.64**	**339**	Pn		**P**	**10 47 39.8**	**-2.7**	
	31nm,0.3s,baz=155,slow=8.2,SNR=4.6								
STKI	**Sintang**	**14.81**	**269**	P		**Pn**	**10 47 39.9**	**+1.2**	
MACP	**Maragondon, Ca**	**14.87**	**338**	*eP*		**Pn**	**10 47 40.2**	**+0.8**	
JAGI	**Jajag, Banyuwa**	**14.94**	**234**			**P**	**10 47 43.1**	**-2.6**	
JAGI				IAmb		IAmb	10 48 04.1		
	comp=Z,258nm,1.1s								
JAGI	**Jajag, Banyuwa**	**14.94**	**234**	P		**P**	**10 47 43.6**	**-2.1**	
	comp=Z,6µmcomp=Z,3µmcomp=Z,196nm,0.8s								
JAGI	**Jajag, Banyuwa**	**14.94**	**234**	P		**Pn**	**10 47 43.0**	**+2.6**	
BLJI	**Banyuglugur**	**15.00**	**237**	P		**P**	**10 47 45.8**	**-0.6**	
	comp=Z,2µmcomp=Z,90nm,0.9s								
GMJI	**Gumukmas**	**15.41**	**236**	P		**P**	**10 47 49.4**	**-1.5**	
	comp=Z,3µmcomp=Z,187nm,1.0s								
PCPH	**Palayan**	**15.95**	**341**	*eP*		**P**	**10 47 57.0**	**+0.1**	
KSM	**Kuching**	**16.01**	**274**			**Pn**	**10 47 54.2**	**-0.2**	
KSM				IAmb		IAmb	10 48 03.5		
	comp=Z,529nm,1.3s								
KSM	**Kuching**	**16.01**	**274**	P		**P**	**10 47 57.1**	**-0.6**	
TBJI	**Tambak Boyo**	**16.08**	**243**	P		P	10 48 10.0	+12	
KNRA	**Kununurra**	**16.12**	**171**	P		**Pn**	**10 47 55.0**	**-0.8**	
	baz=16,SNR=87								
KNRA	**Kununurra**	**16.12**	**171**	Pn		**Pn**	**10 47 55.0**	**-0.8**	
KNRA				IAmb		IAmb	10 48 02.3		
	comp=Z,238nm,0.8s								
KNRA	**Kununurra**	**16.12**	**171**	P		**Pn**	**10 47 55.4**	**-0.4**	
MMPI	**Merauke**	**16.56**	**122**	P		**P**	**10 48 03.5**	**-0.2**	
	comp=Z,10µmcomp=Z,852nm,1.1s								
SMPP	**San Manuel, Pa**	**16.63**	**341**	*eP*		**P**	**10 48 03.5**	**-1.0**	
PWJI	**Pagerwojo**	**16.67**	**240**	P		**P**	**10 48 04.4**	**-0.5**	
	comp=Z,5µmcomp=Z,256nm,0.7s								
PCJI	**Pacitan**	**17.29**	**240**	P		**P**	**10 48 12.6**	**+0.7**	
	comp=Z,6µmcomp=Z,357nm,0.9s								
WOJI	**Wonogiri, Jawa**	**17.35**	**242**	P		**P**	**10 48 13.8**	**+1.3**	
	comp=Z,2µmcomp=Z,78nm,0.8s								
SAMP	**Sagada Mountai**	**17.44**	**343**	*eP*		**Pn**	**10 48 11.9**	**-0.5**	
SMRI	**Semarang**	**17.44**	**245**	P		**P**	**10 48 13.5**	**0.0**	
	comp=Z,292nm,1.1s								
UGM	**Wanagama**	**17.74**	**242**	P		**P**	**10 48 16.9**	**+0.1**	
UGM	**Wanagama**	**17.74**	**242**	P		**P**	**10 48 18.4**	**+1.6**	
	comp

comp=Z,8.8nm,0.6s,baz=344,slow=1.9,SNR=7.9
ASAR S **S** **10 54 00.1 +4.7**
comp=Z,23nm,1.1s,baz=348,slow=19,SNR=7.3
ASAR ScP **ScP** **10 56 44.7 -0.4**
comp=Z,2.0nm,0.8s,baz=348,slow=2.8,SNR=3.2
comp=Z,205nm,0.7s
ASAR Alice Springs 25.01 163 P **P** **10 49 34.5 +1.8**
BKNI Bangkinang 25.25 270 P **P** **10 49 35.9 +0.9**
BKNI IAmb IAmb 10 49 45.9
comp=Z,155nm,1.2s
WRKA Warakurna 25.33 176 P **P** **10 49 35.3 -0.4**
baz=26,SNR=264
WRKA Warakurna 25.33 176 P **P** **10 49 36.7 +1.1**
MTSU Mount Surprise 25.54 137 P **P** **10 49 38.1 +0.5**
baz=26,SNR=25
MTSU Mount Surprise 25.54 137 P **P** **10 49 39.3 +1.7**
QZH Quanzhou 25.54 344 ⇓*i*P **P** **10 49 38.7 +1.2**
QZH sP **pwP** **10 49 48.4 +0.7**
QZH S **S** **10 54 05.4 +1.6**
QZH pmax pmax
comp=Z,47nm,1.6s
QZH LR LR
comp=Z,2μm,22.0s
QZH LR LR
comp=Z,870nm,18.4s
QZH LR LR
comp=Z,2μm,22.3s
IPM Ipoh 25.56 280 P **P** **10 49 37.0 -0.9**
IPM IAmb IAmb 10 49 43.6
comp=Z,60nm,0.8s
IPM Ipoh 25.56 280 P **P** **10 49 38.0 +0.1**
GIRL Giralia 25.70 206 P **P** **10 49 40.4 +1.4**
baz=26,SNR=4.8
PPI Padang Panjang 25.90 268 P **P** **10 49 41.5 +0.5**
comp=Z,85nm,0.9s
KULM Kulim 26.06 281 P **P** **10 49 41.2 -1.2**
KRVT Keravat (AS076 26.13 100 P **P** **10 49 43.3 +0.2**
comp=Z,238nm,1.0s,baz=174,slow=3.7,SNR=7.9
comp=Z,238nm,1.0s
RABL Rabaul 26.25 100 P **P** **10 49 46.4 +2.3**
JOW Kunigami 26.39 4 P **P** **10 49 45.5 +0.4**
comp=Z,63nm,0.6s,baz=218,slow=5.4,SNR=12
comp=Z,63nm,0.6s
JOW Kunigami 26.39 4 P **P** **10 49 46.6 +1.4**
MNSI Mandailing Nat 26.71 271 P **P** **10 49 49.4 +1.1**
comp=Z,34nm,0.7s
PSI Prapat 27.46 275 P **P** **10 49 54.6 -0.5**
comp=Z,33nm,1.0s,baz=128,slow=1.9,SNR=7.6
comp=Z,33nm,1.0s
SRIT Nakonsritamara 27.81 288 P **P** **10 49 57.7 -0.5**
CTA Charters Tower 28.21 137 P **P** **10 50 02.3 +0.7**
comp=Z,13nm,0.8s,baz=310,slow=11,SNR=11
CTA LR LR 11 03 11.5
comp=Z,2μm,20.5s,baz=323,slow=40
comp=Z,13nm,0.8s
CTA Charters Tower 28.21 137 P **P** **10 50 02.4 +0.8**
CTAO Charters Tower 28.21 137 P **P** **10 50 01.5 -0.1**
CTAO Charters Tower 28.21 137 P **P** **10 50 01.5 -0.1**
CTAO pmax pmax
comp=Z,37nm,1.0s
CTAO Charters Tower 28.21 137 P **P** **10 50 02.4 +0.8**
KCSI Kotacane, Aceh 28.67 277 P **P** **10 50 02.5 -3.3**
GSI Gunungsitoli 28.72 272 P **P** **10 50 05.8 -0.5**
GSI IAmb IAmb 10 50 15.3
comp=Z,63nm,1.3s
GSI Gunungsitoli 28.72 272 P P 10 49 59.9 -6.4
OOD Oodnadatta 29.42 163 P **P** **10 50 13.3 +1.1**
JCJ Chichijima 30.66 29 LR LR 11 02 26.4
comp=Z,358nm,20.0s,baz=201,slow=36
MORW Morawa 30.86 198 P **P** **10 50 25.7 +0.7**
baz=31,SNR=12
SSE Sheshan 30.95 351 P **P** **10 50 25.3 -0.4**
SSE S **S** **10 55 28.2 -0.5**
SSE pmax pmax
comp=Z,11nm,0.7s
SSE pmax pmax
comp=Z,130nm,3.2s
SSE LR LR
comp=Z,400nm,23.2s
SSE LR LR
comp=Z,350nm,22.3s
FORT Forrest 31.02 177 P **P** **10 50 26.8 +0.5**
baz=31,SNR=32
FORT Forrest 31.02 177 P **P** **10 50 26.6 +0.3**
FORT Forrest 31.02 177 P **P** **10 50 26.9 +0.5**
INKA Innaminka 31.20 155 P **P** **10 50 30.2 +2.1**
MULG Mulgathing 31.36 167 P **P** **10 50 30.4 +1.0**
QLP Quilpie 31.89 149 P **P** **10 50 33.7 -0.4**
baz=32,SNR=29
QLP Quilpie 31.89 149 P **P** **10 50 35.8 +1.7**
GYA Guiyang 32.10 325 ⇓P **P** **10 50 40.1 +4.0**
GYA S **S** **10 55 49.2 +2.1**
GYA pmax pmax
comp=Z,18nm,2.2s
GYA pmax pmax
comp=Z,110nm,3.5s
GYA LR LR
comp=Z,1μm,19.9s
GYA LR LR
comp=Z,810nm,22.4s
GYA LR LR
comp=Z,2μm,20.4s
BLDU Ballidu 32.13 196 P **P** **10 50 36.6 +0.4**
baz=32,SNR=15
NJ2 Nanjing 32.29 348 ⇑P **P** **10 50 41.0 +3.4**
NJ2 S **S** **10 55 52.7 +3.0**
NJ2 sS **sS** **10 56 05.7 +4.4**
NJ2 pmax pmax
comp=Z,25nm,1.2s
NJ2 LR LR
comp=Z,1μm,22.5s
NJ2 LR LR
comp=Z,1μm,14.9s
NJ2 LR LR
comp=Z,2μm,23.8s
CM31 Chiang Mai Arr 32.32 305 P **P** **10 50 37.8 -0.2**
CMAR Chiang Mai Arr 32.32 305 P **P** **10 50 38.0 -0.1**
comp=Z,4.7nm,1.0s,baz=131,slow=7.3,SNR=18
CMAR PcP **PcP** **10 53 26.4 +0.5**
comp=Z,4.9nm,0.8s,baz=149,slow=1.9,SNR=13
CMAR ScP **ScP** **10 57 08.9 +0.8**
comp=Z,1.5nm,0.8s,baz=166,slow=2.9,SNR=6.0
CMAR LR LR 11 04 56.6
comp=Z,1μm,21.8s,baz=120,slow=39
comp=Z,4.7nm,1.0s
CMAR Chiang Mai Arr 32.32 305 P **P** **10 50 37.6 -0.3**
CMAR Chiang Mai Arr 32.32 305 P **P** **10 50 37.7 -0.3**
CHTO Chiang Mai 32.50 306 P **P** **10 50 39.4 -0.2**
CHTO Chiang Mai 32.50 306 P **P** **10 50 39.4 -0.2**
CHTO pmax pmax
comp=Z,24nm,1.1s
CHTO Chiang Mai 32.50 306 P **P** **10 50 42.1 +2.5**
LCRK Leigh Creek 32.68 161 P **P** **10 50 43.1 +2.1**
KLBR Kellerberrin 32.79 194 P **P** **10 50 41.6 -0.4**
baz=33,SNR=19
KLBR Kellerberrin 32.79 194 P **P** **10 50 43.0 +1.0**
RK1H Rockhampton Ha 33.33 137 P **P** **10 50 47.5 +0.7**
comp=Z,153nm,0.7s
KMI Kunming 33.52 319 ⇑P **P** **10 50 49.5 +0.8**
KMI pP pP 10 50 55.6 0.0
KMI PP **PnPn** **10 52 02.0 +1.5**
KMI S **S** **10 56 05.4 -4.2**
KMI sS sS 10 56 23.5 +2.2
KMI pmax pmax
comp=Z,22nm,1.6s
KMI pmax pmax
comp=Z,190nm,4.7s
KMI LR LR
comp=Z,950nm,21.5s
KMI LR LR
comp=Z,1μm,20.8s
KMI LR LR
comp=Z,2μm,23.1s
MUN Mundaring 33.55 196 P **P** **10 50 50.9 +2.3**
baz=34,SNR=5.4
ENH Enshi 33.76 333 P **P** **10 50 49.7 -0.8**
ENH IAmb IAmb 10 50 58.7
comp=Z,40nm,0.8s
BBOO Buckleboo 34.26 165 P **P** **10 50 54.9 +0.1**
baz=34,SNR=74
BBOO Buckleboo 34.26 165 P **P** **10 50 55.3 +0.6**
BBOO IAmb IAmb 10 50 56.9
comp=Z,45nm,0.6s
BBOO Buckleboo 34.26 165 P **P** **10 50 55.4 +0.6**
RMQ Roma 34.37 143 P **P** **10 50 54.9 -0.9**
baz=34,SNR=16
RMQ Roma 34.37 143 P **P** **10 50 57.6 +1.7**
WHYH Whyalla 34.88 163 P **P** **10 51 00.5 +0.4**
comp=Z,82nm,0.7s
NAWB Namwon 34.89 2 IAmb IAmb 10 51 05.3
comp=Z,55nm,1.2s
HNR Honiara 34.90 107 P **P** **10 50 59.2 -1.4**
HNR Honiara 34.90 107 P **P** **10 50 59.2 -1.4**
HNR pmax pmax
comp=Z,328nm,0.7s
HNR Honiara 34.90 107 P **P** **10 51 01.1 +0.6**
JHJ Hachijo jima 2 34.97 20 P **P** **10 51 01.4 +0.5**
comp=Z,27nm,0.6s,baz=272,slow=22,SNR=5.3
comp=Z,27nm,0.6s
JHS Saijyo 35.04 10 P **P** **10 50 59.8 -1.7**
JHS IAmb IAmb 10 51 06.1
comp=Z,67nm,1.1s
EIDS Eidsvold 35.06 139 P **P** **10 51 02.1 +0.3**
baz=35,SNR=10
EIDS Eidsvold 35.06 139 P **P** **10 51 01.4 -0.3**
EIDS IAmb IAmb 10 51 03.9
comp=Z,46nm,0.9s
EIDS Eidsvold 35.06 139 P **P** **10 51 03.5 +1.7**
PZH PanZhiHua 35.12 320 P **P** **10 51 05.4 +2.9**
PZH pP **sP** **10 51 12.0 -0.2**
PZH sP **pwP** **10 51 14.1 +1.3**
PZH PP **PnPn** **10 52 19.0 -1.4**
PZH S **S** **10 56 32.0 -2.1**
PZH pmax pmax
comp=Z,20nm,0.8s
PZH pmax pmax
comp=Z,120nm,5.9s
PZH LR LR
comp=Z,4μm,18.8s
PZH LR LR
comp=Z,3μm,19.8s
PZH LR LR
comp=Z,3μm,18.7s
NAPP Napperby 35.19 163 P **P** **10 51 04.0 +1.2**
comp=Z,41nm,0.6s
STKA Stephens Creek 35.19 157 P **P** **10 51 03.3 +0.5**
comp=Z,66nm,0.7s,baz=330,slow=9.1,SNR=106
comp=Z,66nm,0.7s
STKA Stephens Creek 35.19 157 P **P** **10 51 03.4 +0.5**
baz=35,SNR=94
STKA Stephens Creek 35.19 157 P **P** **10 51 03.8 +1.0**
HTT Hallett 35.66 162 P **P** **10 51 07.9 +1.0**
baz=36,SNR=37
HTT Hallett 35.66 162 P **P** **10 51 07.5 +0.6**
TJN Taejon 35.85 1 ⇑*e*P **P** **10 51 08.6 +0.2**
RKGY Rocky Gully 35.87 193 P **P** **10 51 10.3 +1.8**
baz=36,SNR=5.2
INU Inuyama 36.22 15 P **P** **10 51 10.8 -0.8**
INU IAmb IAmb 10 51 16.8
comp=Z,62nm,0.9s
INU Inuyama 36.22 15 P **P** **10 51 11.1 -0.5**
KSCHJ Chungju 36.36 2 IAmb IAmb 10 51 18.3
comp=Z,67nm,1.4s
LYN LuoYang 36.38 341 ⇓P **P** **10 51 15.2 +2.2**
LYN pmax pmax
comp=Z,30nm,1.0s
LYN pmax pmax
comp=Z,210nm,5.9s
LYN LR LR
comp=Z,1μm,22.6s
LYN LR LR
comp=Z,910nm,18.6s
LYN LR LR
comp=Z,2μm,22.1s
JGF Kuroka 36.54 15 IAmb IAmb 10 51 19.2
comp=Z,26nm,0.6s
TIA Tai'an 36.67 348 ⇓P **P** **10 51 16.3 +0.9**
TIA S **S** **10 56 55.5 -1.8**
TIA pmax pmax
comp=Z,10.0nm,0.8s
TIA pmax pmax
comp=Z,220nm,4.5s
TIA LR LR
comp=Z,790nm,24.9s
TIA LR LR
comp=Z,540nm,22.4s
TIA LR LR
comp=Z,1μm,24.9s
CMSA Cobar Meteorol 36.67 152 P **P** **10 51 15.8 +0.3**
baz=37,SNR=38
CMSA Cobar Meteorol 36.67 152 P **P** **10 51 16.4 +0.9**
KSAR Wonju Array Be 36.92 2 P **P** **10 51 16.5 -1.1**
KSAR Wonju Array Be 36.92 2 P **P** **10 51 16.5 -1.1**
KSRS Korea Array 36.94 2 P **P** **10 51 18.2 +0.6**
comp=Z,13nm,0.9s,baz=179,slow=9.8,SNR=32
KSRS PcP **PcP** **10 53 39.0 +0.2**
comp=Z,3.1nm,0.6s,baz=183,slow=2.7,SNR=9.6
comp=Z,13nm,0.9s
KS19 Wonju Array Si 36.98 2 P **P** **10 51 16.8 -1.3**
TWOA Tennyson Woods 37.04 163 P **P** **10 51 19.9 +1.3**
CD2 Chengdu 37.15 327 P **P** **10 51 19.1 -0.5**
CD2 pP pP 10 51 23.8 -2.8
CD2 PP **PnPn** **10 52 46.5 +1.4**
CD2 S **S** **10 57 04.9 +0.1**
CD2 pmax pmax
comp=Z,20nm,1.0s
CD2 pmax pmax
comp=Z,170nm,7.8s
CD2 LR LR
comp=Z,2μm,20.1s
CD2 LR LR
comp=Z,2μm,23.0s
XAN Xi'an 37.25 336 P **P** **10 51 19.8 -0.6**
XAN pP sP 10 51 30.3 +0.1
XAN PP **PnPn** **10 52 55.8 +10**
XAN pmax pmax
comp=Z,12nm,1.1s
XAN LR LR
comp=Z,590nm,24.7s
XAN LR LR
comp=Z,1μm,22.8s
XAN LR LR
comp=Z,2μm,23.0s
HJU Haeju 37.50 359 P **P** **10 51 23.6 +1.2**
HJU pP **pwP** **10 51 33.4 +0.7**
HJU S **S** **10 57 11.4 +1.6**
HJU AmB
comp=Z,135nm,1.7s
HJU AMS AMS
comp=N,1μm,2.0s
HJU AMS AMS
comp=E,1μm,2.0s
HJU AMS AMS
comp=Z,1μm,1.9s
MAJO Matsushiro 37.66 16 P **P** **10 51 22.6 -1.3**
MAJO IAmb IAmb 10 51 27.9
comp=Z,182nm,2.0s
MAJO Matsushiro 37.66 16 ⇑*e*P **P** **10 51 22.6 -1.3**
MAJO pmax pmax
comp=Z,46nm,1.3s
MAJO Matsushiro 37.66 16 P **P** **10 51 23.0 -0.8**
MJAR Matsushiro Arr 37.66 16 P **P** **10 51 22.4 -1.4**
comp=Z,8.9nm,0.6s,baz=173,slow=8.7,SNR=30
MJAR PcP **PcP** **10 53 43.2 +2.2**
comp=Z,4.1nm,0.8s,baz=160,slow=3.6,SNR=4.2
MJAR LR LR 11 05 37.4
comp=Z,1μm,22.0s,baz=217,slow=34
comp=Z,8.9nm,0.6s
MJB9 Matsu-Tunnel 37.66 16 IAmb IAmb 10 51 27.8
comp=Z,172nm,2.0s
HNS HongShan 38.37 345 ⇑P **P** **10 51 26.2 -3.6**
HNS S **S** **10 57 19.6 -3.5**
HNS pmax pmax
comp=Z,24nm,1.2s
HNS LR LR
comp=Z,400nm,20.6s
HNS LR LR
comp=Z,850nm,21.7s
HNS LR LR
comp=Z,1μm,22.5s
PYAG Pyongyang 38.51 359 P **P** **10 51 33.3 +2.4**
PYAG sP **pwP** **10 51 44.2 +3.0**
PYAG S **S** **10 57 27.6 +2.5**
PYAG AmB
comp=Z,222nm,1.4s
PYAG AMS AMS
comp=N,363nm,3.7s
PYAG AMS AMS
comp=E,105nm,1.1s
PYAG AMS AMS
comp=Z,253nm,2.6s
DL2 Dalian 38.59 354 P **P** **10 51 32.5 +0.8**
DL2 sP **pwP** **10 51 46.8 +4.8**
DL2 S **S** **10 57 29.7 +3.3**
DL2 pmax pmax
comp=Z,140nm,1.1s
DL2 pmax pmax
comp=Z,160nm,5.8s
DL2 LR LR
comp=Z,550nm,13.9s
DL2 LR LR
comp=Z,940nm,16.1s
DL2 LR LR
comp=Z,950nm,16.1s
ARMA Armidale 38.97 144 P **P** **10 51 35.6 +0.6**
baz=39,SNR=42
ARMA Armidale 38.97 144 P **P** **10 51 35.6 +0.6**
ARMA IAmb IAmb 10 51 38.5
comp=Z,113nm,0.8s
ARMA Armidale 38.97 144 P **P** **10 51 36.0 +0.9**
JSD Sado 39.08 15 IAmb IAmb 10 51 38.1
comp=Z,74nm,1.0s
TIY Taiyuan 39.30 343 *e*P **P** **10 51 40.1 +2.4**
TIY PP **PnPn** **10 53 13.8 +2.8**
TIY S **S** **10 57 34.0 -3.3**
TIY pmax pmax
comp=Z,200nm,4.0s
TIY LR LR
comp=Z,740nm,28.2s
TIY LR LR
comp=Z,720nm,21.3s
TIY LR LR
comp=Z,1μm,26.1s
HHU Hamhung 39.39 2 P **P** **10 51 39.9 +1.6**
HHU pP **pP** **10 51 44.0 -1.3**
HHU S **S** **10 57 44.7 +6.4**
HHU AmB
comp=Z,59nm,0.9s
HHU AMS AMS
comp=N,342nm,3.7s
HHU AMS AMS
comp=E,327nm,3.5s
HHU AMS AMS
comp=Z,340nm,3.7s
SUJ Sinuiju 39.59 358 P **P** **10 51 40.6 +0.7**
SUJ pP **pP** **10 51 48.1 +1.2**
SUJ S **S** **10 57 41.3 0.0**
SUJ AmB
comp=Z,488nm,2.6s
SUJ AMS AMS
comp=N,283nm,3.6s
SUJ AMS AMS
comp=E,539nm,6.9s
SUJ AMS AMS
comp=Z,247nm,3.2s
JMM Marumori 39.64 18 IAmb IAmb 10 51 45.5
comp=Z,161nm,1.2s
ARPS Mount Arapiles 39.66 160 P **P** **10 51 40.9 +0.3**
baz=40,SNR=91
ARPS Mount Arapiles 39.66 160 P **P** **10 51 41.6 +0.9**
BJT Baijiatuau 40.53 348 P **P** **10 51 47.7 -0.1**
BJT IAmb IAmb 10 51 53.4
comp=Z,189nm,1.7s
BJT Baijiatuau 40.53 348 P **P** **10 51 47.7 -0.1**
BJT pmax pmax
comp=Z,189nm,1.7s
BJI Beijing 40.55 348 P **P** **10 51 48.5 +0.5**
BJI S **S** **10 57 55.3 -0.4**
BJI SS **SnSn** **11 01 02.8 +0.5**
BJI pmax pmax
comp=Z,20nm,0.8s
BJI pmax pmax
comp=Z,280nm,3.8s
BJI LR LR
comp=Z,460nm,21.9s
BJI LR LR
comp=Z,470nm,21.9s
BJI LR LR
comp=Z,950nm,22.7s
BRAT Ballarat 41.10 159 P **P** **10 51 54.1 +1.6**
LZH Lanzhou 41.21 332 *e*P **P** **10 51 55.1 +1.4**
LZH sP pwP 10 52 05.0 +1.0
LZH PcP **PcP** **10 53 54.3 +1.8**
LZH S **S** **10 58 02.9 -3.1**
LZH pmax pmax
comp=Z,22nm,1.3s
LZH pmax pmax
comp=Z,220nm,4.3s
LZH LR LR
comp=Z,900nm,15.7s
LZH LR LR
comp=Z,1μm,16.3s
LZH LR LR
comp=Z,2μm,17.1s
SNY Shenyang 41.35 357 ⇓P **P** **10 51 53.9 -0.6**
SNY S **S** **10 58 06.3 -1.2**
SNY pmax pmax
comp=Z,46nm,1.1s
SNY pmax pmax
comp=Z,390nm,4.5s
SNY LR LR
comp=Z,1μm,23.5s
SNY LR LR
comp=Z,950nm,21.0s
SNY LR LR
comp=Z,2μm,22.9s
CAN Canberra 41.35 151 P **P** **10 51 55.3 +0.6**
CAN IAmb IAmb 10 51 58.5
comp=Z,69nm,0.7s
CAN Canberra 41.35 151 P **P** **10 51 55.3 +0.6**
CAN pmax pmax
comp=Z,69nm,0.7s
CAN Canberra 41.35 151 P **P** **10 51 57.4 +2.7**
CNB Canberra Magne 41.52 151 P **P** **10 51 57.1 +0.9**
baz=42,SNR=10
TOO Toolangi 41.71 157 P **P** **10 51 59.6 +2.1**
baz=42,SNR=12
TOO Toolangi 41.71 157 P **P** **10 51 58.8 +1.2**
TOO IAmb IAmb 10 52 05.3
comp=Z,118nm,1.6s
TOO Toolangi 41.71 157 P **P** **10 51 58.8 +1.2**
TOO pmax pmax
comp=Z,118nm,1.7s
TOO Toolangi 41.71 157 P **P** **10 51 59.7 +2.1**
JTM Tenmabayashi 42.42 17 IAmb IAmb 10 52 07.0
comp=Z,135nm,1.1s
HHC Hu-ho-hao-te 42.46 343 *e*P **P** **10 52 06.5 +2.8**
HHC PP **PP** **10 53 48.2 +5.7**
HHC S **S** **10 58 28.1 +3.9**
HHC SS **SS** **11 01 32.2 -2.0**
HHC pmax pmax
comp=Z,39nm,0.9s
HHC pmax pmax
comp=Z,550nm,8.6s
HHC LR LR
comp=Z,2μm,18.9s
HHC LR LR
comp=Z,1μm,19.9s
HHC LR LR
comp=Z,2μm,18.8s
BTO Baotou 42.70 342 *e*P **P** **10 52 07.6 +1.9**
BTO S **S** **10 58 32.5 +4.7**
BTO LR LR
comp=Z,4μm,22.9s
BTO LR LR
comp=Z,4μm,21.0s
VLA Vladivostok 42.86 6 ⇑*e*P **P** **10 52 07.5 +0.7**
VLA pmax pmax
comp=Z,45nm,1.1s
CN2 Changchun 43.26 359 *e*P **P** **10 52 11.5 +1.5**
CN2 PP **PP** **10 53 54.2 +3.3**
CN2 S **S** **10 58 40.0 +4.4**
CN2 SS **SS** **11 01 45.2 -4.3**
CN2 pmax pmax
comp=Z,20nm,1.1s
CN2 LR LR
comp=Z,460nm,21.0s
CN2 LR LR
comp=Z,950nm,21.0s
CN2 LR LR
comp=Z,730nm,23.0s
USA0B Ussuriysk Arra 43.94 6 P **P** **10 52 15.2 -0.3**
USA0B IAmb IAmb 10 52 19.8
comp=Z,45nm,0.8s
USA0B Ussuriysk Arra 43.94 6 *ce*P **P** **10 52 15.3 -0.3**
USRK Ussuriysk Ar. 43.94 6 P **P** **10 52 15.4 -0.1**
comp=Z,55nm,0.9s,baz=184,slow=8.7,SNR=34
comp=Z,55nm,0.9s

USRK Ussuriysk Ar. 43.94 6 P **P** **10 52 15.2 -0.3**
USRK Ussuriysk Ar. 43.94 6 P **P** **10 52 15.2 -0.3**
MDJ Mudanjiang 44.16 3 P **P** **10 52 17.3 0.0**
MDJ IAmb IAmb 10 52 21.7
comp=Z,54nm,0.9s
MDJ Mudanjiang 44.16 3 P **P** **10 52 18.6 +1.3**
MDJ S **S** **10 58 53.0 +4.2**
MDJ SS **SS** **11 02 09.4 +2.2**
MDJ pmax pmax
comp=Z,16nm,0.9s
MDJ pmax pmax
comp=Z,210nm,3.5s
MDJ LR LR
comp=Z,810nm,21.6s
MDJ LR LR
comp=Z,590nm,21.6s
MDJ LR LR
comp=Z,1µm,24.5s
MDJ Mudanjiang 44.16 3 P **P** **10 52 17.9 +0.6**
XLT XiLinHaoTe 44.29 349⇓ *i*P **P** **10 52 19.5 +1.0**
XLT pP pP 10 52 24.6 -0.9
XLT sP sP 10 52 27.8 -0.5
XLT pmax pmax
comp=Z,52nm,0.9s
XLT pmax pmax
comp=Z,380nm,4.0s
XLT LR LR
comp=Z,590nm,22.4s
XLT LR LR
comp=Z,940nm,22.1s
LSA Lhasa 44.39 314 P **P** **10 52 19.7 -0.3**
LSA IAmb IAmb 10 52 24.5
comp=Z,30nm,0.6s
LSA Lhasa 44.39 314 P **P** **10 52 19.7 -0.3**
LSA pmax pmax
comp=Z,30nm,0.6s
LSA Lhasa 44.39 314 P **P** **10 52 20.2 +0.3**
LSA pmax pmax
comp=Z,15nm,0.6s
LSA Lhasa 44.39 314 P **P** **10 52 20.2 +0.3**
DZM Mont Dzumac 45.04 122 LR LR 11 12 22.4
comp=Z,665nm,20.0s,baz=308,slow=38
DZM Mont Dzumac 45.04 122 P **P** **10 52 24.2 -0.6**
DZM IAmb IAmb 10 52 40.5
comp=Z,79nm,1.3s
DZM Mont Dzumac 45.04 122 P **P** **10 52 26.2 +1.4**
BNX BinXian 45.20 1⇓ P **P** **10 52 27.8 +2.3**
BNX pP **pP** **10 52 30.0 -2.6**
BNX S **S** **10 59 06.9 +3.1**
BNX SS **SS** **11 02 29.8 +2.8**
BNX pmax pmax
comp=Z,96nm,1.2s
BNX pmax pmax
comp=Z,390nm,6.1s
BNX LR LR
comp=Z,380nm,13.2s
BNX LR LR
comp=Z,500nm,10.7s
BNX LR LR
comp=Z,3µm,21.6s
TEY Ternei 45.41 10⇓ *e*P **P** **10 52 27.7 +0.5**
TEY *e* 10 59 03.7
TEY pmax pmax
comp=N,20nm,0.9s
TEY pmax pmax
comp=Z,20nm,0.9s
TAPN Taplejung 45.72 309 *e*P **P** **10 52 28.8 -1.5**
GTA Gaotai 45.78 331 *e*P **P** **10 52 29.2 -1.2**
GTA pP pwP 10 52 43.0 +2.1
GTA PcP **PcP** **10 54 08.4 +0.5**
GTA pmax pmax
comp=Z,8.0nm,1.2s
GTA pmax pmax
comp=Z,110nm,4.4s
GTA LR LR
comp=Z,710nm,21.4s
GTA LR LR
comp=Z,990nm,19.3s
GTA LR LR
comp=Z,2µm,20.0s
ASAJ Asahikawa 45.92 16 P **P** **10 52 32.3 +1.0**
comp=Z,34nm,0.8s,baz=224,slow=8.4,SNR=18
comp=Z,34nm,0.8s
ASAJ Asahikawa 45.92 16 P **P** **10 52 30.6 -0.7**
ASAJ pmax pmax
comp=Z,194nm,1.7s
JKA Kamikawa-asahi 45.92 16 P **P** **10 52 30.6 -0.7**
PALK Pallekele 45.97 280 P **P** **10 52 33.0 +0.8**
PALK IAmb IAmb 10 54 10.1
comp=Z,126nm,1.9s
PALK Pallekele 45.97 280 P **P** **10 52 33.0 +0.8**
PALK pmax pmax
comp=Z,125nm,2.0s
GOMU GeErMu 46.09 324 P **P** **10 52 36.3 +3.1**
GOMU pP pP 10 52 39.9 -0.4
GOMU sP sP 10 52 41.6 -1.5
GOMU pmax pmax
comp=Z,16nm,1.3s
GOMU pmax pmax
comp=Z,100nm,5.4s
GOMU LR LR
comp=Z,360nm,21.6s
GOMU LR LR
comp=Z,560nm,21.4s
GOMU LR LR
comp=Z,1µm,22.0s
PINNC Pines Island, 46.11 122 P **P** **10 52 32.8 -0.3**
RAMN Ramite 46.39 308 *e*P **P** **10 52 34.6 -1.0**
comp=Z,65nm,0.7s
MOO Moorlands 46.59 159 P **P** **10 52 37.5 +0.9**
baz=47,SNR=6.8
YUK Yuzh-Kuril'sk 46.85 19⇑ *e*P **P** **10 52 38.8 +0.2**
TAU Tasmania Unive 47.04 159 P **P** **10 52 41.4 +1.3**
TAU IAmb IAmb 10 52 45.3
comp=Z,89nm,1.6s
TAU Tasmania Unive 47.04 159 P **P** **10 52 41.4 +1.3**
TAU pmax pmax
comp=Z,89nm,1.6s
GUN Gumba 47.41 309 *e*P **P** **10 52 42.2 -1.5**
comp=Z,157nm,0.8s
PKI Pulchoki 47.62 308 *e*P **P** **10 52 43.5 -1.8**
comp=Z,15nm,0.3s
PKIN Phulchoki 47.63 308 *e*P **P** **10 52 43.4 -1.9**
DMN Daman 47.87 308 *e*P **P** **10 52 46.0 -1.2**
comp=Z,78nm,0.9s
GKN Gorkha 48.42 308 *e*P **P** **10 52 50.3 -1.0**
comp=Z,51nm,0.8s
KUR Kuril'sk 48.59 20 P **P** **10 52 51.4 -0.6**
KUR *e* 10 54 15.9
KUR *e* 10 54 45.1
KUR *e*S **S** **10 59 52.2 0.0**
KUR MLR MLR
comp=Z,400nm,18.0s
YSS Yuzh-Sakhalins 48.59 15 P **P** **10 52 52.1 +0.1**
YSS Yuzh-Sakhalins 48.59 15 *e*P **P** **10 52 52.0 0.0**
YSS *e**SP **pP** **10 52 59.4 +0.3**
YSS *e*S **S** **10 59 51.1 -1.1**
YSS pmax pmax
comp=Z,30nm,1.0s
YSS pmax pmax
comp=Z,100nm,3.7s
YSS smax smax
comp=E,100nm,4.4s
YSS MLR MLR
comp=Z,400nm,13.0s
YSS Yuzh-Sakhalins 48.59 15 P **P** **10 52 52.3 +0.3**
KLR Kul'dur 48.91 5 P **P** **10 52 54.2 -0.2**
comp=Z,7.9nm,0.4s,baz=195,slow=5.1,SNR=28
comp=Z,7.9nm,0.4s
KLR Kul'dur 48.91 5*c**e*P **P** **10 52 53.7 -0.7**
KLR pmax pmax
comp=Z,20nm,0.9s
DANN Dangsing 49.27 308 *e*P **P** **10 52 56.0 -2.0**
comp=Z,113nm,0.7s
PYUN Piuthan 49.77 307 *e*P **P** **10 53 00.2 -1.5**
comp=Z,93nm,0.5s
HYBB Hyderabad (bro 49.91 293 *e*P **P** **10 53 02.8 0.0**
HYBB *e*pP **pP** **10 53 05.7 -4.2**
HYBB *e*sP **sP** **10 53 07.1 -5.5**
HYBB *e*PP **PP** **10 54 58.2 +0.5**
HYBB *e*S **S** **11 00 11.7 -0.2**
HYBB *e*ScS **ScS** **11 02 54.2 +1.0**
ULN Ulaanbaatar 50.18 343 P **P** **10 53 04.7 +0.4**
ULN IAmb IAmb 10 53 10.6
comp=Z,65nm,0.9s
ULN Ulaanbaatar 50.18 343*c* *i*P **P** **10 53 04.9 +0.5**
ULN pmax pmax
comp=Z,85nm,1.3s
SONM Songino Array 50.34 343 P **P** **10 53 06.2 +0.6**
comp=Z,38nm,0.9s,baz=158,slow=8.9,SNR=41
SONM LR LR 11 16 57.7
comp=Z,719nm,19.9s,baz=158,slow=39
comp=Z,38nm,0.9s
SONM Songino Array 50.34 343 P **P** **10 53 05.1 -0.5**
SONM IAmb IAmb 10 53 11.6
comp=Z,35nm,0.8s
SONM Songino Array 50.34 343 P **P** **10 53 05.1 -0.5**
SONM pmax pmax
comp=Z,35nm,0.8s
UGL Uglegorsk 50.40 13 *e*P **P** **10 53 08.2 +2.5**
UGL pmax pmax
comp=Z,70nm,1.1s
PCHI Peechi 50.65 283 *e*P **P** **10 53 07.9 -0.5**
PCHI *e*S S 11 00 05.2 -17
GRNR Gornyy 50.95 8⇑ *i*P **P** **10 53 10.2 +0.2**
GRNR pmax pmax
comp=Z,10.0nm,0.6s
TYV Tymovskoe 52.20 13 *e*P **P** **10 53 22.6 +3.3**
TYV *e*S **S** **11 00 49.6 +7.2**
TYV pmax pmax
comp=Z,200nm,2.5s
TYV pmax pmax
comp=Z,15nm,1.4s
TYV smax smax
comp=N,200nm,6.0s
TYV smax smax
comp=E,300nm,6.0s
CIT Chita 52.58 350 *e*P **P** **10 53 24.0 +1.8**
CIT *e* 10 53 39.7
CIT pmax pmax
comp=Z,233nm,1.7s
ZEA Zeya 53.20 1 *e*P **P** **10 53 26.1 -0.5**
ZEA *e*S **S** **11 00 50.9 -5.0**
ZEA *e*SS **SS** **11 04 30.3 -5.6**
ZEA pmax pmax
comp=N,10.0nm,0.7s
ZEA pmax pmax
comp=Z,10.0nm,0.8s
ZEA pmax pmax
comp=N,100nm,8.1s
ZEA pmax pmax
comp=Z,100nm,7.0s
ZEA smax smax
comp=E,100nm,15.3s
ZEA smax smax
comp=N,200nm,18.2s
ZEA MLR MLR
comp=E,200nm,16.0s
ZEA MLR MLR
comp=N,200nm,17.0s
ZEA MLR MLR
comp=Z,400nm,23.0s
FUNA Funafuti 53.45 101 P **P** **10 53 30.7 +1.5**
ZAK Zakamensk 53.55 342 *e*P **P** **10 53 29.4 0.0**
ZAK pmax pmax
comp=Z,22nm,1.5s
NKL Nikolayevsk 53.96 11 *e*P **P** **10 53 29.4 -2.7**
NKL *e*S **S** **11 01 05.6 -0.5**
NKL pmax pmax
comp=N,3.0nm,0.6s
NKL pmax pmax
comp=Z,54nm,1.0s
NKL pmax pmax
comp=E,2.0nm,0.7s
NKL smax smax
comp=E,3.0nm,0.9s
NKL smax smax
comp=N,1.0nm,2.6s
NKL MLR MLR
comp=E,231nm,20.0s
NKL MLR MLR
comp=N,5.0nm,11.0s
NKL MLR MLR
comp=Z,529nm,22.0s
MSVF Nonsavu 53.99 112 LR LR 11 15 20.9
comp=Z,1µm,21.8s,baz=309,slow=35
MSVF Nonsavu 53.99 112⇓ *e*P **P** **10 53 33.7 +0.5**
MSVF pmax pmax
comp=Z,23nm,0.9s
MSVF Nonsavu 53.99 112 P **P** **10 53 34.8 +1.6**
POO Poona 54.52 293 *e*P **P** **10 53 35.0 -2.0**
IRK Irkutsk 54.90 344 *e*P **P** **10 53 39.0 -0.1**
IRK pmax pmax
comp=Z,155nm,1.7s
DGTI Dogotuki 55.24 110 P **P** **10 53 44.2 +2.0**
WMQ Urumqi 55.24 327 *e*P **P** **10 53 42.3 +0.5**
WMQ pP sP 10 53 50.5 -1.3
WMQ PcP **PcP** **10 54 38.0 -4.5**
WMQ pmax pmax
comp=Z,51nm,1.3s
WMQ pmax pmax
comp=Z,330nm,3.8s
WMQ LR LR
comp=Z,1µm,20.7s
WMQ LR LR
comp=Z,1µm,23.9s
WMQ LR LR
comp=Z,1µm,28.1s
KNGR Kungurtug, Tuv 55.71 338⇓ *e*P **P** **10 53 45.7 +0.6**
KNGR pmax pmax
comp=Z,21nm,1.4s
BOD Bodaibo 58.12 352 *e*P **P** **10 54 00.7 -1.1**
BOD pmax pmax
comp=Z,43nm,1.1s
PEA0B Petropavlovsk- 58.70 22 P **P** **10 54 06.0 -0.1**
PEA0B Petropavlovsk- 58.70 22 *de*P **P** **10 54 06.4 +0.4**
PETK Petropavlovsk- 58.70 22 P **P** **10 54 06.5 +0.5**
comp=Z,35nm,0.6s,baz=187,slow=4.1,SNR=57
comp=Z,35nm,0.6s
PETK Petropavlovsk- 58.70 22 P **P** **10 54 05.7 -0.3**
PETK Petropavlovsk- 58.70 22 P **P** **10 54 05.7 -0.3**
PET Petropavlovsk 58.99 22 *e*P **P** **10 54 10.9 +2.9**
PET *e*S **S** **11 02 13.4 +0.6**
PET pmax pmax
comp=Z,82nm,1.6s
PET pmax pmax
comp=Z,300nm,14.1s
PET MLR MLR
comp=Z,800nm,16.0s
ZSN Zaisan 59.10 328 *e*P **P** **10 54 07.7 -1.2**
ZSN pmax pmax
comp=Z,7.0nm,0.7s
ZSN Zaisan 59.10 328 *e*P **P** **10 54 07.8 -1.2**
comp=Z,7.3nm,0.7s,baz=328
LBZ Lake Benmore 59.19 145 P **P** **10 54 10.0 +0.4**
RPZ Rata Peaks 59.31 144 LR LR 11 20 38.2
comp=Z,2µm,20.8s,baz=306,slow=37
SHLS Shalkode 59.67 322 *e*P **P** **10 54 09.6 -3.5**
SHLS pmax pmax
comp=Z,14nm,1.0s
SHLS Shalkode 59.67 322 *e*P **P** **10 54 09.6 -3.5**
comp=Z,14nm,1.0s,baz=322
PDGK Podgornoye 59.74 322 P **P** **10 54 11.4 -2.3**
OTVZ Oturere 59.86 137 P **P** **10 54 14.4 -0.1**
UZB Uzynbulak 59.94 322 *e*P **P** **10 54 14.2 -0.8**
UZB pmax pmax
comp=Z,21nm,1.3s
UZB Uzynbulak 59.94 322 *e*P **P** **10 54 14.3 -0.8**
comp=Z,21nm,1.3s,baz=322
PRZ Przheval'sk 59.98 321 P **P** **10 54 15.2 -0.2**
PRZ Przheval'sk 59.98 321 P **P** **10 54 15.2 -0.2**
PRZ pmax pmax
comp=Z,136nm,1.6s
MK31 Makanchi Array 60.08 327 IAmb IAmb 10 54 18.3
comp=Z,38nm,0.9s
MK31 Makanchi Array 60.08 327 *i* P **P** **10 54 14.3 -1.4**
MKAR Makanchi Array 60.08 327 P **P** **10 54 14.4 -1.3**
comp=Z,27nm,0.5s,baz=120,slow=8.2,SNR=111
MKAR LR LR 11 20 45.3
comp=Z,1µm,21.8s,baz=118,slow=37
comp=Z,27nm,0.5s
MKAR Makanchi Array 60.08 327 P **P** **10 54 14.6 -1.2**
MKAR Makanchi Array 60.08 327 P **P** **10 54 14.6 -1.2**
KSH Kashi 60.13 317 P **P** **10 54 17.8 +1.4**
KSH pP sP 10 54 25.1 -1.3
KSH S **S** **11 02 28.3 -0.2**
KSH pmax pmax
comp=Z,17nm,1.0s
KSH pmax pmax
comp=Z,190nm,4.3s
KSH LR LR
comp=Z,730nm,19.2s
KSH LR LR
comp=Z,440nm,18.5s
KSH LR LR
comp=Z,670nm,22.0s
MAKZ Makanchi 60.26 326 P **P** **10 54 15.8 -1.1**
MAKZ Makanchi 60.26 326 P **P** **10 54 15.9 -1.1**
MAKZ pmax pmax
comp=Z,61nm,1.1s
SATY Saty 60.27 321 *e*P **P** **10 54 16.6 -0.7**
SATY pmax pmax
comp=Z,26nm,0.8s
SATY Saty 60.27 321 *e*P **P** **10 54 16.6 -0.7**
comp=Z,26nm,0.8s,baz=321
BHHZ Black Hill Sta 60.28 137 P **P** **10 54 16.5 -0.8**
KPKS Kokpek 60.31 322 *e*P **P** **10 54 16.5 -1.0**
KPKS pmax pmax
comp=Z,52nm,2.4s
KPKS Kokpek 60.31 322 *e*P **P** **10 54 16.5 -1.0**
comp=Z,52nm,2.4s,baz=322
BKZ Black Stump Fm 60.42 137 P **P** **10 54 17.0 -1.3**
BKZ Black Stump Fm 60.42 137 P **P** **10 54 19.5 +1.2**
URZ Urewera 60.44 135 LR LR 11 22 40.6
comp=Z,490nm,18.1s,baz=288,slow=38
URZ Urewera 60.44 135 P **P** **10 54 17.9 -0.4**
KWHZ Kaweka Forest 60.50 137 P **P** **10 54 18.8 0.0**
MTHZ Maungataniwha 60.52 136 P **P** **10 54 18.0 -0.9**
KDJ Kajisay 60.58 320 IAmb IAmb 10 54 29.1
comp=Z,22nm,0.8s
MCHZ McNeill Hill 60.69 137 P **P** **10 54 20.0 0.0**
RAHZ Arahi 60.72 136 P **P** **10 54 20.0 -0.2**
RAGZ Rawiri 60.76 136 P **P** **10 54 20.2 -0.4**
MWZ Matawai 60.76 135 P **P** **10 54 20.1 -0.5**
RIGZ Rimuhau 61.09 136 P **P** **10 54 22.6 -0.2**
MDOK Medeo 61.18 321 *e*P **P** **10 54 23.3 -0.2**
MDOK Medeo 61.18 321 *e*P **P** **10 54 23.4 -0.2**
baz=321
TNSS Tian-Shan 61.18 321 *e*P **P** **10 54 21.9 -1.9**
TNSS Tian-Shan 61.18 321 *e*P **P** **10 54 22.0 -1.9**
baz=321
ARXS Arharly 61.23 322 *e*P **P** **10 54 23.2 -0.6**
AAA Alma-Ata 61.29 321 *e*P **P** **10 54 22.8 -1.3**
AAA Alma-Ata 61.29 321 *e*P **P** **10 54 22.8 -1.3**
baz=321
TDK Taldyqorghan 61.30 323 *e*P **P** **10 54 22.9 -1.2**
TDK Taldyqorghan 61.30 323 *e*P **P** **10 54 22.9 -1.2**
baz=323
BOOM Boomskoye usch 61.56 320 P **P** **10 54 25.3 -0.8**
BOOM IAmb IAmb 10 54 29.2
comp=Z,24nm,1.2s
BOOM Boomskoye usch 61.56 320 P **P** **10 54 25.3 -0.8**
BOOM pmax pmax
comp=Z,24nm,1.2s
YAK Yakutsk 61.56 2 P **P** **10 54 25.4 -0.1**
comp=Z,35nm,0.6s,baz=210,slow=1.3,SNR=8.8
comp=Z,35nm,0.6s
YAK Yakutsk 61.56 2 P **P** **10 54 24.9 -0.5**
YAK Yakutsk 61.56 2 *e*P **P** **10 54 24.9 -0.5**
YAK *e**PP **pP** **10 54 29.2 -3.5**
YAK *e* 10 55 06.4
YAK *e*S **S** **11 02 46.9 +1.3**
YAK *e* 11 04 13.0
YAK *e*SS **SS** **11 06 47.5 +0.4**
YAK pmax pmax
comp=Z,55nm,0.9s
YAK pmax pmax
comp=E,4.0nm,0.9s
YAK pmax pmax
comp=N,11nm,1.1s
YAK smax smax
comp=E,181nm,3.0s
YAK smax smax
comp=N,92nm,2.8s
YAK MLR MLR
comp=Z,632nm,22.0s
YAK MLR MLR
comp=N,510nm,23.0s
YAK MLR MLR
comp=E,103nm,20.0s
CHKK Chushkaly 61.57 321 *e*P **P** **10 54 25.7 -0.2**
CHKK Chushkaly 61.57 321 *e*P **P** **10 54 25.7 -0.2**
baz=321
TKM2 Tokmak 2 61.99 320 P **P** **10 54 28.0 -1.0**
KUU Kurty 61.99 321 *e*P **P** **10 54 28.3 -0.5**
KUU Kurty 61.99 321 *e*P **P** **10 54 28.3 -0.5**
baz=321
MA2 Magadan 62.06 14 P **P** **10 54 28.7 -0.1**
comp=E,82nm,0.8s,baz=192,slow=5.9,SNR=26
comp=E,82nm,0.8s
MA2 Magadan 62.06 14 P **P** **10 54 28.9 0.0**
MA2 Magadan 62.06 14*d* *i*P **P** **10 54 28.4 -0.5**
MA2 pmax pmax
comp=Z,33nm,0.6s
MA2 Magadan 62.06 14 P **P** **10 54 30.0 +1.1**
AAK Ala-Archa 62.57 319 P **P** **10 54 33.1 +0.2**
AAK IAmb IAmb 10 54 39.1
comp=Z,23nm,1.1s
AAK Ala-Archa 62.57 319*c* *i*P **P** **10 54 32.9 0.0**
AAK pmax pmax
comp=Z,14nm,1.0s
AAK Ala-Archa 62.57 319 *i* P **P** **10 54 33.6 +0.7**
SNR=8.9
SGDS Sogindy 62.86 320 *e*P **P** **10 54 33.9 -0.8**
SGDS pmax pmax
comp=Z,24nm,2.4s
SGDS Sogindy 62.86 320 *e*P **P** **10 54 33.9 -0.8**
comp=Z,24nm,2.4s,baz=320
AML Almayashu 62.87 318 *i* P **P** **10 54 34.2 -1.0**
SNR=22
AFI Afiamalu 62.91 106 LR LR 11 21 32.2
comp=Z,423nm,19.0s,baz=278,slow=36
KBL Kabul 63.24 309 P **P** **10 54 36.2 -1.4**
KBL IAmb IAmb 10 54 59.7
comp=Z,20nm,0.8s
KBL Kabul 63.24 309 P **P** **10 54 36.2 -1.4**
KBL pmax pmax
comp=Z,20nm,0.8s
KBL Kabul 63.24 309 P **P** **10 54 39.3 +1.8**
SNR=16
KBL P **P** **10 54 39.3 +1.8**
SNR=16
SEM Semipalatinsk 63.32 329 *e*P **P** **10 54 36.0 -1.8**
SEM Semipalatinsk 63.32 329 *e*P **P** **10 54 36.0 -1.8**
baz=329
ZAA0 Zalesovo Array 63.38 334 P **P** **10 54 36.5 -1.3**
ZAA0 IAmb IAmb 10 54 41.6
comp=Z,48nm,1.0s
ZALV Zalesovo Beam 63.38 334 P **P** **10 54 37.4 -0.4**
comp=Z,14nm,0.5s,baz=137,slow=5.7,SNR=30
ZALV LR LR 11 24 42.9
comp=Z,381nm,21.8s,baz=128,slow=38
comp=Z,14nm,0.5s
ZALV Zalesovo Beam 63.38 334 P **P** **10 54 36.6 -1.2**
BTK Batken 63.95 315 IAmb IAmb 10 55 04.6
comp=Z,41nm,1.1s
BTLS Baital 63.99 321 *e*P **P** **10 54 40.7 -1.3**
BTLS pmax pmax
comp=Z,23nm,1.8s
BTLS Baital 63.99 321 *e*P **P** **10 54 40.8 -1.3**
comp=Z,23nm,1.8s,baz=321
KURBB Kurchatov Arra 64.34 328 LR LR 11 24 39.6
comp=Z,370nm,21.1s,baz=103,slow=38
KURBB Kurchatov Arra 64.34 328 P **P** **10 54 43.2 -1.0**
KURK Kurchatov 64.34 329 P **P** **10 54 43.2 -1.0**
KURK Kurchatov 64.34 329*d* *i*P **P** **10 54 42.8 -1.4**
KURK pmax pmax
comp=Z,50nm,0.9s
CHGR Chuyangaron 64.61 313 IAmb IAmb 10 54 48.0
comp=Z,44nm,0.9s
DZA Taraz 64.77 318 *e*P **P** **10 54 45.9 -1.3**
DZA Taraz 64.77 318 *e*P **P** **10 54 45.9 -1.3**
baz=318
IUG Iuzhnay 65.34 317 *e*P **P** **10 54 50.2 -0.8**
IUG Iuzhnay 65.34 317 *e*P **P** **10 54 50.2 -0.8**
baz=317
SEY Seymchan 65.39 13 P **P** **10 54 51.5 +0.8**
comp=Z,30nm,0.8s,baz=214,slow=3.4,SNR=34
SEY LR LR 11 23 11.0
comp=Z,212nm,21.4s,baz=212,slow=36
comp=Z,30nm,0.8s
SEY Seymchan 65.39 13⇑ *e*P **P** **10 54 51.4 +0.6**
SEY pmax pmax
comp=Z,33nm,0.9s
KK31 Karatay Array 65.40 318 P **P** **10 54 50.3 -1.0**
KK31 IAmb IAmb 10 54 57.3
comp=Z,34nm,1.2s

KK31	**Karatay Array**	**65.40**	**318**		P		**P**	**10 54 50.3**	**-1.0**
KK31					pmax		pmax			
	comp=Z,34nm,1.2s									
KKAR	**Karatay Array**	**65.40**	**318**		P		**P**	**10 54 50.4**	**-1.0**
KKAR					IAmb		IAmb	10 54 57.3		
	comp=Z,34nm,1.2s									
KKAR	**Karatay Array**	**65.40**	**318**		P		**P**	**10 54 50.2**	**-1.1**
KKAR	**Karatay Array**	**65.40**	**318**		P		**P**	**10 54 50.2**	**-1.1**
SHEM	**Shemya Is, Ala**	**65.58**	**30**		LR		LR	11 19 41.8		
	comp=Z,317nm,21.2s,baz=274,slow=32									
OTUK	**Ortayu**	**66.54**	**324**		P		**P**	**10 54 57.6**	**-1.0**
BRZS	**Berezniki**	**67.18**	**326**	*eP*			**P**	**10 55 02.0**	**-0.5**
BRZS	**Berezniki**	**67.18**	**326**	*eP*			**P**	**10 55 02.1**	**-0.5**
	baz=326									
CASY	**Casey**	**67.44**	**187**		P		**P**	**10 55 03.6**	**-0.3**
CASY					IAmb		IAmb	10 55 06.2		
	comp=Z,34nm,0.8s									
WBK	**Wadi Bani Khal**	**68.98**	**294**		P		**P**	**10 55 14.2**	**-0.2**
WSAR	**Wadi Sarin**	**69.38**	**295**		P		**P**	**10 55 16.0**	**-0.9**
MHTO	**MHTO**	**69.67**	**292**		P		**P**	**10 55 17.4**	**-1.2**
	SNR=5.5									
MHTO					P		**P**	**10 55 17.4**	**-1.2**
	SNR=5.5									
JMDO	**Jabal Madar**	**69.73**	**294**		P		**P**	**10 55 19.0**	**0.0**
JMDO					P		**P**	**10 55 19.0**	**0.0**
BIDO	**Bidbid**	**69.88**	**295**		P		**P**	**10 55 21.2**	**+1.3**
BIDO					P		**P**	**10 55 21.2**	**+1.3**
SMDO	**Samad**	**69.88**	**294**		P		**P**	**10 55 19.4**	**-0.7**
SMDO					P		**P**	**10 55 19.4**	**-0.7**
DQM	**DQM**	**69.93**	**291**		P		**P**	**10 55 20.0**	**-0.2**
DQM					P		**P**	**10 55 20.0**	**-0.2**
BRVK	**Borovoye**	**69.97**	**328**		P		**P**	**10 55 19.5**	**-0.4**
BRVK	**Borovoye**	**69.97**	**328**		P		**P**	**10 55 19.5**	**-0.4**
BRVK					pmax		pmax			
	comp=Z,71nm,1.1s									
BSY	**Bisya**	**70.61**	**294**		P		**P**	**10 55 24.9**	**+0.4**
BSY					P		**P**	**10 55 24.9**	**+0.4**
TIXI	**Tiksi**	**71.19**	**1**		P		**P**	**10 55 25.9**	**-1.1**
TIXI					IAmb		IAmb	10 55 40.2		
	comp=Z,35nm,1.2s									
TIXI	**Tiksi**	**71.19**	**1**	*c i*	P		**P**	**10 55 25.8**	**-1.1**
TIXI					pmax		pmax			
	comp=Z,31nm,1.3s									
ARQ	**Araqi**	**71.31**	**294**		P		**P**	**10 55 29.0**	**+0.3**
	SNR=6.1									
ARQ					P		**P**	**10 55 29.0**	**+0.3**
	SNR=6.1									
SOHO	**SOHO**	**71.41**	**295**		P		**P**	**10 55 30.4**	**+1.1**
SOHO	**SOHO**	**71.41**	**295**		P		**P**	**10 55 30.3**	**+1.0**
ATKA	**Atka Island**	**71.51**	**34**		P		**P**	**10 55 29.7**	**+0.5**
SHAO	**Shalim**	**71.52**	**289**		P		**P**	**10 55 28.7**	**-1.3**
UOSS	**Minazif**	**71.83**	**296**		P		**P**	**10 55 34.2**	**+2.5**
UOSS	**Minazif**	**71.83**	**296**		P		**P**	**10 55 32.3**	**+0.6**
HATD	**Hatta, Dubai**	**71.87**	**296**		P		**P**	**10 55 32.5**	**+0.4**
HATD	**Hatta, Dubai**	**71.87**	**296**		P		**P**	**10 55 32.4**	**+0.4**
BANOM	**Banah**	**71.89**	**297**		P		**P**	**10 55 33.3**	**+1.2**
BANOM	**Banah**	**71.89**	**297**		P		**P**	**10 55 32.6**	**+0.5**
ASHO	**Ashiyiah**	**71.92**	**296**		P		**P**	**10 55 33.5**	**+1.1**
ASHO	**Ashiyiah**	**71.92**	**296**		P		**P**	**10 55 31.8**	**-0.6**
MSFE	**Esma-Masafi**	**71.93**	**296**		P		**P**	**10 55 32.5**	**+0.1**
MASF	**Masafi**	**71.93**	**296**		P		**P**	**10 55 33.6**	**+1.2**
MASF					P		**P**	**10 55 33.6**	**+1.2**
SHME	**Shamm**	**72.05**	**297**		P		**P**	**10 55 34.2**	**+1.2**
SHME	**Shamm**	**72.05**	**297**		P		**P**	**10 55 33.6**	**+0.5**
DMTO	**DMTO**	**72.13**	**288**		P		**P**	**10 55 33.1**	**-0.5**
FAQ	**Al Faqa, Dubai**	**72.35**	**296**		P		**P**	**10 55 35.4**	**+0.5**
FAQ	**Al Faqa, Dubai**	**72.35**	**296**		P		**P**	**10 55 34.5**	**-0.3**
UMZA	**Um Al Zommool**	**72.47**	**294**		P		**P**	**10 55 34.8**	**-0.9**
ASUD	**Al Ashush, Dub**	**72.57**	**296**		P		**P**	**10 55 36.7**	**+0.5**
	SNR=6.7									
ASUD	**Al Ashush, Dub**	**72.57**	**296**	*i*	P		**P**	**10 55 36.4**	**+0.2**
	SNR=6.6									
SOCY	**Socotra**	**72.63**	**283**		P		**P**	**10 55 35.7**	**-1.2**
SOCY	**Socotra**	**72.63**	**283**		P		**P**	**10 55 35.4**	**-1.4**
GEYT	**Alibeck**	**72.67**	**310**		P		**P**	**10 55 36.5**	**-0.1**
	comp=Z,12nm,0.7s,baz=71,slow=9.7,SNR=11									
	comp=Z,12nm,0.7s									
GEYT	**Alibeck**	**72.67**	**310**		P		**P**	**10 55 36.5**	**-0.1**
GYA0B	**ALIBECK ARRAY**	**72.67**	**310**		P		**P**	**10 55 36.2**	**-0.4**
GYA0B					IAmb		IAmb	10 55 41.1		
	comp=Z,19nm,0.7s									
BILL	**Bilibino**	**72.90**	**15**		P		**P**	**10 55 36.9**	**-0.4**
BILL					IAmb		IAmb	10 55 52.3		
	comp=Z,28nm,1.3s									
BILL	**Bilibino**	**72.90**	**15**	⇑ *i*	P		**P**	**10 55 37.8**	**+0.5**
BILL				*i*				10 55 50.3		
BILL				*i*				10 58 19.1		
BILL				*eS*			**S**	**11 04 57.7**	**-4.2**
BILL					pmax		pmax			
	comp=Z,36nm,2.5s									
BILL					MLR		MLR			
	comp=Z,355nm,22.0s									
DOK	**Doka**	**72.99**	**289**		P		**P**	**10 55 37.5**	**-1.3**
	SNR=5.6									
DOK					P		**P**	**10 55 37.5**	**-1.3**
	SNR=5.6									
WHFO	**Wadi Hawf**	**73.26**	**289**		P		**P**	**10 55 39.1**	**-1.4**
WHFO					P		**P**	**10 55 39.1**	**-1.4**
NRIK	**Noril'sk**	**73.58**	**347**		P		**P**	**10 55 40.8**	**-0.4**
	comp=Z,11nm,0.6s,baz=131,slow=5.5,SNR=18									
	comp=Z,11nm,0.6s									
NRIK	**Noril'sk**	**73.58**	**347**		P		**P**	**10 55 40.8**	**-0.4**
NRIK					IAmb		IAmb	10 55 49.6		
	comp=Z,45nm,1.0s									
NRIK	**Noril'sk**	**73.58**	**347**	*c i*	P		**P**	**10 55 40.6**	**-0.6**
NRIK					pmax		pmax			
	comp=Z,20nm,1.1s									
ABTO	**Aybut**	**73.67**	**288**		P		**P**	**10 55 42.2**	**-0.7**
ABTO					P		**P**	**10 55 42.2**	**-0.7**
MZR	**Muzera**	**74.05**	**294**		P		**P**	**10 55 44.0**	**-1.0**
MZR	**Muzera**	**74.05**	**294**		P		**P**	**10 55 43.9**	**-1.0**
AB31	**Akbulak array**	**74.47**	**321**		P		**P**	**10 55 46.2**	**-0.7**
ABKAR	**Akbulak array**	**74.47**	**321**		P		**P**	**10 55 46.1**	**-0.7**
ABKAR					IAmb		IAmb	10 55 51.2		
	comp=Z,71nm,1.3s									
ABKAR	**Akbulak array**	**74.47**	**321**		P		**P**	**10 55 46.2**	**-0.7**
NIKH	**Nikolski High**	**74.81**	**35**		P		**P**	**10 55 48.4**	**-0.4**
	baz=250									
JRN	**Qarnain Island**	**74.84**	**296**		P		**P**	**10 55 48.7**	**-0.8**
RAR	**Rarotonga**	**75.18**	**112**		LR		LR	11 27 46.3		
	comp=Z,116nm,21.9s,baz=289,slow=35									
AKTO	**Aktyubinsk**	**76.02**	**322**		LR		LR	11 31 48.7		
	comp=Z,608nm,21.1s,baz=106,slow=38									
UNV	**Unalaska Valle**	**76.43**	**34**		P		**P**	**10 55 58.0**	**0.0**
UNV					IAmb		IAmb	10 56 06.8		
	comp=Z,32nm,0.6s									
UNV	**Unalaska Valle**	**76.43**	**34**		P		**P**	**10 55 58.1**	**+0.1**
	baz=251									
SVE	**Sverdlovsk**	**76.59**	**329**	*de*	P		**P**	**10 55 58.3**	**-0.6**
SVE				*eS*			**S**	**11 05 37.9**	**-5.6**
SVE					pmax		pmax			
	comp=Z,111nm,1.4s									
SHMA	**Al-Shehemyia**	**76.64**	**296**		P		**P**	**10 56 01.5**	**+1.7**
SMRA	**Abu-Samra**	**76.65**	**295**		P		**P**	**10 56 00.2**	**+0.3**
AKUT	**Akutan**	**76.93**	**34**		P		**P**	**10 56 01.0**	**+0.2**
ARU	**Arti**	**77.54**	**328**		P		**P**	**10 56 03.6**	**-0.6**
ARU					IAmb		IAmb	10 56 07.1		
	comp=Z,33nm,0.9s									
ARU	**Arti**	**77.54**	**328**	*c i*	P		**P**	**10 56 03.1**	**-1.1**
ARU								10 56 15.1		
ARU								10 58 56.4		
ARU					PPP		PPP	11 00 43.3		
ARU					S		**S**	**11 05 52.4**	**-1.4**
ARU					pmax		pmax			
	comp=Z,47nm,1.0s									
ARU					MLR		MLR			
	comp=Z,330nm,20.0s									
GAMB	**Gambell**	**77.64**	**24**		IAmb		IAmb	10 56 08.7		
	comp=Z,44nm,0.9s									
GAMB	**Gambell**	**77.64**	**24**		P		**P**	**10 56 05.1**	**+0.5**
	baz=245									
FALS	**False Pass**	**78.46**	**34**		P		**P**	**10 56 09.0**	**-0.3**
	baz=254									
FALS	**False Pass**	**78.46**	**34**		P		**P**	**10 56 09.8**	**+0.5**
VNDA	**Vanda**	**80.17**	**173**		P		**P**	**10 56 17.5**	**-0.8**
	comp=Z,10nm,0.9s,baz=316,slow=6.0,SNR=40									
VNDA					PP		**PP**	**10 59 19.9**	**-0.8**
	comp=Z,2.1nm,0.8s,baz=304,slow=8.9,SNR=3.1									
VNDA					LR		LR	11 34 41.5		
	comp=Z,400nm,18.1s,baz=332,slow=38									
	comp=Z,10nm,0.9s									
VNDA	**Vanda**	**80.17**	**173**		P		**P**	**10 56 18.7**	**+0.4**
SDPT	**Sand Point**	**80.22**	**34**		P		**P**	**10 56 18.7**	**-0.2**
	baz=256,SNR=27									

VOI	**Vohitsoka**	**80.39**	**248**		P		**P**	**10 56 20.3**	**-0.4**
VOI					IAmb		IAmb	10 56 33.6		
	comp=Z,22nm,0.9s									
VOI	**Vohitsoka**	**80.39**	**248**		P		P	10 56 33.4	+13
MAW	**Mawson**	**80.46**	**200**		P		**P**	**10 56 19.8**	**-0.2**
	comp=Z,24nm,0.7s,baz=75,slow=4.9,SNR=46									
MAW					LR		LR	11 30 03.0		
	comp=Z,263nm,19.3s,baz=57,slow=34									
	comp=Z,24nm,0.7s									
MAW	**Mawson**	**80.46**	**200**		P		**P**	**10 56 20.0**	**0.0**
	baz=81,SNR=20									
MAW	**Mawson**	**80.46**	**200**		P		**P**	**10 56 20.6**	**+0.6**
CNBA	**Chernabura Isl**	**80.59**	**34**		IAmb		IAmb	10 56 26.1		
	comp=Z,30nm,0.8s									
CHNA	**Chernabura Isl**	**80.59**	**34**		P		**P**	**10 56 20.8**	**-0.1**
	baz=257,SNR=6.2									
SBA	**Scott Base**	**81.08**	**172**		P		**P**	**10 56 24.5**	**+1.4**
SBA	**Scott Base**	**81.08**	**172**		P		**P**	**10 56 24.5**	**+1.4**
SBA					pmax		pmax			
	comp=Z,18nm,1.2s									
RAYN	**Ar Rayn**	**81.40**	**294**		P		**P**	**10 56 25.7**	**-0.4**
RAYN					IAmb		IAmb	10 56 31.2		
	comp=Z,51nm,0.8s									
RAYN	**Ar Rayn**	**81.40**	**294**		P		**P**	**10 56 25.7**	**-0.4**
RAYN					pmax		pmax			
	comp=Z,51nm,0.9s									
RAYN	**Ar Rayn**	**81.40**	**294**		P		**P**	**10 56 25.7**	**-0.4**
RAYN	**Ar Rayn**	**81.40**	**294**	*i*	P		**P**	**10 56 25.5**	**-0.6**
	SNR=12									
MAK	**Makhachkala**	**81.54**	**313**	*eP*			**P**	**10 56 22.4**	**-3.9**
MAK				*e*	PPP		PPP	11 01 19.3		
MAK				*eS*			**S**	**11 06 33.1**	**-3.6**
MAK				*eSS*			**SS**	**11 11 54.9**	**+1.0**
MAK				*eSSS*			SSS	11 15 18.2		
MAK					pmax		pmax			
	comp=Z,254nm,1.3s									
N16K	**Nishlik Lake**	**82.29**	**29**		P		**P**	**10 56 30.9**	**+1.0**
	baz=257,SNR=23									
P16K	**Nushagak River**	**82.36**	**30**		P		**P**	**10 56 31.4**	**+1.2**
	baz=258									
O16K	**Kokwok River B**	**82.43**	**30**		P		**P**	**10 56 31.1**	**+0.5**
	baz=258,SNR=25									
RDOG	**Red Dog Mine**	**82.56**	**21**		P		**P**	**10 56 30.3**	**-0.8**
	baz=252									
BELG	**Belogornoye**	**82.79**	**323**		LR		LR	11 35 43.6		
	comp=Z,477nm,20.4s,baz=128,slow=37									
BELG	**Belogornoye**	**82.79**	**323**	*ce*	P		**P**	**10 56 31.2**	**-1.4**
BELG					pmax		pmax			
	comp=Z,16nm,0.9s									
GROC	**Groznyy**	**82.81**	**313**	*eP*			**P**	**10 56 34.1**	**+1.1**
GROC				*e*				10 56 39.1		
GROC				*eS*			**S**	**11 06 51.1**	**+1.3**
GROC					pmax		pmax			
	comp=Z,51nm,0.6s									
KIRV	**Kirov**	**82.86**	**329**	*c i*	P		**P**	**10 56 32.6**	**-0.2**
CHIR	**Chirikof Islan**	**83.01**	**34**		P		**P**	**10 56 33.6**	**-0.1**
	baz=260,SNR=6.4									
P17K	**Kvichak River**	**83.18**	**30**		P		**P**	**10 56 35.6**	**+1.1**
	baz=259									
GNI	**Garni**	**83.30**	**310**		LR		LR	11 40 02.7		
	comp=Z,110nm,20.0s,baz=80,slow=40									
GNI	**Garni**	**83.30**	**310**		P		**P**	**10 56 35.8**	**+0.1**
GNI	**Garni**	**83.30**	**310**	*c i*	P		**P**	**10 56 36.4**	**+0.6**
GNI					pmax		pmax			
	comp=Z,17nm,1.1s									
GNI	**Garni**	**83.30**	**310**		P		**P**	**10 56 37.3**	**+1.5**
ATD	**Arta Tunnel**	**83.50**	**281**		LR		LR	11 31 52.8		
	comp=Z,96nm,21.5s,baz=59,slow=34									
N18K	**Kilae Creek**	**83.73**	**29**		IAmb		IAmb	10 56 41.8		
	comp=Z,40nm,1.2s									
N18K	**Kilae Creek**	**83.73**	**29**		P		**P**	**10 56 38.1**	**+0.8**
	baz=260,SNR=14									
P18K	**Big Mountain,**	**83.83**	**30**		IAmb		IAmb	10 56 43.7		
	comp=Z,46nm,1.4s									
P18K	**Big Mountain,**	**83.83**	**30**		P		**P**	**10 56 36.9**	**-0.9**
	baz=260									
O18K	**Koktuh Hills**	**83.91**	**30**		IAmb		IAmb	10 56 57.0		
	comp=Z,38nm,1.1s									
O18K	**Koktuh Hills**	**83.91**	**30**		P		**P**	**10 56 38.9**	**+0.6**
	baz=260,SNR=6.5									
SII	**Sitkinak Islan**	**83.92**	**33**		P		**P**	**10 56 39.5**	**+1.1**
	baz=261,SNR=7.1									
SII	**Sitkinak Islan**	**83.92**	**33**		P		**P**	**10 56 41.3**	**+2.9**
SVW2	**Sparrevohn**	**83.95**	**29**		P		**P**	**10 56 38.8**	**+0.3**
GCSA	**Galena City Sc**	**84.06**	**25**		P		**P**	**10 56 39.5**	**+0.6**
	baz=258,SNR=23									
TTA	**Tatalina**	**84.08**	**27**		P		**P**	**10 56 39.7**	**+0.5**
TTA	**Tatalina**	**84.08**	**27**		P		**P**	**10 56 39.7**	**+0.5**
TTA					pmax		pmax			
	comp=Z,70nm,1.4s									
TTA	**Tatalina**	**84.08**	**27**		P		**P**	**10 56 39.9**	**+0.7**
	baz=259,SNR=41									
ZEI	**Tsey**	**84.16**	**313**	*eP*			**P**	**10 56 39.5**	**-0.7**
ZEI					pmax		pmax			
	comp=Z,41nm,1.0s									
AKH	**Akhalkalaki**	**84.35**	**311**	⇑	P		**P**	**10 56 41.0**	**-0.2**
O19K	**Port Alsworth**	**84.41**	**30**		IAmb		IAmb	10 56 46.0		
	comp=Z,43nm,1.2s									
O19K	**Port Alsworth**	**84.41**	**30**		P		**P**	**10 56 41.4**	**+0.6**
	baz=261									
N19K	**Bonanza Creek**	**84.43**	**29**		P		**P**	**10 56 41.7**	**+0.7**
	baz=261,SNR=56									
GEVA	**Gevas**	**84.45**	**308**		P		**P**	**10 56 41.9**	**+0.1**
L19K	**White Mountain**	**84.48**	**28**		P		**P**	**10 56 42.0**	**+0.8**
	baz=260,SNR=32									
OHAK	**Old Harbor**	**84.50**	**33**		P		**P**	**10 56 41.6**	**+0.3**
	baz=262,SNR=30									
PPT	**Papeete**	**84.52**	**108**		LR		LR	11 30 58.4		
	comp=Z,350nm,21.5s,baz=286,slow=33									
Q19K	**Cape Douglas,**	**84.56**	**31**		P		**P**	**10 56 40.7**	**-0.9**
Q19K	**Cape Douglas,**	**84.56**	**31**		P		**P**	**10 56 41.1**	**-0.5**
	baz=262,SNR=11									
KARS	**Kars**	**84.60**	**311**		P		**P**	**10 56 42.2**	**-0.2**
KARS	**Kars**	**84.60**	**311**		P		**P**	**10 56 42.2**	**-0.2**
KARS					pmax		pmax			
	comp=Z,820nm,2.0s									
M19K	**Big River Lodg**	**84.65**	**28**		IAmb		IAmb	10 56 56.5		
	comp=Z,35nm,0.9s									
M19K	**Big River Lodg**	**84.65**	**28**		P		**P**	**10 56 43.1**	**+1.1**
	baz=261									
KDAK	**Kodiak Island**	**84.96**	**32**		P		**P**	**10 56 43.6**	**0.0**
	comp=Z,24nm,0.5s,baz=272,slow=3.5,SNR=68									
	comp=Z,24nm,0.5s									
KDAK	**Kodiak Island**	**84.96**	**32**		P		**P**	**10 56 43.1**	**-0.5**
KDAK	**Kodiak Island**	**84.96**	**32**		P		**P**	**10 56 43.1**	**-0.5**
KDAK					pmax		pmax			
	comp=Z,49nm,0.9s									
KDAK	**Kodiak Island**	**84.96**	**32**		P		**P**	**10 56 43.2**	**-0.4**
	baz=263									
GOF	**Gofitskoye**	**84.96**	**315**	⇑ *eP*			**P**	**10 56 44.5**	**+0.6**
KBZ	**Khabaz**	**84.96**	**314**		P		**P**	**10 56 43.5**	**-0.4**
	comp=Z,28nm,1.0s,baz=141,slow=2.9,SNR=28									
KBZ					LR		LR	11 38 43.7		
	comp=Z,197nm,20.8s,baz=88,slow=39									
	comp=Z,28nm,1.0s									
KBZ	**Khabaz**	**84.96**	**314**	*ce*	P		**P**	**10 56 44.1**	**+0.2**
KBZ					pmax		pmax			
	comp=Z,34nm,1.1s									
L20K	**Farewell, AK**	**84.98**	**27**		P		**P**	**10 56 44.1**	**+0.4**
	baz=261									
K20K	**Telida**	**85.03**	**26**		P		**P**	**10 56 44.2**	**+0.3**
	baz=261,SNR=12									
J20K	**Nowinta River**	**85.13**	**26**		P		**P**	**10 56 44.4**	**+0.1**
	baz=261,SNR=9.1									
KVAR	**Kislovodsk Arr**	**85.13**	**314**		LR		LR	11 41 01.5		
	comp=Z,111nm,18.5s,baz=270,slow=40									
KIV	**Kislovodsk**	**85.13**	**314**	⇑	P		**P**	**10 56 44.5**	**-0.4**
KIV	**Kislovodsk**	**85.13**	**314**		P		**P**	**10 56 44.5**	**-0.4**
KIV					IAmb		IAmb	10 57 26.9		
	comp=Z,26nm,1.0s									
KIV	**Kislovodsk**	**85.13**	**314**	*eP*			**P**	**10 56 44.6**	**-0.4**
KIV				*e*				11 07 07.4		
KIV	**Kislovodsk**	**85.13**	**314**	*i*	P		**P**	**10 56 46.1**	**+1.2**
	SNR=14									
Q20K	**Shuyak Island**	**85.16**	**31**		P		**P**	**10 56 44.5**	**-0.1**
	baz=263,SNR=13									
M20K	**Styx River**	**85.23**	**28**		IAmb		IAmb	10 57 02.8		
	comp=Z,17nm,0.9s									
M20K	**Styx River**	**85.23**	**28**		P		**P**	**10 56 45.3**	**+0.3**
	baz=262									
PRGR	**Permogore**	**85.24**	**332**	*eP*			**P**	**10 56 45.0**	**+0.1**
PRGR				*e*	*PP		**pP**	**10 56 51.6**	**-0.8**
CHVG	**Ch'k'valeri**	**85.49**	**313**	⇑	P		**P**	**10 56 46.4**	**-0.2**
SPCR	**Spurr Chakacha**	**85.58**	**29**		P		**P**	**10 56 47.8**	**+1.0**
	baz=263									
SPU	**Mount Spurr**	**85.65**	**29**		P		**P**	**10 56 46.7**	**-0.4**

BATM	**Batumi**	**85.71**	**312**	⇓	P		**P**	**10 56 46.4**	**-1.4**
PPLA	**Purkeypile**	**85.81**	**27**		P		**P**	**10 56 48.4**	**+0.4**
	baz=263									
CHUM	**Lake Minchumin**	**85.88**	**26**		P		**P**	**10 56 49.0**	**+0.9**
	baz=262,SNR=6.8									
H21K	**Melozitna Rive**	**85.92**	**24**		P		**P**	**10 56 48.3**	**+0.1**
	baz=262									
CAST	**Castle Rocks**	**85.92**	**27**		P		**P**	**10 56 48.4**	**+0.1**
	baz=263,SNR=7.8									
SKT	**Skwentna**	**86.00**	**28**		IAmb		IAmb	10 56 53.8		
	comp=Z,15nm,0.9s									
SKT	**Skwentna**	**86.00**	**28**		P		**P**	**10 56 48.2**	**-0.5**
	baz=263,SNR=8.3									
BRLK	**Bradley Lake**	**86.06**	**30**		IAmb		IAmb	10 56 54.4		
	comp=Z,36nm,0.8s									
BRSE	**Bradley Lake S**	**86.14**	**30**		P		**P**	**10 56 49.5**	**+0.1**
	baz=264,SNR=13									
I21K	**Tanana**	**86.19**	**25**		P		**P**	**10 56 49.7**	**+0.1**
	baz=263,SNR=15									
VRH	**Novokhopyorsk**	**86.30**	**321**	*eP*			**P**	**10 56 49.8**	**-0.6**
VRH					pmax		pmax			
	comp=Z,110nm,1.0s									
SUA	**Susitna One**	**86.31**	**29**		IAmb		IAmb	10 56 55.7		
	comp=Z,25nm,0.8s									
SUA	**Susitna One**	**86.31**	**29**		P		**P**	**10 56 49.7**	**-0.7**
	baz=264									
BPAW	**Bear Paw Mtn.**	**86.49**	**26**		P		**P**	**10 56 50.8**	**-0.3**
	baz=264									
M22K	**Willow**	**86.64**	**28**		P		**P**	**10 56 51.5**	**-0.3**
	baz=264,SNR=6.6									
MLY	**Manley**	**86.70**	**25**		IAmb		IAmb	10 56 56.2		
	comp=Z,13nm,0.8s									
MLY	**Manley**	**86.70**	**25**		P		**P**	**10 56 51.8**	**-0.4**
	baz=264,SNR=19									
O22K	**Cooper Landing**	**86.71**	**30**		P		**P**	**10 56 52.4**	**+0.2**
	baz=265,SNR=7.7									
TRF	**Thorofare Moun**	**86.73**	**27**		P		**P**	**10 56 52.2**	**-0.3**
	baz=264									
RC01	**Rabbit Creek A**	**86.76**	**29**		IAmb		IAmb	10 56 57.5		
	comp=Z,20nm,0.7s									
RC01	**Rabbit Creek A**	**86.76**	**29**		P		**P**	**10 56 51.8**	**-0.7**
	baz=265,SNR=12									
SEW	**Seward**	**86.82**	**30**		IAmb		IAmb	10 56 56.8		
	comp=Z,23nm,1.0s									
SEW	**Seward**	**86.82**	**30**		P		**P**	**10 56 52.4**	**-0.3**
	baz=265									
PMR	**Palmer**	**87.09**	**28**		P		**P**	**10 56 53.7**	**-0.3**
	baz=265									
KTUT	**Trabzon**	**87.13**	**311**	⇓	P		**P**	**10 56 53.5**	**-1.2**
COLD	**Coldfoot**	**87.15**	**23**		IAmb		IAmb	10 57 00.8		
	comp=Z,17nm,0.8s									
COLD	**Coldfoot**	**87.15**	**23**		P		**P**	**10 56 54.5**	**+0.3**
	baz=264,SNR=14									
SOC	**Sochi**	**87.26**	**313**	*eP*			**P**	**10 56 53.1**	**-2.2**
SOC				*e*	PPP		PPP	11 02 10.2		
SOC				*eS*			**SKSac**	**11 07 18.5**	**-2.8**
SOC				*eSSS*			SSS	11 16 51.1		
SOC					pmax		pmax			
	comp=Z,26nm,0.6s									
H23K	**Yukon River**	**87.27**	**24**		IAmb		IAmb	10 56 57.9		
	comp=Z,9.6nm,0.7s									
H23K	**Yukon River**	**87.27**	**24**		P		**P**	**10 56 54.9**	**0.0**
	baz=265,SNR=19									
I23K	**Minto, Yukon-K**	**87.29**	**25**		IAmb		IAmb	10 57 02.2		
	comp=Z,18nm,1.0s									
I23K	**Minto, Yukon-K**	**87.29**	**25**		P		**P**	**10 56 54.7**	**-0.2**
	baz=265,SNR=16									
MCK	**McKinley**	**87.36**	**26**		P		**P**	**10 56 54.4**	**-1.0**
	baz=265									

KMBO	**Kilima Mbogo**	**89.04**	**269**		P		**P**	**10 57 03.8**	**-0.9**
	comp=Z,8.6nm,0.9s,baz=46,slow=6.6,SNR=14									
KMBO					LR		LR	11 33 39.8		
	comp=Z,332nm,21.9s,baz=94,slow=33									
	comp=Z,8.6nm,0.9s									
KMBO	**Kilima Mbogo**	**89.04**	**269**		P		**P**	**10 57 04.4**	**-0.3**
KMBO					IAmb		IAmb	10 57 08.7		
	comp=Z,21nm,1.1s									
KMBO	**Kilima Mbogo**	**89.04**	**269**	*de*	P		**P**	**10 57 06.4**	**+1.7**
KMBO	**Kilima Mbogo**	**89.04**	**269**	*i*	P		**P**	**10 57 05.7**	**+1.0**
	SNR=9.7									
RIDG	**Independent Ri**	**89.17**	**26**		IAmb		IAmb	10 57 06.5		
	comp=Z,17nm,0.9s									
RIDG	**Independent Ri**	**89.17**	**26**		P		**P**	**10 57 02.9**	**-1.1**
	baz=269,SNR=19									
BMRM	**Bremner River**	**89.25**	**29**		IAmb		IAmb	10 57 19.5		
	comp=Z,28nm,1.4s									
BMRM	**Bremner River**	**89.25**	**29**		P		**P**	**10 57 05.1**	**+0.7**
	baz=269									
N25K	**Chitina, Valde**	**89.26**	**29**		P		**P**	**10 57 04.0**	**-0.5**
	baz=269									
OBN	**Obninsk**	**89.54**	**325**		LR		LR	11 38 59.3		
	comp=Z,103nm,21.5s,baz=80,slow=37									
OBN	**Obninsk**	**89.54**	**325**		P		**P**	**10 57 04.9**	**-0.9**
OBN	**Obninsk**	**89.54**	**325**	⇑	*eP*		**P**	**10 57 04.9**	**-0.9**
OBN					*i*			10 57 08.1		
OBN					*i*			11 00 37.7		
OBN					*eS*		**SKSac**	**11 07 35.8**	**+1.4**
OBN					pmax		pmax			
	comp=Z,22nm,1.0s									
OBN					MLR		MLR			
	comp=Z,557nm,23.0s									
SCRK	**Sand Creek**	**89.56**	**26**		P		**P**	**10 57 05.5**	**-0.4**
	baz=270,SNR=9.5									
MENT	**Mentasta**	**89.68**	**27**		P		**P**	**10 57 06.1**	**-0.2**
J26L	**Joseph Creek**	**89.74**	**26**		IAmb		IAmb	10 57 09.3		
	comp=Z,14nm,0.7s									
J26L	**Joseph Creek**	**89.74**	**26**		P		**P**	**10 57 05.7**	**-1.0**
	baz=270,SNR=30									
L26K	**Log Cabin Wild**	**89.85**	**27**		P		**P**	**10 57 06.5**	**-0.7**
	baz=270,SNR=8.5									
M26K	**Nabesna, AK**	**90.02**	**28**		P		**P**	**10 57 07.1**	**-0.9**
	baz=271									
MCARA	**McCarthy VSAT**	**90.02**	**29**		P		**P**	**10 57 10.0**	**+2.1**
	baz=271									
WAX	**Waxell Ridge**	**90.11**	**30**		IAmb		IAmb	10 57 23.4		
	comp=Z,15nm,0.9s									
TGL	**Tana Glacier**	**90.12**	**29**		IAmb		IAmb	10 57 23.2		
	comp=Z,20nm,1.2s									
QSPA	**South Pole Qui**	**90.29**	**180**		P		**P**	**10 57 09.2**	**0.0**
QSPA					IAmb		IAmb	10 57 26.4		
	comp=Z,61nm,1.6s									
K27K	**Chicken**	**90.40**	**26**		IAmb		IAmb	10 57 13.7		
	comp=Z,25nm,1.1s									
K27K	**Chicken**	**90.40**	**26**		P		**P**	**10 57 10.0**	**+0.3**
	baz=272									
M27K	**Edge Creek, AK**	**90.54**	**28**		P		**P**	**10 57 10.2**	**-0.3**
	baz=272									
L27K	**Beaver Creek,**	**90.54**	**27**		IAmb		IAmb	10 57 16.3		
	comp=Z,9.2nm,0.7s									
L27K	**Beaver Creek,**	**90.54**	**27**		P		**P**	**10 57 10.3**	**0.0**
	baz=272									
MMAI	**Mount Meron Ar**	**90.55**	**303**		LR		LR	11 42 04.6		
	comp=Z,238nm,21.7s,baz=258,slow=38									
GRNC	**Granite Creek**	**90.65**	**29**		P		**P**	**10 57 10.8**	**-0.3**
GRNC					IAmb		IAmb	10 57 17.1		
	comp=Z,12nm,0.8s									
BARN	**Barnard Glacie**	**90.68**	**29**		IAmb		IAmb	10 57 13.3		
	comp=Z,11nm,0.6s									
APA	**Apatity**	**90.77**	**337**	⇑	*iP*		P	10 57 19.5	+8.2	
APA					pmax		pmax			
	comp=Z,14nm,1.2s									
APA					MLR		MLR			
	comp=Z,800nm,20.0s									
CTG	**Chitna Glacier**	**90.84**	**29**		P		**P**	**10 57 12.2**	**+0.2**
	baz=272									
CTGM	**Chitina Glacie**	**90.85**	**29**		IAmb		IAmb	10 57 35.6		
	comp=Z,16nm,0.9s									
TABL	**Table Mountain**	**90.96**	**30**		IAmb		IAmb	11 00 15.0		
	comp=Z,22nm,0.7s									
EIL	**Elat**	**90.98**	**300**		LR		LR	11 41 40.9		
	comp=Z,370nm,21.3s,baz=93,slow=38									
BVCY	**Beaver Creek**	**91.01**	**28**		P		**P**	**10 57 12.9**	**+0.3**
	baz=273									
LOGN	**Logan Glacier**	**91.01**	**29**		IAmb		IAmb	10 57 42.4		
	comp=Z,19nm,1.2s									
YUK3	**Moose Creek**	**91.23**	**28**		P		**P**	**10 57 14.0**	**+0.2**
	baz=273									
SIM	**Simferopol'**	**91.29**	**315**	*ce*	P		**P**	**10 57 14.7**	**+0.5**
SIM				*e*	*PP		**pP**	**10 57 21.0**	**-0.8**
SIM				*e*				11 00 52.0		
SIM				*e*				11 07 35.0		
SIM				*e*	SSS		SSS	11 17 51.0		
SIM					pmax		pmax			
	comp=Z,29nm,0.9s									
SIM					pmax		pmax			
	comp=Z,140nm,16.7s									
PINM	**Pinnacle**	**91.42**	**30**		P		**P**	**10 57 14.5**	**-0.1**
	baz=273									
DAWY	**Dawson**	**91.58**	**26**		P		**P**	**10 57 14.9**	**-0.3**
DAWY	**Dawson**	**91.58**	**26**		P		**P**	**10 57 14.8**	**-0.3**
	baz=274,SNR=11									
YUK8	**Steele Glacier**	**91.59**	**29**		P		**P**	**10 57 15.4**	**-0.2**
	baz=274									
BR131	**Keskin Array S**	**91.81**	**310**		P		**P**	**10 57 15.7**	**-1.2**
BR131					IAmb		IAmb	10 57 18.4		
	comp=Z,15nm,0.9s									
BR131	**Keskin Array S**	**91.81**	**310**	*ce*	P		**P**	**10 57 15.8**	**-1.2**
BR131	**Keskin Array S**	**91.81**	**310**		P		**P**	**10 57 16.2**	**-0.7**
	SNR=8.2									
BR131					P		**P**	**10 57 16.2**	**-0.7**
	SNR=8.2									
BRTR	**Keskin Array B**	**91.81**	**310**		P		**P**	**10 57 15.2**	**-1.7**
	comp=Z,7.2nm,0.9s,baz=126,slow=5.0,SNR=24									
BRTR					LR		LR	11 44 31.0		
	comp=Z,126nm,20.7s,baz=90,slow=40									
	comp=Z,7.2nm,0.9s									
I29M	**Ogilvie Camp,**	**91.94**	**25**		IAmb		IAmb	10 57 20.6		
	comp=Z,28nm,1.6s									
I29M	**Ogilvie Camp,**	**91.94**	**25**		P		**P**	**10 57 16.1**	**-0.7**
	baz=275,SNR=11									
YUK4	**Talbot Arm**	**92.12**	**29**		P		**P**	**10 57 18.3**	**+0.3**
	baz=275									
EPYK	**Eagle Plains**	**92.48**	**24**		IAmb		IAmb	10 57 22.8		
	comp=Z,23nm,1.2s									
EPYK	**Eagle Plains**	**92.48**	**24**		P		**P**	**10 57 19.1**	**-0.2**
	baz=276,SNR=6.6									
HYT	**Haines Junctio**	**92.72**	**29**		P		**P**	**10 57 19.9**	**-0.7**
HYT					IAmb		IAmb	10 57 26.2		
	comp=Z,9.3nm,1.0s									
HYT	**Haines Junctio**	**92.72**	**29**		P		**P**	**10 57 20.6**	**-0.1**
	baz=276									
N30M	**Aishikik Lake**	**92.86**	**29**		P		**P**	**10 57 21.1**	**-0.1**
	baz=276									
M30M	**Minto, Yukon**	**92.88**	**27**		P		**P**	**10 57 20.7**	**-0.6**
M30M					IAmb		IAmb	10 57 27.1		
	comp=Z,12nm,0.9s									
M30M	**Minto, Yukon**	**92.88**	**27**		P		**P**	**10 57 21.4**	**+0.2**
	baz=276									
O30N	**Mendenhall**	**93.42**	**29**		P		**P**	**10 57 23.8**	**0.0**
	baz=277									
ARCES	**ARCESS Array B**	**93.43**	**340**		P		**P**	**10 57 21.5**	**-2.1**
	comp=Z,2.8nm,0.6s,baz=74,slow=5.2,SNR=11									
ARCES					PKKP		**PKKPdf**	**11 14 28.9**	**-2.3**	
	comp=Z,2.5nm,0.8s,baz=64,slow=2.8,SNR=4.2									
	comp=Z,2.8nm,0.6s									
INK	**Inuvik**	**93.44**	**22**		P		**P**	**10 57 21.8**	**-1.8**
	comp=Z,5.1nm,0.7s,baz=298,slow=4.0,SNR=15									
	comp=Z,5.1nm,0.7s									
INK	**Inuvik**	**93.44**	**22**		IAmb		IAmb	10 57 26.8		
	comp=Z,11nm,1.0s									
INK	**Inuvik**	**93.44**	**22**		P		**P**	**10 57 22.6**	**-1.0**
	baz=280									
N31M	**Braeburn, Yuko**	**93.48**	**28**		P		**P**	**10 57 24.3**	**+0.3**
	baz=277									
SPITS	**Spitsbergen Ar**	**93.67**	**349**		LR		LR	11 44 28.9		
	comp=Z,402nm,21.8s,baz=34,slow=39									
SKAG	**Skagway**	**93.96**	**30**		IAmb		IAmb	10 57 32.3		
	comp=Z,30nm,1.0s									
SKAG	**Skagway**	**93.96**	**30**		P		**P**	**10 57 26.5**	**+0.4**
	baz=277									
M31M	**Drury Creek, Y**	**94.04**	**28**		P		**P**	**10 57 26.4**	**-0.2**
	baz=278									
AKASG	**Malin Array Be**	**94.20**	**321**		P		**P**	**10 57 26.2**	**-1.3**
	comp=Z,1.4nm,0.6s,baz=58,slow=3.9,SNR=11									
AKASG					LR		LR	11 43 09.7		
	comp=Z,518nm,22.0s,baz=76,slow=38									
	comp=Z,1.4nm,0.6s									

AKBB	**Malin Array Si**	**94.20**	**321**	*ce*	P		**P**	**10 57 26.3**	**-1.2**
FARO	**Faro, Yukon**	**94.51**	**28**		P		**P**	**10 57 28.7**	**-0.1**
	baz=279									
FINES	**FINESS Array B**	**94.57**	**332**		P		**P**	**10 57 27.2**	**-1.7**
	comp=Z,3.3nm,0.8s,baz=61,slow=4.6,SNR=8.2									
FINES					PKiKP		**PKiKP**	**11 02 15.6**	**+3.9**	
	comp=Z,1.0nm,0.7s,baz=98,slow=2.9,SNR=3.9									
FINES					LR		LR	11 42 57.2		
	comp=Z,369nm,22.0s,baz=76,slow=37									
	comp=Z,3.3nm,0.8s									
MNK	**Minsk**	**94.59**	**325**	*i*	P		**P**	**10 57 29.4**	**+0.2**
MNK				*i*				11 01 17.3		
MNK				*i*	PPP		PPP	11 03 18.8		
MNK				*i*	S		**SKSac**	**11 08 02.1**	**-0.8**
MNK				*i*				11 08 40.8		
MNK				*i*	SS		**SS**	**11 15 04.4**	**+1.0**
MNK				*i*	SSS		SSS	11 18 46.7		
MNK					pmax		pmax			
	comp=N,8.0nm,0.9s									
MNK					pmax		pmax			
	comp=E,2.0nm,0.9s									
MNK					pmax		pmax			
	comp=Z,22nm,0.9s									
MNK					MLR		MLR			
	comp=N,327nm,19.0s									
MNK					MLR		MLR			
	comp=E,105nm,19.0s									
MNK					MLR		MLR			
	comp=Z,509nm,19.0s									
MNK	**Minsk**	**94.59**	**325**	*i*	P		**P**	**10 57 29.5**	**+0.2**
	comp=E,2.0nm,0.9s									
MNK				*i*	P		**P**	**10 57 29.5**	**+0.2**
	comp=N,8.0nm,0.9s									
MNK				*i*	P		**P**	**10 57 29.5**	**+0.2**
	comp=Z,22nm,0.9s,baz=83									
MNK				*i*	PP		**PP**	**11 01 17.3**	**+0.1**
MNK				*i*	PPP		PPP	11 03 18.8		
MNK				*i*	SKS			11 07 14.3		
MNK				*i*	S		**SKSac**	**11 08 02.2**	**-0.8**
MNK				*i*	SS		**SS**	**11 15 04.5**	**+1.0**
MNK				*i*	SSS		SSS	11 18 46.7		
MNK				*i*	LQ			11 31 05.4		
MNK				*i*	LR		LR	11 34 53.6		
MNK				*i*	LRM		MLR	11 40 04.5		
	comp=N,327nm,19.4s									
MNK				*i*	LRM		MLR	11 40 24.2		
	comp=E,105nm,19.4s									
MNK				*i*	LRM		MLR	11 41 30.1		
	comp=Z,509nm,19.0s									
SORM	**Soroca**	**95.04**	**318**	⇑	P		**P**	**10 57 29.6**	**-1.8**
P33M	**Teslin, Yukon**	**95.10**	**29**		P		**P**	**10 57 31.4**	**-0.2**
	baz=280									
NACGM	**Naroch**	**95.18**	**325**	⇑	*eP*		**P**	**10 57 32.1**	**+0.3**
	comp=Z,18nm,0.7s,baz=82									
MMPY	**Sheldon Lake,**	**95.40**	**27**		P		**P**	**10 57 33.0**	**+0.2**
	baz=281									
CFR	**Carcaliu**	**95.50**	**315**	⇑	P		**P**	**10 57 32.9**	**-0.7**
MBAR	**Mbarara**	**95.55**	**269**		LR		LR	11 38 15.8		
	comp=Z,237nm,22.0s,baz=68,slow=34									
VRI	**Vrincioaia**	**96.40**	**316**	⇓	P		**P**	**10 57 36.7**	**-1.1**
H02S1	**DAWSON INLET T**	**96.44**	**36**		T		T	12 45 30.9		
	SNR=59									
PLOR	**Plostina**	**96.46**	**316**	⇓	P		**P**	**10 57 37.4**	**-0.6**
C36M	**Paulatuk**	**96.51**	**20**		P		**P**	**10 57 36.6**	**-1.0**
	baz=288									
NEHR	**Nehoiu**	**96.76**	**316**	⇑	P		**P**	**10 57 38.7**	**-0.7**
DLBC	**Dease Lake**	**96.84**	**31**		P		**P**	**10 57 38.7**	**-0.8**
	comp=Z,1.4nm,0.5s,baz=258,slow=12,SNR=2.5									
DLBC					LR		LR	11 36 47.3		
	comp=Z,216nm,21.8s,baz=284,slow=33									
	comp=Z,1.4nm,0.5s									
MLR	**Muntele Rosu**	**97.00**	**316**	⇓	P		**P**	**10 57 39.3**	**-1.2**
MLR	**Muntele Rosu**	**97.00**	**316**		LR		LR	11 46 47.4		
	comp=Z,461nm,22.0s,baz=70,slow=39									
MLR	**Muntele Rosu**	**97.00**	**316**		IAmb		IAmb	10 57 42.6		
	comp=Z,11nm,1.0s									
TGTN	**Hyland Airport**	**97.01**	**28**		P		Pdif	10 57 40.3	0.0	
	baz=284									
BURAR	**Bucovina Array**	**97.20**	**318**	⇓	P		**P**	**10 57 40.4**	**-0.9**
BURAR	**Bucovina Array**	**97.20**	**318**		P		**P**	**10 57 40.3**	**-1.1**
BUR08	**Bucovina Ar. S**	**97.20**	**318**		IAmb		IAmb	10 57 43.4		
	comp=Z,10nm,0.8s									
MATP	**Matopo**	**97.43**	**250**		LR		LR	11 39 19.5		
	comp=Z,339nm,20.1s,baz=61,slow=34									
LVV	**L'vov**	**97.62**	**320**	*eP*			Pdif	10 57 45.1	+1.9	
LSZ	**Lusaka**	**97.91**	**255**		P		**P**	**10 57 44.9**	**-0.4**
LSZ					IAmb		IAmb	10 59 15.9		
	comp=Z,24nm,1.8s									
LSZ	**Lusaka**	**97.91**	**255**		P		**P**	**10 57 44.9**	**-0.4**
LSZ					pmax		pmax			
	comp=Z,24nm,1.8s									
KOLS	**Kolonicke sedl**	**98.91**	**320**	*eP*			Pdif	10 57 49.9	+0.9	
KOLS	**Kolonicke sedl**	**98.91**	**320**	*ePDIFF*			Pdif	10 57 49.9	+0.9	
UZH	**Uzhgorod**	**98.96**	**319**	*eP*			**P**	**10 57 47.8**	**-1.3**
UZH				*i*				10 57 51.9		
UZH				*i*				10 57 59.6		
DRGR		**99.02**	**317**	⇑	P		**Pdif**	**10 57 48.5**	**-1.1**
IDI	**Anoyia**	**99.09**	**306**		LR		LR	11 49 09.6		
	comp=Z,81nm,21.8s,baz=86,slow=39									
VTS	**Vitosha**	**99.35**	**313**	⇓	P		**Pdif**	**10 57 49.6**	**-1.6**
CRVS	**Cervenica-Dubn**	**99.44**	**320**	*eP*			**Pdif**	**10 57 51.5**	**+0.2**
CRVS	**Cervenica-Dubn**	**99.44**	**320**	*ePDIFF*			**Pdif**	**10 57 51.5**	**+0.2**
HERR	**Herculane**	**99.56**	**316**	⇑	P		**Pdif**	**10 57 51.5**	**-0.4**
BLKB	**Belogradchik**	**99.59**	**314**	⇑	P		**Pdif**	**10 57 50.8**	**-1.3**
SIRR	**Siria**	**99.83**	**317**	⇑	P		**Pdif**	**10 57 51.8**	**-1.3**
LBTB	**Lobatse**	**99.84**	**245**		LR		LR	11 39 13.3		
	comp=Z,115nm,20.4s,baz=94,slow=33									
BOSA	**Boshof**	**99.86**	**241**		PKKPbc		PKKPbc	11 14 12.7	-1.6	
	comp=Z,2.5nm,0.7s,baz=321,slow=4.4,SNR=5.2									
BOSA					LR		LR	11 39 15.7		
	comp=Z,220nm,21.9s,baz=95,slow=33									
MDVR	**Moldovita**	**100.06**	**316**	⇑	P		**Pdif**	**10 57 53.9**	**-0.3**
NB2	**NORSAR Subarra**	**101.58**	**333**		P		**Pdif**	**10 57 57.4**	**-3.2**
	baz=72,slow=4.4									
NB2	**NORSAR Subarra**	**101.58**	**333**		P		**Pdif**	**10 57 57.4**	**-3.2**
	comp=Z,2.0nm,1.4s,baz=72,slow=4.4									
NOA	**NORSAR Array B**	**101.58**	**333**		P		**Pdif**	**10 57 57.4**	**-3.2**
	comp=Z,1.2nm,0.8s,baz=68,slow=4.4,SNR=4.7									
NOA					PP		**PP**	**11 02 10.2**	**-0.2**	
	comp=Z,0.8nm,0.9s,baz=174,slow=13,SNR=3.3									
MORH	**Mrgy, Hungar**	**101.88**	**317**		P		**Pdif**	**10 58 01.6**	**-0.6**
MPLH	**Magyarpolny**	**102.40**	**319**		P		**Pdif**	**10 58 01.3**	**-3.1**
YKA	**Yellowknife Ar**	**102.73**	**25**		P		**Pdif**	**10 58 03.9**	**-1.6**
	comp=Z,1.0nm,0.6s,baz=298,slow=4.2,SNR=11									
YKA					PP		**PP**	**11 02 22.8**	**+3.8**	
	comp=Z,2.4nm,1.1s,baz=293,slow=7.1,SNR=6.7									
YKA					PKKPbc		**PKKPbc**	**11 14 04.5**	**-2.5**	
	comp=Z,1.4nm,0.6s,baz=113,slow=2.7,SNR=16									
CLL	**Collm**	**104.08**	**324**	*e*	SKSac		**SKSac**	**11 08 54.0**	**+3.7**
CLL				*e*	SKKSac		**SKKSac**	**11 09 39.0**	**+5.7**
CLL				*e*	Sdif		**Sdif**	**11 10 06.0**	**+5.2**
CLL				*e*	PS		PS	11 11 30.0	-11	
CLL				*e*	PPS		PPS	11 12 30.0		
CLL				*e*	SS		**SS**	**11 17 06.0**	**-10**
CLL				*ex*			x	11 18 00.0		
CLL				*e*	SSS		SSS	11 21 24.0		
CLL				*ex*			x	11 23 00.0		
CLL				*ex*			x	11 26 06.0		
CLL					Lm		MLR	11 50 00.0		
	comp=Z,500nm,22.0s									
GERES	**GERESS Array B**	**104.42**	**321**		Pdiff		**Pdif**	**10 58 13.3**	**-0.3**
	comp=Z,0.3nm,0.7s,baz=76,slow=11,SNR=3.7									
GERES					PP		**PP**	**11 02 30.6**	**-1.6**	
	comp=Z,0.6nm,0.6s,baz=70,slow=1.6,SNR=4.6									
NVAR	**Mina Array Bea**	**109.46**	**49**		Pdiff		**Pdif**	**10 58 37.4**	**+1.0**
	comp=Z,0.6nm,0.9s,baz=264,slow=4.5,SNR=3.7									
NVAR					PKKPbc		**PKKPbc**	**11 13 46.5**	**+0.8**	
	comp=Z,0.8nm,0.7s,baz=140,slow=5.0,SNR=8.5									
EKA	**Eskdalemuir Ar**	**110.97**	**332**		PKKPbc		PKKPbc	11 13 39.5	-1.6	
	comp=Z,0.5nm,0.4s,baz=253,slow=2.1,SNR=4.7									
KEST	**Kesra**	**111.40**	**309**		PKKPbc		PKKPbc	11 13 39.0	-0.1	
	comp=Z,2.8nm,0.6s,baz=105,slow=1.0,SNR=4.5									
BELC	**Belle Mtn. Jos**	**112.51**	**53**		P		**PKiKP**	**11 02 46.4**	**+0.9**
	baz=287									
GMRC	**Granite Mounta**	**112.55**	**52**		P		**PKiKP**	**11 02 46.3**	**+0.8**
	baz=287									
DUG	**Dugway, Tooele**	**112.91**	**46**		P		**PKiKP**	**11 02 46.5**	**+0.4**
	baz=291									
PDAR	**Pinedale Array**	**114.15**	**42**		PKP		**PKiKP**	**11 02 48.8**	**+0.2**
	comp=Z,0.9nm,0.7s,baz=224,slow=2.8,SNR=6.6									
PDAR					PKKPbc		**PKKPbc**	**11 13 28.3**	**-2.1**	
	comp=Z,1.0nm,0.5s,baz=123,slow=5.3,SNR=8.7									
LAO	**LASA Array**	**114.48**	**37**		P		PKPdf	11 02 50.1	+1.3	
	baz=299									
WUAZ	**Wupatki**	**115.64**	**50**		P		**PKPdf**	**11 02 51.6**	**+0.1**
	baz=290									

O20A	**White River Ci**	**116.16**	**44**		P		**PKPdf**	**11 02 52.3**	**-0.1**
	baz=295									
PV13	**Radium Mtn., P**	**116.56**	**46**				**PKPdf**	**11 02 52.5**	**-0.8**
RSSD	**Black Hills**	**117.09**	**39**		PKPdf		**PKPdf**	**11 02 54.1**	**0.0**
RSSD	**Black Hills**	**117.09**	**39**		PKiKP		**PKPdf**	**11 02 54.1**	**0.0**
MVCO	**Mesa Verde**	**117.17**	**47**		P		**PKiKP**	**11 02 55.1**	**+0.6**
	baz=293									
TUC	**Tucson**	**117.19**	**53**		PKPdf		**PKPdf**	**11 02 51.1**	**-3.4**
TUC	**Tucson**	**117.19**	**53**		PKiKP		**PKPdf**	**11 02 51.1**	**-3.4**
TUC	**Tucson**	**117.19**	**53**		P		**PKiKP**	**11 02 54.6**	**+0.2**
	baz=289									
ULM	**Lac du Bonnet**	**118.10**	**29**		PKP		**PKPdf**	**11 02 54.0**	**-1.5**
	comp=Z,4.3nm,0.6s,baz=357,slow=0.6,SNR=9.4									
ULM	**Lac du Bonnet**	**118.10**	**29**				**PKPdf**	**11 02 54.7**	**-0.8**
ISCO	**Idaho Springs**	**118.12**	**43**		P		**PKPdf**	**11 02 56.2**	**-0.1**
	baz=297									
ISCO	**Idaho Springs**	**118.12**	**43**		P		**PKPdf**	**11 02 56.2**	**-0.1**
	baz=297									
S22A	**4UR Ranch, Cre**	**118.16**	**46**		P		**PKiKP**	**11 02 56.8**	**+0.3**
	baz=295									
SDCO	**Great Sand Dun**	**119.11**	**45**		P		**PKPdf**	**11 02 57.8**	**-0.5**
	baz=296									
SDCO	**Great Sand Dun**	**119.11**	**45**		P		**PKPdf**	**11 02 57.8**	**-0.5**
	baz=296									
121A	**Cookes Peak, D**	**119.49**	**52**		P		**PKiKP**	**11 02 59.1**	**0.0**
	baz=292									
121A	**Cookes Peak, D**	**119.49**	**52**		P		**PKiKP**	**11 02 59.2**	**+0.1**
	baz=292									
ANMO	**Albuquerque**	**119.58**	**49**		PKPdf		**PKPdf**	**11 02 58.7**	**-0.4**
ANMO	**Albuquerque**	**119.58**	**49**	⇓	*i*PKiKP		**PKiKP**	**11 02 59.4**	**+0.2**
ANMO					pmax		pmax			
	comp=Z,4.0nm,1.0s									
ANMO	**Albuquerque**	**119.58**	**49**		P		**PKiKP**	**11 02 59.3**	**+0.2**
	baz=294									
ANMO	**Albuquerque**	**119.58**	**49**		P		**PKiKP**	**11 02 59.3**	**+0.1**
	baz=294									
Y22A	**Socorro**	**119.60**	**50**		P		**PKPdf**	**11 02 59.0**	**-0.1**
	baz=293									
ESDC	**Sonseca Array**	**119.65**	**317**		PKP		**PKPdf**	**11 02 58.4**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=113,slow=2.3,SNR=4.7									
T25A	**Trinidad**	**120.16**	**46**		P		**PKPdf**	**11 03 00.3**	**+0.1**
	baz=297									
MVO	**Moncorvo**	**120.92**	**320**	*e*	PKPdf		**PKPdf**	**11 03 01.1**	**-0.2**
MVO	**Moncorvo**	**120.92**	**320**	*e*	LR		LR	11 51 46.9		
	comp=Z,240nm,22.0s									
PGAV	**Gavieira, Arco**	**121.27**	**322**	*e*	PKPdf		**PKPdf**	**11 03 01.9**	**-0.1**
PGAV	**Gavieira, Arco**	**121.27**	**322**	*e*	LR		LR	11 53 23.7		
	comp=Z,316nm,20.0s									
POLO	**Lamas de Olo**	**121.29**	**321**	*e*	PKPdf		**PKPdf**	**11 03 01.6**	**-0.5**
MTE	**Manteigas**	**121.65**	**320**	*e*	PKPdf		**PKiKP**	**11 03 03.0**	**+0.1**
MTE	**Manteigas**	**121.65**	**320**	*e*	LR		LR	11 51 34.0		
	comp=Z,236nm,20.0s									
MNTX	**Cornudas Mount**	**121.69**	**52**				**PKiKP**	**11 03 03.2**	**0.0**
MNTX	**Cornudas Mount**	**121.69**	**52**		P		**PKPdf**	**11 03 02.7**	**-0.4**
	baz=293									
MNTX	**Cornudas Mount**	**121.69**	**52**		P		**PKiKP**	**11 03 03.2**	**0.0**
	baz=293									
ECSD	**EROS Data Cent**	**121.78**	**35

O52A P **PKPdf** **11 03 22.1 -0.8**
baz=320
J58A **Remsen** **132.37 21** P **PKPdf** **11 03 22.4 -0.7**
baz=330
J58A P **PKPdf** **11 03 22.4 -0.7**
baz=330
BINY **Binghamton** **133.11 23** P **PKPdf** **11 03 23.9 -0.6**
baz=329
SSPA **Standing Stone** **133.65 26** **PKPdf** **11 03 25.4 -0.1**
SSPA **Standing Stone** **133.65 26** P **PKPdf** **11 03 24.2 -1.4**
baz=326
TZTN **Tazewell** **134.01 34** P **PKPdf** **11 03 26.3 -0.1**
baz=316
LRAL **Lakeview Retre** **134.33 40** P **PKPdf** **11 03 27.2 +0.2**
baz=310
KMSC **Kings Mountain** **136.26 33** P **PKPdf** **11 03 31.3 +0.7**
baz=318
PLCA **Paso Flores** **137.01 161** PKhKP PKPpre 11 03 22.1
comp=Z,1.0nm,0.6s,baz=196,slow=5.2,SNR=4.4
PLCA PKP **PKPdf** **11 03 32.5 +0.6**
comp=Z,4.3nm,0.6s,baz=238,slow=8.9,SNR=3.9
MT09 **Talagante** **143.02 156** PKPbc 11 03 41.4 +1.6
JTS **Las Juntas de** **147.17 70** *i* PKP2 **PKPbc** **11 03 53.0 +0.2**
AC04 **Llanos de Chal** **147.71 150** **PKPbc** **11 03 54.7 +0.8**
GO03 **Copiap** **148.62 151** **PKPdf** **11 03 52.0 -0.7**
GO03 **PKiKP** **11 03 57.6 -0.3**
PEZE **Perez Zeledon,** **148.63 71** **PKiKP** **11 03 58.0 -0.3**
AC06 **Mina Casimiro** **148.76 151** PKPdf **PKPdf** **11 03 51.0 -1.9**
PLTB **Pedras Altas** **148.77 180** PKPdf **PKPdf** **11 03 52.4 -0.4**
SRBA **San Rafael, Bu** **148.98 71** PKPdf **PKPdf** **11 03 52.4 -1.3**
SRBA **PKiKP** **11 03 58.8 -0.3**
DRK0 **Durika** **149.08 71** PKPdf **PKPdf** **11 03 51.8 -2.1**
PRVC **Isla de Provid** **149.39 62** **PKPbc** **11 03 59.1 +0.5**
PRVC **Isla de Provid** **149.39 62** *eP* **PKPbc** **11 03 57.9 -0.7**
CACAO **El Cacao, Vera** **151.86 74** *eP* **PKPbc** **11 04 01.7 -2.8**
AZU **Azuero** **152.31 72** *eP* **PKPdf** **11 04 01.7 +3.0**
BCIP **Isla Barro Col** **152.31 69** *eP* **PKPbc** **11 04 03.7 -1.8**
UPA **Univ. de Panam** **152.66 70** *eP* **PKPbc** **11 04 03.7 -2.6**
PB06 **IPOC Station P** **152.96 146** **PKiKP** **11 04 07.6 +0.5**
PB07 **IPOC Station P** **153.55 144** PKPdf **PKPdf** **11 04 00.5 -0.1**
PB07 **PKiKP** **11 04 09.2 +0.8**
PB09 **IPOC Station P** **153.86 146** PKPdf **PKPdf** **11 04 00.3 -0.7**
PB09 PKPbc **PKiKP** **11 04 10.2 +1.2**
CPUP **Villa Florida** **153.95 173** PKPbc **PKiKP** **11 04 09.4 +0.5**
comp=Z,7.7nm,0.7s,baz=116,slow=1.3,SNR=16
CPUP **Villa Florida** **153.95 173** PKPdf **PKPdf** **11 03 59.9 -0.9**
CPUP **Villa Florida** **153.95 173** PKiKP **PKPdf** **11 03 59.9 -0.9**
SDDR **Presa de Saban** **154.17 41** **PKPab** **11 04 20.9 -2.2**
COHC **Cochancay** **154.38 95** **PKPbc** **11 04 09.6 -0.5**
PORT **Chimborazo Vol** **154.92 93** PKPdf **PKPdf** **11 04 02.9 -0.4**
OTAV **Otavalo** **155.26 89** *eP* PKPdf 11 04 13.3 +10
TULM **Tulcn-Chalpat** **155.90 87** *eP* PKPdf 11 04 14.3 +10
GCUF **Volcan Galeras** **156.32 86** *eP* PKPdf 11 04 15.2 +10
SJCC **San Jacinto, C** **156.33 64** *eP* **PKPdf** **11 04 04.6 +0.2**
DBBC **Dabeiba** **156.39 71** *eP* **PKPdf** **11 04 08.5 +3.9**
PLMC **San Jos del P** **156.86 77** *eP* **PKPdf** **11 04 04.6 -0.5**
POPC **Popayan, Colom** **156.86 83** *eP* **PKPdf** **11 04 11.4 +6.0**
SOTA **Rioblanco** **156.98 84** *eP* PKPdf 11 04 20.1 +14
YOTC **Yotoco, Valle** **156.98 79** *eP* **PKPdf** **11 04 08.5 +3.1**
PCON **Cinco Dias** **157.16 83** *eP* PKPdf 11 04 17.2 +11
ICMP **Isla Caja de M** **157.91 34** **PKPab** **11 04 38.8 -0.2**
PRAC **Prado** **158.46 79** *eP* PKPdf 11 04 18.1 +11
LPAZ **La Paz** **158.73 139** PKP **PKPdf** **11 04 08.6 +0.5**
comp=Z,2.1nm,0.6s,baz=251,slow=4.1,SNR=13
LPAZ PKPab **PKPab** **11 04 44.9 +1.5**
comp=Z,6.8nm,0.7s,baz=182,slow=5.8,SNR=6.8
LPAZ **La Paz** **158.73 139** PKPdf **PKPdf** **11 04 10.1 +2.1**
SPBC **San Pablo de B** **158.81 73** *eP* **PKPdf** **11 04 08.5 +0.9**
CHIC **Chingaza** **159.40 76** *eP* **PKPdf** **11 04 06.6 -2.1**
RUSC **La Rusia** **159.69 72** *eP* **PKPdf** **11 04 06.6 -2.5**
MACC **Macarena, Meta** **159.72 83** *eP* **PKPdf** **11 04 06.6 -2.0**
BDFB **Brasilia** **163.81 200** PKP **PKPdf** **11 04 12.6 -0.2**
comp=Z,4.1nm,0.7s,baz=180,slow=6.5,SNR=5.5
BDFB PKPab **PKPab** **11 05 04.3 -0.5**
comp=Z,5.4nm,0.8s,baz=141,slow=5.8,SNR=5.4

*IDC **04** 11:07:13.0±3.2,37°.56N×72°.40E,h163km±27km,mb3.3/6,*
mbtmp3.8/12,MS3.8/1,Error ellipse: s-maj=29.3km
s-min=19.7km az=160.0
*NNC **04** 11:07:13.5±3.7,38°.04N×72°.08E,h0km,mb4.2,mpv3.7,*
Error ellipse: s-maj=29.5km s-min=22.8km az=6.0
*SOME **04** 11:07:20.3,38°.83N×71°.65E,h0km*
ISC 04 11:07:07.8±0.7,37°.43N±0°.07×72°.15E±0°.07,h100km,n36,
σ2s65/41,mb3.7/6,4C-4D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**4.84**	**14**	P	**Pn**	**11 08 22.5**	**+3.8**
	SNR=92						
IUG	**luzhnay**	**4.99**	**342**	*eP*	Pn	11 08 28.7	+8.3
	546nm,0.5s						
IUG				*eS*	**Sn**	**11 09 18.4**	**+1.6**
	237nm,0.6s						
UCH	**Uchtor**	**5.12**	**20**	P	**Pn**	**11 08 26.3**	**+3.7**
	SNR=22						
EKS2	**Erkin-Say**	**5.37**	**13**	P	**Pn**	**11 08 29.5**	**+4.0**
	SNR=12						
MRKS	**Merke**	**5.37**	**8**	*eP*	Pn	11 08 34.5	+9.0
	8.8nm,0.4s						
MRKS				*eS*	**Sn**	**11 09 28.3**	**+2.1**
	47nm,0.2s						
AAK	**Ala-Archa**	**5.50**	**18**	P	**Pn**	**11 08 31.4**	**+4.0**
	SNR=14						
AAK	**Ala-Archa**	**5.50**	**18**	P	**Pn**	**11 08 31.3**	**+3.9**
	14nm,0.5s,baz=192,slow=6.7,SNR=33						
AAK				S	**Sn**	**11 09 27.2**	**-2.2**
	16nm,0.5s,baz=328,slow=22,SNR=15						
KK31	**Karatay Array**	**5.80**	**348**	⇓P	**Pn**	**11 08 33.2**	**+1.9**
	7.7nm,0.5s,baz=161,slow=11,SNR=179						
KK31				S	**Sn**	**11 09 35.8**	**-0.7**
	157nm,0.8s,baz=163,slow=13,SNR=41						
BRLS	**Borolday**	**5.87**	**343**	*eP*	**Pn**	**11 08 36.6**	**+4.4**
	3.8nm,0.5s						
BRLS				*eS*	**Sn**	**11 09 31.9**	**-6.1**
	50nm,0.3s						
CHMS	**Chumysh**	**5.91**	**19**	P	**Pn**	**11 08 36.5**	**+3.7**
	SNR=5.6						
CHMS	**Chumysh**	**5.91**	**19**	⇓P	**Pn**	**11 08 35.8**	**+3.0**
	16nm,0.8s						
CHMS				⇓S	**Sn**	**11 09 37.1**	**-2.0**
	26nm,0.7s						
TKM2	**Tokmak 2**	**6.08**	**25**	P	**Pn**	**11 08 37.8**	**+2.5**
	SNR=5.6						
TKM2	**Tokmak 2**	**6.08**	**25**	⇑P	**Pn**	**11 08 37.9**	**+2.6**
	1.9nm,0.5s						
GEYT	**Alibeck**	**11.14**	**277**	P	Pn	11 09 50.2	+6.4
	0.8nm,0.3s,baz=98,slow=16,SNR=1.4						
GEYT				S	**Sn**	**11 11 46.2**	**-0.1**
	2.1nm,0.5s,baz=99,slow=18,SNR=1.9						
MKAR	**Makanchi Array**	**12.00**	**36**	P	**Pn**	**11 09 54.9**	**-0.4**
	0.4nm,0.8s,baz=234,slow=12,SNR=3.0						
PYUN	**Piuthan**	**13.02**	**132**	*eP*	**Pn**	**11 10 10.5**	**+1.4**
	36nm,0.4s						
DANN	**Dangsing**	**13.30**	**130**	*eP*	**Pn**	**11 10 14.3**	**+1.5**
	25nm,0.3s						
KURBB	**Kurchatov Arra**	**13.96**	**17**	P	**Pn**	**11 10 22.4**	**+1.5**
	1.5nm,0.6s,baz=205,slow=10,SNR=9.1						
GKN	**Gorkha**	**14.09**	**128**	*eP*	**Pn**	**11 10 25.0**	**+2.0**
	33nm,0.3s						
DMN	**Daman**	**14.66**	**128**	*eP*	**Pn**	**11 10 32.7**	**+2.3**
	20nm,0.4s						
AB31	**Akbulak array**	**14.76**	**327**	⇑P	**Pn**	**11 10 32.9**	**+1.6**
	2.3nm,0.5s,baz=137,slow=12,SNR=6.3						
AB31				⇑S	**Sn**	**11 13 12.8**	**-1.1**
	2.4nm,0.7s,baz=135,slow=24,SNR=9.4						
PKIN	**Phulchoki**	**14.86**	**128**	*eP*	**Pn**	**11 10 35.2**	**+2.2**
	18nm,0.4s						
PKI	**Pulchoki**	**14.88**	**128**	*eP*	**Pn**	**11 10 35.4**	**+2.2**
	24nm,0.5s						
GUN	**Gumba**	**14.94**	**125**	*eP*	**Pn**	**11 10 35.6**	**+1.5**
	27nm,0.4s						
RAMN	**Ramite**	**16.07**	**126**	*eP*	**P**	**11 10 49.9**	**+0.3**
	15nm,0.4s						
AKTO	**Aktyubinsk**	**16.47**	**327**	P	**P**	**11 10 54.1**	**+0.5**
	3.6nm,0.4s,baz=132,slow=10,SNR=21						
AKTO	**Aktyubinsk**	**16.47**	**327**	⇓P	**P**	**11 10 58.2**	**+4.6**
	6.3nm,0.7s						
AKTO				⇑S	**Sn**	**11 13 55.9**	**+0.7**
	2.8nm,0.8s						
TAPN	**Taplejung**	**16.52**	**123**	*eP*	**P**	**11 10 55.2**	**+0.5**
	13nm,0.5s						
ZALV	**Zalesovo Beam**	**18.69**	**24**	P	**P**	**11 11 16.3**	**-1.6**
	1.0nm,0.5s,baz=216,slow=11,SNR=4.9						
ARU	**Arti**	**21.08**	**339**	P	**P**	**11 11 43.1**	**-0.6**
	2.3nm,0.5s,baz=155,slow=7.0,SNR=5.0						
	2.3nm,0.5s						
ASF	**Jabal al Asfar**	**29.31**	**270**	LR	LR	11 27 56.3	
	comp=Z,213nm,21.2s,baz=111,slow=42						
HFS	**Hagfors**	**42.91**	**321**	P	**P**	**11 14 55.0**	**-1.2**
	1.0nm,0.6s,baz=92,slow=7.2,SNR=1.7						
	1.0nm,0.6s						
TORD	**Torodi Ar. Bea**	**66.66**	**269**	P	**P**	**11 17 47.7**	**-0.4**
	1.1nm,0.4s,baz=47,slow=5.9,SNR=29						
	1.1nm,0.4s						
ILAR	**Eielson Array**	**73.63**	**16**	P	**P**	**11 18 27.3**	**-2.6**
	0.3nm,0.9s,baz=308,slow=4.4,SNR=4.1						
	0.3nm,0.9s						
YKA	**Yellowknife Ar**	**80.27**	**3**	P	**P**	**11 19 04.5**	**-2.5**
	0.3nm,0.4s,baz=349,slow=5.6,SNR=5.7						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	**81.71**	**123**	P	**P**	**11 19 12.7**	**-2.6**
	0.6nm,0.6s,baz=320,slow=5.8,SNR=4.6						
	0.6nm,0.6s						

*NEIC **04** 11:12:27.1±1.4,7°.28S±0°.09×107°.49E±0°.06,h90km±6km,*
mb4.4/23,Error ellipse: s-maj=12.6km s-min=8.9km
az=194.0
*DJA **04** 11:12:28.8±0.2,8°.5S±3°×10°.8E±°,h71km±5km,M4.8/26,*
mb5.0/7,mB5.6/6,MLv4.5/26,Mw(mB)5.1/6
*IDC **04** 11:12:29.5±0.5,7°.17S×107°.67E,h116km±5km,mb3.7/10,*
mbtmp4.1/10,Error ellipse: s-maj=24.8km s-min=15.1km
az=42.0
ISC 04 11:12:28.7±0.7,7°.50S±0°.06×107°.57E±0°.04,h105km±6km,
n83,σ1s30/94,mb4.2/21,Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNJI	**Cibinong**	**0.48**	**294**	P	**Pn**	**11 12 44.8**	**0.0**
CNJI				S	**Sn**	**11 12 53.4**	**-3.5**
LEM	**Lembang**	**0.67**	**4**	P	**Pn**	**11 12 46.7**	**+0.1**
	2µm,0.5s,baz=306,slow=2.8,SNR=205						
LEM				S	**Sn**	**11 13 00.9**	**+1.0**
	3µm,0.7s,baz=299,slow=23,SNR=17						
LEM	**Lembang**	**0.67**	**4**	P	**Pn**	**11 12 46.7**	**+0.1**
LEM				S	**Sn**	**11 13 00.2**	**+0.3**
SKJI	**Sukabumi**	**1.12**	**296**	P	**Pn**	**11 12 50.9**	**+0.1**
SKJI				S	**Sn**	**11 13 08.3**	**+0.8**
DBJI	**Dramaga**	**1.25**	**319**	P	**Pn**	**11 12 52.7**	**+0.5**
DBJI				S	**Sn**	**11 13 09.4**	**-0.6**
KPJI	**Karang Pucung**	**1.36**	**83**	P	**Pn**	**11 12 53.6**	**+0.1**
KPJI				S	**Sn**	**11 13 11.8**	**-0.5**
TNG	**Tangerang**	**1.61**	**325**	P	**Pn**	**11 12 56.2**	**-0.4**
SBJI	**Serang**	**1.98**	**314**	P	**Pn**	**11 13 02.1**	**+0.8**
YOGI	**Yogyakarta**	**2.72**	**97**	P	**Pn**	**11 13 10.5**	**-0.4**
SMRI	**Semarang**	**2.88**	**81**		**Pn**	**11 13 14.3**	**+1.2**
SMRI	**Semarang**	**2.88**	**81**	P	**Pn**	**11 13 14.0**	**+1.0**
SMRI				S	**Sn**	**11 13 48.5**	**+1.3**
UGM	**Wanagama**	**2.96**	**98**		**Pn**	**11 13 13.7**	**-0.3**
UGM	**Wanagama**	**2.96**	**98**	P	**Pn**	**11 13 14.0**	**0.0**
UGM				S	**Sn**	**11 13 47.9**	**-1.0**
BLSI	**Bandar Lampung**	**3.14**	**312**	P	**Pn**	**11 13 17.5**	**+1.1**
WOJI	**Wonogiri, Jawa**	**3.34**	**96**	P	**Pn**	**11 13 18.6**	**-0.5**
WOJI				S	**Sn**	**11 13 56.2**	**-1.9**
XMIS	**Christmas Isla**	**3.52**	**212**	Pn	**Pn**	**11 13 19.6**	**-1.9**
UWJI	**Ujung Watu**	**3.52**	**72**	P	**Pn**	**11 13 22.2**	**+0.7**
KASI	**Kota Agung**	**3.63**	**303**	P	**Pn**	**11 13 24.0**	**+1.0**
PCJI	**Pacitan**	**3.64**	**101**	P	**Pn**	**11 13 23.0**	**-0.1**
PCJI				S	**Sn**	**11 14 04.1**	**-1.1**
PWJI	**Pagerwojo**	**4.23**	**97**	P	**Pn**	**11 13 31.5**	**+0.5**
LWLI	**Liwa**	**4.28**	**305**	P	Pn	11 13 45.0	+13
TBJI	**Tambak Boyo**	**4.30**	**81**	P	**Pn**	**11 13 32.6**	**+0.6**
MDSI	**Maura Dua**	**4.51**	**311**	P	**Pn**	**11 13 36.0**	**+1.1**
GRJI	**Gresik**	**4.91**	**83**	P	**Pn**	**11 13 40.9**	**+0.7**
BWJI	**Bawean**	**5.31**	**72**	P	**Pn**	**11 13 46.7**	**+1.0**
	1.1nm208nm,1.4s						
PPBI	**Pangkal Pinang**	**5.49**	**345**	P	**Pn**	**11 13 48.6**	**+0.4**
MNAI	**Manna**	**5.55**	**304**	Pn	**Pn**	**11 13 46.4**	**-2.6**
MNAI	**Manna**	**5.55**	**304**	P	**Pn**	**11 13 50.2**	**+1.2**
	1.5nm9µm207nm,0.5s						
GMJI	**Gumukmas**	**5.87**	**98**	P	**Pn**	**11 13 55.6**	**+2.3**
BLJI	**Banyuglugur**	**5.98**	**93**	P	**Pn**	**11 13 58.6**	**+3.9**
KMMI	**Kalianget**	**6.36**	**86**	P	**Pn**	**11 13 59.2**	**-0.8**
	0.2nm25nm,0.6s						
JAGI	**Jajag, Banyuwa**	**6.59**	**99**	Pn	**Pn**	**11 14 04.1**	**+1.0**
JAGI	**Jajag, Banyuwa**	**6.59**	**99**	P	**Pn**	**11 14 02.3**	**-0.8**
	0.7nm5µm94nm,0.4s						
ABJI	**Asem Bagus**	**6.61**	**93**	P	**Pn**	**11 14 06.2**	**+2.8**
	2.5nm7µm557nm,0.6s						
SRBI	**Singaraja**	**7.59**	**95**	P	**Pn**	**11 14 17.7**	**+1.0**
	0.4nm73nm,0.5s						
PLAI	**Plampang**	**10.19**	**98**	P	**Pn**	**11 14 50.5**	**-1.5**
GSI	**Gunungsitoli**	**13.26**	**311**	Pn	**Pn**	**11 15 26.9**	**-6.2**
MMRI	**Maumere**	**14.57**	**95**	P	**P**	**11 15 53.0**	**-0.4**
BATI	**Baumata**	**16.13**	**101**	P	**P**	**11 16 10.7**	**-0.1**
	42nm,0.3s,baz=220,slow=0.5,SNR=14						
GIRL	**Giralia**	**16.36**	**158**	P	**Pn**	**11 16 13.1**	**+0.8**
SOEI	**Soe**	**16.66**	**99**	P	**Pn**	**11 16 14.7**	**-1.5**
SOEI				IAmb	IAmb	11 16 23.1	
	comp=Z,35nm,0.7s						
MBWA	**Marble Bar**	**17.96**	**140**	P	**P**	**11 16 31.4**	**+0.5**
KNRA	**Kununurra**	**22.28**	**113**	P	**P**	**11 17 17.8**	**+0.3**
KNRA				IAmb	IAmb	11 17 23.2	
	comp=Z,9.2nm,0.8s						
MTN	**Manton Dam**	**23.78**	**105**	P	**P**	**11 17 31.7**	**-0.3**
MTN				IAmb	IAmb	11 17 42.7	
	comp=Z,11nm,0.9s						
NWAO	**Narrogin (SRO)**	**26.84**	**162**	P	**P**	**11 18 00.5**	**+1.1**
WB0	**Warramunga Arr**	**28.72**	**118**	P	**P**	**11 18 16.8**	**+0.4**
WB0				IAmb	IAmb	11 18 38.7	
	comp=Z,8.3nm,1.5s						
WRA	**Warramunga Arr**	**28.74**	**118**	P	**P**	**11 18 16.4**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=292,slow=7.7,SNR=32						
WRA				PcP	**PcP**	**11 21 23.9**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=319,slow=1.7,SNR=2.4						
	comp=Z,0.5nm,0.3s						
WRA	**Warramunga Arr**	**28.74**	**118**	P	**P**	**11 18 16.8**	**+0.2**
WRAB	**Tennant Creek**	**28.75**	**118**	P	**P**	**11 18 17.1**	**+0.5**
WRAB				IAmb	IAmb	11 18 29.2	
	comp=Z,7.2nm,1.4s						
WB2	**Warramunga Arr**	**28.75**	**118**	P	**P**	**11 18 17.1**	**+0.4**
WB2				IAmb	IAmb	11 18 21.2	
	comp=Z,10nm,1.4s						
WR0	**Warramunga Arr**	**28.92**	**118**	P	**P**	**11 18 18.6**	**+0.4**
WR0				IAmb	IAmb	11 18 30.1	
	comp=Z,7.9nm,1.3s						
AS31	**Alice Springs**	**29.94**	**125**	P	**P**	**11 18 27.9**	**+0.7**
ASAR	**Alice Springs**	**29.94**	**125**	P	**P**	**11 18 27.4**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=302,slow=8.6,SNR=16						
ASAR				PcP	**PcP**	**11 21 27.5**	**0.0**
	comp=Z,0.3nm,0.4s,baz=312,slow=1.9,SNR=3.1						
ASAR				ScP	**ScP**	**11 24 59.5**	**-0.8**
	comp=Z,0.5nm,0.8s,baz=298,slow=2.0,SNR=4.1						
	comp=Z,1.3nm,0.7s						
ASAR	**Alice Springs**	**29.94**	**125**	P	**P**	**11 18 27.9**	**+0.7**
COEN	**Coen**	**35.53**	**103**	P	**P**	**11 19 14.8**	**-1.2**
COEN				IAmb	IAmb	11 19 17.7	
	comp=Z,6.4nm,1.2s						
BBOO	**Buckleboo**	**36.50**	**138**	P	**P**	**11 19 25.7**	**+1.7**
BBOO				IAmb	IAmb	11 19 39.0	
	comp=Z,12nm,1.4s						
PMG	**Port Moresby**	**39.19**	**96**	P	**P**	**11 19 45.3**	**-1.6**
	comp=Z,7.2nm,0.8s,baz=282,slow=21,SNR=1.8						
	comp=Z,7.2nm,0.8s						
STKA	**Stephens Creek**	**39.89**	**132**	P	**P**	**11 19 53.5**	**+1.0**
	comp=Z,3.7nm,0.4s,baz=307,slow=9.1,SNR=9.0						
	comp=Z,3.7nm,0.4s						
STKA	**Stephens Creek**	**39.89**	**132**	P	**P**	**11 19 53.7**	**+1.2**
GOMU	**GeErMu**	**45.09**	**345**	P	**P**	**11 20 37.6**	**+2.7**
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.5s						
SONM	**Songino Array**	**55.10**	**359**	PcP	**PcP**	**11 22 48.5**	**-1.7**
	comp=Z,0.6nm,0.4s,baz=169,slow=2.9,SNR=2.5						
SOCY	**Socotra**	**56.75**	**290**	P	**P**	**11 22 01.0**	**-1.4**
MKAR	**Makanchi Array**	**58.55**	**340**	P	**P**	**11 22 11.2**	**-3.1**
	comp=Z,0.3nm,0.5s,baz=159,slow=8.7,SNR=4.4						
	comp=Z,0.3nm,0.5s						
MKAR	**Makanchi Array**	**58.55**	**340**	P	**P**	**11 22 12.1**	**-2.2**
VOI	**Vohitsoka**	**60.16**	**249**	P	**P**	**11 22 26.9**	**+0.9**
KURBB	**Kurchatov Arra**	**63.11**	**340**	P	**P**	**11 22 43.4**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=154,slow=5.8,SNR=1.9						
	comp=Z,0.2nm,0.3s						
MAW	**Mawson**	**67.05**	**197**	P	**P**	**11 23 12.4**	**+2.1**
	comp=Z,2.4nm,0.5s,baz=33,slow=6.0,SNR=12						
	comp=Z,2.4nm,0.5s						
MAW	**Mawson**	**67.05**	**197**	P	**P**	**11 23 12.2**	**+1.9**
BKZ	**Black Stump Fm**	**68.97**	**129**	P	**P**	**11 23 23.4**	**+0.4**
ABKAR	**Akbulak array**	**70.13**	**329**	P	**P**	**11 23 27.7**	**-2.0**
VNDA	**Vanda**	**75.37**	**169**	P	**P**	**11 24 01.5**	**+1.1**
	comp=Z,0.6nm,0.5s,baz=290,slow=12,SNR=3.6						
	comp=Z,0.6nm,0.5s						
VNDA	**Vanda**	**75.37**	**169**	P	**P**	**11 24 00.8**	**+0.5**
VNDA				IAmb	IAmb	11 24 02.5	
	comp=Z,4.9nm,1.4s						
BOSA	**Boshof**	**79.72**	**242**	P	**P**	**11 24 26.3**	**+0.6**
	comp=Z,2.2nm,0.7s,baz=76,slow=4.0,SNR=4.2						
	comp=Z,2.2nm,0.7s						
BOSA	**Boshof**	**79.72**	**242**	P	**P**	**11 24 26.6**	**+0.9**
BOSA				IAmb	IAmb	11 24 35.8	
	comp=Z,14nm,1.4s						
QSPA	**South Pole Qui**	**82.49**	**180**	P	**P**	**11 24 40.6**	**+1.1**
QSPA				IAmb	IAmb	11 24 42.9	
	comp=Z,6.4nm,1.5s						
AKASG	**Malin Array Be**	**88.44**	**321**	P	**P**	**11 25 07.3**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=101,slow=4.8,SNR=2.4						
	comp=Z,0.2nm,0.3s						
SNAA	**Sanae**	**89.22**	**197**	P	**P**	**11 25 14.4**	**+1.9**
SNAA				IAmb	IAmb	11 25 15.5	
	comp=Z,4.4nm,0.9s						
YKA	**Yellowknife Ar**	**117.13**	**21**	PKP	**PKPdf**	**11 31 00.1**	**-1.1**
	comp=Z,0.3nm,0.4s,baz=322,slow=2.2,SNR=8.7						
YKA	**Yellowknife Ar**	**117.13**	**21**		**PKPdf**	**11 30 60.0**	**-1.2**
TXAR	**Lajitas Array**	**143.47**	**50**	PKP	**PKPdf**	**11 31 50.6**	**-1.3**
	comp=Z,0.1nm,0.4s,baz=253,slow=0.9,SNR=4.5						
TXAR	**Lajitas Array**	**143.47**	**50**		**PKPdf**	**11 31 51.8**	**-0.1**
BDFB	**Brasilia**	**146.63**	**226**	PKPbc	**PKPdf**	**11 31 58.2**	**+0.5**
	comp=Z,2.3nm,0.5s,baz=150,slow=6.7,SNR=3.3						
BDFB	**Brasilia**	**146.63**	**226**		**PKPdf**	**11 31 57.9**	**+0.3**

IDC 04 11:45:53.1±7.7,2°.72N×98°.08W,h0km,mb3.4/5,
mbtmp3.4/5,Error ellipse: s-maj=200.6km
s-min=145.8km az=87.0,West of Galapagos Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**27.00**	**349**	P	P	11 51 37.2	+0.2
	0.3nm,1.0s,baz=173,slow=9.1,SNR=1.9						
	0.3nm,1.0s						
NVAR	**Mina Array Bea**	**40.07**	**335**	P	P	11 53 30.4	-0.2
	0.2nm,0.6s,baz=149,slow=6.1,SNR=1.8						
	0.2nm,0.6s						
H03N2	**Juan Fernandez**	**40.25**	**155**	T	T	12 37 04.7	
	baz=329,slow=78,SNR=5.7						
H03N1	**Juan Fernandez**	**40.26**	**155**	T	T	12 37 08.4	
	baz=329,slow=78,SNR=6.8						
H03N3	**Juan Fernandez**	**40.27**	**155**	T	T	12 37 23.2	
	baz=329,slow=78,SNR=6.0						
PDAR	**Pinedale Array**	**41.17**	**347**	P	P	11 53 39.4	-0.2
	0.2nm,0.3s,baz=148,slow=8.7,SNR=5.2						
	0.2nm,0.3s						
YKA	**Yellowknife Ar**	**60.90**	**351**	P	P	11 56 07.3	-0.1
	1.3nm,1.1s,baz=150,slow=6.4,SNR=4.3						
	1.3nm,1.1s						
ILAR	**Eielson Array**	**71.07**	**340**	P	P	11 57 12.9	+0.1
	0.6nm,0.7s,baz=154,slow=4.9,SNR=6.6						
	0.6nm,0.7s						

*NNC **04** 11:47:59.9±0.7,43°.35N×70°.24E,h0km,mb3.5,mpv3.0,*
Error ellipse: s-maj=3.6km s-min=2.3km az=134.0,
Suspected Mining explosion.
*KRNET **04** 11:47:59.3±0.1,43°.41N×70°.36E,mb2.9*
*SOME **04** 11:48:03.3,43°.27N×70°.32E,h10km*
ISC 04 11:48:01.8±1.1,43°.31N±0°.04×70°.38E±0°.04,h0km,n32,
σ1s65/58,16C-14D,Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK09	**Karatay Array**	**0.21**	**156**	⇑P	**Pg**	**11 48 05.7**	**0.0**
KK09				⇓S	**Sg**	**11 48 10.4**	**+1.9**
KK05	**Karatay Array**	**0.22**	**152**	⇓P	**Pg**	**11 48 05.9**	**-0.1**
KK05				⇓S	**Sg**	**11 48 10.8**	**+2.0**
KK04	**Karatay Array**	**0.22**	**156**	⇑P	**Pg**	**11 48 05.7**	**-0.3**
KK04				⇑S	**Sg**	**11 48 10.7**	**+1.8**
KK08	**Karatay Array**	**0.22**	**160**	⇑P	**Pg**	**11 48 05.9**	**-0.1**
KK08				⇓S	**Sg**	**11 48 10.6**	**+1.8**
KK01	**Karatay Array**	**0.23**	**156**	⇓P	**Pg**	**11 48 05.8**	**-0.2**
KK01				⇓S	**Sg**	**11 48 10.8**	**+1.8**
KK03	**Karatay Array**	**0.23**	**158**	⇓P	**Pg**	**11 48 05.9**	**-0.2**
KK03				⇓S	**Sg**	**11 48 10.9**	**+1.9**
**KK02

KTBS				*eS*		**Sg**	**11 50 27.6**	**-1.9**
	11nm,0.5s							
KTBS	**Karatobe**	**4.60**	**83**	Pg		**Pg**	**11 49 27.5**	**-2.4**
	1.0nm,0.4s							
KTBS				Lg		Lg	11 50 27.6	
	11nm,0.5s							
TNSS	**Tian-Shan**	**4.81**	**91**	*eP*		**Pg**	**11 49 31.9**	**-2.0**
	0.9nm,0.3s							
TNSS				*eS*		**Sg**	**11 50 35.2**	**-1.0**
	2.7nm,0.6s							
TNSS	**Tian-Shan**	**4.81**	**91**	Pg		**Pg**	**11 49 31.9**	**-2.0**
	0.9nm,0.3s							
TNSS				Lg		Lg	11 50 35.2	
	2.7nm,0.6s							

NEIC ***04*** *11:53:04.8±1.1,23°.29S±0°.06×69°.86W±0°.04,h63km±7km, Error ellipse: s-maj=9.1km s-min=4.6km az=159.0*
GUC ***04*** *11:53:05.9±0.6,23°.29S×69°.62W,h64km±3km,ML4.1*
IDC ***04*** *11:53:06.2±2.4,23°.10S×69°.64W,h87km±15km,mb3.4/3, mbtmp3.6/5,Error ellipse: s-maj=43.9km s-min=37.4km az=8.0*

ISC 04 11:53:04.6±0.7,23°26S±0°.03×69°71W±0°.04,h70km±5km, n49,σ1°78/55,mb4.0/5,9C-1D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB15	**IPOC Station P**	**0.22**	**77**	Pn	**Pn**	**11 53 15.7**	**+0.1**
PB15	**IPOC Station P**	**0.22**	**77**	*i*P	**Pn**	**11 53 15.9**	**+0.3**
PB15				*i* S	**Sn**	**11 53 24.0**	**+0.3**
PB06	**IPOC Station P**	**0.57**	**13**	Pn	**Pn**	**11 53 18.8**	**+0.5**
PB06	**IPOC Station P**	**0.57**	**13**	*i*P	**Pn**	**11 53 19.0**	**+0.7**
PB06				*i* S	**Sn**	**11 53 29.2**	**+0.9**
PB06				IAML		11 53 30.2	
	comp=E,9μm,0.3s						
PB10	**IPOC Station P**	**0.82**	**252**	*i*P	**Pn**	**11 53 22.1**	**+1.2**
PB10				*i* S	**Sn**	**11 53 35.2**	**+2.2**
LVC	**Limon Verde**	**0.98**	**49**	P	**Pn**	**11 53 24.3**	**+1.1**
	comp=E,548nm,0.3s,baz=203,slow=7.5,SNR=2421						
LVC				S		11 53 38.3	+1.3
	comp=E,3μm,0.4s,baz=41,slow=16,SNR=61						
LVC	**Limon Verde**	**0.98**	**49**	*i*P	**Pn**	**11 53 23.6**	**+0.4**
LVC				*i* S	**Sn**	**11 53 38.6**	**+1.6**
PB04	**IPOC Station P**	**1.01**	**336**	*i*P	**Pn**	**11 53 24.5**	**+1.1**
PB04				*i* S	**Sn**	**11 53 39.0**	**+1.6**
PB04				IAML		11 53 45.2	
	comp=E,4μm,0.3s						
AF01	**San Pedro de A**	**1.44**	**78**	Pn	**Pn**	**11 53 31.1**	**+2.0**
AF01	**San Pedro de A**	**1.44**	**78**	*i*P	**Pn**	**11 53 31.2**	**+2.1**
AF01				*i* S	**Sn**	**11 53 51.0**	**+3.6**
AF01				IAML		11 53 51.9	
	comp=E,8μm,0.3s						
PB14	**IPOC Station P**	**1.50**	**205**	*i*P	**Pn**	**11 53 31.2**	**+1.3**
PB14				*i* S	**Sn**	**11 53 50.5**	**+1.6**
PB09	**IPOC Station P**	**1.52**	**17**	*i*P	**Pn**	**11 53 32.5**	**+2.5**
PB09				*i* S	**Sn**	**11 53 53.0**	**+3.8**
PB09				IAML		11 53 57.8	
	comp=N,3μm,0.5s						
PB07	**IPOC Station P**	**1.54**	**354**	*i*P	**Pn**	**11 53 31.5**	**+1.3**
PB07				*i* S	**Sn**	**11 53 51.8**	**+2.2**
PB07				IAML		11 53 55.3	
	comp=E,2μm,0.4s						
GO02	**Mina Guanaco**	**1.90**	**177**	Pn	**Pn**	**11 53 36.2**	**+1.0**
GO02	**Mina Guanaco**	**1.90**	**177**	*i*P	**Pn**	**11 53 36.1**	**+0.9**
GO02				IAML		11 54 05.2	
	comp=E,1μm,0.4s						
PB02	**IPOC Station P**	**1.94**	**355**	*i*P	**Pn**	**11 53 36.8**	**+1.2**
PB02				*i* S	**Sn**	**11 54 00.6**	**+1.5**
PB02				IAML		11 54 09.0	
	comp=E,2μm,0.3s						
PB01	**IPOC Station P**	**2.22**	**5**	*i*P	**Pn**	**11 53 40.7**	**+1.4**
PB01				*i* S	**Sn**	**11 54 08.8**	**+3.0**
PB01				IAML		11 54 13.3	
	comp=E,2μm,0.2s						
PATCX	**Punta Patache**	**2.46**	**350**	Pn	**Pn**	**11 53 42.5**	**-0.1**
PATCX	**Punta Patache**	**2.46**	**350**	*i*P	**Pn**	**11 53 43.0**	**+0.4**
PATCX				*i* S	**Sn**	**11 54 13.1**	**+1.3**
PATCX				IAML		11 54 23.6	
	comp=N,775nm,0.6s						
TA01	**Diego Aracena**	**2.72**	**351**	Pn	**Pn**	**11 53 45.8**	**-0.2**
AC01	**Pan de Azucar**	**2.99**	**196**	Pn	**Pn**	**11 53 48.8**	**-0.9**
AC01	**Pan de Azucar**	**2.99**	**196**	*i*P	**Pn**	**11 53 48.6**	**-1.1**
AC01				IAML		11 54 42.8	
	comp=E,596nm,0.5s						
PB08	**IPOC Station P**	**3.15**	**10**	Pn	**Pn**	**11 53 53.3**	**+1.1**
PB08	**IPOC Station P**	**3.15**	**10**	*i*P	**Pn**	**11 53 53.7**	**+1.5**
PB08				IAML		11 54 53.4	
	comp=E,285nm,0.5s						
PB11	**IPOC Station P**	**3.48**	**1**	Pn	**Pn**	**11 53 57.6**	**+1.1**
PB11	**IPOC Station P**	**3.48**	**1**	*i*P	**Pn**	**11 53 56.5**	**-0.1**
PB11				IAML		11 55 04.2	
	comp=N,509nm,0.5s						
PB12	**IPOC Station P**	**4.66**	**353**	Pn	**Pn**	**11 54 12.6**	**0.0**
PB16	**IPOC Station P**	**4.90**	**2**	Pn	**Pn**	**11 54 18.8**	**+2.4**
LPAZ	**La Paz**	**7.09**	**12**	P	**Pn**	**11 54 47.4**	**+1.0**
	comp=N,0.5nm,0.3s,baz=105,slow=3.8,SNR=3.2						
LPAZ	**La Paz**	**7.09**	**12**	Pn	**Pn**	**11 54 48.3**	**+1.9**
SIV	**San Ignacio**	**10.88**	**50**	P	**Pn**	**11 55 36.0**	**-1.6**
	comp=N,2.4nm,0.6s,baz=247,slow=7.3,SNR=11						
SIV				S	**Sn**	**11 57 30.9**	**-6.8**
	comp=N,0.5nm,0.3s,baz=299,slow=19,SNR=1.4						
H03N1	**Juan Fernandez**	**12.97**	**217**	T	T	12 08 36.3	
	baz=41,slow=72,SNR=14						
H03N2	**Juan Fernandez**	**12.98**	**217**	T	T	12 08 37.6	
	baz=41,slow=72,SNR=19						
H03N3	**Juan Fernandez**	**12.99**	**217**	T	T	12 08 39.5	
	baz=41,slow=72,SNR=14						
SNAA	**Sanae**	**60.87**	**161**	P	**P**	**12 03 10.0**	**+0.6**
SNAA				IAmb	IAmb	12 03 29.2	
	comp=Z,5.1nm,1.1s						
QSPA	**South Pole Qui**	**66.94**	**180**	P	**P**	**12 03 51.1**	**+1.7**
QSPA				IAmb	IAmb	12 04 03.8	
	comp=Z,4.5nm,1.4s						
NVAR	**Mina Array Bea**	**76.43**	**323**	P	**P**	**12 04 45.6**	**-1.2**
	comp=Z,0.1nm,0.5s,baz=154,slow=6.7,SNR=1.4						
	comp=Z,0.1nm,0.5s						
TORD	**Torodi Ar. Bea**	**78.64**	**70**	P	**P**	**12 04 58.8**	**-0.6**
	comp=Z,1.0nm,0.6s,baz=259,slow=5.7,SNR=10						
TORD				pP	**pP**	**12 05 18.9**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=256,slow=5.8,SNR=1.9						
	comp=Z,1.0nm,0.6s						
TORD	**Torodi Ar. Bea**	**78.64**	**70**	P	**P**	**12 04 59.0**	**-0.4**
TORD				IAmb	IAmb	12 05 05.1	
	comp=Z,3.7nm,1.4s						
YKA	**Yellowknife Ar**	**92.60**	**341**	P	**P**	**12 06 06.8**	**-1.0**
	comp=Z,0.2nm,0.7s,baz=134,slow=4.0,SNR=2.7						
	comp=Z,0.2nm,0.7s						
H11S2	**WAKE ISLAND Hy**	**27.35**	**276**	T	T	14 32 00.7	
	baz=105,slow=74,SNR=12						
H11S1	**WAKE ISLAND Hy**	**27.36**	**276**	T	T	14 32 00.9	
	baz=105,slow=74,SNR=10						
H11S3	**WAKE ISLAND Hy**	**27.36**	**276**	T	T	14 32 05.3	
	baz=105,slow=74,SNR=11						
H11N3	**WAKE ISLAND Hy**	**27.48**	**278**	T	T	14 31 54.1	
	baz=107,slow=74,SNR=6.4						
H11N1	**WAKE ISLAND Hy**	**27.49**	**278**	T	T	14 31 56.5	
	baz=107						
H11N2	**WAKE ISLAND Hy**	**27.49**	**278**	T	T	14 32 03.0	
	baz=107,slow=74,SNR=6.6						
ASAR	**Alice Springs**	**128.02**	**208**	PKP	**PKPdf**	**12 12 03.0**	**-0.3**
	comp=Z,0.1nm,0.5s,baz=130,slow=1.4,SNR=1.5						
WRA	**Warramunga Arr**	**131.07**	**211**	PKP	**PKiKP**	**12 12 09.3**	**-0.7**
	comp=Z,0.3nm,0.8s,baz=148,slow=1.8,SNR=2.1						
MKAR	**Makanchi Array**	**147.48**	**37**	PKPbc	**PKPdf**	**12 12 38.6**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=312,slow=3.5,SNR=4.1						

IDC 04 11:54:18.2±2.0,54°26N×169°32E,h0km,mb3.2/2, mbtmp3.3/4,ML2.8/2,Error ellipse: s-maj=49.5km s-min=28.9km az=8.0,Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHEM	**Shemya Is, Ala**	**3.24**	**116**	Pn	Pn	11 55 10.4	+0.1
	2.6nm,0.3s,baz=220,slow=14,SNR=1.8						
SHEM				Sn	Sn	11 55 50.2	+0.6
	1.5nm,0.3s,baz=97,slow=21,SNR=1.6						
	87nm,0.9s						
PETK	**Petropavlovsk-**	**7.00**	**265**	Pn	Pn	11 56 02.1	+0.2
	0.3nm,0.3s,baz=75,slow=9.6,SNR=5.7						
	1.1nm,0.6s						
ILAR	**Eielson Array**	**24.05**	**47**	P	P	11 59 34.2	-0.5
	0.3nm,0.7s,baz=254,slow=7.0,SNR=4.7						
	0.3nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**34.52**	**184**	T	T	12 37 29.8	
	baz=2.5,slow=76,SNR=31						
H11N3	**WAKE ISLAND Hy**	**34.53**	**184**	T	T	12 37 31.2	
	baz=2.5,slow=76,SNR=24						
H11N1	**WAKE ISLAND Hy**	**34.54**	**184**	T	T	12 37 30.8	
	baz=2.5,slow=76,SNR=28						
H11S1	**WAKE ISLAND Hy**	**35.74**	**184**	T	T	12 39 01.1	
	baz=2.6,slow=76,SNR=14						
H11S3	**WAKE ISLAND Hy**	**35.76**	**184**	T	T	12 39 03.6	
	baz=2.6,slow=76,SNR=9.2						
H11S2	**WAKE ISLAND Hy**	**35.76**	**184**	T	T	12 39 04.9	
	baz=2.6,slow=76,SNR=13						
TXAR	**Lajitas Array**	**65.08**	**74**	P	P	12 05 00.8	+0.3
	0.2nm,0.5s,baz=320,slow=5.5,SNR=5.8						
	0.2nm,0.5s						

CNRM ***04*** *12:53:01.0,35°.70N×3°.59W,h28km,ml3.0*
IGIL ***04*** *12:53:00.6,35°.58N×3°.62W,h9km,ML2.7*
MDD ***04*** *12:53:00.2±0.4,35°.58N×3°.63W,h22km±4km,mb_Lg2.9/22, Error ellipse: s-maj=3.5km s-min=2.0km az=162.0*
SFS ***04*** *12:53:00.0,35°.50N×3°.60W,h22km,ML2.9,ALBORAN SUR*
INMG ***04*** *12:53:01.4±1.2,35°.62N×3°.57W,h31km,ML2.6,Error ellipse: s-maj=3.1km s-min=2.0km az=10.0*

ISC 04 12:53:00.8±1.0,35°.72N±0°.02×3°59W±0°.02,h27km±11km, n80,σ1°15/143,1D,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EALB	**Alboran**	**0.50**	**64**	Pg	**Pb**	**12 53 11.4**	**+0.3**
EALB				Sg	**Sn**	**12 53 19.7**	**-0.3**
EALB				*i* Vmb_Lg		12 53 21.2	
PALE	**Palemas**	**0.58**	**210**	P	**Pb**	**12 53 12.1**	**-0.2**
PALE				S	**Sb**	**12 53 21.0**	**+0.7**
PALE	**Palemas**	**0.58**	**210**	P	**Pb**	**12 53 12.2**	**-0.2**
PALE				S	**Sb**	**12 53 20.4**	**+0.2**
WMELI	**Melilla**	**0.66**	**127**	P	**Pb**	**12 53 13.1**	**-0.6**
WMELI				S	**Sb**	**12 53 21.6**	**-0.9**
EMEL	**Melilla**	**0.67**	**129**	Pg	**Pb**	**12 53 13.2**	**-0.6**
EMEL				Sg	**Sb**	**12 53 21.1**	**-1.6**
GOG	**Mont Gurugu**	**0.70**	**135**	P	**Pb**	**12 53 14.0**	**-0.4**
PVLZ	**Peæn de**	**0.80**	**227**	P	**Pn**	**12 53 16.9**	**+0.7**
PVLZ				S	**Sb**	**12 53 26.4**	**0.0**
CHAS	**Isla Isabel II**	**1.09**	**119**	P	**Pb**	**12 53 21.2**	**+0.2**
CHAS				S	**Sb**	**12 53 35.1**	**+0.3**
ELGU	**Los Guajares,**	**1.15**	**359**	Pn	**Pn**	**12 53 20.8**	**-0.3**
ELGU				Sn	**Sb**	**12 53 37.9**	**+1.4**
ELGU				*i* Vmb_Lg		12 53 40.6	
AKLM	**AKL**	**1.23**	**191**	P	**Pb**	**12 53 23.0**	**-0.4**
AKLM	**AKL**	**1.23**	**191**	P	**Pn**	**12 53 22.5**	**+0.3**
AKLM				S	**Sb**	**12 53 39.4**	**+0.5**
EMIJ	**Mijas**	**1.27**	**312**	Pn	**Pn**	**12 53 21.8**	**-1.0**
EMIJ				Sn	**Sn**	**12 53 38.3**	**-0.8**
EMIJ				*i* Vmb_Lg		12 53 39.0	
EBER	**Berja**	**1.30**	**26**	Pn	**Pn**	**12 53 22.9**	**-0.5**
EBER				Sn	**Sb**	**12 53 42.1**	**+1.0**
EBER				*i* Vmb_Lg		12 53 51.3	
TAF	**Taforalt**	**1.32**	**133**	P	**Pn**	**12 53 23.4**	**-0.1**
TAF				S	**Sn**	**12 53 40.0**	**-0.3**
EGOR	**Sierra Gorda,**	**1.45**	**343**	Pn	**Pn**	**12 53 25.7**	**+0.3**
EGOR				Sn	**Sn**	**12 53 43.8**	**+0.3**
EGOR				*i* Vmb_Lg		12 53 50.2	
SMIR	**Smir Dam**	**1.46**	**269**	P	**Pn**	**12 53 24.0**	**-1.3**
ECEU	**Ceuta**	**1.46**	**277**	Pn	**Pn**	**12 53 23.8**	**-1.6**
ECEU				Sn	**Sn**	**12 53 42.1**	**-1.6**
ECEU				*i* Vmb_Lg		12 53 43.8	
EQUE	**Quentar**	**1.49**	**5**	Pn	**Pn**	**12 53 25.9**	**+0.1**
EQUE				Sn	**Sn**	**12 53 44.2**	**-0.2**
EQUE				*i* Vmb_Lg		12 53 59.1	
CHEFC	**Chefchaouen**	**1.55**	**247**	P	**Pb**	**12 53 28.0**	**-1.0**
CHEFC	**Chefchaouen**	**1.55**	**247**	P	**Pb**	**12 53 28.0**	**-1.0**
CHEFC				S	**Sn**	**12 53 46.7**	**+0.7**
JBK	**JBK**	**1.62**	**148**	P	**Pn**	**12 53 27.4**	**-0.4**
JBK	**JBK**	**1.62**	**148**	P	**Pn**	**12 53 27.5**	**-0.2**
JBK				S	**Sn**	**12 53 47.0**	**-0.7**
ENIJ	**Nijar**	**1.68**	**41**	Pn	**Pn**	**12 53 27.9**	**-0.4**
ENIJ				Sn	**Sn**	**12 53 48.9**	**0.0**
ENIJ				*i* Vmb_Lg		12 53 59.7	
EJIF	**Jimena Fronter**	**1.69**	**296**	Pn	**Pn**	**12 53 29.3**	**+0.8**
EJIF				Sn	**Sn**	**12 53 47.0**	**-2.2**
LIJA	**Lijar**	**1.88**	**309**	P	**Pb**	**12 53 34.0**	**-0.5**
LIJA				S	**Sn**	**12 53 56.0**	**+1.9**
ESPR	**Espera**	**2.16**	**303**	Pn	**Pn**	**12 53 33.5**	**-1.4**
ESPR				Sn	**Sn**	**12 54 00.1**	**-0.8**
ESPR				*i* Vmb_Lg		12 54 08.9	
IFR	**Ifrane**	**2.54**	**210**	P	**Pn**	**12 53 41.1**	**+0.7**
IFR				S	**Sn**	**12 54 11.0**	**+0.6**
EADA	**Adamuz**	**2.57**	**342**	Pn	**Pn**	**12 53 42.9**	**+2.2**
EADA				Sn	**Sn**	**12 54 11.7**	**+0.7**
EADA				*i* Vmb_Lg		12 54 22.8	
EZAR	**Zarzadilla de**	**2.63**	**35**	Pn	**Pn**	**12 53 39.4**	**-2.2**
EZAR				Sn	**Sn**	**12 54 12.9**	**+0.2**
ECAB	**El Cabril**	**2.77**	**329**	Pn	**Pn**	**12 53 44.6**	**+1.2**
ECAB				Sn	**Sn**	**12 54 13.1**	**+1.2**
ECAB				*i* Vmb_Lg		12 54 27.1	
EMUR	**La Murta**	**2.84**	**41**	Pn	**Pn**	**12 53 44.5**	**+0.2**
EMUR				Sn	**Sn**	**12 54 17.6**	**0.0**
EMUR				*i* Vmb_Lg		12 54 21.9	
TDRA	**Tendrara**	**2.97**	**154**	P	**Pn**	**12 53 46.2**	**-0.2**
TDRA				S	**Sn**	**12 54 22.5**	**+1.3**
MD31	**MD31**	**3.01**	**199**	P	**Pn**	**12 53 48.2**	**+1.5**
MD31				S	**Sn**	**12 54 23.4**	**+1.5**
MDT	**Midelt**	**3.02**	**196**	P	**Pn**	**12 53 48.0**	**+1.0**
MDT	**Midelt**	**3.02**	**196**	P	**Pn**	**12 53 48.0**	**+1.0**
MDT				S	**Sn**	**12 54 24.0**	**+1.8**
EMIN	**Mina Concepcio**	**3.21**	**310**	Pn	**Pn**	**12 53 49.6**	**+0.2**
EMIN				Sn	**Sn**	**12 54 25.6**	**-1.2**
EMIN				*i* Vmb_Lg		12 54 29.0	
ETOB	**Tobarra**	**3.34**	**29**	Pn	**Pn**	**12 53 53.5**	**+2.2**
ETOB				Sn	**Sn**	**12 54 30.3**	**+0.1**
ETOB				*i* Vmb_Lg		12 54 57.8	
ZHG	**ZHG**	**3.39**	**229**	P	**Pn**	**12 53 51.2**	**-0.8**
ZHG				S	**Sn**	**12 54 33.4**	**+2.1**
EGRO	**El Granado**	**3.62**	**301**	Pn	**Pn**	**12 53 55.0**	**0.0**
EGRO				Sn	**Sn**	**12 54 35.2**	**-1.5**
PBAR	**Barrancos**	**3.69**	**313**	*e*Pn	**Pn**	**12 53 56.6**	**+0.6**
PBAR				*e*Sn	**Sn**	**12 54 38.2**	**-0.4**
PBAR				A	A	12 54 39.2	
	13nm,0.8s						
PVAQ	**Vaqueiros**	**3.72**	**298**	*e*Pn	**Pn**	**12 53 57.0**	**+0.5**
PVAQ				*e*Sn	**Sn**	**12 54 38.4**	**-1.0**
PVAQ				A	A	12 54 45.6	
	9.7nm,0.8s						
PVAQ	**Vaqueiros**	**3.72**	**298**	P	**Pn**	**12 53 56.9**	**+0.5**
PVAQ	**Vaqueiros**	**3.72**	**298**	P	**Pn**	**12 53 56.9**	**+0.5**
PBDV	**Barranco-do-Ve**	**3.81**	**295**	*e*Pn	**Pn**	**12 53 58.0**	**+0.3**
PBDV				*e*Sn	**Sn**	**12 54 40.8**	**-0.9**
PBDV				A	A	12 54 46.2	
	6.2nm,0.7s						
AFON	**Font Roja**	**3.82**	**39**	Pn	**Pn**	**12 53 55.5**	**-2.3**
AFON				*i* Vmb_Lg		12 54 35.3	
PAB	**San Pablo**	**3.87**	**351**	Pn	**Pn**	**12 53 59.5**	**+1.0**
PAB				Sn	**Sn**	**12 54 42.2**	**-0.9**
PAB				*i* Vmb_Lg		12 55 08.5	
ESDC	**Sonseca Array**	**3.96**	**356**	Pn	**Pn**	**12 54 00.7**	**+1.0**
ESDC				Sn	**Sn**	**12 54 45.9**	**+0.6**
ESDC				*i* Vmb_Lg		12 55 53.8	
EBEN2	**Beniarda presa**	**4.01**	**42**	Pn	**Pn**	**12 54 00.6**	**+0.2**
EBEN2				*i* Vmb_Lg		12 54 53.3	
PCVE	**Castro Verde**	**4.05**	**299**	*e*Pn	**Pn**	**12 54 01.4**	**+0.4**
PCVE				*e*Sn	**Sn**	**12 54 46.9**	**-0.6**
PCVE				A	A	12 54 49.6	
	13nm,0.3s						
EBAD	**Badajoz**	**4.08**	**319**	Pn	**Pn**	**12 54 01.2**	**-0.1**
EBAD				Sn	**Sn**	**12 54 47.9**	**-0.3**
EBAD				*i* Vmb_Lg		12 54 50.2	
PBEJ	**Beja**	**4.13**	**305**	*e*Pn	**Pn**	**12 54 02.8**	**+0.8**
PBEJ				*e*Sn	**Sn**	**12 54 49.2**	**-0.2**
PBEJ				A	A	12 54 57.2	
	4.5nm,0.6s						
MESJ	**Messejana**	**4.28**	**301**	*e*P	**Pn**	**12 54 04.8**	**+0.7**
MESJ				*e*S	**Sn**	**12 54 51.7**	**-1.3**
MESJ				IAML		12 54 55.6	
	comp=N,12nm,0.4s						
MESJ	**Messejana**	**4.28**	**301**	*e*Pn	**Pn**	**12 54 04.8**	**+0.7**
MESJ				*e*Sn	**Sn**	**12 54 52.0**	**-1.0**
MESJ				A	A	12 55 04.3	
	comp=N,6.2nm,0.8s						
MORF	**Marmelete**	**4.37**	**293**	*e*Pn	**Pn**	**12 54 05.6**	**+0.1**
MORF				*e*S	**Sn**	**12 54 53.1**	**-2.4**
MORF				IAML		12 55 01.8	
	comp=N,16nm,0.2s						
MORF	**Marmelete**	**4.37**	**293**	*e*Pn	**Pn**	**12 54 05.5**	**+0.1**
MORF				*e*Sn	**Sn**	**12 54 54.8**	**-0.7**
MORF				A	A	12 55 01.9	
	comp=N,6.5nm,0.2s						
PFVI	**Vila Bisbo**	**4.45**	**290**	*e*Sn	**Sn**	**12 54 55.4**	**-2.0**
PFVI				A	A	12 55 08.3	
	comp=N,8.2nm,0.6s						
PFVI	**Vila Bisbo**	**4.45**	**290**	P	**Pn**	**12 54 07.4**	**+1.0**
PFVI				S	**Sn**	**12 54 58.8**	**+1.5**
PESTR	**Estremoz**	**4.47**	**316**	*e*Pn	**Pn**	**12 54 08.3**	**+1.5**
PESTR				*e*Sn	**Sn**	**12 54 57.6**	**-0.4**
PESTR				A	A	12 55 00.5	
	comp=N,5.4nm,0.3s						
EVO	**Evora**	**4.51**	**310**	P	**Pn**	**12 54 08.4**	**+1.1**
EVO				S	Sn	12 54 46.9	-12
EVO	**Evora**	**4.51**	**310**	*e*Pn	**Pn**	**12 54 08.6**	**+1.3**
EVO				*e*Sn	**Sn**	**12 54 57.8**	**-1.1**
PTEO	**Sao Teotonio**	**4.51**	**295**	*e*Pn	**Pn**	**12 54 08.1**	**+0.8**
PNCL	**Nicolau / Gran**	**4.62**	**303**	*e*Pn	**Pn**	**12 54 09.6**	**+0.8**
PNCL				*e*Sn	**Sn**	**12 55 00.4**	**-1.1**
PNCL				A	A	12 55 02.9	
	comp=N,4.3nm,0.4s						
EPLA	**Plasencia**	**4.76**	**336**	Pn	**Pn**	**12 54 11.9**	**+1.1**
EPLA				Sn	**Sn**	**12 55 04.0**	**-1.1**
PMRV	**Marv??o**	**4.78**	**322**	*e*Pn	**Pn**	**12 54 12.7**	**+1.7**
PMRV				*e*Sn	**Sn**	**12 55 05.5**	**+0.1**
PMRV				A	A	12 55 34.5	
	comp=N,4.9nm,0.6s						
GUD	**Guadarrama**	**4.93**	**355**	Pn	**Pn**	**12 54 13.1**	**-0.1**
GUD				Sn	**Sn**	**12 55 08.0**	**-1.5**
PMTG	**Montargil**	**4.98**	**314**	*e*Pn	**Pn**	**12 54 14.8**	**+1.1**
PMTG				*e*Sn	**Sn**	**12 55 08.9**	**-1.4**
PMTG				A	A	12 55 12.3	
	comp=N,4.4nm,0.4s						
EIBI	**Ibiza**	**5.13**	**49**	Pn	**Pn**	**12 54 16.1**	**+0.3**
EIBI				Sn	**Sn**	**12 55 12.2**	**-2.0**
PCBR	**Castelo Branco**	**5.14**	**324**	*e*Pn	**Pn**	**12 54 18.0**	**+2.1**
PCBR				*e*Sn	**Sn**	**12 55 13.3**	**-1.0**
OUZM	**OUZ**	**5.48**	**210**	P	**Pn**	**12 54 21.9**	**+1.1**
OUZM				S	**Sn**	**12 55 24.8**	**+1.8**
PMAFR	**Mafra**	**5.57**	**307**	*e*Pn	**Pn**	**12 54 23.1**	**+1.3**
PMAFR				*e*Sn	**Sn**	**12 55 24.9**	**0.0**
PSBE	**So Bento**	**5.60**	**314**	*e*Pn	**Pn**	**12 54 23.8**	**+1.5**
PSBE				*e*Sn	**Sn**	**12 55 24.9**	**-0.9**
MTE	**Manteigas**	**5.62**	**327**	*e*Sn	**Sn**	**12 55 25.6**	**-0.6**
MTE				A	A	12 55 29.6	
	comp=N,3.2nm,0.4s						
PCAS	**Casmilo, Conde**	**5.81**	**320**	*e*Pn	**Pn**	**12 54 27.3**	**+2.2**
PCAS				*e*Sn	**Sn**	**12 55 30.6**	**-0.3**
PCAS				A	A	12 55 32.0	
	comp=N,4.6nm,0.4s						
PVIS	**Viseu**	**6.03**	**327**	*e*Sn	**Sn**	**12 55 35.2**	**-1.1**
MVO	**Moncorvo**	**6.07**	**335**	*e*Pn	**Pn**	**12 54 30.8**	**+2.1**
MVO				*e*Sn	**Sn**	**12 55 36.1**	**-1.2**
MVO				A	A	12 56 19.0	
	comp=N,3.3nm,0.6s						
ERTA	**Horta de San J**	**6.07**	**29**	Sn	**Sn**	**12 55 36.4**	**-0.9**
POLO	**Lamas de Olo**	**6.53**	**331**	*e*Pn	**Pn**	**12 54 37.5**	**+2.3**
POLO				*e*Sn	**Sn**	**12 55 47.2**	**-1.6**
POLO				A	A	12 55 50.7	
	comp=N,1.6nm,0.5s						
ECAL	**Calabor**	**6.68**	**339**	Pn	**Pn**	**12 54 38.2**	**+1.1**
ECAL				Sn	**Sn**	**12 55 50.2**	**-2.2**
ELOB	**Lobios**	**7.06**	**332**	Pn	**Pn**	**12 54 42.2**	**-0.2**
ELOB				Sn	**Sn**	**12 55 58.9**	**-2.9**
PGAV	**Gavieira, Arco**	**7.22**	**331**	*e*Pn	**Pn**	**12 54 47.0**	**+2.4**

NCEDC ***04*** *13:04:18.5±1.4,37°.21N±0°.04×122°.17W±0°.05,h13km±5km, Mwr3.4/4,ML3.1/64(NEIC),Error ellipse: s-maj=8.2km s-min=1.7km az=48.0*
NEIC ***04*** *13:04:18.7,37°.22N×122°.15W,h8km,Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.91; $M_{\theta\theta}$-0.66; $M_{\phi\phi}$-0.25; $M_{r\theta}$0.81; $M_{\theta\phi}$0.64; $M_{\theta r}$-0.24; Fault plane solution: $M_0$1.34000×10^{14} NP1:φs322.62000°, δ27.97000°,λ117.20000°. NP2:φs112.43000°,δ65.35000°, λ76.36000°. Principal axes: T 1.2546, Plg67.0000°, Azm357.0000°; N 0.1510, Plg12.0000°, Azm118.0000°; P -1.4056, Plg19.0000°, Azm213.0000°;*

**NEIC 04 13:04:17.9±0.8,37°17N±0°.03×122°22W±0°.05

MDPB					IAML		13 05 37.0	
	comp=E,77nm,0.4s							
MDPB					IAML		13 05 41.5	
	comp=N,109nm,0.6s							
MRDM	**Red Cones**	**2.56**	**79**		Pn		13 04 59.3	-0.1
MDCM	**Deadman Creek**	**2.59**	**77**		Pn		13 05 00.3	+0.5
OMMB	**Old Mammoth Mi**	**2.60**	**79**		Pn		13 05 00.6	+0.5
PMLM	**Mount Lospe**	**2.62**	**150**		Pn		13 04 59.6	-0.3
KCPM	**Cahto Peak**	**2.73**	**337**	Pn	Pn		13 05 00.1	-1.5
KCPM					IAML		13 05 58.7	
	comp=E,54nm,1.4s							
MPK	**Martis Peak**	**2.74**	**38**		Pn		13 05 02.0	+0.1
PNTR	**Pine Nut**	**2.82**	**46**		Pn		13 05 03.7	+0.7
VCNR	**Virginia City**	**2.94**	**43**		Pn		13 05 05.0	+0.5
VCNR					IAML		13 05 59.7	
	comp=E,111nm,0.6s							
YERR	**Yerington**	**2.97**	**51**		Pn		13 05 05.5	+0.6
BEKR	**Beckworth**	**3.07**	**28**		Pn		13 05 06.6	+0.3
BEKR					IAML		13 05 47.7	
	comp=E,94nm,0.7s							
BEKR					IAML		13 05 48.8	
	comp=N,54nm,0.6s							
LHV	**Little Huntoon**	**3.14**	**69**		Pn		13 05 07.9	+0.8
LHV					IAML		13 06 06.7	
	comp=N,74nm,0.9s							
LHV					IAML		13 06 12.9	
	comp=E,90nm,0.9s							
BCW	**Bitter Crk WRg**	**3.18**	**133**		Pn		13 05 07.4	-0.3
BCW					IAML		13 06 16.3	
	comp=N,69nm,1.0s							
BCW					IAML		13 06 24.7	
	comp=E,76nm,0.8s							
KMRM	**Mail Ridge**	**3.27**	**340**	Pn	Pn		13 05 08.9	-0.1
KMRM					IAML		13 06 47.0	
	comp=E,44nm,2.9s							
RYN	**Ryan**	**3.27**	**62**		Pn		13 05 08.9	-0.1
RYN					IAML		13 06 02.0	
	comp=N,38nm,0.6s							
RYN					IAML		13 06 17.7	
	comp=E,38nm,0.8s							
NVAR	**Mina Array Bea**	**3.35**	**67**		Pn		13 05 10.1	-0.1
ISA	**Isabella, Lake**	**3.37**	**115**	Pn	Pn		13 05 10.9	+0.5
PAHR	**Pah Rah Range**	**3.38**	**40**		Pn		13 05 10.4	-0.1
PAHR					IAML		13 06 10.3	
	comp=N,29nm,0.8s							
PAHR					IAML		13 06 12.2	
	comp=E,29nm,1.0s							
KMPM	**Mount Pierce**	**3.57**	**336**	Pn	Pn		13 05 13.0	-0.1
KMPM					IAML		13 06 49.0	
	comp=N,38nm,2.6s							
KMPM					IAML		13 07 25.4	
	comp=E,36nm,3.2s							
JCC	**Jacoby Creek,**	**3.91**	**339**	Pn	Pn		13 05 17.8	+0.1
JCC					IAML		13 06 27.2	
	comp=N,26nm,2.0s							
JCC					IAML		13 07 30.4	
	comp=E,31nm,2.8s							
CCAC	**Calif City Air**	**3.95**	**119**		Pn		13 05 19.3	+1.0
CCAC					IAML		13 06 25.2	
	comp=N,35nm,1.2s							
CCAC					IAML		13 06 50.6	
	comp=E,31nm,1.1s							
QSM	**Queen of Sheba**	**4.47**	**104**		Pn		13 05 26.0	+0.6
KSXB	**Camp Six Broad**	**4.83**	**345**	Pn	Pn		13 05 31.4	+0.9
KSXB					IAML		13 08 16.0	
	comp=N,25nm,2.0s							
BMN	**Battle Mountai**	**5.09**	**49**	Pn	Pn		13 05 34.0	0.0
KBO	**Bosley Butte**	**5.27**	**344**	Pn	Pn		13 05 36.4	-0.1
J01E	**Myrtle Point**	**6.13**	**348**	Pn	Pn		13 05 49.5	+1.4

*IDC **04** 13:11:01.5±0.4,28°.81S×178°.30W,h211^{km}±3^{km},mb3.8/10, mbtmp4.5/12,Error ellipse: s-maj=13.9km s-min=13.4km az=52.0*

*WEL **04** 13:11:02.1±0.7,30°.5S±11°×17°.7W±2°.3,h204^{km}±7^{km}, M4.0/17,mB4.6/17,MLv4.4/2,Mw(mB)3.9/17,Error ellipse: s-maj=0.0km s-min=0.0km az=113.2*

ISC 04 13:11:01.2±0.5,29°.47S±0.07×178°.4W±0°.1,h200^{km},n90, σ2°93/134,mb4.0/10,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**0.49**	**65**	P	**Pn**	**13 11 31.1**	**+2.9**
GLKZ				S	**Sn**	**13 11 52.9**	**+3.8**
RIZ	**Raoul Island**	**0.49**	**63**	P	**Pn**	**13 11 30.8**	**+2.5**
RIZ				S	**Sn**	**13 11 52.6**	**+3.5**
RAO	**Raoul Island**	**0.49**	**64**	P	**Pn**	**13 11 31.5**	**+3.2**
	1μm,0.3s,baz=65,slow=5.9,SNR=34						
RAO				S	**Sn**	**13 11 52.6**	**+3.5**
	3μm,0.5s,baz=79,slow=23,SNR=8.1						
MXZ	**Matakaoa Point**	**8.52**	**198**	P	**Pn**	**13 13 01.4**	**+0.2**
MXZ				S	**Sn**	**13 14 39.9**	**+3.0**
WMGZ	**Waiomatatini S**	**8.73**	**197**	P	**Pn**	**13 13 05.7**	**+1.8**
WMGZ				S	**Sn**	**13 14 47.7**	**+5.8**
HAZ	**Te Kaha**	**8.85**	**200**	P	**Pn**	**13 13 06.6**	**+3.2**
HAZ				S		**13 14 48.0**	**+3.4**
PKGZ	**Pakihiroa**	**8.89**	**198**	P	**Pn**	**13 13 06.5**	**+0.5**
PKGZ				S	**Sn**	**13 14 51.1**	**+5.4**
PUZ	**Puketiti**	**9.01**	**197**	P	**Pn**	**13 13 08.2**	**+0.6**
PUZ				S	**Sn**	**13 14 52.4**	**+3.8**
URZ	**Urewera**	**9.52**	**202**	P	**Pn**	**13 13 15.0**	**+0.9**
	4.6nm,0.3s,baz=258,slow=3.8,SNR=25						
URZ				S	**Sn**	**13 15 07.2**	**+6.6**
	90nm,0.4s,baz=45,slow=22,SNR=24						
TLZ	**Tolley Road**	**10.16**	**208**	P	**P**	**13 13 29.2**	**-1.1**
HIZ	**Hauiti**	**10.60**	**210**	P	**P**	**13 13 34.4**	**-0.7**
TMVZ	**Te Maari**	**10.78**	**205**	P	**Pn**	**13 13 32.0**	**+1.5**
TMVZ				S	**S**	**13 15 32.7**	**+1.7**
NNVZ	**North Ngauruho**	**10.82**	**205**	P	**P**	**13 13 36.6**	**-1.2**
NNVZ				S	**S**	**13 15 38.2**	**+6.0**
NGZ	**Ngauruhoe**	**10.87**	**205**	P	**P**	**13 13 36.4**	**-1.8**
NGZ				S	**S**	**13 15 36.3**	**+3.1**
BHHZ	**Black Hill Sta**	**10.98**	**203**	P	**Pn**	**13 13 33.6**	**+0.6**
BHHZ				S	**S**	**13 15 37.4**	**+1.7**
MOVZ	**Moawhango**	**11.01**	**204**	P	**Pn**	**13 13 34.9**	**+1.5**
MOVZ				S	**S**	**13 15 39.6**	**+3.0**
MTVZ	**Mangateitei**	**11.10**	**205**	P	**Pn**	**13 13 37.1**	**+2.6**
MTVZ				S	**S**	**13 15 43.5**	**+5.0**
VRZ	**Vera Road**	**11.15**	**208**	P	**P**	**13 13 39.5**	**-1.7**
PNHZ	**Pukenui**	**11.32**	**202**	P	**Pn**	**13 13 36.1**	**-1.3**
PNHZ				S	**Sn**	**13 15 41.2**	**-2.3**
WPHZ	**Waipukurau**	**11.38**	**200**	P	**Pn**	**13 13 39.0**	**+1.0**
WPHZ				S	**Sn**	**13 15 43.7**	**-1.2**
PRHZ	**Porangahau**	**11.51**	**199**	P	**Pn**	**13 13 39.4**	**-0.3**
PRHZ				S	**S**	**13 15 48.9**	**+0.8**
TSZ	**Takapari Road**	**11.53**	**202**	P	**Pn**	**13 13 38.4**	**-1.5**
TSZ				S	**Sn**	**13 15 46.6**	**-1.8**
PKE	**Pukeiti**	**11.54**	**211**	P	**P**	**13 13 47.1**	**+1.4**
NEZ	**North Egmont**	**11.56**	**210**	P	**P**	**13 13 46.1**	**+0.2**
KHEZ	**Kahui Hut**	**11.62**	**210**	P	**P**	**13 13 47.0**	**+0.5**
DVHZ	**Dannevirke**	**11.68**	**201**	P	**Pn**	**13 13 42.4**	**+0.5**
DVHZ				S	**S**	**13 15 51.0**	**-1.2**
ANWZ	**Angora Road**	**11.73**	**199**	P	**Pn**	**13 13 42.3**	**-0.3**
ANWZ				S	**S**	**13 15 53.5**	**+0.1**
POWZ	**Post Office Ro**	**11.89**	**202**	P	**Pn**	**13 13 44.7**	**+0.2**
POWZ				S	**S**	**13 15 57.7**	**+0.5**
PRWZ	**Pori Road**	**11.97**	**201**	P	**Pn**	**13 13 46.3**	**+0.7**
PRWZ				S	**S**	**13 15 58.4**	**-0.7**
BFZ	**Birch Farm**	**12.01**	**200**	P	**Pn**	**13 13 44.3**	**-1.7**
BFZ				S	**Sn**	**13 15 57.7**	**-2.1**
MSVF	**Nonsavu**	**12.12**	**344**	P	Pn	13 13 41.8	-6.0
	73nm,0.9s,baz=140,slow=14,SNR=26						
MRZ	**Mangatainoka R**	**12.19**	**202**	P	**Pn**	**13 13 45.9**	**-2.6**
MRZ				S	**Sn**	**13 15 59.3**	**-5.0**
TIWZ	**Tintock**	**12.20**	**201**	P	**Pn**	**13 13 46.4**	**-2.1**
TIWZ				S	**Sn**	**13 16 02.0**	**-2.5**
HOWZ	**Holdsworth Sta**	**12.43**	**202**	P	**Pn**	**13 13 49.3**	**-2.1**
HOWZ				S	**Sn**	**13 16 06.6**	**-3.3**
OGWZ	**Otaki Gorge**	**12.47**	**203**	P	**Pn**	**13 13 50.1**	**-1.8**
OGWZ				S	**Sn**	**13 16 07.9**	**-3.0**
TMWZ	**Te Maipa**	**12.50**	**200**	P	**Pn**	**13 13 50.2**	**-2.2**
TMWZ				S	**Sn**	**13 16 06.2**	**-5.5**
KIW	**Kapiti Island**	**12.60**	**204**	P	**Pn**	**13 13 51.4**	**-2.1**
KIW				S	**Sn**	**13 16 10.5**	**-3.5**
MTW	**Mount Morrison**	**12.67**	**201**	P	**Pn**	**13 13 52.4**	**-2.0**
MTW				S	**Sn**	**13 16 12.3**	**-3.3**
CAW	**Cannon Point**	**12.77**	**203**	P	**Pn**	**13 13 53.1**	**-2.6**
CAW				S	**Sn**	**13 16 16.1**	**-1.9**
TRWZ	**Traveller**	**12.83**	**200**	P	**Pn**	**13 13 56.5**	**0.0**
TRWZ				S	**Sn**	**13 16 16.4**	**-3.1**
DUWZ	**D'Urville Isla**	**12.92**	**207**	P	**Pn**	**13 13 57.4**	**-0.2**
DUWZ				S	**S**	**13 16 21.3**	**-0.3**
MSWZ	**Moikau Station**	**12.98**	**202**	P	**Pn**	**13 13 58.6**	**+0.3**
MSWZ				S	**S**	**13 16 19.9**	**-3.2**
WEL	**Wellington**	**13.03**	**203**	P	**Pn**	**13 13 58.1**	**-0.8**
PLWZ	**Palliser**	**13.12**	**201**	P	**Pn**	**13 13 58.8**	**-1.3**
PLWZ				S	**S**	**13 16 21.8**	**-4.6**
TCW	**Tory Channel**	**13.13**	**205**	P	**Pn**	**13 13 59.0**	**-1.2**
TCW				S	**S**	**13 16 21.2**	**-5.5**
TUWZ	**Tuamarina**	**13.45**	**205**	P	**Pn**	**13 14 04.9**	**+0.8**
TUWZ				S	**S**	**13 16 29.7**	**-4.3**
NNZ	**Nelson**	**13.49**	**207**	P	**Pn**	**13 14 03.8**	**-0.8**
NNZ				S	**S**	**13 16 32.0**	**-2.8**
QRZ	**Quartz Range**	**13.52**	**211**	P	**Pn**	**13 14 05.6**	**+0.5**
QRZ				S	**S**	**13 16 34.7**	**-1.0**
BSWZ	**Blackbirch Sta**	**13.72**	**205**	P	**Pn**	**13 14 08.2**	**+0.7**
BSWZ				S	**S**	**13 16 35.2**	**-5.2**
MRNZ	**Matariki Terra**	**13.89**	**209**	P	**Pn**	**13 14 11.0**	**+1.3**
MRNZ				S	**S**	**13 16 43.2**	**-1.2**
THZ	**Tophouse**	**14.14**	**207**	P	**Pn**	**13 14 11.9**	**-0.9**
THZ				S	**S**	**13 16 48.4**	**-1.7**
KHZ	**Kahutara**	**14.46**	**204**	P	**Pn**	**13 14 15.9**	**-0.7**
KHZ				S	**S**	**13 16 52.0**	**-5.2**
DSZ	**Denniston Nort**	**14.59**	**210**	P	**Pn**	**13 14 18.4**	**+0.1**
DSZ				S	**S**	**13 16 56.6**	**-3.7**
GVZ	**Greta Valley S**	**15.12**	**205**	P	**Pn**	**13 14 24.6**	**-0.2**
GVZ				S	**S**	**13 17 06.8**	**-5.8**
LTZ	**Lake Taylor**	**15.25**	**207**	P	**Pn**	**13 14 25.3**	**-1.1**
LTZ				S	**S**	**13 17 07.9**	**-7.7**
DZM	**Mont Dzumac**	**15.48**	**295**	P	**P**	**13 14 30.5**	**+0.9**
	25nm,0.9s,baz=109,slow=12,SNR=13						
INZ	**Inchbonnie**	**15.54**	**209**	P	**Pn**	**13 14 29.9**	**+0.1**
INZ				S	**S**	**13 17 16.4**	**-5.8**
OKCZ	**Okains Bay**	**15.77**	**203**	P	**Pn**	**13 14 32.9**	**+0.2**
OKCZ				S	**S**	**13 17 20.7**	**-6.7**
OXZ	**Oxford**	**15.80**	**206**	P	**P**	**13 14 32.8**	**0.0**
OXZ				S	**S**	**13 17 19.8**	**-8.3**
MQZ	**McQueen's Vall**	**15.90**	**204**	P	**P**	**13 14 33.6**	**-0.2**
MQZ				S	**S**	**13 17 23.2**	**-7.0**
RPZ	**Rata Peaks**	**16.52**	**208**	P	**Pn**	**13 14 41.7**	**+0.1**
	4.6nm,0.3s,baz=118,slow=2.1,SNR=12						
RPZ				S	**S**	**13 17 37.8**	**-5.4**
	14nm,0.6s,baz=131,slow=23,SNR=15						
AFI	**Afiamalu**	**16.66**	**23**	P	P	13 14 30.2	-12
	33nm,0.8s,baz=283,slow=17,SNR=2.9						
AFI				S	S	13 17 15.0	-32
	71nm,0.7s,baz=94,slow=17,SNR=7.3						
RAR	**Rarotonga**	**18.74**	**68**	P	**P**	**13 15 00.6**	**-4.5**
	31nm,0.9s,baz=219,slow=1.6,SNR=5.1						
STKA	**Stephens Creek**	**34.34**	**256**	P	**P**	**13 17 30.9**	**+2.0**
	2.5nm,0.7s,baz=100,slow=8.7,SNR=6.1						
	2.5nm,0.7s						
ASAR	**Alice Springs**	**42.79**	**266**	P	P	13 18 39.1	-0.3
	1.6nm,0.5s,baz=98,slow=6.5,SNR=54						
ASAR				pP	pP	13 19 25.5	+3.6
	0.7nm,0.5s,baz=104,slow=7.3,SNR=2.1						
ASAR				S	S	13 24 46.3	-2.2
	0.6nm,0.8s,baz=109,slow=14,SNR=3.3						
	1.6nm,0.5s						
WRA	**Warramunga Arr**	**43.70**	**271**	P	P	13 18 46.3	-0.4
	2.7nm,0.3s,baz=110,slow=7.6,SNR=118						
WRA				pP	pP	13 19 31.8	+2.5
	1.6nm,0.5s,baz=110,slow=7.2,SNR=2.2						
WRA				S	S	13 24 57.2	-4.4
	0.7nm,0.6s,baz=108,slow=13,SNR=5.6						
	2.7nm,0.3s						
VNDA	**Vanda**	**48.98**	**186**	P	P	13 19 32.5	+5.5
	2.9nm,0.5s,baz=13,slow=7.0,SNR=22						
	2.9nm,0.5s						
MAW	**Mawson**	**73.05**	**201**	P	**P**	**13 22 11.5**	**+2.7**
	8.1nm,0.8s,baz=118,slow=8.9,SNR=11						
	8.1nm,0.8s						
MJAR	**Matsushiro Arr**	**77.27**	**325**	P	P	13 22 29.0	-4.3
	2.9nm,0.8s,baz=177,slow=4.3,SNR=7.2						
	2.9nm,0.8s						
TROLL	**Troll, Antarti**	**78.80**	**180**	P	**P**	**13 22 43.9**	**+2.4**
SNAA	**Sanae**	**79.09**	**179**	P	**P**	**13 22 44.9**	**+1.9**
VNA3	**Neumayer Olymp**	**79.26**	**176**	P	**P**	**13 22 45.6**	**+1.8**
VNA2	**Neumayer--Watz**	**79.69**	**177**	P	**P**	**13 22 48.3**	**+2.2**
	baz=175,slow=4.0						
VNA1	**Neumayer--Stat**	**79.92**	**177**	P	**P**	**13 22 49.4**	**+2.1**
KSRS	**Korea Array**	**83.40**	**320**	P	P	13 23 04.3	-1.6
	1.8nm,0.8s,baz=135,slow=5.5,SNR=7.4						
	1.8nm,0.8s						
PLCA	**Paso Flores**	**83.41**	**133**	P	**P**	**13 23 07.2**	**+0.9**
	3.0nm,0.9s,baz=193,slow=4.2,SNR=6.0						
	3.0nm,0.9s						
PETK	**Petropavlovsk-**	**84.82**	**346**	P	P	13 23 10.1	-2.6
	2.3nm,0.6s,baz=166,slow=6.7,SNR=2.6						
	2.3nm,0.6s						
NVAR	**Mina Array Bea**	**87.81**	**43**	P	**P**	**13 23 24.8**	**-3.2**
	0.8nm,0.7s,baz=221,slow=8.7,SNR=9.0						
NVAR				pP	**pP**	**13 24 16.6**	**-0.3**
	0.2nm,0.6s,baz=230,slow=6.8,SNR=2.2						
	0.8nm,0.7s						
MKAR	**Makanchi Array**	**116.89**	**311**	PKP	**PKPdf**	**13 29 18.4**	**-3.3**
	0.4nm,0.4s,baz=225,slow=0.8,SNR=6.5						
BOSA	**Boshof**	**117.97**	**204**	PKP	**PKPdf**	**13 29 23.5**	**-1.1**
	4.1nm,1.1s,baz=171,slow=2.7,SNR=3.8						
KURBB	**Kurchatov Arra**	**120.17**	**314**	PKP	**PKPdf**	**13 29 24.7**	**-3.2**
	0.9nm,0.6s,baz=96,slow=1.9,SNR=8.5						
ARCES	**ARCESS Array B**	**137.60**	**348**	PKP	**PKPdf**	**13 29 58.0**	**-2.4**
	4.5nm,1.0s,baz=32,slow=4.7,SNR=4.0						
FINES	**FINESS Array B**	**144.15**	**340**	PKhKP	PKPpre	13 30 06.9	
	2.7nm,0.5s,baz=69,slow=4.1,SNR=28						
NB2	**NORSAR Subarra**	**147.78**	**351**	PKP	**PKPdf**	**13 30 18.0**	**-0.6**
	comp=Z,5.6nm,1.1s,baz=16,slow=3.2						
NOA	**NORSAR Array B**	**147.78**	**351**	PKPbc	**PKPdf**	**13 30 18.0**	**-0.6**
	comp=Z,1.4nm,0.5s,baz=15,slow=4.5,SNR=7.6						
AKASG	**Malin Array Be**	**150.33**	**323**	PKPbc	**PKPdf**	**13 30 25.4**	**+2.4**
	comp=Z,3.7nm,0.3s,baz=32,slow=3.1,SNR=15						
EIL	**Elat**	**151.02**	**279**	PKPbc	**PKPbc**	**13 30 29.9**	**-0.8**
	comp=Z,4.7nm,0.7s,baz=42,slow=18,SNR=4.0						
BRTR	**Keskin Array B**	**151.82**	**300**	PKPbc	**PKPdf**	**13 30 29.9**	**+4.2**
	comp=Z,1.0nm,0.5s,baz=143,slow=4.9,SNR=6.4						
GERES	**GERESS Array B**	**158.53**	**338**	PKPab	**PKPab**	**13 31 08.2**	**-2.2**
	comp=Z,0.4nm,0.7s,baz=15,slow=5.5,SNR=3.7						
TORD	**Torodi Ar. Bea**	**163.76**	**180**	PKPab	**PKPab**	**13 31 35.1**	**+1.2**
	comp=Z,4.2nm,0.7s,baz=174,slow=4.0,SNR=21						

MAN 04 13:12:10.2,9°.92N×125°.97E,h15^{km},mb4.5,ML3.4,MS3.2, 2C-5D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	**General Luna,**	**0.20**	**131**	↓*e*P	Pn	13 12 15.6	+1.2
GLSP				*e*S		13 12 46.4	
SCPH	**Surigao**	**0.49**	**254**	↓*i*P	Pn	13 12 21.2	+0.4
SCPH				*i*S		13 12 30.6	
BUTP	**Butuan**	**1.01**	**200**	↑*e*P	Pn	13 12 28.5	+0.4
BUTP				*e*S		13 13 50.1	
MSLP	**Maasin**	**1.11**	**281**	↓*e*P	Pb	13 12 30.0	+0.3
MSLP				*e*S		13 14 32.4	
RCP	**Roxas**	**3.56**	**298**	↑*e*P	Pn	13 13 05.5	+2.9
DDMP	**Don Marcelino,**	**3.80**	**184**	↓*e*P	Pn	13 13 09.9	+2.8
DDMP				*e*S		13 13 20.6	
PVCP	**Virac**	**4.06**	**334**	↓*e*P	Pb	13 13 15.9	+2.0

*IDC **04** 13:23:19.8±6.8,35°.91N×71°.36E,h108^{km}±36^{km},mb3.5/4, mbtmp3.9/9,Error ellipse: s-maj=82.9km s-min=27.8km az=161.0*

*NNC **04** 13:23:28.1±4.3,37°.11N×71°.00E,h0^{km},mb4.4,mpv4.2, Error ellipse: s-maj=34.4km s-min=24.8km az=169.0*

ISC 04 13:23:24.2±2.2,36°.5N±0°.2×71°.0E±0°.1,h100^{km},n21, σ2°09/23,mb3.5/3,4C-6D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**6.00**	**19**	P	**Pn**	**13 24 51.7**	**+0.8**
	SNR=49						
UCH	**Uchtor**	**6.34**	**24**	P	**Pn**	**13 24 57.8**	**+2.4**
	SNR=15						
EKS2	**Erkin-Say**	**6.52**	**18**	P	**Pn**	**13 25 00.6**	**+3.0**
	SNR=11						
KK31	**Karatay Array**	**6.61**	**357**	↓P	**Pn**	**13 25 00.2**	**+1.4**
	20nm,0.4s,baz=182,slow=13,SNR=255						
KK31				↓S	Sn	13 26 10.5	-2.2
	13nm,0.5s,baz=188,slow=24,SNR=11						
AAK	**Ala-Archa**	**6.70**	**23**	P	**Pn**	**13 25 01.8**	**+1.7**
	SNR=7.4						
AAK	**Ala-Archa**	**6.70**	**23**	P	**Pn**	**13 25 01.8**	**+1.7**
	8.0nm,0.4s,baz=180,slow=11,SNR=9.9						
AAK				S	**Sn**	**13 26 13.3**	**-1.7**
	13nm,0.5s,baz=139,slow=23,SNR=10						
KBK	**Karagaybulak**	**6.87**	**25**	P	Pn	13 25 07.9	+5.5
	SNR=7.0						
CHMS	**Chumysh**	**7.11**	**23**	↓P	**Pn**	**13 25 06.5**	**+1.0**
	3.6nm,0.5s						
CHMS				↓S	Sn	13 26 20.9	-3.8
	12nm,0.6s						
USP	**Ospenovka**	**7.28**	**21**	P	**Pn**	**13 25 09.2**	**+1.3**
	SNR=9.0						
TKM2	**Tokmak 2**	**7.33**	**27**	P	**Pn**	**13 25 13.4**	**+4.7**
	SNR=22						
TKM2	**Tokmak 2**	**7.33**	**27**	↑P	**Pn**	**13 25 09.4**	**+0.7**
	8.8nm,0.6s						
TKM2				↑S	**Sn**	**13 26 27.7**	**-2.6**
	6.9nm,0.7s						
GEYT	**Alibeck**	**10.38**	**282**	P	**Pn**	**13 25 51.4**	**+1.2**
	1.3nm,0.3s,baz=102,slow=14,SNR=5.3						
GEYT				S	**Sn**	**13 27 41.2**	**-3.4**
	1.5nm,0.4s,baz=146,slow=21,SNR=2.2						
MKAR	**Makanchi Array**	**13.29**	**36**	P	**Pn**	**13 26 28.3**	**-0.5**
	0.7nm,0.6s,baz=212,slow=13,SNR=7.5						
AB31	**Akbulak array**	**15.10**	**331**	↓P	**Pn**	**13 26 52.7**	**+0.7**
	3.1nm,0.4s,baz=161,slow=11,SNR=137						
AB31				↑S	Sn	13 29 36.6	-1.8
	1.2nm,0.5s,baz=150,slow=22,SNR=4.5						
KURBB	**Kurchatov Arra**	**15.13**	**19**	P	**Pn**	**13 26 54.2**	**+1.9**
	1.2nm,0.6s,baz=205,slow=11,SNR=12						
AKTO	**Aktyubinsk**	**16.79**	**330**	P	**P**	**13 27 15.8**	**+2.2**
	2.0nm,0.4s,baz=138,slow=8.6,SNR=12						
AKTO	**Aktyubinsk**	**16.79**	**330**	↓P	**P**	**13 27 14.8**	**+1.2**
	3.5nm,0.8s						
AKTO				↑S	Sn	13 30 17.6	-1.8
	2.4nm,0.8s						
ZALV	**Zalesovo Beam**	**19.92**	**24**	P	**P**	**13 27 46.8**	**-1.0**
	4.7nm,0.4s,baz=220,slow=11,SNR=26						
	4.7nm,0.4s						
ARU	**Arti**	**21.64**	**341**	P	**P**	**13 28 07.3**	**+1.0**
	1.2nm,0.3s,baz=139,slow=9.3,SNR=5.0						
	1.2nm,0.3s						
NOA	**NORSAR Array B**	**44.39**	**323**	P	**P**	**13 31 24.1**	**-0.4**
	0.4nm,0.6s,baz=98,slow=7.7,SNR=3.6						
	0.4nm,0.6s						
YKA	**Yellowknife Ar**	**81.25**	**3**	P	**P**	**13 35 26.8**	**-2.0**
	0.3nm,0.6s,baz=354,slow=5.5,SNR=5.2						
	0.3nm,0.6s						

IDC 04 13:25:37.6±14.0,20°.31S×179°.43W,h660^{km}±89^{km}, mb3.0/4,mbtmp4.1/5,Error ellipse: s-maj=304.3km s-min=113.5km az=81.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.50**	**317**	P	P	13 27 04.4	-0.2
	6.1nm,0.4s,baz=68,slow=22,SNR=11						
CTA	**Charters Tower**	**32.17**	**264**	P	P	13 31 15.4	+0.5
	4.3nm,0.9s,baz=84,slow=9.2,SNR=2.3						
	4.3nm,0.9s						
STKA	**Stephens Creek**	**36.66**	**244**	P	P	13 31 51.6	-0.2
	1.2nm,0.6s,baz=68,slow=11,SNR=2.2						
	1.2nm,0.6s						
ASAR	**Alice Springs**	**43.25**	**257**	P	P	13 32 44.4	+0.2
	1.6nm,0.5s,baz=95,slow=7.6,SNR=10						
	1.6nm,0.5s						
WRA	**Warramunga Arr**	**43.29**	**262**	P	P	13 32 44.4	-0.1
	1.0nm,0.3s,baz=97,slow=7.4,SNR=14						
	1.0nm,0.3s						

*IDC **04** 13:26:17.2±1.8,8°.34S×117°.51E,h0^{km},mb3.9/3, mbtmp4.1/7,ML4.2/4,Error ellipse: s-maj=38.7km s-min=15.8km az=53.0*

*DJA **04** 13:26:20.3±0.8,8°.5S±3°×11°.8E±°,h14^{km}±7^{km},M4.4/22, mb4.7/7,mB5.1/4,MLv4.3/22,Mw(mB)4.5/4*

ISC 04 13:26:19.6±0.8,8°.18S±0°.05×117°.61E±0°.06,h10^{km},n29, σ1°08/33,mb4.0/3,Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.66**	**165**	P	**Pb**	**13 26 33.4**	**+0.1**
WBSI	**Waikabubak, Su**	**2.28**	**130**	P	**Pn**	**13 26 56.8**	**-0.6**
SRBI	**Singaraja**	**2.37**	**272**	P	**Pn**	**13 26 59.1**	**+0.5**
IGBI	**Denpasar**	**2.52**	**255**	P	**Pn**	**13 27 01.0**	**+0.5**
ABJI	**Asem Bagus**	**3.36**	**276**	P	**Pn**	**13 27 11.9**	**-0.3**
JAGI	**Jajag, Banyuwa**	**3.43**	**265**	P	**Pn**	**13 27 13.6**	**+0.4**
BSSI	**B

1.6nm,0.7s,baz=237,slow=0.9,SNR=4.0
1.6nm,0.7s
FINES FINESS Array B 82.63 334 P **P** **13 53 40.0 -1.0**
1.4nm,0.7s,baz=60,slow=4.6,SNR=9.5
1.4nm,0.7s

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*KRNET **04** 13:56:47.1±0.1,39.°70N×75.°18E,mb2.7*
*NNC **04** 13:56:59.0±4.6,40.°37N×74.°60E,h0km,mb3.3,mpv3.0,*
Error ellipse: s-maj=43.8km s-min=30.4km az=109.0
*SOME **04** 13:57:00.1,40.°30N×75.°18E,h5km*
ISC 04 13:56:49.2±2.2,39.°87N±0.°08×75.°24E±0.°04,h6km±14km,
n27,σ1§66/46,18C-4D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARLS	**Aral**	**2.11**	**341**	⇓*i*P	**Pb**	**13 57 27.6**	**-0.4**
	baz=44						
ARLS				⇓*i*S	**Sg**	**13 57 57.6**	**+0.6**
	baz=44						
UCH	**Uchtor**	**2.42**	**347**	⇑*i*P	**Pb**	**13 57 32.6**	**-0.9**
	baz=49						
UCH				⇑*i*S	**Sg**	**13 58 05.8**	**-1.3**
	baz=49						
ULHL	**Ulahol**	**2.50**	**17**	⇑*e*P	**Pb**	**13 57 33.9**	**-0.6**
	baz=17						
ULHL				⇑*i*S	**Sb**	**13 58 08.0**	**+2.4**
	baz=17						
BOOM	**Boomskoye usch**	**2.67**	**11**	⇑*e*P	**Pb**	**13 57 36.1**	**-1.5**
	baz=11						
BOOM				⇑*i*S	**Sb**	**13 58 12.2**	**+1.5**
	baz=11						
DRK	**Karamyk**	**2.68**	**263**	⇑*i*P	**Pn**	**13 57 32.9**	**-0.3**
	baz=66						
DRK				⇑*i*S	**Sn**	**13 58 06.5**	**+0.4**
	baz=66						
KDJ	**Kajisay**	**2.70**	**32**	⇑*i*P	**Pb**	**13 57 36.2**	**-1.8**
	baz=32						
KDJ				⇑*i*S	**Sb**	**13 58 12.6**	**+1.2**
	baz=32						
KBK	**Karagaybulak**	**2.80**	**356**	⇑*i*P	**Pb**	**13 57 37.8**	**-1.9**
	baz=57						
KBK				⇑*i*S	**Sb**	**13 58 15.0**	**+0.8**
	baz=57						
AAK	**Ala-Archa**	**2.83**	**349**	⇑*i*P	**Pb**	**13 57 38.0**	**-2.1**
	baz=50						
AAK				⇑*i*S	**Sb**	**13 58 15.3**	**+0.2**
	baz=50						
TKM2	**Tokmak 2**	**3.06**	**5**	⇑*i*P	**Pb**	**13 57 41.7**	**-2.5**
	baz=5.0						
TKM2				⇑*i*S	**Sb**	**13 58 21.7**	**-0.3**
	baz=5.0						
TKM2	**Tokmak 2**	**3.06**	**5**	⇓Pg	**Pb**	**13 57 46.1**	**+1.9**
	1.4nm,0.3s						
TKM2				⇑Lg	Lg	13 58 20.5	
	3.8nm,0.4s						
CHMS	**Chumysh**	**3.15**	**353**	⇓Pg	**Pb**	**13 57 45.5**	**-0.1**
	1.0nm,0.3s						
CHMS				⇑Lg	Lg	13 58 25.1	
	3.0nm,0.5s						
KST	**Kastek**	**3.22**	**9**	*e*P	**Pg**	**13 57 50.2**	**-0.7**
	5.9nm,0.4s						
KST				*e*S	**Sb**	**13 58 26.1**	**-0.3**
	13nm,1.0s						
MRKS	**Merke**	**3.25**	**333**	*e*P	**Pg**	**13 57 53.2**	**+1.7**
	2.6nm,0.2s						
MRKS				*e*S	**Sg**	**13 58 31.1**	**-2.6**
	4.5nm,0.1s						
TNSS	**Tian-Shan**	**3.42**	**21**	*e*P	**Pg**	**13 57 57.4**	**+2.6**
	2.2nm,0.2s						
TNSS				*e*S	**Sg**	**13 58 38.7**	**-0.3**
	1.9nm,0.5s						
TNSS	**Tian-Shan**	**3.42**	**21**	Pg	**Pg**	**13 57 57.3**	**+2.6**
	2.2nm,0.5s						
TNSS				Lg	Lg	13 58 38.7	
	1.9nm,0.5s						
SGDS	**Sogindy**	**3.61**	**353**	*e*P	**Pg**	**13 58 00.8**	**+2.4**
	0.9nm,0.2s						
SGDS				*e*S	**Sg**	**13 58 44.2**	**-1.1**
	3.2nm,0.1s						
KRBS	**Karabastau**	**3.84**	**5**	*e*P	**Pg**	**13 58 04.0**	**+1.2**
	1.4nm,0.4s						
KRBS				*e*S	**Sg**	**13 58 50.3**	**-2.3**
	3.3nm,0.6s						
KRBS	**Karabastau**	**3.84**	**5**	Pg	**Pg**	**13 58 04.0**	**+1.2**
	1.4nm,0.4s						
KRBS				Lg	Lg	13 58 50.2	
	3.3nm,0.6s						
KTBS	**Karatobe**	**3.99**	**15**	*e*P	**Pg**	**13 58 07.7**	**+2.0**
	1.5nm,0.5s						
KTBS				*e*S	**Sg**	**13 58 56.4**	**-0.9**
	7.2nm,0.5s						
KTBS	**Karatobe**	**3.99**	**15**	Pg	**Pg**	**13 58 07.3**	**+1.6**
	1.5nm,0.5s						
KTBS				Lg	Lg	13 58 55.8	
	7.2nm,0.5s						
KUU	**Kurty**	**4.11**	**11**	*e*P	**Pg**	**13 58 10.0**	**+2.1**
	1.8nm,0.4s						
KUU				*e*S	**Sg**	**13 59 00.2**	**-0.9**
	6.3nm,0.5s						
KUU	**Kurty**	**4.11**	**11**	Pg	**Pg**	**13 58 10.0**	**+2.1**
	1.8nm,0.4s						
KUU				Lg	Lg	13 59 00.2	
	6.3nm,0.5s						
KPKS	**Kokpek**	**4.43**	**35**	*e*P	**Pg**	**13 58 14.9**	**+0.9**
	1.1nm,0.2s						
KPKS				*e*S	**Sg**	**13 59 08.3**	**-3.0**
	5.5nm,0.8s						
KPKS	**Kokpek**	**4.43**	**35**	Pg	**Pg**	**13 58 14.9**	**+0.9**
	1.1nm,0.2s						
KPKS				Lg	Lg	13 59 08.3	
	5.5nm,0.8s						
ARXS	**Arharly**	**4.75**	**23**	*e*P	**Pg**	**13 58 21.9**	**+1.7**
	1.4nm,0.2s						
ARXS				*e*S	**Sg**	**13 59 20.8**	**-1.0**
	2.9nm,0.6s						
ARXS	**Arharly**	**4.75**	**23**	Pg	**Pg**	**13 58 21.9**	**+1.7**
	1.4nm,0.2s						
ARXS				Lg	Lg	13 59 20.8	
	2.9nm,0.6s						
BRLS	**Boroldav**	**5.15**	**310**	*e*P	**Pg**	**13 58 29.2**	**+1.4**
	1.7nm,0.4s						
BRLS				*e*S	**Sg**	**13 59 32.7**	**-1.7**
	2.6nm,0.2s						

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*NNC **04** 14:04:34.8±1.6,41.°21N×74.°60E,h0km,mb3.6,mpv3.3,*
Error ellipse: s-maj=12.2km s-min=9.3km az=167.0
*SOME **04** 14:04:34.6,41.°17N×74.°68E,h10km*
*KRNET **04** 14:04:34.0±0.1,41.°22N×74.°58E,h13km,mb2.9*
*KNET **04** 14:04:34.1±2.2,41.°25N×74.°57E,h6km,8km,ml2.2,Error*
ellipse: s-maj=18.6km s-min=5.9km az=21.0
ISC 04 14:04:34.3±1.3,41.°17N±0.°03×74.°49E±0.°03,h6km±11km,
n56,σ1§31/89,31C-16D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARLS	**Aral**	**0.70**	**350**	⇑*i*P	**Pg**	**14 04 46.8**	**-1.0**
	baz=43						
ARLS				⇑*i*S	**Sg**	**14 04 55.9**	**-1.0**
	baz=43						
UCH	**Uchtor**	**1.06**	**1**	⇓P	**Pg**	**14 04 53.5**	**-1.1**
	16nm,0.2s,SNR=32						
UCH	**Uchtor**	**1.06**	**1**	⇓*i*P	**Pg**	**14 04 53.4**	**-1.2**
	baz=57						
UCH				⇓*i*S	**Sg**	**14 05 07.2**	**-1.2**
	baz=57						
AML	**Almayashu**	**1.13**	**329**	⇓P	**Pg**	**14 04 55.7**	**-0.3**
	14nm,0.1s,SNR=72						
AML				⇓S	**Sb**	**14 05 10.9**	**-0.7**
	46nm,0.2s						
OHH	**Osh**	**1.44**	**244**	⇑*i*P	**Pg**	**14 05 03.0**	**+1.0**
	baz=44						
OHH				⇑*i*S	**Sg**	**14 05 24.0**	**+3.3**
	baz=44						
AAK	**Ala-Archa**	**1.47**	**0**	⇓P	**Pn**	**14 05 00.9**	**-0.6**
	18nm,0.2s,SNR=7.5						
AAK	**Ala-Archa**	**1.47**	**0**	⇑*i*P	**Pn**	**14 05 00.6**	**-0.9**
	baz=57						
AAK				⇑*i*S	**Sn**	**14 05 20.2**	**-0.9**
	baz=57						
KBK	**Karagaybulak**	**1.52**	**13**	⇓P	**Pn**	**14 05 01.8**	**-0.5**
	40nm,0.1s,SNR=10						
KBK	**Karagaybulak**	**1.52**	**13**	⇑*i*P	**Pn**	**14 05 01.5**	**-0.8**
	baz=11						
KBK				⇑*i*S	**Sn**	**14 05 21.4**	**-1.2**
	baz=11						
EKS2	**Erkin-Say**	**1.58**	**341**	⇓P	**Pb**	**14 05 03.5**	**-0.5**
	3.7nm,0.1s,SNR=11						
EKS2	**Erkin-Say**	**1.58**	**341**	⇑*e*P	**Pb**	**14 05 03.3**	**-0.8**
	baz=38						
EKS2				⇑*i*S	**Sg**	**14 05 24.6**	**-0.5**
	baz=38						
ULHL	**Ulahol**	**1.70**	**50**	⇓P	**Pn**	**14 05 03.6**	**-1.2**
	7.0nm,0.1s,SNR=42						
ULHL	**Ulahol**	**1.70**	**50**	⇑*e*P	**Pn**	**14 05 04.0**	**-0.7**
	baz=50						
ULHL				⇑*i*S	**Sn**	**14 05 26.2**	**-0.7**
	baz=50						
BOOM	**Boomskoye usch**	**1.71**	**39**	⇓*i*P	**Pn**	**14 05 04.2**	**-0.6**
	baz=38						
BOOM				⇓*i*S	**Sn**	**14 05 26.6**	**-0.5**
	baz=38						
MRKS	**Merke**	**1.83**	**330**	*e*P	**Pg**	**14 05 11.6**	**+2.2**
	5.8nm,0.2s						
MRKS				*e*S	**Sg**	**14 05 37.6**	**+4.4**
	76nm,0.7s						
CHMS	**Chumysh**	**1.84**	**6**	⇑Pg	**Pb**	**14 05 07.2**	**-1.2**
	2.7nm,0.3s						
CHMS				⇑Lg	Lg	14 05 34.6	
	14nm,0.7s						
TKM2	**Tokmak 2**	**1.94**	**25**	⇑*i*P	**Pb**	**14 05 08.4**	**-1.7**
	baz=24						
TKM2				⇑*i*S	**Sb**	**14 05 33.8**	**-0.8**
	baz=24						
TKM2	**Tokmak 2**	**1.94**	**25**	⇓Pn	**Pb**	**14 05 08.5**	**-1.7**
	3.4nm,0.4s						
TKM2				⇓Lg	Lg	14 05 35.5	
	32nm,0.6s						
ARK	**Arkit**	**2.00**	**289**	⇑*i*P	**Pg**	**14 05 11.3**	**-1.3**
	baz=87						
ARK				⇑*i*S	**Sg**	**14 05 38.7**	**+0.2**
	baz=87						
KST	**Kastek**	**2.17**	**30**	*e*P	**Pb**	**14 05 14.1**	**0.0**
	7.5nm,0.3s						
KST				*e*S	**Sg**	**14 05 42.7**	**-1.3**
	45nm,0.5s						
KST	**Kastek**	**2.17**	**30**	Pg	**Pb**	**14 05 13.0**	**-1.1**
	4.6nm,0.2s						
KST				Lg	Lg	14 05 41.8	
	45nm,0.5s						
KDJ	**Kajisay**	**2.23**	**64**	⇑*i*P	**Pb**	**14 05 13.1**	**-2.1**
	baz=64						
KDJ				⇑*i*S	**Sb**	**14 05 41.7**	**-1.5**
	baz=64						
SGDS	**Sogindy**	**2.28**	**3**	*e*P	**Pb**	**14 05 16.5**	**+0.6**
	11nm,0.2s						
SGDS				*e*S	**Sg**	**14 05 46.9**	**-0.7**
	14nm,0.4s						
SGDS	**Sogindy**	**2.28**	**3**	Pg	**Pb**	**14 05 15.8**	**-0.2**
	16nm,0.3s						
SGDS				Lg	Lg	14 05 46.5	
	14nm,0.4s						
MTBS	**Maitube**	**2.43**	**36**	*e*P	**Pb**	**14 05 18.6**	**+0.1**
	10nm,0.2s						
MTBS				*e*S	**Sb**	**14 05 50.4**	**+1.5**
	41nm,0.4s						
MTBS	**Maitube**	**2.43**	**36**	Pg	**Pb**	**14 05 18.1**	**-0.4**
	11nm,0.3s						
MTBS				Lg	Lg	14 05 50.4	
	41nm,0.4s						
TRKS	**Terek-Say**	**2.54**	**279**	⇑*e*P	**Pb**	**14 05 19.1**	**-1.4**
	baz=76						
TRKS				⇑*i*S	**Sb**	**14 05 52.1**	**0.0**
	baz=76						
TNSS	**Tian-Shan**	**2.61**	**44**	*e*P	**Pb**	**14 05 21.1**	**-0.7**
	8.4nm,0.2s						
TNSS				*e*S	**Sb**	**14 05 54.6**	**+0.2**
	12nm,0.5s						
TNSS	**Tian-Shan**	**2.61**	**44**	Pg	**Pb**	**14 05 20.6**	**-1.3**
	7.6nm,0.2s						
TNSS				Lg	Lg	14 05 54.3	
	12nm,0.5s						
DRK	**Karamyk**	**2.66**	**231**	⇓*i*P	**Pb**	**14 05 21.3**	**-1.2**
	baz=32						
DRK				⇓*i*S	**Sb**	**14 05 55.8**	**+0.3**
	baz=32						
KRBS	**Karabastau**	**2.67**	**19**	*e*P	**Pb**	**14 05 22.8**	**+0.2**
	12nm,0.2s						
KRBS				*e*S	**Sb**	**14 05 57.4**	**+1.7**
	23nm,0.6s						
KRBS	**Karabastau**	**2.67**	**19**	Pg	**Pb**	**14 05 22.2**	**-0.4**
	21nm,0.3s						
KRBS				Lg	Lg	14 05 57.4	
	23nm,0.6s						
MDOK	**Medeo**	**2.75**	**43**	*e*P	**Pb**	**14 05 23.9**	**-0.2**
	6.7nm,0.3s						
MDOK				*e*S	**Sb**	**14 05 59.3**	**+1.1**
	21nm,0.8s						
MDOK	**Medeo**	**2.75**	**43**	⇓Pn	**Pb**	**14 05 23.0**	**-1.0**
	11nm,0.6s						
MDOK				Pg	Pb	**14 05 23.1**	**-1.0**
	15nm,0.5s						
MDOK				Lg	Lg	14 05 58.9	
	21nm,0.8s						
MDOK				Lg	Lg	14 05 59.1	
	16nm,0.6s						
ANVS	**Anan'yevo**	**2.87**	**55**	⇑*i*P	**Pn**	**14 05 21.7**	**+0.9**
	baz=55						
ANVS				⇑*i*S	**Sn**	**14 05 56.6**	**+0.9**
	baz=55						
BTK	**Batken**	**3.00**	**250**	⇑*i*P	**Pb**	**14 05 25.8**	**-2.5**
	baz=49						
BTK				⇑*i*S	**Sb**	**14 06 03.6**	**-1.7**
	baz=49						
KTBS	**Karatobe**	**3.02**	**32**	*e*P	**Pb**	**14 05 28.7**	**+0.3**
	5.1nm,0.3s						
KTBS				*e*S	**Sb**	**14 06 07.8**	**+2.2**
	30nm,0.7s						
KTBS	**Karatobe**	**3.02**	**32**	Pg	**Pb**	**14 05 27.6**	**-0.8**
	11nm,0.3s						
KTBS				Lg	Lg	14 06 06.5	
	30nm,0.7s						
KUU	**Kurty**	**3.05**	**26**	*e*P	**Pb**	**14 05 28.9**	**0.0**
	9.0nm,0.5s						
KUU				*e*S	**Sb**	**14 06 07.7**	**+1.3**
	19nm,0.5s						
KUU	**Kurty**	**3.05**	**26**	Pg	**Pb**	**14 05 28.4**	**-0.6**
	9.0nm,0.5s						
KUU				Lg	Lg	14 06 07.7	
	19nm,0.5s						
PRZ	**Przheval'sk**	**3.21**	**65**	⇑*i*P	**Pn**	**14 05 26.1**	**+0.7**
	baz=65						
PRZ				⇑*i*S	**Sn**	**14 06 04.8**	**+0.8**
	baz=65						
CHKK	**Chushkaly**	**3.26**	**34**	*e*P	**Pb**	**14 05 32.9**	**+0.4**
	2.1nm,0.2s						
CHKK				*e*S	**Sb**	**14 06 14.4**	**+1.9**
	15nm,0.3s						
CHKK	**Chushkaly**	**3.26**	**34**	Pg	**Pb**	**14 05 31.9**	**-0.6**
	5.6nm,0.5s						
CHKK				Lg	Lg	14 06 14.0	
	15nm,0.3s						
SATY	**Saty**	**3.47**	**56**	*e*P	**Pb**	**14 05 36.3**	**0.0**
	1.9nm,0.4s						
SATY				*e*S	**Sb**	**14 06 20.5**	**+1.7**
	9.4nm,0.2s						
SATY	**Saty**	**3.47**	**56**	Pg	**Pb**	**14 05 35.7**	**-0.6**
	2.2nm,0.1s						
SATY				Lg	Lg	14 06 20.5	
	11nm,0.3s						
IUG	**Iuzhnay**	**3.48**	**288**	*e*P	**Pg**	**14 05 40.0**	**-0.9**
	48nm,0.3s						
IUG				*e*S	**Sg**	**14 06 26.8**	**+0.8**
	20nm,0.4s						
KK31	**Karatay Array**	**3.53**	**304**	⇑Pg	**Pb**	**14 05 38.8**	**+1.6**
	0.3nm,0.2s,baz=122,slow=16,SNR=11						
KK31				⇑Lg	Lg	14 06 25.7	
	2.5nm,0.5s,baz=126,slow=28,SNR=7.4						
KPKS	**Kokpek**	**3.87**	**52**	*e*P	**Pb**	**14 05 43.1**	**+0.2**
	2.3nm,0.2s						
KPKS				*e*S	**Sb**	**14 06 32.0**	**+1.9**
	12nm,0.6s						
KPKS	**Kokpek**	**3.87**	**52**	Pg	**Pb**	**14 05 42.3**	**-0.7**
	2.3nm,0.2s						
KPKS				Lg	Lg	14 06 31.8	
	12nm,0.6s						
UZB	**Uzynbulak**	**3.91**	**58**	*e*P	**Pb**	**14 05 43.5**	**-0.2**
	1.5nm,0.1s						
UZB				*e*S	**Sb**	**14 06 32.9**	**+1.6**
	7.5nm,0.4s						
UZB	**Uzynbulak**	**3.91**	**58**	Pg	**Pb**	**14 05 42.3**	**-1.4**
	1.3nm,0.3s						
UZB				Lg	Lg	14 06 32.2	
	7.5nm,0.4s						
ARXS	**Arharly**	**3.91**	**38**	*e*P	**Pb**	**14 05 44.5**	**+0.7**
	5.2nm,0.4s						
ARXS				*e*S	**Sb**	**14 06 34.6**	**+3.2**
	10nm,0.6s						
ARXS	**Arharly**	**3.91**	**38**	Pg	**Pb**	**14 05 43.8**	**+0.1**
	5.2nm,0.4s						
ARXS				Lg	Lg	14 06 34.3	
	10nm,0.6s						
BRLS	**Boroldav**	**3.93**	**300**	*e*P	**Pg**	**14 05 49.6**	**+0.1**
	2.0nm,0.2s						
BRLS				*e*S	**Sg**	**14 06 43.2**	**+2.8**
	4.7nm,0.5s						
PDGK	**Podgornoye**	**4.29**	**58**	Pg	**Pb**	**14 05 51.3**	**+1.0**
	0.7nm,0.3s						
PDGK				Lg	Lg	14 06 47.3	
	2.3nm,0.7s						
PDGK	**Podgornoye**	**4.29**	**58**	⇑Lg	Lg	14 06 51.3	
	3.5nm,0.6s						

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*IDC **04** 14:08:02.1±0.8,16.°11S×173.°20W,h0km,mb4.0/10,*
mbtmp4.0/10,MS3.3/7,Error ellipse: s-maj=43.6km
s-min=16.9km az=136.0
*NEIC **04** 14:08:03.4±2.2,16.°11S±0.°07×172.°9W±0.°1,h18km±6km,*
mb4.5/17,Error ellipse: s-maj=20.1km s-min=10.7km
az=92.0
ISC 04 14:08:04.1±0.6,16.°10S±0.°06×172.°91W±0.°09,h26km,n42,
σ1§76/36,mb4.2/18,MS3.5/6,Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.44**	**27**	Pn	**Pn**	**14 08 40.3**	**-2.1**
	39nm,0.3s,baz=203,slow=2.2,SNR=167						
AFI				Sn	**Sn**	**14 09 07.4**	**-3.9**
	117nm,0.3s,baz=242,slow=22,SNR=8.5						
AFI	**Afiamalu**	**2.44**	**27**		**Pn**	**14 08 40.5**	**-1.9**
NIUE	**Niue**	**4.11**	**137**		**Pn**	**14 09 03.7**	**-1.6**
MSVF	**Nonsavu**	**8.80**	**258**	LR	LR	14 12 52.1	
	comp=Z,108nm,19.2s,baz=180,slow=34						
KNTN	**Kanton**	**13.29**	**5**	Pn	**Pn**	**14 11 11.2**	**-0.1**
RAR	**Rarotonga**	**13.45**	**114**	Pn	**Pn**	**14 11 11.4**	**-2.0**
	0.8nm,0.3s,baz=282,slow=19,SNR=1.5						
RAR				Sn	Sn	14 13 29.2	-13
	0.2nm,0.3s,baz=185,slow=4.5,SNR=1.7						
OUENC	**Ouen Island, N**	**20.11**	**249**	P	P	14 12 27.6	-8.5
PPT	**Papeete**	**22.38**	**97**	LR	LR	14 21 15.6	
	comp=Z,32nm,18.1s,baz=240,slow=35						
URZ	**Urewera**	**23.76**	**200**	P	**P**	**14 13 15.4**	**+0.9**
	2.7nm,0.5s,baz=116,slow=22,SNR=1.6						
	2.7nm,0.5s						
RPZ	**Rata Peaks**	**30.72**	**203**	P	**P**	**14 14 17.7**	**+0.7**
	8.7nm,1.0s,baz=76,slow=11,SNR=2.0						
	8.7nm,1.0s						
RPZ	**Rata Peaks**	**30.72**	**203**	P	**P**	**14 14 17.1**	**0.0**
RPZ				IAmb	IAmb	14 14 33.1	
	comp=Z,8.2nm,1.1s						
TOO	**Toolangi**	**42.40**	**231**	P	**P**	**14 15 54.7**	**-1.9**
TOO				IAmb	IAmb	14 15 55.4	
	comp=Z,9.9nm,1.1s						
COEN	**Coen**	**42.41**	**267**	P	**P**	**14 15 56.9**	**0.0**
COEN				IAmb	IAmb	14 16 10.1	
	comp=Z,4.1nm,1.1s						
STKA	**Stephens Creek**	**44.10**	**241**	P	**P**	**14 16 10.3**	**-0.2**
	comp=Z,1.9nm,0.7s,baz=28,slow=8.7,SNR=5.5						
	comp=Z,1.9nm,0.7s						
STKA	**Stephens Creek**	**44.10**	**241**	P	**P**	**14 16 10.1**	**-0.3**
BBOO	**Buckleboo**	**48.88**	**240**	P	**P**	**14 16 46.5**	**-1.4**
WB0	**Warramunga Arr**	**50.11**	**258**	P	**P**	**14 16 56.9**	**-0.6**
WB0				IAmb	IAmb	14 16 59.8	
	comp=Z,3.5nm,1.1s						
WB2	**Warramunga Arr**	**50.14**	**257**	P	**P**	**14 16 57.1**	**-0.6**
WRA	**Warramunga Arr**	**50.15**	**257**	P	**P**	**14 16 57.3**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=95,slow=6.6,SNR=15						
	comp=Z,0.8nm,0.6s						
WRA	**Warramunga Arr**	**50.15**	**257**	P	**P**	**14 16 57.0**	**-0.8**
AS31	**Alice Springs**	**50.35**	**252**	P	**P**	**14 16 58.6**	**-0.7**
ASAR	**Alice Springs**	**50.35**	**252**	P	**P**	**14 16 58.9**	**-0.4**
	comp=Z,2.4nm,0.5s,baz=89,slow=8.0,SNR=52						
	comp=Z,2.4nm,0.5s						
ASAR	**Alice Springs**	**50.35**	**252**	P	**P**	**14 16 57.8**	**-1.5**
KNRA	**Kununurra**	**55.93**	**262**	P	**P**	**14 17 40.8**	**+0.4**
MBWA	**Marble Bar**	**63.62**	**254**	P	**P**	**14 18 31.9**	**-1.4**
MBWA				IAmb	IAmb	14 18 42.6	
	comp=Z,6.0nm,1.1s						
MORW	**Morawa**	**66.02**	**245**	P	**P**	**14 18 46.3**	**-2.6**
PFO	**Pinyon Flats O**	**73.05**	**47**	LR	LR	14 45 19.3	
	comp=Z,45nm,20.7s,baz=332,slow=30						
YBH	**Yreka Blue Hor**	**73.87**	**37**	P	**P**	**14 19 40.4**	**+3.5**
	comp=Z,2.2nm,0.8s,baz=287,slow=1.9,SNR=4.2						
	comp=Z,2.2nm,0.8s						
NVAR	**Mina Array Bea**	**74.53**	**42**	P	**P**	**14 19 44.1**	**+3.2**
	comp=Z,0.7nm,0.7s,baz=224,slow=8.7,SNR=7.9						
	comp=Z,0.7nm,0.7s						
KDAK	**Kodiak Island**	**75.51**	**11**	LR	LR	14 49 34.8	
	comp=Z,27nm,18.1s,baz=200,slow=33						
TXAR	**Lajitas Array**	**80.61**	**56**	P	**P**	**14 20 18.3**	**+3.3**
	comp=Z,0.2nm,0.8s,baz=224,slow=6.3,SNR=2.6						
TXAR				LR	LR	14 47 43.0	
	comp=Z,20nm,19.3s,baz=297,slow=30						
	comp=Z,0.2nm,0.8s						
ANMO	**Albuquerque**	**80.89**	**50**	LR	LR	14 51 19.1	
	comp=Z,24nm,18.9s,baz=256,slow=32						
J20K	**Nowinta River**	**81.32**	**8**	P	**P**	**14 20 17.9**	**+0.1**
J20K				IAmb	IAmb	14 20 21.1	
	comp=Z,4.5nm,1.1s						
PDAR	**Pinedale Array**	**82.47**	**42**	P	**P**	**14 20 27.3**	**+2.6**
	comp=Z,0.7nm,0.7s,baz=180,slow=1.5,SNR=5.4						
	comp=Z,0.7nm,0.7s						
WRH	**Wood River Hil**	**82.55**	**11**	P	**P**	**14 20 25.4**	**+1.1**
WRH				IAmb	IAmb	14 20 27.4	
	comp=Z,4.2nm,0.9s						
CCB	**Clear Creek Bu**	**82.76**	**11**	P	**P**	**14 20 27.1**	**+1.7**
CCB				IAmb	IAmb	14 20 28.2	
	comp=Z,3.9nm,0.7s						
MDM	**Murphy Dome**	**82.97**	**10**	P	**P**	**14 20 27.9**	**+1.3**
MDM				IAmb	IAmb	14 20 28.9	
	comp=Z,3.4nm,1.0s						
ILAR	**Eielson Array**	**83.04**	**11**	P	**P**	**14 20 29.0**	**+2.2**
	comp=Z,0.9nm,0.6s,baz=232,slow=6.3,SNR=27						
	comp=Z,0.9nm,0.6s						
ILAR	**Eielson Array**	**83.04**	**11**	P	**P**	**14 20 27.5**	**+0.6**
CMIG	**Matias Romero**	**83.67**	**70**	LR	LR	14 49 14.5	
	comp=Z,20nm,19.8s,baz=42,slow=30						
GERES	**GERESS Array B**	**146.90**	**352**	PKPbc	**PKPab**	**14 27 46.3**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=64,slow=4.5,SNR=3.5						
BRTR	**Keskin Array B**	**146.99**	**321**	PKPbc	**PKPab**	**14 27 47.0**	**+0.6**
	comp=Z,0.8nm,0.5s,baz=49,slow=2.9,SNR=5.4						

GUC 04 14:12:02.4±0.6,21.°28S×68.°57W,h119km±4km,ML3.5,
11C-3D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.81**	**230**	⇑*i*P	Pn	14 12 22.7	-0.1
PB09				*i* S	Sn	14 12 38.2	0.0
PB09				IAML		14 12 40.1	
	comp=E,1μm,0.3s						

TA01				IAML		14 12 54.3	
	comp=N,1μm,0.3s						
PB06	**IPOC Station P**	**1.70**	**213**	*iP*	Pn	14 12 32.1	-0.2
PB06				*eS*	Sn	14 12 54.9	-0.2
PB06				IAML		14 12 55.8	
	comp=E,352nm,0.2s						
AF01	**San Pedro de A**	**1.71**	**168**	*eP*	Pn	14 12 31.0	-1.6
TA02	**Huaiquique**	**1.77**	**304**	*iP*	Pn	14 12 32.2	-0.7
TA02				*eS*	Sn	14 12 54.9	-1.4
TA02				IAML		14 13 01.3	
	comp=N,2μm,0.1s						
PB04	**IPOC Station P**	**1.81**	**234**	*iP*	Pn	14 12 32.6	-0.9
PB04				*eS*	Sn	14 12 56.4	-1.0
PB04				IAML		14 13 02.0	
	comp=N,284nm,0.1s						
PB11	**IPOC Station P**	**1.82**	**326**	*iP*	Pn	14 12 33.1	-0.6
PB11				*eS*	Sn	14 12 56.6	-1.0
PB11				IAML		14 13 02.5	
	comp=E,442nm,0.1s						
PB15	**IPOC Station P**	**2.10**	**203**	*eP*	Pn	14 12 37.1	-0.2
PB15				*eS*	Sn	14 13 03.8	-0.1
PB10	**IPOC Station P**	**2.89**	**219**	*eP*	Pn	14 12 46.5	-0.6
PB10				*eS*	Sn	14 13 14.7	-7.0
PB16	**IPOC Station P**	**3.05**	**343**	*eP*	Pn	14 12 51.1	+1.1
PB16				*eS*	Sn	14 13 25.0	-1.5
PB12	**IPOC Station P**	**3.12**	**328**	*eP*	Pn	14 12 49.0	-1.4
PB12				*eS*	Sn	14 13 26.7	-0.6
PB12				IAML		14 13 37.6	
	comp=N,105nm,0.5s						
AC01	**Pan de Azucar**	**5.19**	**201**	*eP*	Pn	14 13 15.3	-2.7

MAN 04 14:12:09.6, 13.67N×120.61E, h72km, mb3.8, ML2.6, MS2.1, Mindoro

JMA 04 14:24:44.7±0.2, 37.5N±0.8×14.5E±°, h63km, MV3.7/27, FAR E OFF NORTH HONSHU, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**2.69**	**288**	*i* P	Pn	14 25 26.7	+1.2
JIKH				S	Sn	14 25 58.2	+1.2
JIO	**Ouri**	**2.82**	**290**	*i* P	Pn	14 25 28.6	+1.2
JIO				S	Sn	14 26 01.7	+1.5
OFUJ	**Ofunato**	**2.86**	**304**	P	Pn	14 25 29.0	+1.1
OFUJ				*eS*	Sn	14 26 02.3	+1.2
JKMT	**Kesennumamotoy**	**2.87**	**298**	P	Pn	14 25 29.1	+1.1
JKMT				S	Sn	14 26 02.4	+1.2
JMK	**Ichinoseki**	**3.10**	**298**	*i* P	Pn	14 25 32.8	+1.6
JMK				S	Sn	14 26 08.7	+1.6
JOM	**Ohasama**	**3.32**	**307**	P	Pn	14 25 35.9	+1.7
JOM				S	Sn	14 26 14.0	+1.6
BSO1	**Boso 1**	**4.17**	**228**	*eP*	Pn	14 25 45.0	-0.2
JOT	**Ohata**	**4.79**	**325**	P	Pn	14 25 55.8	+1.6
JOT				*eS*	Sn	14 26 49.0	+0.6
JRY	**Ryogami san**	**4.91**	**254**	P	Pn	14 25 56.7	+0.8
JRY				S	Sn	14 26 50.4	-0.9
JOD2	**Odawara 2**	**5.07**	**245**	*eP*	Pn	14 26 00.0	+1.9
JCH	**Churui**	**5.19**	**349**	*eP*	Pn	14 25 58.9	-0.9
JCH				*eS*	Sn	14 26 54.7	-3.6
NEM2	**Nemuro 2**	**5.89**	**7**	*eP*	Pn	14 26 06.7	-2.6
NEM2				S	Sn	14 27 09.3	-6.1
JTKR	**Abashiri--Toko**	**6.47**	**355**	*eP*	Pn	14 26 16.4	-0.8
JTKR				*eS*	Sn	14 27 25.3	-4.3

MAN 04 14:36:36.7, 10.05N×124.11E, h34km, mb3.9, ML2.6, MS2.2, Leyte

*IDC **04** 14:41:14.7±2.1, 0.38N×126.22E, h0km, mb3.1/3, mbtmp3.2/3, Error ellipse: s-maj=190.0km s-min=28.1km az=65.0*
*DJA **04** 14:41:20.6±0.3, 0.7S±4.4×12.5E±°, h10km, M3.8/11, mb4.0/5, mB4.9/1, MLv3.7/11, Mw(mB)4.2/1*
ISC 04 14:41:22.4±1.2, 0.1S±0.1×125.25E±0.08, h49km, n13, σ1s59/13, mb3.0/3, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**1.44**	**298**	P	**Pn**	**14 41 45.3**	**-0.9**
SANI	**Sanana**	**2.06**	**159**	P	**Pn**	**14 41 52.7**	**-1.9**
LBMI	**Labuha**	**2.31**	**103**	P	**Pn**	**14 41 59.6**	**+1.6**
LUWI	**Luwuk**	**2.65**	**250**	P	**Pn**	**14 42 05.9**	**+3.2**
MRSI	**Marisa**	**3.37**	**280**	P	**Pn**	**14 42 12.9**	**+0.4**
APSI	**Ampana**	**3.69**	**258**	P	**Pn**	**14 42 18.4**	**+1.4**
SPSI	**Sidrap Palu**	**6.69**	**235**	P	**Pn**	**14 42 59.1**	**+1.0**
	0.1nm17nm,0.6s						
BKSI	**Bulukumba**	**7.28**	**225**	P	**Pn**	**14 43 07.2**	**+0.9**
	0.0nm7.7nm,1.0s						
FAKI	**Fak Fak**	**7.53**	**112**	P	**Pn**	**14 43 09.0**	**-0.7**
	0.1nm13nm,1.0s						
EDFI	**Ende, Flores**	**9.29**	**202**	P	**Pn**	**14 43 35.4**	**+1.5**
WRA	**Warramunga Arr**	**21.62**	**156**	P	**P**	**14 46 07.5**	**-1.2**
	0.5nm,0.8s,baz=338,slow=12,SNR=3.0						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**24.88**	**161**	P	**P**	**14 46 40.9**	**+0.2**
	0.3nm,0.6s,baz=343,slow=10,SNR=5.1						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**59.91**	**327**	P	**P**	**14 51 23.4**	**-0.1**
	0.2nm,0.4s,baz=119,slow=7.6,SNR=4.2						
	0.2nm,0.4s						

*ISK **04** 14:53:09.8, 38.00N×42.97E, h12km, ML2.5/7*
*DDA **04** 14:53:11.3±0.0, 38.07N±43.02E, h7km±1km, ML2.1*
ISC 04 14:53:10.6±1.1, 38.05N±0.04×43.01E±0.03, h13km±10km, n14, σ0s58/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GEVA	**Gevas**	**0.27**	**9**	P	**Pg**	**14 53 16.3**	**0.0**
GEVA				S	**Sg**	**14 53 20.0**	**-0.2**
GEVA				*i* AML	AML	14 53 21.0	
	comp=N,417nm,0.1s						
GEVA				*i* AML	AML	14 53 21.0	
	comp=E,532nm,0.4s						
AKDM	**Akdamar-Van**	**0.28**	**356**	PG	**Pg**	**14 53 17.0**	**+0.5**
AKDM				SG	**Sb**	**14 53 21.9**	**-0.5**
PERV	**Siirt/Pervari-**	**0.38**	**255**	P	**Pb**	**14 53 19.8**	**+0.5**
PERV				S	**Sb**	**14 53 25.7**	**+0.6**
PERV				*i* AML	AML	14 53 29.0	
	comp=N,265nm,0.5s						
PERV				*i* AML	AML	14 53 29.0	
	comp=E,382nm,0.3s						
TVAN	**Van**	**0.57**	**33**	P	**Pg**	**14 53 22.1**	**+0.2**
VANB	**Van**	**0.62**	**29**	PG	**Pg**	**14 53 21.9**	**-0.9**
HAKT	**HAKKARI**	**0.74**	**131**	P	**Pb**	**14 53 25.8**	**+0.3**
HAKT				S	**Sb**	**14 53 36.8**	**+1.3**
HAKT				*i* AML	AML	14 53 41.0	
	comp=E,53nm,0.3s						
HAKT				*i* AML	AML	14 53 42.0	
	comp=N,47nm,0.5s						
ADCV	**BITLIS_Adilcev**	**0.79**	**344**	P	**Pg**	**14 53 25.4**	**-0.5**
ADCV				S	**Sb**	**14 53 37.5**	**+0.5**
ADCV				*i* AML	AML	14 53 41.0	
	comp=E,77nm,0.6s						
BLIS	**Bitlis-Merkez**	**0.79**	**298**	P	**Pg**	**14 53 25.5**	**-0.4**
BLIS				S	**Sg**	**14 53 35.8**	**-0.5**
GURO	**Guroymak-BITLI**	**0.92**	**304**	PG	**Pg**	**14 53 28.1**	**-0.2**
GURO				SG	**Sb**	**14 53 40.9**	**+0.3**
CUKT	**Cukurca**	**0.93**	**149**	PG	**Pg**	**14 53 27.7**	**-0.9**
MLAZ	**Malazgirt-MUS**	**1.15**	**342**	PN	**Pb**	**14 53 32.6**	**+0.2**
MUSM	**Mu-Merkez**	**1.35**	**300**	P	**Pb**	**14 53 36.2**	**+0.3**
MUSM				S	**Sg**	**14 53 54.6**	**+0.4**
SVAN	**Silvan-Diyarba**	**1.43**	**275**	PN	**Pn**	**14 53 35.9**	**-0.4**
MAZI	**Mazidag**	**2.11**	**255**	PN	**Pn**	**14 53 45.4**	**-0.3**

MAN 04 14:58:38.9, 9.80N×125.33E, h33km, mb3.8, ML2.6, MS2.1, Mindanao

*IDC **04** 15:08:22.8±1.0, 2.30S×139.45E, h0km, mb4.0/7, mbtmp4.2/10, ML4.3/3, MS3.1/5, Error ellipse: s-maj=32.3km s-min=20.6km az=90.0*
*DJA **04** 15:08:27.0±1.7, 2.6S×13.9E±°, h19km±18km, M4.4/8, mb4.3/8, MLv4.4/5*
*NEIC **04** 15:08:31.4±1.7, 2.46S±0.07×139.1E±0.1, h54km±9km, mb4.2/17, Error ellipse: s-maj=18.5km s-min=10.3km az=92.0*
ISC 04 15:08:27.3±0.6, 2.27S±0.08×139.28E±0.06, h27km, n60, σ1s23/58, mb4.2/13, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENI	**Genyem**	**0.95**	**110**	P	**Pn**	**15 08 44.7**	**-0.2**
GENI				S	**Sn**	**15 08 58.4**	**+0.9**
SRPI	**Serui, Papua**	**3.06**	**277**	P	**Pn**	**15 09 14.6**	**+0.6**
SRPI				S	**Sn**	**15 09 50.8**	**+1.1**
BAKI	**Biak**	**3.34**	**289**	P	**Pn**	**15 09 17.3**	**-0.6**
FAKI	**Fak Fak**	**7.05**	**265**	Pn	**Pn**	**15 10 09.1**	**+0.2**
FAKI	**Fak Fak**	**7.05**	**265**	P	**Pn**	**15 10 09.0**	**+0.2**
	0.2nm28nm,0.6s						
SIJI	**Sorong**	**8.13**	**280**	Pn	**Pn**	**15 10 25.3**	**+1.7**
	2.8nm,0.3s,baz=181,slow=16,SNR=11						
SIJI				LR	LR	15 14 01.1	
	comp=Z,150nm,20.0s,baz=80,slow=41						
	6.2nm,0.3s						
PMG	**Port Moresby**	**10.57**	**132**	LR	LR	15 15 07.8	
	comp=Z,63nm,20.8s,baz=344,slow=39						
PMG	**Port Moresby**	**10.57**	**132**	P	Pn	15 11 03.0	+5.9
COEN	**Coen**	**12.24**	**162**	Pn	**Pn**	**15 11 21.2**	**+1.2**
KDU	**Kakadu**	**12.35**	**213**	P	**Pn**	**15 11 20.2**	**-1.3**
MTN	**Manton Dam**	**13.25**	**217**	Pn	**Pn**	**15 11 32.3**	**-1.4**
MTN	**Manton Dam**	**13.25**	**217**	P	**Pn**	**15 11 33.3**	**-0.5**
SANI	**Sanana**	**13.28**	**271**	P	**Pn**	**15 11 33.5**	**-0.7**
	9.2nm,0.8s						
MTSU	**Mount Surprise**	**16.53**	**163**	P	**P**	**15 12 20.2**	**+0.4**
SOEI	**Soe**	**16.67**	**243**	Pn	**Pn**	**15 12 17.5**	**-1.8**
SOEI	**Soe**	**16.67**	**243**	P	**P**	**15 12 20.7**	**-0.8**
	46nm,1.0s						
GUMO	**Guam**	**16.70**	**19**	LR	LR	15 18 53.5	
	comp=Z,39nm,18.5s,baz=179,slow=38						
KNRA	**Kununurra**	**16.88**	**217**	P	**Pn**	**15 12 20.2**	**-1.6**
KNRA				IAmb	IAmb	15 12 31.3	
	comp=Z,13nm,0.8s						
KNRA	**Kununurra**	**16.88**	**217**	P	**Pn**	**15 12 21.2**	**-0.7**
BATI	**Baumata**	**17.40**	**242**	P	**P**	**15 12 29.7**	**+0.2**
	comp=Z,2.8nm,0.3s,baz=123,slow=2.8,SNR=6.3						
	comp=Z,24nm,0.7s						
APSI	**Ampana**	**17.67**	**274**	P	**P**	**15 12 33.8**	**+1.3**
WB0	**Warramunga Arr**	**18.04**	**195**	P	**Pn**	**15 12 35.1**	**-1.1**
QIS	**Mount Isa**	**18.18**	**179**	P	**P**	**15 12 40.7**	**+2.6**
WR0	**Warramunga Arr**	**18.19**	**194**		**Pn**	**15 12 36.6**	**-1.5**
WRAB	**Tennant Creek**	**18.21**	**195**	P	**Pn**	**15 12 37.2**	**-1.1**
WRAB				IAmb	IAmb	15 12 49.0	
	comp=Z,21nm,1.5s						
WB2	**Warramunga Arr**	**18.22**	**195**	P	**Pn**	**15 12 37.4**	**-1.0**
WRA	**Warramunga Arr**	**18.22**	**195**	P	**Pn**	**15 12 38.1**	**-0.4**
	comp=Z,0.8nm,0.3s,baz=21,slow=11,SNR=42						
	comp=Z,3.0nm,0.4s						
WRA	**Warramunga Arr**	**18.22**	**195**	P	**Pn**	**15 12 35.3**	**-3.2**
CTA	**Charters Tower**	**18.98**	**159**	P	**Pn**	**15 12 51.2**	**+3.5**
AS31	**Alice Springs**	**21.90**	**193**	P	**P**	**15 13 17.6**	**-0.9**
AS31				IAmb	IAmb	15 13 29.8	
	comp=Z,3.0nm,0.6s						
ASAR	**Alice Springs**	**21.90**	**193**	P	**P**	**15 13 17.9**	**-0.7**
	comp=Z,1.2nm,0.5s,baz=14,slow=11,SNR=31						
ASAR				LR	LR	15 22 25.9	
	comp=Z,108nm,20.1s,baz=360,slow=38						
	comp=Z,1.2nm,0.5s						
ASAR	**Alice Springs**	**21.90**	**193**	P	**P**	**15 13 17.7**	**-0.9**
WRKA	**Warakurna**	**25.00**	**204**	P	**P**	**15 13 48.1**	**-1.0**
INKA	**Innaminka**	**25.37**	**177**	P	**P**	**15 13 54.0**	**+1.6**
OOD	**Oodnadatta**	**25.62**	**187**	P	**P**	**15 13 55.3**	**+0.7**
MBWA	**Marble Bar**	**26.75**	**224**	P	**P**	**15 14 03.6**	**-1.4**
MBWA				IAmb	IAmb	15 14 19.7	
	comp=Z,6.5nm,1.1s						
PSA00	**Pilbara Seismi**	**26.94**	**223**	P	**P**	**15 14 04.7**	**-2.1**
PSA00				IAmb	IAmb	15 14 26.2	
	comp=Z,9.9nm,1.4s						
LCRK	**Leigh Creek**	**28.05**	**182**	P	**P**	**15 14 17.0**	**+0.5**
MULG	**Mulgathing**	**28.30**	**190**	P	**P**	**15 14 19.4**	**+0.7**
FORT	**Forrest**	**30.28**	**199**	P	**P**	**15 14 35.6**	**-0.7**
FORT	**Forrest**	**30.28**	**199**	P	**P**	**15 14 37.2**	**+0.9**
BBOO	**Buckleboo**	**30.54**	**185**	P	**P**	**15 14 37.9**	**-0.6**
HTT	**Hallett**	**31.01**	**181**	P	**P**	**15 14 44.7**	**+1.9**
GHSS	**Government Hou**	**32.49**	**181**	P	**P**	**15 14 57.3**	**+1.6**
	comp=Z,238nm,0.5s						
JHJ	**Hachijo jima 2**	**35.20**	**1**	LR	LR	15 26 09.8	
	comp=Z,29nm,21.6s,baz=270,slow=30						
CMAR	**Chiang Mai Arr**	**44.71**	**299**	P	**P**	**15 16 38.8**	**+0.2**
	comp=Z,1.2nm,0.5s,baz=120,slow=6.6,SNR=9.7						
	comp=Z,1.2nm,0.5s						
CMAR	**Chiang Mai Arr**	**44.71**	**299**	P	**P**	**15 16 38.5**	**0.0**
MK31	**Makanchi Array**	**69.79**	**322**	P	**P**	**15 19 36.2**	**+0.8**
MK31				IAmb	IAmb	15 19 37.8	
	comp=Z,4.0nm,1.2s						
MKAR	**Makanchi Array**	**69.79**	**322**	P	**P**	**15 19 36.3**	**+1.0**
	comp=Z,2.8nm,0.8s,baz=102,slow=8.5,SNR=23						
	comp=Z,2.8nm,0.8s						
MKAR	**Makanchi Array**	**69.79**	**322**	P	**P**	**15 19 36.0**	**+0.6**
MAKZ	**Makanchi**	**69.98**	**322**	P	**P**	**15 19 36.7**	**+0.1**
ZALV	**Zalesovo Beam**	**71.84**	**330**	P	**P**	**15 19 47.3**	**-0.3**
	comp=Z,1.3nm,0.6s,baz=110,slow=6.2,SNR=4.1						
	comp=Z,1.3nm,0.6s						
KURK	**Kurchatov**	**73.68**	**325**	P	**P**	**15 19 59.2**	**+0.6**
KURK				IAmb	IAmb	15 20 00.0	
	comp=Z,4.5nm,1.1s						
VNDA	**Vanda**	**76.17**	**175**	P	**P**	**15 20 11.4**	**-1.2**
	comp=Z,0.3nm,0.5s,baz=353,slow=7.7,SNR=1.7						
	comp=Z,0.3nm,0.5s						
VNDA	**Vanda**	**76.17**	**175**	P	**P**	**15 20 11.5**	**-1.0**
VNDA				IAmb	IAmb	15 20 22.4	
	comp=Z,2.9nm,1.4s						
KKAR	**Karatay Array**	**76.21**	**315**	P	**P**	**15 20 12.2**	**-1.3**
BRVK	**Borovoye**	**79.34**	**325**	P	**P**	**15 20 30.6**	**0.0**
BRVK				IAmb	IAmb	15 20 32.2	
	comp=Z,4.1nm,0.7s						
NRIK	**Noril'sk**	**79.46**	**344**	P	**P**	**15 20 31.4**	**+0.5**
	comp=Z,2.2nm,0.5s,baz=101,slow=4.4,SNR=5.3						
	comp=Z,2.2nm,0.5s						
ILAR	**Eielson Array**	**85.20**	**24**	P	**P**	**15 21 01.1**	**0.0**
	comp=Z,1.1nm,0.7s,baz=257,slow=4.8,SNR=14						
	comp=Z,1.1nm,0.7s						
TORD	**Torodi Ar. Bea**	**136.67**	**287**	PKP	**PKiKP**	**15 27 49.2**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=89,slow=2.3,SNR=7.9						

*BJI **04** 15:18:19.9±0.0, 5.30S×97.80E, h10km, mb4.6/38, mB4.7/20, Ms4.1/6, Ms7 3.8/6*
*DJA **04** 15:18:20.3±0.5, 5.2S±3.9×98.2E±°, h10km, M5.1/47, mB5.5/14, mb4.9/47, MLv5.6/12, Mw(mB)4.9/14*
*IDC **04** 15:18:20.5±0.8, 5.27S×97.89E, h0km, mb4.2/16, mbtmp4.3/18, ML4.6/2, MS3.6/32, Error ellipse: s-maj=22.5km s-min=13.8km az=42.0*
*NEIC **04** 15:18:21.8±1.1, 5.3S±0.1×97.82E±0.0, h10km±1km, mb4.6/19, Error ellipse: s-maj=20.0km s-min=10.5km az=214.0*
ISC 04 15:18:22.0±0.7, 5.32S±0.08×97.93E±0.07, h10km, n143, σ1s59/119, mb4.7/54, MS3.7/33, 3D, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PPSI	**Pulau Pagai**	**3.28**	**39**	P	**Pn**	**15 19 13.4**	**0.0**
SISI	**Saibi**	**4.13**	**16**	P	**Pn**	**15 19 23.2**	**-2.0**
KRJI	**Kerinci**	**4.76**	**48**	P	**Pn**	**15 19 33.7**	**-0.3**
MNAI	**Manna**	**5.10**	**79**	Pn	**Pn**	**15 19 39.1**	**+0.6**
MNAI	**Manna**	**5.10**	**79**	P	**Pn**	**15 19 39.2**	**+0.7**
	10.0nm55μm265nm,1.3s						
PPI	**Padang Panjang**	**5.42**	**27**	P	**Pn**	**15 19 41.3**	**-1.6**
LWLI	**Liwa**	**6.11**	**87**	P	**Pn**	**15 19 53.5**	**+1.0**
	9.6nm11μm550nm,0.6s						
MNSI	**Mandailing Nat**	**6.29**	**15**	P	**Pn**	**15 19 52.8**	**-2.1**
	1.8nm2μm107nm,0.4s						
BKNI	**Bangkinang**	**6.41**	**29**	Pn	**Pn**	**15 19 56.2**	**-0.2**
BKNI	**Bangkinang**	**6.41**	**29**	P	**Pn**	**15 19 56.3**	**-0.2**
	0.8nm4μm206nm,0.8s						
KASI	**Kota Agung**	**6.54**	**92**	P	**Pn**	**15 19 59.1**	**+0.8**
	5.1nm5μm357nm,0.7s						
GSI	**Gunungsitoli**	**6.59**	**357**	Pn	**Pn**	**15 19 57.8**	**-1.2**
GSI	**Gunungsitoli**	**6.59**	**357**	P	**Pn**	**15 19 57.4**	**-1.6**
	0.7nm76nm,0.5s						
SBSI	**Sibolga**	**6.89**	**8**	P	**Pn**	**15 19 58.9**	**-4.2**
	1.1nm1μm55nm,0.5s						
KLI	**Kotabumi**	**6.91**	**87**	P	**Pn**	**15 20 05.4**	**+2.0**
	2.9nm177nm,0.6s						
PMBI	**Palembang**	**7.22**	**71**	P	**Pn**	**15 20 06.4**	**-1.3**
	1.8nm276nm,0.5s						
BLSI	**Bandar Lampung**	**7.28**	**91**	P	**Pn**	**15 20 09.0**	**+0.5**
	1.1nm3μm200nm,0.5s						

PSI	**Prapat**	**8.13**	**7**	Pn	**Pn**	**15 20 18.5**	**-1.7**
	2.5nm,0.3s,baz=150,slow=10,SNR=11						
PSI				LR	LR	15 23 29.9	
	comp=Z,253nm,20.9s,baz=211,slow=39						
	13nm,0.6s						
DSRI	**Dabo**	**8.20**	**54**	P	**Pn**	**15 20 20.3**	**-0.7**
	52nm,0.7s						
SKJI	**Sukabumi**	**8.74**	**101**	P	**Pn**	**15 20 29.3**	**+0.8**
	122nm,0.5s						
KCSI	**Kotacane, Aceh**	**8.78**	**359**	P	**Pn**	**15 20 30.0**	**+0.9**
	45nm,0.5s						
TSI	**Tuntungan**	**8.78**	**4**	P	**Pn**	**15 20 28.8**	**-0.3**
	78nm,0.8s						
DBJI	**Dramaga**	**8.86**	**98**	P	**Pn**	**15 20 34.2**	**+4.0**
	56nm,0.6s						
CBJI	**Citeko**	**8.94**	**97**	P	**Pn**	**15 20 33.4**	**+2.1**
	5μm330nm,0.7s						
TPRI	**Tanjung Pinang**	**9.04**	**47**	P	**Pn**	**15 20 32.4**	**-0.3**
	3μm153nm,0.9s						
MYKOM	**Kota Tinggi**	**9.21**	**40**	Pn	**Pn**	**15 20 34.3**	**-0.7**
CNJI	**Cibinong**	**9.36**	**103**	P	**Pn**	**15 20 35.3**	**-1.6**
	3μm268nm,0.7s						
LEM	**Lembang**	**9.75**	**99**	Pn	**Pn**	**15 20 44.9**	**+2.4**
	20nm,0.3s,baz=276,slow=8.0,SNR=13						
LEM				Sn	**Sn**	**15 22 26.4**	**-5.9**
	8.7nm,0.3s,baz=307,slow=20,SNR=2.6						
LEM				LR	LR	15 23 20.8	
	comp=Z,74nm,21.1s,baz=262,slow=31						
	48nm,0.4s						
LEM	**Lembang**	**9.75**	**99**	P	**Pn**	**15 20 44.1**	**+1.6**
	100nm,0.9s						
IPM	**Ipoh**	**10.21**	**18**	Pn	**Pn**	**15 20 47.0**	**-1.8**
CMJI	**Cimerak**	**10.73**	**104**	P	**Pn**	**15 20 54.9**	**-0.9**
	62nm,0.7s						
KULM	**Kulim**	**10.88**	**14**		**Pn**	**15 20 57.0**	**-0.9**
UGM	**Wanagama**	**12.77**	**102**	P	**Pn**	**15 21 24.2**	**+0.4**
	114nm,1.9s						
PCJI	**Pacitan**	**13.46**	**103**	P	**Pn**	**15 21 33.6**	**+0.4**
	40nm,0.7s						
PWJI	**Pagerwojo**	**14.04**	**102**	P	**Pn**	**15 21 40.5**	**-0.6**
	50nm,0.9s						
KSM	**Kuching**	**14.09**	**62**		**Pn**	**15 21 41.4**	**-0.3**
SBUM	**Sibu**	**16.23**	**62**		**Pn**	**15 22 11.8**	**+1.6**
SBUM				IAmb	IAmb	15 22 17.0	
	comp=Z,43nm,0.9s						
ABJI	**Asem Bagus**	**16.38**	**100**	P	**P**	**15 22 20.5**	**+5.4**
JAGI	**Jajag, Banyuwa**	**16.40**	**102**	P	**Pn**	**15 22 14.2**	**+1.7**
	comp=Z,42nm,1.1s						
BBKI	**Banjar Baru**	**16.96**	**84**	P	**P**	**15 22 22.5**	**+1.0**
	comp=Z,45nm,0.9s						
SRBI	**Singaraja**	**17.38**	**100**	P	**Pn**	**15 22 25.3**	**+0.5**
	comp=Z,40nm,0.7s						
PLAI	**Plampang**	**20.00**	**101**	P	**P**	**15 22 54.1**	**-0.8**
	comp=Z,50nm,0.9s						
PALK	**Pallekele**	**21.26**	**306**	P	**P**	**15 23 09.6**	**+0.9**
	comp=Z,29nm,1.0s,baz=273,slow=10,SNR=4.3						
PALK				LR	LR	15 29 52.7	
	comp=Z,187nm,21.0s,baz=227,slow=33						
	comp=Z,29nm,1.0s						
WBSI	**Waikabubak, Su**	**21.70**	**103**	P	**P**	**15 23 13.3**	**-0.1**
	comp=Z,59nm,0.8s						
KAPI	**Kappang**	**21.73**	**90**	P	**P**	**15 23 15.9**	**+2.2**
	comp=Z,11nm,0.3s,baz=248,slow=10,SNR=5.6						
KAPI				LR	LR	15 32 57.8	
	comp=Z,103nm,18.5s,baz=274,slow=40						
	comp=Z,11nm,0.3s						
SPSI	**Sidrap Palu**	**21.81**	**87**	P	**P**	**15 23 14.5**	**0.0**
	comp=Z,23nm,0.7s						
TTSI	**Tana Toraja**	**21.95**	**85**	P	**P**	**15 23 16.2**	**+0.2**
	comp=Z,26nm,1.2s						
BKSI	**Bulukumba**	**22.10**	**91**	P	**P**	**15 23 18.7**	**+1.1**
	comp=Z,62nm,0.8s						
BNSI	**Bone**	**22.11**	**89**	P	**P**	**15 23 19.0**	**+1.2**
	comp=Z,44nm,1.2s						
BSSI	**Bau Bau, Buton**	**22.46**	**93**	P	**P**	**15 23 21.9**	**+0.3**
	comp=Z,39nm,1.0s						
MPSI	**Mapaga**	**22.65**	**76**	P	**P**	**15 23 23.6**	**+0.1**
	comp=Z,19nm,0.8s						
MYLDM	**Lahad Datu**	**23.04**	**63**	P	**P**	**15 23 29.0**	**+1.4**
MYLDM				IAmb	IAmb	15 23 41.9	
	comp=Z,62nm,1.4s						
CMAR	**Chiang Mai Arr**	**23.65**	**2**	P	**P**	**15 23 34.2**	**+0.5**
	comp=Z,3.3nm,0.9s,baz=194,slow=9.5,SNR=24						
CMAR				LR	LR	15 33 15.4	
	comp=Z,75nm,18.7s,baz=200,slow=38						
	comp=Z,3.3nm,0.9s						
TOLI2	**Tolitoli**	**23.70**	**75**	P	**P**	**15 23 34.9**	**+0.6**
TOLI2				IAmb	IAmb	15 23 38.0	
	comp=Z,48nm,1.3s						
EDFI	**Ende, Flores**	**23.82**	**100**	P	**P**	**15 23 32.5**	**-3.1**
	comp=Z,13nm,0.7s						
CHTO	**Chiang Mai**	**24.00**	**2**	P	**P**	**15 23 35.5**	**-1.5**
APSI	**Ampana**	**24.08**	**80**	P	**P**	**15 23 38.8**	**+0.9**
	comp=Z,305nmcomp=Z,26nm,1.1s						
MMRI	**Maumere**	**24.35**	**99**	P	**P**	**15 23 39.6**	**-0.8**
MMRI	**Maumere**	**24.35**	**99**	P	**P**	**15 23 39.5**	**-0.8**
	comp=Z,3μmcomp=Z,73nm,1.2s						
BBSI	**Bau Bau**	**24.53**	**92**	P	**P**	**15 23 42.9**	**+0.9**
	comp=Z,5.3nm,1.0s						
MRSI	**Marisa**	**24.66**	**77**	P	**P**	**15 23 42.5**	**-0.7**
	comp=

GOMU					sP	sP	15 26 15.7	+4.6
GOMU					pmax	pmax		
	comp=Z,2.0nm,0.5s							
GOMU					pmax	pmax		
	comp=Z,65nm,4.5s							
LZH	**Lanzhou**	**41.56**	**7**	*eP*	**P**		**15 26 10.2**	**+0.1**
LZH					sP	pwP	15 26 17.3	-1.3
LZH					pmax	pmax		
	comp=Z,26nm,1.0s							
LZH					LR	LR		
	comp=Z,100nm,15.9s							
LZH					LR	LR		
	comp=Z,130nm,17.3s							
LZH					LR	LR		
	comp=Z,100nm,17.4s							
NJ2	**Nanjing**	**42.17**	**27**	*eP*	**P**		**15 26 15.5**	**+0.6**
NJ2					pmax	pmax		
	comp=Z,15nm,1.1s							
GTA	**Gaotai**	**44.54**	**2**	⇓P	**P**		**15 26 34.6**	**+0.5**
GTA					pP	pwP	15 26 40.5	-2.2
GTA					sP	sP	15 26 45.5	+9.3
GTA					pmax	pmax		
	comp=Z,4.0nm,0.9s							
GTA					pmax	pmax		
	comp=Z,46nm,6.5s							
GTA					LR	LR		
	comp=Z,63nm,18.9s							
GTA					LR	LR		
	comp=Z,99nm,20.7s							
GTA					LR	LR		
	comp=Z,69nm,17.4s							
HNS	**HongShan**	**45.29**	**19**	⇓P	**P**		**15 26 41.1**	**+1.2**
HNS					pmax	pmax		
	comp=Z,21nm,0.8s							
HHC	**Hu-ho-hao-te**	**47.62**	**14**	*eP*	**P**		**15 26 59.8**	**+1.5**
HHC					pmax	pmax		
	comp=Z,18nm,0.9s							
HHC					pmax	pmax		
	comp=Z,110nm,8.6s							
WSAR	**Wadi Sarin**	**47.73**	**308**		LR	LR	15 43 57.0	
	comp=Z,129nm,20.9s,baz=156,slow=32							
BJI	**Beijing**	**48.16**	**19**		P	**P**	**15 27 03.0**	**+0.6**
BJI					pmax	pmax		
	comp=Z,10.0nm,0.7s							
STKA	**Stephens Creek**	**48.61**	**128**		P	**P**	**15 27 05.9**	**-0.2**
	comp=Z,1.3nm,0.5s,baz=302,slow=6.5,SNR=7.6							
STKA					LR	LR	15 47 01.0	
	comp=Z,67nm,21.8s,baz=247,slow=35							
	comp=Z,1.3nm,0.5s							
STKA	**Stephens Creek**	**48.61**	**128**		P	**P**	**15 27 06.5**	**+0.4**
PMG	**Port Moresby**	**48.96**	**98**		LR	LR	15 51 47.2	
	comp=Z,50nm,18.3s,baz=284,slow=41							
PMG	**Port Moresby**	**48.96**	**98**		P	**P**	**15 27 08.0**	**-1.1**
CTA	**Charters Tower**	**49.17**	**112**		LR	LR	15 49 05.4	
	comp=Z,77nm,19.4s,baz=266,slow=38							
WMQ	**Urumqi**	**49.78**	**350**	*eP*	**P**		**15 27 16.2**	**+1.3**
GUMO	**Guam**	**50.24**	**68**		LR	LR	15 50 21.7	
	comp=Z,14nm,18.1s,baz=113,slow=38							
KSAR	**Wonju Array Be**	**50.88**	**31**		P	**P**	**15 27 23.0**	**-0.3**
KSRS	**Korea Array**	**50.91**	**31**		P	**P**	**15 27 23.6**	**+0.1**
	comp=Z,6.1nm,0.8s,baz=220,slow=7.8,SNR=26							
KSRS					LR	LR	15 49 32.8	
	comp=Z,44nm,18.1s,baz=220,slow=37							
	comp=Z,6.1nm,0.8s							
KS19	**Wonju Array Si**	**50.92**	**31**		P	**P**	**15 27 22.4**	**-1.1**
KS19					IAmb	IAmb	15 27 28.5	
	comp=Z,19nm,1.4s							
AAK	**Ala-Archa**	**52.27**	**338**		LR	LR	15 50 10.1	
	comp=Z,66nm,18.9s,baz=178,slow=37							
SONM	**Songino Array**	**53.45**	**7**		P	**P**	**15 27 42.1**	**-0.3**
	comp=Z,1.1nm,0.5s,baz=183,slow=9.4,SNR=2.7							
	comp=Z,1.1nm,0.5s							
SONM	**Songino Array**	**53.45**	**7**		P	**P**	**15 27 40.9**	**-1.4**
SONM					IAmb	IAmb	15 28 02.3	
	comp=Z,2.0nm,0.8s							
MK31	**Makanchi Array**	**53.71**	**347**		P	**P**	**15 27 42.6**	**-1.5**
MKAR	**Makanchi Array**	**53.71**	**347**		P	**P**	**15 27 43.5**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=150,slow=8.9,SNR=5.2							
	comp=Z,0.5nm,0.7s							
MKAR	**Makanchi Array**	**53.71**	**347**		P	**P**	**15 27 42.7**	**-1.5**
CN2	**Changchun**	**54.84**	**24**	*eP*	**P**		**15 27 48.5**	**-3.9**
CN2					PP	**PP**	**15 29 55.1**	**-0.3**
CN2					S	**S**	**15 35 30.4**	**-3.1**
CN2					pmax	pmax		
	comp=Z,20nm,1.0s							
MJAR	**Matsushiro Arr**	**56.14**	**39**		P	**P**	**15 28 00.9**	**-1.0**
	comp=Z,2.0nm,0.6s,baz=218,slow=7.2,SNR=8.4							
MJAR					LR	LR	15 53 30.7	
	comp=Z,35nm,19.2s,baz=176,slow=38							
	comp=Z,2.0nm,0.6s							
BNX	**BinXian**	**57.22**	**24**	⇓P	**P**		**15 28 09.7**	**+0.3**
BNX					pmax	pmax		
	comp=Z,30nm,1.1s							
BNX					pmax	pmax		
	comp=Z,160nm,6.3s							
ATD	**Arta Tunnel**	**57.30**	**287**		LR	LR	15 45 49.8	
	comp=Z,12nm,20.7s,baz=352,slow=29							
USRK	**Ussuriysk Ar.**	**58.04**	**28**		P	**P**	**15 28 15.1**	**-0.1**
	comp=Z,6.0nm,0.6s,baz=233,slow=6.7,SNR=11							
USRK					LR	LR	15 53 46.8	
	comp=Z,38nm,18.6s,baz=165,slow=37							
	comp=Z,6.0nm,0.6s							
USRK	**Ussuriysk Ar.**	**58.04**	**28**		P	**P**	**15 28 14.0**	**-1.2**
ZAA0	**Zalesovo Array**	**60.07**	**351**		P	**P**	**15 28 27.1**	**-1.9**
ZAA0					IAmb	IAmb	15 28 38.8	
	comp=Z,14nm,1.5s							
ZALV	**Zalesovo Beam**	**60.07**	**351**		P	**P**	**15 28 28.0**	**-1.0**
	comp=Z,2.5nm,0.5s,baz=168,slow=6.9,SNR=15							
	comp=Z,2.5nm,0.5s							
ZALV	**Zalesovo Beam**	**60.07**	**351**		P	**P**	**15 28 27.9**	**-1.2**
KMBO	**Kilima Mbogo**	**60.70**	**272**		LR	LR	15 51 02.5	
	comp=Z,55nm,18.1s,baz=94,slow=32							
KLR	**Kul'dur**	**61.79**	**24**		LR	LR	15 57 48.0	
	comp=Z,65nm,18.3s,baz=227,slow=38							
ASAJ	**Asahikawa**	**63.50**	**34**		LR	LR	15 57 40.8	
	comp=Z,29nm,18.1s,baz=209,slow=37							
ABKAR	**Akbulak array**	**63.60**	**333**		P	**P**	**15 28 52.0**	**-0.9**
ABKAR					IAmb	IAmb	15 29 09.5	
	comp=Z,4.1nm,1.0s							
ABKAR	**Akbulak array**	**63.60**	**333**		P	**P**	**15 28 50.6**	**-2.4**
MBAR	**Mbarara**	**67.24**	**272**		LR	LR	15 55 02.2	
	comp=Z,43nm,18.7s,baz=64,slow=33							
MATP	**Matopo**	**68.90**	**250**		P	**P**	**15 29 28.2**	**+0.5**
	comp=Z,1.9nm,0.7s,baz=82,slow=4.4,SNR=3.7							
	comp=Z,1.9nm,0.7s							
LSZ	**Lusaka**	**69.09**	**256**		LR	LR	15 54 49.6	
	comp=Z,72nm,22.0s,baz=109,slow=32							
EIL	**Elat**	**69.61**	**304**		LR	LR	15 59 06.7	
	comp=Z,54nm,18.2s,baz=88,slow=35							
YAK	**Yakutsk**	**71.46**	**15**		LR	LR	16 03 01.0	
	comp=Z,55nm,18.7s,baz=268,slow=38							
LBTB	**Lobatse**	**71.77**	**246**		LR	LR	15 55 06.6	
	comp=Z,59nm,21.4s,baz=74,slow=31							
BOSA	**Boshof**	**72.27**	**242**		LR	LR	15 54 36.1	
	comp=Z,40nm,21.8s,baz=60,slow=30							
BRTR	**Keskin Array B**	**74.07**	**314**		P	**P**	**15 29 58.0**	**-0.7**
	comp=Z,2.0nm,0.8s,baz=123,slow=6.1,SNR=9.9							
	comp=Z,2.0nm,0.8s							
BRTR	**Keskin Array B**	**74.07**	**314**		P	**P**	**15 29 57.0**	**-1.6**
SUR	**Sutherland**	**76.30**	**238**		LR	LR	15 58 02.7	
	comp=Z,53nm,18.8s,baz=126,slow=31							
PETK	**Petropavlovsk-**	**76.77**	**32**		P	**P**	**15 30 12.9**	**-0.7**
	comp=Z,2.4nm,0.8s,baz=180,slow=4.4,SNR=5.6							
	comp=Z,2.4nm,0.8s							
MA2	**Magadan**	**76.89**	**25**		LR	LR	16 06 30.8	
	comp=Z,32nm,18.9s,baz=284,slow=38							
URZ	**Urewera**	**78.23**	**128**		LR	LR	16 02 04.4	
	comp=Z,63nm,22.0s,baz=211,slow=34							
TSUM	**Tsumeb**	**79.17**	**252**		LR	LR	16 00 32.1	
	comp=Z,52nm,20.5s,baz=144,slow=32							
TIXI	**Tiksi**	**79.44**	**10**		P	**P**	**15 30 26.4**	**-1.6**
TIXI					IAmb	IAmb	15 30 42.9	
	comp=Z,8.9nm,1.5s							
SEY	**Seymchan**	**79.46**	**22**		LR	LR	16 07 57.5	
	comp=Z,39nm,18.4s,baz=188,slow=38							
ARCES	**ARCESS Array B**	**88.88**	**340**		LR	LR	16 13 28.3	
	comp=Z,35nm,18.3s,baz=208,slow=37							
GERES	**GERESS Array B**	**90.17**	**319**		P	**P**	**15 31 24.2**	**+1.5**
	comp=Z,0.3nm,0.7s,baz=117,slow=3.4,SNR=1.4							
	comp=Z,0.3nm,0.7s							
TXAR	**Lajitas Array**	**148.57**	**38**		PKPbc	**PKPbc**	**15 38 09.8**	**-0.3**
	comp=Z,2.4nm,0.8s,baz=204,slow=1.9,SNR=12							

NOU 04 15:47:28.5, 16°.92S × 168°.15E, h30 km, MLv4.2/13, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**0.80**	**177**	P	Pb	15 47 43.9	-0.1
MARNC	**Mare, Loyalty**	**4.54**	**181**	P	Pn	15 48 35.6	+0.4
KOUNC	**Koumac, New Ca**	**5.14**	**225**	P	Pn	15 48 43.6	+0.1
DZM	**Mont Dzumac**	**5.37**	**197**	P	Pn	15 48 46.0	-0.7
NOUC	**Port Laguerre**	**5.44**	**198**	P	Pn	15 48 47.2	-0.4
ONTNC	**Ouen Toro**	**5.59**	**196**	P	Pn	15 48 50.3	+0.6
OUENC	**Ouen Island, N**	**5.61**	**192**	P	Pn	15 48 50.2	+0.3
PINNC	**Pines Island,**	**5.70**	**187**	P	Pn	15 48 50.6	-0.6

*NOU **04** 16:01:16.4, 14°.74S × 167°.09E, h57 km, ML4.6/8, Vanuatu Islands*
*IDC **04** 16:01:20.0 ± 10.0, 15°.45S × 165°.43E, h0 km, mb3.6/3, mbtmp3.7/4, ML4.0/1, Error ellipse: s-maj=181.9km s-min=36.1km az=53.0*
ISC 04 16:01:14.2 ± 2.4, 14°.8S ± 0°.2 × 166°.9E ± 0°.2, h50 km, n7, σ2 s 75/8, mb3.4/3, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**3.18**	**157**	P	**Pn**	**16 02 03.5**	**+1.7**
KOUNC	**Koumac, New Ca**	**6.23**	**203**	P	**Pn**	**16 02 47.3**	**+3.6**
YATNC	**Mamie plateau,**	**7.23**	**180**	P	**Pn**	**16 02 59.7**	**+2.4**
DZM	**Mont Dzumac**	**7.25**	**183**	Pn	**Pn**	**16 02 59.0**	**+1.3**
	3.1nm,0.3s,baz=350,slow=23,SNR=24						
DZM				Sn	**Sn**	**16 04 15.7**	**-3.1**
	1.0nm,0.3s,baz=150,slow=20,SNR=4.6						
	7.7nm,0.4s						
STKA	**Stephens Creek**	**28.66**	**229**	P	**P**	**16 07 06.4**	**+0.1**
	0.8nm,0.4s,baz=70,slow=8.1,SNR=4.5						
	0.8nm,0.4s						
WRA	**Warramunga Arr**	**31.43**	**256**	P	**P**	**16 07 29.6**	**-1.4**
	0.5nm,1.1s,baz=86,slow=10,SNR=1.5						
	0.5nm,1.1s						
ASAR	**Alice Springs**	**32.28**	**249**	P	**P**	**16 07 37.0**	**-1.6**
	0.4nm,0.7s,baz=75,slow=9.5,SNR=6.3						
	0.4nm,0.7s						

*IDC **04** 16:04:17.2 ± 1.0, 6°.27S × 103°.71E, h0 km, mb4.3/17, mbtmp4.3/17, MS3.6/2, Error ellipse: s-maj=36.3km s-min=13.9km az=47.0*
*DJA **04** 16:04:18.4 ± 0.4, 7°.S ± 4°. × 10°.4E ± °, h10 km, M4.6/13, mb4.7/13, MLv4.6/13*
*NEIC **04** 16:04:18.8 ± 0.8, 6°.4S ± 0°.1 × 103°.6E ± 0°.1, h10 km ± 2 km, mb4.4/20, Error ellipse: s-maj=27.2km s-min=14.9km az=239.0*
ISC 04 16:04:20.8 ± 0.6, 6°.58S ± 0°.08 × 103°.50E ± 0°.07, h35 km, n95, σ1 s 30/89, mb4.5/34, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**1.45**	**43**	P	**Pn**	**16 04 41.7**	**-2.8**
LWLI	**Liwa**	**1.65**	**20**	P	**Pn**	**16 04 46.0**	**-1.5**
BLSI	**Bandar Lampung**	**2.12**	**55**	P	**Pn**	**16 04 52.6**	**-1.2**
KLI	**Kotabumi**	**2.18**	**38**	P	**Pn**	**16 04 54.1**	**-0.5**
MNAI	**Manna**	**2.27**	**346**		**Pn**	**16 04 53.9**	**-2.0**
MNAI	**Manna**	**2.27**	**346**	P	**Pn**	**16 04 56.4**	**+0.5**
MNAI	**Manna**	**2.27**	**346**	P	**Pn**	**16 04 57.1**	**+1.2**
SBJI	**Serang**	**2.66**	**80**	P	**Pn**	**16 05 01.1**	**-0.1**
CBJI	**Citeko**	**3.33**	**87**	P	**Pn**	**16 05 12.2**	**+1.7**
CNJI	**Cibinong**	**3.68**	**102**	P	**Pn**	**16 05 14.4**	**-0.8**
LEM	**Lembang**	**4.10**	**94**	Pn	**Pn**	**16 05 23.9**	**+2.8**
	7.7nm,0.3s,baz=228,slow=16,SNR=4.3						
LEM				Sn	**Sn**	**16 06 10.5**	**+2.4**
	10nm,0.3s,baz=333,slow=23,SNR=4.4						
XMI	**Christmas Isla**	**4.41**	**151**	P	**Pn**	**16 05 23.7**	**-1.7**
XMIS	**Christmas Isla**	**4.42**	**151**	P	**Pn**	**16 05 23.5**	**-2.0**
KRJI	**Kerinci**	**4.90**	**335**	P	**Pn**	**16 05 33.7**	**+1.5**
PPSI	**Pulau Pagai**	**5.15**	**317**	P	**Pn**	**16 05 37.1**	**+1.7**
	1.3nm207nm,1.0s						
DSRI	**Dabo**	**6.16**	**10**	P	**Pn**	**16 05 49.0**	**-0.4**
	0.1nm20nm,1.0s						
UGM	**Wanagama**	**7.09**	**101**	Pn	**Pn**	**16 06 03.3**	**+1.0**
UGM	**Wanagama**	**7.09**	**101**	P	**Pn**	**16 06 02.0**	**-0.3**
	0.7nm115nm,2.0s						
UGM	**Wanagama**	**7.09**	**101**	P	**Pn**	**16 06 03.7**	**+1.4**
WOJI	**Wonogiri, Jawa**	**7.47**	**100**	P	**Pn**	**16 06 08.1**	**+0.7**
	0.2nm16nm,0.4s						
PCJI	**Pacitan**	**7.78**	**102**	P	**Pn**	**16 06 11.9**	**+0.2**
	0.3nm58nm,0.9s						
MYKOM	**Kota Tinggi**	**8.32**	**2**	Pn	**Pn**	**16 06 18.4**	**-0.8**
PWJI	**Pagerwojo**	**8.36**	**100**	P	**Pn**	**16 06 20.3**	**+0.7**
	36nm,0.6s						
GSI	**Gunungsitoli**	**9.81**	**323**	Pn	**Pn**	**16 06 37.6**	**-1.9**
GSI	**Gunungsitoli**	**9.81**	**323**	P	**Pn**	**16 06 38.8**	**-0.8**
	19nm,2.2s						
GSI	**Gunungsitoli**	**9.81**	**323**	P	**Pn**	**16 06 39.0**	**-0.6**
GMJI	**Gumukmas**	**10.01**	**100**	P	**Pn**	**16 06 41.9**	**-0.3**
	36nm,1.1s						
ABJI	**Asembagus**	**10.72**	**97**	P	**Pn**	**16 06 54.3**	**+2.3**
	53nm,0.8s						
JAGI	**Jajag, Banyuwa**	**10.73**	**101**	P	**Pn**	**16 06 51.2**	**-0.9**
	28nm,0.7s						
JAGI	**Jajag, Banyuwa**	**10.73**	**101**	P	**Pn**	**16 06 52.0**	**-0.1**
SRBI	**Singaraja**	**11.71**	**98**	P	**Pn**	**16 07 04.2**	**-1.4**
	21nm,0.5s						
LHMI	**Lhok Sumawe**	**13.43**	**331**	P	**Pn**	**16 07 30.0**	**+0.9**
	137nm,1.5s						
PLAI	**Plampang**	**14.32**	**100**	P	**Pn**	**16 07 37.6**	**-3.7**
	27nm,1.0s						
WBSI	**Waikabubak, Su**	**16.02**	**102**	P	**Pn**	**16 08 00.7**	**-3.0**
TOLI2	**Tolitoli**	**18.87**	**67**	P	**P**	**16 08 36.7**	**-1.6**
TOLI2	**Tolitoli**	**18.87**	**67**	P	**P**	**16 08 37.9**	**-0.4**
BATI	**Baumata**	**20.27**	**102**	P	**P**	**16 08 53.7**	**+0.1**
	18nm,0.3s,baz=292,slow=2.1,SNR=10						
	18nm,0.3s						
SOEI	**Soe**	**20.80**	**100**	P	**P**	**16 08 57.8**	**-1.6**
SOEI	**Soe**	**20.80**	**100**	P	**P**	**16 08 58.8**	**-0.6**
CM31	**Chiang Mai Arr**	**25.29**	**350**	P	**P**	**16 09 42.6**	**-1.6**
CM31				IAmb	IAmb	16 09 44.7	
	comp=Z,9.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**25.29**	**350**	P	**P**	**16 09 43.0**	**-1.2**
	comp=Z,7.8nm,0.8s,baz=182,slow=9.0,SNR=55						
	comp=Z,7.8nm,0.8s						
CMAR	**Chiang Mai Arr**	**25.29**	**350**	P	**P**	**16 09 42.2**	**-1.9**
CHTO	**Chiang Mai**	**25.63**	**350**	P	**P**	**16 09 46.4**	**-0.9**
KNRA	**Kununurra**	**26.36**	**112**	P	**P**	**16 09 52.6**	**-1.3**
KNRA	**Kununurra**	**26.36**	**112**	P	**P**	**16 09 53.6**	**-0.3**
KDU	**Kakadu**	**29.18**	**104**	P	**P**	**16 10 18.0**	**-1.3**
H01W3	**Cape Leeuwin H**	**29.82**	**162**	T	T	16 41 40.5	
	baz=340,slow=76,SNR=6.1						
H01W2	**Cape Leeuwin H**	**29.84**	**162**	T	T	16 41 47.1	
	baz=340,slow=76,SNR=7.9						
H01W1	**Cape Leeuwin H**	**29.84**	**162**	T	T	16 41 39.9	
	baz=340,slow=76,SNR=6.8						
H08S2	**Diego Garcia H**	**30.78**	**266**	T	T	16 43 11.1	
	baz=92,slow=74,SNR=5.9						
H08S3	**Diego Garcia H**	**30.79**	**266**	T	T	16 43 12.6	
	baz=92,slow=74,SNR=7.4						
H08S1	**Diego Carcia H**	**30.80**	**266**	T	T	16 43 08.9	
	baz=92						
WB0	**Warramunga Arr**	**32.73**	**117**	P	**P**	**16 10 51.3**	**+0.7**
WB0				IAmb	IAmb	16 11 17.4	
	comp=Z,3.0nm,1.0s						
WRA	**Warramunga Arr**	**32.74**	**117**	P	**P**	**16 10 51.5**	**+0.8**
	comp=Z,1.1nm,0.6s,baz=287,slow=12,SNR=16						
	comp=Z,1.1nm,0.6s						
WRA	**Warramunga Arr**	**32.74**	**117**	P	**P**	**16 10 51.3**	**+0.7**
WRAB	**Tennant Creek**	**32.75**	**117**	P	**P**	**16 10 51.3**	**+0.6**
WRAB				IAmb	IAmb	16 10 52.1	
	comp=Z,5.8nm,0.9s						
WB2	**Warramunga Arr**	**32.76**	**117**	P	**P**	**16 10 51.3**	**+0.6**
WB2				IAmb	IAmb	16 10 57.5	
	comp=Z,5.9nm,1.2s						
WR0	**Warramunga Arr**	**32.93**	**117**	P	**P**	**16 10 52.9**	**+0.6**
WR0				IAmb	IAmb	16 11 08.9	
	comp=Z,5.0nm,1.4s						
ASAR	**Alice Springs**	**33.79**	**123**	P	**P**	**16 11 00.8**	**+1.0**
	comp=Z,0.7nm,0.6s,baz=308,slow=8.3,SNR=23						
ASAR				LR	LR	16 25 44.4	
	comp=Z,36nm,18.8s,baz=9.0,slow=38						
	comp=Z,0.7nm,0.6s						
AS31	**Alice Springs**	**33.79**	**123**	P	**P**	**16 11 01.0**	**+1.2**
TAPN	**Taplejung**	**37.03**	**336**	*eP*	**P**	**16 11 28.5**	**+0.7**
	comp=Z,21nm,0.6s						
RAMN	**Ramite**	**37.14**	**335**	*eP*	**P**	**16 11 29.7**	**+1.0**
	comp=Z,16nm,0.4s						
JIRN	**Jiri**	**37.93**	**335**	*eP*	**P**	**16 11 36.4**	**+0.8**
PKI	**Pulchoki**	**38.20**	**334**	*eP*	**P**	**16 11 38.2**	**+0.5**
	comp=Z,8.2nm,0.5s						
PKIN	**Phulchoki**	**38.21**	**334**	*eP*	**P**	**16 11 38.1**	**+0.4**
	comp=Z,6.0nm,0.4s						
GUN	**Gumba**	**38.28**	**334**	*eP*	**P**	**16 11 39.3**	**+0.8**
	comp=Z,42nm,0.5s						
DMN	**Daman**	**38.36**	**333**	*eP*	**P**	**16 11 39.8**	**+0.7**
	comp=Z,4.8nm,0.2s						
GKN	**Gorkha**	**38.91**	**333**	*eP*	**P**	**16 11 44.3**	**+0.8**
	comp=Z,18nm,0.3s						
DANN	**Dangsing**	**39.61**	**332**	*eP*	**P**	**16 11 50.5**	**+1.0**
	comp=Z,31nm,0.5s						
PYUN	**Piuthan**	**39.76**	**331**	*eP*	**P**	**16 11 52.1**	**+1.4**
	comp=Z,19nm,0.4s						
PMG	**Port Moresby**	**43.31**	**97**	P	**P**	**16 12 19.7**	**-0.1**
	comp=Z,9.2nm,0.8s,baz=262,slow=6.8,SNR=2.6						
	comp=Z,9.2nm,0.8s						
STKA	**Stephens Creek**	**43.53**	**130**	P	**P**	**16 12 23.1**	**+1.8**
	comp=Z,2.8nm,0.5s,baz=298,slow=8.4,SNR=12						
	comp=Z,2.8nm,0.5s						
STKA	**Stephens Creek**	**43.53**	**130**	P	**P**	**16 12 23.1**	**+1.7**
CTAO	**Charters Tower**	**43.57**	**112**	P	**P**	**16 12 20.1**	**-1.7**
CTAO				IAmb	IAmb	16 12 27.4	
	comp=Z,17nm,1.4s						
KSRS	**Korea Array**	**49.39**	**26**	P	**P**	**16 13 05.5**	**-1.7**
	comp=Z,1.7nm,0.7s,baz=221,slow=7.7,SNR=10						
	comp=Z,1.7nm,0.7s						
KDJ	**Kajisay**	**54.10**	**336**	P	**P**	**16 13 43.7**	**+1.2**
SONM	**Songino Array**	**54.24**	**2**	P	**P**	**16 13 43.3**	**0.0**
	comp=Z,3.6nm,0.7s,baz=178,slow=8.5,SNR=12						
	comp=Z,3.6nm,0.7s						
SONM	**Songino Array**	**54.24**	**2**	P	**P**	**16 13 43.1**	**-0.3**
SONM				IAmb	IAmb	16 13 44.2	
	comp=Z,3.3nm,0.8s						
MK31	**Makanchi Array**	**56.38**	**343**	P	**P**	**16 13 58.5**	**-0.2**
MK31				IAmb	IAmb	16 13 59.9	
	comp=Z,2.1nm,0.6s						
MKAR	**Makanchi Array**	**56.38**	**343**	P	**P**	**16 13 58.7**	**+0.1**
	comp=Z,2.6nm,0.5s,baz=149,slow=9.2,SNR=60						
	comp=Z,2.6nm,0.5s						
USRK	**Ussuriysk Ar.**	**56.71**	**24**	P	**P**	**16 13 59.5**	**-1.5**
	comp=Z,2.9nm,0.6s,baz=225,slow=5.5,SNR=8.7						
	comp=Z,2.9nm,0.6s						
KURK	**Kurchatov**	**60.98**	**342**	P	**P**	**16 14 30.0**	**-0.5**
KURK				IAmb	IAmb	16 14 44.8	
	comp=Z,3.1nm,0.9s						
ZAA0	**Zalesovo Array**	**62.33**	**348**	P	**P**	**16 14 38.7**	**-0.8**
ZAA0				IAmb	IAmb	16 14 39.9	
	comp=Z,4.9nm,1.1s						
ZALV	**Zalesovo Beam**	**62.33**	**348**	P	**P**	**16 14 39.1**	**-0.3**
	comp=Z,3.2nm,0.4s,baz=149,slow=5.5,SNR=19						
	comp=Z,3.2nm,0.4s						
ZALV	**Zalesovo Beam**	**62.33**	**348**	P	**P**	**16 14 38.5**	**-1.0**
ABKAR	**Akbulak array**	**67.31**	**331**	P	**P**	**16 15 12.5**	**+0.4**
ABKAR	**Akbulak array**	**67.31**	**331**	P	**P**	**16 15 12.7**	**+0.6**
KBZ	**Khabaz**	**74.03**	**319**	P	**P**	**16 15 55.3**	**+2.2**
	comp=Z,2.1nm,0.7s,baz=108,slow=5.9,SNR=4.7						
	comp=Z,2.1nm,0.7s						
BELG	**Belogornoye**	**75.43**	**328**	LR	LR	16 53 53.2	
	comp=Z,105nm,19.6s,baz=313,slow=40						
NRIK	**Noril'sk**	**76.55**	**354**	P	**P**	**16 16 06.2**	**-0.9**
	comp=Z,1.1nm,0.3s,baz=150,slow=2.2,SNR=4.3						
	comp=Z,1.1nm,0.3s						
BRTR	**Keskin Array B**	**78.97**	**312**	P	**P**	**16 16 23.0**	**+1.5**
	comp=Z,0.5nm,0.6s,baz=131,slow=6.5,SNR=2.6						
	comp=Z,0.5nm,0.6s						
AKASG	**Malin Array Be**	**85.22**	**322**	P	**P**	**16 16 54.9**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=78,slow=3.6,SNR=6.0						
	comp=Z,0.1nm,0.3s						
FINES	**FINESS Array B**	**89.77**	**332**	P	**P**	**16 17 15.9**	**+0.5**
	comp=Z,2.2nm,0.9s,baz=131,slow=6.3,SNR=7.4						
	comp=Z,2.2nm,0.9s						
ARCES	**ARCESS Array B**	**91.94**	**340**	P	**P**	**16 17 26.0**	**+0.6**
	comp=Z,7.0nm,1.2s,baz=116,slow=8.1,SNR=1.7						
	comp=Z,7.0nm,1.2s						
TXAR	**Lajitas Array**	**145.82**	**45**	PKPbc	**PKPab**	**16 23 58.5**	**+0.8**
	comp=Z,2.5nm,0.7s,baz=283,slow=0.9,SNR=27						

*SKHL **04** 16:18:54.3 ± 0.3, 45°.60N × 153°.60E, h55 km ± 4 km, mb4.4/4*
*JMA **04** 16:18:58.0 ± 0.9, 46°.N ± 9°. × 15°.3E ± °, h172 km, MV3.2/11, KURILE ISLANDS REGION*
*IDC **04** 16:18:59.7 ± 8.3, 47°.70N × 151°.93E, h144 km ± 50 km, mb3.3/6, mbtmp3.8/8, Error ellipse: s-maj=116.4km s-min=35.6km az=122.0*
ISC 04 16:18:49.9 ± 2.1, 46°.1N ± 0°.2 × 153°.5E ± 0°.2, h150 km, n40, σ2 s 84/38, mb3.5/5, Kuril Islands

| Code |

PKIN	**Phulchoki** 4.9nm,0.4s	**55.84**	**276**	*eP*	**P**	**16 28 14.2**	**+2.3**
DMN	**Daman** 6.5nm,0.4s	**56.02**	**276**	*eP*	**P**	**16 28 16.1**	**+2.9**
GKN	**Gorkha** 7.8nm,0.6s	**56.10**	**277**	*eP*	**P**	**16 28 16.2**	**+2.5**
DANN	**Dangsing** 11nm,0.6s	**56.49**	**277**	*eP*	**P**	**16 28 19.3**	**+2.7**
FINES	**FINESS Array B** 1.0nm,0.6s,baz=29,slow=8.0,SNR=8.7 1.0nm,0.6s	**64.70**	**335**	P	**P**	**16 29 09.3**	**-1.9**
NOA	**NORSAR Array B** 0.3nm,0.4s,baz=29,slow=5.5,SNR=1.5 0.3nm,0.4s	**68.89**	**341**	P	**P**	**16 29 37.6**	**-0.3**
AKASG	**Malin Array Be** 0.6nm,0.3s,baz=33,slow=5.5,SNR=5.9 0.6nm,0.3s	**72.19**	**326**	P	**P**	**16 29 56.9**	**-1.1**

CRAAG ***04*** *16:30:36.2, 36°.31N × 3°.47E, Ml3.0, Hypocentre not reviewed by the ISC*

MDD 04 16:30:38.1±0.9, 36°.32N × 3°.51E, h14km ±10km, Mb3.9/8, M_mb3.2/8, 7C, Error ellipse: s-maj=11.9km s-min=4.7km az=171.0, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ADJB	**Djebel Djouab**	**0.17**	**199**	P		16 30 40.7	
AKET	**Djebel Ketaf**	**0.41**	**132**	P		16 30 45.5	
ABMS	**Boumerdes**	**0.43**	**357**	P		16 30 46.0	
EIBI	**Ibiza**	**3.20**	**328**	Pn	Pn	16 31 27.5	-0.5
EIBI				⇑*i*Vmb_V		16 31 28.6	
	228nm,SNR=1.5						
EIBI				Sn	Sn	16 32 02.2	-3.8
ETOS	**Mallorca**	**3.49**	**351**	Pn	Pn	16 31 30.2	-1.8
ETOS				⇑*i*Vmb_V		16 31 32.2	
	156nm,SNR=1.9						
ETOS				Sn	Sn	16 32 07.7	-5.4
EMUR	**La Murta**	**4.09**	**293**	Pn	Pn	16 31 38.9	-1.3
EMUR				⇑*i*Vmb_V		16 31 39.7	
	58nm,SNR=0.4						
EMUR				Sn	Sn	16 32 23.4	-4.5
ECOL	**Islas Columbre**	**4.21**	**329**	Pn	Pn	16 31 41.2	-0.6
ECOL				Sn	Sn	16 32 26.5	-4.3
EZAR	**Zarzadilla de**	**4.44**	**292**	Pn	Pn	16 31 43.6	-1.5
ETOB	**Tobarra**	**4.64**	**302**	Pn	Pn	16 31 47.4	-0.5
ETOB				⇑*i*Vmb_V		16 31 50.7	
	102nm,SNR=1.3						
ETOB				Sn	Sn	16 32 39.1	-2.6
ECHE	**Chera**	**4.81**	**314**	Pn	Pn	16 31 49.8	-0.4
ECHE				⇑*i*Vmb_V		16 31 52.7	
	114nm,SNR=1.5						
EMOS	**Mosqueruela**	**5.11**	**323**	Pn	Pn	16 31 53.6	-0.8
EMOS				⇑*i*Vmb_V		16 31 55.7	
	88nm,SNR=1.7						
EMOS				Sn	Sn	16 32 49.4	-3.8
VSL	**Villasalto**	**5.62**	**54**	Pn	Pn	16 31 59.2	-2.1
VSL				Sn	Sn	16 32 59.5	-6.2
EJON	**La Jonquera**	**6.14**	**356**	Pn	Pn	16 32 07.8	-0.6
EJON				⇑*i*Vmb_V		16 32 09.5	
	66nm,SNR=1.0						
EJON				Sn	Sn	16 33 11.2	-7.2

BJI ***04*** *16:38:21.5±0.0, 38°.25N × 20°.24E, h5km, mb4.7/50, mB4.9/29, Ms4.5/11, Ms7 4.2/11*

PDG ***04*** *16:38:23.7±0.3, 38°.16N × 20°.20E, h10km, MD4.8/1, ML4.8/12, Error ellipse: s-maj=0.7km s-min=0.8km az=0.0*

HLW ***04*** *16:38:23.8, 38°.43N × 21°.13E, h12km ±20km, Md4.6, Ml4.5*

IDC ***04*** *16:38:23.3±0.5, 38°.21N × 20°.42E, h0km, mb4.6/30, mbtmp4.6/44, ML4.3/14, MS3.8/64, Error ellipse: s-maj=10.4km s-min=9.9km az=164.0*

MOS ***04*** *16:38:25.7±1.2, 38°.30N × 20°.31E, h25km, mb4.9/21, Error ellipse: s-maj=5.3km s-min=2.9km az=87.9*

ATH ***04*** *16:38:25.8, 38°.14N × 20°.35E, h10km, Mw4.5, Moment Tensor Solution. s5 Moment tensor: Mrr3.50; Mθθ 1.71; Mφφ -5.21; Mrθ 1.66; Mrφ 1.29; Mθφ -3.20; Fault plane solution: NP1:φs 154.00000°, δ66.00000°, λ 72.00000°. NP2:φs 13.00000°, δ30.00000°, λ 125.00000°.*

THE ***04*** *16:38:25.7, 38°.10N × 20°.30E, h6km ±2km, ML4.8/7 Error ellipse: s-maj=3.2km s-min=1.1km az=47.0*

TIR ***04*** *16:38:26.3, 38°.24N × 20°.24E, h42km ±1km, Md4.8, Ml4.8*

NEIC ***04*** *16:38:26.9±2.3, 38°.19N ±0°.06 × 20°.31E ±0°.07, h21km ±3km, mb4.9/79, ML4.7(THE), ML4.7(ATH), Error ellipse: s-maj=8.9km s-min=7.6km az=172.0*

MED_RC ***04*** *16:38:26.0±0.2, 38°.24N × 20°.42E, h21km, MW4.7/21, Moment Tensor Solution.Mantle waves: s21,c28; Duration: f≠1 Moment tensor: Scale 10^16 Nm; Mrr 1.03±.09; Mθθ 0.07±.05; Mφφ -1.10±.05; Mrθ 0.12±.05; Mθφ 0.34±.03; Mrφ 0.33±.05; Best double couple: M0 1.17000×10^16 NP1:φs 356.00000°, δ53.00000°, λ 105.00000°. NP2:φs 153.00000°, δ39.00000°, λ 71.00000°. Principal axes: T 1.1100, Plg 76.0000°, Azm 314.0000°; N 0.1200, Plg 12.0000°, Azm 168.0000°; P -1.2300, Plg 7.0000°, Azm 76.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

GII ***04*** *16:38:30.9±0.0, 37°.82N × 21°.06E, h10km, mb4.9/3, MD4.9/3, Mm4.8/2*

ISC 04 16:38:26.2±0.6, 38°.14N ±0°.02 × 20°.35E ±0°.03, h19km ±2km, n805, σ1 88/853, mb4.8/123, MS3.8/61, 66C-59D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEF3	**Kipouria, Keph**	**0.07**	**3**	P	**Pg**	**16 29 29.0**	**-0.8**
KEF3				S	**Sg**	**16 38 31.3**	**-1.0**
KEF3	**Kipouria, Keph**	**0.07**	**3**	P	**Pg**	**16 38 29.0**	**-0.8**
KEF3				S	**Sg**	**16 38 31.2**	**-1.0**
	1487μm,0.4s						
LXRA	**Lixouri, Kepha**	**0.10**	**49**	P	**Pg**	**16 38 29.2**	**-0.8**
LXRA				S	**Sg**	**16 38 31.5**	**-1.1**
KEF4	**Livadi, Kephal**	**0.14**	**28**	P	**Pg**	**16 38 29.5**	**-0.9**
KEF4				S	**Sg**	**16 38 32.2**	**-1.1**
KEF4	**Livadi, Kephal**	**0.14**	**28**	P	**Pg**	**16 38 29.5**	**-0.9**
KEF4				S	**Sg**	**16 38 32.2**	**-1.1**
	1851μm,0.4s						
VLS	**Valsamata**	**0.20**	**78**	P	**Pg**	**16 38 30.3**	**-1.0**
VLS				S	**Sg**	**16 38 33.6**	**-1.1**
VLS	**Valsamata**	**0.20**	**78**	P	**Pg**	**16 38 30.3**	**-1.0**
VLS				S	**Sg**	**16 38 33.6**	**-1.1**
	1089μm,0.5s						
FSK	**Fiskardo**	**0.36**	**28**	P	**Pg**	**16 38 33.4**	**-0.5**
FSK				S	**Sg**	**16 38 38.9**	**-0.3**
FSK				AML	AML	16 38 39.6	
FSK				AML	AML	16 38 43.3	
FSK	**Fiskardo**	**0.36**	**28**	P	**Pg**	**16 38 33.4**	**-0.5**
FSK				S	**Sg**	**16 38 38.9**	**-0.3**
	87μm,0.3s						
LTHK	**Lithakia**	**0.58**	**138**	P	**Pg**	**16 38 37.2**	**-0.5**
LTHK				S	**Sg**	**16 38 45.2**	**-0.3**
LKD2	**Lefkada island**	**0.69**	**21**	P	**Pg**	**16 38 38.2**	**-1.7**
LKD2				AML	AML	16 38 54.8	
	comp=E,68190μm,0.5s						
LKD2				AML	AML	16 38 56.8	
	comp=N,71637μm,0.5s						
LKD2	**Lefkada island**	**0.69**	**21**	P	**Pg**	**16 38 38.3**	**-1.7**
LKD2				S	**Sn**	**16 38 54.7**	**+3.5**
	comp=N,35μm,0.5s						
LKD2	**Lefkada island** baz=30	**0.69**	**21**	S	**Sn**	**16 38 50.2**	**-1.0**
LKD2	**Lefkada island** baz=30	**0.69**	**21**	P	**Pg**	**16 38 38.6**	**-1.3**
RLS	**Riolos of Patr**	**0.89**	**95**	P	**Pb**	**16 38 42.0**	**-0.9**
RLS				AML	AML	16 39 06.2	
	comp=N,44771μm,0.4s						
RLS				AML	AML	16 39 08.0	
	comp=E,39414μm,0.6s						
RLS	**Riolos of Patr**	**0.89**	**95**	P	**Pb**	**16 38 42.0**	**-0.9**
RLS				S	**Sn**	**16 38 58.0**	**+2.1**
	comp=E,39μm,0.8s						
PVO	**Paravola**	**1.04**	**62**	P	**Pb**	**16 38 45.1**	**-0.4**
PVO	**Paravola**	**1.04**	**62**	P	**Pb**	**16 38 45.2**	**-0.4**
PVO				S	**Sn**	**16 39 03.0**	**+3.2**
DRO	**Drossia**	**1.09**	**99**	P	**Pb**	**16 38 45.3**	**-1.1**
DRO	**Drossia**	**1.09**	**99**	P	**Pb**	**16 38 45.5**	**-0.9**
UPR	**University Cam**	**1.15**	**82**	P	**Pn**	**16 38 47.1**	**0.0**
EFP	**Efpalio**	**1.26**	**76**	P	**Pn**	**16 38 48.1**	**-0.6**
EFP				AML	AML	16 39 13.5	
	comp=E,65090μm,0.6s						
EFP				AML	AML	16 39 21.0	
	comp=N,65583μm,0.9s						
EFP	**Efpalio**	**1.26**	**76**	P	**Pn**	**16 38 48.2**	**-0.5**
LAKA	**Lakka**	**1.29**	**85**	P	**Pn**	**16 38 48.7**	**-0.4**
LAKA				AML	AML	16 39 16.8	
	comp=N,34793μm,0.6s						
LAKA				AML	AML	16 39 17.1	
	comp=E,29930μm,1.0s						
LAKA	**Lakka**	**1.29**	**85**	P	**Pn**	**16 38 48.8**	**-0.4**
SERG	**Sergoula**	**1.38**	**78**	P	**Pn**	**16 38 50.0**	**-0.3**
SERG				AML	AML	16 39 17.6	
	comp=N,35000μm,0.9s						
SERG				AML	AML	16 39 18.1	
	comp=E,38358μm,0.6s						
SERG	**Sergoula**	**1.38**	**78**	P	**Pn**	**16 38 50.1**	**-0.2**
EVR	**Evrytania**	**1.39**	**55**	P	**Pn**	**16 38 50.5**	**-0.1**
EVR	**Evrytania**	**1.39**	**55**	P	**Pn**	**16 38 50.3**	**-0.2**
IGT	**Igoumenitsa**	**1.39**	**360**	P	**Pn**	**16 38 51.0**	**+0.4**
IGT				AML	AML	16 39 19.1	
	comp=N,12575μm,0.5s						
IGT				AML	AML	16 39 25.5	
	comp=E,21178μm,0.6s						
IGT	**Igoumenitsa**	**1.39**	**360**	P	**Pb**	**16 38 51.6**	**+0.1**
IGT	**Igoumenitsa** baz=3.0	**1.39**	**360**	S	**Sn**	**16 39 08.7**	**+0.3**
IGT	**Igoumenitsa** baz=3.0	**1.39**	**360**	P	**Pn**	**16 38 49.6**	**-1.0**
ALIK	**Aliki, Aigiali**	**1.40**	**84**	P	**Pn**	**16 38 50.8**	**+0.2**
KLV	**Kalavryta, Ach**	**1.43**	**93**	P	**Pn**	**16 38 51.1**	**+0.1**
KLV				AML	AML	16 39 24.6	
	comp=E,18864μm,0.8s						
KLV				AML	AML	16 39 32.8	
	comp=N,22229μm,1.1s						
KLV	**Kalavryta, Ach**	**1.43**	**93**	P	**Pn**	**16 38 51.6**	**+0.5**
JAN	**Janina**	**1.57**	**14**	P	**Pn**	**16 38 53.3**	**+0.3**
JAN	**Janina**	**1.57**	**14**	P	**Pn**	**16 38 53.3**	**+0.3**
ITM	**Ithomi**	**1.58**	**127**	P	**Pb**	**16 38 54.5**	**-0.2**
ITM				AML	AML	16 39 24.6	
	comp=N,20077μm,0.9s						
ITM				AML	AML	16 39 35.0	
	comp=E,14396μm,1.0s						
ITM	**Ithomi**	**1.58**	**127**	P	**Pb**	**16 38 54.3**	**-0.4**
ITM				S	**Sg**	**16 39 16.4**	**-0.8**
	comp=E,9μm,1.2s						
ITM	**Ithomi**	**1.58**	**127**	Pn	**Pb**	**16 38 54.5**	**-0.2**
KEK	**Kerkira**	**1.63**	**345**	P	**Pn**	**16 38 54.5**	**+0.7**
KEK	**Kerkira**	**1.63**	**345**		**Pn**	**16 38 54.5**	**+0.7**
MAKR	**Makrakomi, Fth**	**1.65**	**57**	P	**Pb**	**16 38 56.5**	**+0.5**
PYL	**PYLOS**	**1.67**	**138**	P	**Pn**	**16 38 55.1**	**+0.8**
PYL				AML	AML	16 39 36.2	
	comp=N,8090μm,0.6s						
PYL				AML	AML	16 39 36.4	
	comp=E,9049μm,0.6s						
PYL	**PYLOS**	**1.67**	**138**	P	**Pn**	**16 38 55.1**	**+0.8**
DLFA	**Delphi**	**1.73**	**78**	P	**Pb**	**16 38 57.4**	**+0.1**
SRN	**Sarande**	**1.76**	**351**	P	**Pn**	**16 38 56.3**	**+0.7**
SRN	**Sarande** baz=354	**1.76**	**351**	S	**Sn**	**16 39 16.8**	**-0.7**
SRN	**Sarande** comp=N,15nm,0.5s,baz=354	**1.76**	**351**	AMP			
SRN	**Sarande** baz=354	**1.76**	**351**	P	**Pn**	**16 38 56.0**	**+0.4**
THAL	**Thalero**	**1.83**	**92**	P	**Pb**	**16 38 58.8**	**-0.2**
THAL				AML	AML	16 39 37.8	
	comp=N,44733μm,0.8s						
THAL				AML	AML	16 39 41.0	
	comp=E,50223μm,0.6s						
THAL	**Thalero**	**1.83**	**92**	P	**Pb**	**16 38 58.3**	**-0.7**
THL	**Klokotos Trika**	**1.93**	**42**	P	**Pb**	**16 39 00.3**	**-0.3**
THL				AML	AML	16 39 33.8	
	comp=N,13955μm,1.3s						
THL				AML	AML	16 39 37.4	
	comp=E,15822μm,0.8s						
THL	**Klokotos Trika**	**1.93**	**42**	P	**Pb**	**16 39 00.4**	**-0.3**
KPRO	**Kipourio**	**1.98**	**23**	P	**Pb**	**16 39 00.5**	**-1.1**
KPRO	**Kipourio**	**1.98**	**23**	P	**Pb**	**16 39 01.1**	**-0.5**
LSK	**Leskovik**	**2.02**	**6**	P	**Pn**	**16 39 00.7**	**+1.5**
LSK	**Leskovik** baz=8.0	**2.02**	**6**	S	**Sn**	**16 39 22.1**	**-1.9**
LSK	**Leskovik** comp=N,40nm,0.7s,baz=8.0	**2.02**	**6**	AMP			
LSK	**Leskovik** baz=8.0	**2.02**	**6**	P	**Pn**	**16 39 00.5**	**+1.2**
LTK	**Loutraki**	**2.07**	**92**	P	**Pn**	**16 39 01.5**	**+1.6**
PENT	**Pentalofos**	**2.15**	**16**	P	**Pb**	**16 39 03.3**	**-1.1**
LKR	**Lokris**	**2.15**	**75**	P	**Pn**	**16 39 01.8**	**+0.9**
TYRN	**Tyrnavos**	**2.15**	**43**	P	**Pb**	**16 39 03.2**	**-1.3**
ATAL	**Atalanti**	**2.17**	**74**	P	**Pb**	**16 39 03.1**	**-1.8**
EPID	**Epidavros**	**2.26**	**103**	P	**Pn**	**16 39 04.1**	**+1.7**
EPID	**Epidavros**	**2.26**	**103**	P	**Pn**	**16 39 04.1**	**+1.7**
NEST	**Nestorio**	**2.34**	**13**	P	**Pb**	**16 39 06.4**	**-1.3**
NEST				AML	AML	16 39 50.8	
	comp=N,6671μm,0.6s						
NEST				AML	AML	16 39 54.0	
	comp=E,6935μm,0.7s						
NEST	**Nestorio**	**2.34**	**13**	P	**Pb**	**16 39 06.4**	**-1.3**
VILL	**Villia**	**2.34**	**88**	P	**Pn**	**16 39 05.0**	**+1.4**
KRND	**KRANIDI**	**2.35**	**108**	P	**Pn**	**16 39 05.7**	**+2.1**
VLO	**Vlora**	**2.42**	**344**	P	**Pn**	**16 39 05.7**	**+1.1**
VLO	**Vlora**	**2.42**	**344**		**Pn**	**16 39 05.6**	**+0.9**
VLO	**Vlora**	**2.42**	**344**	P	**Pn**	**16 39 05.6**	**+0.9**
VLO	**Vlora** baz=346	**2.42**	**344**	S	**Sn**	**16 39 34.6**	**+1.0**
VLO	**Vlora** baz=346	**2.42**	**344**	P	**Pn**	**16 39 05.5**	**+0.9**
SCTE	**Santa Cesarea**	**2.42**	**323**		**Pn**	**16 39 05.0**	**+0.3**
SCTE	**Santa Cesarea** baz=324	**2.42**	**323**	S	**Sn**	**16 39 34.0**	**+0.3**
SCTE	**Santa Cesarea** baz=324	**2.42**	**323**	P	**Pn**	**16 39 04.9**	**+0.3**
KZN	**Kozani**	**2.43**	**27**	P	**Pn**	**16 39 06.9**	**+2.0**
VLI	**Veliai**	**2.50**	**124**	P	**Pb**	**16 39 08.5**	**-2.0**
VLI				AML	AML	16 40 02.4	
	comp=E,6488μm,0.7s						
VLI				AML	AML	16 40 09.8	
	comp=N,5329μm,0.9s						
KBN	**Korca**	**2.51**	**8**	P	**Pn**	**16 39 08.2**	**+2.3**
KBN	**Korca**	**2.51**	**8**		**Pn**	**16 39 08.2**	**+2.3**
KBN	**Korca**	**2.51**	**8**	P	**Pn**	**16 39 08.2**	**+2.3**
KBN	**Korca** baz=9.0	**2.51**	**8**	S	**Sn**	**16 39 37.1**	**+1.2**
KBN	**Korca** comp=N,11nm,0.7s,baz=9.0	**2.51**	**8**	AMP			
KBN	**Korca** baz=9.0	**2.51**	**8**	P	**Pn**	**16 39 08.2**	**+2.3**
NEO	**Neokhori**	**2.54**	**62**	P	**Pn**	**16 39 08.2**	**+1.9**
XOR	**Xorichti**	**2.54**	**60**	P	**Pn**	**16 39 08.2**	**+1.8**
LIT	**Litokhoron**	**2.57**	**40**	P	**Pn**	**16 39 08.0**	**+1.2**
KTI	**Kastanea**	**2.64**	**31**	P	**Pn**	**16 39 10.3**	**+2.5**
ATH	**Athens Observa**	**2.67**	**93**	P	**Pn**	**16 39 09.7**	**+1.7**
ATHU	**Athens Univers**	**2.72**	**93**	P	**Pn**	**16 39 10.3**	**+1.5**
VLY	**Voula,Athens**	**2.74**	**95**	P	**Pn**	**16 39 10.3**	**+1.2**
FNA	**Florina**	**2.76**	**16**	P	**Pn**	**16 39 11.0**	**+1.6**
PTL	**Penteli**	**2.78**	**91**	P	**Pn**	**16 39 11.0**	**+1.4**
DION	**Dionisos Attik**	**2.83**	**90**	P	**Pn**	**16 39 11.7**	**+1.4**
TIP	**Timpagrande**	**2.99**	**291**	⇑P	**Pn**	**16 39 13.5**	**+0.9**
TIP				⇑S	**Sn**	**16 39 47.4**	**-0.5**
TIP	**Timpagrande**	**2.99**	**291**		**Pn**	**16 39 13.2**	**+0.6**
TIR	**Tirane**	**3.23**	**354**	⇑P	**Pn**	**16 39 16.9**	**+1.1**
TIR				⇑S	**Sn**	**16 39 53.4**	**-0.2**
TIR	**Tirane**	**3.23**	**354**		**Pn**	**16 39 16.8**	**+1.1**
TIR	**Tirane**	**3.23**	**354**	P	**Pn**	**16 39 16.8**	**+1.1**
TIR	**Tirane** baz=355	**3.23**	**354**	S	**Sn**	**16 39 55.7**	**+2.1**
TIR	**Tirane** baz=355	**3.23**	**354**	P	**Pn**	**16 39 16.9**	**+1.1**
CEL	**Celeste**	**3.51**	**273**		**Pn**	**16 39 20.1**	**+0.5**
MATE	**Matera**	**3.77**	**313**	⇑P	**Pn**	**16 39 23.8**	**+0.6**
ULC	**Ulcinj**	**3.91**	**348**	⇑*i*Pn	**Pn**	**16 39 24.8**	**-0.4**
ULC				*e*Sn	**Sn**	**16 40 09.7**	**-0.9**
CUC	**Castrocucco**	**3.98**	**299**	Pn	**Pn**	**16 39 27.7**	**+1.6**
DRME	**Dracevica, Mon**	**4.14**	**348**	⇑*i*Pn	**Pn**	**16 39 28.1**	**-0.2**
DRME	**Dracevica, Mon**	**4.14**	**348**	⇓*i*Pn	**Pn**	**16 39 27.8**	**-0.5**
DRME				*e*Sn	**Sn**	**16 40 16.1**	**-0.1**
APE	**Apeiranthos**	**4.25**	**103**	⇑P	**Pn**	**16 39 32.1**	**+2.2**
APE	**Apeiranthos**	**4.25**	**103**	⇓*e*P	**Pn**	**16 39 32.0**	**+2.1**
BUM	**Brajici-Budva**	**4.30**	**346**	⇑*i*Pn	**Pn**	**16 39 30.0**	**-0.6**
BUM				*e*Sn	**Sn**	**16 40 19.9**	**-0.4**
PDG	**Podgorica**	**4.37**	**349**	⇑P	**Pn**	**16 39 31.2**	**-0.2**
PDG				⇑S	**Sn**	**16 40 20.7**	**-1.0**
PDG	**Podgorica**	**4.37**	**349**	Pn	**Pn**	**16 39 31.1**	**-0.3**
PDG	**Podgorica**	**4.37**	**349**	⇑*i*Pn	**Pn**	**16 39 31.1**	**-0.3**
TTG	**Podgorica**	**4.37**	**349**	⇑*i*Pn	**Pn**	**16 39 30.7**	**-0.7**
TTG				*i* Sn	**Sn**	**16 40 21.3**	**-0.4**
SANT	**Santorini**	**4.45**	**112**	⇓P	**Pn**	**16 39 35.5**	**+2.9**
SANT	**Santorini**	**4.45**	**112**	Pn	**Pn**	**16 39 35.0**	**+2.4**
PVY	**Plav**	**4.46**	**356**	⇓*i*Pn	**Pn**	**16 39 32.4**	**-0.4**
PVY				*i* Sn	**Sn**	**16 40 24.3**	**+0.1**
HCY	**Herceg Novi**	**4.53**	**342**	*e*Pn	**Pn**	**16 39 32.6**	**-1.1**
HCY	**Herceg Novi**	**4.53**	**342**	⇑*i*Pn	**Pn**	**16 39 32.7**	**-1.0**
HCY				*i* Sn	**Sn**	**16 40 25.0**	**-0.8**
CEME	**Cevo**	**4.54**	**347**	*e*Pn	**Pn**	**16 39 32.9**	**-0.9**
CEME				*i* Sn	**Sn**	**16 40 25.4**	**-0.6**
IDI	**Anoyia**	**4.63**	**127**	⇑P	**Pn**	**16 39 37.4**	**+2.3**
IDI				⇓S	**Sn**	**16 40 30.8**	**+2.5**
IDI	**Anoyia** comp=N,8.8nm,0.3s,baz=316,slow=13,SNR=20	**4.63**	**127**	Pn	**Pn**	**16 39 36.2**	**+1.1**
IDI				Sn	**Sn**	**16 40 31.7**	**+3.4**
	comp=N,43nm,0.3s,baz=135,slow=23,SNR=14						
IDI				LR	LR	16 41 45.0	
	comp=N,2μm,18.9s,baz=291,slow=44 comp=N,13nm,0.4s						
IDI	**Anoyia**	**4.63**	**127**	Pn	**Pn**	**16 39 37.3**	**+2.3**
IVA	**Berane**	**4.74**	**356**	⇑*i*Pn	**Pn**	**16 39 36.6**	**0.0**
IVA				*i* Sn	**Sn**	**16 40 31.0**	**-0.1**
VAE	**Valguarnera** comp=N,7.9nm,0.3s,baz=70,slow=16,SNR=12	**4.74**	**264**	Pn	**Pn**	**16 39 37.9**	**+1.2**
VAE				Sn	**Sn**	**16 40 28.6**	**-2.5**
	comp=N,10nm,0.3s,baz=180,slow=22,SNR=4.2						
VAE				LR	LR	16 41 31.5	
	comp=N,411nm,20.2s,baz=178,slow=39 comp=N,34nm,0.4s						
KOME	**Kolasin**	**4.75**	**353**	⇓*i*Pn	**Pn**	**16 39 36.4**	**-0.4**
KOME				*i* Sn	**Sn**	**16 40 30.5**	**-0.8**
NKY	**Niksic**	**4.78**	**348**	⇓*i*Pn	**Pn**	**16 39 36.3**	**-0.9**
NKY				*i* Sn	**Sn**	**16 40 30.8**	**-1.3**
TREB	**Trebinje**	**4.82**	**342**	*e*Pn	**Pn**	**16 39 36.6**	**-1.0**
RAFF	**Raffo Rosso**	**4.83**	**261**		**Pn**	**16 39 36.8**	**-1.0**
BRY	**Bratogost**	**4.95**	**344**	*e*Pn	**Pn**	**16 39 38.6**	**-1.1**
BRY	**Bratogost**	**4.95**	**344**	⇑*i*Pn	**Pn**	**16 39 38.5**	**-1.1**
BRY				*i* Sn	**Sn**	**16 40 34.6**	**-1.8**
VTS	**Vitosha**	**4.99**	**25**	⇑P	**Pn**	**16 39 41.2**	**+1.0**
VTS				⇓S	**Sn**	**16 40 38.4**	**+1.1**
VTS	**Vitosha**	**4.99**	**25**	Pn	**Pn**	**16 39 40.5**	**+0.4**
VTS	**Vitosha**	**4.99**	**25**	P	**Pn**	**16 39 40.5**	**+0.4**
RDO	**Rodhopi**	**5.01**	**52**		**Pn**	**16 39 41.5**	**+1.3**
SGRT	**San Giovanni R**	**5.05**	**317**	Pn	**Pn**	**16 39 41.1**	**+0.2**
SJES	**Sjenica**	**5.13**	**357**	⇑*i*Pn	**Pn**	**16 39 42.5**	**+0.6**
STON	**Ston**	**5.14**	**338**	*e*Pn	**Pn**	**16 39 41.1**	**-0.9**
UPM	**Unac-Piva**	**5.18**	**348**	*e*Pn	**Pn**	**16 39 42.6**	**-0.1**
UPM	**Unac-Piva**	**5.18**	**348**	*e*Pn	**Pn**	**16 39 42.2**	**-0.5**
UPM				*i* Sn	**Sn**	**16 40 41.1**	**-0.9**
PLE	**Pljevlja**	**5.24**	**352**	⇓*i*Pn	**Pn**	**16 39 43.2**	**-0.3**
PLE				*i* Sn	**Sn**	**16 40 42.9**	**-0.5**
PAOL	**Paolisi**	**5.32**	**305**		**Pn**	**16 39 46.2**	**+1.7**
RUDO	**Rudo**	**5.52**	**353**	⇑*i*Pn	**Pn**	**16 39 46.6**	**-0.7**
CLTB	**Caltabellotta**	**5.67**	**267**		**Pn**	**16 39 50.2**	**+0.8**
BLKB	**Belogradchik**	**5.76**	**17**	⇓P	**Pn**	**16 39 51.3**	**+0.7**
BBLS	**Lazići**	**5.77**	**353**	⇑*i*Pn	**Pn**	**16 39 50.1**	**-0.6**
DIVS	**Divibare**	**5.96**	**358**	⇑*i*Pn	**Pn**	**16 39 52.5**	**-0.9**
KARP	**Karpathos**	**6.05**	**113**		**Pn**	**16 39 56.8**	**+2.3**
BALB	**Balikesir**	**6.07**	**73**		**Pn**	**16 39 57.4**	**+2.6**
SRKY	**Kupres RS**	**6.39**	**339**	*e*Pn	**Pn**	**16 39 59.6**	**+0.3**
ARG	**Arkhangelos**	**6.50**	**105**		**Pn**	**16 40 04.5**	**+3.8**
ARG	**Arkhangelos**	**6.50**	**105**	P	**Pn**	**16 40 04.6**	**+3.8**
VLAD	**Vladila**	**6.61**	**26**	⇓P	**Pn**	**16 40 02.3**	**+0.2**
BLJ	**Bijeljina**	**6.69**	**353**	*e*Pn	**Pn**	**16 40 01.0**	**-2.3**
MDVR	**Moldovita**	**6.72**	**8**	⇓P	**Pn**	**16 40 03.1**	**-0.6**
MDVR				⇑S	**Sn**	**16 41 16.8**	**-2.9**
MGRS	**Mrkonjic Grad**	**6.74**	**340**	*e*Pn	**Pn**	**16 40 04.3**	**+0.3**
AQU	**L'Aquila**	**6.78**	**311**		**Pn**	**16 40 06.7**	**+2.1**
AQU	**L'Aquila**	**6.78**	**311**	P	**Pn**	**16 40 06.7**	**+2.1**
DOB	**Doboj**	**6.80**	**346**	*e*Pn	**Pn**	**16 40 02.7**	**-2.1**
SRE	**Strehaia**	**6.86**	**17**	⇑P	**Pn**	**16 40 06.2**	**+0.5**
HERC	**Herculane**	**6.91**	**12**	⇓P	**Pn**	**16 40 06.2**	**-0.1**
BLY	**Banja Luka**	**7.02**	**341**	⇑*i*Pn	**Pn**	**16 40 07.2**	**-0.6**
FRGS	**Fruska Gora**	**7.03**	**357**	⇑P	**Pn**	**16 40 06.6**	**-1.3**
FRGS				⇓S	**Sn**	**16 41 22.4**	**-4.9**
FRGS	**Fruska Gora**	**7.03**	**357**	⇑*i*Pn	**Pn**	**16 40 06.4**	**-1.5**
NRCA	**Norcia**	**7.24**	**313**		**Pn**	**16 40 11.8**	**+1.0**
HUMR	**Humele**	**7.27**	**27**	⇑P	**Pn**	**16 40 12.6**	**+1.3**
PRIJ	**Prijedor**	**7.35**	**339**	*e*Pn	**Pn**	**16 40 12.1**

SRO2	**Moca**	**9.72**	**352**	*e*P		**Pn**	**16 40 44.6**	**-0.3**
SRO2				*e*			16 42 27.0	
SRO2	**Moca**	**9.72**	**352**	*e*PN		**Pn**	**16 40 44.6**	**-0.3**
SRO2				*e*SN		**Sn**	**16 42 27.0**	**-6.5**
BIZ	**Bicaz**	**9.77**	**24**	⇑P		**Pn**	**16 40 46.5**	**+1.1**
ARSA	**Arzberg**	**9.77**	**340**	*i* Pn		**Pn**	**16 40 43.9**	**-1.7**
	comp=N,35nm,0.4s,SNR=52							
ARSA				*e*Sn		**Sn**	**16 42 29.4**	**-5.3**
	comp=N,14nm,0.5s							
PSZ	**Piszkesteto**	**9.78**	**358**	⇑P		**Pn**	**16 40 44.9**	**-0.8**
PSZ	**Piszkesteto**	**9.78**	**358**			**Pn**	**16 40 45.0**	**-0.8**
PSZ	**Piszkesteto**	**9.78**	**358**	P		**Pn**	**16 40 45.0**	**-0.8**
PSZ	**Piszkesteto**	**9.78**	**358**	P		**Pn**	**16 40 44.9**	**-0.8**
PSZ				S		**Sn**	**16 42 28.0**	**-7.0**
SRO	**Srobarova**	**9.78**	**352**	*e*P		**Pn**	**16 40 46.3**	**+0.6**
SRO				*e*			16 42 33.5	
SRO	**Srobarova**	**9.78**	**352**	*e*PN		**Pn**	**16 40 46.3**	**+0.6**
SRO				*e*SN		**Sn**	**16 42 33.5**	**-1.4**
MYKA	**Terra Mystica**	**9.82**	**332**	*i* Pn		**Pn**	**16 40 45.5**	**-0.9**
	comp=N,51nm,0.8s,SNR=32							
MYKA				*e*Sn		**Sn**	**16 42 31.9**	**-4.2**
	comp=N,33nm,0.7s							
SWA2		**9.84**	**153**	P		**Pn**	**16 40 46.0**	**-0.6**
	baz=157							
STAL	**STALIGIAL**	**9.89**	**328**			**Pn**	**16 40 46.1**	**-1.1**
SOP	**Sopron**	**9.94**	**345**	P		**Pn**	**16 40 46.5**	**-1.3**
RONA	**Rosalia, Austr**	**10.01**	**344**	*i* Pn		**Pn**	**16 40 47.1**	**-1.7**
	comp=N,6.9nm,0.3s,SNR=18							
RONA				*i* Sn		**Sn**	**16 42 37.2**	**-3.2**
	comp=N,12nm,0.4s							
BURAR	**Bucovina Array**	**10.12**	**19**	⇓P		**Pn**	**16 40 51.8**	**+1.3**
BURAR	**Bucovina Array**	**10.12**	**19**			**Pn**	**16 40 51.4**	**+0.9**
BUR08	**Bucovina Ar. S**	**10.14**	**19**	Pn		**Pn**	**16 40 51.6**	**+0.9**
CTI	**Castel Tesino**	**10.20**	**324**			**Pn**	**16 40 49.9**	**-1.7**
CTI	**Castel Tesino**	**10.20**	**324**	P		**Pn**	**16 40 49.9**	**-1.7**
KBA	**Koelnbreinsper**	**10.31**	**332**	*i* Pn		**Pn**	**16 40 52.1**	**-1.0**
	comp=N,34nm,0.4s,SNR=54							
KBA				*e*Sn		**Sn**	**16 42 43.1**	**-5.1**
	comp=N,52nm,0.8s							
CONA	**Conrad Observa**	**10.32**	**343**	*e*Pn		**Pn**	**16 40 51.2**	**-1.9**
	comp=N,8.2nm,0.6s,SNR=11							
CONA				*e*Sn		**Sn**	**16 42 42.7**	**-5.5**
	comp=N,17nm,0.8s							
ZST	**Bratislava**	**10.33**	**348**	*e*SN		**Sn**	**16 42 42.0**	**-6.3**
KECS	**Kecovo**	**10.34**	**1**	*e*P		**Pn**	**16 40 53.4**	**0.0**
KECS	**Kecovo**	**10.34**	**1**	*e*PN		**Pn**	**16 40 53.4**	**0.0**
ABTA	**Abfaltersbach**	**10.36**	**329**	*e*Pn		**Pn**	**16 40 52.6**	**-1.2**
	comp=N,28nm,0.5s,SNR=35							
ABTA				*e*Sn		**Sn**	**16 42 42.2**	**-7.2**
	comp=N,96nm,0.6s							
VYHS	**Vyhne**	**10.41**	**354**	*e*P		**Pn**	**16 40 53.5**	**-0.8**
VYHS				*e*			16 42 43.7	
VYHS	**Vyhne**	**10.41**	**354**	*e*PN		**Pn**	**16 40 53.5**	**-0.8**
VYHS				*e*SN		**Sn**	**16 42 43.7**	**-6.6**
SALO	**Salr**	**10.46**	**319**			**Pn**	**16 40 54.1**	**-0.9**
MODS	**Modra-Piesok**	**10.47**	**349**	*e*P		**Pn**	**16 40 53.7**	**-1.5**
MODS				*e*			16 42 44.7	
MODS	**Modra-Piesok**	**10.47**	**349**	*e*PN		**Pn**	**16 40 53.7**	**-1.5**
MODS				*e*SN		**Sn**	**16 42 44.7**	**-7.2**
BR131	**Keskin Array S**	**10.48**	**77**			**Pn**	**16 40 59.2**	**+3.8**
BR131	**Keskin Array S**	**10.48**	**77**	*i* P		**Pn**	**16 40 58.8**	**+3.4**
BRTR	**Keskin Array B**	**10.48**	**77**	Pn		**Pn**	**16 40 59.0**	**+3.6**
	comp=N,1.4nm,0.3s,baz=262,slow=13,SNR=27							
BRTR				LR		LR	16 45 05.4	
	comp=N,509nm,21.8s,baz=263,slow=39							
	comp=N,7.5nm,0.5s							
BRTR	**Keskin Array B**	**10.48**	**77**	P		**Pn**	**16 40 59.0**	**+3.6**
KOLL	**Kolacno**	**10.53**	**353**	*e*PN		**Pn**	**16 40 55.3**	**-0.6**
KOLL				*e*SN		**Sn**	**16 42 46.9**	**-6.4**
UZH	**Uzhgorod**	**10.58**	**7**	*e*P		**Pn**	**16 40 57.0**	**+0.4**
SMOL	**Smolenice**	**10.59**	**349**	*e*P		**Pn**	**16 40 56.8**	**+0.1**
SMOL				*e*			16 42 48.0	
SMOL	**Smolenice**	**10.59**	**349**	*e*PN		**Pn**	**16 40 56.8**	**+0.1**
SMOL				*e*SN		**Sn**	**16 42 48.0**	**-6.6**
MOA	**Molln**	**10.67**	**337**	*i* Pn		**Pn**	**16 40 57.1**	**-0.8**
	comp=N,38nm,0.4s,SNR=77							
MOA				*e*Sn		**Sn**	**16 42 51.1**	**-5.7**
	comp=N,39nm,0.6s							
BIOA	**Bad Ischl, Aus**	**10.73**	**335**	*e*Pn		**Pn**	**16 40 57.8**	**-1.0**
	comp=N,64nm,0.5s,SNR=78							
BIOA				*e*Sn		**Sn**	**16 42 53.0**	**-5.3**
	comp=N,44nm,0.5s							
MILM	**Milestii Mici**	**10.77**	**33**	*e*P		**Pn**	**16 41 03.0**	**+3.9**
	comp=N,40nm,1.2s							
MILM				*e*S		**Sn**	**16 43 02.0**	**+3.0**
MILM				*e*L		L	16 44 02.0	
MILM				LQM			16 44 52.0	
	comp=N,1μm,16.0s							
MILM				LRM		MLR	16 45 44.0	
	comp=N,600nm,11.5s							
MILM	**Milestii Mici**	**10.77**	**33**	*e*P		**Pn**	**16 41 03.0**	**+3.9**
MILM				*e*S		**Sn**	**16 43 02.0**	**+3.0**
MILM				pmax		pmax		
	comp=Z,40nm,1.2s							
MILM				MLR		MLR		
	comp=Z,800nm,13.0s							
MILM				MLR		MLR		
	comp=N,600nm,11.5s							
CRVS	**Cervenica-Dubn**	**10.79**	**4**	*e*P		**Pn**	**16 40 59.4**	**-0.1**
CRVS	**Cervenica-Dubn**	**10.79**	**4**	*e*PN		**Pn**	**16 40 59.4**	**-0.1**
KOLS	**Kolonicke sedl**	**10.88**	**7**	*e*P		**Pn**	**16 41 01.0**	**+0.2**
KOLS	**Kolonicke sedl**	**10.88**	**7**	*e*PN		**Pn**	**16 41 01.0**	**+0.2**
JAVC	**Velka Javorina**	**10.89**	**351**	*e*PN		**Pn**	**16 41 00.9**	**0.0**
JAVC				*e*SN		**Sn**	**16 42 59.1**	**-3.1**
CSS	**Mathiatis**	**10.92**	**103**			**Pn**	**16 41 00.9**	**-0.4**
WTTA	**Wattenberg**	**11.14**	**328**	*e*Pn		**Pn**	**16 41 04.7**	**+0.3**
	comp=N,56nm,0.5s,SNR=43							
WTTA				*e*Sn		**Sn**	**16 43 03.8**	**-4.6**
	comp=N,79nm,0.6s							
WATA	**Walderalm**	**11.22**	**328**	*i* Pn		**Pn**	**16 41 06.2**	**+0.7**
	comp=N,79nm,0.5s,SNR=41							
WATA				*e*Sn		**Sn**	**16 43 06.5**	**-3.8**
	comp=N,89nm,0.8s							
NIE	**Niedzica**	**11.28**	**360**	*e*P		**Pn**	**16 41 07.3**	**+1.1**
KRUC	**Moravsky**	**11.29**	**347**	*e*PN		**Pn**	**16 41 05.6**	**-0.7**
KRUC				*e*SN		**Sn**	**16 43 05.8**	**-6.0**
SQTA	**Sankt Quirin**	**11.29**	**326**	*e*Pn		**Pn**	**16 41 07.2**	**+0.8**
	comp=N,35nm,0.4s,SNR=30							
SQTA				*e*Sn		**Sn**	**16 43 09.3**	**-2.7**
	comp=N,42nm,0.5s							
FETA	**Feichten**	**11.35**	**325**	*i* Pn		**Pn**	**16 41 07.5**	**+0.2**
	comp=N,4.2nm,0.4s							
FETA				*e*Sn		**Sn**	**16 43 09.4**	**-4.2**
	comp=N,11nm,0.5s							
MAUC	**Maruska**	**11.37**	**352**	*e*P		**Pn**	**16 41 06.9**	**-0.6**
MOTA	**Moosalm**	**11.43**	**327**	*e*Pn		**Pn**	**16 41 09.6**	**+1.2**
	comp=N,55nm,0.6s,SNR=52							
MOTA				*e*Sn		**Sn**	**16 43 12.3**	**-3.2**
	comp=N,44nm,0.8s							
VRAC	**Vranov**	**11.49**	**348**	⇑P		**Pn**	**16 41 08.5**	**-0.6**
VRAC	**Vranov**	**11.49**	**348**	Pn		**Pn**	**16 41 08.7**	**-0.3**
	comp=N,1.3nm,0.3s,baz=181,slow=14,SNR=22							
VRAC				LR		LR	16 46 30.0	
	comp=N,146nm,21.8s,baz=176,slow=43							
	comp=N,11nm,0.6s							
VRAC	**Vranov**	**11.49**	**348**	*e*PN		**Pn**	**16 41 08.4**	**-0.6**
VRAC	**Vranov**	**11.49**	**348**	*e*SN		**Sn**	**16 43 12.6**	**-4.2**
CKRC	**Cesky Krumlov**	**11.54**	**340**	*e*P		**Pn**	**16 41 08.7**	**-1.0**
CKRC				AMS		AMS	16 46 30.0	
	comp=N,1μm,10.3s							
SORM	**Soroca**	**11.57**	**28**	⇓P		**Pn**	**16 41 11.3**	**+1.1**
DAVOX	**Davos/Dischmat**	**11.58**	**322**	Pn		**Pn**	**16 41 10.9**	**+0.4**
	comp=N,1.4nm,0.3s,baz=132,slow=14,SNR=21							
DAVOX				Sn		**Sn**	**16 43 13.3**	**-6.0**
	comp=N,1.8nm,0.3s,baz=135,slow=20,SNR=2.2							
DAVOX				LR		LR	16 45 55.6	
	comp=N,300nm,20.2s,baz=138,slow=39							
	comp=N,7.1nm,0.5s							
KWP	**Kalwaria Pacla**	**11.62**	**8**	*e*P		**Pn**	**16 41 12.0**	**+1.2**
TUE	**Stuetta**	**11.64**	**319**			**Pn**	**16 41 11.2**	**-0.1**
RETA	**Reutte**	**11.69**	**326**	*e*Pn		**Pn**	**16 41 12.4**	**+0.5**
	comp=N,20nm,0.5s,SNR=16							
RETA				*e*Sn		**Sn**	**16 43 18.2**	**-3.6**
	comp=N,21nm,0.4s							
GEC2	**GERESS Array S**	**11.73**	**338**			**Pn**	**16 41 10.7**	**-1.9**
GERES	**GERESS Array B**	**11.73**	**338**	Pn		**Pn**	**16 41 11.2**	**-1.3**
	comp=N,4.3nm,0.3s,baz=156,slow=14,SNR=187							
GERES				Sn		**Sn**	**16 43 15.6**	**-7.3**
	comp=N,2.3nm,0.3s,baz=154,slow=25,SNR=6.6							
	comp=N,15nm,0.4s							
GERES	**GERESS Array B**	**11.73**	**338**	Pn		**Pn**	**16 41 10.6**	**-1.9**
GERES	**GERESS Array B**	**11.73**	**338**	P		**Pn**	**16 41 10.6**	**-1.9**
OKC	**Ostrava-Krasne**	**11.80**	**353**	*e*P		**Pn**	**16 41 13.2**	**-0.1**
OKC	**Ostrava-Krasne**	**11.80**	**353**	*e*P		**Pn**	**16 41 13.2**	**-0.1**
MORC	**Moravsky Berou**	**11.81**	**351**	⇓P		**Pn**	**16 41 12.8**	**-0.7**
MORC	**Moravsky Berou**	**11.81**	**351**	*e*PN		**Pn**	**16 41 12.7**	**-0.7**
MORC	**Moravsky Berou**	**11.81**	**351**	*e*SN		**Sn**	**16 43 17.4**	**-7.2**
DAVA	**Damuels**	**11.94**	**323**	*i* Pn		**Pn**	**16 41 16.2**	**+0.8**
	comp=N,8.6nm,0.5s							
DAVA				*e*Sn		**Sn**	**16 43 23.7**	**-4.3**
	comp=N,25nm,0.3s							
LVV	**L'vov**	**11.97**	**12**	*e*P		**Pn**	**16 41 17.0**	**+1.3**
LVV				*e*S		**Sn**	**16 43 29.0**	**+0.4**
LVV				MLR		MLR		
	comp=Z,260nm,10.0s							
KHC	**Kasperske Hory**	**12.03**	**338**			**Pn**	**16 41 14.3**	**-2.1**
KHC	**Kasperske Hory**	**12.03**	**338**	*e*P		**Pn**	**16 41 14.6**	**-1.8**
KHC	**Kasperske Hory**	**12.03**	**338**	*e*P		**Pn**	**16 41 14.7**	**-1.7**
KHC				*e*x		x	16 41 40.0	
KHC				*e*S		**Sn**	**16 43 21.7**	**-8.2**
KHC				AMS		AMS	16 46 50.0	
	comp=Z,1μm,12.7s							
OJC	**Ojcow**	**12.09**	**358**	*e*P		**Pn**	**16 41 19.6**	**+2.4**
KRLC	**Kraliky**	**12.20**	**349**	*e*P		**Pn**	**16 41 18.4**	**-0.5**
KRLC				*e*S		**Sn**	**16 43 28.2**	**-6.1**
KRLC				MLR		MLR		
	comp=Z,800nm,14.8s							
KRLC	**Kraliky**	**12.20**	**349**	*e*P		**Pn**	**16 41 18.4**	**-0.5**
KRLC				*e*S		**Sn**	**16 43 28.2**	**-6.1**
KRLC				AMS		AMS	16 46 50.0	
	comp=Z,800nm,14.8s							
SIM	**Simferopol'**	**12.35**	**52**	*e*P		P	16 41 28.1	-4.8
SIM				pmax		pmax		
	comp=Z,22nm,1.0s							
SIM				MLR		MLR		
	comp=Z,300nm,17.8s							
DPC	**Dobruska-Polom**	**12.54**	**348**	*e*P		**Pn**	**16 41 23.0**	**-0.5**
DPC				MLR		MLR		
	comp=Z,900nm,15.0s							
DPC	**Dobruska-Polom**	**12.54**	**348**	*e*P		**Pn**	**16 41 23.0**	**-0.5**
DPC				AMS		AMS	16 47 10.0	
	comp=Z,900nm,15.0s							
PRU	**Pruhonice**	**12.55**	**343**	*e*P		**Pn**	**16 41 22.5**	**-1.1**
PRU	**Pruhonice**	**12.55**	**343**	*e*P		**Pn**	**16 41 22.5**	**-1.1**
HSAF	**As Saff**	**12.60**	**129**	P		**Pn**	**16 41 20.3**	**-4.0**
	baz=132							
SENIN	**Lac Senin/Sane**	**12.67**	**315**			**Pn**	**16 41 25.7**	**+0.2**
GLL	**Jalalah**	**12.72**	**129**	P		**Pn**	**16 41 23.4**	**-2.6**
	baz=132							
UPC	**Upice**	**12.75**	**347**	*e*P		**Pn**	**16 41 26.6**	**+0.4**
UPC				MLR		MLR		
	comp=Z,1μm,11.7s							
UPC	**Upice**	**12.75**	**347**	*e*P		**Pn**	**16 41 26.6**	**+0.4**
UPC				AMS		AMS	16 47 20.0	
	comp=Z,1μm,11.7s							
OSTC	**Ostas**	**12.76**	**348**	*e*P		**Pn**	**16 41 26.9**	**+0.5**
OSTC				AMS		AMS	16 47 20.0	
	comp=Z,900nm,14.2s							
KSP	**Ksiaz**	**13.03**	**349**	*e*P		**Pn**	**16 41 29.8**	**-0.2**
PVCC	**Panska Ves**	**13.05**	**343**	AMS		AMS	16 48 00.0	
	comp=Z,400nm,13.0s							
HNTI	**Hanita**	**13.07**	**108**	Pn		**Pn**	**16 41 28.0**	**-2.8**
NBNS	**Bani Suef**	**13.17**	**133**	P		**Pn**	**16 41 29.1**	**-3.1**
	baz=136							
MMAI	**Mount Meron Ar**	**13.28**	**108**	Pn		**Pn**	**16 41 33.9**	**+0.3**
	comp=Z,2.3nm,0.3s,baz=166,slow=18,SNR=6.6							
MMAI				Sn		**Sn**	**16 43 53.3**	**-7.4**
	comp=Z,3.2nm,0.3s,baz=75,slow=22,SNR=5.1							
MMAI				LR		LR	16 48 48.5	
	comp=Z,157nm,18.7s,baz=83,slow=47							
	comp=Z,0.6nm,0.3s							
GRFO	**Grafenberg**	**13.28**	**333**			**Pn**	**16 41 31.1**	**-2.4**
GRFO	**Grafenberg**	**13.28**	**333**	P		**Pn**	**16 41 31.1**	**-2.4**
GRA1	**Grafenberg Arr**	**13.28**	**333**			**Pn**	**16 41 31.2**	**-2.3**
GRF	**Grafenberg Arr**	**13.28**	**333**	P		**Pn**	**16 41 31.2**	**-2.3**
NKC	**Novy Kostel**	**13.34**	**338**	*e*P		**Pn**	**16 41 32.7**	**-1.7**
NKC				MLR		MLR		
	comp=Z,1μm,11.5s							
NKC	**Novy Kostel**	**13.34**	**338**	*e*P		**Pn**	**16 41 32.7**	**-1.7**
NKC				AMS		AMS	16 47 40.0	
	comp=Z,1μm,11.5s							
STU	**Stuttgart**	**13.35**	**326**	Pn		**Pn**	**16 41 33.3**	**-1.1**
STU	**Stuttgart**	**13.35**	**326**	P		**Pn**	**16 41 33.3**	**-1.1**
GEM	**Giv'at Ha'Em**	**13.39**	**107**	Pn		**Pn**	**16 41 32.2**	**-2.8**
BFO	**Black Forest**	**13.42**	**323**			**Pn**	**16 41 34.7**	**-0.7**
BFO	**Black Forest**	**13.42**	**323**	P		**Pn**	**16 41 34.7**	**-0.7**
NATI	**Neve Ativ**	**13.42**	**107**	Pn		**Pn**	**16 41 32.6**	**-2.9**
BRG	**Berggiesshubel**	**13.52**	**342**	*i* P		**Pn**	**16 41 35.4**	**-1.4**
BRG				Amp			16 41 36.0	
	comp=Z,12nm,0.7s							
BRG				*e*x		x	16 41 48.4	
BRG				Amp			16 41 49.5	
	comp=Z,17nm,0.7s							
BRG				Amp			16 47 59.0	
	comp=Z,0.7nm,8.9s							
BRG				Amp			16 48 01.0	
	comp=N,0.5nm,7.4s							
BRG				Amp			16 48 06.0	
	comp=E,0.3nm,6.9s							
BRG	**Berggiesshubel**	**13.52**	**342**	*i* P		**Pn**	**16 41 35.3**	**-1.4**
BRG				pmax		pmax		
	comp=Z,12nm,0.7s							
BRG				pmax		pmax		
	comp=Z,17nm,0.7s							
BRG				MLR		MLR		
	comp=Z,670nm,8.9s							
BRG				MLR		MLR		
	comp=N,490nm,7.4s							
BRG				MLR		MLR		
	comp=E,270nm,6.9s							
MMLI	**Mount Malkishu**	**13.56**	**110**	Pn		**Pn**	**16 41 34.4**	**-3.0**
KZIT	**Kziot**	**13.64**	**118**	Pn		**Pn**	**16 41 35.1**	**-3.4**
KZIT				Sn		Sn	16 43 59.9	-10
AMAZ	**Amatzia**	**13.65**	**114**	Pn		**Pn**	**16 41 36.6**	**-2.1**
TAMRE	**El Minia**	**13.68**	**137**	P		**Pn**	**16 41 37.5**	**-1.7**
	baz=139							
BEL	**Belsk**	**13.70**	**1**	*e*P		**P**	**16 41 50.0**	**+2.2**
HMDT	**Nahal Hemdat**	**13.73**	**111**	Pn		**Pn**	**16 41 37.0**	**-2.7**
SSB	**Saint Sauveur**	**13.78**	**306**	Pn		**Pn**	**16 41 39.8**	**-0.6**
SSB	**Saint Sauveur**	**13.78**	**306**	P		**Pn**	**16 41 39.8**	**-0.6**
YTIR	**Yattir**	**13.89**	**115**	Pn		**Pn**	**16 41 39.2**	**-2.8**
YTIR				Sn		Sn	16 44 06.9	-8.8
ECH	**Echery**	**13.91**	**321**			**Pn**	**16 41 40.2**	**-1.9**
ECH	**Echery**	**13.91**	**321**	P		**Pn**	**16 41 40.2**	**-1.9**
DSI	**Dead Sea**	**13.97**	**113**	Pn		**Pn**	**16 41 40.5**	**-2.5**
DSI				Sn		Sn	16 44 08.7	-8.8
AKASG	**Malin Array Be**	**14.06**	**24**	Pn		**Pn**	**16 41 42.0**	**-2.1**
	comp=E,1.5nm,0.3s,baz=210,slow=11,SNR=30							
AKASG				LR		LR	16 48 04.6	
	comp=E,559nm,19.7s,baz=206,slow=42							
	comp=E,5.0nm,0.7s							
AKASG	**Malin Array Be**	**14.06**	**24**			**Pn**	**16 41 42.5**	**-1.6**
AKASG	**Malin Array Be**	**14.06**	**24**	P		**Pn**	**16 41 42.0**	**-2.1**
AKBB	**Malin Array Si**	**14.06**	**24**			**Pn**	**16 41 43.2**	**-0.9**
AKBB	**Malin Array Si**	**14.06**	**24**	⇑P		**Pn**	**16 41 42.7**	**-1.4**
CLL	**Collm**	**14.15**	**341**	*e*P		**Pn**	**16 41 44.0**	**-1.4**
CLL				pmax		pmax		
	comp=Z,4.0nm,0.9s							
CLL	**Collm**	**14.15**	**341**	*e*P		**Pn**	**16 41 44.0**	**-1.4**
	comp=Z,4.0nm,0.9s							
CLL				*i* x		x	16 41 46.0	
	comp=Z,8.0nm,0.6s							
CLL				*i* sP		**P**	**16 41 53.0**	**+0.2**
CLL				*i* PP		**PnPn**	**16 41 54.6**	**+1.3**
	comp=Z,39nm,1.0s							
CLL				*e*sPP			16 42 00.0	
CLL				*e*x		x	16 42 06.0	
CLL				*e*(SS)			16 44 42.0	
CLL				Lmax			16 47 00.0	
GHAJ	**Ghor Haditha**	**14.25**	**114**	Pn		**Pn**	**16 41 44.3**	**-2.5**
KRMI	**Paran Flat**	**14.34**	**120**	Pn		**Pn**	**16 41 45.1**	**-3.0**
PRNI	**Paran**	**14.39**	**118**	Pn		**Pn**	**16 41 46.6**	**-2.2**
ZFRI	**Zfri**	**14.39**	**117**	Pn		**Pn**	**16 41 46.2**	**-2.6**
HRFI	**Mount Harif**	**14.60**	**119**	Pn		**Pn**	**16 41 48.1**	**-3.6**
HRFI				Sn		Sn	16 44 24.1	-8.8
HDK1	**Dakhla**	**14.72**	**146**	P		**Pn**	**16 41 49.9**	**-3.4**
	baz=149							
EIL	**Elat**	**14.77**	**121**	Pn		**Pn**	**16 41 51.4**	**-2.5**
	comp=Z,1.2nm,0.3s,baz=343,slow=4.6,SNR=10.0							
EIL				Sn		Sn	16 44 26.5	-10
	comp=Z,1.4nm,0.3s,baz=283,slow=18,SNR=2.4							
	comp=Z,2.7nm,0.4s							
EIL	**Elat**	**14.77**	**121**	Pn		**Pn**	**16 41 51.0**	**-2.9**
EIL				Sn		Sn	16 44 27.3	-10
ASF	**Jabal al Asfar**	**14.78**	**109**	Pn		**Pn**	**16 41 54.4**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=246,slow=2.2,SNR=7.2							
	comp=Z,3.1nm,0.7s							
HKAT	**Jabal Katrina**	**14.89**	**126**	P		**Pn**	**16 41 53.0**	**-2.7**
	baz=129							
GKP	**Gorka Klasztor**	**15.29**	**353**	*e*P		**P**	**16 42 05.8**	**+0.4**
WLF	**Walferdange**	**15.38**	**323**	*d*P		**Pn**	**16 42 03.9**	**+2.0**
WLF				*dx*		x	16 42 09.4	
SOC	**Sochi**	**15.62**	**64**	*e*P		**P**	**16 42 07.3**	**-1.9**
SOC				*e*			16 45 04.3	
SOC				pmax		pmax		
	comp=Z,25nm,0.8s							
SOC				MLR		MLR		
	comp=Z,119nm,16.0s							
BHOU	**Houvegnez**	**15.92**	**325**	*d*P		**Pn**	**16 42 10.0**	**+1.0**
SUW	**Suwalki**	**16.00**	**6**	*e*P		**Pn**	**16 42 09.2**	**-0.7**
SUW	**Suwalki**	**16.00**	**6**	*e*P		**Pn**	**16 42 09.1**	**-0.8**
BTNL	**Ternell**	**16.03**	**325**	*dx*		**P**	**16 42 15.9**	**+2.2**
MEM	**Membach**	**16.10**	**325**	*d*P		**Pn**	**16 42 12.4**	**+1.2**
	comp=Z,16nm,0.7s							
RCHB	**Rochefort**	**16.15**	**323**	*dx*		**P**	**16 42 16.3**	**+1.3**
BSTI	**Sart Tilman**	**16.29**	**325**	*d*P		**P**	**16 42 16.0**	**-0.5**
BGES	**Gesves**	**16.37**	**323**	*d*P		**P**	**16 42 17.3**	**-0.1**
	comp=Z,9.5nm,1.0s							
DOU	**Dourbes**	**16.41**	**322**	*d*P		**P**	**16 42 16.7**	**-1.2**
	comp=Z,16nm,1.1s							
DOU				*d*PP		PbPb	16 43 10.5	0.0
BMRD	**Maredsous**	**16.47**	**323**	*d*P		**Pn**	**16 42 17.1**	**+1.2**
BMRD				*dx*		x	16 42 42.9	
SNF	**Seneffe**	**16.84**	**322**	*d*P		**P**	**16 42 23.0**	**+0.4**
SNF				*dx*		x	16 42 24.5	
MNK	**Minsk**	**17.16**	**15**	*i* P		**Pn**	**16 42 23.8**	**-0.8**
MNK				*i* S		**Sn**	**16 45 35.4**	**+0.7**
MNK				pmax		pmax		
	comp=E,6.0nm,1.0s							
MNK				pmax		pmax		
	comp=Z,129nm,1.0s							
MNK				pmax		pmax		
	comp=N,36nm,1.0s							
MNK	**Minsk**	**17.16**	**15**	*i* P		**Pn**	**16 42 23.9**	**-0.8**
	comp=E,6.0nm,1.0s							
MNK				*i* P		**Pn**	**16 42 23.9**	**-0.8**
	comp=N,36nm,1.0s							
MNK				*i* P		**Pn**	**16 42 23.9**	**-0.8**
	comp=Z,129nm,1.0s,baz=201							
MNK				*i* PP		**sP**	**16 42 33.6**	**-0.2**
MNK				*i* S		**Sn**	**16 45 35.4**	**+0.7**
MNK				*i* SS		SnSn	16 46 15.1	+27
NACGM	**Naroch**	**17.33**	**13**	⇓*e*P		**Pn**	**16 42 24.9**	**-1.9**
	baz=199							
BSD	**Bornholm Skovb**	**17.38**	**350**	*i* P		**Pn**	**16 42 25.3**	**-2.0**
BSD				IAmb		IAmb	16 42 26.6	
	comp=Z,21nm,0.9s							
PABE	**Paberze**	**17.55**	**7**	P		**Pn**	**16 42 28.3**	**-1.1**
PABE	**Paberze**	**17.55**	**7**	*e*P		**Pn**	**16 42 28.3**	**-1.1**
IIGN	**Ignalina**	**17.67**	**11**	*e*P		**Pn**	**16 42 29.4**	**-1.6**
IIGN				IAmb		IAmb	16 42 45.5	
	comp=Z,18nm,0.8s							
IDID	**Didziasalis**	**17.72**	**12**	*e*P		**Pn**	**16 42 29.8**	**-1.8**
KIV	**Kislovodsk**	**17.80**	**64**	*e*P		**P**	**16 42 34.9**	**+1.4**
KIV				*e*S		**Sn**	**16 45 54.1**	**+3.4**
KIV				pmax		pmax		
	comp=Z,23nm,1.0s							
KIV				MLR		MLR		
	comp=Z,60nm,14.0s							
KVAR	**Kislovodsk Arr**	**17.81**	**64**	P		**Pn**	**16 42 33.2**	**+0.3**
	baz=246,slow=22							
	comp=Z,3.6nm,0.7s							
GEVA	**Gevas**

HOMB Hombersund 21.57 343 *e*P P **16 43 14.8 +0.5**
HLM1 Long Mynd 21.62 319 *e*P P **16 43 15.3 +0.3**
HLM1 IAmb IAmb 16 43 18.2
comp=Z,48nm,0.6s
PMRV Marv??o 21.63 282 *e*P P **16 43 14.7 -0.5**
comp=Z,30nm,1.3s
PCBR Castelo Branco 21.66 283 *e*P P **16 43 15.2 -0.2**
comp=Z,38nm,1.2s
MTE Manteigas 21.68 285 *e*P P **16 43 15.5 -0.2**
comp=Z,52nm,1.1s
MTE Manteigas 21.68 285 P P **16 43 15.6 -0.2**
MTE IAmb IAmb 16 43 24.8
comp=Z,34nm,0.9s
STRU Stroemstad 21.73 347 *i* P P **16 43 14.6 -1.4**
HTL Hartland 21.74 314 *e*P P **16 43 16.6 +0.4**
HTL IAmb IAmb 16 43 20.1
comp=Z,30nm,0.7s
PVRL Vila Real 21.78 287 *e*P P **16 43 17.2 +0.5**
comp=Z,31nm,1.4s
UPP Uppsala 21.81 356 *e*P P **16 43 16.2 -0.5**
POLO Lamas de Olo 21.83 287 *e*P P **16 43 22.2 +4.8**
comp=Z,9.5nm,1.3s
PESTR Estremoz 21.84 281 *e*P P **16 43 16.7 -0.7**
comp=Z,24nm,1.5s
PVIS Viseu 21.93 286 *e*P P **16 43 18.1 -0.3**
comp=Z,48nm,1.3s
SNART Snartemo 21.95 341 *i* P P **16 43 19.9 +1.5**
SNART Snartemo 21.95 341 *e*P P **16 43 18.6 +0.2**
FOEL Foel Wylfa 21.99 320 *e*P P **16 43 19.2 +0.4**
FOEL IAmb IAmb 16 43 22.3
comp=Z,86nm,0.8s
PVAQ Vaqueiros 22.17 277 *e*P P **16 43 21.6 +0.7**
PBEJ Beja 22.18 278 *e*P P **16 43 20.3 -0.7**
comp=Z,26nm,1.9s
LLW Llanuwchllyn 22.21 319 *e*P P **16 43 21.0 -0.1**
EVO Evora 22.22 280 *e*P P **16 43 21.4 0.0**
comp=Z,20nm,1.7s
MEF Metsahovi 22.25 5 *e*P P **16 43 19.9 -1.7**
PMTG Montargil 22.31 281 *e*P P **16 43 21.5 -0.9**
comp=Z,26nm,1.4s
PBDV Barranco-do-Ve 22.36 276 *e*P P **16 43 25.6 +2.6**
comp=Z,46nm,1.4s
PCVE Castro Verde 22.38 278 *e*P P **16 43 27.0 +3.9**
comp=Z,38nm,1.7s
HFS Hagfors 22.42 351 P P **16 43 22.3 -1.0**
comp=Z,20nm,0.4s,baz=183,slow=5.3,SNR=82
HFS LR LR 16 54 30.0
comp=Z,201nm,19.9s,baz=174,slow=43
comp=Z,20nm,0.4s
PCAS Casmilo, Conde 22.43 284 *e*P P **16 43 23.6 -0.1**
comp=Z,29nm,2.2s
MESJ Messejana 22.48 278 *e*P P **16 43 24.9 +0.6**
MESJ IAmb IAmb 16 43 27.8
comp=Z,9.6nm,0.7s
MESJ Messejana 22.48 278 *e*P P **16 43 25.1 +0.8**
comp=Z,29nm,1.5s
MESJ Messejana 22.48 278 *e*P P **16 43 24.8 +0.6**
EDMD Edmundbyers 22.53 325 *e*P P **16 43 23.9 -0.7**
EDMD IAmb IAmb 16 43 26.6
comp=Z,42nm,0.9s
PUL Pulkovo 22.57 13*ce*P P **16 43 24.3 -0.7**
PUL pmax pmax
comp=Z,222nm,1.0s
KONO Kongsberg 22.60 346 P P **16 43 24.3 -1.0**
KONO IAmb IAmb 16 43 26.2
comp=Z,45nm,1.1s
KONO Kongsberg 22.60 346*de*P P **16 43 24.7 -0.6**
KONO pmax pmax
comp=Z,44nm,1.0s
KONO Kongsberg 22.60 346 *e*P P **16 43 24.7 -0.6**
OSL Oslo 22.66 347 *e*P P **16 43 25.1 -0.8**
PNCL Nicolau / Gran 22.68 279 *e*P P **16 43 26.8 +0.5**
comp=Z,28nm,1.1s
WLF1 Llynfaes 22.81 320 *e*P P **16 43 27.8 +0.2**
WLF1 IAmb IAmb 16 43 31.3
comp=Z,42nm,0.9s
YRC Rhoscolyn 22.88 319 *e*P P **16 43 28.2 -0.1**
WPS Cemaes, Anglesey 22.92 320 *e*P P **16 43 29.5 +0.8**
WPS IAmb IAmb 16 43 30.2
comp=Z,44nm,1.4s
RAF Rauma 22.93 2 *e*P P **16 43 26.9 -1.7**
PTEO Sao Teotonio 22.93 278 *e*P P **16 43 31.4 +2.4**
comp=Z,41nm,1.1s
BLS5 Blasjo 23.09 342 *e*P P **16 43 30.7 +0.2**
KMY Karmoy 23.22 340 *e*P P **16 43 31.8 +0.1**
NC602 NORSAR Array S 23.29 349 P P **16 43 31.6 -0.8**
NC602 NORSAR Array S 23.29 349 *e*P P **16 43 31.8 -0.7**
EKA Eskdalemuir Ar 23.38 325 P P **16 43 33.1 -0.3**
comp=Z,25nm,0.9s,baz=127,slow=10,SNR=45
EKA LR LR 16 53 40.7
comp=Z,138nm,21.6s,baz=140,slow=39
comp=Z,25nm,0.9s
ESK Eskdalemuir 23.39 325 *e*P P **16 43 32.9 -0.6**
ESK IAmb IAmb 16 43 35.5
comp=Z,21nm,0.8s
ESK Eskdalemuir 23.39 325 P P **16 43 33.5 +0.1**
ESK IAmb IAmb 16 43 47.0
comp=Z,27nm,0.8s
ESK Eskdalemuir 23.39 325 P P **16 43 33.6 +0.1**
ESK pmax pmax
comp=Z,27nm,0.9s
WIM Isle of Man 23.41 321 *e*P P **16 43 33.5 -0.2**
IOMK Kirk Michael 23.42 322 *e*P P **16 43 33.2 -0.6**
IOMK IAmb IAmb 16 43 35.7
comp=Z,87nm,1.3s
NAO01 NORSAR Array S 23.50 348 P P **16 43 33.1 -1.4**
EBL Broad Law 23.60 326 *e*P P **16 43 35.8 +0.2**
FINES FINESS Array B 23.60 7 P P **16 43 34.0 -1.5**
comp=Z,31nm,0.7s,baz=168,slow=9.7,SNR=105
FINES LR LR 16 53 57.7
comp=Z,319nm,20.1s,baz=193,slow=40
comp=Z,31nm,0.7s
FINES FINESS Array B 23.60 7 P P **16 43 33.9 -1.6**
FINES FINESS Array B 23.60 7 *i* P P **16 43 34.2 -1.3**
FINES pmax pmax
comp=Z,31nm,0.6s
FIA1 FINESS Array S 23.61 7 P P **16 43 34.4 -1.1**
NC405 NORSAR Array S 23.63 350 P P **16 43 35.2 -0.5**
NB201 NORSAR Array S 23.63 349 P P **16 43 35.1 -0.7**
NB2 NORSAR Subarra 23.63 349 P P **16 43 35.0 -0.8**
baz=159,slow=9.3
NB2 NORSAR Subarra 23.63 349 P P **16 43 35.0 -0.8**
comp=Z,72nm,1.1s,baz=159,slow=9.3
NOA NORSAR Array B 23.63 349 P P **16 43 34.7 -1.1**
comp=Z,20nm,0.8s,baz=156,slow=11,SNR=78
NOA LR LR 16 54 18.0
comp=Z,168nm,18.1s,baz=165,slow=40
comp=Z,20nm,0.8s
BELG Belogornoye 23.73 44 P P **16 43 35.9 -0.9**
comp=Z,90nm,0.7s,baz=291,slow=1.5,SNR=26
comp=Z,90nm,0.7s
BELG Belogornoye 23.73 44*c* *i*P P **16 43 35.6 -1.2**
BELG pmax pmax
comp=Z,13nm,0.9s
NEWG New Galloway 23.75 324 *e*P P **16 43 37.1 +0.1**
EDI Edinburgh 23.76 326 *e*P P **16 43 37.6 +0.6**
NC303 NORSAR Array S 23.78 349 IAmb IAmb 16 43 37.4
comp=Z,39nm,0.8s
SKAR Skarslia 23.81 345 *e*P P **16 43 38.1 +0.6**
DSB Dublin 23.82 318 P P **16 43 37.1 -0.6**
NC204 NORSAR Array S 23.93 349 P P **16 43 38.0 -0.7**
ASK Askoy 24.33 342 *e*P P **16 43 42.8 +0.5**
EAB Aberfoyle 24.43 326 *e*P P **16 43 43.2 -0.1**
HYA Hoyanger 24.70 344 *e*P P **16 43 46.0 +0.4**
DOMB Dombas 24.93 347 *e*P P **16 43 48.4 +0.6**
SUE Sulen 24.93 342 *e*P P **16 43 47.0 -0.8**
IDGL Inch Island, C 25.30 321 *e*P P **16 43 50.9 -0.2**
FOO Floro 25.34 343 *e*P P **16 43 51.5 +0.1**
AKN Aaknes 25.44 345 *e*P P **16 43 53.1 +0.7**
MOL Molde 25.69 346 *e*P P **16 43 55.6 +1.0**
NSS Namsos 26.89 352 *e*P P **16 44 05.0 -0.4**
KIRV Kirov 27.77 33 P P **16 44 11.9 -1.4**
comp=Z,14nm,0.5s,baz=240,slow=5.1,SNR=5.8
comp=Z,14nm,0.5s
KIRV Kirov 27.77 33*de*P P **16 44 12.6 -0.7**
PRGR Permogore 28.26 26 *e*P P **16 44 17.1 -0.6**
MOR8 Moi Rana 28.28 355 *e*P P **16 44 19.3 +1.4**
KONS Konsvik 28.71 354 *e*P P **16 44 21.8 +0.1**
AKTO Aktyubinsk 29.32 53 P P **16 44 26.1 -1.2**
comp=Z,3.8nm,0.7s,baz=267,slow=8.0,SNR=16
AKTO LR LR 17 00 07.4
comp=Z,88nm,18.7s,baz=316,slow=45
comp=Z,3.8nm,0.7s
AKTO Aktyubinsk 29.32 53 P P **16 44 25.6 -1.7**
FAUS Fauske 29.43 356 *e*P P **16 44 28.0 -0.1**

GEYT Alibeck 29.62 79 P P **16 44 29.6 -0.6**
comp=Z,4.1nm,0.5s,baz=0.8,slow=10,SNR=2.5
GEYT LR LR 16 59 07.5
comp=Z,91nm,18.3s,baz=302,slow=42
comp=Z,4.1nm,0.5s
GEYT Alibeck 29.62 79 P P **16 44 28.9 -1.2**
TOA0 Torodi Ar. Sit 29.91 219 P P **16 44 33.4 +0.6**
TOA0 IAmb IAmb 16 44 42.0
comp=Z,12nm,1.0s
TORD Torodi Ar. Bea 29.91 219 P P **16 44 33.3 +0.5**
comp=Z,4.1nm,0.8s,baz=34,slow=9.4,SNR=27
TORD LR LR 16 57 49.5
comp=Z,156nm,18.5s,baz=212,slow=39
comp=Z,4.1nm,0.8s
TORD Torodi Ar. Bea 29.91 219 P P **16 44 32.4 -0.4**
STEI Steigen 29.98 356 *e*P P **16 44 32.9 0.0**
LOF Lofoten 30.28 355 *e*P P **16 44 34.2 -1.4**
AB31 Akbulak array 30.38 56 *i* P P **16 44 35.5 -1.2**
ABKAR Akbulak array 30.38 56 P P **16 44 35.9 -0.8**
ABKAR Akbulak array 30.38 56 P P **16 44 35.9 -0.8**
KTK1 Kautokeino 30.97 2 *e*P P **16 44 41.7 0.0**
ARU Arti 31.18 42*c* *i*P P **16 44 42.4 -1.3**
ARU 16 45 41.5
ARU S S **16 49 49.9 +1.4**
ARU SS SnSn **16 51 29.0 -1.8**
ARU pmax pmax
comp=Z,27nm,1.9s
ARU MLR MLR
comp=Z,193nm,12.0s
TRO Tromso 31.57 359 *e*P P **16 44 46.6 -0.2**
ARA0 ARCESS Array S 31.58 3 *e*P P **16 44 46.3 -0.8**
ARCES ARCESS Array B 31.58 3 P P **16 44 45.5 -1.6**
comp=Z,3.8nm,0.6s,baz=190,slow=11,SNR=18
comp=Z,3.8nm,0.6s
SVE Sverdlovsk 32.40 42*de*P P **16 44 53.9 -0.5**
SVE pmax pmax
comp=Z,29nm,0.7s
WSAR Wadi Sarin 35.84 103 LR LR 17 05 04.1
comp=Z,95nm,19.0s,baz=334,slow=45
BORG Borgarnes 36.08 331 P P **16 45 26.8 +0.7**
comp=Z,7.8nm,0.9s,baz=180,slow=1.0,SNR=2.8
BORG LR LR 17 02 25.3
comp=Z,54nm,18.2s,baz=135,slow=40
comp=Z,7.8nm,0.9s
JMIC Jan Mayen 36.16 344 LR LR 17 02 32.1
comp=Z,31nm,18.6s,baz=236,slow=40
KK31 Karatay Array 37.94 66 P P **16 45 42.5 +0.1**
KK31 IAmb IAmb 16 45 51.0
comp=Z,19nm,0.7s
KK31 Karatay Array 37.94 66 *i* P P **16 45 41.7 -0.6**
KKAR Karatay Array 37.94 66 P P **16 45 42.5 +0.2**
KKAR IAmb IAmb 16 45 51.0
comp=Z,19nm,0.7s
KKAR Karatay Array 37.94 66 P P **16 45 42.3 0.0**
KKAR Karatay Array 37.94 66 P P **16 45 42.3 0.0**
KKAR pmax pmax
comp=Z,19nm,0.7s
OTUK Ortayu 38.56 58 P P **16 45 46.1 -1.4**
DBIC Dimbokro 38.77 222 P P **16 45 49.8 +0.3**
comp=Z,5.7nm,0.6s,baz=44,slow=9.8,SNR=8.3
DBIC LR LR 17 02 36.2
comp=Z,160nm,19.3s,baz=36,slow=37
comp=Z,5.7nm,0.6s
DBIC Dimbokro 38.77 222 P P **16 45 48.8 -0.6**
DBIC Dimbokro 38.77 222 P P **16 45 48.8 -0.6**
DBIC pmax pmax
comp=Z,13nm,0.9s
SCO Scoresbysund 39.17 339 *i* P P **16 45 54.0 +1.8**
MBAR Mbarara 39.72 164 LR LR 17 04 31.3
comp=Z,118nm,18.8s,baz=340,slow=39
SPA0 Spitsbergen Ar 40.18 359 *e*P P **16 46 01.1 +0.5**
AAK Ala-Archa 40.90 66 LR LR 17 06 12.6
comp=Z,82nm,18.8s,baz=294,slow=41
AAK Ala-Archa 40.90 66⇑ *e*P P **16 46 09.7 +2.5**
AAK pmax pmax
comp=Z,6.0nm,0.9s
TKM2 Tokmak 2 41.63 65 P P **16 46 15.7 +2.5**
BOOM Boomskoye usch 41.98 66 P P **16 46 16.0 0.0**
BOOM Boomskoye usch 41.98 66 P P **16 46 16.0 0.0**
BOOM pmax pmax
comp=Z,9.0nm,0.8s
KMBO Kilima Mbogo 42.07 154 LR LR 17 06 49.7
comp=Z,78nm,18.4s,baz=93,slow=40
KURBR Kurchatov Arra 42.37 53 P P **16 46 17.7 -1.1**
KURK Kurchatov 42.41 53⇓ *e*P P **16 46 18.5 -0.7**
KURK pmax pmax
comp=Z,17nm,1.7s
MDOK Medeo 42.61 65 P P **16 46 24.4 +3.2**
KSH Kashi 42.77 70 P P **16 46 22.4 -0.1**
KSH pmax pmax
comp=Z,4.0nm,0.6s
PDGK Podgornoye 44.31 64 P P **16 46 32.6 -2.2**
MK31 Makanchi Array 45.44 58 P P **16 46 42.5 -1.2**
MK31 IAmb IAmb 16 46 52.5
comp=Z,12nm,0.6s
MK31 Makanchi Array 45.44 58 *i* P P **16 46 42.4 -1.3**
MKAR Makanchi Array 45.44 58 P P **16 46 42.6 -1.0**
comp=Z,9.1nm,0.5s,baz=274,slow=7.4,SNR=213
MKAR LR LR 17 08 10.0
comp=Z,68nm,21.2s,baz=288,slow=39
comp=Z,9.1nm,0.5s
MKAR Makanchi Array 45.44 58 P P **16 46 42.5 -1.1**
ZAA0 Zalesovo Array 45.82 48 P P **16 46 45.7 -0.8**
ZALV Zalesovo Beam 45.82 48 P P **16 46 45.7 -0.8**
comp=Z,25nm,0.5s,baz=274,slow=8.6,SNR=106
ZALV LR LR 17 09 08.8
comp=Z,74nm,18.8s,baz=296,slow=40
comp=Z,25nm,0.5s
ZALV Zalesovo Beam 45.82 48 P P **16 46 45.8 -0.7**
NRIK Noril'sk 46.89 27 P P **16 46 55.6 +0.8**
comp=Z,2.2nm,0.5s,baz=222,slow=3.2,SNR=7.2
NRIK PcP PcP **16 48 28.0 +0.9**
comp=Z,4.5nm,1.0s,baz=252,slow=3.2,SNR=3.6
NRIK LR LR 17 09 49.0
comp=Z,161nm,18.5s,baz=252,slow=40
comp=Z,2.2nm,0.5s
NRIK Noril'sk 46.89 27 P P **16 46 55.5 +0.8**
NRIK Noril'sk 46.89 27⇑ *e*P P **16 46 55.5 +0.8**
NRIK pmax pmax
comp=Z,12nm,1.5s
SFJD Kangerlussuaq 48.20 330 LR LR 17 08 32.5
comp=Z,114nm,19.3s,baz=89,slow=38
WMQ Urumqi 49.90 61 *e*P P **16 47 21.7 +3.3**
WMQ pmax pmax
comp=Z,13nm,0.7s
GKN Gorkha 53.87 81 *e*P P **16 47 46.8 -1.5**
comp=Z,25nm,0.8s
KNGR Kungurtug, Tuv 54.16 50⇑ *e*P P **16 47 50.7 +0.7**
KNGR pmax pmax
comp=Z,13nm,1.6s
DMN Daman 54.42 81 *e*P P **16 47 50.4 -2.0**
comp=Z,38nm,0.9s
PKIN Phulchoki 54.66 81 *e*P P **16 47 52.6 -1.6**
PKI Pulchoki 54.67 81 *e*P P **16 47 53.2 -1.1**
GUN Gumba 54.88 80 *e*P P **16 47 54.5 -1.3**
MOY Mondy 55.88 48 *e*P P **16 48 03.2 +0.8**
RAMN Ramite 55.90 81 *e*P P **16 48 01.9 -1.2**
FRB Frobisher Bay 56.11 328 LR LR 17 12 57.4
comp=Z,87nm,18.6s,baz=26,slow=37
TAPN Taplejung 56.57 80 *e*P P **16 48 07.4 -0.5**
ZAK Zakamensk 57.69 49 *e*P P **16 48 14.7 -0.6**
ZAK pmax pmax
comp=Z,6.0nm,1.1s
GOMU GeErMu 57.83 67 P P **16 48 17.4 +0.5**
GOMU pP pP 16 48 21.8 -1.3
GOMU sP sP 16 48 23.1 -2.0
GOMU PcP PcP **16 49 08.6 -0.7**
GOMU PP PP **16 50 29.9 +5.0**
GOMU pmax pmax
comp=Z,3.0nm,0.8s
GOMU pmax pmax
comp=Z,48nm,5.8s
SCHQ Schefferville 58.40 317 P P **16 48 20.5 +0.4**
comp=Z,2.9nm,0.5s,baz=45,slow=5.6,SNR=12
SCHQ LR LR 17 13 36.2
comp=Z,50nm,18.4s,baz=97,slow=36
comp=Z,2.9nm,0.5s
SCHQ Schefferville 58.40 317 P P **16 48 20.5 +0.4**
SCHQ IAmb IAmb 16 48 48.2
comp=Z,6.7nm,0.8s
TIXI Tiksi 59.74 20 LR LR 17 18 08.4
comp=Z,516nm,18.6s,baz=358,slow=40
TIXI Tiksi 59.74 20 P P **16 48 30.1 +1.1**
TIXI Tiksi 59.74 20⇓ *e*P P **16 48 29.5 +0.5**
TIXI pmax pmax
comp=Z,12nm,1.7s

GTA Gaotai 59.97 62⇑ P P **16 48 30.5 -0.8**
GTA pP pP 16 48 34.6 -3.1
GTA sP sP 16 48 38.1 -1.5
GTA pmax pmax
comp=Z,5.0nm,0.7s
GTA pmax pmax
comp=Z,46nm,4.4s
GTA LR LR
comp=Z,82nm,17.4s
GTA LR LR
comp=Z,96nm,16.7s
GTA LR LR
comp=Z,110nm,17.1s
SONM Songino Array 60.59 50 P P **16 48 34.8 -0.7**
comp=Z,6.6nm,0.8s,baz=275,slow=7.7,SNR=10
SONM LR LR 17 19 54.1
comp=Z,87nm,18.1s,baz=257,slow=41
comp=Z,6.6nm,0.8s
SONM Songino Array 60.59 50 P P **16 48 34.9 -0.7**
SONM IAmb IAmb 16 48 40.6
comp=Z,8.1nm,1.0s
ULN Ulaanbaatar 60.98 50 P P **16 48 37.3 -0.9**
ULN IAmb IAmb 16 48 42.6
comp=Z,6.1nm,0.8s
ULN Ulaanbaatar 60.98 50*ce*P P **16 48 37.6 -0.5**
ULN pmax pmax
comp=Z,9.0nm,1.0s
BATG Bathurst New B 61.05 309 P P **16 48 38.8 +0.4**
BATG IAmb IAmb 16 48 54.7
comp=Z,17nm,1.3s
PALK Pallekele 62.34 103 LR LR 17 20 14.5
comp=Z,43nm,18.4s,baz=22,slow=40
LZH Lanzhou 64.34 63 *e*P P **16 49 03.7 +2.9**
LZH pP sP 16 49 09.9 +0.8
LZH pmax pmax
comp=Z,15nm,1.1s
YAK Yakutsk 65.21 29 LR LR 17 19 18.1
comp=Z,93nm,19.2s,baz=268,slow=38
YAK Yakutsk 65.21 29 P P **16 49 05.6 -0.1**
YAK Yakutsk 65.21 29 *e*P P **16 49 05.1 -0.7**
YAK *e* 16 49 38.9
YAK *e*S S **16 57 48.6 +1.0**
YAK *e*SS SS **17 02 00.6 +1.1**
YAK pmax pmax
comp=Z,41nm,0.8s
YAK pmax pmax
comp=E,3.0nm,0.9s
YAK pmax pmax
comp=N,2.0nm,0.8s
YAK pmax pmax
comp=Z,55nm,3.8s
YAK pmax pmax
comp=N,52nm,3.0s
YAK pmax pmax
comp=E,45nm,3.8s
YAK smax smax
comp=E,42nm,2.6s
YAK smax smax
comp=N,27nm,3.5s
YAK MLR MLR
comp=Z,111nm,22.0s
LBNH Lisbon 66.10 308 P P **16 49 13.9 +2.0**
baz=59
BOSA Boshof 66.56 175 P P **16 49 15.9 +1.0**
comp=Z,1.8nm,0.5s,baz=8.7,slow=7.6,SNR=13
comp=Z,1.8nm,0.5s
BOSA Boshof 66.56 175 P P **16 49 15.5 +0.6**
BOSA IAmb IAmb 16 49 24.4
comp=Z,11nm,1.2s
BOSA Boshof 66.56 175 P P **16 49 15.5 +0.6**
BOSA pmax pmax
comp=Z,11nm,1.3s
CD2 Chengdu 66.92 68 P P **16 49 16.5 -0.8**
HHC Hu-ho-hao-te 67.17 55 *e*P P **16 49 20.5 +1.6**
HHC pmax pmax
comp=Z,27nm,1.1s
HHC pmax pmax
comp=Z,110nm,8.7s
LONY Lake Ozonia 67.53 310 P P **16 49 22.3 +1.3**
baz=58
A36M Sachs Harbour 67.54 349 P P **16 49 21.7 +1.2**
baz=29
PZH PanZhiHua 67.75 73 P P **16 49 24.3 +1.5**
PZH pmax pmax
comp=Z,7.0nm,0.8s
PZH pmax pmax
comp=Z,100nm,4.6s
RCBR Riachuelo 68.05 243 LR LR 17 19 27.9
comp=Z,128nm,18.4s,baz=148,slow=36
XLT XiLinHaoTe 68.41 51 *e*P P **16 49 30.8 +4.2**
XLT pP sP 16 49 35.0 +0.2
XLT sP pP 16 49 39.2 +6.3
XLT PcP PcP **16 49 54.5 +2.6**
XLT pmax pmax
comp=Z,9.0nm,0.9s
XLT pmax pmax
comp=Z,99nm,4.3s
XLT LR LR
comp=Z,14nm,19.5s
XLT LR LR
comp=Z,130nm,19.3s
XLT LR LR
comp=Z,130nm,18.5s
ZEA Zeya 68.99 38 *e*P P **16 49 30.6 +0.7**
ZEA pmax pmax
comp=Z,10.0nm,0.7s
ZEA MLR MLR
comp=Z,100nm,13.0s
J57A Williamstown 69.04 309 P P **16 49 29.9 -0.5**
J57A IAmb IAmb 16 49 33.0
comp=Z,7.3nm,0.9s
C36M Paulatuk 69.67 347 P P **16 49 34.5 +0.7**
baz=29
BINY Binghamton 69.70 308 P P **16 49 36.3 +1.8**
baz=57
CHTO Chiang Mai 69.83 82 P P **16 49 34.9 -0.8**
CHTO IAmb IAmb 16 49 39.7
comp=Z,9.9nm,1.4s
CHTO Chiang Mai 69.83 82 P P **16 49 34.9 -0.8**
CHTO pmax pmax
comp=Z,10.0nm,1.4s
CM31 Chiang Mai Arr 70.03 82 P P **16 49 35.5 -1.5**
CM31 IAmb IAmb 16 49 45.7
comp=Z,6.2nm,0.9s
CMAR Chiang Mai Arr 70.03 82 P P **16 49 35.8 -1.1**
comp=Z,3.1nm,0.7s,baz=302,slow=7.0,SNR=27
comp=Z,3.1nm,0.7s
SUR Sutherland 70.16 180 LR LR 17 23 03.3
comp=Z,96nm,18.0s,baz=2.0,slow=38
SADO Sadowa 70.18 312 LR LR 17 19 02.3
comp=Z,56nm,19.2s,baz=30,slow=35
BILL Bilibino 71.09 13 P P **16 49 43.0 +0.5**
BILL IAmb IAmb 16 49 43.7
comp=Z,8.5nm,1.1s
BILL Bilibino 71.09 13*de*P P **16 49 42.5 0.0**
BILL *i* 16 49 56.8
BILL *e* 16 52 17.3
BILL pmax pmax
comp=Z,15nm,1.7s
GYA Guiyang 71.46 71 ⇓P P **16 49 49.5 +3.8**
GYA pmax pmax
comp=Z,10.0nm,0.8s
SSPA Standing Stone 71.76 308 P P **16 49 47.1 0.0**
SSPA IAmb IAmb 16 49 49.6
comp=Z,12nm,0.9s
SSPA Standing Stone 71.76 308 P P **16 49 48.9 +1.8**
baz=55
INK Inuvik 72.08 350 P P **16 49 48.7 +0.2**
baz=21
ERPA Erie 72.20 310 P P **16 49 51.2 +1.5**
baz=54
E46A Sault Ste Mari 72.21 315 IAmb IAmb 16 49 52.1
comp=Z,13nm,0.8s
SEY Seymchan 72.22 21 LR LR 17 25 46.0
comp=Z,170nm,18.2s,baz=313,slow=39
SEY Seymchan 72.22 21⇓ *e*P P **16 49 50.6 +1.2**
SEY pmax pmax
comp=Z,9.0nm,1.7s
M53A WI Miller and 73.01 309 P P **16 49 56.0 +1.4**
baz=54
TOLK Toolik Lake Re 73.27 356 P P **16 49 57.1 +1.5**
baz=8.3
YKA Yellowknife Ar 73.38 340 P P **16 49 56.9 +0.5**
comp=Z,2.6nm,0.6s,baz=35,slow=5.6,SNR=17
comp=Z,2.6nm,0.6s
MDP Montagnes des 73.49 263 LR LR 17 20 37.6
comp=Z,52nm,19.9s,baz=59,slow=34

MCWV	**Mont Chateau**	73.55	308	P		P		16 49 59.6	+1.9
	baz=54								
BNX	**BinXian**	73.92	44	⇓P		P		16 49 59.6	-0.2
BNX				pmax		pmax			
	comp=Z,26nm,1.1s								
BNX				pmax		pmax			
	comp=Z,150nm,4.4s								
KLR	**Kul'dur**	73.99	39	*c i*P		P		16 50 00.2	0.0
KLR				pmax		pmax			
	comp=Z,22nm,1.7s								
CN2	**Changchun**	74.01	47	*e*P		P		16 49 59.5	-0.9
CN2				pP		pP		16 50 04.1	-2.6
CN2				S		**SKiKP**		16 59 29.1	+1.6
CN2				pmax		pmax			
	comp=Z,20nm,0.9s								
CN2				LR		LR			
	comp=Z,160nm,15.0s								
CN2				LR		LR			
	comp=Z,180nm,15.0s								
CN2				LR		LR			
	comp=Z,130nm,16.0s								
O53A	**New Philadelph**	74.05	309	P		P		16 50 02.0	+1.4
	baz=53								
RDOG	**Red Dog Mine**	74.10	1	P		P		16 49 57.6	-2.9
	baz=357								
MA2	**Magadan**	74.39	24	LR		LR		17 27 08.6	
	comp=Z,123nm,18.2s,baz=314,slow=39								
MA2	**Magadan**	74.39	24	P		P		16 50 02.8	+0.5
MA2				IAmb		IAmb		16 50 04.3	
	comp=Z,16nm,1.0s								
MA2	**Magadan**	74.39	24	⇓*e*P		P		16 50 03.7	+1.4
MA2				pmax		pmax			
	comp=Z,27nm,1.7s								
COLD	**Coldfoot**	74.71	356	P		P		16 50 05.1	+1.1
	baz=7.7								
P52A	**Corning**	74.98	309	P		P		16 50 06.8	+0.7
	baz=53								
EYMN	**Ely**	75.05	320	P		P		16 50 07.3	+1.0
	baz=49								
I29M	**Ogilvie Camp,**	75.50	351	P		P		16 50 09.4	+0.8
	baz=17,SNR=16								
ULM	**Lac du Bonnet**	75.65	324	P		P		16 50 10.4	+0.7
	comp=Z,14nm,0.8s,baz=50,slow=4.5,SNR=25								
	comp=Z,14nm,0.8s								
H24K	**Noodor Dome**	75.95	355	P		P		16 50 12.6	+1.3
	baz=9.6,SNR=5.0								
H23K	**Yukon River**	76.07	356	IAmb		IAmb		16 50 14.8	
	comp=Z,15nm,1.3s								
H23K	**Yukon River**	76.07	356	P		P		16 50 13.7	+1.8
	baz=8.2,SNR=7.4								
H21K	**Melozitna Rive**	76.40	357	P		P		16 50 15.8	+2.0
	baz=5.6,SNR=27								
O48B	**Farmland**	76.43	311	P		P		16 50 14.8	+0.4
	baz=51								
I23K	**Minto, Yukon-K**	76.73	356	P		P		16 50 17.2	+1.6
	baz=8.3,SNR=6.1								
I21K	**Tanana**	76.84	357	IAmb		IAmb		16 50 18.9	
	comp=Z,7.2nm,0.9s								
I21K	**Tanana**	76.84	357	P		P		16 50 17.8	+1.6
	baz=6.2,SNR=8.6								
MDM	**Murphy Dome**	76.85	355	IAmb		IAmb		16 50 18.4	
	comp=Z,13nm,1.1s								
DAWY	**Dawson**	76.88	351	IAmb		IAmb		16 50 18.2	
	comp=Z,6.7nm,0.7s								
DAWY	**Dawson**	76.88	351	P		P		16 50 17.8	+1.2
	baz=16,SNR=5.9								
COLA	**College**	76.91	355	⇑*e*P		P		16 50 18.1	+1.5
COLA				pmax		pmax			
	comp=Z,4.0nm,1.2s								
J26L	**Joseph Creek**	76.91	353	P		P		16 50 17.8	+1.0
	baz=13,SNR=10								
MLY	**Manley**	76.93	356	P		P		16 50 18.1	+1.3
	baz=7.2,SNR=9.3								
ILAR	**Eielson Array**	76.94	354	P		P		16 50 17.9	+1.1
	comp=Z,3.2nm,0.9s,baz=358,slow=3.6,SNR=6.7								
ILAR				LR		LR		17 25 17.2	
	comp=Z,38nm,20.9s,baz=316,slow=37								
	comp=Z,3.2nm,0.9s								
J25K	**Salcha River,**	76.97	354	P		P		16 50 17.6	+0.5
	baz=12								
MMPY	**Sheldon Lake,**	77.02	347	P		P		16 50 19.5	+2.1
	baz=23								
K27K	**Chicken**	77.22	352	P		P		16 50 19.8	+1.4
	baz=14								
NEA2	**Nenana**	77.27	355	P		P		16 50 19.5	+0.9
	baz=8.6								
HDA	**Harding Lake**	77.30	354	IAmb		IAmb		16 50 20.3	
	comp=Z,13nm,0.8s								
HDA	**Harding Lake**	77.30	354	P		P		16 50 19.5	+0.7
	baz=10,SNR=14								
WRH	**Wood River Hil**	77.32	355	P		P		16 50 19.4	+0.5
WRH				IAmb		IAmb		16 50 20.6	
	comp=Z,11nm,0.8s								
USA0B	**Ussuriysk Arra**	77.40	43	⇑*e*P		P		16 50 20.2	+0.4
USRK	**Ussuriysk Ar.**	77.40	43	P		P		16 50 19.2	-0.6
	comp=Z,5.9nm,0.8s,baz=261,slow=6.7,SNR=8.7								
USRK				LR		LR		17 28 24.2	
	comp=Z,88nm,20.2s,baz=314,slow=39								
	comp=Z,5.9nm,0.8s								
GCSA	**Galena City Sc**	77.43	359	P		P		16 50 21.2	+1.7
	baz=2.3								
SCRK	**Sand Creek**	77.47	353	P		P		16 50 20.5	+0.6
SCRK	**Sand Creek**	77.47	353	P		P		16 50 21.3	+1.3
	baz=13,SNR=5.2								
F36A	**Milaca**	77.47	319	P		P		16 50 20.7	+0.6
F36A				IAmb		IAmb		16 50 21.8	
	comp=Z,9.7nm,0.8s								
SFIN	**Lafayette**	77.51	312	P		P		16 50 21.3	+0.8
	baz=50								
FARO	**Faro, Yukon**	77.75	348	P		P		16 50 23.7	+2.2
	baz=21								
RIDG	**Independent Ri**	77.78	353	P		P		16 50 22.8	+1.2
	baz=12,SNR=5.1								
K24K	**Donnelly Dome**	77.80	354	P		P		16 50 22.6	+0.9
	baz=11,SNR=5.3								
BPAW	**Bear Paw Mtn.**	77.87	356	IAmb		IAmb		16 50 23.3	
	comp=Z,6.8nm,0.8s								
BPAW	**Bear Paw Mtn.**	77.87	356	P		P		16 50 22.6	+0.6
	baz=7.0,SNR=10								
J20K	**Nowinta River**	77.93	358	P		P		16 50 23.8	+1.5
	baz=4.5,SNR=5.2								
M31M	**Drury Creek, Y**	77.94	348	P		P		16 50 24.5	+2.0
	baz=20								
MCK	**McKinley**	78.11	355	P		P		16 50 24.2	+0.8
	baz=8.6								
L27K	**Beaver Creek,**	78.14	352	P		P		16 50 25.3	+1.7
	baz=14								
CHUM	**Lake Minchumin**	78.15	357	P		P		16 50 25.0	+1.4
	baz=5.9								
TKL	**Tuckaleechee C**	78.45	306	LR		LR		17 24 34.7	
	comp=Z,31nm,19.6s,baz=60,slow=35								
TRF	**Thorofare Moun**	78.48	356	P		P		16 50 26.3	+0.6
	baz=7.5,SNR=5.5								
PAX	**Paxson**	78.59	353	P		P		16 50 26.3	+0.1
	baz=11								
CAST	**Castle Rocks**	78.60	357	IAmb		IAmb		16 50 28.1	
	comp=Z,6.1nm,0.8s								
CAST	**Castle Rocks**	78.60	357	P		P		16 50 26.8	+0.7
	baz=6.1,SNR=8.0								
DHY	**Denali Highway**	78.65	354	P		P		16 50 27.4	+0.9
	baz=9.8								
BVCY	**Beaver Creek**	78.65	351	P		P		16 50 28.1	+1.6
	baz=15								
HDIL	**Hopedale**	78.67	313	P		P		16 50 28.2	+1.3
	baz=49								
K20K	**Telida**	78.75	357	P		P		16 50 28.1	+1.1
	baz=4.5,SNR=6.5								
M27K	**Edge Creek, AK**	78.83	352	P		P		16 50 28.8	+1.2
	baz=14								
M26K	**Nabesna, AK**	78.91	352	P		P		16 50 28.6	+0.7
	baz=13								
PPLA	**Purkeypile**	79.13	357	IAmb		IAmb		16 50 30.8	
	comp=Z,8.8nm,0.8s								
PPLA	**Purkeypile**	79.13	357	P		P		16 50 30.1	+0.9
	baz=6.0,SNR=5.9								
WAT6	**Susitna Watana**	79.17	354	P		P		16 50 30.1	+0.6
	baz=9.6								
YUK3	**Moose Creek**	79.22	351	P		P		16 50 31.3	+1.5
	baz=15,SNR=8.0								
TTA	**Tatalina**	79.23	358	P		P		16 50 31.0	+1.3
	baz=2.9								
KSAR	**Wonju Array Be**	79.45	51	P		P		16 50 30.9	-0.3
KSAR	**Wonju Array Be**	79.45	51	P		P		16 50 30.9	-0.3
KSRS	**Korea Array**	79.46	51	P		P		16 50 30.9	-0.3
	comp=Z,4.8nm,0.6s,baz=312,slow=5.0,SNR=33								
KSRS				LR		LR		17 31 16.5	
	comp=Z,46nm,18.2s,baz=340,slow=40								
	comp=Z,4.8nm,0.6s								

KSRS	**Korea Array**	79.46	51	P		P		16 50 31.0	-0.3
HYT	**Haines Junctio**	79.73	349	P		P		16 50 33.8	+1.3
	baz=18								
YUK6	**Outpost Mounta**	79.74	350	P		P		16 50 34.2	+1.5
	baz=17								
N25K	**Chitina, Valde**	79.85	353	P		P		16 50 34.0	+0.9
	baz=12								
M23K	**Glacier View**	79.95	354	P		P		16 50 34.6	+1.1
	baz=9.5								
L19K	**White Mountain**	79.95	358	IAmb		IAmb		16 50 35.8	
	comp=Z,11nm,0.9s								
L19K	**White Mountain**	79.95	358	P		P		16 50 34.9	+1.4
	baz=3.9,SNR=8.2								
SML	**Sawmill**	79.98	355	P		P		16 50 34.7	+1.0
	baz=9.1								
SKT	**Skwentna**	80.01	356	P		P		16 50 33.7	-0.1
	baz=6.5								
KLU	**Klutina**	80.09	353	P		P		16 50 35.2	+0.8
	baz=11								
CTG	**Chitna Glacier**	80.12	351	P		P		16 50 35.8	+1.2
	baz=15								
M20K	**Styx River**	80.19	357	P		P		16 50 35.2	+0.4
	baz=5.2								
M19K	**Big River Lodg**	80.21	357	IAmb		IAmb		16 50 37.8	
	comp=Z,18nm,1.4s								
M19K	**Big River Lodg**	80.21	357	P		P		16 50 36.1	+1.2
	baz=4.2,SNR=6.4								
KNK	**Knik Glacier**	80.38	355	P		P		16 50 37.0	+1.2
	baz=8.9								
SUA	**Susitna One**	80.48	356	IAmb		IAmb		16 50 38.6	
	comp=Z,20nm,1.5s								
SUA	**Susitna One**	80.48	356	P		P		16 50 37.5	+0.9
	baz=7.1								
ECSD	**EROS Data Cent**	80.53	319	P		P		16 50 38.0	+1.0
ECSD				IAmb		IAmb		16 50 38.8	
	comp=Z,11nm,0.8s								
ECSD	**EROS Data Cent**	80.53	319	P		P		16 50 38.0	+1.0
	baz=45								
RC01	**Rabbit Creek A**	80.79	355	P		P		16 50 38.2	+0.2
	baz=7.9								
PINM	**Pinnacle**	80.82	350	P		P		16 50 39.1	+0.8
	baz=15								
YSS	**Yuzh-Sakhalins**	80.88	36	P		P		16 50 38.5	-0.3
YSS	**Yuzh-Sakhalins**	80.88	36	*e*P		P		16 50 38.3	-0.4
YSS				*e*S		S		17 00 45.6	-0.5
YSS				pmax		pmax			
	comp=Z,50nm,1.0s								
YSS				pmax		pmax			
	comp=Z,100nm,4.0s								
YSS				MLR		MLR			
	comp=Z,200nm,16.0s								
N19K	**Bonanza Creek**	81.31	357	P		P		16 50 42.0	+1.1
	baz=4.1								
CCM	**Cathedral Cave**	81.46	312	P		P		16 50 42.8	+0.8
CCM				IAmb		IAmb		16 50 43.6	
	comp=Z,8.5nm,0.6s								
CCM	**Cathedral Cave**	81.46	312	P		P		16 50 42.8	+0.8
CCM				pmax		pmax			
	comp=Z,8.0nm,0.6s								
CCM	**Cathedral Cave**	81.46	312	P		P		16 50 43.0	+1.0
	baz=48								
N18K	**Kilae Creek**	81.48	358	P		P		16 50 43.2	+1.5
	baz=3.0								
P38A	**Dawn**	81.71	314	IAmb		IAmb		16 50 45.2	
	comp=Z,11nm,0.7s								
PETK	**Petropavlovsk-**	81.90	24	LR		LR		17 31 50.3	
	comp=Z,115nm,18.6s,baz=312,slow=39								
R40A	**Maddies Statio**	81.90	313	IAmb		IAmb		16 50 46.3	
	comp=Z,9.1nm,0.8s								
O20K	**Slope Mountain**	81.96	356	P		P		16 50 44.8	+0.5
	baz=5.6								
LRAL	**Lakeview Retre**	82.17	306	P		P		16 50 46.8	+1.0
	baz=49								
O18K	**Koktuh Hills**	82.29	358	P		P		16 50 47.3	+1.3
	baz=3.5								
O17K	**Koliganek Bris**	82.42	359	P		P		16 50 48.3	+1.7
	baz=2.0								
O16K	**Kokwok River B**	82.61	359	P		P		16 50 48.8	+1.2
	baz=1.3								
ASAJ	**Asahikawa**	82.90	38	LR		LR		17 33 29.1	
	comp=Z,56nm,18.5s,baz=334,slow=40								
LAO	**LASA Array**	82.95	326	P		P		16 50 51.8	+2.0
	baz=40								
BAUV	**El Baul**	83.29	276	P		P		16 50 5.	-1.4
EGMT	**Eagleton**	83.40	329	P		P		16 50 53.7	+1.7
	baz=37								
Q20K	**Shuyak Island**	83.42	356	P		P		16 50 53.0	+1.2
	baz=5.8								
U40A	**Yellville**	83.56	312	P		P		16 50 53.9	+0.9
	baz=47								
RSSD	**Black Hills**	83.92	323	P		P		16 50 56.5	+1.6
	baz=41								
W41B	**Gary Mavity, V**	84.00	310	P		P		16 50 56.0	+0.7
	baz=47								
KDAK	**Kodiak Island**	84.25	356	P		P		16 50 57.2	+1.1
KDAK				IAmb		IAmb		16 51 01.0	
	comp=Z,8.5nm,0.9s								
KDAK	**Kodiak Island**	84.25	356	P		P		16 50 57.2	+1.1
KDAK				pmax		pmax			
	comp=Z,9.0nm,1.0s								
KDAK	**Kodiak Island**	84.25	356	P		P		16 50 57.3	+1.2
	baz=5.6								
X40A	**Basin Creek Fa**	84.82	310	P		P		16 51 00.6	+1.2
	baz=47								
OHAK	**Old Harbor**	84.85	357	P		P		16 51 00.4	+1.3
	baz=5.0								
W39A	**Magazine**	84.90	311	P		P		16 51 00.9	+1.0
	baz=46								
MIAR	**Mount Ida**	85.23	311	P		P		16 51 03.2	+1.7
	baz=46								
TUL1	**Leonard**	85.58	313	P		P		16 51 04.3	+1.1
	baz=45								
NEW	**Newport**	86.03	333	LR		LR		17 30 54.3	
	comp=Z,59nm,18.9s,baz=316,slow=37								
NEW	**Newport**	86.03	333	IAmb		IAmb		16 51 07.0	
	comp=Z,7.6nm,0.8s								
NEW	**Newport**	86.03	333	P		P		16 51 06.6	+1.4
	baz=32								
MSO	**Missoula**	86.04	330	P		P		16 51 06.0	+0.6
	baz=34								
MJAR	**Matsushiro Arr**	86.11	46	P		P		16 51 05.4	-0.5
	comp=Z,3.3nm,0.7s,baz=336,slow=3.9,SNR=13								
MJAR				LR		LR		17 31 56.5	
	comp=Z,49nm,18.4s,baz=340,slow=37								
	comp=Z,3.3nm,0.7s								
BOZ	**Bozeman (W)**	86.12	328	P		P		16 51 07.5	+1.6
	baz=36								
K22A	**Casper**	86.21	324	P		P		16 51 06.9	+0.5
	baz=39								
JOW	**Kunigami**	86.61	58	LR		LR		17 38 11.3	
	comp=Z,18nm,18.1s,baz=300,slow=42								
SDPT	**Sand Point**	86.88	0	P		P		16 51 09.0	-0.2
	baz=359								
PDAR	**Pinedale Array**	87.50	326	P		P		16 51 12.8	-0.1
	comp=Z,1.0nm,0.7s,baz=51,slow=4.7,SNR=8.3								
PDAR				LR		LR		17 32 11.2	
	comp=Z,60nm,18.3s,baz=54,slow=37								
	comp=Z,1.0nm,0.7s								
WMOK	**Wichita Mounta**	88.12	314	P		P		16 51 16.6	+1.0
	baz=43								
HAWA	**Hanford**	88.48	334	P		P		16 51 17.1	0.0
O20A	**White River Ci**	88.98	323	P		P		16 51 20.3	+0.5
	baz=38								
BMO	**Blue Mountains**	88.98	331	P		P		16 51 19.4	-0.2
BMO				IAmb		IAmb		16 51 20.7	
	comp=Z,6.0nm,0.7s								
BMO	**Blue Mountains**	88.98	331	P		P		16 51 19.4	-0.2
BMO				pmax		pmax			
	comp=Z,6.0nm,0.7s								
T25A	**Trinidad**	89.40	319	P		P		16 51 23.1	+1.2
	baz=39								
JHJ	**Hachijo jima 2**	89.47	47	LR		LR		17 33 27.8	
	comp=Z,33nm,18.1s,baz=3.5,slow=37								
SDCO	**Great Sand Dun**	89.49	320	P		P		16 51 23.2	+0.8
	baz=40								
ABTX	**Abilene, Hawle**	90.15	313	P		P		16 51 26.8	+1.6
	baz=43								
S22A	**4UR Ranch, Cre**	90.16	321	P		P		16 51 26.3	+0.7
	baz=39								
PV23	**Carpenter Ridg**	90.67	323	P		P		16 51 26.4	-1.4
DUG	**Dugway, Tooele**	91.02	326	P		P		16 51 30.1	+0.8
	baz=35								
ELK	**Elko**	91.61	328	LR		LR		17 33 40.5	
	comp=Z,57nm,18.7s,baz=38,slow=36								
I04A	**Tendick Farm,**	91.75	334	P		P		16 51 32.9	+0.5
	baz=28								
J05D	**Fort Rock, OR**	91.78	333	P		P		16 51 34.9	+2.2
	baz=29								

ANMO	**Albuquerque**	92.14	319	LR		LR		17 32 36.0	
	comp=Z,27nm,20.3s,baz=45,slow=35								
ANMO	**Albuquerque**	92.14	319	⇓*e*P		P		16 51 35.5	+0.8
ANMO				pmax		pmax			
	comp=Z,1.0nm,1.0s								
YBH	**Yreka Blue Hor**	93.66	333	LR		LR		17 35 45.7	
	comp=Z,68nm,18.3s,baz=44,slow=37								
R11A	**Troy Canyon, C**	93.75	327	P		P		16 51 41.9	-0.2
	baz=33								
MNTX	**Cornudas Mount**	94.07	316	P		P		16 51 43.9	+0.6
	baz=40								
NVAR	**Mina Array Bea**	94.83	329	P		P		16 51 48.3	+1.3
	comp=Z,0.9nm,0.8s,baz=38,slow=5.0,SNR=7.4								
NVAR				LR		LR		17 38 54.9	
	comp=Z,66nm,18.2s,baz=54,slow=38								
	comp=Z,0.9nm,0.8s								
TXAR	**Lajitas Array**	94.90	313	P		P		16 51 48.7	+1.4
	comp=Z,1.2nm,0.8s,baz=72,slow=4.9,SNR=13								
TXAR				LR		LR		17 36 07.7	
	comp=Z,19nm,18.3s,baz=13,slow=36								
	comp=Z,1.2nm,0.8s								
JCJ	**Chichijima**	95.29	50	LR		LR		17 40 21.8	
	comp=Z,16nm,18.1s,baz=120,slow=39								
JTS	**Las Juntas de**	95.48	288	LR		LR		17 33 21.0	
	comp=Z,31nm,18.9s,baz=58,slow=34								
CPUP	**Villa Florida**	96.91	242	LR		LR		17 37 07.0	
	comp=Z,124nm,18.4s,baz=42,slow=36								
PFO	**Pinyon Flats O**	98.10	325	LR		LR		17 39 12.4	
	comp=Z,55nm,18.1s,baz=341,slow=37								
CMIG	**Matias Romero**	98.15	299	LR		LR		17 33 11.4	
	comp=Z,27nm,18.9s,baz=22,slow=34								
LPAZ	**La Paz**	98.70	256	LR		LR		17 40 02.3	
	comp=Z,30nm,18.5s,baz=61,slow=37								
WRA	**Warramunga Arr**	120.68	92	PKP		**PKPdf**		16 57 16.9	-0.2
	comp=Z,0.9nm,0.8s,baz=324,slow=1.9,SNR=9.1								
ASAR	**Alice Springs**	122.31	96	PKP		**PKPdf**		16 57 19.6	-0.5
	comp=Z,1.0nm,0.7s,baz=307,slow=1.7,SNR=20								

NEIC ***04*** *16:38:36.7±1.4, 36.38S±0.05×73.48W±0.07, h24km±11km, Error ellipse: s-maj=9.2km s-min=7.5km az=122.0*
GUC ***04*** *16:38:37.9±0.5, 36.48S×73.16W, h35km±1km, ML4.2*

ISC 04 16:38:35.5±1.7, 36.37S±0.04×73.47W±0.10, h25km±12km, n43, σ1°49/60, 2C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BI05	**Punta Hualpn**	0.44	149	Pg		**Pb**	16 38 45.0	+0.4
BI05				Sg		**Sb**	16 38 50.5	-0.5
BI05	**Punta Hualpn**	0.44	149	⇓*i*P		**Pb**	16 38 45.1	+0.4
BI05				*e*S		**Sb**	16 38 49.9	-1.1
BI05				IAML			16 38 50.9	
	comp=E,42μm,0.2s							
CCSP	**San Pedro de C**	0.56	149	⇑*e*P		**Pb**	16 38 47.0	+0.4
CCSP				*e*S		**Sb**	16 38 53.3	-0.9
CCSP				IAML			16 38 54.4	
	comp=E,36μm,0.5s							
ML02	**Panimavida**	1.77	71	Pn		**Pn**	16 39 05.7	+1.2
ML02				Sn		**Sb**	16 39 27.5	-1.5
ML02	**Panimavida**	1.77	71	⇑*e*P		**Pn**	16 39 25.5	+1.2
ML02				*e*S		**Sn**	16 39 24.2	-2.0
ML02				IAML			16 39 34.0	
	comp=E,4μm,0.6s							
GO05	**Huala**	1.85	43	Pn		**Pn**	16 39 07.3	+1.7
GO05	**Huala**	1.85	43	*e*P		**Pn**	16 39 07.3	+1.7
GO05				*e*S		**Sn**	16 39 29.1	+0.9
BO03	**Pichilemu**	2.24	34	*e*P		**Pn**	16 39 11.5	+0.6
BO03				*e*S		**Sn**	16 39 37.0	-0.8
LC02	**Puerto Saavedr**	2.42	178	Pn		**Pn**	16 39 14.8	+1.4
LC02	**Puerto Saavedr**	2.42	178	*e*P		**Pn**	16 39 15.2	+1.8
LC02				*e*S		**Sn**	16 39 42.1	-0.1
LC02				IAML			16 40 08.8	
	comp=E,2μm,0.4s							
BO01	**Tunca**	2.77	45	Pn		**Pn**	16 39 20.7	+2.4
BO01	**Tunca**	2.77	45	*e*P		**Pn**	16 39 20.3	+2.0
BO01				*e*S		**Sn**	16 39 50.3	-0.7
BO01				IAML			16 40 08.2	
	comp=E,346nm,0.4s							
VA05	**Santo Domingo**	3.10	30			**Pn**	16 39 24.6	+1.7
VA05	**Santo Domingo**	3.10	30	*e*P		**Pn**	16 39 24.7	+1.9
VA05				*e*S		**Sn**	16 39 58.3	-0.8
VA05				IAML			16 40 15.1	
	comp=E,506nm,0.4s							
MT09	**Talagante**	3.29	39			**Pn**	16 39 26.8	+1.2
MT09	**Talagante**	3.29	39	*e*P		**Pn**	16 39 27.1	+1.5
MT09				*e*S		**Sn**	16 40 04.8	+0.8
MT09				IAML			16 40 21.4	
	comp=E,595nm,0.4s							
BO04	**La Punta**	3.34	45			**Pn**	16 39 27.2	+1.1
BO04	**La Punta**	3.34	45	*e*P		**Pn**	16 39 28.3	+2.2
BO04				*e*S		**Sn**	16 40 05.2	+0.3
BO04				IAML			16 40 30.0	
	comp=E,305nm,0.6s							
LR03	**Panguipulli**	3.38	165	Pn		**Pn**	16 39 27.9	+1.3
LR03	**Panguipulli**	3.38	165	⇓*e*P		**Pn**	16 39 29.1	+2.5
LR03				*e*S		**Sn**	16 40 04.2	-1.7
LR03				IAML			16 40 34.7	
	comp=N,833nm,0.5s							
LR04	**Corral**	3.50	179	Pn		**Pn**	16 39 29.6	+1.2
LR04	**Corral**	3.50	179	*e*P		**Pn**	16 39 29.8	+1.4
LR04				*e*S		**Sn**	16 40 08.7	-0.3
LR04				IAML			16 40 28.0	
	comp=E,295nm,0.3s							
MT02	**Curacav**	3.65	32	Pn		**Pn**	16 39 31.5	+1.1
MT02	**Curacav**	3.65	32	*e*P		**Pn**	16 39 31.4	+1.1
MT02				*i* S		**Sn**	16 40 11.4	-1.2
VA01

ISCO	**Idaho Springs**	**6.63**	**303**	IAmb_Lg		16 44 23.5
	comp=Z,2.9nm,0.9s					
PHWY	**Pilot Hill**	**7.38**	**314**	IAmb_Lg		16 44 55.4
	comp=Z,3.1nm,0.8s					

*NCEDC **04** 16:58:25.4±2.5, 40°.63N×0°.07×126°.92W±0°.04, h5km±2km, Error ellipse: s-maj=12.9km s-min=4.9km az=169.0*
NEIC 04 16:58:24.9±1.3, 40°.52N±0°.07×126°.9W±0°.2, h9km±14km, ML3.1/36, MLb3.0/9(NCEDC), Error ellipse: s-maj=18.2km s-min=9.9km az=80.0, Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSMM	**Slide Mountain**	**2.08**	**98**		Pn	16 58 58.9	-1.2
KMPM	**Mount Pierce**	**2.10**	**92**	Pn	Pn	16 59 00.2	0.0
KMPM	comp=E,150nm,0.9s			IAML		16 59 34.4	
KMPM	comp=N,130nm,1.0s			IAML		16 59 35.4	
JCC	**Jacoby Creek,**	**2.18**	**81**		Pn	16 59 00.2	-1.0
JCC	**Jacoby Creek,**	**2.18**	**81**		Sn	16 59 28.0	-0.3
JCC	**Jacoby Creek,**	**2.18**	**81**		Pn	16 59 00.7	-0.5
JCC	**Jacoby Creek,**	**2.18**	**81**	IAML		16 59 30.5	
JCC	comp=N,43nm,1.6s			IAML		16 59 35.7	
KRPM	**Rodgers**	**2.25**	**73**		Pn	16 59 02.4	+0.1
KRPM	comp=E,51nm,1.1s			IAML		16 59 47.3	
KRPM	comp=E,78nm,1.1s			IAML		16 59 53.1	
KCRM	**Chalk Rock**	**2.32**	**91**		Pn	16 59 03.4	0.0
KHMM	**Horse Mountain**	**2.41**	**81**	Pn	Pn	16 59 04.9	+0.3
KHMM	comp=N,85nm,0.8s			IAML		16 59 44.1	
KMRM	**Mail Ridge**	**2.43**	**96**	Pn	Pn	16 59 06.1	+1.3
KMRM	comp=E,113nm,1.0s			IAML		16 59 44.3	
KBSM	**Bell Springs**	**2.57**	**102**		Pn	16 59 06.7	-0.1
KBO	**Bosley Butte**	**2.61**	**49**	Pn	Pn	16 59 06.6	-0.7
KBO	comp=E,88nm,1.8s			IAML		16 59 53.3	
KBO	comp=N,82nm,2.4s			IAML		17 00 19.1	
KSXB	**Camp Six Broad**	**2.61**	**59**		Pn	16 59 07.4	+0.1
KCPM	**Cahto Peak**	**2.65**	**107**		Pn	16 59 07.8	-0.1
KOMM	**Orleans Mounta**	**2.69**	**73**		Pn	16 59 08.4	-0.1
KEBM	**Edson Butte**	**3.02**	**38**	Pn	Pn	16 59 11.8	-1.1
KEBM	comp=E,73nm,2.1s			IAML		16 59 55.6	
KEBM	comp=N,56nm,1.8s			IAML		17 01 07.4	
HOPS	**Hopland Field**	**3.30**	**116**	Pn	Pn	16 59 16.2	-0.4
HOPS	comp=N,50nm,1.0s			IAML		17 00 06.1	
HOPS	comp=E,46nm,2.3s			IAML		17 01 00.7	
YBH	**Yreka Blue Hor**	**3.36**	**68**	Pn	Pn	16 59 19.3	+1.6
J01E	**Myrtle Point**	**3.43**	**39**	Pn	Pn	16 59 17.3	-1.2
J01E	comp=E,34nm,3.5s			IAML		17 01 11.9	
J01E	comp=N,25nm,3.5s			IAML		17 01 22.2	
HUMO	**Hull Mountain**	**3.60**	**53**	Pn	Pn	16 59 20.9	+0.1
DBO	**Dodson Butte**	**3.75**	**45**		Pn	16 59 22.9	-0.1
DBO	comp=N,21nm,3.2s			IAML		16 59 50.8	
DBO	comp=E,23nm,3.0s			IAML		17 00 17.2	
L04D	**Klamath Falls**	**3.83**	**62**	Pn	Pn	16 59 26.3	+2.2
L04D	comp=E,34nm,0.7s			IAML		17 00 00.0	
L04D	comp=N,31nm,2.3s			IAML		17 00 20.1	
MCCM	**Marconi Confer**	**3.89**	**126**		Pn	16 59 24.2	-0.6
I02E	**Swisshome, OR**	**4.22**	**31**	Pn	Pn	16 59 29.5	+0.1
PINE	**Pine Mountain**	**5.48**	**51**	Pn	Pn	16 59 46.6	-0.3
CMB	**Columbia Colle**	**5.61**	**114**	Pn	Pn	16 59 49.3	+0.8
SAO	**San Andreas Ge**	**5.66**	**130**	Pn	Pn	16 59 47.5	-1.7
BBGB	**Big Mountain B**	**6.03**	**129**	Pn	Pn	16 59 54.5	+0.2
PMPB	**Monarch Peak**	**6.41**	**130**	Pn	Pn	17 00 00.2	+0.7
G08A	**Pilot Rock**	**7.51**	**48**	Pn	Pn	17 00 16.6	+2.0

IDC 04 17:00:27.6±5.7, 5°.66S×133°.18E, h0km, mb3.1/1, mbtmp2.9/3, ML2.9/2, Error ellipse: s-maj=339.2km s-min=34.1km az=76.0, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.24**	**176**	Pn	Pn	17 03 50.7	-0.1
	0.1nm,0.3s,baz=358,slow=13,SNR=7.8 0.3nm,0.9s						
ASAR	**Alice Springs**	**17.92**	**178**	P	Pn	17 04 38.5	0.0
	baz=343,slow=8.8,SNR=5.8 0.2nm,0.7s						
MKAR	**Makanchi Array**	**68.89**	**325**	P	P	17 11 34.3	0.0
	0.1nm,0.4s,baz=111,slow=7.9,SNR=2.1 0.1nm,0.4s						

*IDC **04** 17:15:01.2±2.6, 3°.98S×129°.06E, h0km, mb3.6/3, mbtmp3.5/4, ML3.4/1, Error ellipse: s-maj=286.6km s-min=26.3km az=70.0*
*DJA **04** 17:15:04.3±1.0, 4°.5±5°×12°.9E±°, h16km±8km, M3.5/8, mb3.7/1, MLv3.4/8*
ISC 04 17:15:06.1±0.8, 3°.85S±0°.07×129°.38E±0°.06, h36km, n19, σ1s15/20, mb3.9/3, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.67**	**318**	P	**Pn**	**17 15 18.0**	**-1.2**
MSAI				S	**Sn**	**17 15 27.8**	**-0.7**
BNDI	**Bandanaira**	**0.85**	**142**	P	**Pn**	**17 15 18.8**	**-2.7**
AAI	**Ambon**	**1.19**	**278**	P	**Pn**	**17 15 25.3**	**-0.9**
FAKI	**Fak Fak**	**3.01**	**72**	P	**Pn**	**17 15 51.5**	**+0.2**
FAKI	**Fak Fak**	**3.01**	**72**	P	**Pn**	**17 15 50.8**	**-0.5**
SWI	**Sorong**	**3.52**	**32**	P	**Pn**	**17 15 58.2**	**-0.1**
LBMI	**Labuha**	**3.70**	**330**	P	**Pn**	**17 16 01.2**	**+0.4**
SANI	**Sanana**	**3.83**	**298**	P	**Pn**	**17 16 01.8**	**-0.8**
SANI	**Sanana**	**3.83**	**298**	P	**Pn**	**17 16 04.0**	**+1.4**
MTN	**Manton Dam**	**9.10**	**169**	P	**Pn**	**17 17 16.3**	**+1.3**
KNRA	**Kununurra**	**11.76**	**183**	P	**Pn**	**17 17 52.5**	**+1.0**
WRA	**Warramunga Arr**	**16.71**	**164**	Pn	**Pn**	**17 18 55.2**	**-2.4**
	0.1nm,0.3s,baz=338,slow=14,SNR=4.9 0.4nm,0.6s						
QIS	**Mount Isa**	**19.36**	**150**	P	**P**	**17 19 28.7**	**-0.1**
ASAR	**Alice Springs**	**20.18**	**168**	P	**P**	**17 19 37.6**	**-0.1**
	1.2nm,0.5s,baz=348,slow=11,SNR=45 1.2nm,0.5s						
MTSU	**Mount Surprise**	**20.38**	**135**	P	**P**	**17 19 40.1**	**+0.2**
WRKA	**Warakurna**	**21.09**	**183**	P	**P**	**17 19 47.8**	**+0.3**
OOD	**Oodnadatta**	**24.56**	**166**	P	**P**	**17 20 23.2**	**+0.6**
	16nm,2.5s						
MKAR	**Makanchi Array**	**65.28**	**326**	P	**P**	**17 25 44.9**	**+0.6**
	0.3nm,0.5s,baz=129,slow=6.5,SNR=5.8 0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**68.51**	**334**	P	**P**	**17 26 04.7**	**0.0**
	0.3nm,0.3s,baz=116,slow=3.4,SNR=3.6 0.3nm,0.3s						

MAN 04 17:39:07.0, 13°.78N×120°.72E, h4km, mb3.7, ML2.5, MS2.0, Mindoro

*IDC **04** 17:41:14.2±1.4, 54°.19N×164°.33W, h0km, mb3.7/8, mbtmp3.7/9, ML3.3/1, MS3.1/4, Error ellipse: s-maj=40.7km s-min=23.4km az=4.0*
*AEIC **04** 17:41:18.6±1.8, 53°.91N±0°.06×163°.98W±0°.06, h32km±5km, Error ellipse: s-maj=8.7km s-min=3.7km az=158.0*
*NEIC **04** 17:41:19.6±1.9, 53°.95N±0°.06×164°.04W±0°.06, h38km±9km, mb3.7/10, ML3.8/10, MLv3.6/28(AEIC), Error ellipse: s-maj=9.2km s-min=3.4km az=157.0*
ISC 04 17:41:18.6±1.4, 53°.93N±0°.07×164°.02W±0°.04, h32km±10km, n121, σ1s13/122, mb3.8/7, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WESE	**West Dahl East**	**0.63**	**329**		**Pn**	**17 41 31.8**	**+0.4**
BRPK	**Brown Peak**	**0.73**	**13**		**Pb**	**17 41 32.8**	**-0.2**
WECS	**Westdahl Cape**	**0.74**	**324**		**Pb**	**17 41 33.4**	**+0.2**
WECS					**Sn**	**17 41 44.0**	**+0.9**
ISLZ	**Isanotski Laza**	**0.81**	**13**		**Pn**	**17 41 33.9**	**0.0**
ISLZ					**Sb**	**17 41 44.8**	**-0.2**
WTUG	**Tugumak**	**0.94**	**347**		**Pb**	**17 41 36.1**	**-0.4**
FALS	**False Pass**	**0.99**	**21**		**Sb**	**17 41 50.5**	**+0.5**
FALS	**False Pass**	**0.99**	**21**		**Pn**	**17 41 36.3**	**+0.1**
FALS	**False Pass**	**0.99**	**21**	P	**Pn**	**17 41 36.5**	**+0.3**
FALS	baz=199			S	**Sb**	**17 41 50.4**	**+0.5**
AKSA	**Akutan Strait**	**1.01**	**282**		**Pb**	**17 41 37.1**	**-0.4**
AKSA					**Sb**	**17 41 50.4**	**0.0**
AKUT	**Akutan**	**1.05**	**282**		**Pb**	**17 41 37.7**	**-0.5**
AKUT				Sn	**Sn**	**17 41 50.4**	**-0.1**
AKUT	comp=N,3μm,0.3s			IAML		17 41 52.1	
AKUT	comp=E,2μm,0.3s			IAML		17 41 52.7	
AKBBA	**Akutan Broad B**	**1.14**	**279**		**Pb**	**17 41 38.9**	**-0.8**
AKBBA					**Sb**	**17 41 54.0**	**-0.2**
AKGG	**Akutan Green G**	**1.19**	**284**		**Pb**	**17 41 39.9**	**-0.7**
AKGG					**Sb**	**17 41 55.8**	**+0.1**
UNV	**Unalaska Valle**	**1.47**	**268**	Pn	**Pn**	**17 41 43.0**	**+0.2**
UNV	**Unalaska Valle**	**1.47**	**268**	P	**Pn**	**17 41 43.0**	**+0.2**
	baz=86						
DT1	**Dutton Round H**	**1.55**	**40**		**Pn**	**17 41 45.1**	**+1.1**
MTBL	**Makushin Table**	**1.57**	**272**		**Pn**	**17 41 45.4**	**+1.1**
MNAT	**Makushin Natee**	**1.57**	**269**		**Pn**	**17 41 44.7**	**+0.4**
MSW	**Makushin Switc**	**1.63**	**270**		**Pn**	**17 41 45.5**	**+0.5**
MGOD	**Makushin Gods**	**1.69**	**266**		**Pn**	**17 41 47.0**	**+1.1**
HAG	**Hague Volcano**	**1.85**	**41**		**Pn**	**17 41 49.6**	**+1.4**
PS4A	**Pavlof South-4**	**1.89**	**41**		**Pn**	**17 41 49.1**	**+0.5**
SDPT	**Sand Point**	**2.50**	**54**	Pn	**Pn**	**17 41 57.3**	**+0.3**
SDPT				Sn	**Sn**	**17 42 26.5**	**+0.1**
SDPT	comp=E,346nm,0.8s			IAML		17 42 38.5	
SDPT	comp=N,299nm,0.9s			IAML		17 42 48.9	
SDPT	**Sand Point**	**2.50**	**54**	P	**Pn**	**17 41 57.8**	**+0.9**
	baz=236						
CNBA	**Chernabura Isl**	**2.74**	**69**	Pn	**Pn**	**17 42 00.6**	**+0.4**
CHNA	**Chernabura Isl**	**2.74**	**69**	P	**Pn**	**17 42 00.7**	**+0.4**
	baz=252						
NIKH	**Nikolski High**	**3.05**	**254**	Pn	**Pn**	**17 42 04.4**	**-0.1**
NIKH	**Nikolski High**	**3.05**	**254**	P	**Pn**	**17 42 06.1**	**+1.6**
	baz=70						
SPIA	**Saint Paul Isl**	**4.80**	**315**	Pn	**Pn**	**17 42 27.0**	**-1.5**
CHIR	**Chirikof Islan**	**5.21**	**65**		**Pn**	**17 42 33.9**	**-0.3**
SII	**Sitkinak Islan**	**5.21**	**61**	Pn	**Pn**	**17 42 48.9**	**+1.0**
OHAK	**Old Harbor**	**6.92**	**57**	Pn	**Pn**	**17 42 59.7**	**+2.1**
P18K	**Big Mountain,**	**7.30**	**38**	Pn	**Pn**	**17 43 05.0**	**+2.1**
KDAK	**Kodiak Island**	**7.50**	**54**	Pn	**Pn**	**17 43 05.9**	**+0.3**
KDAK	comp=N,0.5nm,0.3s,baz=231,slow=5.1,SNR=6.1 baz=343,slow=19 comp=N,2.7nm,0.6s			Sn	**Sn**	**17 44 26.7**	**-2.7**
Q19K	**Cape Douglas,**	**7.62**	**45**	Pn	**Pn**	**17 43 09.1**	**+1.8**
O18K	**Koktuh Hills**	**7.64**	**36**	Pn	**Pn**	**17 43 09.4**	**+1.8**
ADK	**Adak**	**7.93**	**260**	Pn	**Pn**	**17 43 12.9**	**+1.4**
N18K	**Atlae Creek**	**8.06**	**30**	Pn	**Pn**	**17 43 14.9**	**+1.6**
O19K	**Port Alsworth**	**8.20**	**36**	Pn	**Pn**	**17 43 16.1**	**+1.0**
KIWB	**Kanaga Island**	**8.21**	**261**	Pn	**Pn**	**17 43 15.9**	**+0.6**
SVW2	**Sparrevohn**	**8.49**	**29**	Pn	**Pn**	**17 43 19.4**	**+0.2**
N19K	**Bonanza Creek**	**8.60**	**33**	Pn	**Pn**	**17 43 22.9**	**+2.1**
RSO	**Redoubt South**	**8.95**	**39**		**Pn**	**17 43 29.9**	**+4.3**
CNPM	**China Poot**	**8.98**	**46**	Pn	**Pn**	**17 43 26.7**	**+0.8**
M19K	**Big River Lodg**	**9.48**	**29**		**Pn**	**17 43 33.0**	**+0.2**
L19K	**White Mountain**	**9.58**	**27**	Pn	**Pn**	**17 43 35.2**	**+1.1**
M20K	**Styx River**	**9.84**	**32**		**Pn**	**17 43 39.2**	**+1.5**
SUA	**Susitna One**	**10.35**	**38**		**Pn**	**17 43 45.1**	**+0.5**
SKT	**Skwentna**	**10.43**	**34**		**Pn**	**17 43 46.5**	**+0.8**
RC01	**Rabbit Creek A**	**10.49**	**41**	Pn	**Pn**	**17 43 48.4**	**+1.8**
K20K	**Telida**	**10.76**	**25**	Pn	**Pn**	**17 43 51.2**	**+1.0**
M22K	**Willow**	**10.76**	**38**	Pn	**Pn**	**17 43 51.1**	**+0.9**
PPLA	**Purkeypile**	**10.90**	**30**	Pn	**Pn**	**17 43 52.5**	**+0.2**
CAST	**Castle Rocks**	**11.34**	**28**		**Pn**	**17 43 58.9**	**+0.7**
J20K	**Nowinta River**	**11.44**	**22**	Pn	**Pn**	**17 44 00.2**	**+0.7**
GLI	**Glacier Island**	**11.45**	**46**	Pn	**Pn**	**17 44 01.1**	**+1.4**
FID	**Port Fidalgo**	**11.65**	**47**	Pn	**Pn**	**17 44 01.7**	**-0.8**
KTH	**Kantishna Hill**	**11.77**	**30**	Pn	**Pn**	**17 44 03.7**	**-0.4**
SCM	**Sheep Creek Mo**	**11.87**	**42**		**Pn**	**17 44 04.9**	**-0.5**
TRF	**Thorofare Moun**	**11.89**	**31**	Pn	**Pn**	**17 44 05.8**	**+0.1**
DIV	**Divide**	**12.14**	**46**	Pn	**Pn**	**17 44 10.3**	**+1.1**
BPAW	**Bear Paw Mtn.**	**12.17**	**28**	Pn	**Pn**	**17 44 11.7**	**+2.1**
KLU	**Klutina**	**12.25**	**45**		**Pn**	**17 44 09.6**	**-1.1**
RND	**Reindeer**	**12.31**	**34**		**Pn**	**17 44 11.4**	**-0.1**
HMT	**Hamilton**	**12.47**	**51**	Pn	**Pn**	**17 44 12.6**	**-1.1**
M24K	**Tolsona, Glenn**	**12.47**	**42**	Pn	**Pn**	**17 44 11.7**	**-2.0**
BMRM	**Bremner River**	**12.57**	**48**	Pn	**Pn**	**17 44 14.4**	**-0.6**
I21K	**Tanana**	**12.79**	**23**		**Pn**	**17 44 19.0**	**+1.0**
N25K	**Chitina, Valde**	**12.86**	**46**		**Pn**	**17 44 20.7**	**+1.7**
MLY	**Manley**	**12.97**	**26**		**Pn**	**17 44 22.1**	**+1.5**
H21K	**Melozitna Rive**	**13.01**	**21**		**Pn**	**17 44 21.3**	**+0.3**
NEA2	**Nenana**	**13.09**	**29**	Pn	**Pn**	**17 44 22.6**	**+0.5**
IMAR	**Indian Mountai**	**13.11**	**19**	Pn	**Pn**	**17 44 23.8**	**+0.6**
GLB	**Gilahina Butte**	**13.12**	**47**	Pn	**Pn**	**17 44 23.4**	**+0.9**
WAX	**Waxell Ridge**	**13.16**	**52**	Pn	**Pn**	**17 44 22.3**	**-0.9**
VRDI	**Verde Repeater**	**13.19**	**48**	Pn	**Pn**	**17 44 22.9**	**-0.7**
PAX	**Paxson**	**13.23**	**39**		**Pn**	**17 44 23.0**	**-1.0**
I23K	**Minto, Yukon-K**	**13.43**	**27**		**Pn**	**17 44 24.2**	**-2.4**
ISLE	**Juniper Island**	**13.46**	**52**	Pn	**Pn**	**17 44 25.8**	**-1.3**
CCB	**Clear Creek Bu**	**13.51**	**31**	Pn	**Pn**	**17 44 27.4**	**-0.3**
MDM	**Murphy Dome**	**13.61**	**29**	Pn	**Pn**	**17 44 29.4**	**+0.2**
GRNC	**Granite Creek**	**13.77**	**51**	Pn	**Pn**	**17 44 30.9**	**-0.6**
ILAR	**Eielson Array**	**13.88**	**32**	Pn	**Pn**	**17 44 30.2**	**-2.6**
ILAR	baz=229,slow=12,SNR=2.0 comp=N,58nm,21.0s,baz=257,slow=39			LR	LR	17 50 06.1	
MENT	**Mentasta**	**13.88**	**41**	Pn	**Pn**	**17 44 34.2**	**+1.4**
RIDG	**Independent Ri**	**13.90**	**37**		**Pn**	**17 44 32.8**	**-0.4**
M26K	**Nabesna, AK**	**13.90**	**44**	Pn	**Pn**	**17 44 32.7**	**-0.5**
H23K	**Yukon River**	**13.91**	**25**		**Pn**	**17 44 33.5**	**+0.2**
BARN	**Barnard Glacie**	**13.93**	**50**	Pn	**Pn**	**17 44 33.3**	**-0.4**
TABL	**Table Mountain**	**13.96**	**53**	Pn	**Pn**	**17 44 35.3**	**+1.1**
J25K	**Salcha River,**	**14.26**	**34**		**Pn**	**17 44 38.3**	**+0.2**
M27K	**Edge Creek, AK**	**14.35**	**45**		**Pn**	**17 44 38.9**	**-0.5**
SCRK	**Sand Creek**	**14.35**	**38**	Pn	**Pn**	**17 44 38.4**	**-0.9**
H24K	**Noodor Dome**	**14.36**	**27**	Pn	**Pn**	**17 44 38.7**	**-0.6**
L27K	**Beaver Creek,**	**14.69**	**43**	Pn	**Pn**	**17 44 43.9**	**0.0**
BCAR	**Beaver Creek A**	**14.71**	**43**	Pn	**Pn**	**17 44 45.0**	**+0.8**
J26L	**Joseph Creek**	**14.81**	**36**	Pn	**Pn**	**17 44 46.2**	**+0.7**
K27K	**Chicken**	**15.08**	**39**	Pn	**Pn**	**17 44 51.0**	**+2.0**
K27K	comp=Z,7.2nm,1.5s			IAmb	IAmb	17 45 03.8	
HYT	**Haines Junctio**	**15.79**	**54**		**P**	**17 45 00.5**	**-1.5**
HYT	comp=Z,5.0nm,1.0s			IAmb	IAmb	17 45 30.9	
DAWY	**Dawson**	**16.13**	**41**	Pn	**Pn**	**17 45 03.5**	**+0.9**
BMAR	**Burnt Mountain**	**16.43**	**27**	Pn	**Pn**	**17 45 07.0**	**+0.6**
SIT	**Sitka**	**16.50**	**67**	Pn	**Pn**	**17 45 07.8**	**+0.5**
M30M	**Minto, Yukon**	**16.62**	**48**	P	**P**	**17 45 10.6**	**-0.4**
M30M	comp=Z,4.9nm,1.1s			IAmb	IAmb	17 45 15.8	
N31M	**Braeburn, Yuko**	**16.77**	**52**		**P**	**17 45 13.1**	**+0.5**
N31M	comp=Z,7.4nm,0.8s			IAmb	IAmb	17 45 16.8	
I29M	**Ogilvie Camp,**	**17.16**	**38**	P	**Pn**	**17 45 15.2**	**-0.3**
M31M	**Drury Creek, Y**	**17.58**	**50**	P	**Pn**	**17 45 19.4**	**-1.5**
M31M	comp=Z,3.6nm,0.8s			IAmb	IAmb	17 45 29.0	
DLBC	**Dease Lake**	**19.31**	**63**	LR	LR	17 51 49.3	
	comp=Z,45nm,19.3s,baz=300,slow=33						
INK	**Inuvik**	**20.27**	**33**	P	**P**	**17 45 49.3**	**-1.7**
	comp=Z,1.3nm,0.8s,baz=198,slow=6.4,SNR=1.9						
INK	comp=Z,60nm,18.9s,baz=322,slow=39 comp=Z,1.3nm,0.8s			LR	LR	17 54 26.3	
INK	**Inuvik**	**20.27**	**33**	P	**P**	**17 45 49.4**	**-1.6**
INK	comp=Z,10.0nm,1.5s			IAmb	IAmb	17 45 55.5	
YKA	**Yellowknife Ar**	**26.77**	**52**	P	**P**	**17 46 55.2**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=276,slow=9.8,SNR=5.5 comp=Z,0.6nm,0.6s						
NVAR	**Mina Array Bea**	**34.57**	**98**	P	**P**	**17 48 07.0**	**+2.6**
	comp=Z,1.0nm,0.8s,baz=293,slow=8.4,SNR=6.0 comp=Z,1.0nm,0.8s						
YAK	**Yakutsk**	**34.59**	**310**	LR	LR	18 02 10.3	
	comp=Z,27nm,18.1s,baz=284,slow=37						
H11N2	**WAKE ISLAND Hy**	**40.76**	**225**	T	T	18 32 30.9	
	baz=26,slow=76,SNR=39						
H11N3	**WAKE ISLAND Hy**	**40.77**	**225**	T	T	18 32 24.5	
	baz=26,slow=76,SNR=46						
H11N1	**WAKE ISLAND Hy**	**40.78**	**225**	T	T	18 32 35.1	
	baz=26,slow=76,SNR=32						
H11S1	**WAKE ISLAND Hy**	**41.94**	**224**	T	T	18 34 00.8	
	baz=26,slow=76,SNR=44						
H11S2	**WAKE ISLAND Hy**	**41.95**	**224**	T	T	18 34 02.5	
	baz=26,slow=76,SNR=49						
H11S3	**WAKE ISLAND Hy**	**41.95**	**224**	T	T	18 33 52.2	
	baz=26,slow=76,SNR=32						
TXAR	**Lajitas Array**	**49.58**	**95**	P	**P**	**17 50 07.3**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=268,slow=5.8,SNR=4.9 comp=Z,0.4nm,0.7s						
AKASG	**Malin Array Be**	**75.14**	**351**	P	**P**	**17 52 55.1**	**-2.0**
	comp=Z,0.5nm,0.5s,baz=8.7,slow=5.7,SNR=5.9 comp=Z,0.5nm,0.5s						
CMAR	**Chiang Mai Arr**	**79.34**	**287**	P	**P**	**17 53 20.9**	**-0.3**
	comp=Z,0.8nm,0.8s,baz=14,slow=5.7,SNR=6.4 comp=Z,0.8nm,0.8s						
ESDC	**Sonseca Array**	**85.19**	**15**	P	**P**	**17 53 51.6**	**+0.1**
	comp=Z,0.7nm,1.0s,baz=350,slow=5.3,SNR=4.0 comp=Z,0.7nm,1.0s						
BRTR	**Keskin Array B**	**85.48**	**346**	P	**P**	**17 53 52.9**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=30,slow=3.3,SNR=4.3 comp=Z,0.7nm,0.8s						

MAN 04 18:09:56.5, 10°.15N×125°.07E, h13km, mb4.1, ML2.9, MS2.5, Leyte

*IDC **04** 18:20:41.0±1.3, 35°.37N×68°.60E, h0km, mb3.9/7, mbtmp3.8/12, ML3.6/5, MS3.1/5, Error ellipse: s-maj=22.2km s-min=19.6km az=173.0*
*NEIC **04** 18:20:44.8±2.1, 35°.41N±0°.04×68°.56E±0°.07, h27km±6km, mb4.0/15, Error ellipse: s-maj=8.6km s-min=4.8km az=77.0*
*NNC **04** 18:20:45.5±1.9, 35°.84N×68°.32E, h0km, mb4.4, mpv4.1, Error ellipse: s-maj=21.2km s-min=8.4km az=159.0*
*BJI **04** 18:20:47.0±0.0, 35°.40N×68°.60E, h5km, mb3.7/7, mB4.3/5*
ISC 04 18:20:46.1±0.6, 35°.48N±0°.06×68°.48E±0°.05, h35km, n70, σ1s88/72, mb4.0/13, MS2.9/5, 6C-7D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**1.05**	**154**		**Pn**	**18 21 02.7**	**-1.8**
KBL				Sn	**Sn**	**18 21 15.2**	**-2.8**
CHGR	**Chuyangaron**	**3.22**	**10**	Pn	**Pn**	**18 21 33.7**	**-0.6**
CEP	**Cherat**	**3.28**	**119**	P	**Pn**	**18 21 38.4**	**+3.3**
CEP				S	Sn	18 22 25.0	+12
GAR	**Garm**	**3.81**	**22**		**Pn**	**18 21 43.8**	**+1.4**
THW	**Thamme Wali**	**3.81**	**134**	P	Pn	18 21 47.0	+4.6
CHCP	**Chirah Chowk**	**4.35**	**113**	P	**Pn**	**18 21 52.5**	**+2.7**
DRK	**Karamyk**	**4.79**	**33**	Pn	**Pn**	**18 21 58.5**	**+2.5**
BTK	**Batken**	**4.93**	**21**		**Pn**	**18 21 59.8**	**+2.0**
HRA	**Herat**	**5.24**	**260**	Pn	**Pn**	**18 22 01.7**	**-0.4**
TAS	**Tashkent**	**5.87**	**6**	Pn	Pn	18 22 04.4	-6.2
KSH	**Kashi**	**7.19**	**54**	Pn	Pn	18 22 33.2	+4.3
KSH				sP		18 22 39.2	
KSH				Sn	**Sn**	**18 23 43.6**	**-5.8**
KSH	comp=Z,37nm,0.7s			pmax	pmax		
KSH	comp=N,55nm,0.8s			smax	smax		
KSH	comp=E,110nm,0.9s			smax	smax		
KSH	comp=N,190nm,7.3s			LR	LR		
KSH	comp=E,200nm,7.2s			LR	LR		
KSH	comp=Z,160nm,6.9s			LR	LR		
KK31	**Karatay Array**	**7.77**	**11**		**Pn**	**18 22 36.5**	**-0.3**
KK31	**Karatay Array**	**7.77**	**11**	⇑Pn	**Pn**	**18 22 37.0**	**+0.3**
	comp=Z,2.1nm,0.3s,baz=202,slow=14,SNR=87						
KK31	comp=Z,7.5nm,0.6s,baz=196,slow=25,SNR=4.0			⇓Sn	**Sn**	**18 24 03.2**	**-0.3**
KK31	comp=Z,8.9nm,0.5s,baz=192,slow=29,SNR=4.9			⇓Lg	Lg	18 24 41.4	
KKAR	**Karatay Array**	**7.77**	**11**		**Pn**	**18 22 35.8**	**-0.9**
KKAR	**Karatay Array**	**7.77**	**11**	Pn	**Pn**	**18 22 35.9**	**-0.9**
AML	**Almayashu**	**7.79**	**30**	P	**Pn**	**18 22 38.0**	**+0.7**
	SNR=13						
UCH	**Uchtor**	**8.22**	**33**	P	**Pn**	**18 22 43.2**	**0.0**
	SNR=18						
AAK	**Ala-Archa**	**8.54**	**31**	Pn	**Pn**	**18 22 48.3**	**+0.9**
	comp=Z,2.7nm,0.3s,baz=159,slow=9.5,SNR=11						
AAK	comp=Z,2.5nm,0.3s,baz=147,slow=23,SNR=13 comp=Z,7.1nm,0.4s			Sn	**Sn**	**18 24 21.5**	**-1.0**
AAK	**Ala-Archa**	**8.54**	**31**	Pn	**Pn**	**18 22 47.3**	**-0.1**
GEYT	**Alibeck**	**8.67**	**289**	Pn	**Pn**	**18 22 48.2**	**-0.9**
	comp=Z,1.7nm,0.3s,baz=114,slow=10,SNR=15 comp=Z,2.7nm,0.3s						
GEYT	**Alibeck**	**8.67**	**289**	Pn	**Pn**	**18 22 49.5**	**+0.4**
GYA0B	**ALIBECK ARRAY**	**8.67**	**289**	Pn	**Pn**	**18 22 50.0**	**+0.9**
GYA0B	**ALIBECK ARRAY**	**8.67**	**289**	⇓Pn	**Pn**	**18 22 50.2**	**+1.1**
GYA0B				⇑Sn	**Sn**	**18 24 24.4**	**-1.2**
GYA0B				⇓Lg	Lg	18 25 14.9	
FRU1	**Bishkek**	**8.74**	**31**	Pn	**Pn**	**18 22 49.2**	**-0.8**
KBK	**Karagaybulak**	**

ZAA0	**Zalesovo Array**	**21.72**	**27**	P		**P**		**18 25 31.8**	**-2.2**
ZAA0				IAmb		IAmb		18 25 42.4	
	comp=Z,5.1nm,0.7s								
ZALV	**Zalesovo Beam**	**21.72**	**27**	P		**P**		**18 25 34.0**	**0.0**
	comp=Z,3.9nm,0.5s,baz=219,slow=9.9,SNR=16								
	comp=Z,3.9nm,0.5s								
ZALV	**Zalesovo Beam**	**21.72**	**27**	P		**P**		**18 25 32.5**	**-1.5**
ARU	**Arti**	**22.01**	**345**	P		**P**		**18 25 38.8**	**+1.7**
	comp=Z,6.3nm,0.5s,baz=171,slow=4.8,SNR=13								
ARU				LR		LR		18 35 48.6	
	comp=Z,30nm,19.4s,baz=130,slow=41								
	comp=Z,6.3nm,0.5s								
ARU	**Arti**	**22.01**	**345**			**P**		**18 25 34.8**	**-2.3**
MARD	**Mardin**	**22.34**	**283**	P		**P**		**18 25 41.4**	**+0.4**
BELG	**Belogornoye**	**22.48**	**325**	P		**P**		**18 25 43.0**	**+0.8**
	comp=Z,39nm,0.7s,baz=352,slow=1.5,SNR=18								
BELG				LR		LR		18 35 30.3	
	comp=Z,31nm,20.1s,baz=9.9,slow=39								
KOPT	**Kop Dagi**	**22.54**	**290**	P		**P**		**18 25 46.2**	**+2.9**
KOPT				IAmb		IAmb		18 25 55.4	
	comp=Z,12nm,1.4s								
GTA	**Gaotai**	**25.12**	**72**	⇑P		**P**		**18 26 11.2**	**+3.4**
GTA				pP		pP		18 26 15.1	-3.2
GTA				sP		sP		18 26 19.4	-3.4
GTA				pmax		pmax			
	comp=Z,2.0nm,1.1s								
AKASG	**Malin Array Be**	**32.02**	**311**	P		**P**		**18 27 10.5**	**+1.4**
	comp=Z,1.2nm,0.7s,baz=90,slow=7.2,SNR=9.6								
	comp=Z,1.2nm,0.7s								
AKASG	**Malin Array Be**	**32.02**	**311**	IAmb		IAmb		18 27 39.0	
	comp=Z,2.4nm,1.4s								
MLR	**Muntele Rosu**	**33.51**	**301**	P		**P**		**18 27 24.3**	**+2.0**
FINES	**FINESS Array B**	**37.22**	**328**	P		**P**		**18 27 55.4**	**+1.6**
	comp=Z,1.4nm,0.7s,baz=111,slow=10,SNR=7.0								
FINES				LR		LR		18 44 24.2	
	comp=Z,21nm,21.0s,baz=226,slow=38								
	comp=Z,1.4nm,0.7s								
FINES	**FINESS Array B**	**37.22**	**328**	P		**P**		**18 27 53.5**	**-0.2**
HFS	**Hagfors**	**42.62**	**323**	LR		LR		18 47 42.0	
	comp=Z,38nm,19.4s,baz=124,slow=38								
NOA	**NORSAR Array B**	**43.98**	**324**	P		**P**		**18 28 50.3**	**+0.6**
	comp=Z,1.4nm,1.1s,baz=99,slow=8.1,SNR=3.4								
NOA				LR		LR		18 48 47.7	
	comp=Z,30nm,18.4s,baz=90,slow=38								
	comp=Z,1.4nm,1.1s								
WRA	**Warramunga Arr**	**83.22**	**120**	P		**P**		**18 33 08.9**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=326,slow=5.0,SNR=2.0								
	comp=Z,0.3nm,0.7s								
ASAR	**Alice Springs**	**85.38**	**123**	P		**P**		**18 33 19.2**	**-0.8**
	comp=Z,0.4nm,0.9s,baz=301,slow=5.3,SNR=2.0								
	comp=Z,0.4nm,0.9s								

MAN 04 18:29:04.8, 14.31N×120.08E, h27km, mb4.0, ML2.8, MS2.4, 1C-3D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LUBP	**Lubang**	**0.59**	**164**	⇓*e*P		Pn	18 29 17.6	+3.3
LUBP				*e*S			18 29 28.2	
MACP	**Maragondon, Ca**	**0.62**	**94**	⇓*e*P		Pn	18 29 18.0	+5.1
PGP	**Puerto Galera**	**1.17**	**133**	⇓*e*P		Pn	18 29 25.0	+5.6
PGP				*i* S			18 29 40.6	
PCPH	**Palayan**	**1.59**	**38**	⇓*e*P		Pn	18 29 31.8	+6.9
PCPH				*e*S			18 29 49.0	

*EAF **04** 18:29:42.9±5.7, 11.34N×39.69E, h0km±34km*
AAE 04 18:29:43.5±2.8, 11.30N×39.71E, h0km±12km, Ethiopia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DESE	**Dese**	**0.19**	**202**	*e*P		Pg	18 29 46.6	-0.6
DESE				*e*S		Sg	18 29 48.8	-0.9
DESE	**Dese**	**0.19**	**202**	*e*P		Pg	18 29 46.5	-0.7
DESE				*i* Sg		Sg	18 29 48.7	-1.0
DESE	**Dese**	**0.19**	**202**	*e*P		Pg	18 29 46.6	-0.6
DESE				*e*S		Sg	18 29 48.0	-1.8
DESE				*i* Sg		Sg	18 29 48.0	-1.8
DESE	**Dese**	**0.19**	**202**	*e*P		Pg	18 29 46.9	-0.3
DESE				*e*S		Sg	18 29 48.3	-1.4
DESE	**Dese**	**0.19**	**202**	*e*P		Pg	18 29 46.7	-0.5
DESE				*e*S		Sg	18 29 49.0	-0.8
DESE	**Dese**	**0.19**	**202**	*e*P		Pg	18 29 46.6	-0.7
DESE				*e*S		Sg	18 29 49.0	-0.7
DESE	**Dese**	**0.19**	**202**	*e*P		Pg	18 29 46.9	-0.3
DESE				*e*S		Sg	18 29 48.9	-0.8
TEND	**Ethiopian Broa**	**1.36**	**69**	*e*P		Pg	18 30 03.3	-6.4
TEND				*e*S		Sn	18 30 28.4	-0.2
ANKE	**Ethiopia-Afar**	**1.70**	**179**	*e*P		Pn	18 30 13.6	-1.1
ANKE				*e*S		Sn	18 30 36.1	-1.3
ANKE	**Ethiopia-Afar**	**1.70**	**179**	*e*P		Pn	18 30 13.6	-1.1
ANKE				*e*S		Sn	18 30 36.1	-1.3
ANKE	**Ethiopia-Afar**	**1.70**	**179**	*e*P		Pn	18 30 14.1	-0.7
ANKE				*e*S		Sn	18 30 35.4	-2.0
AAE	**Adis Abeba**	**2.44**	**202**	*i* Sg		Sb	18 30 57.5	-1.7
AAE	**Adis Abeba**	**2.44**	**202**	*e*P		Pn	18 30 25.5	+0.6
AAE				*e*S		Sn	18 30 53.3	-2.3
FURI	**Furi**	**2.59**	**203**	*e*P		Pn	18 30 26.3	-0.8
FURI				*e*S		Sb	18 31 02.0	-1.7
FURI	**Furi**	**2.59**	**203**	*e*P		Sb	18 30 54.7	-9.0
FURI				*e*S		Sb	18 31 02.5	-1.2
FURI	**Furi**	**2.59**	**203**	*e*P		Pn	18 30 25.8	-1.3
FURI				*e*S		Sn	18 30 57.1	-2.3
FURI	**Furi**	**2.59**	**203**	*e*P		Pn	18 30 26.8	-0.2
FURI				*e*S		Sn	18 30 56.4	-3.0
FURI	**Furi**	**2.59**	**203**	*e*P		Pn	18 30 27.7	+0.6
FURI				*e*S		Sn	18 30 57.2	-2.3

*MDD **04** 18:41:19.4±0.3, 41.46N×8.38W, h12km, mb_Lg2.4/8, Error ellipse: s-maj=3.2km s-min=1.8km az=97.0*
*SFS **04** 18:41:19.0, 41.45N×8.38W, h12km, ML2.4, GUIMERAES (PORTUGAL)*
*INMG **04** 18:41:21.2±1.3, 41.45N×8.37W, h19km±2km, MD2.7, ML2.1, Error ellipse: s-maj=2.9km s-min=1.3km az=95.0*
ISC 04 18:41:19.0±1.1, 41.44N±0.02×8.31W±0.03, h15km±9km, n33, σ1.8s36/72, 2C-2D, Portugal

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PCAB	**Cabril**	**0.34**	**39**	⇑*i*Pg		**Pb**	**18 41 28.7**	**+1.9**
PCAB				*e*Sg		**Sb**	**18 41 33.9**	**+1.8**
PCAB				A		A	18 41 35.5	
	72nm,0.2s							
PTO	**Porto**	**0.37**	**216**	*e*Pg		**Pb**	**18 41 28.5**	**+1.2**
PTO				*e*Sg		**Sb**	**18 41 33.7**	**+0.8**
PTO				A		A	18 41 34.4	
	462nm,0.1s							
POLO	**Lamas de Olo**	**0.40**	**100**	⇓*i*Pg		**Pn**	**18 41 30.0**	**-0.3**
POLO				*e*Sg		**Sb**	**18 41 36.5**	**+2.8**
POLO				A		A	18 41 36.9	
	37nm,0.4s							
ELOB	**Lobios**	**0.46**	**24**	Pg		**Pb**	**18 41 30.2**	**+1.3**
ELOB				Sg		**Sb**	**18 41 36.1**	**+0.4**
ELOB				*i* Vmb_Lg			18 41 38.4	
PVRL	**Vila Real**	**0.48**	**110**	⇓*e*Pg		**Pn**	**18 41 31.2**	**-0.2**
PVRL				*e*Sg		**Sb**	**18 41 38.9**	**+2.9**
PVRL				A		A	18 41 40.2	
	86nm,0.1s							
PGAV	**Gavieira, Arco**	**0.52**	**4**	⇑*i*Pg		**Pb**	**18 41 30.9**	**+1.0**
PGAV				*e*Sg		**Sb**	**18 41 38.1**	**+0.8**
PGAV				A		A	18 41 38.7	
	132nm,0.1s							
EZAM	**Zamans**	**0.76**	**338**	Pg		**Pg**	**18 41 34.0**	**+0.2**
EZAM				Sg		**Sg**	**18 41 42.8**	**-1.1**
EZAM				*i* Vmb_Lg			18 41 45.6	
PVIS	**Viseu**	**0.79**	**156**	*e*Pg		**Pn**	**18 41 36.0**	**+0.3**
PVIS				*e*Sg		**Sn**	**18 41 47.1**	**-0.1**
PVIS				A		A	18 41 48.0	
	100nm,0.1s							
MVO	**Moncorvo**	**1.01**	**106**	*e*P		**Pb**	**18 41 38.6**	**+0.4**
MVO				*e*S		**Sn**	**18 41 53.6**	**+1.0**
MVO				A		A	18 41 54.7	
	27nm,0.2s							
MTE	**Manteigas**	**1.20**	**151**	*e*P		**Pg**	**18 41 42.8**	**+0.7**
MTE				*e*S		**Sn**	**18 41 59.0**	**+1.8**
MTE				A		A	18 42 00.2	
	17nm,0.2s							
PBRG	**Braganca**	**1.23**	**72**	*e*S		**Sn**	**18 41 59.8**	**+1.7**
PBRG				A		A	18 42 01.4	
	14nm,0.1s							
COI	**Coimbra**	**1.24**	**183**	*e*S		**Sn**	**18 41 59.5**	**+1.4**
ECAL	**Calabor**	**1.28**	**67**	Pg		**Pb**	**18 41 43.5**	**+0.7**
ECAL				Sn		**Sb**	**18 41 58.8**	**-0.3**
ECAL				*i* Vmb_Lg			18 42 03.9	
EAGO	**Agolada(Pontev**	**1.37**	**7**	Pg		**Pn**	**18 41 42.9**	**-0.6**
EAGO				Sn		**Sb**	**18 41 59.1**	**-2.5**
EAGO				Sg		**Sn**	**18 42 01.9**	**+0.5**
EAGO				*i* Vmb_Lg			18 42 06.0	
PCAS	**Casmilo, Conde**	**1.40**	**186**	*e*Pg		**Pg**	**18 41 45.6**	**-0.3**
PCAS				*e*Sg		**Sg**	**18 42 04.7**	**+0.6**
PCAS				A		A	18 42 05.6	
	7.2nm,0.1s							
EMAZ	**Mazaricos**	**1.58**	**342**	Pg		**Pn**	**18 41 46.8**	**+0.3**
EMAZ				Sg		**Sn**	**18 42 06.5**	**-0.2**
EMAZ				*i* Vmb_Lg			18 42 11.1	
PCBR	**Castelo Branco**	**1.72**	**158**	*e*Sg		**Sg**	**18 42 15.4**	**+0.9**
PCBR				A		A	18 42 20.6	
	10nm,0.3s							
PMRV	**Marv??o**	**2.13**	**160**	*e*Sg		**Sg**	**18 42 29.1**	**+1.5**
PMRV				A		A	18 42 32.1	
	5.6nm,0.5s							
EPLA	**Plasencia**	**2.19**	**128**	Pn		**Pn**	**18 41 55.4**	**+0.6**
EPLA				Pg		**Pg**	**18 42 00.5**	**-0.4**
EPLA				Sn		**Sn**	**18 42 20.9**	**-0.6**
EPLA				*i* Vmb_Lg			18 42 21.6	
EPLA				Sg		**Sg**	**18 42 29.4**	**+0.1**
PMTG	**Montargil**	**2.37**	**178**	*e*Pn		**Pn**	**18 41 57.7**	**+0.4**
PMTG				*e*Sn		**Sn**	**18 42 24.9**	**-1.2**
PMTG				*e*Sg		**Sg**	**18 42 34.5**	**-0.8**
PMTG				A		A	18 42 38.5	
	3.7nm,0.4s							
PMAFR	**Mafra**	**2.59**	**197**	*e*Pn		**Pn**	**18 42 00.2**	**-0.2**
PMAFR				*e*Sg		**Sg**	**18 42 41.2**	**-1.2**
PESTR	**Estremoz**	**2.63**	**168**	*e*Pn		**Pn**	**18 42 01.4**	**+0.5**
PESTR				*e*Sn		**Sn**	**18 42 31.7**	**-0.9**
PESTR				*e*Sg		**Sg**	**18 42 43.3**	**-0.3**
PESTR				A		A	18 42 45.5	
	3.3nm,0.5s							
EBAD	**Badajoz**	**2.86**	**159**	Pn		**Pn**	**18 42 04.6**	**+0.5**
EBAD				Pg		**Pb**	**18 42 10.1**	**+0.3**
EBAD				Sg		**Sg**	**18 42 49.5**	**-1.5**
EBAD				*i* Vmb_Lg			18 42 53.9	
EVO	**Evora**	**2.92**	**175**	P		**Pg**	**18 42 15.1**	**+0.2**
EVO				S		**Sg**	**18 42 50.5**	**-2.3**
EARI	**Arriondas**	**2.96**	**50**	Pn		**Pn**	**18 42 06.6**	**+1.2**
EARI				Sn		**Sn**	**18 42 39.9**	**-0.7**
EARI				Sg		**Sg**	**18 42 51.9**	**-2.1**
EARI				*i* Vmb_Lg			18 42 57.7	
GUD	**Guadarrama**	**3.25**	**103**	Pn		**Pn**	**18 42 09.6**	**+0.1**
GUD				Sn		**Sn**	**18 42 46.0**	**-1.9**
GUD				Sg		**Sg**	**18 43 01.2**	**-2.1**
PNCL	**Nicolau / Gran**	**3.33**	**183**	*e*Pn		**Pn**	**18 42 10.8**	**+0.3**
PNCL				*e*Sn		**Sn**	**18 42 48.1**	**-1.7**
PBAR	**Barrancos**	**3.41**	**163**	*e*Sn		**Sn**	**18 42 49.6**	**-2.1**
PBAR				*e*Sg		**Sg**	**18 43 07.1**	**-1.4**
PAB	**San Pablo**	**3.57**	**121**	Pn		**Pn**	**18 42 14.5**	**+0.6**
PAB				Sn		**Sn**	**18 42 54.5**	**-1.3**
PAB				Sg		**Sg**	**18 43 11.6**	**-2.0**
MESJ	**Messejana**	**3.60**	**179**	*e*Pn		**Pn**	**18 42 14.3**	**+0.1**
MESJ				*e*Sn		**Sn**	**18 42 54.0**	**-2.4**
ESDC	**Sonseca Array**	**3.76**	**117**	Pn		**Pn**	**18 42 16.4**	**0.0**
ESDC				Sn		**Sn**	**18 42 58.2**	**-2.1**
ESDC				Sg		**Sg**	**18 43 17.8**	**-1.8**
ECAB	**El Cabril**	**4.04**	**146**	Pn		**Pn**	**18 42 20.3**	**0.0**
ECAB				Sn		**Sn**	**18 43 04.4**	**-2.8**
ECAB				Sg		**Sg**	**18 43 25.3**	**-3.3**
PVAQ	**Vaqueiros**	**4.06**	**173**	*e*Pn		**Pn**	**18 42 20.7**	**+0.2**

KRSC 04 18:56:31.4±1.9, 50.59N×155.71E, h189km±15km, ML3.5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SKR	**Severo-Kuril's**	**0.28**	**71**	P		Pn	18 56 56.9	+0.5
PAU	**Pauzhetka**	**1.12**	**38**	P		Pn	18 57 01.4	+0.6
MIPR	**Malaya Ipel'ka**	**1.81**	**21**	P		Pn	18 57 07.0	0.0
MIPR				S		Sn	18 57 34.6	-0.3
KDTR	**Khodutka, Kamc**	**1.92**	**50**	P		Pn	18 57 09.4	+1.2
KDTR				S		Sn	18 57 38.3	+1.4
ASAK	**Asacha**	**2.26**	**37**	P		Pn	18 57 13.0	+1.1
MTVR	**Mutnovka**	**2.44**	**38**	P		Pn	18 57 15.5	+1.5
MTVR				S		Sn	18 57 49.4	+2.1
RUS	**Russkaya**	**2.54**	**42**	P		Pn	18 57 16.1	+1.1
RUS				*e*S		Sn	18 57 50.1	+1.1
DALK	**Dalny**	**3.09**	**37**	P		Pn	18 57 23.4	+2.0
DALK				S		Sn	18 58 01.8	+1.2
KOK	**Koryaka**	**3.25**	**33**	P		Pn	18 57 25.9	+2.4
UGLR	**Uglovaya**	**3.25**	**35**	P		Pn	18 57 25.9	+2.4
AVH	**Avacha**	**3.27**	**34**	P		Pn	18 57 25.8	+2.1
SDLR	**Sedlovina**	**3.33**	**35**	*e*P		Pn	18 57 26.1	+1.6
NLC	**Nalytchevo**	**3.43**	**40**	S		Sn	18 58 06.5	-1.4
SPN	**Mys Shipunski**	**3.67**	**45**	*e*S		Sn	18 58 11.5	-1.8
KBTR	**Krutoberegovo**	**7.05**	**34**	P		Pn	18 58 12.0	0.0

*KRSC **04** 19:00:09.1±2.1, 53.91N×169.37E, h20km±25km, ML4.5*
*MOS **04** 19:00:10.6±0.8, 54.09N×169.37E, h11km, mb4.4/5, Error ellipse: s-maj=9.0km s-min=6.6km az=9.1*
*IDC **04** 19:00:11.3±0.6, 54.20N×169.41E, h0km, mb3.9/21, mbtmp3.9/22, ML3.0/1, MS3.3/23, Error ellipse: s-maj=20.2km s-min=12.4km az=163.0*
*NEIC **04** 19:00:13.9±1.5, 54.13N±0.09×169.4E±0.1, h18km±3km, mb4.2/44, Error ellipse: s-maj=13.1km s-min=9.0km az=199.0*
ISC 04 19:00:13.6±0.5, 54.06N±0.06×169.39E±0.05, h17km, n222, σ0.99/207, mb4.1/37, MS3.4/20, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BKI	**Bering**	**2.29**	**301**	PN		**Pn**	**19 00 48.6**	**-2.0**
BKI				S		**Sn**	**19 01 17.8**	**-0.7**
BKI	**Bering**	**2.29**	**301**	*e*P		**Pn**	**19 00 48.6**	**-2.0**
BKI				*e*S		**Sn**	**19 01 17.8**	**-0.7**
SMY	**Shemya**	**3.12**	**113**			**Pn**	**19 01 02.5**	**+0.6**
SMY	**Shemya**	**3.12**	**113**	PN		**Pn**	**19 01 02.5**	**+0.6**
SMKR	**Semkarok**	**5.18**	**302**	PN		**Pn**	**19 01 30.0**	**-0.4**
SMKR				S		**Sn**	**19 02 31.3**	**+1.5**
SMKR	**Semkarok**	**5.18**	**302**	*e*P		**Pn**	**19 01 30.0**	**-0.4**
SMKR				*e*S		**Sn**	**19 02 31.3**	**+1.5**
BDR	**Baidarnaya**	**5.31**	**302**	PN		**Pn**	**19 01 32.2**	**+0.1**
BDR	**Baidarnaya**	**5.31**	**302**	*e*P		**Pn**	**19 01 32.2**	**+0.1**
TUMR	**Tumrok**	**5.50**	**287**	PN		**Pn**	**19 01 35.5**	**+0.6**
TUMR	**Tumrok**	**5.50**	**287**	*e*P		**Pn**	**19 01 35.5**	**+0.6**
KMNR	**Kamenistaya**	**5.55**	**292**	PN		**Pn**	**19 01 36.3**	**+0.9**
KMNR	**Kamenistaya**	**5.55**	**292**	*e*P		**Pn**	**19 01 36.3**	**+0.9**
KII	**Karymskiy**	**5.86**	**274**	PN		**Pn**	**19 01 40.0**	**+0.3**
KII	**Karymskiy**	**5.86**	**274**	*e*P		**Pn**	**19 01 40.0**	**+0.3**
NLC	**Nalytchevo**	**6.05**	**266**	PN		**Pn**	**19 01 40.7**	**-1.5**
NLC	**Nalytchevo**	**6.05**	**266**	P		**Pn**	**19 01 40.7**	**-1.5**
SDLR	**Sedlovina**	**6.30**	**267**	PN		**Pn**	**19 01 45.7**	**0.0**
SDLR	**Sedlovina**	**6.30**	**267**	*e*P		**Pn**	**19 01 45.7**	**0.0**
UGLR	**Uglovaya**	**6.34**	**267**	PN		**Pn**	**19 01 46.0**	**-0.4**
UGLR	**Uglovaya**	**6.34**	**267**	*e*P		**Pn**	**19 01 46.0**	**-0.4**
SMAR	**Somma**	**6.35**	**267**	PN		**Pn**	**19 01 45.9**	**-0.6**
SMAR	**Somma**	**6.35**	**267**	*e*P		**Pn**	**19 01 45.9**	**-0.6**
KRER	**Koryakskii**	**6.37**	**267**	PN		**Pn**	**19 01 46.5**	**-0.3**
KRER	**Koryakskii**	**6.37**	**267**	*e*P		**Pn**	**19 01 46.5**	**-0.3**
AVH	**Avacha**	**6.38**	**267**	PN		**Pn**	**19 01 46.3**	**-0.6**
AVH	**Avacha**	**6.38**	**267**	*e*P		**Pn**	**19 01 46.3**	**-0.6**
KRX	**Arik**	**6.42**	**268**	PN		**Pn**	**19 01 47.5**	**+0.1**
KRX	**Arik**	**6.42**	**268**	*e*P		**Pn**	**19 01 47.5**	**+0.1**
DALK	**Dalny**	**6.43**	**265**	PN		**Pn**	**19 01 46.5**	**-0.9**
DALK	**Dalny**	**6.43**	**265**	*e*P		**Pn**	**19 01 46.5**	**-0.9**
ESO	**Esso**	**6.43**	**291**	PN		**Pn**	**19 01 49.1**	**+1.6**
ESO	**Esso**	**6.43**	**291**	*e*P		**Pn**	**19 01 49.1**	**+1.6**
KOK	**Koryaka**	**6.44**	**267**	PN		**Pn**	**19 01 46.8**	**-0.9**
KOK	**Koryaka**	**6.44**	**267**	*e*P		**Pn**	**19 01 46.8**	**-0.9**
PET	**Petropavlovsk**	**6.49**	**265**	Pn		**Pn**	**19 01 48.2**	**0.0**
PET	**Petropavlovsk**	**6.49**	**265**	*e*PN		**Pn**	**19 01 46.8**	**-1.4**
PET				MLR		MLR		
	comp=Z,600nm,13.0s							
PET	**Petropavlovsk**	**6.49**	**265**	P		**Pn**	**19 01 48.9**	**+0.7**
GNL	**Ganaly**	**6.78**	**272**	PN		**Pn**	**19 01 52.6**	**+0.2**
GNL	**Ganaly**	**6.78**	**272**	*e*P		**Pn**	**19 01 52.6**	**+0.2**
KRMR	**Karymshinskiy**	**6.84**	**264**	PN		**Pn**	**19 01 53.9**	**+0.8**
KRMR	**Karymshinskiy**	**6.84**	**264**	*e*P		**Pn**	**19 01 53.9**	**+0.8**
MTVR	**Mutnovka**	**6.91**	**261**	PN		**Pn**	**19 01 53.6**	**-0.5**
MTVR	**Mutnovka**	**6.91**	**261**	*e*P		**Pn**	**19 01 53.6**	**-0.5**
GRL	**Gorelyy**	**6.95**	**262**	PN		**Pn**	**19 01 54.8**	**+0.1**
GRL	**Gorelyy**	**6.95**	**262**	*e*P		**Pn**	**19 01 54.8**	**+0.1**
PEA0B	**Petropavlovsk-**	**7.03**	**267**	Pn		**Pn**	**19 01 55.8**	**+0.1**
PEA0B	**Petropavlovsk-**	**7.03**	**267**	PN		**Pn**	**19 01 55.8**	**+0.1**
PETK	**Petropavlovsk-**	**7.03**	**267**	Pn		**Pn**	**19 01 55.7**	**0.0**
	comp=Z,1.3nm,0.3s,baz=104,slow=16,SNR=23							
PETK				Sn		**Sn**	**19 03 13.2**	**-1.9**
	comp=Z,1.0nm,0.3s,baz=97,slow=19,SNR=1.6							
PETK				LR		LR	19 04 38.3	
	comp=Z,201nm,21.0s,baz=77,slow=38							
	comp=Z,3.3nm,0.4s							
PETK	**Petropavlovsk-**	**7.03**	**267**			**Pn**	**19 01 56.1**	**+0.4**
KDTR	**Khodutka, Kamc**	**7.20**	**256**	PN		**Pn**	**19 01 57.0**	**-1.0**
KDTR	**Khodutka, Kamc**	**7.20**	**256**	*e*P		**Pn**	**19 01 57.0**	**-1.0**
KIWB	**Kanaga Island**	**8.42**	**100**	Pn		**Pn**	**19 02 15.2**	**+0.4**
ADK	**Adak**	**8.68**	**99**	Pn		**Pn**	**19 02 19.3**	**+1.0**
ADK	**Adak**	**8.68**	**99**	PN		**Pn**	**19 02 19.3**	**+1.0**
MA2	**Magadan**	**11.58**	**306**	LR		LR	19 07 28.6	
	comp=Z,38nm,18.8s,baz=92,slow=38							
SEY	**Seymchan**	**12.54**	**322**	LR		LR	19 07 45.5	
	comp=Z,74nm,18.3s,baz=114,slow=36							
BILL	**Bilibino**	**14.11**	**355**	Pn		**Pn**	**19 03 32.7**	**+0.3**
BILL	**Bilibino**	**14.11**	**355**	*e*P		**Pn**	**19 03 33.3**	**+0.9**
BILL				*e*S		**Sn**	**19 06 08.1**	**-0.2**
BILL				pmax		pmax		
	comp=Z,8.0nm,1.8s							
BILL				MLR		MLR		
	comp=Z,76nm,17.0s							
YSS	**Yuzh-Sakhalins**	**18.30**	**258**	*e*P		**P**	**19 04 32.5**	**+6.0**
O17K	**Koliganek Bris**	**19.02**	**59**	P		**Pn**	**19 04 35.9**	**+0.9**
	baz=268							
RDOG	**Red Dog Mine**	**19.14**	**32**	P		**Pn**	**19 04 38.2**	**+1.7**
	baz=237							
P17K	**Kvichak River**	**19.34**	**61**	P		**Pn**	**19 04 39.4**	**+0.5**
	baz=270							
N18K	**Kilae Creek**	**19.67**	**56**	P		**P**	**19 04 42.2**	**+0.7**
	baz=266							
SVW2	**Sparrevohn**	**19.86**	**55**	P		**P**	**19 04 44.4**	**+0.9**
SVW2				IAmb		IAmb	19 04 50.5	
	comp=Z,24nm,1.8s							
TTA	**Tatalina**	**19.90**	**50**	P		**P**	**19 04 45.0**	**+0.9**
TTA				IAmb		IAmb	19 04 47.5	
	comp=Z,11nm,1.0s							
TTA	**Tatalina**	**19.90**	**50**	P		**P**	**19 04 45.0**	**+0.9**
TTA				pmax		pmax		
	comp=Z,11nm,1.0s							
TTA	**Tatalina**	**19.90**	**50**	P		**P**	**19 04 44.8**	**+0.8**
	baz=260,SNR=11							
O18K	**Koktuh Hills**	**19.97**	**59**	P		**P**	**19 04 43.0**	**-1.8**
	baz=269							
ASAJ	**Asahikawa**	**20.06**	**251**	LR		LR	19 11 11.1	
	comp=Z,52nm,21.2s,baz=64,slow=33							
L19K	**White Mountain**	**20.32**	**52**			**P**	**19 04 49.3**	**+0.8**
L19K	**White Mountain**	**20.32**	**52**	P		**P**	**19 04 49.7**	**+1.1**
	baz=263,SNR=21							
N19K	**Bonanza Creek**	**20.37**	**56**			**P**	**19 04 50.0**	**+0.8**
N19K				IAmb		IAmb	19 05 02.3	
	comp=Z,7.5nm,0.8s							
N19K	**Bonanza Creek**	**20.37**	**56**	P		**P**	**19 04 49.6**	**+0.4**
	baz=267,SNR=5.2							
M19K	**Big River Lodg**	**20.50**	**53**	P		**P**	**19 04 51.5**	**+1.0**
M19K				IAmb		IAmb	19 04 53.7	
	comp=Z,10nm,1.1s							
M19K	**Big River Lodg**	**20.50**	**53**	P		**P**	**19 04 51.0**	**+0.5**
	baz=264							
Q19K	**Cape Douglas,**	**20.78**	**62**	P		**P**	**19 04 53.2**	**-0.4**
	baz=273							
L20K	**Farewell, AK**	**20.80**	**51**	P		**P**	**19 04 54.0**	**+0.2**
	baz=263,SNR=6.6							
K20K	**Telida**	**20.84**	**49**	P		**P**	**19 04 54.9**	**+0.7**
K20K				IAmb		IAmb	19 04 55.8	
	comp=Z,8.4nm,0.8s							
K20K	**Telida**	**20.84**	**49**	P		**P**	**19 04 54

baz=271
TOLK Toolik Lake Re 23.86 36 P P 19 05 25.1 -0.6
TOLK IAmb IAmb 19 05 32.4
comp=Z,12nm,1.0s
TOLK Toolik Lake Re 23.86 36 P P 19 05 25.2 -0.5
baz=253,SNR=8.8
H24K Noodor Dome 23.88 44 P P 19 05 26.0 +0.1
H24K Noodor Dome 23.88 44 P P 19 05 25.2 -0.7
baz=261
POKR Poker Flat Res 23.96 45 P P 19 05 25.6 -1.1
baz=263
HDA Harding Lake 24.10 47 P P 19 05 27.3 -0.7
baz=266
IL31 24.16 46 P P 19 05 27.2 -1.3
IL31 IAmb IAmb 19 05 44.2
comp=Z,10nm,1.4s
ILAR Eielson Array 24.16 46 P P 19 05 27.4 -1.2
comp=Z,1.6nm,0.6s,baz=252,slow=6.9,SNR=31
ILAR LR LR 19 15 01.1
comp=Z,96nm,18.3s,baz=255,slow=37
comp=Z,1.6nm,0.6s
ILAR Eielson Array 24.16 46 P P 19 05 26.8 -1.7
ILAR Eielson Array 24.16 46 P P 19 05 26.8 -1.7
M24K Tolsona, Glenn 24.38 53 P P 19 05 30.8 +0.2
baz=271,SNR=6.8
KLU Klutina 24.52 54 P P 19 05 31.0 -0.9
baz=273
PAX Paxson 24.70 51 P P 19 05 33.5 0.0
baz=270,SNR=7.1
TIXI Tiksi 24.76 331 P P 19 05 32.9 -1.0
comp=Z,3.2nm,0.5s,baz=92,slow=23,SNR=21
comp=Z,3.2nm,0.5s
TIXI Tiksi 24.76 331 P P 19 05 33.0 -0.8
TIXI IAmb IAmb 19 05 37.1
comp=Z,5.1nm,0.8s
J25K Salcha River, 24.80 47 P P 19 05 32.4 -2.0
baz=266
RIDG Independent Ri 24.99 49 P P 19 05 35.6 -0.5
baz=269
N25K Chitina, Valde 25.15 54 P P 19 05 37.6 +0.1
baz=274
BMRM Bremner River 25.19 56 P P 19 05 35.9 -2.1
baz=275
SCRK Sand Creek 25.38 48 P P 19 05 38.9 -0.8
SCRK Sand Creek 25.38 48 P P 19 05 38.0 -1.6
baz=269
BMAR Burnt Mountain 25.43 40 P P 19 05 39.5 -0.5
J26L Joseph Creek 25.57 47 P P 19 05 40.6 -0.8
J26L Joseph Creek 25.57 47 P P 19 05 39.4 -2.0
baz=268
VRDI Verde Repeater 25.73 55 P P 19 05 42.4 -0.6
VRDI IAmb IAmb 19 05 52.3
comp=Z,6.1nm,0.8s
USRK Ussuriysk Ar. 26.10 263 LR LR 19 16 42.9
comp=Z,99nm,19.7s,baz=25,slow=38
K27K Chicken 26.22 48 P P 19 05 46.0 -1.1
baz=271
L27K Beaver Creek, 26.36 50 P P 19 05 48.9 +0.4
L27K IAmb IAmb 19 05 58.9
comp=Z,3.7nm,0.9s
L27K Beaver Creek, 26.36 50 P P 19 05 47.7 -0.8
baz=273
BCAR Beaver Creek A 26.38 50 P P 19 05 49.7 +1.0
M27K Edge Creek, AK 26.38 52 P P 19 05 51.6 +2.8
baz=274,SNR=6.1
CTG Chitna Glacier 26.78 55 P P 19 05 52.5 +0.1
baz=278
DAWY Dawson 27.40 48 P P 19 05 57.6 -0.2
baz=273
MJAR Matsushiro Arr 27.75 244 P P 19 06 01.6 +0.4
comp=Z,0.8nm,0.7s,baz=4.2,slow=6.7,SNR=5.4
comp=Z,0.8nm,0.7s
MJB9 Matsu-Tunnel 27.75 244 P P 19 06 02.2 +1.1
MJB9 IAmb IAmb 19 06 05.8
comp=Z,7.3nm,0.9s
MAJO Matsushiro 27.75 244 P P 19 06 02.2 +1.0
MAJO IAmb IAmb 19 06 05.9
comp=Z,7.0nm,0.8s
MAJO Matsushiro 27.75 244 P P 19 06 02.2 +1.0
MAJO pmax pmax
comp=Z,7.0nm,0.9s
HYT Haines Junctio 28.65 55 P P 19 06 09.2 0.0
HYT IAmb IAmb 19 06 22.1
comp=Z,11nm,1.4s
JHJ Hachijo jima 2 29.61 237 LR LR 19 20 28.8
comp=Z,10nm,18.4s,baz=82,slow=41
INK Inuvik 29.66 39 LR LR 19 18 56.3
comp=Z,29nm,18.0s,baz=62,slow=38
A36M Sachs Harbour 32.42 32 P P 19 06 42.3 +0.2
KSRS Korea Array 32.79 257 P P 19 06 47.6 +1.9
comp=Z,1.6nm,0.8s,baz=45,slow=9.0,SNR=6.3
KSRS LR LR 19 20 12.3
comp=Z,22nm,20.1s,baz=40,slow=37
comp=Z,1.6nm,0.8s
DLBC Dease Lake 32.93 57 LR LR 19 20 04.5
comp=Z,90nm,18.6s,baz=261,slow=36
C36M Paulatuk 33.02 37 P P 19 06 45.9 -1.5
H11N2 WAKE ISLAND Hy 34.32 184 T T 19 43 20.9
baz=2.5,slow=76,SNR=354
H11N3 WAKE ISLAND Hy 34.33 184 T T 19 43 22.5
baz=2.5,slow=76,SNR=261
H11N1 WAKE ISLAND Hy 34.34 184 T T 19 43 21.6
baz=2.5,slow=76,SNR=363
H11S1 WAKE ISLAND Hy 35.55 184 T T 19 44 52.7
baz=2.8,slow=76,SNR=223
H11S3 WAKE ISLAND Hy 35.56 184 T T 19 44 53.8
baz=2.8,slow=76,SNR=126
H11S2 WAKE ISLAND Hy 35.56 184 T T 19 44 55.3
baz=2.8,slow=76,SNR=194
BBB Bella Bella 36.47 67 LR LR 19 20 29.9
comp=Z,77nm,19.2s,baz=304,slow=34
YKA Yellowknife Ar 38.59 46 P P 19 07 34.4 -0.8
comp=Z,0.8nm,0.6s,baz=292,slow=7.8,SNR=5.6
comp=Z,0.8nm,0.6s
SONM Songino Array 38.99 287 P P 19 07 38.8 -0.1
comp=Z,0.5nm,0.6s,baz=60,slow=8.5,SNR=2.0
SONM LR LR 19 25 16.4
comp=Z,51nm,18.1s,baz=67,slow=39
comp=Z,0.5nm,0.6s
JOW Kunigami 40.58 245 LR LR 19 26 20.0
comp=Z,20nm,18.1s,baz=36,slow=39
NEW Newport 44.52 66 LR LR 19 27 19.4
comp=Z,44nm,18.2s,baz=311,slow=37
YBH Yreka Blue Hor 45.44 77 LR LR 19 25 36.2
comp=Z,46nm,18.2s,baz=289,slow=34
NVAR Mina Array Bea 50.15 77 P P 19 09 08.4 +0.2
comp=Z,0.7nm,0.2s,baz=307,slow=3.3,SNR=1.8
NVAR PcP **PcP 19 10 27.9 +0.6**
comp=Z,0.9nm,0.3s,baz=349,slow=3.7,SNR=3.5
comp=Z,0.7nm,0.2s
ELK Elko 50.33 73 LR LR 19 27 27.6
comp=Z,38nm,21.3s,baz=305,slow=32
KURK Kurchatov 51.80 306 P P 19 09 18.9 -1.2
KURK Kurchatov 51.80 306 P P 19 09 18.9 -1.2
KURK pmax pmax
comp=Z,6.0nm,1.2s
PD31 Pinedale Array 52.12 67 P P 19 09 22.5 -0.4
PD31 IAmb IAmb 19 09 25.1
comp=Z,3.2nm,1.4s
PDAR Pinedale Array 52.12 67 P P 19 09 22.6 -0.4
comp=Z,0.4nm,0.5s,baz=270,slow=3.0,SNR=4.9
comp=Z,0.4nm,0.5s
MK31 Makanchi Array 52.60 300 P P 19 09 25.2 -1.0
MK31 Makanchi Array 52.60 300 P P 19 09 25.2 -1.0
MK31 pmax pmax
comp=Z,2.0nm,1.2s
MKAR Makanchi Array 52.60 300 P P 19 09 25.1 -1.0
comp=Z,0.4nm,0.6s,baz=54,slow=8.2,SNR=5.8
comp=Z,0.4nm,0.6s
ARCES ARCESS Array B 53.94 345 P P 19 09 33.5 -2.1
comp=Z,1.9nm,0.6s,baz=26,slow=8.7,SNR=6.4
comp=Z,1.9nm,0.6s
BRVK Borovoye 54.01 313 P P 19 09 35.5 -0.8
BRVK Borovoye 54.01 313 P P 19 09 35.5 -0.8
BRVK pmax pmax
comp=Z,22nm,1.7s
ECSD EROS Data Cent 58.22 58 P P 19 10 05.9 -0.7
ECSD IAmb IAmb 19 10 37.5
comp=Z,3.4nm,1.2s
ANMO Albuquerque 59.34 72 LR LR 19 33 43.7
comp=Z,28nm,20.7s,baz=319,slow=34
ABKAR Akbulak array 61.21 315 P P 19 10 26.2 -0.9
ABKAR Akbulak array 61.21 315 P P 19 10 26.4 -0.7
ABKAR IAmb IAmb 19 10 32.9
comp=Z,6.8nm,1.4s
FIA1 FINESS Array S 61.23 341 P P 19 10 26.2 -0.8
FINES FINESS Array B 61.23 341 P P 19 10 26.5 -0.5
FINES FINESS Array B 61.23 341 P P 19 10 26.5 -0.5
CMAR Chiang Mai Arr 63.80 265 P P 19 10 45.0 +0.2
comp=Z,0.6nm,0.8s,baz=15,slow=7.4,SNR=6.7
CMAR LR LR 19 38 53.0
comp=Z,18nm,21.9s,baz=95,slow=36
comp=Z,0.6nm,0.8s
NC405 NORSAR Array S 63.81 348 P P 19 10 44.1 -0.2
NB2 NORSAR Subarra 63.94 348 P P 19 10 44.1 -1.1
comp=Z,1.1nm,0.6s,baz=15,slow=6.9
NOA NORSAR Array B 63.94 348 P P 19 10 44.5 -0.7
comp=Z,0.8nm,0.5s,baz=16,slow=6.8,SNR=4.9
comp=Z,0.8nm,0.5s
TX31 Lajitas Ar. Si 65.09 74 P P 19 10 53.3 +0.1
TXAR Lajitas Array 65.09 74 P P 19 10 53.5 +0.2
comp=Z,1.2nm,0.6s,baz=303,slow=4.6,SNR=14
comp=Z,1.2nm,0.6s
TXAR Lajitas Array 65.09 74 P P 19 10 53.0 -0.3
TXAR Lajitas Array 65.09 74 P P 19 10 53.0 -0.3
SADO Sadowa 65.59 47 LR LR 19 40 32.3
comp=Z,34nm,18.1s,baz=312,slow=37
AKASG Malin Array Be 70.40 334 P P 19 11 25.7 -0.5
comp=Z,0.6nm,0.4s,baz=29,slow=6.2,SNR=5.9
comp=Z,0.6nm,0.4s
TKL Tuckaleechee C 70.75 56 LR LR 19 43 17.9
comp=Z,68nm,19.4s,baz=54,slow=37
BURAR Bucovina Array 74.25 336 P P 19 11 49.7 +0.2
BURAR IAmb IAmb 19 11 51.9
comp=Z,1.1nm,0.7s
GERES GERESS Array B 75.43 344 P P 19 11 56.8 +0.5
comp=Z,0.1nm,0.3s,baz=38,slow=5.0,SNR=2.5
comp=Z,0.1nm,0.3s
BRTR Keskin Array B 79.14 327 P P 19 12 18.9 +1.7
comp=Z,0.9nm,0.8s,baz=26,slow=3.1,SNR=4.9
comp=Z,0.9nm,0.8s
BRTR Keskin Array B 79.14 327 P P 19 12 16.4 -0.8
BRTR Keskin Array B 79.14 327 P P 19 12 16.4 -0.8
WB0 Warramunga Arr 79.44 213 P P 19 12 18.9 +0.1
WRA Warramunga Arr 79.62 213 P P 19 12 20.5 +0.7
comp=Z,2.3nm,1.1s,baz=30,slow=5.8,SNR=6.7
comp=Z,2.3nm,1.1s
WRA Warramunga Arr 79.62 213 P P 19 12 18.6 -1.1
WRA Warramunga Arr 79.62 213 P P 19 12 18.6 -1.1
WRA pmax pmax
comp=Z,1.0nm,1.7s
ASAR Alice Springs 83.24 212 P P 19 12 39.9 +1.0
comp=Z,1.7nm,0.9s,baz=8.5,slow=4.3,SNR=10
comp=Z,1.7nm,0.9s
ASAR Alice Springs 83.24 212 P P 19 12 39.4 +0.5
ASAR Alice Springs 83.24 212 P P 19 12 39.4 +0.5
PALK Pallekele 83.40 273 LR LR 19 55 05.1
comp=Z,37nm,18.0s,baz=230,slow=40

MAN 04 19:15:21.2, 9.46N×125.45E, h22km, mb3.7, ML2.4, MS1.9, Mindanao

*IDC **04** 19:47:10.0±0.8, 14.64S×176.07W, h0km, mb4.1/9, mbtmp4.1/9, MS3.5/29, Error ellipse: s-maj=42.6km s-min=19.4km az=148.0*
*NEIC **04** 19:47:11.0±2.7, 14.70S±0.06×175.62W±0.08, h10km±1km, mb4.7/10, Error ellipse: s-maj=13.4km s-min=9.4km az=275.0*
ISC 04 19:47:11.4±0.6, 14.7S±0.1×175.9W±0.1, h10km, n92, σ1s07/51, mb4.5/15, MS3.6/29, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**4.11**	**79**	Pn	Pn	19 48 08.7	-5.7
	16nm,0.3s,baz=68,slow=2.4,SNR=18						
AFI				Sn	Sn	19 48 48.6	-14
	39nm,0.3s,baz=84,slow=23,SNR=11						
MSVF	**Nonsavu**	**6.50**	**242**	Pn	**Pn**	**19 48 49.5**	**+2.1**
NIUE	**Niue**	**7.18**	**128**	Pn	Pn	19 48 51.3	-5.3
KNTN	**Kanton**	**12.59**	**20**	Pn	Pn	19 50 05.3	-5.5
RAR	**Rarotonga**	**16.66**	**115**	LR	LR	19 55 58.6	
	comp=Z,120nm,21.5s,baz=268,slow=31						
DZM	**Mont Dzumac**	**18.24**	**244**		**Pn**	**19 51 24.0**	**-0.9**
URZ	**Urewera**	**24.22**	**193**	LR	LR	20 01 20.4	
	comp=Z,124nm,19.5s,baz=31,slow=35						
PPT	**Papeete**	**25.46**	**100**	LR	LR	20 01 52.8	
	comp=Z,18nm,18.4s,baz=266,slow=34						
PAE	**Paea**	**25.46**	**100**	*e*T	T	20 18 53.7	
	1.2nm,0.2s						
TBI	**Tubuai**	**26.41**	**113**	*e*LR	LR	19 58 38.3	
	comp=Z,187nm,27.5s						
PMOR	**Pomariorio Ree**	**27.09**	**94**	*e*T	T	20 20 56.8	
	1.6nm,0.2s						
CTA	**Charters Tower**	**36.42**	**256**	P	**P**	**19 54 16.1**	**-0.4**
	4.9nm,0.9s,baz=53,slow=5.1,SNR=2.2						
	4.9nm,0.9s						
CTAO	**Charters Tower**	**36.42**	**256**	P	**P**	**19 54 16.2**	**-0.4**
PMG	**Port Moresby**	**36.45**	**274**	LR	LR	20 07 41.6	
	comp=Z,91nm,18.2s,baz=156,slow=34						
H11S2	**WAKE ISLAND Hy**	**37.19**	**332**	T	T	20 33 44.8	
	baz=151,slow=76,SNR=18						
H11S3	**WAKE ISLAND Hy**	**37.20**	**332**	T	T	20 33 43.8	
	baz=151,slow=76,SNR=17						
H11S1	**WAKE ISLAND Hy**	**37.21**	**332**	T	T	20 33 44.3	
	baz=151,slow=76,SNR=14						
H11N3	**WAKE ISLAND Hy**	**38.18**	**333**	T	T	20 34 57.9	
	baz=152,slow=76,SNR=86						
H11N1	**WAKE ISLAND Hy**	**38.18**	**333**	T	T	20 34 56.6	
	baz=152,slow=76,SNR=108						
H11N2	**WAKE ISLAND Hy**	**38.19**	**333**	T	T	20 34 59.5	
	baz=152,slow=76,SNR=95						
WB0	**Warramunga Arr**	**47.58**	**257**	P	**P**	**19 55 46.7**	**-1.1**
WB0				IAmb	IAmb	19 55 47.1	
	comp=Z,9.2nm,0.9s						
WRA	**Warramunga Arr**	**47.62**	**256**	P	**P**	**19 55 47.1**	**-1.0**
	comp=Z,3.9nm,0.9s,baz=90,slow=8.1,SNR=17						
	comp=Z,3.9nm,0.9s						
WRA	**Warramunga Arr**	**47.62**	**256**	P	P	19 55 46.4	-1.7
GUMO	**Guam**	**47.93**	**304**	LR	LR	20 12 50.1	
	comp=Z,24nm,19.4s,baz=116,slow=32						
AS31	**Alice Springs**	**48.00**	**251**	P	**P**	**19 55 50.2**	**-0.8**
AS31				IAmb	IAmb	19 55 51.0	
	comp=Z,3.1nm,0.7s						
ASAR	**Alice Springs**	**48.00**	**251**	P	**P**	**19 55 50.3**	**-0.7**
	comp=Z,9.2nm,0.8s,baz=82,slow=8.2,SNR=108						
ASAR				LR	LR	20 13 27.7	
	comp=Z,46nm,19.7s,baz=340,slow=33						
	comp=Z,9.2nm,0.8s						
ASAR	**Alice Springs**	**48.00**	**251**	P	**P**	**19 55 50.1**	**-0.9**
MTN	**Manton Dam**	**51.35**	**265**	P	**P**	**19 56 16.2**	**-0.4**
SIJI	**Sorong**	**53.94**	**280**	LR	LR	20 18 54.2	
	comp=Z,42nm,20.8s,baz=323,slow=35						
JCJ	**Chichijima**	**58.16**	**316**	LR	LR	20 18 10.0	
	comp=Z,65nm,20.0s,baz=157,slow=32						
DAV	**Davao City (W)**	**61.91**	**286**	LR	LR	20 23 01.0	
	comp=Z,48nm,18.2s,baz=137,slow=35						
JHJ	**Hachijo jima 2**	**63.66**	**319**	LR	LR	20 25 31.5	
	comp=Z,22nm,18.5s,baz=282,slow=36						
VNDA	**Vanda**	**63.79**	**185**	P	**P**	**19 57 43.8**	**+0.5**
	comp=Z,1.1nm,1.0s,baz=22,slow=3.8,SNR=4.5						
VNDA				LR	LR	20 18 56.1	
	comp=Z,29nm,21.4s,baz=358,slow=30						
	comp=Z,1.1nm,1.0s						
MJAR	**Matsushiro Arr**	**66.88**	**321**	LR	LR	20 22 28.9	
	comp=Z,35nm,19.8s,baz=152,slow=32						
SHEM	**Shemya Is, Ala**	**67.74**	**353**	LR	LR	20 20 30.7	
	comp=Z,41nm,21.6s,baz=296,slow=30						
JOW	**Kunigami**	**68.13**	**307**	LR	LR	20 22 03.7	
	comp=Z,46nm,20.4s,baz=110,slow=31						
PETK	**Petropavlovsk-**	**71.28**	**344**	LR	LR	20 23 54.2	
	comp=Z,30nm,22.0s,baz=136,slow=31						
KSRS	**Korea Array**	**73.99**	**317**	LR	LR	20 28 43.7	
	comp=Z,20nm,19.2s,baz=115,slow=34						
YBH	**Yreka Blue Hor**	**74.58**	**38**	LR	LR	20 23 13.7	
	comp=Z,32nm,19.5s,baz=276,slow=29						
QSPA	**South Pole Qui**	**75.30**	**180**	LR	LR	20 30 24.7	
	comp=Z,36nm,18.3s,baz=7.0,slow=34						
QSPA	**South Pole Qui**	**75.30**	**180**	P	**P**	**19 58 54.7**	**0.0**
QSPA				IAmb	IAmb	19 58 56.3	
	comp=Z,10nm,1.3s						
USRK	**Ussuriysk Ar.**	**75.40**	**324**	LR	LR	20 26 12.3	
	comp=Z,66nm,21.0s,baz=151,slow=31						
NVAR	**Mina Array Bea**	**75.50**	**43**	P	**P**	**19 58 57.0**	**+0.6**
	comp=Z,1.3nm,0.8s,baz=232,slow=10,SNR=5.6						
	comp=Z,1.3nm,0.8s						
NVAR	**Mina Array Bea**	**75.50**	**43**	P	P	19 58 55.1	-1.3
KLR	**Kul'dur**	**78.65**	**328**	LR	LR	20 27 58.3	
	comp=Z,27nm,21.0s,baz=167,slow=31						
MA2	**Magadan**	**78.82**	**343**	LR	LR	20 29 09.4	
	comp=Z,32nm,20.5s,baz=126,slow=32						
SEY	**Seymchan**	**81.27**	**346**	LR	LR	20 31 35.1	
	comp=Z,33nm,19.8s,baz=158,slow=33						
DLBC	**Dease Lake**	**82.00**	**22**	LR	LR	20 26 23.6	
	comp=Z,42nm,20.6s,baz=292,slow=29						
IMAR	**Indian Mountai**	**82.18**	**9**	P	**P**	**19 59 31.8**	**-0.5**
TXAR	**Lajitas Array**	**82.29**	**57**	P	**P**	**19 59 35.0**	**+1.2**
	comp=Z,1.9nm,1.0s,baz=223,slow=6.8,SNR=7.5						
	comp=Z,1.9nm,1.0s						
ILAR	**Eielson Array**	**82.29**	**12**	P	**P**	**19 59 31.9**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=221,slow=5.4,SNR=3.2						
ILAR				LR	LR	20 26 51.9	
	comp=Z,26nm,21.8s,baz=244,slow=29						
	comp=Z,0.3nm,0.6s						
SMAI	**San Martin Ant**	**83.25**	**159**	P	**P**	**19 59 37.0**	**-1.0**
SMAI				IAmb	IAmb	19 59 45.7	
	comp=Z,5.8nm,1.0s						
YHL	**Hebgen Lake**	**83.34**	**40**	P	P	19 59 37.8	-1.3
YHL				IAmb	IAmb	19 59 43.1	
	comp=Z,6.0nm,1.0s						
PDAR	**Pinedale Array**	**83.42**	**43**	P	**P**	**19 59 39.2**	**-0.3**
	comp=Z,1.5nm,0.9s,baz=211,slow=2.6,SNR=6.9						
	comp=Z,1.5nm,0.9s						
PDAR	**Pinedale Array**	**83.42**	**43**	P	P	19 59 37.4	-2.2
BELA	**Belgrano 2**	**84.98**	**172**	P	**P**	**19 59 45.5**	**-1.1**
BELA				IAmb	IAmb	19 59 52.5	
	comp=Z,7.8nm,1.4s						
BMAR	**Burnt Mountain**	**85.08**	**12**	P	**P**	**19 59 46.3**	**-0.8**
PMSA	**Palmer Station**	**85.76**	**156**	LR	LR	20 29 53.1	
	comp=Z,22nm,20.9s,baz=227,slow=30						
CMAR	**Chiang Mai Arr**	**90.09**	**289**	P	**P**	**20 00 11.2**	**-1.1**
	comp=Z,1.2nm,1.1s,baz=137,slow=2.9,SNR=5.8						
CMAR				LR	LR	20 35 31.6	
	comp=Z,18nm,21.8s,baz=195,slow=32						
	comp=Z,1.2nm,1.1s						
CMAR	**Chiang Mai Arr**	**90.09**	**289**	P	**P**	**20 00 12.4**	**+0.1**
PLCA	**Paso Flores**	**91.76**	**133**	LR	LR	20 33 09.6	
	comp=Z,33nm,20.1s,baz=228,slow=30						
SONM	**Songino Array**	**92.73**	**319**	LR	LR	20 36 47.4	
	comp=Z,23nm,20.9s,baz=108,slow=32						
LVC	**Limon Verde**	**99.50**	**116**	LR	LR	20 37 27.0	
	comp=Z,13nm,18.9s,baz=267,slow=30						
BR131	**Keskin Array S**	**144.09**	**320**	PKPdf	**PKPab**	**20 06 45.4**	**-0.1**
BRTR	**Keskin Array B**	**144.09**	**320**	PKP	**PKPab**	**20 06 45.8**	**+0.3**
	comp=Z,4.1nm,0.9s,baz=99,slow=1.6,SNR=14						
BRTR	**Keskin Array B**	**144.09**	**320**		**PKPab**	**20 06 45.4**	**-0.1**
KHC	**Kasperske Hory**	**144.83**	**349**	PKPdf	**PKPab**	**20 06 46.9**	**-0.9**
KHC	**Kasperske Hory**	**144.83**	**349**	*e*PKP	**PKPab**	**20 06 47.6**	**-0.1**
CKRC	**Cesky Krumlov**	**144.99**	**348**	*e*PKP	**PKPab**	**20 06 48.0**	**-0.3**
GERES	**GERESS Array B**	**145.08**	**349**	PKP	**PKPbc**	**20 06 48.3**	**-0.4**
	comp=Z,1.1nm,0.7s,baz=29,slow=3.0,SNR=12						
GERES	**GERESS Array B**	**145.08**	**349**	PKPbc	**PKPbc**	**20 06 47.8**	**-0.9**
ASF	**Jabal al Asfar**	**145.43**	**306**	PKPbc	**PKPbc**	**20 06 49.7**	**-0.7**
	comp=Z,2.3nm,0.7s,baz=295,slow=1.9,SNR=5.8						
CONA	**Conrad Observa**	**145.49**	**346**	*i* P	**PKPbc**	**20 06 50.3**	**+0.2**
	comp=Z,7.3nm,1.0s						
RONA	**Rosalia, Austr**	**145.60**	**345**	*e*P	**PKPdf**	**20 06 50.6**	**+0.4**
	comp=Z,5.6nm,0.8s						
MOA	**Molln**	**145.92**	**348**	*i* P	**PKPdf**	**20 06 51.2**	**+0.5**
	comp=Z,1.6nm,0.7s						
BIOA	**Bad Ischl, Aus**	**146.20**	**348**	*i* P	**PKPdf**	**20 06 52.8**	**+1.6**
	comp=Z,3.5nm,0.8s						
ARSA	**Arzberg**	**146.21**	**346**	*i* P	**PKPdf**	**20 06 52.3**	**+1.1**
	comp=Z,2.2nm,0.9s						
BFO	**Black Forest**	**146.32**	**355**	PKPbc	**PKPdf**	**20 06 50.9**	**-0.5**
KBA	**Koelnbreinsper**	**146.84**	**348**	*i* P	**PKPdf**	**20 06 52.7**	**+0.2**
	comp=Z,2.0nm,0.6s						
SOKA	**Soboth**	**146.86**	**346**	*e*P	**PKPdf**	**20 06 53.5**	**+1.1**
	comp=Z,3.4nm,1.0s						
RETA	**Reutte**	**146.88**	**352**	*i* P	**PKPdf**	**20 06 54.0**	**+1.6**
	comp=Z,4.1nm,1.1s						
WATA	**Walderalm**	**146.90**	**351**	*i* P	**PKPdf**	**20 06 53.9**	**+1.3**
	comp=Z,3.2nm,0.9s						
WTTA	**Wattenberg**	**146.96**	**351**	*i* P	**PKPdf**	**20 06 53.9**	**+1.2**
	comp=Z,3.2nm,0.8s						
MOTA	**Moosalm**	**146.97**	**351**	*e*P	**PKPdf**	**20 06 52.6**	**-0.1**
	comp=Z,2.6nm,0.9s						
SQTA	**Sankt Quirin**	**147.07**	**351**	*i* P	**PKPdf**	**20 06 53.6**	**+0.7**
	comp=Z,2.0nm,0.6s						
DAVA	**Damuels**	**147.19**	**353**	*i* P	**PKPdf**	**20 06 55.1**	**+2.0**
	comp=Z,2.6nm,0.8s						
MYKA	**Terra Mystica**	**147.21**	**348**	*i* P	**PKPdf**	**20 06 54.2**	**+1.2**
	comp=Z,1.8nm,0.4s						
ABTA	**Abfaltersbach**	**147.32**	**349**	*i* P	**PKPdf**	**20 06 54.5**	**+1.3**
	comp=Z,2.1nm,0.7s						
FETA	**Feichten**	**147.34**	**352**	*i* P	**PKPdf**	**20 06 53.6**	**+0.3**
	comp=Z,3.7nm,1.3s						
DAVOX	**Davos/Dischmat**	**147.69**	**353**	PKPbc	**PKPdf**	**20 06 56.2**	**+2.3**
	comp=Z,2.7nm,0.7s,baz=329,slow=3.5,SNR=6.9						
DIVS	**Divibare**	**147.74**	**338**	PKPbc	**PKPdf**	**20 06 55.0**	**+1.0**
EIL	**Elat**	**147.91**	**303**	PKPbc	**PKPdf**	**20 06 57.7**	**+3.1**
	comp=Z,6.8nm,1.0s,baz=346,slow=6.6,SNR=5.9						

*IDC **04** 20:05:44.4±1.8, 21.67N±0.09×143.1E±0.3, h311km, n14, σ0s47/15, mb3.5/10, Mariana Islands region*

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**5.46**	**352**	P	**Pn**	**20 07 07.9**	**0.0**
	26nm,0.3s,baz=286,slow=23,SNR=31						
JCJ				S	**S**	20 08 14.2	**-0.7**
	45nm,0.8s,baz=288,slow=19,SNR=1.5						
JHJ	**Hachijo jima 2**	**11.77**	**346**	P	**Pn**	**20 08 24.0**	**-0.2**
	57nm,0.7s,baz=90,slow=20,SNR=1.4						
MJAR	**Matsushiro Arr**	**15.41**	**345**	P	**P**	**20 09 05.8**	**+0.2**
	0.4nm,0.3s,baz=179,slow=14,SNR=5.8						
KSRS	**Korea Array**	**20.47**	**324**	P	**P**	**20 10 00.0**	**+0.5**
	1.4nm,0.6s,baz=146,slow=8.8,SNR=9.4						
	1.4nm,0.6s						
KLR	**Kul'dur**	**28.94**	**345**	P	**P**	**20 11 16.2**	**+0.6**
	3.5nm,0.5s,baz=166,slow=7.9,SNR=14						
	3.5nm,0.5s						
CTA	**Charters Tower**	**41.62**	**175**	P	**P**	**20 13 03.3**	**0.0**
	1.7nm,0.6s,baz=343,slow=14,SNR=0.9						
	1.7nm,0.6s						
WRA	**Warramunga Arr**	**42.22**	**192**	P	**P**	**20 13 07.7**	**-0.4**
	0.8nm,0.5s,baz=17,slow=9.3,SNR=12						
	0.8nm,0.5s						
ASAR	**Alice Springs**	**45.93**	**192**	P	**P**	**20 13 37.3**	**-0.1**
	0.4nm,0.6s,baz=18,slow=10,SNR=4.3						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**54.63**	**313**	P	**P**	**20 14 42.1**	**+0.2**
	0.2nm,0.5s,baz=86,slow=9.2,SNR=5.2						
	0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**57.46**	**317**	P	**P**	**20 15 01.6**	**0.0**
	0.9nm,0.5s,baz=92,slow=7.5,SNR=18						
	0.9nm,0.5s						
ILAR	**Eielson Array**	**62.12**	**27**	P	**P**	**20 15 32.8**	**-0.2**
	0.3nm,0.6s,baz=260,slow=5.2,SNR=3.9						
	0.3nm,0.6s						
YKA	**Yellowknife Ar**	**76.54**	**28**	P	P	**20 17 01.0**	**+0.4**
	0.5nm,0.5s,baz=295,slow=5.5,SNR=3.7						
	0.5nm,0.5s						
ARCES	**ARCESS Array B**	**78.91**	**341**	P	**P**	**20 17 13.9**	**+0.3**
	3.6nm,0.8s,baz=46,slow=5.4,SNR=4.1						
	3.6nm,0.8s						
FINES	**FINESS Array B**	**83.16**	**334**	P	**P**	**20 17 35.0**	**-1.0**
	0.7nm,0.4s,baz=84,slow=4.8,SNR=11						
	0.7nm,0.4s						

*DDA **04** 20:54:31.4±0.0, 35.55N×31.66E, h15km±1km, ML2.3*
*ISK **04** 20:54:32.8, 35.62N×31.71E, h8km, ML2.6/22*
*GII **04** 20:54:33.4±0.0, 35.22N×31.36E, h10km*
*NIC **04** 20:54:33.1±0.0, 35.62N×31.80E, h19km±1km, MI2.8/7*
**ISC 04 20:54:32.6±1.2,

ALFC				S	Sb	20 55 00.6	-0.5
ALFC				AML	AML	20 55 09.1	
	2.2nm,0.6s						
ALFC				AML	AML	20 55 09.1	
	2.2nm,0.6s						
ALFC				AML	AML	20 55 14.6	
	1.0nm,0.4s						
ALFC				AML	AML	20 55 14.6	
	1.0nm,0.4s						
NATA	**Nata**	**1.08**	**138** ⇓ *i*P		**Pg**	**20 54 54.6**	**+1.1**
NATA				S	**Sb**	**20 55 07.8**	**+0.3**
NATA				AML	AML	20 55 17.9	
	2.3nm,0.9s						
NATA				AML	AML	20 55 17.9	
	2.3nm,0.9s						
NATA				AML	AML	20 55 22.6	
	4.6nm,0.7s						
NATA				AML	AML	20 55 22.6	
	4.6nm,0.7s						
AKDN	**Akdeniz- Kıbrı**	**1.08**	**105**	PG	**Pn**	**20 54 53.7**	**0.0**
AKDN				SG	**Sn**	**20 55 09.3**	**+0.6**
LEF	**Lefka**	**1.09**	**115**	PG	**Pb**	**20 54 51.5**	**-1.8**
LEF	**Lefka**	**1.09**	**115**	P	**Pb**	**20 54 51.6**	**-1.8**
SZAC	**Souni**	**1.28**	**130**	P	**Pg**	**20 54 57.7**	**+0.4**
SZAC				S	**Sb**	**20 55 13.2**	**-0.1**
SZAC				AML	AML	20 55 28.3	
	0.9nm,0.7s						
SZAC				AML	AML	20 55 28.3	
	0.9nm,0.7s						
SZAC				AML	AML	20 55 31.4	
	0.7nm,0.5s						
SZAC				AML	AML	20 55 31.4	
	0.7nm,0.5s						
TEKE	**Tekeli-Mersin**	**1.28**	**64**	PN	**Pg**	**20 54 57.1**	**-0.1**
KEPZ	**Antalya-Kepez**	**1.31**	**357**	P	**Pn**	**20 54 55.8**	**-1.1**
KEPZ				S	**Sb**	**20 55 12.5**	**-1.6**
KEPZ				*i* AML	AML	20 55 15.0	
	comp=E,47nm,0.6s						
AKUM	**Antalya-Kumluc**	**1.31**	**304**	P	**Pn**	**20 54 56.5**	**-0.4**
ERMK	**Ermenek**	**1.45**	**43**	P	**Pb**	**20 54 59.3**	**-0.3**
BERE	**Bereket-Mersin**	**1.46**	**58**	PN	**Pb**	**20 54 59.7**	**-0.1**
BERE				SN	**Sg**	**20 55 19.4**	**-0.1**
CSS	**Mathiatis**	**1.48**	**114**	PN	**Pb**	**20 55 01.4**	**+0.3**
CSS	**Mathiatis**	**1.48**	**114**	P	**Pn**	**20 54 58.0**	**-1.2**
CSS				S	**Sn**	**20 55 16.3**	**-2.2**
CSS				AML	AML	20 55 32.2	
	0.1nm,0.8s						
CSS				AML	AML	20 55 32.2	
	0.1nm,0.8s						
CSS				AML	AML	20 55 36.5	
	0.1nm,0.8s						
CSS				AML	AML	20 55 36.5	
	0.1nm,0.8s						
HDMB	**Hadim**	**1.52**	**25**	PN	**Pb**	**20 55 00.4**	**-0.4**
LFK	**Lefkose**	**1.54**	**101**	PN	**Pb**	**20 55 00.7**	**-0.4**
LFK				SN	**Sg**	**20 55 22.1**	**0.0**
ANTB	**Antalya**	**1.55**	**328**	PN	**Pb**	**20 55 01.2**	**-0.1**
AKKU	**Akkuyu-Mersin**	**1.62**	**69**	PN	**Pb**	**20 55 01.9**	**-0.5**
TEVE	**Tevekalti-Mers**	**1.66**	**59**	PN	**Pb**	**20 55 02.6**	**-0.5**
MVOU	**Mavrovouni**	**1.69**	**109**	P	**Pn**	**20 55 00.7**	**-1.3**
MVOU				S	**Sn**	**20 55 21.9**	**-1.7**
MVOU				AML	AML	20 55 41.2	
	0.2nm,0.6s						
MVOU				AML	AML	20 55 41.2	
	0.2nm,0.6s						
MVOU				AML	AML	20 55 43.5	
	0.3nm,0.8s						
MVOU				AML	AML	20 55 43.5	
	0.3nm,0.8s						
KORT	**Korkueli**	**1.78**	**323**	PN	**Pb**	**20 55 04.5**	**-0.7**
KORT	**Korkueli**	**1.78**	**323**	P	**Pg**	**20 55 07.3**	**+0.6**
AKAS	**Kas**	**1.81**	**291**	PN	**Pb**	**20 55 05.5**	**-0.3**
SEYD	**Seydisehir-KON**	**1.82**	**4**	PN	**Pb**	**20 55 04.7**	**-1.2**
ELL	**Elmali**	**1.85**	**309**	PN	**Pb**	**20 55 05.9**	**-0.5**
KEBE	**Keben-Mersin**	**1.85**	**62**	PN	**Pb**	**20 55 05.9**	**-0.6**
SEDI	**Konya, Seydise**	**1.86**	**2**	P	**Pb**	**20 55 05.5**	**-1.1**
KKBE	**Karaman, Kazim**	**1.92**	**31**	P	**Pb**	**20 55 07.2**	**-0.3**
KKBE				S	**Sg**	**20 55 34.0**	**-0.2**
KKBE				*i* AML	AML	20 55 43.0	
	comp=E,20nm,0.4s						
SUTC	**Sutluce-Ispart**	**1.96**	**344**	PN	**Pn**	**20 55 06.9**	**+1.0**
EREN	**Erenkoy**	**2.02**	**91**	PN	**Pb**	**20 55 08.0**	**-1.4**
KRMN	**Karaman**	**2.03**	**38**	PN	**Pb**	**20 55 07.9**	**-1.6**
KMER	**Konya-Meram**	**2.24**	**14**	P	**Pn**	**20 55 10.8**	**+1.0**
KONT	**Konya--Tatoy**	**2.41**	**13**	PN	**Pn**	**20 55 13.5**	**+1.5**
DOGA	**KONYA_Doganhis**	**2.51**	**360**	P	**Pn**	**20 55 14.8**	**+1.4**
MERS	**Mersin**	**2.62**	**60**	PN	**Pn**	**20 55 16.4**	**+1.5**
LADK	**Ladik-KONYA**	**2.66**	**12**	PN	**Pn**	**20 55 16.9**	**+1.4**
KERG	**Konya-Eregli**	**2.68**	**46**	P	**Pb**	**20 55 19.2**	**-1.4**
YESY	**Yesilyurt**	**2.74**	**36**	PN	**Pn**	**20 55 18.0**	**+1.4**
CMRD	**Camardi-Nigde**	**3.37**	**51**	PN	**Pn**	**20 55 26.9**	**+1.7**
TAHT	**Tahtakopru-Hat**	**3.73**	**77**	PN	**Pn**	**20 55 32.3**	**+2.2**
MMA0B	**Mount Meron ar**	**4.01**	**129**	Pn	**Pn**	**20 55 35.5**	**+1.6**
MMA0B				Sn	**Sn**	**20 56 22.7**	**+1.8**
GEM	**Giv'at Ha'Em**	**4.05**	**125**	Pn	**Pn**	**20 55 36.1**	**+1.6**
GEM				Sn	**Sn**	**20 56 24.2**	**+2.2**
NATI	**Neve Ativ**	**4.07**	**124**	Pn	**Pn**	**20 55 35.4**	**+1.2**
NATI				Sn	**Sn**	**20 56 24.2**	**+1.8**
MMLI	**Mount Malkishu**	**4.42**	**134**	Pn	**Pn**	**20 55 40.6**	**+1.1**
HMDT	**Nahal Hemdat**	**4.61**	**135**	Pn	**Pn**	**20 55 42.6**	**+0.4**
PRNI	**Paran**	**5.92**	**151**	Pn	**Pn**	**20 55 58.1**	**-2.1**

*KRSC **04** 21:05:10.1±0.9,54.˚62N×162.˚43E,h59km±26km,ML4.2*
*IDC **04** 21:05:16.7±3.8,54.˚83N×161.˚72E,h77km±32km,mb3.4/13,*
mbtmp3.7/14,MS2.3/3,Error ellipse: s-maj=30.9km
s-min=19.9km az=92.0

ISC 04 21:05:12.2±1.1,54.˚63N±0.˚03×162.˚45E±0.˚04,h56km±11km,
n61,σ0.97/88,mb3.7/13,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
TUMR	**Tumrok**	**1.48**	**297**	*e*P	**Pn**	**21 05 36.0**		**-0.6**
TUMR				*e*S	**Sn**	**21 05 54.0**		**-0.9**
KBTR	**Krutoberegovo**	**1.59**	**7**	*e*P	**Pn**	**21 05 37.8**		**-0.2**
KBTR				*e*S	**Sn**	**21 05 57.5**		**+0.1**
KBG	**Krutoberegovo**	**1.63**	**5**	*e*P	**Pn**	**21 05 38.4**		**-0.1**
KBG				*e*S	**Sn**	**21 05 59.1**		**+0.7**
BZGR	**Bezymyannyi-Gr**	**1.65**	**323**	*e*P	**Pn**	**21 05 39.0**		**+0.1**
BZGR				*e*S	**Sn**	**21 05 59.5**		**+0.5**
ZLN	**Zelenaya**	**1.68**	**326**	*e*P	**Pn**	**21 05 39.7**		**+0.5**
ZLN				*e*S	**Sn**	**21 06 00.2**		**+0.5**
KMNR	**Kamenistaya**	**1.70**	**312**	*e*P	**Pn**	**21 05 39.6**		**+0.1**
KMNR				*e*S	**Sn**	**21 06 01.5**		**+1.4**
BZWR	**Bezymyannyi-We**	**1.74**	**321**	*e*P	**Pn**	**21 05 40.1**		**-0.1**
BZWR				*e*S	**Sn**	**21 06 00.5**		**-0.8**
LGNR	**Loginova**	**1.77**	**326**	*e*P	**Pn**	**21 05 41.3**		**+0.7**
LGNR				*e*S	**Sn**	**21 06 02.3**		**+0.2**
CIRR	**Tsirk**	**1.77**	**327**	S	**Sn**	**21 06 02.0**		**-0.1**
KIRR	**Kirishev**	**1.79**	**318**	*e*P	**Pn**	**21 05 41.2**		**+0.4**
KIRR				*e*S	**Sn**	**21 06 02.0**		**-0.5**
KPT	**Kopyto**	**1.85**	**317**	*e*P	**Pn**	**21 05 41.5**		**0.0**
KPT				*e*S	**Sn**	**21 06 04.5**		**+0.7**
KII	**Karymskiy**	**1.86**	**252**	*e*P	**Pn**	**21 05 41.5**		**-0.2**
KII				*e*S	**Sn**	**21 06 04.0**		**0.0**
KRSR	**Krestovskiy**	**1.92**	**327**	*e*P	**Pn**	**21 05 41.4**		**-1.1**
KRSR				S	**Sn**	**21 06 03.9**		**-1.6**
KLY	**Klyuchi**	**1.97**	**329**	*e*P	**Pn**	**21 05 43.1**		**0.0**
KLY				*e*S	**Sn**	**21 06 06.5**		**-0.1**
SMKR	**Semkarok**	**2.03**	**344**	*e*P	**Pn**	**21 05 44.7**		**+0.7**
SMKR				*e*S	**Sn**	**21 06 10.6**		**+2.3**
KOZ	**Kozyrevsk**	**2.05**	**315**	*e*P	**Pn**	**21 05 44.8**		**+0.6**
KOZ				*e*S	**Sn**	**21 06 10.1**		**+1.4**
BDR	**Baidarnaya**	**2.06**	**341**	*e*P	**Pn**	**21 05 44.8**		**+0.3**
BDR				*e*S	**Sn**	**21 06 10.6**		**+1.5**
SPN	**Mys Shipunski**	**2.11**	**224**	*e*P	**Pn**	**21 05 44.1**		**-0.9**
SPN				*e*S	**Sn**	**21 06 08.3**		**-1.7**
BKI	**Bering**	**2.11**	**73**	*e*P	**Pn**	**21 05 45.8**		**+0.8**
BKI				*e*S	**Sn**	**21 06 09.4**		**-0.7**
SRKR	**Sorokina**	**2.15**	**341**	*e*P	**Pn**	**21 05 46.1**		**+0.4**
SRKR				S	**Sn**	**21 06 11.7**		**+0.5**
NLC	**Nalytchevo**	**2.35**	**233**	*e*P	**Pn**	**21 05 48.2**		**-0.1**
NLC				*e*S	**Sn**	**21 06 16.1**		**+0.2**
ESO	**Esso**	**2.51**	**303**	*e*P	**Pn**	**21 05 51.7**		**+1.2**
ESO				*e*S	**Sn**	**21 06 20.0**		**+0.2**
SDLR	**Sedlovina**	**2.51**	**239**	*e*P	**Pn**	**21 05 51.5**		**+0.9**
SDLR				*e*S	**Sn**	**21 06 20.9**		**+0.9**
SMAR	**Somma**	**2.56**	**239**	*e*P	**Pn**	**21 05 52.1**		**+0.8**
SMAR				*e*S	**Sn**	**21 06 21.3**		**0.0**
KRER	**Koryakskii**	**2.56**	**240**	*e*P	**Pn**	**21 05 52.5**		**+1.1**
KRER				*e*S	**Sn**	**21 06 22.3**		**+0.9**
UGLR	**Uglovaya**	**2.58**	**238**	*e*P	**Pn**	**21 05 52.5**		**+1.0**
UGLR				*e*S	**Sn**	**21 06 22.5**		**+0.8**
KRX	**Arik**	**2.58**	**242**	*e*P	**Pn**	**21 05 52.6**		**+1.0**
KRX				*e*S	**Sn**	**21 06 22.6**		**+0.7**
AVH	**Avacha**	**2.59**	**240**	*e*P	**Pn**	**21 05 53.0**		**+1.4**
AVH				*e*S	**Sn**	**21 06 22.3**		**+0.4**
KOK	**Koryaka**	**2.62**	**241**	*e*P	**Pn**	**21 05 53.2**		**+1.1**
KOK				*e*S	**Sn**	**21 06 22.5**		**-0.3**
DALK	**Dalny**	**2.72**	**235**	*e*P	**Pn**	**21 05 53.8**		**+0.5**
DALK				*e*S	**Sn**	**21 06 25.7**		**+0.8**
PET	**Petropavlovsk**	**2.77**	**236**	*e*P	**Pn**	**21 05 54.9**		**+0.9**
PET				*e*S	**Sn**	**21 06 26.3**		**+0.1**
GNL	**Ganaly**	**2.81**	**252**	*e*P	**Pn**	**21 05 55.4**		**+0.7**
GNL				*e*S	**Sn**	**21 06 27.6**		**+0.1**
KRMR	**Karymshinskiy**	**3.14**	**237**	*e*P	**Pn**	**21 06 00.0**		**+0.9**
KRMR				*e*S	**Sn**	**21 06 36.7**		**+1.4**
PETK	**Petropavlovsk-**	**3.20**	**243**	P	**Pn**	**21 06 00.3**		**+0.3**
	13nm,0.3s,baz=73,slow=17,SNR=71							
PETK				S	**Sn**	**21 06 36.4**		**-0.5**
	8.0nm,0.6s,baz=6.6,slow=26,SNR=1.9							
PETK				LR	LR	21 07 25.8		
	comp=Z,66nm,21.5s,baz=85,slow=44							
RUS	**Russkaya**	**3.22**	**228**	*e*P	**Pn**	**21 06 00.5**		**+0.3**
RUS				S	**Sn**	**21 06 36.2**		**-1.1**
MTVR	**Mutnovka**	**3.33**	**231**	*e*P	**Pn**	**21 06 02.9**		**+1.0**
MTVR				S	**Sn**	**21 06 40.0**		**-0.3**
GRL	**Gorelyy**	**3.34**	**233**	*e*P	**Pn**	**21 06 03.3**		**+1.3**
ASAK	**Asacha**	**3.53**	**232**	*e*P	**Pn**	**21 06 06.1**		**+1.6**
ASAK				S	**Sn**	**21 06 47.4**		**+2.4**
APC	**Apacha**	**3.58**	**244**	P	**Pn**	**21 06 06.7**		**+1.6**
KDTR	**Khodutka, Kamc**	**3.86**	**225**	*e*P	**Pn**	**21 06 09.1**		**+0.1**
KDTR				*e*S	**Sn**	**21 06 51.4**		**-1.6**
MA2	**Magadan**	**8.06**	**313**	LR	LR	21 09 30.4		
	comp=Z,10nm,21.9s,baz=316,slow=33							
YAK	**Yakutsk**	**18.56**	**307**	LR	LR	21 17 13.9		
	comp=Z,26nm,21.6s,baz=88,slow=40							
TIXI	**Tiksi**	**22.31**	**333**	P	**P**	**21 10 03.4**		**-1.1**
	0.7nm,0.3s,baz=94,slow=23,SNR=7.2							
	0.7nm,0.3s							
H11N2	**WAKE ISLAND Hy**	**35.01**	**173**	T	T	21 49 16.7		
	baz=355,slow=76,SNR=90							
H11N3	**WAKE ISLAND Hy**	**35.02**	**173**	T	T	21 49 21.2		
	baz=355,slow=76,SNR=70							
H11N1	**WAKE ISLAND Hy**	**35.02**	**173**	T	T	21 49 24.1		
	baz=355,slow=76,SNR=75							
H11S1	**WAKE ISLAND Hy**	**36.21**	**173**	T	T	21 50 59.7		
	baz=352							
H11S3	**WAKE ISLAND Hy**	**36.22**	**173**	T	T	21 50 46.2		
	baz=352,slow=74							
H11S2	**WAKE ISLAND Hy**	**36.23**	**173**	T	T	21 50 52.1		
	baz=352,slow=74							
KURBB	**Kurchatov Arra**	**48.21**	**302**	P	**P**	**21 13 44.8**		**-1.9**
	0.6nm,0.7s,baz=56,slow=8.2,SNR=6.0							
	0.6nm,0.7s							
MKAR	**Makanchi Array**	**48.74**	**296**	P	**P**	**21 13 48.6**		**-2.3**
	0.3nm,0.6s,baz=64,slow=9.0,SNR=5.0							
	0.3nm,0.6s							
ARU	**Arti**	**53.20**	**318**	P	**P**	**21 14 22.9**		**-1.2**
	1.5nm,0.4s,baz=70,slow=12,SNR=5.1							
	1.5nm,0.4s							
FINES	**FINESS Array B**	**59.25**	**337**	P	**P**	**21 15 07.0**		**-0.1**
	2.4nm,0.6s,baz=32,slow=8.4,SNR=17							
	2.4nm,0.6s							
NOA	**NORSAR Array B**	**62.44**	**345**	P	**P**	**21 15 29.1**		**+0.2**
	0.5nm,0.5s,baz=19,slow=6.1,SNR=4.0							
	0.5nm,0.5s							
AKASG	**Malin Array Be**	**67.99**	**330**	P	**P**	**21 16 04.7**		**-0.2**
	0.7nm,0.4s,baz=35,slow=6.3,SNR=4.7							
	0.7nm,0.4s							
TXAR	**Lajitas Array**	**68.77**	**69**	P	P	21 16 14.0		+3.7
	0.2nm,0.4s,baz=316,slow=3.8,SNR=2.8							
	0.2nm,0.4s							
GERES	**GERESS Array B**	**73.59**	**339**	P	**P**	**21 16 40.1**		**+1.0**
	0.2nm,0.5s,baz=28,slow=4.4,SNR=3.8							
	0.2nm,0.5s							
BRTR	**Keskin Array B**	**76.30**	**322**	P	**P**	**21 16 54.5**		**-0.4**
	0.6nm,0.7s,baz=42,slow=5.7,SNR=5.2							
	0.6nm,0.7s							
WRA	**Warramunga Arr**	**78.08**	**207**	P	**P**	**21 17 06.5**		**+1.8**
	0.3nm,0.6s,baz=21,slow=6.0,SNR=1.4							
	0.3nm,0.6s							
ASAR	**Alice Springs**	**81.75**	**206**	P	P	21 17 26.9		+2.4
	0.2nm,0.5s,baz=17,slow=5.3,SNR=4.6							
	0.2nm,0.5s							
ESDC	**Sonseca Array**	**85.34**	**350**	P	**P**	**21 17 44.4**		**+1.4**
	0.4nm,0.7s,baz=0.4,slow=3.8,SNR=7.0							
	0.4nm,0.7s							

*JMA **04** 21:25:02.6±0.2,24.˚N±1.˚×12.˚2E±.˚,h9km±2km,MV3.4/11,*
TAIWAN REGION
*TAP **04** 21:25:02.9,24.˚14N×121.˚67E,h11km,ML4.0,C*
*IDC **04** 21:25:04.8±1.4,23.˚79N×121.˚55E,h0km,mb3.3/4,*
mbtmp3.3/5,ML3.6/1,MS2.9/1,Error ellipse: s-maj=73.6km
s-min=23.4km az=69.0

ISC 04 21:25:02.6±1.1,24.˚10N±0.˚01×121.˚74E±0.˚02,h2km±8km,
n138,σ1.03/218,mb3.3/4,33C-28D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
ETL	**Fush Village**	**0.12**	**298**	⇑ *i*P	**Pg**	**21 25 05.2**		**+0.2**
	baz=294							
ETL				*i* S	**Sg**	**21 25 06.7**		**+0.2**
	baz=294							
TWD	**Chiawan**	**0.13**	**260**	⇑ *i*P	**Pg**	**21 25 05.5**		**+0.3**
	baz=224							
TWD				*i* S	**Sg**	**21 25 07.3**		**+0.4**
	baz=224							
NACB	**Ninganchiao**	**0.15**	**299**	⇑ *i*P	**Pg**	**21 25 05.5**		**0.0**
	baz=297							
NACB				*i* S	**Sg**	**21 25 07.3**		**-0.2**
	baz=297							
HWA	**Hwalien**	**0.17**	**224**	⇑ *i*P	**Pg**	**21 25 07.0**		**+1.0**
	baz=197							
HWA				*e*S	**Sg**	**21 25 11.1**		**+2.9**
	baz=197							
EHP	**Heping Village**	**0.21**	**1**	⇓ P	**Pg**	**21 25 07.0**		**+0.3**
	baz=24							
EHP				*e*S	**Sg**	**21 25 09.9**		**+0.6**
	baz=24							
ETLH	**Xiulin Townshi**	**0.26**	**294**	⇑ *i*P	**Pg**	**21 25 07.5**		**-0.1**
	baz=291							
ETLH				*i* S	**Sg**	**21 25 10.6**		**-0.3**
	baz=291							
ETM	**Tongmen**	**0.26**	**239**	⇑ *i*P	**Pg**	**21 25 07.9**		**+0.2**
	baz=223							
ETM				*e*S	**Sg**	**21 25 11.7**		**+0.6**
	baz=223							
TEYL	**Yanliau Villag**	**0.27**	**209**	⇑ P	**Pg**	**21 25 08.5**		**+0.8**
	baz=194							
TEYL				*e*S	**Sb**	**21 25 14.1**		**-1.0**
	baz=194							
ENA	**Nanau**	**0.32**	**1**	⇓ *i*P	**Pg**	**21 25 09.0**		**+0.1**
	baz=15							
ENA				*i* S	**Sg**	**21 25 13.2**		**+0.1**
	baz=15							
EWUT	**Wuta**	**0.34**	**6**	⇓ *i*P	**Pg**	**21 25 09.3**		**+0.1**
	baz=18							
EWUT				*i* S	**Sg**	**21 25 13.8**		**0.0**
	baz=18							
ESL	**Shilin**	**0.40**	**224**	⇈ *e*P	**Pg**	**21 25 10.5**		**+0.2**
	baz=212							
ESL				*e*S	**Sg**	**21 25 16.3**		**+0.8**
	baz=212							
TEGC	**Jichi Village**	**0.43**	**205**	*e*P	**Pb**	**21 25 12.6**		**-0.4**
	baz=194							
WHF	**Hehuan Shan**	**0.43**	**276**	⇑ *i*P	**Pg**	**21 25 10.9**		**-0.1**
	baz=270							
WHF				S	**Sg**	**21 25 16.2**		**-0.5**
	baz=270							
NNSB	**Datong**	**0.46**	**315**	⇓ *i*P	**Pg**	**21 25 11.5**		**0.0**
	baz=318							
NNSB				*i* S	**Sg**	**21 25 17.1**		**-0.3**
	baz=318							
LATG	**Datong**	**0.47**	**336**	⇓ *i*P	**Pg**	**21 25 11.7**		**-0.1**
	baz=342							
LATG				*i* S	**Sg**	**21 25 17.4**		**-0.4**
	baz=342							
NNS	**Nan Shan**	**0.47**	**315**	⇓ *i*P	**Pg**	**21 25 11.7**		**0.0**
	baz=319							
NNS				*e*S	**Sg**	**21 25 17.6**		**-0.3**
	baz=319							
FUSS	**Fushou**	**0.47**	**288**	⇑ *i*P	**Pg**	**21 25 11.8**		**+0.1**
	baz=285							
FUSS				S	**Sg**	**21 25 17.7**		**-0.2**
	baz=285							
TWC	**Suao**	**0.52**	**11**	⇓ *i*P	**Pg**	**21 25 12.7**		**+0.2**
	baz=21							
TWC				*e*S	**Sg**	**21 25 20.2**		**+1.0**
	baz=21							
CHGB	**Renai**	**0.52**	**265**	⇑ *i*P	**Pg**	**21 25 12.7**		**+0.1**
	baz=260							
CHGB				*e*S	**Sg**	**21 25 19.2**		**-0.1**
	baz=260							
EGFH	**Guangfu**	**0.52**	**213**	⇑ *i*P	**Pg**	**21 25 13.0**		**+0.4**
	baz=205							
EGFH				*e*S	**Sb**	**21 25 22.2**		**-0.2**
	baz=205							
NDS	**Dongshan**	**0.53**	**358**	⇓ *e*P	**Pg**	**21 25 12.9**		**+0.1**
	baz=5.0							
NDS				*e*S	**Sg**	**21 25 19.6**		**-0.1**
	baz=5.0							
OWD	**Renai**	**0.53**	**254**	⇑ *i*P	**Pg**	**21 25 12.9**		**0.0**
	baz=248							
OWD				*e*S	**Sg**	**21 25 19.4**		**-0.4**
	baz=248							
TWT	**Tachien**	**0.53**	**286**	⇑ *i*P	**Pg**	**21 25 13.3**		**+0.4**
	baz=283							
TWT				S	**Sg**	**21 25 20.1**		**+0.2**
	baz=283							
NDT	**Datong Townshi**	**0.54**	**338**	⇓ *e*P	**Pg**	**21 25 13.2**		**+0.2**
	baz=343							
NDT				*e*S	**Sg**	**21 25 19.8**		**-0.1**
	baz=343							
TDCB	**Techi**	**0.55**	**286**	⇑ P	**Pg**	**21 25 13.4**		**+0.2**
	baz=283							
TDCB				S	**Sg**	**21 25 20.2**		**-0.2**
	baz=283							
ENTT	**Nioudou**	**0.56**	**344**	⇓ *i*P	**Pg**	**21 25 13.5**		**+0.2**
	baz=350							
ENTT				S	**Sg**	**21 25 20.9**		**+0.3**
	baz=350							
WUSB	**Renai**	**0.58**	**259**	⇑ *i*P	**Pg**	**21 25 13.9**		**+0.2**
	baz=254							
WUSB				*e*S	**Sg**	**21 25 21.0**		**-0.2**
	baz=254							
TWE	**Neicheng**	**0.62**	**354**	⇓ *i*P	**Pg**	**21 25 14.8**		**+0.2**
	baz=1.0							
TWE				*e*S	**Sg**	**21 25 22.6**		**0.0**
	baz=1.0							
VWDT	**VWDT**	**0.65**	**238**	⇑ *i*P	**Pg**	**21 25 15.2**		**+0.2**
	baz=231							
VWDT				*e*S	**Sb**	**21 25 25.2**		**-0.9**
	baz=231							
YHNB	**Yeheng**	**0.65**	**330**	⇓ *i*P	**Pg**	**21 25 15.3**		**+0.1**
	baz=333							
YHNB				S	**Sg**	**21 25 23.4**		**-0.3**
	baz=333							
ILA	**Ilan**	**0.66**	**1**	*e*P	**Pg**	**21 25 15.7**		**+0.4**
	baz=7.0							
ILA				*e*S	**Sb**	**21 25 24.7**		**-1.8**
	baz=7.0							
NSK	**Sanguang**	**0.67**	**329**	⇓ *i*P	**Pg**	**21 25 15.4**		**0.0**
	baz=333							
NSK				*e*S	**Sg**	**21 25 23.7**		**-0.4**
	baz=333							
FUSB	**Fushanzhiwuyua**	**0.67**	**348**	⇓ *i*P	**Pg**	**21 25 15.7**		**+0.2**
	baz=353							
FUSB				*e*S	**Sg**	**21 25 24.1**		**0.0**
	baz=353							
HGSD	**Ruisui**	**0.67**	**205**	⇑ *i*P	**Pb**	**21 25 16.7**		**-0.3**
	baz=199							
HGSD				*e*S	**Sn**	**21 25 29.3**		**-0.9**
	baz=199							
EHY	**Hungye**	**0.70**	**213**	P	**Pg**	**21 25 16.2**		**+0.1**
	baz=206							
EHY				*e*S	**Sb**	**21 25 27.6**		**-0.2**
	baz=206							
NWLT	**Wulai**	**0.70**	**342**	⇓ P	**Pg**	**21 25 16.3**		**+0.1**
	baz=347							
NWLT				*e*S	**Sg**	**21 25 25.0**		**-0.3**
	baz=347							
WPL	**Puli Township**	**0.72**	**263**	⇑ P	**Pg**	**21 25 16.6**		**+0.2**
	baz=259							
WPL				*e*S	**Sg**	**21 25 25.2**		**-0.5**
	baz=259							
WHP	**Taichung City**	**0.74**	**284**	⇑ P	**Pg**	**21 25 17.3**		**+0.4**
	baz=282							
WHP				*e*S	**Sg**	**21 25 26.8**		**+0.2**
	baz=282							
DPDB	**Guoxing**	**0.74**	**265**	⇑ P	**Pg**	**21 25 17.2**		**+0.3**
	baz=261							
DPDB				*e*S	**Sg**	**21 25 26.4**		**-0.1**
	baz=261							
NTC	**Toucheng**	**0.75**	**6**	⇓ P	**Pg**	**21 25 17.2**		**+0.1**
	baz=12							
NTC				*e*S	**Sb**	**21 25 28.3**		**-0.9**
	baz=12							
WCS	**Beigang Elemen**	**0.76**	**267**	⇑ P	**Pg**	**21 25 17.3**		**+0.1**
	baz=263							
WCS				*e*S	**Sg**	**21 25 26.5**		**-0.4**
	baz=263							
EGS		**0.76**	**13**	*e*P	**Pb**	**21 25 17.6**		**-1.0**
	baz=20							
EGS				*e*S	**Sb**	**21 25 28.8**		**-0.6**
	baz=20							
NFF	**W

WWF	**Wufeng**			0.95	267	*e*P	**Pn**	21 25 22.1	-0.9
	baz=264								
TAP1	**Taipei**			0.95	348	*e*P	**Pn**	21 25 21.6	-1.4
TAP1	baz=351					*e*S	**Sg**	21 25 33.5	+0.2
TAP	**Taipei**			0.96	347	*e*P	**Pb**	21 25 21.5	-0.4
TAP	baz=351					*e*S	**Sb**	21 25 33.7	-1.3
WJS	**Zhushan**			0.96	253⇑	*e*P	**Pn**	21 25 21.8	-1.5
WJS	baz=250					*e*S	**Sb**	21 25 34.9	-0.4
NMLH	**Miaoli**			0.96	297	*e*P	**Pn**	21 25 22.2	-1.0
NMLH	baz=296					*e*S	**Sb**	21 25 34.3	-1.0
NWF	**Wu-fen Shan**			0.96	2⇓	*e*P	**Pb**	21 25 21.4	-0.8
NWF	baz=6.0					*e*S	**Sg**	21 25 33.5	-0.2
WFSB	**Wu-fen Shan**			0.96	2⇓	*e*P	**Pb**	21 25 21.4	-0.7
WFSB	baz=6.0					*e*S	**Sg**	21 25 33.4	-0.3
SBCB	**Hsinchu**			0.97	315	*e*P	**Pn**	21 25 22.4	-0.8
TCU	**Taichung**			0.97	273	*e*P	**Pn**	21 25 22.5	-0.8
FULB	**Fuli**			0.99	204	*e*P	**Pb**	21 25 21.7	-0.8
WNT	**Mingjian**			0.99	257	*e*P	**Pn**	21 25 22.4	-1.1
SXI1	**Grass Mountain**			0.99	7⇓	*e*P	**Pb**	21 25 21.9	-0.7
SXI1	baz=11					*e*S	**Sb**	21 25 35.4	-0.9
NCUH	**Zhongli**			1.00	330	*e*P	**Pn**	21 25 22.5	-1.2
NCUH	baz=332					*e*S	**Sb**	21 25 35.4	-0.9
NCU	**National Centr**			1.00	330	*e*P	**Pn**	21 25 22.8	-0.9
TWS1	**Kuangyinshan**			1.03	344⇓	*e*P	**Pn**	21 25 23.1	-1.0
TWS1	baz=347					*e*S	**Sb**	21 25 36.7	-0.7
ALS	**Alishan**			1.04	236⇑	*e*P	**Pg**	21 25 22.6	+0.1
ALS	baz=231					*e*S	**Sn**	21 25 39.7	0.0
TNOU	**National Taiwa**			1.04	2	*e*P	**Pg**	21 25 22.9	+0.2
YM01	**YM01**			1.05	352⇓	*e*P	**Pn**	21 25 23.1	-1.4
YM01	baz=355					*e*S	**Sb**	21 25 36.2	-0.3
CHKT	**Chengkung**			1.05	199	*e*P	**Pb**	21 25 21.9	-1.7
NTST	**Danshui**			1.09	346	*e*P	**Pn**	21 25 24.1	-0.9
YM08	**YM08**			1.09	353	*e*P	**Pn**	21 25 23.5	-0.8
CHN5	**Tsauling**			1.09	243	*e*P	**Pn**	21 25 24.3	-0.8
ANP	**Anpu**			1.10	350	*e*P	**Pb**	21 25 23.4	-1.0
ECS	**Chishang**			1.11	205	*e*P	**Pb**	21 25 22.7	-1.9
ELDTW	**Lidau**			1.12	216	*e*P	**Pb**	21 25 22.9	-2.0
ELDTW	baz=212					*e*S	**Sn**	21 25 39.7	-1.9
WGK	**Gukeng**			1.15	249	*e*P	**Pg**	21 25 25.6	+0.8
JYNG	**Yonagunijimaku**			1.16	72	P	**Pg**	21 25 25.3	+0.5
WDLH	**Douliu**			1.17	250	*e*P	**Pg**	21 25 25.7	+0.6
TWY	**Chenhua**			1.18	354⇑	*e*P	**Pg**	21 25 25.8	+0.6
EDH	**Donghe**			1.19	200	*e*P	**Pn**	21 25 24.0	-2.4
EDH	baz=196					*e*S	**Sn**	21 25 42.5	-0.6
YOJ	**Yonaguni jima**			1.22	73⇑	*i*P	**Pg**	21 25 26.1	+0.1
YOJ	baz=75					*e*S	**Sn**	21 25 42.3	-1.4
YOJ	**Yonaguni jima**			1.22	73	P	**Pg**	21 25 26.1	+0.1
YOJ						*e*S	**Sn**	21 25 42.9	-0.9
WCKO	**Fanlu**			1.23	238⇑	*e*P	**Pg**	21 25 26.7	+0.5
WCKO	baz=234					*e*S	**Sn**	21 25 44.3	+0.2
WRL	**Guolierlin Hig**			1.26	261⇑	*e*P	**Pg**	21 25 26.8	0.0
WRL	baz=259					*e*S	**Sg**	21 25 43.4	+0.3
STYH	**Taoyuan**			1.28	224⇓	*e*P	**Pn**	21 25 26.4	-1.2
STYH	baz=220					*e*S	**Sn**	21 25 43.5	-1.8
CHN2	**Minshiung**			1.29	244	*e*P	**Pg**	21 25 28.3	+0.9
TPUB	**Ta-pu**			1.29	232⇓	*e*P	**Pg**	21 25 27.4	0.0
TPUB	baz=229					*i*S	**Sg**	21 25 46.1	+1.9
STYT	**Tauyuan**			1.30	224⇓	*e*P	**Pb**	21 25 27.0	-0.8
STYT	baz=220					*e*S	**Sg**	21 25 44.7	+0.3
WTK	**Tuku**			1.30	252	*e*P	**Pg**	21 25 27.5	-0.1
WTK	baz=249					*e*S	**Sg**	21 25 45.4	+0.9
LONT	**Longtian**			1.31	205	*e*P	**Pn**	21 25 25.9	-2.2
WTP	**Ta-pu**			1.34	231	*e*P	**Pb**	21 25 28.0	-0.5
CHY	**Chiayi**			1.34	244	*e*P	**Pg**	21 25 28.2	-0.2
CHY	baz=240					*e*S	**Sg**	21 25 48.0	+2.1
TWGBT	**Beinan**			1.41	205	*e*P	**Pn**	21 25 26.4	-3.0
TWG	**Pinlang**			1.42	206	*e*P	**Pn**	21 25 26.5	-2.9
TWK	**Hsinying**			1.42	234	*e*P	**Pg**	21 25 29.8	0.0
TWK	baz=231					*e*S	**Sg**	21 25 49.9	+1.8
CHN1	**Nanshi**			1.44	231	*e*P	**Pg**	21 25 30.0	-0.2
CHN1	baz=228					*e*S	**Sg**	21 25 50.5	+1.6
SNST	**Tainan City**			1.44	233	*e*P	**Pg**	21 25 30.2	0.0
SNST	baz=229					*e*S	**Sg**	21 25 50.5	+1.7
LDUT	**Ludao**			1.44	190⇑	*i*P	**Pn**	21 25 26.8	-3.0
LDUT	baz=187					*e*S	**Sn**	21 25 47.2	-2.2
TTN	**Taitung**			1.45	202	*e*P	**Pn**	21 25 27.9	-1.9
WSF	**Szhu**			1.46	252	*e*P	**Pb**	21 25 29.4	-1.1
WSL	**Shuilin Townsh**			1.50	248	*e*P	**Pb**	21 25 30.8	-0.4
ICHU	**Yijhu**			1.53	241	*e*P	**Pb**	21 25 31.3	-0.4
ICHU	baz=239					*e*S	**Sg**	21 25 52.1	+0.4
PCYT	**Pengchaiyu**			1.55	11	*e*P	**Pb**	21 25 31.4	-0.7
CHN8	**Yiju**			1.59	242	*e*P	**Pb**	21 25 32.1	-0.6
CHN8	baz=239					*e*S	**Sg**	21 25 53.3	-0.4
ECL	**Taimali**			1.66	206	*e*P	**Pn**	21 25 30.5	-2.3
SCST	**Cishan**			1.66	224	*e*P	**Pb**	21 25 33.8	-0.2
SHHT	**Tainan City**			1.67	230	*e*P	**Pg**	21 25 34.3	-0.4
SSD	**Sandimen**			1.69	217	*e*P	**Pn**	21 25 32.6	-0.6
	baz=214								
SSD						*i*S	**Sg**	21 25 57.0	+0.1
	baz=214								
IRIF	**Iriomote-Funau**			1.83	82	P	**Pn**	21 25 34.7	-0.4
HATJ	**Hateruma jima**			1.89	91	P	**Pn**	21 25 35.7	-0.3
HATJ						*e*S	**Sn**	21 25 58.3	-2.0
JKRS	**Kuro-shima**			2.08	86	P	**Pn**	21 25 38.6	+0.1
LYUB	**Lan-yu**			2.10	184	*e*P	**Pn**	21 25 34.1	-4.7
	baz=182								
JIJ	**Ishigaki jima**			2.21	83	P	**Pn**	21 25 39.6	-0.8
JISG	**Ishigakijimahi**			2.40	78	P	**Pn**	21 25 42.5	-0.5
JTJ	**Tarama**			2.76	78	P	**Pn**	21 25 47.9	0.0
KSRS	**Korea Array**			14.32	20	Pn	**P**	21 28 33.5	-0.3
	0.3nm,0.3s,baz=199,slow=11,SNR=7.3 0.6nm,0.5s								
CMAR	**Chiang Mai Arr**			21.96	260	LR	LR	21 39 59.7	
	comp=Z,31nm,18.9s,baz=205,slow=41								
SONM	**Songino Array**			26.64	337	P	**P**	21 30 47.2	+4.4
	0.2nm,0.4s,baz=157,slow=7.8,SNR=2.0 0.2nm,0.4s								
MKAR	**Makanchi Array**			38.75	316	P	**P**	21 32 31.6	+3.2
	0.3nm,0.6s,baz=100,slow=10,SNR=4.5 0.3nm,0.6s								
H11N1	**WAKE ISLAND Hy**			41.99	87	T	T	22 18 12.7	
	baz=282								
H11N2	**WAKE ISLAND Hy**			41.99	87	T	T	22 18 16.4	
	baz=282								
H11N3	**WAKE ISLAND Hy**			42.00	87	T	T	22 18 05.9	
	baz=282								
H11S3	**WAKE ISLAND Hy**			42.12	89	T	T	22 18 51.7	
	baz=274,slow=74								
H11S1	**WAKE ISLAND Hy**			42.12	89	T	T	22 18 52.4	
	baz=274,slow=74								
H11S2	**WAKE ISLAND Hy**			42.13	89	T	T	22 18 44.9	
	baz=274								
WRA	**Warramunga Arr**			45.47	163	P	**P**	21 33 23.0	-0.5
	0.4nm,0.8s,baz=345,slow=8.7,SNR=2.2 0.4nm,0.8s								
ASAR	**Alice Springs**			48.93	165	P	**P**	21 33 51.7	+1.3
	0.5nm,1.0s,baz=343,slow=6.5,SNR=4.2 0.5nm,1.0s								

JMA ***04*** *21:36:33.9±0.2,31.1°N±0.3°×129.1°E±0.8,h13km±1km, MD4.0/33,MV4.1/33,SW OFF KYUSHU*

NIED ***04*** *21:36:33.9,31.09°N×129.06°E,h13km,MW4.0,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr=0.37; Mθθ=0.73; Mφφ=-0.36; Mrθ=0.22; Mθφ=0.31; Mφr=0.69; Fault plane solution: M₀1.00000×10¹⁵ NP1: φs=110.00000°,δ43.00000°,λ=-22.00000°. NP2: φs=217.00000°,δ75.00000°,λ=-130.00000°.*

IDC ***04*** *21:36:36.2±1.0,31.11°N×129.03E,h0km,mb3.3/5, mbtmp3.5/10,ML3.2/5,MS3.2/8 Error ellipse: s-maj=27.3km s-min=15.7km az=92.0*

ISC 04 21:36:36.3±0.8,31.11N±0.04×129.27E±0.05,h10km,n30, σ1s36/29,mb3.4/5,MS3.5/5,10D,Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
JSJ	**Shimokoshiki**	**0.68**	**34⇓**	*e*P	**Pb**	**21 36 48.7**	**-1.5**
JSJ				⇓*e*S	**Sb**	**21 36 59.6**	**-0.1**
JSJ	**Shimokoshiki**	**0.68**	**34**	A		21 36 48.7	
	comp=E,9.0nm,0.3s,comp=E,10.0nm,1.5s						
JKC	**Kuchinoerabu**	**1.02**	**129**	*e*P	**Pn**	**21 36 55.5**	**-1.2**
JKC				*e*S	**Sn**	**21 37 10.5**	**-0.6**
JKC	**Kuchinoerabu**	**1.02**	**129**	A		21 36 55.5	
	comp=E,6.0nm,0.4s,comp=E,7.0nm,0.4s						
JSU	**Suzuyama**	**1.08**	**69⇓**	*e*P	**Pn**	**21 36 57.0**	**-0.6**
JSU				⇓*e*S	**Sn**	**21 37 13.6**	**+1.0**
JSU	**Suzuyama**	**1.08**	**69**	A		21 36 57.0	
	comp=E,5.0nm,0.2s,comp=E,4.0nm,0.3s						
JNN	**Nakanoshima**	**1.37**	**158**	*e*P	**Pn**	**21 36 59.3**	**-2.2**
JNN	**Nakanoshima**	**1.37**	**158**	A		21 36 59.3	
	comp=E,7.0nm,2.0s,comp=E,5.0nm,2.5s						
JYAK	**Yakushimahirau**	**1.38**	**129⇓**	*e*P	**Pn**	**21 37 00.3**	**-1.3**
JYAK				⇓*e*S	**Sn**	**21 37 19.0**	**-0.8**
JYAK	**Yakushimahirau**	**1.38**	**129**	A		21 37 00.3	
	comp=E,3.0nm,3.9s,comp=E,3.0nm,4.3s						
JZO	**Okuchi**	**1.52**	**47**	A		21 37 03.3	
	comp=E,2.0nm,2.9s,comp=E,4.0nm,0.9s						
JTN	**Tanegashima 3**	**1.54**	**107**	⇓P	**Pb**	**21 37 03.3**	**-1.5**
JTN				⇓S	**Sb**	**21 37 24.1**	**-0.3**
JMTN	**Minamitane**	**1.57**	**117**	P	**Pn**	**21 37 03.4**	**-0.8**
JMTN				*e*S	**Sb**	**21 37 24.8**	**-0.6**
JFU	**Fukue jima 2**	**1.60**	**344**	*e*P	**Pn**	**21 37 02.2**	**-2.5**
JTZ	**Takazaki**	**1.74**	**63⇓**	*e*P	**Pb**	**21 37 06.8**	**-1.5**
JTZ				⇓*e*S	**Sb**	**21 37 30.0**	**-0.1**
JIU3	**Izumi3**	**1.94**	**42**	P	**Pn**	**21 37 09.2**	**-0.1**
JNU	**Nakatsue**	**2.42**	**34**	Pn	**Pb**	**21 37 19.8**	**-0.2**
	22nm,0.3s,baz=225,slow=8.3,SNR=41						
JNU				Sn	**Sg**	**21 37 52.4**	**-1.7**
	22nm,0.3s,baz=319,slow=16,SNR=6.1 117nm,0.6s						
JOW	**Kunigami**	**4.36**	**192**	Pn	**Pn**	**21 37 44.2**	**+1.7**
	1.9nm,0.3s,baz=5.7,slow=10,SNR=4.5						
JOW				LR	LR	21 39 35.2	
	comp=Z,173nm,20.2s,baz=116,slow=42 12nm,0.6s						
KSRS	**Korea Array**	**6.42**	**350**	Pn	**Pn**	**21 38 10.7**	**-0.3**
	0.4nm,0.3s,baz=169,slow=14,SNR=6.3						
KSRS				Sn	**Sn**	**21 39 22.9**	**-1.4**
	0.5nm,0.3s,baz=164,slow=28,SNR=3.2						
KSRS				Lg		21 39 58.0	
	0.9nm,0.3s,baz=176,slow=29,SNR=5.4 2.0nm,0.4s						
MJAR	**Matsushiro Arr**	**9.19**	**52**	Pn	**Pn**	**21 38 51.5**	**+2.5**
	baz=243,slow=14,SNR=4.5						
MJAR				LR	LR	21 42 18.7	
	comp=Z,60nm,19.6s,baz=248,slow=37 0.6nm,0.4s						
KLR	**Kul'dur**	**18.19**	**5**	P	**P**	**21 40 51.2**	**+2.1**
	0.1nm,0.3s,baz=195,slow=8.9,SNR=6.5						
KLR				LR	LR	21 47 20.9	
	comp=Z,32nm,18.4s,baz=190,slow=35 2.2nm,0.9s						
SONM	**Songino Array**	**24.17**	**320**	P	**P**	**21 41 52.4**	**-0.4**
	0.7nm,0.8s,baz=128,slow=9.6,SNR=4.9						
SONM				LR	LR	21 51 57.0	
	comp=Z,82nm,18.6s,baz=127,slow=38 0.7nm,0.8s						
DAV	**Davao City (W)**	**24.17**	**189**	LR	LR	21 52 39.1	
	comp=Z,169nm,19.5s,baz=150,slow=40						
SEY	**Seymchan**	**35.10**	**18**	LR	LR	21 58 13.1	
	comp=Z,31nm,20.7s,baz=225,slow=37						
MKAR	**Makanchi Array**	**39.14**	**307**	P	**P**	**21 44 05.2**	**+1.2**
	0.2nm,0.6s,baz=96,slow=10,SNR=2.1 0.2nm,0.6s						
WRA	**Warramunga Arr**	**51.00**	**174**	P	**P**	**21 45 40.2**	**+1.7**
	0.5nm,0.9s,baz=358,slow=8.1,SNR=2.1 0.5nm,0.9s						
ASAR	**Alice Springs**	**54.65**	**175**	P	**P**	**21 46 06.2**	**+0.7**
	0.3nm,0.7s,baz=3.7,slow=14,SNR=5.3 0.3nm,0.7s						
AKTO	**Aktyubinsk**	**55.14**	**312**	LR	LR	22 11 35.0	
	comp=Z,42nm,18.5s,baz=84,slow=38						
INK	**Inuvik**	**64.06**	**24**	LR	LR	22 19 48.5	
	comp=Z,34nm,18.2s,baz=16,slow=40						
BRTR	**Keskin Array B**	**74.79**	**307**	P	**P**	**21 48 17.4**	**+0.4**
	0.6nm,1.0s,baz=72,slow=4.7,SNR=3.6 0.6nm,1.0s						

JMA ***04*** *21:41:36.0±0.2,24.0°N±0.6°×122°E±°,h7km±1km,MV3.6/12, TAIWAN REGION*

NIED ***04*** *21:41:36.0,23.99°N×121.61E,h7km,MW3.9,Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁴Nm; Mrr=2.13; Mθθ=0.76; Mφφ=2.89; Mrθ=6.03; Mθφ=1.76; Mφr=2.37; Fault plane solution: M₀7.17000×10¹⁴ NP1: φs=172.00000°,δ23.00000°,λ=-158.00000°. NP2: φs=62.00000°,δ82.00000°,λ=-69.00000°.*

TAP ***04*** *21:41:38.1,24.14N×121.67E,h11km,ML4.1,C*

ISC 04 21:41:37.9±0.8,24.12N±0.01×121.73E±0.02,h8km±6km, n144,σ0s82/248,33C-22D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
ETL	**Fush Village**	**0.11**	**290⇑**	*i*P	**Pg**	**21 41 40.4**	**0.0**
	baz=297						
ETL				*i*S	**Sg**	**21 41 42.1**	**-0.1**
	baz=297						
TWD	**Chiawan**	**0.13**	**252⇑**	*i*P	**Pg**	**21 41 40.7**	**-0.1**
	baz=228						
TWD				*i*S	**Sg**	**21 41 42.6**	**-0.1**
	baz=228						
NACB	**Ninganchiao**	**0.14**	**292⇑**	*i*P	**Pg**	**21 41 40.7**	**-0.1**
	baz=298						
NACB				S	**Sg**	**21 41 42.6**	**-0.3**
	baz=298						
HWA	**Hwalien**	**0.19**	**219**	*i*P	**Pg**	**21 41 42.3**	**+0.6**
	baz=198						
HWA				*e*S	**Sg**	**21 41 46.1**	**+1.8**
	baz=198						
EHP	**Heping Village**	**0.19**	**2⇓**	*i*P	**Pg**	**21 41 42.2**	**+0.4**
	baz=23						
EHP				*e*S	**Sg**	**21 41 45.4**	**+1.0**
	baz=23						
ETLH	**Xiulin Townshi**	**0.24**	**290⇑**	*i*P	**Pg**	**21 41 42.7**	**-0.2**
	baz=292						
ETLH				S	**Sg**	**21 41 46.0**	**-0.2**
	baz=292						
ETM	**Tongmen**	**0.27**	**235**	*i*P	**Pg**	**21 41 43.1**	**-0.2**
	baz=224						
ETM				*e*S	**Sg**	**21 41 46.8**	**-0.1**
	baz=224						
TEYL	**Yanliau Villag**	**0.28**	**206**	*e*P	**Pg**	**21 41 43.8**	**+0.4**
	baz=195						
TEYL				*e*S	**Sb**	**21 41 50.2**	**+0.1**
	baz=195						
ENA	**Nanau**	**0.30**	**1⇓**	*i*P	**Pg**	**21 41 44.2**	**+0.3**
	baz=14						
ENA				S	**Sg**	**21 41 48.5**	**+0.5**
	baz=14						
EWUT	**Wuta**	**0.33**	**7⇓**	*i*P	**Pg**	**21 41 44.5**	**+0.2**
	baz=18						
EWUT				*e*S	**Sg**	**21 41 49.0**	**+0.4**
	baz=18						
ESL	**Shilin**	**0.41**	**222**	*i*P	**Pg**	**21 41 45.7**	**-0.2**
	baz=213						
ESL				*e*S	**Sg**	**21 41 50.9**	**-0.4**
	baz=213						
WHF	**Hehuan Shan**	**0.43**	**273⇑**	*i*P	**Pg**	**21 41 46.1**	**-0.3**
	baz=271						
WHF				S	**Sg**	**21 41 51.9**	**-0.2**
	baz=271						
NNSB	**Datong**	**0.44**	**314⇑**	*i*P	**Pg**	**21 41 46.7**	**+0.1**
	baz=318						
NNSB				*e*S	**Sg**	**21 41 52.5**	**+0.1**
	baz=318						
TEGC	**Jichi Village**	**0.45**	**203**	*e*P	**Pb**	**21 41 47.9**	**-0.2**
	baz=195						
TEGC				*e*S	**Sb**	**21 41 58.0**	**+3.1**
	baz=195						
LATG	**Datong**	**0.45**	**335⇑**	*i*P	**Pg**	**21 41 46.9**	**+0.1**
	baz=342						
LATG				*e*S	**Sg**	**21 41 52.9**	**+0.2**
	baz=342						
NNS	**Nan Shan**	**0.46**	**314⇑**	*i*P	**Pg**	**21 41 46.9**	**+0.1**
	baz=319						
NNS				*e*S	**Sg**	**21 41 53.0**	**+0.1**
	baz=319						
FUSS	**Fushou**	**0.47**	**286⇑**	*i*P	**Pg**	**21 41 47.0**	**0.0**
	baz=286						
FUSS				S	**Sg**	**21 41 53.3**	**+0.1**
	baz=286						
TWC	**Suao**	**0.50**	**12⇓**	*i*P	**Pg**	**21 41 47.9**	**+0.3**
	baz=20						
TWC				*e*S	**Sb**	**21 41 55.2**	**-1.2**
	baz=20						
NDS	**Dongshan**	**0.51**	**358⇓**	*i*P	**Pg**	**21 41 48.1**	**+0.3**
	baz=5.0						
NDS				*e*S	**Sg**	**21 41 55.0**	**+0.5**
	baz=5.0						
CHGB	**Renai**	**0.52**	**263⇑**	*i*P	**Pg**	**21 41 47.9**	**0.0**
	baz=261						
CHGB				*e*S	**Sg**	**21 41 55.0**	**+0.2**
	baz=261						
NDT	**Datong Townshi**	**0.52**	**337**	⇑P	**Pg**	**21 41 48.4**	**+0.4**
	baz=343						
NDT				*e*S	**Sg**	**21 41 55.1**	**+0.3**
	baz=343						
TWT	**Tachien**	**0.53**	**285**	⇑P	**Pg**	**21 41 48.5**	**+0.4**
	baz=284						
TWT				*e*S	**Sg**	**21 41 55.6**	**+0.6**
	baz=284						
EGFH	**Guangfu**	**0.53**	**212**	*e*P	**Pg**	**21 41 48.2**	**+0.1**
	baz=206						
EGFH				*e*S	**Sb**	**21 41 56.9**	**-0.4**
	baz=206						
OWD	**Renai**	**0.54**	**252⇑**	*i*P	**Pg**	**21 41 48.1**	**-0.2**
	baz=248						
OWD				*e*S	**Sg**	**21 41 54.8**	**-0.6**
	baz=248						
ENTT	**Nioudou**	**0.54**	**344⇓**	*i*P	**Pg**	**21 41 48.7**	**+0.4**
	baz=350						
ENTT				S	**Sg**	**21 41 56.0**	**+0.6**
	baz=350						
TDCB	**Techi**	**0.54**	**284**	⇑P	**Pg**	**21 41 48.6**	**+0.2**
	baz=284						
TDCB				S	**Sg**	**21 41 55.7**	**+0.2**
	baz=284						
WUSB	**Renai**	**0.58**	**257⇑**	*i*P	**Pg**	**21 41 49.1**	**0.0**
	baz=254						
WUSB				*e*S	**Sg**	**21 41 56.8**	**+0.1**
	baz=254						
TWE	**Neicheng**	**0.60**	**354⇓**	*i*P	**Pg**	**21 41 50.0**	**+0.4**
	baz=1.0						
TWE				*i*S	**Sb**	**21 41 58.3**	**-1.0**
	baz=1.0						
YHNB	**Yeheng**	**0.64**	**329⇑**	*i*P	**Pg**	**21 41 50.5**	**+0.3**
	baz=333						
YHNB				S	**Sg**	**21 41 58.9**	**+0.3**
	baz=333						
ILA	**Ilan**	**0.64**	**1**	*e*P	**Pb**	**21 41 50.9**	**-0.5**
	baz=7.0						
ILA				*e*S	**Sb**	**21 41 59.7**	**-0.8**
	baz=7.0						
FUSB	**Fushanzhiwuyua**	**0.65**	**348⇓**	*i*P	**Pg**	**21 41 50.9**	**+0.5**
	baz=353						
FUSB				*e*S	**Sg**	**21 41 59.5**	**+0.5**
	baz=353						
NSK	**Sanguang**	**0.65**	**328**	⇑P	**Pg**	**21 41 50.7**	**+0.2**
	baz=333						
NSK				*e*S	**Sg**	**21 41 59.3**	**+0.4**
	baz=333						
VWDT	**VWDT**	**0.65**	**236**	⇑P	**Pg**	**21 41 50.4**	**-0.1**
	baz=232						
VWDT				*e*S	**Sb**	**21 42 00.7**	**-0.2**
	baz=232						
NWLT	**Wulai**	**0.69**	**342**	⇓P	**Pg**	**21 41 51.6**	**+0.4**
	baz=346						
NWLT				*e*S	**Sg**	**21 42 00.3**	**+0.2**
	baz=346						
HGSD	**Ruisui**	**0.69**	**204⇓**	*e*P	**Pg**	**21 41 51.8**	**+0.6**
	baz=199						
HGSD				*e*S	**Sn**	**21 42 05.6**	**+0.7**
	baz=199						
WPL	**Puli Township**	**0.72**	**261**	*e*P	**Pg**	**21 41 51.8**	**+0.1**
	baz=260						
WPL				*e*S	**Sg**	**21 42 00.8**	**-0.3**
	baz=260						
EHY	**Hungye**	**0.72**	**212**	⇓P	**Pg**	**21 41 51.4**	**-0.4**
	baz=206						
EHY				*e*S	**Sg**	**21 42 02.4**	**+1.2**
	baz=206						
NTC	**Toucheng**	**0.73**	**7⇓**	*e*P	**Pg**	**21 41 52.4**	**+0.3**
	baz=11						
NTC				*e*S	**Sg**	**21 42 02.0**	**+0.4**
	baz=11						
WHP	**Taichung City**	**0.74**	**282⇑**	*e*P	**Pg**	**21 41 52.5**	**+0.4**
	baz=282						
WHP				*e*S	**Sg**	**21 42 02.5**	**+0.8**
	baz=282						
WCS	**Beigang Elemen**	**0.75**	**265⇑**	*e*P	**Pg**	**21 41 52.5**	**+0.1**
	baz=264						
WCS				*e*S	**Sg**	**21 42 02.4**	**+0.1**
	baz=264						
NFF	**Wufeng Townshi**	**0.76**	**312⇑**	*e*P	**Pg**	**21 41 52.8**	**+0.3**
	baz=314						
NFF				*e*S	**Sg**	**21 42 02.3**	**-0.1**
	baz=314						
SSLB	**Suanglung**	**0.79**	**245**	⇑P	**Pg**	**21 41 52.8**	**-0.2**
	baz=242						
SSLB				*e*S	**Sg**	**21 42 02.7**	**-0.6**
	baz=242						
SMLT	**Sun Moon Lake**	**0.80**	**253⇑**	*e*P	**Pg**	**21 41 53.2**	**0.0**
	baz=250						
SMLT				*e*S	**Sg**	**21 42 03.9**	**+0.2**
	baz=250						
YULB	**Yu-li**	**0.83**	**209⇓**	*e*P	**Pg**	**21 41 52.9**	**-0.9**
	baz=205						
YULB				*e*S	**Sb**	**21 42 07.3**	**+1.4**
	baz=205						
TYC	**Yuchr**	**0.83**	**255⇑**	*e*P	**Pg**	**21 41 53.6**	**-0.2**
	baz=253						

TYC					*e*S	**Sg**	21 42 05.3	+0.6	
	baz=253								
LIOB	**Emei**	**0.84**	**309**	⇑	*e*P	**Pb**	21 41 54.7	-0.1	
LIOB	baz=310				*e*S	**Sg**	21 42 05.4	+0.5	
NSTT	**Nanjuang**	**0.84**	**307**	⇑	*e*P	**Pg**	21 41 54.5	+0.4	
NSTT	baz=309				*e*S	**Sg**	21 42 05.2	+0.2	
NJD	**Zhudong**	**0.85**	**316**		*e*P	**Pn**	21 41 55.7	-0.5	
	baz=318								
TIPB	**Shuangxi**	**0.85**	**6**	⇓	*e*P	**Pb**	21 41 54.6	-0.4	
TIPB	baz=10.0				*e*S	**Sg**	21 42 05.5	+0.2	
EYUL	**Yuli**	**0.86**	**206**		*e*P	**Pg**	21 41 53.9	-0.5	
EYUL	baz=202				*e*S	**Sb**	21 42 07.8	+1.0	
NHDH	**Xindian Distri**	**0.86**	**347**	⇑	*e*P	**Pb**	21 41 55.0	-0.1	
NHDH	baz=351				*e*S	**Sb**	21 42 06.0	-0.8	
TWF1	**Yuli**	**0.86**	**208**		*e*P	**Pg**	21 41 53.5	-1.0	
TWF1	baz=203				*e*S	**Sn**	21 42 08.5	-0.7	
TWA	**Mucha**	**0.87**	**351**		*e*P	**Pb**	21 41 55.0	-0.2	
TWA	baz=355				*e*S	**Sg**	21 42 05.9	0.0	
TATO	**Taipei**	**0.88**	**345**		*e*P	**Pb**	21 41 55.3	-0.1	
TATO	baz=349				*e*S	**Sg**	21 42 06.4	+0.1	
TWQ1	**Liyutan**	**0.91**	**285**		*e*P	**Pb**	21 41 56.1	+0.2	
TWQ1	baz=284				*e*S	**Sn**	21 42 10.2	-0.1	
BACT	**New Taipei Cit**	**0.91**	**343**		*e*P	**Pn**	21 41 56.6	-0.4	
	baz=346								
TWB1	**Santiao Chiao**	**0.91**	**15**		*e*P	**Pb**	21 41 55.9	-0.2	
TWB1	baz=19				*e*S	**Sb**	21 42 07.7	-0.6	
HSN1	**Hsinchu**	**0.92**	**315**		*e*P	**Pn**	21 41 57.0	-0.2	
	baz=317								
NHY	**Taipei**	**0.93**	**351**		*e*P	**Pn**	21 41 56.6	-0.6	
	baz=354								
TAP1	**Taipei**	**0.93**	**348**		*e*P	**Pn**	21 41 56.9	-0.5	
TAP1	baz=351				*e*S	**Sb**	21 42 08.8	-0.1	
NSY	**Sanyi**	**0.94**	**288**	⇑	*e*P	**Pn**	21 41 57.1	-0.3	
NSY	baz=289				*e*S	**Sn**	21 42 10.4	-0.6	
TAP	**Taipei**	**0.94**	**347**		*e*P	**Pn**	21 41 56.9	-0.5	
TAP	baz=351				*e*S	**Sb**	21 42 09.0	0.0	
NWF	**Wu-fen Shan**	**0.95**	**3**	⇓	*e*P	**Pb**	21 41 56.7	0.0	
NWF	baz=6.0				*e*S	**Sb**	21 42 08.7	-0.7	
WFSB	**Wu-fen Shan**	**0.95**	**3**	⇓	*e*P	**Pb**	21 41 56.7	+0.1	
WFSB	baz=6.0				*e*S	**Sb**	21 42 08.7	-0.6	
WWF	**Wufeng**	**0.95**	**265**		*e*P	**Pn**	21 41 57.8	+0.2	
	baz=264								
YUS	**Yu-Shan**	**0.95**	**229**		*e*P	**Pg**	21 41 56.4	+0.1	
YUS	baz=225				*e*S	**Sb**	21 42 10.1	+0.2	
NMLH	**Miaoli**	**0.95**	**296**		*e*P	**Pn**	21 41 57.3	-0.3	
NMLH	baz=296				*e*S	**Sn**	21 42 10.8	-0.7	
SBCB	**Hsinchu**	**0.95**	**315**		*e*P	**Pn**	21 41 57.9	+0.2	
SBCB	baz=316				*e*S	**Sb**	21 42 10.2	+0.6	
NTY	**Taoyuan**	**0.96**	**336**		*e*P	**Pn**	21 41 58.1	+0.4	
	baz=338								
NJN	**Zhunan**	**0.97**	**306**		*e*P	**Pn**	21 41 57.9	+0.1	
	baz=307								
TCU	**Taichung**	**0.97**	**272**	⇑	*e*P	**Pn**	21 41 58.0	+0.1	
TCU	baz=271				*e*S	**Sn**	21 42 11.7	-0.1	
WJS	**Zhushan**	**0.97**	**252**		*e*P	**Pg**	21 41 57.1	+0.6	
WJS	baz=250				*e*S	**Sb**	21 42 10.6	+0.7	
HSN	**Hsinchu**	**0.97**	**314**		*e*P	**Pn**	21 41 57.9	0.0	
HSN	baz=319				*e*S	**Sn**	21 42 11.4	-0.5	
SXI1	**Grass Mountain**	**0.98**	**8**	⇓	*e*P	**Pb**	21 41 57.1	0.0	
SXI1	baz=11				*e*S	**Sb**	21 42 09.9	-0.4	
NCUH	**Zhongli**	**0.98**	**329**		*e*P	**Pn**	21 41 57.8	-0.2	
	baz=332								
NCU	**National Centr**	**0.98**	**330**		*e*P	**Pn**	21 41 58.0	0.0	
NCU	baz=332				*e*S	**Sn**	21 42 12.0	-0.2	
WNT1	**Nantou City**	**0.99**	**258**		*e*P	**Pn**	21 41 58.4	+0.3	
	baz=256								
WNT	**Mingjian**	**0.99**	**256**		*e*P	**Pb**	21 41 57.9	+0.6	
	baz=254								
FULB	**Fuli**	**1.00**	**204**	⇑	*e*P	**Pg**	21 41 56.9	-0.2	
FULB	baz=200				*e*S	**Sn**	21 42 13.9	+1.2	
TWS1	**Kuangyinshan**	**1.02**	**344**		*e*P	**Pn**	21 41 58.6	+0.1	
	baz=347								
TWS1	baz=347				*e*S	**Sn**	21 42 11.9	-1.1	
WDJ	**Dajia District**	**1.02**	**283**		*e*P	**Pn**	21 41 59.0	+0.4	
	baz=283								
TNOU	**National Taiwa**	**1.02**	**2**		*e*P	**Pn**	21 41 58.1	-0.5	
	baz=5.0								
YM01	**YM01**	**1.03**	**352**	⇑	*e*P	**Pn**	21 41 58.5	-0.3	
YM01	baz=355				*e*S	**Sb**	21 42 12.1	+0.3	
ALS	**Alishan**	**1.05**	**235**	⇑	*e*P	**Pg**	21 41 58.0	-0.1	
ALS	baz=232				*e*S	**Sn**	21 42 13.7	-0.4	
WYL	**Yuanlin Townsh**	**1.07**	**262**		*e*P	**Pn**	21 41 59.5	+0.4	
	baz=260								
NTST	**Danshui**	**1.07**	**346**		*e*P	**Pn**	21 41 59.7	+0.5	
	baz=349								
YM08	**YM08**	**1.07**	**353**		*e*P	**Pn**	21 41 58.9	-0.3	
YM08	baz=356				*e*S	**Sn**	21 42 14.0	-0.3	
WCHH	**Zhanghua**	**1.07**	**268**		*e*P	**Pn**	21 41 59.3	0.0	
	baz=267								
ANP	**Anpu**	**1.08**	**350**		*e*P	**Pn**	21 41 59.3	-0.1	
	baz=353								
NHW	**Xinwu Township**	**1.08**	**325**		*e*P	**Pn**	21 41 59.8	+0.4	
	baz=327								
EHD	**Haiduan**	**1.08**	**207**		*e*P	**Pb**	21 41 57.5	-1.4	
	baz=203								
CHN5	**Tsauling**	**1.10**	**242**		*e*P	**Pg**	21 41 59.6	+0.6	
	baz=239								
ECS	**Chishang**	**1.12**	**205**		*e*P	**Pb**	21 41 58.7	-0.9	
	baz=202								
ELDTW	**Lidau**	**1.14**	**215**		*e*P	**Pb**	21 41 57.9	-2.0	
	baz=212								
ELDTW	baz=212				*e*S	**Sb**	21 42 15.0	+0.1	
JYNG	**Yonagunijimaku**	**1.15**	**73**		*e*P	**Pn**	21 42 00.6	+0.2	
JYNG					*e*S	**Sn**	21 42 18.0	+1.7	
TWY	**Chenhua**	**1.16**	**354**		*e*P	**Pn**	21 42 01.0	+0.6	
	baz=357								
WGK	**Gukeng**	**1.16**	**248**		*e*P	**Pg**	21 42 01.0	+0.9	
	baz=246								
WDLH	**Douliu**	**1.18**	**249**		*e*P	**Pg**	21 42 01.1	+0.6	
	baz=247								
WDLH	baz=247				*e*S	**Sn**	21 42 17.0	+0.1	
EDH	**Donghe**	**1.21**	**199**	⇓	*e*P	**Pn**	21 41 59.1	-2.0	
	baz=196								
EDH	baz=196				*e*S	**Sn**	21 42 18.4	+0.7	
YOJ	**Yonaguni jima**	**1.21**	**74**		*i* P	**Pg**	21 42 01.3	+0.1	
YOJ	baz=75				*e*S	**Sn**	21 42 19.1	+1.2	
YOJ	**Yonaguni jima**	**1.21**	**74**		P	**Pg**	21 42 01.4	+0.2	
YOJ					*e*S	**Sn**	21 42 19.1	+1.2	
WCKO	**Fanlu**	**1.24**	**237**		*e*P	**Pn**	21 42 01.8	+0.2	
	baz=235								
WCKO	baz=235				*e*S	**Sn**	21 42 19.1	+0.7	
WRL	**Guolierlin Hig**	**1.26**	**260**		*e*P	**Pn**	21 42 02.0	+0.2	
	baz=259								
WRL	baz=259				*e*S	**Sb**	21 42 18.7	+0.4	
STYH	**Taoyuan**	**1.29**	**223**	⇓	*e*P	**Pn**	21 42 01.6	-0.6	
	baz=221								
STYH	baz=221				*e*S	**Sb**	21 42 18.7	-0.5	
TPUB	**Ta-pu**	**1.30**	**231**	⇓	*e*P	**Pn**	21 42 02.6	+0.1	
	baz=229								
TPUB	baz=229				*e*S	**Sn**	21 42 20.2	+0.2	
WTK	**Tuku**	**1.30**	**251**		*e*P	**Pb**	21 42 03.1	+0.4	
	baz=249								
STYT	**Tauyuan**	**1.31**	**223**		*e*P	**Pn**	21 42 02.0	-0.5	
	baz=221								
STYT	baz=221				*e*S	**Sb**	21 42 19.8	+0.1	
LONT	**Longtian**	**1.33**	**205**		*e*P	**Pn**	21 42 00.1	-2.7	
	baz=202								
WTP	**Ta-pu**	**1.35**	**230**		*e*P	**Pn**	21 42 03.4	+0.3	
	baz=227								
CHY	**Chiayi**	**1.35**	**243**		*e*P	**Pg**	21 42 04.5	+0.6	
	baz=241								
TWK	**Hsinying**	**1.42**	**234**		*e*P	**Pn**	21 42 04.5	+0.4	
	baz=231								
TWK	baz=231				*e*S	**Sn**	21 42 23.2	+0.1	
TWG	**Pinlang**	**1.43**	**205**		*e*P	**Pn**	21 42 01.6	-2.6	
	baz=202								
TWGBT	**Beinan**	**1.43**	**205**	⇓	*e*P	**Pn**	21 42 01.6	-2.6	
	baz=202								
CHN1	**Nanshi**	**1.45**	**230**		*e*P	**Pn**	21 42 04.9	+0.5	
	baz=228								
CHN1	baz=228				*e*S	**Sg**	21 42 25.9	+1.5	
LDUT	**Ludao**	**1.46**	**190**		*e*P	**Pn**	21 42 01.9	-2.7	
	baz=187								
TTN	**Taitung**	**1.46**	**202**		*e*P	**Pn**	21 42 03.2	-1.5	
	baz=199								
WSL	**Shuilin Townsh**	**1.50**	**247**		*e*P	**Pb**	21 42 06.0	-0.1	
	baz=245								
ICHU	**Yijhu**	**1.53**	**241**		*e*P	**Pn**	21 42 06.2	+0.6	
	baz=239								
ICHU	baz=239				*e*S	**Sg**	21 42 28.3	+1.1	
PCYT	**Pengchaiyu**	**1.53**	**11**		*e*P	**Pb**	21 42 06.4	-0.2	
	baz=14								
CHN8	**Yiju**	**1.59**	**241**		*e*P	**Pb**	21 42 07.3	-0.3	
	baz=239								
SCST	**Cishan**	**1.68**	**223**		*e*P	**Pb**	21 42 09.0	0.0	
	baz=221								
SCST	baz=221				*e*S	**Sg**	21 42 33.8	+2.0	
ECL	**Taimali**	**1.68**	**205**		*e*P	**Pn**	21 42 04.9	-2.7	
	baz=203								
ECL	baz=203				*e*S	**Sn**	21 42 30.0	+0.7	
SSD	**Sandimen**	**1.70**	**217**		*e*P	**Pn**	21 42 07.5	-0.4	
	baz=214								
SSD	baz=214				*e*S	**Sb**	21 42 32.4	+1.3	
TSMG	**Majia**	**1.73**	**216**		*e*P	**Pn**	21 42 08.2	-0.1	
	baz=214								
TSMG	baz=214				*e*S	**Sn**	21 42 31.5	+0.9	
TWM1	**Shoushan**	**1.77**	**223**		*e*P	**Pb**	21 42 10.5	-0.1	
	baz=221								
MASBT	**Mashibuluo**	**1.81**	**214**		*e*P	**Pn**	21 42 08.8	-0.6	
	baz=212								
MASBT	baz=212				*e*S	**Sb**	21 42 35.2	+1.0	
IRIF	**Iriomote-Funau**	**1.83**	**83**		P	**Pn**	21 42 10.0	+0.2	
HATJ	**Hateruma jima**	**1.89**	**92**		*e*S	**Sb**	21 42 35.3	-1.2	
SCZT	**Fangliau**	**2.02**	**211**		*e*P	**Pn**	21 42 12.3	0.0	
	baz=209								
SCZT	baz=209				*e*S	**Sn**	21 42 38.5	+0.8	
PHUB	**P'eng-hu**	**2.07**	**253**		*e*P	**Pn**	21 42 13.4	+0.4	
	baz=252								
PHUB	baz=252				*e*S	**Sn**	21 42 40.0	+1.1	
PNG	**Penghu**	**2.07**	**255**		*e*P	**Pn**	21 42 13.2	+0.2	
	baz=254								
PNG	baz=254				*e*S	**Sn**	21 42 39.3	+0.3	
LAY	**Lan-yu**	**2.08**	**185**		*e*P	**Pn**	21 42 10.4	-2.8	
	baz=183								
JKRS	**Kuro-shima**	**2.08**	**86**		P	**Pn**	21 42 13.9	+0.7	
JKRS					S	**Sb**	21 42 41.8	-0.1	
SLIU	**Shizi**	**2.08**	**205**		*e*P	**Pn**	21 42 12.3	-0.8	
	baz=203								
WDGT	**Dungji**	**2.09**	**246**	⇓	*e*P	**Pn**	21 42 13.6	+0.4	
	baz=245								
WDGT	baz=245				*e*S	**Sn**	21 42 39.5	+0.1	
LYUB	**Lan-yu**	**2.11**	**184**		*e*P	**Pn**	21 42 10.1	-3.5	
	baz=182								
LYUB	baz=182				*e*S	**Sn**	21 42 38.7	-1.4	
JIJ	**Ishigaki jima**	**2.21**	**83**		P	**Pn**	21 42 15.0	+0.1	
JIJ					S	**Sn**	21 42 42.8	+0.3	
VWUC	**VWUC**	**2.25**	**293**	⇑	*e*P	**Pn**	21 42 14.9	-0.6	
	baz=293								
VWUC	baz=293				*e*S	**Sn**	21 42 41.6	-1.9	
TWK1	**Hengchun**	**2.33**	**202**		*e*P	**Pn**	21 42 16.5	-0.1	
	baz=200								
JISG	**Ishigakijimahi**	**2.40**	**78**		*e*P	**Pn**	21 42 17.7	+0.3	
JISG					S	**Sn**	21 42 48.0	+1.0	
PTMZ	**Houxiangcun**	**2.55**	**292**		*e*P	**Pn**	21 42 19.0	-0.6	
	baz=291								
PTMZ	baz=291				*e*S	**Sn**	21 42 48.9	-2.0	
MATB	**Ma-tsu**	**2.59**	**322**		*e*P	**Pn**	21 42 19.5	-0.6	
	baz=322								
MATB	baz=322				*e*S	**Sn**	21 42 50.8	-1.1	
JTJ	**Tarama**	**2.75**	**79**		P	**Pn**	21 42 23.2	+0.8	
JTJ					*e*S	**Sb**	21 42 58.8	-2.5	
JIRB	**Irabujima**	**3.21**	**77**		P	**Pn**	21 42 30.5	+1.8	

*IDC **04** 21:44:36.8±0.6,1.˝89N×126˝.17E,h0km,mb4.3/15, mbtmp4.2/16,ML3.3/1,MS3.2/3,Error ellipse: s-maj=33.3km s-min=12.5km az=69.0*

*NEIC **04** 21:44:38.1±2.4,2˝.00N±0˝.07×126˝.68E±0˝.08,h10km±1km, mb4.5/51,Error ellipse: s-maj=16.6km s-min=8.5km az=51.0*

*DJA **04** 21:44:39.7±1.7,2˝N±4˝×12˝7E±˝,h12km±17km,M4.5/12, mb4.8/5,mB4.9/2,MLv4.3/12,Mw(mB)4.1/2*

ISC 04 21:44:42.7±0.4,**2˝.00N**±0˝.04×**126˝.60E**±0˝.07,**h47**km,**n107,** σ1§**48**/110,**mb4.5**/49,**MS3.2**/3,**2C, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.44**	**148**	Pn	**Pn**	**21 45 04.6**	**-1.7**
TNTI				Sn	**Sn**	**21 45 21.1**	**-3.0**
TNTI	**Ternate**	**1.44**	**148**	P	**Pn**	**21 45 04.5**	**-1.9**
SGSI	**Sangihe**	**1.99**	**328**	P	**Pn**	**21 45 12.3**	**-1.6**
LBMI	**Labuha**	**2.77**	**161**	P	**Pn**	**21 45 24.5**	**-0.1**
KMSI	**Cibinong**	**2.97**	**242**	P	**Pn**	**21 45 29.2**	**+1.8**
SANI	**Sanana**	**4.06**	**189**	P	**Pn**	**21 45 42.7**	**+0.3**
DDMP	**Don Marcelino,**	**4.17**	**348**	⇑	*e*P	**Pn**	**21 45 45.2**	**+1.2**
DDMP					*e*S	**Sn**	**21 46 27.9**	**-3.6**
LUWI	**Luwuk**	**4.87**	**232**	Pn		**Pn**	**21 45 53.0**	**-0.5**
LUWI	**Luwuk**	**4.87**	**232**	P		**Pn**	**21 45 54.1**	**+0.6**
MRSI	**Marisa**	**4.89**	**252**	P		**Pn**	**21 45 56.9**	**+3.1**
	0.3nm982nm77nm,0.5s							
KCP	**Kidapawan**	**5.20**	**343**	⇑	*i* P	**Pn**	**21 46 02.1**	**+4.0**
SIJI	**Sorong**	**5.47**	**121**	Pn		**Pn**	**21 46 03.9**	**+2.2**
	0.9nm,0.3s,baz=287,slow=8.5,SNR=2.2							
SIJI				LR		LR	21 48 46.3	
	comp=Z,378nm,20.7s,baz=341,slow=43 3.3nm,0.3s							
APSI	**Ampana**	**5.73**	**240**	P		**Pn**	**21 46 06.9**	**+1.7**
	0.4nm980nm114nm,0.6s							
TOLI2	**Tolitoli**	**5.88**	**261**	Pn		**Pn**	**21 46 06.5**	**-0.8**
MPSI	**Mapaga**	**6.90**	**256**	P		**Pn**	**21 46 21.9**	**+0.6**
	0.4nm18nm,0.9s							
MYLDM	**Lahad Datu**	**8.68**	**292**	Pn		**Pn**	**21 46 46.9**	**+1.2**
MTN	**Manton Dam**	**15.42**	**163**	Pn		**Pn**	**21 48 17.1**	**-0.1**
KNRA	**Kununurra**	**17.69**	**173**			**Pn**	**21 48 44.9**	**-0.8**
TWG	**Pinlang**	**21.38**	**346**	P		**P**	**21 49 23.3**	**-3.2**
TWG				IAmb		IAmb	21 49 34.1	
	comp=Z,12nm,0.8s							
YULB	**Yu-li**	**21.88**	**347**	P		**P**	**21 49 28.8**	**-2.9**
YULB				IAmb		IAmb	21 49 52.0	
	comp=Z,20nm,1.4s							
TPUB	**Ta-pu**	**21.95**	**345**	P		**P**	**21 49 30.2**	**-2.4**
TPUB				IAmb		IAmb	21 49 35.8	
	comp=Z,22nm,1.0s							
WB0	**Warramunga Arr**	**22.94**	**161**	P		**P**	**21 49 42.0**	**-1.1**
WB0				IAmb		IAmb	21 49 49.0	
	comp=Z,11nm,0.6s							
WRA	**Warramunga Arr**	**23.09**	**161**	P		**P**	**21 49 43.3**	**-1.3**
	comp=Z,7.0nm,0.5s,baz=339,slow=11,SNR=22							
WRA				PcP		**PcP**	**21 53 33.1**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=331,slow=2.2,SNR=5.1 comp=Z,7.0nm,0.5s							
WRA	**Warramunga Arr**	**23.09**	**161**	P		**P**	**21 49 42.2**	**-2.4**
WR0	**Warramunga Arr**	**23.17**	**161**	P		**P**	**21 49 44.0**	**-1.4**
WR0				IAmb		IAmb	21 49 47.7	
	comp=Z,10nm,0.9s							
MBWA	**Marble Bar**	**23.97**	**196**			**P**	**21 49 53.3**	**+0.4**
MBWA				IAmb		IAmb	21 49 56.8	
	comp=Z,25nm,1.4s							
PSA00	**Pilbara Seismi**	**24.34**	**195**	P		**P**	**21 49 55.1**	**-1.2**
PSA00				IAmb		IAmb	21 50 09.7	
	comp=Z,18nm,1.4s							
PSA00	**Pilbara Seismi**	**24.34**	**195**	P		**P**	**21 49 54.9**	**-1.4**
PSA00				IAmb		IAmb	21 50 11.8	
	comp=Z,7.1nm,1.4s							
JOW	**Kunigami**	**24.75**	**4**	P		**P**	**21 50 03.3**	**+3.4**
	comp=Z,18nm,0.8s,baz=162,slow=13,SNR=5.4 comp=Z,18nm,0.8s							
AS31	**Alice Springs**	**26.48**	**165**	P		**P**	**21 50 14.9**	**-0.9**
ASAR	**Alice Springs**	**26.48**	**165**	P		**P**	**21 50 16.1**	**+0.4**
	comp=Z,2.9nm,0.9s,baz=345,slow=11,SNR=33							
ASAR				PcP		**PcP**	**21 53 40.4**	**+0.3**
	comp=Z,1.0nm,0.4s,baz=354,slow=2.2,SNR=11 comp=Z,2.9nm,0.9s							
ASAR	**Alice Springs**	**26.48**	**165**	P		**P**	**21 50 16.6**	**+0.8**
CMAR	**Chiang Mai Arr**	**31.66**	**303**	P		**P**	**21 51 01.1**	**-0.7**
	comp=Z,0.9nm,0.4s,baz=101,slow=5.7,SNR=6.8							
CMAR				LR		LR	22 05 12.6	
	comp=Z,28nm,18.2s,baz=110,slow=39 comp=Z,0.9nm,0.4s							
CMAR	**Chiang Mai Arr**	**31.66**	**303**	P		**P**	**21 51 01.5**	**-0.3**
CHTO	**Chiang Mai**	**31.83**	**304**	P		**P**	**21 51 02.6**	**-0.7**
ENH	**Enshi**	**32.47**	**332**	P		**P**	**21 51 07.9**	**-0.9**
ENH				IAmb		IAmb	21 51 08.8	
	comp=Z,8.2nm,1.0s							
FORT	**Forrest**	**32.62**	**178**	P		**P**	**21 51 10.3**	**+0.2**
PZH	**PanZhiHua**	**34.11**	**318**	P		**P**	**21 51 26.0**	**+2.7**
PZH				pmax		pmax		
	comp=Z,8.0nm,0.9s							
PZH				pmax		pmax		
	comp=Z,100nm,5.1s							
INU	**Inuyama**	**34.57**	**15**	P		**P**	**21 51 25.8**	**-1.1**
JGF	**Kuroka**	**34.90**	**15**	P		**P**	**21 51 29.0**	**-0.9**
JGF				IAmb		IAmb	21 51 32.2	
	comp=Z,12nm,1.2s							
KSRS	**Korea Array**	**35.31**	**2**	P		**P**	**21 51 34.2**	**+0.9**
	comp=Z,2.0nm,0.7s,baz=177,slow=9.1,SNR=8.4 comp=Z,2.0nm,0.7s							
BBOO	**Buckleboo**	**35.76**	**166**	P		**P**	**21 51 36.1**	**-1.1**
MJAR	**Matsushiro Arr**	**36.01**	**16**	P		**P**	**21 51 37.9**	**-1.6**
	comp=Z,3.7nm,0.9s,baz=172,slow=9.5,SNR=9.4							
STKA	**Stephens Creek**	**36.57**	**158**	P		**P**	**21 51 46.9**	**+2.7**
	comp=Z,2.8nm,0.4s,baz=339,slow=10,SNR=16 comp=Z,2.8nm,0.4s							
STKA	**Stephens Creek**	**36.57**	**158**	P		**P**	**21 51 44.8**	**+0.5**
JMM	**Marumori**	**38.01**	**18**	P		**P**	**21 51 56.9**	**+0.6**
BJT	**Baijiatuan**	**39.01**	**347**	P		**P**	**21 52 05.1**	**+0.4**
BJT				IAmb		IAmb	21 52 14.0	
	comp=Z,8.8nm,1.2s							
LZH	**Lanzhou**	**39.93**	**331**	*e*P		**P**	**21 52 13.9**	**+1.2**
LZH				pP		pP	21 52 20.4	-4.4
LZH				pmax		pmax		
	comp=Z,17nm,1.1s							
HHC	**Hu-ho-hao-te**	**41.00**	**343**	*e*P		**P**	**21 52 24.3**	**+3.0**
HHC				pmax		pmax		
	comp=Z,31nm,0.8s							
HHC				pmax		pmax		
	comp=Z,100nm,9.2s							
USRK	**Ussuriysk Ar.**	**42.30**	**6**	P		**P**	**21 52 32.7**	**+0.9**
	comp=Z,5.6nm,0.9s,baz=197,slow=7.9,SNR=7.7 comp=Z,5.6nm,0.9s							
USRK	**Ussuriysk Ar.**	**42.30**	**6**	P		**P**	**21 52 31.9**	**+0.2**
H11S3	**WAKE ISLAND Hy**	**42.57**	**65**	T		T	22 37 57.3	
	baz=252,slow=74							
H11S2	**WAKE ISLAND Hy**	**42.58**	**65**	T		T	22 38 11.8	
	baz=252,slow=74							
H11S1	**WAKE ISLAND Hy**	**42.59**	**65**	T		T	22 38 17.5	
	baz=252							
LSA	**Lhasa**	**43.49**	**313**	P		**P**	**21 52 42.0**	**-0.3**
GTA	**Gaotai**	**44.52**	**330**	*e*P		**P**	**21 52 49.4**	**-0.5**
GTA				pP		pP	21 52 59.5	-2.7
GTA				sP		pwP	21 53 05.1	+0.7
GTA				pmax		pmax		
	comp=Z,3.0nm,0.8s							
GUN	**Gumba**	**46.65**	**307**	*e*P		**P**	**21 53 06.1**	**-1.1**
	comp=Z,26nm,0.8s							
PKI	**Pulchoki**	**46.88**	**307**	*e*P		**P**	**21 53 06.3**	**-2.7**
PKIN	**Phulchoki**	**46.89**	**307**	*e*P		**P**	**21 53 06.3**	**-2.7**
DMN	**Daman**	**47.13**	**307**	*e*P		**P**	**21 53 08.8**	**-2.1**
GKN	**Gorkha**	**47.68**	**307**	*e*P		**P**	**21 53 13.6**	**-1.4**
	comp=Z,12nm,0.8s							
SONM	**Songino Array**	**48.89**	**342**	P		**P**	**21 53 24.2**	**+0.2**
	comp=Z,1.0nm,0.7s,baz=159,slow=8.9,SNR=8.0							
SONM				PcP		**PcP**	**21 54 48.1**	**+0.2**
	comp=Z,0.6nm,0.8s,baz=164,slow=3.8,SNR=3.8							
SONM				LR		LR	22 15 53.8	
	comp=Z,26nm,18.7s,baz=162,slow=38 comp=Z,1.0nm,0.7s							
SONM	**Songino Array**	**48.89**	**342**	P		**P**	**21 53 24.0**	**0.0**
PYUN	**Piuthan**	**49.04**	**306**	*e*P		**P**	**21 53 24.7**	**-0.9**
	comp=Z,24nm,0.7s							
WMQ	**Urumqi**	**54.07**	**326**	*e*P		P	21 54 07.1	+4.4
WMQ				pP		pP	21 54 12.4	-2.9
WMQ				PcP		**PcP**	**21 55 11.9**	**+4.7**
WMQ				pmax		pmax		
	comp=Z,26nm,0.9s							
WMQ				LR		LR		
	comp=Z,120nm,24.5s							
PEA0B	**Petropavlovsk-**	**57.08**	**22**	P		**P**	**21 54 24.6**	**+0.5**
MK31	**Makanchi Array**	**58.90**	**326**	P		**P**	**21 54 36.5**	**-0.5**
MKAR	**Makanchi Array**	**58.90**	**326**	P		**P**	**21 54 36.4**	**-0.7**
	comp=Z,2.0nm,0.5s,baz=126,slow=8.0,SNR=29							
MKAR				PcP		**PcP**	**21 55 24.4**	**-1.6**

KKAR	**Karatay Array**	**64.41**	**318**	P	**P**	**21 55 13.2**	**-0.9**
KKAR	**Karatay Array**	**64.41**	**318**	P	**P**	**21 55 13.0**	**-1.2**
KKAR				IAmb	IAmb	21 55 14.8	
	comp=Z,2.3nm,0.8s						
BRVK	**Borovoye**	**68.77**	**327**	P	**P**	**21 55 41.2**	**-0.6**
BRVK				IAmb	IAmb	21 55 51.6	
	comp=Z,3.2nm,0.6s						
CASY	**Casey**	**69.09**	**187**	P	**P**	**21 55 45.1**	**+1.6**
TIXI	**Tiksi**	**69.57**	**1**	P	**P**	**21 55 46.1**	**-0.3**
GEYT	**Alibeck**	**71.88**	**309**	P	**P**	**21 55 59.5**	**-1.6**
	comp=Z,1.6nm,0.8s,baz=70,slow=19,SNR=2.6						
	comp=Z,1.6nm,0.8s						
ABKAR	**Akbulak array**	**73.40**	**321**	P	**P**	**21 56 09.1**	**-0.8**
ABKAR	**Akbulak array**	**73.40**	**321**	P	**P**	**21 56 09.3**	**-0.6**
ABKAR				IAmb	IAmb	21 56 13.1	
	comp=Z,2.8nm,0.9s						
ARU	**Arti**	**76.32**	**328**	P	**P**	**21 56 26.0**	**-0.6**
ARU				IAmb	IAmb	21 56 26.7	
	comp=Z,6.1nm,0.9s						
RAYN	**Ar Rayn**	**81.04**	**293**	P	**P**	**21 56 53.1**	**-0.3**
VOI	**Vohitsoka**	**81.29**	**248**	P	**P**	**21 56 55.8**	**+1.0**
VOI				IAmb	IAmb	21 57 17.0	
	comp=Z,10.0nm,1.2s						
VNDA	**Vanda**	**81.73**	**173**	P	**P**	**21 56 56.5**	**+0.7**
	comp=Z,1.3nm,0.5s,baz=315,slow=7.8,SNR=16						
	comp=Z,1.3nm,0.5s						
VNDA	**Vanda**	**81.73**	**173**	P	**P**	**21 56 56.4**	**+0.5**
VNDA				IAmb	IAmb	21 56 57.7	
	comp=Z,4.7nm,1.2s						
MAW	**Mawson**	**82.09**	**200**	P	**P**	**21 56 58.5**	**+0.7**
SBA	**Scott Base**	**82.65**	**172**	P	**P**	**21 57 01.2**	**+0.6**
SBA				IAmb	IAmb	21 57 03.8	
	comp=Z,4.5nm,1.2s						
L19K	**White Mountain**	**82.90**	**28**	P	**P**	**21 57 03.5**	**+1.2**
L19K				IAmb	IAmb	21 57 07.3	
	comp=Z,3.4nm,0.9s						
J20K	**Nowinta River**	**83.53**	**26**	P	**P**	**21 57 06.5**	**+1.1**
J20K				IAmb	IAmb	21 57 08.1	
	comp=Z,6.6nm,1.2s						
GEVA	**Gevas**	**83.69**	**308**	P	**P**	**21 57 07.1**	**+0.1**
IMAR	**Indian Mountai**	**83.97**	**24**	P	**P**	**21 57 08.1**	**+0.4**
KBZ	**Khabaz**	**84.07**	**314**	P	**P**	**21 57 08.6**	**0.0**
	comp=Z,2.1nm,0.9s,baz=45,slow=2.9,SNR=4.0						
	comp=Z,2.1nm,0.9s						
SKT	**Skwentna**	**84.42**	**28**	P	**P**	**21 57 10.3**	**+0.3**
SKT				IAmb	IAmb	21 57 21.1	
	comp=Z,9.9nm,1.5s						
GURO	**Guroymak-BITLI**	**84.51**	**308**	P	**P**	**21 57 11.8**	**+0.6**
KLMR	**Klimovskoe**	**86.84**	**331**	*e*P	**P**	**21 57 22.2**	**+0.2**
KLMR				AMP		21 57 23.8	
	comp=Z,12nm,1.0s						
BMAR	**Burnt Mountain**	**87.72**	**23**	P	**P**	**21 57 27.6**	**+1.3**
BCAR	**Beaver Creek A**	**88.97**	**27**	P	**P**	**21 57 33.7**	**+1.4**
BRTR	**Keskin Array B**	**91.02**	**310**	P	**P**	**21 57 42.1**	**-0.4**
	comp=Z,1.1nm,0.8s,baz=108,slow=4.0,SNR=6.7						
	comp=Z,1.1nm,0.8s						
FINES	**FINESS Array B**	**93.29**	**332**	P	**P**	**21 57 52.5**	**+0.2**
	comp=Z,2.1nm,0.8s,baz=72,slow=4.5,SNR=4.9						
	comp=Z,2.1nm,0.8s						
TORD	**Torodi Ar. Bea**	**123.31**	**287**	PKP	**PKiKP**	**22 03 35.7**	**-0.2**
	comp=Z,0.6nm,0.8s,baz=79,slow=3.1,SNR=2.5						

JMA 04 21:50:53.8±0.2, 24°.8N±0°.6×123°.8E±0°.3, h12km, MV2.7/12, NW OFF ISHIGAKIJIMA IS, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.50**	**188**	P	Pg	21 51 03.6	0.0
IRIF				S	Sg	21 51 10.5	+0.2
JISG	**Ishigakijimahi**	**0.52**	**118**	*i* P	Pg	21 51 03.9	0.0
JISG				*e*S	Sg	21 51 11.1	+0.2
JIJ	**Ishigaki jima**	**0.56**	**147**	P	Pg	21 51 04.4	-0.3
JIJ				S	Sg	21 51 11.4	-0.7
JKRS	**Kuro-shima**	**0.62**	**163**	P	Pg	21 51 05.9	0.0
JKRS				S	Sg	21 51 13.8	-0.3
HATJ	**Hateruma jima**	**0.77**	**180**	P	Pg	21 51 08.7	-0.1
HATJ				S	Sg	21 51 18.9	0.0
YOJ	**Yonaguni jima**	**0.81**	**243**	P	Pg	21 51 08.9	-0.6
JTJ	**Tarama**	**0.84**	**103**	P	Pg	21 51 10.0	0.0
JTJ				S	Sg	21 51 21.1	+0.2
JIRB	**Irabujima**	**1.24**	**90**	*e*S	Sb	21 51 33.1	0.0
JMJ2	**Miyako jima3**	**1.39**	**94**	*e*S	Sg	21 51 38.0	-0.4
JOGS	**Gusukube**	**1.46**	**93**	*e*S	Sb	21 51 39.4	+0.1

TAP 04 21:51:02.3, 24°.16N×121°.67E, h11km, ML1.2, 1D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.04**	**270**	*i* P	Pg	21 51 04.5	0.0
ETL				*i* S	Sg	21 51 06.2	+0.2
	baz=268						
NACB	**Ninganchiao**	**0.07**	**283**	⇓*i* P	Pg	21 51 04.8	+0.2
NACB				*i* S	Sg	21 51 06.7	+0.3
	baz=283						
TWD	**Chiawan**	**0.10**	**219**	*e*P	Pg	21 51 05.4	+0.3
	baz=215						
ETLH	**Xiulin Townshi**	**0.17**	**286**	P	Pg	21 51 06.6	+0.4
ETLH	baz=286			S	Sg	21 51 09.9	+0.9
	baz=286						
HWA	**Hwalien**	**0.19**	**197**	*e*P	Pb	21 51 07.5	-0.3
	baz=194						
ETM	**Tongmen**	**0.25**	**219**	*e*P	Pg	21 51 07.5	+0.1
ETM	baz=219			*e*S	Sg	21 51 11.1	+0.2
	baz=219						
EWUT	**Wuta**	**0.30**	**20**	*e*P	Pg	21 51 08.5	0.0
EWUT	baz=20			*e*S	Sg	21 51 12.8	+0.2
	baz=20						
WHF	**Hehuan Shan**	**0.37**	**268**	*e*P	Pg	21 51 10.4	+0.6
	baz=267						
WHF				*e*S	Sg	21 51 15.7	+1.0
	baz=267						
FUSS	**Fushou**	**0.40**	**283**	*e*P	Pb	21 51 11.0	-0.4
	baz=283						
FUSS				*e*S	Sb	21 51 17.1	-0.5
	baz=283						
LATG	**Datong**	**0.40**	**341**	*e*P	Pg	21 51 10.8	+0.6
	baz=341						
LATG				*e*S	Sb	21 51 16.8	-0.6
	baz=341						
CHGB	**Renai**	**0.46**	**258**	*e*P	Pb	21 51 12.3	-0.2
	baz=258						
CHGB				*e*S	Sb	21 51 18.8	-0.6
	baz=258						
NDT	**Datong Townshi**	**0.46**	**343**	*e*P	Pg	21 51 11.9	+0.5
	baz=343						
NDT				*e*S	Sb	21 51 19.2	-0.1
	baz=343						
ENTT	**Nioudou**	**0.49**	**349**	*e*P	Pb	21 51 12.5	-0.4
	baz=350						
ENTT				*e*S	Sb	21 51 19.6	-0.4
	baz=350						
OWD	**Renai**	**0.49**	**246**	*e*P	Pb	21 51 12.8	-0.2
	baz=245						
OWD				*e*S	Sb	21 51 19.9	-0.3
	baz=245						

TAP 04 21:52:35.2, 24°.15N×121°.66E, h12km, ML2.6, 20D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.04**	**279**	⇓*i* P	Pg	21 52 37.6	+0.1
ETL	baz=278			*i* S	Sg	21 52 39.4	+0.2
	baz=278						
NACB	**Ninganchiao**	**0.07**	**288**	⇓*i* P	Pg	21 52 37.9	+0.2
NACB	baz=288			*i* S	Sg	21 52 39.8	+0.3
	baz=288						
TWD	**Chiawan**	**0.10**	**220**	⇓*i* P	Pg	21 52 38.0	0.0
TWD	baz=217			*i* S	Sg	21 52 40.1	+0.1
	baz=217						
ETLH	**Xiulin Townshi**	**0.17**	**288**	⇓*i* P	Pg	21 52 39.7	+0.5
	baz=288						
ETLH				S	Sg	21 52 42.9	+0.9
	baz=288						

HWA	**Hwalien**	**0.18**	**197**	*i* P	Pg	21 52 39.9	+0.6
	baz=194						
HWA				*e*S	Sg	21 52 43.8	+1.7
	baz=194						
ETM	**Tongmen**	**0.24**	**220**	P	Pg	21 52 40.5	+0.2
	baz=220						
ETM				S	Sg	21 52 44.1	+0.3
	baz=220						
ENA	**Nanau**	**0.28**	**15**	⇓*i* P	Pg	21 52 41.1	0.0
	baz=16						
ENA				*e*S	Sg	21 52 45.2	+0.2
	baz=16						
TEYL	**Yanliau Villag**	**0.29**	**192**	*e*P	Pb	21 52 41.9	-0.5
	baz=193						
TEYL				*e*S	Sb	21 52 47.6	+0.4
	baz=193						
EWUT	**Wuta**	**0.31**	**20**	⇓*i* P	Pg	21 52 41.5	-0.1
	baz=20						
EWUT				*e*S	Sg	21 52 45.8	0.0
	baz=20						
WHF	**Hehuan Shan**	**0.36**	**269**	⇓*i* P	Pg	21 52 43.2	+0.5
	baz=269						
WHF				S	Sb	21 52 48.7	-1.0
	baz=269						
NNSB	**Datong**	**0.38**	**317**	⇓P	Pb	21 52 43.5	-0.5
	baz=317						
NNSB				*e*S	Sb	21 52 49.2	-0.6
	baz=317						
NNS	**Nan Shan**	**0.39**	**317**	⇓P	Pb	21 52 43.7	-0.5
	baz=318						
NNS				*e*S	Sb	21 52 49.6	-0.6
	baz=318						
FUSS	**Fushou**	**0.39**	**284**	⇓*i* P	Pb	21 52 44.0	-0.4
	baz=284						
FUSS				*e*S	Sb	21 52 50.2	-0.3
	baz=284						
ESL	**Shilin**	**0.40**	**212**	P	Pg	21 52 43.0	-0.1
	baz=211						
ESL				*e*S	Sg	21 52 48.5	0.0
	baz=211						
LATG	**Datong**	**0.40**	**342**	⇓*i* P	Pg	21 52 43.6	+0.4
	baz=342						
LATG				*e*S	Sb	21 52 49.7	-0.8
	baz=342						
CHGB	**Renai**	**0.46**	**258**	⇓*i* P	Pb	21 52 45.0	-0.4
	baz=258						
CHGB				*e*S	Sb	21 52 51.6	-0.6
	baz=258						
NDT	**Datong Townshi**	**0.47**	**343**	⇓*e*P	Pb	21 52 45.2	-0.3
	baz=343						
NDT				*e*S	Sb	21 52 52.1	-0.3
	baz=343						
TDCB	**Techi**	**0.47**	**282**	⇓P	Pb	21 52 45.6	0.0
	baz=282						
TDCB				*e*S	Sb	21 52 52.5	-0.1
	baz=282						
NDS	**Dongshan**	**0.48**	**6**	⇓P	Pg	21 52 45.0	+0.2
	baz=6.0						
NDS				*e*S	Sg	21 52 51.5	+0.4
	baz=6.0						
TWC	**Suao**	**0.48**	**20**	P	Pg	21 52 44.9	+0.1
	baz=22						
TWC				*e*S	Sg	21 52 51.4	+0.2
	baz=22						
OWD	**Renai**	**0.49**	**246**	⇓P	Pg	21 52 45.3	+0.4
	baz=246						
OWD				*e*S	Sb	21 52 52.5	-0.5
	baz=246						
ENTT	**Nioudou**	**0.49**	**350**	⇓P	Pb	21 52 45.5	-0.4
	baz=350						
ENTT				S	Sb	21 52 52.6	-0.5
	baz=350						
WUSB	**Renai**	**0.52**	**252**	⇓*e*P	Pb	21 52 46.3	-0.2
	baz=252						
WUSB				*e*S	Sb	21 52 54.0	-0.1
	baz=252						
EGFH	**Guangfu**	**0.53**	**204**	*e*P	Pg	21 52 45.6	0.0
	baz=204						
EGFH				*e*S	Sb	21 52 54.1	0.0
	baz=204						
TWE	**Neicheng**	**0.57**	**0**	⇓P	Pb	21 52 46.8	-0.3
	baz=2.0						
TWE				*e*S	Sg	21 52 53.8	-0.1
	baz=2.0						
YHNB	**Yeheng**	**0.58**	**333**	*e*P	Pb	21 52 47.3	-0.1
	baz=333						
YHNB				*e*S	Sb	21 52 55.4	-0.2
	baz=333						
NSK	**Sanguang**	**0.59**	**332**	*e*P	Pb	21 52 47.5	-0.1
	baz=332						
NSK				*e*S	Sb	21 52 55.5	-0.5
	baz=332						
FUSB	**Fushanzhiwuyua**	**0.61**	**354**	⇓P	Pb	21 52 47.8	-0.1
	baz=353						
FUSB				*e*S	Sb	21 52 56.1	-0.4
	baz=353						
ILA	**Ilan**	**0.61**	**7**	*e*P	Pg	21 52 47.5	+0.3
	baz=8.0						
VWDT	**VWDT**	**0.62**	**230**	*e*P	Pb	21 52 47.7	-0.3
	baz=230						
VWDT				*e*S	Sb	21 52 57.1	+0.4
	baz=230						
NWLT	**Wulai**	**0.64**	**347**	*e*P	Pb	21 52 48.4	0.0
	baz=347						
NWLT				*e*S	Sg	21 52 56.7	+0.5
	baz=347						
HGSD	**Ruisui**	**0.69**	**198**	*e*P	Pb	21 52 49.8	+0.5
	baz=198						
WCS	**Beigang Elemen**	**0.69**	**262**	*e*P	Pb	21 52 49.8	+0.5
	baz=262						
WCS				*e*S	Sb	21 52 59.5	+0.7
	baz=262						
EHY	**Hungye**	**0.72**	**206**	*e*P	Pg	21 52 49.2	0.0
	baz=205						
EHY				*e*S	Sb	21 52 59.5	0.0
	baz=205						
LIOB	**Emei**	**0.77**	**310**	*e*P	Pn	21 52 51.7	-0.3
	baz=310						
YULB	**Yu-li**	**0.83**	**204**	*e*P	Pg	21 52 50.5	-0.8
	baz=204						
YULB				*e*S	Sb	21 53 02.4	-0.3
	baz=204						
YOJ	**Yonaguni jima**	**1.27**	**76**	*e*P	Pn	21 52 58.1	-0.6
	baz=76						
YOJ				*e*S	Sb	21 53 14.4	-1.0
	baz=76						

JMA 04 21:53:30.3±0.3, 24°.8N±0°.9×123°.8E±0°.4, h0km, MV0.9/7, NW OFF ISHIGAKIJIMA IS, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.48**	**190**	P	Pg	21 53 40.1	+0.5
JISG	**Ishigakijimahi**	**0.50**	**116**	*e*S	Sg	21 53 47.9	+1.4
JIJ	**Ishigaki jima**	**0.54**	**146**	P	Pg	21 53 41.0	+0.4
JIJ				S	Sg	21 53 48.2	+0.6
JKRS	**Kuro-shima**	**0.60**	**163**	P	Pg	21 53 42.5	+0.7
JKRS				S	Sb	21 53 51.1	-1.5
HATJ	**Hateruma jima**	**0.75**	**181**	*e*S	Sb	21 53 55.8	-1.3
JTJ	**Tarama**	**0.82**	**102**	*e*S	Sb	21 53 58.5	-0.7

*IDC **04** 21:59:08.5±0.5, 18°.09S×168°.47E, h0km, mb4.6/24, mbtmp4.6/25, ML5.0/1, MS4.3/51, Error ellipse: s-maj=17.1km s-min=13.2km az=93.0*
*BJI **04** 21:59:10.3±0.0, 18°.76S×168°.54E, h31km, mb4.8/50, mB5.0/32, Ms4.7/25, Ms7 4.5/25*
*MOS **04** 21:59:14.3±1.1, 18°.12S×168°.24E, h45km, mb5.0/19, MS4.6/8, Error ellipse: s-maj=9.2km s-min=8.0km az=20.1*
*NOU **04** 21:59:15.9, 18°.12S×168°.19E, h31km, mb5.1/64, Vanuatu Islands*
*NEIC **04** 21:59:16.5±1.9, 18°.25S±0°.07×168°.28E±0°.06, h44km±2km, mb5.2/85, Error ellipse: s-maj=9.8km s-min=7.5km az=202.0*
*GCMT **04** 21:59:19.5±0.2, 18°.11S±0°.01×168°.16E±0°.01, h37km, MW5.1/119, Moment Tensor Solution. s83,c121; s119,c178; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-3.49±.15; Mθθ4.27±.10; Mϕϕ-0.77±.11; Mrθ1.20±.12; Mθϕ2.89±.08; Mϕr-2.79±.13; Best double couple: Mo5.74500×10^16 NP1:ϕs277.00000°, δ56.00000°, λ-41.00000°. NP2:ϕs34.00000°, δ57.00000°, λ-138.00000°. Principal axes: T 5.5840, Plg0.0000°, Azm155.0000°; N 0.3260, Plg39.0000°, Azm65.0000°; P -5.9060, Plg51.0000°, Azm246.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 21:59:15.5±0.4, 18°.18S±0°.04×168°.30E±0°.05, h44km±3km, h44km:pP-P, n529, σ1ᵍ53/501, mb5.0/92, MS4.4/75, 20C-42D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**0.47**	**347**	P	**Pn**	**21 59 25.6**	**-0.4**
MARNC	**Mare, Loyalty**	**3.29**	**184**	Pn	**Pn**	**22 00 02.8**	**-1.8**
MARNC				Sn	**Sn**	**22 00 38.3**	**-4.1**
YATNC	**Mamie plateau,**	**4.08**	**199**	P	**Pn**	**22 00 15.9**	**+0.5**
DZM	**Mont Dzumac**	**4.24**	**204**	Pn	**Pn**	**22 00 17.3**	**-0.4**
	88nm,0.3s,baz=42,slow=7.2,SNR=206						
DZM				Sn	**Sn**	**22 01 01.7**	**-4.4**
	56nm,0.3s,baz=104,slow=19,SNR=5.4						
DZM				LR	LR	22 01 48.6	
	comp=Z,7μm,21.2s,baz=36,slow=36						
	238nm,0.4s						
DZM	**Mont Dzumac**	**4.24**	**204**	*e*Pn	**Pn**	**22 00 18.8**	**+1.1**
	2μm,0.8s						
DZM				*e*Sn	**Sn**	**22 00 59.7**	**-6.4**
	2μm,0.8s						
DZM				*e*LR	LR	22 01 08.1	
	comp=Z,10μm,24.2s						
DZM	**Mont Dzumac**	**4.24**	**204**	Pn	**Pn**	**22 00 17.6**	**-0.2**
DZM				Sn	**Sn**	**22 01 03.5**	**-2.5**
DZM	**Mont Dzumac**	**4.24**	**204**	P	**Pn**	**22 00 18.4**	**+0.7**
NOUC	**Port Laguerre**	**4.33**	**205**	P	**Pn**	**22 00 19.0**	**+0.2**
OUENC	**Ouen Island, N**	**4.43**	**198**	Pn	**Pn**	**22 00 20.4**	**+0.1**
ONTNC	**Ouen Toro**	**4.46**	**203**	Pn	**Pn**	**22 00 21.0**	**+0.5**
ONTNC	**Ouen Toro**	**4.46**	**203**	P	**Pn**	**22 00 21.1**	**+0.6**
KOUNC	**Koumac, New Ca**	**4.46**	**237**	Pn	**Pn**	**22 00 20.6**	**0.0**
KOUNC	**Koumac, New Ca**	**4.46**	**237**	P	**Pn**	**22 00 20.7**	**0.0**
PINNC	**Pines Island,**	**4.48**	**190**	Pn	**Pn**	**22 00 20.6**	**-0.3**
PINNC	**Pines Island,**	**4.48**	**190**	P	**Pn**	**22 00 21.6**	**+0.7**
MSVF	**Nonsavu**	**9.29**	**89**	Pn	Pn	22 01 32.5	+5.5
	1.4nm,0.3s,baz=262,slow=10,SNR=12						
MSVF				LR	LR	22 04 25.2	
	comp=Z,3μm,19.7s,baz=242,slow=35						
MSVF	**Nonsavu**	**9.29**	**89**	Pn	**Pn**	**22 01 29.0**	**+2.0**
MSVF	**Nonsavu**	**9.29**	**89**	P	**Pn**	**22 01 29.0**	**+2.0**
MSVF	**Nonsavu**	**9.29**	**89**	P	**Pn**	**22 01 30.1**	**+3.1**
NFK	**Norfolk Island**	**10.82**	**182**	P	**Pn**	**22 01 50.3**	**+2.5**
	baz=11,SNR=5.6						
NFK	**Norfolk Island**	**10.82**	**182**	P	**Pn**	**22 01 50.8**	**+3.0**
HNR	**Honiara**	**11.89**	**316**	Pn	**Pn**	**22 02 03.7**	**+1.2**
	19nm,0.3s,baz=152,slow=5.9,SNR=12						
HNR	**Honiara**	**11.89**	**316**	Pn	**Pn**	**22 02 03.5**	**+1.0**
HNR	**Honiara**	**11.89**	**316**	P	**Pn**	**22 02 03.5**	**+1.0**
HNR	**Honiara**	**11.89**	**316**	P	**Pn**	**22 02 01.7**	**-0.8**
RAO	**Raoul Island**	**16.74**	**134**	LR	LR	22 08 18.9	
	comp=Z,1μm,20.1s,baz=102,slow=33						
RK1H	**Rockhampton Ha**	**17.43**	**250**	P	**P**	**22 03 16.5**	**+0.2**
EIDS	**Eidsvold**	**17.51**	**243**	P	**P**	**22 03 20.0**	**+2.9**
	baz=18,SNR=5.0						
EIDS	**Eidsvold**	**17.51**	**243**	P	**Pn**	**22 03 16.1**	**-0.4**
EIDS	**Eidsvold**	**17.51**	**243**	P	**P**	**22 03 17.8**	**+0.7**
OUZ	**Omahuta**	**17.61**	**166**	P	**P**	**22 03 19.4**	**+1.2**
ARMA	**Armidale**	**19.44**	**228**	P	**Pn**	**22 03 41.7**	**+1.7**
	baz=20,SNR=12						
ARMA	**Armidale**	**19.44**	**228**	Pn	**Pn**	**22 03 40.7**	**+0.7**
ARMA				IAmb	IAmb	22 03 45.2	
	comp=Z,202nm,1.4s						
ARMA	**Armidale**	**19.44**	**228**	P	**Pn**	**22 03 41.2**	**+1.2**
AFI	**Afiamalu**	**19.61**	**80**	LR	LR	22 10 20.4	
	comp=Z,170nm,21.0s,baz=282,slow=35						
AFI	**Afiamalu**	**19.61**	**80**		**Pn**	**22 03 43.4**	**+1.4**
AFI				IAmb	IAmb	22 03 53.9	
	comp=Z,124nm,1.2s						
AFI	**Afiamalu**	**19.61**	**80**	P	**Pn**	**22 03 43.4**	**+1.4**
AFI				pmax	pmax		
	comp=Z,124nm,1.2s						
RMQ	**Roma**	**19.86**	**242**	P	**Pn**	**22 03 46.5**	**+1.7**
	baz=20,SNR=42						
RMQ	**Roma**	**19.86**	**242**	P	**Pn**	**22 03 45.6**	**+0.8**
CTA	**Charters Tower**	**20.91**	**261**	P	Pn	22 03 56.0	-1.3
	comp=Z,42nm,1.0s,baz=81,slow=13,SNR=15						
CTA				LR	LR	22 11 22.1	
	comp=Z,1μm,19.3s,baz=81,slow=35						
	comp=Z,42nm,1.0s						
CTA	**Charters Tower**	**20.91**	**261**	P	Pn	22 03 56.1	-1.3
CTAO	**Charters Tower**	**20.91**	**261**	P	**P**	**22 03 54.5**	**0.0**
CTAO				IAmb	IAmb	22 04 03.0	
	comp=Z,95nm,1.3s						
CTAO	**Charters Tower**	**20.91**	**261**	P	**P**	**22 03 54.5**	**0.0**
CTAO				pmax	pmax		
	comp=Z,95nm,1.3s						
CTAO	**Charters Tower**	**20.91**	**261**	P	Pn	22 03 56.1	-1.3
HIZ	**Hauiti**	**21.05**	**166**		**P**	**22 03 57.1**	**+1.3**
HIZ				IAmb	IAmb	22 04 13.2	
	comp=Z,176nm,1.3s						
HIZ	**Hauiti**	**21.05**	**166**	P	**P**	**22 03 57.7**	**+2.0**
KRVT	**Keravat (AS076**	**21.06**	**309**	P	**P**	**22 03 57.1**	**+1.1**
	comp=Z,17nm,0.5s,baz=144,slow=19,SNR=3.7						
	comp=Z,17nm,0.5s						
HAZ	**Te Kaha**	**21.20**	**159**	P	**P**	**22 03 58.9**	**+1.6**
MXZ	**Matakaoa Point**	**21.21**	**158**	P	**P**	**22 03 59.3**	**+1.9**
RUGZ	**Raukumara Rang**	**21.35**	**159**	P	**P**	**22 04 01.6**	**+2.5**
PKGZ	**Pakihiroa**	**21.42**	**158**	P	**P**	**22 04 01.1**	**+1.3**
URZ	**Urewera**	**21.43**	**161**	P	**P**	**22 04 00.4**	**+0.5**
	comp=Z,25nm,0.6s,baz=303,slow=7.8,SNR=29						
URZ				LR	LR	22 10 52.8	
	comp=Z,2μm,20.9s,baz=31,slow=33						
	comp=Z,25nm,0.6s						
URZ	**Urewera**	**21.43**	**161**	P	**P**	**22 04 00.3**	**+0.5**
URZ				IAmb	IAmb	22 04 19.8	
	comp=Z,302nm,1.9s						
URZ	**Urewera**	**21.43**	**161**	P	**P**	**22 04 00.4**	**+0.5**
URZ	**Urewera**	**21.43**	**161**	P	**P**	**22 04 03.4**	**+3.6**
WMGZ	**Waiomatini S**	**21.48**	**158**	P	**P**	**22 04 01.5**	**+1.2**
MWZ	**Matawai**	**21.64**	**160**	P	**P**	**22 04 03.7**	**+1.6**
PUZ	**Puketiti**	**21.65**	**158**	P	**P**	**22 04 03.1**	**+0.9**
CNGZ	**Carnagh Statio**	**22.00**	**159**	P	**P**	**22 04 07.1**	**+1.2**
RIGZ	**Rimuhau**	**22.05**	**160**	P	**P**	**22 04 07.4**	**+0.9**
BKZ	**Black Stump Fm**	**22.09**	**163**	P	**P**	**22 04 08.0**	**+1.1**
PMG	**Port Moresby**	**22.29**	**290**	P	**P**	**22 04 10.3**	**+1.1**
	comp=Z,20nm,0.9s,baz=84,slow=9.2,SNR=6.6						
PMG				LR	LR	22 12 07.8	
	comp=Z,1μm,18.3s,baz=125,slow=35						
	comp=Z,20nm,0.9s						
PMG	**Port Moresby**	**22.29**	**290**	P	**P**	**22 04 09.6**	**+0.4**
PMG	**Port Moresby**	**22.29**	**290**	⇑*e*P	**P**	**22 04 10.6**	**+1.4**
PMG				pmax	pmax		
	comp=Z,51nm,1.5s						
MTSU	**Mount Surprise**	**22.79**	**266**	P	**P**	**22 04 15.6**	**+1.0**
	baz=23,SNR=32						
MTSU	**Mount Surprise**	**22.79**	**266**	P	**P**	**22 04 15.0**	**+0.4**
QRZ	**Quartz Range**	**22.86**	**172**	P	**P**	**22 04 18.4**	**+3.4**
BFZ	**Birch Farm**	**23.45**	**165**	P	**P**	**22 04 21.8**	**+0.9**
TUWZ	**Tuamarina**	**23.67**	**169**	P	**P**	**22 04 23.5**	**+0.6**
SNZO	**South Karori**	**23.70**	**168**	P	**P**	**22 04 24.5**	**+1.3**
QLP	**Quilpie**	**23.74**

QIS Mount Isa 27.16 260 P **P** **22 04 56.4 +1.5**
baz=27,SNR=5.2
QIS Mount Isa 27.16 260 P **P** **22 04 56.3 +1.3**
STKA Stephens Creek 27.68 235 P **P** **22 05 00.3 +0.9**
comp=Z,37nm,0.9s,baz=82,slow=10,SNR=36
STKA LR LR 22 15 47.3
comp=Z,545nm,19.6s,baz=46,slow=36
comp=Z,37nm,0.9s
STKA Stephens Creek 27.68 235 P **P** **22 05 00.7 +1.2**
baz=28,SNR=29
STKA Stephens Creek 27.68 235 P **P** **22 05 00.4 +0.9**
STKA Stephens Creek 27.68 235 P **P** **22 05 00.4 +0.9**
STKA pmax pmax
comp=Z,13nm,1.2s
STKA Stephens Creek 27.68 235 P **P** **22 05 00.4 +0.9**
TOO Toolangi 27.79 221 P **P** **22 05 02.8 +2.3**
baz=28,SNR=6.7
TOO Toolangi 27.79 221 P **P** **22 05 01.4 +1.0**
TOO Toolangi 27.79 221 P **P** **22 05 01.4 +1.0**
TOO pmax pmax
comp=Z,29nm,1.2s
TOO Toolangi 27.79 221 P **P** **22 05 01.5 +1.0**
ARPS Mount Arapiles 29.74 226 P **P** **22 05 18.9 +1.1**
baz=30,SNR=11
ARPS Mount Arapiles 29.74 226 P **P** **22 05 18.1 +0.3**
LCRK Leigh Creek 29.91 240 P **P** **22 05 19.6 +0.3**
RAR Rarotonga 30.18 101 LR LR 22 15 05.5
comp=Z,230nm,20.3s,baz=278,slow=32
HTT Hallett 30.36 234 P **P** **22 05 24.0 +0.7**
baz=31,SNR=8.1
HTT Hallett 30.36 234 P **P** **22 05 24.0 +0.7**
TWOA Tennyson Woods 31.27 232 P **P** **22 05 32.4 +1.2**
OOD Oodnadatta 31.43 246 P **P** **22 05 33.5 +0.8**
GENI Genyem 31.63 296 P **P** **22 05 35.3 +0.7**
comp=Z,70nm,1.4s
WR0 Warramunga Arr 31.93 261 P **P** **22 05 36.0 -1.2**
WR0 IAmb IAmb 22 05 37.9
comp=Z,82nm,2.0s
WRAB Tennant Creek 32.10 261⇓*e*P **P** **22 05 37.5 -1.3**
WRAB pmax pmax
comp=Z,29nm,2.5s
WRAB Tennant Creek 32.10 261 P **P** **22 05 38.0 -0.8**
WRA Warramunga Arr 32.12 261 P **P** **22 05 37.5 -1.4**
comp=Z,3.1nm,0.6s,baz=84,slow=7.6,SNR=40
WRA PcP **PcP** **22 08 26.2 -1.3**
comp=Z,1.4nm,0.8s,baz=93,slow=3.6,SNR=3.9
WRA LR LR 22 17 31.5
comp=Z,695nm,21.8s,baz=52,slow=34
comp=Z,3.1nm,0.6s
WRA Warramunga Arr 32.12 261 P **P** **22 05 37.5 -1.4**
BBOO Buckleboo 32.39 237 P **P** **22 05 41.6 +0.4**
baz=33,SNR=20
BBOO Buckleboo 32.39 237 P **P** **22 05 41.2 0.0**
BBOO IAmb IAmb 22 05 43.0
comp=Z,106nm,1.5s
BBOO Buckleboo 32.39 237 P **P** **22 05 41.8 +0.6**
AS31 Alice Springs 32.53 254 P **P** **22 05 41.8 -0.8**
ASAR Alice Springs 32.53 254 P **P** **22 05 42.1 -0.4**
comp=Z,11nm,0.6s,baz=81,slow=9.2,SNR=103
ASAR LR LR 22 18 44.1
comp=Z,1µm,18.8s,baz=90,slow=36
comp=Z,11nm,0.6s
ASAR Alice Springs 32.53 254 P **P** **22 05 41.9 -0.7**
ASAR Alice Springs 32.53 254 P **P** **22 05 41.9 -0.7**
MULG Mulgathing 33.34 242 P **P** **22 05 49.6 +0.1**
KDU Kakadu 34.92 274 P **P** **22 06 03.0 -0.3**
baz=35,SNR=8.3
MTN Manton Dam 36.16 273 P **P** **22 06 13.5 -0.4**
baz=36,SNR=4.4
MTN Manton Dam 36.16 273 P **P** **22 06 13.6 -0.4**
MTN IAmb IAmb 22 06 15.1
comp=Z,58nm,1.4s
MTN Manton Dam 36.16 273 P **P** **22 06 14.1 +0.1**
WRKA Warakurna 37.71 252 P **P** **22 06 26.8 -0.3**
baz=38,SNR=26
WRKA Warakurna 37.71 252 P **P** **22 06 26.5 -0.6**
KNRA Kununurra 37.86 268 P **P** **22 06 28.2 -0.1**
baz=38,SNR=54
KNRA Kununurra 37.86 268 P **P** **22 06 28.1 -0.3**
KNRA Kununurra 37.86 268 P **P** **22 06 28.0 -0.4**
FAKI Fak Fak 38.43 289 P **P** **22 06 32.8 -0.5**
FAKI IAmb IAmb 22 06 50.0
comp=Z,42nm,1.0s
FAKI Fak Fak 38.43 289 P **P** **22 06 32.7 -0.5**
comp=Z,44nm,1.0s
FAKI Fak Fak 38.43 289 P **P** **22 06 33.0 -0.3**
FORT Forrest 38.51 243 P **P** **22 06 34.0 +0.2**
baz=39,SNR=11
FORT Forrest 38.51 243 P **P** **22 06 34.0 +0.2**
FORT Forrest 38.51 243 P **P** **22 06 33.9 +0.2**
GUMO Guam 39.12 322 LR LR 22 21 09.1
comp=Z,526nm,21.6s,baz=140,slow=34
TBI Tubuai 39.73 105 *e*LR LR 22 17 36.7
comp=Z,840nm,28.2s
PPT2 Papeete2 40.03 96 *e*LR LR 22 17 50.6
comp=Z,1µm,28.8s
PPT Papeete 40.03 96 LR LR 22 19 18.1
comp=Z,409nm,21.8s,baz=259,slow=30
SIJI Sorong 40.23 291 P **P** **22 06 48.2 0.0**
comp=Z,12nm,0.6s,baz=92,slow=6.0
SIJI LR LR 22 23 38.9
comp=Z,527nm,19.5s,baz=124,slow=36
comp=Z,12nm,0.6s
SOEI Soe 43.45 275 P **P** **22 07 15.2 +0.5**
SOEI IAmb IAmb 22 08 06.0
comp=Z,42nm,1.1s
SOEI Soe 43.45 275 P **P** **22 07 15.7 +0.9**
comp=Z,1µmcomp=Z,36nm,1.3s
LBMI Labuha 43.69 289 P **P** **22 07 18.3 +1.8**
comp=Z,547nmcomp=Z,21nm,1.5s
BATI Baumata 43.90 274 LR LR 22 25 14.5
comp=Z,354nm,20.6s,baz=137,slow=36
BATI Baumata 43.90 274 P **P** **22 07 19.8 +1.5**
comp=Z,46nm,1.3s
TNTI Ternate 44.44 291 P **P** **22 07 22.7 +0.2**
SANI Sanana 44.47 286 P **P** **22 07 22.8 0.0**
comp=Z,820nmcomp=Z,53nm,1.5s
PSA00 Pilbara Seismi 45.55 257 P **P** **22 07 31.5 +0.2**
PSA00 IAmb IAmb 22 07 32.8
comp=Z,100nm,1.6s
PSA00 Pilbara Seismi 45.55 257 P **P** **22 07 31.1 -0.2**
PSA00 IAmb IAmb 22 07 33.0
comp=Z,60nm,1.6s
PSA00 Pilbara Seismi 45.55 257 P **P** **22 07 31.8 +0.5**
MMRI Maumere 45.69 276 P **P** **22 07 32.2 -0.3**
MMRI Maumere 45.69 276 P **P** **22 07 32.0 -0.5**
MBWA Marble Bar 45.69 258 P **P** **22 07 32.5 0.0**
MBWA Marble Bar 45.69 258 P **P** **22 07 32.9 +0.5**
EDFI Ende, Flores 46.17 275 P **P** **22 07 36.0 -0.4**
comp=Z,15nm,1.3s
KLBR Kellerberrin 47.37 244 P **P** **22 07 45.1 -0.4**
baz=48,SNR=9.3
KLBR Kellerberrin 47.37 244 P **P** **22 07 45.1 -0.4**
LUWI Luwuk 47.81 286 P **P** **22 07 49.2 +0.1**
LUWI Luwuk 47.81 286 P **P** **22 07 49.7 +0.6**
comp=Z,2µmcomp=Z,65nm,1.4s
NWAO Narrogin (SRO) 47.91 242 P **P** **22 07 49.3 -0.4**
NWAO Narrogin (SRO) 47.91 242 P **P** **22 07 49.3 -0.4**
NWAO pmax pmax
comp=Z,82nm,1.5s
NWAO Narrogin (SRO) 47.91 242 P **P** **22 07 49.5 -0.2**
BLDU Ballidu 48.21 245 P **P** **22 07 51.4 -0.6**
MUN Mundaring 48.71 243 P **P** **22 07 55.8 0.0**
baz=49,SNR=4.4
MUN Mundaring 48.71 243 P **P** **22 07 55.7 -0.1**
MORW Morawa 48.75 247 P **P** **22 07 56.2 0.0**
baz=49,SNR=10
MORW Morawa 48.75 247 P **P** **22 07 55.6 -0.6**
MORW Morawa 48.75 247 P **P** **22 07 56.0 -0.2**
APSI Ampana 48.90 285 P **P** **22 07 58.6 +1.2**
comp=Z,652nmcomp=Z,40nm,1.5s
BNSI Bone 49.04 280 P **P** **22 07 59.0 +0.5**
comp=Z,48nm,1.6s
KAPI Kappang 49.16 279 P **P** **22 07 59.0 -0.5**
KAPI Kappang 49.16 279 P **P** **22 07 59.0 -0.5**
KAPI pmax pmax
comp=Z,119nm,1.7s
TOLI2 Tolitoli 50.51 287 P **P** **22 08 08.9 -0.8**
TOLI2 IAmb IAmb 22 08 10.8
comp=Z,35nm,0.9s
TOLI2 Tolitoli 50.51 287 P **P** **22 08 09.6 -0.1**
GIRL Giralia 50.64 255 P **P** **22 08 11.1 +0.5**
GIRL Giralia 50.64 255 P **P** **22 08 11.6 +1.0**
TAOE Nuku Hiva Isla 50.83 87 *e*LR LR 22 22 38.7
comp=Z,1µm,28.0s

MPSI Mapaga 51.00 286 P **P** **22 08 13.8 +0.4**
JCJ Chichijima 51.65 330 LR LR 22 29 19.1
comp=Z,130nm,20.7s,baz=148,slow=35
BKB Balikpapan 53.15 282 P **P** **22 08 31.1 +1.7**
MYLDM Lahad Datu 54.31 291 P **P** **22 08 38.4 +0.5**
MYLDM IAmb IAmb 22 09 04.6
comp=Z,45nm,1.2s
JHJ Hachijo jima 2 57.83 332 LR LR 22 31 07.7
comp=Z,105nm,21.3s,baz=126,slow=33
JOW Kunigami 59.25 318 LR LR 22 30 04.1
comp=Z,155nm,21.8s,baz=109,slow=31
VNDA Vanda 59.45 182 P **P** **22 09 13.0 -0.4**
comp=Z,2.6nm,1.0s,baz=36,slow=5.3,SNR=9.0
comp=Z,2.6nm,1.0s
VNDA Vanda 59.45 182 P **P** **22 09 13.7 +0.3**
VNDA Vanda 59.45 182 P **P** **22 09 13.0 -0.4**
VNDA Vanda 59.45 182 P **P** **22 09 13.8 +0.4**
VNDA pP **sP** **22 09 29.4 -0.9**
SBA Scott Base 59.71 180 P **P** **22 09 16.6 +1.5**
SBA IAmb IAmb 22 09 33.7
comp=Z,35nm,1.1s
SBA Scott Base 59.71 180 P **P** **22 09 16.6 +1.5**
SBA pmax pmax
comp=Z,35nm,1.1s
SBA Scott Base 59.71 180 P **P** **22 09 16.6 +1.5**
SBA pP **sP** **22 09 31.4 -0.6**
LEM Lembang 60.07 273 LR LR 22 36 36.9
comp=Z,225nm,18.2s,baz=121,slow=37
KSM Kuching 60.27 283 P **P** **22 09 20.5 +0.5**
CASY Casey 60.74 203 P **P** **22 09 22.1 -0.2**
JGF Kuroka 61.00 331 P **P** **22 09 24.4 -0.2**
JSU Suzuyama 61.32 323 P **P** **22 09 26.9 +0.1**
MJAR Matsushiro Arr 61.41 333 P **P** **22 09 26.4 -0.9**
comp=Z,2.1nm,0.7s,baz=148,slow=7.2,SNR=6.6
MJAR LR LR 22 31 54.9
comp=Z,84nm,21.3s,baz=120,slow=32
comp=Z,2.1nm,0.7s
MJAR Matsushiro Arr 61.41 333 P **P** **22 09 28.0 +0.7**
CCD Concordia, Ant 61.74 192 P **P** **22 09 29.5 0.0**
CCD pP **pP** **22 09 41.1 -0.6**
JHS Saijyo 62.56 328 P **P** **22 09 35.5 +0.5**
ASAJ Asahikawa 66.31 340 P **P** **22 09 58.8 -0.5**
comp=Z,4.1nm,0.8s,baz=138,slow=17,SNR=2.1
ASAJ LR LR 22 34 24.4
comp=Z,629nm,21.6s,baz=171,slow=32
comp=Z,4.1nm,0.8s
TJN Taejon 66.64 325⇑*e*P **P** **22 10 01.8 +0.2**
KSCHJ Chungju 66.68 326 P **P** **22 10 02.0 +0.2**
KSRS Korea Array 67.14 326 P **P** **22 10 04.3 -0.4**
comp=Z,1.6nm,0.8s,baz=147,slow=6.9,SNR=6.3
comp=Z,1.6nm,0.8s
KSAR Wonju Array Be 67.15 326 P **P** **22 10 04.8 0.0**
KSAR Wonju Array Be 67.15 326 P **P** **22 10 04.8 0.0**
QIZ Qiongzhong 68.28 300 P **P** **22 10 16.4 +4.0**
QIZ S **S** **22 19 14.0 +3.6**
QIZ LR LR
comp=Z,240nm,15.2s
QIZ LR LR
comp=Z,130nm,15.9s
QIZ LR LR
comp=Z,190nm,15.9s
BKNI Bangkinang 68.55 278 P **P** **22 10 14.7 +0.5**
YSS Yuzh-Sakhalins 68.80 342 P **P** **22 10 16.6 +1.6**
YSS IAmb IAmb 22 10 35.1
comp=Z,15nm,1.0s
YSS Yuzh-Sakhalins 68.80 342 *e*P **P** **22 10 16.8 +1.9**
YSS *e*S **S** **22 19 15.7 +0.4**
YSS pmax pmax
comp=Z,10.0nm,1.2s
YSS MLR MLR
comp=Z,300nm,20.0s
NJ2 Nanjing 68.83 316 *e*P **P** **22 10 18.3 +2.8**
NJ2 pmax pmax
comp=Z,10.0nm,1.0s
IPM Ipoh 69.99 282 P **P** **22 10 23.2 0.0**
IPM IAmb IAmb 22 10 24.6
comp=Z,91nm,1.6s
USA0B Ussuriysk Arra 70.39 333 P **P** **22 10 25.2 +0.4**
USA0B IAmb IAmb 22 10 28.0
comp=Z,60nm,1.8s
USA0B Ussuriysk Arra 70.39 333*de*P **P** **22 10 26.5 +1.6**
USRK Ussuriysk Ar. 70.39 333 P **P** **22 10 25.2 +0.4**
comp=Z,3.2nm,0.6s,baz=134,slow=4.2,SNR=9.2
USRK LR LR 22 38 21.1
comp=Z,149nm,20.5s,baz=146,slow=33
comp=Z,3.2nm,0.6s
KULM Kulim 70.63 283 P **P** **22 10 26.3 -0.7**
KULM IAmb IAmb 22 10 28.5
comp=Z,59nm,1.6s
SHEM Shemya Is, Ala 70.79 4 LR LR 22 38 05.4
comp=Z,229nm,19.0s,baz=140,slow=33
PSI Prapat 71.37 279 LR LR 22 45 27.1
comp=Z,230nm,18.1s,baz=120,slow=39
PET Petropavlovsk 71.40 354⇓*e*P **P** **22 10 34.3 +3.6**
PET pmax pmax
comp=Z,22nm,1.1s
PETK Petropavlovsk- 71.58 353 P **P** **22 10 31.4 -0.4**
comp=Z,3.2nm,0.8s,baz=166,slow=8.3,SNR=2.0
PETK LR LR 22 37 01.7
comp=Z,313nm,20.8s,baz=162,slow=32
comp=Z,3.2nm,0.8s
PETK Petropavlovsk- 71.58 353 P **P** **22 10 32.5 +0.6**
MDJ Mudanjiang 71.78 332 P **P** **22 10 33.5 +0.3**
MDJ IAmb IAmb 22 10 49.8
comp=Z,28nm,1.2s
MDJ Mudanjiang 71.78 332 P P 22 10 38.5 +5.3
MDJ pmax pmax
comp=Z,18nm,0.9s
MDJ pmax pmax
comp=Z,150nm,3.8s
QSPA South Pole Qui 71.86 180 P **P** **22 10 33.5 -0.2**
QSPA IAmb IAmb 22 10 51.4
comp=Z,48nm,0.9s
QSPA South Pole Qui 71.86 180 P **P** **22 10 34.0 +0.2**
QSPA pP **pwP** **22 10 48.5 +0.2**
GSI Gunungsitoli 72.14 277 P **P** **22 10 36.1 -0.1**
GSI IAmb IAmb 22 10 51.9
comp=Z,47nm,1.0s
SRIT Nakonsritamara 72.81 285 P **P** **22 10 40.2 +0.1**
SRIT IAmb IAmb 22 10 56.6
comp=Z,41nm,1.2s
CN2 Changchun 73.10 329 *e*P **P** **22 10 40.5 -0.6**
CN2 pP PcP 22 10 57.0 -0.7
CN2 S **S** **22 20 02.5 -2.9**
CN2 sS sS 22 20 30.9 +4.6
CN2 pmax pmax
comp=Z,20nm,1.0s
CN2 LR LR
comp=Z,110nm,18.0s
CN2 LR LR
comp=Z,130nm,18.0s
CN2 LR LR
comp=Z,190nm,20.0s
BNX BinXian 73.63 331 ⇓P **P** **22 10 43.6 -0.6**
BNX pmax pmax
comp=Z,20nm,0.6s
BNX pmax pmax
comp=Z,120nm,5.9s
GRNR Gornyy 74.15 340⇓*i*P **P** **22 10 48.1 +0.9**
GRNR pmax pmax
comp=Z,10.0nm,0.9s
ENH Enshi 74.31 310 P **P** **22 10 48.6 0.0**
KLR Kul'dur 74.55 336 LR LR 22 40 25.0
comp=Z,294nm,20.9s,baz=122,slow=33
KLR Kul'dur 74.55 336⇑*e*P **P** **22 10 50.3 +0.8**
KLR pmax pmax
comp=Z,17nm,1.7s
LYN LuoYang 74.60 315⇑*i*P **P** **22 10 50.8 +0.7**
LYN PP **PP** **22 13 36.9 -0.7**
LYN S **S** **22 20 20.6 -2.1**
LYN LR LR
comp=Z,260nm,16.7s
LYN LR LR
comp=Z,200nm,18.6s
HNS HongShan 74.82 318 ⇑P **P** **22 10 52.3 +1.0**
HNS S **S** **22 20 30.6 +5.5**
HNS LR LR
comp=Z,180nm,18.6s
HNS LR LR
comp=Z,160nm,20.1s
BJT Baijiatuau 75.55 321 P **P** **22 10 56.2 +0.7**
BJT Baijiatuau 75.55 321 P **P** **22 10 56.2 +0.7**
BJT pmax pmax
comp=Z,8.0nm,0.7s
BJI Beijing 75.56 321 P **P** **22 10 55.8 +0.3**

BJI pP **pP** **22 11 06.7 -1.3**
BJI PcP **PcP** **22 11 09.2 +0.9**
BJI S **S** **22 20 34.8 +1.7**
BJI pmax pmax
comp=Z,12nm,0.6s
BJI LR LR
comp=Z,120nm,17.0s
BJI LR LR
comp=Z,100nm,15.0s
BJI LR LR
comp=Z,220nm,23.6s
XAN Xi'an 76.74 313 P **P** **22 11 03.5 +1.0**
XAN pP PcP 22 11 10.6 -3.1
XAN pmax pmax
comp=Z,12nm,1.3s
XAN LR LR
comp=Z,160nm,15.3s
XAN LR LR
comp=Z,210nm,17.7s
XAN LR LR
comp=Z,280nm,18.5s
KMI Kunming 76.96 302 ⇓P **P** **22 11 05.2 +1.1**
KMI pP sP 22 11 20.0 -1.3
KMI S **S** **22 20 50.3 +0.7**
KMI pmax pmax
comp=Z,13nm,1.4s
KMI pmax pmax
comp=Z,130nm,3.6s
KMI LR LR
comp=Z,120nm,12.4s
KMI LR LR
comp=Z,120nm,16.4s
KMI LR LR
comp=Z,180nm,15.5s
CMAR Chiang Mai Arr 77.26 294 P **P** **22 11 07.0 +1.3**
comp=Z,3.1nm,0.7s,baz=128,slow=4.4,SNR=19
CMAR LR LR 22 47 23.5
comp=Z,45nm,18.5s,baz=105,slow=37
comp=Z,3.1nm,0.7s
CMAR Chiang Mai Arr 77.26 294 P **P** **22 11 06.5 +0.9**
CMAR Chiang Mai Arr 77.26 294 *i* P **P** **22 11 07.0 +1.3**
CMAR pmax pmax
comp=Z,4.0nm,0.7s
CHTO Chiang Mai 77.40 295 P **P** **22 11 07.0 +0.5**
CHTO IAmb IAmb 22 11 22.3
comp=Z,13nm,1.1s
CHTO Chiang Mai 77.40 295 P **P** **22 11 07.0 +0.5**
CHTO pmax pmax
comp=Z,13nm,1.1s
XLT XiLinHaoTe 78.07 324 *e*P **P** **22 11 09.8 +0.1**
XLT pP pP 22 11 21.5 -0.8
XLT sP sP 22 11 24.5 -2.5
XLT pmax pmax
comp=Z,21nm,0.7s
XLT pmax pmax
comp=Z,58nm,3.6s
XLT LR LR
comp=Z,140nm,18.6s
XLT LR LR
comp=Z,180nm,16.8s
PZH PanZhiHua 78.39 303 P **P** **22 11 14.6 +2.6**
PZH pmax pmax
comp=Z,7.0nm,0.6s
PZH pmax pmax
comp=Z,100nm,5.8s
MA2 Magadan 78.79 351 LR LR 22 42 25.8
comp=Z,206nm,20.2s,baz=153,slow=33
MA2 Magadan 78.79 351⇑*e*P **P** **22 11 17.2 +4.0**
MA2 pmax pmax
comp=Z,7.0nm,1.1s
HHC Hu-ho-hao-te 78.84 320 *e*P P 22 11 08.1 -6.0
HHC PP **PP** **22 14 08.9 -4.4**
HHC S **S** **22 21 01.7 -7.4**
HHC pmax pmax
comp=Z,15nm,0.8s
HHC pmax pmax
comp=Z,150nm,8.4s
HHC LR LR
comp=N,190nm,13.3s
HHC LR LR
comp=E,230nm,15.2s
HHC LR LR
comp=Z,320nm,18.4s
CD2 Chengdu 78.89 308 P **P** **22 11 16.0 +1.5**
CD2 pmax pmax
comp=Z,10.0nm,0.9s
CD2 LR LR
comp=Z,240nm,17.3s
CD2 LR LR
comp=Z,280nm,16.7s
MAW Mawson 79.07 202 P **P** **22 11 15.9 +1.0**
comp=Z,18nm,1.2s,baz=108,slow=6.6,SNR=12
MAW LR LR 22 40 41.3
comp=Z,261nm,21.9s,baz=102,slow=32
comp=Z,18nm,1.2s
MAW Mawson 79.07 202 P **P** **22 11 14.7 -0.1**
baz=79,SNR=8.5
MAW Mawson 79.07 202 P **P** **22 11 15.8 +1.0**
MAW Mawson 79.07 202 P **P** **22 11 15.8 +1.0**
MAW pmax pmax
comp=Z,10.0nm,1.4s
ZEA Zeya 79.84 337 *e*P **P** **22 11 19.9 +0.8**
ZEA pmax pmax
comp=Z,10.0nm,0.7s
LZH Lanzhou 81.36 312 *e*P **P** **22 11 29.4 +1.5**
LZH pP pP 22 11 41.0 +0.7
LZH pmax pmax
comp=Z,21nm,1.1s
LZH pmax pmax
comp=Z,160nm,6.3s
LZH LR LR
comp=Z,130nm,17.2s
LZH LR LR
comp=Z,150nm,16.7s
LZH LR LR
comp=Z,150nm,20.7s
PAF Port-aux-Franc 81.53 221 P **P** **22 11 29.9 +1.5**
PAF Port-aux-Franc 81.53 221 P **P** **22 11 29.9 +1.5**
PAF pmax pmax
comp=Z,878nm,1.8s
SEY Seymchan 81.81 353 P **P** **22 11 28.4 -1.0**
comp=Z,3.4nm,0.8s,baz=152,slow=4.5,SNR=9.2
SEY LR LR 22 44 07.2
comp=Z,496nm,20.8s,baz=175,slow=33
comp=Z,3.4nm,0.8s
SEY Seymchan 81.81 353⇑*e*P **P** **22 11 29.1 -0.3**
SEY pmax pmax
comp=Z,20nm,1.7s
KDAK Kodiak Island 82.34 20 LR LR 22 42 50.4
comp=Z,156nm,19.3s,baz=235,slow=32
BELA Belgrano 2 83.22 175 P **P** **22 11 35.9 -0.9**
BELA IAmb IAmb 22 11 37.2
comp=Z,7.7nm,0.5s
O18K Koktuh Hills 83.22 18 P **P** **22 11 38.0 +1.1**
SMAI San Martin Ant 85.11 162 P **P** **22 11 45.9 -0.5**
SMAI IAmb IAmb 22 11 47.6
comp=Z,31nm,1.5s
ULN Ulaanbaatar 85.49 324 P **P** **22 11 48.7 -0.1**
ULN IAmb IAmb 22 12 04.4
comp=Z,29nm,1.2s
ULN Ulaanbaatar 85.49 324*d i*P **P** **22 11 49.0 +0.2**
ULN pmax pmax
comp=Z,28nm,1.7s
YAK Yakutsk 85.60 343 P **P** **22 11 48.0 -0.8**
comp=Z,8.8nm,0.6s,baz=150,slow=0.9,SNR=7.9
YAK LR LR 22 45 24.7
comp=Z,217nm,21.8s,baz=90,slow=32
comp=Z,8.8nm,0.6s
YAK Yakutsk 85.60 343 P **P** **22 11 48.2 -0.6**
YAK IAmb IAmb 22 11 50.2
comp=Z,20nm,0.8s
YAK Yakutsk 85.60 343*d i*P **P** **22 11 48.1 -0.7**
YAK *e**PP **pP** **22 12 02.7 +1.1**
YAK *e* 22 15 02.6
YAK *e*S S 22 22 07.9 -9.3
YAK *e*SS **SS** **22 27 53.1 -1.3**
YAK pmax pmax
comp=Z,16nm,0.8s
YAK pmax pmax
comp=E,2.0nm,0.8s
YAK pmax pmax
comp=N,2.0nm,0.9s
YAK pmax pmax
comp=Z,82nm,4.2s
YAK pmax pmax
comp=E,47nm,4.4s

YAK smax smax
comp=E,40nm,3.3s
YAK smax smax
comp=N,22nm,3.1s
YAK MLR MLR
comp=Z,164nm,18.0s
YAK MLR MLR
comp=N,172nm,20.0s
YAK MLR MLR
comp=E,51nm,22.0s
GTA Gaotai 85.76 314 ||P **P** **22 11 50.4 +0.1**
GTA pP pP 22 12 02.4 -0.4
GTA sP sP 22 12 10.4 +2.9
GTA pmax pmax
comp=E,12nm,1.4s
GTA pmax pmax
comp=E,59nm,7.6s
GTA LR LR
comp=E,110nm,20.7s
GTA LR LR
comp=E,120nm,21.1s
GTA LR LR
comp=E,130nm,20.7s
SONM Songino Array 85.84 323 P **P** **22 11 50.2 -0.3**
comp=E,5.0nm,1.0s,baz=137,slow=4.4,SNR=27
SONM LR LR 22 47 47.0
comp=E,85nm,21.8s,baz=114,slow=34
comp=E,5.0nm,1.0s
SONM Songino Array 85.84 323 P **P** **22 11 50.0 -0.6**
SONM IAmb IAmb 22 12 06.0
comp=Z,19nm,1.1s
SONM Songino Array 85.84 323 P **P** **22 11 50.0 -0.6**
SONM pmax pmax
comp=Z,19nm,1.1s
BILL Bilibino 85.99 359 P **P** **22 11 49.8 -0.8**
BILL IAmb IAmb 22 11 51.1
comp=Z,45nm,1.8s
BILL Bilibino 85.99 359 *de*P **P** **22 11 50.2 -0.4**
BILL *i* 22 11 59.5
BILL *e* 22 15 13.4
BILL *e*S **S** **22 22 14.2 -6.6**
BILL pmax pmax
comp=Z,20nm,1.7s
BILL MLR MLR
comp=Z,73nm,16.0s
ORV Oroville 87.00 47 P **P** **22 11 56.4 +0.1**
ORV Oroville 87.00 47 P **P** **22 11 56.4 +0.1**
ORV pmax pmax
comp=Z,8.0nm,1.2s
CMB Columbia Colle 87.12 49 P **P** **22 11 56.5 -0.5**
CMB IAmb IAmb 22 11 58.9
comp=Z,7.0nm,0.9s
CMB Columbia Colle 87.12 49 P **P** **22 11 56.5 -0.5**
CMB pmax pmax
comp=Z,7.0nm,0.9s
YBH Yreka Blue Hor 87.17 44 LR LR 22 42 39.3
comp=Z,204nm,21.2s,baz=252,slow=30
ISA Isabella, Lake 87.51 51 P **P** **22 11 59.1 +0.2**
ISA Isabella, Lake 87.51 51 P **P** **22 11 59.1 +0.2**
ISA pmax pmax
comp=Z,5.0nm,0.9s
MDPB Devils Postpil 87.89 49 P **P** **22 12 00.8 -0.2**
MDPB IAmb IAmb 22 13 13.4
comp=Z,8.5nm,0.9s
GOMU GeErMu 87.92 309 P **P** **22 12 04.3 +3.0**
GOMU pP PcP 22 12 08.3 +5.3
GOMU pmax pmax
comp=Z,42nm,6.5s
GOMU LR LR
comp=Z,100nm,17.1s
GOMU LR LR
comp=Z,130nm,16.3s
GOMU LR LR
comp=Z,150nm,17.7s
BEKR Beckworth 87.93 47 P **P** **22 12 00.6 -0.3**
BEKR IAmb IAmb 22 12 02.7
comp=Z,9.3nm,1.2s
OMMB Old Mammoth Mi 87.94 49 P **P** **22 12 01.3 0.0**
OMMB IAmb IAmb 22 12 15.3
comp=Z,20nm,1.7s
PMSA Palmer Station 88.20 160 LR LR 22 46 09.0
comp=Z,199nm,20.2s,baz=228,slow=32
PFO Pinyon Flats O 88.21 54 LR LR 22 42 43.6
comp=Z,88nm,20.8s,baz=246,slow=30
LSA Lhasa 88.22 302 P **P** **22 12 02.5 -0.4**
LSA Lhasa 88.22 302 P **P** **22 12 02.5 -0.4**
LSA pmax pmax
comp=Z,5.0nm,1.0s
IMAR Indian Mountai 88.63 15 P **P** **22 12 03.3 -0.1**
NVAR Mina Array Bea 88.78 49 P **P** **22 12 04.5 -0.6**
comp=Z,1.6nm,0.7s,baz=228,slow=6.8,SNR=14
NVAR LR LR 22 46 47.0
comp=Z,105nm,18.5s,baz=263,slow=32
comp=Z,1.6nm,0.7s
MOD Modoc Plateau 88.85 45 P **P** **22 12 04.8 -0.5**
MOD IAmb IAmb 22 12 27.8
comp=Z,35nm,1.9s
NV11 Mina Array Sit 88.88 49 P **P** **22 12 05.2 -0.3**
NV11 IAmb IAmb 22 12 18.9
comp=Z,16nm,1.5s
ZAK Zakamensk 88.92 325 *e*P **P** **22 12 04.2 -1.1**
ZAK *e* 22 12 17.9
ZAK pmax pmax
comp=Z,8.0nm,1.8s
ZAK pmax pmax
comp=Z,8.0nm,1.3s
BBB Bella Bella 89.08 33 LR LR 22 46 06.3
comp=Z,94nm,19.0s,baz=167,slow=32
PINE Pine Mountain 89.26 43 P **P** **22 12 07.5 +0.3**
PINE IAmb IAmb 22 12 21.5
comp=Z,18nm,1.4s
TPH Tonopah 89.41 50 P **P** **22 12 07.6 -0.4**
TPH Tonopah 89.41 50 P **P** **22 12 07.6 -0.4**
TPH pmax pmax
comp=Z,33nm,1.2s
ILAR Eielson Array 89.50 18 P **P** **22 12 05.5 -2.0**
comp=Z,0.6nm,0.6s,baz=241,slow=5.2,SNR=9.7
ILAR LR LR 22 48 59.9
comp=Z,158nm,19.0s,baz=237,slow=34
comp=Z,0.6nm,0.6s
TROLL Troll, Antarti 89.52 184 P **P** **22 12 07.8 -0.1**
TROLL Troll, Antarti 89.52 184 pP pP 22 12 19.0 -1.6
BLYC Blythe 89.75 54 P **P** **22 12 09.6 +0.1**
BLYC IAmb IAmb 22 12 23.1
comp=Z,6.7nm,1.1s
LPIG La Paz 89.77 65 LR LR 22 44 07.4
comp=Z,203nm,19.9s,baz=233,slow=30
J25K Salcha River, 89.82 18 P **P** **22 12 10.3 +1.2**
PALK Pallekele 89.97 278 LR LR 22 56 06.9
comp=Z,76nm,18.5s,baz=216,slow=38
D05A Enumclaw 90.11 40 P **P** **22 12 11.2 +0.4**
SNAA Sanae 90.17 183 P **P** **22 12 10.2 -0.6**
SNAA Sanae 90.17 183 pP pP 22 12 21.0 -2.6
SNAA Sanae 90.17 183 P **P** **22 12 09.7 -1.2**
SNAA IAmb IAmb 22 12 24.9
comp=Z,6.6nm,0.8s
SNAA Sanae 90.17 183 *ce*P **P** **22 12 10.5 -0.4**
SNAA pmax pmax
comp=Z,10.0nm,1.3s
BMN Battle Mountai 90.35 47 P **P** **22 12 12.1 -0.2**
BMN IAmb IAmb 22 12 14.6
comp=Z,5.7nm,0.9s
BMN Battle Mountai 90.35 47 P **P** **22 12 12.1 -0.2**
BMN pmax pmax
comp=Z,6.0nm,0.9s
W13A Hualapai Mount 90.75 53 P **P** **22 12 14.1 -0.3**
VNA3 Neumayer Olymp 90.80 181 P **P** **22 12 12.6 -1.1**
VNA3 Neumayer Olymp 90.80 181 pP pP 22 12 25.0 -1.4
VNA2 Neumayer--Watz 91.08 181 P **P** **22 12 15.5 +0.5**
baz=182,slow=4.1
VNA2 Neumayer--Watz 91.08 181 PP PP 22 15 50.9 -0.3
VNA2 Neumayer--Watz 91.08 181 pP pP 22 12 26.2 -1.5
VNA1 Neumayer--Stat 91.37 181 P **P** **22 12 16.8 +0.5**
VNA1 Neumayer--Stat 91.37 181 pP pP 22 12 28.1 -0.9
DLBC Dease Lake 91.52 28 LR LR 22 44 44.7
comp=Z,185nm,22.0s,baz=262,slow=30
ELK Elko 91.87 48 LR LR 22 46 11.1
comp=Z,76nm,20.6s,baz=266,slow=31
U15A North Rim 92.43 53 P **P** **22 12 23.3 +1.1**
TIXI Tiksi 93.53 348 P **P** **22 12 27.2 +1.2**
comp=Z,1.9nm,1.0s,baz=89,slow=23,SNR=7.3
TIXI LR LR 22 51 06.9
comp=Z,105nm,22.0s,baz=180,slow=33
comp=Z,1.9nm,1.0s
TIXI Tiksi 93.53 348 ⇑*i*P **P** **22 12 28.4 +2.4**
TIXI pmax pmax
comp=Z,2.0nm,1.0s
NEW Newport 93.55 40 LR LR 22 47 03.2
comp=Z,68nm,21.6s,baz=278,slow=31
HYBB Hyderabad (bro 95.06 287 *e*P **P** **22 12 34.5 +0.2**
HYBB *e*pP **pP** **22 12 47.8 +0.7**
INK Inuvik 95.83 19 LR LR 22 49 44.8
comp=Z,128nm,21.4s,baz=222,slow=32
WMQ Urumqi 95.83 314 *e*P **P** **22 12 38.0 +0.6**
WMQ LR LR
comp=Z,220nm,28.1s
WMQ LR LR
comp=Z,140nm,24.3s
ANMO Albuquerque 96.44 55 LR LR 22 49 18.0
comp=Z,65nm,19.9s,baz=266,slow=31
PDAR Pinedale Array 96.55 47 LR LR 22 50 52.2
comp=Z,68nm,19.0s,baz=268,slow=32
TXAR Lajitas Array 97.05 62 P **P** **22 12 42.5 -0.8**
comp=Z,0.3nm,0.7s,baz=220,slow=6.6,SNR=4.0
TXAR LR LR 22 47 26.9
comp=Z,87nm,21.9s,baz=267,slow=30
comp=Z,0.3nm,0.7s
PLCA Paso Flores 99.91 139 LR LR 22 49 34.3
comp=Z,57nm,20.1s,baz=242,slow=30
MK31 Makanchi Array 100.36 316 *e*P **Pdif** **22 12 57.9 +0.3**
MKAR Makanchi Array 100.36 316 P **Pdif** **22 12 57.0 -0.6**
comp=Z,1.6nm,0.6s,baz=92,slow=5.4,SNR=25
MKAR Makanchi Array 100.36 316 Pdif **Pdif** **22 12 57.5 -0.1**
ZALV Zalesovo Beam 100.74 323 P **Pdif** **22 12 57.3 -1.7**
comp=Z,0.4nm,0.2s,baz=104,slow=6.1,SNR=2.6
ZALV Zalesovo Beam 100.74 323 P **Pdif** **22 12 57.8 -1.2**
ABPO Ambohimpanom 111.33 240 *i* PKIKP **PKiKP** **22 17 46.1 +0.3**
ARU Arti 115.86 324 PKP **PKPdf** **22 17 52.0 -1.0**
comp=Z,4.4nm,0.5s,baz=1.4,slow=3.3,SNR=10
ARU Arti 115.86 324 **PKPdf** **22 17 51.8 -1.3**
ARU Arti 115.86 324 *i* PKIKP **PKPdf** **22 17 51.9 -1.1**
ARU 22 18 55.0
ARU 22 25 01.3
ARU SS SS 22 34 53.0 -2.3
AKTO Aktyubinsk 116.69 318 PKP **PKPdf** **22 17 53.4 -1.5**
comp=Z,1.6nm,0.5s,baz=113,slow=4.7,SNR=6.2
BELG Belogorsk Array 122.84 321 PKP **PKPdf** **22 18 04.9 -1.6**
comp=Z,9.1nm,0.6s,baz=64,slow=2.9,SNR=13
ARCES ARCESS Array B 123.82 345 PKP **PKPdf** **22 18 06.9 -1.1**
comp=Z,4.8nm,0.6s,baz=63,slow=1.9,SNR=20
KLMR Klimovskoe 124.19 333 *e*PKIKP **PKPdf** **22 18 05.7 -3.2**
KLMR pmax pmax
comp=Z,24nm,1.5s
KLMR Klimovskoe 124.19 333 *e*PKPdf **PKPdf** **22 18 05.7 -3.2**
KLMR AMP 22 18 24.0
comp=Z,24nm,1.5s
RAYN Ar Rayn 126.56 286 ||PKIKP **PKPdf** **22 18 14.7 0.0**
KIV Kislovodsk 127.90 312 *i* PKIKP **PKPdf** **22 18 16.2 -0.5**
KIV pmax pmax
comp=Z,4.0nm,1.1s
VORR Voronezh 128.02 322 *e*PKIKP **PKPdf** **22 18 15.0 -1.5**
VORR pmax pmax
comp=Z,10.0nm,0.4s
FINES FINESS Array B 129.28 338 PKP **PKPdf** **22 18 17.6 -1.0**
comp=Z,1.5nm,0.6s,baz=20,slow=4.5,SNR=13
FINES FINESS Array B 129.28 338 *c i* PKIKP **PKPdf** **22 18 18.1 -0.5**
FINES pmax pmax
comp=Z,2.0nm,0.6s
GURO Guroymak-BITLI 129.30 305 **PKPdf** **22 18 18.8 -0.8**
AKASG Malin Array Be 134.12 325 PKP **PKPdf** **22 18 27.5 -0.5**
comp=Z,1.2nm,0.5s,baz=44,slow=1.5,SNR=10
AKASG Malin Array Be 134.12 325 **PKPdf** **22 18 27.4 -0.7**
AKASG Malin Array Be 134.12 325 PKIKP **PKPdf** **22 18 27.4 -0.7**
NB2 NORSAR Subarra 134.20 345 PKPdf **PKPdf** **22 18 27.8 -0.2**
baz=31,slow=1.9
NB2 NORSAR Subarra 134.20 345 PKPdf **PKPdf** **22 18 27.8 -0.2**
comp=Z,13nm,1.7s,baz=31,slow=1.9
NOA NORSAR Array B 134.20 345 PKP **PKPdf** **22 18 26.9 -1.1**
comp=Z,0.8nm,0.6s,baz=33,slow=2.1,SNR=5.8
BR131 Keskin Array S 135.46 309 PKPdf **PKPdf** **22 18 30.6 -0.6**
BR131 Keskin Array S 135.46 309 PKIKP **PKPdf** **22 18 30.6 -0.6**
BRTR Keskin Array B 135.46 309 PKP **PKPdf** **22 18 30.7 -0.5**
comp=Z,0.8nm,0.6s,baz=132,slow=4.0,SNR=6.8
BRTR Keskin Array B 135.46 309 **PKPdf** **22 18 30.5 -0.6**
BRTR Keskin Array B 135.46 309 *c i* PKIKP **PKPdf** **22 18 31.0 -0.2**
BRTR pmax pmax
comp=Z,1.0nm,0.6s
BIZ Bicaz 137.78 321 ⇑P **PKPdf** **22 18 35.3 +0.2**
BUR08 Bucovina Ar. S 137.95 323 **PKPdf** **22 18 35.5 0.0**
BURAR Bucovina Array 137.96 323 ⇑P **PKPdf** **22 18 36.1 +0.6**
BURAR Bucovina Array 137.96 323 ⇑PKIKP **PKPdf** **22 18 36.1 +0.6**
UZH Uzhgorod 139.02 326 *e*PKIKP **PKPdf** **22 18 37.0 -0.2**
UZH *e* 22 18 49.9
DRGR 139.84 323 ⇑P PKPdf 22 18 30.6 -8.4
DRGR 139.84 323 ⇑PKHKP PKPpre 22 18 30.6
OKC Ostrava-Krasne 140.38 330 AMS AMS 23 19 20.0
comp=Z,200nm,21.9s
OSTC Ostas 140.78 332 *e*PKP **PKPdf** **22 18 38.4 -2.0**
OSTC AMS AMS 23 21 30.0
comp=Z,200nm,24.2s
CHVC Chvalec 140.83 332 *e*PKP **PKPdf** **22 18 36.5 -4.0**
KRLC Kraliky 140.86 331 *e*PKHKP PKPpre 22 18 34.6
KRLC Kraliky 140.86 331 *e*PKP **PKPdf** **22 18 34.6 -6.0**
DPC Dobruska-Polom 140.88 332 *e*PKHKP PKPpre 22 18 33.9
DPC MLR MLR
comp=Z,200nm,21.5s
DPC Dobruska-Polom 140.88 332 *e*PKP **PKPdf** **22 18 33.9 -6.7**
DPC AMS AMS 23 21 40.0
comp=Z,200nm,21.5s
UPC Upice 140.90 332 AMS AMS 23 18 20.0
comp=Z,200nm,22.4s
JAVC Velka Javorina 141.26 329 *e*PKP **PKPdf** **22 18 38.1 -3.3**
MDVR Moldovita 141.52 321 ⇑P **PKPdf** **22 18 40.3 -1.6**
PVCC Panska Ves 141.52 333 AMS AMS 23 18 20.0
comp=Z,200nm,23.3s
BRG Berggiesshubel 141.53 344 *e*PKP **PKPdf** **22 18 38.7 -3.0**
BRG Amp 22 18 41.2
comp=Z,2.1nm,0.6s
BRG Berggiesshubel 141.53 334 *e*PKIKP **PKPdf** **22 18 38.7 -3.0**
BRG pmax pmax
comp=Z,2.0nm,0.6s
CLL Collm 141.59 335 PKPdf **PKPdf** **22 18 43.1 +1.3**
CLL Collm 141.59 335 PKIKP **PKPdf** **22 18 43.1 +1.3**
CLL Collm 141.59 335 *e*PKPdf **PKiKP** **22 18 44.0 -0.6**
comp=Z,3.0nm,0.6s
CLL *ep*PKPdf **pPKPdf** **22 18 55.0 0.0**
CLL *e*SPP SPP 22 33 54.0
CLL *e*SS **SS** **22 40 18.0 +5.7**
CLL *e*SSS SSS 22 45 36.0
VTS Vitosha 141.68 317 ||P **PKPdf** **22 18 36.6 -5.8**
VTS Vitosha 141.68 317 PKPdf **PKPdf** **22 18 42.2 -0.2**
VTS Vitosha 141.68 317 ||PKHKP PKPpre 22 18 36.6
KRUC Moravsky 141.74 330 *e*PKP **PKPdf** **22 18 37.7 -4.5**
PRU Pruhonice 141.93 332 *e*PKIKP **PKPdf** **22 18 37.8 -4.7**
PRU MLR MLR
comp=Z,200nm,21.8s
PRU Pruhonice 141.93 332 *e*PKP **PKPdf** **22 18 37.8 -4.7**
PRU AMS AMS 23 18 40.0
comp=Z,200nm,21.8s
MORH Mrgy, Hungar 142.46 325 *e*P **PKPdf** **22 18 44.8 +1.3**
MORH Mrgy, Hungar 142.46 325 PKP **PKPdf** **22 18 43.0 -0.5**
NKC Novy Kostel 142.64 334 AMS AMS 23 22 00.0
comp=Z,200nm,19.0s
RONA Rosalia, Austr 142.72 328 *e*P **PKPdf** **22 18 41.4 -2.6**
comp=Z,3.5nm,0.6s
CONA Conrad Observa 142.78 329 *e*P **PKPdf** **22 18 41.6 -2.6**
comp=Z,7.6nm,1.5s
CONA *e*P **pPKPdf** **22 18 56.2 -1.1**
comp=Z,7.3nm,1.1s
KOVH Kovagotottos 142.83 325 PKP **PKiKP** **22 18 46.8 -0.5**
CKRC Cesky Krumlov 142.89 331 *e*PKP **PKPdf** **22 18 40.6 -3.7**
CKRC AMS AMS 23 18 30.0
comp=Z,200nm,23.9s
DIVS Divibare 142.93 321 *e*P **PKPdf** **22 18 39.2 -5.4**
KHC Kasperske Hory 142.99 332 *e*PKIKP **PKPdf** **22 18 40.8 -3.7**
KHC MLR MLR
comp=Z,200nm,21.0s
KHC Kasperske Hory 142.99 332 *e*PKP **PKPdf** **22 18 40.8 -3.7**
KHC AMS AMS 23 20 00.0
comp=Z,200nm,21.0s
GERES GERESS Array B 143.14 332 PKhKP PKPpre 22 18 41.1
comp=Z,1.9nm,0.6s,baz=25,slow=2.9,SNR=26
BBLS Lazići 143.41 321 ||*i*P PKPab 22 18 41.7 +0.1
ARSA Arzberg 143.41 328 *i* P PKPbc 22 18 42.1 -0.4
comp=Z,3.7nm,0.7s
RUDO Rudo 143.57 321 *e*P PKPab 22 18 42.0 -0.1
MOA Molln 143.60 330 *e*P PKPbc 22 18 42.9 -0.1
comp=Z,3.9nm,0.6s,SNR=5.9
MOA *i* P pPKPdf 22 18 58.3 -0.4
comp=Z,12nm,1.6s
IVA Berane 143.66 319 *e*PKP PKPab 22 18 42.8 +0.2
comp=Z,2.0nm,1.0s
FNA Florina 143.78 315 P PKPab 22 18 41.7 -1.4
BIOA Bad Ischl, Aus 144.01 331 *e*P **PKPab** **22 18 43.9 +0.1**
comp=Z,5.5nm,0.7s
PERS Pernice 144.04 328 *i* PKPbc **PKPab** **22 18 43.5 -0.3**
SOKA Soboth 144.05 328 *i* P **PKPab** **22 18 43.7 -0.3**
comp=Z,9.1nm,0.6s,SNR=14
SOKA *e*P **pPKPdf** **22 18 58.0 -1.7**
comp=Z,10nm,0.8s
BLY Banja Luka 144.17 324 ||*i*P PKPbc 22 18 44.6 -0.2
KPRO Kipourio 144.18 314 P **PKPab** **22 18 43.7 -0.9**
KBN Korca 144.25 316 P **PKPab** **22 18 43.3 -1.6**
KBN Korca 144.25 316 **PKPab** **22 18 44.7 -0.2**
KBN Korca 144.25 316 PKIKP **PKPab** **22 18 44.7 -0.2**
PDG Podgorica 144.30 319 ||P **PKPab** **22 18 44.4 -0.5**
PDG Podgorica 144.30 319 PKPdf **PKPab** **22 18 44.7 -0.1**
PDG Podgorica 144.30 319 ||*i*P **PKPab** **22 18 44.3 -0.6**
TTG Podgorica 144.30 319 ||*i*PKP **PKPab** **22 18 44.0 -0.9**
SERG Sergoula 144.37 311 P PKPbc 22 18 45.9 +0.2
OBKA Obir 144.41 328 *e*P **PKPab** **22 18 44.7 -0.6**
comp=Z,9.5nm,0.9s,SNR=6.7
OBKA *i* P **pPKPdf** **22 18 57.7 -2.6**
comp=Z,12nm,1.0s
CRES Cresnjev 144.41 327 ||*i*P **PKPab** **22 18 45.0 -0.2**
MGRS Mrkonjic Grad 144.43 324 *e*P PKPbc 22 18 45.9 +0.2
CEME Cevo 144.44 320 ||*i*PKP **PKPab** **22 18 44.7 -0.8**
EFP Efpalio 144.47 312 P PKPbc 22 18 46.1 +0.2
DRME Dracevica, Mon 144.47 319 ||*i*P **PKPab** **22 18 45.3 -0.3**
DRME Dracevica, Mon 144.47 319 ||*i*PKP **PKPab** **22 18 45.2 -0.3**
ULC Ulcinj 144.56 319 *e*PKP **PKPab** **22 18 44.6 -1.3**
YRC Rhoscolyn 144.56 353 *e*P **PKPab** **22 18 44.8 -0.7**
CWF Charnwood Fore 144.57 349 *e*P **PKPab** **22 18 45.0 -0.6**
KBA Koelnbreinsper 144.59 330 *e*P **PKPab** **22 18 45.3 -0.8**
comp=Z,3.0nm,0.5s,SNR=19
BUM Brajici-Budva 144.59 319 ||*i*PKP **PKPab** **22 18 44.7 -1.4**
SRKY Kupres RS 144.60 323 *e*P **PKPab** **22 18 45.3 -0.8**
LSK Leskovik 144.60 315 P **PKPab** **22 18 44.2 -2.0**
BTNL Ternell 144.67 340 *d*PKP **PKPab** **22 18 45.5 -0.6**
BTNL *dp*PKP **pPKPdf** **22 18 57.3 -2.7**
MEM Membach 144.69 340 *d*PKP **PKPab** **22 18 45.6 -0.5**
MEM *dp*PKP **pPKPdf** **22 18 57.1 -3.3**
SBD1 Bryn Du 144.72 351 *e*P **PKiKP** **22 18 52.5 +1.5**
FOEL Foel Wylfa 144.73 351 *e*P **PKPab** **22 18 45.1 -1.1**
LJU Ljubljana 144.74 328 ||*i*P **PKPab** **22 18 46.1 -0.3**
LJU Ljubljana 144.74 328 *i* PKPbc **PKPab** **22 18 46.2 -0.2**
LJU *i* 22 19 00.1
HCY Herceg Novi 144.76 320 *e*P **PKPab** **22 18 45.8 -0.8**
HCY Herceg Novi 144.76 320 ||*i*PKP **PKPab** **22 18 45.1 -1.5**
MYKA Terra Mystica 144.77 329 *e*P **PKPab** **22 18 45.6 -1.0**
comp=Z,19nm,0.6s,SNR=14
DRO Drossia 144.81 311 P **PKPab** **22 18 42.7 -4.3**
LLW Llanuwchllyn 144.84 352 *e*P **PKPab** **22 18 44.9 -1.7**
BSTI Sart Tilman 144.85 341 *d*PKP **PKPab** **22 18 46.1 -0.6**
BHOU Houvegnez 144.91 340 *d*PKP PKPbc 22 18 47.0 0.0
BHOU *dp*PKP pPKPdf 22 18 58.4 -2.5
GBRS Gornja Briga 144.94 327 *i* PKPbc **PKPab** **22 18 47.1 -0.1**
RLS Riolos of Patr 144.94 311 P **PKPab** **22 18 47.2 -0.2**
ITM Ithomi 144.97 310 P PKPbc 22 18 44.9 -2.7
ITM Ithomi 144.97 310 PKPbc 22 18 46.5 -1.1
CEY Cerknica 145.00 327 ||*i*P PKPbc 22 18 46.6 -0.8
HLM1 Long Mynd 145.04 351 *e*P **PKPbc** **22 18 46.2 -1.1**
IGT Igoumenitsa 145.07 314 P **PKPbc** **22 18 44.2 -3.6**
STU Stuttgart 145.10 336 **PKPbc** **22 18 46.8 -0.8**
STU Stuttgart 145.10 336 PKIKP **PKPbc** **22 18 46.8 -0.8**
VLO Vlora 145.18 316 **PKPbc** **22 18 47.1 -1.0**
VLO Vlora 145.18 316 PKIKP **PKPbc** **22 18 47.1 -1.0**
BGES Gesves 145.18 341 *d*PKP **PKPbc** **22 18 46.6 -1.2**
LKD2 Lefkada island 145.19 313 P **PKPbc** **22 18 45.0 -3.3**
PYL PYLOS 145.22 309 P **PKPbc** **22 18 47.1 -1.3**
WATA Walderalm 145.22 332 *i* P **PKPbc** **22 18 47.5 -0.7**
comp=Z,21nm,0.8s,SNR=23
ABTA Abfaltersbach 145.23 330 *e*P **PKPbc** **22 18 47.0 -1.2**
comp=Z,28nm,0.7s,SNR=42
ABTA *i* P **pPKPdf** **22 19 02.6 +0.9**
comp=Z,53nm,1.3s
WTTA Wattenberg 145.25 332 *e*P **PKPbc** **22 18 47.8 -0.6**
comp=Z,34nm,1.1s,SNR=20
WTTA *i* P **pPKPdf** **22 19 02.6 +0.8**
comp=Z,51nm,1.4s
SNF Seneffe 145.31 342 *d*PKP **PKPbc** **22 18 47.6 -0.6**
RCHB Rochefort 145.33 341 *d*PKP **PKPbc** **22 18 47.6 -0.7**
SKDS Skadanscina 145.34 328 ||*i*P **PKPbc** **22 18 47.5 -1.0**
BMRD Maredsous 145.35 341 *d*PKP **PKPbc** **22 18 47.6 -0.7**
MOTA Moosalm 145.42 332 *e*P **PKPbc** **22 18 48.3 -0.6**
comp=Z,36nm,0.8s,SNR=30
MOTA *i* P **pPKPdf** **22 19 02.8 +0.7**
comp=Z,52nm,1.1s
WLF Walferdange 145.46 339 PKPdf **PKPdf** **22 18 48.1 -0.6**
WLF Walferdange 145.46 339 PKIKP **PKPdf** **22 18 48.1 -0.6**
WLF Walferdange 145.46 339 *d*PKP **PKPbc** **22 18 48.8 +0.1**
WLF *dp*PKP pPKPab 22 19 00.4 -1.4
RETA Reutte 145.46 333 *e*P **PKPdf** **22 18 48.5 -0.4**
comp=Z,15nm,0.7s,SNR=14
SQTA Sankt Quirin 145.47 332 *e*P **PKPdf** **22 18 48.7 -0.3**
comp=Z,52nm,0.7s,SNR=41
STAL STALIGIAL 145.49 330 **PKPdf** **22 18 47.6 -1.3**
MCH1 Michaelchurch 145.56 350 *e*P **PKPdf** **22 18 47.5 -1.3**
DOU Dourbes 145.58 341 *d*PKP **PKPdf** **22 18 48.6 -0.2**
DOU *dp*PKP **pPKPdf** **22 19 00.5 -1.6**
IWEX Carrickbyrne, 145.66 355 *e*P **PKPdf** **22 18 48.5 -0.4**
MONM Monmouth 145.69 350 *e*P **PKPdf** **22 18 48.0 -1.0**
BFO Black Forest 145.79 336 PKPdf **PKPdf** **22 18 48.7 -0.6**
BFO Black Forest 145.79 336 PKP2 **PKPdf** **22 18 48.7 -0.6**
SWN1 Swindon 145.83 349 *e*P **PKPdf** **22 18 49.1 -0.1**
FETA Feichten 145.84 332 *e*P **PKPbc** **22 18 50.0 -0.2**
comp=Z,17nm,0.7s,SNR=19
RSBS Rosebush, Pemb 145.86 352 *e*P **PKPdf** **22 18 48.4 -0.9**
WOL Wolverton 145.91 348 *e*P **PKPdf** **22 18 49.4 0.0**
DAVA Damuels 146.00 333 *e*P **PKPdf** **22 18 50.2 +0.3**
comp=Z,24nm,0.7s,SNR=20
SCTE Santa Cesarea 146.06 316 **PKPdf** **22 18 50.0 +0.1**
CTI Castel Tesino 146.15 330 PKPdf **PKPdf** **22 18 50.0 -0.1**
CTI Castel Tesino 146.15 330 PKP2 **PKPdf** **22 18 50.0 -0.1**
ECH Echery 146.33 337 **PKPdf** **22 18 49.9 -0.4**
ECH Echery 146.33 337 PKP2 **PKPdf** **22 18 49.9 -0.4**
TEOL Teolo 146.64 329 PKPdf **PKPdf** **22 18 51.3 +0.5**
HTL Hartland 146.76 352 *e*P **PKPdf** **22 18 51.4 +0.6**
SGRT San Giovanni R 146.83 321 PKPdf **PKPdf** **22 18 49.8 -1.6**
TUE Stuetta 146.86 333 PKPdf **PKPdf** **22 18 51.3 -0.1**
MATE Matera 146.88 319 ||P **PKPbc** **22 18 52.6 -0.6**
SALO Salr 146.99 331 PKPdf **PKPdf** **22 18 51.3 -0.2**
DYA Yadsworthy 147.23 351 *e*P **PKPdf** **22 18 51.5 -0.1**
DYA IAmb IAmb 22 18 54.0
comp=Z,20nm,1.2s
TIP Timpagrande 147.65 316 ⇑P **PKPbc** **22 18 55.4 -0.2**
TIP Timpagrande 147.65 316 **PKPdf** **22 18 52.9 +0.1**
CCA1 Carnmenellis 147.65 352 *e*P **PKPbc** **22 18 53.8 -1.3**
CCA1 IAmb IAmb 22 18 55.5
comp=Z,11nm,0.8s
NRCA Norcia 147.66 325 **PKPdf** **22 18 52.4 -0.3**
MURB Monte Urbino 147.69 326 **PKPbc** **22 18 55.2 -0.3**
ZCCA Zocca 147.71 329 **PKPbc** **22 18 55.5 0.0**
PRMA PARMA 147.73 330 **PKPbc** **22 18 55.2 -0.2**
SENIN Lac Senin/Sane 147.80 335 **PKPbc** **22 18 55.5 -0.5**
CUC Castrocucco 147.81 318 PKPdf **PKPdf** **22 18 53.4 +0.4**
AQU L'Aquila 147.81 324 **PKPbc** **22 18 55.3 -0.6**
AQU L'Aquila 147.81 324 PKP2 **PKPbc** **22 18 55.3 -0.6**
PAOL Paolisi 147.97 321 **PKPbc** **22 18 55.9 -0.4**
JSA Saint Aubin 148.12 348 *e*P **PKPdf** **22 18 54.5 +1.4**
CLF Chambon-Foret 148.12 342 **PKPbc** **22 18 56.5 0.0**
VLC Villacollemand 148.14 329 **PKPbc** **22 18 56.3 -0.4**
MSSA Maissana 148.44 330 **PKPbc** **22 18 56.0 -1.5**
BNI Bardonecchia 149.12 334 **PKPbc** **22 18 58.5 -0.8**
BNI Bardonecchia 149.12 334 PKP2 **PKPbc** **22 18 58.5 -0.8**
ROSF Rostrenen 149.15 349 *e*P **PKPbc** **22 18 57.7 -1.4**
SSB Saint Sauveur 149.78 337 **PKPbc** **22 18 59.6 -1.2**
SSB Saint Sauveur 149.78 337 PKP2 **PKPbc** **22 18 59.6 -1.2**
RAFF Raffo Rosso 150.29 315 **PKPbc** **22 19 01.4 -0.9**
VSL Villasalto 151.99 324 **PKPbc** **22 19 05.1 -1.0**
KEST Kesra 154.45 317 PKPbc **PKPbc** **22 19 10.9 -0.8**
comp=Z,2.3nm,0.6s,baz=336,slow=1.8,SNR=5.8
ESDC Sonseca Array 157.56 344 PKPab **PKPab** **22 19 38.6 -0.6**
comp=Z,0.8nm,0.6s,baz=16,slow=3.6,SNR=11
TOA0 Torodi Ar. Sit 166.16 251 **PKPdf** **22 19 14.5 -2.2**
TOA0 PKPab **PKPab** **22 20 17.7 +0.1**
TORD Torodi Ar. Bea 166.16 251 PKP **PKPdf** **22 19 14.9 -1.8**
comp=Z,1.6nm,0.9s,baz=76,slow=0.6,SNR=8.0
TORD PKPab **PKPab** **22 20 16.9 -0.7**
comp=Z,1.5nm,0.7s,baz=120,slow=2.0,SNR=7.1
TORD Torodi Ar. Bea 166.16 251 **PKPdf** **22 19 15.2 -1.5**
TORD PKPab **PKPab** **22 20 17.7 +0.1**

*DDA **04** 22:17:10.9±0.0,40.36N×27.65E,h15km±1km,ML1.8*

ISK 04 22:17:10.9,40.40N×27.61E,h14km,ML2.2/17,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNL	**Balıkesir**	**0.14**	**207**	P	Pb	22 17 15.0	-0.3
KNL				S	Sg	22 17 17.6	+0.5
EDC	**Edincik**	**0.20**	**104**	PG	Pg	22 17 15.8	+0.3
EDC				SG	Sg	22 17 19.2	+0.6
MRMT	**Marmara Adasi**	**0.21**	**357**	PG	Pb	22 17 16.1	-0.4
KRBG	**Karabiga-Canak**	**0.24**	**269**	PG	Pg	22 17 16.5	+0.4
KRBG				SG	Sg	22 17 20.3	+0.7
GONE	**Gonen-Balikesi**	**0.35**	**170**	PG	Pb	22 17 18.9	-0.1
GONE				SG	Sb	22 17 24.3	-0.1
MAR6	**Marsite Statio**	**0.40**	**320**	PG	Pb	22 17 20.1	+0.3
MAR6				SG	Sb	22 17 25.8	0.0
GZKV	**Gazikoy-Tekird**	**0.41**	**329**	PG	Pb	22 17 19.9	0.0
GZKV				SG	Sb	22 17 25.9	-0.1
MAR3	**Marsite Statio**	**0.42**	**325**	PG	Pb	22 17 20.1	0.0
MAR3				SG	Sb	22 17 26.3	0.0
TKR	**Tekirdag**	**0.59**	**355**	PG	Pg	22 17 22.3	-0.3
BALB	**Balikesir**	**0.78**	**165**	PG	Pb	22 17 26.5	+0.2
ERIK	**Erikli-Kesan**	**0.88**	**288**	PG	Pn	22 17 29.2	+0.4
SLVT	**Silivri**	**0.95**	**29**	PG	Pn	22 17 29.8	0.0
ARMT	**Armutlu**	**0.97**	**80**	PG	Pn	22 17 30.3	+0.2
MDNY	**Mudanya-Bursa**	**0.97**	**91**	PG	Pn	22 17 30.4	+0.3
BUHA	**Balikesir, Bur**	**0.98**	**205**	P	Pb	22 17 29.5	-0.2
BUHA				S	Sg	22 17 43.2	+0.5
BUHA				*i* AML	AML	22 17 46.0	
	comp=N,23nm,0.3s						
BUHA				*i* AML	AML	22 17 46.0	
	comp=E,34nm,0.8s						
STEP	**BALIKESIR_Sava**	**1.02**	**175**	P	Pn	22 17 31.7	+0.8
STEP				S	Sn	22 17 44.7	-0.3
STEP				*i* AML	AML	22 17 47.0	
	comp=E,33nm,0.3s						
STEP				*i* AML	AML	22 17 47.0	
	comp=N,28nm,0.7s						
UKOP	**Uzunkopru-Edir**	**1.04**	**315**	PG	Pn	22 17 31.7	+0.7
BAYC	**CANAKKALE_Bayr**	**1.05**	**232**	P	Pb	22 17 30.0	-0.8
BAYC				S	Sb	22 17 43.8	-0.6
CTKS	**Kestanelik-??a**	**1.08**	**39**	PN	Pn	22 17 31.5	-0.1
EZN	**Ezine**	**1.14**	**240**	PN	Pb	22 17 32.1	-0.2
ENEZ	**Enez**	**1.16**	**287**	PN	Pb	22 17 32.9	+0.2
ULDT	**Uludag**	**1.20**	**102**	P	Pg	22 17 34.7	+0.8
BOZC	**Bozcaada**	**1.32**	**246**	PN	Pb	22 17 35.1	-0.3
GOA	**anakkale-Gk**	**1.32**	**262**	P	Pg	22 17 36.1	-0.1
GOKA				S	Sg	22 17 52.8	-0.6
GOKA				*i* AML	AML	22 17 56.0	
	comp=E,54nm,0.4s						
GADA	**Gvkgeada**	**1.32**	**262**	PN	Pb	22 17 35.4	-0.1

*SJA **04** 22:19:02.7±0.7,31.59S×71.61W,h29km±2km,ML4.1, MW4.0*

*GUC **04** 22:19:04.5±0.6,31.59S×71.49W,h48km±2km,ML4.1*

*NEIC **04** 22:19:05.5±1.5,31.60S±0.04×71.52W±0.10,h45km±7km, mb4.3/7, ML4.1(GUC), Error ellipse: s-maj=12.6km s-min=4.5km az=102.0*

*IDC **04** 22:19:06.5±2.9,31.61S×71.28W,h56km±24km,mb3.7/7, mbtmp3.9/12,ML3.7/5,Error ellipse: s-maj=27.4km s-min=16.9km az=101.0*

ISC 04 22:19:04.4±0.9,31.57S±0.03×71.59W±0.04,h41km±9km, n127,σ1ş83/164,mb4.1/8,7C-6D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO02	**Combarbal**	**0.62**	**54**		**Pn**	**22 19 16.6**	**-0.2**
CO02				Sn	**Sn**	**22 19 25.4**	**-0.4**
CO02	**Combarbal**	**0.62**	**54**	⇓*i*P	**Pn**	**22 19 16.7**	**-0.2**
CO02				*e*S	**Sn**	**22 19 25.1**	**-0.7**
CO02				IAML		22 19 26.6	
	comp=E,89µm,0.3s						
CO02	**Combarbal**	**0.62**	**54**	*e*P	**Pn**	**22 19 16.4**	**-0.5**
CO02				*e*S	**Sn**	**22 19 25.9**	**+0.1**
CO02				IAML		22 19 26.2	
	comp=Z,21µm,0.2s						
CO06	**Fray Jorge**	**0.90**	**358**		**Pn**	**22 19 21.7**	**+1.2**
CO06	**Fray Jorge**	**0.90**	**358**	⇑*i*P	**Pn**	**22 19 21.6**	**+1.2**
CO06				*e*S	**Sn**	**22 19 34.6**	**+2.3**
VA06	**Catapilco**	**1.02**	**166**		**Pn**	**22 19 22.3**	**+0.1**
VA06				Sn	**Sn**	**22 19 35.0**	**-0.2**
VA06	**Catapilco**	**1.02**	**166**	⇑*i*P	**Pn**	**22 19 22.3**	**+0.1**
VA06				*e*S	**Sn**	**22 19 35.2**	**-0.1**
VA06				IAML		22 19 37.7	
	comp=E,9µm,0.2s						
VA01	**Torpederas**	**1.45**	**182**	Pn	**Pn**	**22 19 28.7**	**+0.6**
VA01	**Torpederas**	**1.45**	**182**	⇓*e*P	**Pn**	**22 19 28.9**	**+0.8**
VA01				*e*S	**Sn**	**22 19 47.4**	**+1.6**
VA01				IAML		22 19 51.8	
	comp=E,2µm,0.1s						
VA01	**Torpederas**	**1.45**	**182**	*e*P	**Pn**	**22 19 28.9**	**+0.8**
VA01				*e*S	**Sn**	**22 19 48.0**	**+2.1**
ROCH	**El Roble**	**1.48**	**161**	*e*P	**Pn**	**22 19 29.0**	**+0.3**
ROCH				*e*S	**Sn**	**22 19 48.2**	**+1.2**
ROCH				IAML		22 19 50.8	
	comp=N,6µm,0.4s						
VA03	**San Esteban**	**1.48**	**144**		**Pn**	**22 19 28.8**	**+0.1**
VA03	**San Esteban**	**1.48**	**144**	⇓*i*P	**Pn**	**22 19 28.8**	**+0.1**
VA03				*e*S	**Sn**	**22 19 47.0**	**+0.2**
VA03				IAML		22 19 49.1	
	comp=E,7µm,0.2s						
VA03	**San Esteban**	**1.48**	**144**	*e*P	**Pn**	**22 19 28.9**	**+0.3**
VA03				*e*P	**Pn**	**22 19 28.9**	**+0.3**
VA03				*e*S	**Sn**	**22 19 47.4**	**+0.5**
VA03				IAML		22 19 51.1	
	comp=Z,2µm,0.2s						
ROC1	**El Roble**	**1.48**	**161**		**Pn**	**22 19 29.4**	**+0.6**
ROC1				Sn	**Sn**	**22 19 48.1**	**+1.0**
ROC1	**El Roble**	**1.48**	**161**	*e*P	**Pn**	**22 19 29.7**	**+0.9**
ROC1				*e*S	**Sn**	**22 19 48.7**	**+1.6**
GO04	**Tololo Observa**	**1.55**	**26**		**Pn**	**22 19 30.8**	**+1.1**
GO04	**Tololo Observa**	**1.55**	**26**	*e*P	**Pn**	**22 19 30.7**	**+1.0**
GO04				*i* S	**Sn**	**22 19 50.1**	**+1.4**
GO04				IAML		22 19 55.9	
	comp=N,11µm,0.4s						
GO04	**Tololo Observa**	**1.55**	**26**	*e*P	**Pn**	**22 19 30.8**	**+1.1**
GO04				*e*S	**Sn**	**22 19 52.0**	**+3.2**
CO05	**La Serena**	**1.67**	**11**	Pn	**Pn**	**22 19 32.4**	**+1.2**
CO05	**La Serena**	**1.67**	**11**	*e*P	**Pn**	**22 19 32.6**	**+1.5**
CO05				*e*S	**Sn**	**22 19 53.2**	**+1.8**
CO05				IAML		22 19 58.5	
	comp=E,2µm,0.4s						
MT02	**Curacav**	**1.73**	**167**	Pn	**Pn**	**22 19 32.5**	**+0.6**
MT02	**Curacav**	**1.73**	**167**	*e*P	**Pn**	**22 19 32.5**	**+0.6**
MT02				*e*S	**Sn**	**22 19 53.6**	**+0.8**
MT02	**Curacav**	**1.73**	**167**	*e*P	**Pn**	**22 19 32.6**	**+0.6**
MT02				*e*S	**Sn**	**22 19 55.0**	**+2.3**
PEL	**Peldehue**	**1.75**	**154**		**Pn**	**22 19 32.9**	**+0.6**
PEL	**Peldehue**	**1.75**	**154**	*e*P	**Pn**	**22 19 32.8**	**+0.6**
PEL	**Peldehue**	**1.75**	**154**	*e*P	**Pn**	**22 19 33.0**	**+0.8**
PEL				*e*S	**Sn**	**22 19 56.3**	**+3.0**
MT05	**Renca**	**1.95**	**159**	Pn	**Pn**	**22 19 36.0**	**+0.9**
MT05	**Renca**	**1.95**	**159**	⇑*i*P	**Pn**	**22 19 36.2**	**+1.1**
MT05				*e*S	**Sn**	**22 19 59.5**	**+1.0**
MT05				IAML		22 20 02.7	
	comp=E,4µm,0.4s						
MT05	**Renca**	**1.95**	**159**	*e*P	**Pn**	**22 19 36.2**	**+1.1**
MT05				*e*S	**Sn**	**22 20 00.8**	**+2.4**
MT05				IAML		22 20 06.9	
	comp=Z,1µm,0.2s						
RTLS	**Leoncito**	**1.97**	**97**	*e*P	**Pn**	**22 19 37.2**	**+1.7**
RTLS				*e*S	**Sn**	**22 19 58.9**	**-0.2**
RTLS				IAML		22 20 06.1	
	comp=Z,694nm,0.5s						
AUSP	**Uspallata**	**1.98**	**110**	*e*P	**Pn**	**22 19 37.4**	**+1.7**
AUSP				*e*S	**Sn**	**22 19 56.9**	**-2.6**
CO01	**Juntas del Tor**	**2.04**	**39**		**Pn**	**22 19 38.5**	**+1.9**
CO01	**Juntas del Tor**	**2.04**	**39**	⇓*i*P	**Pn**	**22 19 38.2**	**+1.8**
CO01				*e*S	**Sn**	**22 20 02.5**	**+1.5**
CO01				IAML		22 20 05.3	
	comp=E,2µm,0.3s						
CO01	**Juntas del Tor**	**2.04**	**39**	*e*P	**Pn**	**22 19 38.3**	**+1.8**
CO01				*e*S	**Sn**	**22 20 04.2**	**+3.3**
CO01				IAML		22 20 06.9	
	comp=Z,1µm,0.4s						
FCH	**Farellones**	**2.07**	**148**	⇑*e*P	**Pn**	**22 19 37.7**	**+0.8**
FCH				*i* S	**Sn**	**22 20 03.5**	**+1.8**
FCH				IAML		22 20 14.7	
	comp=N,1µm,0.2s						
VA05	**Santo Domingo**	**2.08**	**181**		**Pn**	**22 19 37.3**	**+0.5**
VA05	**Santo Domingo**	**2.08**	**181**	*e*P	**Pn**	**22 19 37.8**	**+1.1**
VA05				*e*S	**Sn**	**22 20 02.6**	**+1.2**
VA05				IAML		22 20 11.5	
	comp=E,2µm,0.3s						
MT09	**Talagante**	**2.26**	**167**		**Pn**	**22 19 40.7**	**+1.4**
MT09	**Talagante**	**2.26**	**167**	⇑*i*P	**Pn**	**22 19 40.7**	**+1.4**
MT09				*e*S	**Sn**	**22 20 07.1**	**+1.1**
MT09				IAML		22 20 20.6	
	comp=N,1µm,0.2s						
AROD	**Rodeo**	**2.30**	**53**	*e*P	**Pn**	**22 19 43.0**	**+3.0**
AROD				*e*S	**Sn**	**22 20 13.7**	**+6.4**
MT01	**Popeta**	**2.31**	**173**		**Pn**	**22 19 40.8**	**+1.0**
MT01	**Popeta**	**2.31**	**173**	*e*P	**Pn**	**22 19 40.9**	**+1.0**
MT01				*e*S	**Sn**	**22 20 07.8**	**+0.8**
MT01				IAML		22 20 16.8	
	comp=E,1µm,0.3s						
MT01	**Popeta**	**2.31**	**173**	*e*P	**Pn**	**22 19 41.0**	**+1.1**
MT01				*e*S	**Sn**	**22 20 09.7**	**+2.7**
MT01				IAML		22 20 18.6	
	comp=Z,865nm,0.5s						
ACCO	**Cerro Coronel**	**2.38**	**66**	*e*P	**Pn**	**22 19 44.1**	**+2.9**
ACCO				*e*S	**Sn**	**22 20 17.7**	**+8.4**
ZON	**Zonda**	**2.49**	**90**		**Pn**	**22 19 44.7**	**+2.3**
ZON	**Zonda**	**2.49**	**90**	*e*P	**Pn**	**22 19 45.0**	**+2.6**
ZON				IAML		22 20 26.1	
	comp=Z,403nm,0.5s						
ACDV	**Cuesta del Vie**	**2.54**	**57**	*e*P	**Pn**	**22 19 46.6**	**+3.4**
BO04	**La Punta**	**2.55**	**161**		**Pn**	**22 19 44.6**	**+1.4**
BO04	**La Punta**	**2.55**	**161**	⇑*e*P	**Pn**	**22 19 44.5**	**+1.2**
BO04				*e*S	**Sn**	**22 20 14.2**	**+1.1**
BO04				IAML		22 20 27.2	
	comp=N,683nm,0.3s						
LMEL	**Las Melosas**	**2.55**	**153**		**Pn**	**22 19 45.2**	**+1.8**
LMEL	**Las Melosas**	**2.55**	**153**	*e*P	**Pn**	**22 19 45.0**	**+1.6**
LMEL				*e*S	**Sn**	**22 20 15.1**	**+1.8**
LMEL				IAML		22 20 20.4	
	comp=N,2µm,0.2s						
LCO	**Las Campanas**	**2.67**	**17**	Pn	**Pn**	**22 19 46.8**	**+1.7**
LCO	**Las Campanas**	**2.67**	**17**	⇑*e*P	**Pn**	**22 19 46.6**	**+1.5**
LCO				*e*S	**Sn**	**22 20 18.4**	**+2.1**
LCO	**Las Campanas**	**2.67**	**17**	*e*P	**Pn**	**22 19 46.7**	**+1.7**
RTLL	**Cerro Villicun**	**2.67**	**86**	*e*P	**Pn**	**22 19 46.7**	**+1.8**
RTLL	**Cerro Villicun**	**2.67**	**86**	*e*P	**Pn**	**22 19 46.7**	**+1.8**
RTLL				*e*S	**Sn**	**22 20 22.3**	**+6.2**
BO01	**Tunca**	**2.84**	**172**	Pn	**Pn**	**22 19 48.1**	**+0.8**
BO01	**Tunca**	**2.84**	**172**	*e*P	**Pn**	**22 19 48.3**	**+1.0**
BO01				*e*S	**Sn**	**22 20 19.9**	**-0.4**
BO01				IAML		22 20 34.6	
	comp=E,390nm,0.3s						
BO01	**Tunca**	**2.84**	**172**	*e*P	**Pn**	**22 19 48.3**	**+1.0**
BO01				*e*S	**Sn**	**22 20 22.9**	**+2.6**
BO03	**Pichilemu**	**2.93**	**186**	*e*P	**Pn**	**22 19 48.5**	**0.0**
BO03				*e*S	**Sn**	**22 20 20.3**	**-2.2**
AC04	**Llanos de Chal**	**3.38**	**8**	Pn	**Pn**	**22 19 55.8**	**+1.1**
AC04	**Llanos de Chal**	**3.38**	**8**	⇓*e*P	**Pn**	**22 19 55.7**	**+1.1**
AC04				*e*S	**Sn**	**22 20 34.6**	**+1.0**
AC04				IAML		22 20 54.0	
	comp=E,401nm,0.3s						
AC04	**Llanos de Chal**	**3.38**	**8**	*e*P	**Pn**	**22 19 55.8**	**+1.1**
AC04				*e*S	**Sn**	**22 20 37.4**	**+3.8**
AC04				IAML		22 20 51.5	
	comp=Z,367nm,0.5s						
GO05	**Huala**	**3.44**	**185**	Pn	**Pn**	**22 19 55.5**	**0.0**
GO05	**Huala**	**3.44**	**185**	⇓*e*P	**Pn**	**22 19 55.4**	**-0.1**
GO05				*e*S	**Sn**	**22 20 33.4**	**-1.7**
GO05	**Huala**	**3.44**	**185**	*e*P	**Pn**	**22 19 55.6**	**+0.1**
AVFE	**Valle Fertil**	**3.66**	**77**	*e*P	**Pn**	**22 20 00.2**	**+1.5**
AVFE				*e*S	**Sn**	**22 20 42.4**	**+1.9**
AVFE				IAML		22 20 51.1	
	comp=Z,370nm,0.4s						
GO03	**Copiap**	**4.13**	**17**		**Pn**	**22 20 07.2**	**+2.1**
GO03	**Copiap**	**4.13**	**17**	*e*P	**Pn**	**22 20 05.6**	**+0.5**
GO03				*e*S	**Sn**	**22 20 52.7**	**+0.5**
GO03	**Copiap**	**4.13**	**17**	*e*P	**Pn**	**22 20 06.9**	**+1.8**
GO03				*e*S	Sn	22 21 09.1	+17
ML02	**Panimavida**	**4.18**	**178**		**Pn**	**22 20 06.8**	**+1.1**
ML02	**Panimavida**	**4.18**	**178**	*e*P	**Pn**	**22 20 07.6**	**+2.0**
AC06	**Mina Casimiro**	**4.33**	**15**	Pn	**Pn**	**22 20 09.0**	**+1.2**
AC06	**Mina Casimiro**	**4.33**	**15**	*e*P	**Pn**	**22 20 08.4**	**+0.6**
AC06				*e*S	**Sn**	**22 20 57.8**	**+0.7**
APLL	**PUNTA DE LOS L**	**4.50**	**76**	*e*P	**Pn**	**22 20 11.4**	**+1.3**
ACLC	**CERRO LA CRUZ**	**4.54**	**63**	*e*P	**Pn**	**22 20 06.9**	**-3.8**
ACLC				*e*P	**Pn**	**22 20 12.7**	**+1.9**
ACLC				*e*S	**Sn**	**22 21 04.9**	**+2.6**
ACLC				IAML		22 21 13.7	
	comp=Z,424nm,0.4s						
AC02	**Maricunga**	**5.19**	**25**	Pn	**Pn**	**22 20 20.9**	**+1.0**
AC02	**Maricunga**	**5.19**	**25**	*e*P	**Pn**	**22 20 21.3**	**+1.4**
AC02	**Maricunga**	**5.19**	**25**	*e*P	Pn	22 20 05.5	-14
AC02				IAML		22 21 53.5	
	comp=Z,85nm,0.5s						
BI05	**Punta Hualpn**	**5.33**	**194**		**Pn**	**22 20 20.7**	**-0.7**
AC01	**Pan de Azucar**	**5.47**	**9**	Pn	**Pn**	**22 20 24.7**	**+1.3**
H03N1	**Juan Fernandez**	**6.46**	**251**	T	T	22 27 22.8	
	baz=80,slow=73,SNR=1524						
H03N3	**Juan Fernandez**	**6.47**	**251**	T	T	22 27 20.6	
	baz=80,slow=73,SNR=243						
H03N2	**Juan Fernandez**	**6.48**	**251**	T	T	22 27 23.6	
	baz=80,slow=73,SNR=1288						
H03S3	**Juan Fernandez**	**6.57**	**248**	T	T	22 27 32.7	
	baz=80,SNR=22						
H03S1	**Juan Fernandez**	**6.57**	**248**	T	T	22 27 31.4	
	baz=80,SNR=26						
H03S2	**Juan Fernandez**	**6.58**	**248**	T	T	22 27 32.3	
	baz=80,SNR=27						
GO02	**Mina Guanaco**	**6.62**	**16**	Pn	**Pn**	**22 20 40.4**	**+0.9**
PB10	**IPOC Station P**	**8.08**	**7**	Pn	**Pn**	**22 21 02.5**	**+3.3**
LR04	**Corral**	**8.42**	**190**	Pn	**Pn**	**22 21 03.5**	**-0.3**
PLCA	**Paso Flores**	**9.18**	**175**	P	**Pn**	**22 21 15.2**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=322,slow=16,SNR=2.0						
	comp=Z,0.8nm,0.5s						
PLCA	**Paso Flores**	**9.18**	**175**		**Pn**	**22 21 13.9**	**-0.4**
LVC	**Limon Verde**	**9.24**	**16**	P	**Pn**	**22 21 17.0**	**+1.6**
	comp=Z,0.3nm,0.3s,baz=266,slow=19,SNR=1.5						
LVC				S	**Sn**	**22 23 01.0**	**+2.7**
	comp=Z,4.4nm,0.5s,baz=219,slow=14,SNR=1.6						
	comp=Z,1.2nm,0.3s						
LVC	**Limon Verde**	**9.24**	**16**		**Pn**	**22 21 15.5**	**0.0**
LL04	**Puerto Octay**	**9.34**	**184**	Pn	**Pn**	**22 21 16.2**	**-0.2**
PB09	**IPOC Station P**	**9.96**	**13**	Pn	**Pn**	**22 21 25.5**	**+0.4**
ITQB	**Itaqui**	**13.03**	**86**	Pn	**Pn**	**22 22 05.5**	**-1.4**
PB16	**IPOC Station P**	**13.31**	**9**	Pn	**Pn**	**22 22 14.1**	**+2.8**
CPUP	**Villa Florida**	**13.53**	**71**	P	**Pn**	**22 22 13.1**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=162,slow=2.8,SNR=2.8						
CPUP				S	**Sn**	**22 24 37.0**	**-5.8**
	comp=Z,2.7nm,0.8s,baz=197,slow=15,SNR=1.8						
	comp=Z,1.4nm,0.6s						
CPUP	**Villa Florida**	**13.53**	**71**		**Pn**	**22 22 11.0**	**-2.8**
PLTB	**Pedras Altas**	**15.32**	**95**	Pn	**Pn**	**22 22 35.5**	**-2.2**
PLTB				IAmb	IAmb	22 22 52.2	
	comp=Z,21nm,1.4s						
LPAZ	**La Paz**	**15.54**	**12**	P	**Pn**	**22 22 42.4**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=208,slow=8.6,SNR=8.2						
	comp=Z,1.8nm,0.7s						
LPAZ	**La Paz**	**15.54**	**12**		**Pn**	**22 22 41.3**	**+0.1**
SIV	**San Ignacio**	**18.23**	**34**	P	**P**	**22 23 13.7**	**-0.6**
	baz=197,slow=11,SNR=8.1						
	comp=Z,1.1nm,0.5s						
BDFB	**Brasilia**	**26.71**	**59**	P	**P**	**22 24 38.4**	**-1.7**
	comp=Z,2.9nm,0.8s,baz=218,slow=6.3,SNR=4.3						
	comp=Z,2.9nm,0.8s						
QSPA	**South Pole Qui**	**58.66**	**180**	P	**P**	**22 28 57.8**	**+0.4**
	comp=Z,2.1nm,0.9s,baz=171,slow=1.4,SNR=7.2						
	comp=Z,2.1nm,0.9s						
QSPA	**South Pole Qui**	**58.66**	**180**	P	**P**	**22 28 57.9**	**+0.6**
QSPA				IAmb	IAmb	22 29 01.7	
	comp=Z,7.6nm,1.4s						
TXAR	**Lajitas Array**	**67.81**	**330**	P	**P**	**22 29 59.8**	**+1.5**
	comp=Z,0.2nm,0.8s,baz=152,slow=12,SNR=2.1						
	comp=Z,0.2nm,0.8s						
DBIC	**Dimbokro**	**74.05**	**72**	P	**P**	**22 30 35.6**	**-0.8**
	comp=Z,2.9nm,0.6s,baz=202,slow=6.5,SNR=4.7						
	comp=Z,2.9nm,0.6s						
DBIC	**Dimbokro**	**74.05**	**72**	P	**P**	**22 30 35.5**	**-0.9**
MAW	**Mawson**	**75.40**	**164**	P	**P**	**22 30 43.4**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=248,slow=6.9,SNR=1.7						
	comp=Z,0.6nm,0.5s						
NVAR	**Mina Arroy Bea**	**82.12**	**325**	P	**P**	**22 31 21.7**	**+0.9**
	comp=Z,0.3nm,0.6s,baz=156,slow=6.9,SNR=2.2						
	comp=Z,0.3nm,0.6s						
TOA0	**Torodi Ar. Sit**	**83.03**	**70**	P	**P**	**22 31 25.1**	**-0.8**
TOA0				IAmb	IAmb	22 31 25.9	
	comp=Z,2.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**83.03**	**70**	P	**P**	**22 31 25.1**	**-0.7**
	comp=Z,1.8nm,0.7s,baz=276,slow=6.2,SNR=10.0						
	comp=Z,1.8nm,0.7s						
TORD	**Torodi Ar. Bea**	**83.03**	**70**	P	**P**	**22 31 25.1**	**-0.7**
TORD				IAmb	IAmb	22 31 25.9	
	comp=Z,2.3nm,0.8s						
WRA	**Warramunga Arr**	**123.06**	**209**	PKP	**PKPdf**	**22 37 56.4**	**-0.7**
	comp=Z,0.3nm,0.7s,baz=154,slow=1.7,SNR=4.7						
H11S2	**WAKE ISLAND Hyl**	**26.15**	**271**	T	T	00 57 01.7	
	baz=117,slow=74,SNR=28						
H11S1	**WAKE ISLAND Hyl**	**26.17**	**271**	T	T	00 56 54.7	
	baz=117,slow=74,SNR=26						
H11S3	**WAKE ISLAND Hyl**	**26.17**	**271**	T	T	00 57 02.6	
	baz=117,slow=74,SNR=25						
H11N3	**WAKE ISLAND Hyl**	**26.50**	**272**	T	T	00 57 21.9	
	baz=116,slow=75,SNR=8.3						
H11N1	**WAKE ISLAND Hyl**	**26.52**	**272**	T	T	00 57 22.8	
	baz=116,slow=75,SNR=5.6						
H11N2	**WAKE ISLAND Hyl**	**26.52**	**272**	T	T	00 57 29.1	
	baz=116,slow=75,SNR=20						
ZALV	**Zalesovo Beam**	**151.96**	**30**	PKPbc	**PKPbc**	**22 38 54.3**	**-0.2**
	comp=Z,3.5nm,0.5s,baz=317,slow=2.8,SNR=16						
ZALV	**Zalesovo Beam**	**151.96**	**30**		**PKPbc**	**22 38 53.9**	**-0.6**
MKAR	**Makanchi Array**	**154.84**	**45**	PKPab	**PKPab**	**22 39 16.2**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=292,slow=3.5,SNR=8.0						
MKAR	**Makanchi Array**	**154.84**	**45**		**PKPab**	**22 39 15.9**	**-0.4**

*UPA **04** 22:19:54.9±0.8,9.00N×83.04W,h8km±4km,MW4.0*

*IASPEI **04** 22:19:55.2±0.8,9.01N±0.02×83.06W±0.02,h16km±5km, Error ellipse: s-maj=3.9km s-min=2.3km az=43.2,GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*

*NEIC **04** 22:19:55.5±1.3,8.98N±0.04×83.11W±0.04,h15km±4km, ML4.3(UCR),Error ellipse: s-maj=7.6km s-min=2.2km az=48.0*

*INET **04** 22:19:55.5±2.4,9.02N×83.14W,h3km±16km,MW3.4*

*UCR **04** 22:19:55.2±1.8,9.00N×83.06W,h4km±2km,MW4.2, mb4.3(NEIC)*

ISC 04 22:19:55.7±0.8,9.02N±0.02×83.06W±0.02,h14km±5km, n90,σ1ş11/122,6C-6D,Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POTG	**Potrero Grande**	**0.07**	**302**	*e*P	**Pg**	**22 19 57.8**	**-0.8**
POTG				*e*S	**Sg**	**22 19 59.9**	**-0.6**
EDSV	**San Vito**	**0.22**	**155**	*e*P	**Pg**	**22 20 00.3**	**-0.4**
EDBA	**Buenos Aires**	**0.25**	**305**	*e*P	**Pg**	**22 20 01.5**	**+0.4**
DRK0	**Durika**	**0.30**	**324**	Pg	**Pg**	**22 20 02.4**	**+0.3**
DRK0				Sg	**Sg**	**22 20 07.0**	**+0.6**
DRK0	**Durika**	**0.30**	**324**	*e*P	**Pg**	**22 20 02.4**	**+0.3**
DRK0	**Durika**	**0.30**	**324**	⇓*i*P	**Pg**	**22 20 02.4**	**+0.3**
DRK0				*e*S	**Sg**	**22 20 06.9**	**+0.5**
SRBA	**San Rafael, Bu**	**0.36**	**306**	Pg	**Pg**	**22 20 02.4**	**-0.7**
SRBA				Sg	**Sg**	**22 20 07.7**	**-0.5**
SRBA	**San Rafael, Bu**	**0.36**	**306**	*e*P	**Pg**	**22 20 02.5**	**-0.7**
EDPN	**Palmar Norte**	**0.39**	**262**	*e*P	**Pg**	**22 20 03.6**	**0.0**
EDPN				*e*S	**Sb**	**22 20 10.4**	**+0.1**
BRU2	**Volcan**	**0.43**	**121**	*e*P	**Pg**	**22 20 03.6**	**-0.7**
BRU2	**Volcan**	**0.43**	**121**	⇑*i*P	**Pg**	**22 20 03.6**	**-0.7**
BRU2				*e*S	**Sg**	**22 20 10.4**	**+0.2**
CDITO	**Canoas**	**0.48**	**157**	Pg	**Pg**	**22 20 04.5**	**-0.7**
CDITO				Sg	**Sb**	**22 20 12.2**	**-0.6**
CDITO	**Canoas**	**0.48**	**157**	⇓*i*P	**Pg**	**22 20 04.6**	**-0.7**
CDITO				*e*S	**Sg**	**22 20 11.5**	**-0.2**
BCO2	**Palmira**	**0.61**	**119**	⇑*i*P	**Pg**	**22 20 06.7**	**-0.9**
BCO2				*e*S	**Sg**	**22 20 16.0**	**+0.2**
CCOL	**Caracol de Cor**	**0.61**	**172**	*e*P	**Pg**	**22 20 06.7**	**-1.0**
PTAR3	**Potrerillos Ar**	**0.65**	**120**	*e*P	**

BCIP	**Isla Barro Col**	**3.19**	**87**	*eP*	**Pn**	**22 20 45.4**	**0.0**
CHOR3	**La Chorrera**	**3.26**	**92**	*eS*	**Sn**	**22 21 24.7**	**-0.4**
ACON	**Acoyapa**	**3.59**	**325**	Pn	**Pn**	**22 20 50.9**	**-0.1**
ACON	**Acoyapa**	**3.59**	**325**	*eP*	**Pn**	**22 20 50.1**	**-0.8**
BOAB	**BOACO BROADBAN**	**3.26**	**323**		**Pn**	**22 20 59.8**	**-0.4**
PRVC	**Isla de Provid**	**4.64**	**21**	Pn	**Pn**	**22 21 05.5**	**+0.1**
MATN	**Matagalpa**	**4.80**	**324**	Pn	**Pn**	**22 21 06.8**	**-0.9**
CRIN	**San Cristobal**	**5.36**	**313**	Pn	**Pn**	**22 21 16.4**	**+1.0**
SJCC	**San Jacinto, C**	**7.83**	**83**	Pn	**Pn**	**22 21 48.9**	**-0.3**

IPEC ***04*** *22:20:56.4±0.3,51°.59N×16°.17E, h0km±1km, ML3.5/5, Error ellipse: s-maj=3.5km s-min=1.6km az=57.0*
MCSM ***04*** *22:20:56.8±0.4, 52°N±3°×1°.6E±°, h3km±1km, ML3.5*
IDC ***04*** *22:20:58.0±0.5, 51°.52N×16°.01E, h0km, mb3.6/5, mbtmp3.6/13, ML3.3/8, MS2.7/1, Error ellipse: s-maj=9.3km s-min=5.5km az=104.0*
DNK ***04*** *22:20:57.6±2.1, 51°.63N×16°.02E, h0km±72km, ML3.1*
LDG ***04*** *22:20:57.9±0.2, 51°.48N×16°.40E, h1km, Ml3.9/41, Error ellipse: s-maj=4.5km s-min=2.6km az=178.0, Suspected Mining induced.*
VIE ***04*** *22:20:58.4±0.6, 51°.46N×16°.10E, h0km, mb3.3/20, ml3.5/16, ms3.7/3, Error ellipse: s-maj=6.5km s-min=3.4km az=42.0 75 km NW of Wroclaw Suspected Mining induced.*
PRU ***04*** *22:20:58.6±0.0, 51°.49N×16°.07E, h0km*
BGR ***04*** *22:20:58.4±0.4, 51°.50N×16°.12E, h1km, ML3.7/14, Error ellipse: s-maj=5.6km s-min=2.2km az=22.0*
UPP ***04*** *22:21:03.7±3.2, 51°.96N×15°.62E, h0km, ML3.0, Suspected explosion*

ISC 04 22:20:55.8±0.5, 51°.56N±0°.02×16°.12E±0°.02, h0km, n213, σ1s50/298, mb3.7/6, 6C-9D, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.73**	**171**	*i*	Pg	**Pb**		**22 21 11.0**	**-0.4**
KSP					eSg	**Sg**		**22 21 20.1**	**+0.9**
KSP	**Ksiaz**	**0.73**	**171**		Pg	**Pb**		**22 21 10.9**	**-0.4**
KSP	**Ksiaz**	**0.73**	**171**		ePg	**Pb**		**22 21 11.1**	**-0.4**
KSP					eSg	**Sb**		**22 21 20.7**	**-1.2**
CHVC	**Chvalec**	**0.98**	**182**		ePG	**Pb**		**22 21 15.8**	**+0.1**
CHVC					eSG	**Sg**		**22 21 27.8**	**+0.7**
CHVC	**Chvalec**	**0.98**	**182**		Pg	**Pb**		**22 21 15.7**	**+0.1**
OSTC	**Ostas**	**1.01**	**176**		ePG	**Pb**		**22 21 16.4**	**+0.2**
OSTC					eSG	**Sg**		**22 21 29.1**	**+0.9**
OSTC	**Ostas**	**1.01**	**176**		Pg	**Pb**		**22 21 16.3**	**+0.1**
UPC	**Upice**	**1.06**	**184**		ePG	**Pb**		**22 21 17.2**	**+0.2**
UPC					eSG	**Sg**		**22 21 30.3**	**+0.5**
	comp=Z,641nm,0.5s								
UPC	**Upice**	**1.06**	**184**		Pg	**Pb**		**22 21 17.0**	**0.0**
DPC	**Dobruska-Polom**	**1.22**	**174**		ePG	**Pb**		**22 21 19.8**	**0.0**
DPC					eSG	**Sg**		**22 21 35.6**	**+0.6**
	comp=Z,210nm,0.3s								
DPC	**Dobruska-Polom**	**1.22**	**174**		Pg	**Pb**		**22 21 19.7**	**0.0**
DPC	**Dobruska-Polom**	**1.22**	**174**		ePg	**Pb**		**22 21 19.8**	**0.0**
DPC					eSg	**Sg**		**22 21 34.9**	**-0.1**
PVCC	**Panska Ves**	**1.42**	**224**		ePG	**Pb**		**22 21 23.9**	**+0.7**
PVCC					eSG	**Sn**		**22 21 43.2**	**+0.9**
	comp=Z,1μm,0.2s								
PVCC	**Panska Ves**	**1.42**	**224**		Pg	**Pb**		**22 21 23.6**	**+0.4**
BRG	**Berggiesshubel**	**1.53**	**244**		Pn	**Pb**		**22 21 24.8**	**-0.2**
BRG					Pg	**Pg**		**22 21 26.6**	**+1.5**
BRG					Sg	**Sb**		**22 21 46.6**	**+1.6**
BRG					Amp			22 21 47.8	
	comp=Z,573nm,0.4s								
BRG	**Berggiesshubel**	**1.53**	**244**		ePn	**Pb**		**22 21 24.9**	**-0.2**
BRG					eSg	**Sb**		**22 21 46.6**	**+1.6**
KRLC	**Kraliky**	**1.55**	**164**		ePG	**Pg**		**22 21 25.6**	**+0.2**
KRLC					eSG	**Sg**		**22 21 45.8**	**+0.3**
KRLC	**Kraliky**	**1.55**	**164**		Pn	**Pb**		**22 21 25.2**	**-0.1**
KRLC	**Kraliky**	**1.55**	**164**		*e*	**Sg**		**22 21 45.8**	**+0.3**
RUE	**Ruedersdorf**	**1.71**	**303**		Pn	**Pb**		**22 21 27.9**	**-0.2**
GKP	**Gorka Klasztor**	**1.84**	**21**		*eP*	**Pg**		**22 21 31.8**	**+0.7**
GKP					IAML			22 22 05.0	
	comp=Z,11μm,0.3s								
FBE	**Freiberg**	**1.85**	**251**		*ePn*	**Pg**		**22 21 31.3**	**0.0**
FBE					eSg	**Sg**		**22 21 56.8**	**+1.6**
GOPC	**GO Pecny, Ondr**	**1.85**	**208**		Pn	**Pn**		**22 21 29.2**	**+0.3**
PRU	**Pruhonice**	**1.87**	**213**		*ePN*	**Pn**		**22 21 29.6**	**+0.6**
PRU					ePG	**Pg**		**22 21 31.7**	**+0.1**
PRU					eSG	**Sb**		**22 21 55.3**	**+0.7**
	comp=Z,325nm,0.6s								
PRU	**Pruhonice**	**1.87**	**213**		Pn	**Pn**		**22 21 29.4**	**+0.4**
CLL	**Collm**	**1.97**	**264**		*ePn*	**Pn**		**22 21 31.0**	**+0.7**
CLL					*i* Pg	**Pg**		**22 21 34.4**	**+0.9**
CLL					*i* x	x		22 21 38.8	
CLL					*i* Sg	**Sg**		**22 22 00.4**	**+1.5**
	comp=Z,237nm,0.6s								
CLL	**Collm**	**1.97**	**264**		*ePn*	**Pn**		**22 21 31.0**	**+0.7**
CLL					eSg	**Sg**		**22 22 01.0**	**+2.0**
MORC	**Moravsky Berou**	**2.00**	**153**		⇓P	**Pn**		**22 21 31.5**	**+0.5**
MORC					⇓S	**Sn**		**22 21 53.6**	**-3.1**
MORC	**Moravsky Berou** baz=335	**2.00**	**153**		*ePn*	**Pn**		**22 21 31.4**	**+0.5**
MORC					eSg	**Sb**		**22 21 59.5**	**+0.8**
	comp=Z,281nm,0.9s,baz=335								
MORC	**Moravsky Berou**	**2.00**	**153**		*ePN*	**Pn**		**22 21 31.5**	**+0.5**
MORC					eSG	**Sb**		**22 21 59.5**	**+0.8**
MORC	**Moravsky Berou**	**2.00**	**153**		*ePn*	**Pn**		**22 21 31.5**	**+0.5**
MORC					eSg	**Sg**		**22 22 01.4**	**+1.2**
OKC	**Ostrava-Krasne**	**2.16**	**142**		*ePn*	**Pn**		**22 21 33.2**	**+0.2**
OKC					eSg	**Sb**		**22 22 04.0**	**+1.1**
VRAC	**Vranov**	**2.28**	**172**		⇑P	**Pn**		**22 21 36.0**	**+1.3**
VRAC					⇓S	**Sn**		**22 22 01.2**	**-2.3**
VRAC	**Vranov**	**2.28**	**172**		Pn	**Pn**		**22 21 36.0**	**+1.3**
	comp=Z,5.0nm,0.3s,baz=330,slow=13,SNR=35								
VRAC					Lg	Lg		22 22 08.1	
	comp=Z,25nm,0.3s,baz=262,slow=21,SNR=11								
	comp=Z,46nm,0.6s								
VRAC	**Vranov** baz=354	**2.28**	**172**		*ePn*	**Pn**		**22 21 35.6**	**+0.9**
VRAC					eSg	**Sg**		**22 22 08.3**	**-0.6**
	comp=Z,204nm,0.8s,baz=354								
VRAC	**Vranov**	**2.28**	**172**		*ePN*	**Pn**		**22 21 35.6**	**+0.9**
VRAC					eSG	**Sg**		**22 22 08.3**	**-0.6**
TREC	**Trest**	**2.31**	**190**		*ePG*	**Pg**		**22 21 40.0**	**0.0**
TREC					eSG	**Sg**		**22 22 09.0**	**-0.8**
	comp=Z,161nm,0.3s								
MAUC	**Maruska**	**2.46**	**153**		*ePN*	**Pn**		**22 21 38.7**	**+1.6**
MAUC					ePG	**Pg**		**22 21 42.7**	**-0.1**
KRUC	**Moravsky** baz=357	**2.51**	**176**		*ePn*	**Pn**		**22 21 38.6**	**+0.8**
KRUC					eSg	**Sg**		**22 22 15.4**	**-0.9**
	comp=Z,230nm,1.1s,baz=357								
KRUC	**Moravsky**	**2.51**	**176**		*ePN*	**Pn**		**22 21 38.7**	**+0.9**
KRUC					eSG	**Sg**		**22 22 15.5**	**-0.9**
TANN	**Tannenbergstha**	**2.58**	**245**		*ePn*	**Pn**		**22 21 40.1**	**+1.2**
TANN					eSg	**Sg**		**22 22 19.8**	**+1.1**
WERD	**Werda**	**2.65**	**247**		*ePn*	**Pn**		**22 21 41.1**	**+1.3**
WERD					eSg	**Sg**		**22 22 20.3**	**-0.7**
NKC	**Novy Kostel**	**2.68**	**242**		*ePN*	**Pn**		**22 21 41.8**	**+1.6**
NKC					ePG	**Pg**		**22 21 47.9**	**+0.8**
OJC	**Ojcow**	**2.69**	**119**		*ePn*	**Pn**		**22 21 42.0**	**+1.7**
OJC					*i* Pg	**Pg**		**22 21 49.1**	**+1.8**
OJC					*i* Sgc			22 22 24.4	
OJC	**Ojcow**	**2.69**	**119**		*ePn*	**Pn**		**22 21 40.1**	**-0.3**
JAVC	**Velka Javorina** baz=341	**2.88**	**159**		*ePn*	**Pn**		**22 21 43.7**	**+0.7**
JAVC					eSg	**Sg**		**22 22 27.4**	**-1.0**
	comp=Z,301nm,1.4s,baz=341								
JAVC	**Velka Javorina**	**2.88**	**159**		*ePN*	**Pn**		**22 21 43.8**	**+0.7**
JAVC					eSG	**Sg**		**22 22 27.4**	**-1.0**
KHC	**Kasperske Hory**	**2.93**	**215**		*ePN*	**Pn**		**22 21 44.2**	**+0.6**
KHC					ePG	**Pg**		**22 21 50.5**	**-1.4**
KHC					eSN	**Sn**		**22 22 20.1**	**+0.6**
KHC					eSG	**Sg**		**22 22 28.3**	**-1.5**
	comp=Z,113nm,0.6s								
CKRC	**Cesky Krumlov**	**2.98**	**204**		*ePG*	**Pg**		**22 21 51.8**	**-1.1**
CKRC					eSG	**Sg**		**22 22 31.0**	**-0.5**
	comp=Z,127nm,0.5s								
MOX	**Moxa**	**2.98**	**254**		*ePn*	**Pn**		**22 21 45.6**	**+1.2**
MOX					eSg	**Sg**		**22 22 31.3**	**-0.2**
GEC2	**GERESS Array S**	**3.13**	**211**		*ePn*	**Pn**		**22 21 47.7**	**+1.2**
GERES	**GERESS Array B**	**3.13**	**211**		Pn	**Pn**		**22 21 47.8**	**+1.2**
	comp=Z,6.2nm,0.3s,baz=32,slow=12,SNR=162								
GERES					Pg	**Pb**		**22 21 54.0**	**+1.7**
	comp=Z,14nm,0.3s,baz=30,slow=17,SNR=35								
GERES					Lg	Lg		22 22 34.3	
	comp=Z,16nm,0.3s,baz=35,slow=23,SNR=7.3								
	comp=Z,10nm,0.4s								

SMOL	**Smolenice**	**3.17**	**164**		*ePN*	**Pn**		**22 21 49.6**	**+2.7**
SMOL					*ePG*	**Pg**		**22 21 57.4**	**+0.9**
SMOL					eSG	**Sg**		**22 22 39.8**	**+2.3**
WET	**Wettzell**	**3.19**	**222**		*ePn*	**Pn**		**22 21 48.1**	**+1.0**
LANS	**Liptovska Anna**	**3.23**	**137**		*ePN*	**Pn**		**22 21 49.2**	**+1.4**
LANS					*ePG*	**Pg**		**22 21 58.8**	**+1.1**
LANS					eSG	**Sg**		**22 22 42.0**	**+2.5**
MODS	**Modra-Piesok**	**3.28**	**166**		*ePN*	**Pn**		**22 21 51.5**	**+3.1**
MODS					*ePG*	**Pg**		**22 21 59.1**	**+0.5**
MODS					eSG	**Sg**		**22 22 43.4**	**+2.3**
KOLL	**Kolacno**	**3.33**	**153**		*ePN*	**Pn**		**22 21 51.2**	**+2.1**
KOLL					*ePG*	**Pg**		**22 22 00.4**	**+0.8**
KOLL					eSG	**Sg**		**22 22 42.4**	**-0.3**
NIE	**Niedzica**	**3.43**	**127**		*ePn*	**Pn**		**22 21 52.3**	**+1.8**
NIE					*i* Pg	**Pg**		**22 22 02.5**	**+1.0**
NIE					eSg	**Sg**		**22 22 46.7**	**+0.9**
ZST	**Bratislava**	**3.43**	**169**		*ePN*	**Pn**		**22 21 52.1**	**+1.6**
ZST					*ePG*	**Pg**		**22 22 01.7**	**+0.2**
ZST					eSG	**Sg**		**22 22 44.5**	**-1.4**
VYHS	**Vyhne**	**3.54**	**149**		*ePN*	**Pn**		**22 21 53.0**	**+1.0**
VYHS					eSG	**Sg**		**22 22 50.6**	**+1.2**
CLZ	**Clausthal**	**3.58**	**277**		*ePn*	**Pn**		**22 21 54.7**	**+2.1**
CLZ					eSg	**Sg**		**22 22 52.7**	**+1.8**
BSD	**Bornholm Skovb**	**3.63**	**349**		*eP*	**Pn**		**22 21 54.0**	**+0.9**
BSD	**Bornholm Skovb**	**3.63**	**349**		*i* P	**Pn**		**22 21 54.6**	**+1.4**
BSD					eS	**Sn**		**22 22 34.9**	**-1.8**
BSD					IAML			22 22 37.0	
	comp=Z,11nm,0.4s								
GRF	**Grafenberg Arr**	**3.64**	**241**		*ePn*	**Pn**		**22 21 54.9**	**+1.5**
GRF					eSg	**Sg**		**22 22 52.4**	**-0.2**
CONA	**Conrad Observa**	**3.64**	**183**		*i* Pn	**Pn**		**22 21 54.8**	**+1.3**
	comp=Z,5.8nm,0.3s,SNR=17								
CONA					Sg	**Sg**		**22 22 52.2**	**-0.5**
	comp=Z,111nm,0.6s								
RONA	**Rosalia, Austr**	**3.87**	**178**		*ePn*	**Pn**		**22 21 57.6**	**+1.0**
	comp=Z,2.0nm,0.2s								
RONA					*i* Sn	**Sn**		**22 22 45.5**	**+2.8**
	comp=Z,16nm,0.3s								
RONA					Sg	**Sg**		**22 22 58.7**	**-1.3**
	comp=Z,32nm,0.4s								
MOA	**Molln**	**3.91**	**199**		*i* Pn	**Pn**		**22 21 58.4**	**+1.4**
	comp=Z,16nm,0.3s,SNR=23								
MOA					Sg	**Sg**		**22 23 00.8**	**-0.4**
	comp=Z,40nm,0.3s								
KECS	**Kecovo**	**4.17**	**136**		*ePN*	**Pn**		**22 22 01.9**	**+1.2**
KECS					*ePG*	**Pg**		**22 22 18.9**	**+3.1**
KECS					eSG	**Sg**		**22 23 11.7**	**+1.8**
BIOA	**Bad Ischl, Aus**	**4.20**	**204**		*ePn*	**Pn**		**22 22 02.3**	**+1.2**
	comp=Z,21nm,0.3s,SNR=23								
BIOA					eSg	**Sg**		**22 23 09.5**	**-1.1**
	comp=Z,92nm,0.5s								
ARSA	**Arzberg**	**4.33**	**185**		*ePn*	**Pn**		**22 22 05.2**	**+2.3**
	comp=Z,4.6nm,0.3s								
ARSA					Sg	**Sg**		**22 23 14.7**	**-0.3**
	comp=Z,112nm,1.1s								
CRVS	**Cervenica-Dubn**	**4.34**	**126**		*ePN*	**Pn**		**22 22 05.0**	**+2.0**
CRVS					*ePG*	**Pg**		**22 22 20.9**	**+1.9**
PSZ	**Piszkesteto**	**4.39**	**145**		⇑P	**Pn**		**22 22 05.5**	**+1.7**
LLD	**Lille Linde**	**4.44**	**330**		*i* P	**Pn**		**22 22 04.1**	**-0.1**
LLD					*i* S	**Sn**		**22 22 57.0**	**+0.4**
LLD					IAML			22 22 59.5	
	comp=Z,34nm,0.4s								
KOLS	**Kolonicke sedl**	**4.75**	**121**		*ePN*	**Pn**		**22 22 09.4**	**+0.8**
KOLS					*ePG*	**Pg**		**22 22 28.5**	**+1.8**
BLEU	**Blekinge**	**4.75**	**358**		*i* P	**Pn**		**22 22 09.9**	**+1.4**
BLEU					P	**Pn**		**22 22 10.0**	**+1.4**
BLEU					S	**Sn**		**22 23 01.6**	**-2.8**
BLEU	**Blekinge**	**4.75**	**358**		P	**Pn**		**22 22 10.0**	**+1.4**
BLEU					S	**Sn**		**22 23 01.6**	**-2.8**
KBA	**Koelnbreinsper**	**4.84**	**203**		*ePn*	**Pn**		**22 22 11.7**	**+1.6**
	comp=Z,15nm,0.4s,SNR=16								
KBA					Sg	**Sg**		**22 23 30.0**	**-1.2**
	comp=Z,34nm,0.5s								
BJUU	**Bjuv**	**4.88**	**339**		P	**Pn**		**22 22 10.3**	**0.0**
BJUU					*i* P	**Pn**		**22 22 10.4**	**0.0**
BJUU					*i* S	**Sn**		**22 23 06.0**	**-1.4**
BJUU	**Bjuv**	**4.88**	**339**		P	**Pn**		**22 22 10.3**	**0.0**
SUW	**Suwalki**	**4.94**	**57**		*eP*	**Pn**		**22 22 13.4**	**+2.2**
SOKA	**Soboth**	**4.94**	**189**		*ePn*	**Pn**		**22 22 13.6**	**+2.3**
	comp=Z,2.3nm,0.3s								
SOKA					Sg	**Sg**		**22 23 32.3**	**-2.1**
	comp=Z,20nm,0.6s								
DEL	**Delary**	**5.09**	**346**		*eP*	**Pn**		**22 22 14.1**	**+0.7**
DEL					IAML			22 23 13.8	
	comp=Z,6.1nm,0.3s								
DEL	**Delary**	**5.09**	**346**		P	**Pn**		**22 22 14.0**	**+0.7**
DEL					*i* P	**Pn**		**22 22 14.0**	**+0.7**
DEL					eS	**Sn**		**22 23 09.8**	**-3.0**
DEL	**Delary**	**5.09**	**346**		P	**Pn**		**22 22 14.0**	**+0.7**
OBKA	**Obir**	**5.16**	**192**		*ePn*	**Pn**		**22 22 15.9**	**+1.5**
	comp=Z,1.4nm,0.4s								
OBKA					Sg	**Sg**		**22 23 41.7**	**+0.2**
	comp=Z,48nm,0.6s								
WATA	**Walderalm**	**5.16**	**217**		*i* Pn	**Pn**		**22 22 16.2**	**+1.8**
	comp=Z,10nm,0.4s,SNR=9.4								
WTTA	**Wattenberg**	**5.20**	**216**		*i* Pn	**Pn**		**22 22 17.0**	**+2.0**
	comp=Z,5.0nm,0.4s,SNR=9.5								
WTTA					Sg	**Sg**		**22 23 44.2**	**+1.4**
	comp=Z,24nm,0.5s								
MOTA	**Moosalm**	**5.34**	**220**		*i* Pn	**Pn**		**22 22 18.0**	**+1.2**
	comp=Z,5.9nm,0.3s,SNR=8.8								
RETA	**Reutte**	**5.37**	**223**		*ePn*	**Pn**		**22 22 18.0**	**+0.9**
	comp=Z,5.9nm,0.5s,SNR=6.4								
RETA					eSg	**Sg**		**22 23 46.9**	**-1.1**
	comp=Z,43nm,0.9s								
ABTA	**Abfaltersbach**	**5.37**	**208**		*ePn*	**Pn**		**22 22 19.2**	**+2.0**
	comp=Z,5.2nm,0.4s,SNR=15								
ABTA					Sg	**Sg**		**22 23 47.7**	**-0.4**
	comp=Z,56nm,0.8s								
SQTA	**Sankt Quirin**	**5.40**	**218**		*i* Pn	**Pn**		**22 22 19.8**	**+2.1**
	comp=Z,4.1nm,0.2s,SNR=8.8								
SQTA					eSg	**Sg**		**22 23 48.5**	**-0.7**
	comp=Z,54nm,0.8s								
VXJU	**Vaexsjoe**	**5.41**	**353**		P	**Pn**		**22 22 19.0**	**+1.4**
VXJU	**Vaexsjoe**	**5.41**	**353**		P	**Pn**		**22 22 19.0**	**+1.4**
MORH	**Mrgy, Hungar**	**5.61**	**162**		⇓P	**Pn**		**22 22 21.5**	**+1.2**
OSKU	**Oskarshamn**	**5.64**	**360**		P	**Pn**		**22 22 22.5**	**+1.6**
OSKU	**Oskarshamn**	**5.64**	**360**		P	**Pn**		**22 22 22.5**	**+1.6**
FETA	**Feichten**	**5.75**	**220**		*i* Pn	**Pn**		**22 22 24.6**	**+2.1**
	comp=Z,2.3nm,0.5s								
FETA					Sg	**Sg**		**22 23 59.5**	**-0.9**
	comp=Z,17nm,0.8s								
BYXU	**Byxelkrok**	**5.76**	**5**		P	**Pn**		**22 22 24.3**	**+1.8**
BYXU	**Byxelkrok**	**5.76**	**5**		P	**Pn**		**22 22 24.3**	**+1.8**
GNOU	**Gnosjoe**	**5.90**	**347**		P	**Pn**		**22 22 25.3**	**+0.9**
GNOU	**Gnosjoe**	**5.90**	**347**		P	**Pn**		**22 22 25.3**	**+0.9**
DAVA	**Damuels**	**5.90**	**226**		*ePn*	**Pn**		**22 22 25.1**	**+0.5**
	comp=Z,4.2nm,0.3s								
DAVA					Sg	**Sg**		**22 24 06.8**	**+1.4**
	comp=Z,37nm,0.8s								
PABE	**Paberze**	**6.12**	**47**		*eP*	**Pn**		**22 22 30.5**	**+3.1**
PABE					IAML			22 24 33.0	
	comp=Z,18nm,0.6s								
BMR	**Baia Mare**	**6.17**	**126**		⇓P	**Pn**		**22 22 29.2**	**+1.0**
DAVOX	**Davos/Dischmat**	**6.29**	**223**		Pn	**Pn**		**22 22 31.4**	**+1.4**
	comp=Z,0.8nm,0.3s,baz=41,slow=11,SNR=7.4								
DAVOX					Sn	**Sn**		**22 23 42.2**	**-0.4**
	comp=Z,0.8nm,0.3s,baz=345,slow=22,SNR=1.8								
DAVOX					Lg	Lg		22 24 15.9	
	comp=Z,1.6nm,0.3s,baz=248,slow=20,SNR=5.5								
	comp=Z,2.9nm,0.4s								
ONAU	**Onsala**	**6.34**	**339**		P	**Pn**		**22 22 31.3**	**+1.0**
ONAU	**Onsala**	**6.34**	**339**		P	**Pn**		**22 22 31.3**	**+1.0**
MUD	**Monsted U'grnd**	**6.38**	**323**		*eP*	**Pn**		**22 22 30.6**	**-0.4**
DRGR		**6.44**	**135**		⇑P	**Pn**		**22 22 33.0**	**+1.1**
CDF	**Champ du Feu**	**6.51**	**245**		*ePn*	**Pn**		**22 22 34.2**	**+1.3**
CDF					eSg	**Sg**		**22 24 25.8**	**+0.9**
	comp=Z,159nm,1.4s								
LNKU	**Linkoeping**	**6.69**	**357**		P	**Pn**		**22 22 36.1**	**+1.0**
LNKU	**Linkoeping**	**6.69**	**357**		P	**Pn**		**22 22 36.1**	**+1.0**
CJR	**Cluj-Napoca**	**6.90**	**132**		⇓P	**Pn**		**22 22 39.8**	**+1.7**
VIKU	**Vikuolandet**	**6.96**	**3**		*eP*	**Pn**		**22 22 40.3**	**+1.4**
BZS	**Buzias**	**6.98**	**146**		⇓P	**Pn**		**22 22 40.7**	**+1.5**
SLIT	**Slitere, Latvi**	**7.05**	**28**		*eP*	**Pn**		**22 22 42.4**	**+2.2**
HINF	**Hinteralfeld**	**7.08**	**242**		*ePn*	**Pn**		**22 22 40.6**	**-0.1**
HINF	**Hinteralfeld**	**7.08**	**242**		*ePg*	**Pg**		**22 23 11.2**	**-0.2**
HINF					eSg	**Sg**		**22 24 43.3**	**+0.2**
	comp=Z,36nm,0.7s								
BURAR	**Bucovina Array**	**7.11**	**120**		⇑P	**Pn**		**22 22 42.4**	**+1.3**
IIGN	**Ignalina**	**7.12**	**54**		*eP*	**Pn**		**22 22 44.8**	**+3.6**
IIGN					IAML			22 24 27.4	
	comp=Z,3.1nm,0.5s								
HAU	**Haudompre**	**7.26**	**244**		*ePn*	**Pn**		**22 22 44.2**	**+1.2**
HAU	**Haudompre**	**7.26**	**244**		*ePg*	**Pg**		**22 23 14.3**	**-0.4**
HAU					eSg	**Sg**		**22 24 48.0**	**-0.7**
	comp=Z,22nm,0.5s								
GIVF	**Givet**	**7.30**	**263**		*ePn*	**Pn**		**22 22 45.1**	**+1.5**
GIVF	**Givet**	**7.30**	**263**		*eP*	Pn		22 22 50.2	+6.6
GIVF					eSg	**Sg**		**22 24 51.6**	**+1.5**
	comp=Z,30nm,0.7s								
KMPD	**K-Podol'skiy**	**7.30**	**110**		Pn	**Pn**		**22 22 44.8**	**+1.2**
PAGF	**Fort de Pagny**	**7.33**	**250**		*ePn*	**Pn**		**22 22 45.0**	**+0.9**
PAGF	**Fort de Pagny**	**7.33**	**250**		*eP*	Pn		22 22 50.9	+6.8
PAGF					eSg	**Sg**		**22 24 51.3**	**+0.1**
	comp=Z,61nm,0.9s								
MI29	**MI29, Kamyanyy**	**7.50**	**94**		Pn	**Pn**		**22 22 47.4**	**+1.1**
LUBAR	**Lubar, Ukraine**	**7.57**	**98**		Pn	**Pn**		**22 22 47.2**	**-0.1**
GZR	**Gura Zlata**	**7.59**	**142**		⇓P	**Pn**		**22 22 48.9**	**+1.2**
MI30	**MI30,Zelenitsa**	**7.64**	**91**		Pn	**Pn**		**22 22 49.2**	**+1.0**
SAVF	**Savonnieres en** baz=72	**7.66**	**252**		*ePn*	**Pn**		**22 22 49.6**	**+1.0**
SAVF					eSg	**Sg**		**22 25 02.4**	**+0.7**
	comp=Z,29nm,0.8s								
BAIF	**Baives**	**7.70**	**263**		*ePn*	**Pn**		**22 22 51.8**	**+2.8**
BAIF					eSg	**Sg**		**22 25 01.0**	**-1.7**
	comp=Z,18nm,0.8s								
MDVR	**Moldovita**	**7.75**	**149**		⇓P	**Pn**		**22 22 51.0**	**+1.2**
MEZF	**Maizieres J'vi** baz=72	**7.76**	**251**		*ePn*	**Pn**		**22 22 49.9**	**0.0**
MEZF					eSg	**Sg**		**22 25 05.0**	**+0.3**
	comp=Z,36nm,0.8s								
HERR	**Herculane**	**7.90**	**145**		⇑P	**Pn**		**22 22 53.3**	**+1.5**
SFTF	**Sexfontaines** baz=74	**7.91**	**249**		*ePn*	**Pn**		**22 22 51.9**	**0.0**
SFTF					eSg	**Sg**		**22 25 08.1**	**-1.4**
	comp=Z,27nm,0.8s								
BIZ	**Bicaz**	**8.00**	**121**		⇑P	**Pn**		**22 22 54.8**	**+1.5**
AK14	**Malin Array Si**	**8.23**	**91**		Pn	**Pn**		**22 22 56.5**	**+0.1**
CABF	**La Chapelle**	**8.24**	**237**		*ePn*	**Pn**		**22 22 57.0**	**+0.4**
CABF	**La Chapelle**	**8.24**	**237**		*ePg*	**Pg**		**22 23 32.3**	**-1.2**
CABF					eSg	**Sg**		**22 25 19.6**	**-0.5**
	comp=Z,24nm,0.6s								
AK04	**Malin Array Si**	**8.25**	**91**		Pn	**Pn**		**22 22 57.1**	**+0.5**
AK11	**Malin Array Si**	**8.26**	**91**		Pn	**Pn**		**22 22 57.3**	**+0.5**
AK03	**Malin Array Si**	**8.29**	**91**		Pn	**Pn**		**22 22 57.9**	**+0.8**
AK01	**Malin Array Si**	**8.29**	**91**		Pn

	comp=Z,6.0nm,0.4s								
MTLF	**Montolieu**	**12.48**	**234**	*e*Pn		**Pn**	**22**	**23**	**58.2 +3.7**
MTLF				*e*Sg			22	27	32.0
	comp=Z,1.3nm,0.3s								
SGMF	**Saint Gilles**	**12.48**	**262**	*e*Pn		**Pn**	**22**	**23**	**56.2 +1.7**
SGMF				*e*Sg			22	27	33.8
	comp=Z,15nm,1.1s								
ROSF	**Rostrenen**	**12.89**	**263**	*e*Pn		**Pn**	**22**	**24**	**01.4 +1.2**
ROSF				*e*Sg			22	27	45.7
	comp=Z,6.9nm,0.8s								
QUIF	**Quistinic**	**12.99**	**261**	*e*Pn		Pn	22	24	07.3 +5.9
QUIF				*e*Sg			22	27	50.3
	comp=Z,8.6nm,0.9s								
EPF	**Esparros**	**13.67**	**238**	*e*P		**P**	**22**	**24**	**16.9 -3.0**
EPF	**Esparros**	**13.67**	**238**	*e*Pg		P	22	25	12.9 +53
EPF				*e*Sg		S	22	28	04.7 +58
	comp=Z,0.8nm,0.4s								
ETSF	**Etsaut**	**14.24**	**239**	*e*Sg			22	28	23.2
	comp=Z,4.6nm,0.7s								
SJPF	**Ste Jean**	**14.45**	**241**	*e*Sg			22	28	32.6
	comp=Z,2.3nm,0.5s								
ESDC	**Sonseca Array**	**18.33**	**237**	P		**P**	**22**	**25**	**13.2 +1.7**
	baz=48,slow=10,SNR=6.1								
	comp=Z,0.9nm,1.1s								
ARCES	**ARCESS Array B**	**18.57**	**10**	P		**P**	**22**	**25**	**11.4 -2.5**
	comp=Z,1.8nm,0.5s,baz=194,slow=13,SNR=11								
KBZ	**Khabaz**	**19.59**	**103**	LR		LR	22	33	31.6
	comp=Z,22nm,18.7s,baz=62,slow=38								
ARU	**Arti**	**25.11**	**62**	P		**P**	**22**	**26**	**21.6 -0.3**
	comp=Z,1.6nm,0.4s,baz=258,slow=15,SNR=2.8								
AKTO	**Aktyubinsk**	**26.14**	**76**	P		**P**	**22**	**26**	**33.2 +1.9**
	comp=Z,1.1nm,0.5s,baz=290,slow=9.9,SNR=3.9								
	comp=Z,1.1nm,0.5s								
TORD	**Torodi Ar. Bea**	**40.05**	**202**	P		**P**	**22**	**28**	**32.8 +0.2**
	comp=Z,1.4nm,1.0s,baz=10,slow=6.3,SNR=5.9								
	comp=Z,1.4nm,1.0s								
MKAR	**Makanchi Array**	**42.19**	**69**	P		**P**	**22**	**28**	**52.3 +2.3**
	comp=Z,0.1nm,0.4s,baz=302,slow=5.0,SNR=3.0								
	comp=Z,0.1nm,0.4s								
SONM	**Songino Array**	**54.88**	**55**	P		**P**	**22**	**30**	**30.9 +3.1**
	comp=Z,0.3nm,0.5s,baz=289,slow=10,SNR=5.1								
	comp=Z,0.3nm,0.5s								
YKA	**Yellowknife Ar**	**59.81**	**336**	P		**P**	**22**	**31**	**03.5 +1.3**
	comp=Z,0.7nm,0.8s,baz=35,slow=6.4,SNR=4.4								
	comp=Z,0.7nm,0.8s								

ROM 04 22:20:59.6±0.1, 41°.865N±0°.004×14°.040E±0°.006, h7km, ML1.2/9, 7C, Error ellipse: s-maj=0.5km s-min=0.3km az=77.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
INTR	**Introdacqua**	**0.18**	**325**	⇑P	Pg	22 21 04.1	+0.9
INTR				S	Sg	22 21 07.2	+1.5
INTR				AML	AML		
	comp=N,243μm,0.7s						
INTR				AML	AML		
	comp=E,119μm,0.6s						
INTR	**Introdacqua**	**0.18**	**325**	S	Sg	22 21 07.7	+2.0
RNI2	**Rionero Sannit**	**0.18**	**153**	P	Pg	22 21 04.3	+1.0
RNI2				S	Sg	22 21 07.3	+1.5
RNI2				AML	AML		
	comp=E,106μm,0.9s						
RNI2				AML	AML		
	comp=N,116μm,0.8s						
RNI2				AML	AML		
	comp=E,107μm,0.9s						
LPEL	**Lama dei Pelig**	**0.21**	**30**	⇑P	Pg	22 21 04.0	+0.2
LPEL				S	Sg	22 21 07.7	+1.1
LPEL				AML	AML		
	comp=N,133μm,0.9s						
LPEL				AML	AML		
	comp=E,202μm,0.2s						
CERA	**Filignano**	**0.27**	**183**	P	Pg	22 21 05.7	+0.8
CERA				S	Sb	22 21 10.4	-1.3
CERA				AML	AML		
	comp=E,56μm,0.4s						
CERA				AML	AML		
	comp=N,56μm,1.3s						
CERA	**Filignano**	**0.27**	**183**	S	Sb	22 21 10.8	-0.9
MIDA	**Miranda**	**0.28**	**144**	P	Pg	22 21 05.6	+0.6
MIDA				S	Sb	22 21 10.6	-1.3
MIDA				AML	AML		
	comp=E,45μm,1.5s						
MIDA				AML	AML		
	comp=E,45μm,1.5s						
MIDA				AML	AML		
	comp=N,40μm,0.4s						
POFI	**Posta Fibreno**	**0.29**	**239**	⇑P	Pg	22 21 05.8	+0.6
POFI				S	Sb	22 21 11.0	-1.2
POFI				AML	AML		
	comp=E,56μm,0.3s						
POFI				AML	AML		
	comp=N,32μm,0.9s						
VVLD	**Villa Vallelon**	**0.31**	**271**	⇑P	Pg	22 21 06.3	+0.6
VVLD				S	Sb	22 21 11.4	-1.5
VVLD				AML	AML		
	comp=N,50μm,0.8s						
VVLD				AML	AML		
	comp=N,50μm,0.8s						
VVLD				AML	AML		
	comp=E,59μm,0.7s						
T0110	**Collepietro**	**0.41**	**332**	P	Pb	22 21 08.5	-0.8
T0110				S	Sb	22 21 15.5	-0.2
T0110				AML	AML		
	comp=E,147μm,1.5s						
T0110				AML	AML		
	comp=N,89μm,0.4s						
T0110				AML	AML		
	comp=N,90μm,0.4s						
T0110				AML	AML		
	comp=E,148μm,1.5s						
CAFR	**Castel Frentan**	**0.43**	**32**	P	Pg	22 21 08.5	+0.6
CAFR				S	Sb	22 21 16.1	-0.2
VAGA	**Valle Agricola**	**0.47**	**162**	⇑P	Pg	22 21 09.4	+0.7
PTQR	**Pietraquaria**	**0.50**	**288**	P	Pb	22 21 10.1	-0.7
FAGN	**Fagnano**	**0.53**	**320**	P	Pb	22 21 10.8	-0.5
FAGN				AML	AML		
	comp=E,82μm,0.8s						
FAGN				AML	AML		
	comp=N,65μm,0.3s						
GUAR	**Guarcino**	**0.55**	**263**	P	Pb	22 21 10.9	-0.7
VCEL	**Villa Celiera**	**0.55**	**344**	P	Pb	22 21 11.2	-0.5
RDP	**Rocca di Papa**	**0.99**	**264**	S	Sb	22 21 33.0	+0.4
RDP	**Rocca di Papa**	**0.99**	**264**	S	Sb	22 21 33.0	+0.4
ROM9	**Roma**	**1.14**	**269**	⇑P	Pn	22 21 24.1	+2.1
ROM9	**Roma**	**1.14**	**269**	⇑P	Pn	22 21 24.1	+2.1
EL6	**Elcito**	**1.62**	**335**	P	Pn	22 21 26.7	-2.0
EL6	**Elcito**	**1.62**	**335**	P	Pn	22 21 26.7	-2.0
MMUR	**Monte Murano**	**1.75**	**334**	S	Sg	22 21 59.0	+3.0
MMUR	**Monte Murano**	**1.75**	**334**	S	Sg	22 21 59.0	+3.0

*IDC **04** 22:58:27.9±1.8, 18°.77N×145°.58E, h190km±17km, mb3.2/9, mbtmp3.8/11, Error ellipse: s-maj=26.4km s-min=11.9km az=86.0*
*NEIC **04** 22:58:29.2±1.9, 18°.7N±0°.1×145°.6E±0°.2, h190km±10km, mb4.2/8, Error ellipse: s-maj=23.3km s-min=14.6km az=82.0*

ISC 04 22:58:28.8±0.6, 18°.74N±0°.06×145°.5E±0°.2, h200km, n22, σ0°88/25, mb3.6/11, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.16**	**187**	P	**Pn**	**22 59 44.9**	**-0.4**
	30nm,0.7s,baz=142,slow=2.8,SNR=1.9						
GUMO				S	**Sn**	**23 00 45.0**	**-0.7**
	15nm,0.3s,baz=241,slow=22,SNR=1.9						
GUMO	**Guam**	**5.16**	**187**		**Pn**	**22 59 44.5**	**-0.9**
JCJ	**Chichijima**	**8.85**	**340**	P	**Pn**	**23 00 32.1**	**-1.0**
	56nm,1.1s,baz=18,slow=22,SNR=1.5						
JCJ				S	**Sn**	**23 02 11.7**	**-0.8**
	59nm,0.8s,baz=299,slow=20,SNR=2.4						
PATS	**Pohnpei**	**17.20**	**132**		**Pn**	**23 02 17.7**	**+0.1**
JGF	**Kuroka**	**18.27**	**338**	P	**Pn**	**23 02 30.5**	**+0.5**
JGF				IAmb	IAmb	23 02 32.6	
	comp=Z,7.0nm,0.9s						
JMM	**Marumori**	**19.49**	**349**	P	**Pn**	**23 02 43.7**	**-0.6**
JMM				IAmb	IAmb	23 03 11.4	
	comp=Z,43nm,1.5s						
WB2	**Warramunga Arr**	**39.97**	**196**	P	**P**	**23 05 44.6**	**+0.5**
WB2				IAmb	IAmb	23 05 47.4	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**39.97**	**196**	P	**P**	**23 05 44.4**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=15,slow=8.2,SNR=8.5						
WRA				PcP	**PcP**	**23 07 44.8**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=18,slow=3.7,SNR=6.0						
	comp=Z,0.3nm,0.3s						
WRA	**Warramunga Arr**	**39.97**	**196**	P	**P**	**23 05 44.3**	**+0.3**
SONM	**Songino Array**	**42.99**	**321**	P	**P**	**23 06 09.6**	**+1.2**
	comp=Z,0.4nm,0.5s,baz=140,slow=8.6,SNR=5.0						
	comp=Z,0.4nm,0.5s						
SONM	**Songino Array**	**42.99**	**321**	P	**P**	**23 06 09.7**	**+1.2**
ASAR	**Alice Springs**	**43.64**	**195**	P	**P**	**23 06 14.6**	**+0.8**
	comp=Z,0.1nm,0.5s,baz=360,slow=5.3,SNR=1.3						
	comp=Z,0.1nm,0.5s						
ZALV	**Zalesovo Beam**	**57.86**	**323**	P	**P**	**23 07 59.6**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=84,slow=4.5,SNR=2.7						
	comp=Z,0.5nm,0.3s						
SII	**Sitkinak Islan**	**58.28**	**34**	P	**P**	**23 08 03.4**	**+1.0**
MKAR	**Makanchi Array**	**58.29**	**314**	P	**P**	**23 08 03.6**	**+0.9**
	comp=Z,0.5nm,0.5s,baz=90,slow=7.9,SNR=6.6						
	comp=Z,0.5nm,0.5s						
MKAR	**Makanchi Array**	**58.29**	**314**	P	**P**	**23 08 03.8**	**+1.1**
MAKZ	**Makanchi**	**58.51**	**314**	P	**P**	**23 08 06.0**	**+1.8**
MAKZ				IAmb	IAmb	23 08 06.5	
	comp=Z,1.1nm,0.6s						
ILAR	**Eielson Array**	**63.69**	**26**	P	**P**	**23 08 38.0**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=248,slow=6.2,SNR=5.5						
	comp=Z,0.6nm,0.6s						
ILAR	**Eielson Array**	**63.69**	**26**	P	**P**	**23 08 38.3**	**-0.4**
YKA	**Yellowknife Ar**	**78.04**	**28**	P	**P**	**23 10 04.8**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=290,slow=5.6,SNR=4.6						
	comp=Z,0.6nm,0.6s						
NVAR	**Mina Array Bea**	**83.27**	**52**	P	**P**	**23 10 34.2**	**+0.6**
	comp=Z,0.9nm,0.7s,baz=270,slow=5.6,SNR=8.5						
	comp=Z,0.9nm,0.7s						
FINES	**FINESS Array B**	**86.76**	**335**	P	**P**	**23 10 48.8**	**-1.3**
	comp=Z,0.6nm,0.3s,baz=64,slow=4.4,SNR=13						
	comp=Z,0.6nm,0.3s						

*ATH **04** 23:04:38.6, 37°.25N×23°.67E, h142km±7km, ML2.8/10, Error ellipse: s-maj=7.3km s-min=1.6km az=110.0*
*THE **04** 23:04:45.5, 37°.23N×23°.73E, h105km±1km, ML2.8/9, Error ellipse: s-maj=1.9km s-min=0.9km az=36.0*

ISC 04 23:04:44.7±1.7, 37°.23N±0°.04×23°.73E±0°.05, h110km±10km, n58, σ0°63/67, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YDRA	**Hydra**	**0.24**	**299**	P	**Pn**	**23 05 00.6**	**+0.3**
YDRA				AML	AML	23 05 12.0	
	comp=N,936μm,0.4s						
YDRA				AML	AML	23 05 12.0	
	comp=E,1000μm,0.4s						
KRND	**KRANIDI**	**0.49**	**288**	P	**Pn**	**23 05 01.6**	**+0.2**
KRND				AML	AML	23 05 14.1	
	comp=N,879μm,0.3s						
KRND				AML	AML	23 05 14.6	
	comp=E,752μm,0.3s						
KRND	**KRANIDI**	**0.49**	**288**	P	**Pn**	**23 05 01.6**	**+0.2**
KRND				S	**Sn**	**23 05 13.4**	**-0.7**
	comp=E,408nm,0.3s						
EPID	**Epidavros**	**0.62**	**308**	P	**Pn**	**23 05 02.6**	**+0.2**
EPID	**Epidavros**	**0.62**	**308**	P	**Pn**	**23 05 02.6**	**+0.2**
EPID				S	**Sn**	**23 05 15.9**	**+0.1**
	comp=E,380nm,0.4s						
VLY	**Voula,Athens**	**0.62**	**5**	P	**Pn**	**23 05 02.7**	**+0.2**
VLY				AML	AML	23 05 15.5	
	comp=N,409μm,0.6s						
VLY				AML	AML	23 05 15.8	
	comp=E,388μm,0.3s						
VLY	**Voula,Athens**	**0.62**	**5**	P	**Pn**	**23 05 02.6**	**+0.2**
VLY				S	**Sn**	**23 05 15.1**	**-0.7**
	comp=E,200nm,0.4s						
ATHU	**Athens Univers**	**0.73**	**3**	P	**Pn**	**23 05 03.8**	**+0.4**
ATHU	**Athens Univers**	**0.73**	**3**	P	**Pn**	**23 05 03.7**	**+0.4**
ATHU				S	**Sn**	**23 05 17.1**	**-0.3**
	comp=E,58nm,0.5s						
ATH	**Athens Observa**	**0.74**	**359**	P	**Pn**	**23 05 03.9**	**+0.5**
MHLO	**Agia Marina, M**	**0.77**	**135**	P	**Pn**	**23 05 04.6**	**+1.0**
MHLO	**Agia Marina, M**	**0.77**	**135**	P	**Pn**	**23 05 04.4**	**+0.8**
MNVA	**Monemvasia**	**0.78**	**226**	P	**Pn**	**23 05 04.0**	**+0.2**
MNVA				AML	AML	23 05 17.8	
	comp=E,943μm,0.2s						
MNVA				AML	AML	23 05 17.9	
	comp=N,1281μm,0.2s						
VLI	**Velíai**	**0.82**	**231**	P	**Pn**	**23 05 04.2**	**+0.1**
VLI				AML	AML	23 05 18.0	
	comp=N,800μm,0.2s						
VLI				AML	AML	23 05 18.1	
	comp=E,798μm,0.4s						
VLI	**Velíai**	**0.82**	**231**	P	**Pn**	**23 05 04.2**	**+0.1**
VLI				S	**Sn**	**23 05 17.8**	**-1.0**
	comp=E,405nm,0.3s						
PTL	**Penteli**	**0.82**	**7**	P	**Pn**	**23 05 04.0**	**-0.2**
DION	**Dionisos Attik**	**0.86**	**11**	P	**Pn**	**23 05 05.1**	**+0.5**
DION				AML	AML	23 05 19.8	
	comp=N,233μm,1.0s						
DION				AML	AML	23 05 20.1	
	comp=E,530μm,0.7s						
DION	**Dionisos Attik**	**0.86**	**11**	P	**Pn**	**23 05 05.0**	**+0.5**
DION				S	**Sn**	**23 05 19.1**	**-0.4**
	comp=E,285nm,0.8s						
KARY	**Karystos**	**0.97**	**35**	P	**Pn**	**23 05 06.2**	**+0.6**
VILL	**Villia**	**0.99**	**340**	P	**Pn**	**23 05 06.0**	**+0.2**
LTK	**Loutraki**	**0.99**	**323**	P	**Pn**	**23 05 06.1**	**+0.3**
LTK	**Loutraki**	**0.99**	**323**	P	**Pn**	**23 05 06.1**	**+0.3**
VIL2	**Platees**	**1.04**	**340**	P	**Pn**	**23 05 06.0**	**-0.3**
VIL2				AML	AML	23 05 22.4	
	comp=E,190μm,0.6s						
VIL2				AML	AML	23 05 24.2	
	comp=N,154μm,0.7s						
KTHA	**Kythira Island**	**1.11**	**209**	P	**Pn**	**23 05 07.5**	**+0.4**
KTHA	**Kythira Island**	**1.11**	**209**	P	**Pn**	**23 05 07.5**	**+0.4**
KTHA				S	**Sn**	**23 05 23.8**	**-0.3**
	comp=N,280nm,0.2s						
KTHR	**Kythira**	**1.13**	**211**	P	**Pn**	**23 05 07.8**	**+0.5**
KTHR				AML	AML	23 05 25.5	
	comp=E,1245μm,0.3s						
KTHR				AML	AML	23 05 28.6	
	comp=N,864μm,0.3s						
THAL	**Thalero**	**1.17**	**314**	P	**Pn**	**23 05 07.7**	**0.0**
THAL	**Thalero**	**1.17**	**314**	P	**Pn**	**23 05 07.7**	**0.0**
KYMI	**Kymi, Euboea I**	**1.43**	**12**	P	**Pn**	**23 05 11.2**	**+0.6**
ITM	**Ithomi**	**1.44**	**268**	P	**Pn**	**23 05 11.8**	**+0.9**
ITM	**Ithomi**	**1.44**	**268**	P	**Pn**	**23 05 11.9**	**+1.1**
ITM				S	**Sn**	**23 05 31.5**	**+0.8**
	comp=N,235nm,0.4s						
KLV	**Kalavryta, Ach**	**1.49**	**303**	P	**Pn**	**23 05 11.3**	**-0.2**
KLV	**Kalavryta, Ach**	**1.49**	**303**	P	**Pn**	**23 05 11.3**	**-0.2**
LKR	**Lokris**	**1.53**	**338**	P	**Pn**	**23 05 11.1**	**-0.7**
ATAL	**Atalanti**	**1.56**	**339**	P	**Pn**	**23 05 12.5**	**+0.2**
ATAL	**Atalanti**	**1.56**	**339**	P	**Pn**	**23 05 12.5**	**+0.2**
PYL	**PYLOS**	**1.63**	**259**	P	**Pn**	**23 05 13.1**	**0.0**
PYL				AML	AML	23 05 35.7	
	comp=N,410μm,0.3s						
PYL				AML	AML	23 05 37.5	
	comp=E,320μm,0.3s						
PYL	**PYLOS**	**1.63**	**259**	P	**Pn**	**23 05 13.1**	**0.0**
LAKA	**Lakka**	**1.71**	**306**	P	**Pn**	**23 05 14.2**	**+0.1**
LAKA	**Lakka**	**1.71**	**306**	P	**Pn**	**23 05 14.3**	**+0.1**
DRO	**Drossia**	**1.76**	**295**	P	**Pn**	**23 05 15.8**	**+1.1**
DRO	**Drossia**	**1.76**	**295**	P	**Pn**	**23 05 15.8**	**+1.1**
SERG	**Sergoula**	**1.77**	**312**	P	**Pn**	**23 05 14.8**	**-0.1**
SERG				AML	AML	23 05 41.0	
	comp=N,144μm,0.2s						
SERG				AML	AML	23 05 41.1	
	comp=E,177μm,0.2s						
SERG	**Sergoula**	**1.77**	**312**	P	**Pn**	**23 05 14.8**	**-0.1**
IMMV	**Iera Moni Meta**	**1.78**	**173**	P	**Pn**	**23 05 15.1**	**+0.1**
IMMV				S	**Sn**	**23 05 38.2**	**+0.2**
	comp=E,210nm,0.3s						
EFP	**Efpalio**	**1.87**	**310**	P	**Pn**	**23 05 16.2**	**+0.2**
EFP	**Efpalio**	**1.87**	**310**	P	**Pn**	**23 05 16.3**	**+0.2**
RLS	**Riolos of Patr**	**1.98**	**295**	P	**Pn**	**23 05 19.0**	**+1.6**
IDI	**Anoyia**	**2.16**	**154**	P	**Pn**	**23 05 19.1**	**-0.7**
MAKR	**Makrakomi, Fth**	**2.18**	**325**	P	**Pn**	**23 05 20.8**	**+0.8**
MAKR	**Makrakomi, Fth**	**2.18**	**325**	P	**Pn**	**23 05 20.6**	**+0.6**
PVO	**Paravola**	**2.22**	**309**	P	**Pn**	**23 05 22.3**	**+1.7**
PVO	**Paravola**	**2.22**	**309**	P	**Pn**	**23 05 21.9**	**+1.4**
EVR	**Evrytania**	**2.26**	**318**	P	**Pn**	**23 05 22.5**	**+1.4**
VLS	**Valsamata**	**2.66**	**292**	P	**Pn**	**23 05 25.9**	**-0.4**
KEF3	**Kipouria, Keph**	**2.85**	**291**	P	**Pn**	**23 05 27.8**	**-0.9**
LKD2	**Lefkada island**	**2.88**	**304**	P	**Pn**	**23 05 29.1**	**0.0**
KEK	**Kerkira**	**3.96**	**310**	P	**Pn**	**23 05 42.5**	**-0.9**

TIR 04 23:08:34.7, 41°.64N×20°.81E, h20km±2km, Md2.5, Ml2.6, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.28**	**280**	P	Pb	23 08 41.8	+0.7
	baz=280						
PHP				S	Sb	23 08 45.8	+0.4
	baz=280						
PHP				AMP			
	comp=N,0.5nm,0.5s,baz=280						
BCI	**Bajram Curri**	**0.91**	**323**	P	Pn	23 08 57.3	+4.8
	baz=324						
BCI				S	Sn	23 09 05.7	+0.6
	baz=324						
BCI				AMP			
	comp=N,0.2nm,0.5s,baz=324						
FNA	**Florina**	**0.95**	**153**	P	Pn	23 08 53.4	+0.3
	baz=152						
FNA				S	Sn	23 09 07.0	+1.0
	baz=152						

*MAN **04** 23:16:04.7, 4°.88N×126°.67E, h55km, mb4.4, ML3.3, MS3.1*
*IDC **04** 23:16:09.9±1.1, 5°.10N×125°.21E, h0km, mb3.5/4, mbtmp3.5/4, MS3.5/1, Error ellipse: s-maj=56.8km s-min=18.6km az=81.0*

ISC 04 23:16:17.1±1.0, 5°.48N±0°.10×126°.5E±0°.2, h66km, n12, σ2s11/12, mb3.3/4, 2C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.02**	**307**	⇓*e*P	Pn	23 16 30.8	-4.8
MATI	**Mati**	**1.48**	**350**	⇑*e*P	Pn	23 16 37.9	-3.8
DAV	**Davao City (W)**	**1.84**	**329**	Pn	**Pn**	**23 16 45.1**	**-1.4**
	20nm,0.3s,baz=113,slow=2.5,SNR=12						
DAV				Sn	**Sn**	**23 17 13.2**	**+4.3**
	37nm,0.3s,baz=59,slow=23,SNR=10.0						
DAV				LR	LR	23 17 40.1	
	comp=Z,399nm,18.4s,baz=130,slow=45						
KCP	**Kidapawan**	**2.08**	**317**	⇓*i*P	**Pn**	**23 16 47.8**	**-2.1**
KCP				*i* S	**Sn**	**23 17 16.1**	**+1.2**
BIPH	**Bislig**	**2.69**	**357**	⇑*i*P	Pn	23 16 53.0	-5.1
BIPH				*e*S	**Sn**	**23 17 31.2**	**+1.7**
GLSP	**General Luna,**	**4.29**	**355**	⇓*e*P	**Pn**	**23 17 18.3**	**-1.7**
GLSP				*e*S	Sn	23 17 30.6	-38
WRA	**Warramunga Arr**	**26.41**	**163**	P	**P**	**23 21 49.5**	**+1.8**
	0.7nm,0.8s,baz=342,slow=10,SNR=5.2						
	0.7nm,0.8s						
ASAR	**Alice Springs**	**29.85**	**166**	P	**P**	**23 22 19.8**	**+1.4**
	0.5nm,0.9s,baz=338,slow=7.0,SNR=2.7						
ASAR				PcP	**PcP**	**23 25 20.5**	**+0.1**
	0.3nm,0.5s,baz=338,slow=1.9,SNR=2.0						
	0.5nm,0.9s						
SONM	**Songino Array**	**45.59**	**341**	P	**P**	**23 24 30.5**	**-0.3**
	0.4nm,0.7s,baz=140,slow=9.4,SNR=1.8						
	0.4nm,0.7s						
MKAR	**Makanchi Array**	**56.01**	**325**	P	**P**	**23 25 48.3**	**-0.8**
	0.6nm,0.6s,baz=127,slow=7.2,SNR=6.7						
	0.6nm,0.6s						
BELG	**Belogornoye**	**78.91**	**322**	LR	LR	00 06 22.5	
	comp=Z,29nm,20.4s,baz=0.4,slow=38						
TORD	**Torodi Ar. Bea**	**122.17**	**289**	PKP	**PKPdf**	**23 35 04.3**	**-1.2**
	0.5nm,0.9s,baz=81,slow=0.9,SNR=3.0						

*IDC **04** 23:30:07.3±1.7, 5°.02S×153°.77E, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=40.0km s-min=24.4km az=38.0*

ISC 04 23:30:19.2±1.4, 4°.8S±0°.1×153°.4E±0°.1, h100km, n7, σ1s36/9, mb3.4/4, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.43**	**290**	Pn	**Pn**	**23 30 42.6**	**-2.1**
	48nm,0.3s,baz=204,slow=2.5,SNR=42						
KRVT				Sn	**Sn**	**23 31 06.2**	**+2.2**
	146nm,0.3s,baz=113,slow=22,SNR=20						
PMG	**Port Moresby**	**7.69**	**233**	Pn	**Pn**	**23 32 07.5**	**-1.0**
	1.1nm,0.3s,baz=78,slow=6.6,SNR=5.0						
PMG				Sn	**Sn**	**23 33 34.3**	**+0.3**
	1.1nm,0.3s,baz=17,slow=24,SNR=1.7						
WRA	**Warramunga Arr**	**23.88**	**229**	P	**P**	**23 35 24.3**	**+0.4**
	0.6nm,0.5s,baz=55,slow=10,SNR=12						
	0.6nm,0.5s						
ASAR	**Alice Springs**	**26.55**	**223**	P	**P**	**23 35 48.0**	**+0.1**
	0.3nm,0.4s,baz=56,slow=8.8,SNR=4.6						
	0.3nm,0.4s						
VNDA	**Vanda**	**72.82**	**178**	P	**P**	**23 41 36.7**	**+0.1**
	0.8nm,0.8s,baz=332,slow=6.2,SNR=5.4						
	0.8nm,0.8s						
QSPA	**South Pole Qui**	**85.17**	**180**	P	**P**	**23 42 44.5**	**+0.2**
	0.7nm,0.5s,baz=272,slow=0.4,SNR=11						
	0.7nm,0.5s						
TORD	**Torodi Ar. Bea**	**150.85**	**288**	PKPbc	**PKPbc**	**23 50 02.0**	**+0.7**
	0.3nm,0.5s,baz=84,slow=2.6,SNR=5.9						

*IDC **04** 23:52:02.6±0.8, 28°.07N×140°.26E, h434km±15km, mb2.9/7, mbtmp3.7/8, Error ellipse: s-maj=50.4km s-min=12.4km az=76.0*
*JMA **04** 23:52:03.7±0.2, 28°N±1°×140°E±°, h431km, MV3.4/20, W OFF OGASAWARA*

ISC 04 23:52:03.1±0.7, 28°.1N±0°.1×140°.5E±0°.2, h450km, n18, σ1s10/22, mb3.3/7, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.82**	**121**	P	**P**	**23 53 02.5**	**-0.2**
CBIJ				S	**S**	**23 53 48.9**	**-2.0**
JCJ	**Chichijima**	**1.82**	**121**	P	**P**	**23 53 02.4**	**-0.3**
	40nm,0.3s,baz=274,slow=18,SNR=41						
JCJ				S	**S**	**23 53 49.0**	**-2.0**
	42nm,0.3s,baz=276,slow=18,SNR=2.5						
JHH2	**Haha-jima-NKT2**	**2.09**	**132**	P	**P**	**23 53 04.4**	**+0.2**
JHH2				S	**S**	**23 53 52.4**	**-1.2**
BSO3	**Boso 3**	**6.72**	**0**	*e*P	**P**	**23 53 44.4**	**-0.1**
JRY	**Ryogami san**	**8.04**	**351**	P	**P**	**23 53 58.8**	**

comp=E,4545µm,1.4s
MRB1 Monte Rocchett 0.13 134 ⇑P Pg 23 55 01.1 +0.4
MRB1 S Sg 23 55 04.7 +1.7
MRB1 AML AML
comp=N,1800µm,0.5s
MRB1 AML AML
comp=N,1845µm,0.5s
MRB1 AML AML
comp=N,1795µm,0.5s
MRB1 AML AML
comp=E,1805µm,1.2s
MRB1 AML AML
comp=E,1765µm,1.2s
VITU Vitulano (BN) 0.17 259 P Pg 23 55 01.8 +0.4
VITU S Sg 23 55 06.0 +2.0
VITU AML AML
comp=N,976µm,1.0s
VITU AML AML
comp=E,476µm,1.1s
VITU AML AML
comp=N,973µm,1.0s
VITU AML AML
comp=N,974µm,1.0s
VITU AML AML
comp=E,1092µm,0.2s
VITU AML AML
comp=N,1094µm,1.0s
SACR S. Croce Del S 0.21 329 P Pg 23 55 02.6 +0.5
SACR S Sg 23 55 06.4 +1.2
SACR AML AML
comp=E,266µm,0.6s
SACR AML AML
comp=N,268µm,0.4s
BIOG Biogem 0.21 94 P Pb 23 55 03.2 -0.4
BIOG S Sg 23 55 08.9 +3.7
BIOG AML AML
comp=E,1155µm,0.6s
BIOG AML AML
comp=N,1425µm,0.5s
BIOG AML AML
comp=E,1160µm,0.6s
BIOG AML AML
comp=N,878µm,1.6s
BIOG AML AML
comp=N,1430µm,0.5s
BIOG AML AML
comp=E,1600µm,0.6s
MOCO Biccari - m.te 0.28 56 ⇑P Pg 23 55 04.0 +0.6
MOCO S Sb 23 55 09.1 -0.5
MOCO AML AML
comp=N,212µm,0.3s
MOCO AML AML
comp=E,384µm,0.3s
PAOL Paolisi 0.28 229 P Pg 23 55 03.6 +0.2
PAOL AML AML
comp=E,259µm,1.2s
PAOL AML AML
comp=N,312µm,0.9s
PAOL AML AML
comp=E,217µm,0.4s
PAOL AML AML
comp=N,239µm,1.4s
PAOL AML AML
comp=N,312µm,0.9s
PAOL AML AML
comp=E,258µm,1.2s
PTRJ Pietraroja 0.28 302 P Pg 23 55 03.6 +0.1
PTRJ S Sb 23 55 09.0 -0.7
GATE Gambatesa 0.30 9 P Pb 23 55 04.6 -0.5
GATE AML AML
comp=E,380µm,0.9s
GATE AML AML
comp=N,488µm,1.5s
GATE AML AML
comp=N,382µm,0.4s
GATE AML AML
comp=E,182µm,0.5s
GATE AML AML
comp=N,381µm,0.4s
GATE AML AML
comp=E,381µm,0.9s
CAFE Carife 0.35 123 ⇓P Pg 23 55 04.6 0.0
CAFE S Sb 23 55 10.6 -1.0
CAFE AML AML
comp=E,290µm,0.4s
CAFE AML AML
comp=N,206µm,1.3s
RSF3 Rocca San Feli 0.35 135 P Pg 23 55 04.3 -0.3
RSF3 S Sg 23 55 10.0 +0.6
BSSO Busso 0.38 330 P Pg 23 55 05.0 -0.2
SGG Gregorio Mates 0.39 296 P Pg 23 55 05.9 +0.5
SGG AML AML
comp=E,149µm,0.5s
SGG AML AML
comp=N,166µm,0.4s
SGTA Sant Agata di 0.40 102 P Pg 23 55 05.6 +0.1
SGTA S Sb 23 55 12.5 -0.5
LIO3 Lioni 0.41 142 P Pg 23 55 05.3 -0.3
CIGN Sant'Elia a Pi 0.44 5 P Pg 23 55 06.6 +0.3
CIGN S Sb 23 55 13.3 -0.9
CIGN AML AML
comp=N,103µm,1.4s
CIGN AML AML
comp=E,91µm,1.4s
MCRV Calabrutti - M 0.50 151 P Pg 23 55 06.8 -0.6
MCRV AML AML
comp=E,114µm,0.2s
MCRV AML AML
comp=N,172µm,0.6s
VVDG Vesuvio Valle 0.50 220 P Pb 23 55 08.1 -0.4
VBKN Vesuvio Bunker 0.50 220 P Pb 23 55 08.1 -0.5
VBKN AML AML
comp=E,394µm,0.3s
VBKN AML AML
comp=N,469µm,0.3s
PIGN Pignataro Magg 0.51 268 P Pg 23 55 07.6 +0.1
PIGN AML AML
comp=E,92µm,1.0s
PIGN AML AML
comp=N,88µm,0.3s
VAGA Valle Agricola 0.51 293 P Pg 23 55 07.7 +0.2
VCRE Vesuvio Crater 0.51 219 P Pb 23 55 08.4 -0.3
CRTO Cratere Ovest, 0.51 219 P Pb 23 55 08.2 -0.5
CRTO AML AML
CRTO AML AML
VARP Vesuvio Array 0.52 220 P Pn 23 55 10.3 -0.8
VTIR Vesuvio Tirone 0.52 218 P Pb 23 55 08.6 -0.3
MELA Melanico ??? S 0.53 23 ⇑P Pg 23 55 07.4 -0.7
MELA S Sb 23 55 16.4 -0.4
MELA AML AML
comp=E,480µm,0.5s
MELA AML AML
comp=N,512µm,0.5s
MELA AML AML
comp=E,480µm,0.5s
MELA AML AML
comp=N,539µm,0.2s
MELA AML AML
comp=E,518µm,0.5s
MIDA Miranda 0.62 314 P Pg 23 55 08.9 -0.8
MIDA AML AML
comp=E,78µm,0.7s
MIDA AML AML
comp=N,65µm,0.4s
CERA Filignano 0.73 302 P Pn 23 55 13.9 -0.2
CERA S Sn 23 55 26.3 +0.9
CERA AML AML
comp=E,104µm,0.4s
CERA AML AML
comp=E,104µm,0.4s
CERA AML AML
comp=N,119µm,0.5s
MODR Mondragone 0.74 265 P Pb 23 55 12.8 +0.3
APRC Apricena 0.75 44 P Pg 23 55 10.3 -1.9
APRC S Sb 23 55 23.2 +0.1
APRC AML AML
comp=E,342µm,0.4s
APRC AML AML
comp=N,386µm,0.5s
APRC AML AML
comp=E,342µm,0.4s
CDRU Civita di Ruta 0.80 154 P Pg 23 55 13.2 0.0
CDRU S Sn 23 55 27.4 +0.3
CDRU AML AML
comp=E,93µm,0.7s
CDRU AML AML
comp=N,91µm,0.3s
SGRT San Giovanni R 0.86 51 P Pg 23 55 12.9 -1.3
SGRT S Sb 23 55 26.3 -0.1
SGRT AML AML
comp=E,347µm,0.4s
SGRT AML AML
comp=N,349µm,0.4s
PALZ Palazzo San Ge 0.88 108 P Pg 23 55 14.7 +0.1
PALZ S Sn 23 55 28.3 -0.7
MSAG Monte S. Angel 0.94 58 P Pg 23 55 14.5 -1.2
MSAG S Sb 23 55 29.4 +0.8
MSAG AML AML
comp=N,308µm,1.6s
MSAG AML AML
comp=E,171µm,0.7s
MTSN Montesano sull 1.17 144 P Pg 23 55 20.2 +0.1
MTSN AML AML
comp=N,46µm,0.6s
MTSN AML AML
comp=E,40µm,0.6s
MTSN AML AML
comp=N,46µm,0.6s
SIRI Monte Sirino - 1.29 143 P Pg 23 55 22.7 +0.3
SIRI AML AML
comp=N,31µm,1.4s
SIRI AML AML
comp=E,38µm,0.5s
AQU L'Aquila 1.57 317 P Pn 23 55 25.3 -0.3
AQU AML AML
comp=E,113µm,1.6s
AQU AML AML
comp=N,114µm,1.3s
LAV9 Lanuvio 1.68 287 ⇓P Pn 23 55 25.4 -1.6
LAV9 S Sg 23 55 52.0 +0.3
MA9 Marino 1.74 289 S Sg 23 55 56.0 +2.5
LSTV Lastovo 2.17 44 *e*Pn Pn 23 55 32.8 -1.0
LSTV Sn Sn 23 55 57.6 -3.2
HVAR Hvar 2.29 31 *e*Pn Pn 23 55 35.0 -0.4
HVAR Sn Sn 23 55 59.9 -3.9
ZIRJ Zirje 2.51 13 *e*Pn Pn 23 55 38.2 -0.2
ZIRJ Sn Sn 23 56 06.0 -3.0
MAKA Makarska 2.62 37 *e*Pn Pn 23 55 39.4 -0.6
MAKA Sn Sn 23 56 09.1 -2.7
STON Ston 2.69 51 *e*Pn Pn 23 55 40.5 -0.4
STON Sn Sn 23 56 10.7 -2.8
STON Ston 2.69 51 P Pn 23 55 42.0 +1.1
MORI Morici 2.72 13 *i* Pn Pn 23 55 40.5 -0.9
MORI Sn Sn 23 56 11.2 -3.1
DUGI Dugi Otok 2.78 3 *e*Pn Pn 23 55 41.4 -0.8
DUGI Sn Sn 23 56 12.7 -3.1
RICI Ricice 2.84 36 *e*Pn Pn 23 55 43.1 +0.1
RICI Sn Sn 23 56 14.3 -2.9
DBRK Dubrovnik 2.86 58 *e*Pn Pn 23 55 43.1 -0.2
DBRK Sn Sn 23 56 14.1 -3.6
KIJV Kijevo 3.01 22 *e*Pn Pn 23 55 45.3 -0.2
KIJV Sn Sn 23 56 19.3 -2.2
VIRC Vir 3.08 3 *e*Pn Pn 23 55 45.9 -0.3
VIRC Sn Sn 23 56 20.3 -2.8
NVLJ Novalja 3.35 0 *e*Pn Pn 23 55 50.2 +0.2
NVLJ Sn Sn 23 56 27.8 -1.9
UDBI Udbina 3.38 11 *e*Pn Pn 23 55 49.4 -1.1
UDBI Sn Sn 23 56 27.6 -3.0
A250A Rusevo Krmpots 3.87 1 *e*Pn Pn 23 55 56.4 -0.8
A250A Sn Sn 23 56 40.8 -1.9

ROM 04 23:57:38.6±0.1,**43°031N**×0°004×**13°287E**±0°007,
h24km, ML1.6/18,**7C-8D, Error ellipse: s-maj=0.6km**
s-min=0.1km az=254.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CSP1	**Cessapalombo**	**0.09**	**315**	⇓P	Pb	23 57 42.8	-0.3
CSP1				S	Sb	23 57 46.0	-0.1
FDMO	**Fiordimonte**	**0.15**	**272**	⇓P	Pb	23 57 43.2	-0.3
FDMO				S	Sb	23 57 46.9	+0.1
MNTP	**Montappone**	**0.17**	**52**	P	Pb	23 57 43.9	+0.1
MNTP				S	Sb	23 57 48.3	+1.1
FEMA	**Monte Fema**	**0.19**	**248**	P	Pb	23 57 44.0	-0.1
FEMA				S	Sb	23 57 48.2	+0.4
MDAR	**Monte D'Aria**	**0.19**	**327**	P	Pb	23 57 43.8	-0.3
MDAR				S	Sb	23 57 47.9	0.0
NRCA	**Norcia**	**0.23**	**213**	⇑P	Pb	23 57 44.4	-0.2
NRCA				S	Sb	23 57 49.1	+0.4
NRCA				AML	AML		
	comp=E,699µm,0.1s						
NRCA				AML	AML		
	comp=N,823µm,0.9s						
NRCA				AML	AML		
	comp=E,700µm,0.1s						
CESI	**CESI - Serrava**	**0.28**	**265**	⇓P	Pb	23 57 45.1	-0.1
CESI				S	Sb	23 57 50.4	+0.6
CESI				AML	AML		
	comp=N,378µm,0.5s						
CESI				AML	AML		
	comp=N,379µm,0.5s						
CESI				AML	AML		
	comp=E,198µm,0.1s						
OFFI	**Offida**	**0.31**	**108**	⇓P	Pb	23 57 46.2	+0.6
OFFI				AML	AML		
	comp=N,102µm,1.3s						
OFFI				AML	AML		
	comp=E,99µm,0.5s						
EL6	**Elcito**	**0.33**	**336**	⇑P	Pb	23 57 45.7	-0.3
EL6				S	Sb	23 57 51.7	+0.6
SNTG	**Esanatoglia**	**0.34**	**312**	P	Pb	23 57 45.9	-0.2
SNTG				S	Sb	23 57 51.8	+0.5
SNTG				AML	AML		
	comp=E,127µm,1.5s						
SNTG				AML	AML		
	comp=N,158µm,0.3s						
SNTG				AML	AML		
	comp=E,126µm,1.5s						
CING	**Cingoli**	**0.35**	**349**	⇑P	Pb	23 57 46.0	-0.3
CING				S	Sb	23 57 52.3	+0.7
SMA1	**SAN MARTINO**	**0.40**	**175**	P	Pb	23 57 46.7	-0.4
SMA1				S	Sb	23 57 53.8	+0.7
SMA1	**SAN MARTINO**	**0.40**	**175**	⇑P	Pb	23 57 46.8	-0.4
SMA1				S	Sb	23 57 53.8	+0.8
SMA1				AML	AML		
	comp=N,56µm,0.3s						
SMA1				AML	AML		
	comp=E,69µm,0.3s						
PP3	**Marolino**	**0.42**	**34**	P	Pn	23 57 48.9	-0.2
ASSB	**Assisi San Ben**	**0.46**	**272**	⇓P	Pb	23 57 47.8	-0.3
ASSB				S	Sb	23 57 55.2	+0.7
ASSB				AML	AML		
	comp=N,120µm,0.3s						
ASSB				AML	AML		
	comp=E,129µm,0.3s						
MMUR	**Monte Murano**	**0.46**	**333**	S	Sb	23 57 55.0	+0.3
LNSS	**Leonessa**	**0.47**	**203**	⇑P	Pb	23 57 47.9	-0.3
LNSS				S	Sb	23 57 55.8	+1.1
LNSS				AML	AML		
	comp=N,86µm,0.1s						
LNSS				AML	AML		
	comp=N,86µm,0.1s						
LNSS				AML	AML		
	comp=E,68µm,1.1s						
FOSV	**Fossato di Vic**	**0.47**	**305**	AML	AML		
	comp=N,124µm,0.9s						
FOSV				AML	AML		
	comp=E,122µm,1.1s						
TERO	**Teramo**	**0.47**	**150**	P	Pb	23 57 48.0	-0.3
TERO				S	Sn	23 57 56.3	-1.2
TERO				AML	AML		
	comp=E,46µm,1.6s						
TERO				AML	AML		
	comp=N,60µm,0.5s						
TERO				AML	AML		
	comp=E,46µm,1.6s						
GUMA	**Gualdo di Mace**	**0.48**	**86**	⇓P	Pb	23 57 42.7	-5.6
GUMA				S	Sb	23 57 46.0	-9.0
GUMA				AML	AML		
	comp=E,1008µm,0.3s						
GUMA				AML	AML		
	comp=N,854µm,0.4s						
GUMA				AML	AML		
	comp=E,1305µm,0.4s						
GUMA				AML	AML		
	comp=N,1249µm,1.6s						
ATCC	**AVT- Casa Cast**	**0.50**	**288**	⇓P	Pb	23 57 48.5	-0.2
ATCC				S	Sb	23 57 56.7	+1.0
ATCC				AML	AML		
	comp=N,149µm,0.2s						
ATCC				AML	AML		
	comp=E,85µm,0.7s						
CAMP	**Campotosto**	**0.50**	**170**	⇑P	Pb	23 57 48.3	-0.5
CAMP				S	Sb	23 57 57.0	+1.1
CAMP				AML	AML		
	comp=N,25µm,0.6s						
CAMP				AML	AML		
	comp=E,22µm,0.2s						
RM33	**Pellescritta (**	**0.53**	**186**	P	Pb	23 57 48.8	-0.5
RM33				S	Sn	23 57 57.8	-1.1
RM33				AML	AML		
	comp=N,41µm,1.6s						
RM33				AML	AML		
	comp=E,41µm,1.0s						
ARVD	**Arcevia**	**0.53**	**332**	P	Pb	23 57 48.9	-0.4
ARVD				S	Sb	23 57 57.5	+1.0
ARRO	**Arrone**	**0.59**	**220**	P	Pb	23 57 50.2	-0.1
ARRO				S	Sn	23 57 59.6	-0.8
GIGS	**Gran Sasso**	**0.62**	**160**	P	Pb	23 57 50.2	-0.6
GIGS				AML	AML		
	comp=E,8µm,1.1s						
GIGS				AML	AML		
	comp=N,8µm,0.6s						
FRON	**Frontone**	**0.64**	**320**	P	Pb	23 57 50.7	-0.4
FRON				S	Sn	23 58 01.1	-0.5
FRON				AML	AML		
	comp=E,53µm,0.3s						
FRON				AML	AML		
	comp=N,68µm,1.0s						
ATVO	**AVT- Monte Val**	**0.73**	**299**	P	Pb	23 57 52.4	-0.3
ATVO				S	Sn	23 58 03.8	-0.2
ATVO				AML	AML		
	comp=E,23µm,1.6s						
ATVO				AML	AML		
	comp=N,24µm,0.8s						
PIEI	**Pieia**	**0.75**	**313**	⇑P	Pb	23 57 52.7	-0.2
PIEI				S	Sn	23 58 03.9	-0.4
PIEI				AML	AML		
	comp=N,47µm,0.4s						
PIEI				AML	AML		
	comp=E,80µm,0.9s						
FAGN	**Fagnano**	**0.80**	**164**	P	Pb	23 57 53.2	-0.6
FAGN				AML	AML		
	comp=E,31µm,0.5s						
FAGN				AML	AML		
	comp=N,28µm,1.4s						
ATMI	**Monte Miggiano**	**0.80**	**292**	S	Sn	23 58 08.0	+2.3
APEC	**Apecchio**	**0.82**	**310**	P	Pn	23 57 54.6	-0.1
APEC				S	Sn	23 58 06.9	+0.7
PE3	**Peglio**	**0.88**	**319**	S	Sn	23 58 10.0	+2.4
T0110	**Collepietro**	**0.88**	**156**	⇓P	Pb	23 57 55.1	-0.2
T0110				AML	AML		
	comp=N,29µm,0.4s						
T0110				AML	AML		
	comp=E,24µm,0.5s						
DUGI	**Dugi Otok**	**1.61**	**53**	*e*Pg	Pn	23 58 05.3	-0.2
DUGI					Sg	Sn	23 58 24.1	-1.4
VIRC	**Vir**	**1.80**	**45**	*e*Pg	Pn	23 58 07.5	-0.6
VIRC					Sg	Sn	23 58 29.2	-0.9
ZIRJ	**Zirje**	**1.83**	**69**	*e*Pn	Pn	23 58 07.9	-0.6
ZIRJ					Sg	Sn	23 58 30.4	-0.5
NVLJ	**Novalja**	**1.91**	**36**	*e*Pn	Pn	23 58 09.1	-0.5
NVLJ					Sg	Sn	23 58 33.1	+0.2
UDBI	**Udbina**	**2.34**	**49**	*e*Pn	Pn	23 58 15.7	+0.1
UDBI					Sn	Sn	23 58 43.5	0.0
A250A	**Rusevo Krmpots**	**2.36**	**29**	*e*Pn	Pn	23 58 16.1	+0.2
A250A					Sn	Sn	23 58 45.5	+1.3

NNC ***05*** *00:31:23.8±0.7, 45°.43N×79°.97E, h0km, mb3.8, mpv3.6,*
Error ellipse: s-maj=5.9km s-min=4.4km az=127.0
SOME ***05*** *00:31:24.6, 45°.48N×79°.90E, h10km*
ISC 05 00:31:22.6±1.2,**45°45N**±0°02×**79°90E**±0°03,**h1**km±11km,
n58,σ0°88/86, 6C-8D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPS	**Kapalarasan**	**0.42**	**247**	*e*P	**Pb**	**00 31 32.8**	**+0.1**
	14nm,0.1s						
KAPS				*e*S	**Sb**	**00 31 38.6**	**-0.9**
	91nm,0.1s						
KAPS	**Kapalarasan**	**0.42**	**247**	P	**Pb**	**00 31 32.8**	**+0.1**
	14nm,0.1s						
KAPS				S	**Sb**	**00 31 38.2**	**-1.4**
	187nm,0.1s						
DJR	**Jarkent**	**1.12**	**184**	*e*P	**Pn**	**00 31 44.6**	**-0.8**
	23nm,0.2s						
DJR				*e*S	**Sg**	**00 31 58.4**	**0.0**
	140nm,0.1s						
DJR	**Jarkent**	**1.12**	**184**	P	**Pn**	**00 31 44.6**	**-0.8**
	23nm,0.2s						
DJR				S	**Sg**	**00 31 58.4**	**0.0**
	140nm,0.1s						
TDK	**Taldyqorghan**	**1.15**	**248**	*e*P	**Pn**	**00 31 46.9**	**+1.2**
	103nm,0.2s						
TDK				*e*S	**Sn**	**00 32 02.1**	**0.0**
	185nm,0.2s						
TDK	**Taldyqorghan**	**1.15**	**248**	P	**Pn**	**00 31 46.9**	**+1.2**
	103nm,0.2s						
TDK				S	**Sn**	**00 32 02.1**	**0.0**
	185nm,0.2s						
KNOS	**Konyrlen**	**1.20**	**205**	*e*P	**Pg**	**00 31 46.5**	**+0.9**
	17nm,0.1s						
KNOS				*e*S	**Sn**	**00 32 02.8**	**-0.9**
	54nm,0.2s						
BLB	**Baldybastay**	**1.69**	**217**	*e*P	**Pg**	**00 31 55.9**	**+0.9**
	156nm,0.4s						
BLB				*e*S	**Sg**	**00 32 17.2**	**+0.4**
	162nm,0.2s						
BLB	**Baldybastay**	**1.69**	**217**	P	**Pg**	**00 31 55.9**	**+0.9**
	156nm,0.4s						
BLB				S	**Sg**	**00 32 17.2**	**+0.4**
	162nm,0.2s						
ARXS	**Arharly**	**1.93**	**231**	*e*P	**Pg**	**00 32 00.5**	**+1.1**
	22nm,0.2s						
ARXS				*e*S	**Sg**	**00 32 25.2**	**+0.8**
	144nm,0.4s						
ARXS	**Arharly**	**1.93**	**231**	P	**Pg**	**00 32 00.5**	**+1.1**
	22nm,0.2s						
ARXS				S	**Sg**	**00 32 25.2**	**+0.8**
	144nm,0.4s						
MAKZ	**Makanchi**	**1.98**	**46**	⇑Pg	**Pb**	**00 31 57.6**	**-1.8**
	3.3nm,0.5s						
MAKZ				⇓Lg	Lg	00 32 21.7	
	3.8nm,0.2s						
KTMS	**Ketmen**	**2.03**	**171**	*e*P	**Pg**	**00 32 02.4**	**+1.0**
	10.0nm,0.1s						
KTMS				*e*S	**Sg**	**00 32 28.5**	**+0.8**
	33nm,0.2s						
KTMS	**Ketmen**	**2.03**	**171**	Pg	**Pg**	**00 32 02.4**	**+1.0**
	10.0nm,0.1s						
KTMS				Lg	Lg	00 32 28.5	
	33nm,0.2s						
MK31	**Makanchi Array**	**2.14**	**50**	⇑Pg	**Pn**	**00 31 59.3**	**-0.1**
	0.4nm,0.1s,baz=224,slow=16,SNR=178						
MK31				⇓Lg	Lg	00 32 26.7	
	2.4nm,0.2s,baz=229,slow=26,SNR=4.7						
PDGK	**Podgornoye**	**2.14**	**188**	Pg	**Pg**	**00 32 03.0**	**-0.6**
	11nm,0.3s						
PDGK				Lg	Lg	00 32 29.5	
	66nm,0.4s						
PDGK	**Podgornoye**	**2.14**	**188**	⇓Pg	**Pg**	**00 32 02.8**	**-0.7**
	6.2nm,0.3s						
PDGK				⇑Lg	Lg	00 32 30.6	
	72nm,0.7s						
KPKS	**Kokpek**	**2.17**	**204**	*e*P	**Pg**	**00 32 04.2**	**+0.2**
	22nm,0.2s						
KPKS				*e*S	**Sg**	**00 32 31.7**	**-0.4**
	186nm,0.3s						
KPKS	**Kokpek**	**2.17**	**204**	Pg	**Pg**	**00 32 04.2**	**+0.2**
	22nm,0.2s						
KPKS				Lg	Lg	00 32 31.7	
	186nm,0.3s						
SHLS	**Shalkode**	**2.31**	**188**	*e*P	**Pg**	**00 32 06.1**	**-0.8**
	16nm,0.2s						
SHLS				*e*S	**Sb**	**00 32 34.8**	**+0.6**
	66nm,0.2s						
SHLS	**Shalkode**	**2.31**	**188**	Pg	**Pg**	**00 32 06.1**	**-0.8**
	16nm,0.2s						
SHLS				Lg	Lg	00 32 34.8	
	66nm,0.2s						
KURS	**Kuram**	**2.32**	**213**	*e*P	**Pg**	**00 32 07.1**	**+0.2**
	4.5nm,0.1s						
KURS				*e*S	**Sg**	**00 32 36.3**	**-0.7**
	24nm,0.4s						

KURS	**Kuram**	**2.32**	**213**	Pg	**Pg**	**00 32 07.1**	**+0.2**
	4.5nm,0.1s						
KURS				Lg	Lg	00 32 36.3	
	24nm,0.4s						
CHKK	**Chushkaly**	**2.62**	**234**	*eP*	**Pg**	**00 32 12.6**	**-0.1**
	5.3nm,0.1s						
CHKK				*eS*	**Sg**	**00 32 45.9**	**-0.8**
	43nm,0.1s						
CHKK	**Chushkaly**	**2.62**	**234**	Pg	**Pg**	**00 32 12.6**	**-0.1**
	5.3nm,0.1s						
CHKK				Lg	Lg	00 32 45.9	
	43nm,0.1s						
SATY	**Saty**	**2.62**	**205**	*eP*	**Pg**	**00 32 12.9**	**+0.2**
	8.1nm,0.1s						
SATY				*eS*	**Sg**	**00 32 46.7**	**0.0**
	118nm,0.2s						
SATY	**Saty**	**2.62**	**205**	Pg	**Pg**	**00 32 12.9**	**+0.2**
	8.1nm,0.1s						
SATY				Lg	Lg	00 32 46.7	
	118nm,0.2s						
KTBS	**Karatobe**	**2.88**	**234**	*eP*	**Pg**	**00 32 18.1**	**+0.3**
	4.9nm,0.3s						
KTBS				*eS*	**Sg**	**00 32 55.1**	**0.0**
	40nm,0.6s						
KTBS	**Karatobe**	**2.88**	**234**	Pg	**Pg**	**00 32 18.1**	**+0.3**
	4.9nm,0.3s						
KTBS				Lg	Lg	00 32 55.1	
	40nm,0.6s						
KUU	**Kurty**	**2.98**	**240**	*eP*	**Pg**	**00 32 20.3**	**+0.7**
	5.0nm,0.2s						
KUU				*eS*	**Sg**	**00 32 59.1**	**+0.9**
	25nm,0.2s						
KUU	**Kurty**	**2.98**	**240**	Pg	**Pg**	**00 32 20.3**	**+0.7**
	5.0nm,0.2s						
KUU				Lg	Lg	00 32 59.1	
	25nm,0.2s						
MDOK	**Medeo**	**3.07**	**223**	*eP*	**Pg**	**00 32 21.1**	**-0.2**
	10nm,0.2s						
MDOK				*eS*	**Sg**	**00 33 00.5**	**-0.6**
	24nm,0.2s						
MDOK	**Medeo**	**3.07**	**223**	Pg	**Pg**	**00 32 21.1**	**-0.2**
	10nm,0.2s						
MDOK				⇑Pg	Pb	00 32 22.9	+4.9
	6.2nm,0.4s						
MDOK				Lg	Lg	00 33 00.4	
	14nm,0.4s						
MDOK				Lg	Lg	00 33 00.5	
	24nm,0.2s						
AAA	**Alma-Ata**	**3.10**	**225**	*eP*	**Pg**	**00 32 22.2**	**+0.2**
	11nm,0.1s						
AAA				*eS*	**Sg**	**00 33 02.3**	**+0.2**
	15nm,0.1s						
AAA	**Alma-Ata**	**3.10**	**225**	Pg	**Pg**	**00 32 22.2**	**+0.2**
	11nm,0.1s						
AAA				Lg	Lg	00 33 02.3	
	15nm,0.1s						
TNSS	**Tian-Shan**	**3.21**	**222**	*eP*	**Pg**	**00 32 24.3**	**+0.2**
	4.2nm,0.3s						
TNSS				*eS*	**Sg**	**00 33 05.5**	**-0.2**
	9.2nm,0.4s						
TNSS	**Tian-Shan**	**3.21**	**222**	Pg	**Pg**	**00 32 24.3**	**+0.2**
	4.2nm,0.3s						
TNSS				Lg	Lg	00 33 05.5	
	9.2nm,0.4s						
IZV	**Izvestkoviy**	**3.38**	**226**	*eP*	**Pg**	**00 32 27.1**	**-0.1**
	56nm,0.1s						
IZV				*eS*	**Sg**	**00 33 11.3**	**+0.3**
	9.4nm,0.2s						
IZV	**Izvestkoviy**	**3.38**	**226**	Pg	**Pg**	**00 32 27.1**	**-0.1**
	56nm,0.1s						
IZV				Lg	Lg	00 33 11.3	
	9.4nm,0.2s						
MTBS	**Maitube**	**3.40**	**228**	*eP*	**Pg**	**00 32 27.4**	**-0.4**
	6.4nm,0.1s						
MTBS				*eS*	**Sg**	**00 33 10.9**	**-0.9**
	38nm,0.2s						
MTBS	**Maitube**	**3.40**	**228**	Pg	**Pg**	**00 32 27.4**	**-0.4**
	6.4nm,0.1s						
MTBS				Lg	Lg	00 33 10.9	
	38nm,0.2s						
KRBS	**Karabastau**	**3.49**	**241**	*eP*	**Pg**	**00 32 29.4**	**-0.1**
	2.3nm,0.1s						
KRBS				*eS*	**Sg**	**00 33 14.8**	**+0.1**
	10.0nm,0.3s						
KRBS	**Karabastau**	**3.49**	**241**	Pg	**Pg**	**00 32 29.4**	**-0.1**
	2.3nm,0.1s						
KRBS				Lg	Lg	00 33 14.8	
	10.0nm,0.3s						
KST	**Kastek**	**3.71**	**231**	*eP*	**Pg**	**00 32 33.0**	**-0.8**
	7.3nm,0.4s						
KST				*eS*	**Sg**	**00 33 20.8**	**-1.1**
	13nm,0.5s						
KST	**Kastek**	**3.71**	**231**	Pg	**Pg**	**00 32 33.0**	**-0.8**
	7.3nm,0.4s						
KST				Lg	Lg	00 33 20.8	
	13nm,0.5s						
ZSN	**Zaisan**	**3.97**	**58**	*eP*	**Pb**	**00 32 34.3**	**+1.0**
	1.5nm,0.3s						
ZSN				*eS*	**Sb**	**00 33 23.7**	**+1.8**
	3.7nm,0.3s						
ZSN	**Zaisan**	**3.97**	**58**	Pg	**Pg**	**00 32 36.9**	**-1.8**
	2.6nm,0.4s						
ZSN				Lg	Lg	00 33 27.3	
	6.4nm,0.5s						
TKM2	**Tokmak 2**	**4.00**	**232**	⇑Pg	**Pg**	**00 32 39.8**	**+0.7**
	1.0nm,0.3s						
TKM2				⇓Lg	Lg	00 33 31.7	
	2.4nm,0.3s						
BTLS	**Baital**	**4.16**	**266**	*eP*	**Pg**	**00 32 42.3**	**+0.2**
	1.8nm,0.1s						
BTLS				*eS*	**Sg**	**00 33 36.9**	**+0.9**
	7.2nm,0.3s						
BTLS	**Baital**	**4.16**	**266**	Pg	**Pg**	**00 32 42.3**	**+0.2**
	1.8nm,0.1s						
BTLS				Lg	Lg	00 33 36.9	
	7.2nm,0.3s						
SGDS	**Sogindy**	**4.27**	**244**	*eP*	**Pg**	**00 32 43.7**	**-0.7**
	1.7nm,0.4s						
SGDS				*eS*	**Sg**	**00 33 39.1**	**-0.6**
	5.6nm,0.3s						
SGDS	**Sogindy**	**4.27**	**244**	Pg	**Pg**	**00 32 43.7**	**-0.7**
	1.7nm,0.4s						
SGDS				Lg	Lg	00 33 39.1	
	5.6nm,0.3s						
SEM	**Semipalatinsk**	**4.97**	**3**	Pg	**Pg**	**00 33 00.9**	**+3.2**
	3.0nm,0.1s						
SEM				Lg	Lg	00 34 08.0	
	13nm,0.3s						
KURBB	**Kurchatov Arra**	**5.26**	**350**	⇑Sn	**Sn**	**00 33 44.9**	**+1.5**
	4.0nm,0.6s						
KURBB				⇓Lg	Lg	00 34 07.4	
	38nm,0.7s						
KURK	**Kurchatov**	**5.34**	**351**	⇓Sn	**Sn**	**00 33 45.2**	**-0.2**
	1.1nm,0.4s						
KURK				⇓Lg	Lg	00 34 12.4	
	17nm,0.6s						
OTUK	**Ortayu**	**5.89**	**301**	⇓Lg	Lg	00 34 32.7	
	17nm,0.8s						
BRZS	**Berezniki**	**6.66**	**316**	*eP*	**Pg**	**00 33 27.7**	**-2.3**
	0.7nm,0.1s						
BRZS				*eS*	**Sg**	**00 34 53.9**	**-2.3**
KK31	**Karatay Array**	**7.14**	**254**	Lg	Lg	00 35 10.3	
	1.6nm,0.6s,baz=61,slow=31,SNR=5.7						

IDC 05 00:32:28.6±3.9, 7°04S×131°93E, h0km, mb3.3/1, mbtmp3.2/3, ML3.0/2, Error ellipse: s-maj=252.1km s-min=34.2km az=73.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.03**	**170**	Pn	Pn	00 35 34.8	-0.4
	0.1nm,0.3s,baz=352,slow=13,SNR=9.0						
WRA				Sn	Sn	00 37 56.9	-4.2
	0.1nm,0.3s,baz=351,slow=21,SNR=2.5						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**16.64**	**174**	Pn	Pn	00 36 23.8	+0.4
	0.1nm,0.3s,baz=350,slow=7.6,SNR=6.5						
	0.4nm,0.9s						
MKAR	**Makanchi Array**	**69.32**	**326**	P	P	00 43 38.0	0.0
	0.1nm,0.4s,baz=114,slow=6.0,SNR=2.1						
	0.1nm,0.4s						

*IDC **05** 00:33:04.3±0.8, 19°.55N×69°.92W, h0km, mb3.7/11, mbtmp3.8/13, ML3.7/2, MS3.1/15, Error ellipse: s-maj=22.4km s-min=17.1km az=32.0*
*NEIC **05** 00:33:07.4±2.1, 19°.66N±0°.04×69°.95W±0°.05, h15km±4km, mb4.1/25, Error ellipse: s-maj=6.9km s-min=5.9km az=90.0*
*OSPL **05** 00:33:07.6±4.1, 19°.64N×69°.90W, h5km±20km, ML4.1*
ISC 05 00:33:06.6±1.1, 19°.62N±0°.04×69°.97W±0°.03, h16km±7km, n139, σ1°66/143, mb4.1/17, MS3.2/14, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LONA1	**Toro Cenizo, N**	**0.26**	**157**	*i* P	**Pg**	**00 33 12.0**	**-0.4**
LONA1				*eS*	**Sg**	**00 33 16.6**	**+0.3**
LONA1				IAML		00 33 20.8	
	comp=Z,24μm,0.5s						
SDD	**Santo Domingo**	**1.16**	**177**	Pn	**Pn**	**00 33 26.6**	**-1.6**
SDD				Sg	**Sb**	**00 33 44.0**	**+1.0**
SDD	**Santo Domingo**	**1.16**	**177**	*i* P	**Pn**	**00 33 26.6**	**-1.6**
SDD				*eS*	**Sb**	**00 33 43.2**	**+0.2**
LOPP1	**Punta Rusia, P**	**1.18**	**281**	*i* P	**Pn**	**00 33 29.1**	**+0.7**
LOPP1				*eS*	**Sn**	**00 33 47.0**	**+2.9**
LOPP1				IAML		00 33 58.0	
	comp=Z,4μm,0.4s						
SDDR	**Presa de Saban**	**1.40**	**243**		**Pn**	**00 33 31.5**	**+0.1**
SDDR					**Sn**	**00 33 51.5**	**+1.9**
SDDR	**Presa de Saban**	**1.40**	**243**	*eP*	**Pn**	**00 33 31.0**	**-0.5**
SDDR				*eS*	**Sn**	**00 33 49.6**	**0.0**
SDDR	**Presa de Saban**	**1.40**	**243**	*i* P	**Pn**	**00 33 31.7**	**+0.2**
SDDR				*eS*	**Sn**	**00 33 50.5**	**+0.9**
SDDR				IAML		00 33 53.5	
	comp=Z,2μm,0.9s						
LODA1	**ITESIL, Dajabo**	**1.64**	**268**	*i* P	**Pn**	**00 33 35.7**	**+1.0**
LODA1				*eS*	**Sn**	**00 33 57.5**	**+2.1**
LODA1				IAML		00 34 02.1	
	comp=Z,6μm,0.3s						
LONE2	**Loma La Sidra**	**1.77**	**233**	*i* P	**Pn**	**00 33 38.3**	**+1.6**
LONE2				*eS*	**Sg**	**00 34 04.2**	**+0.3**
LONE2				IAML		00 34 08.1	
	comp=Z,3μm,0.4s						
GRTK	**Grand Turk**	**2.17**	**330**		**Pn**	**00 33 42.2**	**+0.1**
GRTK	**Grand Turk**	**2.17**	**330**	*i* P	**Pn**	**00 33 42.7**	**+0.6**
GRTK				*eS*	**Sn**	**00 34 10.6**	**+1.9**
GRTK				IAML		00 34 14.1	
	comp=Z,939nm,0.5s						
LOPE2	**Hotel El Peder**	**2.31**	**227**	*i* P	**Pb**	**00 33 47.5**	**-0.4**
LOPE2				IAML		00 34 31.1	
	comp=Z,2μm,0.9s						
NQUSE	**US Embassy, Po**	**2.40**	**244**		**Pn**	**00 33 47.6**	**+2.4**
JAKH	**Jacmel**	**2.78**	**241**		**Pn**	**00 33 53.1**	**+2.7**
JAKH	**Jacmel**	**2.78**	**241**	*i* P	**Pn**	**00 33 53.3**	**+2.9**
JAKH				IAML		00 34 41.9	
	comp=Z,370nm,0.9s						
AGPR	**Aguadilla, PR**	**2.94**	**113**		**Pn**	**00 33 53.4**	**+0.8**
AGPR	**Aguadilla, PR**	**2.94**	**113**	*i* P	**Pn**	**00 33 53.8**	**+1.1**
AGPR				IAML		00 34 54.3	
	comp=Z,604nm,0.6s						
PRSN	**Puerto Rico Se**	**3.02**	**117**		**Pn**	**00 33 55.8**	**+2.0**
CRPR	**Cabo Rojo, PR**	**3.15**	**120**		**Pn**	**00 33 57.3**	**+1.7**
CRPR	**Cabo Rojo, PR**	**3.15**	**120**	*i* P	**Pn**	**00 33 57.5**	**+1.9**
CRPR				IAML		00 34 59.2	
	comp=Z,492nm,0.6s						
MLPR	**Magueyes Islan**	**3.22**	**120**		**Pn**	**00 33 58.5**	**+1.9**
EMPR	**Esperanza - Ma**	**3.45**	**109**		**Pn**	**00 34 00.1**	**+0.3**
OBIP	**Obispado Ponce**	**3.55**	**116**		**Pn**	**00 34 02.4**	**+1.3**
CELP	**Cerrillos**	**3.56**	**115**		**Pn**	**00 34 02.2**	**+1.0**
ICMP	**Isla Caja de M**	**3.69**	**117**		**Pn**	**00 34 05.7**	**+2.7**
GCPR	**Guaynabo City**	**3.90**	**109**		**Pn**	**00 34 05.5**	**-0.5**
SJG	**San Juan**	**3.92**	**112**	Pn	**Pn**	**00 34 05.5**	**-0.6**
	comp=Z,5.9nm,0.3s,baz=321,slow=13,SNR=13						
SJG				Sn	**Sn**	**00 34 50.7**	**-1.1**
	comp=Z,41nm,0.3s,baz=288,slow=19,SNR=8.9						
SJG				LR	LR	00 35 38.6	
	comp=Z,134nm,19.1s,baz=273,slow=40						
	comp=Z,14nm,0.3s						
SJG	**San Juan**	**3.92**	**112**		**Pn**	**00 34 05.9**	**-0.2**
MASC	**Masc**	**4.05**	**279**	*eP*	**Pn**	**00 34 06.2**	**-1.7**
MASC				*eS*	**Sn**	**00 34 54.4**	**-0.5**
MASC				*eSg*	**Sb**	**00 35 03.9**	**-2.3**
MASC				IAML		00 35 14.4	
	comp=E,230nm,0.5s						
MASC				IAML		00 35 14.8	
	comp=N,228nm,0.4s						
MASC	**Masc**	**4.05**	**279**	IAML		00 35 16.5	
	comp=Z,231nm,0.8s						
PDPR	**Patillas Dam,**	**4.07**	**112**		**Pn**	**00 34 08.3**	**+0.1**
CBYP	**Canovanas**	**4.12**	**108**		**Pn**	**00 34 08.4**	**-0.5**
HUMP	**Col San Antoni**	**4.17**	**110**		**Pn**	**00 34 09.7**	**+0.1**
MTP	**Monte Pirata**	**4.45**	**109**		**Pn**	**00 34 12.8**	**-0.6**
CUPR	**Culebra, Puert**	**4.63**	**106**		**Pn**	**00 34 14.7**	**-1.2**
MOAC	**Moa**	**4.80**	**283**	*eP*	**Pn**	**00 34 15.9**	**-2.3**
MOAC				*eS*	**Sn**	**00 35 11.4**	**-2.1**
MOAC				IAML		00 35 33.7	
	comp=N,102nm,0.5s						
MOAC				IAML		00 35 33.9	
	comp=E,33nm,0.8s						
GTBY	**Guantanamo Bay**	**4.85**	**274**		**Pn**	**00 34 17.0**	**-1.8**
GTBY	**Guantanamo Bay**	**4.85**	**274**	*eP*	**Pn**	**00 34 17.1**	**-1.8**
GTBY				*eS*	**Sn**	**00 35 12.7**	**-2.0**
STVI	**Saint Thomas**	**4.91**	**104**		**Pn**	**00 34 19.1**	**-0.7**
CDVI	**St. Croix**	**5.27**	**110**	Pn	**Pn**	**00 34 25.5**	**+0.2**
CDVI	**St. Croix**	**5.27**	**110**	*eP*	**Pn**	**00 34 26.7**	**+1.9**
RCC	**Rio Carpintero**	**5.40**	**275**	*eP*	**Pn**	**00 34 24.6**	**-1.9**
RCC				*eS*	**Sn**	**00 35 27.0**	**-1.4**
RCC				IAML		00 35 38.6	
	comp=N,35nm,0.4s						
RCC				IAML		00 35 38.8	
	comp=E,42nm,0.7s						
LMGC	**Las Mercedes**	**6.63**	**275**	*eP*	**Pn**	**00 34 40.1**	**-3.4**
LMGC				*eS*	**Sn**	**00 35 55.9**	**-2.8**
LMGC				IAML		00 36 04.1	
	comp=E,16nm,0.2s						
LMGC				IAML		00 36 04.6	
	comp=N,12nm,0.1s						
MTDJ	**Mount Denham**	**7.29**	**260**	Pn	**Pn**	**00 34 52.2**	**-0.4**
MTDJ	**Mount Denham**	**7.29**	**260**	*eP*	Pn	00 34 47.8	-4.8
HATO	**Hato, Curacao**	**7.46**	**172**	Pn	**Pn**	**00 34 55.9**	**+1.0**
ANWB	**Willy Bob**	**8.00**	**103**	*eP*	**Pn**	**00 35 00.2**	**-2.0**
ANWB	**Willy Bob**	**8.00**	**103**	*eS*	**Sn**	**00 36 29.1**	**-3.3**
URIC	**Uribia, Colomb**	**8.11**	**194**	Pn	**Pn**	**00 35 04.2**	**+0.5**
BPA	**Boggy Peak**	**8.12**	**107**	*eP*	**Pn**	**00 35 02.0**	**-1.9**
BPA	**Boggy Peak**	**8.12**	**107**	*eS*	**Sn**	**00 36 32.8**	**-2.6**
ANBD	**Bethesda, Anti**	**8.20**	**107**	*eP*	**Pn**	**00 35 04.0**	**-1.1**
ANBD	**Bethesda, Anti**	**8.20**	**107**	*eS*	**Sn**	**00 36 34.6**	**-2.8**
CBE	**Ff, Capester**	**8.71**	**113**	Pn	**Pn**	**00 35 13.0**	**+0.9**
CBE	**Ff, Capester**	**8.71**	**113**	*eP*	**Pn**	**00 35 08.6**	**-3.5**
SMRC	**Santa Marta, M**	**9.36**	**207**	*eP*	**Pn**	**00 35 18.4**	**-2.4**
FDF	**Fort de France**	**9.73**	**119**	Pn	**Pn**	**00 35 27.4**	**+1.4**
BIRV	**Birongo**	**9.77**	**158**		**Pn**	**00 35 28.1**	**+1.5**
BIM	**Bigot**	**9.91**	**119**	Pn	**Pn**	**00 35 30.2**	**+1.8**
SDV	**Santo Domingo**	**10.69**	**184**	Pn	**Pn**	**00 35 39.1**	**-0.3**
	comp=N,4.5nm,0.3s,baz=0.2,slow=8.6,SNR=13						
SDV				Sn	**Sn**	**00 37 33.5**	**-5.4**
	comp=N,1.0nm,0.3s,baz=315,slow=11,SNR=1.4						
	comp=N,7.7nm,0.3s						
SDV	**Santo Domingo**	**10.69**	**184**	Pn	**Pn**	**00 35 40.7**	**+1.4**
SDV	**Santo Domingo**	**10.69**	**184**	*eP*	**Pn**	**00 35 39.7**	**+0.4**
BAUV	**El Baul**	**10.78**	**170**		**Pn**	**00 35 42.1**	**+1.8**
SJCC	**San Jacinto, C**	**10.90**	**208**	Pn	**Pn**	**00 35 43.1**	**+1.1**
OCAC	**Ocana**	**11.77**	**196**		**Pn**	**00 35 54.1**	**0.0**
OCAC	**Ocana**	**11.77**	**196**	*eP*	**Pn**	**00 36 04.9**	**+1.1**
PAMC	**Pamplona, Colo**	**12.49**	**193**	*eP*	**Pn**	**00 36 03.9**	**-0.4**
BRRC	**Barranca, Sant**	**12.96**	**197**	*eP*	**Pn**	**00 36 11.6**	**+1.4**
UREC	**San Jos de Ur**	**12.97**	**205**	*eP*	**Pn**	**00 36 11.6**	**+1.2**
BARC	**Barichara**	**13.32**	**194**	*eP*	**Pn**	**00 36 15.5**	**+0.1**
BBSR	**BB Station**	**13.55**	**19**	Pn	**Pn**	**00 36 16.5**	**-1.6**
PTBC	**PUERTO BERRIO,**	**13.71**	**199**	*eP*	**Pn**	**00 36 20.3**	**-0.2**
DBBC	**Dabeiba**	**13.92**	**207**	*eP*	**Pn**	**00 36 24.2**	**+0.8**
RUSC	**La Rusia**	**13.98**	**193**	*eP*	**Pn**	**00 36 26.1**	**+1.6**
BCIP	**Isla Barro Col**	**14.11**	**224**	Pn	**Pn**	**00 36 24.2**	**-1.7**
BCIP	**Isla Barro Col**	**14.11**	**224**	*eP*	**Pn**	**00 36 24.2**	**-1.7**
HELC	**Santa Helena**	**14.40**	**203**	*eP*	**Pn**	**00 36 31.9**	**+1.7**
SPBC	**San Pablo de B**	**14.45**	**197**	*eP*	**Pn**	**00 36 31.9**	**+1.3**
NORC	**Norcasia**	**14.77**	**199**	*eP*	**Pn**	**00 36 35.8**	**+0.9**
CBOC	**Ciudad Bolivar**	**14.88**	**204**	*eP*	**Pn**	**00 36 37.8**	**+1.1**
656A	**Willston**	**14.99**	**313**	Pn	**Pn**	**00 36 34.8**	**-2.9**
ROSC	**El Rosal**	**15.29**	**197**	LR	LR	00 42 17.0	
	comp=N,32nm,21.5s,baz=65,slow=36						
CHIC	**Chingaza**	**15.35**	**194**	*eP*	**Pn**	**00 36 44.5**	**+1.5**
PLMC	**San Jos del P**	**15.87**	**204**	*eP*	**Pn**	**00 36 50.3**	**+0.8**
ORTC	**Ortega, Tolima**	**16.44**	**199**	*eP*	**Pn**	**00 36 59.0**	**+2.2**
PRAC	**Prado**	**16.52**	**197**	*eP*	**P**	**00 37 04.8**	**+4.4**
YOTC	**Yotoco, Valle**	**16.74**	**203**	*eP*	**Pn**	**00 37 01.9**	**+1.2**
V61A	**Roper**	**17.13**	**341**	Pn	**Pn**	**00 37 04.5**	**-0.7**
JTS	**Las Juntas de**	**17.18**	**239**	P	**P**	**00 37 09.7**	**+2.0**
	comp=N,11nm,1.1s,baz=124,slow=7.1,SNR=5.0						
JTS				LR	LR	00 43 42.6	
	comp=N,29nm,20.1s,baz=104,slow=37						
JTS	**Las Juntas de**	**17.18**	**239**	P	**P**	**00 37 09.5**	**+1.8**
JTS				IAmb	IAmb	00 37 11.2	
	comp=Z,13nm,1.1s						
ORTG	**Ortega, Santa**	**17.55**	**241**	P	**P**	**00 37 13.2**	**+1.3**
ORTG				IAmb	IAmb	00 37 42.2	
	comp=Z,17nm,1.2s						
W57A	**Gilead**	**17.83**	**332**		**P**	**00 37 14.8**	**+0.1**
POPC	**Popayan, Colom**	**18.20**	**202**	*eP*	**Pn**	**00 37 16.4**	**-2.5**
PCON	**Cinco Dias**	**18.30**	**201**	*eP*	**P**	**00 37 27.1**	**+6.5**
JSRW	**J. Sargeant Re**	**19.28**	**341**	P	**P**	**00 37 30.5**	**-0.1**
S57A	**Dark Hollow, R**	**19.70**	**338**	P	**Pn**	**00 37 36.8**	**+0.1**
TKL	**Tuckaleechee C**	**20.08**	**326**	P	**P**	**00 37 39.7**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=143,slow=5.1,SNR=1.3						
TKL				S	S	00 41 13.5	-11
	comp=Z,1.8nm,0.7s,baz=60,slow=18,SNR=2.1						
	comp=Z,0.5nm,0.4s						
TKL	**Tuckaleechee C**	**20.08**	**326**	P	**P**	**00 37 39.5**	**+0.1**
OTAV	**Otavalo**	**20.98**	**204**	P	**P**	**00 37 50.6**	**+0.8**
Q52A	**Bidwell**	**22.01**	**334**	P	**P**	**00 38 00.3**	**0.0**
Q52A				IAmb	IAmb	00 38 18.9	
	comp=Z,6.8nm,0.8s						
SADO	**Sadowa**	**26.21**	**345**	LR	LR	00 49 09.0	
	comp=Z,41nm,19.6s,baz=352,slow=37						
TLIG	**Tlapa**	**27.17**	**270**	P	**P**	**00 38 50.9**	**+1.2**
SAML	**Samuel**	**29.17**	**166**	P	**P**	**00 39 05.3**	**-1.9**
SAML				IAmb	IAmb	00 39 18.4	
	comp=Z,7.8nm,1.4s						
WMOK	**Wichita Mounta**	**29.59**	**307**	P	**P**	**00 39 10.6**	**-0.4**
TXAR	**Lajitas Array**	**32.06**	**294**	P	**P**	**00 39 33.3**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=104,slow=11,SNR=6.7						
TXAR				LR	LR	00 57 09.0	
	comp=Z,14nm,18.3s,baz=106,slow=45						
	comp=Z,0.6nm,0.8s						
TXAR	**Lajitas Array**	**32.06**	**294**	P	**P**	**00 39 33.5**	**+0.6**
NNA	**Nana**	**32.13**	**193**	LR	LR	00 52 48.1	
	comp=Z,35nm,18.4s,baz=4.5,slow=37						
MNTX	**Cornudas Mount**	**33.96**	**298**	P	**P**	**00 39 49.5**	**+0.1**
MNTX				IAmb	IAmb	00 39 51.5	
	comp=Z,3.4nm,0.9s						
SCHQ	**Schefferville**	**35.23**	**3**	LR	LR	00 53 49.1	
	comp=Z,38nm,21.0s,baz=177,slow=35						
SCHQ	**Schefferville**	**35.23**	**3**	P	**P**	**00 40 00.9**	**+0.8**
SCHQ				IAmb	IAmb	00 40 26.1	
	comp=Z,3.1nm,1.1s						
LPAZ	**La Paz**	**35.73**	**177**	P	**P**	**00 40 03.6**	**-1.8**
	comp=Z,0.7nm,0.6s,baz=9.0,slow=1.0,SNR=3.7						
LPAZ				LR	LR	00 54 20.4	
	comp=Z,14nm,20.9s,baz=94,slow=36						
	comp=Z,0.7nm,0.6s						
LPAZ	**La Paz**	**35.73**	**177**	P	**P**	**00 40 04.7**	**-0.7**
LVC	**Limon Verde**	**41.99**	**179**	LR	LR	00 59 43.1	
	comp=Z,34nm,18.2s,baz=20,slow=38						
FRB	**Frobisher Bay**	**44.10**	**1**	LR	LR	00 58 49.4	
	comp=Z,63nm,20.8s,baz=168,slow=35						
NVAR	**Mina Array Bea**	**45.67**	**305**	P	**P**	**00 41 27.5**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=90,slow=7.4,SNR=5.6						
	comp=Z,0.4nm,0.7s						
YKA	**Yellowknife Ar**	**52.62**	**336**	P	**P**	**00 42 19.8**	**+0.3**
	comp=Z,0.3nm,0.8s,baz=112,slow=7.2,SNR=5.5						
YKA				LR	LR	01 04 01.2	
	comp=Z,20nm,20.5s,baz=91,slow=35						
	comp=Z,0.3nm,0.8s						
BORG	**Borgarnes**	**55.34**	**23**	LR	LR	01 01 55.3	
	comp=Z,28nm,21.3s,baz=244,slow=31						
SUMG	**Summit**	**55.92**	**11**	P	**P**	**00 42 43.9**	**+0.1**
ESDC	**Sonseca Array**	**59.46**	**55**	P	**P**	**00 43 08.8**	**-0.1**
	comp=Z,0.7nm,0.8s,baz=284,slow=7.1,SNR=11						
	comp=Z,0.7nm,0.8s						
ESDC	**Sonseca Array**	**59.46**	**55**	P	**P**	**00 43 08.8**	**-0.1**
ESDC				IAmb	IAmb	00 43 24.3	
	comp=Z,1.9nm,1.4s						
ESBB	**Sonseca Array**	**59.47**	**55**	P	**P**	**00 43 09.6**	**+0.7**
ESBB				IAmb	IAmb	00 43 16.3	
	comp=Z,1.6nm,0.9s						
INK	**Inuvik**	**62.23**	**338**	LR	LR	01 09 09.7	
	comp=Z,31nm,21.5s,baz=195,slow=35						
JMIC	**Jan Mayen**	**62.42**	**19**	LR	LR	01 05 36.8	
	comp=Z,9.9nm,19.6s,baz=313,slow=31						
BMAR	**Burnt Mountain**	**66.14**	**336**	P	**P**	**00 43 53.8**	**+0.9**
ILAR	**Eielson Array**	**66.86**	**333**	P	**P**	**00 43 59.1**	**+1.6**
	comp=Z,0.2nm,0.4s,baz=88,slow=5.5,SNR=4.6						
ILAR				LR	LR	01 13 21.9	
	comp=Z,22nm,18.9s,baz=256,slow=36						
	comp=Z,0.2nm,0.4s						
TOAQ	**Torodi Ar. Sit**	**68.64**	**83**	P	**P**	**00 44 08.8**	**-0.8**
TOA0				IAmb	IAm

MTP	**Monte Pirata**	**0.93 239**		**Pn**	**00 39 49.7**	**+0.6**
MTP				**Sn**	**00 40 02.8**	**-0.5**
MTP	**Monte Pirata**	**0.93 239**	IAML		00 40 04.8	
	comp=E,130nm,0.2s					
MTP	**Monte Pirata**	**0.93 239**⇑	*eP*	**Pn**	**00 39 49.7**	**+0.6**
MTP			*eS*	**Sn**	**00 40 02.8**	**-0.5**
CBYP	**Canovanas**	**1.13 255**⇑	*eP*	**Pn**	**00 39 51.6**	**+0.2**
CBYP	**Canovanas**	**1.13 255**		**Pn**	**00 39 51.6**	**+0.2**
CBYP				**Sn**	**00 40 06.5**	**-0.9**
CBYP	**Canovanas**	**1.13 255**⇑	*eP*	**Pn**	**00 39 51.6**	**+0.2**
CBYP			*eS*	**Sn**	**00 40 06.5**	**-0.9**
HUMP	**Col San Antoni**	**1.16 248**⇓	*eP*	**Pn**	**00 39 52.2**	**+0.4**
HUMP	**Col San Antoni**	**1.16 248**		**Pn**	**00 39 52.2**	**+0.4**
HUMP				**Sn**	**00 40 08.0**	**-0.1**
HUMP	**Col San Antoni**	**1.16 248**	IAML		00 40 09.0	
	comp=N,47nm,0.2s					
HUMP	**Col San Antoni**	**1.16 248**⇓	*eP*	**Pn**	**00 39 52.2**	**+0.4**
HUMP			*eS*	**Sn**	**00 40 08.0**	**-0.1**
GCPR	**Guaynabo City**	**1.33 259**⇓	*eP*	**Pn**	**00 39 53.8**	**0.0**
GCPR	**Guaynabo City**	**1.33 259**	*eS*	**Sn**	**00 40 10.3**	**-1.3**
GCPR	**Guaynabo City**	**1.33 259**		**Pn**	**00 39 53.8**	**0.0**
GCPR				**Sn**	**00 40 10.3**	**-1.3**
PDPR	**Patillas Dam,**	**1.36 246**		**Pn**	**00 39 54.6**	**+0.3**
SJG	**San Juan**	**1.44 252**	IAML		00 40 16.5	
	comp=N,31nm,0.6s					
SJG			IAML		00 40 18.3	
	comp=N,32nm,0.2s					
SJG	**San Juan**	**1.44 252**	Pn	**Pn**	**00 39 55.5**	**+0.3**
SJG	**San Juan**	**1.44 252**	*eP*	**Pn**	**00 39 56.2**	**+1.0**
IGPR	**InterUniversit**	**1.46 246**⇑	*eP*	**Pn**	**00 39 56.0**	**+0.6**
IGPR	**InterUniversit**	**1.46 246**	*eS*	**Sn**	**00 40 14.0**	**-0.5**
CELP	**Cerrillos**	**1.84 255**⇓	*eP*	**Pn**	**00 40 01.1**	**+0.7**
CELP	**Cerrillos**	**1.84 255**		**Pn**	**00 40 00.8**	**+0.4**
CELP	**Cerrillos**	**1.84 255**		**Sn**	**00 40 23.0**	**-0.3**
CELP	**Cerrillos**	**1.84 255**⇓	*eP*	**Pn**	**00 40 01.1**	**+0.7**
CELP			*eS*	**Sn**	**00 40 23.0**	**-0.3**
OBIP	**Obispado Ponce**	**1.88 254**⇑	*eP*	**Pn**	**00 40 01.7**	**+0.9**
OBIP	**Obispado Ponce**	**1.88 254**		**Pn**	**00 40 01.7**	**+0.9**
OBIP	**Obispado Ponce**	**1.88 254**⇑	*eP*	**Pn**	**00 40 01.7**	**+0.9**
SKI	**Saint Kitts**	**2.25 123**	*eP*	**Pn**	**00 40 06.8**	**+1.1**
SKI			*eS*	**Sn**	**00 40 32.8**	**-0.2**
AGPR	**Aguadilla, PR**	**2.28 268**⇓	*eP*	**Pn**	**00 40 06.4**	**+0.3**
AGPR	**Aguadilla, PR**	**2.28 268**		**Pn**	**00 40 06.4**	**+0.3**
AGPR				**Sn**	**00 40 33.1**	**-0.5**
AGPR	**Aguadilla, PR**	**2.28 268**⇓	*eP*	**Pn**	**00 40 06.4**	**+0.3**
AGPR			*eS*	**Sn**	**00 40 33.1**	**-0.5**
LSP	**Las Mesas**	**2.29 260**⇑	*eP*	**Pn**	**00 40 07.1**	**+0.8**
LSP	**Las Mesas**	**2.29 260**⇑	*eP*	**Pn**	**00 40 07.1**	**+0.8**
MLPR	**Magueyes Islan**	**2.30 255**⇑	*eP*	**Pn**	**00 40 07.3**	**+1.0**
MLPR	**Magueyes Islan**	**2.30 255**		**Pn**	**00 40 07.3**	**+1.0**
CRPR	**Cabo Rojo, PR**	**2.35 256**⇑	*eP*	**Pn**	**00 40 07.9**	**+0.9**
CRPR	**Cabo Rojo, PR**	**2.35 256**		**Pn**	**00 40 07.4**	**+0.4**
CRPR	**Cabo Rojo, PR**	**2.35 256**⇑	*eP*	**Pn**	**00 40 07.9**	**+0.9**
ANWB	**Willy Bob**	**2.93 108**	Pn	**Pn**	**00 40 15.3**	**+0.5**
ANWB	**Willy Bob**	**2.93 108**	*eP*	**Pn**	**00 40 14.7**	**0.0**
ANWB			*eS*	**Sn**	**00 40 47.5**	**-1.5**
BPA	**Boggy Peak**	**3.12 119**	*eP*	**Pn**	**00 40 17.9**	**+0.5**
BPA			*eS*	**Sn**	**00 40 53.6**	**-0.2**
ANBD	**Bethesda, Anti**	**3.19 118**	*eP*	**Pn**	**00 40 18.8**	**+0.4**
ANBD			*eS*	**Sn**	**00 40 55.0**	**-0.5**

IDC 05 00:45:49.6±1.6, 4°07'S×129°39'4E, h0km, mb3.5/1, mbtmp3.4/4, ML3.2/3, Error ellipse: s-maj=58.5km s-min=24.3km az=89.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**3.45**	**23**	Pn	Pn	00 46 44.6	0.0
SIJI	1.6nm,0.3s,baz=198,slow=19,SNR=2.7			Sn	Sn	00 47 28.6	+2.3
	1.0nm,0.3s,baz=251,slow=21,SNR=2.0 3.0nm,0.3s						
WRA	**Warramunga Arr**	**16.35**	**165**	Pn	Pn	00 49 40.0	-0.7
	0.1nm,0.3s,baz=351,slow=13,SNR=1.7 0.5nm,0.8s						
ASAR	**Alice Springs**	**19.85**	**169**	P	P	00 50 22.9	+0.5
	0.3nm,0.3s,baz=352,slow=11,SNR=18 0.8nm,0.3s						
MKAR	**Makanchi Array**	**65.77**	**326**	P	P	00 56 36.4	-0.2
	0.3nm,0.6s,baz=119,slow=8.4,SNR=4.5 0.3nm,0.6s						

*CRAAG **05** 00:48:52.4, 36°36'N×3°56'E, Ml2.5, Hypocentre not reviewed by the ISC*

MDD 05 00:48:49.9±1.1, 36°06'N×3°80'E, h0km, Mb3.8/10, M_mb3.1/12, 7C, Error ellipse: s-maj=10.5km s-min=5.5km az=145.0, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKET	**Djebel Ketaf**	**0.07**	**98**	P		00 49 02.9	
ADJB	**Djebel Djouab**	**0.31**	**289**	P		00 48 58.0	
EMHD	**Djebel Mahouad**	**0.70**	**282**	P		00 49 04.0	
ABMS	**Boumerdes**	**0.74**	**340**	P		00 49 02.6	
EIBI	**Ibiza**	**3.55**	**327**	P	Pn	00 49 44.8	-1.4
EIBI				⇑*i*Vmb_V		00 49 47.8	
	126nm,SNR=0.9						
EIBI				S	Sn	00 50 21.5	-7.5
ETOS	**Mallorca**	**3.79**	**348**	P	Pn	00 49 47.9	-1.6
ETOS				⇑*i*Vmb_V		00 49 50.3	
	128nm,SNR=1.3						
ETOS				S	Sn	00 50 30.1	-4.7
EMUR	**La Murta**	**4.41**	**295**	P	Pn	00 49 57.5	-0.6
EMUR				⇑*i*Vmb_V		00 49 58.6	
	57nm,SNR=0.8						
EMUR				S	Sn	00 50 45.2	-5.0
EZAR	**Zarzadilla de**	**4.76**	**294**	P	Pn	00 50 01.4	-1.6
EZAR				S	Sn	00 50 56.9	-2.0
ETOB	**Tobarra**	**4.98**	**303**	P	Pn	00 50 04.4	-1.6
ETOB				⇑*i*Vmb_V		00 50 06.6	
	105nm,SNR=1.9						
ETOB				S	Sn	00 51 00.7	-3.7
ECHE	**Chera**	**5.17**	**314**	P	Pn	00 50 07.7	-0.8
ECHE				⇑*i*Vmb_V		00 50 11.4	
	91nm,SNR=1.9						
EBER	**Berja**	**5.46**	**281**	P	Pn	00 50 11.2	-1.4
EMOS	**Mosqueruela**	**5.46**	**323**	P	Pn	00 50 10.7	-1.9
EMOS				⇑*i*Vmb_V		00 50 12.2	
	45nm,SNR=1.2						
EMOS				S	Sn	00 51 09.8	-6.5
EJON	**La Jonquera**	**6.42**	**354**	P	Pn	00 50 25.0	-0.8
ETOR	**Torete**	**6.61**	**318**	P	Pn	00 50 27.5	-0.9
ETOR				⇑*i*Vmb_V		00 50 30.5	
	36nm,SNR=1.0						

MDD 05 00:49:11.8±2.7, 35°93'N×3°94'E, h0km±39km, Mb3.8/10, M_mb3.1/10, 8C, Error ellipse: s-maj=57.4km s-min=10.7km az=146.0, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EIBI	**Ibiza**	**3.71**	**327**	P	Pn	00 50 10.0	-0.4
EIBI				⇑*i*Vmb_V		00 50 11.1	
	149nm,SNR=1.0						
EIBI				S	Sn	00 50 46.3	-8.5
ETOS	**Mallorca**	**3.93**	**347**	P	Pn	00 50 12.7	-0.7
ETOS				⇑*i*Vmb_V		00 50 15.5	
	116nm,SNR=1.1						
AFON	**Font Roja**	**4.49**	**309**	P	Pn	00 50 20.0	-1.3
AFON				⇑*i*Vmb_V		00 50 23.6	
	137nm,SNR=1.2						
EMUR	**La Murta**	**4.57**	**296**	P	Pn	00 50 19.0	-3.1
EMUR				⇑*i*Vmb_V		00 50 19.8	
	62nm,SNR=0.7						
EZAR	**Zarzadilla de**	**4.91**	**295**	P	Pn	00 50 25.5	-1.5
EZAR				S	Sn	00 51 19.9	-4.6
ETOB	**Tobarra**	**5.14**	**303**	P	Pn	00 50 29.0	-1.1
ETOB				⇑*i*Vmb_V		00 50 30.2	
	50nm,SNR=0.7						
ETOB				S	Sn	00 51 26.8	-3.4
ECHE	**Chera**	**5.33**	**315**	P	Pn	00 50 31.0	-1.7
ECHE				⇑*i*Vmb_V		00 50 31.5	
	72nm,SNR=1.2						
EMOS	**Mosqueruela**	**5.62**	**323**	P	Pn	00 50 34.8	-2.0
EMOS				⇑*i*Vmb_V		00 50 37.1	
	29nm,SNR=0.5						
EJON	**La Jonquera**	**6.56**	**353**	P	Pn	00 50 48.1	-1.4
EJON				⇑*i*Vmb_V		00 50 52.4	
	124nm,SNR=1.8						

IDC 05 00:58:05.8±3.3, 10°66S×161°32E, h73km±30km, mb3.3/3, mbtmp3.8/4, Error ellipse: s-maj=37.9km s-min=27.4km az=36.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.82**	**312**	P	Pn	00 58 34.8	-0.5
	157nm,0.4s,baz=150,slow=5.9,SNR=12						
HNR				S	Sn	00 58 57.9	+0.4
	164nm,0.5s,baz=184,slow=5.7,SNR=5.6						
MSVF	**Nonsavu**	**17.67**	**115**	P	Pn	01 02 07.4	+0.1
	9.6nm,0.9s,baz=244,slow=15,SNR=2.8						
WRA	**Warramunga Arr**	**27.58**	**247**	P	P	01 03 46.2	-0.2
	0.4nm,0.6s,baz=77,slow=9.2,SNR=5.5 0.4nm,0.6s						
ASAR	**Alice Springs**	**29.15**	**240**	P	P	01 04 00.5	+0.2
	0.5nm,0.9s,baz=66,slow=10,SNR=2.7 0.5nm,0.9s						
SONM	**Songino Array**	**75.83**	**325**	P	P	01 09 44.3	0.0
	0.5nm,0.6s,baz=108,slow=4.7,SNR=3.6 0.5nm,0.6s						

*NOU **05** 00:59:45.8, 18°19S×168°38E, h29km, MLv5.2/12, Vanuatu Islands*

*NEIC **05** 00:59:47.8±1.8, 18°33S±0°09×168°4E±0°1, h49km±7km, mb4.6/21, Error ellipse: s-maj=15.3km s-min=13.0km az=82.0*

*IDC **05** 00:59:51.9±4.2, 18°76S×168°51E, h110km±39km, mb3.9/10, mbtmp4.3/11, MS3.5/12, Error ellipse: s-maj=34.8km s-min=22.2km az=178.0*

ISC 05 00:59:44.6±0.5, 18°22S±0°05×168°47E±0°09, h35km, n81, σ1s41/72, mb4.5/20, MS3.5/11, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**0.56**	**332**	P	Pn	00 59 56.9	+0.8
MARNC	**Mare, Loyalty**	**3.27**	**187**	Pn	Pn	01 00 33.6	+0.2
MARNC				Sn	Sn	01 01 08.7	-2.4
DZM	**Mont Dzumac**	**4.28**	**206**	P	Pn	01 00 48.1	+0.7
	116nm,0.4s,baz=28,slow=14,SNR=95						
DZM				S	Sn	01 01 34.0	-2.1
	147nm,0.5s,baz=323,slow=20,SNR=8.5						
DZM				LR	LR	01 02 18.9	
	comp=Z,473nm,20.1s,baz=56,slow=38						
DZM	**Mont Dzumac**	**4.28**	**206**		Pn	01 00 48.3	+1.0
DZM				Sn	Sn	01 01 35.1	-1.0
DZM	**Mont Dzumac**	**4.28**	**206**	P	Pn	01 00 48.6	+1.3
NOUC	**Port Laguerre**	**4.36**	**207**	P	Pn	01 00 49.8	+1.4
PINNC	**Pines Island,**	**4.47**	**192**		Pn	01 00 51.7	+1.8
ONTNC	**Ouen Toro**	**4.48**	**205**		Pn	01 00 51.4	+1.3
ONTNC	**Ouen Toro**	**4.48**	**205**	P	Pn	01 00 51.7	+1.6
KOUNC	**Koumac, New Ca**	**4.58**	**239**		Pn	01 00 52.5	+1.1
KOUNC	**Koumac, New Ca**	**4.58**	**239**	P	Pn	01 00 52.8	+1.4
CTA	**Charters Tower**	**21.06**	**261**	P	P	01 04 27.3	+1.4
	13nm,1.1s,baz=77,slow=13,SNR=5.8						
CTA				LR	LR	01 11 32.6	
	comp=Z,80nm,20.1s,baz=83,slow=33 13nm,1.1s						
CTAO	**Charters Tower**	**21.06**	**261**	P	P	01 04 27.3	+1.4
URZ	**Urewera**	**21.35**	**161**	P	P	01 04 24.4	-4.4
	2.6nm,0.8s,baz=303,slow=17,SNR=2.9						
URZ				LR	LR	01 11 11.8	
	comp=Z,171nm,19.6s,baz=31,slow=33 2.6nm,0.8s						
URZ	**Urewera**	**21.35**	**161**	P	P	01 04 31.9	+3.1
BKZ	**Black Stump Fm**	**22.01**	**163**	P	P	01 04 38.1	+2.2
BKZ				IAmb	IAmb	01 04 50.2	
	comp=Z,30nm,1.4s						
PMG	**Port Moresby**	**22.45**	**290**	LR	LR	01 12 39.9	
	comp=Z,98nm,18.6s,baz=137,slow=34						
STKA	**Stephens Creek**	**27.79**	**236**	P	P	01 05 29.1	-1.4
	comp=Z,8.6nm,0.9s,baz=41,slow=9.3,SNR=6.9						
STKA				LR	LR	01 15 33.5	
	comp=Z,69nm,19.4s,baz=26,slow=34 comp=Z,8.6nm,0.9s						
STKA	**Stephens Creek**	**27.79**	**236**	P	P	01 05 30.5	0.0
TOO	**Toolangi**	**27.87**	**222**	P	P	01 05 31.2	0.0
TOO				IAmb	IAmb	01 05 52.4	
	comp=Z,19nm,1.2s						
RAR	**Rarotonga**	**30.02**	**101**	LR	LR	01 17 27.6	
	comp=Z,54nm,19.0s,baz=296,slow=35						
WB0	**Warramunga Arr**	**32.23**	**262**	P	P	01 06 08.8	-1.1
WB0				IAmb	IAmb	01 06 12.0	
	comp=Z,9.9nm,1.4s						
WRA	**Warramunga Arr**	**32.27**	**261**	P	P	01 06 09.2	-1.1
	comp=Z,0.9nm,0.7s,baz=81,slow=6.0,SNR=17						
WRA				LR	LR	01 17 47.6	
	comp=Z,118nm,18.4s,baz=22,slow=33 comp=Z,0.9nm,0.7s						
WRA	**Warramunga Arr**	**32.27**	**261**	P	P	01 06 08.7	-1.5
BBOO	**Buckleboo**	**32.50**	**237**	P	P	01 06 13.0	+0.8
BBOO				IAmb	IAmb	01 06 41.9	
	comp=Z,26nm,1.4s						
AS31	**Alice Springs**	**32.68**	**254**	P	P	01 06 13.4	-0.4
ASAR	**Alice Springs**	**32.68**	**254**	P	P	01 06 13.6	-0.2
	comp=Z,4.5nm,0.7s,baz=84,slow=8.2,SNR=42						
ASAR				LR	LR	01 18 45.1	
	comp=Z,125nm,18.7s,baz=152,slow=35 comp=Z,4.5nm,0.7s						
ASAR	**Alice Springs**	**32.68**	**254**	P	P	01 06 13.2	-0.7
MTN	**Manton Dam**	**36.32**	**273**	P	P	01 06 45.1	-0.3
KNRA	**Kununurra**	**38.01**	**268**	P	P	01 06 59.3	-0.4
FORT	**Forrest**	**38.63**	**243**	P	P	01 07 05.1	+0.3
SIJI	**Sorong**	**40.39**	**291**	LR	LR	01 24 12.9	
	comp=Z,64nm,18.6s,baz=150,slow=36						
BATI	**Baumata**	**44.06**	**274**	P	P	01 07 50.4	+0.8
	comp=Z,15nm,0.5s,baz=113,slow=5.4,SNR=4.3 comp=Z,15nm,0.5s						
PSA00	**Pilbara Seismi**	**45.70**	**257**	P	P	01 08 03.3	+0.8
PSA00				IAmb	IAmb	01 08 04.3	
	comp=Z,6.6nm,0.8s						
MBWA	**Marble Bar**	**45.84**	**258**	P	P	01 08 03.9	+0.3
MBWA				IAmb	IAmb	01 08 30.4	
	comp=Z,21nm,1.4s						
NWAO	**Narrogin (SRO)**	**48.03**	**242**	P	P	01 08 20.2	-0.5
TOLI2	**Tolitoli**	**50.67**	**287**	P	P	01 08 40.8	-0.2
SBA	**Scott Base**	**59.67**	**180**	P	P	01 09 46.3	+1.3
SBA				IAmb	IAmb	01 09 54.3	
	comp=Z,7.6nm,1.5s						
ASAJ	**Asahikawa**	**66.40**	**340**	LR	LR	01 34 56.3	
	comp=Z,53nm,21.5s,baz=128,slow=31						
PETK	**Petropavlovsk-**	**71.64**	**353**	LR	LR	01 37 23.8	
	comp=Z,26nm,20.5s,baz=128,slow=31						
QSPA	**South Pole Qui**	**71.83**	**180**	P	P	01 11 04.7	+1.0
QSPA				IAmb	IAmb	01 11 22.7	
	comp=Z,8.5nm,1.1s						
BJT	**Baijiatuau**	**75.68**	**321**	P	P	01 11 26.7	+0.4
BJT				IAmb	IAmb	01 11 28.0	
	comp=Z,5.7nm,0.7s						
CMAR	**Chiang Mai Arr**	**77.42**	**294**	P	P	01 11 36.7	0.0
	comp=Z,1.2nm,0.3s,baz=118,slow=4.5,SNR=5.8 comp=Z,1.2nm,0.3s						
CMAR	**Chiang Mai Arr**	**77.42**	**294**	P	P	01 11 37.2	+0.4
ULN	**Ulaanbaatar**	**85.61**	**324**	P	P	01 12 20.2	+0.6
ULN				IAmb	IAmb	01 12 20.7	
	comp=Z,2.7nm,0.7s						
YAK	**Yakutsk**	**85.69**	**343**	LR	LR	01 45 45.5	
	comp=Z,17nm,21.4s,baz=90,slow=32						
SONM	**Songino Array**	**85.97**	**323**	P	P	01 12 21.7	+0.4
	comp=Z,1.7nm,0.8s,baz=146,slow=5.0,SNR=9.9 comp=Z,1.7nm,0.8s						
SONM	**Songino Array**	**85.97**	**323**	P	P	01 12 21.5	+0.1
SONM				IAmb	IAmb	01 12 22.8	
	comp=Z,2.2nm,1.0s						
NVAR	**Mina Array Bea**	**88.68**	**49**	P	P	01 12 35.6	+0.9
	comp=Z,0.7nm,0.9s,baz=233,slow=9.3,SNR=5.0 comp=Z,0.7nm,0.9s						
NVAR	**Mina Array Bea**	**88.68**	**49**	P	P	01 12 35.9	+1.2
ILAR	**Eielson Array**	**89.48**	**18**	P	P	01 12 37.5	-0.1
	comp=Z,0.2nm,0.8s,baz=241,slow=5.4,SNR=2.1 comp=Z,0.2nm,0.8s						
VNA3	**Neumayer Olymp**	**90.76**	**181**	P	P	01 12 44.3	+0.6
VNA2	**Neumayer--Watz**	**91.04**	**181**	P	P	01 12 46.8	+1.7
	baz=172,slow=1.0						
MKAR	**Makanchi Array**	**100.50**	**316**	P	**Pdif**	01 13 28.8	+0.4
	comp=Z,0.6nm,0.6s,baz=94,slow=7.3,SNR=7.4						
BRTR	**Keskin Array B**	**135.61**	**309**	PKP	**PKPdf**	01 18 58.8	-2.9
	comp=Z,0.3nm,0.7s,baz=90,slow=1.4,SNR=2.1						
CLL	**Collm**	**141.69**	**335**	*e*PKPdf	**PKiKP**	01 19 15.0	-0.1
EKA	**Eskdalemuir Ar**	**142.41**	**352**	PKP	**PKPdf**	01 19 10.5	-2.9
	comp=Z,0.2nm,0.4s,baz=345,slow=1.9,SNR=1.6						
RONA	**Rosalia, Austr**	**142.84**	**329**	*e*P	**PKPdf**	01 19 12.5	-2.0
	comp=Z,1.1nm,0.6s						
CONA	**Conrad Observa**	**142.90**	**329**	*e*P	**PKPdf**	01 19 12.0	-2.6
	comp=Z,1.9nm,0.9s						
GERES	**GERESS Array B**	**143.25**	**332**	PKP	PKPbc	01 19 12.0	-0.3
	comp=Z,0.6nm,0.6s,baz=11,slow=2.7,SNR=5.4						
MOA	**Molln**	**143.72**	**330**	*e*P	PKPbc	01 19 13.9	+0.4
	comp=Z,0.9nm,0.5s						
BIOA	**Bad Ischl, Aus**	**144.12**	**331**	*e*P	PKPbc	01 19 15.3	+0.5
	comp=Z,1.7nm,0.4s						
SOKA	**Soboth**	**144.16**	**328**	*i* P	PKPbc	01 19 15.4	+0.4
	comp=Z,2.6nm,0.4s						
OBKA	**Obir**	**144.52**	**328**	*e*P	**PKPab**	01 19 16.3	+0.4
	comp=Z,2.5nm,0.8s						
CRES	**Cresnjev**	**144.53**	**327**	*i* PKPbc	PKPbc	01 19 16.4	+0.3
KBA	**Koelnbreinsper**	**144.70**	**330**	*e*P	**PKPab**	01 19 16.6	-0.1
	comp=Z,3.2nm,0.6s						
LJU	**Ljubljana**	**144.86**	**328**	*i* PKPbc	PKPbc	01 19 17.4	+0.3
MYKA	**Terra Mystica**	**144.88**	**329**	*i* P	**PKPab**	01 19 17.2	0.0
	comp=Z,6.0nm,0.6s						
CEY	**Cerknica**	**145.12**	**328**	*i* PKPbc	**PKPbc**	01 19 18.2	+0.2
WATA	**Walderalm**	**145.33**	**332**	*i* P	**PKPbc**	01 19 18.9	+0.1
	comp=Z,5.8nm,0.6s						
ABTA	**Abfaltersbach**	**145.34**	**330**	*i* P	**PKPbc**	01 19 18.6	-0.2
	comp=Z,10nm,0.6s,SNR=11						
WTTA	**Wattenberg**	**145.35**	**332**	*e*P	**PKPdf**	01 19 19.3	+0.2
	comp=Z,2.9nm,0.5s						
MOTA	**Moosalm**	**145.53**	**332**	*e*P	**PKPbc**	01 19 19.7	+0.3
	comp=Z,10nm,0.7s,SNR=9.1						
RETA	**Reutte**	**145.57**	**333**	*i* P	**PKPbc**	01 19 19.7	+0.3
	comp=Z,2.4nm,0.5s						
SQTA	**Sankt Quirin**	**145.58**	**332**	*e*P	**PKPbc**	01 19 20.0	+0.4
	comp=Z,12nm,0.6s,SNR=8.7						
FETA	**Feichten**	**145.94**	**332**	*e*P	**PKPab**	01 19 21.5	+0.2
	comp=Z,6.7nm,0.7s,SNR=6.5						
DAVA	**Damuels**	**146.10**	**334**	*e*P	**PKPbc**	01 19 21.6	+0.4
	comp=Z,4.2nm,0.8s						
DAVOX	**Davos/Dischmat**	**146.50**	**333**	PKPbc	**PKPbc**	01 19 23.0	+0.6
	comp=Z,9.5nm,0.7s,baz=132,slow=1.1,SNR=16						
ESDC	**Sonseca Array**	**157.64**	**344**	PKPab	**PKPab**	01 20 09.9	+0.2
	comp=Z,0.3nm,0.7s,baz=16,slow=4.2,SNR=4.7						
ESDC	**Sonseca Array**	**157.64**	**344**		**PKPab**	01 20 10.2	+0.5
TORD	**Torodi Ar. Bea**	**166.30**	**250**	PKPab	**PKPab**	01 20 43.5	-4.9
	comp=Z,0.6nm,0.9s,baz=30,slow=0.4,SNR=2.6						

*IDC **05** 01:10:54.5±1.4, 30°29S×178°73W, h218km±16km, mb3.2/2, mbtmp3.7/3, Error ellipse: s-maj=44.7km s-min=21.8km az=116.0*

*WEL **05** 01:10:54.1±1.4, 30°S±16°×18°0W±3°7, h112km±46km, M4.6/3, MLv4.6/3, Error ellipse: s-maj=0.1km s-min=0.0km az=112.2*

ISC 05 01:10:52.9±0.9, 30°12S±0°09×179°9W±0°1, h150km, n26, σ2s82/41, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**1.91**	**64**	P	Pn	01 11 27.3	+0.3
GLKZ				S	Sn	01 11 52.0	-1.0
RIZ	**Raoul Island**	**1.91**	**63**	P	Pn	01 11 27.3	+0.4
RIZ				S	Sn	01 11 54.2	+1.1
RAO	**Raoul Island**	**1.91**	**64**	P	Pn	01 11 27.8	+0.8
	846nm,0.4s,baz=255,slow=20,SNR=15						
RAO				S	Sn	01 11 43.8	-9.4
	407nm,0.2s,baz=253,slow=19,SNR=8.0						
MXZ	**Matakaoa Point**	**7.58**	**191**	S	Sn	01 14 09.3	+4.1
WMGZ	**Waiomatatini S**	**7.81**	**190**	P	Pn	01 12 45.6	+1.9
WMGZ				S	Sn	01 14 09.2	-1.6
URZ	**Urewera**	**8.49**	**196**	P	Pn	01 12 56.1	+3.3
	2.0nm,0.8s,baz=126,slow=19,SNR=1.1						
URZ				S	Sn	01 14 33.7	+6.5
	8.1nm,0.3s,baz=24,slow=18,SNR=12						
DVHZ	**Dannevirke**	**10.66**	**197**	S	Sn	01 15 20.2	+0.8
POWZ	**Post Office Ro**	**10.85**	**198**	S	Sn	01 15 26.7	+2.8
PRWZ	**Pori Road**	**10.95**	**197**	S	Sn	01 15 24.5	-1.9
BFZ	**Birch Farm**	**11.00**	**196**	S	Sn	01 15 27.4	-0.3
MRZ	**Mangatainoka R**	**11.15**	**198**	P	Pn	01 13 25.9	-2.1
MRZ				S	Sn	01 15 27.7	-3.5
TIWZ	**Tintock**	**11.18**	**197**	P	Pn	01 13 26.4	-2.0
TIWZ				S	Sn	01 15 29.8	-2.1
HOWZ	**Holdsworth Sta**	**11.39**	**198**	P	Pn	01 13 34.1	+3.0
HOWZ				S	Sn	01 15 33.4	-3.6
OGWZ	**Otaki Gorge**	**11.41**	**199**	P	Pn	01 13 31.3	-0.1
OGWZ				S	Sn	01 15 36.4	-1.0
TMWZ	**Te Maipa**	**11.49**	**196**	P	Pn	01 13 34.1	+1.6
TMWZ				S	Sn	01 15 32.5	-6.9
KIW	**Kapiti Island**	**11.53**	**200**	P	Pn	01 13 29.6	-3.3
KIW				S	Sn	01 15 39.0	-1.3
MTW	**Mount Morrison**	**11.64**	**198**	P	Pn	01 13 33.2	-1.1
MTW				S	Sn	01 15 41.7	-1.2
DUWZ	**D'Urville Isla**	**11.79**	**204**	P	Pn	01 13 38.8	+2.4
DUW

ZKR	Zakros	0.95	359	P	Pg	01 11 46.3	-1.4	
ZKR				S	Sn	01 12 04.3	+2.1	
NPS	Neapolis	1.22	335	P	Pn	01 11 50.7	-1.6	
NPS				S	Sn	01 12 11.2	+2.6	
NPS	Neapolis	1.22	335	P	Pn	01 11 50.6	-1.6	
HRKL	Herakleio	1.48	321	P	Pn	01 11 55.5	-0.4	
HRKL				S	Sg	01 12 19.5	+2.4	
HRKL				AML	AML	01 12 40.9		
	comp=E,33622µm,0.9s							
HRKL				AML	AML	01 12 45.8		
	comp=N,32972µm,1.0s							
HRKL	Herakleio	1.48	321	PN	Pb	01 11 56.8	0.0	
HRKL				SN	Sg	01 12 18.5	+1.4	
KSTL	Kastelli Herak	1.49	320	P	Pn	01 11 52.1	-3.9	
KSTL				AML	AML	01 12 23.3		
	comp=N,4806µm,0.8s							
KSTL				AML	AML	01 12 24.9		
	comp=E,3820µm,1.2s							
IACM	Heraklion	1.50	320	P	Pb	01 11 56.5	-0.5	
TMBK	Timbaki Herakl	1.52	307	P	Pn	01 11 56.2	-0.2	
TMBK				S	Sg	01 12 20.5	+2.3	
TMBK				AML	AML	01 12 37.9		
	comp=E,10617µm,1.0s							
TMBK				AML	AML	01 12 42.4		
	comp=N,5959µm,1.3s							
KARP	Karpathos	1.58	28	P	Pb	01 11 59.1	+0.6	
KARP				S	Sg	01 12 20.5	+0.5	
	comp=N,3µm,0.8s							
KARP	Karpathos	1.58	28	PN	Pn	01 11 57.3	+0.1	
KARP	Karpathos	1.58	28		Pb	01 11 59.0	+0.5	
KARP	Karpathos	1.58	28	P	Pn	01 11 57.4	+0.1	
KARP				S	Sg	01 12 21.3	+1.3	
KARP				AML	AML	01 12 36.0		
	comp=N,4.1nm,0.6s							
KARP				AML	AML	01 12 36.0		
	comp=N,4.1nm,0.6s							
KARP				AML	AML	01 12 41.4		
	comp=N,8.2nm,1.1s							
KARP				AML	AML	01 12 41.4		
	comp=N,8.2nm,1.1s							
IDI	Anoyia	1.58	316	Pg	Pn	01 11 56.4	-0.8	
	comp=N,9.9nm,0.3s,baz=160,slow=8.0,SNR=64							
IDI	Anoyia	1.58	316	P	Pn	01 11 57.1	-0.2	
IDI				S	Sg	01 12 22.2	+2.0	
IDI				AML	AML	01 12 35.5		
	comp=E,1292µm,0.6s							
IDI				AML	AML	01 12 36.6		
	comp=N,2212µm,0.7s							
IDI	Anoyia	1.58	316	P	Pn	01 11 56.5	-0.8	
IDI				S	Sn	01 12 15.2	-2.6	
	comp=N,1µm,1.0s							
IDI	Anoyia	1.58	316	PN	Pb	01 11 58.2	-0.4	
IDI	Anoyia	1.58	316		Pn	01 11 57.8	+0.5	
GVD	Gavdhos	1.90	291	P	Pn	01 12 02.0	+0.4	
GVD				S	Sg	01 12 30.6	+0.1	
GVD				AML	AML	01 12 46.8		
	comp=E,2843µm,0.6s							
GVD				AML	AML	01 12 53.8		
	comp=N,3009µm,0.8s							
GVD	Gavdhos	1.90	291	P	Pn	01 12 02.3	+0.6	
GVD				S	Sn	01 12 25.0	-0.6	
GVD	Gavdhos	1.90	291	PN	Pb	01 12 02.8	-1.2	
CHAN	Chania	2.26	307	P	Pb	01 12 08.3	-1.7	
CHAN				S	Sg	01 12 41.9	-0.1	
CHAN				AML	AML	01 13 04.0		
	comp=E,2212µm,0.7s							
CHAN				AML	AML	01 13 06.8		
	comp=N,2711µm,1.4s							
IMMV	Iera Moni Meta	2.27	306	P	Pn	01 12 07.5	+0.8	
IMMV				S	Sg	01 12 42.2	0.0	
IMMV				AML	AML	01 13 06.5		
	comp=E,3383µm,0.9s							
IMMV				AML	AML	01 13 09.5		
	comp=N,2309µm,1.1s							
IMMV	Iera Moni Meta	2.27	306	P	Pn	01 12 06.4	-0.3	
IMMV				S	Sn	01 12 33.4	-1.2	
	comp=N,1µm,1.0s							
IMMV	Iera Moni Meta	2.27	306	PN	Pn	01 12 08.2	+1.5	
SANT	Santorini	2.30	344	P	Pn	01 12 08.1	+1.0	
SANT				AML	AML	01 12 53.9		
	comp=E,2769µm,1.1s							
SANT				AML	AML	01 13 02.3		
	comp=N,1569µm,1.1s							
SANT	Santorini	2.30	344	P	Pn	01 12 06.5	-0.6	
SANT	Santorini	2.30	344	PN	Pn	01 12 07.4	+0.3	
SANT	Santorini	2.30	344		Pn	01 12 07.3	+0.2	
THR6	Thira Island,	2.30	343	P	Pn	01 12 07.0	-0.1	
THR8	Santorini-Mono	2.33	345	P	Pn	01 12 06.7	-0.8	
THR3	Thira Island,	2.35	343	P	Pn	01 12 07.0	-0.7	
KNDR	Palaiochora Ch	2.36	298	P	Pb	01 12 10.5	-1.3	
KNDR				S	Sg	01 12 45.9	+0.7	
KNDR				AML	AML	01 13 08.1		
	comp=E,1580µm,0.8s							
KNDR				AML	AML	01 13 08.2		
	comp=N,1334µm,1.4s							
KNDR	Palaiochora Ch	2.36	298	PN	Pb	01 12 10.4	-1.4	
THR5	Thira Island,	2.37	342	P	Pn	01 12 07.7	-0.3	
CMBO	Columbo, Santo	2.41	344	P	Pn	01 12 08.8	+0.3	
RODP	Rodopos	2.48	305	PN	Pn	01 12 11.1	+1.6	
NISR	Nisiros	2.55	16	P	Pn	01 12 10.6	0.0	
ARG	Arkhangelos	2.57	36	P	Pn	01 12 12.9	+2.1	
ARG				S	Sn	01 12 43.8	+1.8	
	comp=N,962nm,1.6s							
ARG	Arkhangelos	2.57	36	PN	Pn	01 12 11.1	+0.3	
ARG	Arkhangelos	2.57	36		Pn	01 12 12.5	+1.7	
ARG	Arkhangelos	2.57	36	P	Pn	01 12 12.5	+1.7	
KOSK	Kos Island	2.66	13	P	Pn	01 12 12.9	+0.9	
KOSK	Kos Island	2.66	13	PN	Pn	01 12 12.6	+0.6	
DAT	Datca	2.79	23	PN	Pn	01 12 14.4	+0.5	
DAT	Datca	2.79	23	P	Pb	01 12 17.8	-1.3	
DAT				S	Sn	01 12 44.8	-2.7	
SLUM	Salum	2.80	198	PN	Pn	01 12 15.0	+1.1	
	baz=197							
SLUM				SN	Sn	01 12 48.6	+0.9	
	baz=197							
MATC	Matruh	2.93	163	PN	Pn	01 12 17.4	+1.6	
	baz=163							
MHLO	Agia Marina, M	2.94	330	P	Pn	01 12 15.0	-0.9	
ANKY	Antikythira Is	2.95	306	P	Pb	01 12 19.3	-2.6	
APE	Apeiranthos	2.96	349	eP	Pn	01 12 15.7	-0.5	
BODT	Bodrum	3.02	16	PN	Pn	01 12 17.7	+0.6	
BDRM	Kayabasi	3.06	18	P	Pn	01 12 15.3	-2.3	
BDRM				S	Sn	01 12 52.1	-2.0	
TURN	Turunc	3.08	31	PN	Pn	01 12 18.6	+0.8	
DALY	Dalyan (Mula)	3.30	36	PN	Pn	01 12 22.4	+1.6	
KTHA	Kythira Island	3.34	310	P	Pn	01 12 21.2	-0.2	
MLSB	Milas	3.37	21	PN	Pn	01 12 22.7	+0.9	
DDIM	Aydin, Didim	3.39	14	P	Pn	01 12 22.1	0.0	
YER	Yerkesik	3.40	29	PN	Pn	01 12 23.1	+0.8	
AKAS	Kas	3.44	52	PN	Pn	01 12 23.7	+0.7	
AKAS	Kas	3.44	52		Pn	01 12 24.4	+1.4	
AKAS	Kas	3.44	52	P	Pn	01 12 23.5	+0.5	
AKAS				S	Sn	01 13 04.4	+0.6	
AKAS				i AML	AML	01 13 09.0		
	comp=N,317nm,0.7s							
AKAS				i AML	AML	01 13 11.0		
	comp=N,275nm,0.8s							
MULA	Mugla, Merkez-	3.52	28	P	Pn	01 12 25.1	+1.1	
GCAM	G?zelcaml?	3.62	13	P	Pn	01 12 27.6	+2.3	
CAME	Cameli-Denizli	3.73	41	PN	Pn	01 12 28.2	+1.2	
AYDN	Tasoluk	3.74	20	P	Pn	01 12 28.4	+1.5	
CAEL	Denizli, Camel	3.88	39	P	Pn	01 12 31.7	+2.8	
DGB	zmir	3.92	7	P	Pn	01 12 26.8	-2.5	
TAVA	DENIZLI_Tavas	3.95	33	P	Pn	01 12 30.9	+1.0	
TAVA				S	Sn	01 13 07.7	-8.5	
TAVA				i AML	AML	01 13 21.0		
	comp=N,80nm,0.6s							
ELL	Elmali	3.95	48		Pn	01 12 31.0	+1.1	
ELL	Elmali	3.95	48	P	Pn	01 12 31.0	+1.1	
AKUM	Antalya-Kumluc	3.99	56	P	Pn	01 12 31.7	+1.4	
AKUM				S	Sn	01 13 14.3	-2.8	
AKUM				i AML	AML	01 13 28.0		
	comp=N,87nm,0.6s							
AYDB	Zeytinkoy-Aydi	4.01	19	PN	Pn	01 12 31.8	+1.1	
ZEYE	Izmir, Urla-Ze	4.08	3	P	Pn	01 12 32.5	+1.0	
GOLH	Golhisar	4.09	40	P	Pn	01 12 32.8	+1.0	
URLA	Izmir	4.20	4	P	Pn	01 12 29.2	-4.0	
OSC1	CSNet OBS 1	4.24	98	P	Pn	01 12 32.8	-1.0	
DION	Dionisos Attik	4.33	335	P	Pn	01 12 34.1	-1.0	
KORT	Korkueli	4.39	49	P	Pn	01 12 39.1	+3.1	
KORT				S	Sn	01 13 29.0	+1.9	
KORT				i AML	AML	01 13 37.0		
	comp=N,106nm,0.9s							
KORT				i AML	AML	01 13 38.0		
	comp=N,109nm,0.8s							
ITM	Ithomi	4.63	312	Pn	Pn	01 12 38.0	-1.1	
BRDR	BURDUR-Merkez	4.70	40	P	Pn	01 12 41.5	+1.4	
BUCA	Burdur, Bucak-	4.72	47	P	Pn	01 12 42.3	+1.8	
BUCA				S	Sn	01 13 33.1	-2.2	
BUCA				i AML	AML	01 13 38.0		
	comp=N,45nm,1.1s							
BUCA				i AML	AML	01 13 39.0		
	comp=N,59nm,0.9s							
ZEDA	zmir-Bergama	4.84	8	P	Pn	01 12 39.1	-3.0	
PASA	Karahalli, USA	4.93	31	P	Pn	01 12 43.2	-0.2	
PASA				S	Sn	01 13 36.4	-4.1	
PASA				i AML	AML	01 13 49.0		
	comp=N,28nm,0.4s							
SWA2		4.95	188	PN	Pn	01 12 44.7	+1.2	
	baz=188							
ISP	Isparta	5.04	42	eP	Pn	01 12 45.4	+0.5	
USAK	Uak-Merkez	5.07	25	P	Pn	01 12 43.2	-2.0	
AKMS	Akamas	5.10	79	P	Pn	01 12 45.5	-0.1	
AKMS				AML	AML	01 13 42.3		
	comp=N,0.7nm,0.3s							
AKMS				AML	AML	01 13 42.5		
	comp=N,0.9nm,0.3s							
KEPZ	Antalya-Kepez	5.16	56	P	Pn	01 12 47.2	+0.8	
KEPZ				S	Sn	01 13 38.0	-7.9	
KEPZ				i AML	AML	01 13 59.0		
	comp=N,61nm,0.6s							
KEPZ				i AML	AML	01 14 02.0		
	comp=N,52nm,0.9s							
KZIL	AFYON_Kizioren	5.16	37	P	Pn	01 12 44.8	-1.8	
DEMI	Demirci	5.26	21	P	Pn	01 12 47.2	-0.7	
NATA	Nata	5.26	81	P	Pn	01 12 47.9	0.0	
NATA				AML	AML	01 13 46.1		
	comp=N,1.0nm,0.8s							
NATA				AML	AML	01 13 49.6		
	comp=N,1.4nm,0.7s							
BAGO	Egridir - ISPA	5.31	43	P	Pn	01 12 46.4	-2.1	
ALFC	Alefka	5.33	77	P	Pn	01 12 48.4	-0.4	
ALFC				AML	AML	01 13 47.3		
	comp=N,0.6nm,0.3s							
ALFC				AML	AML	01 13 48.9		
	comp=N,0.7nm,0.4s							
GAZI	Gazipasa	5.39	66	P	Pn	01 12 53.0	+3.4	
GAZI				S	Sn	01 13 47.8	-3.7	
GAZI				i AML	AML	01 14 02.0		
	comp=N,100nm,0.6s							
GAZI				i AML	AML	01 14 04.0		
	comp=N,97nm,0.5s							
SZAC	Souni	5.52	82	P	Pn	01 12 51.0	-0.3	
SZAC				AML	AML	01 13 55.2		
	comp=N,0.7nm,0.6s							
SZAC				AML	AML	01 13 55.7		
	comp=N,1.0nm,0.7s							
SEDI	Konya, Seydise	5.55	52	P	Pn	01 12 53.0	+1.0	
SEDI				S	Sn	01 13 50.3	-5.5	
SEDI				i AML	AML	01 14 00.0		
	comp=N,71nm,1.0s							
SEDI				i AML	AML	01 14 03.0		
	comp=N,75nm,0.6s							
LEF	Lefka	5.56	78	P	Pn	01 12 53.8	+1.8	
LEF				S	Sn	01 13 49.5	-6.4	
GDZ	Gediz	5.57	27	P	Pn	01 12 50.5	-1.6	
BAYC	CANAKKALE_Bayr	5.58	2	P	Pn	01 12 50.5	-1.6	
BALB	Balikesir	5.62	13	P	Pn	01 12 55.2	+2.4	
DURS	Dursunbey	5.72	18	P	Pn	01 12 55.4	+1.3	
YVLC	Isparta, Yalva	5.76	43	P	Pn	01 12 57.1	+2.4	
ASGA	Asgata	5.82	82	P	Pn	01 14 00.0	+0.5	
HMYD	Magadein	5.83	137	PN	Pn	01 12 57.5	+2.0	
	baz=138							
HNAT	Natroun	5.85	139	PN	Pn	01 12 57.8	+1.9	
	baz=140							
DOGA	KONYA_Doganhis	5.90	47	P	Pn	01 12 58.7	+2.0	
DOGA				S	Sn	01 13 59.3	-5.0	
DOGA				i AML	AML	01 14 17.0		
	comp=N,42nm,0.9s							
CSS	Mathiatis	5.90	80	Pn	Pn	01 12 58.4	+1.8	
CSS	Mathiatis	5.90	80	P	Pn	01 12 56.5	-0.1	
ATHAL	Athalassa	5.98	79	P	Pn	01 12 57.7	0.0	
ERMK	Ermenek	5.98	64	P	Pn	01 12 58.7	+0.8	
ERMK				S	Sn	01 14 00.1	-6.4	
ERMK				i AML	AML	01 14 22.0		
	comp=N,102nm,0.8s							
KMER	Konya-Meram	6.13	52	P	Pn	01 13 01.2	+1.2	
MVOU	Mavrovouni	6.16	80	P	Pn	01 13 01.2	+1.1	
KONT	Konya--Tatoy	6.23	51	P	Pn	01 13 04.4	+3.3	
KKBE	Karaman, Kazim	6.25	59	P	Pn	01 13 03.6	+2.2	
KKBE				S	Sn	01 14 10.8	-2.1	
KKBE				i AML	AML	01 14 15.0		
	comp=N,52nm,1.4s							
KKBE				i AML	AML	01 14 30.0		
	comp=N,42nm,1.2s							
KOT	Kottamia	6.35	130	PN	Pn	01 13 04.4	+1.6	
	baz=131							
HSAF	As Saff	6.39	134	PN	Pn	01 13 04.8	+1.3	
	baz=134							
KDHN	Kadinhani	6.43	46	P	Pn	01 13 02.0	-2.0	
GLL	Jalalah	6.52	133	PN	Pn	01 13 06.0	+0.9	
	baz=133							
ALIN	Konya, Altinte	6.77	50	P	Pn	01 13 09.4	+0.8	
RDO	Rodhopi	7.00	356		Pn	01 13 13.7	+2.1	
KERG	Konya-Eregli	7.18	61	P	Pn	01 13 15.9	+1.6	
HFRF	Wahat Farafira	7.21	165	PN	Pn	01 13 17.3	+2.7	
	baz=165							
ZAF	Zafarana	7.25	130	PN	Pn	01 13 15.9	+0.8	
	baz=131							
MDUB	Mudurnu	7.43	31	Pn	Pn	01 13 20.1	+2.4	
OFRI	`Ofer	7.47	99	Pn	Pn	01 13 18.3	+0.1	
HNTI	Hanita	7.53	96	Pn	Pn	01 13 18.9	-0.1	
HNTI				Sn	Sn	01 14 41.3	-3.0	
KZIT	Kziot	7.61	113	Pn	Pn	01 13 21.0	+0.9	
KZIT				Sn	Sn	01 14 42.6	-3.8	
SLTI	Sal'it	7.62	102	Pn	Pn	01 13 21.2	+1.0	
MMA0B	Mount Meron ar	7.73	96	Pn	Pn	01 13 22.7	+0.9	
MMAI	Mount Meron Ar	7.73	96	Pn	Pn	01 13 20.8	-0.9	
	comp=N,7.0nm,0.3s,baz=257,slow=26,SNR=29							
MMAI				Sn	Sn	01 14 47.2	-2.1	
	comp=N,12nm,0.3s,baz=218,slow=34,SNR=3.4							
	comp=N,1.1nm,0.3s							
AMAZ	Amatzia	7.75	107	Pn	Pn	01 13 22.9	+0.8	
AMAZ				Sn	Sn	01 14 46.6	-3.3	
DQRL	Deir Qamar	7.77	91	eP	Pn	01 13 23.6	+1.3	
KBN	Korca	7.77	328		Pn	01 13 22.8	+0.4	
KBN	Korca	7.77	328	P	Pn	01 13 22.8	+0.4	
MMLI	Mount Malkishu	7.87	100	Pn	Pn	01 13 23.6	-0.1	
MMLI				Sn	Sn	01 14 49.8	-3.1	
QRWL	Qaraoun	7.88	92	eP	Pn	01 13 22.8	-1.0	
GEM	Giv'at Ha'Em	7.91	94	Pn	Pn	01 13 24.8	+0.6	
SHBL	Chebaa	7.96	93	eP	Pn	01 13 24.5	-0.5	
NATI	Neve Ativ	7.96	94	Pn	Pn	01 13 24.6	-0.3	
YTIR	Yattir	7.98	108	Pn	Pn	01 13 25.4	+0.2	
HMDT	Nahal Hemdat	8.01	101	Pn	Pn	01 13 26.2	+0.6	
RCY	Rachaya	8.01	92	eP	Pn	01 13 26.3	+0.6	
HWQ	Hawqa	8.04	86	eP	Pn	01 13 27.0	+0.9	
HWQ				eP	Pn	01 13 27.2	+1.1	
DSI	Dead Sea	8.11	106	Pn	Pn	01 13 27.2	+0.3	
DSI				Sn	Sn	01 14 55.5	-3.1	
BR131	Keskin Array S	8.12	45		Pn	01 13 28.7	+1.5	
BR131	Keskin Array S	8.12	45	eP	Pn	01 13 29.3	+2.1	
BRTR	Keskin Array B	8.12	45	Pn	Pn	01 13 28.6	+1.5	
	comp=N,0.3nm,0.3s,baz=223,slow=12,SNR=16							
BRTR				LR	LR	01 17 50.3		
	comp=N,840nm,18.2s,baz=220,slow=47							
	comp=N,1.9nm,0.6s							
BRTR	Keskin Array B	8.12	45	Pn	Pn	01 13 29.4	+2.3	
KRMI	Paran Flat	8.24	117	Pn	Pn	01 13 29.8	+1.0	
KRMI				Sn	Sn	01 14 58.4	-3.6	
PRNI	Paran	8.34	115	Pn	Pn	01 13 30.5	+0.4	
GHAJ	Ghor Haditha	8.36	107	Pn	Pn	01 13 31.3	+1.0	
GHAJ	Ghor Haditha	8.36	107	Pn	Pn	01 13 30.9	+0.6	
ZFRI	Zfri	8.37	113	Pn	Pn	01 13 30.8	+0.3	
ZFRI				Sn	Sn	01 15 01.7	-3.3	
HRFI	Mount Harif	8.52	116	Pn	Pn	01 13 33.7	+1.1	
HRFI				Sn	Sn	01 15 05.4	-3.3	
MBRI	Mt Berech	8.55	118	Pn	Pn	01 13 33.9	+0.8	
EIL	Elat	8.65	119	Pn	Pn	01 13 34.5	+0.1	
	comp=N,6.0nm,0.3s,baz=297,slow=5.1,SNR=43							
EIL				Sn	Sn	01 15 07.8	-4.1	
	comp=N,4.3nm,0.3s,baz=252,slow=20,SNR=3.9							
	comp=N,18nm,0.4s							
EIL	Elat	8.65	119	Pn	Pn	01 13 35.1	+0.8	
EIL				Sn	Sn	01 15 09.5	-2.4	
VTS	Vitosha	8.77	345	P	Pn	01 13 37.9	+1.8	
VTS	Vitosha	8.77	345	P	Pn	01 13 37.9	+1.8	
HDK1	Dakhla	9.01	161	PN	Pn	01 13 41.3	+1.9	
	baz=161							
TIP	Timpagrande	9.12	306	P	Pn	01 13 37.3	-3.5	
TIP	Timpagrande	9.12	306		Pn	01 13 38.1	-2.6	
ASF	Jabal al Asfar	9.15	100	Pn	Pn	01 13 40.7	-0.6	
	comp=N,1.3nm,0.3s,baz=293,slow=4.5,SNR=8.2							
ASF				Sn	Sn	01 15 22.1	-2.2	
	comp=N,1.0nm,0.3s,baz=336,slow=20,SNR=5.7							
	comp=N,3.4nm,0.3s							
CEL	Celeste	9.31	299		Pn	01 13 42.1	-1.3	
DRME	Dracevica, Mon	9.75	327	ePn	Pn	01 13 47.1	-2.3	
BLKB	Belogradchik	9.85	345	P	Pn	01 13 53.0	+2.2	
PDG	Podgorica	9.91	328	ePn	Pn	01 13 49.9	-1.7	
RAFF	Raffo Rosso	10.13	291		Pn	01 13 53.5	-1.2	
CUC	Castrocucco	10.16	308		Pn	01 13 54.1	-0.9	
VAE	Valguarnera	10.16	292	Pn	Pn	01 13 55.4	+0.3	
	comp=N,1.7nm,0.3s,baz=82,slow=6.1,SNR=14							
VAE				Sn	Sn	01 15 38.6	-10	
	baz=119,slow=4.9							
	comp=N,1.2nm,0.5s							
HCY	Herceg Novi	10.27	326	ePn	Pn	01 13 51.0	-5.5	
SJES	Sjenica	10.32	334	ePn	Pn	01 13 53.3	-4.0	
TREB	Trebinje	10.54	326	ePn	Pn	01 13 54.4	-5.9	
BRY	Bratogost	10.61	328	ePn	Pn	01 13 58.9	-2.3	
UPM	Unac-Piva	10.69	330	ePn	Pn	01 13 59.4	-3.1	
RUDO	Rudo	10.85	333	ePn	Pn	01 14 01.5	-3.0	
STON	Ston	10.97	325	ePn	Pn	01 14 01.6	-4.4	
DIVS	Divibare	11.04	336	Pn	Pn	01 14 09.0	+1.8	
DIVS	Divibare	11.04	336	ePn	Pn	01 14 17.5	+10	
MLR	Muntele Rosu	11.32	359	P	Pn	01 14 16.7	+5.7	
MLR	Muntele Rosu	11.32	359	Pn	Pn	01 14 10.8	-0.2	
	comp=N,0.1nm,0.3s,baz=92,slow=17,SNR=1.5							
MLR				LR	LR	01 19 21.4		
	comp=N,369nm,20.0s,baz=186,slow=42							
	comp=N,0.5nm,0.6s							
MLR	Muntele Rosu	11.32	359		Pn	01 14 12.7	+1.7	
MLR	Muntele Rosu	11.32	359	P	Pn	01 14 05.4	-5.6	
GZR	Gura Zlata	11.53	348	P	Pn	01 14 17.7	+3.9	
GZR	Gura Zlata	11.53	348	P	Pn	01 14 17.7	+3.9	
BZS	Buzias	11.98	344	P	Pn	01 14 21.6	+1.7	
BZS	Buzias	11.98	344	P	Pn	01 14 28.9	+9.0	
DEV	Deva	11.98	349	P	Pn	01 14 29.0	+9.0	
DEV	Deva	11.98	349	P	Pn	01 14 29.0	+9.1	
SRKY	Kupres RS	12.14	327	ePn	Pn	01 14 18.6	-3.6	
MARD	Mardin	12.22	71	Pn	Pn	01 14 25.5	+2.1	
BLY	Banja Luka	12.67	329	ePn	Pn	01 14 25.9	-3.4	
BIZ	Bicaz	12.77	360	P	Pn	01 14 34.0	+3.3	
KOPT	Kop Dagi	12.79	59	Pn	Pn	01 14 33.7	+2.5	
DRGR		12.90	349	P	P	01 14 39.1	-4.2	
AQU	L'Aquila	12.98	313	Pn	Pn	01 14 33.5	-0.1	
AQU	L'Aquila	12.98	313	P	Pn	01 14 33.5	-0.1	
MORH	Mrgy, Hungar	13.36	337	P	Pn	01 14 40.2	+1.5	
BURAR	Bucovina Array	13.46	357	P	P	01 14 49.7	+0.1	
BURAR	Bucovina Array	13.46	357	Pn	Pn	01 14 41.7	+1.5	
BURAR	Bucovina Array	13.46	357	P	P	01 14 53.5	+3.9	
KEST	Kesra	13.95	281	Pn	Pn	01 14 45.5	-1.4	
	comp=N,0.1nm,0.3s,baz=102,slow=20,SNR=2.0							
	comp=N,1.7nm,0.8s							
KEST	Kesra	13.95	281	Pn	Pn	01 14 47.7	+0.7	
MURB	Monte Urbino	14.03	314	Pn	Pn	01 14 49.0	+1.0	
SOC	Sochi	14.08	44	eP	Pn	01 14 49.8	+1.2	
SOC				e		01 17 28.8		
SOC				MLR	MLR			
	comp=Z,139nm,15.0s							
CRES	Cresnjev	14.27	328	ePn	Pn	01 14 45.7	-5.5	
CEY	Cerknica	14.67	326	ePn	Pn	01 14 50.1	-6.6	
SKDS	Skadanscina	14.73	324	ePn	Pn	01 14 51.7	-5.8	
CHVG	Ch'k'valeri	15.05	51	P	P	01 15 05.3	-1.9	
CHVG	Ch'k'valeri	15.05	51	P	P	01 15 05.3	-1.9	
OBKA	Obir	15.20	328	eP	Pn	01 15 02.5	-1.3	
	comp=Z,3.2nm,0.9s							
AKH	Akhalkalaki	15.43	57	P	P	01 15 20.4	+8.9	
RONA	Rosalia, Austr	15.45	334	eP	Pn	01 15 07.5	+0.4	
	comp=Z,5.5nm,1.2s							
MODS	Modra-Piesok	15.70	337	eP	P	01 15 18.6	+4.2	
MODS	Modra-Piesok	15.70	337	eP	P	01 15 18.6	+4.2	
LVV	L'vov	15.73	355	eP	P	01 15 13.6	-1.1	
LVV				eS	Sn	01 18 07.1	+2.2	
LVV				MLR	MLR			
	comp=E,100nm,9.6s							
LVV				MLR	MLR			
	comp=N,200nm,11.0s							
LVV				MLR	MLR			
	comp=Z,200nm,8.5s							
SMOL	Smolenice	15.78	338	eP	P	01 15 20.8	+5.6	
SMOL	Smolenice	15.78	338	eP	P	01 15 20.8	+5.6	
TEOL	Teolo	15.80	319	Pn	Pn	01 15 11.3	-0.4	
TEOL				IAmb	IAmb	01 15 20.6		
	comp=Z,7.7nm,0.7s							
STAL	STALIGIAL	15

comp=Z,4.2nm,0.6s
KRLC Kraliky 17.36 339 *e*P **Pn** **01 15 30.7 -0.7**
KRLC MLR MLR
comp=Z,100nm,12.2s
KRLC Kraliky 17.36 339 *e*P **Pn** **01 15 30.7 -0.7**
KRLC AMS AMS 01 24 20.0
comp=Z,100nm,12.2s
GERES GERESS Array B 17.39 331 P **Pn** **01 15 31.8 0.0**
comp=Z,0.2nm,0.3s,baz=136,slow=11,SNR=9.1
comp=Z,0.6nm,0.5s
GERES GERESS Array B 17.39 331 Pn **Pn** **01 15 29.6 -2.2**
GERES GERESS Array B 17.39 331 P **Pn** **01 15 29.6 -2.2**
FETA Feichten 17.39 322 *e*P **P** **01 15 32.8 -0.4**
comp=Z,6.4nm,0.8s
MOTA Moosalm 17.42 324 *e*P **Pn** **01 15 31.7 -0.7**
comp=Z,5.9nm,1.1s
KHC Kasperske Hory 17.66 332 *e*P **Pn** **01 15 34.7 -0.5**
KHC MLR MLR
comp=Z,300nm,12.1s
KHC Kasperske Hory 17.66 332 *e*P **Pn** **01 15 34.7 -0.5**
KHC *ex* x 01 15 45.5
KHC AMS AMS 01 23 50.0
comp=Z,300nm,12.1s
DAVOX Davos/Dischmat 17.67 320 P **Pn** **01 15 35.1 -0.4**
comp=Z,0.3nm,0.3s,baz=154,slow=17,SNR=8.7
DAVOX LR LR 01 24 06.3
comp=Z,246nm,18.6s,baz=102,slow=43
comp=Z,2.2nm,0.5s
RETA Reutte 17.69 323 *e*P **Pn** **01 15 34.6 -0.9**
comp=Z,1.3nm,0.5s
DPC Dobruska-Polom 17.74 339 *e*P **Pn** **01 15 33.6 -2.5**
DPC MLR MLR
comp=Z,200nm,14.5s
DPC Dobruska-Polom 17.74 339 *e*P **Pn** **01 15 33.6 -2.5**
DPC AMS AMS 01 23 40.0
comp=Z,200nm,14.5s
OSTC Ostas 17.95 339 *e*P **P** **01 15 39.3 0.0**
OSTC AMS AMS 01 23 50.0
comp=Z,200nm,12.3s
UPC Upice 17.97 338 AMS AMS 01 23 50.0
comp=Z,200nm,13.0s
DAVA Damuels 18.00 322 *e*P **Pn** **01 15 39.0 -0.5**
comp=Z,2.2nm,0.5s
PRU Pruhonice 18.01 335 *e*P **P** **01 15 44.8 +4.9**
PRU MLR MLR
comp=Z,100nm,12.2s
PRU Pruhonice 18.01 335 *e*P **P** **01 15 44.8 +4.9**
PRU AMS AMS 01 23 20.0
comp=Z,100nm,12.2s
CHVC Chvalec 18.03 339 *e*P **P** **01 15 40.0 -0.1**
CHVC AMS AMS 01 23 50.0
comp=Z,200nm,13.2s
PVCC Panska Ves 18.45 336 AMS AMS 01 24 40.0
comp=Z,100nm,11.1s
MAK Makhachkala 18.77 56 *e*P **P** **01 15 45.6 -2.7**
MAK *e*S **Sn** **01 19 18.2 -0.4**
MAK pmax pmax
comp=Z,144nm,1.6s
MAK MLR MLR
comp=Z,110nm,18.0s
NKC Novy Kostel 18.98 332 AMS AMS 01 24 20.0
comp=Z,300nm,13.3s
BFO Black Forest 19.47 322 P **P** **01 15 55.3 -0.7**
BFO Black Forest 19.47 322 P **P** **01 15 55.3 -0.7**
BFO pmax pmax
comp=Z,8.0nm,1.3s
CLL Collm 19.65 335 *e*P **P** **01 15 58.0 +0.1**
CLL Collm 19.65 335 *e*P **P** **01 15 58.0 +0.1**
CLL *ex* x 01 16 09.0
CLL *i* PP **PnPn** **01 16 13.5 +0.7**
CLL *es*PP 01 16 18.0
CLL *ex* x 01 16 33.0
CLL *e*S **Sn** **01 19 42.0 +2.3**
CLL LmV 01 29 00.0
comp=Z,100nm,20.3s
VORR Voronezh 19.86 24 *e*P **P** **01 15 59.6 -0.5**
VORR pmax pmax
comp=Z,31nm,1.8s
RAYN Ar Rayn 19.89 117 P **Pn** **01 16 03.5 +1.1**
RAYN IAmb IAmb 01 16 23.2
comp=Z,8.4nm,1.0s
RAYN Ar Rayn 19.89 117 P **Pn** **01 16 03.5 +1.1**
RAYN pmax pmax
comp=Z,8.0nm,1.0s
SUW Suwalki 19.96 355 *e*P **P** **01 15 58.0 -3.2**
ECH Echery 20.01 320 P **P** **01 16 00.6 -1.3**
ECH Echery 20.01 320 P **P** **01 16 00.6 -1.3**
ECH pmax pmax
comp=Z,4.0nm,0.8s
VRH Novokhopyorsk 20.41 29 *e*P Pn 01 16 08.8 +0.6
VRH pmax pmax
comp=Z,50nm,1.0s
LPSR Galich'ya Gora 20.55 22 *e*P **P** **01 16 08.2 +0.5**
LPSR pmax pmax
comp=Z,30nm,1.0s
IDID Didziasalis 21.16 1 *e*P **P** **01 16 15.2 +1.0**
IIGN Ignalina 21.19 360 *e*P **P** **01 16 15.5 +1.0**
ISAL Salakas 21.41 360 *e*P **P** **01 16 16.7 -0.2**
WLF Walferdange 21.43 322 P **P** **01 16 17.1 -0.1**
WLF IAmb IAmb 01 16 32.5
comp=Z,12nm,0.9s
WLF Walferdange 21.43 322 P **P** **01 16 17.1 -0.1**
WLF pmax pmax
comp=Z,12nm,0.9s
WLF Walferdange 21.43 322 *d*P **P** **01 16 17.5 +0.3**
WLF *dx* x 01 16 27.9
BTNL Ternell 22.03 324 *d*P **P** **01 16 25.3 +1.7**
BTNL *dx* x 01 16 36.4
MEM Membach 22.10 324 *d*P **P** **01 16 24.2 -0.1**
MEM *dx* x 01 16 38.2
MEM *d*PP **PnPn** **01 16 45.0 -1.4**
OBN Obninsk 22.16 16 P **P** **01 16 24.9 0.0**
OBN Obninsk 22.16 16⇓ *i*P **P** **01 16 24.5 -0.4**
OBN *e* 01 16 34.6
OBN 01 16 46.0
OBN PPP PPP 01 16 57.0
OBN pmax pmax
comp=Z,21nm,1.5s
OBN MLR MLR
comp=Z,118nm,19.0s
RCHB Rochefort 22.20 322 *d*P **P** **01 16 27.7 +2.3**
RCHB *dx* x 01 16 39.1
BSTI Sart Tilman 22.30 324 *d*P **P** **01 16 27.8 +1.3**
BSTI *dx* x 01 16 39.3
BGES Gesves 22.41 323 *d*P **P** **01 16 28.5 +0.8**
BGES *dx* x 01 16 42.4
DOU Dourbes 22.49 322 *d*P **P** **01 16 29.3 +0.8**
DOU *d*PP **PnPn** **01 16 50.6 -1.1**
MOS Moscow 22.97 17 *e*P **P** **01 16 32.2 -1.3**
MOS *e*S **S** **01 20 39.1 -4.5**
MOS pmax pmax
comp=Z,32nm,1.3s
BELG Belogornoye 23.82 34 P **P** **01 16 43.0 +1.0**
comp=Z,33nm,1.2s,baz=186,slow=2.3,SNR=4.4
comp=Z,33nm,1.2s
BELG Belogornoye 23.82 34⇑ *e*P **P** **01 16 42.7 +0.7**
BELG pmax pmax
comp=Z,3.0nm,1.2s
DEL Delary 23.87 343 *e*P **P** **01 16 39.1 -3.3**
VSU Vasula 24.31 1 *e*P **P** **01 16 46.8 +0.2**
MTSE Matsula 24.61 357 *e*P **P** **01 16 49.9 +0.6**
ESBB Sonseca Array 24.70 292 P **P** **01 16 49.9 -0.5**
ESBB IAmb IAmb 01 16 52.1
comp=Z,15nm,1.4s
ESDC Sonseca Array 24.70 292 P **P** **01 16 48.7 -1.7**
comp=Z,4.1nm,1.0s,baz=79,slow=8.8,SNR=28
ESDC LR LR 01 28 17.7
comp=Z,27nm,19.2s,baz=87,slow=41
comp=Z,4.1nm,1.0s
ESDC Sonseca Array 24.70 292 P **P** **01 16 49.7 -0.7**
ESDC IAmb IAmb 01 16 52.1
comp=Z,8.7nm,1.4s
PAB San Pablo 24.99 291 P **P** **01 16 52.6 -0.5**
PAB IAmb IAmb 01 16 54.3
comp=Z,5.7nm,1.1s
PAB San Pablo 24.99 291 P **P** **01 16 52.6 -0.5**
PAB pmax pmax
comp=Z,6.0nm,1.2s
PUL Pulkovo 25.76 5⇑ *e*P **P** **01 17 01.3 +1.6**
PUL pmax pmax
comp=Z,32nm,0.6s
GEYT Alibeck 25.98 72 P **P** **01 17 03.4 +1.4**
comp=Z,2.1nm,0.5s,baz=248,slow=11,SNR=6.6
comp=Z,2.1nm,0.5s
GEYT Alibeck 25.98 72 IAmb IAmb 01 17 31.5
comp=Z,3.1nm,0.8s
GYA0B ALIBECK ARRAY 25.98 72 P **P** **01 17 03.2 +1.2**
GYA0B IAmb IAmb 01 17 31.5
comp=Z,5.3nm,0.8s
MEF Metsahovi 26.10 358 *e*P **P** **01 17 00.8 -2.0**
AAL Aland 26.35 353 *e*P **P** **01 17 03.2 -1.8**
RAF Rauma 27.03 355 *e*P **P** **01 17 11.6 +0.5**
HFS Hagfors 27.25 346 P **P** **01 17 11.2 -2.0**
comp=Z,1.8nm,0.7s,baz=126,slow=11,SNR=3.3
comp=Z,1.8nm,0.7s
FINES FINESS Array B 27.30 360 P **P** **01 17 12.2 -1.3**
comp=Z,3.3nm,0.9s,baz=169,slow=10,SNR=18
FINES LR LR 01 29 02.5
comp=Z,123nm,19.7s,baz=182,slow=39
comp=Z,3.3nm,0.9s
KLMR Klimovskoe 28.06 14 *e*P **P** **01 17 18.6 -1.8**
KLMR pmax pmax
comp=Z,16nm,1.0s
KLMR Klimovskoe 28.06 14 *e*P **P** **01 17 18.6 -1.8**
KLMR AMP 01 17 32.4
comp=Z,16nm,1.0s
AKTO Aktyubinsk 28.30 45 P **P** **01 17 22.9 +0.2**
comp=Z,0.9nm,0.4s,baz=244,slow=10,SNR=3.7
comp=Z,0.9nm,0.4s
NB2 NORSAR Subarra 28.59 345 P **P** **01 17 23.4 -1.8**
comp=Z,1.1nm,0.8s,baz=156,slow=9.3
NOA NORSAR Array B 28.59 345 P **P** **01 17 23.8 -1.4**
comp=Z,0.5nm,0.7s,baz=153,slow=9.8,SNR=1.6
NOA LR LR 01 29 42.4
comp=Z,82nm,20.0s,baz=165,slow=38
comp=Z,0.5nm,0.7s
KIRV Kirov 28.91 25⇑ *e*P **P** **01 17 29.6 +1.7**
EKA Eskdalemuir Ar 29.37 325 P **P** **01 17 30.1 -1.9**
comp=Z,2.4nm,0.7s,baz=130,slow=10,SNR=6.4
comp=Z,2.4nm,0.7s
HRA Herat 29.66 79 P **P** **01 17 36.9 +1.8**
HRA IAmb IAmb 01 18 01.0
comp=Z,6.2nm,1.4s
PRGR Permogore 30.16 18 *e*P **P** **01 17 41.6 +2.6**
TOA0 Torodi Ar. Sit 30.56 233 P **P** **01 17 42.6 -0.4**
TORD Torodi Ar. Bea 30.56 233 P **P** **01 17 42.7 -0.3**
comp=Z,4.1nm,0.9s,baz=36,slow=8.6,SNR=22
comp=Z,4.1nm,0.9s
TORD Torodi Ar. Bea 30.56 233 P **P** **01 17 43.7 +0.7**
TORD IAmb IAmb 01 17 54.9
comp=Z,6.8nm,1.3s
ARU Arti 31.35 35 P **P** **01 17 49.8 +0.3**
comp=Z,1.1nm,0.4s,baz=240,slow=12,SNR=3.7
ARU LR LR 01 32 42.2
comp=Z,60nm,21.0s,baz=234,slow=41
comp=Z,1.1nm,0.4s
MBAR Mbarara 34.84 172 LR LR 01 32 49.4
comp=Z,47nm,18.6s,baz=349,slow=37
KK31 Karatay Array 35.37 62 P **P** **01 18 25.8 +1.0**
KK31 IAmb IAmb 01 18 28.1
comp=Z,5.6nm,1.1s
KK31 Karatay Array 35.37 62 P **P** **01 18 25.8 +1.0**
KK31 pmax pmax
comp=Z,6.0nm,1.2s
KKAR Karatay Array 35.37 62 P **P** **01 18 25.8 +1.0**
KKAR Karatay Array 35.37 62 P **P** **01 18 25.8 +1.0**
ARCES ARCESS Array B 35.43 360 P **P** **01 18 22.4 -2.6**
comp=Z,1.7nm,0.6s,baz=188,slow=8.2,SNR=9.6
ARCES LR LR 01 32 28.1
comp=Z,70nm,20.5s,baz=145,slow=36
comp=Z,1.7nm,0.6s
BRVK Borovoye 36.35 45 P **P** **01 18 35.0 +2.0**
BRVK IAmb IAmb 01 18 57.9
comp=Z,3.8nm,1.0s
BRVK Borovoye 36.35 45*de*P **P** **01 18 35.1 +2.0**
BRVK pmax pmax
comp=Z,4.0nm,1.0s
AAK Ala-Archa 38.31 63 P **P** **01 18 50.0 -0.1**
comp=Z,1.2nm,0.4s,baz=253,slow=7.1,SNR=4.7
comp=Z,1.2nm,0.4s
AAK Ala-Archa 38.31 63 P **P** **01 18 51.6 +1.6**
AAK IAmb IAmb 01 19 06.8
comp=Z,4.1nm,1.0s
AAK Ala-Archa 38.31 63⇓ *e*P **P** **01 18 53.1 +3.0**
AAK pmax pmax
comp=Z,5.0nm,1.7s
DBIC Dimbokro 39.66 233 P **P** **01 18 59.7 -1.7**
comp=Z,5.4nm,1.0s,baz=51,slow=12,SNR=1.3
DBIC LR LR 01 39 05.1
comp=Z,111nm,19.9s,baz=56,slow=42
comp=Z,5.4nm,1.0s
DBIC Dimbokro 39.66 233 P **P** **01 18 59.7 -1.7**
DBIC pmax pmax
comp=Z,27nm,1.5s
KURBB Kurchatov Arra 41.07 50 P **P** **01 19 12.8 +0.2**
comp=Z,3.3nm,0.5s,baz=287,slow=10,SNR=36
comp=Z,3.3nm,0.5s
KURK Kurchatov 41.13 50 P **P** **01 19 13.8 +0.6**
KURK Kurchatov 41.13 50*de*P **P** **01 19 15.4 +2.3**
KURK pmax pmax
comp=Z,11nm,1.3s
JMIC Jan Mayen 41.29 344 LR LR 01 38 24.1
comp=Z,50nm,18.0s,baz=102,slow=39
BORG Borgarnes 41.85 332 LR LR 01 40 01.6
comp=Z,51nm,20.5s,baz=123,slow=41
MAKZ Makanchi 43.37 56 P **P** **01 19 32.4 +0.8**
MAKZ IAmb IAmb 01 19 34.1
comp=Z,5.2nm,1.2s
MAKZ Makanchi 43.37 56 P **P** **01 19 32.4 +0.8**
MAKZ pmax pmax
comp=Z,5.0nm,1.3s
MK31 Makanchi Array 43.59 56 P **P** **01 19 33.8 +0.5**
MK31 IAmb IAmb 01 19 42.2
comp=Z,3.7nm,0.7s
MK31 Makanchi Array 43.59 56*c i*P **P** **01 19 33.6 +0.3**
MKAR Makanchi Array 43.59 56 P **P** **01 19 33.7 +0.4**
comp=Z,1.8nm,0.5s,baz=269,slow=6.6,SNR=27
comp=Z,1.8nm,0.5s
SPITS Spitsbergen Ar 44.33 357 P **P** **01 19 36.8 -2.0**
comp=Z,7.7nm,0.9s,baz=160,slow=12,SNR=2.1
comp=Z,7.7nm,0.9s
ZAA0 Zalesovo Array 45.06 45 P **P** **01 19 46.0 +1.1**
ZALV Zalesovo Beam 45.06 45 P **P** **01 19 44.4 -0.5**
comp=Z,2.6nm,0.5s,baz=263,slow=9.1,SNR=14
comp=Z,2.6nm,0.5s
ZALV Zalesovo Beam 45.06 45 P **P** **01 19 45.7 +0.8**
ZALV Zalesovo Beam 45.06 45 *i* P **P** **01 19 45.9 +1.0**
ZALV pmax pmax
comp=Z,3.0nm,0.5s
WMQ Urumqi 47.74 59 *e*P **P** **01 20 09.5 +3.2**
NRIK Noril'sk 48.41 25 P **P** **01 20 09.9 -1.1**
comp=Z,0.7nm,0.4s,baz=228,slow=15,SNR=2.0
comp=Z,0.7nm,0.4s
NRIK Noril'sk 48.41 25⇓ *e*P **P** **01 20 11.9 +1.0**
NRIK pmax pmax
comp=Z,1.0nm,1.0s
LSZ Lusaka 49.20 178 LR LR 01 43 21.5
comp=Z,76nm,18.0s,baz=352,slow=39
KNGR Kungurtug, Tuv 53.10 49⇑ *e*P **P** **01 20 49.4 +2.6**
KNGR pmax pmax
comp=Z,9.0nm,1.6s
TSUM Tsumeb 53.70 190 LR LR 01 45 32.5
comp=Z,217nm,19.5s,baz=352,slow=38
SFJD Kangerlussuaq 53.98 332 LR LR 01 46 24.1
comp=Z,50nm,18.3s,baz=90,slow=39
GOMU GeErMu 54.99 67 P **P** **01 21 00.1 -1.0**
GOMU pP pP 01 21 03.3 -0.6
GOMU sP sP 01 21 04.6 -0.4
GOMU PcP **PcP** **01 22 03.7 +0.9**
GOMU PP **PP** **01 23 03.0 -1.0**
GOMU pmax pmax
comp=Z,3.0nm,0.4s
GOMU pmax pmax
comp=Z,39nm,4.7s
ZAK Zakamensk 56.74 48 *e*P **P** **01 21 14.2 +1.1**
ZAK pmax pmax
comp=Z,3.0nm,1.3s
LBTB Lobatse 58.85 181 LR LR 01 47 28.2
comp=Z,58nm,19.6s,baz=10,slow=37
SONM Songino Array 59.43 50 P **P** **01 21 31.7 -0.3**
comp=Z,0.6nm,0.4s,baz=268,slow=7.0,SNR=6.4
comp=Z,0.6nm,0.4s
SONM Songino Array 59.43 50 P **P** **01 21 32.8 +0.8**
SONM Songino Array 59.43 50 P **P** **01 21 32.8 +0.8**
SONM pmax pmax
comp=Z,5.0nm,1.5s
ULN Ulaanbaatar 59.84 50 P **P** **01 21 36.2 +1.3**
ULN IAmb IAmb 01 21 46.6
comp=Z,2.4nm,0.9s
ULN Ulaanbaatar 59.84 50*de*P **P** **01 21 37.1 +2.2**
ULN pmax pmax
comp=Z,1.0nm,0.5s
TIXI Tiksi 61.79 21⇑ *e*P **P** **01 21 48.4 +0.9**
TIXI pmax pmax
comp=Z,1.0nm,0.9s
BOSA Boshof 62.44 181 LR LR 01 52 21.1
comp=Z,84nm,18.6s,baz=6.0,slow=39
PZH PanZhiHua 64.27 74 P **P** **01 22 08.0 +3.1**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,100nm,5.0s
SCHQ Schefferville 64.52 320 P **P** **01 22 04.5 -1.5**
comp=Z,1.4nm,0.6s,baz=43,slow=3.0,SNR=5.8
comp=Z,1.4nm,0.6s
RES Resolute Bay 64.86 345 LR LR 01 53 59.1
comp=Z,39nm,18.6s,baz=260,slow=39
HHC Hu-ho-hao-te 65.45 56 *e*P **P** **01 22 13.9 +1.5**
HHC pmax pmax
comp=Z,27nm,1.2s
HHC pmax pmax
comp=Z,80nm,5.2s
CMAR Chiang Mai Arr 65.80 84 P **P** **01 22 13.9 -0.9**
comp=Z,0.9nm,0.3s,baz=300,slow=9.7,SNR=4.7
comp=Z,0.9nm,0.3s
CMAR Chiang Mai Arr 65.80 84*ce*P **P** **01 22 17.7 +2.9**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
SUR Sutherland 66.39 185 LR LR 01 52 16.8
comp=Z,105nm,19.4s,baz=342,slow=37
RCBR Riachuelo 70.78 249 LR LR 01 55 07.2
comp=Z,57nm,18.8s,baz=194,slow=37
BILL Bilibino 73.81 15⇓ *i*P **P** **01 23 05.5 +2.2**
BILL 01 23 16.0
BILL S **S** **01 32 38.0 +3.9**
BILL *e* 01 33 06.7
BILL *e*SS **SS** **01 37 09.6 -7.2**
BILL pmax pmax
comp=Z,2.0nm,0.5s
BILL MLR MLR
comp=Z,47nm,17.0s
KLR Kul'dur 73.93 41⇓ *e*P **P** **01 23 06.1 +1.7**
KLR pmax pmax
comp=Z,7.0nm,2.5s
KSAR Wonju Array Be 78.16 53 P **P** **01 23 29.1 +0.5**
KSAR Wonju Array Be 78.16 53 P **P** **01 23 29.1 +0.5**
KSRS Korea Array 78.18 53 P **P** **01 23 27.9 -0.8**
comp=Z,1.3nm,1.0s,baz=310,slow=4.6,SNR=2.0
KSRS LR LR 02 02 20.7
comp=Z,30nm,20.4s,baz=255,slow=39
comp=Z,1.3nm,1.0s
YKA Yellowknife Ar 78.67 343 P **P** **01 23 29.9 -1.1**
comp=Z,0.5nm,0.7s,baz=29,slow=5.4,SNR=1.7
comp=Z,0.5nm,0.7s
ILAR Eielson Array 81.25 357 P **P** **01 23 45.3 +0.4**
comp=Z,0.2nm,0.7s,baz=58,slow=37,SNR=1.7
comp=Z,0.2nm,0.7s
MJAR Matsushiro Ar 85.32 49 P **P** **01 24 06.4 -0.1**
comp=Z,2.0nm,1.0s,baz=350,slow=6.5,SNR=2.9
comp=Z,2.0nm,1.0s
CPUP Villa Florida 99.40 245 LR LR 02 10 48.9
comp=Z,35nm,19.6s,baz=40,slow=36
WRA Warramunga Arr 115.58 98 PKP **PKiKP** **01 30 12.6 +0.7**
comp=Z,0.2nm,0.8s,baz=320,slow=1.3,SNR=1.6

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*MEX **05** 01:44:50.3±2.6, 15.95N×98.42W, h10km±76km, MD4.6*
*NEIC **05** 01:44:50.6±2.5, 16.16N±0.05×98.40W±0.04, h10km±6km, mb4.2/91, Md4.6/135(MEX), Error ellipse: s-maj=7.6km s-min=5.6km az=204.0*
*IDC **05** 01:44:51.2±1.8, 16.43N×98.23W, h0km, mb3.8/8, mbtmp3.8/12, ML3.4/4, MS3.4/1, Error ellipse: s-maj=37.4km s-min=16.6km az=10.0*
ISC 05 01:44:48.2±1.1, 16.08N±0.04×98.40W±0.02, h7km±6km, n183, σ2.918/220, mb4.2/41, 1D, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.41**	**40**		**Pn**	**01 44 58.5**	**-2.1**
PNIG					**Sb**	**01 45 05.0**	**+0.8**
PNIG	**Pinotepa**	**0.41**	**40**	*e*P	**Pn**	**01 44 58.5**	**-2.1**
PNIG				*e*S	**Sb**	**01 45 05.0**	**+0.8**
CRIG	**Cruz Grande**	**0.96**	**313**		**Pg**	**01 45 06.4**	**-0.4**
CRIG					**Sg**	**01 45 19.3**	**0.0**
CRIG	**Cruz Grande**	**0.96**	**313**	*e*P	**Pg**	**01 45 06.4**	**-0.4**
CRIG				*i* S	**Sg**	**01 45 19.3**	**0.0**
YOIG	**Yosondua**	**1.12**	**46**	*e*P	**Pn**	**01 45 10.0**	**-0.7**
YOIG				*i* S	**Sb**	**01 45 24.4**	**-0.8**
MGIG	**Malinaltepec**	**1.17**	**349**	*e*P	**Pg**	**01 45 10.7**	**0.0**
MGIG				*e*S	**Sg**	**01 45 26.3**	**+0.3**
PEIG	**Puerto Escondi**	**1.20**	**94**	*e*P	**Pb**	**01 45 09.4**	**-1.9**
TXIG	**Tlaxiaco**	**1.31**	**27**	*e*P	**Pg**	**01 45 13.1**	**-0.4**
TXIG				*e*S	**Sg**	**01 45 30.6**	**0.0**
TLIG	**Tlapa**	**1.48**	**354**		**Sg**	**01 45 35.9**	**-0.2**
TLIG	**Tlapa**	**1.48**	**354**	Pn	**Pb**	**01 45 15.4**	**-0.8**
TLIG	**Tlapa**	**1.48**	**354**	*e*P	**Pb**	**01 45 15.6**	**-0.7**
TLIG				*e*S	**Sg**	**01 45 35.9**	**-0.2**
DAIG	**Los Arroyos**	**1.52**	**308**		**Pn**	**01 45 15.3**	**-0.6**
DAIG					**Sn**	**01 45 33.0**	**-3.1**
DAIG	**Los Arroyos**	**1.52**	**308**	*e*P	**Pn**	**01 45 15.3**	**-0.6**
DAIG				*i* S	**Sn**	**01 45 33.0**	**-3.1**
ACP2	**Acapulco**	**1.63**	**299**		**Pg**	**01 45 20.6**	**+1.0**
ACP2					**Sn**	**01 45 34.2**	**-4.5**
ACP2	**Acapulco**	**1.63**	**299**	*e*P	**Pg**	**01 45 20.6**	**+1.0**
ACP2				*e*S	**Sn**	**01 45 34.2**	**-4.5**
HLIG	**Huajuapan de L**	**1.83**	**18**	*e*P	**Pn**	**01 45 20.5**	**+0.2**
HLIG				*e*S	**Sb**	**01 45 45.0**	**-0.5**
FTIG	**Fresnillo de T**	**1.84**	**8**	*e*P	**Pn**	**01 45 20.6**	**+0.3**
FTIG				*e*S	**Sb**	**01 45 45.5**	**0.0**
VHO	**Vista Hermosa**	**1.88**	**58**	*e*P	**Pn**	**01 45 20.4**	**-0.6**
VHO				*e*S	**Sb**	**01 45 45.6**	**-1.1**
OXBJ	**Oaxaca**	**1.88**	**58**		**Pn**	**01 45 19.8**	**-1.2**
OXBJ					**Sb**	**01 45 45.7**	**-1.1**
OXBJ	**Oaxaca**	**1.88**	**58**	*e*P	**Pn**	**01 45 19.8**	**-1.2**
OXBJ				*i* S	**Sb**	**01 45 45.7**	**-1.1**
OXLC	**Oaxaca**	**1.90**	**59**	*e*P	**Pn**	**01 45 20.7**	**-0.5**
OXLC				*e*S	**Sb**	**01 45 45.1**	**-2.2**
CAIG	**El Cayaco**	**2.04**	**299**		**Pn**	**01 45 22.2**	**-0.7**
CAIG					**Sb**	**01 45 49.7**	**-1.4**
CAIG	**El Cayaco**	**2.04**	**299**	*e*P	**Pn**	**01 45 22.2**	**-0.7**
CAIG				*i* S	**Sb**	**01 45 49.7**	**-1.4**
MEIG	**Mezcala**	**2.18**	**328**		**Pb**	**01 45 26.1**	**-1.9**
MEIG					**Sn**	**01 45 52.9**	**+0.6**
MEIG	**Mezcala**	**2.18**	**328**	*e*P	**Pb**	**01 45 26.1**	**-1.9**
MEIG				*e*S	**Sn**	**01 45 52.9**	**+0.6**
TOIG	**Toxpalan**	**2.38**	**32**	*e*P	**Pn**	**01 45 28.2**	**+0.4**
TOIG				*e*S	**Sb**	**01 46 00.9**	**-0.1**
PLIG	**Platanillo**	**2.53**	**335**		**Pn**	**01 45 31.1**	**+1.2**
PLIG					**Sb**	**01 46 04.4**	**-1.1**
PLIG	**Platanillo**	**2.53**	**335**	*e*P	**Pn**	**01 45 31.1**	**+1.2**
PLIG				*e*S	**Sb**	**01 46 04.4**	**-1.1**
THEZ	**Tehuacan**	**2.58**	**22**	*e*P	**Pb**	**01 45 33.3**	**-1.6**
THEZ				*e*S	**Sb**	**01 46 07.9**	**+1.1**
YAIG	**Yautepec**	**2.84**	**347**		**Pb**	**01 45 37.6**	**-1.8**
YAIG					**Sb**	**01 46 11.9**	**-2.6**
YAIG	**Yautepec**	**2.84**	**347**	*e*P	**Pb**	**01 45 37.6**	**-1.8**
YAIG				*i* S	**Sb**	**01 46 11.9**	**-2.6**
ARIG	**Puente Sto Nin**	**2.88**	**320**		**Pb**	**01 45 38.8**	**-1.2**
ARIG					**Sb**	**01 46 13.2**	**-2.1**
ARIG	**Puente Sto Nin**	**2.88**	**320**	*e*P	**Pb**	**01 45 38.8**	**-1.2**
ARIG				*e*S	**Sb**	**01 46 13.2**	**-2.1**
PHPU	**Puebla**	**2.96**	**4**		**Pg**	**01 45 44.5**	**-0.5**
PHPU					**Sb**	**01 46 19.2**	**+1.3**
PHPU	**Puebla**	**2.96**	**4**	*e*P	**Pg**	**01 45 44.5**	**-0.5**
PHPU				*i* S	**Sb**	**01 46 19.2**	**+1.3**
NEUV	**Arroyo Zacate**	**2.97**	**56**	*e*P	**Pn**	**01 45 35.9**	**+0.1**
NEUV				*e*S	**Sb**	**01 46 15.5**	**-2.5**
PPM	**Popocatepetl**	**2.98**	**356**	*e*P	**Pb**	**01 45 42.1**	**+0.2**
PPM				*i* S	**Sb**	**01 46 18.3**	**-0.5**
OZST	**Orizaba**	**3.03**	**24**	*e*P	**Pg**	**01 45 45.5**	**-1.0**
OZST				*i* S	**Sb**	**01 46 22.0**	**+2.0**
MAVM	**Malinalco, Edo**	**3.05**	**340**		**Pb**	**01 45 43.0**	**0.0**
MAVM					**Sb**	**01 46 18.5**	**-2.0**
MAVM	**Malinalco, Edo**	**3.05**	**340**	*e*P	**Pb**	**01 45 43.0**	**0.0**
MAVM				*i* S	**Sb**	**01 46 18.5**	**-2.0**
AMVM	**AMECAMECA**	**3.06**	**353**		**Pb**	**01 45 44.5**	**+1.2**
AMVM					**Sb**	**01 46 18.1**	**-2.8**
AMVM	**AMECAMECA**	**3.06**	**353**	*e*P	**Pb**	**01 45 44.5**	**+1.2**
AMVM				*i* S	**Sb**	**01 46 18.1**	**-2.8**
TLVM	**San Miguel Top**	**3.20**	**347**	*e*P	**Pb**	**01 45 46.5**	**+0.9**
TLVM				*i* S	**Sn**	**01 46 19.0**	**+1.2**
XCVM	**Xochimilco**	**3.23**	**348**	*e*P	**Pb**	**01 45 46.5**	**+0.4**
THVM	**De Xico**	**3.26**	**350**	*e*P	**Pb**	**01 45 48.1**	**+1.5**
THVM				*i* S	**Sn**	**01 46 20.2**	**+0.9**

AOVM	**Tlapan**	**3.29**	**345**	*eP*		**Pb**	**01 45 46.2**	**-1.1**
AOVM				*eS*		**Sn**	**01 46 21.4**	**+1.1**
ZIIG	**Zihuatanejo**	**3.31**	**298**			**Pn**	**01 45 41.7**	**+1.3**
ZIIG						**Sn**	**01 46 18.9**	**-1.1**
ZIIG	**Zihuatanejo**	**3.31**	**298**	*eP*		**Pn**	**01 45 41.7**	**+1.3**
ZIIG				*eS*		**Sn**	**01 46 18.9**	**-1.1**
UNM	**Universidad Na**	**3.32**	**347**			**Pn**	**01 45 40.5**	**-0.4**
UNM	**Universidad Na**	**3.32**	**347**	*eP*		**Pg**	**01 45 51.2**	**-0.7**
UNM				*i S*		**Sb**	**01 46 27.4**	**-0.9**
MCRU	**Las Cruces**	**3.33**	**346**	*eP*		**Pb**	**01 45 46.2**	**-1.6**
MCRU				*eS*		**Sb**	**01 46 28.2**	**-0.4**
BJVM	**Benito Juarez**	**3.36**	**347**	*eP*		Pn	01 45 36.6	-4.8
BJVM				*eS*		**Sn**	**01 46 20.3**	**-1.4**
CJVM	**Cuajimalpa**	**3.37**	**346**	*eP*		**Pg**	**01 45 51.4**	**-1.6**
CJVM				*eS*		**Sn**	**01 46 21.8**	**-0.2**
MHVM	**Bosque de Chap**	**3.40**	**347**	*eP*		**Pb**	**01 45 48.4**	**-0.7**
MHVM				*eS*		**Sb**	**01 46 27.2**	**-3.5**
PBVM	**Pinon**	**3.41**	**349**			**Pn**	**01 45 43.4**	**+1.6**
PBVM						**Sn**	**01 46 17.1**	**-5.4**
PBVM	**Pinon**	**3.41**	**349**	*eP*		**Pn**	**01 45 43.4**	**+1.6**
PBVM				*i S*		**Sn**	**01 46 17.1**	**-5.4**
TOVM	**TOLUCA**	**3.41**	**339**			**Pb**	**01 45 46.5**	**-2.8**
TOVM						**Sn**	**01 46 23.6**	**+0.5**
TOVM	**TOLUCA**	**3.41**	**339**	*eP*		**Pb**	**01 45 46.5**	**-2.8**
TOVM				*eS*		**Sn**	**01 46 23.6**	**+0.5**
GMVM	**Gustavo A Made**	**3.46**	**349**	*eP*		**Pn**	**01 45 41.0**	**-1.9**
GMVM				*i S*		**Sn**	**01 46 25.8**	**+1.5**
APVM	**Azcapotzalco**	**3.48**	**347**	*eP*		**Pb**	**01 45 47.4**	**-2.9**
APVM				*eS*		**Sb**	**01 46 32.1**	**-0.9**
CMIG	**Matias Romero**	**3.52**	**73**	Pn		**Pn**	**01 45 42.5**	**-0.8**
	2.8nm,0.3s,baz=267,slow=11,SNR=72							
CMIG				Sn		**Sn**	**01 46 23.3**	**-1.8**
	11nm,0.3s,baz=275,slow=17,SNR=4.1							
CMIG				Lg		Lg	01 46 38.3	
	51nm,0.3s,baz=256,slow=16,SNR=6.4							
	20nm,0.6s							
CMIG	**Matias Romero**	**3.52**	**73**			**Pn**	**01 45 42.2**	**-1.1**
CMIG						**Sn**	**01 46 24.0**	**-1.2**
CMIG	**Matias Romero**	**3.52**	**73**	*eP*		**Pn**	**01 45 42.2**	**-1.1**
CMIG				*i S*		**Sn**	**01 46 24.0**	**-1.2**
PTVM	**Pico Tres Padr**	**3.56**	**349**			**Pb**	**01 45 51.8**	**0.0**
PTVM						**Sn**	**01 46 27.0**	**+0.3**
PTVM	**Pico Tres Padr**	**3.56**	**349**	*eP*		**Sb**	**01 45 51.8**	**0.0**
PTVM				*i S*		**Sn**	**01 46 27.0**	**+0.3**
AZVM	**Cuida Lopez Ma**	**3.59**	**347**			**Pb**	**01 45 52.4**	**+0.2**
AZVM						**Sb**	**01 46 35.5**	**-0.6**
AZVM	**Cuida Lopez Ma**	**3.59**	**347**	*eP*		**Pb**	**01 45 52.4**	**+0.2**
AZVM				*eS*		**Sb**	**01 46 35.5**	**-0.6**
JAUV	**Jalcomulco**	**3.60**	**25**	*eP*		**Pn**	**01 45 45.3**	**+0.7**
JAUV				*eS*		**Sb**	**01 46 32.8**	**-3.5**
VTVM	**Tizayuca**	**3.69**	**354**			**Pg**	**01 45 56.6**	**-2.4**
VTVM						**Sb**	**01 46 37.9**	**-1.2**
VTVM	**Tizayuca**	**3.69**	**354**	*eP*		**Pg**	**01 45 56.6**	**-2.4**
VTVM				*i S*		**Sb**	**01 46 37.9**	**-1.2**
ZUVM	**ZUMPANGO**	**3.78**	**350**			**Pb**	**01 45 54.1**	**-1.5**
ZUVM						**Sn**	**01 46 36.4**	**+4.3**
ZUVM	**ZUMPANGO**	**3.78**	**350**	*eP*		**Pb**	**01 45 54.1**	**-1.5**
ZUVM				*i S*		**Sn**	**01 46 36.4**	**+4.3**
DEIG	**Demacu**	**4.24**	**352**	*eP*		Pb	01 45 59.1	-4.2
DEIG				*i S*		**Sn**	**01 46 38.0**	**-5.5**
MOIG	**Morelia**	**4.46**	**324**			**Pn**	**01 45 57.4**	**+0.8**
JRQG	**Juriquilla Cam**	**5.00**	**337**			**Pn**	**01 46 06.2**	**+2.4**
JRQG						**Sn**	**01 47 06.1**	**+4.1**
JRQG	**Juriquilla Cam**	**5.00**	**337**	*eP*		**Pn**	**01 46 06.2**	**+2.4**
JRQG				*eS*		**Sn**	**01 47 06.1**	**+4.1**
PCIG		**5.00**	**94**			**Pn**	**01 46 03.1**	**-0.6**
PCIG						**Sn**	**01 46 58.5**	**-3.1**
PCIG		**5.00**	**94**	*eP*		**Pn**	**01 46 01.9**	**-1.7**
PCIG				*i P*		Pb	01 46 03.1	-13
PCIG				*i S*		**Sn**	**01 46 58.4**	**-3.3**
PCIG				*i S*		Sb	01 46 58.5	-18
TGIG		**5.11**	**81**			**Pn**	**01 46 05.8**	**+0.5**
TGIG						**Sn**	**01 47 08.6**	**+4.0**
TGIG		**5.11**	**81**	*eP*		**Pn**	**01 46 05.8**	**+0.5**
TGIG				*eS*		**Sn**	**01 47 08.6**	**+4.0**
MMIG	**Aquila**	**5.22**	**296**			**Pn**	**01 46 08.0**	**+1.3**
MMIG						**Sn**	**01 47 05.0**	**-2.1**
MMIG	**Aquila**	**5.22**	**296**	*eP*		**Pn**	**01 46 08.0**	**+1.3**
MMIG				*i S*		**Sn**	**01 47 05.0**	**-2.1**
COIG	**Colima**	**5.92**	**302**	*eP*		Pn	01 46 21.2	+4.8
COIG				*eS*		Sn	01 47 33.3	+8.8
JUBC	**Volcan de Coli**	**6.00**	**306**	*eP*		Pn	01 46 23.2	+5.5
JUBC				*eS*		**Sn**	**01 47 33.3**	**+6.5**
EZ5V		**6.00**	**305**			Sb	01 47 36.6	-9.0
EZ5V		**6.00**	**305**	*eP*		Pn	01 46 23.9	+6.2
EZ5V				*i S*		Sb	01 47 36.6	-9.0
MNGA	**Volcan de Coli**	**6.01**	**305**	*eP*		**Pn**	**01 46 21.5**	**+3.7**
MNGA				*eS*		**Sn**	**01 47 33.3**	**+6.2**
INCO	**Volcan de Coli**	**6.03**	**305**	*eP*		**Pn**	**01 46 21.2**	**+3.0**
INCO				*eS*		**Sn**	**01 47 33.7**	**+5.9**
PAVE	**Pavencul**	**6.06**	**98**	*eP*		**Pn**	**01 46 18.5**	**0.0**
PAVE				*i S*		**Sn**	**01 47 22.7**	**-5.5**
CDAR	**Ciudad de Arme**	**6.07**	**299**	*eP*		**Pn**	**01 46 19.7**	**+1.4**
CDAR				*eS*		**Sn**	**01 47 36.2**	**+8.1**
CHUJ	**Union Juarez**	**6.14**	**98**	*eP*		**Pn**	**01 46 19.0**	**+0.3**
CHUJ				*i S*		**Sn**	**01 47 24.2**	**-6.0**
R15V		**6.15**	**301**	*eP*		Pn	01 46 24.9	+5.3
HUEH	**Huehuetenango**	**6.68**	**96**	Pn		**Pn**	**01 46 29.9**	**+2.9**
ZAIG	**Zacatecas**	**7.73**	**330**	Pn		**Pn**	**01 46 43.1**	**+1.6**
PETF	**Flores**	**8.22**	**83**	Pn		**Pn**	**01 46 51.4**	**+3.4**
ESQI	**Esquipulas**	**8.87**	**99**	Pn		Pn	01 47 01.8	+4.8
833A	**Chaparral WMA,**	**12.22**	**356**	Pn		**Pn**	**01 47 42.1**	**-0.7**
H06E1	**SOCORRO T-PHAS**	**12.26**	**284**	T		T	01 59 58.1	
	SNR=41							
TXAR	**Lajitas Array**	**14.06**	**341**	Pn		**Pn**	**01 48 09.5**	**+1.5**
	baz=156,slow=13,SNR=4.2							
TXAR				LR		LR	01 54 15.8	
	comp=Z,139nm,19.6s,baz=148,slow=41							
	0.4nm,0.9s							
TXAR	**Lajitas Array**	**14.06**	**341**	Pn		**Pn**	**01 48 08.7**	**+0.8**
JTS	**Las Juntas de**	**14.29**	**112**	Pn		**P**	**01 48 15.5**	**-3.1**
	0.3nm,0.3s,baz=286,slow=18,SNR=1.8							
	2.5nm,0.6s							
JCT	**Junction City**	**14.39**	**355**	Pn		**Pn**	**01 48 12.9**	**+0.4**
RIMA	**Rio Macho**	**15.49**	**112**	P		**P**	**01 48 33.6**	**+1.6**
RIMA				IAmb	IAmb		01 48 42.0	
	comp=Z,12nm,1.0s							
WHTX	**Lake Whitney,**	**15.87**	**3**	Pn		**Pn**	**01 48 32.3**	**+0.2**
WHTX				IAmb	IAmb		01 48 38.3	
	comp=Z,7.9nm,0.7s							
MNTX	**Cornudas Mount**	**16.80**	**339**	Pn		**Pn**	**01 48 43.8**	**-0.3**
VBMS	**Vicksburg**	**17.59**	**23**	Pn		**Pn**	**01 48 52.3**	**-1.6**
VBMS				IAmb	IAmb		01 48 57.6	
	comp=Z,15nm,0.7s							
143A	**Socs Landing,**	**17.73**	**20**	Pn		**Pn**	**01 48 53.7**	**-1.9**
WLAR	**White Oak Lake**	**18.17**	**14**	Pn		**Pn**	**01 48 59.8**	**-1.3**
MSTX	**Muleshoe**	**18.25**	**348**			**P**	**01 49 02.1**	**-0.3**
121A	**Cookes Peak, D**	**18.46**	**334**			**Pn**	**01 49 05.3**	**+0.4**
X37A	**Clayton**	**18.63**	**8**			**P**	**01 49 02.6**	**-3.8**
MIAR	**Mount Ida**	**18.89**	**12**			**P**	**01 49 08.6**	**-0.7**
AMTX	**Amarillo**	**18.96**	**352**			**P**	**01 49 09.7**	**-0.5**
BCIP	**Isla Barro Col**	**19.36**	**109**	P		**Pn**	**01 49 20.9**	**+5.2**
BNM	**Barren Site**	**19.46**	**339**			**Pn**	**01 49 18.3**	**+1.3**
W39A	**Magazine**	**19.48**	**11**	P		**Pn**	**01 49 16.4**	**-0.6**
LRAL	**Lakeview Retre**	**19.79**	**29**	P		**Pn**	**01 49 19.2**	**-1.4**
TUL1	**Leonard**	**19.89**	**6**	P		**Pn**	**01 49 20.5**	**-1.3**
TUL1				IAmb	IAmb		01 49 33.4	
	comp=Z,7.7nm,0.7s							
ANMO	**Albuquerque**	**20.13**	**340**	P		Pn	01 49 25.9	+1.0
	comp=Z,0.2nm,0.3s,baz=142,slow=11,SNR=21							
	comp=Z,4.7nm,0.7s							
ANMO	**Albuquerque**	**20.13**	**340**	P		Pn	01 49 24.9	0.0
HHAR	**Hobbs**	**20.51**	**10**	P		**P**	**01 49 27.2**	**+0.2**
Y49A	**Blount Mountai**	**20.74**	**29**	P		Pn	01 49 29.7	-2.1
Y49A				IAmb	IAmb		01 49 35.2	
	comp=Z,5.7nm,0.7s							
U40A	**Yellville**	**20.79**	**13**	P		Pn	01 49 30.7	-1.8
U40A				IAmb	IAmb		01 49 35.8	
	comp=Z,12nm,0.8s							
Z51A	**Franklin**	**20.91**	**32**	P		**P**	**01 49 30.3**	**-1.1**
Z51A				IAmb	IAmb		01 49 31.9	
	comp=Z,13nm,1.4s							
LCAR	**Lake Charles**	**20.93**	**17**			**P**	**01 49 30.8**	**-0.7**
LCAR				IAmb	IAmb		01 49 36.7	
	comp=Z,5.8nm,0.8s							
PLAL	**Pickwick Lake**	**20.98**	**24**	IAmb	IAmb		01 49 37.8	
	comp=Z,6.2nm,0.8s							
T25A	**Trinidad**	**21.64**	**347**	P		**P**	**01 49 41.7**	**+2.2**
T25A				IAmb	IAmb		01 49 46.1	
	comp=Z,10.0nm,1.1s							
FPAL	**Fort Paine**	**21.68**	**30**	P		**P**	**01 49 39.9**	**+0.3**
FPAL				IAmb	IAmb		01 49 46.8	
	comp=Z,6.6nm,1.0s							
MGMO	**Mountain Grove**	**21.68**	**13**	IAmb	IAmb		01 49 52.4	
	comp=Z,7.8nm,1.1s							
GOGA	**Godfrey**	**21.90**	**35**	IAmb	IAmb		01 49 42.6	
	comp=Z,7.8nm,0.8s							
Y52A	**Lilburn**	**21.92**	**33**	IAmb	IAmb		01 49 42.9	
	comp=Z,11nm,0.8s							
S39A	**Bolivar**	**21.99**	**11**	IAmb	IAmb		01 49 46.8	
	comp=Z,9.7nm,0.8s							
WVT	**Waverly**	**22.08**	**23**	P		**P**	**01 49 43.7**	**-0.2**
WVT				IAmb	IAmb		01 49 47.1	
	comp=Z,10nm,0.8s							
SWET	**Sewanee**	**22.09**	**28**	IAmb	IAmb		01 49 46.2	
	comp=Z,6.8nm,0.7s							
V48A	**Smith Brothers**	**22.14**	**26**	IAmb	IAmb		01 49 52.1	
	comp=Z,8.2nm,1.1s							
W50A	**Signal Mountai**	**22.36**	**29**	IAmb	IAmb		01 49 48.2	
	comp=Z,9.3nm,0.8s							
WUAZ	**Wupatki**	**22.57**	**331**	P		**P**	**01 49 49.9**	**+0.5**
WUAZ				IAmb	IAmb		01 49 55.5	
	comp=Z,4.4nm,0.8s							
CLTN	**Cedars of Leba**	**22.65**	**26**	P		**P**	**01 49 49.0**	**-1.0**
CCM	**Cathedral Cave**	**22.78**	**15**	P		**P**	**01 49 52.1**	**+0.7**
CCM				IAmb	IAmb		01 50 12.3	
	comp=Z,5.3nm,0.8s							
MVCO	**Mesa Verde**	**22.87**	**339**	P		**P**	**01 49 55.1**	**+2.5**
MVCO				IAmb	IAmb		01 49 57.1	
	comp=Z,5.7nm,0.8s							
FVM	**French Village**	**22.93**	**16**	IAmb	IAmb		01 49 55.1	
	comp=Z,5.6nm,0.8s							
CPCT	**Cooper Cave**	**22.93**	**30**	IAmb	IAmb		01 49 54.6	
	comp=Z,5.7nm,0.7s							
W52A	**Murphy**	**22.95**	**32**	IAmb	IAmb		01 49 54.5	
	comp=Z,10.0nm,0.9s							
S44A	**Carbondale**	**23.00**	**19**	IAmb	IAmb		01 49 56.1	
	comp=Z,13nm,1.0s							
U49A	**Red Boiling Sp**	**23.24**	**26**	IAmb	IAmb		01 49 58.2	
	comp=Z,7.0nm,0.9s							
V51A	**Loudon**	**23.30**	**30**	IAmb	IAmb		01 50 03.4	
	comp=Z,7.0nm,0.9s							
TKL	**Tuckaleechee C**	**23.47**	**31**	P		**P**	**01 49 58.8**	**+0.3**
	comp=Z,2.4nm,0.7s,baz=195,slow=11,SNR=5.3							
	comp=Z,2.4nm,0.7s							
TKL	**Tuckaleechee C**	**23.47**	**31**	IAmb	IAmb		01 50 03.6	
	comp=Z,5.4nm,1.0s							
U15A	**North Rim**	**23.74**	**331**	IAmb	IAmb		01 50 06.5	
	comp=Z,3.9nm,0.8s							
PV13	**Radium Mtn., P**	**23.84**	**339**	P		**P**	**01 50 04.1**	**+1.8**
P38A	**Dawn**	**23.84**	**9**	IAmb	IAmb		01 50 03.6	
	comp=Z,6.6nm,0.8s							
P40A	**Paris**	**24.02**	**12**	IAmb	IAmb		01 50 05.3	
	comp=Z,8.4nm,0.8s							
T50A	**Nancy**	**24.07**	**27**	IAmb	IAmb		01 50 05.7	
	comp=Z,6.6nm,0.9s							
SMCO	**Snowmass**	**24.21**	**344**	IAmb	IAmb		01 50 15.0	
	comp=Z,4.2nm,0.9s							
ISCO	**Idaho Springs**	**24.46**	**346**	IAmb	IAmb		01 50 12.0	
	comp=Z,7.0nm,0.8s							
MTPU	**Mount Pierson**	**25.03**	**334**	IAmb	IAmb		01 50 20.0	
	comp=Z,5.1nm,0.8s							
N38A	**Joes South For**	**25.03**	**9**	P		**P**	**01 50 13.3**	**+0.3**
U54A	**Nelsons Funny**	**25.13**	**33**	P		**P**	**01 50 15.1**	**+1.1**
Q16A	**Castle Valley**	**25.36**	**336**	IAmb	IAmb		01 50 21.9	
	comp=Z,4.0nm,0.7s							
P46A	**Rosedale**	**25.41**	**20**	P		**P**	**01 50 17.3**	**+1.0**
N23A	**Red Feather La**	**25.58**	**347**	IAmb	IAmb		01 50 27.2	
	comp=Z,6.3nm,0.9s							
P18A	**Preston Nutter**	**25.64**	**339**	P		**P**	**01 50 20.9**	**+2.1**
P18A				IAmb	IAmb		01 50 33.4	
	comp=Z,3.2nm,0.8s							
TMUT	**Trail Mountain**	**25.71**	**337**	IAmb	IAmb		01 50 24.0	
	comp=Z,2.7nm,0.7s							
TPNV	**Topopah Spring**	**26.13**	**326**	P		**P**	**01 50 27.6**	**+4.5**
S54A	**Dingess, Beckl**	**26.37**	**32**	IAmb	IAmb		01 50 33.2	
	comp=Z,7.0nm,0.9s							
PD31	**Pinedale Array**	**28.26**	**342**	P		**P**	**01 50 44.6**	**+2.2**
PDAR	**Pinedale Array**	**28.26**	**342**	P		**P**	**01 50 44.5**	**+2.2**
	comp=Z,0.4nm,0.6s,baz=146,slow=8.2,SNR=2.3							
	comp=Z,0.4nm,0.6s							
NVAR	**Mina Array Bea**	**28.32**	**326**	P		**P**	**01 50 45.9**	**+3.0**
	comp=Z,0.7nm,0.7s,baz=138,slow=9.0,SNR=8.1							
	comp=Z,0.7nm,0.7s							
J08A	**Circle Bar Ran**	**32.13**	**332**	IAmb	IAmb		01 51 20.5	
	comp=Z,2.4nm,0.8s							
F10A	**Beach Ranch, E**	**33.71**	**336**	IAmb	IAmb		01 51 37.0	
	comp=Z,2.8nm,0.8s							
SCHQ	**Schefferville**	**45.70**	**25**	P		**P**	**01 53 10.6**	**+0.9**
	comp=Z,3.7nm,0.8s,baz=204,slow=7.8,SNR=5.7							
	comp=Z,3.7nm,0.8s							
SCHQ	**Schefferville**	**45.70**	**25**	P		**P**	**01 53 10.6**	**+0.9**
YKA	**Yellowknife Ar**	**47.75**	**350**	P		**P**	**01 53 26.9**	**+1.3**
	comp=Z,0.9nm,0.8s,baz=157,slow=7.7,SNR=6.0							
	comp=Z,0.9nm,0.8s							
H03N2	**Juan Fernandez**	**52.63**	**159**	T		T	02 50 52.8	
	baz=338,slow=77,SNR=668							
H03N1	**Juan Fernandez**	**52.64**	**159**	T		T	02 50 54.0	
	baz=338,slow=77,SNR=1302							
H03N3	**Juan Fernandez**	**52.65**	**159**	T		T	02 50 53.0	
	baz=338,slow=77,SNR=1121							
INK	**Inuvik**	**56.78**	**345**	P		**P**	**01 54 34.3**	**+1.6**
	comp=Z,2.3nm,0.6s,baz=108,slow=6.8,SNR=5.1							
	comp=Z,2.3nm,0.6s							
INK	**Inuvik**	**56.78**	**345**	IAmb	IAmb		01 54 34.8	
	comp=Z,2.4nm,0.7s							
ILAR	**Eielson Array**	**58.55**	**338**	P		**P**	**01 54 46.4**	**+1.2**
	comp=Z,0.7nm,0.7s,baz=142,slow=6.4,SNR=6.0							
	comp=Z,0.7nm,0.7s							
ILAR	**Eielson Array**	**58.55**	**338**	P		**P**	**01 54 48.0**	**+2.8**
ESDC	**Sonseca Array**	**83.24**	**51**	P		**P**	**01 57 17.0**	**+1.2**
	comp=Z,0.3nm,0.7s,baz=278,slow=5.5,SNR=5.2							
	comp=Z,0.3nm,0.7s							
WRA	**Warrnunga Arr**	**129.86**	**257**	PKP		**PKiKP**	**02 04 05.6**	**+5.4**
	comp=Z,0.7nm,0.9s,baz=71,slow=1.8,SNR=3.6							
PZH	**PanZhiHua**	**133.37**	**335**	PKP		**PKiKP**	**02 04 11.6**	**+4.3**

*MEX **05** 01:52:40.3±2.6, 16°.01N×98°.40W, h5km, MD4.9*
*IDC **05** 01:52:42.0±1.3, 16°.58N×98°.00W, h0km, mb4.0/11, mbtmp4.0/15, ML3.6/4, MS3.6/2, Error ellipse:*
s-maj=32.0km s-min=18.3km az=34.0
*NEIC **05** 01:52:46.1±1.7, 16°.42N±0°.06×98°.26W±0°.06, h29km±3km, mb4.4/171, Md4.9/125(MEX), Error ellipse: s-maj=11.8km*
s-min=3.6km az=220.0

ISC 05 01:52:43.0±0.5, 16°.20N±0°.04×98°.32W±0°.02, h21km±2km, n305, σ1°76/283, mb4.4/74, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
				Op		ISC	h	m	s	ISC
PNIG	**Pinotepa**	**0.27**	**44**			**Pb**	**01 52 48.7**			**-0.7**
PNIG						**Sb**	**01 52 55.1**			**+1.4**
PNIG	**Pinotepa**	**0.27**	**44**	*i*	P	**Pb**	**01 52 48.6**			**-0.7**
PNIG				*i*	S	**Sb**	**01 52 55.1**			**+1.4**
CRIG	**Cruz Grande**	**0.94**	**305**			Pn	01 52 56.6			-4.5
CRIG						**Sb**	**01 53 09.5**			**-3.3**
CRIG	**Cruz Grande**	**0.94**	**305**	*eP*		Pn	01 52 56.7			-4.4
YOIG	**Yosondua**	**0.99**	**48**	*eP*		**Pn**	**01 52 60.0**			**-2.0**
YOIG				*i*	S	**Sn**	**01 53 15.9**			**+0.3**
MGIG	**Malinaltepec**	**1.07**	**344**	*eP*		**Pn**	**01 53 00.9**			**-2.2**
MGIG				*eS*		**Sn**	**01 53 16.3**			**-1.2**
PEIG	**Puerto Escondi**	**1.14**	**100**	*eP*		Pn	01 52 59.9			-4.0
PEIG				*i*	S	**Sn**	**01 53 14.8**			**-4.1**
TXIG	**Tlaxiaco**	**1.18**	**27**	*eP*		**Pn**	**01 53 03.3**			**-1.3**
TXIG				*i*	S	**Sb**	**01 53 22.6**			**+2.8**
TLIG	**Tlapa**	**1.38**	**350**			**Pn**	**01 53 05.9**			**-1.4**
TLIG	**Tlapa**	**1.38**	**350**			**Sb**	**01 53 26.5**			**+1.1**
TLIG	**Tlapa**	**1.38**	**350**	*eP*		**Pn**	**01 53 05.7**			**-1.5**
TLIG				*eS*		**Sb**	**01 53 26.5**			**+1.1**
DAIG	**Los Arroyos**	**1.52**	**303**			**Pn**	**01 53 05.9**			**-3.1**
DAIG						**Sn**	**01 53 27.9**			**-0.3**
DAIG	**Los Arroyos**	**1.52**	**303**	*eP*		**Pn**	**01 53 05.9**			**-3.1**
DAIG				*eS*		**Sn**	**01 53 27.9**			**-0.3**
HLIG	**Huajuapan de L**	**1.70**	**17**	*eP*		**Pn**	**01 53 10.7**			**-1.0**
HLIG				*i*	S	**Sb**	**01 53 36.5**			**+1.8**
FTIG	**Fresnillo de T**	**1.71**	**6**	*eP*		**Pn**	**01 53 10.8**			**-1.0**
FTIG				*i*	S	**Sb**	**01 53 35.5**			**+0.5**
VHO	**Vista Hermosa**	**1.75**	**60**	*eP*		**Pn**	**01 53 10.5**			**-1.9**
OXBJ	**Oaxaca**	**1.76**	**60**			**Pn**	**01 53 10.8**			**-1.7**
OXBJ						**Sb**	**01 53 38.1**			**+1.6**
OXBJ	**Oaxaca**	**1.76**	**60**	*eP*		**Pn**	**01 53 10.8**			**-1.7**
OXBJ				*eS*		**Sb**	**01 53 38.1**			**+1.6**
OXLC	**Oaxaca**	**1.77**	**61**	*eP*		**Pn**	**01 53 10.9**			**-1.8**
OXLC				*eS*		**Sb**	**01 53 38.7**			**+1.8**
CAIG	**El Cayaco**	**2.05**	**295**			Pn	01 53 12.3			-4.0
CAIG						**Sb**	**01 53 45.4**			**+0.8**
CAIG	**El Cayaco**	**2.05**	**295**	*eP*		Pn	01 53 12.3			-4.0
CAIG				*eS*		**Sb**	**01 53 45.4**			**+0.8**
MEIG	**Mezcala**	**2.12**	**324**			**Pn**	**01 53 15.8**			**-1.6**
MEIG						**Sb**	**01 53 45.7**			**-1.1**
MEIG	**Mezcala**	**2.12**	**324**	*eP*		**Pn**	**01 53 15.8**			**-1.6**
MEIG				*i*	S	**Sb**	**01 53 45.7**			**-1.1**
TOIG	**Toxpalan**	**2.24**	**32**	*eP*		**Pn**	**01 53 18.8**			**-0.3**
TOIG				*eS*		**Sb**	**01 53 52.4**			**+2.3**
THEZ	**Tehuacan**	**2.44**	**21**	*eP*		**Pb**	**01 53 25.0**			**-1.3**
THEZ				*i*	S	**Sb**	**01 53 58.6**			**+2.6**
PLIG	**Platanillo**	**2.46**	**333**			**Pn**	**01 53 21.2**			**-0.9**
PLIG						**Sb**	**01 53 54.5**			**-2.0**
PLIG	**Platanillo**	**2.46**	**333**	*eP*		**Pn**	**01 53 21.2**			**-0.9**
PLIG				*i*	S	**Sb**	**01 53 54.5**			**-2.0**
YAIG	**Yautepec**	**2.74**	**345**			**Pn**	**01 53 27.7**			**+1.7**
YAIG						**Sb**	**01 54 04.0**			**-0.9**
YAIG	**Yautepec**	**2.74**	**345**	*eP*		**Pn**	**01 53 27.7**			**+1.7**
YAIG				*i*	S	**Sb**	**01 54 04.0**			**-0.9**
ARIG	**Puente Sto Nin**	**2.84**	**317**			**Pn**	**01 53 26.7**			**-0.5**
ARIG						**Sb**	**01 54 06.8**			**-0.6**
ARIG	**Puente Sto Nin**	**2.84**	**317**	*eP*		**Pn**	**01 53 26.7**			**-0.5**
ARIG				*eS*		**Sb**	**01 54 06.8**			**-0.6**
NEUV	**Arroyo Zacate**	**2.84**	**58**	*eP*		**Pn**	**01 53 25.9**			**-1.4**
NEUV				*i*	S	**Sb**	**01 54 03.7**			**-3.7**
PPM	**Popocatepetl**	**2.87**	**354**	*eP*		**Pb**	**01 53 31.6**			**-2.2**
PPM				*eS*		**Sb**	**01 54 07.4**			**-1.3**
AMVM	**AMECAMECA**	**2.95**	**351**			Pn	01 53 23.3			-5.8
AMVM						**Sb**	**01 54 09.8**			**-1.1**
AMVM	**AMECAMECA**	**2.95**	**351**	*eP*		Pn	01 53 23.3			-5.8
AMVM				*i*	S	**Sb**	**01 54 09.8**			**-1.1**
MAVM	**Malinalco, Edo**	**2.96**	**338**			**Pn**	**01 53 27.8**			**-1.4**
MAVM						**Sn**	**01 54 05.0**			**+0.8**
MAVM	**Malinalco, Edo**	**2.96**	**338**	*eP*		**Pn**	**01 53 27.8**			**-1.4**
MAVM				*eS*		**Sn**	**01 54 05.0**			**+0.8**
TLVM	**San Miguel Top**	**3.10**	**345**	*eP*		**Pb**	**01 53 34.1**			**-3.6**
TLVM				*i*	S	**Sb**	**01 54 12.8**			**-2.5**
XCVM	**Xochimilco**	**3.13**	**346**	*eP*		**Pn**	**01 53 33.4**			**+1.9**
XCVM				*i*	S	**Sb**	**01 54 10.1**			**-6.0**
THVM	**De Xico**	**3.16**	**349**	*e*		**Pb**	**01 53 40.5**			**+1.8**
THVM				*e*			01 54 13.8			

237A IAmb IAmb 01 56 30.0
comp=Z,35nm,1.0s
DRK0 Durika 16.23 113 Pn Pn 01 56 33.9 +3.7
ABTX Abilene, Hawle 16.40 356 Pn 01 56 32.5 +0.4
ABTX IAmb IAmb 01 56 36.8
comp=Z,39nm,1.0s
ABTX Abilene, Hawle 16.40 356 P P 01 56 35.4 +0.6
baz=175,SNR=9.5
MNTX Cornudas Mount 16.72 339 Pn Pn 01 56 35.2 -0.9
MNTX Cornudas Mount 16.72 339 P P 01 56 39.3 +1.0
baz=155
Z35A Perchaven, San 17.09 3 Pn Pn 01 56 37.9 -2.9
Z38A Mt. Pleasant 17.25 9 Pn Pn 01 56 41.0 -1.8
Z38A IAmb IAmb 01 56 44.8
comp=Z,27nm,1.1s
HSIG 17.27 320 Pn Pn 01 56 42.7 -0.3
143A Socs Landing, 17.59 20 Pn Pn 01 56 44.6 -2.4
Z41A Richland Creek 17.70 15 Pn Pn 01 56 46.6 -1.7
WLAR White Oak Lake 18.04 14 P Pn 01 56 52.0 -0.5
WLAR IAmb IAmb 01 57 02.8
comp=Z,29nm,1.4s
MSTX Muleshoe 18.15 348 P Pn 01 56 52.6 -1.3
MSTX Muleshoe 18.15 348 P Pn 01 56 53.6 -0.4
baz=166
121A Cookes Peak, D 18.39 334 Pn 01 56 55.5 -1.5
121A Cookes Peak, D 18.39 334 P P 01 56 58.6 +1.6
baz=149,SNR=6.2
146A Union 18.39 25 Pn 01 56 55.7 -1.2
MIAR Mount Ida 18.76 12 P P 01 56 59.9 -0.9
MIAR Mount Ida 18.76 12 P Pn 01 57 01.4 +0.1
baz=194
AMTX Amarillo 18.85 351 P P 01 57 00.8 -1.1
AMTX IAmb IAmb 01 57 30.4
comp=Z,13nm,0.6s
250A Grady 19.15 33 P P 01 57 03.9 -1.2
250A IAmb IAmb 01 57 32.4
comp=Z,22nm,1.3s
OKCFA Oklahoma City 19.16 2 P P 01 57 04.0 -1.2
OKCFA IAmb IAmb 01 57 05.5
comp=Z,21nm,0.7s
Z47A Carrollton 19.30 27 P Pn 01 57 06.8 -1.0
W39A Magazine 19.35 11 P P 01 57 06.3 -0.9
W39A Magazine 19.35 11 P Pn 01 57 08.0 -0.4
baz=193
BNM Barren Site 19.38 339 Pn 01 57 08.8 -0.2
352A Blakely 19.50 36 P P 01 57 09.0 +0.1
352A IAmb IAmb 01 57 26.8
comp=Z,27nm,1.4s
LRAL Lakeview Retre 19.64 29 P P 01 57 10.2 -0.3
LRAL Lakeview Retre 19.64 29 P P 01 57 10.3 -0.2
baz=214,SNR=5.9
WHAR Wooly Hollow 19.77 15 P P 01 57 11.8 0.0
ANMO Albuquerque 20.05 340 P P 01 57 15.1 +0.1
comp=Z,0.3nm,0.3s,baz=145,slow=11,SNR=29
comp=Z,8.1nm,0.8s
ANMO Albuquerque 20.05 340 P P 01 57 15.8 +0.8
ANMO Albuquerque 20.05 340 P Pn 01 57 16.2 -0.7
baz=156
FCAR Ozark Folk Cen 20.38 15 P P 01 57 17.6 -0.8
FCAR IAmb IAmb 01 57 44.2
comp=Z,18nm,1.5s
214A Organ Pipe Nat 20.49 323 P Pn 01 57 21.6 -0.4
baz=136
Y49A Blount Mountai 20.60 29 IAmb IAmb 01 57 47.3
comp=Z,12nm,1.0s
U40A Yellville 20.66 13 IAmb IAmb 01 57 26.0
comp=Z,26nm,0.9s
U40A Yellville 20.66 13 P Pn 01 57 23.9 0.0
baz=195,SNR=8.9
LCAR Lake Charles 20.80 17 IAmb IAmb 01 57 26.9
comp=Z,9.9nm,0.8s
PLAL Pickwick Lake 20.84 24 P P 01 57 22.2 -1.3
PLAL IAmb IAmb 01 57 27.9
comp=Z,12nm,0.8s
154A Montrose 21.38 37 IAmb IAmb 01 57 53.2
comp=Z,19nm,0.8s
FPAL Fort Paine 21.54 30 IAmb IAmb 01 57 33.5
comp=Z,9.8nm,0.8s
T25A Trinidad 21.55 347 IAmb IAmb 01 57 40.7
comp=Z,15nm,0.8s
T25A Trinidad 21.55 347 P P 01 57 33.0 +1.7
baz=164,SNR=9.4
MGMO Mountain Grove 21.55 13 P P 01 57 31.4 +0.3
MGMO IAmb IAmb 01 57 56.3
comp=Z,25nm,1.4s
X16A Lo Mia Camp, P 21.64 329 IAmb IAmb 01 57 45.3
comp=Z,11nm,0.9s
GOGA Godfrey 21.76 35 P P 01 57 32.1 -1.3
GOGA IAmb IAmb 01 57 32.7
comp=Z,14nm,0.9s
GOGA Godfrey 21.76 35 P P 01 57 32.0 -1.4
baz=222,SNR=11
WVT Waverly 21.94 23 P P 01 57 33.3 -2.0
WVT IAmb IAmb 01 57 37.2
comp=Z,21nm,0.8s
WVT Waverly 21.94 23 P P 01 57 33.6 -1.7
baz=208
SWET Sewanee 21.95 28 IAmb IAmb 01 57 35.5
comp=Z,18nm,0.9s
V48A Smith Brothers 22.00 26 IAmb IAmb 01 57 37.5
comp=Z,12nm,0.9s
W50A Signal Mountai 22.22 29 IAmb IAmb 01 57 38.4
comp=Z,19nm,0.8s
SDCO Great Sand Dun 22.38 345 P P 01 57 40.1 -0.2
SDCO Great Sand Dun 22.38 345 P P 01 57 41.3 +0.9
baz=161
WUAZ Wupatki 22.50 331 P P 01 57 42.4 +0.9
WUAZ IAmb IAmb 01 57 45.7
comp=Z,9.4nm,0.9s
WUAZ Wupatki 22.50 331 P P 01 57 43.3 +1.8
baz=145,SNR=8.3
CCM Cathedral Cave 22.65 15 P P 01 57 41.9 -1.0
CCM IAmb IAmb 01 57 48.0
comp=Z,8.6nm,0.8s
CCM Cathedral Cave 22.65 15 P P 01 57 43.4 +0.6
baz=198
S22A 4UR Ranch, Cre 22.74 342 P P 01 57 45.3 +1.1
baz=158,SNR=9.0
MVCO Mesa Verde 22.79 339 P P 01 57 44.5 -0.1
MVCO IAmb IAmb 01 57 46.8
comp=Z,12nm,0.9s
MVCO Mesa Verde 22.79 339 P P 01 57 45.5 +0.9
baz=154,SNR=11
FVM French Village 22.79 16 IAmb IAmb 01 57 45.3
comp=Z,12nm,0.9s
CPCT Cooper Cave 22.80 30 IAmb IAmb 01 58 00.1
comp=Z,13nm,1.0s
W52A Murphy 22.81 32 IAmb IAmb 01 57 44.2
comp=Z,22nm,0.9s
YUH Yuha Desert 22.86 319 P P 01 57 45.7 +0.5
KSCO Kaye Shedlock' 23.04 351 P P 01 57 46.2 -0.9
U49A Red Boiling Sp 23.10 26 IAmb IAmb 01 57 48.3
comp=Z,16nm,0.9s
V51A Loudon 23.16 30 IAmb IAmb 01 57 48.6
comp=Z,16nm,1.0s
TKL Tuckaleechee C 23.33 31 P P 01 57 47.7 -2.2
comp=Z,3.6nm,0.7s,baz=235,slow=8.5,SNR=6.4
comp=Z,3.6nm,0.7s
NHSC New Hope 23.50 41 P P 01 57 52.2 +0.6
NHSC New Hope 23.50 41 P P 01 57 51.6 0.0
baz=229
V52A Sevierville 23.56 31 IAmb IAmb 01 57 54.1
comp=Z,9.0nm,1.1s
U15A North Rim 23.67 331 IAmb IAmb 01 57 56.7
comp=Z,7.5nm,0.9s
PV11 David Mesa, Pa 23.90 339 P P 01 57 55.2 -0.4
PV11 IAmb IAmb 01 58 01.1
comp=Z,6.2nm,0.7s
T50A Nancy 23.94 27 IAmb IAmb 01 58 04.0
comp=Z,7.9nm,0.9s
PV07 Paradox Valley 23.95 340 IAmb IAmb 01 57 54.1
comp=Z,10nm,1.1s
SMCO Snowmass 24.12 343 IAmb IAmb 01 58 05.2
comp=Z,9.3nm,0.9s
TZTN Tazewell 24.14 30 IAmb IAmb 01 58 12.1
comp=Z,11nm,1.1s
TZTN Tazewell 24.14 30 P P 01 57 57.0 -0.7
baz=217
GMRC Granite Mounta 24.17 323 P P 01 57 59.2 +1.1
baz=135
KMSC Kings Mountain 24.23 36 P P 01 57 57.9 -0.6
baz=223,SNR=6.8
ISCO Idaho Springs 24.36 346 P P 01 58 00.4 +0.3
ISCO IAmb IAmb 01 58 02.2
comp=Z,12nm,0.8s
ISCO Idaho Springs 24.36 346 P P 01 58 01.5 +1.5
baz=162,SNR=15
HEC Hector,Ludlow 24.60 322 P P 01 58 03.2 +1.2
baz=134
TUQ Turquoise Moun 24.79 324 P P 01 58 05.5 +1.8
baz=136
R49A Shelbyville 24.86 25 IAmb IAmb 01 58 04.9
comp=Z,12nm,1.1s
MTPU Mount Pierson 24.95 333 IAmb IAmb 01 58 10.2
comp=Z,8.9nm,0.8s
X58A Rowland 24.99 39 P P 01 58 05.4 0.0
BLO Bloomington 25.11 22 IAmb IAmb 01 58 07.4
comp=Z,14nm,1.0s
R50A Paris 25.21 27 IAmb IAmb 01 58 07.5
comp=Z,20nm,1.2s
Q16A Castle Valley 25.29 336 IAmb IAmb 01 58 10.3
comp=Z,6.1nm,0.8s
O44A Mansfield 25.36 18 IAmb IAmb 01 58 09.0
comp=Z,9.4nm,0.7s
O20A White River Ci 25.37 342 IAmb IAmb 01 58 12.7
comp=Z,16nm,1.1s
O20A White River Ci 25.37 342 P P 01 58 12.3 +3.2
baz=157,SNR=8.4
N23A Red Feather La 25.48 346 IAmb IAmb 01 58 17.4
comp=Z,10nm,0.9s
N23A Red Feather La 25.48 346 P P 01 58 12.6 +2.4
baz=162,SNR=7.7
HDIL Hopedale 25.51 16 P P 01 58 09.5 -0.5
baz=200
P18A Preston Nutter 25.56 338 P P 01 58 10.9 0.0
P18A IAmb IAmb 01 58 25.4
comp=Z,8.8nm,1.0s
TMUT Trail Mountain 25.63 336 IAmb IAmb 01 58 19.7
comp=Z,6.2nm,0.7s
PHWY Pilot Hill 25.77 348 IAmb IAmb 01 58 15.9
comp=Z,6.5nm,1.0s
P48A Milroy 25.77 23 IAmb IAmb 01 58 18.4
comp=Z,6.6nm,0.9s
TPNV Topopah Spring 26.07 326 P P 01 58 19.3 +3.9
baz=137
P49A Miami Univ. Ec 26.11 24 P P 01 58 14.2 -1.3
baz=211,SNR=18
MPMC Manual Prospec 26.13 323 P P 01 58 17.2 +1.3
baz=134
RDMU Red Mountain 26.18 340 IAmb IAmb 01 58 23.9
comp=Z,7.6nm,0.9s
S54A Dingess, Beckl 26.23 32 IAmb IAmb 01 58 23.3
comp=Z,9.6nm,0.9s
BLA Blacksburg 26.25 34 IAmb IAmb 01 58 18.5
comp=Z,9.3nm,0.8s
BLA Blacksburg 26.25 34 P P 01 58 15.8 -1.1
baz=222
L40A Anamosa 26.49 12 IAmb IAmb 01 58 19.3
comp=Z,9.0nm,0.8s
NLU North Lily Min 26.53 336 P P 01 58 19.7 +0.1
O48B Farmland 26.57 23 P P 01 58 18.6 -1.1
baz=209,SNR=7.3
T57A Hurt 26.73 36 IAmb IAmb 01 58 23.1
comp=Z,12nm,0.9s
P51A Williamsport 26.76 27 IAmb IAmb 01 58 25.6
comp=Z,15nm,0.9s
R11A Troy Canyon, C 26.79 329 P P 01 58 24.8 +2.9
baz=140
DUG Dugway, Tooele 27.03 335 P P 01 58 25.8 +1.8
baz=138,SNR=5.4
R55A Marlinton 27.21 33 IAmb IAmb 01 58 29.5
comp=Z,9.7nm,0.8s
P52A Corning 27.29 28 IAmb IAmb 01 58 30.4
comp=Z,7.4nm,0.8s
P52A Corning 27.29 28 P P 01 58 23.7 -2.5
baz=216
Q54A Coxs Mills 27.39 31 P P 01 58 26.6 -0.4
Q54A IAmb IAmb 01 58 31.3
comp=Z,9.5nm,0.8s
ACSO Alum Creek Sta 27.41 26 IAmb IAmb 01 58 27.0
comp=Z,8.7nm,0.9s
ACSO Alum Creek Sta 27.41 26 P P 01 58 26.6 -0.6
baz=214
SDV Santo Domingo 27.96 102 P P 01 58 32.2 -0.4
comp=Z,2.6nm,0.4s,baz=295,slow=14,SNR=4.0
comp=Z,2.6nm,0.4s
SDV Santo Domingo 27.96 102 P P 01 58 33.6 +0.9
SDV IAmb IAmb 01 58 34.1
comp=Z,6.5nm,0.8s
JSRW J. Sargeant Re 28.00 36 P P 01 58 31.9 -0.6
MDPB Devils Postpil 28.14 323 P P 01 58 34.9 +0.8
BW06 Boulder Array 28.17 342 P P 01 58 34.7 +0.3
baz=156
PD31 Pinedale Array 28.17 342 P P 01 58 34.6 +0.3
PDAR Pinedale Array 28.17 342 P P 01 58 34.6 +0.3
comp=Z,1.1nm,0.8s,baz=145,slow=5.4,SNR=9.3
comp=Z,1.1nm,0.8s
NV11 Mina Array Sit 28.18 326 P P 01 58 34.7 +0.3
NV11 IAmb IAmb 01 58 42.9
comp=Z,7.5nm,1.4s
Q56A Snyder Ridge, 28.26 33 IAmb IAmb 01 58 37.5
comp=Z,12nm,1.2s
NVAR Mina Array Bea 28.26 325 P P 01 58 36.5 +1.4
comp=Z,1.4nm,0.9s,baz=154,slow=9.9,SNR=13
comp=Z,1.4nm,0.9s
L48A N Adams 28.30 22 IAmb IAmb 01 58 35.3
comp=Z,8.8nm,0.7s
ELK Elko 28.52 332 P P 01 58 38.5 +1.0
comp=Z,0.7nm,0.7s,baz=153,slow=4.5,SNR=1.8
comp=Z,0.7nm,0.7s
ELK Elko 28.52 332 IAmb IAmb 01 58 43.6
comp=Z,4.5nm,1.4s
LOHW Long Hollow 29.26 342 P P 01 58 43.8 -0.1
RLMT Red Lodge 30.27 345 IAmb IAmb 01 59 10.2
comp=Z,5.3nm,1.1s
RLMT Red Lodge 30.27 345 P P 01 58 54.2 +1.3
baz=158
BOZ Bozeman (W) 31.37 342 P P 01 59 05.0 +2.5
baz=155
J08A Circle Bar Ran 32.06 332 IAmb IAmb 01 59 10.6
comp=Z,4.3nm,0.8s
AGMN Agassiz Nation 32.08 3 IAmb IAmb 01 59 16.3
comp=Z,6.6nm,0.8s
AGMN Agassiz Nation 32.08 3 P P 01 59 08.2 -0.3
baz=184
BINY Binghamton 32.23 32 P P 01 59 09.1 -0.9
baz=223
F10A Beach Ranch, E 33.63 336 P P 01 59 22.9 +0.6
F10A IAmb IAmb 01 59 32.9
comp=Z,7.5nm,1.1s
ULM Lac du Bonnet 34.02 3 P P 01 59 24.2 -1.3
comp=Z,1.1nm,0.5s,baz=200,slow=7.8,SNR=3.0
comp=Z,1.1nm,0.5s
ULM Lac du Bonnet 34.02 3 IAmb IAmb 01 59 25.2
comp=Z,7.0nm,1.2s
EDM Edmonton 38.79 346 IAmb IAmb 02 00 12.1
comp=Z,7.9nm,0.7s
BBB Bella Bella 42.96 333 LR LR 02 18 49.5
comp=Z,120nm,22.0s,baz=124,slow=37
LPAZ La Paz 43.92 136 LR LR 02 18 42.8
comp=Z,52nm,21.0s,baz=336,slow=36
SCHQ Schefferville 45.56 25 P P 02 00 59.5 -1.8
comp=Z,7.7nm,0.8s,baz=240,slow=7.3,SNR=12
comp=Z,7.7nm,0.8s
SCHQ Schefferville 45.56 25 P P 02 01 00.8 -0.5
YKA Yellowknife Ar 47.65 350 P P 02 01 16.5 -1.0
comp=Z,1.1nm,0.8s,baz=157,slow=7.6,SNR=6.4
comp=Z,1.1nm,0.8s
MMPY Sheldon Lake, 51.78 341 P P 02 01 50.9 +1.8
baz=138
H03N2 Juan Fernandez 52.72 160 T T 02 58 43.3
baz=338,slow=77,SNR=1816
H03N1 Juan Fernandez 52.72 160 T T 02 58 44.4
baz=338,slow=77,SNR=2698
H03N3 Juan Fernandez 52.73 160 T T 02 58 43.4
baz=338,slow=77,SNR=2576
BCAR Beaver Creek A 55.64 338 P P 02 02 18.5 +1.2
L27K Beaver Creek, 55.66 338 P P 02 02 18.2 +0.7
baz=127
K27K Chicken 56.33 339 P P 02 02 23.6 +1.4
baz=127
INK Inuvik 56.69 345 P P 02 02 24.6 0.0
baz=138
SCRK Sand Creek 56.98 338 P P 02 02 27.6 +0.6
baz=125
J26L Joseph Creek 57.13 339 P P 02 02 29.4 +1.3
J26L IAmb IAmb 02 02 30.1
comp=Z,5.9nm,0.9s
J26L Joseph Creek 57.13 339 P P 02 02 29.1 +1.1
baz=126,SNR=7.9
RIDG Independent Ri 57.16 337 P P 02 02 29.0 +0.8
baz=124
J25K Salcha River, 57.84 338 P P 02 02 33.4 +0.4
J25K IAmb IAmb 02 02 42.0
comp=Z,3.4nm,1.2s
IL31 58.47 338 P P 02 02 37.6 +0.3
IL31 IAmb IAmb 02 02 38.4
comp=Z,6.1nm,1.2s
ILAR Eielson Array 58.47 338 P P 02 02 36.6 -0.7
comp=Z,1.4nm,0.8s,baz=136,slow=4.5,SNR=13
comp=Z,1.4nm,0.8s
SKT Skwentna 58.93 334 P P 02 02 40.9 +0.3
baz=116
TRF Thorofare Moun 59.09 336 P P 02 02 42.3 +0.4
baz=118,SNR=8.8
BMAR Burnt Mountain 59.19 341 P P 02 02 42.5 +0.2
H24K Noodor Dome 59.39 339 P P 02 02 44.0 +0.2
H24K IAmb IAmb 02 02 45.0
comp=Z,4.6nm,0.9s
H24K Noodor Dome 59.39 339 P P 02 02 44.0 +0.2
baz=122,SNR=5.8
I23K Minto, Yukon-K 59.56 338 P P 02 02 45.2 +0.4
baz=120
M20K Styx River 59.57 333 P P 02 02 44.5 -0.7
baz=114
BPAW Bear Paw Mtn. 59.67 336 P P 02 02 45.4 -0.3
baz=118
N19K Bonanza Creek 59.74 332 P P 02 02 46.4 0.0
N19K Bonanza Creek 59.74 332 P P 02 02 46.0 -0.3
baz=112
MLY Manley 60.02 337 IAmb IAmb 02 02 49.2
comp=Z,3.5nm,0.9s
MLY Manley 60.02 337 P P 02 02 48.1 0.0
baz=118
M19K Big River Lodg 60.13 333 IAmb IAmb 02 02 49.5
comp=Z,3.9nm,0.8s
M19K Big River Lodg 60.13 333 P P 02 02 49.1 +0.3
baz=113
L20K Farewell, AK 60.14 334 P P 02 02 48.6 -0.3
baz=114
N18K Kilae Creek 60.34 331 P P 02 02 50.3 0.0
baz=111
L19K White Mountain 60.44 333 P P 02 02 50.4 -0.6
baz=113
I21K Tanana 60.55 337 P P 02 02 51.3 -0.3
baz=117
K20K Telida 60.58 335 P P 02 02 51.8 -0.1
K20K IAmb IAmb 02 02 52.4
comp=Z,4.1nm,0.9s
K20K Telida 60.58 335 P P 02 02 51.5 -0.4
baz=114
P16K Nushagak River 60.78 329 P P 02 02 52.8 -0.4
baz=108
J20K Nowinta River 60.95 336 P P 02 02 54.0 -0.3
baz=114
O16K Kokwok River B 61.01 330 P P 02 02 54.5 -0.3
baz=108
TTA Tatalina 61.22 334 P P 02 02 55.7 -0.7
baz=112
TOLK Toolik Lake Re 61.43 341 P P 02 02 57.4 -0.2
baz=121
N16K Nishlik Lake 61.61 331 P P 02 02 59.1 +0.1
baz=108
ICESG Greenland Ices 64.02 20 *i* P P 02 03 14.1 -1.1
SUMG Summit 65.82 17 *i* P P 02 03 30.0 +3.0
ESDC Sonseca Array 83.11 51 P P 02 05 06.6 -1.1
comp=Z,0.7nm,0.8s,baz=291,slow=4.6,SNR=8.7
comp=Z,0.7nm,0.8s
NOA NORSAR Array B 85.08 27 P P 02 05 17.8 +0.5
comp=Z,0.6nm,0.7s,baz=296,slow=4.8,SNR=3.1
comp=Z,0.6nm,0.7s
WRA Warramunga Arr 129.96 257 PKP PKiKP 02 11 55.9 +3.0
comp=Z,0.7nm,0.7s,baz=82,slow=2.3,SNR=6.0
ASAR Alice Springs 130.56 253 PKP PKiKP 02 11 56.4 +2.4
comp=Z,0.8nm,0.9s,baz=153,slow=4.1,SNR=5.2
PZH PanZhiHua 133.29 335 PKP PKiKP 02 12 00.7 +1.1
CMAR Chiang Mai Arr 141.60 333 PKP PKPdf 02 12 15.8 +2.1
comp=Z,0.8nm,0.4s,baz=20,slow=2.9,SNR=1.6

*SJA **05** 01:53:57.5±0.7,24˚.26S×67˚.10W,h193km±5km,ML4.4, MW4.1*
*NEIC **05** 01:53:58.0±1.4,24˚.29S±0˚.06×67˚.00W±0˚.08,h165km±6km, mb4.4/60,Md4.3(SJA),ML4.3(ARE),Mwr4.6(GUC),Error ellipse: s-maj=10.9km s-min=8.5km az=96.0*
*IDC **05** 01:53:58.0±1.0,24˚.25S×66˚.94W,h167km±9km,mb3.8/15, mbtmp4.3/21,Error ellipse: s-maj=13.3km s-min=10.7km az=52.0*
*ARE **05** 01:53:58±0.8,24˚S±90˚×67˚7W±9˚9,h190km±10km,Error ellipse: s-maj=8290.6km s-min=68.9km az=76.0*
*GUC **05** 01:53:59.6±0.6,24˚.40S×67˚.24W,h178km±7km,ML4.8*
*VAO **05** 01:54:00.6±0.6,24˚.20S×67˚.01W,h203km±5km,mb4.2*
ISC 05 01:53:58.8±0.6,24˚.25S±0˚.03×67˚.13W±0˚.03,h181km±5km, n207,σ1$24/239,mb4.3/37,16C,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SLA	**San Lorenzo**	**1.56**	**108**	*i* P	**Pn**	**01 54 32.3**	**+0.8**
SLA				*i* S	**Sn**	**01 54 57.1**	**+0.3**
SLA				IAML		01 54 59.0	
	comp=N,6μm,1.0s						
SLA	**San Lorenzo**	**1.56**	**108**	*e*P	**Pn**	**01 54 32.4**	**+0.8**
SLA				*e*S	**Sn**	**01 54 56.5**	**-0.3**
SLA				IAML		01 54 58.3	
	comp=Z,843nm,1.0s						
AF01	**San Pedro de A**	**1.61**	**323**		**Pn**	**01 54 33.9**	**+1.7**
AF01	**San Pedro de A**	**1.61**	**323**	*i* P	**Pn**	**01 54 34.1**	**+1.9**
AF01				*i* S	**Sn**	**01 55 01.4**	**+3.4**
AF01				IAML		01 55 02.9	
	comp=E,3μm,0.6s						
HJA	**Humahuaca**	**1.89**	**57**	*e*P	**Pn**	**01 54 36.1**	**+0.9**
HJA				*e*S	**Sn**	**01 55 03.4**	**+0.2**
HJA				IAML		01 55 07.8	
	comp=Z,128nm,0.6s						
FSA	**Cafayete**	**2.13**	**151**	*e*P	**Pn**	**01 54 37.9**	**+0.4**
FSA				*e*S	**Sn**	**01 55 06.5**	**-1.2**
LVC	**Limon Verde**	**2.31**	**315**	P	**Pn**	**01 54 40.6**	**+0.9**
	comp=Z,492nm,0.4s,baz=124,slow=7.8,SNR=11.96						
LVC				S	**Sn**	**01 55 11.6**	**+0.2**
	comp=Z,561nm,0.3s,baz=154,slow=5.2,SNR=9.5						
LVC	**Limon Verde**	**2.31**	**315**	Pn	**Pn**	**01 54 40.4**	**+0.7**
LVC	**Limon Verde**	**2.31**	**315**	*i* P	**Pn**	**01 54 40.5**	**+0.7**
LVC				*i* S	**Sn**	**01 55 12.0**	**+0.5**
LVC	**Limon Verde**	**2.31**	**315**	*e*P	**Pn**	**01 54 40.8**	**+1.0**
LVC				*e*S	**Sn**	**01 55 13.3**	**+1.9**
LVC				IAML		01 55 16.1	
	comp=Z,513nm,0.2s						
PB15	**IPOC Station P**	**2.38**	**295**		**Pn**	**01 54 41.2**	**+0.8**
PB15	**IPOC Station P**	**2.38**	**295**	⇑*i*P	**Pn**	**01 54 41.2**	**+0.8**
PB15				*i* S	**Sn**	**01 55 12.6**	**0.0**
PB15	**IPOC Station P**	**2.38**	**295**	*e*P	**Pn**	**01 54 41.3**	**+1.0**
PB15				*e*S	**Sn**	**01 55 12.9**	**+0.3**
PB15				IAML		01 55 15.7	
	comp=Z,17μm,0.2s						
GO02	**Mina Guanaco**	**2.41**	**247**	Pn	**Pn**	**01 54 41.1**	**+0.3**
GO02	**Mina Guanaco**	**2.41**	**247**	⇑*i*P	**Pn**	**01 54 41.2**	**+0.4**
GO02				*i* S	**Sn**	**01 55 13.7**	**+0.2**
GO02				IAML		01 55 14.8	
	comp=E,8μm,0.4s						
GO02	**Mina Guanaco**	**2.41**	**247**	*e*P	**Pn**	**01 54 41.2**	**+0.4**
GO02				*e*P	**Pn**	**01 54 41.3**	**+0.5**
GO02				*e*S	**Sn**	**01 55 13.9**	**+0.5**
YJA	**Yavi**	**2.55**	**36**	*e*P	**Pn**	**01 54 43.5**	**+1.0**
YJA				*e*S	**Sn**	**01 55 13.6**	**-2.8**
YJA				IAML		01 55 19.4	
	comp=Z,27nm,0.6s						
PB06	**IPOC Station P**	**2.72**	**304**		**Pn**	**01 54 44.7**	**+0.5**
PB06	**IPOC Station P**	**2.72**	**304**	⇑*i*P	**Pn**	**01 54 45.0**	**+0.8**
PB06				*i* S	**Sn**	**01 55 19.0**	**-0.6**
PB06				IAML		01 55 20.9	
	comp=E,5μm,0.1s						
PB06	**IPOC Station P**	**2.72**	**304**	*e*P	**Pn**	**01 54 45.0**	**+0.8**
PB06				*e*S	**Sn**	**01 55 19.3**	**-0.3**
PB06				IAML		01 55 21.8	
	comp=Z,3μm,0.3s						
PB14	**IPOC Station P**	**3.00**	**262**	Pn	**Pn**	**01 54 47.5**	**-0.3**
PB14	**IPOC Station P**	**3.00**	**262**	*i* P	**Pn**	**01 54 47.9**	**+0.1**
PB14				*i* S	**Sn**	**01 55 23.7**	**-2.3**
PB14				IAML		01 55 25.9	
	comp=E,1μm,0.6s						
PB14	**IPOC Station P**	**3.00**	**262**	*e*P	**Pn**	**01 54 47.9**	**+0.1**
PB14				*e*S	**Sn**	**01 55 25.0**	**-0.9**
PB14				IAML		01 55 32.8	
	comp=Z,1μm,0.3s						
PB09	**IPOC Station P**	**3.12**	**321**		**Pn**	**01 54 50.3**	**+1.2**
PB09	**IPOC Station P**	**3.12**	**321**	⇑*i*P	**Pn**	**01 54 50.1**	**+1.0**
PB09				*i* S	**Sn**	**01 55 28.6**	**+0.3**

PB09 IAML 01 55 30.9
comp=N,2µm,0.3s
PB09 IPOC Station P 3.12 321 *eP* **Pn 01 54 50.3 +1.2**
PB09 *eS* **Sn 01 55 27.9 -0.4**
PB09 IAML 01 55 31.1
comp=Z,1µm,0.4s
AC02 Maricunga 3.14 215 Pn **Pn 01 54 49.7 0.0**
AC02 Maricunga 3.14 215 ⇑*iP* **Pn 01 54 50.1 +0.4**
AC02 Maricunga 3.14 215 *eP* **Pn 01 54 49.9 +0.3**
AC02 *eS* **Sn 01 55 28.6 -0.7**
AC02 IAML 01 55 54.9
comp=Z,131nm,0.3s
PB10 IPOC Station P 3.22 282 Pn **Pn 01 54 50.4 +0.2**
PB10 IPOC Station P 3.22 282 ⇑*iP* **Pn 01 54 50.3 +0.2**
PB10 *i S* **Sn 01 55 28.4 -1.7**
PB10 IPOC Station P 3.22 282 *eP* **Pn 01 54 50.5 +0.4**
PB10 *eS* **Sn 01 55 29.2 -0.9**
PB10 IAML 01 55 35.3
comp=Z,1µm,0.5s
PB04 IPOC Station P 3.37 304 **Pn 01 54 52.2 +0.1**
PB04 IPOC Station P 3.37 304 ⇑*iP* **Pn 01 54 52.2 +0.1**
PB04 *i S* **Sn 01 55 31.7 -2.0**
PB04 IPOC Station P 3.37 304 *eP* **Pn 01 54 52.3 +0.1**
PB04 *eS* **Sn 01 55 32.7 -1.0**
PB04 IAML 01 55 36.6
comp=Z,2µm,0.3s
PB07 IPOC Station P 3.57 314 **Pn 01 54 54.7 +0.1**
PB07 IPOC Station P 3.57 314 ⇑*iP* **Pn 01 54 54.8 +0.1**
PB07 *i S* **Sn 01 55 36.0 -2.3**
PB07 IPOC Station P 3.57 314 *eP* **Pn 01 54 54.9 +0.2**
PB07 *eS* **Sn 01 55 37.2 -1.1**
PB07 IAML 01 55 39.3
comp=Z,2µm,0.3s
AC01 Pan de Azucar 3.66 238 Pn **Pn 01 54 54.2 -1.4**
AC01 Pan de Azucar 3.66 238 ⇑*iP* **Pn 01 54 54.4 -1.2**
AC01 *i S* **Sn 01 55 37.4 -2.8**
AC01 Pan de Azucar 3.66 238 *eP* **Pn 01 54 54.5 -1.2**
AC01 *eS* **Sn 01 55 38.0 -2.1**
AC01 IAML 01 55 44.9
comp=Z,602nm,0.4s
PB01 IPOC Station P 3.86 325 **Pn 01 54 57.6 -0.7**
PB01 IPOC Station P 3.86 325 ⇑*iP* **Pn 01 54 58.0 -0.3**
PB01 *i S* **Sn 01 55 43.3 -1.5**
PB01 IPOC Station P 3.86 325 *eP* **Pn 01 54 58.4 +0.1**
PB01 *eP* **Pn 01 54 58.4 +0.1**
PB01 *eS* **Sn 01 55 43.4 -1.4**
PB01 IAML 01 55 45.7
comp=Z,685nm,0.2s
PB02 IPOC Station P 3.87 318 **Pn 01 54 58.1 -0.3**
PB02 IPOC Station P 3.87 318 ⇑*iP* **Pn 01 54 58.1 -0.3**
PB02 *i S* **Sn 01 55 42.4 -2.7**
PB02 IPOC Station P 3.87 318 *eP* **Pn 01 54 58.4 0.0**
PB02 *eP* **Pn 01 54 58.4 0.0**
PB02 *eS* **Sn 01 55 43.4 -1.7**
PB02 *eS* **Sn 01 55 43.9 -1.2**
PB02 IAML 01 55 48.0
comp=Z,2µm,0.2s
AC06 Mina Casimiro 4.24 222 Pn **Pn 01 55 01.4 -1.6**
AC06 Mina Casimiro 4.24 222 ⇑*iP* **Pn 01 55 01.5 -1.6**
AC06 *i S* **Sn 01 55 50.6 -2.8**
GO03 Copiap 4.35 219 **Pn 01 55 02.9 -1.4**
GO03 Copiap 4.35 219 *eP* **Pn 01 55 02.7 -1.6**
GO03 Copiap 4.35 219 *eP* **Pn 01 55 03.0 -1.3**
GO03 *eS* **Sn 01 55 53.3 -2.5**
PATCX Punta Patache 4.41 320 ⇑*iP* **Pn 01 55 04.1 -1.1**
PATCX *i S* **Sn 01 55 54.8 -2.6**
PATCX Punta Patache 4.41 320 *eP* **Pn 01 55 04.5 -0.8**
PATCX *eP* **Pn 01 55 04.5 -0.8**
PATCX *eP* **Pn 01 55 05.1 -0.2**
PATCX IAML 01 56 07.2
comp=Z,466nm,0.4s
PB08 IPOC Station P 4.50 335 **Pn 01 55 06.5 -0.2**
PB08 IPOC Station P 4.50 335 ⇑*iP* **Pn 01 55 07.2 +0.5**
PB08 IPOC Station P 4.50 335 *eP* **Pn 01 55 07.2 +0.5**
PB08 *eS* **Sn 01 55 59.0 -0.8**
PB08 IAML 01 56 05.4
comp=Z,213nm,0.6s
TA01 Diego Aracena 4.62 322 Pn **Pn 01 55 06.5 -1.5**
TA01 Diego Aracena 4.62 322 *eP* **Pn 01 55 06.5 -1.5**
HMBC Humberstone 4.70 327 ⇑*iP* **Pn 01 55 07.6 -1.5**
HMBC *i S* **Sn 01 56 00.9 -3.3**
TA02 Huaiquique 4.84 324 **Pn 01 55 10.3 -0.4**
TA02 Huaiquique 4.84 324 *eP* **Pn 01 55 10.5 -0.1**
TA02 *eS* **Sn 01 56 04.8 -2.2**
TA02 IAML 01 56 07.5
comp=Z,460nm,0.1s
PB11 IPOC Station P 5.04 332 ⇑*iP* **Pn 01 55 12.3 -1.2**
PB11 *i S* **Sn 01 56 09.4 -2.7**
PB11 IPOC Station P 5.04 332 *eP* **Pn 01 55 12.3 -1.2**
PB11 *eS* **Sn 01 56 09.5 -2.7**
PB11 *eS* **Sn 01 56 10.5 -1.6**
PB11 IAML 01 56 39.5
comp=Z,230nm,1.1s
ACLC CERRO LA CRUZ 5.16 178 *eP* **Pn 01 55 14.5 -0.4**
ACLC IAML 01 56 49.6
comp=Z,12nm,0.3s
AC04 Llanos de Chal 5.29 221 *eP* **Pn 01 55 14.1 -2.5**
LCO Las Campanas 5.72 213 Pn **Pn 01 55 20.1 -2.2**
CO01 Juntas del Tor 6.29 204 **Pn 01 55 28.5 -1.2**
PB16 IPOC Station P 6.29 339 **Pn 01 55 29.7 -0.5**
GO04 Tololo Observa 6.74 208 **Pn 01 55 34.6 -1.1**
ZON Zonda 7.40 190 Pn **Pn 01 55 42.3 -1.8**
LPAZ La Paz 7.98 353 P **Pn 01 55 52.8 +0.4**
comp=Z,4.6nm,0.4s,baz=150,slow=9.6,SNR=45
LPAZ S **Sn 01 57 21.9 -0.4**
comp=Z,6.1nm,0.6s,baz=315,slow=11,SNR=4.9
LPAZ La Paz 7.98 353 *eP* **Pn 01 55 53.3 +0.8**
CPUP Villa Florida 9.11 105 P **Pn 01 56 04.2 -2.5**
comp=Z,5.1nm,0.8s,baz=292,slow=12,SNR=9.4
CPUP Villa Florida 9.11 105 **Pn 01 56 03.9 -2.8**
CPUP Villa Florida 9.11 105 *eP* **Pn 01 56 04.6 -2.1**
SIV San Ignacio 9.99 36 P **Pn 01 56 16.1 -2.3**
comp=Z,7.6nm,0.6s,baz=215,slow=13,SNR=34
SIV S **Sn 01 58 06.6 -3.1**
comp=Z,2.3nm,0.6s,baz=298,slow=22,SNR=6.4
ITQB Itaqui 10.82 122 *eP* **Pn 01 56 30.1 +1.2**
PTLB Pontes e Lacer 11.54 42 *eP* **Pn 01 56 36.6 -1.8**
ML02 Panimavida 12.06 197 Pn **Pn 01 56 44.7 -0.1**
VILB Vilhena 13.01 32 *eP* **Pn 01 56 58.3 +1.1**
TRCB Terra Rica 13.38 87 Pn **Pn 01 56 59.3 -2.5**
TRCB Terra Rica 13.38 87 *eP* **Pn 01 57 02.0 +0.2**
SALV Santo Antonio 13.57 54 *eP* **Pn 01 57 02.9 -1.4**
CPSB Cacapava Do Su 13.62 120 *eP* **Pn 01 57 03.6 -1.2**
PTGB Pitanga 13.73 95 *eP* **Pn 01 57 06.0 -0.2**
H03N3 Juan Fernandez 13.81 226 P **P 01 57 08.3 -1.1**
ITAB Concordia 13.84 106 *eP* **Pn 01 57 08.6 +1.1**
H03S1 Juan Fernandez 14.04 224 P **P 01 57 11.0 -0.9**
SNR=7.4
PLTB Pedras Altas 14.09 125 *eP* **Pn 01 57 11.7 +1.1**
ETMB Extrema 14.38 4 *eP* **Pn 01 57 15.2 +0.9**
PCMB Pacaembu 14.86 83 *eP* **Pn 01 57 19.3 -0.9**
CNLB Canela 15.39 113 *eP* **Pn 01 57 25.9 -0.7**
PDRB Porto dos Gac 15.99 40 *eP* **P 01 57 32.7 -1.3**
FRTB Fartura 16.11 90 *eP* **P 01 57 34.7 -0.5**
ITRB Iturama 16.20 77 *eP* **P 01 57 36.0 -0.3**
TU01 Guaruva-PR 16.50 97 *eP* **P 01 57 39.3 -0.4**
TER01 Tubaro-SC 16.68 109 *eP* **P 01 57 41.3 -0.2**
PLCA Paso Flores 16.68 189 P **P 01 57 41.9 +0.4**
comp=Z,2.1nm,0.7s,baz=2.8,slow=13,SNR=6.4
PLCA Paso Flores 16.68 189 P **P 01 57 41.4 -0.1**
PLCA IAML IAmb 01 57 50.1
comp=Z,8.5nm,0.7s
PLCA Paso Flores 16.68 189 *eP* **P 01 57 41.5 0.0**
CLDB Colider 17.12 41 *eP* **P 01 57 45.8 -0.6**
CZSB Cruzeiro do Su 17.27 341 *eP* **Pn 01 57 49.5 +0.1**
LL03 Petrohue 17.41 193 P **P 01 57 49.4 0.0**
LL03 IAML IAmb 01 57 54.8
comp=Z,21nm,0.8s
BB19B Bebedouro 17.46 83 *eP* **P 01 57 50.0 -0.2**
RCLB Rio Claro- Sao 18.09 88 *eP* **P 01 57 56.3 -0.8**
PET01 Itanhaem-SP 18.11 94 *eP* **P 01 57 56.3 -0.8**
VAO Valinhos 18.52 90 *eP* **P 01 58 00.6 -1.1**
IPMB Ipameri, GO 18.71 74 *eP* **P 01 58 03.1 -0.7**
LL02 Futaleuf 19.29 190 P **P 01 58 09.8 0.0**
SNDB Serra Nova Dou 19.36 54 *eP* **P 01 58 09.1 -1.7**
PARB Paraibuna 19.71 92 *eP* **P 01 58 14.2 -0.3**
BDFB Brasilia 19.89 68 P **P 01 58 15.5 -1.1**
comp=Z,22nm,0.8s,baz=238,slow=10.0,SNR=32
BDFB Brasilia 19.89 68 P **P 01 58 15.2 -1.4**
BDFB Brasilia 19.89 68 *eP* **P 01 58 15.4 -1.1**
NPGB Novo Progresso 20.50 35 *eP* **P 01 58 20.8 -2.2**
AY01 Puyuhuapi 20.62 191 P **P 01 58 24.1 +0.1**
ESAR Angra dos Reis 20.82 91 *eP* **P 01 58 25.3 -1.1**
BSCB Bom Sucesso 20.89 86 *eP* **P 01 58 25.9 -1.3**
PEXB Peixe 21.55 59 *eP* **P 01 58 32.1 -2.1**
COYC Coyhaique 21.65 189 P **P 01 58 34.2 -0.6**
COYC IAmb IAmb 01 58 35.6
comp=Z,12nm,0.9s
VAS01 Vassouras-RJ 21.85 90 *eP* **P 01 58 36.4 -0.8**
MACA Manacapuru-AM 21.87 18 *eP* **P 01 58 37.5 +0.1**
ITTB Itaituba 22.61 31 *eP* **P 01 58 42.8 -1.6**
DUB01 Friburgo-RJ 22.86 90 *eP* **P 01 58 45.9 -0.8**
JANB Januaria 23.33 71 *eP* **P 01 58 49.4 -1.6**
CAM01 Campos-RJ 23.56 89 *eP* **P 01 58 51.8 -1.2**
SDBA SAO DESIDERIO 24.12 65 *eP* **P 01 58 56.9 -1.3**
SMTB Santa Maria do 24.14 54 *eP* **P 01 58 57.2 -1.1**
PRPB Parauapebas 24.49 46 *eP* **P 01 59 00.5 -1.0**
COHC Cochancay 24.62 330 P **P 01 59 04.5 +1.9**
SJMB Sao Joao De Ma 24.75 82 *eP* **P 01 59 03.1 -0.8**
RIB01 Linhares ES 25.29 84 *eP* **P 01 59 07.8 -0.9**
NAN01 Guarapari, ES 25.97 81 *eP* **P 01 59 13.5 -1.4**
GDU01 Guandu, BA 28.03 73 *eP* **P 01 59 31.4 -1.9**
SDV Santo Domingo 33.11 354 P **P 02 00 17.2 -0.9**
SDV IAmb IAmb 02 00 23.3
comp=Z,9.8nm,1.0s
SDV Santo Domingo 33.11 354 *eP* **P 02 00 17.7 -0.4**
PMSA Palmer Station 40.57 178 *eP* **P 02 01 22.0 +1.9**
MATN Matagalpa 41.26 332 P **P 02 01 25.7 -0.8**
VNA3 Neumayer Olymp 56.96 161 P **P 02 03 25.6 +0.8**
VNA2 Neumayer--Watz 57.52 160 P **P 02 03 29.7 +0.8**
baz=280,slow=7.6
352A Blakely 57.97 342 P **P 02 03 32.5 +0.1**
SNAA Sanae 59.16 161 P **P 02 03 40.9 +0.7**
346A Big Creek Wild 59.31 338 P **P 02 03 40.7 -0.9**
X51A Calhoun 60.87 343 P **P 02 03 52.3 +0.2**
TROLL Troll, Antarti 60.87 161 P **P 02 03 53.0 +1.0**
V55A Taylorsville 61.24 347 P **P 02 03 55.3 +0.7**
TKL Tuckaleechee C 61.63 345 P **P 02 03 57.5 +0.2**
comp=Z,3.2nm,0.6s,baz=163,slow=9.3,SNR=5.6
comp=Z,3.2nm,0.6s
SWET Sewanee 61.77 343 P **P 02 03 57.6 -0.7**
WLAR White Oak Lake 62.70 336 P **P 02 04 05.1 +0.8**
WVT Waverly 63.16 341 P **P 02 04 06.5 -0.9**
WVT IAmb IAmb 02 04 08.1
comp=Z,6.7nm,0.8s
TXAR Lajitas Array 63.81 325 P **P 02 04 12.5 +0.6**
comp=Z,0.9nm,0.9s,baz=129,slow=7.1,SNR=2.7
comp=Z,0.9nm,0.9s
W39A Magazine 64.29 336 IAmb IAmb 02 04 17.3
comp=Z,6.4nm,0.8s
QSPA South Pole Qui 65.96 180 P **P 02 04 25.5 +0.1**
comp=Z,2.2nm,0.6s,baz=139,slow=3.1,SNR=50
comp=Z,5.2nm,0.6s
QSPA South Pole Qui 65.96 180 P **P 02 04 26.1 +0.7**
QSPA IAmb IAmb 02 04 27.3
comp=Z,4.6nm,0.6s
CCM Cathedral Cave 65.98 339 P **P 02 04 25.2 -0.4**
CCM IAmb IAmb 02 04 26.8
comp=Z,6.9nm,0.9s
S39A Bolivar 66.35 338 IAmb IAmb 02 04 29.5
comp=Z,12nm,1.1s
MSTX Muleshoe 67.09 328 P **P 02 04 33.2 +0.3**
P38A Dawn 68.16 338 P **P 02 04 39.9 +0.5**
ANMO Albuquerque 69.69 326 P **P 02 04 51.4 +2.3**
comp=Z,3.7nm,0.8s,baz=152,slow=6.8,SNR=9.7
comp=Z,3.7nm,0.8s
ANMO Albuquerque 69.69 326 P **P 02 04 51.0 +1.8**
ANMO IAmb IAmb 02 04 52.1
comp=Z,5.3nm,0.9s
SDCO Great Sand Dun 71.44 329 P **P 02 05 01.8 +2.0**
SDCO IAmb IAmb 02 05 02.7
comp=Z,4.2nm,0.9s
Q24A Divide 72.25 330 IAmb IAmb 02 05 07.5
comp=Z,6.4nm,0.9s
MVCO Mesa Verde 72.48 326 IAmb IAmb 02 05 10.4
comp=Z,11nm,1.4s
WUAZ Wupatki 72.71 323 P **P 02 05 08.3 +1.1**
WUAZ IAmb IAmb 02 05 10.7
comp=Z,6.2nm,0.9s
ECSD EROS Data Cent 72.86 338 IAmb IAmb 02 05 09.8
comp=Z,4.4nm,0.9s
SMCO Snowmass 73.27 329 IAmb IAmb 02 05 14.0
comp=Z,3.3nm,0.8s
F36A Milaca 73.79 341 IAmb IAmb 02 05 14.1
comp=Z,5.4nm,0.7s
U15A North Rim 73.88 323 IAmb IAmb 02 05 17.9
comp=Z,4.8nm,0.9s
VNDA Vanda 74.44 190 P **P 02 05 17.6 +1.0**
comp=Z,1.2nm,0.9s,baz=136,slow=5.5,SNR=6.2
comp=Z,1.2nm,0.9s
VNDA Vanda 74.44 190 P **P 02 05 17.5 +1.0**
O20A White River Ci 74.63 328 IAmb IAmb 02 05 21.5
comp=Z,8.0nm,0.9s
SRU San Rafael Swe 74.96 326 IAmb IAmb 02 05 23.1
comp=Z,5.9nm,0.7s
P18A Preston Nutter 75.22 327 P **P 02 05 23.0 +1.1**
P18A IAmb IAmb 02 05 25.1
comp=Z,5.0nm,0.8s
CCUT Cedar City 75.29 324 IAmb IAmb 02 05 26.1
comp=Z,6.0nm,0.8s
AGMN Agassiz Nation 76.68 341 IAmb IAmb 02 05 31.4
comp=Z,4.0nm,0.8s
TOA0 Torodi Ar. Sit 76.77 69 P **P 02 05 30.0 -0.8**
TOA0 IAmb IAmb 02 05 39.6
comp=Z,11nm,1.4s
TORD Torodi Ar. Bea 76.77 69 P **P 02 05 29.9 -0.8**
comp=Z,2.8nm,0.7s,baz=258,slow=5.5,SNR=47
comp=Z,2.8nm,0.7s
TORD Torodi Ar. Bea 76.77 69 P **P 02 05 30.2 -0.5**
PDAR Pinedale Array 77.30 329 P **P 02 05 34.9 +1.5**
comp=Z,0.7nm,0.5s,baz=133,slow=8.3,SNR=5.7
comp=Z,0.7nm,0.5s
ULM Lac du Bonnet 78.42 342 P **P 02 05 39.5 +0.4**
comp=Z,3.2nm,0.5s,baz=154,slow=8.5,SNR=6.6
comp=Z,3.2nm,0.5s
ULM Lac du Bonnet 78.42 342 IAmb IAmb 02 05 40.5
comp=Z,4.8nm,0.8s
ELK Elko 78.61 325 P **P 02 05 42.6 +1.9**
comp=Z,3.0nm,1.0s,baz=145,slow=4.3,SNR=8.5
comp=Z,3.0nm,1.0s
NVAR Mina Array Bea 78.66 321 P **P 02 05 43.1 +2.1**
comp=Z,0.9nm,0.7s,baz=150,slow=6.1,SNR=9.5
comp=Z,0.9nm,0.7s
NVAR Mina Array Bea 78.66 321 P **P 02 05 42.3 +1.3**
SCHQ Schefferville 78.76 0 P **P 02 05 41.8 +0.9**
comp=Z,1.2nm,0.7s,baz=254,slow=15,SNR=1.7
comp=Z,1.2nm,0.7s
HLID Hailey 80.23 327 P **P 02 05 50.2 +0.9**
HLID IAmb IAmb 02 05 52.7
comp=Z,6.9nm,0.8s
MCMT McKenzie Canyo 80.41 329 P **P 02 05 52.5 +2.2**
BOSA Boshof 80.73 117 P **P 02 05 52.7 +0.3**
comp=Z,1.2nm,0.4s,baz=264,slow=5.1,SNR=9.9
comp=Z,1.2nm,0.4s
BOSA Boshof 80.73 117 IAmb IAmb 02 05 53.0
comp=Z,6.8nm,1.2s
MAW Mawson 81.23 163 P **P 02 05 55.3 +1.2**
comp=Z,3.7nm,0.7s,baz=207,slow=5.3,SNR=9.7
comp=Z,3.7nm,0.7s
MAW Mawson 81.23 163 IAmb IAmb 02 05 56.1
comp=Z,1.0nm,0.8s
C09A Chrisman Ranch 85.16 328 P **P 02 06 16.1 +1.7**
C09A IAmb IAmb 02 06 16.7
comp=Z,6.9nm,0.7s
ESDC Sonseca Array 86.66 44 P **P 02 06 23.1 +1.0**
comp=Z,0.3nm,0.7s,baz=257,slow=4.6,SNR=5.1
comp=Z,0.3nm,0.7s
ESDC Sonseca Array 86.66 44 IAmb IAmb 02 06 29.6
comp=Z,2.4nm,1.4s
YKA Yellowknife Ar 94.32 340 P **P 02 06 57.5 +0.4**
comp=Z,2.0nm,0.8s,baz=120,slow=6.1,SNR=14
comp=Z,2.0nm,0.8s
ASAR Alice Springs 128.18 205 PKP **PKPdf 02 12 44.2 0.0**
comp=Z,1.3nm,0.7s,baz=126,slow=1.7,SNR=12
WRA Warramunga Arr 131.35 207 PKP **PKPdf 02 12 50.5 +0.1**
comp=Z,0.4nm,0.9s,baz=158,slow=1.9,SNR=9.3
ZAA0 Zalesovo Array 143.67 28 PKPdf **PKPdf 02 13 11.3 -0.5**
ZALV Zalesovo Beam 143.67 28 PKP PKPbc 02 13 10.7 +0.9
comp=Z,2.6nm,0.5s,baz=296,slow=3.9,SNR=14
ZALV Zalesovo Beam 143.67 28 PKPdf **PKPdf 02 13 11.0 -0.8**
KSH Kashi 145.44 55 PKPbc **PKPab 02 13 16.7 +0.4**
MAKZ Makanchi 146.60 40 PKPbc **PKPbc 02 13 18.9 0.0**
MK31 Makanchi Array 146.79 40 PKPbc **PKPbc 02 13 19.0 -0.5**
MKAR Makanchi Array 146.79 40 PKPbc **PKPbc 02 13 18.6 -0.9**
comp=Z,4.5nm,0.8s,baz=325,slow=1.4,SNR=40
MKAR Makanchi Array 146.79 40 PKPbc **PKPbc 02 13 19.0 -0.5**
MJAR Matsushiro Arr 155.02 305 PKPab **PKPab 02 13 56.3 +0.7**
comp=Z,0.5nm,0.5s,baz=53,slow=1.9,SNR=4.8

*IDC **05** 01:54:19.1±1.7, 16°.14N×98°.34W, h0km, mb4.1/10, mbtmp4.1/13, ML3.6/2, MS3.7/6, Error ellipse: s-maj=33.7km s-min=18.5km az=11.0*
*MEX **05** 01:54:21.5±1.5, 16°.00N×98°.34W, h5km, MD4.8*
*NEIC **05** 01:54:23.4±1.7, 16°.06N±0°.09×98°.21W±0°.07, h23km±7km, mb4.6/140, Md4.8/15(MEX), Error ellipse: s-maj=14.5km s-min=8.2km az=211.0*
ISC 05 01:54:19.7±1.0, 16°.09N±0°.04×98°.32W±0°.03, h4km±5km, n215, σ1°39/188, mb4.7/65, MS3.5/5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.35**	**32**			**Pb**	**01 54 29.4**	**+0.8**
PNIG						**Sb**	**01 54 35.9**	**+1.5**
PNIG	**Pinotepa**	**0.35**	**32**	*i* P		**Pb**	**01 54 29.4**	**+0.8**
PNIG				*i* S		**Sb**	**01 54 35.9**	**+1.5**
CRIG	**Cruz Grande**	**1.01**	**309**	*eP*		**Pg**	**01 54 37.9**	**-1.1**
CRIG				*i* S		**Sg**	**01 54 51.4**	**-0.8**
YOIG	**Yosondua**	**1.06**	**44**	*eP*		**Pb**	**01 54 40.7**	**-0.1**
YOIG				*eS*		**Sb**	**01 54 55.8**	**+0.6**
PEIG	**Puerto Escondi**	**1.13**	**95**	*eP*		**Pg**	**01 54 40.3**	**-1.1**
PEIG				*eS*		**Sg**	**01 54 55.3**	**-0.7**
TXIG	**Tlaxiaco**	**1.27**	**24**	*eP*		**Pg**	**01 54 44.0**	**0.0**
TXIG				*eS*		**Sn**	**01 55 02.5**	**+0.3**
TLIG	**Tlapa**	**1.48**	**351**	Pn		**Pg**	**01 54 48.2**	**+0.1**
TLIG	**Tlapa**	**1.48**	**351**	*eP*		**Pg**	**01 54 48.0**	**-0.1**
TLIG				*eS*		**Sg**	**01 55 08.2**	**+0.9**
DAIG	**Los Arroyos**	**1.58**	**306**			**Pn**	**01 54 48.6**	**+0.1**
DAIG						**Sn**	**01 55 08.6**	**-0.9**
DAIG	**Los Arroyos**	**1.58**	**306**	*eP*		**Pn**	**01 54 48.6**	**+0.1**
DAIG				*eS*		**Sn**	**01 55 08.6**	**-0.9**
HLIG	**Huajuapan de L**	**1.79**	**16**	*eP*		**Pb**	**01 54 53.4**	**+0.1**
HLIG				*eS*		**Sg**	**01 55 18.0**	**+0.6**
VHO	**Vista Hermosa**	**1.80**	**57**	*eP*		**Pb**	**01 54 51.9**	**+0.1**
VHO				*eS*		**Sn**	**01 55 14.6**	**-0.7**
FTIG	**Fresnillo de T**	**1.81**	**6**	*eP*		**Pb**	**01 54 53.7**	**+0.1**
FTIG				*eS*		**Sg**	**01 55 19.4**	**+1.4**
MEIG	**Mezcala**	**2.21**	**326**	*eP*		**Pn**	**01 54 56.0**	**-1.3**
MEIG				*eS*		**Sn**	**01 55 21.6**	**-3.5**
TOIG	**Toxpalan**	**2.32**	**31**	*eP*		**Pn**	**01 54 58.1**	**-0.8**
TOIG				*eS*		**Sn**	**01 55 26.8**	**-1.2**
PLIG	**Platanillo**	**2.55**	**334**	*eP*		**Pn**	**01 55 01.2**	**-0.8**
PLIG				*eS*		**Sn**	**01 55 33.8**	**+0.2**
YAIG	**Yautepec**	**2.84**	**346**			**Pg**	**01 55 13.0**	**-1.3**
YAIG						**Sg**	**01 55 49.3**	**-1.9**
YAIG	**Yautepec**	**2.84**	**346**	*eP**		**Pg**	**01 55 13.0**	**-1.3**
YAIG				*eS*		**Sg**	**01 55 49.3**	**-1.9**
ARIG	**Puente Sto Nin**	**2.91**	**319**	*eP*		**Pn**	**01 55 06.4**	**-0.6**
ARIG				*eS*		**Sn**	**01 55 41.6**	**-0.9**
PPM	**Popocatepetl**	**2.97**	**354**	*eP*		**Pn**	**01 55 07.6**	**-0.6**
PPM				*eS*		**Sn**	**01 55 44.0**	**+0.1**
UNM	**Universidad Na**	**3.32**	**346**	*eP*		**Pn**	**01 55 13.4**	**+0.6**
UNM				*eS*		**Sb**	**01 55 58.7**	**-1.6**
ZIIG	**Zihuatanejo**	**3.37**	**297**	*eP*		**Pn**	**01 55 12.6**	**-0.6**
ZIIG				*eS*		**Sn**	**01 55 56.1**	**+2.5**
ZIIG				*e*			01 56 06.1	
CMIG	**Matias Romero** 194nm,0.7s,baz=225,slow=20,SNR=0.7	**3.44**	**73**	Pn		**Pn**	**01 55 13.6**	**-0.5**
CMIG				Lg		Lg	01 56 09.6	
	53nm,0.3s,baz=274,slow=15,SNR=4.8							
CMIG	**Matias Romero**	**3.44**	**73**	*eP*		**Pn**	**01 55 13.1**	**-1.1**
CMIG				*eS*		**Sn**	**01 55 54.4**	**-1.0**
LVIG	**Laguna Verde**	**4.04**	**26**	*eP*		**Pg**	**01 55 35.5**	**-1.6**
LVIG				*eS*		**Sg**	**01 56 27.9**	**-1.6**
DEIG	**Demacu**	**4.24**	**351**	*eP*		**Pn**	**01 55 25.2**	**-0.2**
DEIG				*i* S		**Sn**	**01 56 15.6**	**+0.1**
RTAL	**Retalhuleu**	**6.58**	**103**	Pn		**Pn**	**01 55 57.5**	**+0.2**
HUEH	**Huehuetenango**	**6.61**	**96**	Pn		**Pn**	**01 55 56.4**	**-1.5**
PETF	**Flores**	**8.15**	**83**	Pn		**Pn**	**01 56 18.2**	**-0.7**
ESQI	**Esquipulas**	**8.79**	**99**	Pn		**Pn**	**01 56 27.4**	**-0.4**
833A	**Chaparral WMA,**	**12.21**	**356**	Pn		**Pn**	**01 57 17.1**	**+2.6**
H06E1	**SOCORRO T-PHAS** SNR=30	**12.32**	**284**	T		T	02 09 45.7	
MATN	**Matagalpa**	**12.40**	**103**			**Pn**	**01 57 14.6**	**-2.7**
ORTG	**Ortega, Santa**	**13.75**	**113**			**Pn**	**01 57 36.2**	**+0.5**
TXAR	**Lajitas Array** baz=164,slow=20,SNR=1.7	**14.07**	**340**	Pn		**Pn**	**01 57 42.6**	**+2.6**
TXAR				Sn		**Sn**	**02 00 12.4**	**-4.3**
	0.1nm,0.3s,baz=229,slow=18,SNR=2.0							
TXAR				LR		LR	02 03 46.8	
	comp=Z,305nm,19.8s,baz=150,slow=40 1.4nm,0.9s							
JTS	**Las Juntas de** 0.8nm,0.3s,baz=0.0,slow=20,SNR=2.2 3.7nm,0.6s	**14.23**	**112**	Pn		**Pn**	**01 57 43.3**	**+1.1**
JTS	**Las Juntas de**	**14.23**	**112**	Pn		**Pn**	**01 57 39.1**	**-3.1**
JCT	**Junction City**	**14.38**	**355**	Pn		**Pn**	**01 57 46.1**	**+1.8**
HDC	**Heredia**	**15.10**	**112**	Pn		**Pn**	**01 57 52.0**	**-2.1**
RIMA	**Rio Macho**	**15.42**	**112**	Pn		**Pn**	**01 57 57.7**	**-0.8**
RIMA				IAmb		IAmb	01 58 07.2	
	comp=Z,32nm,1.1s							
WHTX	**Lake Whitney,**	**15.85**	**3**	Pn		**Pn**	**01 58 05.1**	**+1.3**
WHTX	**Lake Whitney,** baz=183	**15.85**	**3**	P		**P**	**01 58 08.9**	**+1.2**
NATX	**Nacogdoches**	**15.95**	**11**	Pn		**Pn**	**01 58 06.3**	**+1.2**
NATX	**Nacogdoches** baz=192	**15.95**	**11**	P		**P**	**01 58 09.4**	**+0.7**
237A	**Washetta, Mont**	**16.00**	**8**			**P**	**01 58 08.4**	**-0.9**
ABTX	**Abilene, Hawle**	**16.50**	**356**			**P**	**01 58 15.2**	**+0.3**
ABTX				IAmb		IAmb	01 58 21.9	
	comp=Z,38nm,0.9s							
ABTX	**Abilene, Hawle** baz=175,SNR=8.0	**16.50**	**356**	P		**P**	**01 58 16.7**	**+1.8**
MNTX	**Cornudas Mount** baz=156	**16.81**	**339**	P		**P**	**01 58 20.2**	**+1.8**
Z38A	**Mt. Pleasant**	**17.36**	**9**			**P**	**01 58 25.4**	**+1.1**
143A	**Socs Landing,**	**17.68**	**20**			**Pn**	**01 58 27.2**	**+0.2**
MSTX	**Muleshoe**	**18.25**	**348**			**Pn**	**01 58 33.8**	**-0.2**
MSTX	**Muleshoe** baz=166	**18.25**	**348**	P		**P**	**01 58 35.1**	**+0.8**
121A	**Cookes Peak, D** baz=150	**18.48**	**334**	P		**Pn**	**01 58 39.5**	**+2.4**
146A	**Union**	**18.49**	**25**	P		**P**	**01 58 34.7**	**-2.1**
146A				IAmb		IAmb	01 58 38.4	
	comp=Z,61nm,1.3s							
250A	**Grady**	**19.24**	**33**	P		**P**	**01 58 44.9**	**-0.2**
Z47A	**Carrollton**	**19.39**	**27**	P		**P**	**01 58 47.0**	**+0.2**
BNM	**Barren Site**	**19.47**	**339**	P		**Pn**	**01 58 50.2**	**+1.1**
LRAL	**Lakeview Retre**	**19.73**	**29**	P		**P**	**01 58 51.1**	**+0.6**
LRAL	**Lakeview Retre** baz=214,SNR=6.4	**19.73**	**29**	P		**P**	**01 58 50.6**	**+0.1**
ANMO	**Albuquerque**	**20.14**	**340**	P		**P**	**01 58 55.0**	**-0.2**
	comp=Z,9.2nm,1.0s,baz=146,slow=12,SNR=8.0							
ANMO				LR		LR	02 07 23.2	
	comp=Z,530nm,18.7s,baz=156,slow=39 comp=Z,9.2nm,1.0s							
ANMO	**Albuquerque**	**20.14**	**340**	P		Pn	01 58 56.5	-0.5
ANMO	**Albuquerque** baz=157	**20.14**	**340**	P		Pn	01 58 57.2	+0.3
HHAR	**Hobbs**	**20.48**	**10**	P		Pn	01 59 00.5	-0.3
W45A	**Hickory Valley**	**20.67**	**22**	P		Pn	01 59 03.4	+0.4
U40A	**Yellville**	**20.76**	**13**	P		**P**	**01 59 02.0**	**+0.4**
U40A		

comp=Z,32nm,0.9s
WVT Waverly 22.03 23 P P 01 59 16.8 +1.4
baz=207
SWET Sewanee 22.04 28 IAmb IAmb 01 59 16.3
comp=Z,36nm,0.9s
V48A Smith Brothers 22.09 26 IAmb IAmb 01 59 18.3
comp=Z,24nm,1.1s
SDCO Great Sand Dun 22.48 345 P P 01 59 21.8 +1.3
SDCO Great Sand Dun 22.48 345 P P 01 59 23.2 +2.7
baz=162
CLTN Cedars of Leba 22.60 26 IAmb IAmb 01 59 22.6
comp=Z,28nm,1.4s
R40A Maddies Statio 22.74 12 P P 01 59 23.4 +0.5
R40A IAmb IAmb 01 59 25.1
comp=Z,29nm,0.9s
CCM Cathedral Cave 22.75 15 P P 01 59 24.3 +1.3
baz=198
S22A 4UR Ranch, Cre 22.84 342 P P 01 59 26.1 +1.8
baz=158
CPCT Cooper Cave 22.88 30 IAmb IAmb 01 59 24.9
comp=Z,14nm,0.9s
MVCO Mesa Verde 22.89 339 P P 01 59 26.1 +1.4
MVCO IAmb IAmb 01 59 27.3
comp=Z,15nm,1.1s
MVCO Mesa Verde 22.89 339 P P 01 59 26.0 +1.3
baz=154
FVM French Village 22.89 16 P P 01 59 24.3 -0.1
FVM IAmb IAmb 01 59 26.2
comp=Z,20nm,1.0s
SIUC Southern Illin 22.99 19 P P 01 59 25.8 +0.3
U49A Red Boiling Sp 23.19 26 IAmb IAmb 01 59 29.1
comp=Z,26nm,0.9s
V51A Loudon 23.25 30 IAmb IAmb 01 59 29.5
comp=Z,26nm,1.1s
TKL Tuckaleechee C 23.41 31 P P 01 59 28.9 -1.0
comp=Z,7.4nm,0.9s,baz=179,slow=5.4,SNR=5.4
TKL LR LR 02 11 10.3
comp=Z,78nm,19.1s,baz=184,slow=43
comp=Z,7.4nm,0.9s
TKL Tuckaleechee C 23.41 31 IAmb IAmb 01 59 42.6
comp=Z,21nm,1.1s
NHSC New Hope 23.58 41 P P 01 59 31.6 +0.1
NHSC New Hope 23.58 41 P P 01 59 32.9 +1.4
baz=228
P40A Paris 23.98 12 IAmb IAmb 01 59 36.4
comp=Z,39nm,1.2s
T50A Nancy 24.03 27 P P 01 59 35.4 -0.4
T50A IAmb IAmb 01 59 37.3
comp=Z,37nm,1.5s
SMCO Snowmass 24.21 343 IAmb IAmb 01 59 46.1
comp=Z,18nm,1.1s
TZTN Tazewell 24.23 30 P P 01 59 38.2 +0.5
TZTN IAmb IAmb 01 59 39.8
comp=Z,38nm,1.3s
TZTN Tazewell 24.23 30 P P 01 59 38.2 +0.5
baz=216,SNR=5.9
KMSC Kings Mountain 24.31 36 IAmb IAmb 01 59 39.5
comp=Z,33nm,1.4s
KMSC Kings Mountain 24.31 36 P P 01 59 38.5 +0.1
baz=223,SNR=5.5
ISCO Idaho Springs 24.46 346 IAmb IAmb 01 59 47.3
comp=Z,27nm,1.2s
ISCO Idaho Springs 24.46 346 P P 01 59 42.3 +2.1
baz=163,SNR=8.9
R49A Shelbyville 24.96 25 IAmb IAmb 01 59 45.8
comp=Z,8.8nm,0.8s
OGNE Ogallala 24.97 353 P P 01 59 47.0 +2.4
baz=171
Y59A Loris 24.98 41 P P 01 59 44.8 +0.2
MTPU Mount Pierson 25.05 333 IAmb IAmb 01 59 55.3
comp=Z,14nm,1.1s
BLO Bloomington 25.21 22 IAmb IAmb 01 59 48.8
comp=Z,22nm,1.1s
R50A Paris 25.30 26 IAmb IAmb 01 59 49.0
comp=Z,26nm,1.1s
Q16A Castle Valley 25.38 336 P P 01 59 50.0 +1.6
O20A White River Ci 25.46 342 IAmb IAmb 01 59 53.6
comp=Z,20nm,1.1s
O20A White River Ci 25.46 342 P P 01 59 53.1 +4.0
baz=157,SNR=5.6
N23A Red Feather La 25.58 347 P P 01 59 52.6 +2.4
baz=163
HDIL Hopedale 25.60 16 P P 01 59 50.8 +0.7
baz=200
PHWY Pilot Hill 25.87 348 IAmb IAmb 02 00 00.4
comp=Z,13nm,1.1s
SFIN Lafayette 26.09 20 P P 01 59 54.9 +0.4
baz=205
TPNV Topopah Spring 26.16 326 P P 01 59 56.7 +1.2
TPNV Topopah Spring 26.16 326 P P 02 00 00.4 +4.9
baz=138
P49A Miami Univ. Ec 26.20 24 P P 01 59 55.3 -0.3
baz=210,SNR=11
MPMC Manual Prospec 26.21 323 P P 01 59 56.8 +0.9
baz=134
L40A Anamosa 26.59 12 IAmb IAmb 02 00 05.5
comp=Z,11nm,0.8s
NLU North Lily Min 26.63 336 P P 02 00 01.2 +1.5
O48B Farmland 26.66 23 P P 01 59 59.3 -0.5
baz=209,SNR=8.5
P51A Williamsport 26.85 27 IAmb IAmb 02 00 06.4
comp=Z,16nm,0.9s
L42A Oliver, Polo 26.87 14 IAmb IAmb 02 00 02.4
comp=Z,22nm,0.9s
O49A Covington 26.91 24 IAmb IAmb 02 00 04.7
comp=Z,29nm,1.1s
DUG Dugway, Tooele 27.13 335 P P 02 00 05.5 +1.4
DUG Dugway, Tooele 27.13 335 P P 02 00 06.6 +2.5
baz=148
R55A Marlinton 27.29 32 IAmb IAmb 02 00 10.4
comp=Z,18nm,0.9s
Q54A Coxs Mills 27.47 31 IAmb IAmb 02 00 12.1
comp=Z,20nm,0.9s
L44A Lake County Fo 27.49 17 P P 02 00 07.9 +0.7
baz=202
JFWS Jewell Farm 27.61 13 P P 02 00 08.5 +0.2
baz=197
T59A Double "B" Far 27.77 38 IAmb IAmb 02 00 16.4
comp=Z,20nm,1.2s
SDV Santo Domingo 27.94 102 LR LR 02 12 53.7
comp=Z,126nm,18.9s,baz=304,slow=40
BW06 Boulder Array 28.27 342 P P 02 00 15.9 +1.4
baz=157
PDAR Pinedale Array 28.27 342 P P 02 00 15.1 +0.6
comp=Z,0.8nm,0.5s,baz=174,slow=7.4,SNR=5.7
PDAR LR LR 02 12 18.1
comp=Z,195nm,19.8s,baz=174,slow=38
comp=Z,0.8nm,0.5s
Q56A Snyder Ridge, 28.34 33 IAmb IAmb 02 00 22.7
comp=Z,10nm,1.0s
NVAR Mina Array Bea 28.35 326 P P 02 00 13.4 -1.8
comp=Z,0.9nm,0.7s,baz=133,slow=9.2,SNR=2.0
comp=Z,0.9nm,0.7s
NVAR Mina Array Bea 28.35 326 P P 02 00 17.7 +2.5
LAO LASA Array 31.21 349 P P 02 00 42.8 +2.6
BOZ Bozeman (W) 31.46 342 P P 02 00 45.0 +2.4
baz=155
WVOR Wild Horse Val 31.51 331 IAmb IAmb 02 00 51.0
comp=Z,12nm,1.5s
LRM Limekiln Ridge 31.92 341 P P 02 00 47.1 +0.4
AGMN Agassiz Nation 32.18 3 P P 02 00 48.3 -0.3
AGMN IAmb IAmb 02 00 56.0
comp=Z,6.7nm,0.9s
AGMN Agassiz Nation 32.18 3 P P 02 00 48.7 +0.1
baz=184
TRNY Table Rock, Ra 32.51 35 IAmb IAmb 02 00 54.4
comp=Z,15nm,1.2s
F10A Beach Ranch, E 33.73 336 P P 02 01 04.1 +1.7
F10A IAmb IAmb 02 01 12.1
comp=Z,5.6nm,0.9s
ULM Lac du Bonnet 34.13 3 P P 02 01 04.2 -1.5
comp=Z,1.2nm,0.4s,baz=181,slow=9.1,SNR=3.4
comp=Z,1.2nm,0.4s
ULM Lac du Bonnet 34.13 3 P P 02 01 05.6 0.0
NNA Nana 35.07 141 LR LR 02 12 45.2
comp=Z,66nm,19.4s,baz=352,slow=32
I62A Tamworth 35.92 34 IAmb IAmb 02 01 25.1
comp=Z,11nm,0.9s
TRQ Mont Tremblant 35.99 28 IAmb IAmb 02 01 26.4
comp=Z,16nm,1.5s
B08A Colville Reser 36.51 336 P P 02 01 26.7 +0.5
G62A West of Eustis 37.25 33 IAmb IAmb 02 01 36.6
comp=Z,8.5nm,0.9s
EDM Edmonton 38.89 346 P P 02 01 47.2 +0.9
EDM IAmb IAmb 02 01 52.3
comp=Z,13nm,1.2s
D62A Allapoint, All 39.27 32 IAmb IAmb 02 01 58.3
comp=Z,11nm,1.1s

SCHQ Schefferville 45.65 25 P P 02 02 40.1 -1.3
comp=Z,9.9nm,0.9s,baz=226,slow=5.9,SNR=8.3
comp=Z,9.9nm,0.9s
SCHQ Schefferville 45.65 25 P P 02 02 41.6 +0.2
YKA Yellowknife Ar 47.75 350 P P 02 02 56.6 -1.0
comp=Z,1.7nm,0.9s,baz=158,slow=7.4,SNR=6.4
comp=Z,1.7nm,0.9s
MMPY Sheldon Lake, 51.88 341 P P 02 03 32.0 +2.8
baz=138,SNR=5.4
H03N2 Juan Fernandez 52.62 160 T T 03 00 12.6
baz=338,slow=77,SNR=256
H03N1 Juan Fernandez 52.63 160 T T 03 00 13.8
baz=338,slow=77,SNR=254
H03N3 Juan Fernandez 52.63 160 T T 03 00 12.8
baz=338,slow=77,SNR=246
YUK3 Moose Creek 54.46 337 P P 02 03 49.9 +1.4
baz=128
BCAR Beaver Creek A 55.74 338 P P 02 03 58.7 +1.3
L27K Beaver Creek, 55.75 338 P P 02 03 59.6 +2.1
baz=127
K27K Chicken 56.42 339 IAmb IAmb 02 04 05.4
comp=Z,10nm,1.1s
K27K Chicken 56.42 339 P P 02 04 04.4 +2.2
baz=127
INK Inuvik 56.79 345 P P 02 04 05.5 +0.8
baz=138
PAX Paxson 57.06 336 P P 02 04 08.0 +1.0
baz=123
SCRK Sand Creek 57.07 338 P P 02 04 08.5 +1.4
baz=125
J26L Joseph Creek 57.23 339 IAmb IAmb 02 04 11.0
comp=Z,9.5nm,1.1s
J26L Joseph Creek 57.23 339 P P 02 04 09.8 +1.8
baz=126,SNR=8.7
RIDG Independent Ri 57.25 337 IAmb IAmb 02 04 10.9
comp=Z,9.9nm,1.0s
RIDG Independent Ri 57.25 337 P P 02 04 10.0 +1.7
baz=124,SNR=6.6
J25K Salcha River, 57.93 338 P P 02 04 14.5 +1.5
baz=124
HDA Harding Lake 58.39 337 P P 02 04 16.4 +0.3
HDA IAmb IAmb 02 04 17.9
comp=Z,3.8nm,1.0s
HDA Harding Lake 58.39 337 P P 02 04 17.3 +1.2
baz=122
IL31 58.56 338 P P 02 04 18.1 +0.9
IL31 IAmb IAmb 02 04 23.9
comp=Z,8.5nm,1.3s
ILAR Eielson Array 58.56 338 P P 02 04 18.3 +1.0
comp=Z,1.8nm,0.9s,baz=140,slow=4.9,SNR=8.5
comp=Z,1.8nm,0.9s
SKT Skwentna 59.02 334 IAmb IAmb 02 04 22.1
comp=Z,9.1nm,1.2s
SKT Skwentna 59.02 334 P P 02 04 21.4 +0.7
baz=116
TRF Thorofare Moun 59.19 336 P P 02 04 22.6 +0.7
baz=118
H24K Noodor Dome 59.49 339 P P 02 04 24.9 +1.1
H24K IAmb IAmb 02 04 25.9
comp=Z,7.1nm,1.1s
H24K Noodor Dome 59.49 339 P P 02 04 24.9 +1.1
baz=122,SNR=5.9
I23K Minto, Yukon-K 59.66 338 IAmb IAmb 02 04 26.5
comp=Z,6.2nm,1.1s
I23K Minto, Yukon-K 59.66 338 P P 02 04 26.1 +1.2
baz=120
M20K Styx River 59.67 333 P P 02 04 26.3 +1.2
baz=114
N19K Bonanza Creek 59.84 332 P P 02 04 27.3 +1.0
N19K Bonanza Creek 59.84 332 P P 02 04 27.1 +0.8
baz=112,SNR=5.1
MLY Manley 60.11 337 P P 02 04 29.2 +1.1
MLY IAmb IAmb 02 04 30.1
comp=Z,5.6nm,1.0s
MLY Manley 60.11 337 P P 02 04 29.2 +1.1
baz=118
M19K Big River Lodg 60.22 333 P P 02 04 29.9 +1.1
baz=113
L20K Farewell, AK 60.23 334 P P 02 04 29.2 +0.2
baz=114
N18K Kilae Creek 60.43 331 P P 02 04 31.0 +0.7
baz=111
L19K White Mountain 60.53 333 P P 02 04 31.7 +0.7
baz=113
I21K Tanana 60.65 337 P P 02 04 32.7 +1.0
baz=117
K20K Telida 60.67 335 P P 02 04 32.7 +0.7
K20K IAmb IAmb 02 04 32.8
comp=Z,5.1nm,1.0s
K20K Telida 60.67 335 P P 02 04 31.9 0.0
baz=114
J20K Nowinta River 61.04 336 P P 02 04 35.0 +0.6
baz=115
H21K Melozitna Rive 61.17 337 P P 02 04 35.8 +0.5
baz=117
TTA Tatalina 61.31 334 P P 02 04 36.0 -0.3
TTA IAmb IAmb 02 04 36.8
comp=Z,6.1nm,1.2s
TTA Tatalina 61.31 334 P P 02 04 35.6 -0.7
baz=112
TOLK Toolik Lake Re 61.53 341 P P 02 04 38.2 +0.5
baz=121
N16K Nishlik Lake 61.70 331 P P 02 04 39.0 +0.1
baz=108
ESDC Sonseca Array 83.17 51 P P 02 06 47.5 0.0
comp=Z,1.1nm,0.8s,baz=296,slow=5.4,SNR=8.2
comp=Z,1.1nm,0.8s
NOA NORSAR Array B 85.17 27 P P 02 06 57.5 +0.3
comp=Z,0.8nm,0.8s,baz=301,slow=5.1,SNR=3.8
comp=Z,0.8nm,0.8s
TIXI Tiksi 86.88 347 P P 02 07 05.0 -0.4
TIXI IAmb IAmb 02 07 06.2
comp=Z,4.4nm,1.2s
WRA Warramunga Arr 129.94 257 PKP PKPdf 02 13 30.5 -1.1
comp=Z,1.0nm,0.8s,baz=74,slow=1.2,SNR=1.9
PZH PanZhiHua 133.38 335 PKP PKPdf 02 13 37.5 -0.7
PZH PKP **sPKPdf** 02 13 40.4 +0.8

TUL ***05*** *01:55:29.3±0.9, 36.95N±0.03×98.00W±0.03, h7km±7km, ML2.7, mb_Lg2.6/51(NEIC), Error ellipse: s-maj=5.2km s-min=2.3km az=150.0*

NEIC 05 01:55:29.5±1.2, 36.96N±0.02×98.03W±0.04, h11km±6km, Error ellipse: s-maj=5.4km s-min=1.7km az=125.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
U32A	**Winter Ranch,**	**0.97**	**234**	Pg	Pg	01 55 47.5	-0.6
T35A	**Sooner Cattle**	**1.22**	**91**	Pg	Pn	01 55 51.6	-0.9
R32A	**Long Quarter,**	**1.56**	**340**		Pn	01 55 57.5	+0.3
OKCSW	**OKLAHOMA CITY**	**1.62**	**163**		Pb	01 55 58.8	-0.6
FNO	**Franklin**	**1.77**	**163**		Pn	01 56 00.9	+0.8
TUL1	**Leonard**	**2.09**	**119**	Pn	Pn	01 56 04.8	+0.3
TUL1				IAmb_Lg		01 56 37.4	
WMOK	**Wichita Mounta**	**2.30**	**196**	Pn	Pn	01 56 07.7	+0.4
X34A	**Smith Ranch, M**	**2.36**	**176**	Pn	Pn	01 56 09.3	+1.1
X37A	**Clayton**	**3.20**	**137**	Pn	Pn	01 56 19.8	0.0
X37A				IAmb_Lg		01 57 16.3	
HHAR	**Hobbs**	**3.36**	**100**		Pn	01 56 22.8	+0.8
HHAR				IAmb_Lg		01 57 22.7	
AMTX	**Amarillo**	**3.61**	**236**	Pn	Pn	01 56 27.1	+1.7
AMTX				IAmb_Lg		01 57 24.2	
Z35A	**Perchaven, San**	**3.67**	**170**	IAmb_Lg		01 57 27.3	
S39A	**Bolivar**	**3.83**	**78**	Pn	Pn	01 56 28.4	0.0
S39A				IAmb_Lg		01 57 38.0	
W39A	**Magazine**	**3.86**	**116**	Pn	Pn	01 56 29.2	+0.4
W39A				IAmb_Lg		01 57 32.1	
KSCO	**Kaye Shedlock'**	**4.17**	**301**	IAmb_Lg		01 57 51.7	
U40A	**Yellville**	**4.21**	**97**	Pn	Pn	01 56 34.3	+0.7
U40A				IAmb_Lg		01 57 50.5	
MIAR	**Mount Ida**	**4.35**	**122**	Pn	Pn	01 56 36.9	+1.4
MIAR				IAmb_Lg		01 57 50.7	
MGMO	**Mountain Grove**	**4.62**	**86**	Pn	Pn	01 56 38.9	-0.3
MGMO				IAmb_Lg		01 57 57.0	
R40A	**Maddies Statio**	**4.77**	**72**	Pn	Pn	01 56 41.6	+0.4
R40A				IAmb_Lg		01 57 56.3	
	comp=Z,12nm,0.9s						
FCAR	**Ozark Folk Cen**	**4.88**	**101**	IAmb_Lg		01 58 03.1	
	comp=Z,8.1nm,1.0s						
X40A	**Basin Creek Fa**	**4.89**	**119**	Pn	Pn	01 56 42.8	-0.2
WHAR	**Wooly Hollow**	**4.94**	**108**	IAmb_Lg		01 58 07.0	
	comp=Z,7.8nm,0.8s						
W41B	**Gary Mavity, V**	**5.01**	**109**	IAmb_Lg		01 58 12.1	
	comp=Z,9.1nm,1.0s						
L34A	**Svendsen Farm,**	**5.17**	**14**	IAmb_Lg		01 58 14.5	
	comp=Z,15nm,0.8s						
WLAR	**White Oak Lake**	**5.18**	**128**	IAmb_Lg		01 58 18.7	
	comp=Z,8.0nm,0.8s						
N38A	**Joes South For**	**5.36**	**43**	IAmb_Lg		01 58 19.3	
	comp=Z,21nm,0.9s						
CCM	**Cathedral Cave**	**5.51**	**76**	IAmb_Lg		01 58 26.1	
	comp=Z,8.0nm,1.1s						
Z41A	**Richland Creek**	**5.66**	**129**	IAmb_Lg		01 58 42.1	
	comp=Z,19nm,1.2s						
PBMO	**Poplar Bluff**	**6.10**	**89**	IAmb_Lg		01 58 48.3	
	comp=Z,6.1nm,0.8s						
GNAR	**Gosnell**	**6.54**	**96**	IAmb_Lg		01 59 03.3	
	comp=Z,13nm,0.7s						
ISCO	**Idaho Springs**	**6.60**	**298**	IAmb_Lg		01 59 16.5	
	comp=Z,5.1nm,1.1s						
S44A	**Carbondale**	**7.03**	**81**	IAmb_Lg		01 59 28.2	
	comp=Z,27nm,1.0s						
S22A	**4UR Ranch, Cre**	**7.05**	**279**	IAmb_Lg		01 59 33.3	
	comp=Z,4.9nm,0.9s						
SIUC	**Southern Illin**	**7.06**	**81**	IAmb_Lg		01 59 28.4	
	comp=Z,27nm,1.1s						
HICK	**Hickman**	**7.08**	**91**	IAmb_Lg		01 59 17.4	
	comp=Z,70nm,1.1s						
O44A	**Mansfield**	**8.14**	**64**	IAmb_Lg		01 59 50.6	
	comp=Z,10nm,0.8s						
L42A	**Oliver, Polo**	**8.20**	**50**	IAmb_Lg		02 00 08.1	
	comp=Z,12nm,0.9s						
JFWS	**Jewell Farm**	**8.43**	**43**	IAmb_Lg		02 00 14.0	
	comp=Z,10nm,1.0s						
RWWY	**Rawlins**	**8.54**	**306**	IAmb_Lg		02 00 07.9	
	comp=Z,11nm,1.3s						
F36A	**Milaca**	**9.52**	**19**	IAmb_Lg		02 00 32.0	
	comp=Z,3.9nm,1.1s						

TUL ***05*** *01:59:06.6±1.1, 36.55N±0.01×98.93W±0.04, h5km±1km, ML2.6, mb_Lg2.4/13(NEIC), Error ellipse: s-maj=5.0km s-min=2.7km az=96.0*

NEIC 05 01:59:06.6±1.1, 36.55N±0.01×98.93W±0.04, h5km±1km, Error ellipse: s-maj=5.3km s-min=3.0km az=262.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
U32A	**Winter Ranch,**	**0.18**	**199**	Pg	Pg	01 59 09.7	-0.5
OKCFA	**Oklahoma City**	**1.65**	**133**	Pn	Pn	01 59 36.3	+0.1
OKCSW	**OKLAHOMA CITY**	**1.67**	**133**	Pn	Pn	01 59 36.0	-0.4
FNO	**Franklin**	**1.79**	**136**	Pn	Pn	01 59 38.0	-0.2
WMOK	**Wichita Mounta**	**1.82**	**176**		Pn	01 59 37.8	-0.7
R32A	**Long Quarter,**	**1.87**	**5**		Pn	01 59 39.3	0.0
R32A				IAmb_Lg		02 00 08.2	
	comp=Z,13nm,0.8s						
T35A	**Sooner Cattle**	**1.97**	**79**	Pn	Pn	01 59 40.8	+0.2
X34A	**Smith Ranch, M**	**2.14**	**155**	Pn	Pn	01 59 43.5	+0.5
X34A				IAmb_Lg		02 00 17.8	
	comp=Z,24nm,0.8s						
CBKS	**Cedar Bluff**	**2.35**	**344**	Pn	Pn	01 59 46.0	+0.1
TUL1	**Leonard**	**2.62**	**103**	Pn	Pn	01 59 49.8	+0.3
AMTX	**Amarillo**	**2.79**	**234**	Pn	Pn	01 59 51.5	-0.5
AMTX				IAmb_Lg		02 00 36.9	
	comp=Z,9.3nm,0.7s						
Q24A	**Divide**	**5.49**	**298**	IAmb_Lg		02 02 06.6	
	comp=Z,7.5nm,1.0s						
JCT	**Junction City**	**6.10**	**187**	IAmb_Lg		02 02 32.3	
	comp=Z,8.2nm,1.0s						
PHWY	**Pilot Hill**	**6.95**	**315**	IAmb_Lg		02 02 47.5	
	comp=Z,4.8nm,0.8s						
MNTX	**Cornudas Mount**	**7.22**	**230**	IAmb_Lg		02 03 09.8	
	comp=Z,2.3nm,0.8s						

NEIC ***05*** *02:05:17.9±1.0, 44.52N±0.02×73.69W±0.02, h9km±5km, Error ellipse: s-maj=2.6km s-min=2.4km az=203.0*
OTT ***05*** *02:05:17.7±0.1, 44.51N×73.67W, h5km, MN2.7/18, 75km southeast from Huntingdon, Qc Western Quebec Seismic Zone.*
LDO ***05*** *02:05:18.4±1.2, 44.51N±0.02×73.688W±0.008, h3km±1km, ML2.2/22, mb_Lg2.7(OTT), mb_Lg2.3/18(NEIC), Error ellipse: s-maj=3.0km s-min=2.7km az=180.0*

ISC 05 02:05:16.6±1.1, 44.50N±0.02×73.66W±0.02, h4km±9km, n67,o0e67/89, New York

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FRNY	**Flat Rock**	**0.34**	**9**	Pg	**Pg**	**02 05 24.1**	**+0.8**
FRNY				Sg	**Sg**	**02 05 28.6**	**+0.9**
NCB	**Newcomb**	**0.66**	**218**	Pg	**Pg**	**02 05 29.5**	**+0.1**
NCB				Sg	**Sg**	**02 05 38.8**	**+0.8**
LONY	**Lake Ozonia**	**0.67**	**281**	Pg	**Pg**	**02 05 29.7**	**+0.2**
LONY				Sg	**Sg**	**02 05 38.4**	**+0.3**
LONY	**Lake Ozonia**	**0.67**	**281**	PG	**Pg**	**02 05 29.7**	**+0.2**
LONY				SG	**Sg**	**02 05 38.5**	**+0.3**
LONY				Trac		02 05 41.9	
	comp=Z,22nm,0.1s						
VT1	**Waterbury**	**0.67**	**104**	Pg	**Pb**	**02 05 30.8**	**-0.1**
VT1					**Sb**	**02 05 40.0**	**-0.6**
MNTQ	**Montreal, Queb**	**1.00**	**2**	Pg	**Pg**	**02 05 35.2**	**-0.7**
MNTQ	**Montreal, Queb**	**1.00**	**2**	PG	**Pg**	**02 05 35.1**	**-0.7**
MNTQ				SG	**Sg**	**02 05 48.5**	**-0.4**
MNTQ				Trac		02 05 48.8	
	comp=Z,18nm,0.1s						
ACCN	**Adirondack Com**	**1.11**	**180**	Pg	**Pg**	**02 05 37.2**	**-0.8**
WBO	**Williamsburg**	**1.25**	**294**	PG	**Pg**	**02 05 39.9**	**-0.8**
WBO				SG	**Sg**	**02 05 56.4**	**-0.5**
WBO				Trac		02 05 60.0	
	comp=Z,16nm,0.1s						
HNH	**Hanover**	**1.27**	**128**		**Pg**	**02 05 40.2**	**-0.8**
LBNH	**Lisbon**	**1.27**	**101**		**Pg**	**02 05 40.8**	**-0.2**
LBNH				Sg	**Sg**	**02 05 57.4**	**-0.1**
LBNH	**Lisbon**	**1.27**	**101**	PG	**Pg**	**02 05 40.9**	**-0.2**
LBNH				SG	**Sg**	**02 05 57.6**	**+0.1**
MOQ	**Mont Orford**	**1.29**	**50**	PG	**Pg**	**02 05 40.7**	**-0.7**
MOQ				SG	**Sg**	**02 05 58.2**	**0.0**
MOQ				Trac		02 05 58.9	
	comp=Z,37nm,0.2s						
J61A	**Chester**	**1.40**	**145**		**Pn**	**02 05 42.4**	**-0.6**
ALFO	**Alfred**	**1.42**	**323**	PG	**Pn**	**02 05 42.5**	**-0.7**
ALFO				SG	**Sb**	**02 06 01.6**	**-0.6**
ALFO				Trac		02 06 03.2	
	comp=Z,24nm,0.2s						
J58A	**Remsen**	**1.63**	**226**		**Pn**	**02 05 46.0**	**-0.1**
OTT	**Ottawa**	**1.71**	**302**	PN	**Pn**	**02 05 47.6**	**+0.4**
OTT				SN	**Sn**	**02 06 09.6**	**+0.1**
OTT				Trac		02 06 17.9	
	comp=Z,13nm,0.1s						
GAC	**Glen Almond**	**1.76**	**314**	PN	**Pn**	**02 05 48.3**	**+0.5**
GAC				PN	**Pn**	**02 05 48.4**	**+0.5**
GAC				SN	**Sn**	**02 06 11.1**	**+0.4**
GAC				SN	**Sb**	**02 06 11.8**	**-0.1**
GAC				Trac		02 06 16.8	
	comp=Z,15nm,0.1s						
GAC				Trac		02 06 16.9	
	comp=Z,5.9nm,0.1s						
TRY	**Troy**	**1.77**	**180**	Pn	**Pn**	**02 05 48.4**	**+0.5**
FFD	**Franklin Falls**	**1.78**	**125**	Pn	**Pb**	**02 05 49.6**	**-0.1**
FFD				Sg	**Sb**	**02 06 13.6**	**+1.0**
I62A	**Tamworth**	**1.79**	**110**	Pn	**Pb**	**02 05 49.5**	**-0.4**
H62A	**Milan**	**1.79**	**87**		**Pn**	**02 05 48.7**	**+0.3**
H62A				IAmb_Lg		02 06 18.0	
	comp=Z,9.9nm,0.7s						
TRQ	**Mont Tremblant**	**1.83**	**340**	Pn	**Pn**	**02 05 49.0**	**0.0**
TRQ				IAmb_Lg		02 06 17.9	
	comp=Z,11nm,0.9s						
TRQ	**Mont Tremblant**	**1.83**	**340**	PN	**Pn**	**02 05 49.0**	**0.0**
TRQ				SN	**Sn**	**02 06 12.9**	**+0.2**
TRQ				Trac		02 06 16.5	
	comp=Z,8.0nm,0.1s						
STUQ	**Sainte-Ursule**	**1.85**	**12**		**Sn**	**02 06 13.3**	**+0.4**
STUQ	**Sainte-Ursule**	**1.85**	**12**	SN	**Sn**	**02 06 13.3**	**+0.4**
VABQ	**Val Des Bois**	**1.97**	**316**	Pn	**Pn**	**02 05 51.6**	**+0.9**
VABQ					**Sn**	**02 06 16.3**	**+0.5**
VABQ	**Val Des Bois**	**1.97**	**316**	PN	**Pn**	**02 05 51.6**	**+0.9**
VABQ				SN	**Sn**	**02 06 16.3**	**+0.5**

VABQ			Trac			02 06 22.6	
	comp=Z,7.9nm,0.1s						
KB1O	**Rock site, Kin**	**2.00 298**	Pn	**Pn**		**02 05 51.5**	**+0.4**
KB1O	**Rock site, Kin**	**2.00 298**	PN	**Pn**		**02 05 51.5**	**+0.4**
KB1O			Trac			02 06 22.0	
	comp=Z,5.2nm,0.1s						
KGNO	**Kingston**	**2.05 263**		**Sb**		**02 06 21.1**	**+1.0**
KGNO	**Kingston**	**2.05 263**	Pn	**Pb**		**02 05 53.8**	**-0.6**
KGNO				**Sn**		**02 06 18.7**	**+0.9**
KGNO	**Kingston**	**2.05 263**	PN	**Pb**		**02 05 53.8**	**-0.6**
KGNO			SN	**Sn**		**02 06 18.7**	**+0.9**
KGNO			LG	Lg		02 06 21.1	
KGNO			Trac			02 06 25.4	
	comp=Z,7.3nm,0.1s						
K62A	**Royalston**	**2.11 150**	Pn	**Pn**		**02 05 53.4**	**+0.7**
I63A	**Otisfield**	**2.26 100**	Pn	**Pn**		**02 05 55.3**	**+0.5**
DPQ	**Saint Jean**	**2.27 16**	PN	**Pn**		**02 05 55.5**	**+0.6**
DPQ			SN	**Sn**		**02 06 23.4**	**+0.1**
DPQ			Trac			02 06 31.7	
	comp=Z,11nm,0.1s						
G62A	**West of Eustis**	**2.34 71**	Pn	**Pn**		**02 05 56.7**	**+0.8**
QUA2	**Belchertown**	**2.42 156**	Pn	**Pb**		**02 05 59.2**	**-1.4**
PECO	**Prince Edward**	**2.46 258**	Pn	**Pn**		**02 05 58.0**	**+0.5**
PECO	**Prince Edward**	**2.46 258**	PN	**Pn**		**02 05 58.0**	**+0.5**
PECO			SN	**Sn**		**02 06 28.2**	**+0.2**
PECO			LG	Lg		02 06 34.6	
PECO			Trac			02 06 35.5	
	comp=Z,14nm,0.1s						
PLVO	**Plevna**	**2.49 284**		**Sn**		**02 06 28.5**	**-0.2**
PLVO	**Plevna**	**2.49 284**	Pn	**Pn**		**02 05 58.3**	**+0.4**
PLVO	**Plevna**	**2.49 284**	PN	**Pn**		**02 05 58.3**	**+0.4**
PLVO			SN	**Sn**		**02 06 28.5**	**-0.2**
PLVO			LG	Lg		02 06 35.2	
PLVO			Trac			02 06 36.5	
	comp=Z,5.1nm,0.1s						
HRV	**Adam Dziewonsk**	**2.51 142**	Pn	**Pn**		**02 05 59.6**	**+1.4**
L59A	**Walton**	**2.52 204**		**Pn**		**02 05 59.7**	**+1.3**
GRQ	**Grand Remous**	**2.61 325**	PN	**Pn**		**02 06 00.5**	**+0.9**
GRQ			SN	**Sn**		**02 06 31.2**	**-0.6**
GRQ			LG	Lg		02 06 39.1	
GRQ			Trac			02 06 45.9	
	comp=Z,5.0nm,0.1s						
J56A	**Wolcott**	**2.61 243**	IAmb_Lg			02 06 45.1	
	comp=Z,11nm,0.9s						
K57A	**Scipio Center**	**2.72 231**	IAmb_Lg			02 06 46.9	
	comp=Z,13nm,1.1s						
KSCT	**Kent School, K**	**2.77 177**	IAmb_Lg			02 06 50.0	
	comp=Z,7.5nm,0.7s						
PEMO	**Pembroke**	**2.80 296**		**Sn**		**02 06 35.9**	**-0.5**
PEMO	**Pembroke**	**2.80 296**	Pn	**Pn**		**02 06 02.6**	**+0.5**
PEMO	**Pembroke**	**2.80 296**	PN	**Pn**		**02 06 02.6**	**+0.5**
PEMO			SN	**Sn**		**02 06 35.9**	**-0.5**
PEMO			LG	Lg		02 06 44.1	
PEMO			Trac			02 06 47.3	
	comp=Z,3.8nm,0.1s						
BCX	**Boston College**	**2.82 139**		**Pn**		**02 06 02.9**	**+0.4**
DELO	**Deloro Mine**	**2.83 272**	Pn	**Pn**		**02 06 02.8**	**+0.2**
DELO	**Deloro Mine**	**2.83 272**	PN	**Pn**		**02 06 02.8**	**+0.2**
DELO			SN	**Sn**		**02 06 37.0**	**-0.1**
DELO			Trac			02 06 45.8	
	comp=Z,8.6nm,0.2s						
DELO			LG	Lg		02 06 46.2	
BINY	**Binghamton**	**2.85 217**	Pn	**Pn**		**02 06 04.0**	**+1.1**
BINY	**Binghamton**	**2.85 217**	PN	**Pn**		**02 06 04.5**	**+1.5**
BINY			SN	**Sn**		**02 06 36.9**	**-0.9**
BINY			LG	Lg		02 06 48.2	
CRLO	**Chalk River**	**3.04 302**		**Sn**		**02 06 41.7**	**-0.6**
CRLO	**Chalk River**	**3.04 302**	Pn	**Pn**		**02 06 05.5**	**0.0**
CRLO	**Chalk River**	**3.04 302**	PN	**Pn**		**02 06 05.5**	**0.0**
CRLO			SN	**Sn**		**02 06 41.7**	**-0.6**
CRLO			Trac			02 06 52.6	
	comp=Z,7.5nm,0.3s						
PKME	**Peaks-Kenny Pk**	**3.20 75**	Pn	**Pn**		**02 06 09.0**	**+1.4**
PKME	**Peaks-Kenny Pk**	**3.20 75**	PN	**Pn**		**02 06 09.6**	**+1.9**
PKME			SN	**Sn**		**02 06 45.5**	**-0.7**
PKME			LG	Lg		02 06 58.0	
PKME			Trac			02 07 02.1	
	comp=Z,11nm,0.2s						
YLE	**Yale**	**3.23 170**	IAmb_Lg			02 07 00.9	
	comp=Z,13nm,0.9s						
J55A	**Hilton**	**3.25 249**	IAmb_Lg			02 07 06.4	
	comp=Z,7.1nm,0.7s						
ODNJ	**Ogdensburg**	**3.48 192**	IAmb_Lg			02 07 16.3	
	comp=Z,7.6nm,1.2s						
MEDO	**Medina**	**3.71 251**	IAmb_Lg			02 07 19.4	
	comp=Z,8.8nm,0.8s						
SSPA	**Standing Stone**	**4.96 220**	IAmb_Lg			02 08 02.1	
	comp=Z,7.5nm,1.2s						

*NEIC **05** 02:41:24.3±1.6, 17.66S±0.05×176.86W±0.10, h300km±6km, mb4.4/39, Error ellipse: s-maj=13.8km s-min=6.8km az=83.0*
*IDC **05** 02:41:26.2±1.6, 17.49S×176.96W, h323km±16km, mb3.8/11, mbtmp4.5/13, Error ellipse: s-maj=18.1km s-min=11.5km az=146.0*
*NOU **05** 02:41:27.8, 17.43S×176.67W, h370km, mb4.9/49, Fiji Islands Region*

ISC 05 02:41:30.0±0.4, 17°79S±0°08×176°86W±0°06, h361km, n164, σ1§76/155, mb4.5/46, 6C-5D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LKBA	**Tubou, Lakemba**	**1.91**	**256**	P		**Pn**	**02 42 21.6**	**-0.1**
TAVE	**Taveuni**	**3.10**	**290**	P		**Pn**	**02 42 30.1**	**-1.0**
DGTI	**Dogotuki**	**3.57**	**294**	P		**Pn**	**02 42 34.2**	**-1.3**
MSVF	**Nonsavu**	**4.85**	**270**	P		**Pn**	**02 42 48.9**	**+0.3**
	248nm,0.9s,baz=115,slow=12,SNR=71							
MSVF				S		**S**	**02 43 55.1**	**+2.9**
	47nm,1.0s,baz=306,slow=22,SNR=8.0							
MSVF	**Nonsavu**	**4.85**	**270**			**Pn**	**02 42 48.1**	**-0.4**
MSVF	**Nonsavu**	**4.85**	**270**	P		**Pn**	**02 42 49.6**	**+1.0**
AFI	**Afiamalu**	**6.23**	**52**	P		Pn	02 42 56.9	-7.0
	684nm,0.6s,baz=33,slow=0.2,SNR=143							
AFI				S		S	02 44 08.0	-12
	70nm,0.4s,baz=55,slow=22,SNR=1.0							
AFI	**Afiamalu**	**6.23**	**52**	Pn		Pn	02 42 56.4	-7.5
AFI	**Afiamalu**	**6.23**	**52**	P		Pn	02 42 57.2	-6.7
NIUE	**Niue**	**6.71**	**102**	Pn		Pn	02 43 02.8	-6.5
NIUE	**Niue**	**6.71**	**102**	P		**Pn**	**02 43 06.7**	**-2.6**
FUNA	**Funafuti**	**9.97**	**337**	Pn		Pn	02 43 41.3	-6.4
RAO	**Raoul Island**	**11.45**	**185**	S		**S**	**02 46 09.5**	**-3.1**
	168nm,0.4s,baz=79,slow=23,SNR=1.7							
MARNC	**Mare, Loyalty**	**14.70**	**253**	P		**P**	**02 44 39.4**	**-1.4**
DZM	**Mont Dzumac**	**16.26**	**252**	P		**P**	**02 44 57.6**	**-0.3**
	17nm,0.8s,baz=76,slow=22,SNR=7.3							
DZM	**Mont Dzumac**	**16.26**	**252**	IAmb		IAmb	02 45 00.7	
	comp=Z,65nm,1.2s							
DZM	**Mont Dzumac**	**16.26**	**252**	P		**P**	**02 44 58.8**	**+0.8**
KOUNC	**Koumac, New Ca**	**18.02**	**258**	P		**P**	**02 45 14.0**	**-2.7**
OUZ	**Omahuta**	**19.33**	**204**	P		**P**	**02 45 32.3**	**+2.0**
URZ	**Urewera**	**21.07**	**193**	P		**P**	**02 45 48.2**	**+1.5**
	comp=Z,5.7nm,0.4s,baz=28,slow=0.2,SNR=12							
	comp=Z,5.7nm,0.4s							
URZ	**Urewera**	**21.07**	**193**	P		**P**	**02 45 46.3**	**-0.5**
URZ				IAmb		IAmb	02 45 54.6	
	comp=Z,14nm,0.9s							
URZ	**Urewera**	**21.07**	**193**	P		**P**	**02 45 47.9**	**+1.1**
QRZ	**Quartz Range**	**24.71**	**200**	P		**P**	**02 46 19.8**	**0.0**
EIDS	**Eidsvold**	**30.69**	**250**	P		**P**	**02 47 11.6**	**-1.2**
EIDS	**Eidsvold**	**30.69**	**250**	P		**P**	**02 47 12.1**	**-0.7**
	comp=Z,51nm,1.3s							
RK1H	**Rockhampton Ha**	**31.02**	**254**	P		**P**	**02 47 14.8**	**-0.9**
	comp=Z,33nm,0.8s							
ARMA	**Armidale**	**31.28**	**240**	P		**P**	**02 47 18.7**	**+0.7**
RMQ	**Roma**	**32.92**	**249**	P		**P**	**02 47 31.0**	**-1.1**
CNB	**Canberra Magne**	**34.67**	**233**	P		**P**	**02 47 47.5**	**+0.5**
	comp=Z,108nm,1.4s							
CTA	**Charters Tower**	**34.92**	**260**	P		**P**	**02 47 50.1**	**+0.9**
CTAO	**Charters Tower**	**34.92**	**260**	P		**P**	**02 47 47.5**	**-1.7**
CTAO	**Charters Tower**	**34.92**	**260**	P		**P**	**02 47 49.8**	**+0.6**
CAN	**Canberra**	**34.95**	**233**	P		**P**	**02 47 49.8**	**+0.5**
	comp=Z,65nm,1.1s							
PMG	**Port Moresby**	**35.90**	**279**	P		**P**	**02 47 56.3**	**-1.1**
PMG				IAmb		IAmb	02 47 58.3	
	comp=Z,32nm,1.2s							
CMSA	**Cobar Meteorol**	**36.49**	**241**	P		**P**	**02 48 02.6**	**+0.3**
MTSU	**Mount Surprise**	**36.88**	**263**	P		**P**	**02 48 04.2**	**-1.6**
QLP	**Quilpie**	**36.95**	**249**	P		**P**	**02 48 05.3**	**-0.9**
GLAD	**Gladstone**	**37.97**	**225**	P		**P**	**02 48 15.2**	**+0.8**
	comp=Z,42nm,1.1s							
TOO	**Toolangi**	**38.39**	**231**	P		**P**	**02 48 17.8**	**-0.2**
TOO	**Toolangi**	**38.39**	**231**	P		**P**	**02 48 19.2**	**+1.2**
COEN	**Coen**	**38.58**	**270**	P		**P**	**02 48 18.6**	**-1.2**
COEN				IAmb		IAmb	02 48 20.1	
	comp=Z,31nm,1.3s							
STKA	**Stephens Creek**	**39.98**	**241**	P		**P**	**02 48 31.1**	**+0.1**
	comp=Z,50nm,0.9s,baz=90,slow=10,SNR=45							
	comp=Z,50nm,0.9s							
STKA	**Stephens Creek**	**39.98**	**241**	P		**P**	**02 48 30.7**	**-0.4**
STKA				IAmb		IAmb	02 48 32.4	
	comp=Z,14nm,0.9s							
STKA	**Stephens Creek**	**39.98**	**241**	P		**P**	**02 48 31.5**	**+0.4**
INKA	**Innaminka**	**40.16**	**248**	P		**P**	**02 48 33.1**	**+0.6**
ARPS	**Mount Arapiles**	**40.91**	**234**	P		**P**	**02 48 38.7**	**+0.2**
QIS	**Mount Isa**	**41.12**	**259**	P		**P**	**02 48 41.5**	**+1.0**
HTT	**Hallett**	**42.48**	**240**	P		**P**	**02 48 51.7**	**+0.5**
LCRK	**Leigh Creek**	**42.63**	**244**	P		**P**	**02 48 52.3**	**-0.1**
NAPP	**Napperby**	**43.07**	**240**	P		**P**	**02 48 56.5**	**+0.6**
	comp=Z,64nm,1.0s							
PTCN	**Pitcairn Islan**	**43.96**	**108**	P		**P**	**02 48 59.6**	**-3.4**
	comp=Z,995nm,0.7s							
OOD	**Oodnadatta**	**44.63**	**248**	P		**P**	**02 49 08.9**	**+0.7**
BBOO	**Buckleboo**	**44.75**	**241**	P		**P**	**02 49 08.3**	**-0.8**
BBOO	**Buckleboo**	**44.75**	**241**	P		**P**	**02 49 08.3**	**-0.8**
	comp=Z,92nm,1.3s							
WR0	**Warramunga Arr**	**45.91**	**259**	P		**P**	**02 49 16.4**	**-1.9**
WR0				IAmb		IAmb	02 49 17.6	
	comp=Z,30nm,1.2s							
WB2	**Warramunga Arr**	**46.09**	**259**	P		**P**	**02 49 18.1**	**-1.6**
WB2				IAmb		IAmb	02 49 19.0	
	comp=Z,31nm,0.8s							
WRAB	**Tennant Creek**	**46.09**	**259**	P		**P**	**02 49 18.2**	**-1.5**
WRAB				IAmb		IAmb	02 49 19.0	
	comp=Z,26nm,0.8s							
WRAB	**Tennant Creek**	**46.09**	**259**	P		**P**	**02 49 18.0**	**-1.7**
WRA	**Warramunga Arr**	**46.10**	**259**	P		**P**	**02 49 17.9**	**-1.9**
	comp=Z,14nm,0.6s,baz=97,slow=7.2,SNR=174							
WRA				ScP		**ScP**	**02 54 09.7**	**+2.3**
	comp=Z,0.5nm,0.8s,baz=90,slow=3.3,SNR=2.2							
	comp=Z,14nm,0.6s							
MULG	**Mulgathing**	**46.20**	**245**	P		**P**	**02 49 20.0**	**-0.3**
ASAR	**Alice Springs**	**46.24**	**254**	P		**P**	**02 49 19.9**	**-0.9**
	comp=Z,198nm,0.6s,baz=90,slow=8.2,SNR=1887							
ASAR				PcP		**PcP**	**02 50 49.1**	**-0.6**
	comp=Z,2.3nm,0.7s,baz=110,slow=3.9,SNR=2.2							
ASAR				ScP		**ScP**	**02 54 10.5**	**+2.6**
	comp=Z,0.6nm,1.0s,baz=122,slow=37,SNR=4.1							
ASAR				S		**S**	**02 55 37.8**	**-2.1**
	comp=Z,1.5nm,0.7s,baz=85,slow=16,SNR=8.4							
KDU	**Kakadu**	**49.03**	**268**	P		**P**	**02 49 40.6**	**-1.5**
MTN	**Manton Dam**	**50.27**	**268**	P		**P**	**02 49 49.4**	**-2.0**
MTN				IAmb		IAmb	02 49 50.9	
	comp=Z,34nm,0.8s							
WRKA	**Warakurna**	**51.28**	**252**	P		**P**	**02 49 58.1**	**-0.7**
FORT	**Forrest**	**51.39**	**245**	P		**P**	**02 49 58.2**	**-1.2**
	comp=Z,48nm,1.0s							
KNRA	**Kununurra**	**51.97**	**264**	P		**P**	**02 50 02.5**	**-1.3**
KNRA	**Kununurra**	**51.97**	**264**	P		**P**	**02 50 03.7**	**-0.1**
SIJI	**Sorong**	**53.65**	**282**	P		**P**	**02 50 14.5**	**-1.6**
	comp=Z,35nm,0.7s,baz=93,slow=6.4,SNR=25							
	comp=Z,35nm,0.7s							
SWI	**Sorong**	**53.65**	**282**	P		**P**	**02 50 15.1**	**-1.0**
	comp=Z,1μmcomp=Z,67nm,0.9s							
SOEI	**Soe**	**57.54**	**270**	P		**P**	**02 50 42.6**	**-1.0**
SOEI	**Soe**	**57.54**	**270**	P		**P**	**02 50 44.4**	**+0.8**
	comp=Z,42nm,0.8s							
PSA00	**Pilbara Seismi**	**59.36**	**255**	P		**P**	**02 50 54.4**	**-1.4**
PSA00				IAmb		IAmb	02 50 56.3	
	comp=Z,9.2nm,0.9s							
PSA00	**Pilbara Seismi**	**59.36**	**255**	P		**P**	**02 50 54.5**	**-1.4**
	comp=Z,30nm,1.6s							
MBWA	**Marble Bar**	**59.53**	**256**	P		**P**	**02 50 55.7**	**-1.2**
MBWA				IAmb		IAmb	02 50 56.9	
	comp=Z,12nm,0.9s							
MBWA	**Marble Bar**	**59.53**	**256**	P		**P**	**02 50 56.4**	**-0.6**
KLBR	**Kellerberrin**	**60.20**	**243**	P		**P**	**02 51 00.5**	**-0.8**
	comp=Z,49nm,1.0s							
VNDA	**Vanda**	**60.69**	**185**	P		**P**	**02 51 05.6**	**+1.8**
	comp=Z,1.7nm,1.1s,baz=346,slow=7.0,SNR=5.7							
	comp=Z,1.7nm,1.1s							
BLDU	**Ballidu**	**61.16**	**244**	P		**P**	**02 51 08.9**	**+1.1**
MORW	**Morawa**	**61.88**	**246**	P		**P**	**02 51 12.8**	**+0.3**
	comp=Z,14nm,1.3s							
APSI	**Ampana**	**62.64**	**278**	P		**P**	**02 51 18.2**	**+0.4**
	comp=Z,21nm,1.3s							
MPSI	**Mapaga**	**64.71**	**279**	P		**P**	**02 51 31.1**	**0.0**
	comp=Z,3μmcomp=Z,16nm,0.9s							
QSPA	**South Pole Qui**	**72.27**	**180**	P		**P**	**02 52 18.3**	**+1.6**
QSPA				IAmb		IAmb	02 52 19.2	
	comp=Z,11nm,1.0s							
KSM	**Kuching**	**74.13**	**277**	P		**P**	**02 52 27.8**	**-0.5**
KSM				IAmb		IAmb	02 52 31.7	
	comp=Z,16nm,1.0s							
NVAR	**Mina Array Bea**	**78.32**	**43**	P		**P**	**02 52 50.8**	**-0.6**
	comp=Z,1.7nm,0.8s,baz=228,slow=9.3,SNR=11							
	comp=Z,1.7nm,0.8s							
NVAR	**Mina Array Bea**	**78.32**	**43**	P		**P**	**02 52 50.3**	**-1.1**
KVN	**Kaiserville**	**78.80**	**43**	P		**P**	**02 52 53.1**	**-0.8**
TUC	**Tucson**	**80.47**	**52**	P		**P**	**02 53 02.9**	**+0.1**
SMAI	**San Martin Ant**	**80.74**	**159**	P		**P**	**02 53 04.8**	**+1.2**
SMAI				IAmb		IAmb	02 53 06.2	
	comp=Z,12nm,1.1s							
MSU	**Marysvale**	**82.45**	**46**	P		**P**	**02 53 13.0**	**-0.3**
F10A	**Beach Ranch, E**	**83.21**	**37**	P		**P**	**02 53 15.7**	**-1.0**
TMUT	**Trail Mountain**	**83.50**	**45**	IAmb		IAmb	02 53 19.7	
	comp=Z,3.4nm,0.8s							
HLID	**Hailey**	**83.58**	**40**	P		**P**	**02 53 18.4**	**-0.4**
P17A	**Butcher Ranch,**	**83.90**	**45**	P		**P**	**02 53 19.2**	**-1.2**
MNTX	**Cornudas Mount**	**84.31**	**54**	P		**P**	**02 53 21.9**	**-0.5**
MNTX				IAmb		IAmb	02 53 23.7	
	comp=Z,4.8nm,1.4s							
TX31	**Lajitas Ar. Si**	**84.69**	**57**	IAmb		IAmb	02 53 43.9	
	comp=Z,12nm,1.2s							
TX32	**Lajitas Array**	**84.69**	**57**	IAmb		IAmb	02 53 43.9	
	comp=Z,4.8nm,1.4s							
TXAR	**Lajitas Array**	**84.69**	**57**	P		**P**	**02 53 24.1**	**-0.4**
	comp=Z,1.4nm,0.8s,baz=220,slow=7.5,SNR=17							
	comp=Z,1.4nm,0.8s							
TXAR	**Lajitas Array**	**84.69**	**57**	P		**P**	**02 53 25.4**	**+0.9**
CCB	**Clear Creek Bu**	**85.15**	**12**	P		**P**	**02 53 25.2**	**-0.6**
ILAR	**Eielson Array**	**85.45**	**12**	P		**P**	**02 53 25.2**	**-2.1**
	comp=Z,0.6nm,0.7s,baz=223,slow=5.5,SNR=5.4							
	comp=Z,0.6nm,0.7s							
YHL	**Hebgen Lake**	**86.23**	**41**	P		**P**	**02 53 31.2**	**-0.7**
YHL				IAmb		IAmb	02 53 33.8	
	comp=Z,3.9nm,1.1s							
PDAR	**Pinedale Array**	**86.26**	**43**	P		**P**	**02 53 31.1**	**-0.9**
	comp=Z,0.4nm,0.7s,baz=270,slow=0.2,SNR=2.0							
	comp=Z,0.4nm,0.7s							
HHC	**Hu-ho-hao-te**	**88.25**	**314**	*e*P		**P**	**02 53 41.1**	**-0.2**
HHC				pmax		pmax		
	comp=Z,40nm,1.2s							
HHC				pmax		pmax		
	comp=Z,180nm,5.8s							
LL02	**Futaleuf**	**88.48**	**135**	P		**P**	**02 53 43.2**	**+0.8**
LL02				IAmb		IAmb	02 53 45.4	
	comp=Z,10nm,1.3s							
CMAR	**Chiang Mai Arr**	**90.23**	**289**	P		**P**	**02 53 50.5**	**-0.5**
	comp=Z,1.5nm,0.3s,baz=90,slow=3.7,SNR=5.3							
	comp=Z,1.5nm,0.3s							
PLCA	**Paso Flores**	**90.34**	**133**	P		**P**	**02 53 52.2**	**+1.0**
	comp=Z,1.1nm,0.7s,baz=269,slow=6.6,SNR=4.0							
	comp=Z,1.1nm,0.7s							
PLCA	**Paso Flores**	**90.34**	**133**	IAmb		IAmb	02 53 56.6	
	comp=Z,7.6nm,1.4s							
PZH	**PanZhiHua**	**90.40**	**298**	P		**P**	**02 53 53.0**	**+1.3**
TROLL	**Troll, Antarti**	**90.43**	**180**	P		**P**	**02 53 51.2**	**+0.1**
SNAA	**Sanae**	**90.67**	**178**	P		**P**	**02 53 52.6**	**+0.5**
VNA3	**Neumayer Olymp**	**90.76**	**176**	P		**P**	**02 53 53.0**	**+0.5**
VNA2	**Neumayer--Watz**	**91.22**	**177**	P		**P**	**02 53 55.5**	**+1.0**
	baz=199,slow=3.7							
INK	**Inuvik**	**91.39**	**15**	P		**P**	**02 53 54.4**	**-0.7**
INK				IAmb		IAmb	02 54 07.9	
	comp=Z,4.1nm,1.4s							
SUW	**Suwalki**	**140.66**	**341**	*e*PKP		PKPdf	03 00 01.7	-15
KWP	**Kalwaria Pacla**	**144.53**	**338**	*e*PKP		PKPbc	03 00 16.4	-6.9
BNN	**Bunyan**	**144.66**	**313**			PKPbc	03 00 23.8	-0.5
OJC	**Ojcow**	**144.99**	**341**	*e*PKP		**PKPdf**	**03 00 23.4**	**-1.2**
OJC	**Ojcow**	**144.99**	**341**			**PKPdf**	**03 00 24.0**	**-0.6**
BURAR	**Bucovina Array**	**145.18**	**334**	⇑P		PKPdf	03 00 13.2	-12
BIZ	**Bicaz**	**145.31**	**332**	⇓P		**PKiKP**	**03 00 32.7**	**+3.4**
KSP	**Ksiaz**	**145.39**	**345**	*e*PKP		**PKiKP**	**03 00 34.9**	**+5.6**
CRVS	**Cervenica-Dubn**	**145.59**	**338**	*e*PKP		**PKPab**	**03 00 28.6**	**+1.1**
CLL	**Collm**	**145.65**	**349**	*e*PKPbc		**PKPbc**	**03 00 27.0**	**+0.3**
OSTC	**Ostas**	**145.67**	**345**	*e*PKP		**PKiKP**	**03 00 32.8**	**+2.8**
CHVC	**Chvalec**	**145.68**	**345**	*e*PKP		**PKiKP**	**03 00 34.8**	**+4.8**
BR131	**Keskin Array S**	**145.73**	**316**	PKPdf		**PKPdf**	**03 00 26.7**	**+0.4**
BRTR	**Keskin Array B**	**145.73**	**316**	PKPbc		**PKPdf**	**03 00 26.9**	**+0.5**
	comp=Z,4.0nm,0.9s,baz=133,slow=4.7,SNR=6.7							
BRTR	**Keskin Array B**	**145.73**	**316**	PKPbc		**PKPbc**	**03 00 27.0**	**-0.5**
DPC	**Dobruska-Polom**	**145.84**	**345**	*e*PKP		**PKiKP**	**03 00 32.7**	**+2.4**
MORC	**Moravsky Berou**	**146.04**	**343**	⇓P		**PKiKP**	**03 00 31.0**	**+0.2**
MORC	**Moravsky Berou**	**146.04**	**343**	PKPbc		**PKPdf**	**03 00 26.2**	**-0.2**
PVCC	**Panska Ves**	**146.08**	**347**	*e*PKP		**PKiKP**	**03 00 37.0**	**+6.2**
DOPR	**Dopca**	**146.37**	**332**	⇓P		PKPdf	03 00 11.7	-15
PRU	**Pruhonice**	**146.59**	**347**	*e*PKP		**PKiKP**	**03 00 37.6**	**+5.8**
VRAC	**Vranov**	**146.72**	**344**	⇑P		**PKiKP**	**03 00 35.0**	**+2.9**
VYHS	**Vyhne**	**146.81**	**341**	*e*PKP		**PKPab**	**03 00 32.1**	**-0.2**
DRGR		**146.87**	**335**	⇓P		**PKPdf**	**03 00 24.0**	**-4.0**
PSZ	**Piszkesteto**	**146.97**	**339**	PKPbc		**PKPbc**	**03 00 30.6**	**0.0**
ARR	**Arges**	**147.17**	**332**	⇑P		**PKPdf**	**03 00 21.7**	**-6.8**
MODS	**Modra-Piesok**	**147.39**	**342**	*e*PKP		**PKPab**	**03 00 35.3**	**+0.7**
KHC	**Kasperske Hory**	**147.61**	**347**	*e*PKP		**PKPab**	**03 00 39.9**	**+4.4**
CKRC	**Cesky Krumlov**	**147.74**	**346**	*e*PKP		**PKPab**	**03 00 39.5**	**+3.4**
CONA	**Conrad Observa**	**148.19**	**344**	*e*P		**PKPab**	**03 00 40.8**	**+2.8**
	comp=Z,7.5nm,1.2s							
BZS	**Buzias**	**148.27**	**335**	⇓P		**PKPdf**	**03 00 30.5**	**+0.3**
RONA	**Rosalia, Austr**	**148.28**	**343**	*e*P		**PKPab**	**03 00 41.1**	**+2.8**
	comp=Z,3.0nm,1.0s							
HERR	**Herculane**	**148.53**	**333**	⇑P		**PKPdf**	**03 00 29.9**	**-0.7**
MOA	**Molln**	**148.66**	**346**	*e*P		**PKPab**	**03 00 42.3**	**+2.5**
	comp=Z,3.8nm,1.1s							
ARSA	**Arzberg**	**148.90**	**344**	*e*P		**PKPab**	**03 00 44.3**	**+3.5**
	comp=Z,4.5nm,1.1s							
FRGS	**Fruska Gora**	**149.36**	**337**	⇑P		**PKiKP**	**03 00 37.8**	**0.0**
BLKB	**Belogradchik**	**149.41**	**331**	⇑P		**PKPdf**	**03 00 31.3**	**-0.8**
SOKA	**Soboth**	**149.56**	**344**	*e*P		**PKPab**	**03 00 44.9**	**+1.3**
	comp=Z,3.8nm,1.2s							
WATA	**Walderalm**	**149.72**	**349**	*i* P		**PKPab**	**03 00 45.6**	**+1.2**
	comp=Z,1.3nm,0.5s							
WTTA	**Wattenberg**	**149.78**	**348**	*e*P		**PKPab**	**03 00 45.9**	**+1.3**
	comp=Z,4.1nm,0.5s							
MOTA	**Moosalm**	**149.80**	**349**	*e*P		**PKPab**	**03 00 45.8**	**+1.1**
	comp=Z,3.1nm,1.0s							
SQTA	**Sankt Quirin**	**149.90**	**349**	*e*P		**PKPab**	**03 00 46.4**	**+1.3**
	comp=Z,2.6nm,0.5s							
DAVA	**Damuels**	**150.06**	**351**	*e*P		**PKPab**	**03 00 47.6**	**+1.9**
	comp=Z,7.0nm,1.3s							
ABTA	**Abfaltersbach**	**150.10**	**347**	*e*P		**PKPab**	**03 00 46.3**	**+0.4**
	comp=Z,2.4nm,0.5s							
FETA	**Feichten**	**150.18**	**350**	*e*P		**PKPab**	**03 00 47.3**	**+1.0**
	comp=Z,7.2nm,1.4s							
CRES	**Cresnjev**	**150.22**	**343**	*i* PKPbc		**PKPbc**	**03 00 38.0**	**-0.8**
CRES	**Cresnjev**	**150.22**	**343**	*i* PKPab		**PKPab**	**03 00 46.5**	**+0.2**
DAVOX	**Davos/Dischmat**	**150.56**	**351**	PKPbc		**PKPbc**	**03 00 39.0**	**-0.8**
	comp=Z,1.5nm,0.5s,baz=47,sl

JNU Nakatsue 4.78 27 P **Pn 02 49 03.3 +0.4**
82nm,0.4s,baz=186,slow=15,SNR=15
JNU S **Sn 02 49 59.6 +0.5**
60nm,0.6s,baz=195,slow=16,SNR=7.3
JNU Nakatsue 4.78 27 **Pn 02 49 04.1 +1.2**
JNU Nakatsue 4.78 27 P **Pn 02 49 04.9 +2.0**
JTU Tsushima 5.71 9 Pn **Pn 02 49 15.4 +0.7**
SSE Sheshan 6.53 292 P **Pn 02 49 27.0 +1.5**
SSE S **Sn 02 50 38.6 -1.2**
SSE pmax pmax
comp=Z,150nm,0.7s
SSE pmax pmax
comp=Z,250nm,4.2s
SSE LR LR
comp=N,140nm,14.0s
SSE LR LR
comp=E,110nm,13.7s
NAWB Namwon 6.56 354 Pn **Pn 02 49 27.0 +1.1**
YHNB Yeheng 7.45 237 **Pn 02 49 38.6 +0.9**
YHNB Yeheng 7.45 237 P **Pn 02 49 39.9 +2.2**
TJN Taejon 7.52 354 Pn **Pn 02 49 38.0 -0.3**
TJN Taejon 7.52 354 P **Pn 02 49 40.1 +1.8**
KSCHJ Chungju 7.97 358 **Pn 02 49 44.9 +0.6**
SSLB Suanglung 8.29 234 **Pn 02 49 47.0 -1.7**
YULB Yu-li 8.31 231 Pn **Pn 02 49 47.6 -1.3**
KSAR Wonju Array Be 8.55 358 Pn **Pn 02 49 52.7 +0.9**
KSRS Korea Array 8.56 358 P **Pn 02 49 53.0 +1.0**
84nm,0.9s,baz=178,slow=14,SNR=201
KS19 Wonju Array Si 8.61 358 **Pn 02 49 52.4 -0.3**
INCN Inchon 8.69 351 **Pn 02 49 53.5 -0.3**
INCN Inchon 8.69 351 P **Pn 02 49 55.8 +2.1**
NJ2 Nanjing 8.72 294 ⇑P **Pn 02 49 53.6 -0.5**
NJ2 S **Sn 02 51 33.0 +1.2**
NJ2 pmax pmax
comp=Z,80nm,0.8s
SEHB SEOHWA 9.37 360 Pn **Pn 02 50 03.4 +0.8**
QZH Quanzhou 9.49 248 *e*P **Pn 02 50 05.2 +1.0**
QZH S **Sn 02 51 51.8 +1.6**
INU Inuyama 9.82 47 Pn **Pn 02 50 09.8 +1.3**
INU Inuyama 9.82 47 P **Pn 02 50 11.8 +3.3**
JGF Kuroka 10.20 47 Pn **Pn 02 50 15.3 +1.9**
PYAG Pyongyang 10.36 349 P **Pn 02 50 16.5 +1.1**
PYAG pP **P 02 50 21.1 -2.2**
PYAG AMS AMS
comp=N,187nm,1.2s
PYAG AMS AMS
comp=E,246nm,1.6s
PYAG AMS AMS
comp=Z,466nm,3.0s
JHJ Hachijo jima 2 10.74 64 P **P 02 50 25.6 -2.1**
comp=Z,106nm,0.6s,baz=228,slow=12,SNR=5.6
JHJ LR LR 02 54 09.9
comp=Z,202nm,18.5s,baz=254,slow=35
HHU Hamhung 11.04 357 P **Pn 02 50 25.8 +1.6**
HHU pP **P 02 50 33.0 +2.1**
HHU AMS AMS
comp=N,150nm,2.1s
HHU AMS AMS
comp=E,232nm,3.2s
HHU AMS AMS
comp=Z,447nm,6.2s
MAJO Matsushiro 11.32 45 **Pn 02 50 29.8 +1.8**
MAJO Matsushiro 11.32 45 P **P 02 50 31.6 -2.6**
MJAR Matsushiro Arr 11.33 45 P **Pn 02 50 27.7 -0.3**
comp=Z,2.5nm,0.7s,baz=237,slow=13,SNR=9.6
MJAR S **Sn 02 52 28.7 -5.3**
comp=Z,9.2nm,0.8s,baz=251,slow=29,SNR=6.0
MJAR LR LR 02 55 09.8
comp=Z,91nm,19.3s,baz=219,slow=39
MJAR ScP **ScP 02 59 22.7 +3.3**
comp=Z,1.0nm,0.8s,baz=242,slow=2.7,SNR=4.3
MJAR Matsushiro Arr 11.33 45 Pn **Pn 02 50 29.2 +1.2**
MJAR **ScP 02 59 21.4 +2.0**
SUJ Sinuiju 11.62 345 P **Pn 02 50 32.9 +1.3**
SUJ pP **P 02 50 38.2 +0.8**
SUJ AMS AMS
comp=N,202nm,1.8s
SUJ AMS AMS
comp=E,291nm,2.6s
SUJ AMS AMS
comp=Z,505nm,4.4s
TIA Tai'an 11.91 311 P **Pn 02 50 36.4 +1.0**
TIA S **S 02 52 53.7 +3.3**
TIA pmax pmax
comp=Z,10.0nm,0.8s
TIA pmax pmax
comp=Z,92nm,4.1s
TIA LR LR
comp=Z,260nm,5.7s
TIA LR LR
comp=Z,250nm,6.9s
TIA LR LR
comp=Z,65nm,6.7s
WHN Wuhan 12.22 281 ⇓*i*P **P 02 50 45.5 +1.4**
WHN S **S 02 52 58.5 +0.3**
WHN sS Sn 02 53 07.2 +12
WHN pmax pmax
comp=Z,58nm,0.9s
WHN LR LR
comp=N,950nm,4.6s
WHN LR LR
comp=E,320nm,5.1s
JSD Sado 12.36 40 Pn **Pn 02 50 42.5 +1.4**
JCJ Chichijima 12.42 95 P **P 02 50 44.6 -1.8**
comp=E,116nm,0.9s,baz=281,slow=8.6,SNR=6.3
JCJ Chichijima 12.42 95 **Pn 02 50 43.1 +1.1**
JCJ Chichijima 12.42 95 P **P 02 50 46.8 +0.3**
CNSH ChangSha 13.51 271 ⇓P **P 02 50 58.0 -0.5**
CNSH S **Sn 02 53 25.5 -0.7**
CNSH LR LR
comp=E,460nm,6.7s
CNSH LR LR
comp=E,310nm,9.8s
HNS HongShan 14.18 310 ⇓P **Pn 02 51 04.8 +0.9**
HNS S **S 02 53 45.8 +2.7**
HNS pmax pmax
comp=E,160nm,0.9s
LYN LuoYang 14.59 297 ⇓P **P 02 51 09.7 -0.7**
LYN S **S 02 53 52.9 +0.5**
LYN pmax pmax
comp=E,120nm,1.2s
LYN pmax pmax
comp=E,230nm,8.4s
BJT Baijiatuan 14.92 321 P **P 02 51 14.2 +0.1**
BJI Beijing 14.93 321 P **P 02 51 14.5 +0.3**
BJI S **Sn 02 53 54.8 -5.3**
BJI pmax pmax
comp=E,160nm,0.8s
BJI pmax pmax
comp=E,590nm,5.2s
CN2 Changchun 15.06 352 *e*P **P 02 51 17.2 +1.6**
CN2 S **S 02 54 01.7 -1.2**
CN2 pmax pmax
comp=E,90nm,1.6s
CN2 pmax pmax
comp=E,400nm,3.0s
CN2 LR LR
comp=E,100nm,10.0s
CN2 LR LR
comp=E,100nm,10.0s
CN2 LR LR
comp=E,200nm,12.0s
USA0B Ussuriysk Arra 15.58 10 **P 02 51 21.9 +0.7**
USA0B IAmb IAmb 02 51 25.2
comp=Z,71nm,1.4s
USRK Ussuriysk Ar. 15.58 10 P **P 02 51 22.4 +1.1**
comp=Z,12nm,0.5s,baz=193,slow=11,SNR=34
USRK Ussuriysk Ar. 15.58 10 **P 02 51 21.1 -0.1**
MDJ Mudanjiang 15.74 3 **Pn 02 51 22.9 -0.1**
MDJ Mudanjiang 15.74 3 P **P 02 51 25.0 +1.9**
MDJ S **S 02 54 18.5 +0.6**
MDJ pmax pmax
comp=Z,530nm,2.2s
MDJ pmax pmax
comp=Z,120nm,3.6s
MDJ Mudanjiang 15.74 3 P **P 02 51 25.8 +2.7**
TIY Taiyuan 15.89 308 *e*P **Pn 02 51 26.8 +1.8**
TIY pmax pmax
comp=Z,140nm,0.8s
TIY pmax pmax
comp=Z,620nm,3.5s
GULI GuiLin 16.34 262 ⇑P **P 02 51 30.0 +0.1**
GULI S **S 02 54 31.0 0.0**
GULI pmax pmax
comp=Z,30nm,1.6s
GULI LR LR
comp=Z,330nm,6.0s
GULI LR LR
comp=Z,210nm,10.3s
ENH Enshi 16.40 279 **P 02 51 30.7 +0.1**
ENH IAmb IAmb 02 51 32.8
comp=Z,33nm,0.7s
BNX BinXian 16.84 358 ⇓P **Pn 02 51 36.7 +0.4**
BNX sP **sP 02 52 32.3 +1.9**
BNX S **S 02 54 41.0 -0.1**
BNX pmax pmax
comp=Z,300nm,1.0s
BNX pmax pmax
comp=Z,400nm,5.9s
XAN Xi'an 17.29 292 ⇓P **Pn 02 51 41.5 -0.2**
XAN S **S 02 54 51.1 +0.7**
XAN pmax pmax
comp=Z,260nm,1.0s
XAN pmax pmax
comp=Z,760nm,3.5s
XAN LR LR
comp=Z,220nm,13.0s
XAN LR LR
comp=Z,100nm,10.8s
XAN LR LR
comp=Z,180nm,17.6s
XLT XiLinHaoTe 17.89 330 ⇓*i*P **P 02 51 47.4 +0.7**
XLT sP sP 02 52 43.7 +1.5
XLT pmax pmax
comp=Z,190nm,1.2s
XLT pmax pmax
comp=Z,330nm,5.4s
HHC Hu-ho-hao-te 18.14 316 *e*P **Pn 02 51 51.1 -0.7**
HHC sP sP 02 52 47.0 +1.9
HHC S **S 02 55 10.8 +3.3**
HHC pmax pmax
comp=Z,120nm,1.1s
HHC pmax pmax
comp=Z,460nm,4.4s
BTO Baotou 18.98 313 *e*P **Pn 02 52 00.6 -1.0**
BTO S **S 02 55 23.8 -0.2**
BTO LR LR
comp=Z,450nm,4.5s
ASAJ Asahikawa 19.03 33 P **P 02 51 57.4 -1.7**
comp=Z,2.5nm,0.5s,baz=261,slow=12,SNR=2.2
JKA Kamikawa-asahi 19.03 33 P **P 02 51 57.4 -1.7**
GYA Guiyang 19.29 268 ⇓P **P 02 52 02.5 +0.3**
GYA pmax pmax
comp=Z,20nm,1.2s
KLR Kul'dur 20.50 7 P **P 02 52 12.8 -1.9**
comp=Z,3.7nm,0.5s,baz=196,slow=7.0,SNR=12
KLR PcP **PcP 02 56 19.2 +1.2**
comp=Z,1.9nm,0.6s,baz=225,slow=2.9,SNR=3.3
comp=Z,3.7nm,0.5s
YSS Yuzh-Sakhalins 21.30 28 P **P 02 52 23.7 +0.6**
YSS IAmb IAmb 02 52 25.5
comp=Z,34nm,1.0s
CD2 Chengdu 21.34 281 P **P 02 52 22.4 -1.5**
CD2 PP **pP 02 52 58.6 +2.4**
CD2 S **S 02 56 07.0 -2.1**
CD2 pmax pmax
comp=Z,40nm,0.8s
CD2 pmax pmax
comp=Z,140nm,4.7s
HIA Hailar 21.38 345 P **P 02 52 23.7 -0.4**
HIA IAmb IAmb 02 52 36.7
comp=Z,23nm,1.1s
GUMO Guam 21.66 131 P **P 02 52 27.5 +0.3**
comp=Z,156nm,0.9s,baz=342,slow=20,SNR=7.4
GUMO LR LR 03 00 02.1
comp=Z,97nm,21.3s,baz=54,slow=34
comp=Z,156nm,0.9s
GUMO Guam 21.66 131 P **P 02 52 28.5 +1.3**
LZH Lanzhou 21.79 296 ⇓P **P 02 52 28.5 -0.1**
LZH pP pP 02 53 04.0 +2.8
LZH sP sP 02 53 27.9 +2.8
LZH S **S 02 56 18.2 +1.7**
LZH pmax pmax
comp=Z,83nm,1.0s
LZH pmax pmax
comp=Z,370nm,4.9s
DAV Davao City (W) 21.84 187 LR LR 03 00 55.8
comp=Z,59nm,21.1s,baz=19,slow=36
KMI Kunming 23.04 267 ⇑P **P 02 52 41.1 +0.7**
KMI pP pP 02 53 18.0 +3.0
KMI pmax pmax
comp=Z,18nm,1.1s
KMI LR LR
comp=Z,320nm,13.7s
KMI LR LR
comp=Z,100nm,14.3s
KMI LR LR
comp=Z,140nm,17.0s
PZH PanZhiHua 23.59 271 P **P 02 52 44.9 -0.5**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,100nm,5.0s
ULN Ulaanbaatar 25.08 325 P **P 02 52 58.1 -0.5**
SONM Songino Array 25.39 324 P **P 02 53 00.7 -0.7**
comp=Z,84nm,0.9s,baz=136,slow=9.4,SNR=78
SONM PcP **PcP 02 56 28.7 +0.3**
comp=Z,1.6nm,0.7s,baz=168,slow=4.3,SNR=4.2
SONM ScP **ScP 02 59 50.1 +0.4**
comp=Z,4.0nm,0.8s,baz=144,slow=4.3,SNR=18
comp=Z,84nm,0.9s
SONM Songino Array 25.39 324 P **P 02 53 01.0 -0.4**
GTA Gaotai 25.69 302 ⇓P **P 02 53 03.7 -0.5**
GTA pP pP 02 53 45.3 +2.9
GTA sP PP 02 54 07.7 +1.5
GTA PcP **PcP 02 56 30.6 +1.3**
GTA ScP **ScP 02 59 51.3 +0.5**
GTA PcS **PcS 03 00 10.4 +0.2**
GTA pmax pmax
comp=Z,22nm,1.0s
GTA pmax pmax
comp=Z,190nm,5.5s
GTA LR LR
comp=Z,130nm,14.5s
GTA LR LR
comp=Z,130nm,14.5s
GTA LR LR
comp=Z,140nm,14.5s
TOLI2 Tolitoli 28.52 196 P **P 02 53 28.9 -0.5**
CMAR Chiang Mai Arr 28.72 255 P **P 02 53 30.6 -0.7**
comp=Z,1.4nm,0.3s,baz=50,slow=8.4,SNR=1.6
CMAR PcP **PcP 02 56 38.1 +1.4**
comp=Z,4.1nm,0.9s,baz=39,slow=1.6,SNR=14
CMAR ScP **ScP 03 00 01.2 +1.1**
comp=Z,0.6nm,0.3s,baz=67,slow=2.4,SNR=6.6
comp=Z,1.4nm,0.3s
GOMU GeErMu 29.03 293 P **P 02 53 34.6 +0.3**
GOMU pmax pmax
comp=Z,5.0nm,0.9s
GOMU pmax pmax
comp=Z,58nm,4.8s
FAKI Fak Fak 31.85 172 P **P 02 53 58.9 +0.2**
FAKI Fak Fak 31.85 172 P **P 02 54 00.0 +1.3**
comp=Z,56nm,0.9s
SHL Shillong 32.45 273 P **P 02 54 03.4 -0.7**
SHL PcP **PcP 02 56 46.7 -0.1**
PETK Petropavlovsk- 32.45 34 P **P 02 54 02.9 -0.7**
comp=Z,4.9nm,0.9s,baz=219,slow=12,SNR=6.0
PETK ScP **ScP 03 00 10.9 -0.9**
comp=Z,3.2nm,0.8s,baz=230,slow=12,SNR=4.8
comp=Z,4.9nm,0.9s
PETK Petropavlovsk- 32.45 34 P **P 02 54 03.2 -0.4**
YAK Yakutsk 33.17 1 LR LR 03 08 00.3
comp=Z,45nm,18.1s,baz=87,slow=37
SRIT Nakonsritamara 33.66 239 P **P 02 54 14.8 +0.2**
SRIT IAmb IAmb 02 54 17.9
comp=Z,29nm,0.9s
MA2 Magadan 34.31 20 P **P 02 54 18.5 -1.2**
comp=Z,4.1nm,0.6s,baz=207,slow=8.3,SNR=3.8
comp=Z,4.1nm,0.6s
MA2 Magadan 34.31 20 IAmb IAmb 02 54 19.6
comp=Z,5.7nm,0.7s
KULM Kulim 35.14 233 P **P 02 54 26.2 -1.0**
KULM IAmb IAmb 02 54 30.1
comp=Z,16nm,0.9s
KULM PcP **PcP 02 56 53.9 -0.5**
IPM Ipoh 35.45 232 P **P 02 54 29.1 -0.8**
IPM IAmb IAmb 02 54 32.2
comp=Z,26nm,1.1s
WMQ Urumqi 35.54 306 *e*P **P 02 54 31.9 +1.4**
H11N2 WAKE ISLAND Hy 36.23 96 T T 03 33 06.6
baz=290,slow=74,SNR=3.3
H11N1 WAKE ISLAND Hy 36.23 96 T T 03 32 55.7
baz=290,slow=74,SNR=3.5
H11N3 WAKE ISLAND Hy 36.24 96 T T 03 33 00.1
baz=290,slow=74,SNR=3.2
PSI Prapat 38.11 232 P **P 02 54 53.5 +1.1**
comp=Z,6.4nm,0.7s,baz=342,slow=2.9,SNR=5.8
PSI PcP **PcP 02 57 04.3 +0.8**
comp=Z,3.8nm,0.5s,baz=7.1,slow=8.1,SNR=4.4
comp=Z,6.4nm,0.7s
BATI Baumata 39.11 187 LR LR 03 12 44.5
comp=Z,268nm,18.3s,baz=295,slow=38
MK31 Makanchi Array 39.84 310 P **P 02 55 05.4 -1.0**
MKAR Makanchi Array 39.84 310 P **P 02 55 04.7 -1.7**
comp=Z,12nm,0.8s,baz=96,slow=9.3,SNR=74
MKAR PcP **PcP 02 57 08.4 +0.1**
comp=Z,7.0nm,0.7s,baz=72,slow=3.8,SNR=14
MKAR ScP **ScP 03 00 38.2 -1.1**
comp=Z,0.6nm,0.6s,baz=96,slow=5.3,SNR=4.0
comp=Z,12nm,0.8s
MKAR Makanchi Array 39.84 310 P **P 02 55 05.3 -1.1**
MKAR PcP **PcP 02 57 08.6 +0.3**
MAKZ Makanchi 40.05 310 P **P 02 55 07.6 -0.6**
MAKZ PcP **PcP 02 57 08.8 -0.3**
GSI Gunungsitoli 40.11 232 P **P 02 55 08.7 -0.2**
ZAA0 Zalesovo Array 40.19 321 P **P 02 55 07.9 -1.2**
ZAA0 PcP **PcP 02 57 09.2 -0.1**
ZALV Zalesovo Beam 40.19 321 P **P 02 55 07.4 -1.7**
comp=Z,7.9nm,0.6s,baz=107,slow=8.4,SNR=24
ZALV PcP **PcP 02 57 08.8 -0.5**
comp=Z,8.4nm,0.9s,baz=101,slow=3.8,SNR=9.5
ZALV ScP **ScP 03 00 39.5 -0.9**
comp=Z,2.2nm,0.5s,baz=108,slow=4.8,SNR=12
comp=Z,7.9nm,0.6s
MDSI Maura Dua 40.46 219 P **P 02 55 13.2 +1.5**
comp=Z,12nm,1.2s
MTN Manton Dam 41.57 176 P **P 02 55 20.7 -0.1**
MTN IAmb IAmb 02 55 21.9
comp=Z,34nm,0.8s
PMG Port Moresby 42.20 152 P **P 02 55 26.1 +0.2**
PMG IAmb IAmb 02 55 28.3
comp=Z,28nm,0.9s
TIXI Tiksi 42.82 0 P **P 02 55 30.0 -0.1**
TIXI PcP **PcP 02 57 15.9 -1.7**
KURK Kurchatov 42.96 315 P **P 02 55 30.8 -0.8**
KURK IAmb IAmb 02 55 32.2
comp=Z,16nm,0.8s
KURK **PP 02 57 15.2 0.0**
KURBB Kurchatov Arra 43.00 315 P **P 02 55 30.6 -1.3**
comp=Z,11nm,0.6s,baz=101,slow=8.8,SNR=56
KURBB PcP **PcP 02 57 17.2 -1.4**
comp=Z,9.5nm,1.0s,baz=110,slow=3.4,SNR=16
KURBB LR LR 03 13 14.1
comp=Z,50nm,18.0s,baz=124,slow=36
comp=Z,11nm,0.6s
BOOM Boomskoye usch 43.97 303 P **P 02 55 41.0 +0.9**
BOOM PcP **PcP 02 57 22.9 +0.5**
KSH Kashi 44.00 298 P **P 02 55 44.0 +3.7**
KSH pP pP 02 56 27.3 +6.0
KSH PcP **PP 02 57 25.6 -1.0**
KSH pmax pmax
comp=Z,5.0nm,0.7s
KNRA Kununurra 44.30 179 P **P 02 55 42.2 -0.3**
KNRA IAmb IAmb 02 55 44.2
comp=Z,20nm,0.7s
AAK Ala-Archa 45.03 303 P **P 02 55 46.6 -1.9**
comp=Z,1.9nm,0.4s,baz=134,slow=11,SNR=3.7
comp=Z,1.9nm,0.4s
AAK Ala-Archa 45.03 303 P **P 02 55 48.1 -0.4**
BILL Bilibino 45.16 19 P **P 02 55 49.4 +0.6**
BILL PcP **PcP 02 57 26.4 +0.7**
NRIK Noril'sk 46.76 341 P **P 02 56 00.4 -0.9**
comp=Z,4.4nm,0.5s,baz=129,slow=6.4,SNR=7.5
NRIK PcP **PcP 02 57 31.4 +0.1**
comp=Z,4.5nm,0.5s,baz=136,slow=3.0,SNR=6.8
comp=Z,4.4nm,0.5s
NRIK Noril'sk 46.76 341 P **P 02 56 00.7 -0.6**
NRIK PcP **PcP 02 57 31.4 +0.1**
KK31 Karatay Array 47.95 303 P **P 02 56 10.8 -0.1**
KK31 PcP **PcP 02 57 35.5 -0.7**
BRVK Borovoye 48.42 317 P **P 02 56 13.6 -0.7**
BRVK IAmb IAmb 02 56 15.8
comp=Z,16nm,0.9s
BRVK PcP **PcP 02 57 36.7 -0.9**
WRAB Tennant Creek 48.88 172 P **P 02 56 18.2 +0.1**
WRA Warramunga Arr 48.89 172 P **P 02 56 18.8 +0.5**
comp=Z,6.0nm,0.8s,baz=352,slow=8.4,SNR=39
WRA pP **pP 02 56 59.6 -0.4**
comp=Z,8.3nm,0.8s,baz=353,slow=8.4,SNR=11
comp=Z,6.0nm,0.8s
WR0 Warramunga Arr 48.93 172 P **P 02 56 19.1 +0.6**
WR0 pP **pP 02 57 00.5 +0.2**
CHGR Chuyangaron 49.35 298 IAmb IAmb 02 56 30.0
comp=Z,11nm,0.7s
KBL Kabul 50.09 292 P **P 02 56 27.5 0.0**
KBL pP **pP 02 57 10.6 +1.0**
ASAR Alice Springs 52.52 173 P **P 02 56 46.3 +0.9**
comp=Z,3.0nm,0.5s,baz=358,slow=6.6,SNR=46
ASAR pP **pP 02 57 27.6 0.0**
comp=Z,6.4nm,0.9s,baz=356,slow=7.2,SNR=9.0
ASAR ScP **ScP 03 01 32.6 +0.4**
comp=Z,1.6nm,0.9s,baz=6.5,slow=5.7,SNR=8.6
comp=Z,3.0nm,0.5s
ASAR Alice Springs 52.52 173 P **P 02 56 45.9 +0.6**
ASAR pP **pP 02 57 27.5 -0.2**
TNA Tin City 53.27 28 P **P 02 56 50.8 +0.5**
TNA IAmb IAmb 02 56 51.8
comp=Z,15nm,1.0s
TNA Tin City 53.27 28 P **P 02 56 50.9 +0.6**
baz=259
ABKAR Akbulak array 54.89 312 P **P 02 57 00.9 -1.4**
ABKAR pP **pP 02 57 44.5 -0.5**
ARU Arti 55.36 321 LR LR 03 25 46.4
comp=Z,32nm,19.6s,baz=102,slow=41
ARU Arti 55.36 321 P **P 02 57 04.0 -1.5**
ARU pP **pP 02 57 49.5 +1.3**
CHNA Chernabura Isl 56.80 41 P **P 02 57 15.6 -0.1**
baz=274
N16K Nishlik Lake 57.00 34 P **P 02 57 18.4 +1.3**
baz=271,SNR=8.8
O16K Kokwok River B 57.36 35 P **P 02 57 20.6 +1.1**
baz=272,SNR=8.9
P16K Nushagak River 57.44 36 P **P 02 57 21.1 +1.0**
baz=273
GCSA Galena City Sc 57.84 29 P **P 02 57 23.1 +0.3**
baz=270
GEYT Alibeck 58.03 299 P **P 02 57 24.4 -0.2**
P17K Kvichak River 58.23 36 P **P 02 57 26.7 +1.1**
baz=274,SNR=9.3
TTA Tatalina 58.25 31 P **P 02 57 26.7 +0.8**
TTA IAmb IAmb 02 57 27.4
comp=Z,12nm,0.9s
TTA Tatalina 58.25 31 P **P 02 57 26.6 +0.8**
baz=272,SNR=16
N18K Kilae Creek 58.41 34 IAmb IAmb 02 57 29.0
comp=Z,8.0nm,0.8s
N18K Kilae Creek 58.41 34 P **P 02 57 28.0 +1.1**
baz=273,SNR=6.7
SVW2 Sparrevohn 58.53 34 P **P 02 57 28.3 +0.6**
SVW2 IAmb IAmb 02 57 29.8
comp=Z,14nm,0.7s
O18K Koktuh Hills 58.80 35 P **P 02 57 30.7 +1.0**
baz=274,SNR=10
L19K White Mountain 58.82 32 IAmb IAmb 02 57 31.7
comp=Z,17nm,0.8s
L19K White Mountain 58.82 32 P **P 02 57 30.9 +1.2**
baz=273,SNR=21
P18K Big Mountain, 58.83 36 P **P 02 57 30.4 +0.5**
baz=275
J20K Nowinta River 59.03 30 P **P 02 57 32.5 +1.4**
baz=273,SNR=34
M19K Big River Lodg 59.05 33 IAmb IAmb 02 57 33.4
comp=Z,7.3nm,0.7s
M19K Big River Lodg 59.05 33 P **P 02 57 32.7 +1.4**
baz=274
N19K Bonanza Creek 59.09 34 IAmb IAmb 02 57 33.6
comp=Z,10nm,0.7s
N19K Bonanza Creek 59.09 34 P **P 02 57 32.6 +1.0**
baz=275,SNR=11
K20K Telida 59.11 31 P **P 02 57 32.9 +1.2**
baz=273,SNR=34
IMAR Indian Mountai 59.13 28 P **P 02 57 32.0 +0.2**
O19K Port Alsworth 59.22 35 P **P 02 57 33.7 +1.2**
baz=275
L20K Farewell, AK 59.25 32 P **P 02 57 33.8 +1.1**
baz=274,SNR=19

H21K **Melozitna Rive** 59.53 28 P P 02 57 35.3 +0.8
baz=273,SNR=42
M20K **Styx River** 59.65 33 IAmb IAmb 02 57 37.7
comp=Z,16nm,0.7s
M20K **Styx River** 59.65 33 P P 02 57 36.7 +1.2
baz=275,SNR=14
SII **Sitkinak Islan** 59.68 39 P P 02 57 36.2 +0.6
baz=277
Q19K **Cape Douglas,** 59.69 36 P P 02 57 35.5 -0.2
baz=276
CHUM **Lake Minchumin** 59.86 30 P P 02 57 38.2 +1.5
baz=275,SNR=19
I21K **Tanana** 59.90 29 P P 02 57 38.3 +1.3
baz=274,SNR=55
PPLA **Purkeypile** 60.00 31 P P 02 57 39.0 +1.1
baz=275,SNR=12
CAST **Castle Rocks** 60.00 31 P P 02 57 38.7 +1.0
CAST **Castle Rocks** 60.00 31 P P 02 57 38.7 +1.0
baz=275,SNR=22
O20K **Slope Mountain** 60.08 35 P P 02 57 39.2 +0.8
baz=277,SNR=6.5
OHAK **Old Harbor** 60.08 38 IAmb IAmb 02 57 39.2
comp=Z,17nm,0.7s
OHAK **Old Harbor** 60.08 38 P P 02 57 38.7 +0.3
baz=278,SNR=8.2
SPCR **Spurr Chakacha** 60.16 33 P P 02 57 40.1 +1.1
baz=276,SNR=6.9
Q20K **Shuyak Island** 60.37 36 P P 02 57 40.4 0.0
baz=278
KDAK **Kodiak Island** 60.38 37 P P 02 57 40.7 +0.3
comp=Z,29nm,0.6s,baz=290,slow=4.9,SNR=59
comp=Z,29nm,0.6s
KDAK **Kodiak Island** 60.38 37 P P 02 57 41.0 +0.6
KDAK **Kodiak Island** 60.38 37 P P 02 57 40.7 +0.3
baz=278
SKT **Skwentna** 60.39 32 P P 02 57 40.7 +0.3
baz=276,SNR=13
BPAW **Bear Paw Mtn.** 60.42 30 IAmb IAmb 02 57 42.4
comp=Z,16nm,0.8s
BPAW **Bear Paw Mtn.** 60.42 30 P P 02 57 41.4 +0.8
baz=276,SNR=23
MLY **Manley** 60.44 29 P P 02 57 41.7 +1.0
baz=275,SNR=38
COLD **Coldfoot** 60.47 26 P P 02 57 41.5 +0.7
baz=275
KTH **Kantishna Hill** 60.50 31 IAmb IAmb 02 57 42.8
comp=Z,23nm,1.1s
TOLK **Toolik Lake Re** 60.60 25 IAmb IAmb 02 57 43.3
comp=Z,17nm,0.8s
TOLK **Toolik Lake Re** 60.60 25 P P 02 57 42.4 +0.6
baz=274,SNR=17
TRF **Thorofare Moun** 60.80 31 P P 02 57 43.8 +0.4
TRF IAmb IAmb 02 57 45.4
comp=Z,9.8nm,0.9s
TRF **Thorofare Moun** 60.80 31 P P 02 57 43.6 +0.3
baz=277,SNR=8.3
SUA **Susitna One** 60.83 33 P P 02 57 43.5 0.0
baz=277,SNR=14
H23K **Yukon River** 60.86 28 P P 02 57 44.9 +1.3
baz=276,SNR=52
CUT **Chulitna** 60.93 32 P P 02 57 44.3 +0.3
baz=277
I23K **Minto, Yukon-K** 61.01 29 IAmb IAmb 02 57 46.5
comp=Z,28nm,1.3s
I23K **Minto, Yukon-K** 61.01 29 P P 02 57 45.5 +1.1
baz=276,SNR=12
BRSE **Bradley Lake S** 61.06 35 P P 02 57 46.3 +1.4
baz=278,SNR=7.3
M22K **Willow** 61.08 33 P P 02 57 45.5 +0.5
baz=278,SNR=8.9
NEA2 **Nenana** 61.20 29 P P 02 57 46.3 +0.5
NEA2 **Nenana** 61.20 29 P P 02 57 46.4 +0.6
baz=277,SNR=66
RC01 **Rabbit Creek A** 61.36 33 P P 02 57 47.9 +0.9
baz=278
MCK **McKinley** 61.36 30 P P 02 57 47.4 +0.4
baz=278,SNR=12
H24K **Noodor Dome** 61.54 28 P P 02 57 49.3 +1.2
baz=277,SNR=35
PMR **Palmer** 61.57 33 IAmb IAmb 02 57 49.1
comp=Z,14nm,0.9s
PMR **Palmer** 61.57 33 P P 02 57 48.0 -0.3
baz=279
WRH **Wood River Hil** 61.63 29 IAmb IAmb 02 57 51.5
comp=Z,16nm,0.7s
GHO **Glory Hole Cre** 61.65 32 IAmb IAmb 02 57 51.1
comp=Z,21nm,1.0s
SEW **Seward** 61.65 34 P P 02 57 49.0 +0.2
baz=279,SNR=5.2
WAT1 **Susitna Watana** 61.66 31 P P 02 57 49.2 +0.2
baz=278
TCOL **CIGO, UAF Yank** 61.67 29 P P 02 57 49.8 +0.8
baz=278
COLA **College** 61.68 29 P P 02 57 49.1 +0.2
CCB **Clear Creek Bu** 61.73 29 IAmb IAmb 02 57 50.5
comp=Z,9.7nm,0.7s
STKA **Stephens Creek** 61.74 167 P P 02 57 50.5 +0.8
comp=Z,5.5nm,0.7s,baz=342,slow=5.3,SNR=10
comp=Z,5.5nm,0.7s
POKR **Poker Plat Res** 61.82 29 P P 02 57 50.8 +0.8
baz=278,SNR=43
SML **Sawmill** 61.92 32 P P 02 57 50.7 0.0
baz=279,SNR=5.7
KNK **Knik Glacier** 61.92 33 P P 02 57 51.2 +0.5
baz=279,SNR=7.0
WAT6 **Susitna Watana** 62.07 31 P P 02 57 52.1 +0.2
baz=279,SNR=14
IL31 62.10 29 IAmb IAmb 02 57 54.0
comp=Z,9.4nm,0.7s
ILAR **Eielson Array** 62.10 29 P P 02 57 50.9 -0.9
comp=Z,6.0nm,0.7s,baz=268,slow=4.5,SNR=75
comp=Z,6.0nm,0.7s
HDA **Harding Lake** 62.13 29 P P 02 57 51.8 -0.3
baz=279,SNR=35
DHY **Denali Highway** 62.15 31 IAmb IAmb 02 57 54.0
comp=Z,10.0nm,0.7s
DHY **Denali Highway** 62.15 31 P P 02 57 52.3 -0.1
baz=279
M23K **Glacier View** 62.20 32 P P 02 57 52.8 +0.2
baz=280,SNR=6.9
SCM **Sheep Creek Mo** 62.38 32 P P 02 57 54.5 +0.6
baz=280,SNR=7.7
BMAR **Burnt Mountain** 62.61 26 P P 02 57 56.1 +0.9
K24K **Donnelly Dome** 62.74 30 P P 02 57 56.2 0.0
baz=280,SNR=12
J25K **Salcha River,** 62.77 29 P P 02 57 55.4 -1.0
baz=280,SNR=8.7
M24K **Tolsona, Glenn** 62.87 32 P P 02 57 57.9 +0.8
baz=281
PAX **Paxson** 63.03 31 IAmb IAmb 02 57 59.4
comp=Z,14nm,0.9s
PAX **Paxson** 63.03 31 P P 02 57 58.4 +0.3
baz=281,SNR=16
KLU **Klutina** 63.10 32 IAmb IAmb 02 57 60.0
comp=Z,13nm,0.9s
KLU **Klutina** 63.10 32 P P 02 57 59.1 +0.4
baz=281,SNR=5.7
RIDG **Independent Ri** 63.16 30 P P 02 57 58.8 -0.1
baz=281,SNR=16
HARP **HAARP** 63.28 31 P P 02 58 00.6 +0.8
baz=282
SCRK **Sand Creek** 63.48 30 P P 02 58 00.9 -0.2
SCRK IAmb IAmb 02 58 02.0
comp=Z,17nm,0.8s
SCRK **Sand Creek** 63.48 30 P P 02 58 01.2 +0.1
baz=282,SNR=29
J26L **Joseph Creek** 63.56 29 P P 02 58 01.1 -0.4
baz=282,SNR=44
N25K **Chitina, Valde** 63.70 32 P P 02 58 03.5 +0.9
baz=282
BMRM **Bremner River** 63.84 33 P P 02 58 03.8 +0.4
baz=283
L26K **Log Cabin Wild** 63.97 30 IAmb IAmb 02 58 05.9
comp=Z,19nm,1.1s
L26K **Log Cabin Wild** 63.97 30 P P 02 58 05.1 +0.9
baz=283,SNR=10.0
M26K **Nabesna, AK** 64.26 31 P P 02 58 06.9 +0.8
baz=283,SNR=26
K27K **Chicken** 64.29 29 P P 02 58 07.0 +0.7
baz=283
MCARA **McCarthy VSAT** 64.49 32 P P 02 58 08.8 +1.2
MCARA **McCarthy VSAT** 64.49 32 P P 02 58 08.6 +1.0
baz=284,SNR=6.6
L27K **Beaver Creek,** 64.63 30 IAmb IAmb 02 58 10.5
comp=Z,14nm,0.9s
L27K **Beaver Creek,** 64.63 30 P P 02 58 09.6 +1.1
baz=284,SNR=17
M27K **Edge Creek, AK** 64.78 31 IAmb IAmb 02 58 11.2
comp=Z,16nm,0.8s
M27K **Edge Creek, AK** 64.78 31 P P 02 58 10.5 +0.9
baz=284,SNR=11
BVCY **Beaver Creek** 65.22 31 P P 02 58 13.3 +0.9
baz=285,SNR=5.3
CTG **Chitna Glacier** 65.38 32 P P 02 58 14.5 +1.0
baz=285,SNR=6.5
CTGM **Chitina Glacie** 65.39 32 IAmb IAmb 02 58 15.2
comp=Z,16nm,0.8s
DAWY **Dawson** 65.43 29 IAmb IAmb 02 58 15.1
comp=Z,8.5nm,0.8s
DAWY **Dawson** 65.43 29 P P 02 58 14.3 +0.7
baz=286,SNR=13
I29M **Ogilvie Camp,** 65.53 27 IAmb IAmb 02 58 16.0
comp=Z,16nm,0.9s
I29M **Ogilvie Camp,** 65.53 27 P P 02 58 15.1 +0.9
baz=286,SNR=15
YUK3 **Moose Creek** 65.58 31 P P 02 58 15.6 +0.8
baz=286,SNR=6.4
YUK8 **Steele Glacier** 66.03 32 P P 02 58 19.1 +1.3
baz=286
PINM **Pinnacle** 66.14 33 P P 02 58 19.2 +0.9
baz=287
INK **Inuvik** 66.45 24 P P 02 58 20.1 +0.1
comp=Z,6.3nm,0.6s,baz=288,slow=7.0,SNR=13
comp=Z,6.3nm,0.6s
INK **Inuvik** 66.45 24 IAmb IAmb 02 58 21.2
comp=Z,15nm,1.1s
INK **Inuvik** 66.45 24 P P 02 58 20.4 +0.4
baz=289,SNR=8.8
YUK6 **Outpost Mounta** 66.78 32 P P 02 58 23.5 +0.9
baz=288
M30M **Minto, Yukon** 66.99 30 P P 02 58 24.8 +1.2
baz=288,SNR=7.1
N30M **Aishikik Lake** 67.21 31 P P 02 58 26.4 +1.4
baz=289
HYT **Haines Junctio** 67.22 32 IAmb IAmb 02 58 27.3
comp=Z,14nm,0.9s
HYT **Haines Junctio** 67.22 32 P P 02 58 26.3 +1.1
baz=289,SNR=8.3
KBZ **Khabaz** 67.53 309 P P 02 58 25.6 -1.6
comp=Z,5.7nm,1.1s,baz=55,slow=12,SNR=6.6
comp=Z,5.7nm,1.1s
ARCES **ARCESS Array B** 67.57 338 P P 02 58 26.1 -0.9
comp=Z,1.7nm,0.6s,baz=69,slow=6.6,SNR=7.6
comp=Z,1.7nm,0.6s
KIV **Kislovodsk** 67.60 309 P P 02 58 27.7 -0.1
KIV IAmb IAmb 02 58 31.6
comp=Z,21nm,1.4s
A36M **Sachs Harbour** 67.71 19 P P 02 58 28.2 +0.3
baz=295,SNR=12
OBN **Obninsk** 67.77 322 P P 02 58 29.6 +1.1
OBN IAmb IAmb 02 58 30.6
comp=Z,14nm,1.3s
N31M **Braeburn, Yuko** 67.79 31 P P 02 58 29.7 +1.1
baz=290
O30N **Mendenhall** 67.89 32 P P 02 58 30.3 +1.0
baz=290
M31M **Drury Creek, Y** 68.17 30 IAmb IAmb 02 58 32.7
comp=Z,9.0nm,0.9s
M31M **Drury Creek, Y** 68.17 30 P P 02 58 31.6 +0.6
baz=291,SNR=7.9
PLBC **Pleasant Camp** 68.21 33 P P 02 58 32.0 +0.8
baz=290
FARO **Faro, Yukon** 68.61 30 P P 02 58 34.9 +1.1
baz=291,SNR=32
SKAG **Skagway** 68.70 33 P P 02 58 35.5 +1.3
baz=291
C36M **Paulatuk** 69.22 21 P P 02 58 37.5 +0.3
baz=297,SNR=8.0
MMPY **Sheldon Lake,** 69.37 29 P P 02 58 39.5 +1.2
baz=293,SNR=17
JIS **Juneau Island** 69.59 34 IAmb IAmb 02 58 42.0
comp=Z,13nm,0.8s
P33M **Teslin, Yukon** 69.61 32 IAmb IAmb 02 58 42.0
comp=Z,18nm,1.0s
P33M **Teslin, Yukon** 69.61 32 P P 02 58 41.2 +1.2
baz=293,SNR=8.0
GURO **Guroymak-BITLI** 69.92 304 P P 02 58 41.8 -0.6
FINES **FINESS Array B** 70.59 330 P P 02 58 43.5 -2.2
comp=Z,2.3nm,0.5s,baz=68,slow=5.7,SNR=29
FINES LR LR 03 34 05.2
comp=Z,28nm,18.9s,baz=30,slow=39
comp=Z,2.3nm,0.5s
TGTN **Hyland Airport** 71.10 30 P P 02 58 50.1 +1.2
baz=296,SNR=5.5
WRAK **Wrangell Islan** 71.33 35 P P 02 58 51.7 +1.4
baz=294
DLBC **Dease Lake** 71.63 33 IAmb IAmb 02 58 54.6
comp=Z,9.1nm,0.9s
DLBC **Dease Lake** 71.63 33 P P 02 58 53.7 +1.5
baz=295
T35M **Bob Quinn** 72.15 34 P P 02 58 57.0 +1.8
baz=296
DIB **Dawson Inlet,** 72.60 38 IAmb IAmb 02 58 59.2
comp=Z,14nm,0.7s
RES **Resolute Bay** 72.95 11 P P 02 58 59.5 0.0
RAYN **Ar Rayn** 73.02 288 P P 02 59 00.3 -0.7
AKASG **Malin Array Be** 73.55 319 P P 02 59 01.6 -1.9
comp=Z,0.7nm,0.5s,baz=51,slow=6.4,SNR=6.8
AKASG pP pP 02 59 47.1 -1.4
comp=Z,1.5nm,0.6s,baz=48,slow=5.8,SNR=3.3
comp=Z,0.7nm,0.5s
AKASG **Malin Array Be** 73.55 319 P P 02 59 03.5 0.0
AKASG pP pP 02 59 50.2 +1.7
BR131 **Keskin Array S** 75.45 307 P P 02 59 14.0 -0.9
BR131 pP pP 03 00 01.4 +1.2
BRTR **Keskin Array B** 75.45 307 P P 02 59 13.8 -1.0
comp=Z,2.7nm,0.7s,baz=100,slow=5.0,SNR=26
comp=Z,2.7nm,0.7s
YKA **Yellowknife Ar** 76.12 25 P P 02 59 18.2 +0.2
comp=Z,19nm,0.9s,baz=306,slow=5.8,SNR=85
comp=Z,19nm,0.9s
HFS **Hagfors** 76.50 332 P P 02 59 18.3 -1.9
comp=Z,1.2nm,0.4s,baz=90,slow=5.9,SNR=16
HFS LR LR 03 39 37.1
comp=Z,21nm,18.9s,baz=50,slow=41
comp=Z,1.2nm,0.4s
NB2 **NORSAR Subarra** 76.96 334 P P 02 59 21.0 -1.9
comp=Z,1.7nm,0.6s,baz=52,slow=5.9
NOA **NORSAR Array B** 76.96 334 P P 02 59 21.4 -1.5
comp=Z,1.1nm,0.6s,baz=52,slow=5.7,SNR=9.0
comp=Z,1.1nm,0.6s
BURAR **Bucovina Array** 77.30 317 P P 02 59 24.3 -0.8
BORA **Eskisehir** 77.58 309 P P 02 59 25.3 -1.5
SUMG **Summit** 78.40 356 P P 02 59 30.7 -0.4
SUMG **Summit** 78.40 356 *i* P P 02 59 30.4 -0.7
SUMG IAmb IAmb 02 59 32.1
comp=Z,12nm,0.6s
ATD **Arta Tunnel** 80.56 278 LR LR 03 36 22.5
comp=Z,23nm,18.9s,baz=9.0,slow=36
D03D **Eldon** 80.59 41 P P 02 59 44.1 +1.2
baz=303
DPC **Dobruska-Polom** 80.86 323 *e*P P 02 59 46.7 +2.5
VRAC **Vranov** 81.30 322 P P 02 59 46.3 -0.2
comp=Z,2.6nm,0.9s,baz=60,slow=6.0
comp=Z,2.6nm,0.9s
MODS **Modra-Piesok** 81.45 321 *e*P P 02 59 49.5 +2.1
MORH **Mrgy, Hungar** 81.88 319 P P 02 59 51.0 +1.4
ICESG **Greenland Ices** 81.92 356 *i* P P 02 59 48.9 -0.9
CLL **Collm** 82.01 325 P P 02 59 50.0 -0.2
CLL **Collm** 82.01 325 *i* P P 02 59 50.0 -0.2
comp=Z,7.0nm,1.2s
CLL *i* pP pP 03 00 37.9 +1.8
CLL *e*S S 03 09 48.0 -0.3
CLL *e*PS PnS 03 11 06.0 +3.1
CLL *e*(SSSS) 03 22 00.0
LTY **Liberty** 82.12 40 IAmb IAmb 02 59 52.6
comp=Z,16nm,1.4s
B08A **Colville Reser** 82.23 38 IAmb IAmb 02 59 53.2
comp=Z,14nm,0.8s
KOVH **Kovagotottos** 82.27 319 P P 02 59 52.1 +0.4
EDM **Edmonton** 82.34 32 IAmb IAmb 02 59 53.5
comp=Z,27nm,1.2s
CONA **Conrad Observa** 82.49 321 *e*P P 02 59 55.2 +2.3
comp=Z,7.0nm,1.2s
HOOD **Mount Hood Mea** 82.64 42 IAmb IAmb 02 59 55.9
comp=Z,35nm,1.2s
CKRC **Cesky Krumlov** 82.81 323 *e*P P 02 59 54.9 +0.5
E07A **Sunnyside** 82.97 40 P P 02 59 56.5 +1.2
E07A IAmb IAmb 02 59 57.5
comp=Z,19nm,1.1s
KHC **Kasperske Hory** 83.01 323 *e*P P 02 59 55.8 +0.3
I04A **Tendick Farm,** 83.03 44 P P 02 59 57.0 +1.2
baz=304,SNR=5.8
ARSA **Arzberg** 83.07 321 *e*P P 02 59 55.4 -0.4
comp=Z,4.9nm,1.2s
GERES **GERESS Array B** 83.12 323 P P 02 59 55.2 -0.9
comp=Z,0.9nm,0.7s,baz=54,slow=6.8,SNR=13
GERES pP pP 03 00 39.5 -2.6
comp=Z,1.7nm,0.5s,baz=28,slow=3.5,SNR=8.2
comp=Z,0.9nm,0.7s
GERES **GERESS Array B** 83.12 323 P P 02 59 54.9 -1.2
GERES pP pP 03 00 41.1 -1.1
C09A **Chrisman Ranch** 83.14 39 IAmb IAmb 02 59 58.0
comp=Z,14nm,1.1s
D08A **Wollman Farm,** 83.21 39 IAmb IAmb 02 59 58.3
comp=Z,12nm,0.8s
HAWA **Hanford** 83.25 40 IAmb IAmb 02 59 58.9
comp=Z,15nm,0.9s
F07A **Phinny Hill Vi** 83.31 41 IAmb IAmb 02 59 59.3
comp=Z,14nm,0.9s
I05D **Terrebonne, OR** 83.37 43 P P 02 59 58.8 +1.3
baz=304
MOA **Molln** 83.41 322 *e*P P 02 59 58.1 +0.6
comp=Z,2.7nm,0.9s
E08A **Dider Farm, El** 83.46 40 IAmb IAmb 02 59 59.9
comp=Z,11nm,0.9s
NEW **Newport** 83.48 38 LR LR 03 39 52.0
comp=Z,26nm,18.1s,baz=347,slow=37
NEW **Newport** 83.48 38 IAmb IAmb 02 59 59.7
comp=Z,16nm,1.1s
NEW **Newport** 83.48 38 P P 02 59 58.5 +0.6
baz=307
J04D **Umpqua Nationa** 83.52 44 P P 02 59 59.4 +0.9
baz=304,SNR=7.3
PDG **Podgorica** 83.60 315 ⇑P P 02 59 57.2 -1.4
SOKA **Soboth** 83.67 320 *e*P P 02 59 59.8 +0.8
comp=Z,5.8nm,1.2s
BORG **Borgarnes** 83.71 347 P P 02 59 58.6 -0.1
BORG IAmb IAmb 03 00 04.2
comp=Z,24nm,1.4s
BORG pP pP 03 00 45.6 +0.9
BIOA **Bad Ischl, Aus** 83.84 322 *e*P P 03 00 00.8 +1.1
comp=Z,4.7nm,1.2s
GRA1 **Grafenberg Arr** 83.89 324 IAmb IAmb 03 00 02.3
comp=Z,26nm,1.5s
GRFO **Grafenberg** 83.90 324 P P 03 00 00.7 +0.8
PINE **Pine Mountain** 83.92 43 IAmb IAmb 03 00 03.0
comp=Z,22nm,0.9s
CRES **Cresnjev** 83.93 320 *i* P P 03 00 00.8 +0.6
E09A **Wood Farm, Sta** 83.96 40 IAmb IAmb 03 00 02.5
comp=Z,19nm,1.2s
L04D **Klamath Falls** 83.97 45 IAmb IAmb 03 00 02.8
comp=Z,24nm,1.1s
L04D **Klamath Falls** 83.97 45 P P 03 00 01.4 +0.8
baz=304
J05D **Fort Rock, OR** 84.03 43 P P 03 00 02.6 +1.6
baz=304,SNR=10
OBKA **Obir** 84.04 321 *e*P P 03 00 01.5 +0.6
comp=Z,1.7nm,0.7s
K04D **Chiloquin, OR** 84.08 44 P P 03 00 02.9 +1.7
baz=304
G08A **Pilot Rock** 84.22 41 P P 03 00 02.3 +0.5
BOJS **Bojanci** 84.24 319 *i* P P 03 00 02.3 +0.6
SFJD **Kangerlussuaq** 84.42 360 P P 03 00 01.0 -1.2
comp=Z,10nm,0.7s,baz=301,slow=3.1,SNR=9.8
comp=Z,10nm,0.7s
SFJD **Kangerlussuaq** 84.42 360 IAmb IAmb 03 00 01.9
comp=Z,14nm,0.9s
SFJD **Kangerlussuaq** 84.42 360 *i* P P 03 00 00.0 -2.2
SFJD IAmb IAmb 03 00 01.5
comp=Z,8.5nm,0.8s
K05A **Summer Lake** 84.55 44 P P 03 00 04.6 +0.9
K05A IAmb IAmb 03 00 06.1
comp=Z,16nm,1.1s
WALA **Waterton Lakes** 84.68 36 IAmb IAmb 03 00 06.1
comp=Z,8.1nm,0.8s
DY2G **Dye2** 84.86 358 *i* P P 03 00 03.8 -1.0
DY2G IAmb IAmb 03 00 06.0
comp=Z,16nm,0.8s
ABTA **Abfaltersbach** 85.02 322 *e*P P 03 00 04.7 -1.1
comp=Z,5.3nm,1.2s
WATA **Walderalm** 85.17 322 *e*P P 03 00 06.0 -0.6
comp=Z,2.4nm,1.4s
WTTA **Wattenberg** 85.18 322 *e*P P 03 00 06.4 -0.3
comp=Z,5.0nm,1.0s
STAL **STALIGIAL** 85.21 321 P P 03 00 05.8 -0.8
JTMT **Jette** 85.31 37 IAmb IAmb 03 00 09.4
comp=Z,16nm,1.2s
MOD **Modoc Plateau** 85.38 44 IAmb IAmb 03 00 09.9
comp=Z,11nm,0.8s
MOTA **Moosalm** 85.41 323 *e*P P 03 00 07.2 -0.6
comp=Z,1.6nm,0.6s
BMO **Blue Mountains** 85.42 41 IAmb IAmb 03 00 09.7
comp=Z,12nm,1.1s
J08A **Circle Bar Ran** 85.63 42 IAmb IAmb 03 00 11.2
comp=Z,17nm,0.7s
FETA **Feichten** 85.82 323 *e*P P 03 00 09.1 -0.7
comp=Z,3.7nm,1.0s
CTI **Castel Tesino** 85.92 321 P P 03 00 09.5 -0.8
PLID **Pearl Lake** 86.02 40 IAmb IAmb 03 00 14.6
comp=Z,6.0nm,0.7s
MSO **Missoula** 86.07 38 IAmb IAmb 03 00 12.5
comp=Z,7.0nm,0.9s
MSO **Missoula** 86.07 38 P P 03 00 12.1 +1.1
baz=309
EKA **Eskdalemuir Ar** 86.40 335 P P 03 00 10.8 -1.5
comp=Z,0.8nm,0.4s,baz=34,slow=5.3,SNR=11
comp=Z,0.8nm,0.4s
DAVOX **Davos/Dischmat** 86.42 323 P P 03 00 12.2 -0.5
comp=Z,3.4nm,0.6s,baz=14,slow=1.2,SNR=11
comp=Z,3.4nm,0.6s
BEKR **Beckworth** 86.51 46 IAmb IAmb 03 00 15.1
comp=Z,8.8nm,0.8s
FRB **Frobisher Bay** 86.73 7 LR LR 03 41 24.1
comp=Z,13nm,18.3s,baz=198,slow=37
MFID **Camas Ranch** 87.14 41 IAmb IAmb 03 00 18.5
comp=Z,11nm,0.9s
AQU **L'Aquila** 87.19 318 P P 03 00 16.3 -0.1
PAHR **Pah Rah Range** 87.22 46 IAmb IAmb 03 00 18.7
comp=Z,8.5nm,0.9s
PNTR **Pine Nut** 87.44 46 IAmb IAmb 03 00 20.2
comp=Z,8.5nm,1.0s
EGMT **Eagleton** 87.46 35 P P 03 00 18.5 +0.9
baz=312
CMB **Columbia Colle** 87.55 47 P P 03 00 18.1 -0.1
DLMT **Dillon** 87.72 38 IAmb IAmb 03 00 21.2
comp=Z,17nm,0.8s
HLID **Hailey** 87.86 40 IAmb IAmb 03 00 22.4
comp=Z,12nm,0.9s
HLID **Hailey** 87.86 40 P P 03 00 21.1 +1.4
baz=309
BOZ **Bozeman (W)** 88.09 37 IAmb IAmb 03 00 22.7
comp=Z,7.4nm,1.0s
BOZ **Bozeman (W)** 88.09 37 P P 03 00 21.6 +0.9
baz=311
BMN **Battle Mountai** 88.12 44 IAmb IAmb 03 00 23.6
comp=Z,8.0nm,1.0s
KVN **Kaiserville** 88.41 46 IAmb IAmb 03 00 24.7
comp=Z,9.7nm,1.1s
NVAR **Mina Array Bea** 88.65 46 P P 03 00 24.6 +1.0
comp=Z,1.9nm,0.8s,baz=294,slow=5.3,SNR=19
comp=Z,1.9nm,0.8s
NV11 **Mina Array Sit** 88.74 46 P P 03 00 24.0 +0.1
YHL **Hebgen Lake** 88.81 38 IAmb IAmb 03 00 26.9
comp=Z,9.9nm,1.0s
LKWY **Lake** 89.42 38 IAmb IAmb 03 00 31.2
comp=Z,19nm,1.1s
H17A **Grant Village** 89.44 38 IAmb IAmb 03 00 31.4
comp=Z,17nm,1.1s
H17A **Grant Village** 89.44 38 P P 03 00 30.7 +3.5
baz=312
FLWY **Flagg Ranch** 89.58 38 IAmb IAmb 03 00 31.1
comp=Z,17nm,1.1s
RLMT **Red Lodge** 89.65 37 IAmb IAmb 03 00 30.5
comp=Z,15nm,1.1s
RLMT **Red Lodge** 89.65 37 P P 03 00 29.7 +1.5
baz=312
DGMT **Dagmar** 89.82 32 P P 03 00 28.7 +0.1
DGMT **Dagmar** 89.82 32 P P 03 00 29.9 +1.2
baz=316
TPAW **Teton Pass** 89.83 39 IAmb IAmb 03 00 31.8
comp=Z,6.3nm,0.9s
LAO **LASA Array** 90.12 34 P P 03 00 32.0 +1.9
baz=315
R11A **Troy Canyon, C** 90.40 45 IAmb IAmb 03 00 33.9
comp=Z,5.4nm,0.8s
R11A **Troy Canyon, C** 90.40 45 P P 03 00 33.2 +1.5
baz=308,SNR=12
MPMC **Manual Prospec** 90.58 48 P P 03 00 33.7 +1.0
baz=307
HWUT **Hardware Ranch** 90.72 40 IAmb IAmb 03 00 35.8
comp=Z,15nm,1.1s
FURC **Furnace Creek,** 90.74 47 P P 03 00 34.7 +1.7
baz=308

TPNV	**Topopah Spring**	**90.84**	**46**	IAmb	IAmb	03 00 35.8		
	comp=Z,6.9nm,0.9s							
TPNV	**Topopah Spring**	**90.84**	**46**	P	**P**	**03 00 35.2**	**+1.4**	
	baz=308,SNR=10							
DUG	**Dugway, Tooele**	**90.91**	**42**	IAmb	IAmb	03 00 36.6		
	comp=Z,11nm,0.8s							
DUG	**Dugway, Tooele**	**90.91**	**42**	P	**P**	**03 00 35.9**	**+1.8**	
	baz=310							
QSM	**Queen of Sheba**	**91.04**	**47**	IAmb	IAmb	03 00 36.7		
	comp=Z,8.5nm,1.0s							
BW06	**Boulder Array**	**91.08**	**39**	IAmb	IAmb	03 00 36.3		
	comp=Z,5.0nm,0.8s							
BW06	**Boulder Array**	**91.08**	**39**	P	**P**	**03 00 35.4**	**+0.5**	
	baz=312							
PD31	**Pinedale Array**	**91.08**	**39**	IAmb	IAmb	03 00 36.3		
	comp=Z,5.0nm,0.9s							
PDAR	**Pinedale Array**	**91.08**	**39**	P	**P**	**03 00 35.6**	**+0.8**	
	comp=Z,4.7nm,0.8s,baz=349,slow=0.8,SNR=32							
	comp=Z,4.7nm,0.8s							
PDAR	**Pinedale Array**	**91.08**	**39**	P	**P**	**03 00 34.6**	**-0.2**	
PRN	**Pahroc Range**	**91.31**	**45**	IAmb	IAmb	03 00 38.4		
	comp=Z,6.1nm,0.9s							
PSUT	**Pine Spring**	**91.34**	**44**	IAmb	IAmb	03 00 38.3		
	comp=Z,7.0nm,0.8s							
JLU	**Jordanelle**	**91.44**	**41**	IAmb	IAmb	03 00 38.9		
	comp=Z,5.0nm,1.0s							
GSC	**Goldstone, Bar**	**91.48**	**48**	IAmb	IAmb	03 00 38.8		
	comp=Z,9.9nm,1.1s							
GSC	**Goldstone, Bar**	**91.48**	**48**	P	**P**	**03 00 38.0**	**+1.3**	
	baz=308,SNR=6.9							
NLU	**North Lily Min**	**91.50**	**42**	IAmb	IAmb	03 00 39.4		
	comp=Z,9.2nm,0.9s							
MPU	**Maple Canyon**	**91.72**	**42**	IAmb	IAmb	03 00 40.2		
	comp=Z,7.3nm,0.9s							
SHPR	**Sheep Range**	**91.80**	**46**	IAmb	IAmb	03 00 40.7		
	comp=Z,6.4nm,0.9s							
TUQ	**Turquoise Moun**	**91.97**	**47**	P	**P**	**03 00 40.4**	**+1.4**	
	baz=308							
ULM	**Lac du Bonnet**	**92.04**	**27**	P	**P**	**03 00 38.3**	**-0.5**	
	comp=Z,11nm,0.9s,baz=329,slow=4.3,SNR=16							
	comp=Z,11nm,0.9s							
HEC	**Hector,Ludlow**	**92.08**	**48**	P	**P**	**03 00 40.8**	**+1.4**	
	baz=308							
CCUT	**Cedar City**	**92.27**	**44**	P	**P**	**03 00 40.6**	**+0.1**	
RDMU	**Red Mountain**	**92.54**	**40**	IAmb	IAmb	03 00 43.7		
	comp=Z,5.0nm,0.9s							
GMRC	**Granite Mounta**	**92.54**	**48**	P	**P**	**03 00 43.0**	**+1.4**	
	baz=308,SNR=6.6							
MTPU	**Mount Pierson**	**92.67**	**43**	IAmb	IAmb	03 00 45.4		
	comp=Z,4.7nm,0.8s							
LCMT	**Little Creek M**	**92.68**	**45**	IAmb	IAmb	03 00 44.7		
	comp=Z,5.8nm,1.0s							
Q16A	**Castle Valley**	**92.71**	**42**	IAmb	IAmb	03 00 45.0		
	comp=Z,5.0nm,0.9s							
PFO	**Pinyon Flats O**	**92.73**	**49**	P	**P**	**03 00 43.4**	**+0.8**	
PFO	**Pinyon Flats O**	**92.73**	**49**	P	**P**	**03 00 43.7**	**+1.2**	
	baz=308,SNR=7.2							
TPFO	**Pinon Flats**	**92.74**	**49**	P	**P**	**03 00 43.8**	**+1.3**	
	baz=308,SNR=9.7							
K22A	**Casper**	**92.79**	**37**	IAmb	IAmb	03 00 44.1		
	comp=Z,4.9nm,0.8s							
K22A	**Casper**	**92.79**	**37**	P	**P**	**03 00 43.3**	**+0.7**	
	baz=314							
BELC	**Belle Mtn. Jos**	**92.80**	**49**	P	**P**	**03 00 43.9**	**+1.0**	
	baz=308,SNR=6.3							
PKCU	**Pink Cliffs**	**92.98**	**44**	IAmb	IAmb	03 00 46.8		
	comp=Z,12nm,1.3s							
RSSD	**Black Hills**	**93.03**	**35**	P	**P**	**03 00 44.5**	**+0.7**	
RSSD				IAmb	IAmb	03 00 46.2		
	comp=Z,5.8nm,0.8s							
RSSD	**Black Hills**	**93.03**	**35**	P	**P**	**03 00 44.5**	**+0.7**	
	baz=316							
RWWY	**Rawlins**	**93.09**	**38**	IAmb	IAmb	03 00 46.3		
	comp=Z,6.5nm,1.0s							
MONP2	**Monument Peak**	**93.19**	**50**	P	**P**	**03 00 45.9**	**+1.1**	
	baz=308							
IRM	**Iron Mountain**	**93.26**	**48**	P	**P**	**03 00 46.3**	**+1.4**	
	baz=308,SNR=7.7							
BC3	**Big Chuckawall**	**93.37**	**49**	P	**P**	**03 00 46.6**	**+1.2**	
	baz=308,SNR=7.4							
CBX	**Cerro Bola**	**93.38**	**50**	IAmb	IAmb	03 00 47.9		
	comp=Z,5.6nm,0.8s							
W13A	**Hualapai Mount**	**93.49**	**47**	IAmb	IAmb	03 00 48.2		
	comp=Z,5.9nm,1.1s							
IKP	**In-Ko-Pah, Jac**	**93.55**	**50**	P	**P**	**03 00 47.8**	**+1.6**	
	baz=308							
O20A	**White River Ci**	**93.58**	**40**	IAmb	IAmb	03 00 48.1		
	comp=Z,7.2nm,1.0s							
O20A	**White River Ci**	**93.58**	**40**	P	**P**	**03 00 46.4**	**0.0**	
	baz=313							
U15A	**North Rim**	**93.64**	**45**	IAmb	IAmb	03 00 49.8		
	comp=Z,5.7nm,0.7s							
YUH	**Yuha Desert**	**93.67**	**50**	IAmb	IAmb	03 00 48.9		
	comp=Z,6.1nm,0.8s							
BLYC	**Blythe**	**93.92**	**48**	IAmb	IAmb	03 00 50.7		
	comp=Z,7.4nm,0.9s							
PV23	**Carpenter Ridg**	**94.28**	**41**	P	**P**	**03 00 50.5**	**+0.8**	
PV23				IAmb	IAmb	03 00 52.0		
	comp=Z,9.6nm,1.0s							
PHWY	**Pilot Hill**	**94.30**	**38**	IAmb	IAmb	03 00 51.4		
	comp=Z,4.4nm,1.1s							
N23A	**Red Feather La**	**94.32**	**38**	P	**P**	**03 00 51.2**	**+1.3**	
	baz=315							
B35A	**Bob, Littlefor**	**94.40**	**27**	IAmb	IAmb	03 00 51.5		
	comp=Z,8.7nm,1.1s							
WUAZ	**Wupatki**	**94.80**	**45**	IAmb	IAmb	03 00 54.3		
	comp=Z,4.3nm,1.0s							
WUAZ	**Wupatki**	**94.80**	**45**	P	**P**	**03 00 53.0**	**+1.0**	
	baz=311							
SMCO	**Snowmass**	**94.95**	**40**	P	**P**	**03 00 54.1**	**+1.1**	
SMCO				IAmb	IAmb	03 00 55.0		
	comp=Z,2.8nm,0.8s							
F33A	**5 Mile Ranch,**	**95.35**	**30**	IAmb	IAmb	03 00 55.1		
	comp=Z,6.8nm,1.1s							
SCHQ	**Schefferville**	**95.62**	**9**	P	**P**	**03 00 54.5**	**-0.7**	
	comp=Z,6.2nm,0.8s,baz=350,slow=6.6,SNR=12							
	comp=Z,6.2nm,0.8s							
TXAR	**Lajitas Array**	**103.76**	**45**	Pdiff	**Pdif**	**03 01 33.3**	**+1.1**	
	comp=Z,0.3nm,0.6s,baz=307,slow=3.0,SNR=5.9							
TORD	**Torodi Ar. Bea**	**113.61**	**301**	PKiKP	**PKiKP**	**03 06 07.1**	**-0.8**	
	comp=Z,2.5nm,0.8s,baz=13,slow=2.8,SNR=14							
BOSA	**Boshof**	**113.74**	**249**	PKiKP	**PKiKP**	**03 06 08.3**	**+0.5**	
	comp=Z,2.4nm,0.8s,baz=20,slow=2.4,SNR=4.6							
DBIC	**Dimbokro**	**122.69**	**301**	PKP	**PKPdf**	**03 06 24.9**	**-0.4**	
	comp=Z,6.9nm,0.7s,baz=38,slow=1.6,SNR=8.8							
BOSC	**San Juan Bosco**	**143.91**	**50**	PKPdf	PKPbc	03 07 03.8	+0.4	
LPAZ	**La Paz**	**160.37**	**54**	PKP	**PKPdf**	**03 07 31.0**	**+1.2**	
	comp=Z,2.2nm,1.0s,baz=10.0,slow=4.0,SNR=7.5							
LPAZ				PKPab	**PKPab**	**03 08 10.2**	**-1.3**	
	comp=Z,2.1nm,1.0s,baz=324,slow=6.5,SNR=4.8							
PLCA	**Paso Flores**	**160.59**	**132**	PKPab	**PKPab**	**03 08 12.8**	**+1.5**	
	comp=Z,1.6nm,0.9s,baz=225,slow=8.6,SNR=3.3							

MAN 05 02:55:29.8, 9°.95N×122°.85E, h25km, mb4.1, ML2.9, MS2.6, Negros

*IDC **05** 02:57:50.1±1.7, 6°.45S×129°.86E, h0km, mb4.1/2, mbtmp4.1/4, ML4.2/2, MS3.3/1, Error ellipse: s-maj=101.3km s-min=29.1km az=70.0*
*NEIC **05** 02:58:06.7±1.9, 6°.89S±0°.09×130°.0E±0°.1, h190km±8km, mb4.1/7, Error ellipse: s-maj=17.1km s-min=13.2km az=92.0*

ISC 05 02:58:06.3±0.8, 7°.03S±0°.08×129°.99E±0°.10, h200km, n25, σ2§09/25, mb4.0/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.61**	**126**				**Pn**	**02 58 41.6**	**+0.6**
FAKI	**Fak Fak**	**4.67**	**29**				**Pn**	**02 59 14.9**	**-1.6**
MTN	**Manton Dam**	**5.88**	**169**				**Pn**	**02 59 32.8**	**+0.7**
SOEI	**Soe**	**6.27**	**244**	Pn		Pn	**Pn**	**02 59 37.5**	**+0.2**
MMRI	**Maumere**	**7.84**	**258**	Pn		Pn	**Pn**	**02 59 57.8**	**+0.2**
KNRA	**Kununurra**	**8.67**	**188**				**Pn**	**03 00 08.1**	**-0.3**
WB0	**Warramunga Ar**	**13.36**	**162**				**Pn**	**03 01 09.2**	**+0.8**
WRAB	**Tennant Creek**	**13.50**	**162**				**Pn**	**03 01 11.5**	**+1.3**
WRA	**Warramunga Arr**	**13.51**	**162**	Pn			**Pn**	**03 01 10.9**	**+0.6**
	1.2nm,0.3s,baz=342,slow=11,SNR=36								
WRA				Sn			**S**	**03 03 35.9**	**-5.1**
	2.3nm,0.3s,baz=330,slow=23,SNR=12								
	1.6nm,0.3s								
WB2	**Warramunga Arr**	**13.51**	**162**				**Pn**	**03 01 11.8**	**+1.5**
WR0	**Warramunga Arr**	**13.59**	**161**	Pn		Pn	**Pn**	**03 01 12.3**	**+1.0**
AS31	**Alice Springs**	**16.96**	**168**	P		P	**Pn**	**03 01 54.5**	**+2.2**
AS31				IAmb		IAmb	IAmb	03 01 58.0	
	comp=Z,2.8nm,0.4s								
ASAR	**Alice Springs**	**16.96**	**168**	P		P	**Pn**	**03 01 56.6**	**+4.3**
	comp=Z,1.0nm,0.3s,baz=345,slow=11,SNR=66								
	comp=Z,4.6nm,0.7s								
ASAR	**Alice Springs**	**16.96**	**168**	P		P	**Pn**	**03 01 53.9**	**+1.7**
SBUM	**Sibu**	**20.08**	**297**	P		P	**P**	**03 02 24.0**	**-0.7**
SBUM				IAmb		IAmb	IAmb	03 02 28.0	
	comp=Z,7.6nm,0.8s								
DZM	**Mont Dzumac**	**38.19**	**117**	LR		LR		03 20 48.1	
	comp=Z,42nm,18.2s,baz=327,slow=36								
ENH	**Enshi**	**41.99**	**333**	P		P	**P**	**03 05 37.1**	**-0.9**
MK31	**Makanchi Array**	**68.25**	**327**	P		P	**P**	**03 08 46.6**	**+1.1**
MKAR	**Makanchi Array**	**68.25**	**327**	P		P	**P**	**03 08 49.8**	**+4.3**
	comp=Z,1.4nm,0.5s,baz=116,slow=7.7,SNR=20								
	comp=Z,1.4nm,0.5s								
MKAR	**Makanchi Array**	**68.25**	**327**	P		P	**P**	**03 08 46.8**	**+1.3**
MAKZ	**Makanchi**	**68.43**	**327**	P		P	**P**	**03 08 47.5**	**+0.8**
MAKZ				IAmb		IAmb	IAmb	03 10 03.0	
	comp=Z,4.6nm,1.6s								
BOOM	**Boomskoye usch**	**69.56**	**320**	P		P	**P**	**03 08 54.1**	**+0.2**
BOOM				IAmb		IAmb	IAmb	03 10 34.5	
	comp=Z,2.5nm,1.1s								
ZALV	**Zalesovo Beam**	**71.61**	**334**	P		P	**P**	**03 09 09.0**	**+3.3**
	comp=Z,0.6nm,0.5s,baz=142,slow=5.4,SNR=2.0								
	comp=Z,0.6nm,0.5s								
ZALV	**Zalesovo Beam**	**71.61**	**334**	P		P	**P**	**03 09 06.5**	**+0.8**
GYA0B	**ALIBECK ARRAY**	**80.22**	**310**	P		P	**P**	**03 09 55.3**	**+0.3**
GYA0B				IAmb		IAmb	IAmb	03 12 44.9	
	comp=Z,3.6nm,0.8s								

*IDC **05** 02:59:15.5±1.2, 45°.67N×27°.88W, h0km, mb3.7/5, mbtmp3.6/6, ML3.4/1, MS3.2/24, Error ellipse: s-maj=49.8km s-min=24.5km az=10.0*

ISC 05 02:59:17.0±1.1, 45°.6N±0°.3×27°.9W±0°.2, h10km, n28, σ1§69/9, mb3.7/5, MS3.2/21, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
EKA	**Eskdalemuir Ar**	**18.42**	**49**	LR		LR	LR	03 09 20.7	
	comp=Z,60nm,19.9s,baz=195,slow=33								
ESDC	**Sonseca Array**	**18.56**	**100**	P		P	**Pn**	**03 03 35.4**	**+1.3**
	baz=292,slow=12,SNR=6.5								
ESDC				LR		LR	LR	03 09 11.4	
	comp=Z,87nm,19.6s,baz=294,slow=32								
	0.3nm,0.7s								
BORG	**Borgarnes**	**19.51**	**8**	LR		LR	LR	03 08 44.0	
	comp=Z,20nm,20.2s,baz=250,slow=29								
MDT	**Midelt**	**22.04**	**117**	LR		LR	LR	03 11 32.4	
	comp=Z,32nm,18.0s,baz=343,slow=33								
SFJD	**Kangerlussuaq**	**24.56**	**339**	LR		LR	LR	03 12 06.0	
	comp=Z,41nm,19.8s,baz=128,slow=31								
DAVOX	**Davos/Dischmat**	**26.02**	**74**	LR		LR	LR	03 13 52.0	
	comp=Z,45nm,19.3s,baz=260,slow=34								
NOA	**NORSAR Array B**	**27.47**	**42**	LR		LR	LR	03 15 01.1	
	comp=Z,18nm,18.5s,baz=90,slow=34								
GERES	**GERESS Array B**	**28.19**	**68**	P		P	**P**	**03 05 11.1**	**+1.5**
	0.1nm,0.3s,baz=328,slow=3.6,SNR=3.7								
GERES				LR		LR	LR	03 15 50.8	
	comp=Z,49nm,18.4s,baz=167,slow=35								
	0.1nm,0.3s								
HFS	**Hagfors**	**28.43**	**44**	LR		LR	LR	03 15 58.3	
	comp=Z,20nm,18.9s,baz=190,slow=35								
FRB	**Frobisher Bay**	**28.96**	**323**	LR		LR	LR	03 14 18.1	
	comp=Z,30nm,19.8s,baz=355,slow=31								
KEST	**Kesra**	**29.70**	**96**	P		P	**P**	**03 05 23.4**	**+0.2**
	2.1nm,0.7s,baz=239,slow=12,SNR=3.6								
KEST				LR		LR	LR	03 14 37.1	
	comp=Z,60nm,21.7s,baz=312,slow=31								
	2.1nm,0.7s								
VRAC	**Vranov**	**29.98**	**67**	LR		LR	LR	03 16 59.1	
	comp=Z,57nm,18.6s,baz=311,slow=36								
SADO	**Sadowa**	**35.60**	**287**	LR		LR	LR	03 20 15.8	
	comp=Z,39nm,18.7s,baz=50,slow=35								
MLR	**Muntele Rosu**	**37.11**	**70**	LR		LR	LR	03 22 57.2	
	comp=Z,43nm,18.7s,baz=33,slow=38								
AKASG	**Malin Array Be**	**37.63**	**61**	LR		LR	LR	03 21 07.2	
	comp=Z,32nm,21.7s,baz=68,slow=35								
TORD	**Torodi Ar. Bea**	**40.95**	**133**	P		P	**P**	**03 06 59.2**	**-0.5**
	1.4nm,0.9s,baz=340,slow=7.8,SNR=4.0								
	1.4nm,0.9s								
SJG	**San Juan**	**41.89**	**242**	LR		LR	LR	03 20 06.6	
	comp=Z,23nm,21.6s,baz=84,slow=30								
TKL	**Tuckaleechee C**	**42.76**	**277**	LR		LR	LR	03 24 53.0	
	comp=Z,16nm,18.3s,baz=116,slow=36								
ULM	**Lac du Bonnet**	**44.33**	**302**	LR		LR	LR	03 24 17.9	
	comp=Z,48nm,18.6s,baz=281,slow=34								
BRTR	**Keskin Array B**	**44.66**	**75**	P		P	**P**	**03 07 29.4**	**-0.6**
	1.9nm,1.0s,baz=278,slow=5.2,SNR=8.3								
	1.9nm,1.0s								
MDP	**Montagnes des**	**45.74**	**216**	LR		LR	LR	03 21 44.9	
	comp=Z,34nm,19.1s,baz=75,slow=30								
PDAR	**Pinedale Array**	**56.14**	**299**	LR		LR	LR	03 31 31.7	
	comp=Z,44nm,18.4s,baz=41,slow=34								
ANMO	**Albuquerque**	**58.62**	**289**	LR		LR	LR	03 34 14.1	
	comp=Z,42nm,18.0s,baz=52,slow=36								
TXAR	**Lajitas Array**	**60.13**	**283**	P		P	**P**	**03 09 26.6**	**+1.8**
	0.4nm,0.9s,baz=101,slow=4.7,SNR=4.4								
TXAR				LR		LR	LR	03 35 34.7	
	comp=Z,54nm,18.4s,baz=22,slow=36								
	0.4nm,0.9s								
LPIG	**La Paz**	**68.03**	**282**	LR		LR	LR	03 39 55.7	
	comp=Z,52nm,18.2s,baz=20,slow=36								
AAK	**Ala-Archa**	**68.31**	**51**	LR		LR	LR	03 38 47.4	
	comp=Z,29nm,18.9s,baz=166,slow=35								
WRA	**Warramunga Arr**	**150.50**	**36**	PKPbc			**PKiKP**	**03 19 07.9**	**-1.9**
	0.8nm,1.1s,baz=346,slow=1.9,SNR=4.7								
ASAR	**Alice Springs**	**153.59**	**40**	PKPbc			**PKPbc**	**03 19 14.3**	**-1.7**
	0.3nm,0.7s,baz=1.9,slow=3.8,SNR=2.5								
ASAR				PKPab			**PKPab**	**03 19 26.8**	**-1.7**
	0.4nm,0.8s,baz=311,slow=3.6,SNR=4.2								

*MDD **05** 03:27:04.0±0.3, 35°.66N×3°.67W, h0km, mb_Lg2.6/14, Error ellipse: s-maj=3.0km s-min=2.2km az=11.0*
*SFS **05** 03:27:03.0, 35°.66N×3°.66W, ML2.5, ALBORAN SUR*
*INMG **05** 03:27:04.0±1.4, 35°.68N×3°.66W, h0km, ML2.2, Error ellipse: s-maj=3.8km s-min=2.7km az=66.0*
*IGIL **05** 03:27:05.2, 35°.66N×3°.67W, h0km, ML2.2*
*CNRM **05** 03:27:05.0, 35°.73N×3°.55W, h22km, ml2.7*

ISC 05 03:27:04.3±1.1, 35°.72N±0°.02×3°.63W±0°.02, h14km±9km, n60, σ1§17/107, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
EALB	**Alboran**	**0.53**	**65**	Pg		Pg	**Pb**	**03 27 15.6**	**+0.2**
EALB				Sg		Sg	**Sb**	**03 27 23.8**	**+0.8**
EALB				*i*	Vmb_Lg			03 27 30.6	
PALE	**Palemas**	**0.56**	**207**	P		P	**Pb**	**03 27 17.0**	**+1.1**
PALE	**Palemas**	**0.56**	**207**	P		P	**Pb**	**03 27 16.7**	**+0.8**
PALE				S		S	**Sb**	**03 27 24.9**	**+1.2**
WMELI	**Melilla**	**0.68**	**126**	P		P	**Pg**	**03 27 17.7**	**+0.2**
WMELI				S		S	**Sg**	**03 27 26.1**	**-0.4**
EMEL	**Melilla**	**0.69**	**127**	Pg		Pg	**Pg**	**03 27 17.6**	**0.0**
EMEL				Sg		Sg	**Sg**	**03 27 26.2**	**-0.5**
GOG	**Mont Gurugu**	**0.71**	**133**	P		P	**Pg**	**03 27 18.2**	**0.0**
GOG				S		S	**Sg**	**03 27 26.7**	**-1.0**
PVLZ	**Peæn de**	**0.77**	**225**	P		P	**Pg**	**03 27 19.5**	**+0.3**
PVLZ				S		S	**Sb**	**03 27 31.1**	**+1.3**
CHAS	**Isla Isabel II**	**1.11**	**118**	P		P	**Pb**	**03 27 23.7**	**-1.6**
CHAS				S		S	**Sb**	**03 27 38.0**	**-1.7**
ELGU	**Los Guajares,**	**1.15**	**0**	Pg		Pg	**Pb**	**03 27 25.3**	**-0.7**
ELGU				Sg		Sg	**Sn**	**03 27 41.9**	**+0.2**
ELGU				*i*	Vmb_Lg			03 27 44.3	
AKLM	**AKL**	**1.22**	**189**	P		P	**Pg**	**03 27 27.6**	**-0.1**
AKLM	**AKL**	**1.22**	**189**	P		P	**Pb**	**03 27 27.4**	**+0.2**
AKLM				S		S	**Sg**	**03 27 44.1**	**+0.5**
EMIJ	**Mijas**	**1.25**	**313**	Pg		Pn	**Pn**	**03 27 26.4**	**-1.0**
EMIJ				Sg		Sg	**Sb**	**03 27 42.5**	**-1.3**
EMIJ				*i*	Vmb_Lg			03 27 43.6	
EBER	**Berja**	**1.32**	**27**	Pg		Pg	**Pn**	**03 27 28.1**	**-0.4**
EBER				Sg		Sg	**Sg**	**03 27 46.8**	**-0.2**
EBER				*i*	Vmb_Lg			03 27 53.0	
TAF	**Taforalt**	**1.34**	**132**	P		P	**Pn**	**03 27 28.1**	**-0.6**
TAF	**Taforalt**	**1.34**	**132**	P		P	**Pn**	**03 27 28.2**	**-0.6**
TAF				S		S	**Sb**	**03 27 45.4**	**-1.0**
SMIR	**Smir Dam**	**1.43**	**269**	S		S	**Sb**	**03 27 49.6**	**+0.9**
CEU	**Ceuta**	**1.43**	**278**	P		P	**Pn**	**03 27 27.7**	**-2.1**
CEU				S		S	**Sn**	**03 27 44.2**	**-4.2**
ECEU	**Ceuta**	**1.43**	**278**	Pg		Pn	**Pn**	**03 27 29.5**	**-0.4**
ECEU				Sg		Sn	**Sn**	**03 27 46.5**	**-2.0**
ECEU				*i*	Vmb_Lg			03 27 59.6	
EGOR	**Sierra Gorda,**	**1.44**	**345**	Pg		Pn	**Pn**	**03 27 30.3**	**+0.1**
EGOR				Sg		Sg	**Sg**	**03 27 51.2**	**+0.3**
EGOR				*i*	Vmb_Lg			03 27 54.6	
CHEFC	**Chefchaouen**	**1.52**	**247**	P			**Pb**	**03 27 32.1**	**-0.3**
CHEFC	**Chefchaouen**	**1.52**	**247**	P			**Pb**	**03 27 32.0**	**-0.3**
CHEFC				S			**Sb**	**03 27 51.8**	**+0.2**
JBK	**JBK**	**1.63**	**147**	P			**Pn**	**03 27 32.0**	**-0.8**
JBK	**JBK**	**1.63**	**147**	P			**Pn**	**03 27 32.0**	**-0.8**
JBK				S			**Sn**	**03 27 52.1**	**-1.7**
EJIF	**Jimena Fronter**	**1.66**	**297**	Pn			**Pn**	**03 27 32.6**	**-0.4**
EJIF				Sn			**Sn**	**03 27 51.4**	**-2.8**
ENIJ	**Nijar**	**1.70**	**42**	Pn			**Pn**	**03 27 33.8**	**+0.2**
ENIJ				Sn			**Sn**	**03 27 53.5**	**-1.7**
ENIJ				*i*	Vmb_Lg			03 27 56.3	
SICH	**Sidi Chahed**	**2.12**	**221**	S			**Sb**	**03 28 07.6**	**-1.2**
IFR	**Ifrane**	**2.52**	**210**	P			**Pn**	**03 27 45.5**	**+0.5**
IFR				S			**Sn**	**03 28 15.5**	**-0.1**
EADA	**Adamuz**	**2.56**	**343**	Pn			**Pn**	**03 27 45.7**	**+0.3**
EADA				Sn			**Sn**	**03 28 17.8**	**+1.3**
EADA				*i*	Vmb_Lg			03 28 26.0	
ECAB	**El Cabril**	**2.76**	**329**	Pn			**Pn**	**03 27 49.0**	**+0.9**
ECAB				Sn			**Sn**	**03 28 21.7**	**+0.4**
ECAB				Sg			**Sb**	**03 28 26.9**	**-0.2**
ECAB				*i*	Vmb_Lg			03 28 30.8	
TDRA	**Tendrara**	**2.98**	**153**	P			**Pn**	**03 27 52.3**	**+1.0**
TDRA				S			**Sn**	**03 28 27.3**	**+0.3**
MD31	**MD31**	**2.99**	**199**	P			**Pn**	**03 27 52.9**	**+1.4**
MD31				S			**Sn**	**03 28 28.6**	**+1.4**
MDT	**Midelt**	**3.01**	**196**	P			**Pn**	**03 27 53.7**	**+2.0**
MDT	**Midelt**	**3.01**	**196**	P			**Pn**	**03 27 53.7**	**+2.0**
MDT				S			**Sn**	**03 28 27.7**	**+0.2**
EMIN	**Mina Concepcio**	**3.19**	**311**	Pn			**Pn**	**03 27 53.3**	**-0.7**
EMIN				Sn			**Sn**	**03 28 30.9**	**-1.0**
EMIN				*i*	Vmb_Lg			03 28 33.6	
ZHG	**ZHG**	**3.36**	**229**	P			**Pn**	**03 27 57.7**	**+0.5**
ETOB	**Tobarra**	**3.36**	**29**	Pn			**Pn**	**03 27 58.2**	**+1.7**
ETOB				Sn			**Sn**	**03 28 39.4**	**+3.1**
ETOB				*i*	Vmb_Lg			03 28 44.0	
EGRO	**El Granado**	**3.59**	**301**	Pn			**Pn**	**03 27 59.6**	**0.0**
EGRO				Sn			**Sn**	**03 28 41.0**	**-0.8**
EGRO				*i*	Vmb_Lg			03 28 42.5	
PBAR	**Barrancos**	**3.67**	**313**	*e*Pn			**Pn**	**03 28 01.3**	**+0.6**
PBAR				*e*Sn			**Sn**	**03 28 43.0**	**-0.8**
PVAQ	**Vaqueiros**	**3.70**	**298**	*e*Pn			**Pn**	**03 28 01.5**	**+0.5**
PVAQ				*e*Sn			**Sn**	**03 28 43.2**	**-1.2**
PVAQ				A			A	03 28 49.8	
	3.8nm,0.6s								
PVAQ	**Vaqueiros**	**3.70**	**298**	P			**Pn**	**03 28 01.5**	**+0.5**
PVAQ	**Vaqueiros**	**3.70**	**298**	P			**Pn**	**03 28 01.7**	**+0.7**
PBDV	**Barranco-do-Ve**	**3.79**	**295**	*e*Pn			**Pn**	**03 28 03.1**	**+0.8**
PBDV				*e*Sn			**Sn**	**03 28 46.5**	**-0.2**
PBDV				A			A	03 28 54.3	
	4.2nm,0.8s								
PAB	**San Pablo**	**3.87**	**352**	Pn			**Pn**	**03 28 04.6**	**+1.2**
PAB				Sn			**Sn**	**03 28 49.0**	**+0.3**
PCVE	**Castro Verde**	**4.03**	**300**	*e*Pn			**Pn**	**03 28 06.0**	**+0.4**
PCVE				*e*Sn			**Sn**	**03 28 51.4**	**-1.2**
PCVE				A			A	03 28 53.8	
	4.4nm,0.5s								
EBAD	**Badajoz**	**4.06**	**319**	Pn			**Pn**	**03 28 06.4**	**+0.4**
EBAD				Sn			**Sn**	**03 28 53.1**	**-0.3**
EBAD				*i*	Vmb_Lg			03 28 54.7	
MESJ	**Messejana**	**4.25**	**301**	*e*P			**Pn**	**03 28 09.2**	**+0.6**
MESJ				*e*S			**Sn**	**03 28 56.0**	**-2.0**
MESJ				IAML				03 29 00.0	
	comp=N,4.9nm,0.4s								
MESJ	**Messejana**	**4.25**	**301**	*e*Pn			**Pn**	**03 28 09.3**	**+0.6**
MESJ				*e*Sn			**Sn**	**03 28 58.2**	**+0.1**
MESJ				A			A	03 29 05.4	
	comp=N,

ZANG	**Zanguenga, Cho**	**2.19**	**264**	*eP*		**Pn**	**03 30 16.3**	**+0.7**
ZANG				*eS*		**Sn**	**03 30 42.7**	**+0.9**
VTON	**El Valle, Cocl**	**2.49**	**256**	*eS*		**Sb**	**03 30 52.7**	**-2.3**
SJCC	**San Jacinto, C**	**2.55**	**74**	*eP*		**Pn**	**03 30 21.2**	**+0.6**
SJCC				*eS*		**Sn**	**03 30 51.5**	**+0.5**
UREC	**San Jos de Ur**	**2.56**	**124**	*eP*		**Pn**	**03 30 21.1**	**+0.4**
UREC				*eS*		**Sn**	**03 30 50.1**	**-1.1**
UREC	**San Jos de Ur**	**2.56**	**124**	*eP*		**Pn**	**03 30 21.0**	**+0.2**
UREC				*eS*		**Sn**	**03 30 48.8**	**-2.4**
DBBC	**Dabeiba**	**2.61**	**146**‖	*eP*		**Pn**	**03 30 22.1**	**+0.6**
DBBC				*eS*		**Sn**	**03 30 53.5**	**+1.0**
DBBC				*i*			03 31 07.4	
	comp=Z,342nm,0.6s							
AZU	**Azuero**	**2.94**	**242**	*eP*		**Pn**	**03 30 26.3**	**+0.5**
AZU				*eS*		**Sn**	**03 30 59.4**	**-1.0**
AZU				*i*			03 31 15.1	
	comp=Z,154nm,0.6s							
AZU	**Azuero**	**2.94**	**242**⇑	*iP*		**Pn**	**03 30 26.3**	**+0.5**
AZU				*eS*		**Sn**	**03 30 58.8**	**-1.6**
CHIT3	**Chitre**	**2.99**	**246**	*eP*		**Pn**	**03 30 26.4**	**-0.1**
CHIT3				*eS*		**Sn**	**03 30 59.0**	**-2.7**
CACAO	**El Cacao, Vera**	**3.66**	**240**	*eP*		**Pn**	**03 30 36.7**	**+0.8**
CACAO				*eS*		**Sn**	**03 31 19.5**	**+1.2**
CBOC	**Ciudad Bolivar**	**3.71**	**154**	*eP*		**Pn**	**03 30 38.5**	**+1.9**
CBOC				*eS*		**Sb**	**03 31 26.7**	**-3.5**
GMAL	**Guarumal, Vera**	**3.81**	**248**	*eP*		**Pn**	**03 30 40.3**	**+2.4**
GMAL				*eS*		**Sn**	**03 31 23.4**	**+1.4**
PTBC	**PUERTO BERRIO,**	**4.14**	**130**	*eP*		**Pn**	**03 30 42.5**	**0.0**
PTBC				*eS*		**Sn**	**03 31 27.7**	**-2.5**
PTBC				*i*			03 31 33.0	
	comp=Z,26nm,0.5s							
OCAC	**Ocana**	**4.41**	**102**	*eP*		**Pn**	**03 30 45.9**	**-0.4**
OCAC				*eS*		**Sn**	**03 31 34.9**	**-2.0**
BRRC	**Barranca, Sant**	**4.44**	**118**	*eP*		**Pn**	**03 30 46.9**	**+0.4**
BRRC				*eS*		**Sn**	**03 31 37.6**	**+0.1**
BRRC				*i*			03 31 44.7	
	comp=Z,26nm,0.4s							
PLMC	**San Jos del P**	**4.49**	**162**	*eP*		**Pn**	**03 30 47.9**	**+0.5**
NORC	**Norcasia**	**4.56**	**142**	*eP*		**Pn**	**03 30 49.2**	**+0.8**
SPBC	**San Pablo de B**	**5.02**	**134**	*eP*		**Pn**	**03 30 55.6**	**+0.9**
SPBC				*eS*		**Sn**	**03 31 53.6**	**+1.6**
SPBC				*i*			03 31 60.0	
	comp=Z,10.0nm,0.3s							
CRJC	**Cerrejon, Guaj**	**5.04**	**69**	*eP*		**Pn**	**03 30 55.9**	**+0.9**
CRJC				*eS*		**Sn**	**03 31 49.0**	**-3.6**
CRJC				*i*			03 31 53.1	
	comp=Z,27nm,0.4s							
BARC	**Barichara**	**5.15**	**120**	*eP*		**Pn**	**03 30 58.1**	**+1.6**
BARC				*eS*		**Sn**	**03 31 56.1**	**+0.7**
BARC				*i*			03 32 01.1	
	comp=Z,27nm,0.4s							
PAMC	**Pamplona, Colo**	**5.26**	**110**	*eP*		**Pn**	**03 30 59.2**	**+0.9**
PAMC				*eS*		**Sn**	**03 31 56.8**	**-1.6**
PAMC				*i*			03 32 02.4	
	comp=Z,22nm,0.5s							
RUSC	**La Rusia**	**5.62**	**126**	*eP*		**Pn**	**03 31 04.1**	**+0.9**
RUSC				*eS*		**Sn**	**03 32 08.1**	**+0.9**
RUSC				*i*			03 32 13.1	
	comp=Z,16nm,0.5s							
GCUF	**Volcan Galeras**	**7.94**	**178**	*eP*		Pb	03 32 21.6	+24
TULM	**Tulcn-Chalpat**	**8.44**	**181**	*eP*		Pb	03 32 14.4	+8.0
CUSE	**Cuicocha Este**	**8.88**	**185**	*eP*		Pn	03 32 04.2	+16

IDC 05 03:46:49.7±7.4, 17°.53S×178°.66W, h639km±88km, mb2.7/5, mbtmp3.7/5, Error ellipse: s-maj=93.0km s-min=36.2km az=148.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
STKA	**Stephens Creek**	**38.60**	**241**	P		P	03 53 20.3	-0.4
	0.6nm,0.2s,baz=163,slow=14,SNR=1.0							
	0.6nm,0.2s							
WRA	**Warramunga Arr**	**44.47**	**259**	P		P	03 54 07.0	+0.2
	0.7nm,0.4s,baz=96,slow=7.0,SNR=32							
WRA				PcP		PcP	03 55 35.9	0.0
	0.4nm,0.9s,baz=92,slow=4.1,SNR=1.0							
	0.7nm,0.4s							
ASAR	**Alice Springs**	**44.66**	**254**	P		P	03 54 08.4	+0.1
	1.7nm,0.6s,baz=88,slow=8.6,SNR=24							
ASAR				PcP		PcP	03 55 36.1	-0.4
	0.2nm,0.4s,baz=98,slow=3.7,SNR=1.6							
	1.7nm,0.6s							
ILAR	**Eielson Array**	**85.57**	**13**	P		P	03 58 21.0	-0.7
	0.2nm,0.8s,baz=191,slow=4.3,SNR=1.9							
	0.2nm,0.8s							
TXAR	**Lajitas Array**	**86.00**	**58**	P		P	03 58 25.3	+0.6
	0.2nm,0.6s,baz=217,slow=6.8,SNR=3.8							
	0.2nm,0.6s							

*GUC **05** 04:07:03.5±0.5, 15°.82S×74°.15W, h38km, ML5.3*
*VAO **05** 04:07:03.2±0.4, 15°.95S×73°.89W, h10km, mb5.1*
*ARE **05** 04:07:04±0.0, 16°.03S×74°.22W, h24km, Error ellipse: s-maj=0.0km s-min=0.0km az=90.0*
*NEIC **05** 04:07:05.6±1.8, 15°.96S±0°.06×74°.10W±0°.09, h37km±5km, mb4.9/245, Mww5.1, ML4.9(ARE), Mwr5.3(GUC), Error ellipse: s-maj=13.3km s-min=8.2km az=66.0*
*GCMT **05** 04:07:07.6±0.2, 15°.85S±0°.01×74°.58W±0°.02, h48km±1km, MW5.2/112, Moment Tensor Solution. s89,c125; s112,c162; Duration: 1ᵗ0 Moment tensor: Scale 10¹⁷ Nm; Mrr0.56±.02; Mθθ0.06±.01; Mϕϕ-0.62±.01; Mrθ0.07±.01; Mθϕ0.37±.01; Mϕr-0.40±.02; Best double couple: M₀0.79200×10¹⁷ NP1:ϕ₁323.00000°, δ31.00000°, λ70.00000°. NP2:ϕ₂166.00000°, δ61.00000°, λ102.00000°. Principal axes: T 0.6900, Plg71.0000°, Azm103.0000°; N 0.2050, Plg10.0000°, Azm341.0000°; P -0.8950, Plg15.0000°, Azm248.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **05** 04:07:08.2±1.9, 15°.87S×74°.13W, h69km±16km, mb4.2/19, mbtmp4.5/22, MS4.4/55 Error ellipse: s-maj=17.9km s-min=10.1km az=52.0*
*NEIC **05** 04:07:09, 15°.94S×74°.10W, h36km, Moment Tensor Solution. Duration: 8ˢ0 Moment tensor: Scale 10¹⁶Nm; Mrr4.34; Mθθ-1.80; Mϕϕ-2.54; Mrθ-0.59; Mθϕ2.42; Mϕr-4.61; Fault plane solution: M₀6.46000×10¹⁶ NP1: ϕs299.00000°, δ31.00000°, λ45.00000°. NP2: ϕs169.00000°, δ69.00000°, λ113.00000°. Principal axes: T 6.9638, Plg60.0000°, Azm112.0000°; N -1.1554, Plg21.0000°, Azm340.0000°; P -5.8084, Plg20.0000°, Azm242.0000°;*

ISC 05 04:07:06.6±0.3, 15°.95S±0°.04×74°.05W±0°.05, h54km, n410, σ1ˢ43/281, mb4.9/139, MS4.4/52, 1C-1D, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
AP01	**Chacalluta**	**4.28**	**125**			**Pn**	**04 08 11.6**	**+2.3**
AP01	**Chacalluta**	**4.28**	**125**	*i*	P	**Pn**	**04 08 11.4**	**+2.2**
AP01				*i*	S	**Sn**	**04 08 58.4**	**+0.4**
PB12	**IPOC Station P**	**4.43**	**127**		Pn	**Pn**	**04 08 11.4**	**+0.1**
PB12	**IPOC Station P**	**4.43**	**127**⇑	*i*	P	**Pn**	**04 08 10.9**	**-0.4**
PB12				*eS*		**Sn**	**04 09 02.8**	**+1.0**
NNA	**Nana**	**4.78**	**325**	P		**Pn**	**04 08 15.4**	**-0.7**
	238nm,0.3s,baz=123,slow=17,SNR=36							
NNA				S		**Sn**	**04 09 09.9**	**-0.4**
	432nm,0.4s,baz=123,slow=20,SNR=2.0							
NNA	**Nana**	**4.78**	**325**	Pn		**Pn**	**04 08 15.9**	**-0.3**
PB16	**IPOC Station P**	**4.95**	**119**	Pn		**Pn**	**04 08 20.2**	**+1.4**
PB16	**IPOC Station P**	**4.95**	**119**	*eP*		**Pn**	**04 08 20.1**	**+1.2**
PB11	**IPOC Station P**	**5.64**	**133**			**Pn**	**04 08 27.8**	**-0.2**
TA02	**Huaiquique**	**5.69**	**140**			**Pn**	**04 08 28.0**	**-0.5**
TA02	**Huaiquique**	**5.69**	**140**	*eP*		**Pn**	**04 08 28.3**	**-0.2**
TA02				*i*	S	**Sn**	**04 09 28.8**	**-3.7**
LPAZ	**La Paz**	**5.69**	**94**	P		**Pn**	**04 08 33.9**	**+4.7**
	359nm,0.9s,baz=274,slow=8.0,SNR=222							
LPAZ				S		Sn	04 09 46.2	+13
	481nm,0.9s,baz=1.0,slow=25,SNR=7.4							
LPAZ				LR		LR	04 11 02.6	
	comp=Z,7μm,20.0s,baz=274,slow=40							
TA01	**Diego Aracena**	**5.88**	**142**	Pn		**Pn**	**04 08 29.7**	**-1.5**
PATCX	**Punta Patache**	**6.09**	**143**			**Pn**	**04 08 33.3**	**-0.8**
PB08	**IPOC Station P**	**6.25**	**133**			**Pn**	**04 08 37.1**	**+0.6**
PB02	**IPOC Station P**	**6.63**	**144**			**Pn**	**04 08 40.7**	**-0.9**
PB01	**IPOC Station P**	**6.66**	**140**			**Pn**	**04 08 41.9**	**0.0**
PB07	**IPOC Station P**	**6.97**	**146**			**Pn**	**04 08 45.2**	**-1.1**
PB04	**IPOC Station P**	**7.34**	**151**			**Pn**	**04 08 49.9**	**-1.4**
PB09	**IPOC Station P**	**7.38**	**143**			**Pn**	**04 08 51.4**	**-0.6**
PB06	**IPOC Station P**	**7.94**	**149**			**Pn**	**04 08 58.9**	**-0.6**
LVC	**Limon Verde**	**8.21**	**145**	P		**Pn**	**04 09 03.8**	**+0.4**
	37nm,0.3s,baz=4.0,slow=6.8,SNR=76							
LVC				S		**Sn**	**04 10 32.0**	**-3.0**
	144nm,0.4s,baz=132,slow=18,SNR=9.3							
LVC				LR		LR	04 12 13.1	
	comp=Z,2μm,19.6s,baz=320,slow=37							
LVC	**Limon Verde**	**8.21**	**145**	Pn		**Pn**	**04 09 03.5**	**+0.1**
LVC	**Limon Verde**	**8.21**	**145**	*eP*		**Pn**	**04 09 01.8**	**-1.6**
PB10	**IPOC Station P**	**8.21**	**157**			**Pn**	**04 09 01.8**	**-1.4**
CZSB	**Cruzeiro do Su**	**8.27**	**9**	*eP*		**Pn**	**04 09 03.5**	**-0.4**
PB15	**IPOC Station P**	**8.41**	**150**			**Pn**	**04 09 04.5**	**-1.6**
AF01	**San Pedro de A**	**8.90**	**142**			**Pn**	**04 09 13.4**	**+0.6**
PB14	**IPOC Station P**	**9.28**	**159**	Pn		**Pn**	**04 09 17.1**	**-1.0**
ATAH	**Atahualpa**	**9.74**	**334**	P		**Pn**	**04 09 24.8**	**+0.3**
	3.0nm,0.4s,baz=109,slow=8.7,SNR=1.5							
ATAH				S		**Sn**	**04 11 13.6**	**+1.0**
	64nm,0.8s,baz=258,slow=14,SNR=2.4							
ETMB	**Extrema**	**9.77**	**52**	*eP*		**Pn**	**04 09 25.0**	**+0.5**
AC02	**Maricunga**	**11.76**	**158**	Pn		**Pn**	**04 09 52.9**	**+0.8**
AC06	**Mina Casimiro**	**11.86**	**164**	Pn		**Pn**	**04 09 53.4**	**+0.4**
GO03	**Copiap**	**12.12**	**164**			**Pn**	**04 09 56.7**	**+0.1**
SIV	**San Ignacio**	**12.48**	**92**	P		**Pn**	**04 10 00.7**	**-0.8**
	20nm,0.7s,baz=268,slow=12,SNR=46							
SIV				S		**Sn**	**04 12 17.7**	**-1.4**
	27nm,1.1s,baz=203,slow=20,SNR=1.6							
SIV				LR		LR	04 14 15.3	
	comp=Z,594nm,21.8s,baz=284,slow=34							
SAML	**Samuel**	**12.68**	**58**			**Pn**	**04 10 02.6**	**-1.7**
LCO	**Las Campanas**	**13.36**	**167**	Pn		**Pn**	**04 10 14.3**	**+0.5**
VILB	**Vilhena**	**13.73**	**79**	*eP*		**Pn**	**04 10 17.3**	**-1.4**
PTLB	**Pontes e Lacer**	**14.37**	**90**	*eP*		**Pn**	**04 10 25.0**	**-2.1**
GO04	**Tololo Observa**	**14.47**	**169**			**Pn**	**04 10 27.7**	**-0.9**
PORT	**Chimborazo Vol**	**15.13**	**342**			**P**	**04 10 39.9**	**-1.9**
PORT					IAmb	IAmb	04 11 06.8	
	comp=Z,80nm,0.7s							
CO02	**Combarbal**	**15.44**	**170**		IAmb	IAmb	04 10 47.5	
	comp=Z,62nm,1.0s							
PTLC	**Puerto Leguiza**	**16.03**	**357**	*eP*		**Pn**	**04 10 45.8**	**-2.9**
ZON	**Zonda**	**16.28**	**163**	Pn		**Pn**	**04 10 50.9**	**-0.8**
OTAV	**Otavalo**	**16.66**	**344**			**P**	**04 10 58.4**	**-0.2**
OTAV	**Otavalo**	**16.66**	**344**	*eP*		P	04 11 06.9	+8.3
OTAV	**Otavalo**	**16.66**	**344**	*eP*		**P**	**04 10 58.8**	**+0.1**
VA06	**Catapilco**	**16.73**	**172**	Pn		**Pn**	**04 10 56.2**	**-1.0**
TULM	**Tulcn-Chalpat**	**16.96**	**347**	*eP*		**P**	**04 11 06.9**	**+4.9**
VA03	**San Esteban**	**17.04**	**170**			**Pn**	**04 11 01.2**	**0.0**
VA03					IAmb	IAmb	04 11 06.4	
	comp=Z,86nm,1.2s							
CMBC	**Cumbal**	**17.19**	**347**	*eP*		**P**	**04 11 06.0**	**+1.4**
PDRB	**Porto dos Gac**	**17.36**	**78**	*eP*		**Pn**	**04 11 03.4**	**-1.9**
GCUF	**Volcan Galeras**	**17.37**	**349**	*eP*		**P**	**04 11 10.8**	**+4.2**
PEL	**Peldehue**	**17.39**	**171**			**Pn**	**04 11 05.1**	**-0.4**
MT02	**Curacav**	**17.44**	**172**			**Pn**	**04 11 05.9**	**-0.1**
FLOC	**Florencia**	**17.49**	**355**‖	*eP*		P	04 11 20.4	+13
MT05	**Renca**	**17.62**	**171**			**P**	**04 11 08.6**	**-0.2**
MT05					IAmb	IAmb	04 11 29.8	
	comp=Z,97nm,1.4s							
CRUC	**La Cruz**	**17.64**	**350**	*eP*		**P**	**04 11 12.7**	**+3.3**
SALV	**Santo Antonio**	**17.65**	**92**	*eP*		**Pn**	**04 11 07.1**	**-1.7**
VA05	**Santo Domingo**	**17.77**	**173**	P		**P**	**04 11 10.4**	**+0.1**
H03N1	**Juan Fernandez**	**17.96**	**193**	T		T	04 29 42.1	
	baz=16,slow=74							
H03N2	**Juan Fernandez**	**17.97**	**193**	T		T	04 29 41.4	
	baz=16,slow=74							
MACC	**Macarena, Meta**	**17.98**	**1**	*eP*		**P**	**04 11 10.8**	**-2.0**
H03N3	**Juan Fernandez**	**17.98**	**193**	T		T	04 29 40.7	
	baz=16,slow=74							
GARC	**Garzon, Huila**	**18.07**	**355**	*eP*		**Pn**	**04 11 20.4**	**+6.2**
SOTA	**Rioblanco**	**18.14**	**352**	*eP*		**Pn**	**04 11 19.4**	**+4.1**
MACA	**Manacapuru-AM**	**18.28**	**47**	*eP*		**P**	**04 11 15.2**	**-0.9**
PCON	**Cinco Dias**	**18.31**	**352**	*eP*		Pn	04 11 31.0	+14
H03S3	**Juan Fernandez**	**18.34**	**193**	T		T	04 30 05.5	
	baz=348,SNR=26							
H03S2	**Juan Fernandez**	**18.35**	**193**	T		T	04 30 10.2	
	baz=348,SNR=201							
H03S1	**Juan Fernandez**	**18.35**	**193**	T		T	04 30 06.1	
	baz=348,SNR=33							
CLDB	**Colider**	**18.45**	**76**	*eP*		**P**	**04 11 17.5**	**-0.5**
POPC	**Popayan, Colom**	**18.55**	**352**	*eP*		**Pn**	**04 11 22.3**	**+2.3**
BO01	**Tunca**	**18.56**	**172**	P		**P**	**04 11 19.1**	**+0.1**
CPUP	**Villa Florida**	**18.68**	**126**	P		**Pn**	**04 11 21.6**	**+0.3**
	comp=Z,20nm,1.0s,baz=296,slow=13,SNR=20							
CPUP				LR		LR	04 19 56.2	
	comp=Z,1μm,19.8s,baz=302,slow=41							
CPUP	**Villa Florida**	**18.68**	**126**	P		**Pn**	**04 11 21.4**	**+0.1**
CPUP	**Villa Florida**	**18.68**	**126**	*eP*		**P**	**04 11 20.7**	**+0.3**
MARP	**Paez Belalcaza**	**18.77**	**354**	*eP*		**Pn**	**04 11 23.3**	**+0.7**
GO05	**Huala**	**19.08**	**175**	P		**P**	**04 11 25.1**	**+0.4**
PRAC	**Prado**	**19.55**	**357**	*eP*		**Pn**	**04 11 35.8**	**+4.0**
ORTC	**Ortega, Tolima**	**19.77**	**356**	*eP*		**Pn**	**04 11 37.7**	**+3.5**
ML02	**Panimavida**	**19.87**	**174**		IAmb	IAmb	04 11 35.8	
	comp=Z,98nm,1.3s							
YOTC	**Yotoco, Valle**	**19.93**	**353**	*eP*		**Pn**	**04 11 38.7**	**+2.4**
VILC	**Villavicencio,**	**19.93**	**1**	*eP*		**Pn**	**04 11 37.7**	**+1.4**
NPGB	**Novo Progresso**	**20.32**	**66**	*eP*		**P**	**04 11 37.9**	**-0.5**
ANIL	**Santa Ana**	**20.35**	**356**	*eP*		Pn	04 11 47.3	+5.9
CHIC	**Chingaza**	**20.45**	**1**	*eP*		Pn	04 11 43.5	+0.8
ROSC	**El Rosal**	**20.66**	**359**	P		**P**	**04 11 43.4**	**+1.0**
	comp=Z,4.9nm,0.5s,baz=224,slow=23,SNR=1.9							
ROSC				LR		LR	04 21 56.6	
	comp=Z,2μm,18.3s,baz=217,slow=43							
	comp=Z,4.9nm,0.5s							
ROSC	**El Rosal**	**20.66**	**359**	P		**P**	**04 11 42.8**	**+0.4**
ROSC					IAmb	IAmb	04 12 03.0	
	comp=Z,43nm,1.1s							
ROSC	**El Rosal**	**20.66**	**359**	*eP*		Pn	04 11 51.2	+6.1
PLMC	**San Jos del P**	**20.84**	**354**	*eP*		Pn	04 11 46.4	-0.6
ITQB	**Itaqui**	**21.04**	**133**	P		**P**	**04 11 47.1**	**+1.1**
ITQB	**Itaqui**	**21.04**	**133**	*eP*		**P**	**04 11 47.2**	**+1.3**
TRCB	**Terra Rica**	**21.30**	**112**	P		**P**	**04 11 48.7**	**-0.3**
TRCB	**Terra Rica**	**21.30**	**112**	*eP*		**P**	**04 11 49.6**	**+0.7**
ITTB	**Itaituba**	**21.36**	**59**	*eP*		**P**	**04 11 48.7**	**-0.9**
NORC	**Norcasia**	**21.39**	**358**	*eP*		**P**	**04 11 52.1**	**+2.3**
SPBC	**San Pablo de B**	**21.46**	**360**	*eP*		**P**	**04 11 52.1**	**+1.4**
RUSC	**La Rusia**	**21.72**	**3**	*eP*		**P**	**04 11 54.1**	**+0.2**
CBOC	**Ciudad Bolivar**	**21.76**	**355**	*eP*		**P**	**04 11 54.1**	**+0.1**
CRSM	**Crissiumal (Br**	**21.81**	**125**	*eP*		**P**	**04 11 55.0**	**+0.7**
HELC	**Santa Helena**	**22.05**	**356**	*eP*		**P**	**04 11 57.9**	**+0.7**
PCMB	**Pacaembu**	**22.28**	**108**	*eP*		**P**	**04 11 59.3**	**-0.1**
PTBC	**PUERTO BERRIO,**	**22.35**	**359**	*eP*		**P**	**04 11 58.9**	**-1.3**
PTGB	**Pitanga**	**22.36**	**117**	*eP*		**P**	**04 12 00.4**	**+0.1**
SNDB	**Serra Nova Dou**	**22.42**	**83**	*eP*		**P**	**04 12 00.2**	**-0.9**
BOAV	**Boa Vista**	**22.60**	**37**	*eP*		**P**	**04 12 02.9**	**0.0**
ITRB	**Iturama**	**22.85**	**103**	*eP*		**P**	**04 12 05.6**	**+0.1**
BRRC	**Barranca, Sant**	**22.91**	**1**	*eP*		**P**	**04 12 09.5**	**+3.4**
DBBC	**Dabeiba**	**22.92**	**354**	*eP*		**P**	**04 12 09.5**	**+3.2**
ITAB	**Concordia**	**23.23**	**123**	P		**P**	**04 12 09.1**	**0.0**
ITAB	**Concordia**	**23.23**	**123**	*eP*		**P**	**04 12 09.3**	**+0.2**
URCC	**San Jos de Ur**	**23.59**	**356**	*eP*		**P**	**04 12 19.1**	**+6.4**
CPSB	**Cacapava Do Su**	**23.73**	**131**	*eP*		**P**	**04 12 14.3**	**+0.4**
MALB	**Monte Alegre**	**24.00**	**56**	*eP*		**P**	**04 12 16.8**	**+0.3**
OCAC	**Ocana**	**24.04**	**2**	P		**P**	**04 12 15.8**	**-1.2**
FRTB	**Fartura**	**24.18**	**112**	*eP*		**P**	**04 12 18.2**	**+0.2**
PLTB	**Pedras Altas**	**24.37**	**134**	P		**P**	**04 12 19.5**	**-0.2**
PLTB					IAmb	IAmb	04 12 36.8	
	comp=Z,54nm,1.3s							
PLTB	**Pedras Altas**	**24.37**	**134**	*eP*		**P**	**04 12 20.1**	**+0.4**
IPMB	**Ipameri, GO**	**24.79**	**98**	*eP*		**P**	**04 12 24.1**	**+0.4**
PLCA	**Paso Flores**	**24.88**	**174**	P		**P**	**04 12 24.9**	**+0.7**
	comp=Z,11nm,0.9s,baz=354,slow=11,SNR=17							
PLCA				LR		LR	04 20 30.6	
	comp=Z,318nm,20.8s,baz=12,slow=32							
	comp=Z,11nm,0.9s							
PLCA	**Paso Flores**	**24.88**	**174**	P		**P**	**04 12 25.1**	**+0.7**
PLCA					IAmb	IAmb	04 12 44.0	
	comp=Z,62nm,1.3s							
PLCA	**Paso Flores**	**24.88**	**174**	*eP*		**P**	**04 12 25.1**	**+0.7**
SDV	**Santo Domingo**	**24.90**	**8**	P		**P**	**04 12 24.2**	**-0.7**
	comp=Z,6.0nm,0.3s,baz=231,slow=6.3,SNR=5.4							
SDV				LR		LR	04 23 14.0	
	comp=Z,883nm,21.2s,baz=202,slow=39							
	comp=Z,6.0nm,0.3s							
SDV	**Santo Domingo**	**24.90**	**8**	P		**P**	**04 12 24.7**	**-0.1**
SDV					IAmb	IAmb	04 12 41.3	
	comp=Z,22nm,0.8s							
SDV	**Santo Domingo**	**24.90**	**8**	*eP*		**P**	**04 12 26.2**	**+1.3**
LL04	**Puerto Octay**	**24.91**	**177**	P		**P**	**04 12 24.6**	**+0.1**
LL04					IAmb	IAmb	04 12 42.6	
	comp=Z,30nm,1.1s							
BDFB	**Brasilia**	**25.05**	**93**	P		**P**	**04 12 27.1**	**+1.0**
	comp=Z,34nm,1.0s,baz=266,slow=13,SNR=42							
BDFB				LR		LR	04 23 58.5	
	comp=Z,848nm,19.5s,baz=286,slow=40							
	comp=Z,34nm,1.0s							
BDFB	**Brasilia**	**25.05**	**93**	P		**P**	**04 12 26.2**	**0.0**
BDFB	**Brasilia**	**25.05**	**93**	*eP*		**P**	**04 12 27.0**	**+0.9**
CNLB	**Canela**	**25.14**	**126**	*eP*		**P**	**04 12 27.6**	**+0.8**
TIJ01	**Guaruva-PR**	**25.18**	**116**	*eP*		**P**	**04 12 27.3**	**0.0**
PEXB	**Peixe**	**25.26**	**85**	*eP*		**P**	**04 12 28.0**	**+0.1**
BAUV	**El Baul**	**25.43**	**14**	P		**P**	**04 12 28.9**	**-0.6**
BCIP	**Isla Barro Col**	**25.60**	**347**	P		**P**	**04 12 32.2**	**+1.2**
BCIP					IAmb	IAmb	04 12 43.1	
	comp=Z,30nm,1.1s							
ARGC	**Ariguani, Magd**	**25.64**	**360**	*eP*		**P**	**04 12 34.5**	**+3.2**
PRPB	**Paraupebas**	**25.66**	**70**	*eP*		**P**	**04 12 31.1**	**-0.5**
SJCC	**San Jacinto, C**	**25.70**	**357**	P		**P**	**04 12 32.1**	**+0.2**
SJCC	**San Jacinto, C**	**25.70**	**357**	*eP*		**P**	**04 12 35.5**	**+3.5**
RCLB	**Rio Claro- Sao**	**25.83**	**109**	*eP*		**P**	**04 12 34.1**	**+0.9**
TER01	**Tubaro-SC**	**26.18**	**123**	*eP*		**P**	**04 12 37.2**	**+1.0**
PET01	**Itanhaem-SP**	**26.43**	**113**	*eP*		**P**	**04 12 40.4**	**+1.9**
VAO	**Valinhos**	**26.45**	**110**	*eP*		**P**	**04 12 39.9**	**+1.2**
MCPB	**Macapa, AP**	**26.66**	**57**	*eP*		**P**	**04 12 41.3**	**+0.7**
SMTB	**Santa Maria do**	**26.76**	**78**	*eP*		**P**	**04 12 42.0**	**+0.5**
PARB	**Paraibuna**	**27.73**	**110**	*eP*		**P**	**04 12 50.3**	**+0.1**
JTS	**Las Juntas de**	**28.22**	**337**	LR		LR	04 23 57.0	
	comp=Z,840nm,21.0s,baz=225,slow=36							
SDBA	**SAO DESIDERIO**	**28.46**	**87**	*eP*		**P**	**04 12 57.2**	**+0.4**
JANB	**Januaria**	**28.66**	**92**	*eP*		**P**	**04 12 59.2**	**+0.7**
ESAR	**Angra dos Reis**	**28.75**	**109**	*eP*		**P**	**04 13 00.1**	**+0.9**
TMAB	**Tom-Au,PA,Br**	**28.90**	**65**	*eP*		**P**	**04 13 01.4**	**+0.8**
MAN01	**Angra dos Reis**	**29.16**	**108**	*eP*		**P**	**04 13 04.0**	**+1.1**
MDP	**Montagnes des**	**29.77**	**47**	LR		LR	04 25 53.4	
	comp=Z,3μm,18.1s,baz=226,slow=38							
SJMB	**Sao Joao De Ma**	**31.46**	**100**	*eP*		**P**	**04 13 24.2**	**+0.9**
ALF01	**Guarapari-ES**	**31.94**	**103**	*eP*		**P**	**04 13 27.7**	**+0.2**
ROSB	**Rosrio**	**32.17**	**69**	*eP*		**P**	**04 13 29.7**	**+0.1**
RIB01	**Linhares ES**	**32.22**	**101**	*eP*		**P**	**04 13 30.9**	**+1.0**
NAN01	**Guarapari, ES**	**32.48**	**98**	*eP*		**P**	**04 13 33.0**	**+0.7**
GUA01	**Guaratinga, BA**	**32.85**	**96**	*eP*		**P**	**04 13 35.9**	**+0.4**
CMC01	**Camacan, BA**	**33.23**	**94**	*eP*		**P**	**04 13 39.3**	**+0.5**
NBPN	**Ponto Novo - B**	**33.29**	**86**	*eP*		**P**	**04 13 39.2**	**-0.1**
GDU01	**Guandu, BA**	**33.37**	**91**	*eP*		**P**	**04 13 40.7**	**+0.6**
NBPB	**Pedra_Branca-C**	**35.34**	**77**	*eP*		**P**	**04 13 57.4**	**+0.3**
NBMA	**Muriti-CE**	**35.54**

R40A	Maddies Statio	56.60	343		IAmb	IAmb	04 16 53.9		
	comp=Z,13nm,0.8s								
MSTX	Muleshoe	56.69	331		IAmb	IAmb	04 16 57.0		
	comp=Z,10nm,1.1s								
KSPA	Keystone Colle	57.23	358		P	P	04 16 48.6	+0.2	
KSPA					IAmb	IAmb	04 16 49.5		
	comp=Z,22nm,1.3s								
M55A	Ridgway	57.29	356		IAmb	IAmb	04 17 02.5		
	comp=Z,9.0nm,0.8s								
121A	Cookes Peak, D	58.02	326		IAmb	IAmb	04 17 07.2		
	comp=Z,18nm,1.1s								
WES	Weston	58.09		2	P	P	04 16 53.8	-0.5	
WES					IAmb	IAmb	04 17 19.2		
	comp=Z,16nm,1.5s								
P38A	Dawn	58.20	342		IAmb	IAmb	04 17 06.1		
	comp=Z,6.3nm,0.7s								
TRY	Troy	58.39		0	P	P	04 16 55.9	-0.5	
TRY					IAmb	IAmb	04 16 57.5		
	comp=Z,18nm,1.2s								
ACCN	Adirondack Com	59.04		0	P	P	04 17 00.7	-0.2	
ACCN					IAmb	IAmb	04 17 02.0		
	comp=Z,16nm,1.4s								
J59A	Piesco	59.12	360		IAmb	IAmb	04 17 20.1		
	comp=Z,22nm,1.4s								
ANMO	Albuquerque	59.24	329		LR	LR	04 41 22.9		
	comp=Z,226nm,18.8s,baz=129,slow=35								
ANMO	Albuquerque	59.24	329		P	P	04 17 02.3	-0.4	
ANMO					IAmb	IAmb	04 17 15.2		
	comp=Z,9.2nm,1.2s								
ANMO	Albuquerque	59.24	329		P	P	04 17 02.2	-0.4	
ANMO					pP	pP	04 17 12.5	-5.4	
TUC	Tucson	59.50	324		P	P	04 17 04.1	-0.3	
NCB	Newcomb	59.62	360		IAmb	IAmb	04 17 22.8		
	comp=Z,13nm,1.4s								
T25A	Trinidad	60.06	332		IAmb	IAmb	04 17 25.3		
	comp=Z,7.1nm,0.8s								
FRNY	Flat Rock	60.49		0	P	P	04 17 10.4	-0.5	
FRNY					IAmb	IAmb	04 17 11.8		
	comp=Z,15nm,1.2s								
SADO	Sadowa	60.60	356		LR	LR	04 43 35.2		
	comp=Z,214nm,21.7s,baz=182,slow=36								
G62A	West of Eustis	60.96		3	P	P	04 17 14.6	+0.6	
G62A					IAmb	IAmb	04 17 15.5		
	comp=Z,20nm,1.2s								
SFX	San Felipe	60.99	320		P	P	04 17 14.8	+0.3	
MNTQ	Montreal, Queb	61.16		0	IAmb	IAmb	04 17 16.1		
	comp=Z,16nm,1.1s								
X16A	Lo Mia Camp, P	61.43	325		IAmb	IAmb	04 17 29.5		
	comp=Z,5.9nm,0.9s								
S22A	4UR Ranch, Cre	61.66	331		IAmb	IAmb	04 17 31.8		
	comp=Z,10nm,1.2s								
F64A	Sherman	61.73		5	IAmb	IAmb	04 17 20.5		
	comp=Z,16nm,1.2s								
TRQ	Mont Tremblant	61.88	360		IAmb	IAmb	04 17 36.8		
	comp=Z,17nm,1.4s								
MVCO	Mesa Verde	62.04	329		IAmb	IAmb	04 17 34.4		
	comp=Z,8.5nm,1.0s								
WUAZ	Wupatki	62.22	326		IAmb	IAmb	04 17 41.2		
	comp=Z,12nm,1.2s								
PQI	Presque Isle	62.56		5	IAmb	IAmb	04 17 26.1		
	comp=Z,22nm,1.4s								
ECSD	EROS Data Cent	62.88	342		P	P	04 17 25.8	-1.2	
ECSD					IAmb	IAmb	04 17 37.6		
	comp=Z,13nm,0.9s								
SMCO	Snowmass	62.88	332		IAmb	IAmb	04 17 44.9		
	comp=Z,6.8nm,0.8s								
D62A	Allapoint, All	62.90		4	P	P	04 17 27.0	0.0	
D62A					IAmb	IAmb	04 17 28.2		
	comp=Z,18nm,1.2s								
PV15	Paradox Valley	62.92	330		IAmb	IAmb	04 17 40.7		
	comp=Z,15nm,1.0s								
PV13	Radium Mtn., P	62.94	330		IAmb	IAmb	04 17 40.4		
	comp=Z,9.5nm,1.0s								
PFO	Pinyon Flats O	63.75	321		LR	LR	04 40 21.3		
	comp=Z,291nm,21.9s,baz=150,slow=31								
PFO	Pinyon Flats O	63.75	321		P	P	04 17 32.8	-0.3	
PFO					pP	pP	04 17 44.0	-4.2	
VLDQ	Val d'Or	63.84	357		IAmb	IAmb	04 17 33.8		
	comp=Z,22nm,1.4s								
F36A	Milaca	64.00	345		IAmb	IAmb	04 17 34.0		
	comp=Z,16nm,1.2s								
O20A	White River Ci	64.23	331		IAmb	IAmb	04 17 49.5		
	comp=Z,9.8nm,0.9s								
MTPU	Mount Pierson	64.54	327		P	P	04 17 38.5	0.0	
SZCU	Shurtz Canyon	64.69	326		IAmb	IAmb	04 17 52.6		
	comp=Z,9.7nm,1.2s								
F33A	5 Mile Ranch,	64.71	343		IAmb	IAmb	04 17 49.7		
	comp=Z,16nm,1.1s								
CCUT	Cedar City	64.80	326		IAmb	IAmb	04 17 53.8		
	comp=Z,12nm,1.4s								
P17A	Butcher Ranch,	64.90	329		IAmb	IAmb	04 17 53.9		
	comp=Z,9.4nm,0.8s								
BELA	Belgrano 2	64.91	171		P	P	04 17 40.3	+0.4	
BELA					IAmb	IAmb	04 17 42.6		
	comp=Z,12nm,0.9s								
SHPR	Sheep Range	65.03	324		P	P	04 17 41.9	+0.4	
RSSD	Black Hills	65.76	337		P	P	04 17 56.2	+10	
RSSD					pP	sP	04 18 06.9	-0.5	
JLU	Jordanelle	66.12	330		IAmb	IAmb	04 18 02.8		
	comp=Z,8.2nm,0.7s								
B35A	Bob, Littlefor	66.38	346		IAmb	IAmb	04 18 15.4		
	comp=Z,9.4nm,1.1s								
DUG	Dugway, Tooele	66.48	328		IAmb	IAmb	04 18 04.6		
	comp=Z,12nm,0.8s								
AGMN	Agassiz Nation	66.85	344		IAmb	IAmb	04 18 03.5		
	comp=Z,6.7nm,0.8s								
VNA3	Neumayer Olymp	66.86	162		P	P	04 17 53.7	+1.1	
PDAR	Pinedale Array	66.93	332		P	P	04 17 52.8	-0.9	
	comp=Z,0.2nm,0.4s,baz=134,slow=6.4,SNR=4.5								
PDAR					LR	LR	04 48 25.3		
	comp=Z,145nm,20.0s,baz=140,slow=37								
	comp=Z,0.2nm,0.4s								
PDAR	Pinedale Array	66.93	332		P	P	04 17 52.9	-0.8	
VNA1	Neumayer--Stat	67.11	161		P	P	04 17 55.2	+1.1	
VNA2	Neumayer--Watz	67.47	161		P	P	04 17 57.4	+1.0	
	baz=284,slow=7.0								
VNA2	Neumayer--Watz	67.47	161		PKiKP	PKiKP	04 24 20.2	-1.0	
HVU	Hansel Valley	67.66	330		IAmb	IAmb	04 18 12.0		
	comp=Z,7.5nm,0.8s								
REDW	Red Top Meadow	67.98	332		IAmb	IAmb	04 18 11.9		
	comp=Z,13nm,1.4s								
OMMB	Old Mammoth Mi	68.00	323		IAmb	IAmb	04 18 18.3		
	comp=Z,10.0nm,1.2s								
NV11	Mina Array Sit	68.07	324		P	P	04 18 00.3	-0.5	
ELK	Elko	68.13	327		LR	LR	04 46 41.8		
	comp=Z,373nm,19.4s,baz=136,slow=35								
NVAR	Mina Array Bea	68.16	324		P	P	04 18 01.0	-0.5	
	comp=Z,0.9nm,0.8s,baz=149,slow=7.3,SNR=6.9								
NVAR					LR	LR	04 47 25.6		
	comp=Z,177nm,18.9s,baz=95,slow=36								
	comp=Z,0.9nm,0.8s								
FLWY	Flagg Ranch	68.48	332		IAmb	IAmb	04 18 17.0		
	comp=Z,12nm,0.8s								
ULM	Lac du Bonnet	68.66	345		P	P	04 18 01.9	-2.2	
	comp=Z,2.7nm,0.7s,baz=155,slow=7.9,SNR=4.9								
ULM					LR	LR	04 50 02.2		
	comp=Z,142nm,21.9s,baz=153,slow=38								
	comp=Z,2.7nm,0.7s								
ULM	Lac du Bonnet	68.66	345		IAmb	IAmb	04 18 14.1		
	comp=Z,7.4nm,0.9s								
SNAA	Sanae	69.08	161		P	P	04 18 07.6	+1.1	
SNAA	Sanae	69.08	161		P	P	04 18 07.0	+0.4	
YHL	Hebgen Lake	69.29	333		IAmb	IAmb	04 18 21.1		
	comp=Z,9.1nm,1.0s								
PNTR	Pine Nut	69.34	324		IAmb	IAmb	04 18 13.8		
	comp=Z,7.6nm,0.8s								
PAHR	Pah Rah Range	69.64	324		IAmb	IAmb	04 18 23.1		
	comp=Z,10nm,0.9s								
BCYI	Bear Canyon	69.89	331		P	P	04 18 12.4	+0.3	
MFID	Camas Ranch	70.38	329		IAmb	IAmb	04 18 32.9		
	comp=Z,12nm,0.9s								
ORV	Oroville	70.75	323		IAmb	IAmb	04 18 34.9		
	comp=Z,14nm,1.1s								
SCHQ	Schefferville	70.76		4	P	P	04 18 16.0	-0.9	
	comp=Z,7.3nm,1.1s,baz=174,slow=3.9,SNR=7.2								
SCHQ					LR	LR	04 49 53.7		
	comp=Z,143nm,21.2s,baz=188,slow=36								
	comp=Z,7.3nm,1.1s								
SCHQ	Schefferville	70.76		4	IAmb	IAmb	04 18 16.7		
	comp=Z,14nm,1.1s								
TROLL	Troll, Antarti	70.80	161		P	P	04 18 18.4	+1.2	
LIC	Lamto	71.76	78		eP	P	04 18 24.0	+0.2	
	comp=Z,46nm,1.6s								
PPT	Papeete	71.87	256		LR	LR	04 41 52.1		
	comp=Z,361nm,20.4s,baz=138,slow=29								
TIC	Toumodi	71.90		77	ePKP2	P	04 18 24.2	-0.5	
	comp=Z,39nm,1.0s								
DBIC	Dimbokro	72.06		77	P	P	04 18 24.9	-0.8	
	comp=Z,11nm,1.0s,baz=270,slow=7.1,SNR=8.3								
DBIC					LR	LR	04 48 58.6		
	comp=Z,870nm,19.2s,baz=250,slow=35								
	comp=Z,11nm,1.0s								
DBIC	Dimbokro	72.06		77	IAmb	IAmb	04 18 26.6		
	comp=Z,17nm,1.0s								
KIC	Kosan Boka	72.07		78	ePKP2	P	04 18 25.3	-0.4	
	comp=Z,10nm,0.5s								
PMOZ	Porto Moniz, M	72.80		48	eLR	LR	04 46 15.8		
	comp=Z,249nm,20.0s								
YBH	Yreka Blue Hor	72.87	324		LR	LR	04 50 30.6		
	comp=Z,128nm,18.2s,baz=122,slow=36								
F10A	Beach Ranch, E	72.93	330		P	P	04 18 31.3	+1.1	
PMPS	Porto Santo	73.54		48	eP	P	04 18 34.2	+0.2	
	comp=Z,87nm,2.0s								
QSPA	South Pole Qui	74.21	180		P	P	04 18 37.8	+0.3	
QSPA					IAmb	IAmb	04 18 40.2		
	comp=Z,23nm,1.2s								
NEW	Newport	74.55	332		LR	LR	04 53 36.0		
	comp=Z,76nm,18.1s,baz=135,slow=38								
EDM	Edmonton	76.74	337		IAmb	IAmb	04 19 03.0		
	comp=Z,11nm,0.8s								
FRB	Frobisher Bay	79.56		2	LR	LR	04 57 51.6		
	comp=Z,133nm,18.5s,baz=184,slow=38								
TOA0	Torodi Ar. Sit	80.26		73	P	P	04 19 11.8	-0.4	
TORD	Torodi Ar. Bea	80.26		73	P	P	04 19 12.3	+0.1	
	comp=Z,20nm,0.9s,baz=258,slow=5.2,SNR=81								
TORD					LR	LR	04 53 54.8		
	comp=Z,580nm,19.7s,baz=202,slow=35								
	comp=Z,20nm,0.9s								
TORD	Torodi Ar. Bea	80.26		73	P	P	04 19 11.9	-0.3	
RAR	Rarotonga	80.50	251		LR	LR	04 45 17.2		
	comp=Z,356nm,21.6s,baz=106,slow=28								
MORF	Marmelete	81.11		47	eP	P	04 19 17.8	+1.5	
MORF					IAmb	IAmb	04 19 18.9		
	comp=Z,16nm,0.9s								
MORF	Marmelete	81.11		47	eP	P	04 19 18.1	+1.8	
	comp=Z,31nm,1.3s								
PTEO	Sao Teotonio	81.17		47	eP	P	04 19 18.4	+1.9	
	comp=Z,35nm,1.4s								
VNDA	Vanda	81.42	190		P	P	04 19 18.6	+1.3	
	comp=Z,2.1nm,1.1s,baz=186,slow=4.0,SNR=4.5								
VNDA					LR	LR	04 49 38.9		
	comp=Z,190nm,18.9s,baz=126,slow=31								
	comp=Z,2.1nm,1.1s								
VNDA	Vanda	81.42	190		P	P	04 19 18.9	+1.6	
PMAFR	Mafra	81.44		45	eP	P	04 19 18.9	+0.9	
PNCL	Nicolau / Gran	81.57		47	eP	P	04 19 20.0	+1.4	
	comp=Z,18nm,1.5s								
MESJ	Messejana	81.66		47	eP	P	04 19 20.6	+1.4	
MESJ					IAmb	IAmb	04 19 22.1		
	comp=Z,8.3nm,0.8s								
MESJ	Messejana	81.66		47	eP	P	04 19 20.4	+1.3	
	comp=Z,17nm,1.3s								
PCVE	Castro Verde	81.69		47	eP	P	04 19 20.8	+1.5	
	comp=Z,22nm,1.1s								
PVAQ	Vaqueiros	81.81		47	eLR	LR	04 48 11.5		
	comp=Z,351nm,22.0s								
PBEJ	Beja	81.99		47	eP	P	04 19 22.2	+1.3	
	comp=Z,17nm,1.5s								
MDT	Midelt	82.11		53	LR	LR	04 53 10.1		
	comp=Z,490nm,21.9s,baz=257,slow=34								
PMTG	Montargil	82.22		46	eP	P	04 19 23.2	+1.1	
	comp=Z,37nm,1.6s								
PESTR	Esmoz	82.57		46	eP	P	04 19 25.2	+1.3	
	comp=Z,24nm,1.8s								
PESTR	Estremoz	82.57		46	P	P	04 19 24.7	+0.8	
PESTR					IAmb	IAmb	04 19 26.7		
	comp=Z,14nm,1.4s								
COI	Coimbra	82.62		45	eP	P	04 19 25.6	+1.5	
	comp=Z,60nm,1.4s								
PMRV	Marv??o	82.96		46	eP	P	04 19 26.3	+0.3	
	comp=Z,14nm,1.9s								
PMRV	Marv??o	82.96		46	eLR	LR	04 47 24.5		
	comp=Z,413nm,20.0s								
PCBR	Castelo Branco	83.09		45	eP	P	04 19 27.7	+1.1	
	comp=Z,22nm,1.2s								
PVIS	Viseu	83.21		44	eP	P	04 19 27.9	+0.6	
	comp=Z,42nm,1.5s								
MTE	Manteigas	83.30		45	eP	P	04 19 28.5	+0.7	
	comp=Z,34nm,1.3s								
MTE	Manteigas	83.30		45	eLR	LR	04 47 34.2		
	comp=Z,481nm,22.0s								
MTE	Manteigas	83.30		45	P	P	04 19 28.5	+0.7	
PGAV	Gavieira, Arco	83.54		43	eP	P	04 19 29.5	+0.5	
	comp=Z,32nm,1.8s								
PGAV	Gavieira, Arco	83.54		43	eLR	LR	04 49 06.6		
	comp=Z,294nm,20.0s								
POLO	Lamas de Olo	83.58		44	eP	P	04 19 29.8	+0.6	
	comp=Z,13nm,1.4s								
PCAB	Cabril	83.58		44	eP	P	04 19 29.7	+0.6	
	comp=Z,41nm,1.4s								
PVRL	Vila Real	83.59		44	eP	P	04 19 30.4	+1.2	
	comp=Z,7nm,1.7s								
MVO	Moncorvo	84.00		44	eP	P	04 19 31.9	+0.6	
	comp=Z,30nm,1.3s								
MVO	Moncorvo	84.00		44	eLR	LR	04 48 04.1		
	comp=Z,324nm,22.0s								
YKA	Yellowknife Ar	84.41	342		P	P	04 19 31.6	-1.1	
	comp=Z,1.5nm,0.8s,baz=142,slow=6.0,SNR=18								
YKA					LR	LR	04 59 17.3		
	comp=Z,162nm,19.9s,baz=150,slow=37								
	comp=Z,1.5nm,0.8s								
PBRG	Braganca	84.48		44	eP	P	04 19 34.3	+0.6	
	comp=Z,26nm,1.6s								
SFJD	Kangerlussuaq	84.50		9	LR	LR	04 59 21.7		
	comp=Z,60nm,19.9s,baz=204,slow=37								
DY2G	Dye2	84.75		11	eP	P	04 19 33.1	-1.6	
PAB	San Pablo	85.13		47	P	P	04 19 37.8	+0.7	
ESDC	Sonseca Array	85.45		47	P	P	04 19 39.5	+0.9	
	comp=Z,11nm,1.1s,baz=256,slow=5.4,SNR=52								
ESDC					LR	LR	04 55 47.6		
	comp=Z,374nm,20.1s,baz=234,slow=34								
	comp=Z,11nm,1.1s								
SUR	Sutherland	85.61	122		LR	LR	04 55 23.5		
	comp=Z,286nm,19.4s,baz=261,slow=34								
TSUM	Tsumeb	86.36	109		LR	LR	04 57 27.4		
	comp=Z,299nm,18.1s,baz=284,slow=35								
TSUM	Tsumeb	86.36	109		P	P	04 19 44.5	+0.8	
TSUM					IAmb	IAmb	04 19 46.6		
	comp=Z,9.7nm,0.9s								
DLBC	Dease Lake	87.08	334		LR	LR	05 02 35.1		
	comp=Z,141nm,18.5s,baz=90,slow=38								
ICESG	Greenland Ices	88.27		12	iP	P	04 19 54.5	+2.4	
BESE	Bessie Mountai	89.24	333		P	P	04 19 57.0	+0.5	
BESE					IAmb	IAmb	04 20 22.5		
	comp=Z,12nm,1.1s								
BORG	Borgarnes	89.81		20	LR	LR	04 57 32.7		
	comp=Z,92nm,22.0s,baz=234,slow=34								
BOSA	Boshof	90.38	120		P	P	04 20 02.8	+0.1	
	comp=Z,6.6nm,1.0s,baz=58,slow=1.0,SNR=6.0								
BOSA					LR	LR	04 58 07.0		
	comp=Z,188nm,20.4s,baz=241,slow=34								
	comp=Z,6.6nm,1.0s								
MAW	Mawson	90.97	165		P	P	04 20 05.6	+1.1	
	comp=Z,1.7nm,0.7s,baz=200,slow=2.5,SNR=3.6								
MAW					LR	LR	04 58 27.9		
	comp=Z,230nm,21.6s,baz=218,slow=34								
	comp=Z,1.7nm,0.7s								
RES	Resolute Bay	91.39	355		LR	LR	05 04 49.4		
	comp=Z,110nm,18.7s,baz=117,slow=38								
SUMG	Summit	91.42		10	iP	P	04 20 06.0	-0.7	
LBTB	Lobatse	91.80	117		LR	LR	04 57 58.1		
	comp=Z,203nm,20.7s,baz=253,slow=33								
LBTB	Lobatse	91.80	117		P	P	04 20 09.6	+0.3	
AFI	Afiamalu	93.47	255		LR	LR	04 52 41.6		
	comp=Z,152nm,20.5s,baz=168,slow=29								
INK	Inuvik	94.12	341		LR	LR	05 06 44.8		
	comp=Z,234nm,18.6s,baz=111,slow=38								
URZ	Urewera	94.37	228		LR	LR	04 53 10.7		
	comp=Z,190nm,20.8s,baz=31,slow=29								
MATP	Matopo	95.81	113		LR	LR	05 02 27.4		
	comp=Z,219nm,18.6s,baz=240,slow=35								
ECH	Echery	96.00		42	P	P	04 20 28.3	+0.4	
ECH					IAmb	IAmb	04 20 29.1		
	comp=Z,6.8nm,1.1s								
RPZ	Rata Peaks	96.07	221		LR	LR	04 53 19.9		
	comp=Z,192nm,21.9s,baz=86,slow=29								
ILAR	Eielson Array	97.19	336		LR	LR	05 07 19.5		
	comp=Z,131nm,21.3s,baz=106,slow=37								
LSZ	Lusaka	97.19	108		LR	LR	05 02 04.9		
	comp=Z,208nm,21.5s,baz=262,slow=34								
KDAK	Kodiak Island	97.36	328		LR	LR	05 03 49.5		
	comp=Z,86nm,20.6s,baz=120,slow=35								
DAVOX	Davos/Dischmat	97.38		44	LR	LR	05 03 13.8		
	comp=Z,199nm,19.9s,baz=246,slow=35								
STU	Stuttgart	97.46		41	P	P	04 20 34.4	-0.1	
VAE	Valguarnera	98.33		53	LR	LR	05 03 57.7		
	comp=Z,167nm,21.7s,baz=289,slow=35								
CTI	Castel Tesino	98.38		45	IAmb	IAmb	04 20 40.1		
	comp=Z,6.9nm,1.3s								
GERES	GERESS Array B	100.37		42	P	Pdif	04 20 47.6	0.0	
	comp=Z,0.5nm,0.8s,baz=207,slow=1.5,SNR=5.9								
CLL	Collm	100.45		40	i Pdif	Pdif	04 20 48.9	+1.1	
CLL					ePP	PP	04 24 58.0	+2.9	
CLL					ePPP	PPP	04 27 04.0		
CLL					e(SKSac)		04 31 34.0		
CLL					e(Sdif)		04 32 42.0		
CLL					ePS	PS	04 33 56.0	-0.4	
CLL					ePPS	PPS	04 34 49.0		
CLL					eSS	SS	04 39 18.0	+1.2	
CLL					eSSS	SSS	04 43 06.0		
CLL					Lm	MLR	05 06 00.0		
	comp=N,100nm,18.8s								
CLL					Lm	MLR	05 06 00.0		
	comp=E,100nm,18.0s								
CLL					Lm	MLR	05 06 00.0		
	comp=Z,200nm,18.7s								
BRG	Berggiesshubel	100.94		40	eP	Pdif	04 20 49.5	-0.4	
BRG					Amp		04 20 52.2		
	comp=Z,4.7nm,1.1s								
AKASG	Malin Array Be	110.56		41	PP	PP	04 26 05.3	-4.5	
	comp=Z,0.1nm,0.3s,baz=265,slow=7.3,SNR=7.2								
H11N3	WAKE ISLAND Hyl	122.11	284		T	T	06 39 43.2		
	baz=90,slow=75								
H11N2	WAKE ISLAND Hyl	122.13	284		T	T	06 39 43.9		
	baz=90,slow=75								
H11N1	WAKE ISLAND Hyl	122.13	283		T	T	06 39 40.6		
	baz=90,slow=75								
H11S2	WAKE ISLAND Hyl	122.15	282		T	T	06 39 41.9		
	baz=99,slow=75								
H11S1	WAKE ISLAND Hyl	122.16	282		T	T	06 39 42.1		
	baz=99,slow=75								
H11S3	WAKE ISLAND Hyl	122.17	282		T	T	06 39 42.5		
	baz=99,slow=75								
AKTO	Aktyubinsk	128.47		37	PKP	PKPdf	04 26 07.6	+0.3	
	comp=Z,2.0nm,0.9s,baz=297,slow=2.3,SNR=4.0								
ASAR	Alice Springs	132.08	215		PKP	PKPdf	04 26 14.8	-0.4	
	comp=Z,1.6nm,0.9s,baz=134,slow=2.4,SNR=7.7								
WRA	Warramunga Arr	134.72	219		PKP	PKPdf	04 26 19.3	-0.8	
	comp=Z,0.9nm,0.6s,baz=132,slow=2.1,SNR=17								
ZALV	Zalesovo Beam	138.65	19		PKP	PKPdf	04 26 25.7	-0.6	
	comp=Z,7.6nm,0.9s,baz=298,slow=3.2,SNR=19								
ZALV	Zalesovo Beam	138.65	19			PKPdf	04 26 26.3	0.0	
KURBB	Kurchatov Arra	138.97		27	PKP	PKPdf	04 26 28.1	+1.1	
	comp=Z,3.0nm,1.1s,baz=311,slow=2.5,SNR=9.6								
MKAR	Makanchi Array	143.49		28	PKP	PKPbc	04 26 32.6	0.0	
	comp=Z,1.5nm,0.8s,baz=304,slow=2.6,SNR=11								
PRZ	Przheval'sk	144.55		36	PKPdf	PKPdf	04 26 37.9	+0.4	
MJAR	Matsushiro Arr	144.79	312		PKP	PKPab	04 26 35.7	-1.2	
	comp=Z,2.1nm,1.0s,baz=79,slow=2.0,SNR=7.5								
KSH	Kashi	144.85		42	PKP	PKPdf	04 26 38.8	+0.8	
KSH					sPKP		04 26 52.7		
KSH					smax	smax			
	comp=N,430nm,0.7s								
KSH					smax	smax			
	comp=E,350nm,0.7s								
HIA	Hailar	144.92	344		PKPdf	PKPbc	04 26 37.3	+0.4	
ULN	Ulaanbaatar	148.16	359		PKPbc	PKPbc	04 26 46.6	-0.1	
WMQ	Urumqi	148.17		25	eP	PKPdf	04 26 45.0	+1.6	
SONM	Songino Array	148.20	359		PKP	PKPdf	04 26 43.0	-0.4	
	comp=E,6.9nm,1.0s,baz=44,slow=2.7,SNR=14								
SONM					PKPbc	PKPbc	04 26 46.4	-0.4	
	comp=E,4.1nm,0.7s,baz=327,slow=1.7,SNR=24								
SONM	Songino Array	148.20	359		PKPbc	PKPdf	04 26 45.0	+1.6	
KSRS	Korea Array	151.08	322		PKPbc	PKPbc	04 26 54.2	+0.3	
	comp=E,3.8nm,0.9s,baz=318,slow=0.7,SNR=14								
HHC	Hu-ho-hao-te	154.71	350		eP	PKPdf	04 26 50.7	-2.8	
NJ2	Nanjing	160.13	326		eP	PKPdf	04 27 01.6	+1.2	
NJ2					pmax	pmax			
	comp=Z,7.0nm,0.5s								
PZH	PanZhiHua	168.79		20	PKP	PKPdf	04 27 08.0	-0.4	
CMAR	Chiang Mai Arr	172.85		69	PKPab	PKPab	04 28 37.8	+0.7	
	comp=Z,0.8nm,0.3s,baz=289,slow=4.9,SNR=7.7								

*JMA **05** 04:22:44.9±0.2,24.9N±0.7×122.0E±0.4,h13km±1km, MV2.1/11,TAIWAN REGION*
*TAP **05** 04:22:44.9,24.84N×121.84E,h121km,ML2.8,B*

NCUH	**Zhongli** baz=282	**0.69**	**277**	*e*S		**Sn**	04 23 17.4	-1.4	
NACB	**Ninganchiao** baz=203	**0.77**	**204**	*e*P		**Pn**	04 23 04.4	+0.3	
NACB	baz=203			*e*S		**Sn**	04 23 19.0	-1.0	
ETL	**Fush Village** baz=203	**0.77**	**201**	*e*S		**Sn**	04 23 19.0	-1.1	
NFF	**Wufeng Townshi** baz=251	**0.78**	**252**	*e*P		**Pn**	04 23 04.3	+0.1	
NFF	baz=251			*e*S		**Sn**	04 23 18.6	-1.7	
ETLH	**Xiulin Townshi** baz=212	**0.79**	**212**	*e*P		**Pn**	04 23 04.6	+0.3	
ETLH	baz=212			*e*S		**Sn**	04 23 19.1	-1.4	
TWD	**Chiawan** baz=203	**0.85**	**201**	*e*P		**Pn**	04 23 05.4	+0.6	
TWD	baz=203			*e*S		**Sn**	04 23 20.3	-0.9	
LIOB	**Emei** baz=249	**0.87**	**254**	*e*P		**Pn**	04 23 06.2	+1.3	
LIOB	baz=249			*e*S		**Sn**	04 23 21.0	-0.5	
NSTT	**Nanjuang** baz=249	**0.88**	**254**	*e*P		**Pn**	04 23 06.2	+1.2	
NSTT	baz=249			*e*S		**Sn**	04 23 20.9	-0.8	
FUSS	**Fushou** baz=216	**0.89**	**225**	*e*P		**Pn**	04 23 06.2	+0.8	
FUSS	baz=216			*e*S		**Sn**	04 23 21.8	-0.5	
TDCB	**Techi** baz=231	**0.94**	**229**	*e*S		**Sn**	04 23 21.1	-1.8	
WHF	**Hehuan Shan** baz=210	**0.95**	**220**	*e*P		**Pn**	04 23 07.3	+1.2	
WHF	baz=210			*e*S		**Sn**	04 23 23.0	-0.6	
JYNG	**Yonaguni jima**	**1.02**	**115**	*e*P		**Pn**	04 23 06.2	+0.1	
JYNG				*e*S		**Sn**	04 23 21.4	-2.3	
YOJ	**Yonaguni jima** baz=114	**1.07**	**113**	*e*P		**Pn**	04 23 08.5	+1.8	
YOJ	baz=114			*e*S		**Sn**	04 23 25.5	+0.9	
YOJ	**Yonaguni jima**	**1.07**	**113**	P		**Pn**	04 23 06.5	-0.1	
YOJ				S		**Sn**	04 23 22.9	-1.7	
CHGB	**Renai** baz=215	**1.07**	**220**	*e*S		**Sn**	04 23 25.5	+0.3	
WHP	**Taichung City** baz=234	**1.08**	**236**	*e*P		**Pn**	04 23 08.1	+1.2	
WHP	baz=234			*e*S		**Sn**	04 23 25.5	+0.4	
OWD	**Renai** baz=217	**1.15**	**217**	*e*P		**Pn**	04 23 08.8	+1.1	
OWD	baz=217			*e*S		**Sn**	04 23 26.4	-0.1	
ESL	**Shilin** baz=193	**1.16**	**203**	*e*P		**Pn**	04 23 08.6	+1.0	
ESL	baz=193			*e*S		**Sn**	04 23 25.3	-1.0	
WUSB	**Renai** baz=215	**1.16**	**220**	*e*P		**Pn**	04 23 09.3	+1.6	
WUSB	baz=215			*e*S		**Sn**	04 23 26.2	-0.3	
NSY	**Sanyi** baz=245	**1.16**	**247**	*e*P		**Pn**	04 23 08.9	+1.2	
NSY	baz=245			*e*S		**Sn**	04 23 25.9	-0.4	
TWQ1	**Liyutan** baz=234	**1.18**	**244**	*e*P		**Pn**	04 23 08.2	+0.4	
TWQ1	baz=234			*e*S		**Sn**	04 23 25.6	-1.1	
WCS	**Beigang Elemen** baz=230	**1.24**	**229**	*e*P		**Pn**	04 23 08.9	+0.4	
WCS	baz=230			*e*S		**Sn**	04 23 26.6	-1.1	
EGFH	**Guangfu** baz=196	**1.29**	**201**	*e*P		**Pn**	04 23 09.8	+0.9	
EGFH	baz=196			*e*S		**Sn**	04 23 27.7	-1.0	
VWDT	**VWDT** baz=213	**1.34**	**213**	*e*P		**Pn**	04 23 11.4	+2.0	
VWDT	baz=213			*e*S		**Sn**	04 23 28.9	-0.6	
SMLT	**Sun Moon Lake** baz=227	**1.37**	**224**	*e*P		**Pn**	04 23 10.6	+0.7	
SMLT	baz=227			*e*S		**Sn**	04 23 29.8	-0.6	
TYC	**Yuchr** baz=229	**1.38**	**225**	*e*P		**Pn**	04 23 11.5	+1.6	
TYC	baz=229			*e*S		**Sn**	04 23 30.0	-0.3	
SSLB	**Suanglung** baz=224	**1.41**	**220**	*e*P		**Pn**	04 23 10.9	+0.6	
SSLB	baz=224			*e*S		**Sn**	04 23 29.9	-1.1	
HGSD	**Ruisui** baz=193	**1.46**	**199**	*e*P		**Pn**	04 23 12.3	+1.5	
HGSD	baz=193			*e*S		**Sn**	04 23 32.6	+0.7	
EHY	**Hungye** baz=190	**1.48**	**202**	*e*P		**Pn**	04 23 11.7	+0.6	
EHY	baz=190			*e*S		**Sn**	04 23 31.5	-0.9	
YULB	**Yu-li** baz=191	**1.59**	**202**	*e*P		**Pn**	04 23 12.7	+0.4	
YULB	baz=191			*e*S		**Sn**	04 23 33.5	-1.1	
YUS	**Yu-Shan** baz=218	**1.65**	**213**	*e*P		**Pn**	04 23 14.8	+1.3	
YUS	baz=218			*e*S		**Sn**	04 23 36.4	-0.2	
ALS	**Alishan** baz=213	**1.71**	**217**	*e*P		**Pn**	04 23 14.8	+0.9	
ALS	baz=213			*e*S		**Sn**	04 23 36.7	-0.8	
CHN5	**Tsauling** baz=218	**1.72**	**222**	*e*P		**Pn**	04 23 14.4	+0.6	
CHN5	baz=218			*e*S		**Sn**	04 23 36.3	-0.9	
IRIF	**Iriomote-Funau**	**1.72**	**108**	P		**Pn**	04 23 13.9	+0.2	
IRIF				*e*S		**Sn**	04 23 35.6	-1.6	
FULB	**Fuli** baz=194	**1.77**	**199**	*e*P		**Pn**	04 23 15.8	+1.4	
FULB	baz=194			*e*S		**Sn**	04 23 37.7	-0.7	
ELDTW	**Lidau** baz=194	**1.88**	**207**	*e*P		**Pn**	04 23 16.0	+0.2	
ELDTW	baz=194			*e*S		**Sn**	04 23 41.0	+0.2	
HATJ	**Hateruma jima**	**1.89**	**115**	P		**Pn**	04 23 16.5	+0.7	
TPUB	**Ta-pu** baz=213	**1.97**	**217**	*e*P		**Pn**	04 23 17.2	+0.4	
TPUB	baz=213			*e*S		**Sn**	04 23 41.3	-1.3	
EDH	**Donghe** baz=186	**1.99**	**197**	*e*P		**Pn**	04 23 17.7	+0.8	
EDH	baz=186			*e*S		**Sn**	04 23 42.2	-0.6	
JKRS	**Kuro-shima**	**2.00**	**108**	P		**Pn**	04 23 17.6	+0.6	
JKRS				*e*S		**Sn**	04 23 42.4	-0.6	
WTP	**Ta-pu** baz=213	**2.03**	**217**	*e*P		**Pn**	04 23 18.1	+0.6	
WTP	baz=213			*e*S		**Sn**	04 23 42.1	-1.7	
JIJ	**Ishigaki jima**	**2.08**	**104**	P		**Pn**	04 23 18.2	+0.2	
JIJ				S		**Sn**	04 23 42.6	-2.2	
LONT	**Longtian** baz=188	**2.10**	**201**	*e*S		**Sn**	04 23 44.1	-1.2	
JISG	**Ishigakijimahi**	**2.18**	**97**	*e*P		**Pn**	04 23 19.8	+0.5	
JISG				*e*S		**Sn**	04 23 46.5	-0.6	
JTJ	**Tarama**	**2.53**	**95**	P		**Pn**	04 23 24.8	+1.2	
JTJ				S		**Sn**	04 23 55.0	+0.2	

*IDC **05** 04:25:46.5±3.2,36°.13N×71°.37E,h75^{km}±28^{km},mb3.5/16, mbtmp3.9/21,MS2.8/2,Error ellipse: s-maj=21.3km s-min=16.5km az=4.0*

*NNC **05** 04:25:54.5±1.6,36°.72N×71°.28E,h127^{km}±25^{km},mb4.0, mpv4.7,Error ellipse: s-maj=14.6km s-min=12.0km az=140.0*

ISC 05 04:25:50.7±0.5,**36°.44N**±0°.05×**71°.36E**±0°.06,**h114**^{km},**n46,** σ**2**^{s}**10/55,mb3.8/15,4C-1D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.65**	**170**	P	**Pn**	04 26 32.6	+0.3
CEP				S	**Sn**	04 27 04.0	-0.3
CHCP	**Chirah Chowk**	**3.19**	**150**	P	**Pn**	04 26 39.9	+0.6
IUG	**luzhnay** baz=348	**5.79**	**350**	*e*P	**Pn**	04 27 14.6	+0.4
AML	**Almayashu** SNR=82	**5.97**	**17**	P	**Pn**	04 27 17.7	+0.8
UCH	**Uchtor** SNR=24	**6.28**	**22**	P	**Pn**	04 27 22.3	+1.1
DZA	**Taraz** baz=358	**6.45**	**360**	*e*P	**Pn**	04 27 23.3	+0.2
EKS2	**Erkin-Say** SNR=26	**6.49**	**16**	P	**Pn**	04 27 24.8	+1.1
AAK	**Ala-Archa** SNR=21	**6.65**	**20**	P	**Pn**	04 27 27.1	+1.2
AAK	**Ala-Archa** 21nm,0.3s,baz=205,slow=8.8,SNR=34	**6.65**	**20**	P	**Pn**	04 27 27.0	+1.1
AAK	14nm,0.3s,baz=174,slow=23,SNR=7.8			S	**Sn**	04 28 40.0	-0.3
BRLS	**Borolday** baz=347	**6.69**	**350**	*e*P	**Pn**	04 27 22.9	-3.4
KK31	**Karatay Array** 58nm,0.3s,baz=178,slow=12,SNR=1908	**6.69**	**355**	P	**Pn**	04 27 26.6	+0.2
KK31	10nm,0.3s,baz=179,slow=15,SNR=8.1			S	**Sn**	04 28 38.6	-2.4
CHMS	**Chumysh** SNR=7.7	**7.05**	**21**	P	**Pn**	04 27 32.3	+1.0
CHMS	**Chumysh** 12nm,0.4s	**7.05**	**21**	⇓P	**Pn**	04 27 31.8	+0.5
CHMS	26nm,0.9s			⇑S	**Sn**	04 28 49.1	-0.9
USP	**Ospenovka** SNR=6.9	**7.24**	**19**	P	**Pn**	04 27 34.8	+1.1
TKM2	**Tokmak 2** SNR=22	**7.25**	**25**	P	**Pn**	04 27 35.2	+1.1
TKM2	**Tokmak 2** 18nm,0.6s	**7.25**	**25**	⇑P	**Pn**	04 27 35.0	+0.8
TKM2	13nm,0.9s			⇑S	**Sn**	04 28 53.7	-1.3
SGDS	**Sogindy** baz=17	**7.44**	**19**	*e*P	**Pn**	04 27 36.4	-0.2
SGDS	baz=17			*e*S	**Sn**	04 28 58.5	-0.9
KUU	**Kurty** baz=24	**8.36**	**26**	*e*P	**Pn**	04 27 47.6	-1.4
SHLS	**Shalkode** baz=40	**9.16**	**40**	*e*P	**Pn**	04 28 01.7	+1.8
NDI	**New Delhi**	**9.18**	**146**	*e*P	**Pn**	04 28 01.5	+1.4
NDI				*e*S	**Sn**	04 29 35.0	-6.6
GEYT	**Alibeck** 2.1nm,0.3s,baz=101,slow=14,SNR=8.5	**10.67**	**282**	P	**Pn**	04 28 16.8	-3.4
GEYT	4.6nm,0.3s,baz=105,slow=16,SNR=4.3			S	Sn	04 30 08.9	-8.8
MKAR	**Makanchi Array** 0.7nm,0.8s,baz=224,slow=13,SNR=3.1	**13.18**	**35**	P	**Pn**	04 28 52.7	-0.6
BRZS	**Berezniki** baz=2.8	**13.57**	**4**	*e*P	**Pn**	04 28 57.2	-1.1
KURBB	**Kurchatov Arra** 0.5nm,0.5s,baz=203,slow=10,SNR=7.9	**15.09**	**18**	P	**Pn**	04 29 17.8	+0.1
AB31	**Akbulak array** 2.2nm,0.3s,baz=162,slow=11,SNR=149	**15.28**	**331**	P	**Pn**	04 29 19.2	-0.8
AKTO	**Aktyubinsk** 9.0nm,0.4s,baz=134,slow=13,SNR=27	**16.98**	**330**	P	**Pn**	04 29 41.1	+0.2
AKTO	1.7nm,0.5s,baz=357,slow=20,SNR=2.7			S	**Sn**	04 32 40.8	-9.0
AKTO	**Aktyubinsk** 7.4nm,0.5s	**16.98**	**330**	⇑P	**Pn**	04 29 41.2	+0.2
GOMU	**GeErMu**	**18.90**	**84**	P	**P**	04 29 59.4	-3.3
GOMU				sS	sS	04 34 04.6	-3.2
GOMU	comp=Z,2.0nm,0.4s			pmax	pmax		
GOMU	comp=Z,43nm,5.1s			pmax	pmax		
GOMU	comp=N,82nm,7.4s			LR	LR		
GOMU	comp=E,43nm,7.9s			LR	LR		
GOMU	comp=Z,57nm,9.4s			LR	LR		
ZALV	**Zalesovo Beam** comp=Z,4.8nm,0.4s,baz=201,slow=9.9,SNR=22 comp=Z,4.8nm,0.4s	**19.85**	**24**	P	**P**	04 30 13.3	+0.9
GNI	**Garni** comp=Z,2.8nm,0.5s,baz=90,slow=4.0,SNR=1.5	**21.18**	**288**	P	**P**	04 30 26.4	-0.6
GNI	comp=Z,23nm,20.9s,baz=154,slow=42 comp=Z,2.8nm,0.5s			LR	LR	04 40 47.1	
ARU	**Arti** comp=Z,2.6nm,0.4s,baz=173,slow=4.3,SNR=5.3	**21.78**	**341**	P	**P**	04 30 34.8	+1.7
ARU	comp=Z,28nm,20.2s,baz=100,slow=39 comp=Z,2.6nm,0.4s			LR	LR	04 40 14.2	
KBZ	**Khabaz** comp=Z,2.5nm,0.8s,baz=113,slow=12,SNR=5.9 comp=Z,2.5nm,0.8s	**22.88**	**297**	P	**P**	04 30 45.4	+1.0
BRTR	**Keskin Array B** comp=Z,0.3nm,0.6s,baz=92,slow=9.5,SNR=1.9 comp=Z,0.3nm,0.6s	**29.73**	**288**	P	**P**	04 31 47.3	+1.1
AKASG	**Malin Array Be** comp=Z,0.7nm,0.4s,baz=77,slow=6.3,SNR=13 comp=Z,0.7nm,0.4s	**33.21**	**309**	P	**P**	04 32 18.3	+1.9
FINES	**FINESS Array B** comp=Z,1.3nm,0.5s,baz=119,slow=8.2,SNR=15 comp=Z,1.3nm,0.5s	**37.69**	**326**	P	**P**	04 32 57.2	+2.5
ARCES	**ARCESS Array B** comp=Z,1.8nm,0.5s,baz=110,slow=8.2,SNR=17 comp=Z,1.8nm,0.5s	**41.31**	**338**	P	**P**	04 33 27.0	+2.4
GERES	**GERESS Array B** comp=Z,0.1nm,0.3s,baz=111,slow=9.7,SNR=1.1 comp=Z,0.1nm,0.3s	**43.20**	**305**	P	**P**	04 33 42.2	+2.0
CLL	**Collm**	**43.45**	**309**	*e*P	**P**	04 33 45.0	+2.9
CLL				*e*PP	**PP**	04 35 26.0	+0.9
CLL				*e*Sx	Sx	04 40 06.0	
NB2	**NORSAR Subarra** comp=Z,2.0nm,0.7s,baz=94,slow=7.9	**44.60**	**323**	P	**P**	04 33 52.3	+1.1
NOA	**NORSAR Array B** comp=Z,1.0nm,0.6s,baz=96,slow=7.8,SNR=9.9 comp=Z,1.0nm,0.6s	**44.60**	**323**	P	**P**	04 33 52.9	+1.7
ESDC	**Sonseca Array** comp=Z,0.2nm,0.6s,baz=58,slow=6.9,SNR=1.8 comp=Z,0.2nm,0.6s	**57.74**	**298**	P	**P**	04 35 30.7	+1.0
TORD	**Torodi Ar. Bea** comp=Z,0.6nm,0.5s,baz=49,slow=5.8,SNR=16 comp=Z,0.6nm,0.5s	**66.00**	**269**	P	**P**	04 36 24.2	-1.1
BOSA	**Boshof** comp=Z,2.0nm,0.7s,baz=29,slow=11,SNR=3.8 comp=Z,2.0nm,0.7s	**77.89**	**220**	P	**P**	04 37 35.6	-0.4
YKA	**Yellowknife Ar** comp=Z,0.7nm,0.7s,baz=352,slow=5.1,SNR=8.4 comp=Z,0.7nm,0.7s	**81.29**	**3**	P	**P**	04 37 54.6	+0.8
WRA	**Warramunga Arr** comp=Z,0.4nm,0.8s,baz=326,slow=4.9,SNR=7.3 comp=Z,0.4nm,0.8s	**81.72**	**122**	P	**P**	04 37 56.4	-0.3
ASAR	**Alice Springs** comp=Z,0.2nm,0.6s,baz=321,slow=6.1,SNR=4.5 comp=Z,0.2nm,0.6s	**83.98**	**125**	P	**P**	04 38 08.2	-0.2

*AEIC **05** 04:26:00±3.1,55°.18N×0°.09×164°.0W±0°.1,h248^{km}±3^{km}, Error ellipse: s-maj=12.6km s-min=8.5km az=173.0*

*NEIC **05** 04:26:00.5±1.4,55°.67N×0°.07×164°.4W×0°.1,h223^{km}±2^{km}, mb4.3/153,ML4.3/10,ML4.0(AEIC), Error ellipse: s-maj=10.0km s-min=8.4km az=168.0*

*IDC **05** 04:26:02.8±0.9,55°.90N×164°.40W,h238^{km}±6^{km},mb3.6/26, mbtmp4.2/29, Error ellipse: s-maj=16.2km s-min=7.8km az=18.0*

ISC 05 04:26:00.8±0.5,**55°.64N**±0°.06×**164°.35W**±0°.04, **h230**^{km}±4^{km},**n412,** σ**1**^{s}**42/369,mb4.2/96,Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WTUG	**Tugumak**	**0.79**	**182**		**Pn**	04 26 32.0	-0.7
WTUG					**S**	04 26 56.6	-0.8
SSLN	**Shishaldin Nor**	**0.85**	**166**		**Pn**	04 26 32.5	-0.5
ISNN	**Isanotski Nort**	**0.87**	**158**		**Pn**	04 26 32.5	-0.5
SSLW	**Shishaldin Wes**	**0.88**	**171**		**Pn**	04 26 32.2	-0.9
FALS	**False Pass**	**0.95**	**145**	Pn	**Pn**	04 26 32.2	-1.1
FALS	**False Pass**	**0.95**	**145**		**S**	04 26 57.0	-1.7
FALS	**False Pass** baz=321,SNR=23	**0.95**	**145**	P	**Pn**	04 26 32.2	-1.1
FALS	**False Pass**	**0.95**	**145**	P	**Pn**	04 26 32.4	-1.0
ISLZ	**Isanotski Laza**	**0.98**	**158**		**Pn**	04 26 32.7	-1.0
BALA	**Baldy Mountain**	**1.00**	**116**		**Pn**	04 26 33.4	-0.3
BALA					**S**	04 26 58.8	-0.5
BRPK	**Brown Peak**	**1.05**	**160**		**Pn**	04 26 33.0	-1.1
BRPK					**S**	04 26 58.0	-2.0
WEBT	**Westdahl Beart**	**1.07**	**193**		**Pn**	04 26 33.5	-0.7
WESN	**West Dahl Nort**	**1.08**	**187**		**Pn**	04 26 33.6	-0.7
WECS	**Westdahl Cape**	**1.14**	**193**		**Pn**	04 26 33.8	-0.9
WECS					**S**	04 27 00.4	-0.6
WESE	**West Dahl East**	**1.18**	**187**		**Pn**	04 26 34.1	-0.8
BLHA	**Black Hill**	**1.29**	**86**		**Pn**	04 26 35.6	0.0
DT1	**Dutton Round H**	**1.29**	**113**		**Pn**	04 26 34.6	-1.0
HAG	**Hague Volcano**	**1.43**	**102**		**Pn**	04 26 36.2	-0.4
PS4A	**Pavlof South-4**	**1.45**	**101**		**Pn**	04 26 36.1	-0.7
PVV	**Pavlof Volcano**	**1.48**	**99**		**Pn**	04 26 36.3	-0.7
AKSA	**Akutan Strait**	**1.69**	**208**		**Pn**	04 26 38.1	-0.8
AKSA					**S**	04 27 07.1	-1.4
AKSA	**Akutan Strait**	**1.69**	**208**		**Pn**	04 26 37.9	-1.0
HSB	**Akutan Spr's B**	**1.71**	**212**		**Pn**	04 26 37.9	-1.1
AKUT	**Akutan**	**1.72**	**209**	Pn	**Pn**	04 26 38.0	-1.1
AKGG	**Akutan Green G**	**1.73**	**214**		**Pn**	04 26 38.2	-0.9
AKGG					**S**	04 27 07.5	-1.5
AKBBA	**Akutan Broad B**	**1.79**	**211**		**Pn**	04 26 38.5	-1.3
AKBBA					**S**	04 27 08.9	-1.2
MTBL	**Makushin Table**	**2.15**	**220**		**Pn**	04 26 42.2	-0.9
UNV	**Unalaska Valle**	**2.19**	**216**		**Pn**	04 26 41.8	-1.6
UNV					**S**	04 27 14.6	-2.1
UNV	**Unalaska Valle** baz=40,SNR=79	**2.19**	**216**	P	**Pn**	04 26 42.0	-1.5
MNAT	**Makushin Natee**	**2.22**	**219**		**Pn**	04 26 42.5	-1.2
MNAT					**S**	04 27 15.6	-1.7
SDPT	**Sand Point**	**2.22**	**96**		**Pn**	04 26 42.2	-1.5
SDPT					**S**	04 27 14.3	-2.9
SDPT	**Sand Point** comp=E,3μm,0.5s	**2.22**	**96**	IAML		04 27 14.8	
SDPT	comp=N,2μm,0.3s			IAML		04 27 15.4	
SDPT	**Sand Point** baz=272,SNR=29	**2.22**	**96**	P	**Pn**	04 26 42.2	-1.5
MSW	**Makushin Switc**	**2.23**	**220**		**Pn**	04 26 42.5	-1.4
MGOD	**Makushin Gods**	**2.36**	**219**		**Pn**	04 26 44.3	-1.0
CHNA	**Chernabura Isl** baz=284,SNR=45	**2.84**	**105**	P	**Pn**	04 26 47.8	-2.4
CNBA	**Chernabura Isl**	**2.85**	**105**		**Pn**	04 26 47.9	-2.4
CNBA	**Chernabura Isl** comp=E,706nm,0.5s	**2.85**	**105**	IAML		04 27 25.7	
CNBA	comp=N,731nm,0.3s			IAML		04 27 25.9	
VNHG	**Veniaminof 1**	**2.98**	**77**		**Pn**	04 26 51.6	-0.2
VNSG	**Veniaminof 6**	**3.00**	**78**		**Pn**	04 26 51.9	-0.2
OKFG	**Magazine Ridge**	**3.05**	**224**		**Pn**	04 26 51.2	-1.4
OKSO	**Okmok South**	**3.19**	**226**		**Pn**	04 26 52.8	-1.4
OKSO					**S**	04 27 32.3	-3.7
ANPB	**Aniakchak Plen**	**3.58**	**68**		**Pn**	04 26 58.6	-0.1
SPIA	**Saint Paul Isl**	**3.62**	**298**	Pn	**Pn**	04 26 58.4	-0.7
SPIA	**Saint Paul Isl** baz=115	**3.62**	**298**	P	**Pn**	04 26 59.1	0.0
NIKH	**Nikolski High**	**3.75**	**227**	Pn	**Pn**	04 26 59.0	-1.8
NIKH	**Nikolski High**	**3.75**	**227**		**S**	04 27 45.0	-2.9
NIKH	**Nikolski High** baz=47,SNR=12	**3.75**	**227**	P	**Pn**	04 26 59.3	-1.5
P16K	**Nushagak River**	**4.84**	**43**		**Pn**	04 27 14.9	+1.1
P16K	**Nushagak River** baz=225,SNR=18	**4.84**	**43**	P	**Pn**	04 27 15.0	+1.1
CHIR	**Chirikof Islan**	**4.94**	**84**		**Pn**	04 27 13.4	-1.7
CHIR	**Chirikof Islan** comp=E,270nm,0.8s	**4.94**	**84**	IAML		04 28 10.8	
CHIR	comp=N,312nm,0.6s			IAML		04 28 12.1	
CHIR	**Chirikof Islan** baz=268,SNR=7.3	**4.94**	**84**	P	**Pn**	04 27 13.3	-1.7
O16K	**Kokwok River B**	**5.20**	**38**		**Pn**	04 27 18.8	+0.5
O16K	**Kokwok River B** baz=220,SNR=14	**5.20**	**38**	P	**Pn**	04 27 18.7	+0.4
KELA	**Mount Kelaz**	**5.47**	**56**		**Pn**	04 27 22.9	+1.0
ANCK	**Angle Creek**	**5.49**	**58**		**Pn**	04 27 22.8	+0.8
CAHL	**Cahill**	**5.52**	**60**		**Pn**	04 27 23.2	+0.7
P17K	**Kvichak River**	**5.56**	**47**		**Pn**	04 27 24.3	+1.4
P17K	**Kvichak River** baz=231,SNR=13	**5.56**	**47**	P	**Pn**	04 27 24.2	+1.4
N16K	**Nishlik Lake**	**5.68**	**29**		**Pn**	04 27 25.5	+1.2
N16K	**Nishlik Lake** baz=212,SNR=26	**5.68**	**29**	P	**Pn**	04 27 25.4	+1.0
O17K	**Koliganek Bris**	**5.68**	**40**		**Pn**	04 27 25.1	+0.7
SII	**Sitkinak Islan**	**5.76**	**77**		**Pn**	04 27 23.5	-1.9
SII	**Sitkinak Islan** baz=262,SNR=8.8	**5.76**	**77**	P	**Pn**	04 27 23.6	-1.9
SII	**Sitkinak Islan**	**5.76**	**77**	P	**Pn**	04 27 24.1	-1.4
P18K	**Big Mountain,**	**6.19**	**49**		**Pn**	04 27 30.8	0.0
P18K	**Big Mountain,** baz=234	**6.19**	**49**	P	**Pn**	04 27 32.0	+1.2
OHAK	**Old Harbor**	**6.34**	**71**		**Pn**	04 27 30.7	-2.0
OHAK	**Old Harbor** baz=258,SNR=12	**6.34**	**71**	P	**Pn**	04 27 30.5	-2.2
O18K	**Koktuh Hills**	**6.46**	**45**	Pn	**Pn**	04 27 34.5	+0.2
O18K	**Koktuh Hills** baz=231,SNR=12	**6.46**	**45**	P	**Pn**	04 27 35.3	+1.0
KOFP	**Korovin Flat P**	**6.67**	**244**		**Pn**	04 27 36.6	-0.4
Q19K	**Cape Douglas,**	**6.67**	**56**	Pn	**Pn**	04 27 36.4	-0.6
Q19K	**Cape Douglas,** baz=243,SNR=8.2	**6.67**	**56**	P	**Pn**	04 27 36.6	-0.4
N18K	**Kilae Creek**	**6.75**	**38**	Pn	**Pn**	04 27 38.0	+0.1
N18K	**Kilae Creek** baz=223,SNR=24	**6.75**	**38**	P	**Pn**	04 27 38.7	+0.8
ATKA	**Atka Island**	**6.76**	**243**		**Pn**	04 27 36.7	-1.4
KDAK	**Kodiak Island** comp=N,51nm,0.3s,baz=263,slow=7.3,SNR=203	**6.83**	**67**	P	**Pn**	04 27 37.5	-1.4
KDAK	comp=N,23nm,0.4s,baz=250,slow=23,SNR=11			S	**S**	04 28 50.7	-6.5
KDAK	**Kodiak Island**	**6.83**	**67**	Pn	**Pn**	04 27 36.7	-2.2
KDAK	**Kodiak Island** baz=254	**6.83**	**67**	P	**Pn**	04 27 37.3	-1.6
SVW2	**Sparrevohn**	**7.15**	**36**	Pn	**Pn**	04 27 43.7	+0.6
Q20K	**Shuyak Island** baz=248	**7.16**	**61**	P	**Pn**	04 27 41.6	-1.5
SYI	**Shuyak Island**	**7.16**	**61**		**Pn**	04 27 41.7	-1.4
N19K	**Bonanza Creek**	**7.35**	**41**		**Pn**	04 27 47.3	+1.6
N19K	**Bonanza Creek** baz=228,SNR=43	**7.35**	**41**	P	**Pn**	04 27 47.2	+1.6
O20K	**Slope Mountain**	**7.67**	**50**		**Pn**	04 27 50.7	+1.0
O20K	**Slope Mountain** baz=238	**7.67**	**50**	P	**Pn**	04 27 50.9	+1.1
RED	**Redoubt Volcan**	**7.79**	**47**		**Pn**	04 27 52.1	+0.8
RDWB	**Redoubt West**	**7.80**	**47**		**Pn**	04 27 52.5	+1.1
NCT	**North Crescent**	**7.80**	**46**		**Pn**	04 27 52.8	+1.4
GSMY	**Great Sitkin M**	**7.80**	**247**		**Pn**	04 27 50.5	-1.0
RDSO	**Redoubt South**	**7.82**	**47**		**Pn**	04 27 52.6	+0.9
RSO	**Redoubt South**	**7.82**	**47**		**Pn**	04 27 51.5	-0.3
GSTD	**Great Sitkin T**	**7.84**	**248**		**Pn**	04 27 51.2	-0.8
DFR	**Drift River**	**7.92**	**46**		**Pn**	04 27 54.2	+1.3
CNPM	**China Poot**	**8.05**	**56**		**Pn**	04 27 53.4	-1.1
M19K	**Big River Lodg**	**8.13**	**35**		**Pn**	04 27 57.4	+1.8
M19K	**Big River Lodg** baz=222,SNR=25	**8.13**	**35**	P	**Pn**	04 27 57.4	+1.8
L19K	**White Mountain**	**8.19**	**33**		**Pn**	04 27 57.6	+1.3
L19K	**White Mountain** baz=219,SNR=28	**8.19**	**33**	P	**Pn**	04 27 57.6	+1.3
BRSE	**Bradley Lake S**	**8.37**	**55**		**Pn**	04 27 57.4	-1.3
BRSE	**Bradley Lake S** baz=245	**8.37**	**55**	P	**Pn**	04 27 57.3	-1.3
TT01	**Tatalina**	**8.44**	**27**		**Pn**	04 28 00.9	+1.5
TTA	**Tatalina**	**8.46**	**27**	Pn	**Pn**	04 27 59.9	0.0
TTA	**Tatalina** baz=213,SNR=24	**8.46**	**27**	P	**Pn**	04 28 01.1	+1.2
SPCP	**Crater Peak Br**	**8.52**

baz=230,SNR=9.0
SUA Susitna One 9.19 45 Pn Pn 04 28 09.3 +0.1
SUA Susitna One 9.19 45 P Pn 04 28 09.4 +0.2
baz=235
K20K Telida 9.33 30 Pn Pn 04 28 12.6 +1.8
K20K Telida 9.33 30 P Pn 04 28 12.6 +1.8
baz=217,SNR=80
RC01 Rabbit Creek A 9.41 49 Pn 04 28 11.7 -0.3
RC01 Rabbit Creek A 9.41 49 P Pn 04 28 11.6 -0.3
baz=239
PPLA Purkeypile 9.56 36 Pn 04 28 15.6 +1.7
PPLA Purkeypile 9.56 36 P Pn 04 28 16.0 +2.0
baz=225,SNR=10
GCSA Galena City Sc 9.86 19 P Pn 04 28 19.3 +1.8
baz=204,SNR=25
PMR Palmer 9.91 47 P Pn 04 28 18.3 0.0
baz=238
J20K Nowinta River 9.96 27 P Pn 04 28 20.5 +1.6
baz=214,SNR=53
CAST Castle Rocks 9.97 34 P Pn 04 28 20.7 +1.7
baz=223,SNR=17
P23K Montague Islan 10.03 57 P Pn 04 28 18.7 -1.1
baz=250
TNA Tin City 10.11 352 Pn Pn 04 28 21.1 +0.4
TNA Tin City 10.11 352 P Pn 04 28 22.1 +1.4
baz=168,SNR=5.9
KNK Knik Glacier 10.11 49 P Pn 04 28 19.6 -1.2
baz=241
CHUM Lake Minchumin 10.24 31 P Pn 04 28 24.2 +1.8
baz=220,SNR=20
SML Sawmill 10.35 47 P Pn 04 28 23.2 -0.7
baz=239
GLI Glacier Island 10.48 53 P Pn 04 28 23.4 -2.1
baz=246
TRF Thorofare Moun 10.57 37 P Pn 04 28 28.3 +1.5
baz=227,SNR=6.9
M23K Glacier View 10.60 48 P Pn 04 28 26.1 -0.9
baz=240
SCM Sheep Creek Mo 10.78 48 P Pn 04 28 28.7 -0.7
baz=241,SNR=13
BPAW Bear Paw Mtn. 10.80 33 P Pn 04 28 30.8 +1.3
baz=223,SNR=33
EYAK Cordova Ski Ar 10.99 56 P Pn 04 28 30.3 -1.6
baz=250
WAT6 Susitna Watana 10.99 44 P Pn 04 28 30.6 -1.5
baz=237
RND Reindeer 11.04 39 Pn 04 28 32.1 -0.6
MCK McKinley 11.22 37 P Pn 04 28 35.4 +0.5
baz=230
KLU Klutina 11.24 51 P Pn 04 28 33.8 -1.5
baz=245,SNR=13
I21K Tanana 11.33 27 P Pn 04 28 37.7 +1.5
baz=217,SNR=32
M24K Tolsona, Glenn 11.39 48 P Pn 04 28 36.7 -0.4
baz=242
DHY Denali Highway 11.39 42 P Pn 04 28 37.2 0.0
baz=236
H21K Melozitna Rive 11.51 25 P Pn 04 28 40.1 +1.6
baz=214,SNR=38
MLY Manley 11.55 30 P Pn 04 28 40.2 +1.1
baz=221,SNR=32
IMAR Indian Mountai 11.57 22 Pn Pn 04 28 38.5 -0.8
BMRM Bremner River 11.65 55 P Pn 04 28 39.1 -1.3
baz=250
NEA2 Nenana 11.74 34 P Pn 04 28 41.0 -0.4
baz=226,SNR=12
N25K Chitina, Valde 11.87 52 P Pn 04 28 41.8 -1.4
baz=247,SNR=6.8
HARP HAARP 11.95 48 P Pn 04 28 44.4 +0.3
baz=243
I23K Minto, Yukon-K 12.04 32 P Pn 04 28 45.8 +0.8
baz=224,SNR=18
PAX Paxson 12.09 45 P Pn 04 28 45.4 -0.4
baz=240
COLA College 12.32 35 Pn 04 28 46.5 -2.1
HDA Harding Lake 12.32 37 P Pn 04 28 47.7 -0.9
baz=232,SNR=14
K24K Donnelly Dome 12.39 41 P Pn 04 28 49.7 +0.1
baz=236
H23K Yukon River 12.48 29 P Pn 04 28 51.9 +1.3
baz=221,SNR=42
MCARA McCarthy VSAT 12.51 54 P Pn 04 28 50.8 -0.3
baz=251,SNR=5.4
ILAR Eielson Array 12.57 36 P Pn 04 28 49.5 -2.3
comp=N,1.8nm,0.6s,baz=244,slow=10,SNR=24
ILAR S S 04 31 06.1 -4.5
comp=N,0.6nm,0.5s,baz=237,slow=9.4,SNR=1.1
ILAR ScP ScP 04 37 18.8 -1.7
comp=N,0.7nm,0.6s,baz=265,slow=2.7,SNR=7.2
ILAR Eielson Array 12.57 36 Pn Pn 04 28 49.6 -2.1
RIDG Independent Ri 12.71 42 P Pn 04 28 54.0 +0.4
baz=238,SNR=8.0
MESA MESA 12.72 60 P Pn 04 28 54.7 +0.9
baz=258
M26K Nabesna, AK 12.87 50 P Pn 04 28 55.4 -0.2
baz=247,SNR=10
H24K Noodor Dome 12.96 31 Pn Pn 04 28 55.0 -1.6
H24K Noodor Dome 12.96 31 P Pn 04 28 56.5 -0.2
baz=225,SNR=47
L26K Log Cabin Wild 12.97 47 P P 04 28 58.2 -0.9
baz=244,SNR=48
J25K Salcha River, 13.00 39 P Pn 04 28 56.0 -1.1
baz=234,SNR=17
SCRK Sand Creek 13.16 42 Pn Pn 04 28 57.9 -1.3
SCRK Sand Creek 13.16 42 P Pn 04 28 58.2 -1.0
baz=239,SNR=14
CTG Chitna Glacier 13.18 57 P Pn 04 28 59.6 +0.1
baz=255,SNR=5.2
M27K Edge Creek, AK 13.34 51 P Pn 04 29 01.5 +0.1
baz=249,SNR=14
COLD Coldfoot 13.40 24 P P 04 29 03.8 0.0
baz=216
PINM Pinnacle 13.54 61 P P 04 29 06.6 +1.1
baz=260
J26L Joseph Creek 13.59 41 P Pn 04 29 03.8 -0.6
baz=238,SNR=27
L27K Beaver Creek, 13.62 48 P Pn 04 29 04.5 -0.2
baz=246,SNR=13
BCAR Beaver Creek A 13.64 48 Pn Pn 04 29 04.1 -0.9
YUK3 Moose Creek 13.80 54 P Pn 04 29 07.0 -0.1
baz=253
PNL Peninsula 13.91 63 P Pn 04 29 08.5 +0.1
baz=263
K27K Chicken 13.93 44 P Pn 04 29 07.8 -0.7
baz=242
YUK8 Steele Glacier 14.00 56 P P 04 29 12.2 +1.4
baz=256
YUK4 Talbot Arm 14.54 56 P P 04 29 18.2 +1.5
baz=257
YUK6 Outpost Mounta 14.60 58 P P 04 29 19.5 +2.1
baz=259,SNR=8.4
TOLK Toolik Lake Re 14.69 22 P P 04 29 20.1 +2.0
baz=214,SNR=18
HYT Haines Junctio 15.00 59 P P 04 29 22.3 +0.6
baz=261,SNR=9.3
BMAR Burnt Mountain 15.02 30 P 04 29 22.0 +0.3
DAWY Dawson 15.02 46 IAmb IAmb 04 29 24.8
comp=Z,7.6nm,0.8s
DAWY Dawson 15.02 46 P P 04 29 22.5 +0.7
baz=246,SNR=14
N30M Aishikik Lake 15.30 56 P Pn 04 29 26.2 +1.0
baz=259,SNR=8.1
PLBC Pleasant Camp 15.44 64 P Pn 04 29 28.8 +2.0
baz=267
M30M Minto, Yukon 15.67 52 P Pn 04 29 29.5 -0.1
M30M Minto, Yukon 15.67 52 P Pn 04 29 29.9 +0.4
baz=255,SNR=6.0
O30N Mendenhall 15.68 59 P Pn 04 29 31.5 +1.8
baz=262,SNR=14
N31M Braeburn, Yuko 15.92 57 P Pn 04 29 33.9 +1.3
baz=260
SKAG Skagway 15.97 64 P Pn 04 29 35.1 +2.0
baz=269
I29M Ogilvie Camp, 15.97 42 IAmb IAmb 04 29 35.6
comp=Z,12nm,0.6s
I29M Ogilvie Camp, 15.97 42 P Pn 04 29 34.1 +0.9
baz=244,SNR=8.1
JIS Juneau Island 16.49 68 IAmb IAmb 04 29 41.7
comp=Z,8.8nm,0.8s
M31M Drury Creek, Y 16.69 55 IAmb IAmb 04 29 42.6
comp=Z,12nm,0.9s
M31M Drury Creek, Y 16.69 55 P Pn 04 29 41.8 +0.1
baz=260,SNR=12
FARO Faro, Yukon 17.17 55 P Pn 04 29 46.5 -0.9
baz=261,SNR=21
P33M Teslin, Yukon 17.25 62 P Pn 04 29 48.4 0.0
baz=268,SNR=16
CRAG Craig 17.59 78 P Pn 04 29 52.8 +0.6
baz=283
MMPY Sheldon Lake, 18.19 54 P P 04 29 56.9 +0.5
baz=262,SNR=32
BILL Bilibino 18.36 324 P P 04 29 59.0 +0.8
BILL IAmb IAmb 04 30 00.6
comp=Z,12nm,0.9s
DLBC Dease Lake 18.76 67 P P 04 30 03.0 +0.3
comp=Z,4.1nm,0.6s,baz=293,slow=13,SNR=11
DLBC Dease Lake 18.76 67 IAmb IAmb 04 30 10.6
comp=Z,9.0nm,1.2s
DLBC Dease Lake 18.76 67 P P 04 30 04.4 +1.7
baz=275
T35M Bob Quinn 18.85 72 P Pn 04 30 08.1 +1.0
baz=280
INK Inuvik 18.97 36 P P 04 30 03.8 -0.9
comp=Z,19nm,0.5s,baz=224,slow=11,SNR=29
INK S S 04 33 22.2 -5.0
comp=Z,2.7nm,0.8s,baz=216,slow=29,SNR=6.8
INK Inuvik 18.97 36 P P 04 30 03.7 -0.9
baz=243,SNR=23
GRNB Grenville Isla 19.82 81 P P 04 30 16.2 +2.3
GRNB IAmb IAmb 04 30 19.2
comp=Z,9.3nm,0.7s
PETK Petropavlovsk- 22.07 279 P P 04 30 36.9 0.0
comp=Z,2.0nm,0.6s,baz=83,slow=13,SNR=4.2
comp=Z,2.0nm,0.6s
C36M Paulatuk 22.54 37 P P 04 30 40.5 -0.5
C36M Paulatuk 22.54 37 P P 04 30 40.7 -0.2
baz=252,SNR=11
SEY Seymchan 22.88 306 P P 04 30 44.0 -0.1
comp=Z,1.6nm,0.5s,baz=131,slow=10,SNR=6.5
comp=Z,1.6nm,0.5s
A36M Sachs Harbour 23.11 30 P P 04 30 47.0 +0.9
A36M Sachs Harbour 23.11 30 P P 04 30 47.2 +1.1
baz=245,SNR=13
MA2 Magadan 24.00 298 P P 04 30 55.1 +0.7
comp=Z,1.6nm,0.7s,baz=62,slow=8.5,SNR=4.5
comp=Z,5.6nm,0.7s
YKA Yellowknife Ar 25.89 54 P P 04 31 11.3 +0.1
comp=Z,0.8nm,0.3s,baz=274,slow=8.4,SNR=74
YKA pP pP 04 31 57.1 +0.8
comp=Z,0.4nm,0.6s,baz=274,slow=9.8,SNR=1.5
YKA ScP ScP 04 37 50.0 -0.6
comp=Z,1.1nm,0.7s,baz=281,slow=3.0,SNR=6.7
comp=Z,0.8nm,0.3s
E04D Cinebar 27.39 92 P P 04 31 26.3 +1.5
E04D Cinebar 27.39 92 P P 04 31 28.1 +3.3
baz=304
I02E Swisshome, OR 28.13 97 P P 04 31 34.3 +3.0
baz=308
B08A Colville Reser 28.23 86 IAmb IAmb 04 31 35.3
comp=Z,5.5nm,0.8s
H04D Lebanon 28.50 95 P P 04 31 37.2 +2.5
baz=308
I03D Drain, OR 28.66 97 P P 04 31 38.6 +2.5
baz=309
G05D Wamic, OR 28.86 93 P P 04 31 40.3 +2.4
baz=306
I04A Tendick Farm, 29.13 96 P P 04 31 42.8 +2.4
baz=308
D08A Wollman Farm, 29.17 88 IAmb IAmb 04 31 43.3
comp=Z,4.6nm,0.8s
EDM Edmonton 29.22 73 P P 04 31 42.0 +1.0
I05D Tetebonne, OR 29.40 94 P P 04 31 45.1 +2.4
baz=308
NEW Newport 29.53 84 P P 04 31 45.5 +1.7
comp=Z,2.8nm,0.5s,baz=301,slow=9.3,SNR=8.0
comp=Z,2.8nm,0.5s
NEW Newport 29.53 84 IAmb IAmb 04 31 46.5
comp=Z,4.7nm,0.9s
NEW Newport 29.53 84 P P 04 31 45.9 +2.1
baz=302,SNR=5.5
L02F Cave Junction 29.56 100 P P 04 31 47.1 +3.0
baz=311
J04D Umpqua Nationa 29.65 97 P P 04 31 46.7 +1.6
J04D Umpqua Nationa 29.65 97 P P 04 31 48.1 +3.0
baz=309,SNR=7.5
PINE Pine Mountain 29.96 95 IAmb IAmb 04 31 51.0
comp=Z,6.1nm,0.9s
J05D Fort Rock, OR 30.12 96 P P 04 31 52.2 +3.0
baz=309,SNR=17
G08A Pilot Rock 30.17 91 IAmb IAmb 04 31 52.1
comp=Z,3.8nm,0.6s
L04D Klamath Falls 30.20 99 P P 04 31 52.4 +2.5
baz=311
YBH Yreka Blue Hor 30.30 100 P P 04 31 53.0 +2.3
comp=Z,3.0nm,0.8s,baz=293,slow=10,SNR=7.4
comp=Z,3.0nm,0.8s
I07A Izee 30.59 93 IAmb IAmb 04 31 56.4
comp=Z,7.0nm,0.8s
F10A Beach Ranch, E 30.75 88 IAmb IAmb 04 31 57.3
comp=Z,4.2nm,0.8s
BMO Blue Mountains 31.37 90 IAmb IAmb 04 32 02.5
comp=Z,2.9nm,0.7s
JTMT Jette 31.41 83 IAmb IAmb 04 32 03.1
comp=Z,8.6nm,1.1s
TIXI Tiksi 31.56 326 P P 04 32 01.2 0.0
comp=Z,1.2nm,0.3s,baz=87,slow=23,SNR=6.2
TIXI ScP ScP 04 38 06.6 -1.7
comp=Z,0.4nm,0.3s,baz=90,slow=22,SNR=4.0
comp=Z,1.2nm,0.3s
TIXI Tiksi 31.56 326 P P 04 32 01.5 +0.3
RES Resolute Bay 32.11 28 P P 04 32 05.8 -0.2
comp=Z,3.2nm,0.6s,baz=266,slow=9.2,SNR=12
comp=Z,3.2nm,0.6s
RES Resolute Bay 32.11 28 IAmb IAmb 04 32 07.8
comp=Z,3.7nm,0.7s
BEKR Beckworth 32.87 100 IAmb IAmb 04 32 15.7
comp=Z,5.7nm,0.6s
HLID Hailey 33.80 90 IAmb IAmb 04 32 23.9
comp=Z,4.1nm,0.8s
HLID Hailey 33.80 90 P P 04 32 23.2 +2.0
baz=308,SNR=10
BCYI Bear Canyon 33.91 88 P P 04 32 22.9 +0.7
BOZ Bozeman (W) 34.14 85 P P 04 32 25.6 +1.5
baz=306
CMB Columbia Colle 34.14 102 P P 04 32 24.8 +0.8
CMB IAmb IAmb 04 32 27.1
comp=Z,10nm,1.2s
BMN Battle Mountai 34.25 96 IAmb IAmb 04 32 27.5
comp=Z,6.0nm,0.5s
KVN Kaiserville 34.70 99 IAmb IAmb 04 32 31.9
comp=Z,5.5nm,0.9s
RYN Ryan 34.76 100 IAmb IAmb 04 32 32.4
comp=Z,8.8nm,1.0s
YHL Hebgen Lake 34.84 85 IAmb IAmb 04 32 32.9
comp=Z,6.7nm,0.8s
NVAR Mina Array Bea 35.02 100 P P 04 32 33.8 +2.1
comp=Z,6.9nm,0.8s,baz=304,slow=8.1,SNR=67
NVAR PcP PcP 04 34 59.1 +0.9
comp=Z,0.6nm,0.6s,baz=305,slow=2.4,SNR=5.0
NVAR ScP ScP 04 38 21.9 +0.5
comp=Z,0.7nm,0.8s,baz=317,slow=3.4,SNR=5.2
comp=Z,6.9nm,0.8s
LHV Little Huntoon 35.03 100 IAmb IAmb 04 32 35.1
comp=Z,8.4nm,0.9s
NV11 Mina Array Sit 35.10 100 P P 04 32 33.8 +1.5
NV11 IAmb IAmb 04 32 34.8
comp=Z,3.4nm,0.6s
MDPB Devils Postpil 35.15 102 IAmb IAmb 04 32 36.2
comp=Z,9.3nm,0.8s
ELK Elko 35.16 94 P P 04 32 35.0 +2.1
comp=Z,4.6nm,0.6s,baz=309,slow=9.4,SNR=27
ELK ScP ScP 04 38 21.8 -0.1
comp=Z,0.5nm,0.6s,baz=0.0,slow=6.1,SNR=4.3
comp=Z,4.6nm,0.6s
ELK Elko 35.16 94 P P 04 32 34.3 +1.3
ELK IAmb IAmb 04 32 35.8
comp=Z,5.7nm,0.7s
OMMB Old Mammoth Mi 35.21 102 IAmb IAmb 04 32 36.8
comp=Z,9.3nm,1.0s
H17A Grant Village 35.46 85 IAmb IAmb 04 32 39.4
comp=Z,5.8nm,0.9s
H17A Grant Village 35.46 85 P P 04 32 38.7 +3.2
baz=308,SNR=5.9
FLWY Flagg Ranch 35.58 86 IAmb IAmb 04 32 39.7
comp=Z,7.4nm,0.7s
HVU Hansel Valley 35.87 91 IAmb IAmb 04 32 41.6
comp=Z,7.2nm,0.6s
VES Vestal, Richgr 36.44 104 P P 04 32 45.1 +1.6
baz=317
GRAC Grapevine Rang 36.56 101 IAmb IAmb 04 32 47.5
comp=Z,5.0nm,0.7s
GRAC Grapevine Rang 36.56 101 P P 04 32 47.0 +2.4
baz=316,SNR=7.8
R11A Troy Canyon, C 36.60 97 IAmb IAmb 04 32 47.7
comp=Z,11nm,1.1s
R11A Troy Canyon, C 36.60 97 P P 04 32 46.9 +1.8
baz=314,SNR=19
HWUT Hardware Ranch 36.67 90 IAmb IAmb 04 32 48.3
comp=Z,3.9nm,0.8s
DUG Dugway, Tooele 36.90 93 IAmb IAmb 04 32 50.4
comp=Z,8.1nm,1.2s
DUG Dugway, Tooele 36.90 93 P P 04 32 49.4 +1.8
baz=312,SNR=6.0
BW06 Boulder Array 37.06 87 P P 04 32 50.2 +1.2
baz=309
PD31 Pinedale Array 37.06 87 P P 04 32 49.3 +0.3
PDAR Pinedale Array 37.06 87 P P 04 32 50.5 +1.5
comp=Z,1.6nm,0.6s,baz=285,slow=4.0,SNR=17
PDAR ScP ScP 04 38 28.5 -0.4
comp=Z,0.4nm,0.5s,baz=90,slow=1.5,SNR=4.9
comp=Z,1.6nm,0.6s
TPNV Topopah Spring 37.22 100 P P 04 32 52.3 +2.0
baz=316,SNR=26
FURC Furnace Creek, 37.22 101 P P 04 32 52.2 +2.2
baz=316,SNR=5.8
GWY Greenwater Val 37.53 101 IAmb IAmb 04 32 55.4
comp=Z,7.0nm,0.8s
PRN Pahroc Range 37.56 98 IAmb IAmb 04 32 55.9
comp=Z,7.2nm,0.6s
SHOC Shoshone, Teco 37.96 101 P P 04 32 58.3 +2.0
baz=316,SNR=5.3
GSC Goldstone, Bar 38.10 102 IAmb IAmb 04 33 00.4
comp=Z,10nm,1.3s
TMUT Trail Mountain 38.42 92 P P 04 33 00.6 +0.2
TMUT IAmb IAmb 04 33 03.2
comp=Z,8.4nm,0.8s
P17A Butcher Ranch, 38.56 92 IAmb IAmb 04 33 03.6
comp=Z,3.6nm,0.6s
Q16A Castle Valley 38.70 93 IAmb IAmb 04 33 05.1
comp=Z,6.3nm,0.6s
K22A Casper 38.85 85 IAmb IAmb 04 33 06.1
comp=Z,5.8nm,1.0s
K22A Casper 38.85 85 P P 04 33 05.3 +1.5
baz=310
RWWY Rawlins 39.08 86 IAmb IAmb 04 33 07.6
comp=Z,6.7nm,1.0s
GMRC Granite Mounta 39.12 101 P P 04 33 07.8 +1.8
baz=317,SNR=6.9
RSSD Black Hills 39.31 81 P P 04 33 07.7 0.0
RSSD IAmb IAmb 04 33 14.1
comp=Z,4.8nm,0.6s
RSSD Black Hills 39.31 81 P P 04 33 08.9 +1.3
baz=309
BELC Belle Mtn. Jos 39.51 103 P P 04 33 10.6 +1.3
baz=318,SNR=5.7
O20A White River Ci 39.53 89 P P 04 33 10.9 +1.4
baz=312,SNR=15
U15A North Rim 39.81 97 IAmb IAmb 04 33 14.6
comp=Z,12nm,1.2s
IRM Iron Mountain 39.86 102 P P 04 33 13.9 +1.8
baz=318,SNR=7.8
W13A Hualapai Mount 39.87 99 IAmb IAmb 04 33 14.9
comp=Z,5.1nm,0.8s
ULM Lac du Bonnet 40.08 68 P P 04 33 14.0 +0.4
comp=Z,2.9nm,0.4s,baz=301,slow=5.8,SNR=7.8
comp=Z,2.9nm,0.4s
PV23 Carpenter Ridg 40.24 91 IAmb IAmb 04 33 19.2
comp=Z,4.4nm,0.5s
N23A Red Feather La 40.33 86 P P 04 33 17.4 +1.3
baz=311
BLYC Blythe 40.51 101 IAmb IAmb 04 33 19.9
comp=Z,15nm,1.3s
PV13 Radium Mtn., P 40.55 92 P P 04 33 18.2 +0.3
WUAZ Wupatki 40.98 97 IAmb IAmb 04 33 24.1
comp=Z,9.0nm,1.2s
Y14A Wickenburg 41.22 100 IAmb IAmb 04 33 25.5
comp=Z,5.9nm,0.7s
MVCO Mesa Verde 41.40 92 P P 04 33 25.8 +1.0
baz=315,SNR=5.2
H11N2 WAKE ISLAND Hy 41.87 223 T T 05 18 18.8
baz=26,slow=76,SNR=25
H11N3 WAKE ISLAND Hy 41.87 223 T T 05 18 19.5
baz=26,slow=76,SNR=14
H11N1 WAKE ISLAND Hy 41.88 223 T T 05 18 20.0
baz=26,slow=76,SNR=12
S22A 4UR Ranch, Cre 41.97 90 P P 04 33 32.0 +2.4
baz=314
W18A Petrified Fore 42.19 96 P P 04 33 33.0 +1.8
baz=316
B35A Bob, Littlefor 42.33 69 IAmb IAmb 04 33 35.2
comp=Z,3.8nm,0.5s
OGNE Ogallala 42.50 83 IAmb IAmb 04 33 35.5
comp=Z,22nm,1.4s
OGNE Ogallala 42.50 83 P P 04 33 34.8 +1.3
baz=312
SDCO Great Sand Dun 42.72 89 P P 04 33 37.2 +1.6
baz=314,SNR=9.5
214A Organ Pipe Nat 42.81 102 IAmb IAmb 04 33 38.3
comp=Z,7.1nm,0.8s
214A Organ Pipe Nat 42.81 102 P P 04 33 37.7 +1.7
baz=319,SNR=6.2
H11S1 WAKE ISLAND Hy 43.05 222 T T 05 19 47.7
baz=22,slow=74,SNR=11
H11S2 WAKE ISLAND Hy 43.07 222 T T 05 19 41.5
baz=22,slow=74,SNR=7.4
H11S3 WAKE ISLAND Hy 43.07 222 T T 05 19 46.7
baz=22
KSCO Kaye Shedlock' 43.48 86 IAmb IAmb 04 33 43.8
comp=Z,12nm,0.7s
KSCO Kaye Shedlock' 43.48 86 P P 04 33 43.2 +1.9
baz=313
TUC Tucson 43.67 99 P P 04 33 43.2 +0.2
TUC Tucson 43.67 99 P P 04 33 44.6 +1.7
baz=318
ECSD EROS Data Cent 43.68 76 P P 04 33 42.7 -0.1
ECSD EROS Data Cent 43.68 76 P P 04 33 42.5 -0.3
baz=310
T25A Trinidad 43.77 89 IAmb IAmb 04 33 46.2
comp=Z,9.8nm,0.9s
T25A Trinidad 43.77 89 P P 04 33 45.3 +1.5
baz=315,SNR=12
EYMN Ely 43.77 68 P P 04 33 46.0 +2.6
baz=308
ANMO Albuquerque 44.17 93 P P 04 33 47.6 +0.6
ANMO Albuquerque 44.17 93 P P 04 33 48.1 +1.1
baz=316
BGNE Belgrade 44.37 80 P P 04 33 49.3 +1.0
baz=312
FRB Frobisher Bay 44.58 39 P P 04 33 49.0 -0.5
comp=Z,9.3nm,0.4s,baz=309,slow=11
comp=Z,9.3nm,0.4s
NRIK Noril'sk 44.96 331 P P 04 33 52.4 -0.1
comp=Z,2.6nm,0.6s,baz=63,slow=7.6,SNR=4.3
comp=Z,2.6nm,0.6s
121A Cookes Peak, D 45.19 96 P P 04 33 56.8 +1.8
baz=318
DAG Danmarks Havn 46.08 10 *i* P P 04 34 00.5 -0.6
DAG IAmb IAmb 04 34 01.9
comp=Z,10nm,0.7s
HSIG 46.08 103 P P 04 34 03.2 +1.4
HSIG IAmb IAmb 04 34 03.5
comp=Z,6.9nm,0.8s
N35A Tabor 46.13 79 P P 04 34 02.1 0.0
N35A IAmb IAmb 04 34 03.5
comp=Z,11nm,0.5s
SUMG Summit 46.74 20 P P 04 34 07.2 +0.4
SUMG IAmb IAmb 04 34 08.6
comp=Z,11nm,0.9s
SUMG Summit 46.74 20 *i* P P 04 34 06.6 -0.2
SUMG IAmb IAmb 04 34 07.8
comp=Z,8.1nm,0.6s
I40A Norwalk 46.85 72 IAmb IAmb 04 34 11.8
comp=Z,6.3nm,0.6s
MSTX Muleshoe 46.97 91 P P 04 34 09.6 +0.8
baz=317
MNTX Cornudas Mount 47.17 95 IAmb IAmb 04 34 12.6
comp=Z,8.1nm,0.6s
MNTX Cornudas Mount 47.17 95 P P 04 34 11.9 +1.7
baz=318,SNR=19
KSRS Korea Array 47.95 277 P P 04 34 16.0 -0.1
comp=Z,1.2nm,0.6s,baz=48,slow=7.5,SNR=3.3
comp=Z,1.2nm,0.6s
DBG Daneborg 48.12 12 *i* P P 04 34 16.1 -0.8
DBG IAmb IAmb 04 34 17.5
comp=Z,6.5nm,0.6s
WMOK Wichita Mounta 48.67 87 P P 04 34 22.4 +0.7
baz=316,SNR=5.9
ICESG Greenland Ices 49.24 23 *i* P P 04 34 23.6 -2.3
ICESG IAmb IAmb 04 34 27.0
comp=Z,4.7nm,0.7s
DY2G Dye2 49.66 28 *i* P P 04 34 28.5 -0.5
DY2G IAmb IAmb 04 34 30.2
comp=Z,3.0nm,0.5s
ABTX Abilene, Hawle 49.73 89 IAmb IAmb 04 34 31.2

	comp=Z,14nm,0.8s						
ABTX	**Abilene, Hawle**	**49.73**	**89**	P	**P**	**04 34 30.5**	**+0.8**
	baz=318,SNR=6.5						
TX32	**Lajitas Array**	**49.92**	**96**	IAmb	IAmb	04 34 33.2	
	comp=Z,7.0nm,0.7s						
TXAR	**Lajitas Array**	**49.92**	**96**	P	**P**	**04 34 32.3**	**+1.1**
	comp=Z,5.5nm,0.5s,baz=302,slow=6.2,SNR=142						
TXAR				PcP	**PcP**	**04 35 48.7**	**+0.8**
	comp=Z,0.8nm,0.5s,baz=233,slow=0.9,SNR=8.5						
	comp=Z,5.5nm,0.5s						
X37A	**Clayton**	**50.71**	**84**	P	**P**	**04 34 36.7**	**-0.2**
X37A				IAmb	IAmb	04 34 38.1	
	comp=Z,5.5nm,0.7s						
U40A	**Yellville**	**50.84**	**81**	IAmb	IAmb	04 34 37.3	
	comp=Z,4.8nm,0.4s						
U40A	**Yellville**	**50.84**	**81**	P	**P**	**04 34 37.2**	**-0.8**
	baz=316,SNR=5.5						
SCHQ	**Schefferville**	**51.03**	**48**	P	**P**	**04 34 38.6**	**-0.4**
	comp=Z,1.2nm,0.3s,baz=314,slow=9.0,SNR=13						
	comp=Z,1.2nm,0.3s						
W39A	**Magazine**	**51.16**	**83**	P	**P**	**04 34 40.3**	**0.0**
	baz=316						
JCT	**Junction City**	**51.24**	**91**	P	**P**	**04 34 41.6**	**+0.6**
	baz=319,SNR=6.3						
FCAR	**Ozark Folk Cen**	**51.59**	**81**	IAmb	IAmb	04 34 42.9	
	comp=Z,7.3nm,1.1s						
MIAR	**Mount Ida**	**51.75**	**83**	P	**P**	**04 34 44.5**	**-0.2**
	baz=317						
SONM	**Songino Array**	**52.15**	**301**	P	**P**	**04 34 47.0**	**-0.6**
	comp=Z,0.2nm,0.4s,baz=40,slow=9.4,SNR=2.4						
SONM				pP	**pP**	**04 35 39.7**	**+1.9**
	comp=Z,0.8nm,0.9s,baz=39,slow=7.4,SNR=3.5						
SONM				ScP	**ScP**	**04 39 29.8**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=94,slow=4.3,SNR=3.7						
	comp=Z,0.2nm,0.4s						
SONM	**Songino Array**	**52.15**	**301**	IAmb	IAmb	04 34 48.2	
	comp=Z,1.1nm,1.2s						
SADO	**Sadowa**	**52.27**	**64**	P	**P**	**04 34 48.2**	**-0.2**
	comp=Z,3.0nm,0.7s,baz=3.9,slow=5.8,SNR=4.0						
	comp=Z,3.0nm,0.7s						
O48B	**Farmland**	**52.30**	**72**	P	**P**	**04 34 47.5**	**-1.2**
	baz=315						
P48A	**Milroy**	**52.72**	**73**	IAmb	IAmb	04 34 53.5	
	comp=Z,4.7nm,0.5s						
833A	**Chaparral WMA,**	**53.10**	**93**	P	**P**	**04 34 55.4**	**+0.7**
	baz=320						
OXF	**Oxford**	**54.11**	**80**	P	**P**	**04 35 01.8**	**-0.1**
	baz=317						
HHC	**Hu-ho-hao-te**	**54.48**	**292**	*eP*	**P**	**04 35 02.4**	**-2.2**
HHC				pmax	pmax		
	comp=Z,39nm,0.9s						
HHC				pmax	pmax		
	comp=Z,180nm,6.9s						
ARCES	**ARCESS Array B**	**54.93**	**356**	P	**P**	**04 35 06.8**	**-0.5**
	comp=Z,2.4nm,0.7s,baz=9.6,slow=7.4,SNR=7.2						
	comp=Z,2.4nm,0.7s						
L56A	**Greenwood**	**54.96**	**65**	P	**P**	**04 35 08.5**	**+0.5**
L56A				IAmb	IAmb	04 35 09.3	
	comp=Z,5.4nm,0.9s						
BINY	**Binghamton**	**55.72**	**64**	P	**P**	**04 35 13.8**	**+0.5**
	baz=316						
L59A	**Walton**	**56.20**	**63**	IAmb	IAmb	04 35 18.1	
	comp=Z,6.3nm,0.8s						
G62A	**West of Eustis**	**56.22**	**58**	IAmb	IAmb	04 35 17.3	
	comp=Z,17nm,1.5s						
TLIG	**Tlapa**	**62.04**	**100**	P	**P**	**04 35 57.8**	**+0.7**
LZH	**Lanzhou**	**62.06**	**294**	*eP*	**P**	**04 35 55.9**	**-1.2**
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
FINES	**FINESS Array B**	**62.97**	**354**	P	**P**	**04 36 01.9**	**-0.5**
	comp=Z,4.9nm,0.7s,baz=15,slow=7.5,SNR=27						
	comp=Z,4.9nm,0.7s						
NB2	**NORSAR Subarra**	**63.61**	**2**	P	**P**	**04 36 06.6**	**-0.2**
	comp=Z,1.1nm,0.5s,baz=359,slow=6.2						
NOA	**NORSAR Array B**	**63.61**	**2**	P	**P**	**04 36 06.3**	**-0.5**
	comp=Z,2.2nm,0.7s,baz=356,slow=6.2,SNR=10						
	comp=Z,2.2nm,0.7s						
WMQ	**Urumqi**	**63.78**	**310**	*eP*	**P**	**04 36 09.7**	**+1.5**
WMQ				pmax	pmax		
	comp=Z,21nm,1.1s						
TAOE	**Nuku Hiva Isla**	**67.35**	**154**	*e*LR	LR	04 36 31.0	
	comp=Z,1μm,25.4s						
ABKAR	**Akbulak array**	**69.12**	**331**	P	**P**	**04 36 41.5**	**-0.3**
PZH	**PanZhiHua**	**70.67**	**289**	P	**P**	**04 36 53.0**	**+1.3**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,5.0s						
CLL	**Collm**	**73.40**	**2**	*eP*	**P**	**04 37 07.0**	**-0.3**
AKASG	**Malin Array Be**	**73.43**	**351**	P	**P**	**04 37 06.5**	**-0.9**
	comp=Z,1.0nm,0.4s,baz=10,slow=5.7,SNR=11						
	comp=Z,1.0nm,0.4s						
GEC2	**GERESS Array S**	**75.87**	**1**	P	**P**	**04 37 21.6**	**-0.1**
GERES	**GERESS Array B**	**75.87**	**1**	P	**P**	**04 37 21.6**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=35,slow=4.9,SNR=5.2						
	comp=Z,0.4nm,0.5s						
GERES	**GERESS Array B**	**75.87**	**1**	P	**P**	**04 37 21.3**	**-0.3**
BUR08	**Bucovina Ar. S**	**76.78**	**353**	P	**P**	**04 37 26.4**	**-0.4**
BUR08				IAmb	IAmb	04 37 28.1	
	comp=Z,5.9nm,1.4s						
CHTO	**Chiang Mai**	**78.39**	**286**	P	**P**	**04 37 35.7**	**-0.2**
PDPR	**Patillas Dam,**	**79.92**	**73**	P	**P**	**04 37 43.9**	**-0.3**
ESDC	**Sonseca Array**	**83.59**	**15**	P	**P**	**04 38 02.9**	**-0.3**
	comp=Z,1.1nm,0.8s,baz=349,slow=4.7,SNR=4.4						
ESDC				pP	**pP**	**04 38 59.4**	**+1.2**
	comp=Z,1.2nm,0.9s,baz=353,slow=7.3,SNR=8.1						
	comp=Z,1.1nm,0.8s						
BRTR	**Keskin Array B**	**83.78**	**346**	P	**P**	**04 38 03.9**	**-0.3**
	comp=Z,1.1nm,1.0s,baz=29,slow=2.8,SNR=4.5						
	comp=Z,1.1nm,1.0s						
BRTR	**Keskin Array B**	**83.78**	**346**	P	**P**	**04 38 04.2**	**+0.1**
WRA	**Warramunga Arr**	**91.33**	**236**	P	**P**	**04 38 38.8**	**-1.5**
	comp=Z,0.3nm,0.5s,baz=35,slow=6.1,SNR=6.5						
QSPA	**South Pole Qui**	**145.41**	**180**	PKPdf	**PKPbc**	**04 45 10.2**	**-0.1**
VNA1	**Neumayer--Stat**	**161.69**	**155**	PKPab	**PKPab**	**04 46 21.9**	**+2.7**
VNA2	**Neumayer--Watz**	**161.71**	**156**	PKPab	**PKPab**	**04 46 18.6**	**-0.7**
	baz=276,slow=3.1						

*UCR **05** 04:45:18.8±1.3, 9.°84N×85.°66W, h23km±3km, MW3.6*
*INET **05** 04:45:19.3±1.8, 9.°82N×85.°61W, h16km±8km, ML3.8*

ISC 05 04:45:18.5±1.7, 9.°82N±0.°06×85.°67W±0.°08, h28km±7km, n34, σ065/52, 12C, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
INDI	**Punta indio, G**	**0.17**	**74**	*eP*		**Pb**	**04 45 23.9**	**-0.2**
INDI				*eS*		**Sb**	**04 45 28.2**	**+0.1**
SAJU	**San Juanillo,**	**0.25**	**351**	*eP*		**Pb**	**04 45 24.4**	**-0.7**
SAJU				*eS*		**Sb**	**04 45 29.1**	**-0.6**
DUNO	**Dulce Nombre,**	**0.31**	**34**	*eP*		**Pb**	**04 45 25.8**	**-0.1**
DUNO				*eS*		**Sb**	**04 45 31.4**	**+0.4**
DUNO				IAML			04 45 32.4	
	comp=N,14μm,0.2s							
GUAI	**GUAI**	**0.47**	**19**	*eP*		**Pb**	**04 45 28.1**	**-0.3**
GUAI				*eS*		**Sb**	**04 45 35.9**	**+0.7**
ORTG	**Ortega, Santa**	**0.58**	**21**	*eP*		**Pb**	**04 45 29.7**	**-0.5**
LAFE	**Finca La Fe, P**	**0.75**	**91**	*eP*		**Pb**	**04 45 31.8**	**-1.1**
LAFE				*eS*		**Sb**	**04 45 42.4**	**-0.4**
LAFE	**Finca La Fe, P**	**0.75**	**91**	*eP*		**Pb**	**04 45 31.8**	**-1.1**
LAFE				*eS*		**Sb**	**04 45 42.5**	**-0.4**
HZTE	**Horizontes, Gu**	**0.89**	**5**	*eP*		**Pb**	**04 45 35.0**	**-0.4**
HZTE	**Horizontes, Gu**	**0.89**	**5**	*eP*		**Pb**	**04 45 35.0**	**-0.4**
COLC	**Colonia**	**0.96**	**29**	*iP*		**Pb**	**04 45 35.8**	**-0.7**
COLC				*eS*		**Sb**	**04 45 48.8**	**0.0**
LIM1	**Limonal**	**0.96**	**25**	*iP*		**Pb**	**04 45 35.9**	**-0.8**
LIM1				*eS*		**Sb**	**04 45 49.4**	**+0.3**
CUI	**Cuipilapa**	**0.97**	**31**	*iP*		**Pb**	**04 45 36.0**	**-0.8**
CUI				*eS*		**Sb**	**04 45 49.1**	**-0.1**
LAPC	**Finca la Perla**	**0.97**	**14**	*iP*		**Pb**	**04 45 35.8**	**-0.9**
LAPC				*eS*		**Sb**	**04 45 48.5**	**-0.7**
GUAB	**Guayabo de Bag**	**0.98**	**26**	*iP*		**Pb**	**04 45 36.1**	**-0.9**
GUAB				*eS*		**Sb**	**04 45 49.7**	**+0.1**
BUEV	**Buena Vista**	**1.01**	**15**	*iP*		**Pb**	**04 45 36.5**	**-0.9**
BUEV				*eS*		**Sb**	**04 45 50.3**	**0.0**
JACO	**JACO, Garabito**	**1.01**	**99**	*eP*		**Pb**	**04 45 36.3**	**-1.0**
HORNC	**Hornillas**	**1.01**	**28**	*iP*		**Pb**	**04 45 36.6**	**-0.9**
HORNC				*eS*		**Sb**	**04 45 50.1**	**-0.3**
ACAL	**Aguas Claras**	**1.02**	**38**	*iP*		**Pb**	**04 45 37.0**	**-0.7**
ACAL				*eS*		**Sb**	**04 45 50.9**	**+0.2**
GB1A	**Borinquen Arri**	**1.03**	**15**	*iP*		**Pb**	**04 45 36.9**	**-0.9**
GB1A				*eS*		**Sb**	**04 45 50.5**	**-0.5**
BUAI	**Buenos Aires**	**1.10**	**17**	*eP*		**Pn**	**04 45 38.0**	**-0.1**
BUAI				*eS*		**Sb**	**04 45 52.3**	**-0.7**
CASO	**Castillo**	**1.10**	**56**	*eP*		**Pn**	**04 45 38.5**	**+0.3**
CASO				*eS*		**Sn**	**04 45 54.0**	**+1.5**
PTEN	**Parque Tenorio**	**1.11**	**37**	*eP*		**Pn**	**04 45 38.5**	**+0.2**
PTEN				*eS*		**Sb**	**04 45 53.4**	**0.0**
VMAR	**Armenia, Volca**	**1.12**	**29**	*eP*		**Pn**	**04 45 38.6**	**+0.2**
SRA1	**San Ramn**	**1.20**	**77**	*eP*		**Pn**	**04 45 39.7**	**+0.1**
HDC3	**Heredia 3**	**1.54**	**83**	*eP*		**Pn**	**04 45 44.8**	**+0.6**
LCR2	**La Lucha 2**	**1.64**	**93**	*eP*		**Pn**	**04 45 46.3**	**+0.7**
CONN	**Concepcion**	**1.73**	**1**	*eP*		**Pn**	**04 45 47.4**	**+0.6**
RIMA	**Rio Macho**	**1.78**	**92**	*eP*		**Pn**	**04 45 48.4**	**+0.8**
RIMA	**Rio Macho**	**1.78**	**92**	*eP*		**Pn**	**04 45 48.3**	**+0.7**
CDM	**Cerro de Muert**	**1.90**	**98**	*eP*		**Pn**	**04 45 49.8**	**+0.3**
CDM	**Cerro de Muert**	**1.90**	**98**	*eP*		**Pn**	**04 45 49.5**	**+0.1**
PEZE	**Perez Zeledon,**	**2.01**	**102**	*eP*		**Pn**	**04 45 50.0**	**-0.6**
ACON	**Acoyapa**	**2.19**	**13**	*eP*		**Pn**	**04 45 53.0**	**0.0**
PIRO	**Carate, Puerto**	**2.70**	**121**	*eP*		**Pn**	**04 46 01.2**	**+1.2**

*NEIC **05** 04:52:53.8±1.8, 15.°36S±0.°07×71.°20W±0.°09, h143km±7km, mb4.2/22, ML4.5(GUC), Error ellipse: s-maj=12.7km s-min=9.8km az=60.0*
*GUC **05** 04:52:54.2±0.7, 15.°95S×71.°62W, h222km±9km, ML4.6*
*VAO **05** 04:52:55.5±0.4, 15.°37S×71.°13W, h150km, mb4.2*
*IDC **05** 04:52:58.4±1.6, 15.°30S×70.°82W, h177km±13km, mb3.6/8, mbtmp4.1/12, MS2.9/2, Error ellipse: s-maj=20.5km s-min=17.0km az=47.0*

ISC 05 04:52:54.7±0.5, 15.°44S±0.°05×71.°24W±0.°06, h167km, n94, σ1978/97, mb4.1/9, 6D, Southern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
AP01	**Chacalluta**	**3.04**	**164**			**Pn**	**04 53 44.0**	**+0.8**
LPAZ	**La Paz**	**3.11**	**106**	P		**Pn**	**04 53 45.3**	**+0.7**
	52nm,0.3s,baz=293,slow=8.7,SNR=859							
LPAZ				S		**Sn**	**04 54 21.6**	**-1.8**
	37nm,0.7s,baz=191,slow=25,SNR=6.7							
LPAZ				LR		LR	04 54 54.8	
	comp=Z,40nm,18.7s,baz=338,slow=42							
PB12	**IPOC Station P**	**3.27**	**165**	Pn		**Pn**	**04 53 46.6**	**+0.4**
PB12	**IPOC Station P**	**3.27**	**165**	*i*P		**Pn**	**04 53 46.5**	**+0.2**
PB12				*i* S		**Sn**	**04 54 24.9**	**-1.5**
PB12				IAML			04 54 28.2	
	comp=N,804nm,0.3s							
PB16	**IPOC Station P**	**3.32**	**150**	Pn		**Pn**	**04 53 48.8**	**+1.5**
PB16	**IPOC Station P**	**3.32**	**150**	*i*P		**Pn**	**04 53 48.9**	**+1.6**
PB16				*i* S		**Sn**	**04 54 31.0**	**+2.7**
PB11	**IPOC Station P**	**4.55**	**161**			**Pn**	**04 54 01.9**	**-0.8**
PB11	**IPOC Station P**	**4.55**	**161**	*i*P		**Pn**	**04 54 02.4**	**-0.3**
PB11				*i* S		**Sn**	**04 54 52.9**	**-3.1**
TA02	**Huaiquique**	**4.92**	**168**			**Pn**	**04 54 06.3**	**-1.0**
PB08	**IPOC Station P**	**5.08**	**157**			**Pn**	**04 54 10.5**	**+0.7**
PB08	**IPOC Station P**	**5.08**	**157**	*i*P		**Pn**	**04 54 10.4**	**+0.7**
PB08				*i* S		**Sn**	**04 55 06.7**	**-1.9**
TA01	**Diego Aracena**	**5.20**	**169**	Pn		**Pn**	**04 54 10.3**	**-0.7**
TA01	**Diego Aracena**	**5.20**	**169**	*i*P		**Pn**	**04 54 10.2**	**-0.8**
TA01				*i* S		**Sn**	**04 55 06.1**	**-4.7**
PATCX	**Punta Patache**	**5.45**	**169**			**Pn**	**04 54 13.8**	**-0.6**
PATCX	**Punta Patache**	**5.45**	**169**	*e*P		**Pn**	**04 54 13.3**	**-1.1**
PATCX				*i* S		**Sn**	**04 55 11.7**	**-5.2**
PB01	**IPOC Station P**	**5.82**	**164**			**Pn**	**04 54 18.1**	**-1.1**
PB02	**IPOC Station P**	**5.99**	**168**			**Pn**	**04 54 20.9**	**-0.5**
PB07	**IPOC Station P**	**6.38**	**169**			**Pn**	**04 54 25.8**	**-1.0**
NNA	**Nana**	**6.44**	**302**	P		**Pn**	**04 54 27.9**	**+0.5**
	comp=N,27nm,0.3s,baz=124,slow=12,SNR=11							
NNA				S		**Sn**	**04 55 37.0**	**-3.3**
	comp=N,52nm,0.4s,baz=35,slow=15,SNR=13							
NNA	**Nana**	**6.44**	**302**			**Pn**	**04 54 27.3**	**-0.1**
PB09	**IPOC Station P**	**6.60**	**164**			**Pn**	**04 54 29.4**	**-0.2**
PB04	**IPOC Station P**	**6.93**	**172**			**Pn**	**04 54 33.0**	**-1.0**
ETMB	**Extrema**	**7.43**	**42**	*e*P		**Pn**	**04 54 38.9**	**-1.7**
LVC	**Limon Verde**	**7.46**	**163**	P		**Pn**	**04 54 41.9**	**+0.7**
	comp=N,166nm,0.4s,baz=348,slow=10,SNR=355							
LVC				S		**Sn**	**04 56 00.3**	**-4.9**
	comp=N,44nm,0.3s,baz=34,slow=6.6,SNR=9.5							
LVC	**Limon Verde**	**7.46**	**163**	Pn		**Pn**	**04 54 41.4**	**+0.1**
LVC	**Limon Verde**	**7.46**	**163**	*e*P		**Pn**	**04 54 41.3**	**+0.1**
CZSB	**Cruzeiro do Su**	**7.80**	**349**	*e*P		**Pn**	**04 54 44.1**	**-1.3**
AF01	**San Pedro de A**	**8.01**	**159**			**Pn**	**04 54 48.6**	**+0.1**
GO02	**Mina Uranaco**	**9.80**	**171**			**Pn**	**04 55 11.5**	**-0.5**
SIV	**San Ignacio**	**9.80**	**95**	P		**Pn**	**04 55 09.6**	**-2.3**
	comp=N,5.8nm,0.5s,baz=278,slow=13,SNR=27							
SAML	**Samuel**	**10.18**	**52**			**Pn**	**04 55 14.0**	**-2.8**
ATAH	**Atahualpa**	**10.83**	**319**	P		**P**	**04 55 29.8**	**-3.9**
	comp=N,3.8nm,0.5s,baz=112,slow=20,SNR=3.9							
VILB	**Vilhena**	**10.98**	**78**	*e*P		**Pn**	**04 55 24.8**	**-2.6**
PTLB	**Pontes e Lacer**	**11.67**	**92**	*e*P		**Pn**	**04 55 33.5**	**-2.8**
BOSC	**San Juan Bosco**	**14.15**	**329**	Pn		**Pn**	**04 56 06.0**	**-2.0**
SALV	**Santo Antonio**	**14.98**	**94**	*e*P		**P**	**04 56 17.9**	**-1.7**
CLDB	**Colider**	**15.71**	**75**	*e*P		**P**	**04 56 26.9**	**-0.8**
PORT	**Chimborazo Vol**	**15.75**	**331**			**Pn**	**04 56 27.1**	**-1.1**
PORT				IAmb		IAmb	04 56 40.4	
	comp=Z,7.4nm,1.0s							
MACA	**Manacapuru-AM**	**16.03**	**41**	*e*P		**P**	**04 56 31.0**	**-0.2**
SLOR	**San Lorenzo -**	**16.28**	**333**			**P**	**04 56 33.0**	**-1.5**
CPUP	**Villa Florida**	**16.90**	**132**	P		**Pn**	**04 56 40.9**	**-0.7**
	comp=Z,1.2nm,0.6s,baz=1.6,slow=11,SNR=1.7							
CPUP	**Villa Florida**	**16.90**	**132**	*e*P		**Pn**	**04 56 42.3**	**+0.8**
OTAV	**Otavalo**	**17.13**	**335**	*e*P		**Pn**	**04 56 44.1**	**-0.7**
VA03	**San Esteban**	**17.26**	**178**	P		**P**	**04 56 44.5**	**-0.2**
VA03				IAmb		IAmb	04 56 51.2	
	comp=Z,10nm,0.8s							
NPGB	**Novo Progresso**	**17.66**	**64**	*e*P		**Pn**	**04 56 49.6**	**-1.0**
LMEL	**Las Melosas**	**18.35**	**177**	P		**P**	**04 56 58.2**	**+1.5**
LMEL				IAmb		IAmb	04 57 04.5	
	comp=Z,9.9nm,0.8s							
ITTB	**Itaituba**	**18.80**	**56**	*e*P		**Pn**	**04 57 01.8**	**-2.3**
BO01	**Tunca**	**18.87**	**180**	P		**P**	**04 57 04.0**	**+1.8**
ITQB	**Itaqui**	**19.53**	**139**	P		**P**	**04 57 09.9**	**+0.5**
ITQB				IAmb		IAmb	04 57 14.2	
	comp=Z,13nm,0.7s							
ITQB	**Itaqui**	**19.53**	**139**	*e*P		**Pn**	**04 57 11.4**	**-1.1**
SNDB	**Serra Nova Dou**	**19.68**	**82**	*e*P		**Pn**	**04 57 11.9**	**-2.5**
PCMB	**Pacaembu**	**19.90**	**111**	*e*P		**Pn**	**04 57 15.1**	**-1.9**
PTGB	**Pitanga**	**20.21**	**120**	*e*P		Pn	**04 57 18.4**	**-2.5**
ITRB	**Iturama**	**20.35**	**105**	*e*P		Pn	04 57 19.5	-2.9
BOAV	**Boa Vista**	**20.65**	**32**	*e*P		**P**	**04 57 22.1**	**+0.6**
ITAB	**Concordia**	**21.29**	**127**	*e*P		**P**	**04 57 27.9**	**-0.3**
MALB	**Monte Alegre**	**21.51**	**53**	*e*P		**P**	**04 57 30.9**	**+0.2**
FRTB	**Fartura**	**21.89**	**114**	*e*P		**P**	**04 57 35.2**	**+0.7**
CPSB	**Cacapava Do Su**	**22.10**	**135**	*e*P		**P**	**04 57 37.3**	**+0.8**
IPMB	**Ipameri, GO**	**22.20**	**100**	*e*P		**P**	**04 57 36.3**	**-1.4**
BDFB	**Brasilia**	**22.38**	**94**	P		**P**	**04 57 38.7**	**-0.8**
	comp=Z,2.9nm,0.6s,baz=269,slow=12,SNR=7.0							
	comp=Z,2.9nm,0.6s							
BDFB	**Brasilia**	**22.38**	**94**	IAmb		IAmb	04 57 39.5	
	comp=Z,3.4nm,0.6s							
BDFB	**Brasilia**	**22.38**	**94**	*e*P		**P**	**04 57 39.0**	**-0.4**
PEXB	**Peixe**	**22.52**	**84**	*e*P		**P**	**04 57 40.2**	**-0.5**
PLTB	**Pedras Altas**	**22.86**	**138**	*e*P		**P**	**04 57 44.5**	**+0.8**
PRPB	**Parauapebas**	**22.95**	**69**	*e*P		**P**	**04 57 44.5**	**-0.1**
CNLB	**Canela**	**23.31**	**130**	*e*P		**P**	**04 57 49.5**	**+1.7**
SMTB	**Santa Maria do**	**24.01**	**77**	*e*P		**P**	**04 57 55.6**	**+1.3**
MCPB	**Macapa, AP**	**24.15**	**53**	*e*P		**P**	**04 57 56.9**	**+1.3**
PET01	**Itanhaem-SP**	**24.16**	**115**	*e*P		**P**	**04 57 57.0**	**+1.4**
PLCA	**Paso Flores**	**25.21**	**179**	P		**P**	**04 58 08.2**	**+3.2**
	comp=Z,2.8nm,0.5s,baz=355,slow=10,SNR=10.0							
	comp=Z,2.8nm,0.5s							
PLCA	**Paso Flores**	**25.21**	**179**	P		**P**	**04 58 06.3**	**+1.4**
PLCA				IAmb		IAmb	04 58 08.8	
	comp=Z,3.9nm,0.6s							
PLCA	**Paso Flores**	**25.21**	**179**	*e*P		**P**	**04 58 08.5**	**+3.5**
SJCC	**San Jacinto, C**	**25.47**	**351**	P		**P**	**04 58 07.1**	**-0.5**
SJCC				IAmb		IAmb	04 58 10.8	
	comp=Z,12nm,1.0s							
ROSB	**Rosrio**	**29.47**	**68**	*e*P		**P**	**04 58 44.3**	**+1.1**
RIB01	**Linhares ES**	**29.67**	**102**	*e*P		**P**	**04 58 44.6**	**-0.3**
NBPB	**Pedra_Branca-C**	**32.60**	**76**	*e*P		**P**	**04 59 11.8**	**+1.1**
CBYP	**Canovanas**	**33.92**	**9**	P		**P**	**04 59 22.0**	**0.0**
S44A	**Carbondale**	**55.50**	**343**	P		**P**	**05 02 12.9**	**+0.7**
FVM	**French Village**	**56.11**	**342**	P		**P**	**05 02 16.9**	**+0.2**
ULM	**Lac du Bonnet**	**68.91**	**343**	P		**P**	**05 03 43.1**	**+1.9**
	comp=Z,1.8nm,0.3s,baz=161,slow=4.0,SNR=5.1							
	comp=Z,1.8nm,0.3s							
ULM	**Lac du Bonnet**	**68.91**	**343**	IAmb		IAmb	05 04 00.5	
	comp=Z,3.7nm,1.1s							
DBIC	**Dimbokro**	**69.31**	**77**	P		**P**	**05 03 44.0**	**-0.5**
	comp=Z,1.6nm,0.4s,baz=263,slow=5.0,SNR=7.2							
DBIC				LR		LR	05 32 17.7	
	comp=Z,33nm,19.6s,baz=110,slow=34							
	comp=Z,1.6nm,0.4s							
DBIC	**Dimbokro**	**69.31**	**77**	IAmb		IAmb	05 03 49.2	
	comp=Z,14nm,1.3s							
TORD	**Torodi Ar. Bea**	**77.53**	**73**	P		**P**	**05 04 32.2**	**-0.3**
	comp=Z,2.1nm,0.3s,baz=258,slow=4.7,SNR=39							
	comp=Z,2.1nm,0.3s							
TORD	**Torodi Ar. Bea**	**77.53**	**73**	P		**P**	**05 04 32.3**	**-0.3**
TORD				IAmb		IAmb	05 04 34.1	
	comp=Z,2.0nm,0.5s							
VNDA	**Vanda**	**82.40**	**190**	P		**P**	**05 05 02.2**	**+4.7**
	comp=Z,0.2nm,0.4s,baz=169,slow=5.2,SNR=2.2							
	comp=Z,0.2nm,0.4s							
ESDC	**Sonseca Array**	**83.15**	**46**	P		**P**	**05 05 03.3**	**+1.2**
	comp=Z,0.2nm,0.4s,baz=253,slow=4.6,SNR=4.3							
	comp=Z,0.2nm,0.4s							
ESDC	**Sonseca Array**	**83.15**	**46**	IAmb		IAmb	05 05 07.2	
	comp=Z,0.3nm,0.8s							
YKA	**Yellowknife Ar**	**84.77**	**341**	P		**P**	**05 05 12.9**	**+3.3**
	comp=Z,0.3nm,0.4s,baz=130,slow=5.2,SNR=10							
	comp=Z,0.3nm,0.4s							
WRA	**Warramunga Arr**	**136.77**	**216**	PKP		**PKiKP**	**05 12 02.5**	**+2.5**
	comp=Z,0.4nm,0.8s,baz=134,slow=1.6,SNR=2.1							
ZALV	**Zalesovo Beam**	**137.26**	**21**	PKP		**PKiKP**	**05 12 01.8**	**+1.9**
	comp=Z,0.9nm,0.4s,baz=321,slow=2.1,SNR=5.3							
MKAR	**Makanchi Array**	**141.75**	**30**	PKP		**PKiKP**	**05 12 10.3**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=259,slow=0.8,SNR=2.6							
SONM	**Songino Array**	**147.64**	**3**	PKPbc		**PKPab**	**05 12 22.3**	**+0.1**
	comp=Z,1.3nm,0.5s,baz=330,slow=3.3,SNR=11							

*NIED **05** 04:55:07.6, 32.°62N×130.°68E, h7km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.18; $M_{\theta\theta}$0.89; $M_{\phi\phi}$-3.08; $M_{r\theta}$-1.41; $M_{\theta\phi}$0.02; $M_{\phi r}$0.21; Fault plane solution: $M_0$3.09000×10^{14} NP1: ϕ_s208.00000°, δ51.00000°, λ134.00000°. NP2: ϕ_s331.00000°, δ56.00000°, λ49.00000°.*

JMA 05 04:55:07.6±0.0, 32.°6N±0.°1×130.°7E±0.°2, h7km, MV3.6/20, 2D, SOUTHERN KUMAMOTO PREF, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
JIU3	**Izumi3**	**0.13**	**122**	*i*P		Pg	04 55 10.6	+0.2
JIU3				*i*S		Sg	04 55 12.8	+0.5
JTA	**Tamana**	**0.37**	**340**	*i* P		Pg	04 55 15.1	+0.3
JTA				*e*S		Sg	04 55 20.6	+0.9
JZO	**Okuchi**	**0.48**	**189**	*i* P		Pg	04 55 17.2	+0.2
JZO				S		Sg	04 55 23.8	+0.6
JTZ	**Takazaki**	**0.79**	**154**

KMSI	**Cibinong**	**1.18**	**148**	P	Pb	05 46 06.7	-1.1
LUWI	**Luwuk**	**2.67**	**193**	P	Pn	05 46 28.5	+0.1
APSI	**Ampana**	**3.00**	**215**	P	Pn	05 46 33.0	0.0
MPSI	**Mapaga**	**3.67**	**250**	P	Pn	05 46 42.5	+0.4
TTSI	**Tana Toraja**	**5.79**	**218**	P	Pn	05 47 11.8	+0.4

VAO ***05*** *05:51:07.7±0.2,29.˙39S×71.˙85W,h10km,mb5.5*
SJA ***05*** *05:51:07.2±1.1,29.˙31S×72.˙03W,h25km,ML5.5,MW5.6*
IDC ***05*** *05:51:07.3±0.3,29.˙37S×71.˙75W,h0km,mb5.3/20, mbtmp5.2/25,ML4.8/5,MS5.4/55,Error ellipse: s-maj=15.9km s-min=10.9km az=89.0*
NEIC ***05*** *05:51:08.2,29.˙34S×71.˙88W,h28km,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.31; $M_{\theta\theta}$0.42; $M_{\phi\phi}$-1.73; $M_{r\theta}$-1.14; $M_{r\phi}$0.51; $M_{\theta\phi}$-2.01; Fault plane solution: M_o2.84000×10^{17} NP1:ϕ_s199.74000°, δ75.48000°,λ113.87000°. NP2:ϕ_s319.27000°,δ27.71000°, λ32.62000°. Principal axes: T 2.9328, Plg53.0000°, Azm138.0000°; N -0.2002, Plg23.0000°, Azm13.0000°; P -2.7326, Plg27.0000°, Azm271.0000°;*
BJI ***05*** *05:51:10.0±0.0,29.˙30S×71.˙70W,h15km,mB5.6/51, Ms5.7/63,Ms7 5.6/62*
GUC ***05*** *05:51:10.6±0.6,29.˙32S×71.˙82W,h40km±3km,ML5.6*
NEIC ***05*** *05:51:11.6±2.0,29.˙34S±0.˙03×71.˙86W±0.˙06,h28km±1km, mb5.6/512,Ms_20 5.4/378,Mwb5.6/83,Mww5.8, ML5.7(GUC),Error ellipse: s-maj=8.5km s-min=4.8km az=271.0*
MOS ***05*** *05:51:12.4±1.0,29.˙03S×71.˙72W,h33km,mb5.8/45, MS5.4/20,Error ellipse: s-maj=11.3km s-min=7.2km az=89.3*
NEIC ***05*** *05:51:13,29.˙45S×72.˙02W,h30km,Moment Tensor Solution. Duration: 8≤0 Moment tensor: Scale 10^{17}Nm; M_{rr}2.55; $M_{\theta\theta}$1.34; $M_{\phi\phi}$-3.89; $M_{r\theta}$-2.69; $M_{r\phi}$1.09; $M_{\theta\phi}$-4.38; Fault plane solution: M_o6.28000×10^{17} NP1: ϕ_s318.00000°,δ29.00000°,λ28.00000°. NP2: ϕ_s203.00000°,δ77.00000°,λ116.00000°. Principal axes: T 6.4224, Plg51.0000°, Azm142.0000°; N -0.3041, Plg25.0000°, Azm16.0000°; P -6.1183, Plg27.0000°, Azm272.0000°;*
GCMT ***05*** *05:51:15.6±0.1,29.˙45S±0.˙01×72.˙03W±0.˙01,h36km, MW5.8/146,Moment Tensor Solution. s136,c246; s146,c361; Duration: 1≤9 Moment tensor: Scale 10^{17} Nm; M_{rr}2.50±.05; $M_{\theta\theta}$1.68±.04; $M_{\phi\phi}$-4.18±.05; $M_{r\theta}$-2.18±.07; $M_{r\phi}$1.32±.03; $M_{\theta\phi}$-3.61±.09; Best double couple: M_o5.72600×10^{17} NP1:ϕ_s314.00000°,δ35.00000°, λ28.00000°. NP2:ϕ_s201.00000°,δ74.00000°,λ122.00000°. Principal axes: T 5.6780, Plg50.0000°, Azm147.0000°; N 0.0970, Plg31.0000°, Azm11.0000°; P -5.7750, Plg23.0000°, Azm267.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
ISC 05 05:51:11.0±0.3,29˚36S±0.˚02×71˚91W±0.˚03,h27km±1km, h27km:pP-P,n1602,σ1.9 88/1612,mb5.6/301,MS5.5/263, 241C-85D,Fault plane solution: NP1:ϕ_s191.00850°, δ50.58237°,λ123.12429°. NP2:ϕ_s325.22852°,δ49.68490°, λ56.38203°. Principal axes: T Plg65.0236°, Azm167.2310°; N Plg24.9710°, Azm348.5036°; P Plg0.4871°, Azm258.2767°; Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CO05	**La Serena**	**0.81**	**134**			**Pn**	**05 51 23.9**	**-2.6**
CO05				Sg		**Sb**	**05 51 35.9**	**-1.0**
CO05	**La Serena**	**0.81**	**134**	⇓*iP*		**Pn**	**05 51 25.5**	**-1.1**
CO05				*eS*		**Sb**	**05 51 36.0**	**-1.0**
CO05				IAML			05 51 38.6	
	comp=E,286μm,0.5s							
LCO	**Las Campanas**	**1.11**	**72**	Pn		**Pn**	**05 51 30.2**	**-0.8**
LCO						**Sn**	**05 51 44.0**	**-1.6**
LCO	**Las Campanas**	**1.11**	**72**	*eP*		**Pn**	**05 51 30.2**	**-0.8**
LCO	**Las Campanas**	**1.11**	**72**	*eP*		**Pn**	**05 51 29.3**	**-1.7**
LCO				*i* S		**Sn**	**05 51 43.6**	**-2.0**
LCO	**Las Campanas**	**1.11**	**72**	*i* P		**Pn**	**05 51 30.4**	**-0.6**
LCO				*eS*		**Sn**	**05 51 44.2**	**-1.4**
LCO				IAML			05 51 47.2	
	comp=Z,719μm,1.0s							
GO04	**Tololo Observa**	**1.26**	**130**			**Pn**	**05 51 32.9**	**-0.2**
GO04						**Sn**	**05 51 49.1**	**-0.1**
GO04	**Tololo Observa**	**1.26**	**130**	⇑*iP*		**Pn**	**05 51 32.5**	**-0.5**
GO04				*eS*		**Sn**	**05 51 48.5**	**-0.7**
GO04	**Tololo Observa**	**1.26**	**130**	*i* P		**Pn**	**05 51 32.9**	**-0.2**
GO04				*eS*		**Sn**	**05 51 48.9**	**-0.3**
CO06	**Fray Jorge**	**1.33**	**170**	Pn		**Pn**	**05 51 33.2**	**-0.5**
CO06						**Sn**	**05 51 48.8**	**-1.8**
CO06	**Fray Jorge**	**1.33**	**170**	⇑*iP*		**Pn**	**05 51 33.1**	**-0.7**
CO06				*eS*		**Sn**	**05 51 48.5**	**-2.1**
AC04	**Llanos de Chal**	**1.37**	**33**	Pn		**Pn**	**05 51 32.6**	**-1.7**
AC04						**Sn**	**05 51 49.5**	**-1.9**
AC04	**Llanos de Chal**	**1.37**	**33**	⇓*iP*		**Pn**	**05 51 33.3**	**-1.0**
AC04				*i* S		**Sn**	**05 51 49.6**	**-1.9**
AC04				IAML			05 51 51.1	
	comp=E,135μm,0.1s							
AC04	**Llanos de Chal**	**1.37**	**33**	*i* P		**Pn**	**05 51 33.5**	**-0.7**
AC04				*eS*		**Sn**	**05 51 49.8**	**-1.6**
AC04				IAML			05 52 00.8	
	comp=Z,62μm,0.7s							
CO01	**Juntas del Tor**	**1.70**	**112**			**Pn**	**05 51 39.4**	**+0.4**
CO01				Sn		**Sn**	**05 52 00.2**	**+0.2**
CO01	**Juntas del Tor**	**1.70**	**112**	⇑*iP*		**Pn**	**05 51 39.4**	**+0.4**
CO01				*eS*		**Sn**	**05 52 00.1**	**+0.1**
CO01				IAML			05 52 04.1	
	comp=N,93μm,0.8s							
CO01	**Juntas del Tor**	**1.70**	**112**	*i* P		**Pn**	**05 51 39.5**	**+0.4**
CO01				*eS*		**Sn**	**05 52 00.0**	**+0.1**
CO01				IAML			05 52 02.3	
	comp=Z,93μm,0.7s							
CO03	**El Pedregal**	**1.81**	**145**			**Pn**	**05 51 40.5**	**0.0**
CO02	**Combarbal**	**2.00**	**157**			**Pn**	**05 51 43.3**	**+0.2**
CO02	**Combarbal**	**2.00**	**157**	⇑*iP*		**Pn**	**05 51 43.4**	**+0.3**
CO02				*i* S		**Sn**	**05 52 06.6**	**-0.7**
CO02				IAML			05 52 10.8	
	comp=N,121μm,0.3s							
CO02	**Combarbal**	**2.00**	**157**	*i* P		**Pn**	**05 51 43.4**	**+0.3**
CO02				*eS*		**Sn**	**05 52 06.2**	**-1.1**
CO02				IAML			05 52 13.5	
	comp=Z,41μm,0.8s							
AROD	**Rodeo**	**2.27**	**111**	*i* P		**Pn**	**05 51 48.0**	**+1.1**
GO03	**Copiap**	**2.30**	**40**			**Pn**	**05 51 46.6**	**-0.5**
GO03	**Copiap**	**2.30**	**40**	*i* P		**Pn**	**05 51 46.6**	**-0.5**
GO03				*eS*		**Sn**	**05 52 13.9**	**-0.6**
GO03				IAML			05 52 29.6	
	comp=N,36μm,0.2s							
GO03	**Copiap**	**2.30**	**40**	*i* P		**Pn**	**05 51 47.0**	**-0.1**
AC06	**Mina Casimiro**	**2.42**	**35**			**Pn**	**05 51 48.8**	**0.0**
AC06	**Mina Casimiro**	**2.42**	**35**	*eP*		**Pn**	**05 51 48.6**	**-0.2**
AC06				*i* S		**Sn**	**05 52 16.6**	**-1.0**
AC06				IAML			05 52 32.5	
	comp=N,27μm,0.5s							
ACDV	**Cuesta del Vie**	**2.56**	**109**	*i* P		**Pn**	**05 51 53.0**	**+2.2**
ACDV				*eS*		**Sb**	**05 52 26.8**	**-0.6**
ACDV				IAML			05 52 33.0	
	comp=Z,26μm,0.6s							
ACCO	**Cerro Coronel**	**2.75**	**117**	*i* P		**Pn**	**05 51 56.0**	**+2.3**
ACCO				IAML			05 53 31.9	
	comp=Z,2μm,3.0s							
VA06	**Catapilco**	**3.23**	**171**			**Pn**	**05 51 59.8**	**-0.2**
VA06	**Catapilco**	**3.23**	**171**	⇑*iP*		**Pn**	**05 51 59.7**	**-0.2**
VA06				*eS*		**Sn**	**05 52 37.3**	**-0.2**
VA06				IAML			05 53 00.1	
	comp=N,22μm,0.6s							
RTLS	**Leoncito**	**3.31**	**138**	*i* P		**Pn**	**05 52 04.9**	**+3.6**
RTLS				IAML			05 52 57.4	
	comp=Z,6μm,0.8s							
AC01	**Pan de Azucar**	**3.41**	**20**	Pn		**Pn**	**05 52 00.6**	**-1.7**
AC01	**Pan de Azucar**	**3.41**	**20**	⇓*eP*		**Pn**	**05 52 00.5**	**-1.7**
AC01				*eS*		**Sn**	**05 52 37.4**	**-4.4**
AC01				IAML			05 53 02.2	
	comp=E,5μm,0.5s							
AC02	**Maricunga**	**3.52**	**45**			**Pn**	**05 52 05.2**	**+0.9**
AC02	**Maricunga**	**3.52**	**45**	*eP*		**Pn**	**05 52 04.9**	**+0.7**
AC02				*eS*		**Sn**	**05 52 45.3**	**+0.1**
ZON	**Zonda**	**3.54**	**129**			**Pn**	**05 52 06.6**	**+2.4**
ZON	**Zonda**	**3.54**	**129**	P		**Pn**	**05 52 06.6**	**+2.4**
ZON	**Zonda**	**3.54**	**129**	*i* P		**Pn**	**05 52 06.0**	**+1.8**
ZON				IAML			05 53 08.0	
	comp=Z,7μm,0.8s							
RTLL	**Cerro Villicun**	**3.56**	**124**	*i* P		**Pn**	**05 52 06.7**	**+2.2**
AUSP	**Uspallata**	**3.59**	**143**	*i* P		**Pn**	**05 52 08.0**	**+3.0**
VA03	**San Esteban**	**3.59**	**161**			**Pn**	**05 52 06.0**	**+1.1**
VA03	**San Esteban**	**3.59**	**161**	⇑*eP*		**Pn**	**05 52 05.6**	**+0.7**
VA03				*eS*		**Sn**	**05 52 47.7**	**+1.3**
VA03				IAML			05 53 20.8	
	comp=E,15μm,0.5s							
VA03	**San Esteban**	**3.59**	**161**	*i* P		**Pn**	**05 52 06.0**	**+1.1**
VA03				IAML			05 53 06.6	
	comp=Z,15μm,0.7s							
VA01	**Torpederas**	**3.66**	**177**	Pn		**Pn**	**05 52 05.1**	**-0.7**
VA01	**Torpederas**	**3.66**	**177**	⇑*eP*		**Pn**	**05 52 05.1**	**-0.7**
VA01	**Torpederas**	**3.66**	**177**	*i* P		**Pn**	**05 52 05.0**	**-0.7**
VA01				IAML			05 53 23.5	
	comp=Z,3μm,1.9s							
ROCH	**El Roble**	**3.68**	**168**	⇑*iP*		**Pn**	**05 52 06.4**	**+0.1**
ROCH				⇑*iP*			05 52 06.4	
ROCH				*i* S		**Sn**	**05 52 49.5**	**+0.6**
ROCH				*eS*			05 52 49.8	
ROC1	**El Roble**	**3.69**	**168**			**Pn**	**05 52 06.6**	**+0.3**
ROC1	**El Roble**	**3.69**	**168**	*i* P		**Pn**	**05 52 06.7**	**+0.3**
RTCV	**Cerro Valdivia**	**3.83**	**131**	*i* P		**Pn**	**05 52 11.0**	**+2.8**
RTCV				IAML			05 53 26.0	
	comp=Z,93nm,1.0s							
PEL	**Peldehue**	**3.92**	**165**			**Pn**	**05 52 09.3**	**0.0**
PEL	**Peldehue**	**3.92**	**165**	P		**Pn**	**05 52 09.3**	**0.0**
PEL	**Peldehue**	**3.92**	**165**	*i* P		**Pn**	**05 52 10.0**	**+0.6**
MT02	**Curacav**	**3.94**	**171**	Pn		**Pn**	**05 52 09.5**	**-0.2**
MT02	**Curacav**	**3.94**	**171**	⇑*eP*		**Pn**	**05 52 09.0**	**-0.7**
MT02				*eS*		**Sn**	**05 52 54.0**	**-1.0**
MT02	**Curacav**	**3.94**	**171**	*i* P		**Pn**	**05 52 09.4**	**-0.2**
MT02				IAML			05 53 22.2	
	comp=Z,8μm,0.8s							
TINO	**Tinogasta**	**4.03**	**72**	*i* P		**Pn**	**05 52 15.0**	**+4.0**
AVFE	**Valle Fertil**	**4.08**	**110**	*i* P		**Pn**	**05 52 13.0**	**+1.4**
AVFE				IAML			05 53 22.9	
	comp=Z,14μm,0.6s							
MT05	**Renca**	**4.14**	**166**	Pn		**Pn**	**05 52 12.4**	**-0.1**
MT05	**Renca**	**4.14**	**166**	*i* P		**Pn**	**05 52 13.0**	**+0.5**
MT05				IAML			05 53 30.7	
	comp=Z,9μm,0.7s							
FCH	**Farellones**	**4.19**	**161**	⇑*iP*		**Pn**	**05 52 14.2**	**+0.8**
FCH				*i* S		**Sn**	**05 53 02.9**	**+1.3**
VA05	**Santo Domingo**	**4.29**	**177**			**Pn**	**05 52 13.7**	**-0.8**
VA05	**Santo Domingo**	**4.29**	**177**	⇑*eP*		**Pn**	**05 52 13.4**	**-1.1**
VA05				*i* S		**Sn**	**05 53 00.3**	**-3.3**
ACLC	**CERRO LA CRUZ**	**4.33**	**92**	*i* P		**Pn**	**05 52 16.0**	**+0.9**
ACLC				IAML			05 53 29.0	
	comp=Z,13μm,2.1s							
MT09	**Talagante**	**4.47**	**170**			**Pn**	**05 52 17.2**	**+0.1**
MT09	**Talagante**	**4.47**	**170**	⇑*iP*		**Pn**	**05 52 17.6**	**+0.5**
MT09				*i* S		**Sn**	**05 53 07.3**	**-1.0**
MT01	**Popeta**	**4.53**	**173**			**Pn**	**05 52 17.7**	**0.0**
GO02	**Mina Guanaco**	**4.66**	**27**			**Pn**	**05 52 19.0**	**-0.9**
GO02	**Mina Guanaco**	**4.66**	**27**	⇓*iP*		**Pn**	**05 52 18.9**	**-0.9**
GO02				*eS*		**Sn**	**05 53 10.9**	**-2.3**
GO02	**Mina Guanaco**	**4.66**	**27**	*i* P		**Pn**	**05 52 19.0**	**-0.9**
LMEL	**Las Melosas**	**4.71**	**162**			**Pn**	**05 52 21.7**	**+1.4**
LMEL	**Las Melosas**	**4.71**	**162**	⇑*eP*		**Pn**	**05 52 21.6**	**+1.2**
LMEL				*eS*		**Sn**	**05 53 14.7**	**+0.6**
BO04	**La Punta**	**4.75**	**167**			**Pn**	**05 52 20.9**	**+0.2**
BO04	**La Punta**	**4.75**	**167**	⇑*iP*		**Pn**	**05 52 20.9**	**+0.2**
APLL	**PUNTA DE LOS L**	**4.79**	**104**	*i* P		**Pn**	**05 52 22.0**	**+0.7**
PB14	**IPOC Station P**	**4.90**	**16**			**Pn**	**05 52 20.8**	**-2.4**
PB14	**IPOC Station P**	**4.90**	**16**	*eP*		**Pn**	**05 52 20.6**	**-2.6**
PB14	**IPOC Station P**	**4.90**	**16**	*i* P		**Pn**	**05 52 21.0**	**-2.2**
PB14				IAML			05 53 53.6	
	comp=Z,4μm,0.9s							
BO01	**Tunca**	**5.07**	**172**			**Pn**	**05 52 24.6**	**-0.6**
BO01	**Tunca**	**5.07**	**172**	*i* P		**Pn**	**05 52 24.0**	**-1.1**
BO01				IAML			05 54 05.1	
	comp=Z,2μm,0.8s							
GO05	**Huala**	**5.63**	**180**			**Pn**	**05 52 31.7**	**-1.2**
PB10	**IPOC Station P**	**5.95**	**12**			**Pn**	**05 52 34.4**	**-2.9**
ML02	**Panimavida**	**6.40**	**176**			**Pn**	**05 52 42.6**	**-0.8**
PB15	**IPOC Station P**	**6.51**	**20**			**Pn**	**05 52 43.2**	**-2.0**
PB06	**IPOC Station P**	**6.95**	**18**			**Pn**	**05 52 48.4**	**-2.8**
PB04	**IPOC Station P**	**7.17**	**13**			**Pn**	**05 52 50.7**	**-3.6**
AF01	**San Pedro de A**	**7.21**	**29**			**Pn**	**05 52 54.0**	**-0.9**
H03N1	**Juan Fernandez**	**7.24**	**234**	Pn		**Pn**	**05 52 53.1**	**-1.5**
	baz=110,slow=18							
H03N1						**Sn**	**05 54 08.6**	**-7.2**
	baz=82,slow=19							
H03N1				T		T	06 00 40.5	
	baz=63,slow=72							
LVC	**Limon Verde**	**7.24**	**23**	Pn		**Pn**	**05 52 53.2**	**-2.2**
	comp=Z,9.8nm,0.3s,baz=169,slow=9.9,SNR=153							
LVC						**Sn**	**05 54 12.9**	**-4.0**
	comp=Z,78nm,0.3s,baz=284,slow=23,SNR=6.3							
LVC					Lg	Lg	05 54 47.6	
	comp=Z,119nm,0.3s,baz=147,slow=12,SNR=6.2							
LVC					LR	LR	05 55 47.8	
	comp=Z,44μm,19.3s,baz=222,slow=39							
	comp=Z,61nm,0.5s							
LVC	**Limon Verde**	**7.24**	**23**			**Pn**	**05 52 53.4**	**-2.0**
LVC	**Limon Verde**	**7.24**	**23**	*eP*		**Pn**	**05 52 53.4**	**-2.0**
H03N2	**Juan Fernandez**	**7.25**	**234**	Pn		**Pn**	**05 52 53.4**	**-1.4**
	baz=110,slow=18							
H03N2						**Sn**	**05 54 09.1**	**-7.0**
	baz=82,slow=19							
H03N2				T		T	06 00 43.3	
	baz=63,slow=72							
H03N3	**Juan Fernandez**	**7.25**	**234**	Pn		**Pn**	**05 52 53.5**	**-1.4**
	baz=110,slow=18							
H03N3						**Sn**	**05 54 09.1**	**-7.1**
	baz=82,slow=19							
H03N3				T		T	06 00 39.3	
	baz=63,slow=72							
SLA	**San Lorenzo**	**7.35**	**53**	⇓*eP*		**Pn**	**05 52 57.1**	**+0.5**
BI05	**Punta Hualpn**	**7.45**	**188**			**Pn**	**05 52 56.0**	**-1.8**
H03S3	**Juan Fernandez**	**7.45**	**232**	Pn		**Pn**	**05 52 56.0**	**-1.6**
H03S3						**Sn**	**05 54 14.6**	**-6.4**
H03S3				T		T	06 01 09.2	
	baz=84,SNR=11							
H03S1	**Juan Fernandez**	**7.45**	**231**	Pn		**Pn**	**05 52 54.9**	**-2.7**
H03S1						**Sn**	**05 54 14.2**	**-6.9**
H03S1				T		T	06 00 55.2	
	baz=84,SNR=7.6							
H03S2	**Juan Fernandez**	**7.46**	**232**	Pn		**Pn**	**05 52 56.1**	**-1.7**
H03S2						**Sn**	**05 54 15.3**	**-6.1**
H03S2				T		T	06 01 14.4	
	baz=84,SNR=37							
PB07	**IPOC Station P**	**7.82**	**14**			**Pn**	**05 53 00.0**	**-3.1**
PB09	**IPOC Station P**	**7.91**	**18**			**Pn**	**05 53 02.1**	**-2.2**
PB02	**IPOC Station P**	**8.21**	**13**			**Pn**	**05 53 05.0**	**-3.5**
PB01	**IPOC Station P**	**8.57**	**15**			**Pn**	**05 53 09.8**	**-3.5**
PATCX	**Punta Patache**	**8.65**	**11**			**Pn**	**05 53 12.8**	**-1.7**
TA01	**Diego Aracena**	**8.90**	**11**	Pn		**Pn**	**05 53 14.5**	**-3.3**
LR04	**Corral**	**10.57**	**186**			**Pn**	**05 53 38.5**	**-2.1**
PB12	**IPOC Station P**	**10.79**	**8**			**Pn**	**05 53 40.3**	**-3.6**
AP01	**Chacalluta**	**11.03**	**8**	Pn		**Pn**	**05 53 44.1**	**-2.9**
PB16	**IPOC Station P**	**11.19**	**12**			**Pn**	**05 53 47.2**	**-2.6**
PLCA	**Paso Flores**	**11.40**	**175**	Pn		**Pn**	**05 53 51.0**	**-1.1**
	comp=Z,7.9nm,0.3s,baz=342,slow=11,SNR=219							
PLCA					Lg	Lg	05 56 57.9	
	comp=Z,0.4nm,0.3s,baz=343,slow=23,SNR=1.9							
PLCA					LR	LR	05 58 18.7	
	comp=Z,30μm,19.3s,baz=349,slow=38							
	comp=Z,36nm,0.5s							
PLCA	**Paso Flores**	**11.40**	**175**			**Pn**	**05 53 51.5**	**-0.6**
PLCA	**Paso Flores**	**11.40**	**175**	*eP*		**Pn**	**05 53 51.2**	**-0.9**
PLCA	**Paso Flores**	**11.40**	**175**	*eP*		**Pn**	**05 53 51.5**	**-0.6**
LL04	**Puerto Octay**	**11.53**	**182**			**Pn**	**05 53 51.8**	**-2.0**
LL03	**Petrohue**	**11.76**	**182**			**Pn**	**05 53 55.2**	**-1.7**
LL01	**San Ignacio de**	**13.00**	**182**			**Pn**	**05 54 13.3**	**-0.5**
LPA	**La Plata**	**13.07**	**119**	SN		**Sn**	**05 56 38.0**	**-1.3**
LPA				sS		S	05 56 46.3	-18
LPA				SSS		SSS	05 57 46.7	
LPA				PKIKP		PKiKP	06 07 28.6	-15
LPA				SKIKP			06 11 03.3	
LPA				PKIKS			06 11 08.8	
LPA				SKIKS			06 14 39.7	
CPUP	**Villa Florida**	**13.25**	**80**	Pn		**Pn**	**05 54 14.5**	**-2.8**
	comp=Z,0.3nm,0.3s,baz=267,slow=12,SNR=7.5							
CPUP					Lg	Lg	05 57 53.6	
	comp=Z,4.2nm,0.3s,baz=181,slow=12,SNR=2.9							
CPUP					LR	LR	05 59 44.8	
	comp=Z,45μm,18.6s,baz=262,slow=40							
	comp=Z,8.7nm,0.9s							
CPUP	**Villa Florida**	**13.25**	**80**			**Pn**	**05 54 14.9**	**-2.4**
CPUP	**Villa Florida**	**13.25**	**80**	*eP*		**Pn**	**05 54 15.7**	**-1.6**
ITQB	**Itaqui**	**13.32**	**95**			**Pn**	**05 54 16.3**	**-2.0**
ITQB	**Itaqui**	**13.32**	**95**	*eP*		**Pn**	**05 54 15.9**	**-2.4**
LPAZ	**La Paz**	**13.47**	**16**	Pn		**Pn**	**05 54 18.1**	**-2.8**
	comp=Z,2.5nm,0.3s,baz=200,slow=6.4,SNR=112							
LPAZ					LR	LR	06 00 23.1	
	comp=Z,17μm,19.3s,baz=194,slow=41							
	comp=Z,8.6nm,0.5s							
LPAZ	**La Paz**	**13.47**	**16**			**Pn**	**05 54 18.4**	**-2.5**
LPAZ	**La Paz**	**13.47**	**16**	P		**Pn**	**05 54 18.4**	**-2.5**
LPAZ	**La Paz**	**13.47**	**16**	*eP*		**Pn**	**05 54 18.2**	**-2.7**
LL07	**Hotel Espejo d**	**13.50**	**185**			**Pn**	**05 54 18.8**	**-1.9**
GO07	**Milladeo Hill,**	**13.80**	**185**			**Pn**	**05 54 22.0**	**-2.7**
UNIS	**Unistalda (Bra**	**14.71**	**93**	*eP*		**Pn**	**05 54 37.8**	**+0.6**
CRSM	**Crissiumal (Br**	**15.83**	**88**	*eP*		**Pn**	**05 54 50.8**	**-1.2**
PLTB	**Pedras Altas**	**15.95**	**103**			**Pn**	**05 54 50.3**	**-3.3**
PLTB	**Pedras Altas**	**15.95**	**103**	*eP*		**Pn**	**05 54 50.4**	**-3.1**
CPSB	**Cacapava Do Su**	**16.06**	**98**	*eP*		**Pn**	**05 54 53.2**	**-1.7**
ANTJ	**Antonio Joao (**	**16.09**	**67**	*eP*		**Pn**	**05 54 54.0**	**-1.4**
AMBA	**Amambai (Brazi**	**16.48**	**71**	*eP*		**Pn**	**05 55 00.0**	**-0.3**
ALGR	**Alto Alegre (B**	**16.52**	**93**	*eP*		**Pn**	**05 54 58.6**	**-2.3**
SIV	**San Ignacio**	**16.63**	**39**	Pn		**Pn**	**05 54 57.4**	**-4.8**
	comp=Z,0.3nm,0.3s,baz=254,slow=7.6,SNR=22							
SIV					LR	LR	06 01 59.5	
	comp=Z,9μm,21.6s,baz=222,slow=39							
MCR1	**Marechal Candi**	**16.67**	**77**	*eP*		**Pn**	**05 55 00.9**	**-1.8**
AQDB	**Aquidauana**	**17.14**	**63**	*eP*		**Pn**	**05 55 06.0**	**-2.7**
ITAB	**Concordia**	**17.55**	**88**	*eP*		**Pn**	**05 55 11.9**	**-1.8**
NNA	**Nana**	**17.89**	**344**	P		**P**	**05 55 18.6**	**+0.2**
	comp=Z,0.8nm,0.3s,baz=186,slow=15,SNR=11							
NNA					S	**Sn**	**05 58 30.4**	**-6.3**
	comp=Z,12nm,0.7s,baz=195,slow=8.3,SNR=2.3							
NNA					LR	LR	06 00 36.3	
	comp=Z,16μm,21.5s,baz=171,slow=32							
	comp=Z,18nm,0.9s							
NNA	**Nana**	**17.89**	**344**	P		**Pn**	**05 55 17.3**	**-0.7**
NNA	**Nana**	**17.89**	**344**	P		**Pn**	**05 55 17.3**	**-0.7**
NNA				pmax		pmax		
	comp=Z,90nm,1.3s							
PTLB	**Pontes e Lacer**	**18.18**	**43**	*eP*		**Pn**	**05 55 19.0**	**-2.4**
PTGB	**Pitanga**	**18.27**	**80**	*eP*		**P**	**05 55 21.4**	**-1.3**
CNLB	**Canela**	**18.36**	**95**	*eP*		**P**	**05 55 21.9**	**-1.7**
VBST	**Vila Bela da S**	**18.40**	**39**	*eP*		**P**	**05 55 19.7**	**-4.4**
TRCB	**Terra Rica**	**18.50**	**74**	P		**P**	**05 55 25.0**	**-0.2**
TRCB	**Terra Rica**	**18.50**	**74**	*eP*		**P**	**05 55 24.8**	**-0.4**
POCN	**Pocone**	**18.84**	**51**	*eP*		**Pn**	**05 55 29.1**	**-0.5**
PTET	**Porto Estrela**	**19.45**	**48**	*eP*		**P**	**05 55 35.3**	**-0.3**
PP1B	**Ponte de Pedra**	**19.49**	**57**	*eP*		**P**	**05 55 33.9**	**-2.1**
VILB	**Vilhena**	**19.62**	**36**	*eP*		**P**	**05 55 35.9**	**-1.5**
TER01	**Tubaro-SC**	**19.95**	**93**	*eP*		**P**	**05 55 40.0**	**-1.0**
SALV	**Santo Antonio**	**20.05**	**52**	*eP*		**P**	**05 55 40.9**	**-1.2**
PCMB	**Pacaembu**	**20.16**	**72**	*eP*		**P**	**05 55 42.6**	**-0.7**
ETMB	**Extrema**	**20.16**	**16**	*eP*		**P**	**05 55 43.1**	**-0.2**
C2SB	**Chapadao do Su**	**20.33**	**63**	*eP*		**P**	**05 55 42.4**	**-2.7**
TIJ01	**Guaruva-PR**	**20.73**	**84**	*eP*		**P**	**05 55 45.8**	**-3.8**
FRTB	**Fartura**	**20.89**	**79**	*eP*		**P**	**05 55 50.1**	**-1.1**
NBRS	**Nobres**	**21.13**	**48**	*eP*		**P**	**05 55 52.7**	**-1.2**
CZSB	**Cruzeiro do Su**	**21.53**	**358**	*eP*		**P**	**05 55 59.6**	**+1.5**
ITRB	**Iturama**	**21.80**

ORTC Ortega, Tolima 33.23 354 *e*P P 05 57 53.0 +7.1
VILC Villavicencio, 33.33 357 *e*P **P** **05 57 49.2 +2.3**
PTGC Puerto Gaitan, 33.37 360 *e*P **P** **05 57 51.1 +4.0**
BOAV Boa Vista 33.41 21 *e*P **P** **05 57 47.3 -0.1**
YOTC Yotoco, Valle 33.42 352 *e*P **P** **05 57 50.1 +2.4**
PAYG Puerto Ayora 33.48 325 P **P** **05 57 46.5 -1.6**
PAYG IAmb IAmb 05 58 32.2
comp=Z,79nm,1.1s
PAYG Puerto Ayora 33.48 325 IAMs_20 IAMs_20 06 07 55.1
comp=Z,12µm,20.0s
MALC Bahia Malaga 33.59 350 *e*P P 05 57 59.8 +11
GDU01 Guandu, BA 33.72 69 *e*P **P** **05 57 49.5 -0.6**
ANIL Santa Ana 33.82 354 *e*P P 05 57 59.8 +8.5
CHIC Chingaza 33.84 357 *e*P P 05 57 58.9 +7.2
ROSC El Rosal 34.08 356 P **P** **05 57 54.3 +0.6**
comp=Z,17nm,0.9s,baz=168,slow=3.8,SNR=9.6
ROSC LR LR 06 12 42.7
comp=Z,5µm,18.5s,baz=200,slow=38
comp=Z,17nm,0.9s
ROSC El Rosal 34.08 356 P **P** **05 57 54.9 +1.1**
ROSC IAmb IAmb 05 58 15.1
comp=Z,72nm,0.9s
ROSC El Rosal 34.08 356 *e*P P 05 57 59.8 +6.1
PLMC San Jos del P 34.33 352 *e*P **P** **05 57 57.9 +2.4**
MCPB Macapa, AP 34.50 37 *e*P **P** **05 57 56.4 -0.5**
NORC Norcasia 34.84 355 *e*P P 05 58 06.6 +6.7
NBPN Ponto Novo - B 34.84 65 *e*P **P** **05 57 58.5 -1.4**
SPBC San Pablo de B 34.87 356 *e*P P 05 58 06.6 +6.4
RUSC La Rusia 35.07 358 *e*P **P** **05 58 04.7 +2.3**
TMAB Tom-Au,PA,Br 35.12 45 *e*P **P** **05 58 02.3 0.0**
CBOC Ciudad Bolivar 35.24 353 *e*P **P** **05 58 05.6 +2.2**
HELC Santa Helena 35.52 354 *e*P **P** **05 58 06.6 +0.5**
TAMC Tame, Arauca 35.59 0 *e*P **P** **05 58 06.6 +0.3**
BARC Barichara 35.77 358 *e*P **P** **05 58 08.6 +0.5**
PMSA Palmer Station 35.77 174 P **P** **05 58 08.1 +0.8**
comp=Z,73nm,1.0s,baz=18,slow=5.0,SNR=11
PMSA LR LR 06 13 04.1
comp=Z,5µm,18.4s,baz=344,slow=37
comp=Z,73nm,1.0s
PMSA Palmer Station 35.77 174 P **P** **05 58 07.6 +0.2**
PMSA Palmer Station 35.77 174 IAMs_20 IAMs_20 06 12 34.5
comp=Z,5µm,19.0s
PMSA Palmer Station 35.77 174 *e*P **P** **05 58 05.3 -2.0**
PTBC PUERTO BERRIO, 35.78 356 *e*P **P** **05 58 10.5 +2.6**
ORCD Orcadas 36.25 158 P **P** **05 58 10.9 -0.6**
BRRC Barranca, Sant 36.30 357 *e*P **P** **05 58 13.4 +1.1**
DBBC Dabeiba 36.40 353 *e*P **P** **05 58 15.3 +2.0**
PAMC Pamplona, Colo 36.49 359 *e*P **P** **05 58 15.3 +0.8**
NBLA Lagarto - SE 36.68 67 *e*P **P** **05 58 13.2 -2.4**
UREC San Jos de Ur 37.06 354 *e*P **P** **05 58 19.2 +0.4**
ROSB Rosrio 37.27 50 *e*P **P** **05 58 19.6 -1.1**
OCAC Ocana 37.41 358 P **P** **05 58 20.9 -1.0**
OCAC Ocana 37.41 358 *e*P **P** **05 58 22.1 +0.2**
CACAO El Cacao, Vera 37.50 345 *e*P P 05 58 27.9 +5.4
AZU Azuero 37.80 346 *e*P P 05 58 34.7 +10
SDV Santo Domingo 38.04 2 LR LR 06 16 01.8
comp=Z,4µm,18.9s,baz=198,slow=39
SDV Santo Domingo 38.04 2 P **P** **05 58 26.4 -1.0**
SDV Santo Domingo 38.04 2 *e*P **P** **05 58 26.9 -0.4**
NBMA Muriti-CE 38.09 62 *e*P **P** **05 58 26.5 -1.2**
NBPB Pedra_Branca-C 38.64 58 *e*P **P** **05 58 31.6 -0.7**
NBAN Anadia - AL 38.65 67 *e*P **P** **05 58 30.5 -1.9**
LL6C La Loma 6 Bece 38.89 358 *e*P **P** **05 58 31.8 -2.5**
MDP Montagnes des 38.95 32 LR LR 06 15 48.8
comp=Z,10µm,18.4s,baz=200,slow=38
ARGC Ariguani, Magd 39.05 356 *e*P **P** **05 58 36.7 +1.0**
BCIP Isla Barro Col 39.06 348 *e*P **P** **05 58 39.6 +3.9**
SJCC San Jacinto, C 39.16 355 P **P** **05 58 35.5 -1.0**
SJCC IAmb IAmb 05 58 54.0
comp=Z,112nm,1.1s
SJCC San Jacinto, C 39.16 355 *e*P P 05 58 43.4 +6.9
NBCA Caruaru-PE 39.71 65 *e*P **P** **05 58 39.2 -2.1**
NBMO Morrinhos-CE 39.81 55 *e*P **P** **05 58 41.6 -0.5**
BIRV Birongo 39.98 9 IAmb IAmb 05 59 00.9
comp=Z,104nm,0.9s
NBRF Rio Formoso - 40.15 67 *e*P **P** **05 58 43.9 -1.0**
TRN Trinidad (W) 41.05 16 *e* P 05 59 01.4 +9.2
RCBR Riachuelo 41.26 62 P **P** **05 58 54.3 +0.2**
comp=Z,33nm,0.8s,baz=18,slow=10,SNR=19
RCBR LR LR 06 17 38.9
comp=Z,8µm,18.2s,baz=7.5,slow=39
comp=Z,33nm,0.8s
RCBR Riachuelo 41.26 62 P **P** **05 58 52.7 -1.4**
RCBR IAmb IAmb 05 59 04.4
comp=Z,111nm,1.3s
RCBR Riachuelo 41.26 62 IAMs_20 IAMs_20 06 17 49.0
comp=Z,7µm,21.0s
RCBR Riachuelo 41.26 62 P **P** **05 58 52.7 -1.4**
RCBR pmax pmax
comp=Z,111nm,1.3s
RCBR MLR MLR
comp=Z,7µm,21.0s
RCBR Riachuelo 41.26 62 *e*P **P** **05 58 53.0 -1.1**
JTS Las Juntas de 41.38 340 LR LR 06 12 39.4
comp=Z,3µm,21.2s,baz=240,slow=31
TOSP Speyside 41.88 17 P **P** **05 58 58.7 -0.3**
HZTE Horizontes, Gu 41.97 340 P **P** **05 59 59.2 -0.6**
GRGR Grenville 42.42 15 P **P** **05 59 03.3 -0.1**
GRGR Grenville 42.42 15 *e*P **P** **05 59 04.2 +0.8**
GCMP Grenada, Carri 42.81 15 *e*P P 05 59 13.5 +6.9
ACON Acoyapa 43.03 341 P **P** **05 59 09.6 +1.2**
BOAB BOACO BROADBAN 43.63 340 P **P** **05 59 12.9 -0.3**
BOAB IAmb IAmb 05 59 30.5
comp=Z,187nm,1.4s
BOAB IAMs_20 IAMs_20 06 12 52.8
comp=Z,7µm,22.0s
BBGH Gun Hill 43.91 17 IAMs_20 IAMs_20 06 19 53.0
comp=Z,5µm,21.0s
BBGH Gun Hill 43.91 17 *e*P **P** **05 59 18.1 +2.7**
MATN Matagalpa 44.17 340 P **P** **05 59 17.6 0.0**
SLBI Saint Lucia, B 44.40 15 *e*P **P** **05 59 22.8 +3.4**
MPOM Morne Pois Mar 44.84 15 *e*P **P** **05 59 18.1 -4.7**
BIM Bigot 44.86 15 *e*P **P** **05 59 22.8 -0.3**
FDF Fort de France 45.05 15 *e*P **P** **05 59 22.8 -1.8**
ILAM Ilet Lapin Mar 45.15 15 IAMs_20 IAMs_20 06 18 12.1
comp=Z,4µm,21.0s
DSLB Salisbury 45.67 14 *e*P **P** **05 59 27.4 -2.1**
TDBA Terre de Bas, 46.03 14 *e*P P 05 59 27.4 -4.8
MAGL Barre de l'ile 46.20 14 IAMs_20 IAMs_20 06 22 44.8
comp=Z,3µm,19.0s
MAGL Barre de l'ile 46.20 14 *e*P **P** **05 59 34.4 +0.7**
CBE Ff, Capester 46.25 14 IAMs_20 IAMs_20 06 19 18.1
comp=Z,3µm,21.0s
CBE Ff, Capester 46.25 14 *e*P **P** **05 59 32.1 -1.9**
GDHS Morne Mazeau, 46.41 14 IAMs_20 IAMs_20 06 19 31.5
comp=Z,4µm,20.0s
ANBD Bethesda, Anti 47.16 13 *e*P **P** **05 59 38.6 -2.6**
CRPR Cabo Rojo, PR 47.32 6 P **P** **05 59 41.9 -0.4**
CDVI St. Croix 47.34 9 P **P** **05 59 40.1 -2.4**
CDVI IAmb IAmb 06 00 02.4
comp=Z,60nm,0.9s
CDVI St. Croix 47.34 9 *e*P P 05 59 36.7 -5.8
SEUS St. Eustatius 47.37 12 IAMs_20 IAMs_20 06 23 26.9
comp=Z,3µm,18.0s
PDPR Patillas Dam, 47.44 8 P **P** **05 59 42.2 -1.1**
PDPR IAmb IAmb 05 59 56.9
comp=Z,42nm,0.8s
SJG San Juan 47.52 7 LR LR 06 22 34.2
comp=Z,2µm,18.0s,baz=194,slow=40
SJG San Juan 47.52 7 P **P** **05 59 43.1 -0.8**
SJG San Juan 47.52 7 IAMs_20 IAMs_20 06 23 06.0
comp=Z,3µm,19.0s
SJG San Juan 47.52 7 P **P** **05 59 43.1 -0.8**
SJG pmax pmax
comp=Z,169nm,1.5s
SJG MLR MLR
comp=Z,3µm,19.0s
SJG San Juan 47.52 7 *e*P P 05 59 49.4 +5.4
GCPR Guaynabo City 47.72 7 IAmb IAmb 05 59 57.8
comp=Z,103nm,1.6s
ANWB Willy Bob 47.77 13 *e*P P 05 59 38.6 -7.2
SDDR Presa de Saban 48.06 1 IAMs_20 IAMs_20 06 21 39.6
comp=Z,3µm,20.0s
PETF Flores 49.16 337 IAmb IAmb 06 00 07.5
comp=Z,116nm,1.3s
CCIG Comitan 49.40 334 IAmb IAmb 06 00 25.2
comp=Z,80nm,1.3s
CMIG Matias Romero 51.23 331 LR LR 06 17 05.3
comp=Z,4µm,20.9s,baz=149,slow=30
BELA Belgrano 2 51.42 171 P **P** **06 00 13.2 +0.2**
BELA IAmb IAmb 06 00 14.6
comp=Z,64nm,1.1s
TLIG Tlapa 53.28 328 IAmb IAmb 06 00 39.8
comp=Z,88nm,1.2s

VNA3 Neumayer Olymp 53.62 159 P **P** **06 00 29.8 +0.3**
VNA1 Neumayer--Stat 53.91 158 P **P** **06 00 28.7 -2.8**
VNA2 Neumayer--Watz 54.26 159 P **P** **06 00 34.4 +0.3**
baz=285,slow=8.4
SNAA Sanae 55.85 159 P **P** **06 00 45.8 +0.1**
SNAA Sanae 55.85 159 P **P** **06 00 45.5 -0.1**
comp=Z,107nm,0.5s,baz=281,slow=7.3,SNR=370
SNAA LR LR 06 22 49.2
comp=Z,5µm,22.0s,baz=288,slow=34
comp=Z,107nm,0.5s
SNAA Sanae 55.85 159 P **P** **06 00 45.5 -0.1**
SNAA IAMs_20 IAMs_20 06 22 15.6
comp=Z,5µm,22.0s
TROLL Troll, Antarti 57.56 159 P **P** **06 00 58.0 +0.1**
656A Willston 59.28 349 P **P** **06 01 09.9 -0.2**
656A IAmb IAmb 06 01 26.2
comp=Z,71nm,1.1s
656A Willston 59.28 349 S **S** **06 09 16.5 -0.1**
baz=169
553A Crawfordville 60.41 348 P **P** **06 01 19.4 +1.6**
baz=168
553A S **S** **06 09 32.5 +1.3**
baz=168
456A Hilliard 60.52 350 S **S** **06 09 33.3 +0.7**
baz=170
NVL N'lazarevskaya 60.54 158 ⇑*i*P **P** **06 01 15.8 -2.6**
NVL *e*S **S** **06 09 29.5 -2.6**
NVL pmax pmax
comp=Z,117nm,1.0s
NVL MLR MLR
comp=Z,2µm,16.0s
QSPA South Pole Qui 60.86 180 P **P** **06 01 20.9 +0.1**
QSPA South Pole Qui 60.86 180 ⇑P **P** **06 01 21.5 +0.7**
QSPA pP **sP** **06 01 31.2 -0.1**
QSPA sP **pwP** **06 01 35.0 +2.8**
H06S1 SOCORRO T 60.87 317 T T 07 07 44.4
SNR=12
H06E1 SOCORRO T-PHAS 60.89 317 T T 07 07 50.1
SNR=24
451A Vernon 61.08 346 S **S** **06 09 39.4 -0.4**
baz=166
TIGA Tifton 61.48 349 IAmb IAmb 06 01 34.9
comp=Z,81nm,1.2s
TIGA Tifton 61.48 349 P **P** **06 01 25.6 +0.5**
baz=168
TIGA S **S** **06 09 44.4 -0.3**
baz=168
TIGA Tifton 61.48 349 P **P** **06 01 25.7 +0.5**
baz=168
TIGA S **S** **06 09 44.1 -0.6**
baz=168
352A Blakely 61.76 347 P **P** **06 01 27.5 +0.5**
baz=167,SNR=6.7
352A S **S** **06 09 48.9 +0.6**
baz=167
255A Hazlehurst 61.77 350 S **S** **06 09 46.1 -2.3**
baz=170
250A Grady 62.51 346 IAmb IAmb 06 01 47.4
comp=Z,66nm,1.1s
250A Grady 62.51 346 P **P** **06 01 32.4 +0.4**
baz=166
250A S **S** **06 09 54.2 -3.5**
baz=166
154A Montrose 62.54 349 IAmb IAmb 06 01 48.1
comp=Z,68nm,1.0s
154A Montrose 62.54 349 P **P** **06 01 32.4 +0.2**
baz=169
NHSC New Hope 62.62 352 P **P** **06 01 32.8 0.0**
NHSC IAMs_20 IAMs_20 06 30 15.4
comp=Z,2µm,20.0s
NHSC New Hope 62.62 352 P **P** **06 01 33.6 +0.8**
baz=172
NHSC New Hope 62.62 352 P **P** **06 01 34.0 +1.3**
baz=172
346A Big Creek Wild 62.68 343 S **S** **06 10 00.9 +0.9**
baz=163
152A Waverly Hall 62.88 348 P **P** **06 01 34.6 +0.1**
baz=168,SNR=5.4
735A Kenedy 62.96 335 S **S** **06 10 06.0 +2.5**
baz=155
344A Westbrook Farm 63.07 342 P **P** **06 01 37.9 +2.1**
baz=162,SNR=5.7
833A Chaparral WMA, 63.09 333 P **P** **06 01 38.5 +2.4**
baz=153,SNR=21
833A S **S** **06 10 05.5 +0.2**
baz=153
833A Chaparral WMA, 63.09 333 P **P** **06 01 38.3 +2.3**
baz=153,SNR=21
833A S **S** **06 10 07.0 +1.7**
baz=153
441A DeRidder 63.12 339 S **S** **06 10 09.3 +3.8**
baz=159
HKT Hockley 63.24 337 P **P** **06 01 37.8 +1.0**
HKT IAmb IAmb 06 01 48.5
comp=Z,71nm,1.4s
HKT Hockley 63.24 337 *di*P **P** **06 01 38.8 +1.9**
HKT pmax pmax
comp=Z,60nm,1.3s
HKT Hockley 63.24 337 P **P** **06 01 39.2 +2.3**
baz=157
HKT S **S** **06 10 03.7 -3.2**
baz=157
HKT Hockley 63.24 337 P **P** **06 01 39.3 +2.4**
HKT pP **sP** **06 01 47.8 +0.7**
Y58A Scranton 63.35 353 IAmb IAmb 06 01 47.8
comp=Z,71nm,1.0s
Y58A Scranton 63.35 353 P **P** **06 01 37.8 +0.2**
baz=172
Y58A P **P** **06 01 37.8 +0.2**
baz=172
GOGA Godfrey 63.38 349 P **P** **06 01 37.0 -0.8**
GOGA Godfrey 63.38 349 P **P** **06 01 37.0 -0.8**
GOGA pmax pmax
comp=Z,25nm,1.1s
GOGA Godfrey 63.38 349 P **P** **06 01 37.2 -0.6**
baz=169
GOGA S **S** **06 10 05.9 -2.7**
baz=169
GOGA Godfrey 63.38 349 P **P** **06 01 37.9 +0.1**
baz=169
GOGA S **S** **06 10 06.3 -2.3**
baz=169
342B Flagon Creek P 63.45 341 P **P** **06 01 40.7 +2.4**
baz=160
342B S **S** **06 10 10.9 +1.4**
baz=160
Y57A Sumter 63.54 352 P **P** **06 01 39.3 +0.4**
Y57A IAmb IAmb 06 01 55.0
comp=Z,37nm,0.8s
Z51A Franklin 63.59 348 P **P** **06 01 39.1 -0.1**
LRAL Lakeview Retre 63.68 346 P **P** **06 01 39.9 +0.1**
baz=165,SNR=5.3
LRAL S **S** **06 10 08.5 -3.9**
baz=165
LRAL Lakeview Retre 63.68 346 P **P** **06 01 40.1 +0.3**
baz=165,SNR=5.3
LRAL S **S** **06 10 08.9 -3.5**
baz=165
VBMS Vicksburg 63.74 342 P **P** **06 01 41.5 +1.4**
baz=162
VBMS S **S** **06 10 11.4 -1.7**
baz=162
VBMS Vicksburg 63.74 342 P **P** **06 01 42.1 +1.9**
baz=162
VBMS S **S** **06 10 16.3 +3.2**
baz=162
146A Union 63.77 344 IAmb IAmb 06 01 56.1
comp=Z,120nm,1.6s
146A Union 63.77 344 S **S** **06 10 15.7 +2.2**
baz=163
Y52A Lilburn 63.92 349 IAmb IAmb 06 01 56.8
comp=Z,39nm,1.1s
Y52A Lilburn 63.92 349 P **P** **06 01 41.1 -0.4**
baz=168,SNR=7.2
Y52A P **P** **06 01 41.1 -0.4**
baz=168,SNR=7.2
Y52A S **S** **06 10 11.2 -4.2**
baz=168
Y52A S **S** **06 10 11.2 -4.2**
baz=168
X58A Rowland 63.96 353 IAmb IAmb 06 01 57.3
comp=Z,47nm,1.0s
X58A Rowland 63.96 353 P **P** **06 01 42.5 +1.0**
baz=173,SNR=6.9
X58A P **P** **06 01 42.5 +1.0**
baz=173,SNR=6.9
Z47A Carrollton 64.08 345 IAmb IAmb 06 01 52.4
comp=Z,79nm,1.4s
Z47A Carrollton 64.08 345 P **P** **06 01 43.1 +0.7**
baz=164,SNR=5.8
SACV Santiago Islan 64.15 53 IAMs_20 IAMs_20 06 30 00.8
comp=Z,3µm,18.0s
Y49A Blount Mountai 64.36 347 P **P** **06 01 44.3 +0.1**
baz=166
Y49A S **S** **06 10 17.8 -3.0**
baz=166
143A Socs Landing, 64.44 342 P **P** **06 01 46.9 +2.2**
baz=161,SNR=14
143A S **S** **06 10 21.8 0.0**
baz=161
CNNC Cliffs of the 64.50 355 IAmb IAmb 06 01 55.6
comp=Z,94nm,1.2s
CNNC Cliffs of the 64.50 355 P **P** **06 01 46.6 +1.5**
baz=174
CNNC Cliffs of the 64.50 355 P **P** **06 01 46.5 +1.3**
baz=174
NATX Nacogdoches 64.52 339 P **P** **06 01 46.1 +0.8**
NATX Nacogdoches 64.52 339 P **P** **06 01 47.4 +2.0**
baz=158,SNR=6.0
NATX S **S** **06 10 26.3 +3.5**
baz=158
NATX Nacogdoches 64.52 339 P **P** **06 01 47.3 +2.0**
baz=158,SNR=6.0
NATX S **S** **06 10 26.0 +3.2**
baz=158
435B Jarrell 64.61 336 IAmb IAmb 06 01 57.3
comp=Z,78nm,1.3s
435B Jarrell 64.61 336 S **S** **06 10 23.4 -0.7**
baz=155
435B Jarrell 64.61 336 S **S** **06 10 23.4 -0.7**
baz=155
W57A Gilead 64.62 353 P **P** **06 01 45.8 -0.1**
W57A IAmb IAmb 06 02 01.4
comp=Z,53nm,1.2s
W57A Gilead 64.62 353 P **P** **06 01 45.8 -0.1**
baz=172,SNR=6.9
W57A P **P** **06 01 45.8 -0.1**
baz=172,SNR=6.9
W57A S **S** **06 10 22.5 -1.4**
baz=172
W57A S **S** **06 10 22.5 -1.4**
baz=172
LPIG La Paz 64.72 321 LR LR 06 24 08.0
comp=Z,1µm,20.9s,baz=140,slow=31
X51A Calhoun 64.75 348 IAmb IAmb 06 02 03.0
comp=Z,69nm,0.9s
X51A Calhoun 64.75 348 P **P** **06 01 47.5 +0.7**
baz=168,SNR=12
X51A P **P** **06 01 47.5 +0.7**
baz=168,SNR=12
X51A S **S** **06 10 22.4 -3.1**
baz=168
X51A S **S** **06 10 22.4 -3.1**
baz=168
KMSC Kings Mountain 64.77 351 IAmb IAmb 06 02 02.5
comp=Z,40nm,1.1s
KMSC Kings Mountain 64.77 351 P **P** **06 01 47.4 +0.4**
baz=171,SNR=6.5
KMSC S **S** **06 10 24.7 -1.1**
baz=171
KMSC Kings Mountain 64.77 351 P **P** **06 01 47.3 +0.4**
baz=171,SNR=6.5
KMSC S **S** **06 10 24.1 -1.7**
baz=171
FPAL Fort Paine 64.86 348 P **P** **06 01 47.4 -0.2**
FPAL IAmb IAmb 06 01 57.3
comp=Z,61nm,1.3s
X48A Hartselle 65.06 346 IAmb IAmb 06 01 58.8
comp=Z,101nm,1.2s
X48A Hartselle 65.06 346 P **P** **06 01 49.5 +0.7**
baz=166,SNR=19
X48A S **S** **06 10 25.0 -4.4**
baz=166
Y45A Yeager Farm, C 65.06 344 P **P** **06 01 50.2 +1.4**
baz=163,SNR=6.7
Y45A S **S** **06 10 27.9 -1.5**
baz=163
W52A Murphy 65.10 349 IAmb IAmb 06 01 59.4
comp=Z,60nm,1.2s
W52A Murphy 65.10 349 P **P** **06 01 49.8 +0.6**
baz=168,SNR=7.3
W52A S **S** **06 10 27.7 -2.3**
baz=168
237A Washetta, Mont 65.11 338 P **P** **06 01 51.0 +1.8**
baz=157,SNR=7.9
V58A Windy Hill, Pi 65.16 354 P **P** **06 01 49.6 +0.2**
V58A IAmb IAmb 06 01 59.4
comp=Z,44nm,1.1s
V58A Windy Hill, Pi 65.16 354 P **P** **06 01 50.1 +0.6**
baz=173,SNR=7.6
V58A P **P** **06 01 50.1 +0.6**
baz=173,SNR=7.6
JCT Junction City 65.17 334 P **P** **06 01 51.1 +1.4**
JCT Junction City 65.17 334 P **P** **06 01 51.1 +1.4**
JCT pmax pmax
comp=Z,323nm,1.5s
JCT Junction City 65.17 334 P **P** **06 01 51.6 +1.9**
baz=153,SNR=19
JCT S **S** **06 10 31.1 0.0**
baz=153
JCT Junction City 65.17 334 P **P** **06 01 51.6 +1.9**
baz=153,SNR=19
JCT S **S** **06 10 32.4 +1.4**
baz=153
Z41A Richland Creek 65.35 341 P **P** **06 01 52.6 +1.9**
baz=160,SNR=5.4
Z41A P **P** **06 01 52.6 +1.9**
baz=160,SNR=5.4
Z41A Richland Creek 65.35 341 P **P** **06 01 52.5 +1.8**
baz=160,SNR=5.4
W50A Signal Mountai 65.45 348 P **P** **06 01 51.3 -0.1**
W50A IAmb IAmb 06 02 01.5
comp=Z,84nm,1.2s
W50A Signal Mountai 65.45 348 P **P** **06 01 51.8 +0.4**
baz=167,SNR=12
V55A Taylorsville 65.45 352 IAmb IAmb 06 02 07.1
comp=Z,50nm,1.0s
V55A Taylorsville 65.45 352 P **P** **06 01 52.1 +0.7**
baz=171,SNR=10
V55A P **P** **06 01 52.1 +0.7**
baz=171,SNR=10
V55A S **S** **06 10 32.6 -1.6**
baz=171
V55A S **S** **06 10 32.6 -1.6**
baz=171
V53A Saluda 65.49 350 IAmb IAmb 06 02 07.2
comp=Z,33nm,0.9s
V53A Saluda 65.49 350 P **P** **06 01 52.2 +0.5**
baz=170,SNR=8.9
V53A P **P** **06 01 52.2 +0.5**
baz=170,SNR=8.9
V53A S **S** **06 10 33.4 -1.4**
baz=170
V53A S **S** **06 10 33.4 -1.4**
baz=170
CPCT Cooper Cave 65.55 349 IAmb IAmb 06 02 02.1
comp=Z,80nm,1.3s
SWET Sewanee 65.58 347 IAmb IAmb 06 02 02.2
comp=Z,107nm,1.3s
U59A Littleton 65.60 355 IAmb IAmb 06 02 02.9
comp=Z,74nm,1.2s
TKL Tuckaleechee C 65.63 349 LR LR 06 29 43.0
comp=Z,1µm,21.7s,baz=166,slow=35
TKL Tuckaleechee C 65.63 349 IAmb IAmb 06 02 07.9
comp=Z,46nm,1.0s
TKL Tuckaleechee C 65.63 349 P **P** **06 01 52.8 +0.3**
baz=169,SNR=9.9
TKL S **S** **06 10 34.9 -1.5**
baz=169
OXF Oxford 65.64 344 P **P** **06 01 52.4 -0.2**
OXF Oxford 65.64 344 P **P** **06 01 52.4 -0.2**
OXF pmax pmax
comp=Z,194nm,1.2s
OXF MLR MLR
comp=Z,600nm,20.0s
OXF Oxford 65.64 344 P **P** **06 01 53.0 +0.4**
baz=163,SNR=19
OXF S **S** **06 10 34.0 -2.5**
baz=163
OXF Oxford 65.64 344 P **P** **06 01 53.3 +0.7**
baz=163,SNR=19
WHTX Lake Whitney, 65.67 336 P **P** **06 01 54.5 +1.7**
baz=156,SNR=8.0
WHTX S **S** **06 10 37.2 +0.3**
baz=156

WHTX Lake Whitney, 65.67 336 P **P** **06 01 54.4 +1.7**
baz=156,SNR=8.0
WHTX S **S** **06 10 37.1 +0.2**
baz=156
CCAR Cane Creek 65.68 342 P **P** **06 01 54.6 +1.7**
baz=161,SNR=5.3
CCAR S **S** **06 10 37.2 +0.2**
baz=161
TXAR Lajitas Array 65.77 330 P **P** **06 01 55.5 +1.8**
comp=Z,3.8nm,0.6s,baz=156,slow=9.1,SNR=102
TXAR LR LR 06 26 10.1
comp=Z,3µm,20.5s,baz=132,slow=32
TXAR PKPPKP **P'P'df** **06 30 29.2 +2.6**
comp=Z,0.9nm,1.0s,baz=270,slow=2.3,SNR=4.4
comp=Z,3.8nm,0.6s
TX31 Lajitas Ar. Si 65.77 330 P **P** **06 01 55.6 +2.0**
baz=150,SNR=28
TX31 S **S** **06 10 44.2 +5.6**
baz=150
V52A Sevierville 65.78 350 P **P** **06 01 53.8 +0.3**
baz=169,SNR=16
V52A S **S** **06 10 35.9 -2.4**
baz=169
PLAL Pickwick Lake 65.79 345 IAmb IAmb 06 02 09.4
comp=Z,39nm,1.0s
U56A King 65.84 353 IAmb IAmb 06 02 09.8
comp=Z,44nm,1.1s
U56A King 65.84 353 P **P** **06 01 54.9 +1.1**
baz=172
U56A P **P** **06 01 54.9 +1.1**
baz=172
U56A S **S** **06 10 38.6 -0.3**
baz=172
U56A S **S** **06 10 38.6 -0.3**
baz=172
V51A Loudon 65.87 349 IAmb IAmb 06 02 03.9
comp=Z,47nm,1.2s
V51A Loudon 65.87 349 P **P** **06 01 54.4 +0.4**
baz=168,SNR=9.8
V51A S **S** **06 10 35.5 -3.7**
baz=168
U54A Nelsons Funny 66.19 351 IAmb IAmb 06 02 12.1
comp=Z,45nm,0.9s
U54A Nelsons Funny 66.19 351 P **P** **06 01 56.7 +0.5**
baz=171,SNR=10
U54A P **P** **06 01 56.7 +0.5**
baz=171,SNR=10
U54A S **S** **06 10 41.1 -2.2**
baz=171
U54A S **S** **06 10 41.1 -2.2**
baz=171
T59A Double "B" Far 66.19 355 IAmb IAmb 06 02 06.8
comp=Z,100nm,1.2s
T59A Double "B" Far 66.19 355 P **P** **06 01 57.0 +0.9**
baz=175,SNR=12
T59A P **P** **06 01 57.0 +0.9**
baz=175,SNR=12
W45A Hickory Valley 66.21 345 P **P** **06 01 55.9 -0.3**
baz=164,SNR=17
V48A Smith Brothers 66.26 347 P **P** **06 01 57.2 +0.6**
baz=166,SNR=23
V48A S **S** **06 10 41.8 -2.2**
baz=166
T60A Surry 66.31 356 S **S** **06 10 47.1 +2.7**
baz=175
T60A S **S** **06 10 47.1 +2.7**
baz=175
T57A Hurt 66.37 354 P **P** **06 01 57.1 -0.1**
baz=173,SNR=5.1
T57A P **P** **06 01 57.1 -0.1**
baz=173,SNR=5.1
T57A S **S** **06 10 44.6 -0.7**
baz=173
T57A S **S** **06 10 44.6 -0.7**
baz=173
TZTN Tazewell 66.46 350 P **P** **06 01 57.8 -0.1**
TZTN IAMs_20 IAMs_20 06 31 46.2
comp=Z,2µm,21.0s
TZTN Tazewell 66.46 350 P **P** **06 01 58.1 +0.2**
baz=169
TZTN S **S** **06 10 42.3 -4.2**
baz=169
TZTN Tazewell 66.46 350 P **P** **06 01 58.0 +0.2**
baz=169
TZTN S **S** **06 10 43.3 -3.2**
baz=169
CLTN Cedars of Leba 66.50 347 IAmb IAmb 06 02 08.2
comp=Z,105nm,1.4s
X40A Basin Creek Fa 66.51 341 S **S** **06 10 44.2 -2.9**
baz=160
X40A S **S** **06 10 44.2 -2.9**
baz=160
X40A Basin Creek Fa 66.51 341 P **P** **06 01 59.1 +1.0**
baz=160
X40A S **S** **06 10 48.2 +1.1**
baz=160
BLA Blacksburg 66.70 353 P **P** **06 01 60.0 +0.6**
baz=172
BLA S **S** **06 10 47.3 -2.1**
baz=172
BLA Blacksburg 66.70 353 P **P** **06 02 00.4 +1.0**
baz=172
BLA S **S** **06 10 48.7 -0.7**
baz=172
MIAR Mount Ida 66.78 341 IAmb IAmb 06 02 11.2
comp=Z,63nm,1.1s
MIAR Mount Ida 66.78 341 P **P** **06 02 00.9 +1.1**
baz=160,SNR=50
MIAR S **S** **06 10 50.9 +0.5**
baz=160
MIAR Mount Ida 66.78 341 P **P** **06 02 00.9 +1.1**
baz=160,SNR=50
MIAR S **S** **06 10 48.9 -1.4**
baz=160
U49A Red Boiling Sp 66.81 348 IAmb IAmb 06 02 10.0
comp=Z,62nm,1.2s
U49A Red Boiling Sp 66.81 348 P **P** **06 02 00.4 +0.4**
baz=167,SNR=12
U49A S **S** **06 10 48.3 -2.4**
baz=167
Z35A Perchaven, San 66.81 337 S **S** **06 10 51.0 +0.2**
baz=156
WVT Waverly 66.84 346 P **P** **06 02 00.3 +0.1**
WVT IAmb IAmb 06 02 10.1
comp=Z,93nm,1.4s
WVT Waverly 66.84 346 P **P** **06 02 00.3 +0.1**
WVT pmax pmax
comp=Z,93nm,1.4s
WVT MLR MLR
comp=Z,700nm,20.0s
WVT Waverly 66.84 346 P **P** **06 02 00.7 +0.4**
baz=165,SNR=20
WVT S **S** **06 10 47.6 -3.5**
baz=165
WVT Waverly 66.84 346 P **P** **06 02 00.6 +0.4**
baz=165
WVT S **S** **06 10 48.6 -2.5**
baz=165
W41B Gary Mavity, V 66.99 342 IAmb IAmb 06 02 27.0
comp=Z,41nm,1.1s
W41B Gary Mavity, V 66.99 342 P **P** **06 02 02.2 +1.0**
baz=161,SNR=16
W41B S **S** **06 10 52.3 -0.6**
baz=161
W41B Gary Mavity, V 66.99 342 P **P** **06 02 02.2 +1.0**
baz=161,SNR=16
W41B S **S** **06 10 52.4 -0.5**
baz=161
ABTX Abilene, Hawle 67.03 335 P **P** **06 02 03.3 +1.7**
baz=154,SNR=17
ABTX S **S** **06 10 54.1 +0.6**
baz=154
ABTX Abilene, Hawle 67.03 335 P **P** **06 02 03.2 +1.7**
baz=154,SNR=17
ABTX S **S** **06 10 54.8 +1.3**
baz=154
S57A Dark Hollow, R 67.10 354 IAmb IAmb 06 02 12.3
comp=Z,43nm,1.2s
S57A Dark Hollow, R 67.10 354 P **P** **06 02 02.9 +1.1**
baz=173,SNR=8.4
S57A P **P** **06 02 02.9 +1.1**
baz=173,SNR=8.4
S57A S **S** **06 10 53.3 -0.7**
baz=173
S57A S **S** **06 10 53.3 -0.7**
baz=173
WHAR Wooly Hollow 67.11 342 P **P** **06 02 02.1 +0.1**
WHAR IAmb IAmb 06 02 29.5
comp=Z,54nm,1.1s
T50A Nancy 67.14 349 IAmb IAmb 06 02 16.9
comp=Z,109nm,1.8s
T50A Nancy 67.14 349 P **P** **06 02 02.4 +0.3**
baz=168
T50A P **P** **06 02 02.4 +0.3**
baz=168
T50A S **S** **06 10 52.4 -2.2**
baz=168
T50A S **S** **06 10 52.4 -2.2**
baz=168
R58B Mineral 67.21 355 IAmb IAmb 06 02 18.5
comp=Z,98nm,1.2s
R58B Mineral 67.21 355 P **P** **06 02 04.3 +1.8**
baz=174,SNR=18
R58B P **P** **06 02 04.3 +1.8**
baz=174,SNR=18
X37A Clayton 67.36 339 IAmb IAmb 06 02 14.5
comp=Z,121nm,1.5s
X37A Clayton 67.36 339 P **P** **06 02 05.0 +1.4**
baz=158,SNR=6.9
X37A S **S** **06 10 57.1 -0.2**
baz=158
S54A Dingess, Beckl 67.39 352 P **P** **06 02 03.2 -0.5**
S54A IAmb IAmb 06 02 18.5
comp=Z,91nm,1.5s
S54A Dingess, Beckl 67.39 352 P **P** **06 02 04.1 +0.3**
baz=171,SNR=6.9
S54A P **P** **06 02 04.1 +0.3**
baz=171,SNR=6.9
S54A S **S** **06 10 53.7 -4.0**
baz=171
S54A S **S** **06 10 53.7 -4.0**
baz=171
CBN Corbin Frederi 67.41 355 IAmb IAmb 06 02 24.3
comp=Z,57nm,1.2s
CBN Corbin Frederi 67.41 355 P **P** **06 02 05.1 +1.3**
baz=175
CBN Corbin Frederi 67.41 355 P **P** **06 02 05.2 +1.5**
baz=175
W39A Magazine 67.44 341 P **P** **06 02 05.8 +1.7**
baz=160,SNR=24
W39A S **S** **06 10 59.8 +1.4**
baz=160
W39A Magazine 67.44 341 P **P** **06 02 05.7 +1.6**
baz=160,SNR=24
W39A S **S** **06 10 59.6 +1.3**
baz=160
T47A Sharon Grove 67.52 347 P **P** **06 02 05.2 +0.6**
baz=166,SNR=15
T47A S **S** **06 10 56.3 -3.0**
baz=166
S51A Beattyville 67.54 350 IAmb IAmb 06 02 19.4
comp=Z,108nm,1.6s
S51A Beattyville 67.54 350 P **P** **06 02 05.0 +0.4**
baz=169,SNR=8.3
S51A P **P** **06 02 05.0 +0.4**
baz=169,SNR=8.3
S51A S **S** **06 10 58.2 -1.3**
baz=169
S51A S **S** **06 10 58.2 -1.3**
baz=169
LCAR Lake Charles 67.56 343 P **P** **06 02 05.6 +0.9**
baz=162,SNR=24
SBA Scott Base 67.63 191 P **P** **06 02 06.3 +1.5**
SBA IAmb IAmb 06 02 07.8
comp=Z,41nm,1.2s
SBA Scott Base 67.63 191 P **P** **06 02 06.3 +1.5**
SBA pmax pmax
comp=Z,41nm,1.2s
SBA Scott Base 67.63 191 ⇑P **P** **06 02 06.9 +2.1**
SBA pP **sP** **06 02 16.6 +1.6**
FCAR Ozark Folk Cen 67.64 342 IAmb IAmb 06 02 15.6
comp=Z,40nm,1.1s
R55A Marlinton 67.73 353 IAmb IAmb 06 02 21.6
comp=Z,88nm,1.5s
R55A Marlinton 67.73 353 P **P** **06 02 07.5 +1.6**
baz=172,SNR=6.2
R55A P **P** **06 02 07.5 +1.6**
baz=172,SNR=6.2
R55A S **S** **06 11 01.7 -0.1**
baz=172
R55A S **S** **06 11 01.7 -0.1**
baz=172
T45B Paducah 67.87 346 P **P** **06 02 07.7 +1.0**
baz=164,SNR=16
T45B S **S** **06 11 00.2 -3.2**
baz=164
R53A Hurricane 67.99 351 IAmb IAmb 06 02 22.2
comp=Z,70nm,1.6s
R53A Hurricane 67.99 351 P **P** **06 02 07.9 +0.4**
baz=171
R53A P **P** **06 02 07.9 +0.4**
baz=171
R53A S **S** **06 11 03.0 -1.7**
baz=171
R53A S **S** **06 11 03.0 -1.7**
baz=171
PBMO Poplar Bluff 68.05 344 P **P** **06 02 08.7 +0.9**
baz=163,SNR=39
U40A Yellville 68.27 342 IAmb IAmb 06 02 19.7
comp=Z,90nm,1.2s
U40A Yellville 68.27 342 P **P** **06 02 10.3 +1.0**
baz=160,SNR=9.4
U40A P **P** **06 02 10.3 +1.0**
baz=160,SNR=9.4
U40A S **S** **06 11 07.3 -0.9**
baz=160
U40A S **S** **06 11 07.3 -0.9**
baz=160
U40A Yellville 68.27 342 P **P** **06 02 10.3 +1.0**
baz=160,SNR=9.4
U40A S **S** **06 11 08.3 0.0**
baz=160
R50A Paris 68.28 350 P **P** **06 02 09.7 +0.4**
baz=168
R50A P **P** **06 02 09.7 +0.4**
baz=168
R50A S **S** **06 11 04.9 -3.4**
baz=168
R50A S **S** **06 11 04.9 -3.4**
baz=168
R49A Shelbyville 68.43 349 P **P** **06 02 10.6 +0.3**
baz=168
R49A P **P** **06 02 10.6 +0.3**
baz=168
R49A S **S** **06 11 06.4 -3.7**
baz=168
R49A S **S** **06 11 06.4 -3.7**
baz=168
Q54A Coxs Mills 68.50 353 P **P** **06 02 10.7 +0.1**
baz=172
Q54A P **P** **06 02 10.7 +0.1**
baz=172
HHAR Hobbs 68.50 341 P **P** **06 02 11.6 +0.8**
baz=160
HHAR S **S** **06 11 10.8 -0.2**
baz=160
MNTX Cornudas Mount 68.55 330 IAmb IAmb 06 02 22.6
comp=Z,57nm,1.3s
MNTX Cornudas Mount 68.55 330 P **P** **06 02 11.9 +0.8**
baz=149,SNR=21
MNTX S **S** **06 11 15.0 +3.1**
baz=149
MNTX Cornudas Mount 68.55 330 P **P** **06 02 11.9 +0.8**
baz=149,SNR=21
MNTX S **S** **06 11 12.7 +0.9**
baz=149
SDMD Soldier's Deli 68.57 356 P **P** **06 02 12.3 +1.2**
baz=175
SDMD S **S** **06 11 12.2 +0.6**
baz=175
TBI Tubuai 68.58 255 *e*S **S** **06 11 06.3 -6.4**
comp=Z,4µm,26.8s
TBI *e*S **S** **06 11 06.5 -6.2**
comp=Z,4µm,27.2s
TBI Tubuai 68.58 255 *e*LR LR 06 22 50.6
comp=Z,4µm,27.0s
WMOK Wichita Mounta 68.62 336 IAmb IAmb 06 02 21.9
comp=Z,49nm,1.2s
WMOK Wichita Mounta 68.62 336 P **P** **06 02 12.6 +1.1**
baz=155,SNR=6.5
WMOK S **S** **06 11 14.6 +2.2**
baz=155
WMOK Wichita Mounta 68.62 336 P **P** **06 02 12.4 +0.9**
baz=155,SNR=6.5
WMOK S **S** **06 11 11.5 -1.0**
baz=155
FNO Franklin 68.62 338 IAmb IAmb 06 02 21.9
comp=Z,90nm,1.3s
Q52A Bidwell 68.65 351 IAmb IAmb 06 02 27.0
comp=Z,55nm,1.1s
Q52A Bidwell 68.65 351 P **P** **06 02 11.7 +0.1**
baz=170,SNR=8.1
Q52A P **P** **06 02 11.7 +0.1**
baz=170,SNR=8.1
Q52A S **S** **06 11 08.9 -3.7**
baz=170
Q52A S **S** **06 11 08.9 -3.7**
baz=170
S44A Carbondale 68.65 345 P **P** **06 02 12.3 +0.7**
baz=164,SNR=27
S44A S **S** **06 11 11.2 -1.5**
baz=164
VNDA Vanda 68.66 191 P **P** **06 02 13.2 +2.0**
comp=Z,13nm,0.8s,baz=137,slow=5.0,SNR=43
VNDA LR LR 06 28 01.6
comp=Z,755nm,20.8s,baz=138,slow=32
VNDA PKPPKP P'P'df 06 30 19.5 -12
comp=Z,1.5nm,0.9s,baz=323,slow=4.2,SNR=4.6
comp=Z,13nm,0.8s
VNDA Vanda 68.66 191 P **P** **06 02 12.7 +1.4**
VNDA IAmb IAmb 06 02 15.0
comp=Z,107nm,1.9s
VNDA Vanda 68.66 191 P **P** **06 02 12.7 +1.4**
VNDA pmax pmax
comp=Z,107nm,2.0s
TUL1 Leonard 68.71 339 P **P** **06 02 13.1 +1.0**
baz=158,SNR=14
TUL1 S **S** **06 11 14.1 +0.7**
baz=158
TUL1 Leonard 68.71 339 P **P** **06 02 13.0 +1.0**
baz=158,SNR=14
TUL1 S **S** **06 11 14.2 +0.8**
baz=158
P57A Homestead Farm 68.73 355 IAmb IAmb 06 02 28.9
comp=Z,66nm,1.1s
P57A Homestead Farm 68.73 355 P **P** **06 02 13.8 +1.8**
baz=174,SNR=15
P57A P **P** **06 02 13.8 +1.8**
baz=174,SNR=15
P57A S **S** **06 11 16.4 +2.9**
baz=174
P57A S **S** **06 11 16.4 +2.9**
baz=174
OKCFA Oklahoma City 68.78 338 IAmb IAmb 06 02 22.8
comp=Z,56nm,1.0s
OKCFA Oklahoma City 68.78 338 P **P** **06 02 13.9 +1.4**
baz=156
Q51A Peebles 68.87 350 IAmb IAmb 06 02 28.3
comp=Z,64nm,1.1s
Q51A Peebles 68.87 350 P **P** **06 02 13.4 +0.5**
baz=169,SNR=7.6
Q51A P **P** **06 02 13.4 +0.5**
baz=169,SNR=7.6
MGMO Mountain Grove 68.87 343 IAmb IAmb 06 02 23.5
comp=Z,75nm,1.3s
GEDE Greenville 68.91 357 P **P** **06 02 14.0 +0.8**
baz=176
WUPA West Chester U 69.03 357 IAmb IAmb 06 02 34.7
comp=Z,46nm,1.3s
P53A Whipple 69.06 352 IAmb IAmb 06 02 24.2
comp=Z,61nm,1.2s
P53A Whipple 69.06 352 P **P** **06 02 14.7 +0.6**
baz=171,SNR=7.9
P53A P **P** **06 02 14.7 +0.6**
baz=171,SNR=7.9
P53A S **S** **06 11 12.9 -4.5**
baz=171
P53A S **S** **06 11 12.9 -4.5**
baz=171
MCWV Mont Chateau 69.06 353 IAmb IAmb 06 02 24.6
comp=Z,47nm,1.1s
MCWV IAMs_20 IAMs_20 06 35 39.9
comp=Z,2µm,20.0s
MCWV Mont Chateau 69.06 353 P **P** **06 02 15.2 +1.0**
baz=173,SNR=7.3
MCWV Mont Chateau 69.06 353 P **P** **06 02 15.1 +1.0**
baz=173,SNR=7.3
KIDD KIDD Seismic O 69.12 329 P **P** **06 02 16.7 +1.9**
baz=148
MVL Millersville 69.13 356 IAmb IAmb 06 02 25.7
comp=Z,65nm,1.2s
FVM French Village 69.20 344 P **P** **06 02 16.0 +1.0**
baz=163,SNR=36
FVM S **S** **06 11 17.5 -1.7**
baz=163
TUPA Temple Univers 69.24 357 P **P** **06 02 16.9 +1.7**
baz=177,SNR=5.4
P51A Williamsport 69.27 351 P **P** **06 02 15.0 -0.4**
P51A IAmb IAmb 06 02 30.7
comp=Z,44nm,0.8s
P51A Williamsport 69.27 351 P **P** **06 02 15.7 +0.3**
baz=170
P51A P **P** **06 02 15.7 +0.3**
baz=170
P52A Corning 69.30 352 IAmb IAmb 06 02 25.3
comp=Z,76nm,1.2s
P52A Corning 69.30 352 P **P** **06 02 16.0 +0.4**
baz=170,SNR=10
P52A S **S** **06 11 16.5 -3.7**
baz=170
MSTX Muleshoe 69.42 333 P **P** **06 02 18.1 +1.4**
baz=152,SNR=22
MSTX S **S** **06 11 23.6 +1.4**
baz=152
MSTX Muleshoe 69.42 333 P **P** **06 02 18.1 +1.4**
baz=152,SNR=22
MSTX S **S** **06 11 23.9 +1.6**
baz=152
PANJ Princeton 69.43 358 P **P** **06 02 17.8 +1.5**
baz=177
PANJ S **S** **06 11 22.5 +0.8**
baz=177
CCM Cathedral Cave 69.46 344 P **P** **06 02 17.2 +0.6**
CCM Cathedral Cave 69.46 344 P **P** **06 02 17.2 +0.6**
CCM pmax pmax
comp=Z,124nm,1.2s
CCM MLR MLR
comp=Z,700nm,22.0s
CCM Cathedral Cave 69.46 344 P **P** **06 02 17.5 +0.9**
baz=162,SNR=35
CCM S **S** **06 11 20.0 -2.3**
baz=162
CCM Cathedral Cave 69.46 344 P **P** **06 02 17.6 +0.9**
baz=162
CCM S **S** **06 11 21.4 -0.9**
baz=162
CCM Cathedral Cave 69.46 344 P **P** **06 02 17.4 +0.7**
CCM pP **sP** **06 02 26.7 -0.1**
BLO Bloomington 69.53 348 IAmb IAmb 06 02 31.6
comp=Z,74nm,1.3s
P49A Miami Univ. Ec 69.57 349 IAmb IAmb 06 02 26.8
comp=Z,49nm,1.1s
P49A IAMs_20 IAMs_20 06 34 42.5
comp=Z,2µm,20.0s
P49A Miami Univ. Ec 69.57 349 P **P** **06 02 17.3 0.0**
baz=168,SNR=6.2
P49A S **S** **06 11 20.4 -3.0**
baz=168
P49A Miami Univ. Ec 69.57 349 P **P** **06 02 17.2 -0.1**
baz=168,SNR=6.2
P49A S **S** **06 11 20.3 -3.2**
baz=168
P48A Milroy 69.62 349 IAmb IAmb 06 02 27.1
comp=Z,66nm,1.2s
P48A Milroy 69.62 349 P **P** **06 02 17.4 -0.1**
baz=168,SNR=6.9
P48A P **P** **06 02 17.4 -0.1**
baz=168,SNR=6.9
P48A S **S** **06 11 19.2 -4.8**
baz=168
P48A S **S** **06 11 19.2 -4.8**
baz=168
O54A Avella 69.64 353 P **P** **06 02 17.5 -0.2**
baz=172
O54A P **P** **06 02 17.5 -0.2**
baz=172
S39A Bolivar 69.65 342 P **P** **06 02 18.7 +0.9**
baz=160,SNR=46
S39A S **S** **06 11 22.9 -1.6**
baz=160
BRNJ Basking Ridge 69.73 358 IAmb IAmb 06 02 38.5
comp=Z,44nm,1.0s
BRNJ Basking Ridge 69.73 358 P **P** **06 02 19.9 +1.7**
baz=178

O52A Adamsville 69.74 352 IAmb IAmb 06 02 28.1
comp=Z,61nm,1.2s
O52A Adamsville 69.74 352 P **P** **06 02 18.4 +0.1**
baz=171
O52A P **P** **06 02 18.4 +0.1**
baz=171
Q44A Meyer Farm, Va 69.76 346 IAmb IAmb 06 02 28.8
comp=Z,67nm,1.1s
Q44A Meyer Farm, Va 69.76 346 P **P** **06 02 18.8 +0.3**
baz=164,SNR=8.6
Q44A S **S** **06 11 22.7 -3.0**
baz=164
SLM Saint Louis 69.78 345 P **P** **06 02 19.4 +0.9**
baz=163
O53A New Philadelph 69.79 352 IAmb IAmb 06 02 33.6
comp=Z,88nm,1.4s
O53A New Philadelph 69.79 352 P **P** **06 02 18.9 +0.3**
baz=171
AMTX Amarillo 69.80 334 P **P** **06 02 20.8 +1.9**
baz=153,SNR=27
AMTX S **S** **06 11 28.3 +1.7**
baz=153
AMTX Amarillo 69.80 334 P **P** **06 02 20.9 +1.9**
baz=153
AMTX S **S** **06 11 27.0 +0.4**
baz=153
T35A Sooner Cattle 69.86 339 IAmb IAmb 06 02 29.9
comp=Z,98nm,1.3s
T35B Sooner Cattle 69.86 339 P **P** **06 02 20.9 +1.8**
baz=157,SNR=9.3
T35B S **S** **06 11 27.0 0.0**
baz=157
SSPA Standing Stone 69.86 355 P **P** **06 02 18.9 -0.1**
SSPA IAmb IAmb 06 02 29.9
comp=Z,70nm,1.2s
SSPA Standing Stone 69.86 355 P **P** **06 02 20.3 +1.2**
baz=174,SNR=7.9
SSPA S **S** **06 11 26.6 -0.2**
baz=174
SSPA Standing Stone 69.86 355 P **P** **06 02 20.2 +1.1**
baz=174
SSPA S **S** **06 11 28.6 +1.8**
baz=174
SSPA Standing Stone 69.86 355 P **P** **06 02 20.1 +1.1**
SSPA pP **sP** **06 02 29.1 -0.6**
FOR Fordham 69.89 358 P **P** **06 02 20.8 +1.6**
baz=178
R40A Maddies Statio 69.94 343 P **P** **06 02 20.6 +1.0**
baz=161,SNR=32
R40A S **S** **06 11 27.0 -0.9**
baz=161
N58A Sunbury 69.99 356 IAmb IAmb 06 02 30.9
comp=Z,66nm,1.1s
N58A Sunbury 69.99 356 P **P** **06 02 21.2 +1.4**
baz=176,SNR=11
N58A P **P** **06 02 21.2 +1.4**
baz=176,SNR=11
N58A S **S** **06 11 28.9 +0.6**
baz=176
N58A S **S** **06 11 28.9 +0.6**
baz=176
ACSO Alum Creek Sta 70.00 351 IAmb IAmb 06 02 30.4
comp=Z,71nm,0.9s
ACSO IAMs_20 IAMs_20 06 31 29.8
comp=Z,2µm,22.0s
ACSO Alum Creek Sta 70.00 351 P **P** **06 02 20.4 +0.5**
baz=170,SNR=14
ACSO Alum Creek Sta 70.00 351 P **P** **06 02 20.3 +0.4**
baz=170,SNR=14
PAL Palisades 70.04 358 P **P** **06 02 21.5 +1.5**
baz=178
PAL S **S** **06 11 30.9 +2.1**
baz=178
PAL Palisades 70.04 358 P **P** **06 02 21.2 +1.2**
baz=178
PAL S **S** **06 11 31.2 +2.4**
baz=178
P46A Rosedale 70.09 347 IAmb IAmb 06 02 34.9
comp=Z,77nm,1.0s
ODNJ Ogdensburg 70.13 358 IAmb IAmb 06 02 31.8
comp=Z,46nm,1.2s
ODNJ Ogdensburg 70.13 358 P **P** **06 02 22.1 +1.5**
baz=178,SNR=8.2
ODNJ S **S** **06 11 30.9 +0.9**
baz=178
O49A Covington 70.15 350 IAmb IAmb 06 02 30.6
comp=Z,102nm,1.2s
O49A Covington 70.15 350 P **P** **06 02 21.2 +0.4**
baz=168,SNR=7.4
O49A P **P** **06 02 21.2 +0.4**
baz=168,SNR=7.4
O49A S **S** **06 11 26.6 -3.6**
baz=168
O49A S **S** **06 11 26.6 -3.6**
baz=168
U32A Winter Ranch, 70.18 337 IAmb IAmb 06 02 32.0
comp=Z,104nm,1.2s
U32A Winter Ranch, 70.18 337 P **P** **06 02 22.2 +1.1**
baz=155,SNR=5.4
WSPT Westport, CT 70.19 359 IAmb IAmb 06 02 41.9
comp=Z,106nm,1.5s
N53A Lisbon 70.30 353 P **P** **06 02 22.8 +1.1**
baz=172
N53A P **P** **06 02 22.8 +1.1**
baz=172
121A Cookes Peak, D 70.34 328 IAmb IAmb 06 02 34.6
comp=Z,89nm,1.4s
121A Cookes Peak, D 70.34 328 P **P** **06 02 24.7 +2.3**
baz=147,SNR=8.2
121A S **S** **06 11 36.4 +3.3**
baz=147
121A Cookes Peak, D 70.34 328 P **P** **06 02 24.9 +2.5**
baz=147,SNR=8.2
121A S **S** **06 11 38.6 +5.5**
baz=147
O48B Farmland 70.35 349 P **P** **06 02 22.1 0.0**
baz=168,SNR=8.2
O48B S **S** **06 11 30.4 -2.1**
baz=168
O48B Farmland 70.35 349 P **P** **06 02 21.9 -0.2**
baz=168,SNR=8.2
O48B S **S** **06 11 28.5 -4.1**
baz=168
M63A Gales Ferry 70.41 360 S **S** **06 11 33.5 +0.3**
baz=180
M63A S **S** **06 11 33.5 +0.3**
baz=180
BRNY Black Rk. Fore 70.45 358 P **P** **06 02 23.6 +1.0**
baz=178
BRNY S **S** **06 11 32.5 -1.1**
baz=178
M57A Sunshine Farm, 70.51 356 IAmb IAmb 06 02 34.1
comp=Z,84nm,1.2s
M57A Sunshine Farm, 70.51 356 P **P** **06 02 24.4 +1.4**
baz=175,SNR=7.0
M57A P **P** **06 02 24.4 +1.4**
baz=175,SNR=7.0
M57A S **S** **06 11 35.0 +0.6**
baz=175
M57A S **S** **06 11 35.0 +0.6**
baz=175
P43A Skaggs, Pawnee 70.58 346 P **P** **06 02 24.1 +0.7**
baz=164,SNR=15
P43A S **S** **06 11 32.1 -3.2**
baz=164
KSPA Keystone Colle 70.65 357 IAmb IAmb 06 02 44.7
comp=Z,50nm,1.2s
KSPA Keystone Colle 70.65 357 P **P** **06 02 25.0 +1.1**
baz=176,SNR=6.8
KSPA S **S** **06 11 37.0 +0.9**
baz=176
KSCT Kent School, K 70.75 359 IAmb IAmb 06 02 45.3
comp=Z,53nm,1.1s
M55A Ridgway 70.76 355 IAmb IAmb 06 02 35.1
comp=Z,81nm,1.1s
M55A Ridgway 70.76 355 P **P** **06 02 25.6 +1.1**
baz=174,SNR=13
M55A P **P** **06 02 25.6 +1.1**
baz=174,SNR=13
M55A S **S** **06 11 35.3 -2.1**
baz=174
M55A S **S** **06 11 35.3 -2.1**
baz=174
NPNY Mohonk Preserv 70.79 358 P **P** **06 02 26.4 +1.7**
baz=178,SNR=16
NPNY S **S** **06 11 39.3 +1.7**
baz=178
UCCT U. Connecticut 70.80 360 IAmb IAmb 06 02 35.7
comp=Z,53nm,1.3s
SFIN Lafayette 70.80 348 IAmb IAmb 06 02 34.1
comp=Z,78nm,1.2s
SFIN Lafayette 70.80 348 P **P** **06 02 24.7 -0.1**
baz=166
SFIN Lafayette 70.80 348 P **P** **06 02 24.7 -0.1**
baz=166
SFIN S **S** **06 11 32.9 -5.0**
baz=166
N49A Columbus Grove 70.85 350 P **P** **06 02 25.7 +0.6**
baz=169,SNR=13
N49A P **P** **06 02 25.7 +0.6**
baz=169,SNR=13
N49A S **S** **06 11 31.4 -6.9**
baz=169
N49A S **S** **06 11 31.4 -6.9**
baz=169
O44A Mansfield 70.85 347 IAmb IAmb 06 02 34.6
comp=Z,66nm,1.1s
O44A Mansfield 70.85 347 P **P** **06 02 25.1 0.0**
baz=165,SNR=8.4
M53A WI Miller and 70.91 353 IAmb IAmb 06 02 35.6
comp=Z,68nm,1.1s
M53A IAMs_20 IAMs_20 06 36 58.8
comp=Z,2µm,20.0s
M53A WI Miller and 70.91 353 P **P** **06 02 26.3 +0.8**
baz=172
BRYW Bryant College 70.92 0 IAmb IAmb 06 02 46.6
comp=Z,81nm,1.1s
L64A Middleborough 70.95 1 IAmb IAmb 06 02 36.8
comp=Z,84nm,1.4s
L64A Middleborough 70.95 1 P **P** **06 02 26.9 +1.3**
baz=181,SNR=5.7
L64A P **P** **06 02 26.9 +1.3**
baz=181,SNR=5.7
N47A Urbana 71.05 349 P **P** **06 02 26.3 0.0**
baz=167,SNR=12
N47A P **P** **06 02 26.3 0.0**
baz=167,SNR=12
N47A S **S** **06 11 36.4 -4.2**
baz=167
N47A S **S** **06 11 36.4 -4.2**
baz=167
P40A Paris 71.06 344 P **P** **06 02 27.4 +1.1**
baz=162,SNR=41
P40A S **S** **06 11 39.9 -0.9**
baz=162
ALLY Alegheny Colle 71.06 353 IAmb IAmb 06 02 36.5
comp=Z,73nm,1.2s
ALLY Alegheny Colle 71.06 353 P **P** **06 02 26.9 +0.5**
baz=172
PPT Papeete 71.08 260 LR LR 06 25 32.0
comp=Z,4µm,21.1s,baz=126,slow=29
M52A Chesterland 71.08 353 P **P** **06 02 27.4 +0.9**
baz=171
M52A P **P** **06 02 27.4 +0.9**
baz=171
Y22A Socorro 71.15 330 P **P** **06 02 28.9 +1.5**
baz=148,SNR=7.5
Y22A S **S** **06 11 47.5 +5.0**
baz=148
M50A Fremont 71.16 351 IAmb IAmb 06 02 42.4
comp=Z,74nm,1.0s
L59A Walton 71.25 358 P **P** **06 02 29.1 +1.6**
baz=177,SNR=16
L59A P **P** **06 02 29.1 +1.6**
baz=177,SNR=16
L59A S **S** **06 11 43.6 +0.4**
baz=177
L59A S **S** **06 11 43.6 +0.4**
baz=177
QUA2 Belchertown 71.28 360 IAmb IAmb 06 02 49.1
comp=Z,66nm,1.2s
BINY Binghamton 71.30 357 IAmb IAmb 06 02 49.3
comp=Z,55nm,1.1s
BINY Binghamton 71.30 357 P **P** **06 02 29.1 +1.3**
baz=176,SNR=5.2
BINY Binghamton 71.30 357 P **P** **06 02 28.9 +1.0**
baz=176,SNR=5.2
BINY S **S** **06 11 45.5 +1.9**
baz=176
L56A Greenwood 71.33 356 P **P** **06 02 29.3 +1.3**
baz=175,SNR=14
L56A P **P** **06 02 29.3 +1.3**
baz=175,SNR=14
L56A S **S** **06 11 42.3 -1.7**
baz=175
L56A S **S** **06 11 42.3 -1.7**
baz=175
WES Weston 71.39 0 IAmb IAmb 06 02 48.8
comp=Z,52nm,1.2s
WES IAMs_20 IAMs_20 06 36 06.3
comp=Z,1µm,20.0s
WES Weston 71.39 0 P **P** **06 02 29.0 +0.7**
baz=180,SNR=6.2
HDIL Hopedale 71.41 346 P **P** **06 02 28.7 +0.3**
baz=164
HDIL S **S** **06 11 43.3 -1.6**
baz=164
HDIL Hopedale 71.41 346 P **P** **06 02 28.8 +0.3**
baz=164
HDIL S **S** **06 11 43.3 -1.6**
baz=164
ERPA Erie 71.51 354 P **P** **06 02 29.8 +0.7**
baz=173
ERPA Erie 71.51 354 P **P** **06 02 29.8 +0.7**
baz=173
HRV Adam Dziewonsk 71.51 0 P **P** **06 02 29.6 +0.5**
HRV IAmb IAmb 06 02 50.2
comp=Z,50nm,1.1s
HRV Adam Dziewonsk 71.51 0 P **P** **06 02 29.6 +0.5**
HRV pmax pmax
comp=Z,50nm,1.1s
HRV Adam Dziewonsk 71.51 0 P **P** **06 02 30.6 +1.6**
baz=180
HRV Adam Dziewonsk 71.51 0 P **P** **06 02 30.7 +1.7**
baz=180
HRV Adam Dziewonsk 71.51 0 ⇑P **P** **06 02 30.4 +1.4**
P38A Dawn 71.52 343 IAmb IAmb 06 02 39.5
comp=Z,98nm,1.4s
P38A Dawn 71.52 343 P **P** **06 02 29.9 +0.7**
baz=160,SNR=12
P38A S **S** **06 11 44.8 -1.5**
baz=160
TUC Tucson 71.58 326 P **P** **06 02 30.4 +0.6**
TUC Tucson 71.58 326 P **P** **06 02 30.4 +0.6**
TUC pmax pmax
comp=Z,40nm,1.3s
TUC Tucson 71.58 326 P **P** **06 02 31.7 +1.9**
baz=145
TUC S **S** **06 11 52.4 +5.1**
baz=145
TUC Tucson 71.58 326 P **P** **06 02 31.6 +1.9**
TUC pP **sP** **06 02 40.5 +0.4**
K62A Royalston 71.67 360 IAmb IAmb 06 02 41.5
comp=Z,82nm,1.4s
K62A Royalston 71.67 360 P **P** **06 02 31.8 +1.8**
baz=180,SNR=7.2
K62A P **P** **06 02 31.8 +1.8**
baz=180,SNR=7.2
K62A S **S** **06 11 51.6 +3.8**
baz=180
K62A S **S** **06 11 51.6 +3.8**
baz=180
WVNY West Valley, N 71.68 355 P **P** **06 02 31.4 +1.3**
baz=174,SNR=14
HCNY Howe Caverns 71.74 358 P **P** **06 02 32.0 +1.6**
baz=178,SNR=6.9
HCNY S **S** **06 11 48.2 -0.4**
baz=178
TRY Troy 71.75 359 IAmb IAmb 06 02 42.0
comp=Z,97nm,1.2s
TRY Troy 71.75 359 P **P** **06 02 32.4 +2.0**
baz=178,SNR=14
TRY S **S** **06 11 50.4 +1.6**
baz=178
ANMO Albuquerque 71.79 331 LR LR 06 30 08.5
comp=Z,4µm,19.8s,baz=150,slow=33
ANMO Albuquerque 71.79 331 P **P** **06 02 31.6 +0.4**
ANMO Albuquerque 71.79 331 *de*P **P** **06 02 32.8 +1.6**
ANMO pmax pmax
comp=Z,45nm,1.3s
ANMO Albuquerque 71.79 331 P **P** **06 02 33.2 +2.0**
baz=149,SNR=14
ANMO S **S** **06 11 51.7 +1.8**
baz=149
ANMO Albuquerque 71.79 331 P **P** **06 02 33.6 +2.4**
baz=149
ANMO S **S** **06 11 53.1 +3.2**
baz=149
ANMO Albuquerque 71.79 331 P **P** **06 02 33.7 +2.5**
K57A Scipio Center 71.86 356 P **P** **06 02 31.5 +0.3**
K57A Scipio Center 71.86 356 P **P** **06 02 32.0 +0.9**
baz=176,SNR=5.7
K57A S **S** **06 11 51.0 +1.0**
baz=176
L48A N Adams 71.89 350 P **P** **06 02 31.4 0.0**
L48A IAmb IAmb 06 02 41.1
comp=Z,95nm,1.1s
L48A N Adams 71.89 350 P **P** **06 02 31.3 0.0**
baz=169,SNR=5.5
L48A P **P** **06 02 31.3 0.0**
baz=169,SNR=5.5
L48A S **S** **06 11 46.2 -4.2**
baz=169
L48A S **S** **06 11 46.2 -4.2**
baz=169
N41A Harden Midland 71.89 345 P **P** **06 02 32.0 +0.7**
baz=163
N41A S **S** **06 11 50.2 -0.2**
baz=163
KSU1 Kansas State U 71.90 340 S **S** **06 11 47.9 -2.7**
baz=158
KSU1 Kansas State U 71.90 340 S **S** **06 11 48.8 -1.8**
baz=158
R32A Long Quarter, 71.93 338 IAmb IAmb 06 02 42.8
comp=Z,100nm,1.3s
R32A Long Quarter, 71.93 338 P **P** **06 02 33.5 +1.7**
baz=156,SNR=5.6
R32A S **S** **06 11 51.8 +0.7**
baz=156
MMNY Mt. Morris Dam 71.95 355 IAmb IAmb 06 02 42.3
comp=Z,118nm,1.2s
M44A Midewin, Midew 71.96 347 IAmb IAmb 06 02 42.1
comp=Z,101nm,1.1s
M44A Midewin, Midew 71.96 347 P **P** **06 02 32.0 +0.2**
baz=165,SNR=6.7
M44A S **S** **06 11 46.9 -4.3**
baz=165
UNH University of 72.10 1 S **S** **06 11 54.5 +1.8**
baz=181
AAM Ann Arbor 72.12 351 IAMs_20 IAMs_20 06 32 35.0
comp=Z,2µm,22.0s
AAM Ann Arbor 72.12 351 S **S** **06 11 51.1 -1.9**
baz=169
AAM Ann Arbor 72.12 351 S **S** **06 11 50.8 -2.3**
baz=169
L46A Eue Claire 72.25 349 IAmb IAmb 06 02 42.9
comp=Z,60nm,1.1s
L46A Eue Claire 72.25 349 P **P** **06 02 33.5 +0.1**
baz=167,SNR=6.2
L46A P **P** **06 02 33.5 +0.1**
baz=167,SNR=6.2
L46A S **S** **06 11 51.8 -2.7**
baz=167
L46A S **S** **06 11 51.8 -2.7**
baz=167
214A Organ Pipe Nat 72.31 324 IAmb IAmb 06 02 46.3
comp=Z,118nm,1.4s
214A Organ Pipe Nat 72.31 324 P **P** **06 02 36.8 +2.7**
baz=143,SNR=12
214A S **S** **06 12 00.6 +5.0**
baz=143
J61A Chester 72.35 360 P **P** **06 02 35.9 +1.8**
baz=179,SNR=8.4
J61A P **P** **06 02 35.9 +1.8**
baz=179,SNR=8.4
J61A S **S** **06 11 58.0 +2.4**
baz=179
J61A S **S** **06 11 58.0 +2.4**
baz=179
ACCN Adirondack Com 72.41 359 IAmb IAmb 06 02 55.4
comp=Z,65nm,1.4s
ACCN Adirondack Com 72.41 359 P **P** **06 02 36.0 +1.6**
baz=178,SNR=8.1
ACCN S **S** **06 11 58.6 +2.4**
baz=178
MEDO Medina 72.42 355 IAmb IAmb 06 02 54.0
comp=Z,51nm,1.1s
J56A Wolcott 72.42 356 IAmb IAmb 06 02 44.9
comp=Z,64nm,1.1s
J56A Wolcott 72.42 356 P **P** **06 02 35.3 +0.9**
baz=176,SNR=6.8
J56A P **P** **06 02 35.3 +0.9**
baz=176,SNR=6.8
J56A S **S** **06 11 55.8 -0.6**
baz=176
J56A S **S** **06 11 55.8 -0.6**
baz=176
J58A Remsen 72.43 357 P **P** **06 02 35.5 +0.9**
baz=177
J58A P **P** **06 02 35.5 +0.9**
baz=177
J58A S **S** **06 11 56.4 -0.1**
baz=177
J58A S **S** **06 11 56.4 -0.1**
baz=177
K50A Casco 72.45 352 P **P** **06 02 35.0 +0.4**
baz=170,SNR=6.2
K50A P **P** **06 02 35.0 +0.4**
baz=170,SNR=6.2
J55A Hilton 72.47 355 IAmb IAmb 06 02 45.2
comp=Z,69nm,1.1s
J55A Hilton 72.47 355 S **S** **06 11 55.2 -1.7**
baz=175
J55A S **S** **06 11 55.2 -1.7**
baz=175
FFD Franklin Falls 72.47 0 IAmb IAmb 06 02 56.8
comp=Z,47nm,0.9s
FFD Franklin Falls 72.47 0 P **P** **06 02 36.7 +2.0**
baz=180,SNR=11
J59A Piesco 72.51 358 IAmb IAmb 06 02 46.0
comp=Z,54nm,1.2s
J59A Piesco 72.51 358 P **P** **06 02 36.2 +1.2**
baz=178,SNR=9.7
J59A P **P** **06 02 36.2 +1.2**
baz=178,SNR=9.7
J59A S **S** **06 11 58.6 +1.2**
baz=178
J59A S **S** **06 11 58.6 +1.2**
baz=178
J54A Appleton 72.54 355 IAmb IAmb 06 02 45.6
comp=Z,65nm,1.1s
N38A Joes South For 72.55 343 P **P** **06 02 36.2 +0.9**
baz=161,SNR=10.0
N38A S **S** **06 11 56.7 -1.2**
baz=161
CBKS Cedar Bluff 72.63 338 IAmb IAmb 06 02 47.0
comp=Z,92nm,1.1s
CBKS Cedar Bluff 72.63 338 P **P** **06 02 37.6 +1.7**
baz=155,SNR=8.0
CBKS S **S** **06 12 01.2 +2.1**
baz=155
CBKS Cedar Bluff 72.63 338 P **P** **06 02 37.5 +1.7**
baz=155,SNR=8.0
CBKS S **S** **06 11 59.1 0.0**
baz=155
L44A Lake County Fo 72.70 348 IAmb IAmb 06 02 46.2
comp=Z,94nm,1.1s
L44A Lake County Fo 72.70 348 P **P** **06 02 36.6 +0.5**
baz=165
L44A Lake County Fo 72.70 348 P **P** **06 02 36.8 +0.6**
baz=165
HNH Hanover 72.71 360 IAmb IAmb 06 02 58.2
comp=Z,65nm,1.2s
HNH Hanover 72.71 360 P **P** **06 02 38.3 +2.1**
baz=180,SNR=8.9
HNH S **SKiKP** **06 12 04.2 -4.2**
baz=180
T25A Trinidad 72.84 333 IAmb IAmb 06 02 50.0
comp=Z,102nm,1.2s
T25A Trinidad 72.84 333 P **P** **06 02 39.6 +2.2**
baz=151,SNR=22
T25A S **SKiKP** **06 12 06.1 -3.0**
baz=151
L42A Oliver, Polo 72.88 346 IAmb IAmb 06 02 47.3
comp=Z,64nm,1.2s
L42A Oliver, Polo 72.88 346 P **P** **06 02 38.1 +0.9**
baz=164,SNR=5.2
L42A S **S** **06 12 00.8 -0.9**
baz=164
I62A Tamworth 72.88 0 P **P** **06 02 36.5 -0.7**
I62A Tamworth 72.88 0 P **P** **06 02 39.1 +1.9**
baz=180,SNR=5.2
I62A P **P** **06 02 39.1 +1.9**
baz=180,SNR=5.2

I62A S **SKiKP** **06 12 04.9 -3.7**
baz=180
I62A S **SKiKP** **06 12 04.9 -3.7**
baz=180
MCVT **Middlebury Col** **72.96 359** P **P** **06 02 39.2 +1.4**
baz=179
MCVT S **S** **06 12 04.6 +2.0**
baz=179
NCB **Newcomb** **73.01 358** P **P** **06 02 39.3 +1.3**
baz=178,SNR=6.5
NCB S **S** **06 12 03.7 +0.6**
baz=178
I63A **Otisfield** **73.06 1** IAmb IAmb 06 03 00.5
comp=Z,78nm,1.2s
I63A **Otisfield** **73.06 1** P **P** **06 02 40.2 +1.9**
baz=181,SNR=12
I63A P **P** **06 02 40.2 +1.9**
baz=181,SNR=12
I63A S **SKiKP** **06 12 07.2 -1.7**
baz=181
I63A S **SKiKP** **06 12 07.2 -1.7**
baz=181
WCNY **West Carthage** **73.06 357** P **P** **06 02 39.5 +1.2**
baz=177,SNR=10
WCNY S **S** **06 12 04.0 +0.3**
baz=177
PECO **Prince Edward** **73.09 356** IAmb IAmb 06 02 49.0
comp=Z,74nm,1.3s
J47A **Sunmer** **73.21 350** IAmb IAmb 06 02 49.0
comp=Z,92nm,1.2s
J47A **Sunmer** **73.21 350** P **P** **06 02 39.4 +0.2**
baz=168,SNR=5.8
J47A P **P** **06 02 39.4 +0.2**
baz=168,SNR=5.8
J47A S **S** **06 12 01.9 -3.5**
baz=168
J47A S **S** **06 12 01.9 -3.5**
baz=168
LBNH **Lisbon** **73.24 360** P **P** **06 02 39.4 +0.1**
LBNH IAMs_20 IAMs_20 06 37 05.4
comp=Z,1µm,20.0s
LBNH **Lisbon** **73.24 360** P **P** **06 02 39.4 +0.1**
LBNH pmax pmax
comp=Z,37nm,1.1s
LBNH MLR MLR
comp=Z,1µm,20.0s
LBNH **Lisbon** **73.24 360** P **P** **06 02 40.6 +1.3**
baz=180,SNR=9.8
LBNH S **SKiKP** **06 12 08.5 -0.7**
baz=180
LBNH **Lisbon** **73.24 360** P **P** **06 02 41.0 +1.6**
baz=180,SNR=9.8
LBNH S **SKiKP** **06 12 10.7 +1.5**
baz=180
N35A **Tabor** **73.25 341** IAmb IAmb 06 03 03.7
comp=Z,53nm,0.7s
N35A **Tabor** **73.25 341** P **P** **06 02 40.1 +0.7**
baz=159,SNR=8.9
LIC **Lamto** **73.25 73** *e*P **P** **06 02 40.4 +0.3**
comp=Z,61nm,0.7s
L40A **Anamosa** **73.27 345** P **P** **06 02 40.2 +0.7**
baz=162,SNR=18
L40A S **S** **06 12 04.8 -1.3**
baz=162
K43A **Burlington** **73.29 347** IAmb IAmb 06 02 49.8
comp=Z,64nm,1.2s
K43A **Burlington** **73.29 347** S **S** **06 12 03.2 -3.1**
baz=165
W18A **Petrified Fore** **73.39 328** P **P** **06 02 43.2 +2.5**
baz=146,SNR=7.5
W18A S **SKiKP** **06 12 13.0 +3.0**
baz=146
TIC **Toumodi** **73.48 72** *e*PKP2 **P** **06 02 41.2 -0.3**
comp=Z,161nm,1.1s
KIC **Kosan Boka** **73.56 73** *e*PKP2 **P** **06 02 41.8 -0.2**
comp=Z,97nm,0.7s
H62A **Milan** **73.58 1** P **P** **06 02 42.4 +1.1**
baz=181
H62A P **P** **06 02 42.4 +1.1**
baz=181
H62A S **SKiKP** **06 12 14.0 +4.3**
baz=181
H62A S **SKiKP** **06 12 14.0 +4.3**
baz=181
SCIA **State Center** **73.59 344** S **SKiKP** **06 12 08.1 -1.7**
baz=161
SCIA **State Center** **73.59 344** S **SKiKP** **06 12 08.6 -1.2**
baz=161
WVL **Waterville** **73.60 2** P **P** **06 02 43.4 +2.0**
baz=182
X16A **Lo Mia Camp, P** **73.61 327** IAmb IAmb 06 02 55.3
comp=Z,60nm,1.2s
I49A **Point Hope** **73.63 352** IAmb IAmb 06 02 51.3
comp=Z,103nm,1.2s
I49A **Point Hope** **73.63 352** S **SKiKP** **06 12 05.8 -4.0**
baz=170
I49A S **SKiKP** **06 12 05.8 -4.0**
baz=170
DBIC **Dimbokro** **73.63 72** ⇑*i*P **P** **06 02 41.7 -0.7**
DBIC IAmb IAmb 06 02 43.1
comp=Z,79nm,0.7s
DBIC **Dimbokro** **73.63 72** P **P** **06 02 42.0 -0.4**
comp=Z,74nm,0.7s,baz=242,slow=5.8,SNR=101
DBIC LR LR 06 33 02.9
comp=Z,3µm,19.4s,baz=235,slow=34
comp=Z,74nm,0.7s
DBIC **Dimbokro** **73.63 72** P **P** **06 02 41.6 -0.7**
DBIC **Dimbokro** **73.63 72** P **P** **06 02 41.6 -0.7**
DBIC pmax pmax
comp=Z,82nm,0.7s
N33B **J Bar K, Exete** **73.66 340** P **P** **06 02 43.1 +1.2**
baz=157
N33A **J Bar K, Exete** **73.66 340** IAmb IAmb 06 02 52.5
comp=Z,139nm,1.4s
LONY **Lake Ozonia** **73.66 358** P **P** **06 02 42.8 +1.0**
baz=178,SNR=9.2
LONY S **S** **06 12 11.3 +0.7**
baz=178
DELO **Deloro Mine** **73.71 356** IAmb IAmb 06 02 52.6
comp=Z,58nm,1.4s
SDCO **Great Sand Dun** **73.79 333** P **P** **06 02 43.8 +0.6**
SDCO IAMs_20 IAMs_20 06 32 05.9
comp=Z,3µm,19.0s
SDCO **Great Sand Dun** **73.79 333** P **P** **06 02 45.3 +2.2**
baz=150,SNR=13
SDCO S **S** **06 12 14.4 +1.5**
baz=150
SDCO **Great Sand Dun** **73.79 333** P **P** **06 02 45.3 +2.2**
baz=150,SNR=13
SDCO S **S** **06 12 15.8 +2.9**
baz=150
KSCO **Kaye Shedlock'** **73.81 336** P **P** **06 02 45.2 +2.2**
baz=152,SNR=7.3
KSCO S **S** **06 12 14.2 +1.6**
baz=152
KSCO **Kaye Shedlock'** **73.81 336** P **P** **06 02 45.1 +2.2**
baz=152,SNR=7.3
KSCO S **S** **06 12 15.6 +3.0**
baz=152
EMMW **East Machias** **73.82 3** P **P** **06 02 43.4 +0.7**
EMMW **East Machias** **73.82 3** P **P** **06 02 44.4 +1.7**
baz=184,SNR=9.5
FRNY **Flat Rock** **73.86 359** P **P** **06 02 44.1 +1.2**
baz=178,SNR=20
FRNY S **S** **06 12 15.3 +2.7**
baz=178
JFWS **Jewell Farm** **73.87 346** IAmb IAmb 06 02 53.6
comp=Z,119nm,1.3s
JFWS **Jewell Farm** **73.87 346** P **P** **06 02 44.0 +0.9**
baz=163,SNR=9.9
JFWS S **SKiKP** **06 12 11.0 +0.8**
baz=163
JFWS **Jewell Farm** **73.87 346** P **P** **06 02 43.9 +0.8**
baz=163,SNR=9.9
JFWS S **S** **06 12 11.2 -1.6**
baz=163
BMNY **Brushton-Moira** **73.88 358** P **P** **06 02 44.2 +1.2**
baz=178,SNR=7.0
BMNY S **S** **06 12 15.2 +2.3**
baz=178
SADO **Sadowa** **74.07 355** LR LR 06 39 00.5
comp=Z,642nm,18.4s,baz=184,slow=39
SADO **Sadowa** **74.07 355** IAmb IAmb 06 02 54.5
comp=Z,96nm,1.2s
K38A **Parkersburg** **74.18 344** IAmb IAmb 06 02 55.1
comp=Z,73nm,1.2s
K38A **Parkersburg** **74.18 344** P **P** **06 02 45.5 +0.6**
baz=161
K38A S **S** **06 12 14.8 -1.6**
baz=161
GLA **Glamis** **74.21 324** S **S** **06 12 22.7 +5.5**
baz=142
G62A **West of Eustis** **74.23 1** IAmb IAmb 06 03 06.5
comp=Z,42nm,1.0s
G62A **West of Eustis** **74.23 1** P **P** **06 02 46.5 +1.3**
baz=181,SNR=19
G62A P **P** **06 02 46.5 +1.3**
baz=181,SNR=19
G62A S **S** **06 12 19.0 +2.1**
baz=181
G62A S **S** **06 12 19.0 +2.1**
baz=181
PKME **Peaks-Kenny Pk** **74.31 2** P **P** **06 02 46.0 +0.5**
PKME **Peaks-Kenny Pk** **74.31 2** P **P** **06 02 47.1 +1.6**
baz=182,SNR=11
PKME S **S** **06 12 20.0 +2.4**
baz=182
PKME **Peaks-Kenny Pk** **74.31 2** P **P** **06 02 47.0 +1.5**
baz=182,SNR=11
PKME S **S** **06 12 20.4 +2.7**
baz=182
S22A **4UR Ranch, Cre** **74.33 332** IAmb IAmb 06 03 12.7
comp=Z,66nm,1.6s
S22A **4UR Ranch, Cre** **74.33 332** P **P** **06 02 48.4 +2.1**
baz=149,SNR=5.3
WUAZ **Wupatki** **74.47 327** IAmb IAmb 06 02 59.2
comp=Z,117nm,1.4s
WUAZ IAMs_20 IAMs_20 06 30 30.2
comp=Z,4µm,22.0s
WUAZ **Wupatki** **74.47 327** P **P** **06 02 49.5 +2.5**
baz=145,SNR=16
WUAZ S **S** **06 12 25.5 +5.1**
baz=145
L34A **Svendsen Farm,** **74.48 341** P **P** **06 02 47.3 +0.7**
baz=158,SNR=6.5
L34A S **S** **06 12 17.4 -2.4**
baz=158
BGNE **Belgrade** **74.48 340** P **P** **06 02 47.9 +1.1**
baz=156
BGNE S **S** **06 12 19.1 -0.8**
baz=156
BGNE **Belgrade** **74.48 340** P **P** **06 02 47.9 +1.1**
baz=156
BGNE S **S** **06 12 20.2 +0.4**
baz=156
I42A **Draeger Farm,** **74.54 347** IAmb IAmb 06 02 57.3
comp=Z,101nm,1.4s
I42A **Draeger Farm,** **74.54 347** P **P** **06 02 47.4 +0.5**
baz=165
I42A S **S** **06 12 17.5 -2.9**
baz=165
MVCO **Mesa Verde** **74.58 330** IAmb IAmb 06 02 59.5
comp=Z,93nm,1.3s
MVCO IAMs_20 IAMs_20 06 31 24.6
comp=Z,3µm,20.0s
MVCO **Mesa Verde** **74.58 330** P **P** **06 02 49.8 +2.1**
baz=147,SNR=12
MVCO S **S** **06 12 26.1 +4.5**
baz=147
Q24A **Divide** **74.71 334** IAmb IAmb 06 03 00.3
comp=Z,143nm,1.4s
Q24A **Divide** **74.71 334** P **P** **06 02 50.6 +2.2**
baz=150,SNR=6.9
Q24A S **S** **06 12 27.1 +4.0**
baz=150
GLMI **Grayling** **74.73 351** IAmb IAmb 06 03 16.1
comp=Z,54nm,1.0s
GLMI IAMs_20 IAMs_20 06 34 15.1
comp=Z,2µm,21.0s
GLMI **Grayling** **74.73 351** P **P** **06 02 48.1 +0.1**
baz=169
GLMI **Grayling** **74.73 351** P **P** **06 02 48.3 +0.2**
baz=169
F63A **Nahmakanta, Br** **74.75 2** P **P** **06 02 49.9 +1.7**
baz=182
F63A P **P** **06 02 49.9 +1.7**
baz=182
F63A S **S** **06 12 22.6 -0.1**
baz=182
F63A S **S** **06 12 22.6 -0.1**
baz=182
I40A **Norwalk** **74.88 346** IAmb IAmb 06 02 59.3
comp=Z,56nm,1.2s
H43A **Windswept, Lux** **74.89 348** IAmb IAmb 06 03 23.2
comp=Z,56nm,0.9s
H43A **Windswept, Lux** **74.89 348** P **P** **06 02 49.5 +0.5**
baz=166
H43A S **S** **06 12 20.1 -4.1**
baz=166
F62A **Pittston Farm,** **74.92 1** S **S** **06 12 25.6 +1.1**
baz=182
F62A S **S** **06 12 25.6 +1.1**
baz=182
F64A **Sherman** **74.94 3** IAmb IAmb 06 03 00.5
comp=Z,60nm,1.4s
F64A **Sherman** **74.94 3** P **P** **06 02 51.0 +1.8**
baz=183,SNR=14
F64A P **P** **06 02 51.0 +1.8**
baz=183,SNR=14
BC3 **Big Chuckawall** **75.01 323** P **P** **06 02 52.3 +2.3**
baz=142,SNR=7.9
G45A **Suttons Bay** **75.10 350** S **S** **06 12 23.7 -2.9**
baz=168
G45A S **S** **06 12 23.7 -2.9**
baz=168
IRM **Iron Mountain** **75.24 324** P **P** **06 02 53.6 +2.3**
baz=142,SNR=7.3
TRQ **Mont Tremblant** **75.26 358** P **P** **06 02 51.4 +0.2**
TRQ IAmb IAmb 06 03 11.4
comp=Z,80nm,1.4s
109C **Camp Elliot, M** **75.29 322** IAMs_20 IAMs_20 06 28 36.9
comp=Z,2µm,22.0s
109C **Camp Elliot, M** **75.29 322** S **S** **06 12 34.5 +5.4**
baz=140
CER **Ceres** **75.42 120** *e*P **P** **06 02 51.9 -0.7**
CER IAmb IAmb 06 02 54.2
comp=Z,30nm,1.1s
E63A **Oxbow** **75.49 2** P **P** **06 02 54.0 +1.6**
baz=183,SNR=9.0
E63A P **P** **06 02 54.0 +1.6**
baz=183,SNR=9.0
TPFO **Pinon Flats** **75.49 323** P **P** **06 02 55.7 +2.8**
baz=141,SNR=5.9
PFO **Pinyon Flats O** **75.50 323** LR LR 06 30 04.1
comp=Z,2µm,19.9s,baz=139,slow=31
PFO **Pinyon Flats O** **75.50 323** P **P** **06 02 52.9 0.0**
PFO IAmb IAmb 06 03 05.2
comp=Z,55nm,1.4s
PFO **Pinyon Flats O** **75.50 323** IAMs_20 IAMs_20 06 29 51.4
comp=Z,2µm,19.0s
PFO **Pinyon Flats O** **75.50 323** P **P** **06 02 52.9 0.0**
PFO pmax pmax
comp=Z,55nm,1.4s
PFO **Pinyon Flats O** **75.50 323** P **P** **06 02 55.7 +2.8**
baz=141,SNR=6.2
PV13 **Radium Mtn., P** **75.52 331** IAmb IAmb 06 03 04.9
comp=Z,76nm,1.3s
PV15 **Paradox Valley** **75.53 331** IAmb IAmb 06 03 05.4
comp=Z,113nm,1.5s
BELC **Belle Mtn. Jos** **75.56 323** P **P** **06 02 55.6 +2.4**
baz=141,SNR=6.2
BELC S **S** **06 12 37.5 +5.1**
baz=141
ISCO **Idaho Springs** **75.61 334** IAMs_20 IAMs_20 06 32 55.0
comp=Z,2µm,20.0s
ISCO **Idaho Springs** **75.61 334** P **P** **06 02 55.8 +2.2**
baz=150,SNR=38
ISCO S **S** **06 12 34.8 +1.7**
baz=150
ISCO **Idaho Springs** **75.61 334** P **P** **06 02 55.8 +2.2**
baz=150,SNR=38
ISCO S **S** **06 12 35.5 +2.3**
baz=150
SMCO **Snowmass** **75.61 333** IAmb IAmb 06 03 06.6
comp=Z,114nm,1.2s
I37B **Waseca** **75.62 344** P **P** **06 02 54.1 +0.9**
baz=161,SNR=15
I37B S **S** **06 12 31.0 -1.4**
baz=161
U15A **North Rim** **75.65 327** IAmb IAmb 06 03 06.3
comp=Z,71nm,1.3s
PV11 **David Mesa, Pa** **75.66 331** IAmb IAmb 06 03 05.7
comp=Z,78nm,1.3s
K31A **O'Neill** **75.77 340** P **P** **06 02 55.9 +1.8**
baz=156,SNR=15
PV10 **Paradox Valley** **75.79 331** IAmb IAmb 06 03 05.9
comp=Z,110nm,1.6s
MURC **Murrieta** **75.88 322** P **P** **06 02 57.8 +2.8**
baz=140,SNR=7.1
GMRC **Granite Mounta** **76.00 324** P **P** **06 02 58.5 +2.8**
baz=142,SNR=5.4
GMRC S **S** **06 12 41.7 +4.5**
baz=142
ELS **Elsinore Mount** **76.04 322** IAmb IAmb 06 03 08.0
comp=Z,74nm,1.4s
G40A **Rib Lake** **76.12 347** P **P** **06 02 57.6 +1.6**
baz=164
D62A **Allapoint, All** **76.13 2** IAmb IAmb 06 03 17.5
comp=Z,41nm,1.0s
D62A **Allapoint, All** **76.13 2** P **P** **06 02 57.5 +1.6**
baz=183,SNR=15
D62A P **P** **06 02 57.5 +1.6**
baz=183,SNR=15
ECSD **EROS Data Cent** **76.18 342** P **P** **06 02 57.4 +1.0**
baz=158,SNR=60
ECSD S **S** **06 12 38.2 -0.5**
baz=158
ECSD **EROS Data Cent** **76.18 342** P **P** **06 02 57.4 +1.0**
baz=158,SNR=60
ECSD S **S** **06 12 38.1 -0.5**
baz=158
E46A **Sault Ste Mari** **76.20 351** IAmb IAmb 06 03 06.5
comp=Z,111nm,1.3s
E46A **Sault Ste Mari** **76.20 351** P **P** **06 02 57.0 +0.5**
baz=169,SNR=11
E46A S **S** **06 12 34.3 -4.3**
baz=169
F42A **Maple Grove Fa** **76.20 348** IAmb IAmb 06 03 11.2
comp=Z,157nm,2.0s
F42A **Maple Grove Fa** **76.20 348** S **S** **06 12 36.6 -2.1**
baz=166
HEC **Hector,Ludlow** **76.38 324** P **P** **06 03 00.8 +3.0**
baz=141
LATQ **La Tuque** **76.39 359** IAmb IAmb 06 03 18.6
comp=Z,68nm,1.5s
MATJ **Matjiesfontein** **76.44 121** ⇑*i*P **P** **06 02 59.0 +0.5**
MATJ IAmb IAmb 06 02 59.7
comp=Z,130nm,1.1s
BATG **Bathurst New B** **76.46 4** IAmb IAmb 06 03 09.3
comp=Z,76nm,1.5s
LMQ **La Malbaie** **76.57 1** IAmb IAmb 06 03 09.4
comp=Z,60nm,1.5s
CVNA **Calvinia** **76.60 119** *e*P **P** **06 02 59.9 +0.5**
CVNA IAmb IAmb 06 03 00.7
comp=Z,87nm,1.2s
E43A **Lone Tree Farm** **76.61 349** S **S** **06 12 38.9 -4.2**
baz=166
BFSC **Mount Baldy Ra** **76.62 322** P **P** **06 03 01.7 +2.5**
baz=140
BFSC S **S** **06 12 49.2 +5.1**
baz=140
SPMN **Marine on St.** **76.63 345** IAmb IAmb 06 03 09.0
comp=Z,103nm,1.6s
SPMN **Marine on St.** **76.63 345** P **P** **06 02 59.3 +0.4**
baz=161,SNR=7.8
SPMN **Marine on St.** **76.63 345** P **P** **06 02 59.2 +0.3**
baz=161,SNR=7.8
SPMN S **S** **06 12 41.4 -2.0**
baz=161
TUQ **Turquoise Moun** **76.64 324** P **P** **06 03 02.0 +2.7**
baz=142,SNR=5.2
N23A **Red Feather La** **76.69 334** IAmb IAmb 06 03 11.6
comp=Z,81nm,1.4s
N23A **Red Feather La** **76.69 334** P **P** **06 03 02.3 +2.6**
baz=150,SNR=7.0
N23A S **S** **06 12 48.7 +3.8**
baz=150
COWI **Conover** **76.71 348** P **P** **06 03 00.3 +1.0**
baz=165
COWI S **S** **06 12 42.7 -1.6**
baz=165
PASC **Pasadena Art C** **76.85 322** IAMs_20 IAMs_20 06 30 20.2
comp=Z,2µm,21.0s
PHWY **Pilot Hill** **76.86 335** IAmb IAmb 06 03 12.3
comp=Z,76nm,1.4s
MTPU **Mount Pierson** **76.91 328** IAmb IAmb 06 03 28.5
comp=Z,70nm,1.5s
O20A **White River Ci** **76.94 332** IAmb IAmb 06 03 13.7
comp=Z,110nm,1.2s
O20A **White River Ci** **76.94 332** P **P** **06 03 03.3 +2.2**
baz=148,SNR=17
O20A S **S** **06 12 50.3 +2.8**
baz=148
SZCU **Shurtz Canyon** **76.96 328** IAmb IAmb 06 03 13.6
comp=Z,83nm,1.5s
GSC **Goldstone, Bar** **76.99 324** P **P** **06 03 04.0 +2.7**
baz=141,SNR=8.3
DECC **Green Verdugo** **76.99 322** P **P** **06 03 04.6 +3.3**
baz=140
SUR **Sutherland** **77.00 120** LR LR 06 32 48.1
comp=Z,3µm,19.9s,baz=234,slow=32
SUR **Sutherland** **77.00 120** P **P** **06 03 02.4 +0.6**
SUR IAmb IAmb 06 03 05.0
comp=Z,94nm,1.5s
SRU **San Rafael Swe** **77.04 330** IAmb IAmb 06 03 13.2
comp=Z,70nm,1.4s
CCUT **Cedar City** **77.06 327** IAmb IAmb 06 03 16.3
comp=Z,75nm,1.2s
Q16A **Castle Valley** **77.17 330** IAmb IAmb 06 03 14.4
comp=Z,110nm,1.5s
EDW2 **Edwards Air Fo** **77.28 323** P **P** **06 03 05.2 +2.2**
baz=140
P18A **Preston Nutter** **77.35 331** IAmb IAmb 06 03 16.2
comp=Z,99nm,1.2s
F36A **Milaca** **77.40 345** IAmb IAmb 06 03 13.3
comp=Z,58nm,1.4s
F36A **Milaca** **77.40 345** P **P** **06 03 03.7 +0.5**
baz=161,SNR=16
F36A S **S** **06 12 49.4 -2.3**
baz=161
P17A **Butcher Ranch,** **77.44 330** IAmb IAmb 06 03 16.2
comp=Z,65nm,1.2s
OSI **Osito Audit: C** **77.47 322** P **P** **06 03 06.6 +2.7**
baz=139
SUSD **Miller** **77.50 341** S **S** **06 12 52.3 -0.7**
baz=156
SUSD **Miller** **77.50 341** P **P** **06 03 04.4 +0.6**
baz=156
SUSD S **S** **06 12 53.0 +0.1**
baz=156
SCZ2 **Santa Cruz Isl** **77.50 321** P **P** **06 03 07.1 +2.9**
baz=139
CCAC **Calif City Air** **77.50 323** IAmb IAmb 06 03 16.1
comp=Z,61nm,1.2s
D41A **Chassel** **77.54 348** IAmb IAmb 06 03 20.4
comp=Z,60nm,0.8s
LRMC **Laurel Mtn Rad** **77.58 323** P **P** **06 03 07.6 +2.9**
baz=140
MAW **Mawson** **77.59 164** P **P** **06 03 04.3 +0.2**
comp=Z,46nm,0.5s,baz=211,slow=7.5,SNR=110
MAW LR LR 06 38 20.1
comp=Z,3µm,19.9s,baz=232,slow=36
comp=Z,46nm,0.5s
MAW **Mawson** **77.59 164** P **P** **06 03 04.5 +0.4**
E38A **The Farm, Brul** **77.67 346** P **P** **06 03 05.3 +0.6**
E38A IAmb IAmb 06 03 14.9
comp=Z,88nm,1.6s
E38A **The Farm, Brul** **77.67 346** P **P** **06 03 05.3 +0.6**
baz=163,SNR=6.4
PRN **Pahroc Range** **77.75 326** IAmb IAmb 06 03 24.2
comp=Z,62nm,1.1s
RDMU **Red Mountain** **77.85 332** IAmb IAmb 06 03 18.4
comp=Z,84nm,1.2s
RWWY **Rawlins** **77.85 334** IAMs_20 IAMs_20 06 34 17.4
comp=Z,3µm,20.0s
FURC **Furnace Creek,** **77.92 324** P **P** **06 03 08.9 +2.6**
baz=141,SNR=9.0
MPMC **Manual Prospec** **77.92 324** P **P** **06 03 08.8 +2.1**
baz=140,SNR=5.7
MPMC S **S** **06 13 00.6 +2.3**
baz=140
TPNV **Topopah Spring** **77.98 325** IAmb IAmb 06 03 27.8
comp=Z,73nm,1.4s
TPNV IAMs_20 IAMs_20 06 32 56.1
comp=Z,2µm,19.0s
TPNV **Topopah Spring** **77.98 325** P **P** **06 03 09.6 +2.7**
baz=142,SNR=39
TPNV S **S** **06 13 04.0 +5.2**
baz=142
F33A **5 Mile Ranch,** **78.05 343** P **P** **06 03 07.3 +0.4**
baz=158,SNR=6.6
F33A S **S** **06 12 56.8 -2.0**
baz=158
GRAN **Grantham** **78.06 120** ⇑*i*P **P** **06 03 08.1 +0.5**

GRAN IAmb IAmb 06 03 10.7
comp=Z,32nm,0.6s
RAR Rarotonga 78.12 252 LR LR 06 29 27.1
comp=Z,3µm,19.0s,baz=117,slow=29
ISA Isabella, Lake 78.13 323 P **P** **06 03 10.4 +2.7**
baz=140,SNR=8.6
ISA S **S** **06 13 06.4 +6.1**
baz=140
PKM Mcpherson Peak 78.27 321 P **P** **06 03 11.2 +2.6**
baz=139,SNR=10
MPU Maple Canyon 78.27 330 IAmb IAmb 06 03 29.4
comp=Z,56nm,1.2s
AUGR Augrabies 78.34 116 *e*P **P** **06 03 09.2 +0.1**
AUGR IAmb IAmb 06 03 10.5
comp=Z,78nm,1.1s
NLU North Lily Min 78.42 330 IAmb IAmb 06 03 21.3
comp=Z,54nm,1.3s
K22A Casper 78.42 335 P **P** **06 03 11.3 +2.1**
baz=150,SNR=18
K22A S **S** **06 13 06.9 +3.6**
baz=150
K22A Casper 78.42 335 P **P** **06 03 11.3 +2.1**
baz=150,SNR=18
K22A S **S** **06 13 06.8 +3.6**
baz=150
CWC Cottonwood Cre 78.52 324 P **P** **06 03 12.5 +2.6**
baz=140
GRAC Grapevine Rang 78.58 324 IAmb IAmb 06 03 37.1
comp=Z,71nm,1.4s
GRAC Grapevine Rang 78.58 324 P **P** **06 03 12.6 +2.5**
baz=141,SNR=17
GRAC S **S** **06 13 10.6 +5.6**
baz=141
VES Vestal, Richgr 78.59 323 P **P** **06 03 12.6 +2.5**
baz=139,SNR=5.6
KOWA Kowa 78.65 66 IAMs_20 IAMs_20 06 38 08.2
comp=Z,2µm,19.0s
SMMC Simmler 78.69 322 P **P** **06 03 13.9 +3.2**
baz=139
R11A Troy Canyon, C 78.75 326 P **P** **06 03 13.6 +2.4**
baz=142,SNR=13
R11A S **S** **06 13 11.8 +4.7**
baz=142
KEIM Keimoes 78.78 117⇑ *i*P **P** **06 03 11.9 +0.3**
KEIM IAmb IAmb 06 03 12.4
comp=Z,58nm,1.1s
RSSD Black Hills 78.81 337 P **P** **06 03 11.8 +0.4**
RSSD IAmb IAmb 06 03 22.7
comp=Z,79nm,1.6s
RSSD Black Hills 78.81 337 P **P** **06 03 11.8 +0.4**
RSSD pmax pmax
comp=Z,79nm,1.6s
RSSD Black Hills 78.81 337 P **P** **06 03 13.2 +1.8**
baz=152,SNR=13
RSSD S **S** **06 13 09.4 +1.8**
baz=152
RSSD Black Hills 78.81 337 P **P** **06 03 13.2 +1.8**
baz=152
RSSD S **S** **06 13 09.5 +1.9**
baz=152
EYMN Ely 78.94 347 P **P** **06 03 12.0 +0.3**
EYMN IAmb IAmb 06 03 22.0
comp=Z,57nm,1.4s
EYMN Ely 78.94 347 IAMs_20 IAMs_20 06 39 29.5
comp=Z,1µm,20.0s
EYMN Ely 78.94 347 P **P** **06 03 12.1 +0.5**
baz=163,SNR=5.4
EYMN S **S** **06 13 06.7 -1.6**
baz=163
EYMN Ely 78.94 347 P **P** **06 03 12.2 +0.5**
baz=163,SNR=5.4
EYMN S **S** **06 13 06.3 -2.0**
baz=163
DUG Dugway, Tooele 78.94 329 IAmb IAmb 06 03 24.0
comp=Z,87nm,1.4s
DUG Dugway, Tooele 78.94 329 P **P** **06 03 14.3 +2.2**
baz=144,SNR=49
ROSN Rosenhof 79.00 123 *e*P **P** **06 03 12.1 -0.5**
ROSN IAmb IAmb 06 03 17.0
comp=Z,52nm,1.3s
TIN Tinemaha, Big 79.07 324 P **P** **06 03 15.4 +2.6**
baz=140
UPI Upington 79.16 116⇑ *i*P **P** **06 03 13.8 +0.1**
UPI IAmb IAmb 06 03 14.7
comp=Z,76nm,1.3s
HWUT Hardware Ranch 79.55 331 IAmb IAmb 06 03 32.9
comp=Z,44nm,0.8s
BGU Big Grassy Mou 79.63 330 IAmb IAmb 06 03 27.3
comp=Z,58nm,1.4s
BW06 Boulder Array 79.69 333 IAMs_20 IAMs_20 06 35 17.0
comp=Z,3µm,20.0s
BW06 Boulder Array 79.69 333 P **P** **06 03 17.6 +1.3**
baz=147,SNR=11
BW06 S **S** **06 13 18.0 +1.0**
baz=147
PDAR Pinedale Array 79.69 333 P **P** **06 03 17.4 +1.1**
comp=Z,3.2nm,0.6s,baz=139,slow=7.0,SNR=24
PDAR PKKPbc **PKKPbc** **06 22 03.2 -2.2**
comp=Z,0.8nm,0.7s,baz=202,slow=1.6,SNR=6.7
PDAR LR LR 06 35 28.4
comp=Z,2µm,20.3s,baz=156,slow=33
comp=Z,3.2nm,0.6s
B35A Bob, Littlefor 79.80 345 P **P** **06 03 17.1 +0.7**
baz=161,SNR=9.6
MLAC Mammoth, Mammo 79.82 324 P **P** **06 03 19.8 +2.8**
baz=140
E28A Huff 79.94 340 IAmb IAmb 06 03 28.5
comp=Z,110nm,1.2s
E28A Huff 79.94 340 P **P** **06 03 18.8 +1.6**
baz=155,SNR=6.6
NVAR Mina Array Bea 80.16 325 PKKPbc PKKPbc 06 22 04.2 +0.2
comp=Z,1.2nm,0.7s,baz=337,slow=2.1,SNR=12
NVAR LR LR 06 32 36.7
comp=Z,2µm,21.2s,baz=138,slow=31
AGMN Agassiz Nation 80.23 344 IAmb IAmb 06 03 29.2
comp=Z,58nm,1.4s
AGMN Agassiz Nation 80.23 344 P **P** **06 03 19.5 +0.8**
baz=159,SNR=17
AGMN Agassiz Nation 80.23 344 P **P** **06 03 19.4 +0.8**
baz=159,SNR=17
AGMN S **S** **06 13 20.1 -1.8**
baz=159
AHID Auburn Hatcher 80.31 332 P **P** **06 03 20.7 +1.2**
AHID IAMs_20 IAMs_20 06 35 56.6
comp=Z,2µm,20.0s
TSUM Tsumeb 80.40 107⇑ *i*P **P** **06 03 20.8 +0.1**
TSUM IAmb IAmb 06 03 23.1
comp=Z,643nm,1.0s
TSUM Tsumeb 80.40 107 LR LR 06 36 12.9
comp=Z,5µm,18.3s,baz=240,slow=34
TSUM Tsumeb 80.40 107 P **P** **06 03 20.5 -0.2**
TSUM IAmb IAmb 06 03 23.4
comp=Z,70nm,0.9s
SOE Somerset East 80.41 122 *e*P **P** **06 03 20.1 -0.3**
SOE IAmb IAmb 06 03 23.2
comp=Z,65nm,1.0s
ELK Elko 80.48 328 LR LR 06 35 17.8
comp=Z,3µm,19.9s,baz=145,slow=33
ELK Elko 80.48 328 IAMs_20 IAMs_20 06 34 47.2
comp=Z,3µm,20.0s
SAO San Andreas Ge 80.55 322 IAMs_20 IAMs_20 06 31 56.2
comp=Z,2µm,20.0s
PMOZ Porto Moniz, M 80.71 44 *e*P **P** **06 03 22.4 +0.6**
comp=Z,79nm,1.3s
PMOZ Porto Moniz, M 80.71 44 *e*SKSac **S** **06 13 31.6 +3.8**
PMOZ Porto Moniz, M 80.71 44 *e*LR LR 06 30 57.8
comp=Z,2µm,20.0s
REDW Red Top Meadow 80.71 332 IAmb IAmb 06 03 57.5
comp=Z,55nm,1.1s
REDW IAMs_20 IAMs_20 06 35 46.0
comp=Z,2µm,21.0s
SNOW Snow King Moun 80.75 332 IAMs_20 IAMs_20 06 35 59.1
comp=Z,2µm,19.0s
MDND Maddock 80.79 342 P **P** **06 03 23.2 +1.5**
baz=156
PMAR Madeira 80.81 44 *e*P **P** **06 03 23.2 +0.7**
comp=Z,64nm,1.5s
LOHW Long Hollow 80.82 333 IAMs_20 IAMs_20 06 35 52.8
comp=Z,2µm,20.0s
TPAW Teton Pass 80.86 332 IAMs_20 IAMs_20 06 36 28.8
comp=Z,1µm,20.0s
CMB Columbia Colle 80.93 323 IAMs_20 IAMs_20 06 34 05.2
comp=Z,1µm,20.0s
MOOW Moose Ponds 80.99 333 IAMs_20 IAMs_20 06 36 08.3
comp=Z,3µm,20.0s
FXWY Fox Creek 81.01 332 IAMs_20 IAMs_20 06 41 28.9
comp=Z,2µm,22.0s
FLWY Flagg Ranch 81.25 333 IAmb IAmb 06 03 36.4
comp=Z,145nm,1.8s
FLWY IAMs_20 IAMs_20 06 36 18.2
comp=Z,3µm,21.0s
PMPS Porto Santo 81.40 44 *e*P **P** **06 03 26.9 +1.6**
comp=Z,66nm,1.7s
PMPST Porto Santo, M 81.41 44 *e*P **P** **06 03 26.6 +1.2**
comp=Z,108nm,1.7s
H17A Grant Village 81.46 333 P **P** **06 03 28.3 +2.6**
baz=147
H17A S **S** **06 13 38.3 +2.8**
baz=147
LKWY Lake 81.53 333 IAMs_20 IAMs_20 06 39 04.7
comp=Z,2µm,19.0s
RLMT Red Lodge 81.56 334 IAMs_20 IAMs_20 06 37 40.4
comp=Z,2µm,19.0s
RLMT Red Lodge 81.56 334 P **P** **06 03 27.9 +1.7**
baz=148,SNR=25
PAHR Pah Rah Range 81.67 325 IAmb IAmb 06 03 39.0
comp=Z,89nm,1.5s
LAO LASA Array 81.81 337 IAmb IAmb 06 03 38.4
comp=Z,110nm,1.4s
LAO LASA Array 81.81 337 P **P** **06 03 28.7 +1.5**
baz=150,SNR=18
LAO LASA Array 81.81 337 P **P** **06 03 28.7 +1.5**
baz=150,SNR=18
YMR Madison River 81.84 333 IAmb IAmb 06 03 45.3
comp=Z,75nm,1.1s
ULM Lac du Bonnet 82.06 345 P **P** **06 03 28.8 +0.4**
comp=Z,22nm,0.9s,baz=180,slow=3.2,SNR=23
ULM LR LR 06 41 50.0
comp=Z,925nm,19.1s,baz=150,slow=37
comp=Z,22nm,0.9s
ULM Lac du Bonnet 82.06 345 IAmb IAmb 06 03 38.6
comp=Z,122nm,1.5s
YHL Hebgen Lake 82.08 333 IAmb IAmb 06 04 06.2
comp=Z,64nm,1.4s
BOSA Boshof 82.15 118⇑ *i*P **P** **06 03 29.3 -0.4**
BOSA IAmb IAmb 06 03 31.5
comp=Z,56nm,1.1s
BOSA Boshof 82.15 118 P **P** **06 03 29.4 -0.4**
comp=Z,31nm,0.8s,baz=255,slow=3.3,SNR=52
BOSA LR LR 06 36 24.2
comp=Z,3µm,19.2s,baz=242,slow=33
comp=Z,31nm,0.8s
BOSA Boshof 82.15 118 P **P** **06 03 29.4 -0.4**
BOSA IAmb IAmb 06 03 30.1
comp=Z,55nm,1.1s
BOSA Boshof 82.15 118 P **P** **06 03 29.4 -0.4**
BOSA pmax pmax
comp=Z,55nm,1.1s
QLMT Earthquake Lak 82.16 333 P **P** **06 03 31.4 +2.1**
GCMT Greycliff 82.28 334 P **P** **06 03 30.9 +1.0**
MCCM Marconi Confer 82.33 322 IAMs_20 IAMs_20 06 32 26.5
comp=Z,2µm,20.0s
HLID Hailey 82.36 330 P **P** **06 03 32.3 +1.9**
HLID IAmb IAmb 06 04 06.6
comp=Z,45nm,1.2s
HLID Hailey 82.36 330 P **P** **06 03 32.6 +2.2**
baz=144,SNR=68
TOA0 Torodi Ar. Sit 82.54 70 P **P** **06 03 31.5 -0.2**
TORD Torodi Ar. Bea 82.54 70 P **P** **06 03 31.4 -0.4**
comp=Z,98nm,0.8s,baz=260,slow=4.9,SNR=356
TORD S **S** **06 13 42.7 -4.6**
comp=Z,1.6nm,1.0s,baz=255,slow=7.7,SNR=4.6
TORD LR LR 06 38 46.3
comp=Z,4µm,19.6s,baz=213,slow=35
comp=Z,98nm,0.8s
TORD Torodi Ar. Bea 82.54 70 P **P** **06 03 31.4 -0.4**
ORV Oroville 82.64 324 IAmb IAmb 06 03 43.7
comp=Z,76nm,1.2s
ORV IAMs_20 IAMs_20 06 33 56.5
comp=Z,2µm,19.0s
DGMT Dagmar 82.70 339 P **P** **06 03 33.2 +1.4**
DGMT Dagmar 82.70 339 IAMs_20 IAMs_20 06 37 34.4
comp=Z,1µm,21.0s
DGMT Dagmar 82.70 339 P **P** **06 03 33.6 +1.8**
baz=152,SNR=22
DGMT Dagmar 82.70 339 P **P** **06 03 33.5 +1.7**
baz=152,SNR=22
BOZ Bozeman (W) 82.87 333 P **P** **06 03 33.5 +0.6**
BOZ IAMs_20 IAMs_20 06 37 21.2
comp=Z,2µm,20.0s
BOZ Bozeman (W) 82.87 333 P **P** **06 03 33.5 +0.6**
BOZ pmax pmax
comp=Z,11nm,1.2s
BOZ Bozeman (W) 82.87 333 P **P** **06 03 34.2 +1.2**
baz=146,SNR=14
SWZ Schweizer 82.90 117 *e*P **P** **06 03 32.4 -1.4**
SWZ IAmb IAmb 06 03 33.5
comp=Z,45nm,1.1s
HOPS Hopland Field 83.06 322 IAMs_20 IAMs_20 06 33 12.5
comp=Z,2µm,20.0s
WVOR Wild Horse Val 83.39 327 IAMs_20 IAMs_20 06 35 20.2
comp=Z,3µm,22.0s
MOD Moc Plateau 83.79 326 IAmb IAmb 06 03 55.0
comp=Z,64nm,1.4s
SCHQ Schefferville 83.96 3 P **P** **06 03 38.5 +0.4**
comp=Z,19nm,0.9s,baz=211,slow=5.8,SNR=24
SCHQ LR LR 06 41 28.6
comp=Z,684nm,21.3s,baz=198,slow=36
comp=Z,19nm,0.9s
SCHQ Schefferville 83.96 3 P **P** **06 03 38.3 +0.2**
J08A Circle Bar Ran 84.03 328 IAmb IAmb 06 03 59.8
comp=Z,86nm,1.4s
LBTB Lobatse 84.17 115⇑ *i*P **P** **06 03 38.3 -2.0**
LBTB IAmb IAmb 06 03 40.3
comp=Z,67nm,1.0s
LBTB Lobatse 84.17 115 LR LR 06 35 57.1
comp=Z,6µm,21.9s,baz=235,slow=32
LBTB Lobatse 84.17 115 P **P** **06 03 39.5 -0.7**
LBTB Lobatse 84.17 115 P **P** **06 03 39.5 -0.7**
LBTB pmax pmax
comp=Z,57nm,0.9s
EGMT Eagleton 84.19 336 P **P** **06 03 39.4 -0.2**
EGMT IAmb IAmb 06 04 14.0
comp=Z,32nm,1.2s
EGMT IAMs_20 IAMs_20 06 38 50.9
comp=Z,2µm,20.0s
EGMT Eagleton 84.19 336 P **P** **06 03 40.4 +0.9**
baz=148
SNKL Senekal, Frees 84.24 119⇑ *i*P **P** **06 03 40.4 -0.2**
SNKL IAmb IAmb 06 03 40.8
comp=Z,48nm,1.0s
PLID Pearl Lake 84.27 330 P **P** **06 03 40.2 -0.1**
PLID IAmb IAmb 06 03 57.1
comp=Z,30nm,0.9s
CASY Casey 84.65 181 P **P** **06 03 42.1 +0.4**
KSR Koster 84.77 117 *e*P **P** **06 03 42.9 -0.5**
KSR IAmb IAmb 06 03 43.9
comp=Z,58nm,1.6s
MSO Missoula 84.80 333 P **P** **06 03 44.6 +1.9**
baz=144
TTIG Tnine Tigouga, 84.85 51 P **P** **06 03 45.1 +1.7**
YBH Yreka Blue Hor 84.87 324 LR LR 06 35 28.6
comp=Z,2µm,20.5s,baz=151,slow=31
YBH Yreka Blue Hor 84.87 324 IAMs_20 IAMs_20 06 35 07.4
comp=Z,2µm,20.0s
JCC Jacoby Creek, 84.88 323 IAMs_20 IAMs_20 06 35 23.9
comp=Z,2µm,19.0s
L04D Klamath Falls 85.02 325 IAmb IAmb 06 04 03.0
comp=Z,56nm,1.3s
L04D Klamath Falls 85.02 325 P **P** **06 03 45.7 +1.7**
baz=138
K04D Chiloquin, OR 85.05 326 P **P** **06 03 46.8 +2.7**
baz=138
I07A Izee 85.06 328 IAmb IAmb 06 03 55.9
comp=Z,55nm,1.5s
J05D Fort Rock, OR 85.28 326 P **P** **06 03 47.8 +2.5**
baz=138,SNR=5.8
HRAO HartRAO 85.37 117⇑ *i*P **P** **06 03 45.5 -0.8**
comp=Z,107nm,1.8s
HRAO IAmb IAmb 06 03 46.0
comp=Z,107nm,1.8s
PINE Pine Mountain 85.52 327 IAmb IAmb 06 04 04.2
comp=Z,40nm,0.9s
L02F Cave Junction 85.59 324 P **P** **06 03 48.3 +1.6**
baz=137
HUMO Hull Mountain 85.63 325 IAMs_20 IAMs_20 06 36 03.6
comp=Z,1µm,20.0s
J04D Umpqua Nationa 85.68 326 IAmb IAmb 06 04 07.4
comp=Z,48nm,0.9s
J04D IAMs_20 IAMs_20 06 36 25.8
comp=Z,2µm,20.0s
J04D Umpqua Nationa 85.68 326 P **P** **06 03 49.3 +1.9**
baz=138
JTMT Jette 85.68 333 IAmb IAmb 06 03 58.5
comp=Z,27nm,1.1s
SLR Silverton 85.91 117⇑ *i*P **P** **06 03 47.8 -1.2**
SLR IAmb IAmb 06 03 49.5
comp=Z,61nm,1.6s
K02D Willamette Mer 86.05 325 P **P** **06 03 50.8 +1.7**
baz=137,SNR=5.6
I05D Terrebonne, OR 86.12 327 P **P** **06 03 51.3 +2.0**
baz=138
DBO Dodson Butte 86.15 325 IAmb IAmb 06 04 01.5
comp=Z,70nm,1.4s
OUZM OUZ 86.22 51 P **P** **06 03 52.0 +1.8**
MQZ McQueen's Vall 86.33 221 IAMs_20 IAMs_20 06 32 25.1
comp=Z,2µm,19.0s
MXZ Matakaoa Point 86.48 229 IAMs_20 IAMs_20 06 34 30.7
comp=Z,2µm,19.0s
ZGR Zagora 86.53 53 P **P** **06 03 53.0 +1.3**
WALA Waterton Lakes 86.60 334 P **P** **06 03 51.9 +0.2**
WALA IAmb IAmb 06 04 02.7
comp=Z,79nm,1.4s
I03D Drain, OR 86.62 325 P **P** **06 03 55.5 +3.8**
baz=137
BKZ Black Stump Fm 86.73 226 IAMs_20 IAMs_20 06 32 55.1
comp=Z,2µm,22.0s
H04A Detroit Lake 86.78 327 IAmb IAmb 06 04 09.2
comp=Z,39nm,1.1s
HAWA Hanford 86.84 329 IAmb IAmb 06 04 04.2
comp=Z,28nm,1.1s
URZ Urewera 86.86 227 P **P** **06 03 55.2 +1.9**
comp=Z,6.2nm,0.9s,baz=78,slow=17,SNR=5.2
URZ LR LR 06 35 11.8
comp=Z,1µm,18.4s,baz=211,slow=30
comp=Z,6.2nm,0.9s
URZ Urewera 86.86 227 IAmb IAmb 06 04 21.4
comp=Z,43nm,1.5s
URZ IAMs_20 IAMs_20 06 34 50.6
comp=Z,2µm,18.0s
H04D Lebanon 86.93 326 IAMs_20 IAMs_20 06 41 38.9
comp=Z,2µm,18.0s
TZRR Tazzarine 86.96 52 P **P** **06 03 55.3 +1.5**
XMAS Kiritimati 87.10 274 IAMs_20 IAMs_20 06 33 10.8
comp=Z,3µm,21.0s
LTZ Lake Taylor 87.12 222 P **P** **06 03 56.5 +2.0**
RPZ Rata Peaks 87.24 220 P **P** **06 03 56.6 +1.6**
comp=Z,30nm,1.0s,baz=159,slow=4.0,SNR=8.0
RPZ LR LR 06 34 57.5
comp=Z,959nm,19.4s,baz=125,slow=30
comp=Z,30nm,1.0s
RPZ Rata Peaks 87.24 220 P **P** **06 03 55.4 +0.4**
NEW Newport 87.25 332 LR LR 06 40 15.0
comp=Z,3µm,18.1s,baz=152,slow=34
NEW Newport 87.25 332 P **P** **06 03 55.3 +0.6**
baz=142
COR Corvallis 87.25 326 IAMs_20 IAMs_20 06 37 07.4
comp=Z,2µm,22.0s
G03D McMinnville, O 87.69 326 IAMs_20 IAMs_20 06 41 14.0
comp=Z,2µm,18.0s
F04A Amboy 87.82 327 IAmb IAmb 06 04 14.2
comp=Z,54nm,1.1s
LTY Liberty 88.00 329 IAmb IAmb 06 04 10.1
comp=Z,30nm,1.4s
HIZ Hauiti 88.15 226 IAMs_20 IAMs_20 06 34 21.6
comp=Z,1µm,20.0s
B08A Colville Reser 88.25 331 IAmb IAmb 06 04 10.0
comp=Z,31nm,1.6s
E04D Cinebar 88.35 328 IAmb IAmb 06 04 11.2
comp=Z,69nm,1.4s
E04D Cinebar 88.35 328 P **P** **06 04 01.9 +2.0**
baz=138
RAO Raoul Island 88.47 237 LR LR 06 34 23.5
comp=Z,725nm,21.4s,baz=130,slow=29
D05A Enumclaw 88.55 328 IAmb IAmb 06 04 17.6
comp=Z,54nm,1.3s
PFVI Vila Bisbo 88.70 45 *e*SKSac **S** **06 14 43.1 -3.9**
MATP Matopo 88.78 113⇑ *i*P **P** **06 04 02.9 0.0**
MATP IAmb IAmb 06 04 05.1
comp=Z,3µm,1.9s
MATP Matopo 88.78 113 LR LR 06 41 29.7
comp=Z,4µm,18.1s,baz=248,slow=34
E03A Lebam 88.81 327 IAmb IAmb 06 04 19.2
comp=Z,40nm,0.9s
MDT Midelt 88.82 51 LR LR 06 42 59.3
comp=Z,3µm,20.9s,baz=245,slow=35
MDT Midelt 88.82 51 P **P** **06 04 04.1 +1.4**
MORF Marmelete 88.92 45 *e*P **P** **06 04 03.6 +0.7**
MORF *e*SKSac **SKSac** **06 14 32.3 +1.6**
MORF IAMs_20 IAMs_20 06 40 41.6
comp=Z,4µm,20.5s
MORF Marmelete 88.92 45 *e*P **P** **06 04 03.7 +0.7**
comp=Z,25nm,2.3s
MORF Marmelete 88.92 45 *e*SKSac S 06 14 38.3 -11
MORF Marmelete 88.92 45 *e*P **P** **06 04 03.6 +0.7**
MORF *e* 06 14 32.3
BLWY Bulawayo 89.01 112⇑ *i*P **P** **06 04 03.4 -0.7**
BLWY IAmb IAmb 06 04 05.9
comp=Z,212nm,1.6s
PTEO Sao Teotonio 89.03 45 *e*P **P** **06 04 04.3 +1.0**
D03D Eldon 89.31 328 P **P** **06 04 06.3 +1.9**
baz=137
PBDV Barranco-do-Ve 89.33 46 *e*P **P** **06 04 05.7 +0.9**
comp=Z,42nm,1.3s
PBDV Barranco-do-Ve 89.33 46 *e*SKSac S 06 14 42.0 -11
MOPA Mopani 89.48 117 *e*P **P** **06 04 06.5 +0.5**
MOPA IAmb IAmb 06 04 08.8
comp=Z,43nm,1.2s
LIS Lisbon 89.50 44 *e*P **P** **06 04 06.4 +0.8**
LIS IAMs_20 IAMs_20 06 41 45.1
comp=E,3µm,19.6s
LIS Lisbon 89.50 44 *e*P **P** **06 04 06.3 +0.8**
PNCL Nicolau / Gran 89.50 45 *e*P **P** **06 04 06.4 +0.8**
PNCL Nicolau / Gran 89.50 45 *e*SKSac **SKSac** **06 14 39.8 +5.9**
PCVE Castro Verde 89.51 45 *e*P **P** **06 04 06.3 +0.7**
comp=E,18nm,1.5s
PCVE Castro Verde 89.51 45 *e*SKSac S 06 14 43.3 -11
MESJ Messejana 89.52 45 *e*P **P** **06 04 06.4 +0.7**
MESJ *e*SKSac **SKSac** **06 14 35.8 +1.7**
MESJ IAMs_20 IAMs_20 06 41 10.4
comp=Z,3µm,21.7s
MESJ Messejana 89.52 45 *e*P **P** **06 04 06.4 +0.7**
comp=Z,20nm,1.5s
MESJ Messejana 89.52 45 *e*P **P** **06 04 06.3 +0.7**
MESJ *e* 06 14 35.7
NLWA Neilton Lookou 89.56 328 IAMs_20 IAMs_20 06 39 34.5
comp=Z,1µm,22.0s
PVAQ Vaqueiros 89.56 46 *e*P **P** **06 04 06.7 +0.8**
comp=Z,40nm,1.7s
PVAQ Vaqueiros 89.56 46 *e*SKSac S 06 14 41.2 -14
PVAQ Vaqueiros 89.56 46 *e*LR LR 06 34 56.3
comp=Z,4µm,22.0s
PMAFR Mafra 89.57 44 *e*SKSac **S** **06 14 47.4 -7.6**
FCC Fort Churchill 89.72 349 IAmb IAmb 06 04 17.0
comp=Z,50nm,1.1s
PBEJ Beja 89.86 45 *e*P **P** **06 04 07.8 +0.5**
comp=Z,15nm,1.5s
EVO Evora 90.08 45 *e*P **P** **06 04 09.2 +0.9**
comp=Z,15nm,1.5s
PSBE So Bento 90.22 44 *e*P **P** **06 04 09.3 +0.4**
comp=Z,24nm,1.4s
PSBE So Bento 90.22 44 *e*SKSac **SKSac** **06 14 43.2 +5.1**
PMTG Montargil 90.28 44 *e*P **P** **06 04 09.7 +0.5**
comp=Z,23nm,1.4s
PBAR Barrancos 90.46 46 *e*SKSac **SKSac** **06 14 43.8 +4.3**
PESTR Estremoz 90.55 45 *e*P **P** **06 04 11.0 +0.5**
comp=Z,11nm,1.9s
PESTR Estremoz 90.55 45 *e*SKSac **SKSac** **06 14 47.6 +7.6**
PESTR Estremoz 90.55 45 P **P** **06 04 11.2 +0.8**
PCAS Casmilo, Conde 90.73 43 *e*P **P** **06 04 11.1 -0.2**
PCAS Casmilo, Conde 90.73 43 *e*SKSac S 06 14 52.8 -13
FIGM Figuig 90.73 53 P **P** **06 04 13.0 +1.3**
COI Coimbra 90.88 43 *e*P **P** **06 04 12.2 +0.3**
COI Coimbra 90.88 43 *e*SKSac **SKSac** **06 14 48.6 +6.8**
PMRV Marv??o 91.01 44 *e*P **P** **06 04 12.3 -0.3**
PMRV Marv??o 91.01 44 *e*SKSac S 06 14 52.3 -16
PMRV Marv??o 91.01 44 *e*LR LR 06 35 03.1
comp=Z,4µm,20.0s
LSZ Lusaka 91.15 108 LR LR 06 42 50.6
comp=Z,2µm,18.2s,baz=244,slow=34
LSZ Lusaka 91.15 108 P **P** **06 04 13.3 -0.7**
LSZ Lusaka 91.15 108 P **P** **06 04 13.3 -0.7**
LSZ pmax pmax
comp=Z,100nm,1.6s
PCBR Castelo Branco 91.22 44 *e*P **P** **06 04 12.8 -0.7**
comp=Z,12nm,1.5s
MTE Manteigas 91.52 44 *e*P **P** **06 04 15.1 +0.1**
comp=Z,15nm,1.5s
MTE Manteigas 91.52 44 *e*SKSac **SKSac** **06 14 49.2 +3.6**
MTE Manteigas 91.52 44 *e*LR LR 06 34 32.6

	comp=Z,4µm,20.0s								
AFI	**Afiamalu**	**91.65**	**253**		LR	LR	06 35 35.5		
	comp=Z,3µm,20.7s,baz=114,slow=29								
POLO	**Lamas de Olo**	**91.97**	**43**	*eP*	**P**		**06 04 18.7**	**+1.6**	
POLO	**Lamas de Olo**	**91.97**	**43**	*e*SKSac	**SKSac**		**06 14 56.4**	**+8.2**	
PGAV	**Gavieira, Arco**	**92.06**	**42**	*e*SKSac	**SKSac**		**06 14 54.6**	**+5.9**	
PGAV	**Gavieira, Arco**	**92.06**	**42**	*e*LR	LR		06 38 01.1		
	comp=Z,2µm,22.0s								
MVO	**Moncorvo**	**92.30**	**43**	*eP*	**P**		**06 04 18.6**	**0.0**	
	comp=Z,13nm,1.8s								
MVO	**Moncorvo**	**92.30**	**43**	*e*SKSac	**SKSac**		**06 14 58.7**	**+8.7**	
MVO	**Moncorvo**	**92.30**	**43**	*e*LR	LR		06 36 54.4		
	comp=Z,3µm,20.0s								
FRB	**Frobisher Bay**	**92.83**	**1**		LR	LR	06 48 55.4		
	comp=Z,627nm,18.9s,baz=175,slow=37								
PBRG	**Braganca**	**92.86**	**43**	*e*LR	LR		06 38 13.1		
	comp=Z,2µm,18.0s								
PAB	**San Pablo**	**92.96**	**46**		P	**P**	**06 04 21.6**	**-0.1**	
PAB	**San Pablo**	**92.96**	**46**		P	**P**	**06 04 21.6**	**-0.1**	
PAB					pmax	pmax			
	comp=Z,10.0nm,1.2s								
PAB	**San Pablo**	**92.96**	**46**		P	**P**	**06 04 22.3**	**+0.5**	
ESDC	**Sonseca Array**	**93.28**	**46**		P	**P**	**06 04 23.2**	**0.0**	
	comp=Z,3.0nm,0.9s,baz=253,slow=4.1,SNR=21								
ESDC					LR	LR	06 43 30.9		
	comp=Z,4µm,21.2s,baz=226,slow=34								
	comp=Z,3.0nm,0.9s								
CART	**Cartagena**	**93.98**	**49**		IAMs_20	IAMs_20	06 44 27.0		
	comp=Z,1µm,20.0s								
BBB	**Bella Bella**	**94.90**	**329**		LR	LR	06 42 20.4		
	comp=Z,927nm,21.9s,baz=147,slow=32								
TETE	**Tete**	**95.12**	**112**	*eP*		**P**	**06 04 33.6**	**+1.5**	
TETE					IAmb	IAmb	06 04 35.7		
	comp=Z,93nm,2.3s								
KIP	**Kipapa**	**97.00**	**291**	*ceP*			06 04 41.0		
KIP					pmax	pmax			
	comp=Z,91nm,1.8s								
SFJD	**Kangerlussuaq**	**97.40**	**8**		LR	LR	06 49 13.3		
	comp=Z,685nm,20.0s,baz=198,slow=36								
SFJD	**Kangerlussuaq**	**97.40**	**8**		IAMs_20	IAMs_20	06 49 21.1		
	comp=Z,1µm,21.0s								
YKA	**Yellowknife Ar**	**97.71**	**341**		P	Pdif	06 04 42.8	0.0	
	comp=Z,3.4nm,1.0s,baz=138,slow=4.8,SNR=15								
YKA					PP	**PP**	**06 08 44.5**	**+3.2**	
	comp=Z,1.0nm,1.0s,baz=144,slow=7.1,SNR=2.3								
YKA					PKKPbc	**PKKPbc**	**06 21 17.9**	**-2.5**	
	comp=Z,0.7nm,0.6s,baz=323,slow=3.7,SNR=10								
YKA					LR	LR	06 51 58.6		
	comp=Z,608nm,18.4s,baz=150,slow=37								
	comp=Z,3.4nm,1.0s								
MSVF	**Nonsavu**	**97.90**	**245**		LR	LR	06 38 56.7		
	comp=Z,810nm,21.8s,baz=148,slow=29								
MSVF	**Nonsavu**	**97.90**	**245**		IAMs_20	IAMs_20	06 39 39.3		
	comp=Z,1µm,20.0s								
MSVF	**Nonsavu**	**97.90**	**245**	‖ *eP*		**P**	**06 04 42.5**	**-2.4**	
MSVF					pmax	pmax			
	comp=Z,58nm,2.0s								
ILULI	**Ilulissat**	**99.46**	**7**	*i* P		**PKiKP**	**06 09 20.6**	**+1.1**	
WRAK	**Wrangell Islan**	**99.57**	**331**		IAMs_20	IAMs_20	06 46 39.9		
	comp=Z,2µm,19.0s								
DLBC	**Dease Lake**	**99.92**	**333**		LR	LR	06 48 06.3		
	comp=Z,1µm,18.8s,baz=139,slow=34								
DLBC	**Dease Lake**	**99.92**	**333**		P	**Pdif**	**06 04 54.7**	**+1.9**	
	baz=131								
DSB	**Dublin**	**99.94**	**34**		IAMs_20	IAMs_20	06 52 34.3		
	comp=Z,2µm,19.0s								
KEST	**Kesra**	**100.12**	**55**		P	**Pdif**	**06 04 54.3**	**0.0**	
	comp=Z,3.1nm,0.8s,baz=207,slow=6.8,SNR=3.3								
P33M	**Teslin, Yukon**	**102.16**	**333**		IAMs_20	IAMs_20	06 47 41.4		
	comp=Z,2µm,20.0s								
ESK	**Eskdalemuir**	**102.65**	**33**		IAMs_20	IAMs_20	06 54 51.0		
	comp=Z,2µm,19.0s								
FARO	**Faro, Yukon**	**103.62**	**335**		P	**Pdif**	**06 05 10.9**	**+1.8**	
	baz=128								
N31M	**Braeburn, Yuko**	**104.09**	**334**		IAMs_20	IAMs_20	06 50 00.4		
	comp=Z,1µm,20.0s								
BMRD	**Maredsous**	**104.20**	**40**	*d*Pdif	**Pdif**		**06 05 12.1**	**+0.2**	
SUMG	**Summit**	**104.22**	**10**	*i* P		**PKiKP**	**06 09 29.0**	**+0.4**	
BGES	**Gesves**	**104.42**	**40**	*d*Pdif	**Pdif**		**06 05 13.2**	**+0.2**	
ECH	**Echery**	**104.59**	**43**		IAMs_20	IAMs_20	06 53 15.6		
	comp=Z,2µm,20.0s								
WLF	**Walferdange**	**104.68**	**41**	*d*Pdif	**Pdif**		**06 05 15.6**	**+1.5**	
VLC	**Villacollemand**	**104.74**	**48**		IAMs_20	IAMs_20	06 53 56.7		
	comp=Z,1µm,20.0s								
BCPM	**Bancas Point**	**104.78**	**331**		IAMs_20	IAMs_20	06 48 16.6		
	comp=Z,1µm,20.0s								
BTNL	**Ternell**	**105.10**	**40**	*d*Pdif	**Pdif**		**06 05 15.4**	**-0.6**	
M30M	**Minto, Yukon**	**105.12**	**334**		IAMs_20	IAMs_20	06 52 00.4		
	comp=Z,1µm,19.0s								
BFO	**Black Forest**	**105.34**	**43**		IAMs_20	IAMs_20	06 54 06.4		
	comp=Z,1µm,20.0s								
C36M	**Paulatuk**	**105.43**	**343**		IAMs_20	IAMs_20	06 53 47.1		
	comp=Z,1µm,19.0s								
TULEG	**Thule**	**105.66**	**1**		IAMs_20	IAMs_20	06 53 16.5		
	comp=Z,1µm,21.0s								
TABL	**Table Mountain**	**105.67**	**331**		IAMs_20	IAMs_20	06 51 01.3		
	comp=Z,1µm,21.0s								
SCO	**Scoresbysund**	**105.70**	**16**		IAMs_20	IAMs_20	06 58 05.4		
	comp=Z,833nm,20.0s								
LOGN	**Logan Glacier**	**105.82**	**332**		IAMs_20	IAMs_20	06 49 46.1		
	comp=Z,1µm,20.0s								
YAH	**Yahtse**	**105.89**	**331**		IAMs_20	IAMs_20	06 49 21.9		
	comp=Z,2µm,21.0s								
CTGM	**Chitina Glacie**	**106.03**	**332**		IAMs_20	IAMs_20	06 48 48.8		
	comp=Z,2µm,22.0s								
STU	**Stuttgart**	**106.05**	**43**		IAMs_20	IAMs_20	06 54 06.2		
	comp=Z,1µm,20.0s								
GRNC	**Granite Creek**	**106.08**	**331**		IAMs_20	IAMs_20	06 49 52.2		
	comp=Z,2µm,22.0s								
BARN	**Barnard Glacie**	**106.22**	**332**		IAMs_20	IAMs_20	06 49 08.6		
	comp=Z,1µm,22.0s								
SNH	**Sunshine Point**	**106.26**	**331**		IAMs_20	IAMs_20	06 48 55.8		
	comp=Z,2µm,22.0s								
WAX	**Waxell Ridge**	**106.40**	**331**		IAMs_20	IAMs_20	06 48 49.6		
	comp=Z,2µm,21.0s								
HMT	**Hamilton**	**106.95**	**330**		IAMs_20	IAMs_20	06 51 34.1		
	comp=Z,1µm,19.0s								
MCARA	**McCarthy VSAT**	**106.95**	**332**		IAMs_20	IAMs_20	06 52 04.0		
	comp=Z,1µm,20.0s								
M27K	**Edge Creek, AK**	**106.98**	**333**		IAMs_20	IAMs_20	06 51 04.7		
	comp=Z,1µm,21.0s								
VRDI	**Verde Repeater**	**107.05**	**331**		IAMs_20	IAMs_20	06 49 57.7		
	comp=Z,2µm,21.0s								
I29M	**Ogilvie Camp,**	**107.24**	**336**		IAMs_20	IAMs_20	06 50 54.3		
	comp=Z,728nm,20.0s								
GLB	**Gilahina Butte**	**107.31**	**331**		IAMs_20	IAMs_20	06 52 03.5		
	comp=Z,1µm,21.0s								
INK	**Inuvik**	**107.37**	**340**		PKKPbc	PKKPbc	06 20 50.0	-1.8	
	comp=Z,1.7nm,0.8s,baz=166,slow=3.1,SNR=4.4								
BMRM	**Bremner River**	**107.41**	**331**		IAMs_20	IAMs_20	06 49 10.2		
	comp=Z,1µm,22.0s								
M26K	**Nabesna, AK**	**107.45**	**332**		IAMs_20	IAMs_20	06 50 58.2		
	comp=Z,2µm,22.0s								
GRFO	**Grafenberg**	**107.64**	**43**		IAMs_20	IAMs_20	06 52 23.3		
	comp=Z,1µm,21.0s								
GRA1	**Grafenberg Arr**	**107.65**	**43**		IAMs_20	IAMs_20	06 52 11.4		
	comp=Z,1µm,21.0s								
N25K	**Chitina, Valde**	**107.72**	**331**		IAMs_20	IAMs_20	06 50 29.3		
	comp=Z,1µm,22.0s								
L26K	**Log Cabin Wild**	**107.90**	**333**		IAMs_20	IAMs_20	06 51 54.1		
	comp=Z,1µm,21.0s								
HIN	**Hinchinbrook I**	**107.95**	**330**		IAMs_20	IAMs_20	06 52 19.8		
	comp=Z,1µm,18.0s								
FID	**Port Fidalgo**	**108.11**	**330**		IAMs_20	IAMs_20	06 52 46.9		
	comp=Z,866nm,20.0s								
KLU	**Klutina**	**108.22**	**331**		IAMs_20	IAMs_20	06 49 57.6		
	comp=Z,1µm,21.0s								
OBKA	**Obir**	**108.39**	**47**	*eP*		**PKiKP**	**06 09 37.5**	**+0.7**	
	comp=Z,1.5nm,0.7s								
GLI	**Glacier Island**	**108.44**	**330**		IAMs_20	IAMs_20	06 55 06.5		
	comp=Z,881nm,18.0s								
NKC	**Novy Kostel**	**108.59**	**42**	*e*PP		PP	06 09 54.7	-8.4	
NKC					AMS	AMS	06 52 10.0		
	comp=Z,1µm,20.7s								
M24K	**Tolsona, Glenn**	**108.61**	**331**		IAMs_20	IAMs_20	06 50 55.0		
	comp=Z,1µm,22.0s								
SOKA	**Soboth**	**108.77**	**47**	*eP*		**PKiKP**	**06 09 38.4**	**+1.0**	
	comp=Z,2.2nm,0.8s								
GERES	**GERESS Array B**	**108.79**	**44**		PKiKP	**PKiKP**	**06 09 38.0**	**+0.6**	
	comp=Z,1.3nm,0.6s,baz=201,slow=2.5,SNR=11								
GERES	**GERESS Array B**	**108.79**	**44**			**PKiKP**	**06 09 37.4**	**0.0**	
KHC	**Kasperske Hory**	**108.83**	**44**	*eP*		**PP**	**06 09 59.1**	**-5.7**	
KHC				*e*SDIF			06 17 41.3		
KHC					AMS	AMS	06 49 30.0		
	comp=Z,1µm,25.8s								
RIDG	**Independent Ri**	**108.84**	**333**		IAMs_20	IAMs_20	06 53 20.9		
	comp=Z,1µm,18.0s								
SCM	**Sheep Creek Mo**	**108.97**	**331**		IAMs_20	IAMs_20	06 51 32.5		
	comp=Z,879nm,21.0s								
CKRC	**Cesky Krumlov**	**109.15**	**44**	*eP*		**PP**	**06 10 02.0**	**-5.2**	
CKRC				*e*SDIF			06 17 38.7		
KNK	**Knik Glacier**	**109.27**	**330**		IAMs_20	IAMs_20	06 55 41.4		
	comp=Z,880nm,20.0s								
ARSA	**Arzberg**	**109.30**	**46**	*eP*		**PKiKP**	**06 09 38.6**	**+0.3**	
	comp=Z,2.7nm,0.7s								
CLL	**Collm**	**109.34**	**41**	*eP*		**Pdif**	**06 05 36.0**	**+1.2**	
CLL					pmax	pmax			
	comp=Z,4.0nm,1.2s								
CLL					MLR	MLR			
	comp=Z,2µm,19.5s								
CLL	**Collm**	**109.34**	**41**	*e*Pdif		**Pdif**	**06 05 36.0**	**+1.2**	
CLL				*e*PKiKP		**PKiKP**	**06 09 39.0**	**+0.8**	
	comp=Z,4.0nm,1.2s								
CLL				*e*PP		**PP**	**06 10 04.0**	**-4.4**	
CLL				*e*pPP			06 10 12.0		
CLL				*e*SKPdf		**SKiKP**	**06 13 11.0**	**-0.7**	
CLL				*e*PPPP			06 14 18.0		
CLL				*e*SKSac		**SKSac**	**06 16 12.0**	**-0.3**	
CLL				*e*SKSdf		**SKSdf**	**06 16 48.0**	**-0.1**	
CLL				*e*Sdif		**Sdif**	**06 17 40.0**	**-3.7**	
CLL				*e*PS		**PS**	**06 19 31.0**	**-4.6**	
CLL				*e*PKKPab		**PKKPab**	**06 20 57.0**	**+3.0**	
CLL				*e*SS		**SS**	**06 25 26.0**	**-2.0**	
CLL				*e*SSS		SSS	06 29 29.0		
CLL				*e*SSSS			06 32 30.0		
CLL					Lm	MLR	06 54 00.0		
	comp=N,700nm,21.0s								
CLL					Lm	MLR	06 54 00.0		
	comp=E,2µm,20.5s								
CLL					Lm	MLR	06 54 00.0		
	comp=Z,2µm,19.5s								
O22K	**Cooper Landing**	**109.42**	**329**		IAMs_20	IAMs_20	06 46 42.6		
	comp=Z,849nm,20.0s								
DHY	**Denali Highway**	**109.55**	**332**		IAMs_20	IAMs_20	06 53 16.7		
	comp=Z,872nm,21.0s								
GHO	**Glory Hole Cre**	**109.63**	**331**		IAMs_20	IAMs_20	07 02 59.9		
	comp=Z,778nm,21.0s								
KDAK	**Kodiak Island**	**109.64**	**326**		IAMs_20	IAMs_20	06 52 26.6		
	comp=Z,1µm,20.0s								
BRLK	**Bradley Lake**	**109.65**	**328**		IAMs_20	IAMs_20	06 48 00.7		
	comp=Z,953nm,22.0s								
RC01	**Rabbit Creek A**	**109.69**	**330**		IAMs_20	IAMs_20	06 53 12.6		
	comp=Z,1µm,21.0s								
CNPM	**China Poot**	**109.71**	**328**		IAMs_20	IAMs_20	06 47 31.3		
	comp=Z,869nm,19.0s								
BRG	**Berggiesshubel**	**109.72**	**42**	*e*(P)		**PKiKP**	**06 09 40.2**	**+1.3**	
BRG					Amp		06 09 42.9		
	comp=Z,1.9nm,1.0s								
PRU	**Pruhonice**	**109.74**	**43**	*eP*		PP	06 09 56.1	-15	
PRU				*e*SDIF			06 17 47.8		
PRU					AMS	AMS	06 55 00.0		
	comp=Z,1µm,20.2s								
CONA	**Conrad Observa**	**109.77**	**46**	*eP*		**PKiKP**	**06 09 39.3**	**+0.1**	
	comp=Z,2.7nm,0.7s								
FIS	**Fire Island**	**109.92**	**330**		IAMs_20	IAMs_20	06 53 31.7		
	comp=Z,1µm,19.0s								
RONA	**Rosalia, Austr**	**109.95**	**46**	*eP*		**PKiKP**	**06 09 39.5**	**0.0**	
	comp=Z,1.4nm,0.7s								
HOM	**Homer**	**109.95**	**328**		IAMs_20	IAMs_20	06 47 56.8		
	comp=Z,832nm,20.0s								
PVCC	**Panska Ves**	**109.96**	**43**	*e*PP		PP	06 09 58.2	-15	
PVCC					AMS	AMS	06 56 50.0		
	comp=Z,2µm,19.8s								
HDA	**Harding Lake**	**109.97**	**333**		IAMs_20	IAMs_20	06 53 38.7		
	comp=Z,1µm,19.0s								
TREC	**Trest**	**110.05**	**44**		AMS	AMS	06 58 10.0		
	comp=Z,2µm,19.2s								
ILAR	**Eielson Array**	**110.11**	**334**		PKiKP	**PKiKP**	**06 09 38.9**	**-0.3**	
	comp=Z,1.4nm,1.0s,baz=184,slow=1.6,SNR=7.1								
ILAR					PKKPbc	**PKKPbc**	**06 20 40.6**	**-2.3**	
	comp=Z,0.7nm,0.7s,baz=286,slow=2.9,SNR=6.2								
M22K	**Willow**	**110.13**	**330**		IAMs_20	IAMs_20	06 53 49.3		
	comp=Z,859nm,22.0s								
SUA	**Susitna One**	**110.29**	**330**		IAMs_20	IAMs_20	06 53 43.4		
	comp=Z,1µm,21.0s								
RND	**Reindeer**	**110.29**	**332**		IAMs_20	IAMs_20	06 53 37.5		
	comp=Z,1µm,22.0s								
CCB	**Clear Creek Bu**	**110.41**	**334**		IAMs_20	IAMs_20	06 53 53.2		
	comp=Z,1µm,19.0s								
WRH	**Wood River Hil**	**110.44**	**333**		IAMs_20	IAMs_20	06 54 23.2		
	comp=Z,1µm,20.0s								
MCK	**McKinley**	**110.47**	**332**		IAMs_20	IAMs_20	06 53 02.9		
	comp=Z,1µm,22.0s								
KRUC	**Moravsky**	**110.52**	**45**	*e*PKiKP		**PKiKP**	**06 09 41.0**	**+0.5**	
COLA	**College**	**110.52**	**334**		IAMs_20	IAMs_20	06 54 06.4		
	comp=Z,1µm,19.0s								
TCOL	**CIGO, UAF Yank**	**110.53**	**334**		IAMs_20	IAMs_20	06 54 06.4		
	comp=Z,1µm,19.0s								
Q19K	**Cape Douglas,**	**110.61**	**327**		IAMs_20	IAMs_20	06 52 24.1		
	comp=Z,831nm,21.0s								
MDM	**Murphy Dome**	**110.70**	**334**		IAMs_20	IAMs_20	06 54 20.2		
	comp=Z,1µm,19.0s								
VRAC	**Vranov**	**110.72**	**44**	↑↑P		**PKiKP**	**06 09 41.5**	**+0.6**	
VRAC	**Vranov**	**110.72**	**44**	PKiKP		**PKiKP**	**06 09 41.5**	**+0.6**	
VRAC	**Vranov**	**110.72**	**44**	*e*PKiKP		**PKiKP**	**06 09 41.6**	**+0.6**	
KONO	**Kongsberg**	**110.78**	**32**		IAMs_20	IAMs_20	06 52 23.9		
	comp=Z,1µm,21.0s								
UPC	**Upice**	**110.81**	**43**	*eP*		PP	06 10 05.5	-14	
UPC				*e*SDIF		**Sdif**	**06 17 54.8**	**-1.2**	
UPC					AMS	AMS	06 50 40.0		
	comp=Z,2µm,24.0s								
CHVC	**Chvalec**	**110.86**	**43**	*eP*		PP	06 10 11.1	-8.4	
CHVC					AMS	AMS	06 50 40.0		
	comp=Z,2µm,24.1s								
TRF	**Thorofare Moun**	**110.90**	**332**		IAMs_20	IAMs_20	06 53 33.5		
	comp=Z,1µm,21.0s								
DPC	**Dobruska-Polom**	**110.94**	**43**	*eP*		PP	06 10 04.0	-16	
DPC				*e*SDIF		**Sdif**	**06 18 01.8**	**+4.6**	
DPC					AMS	AMS	06 50 30.0		
	comp=Z,1µm,25.3s								
OSTC	**Ostas**	**110.94**	**43**	*eP*		**PP**	**06 10 12.6**	**-7.5**	
OSTC					AMS	AMS	06 50 40.0		
	comp=Z,2µm,23.4s								
DIVS	**Divibare**	**111.05**	**50**		IAMs_20	IAMs_20	06 59 32.7		
	comp=Z,1µm,19.0s								
KRLC	**Kraliky**	**111.11**	**44**	*eP*		PP	06 10 05.8	-16	
KRLC				*e*SDIF		**Sdif**	**06 18 06.8**	**+8.1**	
KRLC					AMS	AMS	06 55 40.0		
	comp=Z,1µm,20.3s								
KTH	**Kantishna Hill**	**111.20**	**332**		IAMs_20	IAMs_20	06 53 42.4		
	comp=Z,1µm,20.0s								
I23K	**Minto, Yukon-K**	**111.22**	**334**		IAMs_20	IAMs_20	06 55 32.7		
	comp=Z,1µm,19.0s								
JAVC	**Velka Javorina**	**111.23**	**45**	*e*PKiKP		**PKiKP**	**06 09 43.1**	**+1.2**	
BPAW	**Bear Paw Mtn.**	**111.44**	**332**		IAMs_20	IAMs_20	06 53 43.8		
	comp=Z,881nm,22.0s								
MORC	**Moravsky Berou**	**111.47**	**44**	↑↑P		**PKiKP**	**06 09 43.0**	**+0.7**	
MORC	**Moravsky Berou**	**111.47**	**44**	PKiKP		**PKiKP**	**06 09 43.0**	**+0.7**	
MORC	**Moravsky Berou**	**111.47**	**44**	*e*PKiKP		**PKiKP**	**06 09 42.6**	**+0.2**	
M20K	**Styx River**	**111.50**	**330**		IAMs_20	IAMs_20	06 54 31.4		
	comp=Z,966nm,21.0s								
MAUC	**Maruska**	**111.50**	**45**		AMS	AMS	06 53 40.0		
	comp=Z,2µm,20.5s								
CAST	**Castle Rocks**	**111.63**	**332**		IAMs_20	IAMs_20	06 56 16.8		
	comp=Z,1µm,18.0s								
O18K	**Koktuh Hills**	**111.70**	**327**		IAMs_20	IAMs_20	06 50 56.8		
	comp=Z,854nm,21.0s								
N19K	**Bonanza Creek**	**111.71**	**328**		IAMs_20	IAMs_20	07 03 09.1		
	comp=Z,851nm,19.0s								
ALE	**Alert**	**111.75**	**1**		IAMs_20	IAMs_20	06 57 02.2		
	comp=Z,2µm,22.0s								
OKC	**Ostrava-Krasne**	**111.86**	**44**	*e*SDIF		**Sdif**	**06 18 06.7**	**+1.9**	
OKC					AMS	AMS	06 58 00.0		
	comp=Z,1µm,19.5s								
NB2	**NORSAR Subarra**	**112.04**	**31**		PKPdf	**PKiKP**	**06 09 46.2**	**+3.1**	
	baz=248,slow=1.9								
NB2	**NORSAR Subarra**	**112.04**	**31**		PKPdf	**PKiKP**	**06 09 46.2**	**+3.1**	
	comp=Z,6.0nm,1.4s,baz=248,slow=1.9								
NOA	**NORSAR Array B**	**112.04**	**31**		PKiKP	**PKiKP**	**06 09 43.2**	**+0.1**	
	comp=Z,0.6nm,0.6s,baz=249,slow=2.1,SNR=4.4								
M19K	**Big River Lodg**	**112.06**	**330**		IAMs_20	IAMs_20	06 52 01.3		
	comp=Z,884nm,19.0s								
CNBA	**Chernabura Isl**	**112.17**	**321**		IAMs_20	IAMs_20	06 45 32.0		
	comp=Z,2µm,21.0s								
SANT	**Santorini**	**112.23**	**60**		IAMs_20	IAMs_20	06 59 53.4		
	comp=Z,1µm,20.0s								
N18K	**Kilae Creek**	**112.31**	**328**		IAMs_20	IAMs_20	07 03 58.9		
	comp=Z,756nm,20.0s								
L19K	**White Mountain**	**112.36**	**330**		IAMs_20	IAMs_20	06 54 59.3		
	comp=Z,1µm,20.0s								
K20K	**Telida**	**112.44**	**331**		IAMs_20	IAMs_20	06 54 36.2		
	comp=Z,1µm,21.0s								
BZS	**Buzias**	**112.65**	**49**	⇓P		**PKiKP**	**06 09 45.5**	**+0.8**	
BZS	**Buzias**	**112.65**	**49**	⇓PKIKP		**PKiKP**	**06 09 45.5**	**+0.8**	
TOLK	**Toolik Lake Re**	**112.68**	**337**		IAMs_20	IAMs_20	06 55 17.0		
	comp=Z,1µm,21.0s								
TOLK	**Toolik Lake Re**	**112.68**	**337**		P	**PKiKP**	**06 09 45.2**	**+1.0**	
	baz=112								
H21K	**Melozitna Rive**	**112.75**	**334**		IAMs_20	IAMs_20	06 55 44.1		
	comp=Z,2µm,20.0s								
H21K	**Melozitna Rive**	**112.75**	**334**		P	**PKiKP**	**06 09 45.2**	**+0.9**	
	baz=111								
J20K	**Nowinta River**	**112.76**	**332**		IAMs_20	IAMs_20	06 54 36.6		
	comp=Z,1µm,21.0s								
VTS	**Vitosha**	**112.76**	**53**	⇓P		**PKiKP**	**06 09 45.8**	**+0.6**	
VTS	**Vitosha**	**112.76**	**53**	⇓PKIKP		**PKiKP**	**06 09 45.8**	**+0.6**	
TTA	**Tatalina**	**113.12**	**330**		P	**PKiKP**	**06 09 45.8**	**+0.7**	
	baz=109								
KARP	**Karpathos**	**113.24**	**61**		IAMs_20	IAMs_20	07 00 35.3		
	comp=Z,1µm,20.0s								
DRGR		**113.75**	**48**	⇓P		**PKiKP**	**06 09 47.5**	**+0.7**	
DRGR		**113.75**	**48**	⇓PKIKP		**PKiKP**	**06 09 47.5**	**+0.7**	
NOR	**Nord**	**114.16**	**8**	*i* P		PKPdf	06 09 42.4	-4.2	
ARR	**Arges**	**114.59**	**50**	⇓P		**PKiKP**	**06 09 48.9**	**+0.4**	
DOPR	**Dopca**	**115.27**	**50**	⇑P		**PKiKP**	**06 09 50.6**	**+0.9**	
MLR	**Muntele Rosu**	**115.51**	**51**	⇑P		**PKiKP**	**06 09 51.3**	**+1.0**	
MLR	**Muntele Rosu**	**115.51**	**51**	⇑PKIKP		**PKiKP**	**06 09 51.3**	**+1.0**	
BURAR	**Bucovina Array**	**115.62**	**48**	⇑P		**PKiKP**	**06 09 51.6**	**+1.2**	
BURAR	**Bucovina Array**	**115.62**	**48**	⇑PKIKP		**PKiKP**	**06 09 51.6**	**+1.2**	
MIDW	**Midway**	**115.77**	**289**		IAMs_20	IAMs_20	06 45 42.4		
	comp=Z,2µm,20.0s								
A21K	**Barrow**	**115.84**	**339**		IAMs_20	IAMs_20	06 58 23.4		
	comp=Z,1µm,21.0s								
BIZ	**Bicaz**	**116.02**	**49**	⇓P		**PKiKP**	**06 09 51.7**	**+0.6**	
SUW	**Suwalki**	**116.07**	**41**			**PKiKP**	**06 09 50.2**	**-0.7**	
SUW					IAMs_20	IAMs_20	06 56 47.2		
	comp=Z,1µm,22.0s								
SUW	**Suwalki**	**116.07**	**41**		PKiKP	**PKPdf**	**06 09 50.2**	**-0.7**	
SUW					MLR	MLR			
	comp=Z,1µm,22.0s								
SUW	**Suwalki**	**116.07**	**41**	*eP*		**PKiKP**	**06 09 51.2**	**+0.3**	
ISP	**Isparta**	**116.53**	**60**		IAMs_20	IAMs_20	07 05 40.1		
	comp=Z,1µm,19.0s								
HARR	**Harsova**	**116.64**	**52**	⇑P		**PKiKP**	**06 09 53.0**	**+0.7**	
HARR	**Harsova**	**116.64**	**52**	⇑PKIKP		**PKiKP**	**06 09 53.0**	**+0.7**	
PABE	**Paberze**	**116.87**	**39**	*eP*		**PKiKP**

comp=Z,50nm,1.5s
OBN MLR MLR
comp=Z,2µm,20.0s
RAYN Ar Rayn 124.23 80 PKPdf **PKiKP 06 10 08.0 0.0**
RAYN Ar Rayn 124.23 80 ⇑PKiKP **PKiKP 06 10 08.6 +0.7**
RAYN Ar Rayn 124.23 80 *i* PKiKP **PKiKP 06 10 08.6 +0.7**
SNR=17
MOS Moscow 124.57 40 *i* PKIKP **PKPdf 06 10 05.1 -2.1**
MOS *e* 06 11 52.6
MOS pmax pmax
comp=Z,29nm,0.8s
MOS MLR MLR
comp=Z,2µm,21.0s
SOC Sochi 124.67 55 *i* PKIKP **PKiKP 06 10 08.1 0.0**
SOC *e* 06 11 52.7
SOC *e*PPP PPP 06 14 31.2
SOC *e*PS **PS 06 21 54.4 -0.9**
SOC *e*SS SS 06 28 47.9 -0.3
SOC *e*SSS SSS 06 33 27.0
SOC pmax pmax
comp=Z,25nm,0.9s
SOC MLR MLR
comp=Z,402nm,19.0s
WR0 Warramunga Arr 124.73 211 PKPdf **PKPdf 06 10 08.5 -0.3**
WRA Warramunga Arr 124.83 210 PKP **PKPdf 06 10 08.6 -0.4**
comp=Z,6.6nm,0.4s,baz=151,slow=1.7,SNR=26
WRA PKKPbc **PKKPbc 06 19 49.6 +0.3**
comp=Z,1.4nm,0.6s,baz=342,slow=4.4,SNR=14
WRAB Tennant Creek 124.83 210 **PKPdf 06 10 08.6 -0.4**
WRAB Tennant Creek 124.83 210*c* iPKIKP **PKiKP 06 10 09.5 +0.2**
WRAB pmax pmax
comp=Z,18nm,1.0s
LPSR Galich'ya Gora 125.17 44 *i* PKIKP **PKPdf 06 10 08.3 -0.2**
LPSR pmax pmax
comp=Z,20nm,0.8s
LPSR MLR MLR
comp=Z,1µm,21.0s
VSR Storozhevoye 125.22 46 *i* PKIKP **PKPdf 06 10 07.7 -0.9**
VSR pmax pmax
comp=Z,10.0nm,0.9s
VORD Divnogorie 125.28 46 *e*PKIKP **PKPdf 06 10 08.7 0.0**
VORD pmax pmax
comp=Z,10.0nm,0.6s
VORR Voronezh 125.28 45 *e*PKIKP **PKPdf 06 10 07.9 -0.8**
VORR pmax pmax
comp=Z,70nm,0.4s
KLMR Klimovskoe 125.56 34 *e*PKIKP **PKPdf 06 10 07.0 -1.9**
KLMR pmax pmax
comp=Z,40nm,0.8s
KLMR Klimovskoe 125.56 34 *e*PKPdf **PKPdf 06 10 07.0 -1.9**
KLMR AMP 06 10 11.3
comp=Z,40nm,0.8s
KLMR LQ LQ 06 54 40.6
KLMR LQ LQ 06 54 40.6
KLMR LR LR 07 02 38.3
BATM Batumi 125.79 58 ⇓P **PKiKP 06 10 10.9 +0.4**
BATM Batumi 125.79 58 ⇓PKIKP **PKiKP 06 10 10.9 +0.4**
H11S2 WAKE ISLAND Hyl 25.82 272 T T 08 29 08.3
baz=115,slow=75,SNR=314
H11S1 WAKE ISLAND Hyl 25.83 272 T T 08 29 12.8
baz=115,slow=75,SNR=242
H11S3 WAKE ISLAND Hyl 25.83 272 T T 08 29 04.0
baz=115,slow=75,SNR=239
H11N3 WAKE ISLAND Hyl 26.11 274 T T 08 29 28.8
baz=112,slow=75,SNR=89
PMG Port Moresby 126.12 230 PKP **PKiKP 06 10 11.9 0.0**
comp=Z,13nm,0.8s,baz=262,slow=3.6,SNR=6.3
PMG Port Moresby 126.12 230*d* iPKIKP **PKiKP 06 10 12.7 +0.7**
PMG pmax pmax
comp=Z,21nm,1.0s
H11N1 WAKE ISLAND Hyl 26.13 274 T T 08 29 24.9
baz=112,slow=75,SNR=49
H11N2 WAKE ISLAND Hyl 26.13 274 T T 08 29 33.4
baz=112,slow=75,SNR=84
VRH Novokhopyorsk 126.82 46 *i* PKIKP **PKPdf 06 10 11.3 -0.4**
VRH pmax pmax
comp=Z,10.0nm,0.9s
VRH MLR MLR
comp=Z,2µm,23.0s
KIV Kislovodsk 126.86 55 PKPdf **PKiKP 06 10 12.5 -0.1**
KIV Kislovodsk 126.86 55 *i* PKIKP **PKiKP 06 10 12.4 -0.2**
KIV *e* 06 12 09.2
KIV *e*PS **PS 06 22 12.9 -1.8**
KIV pmax pmax
comp=Z,18nm,1.1s
KIV MLR MLR
comp=Z,406nm,23.0s
KIV Kislovodsk 126.86 55 PKiKP **PKiKP 06 10 13.3 +0.7**
KBZ Khabaz 126.98 55 PKP **PKiKP 06 10 13.3 +0.7**
comp=Z,9.2nm,0.8s,baz=263,slow=1.8,SNR=20
KBZ Khabaz 126.98 55*d* iPKIKP **PKiKP 06 10 13.0 +0.3**
GOF Gofitskoye 127.24 54⇑*e*PKIKP **PKiKP 06 10 13.2 0.0**
ZEI Tsey 127.59 57 *i* PKIKP **PKiKP 06 10 14.3 0.0**
ZEI pmax pmax
comp=Z,8.0nm,1.0s
GNI Garni 127.84 60 PKP **PKiKP 06 10 15.8 +1.0**
comp=Z,3.4nm,0.3s,baz=231,slow=5.1,SNR=6.5
GNI Garni 127.84 60 IAMs_20 IAMs_20 07 17 57.5
comp=Z,822nm,21.0s
GNI Garni 127.84 60*d* iPKIKP **PKiKP 06 10 15.4 +0.6**
GNI Garni 127.84 60 PKiKP **PKiKP 06 10 16.0 +1.2**
PRGR Permogore 128.41 33 *e*PKIKP **PKiKP 06 10 15.5 +0.5**
PRGR pmax pmax
comp=Z,62nm,0.9s
MBWA Marble Bar 128.54 194 **PKPdf 06 10 15.6 -0.4**
BILL Bilibino 128.69 336 PKPdf **PKiKP 06 10 16.1 +0.6**
BILL IAMs_20 IAMs_20 07 07 39.3
comp=Z,932nm,20.0s
BILL Bilibino 128.69 336*d* iPKIKP **PKiKP 06 10 16.0 +0.6**
BILL *i* 06 10 25.3
BILL *i* 06 10 29.4
BILL *e* 06 12 31.1
BILL *e*PS **PS 06 22 27.1 -2.5**
BILL pmax pmax
comp=Z,20nm,1.1s
BILL MLR MLR
comp=Z,916nm,18.0s
GROC Groznyy 129.02 56 *i* PKIKP **PKiKP 06 10 19.8 +3.0**
GROC *e* 06 12 26.0
GROC pmax pmax
comp=Z,20nm,0.4s
MAK Makhachkala 130.24 57 *e*P **Pdif 06 07 03.4 -4.5**
MAK *e* 06 12 27.9
MAK *e*SSS SSS 06 34 39.3
MAK pmax pmax
comp=Z,30nm,0.4s
BELG Belogornoye 130.48 45⇑*i* PKIKP **PKiKP 06 10 19.4 0.0**
KIRV Kirov 130.79 36 PKP **PKiKP 06 10 19.8 0.0**
comp=Z,18nm,0.5s,baz=258,slow=2.8,SNR=8.3
KIRV Kirov 130.79 36*d* iPKIKP **PKiKP 06 10 20.2 +0.4**
MZR Muzera 130.95 84 PKiKP **PKiKP 06 10 21.5 +0.1**
ASUD Al Ashush, Dub 133.07 83 *i* PKiKP **PKiKP 06 10 25.4 -0.2**
SNR=6.1
FAQ Al Faqa, Dubai 133.34 83 PKiKP **PKiKP 06 10 25.7 -0.4**
NAZ Nazwa, Dubai 133.47 82 PKPdf **PKiKP 06 10 25.9 -0.5**
ASHO Ashiyiah 133.72 83 PKPdf **PKPdf 06 10 25.6 -0.1**
HATD Hatta, Dubai 133.83 83 PKPdf **PKPdf 06 10 26.0 +0.2**
UOSS Minazif 133.93 83 PKPdf **PKPdf 06 10 26.1 0.0**
SOHO SOHO 133.96 84 *i* PKPdf **PKPdf 06 10 26.3 +0.2**
SNR=6.3
MSFE Esma-Masafi 134.01 82 PKPdf **PKPdf 06 10 26.6 +0.4**
SHME Shamm 134.19 81 *i* PKPdf **PKPdf 06 10 26.9 +0.4**
SNR=9.8
BANOM Banah 134.29 81 PKPdf **PKiKP 06 10 27.3 -0.8**
SEY Seymchan 136.02 333 PKhKP PKPpre 06 10 20.4
comp=Z,2.0nm,0.6s,baz=45,slow=8.3,SNR=4.4
SEY PKP **PKiKP 06 10 30.3 -0.1**
comp=Z,16nm,0.7s,baz=103,slow=3.2,SNR=34
SEY Seymchan 136.02 333*d* iPKIKP **PKiKP 06 10 30.9 +0.5**
SEY pmax pmax
comp=Z,25nm,1.0s
ARU Arti 136.09 38 PKP **PKiKP 06 10 30.2 -0.5**
comp=Z,23nm,0.6s,baz=283,slow=1.2,SNR=19
ARU Arti 136.09 38 PKPdf **PKiKP 06 10 29.8 -0.8**
ARU Arti 136.09 38 *i* PKIKP **PKiKP 06 10 30.2 -0.5**
ARU 06 13 05.9
ARU SS SS 06 30 57.4 -10
ARU MLR MLR
comp=Z,1µm,21.0s
TIXI Tiksi 136.15 351 PKhKP PKPpre 06 10 19.4
comp=Z,0.7nm,0.3s,baz=282,slow=13,SNR=6.5
TIXI PKP **PKPdf 06 10 26.8 -2.0**
comp=Z,3.4nm,0.8s,baz=267,slow=20,SNR=4.0
TIXI Tiksi 136.15 351 PKPdf **PKPdf 06 10 28.5 -0.2**
TIXI IAMs_20 IAMs_20 07 09 58.8
comp=Z,612nm,21.0s
TIXI Tiksi 136.15 351⇓*i* PKIKP **PKPdf 06 10 29.4 +0.7**
TIXI pmax pmax
comp=Z,4.0nm,0.7s
PEA0B Petropavlovsk- 136.91 318⇑*i* PKIKP **PKiKP 06 10 33.7 +1.2**
PETK Petropavlovsk- 136.91 318 PKP **PKiKP 06 10 32.2 -0.3**
comp=Z,31nm,1.0s,baz=101,slow=4.7,SNR=16
PETK Petropavlovsk- 136.91 318 PKPdf **PKiKP 06 10 31.7 -0.8**
PETK Petropavlovsk- 136.91 318 PKiKP **PKiKP 06 10 31.7 -0.8**
SVE Sverdlovsk 137.05 36 *i* PKIKP **PKiKP 06 10 32.5 -0.2**
SVE pmax pmax
comp=Z,19nm,1.2s
AKTO Aktyubinsk 137.16 46 PKhKP PKPpre 06 10 22.6
comp=Z,1.6nm,0.7s,baz=322,slow=2.3,SNR=5.7
AKTO PKP **PKPdf 06 10 31.9 +0.6**
comp=Z,7.3nm,0.7s,baz=277,slow=4.8,SNR=11
AKTO Aktyubinsk 137.16 46 PKIKP **PKPdf 06 10 31.2 -0.1**
GEYT Alibeck 137.95 65 PKhKP PKPpre 06 10 25.7
comp=Z,2.8nm,0.6s,baz=91,slow=14,SNR=4.1
GEYT PKP **PKPdf 06 10 31.7 -1.4**
comp=Z,6.9nm,0.8s,baz=253,slow=8.7,SNR=7.1
GEYT Alibeck 137.95 65 **PKPdf 06 10 32.4 -0.8**
GYA0B ALIBECK ARRAY 137.95 65 **PKPdf 06 10 32.1 -1.1**
NRIK Noril'sk 138.26 11 PKP **PKiKP 06 10 33.6 -1.2**
comp=Z,7.7nm,0.9s,baz=315,slow=1.6,SNR=8.0
NRIK Noril'sk 138.26 11 PKPdf **PKiKP 06 10 33.9 -0.9**
NRIK Noril'sk 138.26 11⇓*i* PKIKP **PKiKP 06 10 34.2 -0.6**
MA2 Magadan 138.29 329 PKP **PKiKP 06 10 34.1 -1.0**
comp=Z,14nm,1.0s,baz=87,slow=2.1,SNR=5.2
MA2 Magadan 138.29 329 PKPdf **PKPdf 06 10 32.6 -0.5**
MA2 IAMs_20 IAMs_20 07 14 34.7
comp=Z,682nm,20.0s
MA2 Magadan 138.29 329⇓*i* PKIKP **PKiKP 06 10 35.7 +0.6**
MA2 pmax pmax
comp=Z,16nm,1.0s
AB31 Akbulak array 138.60 48 *i* PKHKP PKPpre 06 10 24.3
FAKI Fak Fak 140.43 220 IAMs_20 IAMs_20 07 20 56.7
comp=Z,658nm,19.0s
BRVK Borovoye 143.63 39 PKPdf **PKPdf 06 10 41.6 -1.2**
BRVK Borovoye 143.63 39 PKIKP PKPbc 06 10 41.1 +0.8
KAPI Kappang 144.03 200 PKPdf **PKPdf 06 10 43.8 -1.0**
KAPI Kappang 144.03 200 IAMs_20 IAMs_20 07 15 26.1
comp=Z,914nm,20.0s
KAPI Kappang 144.03 200 PKIKP **PKPdf 06 10 43.8 -1.0**
KAPI MLR MLR
comp=Z,900nm,20.0s
YAK Yakutsk 144.38 343 PKP **PKPdf 06 10 43.1 -0.8**
comp=Z,75nm,0.7s,baz=244,slow=1.5,SNR=33
YAK Yakutsk 144.38 343 PKPdf **PKPdf 06 10 43.2 -0.6**
YAK IAMs_20 IAMs_20 07 18 39.3
comp=Z,754nm,21.0s
YAK Yakutsk 144.38 343*c* iPKIKP PKPbc 06 10 42.9 +0.6
YAK *e* 06 10 51.8
YAK *e* 06 13 58.6
YAK *e*SS SS 06 32 36.3 -6.9
YAK pmax pmax
comp=Z,191nm,0.9s
YAK pmax pmax
comp=N,20nm,1.1s
YAK pmax pmax
comp=E,11nm,0.9s
YAK pmax pmax
comp=Z,402nm,5.3s
YAK pmax pmax
comp=N,99nm,3.5s
YAK pmax pmax
comp=E,76nm,3.3s
YAK MLR MLR
comp=Z,686nm,24.0s
PCHI Peechi 144.94 116⇑*e*P **PKPdf 06 10 45.8 -0.5**
PCHI *ex* x 06 26 53.6
KUR Kuril'sk 145.01 308 *e*PKIKP **PKPab 06 10 44.9 0.0**
KUR *i* 06 10 49.5
KUR *e* 06 14 03.7
KUR *e* 06 17 54.2
KUR pmax pmax
comp=Z,1µm,4.2s
KUR pmax pmax
comp=Z,298nm,1.4s
KUR pmax pmax
comp=N,122nm,1.0s
KUR pmax pmax
comp=E,107nm,1.3s
BRZS Berezniki 146.29 42 *e*PKIKP **PKPdf 06 10 47.6 +0.1**
BRZS Berezniki 146.29 42 *e*PKP **PKPdf 06 10 47.6 +0.1**
baz=57
NKL Nikolayevsk 146.34 324 *i* PKP2 **PKiKP 06 10 51.6 -0.2**
BRLS Borolday 146.55 55 *e*PKP2 **PKPbc 06 10 49.3 -0.4**
BRLS Borolday 146.55 55 *e*PKP **PKPbc 06 10 49.4 -0.4**
baz=56
KBL Kabul 146.61 71 **PKPbc 06 10 50.2 -0.3**
KBL Kabul 146.61 71 PKP2 **PKPbc 06 10 50.2 -0.3**
LUWI Luwuk 146.67 207 IAMs_20 IAMs_20 07 16 10.7
comp=Z,736nm,21.0s
OTUK Ortayu 146.76 45 PKP2 **PKPbc 06 10 49.8 -0.4**
IUG Iuzhnay 146.85 57 *e*PKP2 **PKPbc 06 10 50.0 -0.8**
IUG Iuzhnay 146.85 57 *e*PKP **PKPbc 06 10 50.1 -0.8**
baz=57
POO Poona 147.01 101 *e*P **PKPdf 06 10 48.0 -1.8**
KK31 Karatay Array 147.02 55 **PKPbc 06 10 50.0 -1.1**
KK31 Karatay Array 147.02 55 *i* PKIKP **PKPbc 06 10 50.2 -0.9**
KKAR Karatay Array 147.02 55 PKPdf **PKPdf 06 10 49.8 +0.7**
KKAR PKPbc **PKPab 06 10 52.4 -0.3**
KKAR Karatay Array 147.02 55 PKIKP **PKPdf 06 10 49.8 +0.7**
KKAR 06 10 52.1
DZA Taraz 147.65 55 *e*PKIKP **PKPdf 06 10 50.4 +0.3**
DZA Taraz 147.65 55 *e*PKP **PKPdf 06 10 50.5 +0.3**
baz=55
YSS Yuzh-Sakhalins 147.91 313 PKPdf **PKPdf 06 10 50.9 +0.6**
YSS Yuzh-Sakhalins 147.91 313 *i* PKIKP **PKPbc 06 10 51.8 -1.6**
YSS *e* 06 11 03.9
YSS *e*SS SS 06 33 58.8 +34
YSS pmax pmax
comp=Z,40nm,0.8s
DRK Karamyk 148.59 62 **PKiKP 06 10 57.3 0.0**
JKA Kamikawa-asahi 148.93 308 PKPdf **PKPdf 06 10 52.4 +0.3**
ASAJ Asahikawa 148.93 308 PKP **PKPdf 06 10 53.1 +1.1**
comp=Z,46nm,1.0s,baz=252,slow=13,SNR=17
ASAJ PKPbc **PKPbc 06 10 56.4 +0.3**
comp=Z,54nm,1.0s,baz=256,slow=11,SNR=8.8
BTLS Baital 148.96 50 *e*PKIKP **PKPdf 06 10 52.8 +0.7**
BTLS Baital 148.96 50 *e*PKP **PKPdf 06 10 52.8 +0.7**
baz=50
KURK Kurchatov 149.28 38 PKPdf **PKPdf 06 10 52.9 +0.5**
KURK PKPbc **PKiKP 06 10 57.9 -0.1**
KURK Kurchatov 149.28 38 IAMs_20 IAMs_20 07 28 56.2
comp=Z,895nm,19.0s
KURK Kurchatov 149.28 38*c* iPKIKP **PKPdf 06 10 53.4 +1.0**
KURK pmax pmax
comp=Z,91nm,1.3s
KURBB Kurchatov Arra 149.28 38 PKPbc **PKiKP 06 10 57.6 -0.4**
comp=Z,31nm,0.5s,baz=305,slow=3.0,SNR=57
KURBB Kurchatov Arra 149.28 38 PKIKP **PKPdf 06 10 52.8 +0.4**
TOLI2 Tolitoli 149.41 206 IAMs_20 IAMs_20 07 18 52.3
comp=Z,560nm,21.0s
EKS2 Erkin-Say 149.46 55 P **PKPdf 06 10 55.0 +1.8**
SNR=20
AML Almayashu 149.52 56 P **PKPdf 06 10 55.2 +1.5**
SNR=23
AML Almayashu 149.52 56 *i* PKPdf **PKPdf 06 10 55.2 +1.5**
SNR=24
USP Ospenovka 149.81 53 P **PKPdf 06 10 55.0 +1.4**
SNR=15
SGDS Sogindy 149.84 53 *e*PKIKP **PKPdf 06 10 53.6 -0.1**
SGDS Sogindy 149.84 53 *e*PKP **PKPdf 06 10 53.7 -0.1**
baz=53
GRNR Gornyy 149.85 323 *e*PKIKP **PKPdf 06 10 49.9 -3.5**
JCJ Chichijima 149.94 274 PKPbc **PKPbc 06 10 58.4 -0.8**
comp=Z,36nm,0.5s,baz=260,slow=16,SNR=7.4
AAK Ala-Archa 149.97 55 P **PKPdf 06 10 55.7 +1.7**
SNR=15
AAK Ala-Archa 149.97 55 PKP **PKPdf 06 10 55.0 +0.9**
comp=Z,51nm,0.6s,baz=221,slow=2.4,SNR=20
AAK PKPbc **PKiKP 06 11 00.5 +0.6**
comp=Z,66nm,0.8s,baz=221,slow=2.8,SNR=40
AAK Ala-Archa 149.97 55 IAMs_20 IAMs_20 07 29 19.1
comp=Z,1µm,20.0s
AAK Ala-Archa 149.97 55 PKHKP PKPpre 06 10 55.0
AAK Ala-Archa 149.97 55 *i* PKPdf **PKPdf 06 10 55.9 +1.9**
SNR=57
CHMS Chumysh 150.06 54 P **PKiKP 06 11 00.4 +0.5**
SNR=24
CHMS Chumysh 150.06 54 PKP2 **PKiKP 06 10 59.6 -0.3**
UCH Uchtor 150.09 55 P **PKPdf 06 10 56.4 +1.7**
SNR=18
ZAA0 Zalesovo Array 150.17 28 PKPbc **PKiKP 06 11 00.1 +0.4**
ZALV Zalesovo Beam 150.17 28 PKP **PKPdf 06 10 54.5 +0.7**
comp=Z,26nm,0.8s,baz=287,slow=2.5,SNR=75
ZALV PKPbc **PKiKP 06 10 59.7 +0.1**
comp=Z,162nm,0.6s,baz=306,slow=3.2,SNR=116
ZALV Zalesovo Beam 150.17 28 **PKPdf 06 10 54.3 +0.6**
ZALV PKPbc **PKiKP 06 11 00.3 +0.6**
ZALV Zalesovo Beam 150.17 28 PKHKP PKPpre 06 10 54.3
KBK Karagaybulak 150.29 54 P **PKiKP 06 11 01.4 +0.8**
SNR=16
SEM Semipalatinsk 150.32 37 *e*PKIKP **PKPdf 06 10 53.7 -0.7**
SEM Semipalatinsk 150.32 37 *e*PKP **PKPdf 06 10 53.7 -0.7**
baz=37
BKNI Bangkinang 150.35 166 **PKPbc 06 11 00.1 -0.5**
HYBB Hyderabad (bro 150.49 107 *e*P **PKPdf 06 10 53.3 -2.1**
HYBB *e*PKiKP **PKPbc 06 11 00.1 -0.6**
HYBB *e*pPKiKP **sPKPbc 06 11 12.3 +0.7**
HYBB *e*PP **PP 06 14 37.7 +0.9**
HYBB *e*SKSdf **SKSdf 06 17 57.0 -4.6**
TKM2 Tokmak 2 150.68 54 P **PKPdf 06 10 56.4 +1.1**
SNR=12
TKM2 Tokmak 2 150.68 54 PKIKP **PKPdf 06 10 55.8 +0.6**
KUU Kurty 150.89 51 *e*PKIKP **PKPdf 06 10 55.2 0.0**
KUU Kurty 150.89 51 *e*PKP **PKPdf 06 10 55.3 0.0**
baz=52
BOD Bodaibo 151.25 353 *e*PKIKP **PKPbc 06 11 01.2 -0.1**
BOD pmax pmax
comp=Z,49nm,2.2s
ULHL Ulahol 151.32 55 P **PKPdf 06 10 57.6 +1.4**
SNR=6.4
CHKK Chushkaly 151.34 51 *e*PKIKP **PKPdf 06 10 56.8 +0.8**
CHKK Chushkaly 151.34 51 *e*PKP **PKPdf 06 10 56.9 +0.9**
baz=51
AAA Alma-Ata 151.51 53 *e*PKIKP **PKPdf 06 10 55.6 -0.7**
AAA Alma-Ata 151.51 53 *e*PKP **PKPdf 06 10 55.7 -0.7**
baz=53
TNSS Tian-Shan 151.58 53 *e*PKIKP **PKPdf 06 10 57.3 +0.5**
TNSS Tian-Shan 151.58 53 *e*PKP **PKPdf 06 10 57.4 +0.5**
baz=53
MDOK Medeo 151.61 53 *e*PKIKP **PKPdf 06 10 56.6 +0.1**
MDOK Medeo 151.61 53 *e*PKP **PKPdf 06 10 56.7 +0.1**
baz=53
KSH Kashi 151.77 60 PKPbc **PKPdf 06 10 58.4 +1.5**
KSH pPKP pPKPdf 06 11 04.7 -0.3
KSH PP **PP 06 14 42.9 -1.2**
KSH AMB AMB
comp=Z,400nm,7.5s
KSH LR LR
comp=Z,540nm,22.8s
KSH LR LR
comp=Z,880nm,20.5s
KSH LR LR
comp=Z,2µm,23.1s
ARXS Arharly 151.78 50 *e*PKIKP **PKPdf 06 10 56.6 -0.1**
TDK Taldyqorghan 151.86 48 *e*PKIKP **PKPdf 06 10 57.5 +0.8**
TDK Taldyqorghan 151.86 48 *e*PKP **PKPdf 06 10 57.5 +0.8**
baz=48
ZEA Zeya 151.92 336 *e*PKIKP **PKPdf 06 10 57.4 +1.0**
ZEA *e* 06 14 45.2
ZEA pmax pmax
comp=Z,30nm,1.3s
ZEA pmax pmax
comp=Z,300nm,7.0s
KSM Kuching 152.19 185 IAMs_20 IAMs_20 07 19 10.2
comp=Z,660nm,20.0s
MYKOM Kota Tinggi 152.29 171 IAMs_20 IAMs_20 07 22 19.6
comp=Z,906nm,18.0s
DAV Davao City (W) 152.37 220 IAMs_20 IAMs_20 07 23 35.4
comp=Z,590nm,20.0s
SATY Saty 152.59 52 *e*PKIKP **PKPdf 06 10 57.5 -0.5**
SATY Saty 152.59 52 *e*PKP **PKPdf 06 10 57.5 -0.5**
baz=52
TEY Ternei 152.61 313 *e*PKIKP **PKPdf 06 10 55.9 -1.8**
KPKS Kokpek 152.63 51 *e*PKIKP **PKPdf 06 10 58.3 +0.3**
KPKS Kokpek 152.63 51 *e*PKP **PKPdf 06 10 58.4 +0.3**
baz=51
SBUM Sibu 152.95 189 **PKPdf 06 10 57.8 -1.4**
SBUM **PKiKP 06 11 07.1 +0.4**
SBUM PKPab **sPKPbc 06 11 19.0 +1.6**
SBUM IAMs_20 IAMs_20 07 12 22.8
comp=Z,909nm,21.0s
KLR Kul'dur 153.19 324 PKP **PKPdf 06 10 59.7 +1.2**
comp=Z,3.7nm,0.7s,baz=62,slow=2.5,SNR=14
KLR PKPbc **PKiKP 06 11 06.3 +0.3**
comp=Z,13nm,0.6s,baz=49,slow=3.3,SNR=37
PDGK Podgornoye 153.23 51 PKIKP **PKPdf 06 10 59.0 +0.1**
MAKZ Makanchi 153.24 42 PKPdf **PKPdf 06 10 58.7 0.0**
MAKZ PKPbc **pPKPdf 06 11 06.9 +0.1**
MAKZ Makanchi 153.24 42⇓PKIKP **PKPdf 06 10 59.2 +0.5**
SHLS Shalkode 153.28 51 *e*PKIKP **PKPdf 06 11 00.1 +1.1**
SHLS Shalkode 153.28 51 *e*PKP **PKPdf 06 11 00.1 +1.1**
baz=51
MK31 Makanchi Array 153.44 42 **PKPdf 06 10 58.9 -0.1**
MK31 PKPab **PKPab 06 11 19.0 +0.1**
MK31 Makanchi Array 153.44 42 PKIKP **PKPdf 06 10 58.9 -0.1**
MK31 06 11 19.0
MKAR Makanchi Array 153.44 42 PKP **PKPdf 06 10 59.5 +0.5**
comp=Z,5.7nm,0.8s,baz=333,slow=1.4,SNR=32
MKAR PKPbc **pPKPdf 06 11 07.3 +0.2**
comp=Z,23nm,0.7s,baz=331,slow=1.8,SNR=61
MKAR PKPab **PKPab 06 11 19.8 +0.9**
comp=Z,8.7nm,0.6s,baz=347,slow=4.0,SNR=11
MKAR Makanchi Array 153.44 42 PKPdf **PKPdf 06 10 58.4 -0.5**
MKAR PKPbc **pPKPdf 06 11 07.3 +0.2**
MKAR Makanchi Array 153.44 42 PKIKP **PKPdf 06 10 58.4 -0.5**
MKAR 06 11 07.3
MJAR Matsushiro Arr 153.80 294 PKP **PKPdf 06 11 00.4 +0.6**
comp=Z,5.9nm,1.1s,baz=29,slow=0.6,SNR=12
MJAR PKPbc **pPKPdf 06 11 08.7 +0.9**
comp=Z,5.3nm,1.0s,baz=48,slow=0.9,SNR=11
MJAR PKPab **PKPab 06 11 21.8 +1.0**
comp=Z,5.8nm,0.9s,baz=105,slow=1.2,SNR=7.1
MJAR Matsushiro Arr 153.80 294 PKPdf **PKPdf 06 10 60.0 +0.2**
MAJO Matsushiro 153.80 294 PKPdf **PKPdf 06 11 00.2 +0.4**
MAJO Matsushiro 153.80 294 IAMs_20 IAMs_20 07 22 33.2
comp=Z,560nm,18.0s
MAJO Matsushiro 153.80 294⇓PKIKP **PKPdf 06 11 00.8 +1.0**
MYLDM Lahad Datu 154.01 204 IAMs_20 IAMs_20 07 18 56.9
comp=Z,944nm,20.0s
ZSN Zaisan 154.52 38 *e*PKIKP **PKPdf 06 11 00.5 +0.1**
ZSN Zaisan 154.52 38 *e*PKP **PKPdf 06 11 00.5 +0.1**
baz=39
INU Inuyama 154.90 291 PKPdf **PKPdf 06 11 01.9 +0.6**
INU IAMs_20 IAMs_20 07 32 39.0
comp=Z,532nm,21.0s
KULM Kulim 155.05 162 PKPdf **PKPdf 06 11 01.2 -1.0**
KULM **pPKPdf 06 11 10.5 +0.2**
KULM PKPab **PKPab 06 11 26.1 -0.3**
USRK Ussuriysk Ar. 155.91 314 PKP **PKPdf 06 11 03.1 +0.7**
comp=Z,1.5nm,0.4s,baz=347,slow=16,SNR=5.7
USRK PKPbc **sPKPdf 06 11 12.9 -0.1**
comp=Z,7.5nm,0.8s,baz=56,slow=3.4,SNR=9.7
IRK Irkutsk 156.96 6 *e*PKIKP **PKPdf 06 11 04.4 +0.8**
IRK *e* 06 15 12.2
IRK pmax pmax
comp=Z,92nm,1.9s
MOY Mondy 157.10 11 *e*PKIKP **PKPdf 06 11 05.7 +1.8**
MOY pmax pmax
comp=Z,70nm,2.5s
MDJ Mudanjiang 157.15 318 IAMs_20 IAMs_20 07 17 21.8
comp=Z,932nm,21.0s
MDJ Mudanjiang 157.15 318 PKP **PKPdf 06 11 04.9 +0.9**
MDJ AMB AMB
comp=Z,250nm,9.7s
MDJ LR LR
comp=Z,480nm,21.0s
MDJ LR LR
comp=Z,580nm,16.3s
MDJ LR LR
comp=Z,960nm,20.6s
BNX BinXian 157.69 322⇓PKP **PKPdf 06 11 04.3 -0.3**
BNX SKS **SKSdf 06 18 05.1 -3.5**
BNX AMB AMB
comp=Z,240nm,4.2s
BNX LR LR
comp=Z,2µm,16.2s
BNX LR LR
comp=Z,1µm,16.0s
BNX LR LR
comp=Z,2µm,21.2s
PYUN Piuthan 157.96 87 *e*P **PKPdf 06 11 06.2 +0.4**
HIA Hailar 158.22 339 IAMs_20 IAMs_20 07 36 20.6
comp=Z,875nm,19.0s
WMQ Urumqi 158.25 43 *e*PKP **PKPdf 06 11 07.0 +1.5**
WMQ PKPab **PKPab 06 11 41.2 +1.5**

WMQ					PP	**PP**	**06 15 22.4 +2.7**	
WMQ					SS	SS	06 35 21.2 +3.1	
WMQ					AMB	AMB		
	comp=Z,510nm,5.1s							
WMQ					LR	LR		
	comp=Z,820nm,19.5s							
WMQ					LR	LR		
	comp=Z,810nm,21.7s							
WMQ					LR	LR		
	comp=Z,1μm,20.3s							
ZAK	**Zakamensk**	**158.69**	**8**	*e*PKIKP	**PKPdf**	**06 11 06.9 +1.0**		
ZAK				*e*		06 15 22.7		
ZAK				pmax	pmax			
	comp=Z,21nm,1.2s							
ZAK				pmax	pmax			
	comp=Z,7.0nm,1.4s							
GUN	**Gumba**	**160.45**	**89**	*e*P	**PKPdf**	**06 11 09.3 +0.4**		
JIRN	**Jiri**	**160.68**	**90**	*e*P	**PKPdf**	**06 11 09.2 0.0**		
RAMN	**Ramite**	**160.90**	**92**	*e*P	**PKPdf**	**06 11 09.9 +0.6**		
ULN	**Ulaanbaatar**	**161.50**	**2**	PKPdf	**PKPdf**	**06 11 08.9 -0.3**		
ULN					**PKPab**	**06 11 55.0 +1.4**		
ULN	**Ulaanbaatar**	**161.50**	**2**	PKIKP	**PKPdf**	**06 11 08.9 -0.3**		
SONM	**Songino Array**	**161.51**	**4**	PKP	**PKPdf**	**06 11 09.8 +0.6**		
	comp=Z,5.3nm,0.9s,baz=257,slow=0.6,SNR=24							
SONM					PKPab	**PKPab**	**06 11 54.1 +0.4**	
	comp=Z,10.0nm,1.0s,baz=337,slow=3.4,SNR=9.5							
SONM					PP	PP	06 15 45.9 +9.5	
	comp=Z,3.5nm,1.1s,baz=330,slow=5.1,SNR=4.7							
SONM	**Songino Array**	**161.51**	**4**	PKPdf	**PKPdf**	**06 11 09.2 +0.1**		
SONM					PKPab	**PKPab**	**06 11 55.2 +1.5**	
SONM	**Songino Array**	**161.51**	**4**	PKIKP	**PKPdf**	**06 11 09.2 +0.1**		
KSRS	**Korea Array**	**161.60**	**301**	PKP	**PKPdf**	**06 11 08.7 -0.7**		
	comp=Z,2.6nm,0.8s,baz=123,slow=1.2,SNR=11							
KSAR	**Wonju Array Be**	**161.63**	**301**	PKPdf	**PKPdf**	**06 11 08.4 -1.0**		
KSAR	**Wonju Array Be**	**161.63**	**301**	PKIKP	**PKPdf**	**06 11 08.4 -1.0**		
TAPN	**Taplejung**	**161.95**	**91**	*e*P	**PKPdf**	**06 11 11.0 +0.5**		
SNY	**Shenyang**	**162.33**	**319**	⇑PKP	**PKPdf**	**06 11 09.7 -0.3**		
SNY				SKKS		06 22 29.8		
SNY				LR	LR			
	comp=Z,370nm,20.6s							
SNY				LR	LR			
	comp=Z,830nm,19.4s							
SNY				LR	LR			
	comp=Z,2μm,20.4s							
XLT	**XiLinHaoTe**	**164.15**	**338**	*e*PKP	**PKPdf**	**06 11 11.7 -0.1**		
XLT				SKKS		06 22 34.2		
XLT				AMB	AMB			
	comp=Z,230nm,6.5s							
XLT				LR	LR			
	comp=Z,710nm,20.4s							
XLT				LR	LR			
	comp=Z,930nm,20.2s							
CMAR	**Chiang Mai Arr**	**166.31**	**140**	PKP	**PKPdf**	**06 11 14.8 +0.6**		
	comp=Z,1.9nm,0.6s,baz=263,slow=2.1,SNR=18							
CMAR				PKPab	**PKPab**	**06 12 14.9 -0.5**		
	comp=Z,2.3nm,0.3s,baz=242,slow=3.9,SNR=6.6							
CMAR				PP	PP	06 16 10.9 +8.6		
	comp=Z,1.0nm,0.3s,baz=241,slow=6.3,SNR=4.4							
CMAR	**Chiang Mai Arr**	**166.31**	**140**		**PKPdf**	**06 11 14.5 +0.3**		
CMAR	**Chiang Mai Arr**	**166.31**	**140**	PKIKP	**PKPdf**	**06 11 14.5 +0.3**		
GOMU	**GeErMu**	**166.92**	**55**	PKP	**PKPdf**	**06 11 16.2 +1.5**		
GOMU				PP	**PP**	**06 16 06.6 +0.1**		
GOMU				SKKS		06 22 50.8		
GOMU				AMB	AMB			
	comp=Z,210nm,4.2s							
GOMU				LR	LR			
	comp=Z,410nm,20.2s							
GOMU				LR	LR			
	comp=Z,390nm,20.2s							
GOMU				LR	LR			
	comp=Z,660nm,19.3s							
BJI	**Beijing**	**167.45**	**330**	PKP	**PKPdf**	**06 11 14.9 +0.5**		
BJI				pPKP	**sPKPdf**	**06 11 25.4 0.0**		
BJI				PP	PP	06 16 16.6 +8.8		
BJI				SKKS		06 22 52.7		
BJI				AMB	AMB			
	comp=Z,290nm,9.3s							
BJI				LR	LR			
	comp=Z,240nm,24.3s							
BJI				LR	LR			
	comp=Z,190nm,23.8s							
BJI				LR	LR			
	comp=Z,200nm,24.1s							
GTA	**Gaotai**	**167.87**	**32**	⇑PKP	**PKPdf**	**06 11 16.2 +1.2**		
GTA				PKPab	**PKPab**	**06 12 22.5 +0.5**		
GTA				PP	**PP**	**06 16 08.2 -2.1**		
GTA				SS	SS	06 36 57.6 +0.4		
GTA				AMB	AMB			
	comp=Z,290nm,6.9s							
GTA				LR	LR			
	comp=Z,730nm,21.1s							
GTA				LR	LR			
	comp=Z,1μm,21.1s							
GTA				LR	LR			
	comp=Z,1μm,21.1s							
HHC	**Hu-ho-hao-te**	**168.19**	**347**	*e*PKP	**PKPdf**	**06 11 14.4 -0.7**		
HHC				SKKS		06 22 59.5		
HHC				SS	SS	06 37 05.4 +6.0		
HHC				AMB	AMB			
	comp=Z,810nm,7.2s							
HHC				LR	LR			
	comp=Z,2μm,20.6s							
HHC				LR	LR			
	comp=Z,580nm,20.5s							
HHC				LR	LR			
	comp=Z,2μm,19.7s							
SSE	**Sheshan**	**168.54**	**282**	PKP	**PKPdf**	**06 11 17.4 +1.9**		
SSE				PP	**PP**	**06 16 19.2 +4.4**		
SSE				SS	SS	06 37 08.8 +2.8		
SSE				AMB	AMB			
	comp=Z,130nm,7.7s							
SSE				LR	LR			
	comp=Z,420nm,20.6s							
SSE				LR	LR			
	comp=Z,120nm,23.4s							
BTO	**Baotou**	**168.67**	**352**	*e*PKP	**PKPdf**	**06 11 15.5 +0.1**		
BTO				LR	LR			
	comp=Z,780nm,5.2s							
BTO				LR	LR			
	comp=Z,500nm,14.7s							
QIZ	**Qiongzhong**	**169.59**	**189**	⇑*i*PKP	**PKPdf**	**06 11 18.2 +1.7**		
QIZ				PP	**PP**	**06 16 19.0 +0.7**		
QIZ				SS	SS	06 37 14.5 +1.5		
QIZ				AMB	AMB			
	comp=Z,370nm,16.7s							
QIZ				LR	LR			
	comp=Z,680nm,17.5s							
QIZ				LR	LR			
	comp=Z,540nm,19.1s							
QIZ				LR	LR			
	comp=Z,1μm,23.9s							
QZH	**Quanzhou**	**169.66**	**247**	*e*PKP	**PKPdf**	**06 11 17.4 +1.0**		
QZH				PP	PP	06 16 28.1 +7.8		
QZH				SKKS		06 23 07.3		
QZH				SS	SS	06 37 20.1 +3.3		
QZH				LR	LR			
	comp=Z,440nm,16.6s							
QZH				LR	LR			
	comp=Z,460nm,20.4s							
QZH				LR	LR			
	comp=Z,660nm,21.8s							
TIA	**Tai'an**	**169.78**	**314**	PKP	**PKPdf**	**06 11 17.0 +0.9**		
TIA				pPKP	**sPKPdf**	**06 11 26.7 -0.4**		
TIA				PP	**PP**	**06 16 25.6 +5.4**		
TIA				LR	LR			
	comp=Z,660nm,17.8s							
TIA				LR	LR			
	comp=Z,470nm,16.7s							
TIA				LR	LR			
	comp=Z,870nm,19.2s							
HNS	**HongShan**	**170.26**	**327**	⇑PKP	**PKPdf**	**06 11 17.5 +1.2**		
HNS				PKPab	**pPKPab**	**06 12 37.9 -2.2**		
HNS				PP	PP	06 16 30.8 +8.7		
HNS				SKKS		06 23 07.4		
HNS				AMB	AMB			
	comp=Z,540nm,9.9s							
HNS				LR	LR			
	comp=Z,330nm,19.2s							
HNS				LR	LR			
	comp=Z,870nm,21.6s							
HNS				LR	LR			
	comp=Z,1μm,24.5s							
NJ2	**Nanjing**	**170.35**	**289**	*e*PKP	**PKPdf**	**06 11 17.3 +0.8**		
TIY	**Taiyuan**	**170.92**	**338**	*e*PKP	**PKPdf**	**06 11 17.8 +1.0**		
TIY				PP	PP	06 16 33.6 +8.4		
TIY				SS	SS	06 37 28.5 +1.7		
TIY				AMB	AMB			
	comp=Z,300nm,10.4s							
TIY				LR	LR			
	comp=Z,1μm,22.7s							
TIY				LR	LR			
	comp=Z,610nm,22.0s							
TIY				LR	LR			
	comp=Z,1μm,18.5s							
LZH	**Lanzhou**	**172.40**	**27**	⇑PKP	**PKPdf**	**06 11 19.3 +1.6**		
LZH				PP	**PP**	**06 16 31.6 -1.2**		
LZH				SS	SS	06 37 40.5 -1.3		
LZH				AMB	AMB			
	comp=Z,560nm,6.0s							
LZH				LR	LR			
	comp=Z,1μm,16.3s							
LZH				LR	LR			
	comp=Z,550nm,16.8s							
LZH				LR	LR			
	comp=Z,2μm,17.9s							
LYN	**LuoYang**	**173.63**	**325**	⇑PKP	**PKPdf**	**06 11 18.9 +0.9**		
LYN				PKPab	**pPKPab**	**06 12 54.1 -1.0**		
LYN				PP	**PP**	**06 16 45.4 +6.5**		
LYN				SKKS		06 23 24.7		
LYN				AMB	AMB			
	comp=Z,690nm,8.0s							
LYN				LR	LR			
	comp=Z,1μm,19.8s							
LYN				LR	LR			
	comp=Z,1μm,18.8s							
LYN				LR	LR			
	comp=Z,2μm,19.4s							
KMI	**Kunming**	**173.64**	**130**	⇑PKP	**PKPdf**	**06 11 19.3 +0.7**		
KMI				sPKP		06 11 29.0		
PZH	**PanZhiHua**	**173.71**	**115**	PKP	**PKPdf**	**06 11 18.3 -0.1**		
PZH				sPKP		06 11 29.7		
PZH				PKPab	**PKPab**	**06 12 47.0 -1.4**		
PZH				PP	**PP**	**06 16 41.0 +0.5**		
PZH				SKKS		06 23 24.6		
PZH				SS	SS	06 37 58.9 +2.2		
PZH				AMB	AMB			
	comp=Z,570nm,8.8s							
PZH				LR	LR			
	comp=Z,740nm,22.6s							
PZH				LR	LR			
	comp=Z,750nm,21.6s							
PZH				LR	LR			
	comp=Z,1μm,26.7s							
WHN	**Wuhan**	**174.44**	**284**	⇑PKP	**PKPdf**	**06 11 19.3 +0.9**		
WHN				PP	**PP**	**06 16 49.4 +5.3**		
WHN				SKKS		06 23 27.6		
WHN				AMB	AMB			
	comp=Z,500nm,6.6s							
WHN				LR	LR			
	comp=Z,2μm,17.8s							
WHN				LR	LR			
	comp=Z,2μm,19.2s							
WHN				LR	LR			
	comp=Z,3μm,21.5s							
XAN	**Xi'an**	**175.28**	**352**	PKP	**PKPdf**	**06 11 19.6 +1.0**		
XAN				pPKP	sPKPdf	06 11 29.7 +0.1		
XAN				PP	**PP**	**06 16 46.0 -0.3**		
XAN				SKKS		06 23 33.2		
XAN				AMB	AMB			
	comp=Z,840nm,7.5s							
XAN				LR	LR			
	comp=Z,800nm,22.9s							
XAN				LR	LR			
	comp=Z,980nm,21.0s							
XAN				LR	LR			
	comp=Z,2μm,24.8s							
CNSH	**ChangSha**	**175.59**	**256**	⇑PKP	**PKPdf**	**06 11 20.1 +1.3**		
CNSH				PP	**PP**	**06 16 52.5 +2.8**		
CNSH				LR	LR			
	comp=Z,850nm,22.7s							
CNSH				LR	LR			
	comp=Z,770nm,21.6s							
CNSH				LR	LR			
	comp=Z,1μm,22.9s							
CD2	**Chengdu**	**175.94**	**67**	PKP	**PKPdf**	**06 11 20.2 +1.3**		
CD2				PKPab	**PKPab**	**06 12 58.2 +0.1**		
CD2				PP	**PP**	**06 16 48.4 -2.8**		
CD2				SKKS		06 23 38.9		
CD2				SS	SS	06 38 20.9 +2.8		
CD2				AMB	AMB			
	comp=Z,480nm,6.5s							
CD2				LR	LR			
	comp=Z,630nm,18.6s							
CD2				LR	LR			
	comp=Z,1μm,20.1s							
GYA	**Guiyang**	**176.85**	**156**	⇓PKP	**PKPdf**	**06 11 20.1 +0.8**		
GYA				PP	**PP**	**06 16 52.4 -1.7**		
GYA				AMB	AMB			
	comp=Z,470nm,11.2s							
GYA				LR	LR			
	comp=Z,620nm,17.8s							

MAN 05 05:55:07.8,6.02N×125.86E,h87km,mb4.3,ML3.1,MS2.8, Mindanao

*DJA **05** 06:02:07.9±0.4,6.°S±4.°×12.°9E±.°,h247km±11km,M4.2/12, mb4.2/7,mB4.9/4,MLv4.2/12,Mw(mB)4.2/4*
*IDC **05** 06:02:11.8±4.9,6.19S×128.66E,h299km±56km,mb3.8/1, mbtmp4.5/3,Error ellipse: s-maj=119.7km s-min=16.7km az=70.0*
ISC 05 06:02:07.9±0.8,5.88S±0.07×129.24E±0.09,h264km,n26, σ1°59/29,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	**2.42**	**334**	P	**Pn**	**06 02 55.8**	**+0.4**
MSAI	**Masohi**	**2.54**	**353**	P	**Pn**	**06 02 56.5**	**-0.1**
MSAI				S	**S**	**06 03 32.6**	**-2.7**
NLAI	**Namlea**	**3.38**	**321**	P	**Pn**	**06 03 06.4**	**+1.0**
FAKI	**Fak Fak**	**4.20**	**46**	P	**Pn**	**06 03 15.1**	**+0.3**
FAKI	**Fak Fak**	**4.20**	**46**	P	**Pn**	**06 03 15.4**	**+0.6**
SANI	**Sanana**	**5.00**	**319**	P	**Pn**	**06 03 23.8**	**-0.4**
	0.1nm19nm,0.6s						
SANI	**Sanana**	**5.00**	**319**	P	**Pn**	**06 03 23.8**	**-0.4**
SWI	**Sorong**	**5.38**	**22**	P	**Pn**	**06 03 28.7**	**-0.1**
	0.6nm3μm46nm,0.5s						
LBMI	**Labuha**	**5.49**	**342**	P	**Pn**	**06 03 30.4**	**+0.2**
	0.2nm750nm47nm,0.8s						
SOEI	**Soe**	**6.25**	**232**	P	**Pn**	**06 03 38.3**	**-1.3**
	0.2nm17nm,0.5s						
SOEI	**Soe**	**6.25**	**232**	P	**Pn**	**06 03 38.6**	**-1.0**
BATI	**Baumata**	**7.00**	**232**	P	**Pn**	**06 03 47.8**	**-1.0**
	0.1nm18nm,0.6s						
MTN	**Manton Dam**	**7.17**	**165**	P	**Pn**	**06 03 50.7**	**-0.2**
KDU	**Kakadu**	**7.48**	**155**	P	**Pn**	**06 03 54.6**	**-0.2**
EDFI	**Ende, Flores**	**8.01**	**249**	P	**Pn**	**06 04 02.0**	**+0.4**
	0.0nm3.7nm,1.3s						
KNRA	**Kununurra**	**9.74**	**183**	P	**Pn**	**06 04 22.0**	**-1.2**
WRAB	**Tennant Creek**	**14.82**	**161**	P	**Pn**	**06 05 25.1**	**-0.5**
WRA	**Warramunga Arr**	**14.83**	**161**	P	**P**	**06 05 24.6**	**-0.6**
	5.7nm,0.8s,baz=340,slow=13,SNR=44						
WRA				S	**S**	**06 08 10.1**	**+1.2**
	1.5nm,0.6s,baz=336,slow=21,SNR=5.5						
QIS	**Mount Isa**	**17.72**	**146**	P	**Pn**	**06 05 58.4**	**-1.4**
ASAR	**Alice Springs**	**18.24**	**166**	P	**P**	**06 06 03.6**	**+1.2**
	12nm,0.6s,baz=348,slow=12,SNR=176						
ASAR				S	**S**	**06 09 14.8**	**-2.5**
	1.4nm,0.8s,baz=347,slow=19,SNR=6.9						
WRKA	**Warakurna**	**19.07**	**183**	P	**P**	**06 06 11.8**	**+0.5**
MULG	**Mulgathing**	**24.69**	**170**	P	**P**	**06 07 07.4**	**+2.1**
PKI	**Pulchoki**	**53.83**	**310**	*e*P	**P**	**06 11 08.4**	**+3.8**
PKIN	**Phulchoki**	**53.84**	**310**	*e*P	**P**	**06 11 08.3**	**+3.7**
GKN	**Gorkha**	**54.64**	**310**	*e*P	**P**	**06 11 07.7**	**-2.5**
MKAR	**Makanchi Array**	**66.88**	**327**	P	**P**	**06 12 31.9**	**0.0**
	3.6nm,0.7s,baz=127,slow=7.2,SNR=1.0 3.6nm,0.7s						

IDC 05 06:10:31.9±374.0,17.24S×138.64E,h0km,Error ellipse: s-maj=173.4km s-min=93.3km az=61.0,Queensland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I07AU	**WARRAMUNGA INF**	**4.89**	**236**	*i*		06 41 00.0	
	0.1nm,0.9s,baz=57,slow=319,SNR=8.3						
I39PW	**PALAU INFRASON**	**24.95**	**350**	*i*		08 44 00.0	
	baz=171,slow=318,SNR=5.2						

IDC 05 06:13:05.2±8.1,5.31S×155.54E,h0km,mb3.6/4, mbtmp3.6/4,Error ellipse: s-maj=242.4km s-min=33.4km az=108.0,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**25.24**	**233**	P	P	06 18 33.4	+0.2
	0.2nm,0.4s,baz=59,slow=10,SNR=8.5						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**27.70**	**227**	P	P	06 18 55.2	-0.3
	0.2nm,0.3s,baz=56,slow=9.1,SNR=1.5						
	0.2nm,0.3s						
SONM	**Songino Array**	**68.23**	**327**	P	P	06 24 09.4	+1.5
	0.5nm,0.4s,baz=144,slow=4.8,SNR=3.5						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**82.51**	**318**	P	P	06 25 28.6	-1.4
	0.3nm,0.5s,baz=96,slow=4.9,SNR=4.7						
	0.3nm,0.5s						

DJA 05 06:17:01.6±0.4,11.°S±4.°×11.°1E±.°,h10km,M4.1/8,mb4.2/4, MLv4.0/8,South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCJI	**Pacitan**	**3.19**	**356**	P	Pn	06 17 52.5	+0.6
PCJI				S	Sn	06 18 28.4	-1.6
PWJI	**Pagerwojo**	**3.38**	**7**	P	Pn	06 17 53.4	-1.1
WOJI	**Wonogiri, Jawa**	**3.57**	**352**	P	Pn	06 17 57.9	+0.8
UGM	**Wanagama**	**3.57**	**346**	P	Pn	06 17 58.1	+1.0
GMJI	**Gumukmas**	**3.70**	**33**	P	Pn	06 17 59.0	+0.1
YOGI	**Yogyakarta**	**3.72**	**343**	P	Pn	06 17 59.8	+0.6
JAGI	**Jajag, Banyuwa**	**3.98**	**43**	P	Pn	06 18 03.0	+0.3
BLJI	**Banyuglugur**	**4.23**	**31**	P	Pn	06 18 08.1	+2.0
EDFI	**Ende, Flores**	**10.47**	**76**	P	Pn	06 19 31.3	-0.7
	3.2nm,0.9s						

*IDC **05** 06:17:57.1±0.8,56.°12S×25.°60W,h0km,mb4.2/7, mbtmp4.2/8,ML3.8/1,Error ellipse: s-maj=31.6km s-min=18.7km az=67.0*
*NEIC **05** 06:18:02.6±2.5,56.3S±0.°1×25.°9W±0.°2,h26km±5km, mb4.6/32,Error ellipse: s-maj=20.2km s-min=14.2km az=45.0*
ISC 05 06:17:59.2±0.6,56.2S±0.°1×25.°8W±0.°1,h10km,n45, σ1°20/47,mb4.5/18,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**6.42**	**282**	Pn	**Pn**	**06 19 35.4**	**+1.6**
SNAA	**Sanae**	**18.33**	**157**	P	**P**	**06 22 14.0**	**+0.7**
	0.3nm,0.3s,baz=327,slow=23,SNR=7.3						
	0.8nm,0.3s						
SNAA	**Sanae**	**18.33**	**157**		**P**	**06 22 14.2**	**+0.9**
BELA	**Belgrano 2**	**22.04**	**185**	P	**P**	**06 22 51.8**	**-1.6**
BELA				IAmb	IAmb	06 23 06.0	
	comp=Z,12nm,0.6s						
DSPA	**Despedida**	**24.17**	**257**	P	**P**	**06 23 14.2**	**-1.2**
PLCA	**Paso Flores**	**32.81**	**279**	P	**P**	**06 24 30.9**	**-1.8**
	comp=Z,1.7nm,0.9s,baz=143,slow=8.5,SNR=3.7						
	comp=Z,1.7nm,0.9s						
PLCA	**Paso Flores**	**32.81**	**279**	P	**P**	**06 24 31.6**	**-1.0**
PLCA				IAmb	IAmb	06 24 56.6	
	comp=Z,8.2nm,1.4s						
LL04	**Puerto Octay**	**33.72**	**277**	P	**P**	**06 24 39.7**	**-0.8**
QSPA	**South Pole Qui**	**34.10**	**180**	P	**P**	**06 24 42.6**	**-1.1**
	comp=Z,4.5nm,0.6s,baz=200,slow=2.5,SNR=30						
	comp=Z,4.5nm,0.6s						
QSPA	**South Pole Qui**	**34.10**	**180**	P	**P**	**06 24 43.6**	**-0.1**
QSPA				IAmb	IAmb	06 24 56.5	
	comp=Z,7.1nm,0.6s						
GO05	**Huala**	**37.68**	**284**	P	**P**	**06 25 12.1**	**-2.4**
GO05				IAmb	IAmb	06 25 24.3	
	comp=Z,6.2nm,0.9s						
MT09	**Talagante**	**38.11**	**287**	P	**P**	**06 25 16.7**	**-1.6**
MT09				IAmb	IAmb	06 25 31.7	
	comp=Z,17nm,1.5s						
PEL	**Peldehue**	**38.43**	**288**	P	**P**	**06 25 20.4**	**-0.4**
PEL				IAmb	IAmb	06 25 24.4	
	comp=Z,7.8nm,0.8s						
MT02	**Curacav**	**38.58**	**287**	P	**P**	**06 25 21.5**	**-0.6**
MT02				IAmb	IAmb	06 25 26.5	
	comp=Z,15nm,1.2s						
ZON	**Zonda**	**38.62**	**291**	P	**P**	**06 25 21.7**	**-0.8**
VA03	**San Esteban**	**38.65**	**288**	P	**P**	**06 25 22.9**	**+0.1**
VA03				IAmb	IAmb	06 25 35.6	
	comp=Z,18nm,1.4s						
ROC1	**El Roble**	**38.74**	**287**	P	**P**	**06 25 23.2**	**-0.5**
ROC1				IAmb	IAmb	06 25 26.8	
	comp=Z,9.4nm,0.8s						
VA06	**Catapilco**	**39.21**	**288**	P	**P**	**06 25 26.3**	**-1.0**
VA06				IAmb	IAmb	06 25 44.9	
	comp=Z,14nm,1.1s						
MAW	**Mawson**	**39.59**	**143**	P	**P**	**06 25 31.1**	**+1.1**
CO03	**El Pedregal**	**40.23**	**290**	P	**P**	**06 25 36.5**	**+0.5**
CO03				IAmb	IAmb	06 25 51.2	
	comp=Z,18nm,1.4s						
CO01	**Juntas del Tor**	**40.60**	**291**	P	**P**	**06 25 40.2**	**+1.0**
AC04	**Llanos de Chal**	**42.53**	**292**	P	**P**	**06 25 55.0**	**+0.2**
AC02	**Maricunga**	**42.64**	**295**	P	**P**	**06 25 57.7**	**+1.4**
BDFB	**Brasilia**	**43.86**	**328**	P	**P**	**06 26 04.7**	**-1.0**
	comp=Z,2.6nm,0.9s,baz=70,slow=11,SNR=3.2						
	comp=Z,2.6nm,0.9s						
GO02	**Mina Guanaco**	**44.26**	**296**	P	**P**	**06 26 10.0**	**+0.9**
LVC	**Limon Verde**	**46.05**	**299**	P	**P**	**06 26 24.5**	**+1.1**
	comp=Z,11nm,0.8s,baz=137,slow=6.0						
	comp=Z,11nm,0.8s						
LVC	**Limon Verde**	**46.05**	**299**	P	**P**	**06 26 25.1**	**+1.6**
LVC				IAmb	IAmb	06 26 28.0	
	comp=Z,11nm,0.8s						
VNDA	**Vanda**	**46.51**	**182**	P	**P**	**06 26 25.6**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=178,slow=6.4,SNR=8.9						
	comp=Z,1.6nm,0.8s						
VNDA	**Vanda**	**46.51**	**182**	P	**P**	**06 26 25.9**	**0.0**
PB09	**IPOC Station P**	**46.90**	**299**	P	**P**	**06 26 32.3**	**+2.4**
PB07	**IPOC Station P**	**47.28**	**298**	P	**P**	**06 26 33.9**	**+1.0**
PB01	**IPOC Station P**	**47.66**	**299**	P	**P**	**06 26 37.2**	**+1.5**
PB11	**IPOC Station P**	**48.83**	**300**	P	**P**	**06 26 46.5**	**+1.7**
LPAZ	**La Paz**	**51.10**	**304**	P	**P**	**06 27 02.6**	**0.0**
	comp=Z,1.0nm,0.4s,baz=134,slow=7.5,SNR=12						
	comp=Z,1.0nm,0.4s						
LPAZ	**La Paz**	**51.10**	**304**	P	**P**	**06 27 01.2**	**-1.4**
CASY	**Casey**	**53.54**	**160**	P	**P**	**06 27 20.2**	**+0.8**
CASY				IAmb	IAmb	06 27 41.0	
	comp=Z,9.6nm,0.8s						
SAML	**Samuel**	**55.45**	**313**	P	**P**	**06 27 34.7**	**+0.8**
SAML				IAmb	IAmb	06 27 35.3	
	comp=Z,5.1nm,1.1s						
TORD	**Torodi Ar. Bea**	**72.76**	**28**	P	**P**	**06 29 25.9**	**-1.5**
	comp=Z,2.1nm,0.7s,baz=197,slow=6.5,SNR=7.8						
	comp=Z,2.1nm,0.7s						
TORD	**Torodi Ar. Bea**	**72.76**	**28**	P	**P**	**06 29 27.8**	**+0.3**
INK	**Inuvik**	**146.39**	**320**	PKPbc	**PKPbc**	**06 37 38.2**	**-0.5**
	comp=Z,3.5nm,0.8s,baz=345,slow=8.1,SNR=3.4						
INK	**Inuvik**	**146.39**	**320**		**PKPbc**	**06 37 38.5**	**-0.2**
SONM	**Songino Array**	**149.93**	**86**	PKPbc	**PKPbc**	**06 37 48.0**	**-0.9**
	comp=Z,0.8nm,0.8s,baz=242,slow=5.1,SNR=3.6						
SONM	**Songino Array**	**149.93**	**86**		**PKPbc**	**06 37 48.6**	**-0.3**
ILAR	**Eielson Array**	**150.78**	**311**	PKPbc	**PKPbc**	**06 37 49.9**	**-0.3**
	comp=Z,2.4nm,0.9s,baz=101,slow=1.0,SNR=8.6						
ILAR	**Eielson Array**	**150.78**	**311**	PKPdf	**PKPdf**	**06 37 47.0**	**+2.3**
ILAR				PKPbc	**sPKPbc**	**06 37 52.3**	**+0.6**
ILAR					**PKPab**	**06 37 55.7**	**-1.8**

*ISK **05** 06:19:05.1,34.°89N×31.°92E,h70km,ML3.2/21*
*NIC **05** 06:19:10.7±0.0,35.°61N×31.°52E,h3km±31km,Ml3.2/8*

4.3nm,0.7s
ALFC AML AML 06 19 58.0
2.0nm,0.9s
NATA Nata 1.14 135 P **Pn** **06 19 34.4 +0.8**
NATA S **Sn** **06 19 51.5 +2.3**
NATA AML AML 06 19 58.2
4.5nm,1.0s
NATA AML AML 06 19 58.2
4.5nm,1.0s
NATA AML AML 06 20 02.5
7.7nm,0.7s
NATA AML AML 06 20 02.5
7.7nm,0.7s
LEF Lefka 1.16 114 P **Pb** **06 19 32.3 -1.3**
AKUM Antalya-Kumluc 1.25 306 P **Pg** **06 19 36.4 +0.7**
AKUM *i* AML AML 06 20 04.0
comp=E,101nm,0.5s
KEPZ Antalya-Kepez 1.30 0 P **Pg** **06 19 35.7 -1.0**
KEPZ S **Sg** **06 19 52.3 -1.4**
KEPZ *i* AML AML 06 19 54.0
comp=N,97nm,0.7s
SZAC Souni 1.34 128 P **Pg** **06 19 37.1 -0.3**
SZAC AML AML 06 20 08.5
1.4nm,0.7s
SZAC AML AML 06 20 09.7
1.0nm,0.9s
ERMK Ermenek 1.49 45 P **Pg** **06 19 42.7 +2.4**
ERMK *i* AML AML 06 20 11.0
comp=N,74nm,0.6s
ANTB Antalya 1.51 330 PN **Pg** **06 19 41.6 +1.0**
HDMB Hadim 1.54 27 PN **Pg** **06 19 39.8 -1.5**
HDMB SN **Sg** **06 20 05.1 +3.7**
CSS Mathiatis 1.55 113 P **Pb** **06 19 39.7 -0.7**
ASGA Asgata 1.57 120 P **Pg** **06 19 41.4 -0.4**
ASGA S **Sg** **06 20 03.9 +1.7**
ASGA AML AML 06 20 08.1
0.9nm,0.7s
ASGA AML AML 06 20 08.1
0.9nm,0.7s
ASGA AML AML 06 20 18.4
0.8nm,1.2s
ASGA AML AML 06 20 18.4
0.8nm,1.2s
GULN MERSIN_Gulnar 1.69 69 P **Pg** **06 19 43.0 -1.0**
GULN S **Sg** **06 20 05.7 -0.2**
KORT Korkueli 1.73 325 PN **Pg** **06 19 44.7 -0.1**
KORT SN **Sg** **06 20 13.2 +6.0**
KORT Korkueli 1.73 325 P **Pg** **06 19 43.9 -0.9**
AKAS Kas 1.74 292 PN **Pb** **06 19 42.6 -1.1**
ELL Elmali 1.79 311 PN **Pg** **06 19 44.6 -1.3**
SEYD Seydisehir-KON 1.82 6 PN **Pg** **06 19 45.3 -1.2**
SEDI Konya, Seydise 1.86 4 P **Pg** **06 19 45.9 -1.4**
SEDI *i* AML AML 06 20 23.0
comp=N,59nm,0.7s
SUTC Sutluce-Ispart 1.94 346 PN **Pg** **06 19 47.5 -1.4**
KKBE Karaman, Kazim 1.95 33 P **Pb** **06 19 47.0 -0.2**
KKBE *i* AML AML 06 20 22.0
comp=E,42nm,0.5s
BCK Bucak 2.03 337 PN **Pg** **06 19 49.1 -1.5**
EREN Erenkoy 2.10 91 P **Pg** **06 19 51.3 -0.6**
EREN *i* AML AML 06 20 22.0
comp=E,82nm,0.7s
EREN *i* AML AML 06 20 25.0
comp=N,60nm,0.9s
KMER Konya-Meram 2.26 16 P **Pb** **06 19 52.1 -0.4**
KMER *i* AML AML 06 20 27.0
comp=N,39nm,0.5s
FETY Fethiye 2.29 298 PN **Pb** **06 19 50.6 -2.3**
ISP Isparta 2.39 339 PN **Pb** **06 19 53.9 -0.8**
KONT Konya--Tatoy 2.42 14 PN **Pb** **06 19 53.3 -2.0**
KONT Konya--Tatoy 2.42 14 P **Pg** **06 19 56.0 -2.1**
APMY Acipayam-Deniz 2.63 316 PN **Pb** **06 19 56.9 -2.0**
BASM Basmaki-Afyon 2.63 332 PN **Pb** **06 19 57.6 -1.3**
LADK Ladik-KONYA 2.67 13 PN **Pb** **06 19 56.9 -2.7**
DALY Dalyan (Mula) 2.68 298 PN **Pn** **06 19 55.6 +0.9**
ARG Arkhangelos 2.89 283 PN **Pn** **06 19 57.4 -0.2**
TURN Turunc 2.96 294 PN **Pn** **06 19 59.6 +1.1**
SHUT Suhut-Afyon 3.07 344 PN **Pb** **06 20 03.7 -2.7**
YER Yerkesik 3.09 301 PN **Pn** **06 20 02.0 +1.6**
DAT Datca 3.44 290 PN **Pn** **06 20 05.9 +0.5**
MLSB Milas 3.52 300 PN **Pn** **06 20 07.9 +1.6**
KARP Karpathos 3.62 271 PN **Pn** **06 20 05.8 -1.9**
KULA Kula-Manisa 3.74 322 PN **Pb** **06 20 12.7 -5.1**
BODT Bodrum 3.76 294 PN **Pn** **06 20 10.2 +0.6**
AYDB Zeytinkoy-Aydi 3.79 309 PN **Pn** **06 20 12.5 +2.4**
ZKR Zakros 4.42 265 PN **Pn** **06 20 15.9 -2.8**

*IDC **05** 06:24:31.8±1.2,4.°64S×104.°95W,h0km,mb3.9/11, mbtmp3.9/11,MS4.4/8,Error ellipse: s-maj=53.3km s-min=19.8km az=66.0*
*NEIC **05** 06:24:34.6±1.5,4.°6S±0.°1×105.°0W±0.°1,h10km±1km, mb4.5/95,Error ellipse: s-maj=24.3km s-min=17.2km az=251.0*
*GCMT **05** 06:24:37.6±0.6,4.°48S±0.°02×104.°83W±0.°03,h20km±1km, MW4.9/69,Moment Tensor Solution. s8,c8; s69,c95; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr~0.59±.13; Mθθ0.80±.11; Mθφ~0.20±.10; Mrθ1.08±.24; Mφφ2.04±.09; Mφr~0.25±.19; Best double couple: M○2.41800×10^16^ NP1:ϕs9.00000°,δ60.00000°,λ-168.00000°. NP2: ϕs273.00000°,δ80.00000°,λ-30.00000°. Principal axes: T 2.5570, Plg13.0000°, Azm325.0000°; N -0.2780, Plg58.0000°, Azm76.0000°; P -2.2780, Plg29.0000°, Azm227.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 06:24:34.2±0.7,4.°60S±0.°09×105.°0W±0.°1,h13km,n124, σ0.°73/92,mb4.4/56,MS4.4/8,Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAYG	**Puerto Ayora**	**15.16**	**75**		**Pn**	**06 28 08.6**	**+0.5**
CMIG	**Matias Romero**	**23.74**	**25**	P	**P**	**06 29 47.4**	**+1.1**
	3.3nm,1.0s,baz=324,slow=17,SNR=4.0						
	3.3nm,1.0s						
HUEH	**Huehuetenango**	**23.86**	**34**	P	**P**	**06 29 49.5**	**+1.8**
H06S1	**SOCORRO T**	**23.93**	**346**	T	T	06 54 36.5	
	SNR=14						
CCIG	**Comitan**	**24.32**	**31**	P	**P**	**06 29 51.9**	**0.0**
JTS	**Las Juntas de**	**24.81**	**53**	LR	LR	06 37 01.8	
	comp=Z,812nm,20.2s,baz=144,slow=30						
HDC	**Heredia**	**25.32**	**55**	P	**P**	**06 30 02.0**	**+0.9**
DRK0	**Durika**	**25.65**	**58**	P	**P**	**06 30 03.8**	**-0.2**
PETF	**Flores**	**26.07**	**35**	P	**P**	**06 30 08.3**	**+0.7**
PORT	**Chimborazo Vol**	**26.32**	**84**	P	**P**	**06 30 10.5**	**-0.2**
PORT				IAmb	IAmb	06 30 27.9	
	comp=Z,19nm,1.2s						
BOSC	**San Juan Bosco**	**26.43**	**88**	P	**P**	**06 30 10.7**	**-0.6**
BOSC				IAmb	IAmb	06 30 22.6	
	comp=Z,14nm,1.1s						
SLOR	**San Lorenzo -**	**26.70**	**82**	P	**P**	**06 30 14.4**	**+0.5**
SLOR				IAmb	IAmb	06 30 38.7	
	comp=Z,9.2nm,1.2s						
SRIG	**Santa Rosalia**	**32.51**	**348**	P	**P**	**06 31 04.3**	**-0.5**
KVTX	**Kingsville**	**32.68**	**12**	P	**P**	**06 31 06.0**	**-0.3**
833A	**Chaparral WMA,**	**33.17**	**9**	P	**P**	**06 31 10.5**	**0.0**
TXAR	**Lajitas Array**	**33.77**	**2**	P	**P**	**06 31 16.4**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=185,slow=8.7,SNR=7.4						
	comp=Z,0.4nm,0.6s						
WHTX	**Lake Whitney,**	**37.08**	**11**	P	**P**	**06 31 43.9**	**-0.4**
WHTX				IAmb	IAmb	06 31 56.9	
	comp=Z,6.6nm,0.9s						
PB11	**IPOC Station P**	**37.53**	**117**	P	**P**	**06 31 48.6**	**+0.1**
H03N2	**Juan Fernandez**	**37.56**	**143**	T	T	07 11 34.3	
	baz=317,slow=77,SNR=93						
H03N1	**Juan Fernandez**	**37.57**	**143**	T	T	07 11 35.7	
	baz=317,slow=77,SNR=112						
H03N3	**Juan Fernandez**	**37.57**	**143**	T	T	07 11 35.0	
	baz=317,slow=77,SNR=115						
BNM	**Barren Site**	**38.58**	**358**	P	**P**	**06 31 57.4**	**+0.3**
GLA	**Glamis**	**38.60**	**347**	P	**P**	**06 31 58.6**	**+1.4**
GLA				IAmb	IAmb	06 32 13.3	
	comp=Z,10nm,1.4s						
LENM	**Lemitar**	**38.61**	**357**	P	**P**	**06 31 58.1**	**+0.7**
Y14A	**Wickenburg**	**39.08**	**349**	P	**P**	**06 32 02.3**	**+1.2**
LVC	**Limon Verde**	**39.17**	**121**	LR	LR	06 43 38.4	
	comp=Z,455nm,20.2s,baz=351,slow=29						
X16A	**Lo Mia Camp, P**	**39.29**	**352**	P	**P**	**06 32 04.2**	**+1.1**
W18A	**Petrified Fore**	**39.77**	**354**	P	**P**	**06 32 07.9**	**+0.9**
WUAZ	**Wupatki**	**40.36**	**352**	P	**P**	**06 32 13.4**	**+1.4**
MIAR	**Mount Ida**	**40.39**	**15**	P	**P**	**06 32 11.7**	**-0.3**
MIAR				IAmb	IAmb	06 32 22.7	
	comp=Z,5.5nm,0.8s						
GSC	**Goldstone, Bar**	**41.23**	**345**	P	**P**	**06 32 19.6**	**+0.6**
MVCO	**Mesa Verde**	**41.73**	**356**	P	**P**	**06 32 23.9**	**+0.6**
MVCO				IAmb	IAmb	06 32 34.9	
	comp=Z,7.2nm,1.1s						
VA06	**Catapilco**	**41.98**	**136**	P	**P**	**06 32 25.0**	**-0.1**
SHPR	**Sheep Range**	**41.99**	**348**	P	**P**	**06 32 26.6**	**+1.2**
SHPR				IAmb	IAmb	06 32 47.2	
	comp=Z,9.6nm,1.5s						
GWY	**Greenwater Val**	**42.03**	**346**	P	**P**	**06 32 26.9**	**+1.2**
LCMT	**Little Creek M**	**42.12**	**350**	P	**P**	**06 32 26.9**	**+0.5**
S22A	**4UR Ranch, Cre**	**42.17**	**358**	P	**P**	**06 32 27.9**	**+0.9**
LCAR	**Lake Charles**	**42.48**	**17**	P	**P**	**06 32 29.1**	**+0.1**
CCUT	**Cedar City**	**42.66**	**350**	P	**P**	**06 32 32.1**	**+1.3**
PV13	**Radium Mtn., P**	**42.70**	**355**	P	**P**	**06 32 31.2**	**0.0**
PRN	**Pahroc Range**	**42.84**	**348**	P	**P**	**06 32 33.0**	**+0.8**
PRN				IAmb	IAmb	06 32 49.8	
	comp=Z,8.0nm,1.1s						
MTPU	**Mount Pierson**	**42.96**	**352**	P	**P**	**06 32 34.1**	**+0.7**
GRAC	**Grapevine Rang**	**42.98**	**345**	IAmb	IAmb	06 32 54.7	
	comp=Z,17nm,1.4s						
GO05	**Huala**	**42.98**	**139**	P	**P**	**06 32 33.0**	**-0.3**
GO05				IAmb	IAmb	06 32 39.5	
	comp=Z,16nm,1.1s						
ZON	**Zonda**	**43.31**	**133**	IAmb	IAmb	06 32 44.8	
	comp=Z,8.4nm,1.1s						
PBMO	**Poplar Bluff**	**43.34**	**17**	IAmb	IAmb	06 32 43.6	
	comp=Z,10nm,1.1s						
Q24A	**Divide**	**43.35**	**360**	IAmb	IAmb	06 33 02.3	
	comp=Z,4.8nm,0.8s						
MSU	**Marysvale**	**43.42**	**352**	P	**P**	**06 32 38.5**	**+1.6**
S39A	**Bolivar**	**43.45**	**13**	IAmb	IAmb	06 32 40.7	
	comp=Z,8.6nm,1.4s						
KSCO	**Kaye Shedlock'**	**43.45**	**3**	P	**P**	**06 32 36.9**	**-0.2**
KSCO				IAmb	IAmb	06 32 49.1	
	comp=Z,16nm,1.5s						
LMEL	**Las Melosas**	**43.46**	**136**	P	**P**	**06 32 37.5**	**+0.2**
CBKS	**Cedar Bluff**	**43.47**	**6**	P	**P**	**06 32 35.8**	**-1.4**
CBKS				IAmb	IAmb	06 32 47.3	
	comp=Z,17nm,1.3s						
SMCO	**Snowmass**	**43.60**	**358**	P	**P**	**06 32 39.3**	**+0.7**
Q16A	**Castle Valley**	**43.68**	**353**	P	**P**	**06 32 40.1**	**+1.0**
MDPB	**Devils Postpil**	**44.03**	**344**	P	**P**	**06 32 42.4**	**+0.5**
P17A	**Butcher Ranch,**	**44.18**	**354**	IAmb	IAmb	06 32 55.0	
	comp=Z,4.8nm,1.0s						
R40A	**Maddies Statio**	**44.27**	**14**	P	**P**	**06 32 42.9**	**-0.7**
R40A				IAmb	IAmb	06 32 53.9	
	comp=Z,6.2nm,0.8s						
P18A	**Preston Nutter**	**44.28**	**354**	P	**P**	**06 32 44.3**	**+0.3**
P18A				IAmb	IAmb	06 32 55.8	
	comp=Z,4.2nm,0.9s						
CCM	**Cathedral Cave**	**44.31**	**16**	P	**P**	**06 32 42.9**	**-1.0**
LHV	**Little Huntoon**	**44.45**	**345**	IAmb	IAmb	06 32 49.9	
	comp=Z,4.2nm,1.0s						
SIV	**San Ignacio**	**44.53**	**108**	LR	LR	06 48 16.2	
	comp=Z,590nm,18.6s,baz=317,slow=32						
NVAR	**Mina Array Bea**	**44.57**	**345**	P	**P**	**06 32 46.2**	**-0.1**
	comp=Z,1.4nm,1.0s,baz=170,slow=8.8,SNR=7.1						
	comp=Z,1.4nm,1.0s						
O20A	**White River Ci**	**44.62**	**356**	IAmb	IAmb	06 32 58.6	
	comp=Z,8.9nm,1.0s						
MPU	**Maple Canyon**	**44.82**	**353**	IAmb	IAmb	06 33 00.8	
	comp=Z,7.4nm,1.1s						
V53A	**Saluda**	**45.13**	**26**	P	**P**	**06 32 49.7**	**-0.8**
V53A				IAmb	IAmb	06 33 00.7	
	comp=Z,10.0nm,1.2s						
DUG	**Dugway, Tooele**	**45.16**	**352**	P	**P**	**06 32 51.0**	**+0.2**
DUG				IAmb	IAmb	06 33 04.8	
	comp=Z,4.2nm,0.8s						
PPT	**Papeete**	**45.52**	**250**	LR	LR	06 47 53.4	
	comp=Z,196nm,18.2s,baz=187,slow=31						
BMN	**Battle Mountai**	**46.21**	**347**	P	**P**	**06 32 59.5**	**+0.3**
HWUT	**Hardware Ranch**	**46.38**	**353**	P	**P**	**06 33 00.1**	**-0.4**
HWUT				IAmb	IAmb	06 33 12.1	
	comp=Z,6.7nm,1.1s						
ORV	**Oroville**	**46.52**	**342**	P	**P**	**06 33 02.0**	**+0.7**
ORV				IAmb	IAmb	06 33 14.6	
	comp=Z,4.8nm,0.9s						
HVU	**Hansel Valley**	**46.71**	**352**	P	**P**	**06 33 03.4**	**+0.3**
HVU				IAmb	IAmb	06 33 14.7	
	comp=Z,3.8nm,1.1s						
K22A	**Casper**	**47.05**	**358**	P	**P**	**06 33 05.2**	**-0.5**
K22A				IAmb	IAmb	06 33 17.3	
	comp=Z,7.3nm,1.1s						
PD31	**Pinedale Array**	**47.33**	**355**	P	**P**	**06 33 07.4**	**-0.6**
PD31				IAmb	IAmb	06 33 18.6	
	comp=Z,3.6nm,1.1s						
PDAR	**Pinedale Array**	**47.33**	**355**	P	**P**	**06 33 07.7**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=173,slow=5.8,SNR=7.8						
	comp=Z,1.0nm,0.6s						
PDAR	**Pinedale Array**	**47.33**	**355**	P	**P**	**06 33 07.3**	**-0.7**
PLCA	**Paso Flores**	**47.40**	**144**	P	**P**	**06 33 07.8**	**-0.7**
	comp=Z,2.7nm,0.9s,baz=289,slow=11,SNR=6.4						
PLCA				LR	LR	06 47 58.3	
	comp=Z,695nm,19.2s,baz=0.0,slow=30						
	comp=Z,2.7nm,0.9s						
LOHW	**Long Hollow**	**48.26**	**354**	P	**P**	**06 33 14.5**	**-0.7**
LOHW				IAmb	IAmb	06 33 26.1	
	comp=Z,6.7nm,1.3s						
LL02	**Futaleuf**	**48.31**	**148**	P	**P**	**06 33 15.0**	**-0.4**
MOD	**Modoc Plateau**	**48.35**	**345**	P	**P**	**06 33 16.9**	**+1.0**
MOOW	**Moose Ponds**	**48.41**	**354**	P	**P**	**06 33 16.1**	**-0.3**
MOOW				IAmb	IAmb	06 33 30.0	
	comp=Z,9.1nm,1.6s						
RSSD	**Black Hills**	**48.51**	**1**	P	**P**	**06 33 16.9**	**-0.1**
RSSD				IAmb	IAmb	06 33 36.2	
	comp=Z,7.6nm,1.2s						
HLID	**Hailey**	**48.70**	**351**	P	**P**	**06 33 19.2**	**+0.8**
HLID				IAmb	IAmb	06 33 30.3	
	comp=Z,4.5nm,0.9s						
FLWY	**Flagg Ranch**	**48.74**	**354**	P	**P**	**06 33 19.0**	**+0.1**
MFID	**Camas Ranch**	**48.80**	**349**	P	**P**	**06 33 19.6**	**+0.4**
MFID				IAmb	IAmb	06 33 30.8	
	comp=Z,3.9nm,0.8s						
YBH	**Yreka Blue Hor**	**48.88**	**342**	P	**P**	**06 33 19.9**	**+0.1**
	comp=Z,1.7nm,0.9s,baz=173,slow=5.8,SNR=3.7						
	comp=Z,1.7nm,0.9s						
YPP	**Pitchstone Pla**	**48.94**	**354**	IAmb	IAmb	06 33 32.0	
	comp=Z,4.5nm,1.2s						
J08A	**Circle Bar Ran**	**49.28**	**347**	P	**P**	**06 33 23.7**	**+0.8**
J08A				IAmb	IAmb	06 33 39.1	
	comp=Z,6.1nm,1.1s						
BCYI	**Bear Canyon**	**49.28**	**352**	P	**P**	**06 33 23.1**	**+0.1**
YHL	**Hebgen Lake**	**49.55**	**354**	P	**P**	**06 33 25.4**	**+0.3**
YHL				IAmb	IAmb	06 33 41.9	
	comp=Z,7.4nm,1.1s						
QLMT	**Earthquake Lak**	**49.55**	**354**	P	**P**	**06 33 25.4**	**+0.3**
RLMT	**Red Lodge**	**49.65**	**356**	IAmb	IAmb	06 33 37.5	
	comp=Z,4.9nm,1.1s						
MCMT	**McKenzie Canyo**	**49.72**	**353**	P	**P**	**06 33 27.0**	**+0.7**
I07A	**Izee**	**50.20**	**346**	IAmb	IAmb	06 33 43.3	
	comp=Z,4.2nm,0.8s						
DLMT	**Dillon**	**50.21**	**353**	IAmb	IAmb	06 33 55.3	
	comp=Z,7.0nm,1.5s						
CPUP	**Villa Florida**	**50.35**	**121**	P	**P**	**06 33 30.4**	**-0.8**
	comp=Z,2.5nm,0.8s,baz=300,slow=3.1,SNR=4.0						
	comp=Z,2.5nm,0.8s						
CPUP	**Villa Florida**	**50.35**	**121**	IAmb	IAmb	06 33 40.5	
	comp=Z,10nm,1.2s						
HRY	**Holter Researc**	**51.45**	**354**	P	**P**	**06 33 39.0**	**-0.2**
F10A	**Beach Ranch, E**	**51.53**	**349**	P	**P**	**06 33 40.4**	**+0.6**
F10A				IAmb	IAmb	06 33 54.0	
	comp=Z,10nm,1.4s						
C09A	**Chrisman Ranch**	**53.48**	**349**	P	**P**	**06 33 54.5**	**+0.3**
C09A				IAmb	IAmb	06 34 05.5	
	comp=Z,4.1nm,0.9s						
NEW	**Newport**	**53.72**	**350**	LR	LR	06 53 14.2	
	comp=Z,617nm,21.4s,baz=106,slow=32						
NEW	**Newport**	**53.72**	**350**	IAmb	IAmb	06 34 06.7	
	comp=Z,4.6nm,0.9s						
ULM	**Lac du Bonnet**	**55.19**	**7**	P	**P**	**06 34 06.3**	**-0.3**
	comp=Z,2.7nm,0.8s,baz=217,slow=10,SNR=2.5						
	comp=Z,2.7nm,0.8s						
RAR	**Rarotonga**	**55.63**	**248**	LR	LR	06 50 37.2	
	comp=Z,112nm,19.0s,baz=270,slow=28						
PMSA	**Palmer Station**	**66.74**	**162**	LR	LR	06 57 10.5	
	comp=Z,268nm,19.7s,baz=356,slow=29						
PMSA	**Palmer Station**	**66.74**	**162**	P	**P**	**06 35 25.9**	**+1.1**
YKA	**Yellowknife Ar**	**67.32**	**355**	P	**P**	**06 35 27.8**	**-0.7**
	comp=Z,0.5nm,0.6s,baz=161,slow=6.5,SNR=7.3						
	comp=Z,0.5nm,0.6s						
BCAR	**Beaver Creek A**	**73.00**	**343**	P	**P**	**06 36 03.3**	**-0.1**
INK	**Inuvik**	**75.44**	**349**	P	**P**	**06 36 16.9**	**-0.5**
	comp=Z,2.1nm,1.0s,baz=157,slow=3.2,SNR=3.0						
	comp=Z,2.1nm,1.0s						
ILAR	**Eielson Array**	**75.77**	**343**	P	**P**	**06 36 18.9**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=151,slow=5.1,SNR=7.8						
	comp=Z,0.8nm,0.7s						
ILAR	**Eielson Array**	**75.77**	**343**	P	**P**	**06 36 18.5**	**-0.9**
WRH	**Wood River Hil**	**75.92**	**342**	P	**P**	**06 36 20.6**	**+0.3**
WRH				IAmb	IAmb	06 36 36.2	
	comp=Z,5.2nm,0.9s						
IMAR	**Indian Mountai**	**78.70**	**342**	P	**P**	**06 36 35.6**	**-0.2**
RES	**Resolute Bay**	**79.40**	**3**	P	**P**	**06 36 40.2**	**+0.7**
RES				IAmb	IAmb	06 36 45.0	
	comp=Z,4.9nm,0.8s						
QSPA	**South Pole Qui**	**85.45**	**180**	P	**P**	**06 37 11.9**	**+0.4**
H11N3	**WAKE ISLAND Hy**	**89.79**	**290**	T	T	08 17 00.9	
	baz=96,slow=74,SNR=764						
H11N2	**WAKE ISLAND Hy**	**89.80**	**290**	T	T	08 17 01.9	
	baz=96,slow=74,SNR=616						
H11N1	**WAKE ISLAND Hy**	**89.80**	**290**	T	T	08 16 55.4	
	baz=96,slow=74,SNR=346						
H11S2	**WAKE ISLAND Hy**	**89.88**	**288**	T	T	08 17 06.6	
	baz=94,slow=74,SNR=366						
H11S1	**WAKE ISLAND Hy**	**89.88**	**288**	T	T	08 17 05.1	
	baz=94,slow=74,SNR=248						
H11S3	**WAKE ISLAND Hy**	**89.89**	**288**	T	T	08 17 07.9	
	baz=94,slow=74,SNR=164						
BRTR	**Keskin Array B**	**128.85**	**41**	PKP	**PKPdf**	**06 43 41.2**	**-0.9**
	comp=Z,0.6nm,0.8s,baz=330,slow=5.0,SNR=4.0						
MKAR	**Makanchi Array**	**137.51**	**353**	PKP	**PKiKP**	**06 43 59.3**	**-0.7**
	comp=Z,0.1nm,0.5s,baz=11,slow=2.9,SNR=2.2						
PZH	**PanZhiHua**	**146.45**	**313**	PKPbc	**PKPdf**	**06 44 14.0**	**-0.7**
CMAR	**Chiang Mai Arr**	**152.90**	**302**	PKPbc	**PKiKP**	**06 44 33.9**	**+1.5**
	comp=Z,1.3nm,0.3s,baz=169,slow=19,SNR=1.6						

TAP 05 06:51:05.3,24.°20N×121.°72E,h11km,ML1.6,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.10**	**242**	P	Pg	06 51 08.7	+0.6
	baz=242						
ETL				S	Sg	06 51 11.1	+1.1
	baz=242						
EHP	**Heping Village**	**0.11**	**12**	*e*P	Pg	06 51 08.5	+0.4
	baz=15						
NACB	**Ninganchiao**	**0.12**	**255**	P	Pg	06 51 08.9	+0.7
	baz=255						
NACB				S	Sg	06 51 11.5	+1.2
	baz=255						
TWD	**Chiawan**	**0.17**	**222**	P	Pg	06 51 09.7	+0.7
	baz=220						
TWD				*i* S	Sg	06 51 12.9	+1.4
	baz=220						
ETLH	**Xiulin Townshi**	**0.21**	**271**	P	Pb	06 51 10.7	-0.7
	baz=270						
ETLH				S	Sg	06 51 14.4	+1.4
	baz=270						
ENA	**Nanau**	**0.22**	**6**	*i* P	Pb	06 51 10.9	-0.6
	baz=7.0						
ENA				*i* S	Sg	06 51 14.6	+1.4
	baz=7.0						
EWUT	**Wuta**	**0.25**	**13**	*e*P	Pg	06 51 11.1	+0.6
	baz=13						
EWUT				*e*S	Sg	06 51 15.2	+1.3
	baz=13						
HWA	**Hwalien**	**0.25**	**204**	S	Sg	06 51 15.7	+1.9
	baz=202						
LATG	**Datong**	**0.37**	**332**	P	Pb	06 51 13.8	-0.3
	baz=332						
LATG				S	Sb	06 51 19.9	0.0
	baz=332						
NNSB	**Datong**	**0.38**	**306**	P	Pb	06 51 13.9	-0.3
	baz=306						
NNSB				S	Sb	06 51 19.6	-0.5
	baz=306						
NNS	**Nan Shan**	**0.39**	**307**	P	Pb	06 51 14.2	-0.3
	baz=307						
NNS				S	Sb	06 51 20.1	-0.4
	baz=307						
WHF	**Hehuan Shan**	**0.42**	**262**	*i* P	Pg	06 51 14.2	+0.5
	baz=261						
WHF				S	Sg	06 51 19.9	+0.6
	baz=261						
TWC	**Suao**	**0.42**	**17**	*e*P	Pb	06 51 14.9	+0.1
	baz=17						
NDS	**Dongshan**	**0.43**	**360**	*e*P	Pg	06 51 14.3	+0.6
	baz=359						
NDS				S	Sb	06 51 21.2	-0.2
	baz=359						
FUSS	**Fushou**	**0.43**	**276**	*e*P	Pb	06 51 14.8	-0.4
	baz=275						
ENTT	**Nioudou**	**0.46**	**342**	*i* P	Pb	06 51 15.3	-0.2
	baz=343						
ESL	**Shilin**	**0.47**	**214**	*i* P	Pb	06 51 15.3	-0.3
	baz=212						
TWT	**Tachien**	**0.50**	**276**	*e*P	Pb	06 51 16.4	+0.1
	baz=275						
TWT				S	Sb	06 51 23.6	+0.1
	baz=275						
TDCB	**Techi**	**0.51**	**276**	*e*P	Pb	06 51 16.2	-0.3
	baz=275						
TDCB				*e*S	Sb	06 51 24.6	+0.5
	baz=275						
CHGB	**Renai**	**0.52**	**254**	P	Pb	06 51 16.2	-0.3
	baz=253						
CHGB				*e*S	Sb	06 51 24.6	+0.4
	baz=253						
TWE	**Neicheng**	**0.52**	**355**	*e*P	Pb	06 51 16.0	-0.5
	baz=356						
TWE				*e*S	Sb	06 51 24.3	+0.3
	baz=356						
OWD	**Renai**	**0.55**	**243**	*e*P	Pb	06 51 17.0	-0.2
	baz=243						
OWD				*e*S	Sb	06 51 25.5	+0.3
	baz=243						
YHNB	**Yeheng**	**0.56**	**326**	*e*P	Pb	06 51 17.5	+0.2
	baz=326						
YHNB				*e*S	Sb	06 51 25.6	+0.3
	baz=326						
FUSB	**Fushanzhiwuyua**	**0.57**	**348**	*e*P	Pb	06 51 17.0	-0.3
	baz=347						
FUSB				*e*S	Sb	06 51 26.1	+0.6
	baz=347						
NSK	**Sanguang**	**0.57**	**325**	*e*P	Pb	06 51 17.5	+0.1
	baz=325						
NSK				*e*S	Sb	06 51 25.7	+0.1
	baz=325						
WUSB	**Renai**	**0.59**	**249**	*e*P	Pg	06 51 17.2	+0.4
	baz=248						
WUSB				*e*S	Sb	06 51 25.9	-0.2
	baz=248						
VWDT	**VWDT**	**0.69**	**230**	*e*P	Pb	06 51 19.6	+0.1
	baz=229						
VWDT				*e*S	Sb	06 51 29.5	+0.5
	baz=229						

**ROM 05 07:17:31.1±0.1,42.°918N±0.°004×12.°973E±0.°004, h10km,ML1.4/8,2C-2D,Error ellipse: s-maj=0.3km s-min

ATCC					AML	AML	
	comp=E,19μm,1.5s						
ATCC					AML	AML	
	comp=N,13μm,0.9s						
MMUR	**Monte Murano**	**0.52**	**2**		AML	AML	
	comp=N,461μm,1.6s						
MMUR					AML	AML	
	comp=E,527μm,1.6s						
ATTE	**AVT- Monte Tez**	**0.53**	**302**		AML	AML	
	comp=N,226μm,0.2s						
ATTE					AML	AML	
	comp=E,103μm,0.1s						
PE3	**Peglio**	**0.85**	**336**		AML	AML	
	comp=E,24μm,0.1s						
PE3					AML	AML	
	comp=N,37μm,0.4s						

ATH ***05*** *07:18:54.4,38°.11N×20°.34E,h9km±4km,ML3.1/1,Error ellipse: s-maj=6.2km s-min=2.1km az=38.0*

THE 05 07:18:54.8,38°.15N×20°.39E,h13km,ML2.8/6,Error ellipse: s-maj=1.2km s-min=0.5km az=229.0,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	**Kipouria, Keph**	**0.06**	**328**	P	Pg	07 18 57.1	-0.2
KEF3				S	Sg	07 18 59.3	+0.1
KEF3	**Kipouria, Keph**	**0.06**	**328**	P	Pg	07 18 57.1	-0.2
KEF3				S	Sg	07 18 59.3	+0.1
	28μm,0.1s						
LXRA	**Lixouri, Kepha**	**0.06**	**40**	P	Pg	07 18 57.2	-0.2
LXRA				S	Sg	07 18 59.7	+0.5
ARGA	**Argostoli. Kep**	**0.07**	**72**	P	Pg	07 18 58.3	+0.9
ARGA				S	Sg	07 19 00.0	+0.6
DMLN	**Damoulianata-K**	**0.09**	**352**	P	Pg	07 18 57.3	-0.3
DMLN				S	Sg	07 18 59.6	-0.1
	5μm,0.2s						
KEF4	**Livadi, Kephal**	**0.11**	**16**	P	Pg	07 18 57.6	-0.3
KEF4				S	Sg	07 19 00.2	+0.2
KEF4	**Livadi, Kephal**	**0.11**	**16**	P	Pg	07 18 57.6	-0.3
KEF4				S	Sg	07 19 00.3	+0.2
	24μm,0.1s						
PSDA	**Pessada-Kefalo**	**0.16**	**104**	P	Pg	07 18 58.4	-0.2
PSDA				S	Sg	07 19 01.5	+0.3
PSDA	**Pessada-Kefalo**	**0.16**	**104**	P	Pg	07 18 58.4	-0.2
PSDA				S	Sg	07 19 01.6	+0.4
	832nm,0.1s						
VLS	**Valsamata**	**0.16**	**82**	P	Pg	07 18 58.3	-0.3
VLS				S	Sg	07 19 01.5	+0.2
VLS				AML	AML	07 19 01.6	
	comp=E,24091μm,0.2s						
VLS				AML	AML	07 19 01.6	
	comp=N,9830μm,0.2s						
VLS	**Valsamata**	**0.16**	**82**	P	Pg	07 18 58.3	-0.3
VLS				S	Sg	07 19 01.4	+0.1
	comp=N,9μm,0.1s						
VLS	**Valsamata**	**0.16**	**82**	P	Pg	07 18 58.3	-0.3
FSK	**Fiskardo**	**0.33**	**24**	P	Pg	07 19 01.5	-0.1
FSK				S	Sg	07 19 06.4	+0.2
	comp=N,485nm,0.2s						
EVGI	**Lefkada island**	**0.51**	**24**	P	Pb	07 19 06.2	+0.5
EVGI	**Lefkada island**	**0.51**	**24**	P	Pg	07 19 04.0	-0.9
NYDR	**Nydri-Lefkada**	**0.61**	**23**	P	Pb	07 19 07.0	-0.3
NYDR	**Nydri-Lefkada**	**0.61**	**23**	P	Pg	07 19 06.6	-0.1
LKD2	**Lefkada island**	**0.67**	**18**	P	Pg	07 19 08.1	+0.3
PVO	**Paravola**	**1.01**	**62**	P	Pb	07 19 13.4	-0.7
DRO	**Drossia**	**1.06**	**101**	P	Pb	07 19 14.3	-0.8
EFP	**Efpalio**	**1.23**	**77**	P	Pn	07 19 16.6	-1.0
SERG	**Sergoula**	**1.34**	**78**	P	Pn	07 19 18.6	-0.6
KLV	**Kalavryta, Ach**	**1.40**	**94**	P	Pn	07 19 19.5	-0.5

NNC 05 07:28:55.5±0.4,49°.99N×78°.68E,h0km,mb3.5,mpv3.2, 22C-5D,Error ellipse: s-maj=4.3km s-min=2.0km az=72.0,Suspected Mining explosion.,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.60**	**350**	⇑P	Pg	07 29 07.2	+0.2
KUR07				⇓S	Sg	07 29 16.1	+1.2
KUR06	**Kurchatov Arra**	**0.62**	**351**	⇓P	Pg	07 29 07.5	+0.1
KUR06				⇑S	Sg	07 29 17.0	+1.5
KUR14	**Kurchatov Arra**	**0.63**	**355**	⇑P	Pg	07 29 07.3	-0.2
KUR14				⇑S	Sg	07 29 16.2	+0.5
KUR15	**Kurchatov Arra**	**0.63**	**353**	⇑P	Pg	07 29 07.7	+0.1
KUR15				⇑S	Sg	07 29 16.8	+1.0
KURBB	**Kurchatov Arra**	**0.64**	**351**	⇑P	Pg	07 29 08.1	+0.3
	12nm,0.2s						
KURBB				⇑S	Sb	07 29 18.3	-0.8
	40nm,0.3s						
KUR16	**Kurchatov Arra**	**0.65**	**350**	⇑P	Pg	07 29 08.0	+0.1
KUR16				S	Sg	07 29 17.2	+0.9
KUR17	**Kurchatov Arra**	**0.66**	**348**	⇑P	Pg	07 29 08.2	+0.1
KUR17				⇑S	Sg	07 29 17.8	+1.2
KUR05	**Kurchatov Arra**	**0.66**	**352**	⇑P	Pg	07 29 08.2	0.0
KUR05				⇑S	Sg	07 29 17.2	+0.6
KUR04	**Kurchatov Arra**	**0.68**	**352**	⇑P	Pg	07 29 08.7	+0.2
KUR04				⇑S	Sg	07 29 18.0	+0.7
KURK	**Kurchatov**	**0.73**	**357**	⇑P	Pg	07 29 09.4	0.0
	7.0nm,0.3s						
KURK				⇑S	Sg	07 29 19.5	+0.7
	15nm,0.4s						
SEM	**Semipalatinsk**	**1.09**	**67**	P	Pg	07 29 16.1	-0.3
	10nm,0.1s						
SEM				S	Sb	07 29 31.8	-0.4
	54nm,0.2s						
MAKZ	**Makanchi**	**3.87**	**144**	⇓Pn	Pn	07 29 53.2	-3.0
	1.1nm,0.5s						
MAKZ				⇑Pg	Pg	07 30 07.1	-2.5
	2.0nm,0.7s						
MAKZ				⇑Lg	Lg	07 30 56.5	
	4.1nm,0.5s						
MK31	**Makanchi Array**	**4.00**	**142**	Pn	Pn	07 30 00.2	+2.1
	0.1nm,0.1s,baz=278,slow=6.2,SNR=30						
MK31				⇑Pg	Pg	07 30 12.3	+0.1
	0.4nm,0.3s,baz=314,slow=14,SNR=10						
MK31				Lg	Lg	07 31 01.6	
	4.2nm,0.5s,baz=330,slow=26,SNR=21						
OTUK	**Ortayu**	**4.52**	**250**	⇑Pn	Pn	07 30 07.2	+2.0
	1.0nm,0.2s						
OTUK				⇓Pg	Pg	07 30 18.9	-3.2
	0.5nm,0.3s						
OTUK				⇑Lg	Lg	07 31 19.6	
	4.5nm,0.8s						
ZSN	**Zaisan**	**4.82**	**120**	Pg	Pb	07 30 20.0	-0.8
	2.0nm,0.2s						
ZSN				Lg	Lg	07 31 22.0	
	5.1nm,0.5s						
ARXS	**Arharly**	**5.81**	**186**	Pg	Pb	07 30 41.2	+3.5
	1.6nm,0.3s						
ARXS				Lg	Lg	07 31 58.1	
	6.4nm,0.4s						
BLB	**Baldybastay**	**5.90**	**181**	Pg	Pb	07 30 43.2	+3.9
	3.5nm,0.3s						
BLB				Lg	Lg	07 32 01.8	
	9.8nm,0.6s						
CHKK	**Chushkaly**	**6.25**	**191**	Pg	Pb	07 30 49.8	+4.6
	0.6nm,0.1s						
CHKK				Lg	Lg	07 32 12.3	
	8.1nm,0.4s						
KUU	**Kurty**	**6.31**	**196**	Pg	Pb	07 30 49.7	+3.6
	1.2nm,0.2s						
KUU				Lg	Lg	07 32 12.6	
	7.0nm,0.3s						
KPKS	**Kokpek**	**6.53**	**180**	Pg	Pb	07 30 54.7	+4.8
	1.4nm,0.4s						
KPKS				Lg	Lg	07 32 21.1	
	7.8nm,0.8s						
PDGK	**Podgornoye**	**6.69**	**175**	Pg	Pb	07 30 57.9	+5.2
	0.7nm,0.8s						
PDGK				Lg	Lg	07 32 26.6	
	2.2nm,0.8s						
TNSS	**Tian-Shan**	**7.06**	**190**	Pg	Pg	07 31 05.0	-5.7
	1.3nm,0.3s						
TNSS				Lg	Lg	07 32 38.9	
	1.3nm,0.6s						

PDG ***05*** *07:29:59.7±0.4,38°.12N×20°.25E,h20km,ML3.6/11,Error ellipse: s-maj=1.2km s-min=1.3km az=0.0*

IDC ***05*** *07:29:59.8±1.4,38°.44N×20°.57E,h0km,mb3.6/7, mbtmp3.5/12,ML3.7/5,Error ellipse: s-maj=21.2km s-min=18.7km az=33.0*

BEO ***05*** *07:30:00.7±0.7,38°.21N×20°.40E,h0km,ML3.5/9*

ATH ***05*** *07:30:01.0,38°.16N×20°.35E,h17km±1km,ML3.5/8,Error ellipse: s-maj=2.1km s-min=1.0km az=61.0*

THE ***05*** *07:30:01.6,38°.16N×20°.37E,h12km,ML3.6/13,Error ellipse: s-maj=1.3km s-min=0.7km az=238.0*

ISC 05 07:30:01.5±0.7,38°.20N±0.03×20°.39E±0.03,h16km±3km, n133,σ1§27/177,mb3.6/7,6C-6D,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	**Kipouria, Keph**	**0.04**	**277**	P	Pg	07 30 04.1	-0.4
KEF3				S	Sg	07 30 06.1	-0.3
KEF3	**Kipouria, Keph**	**0.04**	**277**	P	Pg	07 30 04.1	-0.4
KEF3				S	Sg	07 30 06.0	-0.5
	447μm,0.2s						
DMLN	**Damoulianata-K**	**0.04**	**338**	P	Pg	07 30 04.3	-0.3
DMLN				S	Sg	07 30 06.6	0.0
	90μm,0.1s						
KEF4	**Livadi, Kephal**	**0.06**	**22**	P	Pg	07 30 04.7	0.0
KEF4				S	Sg	07 30 07.3	+0.6
KEF4	**Livadi, Kephal**	**0.06**	**22**	P	Pg	07 30 04.6	0.0
KEF4				S	Sg	07 30 07.3	+0.6
	717μm,0.2s						
ARGA	**Argostoli. Kep**	**0.07**	**108**	P	Pg	07 30 04.9	+0.2
ARGA				S	Sg	07 30 07.2	+0.4
VLS	**Valsamata**	**0.16**	**98**	P	Pg	07 30 05.4	-0.3
VLS				S	Sg	07 30 08.6	+0.1
VLS				AML	AML	07 30 08.7	
VLS				AML	AML	07 30 08.8	
VLS	**Valsamata**	**0.16**	**98**	P	Pg	07 30 05.3	-0.4
VLS				S	Sg	07 30 08.6	+0.1
	88μm,0.2s						
PSDA	**Pessada-Kefalo**	**0.17**	**119**	P	Pg	07 30 05.4	-0.5
PSDA				S	Sg	07 30 08.9	+0.1
PSDA	**Pessada-Kefalo**	**0.17**	**119**	P	Pg	07 30 05.3	-0.6
PSDA				S	Sg	07 30 08.7	-0.1
	6μm,0.4s						
FSK	**Fiskardo**	**0.29**	**27**	P	Pb	07 30 08.6	+0.2
FSK				S	Sb	07 30 13.7	+0.6
FSK				AML	AML	07 30 14.7	
	comp=E,50121μm,0.2s						
FSK				AML	AML	07 30 15.4	
	comp=N,18207μm,0.3s						
FSK	**Fiskardo**	**0.29**	**27**	P	Pb	07 30 08.5	+0.2
FSK				S	Sb	07 30 13.6	+0.6
	comp=N,17μm,0.2s						
EVGI	**Lefkada island**	**0.47**	**26**	P	Pg	07 30 10.9	0.0
EVGI				S	Sb	07 30 18.8	+0.6
EVGI	**Lefkada island**	**0.47**	**26**	P	Pb	07 30 11.6	+0.2
EVGI				S	Sb	07 30 18.7	+0.6
	comp=N,8μm,0.1s						
NYDR	**Nydri-Lefkada**	**0.57**	**25**	P	Pg	07 30 12.4	-0.4
NYDR	**Nydri-Lefkada**	**0.57**	**25**	P	Pg	07 30 12.3	-0.5
NYDR				S	Sb	07 30 21.9	+1.0
	comp=N,3μm,0.4s						
LTHK	**Lithakia**	**0.60**	**144**	P	Pg	07 30 12.4	-1.0
LKD2	**Lefkada island**	**0.62**	**19**	P	Pg	07 30 13.4	-0.4
LKD2				AML	AML	07 30 30.1	
	comp=E,5307μm,0.3s						
LKD2				AML	AML	07 30 31.8	
	comp=N,6239μm,0.4s						
LKD2	**Lefkada island**	**0.62**	**19**	P	Pg	07 30 13.5	-0.4
LKD2				S	Sn	07 30 24.6	-0.8
	comp=N,3μm,0.3s						
TSLK	**Tsoukalades, L**	**0.66**	**18**	P	Pg	07 30 14.3	-0.2
TSLK	**Tsoukalades, L**	**0.66**	**18**	P	Pg	07 30 14.4	-0.1
TSLK				S	Sn	07 30 25.7	-0.5
	comp=N,4μm,0.4s						
RLS	**Riolos of Patr**	**0.86**	**99**	P	Pb	07 30 17.5	-0.5
RLS				AML	AML	07 30 38.5	
	comp=E,2377μm,0.7s						
RLS				AML	AML	07 30 39.7	
	comp=N,2655μm,0.5s						
RLS	**Riolos of Patr**	**0.86**	**99**	P	Pb	07 30 17.1	-0.9
RLS				S	Sn	07 30 31.5	+0.4
	comp=N,1μm,0.6s						
PVO	**Paravola**	**0.98**	**64**	P	Pb	07 30 19.9	-0.3
PVO	**Paravola**	**0.98**	**64**	P	Pb	07 30 20.3	+0.2
PVO				S	Sn	07 30 35.6	+1.4
	comp=N,5μm,0.5s						
DRO	**Drossia**	**1.07**	**103**	P	Pb	07 30 21.5	-0.1
DRO				AML	AML	07 30 43.1	
	comp=N,3532μm,0.5s						
DRO				AML	AML	07 30 49.6	
	comp=E,1325μm,0.7s						
DRO	**Drossia**	**1.07**	**103**	P	Pb	07 30 20.8	-0.8
UPR	**University Cam**	**1.10**	**85**	P	Pg	07 30 22.8	0.0
EFP	**Efpalio**	**1.21**	**79**	P	Pn	07 30 23.6	-0.2
EFP				AML	AML	07 30 48.5	
	comp=E,3151μm,0.5s						
EFP				AML	AML	07 30 52.3	
	comp=N,2654μm,0.4s						
EFP	**Efpalio**	**1.21**	**79**	P	Pn	07 30 23.4	-0.4
EFP				S	Sg	07 30 42.7	+2.0
	comp=N,2μm,0.4s						
LAKA	**Lakka**	**1.25**	**88**	P	Pn	07 30 24.1	-0.2
LAKA	**Lakka**	**1.25**	**88**	P	Pn	07 30 24.1	-0.2
SERG	**Sergoula**	**1.32**	**80**	P	Pn	07 30 25.4	0.0
SERG				AML	AML	07 30 51.4	
	comp=N,2610μm,0.4s						
SERG				AML	AML	07 30 51.7	
	comp=E,2424μm,0.6s						
IGT	**Igoumenitsa**	**1.33**	**358**	P	Pb	07 30 26.3	+0.1
IGT	**Igoumenitsa**	**1.33**	**358**	P	Pb	07 30 26.1	0.0
ALIK	**Áliki, Aigiali**	**1.35**	**87**	P	Pb	07 30 26.5	0.0
KLV	**Kalavryta, Ach**	**1.39**	**96**	P	Pn	07 30 26.5	+0.2
KLV	**Kalavryta, Ach**	**1.39**	**96**	P	Pn	07 30 26.5	+0.2
JAN	**Janina**	**1.50**	**14**	P	Pb	07 30 28.6	-0.4
KEK	**Kerkira**	**1.58**	**343**	P	Pn	07 30 29.5	+0.6
KEK	**Kerkira**	**1.58**	**343**	P	Pn	07 30 29.6	+0.7
KASA	**Kassiopi**	**1.59**	**347**	P	Pb	07 30 30.3	-0.2
MAKR	**Makrakomi, Fth**	**1.59**	**59**	AML	AML	07 30 57.5	
	comp=E,4595μm,0.6s						
MAKR				AML	AML	07 30 59.4	
	comp=N,2476μm,0.8s						
PYL	**PYLOS**	**1.69**	**140**	P	Pb	07 30 31.1	-1.0
THL	**Klokotos Trika**	**1.86**	**42**	P	Pb	07 30 35.3	+0.1
LSK	**Leskovik**	**1.96**	**5**	P	Pn	07 30 35.4	+1.3
LTK	**Loutraki**	**2.09**	**94**	P	Pn	07 30 36.1	0.0
LKR	**Lokris**	**2.10**	**77**	P	Pn	07 30 37.0	+1.1
ATAL	**Atalanti**	**2.12**	**76**	P	Pb	07 30 38.2	-1.4
FNA	**Florina**	**2.69**	**16**	*e*Pn	Pn	07 30 46.4	+2.2
FNA				*e*Sn	Sn	07 31 16.5	+0.1
OHR	**Ohrid**	**2.93**	**6**	*e*Pn	Pn	07 30 49.9	+2.5
OHR				*e*Sn	Sn	07 31 23.6	+1.4
TIP	**Timpagrande**	**3.01**	**290**	⇓P	Pn	07 30 48.8	+0.2
TIR	**Tirane**	**3.17**	**353**	*e*Pn	Pn	07 30 52.3	+1.6
TIR				*e*Sn	Sn	07 31 30.4	+2.2
TIR	**Tirane**	**3.17**	**353**	⇑P	Pn	07 30 52.3	+1.6
VAY	**Valandovo**	**3.54**	**28**	*e*Pn	Pn	07 30 57.4	+1.6
SRS	**Serrai**	**3.82**	**39**	*e*Pn	Pn	07 31 00.8	+1.2
SRS				*e*Sn	Sn	07 31 44.7	+0.5
ULC	**Ulcinj**	**3.86**	**347**	⇑*i*Pn	Pn	07 30 59.9	-0.4
ULC				*e*Sn	Sn	07 31 45.3	0.0
DRME	**Dracevica, Mon**	**4.09**	**347**	*e*Pn	Pn	07 31 03.6	+0.3
DRME	**Dracevica, Mon**	**4.09**	**347**	*e*Pn	Pn	07 31 03.4	+0.1
DRME				*i* Sn	Sn	07 31 50.5	-0.3
BUJ	**Brajici-Budva**	**4.25**	**345**	*e*Pn	Pn	07 31 05.5	-0.2
BUM				*i* Sn	Sn	07 31 52.6	-2.4
PDG	**Podgorica**	**4.32**	**349**	*e*Pn	Pn	07 31 06.3	-0.1
PDG				*e*Sn	Sn	07 31 57.2	+0.8
PDG	**Podgorica**	**4.32**	**349**	⇑P	Pn	07 31 06.9	+0.5
PDG	**Podgorica**	**4.32**	**349**	*e*Pn	Pn	07 31 06.0	-0.4
TTG	**Podgorica**	**4.32**	**349**	*e*Pn	Pn	07 31 06.4	0.0
TTG				*e*Sn	Sn	07 31 56.7	+0.3
PVY	**Plav**	**4.40**	**356**	⇑*i*Pn	Pn	07 31 08.1	+0.3
PVY				*i* Sn	Sn	07 31 59.1	+0.3
HCY	**Herceg Novi**	**4.49**	**342**	*e*Pn	Pn	07 31 07.7	-1.1
HCY	**Herceg Novi**	**4.49**	**342**	⇓*i*Pn	Pn	07 31 08.1	-0.7
HCY				*e*Sn	Sn	07 32 00.0	-0.6
CEME	**Cevo**	**4.49**	**346**	⇓*i*Pn	Pn	07 31 08.7	-0.2
CEME				*i* Sn	Sn	07 31 59.2	-1.5
PRVS	**Prvonek**	**4.49**	**16**	*e*Pn	Pn	07 31 08.3	-0.6
IDI	**Anoyia**	**4.63**	**127**	Pn	Pn	07 31 16.3	+5.4
IDI	comp=N,0.6nm,0.3s,baz=284,slow=14,SNR=1.7			Sn	Sn	07 32 03.1	-1.3
	comp=N,1.0nm,0.3s,baz=4.5,slow=23,SNR=1.5						
IVA	**Berane**	**4.68**	**355**	⇓*i*Pn	Pn	07 31 12.0	+0.4
IVA				*i* Sn	Sn	07 32 06.0	+0.4
KOME	**Kolasin**	**4.70**	**352**	*e*Pn	Pn	07 31 12.0	+0.3
KOME				*i* Sn	Sn	07 32 05.6	-0.3
NKY	**Niksic**	**4.73**	**347**	⇓*i*Pn	Pn	07 31 12.3	0.0
NKY				*e*Sn	Sn	07 32 06.6	-0.2
BARS	**Barje**	**4.74**	**13**	*e*Pn	Pn	07 31 12.9	+0.6
BARS				*e*Sn	Sn	07 32 07.2	+0.4
TREB	**Trebinje**	**4.78**	**342**	*e*Pn	Pn	07 31 11.7	-1.1
VAE	**Valguarnera**	**4.79**	**263**	Sn	Sn	07 32 08.9	+0.7
	comp=N,2.0nm,0.3s,baz=326,slow=16,SNR=6.0						
BRY	**Bratogost**	**4.91**	**344**	*e*Pn	Pn	07 31 14.0	-0.7
BRY	**Bratogost**	**4.91**	**344**	*e*Pn	Pn	07 31 14.0	-0.7
BRY				*e*Sn	Sn	07 32 09.9	-1.3
SELS	**Selova**	**5.05**	**6**	*e*Pn	Pn	07 31 16.3	-0.2
SELS				*e*Sn	Sn	07 32 14.6	+0.2
SJES	**Sjenica**	**5.07**	**357**	*e*Pn	Pn	07 31 17.5	+0.6
SJES				*e*Sn	Sn	07 32 15.3	+0.2
SJES	**Sjenica**	**5.07**	**357**	*e*Pn	Pn	07 31 17.2	+0.3
STON	**Ston**	**5.10**	**337**	*e*Pn	Pn	07 31 16.3	-0.9
UPM	**Unac-Piva**	**5.13**	**348**	*e*Pn	Pn	07 31 17.9	+0.1
UPM	**Unac-Piva**	**5.13**	**348**	⇓*i*Pn	Pn	07 31 17.8	0.0
UPM				*i* Sn	Sn	07 32 15.5	-1.1
RUDO	**Rudo**	**5.47**	**352**	*e*Pn	Pn	07 31 21.6	-0.7
GRUS	**Gruza**	**5.69**	**2**	*e*Pn	Pn	07 31 25.2	-0.1
BBLS	**Lazići**	**5.71**	**353**	*e*Pn	Pn	07 31 24.9	-0.8
BBLS				*e*Sn	Sn	07 32 30.4	-0.5
BBLS	**Lazići**	**5.71**	**353**	*e*Pn	Pn	07 31 22.2	-3.5
DIVS	**Divibare**	**5.90**	**357**	*e*Pn	Pn	07 31 28.0	-0.3
DIVS				*e*Sn	Sn	07 32 34.1	-1.5
DIVS	**Divibare**	**5.90**	**357**	*e*Pn	Pn	07 31 27.6	-0.7
TRUS	**Trudelj**	**6.02**	**0**	*e*Pn	Pn	07 31 29.6	-0.3
TRUS				*e*Sn	Sn	07 32 36.7	-1.7
SRKY	**Kupres RS**	**6.35**	**338**	*e*Pn	Pn	07 31 34.0	-0.5
MDVR	**Moldovita**	**6.65**	**8**	⇑P	Pn	07 31 38.4	-0.1
MGRS	**Mrkonjic Grad**	**6.69**	**339**	*e*Pn	Pn	07 31 38.7	-0.4
FRGS	**Fruska Gora**	**6.97**	**357**	*e*Pn	Pn	07 31 41.7	-1.2
FRGS	**Fruska Gora**	**6.97**	**357**	*e*Pn	Pn	07 31 41.3	-1.6
BLY	**Banja Luka**	**6.97**	**341**	*e*Pn	Pn	07 31 42.4	-0.5
KOVH	**Kovagotottos**	**8.07**	**349**	P	Pn	07 31 56.5	-1.4
KOVH				S	Sn	07 33 22.6	-6.1
MORH	**Mrgy, Hungar**	**8.12**	**351**	*e*Pn	Pn	07 31 56.6	-2.0
MORH	**Mrgy, Hungar**	**8.12**	**351**	S	Sn	07 33 23.2	-6.7
MORH	**Mrgy, Hungar**	**8.12**	**351**	P	Pn	07 31 58.2	-0.4
MLR	**Muntele Rosu**	**8.38**	**28**	⇑P	Pn	07 32 09.7	+7.3
MLR	**Muntele Rosu**	**8.38**	**28**	Pn	Pn	07 31 59.8	-2.5
	comp=N,0.3nm,0.3s,baz=161,slow=17,SNR=2.1						
	comp=N,1.0nm,0.5s						
CRES	**Cresnjev**	**8.46**	**336**	*e*Pn	Pn	07 32 02.8	-0.5
CERK	**Cerknica**	**8.74**	**331**	*e*Pn	Pn	07 32 07.0	-0.3
SKDS	**Skadanscina**	**8.75**	**329**	*e*Pn	Pn	07 32 06.5	-0.8
LJU	**Ljubljana**	**8.97**	**333**	*e*Pn	Pn	07 32 10.1	-0.2
MPLH	**Magyarpolny**	**9.21**	**348**	P	Pn	07 32 12.6	-1.0
SOKA	**Soboth**	**9.35**	**337**	*i* Pn	Pn	07 32 14.6	-1.0
	comp=N,7.7nm,0.4s,SNR=23						
OBKA	**Obir**	**9.36**	**334**	*e*Pn	Pn	07 32 15.9	+0.1
	comp=N,6.6nm,0.6s,SNR=8.7						
ARSA	**Arzberg**	**9.73**	**340**	*i* Pn	Pn	07 32 19.9	-0.8
	comp=N,2.2nm,0.4s,SNR=7.7						
CONA	**Conrad Observa**	**10.27**	**343**	*e*Pn	Pn	07 32 29.4	+1.2
	comp=N,0.5nm,0.3s						
ABTA	**Abfaltersbach**	**10.33**	**328**	*e*Pn	Pn	07 32 28.8	-0.2
	comp=N,1.0nm,0.3s						
BRTR	**Keskin Array B**	**10.43**	**77**	Pn	Pn	07 32 33.0	+2.6
	comp=N,0.1nm,0.3s,baz=267,slow=13,SNR=2.2						
	comp=N,0.3nm,0.4s						
MOA	**Molln**	**10.63**	**337**	*e*Pn	Pn	07 32 32.9	-0.2
	comp=N,2.9nm,0.3s,SNR=11						
BIOA	**Bad Ischl, Aus**	**10.70**	**335**	*e*Pn	Pn	07 32 33.3	-0.7
	comp=N,2.1nm,0.3s						
WTTA	**Wattenberg**	**11.11**	**327**	*e*Pn	Pn	07 32 40.2	+0.4
	comp=N,3.0nm,0.5s,SNR=6.8						
WATA	**Walderalm**	**11.19**	**328**	*e*Pn	Pn	07 32 41.4	+0.6
	comp=N,3.1nm,0.4s,SNR=7.7						
SQTA	**Sankt Quirin**	**11.26**	**326**	*e*Pn	Pn	07 32 43.0	+1.2
	comp=N,3.3nm,0.5s						
MOTA	**Moosalm**	**11.40**	**326**	*e*Pn	Pn	07 32 44.2	+0.4
	comp=N,2.1nm,0.5s,SNR=5.9						
DAVOX	**Davos/Dischmat**	**11.56**	**321**	Pn	Pn	07 32 46.8	+0.8
	comp=N,0.1nm,0.3s,baz=160,slow=23,SNR=1.6						
	comp=N,0.5nm,0.4s						
RETA	**Reutte**	**11.66**	**326**	*i* Pn	Pn	07 32 49.4	+2.2
	comp=N,0.6nm,0.3s						
GERES	**GERESS Array B**	**11.69**	**338**	Pn	Pn	07 32 46.2	-1.4
	comp=N,0.6nm,0.3s,baz=155,slow=14,SNR=15						
GERES				Sn	Sn	07 34 53.3	-4.5
	comp=N,0.3nm,0.3s,baz=339,slow=41,SNR=2.7						
	comp=N,1.1nm,0.4s						
KHC	**Kasperske Hory**	**11.98**	**338**	*e*PN	Pn	07 32 49.7	-1.9
KHC				*e*SN	Sn	07 34 59.9	-5.0
ESDC	**Sonseca Array**	**19.00**	**282**	P	Pn	07 34 24.6	+1.5
	comp=N,0.1nm,0.3s,baz=83,slow=11,SNR=1.5						
	comp=N,0.1nm,0.5s						
HFS	**Hagfors**	**22.36**	**351**	P	P	07 34 57.9	-0.7
	comp=N,1.7nm,0.7s,baz=140,slow=12,SNR=6.8						
	comp=N,1.7nm,0.7s

FRON	**Frontone**	**0.18**	**81**	⇑P	Pg	07 30 23.3	+0.5
FRON				S	Sg	07 30 26.5	+1.1
ATMI	**Monte Miggiano**	**0.22**	**225**	P	Pg	07 30 23.9	+0.4
ATMI				S	Sg	07 30 28.0	+1.4
PARC	**Parchiule**	**0.24**	**312**	⇓P	Pg	07 30 24.4	+0.5
PARC				S	Sg	07 30 28.6	+1.5
PARC				AML	AML		
	comp=E,25μm,0.1s						
PARC				AML	AML		
	comp=N,20μm,0.1s						
PARC				AML	AML		
	comp=N,20μm,0.1s						
MPAG	**Monte Paganucc**	**0.24**	**55**	⇑P	Pg	07 30 24.5	+0.5
MPAG				S	Sg	07 30 29.0	+1.6
MPAG				AML	AML		
	comp=E,13μm,1.3s						
MPAG				AML	AML		
	comp=N,14μm,1.5s						
ARVD	**Arcevia**	**0.34**	**89**	P	Pg	07 30 26.1	+0.5
ARVD				S	Sb	07 30 31.9	-0.7

NEIC ***05*** *07:30:24.0±1.5, 16°.04N±0°.03×98°.40W±0°.06, h10km±2km, mb4.0/20, Md4.1/12(MEX), Error ellipse: s-maj=10.3km s-min=3.3km az=119.0*
MEX ***05*** *07:30:24.7±0.5, 15°.95N×98°.41W, h17km±14km, MD4.1*
ISC 05 07:30:23.0±1.1, 15°.99N±0°.07×98°.36W±0°.05, h17km, n37, σ1§43/40, mb4.0/8, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.46**	**29**		**Pg**	**07 30 32.2**	**-0.1**
PNIG					**Sb**	**07 30 38.8**	**-0.4**
PNIG	**Pinotepa**	**0.46**	**29**	*eP*	**Pg**	**07 30 32.2**	**-0.1**
PNIG				*i* S	**Sb**	**07 30 38.8**	**-0.4**
CRIG	**Cruz Grande**	**1.05**	**315**		**Pb**	**07 30 40.1**	**-2.7**
CRIG	**Cruz Grande**	**1.05**	**315**	*eP*	**Pb**	**07 30 40.1**	**-2.7**
YOIG	**Yosondua**	**1.16**	**42**	*eP*	**Pb**	**07 30 43.5**	**-1.3**
PEIG	**Puerto Escondi**	**1.16**	**89**	*iP*	**Pb**	**07 30 43.2**	**-1.3**
PEIG				*eS*	**Sb**	**07 30 58.1**	**-1.3**
MGIG	**Malinaltepec**	**1.27**	**348**	*eP*	**Pn**	**07 30 44.3**	**-1.8**
TXIG	**Tlaxiaco**	**1.38**	**24**	*eP*	**Pn**	**07 30 46.8**	**-0.9**
TLIG	**Tlapa**	**1.58**	**353**		**Pn**	**07 30 49.9**	**-0.4**
TLIG				Sn	**Sn**	**07 31 11.2**	**+0.8**
TLIG	**Tlapa**	**1.58**	**353**	*eP*	**Pn**	**07 30 49.3**	**-1.0**
VHO	**Vista Hermosa**	**1.89**	**55**	*eP*	**Pn**	**07 30 54.1**	**-0.6**
HLIG	**Huajuapan de L**	**1.91**	**16**	*eP*	**Pn**	**07 30 54.0**	**-0.9**
FTIG	**Fresnillo de T**	**1.92**	**6**	*eP*	**Pn**	**07 30 54.4**	**-0.7**
UNM	**Universidad Na**	**3.41**	**347**		**Pn**	**07 31 17.8**	**+2.1**
MOIG	**Morelia**	**4.55**	**324**	Pn	**Pn**	**07 31 32.5**	**+1.1**
CCIG	**Comitan**	**5.99**	**86**		**Pn**	**07 31 53.3**	**+2.3**
ORTG	**Ortega, Santa**	**13.74**	**112**	Pn	**Pn**	**07 33 37.4**	**+0.1**
ABTX	**Abilene, Hawle**	**16.60**	**356**	Pn	**Pn**	**07 34 14.6**	**-0.5**
ABTX				IAmb	IAmb	07 34 19.9	
	comp=Z,9.6nm,0.9s						
ANMO	**Albuquerque**	**20.23**	**340**	P	Pn	07 34 60.0	+0.5
U40A	**Yellville**	**20.87**	**13**	P	**P**	**07 35 05.2**	**+1.0**
U40A				IAmb	IAmb	07 35 10.0	
	comp=Z,5.7nm,0.8s						
T25A	**Trinidad**	**21.74**	**347**	P	**P**	**07 35 12.7**	**-1.1**
MGMO	**Mountain Grove**	**21.76**	**13**	P	**P**	**07 35 12.9**	**-0.9**
MGMO				IAmb	IAmb	07 35 26.2	
	comp=Z,5.8nm,1.2s						
X16A	**Lo Mia Camp, P**	**21.80**	**330**	P	**P**	**07 35 18.7**	**+4.2**
PBMO	**Poplar Bluff**	**21.87**	**17**	P	**P**	**07 35 16.6**	**+1.6**
PBMO				IAmb	IAmb	07 35 18.7	
	comp=Z,7.0nm,0.8s						
S39A	**Bolivar**	**22.07**	**11**	P	**P**	**07 35 17.6**	**+0.4**
WVT	**Waverly**	**22.14**	**23**	P	**P**	**07 35 17.2**	**-0.7**
WVT				IAmb	IAmb	07 35 21.2	
	comp=Z,5.2nm,0.9s						
SDCO	**Great Sand Dun**	**22.57**	**345**	P	**P**	**07 35 23.7**	**+0.9**
R40A	**Maddies Statio**	**22.86**	**12**	P	**P**	**07 35 26.0**	**+0.6**
R40A				IAmb	IAmb	07 35 28.3	
	comp=Z,5.9nm,0.9s						
MVCO	**Mesa Verde**	**22.97**	**339**	P	**P**	**07 35 28.7**	**+1.7**
MVCO				IAmb	IAmb	07 35 36.5	
	comp=Z,9.7nm,1.5s						
CPCT	**Cooper Cave**	**22.99**	**30**	P	**P**	**07 35 27.2**	**+0.2**
CPCT				IAmb	IAmb	07 35 27.7	
	comp=Z,4.7nm,1.0s						
W52A	**Murphy**	**23.00**	**32**	P	**P**	**07 35 27.7**	**+0.6**
S44A	**Carbondale**	**23.07**	**19**	P	**P**	**07 35 28.9**	**+1.2**
SIUC	**Southern Illin**	**23.10**	**19**	P	**P**	**07 35 29.3**	**+1.4**
T47A	**Sharon Grove**	**23.18**	**23**	P	**P**	**07 35 29.9**	**+1.1**
HODGE	**Hodges**	**23.23**	**36**	P	**P**	**07 35 28.8**	**-0.6**
HODGE				IAmb	IAmb	07 35 30.0	
	comp=Z,5.2nm,0.8s						
U49A	**Red Boiling Sp**	**23.30**	**26**	P	**P**	**07 35 31.0**	**+0.9**
ISCO	**Idaho Springs**	**24.55**	**346**	P	**P**	**07 35 44.0**	**+1.7**
ISCO				IAmb	IAmb	07 35 45.8	
	comp=Z,2.9nm,0.9s						

IDC ***05*** *07:30:20.8±9.9, 7°.65S×113°.24E, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=170.2km s-min=137.2km az=171.0*
DJA ***05*** *07:30:38.0±0.6, 8°S±10°×11°3E±°, h144km±9km, M3.2/11, mb3.9/2, MLv2.9/11*
ISC 05 07:30:37.3±1.3, 8°.0S±0°.2×112°.91E±0°.08, h154km, n15, σ0§95/15, mb3.4/3, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMJI	**Gumukmas**	**0.58**	**115**	P	**Pn**	**07 31 00.4**	**+0.9**
BLJI	**Banyuglugur**	**0.73**	**67**	P	**Pn**	**07 31 00.9**	**+0.4**
PWJI	**Pagerwojo**	**1.10**	**270**	P	**Pn**	**07 31 03.3**	**0.0**
GRJI	**Gresik**	**1.19**	**339**	P	**Pn**	**07 31 04.9**	**+0.3**
JAGI	**Jajag, Banyuwa**	**1.30**	**110**	P	**Pn**	**07 31 06.0**	**+0.7**
PCJI	**Pacitan**	**1.72**	**264**	P	**Pn**	**07 31 09.8**	**+0.2**
WOJI	**Wonogiri, Jawa**	**1.98**	**275**	P	**Pn**	**07 31 12.8**	**+0.4**
SRBI	**Singaraja**	**2.28**	**92**	P	**Pn**	**07 31 17.6**	**+1.6**
UGM	**Wanagama**	**2.37**	**273**	P	**Pn**	**07 31 17.2**	**+0.1**
PLAI	**Plampang**	**4.88**	**100**	P	**Pn**	**07 31 51.3**	**+2.0**
WBSI	**Waikabubak, Su** 0.2nm39nm,0.8s	**6.60**	**105**	P	**Pn**	**07 32 12.3**	**+0.1**
EDFI	**Ende, Flores**	**8.72**	**95**	P	**Pn**	**07 32 39.3**	**-1.1**
WRA	**Warramunga Arr** 0.6nm,0.9s,baz=299,slow=12,SNR=8.4 0.6nm,0.9s	**23.89**	**122**	P	**P**	**07 35 36.1**	**-0.9**
ASAR	**Alice Springs** 0.5nm,0.5s,baz=305,slow=9.2,SNR=9.8 0.5nm,0.5s	**25.43**	**130**	P	**P**	**07 35 50.5**	**-0.5**
STKA	**Stephens Creek** 3.6nm,0.9s,baz=319,slow=12,SNR=3.2 3.6nm,0.9s	**35.70**	**136**	P	**P**	**07 37 21.0**	**-0.1**

IDC ***05*** *07:42:17.7±2.4, 10°.95N×62°.24W, h0km, mb3.6/4, mbtmp3.7/5, ML3.4/1, Error ellipse: s-maj=110.8km s-min=35.8km az=33.0*
FUNV ***05*** *07:42:21.5, 10°.45N×62°.63W, h14km, MW3.8*
TRN ***05*** *07:42:21.5, 10°.33N×62°.75W, h27km, MD3.9*
ISC 05 07:42:20.7±1.1, 10°.30N±0°.05×62°.70W±0°.03, h28km±10km, n32, σ1§49/51, mb3.7/4, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRUV	**Carupano**	**0.64**	**305**	*eP*	**Pb**	**07 42 32.8**	**-0.6**
CRUV				*eS*	**Sb**	**07 42 40.7**	**-1.3**
COAV	**Cumanacoa**	**1.12**	**263**	*eP*	**Pb**	**07 42 43.6**	**+2.2**
TPP	**Pointe-a-Pierr**	**1.23**	**89**	*eP*	**Pb**	**07 42 44.0**	**+0.7**
TPP				*eS*	**Sb**	**07 43 00.3**	**+1.4**
TRN	**Trinidad (W)**	**1.32**	**75**	*eP*	**Pn**	**07 42 43.7**	**+0.4**
TRN				*eS*	**Sb**	**07 43 01.6**	**+0.1**
TBH	**Brigand Hill**	**1.62**	**83**	*eP*	**Pb**	**07 42 49.2**	**-0.7**
PCRV	**Puerto La Cruz**	**1.91**	**266**	*eP*	**Pb**	**07 42 53.5**	**-1.4**
GRFF	**Grenada Fort F**	**1.98**	**29**	*eP*	**Pn**	**07 42 53.4**	**+1.0**
GRFF				*eS*	**Sn**	**07 43 17.0**	**+0.8**
GRGR	**Grenville**	**2.09**	**29**	*eP*	**Pn**	**07 42 54.8**	**+0.9**
GRGR				*eS*	**Sn**	**07 43 19.9**	**+0.9**
TOSP	**Speyside**	**2.35**	**65**	*eP*	**Pb**	**07 43 00.2**	**-2.1**
TOSP				*eS*	**Sn**	**07 43 27.5**	**+2.2**
PRGV	**PARIAGUAN**	**2.46**	**232**	*eP*	**Pb**	**07 43 03.4**	**-0.7**
PRGV				*eS*	**Sb**	**07 43 33.4**	**-0.6**
GCMP	**Grenada, Carri**	**2.50**	**30**	*eP*	**Pn**	**07 43 01.2**	**+1.6**
GCMP				*eS*	**Sn**	**07 43 29.0**	**-0.2**
SVV	**Soufriere Volc**	**3.33**	**26**	*eP*	**Pn**	**07 43 13.1**	**+2.1**
BIRV	**Birongo**	**3.51**	**273**	*eP*	**Pn**	**07 43 16.3**	**+2.8**
BIRV				*eS*	**Sn**	**07 43 54.4**	**+0.2**
MERV	**Las Mercedes**	**3.69**	**254**	*eP*	**Pn**	**07 43 18.7**	**+2.7**
MERV				*eS*	**Sn**	**07 44 01.1**	**+2.4**
MCLT	**Moule a Chique**	**3.80**	**27**	*eP*	**Pn**	**07 43 18.1**	**+0.7**
MCLT				*eS*	**Sn**	**07 44 01.2**	**0.0**
SLAC	**Saint Lucia, A**	**3.98**	**26**	*eS*	**Sn**	**07 44 05.2**	**-0.7**
SLCP	**Castries, St.**	**4.05**	**24**	*eP*	**Pn**	**07 43 21.8**	**+1.0**
SLCP				*eS*	**Sn**	**07 44 06.7**	**-0.6**
SLBI	**Saint Lucia, B**	**4.07**	**24**	*eP*	**Pn**	**07 43 23.2**	**+2.1**
SLBI				*eS*	**Sn**	**07 44 08.0**	**+0.2**
CARV	**Caracas**	**4.16**	**273**	*eP*	**Pn**	**07 43 24.0**	**+1.5**
CARV				*eS*	**Sn**	**07 44 10.6**	**+0.3**
MPOM	**Morne Pois Mar**	**4.49**	**23**	*eP*	**Pn**	**07 43 28.8**	**+1.8**
MPOM	**Morne Pois Mar**	**4.49**	**23**	*eS*	**Sn**	**07 44 17.8**	**-0.5**
CACV	**CAICARA DEL OR**	**4.67**	**235**	*eP*	**Pn**	**07 43 27.2**	**-2.2**
CACV				*eS*	Sn	07 44 15.8	-6.8
BENV	**Beln**	**4.83**	**266**	*eP*	**Pn**	**07 43 34.0**	**+2.3**
BENV				*eS*	**Sn**	**07 44 26.0**	**-0.8**
BAUV	**El Baul**	**5.44**	**256**	*eP*	**Pn**	**07 43 42.4**	**+2.5**
BAUV				*eS*	**Sn**	**07 44 41.1**	**-0.5**
MAPV	**Macapo**	**5.69**	**266**	*eP*	**Pn**	**07 43 45.0**	**+1.6**
MAPV				*eS*	**Sn**	**07 44 47.3**	**-0.6**
JACV	**Jacura**	**6.07**	**278**	*eP*	**Pn**	**07 43 49.5**	**+0.8**
JACV				*eS*	**Sn**	**07 44 55.2**	**-2.2**
SANV	**Sanarito**	**6.78**	**264**	*eP*	**Pn**	**07 44 00.3**	**+1.7**
SANV				*eS*	**Sn**	**07 45 12.8**	**-2.1**
MDP	**Montagnes des** 0.3nm,0.3s,baz=76,slow=17,SNR=2.2	**11.23**	**117**	Pn	**Pn**	**07 44 58.4**	**-1.0**
MDP				Sn	Sn	07 46 56.6	-7.5
	0.8nm,0.3s,baz=51,slow=21,SNR=7.0 13nm,0.9s						
TXAR	**Lajitas Array** 0.2nm,0.6s,baz=122,slow=8.1,SNR=6.6 0.2nm,0.6s	**42.65**	**302**	P	**P**	**07 50 16.9**	**+1.6**
PDAR	**Pinedale Array** 0.4nm,0.6s,baz=112,slow=12,SNR=3.7 0.4nm,0.6s	**51.99**	**317**	P	**P**	**07 51 27.5**	**-0.4**
YKA	**Yellowknife Ar** 0.6nm,0.7s,baz=107,slow=7.2,SNR=6.3 0.6nm,0.7s	**63.94**	**336**	P	**P**	**07 52 50.2**	**-0.8**
ILAR	**Eielson Array** 0.7nm,0.6s,baz=93,slow=4.5,SNR=11 0.7nm,0.6s	**78.27**	**334**	P	**P**	**07 54 17.1**	**-0.8**

MAN 05 07:44:05.0, 10°.90N×122°.59E, h23km, mb3.7, ML2.5, MS2.0, Panay

IDC ***05*** *08:25:36.9±2.1, 23°.77S×70°.83W, h0km, mb3.9/2, mbtmp3.7/5, ML3.3/3, Error ellipse: s-maj=59.4km s-min=40.0km az=150.0*
GUC ***05*** *08:25:43.1±0.8, 23°.34S×70°.71W, h42km±2km, ML3.3*
ISC 05 08:25:43.5±1.3, 23°.34S±0°.05×70°.76W±0°.09, h31km±8km, n17, σ0§87/26, 6C-3D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB10	**IPOC Station P**	**0.26**	**132**	⇑*iP*	**Pb**	**08 25 50.3**	**-0.2**
PB10				*i* S	**Sb**	**08 25 54.9**	**-0.3**
PB10				IAML		08 25 55.5	
	comp=N,16μm,0.4s						
PB04	**IPOC Station P**	**1.15**	**30**	⇑*iP*	**Pn**	**08 26 03.5**	**-0.2**
PB04				*i* S	**Sn**	**08 26 17.8**	**-0.6**
PB04				IAML		08 26 24.8	
	comp=E,628nm,0.3s						
PB15	**IPOC Station P**	**1.19**	**84**	⇓*iP*	**Pn**	**08 26 03.8**	**-0.5**
PB15				*i* S	**Sn**	**08 26 19.0**	**-0.6**
PB06	**IPOC Station P**	**1.26**	**60**	*eP*	**Pn**	**08 26 04.8**	**-0.4**
PB06				*i* S	**Sn**	**08 26 20.5**	**-0.7**
PB06				IAML		08 26 22.8	
	comp=N,1μm,0.2s						
PB07	**IPOC Station P**	**1.80**	**27**	⇑*iP*	**Pn**	**08 26 12.7**	**+0.1**
PB07				*i* S	**Sn**	**08 26 34.3**	**-0.1**
PB07				IAML		08 26 44.5	
	comp=E,292nm,0.4s						
LVC	**Limon Verde** comp=E,8.8nm,0.3s,baz=237,slow=7.1,SNR=89	**1.85**	**67**	Pn	**Pn**	**08 26 14.4**	**+1.0**
LVC				Sn	**Sn**	**08 26 35.9**	**-0.2**
	comp=E,64nm,0.3s,baz=84,slow=19,SNR=27 comp=E,62nm,0.3s						
LVC	**Limon Verde**	**1.85**	**67**	⇓*iP*	**Pn**	**08 26 13.9**	**+0.5**
LVC				*i* S	**Sn**	**08 26 36.9**	**+0.8**
PB09	**IPOC Station P**	**2.08**	**43**	⇑*iP*	**Pn**	**08 26 17.5**	**+1.0**
PB09				*i* S	**Sn**	**08 26 42.8**	**+1.4**
PB09				IAML		08 26 43.8	
	comp=E,281nm,0.8s						
GO02	**Mina Guanaco**	**2.11**	**150**	⇓*iP*	**Pn**	**08 26 17.4**	**+0.5**
GO02				*i* S	**Sn**	**08 26 42.6**	**+0.4**
PB02	**IPOC Station P**	**2.16**	**22**	⇑*iP*	**Pn**	**08 26 17.6**	**+0.1**
PB02				IAML		08 26 44.4	
	comp=E,337nm,0.2s						
PATCX	**Punta Patache** comp=E,79nm,0.1s	**2.57**	**13**	IAML		08 26 57.1	
PATCX				IAML		08 26 58.0	
	comp=N,85nm,0.3s						
PB01	**IPOC Station P**	**2.57**	**28**	⇑*iP*	**Pn**	**08 26 23.7**	**+0.6**
PB01				*i* S	**Sn**	**08 26 52.8**	**-0.7**
PB01				IAML		08 26 54.3	
	comp=N,128nm,0.1s						
PB01				IAML		08 26 55.3	
	comp=E,219nm,0.2s						
LPAZ	**La Paz** comp=E,0.1nm,0.3s,baz=225,slow=8.6,SNR=9.9 comp=E,0.3nm,0.3s	**7.44**	**20**	Pn	**Pn**	**08 27 33.3**	**+2.8**
SIV	**San Ignacio** baz=309,slow=18,SNR=1.7 comp=E,0.6nm,0.3s	**11.69**	**53**	Pn	**Pn**	**08 28 28.4**	**+0.1**
TORD	**Torodi Ar. Bea** comp=E,1.0nm,0.6s,baz=252,slow=5.1,SNR=9.5 comp=E,1.0nm,0.6s	**79.58**	**71**	P	**P**	**08 37 47.3**	**-0.8**
YKA	**Yellowknife Ar** comp=E,0.2nm,0.7s,baz=134,slow=5.8,SNR=2.4 comp=E,0.2nm,0.7s	**92.36**	**341**	P	**P**	**08 38 50.2**	**-0.1**
MKAR	**Makanchi Array** comp=E,0.4nm,0.7s,baz=316,slow=1.9,SNR=5.0	**148.12**	**36**	PKPbc	**PKPbc**	**08 45 25.6**	**-0.5**

IDC ***05*** *08:57:20.0±1.7, 1°.28N×126°.34E, h0km, mb4.0/5, mbtmp4.0/5, Error ellipse: s-maj=150.0km s-min=22.1km az=65.0*
DJA ***05*** *08:57:30.4±0.9, 2°N±4°×12°8E±°, h125km±8km, M3.9/7, mb4.2/1, MLv3.8/7*
ISC 05 08:57:31.5±1.1, 1°.81N±0°.09×127°.6E±0°.2, h112km, n10, σ0§91/11, mb3.9/5, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.06**	**193**	P	**Pn**	**08 57 53.8**	**+0.4**
TNTI				S	**Sn**	**08 58 11.8**	**+1.8**
LBMI	**Labuha**	**2.43**	**183**	P	**Pn**	**08 58 09.2**	**-0.9**
SGSI	**Sangihe**	**2.80**	**312**	P	**Pn**	**08 58 14.4**	**-0.5**
KMSI	**Cibinong**	**3.83**	**251**	P	**Pn**	**08 58 28.1**	**-0.5**
SANI	**Sanana**	**4.16**	**203**	P	**Pn**	**08 58 32.0**	**-1.1**
WRA	**Warramunga Arr** 3.3nm,0.4s,baz=338,slow=11,SNR=64 3.3nm,0.4s	**22.60**	**163**	P	**P**	**09 02 22.4**	**-0.5**
ASAR	**Alice Springs** 1.3nm,0.5s,baz=345,slow=7.2,SNR=36 1.3nm,0.5s	**26.05**	**167**	P	**P**	**09 02 54.1**	**-0.4**
STKA	**Stephens Creek** 3.4nm,0.6s,baz=337,slow=8.5,SNR=8.3 3.4nm,0.6s	**36.03**	**160**	P	**P**	**09 04 22.4**	**+0.4**
MKAR	**Makanchi Array** 0.4nm,0.3s,baz=119,slow=7.4,SNR=11 0.4nm,0.3s	**59.63**	**326**	P	**P**	**09 07 24.3**	**+0.5**
VNDA	**Vanda** 0.6nm,0.8s,baz=315,slow=2.9,SNR=2.9 0.6nm,0.8s	**81.42**	**173**	P	**P**	**09 09 35.0**	**-0.5**

SJA ***05*** *09:30:47.9±0.7, 29°.28S×72°.12W, h15km±4km, ML4.1, MW3.9*
IDC ***05*** *09:30:49.6±0.8, 29°.41S×71°.72W, h0km, mb3.8/4, mbtmp3.9/8, ML4.1/4, MS3.3/11, Error ellipse: s-maj=38.8km s-min=22.8km az=102.0*
NEIC ***05*** *09:30:52.7±1.4, 29°.29S±0°.05×72°.0W±0°.1, h35km±2km, mb4.4/4, Mwr4.0/35, ML4.2(GUC), Error ellipse: s-maj=15.6km s-min=7.7km az=285.0*
NEIC ***05*** *09:30:52.7, 29°.29S×72°.01W, h33km, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr1.05; Mθθ0.38; Mϕϕ-1.43; Mrθ-0.44; Mrϕ-0.20; Mθϕ-0.11; Fault plane solution: M₀1.38000×10¹⁵ NP1:ϕs341.96000°, δ47.19000°, λ53.18000°. NP2:ϕs209.73000°, δ54.04000°, λ122.90000°. Principal axes: T 1.2711, Plg64.0000°, Azm180.0000°; N 0.1900, Plg26.0000°, Azm9.0000°; P -1.4611, Plg4.0000°, Azm277.0000°;*
GUC ***05*** *09:30:53.8±0.7, 29°.37S×71°.65W, h53km±6km, ML4.2*
ISC 05 09:30:50.5±1.4, 29°.32S±0°.02×71°.90W±0°.06, h12km±8km, n97, σ1§41/106, mb4.3/6, MS3.4/5, 11C-6D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO05	**La Serena**	**0.83**	**136**		**Pn**	**09 31 08.3**	**+0.3**
CO05	**La Serena**	**0.83**	**136**	⇓*iP*	**Pn**	**09 31 08.3**	**+0.3**
CO05				*i* S	**Sb**	**09 31 18.2**	**+0.3**
CO05				IAML		09 31 19.2	
	comp=E,30μm,0.3s						
LCO	**Las Campanas**	**1.09**	**74**		**Pn**	**09 31 12.6**	**+0.8**
LCO	**Las Campanas**	**1.09**	**74**	⇑*iP*	**Pn**	**09 31 12.2**	**+0.4**
LCO				*i* S	**Sn**	**09 31 26.2**	**-0.7**
LCO	**Las Campanas**	**1.09**	**74**	*eP*	**Pn**	**09 31 12.0**	**+0.2**
GO04	**Tololo Observa**	**1.28**	**132**		**Pg**	**09 31 15.5**	**+0.4**
GO04	**Tololo Observa**	**1.28**	**132**	⇑*iP*	**Pg**	**09 31 15.2**	**+0.1**
GO04				*i* S	**Sn**	**09 31 31.0**	**-0.5**
GO04	**Tololo Observa**	**1.28**	**132**	*eP*	**Pg**	**09 31 15.2**	**+0.1**
GO04				*eS*	**Sg**	**09 31 31.3**	**-0.5**
AC04	**Llanos de Chal**	**1.32**	**33**		**Pb**	**09 31 15.7**	**+0.4**
AC04	**Llanos de Chal**	**1.32**	**33**	⇓*iP*	**Pg**	**09 31 16.0**	**+0.1**
AC04				*i* S	**Sb**	**09 31 32.0**	**-0.2**
AC04				IAML		09 31 32.9	
	comp=E,5μm,0.1s						
AC04	**Llanos de Chal**	**1.32**	**33**	*eP*	**Pg**	**09 31 16.0**	**+0.1**
AC04				*eS*	**Sg**	**09 31 33.1**	**-0.1**
AC04				IAML		09 31 43.1	
	comp=Z,1μm,0.8s						
CO06	**Fray Jorge**	**1.37**	**171**	Pn	**Pb**	**09 31 16.0**	**-0.1**
CO06	**Fray Jorge**	**1.37**	**171**	⇑*iP*	**Pb**	**09 31 15.9**	**-0.1**
CO06				*i* S	**Sb**	**09 31 31.1**	**-2.4**
CO06				IAML		09 31 33.6	
	comp=E,4μm,0.4s						
CO01	**Juntas del Tor**	**1.70**	**113**	⇓*iP*	**Pb**	**09 31 22.0**	**+0.2**
CO01				*i* S	**Sb**	**09 31 42.0**	**-1.2**
CO01				IAML		09 31 43.7	
	comp=N,4μm,0.1s						
CO01	**Juntas del Tor**	**1.70**	**113**	*eP*	**Pb**	**09 31 22.0**	**+0.2**
CO01				*eS*	**Sb**	**09 31 42.5**	**-0.7**
CO01				IAML		09 31 42.9	
	comp=Z,3μm,0.5s						
CO02	**Combarbal**	**2.03**	**158**	⇑*iP*	**Pb**	**09 31 26.1**	**-1.3**
CO02				*i* S	**Sn**	**09 31 49.2**	**-0.8**
CO02	**Combarbal**	**2.03**	**158**	*eP*	**Pn**	**09 31 25.9**	**+1.3**
CO02				*eS*	**Sg**	**09 31 56.4**	**+0.5**
CO02				IAML		09 31 58.0	
	comp=Z,3μm,0.3s						
GO03	**Copiap**	**2.26**	**41**	⇓*iP*	**Pn**	**09 31 29.2**	**+1.6**
GO03				*i* S	**Sn**	**09 31 55.8**	**+0.3**
GO03				IAML		09 32 07.3	
	comp=N,967nm,0.6s						
GO03	**Copiap**	**2.26**	**41**	*eP*	**Pn**	**09 31 29.0**	**+1.3**
GO03				*eS*	**Sb**	**09 31 58.5**	**-0.5**
AC06	**Mina Casimiro**	**2.38**	**35**	⇓*iP*	**Pn**	**09 31 31.5**	**+2.2**
AC06				IAML		09 32 11.2	
	comp=E,953nm,0.7s						
VA06	**Catapilco**	**3.27**	**171**		**Pn**	**09 31 42.3**	**+0.8**
VA06	**Catapilco**	**3.27**	**171**	⇑*iP*	**Pn**	**09 31 42.5**	**+1.0**
VA06				IAML		09 32 42.5	
	comp=E,1μm,0.6s						
AC01	**Pan de Azucar**	**3.36**	**20**	*eP*	**Pn**	**09 31 43.4**	**+0.5**
AC01				*eS*	**Sg**	**09 32 39.3**	**+0.8**
AC01				IAML		09 32 50.1	
	comp=Z,214nm,0.8s						
AC02	**Maricunga**	**3.48**	**45**	*eP*	Pn	09 31 39.3	-5.5
AC02				*eP*	**Pn**	**09 31 47.0**	**+2.2**
AC02				*eS*	**Sb**	**09 32 33.3**	**-1.4**
AC02				IAML		09 32 45.2	
	comp=Z,271nm,1.2s						
ZON	**Zonda**	**3.56**	**129**	*eP*	**Pn**	**09 31 49.0**	**+3.5**
ZON				*eS*	**Sb**	**09 32 36.8**	**+0.3**
ZON				IAML		09 32 50.5	
	comp=Z,245nm,0.6s						
VA03	**San Esteban**	**3.62**	**162**	⇑*iP*	**Pn**	**09 31 48.4**	**+1.9**
VA03				*i* S	**Sn**	**09 32 29.7**	**+0.5**
VA03				IAML		09 32 49.8	
	comp=N,910nm,0.5s						
VA03	**San Esteban**	**3.62**	**162**	*eP*	**Pn**	**09 31 48.0**	**+1.5**
VA03				IAML		09 32 52.2	
	comp=Z,449nm,0.7s						
VA01	**Torpederas**	**3.70**	**177**	*eP*	**Pn**	**09 31 47.5**	**+0.1**
VA01	**Torpederas**	**3.70**	**177**	*eP*	**Pn**	**09 31 48.0**	**+0.6**
VA01				IAML		09 32 54.1	
	comp=Z,138nm,1.0s						
ROCH	**El Roble**	**3.72**	**168**	⇑*iP*	**Pn**	**09 31 49.2**	**+1.3**
ROC1	**El Roble**	**3.72**	**169**		**Pn**	**09 31 49.2**	**+1.2**
ROC1	**El Roble**	**3.72**	**169**	*eP*	**Pn**	**09 31 49.0**	**+1.0**
ROC1				*eP*	**Pn**	**09 31 49.2**	**+1.2**
ROC1				*eS*	**Sn**	**09 32 35.5**	**+3.6**
MT02	**Curacav**	**3.98**	**171**	Pn	**Pn**	**09 31 51.9**	**+0.6**
MT02	**Curacav**	**3.98**	**171**	*eP*	**Pn**	**09 31 52.0**	**+0.6**
MT02				*eS*	**Sn**	**09 32 38.8**	**+0.9**
MT02				IAML		09 32 55.4	
	comp=Z,185nm,0.3s						
MT05	**Renca**	**4.18**	**167**	⇑*iP*	**Pn**	**09 31 55.6**	**+1.5**
MT05				*i* S	**Sn**	**09 32 41.9**	**-1.0**
MT05	**Renca**	**4.18**	**167**	*eP*	**Pn**	**09 31 55.6**	**+1.5**
MT05				IAML		09 33 12.4	
	comp=

comp=Z,1.0nm,0.3s
SIV San Ignacio 16.59 39 Pn **Pn** **09 34 43.2 +0.2**
baz=217,slow=10.0,SNR=13
SIV LR LR 09 41 29.4
comp=Z,85nm,19.4s,baz=122,slow=39
comp=Z,3.2nm,0.9s
NNA Nana 17.85 344 LR LR 09 40 18.8
comp=Z,54nm,21.1s,baz=165,slow=32
PMSA Palmer Station 35.82 174 LR LR 09 53 41.3
comp=Z,33nm,18.5s,baz=48,slow=38
MDP Montagnes des 38.90 32 LR LR 09 55 11.0
comp=Z,44nm,18.2s,baz=178,slow=38
VNA3 Neumayer Olymp 53.66 159 P **P** **09 40 11.8 +0.3**
VNA1 Neumayer--Stat 53.94 158 P **P** **09 40 14.5 +1.0**
VNA2 Neumayer--Watz 54.29 159 P **P** **09 40 16.5 +0.4**
baz=285,slow=8.3
SNAA Sanae 55.88 159 P **P** **09 40 28.1 +0.5**
SNAA Sanae 55.88 159 P **P** **09 40 27.0 -0.6**
TROLL Troll, Antarti 57.59 159 P **P** **09 40 40.1 +0.2**
QSPA South Pole Qui 60.90 180 P **P** **09 41 01.9 -1.0**
QSPA IAmb IAmb 09 41 04.9
comp=Z,3.0nm,0.9s
TXAR Lajitas Array 65.74 330 P **P** **09 41 37.6 +2.4**
comp=Z,0.1nm,0.6s,baz=146,slow=8.7,SNR=2.3
comp=Z,0.1nm,0.6s
TXAR Lajitas Array 65.74 330 P **P** **09 41 32.6 -2.7**
VNDA Vanda 68.71 191 P **P** **09 41 54.5 +1.2**
comp=Z,0.6nm,0.9s,baz=9.9,slow=2.4,SNR=3.8
comp=Z,0.6nm,0.9s
VNDA Vanda 68.71 191 P **P** **09 41 51.2 -2.1**
MAW Mawson 77.62 164 P **P** **09 42 47.0 +0.8**
comp=Z,2.7nm,0.7s,baz=202,slow=3.5,SNR=4.5
comp=Z,2.7nm,0.7s
MAW Mawson 77.62 164 P **P** **09 42 46.1 -0.1**
ELK Elko 80.45 328 LR LR 10 13 19.7
comp=Z,22nm,20.8s,baz=162,slow=32
BOSA Boshof 82.15 118 LR LR 10 14 27.3
comp=Z,17nm,20.7s,baz=185,slow=32
TOA0 Torodi Ar. Sit 82.52 70 P **P** **09 43 10.7 -2.8**
TOA0 IAmb IAmb 09 43 26.0
comp=Z,2.8nm,0.8s
TORD Torodi Ar. Bea 82.52 70 P **P** **09 43 13.8 +0.3**
comp=Z,1.5nm,0.7s,baz=256,slow=4.7,SNR=8.3
comp=Z,1.5nm,0.7s
ESDC Sonseca Array 93.24 46 LR LR 10 23 20.9
comp=Z,18nm,18.5s,baz=180,slow=34
WRA Warramunga Arr 124.87 210 PKP **PKPdf** **09 49 50.9 -0.1**
comp=Z,0.4nm,0.7s,baz=150,slow=1.8,SNR=6.5
H11S2 WAKE ISLAND Hyl 25.83 272 T T 12 08 47.2
baz=115,slow=75,SNR=32
H11S1 WAKE ISLAND Hyl 25.84 272 T T 12 08 51.6
baz=115,slow=75,SNR=42
H11S3 WAKE ISLAND Hyl 25.85 272 T T 12 08 51.0
baz=115,slow=75,SNR=43
H11N3 WAKE ISLAND Hyl 26.12 274 T T 12 09 07.0
baz=112,slow=75,SNR=19
H11N1 WAKE ISLAND Hyl 26.14 274 T T 12 09 08.1
baz=112,slow=75,SNR=18
H11N2 WAKE ISLAND Hyl 26.14 274 T T 12 09 09.0
baz=112,slow=75,SNR=10
ZALV Zalesovo Beam 150.12 28 PKP **PKPdf** **09 50 37.4 +1.8**
comp=Z,1.5nm,0.5s,baz=341,slow=3.1,SNR=2.1
ZALV PKPbc **PKiKP** **09 50 42.1 +0.6**
comp=Z,4.3nm,0.7s,baz=288,slow=3.2,SNR=16
ZALV Zalesovo Beam 150.12 28 PKiKP 09 50 42.9 +1.4
MKAR Makanchi Array 153.40 42 PKPbc **PKiKP** **09 50 49.4 +0.8**
comp=Z,0.6nm,0.7s,baz=314,slow=2.7,SNR=6.9
MKAR PKPab **PKPab** **09 50 59.8 -0.8**
comp=Z,0.3nm,0.6s,baz=8.1,slow=3.1,SNR=2.4
MKAR Makanchi Array 153.40 42 PKPdf 09 50 43.5 +2.6

KRSC 05 09:37:52.3±1.3, 53.87N×168.89E, h34km±25km, ML3.7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BKI	**Bering**	**2.16**	**309**	P		Pn	09 38 27.8	+2.0
BKI				S		Sb	09 38 55.1	-2.1
KBTR	**Krutoberegovo**	**4.21**	**306**	P		Pn	09 38 58.2	+4.3
TUMR	**Tumrok**	**5.28**	**289**	P		Pn	09 39 14.5	+5.7
SDLR	**Sedlovina**	**5.99**	**268**	P		Pn	09 39 24.1	+5.5
AVH	**Avacha**	**6.08**	**268**	P		Pn	09 39 24.7	+5.0
KRX	**Arik**	**6.12**	**269**	P		Pn	09 39 25.0	+4.7
KOK	**Koryaka**	**6.14**	**269**	P		Pn	09 39 25.3	+4.8
GNL	**Ganaly**	**6.49**	**273**	P		Pn	09 39 30.6	+5.2
MTVR	**Mutnovka**	**6.58**	**262**	P		Pn	09 39 32.2	+5.5
MTVR				S		Sn	09 40 45.0	+4.4
ASAK	**Asacha**	**6.78**	**262**	P		Pn	09 39 34.7	+5.4

GUC 05 09:52:33.7±0.7, 31.15S×71.71W, h35km±2km, ML3.6, 2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CO06	**Fray Jorge**	**0.48**	**8**	*i* P		Pn	09 52 43.7	-0.3
CO06				*i* S		Sn	09 52 50.8	-0.4
CO06				IAML			09 52 51.8	
	comp=E,4µm,0.3s							
CO02	**Combarbal**	**0.61**	**95**	*i* P		Pn	09 52 45.9	-0.2
CO02				*i* S		Sn	09 52 54.6	-0.1
CO02				IAML			09 52 56.9	
	comp=E,6µm,0.2s							
GO04	**Tololo Observa**	**1.25**	**39**	*i* P		Pn	09 52 55.9	+1.0
GO04				*i* S		Sn	09 53 12.5	+1.8
GO04				IAML			09 53 17.5	
	comp=N,4µm,0.4s							
CO05	**La Serena**	**1.29**	**19**	*i* P		Pn	09 52 56.2	+1.0
CO05				*i* S		Sn	09 53 12.9	+1.6
VA06	**Catapilco**	**1.45**	**166**	*i* P		Pn	09 52 58.5	+1.0
VA06				*i* S		Sn	09 53 17.5	+2.2
VA06				IAML			09 53 23.3	
	comp=E,1µm,0.4s							
CO01	**Juntas del Tor**	**1.82**	**51**	*i* P		Pn	09 53 04.8	+2.1
CO01				*i* S		Sn	09 53 28.0	+3.3
VA03	**San Esteban**	**1.89**	**149**	*i* P		Pn	09 53 05.6	+2.0
VA03				*i* S		Sn	09 53 29.9	+3.6
VA03				IAML			09 53 32.7	
	comp=E,924nm,0.1s							
ROCH	**El Roble**	**1.92**	**162**	*i* P		Pn	09 53 05.6	+1.5
ROCH				*i* S		Sn	09 53 31.0	+4.0
ROCH				IAML			09 53 34.2	
	comp=N,735nm,0.4s							
MT02	**Curacav**	**2.16**	**167**	*i* P		Pn	09 53 08.2	+1.0
MT02				*e*S		Sn	09 53 35.3	+2.5
LCO	**Las Campanas**	**2.30**	**23**	*i* P		Pn	09 53 10.5	+1.1
LCO				*i* S		Sn	09 53 38.9	+2.2
MT05	**Renca**	**2.39**	**160**	*i* P		Pn	09 53 12.2	+1.8
MT05				IAML			09 53 47.9	
	comp=E,578nm,0.3s							
FCH	**Farellones**	**2.49**	**151**	*e*P		Pn	09 53 14.2	+2.3
VA05	**Santo Domingo**	**2.50**	**178**	*e*P		Pn	09 53 12.5	+0.6
VA05				IAML			09 53 55.4	
	comp=E,327nm,0.4s							
MT03	**Universidad Ad**	**2.55**	**157**	*e*P		Pn	09 53 15.2	+2.5
MT03				IAML			09 53 55.9	
	comp=E,455nm,0.2s							
MT09	**Talagante**	**2.69**	**167**	*i* P		Pn	09 53 16.7	+2.0
MT09				*i* S		Sn	09 53 49.3	+3.2
MT09				IAML			09 54 02.4	
	comp=N,225nm,0.6s							
MT01	**Popeta**	**2.74**	**172**	*e*P		Pn	09 53 16.3	+1.2
MT01				IAML			09 54 01.9	
	comp=E,167nm,0.2s							
LMEL	**Las Melosas**	**2.98**	**155**	*e*P		Pn	09 53 20.9	+2.3
LMEL				IAML			09 54 07.4	
	comp=N,234nm,0.4s							
BO04	**La Punta**	**2.98**	**162**	*i* P		Pn	09 53 20.5	+1.9
BO04				*i* S		Sn	09 53 54.7	+1.5
BO04				IAML			09 54 06.3	
	comp=E,236nm,0.6s							
AC04	**Llanos de Chal**	**2.98**	**11**	*e*P		Pn	09 53 18.9	+0.4
AC04				IAML			09 54 08.4	
	comp=E,113nm,0.3s							
AC06	**Mina Casimiro**	**3.96**	**18**	IAML			09 54 35.0	
	comp=N,60nm,0.5s							

JMA 05 10:17:44.6±0.1, 24.8N±0.3×123.8E±0.2, h1km±1km, MV2.6/9, NW OFF ISHIGAKIJIMA IS, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
IRIF	**Iriomote-Funau**	**0.48**	**192**	*i* P		Pg	10 17 54.3	+0.4
IRIF				S		Sg	10 18 01.0	+0.9
JISG	**Ishigakijimahi**	**0.48**	**117**	*i* P		Pg	10 17 54.4	+0.5
JISG				S		Sg	10 18 01.1	+0.9
JIJ	**Ishigaki jima**	**0.52**	**148**	*i* P		Pg	10 17 54.9	+0.2
JIJ				S		Sg	10 18 02.0	+0.5
JKRS	**Kuro-shima**	**0.59**	**164**	P		Pg	10 17 56.4	+0.5
JKRS				S		Sg	10 18 04.5	+0.9
HATJ	**Hateruma jima**	**0.75**	**182**	P		Pg	10 17 59.4	+0.4
HATJ				S		Sg	10 18 09.7	+1.0
JTJ	**Tarama**	**0.81**	**102**	P		Pg	10 18 00.6	+0.5
JTJ				S		Sb	10 18 11.8	-1.0
YOJ	**Yonaguni jima**	**0.83**	**245**	P		Pg	10 18 00.6	+0.1
YOJ				*e*S		Sg	10 18 11.9	+0.7
JYNG	**Yonagunijimaku**	**0.89**	**246**	P		Pg	10 18 01.8	+0.1
JYNG				*e*S		Sg	10 18 14.0	+0.9

TAP 05 10:18:22.1, 24.52N×121.56E, h10km, ML0.9, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LATG	**Datong**	**0.04**	**304**	*e*P		Pg	10 18 24.4	+0.2
	baz=305							
NDT	**Datong Townshi**	**0.10**	**334**	P		Pg	10 18 25.3	+0.6
	baz=337							
NDT				S		Sg	10 18 27.3	+0.7
	baz=337							
ENTT	**Nioudou**	**0.12**	**3**	P		Pg	10 18 25.4	+0.3
	baz=10.0							
ENTT				*i* S		Sg	10 18 27.9	+0.7
	baz=10.0							
NNSB	**Datong**	**0.18**	**242**	P		Pg	10 18 26.5	+0.4
	baz=231							
NNSB				S		Sg	10 18 29.2	+0.4
	baz=231							
ENA	**Nanau**	**0.19**	**118**	P		Pg	10 18 26.5	+0.4
	baz=116							
YHNB	**Yeheng**	**0.23**	**313**	P		Pg	10 18 27.8	+0.9
	baz=313							
YHNB				S		Sg	10 18 30.8	+0.7
	baz=313							
NSK	**Sanguang**	**0.24**	**311**	P		Pg	10 18 27.5	+0.3
	baz=312							
NSK				*i* S		Sg	10 18 31.3	+0.7
	baz=312							
FUSB	**Fushanzhiwuyua**	**0.24**	**6**	*e*P		Pg	10 18 27.0	-0.2
	baz=19							
NWLT	**Wulai**	**0.27**	**349**	*i* P		Pg	10 18 28.2	+0.6
	baz=352							
NWLT				S		Sg	10 18 32.1	+0.8
	baz=352							
TWC	**Suao**	**0.28**	**70**	P		Pg	10 18 28.1	+0.3
	baz=73							
TWC				S		Sg	10 18 32.2	+0.6
	baz=73							
NACB	**Ninganchiao**	**0.34**	**175**	P		Pg	10 18 29.0	+0.1
	baz=163							

*IDC **05** 10:25:34.4±0.7, 17.74S×173.48W, h0km, mb4.2/9, mbtmp4.3/10, ML4.2/1, MS3.3/3, Error ellipse: s-maj=36.2km s-min=16.0km az=140.0*
*NEIC **05** 10:25:39.5±2.1, 17.88S±0.08×173.3W±0.1, h35km±1km, mb4.5/23, Error ellipse: s-maj=19.5km s-min=13.8km az=76.0*

ISC 05 10:25:38.5±0.4, 17.86S±0.06×173.29W±0.08, h35km, n79, σ2.966/79, mb4.4/22, 1C, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
NIUE	**Niue**	**3.41**	**111**			**Pn**	**10 26 27.9**	**-1.3**
AFI	**Afiamalu**	**4.19**	**21**	Pn		**Pn**	**10 26 38.7**	**-1.3**
	15nm,0.3s,baz=210,slow=4.3,SNR=26							
AFI				Sn		**Sn**	**10 27 21.6**	**-6.1**
	42nm,0.3s,baz=294,slow=20,SNR=11							
	33nm,0.2s							
AFI	**Afiamalu**	**4.19**	**21**			**Pn**	**10 26 39.2**	**-0.7**
MSVF	**Nonsavu**	**8.25**	**270**	LR		LR	10 30 06.0	
	comp=Z,107nm,21.4s,baz=141,slow=34							
RAR	**Rarotonga**	**13.17**	**107**	Pn		**Pn**	**10 28 41.0**	**-2.0**
	4.2nm,0.3s,baz=266,slow=9.2,SNR=18							
RAR				P		LR	10 32 07.0	
	comp=Z,147nm,18.9s,baz=278,slow=29							
DZM	**Mont Dzumac**	**19.50**	**254**	LR		LR	10 36 11.2	
	comp=Z,183nm,19.2s,baz=198,slow=33							
MXZ	**Matakaoa Point**	**20.97**	**199**	P		**P**	**10 30 24.4**	**+5.8**
KUZ	**Kuaotunu**	**21.17**	**205**	P		**P**	**10 30 22.1**	**+1.4**
WMGZ	**Waiomatatini S**	**21.18**	**198**	P		**P**	10 30 28.1	+7.4
HAZ	**Te Kaha**	**21.32**	**200**	P		**P**	**10 30 25.5**	**+3.3**
HAZ				S		S	10 34 03.0	-14
PKGZ	**Pakihiroa**	**21.34**	**199**	P		**P**	**10 30 27.6**	**+4.9**
PKGZ				S		S	10 34 01.8	-16
PUZ	**Puketiti**	**21.46**	**198**	P		**P**	**10 30 28.2**	**+4.5**
PUZ				S		S	10 34 05.8	-14
RUGZ	**Raukumara Rang**	**21.54**	**200**	P		**P**	**10 30 29.1**	**+4.3**
RUGZ				S		S	10 34 03.4	-18
CNGZ	**Carnagh Statio**	**21.85**	**198**	P		**P**	**10 30 34.2**	**+6.2**
URZ	**Urewera**	**21.99**	**201**	P		**P**	**10 30 30.2**	**+0.7**
	11nm,0.3s,baz=21,slow=8.9,SNR=42							
URZ				S		**S**	**10 34 22.7**	**-7.6**
	5.4nm,0.9s,baz=41,slow=19,SNR=2.1							
	11nm,0.3s							
URZ	**Urewera**	**21.99**	**201**	P		**P**	**10 30 31.5**	**+2.0**
URZ				S		**S**	**10 34 22.2**	**-8.1**
KMRZ	**Kaimai**	**22.04**	**203**	P		**P**	**10 30 35.0**	**+4.9**
RAGZ	**Rawiri**	**22.11**	**200**	P		**P**	**10 30 34.8**	**+3.9**
TOZ	**Tahuroa Road**	**22.11**	**204**	P		**P**	**10 30 34.8**	**+4.1**
RIGZ	**Rimuhau**	**22.19**	**199**	P		**P**	**10 30 35.8**	**+4.1**
RIGZ				S		S	10 34 24.1	-10
RTZ	**Ruatahuna**	**22.36**	**200**	P		**P**	**10 30 36.7**	**+3.2**
MTHZ	**Maungataniwha**	**22.62**	**200**	P		**P**	**10 30 39.2**	**+2.9**
MTHZ				S		**S**	**10 34 36.5**	**-5.3**
BKZ	**Black Stump Fm**	**23.02**	**201**	P		**P**	**10 30 41.1**	**+0.7**
BKZ				IAmb		IAmb	10 30 43.6	
	comp=Z,26nm,1.5s							
RPZ	**Rata Peaks**	**28.97**	**204**	P		P	10 31 40.5	+5.8
	comp=Z,6.8nm,0.4s,baz=47,slow=4.2,SNR=18							
RPZ	**Rata Peaks**	**28.97**	**204**	P		**P**	**10 31 33.9**	**-0.8**
CTA	**Charters Tower**	**38.26**	**260**	P		**P**	**10 32 55.5**	**-0.1**
	comp=Z,3.3nm,0.8s,baz=87,slow=11,SNR=3.6							
	comp=Z,3.3nm,0.8s							
CTAO	**Charters Tower**	**38.26**	**260**	P		**P**	**10 32 55.9**	**+0.3**
CTAO				IAmb		IAmb	10 33 08.8	
	comp=Z,10nm,1.4s							
COEN	**Coen**	**41.98**	**269**	P		**P**	**10 33 27.3**	**+0.7**
COEN				IAmb		IAmb	10 33 40.0	
	comp=Z,12nm,1.4s							
STKA	**Stephens Creek**	**42.95**	**242**	P		**P**	**10 33 35.4**	**+1.1**
	comp=Z,1.8nm,0.7s,baz=120,slow=16,SNR=3.2							
	comp=Z,1.8nm,0.7s							
STKA	**Stephens Creek**	**42.95**	**242**	P		**P**	**10 33 35.9**	**+1.7**
WR0	**Warramunga Arr**	**49.24**	**259**	P		**P**	**10 34 22.5**	**-1.5**
WR0				IAmb		IAmb	10 34 33.2	
	comp=Z,6.7nm,1.4s							
WB0	**Warramunga Arr**	**49.40**	**259**	P		**P**	**10 34 24.2**	**-1.0**
WB0				IAmb		IAmb	10 34 35.8	
	comp=Z,8.3nm,1.4s							
WB2	**Warramunga Arr**	**49.42**	**259**	P		**P**	**10 34 24.7**	**-0.6**
WRAB	**Tennant Creek**	**49.42**	**259**	P		**P**	**10 34 24.2**	**-1.1**
WRAB				IAmb		IAmb	10 34 29.8	
	comp=Z,4.3nm,1.0s							
WRA	**Warramunga Arr**	**49.43**	**259**	P		**P**	**10 34 24.3**	**-1.1**
	comp=Z,1.0nm,0.4s,baz=98,slow=6.9,SNR=16							
	comp=Z,1.0nm,0.4s							
WRA	**Warramunga Arr**	**49.43**	**259**	P		**P**	**10 34 24.2**	**-1.3**
AS31	**Alice Springs**	**49.49**	**254**	P		**P**	**10 34 25.5**	**-0.4**
AS31				IAmb		IAmb	10 34 29.1	
	comp=Z,2.3nm,0.7s							
ASAR	**Alice Springs**	**49.49**	**254**	P		**P**	**10 34 25.6**	**-0.3**
	comp=Z,7.4nm,0.7s,baz=89,slow=8.4,SNR=97							
ASAR				PcP		**PcP**	**10 35 49.4**	**+1.8**
	comp=Z,0.7nm,0.5s,baz=104,slow=3.7,SNR=1.8							
ASAR				S		**S**	**10 41 26.2**	**-5.2**
	comp=Z,0.5nm,0.8s,baz=87,slow=17,SNR=4.2							
	comp=Z,7.4nm,0.7s							
ASAR	**Alice Springs**	**49.49**	**254**	P		**P**	**10 34 24.4**	**-1.5**
VNDA	**Vanda**	**60.95**	**186**	P		**P**	**10 35 47.7**	**+0.1**
QSPA	**South Pole Qui**	**72.20**	**180**	P		**P**	**10 37 01.6**	**+1.9**
NVAR	**Mina Array Bea**	**76.08**	**42**	P		**P**	**10 37 24.8**	**+1.9**
	comp=Z,3.2nm,0.9s,baz=222,slow=7.2,SNR=13							
	comp=Z,3.2nm,0.9s							
NV11	**Mina Array Sit**	**76.18**	**42**	P		**P**	**10 37 24.3**	**+0.9**
NV11				IAmb		IAmb	10 37 26.3	
	comp=Z,6.4nm,1.2s							
TPH	**Tonopah**	**76.56**	**42**	P		**P**	**10 37 26.9**	**+1.3**
TUC	**Tucson**	**77.86**	**50**	P		**P**	**10 37 33.5**	**+0.6**
J08A	**Circle Bar Ran**	**78.94**	**37**	P		**P**	**10 37 39.4**	**+0.8**
J08A				IAmb		IAmb	10 37 41.9	
	comp=Z,6.8nm,1.4s							
TXAR	**Lajitas Array**	**81.89**	**56**	P		**P**	**10 37 56.9**	**+2.1**
	comp=Z,0.6nm,1.0s,baz=211,slow=7.0,SNR=5.3							
	comp=Z,0.6nm,1.0s							
TRF	**Thorofare Moun**	**83.01**	**10**	P		**P**	**10 38 00.8**	**+0.9**
TRF				IAmb		IAmb	10 38 01.5	
	comp=Z,4.9nm,0.8s							
H03S2	**Juan Fernandez**	**83.76**	**123**	T		T	12 11 08.7	
	baz=250							
H03S1	**Juan Fernandez**	**83.78**	**123**	T		T	12 11 11.1	
	baz=250							
H03S3	**Juan Fernandez**	**83.78**	**123**	T		T	12 11 09.2	
	baz=250							
PDAR	**Pinedale Array**	**84.02**	**42**	P		**P**	**10 38 06.5**	**+0.8**
	comp=Z,1.3nm,0.8s,baz=250,slow=3.0,SNR=7.2							
	comp=Z,1.3nm,0.8s							
PDAR	**Pinedale Array**	**84.02**	**42**	P		**P**	**10 38 07.1**	**+1.5**
CCB	**Clear Creek Bu**	**84.55**	**11**	P		**P**	**10 38 08.1**	**+0.6**
TCOL	**CIGO, UAF Yank**	**84.74**	**11**	P		**P**	**10 38 09.9**	**+1.5**
ILAR	**Eielson Array**	**84.83**	**11**	P		**P**	**10 38 09.7**	**+0.7**
	comp=Z,1.2nm,0.7s,baz=229,slow=6.2,SNR=27							
	comp=Z,1.2nm,0.7s							
ILAR	**Eielson Array**	**84.83**	**11**	P		**P**	**10 38 10.1**	**+1.2**
IMAR	**Indian Mountai**	**84.88**	**8**	P		**P**	**10 38 10.4**	**+1.2**
J26L	**Joseph Creek**	**85.23**	**12**	P		**P**	**10 38 13.0**	**+1.9**
J26L				IAmb		IAmb	10 38 14.5	
	comp=Z,4.3nm,0.9s							
DAWY	**Dawson**	**85.77**	**14**	P		**P**	**10 38 14.4**	**+0.7**
DAWY				IAmb		IAmb	10 38 16.4	
	comp=Z,3.8nm,1.0s							
SNAA	**Sanae**	**90.46**	**177**	P		**P**	**10 38 36.4**	**+0.2**
SNAA				IAmb		IAmb	10 38 38.1	
	comp=Z,1.3nm,0.8s							
AKASG	**Malin Array Be**	**142.63**	**336**	PKP		**PKPdf**	**10 45 07.2**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=0.0,slow=1.9,SNR=1.7							
KMBO	**Kilima Mbogo**	**144.51**	**241**	PKP		**PKPdf**	**10 45 13.6**	**+1.1**
	comp=Z,0.8nm,0.4s,baz=72,slow=3.2,SNR=4.2							
KMBO	**Kilima Mbogo**	**144.51**	**241**			**PKPab**	**10 45 10.3**	**-0.6**
CLL	**Collm**	**146.25**	**353**	*i* PKPbc		**PKPab**	**10 45 16.7**	**+0.8**
	comp=Z,10.0nm,0.9s							
OSTC	**Ostas**	**146.50**	**349**	*e*PKP		**PKPab**	**10 45 17.8**	**+0.9**
BRG	**Berggiesshubel**	**146.56**	**352**	*e*PKP		**PKPab**	**10 45 17.8**	**+0.7**
BRG				Amp			10 45 19.2	
	comp=Z,4.3nm,1.2s							
DPC	**Dobruska-Polom**	**146.68**	**349**	*e*PKP		**PKPab**	**10 45 18.4**	**+0.7**
KRLC	**Kraliky**	**146.86**	**348**	*e*PKP		**PKPab**	**10 45 18.7**	**+0.3**
MAUC	**Maruska**	**147.31**	**347**	*e*PKP		**PKPab**	**10 45 20.4**	**+0.2**
BRTR	**Keskin Array B**	**148.10**	**319**	PKPbc		**PKPbc**	**10 45 21.5**	**+0.6**
	comp=Z,1.3nm,0.9s,baz=131,slow=3.4,SNR=6.4							
BRTR	**Keskin Array B**	**148.10**	**319**			**PKPbc**	**10 45 20.6**	**-0.3**
KHC	**Kasperske Hory**	**148.31**	**351**	*e*PKP		**PKPbc**	**10 45 22.3**	**+1.3**
CKRC	**Cesky Krumlov**	**148.51**	**350**	*e*PKP		**PKiKP**	**10 45 23.1**	**0.0**
GERES	**GERESS Array B**	**148.58**	**351**	PKPbc		**PKiKP**	**10 45 23.2**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=325,slow=2.1,SNR=7.7							
GERES	**GERESS Array B**	**148.58**	**351**			**PKPbc**	**10 45 22.2**	**+0.4**
ESDC	**Sonseca Array**	**156.37**	**21**	PKPab		**PKPab**	**10 45 59.5**	**+1.3**
	comp=Z,0.3nm,0.7s,baz=324,slow=4.2,SNR=2.7							
TORD	**Torodi Ar. Bea**	**173.27**	**133**	PKPab		**PKPab**	**10 47 14.8**	**+1.8**
	comp=Z,0.5nm,0.6s,baz=277,slow=4.8,SNR=3.4							
TORD	**Torodi Ar. Bea**	**173.27**	**133**	PKPdf		**PKPdf**	**10 45 42.8**	**-2.2**
TORD						**PKPab**	**10 47 11.1**	**-1.9**

*DJA **05** 10:26:10.6±0.3, 7.7S×123.3E±, h604km±6km, M4.0/21, mb4.2/16, mB4.5/6, MLv4.1/21, Mw(mB)3.7/6*
*NEIC **05** 10:26:11.2±1.2, 7.11S±0.06×123.3E±0.1, h594km±13km, mb4.2/14, Error ellipse: s-maj=22.2km s-min=3.3km az=69.0*
*IDC **05** 10:26:11.6±0.8, 7.11S×123.26E, h598km±14km, mb3.0/5, mbtmp4.0/8, Error ellipse: s-maj=43.7km s-min=11.8km az=62.0*

ISC 05 10:26:10.9±0.5, 7.17S±0.07×123.21E±0.08, h600km, n83, σ1.901/89, mb3.7/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MMRI	**Maumere**	**1.74**	**213**	P		**P**	**10 27 23.7**	**-0.6**
MMRI	**Maumere**	**1.74**	**213**	P		**P**	**10 27 23.6**	**-0.7**
MMRI	**Maumere**	**1.74**	**213**	P		**P**	**10 27 23.9**	**-0.4**
BBSI	**Bau Bau**	**1.79**	**339**	P		**P**	**10 27 25.4**	**+0.9**
EDFI	**Ende, Flores**	**2.17**	**224**	P		**P**	**10 27 24.8**	**-1.3**
SOEI	**Soe**	**2.77**	**158**	P		**P**	**10 27 28.9**	**-0.1**
SOEI	**Soe**	**2.77**	**158**	P		**P**	**10 27 29.0**	**+0.1**
SOEI	**Soe**	**2.77**	**158**	P		**P**	**10 27 29.1**	**+0.1**
BSSI	**Bau Bau, Buton**	**2.89**	**291**	P		**P**	**10 27 29.9**	**+0.4**
BATI	**Baumata**	**3.05**	**172**	P		**P**	**10 27 30.5**	**+0.1**
	132nm,0.3s,baz=56,slow=2.3,SNR=44							
BATI				S		**S**	**10 28 32.7**	**-2.4**
	72nm,0.5s,baz=355,slow=0.9,SNR=6.5							
BATI	**Baumata**	**3.05**	**172**	P		**P**	**10 27 30.7**	**+0.3**
BKSI	**Bulukumba**	**3.58**	**301**	P		**P**	**10 27 34.2**	**+0.6**
BASI	**Baing, Sumba**	**3.99**	**221**	P		**P**	**10 27 36.0**	**-0.3**
KAPI	**Kappang**	**4.05**	**302**	P		**P**	**10 27 38.2**	**+1.4**
	34nm,0.4s,baz=142,slow=3.7,SNR=38							
KAPI				S		**S**	**10 28 47.4**	**+0.7**
	5.7nm,0.9s,baz=139,slow=20,SNR=0.7							
KAPI	**Kappang**	**4.05**	**302**	P		**P**	**10 27 38.1**	**+1.3**
BNSI	**Bone**	**4.14**	**312**	P		**P**	**10 27 39.0**	**+1.6**
WBSI	**Waikabubak, Su**	**4.50**	**237**	P		**P**	**10 27 38.6**	**-1.5**

AS31 Alice Springs 19.35 149 P **P** 10 30 00.1 +1.2
AS31 IAmb IAmb 10 30 05.5
comp=Z,1.4nm,0.5s
ASAR Alice Springs 19.35 149 P **P** 10 29 59.9 +1.0
comp=Z,0.9nm,0.3s,baz=325,slow=8.7,SNR=52
ASAR S **S** 10 33 00.3 -3.1
comp=Z,0.5nm,0.7s,baz=344,slow=20,SNR=2.8
ASAR PcP **PcP** 10 33 51.6 +0.3
comp=Z,0.2nm,0.4s,baz=359,slow=1.3,SNR=1.7
ASAR ScP **ScP** 10 36 31.3 -0.2
comp=Z,0.2nm,0.5s,baz=346,slow=2.7,SNR=1.6
ASAR Alice Springs 19.35 149 P **P** 10 29 59.4 +0.6
COEN Coen 20.74 111 P **P** 10 30 11.3 -0.2
COEN IAmb IAmb 10 30 17.0
comp=Z,4.0nm,0.9s
COEN Coen 20.74 111 P **P** 10 30 12.4 +0.9
MORW Morawa 22.81 196 P **P** 10 30 30.3 +0.6
MORW IAmb IAmb 10 30 49.5
comp=Z,20nm,1.4s
MORW Morawa 22.81 196 P **P** 10 30 30.5 +0.8
OOD Oodnadatta 23.67 152 P **P** 10 30 38.9 +1.5
FORT Forrest 23.92 170 P **P** 10 30 40.5 +1.0
FORT Forrest 23.92 170 P **P** 10 30 40.1 +0.6
BLDU Ballidu 24.11 194 P **P** 10 30 41.6 +0.4
KLBR Kellerberrin 24.82 191 P **P** 10 30 48.3 +0.8
MULG Mulgathing 25.14 157 P **P** 10 30 51.5 +1.1
MUN Mundaring 25.53 194 P **P** 10 30 54.9 +1.2
NWAO Narrogin (SRO) 26.22 191 P **P** 10 31 00.4 +0.6
NWAO IAmb IAmb 10 31 06.8
comp=Z,9.4nm,0.9s
LCRK Leigh Creek 27.10 151 P **P** 10 31 09.3 +1.8
BBOO Buckleboo 28.17 157 P **P** 10 31 16.7 -0.1
STKA Stephens Creek 29.97 148 P **P** 10 31 33.9 +1.5
comp=Z,1.5nm,0.3s,baz=319,slow=8.8,SNR=8.5
comp=Z,1.5nm,0.3s
STKA Stephens Creek 29.97 148 P **P** 10 31 32.6 +0.2
USRK Ussuriysk Ar. 51.74 8 P **P** 10 34 23.9 0.0
comp=Z,1.7nm,0.5s,baz=169,slow=4.9,SNR=6.4
comp=Z,1.7nm,0.5s
SONM Songino Array 56.75 347 P **P** 10 34 59.9 +0.8
comp=Z,0.4nm,0.5s,baz=142,slow=6.7,SNR=2.4
comp=Z,0.4nm,0.5s
MKAR Makanchi Array 64.85 330 P **P** 10 35 52.7 +0.7
comp=Z,0.5nm,0.3s,baz=134,slow=7.8,SNR=9.3
comp=Z,0.5nm,0.3s
MKAR Makanchi Array 64.85 330 P **P** 10 35 52.4 +0.4
PETK Petropavlovsk- 66.79 22 P **P** 10 36 04.5 +0.7
comp=Z,1.6nm,1.0s,baz=232,slow=7.0,SNR=1.5
comp=Z,1.6nm,1.0s
VNDA Vanda 73.16 172 P **P** 10 36 41.9 +0.7
ABKAR Akbulak array 78.54 323 P **P** 10 37 10.8 -0.5
TXAR Lajitas Array 130.75 57 PKP **PKiKP** 10 44 16.8 +0.2
comp=Z,0.1nm,0.4s,baz=183,slow=2.2,SNR=3.6

DJA 05 10:31:51.6±0.4, 3°S±4°×12°7E±°, h10km, M3.4/10, mb3.9/3, MLv3.1/10, Buru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**0.55**	**82**	P	Pg	10 32 02.0	-0.2
SANI	**Sanana**	**1.39**	**336**	P	Pn	10 32 16.0	-1.0
AAI	**Ambon**	**1.67**	**103**	P	Pn	10 32 20.7	-0.3
MSAI	**Masohi**	**2.37**	**91**	P	Pn	10 32 30.1	-0.4
LBMI	**Labuha**	**2.83**	**19**	P	Pn	10 32 37.1	+0.3
TNTI	**Ternate**	**4.14**	**11**	P	Pn	10 32 55.5	+0.5
APSI	**Ampana**	**5.46**	**296**	P	Pn	10 33 12.7	-0.4
	0.0nm13nm,0.9s						
FAKI	**Fak Fak**	**5.69**	**86**	P	Pn	10 33 16.8	+0.5
	0.1nm12nm,1.3s						

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*MOS **05** 10:38:25.7±0.9, 3°S×125°.28E, h14km, mb5.0/26, Error ellipse: s-maj=10.6km s-min=6.0km az=116.6*
*IDC **05** 10:38:26.1±0.4, 3°.05S×125°.24E, h0km, mb4.5/26, mbtmp4.5/29, ML4.6/3, MS3.6/28, Error ellipse: s-maj=16.1km s-min=10.4km az=56.0*
*BJI **05** 10:38:26.0±0.0, 3°.00S×125°.30E, h10km, mb4.7/52, mB4.9/29, Ms4.3/7, Ms7 3.9/6*
*NEIC **05** 10:38:28.5±1.8, 2°.98S±0°.06×125°.34E±0°.07, h14km±3km, mb5.0/67, Error ellipse: s-maj=10.6km s-min=8.9km az=50.0*
*GCMT **05** 10:38:29.5±0.3, 2°.95S±0°.03×125°.40E±0°.03, h19km±1km, MW4.9/80, Moment Tensor Solution. s25,c28; s80,c106; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.03±.19; $M_{\theta\theta}$-1.24±.10; $M_{\phi\phi}$-1.80±.13; $M_{r\theta}$0.37±.23; $M_{r\phi}$0.99±.06; $M_{\theta\phi}$-0.49±.29; Best double couple: M=2.85600×10^{16} NP1:ϕ=323.00000°, δ=39.00000°, λ=90.00000°. NP2: ϕ=143.00000°, δ=51.00000°, λ=90.00000°. Principal axes: T 3.0960, Plg84.0000°, Azm53.0000°; N -0.4890, Plg0.0000°, Azm323.0000°; P -2.6170, Plg6.0000°, Azm233.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DJA **05** 10:38:31.0±0.2, 3°S±2°×12°5E±°, h45km±4km, M4.7/31, mb4.8/31, mB5.2/13, MLv4.7/27, Mw(mB)4.6/13, MwMwp4.6/2, Mwp4.9/2*

ISC 05 10:38:27.6±0.3, 3°.00S±0°.04×125°.30E±0°.04, h10km, n290, σ1°23/289, mb4.9/88, MS3.7/29, 17C-4D, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANI	**Sanana**	**1.17**	**36**	P	**Pb**	10 38 47.8	-2.2
SANI	**Sanana**	**1.17**	**36**	P	**Pb**	10 38 47.7	-2.2
NLAI	**Namlea**	**1.81**	**97**	P	**Pb**	10 39 00.4	-0.5
AAI	**Ambon**	**2.97**	**103**	P	**Pn**	10 39 15.9	+1.1
LUWI	**Luwuk**	**3.19**	**308**	Pn	**Pn**	10 39 16.4	-1.4
LUWI	**Luwuk**	**3.19**	**308**	P	**Pn**	10 39 16.5	-1.4
LUWI	**Luwuk**	**3.19**	**308**	P	**Pn**	10 39 16.4	-1.4
LBMI	**Labuha**	**3.22**	**43**	P	**Pn**	10 39 18.1	-0.2
MSAI	**Masohi**	**3.64**	**95**	P	**Pn**	10 39 26.6	+2.6
BBSI	**Bau Bau**	**3.67**	**228**	P	**Pn**	10 39 25.3	+0.8
KMSI	**Cibinong**	**3.79**	**340**	P	**Pn**	10 39 25.8	-0.3
APSI	**Ampana**	**4.20**	**300**	P	**Pn**	10 39 31.6	-0.1
TNTI	**Ternate**	**4.28**	**29**	Pn	**Pn**	10 39 32.8	-0.1
TNTI	**Ternate**	**4.28**	**29**	P	**Pn**	10 39 33.0	+0.1
BNDI	**Bandanaira**	**4.84**	**108**	P	**Pn**	10 39 41.5	+1.0
BNSI	**Bone**	**5.36**	**255**	P	**Pn**	10 39 48.4	+0.7
	0.2nm36nm,1.0s						
TTSI	**Tana Toraja**	**5.47**	**269**	P	**Pn**	10 39 50.7	+1.5
	0.3nm1μm59nm,1.4s						
SPSI	**Sidrap Palu**	**5.60**	**260**	P	**Pn**	10 39 52.4	+1.4
	0.3nm858nm79nm,0.7s						
BKSI	**Bulukumba**	**5.65**	**246**	P	**Pn**	10 39 52.4	+0.7
	0.2nm801nm50nm,0.7s						
BSSI	**Bau Bau, Buton**	**5.72**	**237**	P	**Pn**	10 39 52.4	-0.2
	0.2nm1μm34nm,0.8s						
KAPI	**Kappang**	**5.88**	**250**	Pn	**Pn**	10 39 55.1	+0.3
	4.4nm,0.3s,baz=101,slow=3.3,SNR=8.3						
KAPI				Sn	**Sn**	10 40 58.3	-4.1
	baz=150,slow=22						
KAPI				LR	LR	10 42 25.3	
	comp=Z,819nm,19.0s,baz=64,slow=41						
	10.0nm,0.3s						
KAPI	**Kappang**	**5.88**	**250**	Pn	**Pn**	10 39 55.6	+0.7
KAPI	**Kappang**	**5.88**	**250**	P	**Pn**	10 39 55.8	+0.9
SWI	**Sorong**	**6.33**	**70**	P	**Pn**	10 40 02.3	+1.3
	1.9nm1μm5μm460nm,0.8s						
SIJI	**Sorong**	**6.33**	**71**	Pn	**Pn**	10 40 01.9	+0.9
	22nm,0.3s,baz=261,slow=7.8,SNR=62						
SIJI				Sn	**Sn**	10 41 11.7	-1.8
	4.6nm,0.3s,baz=212,slow=23,SNR=1.0						
SIJI				LR	LR	10 43 04.6	
	comp=Z,445nm,20.9s,baz=278,slow=44						
	89nm,0.2s						
MPSI	**Mapaga**	**6.34**	**301**	P	**Pn**	10 40 00.3	-0.8
	0.6nm2μm138nm,0.8s						
SGSI	**Sangihe**	**6.65**	**2**	P	**Pn**	10 40 05.5	+0.1
	0.9nm163nm,1.1s						
EDFI	**Ende, Flores**	**6.74**	**212**	P	**Pn**	10 40 07.3	+0.5
	0.1nm1μm36nm,0.8s						
SOEI	**Soe**	**6.79**	**189**	Pn	**Pn**	10 40 10.5	+3.1
SOEI	**Soe**	**6.79**	**189**	P	**Pn**	10 40 11.6	+4.2
	0.6nm2μm192nm,1.0s						
FAKI	**Fak Fak**	**6.94**	**89**	Pn	**Pn**	10 40 09.3	-0.1
FAKI	**Fak Fak**	**6.94**	**89**	P	**Pn**	10 40 08.7	-0.8
	0.5nm1μm157nm,0.9s						
FAKI	**Fak Fak**	**6.94**	**89**	P	**Pn**	10 40 10.0	+0.5
BATI	**Baumata**	**7.34**	**193**	Pn	**Pn**	10 40 18.0	+3.1
	6.5nm,0.3s,baz=26,slow=8.2,SNR=10						
BATI				LR	LR	10 43 12.1	
	comp=Z,2μm,20.9s,baz=17,slow=39						
BATI	**Baumata**	**7.34**	**193**	P	**Pn**	10 40 18.6	+3.7
	0.3nm76nm,1.0s						
SAUI	**Saumlaki**	**7.75**	**130**	P	**Pn**	10 40 21.3	+0.7
	0.7nm5μm154nm,0.8s						
DDMP	**Don Marcelino,**	**9.06**	**3**	‖*eP*	**Pn**	10 40 37.4	-1.1
KCP	**Kidapawan**	**9.95**	**359**	‖*iP*	**Pn**	10 40 51.0	+0.2
DAV	**Davao City (W)**	**10.01**	**2**	LR	LR	10 45 13.8	
	comp=Z,255nm,19.2s,baz=120,slow=40						
BAKI	**Biak**	**10.95**	**81**	P	**Pn**	10 41 05.3	+0.8
	65nm,0.8s						
MTN	**Manton Dam**	**11.35**	**150**	P	**Pn**	10 41 12.1	+2.1
	baz=11,SNR=6.4						
MTN	**Manton Dam**	**11.35**	**150**	Pn	**Pn**	10 41 09.7	-0.3
KDU	**Kakadu**	**11.96**	**144**	P	**Pn**	10 41 19.2	+1.0
	baz=12,SNR=7.1						
KDU	**Kakadu**	**11.96**	**144**	P	**Pn**	10 41 19.1	+0.9
KMMI	**Kalianget**	**11.98**	**250**	P	**Pn**	10 41 20.1	+1.5
	31nm,1.4s						
KNRA	**Kununurra**	**13.05**	**165**	P	**Pn**	10 41 32.6	-0.6
	baz=13,SNR=5.3						
KNRA	**Kununurra**	**13.05**	**165**	Pn	**Pn**	10 41 32.6	-0.6
PWJI	**Pagerwojo**	**14.32**	**249**	P	**Pn**	10 41 53.5	+2.9
	56nm,0.9s						
PCJI	**Pacitan**	**14.97**	**249**	P	**Pn**	10 42 01.8	+2.4
	85nm,1.4s						
WOJI	**Wonogiri, Jawa**	**15.09**	**251**	P	**Pn**	10 42 05.0	+4.0
	64nm,1.5s						
KSM	**Kuching**	**15.63**	**286**	P	**Pn**	10 42 09.3	+1.2
KPJI	**Karang Pucung**	**16.86**	**255**	P	**P**	10 42 27.4	+1.5
	62nm,1.6s						
LEM	**Lembang**	**18.02**	**257**	LR	LR	10 49 53.8	
	comp=Z,608nm,18.6s,baz=98,slow=38						
MBWA	**Marble Bar**	**18.84**	**196**	P	**P**	10 42 47.0	-0.8
WB0	**Warramunga Arr**	**18.88**	**153**	P	**P**	10 42 48.1	-0.1
WB0				IAmb	IAmb	10 42 52.4	
	comp=Z,54nm,0.8s						
WRAB	**Tennant Creek**	**19.01**	**153**	P	**P**	10 42 49.1	-0.5
WRAB				IAmb	IAmb	10 42 54.0	
	comp=Z,60nm,0.8s						
WRAB	**Tennant Creek**	**19.01**	**153**	*ce*P	**P**	10 42 48.6	-1.1
WRAB				pmax	pmax		
	comp=Z,66nm,0.8s						
WRAB	**Tennant Creek**	**19.01**	**153**	P	**P**	10 42 48.6	-1.1
WRA	**Warramunga Arr**	**19.01**	**153**	P	**P**	10 42 48.4	-1.3
	comp=Z,2.3nm,0.3s,baz=333,slow=11,SNR=77						
	comp=Z,20nm,0.5s						
WRA	**Warramunga Arr**	**19.01**	**153**	P	**P**	10 42 48.3	-1.4
WRA	**Warramunga Arr**	**19.01**	**153**	P	**P**	10 42 48.3	-1.4
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WB2	**Warramunga Arr**	**19.02**	**153**	P	**P**	10 42 49.0	-0.8
WB2				IAmb	IAmb	10 42 54.0	
	comp=Z,64nm,0.8s						
WR0	**Warramunga Arr**	**19.12**	**153**	P	**P**	10 42 49.9	-1.0
WR0				IAmb	IAmb	10 42 56.1	
	comp=Z,42nm,0.7s						
PSA00	**Pilbara Seismi**	**19.20**	**196**	P	**P**	10 42 51.0	-0.8
PSA00	**Pilbara Seismi**	**19.20**	**196**	P	**P**	10 42 52.7	+0.9
PSA00				IAmb	IAmb	10 43 04.4	
	comp=Z,34nm,1.1s						
COEN	**Coen**	**20.74**	**123**	P	**P**	10 43 06.8	-1.8
	baz=2,SNR=18						
COEN	**Coen**	**20.74**	**123**	P	**P**	10 43 05.6	-3.0
COEN	**Coen**	**20.74**	**123**	P	**P**	10 43 07.2	-1.4
MDSI	**Maura Dua**	**21.12**	**265**	P	**P**	10 43 13.6	+0.8
	comp=Z,39nm,1.2s						
WRKA	**Warakurna**	**22.10**	**173**	P	**P**	10 43 23.6	+0.4
	baz=22,SNR=50						
WRKA	**Warakurna**	**22.10**	**173**	P	**P**	10 43 23.6	+0.4
AS31	**Alice Springs**	**22.16**	**159**	P	**P**	10 43 23.6	-0.4
ASAR	**Alice Springs**	**22.16**	**159**	P	**P**	10 43 22.9	-0.9
	comp=Z,26nm,0.7s,baz=336,slow=9.0,SNR=130						
	comp=Z,26nm,0.7s						
ASAR	**Alice Springs**	**22.16**	**159**	P	**P**	10 43 23.3	-0.6
ASAR	**Alice Springs**	**22.16**	**159**	P	**P**	10 43 23.0	-0.9
GIRL	**Giralia**	**22.28**	**208**	P	**P**	10 43 27.6	+2.5
	baz=22,SNR=7.5						
GIRL	**Giralia**	**22.28**	**208**	P	**P**	10 43 26.5	+1.4
GIRL	**Giralia**	**22.28**	**208**	P	**P**	10 43 26.4	+1.3
QIS	**Mount Isa**	**22.34**	**142**	P	**P**	10 43 24.9	-0.9
	baz=22,SNR=61						
QIS	**Mount Isa**	**22.34**	**142**	P	**P**	10 43 25.6	-0.2
PMG	**Port Moresby**	**22.63**	**107**	P	**P**	10 43 29.0	0.0
	comp=Z,48nm,0.9s,baz=288,slow=6.2,SNR=14						
PMG				LR	LR	10 54 42.4	
	comp=Z,148nm,18.0s,baz=325,slow=43						
	comp=Z,48nm,0.9s						
PMG	**Port Moresby**	**22.63**	**107**	P	**P**	10 43 29.4	+0.4
PMG	**Port Moresby**	**22.63**	**107**	P	**P**	10 43 29.0	0.0
MTSU	**Mount Surprise**	**23.95**	**130**	P	**P**	10 43 41.2	-1.0
	baz=24,SNR=10						
MTSU	**Mount Surprise**	**23.95**	**130**	P	**P**	10 43 41.5	-0.7
IPM	**Ipoh**	**25.37**	**287**	P	**P**	10 43 56.2	+0.9
IPM				IAmb	IAmb	10 44 08.8	
	comp=Z,82nm,1.4s						
GUMO	**Guam**	**25.47**	**49**	P	**P**	10 43 58.0	+1.9
	comp=Z,80nm,1.1s,baz=217,slow=20,SNR=2.7						
	comp=Z,80nm,1.1s						
GUMO	**Guam**	**25.47**	**49**	P	**P**	10 43 58.0	+1.9
KULM	**Kulim**	**25.96**	**288**	P	**P**	10 44 01.4	+0.7
KULM				IAmb	IAmb	10 44 14.2	
	comp=Z,40nm,1.2s						
OOD	**Oodnadatta**	**26.57**	**159**	P	**P**	10 44 04.6	-1.4
CTA	**Charters Tower**	**26.58**	**131**	P	**P**	10 44 05.5	-0.7
	comp=Z,9.4nm,1.0s,baz=294,slow=6.3,SNR=5.2						
	comp=Z,9.4nm,1.0s						
CTAO	**Charters Tower**	**26.58**	**131**	P	**P**	10 44 04.7	-1.4
CTAO	**Charters Tower**	**26.58**	**131**	P	**P**	10 44 04.7	-1.4
CTAO				pmax	pmax		
	comp=Z,20nm,1.2s						
KRVT	**Keravat (AS076**	**26.70**	**94**	P	**P**	10 44 07.8	+0.5
	comp=Z,47nm,0.7s,baz=330,slow=20,SNR=4.6						
	comp=Z,47nm,0.7s						
RABL	**Rabaul**	**26.84**	**93**	P	**P**	10 44 08.5	-0.1
PSI	**Prapat**	**26.99**	**282**	P	**P**	10 44 10.1	+0.1
	comp=Z,2.3nm,0.4s,baz=146,slow=11,SNR=2.0						
	comp=Z,2.3nm,0.4s						
MORW	**Morawa**	**27.38**	**198**	P	**P**	10 44 13.6	+0.4
	baz=28,SNR=4.7						
MORW	**Morawa**	**27.38**	**198**	P	**P**	10 44 10.8	-2.4
MORW	**Morawa**	**27.38**	**198**	P	**P**	10 44 13.6	+0.4
FORT	**Forrest**	**27.75**	**175**	P	**P**	10 44 14.7	-1.8
FORT				IAmb	IAmb	10 44 35.5	
	comp=Z,36nm,0.8s						
FORT	**Forrest**	**27.75**	**175**	P	**P**	10 44 16.5	0.0
MULG	**Mulgathing**	**28.37**	**164**	P	**P**	10 44 22.2	+0.1
BLDU	**Ballidu**	**28.64**	**196**	P	**P**	10 44 23.4	-1.1
	baz=29,SNR=11						
BLDU	**Ballidu**	**28.64**	**196**	P	**P**	10 44 23.4	-1.1
LCRK	**Leigh Creek**	**29.91**	**157**	P	**P**	10 44 35.4	-0.3
BBOO	**Buckleboo**	**31.32**	**162**	P	**P**	10 44 47.3	-0.9
	baz=32,SNR=12						
BBOO	**Buckleboo**	**31.32**	**162**	P	**P**	10 44 46.9	-1.3
BBOO	**Buckleboo**	**31.32**	**162**	P	**P**	10 44 48.2	0.0
RMQ	**Roma**	**32.42**	**138**	P	**P**	10 44 56.8	-1.2
	baz=32,SNR=5.2						
STKA	**Stephens Creek**	**32.56**	**154**	P	**P**	10 44 57.7	-1.4
	comp=Z,16nm,0.8s,baz=326,slow=8.5,SNR=26						
	comp=Z,16nm,0.8s						
STKA	**Stephens Creek**	**32.56**	**154**	P	**P**	10 44 57.8	-1.4
	baz=33,SNR=23						
STKA	**Stephens Creek**	**32.56**	**154**	P	**P**	10 44 56.6	-2.4
STKA	**Stephens Creek**	**32.56**	**154**	P	**P**	10 44 56.7	-2.4
STKA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
STKA	**Stephens Creek**	**32.56**	**154**	P	**P**	10 44 58.2	-0.9
HTT	**Hattt**	**32.84**	**159**	P	**P**	10 45 01.5	-0.1
	baz=33,SNR=16						
HTT	**Hallett**	**32.84**	**159**	P	**P**	10 45 01.7	+0.1
CMAR	**Chiang Mai Arr**	**33.59**	**310**	P	**P**	10 45 08.5	+0.2
	comp=Z,1.3nm,0.9s,baz=145,slow=7.1,SNR=5.5						
CMAR				PcP	**PcP**	10 47 49.7	+0.9
	comp=Z,1.9nm,0.9s,baz=161,slow=3.0,SNR=7.1						
CMAR				LR	LR	10 59 34.1	
	comp=Z,67nm,18.0s,baz=205,slow=38						
	comp=Z,1.3nm,0.9s						
CMAR	**Chiang Mai Arr**	**33.59**	**310**	*ce*P	**P**	10 45 09.8	+1.5
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
CHTO	**Chiang Mai**	**33.80**	**311**	P	**P**	10 45 10.7	+0.5
CHTO	**Chiang Mai**	**33.80**	**311**	P	**P**	10 45 10.7	+0.5
CHTO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
JCJ	**Chichijima**	**34.08**	**28**	LR	LR	10 58 33.0	
	comp=Z,31nm,21.1s,baz=92,slow=35						
CMSA	**Cobar Meteorol**	**34.27**	**148**	P	**P**	10 45 13.0	-1.0
	baz=34,SNR=8.9						
CMSA	**Cobar Meteorol**	**34.27**	**148**	P	**P**	10 45 12.9	-1.2
NJ2	**Nanjing**	**35.40**	**351**	*e*P	**P**	10 45 25.6	+1.9
NJ2				sP	**pwP**	10 45 35.0	+3.1
NJ2				pmax	pmax		
	comp=Z,36nm,0.8s						
KMI	**Kunming**	**35.51**	**323**	⇑P	**P**	10 45 26.2	+1.1
KMI				sP	pwP	10 45 34.2	+1.0
KMI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ARPS	**Mount Arapiles**	**36.90**	**158**	P	**P**	10 45 36.2	-0.4
	baz=37,SNR=16						
ARPS	**Mount Arapiles**	**36.90**	**158**	P	**P**	10 45 36.4	-0.1
ARMA	**Armidale**	**36.93**	**140**	P	**P**	10 45 37.0	0.0
	baz=37,SNR=7.5						
ARMA	**Armidale**	**36.93**	**140**	P	**P**	10 45 35.7	-1.4
ARMA				IAmb	IAmb	10 45 40.2	
	comp=Z,25nm,1.0s						
ARMA	**Armidale**	**36.93**	**140**	P	**P**	10 45 37.0	0.0
PZH	**PanZhiHua**	**37.13**	**324**	P	**P**	10 45 38.6	-0.2
PZH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PZH				pmax	pmax		
	comp=Z,90nm,8.0s						
CAN	**Canberra**	**38.95**	**148**	P	**P**	10 45 53.4	-0.6
CAN	**Canberra**	**38.95**	**148**	P	**P**	10 45 53.4	-0.6
CAN				pmax	pmax		
	comp=Z,288nm,2.0s						
TOO	**Toolangi**	**39.08**	**154**	P	**P**	10 45 55.4	+0.4
TOO				IAmb	IAmb	10 47 18.4	
	comp=Z,111nm,1.9s						
TOO	**Toolangi**	**39.08**	**154**	P	**P**	10 45 55.4	+0.4
TOO				pmax	pmax		
	comp=Z,111nm,2.0s						
LYN	**LuoYang**	**39.26**	**343**	*e*P	**P**	10 45 57.1	+0.6
LYN				pmax	pmax		
	comp=Z,100nm,7.3s						
LYN				LR	LR		
	comp=Z,180nm,11.2s						
CD2	**Chengdu**	**39.49**	**330**	P	**P**	10 45 58.5	0.0
CD2				pmax	pmax		
	comp=Z,20nm,0.9s						
TIA	**Tai'an**	**39.75**	**350**	‖P	**P**	10 46 01.2	+0.6
TIA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KSAR	**Wonju Array Be**	**40.31**	**3**	P	**P**	10 46 05.8	+0.6
KSAR	**Wonju Array Be**	**40.31**	**3**	P	**P**	10 46 05.8	+0.6
KSRS	**Korea Array**	**40.33**	**3**	P	**P**	10 46 05.8	+0.6
	comp=Z,3.1nm,0.8s,baz=180,slow=8.6,SNR=11						
KSRS				LR	LR	11 02 54.1	
	comp=Z,32nm,20.6s,baz=160,slow=36						
	comp=Z,3.1nm,0.8s						
MAJO	**Matsushiro**	**41.15**	**16**	*i*P	**P**	10 46 13.1	+1.0
MJAR	**Matsushiro Arr**	**41.15**	**16**	P	**P**	10 46 10.8	-1.3
	comp=Z,1.3nm,0.7s,baz=179,slow=9.8,SNR=2.9						
	comp=Z,1.3nm,0.7s						
HNS	**HongShan**	**41.38**	**347**	⇑P	**P**	10 46 14.7	+0.7
HNS				pmax	pmax		
	comp=Z,26nm,1.2s						
LZH	**Lanzhou**	**43.75**	**335**	*e*P	**P**	10 46 35.3	+1.8
LZH				sP	pwP	10 46 44.3	+2.6
LZH				*e*S	**S**	10 53 04.7	+0.5
LZH				pmax	pmax		
	comp=Z,23nm,1.0s						
LZH				pmax	pmax		
	comp=Z,93nm,4.6s						
HHC	**Hu-ho-hao-te**	**45.41**	**345**	*e*P	**P**	10 46 47.8	+1.1
HHC				pmax	pmax		
	comp=Z,36nm,1.1s						
HHC				pmax	pmax		
	comp=Z,130nm,6.0s						
PALK	**Pallekele**	**45.66**	**283**	LR	LR	11 06 17.6	
	comp=Z,63nm,18.7s,baz=212,slow=37						
CN2	**Changchun**	**46.59**	**0**	*e*P	**P**	10 46 57.4	+1.6
CN2				*e*S	**S**	10 53 46.6	+1.9
CN2				pmax	pmax		
	comp=Z,10.0nm,1.8s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,100nm,12.0s						
CN2				LR	LR		
	comp=Z,100nm,12.0s						
CN2				LR	LR		
	comp=Z,100nm,14.0s						
USRK	**Ussuriysk Ar.**	**47.37**	**7**	P	**P**	10 47 01.6	-0.3
	comp=Z,4.1nm,0.8s,baz=195,slow=8.1,SNR=7.9						
	comp=Z,4.1nm,0.8s						
USRK	**Ussuriysk Ar.**	**47.37**	**7**	P	**P**	10 47 01.0	-0.8
USRK	**Ussuriysk Ar.**	**47.37**	**7**	P	**P**	10 47 01.0	-0.8
XLT	**XiLinHaoTe**	**47.42**	**351**	‖*iP*	**P**	10 47 02.8	+0.4
XLT				pP	sP	10 47 06.6	+2.0
XLT				sP	pwP	10 47 12.2	+1.6
XLT				S	**S**	10 **53 56.2**	**-0.5**
XLT				sS	sS	10 54 05.8	+6.3
XLT				pmax	pmax		
	comp=Z,12nm,1.7s						
XLT				pmax	pmax		
	comp=Z,110nm,4.5s						
MDJ	**Mudanjiang**	**47.56**	**4**	P	P	10 47 09.1	+5.8
MDJ				pmax	pmax		
	comp=Z,11nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,130nm,3.6s						
MDJ	**Mudanjiang**	**47.56**	**4**	P	**P**	10 47 03.9	+0.6
MDJ				pmax	pmax		
	comp=Z,8.0nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,130nm,3.8s						
GOMU	**GeErMu**	**48.28**	**327**	P	**P**	10 47 10.4	+0.9
GOMU				pP	sP	10 47 15.3	+3.6
GOMU				sP	pwP	10 47 17.0	-0.7
GOMU				pmax	p

MSVF	**Nonsavu**	**53.71**	**110**	P	**P**	**10 47 49.1**	**-1.3**
MSVF	**Nonsavu**	**53.71**	**110**	P	**P**	**10 47 49.1**	**-1.3**
MSVF				pmax	pmax		
	comp=Z,47nm,1.3s						
ZAK	**Zakamensk**	**56.45**	**343**	*e*P	**P**	**10 48 09.3**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.4s						
RPZ	**Rata Peaks**	**57.24**	**142**	P	**P**	**10 48 15.2**	**-0.1**
	comp=Z,8.1nm,0.9s,baz=262,slow=16,SNR=2.3						
	comp=Z,8.1nm,0.9s						
WMQ	**Urumqi**	**57.54**	**328**	*e*P	**P**	**10 48 18.7**	**+1.3**
WMQ				sP	pwP	10 48 27.1	+1.5
WMQ				pmax	pmax		
	comp=Z,58nm,0.7s						
MOY	**Mondy**	**58.26**	**342**	*e*P	**P**	**10 48 23.2**	**+0.8**
MOY				pmax	pmax		
	comp=Z,26nm,1.9s						
KNGR	**Kungurtug, Tuv**	**58.47**	**340**	*i* P	**P**	**10 48 24.8**	**+0.9**
KNGR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BKZ	**Black Stump Fm**	**58.72**	**135**	P	**P**	**10 48 25.2**	**-0.6**
URZ	**Urewera**	**58.79**	**134**	P	**P**	**10 48 28.3**	**+2.0**
	comp=Z,6.4nm,0.7s,baz=288,slow=20,SNR=7.3						
URZ				LR	LR	11 14 46.2	
	comp=Z,83nm,18.4s,baz=31,slow=37						
	comp=Z,6.4nm,0.7s						
URZ	**Urewera**	**58.79**	**134**	P	**P**	**10 48 25.2**	**-1.1**
URZ				IAmb	IAmb	10 50 26.3	
	comp=Z,24nm,1.4s						
RAO	**Raoul Island**	**59.78**	**122**	LR	LR	11 14 51.2	
	comp=Z,778nm,18.9s,baz=133,slow=36						
KSH	**Kashi**	**61.93**	**318**	P	**P**	**10 48 49.2**	**+1.3**
KSH				sP	pwP	10 48 58.6	+2.6
KSH				pmax	pmax		
	comp=Z,8.0nm,0.8s						
PETK	**Petropavlovsk-**	**62.17**	**21**	P	**P**	**10 48 50.4**	**+1.3**
	comp=Z,5.7nm,1.0s,baz=160,slow=4.6,SNR=3.7						
PETK				LR	LR	11 16 09.6	
	comp=Z,18nm,20.3s,baz=200,slow=36						
	comp=Z,5.7nm,1.0s						
MK31	**Makanchi Array**	**62.36**	**328**	P	**P**	**10 48 50.7**	**+0.2**
MK31				IAmb	IAmb	10 49 01.2	
	comp=Z,11nm,0.8s						
MK31	**Makanchi Array**	**62.36**	**328**	*i* P	**P**	**10 48 50.5**	**0.0**
MKAR	**Makanchi Array**	**62.36**	**328**	P	**P**	**10 48 50.7**	**+0.3**
	comp=Z,8.2nm,0.8s,baz=126,slow=8.2,SNR=53						
MKAR				LR	LR	11 18 51.2	
	comp=Z,21nm,19.2s,baz=128,slow=39						
	comp=Z,8.2nm,0.8s						
MAKZ	**Makanchi**	**62.53**	**328**	P	**P**	**10 48 51.8**	**+0.2**
MAKZ				IAmb	IAmb	10 49 02.2	
	comp=Z,12nm,0.8s						
MAKZ	**Makanchi**	**62.53**	**328**	P	**P**	**10 48 51.8**	**+0.2**
MAKZ				pmax	pmax		
	comp=Z,12nm,0.8s						
KDJ	**Kajisay**	**62.54**	**321**	P	**P**	**10 48 52.2**	**+0.2**
KDJ				IAmb	IAmb	10 48 54.0	
	comp=Z,10.0nm,1.1s						
KDJ	**Kajisay**	**62.54**	**321**	P	**P**	**10 48 52.2**	**+0.2**
KDJ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BOOM	**Boomskoye usch**	**63.51**	**321**	P	**P**	**10 48 58.7**	**+0.3**
BOOM				IAmb	IAmb	10 49 09.5	
	comp=Z,21nm,1.2s						
BOOM	**Boomskoye usch**	**63.51**	**321**	P	**P**	**10 48 58.7**	**+0.3**
BOOM				pmax	pmax		
	comp=Z,21nm,1.2s						
TKM2	**Tokmak 2**	**63.95**	**321**	P	**P**	**10 49 01.9**	**+0.6**
	SNR=8.5						
UCH	**Uchtor**	**64.27**	**320**	P	**P**	**10 49 04.7**	**+0.9**
	SNR=8.9						
AAK	**Ala-Archa**	**64.50**	**321**	P	**P**	**10 49 05.2**	**+0.3**
AAK				IAmb	IAmb	10 49 06.9	
	comp=Z,16nm,1.2s						
AAK	**Ala-Archa**	**64.50**	**321**	*ce*P	**P**	**10 49 05.5**	**+0.6**
AAK				pmax	pmax		
	comp=Z,14nm,1.3s						
KBL	**Kabul**	**64.62**	**311**	P	**P**	**10 49 05.0**	**-0.9**
KBL	**Kabul**	**64.62**	**311**	P	**P**	**10 49 05.0**	**-0.9**
KBL				pmax	pmax		
	comp=Z,25nm,1.0s						
AML	**Almayashu**	**64.75**	**320**	P	**P**	**10 49 07.6**	**+0.8**
	SNR=6.5						
USP	**Ospenovka**	**64.82**	**321**	P	**P**	**10 49 07.2**	**+0.4**
	SNR=13						
YAK	**Yakutsk**	**64.94**	**2**	LR	LR	11 20 29.1	
	comp=Z,33nm,19.0s,baz=90,slow=39						
YAK	**Yakutsk**	**64.94**	**2**	P	**P**	**10 49 07.3**	**+0.1**
YAK	**Yakutsk**	**64.94**	**2**	*e*P	**P**	**10 49 07.1**	**0.0**
YAK				*e**PP	**pwP**	**10 49 16.5**	**+1.2**
YAK				*e*		10 49 37.0	
YAK				*e*PPP	PPP	10 53 03.7	
YAK				*e*S	**S**	**10 57 46.7**	**-1.9**
YAK				*e**SS	sS	10 58 06.9	+16
YAK				*e*SS	**SS**	**11 01 59.6**	**-1.0**
YAK				pmax	pmax		
	comp=Z,39nm,1.0s						
YAK				pmax	pmax		
	comp=N,6.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,100nm,3.8s						
YAK				pmax	pmax		
	comp=N,30nm,3.8s						
YAK				pmax	pmax		
	comp=E,39nm,3.8s						
YAK				smax	smax		
	comp=N,39nm,3.6s						
YAK				smax	smax		
	comp=E,66nm,3.8s						
EKS2	**Erkin-Say**	**64.96**	**320**	P	**P**	**10 49 08.8**	**+0.9**
	SNR=8.5						
MA2	**Magadan**	**65.54**	**14**	LR	LR	11 16 16.4	
	comp=E,22nm,21.6s,baz=102,slow=35						
MA2	**Magadan**	**65.54**	**14**	*ce*P	**P**	**10 49 11.9**	**+0.8**
MA2				pmax	pmax		
	comp=Z,9.0nm,0.8s						
GAR	**Garm**	**65.55**	**315**	P	**P**	**10 49 11.2**	**-0.6**
BTK	**Batken**	**65.67**	**317**	P	**P**	**10 49 11.6**	**-0.9**
BTK				IAmb	IAmb	10 49 23.3	
	comp=Z,29nm,1.5s						
BTK	**Batken**	**65.67**	**317**	P	**P**	**10 49 11.6**	**-0.9**
BTK				pmax	pmax		
	comp=Z,29nm,1.5s						
ZAA0	**Zalesovo Array**	**65.98**	**335**	P	**P**	**10 49 13.5**	**-0.6**
ZAA0				IAmb	IAmb	10 49 23.4	
	comp=Z,17nm,1.1s						
ZALV	**Zalesovo Beam**	**65.98**	**335**	P	**P**	**10 49 13.1**	**-1.0**
	comp=Z,8.2nm,0.9s,baz=123,slow=5.5,SNR=23						
	comp=Z,8.2nm,0.9s						
ZALV	**Zalesovo Beam**	**65.98**	**335**	P	**P**	**10 49 12.9**	**-1.2**
ZALV	**Zalesovo Beam**	**65.98**	**335**	P	**P**	**10 49 12.9**	**-1.2**
CHGR	**Chuyangaron**	**66.22**	**315**	P	**P**	**10 49 16.1**	**+0.1**
CHGR	**Chuyangaron**	**66.22**	**315**	P	**P**	**10 49 16.1**	**+0.1**
CHGR				pmax	pmax		
	comp=Z,45nm,1.1s						
KURK	**Kurchatov**	**66.71**	**330**	P	**P**	**10 49 18.7**	**-0.1**
KURK	**Kurchatov**	**66.71**	**330**	*ce*P	**P**	**10 49 18.6**	**-0.1**
KURK				pmax	pmax		
	comp=Z,37nm,1.3s						
KK31	**Karatay Array**	**67.28**	**320**	P	**P**	**10 49 21.8**	**-0.8**
KK31				IAmb	IAmb	10 49 32.9	
	comp=Z,13nm,1.4s						
KK31	**Karatay Array**	**67.28**	**320**	P	**P**	**10 49 21.8**	**-0.8**
KK31				pmax	pmax		
	comp=Z,13nm,1.4s						
KKAR	**Karatay Array**	**67.28**	**320**	P	**P**	**10 49 22.6**	**+0.1**
KKAR				IAmb	IAmb	10 49 32.9	
	comp=Z,13nm,1.4s						
KKAR	**Karatay Array**	**67.28**	**320**	P	**P**	**10 49 22.2**	**-0.4**
KKAR	**Karatay Array**	**67.28**	**320**	P	**P**	**10 49 22.2**	**-0.4**
KKAR						10 49 22.7	
KKAR				pmax	pmax		
	comp=Z,13nm,1.4s						
SEY	**Seymchan**	**68.87**	**13**	*ce*P	**P**	**10 49 32.7**	**+0.5**
SEY				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SHEM	**Shemya Is, Ala**	**68.98**	**29**	LR	LR	11 14 08.7	
	comp=Z,44nm,20.3s,baz=212,slow=31						
BRVK	**Borovoye**	**72.30**	**329**	P	**P**	**10 49 52.6**	**-0.7**
BRVK				IAmb	IAmb	10 50 03.3	
	comp=Z,15nm,1.1s						
BRVK	**Borovoye**	**72.30**	**329**	P	**P**	**10 49 52.6**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,15nm,1.1s						

SOCY	**Socotra**	**72.42**	**284**	P	**P**	**10 49 53.7**	**-1.2**
GEYT	**Alibeck**	**74.07**	**311**	P	**P**	**10 50 04.4**	**+0.2**
	comp=Z,5.3nm,0.9s,baz=194,slow=8.6,SNR=8.3						
	comp=Z,5.3nm,0.9s						
GEYT	**Alibeck**	**74.07**	**311**	P	**P**	**10 50 04.0**	**-0.2**
TIXI	**Tiksi**	**74.55**	**1**	P	**P**	**10 50 05.1**	**-1.1**
TIXI				IAmb	IAmb	10 50 15.8	
	comp=Z,17nm,1.2s						
TIXI	**Tiksi**	**74.55**	**1**	*ce*P	**P**	**10 50 05.4**	**-0.8**
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BILL	**Bilibino**	**76.39**	**15**	*e*P	**P**	**10 50 16.8**	**0.0**
BILL				*e*		10 50 26.7	
BILL				SS	SS	11 05 00.0	+3.8
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,35nm,14.0s						
ABKAR	**Akbulak array**	**76.50**	**322**	P	**P**	**10 50 16.9**	**-0.9**
ABKAR	**Akbulak array**	**76.50**	**322**	P	**P**	**10 50 17.4**	**-0.4**
ABKAR				IAmb	IAmb	10 50 27.5	
	comp=Z,6.6nm,1.0s						
NRIK	**Noril'sk**	**76.61**	**347**	P	**P**	**10 50 17.6**	**-0.5**
	comp=Z,5.8nm,0.9s,baz=151,slow=8.7,SNR=7.4						
	comp=Z,5.8nm,0.9s						
NRIK	**Noril'sk**	**76.61**	**347**	P	**P**	**10 50 18.1**	**0.0**
NRIK				IAmb	IAmb	10 50 28.1	
	comp=Z,11nm,1.0s						
NRIK	**Noril'sk**	**76.61**	**347**	*ce*P	**P**	**10 50 16.3**	**-1.7**
NRIK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VNDA	**Vanda**	**76.98**	**172**	P	**P**	**10 50 19.7**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=342,slow=3.2,SNR=5.5						
VNDA				LR	LR	11 24 30.6	
	comp=Z,58nm,18.4s,baz=336,slow=36						
	comp=Z,1.0nm,0.7s						
VNDA	**Vanda**	**76.98**	**172**	P	**P**	**10 50 17.6**	**-2.4**
VNDA	**Vanda**	**76.98**	**172**	P	**P**	**10 50 17.6**	**-2.4**
VNDA				pmax	pmax		
	comp=Z,5.0nm,1.4s						
MAW	**Mawson**	**76.98**	**200**	P	**P**	**10 50 19.7**	**-0.5**
	comp=Z,1.8nm,0.8s,baz=90,slow=3.0,SNR=2.2						
MAW				LR	LR	11 23 17.9	
	comp=Z,16nm,18.4s,baz=63,slow=35						
	comp=Z,1.8nm,0.8s						
AKTO	**Aktyubinsk**	**78.08**	**323**	LR	LR	11 27 38.8	
	comp=Z,19nm,20.9s,baz=111,slow=38						
ARU	**Arti**	**79.87**	**329**	P	**P**	**10 50 34.8**	**-1.6**
ARU	**Arti**	**79.87**	**329**	*c* P	**P**	**10 50 34.9**	**-1.5**
ARU						10 53 32.6	
ARU				S	**S**	**11 00 38.9**	**-0.8**
ARU				SS	**SS**	**11 05 43.3**	**-5.8**
ARU				pmax	pmax		
	comp=Z,10.0nm,1.1s						
RAYN	**Ar Rayn**	**81.85**	**294**	P	**P**	**10 50 47.9**	**+0.1**
RAYN				IAmb	IAmb	10 50 57.8	
	comp=Z,10nm,1.0s						
RAYN	**Ar Rayn**	**81.85**	**294**	P	**P**	**10 50 47.9**	**+0.1**
RAYN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BELG	**Belogornoye**	**84.86**	**323**	*i* P	**P**	**10 51 01.4**	**-1.1**
BELG				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KIRV	**Kirov**	**85.22**	**329**	*ce*P	**P**	**10 51 03.9**	**-0.3**
KBZ	**Khabaz**	**86.57**	**314**	P	**P**	**10 51 10.7**	**-0.5**
	comp=Z,1.4nm,0.7s,baz=90,slow=1.0,SNR=2.5						
	comp=Z,1.4nm,0.7s						
KBZ	**Khabaz**	**86.57**	**314**	*ce*P	**P**	**10 51 10.4**	**-0.8**
KBZ				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KIV	**Kislovodsk**	**86.75**	**314**	*e*P	**P**	**10 51 11.6**	**-0.7**
KIV				pmax	pmax		
	comp=Z,2.0nm,0.9s						
QSPA	**South Pole Qui**	**86.95**	**180**	P	**P**	**10 51 11.3**	**-1.5**
QSPA				IAmb	IAmb	10 51 30.5	
	comp=Z,14nm,1.4s						
TTA	**Tatalina**	**87.52**	**27**	P	**P**	**10 51 15.3**	**-0.2**
TTA	**Tatalina**	**87.52**	**27**	P	**P**	**10 51 15.3**	**-0.2**
TTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
N19K	**Bonanza Creek**	**87.83**	**29**	P	**P**	**10 51 17.7**	**+0.6**
N19K				IAmb	IAmb	10 51 27.9	
	comp=Z,5.8nm,0.8s						
L19K	**White Mountain**	**87.90**	**28**	P	**P**	**10 51 17.4**	**+0.1**
L19K				IAmb	IAmb	10 51 28.0	
	comp=Z,9.3nm,1.1s						
KMBO	**Kilima Mbogo**	**87.99**	**269**	P	**P**	**10 51 19.2**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=35,slow=13,SNR=1.8						
KMBO				LR	LR	11 25 56.9	
	comp=Z,36nm,18.7s,baz=88,slow=32						
	comp=Z,0.5nm,0.3s						
M19K	**Big River Lodg**	**88.07**	**28**	P	**P**	**10 51 18.0**	**-0.1**
M19K				IAmb	IAmb	10 51 29.1	
	comp=Z,6.4nm,1.1s						
KDAK	**Kodiak Island**	**88.31**	**32**	LR	LR	11 24 37.7	
	comp=Z,80nm,21.4s,baz=258,slow=31						
IMAR	**Indian Mountai**	**89.04**	**24**	P	**P**	**10 51 22.3**	**-0.3**
MLY	**Manley**	**90.15**	**25**	P	**P**	**10 51 27.9**	**+0.1**
MLY				IAmb	IAmb	10 51 38.0	
	comp=Z,11nm,1.4s						
COLD	**Coldfoot**	**90.61**	**23**	P	**P**	**10 51 30.1**	**+0.1**
COLD				IAmb	IAmb	10 51 40.8	
	comp=Z,6.3nm,1.0s						
I23K	**Minto, Yukon-K**	**90.74**	**25**	P	**P**	**10 51 30.3**	**-0.2**
I23K				IAmb	IAmb	10 51 41.0	
	comp=Z,18nm,1.4s						
ILAR	**Eielson Array**	**91.76**	**25**	P	**P**	**10 51 33.2**	**-2.1**
	comp=Z,1.0nm,1.0s,baz=284,slow=4.6,SNR=7.7						
ILAR				PP	**PP**	**10 55 19.2**	**+5.2**
	comp=Z,2.9nm,1.2s,baz=262,slow=6.3,SNR=6.9						
ILAR				LR	LR	11 29 16.3	
	comp=Z,27nm,21.0s,baz=318,slow=33						
ILAR	**Eielson Array**	**91.76**	**25**	P	**P**	**10 51 33.8**	**-1.5**
ILAR	**Eielson Array**	**91.76**	**25**	P	**P**	**10 51 33.8**	**-1.5**
EIL	**Elat**	**91.77**	**299**	LR	LR	11 38 44.8	
	comp=Z,25nm,18.1s,baz=86,slow=39						
BMAR	**Burnt Mountain**	**92.80**	**23**	P	**P**	**10 51 40.7**	**+0.6**
BRTR	**Keskin Array B**	**93.18**	**309**	P	**P**	**10 51 41.1**	**-1.5**
	comp=Z,0.3nm,0.5s,baz=102,slow=10,SNR=2.2						
	comp=Z,0.3nm,0.5s						
K27K	**Chicken**	**93.83**	**26**	P	**P**	**10 51 45.0**	**+0.1**
L27K	**Beaver Creek,**	**93.97**	**27**	P	**P**	**10 51 45.8**	**+0.2**
L27K				IAmb	IAmb	10 51 56.5	
	comp=Z,7.4nm,1.1s						
BCAR	**Beaver Creek A**	**93.98**	**27**	P	**P**	**10 51 46.0**	**+0.3**
DAWY	**Dawson**	**95.01**	**26**	P	**P**	**10 51 50.3**	**-0.1**
I29M	**Ogilvie Camp,**	**95.39**	**25**	P	**P**	**10 51 51.1**	**-0.9**
I29M				IAmb	IAmb	10 52 02.4	
	comp=Z,11nm,1.1s						
M30M	**Minto, Yukon**	**96.30**	**27**	P	**P**	**10 51 56.6**	**+0.4**
BOSA	**Boshof**	**97.37**	**241**	LR	LR	11 28 45.7	
	comp=Z,40nm,20.7s,baz=183,slow=31						
LBTB	**Lobatse**	**97.52**	**244**	LR	LR	11 28 16.4	
	comp=Z,37nm,21.8s,baz=108,slow=31						
SNAA	**Sanae**	**98.38**	**195**	LR	LR	11 35 02.6	
	comp=Z,46nm,19.9s,baz=132,slow=34						
YKA	**Yellowknife Ar**	**106.18**	**25**	PKiKP	**PKiKP**	**10 56 52.4**	**+0.5**
	comp=Z,0.4nm,0.9s,baz=296,slow=1.8,SNR=4.9						
GERES	**GERESS Array B**	**106.37**	**320**	PKiKP	**PKiKP**	**10 56 53.2**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=93,slow=3.9,SNR=1.9						
PDAR	**Pinedale Array**	**117.29**	**43**	PKP	**PKPdf**	**10 57 13.9**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=252,slow=5.6,SNR=4.2						
PDAR	**Pinedale Array**	**117.29**	**43**		**PKPdf**	**10 57 13.3**	**-0.7**
ESDC	**Sonseca Array**	**121.39**	**316**	PKP	**PKPdf**	**10 57 21.2**	**-0.5**
	comp=Z,2.0nm,0.5s,baz=3.8,slow=3.9,SNR=4.2						
TORD	**Torodi Ar. Bea**	**123.38**	**284**	PKP	**PKPdf**	**10 57 25.4**	**-0.7**
	comp=Z,2.1nm,0.7s,baz=38,slow=1.4,SNR=14						
TORD				PKKPbc	**PKKPbc**	**11 07 15.0**	**-0.2**
	comp=Z,2.3nm,1.0s,baz=290,slow=3.6,SNR=8.8						
TORD	**Torodi Ar. Bea**	**123.38**	**284**		**PKPdf**	**10 57 26.0**	**-0.1**
TXAR	**Lajitas Array**	**126.72**	**55**	PKP	**PKPdf**	**10 57 32.5**	**+0.3**
	comp=Z,0.6nm,0.9s,baz=311,slow=4.2,SNR=6.9						
SCHQ	**Schefferville**	**127.40**	**9**	PKP	**PKPdf**	**10 57 33.4**	**+0.7**
	comp=Z,1.1nm,0.8s,baz=252,slow=20,SNR=3.5						
SCHQ	**Schefferville**	**127.40**	**9**		**PKPdf**	**10 57 33.7**	**+1.0**
PLCA	**Paso Flores**	**134.12**	**163**	PKP	**PKPdf**	**10 57 46.7**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=219,slow=6.5,SNR=4.2						
CPUP	**Villa Florida**	**150.73**	**175**	PKPbc	**PKPbc**	**10 58 21.3**	**+0.3**
	comp=Z,6.3nm,1.1s,baz=189,slow=5.3,SNR=4.1						
CPUP	**Villa Florida**	**150.73**	**175**		**PKPbc**	**10 58 21.1**	**+0.1**
CPUP	**Villa Florida**	**150.73**	**175**	PKIKP	**PKPbc**	**10 58 21.1**	**+0.1**
LPAZ	**La Paz**	**156.68**	**146**	PKP	**PKPdf**	**10 58 26.1**	**+1.1**
	comp=Z,0.3nm,0.5s,baz=180,slow=3.0,SNR=3.6						
LPAZ				PKPab	**PKPab**	**10 58 54.0**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=178,slow=6.6,SNR=4.2						

WEL 05 10:40:21.7±1.0, 33°S±18°×17°9E±2°6, h303km±33km, M3.7/10, mB4.1/7, ML4.2/13, MLv4.2/10, Mw(mB)3.2/7, Error ellipse: s-maj=0.0km s-min=0.0km az=121.1, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**4.87**	**186**	P	Pn	10 41 36.8	-0.9
MXZ				S	S	10 42 41.4	+2.6
WMGZ	**Waiomatatini S**	**5.12**	**185**	P	Pn	10 41 41.2	+0.7
WMGZ				S	S	10 42 44.5	+0.6
HAZ	**Te Kaha**	**5.12**	**190**	P	Pn	10 41 40.4	-0.2
HAZ				S	S	10 42 41.2	-2.9
PKGZ	**Pakihiroa**	**5.21**	**188**	P	Pn	10 41 42.2	+0.4
PKGZ				S	S	10 42 47.1	+0.9
RUGZ	**Raukumara Rang**	**5.34**	**191**	P	Pn	10 41 43.6	+0.2
RUGZ				S	S	10 42 49.6	+0.5
PUZ	**Puketiti**	**5.38**	**186**	P	Pn	10 41 44.0	+0.3
PUZ				S	S	10 42 50.4	+0.8
URZ	**Urewera**	**5.74**	**195**	P	Pn	10 41 47.5	-0.3
URZ				S	S	10 42 57.1	-0.1
CNGZ	**Carnagh Statio**	**5.79**	**186**	P	Pn	10 41 48.7	+0.2
CNGZ				S	S	10 42 54.6	-3.8
RAGZ	**Rawiri**	**5.91**	**192**	P	Pn	10 41 50.3	+0.4
RAGZ				S	S	10 43 04.7	+3.6
RIGZ	**Rimuhau**	**6.06**	**189**	P	Pn	10 41 51.4	-0.3
RIGZ				S	S	10 43 05.5	+1.2
RTZ	**Ruatahuna**	**6.11**	**195**	P	Pn	10 41 51.6	-0.7
RTZ				S	S	10 43 03.8	-1.6
SNGZ	**Shannon Statio**	**6.20**	**192**	P	Pn	10 41 53.3	-0.1
SNGZ				S	S	10 43 09.7	+2.4
MTHZ	**Maungataniwha**	**6.36**	**195**	P	Pn	10 41 55.9	+0.6
MTHZ				S	S	10 43 08.9	-2.1
RAHZ	**Arahi**	**6.37**	**193**	P	Pn	10 41 55.0	-0.5
RAHZ				S	S	10 43 13.1	+1.9
MRHZ	**Matea Rd**	**6.45**	**198**	P	Pn	10 41 56.2	-0.2
MRHZ				S	S	10 43 13.1	+0.2
NMHZ	**Naumai**	**6.61**	**195**	P	Pn	10 41 57.9	-0.4
NMHZ				S	S	10 43 17.3	+0.9
ETVZ	**East Tongariro**	**6.93**	**201**	P	Pn	10 42 02.9	+0.6
OTVZ	**Oturere**	**6.97**	**202**	P	Pn	10 42 03.4	+0.6
OTVZ				S	S	10 43 25.7	+1.2
KRHZ	**Kereru**	**7.22**	**196**	P	Pn	10 42 04.1	-1.7
KRHZ				S	S	10 43 29.9	-0.1

*IDC **05** 10:41:10.5±1.0, 9°.19S×158°.43E, h0km, mb3.8/6, mbtmp3.8/6, Error ellipse: s-maj=35.2km s-min=18.6km az=2.0*

ISC 05 10:41:14.8±0.9, 9°.3S±0°.3×158°.46E±0°.09, h30km, n7, σ0s57/8, mb3.8/6, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.47**	**96**	P	**Pn**	**10 41 38.6**	**-0.7**
	379nm,0.3s,baz=246,slow=12,SNR=58						
HNR				Sn	**Sb**	**10 42 00.4**	**+0.5**
	1µm,0.3s,baz=186,slow=18,SNR=21						
WRA	**Warramunga Arr**	**25.60**	**243**	P	**P**	**10 46 42.1**	**+0.3**
	1.9nm,0.7s,baz=69,slow=9.5,SNR=4.6						
	1.9nm,0.7s						
ASAR	**Alice Springs**	**27.49**	**236**	P	**P**	**10 46 58.9**	**+0.2**
	1.3nm,0.8s,baz=70,slow=9.8,SNR=3.5						
	1.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**64.86**	**295**	P	**P**	**10 51 51.6**	**0.0**
	0.6nm,0.7s,baz=101,slow=4.7,SNR=1.8						
	0.6nm,0.7s						
SONM	**Songino Array**	**73.11**	**326**	P	**P**	**10 52 42.2**	**-0.3**
	1.5nm,0.7s,baz=133,slow=5.3,SNR=5.9						
	1.5nm,0.7s						
ILAR	**Eielson Array**	**84.26**	**21**	P	**P**	**10 53 44.0**	**+0.8**
	0.2nm,0.5s,baz=248,slow=4.8,SNR=2.0						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**87.38**	**318**	P	**P**	**10 53 58.9**	**-0.3**
	0.3nm,0.4s,baz=96,slow=6.4,SNR=3.3						
	0.3nm,0.4s						

DJA 05 10:46:24.7±0.3, 3°S±4°×12°7E±°, h10km, M3.7/11, mb4.1/5, MLv3.5/11, Buru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NLAI	**Namlea**	**0.55**	**82**	P	Pg	10 46 34.9	-0.4
NLAI				S	Sg	10 46 42.8	+0.3
SANI	**Sanana**	**1.39**	**336**	P	Pn	10 46 48.2	-1.9
AAI	**Ambon**	**1.67**	**103**	P	Pn	10 46 53.7	-0.4
LBMI	**Labuha**	**2.83**	**19**	P	Pn	10 47 11.0	+1.1
LUWI	**Luwuk**	**4.41**	**301**	P	Pn	10 47 30.5	-1.2
APSI	**Ampana**	**5.46**	**296**	P	Pn	10 47 46.7	+0.5
	0.1nm18nm,0.7s						
FAKI	**Fak Fak**	**5.69**	**86**	P	Pn	10 47 50.4	+1.0
	0.1nm13nm,0.7s						
MRSI	**Marisa**	**5.96**	**309**	P	Pn	10 47 53.2	+0.1
	0.1nm32nm,1.0s						
EDFI	**Ende, Flores**	**7.25**	**222**	P	Pn	10 48 10.0	-0.9

*DJA **05** 11:47:51.0±0.3, 0°S±3°×12°3E±°, h50km±10km, M3.9/14, mb3.8/5, mB4.0/1, MLv4.0/14, Mw(mB)3.0/1*

*IDC **05** 11:47:52.6±2.9, 0°.40S×122°.99E, h101km±31km, mb3.1/4, mbtmp3.6/6, Error

JCJ	**Chichijima**	**8.12**	**339**	P		**Pn**	**12 03 05.4 -1.7**
	30nm,0.7s,baz=253,slow=19,SNR=1.8						
JCJ				S		**Sn**	**12 04 34.0 -3.4**
	31nm,0.4s,baz=293,slow=23,SNR=6.8						
JGF	**Kuroka**	**17.54**	**338**	P		**P**	**12 05 07.7 +1.2**
JGF				IAmb		IAmb	12 05 08.8
	comp=Z,8.4nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**20.08**	**89**	T		T	12 26 20.6
	baz=275,slow=74,SNR=6.3						
H11S1	**WAKE ISLAND Hy**	**20.09**	**89**	T		T	12 26 21.6
	baz=275,slow=74,SNR=4.1						
H11S2	**WAKE ISLAND Hy**	**20.09**	**89**	T		T	12 26 21.4
	baz=275,slow=74,SNR=5.6						
H11N1	**WAKE ISLAND Hy**	**20.17**	**86**	T		T	12 26 36.6
	baz=275						
H11N2	**WAKE ISLAND Hy**	**20.17**	**86**	T		T	12 26 37.6
	baz=275						
H11N3	**WAKE ISLAND Hy**	**20.19**	**86**	T		T	12 26 37.5
	baz=275						
KSRS	**Korea Array**	**23.53**	**323**	P		**P**	**12 06 09.3 +0.4**
	comp=Z,3.7nm,0.7s,baz=148,slow=9.0,SNR=23						
	comp=Z,3.7nm,0.7s						
KS19	**Wonju Array Si**	**23.60**	**323**	P		**P**	**12 06 10.8 +1.3**
KS19				IAmb		IAmb	12 06 11.4
	comp=Z,8.7nm,1.0s						
ASAJ	**Asahikawa**	**24.63**	**355**	P		**P**	**12 06 20.5 +1.6**
	comp=Z,1.6nm,0.4s,baz=220,slow=7.9,SNR=1.9						
	comp=Z,1.6nm,0.4s						
MTN	**Manton Dam**	**35.14**	**205**	P		**P**	**12 07 50.2 -1.6**
KNRA	**Kununurra**	**38.66**	**206**	P		**P**	**12 08 21.8 +0.3**
KNRA				IAmb		IAmb	12 08 45.8
	comp=Z,9.9nm,1.2s						
WB0	**Warramunga Arr**	**40.54**	**196**	P		**P**	**12 08 36.0 -1.1**
WB0				IAmb		IAmb	12 08 37.2
	comp=Z,8.1nm,1.2s						
WR0	**Warramunga Arr**	**40.68**	**196**	P		**P**	**12 08 37.2 -1.1**
WR0				IAmb		IAmb	12 08 44.1
	comp=Z,10nm,1.5s						
WRAB	**Tennant Creek**	**40.71**	**196**	P		**P**	**12 08 37.8 -0.7**
WRAB				IAmb		IAmb	12 08 59.8
	comp=Z,8.6nm,1.5s						
WB2	**Warramunga Arr**	**40.72**	**196**	P		**P**	**12 08 37.9 -0.6**
WRA	**Warramunga Arr**	**40.72**	**196**	P		**P**	**12 08 37.4 -1.2**
	comp=Z,0.7nm,0.3s,baz=17,slow=8.2,SNR=30						
	comp=Z,0.7nm,0.3s						
WRA	**Warramunga Arr**	**40.72**	**196**	P		**P**	**12 08 36.9 -1.7**
SONM	**Songino Array**	**42.37**	**321**	P		**P**	**12 08 52.3 +0.4**
	comp=Z,1.1nm,0.5s,baz=124,slow=7.1,SNR=6.4						
	comp=Z,1.1nm,0.5s						
SONM	**Songino Array**	**42.37**	**321**	P		**P**	**12 08 52.0 0.0**
CMAR	**Chiang Mai Arr**	**43.91**	**277**	P		**P**	**12 09 06.7 +2.1**
	comp=Z,0.4nm,0.3s,baz=85,slow=5.0,SNR=4.4						
	comp=Z,0.4nm,0.3s						
ASAR	**Alice Springs**	**44.39**	**195**	P		**P**	**12 09 07.3 -0.9**
	comp=Z,0.3nm,0.4s,baz=15,slow=7.7,SNR=6.8						
	comp=Z,0.3nm,0.4s						
ASAR	**Alice Springs**	**44.39**	**195**	P		**P**	**12 09 06.5 -1.7**
GSI	**Gunungsitoli**	**50.24**	**255**	P		**P**	**12 09 54.7 +1.0**
ZALV	**Zalesovo Beam**	**57.24**	**322**	P		**P**	**12 10 43.6 -0.3**
	comp=Z,0.7nm,0.4s,baz=107,slow=7.0,SNR=4.5						
	comp=Z,0.7nm,0.4s						
MKAR	**Makanchi Array**	**57.74**	**314**	P		**P**	**12 10 48.3 +0.6**
	comp=Z,1.1nm,0.6s,baz=97,slow=8.9,SNR=8.8						
MKAR				LR		LR	12 36 49.0
	comp=Z,16nm,20.1s,baz=291,slow=37						
	comp=Z,1.1nm,0.6s						
MKAR	**Makanchi Array**	**57.74**	**314**	P		**P**	**12 10 47.7 +0.1**
KDAK	**Kodiak Island**	**58.78**	**34**	LR		LR	12 37 00.4
	comp=Z,18nm,18.0s,baz=114,slow=37						
KURK	**Kurchatov**	**60.52**	**318**	P		**P**	**12 11 07.0 +0.4**
KURK				IAmb		IAmb	12 11 07.1
	comp=Z,1.6nm,0.5s						
NRIK	**Noril'sk**	**60.76**	**340**	P		**P**	**12 11 08.4 +0.4**
	comp=Z,2.2nm,0.4s,baz=147,slow=8.3,SNR=4.1						
	comp=Z,2.2nm,0.4s						
NRIK	**Noril'sk**	**60.76**	**340**	P		**P**	**12 11 08.8 +0.8**
H24K	**Noodor Dome**	**62.82**	**25**	P		**P**	**12 11 21.9 +0.1**
ILAR	**Eielson Array**	**62.99**	**26**	P		**P**	**12 11 21.8 -1.2**
	comp=Z,0.2nm,0.4s,baz=254,slow=4.7,SNR=4.8						
	comp=Z,0.2nm,0.4s						
BMAR	**Burnt Mountain**	**64.44**	**24**	P		**P**	**12 11 33.9 +1.4**
BCAR	**Beaver Creek A**	**64.95**	**29**	P		**P**	**12 11 36.0 +0.2**
BRVK	**Borovoye**	**65.77**	**320**	P		**P**	**12 11 41.5 +0.3**
BRVK				IAmb		IAmb	12 11 42.2
	comp=Z,2.2nm,0.8s						
KK31	**Karatay Array**	**66.08**	**309**	P		**P**	**12 11 43.2 -0.2**
KK31				IAmb		IAmb	12 11 44.4
	comp=Z,1.6nm,0.6s						
KKAR	**Karatay Array**	**66.08**	**309**	P		**P**	**12 11 43.6 +0.2**
ABKAR	**Akbulak array**	**72.60**	**317**	P		**P**	**12 12 23.2 -0.2**
ABKAR	**Akbulak array**	**72.60**	**317**	P		**P**	**12 12 23.1 -0.2**
ABKAR				IAmb		IAmb	12 12 23.7
	comp=Z,2.2nm,0.6s						
YKA	**Yellowknife Ar**	**77.35**	**28**	P		**P**	**12 12 50.4 +0.1**
	comp=Z,1.1nm,0.6s,baz=293,slow=5.3,SNR=12						
	comp=Z,1.1nm,0.6s						
ARCES	**ARCESS Array B**	**81.64**	**342**	P		**P**	**12 13 13.4 0.0**
	comp=Z,2.8nm,0.8s,baz=76,slow=6.4,SNR=8.4						
	comp=Z,2.8nm,0.8s						
ARCES	**ARCESS Array B**	**81.64**	**342**	P		**P**	**12 13 13.7 +0.2**
NVAR	**Mina Array Bea**	**82.79**	**52**	P		**P**	**12 13 21.0 +0.7**
	comp=Z,1.4nm,0.7s,baz=265,slow=5.3,SNR=11						
	comp=Z,1.4nm,0.7s						
FINES	**FINESS Array B**	**86.05**	**335**	P		**P**	**12 13 34.5 -1.4**
	comp=Z,0.7nm,0.3s,baz=69,slow=4.2,SNR=14						
	comp=Z,0.7nm,0.3s						
FINES	**FINESS Array B**	**86.05**	**335**	P		**P**	**12 13 34.1 -1.8**

*IDC **05** 12:11:53.2±0.7, 55°.39S×27°.01W, h0km, mb4.5/6, mbtmp4.5/7, ML4.1/1, MS3.5/11, Error ellipse: s-maj=29.1km s-min=18.8km az=77.0*
*NEIC **05** 12:11:59.2±2.0, 55°.4S±0°.1×27°.34W±0°.06, h36km±7km, mb4.6/21, Error ellipse: s-maj=16.0km s-min=3.6km az=169.0*

ISC 05 12:11:56.9±0.6, 55°.42S±0°.09×27°.20W±0°.10, h25km, n47, σ0°.83/40, mb4.6/13, MS3.5/10, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.48**	**278**	Pn	**Pn**	**12 13 16.6**	**-0.3**
ORCD	**Orcadas**	**10.69**	**233**	Pn	**Pn**	**12 14 28.7**	**+0.5**
VNA1	**Neumayer--Stat**	**17.39**	**159**	P	**P**	**12 15 59.0**	**+0.4**
VNA3	**Neumayer Olymp**	**17.59**	**161**	P	**P**	**12 16 01.5**	**+0.6**
VNA2	**Neumayer--Watz**	**17.79**	**159**	P	**P**	**12 16 04.1**	**+1.1**
	baz=314,slow=14						
SNAA	**Sanae**	**19.33**	**157**	P	**P**	**12 16 20.4**	**+0.4**
SNAA	**Sanae**	**19.33**	**157**	P	**P**	**12 16 19.2**	**-0.7**
	0.5nm,0.3s,baz=290,slow=10,SNR=19						
SNAA				LR	LR	12 22 26.8	
	comp=Z,62nm,20.1s,baz=23,slow=33						
	4.6nm,0.6s						
SNAA	**Sanae**	**19.33**	**157**	P	**P**	**12 16 19.0**	**-1.0**
PMSA	**Palmer Station**	**20.32**	**228**	P	**P**	**12 16 31.4**	**+0.8**
	19nm,0.9s,baz=90,slow=11,SNR=2.3						
PMSA				LR	LR	12 22 45.5	
	comp=Z,69nm,19.7s,baz=76,slow=32						
	19nm,0.9s						
TROLL	**Troll, Antarti**	**20.82**	**154**	P	**P**	**12 16 35.9**	**-0.4**
BELA	**Belgrano 2**	**22.71**	**184**	P	**P**	**12 16 54.3**	**-2.1**
BELA				IAmb	IAmb	12 16 57.9	
	comp=Z,24nm,1.1s						
USHA	**Ushuaia**	**23.34**	**254**	LR	LR	12 24 58.6	
	comp=Z,75nm,19.9s,baz=88,slow=34						
PLCA	**Paso Flores**	**31.89**	**279**	PcP	**PcP**	**12 21 10.3**	**+0.2**
	comp=Z,1.4nm,1.0s,baz=117,slow=2.3,SNR=4.5						
QSPA	**South Pole Qui**	**34.84**	**180**	P	**P**	**12 18 44.9**	**-0.6**
	comp=Z,4.0nm,0.6s,baz=218,slow=1.3,SNR=35						
QSPA				PcP	**PcP**	**12 21 19.6**	**+1.6**
	comp=Z,1.0nm,0.7s,baz=243,slow=2.3,SNR=1.5						
	comp=Z,4.0nm,0.6s						
QSPA	**South Pole Qui**	**34.84**	**180**	P	**P**	**12 18 46.1**	**+0.5**
CPUP	**Villa Florida**	**36.39**	**311**	LR	LR	12 33 38.6	
	comp=Z,56nm,18.2s,baz=187,slow=36						
GO05	**Huala**	**36.70**	**285**	P	**P**	**12 19 00.3**	**-1.4**
GO05				IAmb	IAmb	12 19 03.7	
	comp=Z,8.3nm,0.9s						
MT09	**Talagante**	**37.11**	**287**	P	**P**	**12 19 04.4**	**-0.9**
MT09				IAmb	IAmb	12 19 05.3	
	comp=Z,6.5nm,0.7s						
MT02	**Curacav**	**37.58**	**288**	P	**P**	**12 19 09.0**	**-0.1**
MT02				IAmb	IAmb	12 19 09.9	
	comp=Z,7.9nm,0.7s						
CO01	**Juntas del Tor**	**39.57**	**292**	P	**P**	**12 19 27.8**	**+1.7**
CO01				IAmb	IAmb	12 19 30.7	
	comp=Z,12nm,1.2s						
SUR	**Sutherland**	**40.49**	**76**	LR	LR	12 33 21.1	
	comp=Z,68nm,18.2s,baz=244,slow=32						
MAW	**Mawson**	**40.67**	**144**	P	**P**	**12 19 34.8**	**+0.3**
	comp=Z,4.4nm,0.6s,baz=237,slow=8.0,SNR=13						
	comp=Z,4.4nm,0.6s						
MAW	**Mawson**	**40.67**	**144**	P	**P**	**12 19 35.1**	**+0.6**
AC04	**Llanos de Chal**	**41.49**	**293**	P	**P**	**12 19 42.0**	**+0.2**
GO02	**Mina Guanaco**	**43.20**	**297**	P	**P**	**12 19 55.8**	**-0.2**
LVC	**Limon Verde**	**44.98**	**300**	P	**P**	**12 20 11.3**	**+1.0**
BOSA	**Boshof**	**45.83**	**76**	LR	LR	12 36 07.8	
	comp=Z,79nm,19.8s,baz=184,slow=32						
BOSA	**Boshof**	**45.83**	**76**	P	**P**	**12 20 17.5**	**+0.7**
BOSA				IAmb	IAmb	12 20 38.7	
	comp=Z,11nm,1.4s						
PATCX	**Punta Patache**	**47.10**	**300**	P	**P**	**12 20 26.8**	**0.0**
PB08	**IPOC Station P**	**47.18**	**301**	P	**P**	**12 20 28.3**	**+0.5**
PB08				IAmb	IAmb	12 20 39.1	
	comp=Z,14nm,1.4s						
VNDA	**Vanda**	**47.21**	**183**	P	**P**	**12 20 26.9**	**0.0**
	comp=Z,7.6nm,0.8s,baz=193,slow=6.9,SNR=28						
	comp=Z,7.6nm,0.8s						
VNDA	**Vanda**	**47.21**	**183**	P	**P**	**12 20 27.1**	**+0.2**
TSUM	**Tsumeb**	**49.38**	**61**	LR	LR	12 38 57.3	
	comp=Z,41nm,18.1s,baz=330,slow=33						
LPAZ	**La Paz**	**50.01**	**305**	P	**P**	**12 20 50.5**	**+0.7**
	comp=Z,4.4nm,0.5s,baz=149,slow=6.0,SNR=17						
LPAZ				LR	LR	12 44 48.6	
	comp=Z,22nm,18.6s,baz=67,slow=39						
	comp=Z,4.4nm,0.5s						
LPAZ	**La Paz**	**50.01**	**305**	P	**P**	**12 20 50.6**	**+0.7**
LPAZ				IAmb	IAmb	12 20 51.2	
	comp=Z,5.2nm,0.7s						
TOA0	**Torodi Ar. Sit**	**72.51**	**30**	P	**P**	**12 23 21.2**	**-0.1**
TOA0				IAmb	IAmb	12 23 24.0	
	comp=Z,6.0nm,1.1s						
TORD	**Torodi Ar. Bea**	**72.51**	**30**	P	**P**	**12 23 20.8**	**-0.5**
	comp=Z,2.9nm,0.8s,baz=201,slow=6.5,SNR=13						
	comp=Z,2.9nm,0.8s						
TORD	**Torodi Ar. Bea**	**72.51**	**30**	P	**P**	**12 23 21.1**	**-0.3**
SDV	**Santo Domingo**	**73.55**	**315**	LR	LR	12 56 30.0	
	comp=Z,89nm,20.6s,baz=106,slow=36						
KMBO	**Kilima Mbogo**	**74.82**	**69**	LR	LR	12 54 18.2	
	comp=Z,31nm,18.7s,baz=87,slow=34						
EIL	**Elat**	**99.95**	**51**	LR	LR	13 07 50.0	
	comp=Z,22nm,18.2s,baz=282,slow=34						
CMAR	**Chiang Mai Arr**	**125.29**	**110**	PKP	**PKiKP**	**12 30 55.5**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=232,slow=4.4,SNR=4.7						
YKA	**Yellowknife Ar**	**135.69**	**318**	PKP	**PKPdf**	**12 31 13.6**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=120,slow=2.7,SNR=6.8						
ILAR	**Eielson Array**	**149.68**	**312**	PKPbc	**PKPbc**	**12 31 42.8**	**0.0**
	comp=Z,6.8nm,1.0s,baz=131,slow=2.1,SNR=32						
SONM	**Songino Array**	**150.69**	**85**	PKPbc	**PKPbc**	**12 31 46.2**	**+0.2**
	comp=Z,3.3nm,0.9s,baz=230,slow=2.3,SNR=11						
SONM	**Songino Array**	**150.69**	**85**		**PKiKP**	**12 31 46.3**	**-0.3**
KSRS	**Korea Array**	**155.39**	**127**	PKPab	**PKPab**	**12 32 10.9**	**-2.0**
	comp=Z,1.5nm,1.0s,baz=212,slow=3.5,SNR=3.1						

*AUST **05** 12:17:30.8±1.1, 32°.35S×122°.37E, h0km, Error ellipse: s-maj=25.5km s-min=9.2km az=169.0*
*NOU **05** 12:17:33.9, 32°.40S×122°.24E, h0km, ML4.2/7, Western Australia*

ISC 05 12:17:32.2±0.9, 32°.4S±0°.1×122°.48E±0°.05, h19km, n17, σ2§10/22, Western Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLBR	**Kellerberrin**	**4.09**	**280**	P	**Pn**	**12 18 34.4**	**+0.8**
	baz=4.0						
KLBR				S	**Sn**	**12 19 20.1**	**-0.9**
	baz=4.0						
KLBR	**Kellerberrin**	**4.09**	**280**	P	**Pn**	**12 18 35.3**	**+1.7**
NWAO	**Narrogin (SRO)**	**4.46**	**261**	P	**Pn**	**12 18 40.4**	**+1.7**
FORT	**Forrest**	**5.02**	**73**	P	**Pn**	**12 18 50.5**	**+4.0**
	baz=5.1						
FORT				S	**Sn**	**12 19 47.5**	**+3.5**
	baz=5.1						
FORT	**Forrest**	**5.02**	**73**	P	Pb	12 18 52.8	-6.7
	40nm,2.1s						
RKGY	**Rocky Gully**	**5.11**	**243**	P	**Pn**	**12 18 48.5**	**+0.8**
	baz=5.0						
RKGY				S	**Sn**	**12 19 46.0**	**-0.1**
	baz=5.0						
RKGY	**Rocky Gully**	**5.11**	**243**	P	**Pn**	**12 18 48.4**	**+0.7**
BLDU	**Ballidu**	**5.23**	**288**	P	**Pn**	**12 18 49.0**	**-0.4**
	baz=5.1						
BLDU	**Ballidu**	**5.23**	**288**	P	**Pn**	**12 18 50.0**	**+0.7**
MUN	**Mundaring**	**5.33**	**273**	P	**Pn**	**12 18 50.6**	**-0.1**
	baz=5.2						
MUN	**Mundaring**	**5.33**	**273**	P	**Pn**	**12 18 51.2**	**+0.5**
MORW	**Mowa**	**6.44**	**299**	P	**Pn**	**12 19 06.8**	**+0.7**
	baz=6.3						
MORW	**Morawa**	**6.44**	**299**	P	**Pn**	**12 19 07.5**	**+1.4**
MULG	**Mulgathing**	**10.12**	**81**	P	**Pn**	**12 19 58.6**	**+2.1**
	baz=10						
MULG				S	**Sn**	**12 21 49.4**	**-0.1**
	baz=10						
OOD	**Oodnadatta**	**12.31**	**72**	P	**Pn**	**12 20 27.6**	**+1.1**
	baz=12						
OOD				S	**Sn**	**12 22 40.6**	**-2.7**
	baz=12						
LCRK	**Leigh Creek**	**13.58**	**86**	P	**Pn**	**12 20 43.2**	**-0.6**
	baz=14						
LCRK				S	**Sn**	**12 23 08.8**	**-5.4**
	baz=14						
WB2	**Warramunga Arr**	**16.32**	**44**	P	**Pn**	**12 21 19.0**	**-1.3**
	baz=16						

*IDC **05** 12:45:42.5±1.6, 14°.02N×59°.39W, h0km, mb3.5/4, mbtmp3.8/6, ML4.2/2, Error ellipse: s-maj=49.3km s-min=22.0km az=53.0*
*TRN **05** 12:45:47.6, 14°.02N×59°.70W, h26km, MD3.9*

ISC 05 12:45:44.7±3.0, 14°.03N±0°.03×59°.60W±0°.05, h10km±20km, n57, σ1§42/77, mb3.7/4, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBGH	**Gun Hill**	**0.88**	**177**	*eP*	**Pn**	**12 46 05.1**	**+2.0**
BBGH	**Gun Hill**	**0.88**	**177**	*e*	Pn	12 46 11.6	+8.4
BCHC	**Barbados, Cave**	**0.89**	**182**	*eP*	**Pn**	**12 46 05.6**	**+2.3**
BCHC	**Barbados, Cave**	**0.89**	**182**	*e*	Pn	12 46 09.6	+6.4
BBSP	**Saint Philip**	**0.93**	**172**	*eP*	**Pn**	**12 46 05.9**	**+2.1**
BBSP	**Saint Philip**	**0.93**	**172**	*e*	Pn	12 46 11.0	+7.2
H05S1	**Guadeloupe/Mar**	**1.26**	**288**	Pn	**Pn**	**12 46 08.9**	**+0.5**
H05S1				Sn	**Sb**	**12 46 25.1**	**+0.2**
SLAC	**Saint Lucia, A**	**1.27**	**264**	*eP*	**Pn**	**12 46 08.8**	**+0.3**
SLAC				*eS*	**Sb**	**12 46 24.8**	**-0.3**
MPOM	**Morne Pois Mar**	**1.29**	**289**	*eP*	**Pn**	**12 46 09.5**	**+0.7**
MPOM				*eS*	**Sb**	**12 46 26.6**	**+0.9**
SLBI	**Saint Lucia, B**	**1.33**	**270**	*eP*	**Pn**	**12 46 09.7**	**+0.3**
SLBI				*eS*	**Sn**	**12 46 26.8**	**-0.4**
MCLT	**Moule a Chique**	**1.34**	**257**	*eP*	**Pn**	**12 46 10.1**	**+0.6**
MCLT				*eS*	**Sn**	**12 46 26.9**	**-0.5**
SLCP	**Castries, St.**	**1.35**	**269**	*eP*	**Pn**	**12 46 10.2**	**+0.6**
SLCP				*eS*	**Sn**	**12 46 27.3**	**-0.3**
MVM	**Montagne Vaucl**	**1.36**	**293**	*eP*	**Pn**	**12 46 10.5**	**+0.7**
SLB	**Belfond**	**1.42**	**262**	*eP*	**Pb**	**12 46 12.2**	**+0.9**
LPMF	**Morne Lapointe**	**1.43**	**292**	*eP*	**Pn**	**12 46 11.4**	**+0.7**
ILAM	**Ilet Lapin Mar**	**1.44**	**301**	*eP*	**Pn**	**12 46 12.0**	**+1.2**
ILAM				*eS*	**Sn**	**12 46 30.0**	**+0.2**
ZAM	**Aeronautique**	**1.49**	**291**	*eP*	**Pn**	**12 46 12.3**	**+0.8**
TRMF	**Trois Ilets**	**1.50**	**290**	*eP*	**Pn**	**12 46 12.3**	**+0.7**
BIM	**Bigot**	**1.51**	**289**	*eP*	**Pn**	**12 46 12.7**	**+0.9**
BIM				*eS*	**Sn**	**12 46 32.0**	**+0.5**
FDF	**Fort de France**	**1.66**	**295**	*eP*	**Pn**	**12 46 14.7**	**+0.8**
FDF				*eS*	**Sn**	**12 46 34.0**	**-1.2**
BAMF	**Morne Balai**	**1.69**	**298**	*eP*	**Pn**	**12 46 16.0**	**+1.6**
GBMF	**Grand Be**	**1.70**	**297**	*eP*	**Pn**	**12 46 16.1**	**+1.6**
CXM	**Morne La Croix**	**1.71**	**297**	*eP*	**Pn**	**12 46 15.4**	**+0.8**
PML	**Morne Lenard**	**1.71**	**296**	*eP*	**Pn**	**12 46 16.2**	**+1.6**
SVN	**Savane Anatole**	**1.72**	**298**	*eP*	**Pn**	**12 46 16.2**	**+1.4**
SVV	**Soufriere Volc**	**1.72**	**246**	*eP*	**Pb**	**12 46 16.6**	**+0.1**
SVV				*eS*	**Sn**	**12 46 36.9**	**+0.1**
PCM	**Pelee Case Pet**	**1.75**	**297**	*eP*	**Pn**	**12 46 16.6**	**+1.5**
SVOC	**Richmond Hill,**	**1.80**	**241**	*eP*	**Pb**	**12 46 17.6**	**-0.2**
SVOC				*eS*	**Sn**	**12 46 37.7**	**-1.0**
DLPL	**La Plaine**	**2.06**	**309**	*eP*	**Pb**	**12 46 21.8**	**-0.3**
DLPL				*eS*	**Sn**	**12 46 45.7**	**+0.6**
MDN	**Morne-Daniel**	**2.16**	**307**	*eP*	**Pn**	**12 46 23.0**	**+2.2**
DSLB	**Salisbury**	**2.25**	**309**	*eP*	**Pn**	**12 46 24.1**	**+2.1**
DSLB				*eS*	**Sn**	**12 46 49.6**	**-0.3**
GCMP	**Grenada, Carri**	**2.35**	**229**	*eP*	**Pn**	**12 46 24.1**	**+0.8**
GCMP				*eS*	**Sn**	**12 46 52.4**	**+0.2**
MDVC	**Dominica, Viel**	**2.35**	**312**	*eP*	**Pn**	**12 46 25.8**	**+2.4**
MDCT	**Cottage Hill,**	**2.40**	**311**	*eP*	**Pn**	**12 46 25.8**	**+1.8**
MDCT				*eS*	**Sn**	**12 46 54.1**	**+0.7**
MAGL	**Barre de l'ile**	**2.51**	**320**	*eP*	**Pn**	**12 46 27.1**	**+1.5**
MAGL				*eS*	**Sn**	**12 46 55.6**	**-0.6**
H05N1	**Guadeloupe/Mar**	**2.67**	**328**	Pn	**Pn**	**12 46 29.0**	**+1.1**
H05N1				Sn	**Sn**	**12 46 59.4**	**-1.0**
TDBA	**Terre de Bas,**	**2.67**	**313**	*eP*	**Pn**	**12 46 29.5**	**+1.7**
TDBA				*eS*	**Sn**	**12 47 00.1**	**-0.2**
TBG	**Guadaloupe-3**	**2.68**	**313**	*eP*	**Pn**	**12 46 29.4**	**+1.4**
GRGR	**Grenville**	**2.75**	**227**	*eP*	**Pn**	**12 46 31.4**	**+2.5**
GRGR				*eS*	**Sn**	**12 47 01.5**	**-0.7**
CBE	**Ff, Capester**	**2.81**	**317**	*eP*	**Pn**	**12 46 31.4**	**+1.7**
CBE				*eS*	**Sn**	**12 47 04.3**	**+0.7**
TOSP	**Speyside**	**2.86**	**199**	*eP*	**Pn**	**12 46 32.7**	**+2.3**
GRFF	**Grenada Fort F**	**2.87**	**227**	*eP*	**Pn**	**12 46 32.4**	**+1.9**
GRFF				*eS*	**Sn**	**12 47 04.0**	**-1.1**
ABD	**La Joyeuse, An**	**3.04**	**323**	*eP*	**Pn**	**12 46 33.9**	**+1.0**
ABD				*eS*	**Sn**	**12 47 10.4**	**+1.1**
ANBD	**Bethesda, Anti**	**3.66**	**325**	*eP*	**Pn**	**12 46 44.2**	**+2.8**
ANBD				*eS*	**Sn**	**12 47 23.7**	**-0.9**
BPA	**Boggy Peak**	**3.71**	**324**	*eP*	**Pn**	**12 46 43.4**	**+1.3**
BPA				*eS*	**Sn**	**12 47 25.0**	**-0.9**
TRN	**Trinidad (W)**	**3.79**	**208**	*eP*	**Pn**	**12 46 45.8**	**+2.6**
TRN				*eS*	**Sn**	**12 47 27.9**	**0.0**
ANWB	**Willy Bob**	**4.19**	**330**	*eP*	**Pn**	**12 46 50.2**	**+1.6**
ANWB	**Willy Bob**	**4.19**	**330**	*eS*	**Sn**	**12 47 37.6**	**0.0**
SJG	**San Juan**	**7.49**	**304**	Pn	**Pn**	**12 47 36.7**	**+2.6**
	4.5nm,0.3s,baz=292,slow=10,SNR=11						
SJG				Sn	**Sn**	**12 48 56.3**	**-2.9**
	0.5nm,0.3s,baz=314,slow=20,SNR=0.9						
	8.1nm,0.3s						
MDP	**Montagnes des**	**11.21**	**142**	Pn	**Pn**	**12 48 20.6**	**-4.5**
	1.2nm,0.3s,baz=340,slow=19,SNR=20						
MDP				Sn	Sn	12 50 14.3	-16
	2.3nm,0.3s,baz=59,slow=21,SNR=12						
	12nm,1.1s						
TXAR	**Lajitas Array**	**43.42**	**298**	P	**P**	**12 53 48.8**	**+0.8**
	0.2nm,0.5s,baz=116,slow=10,SNR=6.0						
	0.2nm,0.5s						
H10N3	**ASCENSION HYDR**	**49.75**	**113**	T	T	13 48 04.9	
	baz=295,slow=75,SNR=18						
H10N2	**ASCENSION HYDR**	**49.75**	**113**	T	T	13 48 06.2	
	baz=295,slow=75,SNR=12						
H10N1	**ASCENSION HYDR**	**49.77**	**113**	T	T	13 48 03.7	
	baz=295,slow=75,SNR=19						
PDAR	**Pinedale Array**	**51.48**	**314**	P	**P**	**12 54 50.8**	**+0.1**
	0.9nm,0.8s,baz=115,slow=8.1,SNR=5.3						
	0.9nm,0.8s						
PLCA	**Paso Flores**	**55.42**	**190**	P	**P**	**12 55 19.9**	**+0.6**
	1.0nm,1.1s,baz=0.0,slow=8.1,SNR=3.0						
	1.0nm,1.1s						
YKA	**Yellowknife Ar**	**61.85**	**334**	P	**P**	**12 56 03.9**	**+0.1**
	0.4nm,0.7s,baz=105,slow=7.3,SNR=3.6						
	0.4nm,0.7s						

IDC 05 12:46:30.7±2.3, 1°.30N×126°.02E, h0km, mb3.1/3, mbtmp3.2/3, Error ellipse: s-maj=211.2km s-min=28.6km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.64**	**159**	P	P	12 51 33.6	+0.1
	0.3nm,0.4s,baz=338,slow=11,SNR=9.2						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**25.98**	**163**	P	P	12 52 05.3	0.0
	0.3nm,0.9s,baz=345,slow=11,SNR=1.4						
	0.3nm,0.9s						
MKAR	**Makanchi Array**	**59.15**	**326**	P	P	12 56 33.2	-0.1
	0.1nm,0.3s,baz=124,slow=7.5,SNR=2.2						
	0.1nm,0.3s						

*NEIC **05** 13:24

KPKS	**Kokpek**	**5.75**	**2**	Pg	Pb	13 55 13.9	+4.4
	2.0nm,0.2s							
KPKS				Lg	Lg	13 56 33.4		
	16nm,0.5s							
KURS	**Kuram**	**5.78**	**358**	Pg	Pb	13 55 12.2	+2.3
	1.3nm,0.3s							
KURS				Lg	Lg	13 56 30.0		
	3.9nm,0.7s							
KTMS	**Ketmen**	**5.91**	**14**	Pg	Pb	13 55 14.4	+2.1
	1.0nm,0.4s							
KTMS				Lg	Lg	13 56 34.2		
	2.5nm,0.5s							
CHKK	**Chushkaly**	**6.24**	**350**	Pg	Pb	13 55 21.6	+3.9
	0.8nm,0.2s							
CHKK				Lg	Lg	13 56 46.4		
	4.6nm,0.6s							
ARXS	**Arharly**	**6.51**	**356**	Pg	Pb	13 55 27.1	+4.7
	1.1nm,0.4s							
ARXS				Lg	Lg	13 56 55.3		
	3.0nm,0.3s							
DJR	**Jarkent**	**6.69**	**8**	Pg	Pg	13 55 31.2	-5.3
	1.5nm,0.3s							
DJR				Lg	Lg	13 57 03.1		
	3.0nm,0.3s							

*ATH **05** 14:00:32.0, 34°.99N×26°.60E, h17km±2km, ML2.6/3, Error ellipse: s-maj=6.9km s-min=1.4km az=347.0*
*THE **05** 14:00:33.8, 35°.21N×26°.52E, h12km±2km, ML2.7/2, Error ellipse: s-maj=6.7km s-min=0.9km az=158.0*
*DDA **05** 14:00:36.0±0.0, 35°.51N×26°.65E, h3km, ML2.0*

ISC 05 14:00:29.8±2.1, 35°.2N±0°.1×26°.65E±0°.07, h3km±12km, n12, σ0§91/23, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.36**	**262**	P	**Pb**	**14 00 39.0**	**+0.1**
ZKR				S	**Sb**	**14 00 44.2**	**-0.7**
ZKR				AML	AML	14 00 44.8	
	comp=N,3208μm,0.3s						
ZKR				AML	AML	14 00 44.9	
	comp=E,7396μm,0.4s						
ZKR	**Zakros**	**0.36**	**262**	P	**Pb**	**14 00 39.0**	**+0.1**
ZKR				S	**Sb**	**14 00 44.3**	**-0.6**
	comp=E,3μm,0.4s						
KARP	**Karpathos**	**0.57**	**48**	P	**Pn**	**14 00 45.3**	**+0.4**
KARP				S	**Sn**	**14 00 56.3**	**+1.5**
KARP				AML	AML	14 00 56.7	
	comp=E,1369μm,0.3s						
KARP				AML	AML	14 00 56.8	
	comp=N,1449μm,0.4s						
KARP	**Karpathos**	**0.57**	**48**	P	**Pn**	**14 00 45.3**	**+0.4**
KARP				S	**Sn**	**14 00 55.5**	**+0.7**
	comp=N,705nm,0.4s						
NPS	**Neapolis**	**0.85**	**277**	P	**Pn**	**14 00 48.2**	**-0.6**
NPS				S	**Sb**	**14 00 59.0**	**-0.2**
NPS	**Neapolis**	**0.85**	**277**	P	**Pb**	**14 00 48.0**	**+0.7**
NPS				S	**Sb**	**14 00 59.1**	**-0.1**
IDI	**Anoyia**	**1.45**	**275**	P	**Pg**	**14 00 58.3**	**+0.8**
IDI				S	**Sg**	**14 01 16.2**	**0.0**
IDI				AML	AML	14 01 20.4	
	comp=E,92μm,0.4s						
IDI				AML	AML	14 01 21.3	
	comp=N,141μm,0.5s						
IDI	**Anoyia**	**1.45**	**275**	P	**Pg**	**14 00 57.5**	**0.0**
IDI				S	**Sb**	**14 01 14.2**	**-2.1**
DAT	**Datca**	**1.73**	**26**	P	**Pg**	**14 01 03.3**	**+0.3**
DAT				S	**Sn**	**14 01 23.8**	**+0.1**
DAT				*i* AML	AML	14 01 31.0	
	comp=N,26nm,1.3s						
DAT				*i* AML	AML	14 01 36.0	
	comp=N,20nm,0.6s						
BDRM	**Kayabasi**	**2.00**	**19**	P	**Pb**	**14 01 07.2**	**+0.3**
BDRM				*i* AML	AML	14 01 38.0	
	comp=N,13nm,1.1s						
TURN	**Turunc**	**2.06**	**38**	P	**Pg**	**14 01 09.0**	**-0.3**
TURN				S	**Sg**	**14 01 36.7**	**+0.7**
TURN				*i* AML	AML	14 01 43.0	
	comp=N,16nm,0.9s						
TURN				*i* AML	AML	14 01 50.0	
	comp=N,17nm,0.6s						
TAVA	**DENIZLI_Tavas**	**2.93**	**38**	P	**Pb**	**14 01 20.6**	**-2.3**
TAVA				S	**Sb**	**14 01 59.4**	**+0.2**

IDC 05 14:12:04.2±3.4, 6°.04S×152°.48E, h0km, mb3.0/2, mbtmp3.2/3, ML1.4/1, Error ellipse: s-maj=88.6km s-min=25.2km az=105.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.78**	**345**	Pn	Pb	14 12 37.4	-0.4
	103nm,0.3s,baz=244,slow=3.3,SNR=204						
KRVT				Sn	Sn	14 12 56.8	-2.9
	47nm,0.3s,baz=248,slow=13,SNR=5.9						
PMG	**Port Moresby**	**6.24**	**237**	Pn	Pn	14 13 37.5	-0.1
	0.5nm,0.3s,baz=34,slow=11,SNR=1.9						
PMG				Sn	Sn	14 14 42.7	-7.0
	1.4nm,0.3s,baz=147,slow=22,SNR=2.0						
	3.9nm,0.7s						
WRA	**Warramunga Arr**	**22.40**	**230**	P	P	14 17 03.5	-1.0
	0.3nm,0.5s,baz=53,slow=9.9,SNR=8.6						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**25.03**	**224**	P	P	14 17 31.4	+1.2
	0.3nm,0.6s,baz=54,slow=9.3,SNR=10						
	0.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**150.36**	**286**	PKPbc	PKPbc	14 31 57.0	-1.8
	0.2nm,0.3s,baz=76,slow=2.9,SNR=3.1						

IDC 05 14:25:08.6±8.5, 19°.65S×111°.65W, h0km, mb3.8/3, mbtmp3.8/3, MS3.3/8, Error ellipse: s-maj=182.0km s-min=143.2km az=47.0, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DBIC	**Dimbokro**	**27.00**	**15**	LR	LR	14 39 05.8	
	comp=Z,49nm,19.5s,baz=170,slow=31						
TSUM	**Tsumeb**	**27.56**	**94**	LR	LR	14 39 47.4	
	comp=Z,66nm,19.5s,baz=324,slow=32						
SUR	**Sutherland**	**31.68**	**120**	LR	LR	14 41 06.2	
	comp=Z,32nm,19.4s,baz=286,slow=30						
BOSA	**Boshof**	**34.73**	**112**	LR	LR	14 43 27.1	
	comp=Z,34nm,21.2s,baz=352,slow=32						
LBTB	**Lobatse**	**34.79**	**106**	LR	LR	14 43 52.3	
	comp=Z,68nm,19.2s,baz=255,slow=32						
TORD	**Torodi Ar. Bea**	**35.14**	**23**	P	P	14 32 04.0	-0.1
	2.1nm,1.0s,baz=200,slow=9.4,SNR=6.3						
TORD				LR	LR	14 44 18.3	
	comp=Z,54nm,19.9s,baz=233,slow=33						
	2.1nm,1.0s						
CPUP	**Villa Florida**	**42.40**	**252**	LR	LR	14 47 43.2	
	comp=Z,40nm,20.7s,baz=48,slow=32						
ESDC	**Sonseca Array**	**59.45**	**7**	P	P	14 35 13.2	-0.1
	0.7nm,1.0s,baz=190,slow=6.5,SNR=5.3						
	0.7nm,1.0s						
ATD	**Arta Tunnel**	**61.96**	**65**	LR	LR	14 59 39.1	
	comp=Z,24nm,21.6s,baz=358,slow=33						
BRTR	**Keskin Array B**	**72.63**	**35**	P	P	14 36 38.2	+0.1
	1.1nm,1.0s,baz=215,slow=4.6,SNR=4.2						
	1.1nm,1.0s						

*NEIC **05** 15:00:51.4±1.0, 4°.48N±0°.03×127°.65E±0°.10, h132km±6km, mb4.5/106, Error ellipse: s-maj=14.1km s-min=3.5km az=84.0*
*IDC **05** 15:00:51.5±1.4, 4°.55N×127°.81E, h140km±13km, mb3.8/17, mbtmp4.2/19, MS2.6/3, Error ellipse: s-maj=20.3km s-min=9.2km az=72.0*
*DJA **05** 15:00:52.0±0.6, 4°.N±5°×12°.8E±°, h120km±6km, M4.3/13, mB4.8/6, mb4.3/12, MLv4.5/13, Mw(mB)4.0/6*
*MAN **05** 15:00:55.0, 5°.09N×127°.38E, h166km, mb4.8, ML3.7, MS3.6*

ISC 05 15:00:50.7±0.3, 4°.49N±0°.05×127°.68E±0°.07, h132km, n173, σ1§05/174, mb4.4/72, 3C-4D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**2.29**	**250**	P	**Pn**	**15 01 26.8**	**-1.5**
DDMP	**Don Marcelino,**	**2.53**	**309**	*e*P	**Pn**	**15 01 30.4**	**-1.0**
MATI	**Mati**	**2.82**	**330**	*e*P	**Pn**	**15 01 32.8**	**-2.3**
GSPH	**General Santos**	**3.14**	**300**	*i*P	**Pn**	**15 01 36.3**	**-3.1**
DAV	**Davao City (W)**	**3.30**	**321**	P	**Pn**	**15 01 41.9**	**+0.5**
	99nm,0.4s,baz=51,slow=14,SNR=1.2						
DAV				S	**Sn**	**15 02 23.4**	**+2.8**
	109nm,0.3s,baz=131,slow=21,SNR=5.8						
DAV				LR	LR	15 02 39.5	
	comp=Z,52nm,21.8s,baz=136,slow=32						
DAV	**Davao City (W)**	**3.30**	**321**	Pn	**Pn**	**15 01 42.3**	**+0.9**
KCP	**Kidapawan**	**3.59**	**314**	*e*P	**Pn**	**15 01 43.4**	**-1.7**
KCP				*i* S	**Sn**	**15 02 27.8**	**+0.5**
TNTI	**Ternate**	**3.71**	**185**	Pn	**Pn**	**15 01 46.9**	**+0.3**
TNTI	**Ternate**	**3.71**	**185**	P	**Pn**	**15 01 47.1**	**+0.4**
CTBH	**Cotabato--PC H**	**4.36**	**309**	*i*P	**Pn**	**15 01 53.0**	**-2.3**
CTBH				*i* S	Sn	15 02 36.6	-8.8
LBMI	**Labuha**	**5.10**	**182**	P	**Pn**	**15 02 05.6**	**+0.4**
KMSI	**Cibinong**	**5.36**	**224**	P	**Pn**	**15 02 07.3**	**-1.4**
	1.1nm3μm346nm,0.8s						
GLSP	**General Luna,**	**5.48**	**344**	*e*P	**Pn**	**15 02 07.8**	**-2.5**
SWI	**Sorong**	**6.41**	**146**	P	**Pn**	**15 02 23.4**	**+0.6**
	0.1nm19nm,0.6s						
SIJI	**Sorong**	**6.42**	**146**	P	**Pn**	**15 02 23.6**	**+0.6**
	12nm,0.5s,baz=334,slow=15,SNR=18						
SIJI				S	**Sn**	**15 03 32.4**	**-2.7**
	12nm,0.6s,baz=188,slow=23,SNR=9.1						
SIJI				LR	LR	15 04 23.7	
	comp=Z,39nm,20.9s,baz=300,slow=33						
SANI	**Sanana**	**6.71**	**195**	P	**Pn**	**15 02 25.4**	**-1.5**
	0.1nm685nm33nm,1.0s						
MRSI	**Marisa**	**6.98**	**235**	P	**Pn**	**15 02 30.8**	**+0.4**
	1.1nm3μm402nm,0.7s						
LUWI	**Luwuk**	**7.36**	**222**	Pn	**Pn**	**15 02 35.8**	**+0.2**
LUWI	**Luwuk**	**7.36**	**222**	P	**Pn**	**15 02 35.9**	**+0.3**
	0.3nm74nm,0.8s						
TOLI2	**Tolitoli**	**7.66**	**244**	Pn	**Pn**	**15 02 38.2**	**-1.4**
NLAI	**Namlea**	**7.70**	**184**	P	**Pn**	**15 02 39.7**	**-0.4**
	0.2nm8.6nm,0.4s						
APSI	**Ampana**	**8.06**	**228**	P	**Pn**	**15 02 44.1**	**-1.0**
	0.2nm464nm52nm,0.8s						
FAKI	**Fak Fak**	**8.66**	**148**	Pn	**Pn**	**15 02 53.9**	**+0.8**
MPSI	**Mapaga**	**8.80**	**242**	P	**Pn**	**15 02 54.3**	**-0.6**
	21nm,0.6s						
MYLDM	**Lahad Datu**	**9.17**	**275**	Pn	**Pn**	**15 03 01.1**	**+1.2**
SPSI	**Sidrap Palu**	**11.53**	**223**	P	**Pn**	**15 03 30.8**	**-0.6**
	12nm,0.8s						
EDFI	**Ende, Flores**	**14.44**	**204**	P	**Pn**	**15 04 08.5**	**-0.7**
SBUM	**Sibu**	**15.56**	**263**		**Pn**	**15 04 23.8**	**+0.7**
SBUM				IAmb	IAmb	15 04 27.2	
	comp=Z,9.4nm,0.6s						
MTN	**Manton Dam**	**17.56**	**169**	P	**P**	**15 04 46.4**	**-0.1**
KSM	**Kuching**	**17.60**	**261**	P	**P**	**15 04 46.3**	**-0.7**
KSM				IAmb	IAmb	15 04 48.8	
	comp=Z,9.5nm,0.7s						
TWG	**Pinlang**	**19.31**	**341**	Pn	**Pn**	**15 05 08.7**	**+0.7**
TWG				IAmb	IAmb	15 05 28.8	
	comp=Z,28nm,1.5s						
YULB	**Yu-li**	**19.77**	**342**	P	**P**	**15 05 08.7**	**-2.0**
YULB				IAmb	IAmb	15 05 19.7	
	comp=Z,11nm,0.9s						
TPUB	**Ta-pu**	**19.90**	**341**	P	**P**	**15 05 09.7**	**-2.3**
TPUB				IAmb	IAmb	15 05 15.7	
	comp=Z,14nm,0.5s						
KNRA	**Kununurra**	**20.07**	**177**	P	**P**	**15 05 14.3**	**+0.5**
KNRA				IAmb	IAmb	15 05 15.6	
	comp=Z,7.4nm,0.7s						
SSLB	**Suanglung**	**20.25**	**342**	P	**P**	**15 05 15.3**	**-0.5**
SSLB				IAmb	IAmb	15 05 20.3	
	comp=Z,17nm,1.2s						
YHNB	**Yeheng**	**20.96**	**344**	P	**P**	**15 05 23.5**	**+0.1**
YHNB				IAmb	IAmb	15 05 26.2	
	comp=Z,26nm,0.9s						
KNMB	**Chin-men Tao**	**21.78**	**337**	P	**P**	**15 05 32.0**	**0.0**
KNMB				IAmb	IAmb	15 05 33.3	
	comp=Z,33nm,0.9s						
JOW	**Kunigami**	**22.22**	**1**	P	**P**	**15 05 37.4**	**+0.8**
	comp=Z,7.7nm,0.7s,baz=133,slow=12,SNR=6.5						
	comp=Z,7.7nm,0.7s						
JOW	**Kunigami**	**22.22**	**1**	P	**P**	**15 05 36.0**	**-0.7**
JOW				IAmb	IAmb	15 06 00.8	
	comp=Z,43nm,1.5s						
LEM	**Lembang**	**22.96**	**241**	LR	LR	15 16 54.1	
	comp=Z,34nm,18.2s,baz=319,slow=42						
WRAB	**Tennant Creek**	**25.14**	**165**	P	**P**	**15 06 03.5**	**-0.2**
WRA	**Warramunga Arr**	**25.15**	**165**	P	**P**	**15 06 03.6**	**-0.1**
	comp=Z,1.7nm,0.6s,baz=349,slow=11,SNR=30						
	comp=Z,1.7nm,0.6s						
WRA	**Warramunga Arr**	**25.15**	**165**	P	**P**	**15 06 03.6**	**-0.1**
WB2	**Warramunga Arr**	**25.15**	**165**	P	**P**	**15 06 03.6**	**-0.2**
WR0	**Warramunga Arr**	**25.22**	**165**	P	**P**	**15 06 04.5**	**+0.1**
WR0				IAmb	IAmb	15 06 31.8	
	comp=Z,11nm,1.4s						
JCJ	**Chichijima**	**26.41**	**30**	P	**P**	**15 06 13.8**	**-1.2**
	comp=Z,39nm,0.7s,baz=158,slow=18,SNR=2.6						
JSU	**Suzuyama**	**27.00**	**5**	P	**P**	**15 06 19.0**	**-1.3**
AS31	**Alice Springs**	**28.64**	**168**	P	**P**	**15 06 35.8**	**+0.8**
ASAR	**Alice Springs**	**28.64**	**168**	P	**P**	**15 06 35.4**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=358,slow=8.8,SNR=31						
ASAR				PcP	**PcP**	**15 09 43.2**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=348,slow=2.4,SNR=12						
	comp=Z,0.6nm,0.6s						
ASAR	**Alice Springs**	**28.64**	**168**	P	**P**	**15 06 35.8**	**+0.8**
NJ2	**Nanjing**	**28.64**	**344**	*e*P	**P**	**15 06 33.7**	**-1.1**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**31.32**	**299**	P	**P**	**15 06 59.7**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=115,slow=8.1,SNR=2.0						
	comp=Z,0.4nm,0.3s						
CHTO	**Chiang Mai**	**31.46**	**299**	P	**P**	**15 06 59.5**	**-0.5**
TJN	**Taejon**	**31.73**	**360**	P	**P**	**15 07 02.1**	**0.0**
INU	**Inuyama**	**31.90**	**15**	P	**P**	**15 07 03.4**	**-0.1**
INU				IAmb	IAmb	15 07 04.1	
	comp=Z,11nm,0.7s						
JGF	**Kuroka**	**32.22**	**15**	P	**P**	**15 07 06.2**	**-0.3**
JGF				IAmb	IAmb	15 07 07.5	
	comp=Z,5.7nm,0.6s						
KSCHJ	**Chungju**	**32.23**	**0**	P	**P**	**15 07 07.0**	**+0.6**
KSAR	**Wonju Array Be**	**32.80**	**0**	P	**P**	**15 07 11.0**	**-0.3**
KSRS	**Korea Array**	**32.81**	**0**	P	**P**	**15 07 11.7**	**+0.2**
	comp=Z,5.7nm,0.7s,baz=177,slow=9.8,SNR=38						
	comp=Z,5.7nm,0.7s						
KS19	**Wonju Array Si**	**32.86**	**0**	P	**P**	**15 07 12.0**	**+0.1**
KS19				IAmb	IAmb	15 07 29.8	
	comp=Z,28nm,1.4s						
TIA	**Tai'an**	**33.03**	**344**	P	**P**	**15 07 14.3**	**+0.9**
TIA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
PZH	**PanZhiHua**	**33.08**	**314**	P	**P**	**15 07 16.0**	**+1.9**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,50nm,4.2s						
MJAR	**Matsushiro Arr**	**33.34**	**16**	P	**P**	**15 07 14.2**	**-1.9**
	comp=Z,1.8nm,0.6s,baz=151,slow=10,SNR=11						
	comp=Z,1.8nm,0.6s						
MJAR	**Matsushiro Arr**	**33.34**	**16**	P	**P**	**15 07 14.2**	**-1.9**
MAJO	**Matsushiro**	**33.34**	**16**	P	**P**	**15 07 13.6**	**-2.5**
MAJO				IAmb	IAmb	15 07 16.1	
	comp=Z,13nm,1.4s						
MJB9	**Matsu-Tunnel**	**33.34**	**16**	P	**P**	**15 07 13.4**	**-2.7**
MJB9				IAmb	IAmb	15 07 16.0	
	comp=Z,12nm,1.4s						
SEHB	**SEOHWA**	**33.62**	**1**	P	**P**	**15 07 19.4**	**+0.8**
SEHB				IAmb	IAmb	15 07 21.1	
	comp=Z,8.2nm,0.9s						
XAN	**Xi'an**	**34.18**	**332**	P	**P**	**15 07 23.9**	**+0.4**
XAN				pP	pP	15 07 33.9	-17
XAN				pmax	pmax		
	comp=Z,11nm,1.2s						
JSD	**Sado**	**34.76**	**15**	P	**P**	**15 07 27.5**	**-0.8**
JSD				IAmb	IAmb	15 07 49.3	
	comp=Z,20nm,1.1s						
FORT	**Forrest**	**35.07**	**179**	P	**P**	**15 07 30.7**	**-0.4**
MORW	**Morawa**	**35.19**	**198**	P	**P**	**15 07 32.8**	**+0.6**
MORW				IAmb	IAmb	15 07 58.3	
	comp=Z,23nm,1.4s						
JMM	**Marumori**	**35.31**	**18**	P	**P**	**15 07 33.6**	**+0.5**
BJT	**Baijiatuan**	**36.86**	**345**	P	**P**	**15 07 47.1**	**+0.8**
BJT				IAmb	IAmb	15 07 48.1	
	comp=Z,9.9nm,0.9s						
BJI	**Beijing**	**36.88**	**345**	P	**P**	**15 07 47.1**	**+0.7**
BJI				pmax	pmax		
	comp=Z,13nm,0.8s						
BBOO	**Buckleboo**	**37.94**	**168**	P	**P**	**15 07 55.6**	**+0.1**
JTM	**Tenmabayashi**	**38.09**	**17**	P	**P**	**15 07 56.5**	**-0.1**
NWAO	**Narrogin (SRO)**	**38.51**	**194**	P	**P**	**15 08 01.1**	**+1.0**
STKA	**Stephens Creek**	**38.52**	**161**	P	**P**	**15 08 00.3**	**0.0**
	comp=Z,3.1nm,0.6s,baz=328,slow=9.5,SNR=5.7						
	comp=Z,3.1nm,0.6s						
STKA	**Stephens Creek**	**38.52**	**161**	P	**P**	**15 08 01.0**	**+0.7**
HHC	**Hu-ho-hao-te**	**38.99**	**340**	*e*P	**P**	**15 08 07.8**	**+3.5**
HHC				pmax	pmax		
	comp=Z,38nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,7.9s						
USRK	**Ussuriysk Ar.**	**39.73**	**5**	P	**P**	**15 08 09.3**	**-0.9**
	comp=Z,1.6nm,0.5s,baz=186,slow=5.4,SNR=4.3						
	comp=Z,1.6nm,0.5s						
ERM	**Erimo**	**39.84**	**18**	P	**P**	**15 08 12.4**	**+1.2**
JKA	**Kamikawa-asahi**	**41.60**	**16**	P	**P**	**15 08 25.9**	**+0.4**
JKA				IAmb	IAmb	15 08 27.3	
	comp=Z,7.8nm,0.6s						
GTA	**Gaotai**	**42.95**	**328**	⇑P	**P**	**15 08 37.7**	**+1.0**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,66nm,5.5s						
GTA				LR	LR		
	comp=N,57nm,16.4s						
GTA				LR	LR		
	comp=E,36nm,18.9s						
GTA				LR	LR		
	comp=Z,59nm,17.8s						
GOMU	**GeErMu**	**43.69**	**321**	P	**P**	**15 08 44.1**	**+1.1**
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,61nm,4.9s						
DZM	**Mont Dzumac**	**46.21**	**126**	P	**P**	**15 09 02.8**	**-0.1**
ULN	**Ulaanbaatar**	**46.70**	**341**	P	**P**	**15 09 06.5**	**+0.2**
ULN				IAmb	IAmb	15 09 09.1	
	comp=Z,5.2nm,0.7s						
SONM	**Songino Array**	**46.89**	**340**	P	**P**	**15 09 07.9**	**0.0**
	comp=Z,1.6nm,0.5s,baz=157,slow=9.3,SNR=6.8						
	comp=Z,1.6nm,0.5s						
SONM	**Songino Array**	**46.89**	**340**	P	**P**	**15 09 08.7**	**+0.8**
WMQ	**Urumqi**	**52.65**	**324**	*e*P	**P**	**15 09 53.3**	**+1.9**
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PEA0B	**Petropavlovsk-**	**54.38**	**22**	P	**P**	**15 10 04.2**	**+0.5**
PETK	**Petropavlovsk-**	**54.38**	**22**	P	**P**	**15 10 03.7**	**0.0**
	comp=Z,3.4nm,0.6s,baz=182,slow=7.1,SNR=9.8						
	comp=Z,3.4nm,0.6s						
PETK	**Petropavlovsk-**	**54.38**	**22**	P	**P**	**15 10 04.4**	**+0.7**
YAK	**Yakutsk**	**57.43**	**1**	P	**P**	**15 10 25.3**	**0.0**
MK31	**Makanchi Array**	**57.48**	**325**	P	**P**	**15 10 25.9**	**0.0**
MK31				IAmb	IAmb	15 10 27.5	
	comp=Z,3.5nm,0.8s						
MKAR	**Makanchi Array**	**57.48**	**325**	P	**P**	**15 10 26.6**	**+0.7**
	comp=Z,5.9nm,0.6s,baz=114,slow=8.0,SNR=67						
	comp=Z,5.9nm,0.6s						
MKAR	**Makanchi Array**	**57.48**	**325**	P	**P**	**15 10 26.4**	**+0.4**
MAKZ	**Makanchi**	**57.67**	**324**	P	**P**	**15 10 27.5**	**+0.2**
MAKZ				IAmb	IAmb	15 10 28.8	
	comp=Z,8.1nm,1.0s						
KSH	**Kashi**	**58.18**	**314**	P	**P**	**15 10 34.5**	**+3.4**
KSH				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ZALV	**Zalesovo Beam**	**60.35**	**332**	P	**P**	**15 10 44.8**	**-0.8**
	comp=Z,1.5nm,0.5s,baz=123,slow=7.2,SNR=5.3						
	comp=Z,1.5nm,0.5s						
ZALV	**Zalesovo Beam**	**60.35**	**332**	P	**P**	**15 10 43.8**	**-1.8**
SMY	**Shemya**	**61.34**	**30**	P	**P**	**15 10 52.2**	**0.0**
KURK	**Kurchatov**	**61.62**	**327**	P	**P**	**15 10 54.4**	**+0.2**
THZ	**Tophouse**	**61.73**	**143**	P	**P**	**15 10 54.9**	**-0.3**
RPZ	**Rata Peaks**	**61.84**	**146**	P	**P**	**15 10 56.2**	**+0.4**
GAR	**Garm**	**62.11**	**312**	P	**P**	**15 10 58.1**	**+0.1**
KK31	**Karatay Array**	**63.33**	**316**	P	**P**	**15 11 05.8**	**0.0**
KK31				IAmb	IAmb	15 11 07.1	
	comp=Z,6.0nm,1.1s						
KKAR	**Karatay Array**	**63.33**	**316**	P	**P**	**15 11 05.7**	**0.0**
KKAR	**Karatay Array**	**63.33**	**316**	P	**P**	**15 11 05.8**	**0.0**
KKAR				IAmb	IAmb	15 11 07.1	
	comp=Z,6.0nm,1.1s						
TIXI	**Tiksi**	**67.08**	**0**	P	**P**	**15 11 28.3**	**-1.1**
TIXI				IAmb	IAmb	15 11 31.0	
	comp=Z,5.6nm,0.5s						
BRVK	**Borovoye**	**67.28**	**327**	P	**P**	**15 11 30.5**	**-0.5**
BRVK				IAmb	IAmb	15 11 32.1	
	comp=Z,5.4nm,1.0s						
GEYT	**Alibeck**	**71.16**	**308**	P	**P**	**15 11 55.9**	**+0.6**
	comp=Z,2.1nm,0.7s,baz=97,slow=12,SNR=3.4						
	comp=Z,2.1nm,0.7s						
GEYT	**Alibeck**	**71.16**	**308**	IAmb	IAmb	15 11 57.0	
	comp=Z,2.8nm,0.8s						
CASY	**Casey**	**71.68**	**187**	P	**P**	**15 11 58.6**	**+0.8**
CASY				IAmb	IAmb	15 12 02.2	
	comp=Z,7.1nm,1.2s						
ABKAR	**Akbulak array**	**72.16**	**320**	P	**P**	**15 12 00.7**	**-0.3**
ABKAR	**Akbulak array**	**72.16**	**320**	P	**P**	**15 12 00.7**	**-0.3**
ABKAR				IAmb	IAmb	15 12 01.9	
	comp=Z,3.1nm,0.9s						
UNV	**Unalaska Valle**	**72.27**	**35**	P	**P**	**15 12 01.7**	**+0.2**
AKUT	**Akutan**	**72.76**	**34**	P	**P**	**15 12 04.8**	**+0.3**
SOCY	**Socotra**	**73.14**	**281**	P	**P**	**15 12 06.7**	**-0.8**
ARU	**Arti**	**74.80**	**327**	P	**P**	**15 12 16.0**	**-0.3**
ARU				IAmb	IAmb	15 12 16.3	
	comp=Z,3.0nm,0.5s						
SDPT	**Sand Point**	**76.04**	**34**	P	**P**	**15 12 22.8**	**-0.6**
CHIR	**Chirikof Islan**	**78.84**	**34**	P	**P**	**15 12 39.6**	**+0.7**
N18K	**Kilae Creek**	**79.47**	**29**	P	**P**	**15 12 43.2**	**+0.8**
N18K				IAmb	IAmb	15 12 50.8	
	comp=Z,8.6nm,1.5s						
O18K	**Koktuh Hills**	**79.67**	**30**	P	**P**	**15 12 44.3**	**+0.9**
O18K				IAmb	IAmb	15 12 45.1	
	comp=Z,4.1nm,0.7s						
SVW2	**Sparrevohn**	**79.69**	**29**	P	**P**	**15 12 44.6**	**+1.1**
TTA	**Tat

comp=Z,0.9nm,0.8s,baz=318,slow=5.1,SNR=4.8
comp=Z,0.9nm,0.8s
VNDA Vanda 84.06 173 P **P** **15 13 06.3 +0.3**
M24K Tolsona, Glenn 84.25 28 P **P** **15 13 07.9 +0.4**
KLU Klutina 84.36 29 P **P** **15 13 08.7 +0.7**
KLU IAmb IAmb 15 13 09.3
comp=Z,4.5nm,0.6s
DIV Divide 84.43 29 P **P** **15 13 08.9 +0.6**
DIV IAmb IAmb 15 13 09.9
comp=Z,8.2nm,0.8s
PAX Paxson 84.60 27 P **P** **15 13 09.7 +0.5**
J25K Salcha River, 84.66 26 P **P** **15 13 09.8 +0.4**
RIDG Independent Ri 84.88 26 P **P** **15 13 10.5 -0.1**
RIDG IAmb IAmb 15 13 12.6
comp=Z,8.0nm,1.5s
N25K Chitina, Valde 85.00 29 P **P** **15 13 11.9 +0.8**
N25K IAmb IAmb 15 13 20.1
comp=Z,12nm,1.4s
BMAR Burnt Mountain 85.02 23 P **P** **15 13 12.1 +1.0**
HMT Hamilton 85.17 30 P **P** **15 13 12.6 +0.6**
GLB Gilahina Butte 85.38 29 P **P** **15 13 13.1 +0.1**
GLB IAmb IAmb 15 13 40.2
comp=Z,5.5nm,1.1s
J26L Joseph Creek 85.44 26 P **P** **15 13 13.2 -0.2**
VRDI Verde Repeater 85.55 29 P **P** **15 13 14.6 +0.5**
VRDI IAmb IAmb 15 13 43.6
comp=Z,12nm,1.4s
L27K Beaver Creek, 86.26 27 P **P** **15 13 17.8 +0.4**
BCAR Beaver Creek A 86.28 27 P **P** **15 13 18.0 +0.5**
ARCES ARCESS Array B 90.06 340 P **P** **15 13 33.9 -1.3**
comp=Z,2.2nm,0.7s,baz=78,slow=6.3,SNR=4.9
comp=Z,2.2nm,0.7s
ARCES ARCESS Array B 90.06 340 IAmb IAmb 15 13 46.6
comp=Z,12nm,1.3s
FINES FINESS Array B 91.61 332 P **P** **15 13 40.2 -2.3**
comp=Z,3.7nm,1.1s,baz=48,slow=2.1,SNR=1.7
AKASG Malin Array Be 91.90 321 P **P** **15 13 42.3 -1.8**
comp=Z,0.1nm,0.3s,baz=60,slow=3.8,SNR=2.1
comp=Z,0.1nm,0.3s

MOS ***05*** *15:05:33.3±1.2, 19.˚30S×69.˚02W, h104km, mb5.1/45, Error ellipse: s-maj=11.4km s-min=5.0km az=108.6*
NEIC ***05*** *15:05:33.8±1.5, 19.˚41S±0.˚04×69.˚03W±0.˚06, h97km±3km, mb5.2/502, Mwr5.1/43, Mww5.1, Mwr5.1(GUC), Error ellipse: s-maj=8.1km s-min=6.0km az=90.0*
VAO ***05*** *15:05:33.8±0.4, 19.˚41S×69.˚06W, h99km±3km, mb5.6*
NEIC ***05*** *15:05:34.3, 19.˚42S×69.˚13W, h109km, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr=2.17; Mθθ-0.06; Mφφ2.23; Mrθ0.65; Mθφ-0.49; Mφr-4.18; Fault plane solution: Mo4.79000×10¹⁶ NP1:φs165.52000°, δ14.05000°, λ-95.23000°. NP2:φs350.91000°, δ76.01000°, λ-88.69000°. Principal axes: T 4.8663, Plg31.0000°, Azm80.0000°; N -0.1558, Plg1.0000°, Azm171.0000°; P -4.7105, Plg59.0000°, Azm263.0000°;*
SJA ***05*** *15:05:34.7±0.7, 19.˚54S×69.˚51W, h120km±4km, ML5.3, MW4.9*
NEIC ***05*** *15:05:35, 19.˚52S×69.˚14W, h120km, Moment Tensor Solution. Duration: 4s0 Moment tensor: Scale 10¹⁶Nm; Mrr-1.54; Mθθ-0.59; Mφφ2.14; Mrθ1.26; Mθφ-0.78; Mφr-6.00; Fault plane solution: Mo6.47000×10¹⁶ NP1: φs159.00000°, δ9.00000°, λ-99.00000°. NP2:φs348.00000°, δ81.00000°, λ-88.00000°. Principal axes: T 6.8275, Plg36.0000°, Azm77.0000°; N -0.7911, Plg1.0000°, Azm168.0000°; P -6.0365, Plg54.0000°, Azm260.0000°;*
GUC ***05*** *15:05:35.7±0.6, 19.˚48S×69.˚25W, h107km±2km, ML5.3*
IDC ***05*** *15:05:35.4±0.4, 19.˚39S×69.˚01W, h110km±3km, mb4.7/20, mbtmp5.1/24, MS3.7/29, Error ellipse: s-maj=12.6km s-min=10.2km az=71.0*
BJI ***05*** *15:05:36.0±0.0, 19.˚50S×69.˚10W, h108km, mB5.1/4*
GCMT ***05*** *15:05:38.8±0.2, 19.˚45S±0.˚01×69.˚36W±0.˚01, h130km±1km, MW5.1/122, Moment Tensor Solution. s75,c96; s122,c175; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-2.72±.13; Mθθ0.29±.15; Mφφ2.42±.20; Mrθ0.85±.08; Mθφ-1.11±.15; Mφr-5.13±.11; Best double couple: Mo5.91200×10¹⁶ NP1:φs144.00000°, δ15.00000°, λ-114.00000°. NP2:φs349.00000°, δ76.00000°, λ-84.00000°. Principal axes: T 5.9320, Plg31.0000°, Azm74.0000°; N -0.0460, Plg6.0000°, Azm167.0000°; P -5.8910, Plg58.0000°, Azm267.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 15:05:34.5±0.3, 19.˚48S±0.˚02×69.˚12W±0.˚04, h108km±2km, h108km; pP-P, n1183, σ1§10/1267, mb5.1/289, 74C-280D, Fault plane solution: NP1:φs23.16993°, δ66.27096°, λ-84.12108°. NP2:φs188.81717°, δ24.40551°, λ-103.11664°. Principal axes: T Plg21.0618°, Azm108.7186°; N Plg5.3804°, Azm200.7972°; P Plg68.1977°, Azm304.4150°; Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB11	**IPOC Station P**	**0.58**	**241**		**Pn**	**15 05 51.7**	**-0.2**
PB11				Sn	**Sn**	**15 06 04.0**	**-0.8**
PB11	**IPOC Station P**	**0.58**	**241**	*eP*	**Pn**	**15 05 51.7**	**-0.2**
PB11				*eS*	**Sn**	**15 06 03.7**	**-1.2**
PB11	**IPOC Station P**	**0.58**	**241**	*eP*	**Pn**	**15 05 52.0**	**+0.1**
PB11				*eS*	**Sn**	**15 06 04.8**	**-0.1**
PB11				IAML		15 06 06.0	
	comp=Z,103μm,0.7s						
PB08	**IPOC Station P**	**0.66**	**183**		**Pn**	**15 05 53.5**	**+0.7**
PB08	**IPOC Station P**	**0.66**	**183**	⇓*iP*	**Pn**	**15 05 53.7**	**+0.9**
PB08				*i* S	**Sn**	**15 06 07.6**	**+1.2**
PB08				IAML		15 06 09.3	
	comp=E,141μm,0.3s						
PB08	**IPOC Station P**	**0.66**	**183**	*eP*	**Pn**	**15 05 56.8**	**+4.0**
PB08				*eS*	**Sn**	**15 06 07.9**	**+1.5**
PB08				IAML		15 06 09.7	
	comp=Z,53μm,0.3s						
HMBC	**Humberstone**	**1.07**	**222**	⇑*iP*	**Pn**	**15 05 56.1**	**-0.3**
HMBC				*i* S	**Sn**	**15 06 12.1**	**-0.8**
HMBC				IAML		15 06 16.1	
	comp=N,119μm,0.5s						
PB16	**IPOC Station P**	**1.20**	**342**		**Pn**	**15 05 58.7**	**+0.4**
PB16	**IPOC Station P**	**1.20**	**342**	⇑*iP*	**Pn**	**15 05 59.6**	**+1.2**
PB16				*i* S	**Sn**	**15 06 17.9**	**+1.6**
TA02	**Huaiquique**	**1.23**	**230**		**Pn**	**15 05 57.5**	**-0.6**
TA02	**Huaiquique**	**1.23**	**230**	⇑*iP*	**Pn**	**15 05 57.7**	**-0.4**
TA02				*i* S	**Sn**	**15 06 14.7**	**-1.2**
TA02				IAML		15 06 16.2	
	comp=N,80μm,0.4s						
PB12	**IPOC Station P**	**1.43**	**307**		**Pn**	**15 05 59.8**	**-0.7**
PB12	**IPOC Station P**	**1.43**	**307**	⇑*iP*	**Pn**	**15 05 59.9**	**-0.7**
PB12				*i* S	**Sn**	**15 06 18.5**	**-1.7**
PB12	**IPOC Station P**	**1.43**	**307**	*eP*	**Pn**	**15 05 60.0**	**-0.5**
PB12				*eS*	**Sn**	**15 06 19.1**	**-1.1**
TA01	**Diego Aracena**	**1.47**	**223**		**Pn**	**15 06 00.0**	**-0.7**
TA01	**Diego Aracena**	**1.47**	**223**	⇑*iP*	**Pn**	**15 06 00.1**	**-0.7**
TA01				*i* S	**Sn**	**15 06 19.1**	**-1.6**
TA01				IAML		15 06 22.4	
	comp=N,27μm,0.4s						
PB01	**IPOC Station P**	**1.59**	**192**		**Pn**	**15 06 03.0**	**+0.5**
PB01	**IPOC Station P**	**1.59**	**192**	⇑*iP*	**Pn**	**15 06 02.9**	**+0.5**
PB01				*eS*	**Sn**	**15 06 23.6**	**0.0**
PB01				IAML		15 06 25.8	
	comp=E,59μm,0.3s						
PB01	**IPOC Station P**	**1.59**	**192**	*eP*	**Pn**	**15 06 03.1**	**+0.7**
PB01				*eS*	**Sn**	**15 06 24.3**	**+0.7**
PB01				IAML		15 06 26.4	
	comp=Z,26μm,0.5s						
AP01	**Chacalluta**	**1.60**	**314**		**Pn**	**15 06 02.2**	**-0.3**
AP01	**Chacalluta**	**1.60**	**314**	⇑*iP*	**Pn**	**15 06 02.3**	**-0.1**
AP01				*eS*	**Sn**	**15 06 22.2**	**-1.4**
AP01				IAML		15 06 25.0	
	comp=N,59μm,0.6s						
PATCX	**Punta Patache**	**1.65**	**216**		**Pn**	**15 06 02.5**	**-0.5**
PATCX	**Punta Patache**	**1.65**	**216**	⇑*iP*	**Pn**	**15 06 02.4**	**-0.7**
PATCX				*i* S	**Sn**	**15 06 23.5**	**-1.3**
PATCX				IAML		15 06 28.1	
	comp=E,29μm,0.6s						
PB02	**IPOC Station P**	**1.97**	**202**		**Pn**	**15 06 07.2**	**+0.1**
PB02	**IPOC Station P**	**1.97**	**202**	⇑*iP*	**Pn**	**15 06 07.1**	**0.0**
PB02				*eS*	**Sn**	**15 06 30.3**	**-1.7**
PB02				IAML		15 06 42.5	
	comp=E,31μm,0.4s						
PB02	**IPOC Station P**	**1.97**	**202**	*eP*	**Pn**	**15 06 07.2**	**+0.1**
PB02				*eS*	**Sn**	**15 06 32.0**	**0.0**
PB02				IAML		15 06 37.2	
	comp=Z,24μm,0.4s						
PB09	**IPOC Station P**	**2.30**	**183**		**Pn**	**15 06 13.0**	**+1.5**
PB09	**IPOC Station P**	**2.30**	**183**	⇑*iP*	**Pn**	**15 06 12.6**	**+1.0**
PB09				*eS*	**Sn**	**15 06 38.4**	**-1.4**
PB09				IAML		15 06 44.7	
	comp=N,10μm,0.7s						
PB09	**IPOC Station P**	**2.30**	**183**	*eP*	**Pn**	**15 06 12.8**	**+1.2**
PB09				*eS*	**Sn**	**15 06 41.5**	**+1.7**
PB09				IAML		15 06 47.0	
	comp=Z,15μm,0.5s						
PB07	**IPOC Station P**	**2.34**	**198**		**Pn**	**15 06 12.5**	**+0.4**
PB07	**IPOC Station P**	**2.34**	**198**	⇑*iP*	**Pn**	**15 06 11.8**	**-0.2**
PB07				*i* S	**Sn**	**15 06 39.4**	**-1.4**
PB07				IAML		15 06 49.2	
	comp=E,26μm,0.5s						
PB07	**IPOC Station P**	**2.34**	**198**	*eP*	**Pn**	**15 06 11.9**	**-0.2**
PB07				*eS*	**Sn**	**15 06 39.5**	**-1.3**
PB07				IAML		15 06 49.9	
	comp=Z,18μm,0.8s						
PB04	**IPOC Station P**	**3.00**	**199**		**Pn**	**15 06 20.2**	**-0.4**
PB04	**IPOC Station P**	**3.00**	**199**	⇑*eP*	**Pn**	**15 06 19.5**	**-1.1**
PB04				IAML		15 07 23.5	
	comp=N,9μm,0.5s						
PB04	**IPOC Station P**	**3.00**	**199**	*eP*	**Pn**	**15 06 20.4**	**-0.2**
PB04				*eS*	**Sn**	**15 06 52.8**	**-3.3**
PB04				IAML		15 07 22.4	
	comp=Z,9μm,0.5s						
LVC	**Limon Verde**	**3.12**	**176**	P	**Pn**	**15 06 24.0**	**+1.6**
	comp=Z,611nm,0.4s,baz=351,slow=9.5,SNR=234						
LVC				S	**Sn**	**15 07 00.0**	**+0.8**
	comp=Z,2μm,0.3s,baz=139,slow=21,SNR=4.4						
LVC	**Limon Verde**	**3.12**	**176**	Pn	**Pn**	**15 06 24.2**	**+1.8**
LVC	**Limon Verde**	**3.12**	**176**	P	**Pn**	**15 06 24.0**	**+1.6**
LVC	**Limon Verde**	**3.12**	**176**	⇑*eP*	**Pn**	**15 06 23.5**	**+1.1**
LVC				*i* S	**Sn**	**15 07 00.2**	**+0.9**
LVC	**Limon Verde**	**3.12**	**176**	*eP*	**Pn**	**15 06 22.8**	**+0.4**
PB06	**IPOC Station P**	**3.23**	**187**		**Pn**	**15 06 24.0**	**+0.3**
PB06	**IPOC Station P**	**3.23**	**187**	⇑*eP*	**Pn**	**15 06 23.6**	**-0.2**
PB06				*eS*	**Sn**	**15 06 58.9**	**-2.8**
PB06	**IPOC Station P**	**3.23**	**187**	*eP*	**Pn**	**15 06 24.0**	**+0.3**
PB06				*eS*	Sn	15 06 47.0	-15
PB06				IAML		15 07 29.1	
	comp=Z,6μm,0.5s						
LPAZ	**La Paz**	**3.31**	**17**	P	**Pn**	**15 06 28.2**	**+2.9**
	comp=Z,574nm,0.8s,baz=188,slow=9.2,SNR=874						
LPAZ				S	**Sn**	**15 07 01.6**	**-2.7**
	comp=Z,332nm,0.6s,baz=166,slow=15,SNR=4.3						
LPAZ	**La Paz**	**3.31**	**17**	Pn	**Pn**	**15 06 28.3**	**+3.1**
LPAZ	**La Paz**	**3.31**	**17**	⇑*iP*	**Pn**	**15 06 28.3**	**+3.1**
LPAZ				*i* S	**Sn**	**15 07 08.7**	**+4.4**
AF01	**San Pedro de A**	**3.56**	**166**		**Pn**	**15 06 26.9**	**-1.3**
AF01	**San Pedro de A**	**3.56**	**166**	*eP*	**Pn**	**15 06 32.0**	**+3.8**
PB15	**IPOC Station P**	**3.72**	**185**		**Pn**	**15 06 30.6**	**+0.3**
PB15	**IPOC Station P**	**3.72**	**185**	*eP*	**Pn**	**15 06 30.9**	**+0.5**
PB15				*eS*	**Sn**	**15 07 12.8**	**-0.7**
PB15				IAML		15 07 42.3	
	comp=Z,11μm,0.4s						
PB10	**IPOC Station P**	**4.23**	**198**	Pn	**Pn**	**15 06 35.3**	**-1.6**
PB10	**IPOC Station P**	**4.23**	**198**	*eP*	**Pn**	**15 06 35.8**	**-1.1**
PB10				*eS*	Sn	15 07 04.0	-21
PB10				IAML		15 07 43.0	
	comp=Z,2μm,0.6s						
PB14	**IPOC Station P**	**5.25**	**193**	Pn	**Pn**	**15 06 50.1**	**-1.0**
PB14	**IPOC Station P**	**5.25**	**193**	*eP*	**Pn**	**15 06 50.6**	**-0.5**
PB14				*eS*	Sn	15 08 01.0	+10
PB14				IAML		15 08 23.3	
	comp=Z,1μm,1.0s						
GO02	**Mina Guanaco**	**5.67**	**184**	Pn	**Pn**	**15 06 55.4**	**-1.3**
AC01	**Pan de Azucar**	**6.77**	**191**	Pn	**Pn**	**15 07 08.0**	**-3.4**
AC02	**Maricunga**	**7.32**	**180**	Pn	**Pn**	**15 07 18.3**	**-0.9**
AC06	**Mina Casimiro**	**7.92**	**188**	Pn	**Pn**	**15 07 23.6**	**-3.3**
GO03	**Copiap**	**8.14**	**187**		Pn	15 07 25.8	-4.2
SIV	**San Ignacio**	**8.42**	**67**	P	**Pn**	**15 07 32.7**	**-1.1**
	comp=Z,559nm,0.6s,baz=257,slow=9.8,SNR=2584						
AC04	**Llanos de Chal**	**8.86**	**191**		Pn	15 07 34.2	-5.5
LCO	**Las Campanas**	**9.60**	**188**		**Pn**	**15 07 46.4**	**-3.5**
LCO	**Las Campanas**	**9.60**	**188**	P	**Pn**	**15 07 46.4**	**-3.5**
VBST	**Vila Bela da S**	**10.00**	**62**	*eP*	**Pn**	**15 07 54.0**	**-1.3**
ETMB	**Extrema**	**10.01**	**17**	*eP*	**Pn**	**15 07 53.6**	**-1.8**
PTLB	**Pontes e Lacer**	**10.34**	**69**	*eP*	**Pn**	**15 07 57.9**	**-1.9**
CO01	**Juntas del Tor**	**10.49**	**185**		**Pn**	**15 07 58.9**	**-3.1**
NNA	**Nana**	**10.52**	**314**	P	**Pn**	**15 08 00.8**	**-1.6**
	comp=Z,7.5nm,0.3s,baz=203,slow=8.2,SNR=4.0						
NNA				S	Sn	15 09 47.2	-11
	comp=Z,19nm,0.6s,baz=219,slow=16,SNR=1.4						
NNA	**Nana**	**10.52**	**314**	Pn	**Pn**	**15 07 59.5**	**-2.9**
NNA	**Nana**	**10.52**	**314**	P	**Pn**	**15 07 59.5**	**-2.9**
CO05	**La Serena**	**10.57**	**190**	Pn	**Pn**	**15 08 00.0**	**-2.8**
VILB	**Vilhena**	**10.75**	**54**	*eP*	**Pn**	**15 08 03.6**	**-1.8**
GO04	**Tololo Observa**	**10.75**	**188**		Pn	15 08 01.3	-4.2
CO02	**Combarbal**	**11.79**	**188**		Pn	15 08 14.8	-4.6
SAML	**Samuel**	**11.95**	**30**		Pn	15 08 18.4	-3.0
SAML	**Samuel**	**11.95**	**30**	P	Pn	15 08 18.4	-3.0
ZON	**Zonda**	**12.02**	**178**	Pn	**Pn**	**15 08 19.2**	**-3.0**
ZON	**Zonda**	**12.02**	**178**	P	**Pn**	**15 08 19.3**	**-3.0**
POCN	**Pocone**	**12.12**	**78**	*eP*	Pn	15 08 20.9	-2.8
PTET	**Porto Estrela**	**12.12**	**72**	*eP*	**Pn**	**15 08 21.8**	**-1.9**
CZSB	**Cruzeiro do Su**	**12.19**	**343**	*eP*	**Pn**	**15 08 21.9**	**-2.8**
ANTJ	**Antonio Joao (**	**12.52**	**104**	*eP*	**Pn**	**15 08 28.5**	**-0.5**
AQDB	**Aquidauana**	**12.66**	**97**	*eP*	Pn	15 08 28.5	-2.2
CPUP	**Villa Florida**	**12.82**	**124**	P	**Pn**	**15 08 31.4**	**-1.4**
	comp=Z,107nm,1.1s,baz=305,slow=12,SNR=73						
CPUP	**Villa Florida**	**12.82**	**124**	Pn	**Pn**	**15 08 31.5**	**-1.3**
CPUP	**Villa Florida**	**12.82**	**124**	*eP*	**Pn**	**15 08 31.1**	**-1.8**
VA06	**Catapilco**	**13.17**	**188**	Pn	**Pn**	**15 08 37.0**	**-0.3**
SALV	**Santo Antonio**	**13.28**	**77**	*eP*	Pn	15 08 36.3	-2.7
VA03	**San Esteban**	**13.29**	**185**	Pn	**Pn**	**15 08 38.9**	**-0.2**
ROC1	**El Roble**	**13.54**	**187**		**Pn**	**15 08 41.2**	**-1.2**
AMBA	**Amambai (Brazi**	**13.62**	**107**	*eP*	**Pn**	**15 08 43.2**	**-0.1**
PP1B	**Ponte de Pedra**	**13.63**	**84**	*eP*	**Pn**	**15 08 41.8**	**-1.7**
VA01	**Torpederas**	**13.67**	**189**	Pn	**Pn**	**15 08 43.4**	**-0.5**
NBRS	**Nobres**	**13.76**	**70**	*eP*	**Pn**	**15 08 43.0**	**-2.1**
MT02	**Curacav**	**13.84**	**187**	Pn	**Pn**	**15 08 45.0**	**-1.1**
MT05	**Renca**	**13.93**	**186**	Pn	**Pn**	**15 08 46.1**	**-1.2**
MT03	**Universidad Ad**	**14.01**	**185**	Pn	**Pn**	**15 08 47.3**	**-1.1**
PDRB	**Porto dos Gac**	**14.27**	**59**	*eP*	Pn	15 08 48.4	-3.4
VA05	**Santo Domingo**	**14.29**	**188**	Pn	**Pn**	**15 08 50.8**	**-1.0**
MT09	**Talagante**	**14.33**	**186**		**Pn**	**15 08 51.6**	**-1.0**
LMEL	**Las Melosas**	**14.34**	**184**		**Pn**	**15 08 52.4**	**-0.2**
MT01	**Popeta**	**14.45**	**187**	Pn	**Pn**	**15 08 52.5**	**-1.4**
BO04	**La Punta**	**14.51**	**185**	Pn	**Pn**	**15 08 53.5**	**-1.2**
MCR1	**Marechal Candi**	**14.84**	**112**	*eP*	**Pn**	**15 08 59.2**	**+0.2**
BO01	**Tunca**	**14.95**	**186**	Pn	**Pn**	**15 08 58.8**	**-1.5**
BO01				IAmb	IAmb	15 09 05.7	
	comp=Z,123nm,0.7s						
ITQB	**Itaqui**	**15.22**	**134**		**Pn**	**15 09 02.2**	**-1.5**
ITQB				IAmb	IAmb	15 09 15.0	
	comp=Z,85nm,0.9s						
ITQB	**Itaqui**	**15.22**	**134**	*eP*	**Pn**	**15 09 02.5**	**-1.2**
TBTG	**Tabatinga, AM**	**15.22**	**357**	*eP*	**Pn**	**15 09 03.4**	**-0.4**
ATAH	**Atahualpa**	**15.22**	**322**	P	**Pn**	**15 09 05.1**	**+0.9**
	comp=Z,29nm,0.9s,baz=161,slow=3.5,SNR=17						
ATAH				LR	LR	15 15 58.1	
	comp=Z,437nm,20.4s,baz=167,slow=41						
C2SB	**Chapadao do Su**	**15.41**	**90**	*eP*	**Pn**	**15 09 06.7**	**+0.6**
CLDB	**Colider**	**15.44**	**58**	*eP*	**Pn**	**15 09 04.3**	**-2.3**
GO05	**Huala**	**15.67**	**189**	P	**P**	**15 09 11.2**	**+0.1**
TRCB	**Terra Rica**	**15.73**	**105**		**Pn**	**15 09 10.0**	**-0.2**
TRCB	**Terra Rica**	**15.73**	**105**	*eP*	**Pn**	**15 09 10.6**	**+0.4**
CRSM	**Crissiumal (Br**	**15.95**	**123**	*eP*	**Pn**	**15 09 13.3**	**+0.4**
UNIS	**Unistalda (Bra**	**15.96**	**129**	*eP*	**Pn**	**15 09 13.6**	**+0.7**
ML02	**Panimavida**	**16.34**	**187**	Pn	**Pn**	**15 09 16.6**	**-1.1**
ML02				IAmb	IAmb	15 09 22.1	
	comp=Z,185nm,1.1s						
DVLD	**Doverlandia**	**16.37**	**83**	*eP*	**Pn**	**15 09 17.7**	**-0.4**
RODS	**Rosario do Sul**	**16.61**	**133**	*eP*	**Pn**	**15 09 19.0**	**-2.0**
PTGB	**Pitanga**	**16.64**	**111**	*eP*	**Pn**	**15 09 20.4**	**-1.0**
PCMB	**Pacaembu**	**16.86**	**100**	*eP*	**Pn**	**15 09 23.3**	**-0.8**
ARAG	**Araguaiana, MT**	**16.92**	**80**	*eP*	**Pn**	**15 09 23.9**	**-0.9**
ALGR	**Alto Alegre (B**	**17.35**	**125**	*eP*	**P**	**15 09 29.1**	**-0.8**
ITAB	**Concordia**	**17.39**	**119**	P	**P**	**15 09 30.0**	**-0.2**
ITAB	**Concordia**	**17.39**	**119**	*eP*	**P**	**15 09 29.5**	**-0.7**
BI05	**Punta Hualpn**	**17.57**	**191**		**P**	**15 09 31.3**	**-0.7**
ITRB	**Iturama**	**17.68**	**94**	*eP*	**P**	**15 09 32.2**	**-1.2**
CPSB	**Cacapava Do Su**	**17.88**	**130**	*eP*	**P**	**15 09 35.0**	**-0.5**
MACA	**Manacapuru-AM**	**18.20**	**28**	*eP*	**P**	**15 09 38.1**	**-1.0**
NPGB	**Novo Progresso**	**18.21**	**49**	*eP*	**P**	**15 09 37.8**	**-1.5**
LPA	**La Plata**	**18.28**	**149**	*eP*	**Pn**	**15 09 42.8**	**+1.7**
LPA				pP	**pP**	**15 10 01.1**	**+0.2**
LPA				sP	**sP**	**15 10 10.2**	**-4.9**
LPA				S	**S**	**15 13 02.5**	**-1.0**
LPA				sS	sS	15 13 46.8	+9.0
LPA				PCP	**PcP**	**15 14 08.4**	**+0.9**
LPA				SCS	**ScS**	**15 21 10.6**	**-3.4**
LPA				PKIKP	**PKiKP**	**15 21 56.2**	**-2.5**
LPA				SKIKP		15 25 20.0	
LPA				PKIKS		15 25 25.0	
LPA				SKIKS		15 28 55.7	
PLTB	**Pedras Altas**	**18.55**	**134**	P	**P**	**15 09 41.9**	**-1.0**
PLTB	**Pedras Altas**	**18.55**	**134**	*eP*	**P**	**15 09 43.0**	**+0.1**
FRTB	**Fartura**	**18.61**	**105**	*eP*	**P**	**15 09 44.0**	**+0.3**
SNDB	**Serra Nova Dou**	**18.70**	**69**	*eP*	**P**	**15 09 44.4**	**-0.3**
BB19B	**Bebedouro**	**19.38**	**98**	*eP*	**P**	**15 09 51.4**	**-0.7**
TIJ01	**Guaruva-PR**	**19.48**	**111**	*eP*	**P**	**15 09 53.0**	**-0.2**
IPMB	**Ipameri, GO**	**19.86**	**89**	*eP*	**P**	**15 09 57.0**	**-0.3**
ITTB	**Itaituba**	**19.91**	**43**	*eP*	**P**	**15 09 56.8**	**-0.9**
LR03	**Panguipulli**	**20.27**	**187**	P	**P**	**15 10 00.8**	**-0.7**
LR03				IAmb	IAmb	15 10 07.1	
	comp=Z,102nm,1.0s						
TER01	**Tubaro-SC**	**20.34**	**120**	*eP*	**P**	**15 10 00.5**	**-1.9**
RCLB	**Rio Claro- Sao**	**20.37**	**102**	*eP*	**P**	**15 10 02.2**	**-0.6**
BDFB	**Brasilia**	**20.48**	**83**	P	**P**	**15 10 03.0**	**-1.0**
	comp=Z,194nm,0.5s,baz=259,slow=12,SNR=57						
BDFB				LR	LR	15 18 28.2	
	comp=Z,281nm,20.3s,baz=300,slow=38						
	comp=Z,194nm,0.5s						
BDFB	**Brasilia**	**20.48**	**83**	P	**P**	**15 10 03.3**	**-0.8**
BDFB	**Brasilia**	**20.48**	**83**	P	**P**	**15 10 03.3**	**-0.8**
BDFB				pmax	pmax		
	comp=Z,206nm,0.6s						
BDFB	**Brasilia**	**20.48**	**83**	*eP*	**P**	**15 10 03.5**	**-0.6**
LR04	**Corral**	**20.66**	**189**	P	**P**	**15 10 06.1**	**+0.4**
LR04				IAmb	IAmb	15 10 12.3	
	comp=Z,79nm,1.1s						
VAO	**Valinhos**	**20.94**	**104**	*eP*	**P**	**15 10 07.3**	**-1.6**
PLCA	**Paso Flores**	**21.22**	**183**	P	**P**	**15 10 11.9**	**+0.2**
	comp=Z,102nm,0.9s,baz=3.3,slow=12,SNR=86						
PLCA				PcP	**PcP**	**15 14 14.1**	**+1.3**
	comp=Z,3.5nm,0.7s,baz=34,slow=2.3,SNR=3.4						
	comp=Z,102nm,0.9s						
PLCA	**Paso Flores**	**21.22**	**183**	P	**P**	**15 10 12.0**	**+0.2**
PLCA				IAmb	IAmb	15 10 16.1	
	comp=Z,162nm,0.9s						
PLCA	**Paso Flores**	**21.22**	**183**	*eP*	**P**	**15 10 11.9**	**+0.2**
PEXB	**Peixe**	**21.32**	**73**	*eP*	**P**	**15 10 11.8**	**-1.2**
LL04	**Puerto Octay**	**21.54**	**187**	P	**P**	**15 10 15.0**	**-0.1**
OTAV	**Otavalo**	**21.63**	**334**	P	**P**	**15 10 16.2**	**-0.5**
OTAV	**Otavalo**	**21.63**	**334**	P	**P**	**15 10 16.2**	**-0.5**
OTAV				pmax	pmax		
	comp=Z,27nm,0.9s						
OTAV	**Otavalo**	**21.63**	**334**	*eP*	**P**	**15 10 19.8**	**+3.1**
OTAV	**Otavalo**	**21.63**	**334**	*eP*	**P**	**15 10 17.1**	**+0.4**
LL03	**Petrohue**	**21.77**	**187**	P	**P**	**15 10 17.5**	**0.0**
LL03				IAmb	IAmb	15 10 20.1	
	comp=Z,142nm,0.8s						
FLOC	**Florencia**	**21.89**	**342**	*eP*	**P**	**15 10 20.2**	**+1.2**
GCUF	**Volcan Galeras**	**22.11**	**338**	*eP*	**P**	**15 10 23.4**	**+1.5**
LL05	**Los Muermos**	**22.16**	**189**	P	**P**	**15 10 21.2**	**-0.4**
LL05				IAmb	IAmb	15 10 47.8	
	comp=Z,185nm,1.1s						
PARB	**Paraibuna**	**22.20**	**104**	*eP*	**P**	**15 10 21.1**	**-1.3**
CRUC	**La Cruz**	**22.29**	**339**	*eP*	**P**	**15 10 25.4**	**+1.9**
SLP01	**Ubatuba-SP**	**22.63**	**104**	*eP*	**P**	**15 10 25.2**	**-1.5**
SOTA	**Rioblanco**	**22.71**	**340**	*eP*	**P**	**15 10 28.9**	**+0.9**
MALB	**Monte Alegre**	**22.77**	**41**	*eP*	**P**	**15 10 26.1**	**-1.9**
PCON	**Cinco Dias**	**22.82**	**341**	*eP*	**P**	**15 10 31.9**	**+2.7**
BSCB	**Bom Sucesso**	**22.89**	**98**	*eP*	**P**	**15 10 28.6**	**-0.7**
PRPB	**Parauapebas**	**22.97**	**57**	*eP*	**P**	**15 10 28.0**	**-2.1**
LL01	**San Ignacio de**	**23.

NBRF **Rio Formoso -** 34.61 77 *e*P P 15 12 13.7 +0.2
MPOM **Morne Pois Mar** 34.68 14 P P 15 12 11.9 -2.1
BIM **Bigot** 34.70 14 P P 15 12 11.9 -2.4
FDF **Fort de France** 34.89 14 P P 15 12 14.1 -1.8
FDF **Fort de France** 34.89 14 P P 15 12 14.1 -1.8
FDF pmax pmax
comp=Z,90nm,1.2s
RCBR **Riachuelo** 35.05 72 LR LR 15 27 42.9
comp=Z,429nm,20.0s,baz=4.0,slow=38
RCBR **Riachuelo** 35.05 72 P P 15 12 16.8 -0.6
RCBR **Riachuelo** 35.05 72 P P 15 12 16.8 -0.6
RCBR pmax pmax
comp=Z,99nm,0.7s
RCBR **Riachuelo** 35.05 72 *e*P P 15 12 17.4 +0.1
USHA **Ushuaia** 35.29 179 P P 15 12 20.4 +1.5
comp=Z,13nm,0.7s,baz=15,slow=6.7,SNR=7.7
comp=Z,13nm,0.7s
MLPR **Magueyes Islan** 37.27 3 P P 15 12 35.1 -1.0
CRPR **Cabo Rojo, PR** 37.31 3 P P 15 12 35.2 -1.2
CRPR IAmb IAmb 15 13 03.9
comp=Z,31nm,1.0s
OBIP **Obispado Ponce** 37.37 4 P P 15 12 35.5 -1.4
OBIP IAmb IAmb 15 12 53.4
comp=Z,24nm,0.9s
PDPR **Patillas Dam,** 37.39 5 P P 15 12 35.4 -1.7
PDPR IAmb IAmb 15 13 04.7
comp=Z,44nm,1.1s
CELP **Cerrillos** 37.41 4 P P 15 12 36.6 -0.7
SJG **San Juan** 37.47 5 P P 15 12 35.5 -2.3
SJG IAmb IAmb 15 13 04.9
comp=Z,35nm,1.1s
SJG **San Juan** 37.47 5 P P 15 12 35.5 -2.3
SJG pmax pmax
comp=Z,35nm,1.1s
MTP **Monte Pirata** 37.51 6 P P 15 12 35.6 -2.5
MTP IAmb IAmb 15 12 37.4
comp=Z,21nm,0.9s
HUMP **Col San Antoni** 37.53 5 P P 15 12 36.9 -1.3
HUMP IAmb IAmb 15 12 42.4
comp=Z,34nm,1.3s
CBYP **Canovanas** 37.66 5 P P 15 12 37.1 -2.3
CBYP IAmb IAmb 15 13 06.6
comp=Z,22nm,0.8s
GCPR **Guaynabo City** 37.67 5 P P 15 12 37.5 -2.0
GCPR IAmb IAmb 15 12 55.6
comp=Z,19nm,0.9s
CUPR **Culebra, Puert** 37.74 6 P P 15 12 37.9 -2.2
EMPR **Esperanza - Ma** 37.81 4 P P 15 12 38.5 -2.1
TGUH **Tegucigalpa,Un** 37.82 330 P P 15 12 41.3 +0.4
TGUH IAmb IAmb 15 12 42.9
comp=Z,60nm,1.1s
GTBY **Guantanamo Bay** 39.60 351 P P 15 12 53.9 -1.7
SOR **Soroa** 44.15 341 P P 15 13 32.9 +0.3
SOR IAmb IAmb 15 14 01.6
comp=Z,70nm,1.3s
SOR **Soroa** 44.15 341 P P 15 13 32.9 +0.3
SOR pmax pmax
comp=Z,70nm,1.3s
ORCD **Orcadas** 44.69 163 P P 15 13 36.3 -0.1
PMSA **Palmer Station** 45.39 177 LR LR 15 32 26.0
comp=Z,57nm,21.1s,baz=344,slow=35
061Z **Ochoppi** 46.51 345 P P 15 13 51.8 +0.7
SMAI **San Martin Ant** 48.65 179 P P 15 14 08.4 +1.2
SMAI IAmb IAmb 15 14 10.3
comp=Z,36nm,1.0s
656A **Willston** 50.26 345 P P 15 14 19.9 0.0
656A **Willston** 50.26 345 P P 15 14 20.2 +0.3
baz=163,SNR=5.4
456A **Hilliard** 51.44 346 P P 15 14 28.6 -0.1
456A **Hilliard** 51.44 346 P P 15 14 29.7 +1.0
baz=164
BBSR **BB Station** 51.73 5 P P 15 14 29.5 -1.3
BBSR IAmb IAmb 15 14 32.7
comp=Z,34nm,0.9s
TIGA **Tifton** 52.50 344 P P 15 14 36.4 -0.2
TIGA **Tifton** 52.50 344 P P 15 14 36.6 +0.1
baz=163
TIGA **Tifton** 52.50 344 P P 15 14 36.7 +0.1
baz=163
255A **Hazlehurst** 52.70 346 P P 15 14 37.6 -0.4
255A **Hazlehurst** 52.70 346 P P 15 14 37.9 -0.1
baz=164
352A **Blakely** 52.89 343 P P 15 14 38.9 -0.6
352A **Blakely** 52.89 343 P P 15 14 39.5 0.0
baz=161,SNR=5.1
BRAL **Brewton** 53.23 341 P P 15 14 41.7 -0.2
baz=159
NHSC **New Hope** 53.35 348 P P 15 14 42.8 0.0
NHSC **New Hope** 53.35 348 P P 15 14 43.3 +0.5
baz=167
154A **Montrose** 53.50 345 P P 15 14 43.3 -0.6
154A **Montrose** 53.50 345 P P 15 14 43.8 -0.1
baz=164
250A **Grady** 53.74 342 P P 15 14 45.0 -0.6
250A **Grady** 53.74 342 P P 15 14 45.6 0.0
baz=160,SNR=5.6
HAW **Hawthorne Fire** 53.88 347 P P 15 14 46.5 -0.2
baz=165
152A **Waverly Hall** 53.96 344 P P 15 14 46.4 -0.9
152A IAmb IAmb 15 15 15.7
comp=Z,30nm,1.0s
152A **Waverly Hall** 53.96 344 P P 15 14 46.9 -0.4
baz=162,SNR=9.2
Y58A **Scranton** 54.03 349 P P 15 14 47.5 -0.2
Y58A IAmb IAmb 15 14 51.3
comp=Z,35nm,0.9s
346A **Big Creek Wild** 54.22 338 P P 15 14 48.4 -0.7
346A IAmb IAmb 15 14 49.5
comp=Z,33nm,0.8s
Y57A **Sumter** 54.27 348 P P 15 14 49.3 -0.2
GOGA **Godfrey** 54.35 345 P P 15 14 48.9 -1.2
GOGA **Godfrey** 54.35 345 P P 15 14 48.9 -1.2
GOGA pmax pmax
comp=Z,14nm,1.0s
GOGA **Godfrey** 54.35 345 P P 15 14 48.8 -1.2
baz=163,SNR=6.6
GOGA **Godfrey** 54.35 345 P P 15 14 49.5 -0.5
baz=163,SNR=6.6
X58A **Rowland** 54.61 350 P P 15 14 51.6 -0.3
X58A IAmb IAmb 15 14 54.2
comp=Z,11nm,0.7s
Z51A **Franklin** 54.70 344 P P 15 14 51.9 -0.7
344A **Westbrook Farm** 54.73 337 P P 15 14 52.7 -0.1
344A IAmb IAmb 15 14 53.9
comp=Z,31nm,0.9s
344A **Westbrook Farm** 54.73 337 P P 15 14 52.9 +0.1
baz=155,SNR=5.5
HODGE **Hodges** 54.86 347 P P 15 14 53.5 -0.3
baz=165
BIRD **Birdtown, Kers** 54.90 349 P P 15 14 54.1 +0.1
baz=167
Y52A **Lilburn** 54.93 345 P P 15 14 53.5 -0.8
Y52A **Lilburn** 54.93 345 P P 15 14 53.8 -0.4
baz=163
Y52A P P 15 14 53.8 -0.4
baz=163
LRAL **Lakeview Retre** 54.95 342 P P 15 14 53.3 -1.1
LRAL IAmb IAmb 15 15 22.2
comp=Z,23nm,1.1s
LRAL **Lakeview Retre** 54.95 342 P P 15 14 53.7 -0.7
baz=159,SNR=11
LRAL **Lakeview Retre** 54.95 342 P P 15 14 53.7 -0.7
baz=159,SNR=11
441A **DeRidder** 55.05 335 P P 15 14 54.9 -0.2
441A **DeRidder** 55.05 335 P P 15 14 56.8 +1.6
baz=152,SNR=5.0
146A **Union** 55.22 339 P P 15 14 56.2 -0.2
146A **Union** 55.22 339 P P 15 14 56.3 -0.1
baz=157
342A **Flagon Creek P** 55.26 336 P P 15 14 56.6 0.0
342B **Flagon Creek P** 55.26 336 P P 15 14 57.6 +1.0
baz=153,SNR=6.3
W57A **Gilead** 55.31 349 P P 15 14 56.5 -0.4
W57A IAmb IAmb 15 15 25.8
comp=Z,19nm,0.9s
W57A **Gilead** 55.31 349 P P 15 14 56.8 -0.1
baz=167,SNR=5.2
W57A P P 15 14 56.8 -0.1
baz=167,SNR=5.2
PAULI **Pauline** 55.34 347 P P 15 14 56.9 -0.2
baz=165
Z47A **Carrollton** 55.42 341 P P 15 14 57.3 -0.5
baz=158
735A **Kenedy** 55.47 329 P P 15 14 58.0 -0.2
HKT **Hockley** 55.48 332 P P 15 14 58.1 -0.1
HKT IAmb IAmb 15 15 00.2
comp=Z,38nm,1.2s
HKT **Hockley** 55.48 332 *i* P P 15 14 58.8 +0.6
HKT pmax pmax
comp=Z,45nm,1.4s
HKT **Hockley** 55.48 332 P P 15 14 58.8 +0.6
baz=149
HKT **Hockley** 55.48 332 ⇓P P 15 14 58.9 +0.8
HKT pP pP 15 15 29.5 +4.1
HKT sP sP 15 15 38.6 +0.8
Y49A **Blount Mountai** 55.55 343 P P 15 14 57.1 -1.6
Y49A IAmb IAmb 15 15 26.4
comp=Z,20nm,0.9s
Y49A **Blount Mountai** 55.55 343 P P 15 14 57.9 -0.8
baz=160,SNR=6.2
KMSC **Kings Mountain** 55.55 348 P P 15 14 58.2 -0.5
KMSC IAmb IAmb 15 14 59.7
comp=Z,28nm,0.8s
KMSC **Kings Mountain** 55.55 348 P P 15 14 58.5 -0.1
baz=166,SNR=11
KMSC **Kings Mountain** 55.55 348 P P 15 14 58.9 +0.2
baz=166,SNR=11
CASEE **Lake Jocassee** 55.74 346 P P 15 14 59.8 -0.3
baz=164
V58A **Windy Hill, Pi** 55.78 350 P P 15 14 59.5 -0.8
V58A **Windy Hill, Pi** 55.78 350 P P 15 14 59.9 -0.4
baz=168
V58A P P 15 14 59.9 -0.4
baz=168
X51A **Calhoun** 55.80 344 P P 15 14 59.9 -0.6
baz=162,SNR=7.4
X51A P P 15 14 59.9 -0.6
baz=162,SNR=7.4
833A **Chaparral WMA,** 55.82 328 P P 15 14 59.6 -1.1
833A **Chaparral WMA,** 55.82 328 P P 15 15 01.4 +0.6
baz=145,SNR=18
833A **Chaparral WMA,** 55.82 328 P P 15 15 01.5 +0.8
baz=145,SNR=18
FPAL **Fort Paine** 55.97 344 P P 15 15 00.2 -1.5
FPAL IAmb IAmb 15 15 29.5
comp=Z,15nm,0.9s
W52A **Murphy** 56.07 345 P P 15 15 01.1 -1.4
W52A IAmb IAmb 15 15 03.2
comp=Z,24nm,1.1s
W52A **Murphy** 56.07 345 P P 15 15 01.7 -0.7
baz=163,SNR=8.0
143A **Socs Landing,** 56.10 337 P P 15 15 02.1 -0.5
143A IAmb IAmb 15 15 05.8
comp=Z,21nm,0.9s
143A **Socs Landing,** 56.10 337 P P 15 15 02.6 0.0
baz=154
U59A **Littleton** 56.13 352 P P 15 15 02.6 -0.2
baz=170
U59A P P 15 15 02.6 -0.2
baz=170
V55A **Taylorsville** 56.21 348 P P 15 15 03.0 -0.4
V55A **Taylorsville** 56.21 348 P P 15 15 03.6 +0.2
baz=166,SNR=17
V55A P P 15 15 03.6 +0.2
baz=166,SNR=17
X48A **Hartselle** 56.28 342 P P 15 15 03.0 -0.9
X48A IAmb IAmb 15 15 31.9
comp=Z,41nm,1.1s
X48A **Hartselle** 56.28 342 P P 15 15 03.4 -0.6
baz=160,SNR=13
V53A **Saluda** 56.37 347 P P 15 15 03.7 -0.8
V53A IAmb IAmb 15 15 05.3
comp=Z,13nm,0.8s
V53A **Saluda** 56.37 347 P P 15 15 04.4 -0.1
baz=164,SNR=7.6
V53A P P 15 15 04.4 -0.1
baz=164,SNR=7.6
Y45A **Yeager Farm, C** 56.51 340 P P 15 15 04.7 -0.8
Y45A **Yeager Farm, C** 56.51 340 P P 15 15 05.2 -0.4
baz=157
W50A **Signal Mountai** 56.51 344 P P 15 15 04.5 -1.1
W50A IAmb IAmb 15 15 06.1
comp=Z,28nm,0.9s
W50A pP 15 15 31.4 -1.5
W50A **Signal Mountai** 56.51 344 P P 15 15 05.2 -0.4
baz=162,SNR=8.2
NATX **Nacogdoches** 56.53 334 P P 15 15 04.6 -1.1
NATX **Nacogdoches** 56.53 334 P P 15 15 07.0 +1.2
baz=151,SNR=5.6
NATX **Nacogdoches** 56.53 334 P P 15 15 07.2 +1.4
baz=151,SNR=5.6
U56A **King** 56.54 349 P P 15 15 05.0 -0.7
U56A IAmb IAmb 15 15 07.3
comp=Z,31nm,1.1s
U56A **King** 56.54 349 P P 15 15 06.4 +0.6
baz=167
U56A P P 15 15 06.4 +0.6
baz=167
CPCT **Cooper Cave** 56.55 345 P P 15 15 05.1 -0.7
CPCT IAmb IAmb 15 15 06.3
comp=Z,22nm,1.0s
TKL **Tuckaleechee C** 56.57 346 LR LR 15 42 51.9
comp=Z,34nm,18.5s,baz=148,slow=40
TKL **Tuckaleechee C** 56.57 346 P P 15 15 04.7 -1.3
TKL IAmb IAmb 15 15 06.3
comp=Z,28nm,0.9s
TKL **Tuckaleechee C** 56.57 346 P P 15 15 04.7 -1.3
TKL pmax pmax
comp=Z,28nm,0.9s
TKL **Tuckaleechee C** 56.57 346 P P 15 15 05.2 -0.8
baz=163,SNR=14
SWET **Sewanee** 56.69 344 P P 15 15 05.6 -1.3
SWET IAmb IAmb 15 15 34.7
comp=Z,30nm,0.8s
V52A **Sevierville** 56.71 346 P P 15 15 05.8 -1.1
V52A IAmb IAmb 15 15 07.4
comp=Z,40nm,0.9s
V52A **Sevierville** 56.71 346 P P 15 15 06.6 -0.4
baz=164,SNR=22
T59A **Double "B" Far** 56.71 352 P P 15 15 06.0 -0.9
T59A IAmb IAmb 15 15 10.2
comp=Z,14nm,0.9s
T59A **Double "B" Far** 56.71 352 P P 15 15 06.7 -0.2
baz=170,SNR=5.7
T59A P P 15 15 06.7 -0.2
baz=170,SNR=5.7
V51A **Loudon** 56.85 345 P P 15 15 06.9 -1.0
V51A IAmb IAmb 15 15 08.3
comp=Z,14nm,0.8s
V51A **Loudon** 56.85 345 P P 15 15 07.4 -0.5
baz=163,SNR=6.5
435B **Jarrell** 56.98 331 P P 15 15 08.4 -0.6
435B IAmb IAmb 15 15 10.2
comp=Z,33nm,0.8s
435B **Jarrell** 56.98 331 P P 15 15 09.2 +0.2
baz=148,SNR=5.3
435B **Jarrell** 56.98 331 P P 15 15 09.4 +0.5
baz=148
U54A **Nelsons Funny** 56.98 348 P P 15 15 08.1 -0.8
U54A **Nelsons Funny** 56.98 348 P P 15 15 09.0 +0.1
baz=166,SNR=14
U54A P P 15 15 09.0 +0.1
baz=166,SNR=14
T57A **Hurt** 56.98 350 P P 15 15 09.0 +0.2
baz=168
T57A P P 15 15 09.0 +0.2
baz=168
OXF **Oxford** 57.06 340 P P 15 15 07.9 -1.5
OXF **Oxford** 57.06 340 P P 15 15 07.9 -1.5
OXF pmax pmax
comp=Z,40nm,0.9s
OXF **Oxford** 57.06 340 P P 15 15 08.3 -1.2
baz=157,SNR=9.8
OXF **Oxford** 57.06 340 P P 15 15 08.5 -0.9
baz=157,SNR=9.8
PLAL **Pickwick Lake** 57.08 341 P P 15 15 07.6 -1.9
PLAL IAmb IAmb 15 15 37.0
comp=Z,27nm,1.1s
Z41A **Richland Creek** 57.11 336 P P 15 15 08.6 -1.2
Z41A IAmb IAmb 15 15 11.8
comp=Z,24nm,0.9s
Z41A **Richland Creek** 57.11 336 P P 15 15 10.3 +0.5
baz=153
237A **Washetta, Mont** 57.23 333 P P 15 15 11.9 +1.3
baz=150,SNR=8.0
CCAR **Cane Creek** 57.32 338 P P 15 15 10.8 -0.5
CCAR IAmb IAmb 15 15 12.5
comp=Z,37nm,0.8s
TZTN **Tazewell** 57.37 346 P P 15 15 10.9 -0.7
TZTN IAmb IAmb 15 15 12.1
comp=Z,16nm,1.0s
TZTN **Tazewell** 57.37 346 P P 15 15 11.2 -0.4
baz=164
BLA **Blacksburg** 57.39 349 P P 15 15 11.5 -0.3
BLA **Blacksburg** 57.39 349 P P 15 15 11.5 -0.3
BLA pmax pmax
comp=Z,10.0nm,0.8s
BLA **Blacksburg** 57.39 349 P P 15 15 11.8 0.0
baz=167
V48A **Smith Brothers** 57.43 343 P P 15 15 11.0 -1.0
V48A **Smith Brothers** 57.43 343 P P 15 15 11.4 -0.6
baz=160,SNR=17
W45A **Hickory Valley** 57.58 341 P P 15 15 11.7 -1.4
W45A **Hickory Valley** 57.58 341 P P 15 15 12.1 -1.0
baz=157,SNR=12
WLAR **White Oak Lake** 57.61 336 P P 15 15 13.2 -0.1
CLTN **Cedars of Leba** 57.62 344 P P 15 15 12.4 -0.9
CLTN IAmb IAmb 15 15 13.7
comp=Z,29nm,0.8s
S57A **Dark Hollow, R** 57.69 351 P P 15 15 14.1 +0.3
baz=169
S57A P P 15 15 14.1 +0.3
baz=169
R58B **Mineral** 57.73 352 P P 15 15 13.5 -0.6
JCT **Junction City** 57.78 329 P P 15 15 13.7 -1.0
JCT IAmb IAmb 15 15 15.8
comp=Z,27nm,0.9s
JCT **Junction City** 57.78 329 P P 15 15 13.7 -1.0
JCT pmax pmax
comp=Z,27nm,0.9s
JCT **Junction City** 57.78 329 P P 15 15 14.9 +0.2
baz=145,SNR=13
JCT **Junction City** 57.78 329 P P 15 15 14.9 +0.2
baz=145,SNR=13
U49A **Red Boiling Sp** 57.88 344 P P 15 15 13.9 -1.2
U49A IAmb IAmb 15 15 14.8
comp=Z,16nm,0.7s
U49A **Red Boiling Sp** 57.88 344 P P 15 15 14.4 -0.7
baz=161,SNR=13
WHTX **Lake Whitney,** 57.94 332 P P 15 15 15.2 -0.5
WHTX **Lake Whitney,** 57.94 332 P P 15 15 15.8 +0.2
baz=148,SNR=10
WHTX **Lake Whitney,** 57.94 332 P P 15 15 15.9 +0.2
baz=148,SNR=10
Z38A **Mt. Pleasant** 57.97 334 P P 15 15 15.9 +0.1
Z38A **Mt. Pleasant** 57.97 334 P P 15 15 16.8 +0.9
baz=151,SNR=12
WVT **Waverly** 58.08 342 P P 15 15 15.0 -1.5
WVT IAmb IAmb 15 15 44.0
comp=Z,38nm,0.9s
WVT **Waverly** 58.08 342 P P 15 15 15.0 -1.5
WVT pmax pmax
comp=Z,38nm,1.0s
WVT **Waverly** 58.08 342 P P 15 15 15.3 -1.2
baz=159,SNR=36
WVT **Waverly** 58.08 342 P P 15 15 15.4 -1.2
baz=159
WVT **Waverly** 58.08 342 ⇓P P 15 15 15.3 -1.2
WVT pP pP 15 15 43.0 -0.9
WVT sP sP 15 15 55.2 -1.1
S54A **Dingess, Beckl** 58.12 349 P P 15 15 16.3 -0.6
S54A **Dingess, Beckl** 58.12 349 P P 15 15 17.0 +0.1
baz=166,SNR=16
S54A P P 15 15 17.0 +0.1
baz=166,SNR=16
T50A **Nancy** 58.12 345 P P 15 15 15.2 -1.7
T50A IAmb IAmb 15 15 16.9
comp=Z,16nm,0.8s
T50A **Nancy** 58.12 345 P P 15 15 15.8 -1.1
baz=162
T50A P P 15 15 15.8 -1.1
baz=162
X40A **Basin Creek Fa** 58.22 337 P P 15 15 16.5 -1.1
X40A **Basin Creek Fa** 58.22 337 P P 15 15 16.9 -0.7
baz=154
UALR **University of** 58.30 338 P P 15 15 17.1 -1.0
UALR IAmb IAmb 15 15 18.7
comp=Z,52nm,1.4s
HALT **Halls** 58.33 341 P P 15 15 17.0 -1.3
R55A **Marlinton** 58.38 350 P P 15 15 19.0 +0.3
R55A IAmb IAmb 15 15 21.3
comp=Z,13nm,0.9s
R55A **Marlinton** 58.38 350 P P 15 15 19.4 +0.7
baz=168,SNR=5.9
R55A P P 15 15 19.4 +0.7
baz=168,SNR=5.9
S51A **Beattyville** 58.43 347 P P 15 15 17.4 -1.6
S51A IAmb IAmb 15 15 19.2
comp=Z,11nm,0.8s
S51A **Beattyville** 58.43 347 P P 15 15 18.1 -0.9
baz=164,SNR=6.3
S51A P P 15 15 18.1 -0.9
baz=164,SNR=6.3
LNXT **Lenox** 58.55 341 P P 15 15 19.1 -0.7
MIAR **Mount Ida** 58.55 336 P P 15 15 19.1 -0.8
MIAR IAmb IAmb 15 15 20.8
comp=Z,42nm,1.1s
MIAR **Mount Ida** 58.55 336 P P 15 15 19.1 -0.8
MIAR pmax pmax
comp=Z,42nm,1.1s
MIAR **Mount Ida** 58.55 336 P P 15 15 19.8 -0.1
baz=153,SNR=22
MIAR **Mount Ida** 58.55 336 P P 15 15 19.6 -0.2
baz=153,SNR=22
W41B **Gary Mavity, V** 58.62 338 P P 15 15 19.3 -1.0
W41B IAmb IAmb 15 15 20.3
comp=Z,13nm,0.8s
W41B **Gary Mavity, V** 58.62 338 P P 15 15 19.2 -1.2
baz=154,SNR=10
W41B **Gary Mavity, V** 58.62 338 P P 15 15 19.4 -1.0
baz=154,SNR=10
GLAT **Glass** 58.64 341 P P 15 15 18.5 -2.0
PEBM **Pemiscott Bayo** 58.68 340 P P 15 15 20.1 -0.5
T47A **Sharon Grove** 58.68 343 P P 15 15 19.6 -1.1
T47A **Sharon Grove** 58.68 343 P P 15 15 19.9 -0.7
baz=160,SNR=23
WHAR **Wooly Hollow** 58.74 338 P P 15 15 20.4 -0.7
WHAR IAmb IAmb 15 15 21.6
comp=Z,15nm,0.9s
R53A **Hurricane** 58.76 348 P P 15 15 20.7 -0.5
R53A IAmb IAmb 15 15 22.0
comp=Z,28nm,1.0s
R53A **Hurricane** 58.76 348 P P 15 15 20.1 -1.2
baz=166,SNR=6.6
R53A P P 15 15 20.1 -1.2
baz=166,SNR=6.6
TXAR **Lajitas Array** 58.87 325 P P 15 15 22.1 -0.3
comp=Z,5.9nm,0.8s,baz=148,slow=8.0,SNR=65
TXAR pP pP 15 15 48.8 -0.8
comp=Z,2.9nm,0.9s,baz=145,slow=4.6,SNR=3.5
comp=Z,5.9nm,0.8s
TXAR **Lajitas Array** 58.87 325 P P 15 15 21.5 -0.9
TX31 **Lajitas Ar. Si** 58.87 325 P P 15 15 21.7 -0.7
TX31 IAmb IAmb 15 15 23.1
comp=Z,28nm,0.9s
TX31 **Lajitas Ar. Si** 58.87 325 P P 15 15 22.2 -0.2
baz=141,SNR=18
TX32 **Lajitas Array** 58.87 325 P P 15 15 21.5 -0.8
Q56A **Snyder Ridge,** 58.98 351 P P 15 15 23.3 +0.6
baz=169
Q56A P P 15 15 23.3 +0.6
baz=169
Z35A **Perchaven, San** 58.99 333 P P 15 15 22.3 -0.6
Z35A **Perchaven, San** 58.99 333 P P 15 15 23.3 +0.4
baz=149,SNR=11
LCAR **Lake Charles** 59.06 339 P P 15 15 22.0 -1.3
LCAR IAmb IAmb 15 15 23.5
comp=Z,18nm,0.9s
LCAR **Lake Charles** 59.06 339 P P 15 15 22.5 -0.8
baz=156,SNR=17
T45B **Paducah** 59.14 342 P P 15 15 23.1 -0.8
baz=158,SNR=5.4
T45A **Paducah** 59.14 342 P P 15 15 22.8 -1.1
PARMO **Parma** 59.15 341 P P 15 15 23.2 -0.7
Q54A **Coxs Mills** 59.19 349 P P 15 15 23.6 -0.6
Q54A IAmb IAmb 15 15 25.0
comp=Z,20nm,0.8s
Q54A **Coxs Mills** 59.19 349 P P 15 15 23.9 -0.2
baz=167,SNR=10
Q54A P P 15 15 23.9 -0.2
baz=167,SNR=10
W39A **Magazine** 59.21 337 P P 15 15 24.0 -0.4
W39A **Magazine** 59.21 337 P P 15 15 24.7 +0.3
baz=153,SNR=28
W39A **Magazine** 59.21 337 P P 15 15 24.6 +0.3
baz=153,SNR=28
R50A **Paris** 59.21 346 P P 15 15 23.4 -0.9

R50A IAmb IAmb 15 15 24.7
comp=Z,20nm,0.9s
R50A Paris 59.21 346 P **P** **15 15 23.5 -0.8**
R50A baz=163,SNR=6.9 P **P** **15 15 23.5 -0.8**
baz=163,SNR=6.9
FCAR Ozark Folk Cen 59.23 338 P **P** **15 15 23.2 -1.3**
FCAR IAmb IAmb 15 15 24.6
comp=Z,16nm,0.8s
P57A Homestead Farm 59.24 352 P **P** **15 15 25.1 +0.5**
P57A baz=170 P **P** **15 15 25.1 +0.5**
baz=170
X37A Clayton 59.29 335 **P** **15 15 24.4 -0.6**
X37A Clayton 59.29 335 P **P** **15 15 25.6 +0.6**
baz=151,SNR=47
R49A Shelbyville 59.41 345 P **P** **15 15 24.7 -1.0**
R49A IAmb IAmb 15 15 25.8
comp=Z,13nm,0.8s
R49A Shelbyville 59.41 345 P **P** **15 15 25.0 -0.7**
baz=162
R49A P **P** **15 15 25.0 -0.7**
baz=162
Q52A Bidwell 59.43 348 P **P** **15 15 25.1 -0.7**
Q52A IAmb IAmb 15 15 26.4
comp=Z,23nm,0.8s
Q52A Bidwell 59.43 348 P **P** **15 15 25.9 +0.1**
baz=166
Q52A P **P** **15 15 25.9 +0.1**
baz=166
PBMO Poplar Bluff 59.47 340 P **P** **15 15 25.1 -1.0**
PBMO Poplar Bluff 59.47 340 P **P** **15 15 25.4 -0.7**
baz=156,SNR=16
ABTX Abilene, Hawle 59.47 330 P **P** **15 15 25.7 -0.6**
ABTX Abilene, Hawle 59.47 330 P **P** **15 15 26.4 0.0**
baz=146,SNR=15
ABTX Abilene, Hawle 59.47 330 P **P** **15 15 26.2 -0.1**
baz=146,SNR=15
MVL Millersville 59.56 354 P **P** **15 15 26.6 -0.1**
MVL IAmb IAmb 15 15 56.0
comp=Z,8.9nm,0.8s
TUPA Temple Univers 59.61 355 P **P** **15 15 27.0 0.0**
baz=173
MCWV Mont Chateau 59.68 350 P **P** **15 15 27.4 -0.2**
MCWV IAmb IAmb 15 15 28.9
comp=Z,19nm,0.8s
MCWV Mont Chateau 59.68 350 P **P** **15 15 28.3 +0.8**
baz=168
MCWV Mont Chateau 59.68 350 P **P** **15 15 28.2 +0.7**
baz=168
Q51A Peebles 59.71 347 P **P** **15 15 26.7 -1.1**
Q51A IAmb IAmb 15 15 28.1
comp=Z,23nm,1.1s
Q51A Peebles 59.71 347 P **P** **15 15 27.1 -0.7**
baz=164,SNR=5.8
Q51A P **P** **15 15 27.1 -0.7**
baz=164,SNR=5.8
P53A Whipple 59.77 349 P **P** **15 15 27.9 -0.2**
P53A Whipple 59.77 349 P **P** **15 15 28.1 0.0**
baz=166,SNR=16
P53A P **P** **15 15 28.1 0.0**
baz=166,SNR=16
U40A Yellville 59.90 338 P **P** **15 15 28.2 -1.0**
U40A IAmb IAmb 15 15 29.6
comp=Z,27nm,0.8s
U40A Yellville 59.90 338 P **P** **15 15 28.5 -0.6**
baz=154,SNR=25
U40A P **P** **15 15 28.5 -0.6**
baz=154,SNR=25
U40A Yellville 59.90 338 P **P** **15 15 28.6 -0.5**
baz=154,SNR=25
S44A Carbondale 59.95 342 P **P** **15 15 28.1 -1.3**
S44A Carbondale 59.95 342 P **P** **15 15 28.8 -0.6**
baz=158,SNR=12
SIUC Southern Illin 59.95 342 P **P** **15 15 28.3 -1.1**
P52A Corning 60.05 348 P **P** **15 15 29.1 -1.0**
P52A Corning 60.05 348 P **P** **15 15 29.7 -0.4**
baz=166,SNR=12
BRNJ Basking Ridge 60.07 355 P **P** **15 15 29.8 -0.4**
BRNJ IAmb IAmb 15 15 34.2
comp=Z,14nm,0.9s
P51A Williamsport 60.09 348 P **P** **15 15 29.4 -0.9**
P51A IAmb IAmb 15 15 30.5
comp=Z,28nm,1.1s
P51A Williamsport 60.09 348 P **P** **15 15 29.5 -0.9**
baz=165,SNR=6.3
P51A P **P** **15 15 29.5 -0.9**
baz=165,SNR=6.3
HHAR Hobbs 60.23 337 P **P** **15 15 30.4 -0.9**
HHAR IAmb IAmb 15 15 32.0
comp=Z,43nm,1.1s
HHAR Hobbs 60.23 337 P **P** **15 15 31.1 -0.3**
baz=153
O54A Avella 60.28 350 P **P** **15 15 31.2 -0.4**
O54A IAmb IAmb 15 15 32.0
comp=Z,16nm,0.8s
O54A Avella 60.28 350 P **P** **15 15 31.4 -0.2**
baz=168,SNR=7.3
O54A P **P** **15 15 31.4 -0.2**
baz=168,SNR=7.3
X34A Smith Ranch, M 60.32 333 **P** **15 15 31.8 -0.2**
PAL Palisades 60.34 356 P **P** **15 15 31.1 -0.9**
PAL Palisades 60.34 356 P **P** **15 15 31.1 -0.9**
PAL pmax pmax
comp=Z,8.0nm,0.8s
PAL Palisades 60.34 356 P **P** **15 15 31.6 -0.4**
baz=175
SSPA Standing Stone 60.36 352 P **P** **15 15 31.5 -0.6**
SSPA Standing Stone 60.36 352 P **P** **15 15 32.2 0.0**
baz=170
MGMO Mountain Grove 60.42 339 P **P** **15 15 31.6 -1.0**
MGMO IAmb IAmb 15 15 33.2
comp=Z,42nm,1.1s
N58A Sunbury 60.43 353 P **P** **15 15 32.0 -0.6**
O52A Adamsville 60.46 349 P **P** **15 15 32.1 -0.8**
O52A IAmb IAmb 15 15 33.4
comp=Z,27nm,0.8s
O52A Adamsville 60.46 349 P **P** **15 15 32.3 -0.6**
baz=166,SNR=12
O52A P **P** **15 15 32.3 -0.6**
baz=166,SNR=12
O53A New Philadelph 60.48 349 P **P** **15 15 32.4 -0.7**
O53A IAmb IAmb 15 15 33.8
comp=Z,26nm,0.7s
O53A New Philadelph 60.48 349 P **P** **15 15 33.0 0.0**
baz=167,SNR=7.7
P49A Miami Univ. Ec 60.49 346 P **P** **15 15 31.6 -1.5**
P49A IAmb IAmb 15 15 32.9
comp=Z,32nm,0.9s
P49A Miami Univ. Ec 60.49 346 P **P** **15 15 32.1 -1.0**
baz=163,SNR=9.1
P49A Miami Univ. Ec 60.49 346 P **P** **15 15 32.1 -1.0**
baz=163,SNR=9.1
FVM French Village 60.57 341 P **P** **15 15 32.8 -0.9**
FVM French Village 60.57 341 P **P** **15 15 32.8 -0.9**
FVM pmax pmax
comp=Z,52nm,0.7s
FVM French Village 60.57 341 P **P** **15 15 33.3 -0.4**
baz=157,SNR=29
BLO Bloomington 60.58 345 P **P** **15 15 31.9 -1.8**
BLO IAmb IAmb 15 15 33.7
comp=Z,31nm,1.1s
BLO Bloomington 60.58 345 P **P** **15 15 31.9 -1.8**
BLO pmax pmax
comp=Z,31nm,1.1s
P48A Milroy 60.59 346 P **P** **15 15 32.2 -1.6**
P48A IAmb IAmb 15 15 32.8
comp=Z,17nm,0.6s
P48A Milroy 60.59 346 P **P** **15 15 32.4 -1.3**
baz=162,SNR=6.8
P48A P **P** **15 15 32.4 -1.3**
baz=162,SNR=6.8
TUL1 Leonard 60.61 335 **P** **15 15 33.1 -0.8**
TUL1 Leonard 60.61 335 P **P** **15 15 33.7 -0.3**
baz=151,SNR=18
TUL1 Leonard 60.61 335 P **P** **15 15 34.0 0.0**
baz=151,SNR=18
FNO Franklin 60.70 334 **P** **15 15 33.9 -0.7**
BELA Belgrano 2 60.76 172 P **P** **15 15 35.4 +0.9**
BELA IAmb IAmb 15 15 37.5
comp=Z,34nm,1.3s
ACSO Alum Creek Sta 60.80 348 P **P** **15 15 34.4 -0.8**
ACSO Alum Creek Sta 60.80 348 P **P** **15 15 34.7 -0.4**
baz=165,SNR=11
ACSO Alum Creek Sta 60.80 348 P **P** **15 15 34.7 -0.4**
baz=165,SNR=11

WMOK Wichita Mounta 60.85 332 P **P** **15 15 34.8 -0.9**
WMOK Wichita Mounta 60.85 332 P **P** **15 15 34.8 -0.9**
WMOK pmax pmax
comp=Z,7.0nm,0.9s
WMOK Wichita Mounta 60.85 332 P **P** **15 15 35.3 -0.4**
baz=148
OKCFA Oklahoma City 60.85 334 P **P** **15 15 34.8 -0.8**
OKCFA IAmb IAmb 15 15 36.2
comp=Z,36nm,1.0s
CCM Cathedral Cave 60.90 340 P **P** **15 15 34.3 -1.6**
CCM IAmb IAmb 15 15 36.3
comp=Z,32nm,1.1s
CCM Cathedral Cave 60.90 340 P **P** **15 15 34.3 -1.6**
CCM pmax pmax
comp=Z,32nm,1.1s
CCM Cathedral Cave 60.90 340 P **P** **15 15 35.1 -0.8**
baz=156,SNR=20
CCM Cathedral Cave 60.90 340 P **P** **15 15 35.2 -0.7**
baz=156
CCM Cathedral Cave 60.90 340 ⇓P **P** **15 15 35.2 -0.7**
CCM pP **pP** **15 16 03.7 +0.2**
CCM sP **sP** **15 16 17.3 +1.5**
N53A Lisbon 60.96 350 P **P** **15 15 34.9 -1.3**
N53A IAmb IAmb 15 15 36.8
comp=Z,23nm,0.7s
N53A Lisbon 60.96 350 P **P** **15 15 36.2 -0.1**
baz=167,SNR=5.9
N53A P **P** **15 15 36.2 -0.1**
baz=167,SNR=5.9
M57A Sunshine Farm, 60.96 353 P **P** **15 15 35.8 -0.4**
Q44A Meyer Farm, Va 61.00 342 P **P** **15 15 34.9 -1.6**
Q44A pP **pP** **15 16 01.8 -2.4**
Q44A Meyer Farm, Va 61.00 342 P **P** **15 15 35.3 -1.2**
baz=158,SNR=10
O49A Covington 61.03 347 P **P** **15 15 35.5 -1.3**
O49A IAmb IAmb 15 15 36.9
comp=Z,33nm,1.0s
O49A Covington 61.03 347 P **P** **15 15 35.9 -0.9**
baz=164,SNR=9.6
O49A P **P** **15 15 35.9 -0.9**
baz=164,SNR=9.6
BRYW Bryant College 61.13 358 P **P** **15 15 36.8 -0.6**
P46A Rosedale 61.17 344 P **P** **15 15 35.8 -1.9**
P46A IAmb IAmb 15 15 37.5
comp=Z,35nm,1.1s
P46A Rosedale 61.17 344 P **P** **15 15 36.3 -1.4**
baz=160,SNR=5.6
S39A Bolivar 61.26 338 P **P** **15 15 37.4 -1.0**
S39A IAmb IAmb 15 15 38.9
comp=Z,34nm,0.8s
S39A Bolivar 61.26 338 P **P** **15 15 37.8 -0.6**
baz=154,SNR=35
O48B Farmland 61.28 346 P **P** **15 15 37.8 -0.7**
baz=163,SNR=11
O48B Farmland 61.28 346 P **P** **15 15 37.7 -0.7**
baz=163,SNR=11
M55A Ridgway 61.30 352 P **P** **15 15 38.3 -0.3**
N51A Ashland 61.34 349 P **P** **15 15 38.0 -0.8**
N51A IAmb IAmb 15 15 39.1
comp=Z,27nm,0.8s
MBO M'Bour 61.39 61 P **P** **15 15 39.0 -0.6**
R40A Maddies Statio 61.44 339 P **P** **15 15 38.4 -1.1**
R40A IAmb IAmb 15 15 39.4
comp=Z,17nm,0.8s
R40A Maddies Statio 61.44 339 P **P** **15 15 38.8 -0.7**
baz=155,SNR=12
QUA2 Belchertown 61.52 357 P **P** **15 15 39.3 -0.7**
M53A WI Miller and 61.55 350 P **P** **15 15 39.8 -0.4**
M53A WI Miller and 61.55 350 P **P** **15 15 40.3 +0.1**
baz=168,SNR=8.8
L59A Walton 61.60 355 P **P** **15 15 40.3 -0.3**
MNTX Cornudas Mount 61.64 325 P **P** **15 15 40.0 -1.1**
MNTX IAmb IAmb 15 15 41.6
comp=Z,18nm,0.9s
MNTX Cornudas Mount 61.64 325 P **P** **15 15 40.3 -0.7**
baz=141,SNR=26
MNTX Cornudas Mount 61.64 325 P **P** **15 15 40.5 -0.5**
baz=141,SNR=26
ALLY Alegheny Colle 61.67 351 P **P** **15 15 40.7 -0.4**
ALLY Alegheny Colle 61.67 351 P **P** **15 15 40.8 -0.2**
baz=168,SNR=8.6
BINY Binghamton 61.70 354 P **P** **15 15 40.8 -0.4**
BINY IAmb IAmb 15 15 41.9
comp=Z,13nm,0.8s
BINY Binghamton 61.70 354 P **P** **15 15 41.4 +0.2**
baz=173
N49A Columbus Grove 61.70 347 P **P** **15 15 40.1 -1.1**
N49A Columbus Grove 61.70 347 P **P** **15 15 40.5 -0.7**
baz=164,SNR=21
N49A P **P** **15 15 40.5 -0.7**
baz=164,SNR=21
L61B Northampton 61.71 357 P **P** **15 15 40.5 -0.7**
L61B IAmb IAmb 15 15 44.3
comp=Z,32nm,1.5s
L61B Northampton 61.71 357 P **P** **15 15 41.1 -0.2**
baz=176
HRV Adam Dziewonsk 61.72 358 P **P** **15 15 40.8 -0.5**
HRV IAmb IAmb 15 15 45.1
comp=Z,11nm,0.8s
HRV Adam Dziewonsk 61.72 358 P **P** **15 15 40.8 -0.5**
HRV pmax pmax
comp=Z,11nm,0.8s
M52A Chesterland 61.76 350 P **P** **15 15 41.0 -0.7**
M52A Chesterland 61.76 350 P **P** **15 15 41.3 -0.4**
baz=167
M52A P **P** **15 15 41.3 -0.4**
baz=167
T35A Sooner Cattle 61.77 335 **P** **15 15 41.5 -0.3**
T35B Sooner Cattle 61.77 335 P **P** **15 15 41.9 +0.1**
baz=150,SNR=23
L56A Greenwood 61.80 353 P **P** **15 15 41.4 -0.5**
L56A IAmb IAmb 15 16 11.0
comp=Z,12nm,0.8s
P43A Skaggs, Pawnee 61.83 342 P **P** **15 15 40.7 -1.4**
P43A pP **pP** **15 16 06.1 -3.7**
P43A Skaggs, Pawnee 61.83 342 P **P** **15 15 40.9 -1.2**
baz=158,SNR=14
SFIN Lafayette 61.86 344 P **P** **15 15 40.6 -1.8**
SFIN **pP** **15 16 07.4 -2.7**
SFIN Lafayette 61.86 344 P **P** **15 15 40.8 -1.5**
baz=161,SNR=13
SFIN Lafayette 61.86 344 P **P** **15 15 41.0 -1.3**
baz=161,SNR=13
K62A Royalston 61.90 357 P **P** **15 15 41.8 -0.8**
K62A IAmb IAmb 15 15 45.5
comp=Z,15nm,1.1s
M50A Fremont 61.94 348 P **P** **15 15 42.1 -0.6**
M50A IAmb IAmb 15 15 43.2
comp=Z,34nm,0.8s
N47A Urbana 62.00 346 P **P** **15 15 41.8 -1.4**
N47A Urbana 62.00 346 P **P** **15 15 41.8 -1.4**
baz=162,SNR=9.9
N47A P **P** **15 15 41.8 -1.4**
baz=162,SNR=9.9
O44A Mansfield 62.01 343 P **P** **15 15 41.6 -1.7**
O44A IAmb IAmb 15 15 42.7
comp=Z,29nm,0.7s
O44A **pP** **15 16 08.6 -2.5**
O44A Mansfield 62.01 343 P **P** **15 15 42.0 -1.3**
baz=159
VNA3 Neumayer Olymp 62.04 162 P **P** **15 15 44.9 +1.7**
TRY Troy 62.04 356 P **P** **15 15 43.5 0.0**
TRY IAmb IAmb 15 16 13.0
comp=Z,17nm,0.9s
MSTX Muleshoe 62.08 329 P **P** **15 15 43.3 -0.8**
MSTX Muleshoe 62.08 329 P **P** **15 15 44.0 -0.1**
baz=144,SNR=36
MSTX Muleshoe 62.08 329 P **P** **15 15 44.0 -0.1**
baz=144,SNR=36
ERPA Erie 62.11 351 P **P** **15 15 43.8 -0.2**
ERPA Erie 62.11 351 P **P** **15 15 44.2 +0.3**
baz=168,SNR=8.2
ERPA Erie 62.11 351 P **P** **15 15 44.2 +0.3**
baz=168,SNR=8.2
WVNY West Valley, N 62.20 352 P **P** **15 15 44.4 -0.1**
WVNY IAmb IAmb 15 16 13.9
comp=Z,25nm,0.9s
VNA1 Neumayer--Stat 62.24 161 P **P** **15 15 46.7 +2.2**
K57A Scipio Center 62.28 354 P **P** **15 15 44.6 -0.5**
K57A IAmb IAmb 15 15 49.2
comp=Z,48nm,1.4s
AMTX Amarillo 62.29 330 P **P** **15 15 44.3 -1.2**
AMTX IAmb IAmb 15 15 46.1
comp=Z,20nm,1.1s
AMTX Amarillo 62.29 330 P **P** **15 15 45.0 -0.4**
baz=145

AMTX Amarillo 62.29 330 P **P** **15 15 45.0 -0.4**
baz=145
U32A Winter Ranch, 62.33 333 **P** **15 15 45.6 0.0**
U32A IAmb IAmb 15 15 46.6
comp=Z,37nm,0.9s
MMNY Mt. Morris Dam 62.43 353 P **P** **15 15 45.6 -0.5**
MMNY IAmb IAmb 15 15 48.1
comp=Z,23nm,1.1s
P40A Paris 62.49 340 P **P** **15 15 45.5 -1.1**
P40A IAmb IAmb 15 15 47.0
comp=Z,51nm,1.1s
P40A Paris 62.49 340 P **P** **15 15 46.0 -0.5**
baz=156,SNR=20
VNA2 Neumayer--Watz 62.61 161 P **P** **15 15 48.6 +1.6**
baz=284,slow=7.8
HDIL Hopedale 62.61 343 P **P** **15 15 45.8 -1.6**
HDIL Hopedale 62.61 343 P **P** **15 15 46.1 -1.3**
baz=158,SNR=6.8
HDIL Hopedale 62.61 343 P **P** **15 15 46.0 -1.3**
baz=158,SNR=6.8
L48A N Adams 62.74 347 P **P** **15 15 47.2 -1.0**
L48A N Adams 62.74 347 P **P** **15 15 47.4 -0.8**
baz=164,SNR=11
L48A P **P** **15 15 47.4 -0.8**
baz=164,SNR=11
J58A Remsen 62.79 355 P **P** **15 15 48.3 -0.1**
J59A Piesco 62.83 356 P **P** **15 15 48.7 -0.1**
J57A Williamstown 62.90 354 P **P** **15 15 48.4 -0.8**
AAM Ann Arbor 62.92 348 P **P** **15 15 48.5 -0.8**
AAM IAmb IAmb 15 15 49.6
comp=Z,27nm,1.1s
AAM Ann Arbor 62.92 348 P **P** **15 15 48.5 -0.8**
AAM pmax pmax
comp=Z,27nm,1.1s
M44A Midewin, Midew 63.05 344 P **P** **15 15 48.4 -1.8**
M44A IAmb IAmb 15 15 49.2
comp=Z,14nm,0.7s
J54A Appleton 63.05 352 P **P** **15 15 49.6 -0.6**
J54A IAmb IAmb 15 15 50.5
comp=Z,23nm,0.8s
P38A Dawn 63.07 339 P **P** **15 15 49.4 -1.0**
P38A IAmb IAmb 15 15 50.8
comp=Z,24nm,0.7s
P38A Dawn 63.07 339 P **P** **15 15 49.8 -0.6**
baz=154,SNR=13
K50A Casco 63.19 349 P **P** **15 15 50.0 -1.1**
N41A Harden Midland 63.20 342 P **P** **15 15 49.3 -1.9**
NCB Newcomb 63.31 356 P **P** **15 15 51.8 -0.1**
LBNH Lisbon 63.46 358 P **P** **15 15 51.5 -1.4**
LBNH Lisbon 63.46 358 P **P** **15 15 51.5 -1.4**
LBNH pmax pmax
comp=Z,8.0nm,0.9s
LBNH Lisbon 63.46 358 P **P** **15 15 53.0 +0.2**
baz=177
121A Cookes Peak, D 63.59 324 P **P** **15 15 55.1 +0.9**
121A IAmb IAmb 15 15 56.0
comp=Z,17nm,0.8s
121A Cookes Peak, D 63.59 324 P **P** **15 15 55.2 +1.0**
baz=139,SNR=12
121A Cookes Peak, D 63.59 324 P **P** **15 15 55.4 +1.2**
baz=139,SNR=12
KSU1 Kansas State U 63.71 336 P **P** **15 15 54.5 -0.1**
baz=151
H62A Milan 63.77 358 P **P** **15 15 54.4 -0.5**
EMMW East Machias 63.90 1 P **P** **15 15 55.7 0.0**
R32A Long Quarter, 63.95 334 P **P** **15 15 56.0 -0.2**
R32A Long Quarter, 63.95 334 P **P** **15 15 56.4 +0.2**
baz=149,SNR=8.3
LONY Lake Ozonia 63.98 356 P **P** **15 15 56.0 -0.3**
LONY Lake Ozonia 63.98 356 P **P** **15 15 56.6 +0.3**
baz=174
HAL Halifax 64.01 4 P **P** **15 15 55.4 -1.0**
HAL Halifax 64.01 4 P **P** **15 15 55.4 -1.0**
HAL pmax pmax
comp=Z,11nm,0.8s
N38A Joes South For 64.02 340 P **P** **15 15 55.4 -1.2**
N38A IAmb IAmb 15 15 56.9
comp=Z,33nm,0.8s
J47A Sunmer 64.06 347 P **P** **15 15 55.7 -1.1**
J47A Sunmer 64.06 347 P **P** **15 15 56.1 -0.7**
baz=163,SNR=8.0
J47A P **P** **15 15 56.1 -0.7**
baz=163,SNR=8.0
L42A Oliver, Polo 64.06 343 P **P** **15 15 55.4 -1.5**
L42A IAmb IAmb 15 15 56.7
comp=Z,16nm,0.7s
L42A Oliver, Polo 64.06 343 P **P** **15 15 55.9 -1.0**
baz=158
FRNY Flat Rock 64.14 356 P **P** **15 15 57.1 -0.2**
FRNY Flat Rock 64.14 356 P **P** **15 15 57.6 +0.3**
baz=175
DELO Deloro Mine 64.16 353 P **P** **15 15 57.0 -0.4**
BNM Barren Site 64.19 326 P **P** **15 15 57.9 -0.3**
Y22A Socorro 64.20 325 P **P** **15 15 59.0 +0.8**
baz=140,SNR=8.0
SNAA Sanae 64.24 161 P **P** **15 15 59.3 +1.5**
SNAA Sanae 64.24 161 P **P** **15 15 58.0 +0.2**
SNAA Sanae 64.24 161 *ce*P **P** **15 15 58.8 +1.0**
SNAA pmax pmax
comp=Z,12nm,0.8s
I49A Point Hope 64.35 349 P **P** **15 15 57.4 -1.3**
K43A Burlington 64.36 344 P **P** **15 15 57.2 -1.6**
K43A Burlington 64.36 344 P **P** **15 15 57.9 -0.9**
baz=160,SNR=8.9
LENM Lemitar 64.38 326 P **P** **15 15 57.8 -1.5**
G62A West of Eustis 64.40 359 P **P** **15 15 59.2 +0.2**
G62A IAmb IAmb 15 16 05.2
comp=Z,18nm,0.8s
G62A West of Eustis 64.40 359 P **P** **15 15 59.8 +0.8**
baz=178
G62A P **P** **15 15 59.8 +0.8**
baz=178
PKME Peaks-Kenny Pk 64.44 360 P **P** **15 15 58.9 -0.3**
PKME Peaks-Kenny Pk 64.44 360 P **P** **15 15 58.7 -0.4**
baz=180
PKME Peaks-Kenny Pk 64.44 360 P **P** **15 15 59.2 0.0**
baz=180
L40A Anamosa 64.56 342 P **P** **15 15 58.3 -1.7**
L40A IAmb IAmb 15 16 00.4
comp=Z,34nm,0.9s
L40A Anamosa 64.56 342 P **P** **15 15 59.2 -0.8**
baz=157,SNR=6.6
SADO Sadowa 64.59 352 LR LR 15 46 16.5
comp=Z,18nm,20.6s,baz=138,slow=38
SADO Sadowa 64.59 352 P **P** **15 15 59.4 -0.9**
SADO IAmb IAmb 15 16 00.3
comp=Z,16nm,0.8s
CBKS Cedar Bluff 64.70 334 P **P** **15 16 00.4 -0.8**
CBKS Cedar Bluff 64.70 334 P **P** **15 16 00.4 -0.8**
CBKS pmax pmax
comp=Z,67nm,0.9s
CBKS Cedar Bluff 64.70 334 P **P** **15 16 01.8 +0.6**
baz=148,SNR=8.0
CBKS Cedar Bluff 64.70 334 P **P** **15 16 01.9 +0.7**
baz=148,SNR=8.0
ANMO Albuquerque 64.71 327 P **P** **15 16 01.2 -0.3**
ANMO Albuquerque 64.71 327 *i* P **P** **15 16 01.5 0.0**
ANMO pmax pmax
comp=Z,28nm,2.1s
ANMO Albuquerque 64.71 327 P **P** **15 16 02.2 +0.7**
baz=141,SNR=16
ANMO Albuquerque 64.71 327 P **P** **15 16 02.2 +0.7**
baz=141
ANMO Albuquerque 64.71 327 ⇓P **P** **15 16 02.2 +0.7**
ANMO ⇓pP **pP** **15 16 30.8 +1.4**
ANMO sP **sP** **15 16 43.2 +1.6**
MNTQ Montreal, Queb 64.80 357 P **P** **15 16 01.4 -0.2**
MNTQ IAmb IAmb 15 16 02.6
comp=Z,17nm,0.8s
N35A Tabor 64.90 338 P **P** **15 16 01.4 -0.9**
N35A Tabor 64.90 338 P **P** **15 16 01.6 -0.8**
baz=152,SNR=7.4
GBN Guysborough 64.95 6 P **P** **15 16 01.1 -1.5**
SCIA State Center 65.02 340 P **P** **15 16 02.3 -0.8**
SCIA IAmb IAmb 15 16 03.7
comp=Z,44nm,0.8s
F64A Sherman 65.04 1 P **P** **15 16 03.1 0.0**
F64A Sherman 65.04 1 P **P** **15 16 03.1 0.0**
baz=181
F64A P **P** **15 16 03.1 0.0**
baz=181
JFWS Jewell Farm 65.07 343 P **P** **15 16 02.5 -0.9**
JFWS IAmb IAmb 15 16 03.4
comp=Z,30nm,0.6s
JFWS Jewell Farm 65.07 343 P **P** **15 16 02.5 -0.9**

JFWS pmax pmax
comp=Z,30nm,0.6s
JFWS Jewell Farm 65.07 343 P **P** **15 16 02.7 -0.7**
baz=158,SNR=11
JFWS Jewell Farm 65.07 343 P **P** **15 16 02.9 -0.5**
baz=158,SNR=11
TUC Tucson 65.14 322 P **P** **15 16 03.4 -0.8**
TUC Tucson 65.14 322 P **P** **15 16 03.4 -0.8**
TUC pmax pmax
comp=Z,14nm,1.3s
TUC Tucson 65.14 322 P **P** **15 16 05.0 +0.9**
baz=136
TUC Tucson 65.14 322 P **P** **15 16 05.2 +1.0**
TUC pP **PcP** **15 16 37.1 +1.1**
TUC sP **sP** **15 16 45.9 +1.8**
LMN Caledonia Moun 65.14 3 P **P** **15 16 02.8 -1.0**
T25A Trinidad 65.41 329 P **P** **15 16 05.7 -0.3**
T25A IAmb IAmb 15 16 07.9
comp=Z,27nm,1.2s
T25A Trinidad 65.41 329 P **P** **15 16 06.8 +0.8**
baz=143,SNR=16
N33B J Bar K, Exete 65.45 337 P **P** **15 16 05.5 -0.4**
baz=150,SNR=5.3
N33A J Bar K, Exete 65.45 337 P **P** **15 16 05.0 -1.0**
GLMI Grayling 65.54 348 P **P** **15 16 05.6 -0.8**
GLMI Grayling 65.54 348 P **P** **15 16 06.2 -0.2**
baz=164
GLMI Grayling 65.54 348 P **P** **15 16 06.4 0.0**
baz=164
K38A Parkersburg 65.56 341 P **P** **15 16 05.9 -0.6**
K38A IAmb IAmb 15 16 06.9
comp=Z,43nm,1.1s
TRQ Mont Tremblant 65.58 356 P **P** **15 16 06.0 -0.6**
I42A Draeger Farm, 65.62 344 P **P** **15 16 06.1 -0.8**
I42A IAmb IAmb 15 16 07.5
comp=Z,29nm,0.8s
I42A Draeger Farm, 65.62 344 P **P** **15 16 06.3 -0.7**
baz=159,SNR=6.5
PQI Presque Isle 65.85 1 P **P** **15 16 08.2 -0.1**
H43A Windswept, Lux 65.89 345 P **P** **15 16 07.5 -1.1**
H43A IAmb IAmb 15 16 08.9
comp=Z,30nm,0.8s
H43A Windswept, Lux 65.89 345 P **P** **15 16 07.9 -0.7**
baz=161
TROLL Troll, Antarti 65.96 161 P **P** **15 16 10.8 +1.8**
G45A Suttons Bay 65.96 347 P **P** **15 16 07.8 -1.2**
G45A IAmb IAmb 15 16 35.8
comp=Z,32nm,0.8s
I40A Norwalk 66.07 343 P **P** **15 16 08.8 -1.0**
I40A IAmb IAmb 15 16 10.2
comp=Z,23nm,1.1s
I40A Norwalk 66.07 343 P **P** **15 16 09.2 -0.6**
baz=158
214A Organ Pipe Nat 66.09 320 P **P** **15 16 11.2 +0.9**
214A IAmb IAmb 15 16 12.9
comp=Z,38nm,1.0s
214A Organ Pipe Nat 66.09 320 P **P** **15 16 11.8 +1.5**
baz=135,SNR=37
KSCO Kaye Shedlock' 66.11 332 P **P** **15 16 10.5 +0.2**
KSCO IAmb IAmb 15 16 12.1
comp=Z,46nm,0.9s
KSCO Kaye Shedlock' 66.11 332 P **P** **15 16 11.2 +0.8**
baz=145,SNR=9.0
KSCO Kaye Shedlock' 66.11 332 P **P** **15 16 11.1 +0.8**
baz=145,SNR=9.0
L34A Svendsen Farm, 66.14 338 P **P** **15 16 09.7 -0.6**
L34A Svendsen Farm, 66.14 338 P **P** **15 16 10.2 -0.1**
baz=152,SNR=9.5
D62A Allapoint, All 66.25 0 P **P** **15 16 10.2 -0.7**
D62A Allapoint, All 66.25 0 P **P** **15 16 10.9 0.0**
baz=180
D62A P **P** **15 16 10.9 0.0**
baz=180
X18A Snowflake 66.28 324 P **P** **15 16 11.1 -0.5**
X18A IAmb IAmb 15 16 14.1
comp=Z,32nm,1.4s
BGNE Belgrade 66.29 337 P **P** **15 16 11.1 -0.2**
BGNE Belgrade 66.29 337 P **P** **15 16 11.7 +0.4**
baz=150,SNR=8.5
BGNE Belgrade 66.29 337 P **P** **15 16 11.6 +0.3**
baz=150,SNR=8.5
SDCO Great Sand Dun 66.42 329 P **P** **15 16 12.2 -0.4**
SDCO IAmb IAmb 15 16 14.5
comp=Z,52nm,1.2s
SDCO Great Sand Dun 66.42 329 P **P** **15 16 13.5 +0.9**
baz=142,SNR=58
SDCO Great Sand Dun 66.42 329 P **P** **15 16 13.1 +0.5**
baz=142,SNR=58
BATG Bathurst New B 66.50 2 P **P** **15 16 12.3 -0.2**
W18A Petrified Fore 66.59 324 P **P** **15 16 13.2 -0.4**
W18A IAmb IAmb 15 16 15.9
comp=Z,42nm,1.4s
W18A Petrified Fore 66.59 324 P **P** **15 16 14.7 +1.1**
baz=138,SNR=9.0
E46A Sault Ste Mari 66.97 349 P **P** **15 16 14.4 -1.1**
E46A IAmb IAmb 15 16 15.6
comp=Z,31nm,0.8s
E46A Sault Ste Mari 66.97 349 P **P** **15 16 14.8 -0.7**
baz=164,SNR=11
I37A Lemond, Waseca 66.99 341 P **P** **15 16 14.8 -0.9**
I37A IAmb IAmb 15 16 15.8
comp=Z,30nm,0.7s
I37B Waseca 66.99 341 P **P** **15 16 15.4 -0.3**
baz=155,SNR=11
S22A 4UR Ranch, Cre 67.07 328 P **P** **15 16 16.5 -0.2**
S22A 4UR Ranch, Cre 67.07 328 P **P** **15 16 17.5 +0.8**
baz=141,SNR=11
Q24A Divide 67.22 330 P **P** **15 16 17.6 0.0**
Q24A IAmb IAmb 15 16 19.5
comp=Z,36nm,0.9s
Q24A Divide 67.22 330 P **P** **15 16 18.4 +0.7**
baz=143,SNR=18
113A Mohawk Valley, 67.24 320 P **P** **15 16 16.6 -0.8**
G40A Rib Lake 67.24 344 P **P** **15 16 16.6 -0.7**
G40A Rib Lake 67.24 344 P **P** **15 16 16.8 -0.5**
baz=158
OGNE Ogallala 67.45 334 P **P** **15 16 18.4 -0.4**
OGNE IAmb IAmb 15 16 20.2
comp=Z,32nm,0.8s
OGNE Ogallala 67.45 334 P **P** **15 16 18.8 +0.1**
baz=146,SNR=5.6
OGNE Ogallala 67.45 334 P **P** **15 16 19.2 +0.5**
baz=146,SNR=5.6
MVCO Mesa Verde 67.51 327 P **P** **15 16 19.0 -0.4**
MVCO IAmb IAmb 15 16 20.8
comp=Z,16nm,0.8s
MVCO Mesa Verde 67.51 327 P **P** **15 16 20.2 +0.8**
baz=140,SNR=14
E43A Lone Tree Farm 67.52 347 P **P** **15 16 17.7 -1.2**
E43A IAmb IAmb 15 16 19.1
comp=Z,19nm,0.9s
E43A Lone Tree Farm 67.52 347 P **P** **15 16 18.2 -0.8**
baz=162
K31A O'Neill 67.57 337 P **P** **15 16 18.4 -1.0**
VLDQ Val d'Or 67.70 354 P **P** **15 16 19.7 -0.3**
ECSD EROS Data Cent 67.78 339 P **P** **15 16 19.8 -0.8**
ECSD IAmb IAmb 15 16 21.6
comp=Z,31nm,1.2s
ECSD EROS Data Cent 67.78 339 P **P** **15 16 20.4 -0.3**
baz=152,SNR=16
ECSD EROS Data Cent 67.78 339 P **P** **15 16 20.4 -0.3**
baz=152,SNR=16
WUAZ Wupatki 67.80 324 P **P** **15 16 21.9 +0.8**
WUAZ IAmb IAmb 15 16 23.8
comp=Z,29nm,0.9s
WUAZ Wupatki 67.80 324 P **P** **15 16 22.7 +1.5**
baz=137,SNR=22
SPMN Marine on St. 67.91 342 P **P** **15 16 20.4 -1.0**
SPMN IAmb IAmb 15 16 21.8
comp=Z,31nm,1.1s
SPMN Marine on St. 67.91 342 P **P** **15 16 20.9 -0.6**
baz=156,SNR=5.3
SPMN Marine on St. 67.91 342 P **P** **15 16 20.8 -0.6**
baz=156,SNR=5.3
LIC Lamto 68.03 75 *eP* **P** **15 16 22.8 -0.1**
comp=Z,108nm,1.0s
ISCO Idaho Springs 68.10 330 P **P** **15 16 23.5 +0.3**
ISCO IAmb IAmb 15 16 25.0
comp=Z,22nm,0.9s
ISCO Idaho Springs 68.10 330 P **P** **15 16 23.5 +0.3**
ISCO pmax pmax
comp=Z,22nm,1.0s
ISCO Idaho Springs 68.10 330 P **P** **15 16 24.1 +0.9**
baz=143,SNR=27
ISCO Idaho Springs 68.10 330 P **P** **15 16 24.1 +0.9**
baz=143,SNR=27

TIC Toumodi 68.21 74 *eP* **P** **15 16 23.4 -0.6**
comp=Z,214nm,1.0s
SMCO Snowmass 68.26 329 P **P** **15 16 24.6 +0.3**
SMCO IAmb IAmb 15 16 26.5
comp=Z,17nm,0.8s
KIC Kosan Boka 68.35 75 *eP* **P** **15 16 24.3 -0.6**
comp=Z,164nm,0.7s
PV15 Paradox Valley 68.36 328 P **P** **15 16 25.0 +0.3**
PV15 IAmb IAmb 15 16 27.1
comp=Z,36nm,1.0s
DBIC Dimbokro 68.37 74 P **P** **15 16 24.6 -0.4**
comp=Z,136nm,0.8s,baz=247,slow=5.9,SNR=112
DBIC PP **PP** **15 18 53.2 -4.1**
comp=Z,9.2nm,0.8s,baz=288,slow=5.9,SNR=3.5
DBIC S **S** **15 25 15.2 -2.9**
comp=Z,14nm,1.1s,baz=88,slow=19,SNR=12
DBIC LR LR 15 44 39.9
comp=Z,135nm,21.9s,baz=240,slow=34
comp=Z,136nm,0.8s
DBIC Dimbokro 68.37 74 P **P** **15 16 24.2 -0.8**
DBIC Dimbokro 68.37 74 ⇑P **P** **15 16 24.7 -0.3**
DBIC pP **pP** **15 16 56.9 +3.7**
DBIC sP **sP** **15 17 04.6 -0.7**
BLYC Blythe 68.37 320 P **P** **15 16 25.5 +0.9**
BLYC IAmb IAmb 15 16 27.2
comp=Z,18nm,0.8s
PV13 Radium Mtn., P 68.39 327 P **P** **15 16 25.2 +0.3**
YUH Yuha Desert 68.48 319 P **P** **15 16 25.6 +0.3**
D41A Chassel 68.52 346 P **P** **15 16 25.0 -0.2**
D41A IAmb IAmb 15 16 26.0
comp=Z,32nm,0.8s
PV11 David Mesa, Pa 68.53 327 P **P** **15 16 25.4 -0.3**
PDMCI Parker Dam,Lak 68.53 321 P **P** **15 16 27.1 +1.6**
baz=134,SNR=5.0
IKP In-Ko-Pah, Jac 68.60 319 P **P** **15 16 28.0 +1.8**
baz=132,SNR=9.1
SWSC Sam W. Stewart 68.60 319 P **P** **15 16 27.7 +1.6**
baz=132
PV10 Paradox Valley 68.67 327 P **P** **15 16 25.8 -0.9**
F36A Milaca 68.70 342 P **P** **15 16 25.3 -1.0**
F36A Milaca 68.70 342 P **P** **15 16 25.5 -0.9**
baz=155,SNR=12
NVL N'lazarevskaya 68.78 159 *eP* **P** **15 16 27.7 +1.1**
NVL pmax pmax
comp=Z,13nm,0.8s
E38A The Farm, Brul 68.83 344 P **P** **15 16 26.3 -0.9**
BC3 Big Chuckawall 68.87 320 P **P** **15 16 29.5 +1.6**
baz=133,SNR=12
W13A Hualapai Mount 68.93 322 P **P** **15 16 29.3 +1.0**
MONP2 Monument Peak 68.96 319 P **P** **15 16 30.2 +1.7**
baz=132,SNR=8.4
U15A North Rim 68.97 324 P **P** **15 16 29.4 +0.8**
U15A IAmb IAmb 15 16 31.5
comp=Z,39nm,1.2s
BAR Barrett 68.97 318 P **P** **15 16 29.2 +0.9**
BAR IAmb IAmb 15 16 31.0
comp=Z,47nm,1.2s
IRM Iron Mountain 69.03 320 P **P** **15 16 30.4 +1.7**
baz=133,SNR=8.7
N23A Red Feather La 69.13 331 P **P** **15 16 29.8 +0.3**
N23A IAmb IAmb 15 16 31.4
comp=Z,29nm,0.9s
N23A Red Feather La 69.13 331 P **P** **15 16 30.4 +1.0**
baz=143,SNR=21
PHWY Pilot Hill 69.23 331 P **P** **15 16 29.9 -0.3**
PHWY IAmb IAmb 15 16 31.4
comp=Z,16nm,0.7s
BELC Belle Mtn. Jos 69.44 320 P **P** **15 16 33.0 +1.6**
baz=133
PFO Pinyon Flats O 69.46 319 P **P** **15 16 33.2 +1.7**
baz=132
PFO Pinyon Flats O 69.46 319 sP sP 15 17 13.7 +2.0
F33A 5 Mile Ranch, 69.53 340 P **P** **15 16 30.5 -1.0**
F33A 5 Mile Ranch, 69.53 340 P **P** **15 16 30.8 -0.7**
baz=153,SNR=8.4
O20A White River Ci 69.62 329 P **P** **15 16 32.8 +0.4**
O20A IAmb IAmb 15 16 34.5
comp=Z,27nm,0.9s
O20A White River Ci 69.62 329 P **P** **15 16 33.5 +1.1**
baz=141,SNR=19
PKCU Pink Cliffs 69.71 324 P **P** **15 16 33.5 +0.3**
GMRC Granite Mounta 69.77 320 P **P** **15 16 35.1 +1.7**
baz=133,SNR=12
MURC Murrieta 69.91 319 P **P** **15 16 35.8 +1.7**
baz=132
LCMT Little Creek M 69.92 324 P **P** **15 16 34.9 +0.6**
SRU San Rafael Swe 69.99 327 P **P** **15 16 34.8 +0.1**
SRU IAmb IAmb 15 16 36.6
comp=Z,27nm,0.8s
SRU San Rafael Swe 69.99 327 P **P** **15 16 34.8 +0.1**
SRU pmax pmax
comp=Z,27nm,0.8s
EYMN Ely 70.06 344 P **P** **15 16 33.1 -1.6**
EYMN Ely 70.06 344 P **P** **15 16 33.0 -1.7**
baz=158,SNR=7.8
EYMN Ely 70.06 344 P **P** **15 16 33.8 -0.9**
baz=158,SNR=7.8
MTPU Mount Pierson 70.08 325 P **P** **15 16 36.0 +0.5**
CMLA Cha da Macela 70.17 36 *i* P **P** **15 16 36.9 +1.3**
Q16A Castle Valley 70.18 326 P **P** **15 16 36.5 +0.6**
Q16A IAmb IAmb 15 16 38.5
comp=Z,19nm,0.8s
HEC Hector,Ludlow 70.20 320 P **P** **15 16 38.1 +2.1**
baz=133,SNR=7.0
P18A Preston Nutter 70.23 327 P **P** **15 16 36.9 +0.5**
P18A IAmb IAmb 15 16 38.6
comp=Z,26nm,0.8s
SZCU Shurtz Canyon 70.25 324 P **P** **15 16 37.3 +1.0**
RWWY Rawlins 70.34 331 P **P** **15 16 37.6 +0.8**
P17A Butcher Ranch, 70.37 327 P **P** **15 16 37.2 +0.2**
P17A IAmb IAmb 15 16 39.1
comp=Z,35nm,0.9s
CCUT Cedar City 70.37 324 P **P** **15 16 38.2 +1.1**
CCUT IAmb IAmb 15 16 40.4
comp=Z,34nm,0.9s
MSU Marysvale 70.42 325 P **P** **15 16 38.5 +1.2**
MSU Marysvale 70.42 325 P **P** **15 16 38.5 +1.2**
MVU Marysvale 70.43 325 P **P** **15 16 38.4 +0.9**
TMUT Trail Mountain 70.48 327 P **P** **15 16 38.1 +0.3**
RDMU Red Mountain 70.60 328 P **P** **15 16 38.9 +0.4**
RDMU IAmb IAmb 15 16 40.2
comp=Z,21nm,0.8s
BFSC Mount Baldy Ra 70.62 319 P **P** **15 16 40.0 +1.4**
baz=132,SNR=7.8
TCRU Three Creeks R 70.63 325 P **P** **15 16 39.5 +0.8**
TCRU IAmb IAmb 15 16 41.3
comp=Z,21nm,0.8s
SHPR Sheep Range 70.65 322 P **P** **15 16 39.5 +0.7**
QSPA South Pole Qui 70.70 180 ⇓P **P** **15 16 40.4 +1.7**
QSPA pP **pP** **15 17 09.3 +2.6**
QSPA sP **sP** **15 17 19.8 +0.9**
K22A Casper 70.79 332 P **P** **15 16 39.2 -0.2**
K22A IAmb IAmb 15 16 41.2
comp=Z,25nm,0.8s
K22A Casper 70.79 332 P **P** **15 16 40.4 +0.9**
baz=143,SNR=21
K22A Casper 70.79 332 P **P** **15 16 40.3 +0.9**
baz=143,SNR=21
GSC Goldstone, Bar 70.81 320 P **P** **15 16 41.2 +1.6**
baz=132
PASC Pasadena Art C 70.90 318 P **P** **15 16 40.6 +0.5**
PASC IAmb IAmb 15 16 43.0
comp=Z,44nm,1.2s
RSSD Black Hills 70.90 334 P **P** **15 16 40.0 -0.2**
RSSD IAmb IAmb 15 16 41.9
comp=Z,33nm,0.8s
RSSD Black Hills 70.90 334 P **P** **15 16 40.0 -0.2**
RSSD pmax pmax
comp=Z,33nm,0.8s
RSSD Black Hills 70.90 334 P **P** **15 16 41.0 +0.8**
baz=145,SNR=31
RSSD Black Hills 70.90 334 P **P** **15 16 41.0 +0.8**
baz=145
RSSD Black Hills 70.90 334 ⇓P **P** **15 16 41.0 +0.8**
RSSD pP **pP** **15 17 09.9 +1.4**
D32A Dogwood Acres, 70.91 340 P **P** **15 16 39.2 -0.7**
D32A IAmb IAmb 15 16 40.5
comp=Z,32nm,0.6s
B35A Bob, Littlefor 71.03 343 P **P** **15 16 39.1 -1.5**
B35A IAmb IAmb 15 16 41.1
comp=Z,30nm,1.1s
B35A Bob, Littlefor 71.03 343 P **P** **15 16 39.7 -0.9**
baz=155,SNR=12
DECC Green Verdugo 71.05 318 P **P** **15 16 43.0 +1.9**
baz=131

SNCC San Nicolas Is 71.16 317 P **P** **15 16 43.5 +1.8**
baz=130
PRN Pahroc Range 71.22 323 P **P** **15 16 42.6 +0.4**
MPU Maple Canyon 71.23 327 P **P** **15 16 42.2 -0.1**
MPU IAmb IAmb 15 16 44.5
comp=Z,24nm,0.9s
EDW2 Edwards Air Fo 71.25 319 P **P** **15 16 43.6 +1.3**
baz=131,SNR=9.1
GWY Greenwater Val 71.32 321 P **P** **15 16 42.1 -0.7**
GWY IAmb IAmb 15 16 45.3
comp=Z,24nm,0.9s
PSUT Pine Spring 71.34 324 P **P** **15 16 43.4 +0.5**
PSUT IAmb IAmb 15 16 45.6
comp=Z,22nm,0.8s
NLU North Lily Min 71.42 326 P **P** **15 16 43.7 +0.3**
CCAC Calif City Air 71.44 319 P **P** **15 16 44.2 +0.8**
CCAC IAmb IAmb 15 16 46.0
comp=Z,31nm,0.8s
LRMC Laurel Mtn Rad 71.46 320 P **P** **15 16 45.3 +1.7**
baz=132,SNR=5.3
JLU Jordanelle 71.57 327 P **P** **15 16 44.9 +0.6**
JLU IAmb IAmb 15 16 46.6
comp=Z,27nm,0.9s
AGMN Agassiz Nation 71.59 342 P **P** **15 16 43.0 -0.9**
AGMN IAmb IAmb 15 16 44.6
comp=Z,22nm,0.9s
AGMN Agassiz Nation 71.59 342 P **P** **15 16 43.9 -0.1**
baz=153,SNR=13
AGMN Agassiz Nation 71.59 342 P **P** **15 16 43.7 -0.2**
baz=153,SNR=13
TPNV Topopah Spring 71.59 322 P **P** **15 16 45.6 +1.2**
TPNV IAmb IAmb 15 16 47.5
comp=Z,34nm,1.1s
TPNV Topopah Spring 71.59 322 P **P** **15 16 45.7 +1.2**
TPNV pmax pmax
comp=Z,34nm,1.1s
TPNV Topopah Spring 71.59 322 P **P** **15 16 46.4 +1.9**
baz=133,SNR=30
FURC Furnace Creek, 71.63 321 P **P** **15 16 46.4 +2.0**
baz=133,SNR=22
E28A Huff 71.67 338 P **P** **15 16 44.6 +0.1**
E28A Huff 71.67 338 P **P** **15 16 45.0 +0.5**
baz=149,SNR=7.5
SCZ2 Santa Cruz Isl 71.71 318 P **P** **15 16 46.0 +1.0**
baz=130
MPMC Manual Prospec 71.72 320 P **P** **15 16 46.6 +1.3**
baz=132,SNR=14
PMOZ Porto Moniz, M 71.88 44 *eP* **P** **15 16 44.4 -1.8**
comp=Z,98nm,2.1s
DUG Dugway, Tooele 71.98 326 P **P** **15 16 47.4 +0.7**
DUG IAmb IAmb 15 16 49.2
comp=Z,27nm,1.0s
DUG Dugway, Tooele 71.98 326 P **P** **15 16 47.4 +0.7**
DUG pmax pmax
comp=Z,27nm,1.0s
DUG Dugway, Tooele 71.98 326 P **P** **15 16 48.1 +1.5**
baz=137,SNR=27
ISA Isabella, Lake 72.06 320 P **P** **15 16 48.4 +1.2**
ISA IAmb IAmb 15 16 50.0
comp=Z,22nm,0.8s
ISA Isabella, Lake 72.06 320 P **P** **15 16 48.4 +1.2**
ISA pmax pmax
comp=Z,23nm,0.8s
ISA Isabella, Lake 72.06 320 P **P** **15 16 49.1 +1.9**
baz=131,SNR=20
BCW Bitter Crk WRg 72.17 318 P **P** **15 16 49.2 +1.3**
R11A Troy Canyon, C 72.18 323 P **P** **15 16 49.1 +1.2**
R11A IAmb IAmb 15 16 50.9
comp=Z,37nm,1.4s
R11A Troy Canyon, C 72.18 323 P **P** **15 16 49.8 +1.9**
baz=134,SNR=36
BW06 Boulder Array 72.27 330 P **P** **15 16 47.5 -1.0**
BW06 Boulder Array 72.27 330 P **P** **15 16 48.7 +0.2**
baz=140,SNR=13
PD31 Pinedale Array 72.27 330 P **P** **15 16 47.6 -0.9**
PDAR Pinedale Array 72.27 330 P **P** **15 16 48.3 -0.2**
comp=Z,4.7nm,0.7s,baz=142,slow=7.5,SNR=26
PDAR LR LR 15 51 03.5
comp=Z,8.6nm,20.1s,baz=133,slow=38
comp=Z,4.7nm,0.7s
PDAR Pinedale Array 72.27 330 P **P** **15 16 47.6 -0.9**
GRAC Grapevine Rang 72.28 321 P **P** **15 16 50.0 +1.6**
baz=132,SNR=13
CWC Cottonwood Cre 72.34 320 P **P** **15 16 50.6 +1.7**
baz=132
HWUT Hardware Ranch 72.38 328 P **P** **15 16 49.0 -0.1**
HWUT IAmb IAmb 15 16 52.6
comp=Z,22nm,0.8s
MDND Maddock 72.39 339 P **P** **15 16 48.9 +0.1**
MDND Maddock 72.39 339 P **P** **15 16 49.5 +0.8**
baz=150,SNR=12
MDND Maddock 72.39 339 P **P** **15 16 49.5 +0.8**
baz=150,SNR=12
PKM Mcpherson Peak 72.39 318 P **P** **15 16 51.0 +1.7**
baz=130,SNR=25
VES Vestal, Richgr 72.55 319 P **P** **15 16 51.7 +1.8**
baz=131,SNR=9.0
PMPS Porto Santo 72.59 44 *eP* **P** **15 16 54.6 +4.4**
comp=Z,121nm,1.5s
LCH Last Change Ra 72.61 321 P **P** **15 16 51.1 +0.6**
BGU Big Grassy Mou 72.62 327 P **P** **15 16 50.2 -0.3**
SMMC Simmler 72.78 318 P **P** **15 16 53.5 +2.1**
baz=130,SNR=12
TPH Tonopah 72.92 322 P **P** **15 16 52.8 +0.4**
TPH Tonopah 72.92 322 P **P** **15 16 52.8 +0.4**
AHID Auburn Hatcher 73.01 329 P **P** **15 16 52.7 -0.1**
AHID IAmb IAmb 15 16 54.5
comp=Z,31nm,0.8s
HVU Hansel Valley 73.11 327 P **P** **15 16 53.6 +0.2**
HVU IAmb IAmb 15 16 55.2
comp=Z,27nm,1.1s
HVU Hansel Valley 73.11 327 P **P** **15 16 53.6 +0.2**
HVU pmax pmax
comp=Z,27nm,1.1s
PAGB Antelope Grade 73.20 319 P **P** **15 16 54.7 +0.9**
PAGB IAmb IAmb 15 16 56.7
comp=Z,72nm,1.5s
REDW Red Top Meadow 73.34 330 P **P** **15 16 55.2 +0.4**
ULM Lac du Bonnet 73.34 342 P **P** **15 16 53.5 -0.7**
comp=Z,18nm,0.8s,baz=149,slow=6.0,SNR=20
ULM pP **pP** **15 17 22.8 0.0**
comp=Z,7.4nm,0.6s,baz=156,slow=5.4,SNR=3.0
ULM LR LR 15 52 29.8
comp=Z,10.0nm,18.0s,baz=82,slow=38
comp=Z,18nm,0.8s
ULM Lac du Bonnet 73.34 342 P **P** **15 16 53.4 -0.9**
ULM IAmb IAmb 15 16 54.3
comp=Z,18nm,0.7s
ECR Eagle Creek 73.36 329 P **P** **15 16 54.4 -0.4**
SNOW Snow King Moun 73.37 330 P **P** **15 16 55.4 +0.4**
SNOW IAmb IAmb 15 16 57.0
comp=Z,18nm,0.8s
LOHW Long Hollow 73.41 330 P **P** **15 16 55.5 +0.3**
Q09A Carvers 73.42 323 P **P** **15 16 55.8 +0.6**
Q09A IAmb IAmb 15 16 58.0
comp=Z,44nm,1.0s
TPAW Teton Pass 73.49 330 P **P** **15 16 56.2 +0.5**
TPAW IAmb IAmb 15 16 57.7
comp=Z,19nm,0.8s
MLAC Mammoth, Mammo 73.58 321 P **P** **15 16 57.9 +1.6**
baz=131,SNR=5.5
MOOW Moose Ponds 73.58 330 P **P** **15 16 56.5 +0.4**
ELK Elko 73.66 325 P **P** **15 16 56.8 +0.1**
ELK Elko 73.66 325 P **P** **15 16 56.8 +0.1**
ELK pmax pmax
comp=Z,13nm,1.0s
OMMB Old Mammoth Mi 73.66 321 P **P** **15 16 57.0 +0.1**
OMMB IAmb IAmb 15 16 59.4
comp=Z,33nm,1.0s
NV11 Mina Array Sit 73.71 322 P **P** **15 16 57.3 +0.4**
MDPB Devils Postpil 73.72 321 P **P** **15 16 57.9 +0.8**
LHV Little Huntoon 73.79 322 P **P** **15 16 58.4 +1.3**
LHV IAmb IAmb 15 17 00.2
comp=Z,38nm,1.2s
NVAR Mina Array Bea 73.79 322 P **P** **15 16 58.9 +1.4**
comp=Z,11nm,0.9s,baz=152,slow=6.7,SNR=68
NVAR pP **pP** **15 17 26.7 +0.6**
comp=Z,5.5nm,0.8s,baz=156,slow=6.3,SNR=4.8
NVAR LR LR 15 51 27.5
comp=Z,21nm,18.1s,baz=86,slow=37
comp=Z,11nm,0.9s
NVAR Mina Array Bea 73.79 322 P **P** **15 16 58.1 +0.6**
FLWY Flagg Ranch 73.81 330 P **P** **15 16 58.5 +1.0**
PMPB Monarch Peak 73.86 319 P **P** **15 16 59.2 +1.5**
PMPB IAmb IAmb 15 17 00.7
comp=Z,34nm,0.8s

LAO LASA Array 73.89 334 P **P** **15 16 58.0 +0.3**
LAO IAmb IAmb 15 16 59.5
comp=Z,51nm,1.1s
LAO LASA Array 73.89 334 P **P** **15 16 58.5 +0.9**
baz=144,SNR=12
LAO LASA Array 73.89 334 P **P** **15 16 58.5 +0.9**
baz=144,SNR=12
RLMT Red Lodge 73.95 332 P **P** **15 16 58.6 +0.4**
RLMT IAmb IAmb 15 17 00.4
comp=Z,29nm,0.7s
RLMT Red Lodge 73.95 332 P **P** **15 16 59.4 +1.1**
baz=141,SNR=37
H17A Grant Village 73.99 330 P **P** **15 17 00.5 +1.9**
baz=140,SNR=15
YPP Pitchstone Pla 74.01 330 P **P** **15 16 59.2 +0.5**
SCHQ Schefferville 74.04 1 P **P** **15 16 57.8 -0.5**
comp=Z,10nm,0.8s,baz=209,slow=4.4,SNR=16
comp=Z,10nm,0.8s
SCHQ Schefferville 74.04 1 P **P** **15 16 57.7 -0.6**
RYN Ryan 74.05 322 P **P** **15 16 59.0 0.0**
KVN Kaiserville 74.09 322 P **P** **15 16 59.7 +0.5**
KVN IAmb IAmb 15 17 01.4
comp=Z,29nm,1.1s
KVN Kaiserville 74.09 322 P **P** **15 16 59.7 +0.5**
KVN pmax pmax
comp=Z,29nm,1.1s
BBGB Big Mountain B 74.24 319 P **P** **15 17 00.2 +0.2**
BBGB IAmb IAmb 15 17 05.5
comp=Z,35nm,0.8s
YNR Norris Junctio 74.28 331 P **P** **15 17 01.6 +1.3**
YNR IAmb IAmb 15 17 03.3
comp=Z,19nm,0.7s
YMR Madison River 74.38 330 P **P** **15 17 02.2 +1.4**
YMR IAmb IAmb 15 17 03.8
comp=Z,39nm,1.0s
BMN Battle Mountai 74.53 324 P **P** **15 17 02.2 +0.5**
BMN Battle Mountai 74.53 324 P **P** **15 17 02.2 +0.5**
BMN pmax pmax
comp=Z,9.0nm,1.3s
DGMT Dagmar 74.55 337 P **P** **15 17 02.0 +0.5**
DGMT IAmb IAmb 15 17 03.5
comp=Z,55nm,0.9s
DGMT Dagmar 74.55 337 P **P** **15 17 02.7 +1.2**
baz=146,SNR=9.9
DGMT Dagmar 74.55 337 P **P** **15 17 02.6 +1.2**
baz=146,SNR=9.9
SAO San Andreas Ge 74.61 319 P **P** **15 17 02.9 +0.9**
SAO San Andreas Ge 74.61 319 P **P** **15 17 02.9 +0.9**
SAO pmax pmax
comp=Z,8.0nm,1.0s
YHL Hebgen Lake 74.62 330 P **P** **15 17 03.1 +0.8**
YHL IAmb IAmb 15 17 04.7
comp=Z,22nm,0.8s
GCMT Greycliff 74.65 332 P **P** **15 17 02.8 +0.6**
YERR Yerington 74.71 322 P **P** **15 17 03.8 +1.0**
YERR IAmb IAmb 15 17 05.7
comp=Z,44nm,1.3s
QLMT Earthquake Lak 74.72 330 P **P** **15 17 03.8 +1.0**
CMB Columbia Colle 74.77 320 P **P** **15 17 03.6 +0.6**
CMB Columbia Colle 74.77 320 P **P** **15 17 03.6 +0.6**
CMB pmax pmax
comp=Z,7.0nm,1.0s
PNTR Pine Nut 74.99 322 P **P** **15 17 05.4 +0.9**
VCNR Virginia City 75.15 322 P **P** **15 17 06.3 +1.0**
VCNR IAmb IAmb 15 17 08.3
comp=Z,37nm,1.5s
HLID Hailey 75.24 328 P **P** **15 17 05.8 +0.1**
HLID IAmb IAmb 15 17 08.5
comp=Z,31nm,0.9s
HLID Hailey 75.24 328 P **P** **15 17 07.3 +1.6**
baz=136,SNR=55
PAHR Pah Rah Range 75.27 322 P **P** **15 17 06.6 +0.7**
PAHR IAmb IAmb 15 17 08.8
comp=Z,44nm,0.9s
BCYI Bear Canyon 75.28 329 P **P** **15 17 06.8 +0.8**
MPK Martis Peak 75.38 322 P **P** **15 17 07.3 +0.6**
MPK IAmb IAmb 15 17 09.7
comp=Z,37nm,1.3s
BOZ Bozeman (W) 75.39 331 P **P** **15 17 06.8 +0.3**
BOZ Bozeman (W) 75.39 331 P **P** **15 17 06.8 +0.3**
BOZ pmax pmax
comp=Z,19nm,1.1s
BOZ Bozeman (W) 75.39 331 P **P** **15 17 07.5 +1.0**
baz=139,SNR=28
DLMT Dillon 75.67 330 P **P** **15 17 08.4 +0.3**
MFID Camas Ranch 75.86 327 P **P** **15 17 10.0 +0.8**
MFID IAmb IAmb 15 17 12.0
comp=Z,48nm,1.1s
BEKR Beckworth 75.94 322 P **P** **15 17 10.3 +0.5**
LRM Limekiln Ridge 75.94 330 P **P** **15 17 10.2 +0.4**
HRY Holter Researc 76.32 331 P **P** **15 17 12.4 +0.7**
MCCM Marconi Confer 76.36 319 P **P** **15 17 12.8 +0.9**
MCCM IAmb IAmb 15 17 14.3
comp=Z,45nm,1.1s
ORV Oroville 76.41 321 P **P** **15 17 13.1 +0.8**
ORV IAmb IAmb 15 17 15.1
comp=Z,48nm,1.1s
ORV Oroville 76.41 321 P **P** **15 17 13.1 +0.8**
ORV pmax pmax
comp=Z,48nm,1.2s
EGMT Eagleton 76.42 333 P **P** **15 17 12.6 +0.5**
baz=141
WVOR Wild Horse Val 76.67 325 P **P** **15 17 14.2 +0.4**
WVOR Wild Horse Val 76.67 325 P **P** **15 17 14.2 +0.4**
WVOR pmax pmax
comp=Z,6.0nm,1.2s
TOA0 Torodi Ar. Sit 76.88 71 P **P** **15 17 14.4 -1.0**
TORD Torodi Ar. Bea 76.88 71 P **P** **15 17 14.6 -0.8**
comp=Z,41nm,0.6s,baz=250,slow=5.4,SNR=237
TORD pP **pP** **15 17 43.9 -0.2**
comp=Z,64nm,1.1s,baz=255,slow=5.0,SNR=6.6
TORD sP **sP** **15 17 55.6 -0.5**
comp=Z,28nm,0.9s,baz=256,slow=5.2,SNR=3.0
TORD PP PP 15 19 59.4 -11
comp=Z,12nm,0.8s,baz=246,slow=7.6,SNR=6.7
TORD S **S** **15 26 51.6 -3.2**
comp=Z,6.0nm,1.1s,baz=259,slow=12,SNR=10
TORD LR LR 15 50 18.0
comp=Z,162nm,19.6s,baz=210,slow=35
comp=Z,41nm,0.6s
TORD Torodi Ar. Bea 76.88 71 P **P** **15 17 14.2 -1.2**
PLID Pearl Lake 77.12 328 P **P** **15 17 16.6 +0.2**
PLID IAmb IAmb 15 17 18.6
comp=Z,38nm,0.9s
J08A Circle Bar Ran 77.21 325 P **P** **15 17 16.6 -0.2**
MOD Modoc Plateau 77.24 323 P **P** **15 17 17.1 +0.1**
MSO Missoula 77.38 330 P **P** **15 17 17.5 -0.2**
MSO Missoula 77.38 330 P **P** **15 17 19.0 +1.3**
baz=137,SNR=18
BMO Blue Mountains 77.62 327 P **P** **15 17 19.2 +0.2**
BMO IAmb IAmb 15 17 21.3
comp=Z,26nm,0.9s
BMO Blue Mountains 77.62 327 P **P** **15 17 19.2 +0.2**
BMO pmax pmax
comp=Z,26nm,0.9s
SBA Scott Base 77.77 190 P **P** **15 17 21.1 +1.8**
SBA Scott Base 77.77 190 P **P** **15 17 21.1 +1.8**
SBA pmax pmax
comp=Z,14nm,1.1s
K05A Summer Lake 78.11 324 P **P** **15 17 23.0 +1.1**
K05A IAmb IAmb 15 17 24.9
comp=Z,66nm,1.5s
JTMT Jette 78.21 331 P **P** **15 17 22.6 +0.4**
I07A Izee 78.25 325 P **P** **15 17 23.2 +0.7**
F10A Beach Ranch, E 78.36 328 P **P** **15 17 23.6 +0.5**
YBH Yreka Blue Hor 78.50 322 LR LR 15 52 22.3
comp=Z,30nm,18.4s,baz=137,slow=36
YBH Yreka Blue Hor 78.50 322 P **P** **15 17 23.3 -0.7**
YBH Yreka Blue Hor 78.50 322 P **P** **15 17 23.3 -0.7**
YBH pmax pmax
comp=Z,12nm,1.2s
L04D Klamath Falls 78.58 323 P **P** **15 17 25.2 +0.8**
baz=130
J05D Fort Rock, OR 78.66 324 P **P** **15 17 26.1 +1.2**
baz=131,SNR=8.0
G08A Pilot Rock 78.77 327 P **P** **15 17 25.5 +0.1**
VNDA Vanda 78.79 190 P **P** **15 17 27.0 +2.1**
comp=Z,5.2nm,0.8s,baz=130,slow=4.7,SNR=22
comp=Z,5.2nm,0.8s
VNDA Vanda 78.79 190 P **P** **15 17 26.2 +1.3**
PINE Pine Mountain 78.83 325 P **P** **15 17 27.0 +1.1**
PINE IAmb IAmb 15 17 28.8
comp=Z,39nm,1.3s
KRPM Rodgers 78.92 321 P **P** **15 17 25.6 -0.6**
KRPM IAmb IAmb 15 17 47.7
comp=Z,68nm,1.4s
WALA Waterton Lakes 79.01 332 P **P** **15 17 26.4 -0.2**
WALA IAmb IAmb 15 17 28.5
comp=Z,34nm,1.0s
J04D Umpqua Nationa 79.12 324 P **P** **15 17 28.9 +1.4**
baz=130,SNR=5.9
E09A Wood Farm, Sta 79.20 328 P **P** **15 17 28.1 +0.6**
L02F Cave Junction 79.25 322 P **P** **15 17 29.5 +1.5**
baz=129,SNR=5.7
I05D Terrebonne, OR 79.41 325 P **P** **15 17 30.6 +1.8**
baz=131,SNR=8.4
I04A Tendick Farm, 79.65 324 P **P** **15 17 30.9 +0.9**
baz=130
K02D Willamette Mer 79.66 322 P **P** **15 17 31.8 +1.5**
baz=129
F07A Phinny Hill Vi 79.68 327 P **P** **15 17 29.7 -0.4**
DBO Dodson Butte 79.69 323 P **P** **15 17 31.5 +1.1**
DBO IAmb IAmb 15 17 36.5
comp=Z,57nm,1.5s
SUR Sutherland 79.77 121 P **P** **15 17 32.6 +1.2**
SUR IAmb IAmb 15 17 33.8
comp=Z,36nm,1.1s
HAWA Hanford 79.81 327 P **P** **15 17 31.2 +0.3**
HAWA IAmb IAmb 15 17 33.5
comp=Z,25nm,0.9s
NEW Newport 79.91 330 P **P** **15 17 31.1 -0.4**
NEW Newport 79.91 330 P **P** **15 17 31.1 -0.4**
NEW pmax pmax
comp=Z,6.0nm,0.9s
NEW Newport 79.91 330 P **P** **15 17 31.9 +0.5**
baz=135,SNR=7.5
D08A Wollman Farm, 79.96 328 P **P** **15 17 31.8 +0.2**
PFVI Vila Bisbo 79.96 45 *eP* **P** **15 17 34.9 +3.0**
comp=Z,45nm,1.1s
PFVI Vila Bisbo 79.96 45 P **P** **15 17 31.8 -0.1**
PFVI IAmb IAmb 15 17 37.2
comp=Z,33nm,1.0s
G05D Wamic, OR 79.98 325 P **P** **15 17 34.1 +2.3**
baz=131,SNR=5.2
E07A Sunnyside 80.09 327 P **P** **15 17 32.8 +0.4**
E07A IAmb IAmb 15 17 35.2
comp=Z,29nm,1.2s
H04A Detroit Lake 80.09 325 P **P** **15 17 32.1 -0.4**
I03D Drain, OR 80.11 323 P **P** **15 17 33.7 +1.2**
baz=129
MORF Marmelete 80.17 45 *eP* **P** **15 17 32.8 -0.3**
MORF IAmb IAmb 15 17 38.8
comp=Z,27nm,0.6s
MORF Marmelete 80.17 45 *eP* **P** **15 17 34.5 +1.4**
comp=Z,45nm,1.0s
MORF Marmelete 80.17 45 *eP* **P** **15 17 32.8 -0.3**
BUCK Buck Mountain 80.22 324 P **P** **15 17 33.5 +0.3**
BUCK IAmb IAmb 15 17 35.4
comp=Z,41nm,0.9s
PTEO Sao Teotonio 80.25 45 *eP* **P** **15 17 34.5 +1.1**
comp=Z,85nm,1.0s
MDT Midelt 80.62 50 P **P** **15 17 36.6 +0.9**
comp=Z,13nm,0.8s,baz=293,slow=4.7,SNR=20
comp=Z,13nm,0.8s
PBDV Barranco-do-Ve 80.62 45 *eP* **P** **15 17 36.5 +1.1**
comp=Z,33nm,1.3s
FCC Fort Churchill 80.63 347 P **P** **15 17 34.7 -0.2**
FCC Fort Churchill 80.63 347 P **P** **15 17 34.7 -0.2**
FCC pmax pmax
comp=Z,16nm,1.1s
PNCL Nicolau / Gran 80.70 44 *eP* **P** **15 17 36.8 +1.0**
comp=Z,17nm,0.9s
MESJ Messejana 80.75 44 *eP* **P** **15 17 35.9 -0.3**
MESJ IAmb IAmb 15 17 41.5
comp=Z,17nm,0.8s
MESJ Messejana 80.75 44 *eP* **P** **15 17 37.1 +1.0**
comp=Z,19nm,0.8s
MESJ Messejana 80.75 44 *eP* **P** **15 17 35.8 -0.3**
PCVE Castro Verde 80.76 45 *eP* **P** **15 17 37.1 +1.0**
comp=Z,25nm,0.9s
TSUM Tsumeb 80.81 107 LR LR 15 50 49.3
comp=Z,66nm,19.5s,baz=331,slow=34
TSUM Tsumeb 80.81 107 P **P** **15 17 37.0 -0.1**
PVAQ Vaqueiros 80.85 45 *eP* **P** **15 17 37.1 +0.5**
comp=Z,25nm,1.5s
PVAQ Vaqueiros 80.85 45 P **P** **15 17 37.1 +0.5**
LTY Liberty 80.97 327 P **P** **15 17 37.3 +0.2**
LTY IAmb IAmb 15 17 39.4
comp=Z,37nm,1.1s
F04A Amboy 81.02 325 P **P** **15 17 38.0 +0.7**
F04A IAmb IAmb 15 17 39.4
comp=Z,54nm,1.0s
B08A Colville Reser 81.05 329 P **P** **15 17 37.4 -0.1**
PBEJ Beja 81.09 44 *eP* **P** **15 17 38.2 +0.3**
comp=Z,18nm,0.8s
EVO Evora 81.27 44 *eP* **P** **15 17 39.6 +0.8**
comp=Z,16nm,1.9s
PMTG Montargil 81.42 43 *eP* **P** **15 17 40.3 +0.7**
comp=Z,27nm,0.9s
E04D Cinebar 81.50 326 P **P** **15 17 40.3 +0.5**
E04D Cinebar 81.50 326 P **P** **15 17 41.0 +1.2**
baz=130
D05A Enumclaw 81.61 327 P **P** **15 17 40.3 -0.1**
D05A IAmb IAmb 15 17 42.4
comp=Z,53nm,0.9s
PESTR Estremoz 81.73 44 *eP* **P** **15 17 41.9 +0.6**
comp=Z,19nm,1.0s
PESTR Estremoz 81.73 44 P **P** **15 17 41.5 +0.2**
PCAS Casmilo, Conde 81.79 43 *eP* **P** **15 17 42.1 +0.5**
comp=Z,23nm,1.6s
EDM Edmonton 81.86 335 P **P** **15 17 41.1 -0.5**
EDM Edmonton 81.86 335 P **P** **15 17 41.1 -0.5**
EDM pmax pmax
comp=Z,110nm,0.9s
D04E Lakebay 82.01 326 P **P** **15 17 44.1 +1.6**
baz=130
IVI Ivigtut 82.16 10 P **P** **15 17 43.3 +0.4**
PMRV Marv??o 82.16 44 *eP* **P** **15 17 43.4 -0.1**
comp=Z,9.5nm,1.1s
B06A Marblemount 82.22 328 P **P** **15 17 43.4 -0.1**
B06A IAmb IAmb 15 17 44.9
comp=Z,50nm,1.0s
PCBR Castelo Branco 82.33 43 *eP* **P** **15 17 44.5 +0.1**
D03D Eldon 82.40 326 P **P** **15 17 45.8 +1.3**
baz=130,SNR=7.5
PVIS Viseu 82.54 42 *eP* **P** **15 17 45.6 +0.1**
MTE Manteigas 82.59 43 *eP* **P** **15 17 46.5 +0.7**
NRS Narsarsuaq 82.59 11 P **P** **15 17 45.1 -0.1**
NRS Narsarsuaq 82.59 11 P **P** **15 17 45.1 -0.1**
NRS pmax pmax
comp=Z,13nm,1.1s
NLWA Neilton Lookou 82.72 326 P **P** **15 17 47.0 +0.7**
B04A Port Angeles 82.95 327 P **P** **15 17 48.0 +0.6**
PVRL Vila Real 82.97 42 *eP* **P** **15 17 48.6 +0.9**
comp=Z,21nm,1.5s
POLO Lamas de Olo 82.97 42 *eP* **P** **15 17 48.3 +0.5**
comp=Z,8.7nm,1.7s
PGC Sidney 83.30 327 P **P** **15 17 50.0 +0.9**
PGC IAmb IAmb 15 17 51.4
comp=Z,38nm,0.9s
MVO Moncorvo 83.34 42 *eP* **P** **15 17 50.2 +0.6**
comp=Z,18nm,1.2s
LLLB Lillooet 83.79 329 P **P** **15 17 51.5 -0.2**
LLLB IAmb IAmb 15 17 53.2
comp=Z,32nm,1.1s
PBRG Braganca 83.87 42 *eP* **P** **15 17 52.7 +0.4**
comp=Z,24nm,1.5s
PAB San Pablo 84.22 45 P **P** **15 17 54.2 0.0**
PAB San Pablo 84.22 45 P **P** **15 17 54.2 0.0**
PAB pmax pmax
comp=Z,15nm,0.9s
ESDC Sonseca Array 84.54 45 P **P** **15 17 56.0 +0.2**
comp=Z,14nm,1.1s,baz=244,slow=5.6,SNR=31
ESDC LR LR 15 52 56.2
comp=Z,33nm,20.1s,baz=232,slow=34
comp=Z,14nm,1.1s
ESDC Sonseca Array 84.54 45 P **P** **15 17 55.6 -0.2**
ESBB Sonseca Array 84.55 45 P **P** **15 17 55.7 -0.1**
OZB Mount Ozzard 84.55 327 P **P** **15 17 55.4 -0.1**
OZB IAmb IAmb 15 17 57.2
comp=Z,22nm,0.8s
BOSA Boshof 84.57 118 P **P** **15 17 56.5 +0.1**
comp=Z,12nm,0.9s,baz=269,slow=2.7,SNR=12
BOSA LR LR 15 52 20.8
comp=Z,84nm,19.4s,baz=190,slow=33
comp=Z,12nm,0.9s
BOSA Boshof 84.57 118 P **P** **15 17 56.1 -0.3**
BOSA IAmb IAmb 15 17 58.2
comp=Z,21nm,1.1s
CBB Campbell River 85.14 327 P **P** **15 17 58.3 -0.2**
CBB IAmb IAmb 15 18 00.5
comp=Z,22nm,0.9s
LBTB Lobatse 86.04 115 LR LR 15 55 44.9
comp=Z,34nm,18.1s,baz=247,slow=35
LBTB Lobatse 86.04 115 P **P** **15 18 02.7 -1.1**
LBTB IAmb IAmb 15 18 15.7
comp=Z,11nm,0.7s
LBTB Lobatse 86.04 115 P **P** **15 18 02.7 -1.1**
LBTB pmax pmax
comp=Z,11nm,0.7s
MAW Mawson 86.31 163 P **P** **15 18 05.1 +1.1**
comp=Z,8.4nm,1.0s,baz=239,slow=9.3,SNR=5.8
comp=Z,8.4nm,1.0s
MAW Mawson 86.31 163 P **P** **15 18 04.3 +0.3**
SFJD Kangerlussuaq 87.32 7 LR LR 15 59 25.4
comp=Z,22nm,18.6s,baz=184,slow=37
BBB Bella Bella 87.82 328 LR LR 15 59 56.7
comp=Z,23nm,18.4s,baz=181,slow=37
BBB Bella Bella 87.82 328 P **P** **15 18 12.0 +0.6**
BBB IAmb IAmb 15 18 12.8
comp=Z,18nm,0.9s
YKA Yellowknife Ar 89.23 341 P **P** **15 18 18.2 +0.4**
comp=Z,48nm,0.8s,baz=133,slow=4.8,SNR=268
YKA pP **pP** **15 18 47.1 -0.2**
comp=Z,14nm,0.8s,baz=135,slow=4.9,SNR=5.2
YKA LR LR 16 02 36.5
comp=Z,28nm,18.1s,baz=136,slow=38
comp=Z,48nm,0.8s
YKA Yellowknife Ar 89.23 341 P **P** **15 18 17.8 -0.1**
GRNB Grenville Isla 89.69 329 P **P** **15 18 20.5 +0.2**
GRNB IAmb IAmb 15 18 22.1
comp=Z,20nm,1.0s
T35M Bob Quinn 91.61 331 P **P** **15 18 30.1 +1.0**
baz=124
LSZ Lusaka 91.66 107 LR LR 15 58 07.5
comp=Z,50nm,18.2s,baz=234,slow=34
KEST Kesra 92.25 53 P **P** **15 18 32.9 +0.2**
comp=Z,4.1nm,0.8s,baz=311,slow=2.9,SNR=4.1
comp=Z,4.1nm,0.8s
KEST Kesra 92.25 53 IAmb IAmb 15 18 42.0
comp=Z,6.8nm,0.8s
WRAK Wrangell Islan 92.26 330 P **P** **15 18 32.5 +0.5**
WRAK IAmb IAmb 15 18 33.6
comp=Z,10nm,0.9s
WRAK Wrangell Islan 92.26 330 P **P** **15 18 32.9 +0.9**
baz=122,SNR=5.2
DLBC Dease Lake 92.33 333 LR LR 16 05 12.1
comp=Z,28nm,18.4s,baz=88,slow=39
DLBC Dease Lake 92.33 333 P **P** **15 18 33.0 +0.5**
DLBC IAmb IAmb 15 18 34.5
comp=Z,19nm,1.0s
DLBC Dease Lake 92.33 333 P **P** **15 18 33.6 +1.1**
baz=124,SNR=17
CASY Casey 94.50 180 P **P** **15 18 43.5 +1.1**
CASY IAmb IAmb 15 18 45.1
comp=Z,9.1nm,0.9s
RES Resolute Bay 95.39 353 LR LR 16 05 47.8
comp=Z,22nm,18.5s,baz=67,slow=38
VAE Valguarnera 96.68 53 LR LR 16 04 51.4
comp=Z,57nm,18.1s,baz=10,slow=37
TEOL Teolo 97.39 45 P **P** **15 18 55.4 -0.4**
TEOL IAmb IAmb 15 18 58.2
comp=Z,7.8nm,0.9s
INK Inuvik 98.99 340 LR LR 16 09 37.8
comp=Z,28nm,18.1s,baz=80,slow=39
MBAR Mbarara 99.09 94 LR LR 16 01 25.2
comp=Z,144nm,20.4s,baz=90,slow=34
GERES GERESS Array B 99.85 42 P **Pdif** **15 19 05.8 -1.1**
comp=Z,0.1nm,0.3s,baz=205,slow=4.3,SNR=1.9
GERES PP **PP** **15 23 12.8 -0.3**
comp=Z,0.2nm,0.3s,baz=218,slow=11,SNR=2.2
GERES PKKPbc **PKKPbc** **15 35 28.0 -0.3**
comp=Z,0.3nm,0.5s,baz=94,slow=3.9,SNR=4.9
comp=Z,0.1nm,0.3s
K27K Chicken 100.13 335 P **Pdif** **15 19 08.3 +0.7**
baz=114
CLL Collm 100.19 39 *e*PP **PP** **15 23 10.0 -5.5**
CLL *e*SKSac **SKSac** **15 29 35.0 -1.8**
CLL *e*Sdif **Sdif** **15 30 31.0 -3.2**
CLL *e*SP **SP** **15 32 03.0 -0.6**
J26L Joseph Creek 100.92 335 P **Pdif** **15 19 11.3 0.0**
baz=112
ILAR Eielson Array 102.35 335 P **Pdif** **15 19 17.4 0.0**
comp=Z,0.3nm,0.8s,baz=157,slow=2.8,SNR=5.5
ILAR PP **PP** **15 23 31.9 +0.5**
comp=Z,1.5nm,1.1s,baz=120,slow=5.4,SNR=6.7
FINES FINESS Array B 109.38 30 PKKPbc PKKPbc 15 34 57.8 -1.9
comp=Z,1.2nm,0.7s,baz=27,slow=0.6,SNR=4.2
ARCES ARCESS Array B 109.70 22 PKKPbc PKKPbc 15 34 56.7 -2.1
comp=Z,1.8nm,0.7s,baz=97,slow=3.6,SNR=4.3
AKASG Malin Array Be 110.06 42 PP **PP** **15 24 29.1 +0.6**
comp=Z,0.4nm,0.5s,baz=261,slow=7.3,SNR=12
AKASG PKKPbc **PKKPbc** **15 34 56.1 -0.9**
comp=Z,1.1nm,0.6s,baz=59,slow=2.9,SNR=7.8
BRTR Keskin Array B 111.82 54 PP **PP** **15 24 41.3 -0.4**
comp=Z,1.1nm,0.9s,baz=249,slow=6.5,SNR=5.2
BRTR PKKPab **PKKPab** **15 34 59.8 +1.2**
comp=Z,1.3nm,0.9s,baz=106,slow=3.8,SNR=4.9
SOC Sochi 116.69 50 *i* PKIKP **PKPdf** **15 24 04.5 -1.7**
SOC *e* 15 25 11.7
SOC *e*PPP PPP 15 27 50.7
SOC *e*SS SS 15 41 24.3 +10
SOC *e*SSS SSS 15 45 33.2
KIV Kislovodsk 118.84 50 *e*PKIKP **PKiKP** **15 24 12.2 +1.7**
KIV pmax pmax
comp=Z,5.0nm,1.1s
KBZ Khabaz 119.00 50 PKP **PKPdf** **15 24 10.5 -0.1**
comp=Z,1.6nm,0.7s,baz=178,slow=5.8,SNR=5.2
KBZ Khabaz 119.00 50*c i*PKIKP **PKPdf** **15 24 11.5 +0.9**
BILL Bilibino 120.58 339*c i*PKIKP **PKPdf** **15 24 12.4 -0.5**
BILL *e* 15 25 40.0
BILL 15 31 13.0
BILL pmax pmax
comp=Z,4.0nm,1.1s
BILL MLR MLR
comp=Z,34nm,16.0s
STKA Stephens Creek 121.05 210 PKP **PKPdf** **15 24 15.2 +0.1**
comp=Z,3.5nm,0.8s,baz=105,slow=5.1,SNR=6.2
ARU Arti 126.59 33 *i* PKIKP **PKPdf** **15 24 25.7 +0.9**
ARU 15 26 22.2
ARU 15 31 25.6
ARU SS SS 15 43 11.1 -7.8
TIXI Tiksi 126.78 353 PKPdf **PKPdf** **15 24 24.4 -0.3**
TIXI Tiksi 126.78 353*c i*PKIKP **PKPdf** **15 24 24.3 -0.4**
TIXI pmax pmax
comp=Z,3.0nm,0.7s
NRIK Noril'sk 128.13 10 PKP **PKPdf** **15 24 27.8 +0.4**
comp=Z,1.6nm,0.5s,baz=69,slow=8.6,SNR=2.6
NRIK Noril'sk 128.13 10*c i*PKIKP **PKPdf** **15 24 27.9 +0.5**
SEY Seymchan 128.17 337 PKP **PKPdf** **15 24 28.9 +1.3**
baz=140,slow=3.7
SEY Seymchan 128.17 337*c i*PKIKP **PKPdf** **15 24 28.1 +0.5**
SEY pmax pmax
comp=Z,15nm,1.3s
PETK Petropavlovsk- 130.82 324 PKP **PKPdf** **15 24 31.9 -1.1**
comp=Z,4.8nm,0.9s,baz=137,slow=2.8,SNR=5.2
GEYT Alibeck 130.87 56 PP **PP** **15 26 49.9 -1.3**
comp=Z,2.2nm,0.7s,baz=248,slow=11,SNR=5.0
ASAR Alice Springs 131.59 209 PKhKP PKPpre 15 24 16.1
comp=Z,0.8nm,1.0s,baz=145,slow=2.9,SNR=5.5
ASAR PKP **PKPdf** **15 24 35.1 -0.3**
comp=Z,4.3nm,0.5s,baz=132,slow=1.6,SNR=58
ASAR pPKP pPKPdf 15 25 05.8 -0.2
comp=Z,5.5nm,1.0s,baz=149,slow=2.3,SNR=6.0
ASAR PP **PP** **15 26 53.3 -1.3**
comp=Z,2.8nm,1.2s,baz=152,slow=6.1,SNR=4.8
ASAR SKPbc **SKPbc** **15 27 50.5 -0.7**
comp=Z,6.7nm,1.0s,baz=146,slow=4.0,SNR=13
ASAR Alice Springs 131.59 209 PKPdf **PKPdf** **15 24 35.0 -0.5**
WRA Warramunga Arr 134.57 212 PKhKP PKPpre 15 24 25.6
comp=Z,0.8nm,0.8s,baz=152,slow=6.6,SNR=7.3
WRA PKP **PKPdf** **15 24 41.4 +0.3**
comp=Z,9.2nm,0.7s,baz=148,slow=2.0,SNR=44
WRA pPKP pPKPdf 15 25 11.7 0.0
comp=Z,2.1nm,0.7s,baz=153,slow=1.9,SNR=2.9
WRA SKPbc **SKPbc** **15 28 01.0 -0.4**
comp=Z,6.4nm,1.0s,baz=150,slow=2.4,SNR=10
WRAB Tennant Creek 134.57 212*c i*PKIKP **PKPdf** **15 24 41.0 -0.1**
WRAB pmax pmax
comp=Z,9.0nm,0.7s
YAK Yakutsk 135.51 347 PKP **PKPdf** **15 24 41.1 -0.4**
comp=Z,1.8nm,0.4s,baz=10.0,slow=1.5,SNR=5.6
YAK Yakutsk 135.51 347 *e*PKIKP **PKPdf** **15 24 41.0 -0.4**
YAK pmax pmax
comp=Z,9.0nm,0.9s
KURK Kurchatov 139.74 32*c i*PKIKP **PKPdf** **15 24 50.9 +1.3**
KURK pmax pmax
comp=Z,2.0nm,1.3s

KURBB	**Kurchatov Arra**	139.75	32	PP		**PP**	15 27 48.9	+2.7		
	comp=Z,0.4nm,0.8s,baz=293,slow=6.0,SNR=2.3									
ZALV	**Zalesovo Beam**	**140.21**	**24**	PKhKP	PKPpre		15 24 47.0			
	comp=Z,5.7nm,0.9s,baz=319,slow=3.1,SNR=6.4									
ZALV				PKP		**PKPdf**	**15 24 50.8**	**+0.4**		
	comp=Z,5.6nm,0.9s,baz=332,slow=2.7,SNR=14									
ZALV				SKPbc		**SKPbc**	**15 28 16.9**	**+0.2**		
	comp=Z,3.5nm,0.9s,baz=292,slow=4.7,SNR=4.9									
AAK	**Ala-Archa**	**141.65**	**45**	PP		**PP**	**15 28 00.5**	**+2.1**		
	comp=Z,1.1nm,0.3s,baz=234,slow=6.3,SNR=4.3									
AAK	**Ala-Archa**	**141.65**	**45** *c*	*i*PKIKP		**PKPdf**	**15 24 54.8**	**+1.2**		
AAK				pmax		pmax				
	comp=Z,1.0nm,0.6s									
MTN	**Manton Dam**	**142.19**	**213**	PKPpre	PKPpre		15 24 50.5			
JKA	**Kamikawa-asahi**	**143.90**	**320**	PKPdf	PKPbc		15 24 56.3	+0.9		
ASAJ	**Asahikawa**	**143.90**	**320**	PKP	PKPab		15 24 56.0	+1.3		
	comp=Z,14nm,1.1s,baz=324,slow=4.1,SNR=5.8									
ASAJ	**Asahikawa**	**143.90**	**320**	PKIKP	PKPbc		15 24 56.0	+0.7		
MAKZ	**Makanchi**	**143.93**	**34**	PKPdf	PKPab		15 24 56.0	+1.2		
MAKZ	**Makanchi**	**143.93**	**34**	PKIKP	PKPab		15 24 56.0	+1.3		
KSH	**Kashi**	**143.96**	**49**	PKP	PKPbc		15 24 57.6	+1.7		
KSH				PP		**PP**	**15 28 11.8**	**-0.7**		
MK31	**Makanchi Array**	**144.10**	**34**			**PKPab**	**15 24 55.7**	**+0.3**		
MK31	**Makanchi Array**	**144.10**	**34**	PKIKP		**PKPab**	**15 24 55.7**	**+0.3**		
MKAR	**Makanchi Array**	**144.10**	**34**	PKP		**PKPab**	**15 24 55.8**	**+0.3**		
	comp=Z,3.0nm,0.8s,baz=308,slow=2.8,SNR=21									
MKAR				SKPbc		**SKPbc**	**15 28 27.5**	**+0.7**		
	comp=Z,2.3nm,0.9s,baz=335,slow=2.0,SNR=4.4									
MKAR	**Makanchi Array**	**144.10**	**34**			**PKPab**	**15 24 55.2**	**-0.2**		
MKAR	**Makanchi Array**	**144.10**	**34**	PKIKP		**PKPab**	**15 24 55.2**	**-0.2**		
KLR	**Kul'dur**	**145.92**	**335**	PKPbc		**PKPdf**	**15 25 01.1**	**+0.5**		
	comp=Z,12nm,0.6s,baz=62,slow=3.1,SNR=59									
JTM	**Tennabayashi**	**146.61**	**316**	PKPbc		**PKPdf**	**15 25 02.9**	**+0.8**		
IRK	**Irkutsk**	**146.90**	**7**	*e*PKP2		**PKPdf**	**15 25 02.9**	**+0.7**		
IRK				pmax		pmax				
	comp=Z,30nm,2.2s									
GUMO	**Guam**	**146.93**	**265**	PKPbc		**PKPbc**	**15 25 05.5**	**+0.2**		
	comp=Z,200nm,0.9s,baz=172,slow=22,SNR=9.8									
MOY	**Mondy**	**146.96**	**11**	*e*PKP2		**PKPbc**	**15 25 04.8**	**+0.2**		
MOY				pmax		pmax				
	comp=Z,19nm,1.3s									
BATI	**Baumata**	**147.92**	**204**	P		**PKPbc**	**15 25 10.0**	**+1.8**		
SOEI	**Soe**	**148.09**	**206**	PKPab		**PKPbc**	**15 25 09.8**	**+1.1**		
SOEI	**Soe**	**148.09**	**206**	P		**PKiKP**	**15 25 10.9**	**+0.4**		
ZAK	**Zakamensk**	**148.58**	**9**	*e*PKIKP		**PKPdf**	**15 25 05.9**	**+0.7**		
ZAK				pmax		pmax				
	comp=Z,11nm,1.1s									
WMQ	**Urumqi**	**148.93**	**34**	*e*PKPbc		**PKPdf**	**15 25 05.9**	**0.0**		
HYBB	**Hyderabad (bro**	**149.29**	**89**	*e*PKPdf		**PKPdf**	**15 25 06.1**	**-1.0**		
HYBB				*e*PKiKP		**PKPbc**	**15 25 12.6**	**+1.0**		
HYBB				*ep*PKiKP		**pPKPbc**	**15 25 41.8**	**-0.4**		
HYBB				*es*PKiKP		**sPKPbc**	**15 25 53.0**	**-0.9**		
HYBB				*e*SKSdf		**SKSdf**	**15 32 04.7**	**-1.2**		
FAKI	**Fak Fak**	**149.39**	**226**	PKPbc		**PKPbc**	**15 25 11.8**	**-0.1**		
USRK	**Ussuriysk Ar.**	**149.70**	**329**	PKPbc		**PKPbc**	**15 25 12.8**	**+1.0**		
	comp=Z,30nm,0.8s,baz=30,slow=1.3,SNR=36									
WBSI	**Waikabubak, Su**	**149.87**	**197**	P		**PKPab**	**15 25 21.8**	**+3.0**		
MMRI	**Maumere**	**149.90**	**203**	P		**PKPbc**	**15 25 11.9**	**-1.3**		
EDFI	**Ende, Flores**	**149.99**	**202**	P		**PKPbc**	**15 25 13.3**	**-0.2**		
JCJ	**Chichijima**	**150.32**	**291**	PKPbc		**PKPbc**	**15 25 13.8**	**0.0**		
	comp=Z,32nm,0.5s,baz=108,slow=20,SNR=2.2									
BNX	**BinXian**	**150.47**	**336**	⇑PKPbc		**PKPbc**	**15 25 13.8**	**+0.2**		
MDJ	**Mudanjiang**	**150.49**	**332**	PKPbc		**PKPbc**	**15 25 13.7**	**+0.1**		
MJAR	**Matsushiro Arr**	**150.64**	**311**	PKPbc		**PKPbc**	**15 25 13.8**	**-0.5**		
	comp=Z,20nm,0.7s,baz=100,slow=4.1,SNR=65									
MJAR				pPKPbc		**pPKPbc**	**15 25 44.2**	**-0.7**		
	comp=Z,13nm,0.7s,baz=101,slow=2.6,SNR=7.1									
MSAI	**Masohi**	**151.20**	**220**	P		**PKPbc**	**15 25 15.6**	**-0.7**		
AAI	**Ambon**	**151.36**	**218**	P		**PKPdf**	**15 25 11.4**	**+0.9**		
SONM	**Songino Array**	**151.49**	**6**	PKP		**PKPdf**	**15 25 11.0**	**+1.1**		
	comp=Z,2.6nm,0.8s,baz=297,slow=0.6,SNR=14									
SONM				PKPbc		**PKPbc**	**15 25 16.8**	**+0.7**		
	comp=Z,23nm,0.7s,baz=315,slow=1.4,SNR=62									
SONM				pPKPbc		**pPKPbc**	**15 25 46.7**	**-0.1**		
	comp=Z,17nm,0.9s,baz=311,slow=1.7,SNR=5.7									
NLAI	**Namlea**	**152.36**	**217**	P		**PKPdf**	**15 25 14.0**	**+2.0**		
BSSI	**Bau Bau, Buton**	**152.83**	**201**	P		**PKPbc**	**15 25 19.8**	**-0.1**		
PYUN	**Piuthan**	**153.13**	**66**	*e*P		**PKPbc**	**15 25 20.6**	**+0.1**		
	comp=Z,26nm,0.6s									
BKSI	**Bulukumba**	**153.73**	**201**	P		**PKPbc**	**15 25 22.6**	**+0.7**		
SANI	**Sanana**	**153.96**	**216**	P		**PKPdf**	**15 25 15.1**	**+0.8**		
LBMI	**Labuha**	**154.20**	**221**	P		**PKiKP**	**15 25 25.5**	**+2.5**		
GKN	**Gorkha**	**154.57**	**66**	*e*P		**PKiKP**	**15 25 25.3**	**+1.8**		
	comp=Z,61nm,0.8s									
BNSI	**Bone**	**154.59**	**202**	P		**PKPbc**	**15 25 24.3**	**+0.6**		
SPSI	**Sidrap Palu**	**155.11**	**201**	P		PKPab	15 25 32.5	-8.2		
PKIN	**Phulchoki**	**155.32**	**66**	*e*P		PKPdf	15 25 29.8	+14		
	comp=Z,19nm,0.7s									
PKI	**Pulchoki**	**155.33**	**66**	*e*P		PKPdf	15 25 30.3	+14		
	comp=Z,31nm,1.0s									
GUN	**Gumba**	**155.65**	**65**	*e*P		PKPdf	15 25 29.0	+12		
	comp=Z,50nm,0.7s									
RAMN	**Ramite**	**156.51**	**67**	*e*P		PKPab	15 25 36.2	-11		
	comp=Z,39nm,0.6s									
KSRS	**Korea Array**	**156.72**	**324**	PKP		**PKPdf**	**15 25 18.0**	**+0.7**		
	comp=Z,1.3nm,0.8s,baz=22,slow=0.7,SNR=8.1									
KSRS				PKPbc		PKPbc	15 25 27.9			
	comp=Z,2.3nm,0.8s,baz=21,slow=1.6,SNR=10									
KSRS				PKPab		**PKPab**	**15 25 47.9**	**+0.8**		
	comp=Z,5.7nm,0.8s,baz=62,slow=4.3,SNR=16									
TAPN	**Taplejung**	**157.37**	**65**	*e*P		PKPab	15 25 36.8	-14		
	comp=Z,12nm,0.6s									
GTA	**Gaotai**	**157.96**	**23**	*e*PKP		**PKPdf**	**15 25 20.3**	**+1.3**		
GTA				sPKP			15 26 04.4			
GOMU	**GeErMu**	**158.16**	**37**	PKP		**PKPdf**	**15 25 21.6**	**+1.9**		
GOMU				AMB		AMB				
	comp=Z,74nm,6.1s									
HHC	**Hu-ho-hao-te**	**158.69**	**359**	*e*PKP		**PKPdf**	**15 25 18.6**	**-1.2**		
BTO	**Baotou**	**158.93**	**2**	*e*P		**PKPab**	**15 25 52.5**	**-4.2**		
LZH	**Lanzhou**	**162.34**	**19**	*e*PKP		**PKPdf**	**15 25 26.4**	**+2.4**		
NJ2	**Nanjing**	**165.58**	**332**	*e*PKP		**PKPdf**	**15 25 27.2**	**+0.3**		
CMAR	**Chiang Mai Arr**	**168.66**	**93**	PKP		**PKPdf**	**15 25 30.1**	**+0.6**		
	comp=Z,1.6nm,0.9s,baz=289,slow=1.6,SNR=7.8									
CMAR				PKPab		**PKPab**	**15 26 40.4**	**+0.2**		
	comp=Z,3.1nm,0.8s,baz=255,slow=6.6,SNR=16									
CMAR	**Chiang Mai Arr**	**168.66**	**93**			**PKPdf**	**15 25 29.3**	**-0.2**		
PZH	**PanZhiHua**	**169.07**	**49**	PKP		**PKPdf**	**15 25 31.0**	**+1.3**		

AZER ***05*** *15:46:05.9±0.0,40°.67N×47°.31E,h32km±1km Error ellipse: s-maj=0.6km s-min=0.6km az=290.0*
TIF ***05*** *15:46:05.5,40°.58N×47°.33E,h20km±2km*
MOS ***05*** *15:46:06.9±0.0,40°.83N×47°.20E,h4km,MPVA3.7*
DRS ***05*** *15:46:11.1±0.0,40°.67N×47°.14E,h22km*

ISC 05 15:46:05.9±1.1,40°.64N±0°.01×47°.36E±0°.02,h9km±9km, n56,σ1§40/107,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNGR	**Mingechevir, A**	**0.25**	**303**	P	**Pb**	**15 46 14.0**	**+1.4**
	SNR=300						
MNGR				S	**Sb**	**15 46 19.3**	**+2.2**
BRDA	**Brd**	**0.40**	**201**	P	**Pn**	**15 46 16.9**	**-1.0**
	SNR=8.8						
BRDA				S	**Sb**	**15 46 25.7**	**+4.3**
ZRD	**Zardab**	**0.43**	**145**	P	**Pn**	**15 46 17.1**	**-1.3**
	SNR=17						
ZRD				S	**Sb**	**15 46 26.1**	**+3.7**
QBL	**Gabala**	**0.47**	**49**	P	**Pn**	**15 46 17.1**	**-1.9**
	SNR=31						
QBL				S	**Sb**	**15 46 25.2**	**+1.5**
AGDM	**Agdam**	**0.56**	**200**	P	**Pb**	**15 46 18.8**	**+0.8**
	SNR=21						
AGDM				S	**Sn**	**15 46 28.5**	**-1.2**
SEKA	**Sheki**	**0.58**	**348**	P	**Pb**	**15 46 18.4**	**0.0**
	SNR=45						
SEKA				S	**Sb**	**15 46 27.4**	**+0.5**
IML	**Ismayilli**	**0.64**	**76**	P	**Pn**	**15 46 19.3**	**-2.0**
	SNR=20						
IML				S	**Sn**	**15 46 29.9**	**-1.8**
KDMR	**Kurdemir**	**0.68**	**112**	P	**Pn**	**15 46 20.5**	**-1.3**
	SNR=6.6						
KDMR				S	**Sn**	**15 46 32.1**	**-0.3**
GANJ	**Ganja**	**0.79**	**271**	P	**Pg**	**15 46 21.2**	**0.0**
	SNR=69						
GANJ				S	**Sg**	**15 46 32.1**	**+0.6**
XNQ	**Khinaliq**	**0.80**	**48**	P	**Pb**	**15 46 21.7**	**-0.4**
	SNR=92						
XNQ				S	**Sn**	**15 46 33.3**	**-2.5**
AKT	**Akhty**	**0.89**	**18**	*e*Pg	**Pn**	**15 46 23.8**	**-1.0**
AKT				*e*Sg	**Sn**	**15 46 36.2**	**-1.6**
BLQ	**Beylaqan**	**0.93**	**171**	P	**Pn**	**15 46 24.4**	**-0.8**
BLQ				S	**Sn**	**15 46 37.8**	**-0.8**
PQL	**Pirkuli**	**0.95**	**80**	P	**Pn**	**15 46 24.7**	**-1.0**
	SNR=16						
PQL				S	**Sn**	**15 46 38.6**	**-0.8**
QSAR	**Qusar**	**1.11**	**38**	P	**Pn**	**15 46 27.8**	**0.0**
	SNR=52						
QSAR				S	**Sn**	**15 46 43.3**	**+0.1**
QUBA	**Quba, Azerbaij**	**1.12**	**50**	P	**Pn**	**15 46 27.9**	**0.0**
	SNR=38						
QUBA				S	**Sn**	**15 46 43.7**	**+0.3**
SAAT	**Saatly**	**1.12**	**133**	P	**Pg**	**15 46 26.0**	**-1.5**
SAAT				S	**Sn**	**15 46 41.7**	**-1.7**
KSMR	**Kasumkent**	**1.12**	**31**	*e*Pg	**Pn**	**15 46 29.9**	**+1.9**
KSMR				*e*Sg	**Sn**	**15 46 45.6**	**+1.9**
ZKTA	**Zakatala**	**1.15**	**331**	P	**Pn**	**15 46 27.9**	**-0.4**
	SNR=200						
ZKTA				S	**Sn**	**15 46 43.9**	**-0.2**
QRD	**Qoradiz**	**1.18**	**182**	P	**Pg**	**15 46 28.0**	**-0.5**
	SNR=8.2						
QRD				S	**Sn**	**15 46 44.3**	**-0.5**
GBS	**Qobustan**	**1.21**	**94**	P	**Pn**	**15 46 29.9**	**+0.8**
	SNR=4.6						
GBS				S	**Sn**	**15 46 49.1**	**+3.5**
ATGJ	**Altiaghaj**	**1.22**	**79**	P	**Pn**	**15 46 29.8**	**+0.6**
	SNR=5.6						
ATGJ				S	**Sn**	**15 46 47.6**	**+1.6**
GDB	**GEDABAY**	**1.23**	**274**	P	**Pn**	**15 46 27.9**	**-1.5**
	SNR=148						
GDB				S	**Sb**	**15 46 44.1**	**-1.3**
DDFL	**Dedoflistskaro**	**1.24**	**311**	P	**Pg**	**15 46 32.3**	**+2.6**
DDFL				S	**Sn**	**15 46 49.0**	**+2.5**
SIZA	**Siyzn**	**1.25**	**69**	P	**Pg**	**15 46 29.9**	**+0.1**
	SNR=6.9						
SIZA				S	**Sn**	**15 46 48.3**	**+1.7**
ALIB	**Äli-Bayra**	**1.43**	**118**	Pg	**Pg**	**15 46 33.6**	**+0.3**
	SNR=10						
ALIB				Sn	**Sg**	**15 46 52.4**	**+0.6**
LGD	**Lagodekhi**	**1.47**	**325**	P	**Pn**	**15 46 32.5**	**-0.1**
LGD				S	**Sg**	**15 46 53.4**	**+0.3**
KMKR	**Kumukh**	**1.51**	**353**	*e*Pg	**Pg**	**15 46 34.4**	**-0.5**
KMKR				*e*Sg	**Sg**	**15 46 54.3**	**-0.1**
URKR	**Urkarakh**	**1.54**	**8**	*e*Pg	**Pg**	**15 46 35.7**	**+0.2**
URKR				*e*Sg	**Sg**	**15 46 56.4**	**+0.9**
QZX	**Qazax, Azerbai**	**1.57**	**286**	Pn	**Pn**	**15 46 33.6**	**-0.4**
	SNR=165						
QZX				Sn	**Sn**	**15 46 54.7**	**+0.2**
DRN	**Derbent**	**1.57**	**27**	*e*Pg	**Pg**	**15 46 36.3**	**+0.2**
DRN				*e*Sg	**Sg**	**15 46 58.3**	**+1.8**
GLBA	**Clilabad**	**1.60**	**150**	Sn	**Sg**	**15 46 57.0**	**-0.4**
DGRG	**David-gareji**	**1.71**	**299**	P	**Pb**	**15 46 36.8**	**-0.8**
DGRG				S	**Sb**	**15 47 00.4**	**+1.1**
GNBR	**Gunib**	**1.78**	**350**	*e*Pg	**Pb**	**15 46 38.6**	**-0.1**
GNBR				*e*Sg	**Sg**	**15 47 02.0**	**-1.0**
SGKR	**Sergokala**	**1.83**	**7**	*e*Pg	**Pb**	**15 46 39.6**	**-0.1**
SGKR				*e*Sg	**Sg**	**15 47 03.4**	**-1.5**
YRD	**Yardimli**	**1.85**	**158**	Pn	**Pn**	**15 46 37.6**	**-0.4**
	SNR=13						
YRD				Sn	**Sn**	**15 47 00.5**	**-1.2**
SBZ	**Shahbuz**	**1.86**	**229**	Pg	**Pb**	**15 46 39.8**	**-0.4**
	SNR=8.2						
SBZ				Sg	**Sb**	**15 47 04.6**	**+0.9**
XNZR	**Khunzakh**	**1.97**	**346**	*e*Pg	**Pb**	**15 46 41.8**	**-0.2**
XNZR				*e*Sg	**Sb**	**15 47 07.4**	**+0.7**
ARKR	**Arakani**	**1.98**	**352**	*e*Pg	**Pb**	**15 46 41.9**	**-0.4**
ARKR				*e*Sg	**Sb**	**15 47 06.8**	**-0.3**
ORD	**Ordubad**	**2.01**	**212**	Pn	**Pn**	**15 46 40.9**	**+0.8**
	SNR=9.5						
ORD				Sn	**Sn**	**15 47 06.3**	**+0.9**
NAX	**Nakhchivan**	**2.05**	**225**	Pg	**Pb**	**15 46 43.7**	**+0.3**
	SNR=5.1						
NAX				Sg	**Sg**	**15 47 12.4**	**+0.7**
UNCR	**Uncukul**	**2.12**	**349**	*e*Pg	**Pb**	**15 46 43.4**	**-1.2**
UNCR				*e*Sg	**Sb**	**15 47 10.7**	**-0.3**
LRK	**Lerik**	**2.13**	**159**	Pn	**Pn**	**15 46 41.5**	**-0.4**
LRK				Sn	**Sn**	**15 47 08.3**	**-0.3**
HYR	**Heyderabad**	**2.13**	**245**	Sg	**Sg**	**15 47 14.3**	**-0.1**
BUJR	**Buynaksk**	**2.19**	**355**	*e*Pg	**Pb**	**15 46 45.4**	**-0.4**
BUJR				*e*Sg	**Sb**	**15 47 14.1**	**+0.9**
BTLR	**Botlikh**	**2.20**	**338**	*e*Pg	**Pb**	**15 46 46.1**	**+0.2**
BTLR				*e*Sg	**Sb**	**15 47 13.7**	**+0.4**
BTNK	**Botanikuri**	**2.20**	**299**	P	**Pn**	**15 46 38.7**	**-4.0**
BTNK				S	**Sn**	**15 47 07.5**	**-2.6**
KRNR	**Karanay**	**2.21**	**351**	*e*Pg	**Pb**	**15 46 45.5**	**-0.7**
KRNR				*e*Sg	**Sb**	**15 47 14.7**	**+0.8**
ASTR	**Astara**	**2.35**	**152**	Sg	**Sg**	**15 47 19.8**	**-1.6**
KZRT	**Kazreti**	**2.36**	**289**	P	Pg	15 47 00.0	+8.8
KZRT				S	**Sn**	**15 47 16.3**	**+2.1**
DBC	**Dubki**	**2.41**	**351**	*e*Pg	**Pb**	**15 46 48.3**	**-1.3**
DBC				*e*Sg	**Sb**	**15 47 17.1**	**-2.5**
DMNI	**Dmanisi**	**2.50**	**287**	P	**Pb**	**15 46 49.0**	**-2.0**
DMNI				S	**Sb**	**15 47 20.8**	**-1.2**
TRLG	**Trialeti**	**2.62**	**291**	P	**Pn**	**15 46 50.0**	**+1.4**
TRLG				S	**Sb**	**15 47 23.9**	**-1.7**
BRNG	**Burnasheti**	**2.85**	**291**	P	**Pb**	**15 46 54.7**	**-2.3**
BRNG				S	**Sb**	**15 47 32.0**	**-0.1**
PNSH	**Pansheti**	**2.87**	**315**	P	**Pn**	**15 46 53.0**	**+1.0**
AKH	**Akhalkalaki**	**3.03**	**286**	P	**Pb**	**15 46 58.7**	**-1.5**
AKH				S	**Sb**	**15 47 36.9**	**-0.4**
SHA1	**Shidzhatmaz**	**4.67**	**313**	*e*Pn	**Pn**	**15 47 19.0**	**+2.2**
SHA1				*e*Sn	**Sn**	**15 48 10.8**	**-0.5**

JMA ***05*** *15:49:38.8±0.3,24°N±1°×122°.0E±0°.6,h26km,MV2.8/13, TAIWAN REGION*
TAP ***05*** *15:49:39.7,23°.71N×121°.99E,h36km,ML3.2,C*

ISC 05 15:49:40.3±3.3,23°.67N±0°.02×122°.02E±0°.02,h38km±3km, n115,σ1§43/207,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEYL	**Yanliau Villag**	**0.44**	**297**	*i*P	**Pn**	**15 49 48.5**	**-1.3**
	baz=302						
TEYL				S	**Sn**	**15 49 56.0**	**-0.8**
	baz=302						
TEGC	**Jichi Village**	**0.44**	**275**	*i*P	**Pn**	**15 49 48.8**	**-1.2**
	baz=270						
TEGC				*i*S	**Sn**	**15 49 55.9**	**-1.1**
	baz=270						
HWA	**Hwalien**	**0.49**	**309**	*e*P	**Pn**	**15 49 49.1**	**-1.6**
	baz=304						
HWA				*e*S	**Sn**	**15 49 56.8**	**-1.3**
	baz=304						
EGFH	**Guangfu**	**0.55**	**270**	P	**Pn**	**15 49 49.9**	**-1.7**
	baz=265						
EGFH				*e*S	**Sn**	**15 49 58.0**	**-1.5**
	baz=265						
ESL	**Shilin**	**0.56**	**285**	*e*P	**Pn**	**15 49 49.6**	**-2.2**
	baz=276						
ESL				S	**Sn**	**15 49 57.3**	**-2.5**
	baz=276						
TWD	**Chiawan**	**0.56**	**316**	P	**Pn**	**15 49 49.9**	**-2.0**
	baz=316						
TWD				S	**Sn**	**15 49 57.2**	**-2.8**
	baz=316						
ETM	**Tongmen**	**0.57**	**301**	P	**Pn**	**15 49 49.9**	**-2.1**
	baz=299						
ETM				S	**Sn**	**15 49 57.5**	**-2.6**
	baz=299						
HGSD	**Ruisui**	**0.58**	**252**	P	**Pn**	**15 49 50.4**	**-1.7**
	baz=247						
HGSD				*e*S	**Sn**	**15 49 58.5**	**-1.8**
	baz=247						
ETL	**Fush Village**	**0.61**	**323**	P	**Pn**	**15 49 50.5**	**-2.0**
	baz=318						
ETL				S	**Sn**	**15 49 58.6**	**-2.5**
	baz=318						
NACB	**Ninganchiao**	**0.64**	**322**	*i*P	**Pn**	**15 49 50.9**	**-2.0**
	baz=317						
NACB				S	**Sn**	**15 49 59.1**	**-2.7**
	baz=317						
EHY	**Hungye**	**0.66**	**256**	*i*P	**Pn**	**15 49 52.0**	**-1.3**
	baz=266						
EHY				*e*S	**Sn**	**15 50 01.1**	**-1.3**
	baz=266						
YULB	**Yu-li**	**0.72**	**248**	*e*P	**Pn**	**15 49 53.0**	**-1.0**
	baz=257						
YULB				S	**Sn**	**15 50 02.8**	**-1.0**
	baz=257						
EYUL	**Yuli**	**0.72**	**244**	P	**Pn**	**15 49 52.6**	**-1.3**
	baz=232						
EYUL				S	**Sn**	**15 50 03.0**	**-0.8**
	baz=232						
ETLH	**Xiulin Townshi**	**0.73**	**317**	*i*P	**Pn**	**15 49 52.5**	**-1.6**
	baz=317						
ETLH				*e*S	**Sn**	**15 50 01.7**	**-2.3**
	baz=317						
TWF1	**Yuli**	**0.74**	**245**	*i*P	**Pn**	**15 49 53.4**	**-0.8**
	baz=233						
TWF1				S	**Sn**	**15 50 03.5**	**-0.7**
	baz=233						
ENA	**Nanau**	**0.80**	**341**	P	**Pn**	**15 49 53.7**	**-1.2**
	baz=335						
ENA				*e*S	**Sn**	**15 50 03.8**	**-1.9**
	baz=335						
EWUT	**Wuta**	**0.80**	**344**	*i*P	**Pn**	**15 49 53.7**	**-1.3**
	baz=338						
EWUT				S	**Sn**	**15 50 04.2**	**-1.6**
	baz=338						
VWDT	**VWDT**	**0.81**	**276**	*i*P	**Pn**	**15 49 54.2**	**-0.9**
	baz=273						
VWDT				*e*S	**Sn**	**15 50 04.9**	**-1.2**
	baz=273						
FULB	**Fuli**	**0.82**	**235**	P	**Pn**	**15 49 53.9**	**-1.4**
	baz=221						
OWD	**Renai**	**0.82**	**290**	P	**Pn**	**15 49 54.2**	**-1.3**
	baz=288						
OWD				S	**Sn**	**15 50 04.9**	**-1.7**
	baz=288						
CHKT	**Chengkung**	**0.83**	**227**	*e*P	**Pn**	**15 49 53.7**	**-1.7**
	baz=214						
CHKT				*e*S	**Sn**	**15 50 04.0**	**-2.5**
	baz=214						
WHF	**Hehuan Shan**	**0.84**	**304**	*e*P	**Pn**	**15 49 54.2**	**-1.7**
	baz=303						
WHF				S	**Sn**	**15 50 05.0**	**-2.4**
	baz=303						
CHGB	**Renai**	**0.87**	**297**	P	**Pn**	**15 49 54.8**	**-1.4**
	baz=295						
CHGB				*e*S	**Sn**	**15 50 06.2**	**-1.5**
	baz=295						
WUSB	**Renai**	**0.89**	**291**	P	**Pn**	**15 49 55.4**	**-0.9**
	baz=295						
FUSS	**Fushou**	**0.92**	**309**	P	**Pn**	**15 49 55.7**	**-1.1**
	baz=308						
FUSS				*e*S	**Sn**	**15 50 06.8**	**-2.1**
	baz=308						
TWC	**Suao**	**0.95**	**350**	P	**Pn**	**15 49 56.2**	**-0.8**
	baz=352						
TWC				*e*S	**Sn**	**15 50 08.5**	**-0.9**
	baz=352						
NNSB	**Datong**	**0.95**	**322**	P	**Pn**	**15 49 56.2**	**-1.0**
	baz=322						
NNSB				S	**Sn**	**15 50 08.0**	**-1.7**
	baz=322						
EDH	**Donghe**	**0.96**	**224**	*e*P	**Pn**	**15 49 55.5**	**-1.7**
	baz=214						
EDH				*e*S	**Sn**	**15 50 07.8**	**-1.8**
	baz=214						
TWT	**Tachien**	**0.97**	**307**	P	**Pn**	**15 49 56.8**	**-0.7**
	baz=305						
TWT				S	**Sn**	**15 50 08.6**	**-1.5**
	baz=305						
NNS	**Nan Shan**	**0.97**	**322**	P	**Pn**	**15 49 56.3**	**-1.1**
	baz=322						
NNS				*e*S	**Sn**	**15 50 08.6**	**-1.4**
	baz=322						
LATG	**Datong**	**0.97**	**332**	P	**Pn**	**15 49 56.4**	**-1.1**
	baz=333						
LATG				*e*S	**Sn**	**15 50 08.3**	**-1.9**
	baz=333						
TDCB	**Techi**	**0.98**	**306**	P	**Pn**	**15 49 56.7**	**-0.9**
	baz=305						
TDCB				S	**Sn**	**15 50 08.6**	**-1.8**
	baz=305						
SSLB	**Suanglung**	**0.99**	**277**	*e*P	**Pn**	**15 49 56.2**	**-1.4**
	baz=284						
NDS	**Dongshan**	**1.00**	**344**	P	**Pn**	**15 49 57.0**	**-0.8**
	baz=338						
NDS				*e*S	**Sn**	**15 50 09.5**	**-1.1**
	baz=338						
YUS	**Yu-Shan**	**1.00**	**260**	*e*P	**Pn**	**15 49 57.5**	**-0.7**
	baz=257						
YUS				*e*S	**Sn**	**15 50 10.0**	**-1.2**
	baz=257						
NDT	**Datong Townshi**	**1.04**	**333**	*e*P	**Pn**	**15 49 56.7**	**-1.6**
	baz=334						
NDT				*e*S	**Sn**	**15 50 10.0**	**-1.6**
	baz=334						
ELDTW	**Lidau**	**1.04**	**243**	P

NFF	**Wufeng Townshi** baz=319	**1.26 319**	*eP*	**Pn**	**15 50 02.4 +1.0**
NFF	baz=319		*eS*	**Sn**	**15 50 17.3 +0.1**
TIPB	**Shuangxi** baz=5.0	**1.31 352**	*eP*	**Pn**	**15 50 02.1 +0.1**
TIPB	baz=5.0		*eS*	**Sn**	**15 50 18.3 +0.1**
TCU	**Taichung** baz=290	**1.32 291**	*eP*	**Pn**	**15 50 03.5 +1.3**
TCU	baz=290		*eS*	**Sn**	**15 50 19.7 +1.2**
TWQ1	**Liyutan** baz=300	**1.33 301**	*eP*	**Pn**	**15 50 03.4 +1.1**
TWQ1	baz=300		*eS*	**Sn**	**15 50 20.2 +1.5**
TPUB	**Ta-pu** baz=243	**1.33 254**	P	**Pn**	**15 50 03.2 +0.9**
TPUB	baz=243		*eS*	**Sn**	**15 50 20.3 +1.5**
TWB1	**Santiao Chiao**	**1.33 359**	*eP*	**Pn**	**15 50 02.0 -0.3**
TWB1			*eS*	**Sn**	**15 50 18.1 -0.7**
NSTT	**Nanjuang** baz=315	**1.34 316**	P	**Pn**	**15 50 02.9 +0.5**
NSTT	baz=315		S	**Sn**	**15 50 19.6 +0.8**
LIOB	**Emei** baz=316	**1.34 317**	P	**Pn**	**15 50 03.3 +0.9**
LIOB	baz=316		*eS*	**Sn**	**15 50 20.1 +1.2**
WGK	**Gukeng** baz=269	**1.34 271**	*eP*	**Pn**	**15 50 03.1 +0.7**
WDLH	**Douliu** baz=269	**1.36 271**	P	**Pn**	**15 50 03.7 +1.0**
WDLH	baz=269		S	**Sn**	**15 50 21.3 +1.8**
WTP	**Ta-pu** baz=242	**1.36 252**	P	**Pn**	**15 50 03.6 +0.8**
WTP	baz=242		S	**Sn**	**15 50 21.7 +2.1**
NHDH	**Xindian Distri** baz=329	**1.36 341**	*eP*	**Pn**	**15 50 03.0 +0.3**
NHDH	baz=329		*eS*	**Sn**	**15 50 19.4 -0.1**
TWA	**Mucha** baz=334	**1.36 343**	*eP*	**Pn**	**15 50 02.9 +0.1**
TWA	baz=334		*eS*	**Sn**	**15 50 20.1 +0.5**
NMLH	**Miaoli** baz=307	**1.42 308**	*eP*	**Pn**	**15 50 04.8 +1.3**
NMLH	baz=307		*eS*	**Sn**	**15 50 23.1 +2.2**
SXI1	**Grass Mountain** baz=11	**1.42 355**	*eP*	**Pn**	**15 50 03.7 +0.1**
SXI1	baz=11		*eS*	**Sn**	**15 50 22.5 +1.4**
SGST	**Jiashian** baz=235	**1.45 246**	*eP*	**Pn**	**15 50 05.0 +1.1**
SGST	baz=235		*eS*	**Sn**	**15 50 23.5 +1.8**
CHN1	**Nanshi** baz=249	**1.46 251**	P	**Pn**	**15 50 05.2 +1.1**
CHN1	baz=249		*eS*	**Sn**	**15 50 24.7 +2.8**
TWK	**Hsinying** baz=252	**1.47 254**	*eP*	**Pn**	**15 50 05.1 +0.9**
TWK	baz=252		*eS*	**Sn**	**15 50 24.6 +2.5**
SNST	**Tainan City** baz=250	**1.47 253**	*eP*	**Pn**	**15 50 05.1 +0.9**
SNST	baz=250		*eS*	**Sn**	**15 50 24.9 +2.6**
CHY	**Chiayi** baz=262	**1.48 264**	*eP*	**Pn**	**15 50 05.4 +1.1**
CHY	baz=262		*eS*	**Sn**	**15 50 24.9 +2.5**
HSN	**Hsinchu** baz=321	**1.48 320**	*eS*	**Sn**	**15 50 24.6 +2.1**
WTK	**Tuku** baz=269	**1.50 271**	*eP*	**Pn**	**15 50 05.9 +1.3**
WTK	baz=269		*eS*	**Sn**	**15 50 25.2 +2.3**
NCU	**National Centr** baz=330	**1.50 330**	*eP*	**Pn**	**15 50 04.5 -0.1**
NCU	baz=330		*eS*	**Sn**	**15 50 24.3 +1.3**
WRL	**Guolierlin Hig** baz=277	**1.52 279**	*eP*	**Pn**	**15 50 06.0 +1.0**
WRL	baz=277		*eS*	**Sn**	**15 50 25.3 +1.8**
YM01	**YM01** baz=330	**1.53 344**	*eP*	**Pn**	**15 50 05.7 +0.7**
YM01	baz=330		*eS*	**Sn**	**15 50 24.9 +1.2**
TWS1	**Kuangyinshan** baz=339	**1.53 339**	*eP*	**Pn**	**15 50 05.4 +0.4**
TWS1	baz=339		*eS*	**Sn**	**15 50 24.1 +0.5**
SSD	**Sandimen** baz=229	**1.58 235**	*eP*	**Pn**	**15 50 07.0 +1.3**
SSD	baz=229		*eS*	**Sn**	**15 50 26.5 +1.7**
TSMG	**Majia** baz=224	**1.59 233**	*eP*	**Pn**	**15 50 06.8 +0.9**
SCST	**Cishan** baz=239	**1.61 241**	*eP*	**Pn**	**15 50 08.1 +2.0**
SCST	baz=239		*eS*	**Sn**	**15 50 28.7 +3.1**
ICHU	**Yijhu** baz=258	**1.63 259**	P	**Pn**	**15 50 07.5 +1.2**
ICHU	baz=258		S	**Sn**	**15 50 28.3 +2.2**
WSF	**Szhu** baz=254	**1.65 269**	*eS*	**Sn**	**15 50 29.3 +2.6**
WSL	**Shuilin Townsh** baz=263	**1.65 265**	P	**Pn**	**15 50 07.7 +1.0**
WSL	baz=263		*eS*	**Sn**	**15 50 28.0 +1.3**
MASBT	**Mashibuluo** baz=222	**1.66 231**	*eP*	**Pn**	**15 50 06.9 +0.2**
SHHT	**Tainan City** baz=258	**1.67 248**	*eP*	**Pn**	**15 50 09.6 +2.7**
SHHT	baz=258		*eS*	**Sn**	**15 50 31.3 +4.2**
HATJ	**Hateruma jima**	**1.68 76**	P	**Pn**	**15 50 07.0 0.0**
HATJ			S	**Sn**	**15 50 27.7 +0.5**
EAST	**Anshuo** baz=219	**1.68 220**	*eP*	**Pn**	**15 50 06.5 -0.6**
LAY	**Lan-yu** baz=184	**1.68 195**	*eP*	**Pn**	**15 50 06.2 -0.9**
CHN8	**Yiju** baz=258	**1.69 259**	*eP*	**Pn**	**15 50 08.2 +0.9**
CHN8	baz=258		*eS*	**Sn**	**15 50 30.5 +2.8**
IRIF	**Iriomote-Funau**	**1.69 67**	P	**Pn**	**15 50 07.5 +0.2**
IRIF			S	**Sn**	**15 50 28.8 +1.1**
TWM1	**Shoushan** baz=239	**1.70 240**	*eP*	**Pn**	**15 50 07.7 +0.4**
LYUB	**Lan-yu** baz=192	**1.71 194**	*eP*	**Pn**	**15 50 05.0 -2.6**
LYUB	baz=192		*eS*	**Sn**	**15 50 24.2 -3.9**
SSPT	**Xinbi** baz=223	**1.79 229**	*eP*	**Pn**	**15 50 09.5 +0.9**
SCZT	**Fangliau** baz=220	**1.83 225**	*eP*	**Pn**	**15 50 09.4 +0.3**
TSCK	**Chigu Township** baz=252	**1.85 254**	*eP*	**Pn**	**15 50 10.8 +1.4**
TSCK	baz=252		*eS*	**Sn**	**15 50 33.5 +1.9**
JKRS	**Kuro-shima**	**1.90 72**	P	**Pn**	**15 50 10.4 +0.2**
JKRS			S	**Sn**	**15 50 33.8 +1.0**
JIJ	**Ishigaki jima**	**2.06 70**	P	**Pn**	**15 50 12.0 -0.3**
JIJ			S	**Sn**	**15 50 35.8 -0.8**
WDGT	**Dungji** baz=258	**2.21 260**	*eP*	**Pn**	**15 50 14.9 +0.6**
PHUB	**P'eng-hu** baz=254	**2.25 266**	*eP*	**Pn**	**15 50 15.2 +0.2**
PHUB	baz=254		*eS*	**Sn**	**15 50 41.5 0.0**
PNG	**Penghu** baz=255	**2.27 268**	*eP*	**Pn**	**15 50 15.5 +0.4**
JISG	**Ishigakijimahi**	**2.28 66**	P	**Pn**	**15 50 14.9 -0.5**
JISG			S	**Sn**	**15 50 40.9 -1.2**
JTJ	**Tarama**	**2.63 68**	P	**Pn**	**15 50 20.1 0.0**
JTJ			S	**Sn**	**15 50 50.4 -0.5**
PTMZ	**Houxiangcun** baz=296	**2.98 298**	*eP*	**Pn**	**15 50 24.5 -0.4**
JIRB	**Irabujima**	**3.10 68**	*eP*	**Pn**	**15 50 27.2 +0.6**
JMJ2	**Miyako jima3**	**3.20 70**	P	**Pn**	**15 50 28.3 +0.4**

*IDC **05** 16:10:57.7±0.5,0.°88S×120.°42E, h0km, mb4.2/17, mbtmp4.3/19, ML4.1/2, MS3.5/4, Error ellipse: s-maj=22.2km s-min=11.5km az=71.0*
*DJA **05** 16:11:00.3±0.9, 1.°5S×2.°3×12.°0E×.°1, h10km±7km, M4.5/19, mb4.8/13, mB5.0/10, MLv4.7/19, Mw(mB)4.4/10*
*NEIC **05** 16:11:02.2±2.2, 0.°89S±0.°05×120.°34E±0.°06, h27km±4km, mb4.8/48, Error ellipse: s-maj=8.2km s-min=6.5km az=73.0*

ISC 05 16:11:04.4±0.4, 0.°91S±0.°04×120.°34E±0.°05, h49km, n146, σ1§57/144, mb4.7/56, 1C-2D, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
APSI	**Ampana**	**1.31**	**90**	P	**Pn**	**Pn**	**16 11 25.6**	**-0.7**
APSI				S	**Sn**	**Sn**	**16 11 44.9**	**+2.2**
MPSI	**Mapaga**	**1.31**	**340**	P	**Pn**	**Pn**	**16 11 22.0**	**-4.4**
TOLI2	**Tolitoli**	**2.05**	**12**		**Pn**	**Pn**	**16 11 34.5**	**-2.0**
TOLI2	**Tolitoli**	**2.05**	**12**	P	**Pn**	**Pn**	**16 11 35.7**	**-0.8**
MRSI	**Marisa**	**2.11**	**49**	P	**Pn**	**Pn**	**16 11 34.3**	**-3.0**
TTSI	**Tana Toraja**	**2.19**	**194**	P	**Pn**	**Pn**	**16 11 37.3**	**-1.0**
TTSI				S	**Sn**	**Sn**	**16 12 05.5**	**+1.3**
LUWI	**Luwuk**	**2.44**	**93**		**Pn**	**Pn**	**16 11 40.2**	**-1.5**
LUWI	**Luwuk**	**2.44**	**93**	P	**Pn**	**Pn**	**16 11 40.6**	**-1.1**
LUWI	**Luwuk**	**2.44**	**93**	P	**Pn**	**Pn**	**16 11 41.9**	**+0.2**
SPSI	**Sidrap Palu**	**3.09**	**191**	P	**Pn**	**Pn**	**16 11 49.6**	**-1.1**
SMKI	**Samarinda**	**3.17**	**278**	P	**Pn**	**Pn**	**16 11 55.7**	**+3.9**
BKB	**Balikpapan**	**3.46**	**264**		**Pn**	**Pn**	**16 11 53.0**	**-2.8**
BKB	**Balikpapan**	**3.46**	**264**	P	**Pn**	**Pn**	**16 11 53.5**	**-2.3**
BKB	**Balikpapan**	**3.46**	**264**	P	**Pn**	**Pn**	**16 11 54.8**	**-1.0**
BNSI	**Bone**	**3.48**	**184**	P	**Pn**	**Pn**	**16 11 55.4**	**-0.7**
KMSI	**Cibinong**	**3.93**	**68**	P	Pn	Pn	16 12 09.1	+6.9
KAPI	**Kappang** 20nm,0.3s,baz=327,slow=9.2,SNR=53	**4.12**	**188**	Pn	**Pn**	**Pn**	**16 12 04.1**	**-0.8**
KAPI	12nm,0.3s,baz=346,slow=23,SNR=3.9			Sn		**Sn**	**16 12 51.8**	**-0.1**
KAPI	comp=Z,1μm,20.6s,baz=5.0,slow=42 78nm,0.5s			LR	LR	LR	16 13 51.1	
KAPI	**Kappang**	**4.12**	**188**			**Pn**	**16 12 03.8**	**-1.1**
KAPI	**Kappang**	**4.12**	**188**	P		**Pn**	**16 12 04.9**	**0.0**
BKSI	**Bulukumba**	**4.39**	**183**	P		**Pn**	**16 12 07.0**	**-1.6**
BBSI	**Bau Bau** 0.1nm242nm20nm,0.8s	**5.07**	**154**	P		**Pn**	**16 12 18.0**	**+0.1**
BSSI	**Bau Bau, Buton** 0.4nm1μm65nm,0.6s	**5.20**	**178**	P		**Pn**	**16 12 19.5**	**-0.3**
MTKI	**Muara Teweh, K** 1.0nm3μm84nm,0.6s	**5.44**	**270**	P		**Pn**	**16 12 20.9**	**-2.2**
SANI	**Sanana** 0.2nm1μm41nm,0.8s	**5.76**	**101**	P		**Pn**	**16 12 24.7**	**-2.7**
SANI	**Sanana**	**5.76**	**101**	P		**Pn**	**16 12 25.7**	**-1.7**
BBKI	**Banjar Baru** 0.6nm1μm91nm,0.8s	**6.05**	**245**	P		**Pn**	**16 12 28.3**	**-3.1**
MYLDM	**Lahad Datu**	**6.32**	**343**	Pn		**Pn**	**16 12 33.9**	**-1.2**
NLAI	**Namlea** 0.2nm936nm32nm,0.4s	**7.14**	**109**	P		**Pn**	**16 12 47.5**	**+1.1**
LBMI	**Labuha** 0.2nm523nm34nm,0.7s	**7.17**	**88**	P		**Pn**	**16 12 44.3**	**-2.4**
EDFI	**Ende, Flores** 0.0nm5.1nm,0.6s	**7.91**	**170**	P		**Pn**	**16 12 54.7**	**-2.3**
MMRI	**Maumere**	**7.91**	**166**	Pn		**Pn**	**16 12 55.3**	**-1.6**
AAI	**Ambon**	**8.32**	**110**	P		Pn	16 13 10.9	+8.4
WBSI	**Waikabubak, Su**	**8.73**	**186**	P		**Pn**	**16 13 11.5**	**+3.3**
SBUM	**Sibu**	**8.78**	**292**	Pn		**Pn**	**16 13 07.1**	**-1.7**
PBKI	**Pangkalan Bun** 1μm53nm,1.0s	**8.85**	**258**	P		**Pn**	**16 13 06.3**	**-3.5**
STKI	**Sintang** 2μm22nm,1.1s	**8.91**	**276**	P		**Pn**	**16 13 08.4**	**-2.3**
DAV	**Davao City (W)** comp=Z,85nm,19.1s,baz=200,slow=42	**9.49**	**33**	LR	LR	LR	16 17 29.1	
SOEI	**Soe**	**9.62**	**156**	Pn		**Pn**	**16 13 19.2**	**-1.3**
SOEI	**Soe** 54nm,1.1s	**9.62**	**156**	P		**Pn**	**16 13 21.0**	**+0.5**
SOEI	**Soe**	**9.62**	**156**	P		**Pn**	**16 13 22.7**	**+2.2**
JAGI	**Jajag, Banyuwa**	**9.72**	**219**	Pn		**Pn**	**16 13 20.5**	**-1.2**
JAGI	**Jajag, Banyuwa**	**9.72**	**219**	P		**Pn**	**16 13 19.9**	**-1.8**
JAGI	**Jajag, Banyuwa**	**9.72**	**219**	P		**Pn**	**16 13 22.0**	**+0.3**
BATI	**Baumata** 1.0nm,0.3s,baz=295,slow=17,SNR=2.3	**9.81**	**160**	Pn		**Pn**	**16 13 20.1**	**-2.9**
BATI	comp=Z,369nm,18.9s,baz=318,slow=42 21nm,1.0s			LR	LR	LR	16 17 54.7	
KSM	**Kuching**	**10.31**	**283**	Pn		**Pn**	**16 13 27.6**	**-2.1**
SIJI	**Sorong** comp=Z,202nm,20.0s,baz=204,slow=44	**10.93**	**90**	LR	LR	LR	16 18 52.5	
FAKI	**Fak Fak**	**12.07**	**100**	Pn		**Pn**	**16 13 51.5**	**-2.4**
LEM	**Lembang** 1.0nm,0.3s,baz=326,slow=22,SNR=1.9	**13.98**	**245**	Pn		**Pn**	**16 14 22.2**	**+2.0**
MTN	**Manton Dam**	**15.97**	**138**	P		**P**	**16 14 48.1**	**-0.7**
KDU	**Kakadu**	**16.78**	**135**	P		**P**	**16 14 57.0**	**-0.7**
KNRA	**Kununurra**	**16.87**	**151**			**Pn**	**16 14 56.9**	**-0.3**
KNRA	**Kununurra**	**16.87**	**151**	P		**P**	**16 14 59.2**	**+0.5**
IPM	**Ipoh**	**20.03**	**286**	P		**P**	**16 15 33.7**	**+0.2**
IPM	**Ipoh** 22nm,1.3s	**20.03**	**286**	P		Pn	16 15 34.7	-0.9
PSA00	**Pilbara Seismi**	**20.55**	**181**	P		**P**	**16 15 40.1**	**+1.1**
PSA00	**Pilbara Seismi**	**20.55**	**181**	P		**P**	**16 15 39.4**	**+0.4**
PSA00	comp=Z,10nm,1.3s			IAmb		IAmb	16 15 46.9	
PSA00	**Pilbara Seismi**	**20.55**	**181**	P		Pn	16 15 41.3	-0.3
KULM	**Kulim**	**20.61**	**288**	P		**P**	**16 15 39.1**	**-0.6**
RPSI	**Rantau Prapat**	**21.71**	**280**	P		**P**	**16 15 51.8**	**+0.2**
PSI	**Prapat** comp=Z,2.8nm,0.5s,baz=74,slow=2.1,SNR=4.7	**21.72**	**280**	P		**P**	**16 15 51.8**	**-0.1**
GSI	**Gunungsitoli** comp=Z,2.8nm,0.5s	**22.87**	**275**	P		**P**	**16 16 04.1**	**+0.1**
GSI	comp=Z,17nm,0.9s			IAmb		IAmb	16 16 16.3	
WB0	**Warramunga Arr**	**23.25**	**145**	P		**P**	**16 16 05.8**	**-2.0**
WB0	comp=Z,19nm,1.1s			IAmb		IAmb	16 16 11.8	
WRAB	**Tennant Creek**	**23.36**	**145**	P		**P**	**16 16 06.4**	**-2.4**
WRAB	comp=Z,23nm,1.1s			IAmb		IAmb	16 16 12.9	
WRAB	**Tennant Creek**	**23.36**	**145**	P		**P**	**16 16 09.5**	**+0.7**
WRA	**Warramunga Arr** comp=Z,4.1nm,0.9s,baz=331,slow=9.0,SNR=20	**23.36**	**145**	P		**P**	**16 16 07.0**	**-1.8**
WRA	comp=Z,0.5nm,1.0s,baz=322,slow=2.0,SNR=2.1 comp=Z,4.1nm,0.9s			PcP		**PcP**	**16 19 55.1**	**+0.5**
WRA	**Warramunga Arr**	**23.36**	**145**	P		**P**	**16 16 06.7**	**-2.1**
WB2	**Warramunga Arr**	**23.36**	**145**	P		**P**	**16 16 06.4**	**-2.4**
WB2	comp=Z,25nm,1.1s			IAmb		IAmb	16 16 12.9	
WR0	**Warramunga Arr**	**23.49**	**145**	P		**P**	**16 16 08.2**	**-1.9**
WR0	comp=Z,28nm,1.2s			IAmb		IAmb	16 16 13.5	
WRKA	**Warakurna**	**25.19**	**163**	P		**P**	**16 16 28.8**	**+3.2**
AS31	**Alice Springs**	**26.17**	**151**	P		**P**	**16 16 35.7**	**+1.2**
ASAR	**Alice Springs** comp=Z,1.4nm,0.7s,baz=323,slow=9.0,SNR=26	**26.17**	**151**	P		**P**	**16 16 34.2**	**-0.3**
ASAR	comp=Z,0.7nm,0.5s,baz=339,slow=1.9,SNR=8.9 comp=Z,1.4nm,0.7s			PcP		**PcP**	**16 20 01.2**	**+0.4**
ASAR	**Alice Springs**	**26.17**	**151**	P		**P**	**16 16 35.5**	**+0.9**
CMAR	**Chiang Mai Arr** comp=Z,1.4nm,0.8s,baz=140,slow=7.7,SNR=12 comp=Z,1.4nm,0.8s	**28.51**	**313**	P		**P**	**16 16 57.1**	**+1.5**
KMI	**Kunming**	**30.98**	**328**	⇑P		**P**	**16 17 21.8**	**+4.2**
KMI				pP		pP	16 17 27.6	-2.7
KMI	comp=Z,11nm,0.9s			pmax		pmax		
PZH	**PanZhiHua**	**32.62**	**328**	P		**P**	**16 17 34.6**	**+2.7**
PZH	comp=Z,10.0nm,0.9s			pmax		pmax		
PZH	comp=Z,100nm,6.3s			pmax		pmax		
JCJ	**Chichijima** comp=Z,41nm,0.8s,baz=256,slow=15,SNR=3.6	**34.89**	**35**	P		**P**	**16 17 52.2**	**+0.7**
JCJ	**Chichijima** comp=Z,73nm,1.0s	**34.89**	**35**	IAmb		IAmb	16 17 56.1	
BBOO	**Buckleboo**	**35.01**	**157**	P		**P**	**16 17 52.8**	**+0.3**
CD2	**Chengdu**	**35.35**	**335**	P		**P**	**16 17 55.6**	**+0.2**
CD2	comp=Z,10.0nm,0.7s			pmax		pmax		
STKA	**Stephens Creek** comp=Z,6.3nm,0.8s,baz=308,slow=13,SNR=2.5 comp=Z,6.3nm,0.8s	**36.77**	**149**	P		**P**	**16 18 06.9**	**-0.6**
STKA	**Stephens Creek**	**36.77**	**149**	P		**P**	**16 18 06.4**	**-1.0**
KSRS	**Korea Array**	**38.81**	**10**	P		**P**	**16 18 24.8**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=188,slow=11,SNR=10 comp=Z,1.5nm,0.7s							
PALK	**Pallekele**	**40.37**	**282**	P		**P**	**16 18 37.7**	**-0.3**
PALK				IAmb		IAmb	16 19 01.7	
MJAR	**Matsushiro Arr** comp=Z,2.7nm,1.0s,baz=199,slow=7.4,SNR=6.3 comp=Z,2.7nm,1.0s	**40.79**	**22**	P		**P**	**16 18 39.1**	**-2.0**
BJI	**Beijing**	**40.93**	**355**	P		**P**	**16 18 43.0**	**+0.9**
BJI	comp=Z,11nm,0.9s			pmax		pmax		
TAPN	**Taplejung** comp=Z,14nm,0.5s	**42.12**	**314**	*eP*		**P**	**16 18 53.5**	**+1.1**
HHC	**Hu-ho-hao-te**	**42.32**	**350**	*eP*		**P**	**16 18 54.7**	**+1.0**
HHC	comp=Z,37nm,1.1s			pmax		pmax		
HHC	comp=Z,130nm,7.9s			pmax		pmax		
RAMN	**Ramite** comp=Z,14nm,0.6s	**42.69**	**313**	*eP*		**P**	**16 18 58.1**	**+1.1**
JIRN	**Jiri** comp=Z,19nm,0.6s	**43.39**	**314**	*eP*		**P**	**16 19 03.6**	**+0.7**
GUN	**Gumba** comp=Z,24nm,0.6s	**43.76**	**314**	*eP*		**P**	**16 19 06.8**	**+1.0**
GOMU	**GeErMu**	**43.90**	**330**	P		**P**	**16 19 09.9**	**+3.1**
GOMU	comp=Z,2.0nm,0.6s			pmax		pmax		
GOMU	comp=Z,57nm,4.1s			pmax		pmax		
PKI	**Pulchoki** comp=Z,7.4nm,0.5s	**43.91**	**313**	*eP*		**P**	**16 19 07.3**	**+0.3**
PKIN	**Phulchoki** comp=Z,9.9nm,0.6s	**43.92**	**313**	*eP*		**P**	**16 19 07.2**	**+0.2**
DMN	**Daman**	**44.15**	**313**	*eP*		**P**	**16 19 09.4**	**+0.5**
GTA	**Gaotai**	**44.32**	**337**	⇓P		**P**	**16 19 12.1**	**+2.3**
GTA				sP		sP	16 19 28.9	+0.2
GTA	comp=Z,10.0nm,1.1s			pmax		pmax		
GKN	**Gorkha** comp=Z,15nm,0.5s	**44.72**	**313**	*eP*		**P**	**16 19 13.8**	**+0.6**
XLT	**XiLinHaoTe**	**44.77**	**356**	⇓*i*P		**P**	**16 19 14.5**	**+1.2**
XLT	comp=Z,16nm,0.8s			pmax		pmax		
XLT	comp=Z,74nm,4.4s			pmax		pmax		
PYUN	**Piuthan** comp=Z,35nm,0.6s	**45.99**	**312**	*eP*		**P**	**16 19 23.7**	**+0.3**
USRK	**Ussuriysk Ar.** comp=Z,1.9nm,0.6s,baz=190,slow=6.4,SNR=5.7 comp=Z,1.9nm,0.6s	**46.10**	**12**	P		**P**	**16 19 23.2**	**-0.5**
ULN	**Ulaanbaatar**	**49.94**	**348**	P		**P**	**16 19 52.0**	**-1.6**
ULN				IAmb		IAmb	16 19 57.0	
SONM	**Songino Array** comp=Z,2.4nm,0.8s comp=Z,1.9nm,0.6s,baz=165,slow=11,SNR=9.2 comp=Z,1.9nm,0.6s	**50.05**	**348**	P		**P**	**16 19 54.6**	**+0.3**
SONM	**Songino Array**	**50.05**	**348**	P		**P**	**16 19 54.0**	**-0.4**
WMQ	**Urumqi**	**53.23**	**331**	*eP*		**P**	**16 20 20.6**	**+2.5**
WMQ	comp=Z,21nm,0.7s			pmax		pmax		
KSH	**Kashi**	**57.12**	**320**	P		**P**	**16 20 48.3**	**+2.0**
KSH	comp=Z,8.0nm,1.0s			pmax		pmax		
MK31	**Makanchi Array**	**58.02**	**330**	P		**P**	**16 20 52.6**	**+0.2**
MK31	comp=Z,8.0nm,0.9s			IAmb		IAmb	16 20 55.0	
MKAR	**Makanchi Array** comp=Z,7.7nm,0.8s,baz=132,slow=7.1,SNR=62 comp=Z,7.7nm,0.8s	**58.02**	**330**	P		**P**	**16 20 53.2**	**+0.8**
MKAR	**Makanchi Array**	**58.02**	**330**	P		**P**	**16 20 53.0**	**+0.5**
MAKZ	**Makanchi**	**58.19**	**330**	P		**P**	**16 20 54.0**	**+0.4**
MAKZ	comp=Z,9.2nm,1.1s			IAmb		IAmb	16 20 56.1	
KBL	**Kabul**	**59.52**	**312**	P		**P**	**16 21 02.4**	**-0.8**
AAK	**Ala-Archa**	**59.78**	**322**	P		**P**	**16 21 05.6**	**+0.8**
AAK	comp=Z,18nm,1.4s			IAmb		IAmb	16 21 07.4	
GAR	**Garm**	**60.61**	**317**	P		**P**	**16 21 10.1**	**-0.5**
CHGR	**Chuyangaron**	**61.25**	**316**	P		**P**	**16 21 13.5**	**-1.3**
ZAA0	**Zalesovo Array**	**62.07**	**337**	P		**P**	**16 21 18.1**	**-1.9**
ZAA0	comp=Z,6.9nm,1.1s			IAmb		IAmb	16 21 21.2	
ZALV	**Zalesovo Beam** comp=Z,3.0nm,0.8s,baz=116,slow=5.8,SNR=11 comp=Z,3.0nm,0.8s	**62.07**	**337**	P		**P**	**16 21 19.6**	**-0.4**
ZALV	**Zalesovo Beam**	**62.07**	**337**	P		**P**	**16 21 18.2**	**-1.7**
KURK	**Kurchatov**	**62.46**	**332**	P		**P**	**16 21 22.3**	**-0.4**
KURK	comp=Z,17nm,1.0s			IAmb		IAmb	16 21 24.8	
KK31	**Karatay Array**	**62.50**	**321**	P		**P**	**16 21 22.6**	**-0.5**
KK31	comp=Z,9.9nm,1.4s			IAmb		IAmb	16 21 25.3	
KKAR	**Karatay Array**	**62.50**	**321**	P		**P**	**16 21 23.2**	**+0.1**
KKAR	comp=Z,9.9nm,1.4s			IAmb		IAmb	16 21 25.3	
KKAR	**Karatay Array**	**62.50**	**321**	P		**P**	**16 21 23.1**	**+0.1**
YAK	**Yakutsk**	**63.17**	**5**	P		**P**	**16 21 24.3**	**-2.8**
HRA	**Herat**	**64.65**	**309**	P		**P**	**16 21 37.7**	**0.0**
SOCY	**Socotra**	**67.12**	**284**	P		**P**	**16 21 53.0**	**-0.8**
BRVK	**Borovoye**	**67.98**	**330**	P		**P**	**16 21 56.8**	**-1.5**
BRVK	comp=Z,16nm,1.2s			IAmb		IAmb	16 22 00.2	
GEYT	**Alibeck** comp=Z,12nm,0.9s,baz=184,slow=8.9,SNR=19 comp=Z,12nm,0.9s	**68.97**	**311**	P		**P**	**16 22 06.0**	**+1.1**
GEYT	**Alibeck**	**68.97**	**311**	P		**P**	**16 22 05.1**	**+0.2**
GEYT	comp=Z,11nm,0.9s			IAmb		IAmb	16 22 06.7	
GYA0B	**ALIBECK ARRAY**	**68.97**	**311**	P		**P**	**16 22 05.2**	**+0.3**
ABKAR	**Akbulak array**	**71.84**	**323**	P		**P**	**16 22 21.6**	**-0.5**
ABKAR	comp=Z,13nm,0.9s			IAmb		IAmb	16 22 23.1	
TIXI	**Tiksi**	**72.65**	**3**	P		**P**	**16 22 24.5**	**-1.9**
TIXI	comp=Z,11nm,1.1s			IAmb		IAmb	16 22 26.2	
NRIK	**Noril'sk** comp=Z,3.2nm,1.0s,baz=121,slow=8.4,SNR=5.3 comp=Z,3.2nm,1.0s	**73.52**	**348**	P		**P**	**16 22 30.8**	**-0.9**
NRIK	**Noril'sk**	**73.52**	**348**	P		**P**	**16 22 30.2**	**-1.5**
NRIK	comp=Z,6.3nm,1.1s			IAmb		IAmb	16 22 32.0	
ARU	**Arti**	**75.55**	**330**	P		**P**	**16 22 42.7**	**-1.0**
ARU	comp=Z,8.7nm,1.0s			IAmb		IAmb	16 22 44.4	
RAYN	**Ar Rayn**	**76.48**	**294**	P		**P**	**16 22 48.4**	**-1.4**
RAYN	comp=Z,10nm,1.0s			IAmb		IAmb	16 22 50.1	
VNDA	**Vanda** comp=Z,0.9nm,0.6s,baz=326,slow=5.7,SNR=11 comp=Z,0.9nm,0.6s	**79.73**	**172**	P		**P**	**16 23 07.0**	**+0.3**
VNDA	**Vanda**	**79.73**	**172**	P		**P**	**16 23 07.2**	**+0.5**
GEVA	**Gevas**	**80.59**	**309**	P		**P**	**16 23 11.9**	**-0.5**
KARS	**Kars**	**80.93**	**311**	P		**P**	**16 23 15.0**	**+0.9**
GURO	**Guroymak-BITLI**	**81.42**	**309**	P		**P**	**16 23 17.5**	**+0.8**
KBZ	**Khabaz** comp=Z,7.1nm,0.9s,baz=139,slow=1.9,SNR=14 comp=Z,7.1nm,0.9s	**81.56**	**314**	P		**P**	**16 23 16.9**	**-0.1**
MARD	**Mardin**	**82.25**	**308**	P		**P**	**16 23 21.2**	**+0.2**
MARD	comp=Z,13nm,0.7s			IAmb		IAmb	16 23 22.0	
BNN	**Bunyan**	**86.27**	**309**	P		**P**	**16 23 40.8**	**-0.7**
KLMR	**Klimovskoe**	**86.31**	**331**	*eP*		**P**	**16 23 38.5**	**-2.4**
KLMR	comp=Z,21nm,1.3s			AMP			16 23 41.1	
BR131	**Keskin Array S**	**88.03**	**310**	P		**P**	**16 23 49.0**	**-0.9**
BR131	comp=Z,8.6nm,0.9s			IAmb		IAmb	16 23 50.5	
BRTR	**Keskin Array B** comp=Z,3.5nm,0.8s,baz=121,slow=5.9,SNR=25 comp=Z,3.5nm,0.8s	**88.03**	**310**	P		**P**	**16 23 49.8**	**-0.2**
BRTR	**Keskin

MILZ				S	Sn	16 18 05.6	-0.9
MSRU	**Castanea**	**0.39**	**117**	P	Pn	16 17 53.7	-0.1
MSRU				S	Sn	16 18 06.9	-0.8
MSRU				AML	AML		
	comp=E,100μm,1.3s						
MSRU				AML	AML		
	comp=N,126μm,0.4s						
NOV	**Novara**	**0.41**	**173**	P	Pn	16 17 54.3	+0.3
NOV				S	Sn	16 18 08.5	+0.4
AIO	**Antillo**	**0.48**	**165**	P	Pn	16 17 54.4	0.0
AIO				S	Sn	16 18 08.7	0.0
MSFR	**San Fratello**	**0.56**	**223**	P	Pn	16 17 55.0	+0.2
MSCL	**Scilla**	**0.60**	**110**	P	Pn	16 17 55.1	0.0
MSCL				S	Sn	16 18 09.9	0.0
EPZF	**Pizzo Felice**	**0.64**	**196**	P	Pn	16 17 55.8	+0.4
MTTG	**Motta San Giov**	**0.66**	**132**	P	Pn	16 17 55.6	+0.2
MTTG				S	Sn	16 18 11.1	+0.6
JOPP	**Joppolo**	**0.66**	**75**	P	Pn	16 17 56.1	+0.7
JOPP				S	Sn	16 18 11.3	+0.7
SOI	**Samo**	**0.85**	**115**	P	Pn	16 17 57.0	+0.1
SOI				S	Sn	16 18 12.9	-0.3
ORI	**Oriolo Calabro**	**1.94**	**33**	AML	AML		
	comp=N,154μm,0.1s						
ORI				AML	AML		
	comp=E,254μm,0.1s						

PDG ***05*** *16:18:34.8±0.1, 42°.57N×18°.57E, h9km, ML1.8/11, Error ellipse: s-maj=0.1km s-min=0.1km az=0.0*

RHSSO 05 16:18:35.8±0.3, 42°.54N×18°.55E, h3km±2km, ML1.8/8, 11C-3D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HCY	**Herceg Novi**	**0.10**	**204**	↑*i*Pg	Pg	16 18 37.6	-0.2
HCY				*e*Sg	Sg	16 18 40.1	+0.9
HCY	**Herceg Novi**	**0.10**	**204**	↑*i*Pg	Pg	16 18 37.6	-0.2
HCY				*e*Sg	Sg	16 18 39.9	+0.7
TREB	**Trebinje**	**0.23**	**320**	*e*Pg	Pg	16 18 40.1	-0.1
TREB				*e*Sg	Sg	16 18 43.6	+0.3
CEME	**Cevo**	**0.27**	**89**	↓*i*Pg	Pg	16 18 39.8	-1.2
CEME				*i* Sg	Sg	16 18 43.9	-0.6
DBRK	**Dubrovnik**	**0.33**	**293**	*e*Pg	Pg	16 18 41.5	-0.5
DBRK				Sg	Sg	16 18 46.6	+0.3
BUM	**Brajici-Budva**	**0.35**	**134**	↑*i*Pg	Pg	16 18 41.7	-0.8
BUM				*i* Sg	Sg	16 18 47.3	+0.2
BRY	**Bratogost**	**0.36**	**358**	↓*i*Pg	Pg	16 18 41.6	-1.2
BRY				*e*Sg	Sg	16 18 47.1	-0.4
BRY	**Bratogost**	**0.36**	**358**	↑*i*Pg	Pg	16 18 41.2	-1.6
BRY				*e*Sg	Sg	16 18 46.7	-0.8
NKY	**Niksic**	**0.42**	**50**	*e*Pg	Pg	16 18 42.3	-1.7
NKY				*i* Sg	Sg	16 18 48.6	-0.9
PDG	**Podgorica**	**0.53**	**102**	*e*Pg	Pg	16 18 44.9	-1.1
PDG				*e*Sg	Sg	16 18 53.0	+0.1
TTG	**Podgorica**	**0.53**	**102**	↑*i*Pg	Pg	16 18 44.3	-1.7
TTG				*i* Sg	Sg	16 18 52.8	-0.1
DRME	**Dracevica, Mon**	**0.59**	**127**	*e*Pg	Pg	16 18 46.2	-0.9
DRME				*e*Sg	Sg	16 18 55.4	+0.7
DRME	**Dracevica, Mon**	**0.59**	**127**	↑*i*Pg	Pg	16 18 45.9	-1.2
DRME				*e*Sg	Sg	16 18 55.2	+0.5
STON	**Ston**	**0.71**	**298**	*e*Pg	Pg	16 18 47.9	-1.5
STON				*e*Sg	Sg	16 18 59.2	+0.6
STON	**Ston**	**0.71**	**298**	*e*Pg	Pg	16 18 47.9	-1.5
STON				Sg	Sg	16 18 58.7	+0.1
UPM	**Unac-Piva**	**0.71**	**21**	↑*i*Pg	Pg	16 18 47.7	-1.7
UPM				*e*Sg	Sg	16 18 59.1	+0.4
UPM	**Unac-Piva**	**0.71**	**21**	↑*i*Pg	Pg	16 18 47.6	-1.8
UPM				*i* Sg	Sg	16 18 58.2	-0.5
KOME	**Kolasin**	**0.77**	**66**	↓*i*Pg	Pg	16 18 48.7	-1.9
KOME				*i* Sg	Sg	16 19 00.6	-0.1
ULC	**Ulcinj**	**0.77**	**138**	↑*i*Pg	Pg	16 18 49.4	-1.2
ULC				*e*Sg	Sg	16 19 01.4	+0.8
PVY	**Plav**	**1.04**	**87**	↑*i*Pg	Pg	16 18 53.8	-1.9
PVY				*i* Sg	Sg	16 19 09.9	+0.7
IVA	**Berane**	**1.04**	**71**	↑*i*Pg	Pg	16 18 53.7	-2.1
IVA				*e*Sg	Sg	16 19 09.5	+0.2
RUDO	**Rudo**	**1.23**	**29**	*e*Pg	Pg	16 18 57.5	-1.9
RUDO				*e*Sg	Sg	16 19 15.0	-0.4
LSTV	**Lastovo**	**1.25**	**281**	*e*Pg	Pg	16 18 58.0	-1.6
LSTV				Sg	Sg	16 19 15.3	-0.5
SJES	**Sjenica**	**1.27**	**55**	*e*Pg	Pg	16 18 58.7	-1.4
SJES				*e*Sg	Sg	16 19 16.7	+0.2
MAKA	**Makarska**	**1.35**	**304**	*e*Pn	Pn	16 19 00.2	-1.4
MAKA				Sn	Sg	16 19 19.2	0.0
RICI	**Ricice**	**1.41**	**313**	*e*Pn	Pn	16 19 01.1	-1.4
RICI				Sg	Sn	16 19 21.7	+0.1
BBLS	**Lazići**	**1.46**	**25**	*e*Pg	Pn	16 19 02.3	-0.9
BBLS				*e*Sg	Sn	16 19 23.0	0.0
HVAR	**Hvar**	**1.67**	**293**	*e*Pn	Pn	16 19 05.6	-0.4
HVAR				Sn	Sn	16 19 06.9	-1.1
SRKY	**Kupres RS**	**1.83**	**327**	*e*Pn	Pn	16 19 08.3	0.0
SRKY				*e*Sn	Sn	16 19 32.2	+0.1
DIVS	**Divibare**	**1.88**	**34**	*e*Pn	Pn	16 19 08.9	0.0
DIVS				*e*Sn	Sn	16 19 32.8	-0.4
KIJV	**Kijevo**	**2.14**	**314**	*e*Pn	Pn	16 19 11.7	-0.9
KIJV				Sn	Sn	16 19 40.3	+0.6
ZIRJ	**Zirje**	**2.40**	**299**	*e*Pn	Pn	16 19 15.7	-0.3
ZIRJ				Sn	Sn	16 19 44.9	-1.1
MORI	**Morici**	**2.46**	**303**	*e*Pn	Pn	16 19 16.3	-0.6
MORI				Sn	Sn	16 19 47.8	+0.3
DUGI	**Dugi Otok**	**2.94**	**301**	*e*Pn	Pn	16 19 22.8	-0.6
DUGI				Sn	Sn	16 19 58.9	-0.3
VIRC	**Vir**	**3.09**	**306**	*e*Pn	Pn	16 19 24.5	-1.0
VIRC				Sn	Sn	16 20 02.7	-0.3
BRJN	**Brijuni**	**4.21**	**306**	*e*Pn	Pn	16 19 39.8	-1.0
BRJN				Sn	Sn	16 20 28.8	-1.6

PRU 05 16:22:04.8±0.0, 50°.35N×18°.81E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MORC	**Moravsky Berou**	**1.00**	**235**	*e*PG	Pg	16 22 24.3	+0.4
MORC				*e*SG	Sg	16 22 37.2	+0.4
MAUC	**Maruska**	**1.17**	**213**	*e*PG	Pg	16 22 26.7	-0.6
MAUC				*e*SG	Sg	16 22 42.4	0.0
	comp=Z,8.9nm,0.6s						
LANS	**Liptovska Anna**	**1.27**	**160**	*e*PG	Pg	16 22 28.7	-0.5
LANS				*e*SG	Sb	16 22 46.7	+0.1
LANS				*e*LG	Lg	16 22 52.1	
KRLC	**Kraliky**	**1.33**	**259**	*e*PG	Pg	16 22 28.6	-1.7
KRLC				*e*SG	Sg	16 22 47.2	-0.4
	comp=Z,3.1nm,1.0s						
DPC	**Dobruska-Polom**	**1.59**	**271**	*e*PG	Pn	16 22 33.5	-0.8
DPC				*e*SG	Sg	16 22 56.3	+0.3
	comp=Z,3.1nm,1.1s						
CHVC	**Chvalec**	**1.78**	**279**	*e*SG	Sb	16 23 01.3	+0.2

MOS ***05*** *16:25:31.2±0.8, 4°.53S×125°.62E, h425km, mb6.3/55, MS5.0/11, Error ellipse: s-maj=6.5km s-min=3.8km az=116.2*

NEIC ***05*** *16:25:33.5±2.3, 4°.59S±0°.08×125°.63E±0°.08, h430km±3km, mb6.1/342, Mwb6.3/49, Mww6.3, Error ellipse: s-maj=11.6km s-min=11.1km az=49.0*

NEIC ***05*** *16:25:33.4, 4°.57S×125°.65E, h432km, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr=2.09; Mθθ0.19; Mφφ1.90; Mrθ-2.09; Mθφ1.06; Mrφ-1.75; Fault plane solution: M₀3.54000×10¹⁸ NP1:φs44.38000°, δ71.11000°, λ-75.72000°. NP2:φs186.22000°, δ23.52000°, λ-125.77000°. Principal axes: T 3.5642, Plg25.0000°, Azm123.0000°; N -0.0389, Plg13.0000°, Azm220.0000°; P -3.5253, Plg61.0000°, Azm336.0000°;*

IDC ***05*** *16:25:34.3±0.4, 4°.58S×125°.64E, h443km±4km, mb5.8/57, mbtmp6.6/63 Error ellipse: s-maj=6.5km s-min=4.9km az=83.0*

DJA ***05*** *16:25:34.2±0.1, 5°.5S±1°×12°.6E±°, h448km±1km, M6.0/145, mB6.4/132, mb6.3/145, MLv6.8/30, Mw6.3/74, Mw(mB)6.2/132, MwMwp5.8/111, Mwp5.9/111*

KLM ***05*** *16:25:35, 4.59S×125°.70E, h437km, mb6.5*

GCMT ***05*** *16:25:36.5±0.1, 4°.51S±0°.01×125°.56E±0°.01, h449km, MW6.3/169, Moment Tensor Solution. s169,c419; s157,c251; Duration: 3ˢ5 Moment tensor: Scale 10¹⁸ Nm; Mrr-2.47±.01; Mθθ0.97±.02; Mφφ1.50±.02; Mrθ-1.72±.02; Mθφ1.25±.02; Mrφ-1.85±.02; Best double couple: M₀3.54900×10¹⁸ NP1:φs216.00000°, δ22.00000°, λ-95.00000°. NP2:φs42.00000°, δ68.00000°, λ-88.00000°.*

Principal axes: T 3.5680, Plg23.0000°, Azm130.0000°; N -0.0350, Plg2.0000°, Azm221.0000°; P -3.5290, Plg67.0000°, Azm316.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to mantle waves, cutoff=125s. Triangular moment-rate function

NEIC ***05*** *16:25:36, 4.59S×125.64E, h450km, Moment Tensor Solution. Duration: 69s0 Moment tensor: Scale 10¹⁸Nm; Mrr-2.51; Mθθ0.80; Mφφ1.72; Mrθ-1.44; Mθφ1.02; Mrφ-1.60; Fault plane solution: M₀3.26000×10¹⁸ NP1: φs208.00000°, δ25.00000°, λ-99.00000°. NP2:φs39.00000°, δ66.00000°, λ-85.00000°. Principal axes: T 3.1738, Plg21.0000°, Azm125.0000°; N 0.1628, Plg4.0000°, Azm217.0000°; P -3.3366, Plg69.0000°, Azm318.0000°;*

ISC 05 16:25:33.4±0.2, 4°.59S±0°.02×125°.62E±0°.03, h441km±1km, h442km: pP-P, n3000, σ1s74/3625, mb6.2/364, 235C-536D, Fault plane solution: NP1:φs268.23676°, δ14.04374°, λ-56.71965°. NP2:φs54.15410°, δ78.29546°, λ-97.81560°. Principal axes: T Plg32.8557°, Azm150.7269°; N Plg7.6521°, Azm55.7491°; P Plg56.0391°, Azm314.2424°;

Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**2.00**	**48**	P	**P**	**16 26 33.9**	**+0.8**
NLAI				S	**S**	16 27 20.3	-1.1
SANI	**Sanana**	**2.55**	**8**	P	**P**	**16 26 38.3**	**+1.7**
SANI				S	**S**	16 27 27.8	+0.1
SANI	**Sanana**	**2.55**	**8**	P	**P**	**16 26 38.4**	**+1.8**
AAI	**Ambon**	**2.72**	**71**	P	**P**	**16 26 37.3**	**-0.4**
BBSI	**Bau Bau**	**3.17**	**254**	P	**P**	**16 26 44.8**	**+3.8**
MSAI	**Masohi**	**3.53**	**70**	P	**P**	**16 26 42.7**	**-1.2**
BNDI	**Bandanaira**	**4.27**	**89**	P	**P**	**16 26 50.3**	**-0.1**
LBMI	**Labuha**	**4.35**	**26**	P	**P**	**16 26 53.5**	**+2.3**
LBMI				S	**S**	**16 27 56.3**	**+1.8**
LUWI	**Luwuk**	**4.53**	**321**	P	**P**	**16 26 55.4**	**+2.6**
LUWI	**Luwuk**	**4.53**	**321**	P	**P**	**16 26 55.8**	**+3.0**
LUWI	**Luwuk**	**4.53**	**321**	P	**P**	**16 26 56.1**	**+3.3**
MMRI	**Maumere**	**5.24**	**220**		**P**	**16 27 02.1**	**+2.5**
MMRI	**Maumere**	**5.24**	**220**	P	**P**	**16 27 03.0**	**+3.4**
MMRI	76nm53μm209μm19μm,1.2s			S	**S**	**16 28 13.4**	**+3.4**
MMRI	**Maumere**	**5.24**	**220**	P	**P**	**16 27 03.3**	**+3.7**
SOEI	**Soe**	**5.30**	**195**		**P**	**16 27 02.1**	**+1.6**
SOEI	**Soe**	**5.30**	**195**	P	**P**	**16 27 02.2**	**+1.8**
	268nm52μm123μm7μm,0.7s						
SOEI	**Soe**	**5.30**	**195**	P	**P**	**16 27 02.8**	**+2.4**
BSSI	**Bau Bau, Buton**	**5.33**	**253**	P	**P**	**16 27 04.1**	**+3.5**
BSSI	32nm52μm113μm9μm,1.1s			S	**S**	**16 28 15.0**	**+3.2**
	32nm52μm113μm9μm,1.1s						
KMSI	**Cibinong**	**5.38**	**342**	P	**P**	**16 27 04.1**	**+3.0**
	222nm13μm608μm67μm,0.7s						
APSI	**Ampana**	**5.39**	**313**	P	**P**	**16 27 04.4**	**+3.2**
	79nm117μm293μm23μm,1.0s						
BNSI	**Bone**	**5.50**	**272**	P	**P**	**16 27 05.6**	**+3.3**
	196nm240μm491μm56μm,0.9s						
BKSI	**Bulukumba**	**5.52**	**262**	P	**P**	**16 27 05.6**	**+3.1**
	56nm90μm189μm18μm,1.0s						
TNTI	**Ternate**	**5.61**	**18**		**P**	**16 27 04.3**	**+1.0**
TNTI	**Ternate**	**5.61**	**18**	P	**P**	**16 27 04.4**	**+1.0**
	39nm15μm35μm4μm,0.6s						
TNTI	**Ternate**	**5.61**	**18**	P	**P**	**16 27 05.1**	**+1.7**
EDFI	**Ende, Flores**	**5.68**	**223**	P	**P**	**16 27 07.4**	**+3.2**
	17nm21μm60μm6μm,1.3s						
KAPI	**Kappang**	**5.86**	**266**	P	**P**	**16 27 09.0**	**+3.0**
	7μm,0.9s,baz=82,slow=6.1,SNR=14				73		
KAPI				S	**S**	**16 28 25.4**	**+3.8**
	3μm,1.1s,baz=170,slow=20,SNR=6.7						
KAPI	**Kappang**	**5.86**	**266**		**P**	**16 27 08.8**	**+2.9**
KAPI	**Kappang**	**5.86**	**266**	P	**P**	**16 27 08.8**	**+2.9**
KAPI	**Kappang**	**5.86**	**266**	P	**P**	**16 27 09.6**	**+3.6**
SPSI	**Sidrap Palu**	**5.87**	**276**	P	**P**	**16 27 09.2**	**+3.2**
	72nm138μm306μm24μm,1.1s						
BATI	**Baumata**	**5.91**	**199**	P	**P**	**16 27 08.5**	**+2.0**
	9μm,0.3s,baz=38,slow=1.6,SNR=10				14		
BATI				S	**S**	**16 28 22.5**	**+0.1**
	35μm,0.8s,baz=133,slow=23,SNR=34						
BATI	**Baumata**	**5.91**	**199**	P	**P**	**16 27 08.4**	**+2.0**
	94nm24μm123μm15μm,1.1s						
TTSI	**Tana Toraja**	**5.99**	**285**	P	**P**	**16 27 11.0**	**+3.8**
	67nm151μm241μm20μm,0.8s						
MRSI	**Marisa**	**6.23**	**324**	P	**P**	**16 27 12.2**	**+2.4**
	145nm173μm364μm41μm,0.6s						
SAUI	**Saumlaki**	**6.58**	**121**		**P**	**16 27 12.9**	**-0.6**
SAUI	**Saumlaki**	**6.58**	**121**	P	**P**	**16 27 13.2**	**-0.3**
	126nm72μm130μm13μm,1.1s						
SAUI	**Saumlaki**	**6.58**	**121**	P	**P**	**16 27 13.6**	**+0.1**
SWI	**Sorong**	**6.74**	**57**	P	**P**	**16 27 16.4**	**+1.1**
	65nm41μm158μm15μm,0.8s						
SIJI	**Sorong**	**6.74**	**57**	P	**P**	**16 27 16.4**	**+1.1**
	8μm,0.5s,baz=225,slow=8.8,SNR=28				45		
SIJI				S	**S**	**16 28 39.7**	**+1.2**
	3μm,0.7s,baz=155,slow=19,SNR=12						
FAKI	**Fak Fak**	**6.82**	**76**		**P**	**16 27 15.6**	**-0.5**
FAKI	**Fak Fak**	**6.82**	**76**	P	**P**	**16 27 15.6**	**-0.5**
	185nm49μm341μm28μm,1.4s						
FAKI	**Fak Fak**	**6.82**	**76**	P	**P**	**16 27 16.8**	**+0.7**
TOLI2	**Tolitoli**	**7.45**	**319**		**P**	**16 27 24.5**	**+1.7**
TOLI2	**Tolitoli**	**7.45**	**319**	P	**P**	**16 27 25.4**	**+2.6**
BASI	**Baing, Sumba**	**7.50**	**222**	P	**P**	**16 27 23.2**	**-0.1**
	74nm15μm53μm3μm,1.0s						
MPSI	**Mapaga**	**7.53**	**310**	P	**P**	**16 27 26.6**	**+3.0**
	36nm146μm95μm6μm,1.0s						
WBSI	**Waikabubak, Su**	**7.96**	**231**	P	**P**	**16 27 27.3**	**-1.1**
	63nm24μm37μm3μm,0.8s						
SGSI	**Sangihe**	**8.22**	**359**	P	**P**	**16 27 32.4**	**+1.2**
	4μm82μm6μm,0.7s						
PLAI	**Plampang**	**8.85**	**241**	P	**P**	**16 27 38.8**	**+0.8**
	31μm44μm5μm,0.7s						
PLAI	**Plampang**	**8.85**	**241**	P	**P**	**16 27 40.1**	**+2.1**
BKB	**Balikpapan**	**9.32**	**291**		P	16 27 48.3	+5.2
BKB	**Balikpapan**	**9.32**	**291**	P	P	16 27 48.3	+5.2
	123μm96μm8μm,0.8s						
SMKI	**Samarinda**	**9.36**	**296**	P	P	16 27 48.5	+5.0
	126μm87μm8μm,1.0s						
MTN	**Manton Dam**	**9.84**	**147**	P	**P**	**16 27 48.9**	**+0.1**
	baz=9,SNR=1000						
MTN	**Manton Dam**	**9.84**	**147**		**P**	**16 27 49.1**	**+0.2**
MTN	**Manton Dam**	**9.84**	**147**	P	**P**	**16 27 49.8**	**+1.0**
KDU	**Kakadu**	**10.52**	**140**	P	**P**	**16 27 56.3**	**+0.2**
	baz=10,SNR=1000						
KDU	**Kakadu**	**10.52**	**140**	P	**P**	**16 27 57.1**	**+0.9**
DDMP	**Don Marcelino,**	**10.62**	**0**	↓*e*P	**P**	**16 27 58.4**	**+1.0**
GSPH	**General Santos**	**10.63**	**356**	↑*i*P	**P**	**16 27 58.5**	**+1.0**
BBKI	**Banjar Baru**	**10.81**	**276**	P	**P**	**16 28 03.6**	**+4.2**
	34μm111μm15μm,0.9s						
SRBI	**Singaraja**	**10.91**	**251**	P	**P**	**16 28 02.6**	**+2.1**
	25μm32μm3μm,0.7s						
SRPI	**Serui, Papua**	**10.94**	**76**	P	**P**	**16 28 02.7**	**+1.8**
	13μm39μm5μm,0.7s						
BAKI	**Biak**	**11.00**	**72**	P	**P**	**16 28 03.5**	**+1.9**
	24μm34μm4μm,1.1s						
DNP	**Denpasar**	**11.11**	**248**	P	**P**	**16 28 05.1**	**+2.5**
	81μm3μm,0.6s						
IGBI	**Denpasar**	**11.22**	**247**	P	**P**	**16 28 05.0**	**+1.2**
	4μm29μm1μm,0.4s						
MTKI	**Muara Teweh, K**	**11.30**	**288**	P	**P**	**16 28 07.9**	**+3.0**
	27μm49μm6μm,0.9s						
KNRA	**Kununurra**	**11.44**	**165**	P	**P**	**16 28 06.9**	**+0.7**
	baz=12,SNR=1000						
KNRA	**Kununurra**	**11.44**	**165**		**P**	**16 28 06.9**	**+0.7**
KNRA	**Kununurra**	**11.44**	**165**	P	**P**	**16 28 07.4**	**+1.1**
MATI	**Mati**	**11.48**	**3**	↓*e*P	**P**	**16 28 08.3**	**+1.6**
KCP	**Kidapawan**	**11.54**	**357**	↓*i*P	**P**	**16 28 08.0**	**+0.6**
KCP				*i* S	**S**	**16 30 19.5**	**+5.0**
KCP	**Kidapawan**	**11.54**	**357**	↓*e*P	**ScP**	**16 36 08.7**	**-0.4**
KCP	**Kidapawan**	**11.54**	**357**	↓*e*P	**ScS**	**16 39 43.7**	**-1.5**
DAV	**Davao City (W)**	**11.58**	**360**	P	**P**	**16 28 10.0**	**+2.1**
	1μm,0.5s,baz=101,slow=2.0,SNR=15						
DAV				S	**S**	**16 30 18.0**	**+2.7**
	2μm,0.7s,baz=238,slow=21,SNR=8.2						
DAV	**Davao City (W)**	**11.58**	**360**		**P**	**16 28 08.9**	**+1.1**
DAV	**Davao City (W)**	**11.58**	**360**	P	**P**	**16 28 10.5**	**+2.6**
ABJI	**Asem Bagus**	**11.76**	**254**	P	**P**	**16 28 12.9**	**+3.1**
	22μm82μm7μm,1.3s						
KMMI	**Kalianget**	**11.85**	**258**	P	**P**	**16 28 14.0**	**+3.3**
	24μm97μm10μm,1.1s						
ZCP	**Zamboanga City**	**11.98**	**343**	↑*e*P	**P**	**16 28 14.6**	**+2.4**
JAGI	**Jajag, Banyuwa**	**12.03**	**251**		**P**	**16 28 12.4**	**-0.2**
JAGI	**Jajag, Banyuwa**	**12.03**	**251**	P	**P**	**16 28 12.5**	**-0.2**
	10μm45μm3μm,0.7s						
JAGI	**Jajag, Banyuwa**	**12.03**	**251**	P	**P**	**16 28 13.5**	**+0.8**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MYLDM	**Lahad Datu**	**12.03**	**324**		**P**	**16 28 15.8**	**+3.1**
BLJI	**Banyuglugur**	**12.36**	**255**	P	**P**	**16 28 18.5**	**+2.2**
	9μm23μm976nm,0.8s						
PAGZ	**Pagadian**	**12.56**	**350**	↓*e*P	**P**	**16 28 20.7**	**+2.2**
GMJI	**Gumukmas**	**12.64**	**253**	P	**P**	**16 28 19.5**	**+0.2**
	26μm2μm,1.1s						
BWJI	**Bawean**	**12.97**	**264**	P	**P**	**16 28 25.0**	**+2.1**
	8μm19μm2μm,0.8s						
SPMM	**Sapulut**	**13.00**	**315**	P	**P**	**16 28 27.0**	**+3.7**
GRJI	**Gresik**	**13.28**	**259**	P	**P**	**16 28 28.7**	**+2.4**
	2μm18μm2μm,1.0s						
TBJI	**Tambak Boyo**	**13.88**	**260**	P	**P**	**16 28 34.8**	**+2.0**
	13μm32μm2μm,1.1s						
SNPH	**Sibulan**	**14.04**	**350**	↑*e*P	**P**	**16 28 36.2**	**+1.6**
PBKI	**Pangkalan Bun**	**14.05**	**277**	P	**P**	**16 28 36.6**	**+2.0**
	36μm3μm,1.1s						
PWJI	**Pagerwojo**	**14.15**	**255**	P	**P**	**16 28 34.8**	**-0.9**
	8μm1μm,1.2s						
GLSP	**General Luna,**	**14.29**	**2**	↓*e*P	**P**	**16 28 38.7**	**+1.5**
TBP	**Tagbilaran**	**14.29**	**353**	*e*P	**P**	**16 28 40.3**	**+3.1**
TBP				*i* S	**S**	**16 31 09.4**	**+0.2**
CNOP	**Candoni, Negro**	**14.63**	**348**	↓*e*P	**P**	**16 28 42.5**	**+1.7**
GENI	**Genyem**	**14.65**	**83**	P	**P**	**16 28 41.9**	**+0.8**
	29μm82μm10μm,1.1s						
GENI	**Genyem**	**14.65**	**83**	P	**P**	**16 28 42.4**	**+1.3**
UWJI	**Ujung Watu**	**14.72**	**262**	P	**P**	**16 28 42.8**	**+1.0**
	3μm,0.7s						
PCJI	**Pacitan**	**14.79**	**255**	P	**P**	**16 28 41.0**	**-1.6**
	10μm14μm1μm,0.7s						
STKI	**Sintang**	**14.87**	**288**	P	**P**	**16 28 45.4**	**+2.0**
	8μm16μm984nm,1.0s						
WOJI	**Wonogiri, Jawa**	**14.96**	**257**	P	**P**	**16 28 43.6**	**-0.8**
	6μm7μm483nm,0.8s						
SBUM	**Sibu**	**15.11**	**297**	P	**P**	**16 28 48.9**	**+3.0**
SBUM	**Sibu**	**15.11**	**297**	P	**P**	**16 28 50.0**	**+4.0**
MMPI	**Merauke**	**15.16**	**105**	P	**P**	**16 28 47.2**	**+0.6**
	51μm194μm18μm,0.7s						
JAY	**Jayapura**	**15.20**	**83**	P	**P**	**16 28 46.5**	**-0.5**
SMRI	**Semarang**	**15.29**	**260**	P	**P**	**16 28 49.0**	**+1.1**
SMRI	**Semarang**	**15.29**	**260**	P	**P**	**16 28 49.1**	**+1.1**
	21μm39μm3μm,0.8s						
SMRI	**Semarang**	**15.29**	**260**	P	**P**	**16 28 49.9**	**+1.9**
UGM	**Wanagama**	**15.36**	**257**	P	**P**	**16 28 47.5**	**-1.3**
UGM	**Wanagama**	**15.36**	**257**	P	**P**	**16 28 48.6**	**-0.1**
	11μm16μm2μm,0.9s						
UGM	**Wanagama**	**15.36**	**257**	P	**P**	**16 28 48.8**	**+0.1**
BATP	**Bataraza**	**15.41**	**330**	↓*e*P	**P**	**16 28 51.5**	**+2.3**
GUIM	**Jordan**	**15.41**	**349**	↓*e*P	**P**	**16 28 50.5**	**+1.3**
YOGI	**Yogyakarta**	**15.57**	**257**	P	**P**	**16 28 50.2**	**-0.7**
	20μm2μm,0.9s						
JAP	**San Jose, Anti**	**15.67**	**347**	↓*e*P	**P**	**16 28 54.1**	**+2.2**
JAP	**San Jose, Anti**	**15.67**	**347**	↓*e*P	**S**	**16 31 39.3**	**+3.2**
PPR	**Puerto Princes**	**15.84**	**334**	↓*e*P	**P**	**16 28 56.3**	**+2.6**
RCP	**Roxas**	**16.30**	**350**	↓*e*P	**P**	**16 28 59.9**	**+1.3**
KSM	**Kuching**	**16.44**	**291**	P	**P**	**16 29 01.3**	**+1.1**
KSM	**Kuching**	**16.44**	**291**	P	**P**	**16 29 02.0**	**+1.9**
KSM	**Kuching**	**16.44**	**291**	P	**P**	**16 29 02.1**	**+1.9**
ENPP	**El Nido**	**16.86**	**339**	↓*e*P	**P**	**16 29 05.8**	**+1.3**
WB0	**Warramunga Arr**	**17.34**	**151**	P	**P**	**16 29 09.0**	**-0.6**
CMJI	**Cimerak**	**17.36**	**259**	P	**P**	**16 29 07.3**	**-2.6**
	7μm14μm2μm,0.8s						
JCJI	**Jatiwangi**	**17.37**	**263**	P	**P**	**16 29 10.1**	**+0.1**
	32μm4μm,1.2s						
MBWA	**Marble Bar**	**17.43**	**199**	P	**P**	**16 29 10.0**	**-0.6**
MBWA				IAmb	IAmb	16 29 12.3	
	comp=Z,720nm,0.8s						
MBWA	**Marble Bar**	**17.43**	**199**	P	**P**	**16 29 10.5**	**-0.1**
I07AU	**WARRAMINGA INF**	**17.45**	**152**	P	**P**	**16 29 10.0**	**-0.8**
	baz=327,slow=12,SNR=20						
I07AU				S	**S**	**16 32 07.4**	**-2.8**
	baz=328,slow=22,SNR=6.9						
WRAB	**Tennant Creek**	**17.46**	**152**	P	**P**	**16 29 09.9**	**-1.0**
WRAB	**Tennant Creek**	**17.46**	**152**	*i* P	**P**	**16 29 10.2**	**-0.7**
WRAB	**Tennant Creek**	**17.46**	**152**	P	**P**	**16 29 10.7**	**-0.2**
WRA	**Warramunga Arr**	**17.46**	**152**	P	**P**	**16 29 10.6**	**-0.4**
	com

TPRI **Tanjung Pinang** **21.77 284** P **P** **16 29 53.4 +1.8**
comp=Z,31μmcomp=Z,4μm,1.1s
MANU **Manus Island** **21.86 84** P **P** **16 29 53.0 +0.6**
MANU IAmb IAmb 16 29 57.9
comp=Z,872nm,1.1s
PMG **Port Moresby** **21.90 104** P **P** **16 29 52.7 0.0**
comp=Z,5μm,0.8s,baz=304,slow=2.8,SNR=1143
comp=Z,5μm,0.8s
PMG **Port Moresby** **21.90 104** P **P** **16 29 52.5 -0.3**
PMG **Port Moresby** **21.90 104***c* *i*P **P** **16 29 52.8 0.0**
PMG pmax pmax
comp=Z,7μm,0.9s
PMG **Port Moresby** **21.90 104** P **P** **16 29 52.8 0.0**
PMG **Port Moresby** **21.90 104** P **P** **16 29 52.7 0.0**
MNAI **Manna** **22.59 270** P **P** **16 29 58.0 -1.1**
MNAI IAmb IAmb 16 30 05.0
comp=Z,1μm,0.9s
MNAI **Manna** **22.59 270** P **P** **16 29 57.6 -1.4**
comp=Z,11μmcomp=Z,17μmcomp=Z,2μm,1.1s
MYKOM **Kota Tinggi** **22.66 286** P **P** **16 30 01.2 +1.6**
MYKOM **Kota Tinggi** **22.66 286** P **P** **16 30 02.0 +2.4**
MTSU **Mount Surprise** **22.71 128** P **P** **16 29 59.8 -0.2**
baz=23,SNR=699
MTSU **Mount Surprise** **22.71 128** P **P** **16 30 00.4 +0.4**
RGRI **Rengat** **23.64 280** P **P** **16 30 11.0 +2.6**
comp=Z,16μmcomp=Z,486nm,1.2s
KRJI **Kerinci** **24.24 275** P **P** **16 30 14.1 +0.2**
comp=Z,19μmcomp=Z,85μmcomp=Z,9μm,1.0s
JRMM **Jerantut** **24.61 290** P **P** **16 30 19.0 +1.9**
OOD **Oodnadatta** **24.99 158** P **P** **16 30 20.7 +0.4**
BKNI **Bangkinang** **25.04 281** P **P** **16 30 22.1 +1.1**
BKNI PcP **PcP** **16 33 41.8 +0.1**
BKNI **Bangkinang** **25.04 281** P **P** **16 30 22.1 +1.2**
comp=Z,17μmcomp=Z,52μmcomp=Z,7μm,1.0s
BKNI **Bangkinang** **25.04 281** P **P** **16 30 22.5 +1.6**
CTA **Charters Tower** **25.32 129** P **P** **16 30 23.8 +0.5**
comp=Z,542nm,0.9s,baz=309,slow=10.0,SNR=433
comp=Z,542nm,0.9s
CTA **Charters Tower** **25.32 129** P **P** **16 30 23.6 +0.3**
CTAO **Charters Tower** **25.32 129** P **P** **16 30 23.6 +0.3**
CTAO IAmb IAmb 16 30 25.5
comp=Z,765nm,0.9s
CTAO **Charters Tower** **25.32 129** P **P** **16 30 23.6 +0.3**
CTAO pmax pmax
comp=Z,765nm,1.0s
CTAO **Charters Tower** **25.32 129** P **P** **16 30 23.6 +0.3**
PPI **Padang Panjang** **25.52 279** P **P** **16 30 25.7 +0.5**
PPSI **Pulau Pagai** **25.62 273** P **P** **16 30 24.4 -1.7**
comp=Z,18μmcomp=Z,2μm,1.0s
MORW **Morawa** **25.98 199** P **P** **16 30 28.7 -0.4**
baz=26,SNR=133
MORW **Morawa** **25.98 199** P **P** **16 30 28.0 -1.1**
MORW **Morawa** **25.98 199** P **P** **16 30 29.0 -0.1**
FORT **Forrest** **26.15 175** P **P** **16 30 30.9 +0.4**
baz=26,SNR=867
FORT **Forrest** **26.15 175** P **P** **16 30 30.6 +0.1**
FORT **Forrest** **26.15 175** P **P** **16 30 31.1 +0.6**
IPM **Ipoh** **26.17 290** P **P** **16 30 31.8 +0.8**
IPM IAmb IAmb 16 30 33.7
comp=Z,1μm,1.0s
IPM PcP **PcP** **16 33 45.7 +1.3**
IPM **Ipoh** **26.17 290** P **P** **16 30 33.0 +2.1**
IPM **Ipoh** **26.17 290** P **P** **16 30 32.2 +1.3**
GUMO **Guam** **26.29 46** P **P** **16 30 32.8 +0.9**
comp=Z,460nm,0.9s,baz=187,slow=7.2,SNR=14
GUMO S **S** **16 34 34.1 +1.6**
comp=Z,134nm,0.8s,baz=39,slow=20,SNR=3.0
GUMO ScP **ScP** **16 36 41.3 -0.8**
comp=Z,196nm,0.9s,baz=175,slow=9.5,SNR=4.9
comp=Z,460nm,0.9s
GUMO **Guam** **26.29 46** P **P** **16 30 32.1 +0.1**
GUMO IAmb IAmb 16 30 34.3
comp=Z,801nm,1.1s
GUMO PcP **PcP** **16 33 45.0 +0.4**
GUMO **Guam** **26.29 46** P **P** **16 30 31.4 -0.6**
KRVT **Keravat (AS076** **26.33 90** P **P** **16 30 32.7 +0.3**
comp=Z,3μm,1.0s,baz=211,slow=3.0,SNR=262
comp=Z,3μm,1.0s
RABL **Rabaul** **26.47 90** P **P** **16 30 32.6 -1.1**
RABL **Rabaul** **26.47 90** P **P** **16 30 33.6 0.0**
MNSI **Mandailing Nat** **26.56 281** P **P** **16 30 34.6 +0.2**
comp=Z,30μmcomp=Z,56μmcomp=Z,8μm,0.8s
SISI **Saibi** **26.69 276** P **P** **16 30 34.4 -1.1**
comp=Z,12μmcomp=Z,15μmcomp=Z,2μm,1.0s
MULG **Mulgathing** **26.77 164** P **P** **16 30 36.7 +0.7**
KULM **Kulim** **26.80 291** P **P** **16 30 37.1 +0.6**
KULM **Kulim** **26.80 291** P **P** **16 30 38.0 +1.5**
INKA **Innaminka** **27.16 150** P **P** **16 30 40.3 +0.8**
BLDU **Ballidu** **27.21 197** P **P** **16 30 39.7 -0.2**
baz=27,SNR=146
BLDU **Ballidu** **27.21 197** P **P** **16 30 39.9 0.0**
TWG **Pinlang** **27.60 351** P **P** **16 30 41.5 -2.0**
PSI **Prapat** **27.66 285** P **P** **16 30 44.4 +0.1**
comp=Z,2μm,0.9s,baz=113,slow=4.6,SNR=984
PSI S **S** **16 34 51.1 -3.2**
comp=Z,54nm,0.8s,baz=206,slow=21,SNR=12
comp=Z,2μm,0.9s
KLBR **Kellerberrin** **27.86 194** P **P** **16 30 45.7 +0.1**
baz=28,SNR=194
KLBR **Kellerberrin** **27.86 194** P **P** **16 30 46.0 +0.4**
YULB **Yu-li** **28.13 352** P **P** **16 30 45.5 -2.5**
TPUB **Ta-pu** **28.15 350** P **P** **16 30 47.5 -0.7**
TPUB IAmb IAmb 16 30 50.9
comp=Z,2μm,1.0s
TPUB **Ta-pu** **28.15 350** P **P** **16 30 48.3 +0.1**
QIZ **Qiongzhong** **28.15 327** P **P** **16 30 48.6 +0.3**
QIZ **Qiongzhong** **28.15 327** ⇓*i*P **P** **16 30 49.5 +1.2**
QIZ pP **PP** **16 32 02.6 -1.0**
QIZ sP **sP** **16 32 54.4 -3.0**
QIZ S **S** **16 35 01.0 -0.4**
QIZ sS **SS** **16 37 26.7 +1.7**
QIZ pmax pmax
comp=Z,290nm,0.7s
QIZ pmax pmax
comp=Z,3μm,10.4s
QIZ **Qiongzhong** **28.15 327** P **P** **16 30 49.5 +1.2**
QLP **Quilpie** **28.20 143** P **P** **16 30 48.8 +0.2**
baz=28,SNR=591
QLP **Quilpie** **28.20 143** P **P** **16 30 49.0 +0.4**
TSI **Tuntungan** **28.20 286** P **P** **16 30 49.1 +0.3**
comp=Z,31μmcomp=Z,18μmcomp=Z,2μm,0.8s
LCRK **Leigh Creek** **28.33 157** P **P** **16 30 50.4 +0.6**
SSLB **Suanglung** **28.57 351** P **P** **16 30 50.3 -1.6**
SSLB **Suanglung** **28.57 351** P **P** **16 30 51.4 -0.6**
GSI **Gunungsitoli** **28.62 281** P **P** **16 30 51.9 -0.7**
GSI **Gunungsitoli** **28.62 281** P **P** **16 30 52.1 -0.5**
comp=Z,31μmcomp=Z,47μmcomp=Z,6μm,1.3s
GSI **Gunungsitoli** **28.62 281** P **P** **16 30 52.6 0.0**
MUN **Mundaring** **28.64 197** P **P** **16 30 52.5 0.0**
baz=29,SNR=129
MUN **Mundaring** **28.64 197** P **P** **16 30 52.5 0.0**
NACB **Ninganchiao** **28.86 352** P **P** **16 30 51.7 -2.8**
NACB PcP **PcP** **16 33 50.5 -0.2**
KCSI **Kotacane, Aceh** **28.97 286** P **P** **16 30 54.6 -1.0**
comp=Z,24μmcomp=Z,9μmcomp=Z,716nm,0.9s
HKPS **Hong Kong Po S** **28.97 338** P **P** **16 30 55.3 -0.2**
HKPS IAmb IAmb 16 30 59.2
comp=Z,620nm,0.9s
HKPS PcP **PcP** **16 33 51.0 0.0**
HKC **Hong Kong Obse** **28.98 338** ⇑P **P** **16 30 57.0 +1.5**
YOJ **Yonaguni jima** **28.99 355** P **P** **16 30 55.2 -0.3**
YOJ IAmb IAmb 16 30 58.2
comp=Z,839nm,0.8s
YOJ **Yonaguni jima** **28.99 355** P **P** **16 30 55.3 -0.3**
YOJ pmax pmax
comp=Z,839nm,0.8s
YOJ **Yonaguni jima** **28.99 355** P **P** **16 30 56.0 +0.5**
YOJ **Yonaguni jima** **28.99 355** P **P** **16 30 56.0 +0.5**
MCO **Taipa Grande** **29.05 336** P **P** **16 30 58.0 +1.8**
SRIT **Nakonsritamara** **29.06 297** P **P** **16 30 57.3 +0.9**
SRIT IAmb IAmb 16 30 59.9
comp=Z,466nm,0.8s
JMJ **Miyako jima 2** **29.23 359** P **P** **16 30 58.1 +0.4**
NWAO **Narrogin (SRO)** **29.26 195** P **P** **16 30 58.1 +0.2**
NWAO **Narrogin (SRO)** **29.26 195** P **P** **16 30 58.1 +0.2**
NWAO pmax pmax
comp=Z,200nm,1.0s
NWAO **Narrogin (SRO)** **29.26 195** P **P** **16 30 58.1 +0.2**
YHNB **Yeheng** **29.38 352** P **P** **16 30 57.1 -1.9**
YHNB **Yeheng** **29.38 352** P **P** **16 30 58.5 -0.6**
COCO **West Island** **29.44 253** P **P** **16 30 59.1 -0.6**
COCO IAmb IAmb 16 31 00.7
comp=Z,824nm,0.9s
COCO **West Island** **29.44 253** P **P** **16 30 59.1 -0.6**
COCO pmax pmax
comp=Z,824nm,0.9s
TATO **Taipei** **29.66 352** P **P** **16 31 00.2 -1.3**
TATO PcP **PcP** **16 33 53.7 +0.9**
BBOO **Buckleboo** **29.72 162** P **P** **16 31 02.2 +0.2**
baz=30,SNR=958
BBOO **Buckleboo** **29.72 162** P **P** **16 31 01.9 0.0**
BBOO **Buckleboo** **29.72 162** P **P** **16 31 02.1 +0.2**
KNMB **Chin-men Tao** **29.73 347** P **P** **16 31 02.1 +0.1**
KNMB IAmb IAmb 16 31 04.9
comp=Z,607nm,0.9s
GZH **Guangzhou** **30.01 337** P **P** **16 31 09.1 +4.6**
GZH pP **pwP** **16 32 31.1 +5.7**
GZH sP **sP** **16 33 18.1 +4.6**
GZH S **S** **16 35 35.5 +5.2**
GZH pmax pmax
comp=Z,4μm,6.1s
QZH **Quanzhou** **30.14 347** ⇓*i*P **P** **16 31 05.8 +0.2**
QZH pP **pwP** **16 32 26.3 -0.4**
QZH sP **sP** **16 33 10.1 -4.0**
QZH PcP **PcP** **16 33 55.2 +1.2**
QZH S **S** **16 35 31.0 -1.3**
QZH ScP **ScP** **16 36 54.4 +0.4**
QZH sS **SS** **16 38 02.8 -2.4**
QZH pmax pmax
comp=Z,320nm,1.4s
QZH pmax pmax
comp=Z,2μm,5.5s
QZH LR LR
comp=N,4μm,15.2s
QZH LR LR
comp=E,5μm,11.4s
QZH LR LR
comp=Z,6μm,15.2s
LHMI **Lhok Sumawe** **30.25 288** P **P** **16 31 07.1 +0.3**
LHMI **Lhok Sumawe** **30.25 288** P **P** **16 31 07.5 +0.7**
comp=Z,26μmcomp=Z,45μmcomp=Z,7μm,0.9s
LHMI **Lhok Sumawe** **30.25 288** P **P** **16 31 08.2 +1.4**
WHYH **Whyalla** **30.42 160** P **P** **16 31 08.6 +0.6**
RK1H **Rockhampton Ha** **30.42 130** P **P** **16 31 07.8 -0.3**
PTPS **Port Pirie** **30.69 159** P **P** **16 31 11.5 +1.2**
JMZ **Minamidaito 2** **30.71 10** P **P** **16 31 10.2 -0.4**
NAPP **Napperby** **30.76 159** P **P** **16 31 11.6 +0.7**
RKGY **Rocky Gully** **30.93 194** P **P** **16 31 13.9 +1.6**
baz=31,SNR=41
RKGY **Rocky Gully** **30.93 194** P **P** **16 31 14.1 +1.8**
STKA **Stephens Creek** **31.01 153** P **P** **16 31 13.5 +0.4**
comp=Z,2μm,0.7s,baz=328,slow=8.6,SNR=1287
STKA ScP **ScP** **16 36 55.9 -0.9**
comp=Z,264nm,0.8s,baz=349,slow=4.5,SNR=6.0
STKA P3KPbc 17 02 47.3
comp=Z,4.4nm,0.9s,baz=198,slow=3.2,SNR=3.8
comp=Z,2μm,0.7s
STKA **Stephens Creek** **31.01 153** P **P** **16 31 13.5 +0.4**
baz=31,SNR=1000
STKA **Stephens Creek** **31.01 153** P **P** **16 31 13.3 +0.2**
STKA IAmb IAmb 16 31 15.1
comp=Z,740nm,0.9s
STKA **Stephens Creek** **31.01 153** P **P** **16 31 13.8 +0.7**
RMQ **Roma** **31.04 137** P **P** **16 31 13.2 -0.3**
baz=31,SNR=480
RMQ **Roma** **31.04 137** P **P** **16 31 13.3 -0.2**
HTT **Hallett** **31.26 158** P **P** **16 31 16.0 +0.7**
baz=31,SNR=1000
HTT **Hallett** **31.26 158** P **P** **16 31 16.3 +1.0**
JOW **Kunigami** **31.34 5** P **P** **16 31 16.6 +0.5**
comp=Z,850nm,0.8s,baz=200,slow=7.6,SNR=147
JOW PcP **PcP** **16 33 58.5 +1.2**
comp=Z,85nm,0.8s,baz=161,slow=4.3,SNR=4.1
JOW S **S** **16 35 49.2 -1.6**
comp=Z,115nm,1.2s,baz=35,slow=28,SNR=10
JOW ScP **ScP** **16 36 58.5 +0.5**
comp=Z,144nm,0.9s,baz=167,slow=2.8,SNR=11
comp=Z,850nm,0.8s
JOW **Kunigami** **31.34 5** P **P** **16 31 16.1 0.0**
JOW IAmb IAmb 16 31 20.0
comp=Z,832nm,0.8s
JOW **Kunigami** **31.34 5** P **P** **16 31 16.7 +0.7**
JOW **Kunigami** **31.34 5** P **P** **16 31 16.3 +0.3**
H01W3 **Cape Leeuwin H** **31.96 198** P **P** **16 31 23.5 +2.5**
baz=28,slow=6.1,SNR=10
H01W1 **Cape Leeuwin H** **31.97 198** P **P** **16 31 23.1 +2.0**
baz=28,slow=6.1,SNR=9.2
H01W2 **Cape Leeuwin H** **31.98 198** P **P** **16 31 23.5 +2.4**
baz=28,slow=6.1,SNR=10.0
EIDS **Eidsvold** **32.00 133** P **P** **16 31 20.9 -0.8**
baz=32,SNR=65
EIDS **Eidsvold** **32.00 133** P **P** **16 31 20.4 -1.3**
EIDS **Eidsvold** **32.00 133** P **P** **16 31 20.9 -0.8**
GHSS **Government Hou** **32.49 160** P **P** **16 31 27.0 +1.3**
TWOA **Tennyson Woods** **32.58 160** P **P** **16 31 27.7 +1.1**
CMSA **Cobar Meteorol** **32.77 147** P **P** **16 31 28.9 +0.7**
baz=33,SNR=1000
CMSA **Cobar Meteorol** **32.77 147** P **P** **16 31 29.1 +0.8**
JAM **Amami Oshima** **33.03 6** P **P** **16 31 31.0 +0.5**
GULI **GuiLin** **33.19 334** ⇓P **P** **16 31 31.1 -0.8**
GULI pP **pP** **16 32 45.6 -5.3**
GULI sP **sP** **16 33 39.3 -2.5**
GULI S **S** **16 36 13.9 -5.4**
GULI pmax pmax
comp=Z,590nm,1.3s
GULI LR LR
comp=N,7μm,16.8s
GULI LR LR
comp=E,4μm,16.3s
GULI LR LR
comp=Z,9μm,17.3s
HNR **Honiara** **34.40 100** P **P** **16 31 41.5 -0.8**
HNR **Honiara** **34.40 100** P **P** **16 31 41.5 -0.8**
HNR pmax pmax
comp=Z,3μm,0.8s
HNR **Honiara** **34.40 100** P **P** **16 31 42.1 -0.2**
HNR **Honiara** **34.40 100** ⇑P **P** **16 31 41.9 -0.4**
PATS **Pohnpei** **34.55 71** P **P** **16 31 44.1 +0.4**
baz=34,SNR=11
PATS **Pohnpei** **34.55 71** P **P** **16 31 43.6 0.0**
PATS **Pohnpei** **34.55 71** P **P** **16 31 44.0 +0.4**
CNSH **ChangSha** **34.80 340** ⇑P **P** **16 31 46.5 +1.0**
CNSH pP **pP** **16 33 00.6 -4.5**
CNSH PP **sP** **16 33 53.8 -1.9**
CNSH S **S** **16 36 42.8 -0.8**
CNSH SS SS 16 39 15.2 -24
CNSH pmax pmax
comp=Z,680nm,0.9s
CNSH LR LR
comp=N,6μm,12.2s
CNSH LR LR
comp=E,7μm,12.4s
CNSH LR LR
comp=Z,12μm,14.8s
CM31 **Chiang Mai Arr** **34.87 312** P **P** **16 31 47.8 +1.6**
CM31 IAmb IAmb 16 31 49.7
comp=Z,2μm,1.1s
CM31 **Chiang Mai Arr** **34.87 312** P **P** **16 31 48.3 +2.1**
SNR=378
CMAR **Chiang Mai Arr** **34.87 312** P **P** **16 31 48.0 +1.8**
comp=Z,751nm,0.9s,baz=143,slow=7.3,SNR=2113
CMAR PcP **PcP** **16 34 09.7 +2.1**
comp=Z,215nm,0.9s,baz=170,slow=2.4,SNR=20
CMAR ScP **ScP** **16 37 12.7 +2.0**
comp=Z,230nm,1.0s,baz=164,slow=3.0,SNR=20
CMAR PKiKP **PKiKP** **16 41 29.2 +0.3**
comp=Z,6.9nm,0.7s,baz=226,slow=2.1,SNR=13
CMAR P3KPbc 17 02 30.5
comp=Z,1.6nm,1.0s,baz=316,slow=6.2,SNR=6.8
CMAR PKPPKP **P'P'df** **17 04 48.1 -0.7**
comp=Z,0.5nm,0.7s,baz=289,slow=2.8,SNR=4.1
CMAR P4KPbc 17 10 08.7
comp=Z,0.8nm,0.7s,baz=151,slow=3.0,SNR=4.3
comp=Z,751nm,0.9s
CMAR **Chiang Mai Arr** **34.87 312** P **P** **16 31 47.7 +1.5**
CHTO **Chiang Mai** **35.09 312** P **P** **16 31 49.2 +1.1**
CHTO PcP **PcP** **16 34 08.7 +0.5**
CHTO **Chiang Mai** **35.09 312** P **P** **16 31 49.2 +1.1**
CHTO 16 34 08.7
CHTO pmax pmax
comp=Z,2μm,1.0s
CHTO **Chiang Mai** **35.09 312** P **P** **16 31 50.0 +1.9**
CHTO **Chiang Mai** **35.09 312** ⇓P **P** **16 31 49.8 +1.7**
CHTO sP **PcP** **16 34 10.5 +2.4**
ARPS **Mount Arapiles** **35.32 157** P **P** **16 31 50.6 +0.8**
baz=35,SNR=403
ARPS **Mount Arapiles** **35.32 157** P **P** **16 31 50.8 +1.1**
CBIJ **Chichi jima** **35.34 26** P **P** **16 31 50.2 +0.1**
JCJ **Chichijima** **35.34 26** P **P** **16 31 49.3 -0.7**
comp=Z,2μm,0.7s,baz=119,slow=3.0,SNR=55
JCJ S **S** **16 36 45.2 -6.6**
comp=Z,142nm,1.0s,baz=321,slow=23,SNR=1.5
comp=Z,2μm,0.7s
JCJ **Chichijima** **35.34 26** P **P** **16 31 49.9 -0.1**
JCJ **Chichijima** **35.34 26** P **P** **16 31 49.3 -0.7**
ARMA **Armidale** **35.52 139** P **P** **16 31 52.9 +1.3**
baz=36,SNR=671
ARMA **Armidale** **35.52 139** P **P** **16 31 51.9 +0.2**
ARMA IAmb IAmb 16 31 54.5
comp=Z,880nm,0.8s
ARMA **Armidale** **35.52 139** P **P** **16 31 53.1 +1.4**
SSE **Sheshan** **35.74 353** P **P** **16 31 54.2 +0.9**
SSE S **S** **16 36 56.4 -1.3**
SSE pmax pmax
comp=Z,280nm,1.2s
SSE pmax pmax
comp=Z,2μm,10.5s
SSE LR LR
comp=N,730nm,22.1s
SSE LR LR
comp=E,2μm,20.6s
GYA **Guiyang** **35.91 330** ⇓P **P** **16 31 56.5 +1.5**
GYA pP pP 16 33 14.6 -0.5
GYA PP **PP** **16 33 26.6 -2.6**
GYA sP sP 16 34 05.5 -0.3
GYA S **S** **16 37 00.1 -0.6**
GYA ScP **ScP** **16 37 15.6 +1.2**
GYA SS **SS** **16 40 01.9 +0.2**
GYA ScS **ScS** **16 41 22.4 +1.0**
GYA pmax pmax
comp=Z,770nm,1.1s
GYA pmax pmax
comp=Z,5μm,5.0s
JSU **Suzuyama** **36.19 7** P **P** **16 31 56.9 -0.1**
JSU IAmb IAmb 16 32 00.1
comp=Z,525nm,0.8s
JSU PcP **PcP** **16 34 11.8 +0.6**
JSU **Suzuyama** **36.19 7** P **P** **16 31 57.0 -0.1**
WHN **Wuhan** **36.56 344** ⇓*i*P **P** **16 32 01.6 +1.4**
WHN pP **pwP** **16 33 26.1 +2.1**
WHN sP **PcP** **16 34 11.7 -0.6**
WHN S **S** **16 37 10.5 +0.4**
WHN ScP **ScP** **16 37 17.1 +0.6**
WHN SS **SS** **16 40 18.3 +4.2**
WHN ScS **ScS** **16 41 24.6 0.0**
WHN pmax pmax
comp=Z,3μm,1.0s
WHN pmax pmax
comp=Z,7μm,1.5s
WHN LR LR
comp=Z,12μm,17.3s
BRAT **Ballarat** **36.83 155** P **P** **16 32 03.8 +1.5**
KMI **Kunming** **36.97 324** ⇓P **P** **16 32 06.2 +2.3**
KMI pP pP 16 33 27.6 +2.6
KMI PcP **sP** **16 34 16.3 +0.6**
KMI S **S** **16 37 08.7 -8.1**
KMI ScP **ScP** **16 37 20.8 +2.3**
KMI PcS **PcS** **16 38 09.4 +6.1**
KMI sS sS 16 39 49.6 +6.3
KMI ScS **ScS** **16 41 30.1 +2.4**
KMI pmax pmax
comp=Z,1μm,1.1s
KMI pmax pmax
comp=Z,5μm,7.0s
KMI LR LR
comp=N,6μm,20.4s
KMI LR LR
comp=E,5μm,21.9s
KMI LR LR
comp=Z,9μm,20.2s
NJ2 **Nanjing** **37.00 350** ⇓*i*P **P** **16 32 04.7 +0.9**
NJ2 pP **pwP** **16 33 31.0 +3.0**
NJ2 PcP **sP** **16 34 15.0 +0.6**
NJ2 sP **PcP** **16 34 18.9 +5.3**
NJ2 S **S** **16 37 15.3 -1.3**
NJ2 ScP **ScP** **16 37 19.0 +0.8**
NJ2 sS **sS** **16 39 49.8 +6.6**
NJ2 SS **SS** **16 40 30.8 +8.1**
NJ2 ScS **ScS** **16 41 28.7 +1.6**
NJ2 pmax pmax
comp=Z,1μm,0.9s
NJ2 pmax pmax
comp=Z,1μm,3.5s
JFU **Fukue jima 2** **37.16 4** P **P** **16 32 05.5 +0.4**
NTLH **Newcastle Hard** **37.23 142** P **P** **16 32 08.0 +2.3**
CAN **Canberra** **37.44 148** P **P** **16 32 08.1 +0.6**
CAN **Canberra** **37.44 148** P **P** **16 32 08.1 +0.6**
CAN pmax pmax
comp=Z,2μm,0.9s
CAN **Canberra** **37.44 148** P **P** **16 32 09.2 +1.7**
CAN **Canberra** **37.44 148** P **P** **16 32 09.1 +1.7**
CAN PP **PP** **16 33 46.4 +1.0**
MLBS **Spotswood, Mel** **37.47 155** P **P** **16 32 09.4 +1.8**
TOO **Toolangi** **37.52 154** P **P** **16 32 09.6 +1.6**
baz=38,SNR=1000
TOO **Toolangi** **37.52 154** P **P** **16 32 08.8 +0.7**
TOO **Toolangi** **37.52 154** P **P** **16 32 08.8 +0.7**
TOO pmax pmax
comp=Z,2μm,0.9s
TOO **Toolangi** **37.52 154** P **P** **16 32 10.0 +1.9**
GEXS **Deakin Univers** **37.53 156** P **P** **16 32 10.3 +2.2**
CNB **Canberra Magne** **37.63 147** P **P** **16 32 10.3 +1.2**
baz=38,SNR=94
CNB **Canberra Magne** **37.63 147** P **P** **16 32 10.6 +1.5**
JNU **Nakatsue** **37.84 7** P **P** **16 32 09.9 -0.8**
comp=Z,300nm,0.8s,baz=128,slow=4.6,SNR=20
comp=Z,300nm,0.8s
JNU **Nakatsue** **37.84 7** P **P** **16 32 10.4 -0.3**
JNU **Nakatsue** **37.84 7** P **P** **16 32 11.0 +0.3**
JNU **Nakatsue** **37.84 7** P **P** **16 32 10.3 -0.5**
ENH **Enshi** **37.95 337** P **P** **16 32 11.7 0.0**
ENH IAmb IAmb 16 32 13.8
comp=Z,534nm,0.7s
PZH **PanZhiHua** **38.60 324** ⇓P **P** **16 32 17.8 +0.6**
PZH pP **pP** **16 33 36.8 -2.3**
PZH sP **sP** **16 34 26.1 -3.4**
PZH S **S** **16 37 37.3 -3.5**
PZH PcS **PcS** **16 38 10.2 +0.9**
PZH SS **SS** **16 40 51.8 -2.2**
PZH pmax pmax
comp=Z,680nm,1.1s
PZH pmax pmax
comp=Z,4μm,8.1s
JMN **Monobe** **38.90 11** P **P** **16 32 19.9 +0.5**
JMN **Monobe** **38.90 11** P **P** **16 32 20.6 +1.1**
JTU **Tsushima** **39.07 5** P **P** **16 32 21.2 +0.4**
JTU IAmb IAmb 16 32 24.2
comp=Z,675nm,1.0s
NAWB **Namwon** **39.84 2** P **P** **16 32 26.5 -0.4**
NAWB PcP **PcP** **16 34 23.7 +1.2**
JHJ **Hachijo jima 2** **39.84 19** P **P** **16 32 28.4 +1.4**
comp=Z,208nm,0.6s,baz=228,slow=12,SNR=9.3
JHJ PcP **PcP** **16 34 24.4 +1.7**
comp=Z,371nm,0.8s,baz=151,slow=10,SNR=3.9
JHJ2 **Mitsune** **39.84 19** P **P** **16 32 27.3 +0.3**
JHJ2 **Mitsune** **39.84 19** P **P** **16 32 26.1 -0.9**
JHS **Saijyo** **40.01 10** P **P** **16 32 28.1 -0.3**
JHS IAmb IAmb 16 32 32.0
comp=Z,731nm,0.9s
JHS **Saijyo** **40.01 10** P **P** **16 32 29.0 +0.7**
JIE **Ise** **40.16 14** P **P** **16 32 30.1 +0.6**
JWT **Wachi** **40.71 12** P **P** **16 32 34.6 +0.6**
TJN **Taejon** **40.79 2** P **P** **16 32 34.5 -0.1**
TJN IAmb IAmb 16 32 38.7
comp=Z,2μm,0.9s
TJN PcP **PcP** **16 34 26.9 +1.2**
TJN **Taejon** **40.79 2***d* *i*P **P** **16 32 35.2 +0.7**
TJN **Taejon** **40.79 2** P **P** **16 32 35.3 +0.7**
KOUNC **Koumac, New Ca** **40.79 116** P **P** **16 32 34.5 -0.4**
KOUNC **Koumac, New Ca** **40.79 116** P **P** **16 32 35.3 +0.4**
LYN **LuoYang** **40.86 343** ⇓*i*P **P** **16 32 35.2 0.0**
LYN PP **PP** **16 34 19.6 -1.9**
LYN sP sP 16 34 41.7 -5.5
LYN ScP **ScP** **16 37 30.5 -2.6**
LYN S **S** **16 38 08.5 -5.0**
LYN ScS **ScS** **16 41 50.2 +0.4**
LYN pmax pmax
comp=Z,450nm,1.2s
LYN pmax pmax
comp=Z,5μm,5.4s
CD2 **Chengdu** **41.02 331** ⇓*i*P **P** **16 32 37.2 +0.6**
CD2 PcP **PcP** **16 34 28.6 +2.0**

CD2				ScP	**ScP**	**16 37 34.9**	**+1.0**		
CD2				S	**S**	**16 38 19.4**	**+3.3**		
CD2				sS	sS	16 40 52.7	+7.6		
CD2				SS	**SS**	**16 41 35.8**	**-2.9**		
CD2				pmax	pmax				
	comp=Z,1µm,1.0s								
CD2				pmax	pmax				
	comp=Z,4µm,5.1s								
INU	**Inuyama**	**41.15**	**14**	P	**P**	**16 32 37.4**	**-0.1**		
INU				IAmb	IAmb	16 32 41.0			
	comp=Z,541nm,0.8s								
INU	**Inuyama**	**41.15**	**14**	P	**P**	**16 32 38.3**	**+0.8**		
LHI	**Lord Howe Isla**	**41.26**	**134**	P	**P**	**16 32 38.5**	**0.0**		
LHI				IAmb	IAmb	16 32 40.3			
	comp=Z,609nm,0.9s								
KSCHJ	**Chungju**	**41.31**	**3**	P	**P**	**16 32 38.6**	**-0.1**		
TIA	**Tai'an**	**41.36**	**350**	P	**P**	**16 32 38.7**	**-0.5**		
TIA				pP	**pwP**	**16 34 06.1**	**+1.0**		
TIA				PP	**PP**	**16 34 27.4**	**+0.6**		
TIA				ScP	**ScP**	**16 37 36.3**	**+1.2**		
TIA				S	**S**	**16 38 17.6**	**-3.2**		
TIA				ScS	**ScS**	**16 41 53.5**	**+0.6**		
TIA				pmax	pmax				
	comp=Z,290nm,1.1s								
TIA				pmax	pmax				
	comp=Z,1µm,3.8s								
TIA				LR	LR				
	comp=N,3µm,14.2s								
TIA				LR	LR				
	comp=E,2µm,10.7s								
TIA				LR	LR				
	comp=Z,5µm,21.4s								
GLAD	**Gladstone**	**41.43**	**154**	P	**P**	**16 32 40.8**	**+1.1**		
CORO	**Coronation Par**	**41.45**	**155**	P	**P**	**16 32 42.0**	**+2.1**		
JGF	**Kuroka**	**41.47**	**14**	P	**P**	**16 32 39.6**	**-0.6**		
JGF				IAmb	IAmb	16 32 43.5			
	comp=Z,403nm,0.7s								
JGF	**Kuroka**	**41.47**	**14**	P	**P**	**16 32 40.5**	**+0.3**		
XAN	**Xi'an**	**41.53**	**339**	⇓P	**P**	**16 32 41.0**	**+0.3**		
XAN				pP	pP	16 34 00.7	-2.7		
XAN				PP	**PP**	**16 34 29.6**	**+0.9**		
XAN				S	**S**	**16 38 19.1**	**-4.4**		
XAN				SS	SS	16 41 08.9	-38		
XAN				pmax	pmax				
	comp=Z,870nm,0.9s								
XAN				pmax	pmax				
	comp=Z,4µm,12.0s								
XAN				LR	LR				
	comp=N,6µm,15.5s								
XAN				LR	LR				
	comp=E,7µm,18.6s								
XAN				LR	LR				
	comp=Z,7µm,16.9s								
JOD2	**Odawara 2**	**41.62**	**17**	P	**P**	**16 32 40.0**	**-1.3**		
INCN	**Inchon**	**41.87**	**1**	P	**P**	**16 32 43.0**	**-0.3**		
INCN	**Inchon**	**41.87**	**1**	P	**P**	**16 32 43.0**	**-0.3**		
INCN				pmax	pmax				
	comp=Z,432nm,1.0s								
INCN	**Inchon**	**41.87**	**1**	P	**P**	**16 32 43.4**	**+0.1**		
KSAR	**Wonju Array Be**	**41.87**	**3**	P	**P**	**16 32 43.6**	**+0.4**		
KSAR	**Wonju Array Be**	**41.87**	**3**	P	**P**	**16 32 43.6**	**+0.4**		
KSRS	**Korea Array**	**41.88**	**3**	P	**P**	**16 32 43.9**	**+0.6**		
	comp=Z,456nm,1.0s,baz=179,slow=9.3,SNR=448								
KSRS				PcP	**PcP**	**16 34 30.2**	**+1.0**		
	comp=Z,124nm,0.7s,baz=184,slow=3.0,SNR=26								
KSRS				ScP	**ScP**	**16 37 38.0**	**+1.0**		
	comp=Z,44nm,1.1s,baz=182,slow=4.5,SNR=7.5								
KSRS				PKiKP	**PKiKP**	**16 41 33.7**	**-0.5**		
	comp=Z,0.9nm,0.7s,baz=273,slow=1.4,SNR=4.2								
KSRS				PKPPKP	**P'P'df**	**17 04 32.8**	**-7.7**		
	comp=Z,1.2nm,0.9s,baz=346,slow=2.5,SNR=4.7								
	comp=Z,456nm,1.0s								
KS19	**Wonju Array Si**	**41.93**	**3**	P	**P**	**16 32 43.8**	**+0.1**		
JGN	**Niukaw**	**42.05**	**14**	P	**P**	**16 32 44.8**	**0.0**		
JRY	**Ryogami san**	**42.27**	**16**	P	**P**	**16 32 45.7**	**-0.8**		
MOO	**Moorlands**	**42.30**	**156**	P	**P**	**16 32 48.7**	**+2.1**		
	baz=42,SNR=20								
MOO	**Moorlands**	**42.30**	**156**	P	**P**	**16 32 48.4**	**+1.8**		
HJU	**Haeju**	**42.42**	**0**	P	**P**	**16 32 48.0**	**+0.5**		
HJU				S	**S**	**16 38 36.1**	**+0.1**		
HJU				AmB					
	comp=Z,850nm,1.5s								
HJU				AMS	AMS				
	comp=N,5µm,9.6s								
HJU				AMS	AMS				
	comp=E,2µm,4.7s								
HJU				AMS	AMS				
	comp=Z,4µm,7.6s								
MAJO	**Matsushiro**	**42.58**	**15**	P	**P**	**16 32 48.1**	**-0.8**		
MAJO				IAmb	IAmb	16 32 53.5			
	comp=Z,661nm,0.8s								
MAJO	**Matsushiro**	**42.58**	**15**	*d* iP	**P**	**16 32 48.5**	**-0.4**		
MAJO				pmax	pmax				
	comp=Z,699nm,0.8s								
MAJO	**Matsushiro**	**42.58**	**15**	P	**P**	**16 32 48.6**	**-0.4**		
MAT	**Matsushiro**	**42.58**	**15**	P	**P**	**16 32 48.2**	**-0.8**		
MJAR	**Matsushiro Arr**	**42.58**	**15**	P	**P**	**16 32 47.5**	**-1.4**		
	comp=Z,675nm,0.9s,baz=184,slow=7.9,SNR=413								
MJAR				PcP	**PcP**	**16 34 32.9**	**+1.2**		
	comp=Z,84nm,0.8s,baz=163,slow=4.5,SNR=6.1								
MJAR				ScP	**ScP**	**16 37 39.9**	**-0.1**		
	comp=Z,29nm,0.8s,baz=179,slow=4.7,SNR=8.3								
MJAR				PKPPKP	**P'P'df**	**17 04 34.0**	**-5.8**		
	comp=Z,1.3nm,0.8s,baz=64,slow=5.7,SNR=4.0								
	comp=Z,675nm,0.9s								
MJAR	**Matsushiro Arr**	**42.58**	**15**	P	**P**	**16 32 47.9**	**-1.0**		
MJAR				IAmb	IAmb	16 32 51.8			
	comp=Z,754nm,1.0s								
MJAR	**Matsushiro Arr**	**42.58**	**15**	P	**P**	**16 32 47.9**	**-1.0**		
MJAR				pmax	pmax				
	comp=Z,754nm,1.0s								
MJB9	**Matsu-Tunnel**	**42.58**	**15**	P	**P**	**16 32 48.1**	**-0.8**		
MJB9				IAmb	IAmb	16 32 53.5			
	comp=Z,653nm,0.8s								
AZL	**Aizawl**	**42.70**	**313**	*e*P	**P**	**16 32 51.1**	**+0.9**		
AZL				IAmb	IAmb	16 32 52.9			
	comp=Z,2µm,0.9s								
SEHB	**SEOHWA**	**42.71**	**3**	P	**P**	**16 32 50.8**	**+0.9**		
TAU	**Tasmania Unive**	**42.74**	**156**	P	**P**	**16 32 51.0**	**+0.9**		
TAU				IAmb	IAmb	16 32 52.9			
	comp=Z,638nm,1.0s								
TAU	**Tasmania Unive**	**42.74**	**156**	P	**P**	**16 32 51.0**	**+0.9**		
TAU				pmax	pmax				
	comp=Z,638nm,1.0s								
TAU	**Tasmania Unive**	**42.74**	**156**	P	**P**	**16 32 51.5**	**+1.4**		
LKP	**Lekhapani**	**42.83**	**319**	*e*P	**P**	**16 32 51.6**	**+0.6**		
LKP				IAmb	IAmb	16 32 55.3			
	comp=Z,814nm,0.7s								
JYT	**Yasato**	**42.84**	**17**	P	**P**	**16 32 49.4**	**-1.5**		
JYT				IAmb	IAmb	16 32 54.0			
	comp=Z,658nm,0.8s								
JYT	**Yasato**	**42.84**	**17**	P	**P**	**16 32 50.0**	**-0.9**		
KOHI	**KOHIMA**	**42.92**	**316**	*e*P	**P**	**16 32 52.2**	**+0.2**		
KOHI				IAmb	IAmb	16 32 54.0			
	comp=Z,3µm,1.0s								
HNS	**HongShan**	**42.99**	**347**	⇓P	**P**	**16 32 52.1**	**0.0**		
HNS				pP	**pwP**	**16 34 18.9**	**+0.1**		
HNS				sP	**sP**	**16 35 03.7**	**-1.0**		
HNS				ScP	**ScP**	**16 37 42.5**	**+0.9**		
HNS				S	**S**	**16 38 41.9**	**-2.4**		
HNS				sS	**sS**	**16 41 17.3**	**+2.7**		
HNS				SS	**ScS**	**16 42 03.2**	**+0.3**		
HNS				pmax	pmax				
	comp=Z,1µm,0.9s								
HNS				LR	LR				
	comp=N,3µm,20.4s								
HNS				LR	LR				
	comp=E,4µm,22.4s								
HNS				LR	LR				
	comp=Z,5µm,21.4s								
MOKO	**MOKOCHONG**	**43.03**	**317**	*e*P	**P**	**16 32 53.9**	**+1.1**		
MOKO				IAmb	IAmb	16 32 57.1			
	comp=Z,2µm,0.9s								
NOUC	**Port Laguerre**	**43.05**	**118**	P	**P**	**16 32 53.2**	**+0.3**		
DZM	**Mont Dzumac**	**43.16**	**118**	*e*P	**P**	**16 32 54.9**	**+1.0**		
	comp=Z,1µm,1.2s								
DZM	**Mont Dzumac**	**43.16**	**118**	P	**P**	**16 32 54.0**	**+0.1**		
DZM				IAmb	IAmb	16 32 56.0			
	comp=Z,632nm,1.1s								
DZM	**Mont Dzumac**	**43.16**	**118**	P	**P**	**16 32 54.4**	**+0.5**		
ONTNC	**Ouen Toro**	**43.24**	**118**	P	**P**	**16 32 54.1**	**-0.3**		
ONTNC				IAmb	IAmb	16 32 56.2			
	comp=Z,730nm,0.8s								
ONTNC	**Ouen Toro**	**43.24**	**118**	P	**P**	**16 32 54.8**	**+0.4**		
SILR	**SILCHAR**	**43.25**	**314**	*e*P	**P**	**16 32 56.3**	**+1.9**		
BELO	**BELONIA**	**43.34**	**311**	*e*P	**P**	**16 32 50.8**	**-4.2**		
PYAG	**Pyongyang**	**43.42**	**0**	P	**P**	**16 32 56.3**	**+0.9**		
PYAG				pP	**pP**	**16 34 16.8**	**-2.2**		
PYAG				S	**S**	**16 38 51.4**	**+0.9**		
PYAG				AmB					
	comp=Z,2µm,1.8s								
PYAG				AMS	AMS				
	comp=N,3µm,8.5s								
PYAG				AMS	AMS				
	comp=E,1µm,4.4s								
PYAG				AMS	AMS				
	comp=Z,2µm,8.3s								
DL2	**Dalian**	**43.44**	**355**	⇓*i*P	**P**	**16 32 55.3**	**-0.3**		
DL2				pP	**pwP**	**16 34 21.5**	**-0.4**		
DL2				sP	**sP**	**16 35 03.0**	**-5.6**		
DL2				S	**S**	**16 38 47.1**	**-3.5**		
DL2				ScS	**ScS**	**16 42 04.2**	**-1.5**		
DL2				pmax	pmax				
	comp=Z,700nm,0.9s								
DL2				pmax	pmax				
	comp=Z,2µm,7.5s								
DL2				LR	LR				
	comp=N,3µm,17.7s								
DL2				LR	LR				
	comp=E,9µm,18.1s								
DL2				LR	LR				
	comp=Z,4µm,20.6s								
JORH	**JORHAT**	**43.49**	**317**	IAmb	IAmb	16 32 57.5			
	comp=Z,1µm,0.8s								
DIBR	**DIBRUGARH**	**43.53**	**319**	⇑*e*P	**P**	**16 32 57.2**	**+0.7**		
YATNC	**Mamie plateau,**	**43.56**	**117**	P	**P**	**16 32 58.1**	**+1.2**		
OUENC	**Ouen Island, N**	**43.62**	**118**	P	**P**	**16 32 57.6**	**+0.3**		
OUENC				IAmb	IAmb	16 32 59.7			
	comp=Z,620nm,0.8s								
OUENC	**Ouen Island, N**	**43.62**	**118**	P	**P**	**16 32 58.1**	**+0.7**		
DVP	**Devils Point**	**43.63**	**111**	P	**P**	**16 32 58.5**	**+1.0**		
TIY	**Taiyuan**	**43.84**	**345**	⇓*i*P	**P**	**16 32 59.0**	**+0.1**		
TIY				pP	**pP**	**16 34 22.7**	**+0.3**		
TIY				sP	**sP**	**16 35 12.2**	**+0.4**		
TIY				S	**S**	**16 38 54.3**	**-2.3**		
TIY				SS	**SS**	**16 42 22.5**	**-2.1**		
TIY				pmax	pmax				
	comp=Z,250nm,1.0s								
TIY				pmax	pmax				
	comp=Z,3µm,9.2s								
TIY				LR	LR				
	comp=N,3µm,22.1s								
TIY				LR	LR				
	comp=E,2µm,13.5s								
TIY				LR	LR				
	comp=Z,3µm,19.2s								
KWAJ	**Kwajalein Atol**	**43.93**	**72**	P	**P**	**16 33 00.1**	**+0.2**		
KWAJ	**Kwajalein Atol**	**43.93**	**72**	P	**P**	**16 33 00.1**	**+0.2**		
KWAJ				pmax	pmax				
	comp=Z,396nm,1.0s								
JSD	**Sado**	**44.01**	**14**	P	**P**	**16 32 59.8**	**-0.2**		
JSD				IAmb	IAmb	16 33 06.8			
	comp=Z,444nm,0.5s								
JSD	**Sado**	**44.01**	**14**	P	**P**	**16 33 00.0**	**-0.1**		
ITAN	**ITANAGAR**	**44.10**	**317**	*e*P	**P**	**16 33 02.1**	**+1.1**		
ITAN				IAmb	IAmb	16 33 04.0			
	comp=Z,5µm,1.4s								
PINNC	**Pines Island,**	**44.21**	**118**	P	**P**	**16 33 02.6**	**+0.6**		
PINNC				IAmb	IAmb	16 33 04.6			
	comp=Z,917nm,1.0s								
PINNC	**Pines Island,**	**44.21**	**118**	P	**P**	**16 33 03.1**	**+1.1**		
ZIRO	**ZIRO**	**44.27**	**318**	*e*P	**P**	**16 33 03.7**	**+1.1**		
ZIRO				IAmb	IAmb	16 33 05.1			
	comp=Z,1µm,1.0s								
HHU	**Hamhung**	**44.33**	**2**	P	**P**	**16 33 03.2**	**+0.7**		
HHU				sP	**sP**	**16 35 19.5**	**+3.7**		
HHU				S	**S**	**16 39 02.3**	**-1.1**		
HHU				AmB					
	comp=Z,1µm,1.4s								
HHU				AMS	AMS				
	comp=N,7µm,17.3s								
HHU				AMS	AMS				
	comp=E,2µm,5.3s								
HHU				AMS	AMS				
	comp=Z,4µm,9.6s								
SHL	**Shillong**	**44.39**	**314**	*e*P	**P**	**16 33 04.0**	**+0.5**		
SHL				IAmb	IAmb	16 33 06.5			
	comp=Z,1µm,0.8s								
TEZP	**TEZPUR**	**44.40**	**316**	*e*P	**P**	**16 33 03.8**	**+0.5**		
TEZP				IAmb	IAmb	16 33 06.3			
	comp=Z,375nm,0.7s								
MARNC	**Mare, Loyalty**	**44.41**	**116**	P	**P**	**16 33 03.6**	**+0.1**		
MARNC	**Mare, Loyalty**	**44.41**	**116**	P	**P**	**16 33 04.5**	**+1.0**		
SUJ	**Sinuiju**	**44.49**	**359**	P	**P**	**16 33 03.4**	**-0.3**		
SUJ				sP	**sP**	**16 35 18.4**	**+1.3**		
SUJ				S	**S**	**16 39 03.5**	**-2.0**		
SUJ				AmB					
	comp=Z,755nm,1.3s								
SUJ				AMS	AMS				
	comp=N,392nm,5.2s								
SUJ				AMS	AMS				
	comp=E,345nm,4.6s								
SUJ				AMS	AMS				
	comp=Z,386nm,5.1s								
JMM	**Marumori**	**44.53**	**17**	P	**P**	**16 33 04.6**	**+0.4**		
JMM				IAmb	IAmb	16 33 08.1			
	comp=Z,1µm,0.9s								
JMM	**Marumori**	**44.53**	**17**	P	**P**	**16 33 04.8**	**+0.6**		
GUWA	**GUWAHATI**	**44.91**	**315**	*e*P	**P**	**16 33 07.6**	**+0.3**		
JYA	**Atsumi**	**44.91**	**16**	P	**P**	**16 33 08.3**	**+1.2**		
BJT	**Baijiatuao**	**45.23**	**350**	P	**P**	**16 33 09.1**	**-0.4**		
BJT				IAmb	IAmb	16 33 12.1			
	comp=Z,538nm,0.8s								
BJT				PcP	**PcP**	**16 34 42.6**	**+1.8**		
BJT	**Baijiatuao**	**45.23**	**350**	P	**P**	**16 33 09.8**	**+0.3**		
BJT				pP	**PcP**	**16 34 42.4**	**+1.6**		
BJI	**Beijing**	**45.25**	**350**	P	**P**	**16 33 09.4**	**-0.3**		
BJI				PcP	**PcP**	**16 34 42.3**	**+1.5**		
BJI				PP	**PP**	**16 35 02.0**	**-1.2**		
BJI				ScP	**ScP**	**16 37 51.7**	**+0.9**		
BJI				S	**S**	**16 39 12.8**	**-3.7**		
BJI				pmax	pmax				
	comp=Z,690nm,0.9s								
BJI				pmax	pmax				
	comp=Z,3µm,10.5s								
BJI				LR	LR				
	comp=N,2µm,18.0s								
BJI				LR	LR				
	comp=E,2µm,19.8s								
BJI				LR	LR				
	comp=Z,4µm,18.3s								
LZH	**Lanzhou**	**45.31**	**335**	⇓P	**P**	**16 33 11.8**	**+1.3**		
LZH				pP	PcP	16 34 43.4	+2.1		
LZH				sP	sP	16 35 22.5	-2.5		
LZH				ScP	**ScP**	**16 37 53.0**	**+1.6**		
LZH				PcS	**PcS**	**16 38 37.4**	**+1.2**		
LZH				S	**S**	**16 39 16.8**	**-1.1**		
LZH				sS	sS	16 41 46.5	-3.2		
LZH				ScS	**ScS**	**16 42 18.7**	**+0.3**		
LZH				SS	**SS**	**16 42 55.8**	**+7.1**		
LZH				pmax	pmax				
	comp=Z,3µm,1.1s								
LZH				pmax	pmax				
	comp=Z,7µm,4.6s								
TURI	**Tura**	**45.50**	**313**	*e*P	**P**	**16 33 10.6**	**-1.3**		
TURI				IAmb	IAmb	16 33 12.2			
	comp=Z,3µm,1.0s								
DHUB	**DHUBRI**	**46.02**	**313**	*e*P	**P**	**16 33 16.5**	**+0.7**		
JOM	**Ohasama**	**46.17**	**17**	P	**P**	**16 33 17.4**	**+0.6**		
SNY	**Shenyang**	**46.23**	**358**	⇓P	**P**	**16 33 17.0**	**-0.2**		
SNY				pP	**pwP**	**16 34 45.0**	**0.0**		
SNY				sP	**sP**	**16 35 30.8**	**-0.2**		
SNY				S	S	16 39 19.0	-11		
SNY				sS	**sS**	**16 42 00.8**	**-1.8**		
BWNR	**Bhubaneshwar**	**46.26**	**304**	*e*P	**P**	**16 33 18.7**	**+0.9**		
PALK	**Pallekele**	**46.35**	**285**	P	**P**	**16 33 18.2**	**-0.5**		
PALK	**Pallekele**	**46.35**	**285**	P	**P**	**16 33 18.2**	**-0.5**		
PALK				pmax	pmax				
	comp=Z,276nm,0.9s								
H11S3	**WAKE ISLAND Hy**	**46.52**	**59**	P	**P**	**16 33 20.1**	**+0.5**		
	baz=234,slow=7.4,SNR=6.1								
H11S2	**WAKE ISLAND Hy**	**46.53**	**59**	P	**P**	**16 33 21.5**	**+1.8**		
	baz=234,slow=7.4,SNR=6.3								
H11S1	**WAKE ISLAND Hy**	**46.53**	**59**	P	**P**	**16 33 20.0**	**+0.2**		
	baz=234,slow=7.4,SNR=4.6								
WAKE	**Wake Island**	**46.83**	**58**	P	**P**	**16 33 22.6**	**+0.4**		
NFK	**Norfolk Island**	**46.86**	**126**	P	**P**	**16 33 23.9**	**+1.6**		
	baz=47,SNR=6.2								
HHC	**Hu-ho-hao-te**	**47.02**	**345**	⇓*i*P	**P**	**16 33 23.9**	**+0.5**		
HHC				sP	sP	16 35 38.0	+0.1		
HHC				S	**S**	**16 39 40.7**	**-0.8**		
HHC				sS	sS	16 42 15.9	+1.4		
HHC				pmax	pmax				
	comp=Z,880nm,1.2s								
HHC				pmax	pmax				
	comp=Z,4µm,7.8s								
BTO	**Baotou**	**47.20**	**344**	*e*P	**P**	**16 33 25.1**	**+0.4**		
BTO				S	S	16 39 16.4	-28		
BTO				LR	LR				
	comp=N,10µm,13.3s								
BTO				LR	LR				
	comp=E,13µm,24.5s								
H11N1	**WAKE ISLAND Hy**	**47.22**	**58**	P	**P**	**16 33 26.0**	**+1.1**		
	baz=232,slow=8.3,SNR=12								
H11N2	**WAKE ISLAND Hy**	**47.23**	**58**	P	**P**	**16 33 27.2**	**+2.2**		
	baz=232,slow=8.3,SNR=7.1								
H11N3	**WAKE ISLAND Hy**	**47.24**	**58**	P	**P**	**16 33 27.6**	**+2.5**		
	baz=232,slow=8.3,SNR=12								
JTM	**Tenmabayashi**	**47.33**	**16**	P	**P**	**16 33 26.2**	**+0.7**		
JTM				pP	**pP**	**16 34 49.9**	**-0.8**		
JTM	**Tenmabayashi**	**47.33**	**16**	P	**P**	**16 33 26.4**	**+0.8**		
LSA	**Lhasa**	**47.48**	**318**	P	**P**	**16 33 28.9**	**+1.4**		
LSA				IAmb	IAmb	16 33 30.8			
	comp=Z,940nm,0.7s								
LSA				pP	**pP**	**16 34 51.5**	**-1.8**		
LSA	**Lhasa**	**47.48**	**318**	P	**P**	**16 33 28.9**	**+1.4**		
LSA				*PP	**pP**	**16 34 51.5**	**-1.8**		
LSA				pmax	pmax				
	comp=Z,940nm,0.7s								
LSA	**Lhasa**	**47.48**	**318**	P	**P**	**16 33 29.2**	**+1.6**		
LSA				S	**S**	**16 39 49.2**	**+0.2**		
LSA				pmax	pmax				
	comp=Z,2µm,0.8s								
LSA				LR	LR				
	comp=N,6µm,17.1s								
LSA				LR	LR				
	comp=E,6µm,16.4s								
LSA				LR	LR				
	comp=Z,2µm,11.4s								
LSA	**Lhasa**	**47.48**	**318**	P	**P**	**16 33 29.1**	**+1.6**		
TARA	**Tarawa**	**47.63**	**84**	P	**P**	**16 33 28.3**	**-0.1**		
TARA				IAmb	IAmb	16 33 30.3			
	comp=Z,692nm,1.1s								
RAGD	**RAYAGADA**	**47.77**	**301**	*e*P	**P**	**16 33 30.8**	**+1.5**		
GTK	**Tadong**	**47.79**	**314**	*e*P	**P**	**16 33 30.4**	**+0.9**		
VLA	**Vladivostok**	**47.83**	**6***d*	iP	**P**	**16 33 30.1**	**+0.8**		
VLA				pmax	pmax				
	comp=Z,1µm,0.9s								
JOT	**Ohata**	**47.88**	**16**	P	**P**	**16 33 30.4**	**+0.7**		
BOK	**Bokaro**	**47.91**	**308**	*e*P	**P**	**16 33 31.6**	**+1.3**		
BOK				IAmb	IAmb	16 33 33.9			
	comp=Z,372nm,0.9s								
CN2	**Changchun**	**48.17**	**360**	*e*P	**P**	**16 33 31.1**	**-0.8**		
CN2				epP	pP	16 34 57.4	0.0		
CN2				esP	sP	16 35 44.1	-2.1		
CN2				eS	**S**	**16 39 52.1**	**-5.1**		
CN2				SS	**ScS**	**16 42 28.5**	**-8.1**		
CN2				pmax	pmax				
	comp=Z,200nm,1.0s								
CN2				pmax	pmax				
	comp=Z,2µm,14.4s								
CN2				LR	LR				
	comp=N,2µm,18.0s								
CN2				LR	LR				
	comp=E,2µm,18.0s								
CN2				LR	LR				
	comp=Z,3µm,21.3s								
MDRS	**Chennai**	**48.35**	**292**	*e*P	**P**	**16 33 34.6**	**+0.8**		
MDRS				IAmb	IAmb	16 33 36.5			
	comp=Z,323nm,1.0s								
TAPN	**Taplejung**	**48.45**	**313**	*e*P	**P**	**16 33 35.5**	**+0.8**		
JHSG	**JHARSUGUGA**	**48.62**	**304**	*e*P	**P**	**16 33 36.9**	**+1.2**		
JSH	**Shimam**	**48.80**	**14**	P	**P**	**16 33 37.9**	**+1.3**		
USA0B	**Ussuriysk Arra**	**48.91**	**6**	P	**P**	**16 33 37.7**	**+0.3**		
USA0B				IAmb	IAmb	16 33 41.1			
	comp=Z,854nm,0.9s								
USA0B	**Ussuriysk Arra**	**48.91**	**6***d*	iP	**P**	**16 33 38.1**	**+0.7**		
USRK	**Ussuriysk Ar.**	**48.91**	**6**	P	**P**	**16 33 37.9**	**+0.5**		
	comp=Z,458nm,0.5s,baz=189,slow=7.0,SNR=715								
USRK				ScP	**ScP**	**16 38 06.7**	**+0.5**		
	comp=Z,35nm,1.0s,baz=222,slow=2.6,SNR=5.5								
USRK				S	**S**	**16 40 06.9**	**-0.4**		
	comp=Z,23nm,1.1s,baz=186,slow=12,SNR=5.4								
USRK				PKPPKP		17 04 28.7			
	comp=Z,1.0nm,0.6s,baz=259,slow=6.6,SNR=4.1								
USRK				PKP2bc		17 04 48.9			
	comp=Z,6.4nm,0.7s,baz=356,slow=4.4,SNR=10								
	comp=Z,458nm,0.5s								
USRK	**Ussuriysk Ar.**	**48.91**	**6**	P	**P**	**16 33 37.7**	**+0.3**		
XLT	**XiLinHaoTe**	**49.03**	**351**	⇓*i*P	**P**	**16 33 38.6**	**+0.2**		
XLT				PcP	**PcP**	**16 34 55.2**	**+0.8**		
XLT				pP	pP	16 35 00.9	-3.5		
XLT				sP	sP	16 35 53.0	-0.3		
XLT				ScP	**ScP**	**16 38 07.2**	**+0.4**		
XLT				S	**S**	**16 40 03.1**	**-6.1**		
XLT				sS	ScS	16 42 40.9	-1.7		
XLT				ScS	ScS	16 42 45.2	+2.6		
XLT	**XiLinHaoTe**	**49.03**	**351**	SS	**SS**	**16 43 49.6**	**+2.3**		
XLT				pmax	pmax				
	comp=Z,390nm,1.2s								
XLT				pmax	pmax				
	comp=Z,4µm,5.4s								
XLT				LR	LR				
	comp=N,210nm,15.7s								
XLT				LR	LR				
	comp=E,3µm,17.2s								
XLT				LR	LR				
	comp=Z,2µm,21.0s								
RAMN	**Ramite**	**49.04**	**312**	*e*P	**P**	**16 33 40.2**	**+1.1**		
	comp=Z,9µm,0.9s								
ERM	**Erimo**	**49.06**	**17**	P	**P**	**16 33 39.0**	**+0.5**		
ERM				IAmb	IAmb	16 33 43.3			
	comp=Z,531nm,0.8s								
ERM	**Erimo**	**49.06**	**17**	*d* iP	**P**	**16 33 39.8**	**+1.3**		
ERM				pmax	pmax				
	comp=Z

BNX	**BinXian**	**50.13**	**2**	⇑P		**P**		**16 33 46.5**	**0.0**
BNX				pP		**pP**		**16 35 09.4**	**-3.4**
BNX				PP		**PP**		**16 35 46.1**	**-1.2**
BNX				sP		**sP**		**16 35 57.7**	**-3.5**
BNX				S		**S**		**16 40 20.7**	**-3.3**
BNX				sS		**ScS**		**16 42 47.2**	**-2.7**
BNX				pmax	pmax				
	comp=Z,610nm,0.9s								
BNX				pmax	pmax				
	comp=Z,5μm,11.1s								
BNX				LR	LR				
	comp=N,37nm,25.0s								
BNX				LR	LR				
	comp=E,11μm,25.0s								
BNX				LR	LR				
	comp=Z,5μm,32.1s								
BLSP	**Bilaspur**	**50.15**	**304**	*e*P		**P**		**16 33 47.4**	**+0.4**
KOD	**Kodaikanal**	**50.17**	**287**	*e*P		**P**		**16 33 47.7**	**0.0**
TRD	**Trivandrum**	**50.24**	**285**	*e*P		**P**		**16 33 48.1**	**+0.3**
TRD				IAmb	IAmb			16 33 49.5	
	comp=Z,628nm,0.8s								
PKI	**Pulchoki**	**50.27**	**312**	*e*P		**P**		**16 33 48.6**	**+0.4**
	comp=Z,3μm,1.0s								
PKIN	**Phulchoki**	**50.28**	**312**	*e*P		**P**		**16 33 48.6**	**+0.3**
	comp=Z,3μm,1.0s								
TEY	**Ternei**	**50.37**	**10**	⇓*i*P		**P**		**16 33 49.5**	**+1.3**
TEY				*e*				16 34 59.6	
TEY				*e*				16 36 02.7	
TEY				*e*				16 40 23.0	
TEY				*e*				16 44 09.1	
TEY				pmax	pmax				
	comp=Z,500nm,3.5s								
TEY				pmax	pmax				
	comp=N,230nm,1.0s								
TEY				pmax	pmax				
	comp=Z,430nm,1.0s								
TEY				pmax	pmax				
	comp=E,60nm,0.7s								
ASAJ	**Asahikawa**	**50.84**	**16**	P		**P**		**16 33 52.6**	**+0.9**
	comp=E,1μm,0.8s,baz=228,slow=11,SNR=323								
	comp=E,1μm,0.8s								
ASAJ	**Asahikawa**	**50.84**	**16**	P		**P**		**16 33 52.6**	**+0.9**
JKA	**Kamikawa-asahi**	**50.84**	**16**	P		**P**		**16 33 52.4**	**+0.7**
JKA				IAmb	IAmb			16 33 55.9	
	comp=Z,1μm,0.9s								
JMP	**Maruseppu**	**50.95**	**16**	P		**P**		**16 33 53.6**	**+1.1**
GKN	**Gorkha**	**51.08**	**312**	*e*P		**P**		**16 33 54.5**	**+0.5**
	comp=Z,3μm,0.6s								
PCHI	**Peechi**	**51.31**	**287**	⇓*e*P		**P**		**16 33 56.1**	**+0.4**
PCHI				*e*S		**S**		**16 40 36.9**	**-4.2**
HYB	**Hyderabad**	**51.35**	**296**	*e*P		**P**		**16 33 56.0**	**0.0**
HYB				IAmb	IAmb			16 33 58.0	
	comp=Z,2μm,1.4s								
HYBB	**Hyderabad (bro**	**51.35**	**296**	*e*P		**P**		**16 33 55.3**	**-0.7**
HYBB				IVmB_BB				16 33 56.7	
	comp=Z,6μm,1.8s								
HYBB				*e*PcP		**PcP**		**16 35 04.4**	**+0.8**
HYBB				*e*sP		**sP**		**16 36 09.5**	**-2.7**
HYBB				*e*ScP		**ScP**		**16 38 18.2**	**+0.9**
HYBB				*e*S		**S**		**16 40 41.2**	**-0.4**
HYBB				*e*ScS		**ScS**		**16 43 00.1**	**+0.4**
HYBB				*e*SS		**SS**		**16 44 27.0**	**+2.3**
YUK	**Yuzh-Kuril'sk**	**51.72**	**19**	*d*i P		**P**		**16 33 58.5**	**+0.4**
YUK				*e*				16 35 05.0	
YUK				*e*				16 36 01.8	
YUK				*e**SP		**sP**		**16 36 12.0**	**-2.2**
YUK				*i* S		**S**		**16 40 47.4**	**+1.8**
YUK				*e*				16 43 03.0	
YUK				*e**SS		**sS**		**16 43 22.0**	**+0.3**
YUK				*e*SS		**SKiKP**		**16 44 32.4**	**-1.6**
YUK				pmax	pmax				
	comp=Z,3μm,0.9s								
YUK				pmax	pmax				
	comp=Z,3μm,0.9s								
YUK				pmax	pmax				
	comp=N,1μm,1.0s								
YUK				pmax	pmax				
	comp=E,2μm,1.0s								
JWK2	**Keihoku**	**51.77**	**15**	P		**P**		**16 33 59.7**	**+1.3**
ALBI	**Allahabad**	**51.88**	**307**	*e*P		**P**		**16 33 60.0**	**+0.3**
PYUN	**Piuthan**	**52.36**	**311**	*e*P		**P**		**16 34 04.3**	**+0.9**
	comp=E,12μm,1.0s								
JBP	**Jabalpur**	**52.38**	**304**	*e*P		**P**		**16 34 04.0**	**+0.7**
JBP				*e*S		**S**		**16 40 51.4**	**-3.8**
KAAM	**Kaadhehdhoo**	**52.81**	**274**	P		**P**		**16 34 07.0**	**+0.4**
KAAM				IAmb	IAmb			16 34 09.1	
	comp=Z,774nm,1.0s								
KAAM	**Kaadhehdhoo**	**52.81**	**274**	P		**P**		**16 34 08.3**	**+1.6**
	SNR=6.7								
H08S2	**Diego Garcia H**	**52.88**	**264**	P		**P**		**16 34 08.3**	**+1.4**
	baz=49,slow=9.0,SNR=46								
MSVF	**Nonsavu**	**52.89**	**109**	P		**P**		**16 34 07.9**	**+0.7**
MSVF				IAmb	IAmb			16 34 09.9	
	comp=Z,561nm,0.8s								
MSVF	**Nonsavu**	**52.89**	**109**	*c*i P		**P**		**16 34 09.0**	**+1.8**
MSVF				pmax	pmax				
	comp=Z,602nm,0.8s								
MSVF	**Nonsavu**	**52.89**	**109**	P		**P**		**16 34 08.6**	**+1.4**
H08S3	**Diego Garcia H**	**52.89**	**264**	P		**P**		**16 34 08.0**	**+1.1**
	baz=49,slow=9.0,SNR=26								
H08S1	**Diego Garcia H**	**52.90**	**264**	P		**P**		**16 34 08.5**	**+1.6**
	baz=49,slow=9.0,SNR=17								
DGAR	**Diego Garcia**	**52.92**	**264**	P		**P**		**16 34 08.5**	**+1.1**
DGAR	**Diego Garcia**	**52.92**	**264**	*d*i P		**P**		**16 34 09.1**	**+1.7**
DGAR				pmax	pmax				
	comp=Z,3μm,1.0s								
FUNA	**Funafuti**	**53.34**	**97**	P		**P**		**16 34 10.3**	**0.0**
FUNA				IAmb	IAmb			16 34 12.4	
	comp=Z,1μm,1.2s								
KUR	**Kuril'sk**	**53.44**	**19**	*d*i P		**P**		**16 34 11.2**	**+0.7**
KUR				*e*				16 35 11.6	
KUR				*i*				16 36 17.6	
KUR				*e**SP		**sP**		**16 36 25.0**	**-2.1**
KUR				*i* S		**S**		**16 40 09.1**	**+0.6**
KUR				*i*				16 43 13.6	
KUR				*e*SS		**SS**		**16 45 02.2**	**+5.6**
KUR				pmax	pmax				
	comp=Z,4μm,8.4s								
KUR				pmax	pmax				
	comp=Z,950nm,1.4s								
KUR				pmax	pmax				
	comp=N,192nm,1.0s								
KUR				pmax	pmax				
	comp=E,174nm,1.3s								
KUR				MLR	MLR				
	comp=Z,1μm,20.0s								
LATR	**Latur**	**53.47**	**297**	*e*P		**P**		**16 34 11.1**	**-0.1**
YSS	**Yuzh-Sakhalins**	**53.51**	**15**	P		**P**		**16 34 11.6**	**+0.6**
YSS				IAmb	IAmb			16 34 16.2	
	comp=Z,872nm,0.7s								
YSS	**Yuzh-Sakhalins**	**53.51**	**15**	κ *i*P		**P**		**16 34 11.6**	**+0.6**
YSS				*e*				16 35 12.2	
YSS				*e**PP		**pwP**		**16 35 42.8**	**+0.2**
YSS				*e*				16 36 15.2	
YSS				*e**SP		**sP**		**16 36 24.7**	**-2.8**
YSS				*e*S		**S**		**16 41 08.4**	**-1.1**
YSS				*e*				16 43 11.4	
YSS				pmax	pmax				
	comp=Z,3μm,3.7s								
YSS				pmax	pmax				
	comp=N,1μm,3.6s								
YSS				pmax	pmax				
	comp=Z,1μm,0.7s								
YSS				smax	smax				
	comp=N,2μm,9.5s								
YSS				MLR	MLR				
	comp=Z,1μm,18.0s								
YSS	**Yuzh-Sakhalins**	**53.51**	**15**	P		**P**		**16 34 12.2**	**+1.2**
OUZ	**Omahuta**	**53.70**	**131**	P		**P**		**16 34 13.9**	**+1.3**
OUZ	**Omahuta**	**53.70**	**131**	P		**P**		**16 34 14.1**	**+1.5**
KLR	**Kul'dur**	**53.87**	**5**	P		**P**		**16 34 13.6**	**+0.1**
	comp=Z,251nm,0.7s,baz=197,slow=5.8,SNR=342								
KLR				PcP		**PcP**		**16 35 13.7**	**+1.3**
	comp=Z,138nm,0.8s,baz=286,slow=2.9,SNR=7.4								
	comp=Z,251nm,0.7s								
KLR	**Kul'dur**	**53.87**	**5**	*d*i P		**P**		**16 34 13.8**	**+0.3**
KLR				pmax	pmax				
	comp=Z,228nm,0.8s								
HIA	**Hailar**	**53.88**	**355**	P		**P**		**16 34 14.1**	**+0.5**
HIA	**Hailar**	**53.88**	**355**	P		**P**		**16 34 14.1**	**+0.5**
HIA				pmax	pmax				
	comp=Z,435nm,0.9s								
AKL	**Akola**	**53.90**	**300**	*e*P		**P**		**16 34 14.5**	**+0.2**
MNCY	**Minicoy**	**53.98**	**284**	*e*P		**P**		**16 34 15.7**	**+0.8**
MNCY				IAmb	IAmb			16 34 17.7	
	comp=Z,617nm,0.8s								
DCZ	**Deep Cove**	**54.44**	**145**	P		**P**		**16 34 17.9**	**+0.3**
BHPL	**Bhopal**	**54.55**	**303**	*e*P		**P**		**16 34 18.9**	**0.0**
BHPL				IAmb	IAmb			16 34 20.5	
	comp=Z,1μm,0.8s								
TAVE	**Taveuni**	**54.70**	**107**	P		**P**		**16 34 21.0**	**+1.0**
ULN	**Ulaanbaatar**	**54.72**	**345**	P		**P**		**16 34 20.3**	**+0.6**
ULN				IAmb	IAmb			16 34 23.2	
	comp=Z,1μm,0.9s								
ULN	**Ulaanbaatar**	**54.72**	**345**	*d*i P		**P**		**16 34 20.4**	**+0.6**
ULN				pmax	pmax				
	comp=Z,1μm,0.9s								
SONM	**Songino Array**	**54.87**	**344**	P		**P**		**16 34 21.3**	**+0.5**
	comp=Z,647nm,0.9s,baz=165,slow=7.0,SNR=1137								
SONM				PcP		**PcP**		**16 35 17.8**	**+1.3**
	comp=Z,170nm,0.7s,baz=163,slow=3.0,SNR=8.4								
SONM				PKPPKP				17 04 22.1	
	comp=Z,6.6nm,1.0s,baz=284,slow=1.2,SNR=3.8								
SONM				P4KPbc				17 11 33.8	
	comp=Z,5.0nm,0.9s,baz=161,slow=2.8,SNR=17								
	comp=Z,647nm,0.9s								
SONM	**Songino Array**	**54.87**	**344**	P		**P**		**16 34 21.1**	**+0.3**
SONM				PcP		**PcP**		**16 35 17.3**	**+0.8**
MLZ	**Mavora Lakes**	**54.94**	**144**	P		**P**		**16 34 21.3**	**+0.1**
FOZ	**Fox Glacier**	**54.95**	**142**	P		**P**		**16 34 21.1**	**-0.2**
GOA	**Goa**	**55.02**	**292**	*e*P		**P**		**16 34 22.8**	**+0.6**
GOA				IAmb	IAmb			16 34 24.4	
	comp=Z,1μm,1.2s								
LGTI	**Lohaghat**	**55.12**	**311**	*e*P		**P**		**16 34 23.0**	**+0.3**
WHZ	**Wether Hill Ro**	**55.14**	**145**	P		**P**		**16 34 22.1**	**-0.5**
WKZ	**Wanaka**	**55.16**	**143**	P		**P**		**16 34 22.7**	**-0.1**
PTH	**Pithoragarh**	**55.19**	**311**	*e*P		**P**		**16 34 23.0**	**-0.5**
KAD	**Karad**	**55.24**	**295**	*e*P		**P**		**16 34 23.6**	**-0.2**
UGL	**Uglegorsk**	**55.34**	**13**	⇓*i*P		**P**		**16 34 25.6**	**+1.8**
UGL				*e*S		**S**		**16 41 34.4**	**+1.0**
UGL				*e*SS		**ScS**		**16 43 25.5**	**-1.1**
UGL				pmax	pmax				
	comp=Z,4μm,1.1s								
UGL				pmax	pmax				
	comp=Z,3μm,0.9s								
UGL				smax	smax				
	comp=E,5μm,5.7s								
UGL				smax	smax				
	comp=N,6μm,8.1s								
QRZ	**Quartz Range**	**55.35**	**138**	P		**P**		**16 34 25.2**	**+1.1**
QRZ				IAmb	IAmb			16 34 26.8	
	comp=Z,686nm,1.1s								
QRZ	**Quartz Range**	**55.35**	**138**	P		**P**		**16 34 25.3**	**+1.1**
MKAZ	**Moumakai**	**55.60**	**133**	P		**P**		**16 34 27.6**	**+1.5**
LBZ	**Lake Benmore**	**55.62**	**142**	P		**P**		**16 34 25.7**	**-0.4**
KHEZ	**Kahui Hut**	**55.68**	**135**	P		**P**		**16 34 28.5**	**+1.8**
RPZ	**Rata Peaks**	**55.81**	**141**	P		**P**		**16 34 28.0**	**+0.6**
	comp=Z,1μm,0.8s,baz=337,slow=2.6								
	comp=Z,1μm,0.8s								
RPZ	**Rata Peaks**	**55.81**	**141**	P		**P**		**16 34 27.7**	**+0.3**
RPZ				IAmb	IAmb			16 34 29.2	
	comp=Z,2μm,0.8s								
RPZ	**Rata Peaks**	**55.81**	**141**	P		**P**		**16 34 27.8**	**+0.4**
KUZ	**Kuaotunu**	**55.88**	**132**	P		**P**		**16 34 29.0**	**+1.1**
LKBA	**Tubou, Lakemba**	**55.91**	**109**	P		**P**		**16 34 28.6**	**+0.1**
GRNR	**Gornyy**	**55.92**	**8**	⇓*i*P		**P**		**16 34 29.5**	**+1.6**
GRNR				*e*S		**S**		**16 41 43.5**	**+2.4**
GRNR				pmax	pmax				
	comp=E,20nm,1.1s								
GRNR				pmax	pmax				
	comp=N,280nm,1.0s								
GRNR				pmax	pmax				
	comp=Z,660nm,0.9s								
GRNR				smax	smax				
	comp=E,3.0nm,1.0s								
POO	**Poona**	**55.93**	**296**	IAmb	IAmb			16 34 30.0	
	comp=Z,866nm,0.9s								
HIZ	**Hauiti**	**55.95**	**134**	P		**P**		**16 34 29.4**	**+0.9**
HIZ	**Hauiti**	**55.95**	**134**	P		**P**		**16 34 29.9**	**+1.5**
HIZ	**Hauiti**	**55.95**	**134**	P		**P**		**16 34 29.9**	**+1.5**
THZ	**Tophouse**	**56.04**	**138**	P		**P**		**16 34 28.8**	**-0.2**
NNZ	**Nelson**	**56.10**	**138**	P		**P**		**16 34 29.0**	**-0.4**
TOZ	**Taharoa Road**	**56.10**	**133**	P		**P**		**16 34 31.3**	**+1.8**
LTZ	**Lake Taylor**	**56.11**	**140**	P		**P**		**16 34 29.3**	**-0.2**
VRZ	**Vera Road**	**56.13**	**135**	P		**P**		**16 34 31.1**	**+1.4**
OXZ	**Oxford**	**56.23**	**141**	P		**P**		**16 34 29.8**	**-0.6**
ODZ	**Otahua Downs**	**56.25**	**143**	P		**P**		**16 34 29.9**	**-0.4**
ODZ	**Otahua Downs**	**56.25**	**143**	P		**P**		**16 34 30.0**	**-0.4**
TLZ	**Tolley Road**	**56.37**	**134**	P		**P**		**16 34 33.2**	**+1.8**
KMRZ	**Kaimai**	**56.47**	**133**	P		**P**		**16 34 33.5**	**+1.4**
WAZ	**Wanganui**	**56.56**	**135**	P		**P**		**16 34 33.6**	**+0.9**
TUWZ	**Tuamarina**	**56.58**	**138**	P		**P**		**16 34 32.0**	**-0.7**
TWVZ	**Taurewa**	**56.59**	**135**	P		**P**		**16 34 34.3**	**+1.2**
MCQ	**Macquarie Isla**	**56.61**	**157**	P		**P**		**16 34 34.3**	**+1.7**
	baz=57,SNR=13								
MCQ	**Macquarie Isla**	**56.61**	**157**	P		**P**		**16 34 34.1**	**+1.5**
MCQ				IAmb	IAmb			16 34 35.5	
	comp=Z,1μm,1.0s								
MCQ	**Macquarie Isla**	**56.61**	**157**	P		**P**		**16 34 34.1**	**+1.5**
MCQ				pmax	pmax				
	comp=Z,1μm,1.0s								
MCQ	**Macquarie Isla**	**56.61**	**157**	P		**P**		**16 34 34.3**	**+1.7**
PKVZ	**Pokaka**	**56.62**	**135**	P		**P**		**16 34 33.7**	**+0.5**
KUTZ	**Kaahu Road**	**56.63**	**134**	P		**P**		**16 34 35.7**	**+2.5**
TGRZ	**Tauranga**	**56.66**	**133**	P		**P**		**16 34 34.5**	**+1.2**
WATZ	**Wairara**	**56.66**	**134**	P		**P**		**16 34 35.3**	**+1.9**
BSWZ	**Blackbirch Sta**	**56.66**	**138**	P		**P**		**16 34 32.4**	**-0.9**
BSWZ				PcP		**PcP**		**16 35 24.3**	**+0.7**
WTVZ	**West Tongariro**	**56.72**	**135**	P		**P**		**16 34 35.0**	**+1.1**
KATZ	**Kakaramea**	**56.74**	**134**	P		**P**		**16 34 35.8**	**+1.8**
NNVZ	**North Ngauruho**	**56.74**	**135**	P		**P**		**16 34 35.5**	**+1.3**
MTVZ	**Mangateitei**	**56.75**	**135**	P		**P**		**16 34 35.3**	**+1.2**
KRVZ	**Karewarewa**	**56.75**	**135**	P		**P**		**16 34 36.0**	**+1.8**
RATZ	**Rangitukua**	**56.75**	**134**	P		**P**		**16 34 35.7**	**+1.6**
FWVZ	**Far West T-bar**	**56.75**	**135**	P		**P**		**16 34 35.7**	**+1.4**
NGZ	**Ngauruhoe**	**56.75**	**135**	P		**P**		**16 34 35.6**	**+1.4**
KARZ	**Kaharoa**	**56.76**	**133**	P		**P**		**16 34 35.9**	**+1.8**
KHZ	**Kahutara**	**56.76**	**139**	P		**P**		**16 34 33.6**	**-0.3**
KHZ				IAmb	IAmb			16 34 35.2	
	comp=Z,507nm,0.9s								
KHZ	**Kahutara**	**56.76**	**139**	P		**P**		**16 34 34.0**	**0.0**
TRVZ	**Turoa**	**56.77**	**135**	P		**P**		**16 34 35.7**	**+1.3**
NTVZ	**North Tongarir**	**56.77**	**135**	P		**P**		**16 34 35.6**	**+1.2**
SNVZ	**South Ngauruho**	**56.78**	**135**	P		**P**		**16 34 35.5**	**+1.1**
GRRZ	**Galatos Road**	**56.79**	**134**	P		**P**		**16 34 36.4**	**+2.1**
WHVZ	**Whangaehu Hut**	**56.79**	**135**	P		**P**		**16 34 36.1**	**+1.6**
OTVZ	**Oturere**	**56.79**	**135**	P		**P**		**16 34 35.6**	**+1.1**
TMVZ	**Te Maari**	**56.80**	**135**	P		**P**		**16 34 35.6**	**+1.2**
WHTZ	**Whakaora**	**56.80**	**134**	P		**P**		**16 34 36.8**	**+2.4**
MQZ	**McQueen's Vall**	**56.81**	**141**	P		**P**		**16 34 34.5**	**+0.3**
WNVZ	**Wahianoa**	**56.81**	**135**	P		**P**		**16 34 35.4**	**+0.8**
ETVZ	**East Tongariro**	**56.81**	**135**	P		**P**		**16 34 35.8**	**+1.2**
TUVZ	**Tukino**	**56.83**	**135**	P		**P**		**16 34 35.9**	**+1.2**
LIRZ	**Lichensteins R**	**56.85**	**133**	P		**P**		**16 34 36.0**	**+1.3**
BISR	**Bishrakh**	**56.85**	**308**	*e*P		**P**		**16 34 34.3**	**-0.5**
RITZ	**Rihia Road**	**56.86**	**134**	P		**P**		**16 34 36.2**	**+1.4**
HSRZ	**Hossack Road**	**56.87**	**133**	P		**P**		**16 34 37.1**	**+2.2**
OMRZ	**Omania**	**56.88**	**133**	P		**P**		**16 34 36.2**	**+1.3**
WPRZ	**Whakapapatarin**	**56.89**	**134**	P		**P**		**16 34 36.6**	**+1.6**
CMWZ	**Cape Campbell**	**56.90**	**138**	P		**P**		**16 34 35.0**	**0.0**
HLRZ	**Highlands Stat**	**56.92**	**133**	P		**P**		**16 34 37.5**	**+2.2**
HRRZ	**Handcock Road**	**56.93**	**134**	P		**P**		**16 34 37.3**	**+2.0**
MOVZ	**Moawhango**	**56.95**	**135**	P		**P**		**16 34 35.6**	**+0.1**
OHWZ	**Ohakea**	**56.98**	**136**	P		**P**		**16 34 36.5**	**+1.0**
BOM	**Bombay**	**56.98**	**296**	*e*P		**P**		**16 34 36.1**	**+0.3**
SONA	**Sohna**	**56.98**	**308**	*e*P		**P**		**16 34 35.4**	**-0.3**
HATZ	**Hinemaiaia**	**56.99**	**134**	P		**P**		**16 34 36.7**	**+1.0**
TARZ	**Mount Tarawera**	**57.03**	**133**	P		**P**		**16 34 37.9**	**+1.8**
SNZO	**South Karori**	**57.04**	**137**	P		**P**		**16 34 35.1**	**-0.8**
SNZO				IAmb	IAmb			16 34 36.4	
	comp=Z,670nm,0.7s								
SNZO	**South Karori**	**57.04**	**137**	P		**P**		**16 34 35.4**	**-0.5**
ALRZ	**Allen Road**	**57.04**	**134**	P		**P**		**16 34 37.4**	**+1.4**
PRRZ	**Plateau Road**	**57.05**	**134**	P		**P**		**16 34 37.4**	**+1.4**
AYAN	**Aya Nagar**	**57.05**	**308**	*e*P		**P**		**16 34 35.7**	**-0.5**
MARZ	**Manawahe**	**57.05**	**133**	P		**P**		**16 34 38.2**	**+2.0**
WEL	**Wellington**	**57.07**	**137**	P		**P**		**16 34 35.9**	**-0.3**
RRRZ	**Republican Roa**	**57.08**	**133**	P		**P**		**16 34 37.6**	**+1.3**
TYV	**Tymovskoe**	**57.15**	**13**	*e*P		**P**		**16 34 38.6**	**+2.2**
TYV				*e*S		**S**		**16 41 59.6**	**+2.7**
TYV				pmax	pmax				
	comp=Z,350nm,0.9s								
TYV				pmax	pmax				
	comp=Z,400nm,1.4s								
TYV				smax	smax				
	comp=N,4μm,7.0s								
TYV				smax	smax				
	comp=E,3μm,7.0s								
EDRZ	**Edgecumbe**	**57.15**	**133**	P		**P**		**16 34 38.7**	**+1.9**
BHW	**Baring Head**	**57.19**	**137**	P		**P**		**16 34 35.8**	**-1.2**
MRHZ	**Matea Rd**	**57.20**	**134**	P		**P**		**16 34 37.6**	**+0.5**
BHHZ	**Black Hill Sta**	**57.21**	**135**	P		**P**		**16 34 37.1**	**-0.1**
WHRZ	**Whale Island**	**57.23**	**133**	P		**P**		**16 34 39.7**	**+2.4**
BHGR	**Bahadurgarh**	**57.30**	**308**	*e*P		**P**		**16 34 37.6**	**-0.2**
MUGZ	**Murupara**	**57.31**	**133**	P		**P**		**16 34 38.8**	**+0.9**
CIT	**Chita**	**57.33**	**351**	*e*P		**P**		**16 34 39.0**	**+1.3**
CIT				*e*				16 35 27.2	
CIT				*e*				16 36 59.2	
CIT				pmax	pmax				
	comp=E,918nm,1.3s								
MRZ	**Mangatainoka R**	**57.35**	**136**	P		**P**		**16 34 37.4**	**-0.7**
TSZ	**Takapari Road**	**57.37**	**135**	P		**P**		**16 34 38.4**	**+0.2**
POWZ	**Post Office Ro**	**57.37**	**136**	P		**P**		**16 34 37.9**	**-0.4**
BKZ	**Black Stump Fm**	**57.38**	**134**	P		**P**		**16 34 37.8**	**-0.6**
BKZ	**Black Stump Fm**	**57.38**	**134**	P		**P**		**16 34 38.1**	**-0.4**
BKZ	**Black Stump Fm**	**57.38**	**134**	P		**P**		**16 34 38.2**	**-0.2**
KUDL	**Kundal**	**57.40**	**308**	*e*P		**P**		**16 34 38.0**	**-0.6**
KWHZ	**Kaweka Forest**	**57.44**	**135**	P		**P**		**16 34 39.0**	**+0.2**
MSWZ	**Moikau Station**	**57.45**	**137**	P		**P**		**16 34 37.8**	**-1.0**
PNHZ	**Pukenui**	**57.48**	**135**	P		**P**		**16 34 39.4**	**+0.3**
URZ	**Urewera**	**57.48**	**133**	P		**P**		**16 34 38.1**	**-0.9**
URZ				IAmb	IAmb			16 34 43.4	
	comp=Z,377nm,0.8s								
URZ	**Urewera**	**57.48**	**133**	P		**P**		**16 34 38.5**	**-0.5**
URZ	**Urewera**	**57.48**	**133**	P		**P**		**16 34 38.7**	**-0.3**
KRHZ	**Kereru**	**57.49**	**135**	P		**P**		**16 34 39.1**	**0.0**
MTHZ	**Maungataniwha**	**57.51**	**134**	P		**P**		**16 34 39.2**	**-0.1**
RTZ	**Ruatahuna**	**57.52**	**134**	P		**P**		**16 34 39.4**	**0.0**
PLWZ	**Palliser**	**57.52**	**137**	P		**P**		**16 34 38.3**	**-1.0**
PRWZ	**Pori Road**	**57.58**	**136**	P		**P**		**16 34 39.5**	**-0.2**
NMHZ	**Naumai**	**57.58**	**134**	P		**P**		**16 34 40.5**	**+0.7**
DVHZ	**Dannevirke**	**57.61**	**136**	P		**P**		**16 34 39.8**	**-0.2**
TIWZ	**Tintock**	**57.61**	**136**	P		**P**		**16 34 39.6**	**-0.4**
MCHZ	**McNeill Hill**	**57.64**	**135**	P		**P**		**16 34 40.6**	**+0.5**
WPHZ	**Waipukurau**	**57.71**	**135**	P		**P**		**16 34 40.7**	**+0.2**
RAHZ	**Arahi**	**57.71**	**134**	P		**P**		**16 34 41.1**	**+0.5**
ARHZ	**Aropaoanui**	**57.78**	**134**	P		**P**		**16 34 41.8**	**+0.7**
RUGZ	**Raukumara Rang**	**57.78**	**133**	P		**P**		**16 34 40.3**	**-1.0**
RAGZ	**Rawiri**	**57.79**	**133**	P		**P**		**16 34 41.4**	**+0.2**
MWZ	**Matawai**	**57.81**	**133**	P		**P**		**16 34 41.3**	**-0.1**
BFZ	**Birch Farm**	**57.82**	**136**	P		**P**		**16 34 40.5**	**-0.9**
BFZ	**Birch Farm**	**57.82**	**136**	P		**P**		**16 34 40.8**	**-0.6**
BFZ	**Birch Farm**	**57.82**	**136**	P		**P**		**16 34 40.8**	**-0.6**
SNGZ	**Shannon Statio**	**57.84**	**134**	P		**P**		**16 34 41.5**	**-0.1**
ANWZ	**Angora Road**	**57.89**	**136**	P		**P**		**16 34 41.9**	**+0.1**
KHET	**Khetri**	**57.91**	**307**	*e*P		**P**		**16 34 41.9**	**-0.3**
PRHZ	**Porangahau**	**57.92**	**135**	P		**P**		**16 34 42.6**	**+0.6**
KKR	**Kurukshetra**	**57.97**	**310**	*e*P		**P**		**16 34 42.9**	**+0.3**
PXZ	**Pawanui**	**57.99**	**135**	P		**P**		**16 34 42.3**	**-0.1**
PKGZ	**Pakihiroa**	**58.05**	**132**	P		**P**		**16 34 43.4**	**+0.4**
ZAK	**Zakamensk**	**58.05**	**343**	*e*P		**P**		**16 34 42.8**	**0.0**
ZAK				*e*				16 35 30.1	
ZAK				pmax	pmax				
	comp=Z,313nm,1.0s								
ZAK				pmax	pmax				
	comp=Z,267nm,1.0s								
MXZ	**Matakaoa Point**	**58.10**	**132**	P		**P**		**16 34 43.0**	**-0.3**
MXZ				IAmb	IAmb			16 34 44.7	
	comp=Z,576nm,0.6s		

DRV	**Dumont d'Urvil**	**62.77**	**174**	P	**P**	**16 35 14.2**	**+0.5**
BOD	**Bodaibo**	**62.91**	**353**	*e*P	**P**	**16 35 15.8**	**+1.0**
BOD				pmax	pmax		
	comp=Z,1μm,1.2s						
ZSN	**Zaisan**	**62.99**	**330**	*e*P	**P**	**16 35 15.6**	**0.0**
ZSN				*e*S	**S**	**16 43 09.6**	**-1.0**
ZSN				pmax	pmax		
	comp=Z,162nm,0.9s						
ZSN				smax	smax		
	comp=E,298nm,4.2s						
ZSN	**Zaisan**	**62.99**	**330**	*e*P	**P**	**16 35 15.6**	**0.0**
	comp=E,162nm,0.9s,baz=330						
ZSN				*e*S	**S**	**16 43 09.7**	**-1.0**
	comp=E,298nm,4.2s,baz=330						
SHLS	**Shalkode**	**63.19**	**324**	*d* iP	**P**	**16 35 16.3**	**-0.8**
SHLS				*e*S	**S**	**16 43 09.6**	**-3.7**
SHLS				pmax	pmax		
	comp=Z,405nm,1.0s						
SHLS				smax	smax		
	comp=N,213nm,3.8s						
SHLS	**Shalkode**	**63.19**	**324**	⇓*i* P	**P**	**16 35 16.4**	**-0.8**
	comp=N,405nm,1.0s,baz=324						
SHLS				*e*S	**S**	**16 43 09.7**	**-3.7**
	comp=N,213nm,3.8s,baz=324						
PDGK	**Podgornoye**	**63.27**	**324**	P	**P**	**16 35 18.2**	**+0.5**
KSH	**Kashi**	**63.33**	**319**	P	**P**	**16 35 19.9**	**+1.8**
KSH				PcP	**PcP**	**16 35 53.4**	**+2.7**
KSH				PP	**sP**	**16 37 33.2**	**-2.8**
KSH				ScP		16 39 11.8	
KSH				S	**S**	**16 43 17.8**	**+2.6**
KSH				ScS	**ScS**	**16 44 29.5**	**+2.3**
KSH	**Kashi**	**63.33**	**319**	SS	SS	16 47 28.7	-3.2
KSH				pmax	pmax		
	comp=Z,1μm,0.8s						
KSH				pmax	pmax		
	comp=Z,3μm,5.2s						
KSH				LR	LR		
	comp=N,3μm,19.4s						
KSH				LR	LR		
	comp=E,2μm,20.0s						
KSH				LR	LR		
	comp=Z,4μm,20.0s						
PEA0B	**Petropavlovsk-**	**63.53**	**21**	P	**P**	**16 35 19.9**	**+0.9**
PEA0B				PcP	**PcP**	**16 35 52.1**	**+1.1**
PEA0B	**Petropavlovsk-**	**63.53**	**21**	*c*eP	**P**	**16 35 20.7**	**+1.8**
PETK	**Petropavlovsk-**	**63.53**	**21**	P	**P**	**16 35 19.8**	**+0.9**
	comp=Z,712nm,0.8s,baz=198,slow=8.9,SNR=216						
PETK				PcP	**PcP**	**16 35 51.9**	**+0.9**
	comp=Z,148nm,0.7s,baz=164,slow=1.1,SNR=7.5						
PETK				PKPPKP		17 04 10.7	
	comp=Z,3.9nm,0.8s,baz=276,slow=39,SNR=3.9						
	comp=Z,712nm,0.8s						
SATY	**Saty**	**63.76**	**323**	*e*P	**P**	**16 35 21.5**	**+0.7**
SATY				*e*S	**S**	**16 43 18.8**	**-1.5**
SATY				pmax	pmax		
	comp=Z,520nm,0.7s						
SATY	**Saty**	**63.76**	**323**	*e*P	**P**	**16 35 21.5**	**+0.7**
	comp=Z,520nm,0.7s,baz=323						
SATY				*e*S	**S**	**16 43 18.9**	**-1.4**
	baz=323						
MIDW	**Midway**	**63.80**	**56**	P	**P**	**16 35 21.1**	**0.0**
MIDW				IAmb	IAmb	16 35 24.7	
	comp=Z,294nm,0.8s						
PET	**Petropavlovsk**	**63.80**	**22**	P	**P**	**16 35 21.5**	**+0.9**
PET	**Petropavlovsk**	**63.80**	**22**	*e*P	**P**	**16 35 21.8**	**+1.1**
PET				*e**SP	**sP**	**16 37 38.7**	**-1.0**
PET				*e*S	**S**	**16 43 22.7**	**+2.6**
PET				*e*SP	**SPn**	**16 43 43.1**	**+4.0**
PET				pmax	pmax		
	comp=Z,2μm,1.2s						
PET				pmax	pmax		
	comp=Z,3μm,14.9s						
PET				pmax	pmax		
	comp=Z,3μm,12.4s						
PET				MLR	MLR		
	comp=Z,2μm,20.0s						
PET				MLR	MLR		
	comp=Z,2μm,16.0s						
PET	**Petropavlovsk**	**63.80**	**22**	P	**P**	**16 35 22.1**	**+1.4**
KPKS	**Kokpek**	**63.83**	**324**	*e*P	**P**	**16 35 21.7**	**+0.5**
KPKS				*e*S	**S**	**16 43 20.5**	**-0.6**
KPKS				pmax	pmax		
	comp=Z,610nm,1.1s						
KPKS	**Kokpek**	**63.83**	**324**	*e*P	**P**	**16 35 21.7**	**+0.5**
	comp=Z,610nm,1.1s,baz=324						
KPKS				*e*S	**S**	**16 43 20.6**	**-0.6**
	baz=324						
MK31	**Makanchi Array**	**63.87**	**328**	P	**P**	**16 35 21.7**	**+0.4**
MK31	**Makanchi Array**	**63.87**	**328**	P	**P**	**16 35 21.7**	**+0.4**
MK31				pmax	pmax		
	comp=Z,896nm,0.9s						
MKAR	**Makanchi Array**	**63.87**	**328**	P	**P**	**16 35 21.8**	**+0.5**
	comp=Z,1μm,0.7s,baz=129,slow=8.0,SNR=3394						
MKAR				PcP	**PcP**	**16 35 53.7**	**+1.1**
	comp=Z,352nm,0.9s,baz=136,slow=3.6,SNR=6.5						
MKAR				S	**S**	**16 43 23.2**	**+1.9**
	comp=Z,16nm,0.9s,baz=152,slow=12,SNR=4.0						
MKAR				PKPPKP	**P'P'df**	**17 04 08.3**	**-1.4**
	comp=Z,2.4nm,0.8s,baz=276,slow=4.6,SNR=6.5						
MKAR				P4KPbc		17 12 15.1	
	comp=Z,8.5nm,0.9s,baz=126,slow=4.9,SNR=35						
	comp=Z,1μm,0.7s						
MKAR	**Makanchi Array**	**63.87**	**328**	P	**P**	**16 35 21.6**	**+0.4**
MKAR				PcP	**PcP**	**16 35 54.3**	**+1.7**
MAKZ	**Makanchi**	**64.04**	**328**	P	**P**	**16 35 22.6**	**+0.2**
MAKZ				IAmb	IAmb	16 35 25.5	
	comp=Z,794nm,0.8s						
MAKZ	**Makanchi**	**64.04**	**328**	P	**P**	**16 35 22.6**	**+0.2**
MAKZ				pmax	pmax		
	comp=Z,794nm,0.9s						
NIUE	**Niue**	**64.38**	**109**	P	**P**	**16 35 26.6**	**+1.5**
	baz=64,SNR=3.4						
NIUE	**Niue**	**64.38**	**109**	P	**P**	**16 35 25.7**	**+0.6**
NIUE				IAmb	IAmb	16 35 27.5	
	comp=Z,1μm,1.5s						
PAF	**Port-aux-Franc**	**64.52**	**217**	P	**P**	**16 35 26.9**	**+1.5**
PAF				IAmb	IAmb	16 35 36.7	
	comp=Z,570nm,1.4s						
PAF	**Port-aux-Franc**	**64.52**	**217**	P	**P**	**16 35 26.9**	**+1.5**
PAF				pmax	pmax		
	comp=Z,570nm,1.4s						
ULHL	**Ulahol**	**64.62**	**321**	P	**P**	**16 35 27.3**	**+0.9**
	SNR=312						
TNSS	**Tian-Shan**	**64.62**	**322**	*e*P	**P**	**16 35 26.8**	**+0.2**
TNSS	**Tian-Shan**	**64.62**	**322**	*e*P	**P**	**16 35 26.9**	**+0.2**
	baz=322						
MDOK	**Medeo**	**64.63**	**323**	P	**P**	**16 35 27.3**	**+0.9**
MDOK	**Medeo**	**64.63**	**323**	*e*P	**P**	**16 35 26.9**	**+0.5**
	baz=322						
MDOK				*e*S	**S**	**16 43 30.6**	**-0.3**
	baz=322						
KNDC	**Almaty**	**64.71**	**323**	P	**P**	**16 35 27.8**	**+1.0**
AAA	**Alma-Ata**	**64.74**	**323**	*d* iP	**P**	**16 35 27.7**	**+0.7**
AAA				*e*S	**S**	**16 43 31.0**	**-1.1**
AAA				pmax	pmax		
	comp=Z,2μm,1.8s						
AAA	**Alma-Ata**	**64.74**	**323**	⇓*i* P	**P**	**16 35 27.7**	**+0.7**
	comp=Z,2μm,1.8s,baz=322						
AAA				*e*S	**S**	**16 43 31.0**	**-1.1**
	baz=322						
ARXS	**Arharly**	**64.77**	**324**	*e*P	**P**	**16 35 26.7**	**-0.5**
TDK	**Taldyqorghan**	**64.89**	**325**	*d* iP	**P**	**16 35 28.3**	**+0.5**
TDK				*e*S	**S**	**16 43 33.3**	**-0.4**
TDK				pmax	pmax		
	comp=Z,1μm,1.2s						
TDK	**Taldygorghan**	**64.89**	**325**	⇓*i* P	**P**	**16 35 28.4**	**+0.5**
	comp=Z,1μm,1.2s,baz=325						
TDK				*e*S	**S**	**16 43 33.4**	**-0.4**
	baz=325						
CHKK	**Chushkaly**	**65.06**	**323**	⇓*i* P	**P**	**16 35 29.3**	**+0.4**
CHKK	**Chushkaly**	**65.06**	**323**	⇓*i* P	**P**	**16 35 29.3**	**+0.4**
	baz=323						
TKM2	**Tokmak 2**	**65.39**	**322**	P	**P**	**16 35 32.2**	**+0.9**
	SNR=857						
TKM2	**Tokmak 2**	**65.39**	**322**	P	**P**	**16 35 32.0**	**+0.7**
KUU	**Kurty**	**65.47**	**323**	*d* iP	**P**	**16 35 32.1**	**+0.6**
KUU				*e*S	**S**	**16 43 39.8**	**-0.9**
KUU				pmax	pmax		
	comp=Z,1μm,0.7s						
KUU	**Kurty**	**65.47**	**323**	⇓*i* P	**P**	**16 35 32.2**	**+0.6**
	comp=Z,1μm,0.7s,baz=323						
KUU				*e*S	**S**	**16 43 39.8**	**-0.9**
	baz=323						
KBK	**Karagaybulak**	**65.65**	**321**	P	**P**	**16 35 34.0**	**+1.1**
	SNR=327						
UCH	**Uchtor**	**65.69**	**321**	P	**P**	**16 35 34.7**	**+1.2**
	SNR=881						
KBL	**Kabul**	**65.90**	**311**	P	**P**	**16 35 35.0**	**+0.3**
KBL	**Kabul**	**65.90**	**311**	P	**P**	**16 35 35.0**	**+0.3**
KBL				pmax	pmax		
	comp=Z,1μm,0.8s						
KBL	**Kabul**	**65.90**	**311**	P	**P**	**16 35 35.3**	**+0.6**
	SNR=581						
AAK	**Ala-Archa**	**65.92**	**321**	P	**P**	**16 35 35.8**	**+1.2**
	SNR=418						
AAK	**Ala-Archa**	**65.92**	**321**	P4KPbc		17 12 25.0	
	comp=Z,6.7nm,0.9s,baz=138,slow=3.1,SNR=8.6						
AAK	**Ala-Archa**	**65.92**	**321**	P	**P**	**16 35 35.6**	**+1.1**
AAK	**Ala-Archa**	**65.92**	**321**	*d* iP	**P**	**16 35 35.7**	**+1.1**
AAK				pmax	pmax		
	comp=Z,1μm,1.0s						
AAK	**Ala-Archa**	**65.92**	**321**	*i* P	**P**	**16 35 35.7**	**+1.1**
	SNR=432						
CHMS	**Chumysh**	**65.95**	**321**	P	**P**	**16 35 35.5**	**+0.9**
	SNR=7.5						
CHMS	**Chumysh**	**65.95**	**321**	*i* P	**P**	**16 35 34.8**	**+0.2**
CHMS				pmax	pmax		
	comp=Z,428nm,0.9s						
AML	**Almayashu**	**66.16**	**320**	P	**P**	**16 35 37.7**	**+1.2**
	SNR=53						
AML	**Almayashu**	**66.16**	**320**	*i* P	**P**	**16 35 37.3**	**+0.9**
	SNR=908						
USP	**Ospenovka**	**66.25**	**322**	P	**P**	**16 35 37.3**	**+0.8**
	SNR=51						
SGDS	**Sogindy**	**66.27**	**322**	*e*P	**P**	**16 35 36.9**	**+0.3**
SGDS				*i* S	**S**	**16 43 49.3**	**-1.0**
SGDS				pmax	pmax		
	comp=Z,282nm,1.1s						
SGDS				smax	smax		
	comp=N,385nm,4.6s						
SGDS	**Sogindy**	**66.27**	**322**	*e*P	**P**	**16 35 37.0**	**+0.3**
	comp=N,282nm,1.1s,baz=322						
SGDS				*i* S	**S**	**16 43 49.4**	**-1.0**
	comp=N,385nm,4.6s,baz=322						
EKS2	**Erkin-Say**	**66.38**	**321**	P	**P**	**16 35 38.8**	**+1.3**
	SNR=910						
YAK	**Yakutsk**	**66.50**	**2**	P	**P**	**16 35 38.1**	**+0.5**
	comp=N,1μm,0.7s,baz=177,slow=1.6,SNR=925						
YAK				S	**S**	**16 43 53.1**	**+0.8**
	comp=N,42nm,0.8s,baz=202,slow=9.8,SNR=37						
	comp=N,1μm,0.7s						
YAK	**Yakutsk**	**66.50**	**2**	P	**P**	**16 35 38.0**	**+0.4**
YAK	**Yakutsk**	**66.50**	**2**	⇓*i* P	**P**	**16 35 38.2**	**+0.6**
YAK				*e*		16 36 03.3	
YAK				*e*S	**S**	**16 43 53.3**	**+1.1**
YAK				*e*		16 44 47.5	
YAK				*e*SSS	SSS	16 51 33.6	
YAK				pmax	pmax		
	comp=Z,2μm,1.0s						
YAK				pmax	pmax		
	comp=N,670nm,1.1s						
YAK				pmax	pmax		
	comp=E,398nm,1.0s						
YAK				pmax	pmax		
	comp=Z,483nm,2.5s						
YAK				pmax	pmax		
	comp=N,443nm,2.8s						
YAK				pmax	pmax		
	comp=E,255nm,3.4s						
YAK				smax	smax		
	comp=N,664nm,1.3s						
YAK				smax	smax		
	comp=E,652nm,1.4s						
GAR	**Garm**	**66.90**	**316**	P	**P**	**16 35 41.0**	**+0.2**
MA2	**Magadan**	**67.00**	**14**	P	**P**	**16 35 42.0**	**+1.3**
	comp=E,794nm,0.8s,baz=194,slow=5.7,SNR=161						
	comp=E,794nm,0.8s						
MA2	**Magadan**	**67.00**	**14**	P	**P**	**16 35 41.7**	**+1.0**
MA2	**Magadan**	**67.00**	**14**	P	**P**	**16 35 42.0**	**+1.3**
MA2	**Magadan**	**67.00**	**14**	P	**P**	**16 35 42.3**	**+1.6**
MA2	**Magadan**	**67.00**	**14**	⇓P	**P**	**16 35 42.0**	**+1.3**
MA2				x	x	16 36 08.5	
SEM	**Semipalatinsk**	**67.23**	**330**	*d* iP	**P**	**16 35 42.0**	**-0.7**
SEM				*e*S	**S**	**16 43 58.0**	**-3.8**
SEM				pmax	pmax		
	comp=Z,375nm,1.2s						
SEM	**Semipalatinsk**	**67.23**	**330**	⇓*i* P	**P**	**16 35 42.0**	**-0.7**
	comp=Z,375nm,1.2s,baz=330						
SEM				*e*S	**S**	**16 43 58.0**	**-3.8**
	baz=330						
BTLS	**Baital**	**67.47**	**323**	*d* iP	**P**	**16 35 44.1**	**+0.2**
BTLS				*e*S	**S**	**16 44 02.4**	**-1.9**
BTLS				pmax	pmax		
	comp=Z,404nm,1.3s						
BTLS	**Baital**	**67.47**	**323**	⇓*i* P	**P**	**16 35 44.2**	**+0.2**
	comp=Z,404nm,1.3s,baz=323						
BTLS				*e*S	**S**	**16 44 02.4**	**-1.9**
	baz=323						
JOHN	**Johnston Islan**	**67.47**	**70**	P	**P**	**16 35 44.2**	**-0.2**
JOHN				IAmb	IAmb	16 35 50.3	
	comp=Z,415nm,0.9s						
JOHN	**Johnston Islan**	**67.47**	**70**	P	**P**	**16 35 45.7**	**+1.2**
ZAA0	**Zalesovo Array**	**67.55**	**335**	P	**P**	**16 35 43.6**	**-0.6**
ZALV	**Zalesovo Beam**	**67.55**	**335**	P	**P**	**16 35 43.8**	**-0.5**
	comp=Z,1μm,0.8s,baz=121,slow=4.6,SNR=1683						
ZALV				PKPPKP	**P'P'df**	**17 04 01.5**	**-1.7**
	comp=Z,12nm,0.9s,baz=306,slow=3.7,SNR=9.9						
ZALV				P4KPbc		17 12 29.2	
	comp=Z,3.4nm,0.8s,baz=146,slow=2.9,SNR=11						
	comp=Z,1μm,0.8s						
ZALV	**Zalesovo Beam**	**67.55**	**335**	P	**P**	**16 35 43.6**	**-0.5**
ZALV	**Zalesovo Beam**	**67.55**	**335**	*i* P	**P**	**16 35 43.7**	**-0.5**
ZALV				pmax	pmax		
	comp=Z,1μm,0.8s						
CHGR	**Chuyangaron**	**67.56**	**315**	P	**P**	**16 35 44.7**	**-0.1**
CHGR	**Chuyangaron**	**67.56**	**315**	P	**P**	**16 35 44.7**	**-0.1**
CHGR				pmax	pmax		
	comp=Z,4μm,1.1s						
DZA	**Taraz**	**68.06**	**320**	*e*P	**P**	**16 35 46.4**	**-1.2**
DZA				*e*S	**S**	**16 44 10.1**	**-1.3**
DZA	**Taraz**	**68.06**	**320**	*e*P	**P**	**16 35 46.5**	**-1.2**
	baz=320						
DZA				*e*S	**S**	**16 44 10.2**	**-1.3**
	baz=320						
KURBB	**Kurchatov Arra**	**68.22**	**330**	P4KPbc		17 12 32.1	
	comp=Z,2.7nm,0.7s,baz=128,slow=3.9,SNR=14						
KURBB	**Kurchatov Arra**	**68.22**	**330**	P	**P**	**16 35 48.7**	**+0.3**
KURK	**Kurchatov**	**68.23**	**330**	P	**P**	**16 35 48.7**	**+0.2**
KURK	**Kurchatov**	**68.23**	**330**	*d* iP	**P**	**16 35 48.9**	**+0.4**
KURK				pmax	pmax		
	comp=Z,2μm,0.9s						
IUG	**Iuzhnay**	**68.54**	**319**	*d* iP	**P**	**16 35 51.5**	**+0.7**
IUG				*e*S	**S**	**16 44 17.9**	**+0.7**
IUG	**Iuzhnay**	**68.54**	**319**	⇓*i* P	**P**	**16 35 51.5**	**+0.7**
	baz=319						
IUG				*e*S	**S**	**16 44 18.0**	**+0.7**
	baz=319						
TAS	**Tashkent**	**68.65**	**318**	P	**P**	**16 35 52.0**	**+0.7**
TAS	**Tashkent**	**68.65**	**318**	P	**P**	**16 35 52.0**	**+0.7**
TAS				pmax	pmax		
	comp=Z,2μm,0.9s						
KK31	**Karatay Array**	**68.68**	**320**	P	**P**	**16 35 51.4**	**-0.1**
KK31				IAmb	IAmb	16 35 54.2	
	comp=Z,533nm,1.1s						
KK31	**Karatay Array**	**68.68**	**320**	*i* P	**P**	**16 35 51.7**	**+0.2**
KKAR	**Karatay Array**	**68.68**	**320**	P	**P**	**16 35 51.4**	**-0.1**
KKAR	**Karatay Array**	**68.68**	**320**	P	**P**	**16 35 51.4**	**-0.1**
KKAR				IAmb	IAmb	16 35 54.2	
	comp=Z,533nm,1.1s						
KKAR	**Karatay Array**	**68.68**	**320**	P	**P**	**16 35 51.4**	**-0.1**
KKAR				pmax	pmax		
	comp=Z,533nm,1.1s						
CHM	**Chimkent**	**68.91**	**319**	*e*P	**P**	**16 35 51.9**	**-0.9**
CHM				*e*S	**S**	**16 44 19.8**	**-1.5**
CHM	**Chimkent**	**68.91**	**319**	*e*P	**P**	**16 35 51.9**	**-0.9**
	baz=319						
CHM				*e*S	**S**	**16 44 19.8**	**-1.5**
	baz=319						
BRLS	**Borolday**	**69.08**	**320**	*e*P	**P**	**16 35 52.5**	**-1.4**
BRLS				*e*S	**S**	**16 44 22.2**	**-1.1**
BRLS				smax	smax		
	comp=N,234nm,5.2s						
BRLS	**Borolday**	**69.08**	**320**	*e*P	**P**	**16 35 52.5**	**-1.4**
	baz=319						
BRLS				*e*S	**S**	**16 44 22.2**	**-1.1**
	comp=N,234nm,5.2s,baz=319						
NGCH	**Negor - Chabah**	**69.23**	**299**	P	**P**	**16 35 57.0**	**+1.9**
	SNR=24						
RER	**Riviere de l'E**	**69.59**	**249**	P	**P**	**16 35 58.8**	**+1.2**
RER				IAmb	IAmb	16 36 00.4	
	comp=Z,845nm,0.9s						
RER	**Riviere de l'E**	**69.59**	**249**	P	**P**	**16 35 59.8**	**+2.3**
	SNR=10						
MSEY	**Mahe Island**	**69.88**	**267**	P	**P**	**16 35 59.8**	**+0.4**
MSEY				IAmb	IAmb	16 36 02.0	
	comp=Z,914nm,1.1s						
MSEY	**Mahe Island**	**69.88**	**267**	P	**P**	**16 35 59.8**	**+0.4**
MSEY				pmax	pmax		
	comp=Z,914nm,1.1s						
MSEY	**Mahe Island**	**69.88**	**267**	*i* P	**P**	**16 36 00.2**	**+0.9**
	SNR=33						
JLN	**Jalan Bani Buh**	**69.94**	**295**	P	**P**	**16 35 60.0**	**+0.5**
	SNR=69						
OTUK	**Ortayu**	**70.17**	**325**	P	**P**	**16 36 01.0**	**+0.7**
SHEM	**Shemya Is, Ala**	**70.20**	**29**	P	**P**	**16 36 02.2**	**+1.9**
	comp=Z,761nm,0.8s,baz=313,slow=3.1,SNR=48						
	comp=Z,761nm,0.8s						
SMY	**Shemya**	**70.20**	**29**	P	**P**	**16 36 01.8**	**+1.5**
SMY				IAmb	IAmb	16 36 04.9	
	comp=Z,793nm,0.9s						
SMY	**Shemya**	**70.20**	**29**	P	**P**	**16 36 01.8**	**+1.5**
SMY				pmax	pmax		
	comp=Z,793nm,0.9s						
SEY	**Seymchan**	**70.34**	**13**	P	**P**	**16 36 02.1**	**+1.2**
	comp=Z,758nm,0.8s,baz=210,slow=5.2,SNR=881						
SEY				PKPPKP	**P'P'df**	**17 03 58.3**	**+0.1**
	comp=Z,8.0nm,1.2s,baz=62,slow=3.4,SNR=6.3						
	comp=Z,758nm,0.8s						
SEY	**Seymchan**	**70.34**	**13**	*d* iP	**P**	**16 36 02.2**	**+1.2**
SEY				pmax	pmax		
	comp=Z,788nm,0.8s						
WBK	**Wadi Bani Khal**	**70.44**	**296**	P	**P**	**16 36 03.3**	**+0.8**
	SNR=122						
WSAR	**Wadi Sarin**	**70.90**	**296**	P	**P**	**16 36 06.2**	**+1.0**
	SNR=187						
BRZS	**Berezniki**	**70.91**	**327**	*e*P	**P**	**16 36 04.8**	**+0.2**
BRZS				*e*S	**S**	**16 44 42.8**	**-1.1**
BRZS				smax	smax		
	comp=N,157nm,2.5s						
BRZS	**Berezniki**	**70.91**	**327**	*e*P	**P**	**16 36 04.9**	**+0.2**
	baz=327						
BRZS				*e*S	**S**	**16 44 42.9**	**-1.1**
	comp=N,157nm,2.5s,baz=327						
MHTO	**MHTO**	**70.98**	**294**	P	**P**	**16 36 06.0**	**+0.3**
	SNR=145						
HRA	**Herat**	**71.05**	**309**	P	**P**	**16 36 06.3**	**+0.2**
HRA				IAmb	IAmb	16 36 08.3	
	comp=Z,706nm,1.1s						
DQM	**DQM**	**71.14**	**293**	P	**P**	**16 36 08.0**	**+1.3**
	SNR=54						
JMDO	**Jabal Madar**	**71.17**	**295**	P	**P**	**16 36 07.2**	**+0.4**
	SNR=125						
SMDO	**Samad**	**71.38**	**296**	P	**P**	**16 36 09.0**	**+0.9**
	SNR=179						
BIDO	**Bidbid**	**71.42**	**297**	P	**P**	**16 36 09.0**	**+0.8**
	SNR=375						
HOQ	**Hoqain**	**72.16**	**296**	P	**P**	**16 36 13.1**	**+0.5**
	SNR=310						
JASK	**Jask - Hormozg**	**72.21**	**299**	P	**P**	**16 36 14.7**	**+1.9**
	SNR=45						
SHAO	**Shalim**	**72.54**	**290**	P	**P**	**16 36 16.0**	**+1.1**
	SNR=30						
SHAO	**Shalim**	**72.54**	**290**	*i* P	**P**	**16 36 14.8**	**-0.1**
	SNR=110						
SOCY	**Socotra**	**73.11**	**284**	P	**P**	**16 36 18.1**	**-0.2**
SOCY	**Socotra**	**73.11**	**284**	P	**P**	**16 36 18.9**	**+0.6**
	SNR=46						
DMTO	**DMTO**	**73.12**	**290**	P	**P**	**16 36 19.0**	**+0.8**
	SNR=15						
UOSS	**Minazif**	**73.45**	**298**	P	**P**	**16 36 19.7**	**-0.3**
UOSS				IAmb	IAmb	16 36 21.6	
	comp=Z,759nm,0.9s						
UOSS	**Minazif**	**73.45**	**298**	*i* P	**P**	**16 36 19.8**	**-0.3**
	SNR=61						
HATD	**Hatta, Dubai**	**73.49**	**297**	P	**P**	**16 36 21.0**	**+0.7**
	SNR=105						
HATD	**Hatta, Dubai**	**73.49**	**297**	*i* P	**P**	**16 36 20.6**	**+0.3**
	SNR=156						
ASHO	**Ashiyiah**	**73.52**	**297**	P	**P**	**16 36 21.0**	**+0.5**
	SNR=137						
ASHO	**Ashiyiah**	**73.52**	**297**	*i* P	**P**	**16 36 20.7**	**+0.2**
	SNR=208						
MSFE	**Esma-Masafi**	**73.59**	**298**	*i* P	**P**	**16 36 20.9**	**+0.1**
	SNR=329						
MASF	**Masafi**	**73.59**	**298**	P	**P**	**16 36 22.2**	**+1.3**
	SNR=110						
BANOM	**Banah**	**73.59**	**299**	P	**P**	**16 36 22.1**	**+1.2**
	SNR=59						
BANOM	**Banah**	**73.59**	**299**	*i* P	**P**	**16 36 21.1**	**+0.3**
	SNR=48						
ALNE	**Al Ain**	**73.66**	**297**	P	**P**	**16 36 22.1**	**+0.9**
	SNR=258						
ALNE	**Al Ain**	**73.66**	**297**	*i* P	**P**	**16 36 21.5**	**+0.3**
	SNR=100						
SHME	**Shamm**	**73.76**	**299**	P	**P**	**16 36 23.0**	**+1.2**
	SNR=140						
SHME	**Shamm**	**73.76**	**299**	*i* P	**P**	**16 36 22.2**	**+0.4**
	SNR=82						
RBK	**Rabkut**	**73.78**	**290**	P	**P**	**16 36 23.0**	**+0.9**
	SNR=52						
BRVK	**Borovoye**	**73.81**	**329**	P	**P**	**16 36 21.7**	**+0.2**
BRVK	**Borovoye**	**73.81**	**329**	P	**P**	**16 36 22.2**	**+0.7**
NAZ	**Nazwa, Dubai**	**73.94**	**297**	P	**P**	**16 36 23.9**	**+1.1**
	SNR=94						
NAZ	**Nazwa, Dubai**	**73.94**	**297**	*i* P	**P**	**16 36 22.9**	**0.0**
	SNR=74						
FAQ	**Al Faqa, Dubai**	**73.95**	**297**	P	**P**	**16 36 24.0**	**+1.1**
	SNR=130						
FAQ	**Al Faqa, Dubai**	**73.95**	**297**	*i* P	**P**	**16 36 23.0**	**+0.2**
	SNR=232						
RAR	**Rarotonga**	**74.01**	**111**	P	**P**	**16 36 23.3**	**0.0**
RAR	**Rarotonga**	**74.01**	**111**	P	**P**	**16 36 23.3**	**0.0**
RAR				pmax	pmax		
	comp=Z,225nm,1.3s						
DOK	**Doka**	**74.05**	**291**	P	**P**	**16 36 24.0**	**+0.5**
	SNR=66						
UMQ	**Umm Al-Quwin**	**74.06**	**298**	P	**P**	**16 36 24.9**	**+1.4**
	SNR=23						
UMQ	**Umm Al-Quwin**	**74.06**	**298**	*i* P	**P**	**16 36 24.6**	**+1.1**
	SNR=23						
ASUD	**Al Ashush, Dub**	**74.16**	**297**	P	**P**	**16 36 25.1**	**+1.1**
	SNR=78						
ASUD	**Al Ashush, Dub**	**74.16**	**297**	*i* P	**P**	**16 36 24.8**	**+0.7**
	SNR=43						
KIWB	**Kanaga Island**	**74.20**	**33**	P	**P**	**16 36 24.7**	**+1.0**
WHFO	**Wadi Hawf**	**74.25**	**290**	P	**P**	**16 36 25.4**	**+0.6**
	SNR=82						
AJN	**Ajban**	**74.45**	**297**	P	**P**	**16 36 26.7**	**+1.0**
	SNR=56						
**AJN

CRZF **Crozet Islands** 75.51 223 P P 16 36 31.8 +0.6
MAW **Mawson** 75.62 201 P P 16 36 32.0 +0.6
comp=Z,225nm,1.0s,baz=75,slow=6.0,SNR=115
MAW S S 16 45 33.0 -2.5
comp=Z,8.5nm,0.9s,baz=168,slow=19,SNR=5.6
MAW PKPPKP P'P'df 17 03 51.7 +1.7
comp=Z,6.1nm,1.0s,baz=291,slow=6.6,SNR=4.4
comp=Z,225nm,1.0s
MAW **Mawson** 75.62 201 P P 16 36 32.0 +0.6
baz=76,SNR=135
MAW **Mawson** 75.62 201 P P 16 36 31.9 +0.6
MAW **Mawson** 75.62 201 P P 16 36 32.0 +0.6
ATKA **Atka Island** 75.97 33 P P 16 36 34.3 +0.6
TIXI **Tiksi** 76.12 1 P P 16 36 33.7 -0.4
comp=Z,667nm,0.8s,baz=239,slow=7.5,SNR=510
comp=Z,667nm,0.8s
TIXI **Tiksi** 76.12 1 P P 16 36 33.5 -0.6
TIXI IAmb IAmb 16 36 37.8
comp=Z,674nm,0.9s
SBA **Scott Base** 76.31 172 P P 16 36 35.4 +0.3
SBA **Scott Base** 76.31 172 P P 16 36 35.4 +0.3
SBA pmax pmax
comp=Z,77nm,0.9s
JRN **Qarnain Island** 76.42 297 P P 16 36 37.7 +0.9
SNR=76
XMAS **Kiritimati** 77.15 87 P P 16 36 41.7 +0.7
ABPO **Ambohimpanom** 77.55 252 P P 16 36 43.5 +0.1
ABPO **Ambohimpanom** 77.55 252 P P 16 36 43.5 +0.1
ABPO pmax pmax
comp=Z,213nm,0.9s
KEKH **Kekaha** 77.58 66 P P 16 36 44.3 +1.1
OPO **Ambohidratompo** 77.60 252 P P 16 36 44.2 +0.6
comp=Z,476nm,0.7s,baz=85,slow=4.5,SNR=475
comp=Z,476nm,0.7s
BILL **Bilibino** 77.83 15 P P 16 36 43.7 +0.1
BILL **Bilibino** 77.83 15 *c* iP P 16 36 44.0 +0.4
BILL *i* 16 36 49.9
BILL *e**PP **pP** 16 38 20.0 +0.3
BILL *i* *SP **sP** 16 39 06.5 +0.9
BILL *i* S S 16 45 56.1 -3.0
BILL *e* 16 46 08.6
BILL *e* 16 46 20.5
BILL *e*SS SS 16 51 13.6 +2.2
BILL pmax pmax
comp=Z,73nm,0.8s
BILL MLR MLR
comp=N,863nm,17.0s
AB31 **Akbulak array** 77.94 322 *i* P P 16 36 44.8 +0.2
ABKAR **Akbulak array** 77.94 322 P P 16 36 44.5 0.0
VOI **Vohitsoka** 77.94 249 P P 16 36 45.5 +0.2
VOI IAmb IAmb 16 36 47.3
comp=Z,552nm,0.8s
VOI **Vohitsoka** 77.94 249 P P 16 36 46.5 +1.1
SNR=40
VOI **Vohitsoka** 77.94 249 P P 16 36 45.9 +0.5
NRIK **Noril'sk** 78.22 347 P P 16 36 46.5 +0.9
comp=Z,615nm,0.8s,baz=135,slow=6.0,SNR=573
NRIK S S 16 46 02.5 -0.6
comp=Z,21nm,0.9s,baz=356,slow=22,SNR=13
comp=Z,615nm,0.8s
NRIK **Noril'sk** 78.22 347 P P 16 36 46.3 +0.7
NRIK IAmb IAmb 16 36 50.1
comp=Z,645nm,0.8s
NRIK **Noril'sk** 78.22 347 *d* iP P 16 36 46.6 +0.9
NRIK pmax pmax
comp=Z,1μm,1.2s
HON **Honolulu** 79.04 67 P P 16 36 51.6 +0.5
HON **Honolulu** 79.04 67 P P 16 36 51.6 +0.5
HON pmax pmax
comp=Z,236nm,0.9s
KIP **Kipapa** 79.05 67 *c* eP P 16 36 52.9 +1.8
KIP pmax pmax
comp=Z,342nm,2.5s
OPA **Opana** 79.09 67 P P 16 36 51.9 +0.6
OPA **Opana** 79.09 67 P P 16 36 51.9 +0.6
OPA pmax pmax
comp=Z,72nm,0.9s
NIKH **Nikolski High** 79.25 34 P P 16 36 51.8 +0.2
NIKH IAmb IAmb 16 36 55.3
comp=Z,467nm,0.8s
NIKH **Nikolski High** 79.25 34 P P 16 36 50.7 -0.8
baz=247,SNR=24
NIKH S S 16 46 16.0 +1.4
baz=247
AKTO **Aktyubinsk** 79.53 323 P P 16 36 53.7 +0.6
comp=Z,920nm,0.7s,baz=106,slow=10
AKTO S S 16 46 16.7 -0.9
comp=Z,4.0nm,0.7s,baz=227,slow=21,SNR=7.2
comp=Z,920nm,0.7s
SPIA **Saint Paul Isl** 80.20 30 P P 16 36 57.4 +1.0
SPIA IAmb IAmb 16 37 00.2
comp=Z,469nm,0.8s
SPIA **Saint Paul Isl** 80.20 30 P P 16 36 57.9 +1.4
baz=246
SPIA S S 16 46 26.3 +2.2
baz=246
KHLH **Kahului Airpor** 80.43 68 P P 16 36 59.3 +0.9
SVE **Sverdlovsk** 80.48 330 *c* iP P 16 36 58.4 +0.5
SVE *e* 16 39 21.4
SVE *e* 16 41 59.5
SVE *e*S S 16 46 23.6 -3.5
SVE *e* 16 55 19.7
SVE pmax pmax
comp=Z,2μm,1.1s
KHLU **Kahalu`u** 80.73 69 P P 16 37 02.0 +1.8
HUH **Hualalai** 80.80 69 P P 16 37 01.4 +0.7
UNV **Unalaska Valle** 80.89 34 P P 16 37 00.5 +0.4
UNV IAmb IAmb 16 37 05.0
comp=Z,227nm,0.8s
UNV **Unalaska Valle** 80.89 34 P P 16 37 00.7 +0.6
baz=249,SNR=21
UNV S S 16 46 32.1 +0.8
baz=249
UNV **Unalaska Valle** 80.89 34 P P 16 37 00.9 +0.8
KHU **Kahuku** 80.94 70 P P 16 37 01.0 -0.5
KHU **Kahuku** 80.94 70 P P 16 37 01.0 -0.5
KHU pmax pmax
comp=Z,121nm,1.0s
HPAH **Hawaii Prepara** 80.98 69 P P 16 37 01.5 +0.1
POHA **Pohakuloa** 81.09 69 P P 16 37 01.0 -1.3
POHA **Pohakuloa** 81.09 69 P P 16 37 04.1 +1.9
MLH **Mauna Loa** 81.19 70 P P 16 37 02.2 -0.5
MLH IAmb IAmb 16 37 07.6
comp=Z,485nm,0.9s
ARU **Arti** 81.39 329 P P 16 37 03.1 +0.4
comp=Z,745nm,0.7s,baz=119,slow=2.5,SNR=7.3
ARU S S 16 46 35.9 -0.4
comp=Z,12nm,0.8s,baz=202,slow=22,SNR=7.5
comp=Z,745nm,0.7s
ARU **Arti** 81.39 329 P P 16 37 02.3 -0.4
ARU **Arti** 81.39 329 *d* iP P 16 37 02.4 -0.2
ARU *e**PP **pP** 16 38 36.6 -2.9
ARU *e**SP **sP** 16 39 22.7 -2.1
ARU 16 40 12.5
ARU PPP PPP 16 42 08.6
ARU S S 16 46 37.9 +1.6
ARU SSS SSS 16 55 29.6
ARU pmax pmax
comp=Z,1μm,0.9s
AKUT **Akutan** 81.39 34 P P 16 37 02.6 -0.1
AKUT IAmb IAmb 16 37 06.2
comp=Z,612nm,0.8s
GAMB **Gambell** 82.41 23 P P 16 37 08.6 +0.9
GAMB IAmb IAmb 16 37 11.7
comp=Z,553nm,0.8s
GAMB **Gambell** 82.41 23 P P 16 37 09.0 +1.3
baz=243,SNR=322
GAMB S S 16 46 48.3 +2.0
baz=243
RAYN **Ar Rayn** 82.79 294 P P 16 37 11.0 +0.4
RAYN **Ar Rayn** 82.79 294 P P 16 37 11.0 +0.4
RAYN pmax pmax
comp=Z,1μm,0.9s
RAYN **Ar Rayn** 82.79 294 *i* P P 16 37 11.4 +0.8
SNR=1668
FALS **False Pass** 82.93 33 P P 16 37 11.0 +0.4
FALS IAmb IAmb 16 37 14.2
comp=Z,530nm,0.8s
FALS **False Pass** 82.93 33 P P 16 37 11.1 +0.6
baz=252,SNR=16
FALS S S 16 46 51.6 -0.2
baz=252
HARA **HARA** 83.20 280 *e*P P 16 37 21.1 +8.0
HARA **HARA** 83.20 280 *e*P P 16 37 20.8 +7.6
HARA *e*S S 16 47 10.5 +14
HARA **HARA** 83.20 280 *e*P P 16 37 20.8 +7.6
HARA *e*S S 16 47 10.5 +14
HARA **HARA** 83.20 280 *e*P P 16 37 20.6 +7.5
HARA *e*S **S** **16 47 03.7 +7.0**
HARA **HARA** 83.20 280 ⇓*e*P P 16 37 21.3 +8.2
HARA ⇓*e*S S 16 47 08.7 +12
HARA **HARA** 83.20 280 ⇓*e*P P 16 37 18.6 +5.5
HARA ⇑*e*P **PcP** **16 37 20.9 +4.4**
HARA ⇑*e*S S 16 47 09.1 +12
HARA **HARA** 83.20 280 ⇓*e*P P 16 37 20.4 +7.3
HARA *e*S S 16 47 07.1 +10
HARA **HARA** 83.20 280 *e*P P 16 37 20.8 +7.7
HARA *e*S **S** **16 47 01.8 +5.1**
HARA **HARA** 83.20 280 ⇑*e*P P 16 37 20.9 +7.8
HARA ⇓*e*S **S** **16 47 01.2 +4.6**
HARA **HARA** 83.20 280 ⇓*e*P P 16 37 20.5 +7.4
HARA *e*S **S** **16 47 03.1 +6.5**
HARA **HARA** 83.20 280 ⇓*e*P P 16 37 20.5 +7.4
HARA *e*S **S** **16 47 03.1 +6.5**
HARA **HARA** 83.20 280 *e*P **S** **16 37 14.4 +1.3**
HARA *e*SKSac **S** **16 46 56.3 -0.3**
HARA **HARA** 83.20 280 *e*P P 16 37 21.4 +8.3
HARA *e*S **S** **16 46 51.9 -4.8**
HARA **HARA** 83.20 280 *e*P **S** **16 37 14.0 +0.8**
HARA *e*SKSac **S** **16 46 57.6 +0.9**
HARA **HARA** 83.20 280 *e*P **S** **16 37 15.3 +2.2**
HARA *e*S **S** **16 46 55.0 -1.6**
HARA **HARA** 83.20 280 *e*P P 16 37 21.1 +8.0
HARA **HARA** 83.20 280 *e*P P 16 37 18.0 +4.9
HARA *e*SKSac **S** **16 47 02.7 +6.0**
HARA **HARA** 83.20 280 ⇓*e*P P 16 37 20.4 +7.3
HARA *e*SKSac **S** **16 47 02.3 +5.7**
HARA **HARA** 83.20 280 *e*P P 16 37 20.8 +7.7
HARA *e*S **S** **16 47 01.8 +5.1**
HARA **HARA** 83.20 280 ⇓*e*P P 16 37 21.3 +8.2
HARA ⇓*e*S S 16 47 08.7 +12
PPT **Papeete** 83.69 107 P P 16 37 17.5 +2.3
comp=Z,125nm,1.0s,baz=281,slow=4.0,SNR=8.8
comp=Z,125nm,1.0s
PPTF **Pamatai, Papee** 83.70 107 P P 16 37 14.9 -0.4
PPTF **Pamatai, Papee** 83.70 107 P P 16 37 16.4 +1.1
ATD **Arta Tunnel** 83.85 282 P P 16 37 15.4 -0.7
ATD **Arta Tunnel** 83.85 282 P P 16 37 18.4 +2.2
SNR=75
ATD **Arta Tunnel** 83.85 282 *e*P P 16 37 18.7 +2.6
ATD **Arta Tunnel** 83.85 282 ⇓*e*P P 16 37 16.7 +0.5
ATD ⇓*e*S S 16 47 03.3 +0.7
ATD **Arta Tunnel** 83.85 282 ⇓*e*P P 16 37 16.7 +0.5
ATD ⇓*e*S S 16 47 03.3 +0.7
ATD **Arta Tunnel** 83.85 282 ⇓*e*P P 16 37 18.0 +1.9
ATD *e*S S 16 47 01.1 -1.6
ATD **Arta Tunnel** 83.85 282 ⇓*e*P P 16 37 18.7 +2.6
ATD ⇓*e*S S 16 47 00.8 -1.8
ATD **Arta Tunnel** 83.85 282 ⇓*e*P P 16 37 14.8 -1.3
ATD ⇓*e*S S 16 46 58.7 -4.0
ATD **Arta Tunnel** 83.85 282 ⇓*e*P P 16 37 18.1 +1.9
ATD *e*S S 16 47 00.8 -1.8
ATD **Arta Tunnel** 83.85 282 ⇓*e*P P 16 37 18.3 +2.2
ATD *e*S S 16 47 00.3 -2.4
ATD **Arta Tunnel** 83.85 282 ⇓*e*P P 16 37 18.3 +2.1
ATD ⇓*e*S S 16 47 00.5 -2.1
ATD **Arta Tunnel** 83.85 282 ⇓*e*P P 16 37 18.3 +2.1
ATD *e*S S 16 47 00.5 -2.1
ATD **Arta Tunnel** 83.85 282 ⇓*e*P P 16 37 18.3 +2.1
ATD *e*S S 16 47 01.4 -1.2
ATD **Arta Tunnel** 83.85 282 *e*P P 16 37 18.2 +2.1
ATD *e*SKSac S 16 47 15.2 +13
ATD **Arta Tunnel** 83.85 282 *e*P P 16 37 18.3 +2.1
ATD ⇓*e*S S 16 47 03.3 +0.7
ATD **Arta Tunnel** 83.85 282 *e*P P 16 37 19.1 +2.9
ATD *e*S S 16 47 06.7 +4.0
ATD **Arta Tunnel** 83.85 282 *e*P P 16 37 19.3 +3.1
ATD **Arta Tunnel** 83.85 282 *e*P P 16 37 19.5 +3.4
ATD *e*SKSac S 16 47 06.3 +3.7
ATD **Arta Tunnel** 83.85 282 ⇓*e*P P 16 37 18.1 +1.9
ATD *e*S S 16 47 00.8 -1.8
ATD **Arta Tunnel** 83.85 282 ⇓*e*P P 16 37 18.7 +2.6
ATD ⇓*e*S S 16 47 00.8 -1.8
MAK **Makhachkala** 84.45 314 *e*P P 16 37 15.9 -2.5
MAK *e**PP **pP** 16 38 52.8 -3.2
MAK *e**SP **sP** 16 39 35.7 -5.3
MAK *e* 16 40 37.9
MAK *e* 16 46 56.2
MAK *e*SS SS 16 52 48.7 -1.4
MAK *e*SSS SSS 16 56 23.0
MAK pmax pmax
comp=Z,870nm,1.0s
MAK pmax pmax
comp=Z,6μm,2.8s
TNA **Tin City** 84.64 23 P P 16 37 19.1 +0.3
TNA **Tin City** 84.64 23 P P 16 37 19.6 +0.7
baz=247,SNR=14
TNA S S 16 47 10.5 +2.3
baz=247
SDPT **Sand Point** 84.69 33 P P 16 37 19.0 -0.3
SDPT **Sand Point** 84.69 33 P P 16 37 19.3 0.0
baz=254,SNR=324
SDPT S S 16 47 08.8 -0.3
baz=254
CNBA **Chernabura Isl** 85.04 34 P P 16 37 20.6 -0.4
CNBA IAmb IAmb 16 37 24.5
comp=Z,419nm,0.8s
CHNA **Chernabura Isl** 85.04 34 P P 16 37 21.4 +0.4
baz=255,SNR=97
CHNA S S 16 47 12.3 -0.2
baz=255
ANM **Nome** 85.27 24 P P 16 37 22.2 +0.2
ANM IAmb IAmb 16 37 26.0
comp=Z,175nm,0.8s
ANM **Nome** 85.27 24 P P 16 37 22.2 +0.2
ANM pmax pmax
comp=Z,175nm,0.8s
ANM **Nome** 85.27 24 P P 16 37 23.0 +1.0
baz=249,SNR=44
ANM S S 16 47 15.1 +0.7
baz=249
QSPA **South Pole Qui** 85.37 180 P P 16 37 22.5 -0.2
comp=Z,185nm,0.9s,baz=304,slow=1.5,SNR=293
QSPA S SKSac 16 46 59.5 -5.2
comp=Z,19nm,0.9s,baz=308,slow=3.8,SNR=4.2
QSPA PKKPbc PKKPbc 16 55 24.4 -3.8
comp=Z,20nm,0.9s,baz=207,slow=1.4,SNR=10
comp=Z,185nm,0.9s
QSPA **South Pole Qui** 85.37 180 P P 16 37 22.3 -0.4
TEND **Ethiopian Broa** 85.67 282 ⇑*e*P P 16 37 27.1 +2.0
TEND ⇑*e*S S 16 47 13.8 -6.5
TEND **Ethiopian Broa** 85.67 282 *e*P P 16 37 27.6 +2.5
TEND *e*S S 16 47 15.3 -5.1
TEND **Ethiopian Broa** 85.67 282 ⇓*e*P P 16 37 28.2 +3.1
TEND *e*S S 16 47 14.6 -5.7
TEND **Ethiopian Broa** 85.67 282 ⇓*e*P P 16 37 28.2 +3.1
TEND *e*S S 16 47 14.6 -5.7
GROC **Groznyy** 85.72 314 *e*P P 16 37 24.5 -0.2
GROC *e**PP **pP** 16 39 02.7 +0.2
GROC *e* 16 40 50.8
GROC *e*S **SKSac** 16 47 04.5 -3.0
GROC pmax pmax
comp=Z,995nm,0.9s
GNI **Garni** 85.98 311 P P 16 37 27.7 +1.5
comp=Z,461nm,1.1s,baz=141,slow=1.2,SNR=6.7
comp=Z,461nm,1.1s
GNI **Garni** 85.98 311 P P 16 37 28.2 +2.0
GNI **Garni** 85.98 311 P P 16 37 26.0 -0.2
GNI IAmb IAmb 16 37 42.3
comp=Z,497nm,0.8s
GNI **Garni** 85.98 311 *d* iP P 16 37 27.6 +1.3
GNI pmax pmax
comp=Z,819nm,1.4s
GNI **Garni** 85.98 311 P P 16 37 27.5 +1.3
BELG **Belogornoye** 86.32 323 P P 16 37 26.7 -0.6
comp=Z,2μm,0.9s,baz=39,slow=0.4,SNR=331
comp=Z,2μm,0.9s
TASB **TASBURUN-IGDIR** 86.34 310 P P 16 37 29.5 +1.7
CUKT **Cukurca** 86.41 308 P P 16 37 29.0 +0.7
CLDR **Caldiran** 86.45 310 P P 16 37 29.9 +1.3
ANKE **Ethiopia-Afar** 86.71 280 *e*P P 16 37 29.3 -1.2
ANKE *e*S S 16 47 23.2 -7.7
ANKE **Ethiopia-Afar** 86.71 280 ⇓*e*P P 16 37 31.8 +1.3
ANKE ⇓*e*P P 16 37 33.7 +3.2
ANKE **Ethiopia-Afar** 86.71 280 *e*P P 16 37 33.1 +2.6
ANKE *e*S S 16 47 39.4 +8.4
ANKE **Ethiopia-Afar** 86.71 280 *e*P P 16 37 33.0 +2.6
ANKE *e*S **S** **16 47 22.4 -8.5**
ANKE **Ethiopia-Afar** 86.71 280 ⇓*e*P P 16 37 33.6 +3.2
ANKE ⇓*e*S S 16 47 37.3 +6.3
ANKE **Ethiopia-Afar** 86.71 280 ⇓*e*P P 16 37 33.3 +2.8
ANKE ⇓*e*S S 16 47 21.4 -10
ANKE **Ethiopia-Afar** 86.71 280 ⇓*e*P P 16 37 33.3 +2.8
ANKE ⇓*e*S S 16 47 21.4 -10
ANKE **Ethiopia-Afar** 86.71 280 ⇓*e*P P 16 37 33.6 +3.2
ANKE *e*SKSac **SKSac** 16 47 20.7 +5.1
ANKE *e*SKSac **SKSac** 16 47 20.7 +5.1
ANKE **Ethiopia-Afar** 86.71 280 *e*P P 16 37 33.3 +2.8
ANKE *e*SKSac S 16 47 36.2 +5.2
ANKE **Ethiopia-Afar** 86.71 280 *e*P P 16 37 33.8 +3.2
ANKE *e*S S 16 47 22.7 -8.3
ANKE **Ethiopia-Afar** 86.71 280 *e*P P 16 37 33.8 +3.2
ANKE *e*Pdif 16 47 15.1
ANKE **Ethiopia-Afar** 86.71 280 *e*P P 16 37 33.1 +2.6
ANKE *e*S S 16 47 21.1 -10
ANKE **Ethiopia-Afar** 86.71 280 *e*P P 16 37 33.0 +2.6
ANKE *e*S S 16 47 22.4 -8.5
KIRV **Kirov** 86.74 329 *d* iP P 16 37 28.7 -0.4
VANB **Van** 86.78 309 P P 16 37 31.3 +1.3
N16K **Nishlik Lake** 86.93 29 P P 16 37 31.5 +1.4
baz=255,SNR=258
N16K S S 16 47 30.2 -0.3
baz=255
DESE **Dese** 86.94 281 *e*P P 16 37 34.8 +3.3
DESE **Dese** 86.94 281 *e*P P 16 37 31.0 -0.5
DESE *e*S S 16 47 35.0 +2.0
DESE **Dese** 86.94 281 *e*P P 16 37 31.0 -0.5
DESE *e*S S 16 47 35.0 +2.0
DESE **Dese** 86.94 281 *e*P P 16 37 33.9 +2.4
DESE *e*S SKSac 16 47 21.5 +4.7
DESE **Dese** 86.94 281 ⇓*e*P P 16 37 35.0 +3.5
DESE ⇓*e*S SKSac 16 47 21.3 +4.5
DESE **Dese** 86.94 281 ⇑*e*P P 16 37 30.9 -0.6
DESE *e*S SKSac 16 47 21.4 +4.5
DESE **Dese** 86.94 281 *e*P P 16 37 31.3 -0.2
DESE *e*S SKSac 16 47 21.8 +5.0
DESE **Dese** 86.94 281 *e*P P 16 37 34.6 +3.1
DESE *e*S SKSac 16 47 19.1 +2.3
DESE **Dese** 86.94 281 ⇓*e*P P 16 37 33.9 +2.4
DESE ⇓*e*S SKSac 16 47 20.7 +3.9
DESE **Dese** 86.94 281 ⇑*e*P P 16 37 34.2 +2.7
DESE ⇓*e*S SKSac 16 47 19.3 +2.5
DESE **Dese** 86.94 281 ⇑*e*P P 16 37 34.2 +2.7
DESE ⇓*e*S SKSac 16 47 19.3 +2.5
DESE **Dese** 86.94 281 ⇓*e*P P 16 37 33.9 +2.4
DESE *e*SKSac SKSac 16 47 22.3 +5.5
DESE **Dese** 86.94 281 *e*P P 16 37 32.1 +0.6
DESE *e*S S 16 47 34.4 +1.4
DESE **Dese** 86.94 281 *e*P P 16 37 33.8 +2.3
DESE *e*SKSac S 16 47 25.1 -7.9
DESE **Dese** 86.94 281 *e*P P 16 37 34.4 +2.9
DESE *e*SKSac SKSac 16 47 26.5 +10
DESE **Dese** 86.94 281 *e*P P 16 37 33.7 +2.2
DESE **Dese** 86.94 281 *e*Pdif P 16 37 34.9 +3.3
DESE *e*SKSac SKSac 16 47 23.6 +6.8
DESE **Dese** 86.94 281 *e*P P 16 37 31.3 -0.2
DESE *e*S SKSac 16 47 21.8 +5.0
DESE **Dese** 86.94 281 *e*P P 16 37 34.6 +3.1
DESE *e*S S 16 47 19.1 -14
DESE **Dese** 86.94 281 ⇓*e*P P 16 37 35.0 +3.5
DESE ⇓*e*S SKSac 16 47 21.3 +4.5
P16K **Nushagak River** 86.95 30 P P 16 37 31.1 +1.0
baz=256,SNR=223
P16K S S 16 47 30.3 -0.3
baz=256
GEVA **Gevas** 86.99 309 P P 16 37 31.3 +0.2
ZEI **Tsey** 87.03 313 *e*P P 16 37 27.8 -3.4
ZEI pmax pmax
comp=Z,1μm,1.5s
O16K **Kokwok River B** 87.03 30 P P 16 37 31.1 +0.6
baz=256,SNR=232
O16K S S 16 47 30.4 -1.0
baz=256
AKDM **Akdamar-Van** 87.06 309 P P 16 37 33.2 +1.8
AKH **Akhalkalaki** 87.11 312 ⇑P P 16 37 34.0 +2.4
AKH **Akhalkalaki** 87.11 312 P P 16 37 33.6 +2.0
AGRB **Hanur-Agry** 87.22 310 P P 16 37 33.8 +1.6
KARS **Kars** 87.31 311 P P 16 37 33.6 +1.1
KARS **Kars** 87.31 311 P P 16 37 33.6 +1.1
KARS pmax pmax
comp=Z,2μm,1.0s
KIBK **Kibwezi** 87.40 268 P P 16 37 33.9 +0.5
KIBK IAmb IAmb 16 37 36.5
comp=Z,337nm,1.1s
KIBK **Kibwezi** 87.40 268 P P 16 37 35.1 +1.7
SNR=43
RDOG **Red Dog Mine** 87.40 21 P P 16 37 28.8 -3.3
baz=251
RDOG S S 16 47 32.7 -1.8
baz=251
CHIR **Chirikof Islan** 87.48 34 P P 16 37 33.6 +0.9
CHIR IAmb IAmb 16 37 36.2
comp=Z,196nm,0.8s
CHIR **Chirikof Islan** 87.48 34 P P 16 37 33.4 +0.7
baz=258,SNR=18
CHIR S S 16 47 34.7 -1.1
baz=258
MLAZ **Malazgirt-MUS** 87.50 309 P P 16 37 35.2 +1.7
O17K **Koliganek Bris** 87.57 30 P P 16 37 34.0 +1.0
baz=257,SNR=162
AAE **Adis Abeba** 87.61 279 *e*P P 16 37 37.2 +2.6
AAE **Adis Abeba** 87.61 279 ⇓*e*P P 16 37 36.1 +1.4
AAE ⇓*e*S SKSac 16 47 26.8 +6.0
AAE **Adis Abeba** 87.61 279 ⇓*e*P P 16 37 36.1 +1.4
AAE ⇓*e*S SKSac 16 47 26.1 +6.0
AAE **Adis Abeba** 87.61 279 *e*P P 16 37 27.3 +7.3
AAE *e*S SKSac 16 47 25.9 +5.1
AAE **Adis Abeba** 87.61 279 ⇓*e*P P 16 37 37.3 +2.6
AAE ⇓*e*S SKSac 16 47 24.8 +4.0
AAE **Adis Abeba** 87.61 279 *e*P P 16 37 34.6 0.0
AAE ⇓*e*S SKSac 16 47 23.2 +2.5
AAE **Adis Abeba** 87.61 279 ⇓*e*P P 16 37 36.3 +1.6
AAE *e*S SKSac 16 47 25.6 +4.8
AAE **Adis Abeba** 87.61 279 ⇓*e*P P 16 37 36.9 +2.2
AAE ⇓*e*S SKSac 16 47 25.4 +4.6
AAE **Adis Abeba** 87.61 279 ⇓*e*P P 16 37 36.5 +1.9
AAE ⇓*e*S SKSac 16 47 26.6 +5.8
AAE **Adis Abeba** 87.61 279 ⇓*e*P P 16 37 36.5 +1.9
AAE ⇓*e*S SKSac 16 47 26.6 +5.8
AAE **Adis Abeba** 87.61 279 *e*P P 16 37 34.9 +0.2
AAE *e*SKSac SKSac 16 47 27.9 +7.1
AAE **Adis Abeba** 87.61 279 *e*P P 16 37 37.1 +2.4
AAE *e*SKSac S 16 47 30.7 -8.7
AAE **Adis Abeba** 87.61 279 ⇓*e*P P 16 37 36.1 +1.4
AAE ⇓*e*S SKSac 16 47 26.8 +6.0
AAE **Adis Abeba** 87.61 279 *e*P P 16 37 36.9 +2.2
AAE *e*SKSac SKSac 16 47 27.1 +6.3
AAE **Adis Abeba** 87.61 279 *e*Pdif P 16 37 38.7 +4.1
AAE **Adis Abeba** 87.61 279 *e*Pdif P 16 37 36.7 +2.1
AAE *e*SKSac SKSac 16 47 26.3 +5.5
AAE **Adis Abeba** 87.61 279 ⇓*e*P P 16 37 36.3 +1.6
AAE *e*S S 16 47 25.6 -14
AAE **Adis Abeba** 87.61 279 ⇓*e*P P 16 37 37.3 +2.6
AAE ⇓*e*S S 16 47 24.8 -15
FURI **Furi** 87.69 279 P P 16 37 36.3 +1.3
FURI IAmb IAmb 16 37 39.9
comp=Z,713nm,1.4s
FURI **Furi** 87.69 279 *e*P P 16 37 38.1 +3.1
FURI **Furi** 87.69 279 ⇓*e*P P 16 37 35.1 +0.1
FURI *e*S SKSac 16 47 29.9 +8.6
FURI **Furi** 87.69 279 ⇓*e*P P 16 37 35.1 +0.1
FURI *e*S SKSac 16 47 29.9 +8.6
FURI **Furi** 87.69 279 *e*P P 16 37 38.3 +3.3
FURI *e*S SKSac 16 47 25.0 +3.7
FURI **Furi** 87.69 279 ⇓*e*P P 16 37 38.3 +3.3
FURI ⇓*e*S SKSac 16 47 26.1 +4.8
FURI **Furi** 87.69 279 ⇑*e*P P 16 37 34.6 -0.4
FURI ⇓*e*S SKSac 16 47 25.1 +3.9
FURI **Furi** 87.69 279 ⇓*e*P P 16 37 35.4 +0.3
FURI *e*S SKSac 16 47 26.4 +5.1
FURI **Furi** 87.69 279 *e*P P 16 37 37.9 +2.8
FURI *e*S SKSac 16 47 25.8 +4.5
FURI **Furi** 87.69 279 *e*P P 16 37 37.7 +2.7
FURI ⇓*e*S SKSac 16 47 25.0 +3.7
FURI **Furi** 87.69 279 ⇓*e*P P 16 37 37.7 +2.7
FURI *e*S SKSac 16 47 26.1 +4.8
FURI **Furi** 87.69 279 ⇓*e*P P 16 37 37.7 +2.7
FURI *e*S SKSac 16 47 26.1 +4.8

FURI	**Furi**	**87.69**	**279**	*e*P		**P**	**16 37 37.7**	**+2.7**
FURI				*e*SKSac		**SKSac**	**16 47 26.3**	**+5.0**
FURI	**Furi**	**87.69**	**279**	*e*P		**P**	**16 37 38.0**	**+3.0**
FURI				*e*SKSac		**S**	**16 47 38.3**	**-1.7**
FURI	**Furi**	**87.69**	**279**⇓	*e*P		**P**	**16 37 35.1**	**+0.1**
FURI				*e*S		**SKSac**	**16 47 29.9**	**+8.6**
FURI	**Furi**	**87.69**	**279**	*e*P		**P**	**16 37 35.2**	**+0.2**
FURI				*e*S		**S**	**16 47 32.2**	**-7.9**
FURI	**Furi**	**87.69**	**279**	*e*Pdif		**P**	**16 37 39.4**	**+4.3**
FURI	**Furi**	**87.69**	**279**	*e*Pdif		**P**	**16 37 36.5**	**+1.5**
FURI				*e*SKSac		**SKSac**	**16 47 27.1**	**+5.8**
FURI	**Furi**	**87.69**	**279**⇓	*e*P		**P**	**16 37 35.4**	**+0.3**
FURI				*e*S		**SKSac**	**16 47 26.4**	**+5.1**
FURI	**Furi**	**87.69**	**279**	*e*P		**P**	**16 37 37.9**	**+2.8**
FURI				*e*S		**SKSac**	**16 47 25.8**	**+4.5**
FURI	**Furi**	**87.69**	**279**⇓	*e*P		**P**	**16 37 38.3**	**+3.3**
FURI				⇓*e*S		**SKSac**	**16 47 26.1**	**+4.8**
P17K	**Kvichak River**	**87.77**	**30**	P		**P**	**16 37 34.1**	**+0.2**
	baz=257,SNR=48							
P17K				S		**S**	**16 47 35.6**	**-2.7**
	baz=257							
GURO	**Guroymak-BITLI**	**87.82**	**309**	P		**P**	**16 37 36.6**	**+1.7**
GURO	**Guroymak-BITLI**	**87.82**	**309**	P		**P**	**16 37 35.8**	**+0.8**
GURO				lAmb		lAmb	16 37 38.1	
	comp=Z,642nm,1.0s							
DILA	**Dilla**	**87.86**	**277**⇑	*e*P		**P**	**16 37 34.5**	**-1.2**
DILA				⇓*e*S		**SKSac**	**16 47 25.1**	**+3.1**
DILA	**Dilla**	**87.86**	**277**	*e*P		**P**	**16 37 37.5**	**+1.9**
DILA				*e*S		**SKSac**	**16 47 24.6**	**+2.5**
DILA	**Dilla**	**87.86**	**277**	*e*P		**P**	**16 37 37.6**	**+1.9**
DILA				*e*SKSac		**SKSac**	**16 47 25.8**	**+3.7**
DILA	**Dilla**	**87.86**	**277**	*e*P		**P**	**16 37 37.7**	**+2.0**
DILA				*e*S		**SKSac**	**16 47 26.5**	**+4.5**
DILA	**Dilla**	**87.86**	**277**	*e*P		**P**	**16 37 38.2**	**+2.5**
DILA				*e*S		**SKSac**	**16 47 28.6**	**+6.6**
DILA	**Dilla**	**87.86**	**277**	*e*P		**P**	**16 37 37.5**	**+1.9**
DILA				*e*S		S	16 47 24.6	-17
KBZ	**Khabaz**	**87.89**	**314**	P		**P**	**16 37 35.5**	**+0.6**
	comp=Z,196nm,0.8s,baz=103,slow=4.6,SNR=346							
KBZ				PKKPbc		**PKKPbc**	**16 55 21.0**	**+0.5**
	comp=Z,2.5nm,0.8s,baz=125,slow=1.7,SNR=4.1							
KBZ				SKKPbc	SKKPbc		16 58 14.3	-2.2
	comp=Z,5.1nm,0.9s,baz=8.7,slow=0.9,SNR=6.8							
	comp=Z,196nm,0.8s							
KBZ	**Khabaz**	**87.89**	**314**	*d i* P		**P**	**16 37 35.2**	**+0.3**
KBZ				pmax	pmax			
	comp=Z,318nm,0.9s							
GOF	**Gofitskoye**	**87.98**	**315**	⇓*i* P		**P**	**16 37 35.9**	**+0.6**
GOF				*e*S		**SKSac**	**16 47 19.9**	**-1.2**
GOF				pmax	pmax			
	comp=Z,848nm,1.2s							
GOF				smax	smax			
	comp=N,113nm,1.1s							
GOF				smax	smax			
	comp=E,198nm,1.8s							
SHA1	**Shidzhatmaz**	**88.06**	**314**	*d i* P		**P**	**16 37 36.3**	**+0.2**
KIV	**Kislovodsk**	**88.08**	**314**	⇓P		**P**	**16 37 37.0**	**+1.1**
KIV	**Kislovodsk**	**88.08**	**314**	P		**P**	**16 37 36.7**	**+0.8**
KIV	**Kislovodsk**	**88.08**	**314**	P		**P**	**16 37 36.0**	**0.0**
KIV				lAmb		lAmb	16 38 03.2	
	comp=Z,202nm,0.9s							
KIV	**Kislovodsk**	**88.08**	**314**	*e*P		**P**	**16 37 36.4**	**+0.5**
KIV				*e**PP		**pP**	**16 39 14.2**	**-0.3**
KIV				*e**SP		**sP**	**16 39 57.7**	**-1.6**
KIV				*e*			16 41 09.4	
KIV				*e*PPP		PPP	16 43 09.4	
KIV				*e*			16 47 21.8	
KIV				*e*SS		SS	16 53 44.0	+1.1
KIV				pmax	pmax			
	comp=Z,197nm,1.1s							
KIV				pmax	pmax			
	comp=Z,945nm,4.6s							
KIV				MLR	MLR			
	comp=Z,895nm,20.0s							
KIV	**Kislovodsk**	**88.08**	**314**	*i* P		**P**	**16 37 36.1**	**+0.2**
	SNR=65							
KOPR	**Koprukoy-ERZUR**	**88.15**	**310**	P		**P**	**16 37 37.9**	**+1.4**
KMBO	**Kilima Mbogo**	**88.28**	**269**	P		**P**	**16 37 39.2**	**+1.4**
	comp=Z,75nm,0.7s,baz=68,slow=6.2,SNR=177							
KMBO				pP		**pP**	**16 39 18.6**	**+2.2**
	comp=Z,18nm,1.0s,baz=0.6,slow=5.8,SNR=2.2							
KMBO				PP		**PP**	**16 41 12.8**	**-0.1**
	comp=Z,15nm,1.0s,baz=87,slow=11,SNR=3.2							
	comp=Z,75nm,0.7s							
KMBO	**Kilima Mbogo**	**88.28**	**269**	P		**P**	**16 37 37.9**	**+0.1**
KMBO	**Kilima Mbogo**	**88.28**	**269**	*i* P		**P**	**16 37 39.4**	**+1.7**
KMBO				pmax	pmax			
	comp=Z,75nm,0.7s							
KMBO	**Kilima Mbogo**	**88.28**	**269**⇓	*e*P		**P**	**16 37 37.1**	**-0.6**
KMBO				*e*S		**SKSac**	**16 47 23.8**	**-0.9**
KMBO	**Kilima Mbogo**	**88.28**	**269**⇓	*e*P		**P**	**16 37 37.1**	**-0.6**
KMBO				*e*S		**SKSac**	**16 47 23.8**	**-0.9**
KMBO	**Kilima Mbogo**	**88.28**	**269**	*e*P		**P**	**16 37 38.5**	**+0.8**
KMBO				*e*S		**S**	**16 47 42.8**	**-2.7**
KMBO	**Kilima Mbogo**	**88.28**	**269**⇑	*e*P		**P**	**16 37 39.3**	**+1.5**
KMBO				⇓*e*S		**S**	**16 47 43.5**	**-2.1**
KMBO	**Kilima Mbogo**	**88.28**	**269**	*e*P		**P**	**16 37 35.6**	**-2.2**
KMBO				⇑*e*S		**S**	**16 47 41.2**	**-4.3**
KMBO	**Kilima Mbogo**	**88.28**	**269**⇓	*e*P		**P**	**16 37 38.6**	**+0.8**
KMBO				⇓*e*S		**SKSac**	**16 47 25.1**	**+0.4**
KMBO	**Kilima Mbogo**	**88.28**	**269**⇓	*e*P		**P**	**16 37 38.6**	**+0.8**
KMBO				*e*S		**S**	**16 47 44.4**	**-1.1**
KMBO	**Kilima Mbogo**	**88.28**	**269**⇑	*e*P		**P**	**16 37 38.2**	**+0.5**
KMBO				⇓*e*S		**SKSac**	**16 47 24.5**	**-0.2**
KMBO	**Kilima Mbogo**	**88.28**	**269**⇑	*e*P		**P**	**16 37 38.2**	**+0.5**
KMBO				⇓*e*S		**SKSac**	**16 47 24.5**	**-0.2**
KMBO	**Kilima Mbogo**	**88.28**	**269**⇓	*e*P		**P**	**16 37 38.6**	**+0.8**
KMBO				*e*SKSac		**SKSac**	**16 47 26.9**	**+2.2**
KMBO	**Kilima Mbogo**	**88.28**	**269**⇓	*e*P		**P**	**16 37 37.1**	**-0.6**
KMBO				*e*S		**SKSac**	**16 47 23.8**	**-0.9**
KMBO	**Kilima Mbogo**	**88.28**	**269**	*e*P		**P**	**16 37 34.4**	**-3.3**
KMBO				*e*SKSac		**SKSac**	**16 47 22.7**	**-2.0**
KMBO	**Kilima Mbogo**	**88.28**	**269**	*e*P		**P**	**16 37 40.8**	**+3.0**
KMBO				*e*S		**SKSac**	**16 47 26.9**	**+2.2**
KMBO	**Kilima Mbogo**	**88.28**	**269**⇓	*e*P		**P**	**16 37 38.6**	**+0.8**
KMBO				⇓*e*S		**SKSac**	**16 47 25.1**	**+0.4**
KMBO	**Kilima Mbogo**	**88.28**	**269**⇑	*e*P		**P**	**16 37 39.3**	**+1.5**
KMBO				⇓*e*S		**S**	**16 47 43.5**	**-2.1**
KMBO	**Kilima Mbogo**	**88.28**	**269**	*i* P		**P**	**16 37 39.4**	**+1.7**
	SNR=102							
CHVG	**Ch'k'valeri**	**88.34**	**313**	⇓P		**P**	**16 37 38.7**	**+1.6**
CHVG	**Ch'k'valeri**	**88.34**	**313**	⇓P		**P**	**16 37 38.7**	**+1.6**
VRTB	**Varto-Mus**	**88.35**	**309**	P		**P**	**16 37 39.4**	**+2.0**
N18K	**Kilae Creek**	**88.36**	**29**	P		**P**	**16 37 37.4**	**+0.6**
N18K	**Kilae Creek**	**88.36**	**29**	P		**P**	**16 37 37.8**	**+1.0**
	baz=258,SNR=65							
N18K				S		**S**	**16 47 42.6**	**-1.2**
	baz=258							
SII	**Sitkinak Islan**	**88.41**	**33**	P		**P**	**16 37 37.5**	**+0.5**
SII	**Sitkinak Islan**	**88.41**	**33**	P		**P**	**16 37 38.3**	**+1.2**
	baz=259,SNR=135							
SII				S		**S**	**16 47 43.0**	**-1.5**
	baz=259							
SII	**Sitkinak Islan**	**88.41**	**33**	P		**P**	**16 37 38.1**	**+1.0**
P18K	**Big Mountain,**	**88.41**	**30**	P		**P**	**16 37 36.5**	**-0.6**
P18K	**Big Mountain,**	**88.41**	**30**	P		**P**	**16 37 36.7**	**-0.4**
	baz=258,SNR=12							
P18K				S		**S**	**16 47 41.3**	**-3.1**
	baz=258							
SVAN	**Silvan-Diyarba**	**88.42**	**308**	P		**P**	**16 37 38.5**	**+0.9**
BATM	**Batumi**	**88.48**	**312**	⇓P		**P**	**16 37 38.6**	**+0.9**
BATM	**Batumi**	**88.48**	**312**	⇓P		**P**	**16 37 38.2**	**+0.4**
BATM	**Batumi**	**88.48**	**312**	⇓P		**P**	**16 37 38.6**	**+0.9**
O18K	**Koktuh Hills**	**88.52**	**30**	P		**P**	**16 37 37.3**	**-0.2**
O18K	**Koktuh Hills**	**88.52**	**30**	P		**P**	**16 37 37.9**	**+0.4**
	baz=258,SNR=44							
O18K				S		**S**	**16 47 43.5**	**-1.8**
	baz=258							
SVW2	**Sparrevohn**	**88.59**	**28**	P		**P**	**16 37 38.0**	**+0.1**
SVW2				lAmb		lAmb	16 37 41.5	
	comp=Z,194nm,0.8s							
MARD	**Mardin**	**88.65**	**307**	P		**P**	**16 37 38.7**	**-0.2**
MARD				lAmb		lAmb	16 37 43.7	
	comp=Z,348nm,0.7s							
KARO	**Karlıova-Bingo**	**88.68**	**309**	P		**P**	**16 37 40.8**	**+1.8**
TTA	**Tatalina**	**88.78**	**27**	P		**P**	**16 37 39.1**	**+0.3**
TTA				lAmb		lAmb	16 37 41.7	
	comp=Z,227nm,0.8s							
TTA	**Tatalina**	**88.78**	**27**	P		**P**	**16 37 39.1**	**+0.3**
TTA				pmax	pmax			
	comp=Z,227nm,0.8s							
TTA	**Tatalina**	**88.78**	**27**	P		**P**	**16 37 39.4**	**+0.6**
	baz=258,SNR=222							
TTA				S		**S**	**16 47 44.7**	**-3.0**
	baz=258							
GCSA	**Galena City Sc**	**88.81**	**25**	P		**P**	**16 37 39.2**	**+0.5**
	baz=257,SNR=36							
GCSA				S		**S**	**16 47 45.7**	**-2.1**
	baz=257							
BNGB	**Bingl**	**88.93**	**309**	P		**P**	**16 37 41.3**	**+1.2**
OHAK	**Old Harbor**	**89.01**	**33**	P		**P**	**16 37 40.1**	**+0.2**
OHAK				lAmb		lAmb	16 37 43.1	
	comp=Z,244nm,0.7s							
OHAK	**Old Harbor**	**89.01**	**33**	P		**P**	**16 37 40.5**	**+0.6**
	baz=260,SNR=106							
OHAK				S		**S**	**16 47 47.6**	**-2.3**
	baz=260							
O19K	**Port Alsworth**	**89.02**	**29**	P		**P**	**16 37 39.2**	**-0.6**
O19K	**Port Alsworth**	**89.02**	**29**	P		**P**	**16 37 39.9**	**+0.1**
	baz=259,SNR=9.0							
O19K				S		**S**	**16 47 46.8**	**-3.0**
	baz=259							
N19K	**Bonanza Creek**	**89.06**	**29**	P		**P**	**16 37 40.1**	**0.0**
N19K				lAmb		lAmb	16 37 43.3	
	comp=Z,299nm,0.8s							
N19K	**Bonanza Creek**	**89.06**	**29**	P		**P**	**16 37 40.9**	**+0.7**
	baz=259,SNR=224							
N19K				S		**S**	**16 47 46.7**	**-3.8**
	baz=259							
CHOM	**Cayeli-Rize**	**89.11**	**311**	P		**P**	**16 37 41.7**	**+1.0**
Q19K	**Cape Douglas,**	**89.13**	**31**	P		**P**	**16 37 39.8**	**-0.6**
Q19K				lAmb		lAmb	16 37 47.1	
	comp=Z,202nm,0.8s							
Q19K	**Cape Douglas,**	**89.13**	**31**	P		**P**	**16 37 39.9**	**-0.5**
	baz=260,SNR=12							
L19K	**White Mountain**	**89.15**	**27**	P		**P**	**16 37 40.6**	**+0.2**
L19K				lAmb		lAmb	16 37 43.7	
	comp=Z,285nm,0.9s							
L19K	**White Mountain**	**89.15**	**27**	P		**P**	**16 37 40.9**	**+0.4**
	baz=259,SNR=360							
L19K				S		**S**	**16 47 48.3**	**-2.8**
	baz=259							
KOPT	**Kop Dagi**	**89.19**	**310**	P		**P**	**16 37 42.6**	**+1.1**
DYBB	**Diyarbakir**	**89.23**	**308**	P		**P**	**16 37 42.6**	**+1.2**
PRGR	**Permogore**	**89.26**	**332**	⇓*i* P		**P**	**16 37 39.9**	**-1.0**
PRGR				*e*S		**SKSac**	**16 47 26.8**	**-1.0**
PRGR				*e*			16 47 50.5	
PRGR				pmax	pmax			
	comp=Z,382nm,0.8s							
M19K	**Big River Lodg**	**89.31**	**28**	P		**P**	**16 37 41.6**	**+0.4**
M19K				lAmb		lAmb	16 37 47.0	
	comp=Z,393nm,1.3s							
M19K	**Big River Lodg**	**89.31**	**28**	P		**P**	**16 37 42.0**	**+0.9**
	baz=259,SNR=128							
M19K				S		**S**	**16 47 50.1**	**-2.4**
	baz=259							
KDAK	**Kodiak Island**	**89.48**	**32**	P		**P**	**16 37 42.5**	**+0.5**
	comp=Z,159nm,0.8s,baz=275,slow=2.6,SNR=66							
	comp=Z,159nm,0.8s							
KDAK	**Kodiak Island**	**89.48**	**32**	P		**P**	**16 37 41.8**	**-0.2**
KDAK				lAmb		lAmb	16 37 48.0	
	comp=Z,155nm,0.8s							
KDAK	**Kodiak Island**	**89.48**	**32**	P		**P**	**16 37 42.5**	**+0.5**
	baz=261							
KDAK				S		**S**	**16 47 51.0**	**-3.1**
	baz=261							
L20K	**Farewell, AK**	**89.66**	**27**	P		**P**	**16 37 43.2**	**+0.4**
	baz=260,SNR=288							
L20K				S		**S**	**16 47 51.7**	**-4.0**
	baz=260							
Q20K	**Shuyak Island**	**89.71**	**31**	P		**P**	**16 37 43.1**	**+0.1**
	baz=261,SNR=14							
Q20K				S		**S**	**16 47 52.0**	**-4.3**
	baz=261							
VRH	**Novokhopyorsk**	**89.72**	**321**	*e*P		**P**	**16 37 43.2**	**-0.1**
VRH				*e*			16 47 25.6	
VRH				*e*S		**S**	**16 47 53.2**	**-3.4**
VRH				pmax	pmax			
	comp=Z,600nm,0.7s							
VRH				smax	smax			
	comp=E,2μm,6.3s							
K20K	**Telida**	**89.73**	**26**	P		**P**	**16 37 42.7**	**-0.4**
K20K				lAmb		lAmb	16 37 46.4	
	comp=Z,142nm,0.8s							
K20K	**Telida**	**89.73**	**26**	P		**P**	**16 37 43.3**	**+0.2**
	baz=259,SNR=259							
K20K				S		**S**	**16 47 52.9**	**-3.4**
	baz=259							
RSO	**Redoubt South**	**89.84**	**29**	P		**P**	**16 37 43.1**	**-0.8**
O20K	**Slope Mountain**	**89.84**	**30**	P		**P**	**16 37 42.9**	**-0.9**
	baz=261,SNR=10							
O20K				S		**S**	**16 47 52.5**	**-4.9**
	baz=261							
KTUT	**Trabzon**	**89.85**	**311**	⇓P		**P**	**16 37 45.4**	**+1.3**
KTUT	**Trabzon**	**89.85**	**311**	P		**P**	**16 37 44.7**	**+0.6**
J20K	**Nowinta River**	**89.85**	**26**	P		**P**	**16 37 43.8**	**+0.2**
J20K				lAmb		lAmb	16 37 46.4	
	comp=Z,156nm,0.8s							
J20K	**Nowinta River**	**89.85**	**26**	P		**P**	**16 37 44.3**	**+0.7**
	baz=259,SNR=161							
J20K				S		**S**	**16 47 53.9**	**-3.4**
	baz=259							
M20K	**Styx River**	**89.89**	**28**	P		**P**	**16 37 44.5**	**+0.5**
	baz=260							
M20K				S		**S**	**16 47 54.8**	**-3.2**
	baz=260							
SOC	**Sochi**	**90.16**	**314**	*e*P		**P**	**16 37 44.1**	**-1.4**
SOC				*e**PP		**pP**	**16 39 22.1**	**-2.3**
SOC				*e**SP		**sP**	**16 40 06.1**	**-3.0**
SOC				*e*			16 41 24.0	
SOC				*e*PPP		PPP	16 43 24.8	
SOC				*e*S		**SKSac**	**16 47 32.1**	**-1.7**
SOC				*e*SSS		SSS	16 57 57.3	
SOC				pmax	pmax			
	comp=Z,131nm,0.8s							
SPCR	**Spurr Chakacha**	**90.22**	**29**	P		**P**	**16 37 44.8**	**-0.7**
	baz=261,SNR=50							
SPCR				S		**S**	**16 47 54.4**	**-6.5**
	baz=261							
HOM	**Homer**	**90.26**	**30**	P		**P**	**16 37 44.8**	**-0.8**
HOM	**Homer**	**90.26**	**30**	P		**P**	**16 37 45.4**	**-0.2**
	baz=261,SNR=15							
MQOL	**MQOL**	**90.26**	**291**	*i* S		pP	16 39 25.6	+0.2
MQOL	**MQOL**	**90.26**	**291**	*i* P		**P**	**16 37 46.6**	**+0.1**
MQOL	**MQOL**	**90.26**	**291**	IAML			16 37 48.5	
	comp=E,449nm,0.9s							
MQOL	**MQOL**	**90.26**	**291**	*i*		P	16 37 52.0	+5.5
	baz=252,slow=18							
SPU	**Mount Spurr**	**90.29**	**29**	P		**P**	**16 37 44.9**	**-0.9**
IMAR	**Indian Mountai**	**90.35**	**24**	P		**P**	**16 37 45.8**	**-0.1**
A21K	**Barrow**	**90.41**	**18**	P		**P**	**16 37 46.1**	**0.0**
A21K	**Barrow**	**90.41**	**18**	P		**P**	**16 37 46.0**	**0.0**
	baz=257,SNR=8.2							
CNPM	**China Poot**	**90.44**	**30**	P		**P**	**16 37 46.0**	**-0.5**
CNPM				lAmb		lAmb	16 37 51.1	
	comp=Z,399nm,1.3s							
PPLA	**Purkeypile**	**90.50**	**27**	P		**P**	**16 37 46.5**	**-0.3**
PPLA	**Purkeypile**	**90.50**	**27**	P		**P**	**16 37 46.7**	**-0.1**
	baz=261,SNR=52							
PPLA				S		**S**	**16 47 58.3**	**-5.2**
	baz=261							
LODK	**Lodwar**	**90.53**	**273**	P		**P**	**16 37 48.2**	**+0.3**
LODK	**Lodwar**	**90.53**	**273**	P		**P**	**16 37 49.3**	**+1.4**
	SNR=46							
LODK	**Lodwar**	**90.53**	**273**	*e*P		**P**	**16 37 48.4**	**+0.4**
LODK				*e*S		**SKSac**	**16 47 41.1**	**+3.9**
LODK	**Lodwar**	**90.53**	**273**	*e*P		**P**	**16 37 48.4**	**+0.4**
LODK				*e*S		**SKSac**	**16 47 41.1**	**+3.9**
LODK	**Lodwar**	**90.53**	**273**	*e*P		**P**	**16 37 48.6**	**+0.6**
LODK				*e*S		**SKSac**	**16 47 37.6**	**+0.3**
LODK	**Lodwar**	**90.53**	**273**⇑	*e*P		**P**	**16 37 49.3**	**+1.4**
LODK				⇓*e*S		**SKSac**	**16 47 37.8**	**+0.5**
LODK	**Lodwar**	**90.53**	**273**⇑	*e*P		**P**	**16 37 45.0**	**-2.9**
LODK	**Lodwar**	**90.53**	**273**	*e*P		**P**	**16 37 47.7**	**-0.3**
LODK				*e*S		**SKSac**	**16 47 36.9**	**-0.4**
LODK	**Lodwar**	**90.53**	**273**⇓	*e*P		**P**	**16 37 48.5**	**+0.6**
LODK				*e*S		**SKSac**	**16 47 37.8**	**+0.5**
LODK	**Lodwar**	**90.53**	**273**⇓	*e*P		**P**	**16 37 48.5**	**+0.6**
LODK				⇓*e*S		**SKSac**	**16 47 37.0**	**-0.4**
LODK	**Lodwar**	**90.53**	**273**⇓	*e*P		**P**	**16 37 48.5**	**+0.6**
LODK				⇓*e*S		**SKSac**	**16 47 37.0**	**-0.4**
LODK	**Lodwar**	**90.53**	**273**⇓	*e*P		**P**	**16 37 48.5**	**+0.6**
LODK				*e*SKSac		**SKSac**	**16 47 40.8**	**+3.5**
LODK	**Lodwar**	**90.53**	**273**	*e*P		**P**	**16 37 48.4**	**+0.4**
LODK				*e*S		**SKSac**	**16 47 41.1**	**+3.9**
LODK	**Lodwar**	**90.53**	**273**	*e*P		**P**	**16 37 48.3**	**+0.4**
LODK				*e*S		**SKSac**	**16 47 37.8**	**+0.5**
LODK	**Lodwar**	**90.53**	**273**	*e*P		**P**	**16 37 52.2**	**+4.3**
LODK				*e*S		**SKSac**	**16 47 38.9**	**+1.6**
LODK	**Lodwar**	**90.53**	**273**	*e*P		**P**	**16 37 47.7**	**-0.3**
LODK				*e*S		**SKSac**	**16 47 36.9**	**-0.4**
LODK	**Lodwar**	**90.53**	**273**⇑	*e*P		**P**	**16 37 49.3**	**+1.4**
LODK				⇓*e*S		**SKSac**	**16 47 37.8**	**+0.5**
CHUM	**Lake Minchumin**	**90.60**	**26**	P		**P**	**16 37 47.2**	**+0.2**
	baz=261,SNR=65							
CHUM				S		**S**	**16 47 59.5**	**-4.5**
	baz=261							
CAST	**Castle Rocks**	**90.62**	**26**	P		**P**	**16 37 47.2**	**-0.1**
	baz=261,SNR=9.1							
ESPY	**Espiye-Giresun**	**90.62**	**311**	P		**P**	**16 37 47.5**	**-0.3**
BRLK	**Bradley Lake**	**90.65**	**30**	P		**P**	**16 37 47.2**	**-0.3**
BRLK				lAmb		lAmb	16 37 52.6	
	comp=Z,258nm,1.0s							
SKT	**Skwentna**	**90.66**	**28**	P		**P**	**16 37 46.2**	**-1.2**
SKT				lAmb		lAmb	16 37 49.2	
	comp=Z,147nm,0.8s							
SKT	**Skwentna**	**90.66**	**28**	P		**P**	**16 37 46.0**	**-1.4**
	baz=262							
SKT				S		**S**	**16 48 01.1**	**-3.6**
	baz=262							
CAPN	**Captain Cook N**	**90.66**	**29**	P		**P**	**16 37 47.8**	**+0.4**
CAPN	**Captain Cook N**	**90.66**	**29**	P		**P**	**16 37 48.3**	**+0.9**
	baz=262,SNR=8.7							
H21K	**Melozitna Rive**	**90.68**	**24**	P		**P**	**16 37 47.3**	**-0.1**
H21K	**Melozitna Rive**	**90.68**	**24**	P		**P**	**16 37 47.6**	**+0.1**
	baz=260,SNR=196							
H21K				S		**S**	**16 48 01.4**	**-3.3**
	baz=260							
TETE	**Tete**	**90.70**	**254**	⇓*i* P		**P**	**16 37 47.8**	**-0.8**
TETE				lAmb		lAmb	16 37 50.5	
	comp=Z,152nm,0.9s							
BRSE	**Bradley Lake S**	**90.72**	**30**	P		**P**	**16 37 47.5**	**-0.3**
	baz=262,SNR=25							
BRSE				S		**S**	**16 47 59.3**	**-6.0**
	baz=262							
ARPR	**Arapgir-MALATY**	**90.75**	**309**	P		**P**	**16 37 49.9**	**+1.3**
I21K	**Tanana**	**90.94**	**25**	P		**P**	**16 37 48.6**	**0.0**
I21K				lAmb		lAmb	16 37 52.0	
	comp=Z,142nm,0.8s							
I21K	**Tanana**	**90.94**	**25**	P		**P**	**16 37 49.1**	**+0.5**
	baz=261,SNR=211							
I21K				S		**S**	**16 48 05.6**	**-1.4**
	baz=261							
SUA	**Susitna One**	**90.95**	**29**	P		**P**	**16 37 48.1**	**-0.9**
	baz=262							
SUA				S		**S**	**16 48 03.7**	**-3.9**
	baz=262							
CNG	**Changalane**	**91.06**	**244**	⇓*i* P		**P**	**16 37 50.4**	**+0.3**
CNG				lAmb		lAmb	16 37 51.6	
	comp=Z,128nm,0.8s							
KTH	**Kantishna Hill**	**91.16**	**26**	P		**P**	**16 37 49.1**	**-0.6**
KTH				lAmb		lAmb	16 37 52.3	
	comp=Z,166nm,0.9s							
BPAW	**Bear Paw Mtn.**	**91.21**	**26**	P		**P**	**16 37 49.2**	**-0.7**
BPAW				lAmb		lAmb	16 37 53.5	
	comp=Z,128nm,0.8s							
BPAW	**Bear Paw Mtn.**	**91.21**	**26**	P		**P**	**16 37 49.3**	**-0.6**
	baz=262,SNR=56							
BPAW				S		**S**	**16 48 04.8**	**-4.8**
	baz=262							
VORD	**Divnogorie**	**91.22**	**321**	*e*P		**P**	**16 37 50.2**	**0.0**
VORD				*e*			16 47 38.9	
VORD				*e*S		**S**	**16 48 06.5**	**-3.5**
VORD				pmax	pmax			
	comp=Z,850nm,0.7s							
VORD				smax	smax			
	comp=E,660nm,6.3s							
M22K	**Willow**	**91.29**	**28**	P		**P**	**16 37 49.3**	**-1.0**
M22K	**Willow**	**91.29**	**28**	P		**P**	**16 37 49.6**	**-0.7**
	baz=263,SNR=79							
CUT	**Chulitna**	**91.30**	**28**	P		**P**	**16 37 49.4**	**-1.0**
CUT				lAmb		lAmb	16 37 53.5	
	comp=Z,213nm,0.8s							
CUT	**Chulitna**	**91.30**	**28**	P		**P**	**16 37 49.7**	**-0.7**
	baz=263,SNR=31							
VSR	**Storozhevoye**	**91.32**	**321**	*e*P		**P**	**16 37 50.4**	**-0.3**
VSR				*e*PPP		PPP	16 43 33.4	
VSR				*e*			16 47 34.1	
VSR				*e*S		**S**	**16 48 07.4**	**-3.5**
VSR				pmax	pmax			
	comp=Z,800nm,0.8s							
VSR				pmax	pmax			
	comp=Z,860nm,0.8s							
VSR				smax	smax			
	comp=E,820nm,6.6s							
O22K	**Cooper Landing**	**91.32**	**30**	P		**P**	**16 37 49.8**	**-0.7**
**O

I23K S **S** **16 48 12.1 -4.6**
baz=264,SNR=814

H23K **Yukon River** **92.03 24** P **P** **16 37 53.6 -0.1**
H23K IAmb IAmb 16 37 56.7
comp=Z,222nm,0.8s

H23K **Yukon River** **92.03 24** P **P** **16 37 53.9 +0.2**
baz=263,SNR=320

KNK **Knik Glacier** **92.04 29** P **P** **16 37 53.7 -0.1**
KNK **Knik Glacier** **92.04 29** P **P** **16 37 53.9 +0.1**
baz=264,SNR=134

MOPA **Mopani** **92.05 246**⇓*i*P **P** **16 37 54.8 +0.1**
MOPA IAmb IAmb 16 37 56.1
comp=Z,333nm,0.9s

MOPA **Mopani** **92.05 246** *i* P **P** **16 37 55.0 +0.2**
MOPA **Mopani** **92.05 246** *i* P **P** **16 37 55.0 +0.2**
MOPA **Mopani** **92.05 246** *i* P **P** **16 37 55.0 +0.2**
MCK **McKinley** **92.06 26** P **P** **16 37 53.2 -0.7**
MCK IAmb IAmb 16 37 55.7
comp=Z,263nm,0.8s

MCK **McKinley** **92.06 26** P **P** **16 37 53.2 -0.7**
MCK pmax pmax
comp=Z,263nm,0.8s

MCK **McKinley** **92.06 26** P **P** **16 37 52.9 -0.9**
baz=264,SNR=114

RND **Reindeer** **92.06 27** P **P** **16 37 53.0 -1.0**
RND **Reindeer** **92.06 27** P **P** **16 37 53.0 -1.0**
RND pmax pmax
comp=Z,607nm,0.8s

KLMR **Klimovskoe** **92.07 331** *e*P **P** **16 37 51.2 -2.7**
KLMR *e* 16 41 37.7
KLMR *e*S **SKSac** **16 47 41.5 -2.3**
KLMR pmax pmax
comp=Z,282nm,0.8s

KLMR **Klimovskoe** **92.07 331** *e*P **P** **16 37 51.2 -2.7**
KLMR AMP 16 37 54.6
comp=Z,282nm,0.8s

KLMR *e*PP **PP** **16 41 37.8 -3.2**
KLMR *e*S **SKSac** **16 47 41.5 -2.3**
KLMR *e*S **SKSac** **16 47 41.5 -2.3**
NEA2 **Nenana** **92.10 25** P **P** **16 37 53.0 -1.0**
NEA2 IAmb IAmb 16 37 58.3
comp=Z,164nm,0.8s

NEA2 **Nenana** **92.10 25** P **P** **16 37 53.3 -0.7**
baz=264,SNR=159

SML **Sawmill** **92.14 28** P **P** **16 37 54.5 +0.2**
baz=264,SNR=120

SML S **S** **16 48 14.9 -3.0**
baz=264

WAT1 **Susitna Watana** **92.14 27** P **P** **16 37 53.9 -0.4**
baz=264

WAT1 S **S** **16 48 13.9 -3.9**
baz=264

SARI **SarD1z-Kayseri** **92.19 308** P **P** **16 37 55.6 +0.3**
TAHT **Tahtakopru-Hat** **92.23 306** P **P** **16 37 55.7 +0.4**
YAYL **Yayladag** **92.27 306** P **P** **16 37 56.2 +0.6**
TOKA **Tokat** **92.28 310** P **P** **16 37 56.0 +0.5**
HWQ **Hawqa** **92.28 304** *e*P **P** **16 37 56.4 +0.7**
RCY **Rachaya** **92.32 303** *e*P **P** **16 37 57.0 +1.1**
TOLK **Toolik Lake Re** **92.35 21** P **P** **16 37 55.4 +0.3**
TOLK IAmb IAmb 16 37 58.6
comp=Z,254nm,0.8s

TOLK **Toolik Lake Re** **92.35 21** P **P** **16 37 55.6 +0.5**
baz=264,SNR=222

TOLK S **S** **16 48 17.9 -1.5**
baz=264

SHBL **Chebaa** **92.39 303** *e*P **P** **16 37 57.2 +1.0**
GHAJ **Ghor Haditha** **92.40 301** P **P** **16 37 56.4 +0.3**
GHAJ IAmb IAmb 16 37 58.3
comp=Z,404nm,1.1s

M23K **Glacier View** **92.43 28** P **P** **16 37 55.6 0.0**
baz=265,SNR=152

M23K S **S** **16 48 14.9 -5.5**
baz=265

WAT6 **Susitna Watana** **92.49 28** P **P** **16 37 55.7 -0.3**
baz=265,SNR=147

WAT6 S **S** **16 48 18.1 -3.1**
baz=265

MDM **Murphy Dome** **92.49 25** P **P** **16 37 54.9 -0.9**
MDM IAmb IAmb 16 37 59.5
comp=Z,224nm,0.8s

BHL **Bhannes** **92.50 304** *e*P **P** **16 37 57.5 +0.8**
WRH **Wood River Hil** **92.50 26** P **P** **16 37 55.1 -0.8**
UJAP **Al Uja** **92.53 302** P **P** **16 37 57.2 +0.5**
KOZT **Kozan** **92.60 307** P **P** **16 37 57.1 +0.2**
MMLI **Mount Malkishu** **92.60 302** P **P** **16 37 57.7 +0.6**
SCM **Sheep Creek Mo** **92.62 28** P **P** **16 37 56.3 -0.2**
SCM IAmb IAmb 16 37 59.1
comp=Z,250nm,0.9s

SCM **Sheep Creek Mo** **92.62 28** P **P** **16 37 56.3 -0.2**
SCM pmax pmax
comp=Z,250nm,0.9s

SCM **Sheep Creek Mo** **92.62 28** P **P** **16 37 56.8 +0.2**
baz=265,SNR=72

SCM S **S** **16 48 20.1 -2.1**
baz=265

MOS **Moscow** **92.63 326** *e*P **P** **16 37 55.0 -1.6**
MOS *e*PP **pP** **16 39 35.2 -0.4**
MOS *e*SP **sP** **16 40 17.2 -3.0**
MOS *e* 16 41 44.6
MOS *e*PPP PPP 16 43 52.2
MOS *e* 16 47 45.0
MOS *e*S **S** **16 48 17.1 -5.1**
MOS pmax pmax
comp=Z,378nm,1.1s

MOS pmax pmax
comp=Z,700nm,1.5s

TCOL **CIGO, UAF Yank** **92.64 25** P **P** **16 37 55.4 -1.0**
TCOL IAmb IAmb 16 37 59.6
comp=Z,198nm,0.8s

TCOL **CIGO, UAF Yank** **92.64 25** P **P** **16 37 55.6 -0.9**
baz=265,SNR=34

CCB **Clear Creek Bu** **92.64 25** P **P** **16 37 55.4 -1.1**
COLA **College** **92.64 25** P **P** **16 37 55.4 -1.0**
COLA IAmb IAmb 16 37 59.6
comp=Z,199nm,0.8s

COLA **College** **92.64 25***d* *i*P **P** **16 37 55.5 -1.0**
COLA pmax pmax
comp=Z,158nm,0.8s

GLI **Glacier Island** **92.65 29** P **P** **16 37 55.9 -0.7**
GLI **Glacier Island** **92.65 29** P **P** **16 37 56.7 +0.1**
baz=265,SNR=78

GLI S **S** **16 48 17.6 -4.7**
baz=265

MMAI **Mount Meron Ar** **92.65 303** P **P** **16 37 59.1 +1.8**
comp=Z,5.1nm,0.4s,baz=183,slow=24,SNR=25

BNN **Bunyan** **92.67 309** P **P** **16 37 57.5 +0.1**
BNN **Bunyan** **92.67 309** P **P** **16 37 56.8 -0.6**
DHY **Denali Highway** **92.70 27** P **P** **16 37 56.5 -0.5**
DHY IAmb IAmb 16 38 01.7
comp=Z,200nm,0.8s

DHY **Denali Highway** **92.70 27** P **P** **16 37 56.5 -0.5**
baz=265,SNR=224

DHY S **S** **16 48 20.2 -2.8**
baz=265

H24K **Noodor Dome** **92.72 24** P **P** **16 37 57.1 +0.2**
H24K IAmb IAmb 16 38 00.4
comp=Z,312nm,0.8s

H24K **Noodor Dome** **92.72 24** P **P** **16 37 57.0 +0.2**
baz=265,SNR=486

H24K S **S** **16 48 18.2 -4.6**
baz=265

EIL **Elat** **92.82 299** P **P** **16 37 58.9 +0.7**
comp=Z,113nm,0.9s,baz=83,slow=0.8,SNR=64

EIL PKKPbc **PKKPbc** **16 55 07.0 -0.6**
comp=Z,7.3nm,0.7s,baz=299,slow=4.1,SNR=4.7
comp=Z,113nm,0.9s

EIL **Elat** **92.82 299** P **P** **16 37 58.3 +0.2**
POKR **Poker Plat Res** **92.84 25** P **P** **16 37 55.8 -1.6**
POKR **Poker Plat Res** **92.84 25** P **P** **16 37 56.3 -1.1**
baz=265,SNR=41

POKR S **S** **16 48 15.4 -8.4**
baz=265

HIN **Hinchinbrook I** **92.91 30** P **P** **16 37 57.7 -0.2**
HIN IAmb IAmb 16 38 00.9
comp=Z,332nm,0.9s

FID **Port Fidalgo** **92.94 29** P **P** **16 37 57.7 -0.3**
FID IAmb IAmb 16 38 01.2
comp=Z,220nm,0.8s

HDA **Harding Lake** **92.99 26** P **P** **16 37 56.5 -1.6**
HDA **Harding Lake** **92.99 26** P **P** **16 37 57.1 -1.0**
baz=266,SNR=423

CRLN **Carolina, Mapu** **93.03 244**⇓*i*P **P** **16 37 59.8 +0.4**
CRLN IAmb IAmb 16 38 00.8
comp=Z,59nm,0.8s

IL31 **93.05 25** P **P** **16 37 56.3 -2.0**
IL31 IAmb IAmb 16 38 00.1
comp=Z,130nm,0.8s

ILAR **Eielson Array** **93.05 25** P **P** **16 37 56.9 -1.5**
comp=Z,118nm,0.7s,baz=244,slow=4.4,SNR=314

ILAR PP **PP** **16 41 48.2 -0.3**
comp=Z,7.4nm,0.8s,baz=258,slow=7.3,SNR=3.1

ILAR PKiKP **PKiKP** **16 42 42.9 +0.3**
comp=Z,5.6nm,0.7s,baz=264,slow=3.0,SNR=5.6

ILAR PKKPbc **PKKPdf** **16 55 06.0 +0.3**
comp=Z,7.3nm,0.8s,baz=76,slow=1.7,SNR=18

ILAR SKKPbc SKKPbc 16 58 01.3 -4.4
comp=Z,3.8nm,0.8s,baz=37,slow=1.5,SNR=7.4

ILAR PKPPKP **P'P'df** **17 03 13.6 -3.5**
comp=Z,1.9nm,0.9s,baz=52,slow=1.3,SNR=6.0
comp=Z,118nm,0.7s

ILAR **Eielson Array** **93.05 25** P **P** **16 37 56.7 -1.6**
KSTD **Kokstad** **93.11 239**⇓*i*P **P** **16 38 00.2 +0.6**
KSTD IAmb IAmb 16 38 01.5
comp=Z,97nm,0.9s

YOZ **Yozgat** **93.13 309** P **P** **16 37 59.3 -0.2**
M24K **Tolsona, Glenn** **93.18 28** P **P** **16 37 59.3 +0.2**
M24K **Tolsona, Glenn** **93.18 28** P **P** **16 37 59.9 +0.8**
baz=266,SNR=92

OBN **Obninsk** **93.19 325**⇑P **P** **16 37 58.0 -1.2**
OBN **Obninsk** **93.19 325** P **P** **16 37 58.8 -0.3**
comp=Z,58nm,0.6s,baz=88,slow=0.3,SNR=97

OBN S **SKSac** **16 47 49.0 -1.1**
comp=Z,1.7nm,0.4s,baz=138,slow=24,SNR=9.6
comp=Z,58nm,0.6s

OBN **Obninsk** **93.19 325** P **P** **16 37 58.4 -0.7**
OBN **Obninsk** **93.19 325***d* *i*P **P** **16 37 58.7 -0.4**
OBN *PP **pP** **16 39 34.0 -4.2**
OBN *e*SP **sP** **16 40 15.5 -7.3**
OBN *e* 16 41 53.9
OBN *e*PPP PPP 16 44 00.1
OBN *i* S **SKSac** **16 47 50.0 -0.1**
OBN *e* 16 48 22.8
OBN *e*SS **SS** **16 54 50.9 -4.1**
OBN *e*SSS SSS 16 58 43.1
OBN pmax pmax
comp=Z,647nm,1.5s

OBN MLR MLR
comp=Z,2µm,18.0s

KARA **Karaisali** **93.20 307** P **P** **16 37 59.9 +0.2**
KLU **Klutina** **93.26 29** P **P** **16 37 59.3 -0.2**
KLU IAmb IAmb 16 38 02.5
comp=Z,152nm,0.8s

KLU **Klutina** **93.26 29** P **P** **16 37 59.6 +0.1**
baz=266,SNR=88

CMRD **Camardi-Nigde** **93.27 307** P **P** **16 38 00.9 +0.7**
DIKM **Dikmen** **93.29 311** P **P** **16 37 59.9 -0.1**
EYAK **Cordova Ski Ar** **93.29 30** P **P** **16 37 59.7 +0.2**
EYAK IAmb IAmb 16 38 04.8
comp=Z,135nm,1.0s

EYAK **Cordova Ski Ar** **93.29 30** P **P** **16 38 00.1 +0.6**
baz=266,SNR=29

DIV **Divide** **93.31 29** P **P** **16 37 59.7 0.0**
DIV IAmb IAmb 16 38 02.6
comp=Z,291nm,0.9s

NVL **N'lazarevskaya** **93.34 198**⇑*i*P **P** **16 38 00.1 +0.5**
NVL *e* 16 48 19.6
NVL *e*SSS SSS 16 54 57.9
NVL pmax pmax
comp=Z,38nm,0.7s

K24K **Donnelly Dome** **93.47 26** P **P** **16 38 00.3 0.0**
baz=267,SNR=183

PAX **Paxson** **93.56 27** P **P** **16 38 00.4 -0.5**
PAX IAmb IAmb 16 38 04.4
comp=Z,128nm,0.8s

PAX **Paxson** **93.56 27** P **P** **16 38 00.4 -0.5**
PAX pmax pmax
comp=Z,128nm,0.8s

PAX **Paxson** **93.56 27** P **P** **16 38 00.8 -0.1**
baz=267,SNR=184

PAX S **S** **16 48 24.3 -6.0**
baz=267

MERS **Mersin** **93.60 307** P **P** **16 38 00.5 -1.1**
HARP **HAARP** **93.67 28** P **P** **16 38 01.9 +0.6**
baz=267,SNR=33

CORM **Corum** **93.69 310** P **P** **16 38 02.5 +0.5**
J25K **Salcha River,** **93.69 26** P **P** **16 38 00.0 -1.3**
J25K IAmb IAmb 16 38 02.9
comp=Z,138nm,0.8s

J25K **Salcha River,** **93.69 26** P **P** **16 38 00.3 -1.1**
baz=267,SNR=236

EREN **Erenköy** **93.82 305** P **P** **16 38 02.7 +0.2**
BMRM **Bremner River** **93.87 29** P **P** **16 38 01.9 -0.4**
BMRM IAmb IAmb 16 38 05.0
comp=Z,178nm,0.8s

BMRM **Bremner River** **93.87 29** P **P** **16 38 02.8 +0.5**
baz=268,SNR=52

RIDG **Independent Ri** **93.88 26** P **P** **16 38 01.6 -0.6**
RIDG **Independent Ri** **93.88 26** P **P** **16 38 02.4 +0.1**
baz=268,SNR=343

GULA **Gulagac** **93.90 308** P **P** **16 38 03.3 +0.3**
N25K **Chitina, Valde** **93.90 29** P **P** **16 38 02.6 +0.1**
N25K IAmb IAmb 16 38 05.4
comp=Z,150nm,0.8s

N25K **Chitina, Valde** **93.90 29** P **P** **16 38 03.2 +0.8**
baz=268,SNR=77

N25K S **S** **16 48 29.9 -3.5**
baz=268

HMT **Hamilton** **94.02 30** P **P** **16 38 02.7 -0.2**
HMT IAmb IAmb 16 38 08.3
comp=Z,143nm,0.9s

SILI **Siilfke-Mersin** **94.06 306** P **P** **16 38 03.5 -0.1**
BMAR **Burnt Mountain** **94.13 23** P **P** **16 38 03.9 +0.6**
DOT **Dot Lake** **94.22 27** P **P** **16 38 03.6 -0.2**
DOT IAmb IAmb 16 38 06.6
comp=Z,207nm,0.8s

KEBE **Keben-Mersin** **94.23 306** P **P** **16 38 04.7 +0.2**
BZK **Bozkurt** **94.24 312**⇓P **P** **16 38 03.9 -0.4**
BZK **Bozkurt** **94.24 312** P **P** **16 38 03.9 -0.4**
BZK **Bozkurt** **94.24 312** P **P** **16 38 03.5 -0.7**
SUCK **Suckling Hills** **94.25 30** P **P** **16 38 05.0 +1.0**
SUCK IAmb IAmb 16 38 07.4
comp=Z,203nm,1.0s

YAYX **Yaylak** **94.26 309** P **P** **16 38 03.9 -0.7**
YESY **Yesilyurt** **94.26 307** P **P** **16 38 04.9 +0.2**
SCRK **Sand Creek** **94.27 26** P **P** **16 38 03.9 -0.2**
SCRK IAmb IAmb 16 38 07.4
comp=Z,116nm,0.8s

SCRK **Sand Creek** **94.27 26** P **P** **16 38 04.3 +0.2**
baz=268,SNR=170

SCRK S **S** **16 48 30.4 -6.1**
baz=268

GLB **Gilahina Butte** **94.27 29** P **P** **16 38 04.2 +0.1**
GLB IAmb IAmb 16 38 06.9
comp=Z,122nm,0.9s

SIM **Simferopol'** **94.28 315** *e*P **P** **16 38 04.7 +0.3**
SIM *e* 16 42 00.0
SIM *e* 16 47 56.0
SIM *e*S **S** **16 48 36.0 -1.1**
SIM *e*PS **PS** **16 50 56.0 +2.2**
SIM pmax pmax
comp=Z,609nm,0.9s

SIM pmax pmax
comp=Z,331µm,1.1s

LFK **Lefkose** **94.32 305** P **P** **16 38 05.3 +0.4**
AKKU **Akkuyu-Mersin** **94.35 306** P **P** **16 38 04.9 0.0**
MENT **Mentasta** **94.36 27** P **P** **16 38 04.4 0.0**
MENT IAmb IAmb 16 38 13.6
comp=Z,136nm,0.7s

ILGA **Ilgaz** **94.42 311** P **P** **16 38 05.1 -0.3**
ILGA IAmb IAmb 16 38 06.9
comp=Z,142nm,0.9s

BR131 **Keskin Array S** **94.43 309** P **P** **16 38 04.4 -1.0**
BR131 IAmb IAmb 16 38 06.3
comp=Z,176nm,0.8s

BR131 **Keskin Array S** **94.43 309***d* *i*P **P** **16 38 04.9 -0.5**
BR131 **Keskin Array S** **94.43 309** P **P** **16 38 05.2 -0.3**
SNR=107

BRTR **Keskin Array B** **94.43 309** P **P** **16 38 05.2 -0.3**
comp=Z,94nm,0.8s,baz=128,slow=5.5,SNR=510

BRTR PP **PP** **16 41 52.6 -7.4**
comp=Z,16nm,0.8s,baz=102,slow=8.6,SNR=3.5

BRTR PKKPbc **PKKPbc** **16 55 04.1 +0.1**
comp=Z,2.0nm,0.8s,baz=197,slow=3.5,SNR=5.2

BRTR SKKPbc SKKPbc 16 57 59.6 -1.5
comp=Z,1.9nm,1.0s,baz=285,slow=0.2,SNR=4.1
comp=Z,94nm,0.8s

BRTR **Keskin Array B** **94.43 309** P **P** **16 38 05.0 -0.5**
BRTR **Keskin Array B** **94.43 309** P **P** **16 38 04.5 -1.0**
BRTR **Keskin Array B** **94.43 309** *i* P **P** **16 38 05.1 -0.3**

BRTR pmax pmax
comp=Z,100nm,0.8s

VRDI **Verde Repeater** **94.44 29** P **P** **16 38 04.8 -0.3**
SULT **Sultanhani-AKS** **94.46 308** P **P** **16 38 05.4 -0.1**
J26L **Joseph Creek** **94.46 26** P **P** **16 38 04.6 -0.4**
J26L **Joseph Creek** **94.46 26** P **P** **16 38 04.9 -0.1**
baz=269,SNR=928

J26L S **S** **16 48 31.7 -6.5**
baz=269

CANT **Cankiri** **94.47 310** P **P** **16 38 05.3 -0.2**
CSS **Mathiatis** **94.48 305** P **P** **16 38 05.8 +0.2**
CSS **Mathiatis** **94.48 305** P **P** **16 38 05.1 -0.5**
CSS IAmb IAmb 16 38 16.2
comp=Z,148nm,0.8s

L26K **Log Cabin Wild** **94.53 27** P **P** **16 38 05.5 +0.3**
L26K IAmb IAmb 16 38 08.0
comp=Z,74nm,0.8s

L26K **Log Cabin Wild** **94.53 27** P **P** **16 38 05.9 +0.7**
baz=269,SNR=30

LVZ **Lovozero** **94.59 338** P **P** **16 38 04.3 -1.1**
LVZ IAmb IAmb 16 38 05.3
comp=Z,178nm,0.9s

LVZ **Lovozero** **94.59 338***ce*P **P** **16 38 04.8 -0.6**
LVZ pmax pmax
comp=Z,160nm,0.8s

SLR **Silverton** **94.62 244**⇓*i*P **P** **16 38 05.8 -0.8**
SLR IAmb IAmb 16 38 07.9
comp=Z,150nm,0.8s

BERE **Bereket-Mersin** **94.62 306** P **P** **16 38 06.7 +0.3**
MCARA **McCarthy VSAT** **94.65 29** P **P** **16 38 06.3 +0.5**
MCARA IAmb IAmb 16 38 10.4
comp=Z,139nm,0.9s

MCARA **McCarthy VSAT** **94.65 29** P **P** **16 38 06.3 +0.5**
baz=269,SNR=37

M26K **Nabesna, AK** **94.68 28** P **P** **16 38 06.4 +0.4**
M26K **Nabesna, AK** **94.68 28** P **P** **16 38 06.3 +0.4**
baz=269,SNR=45

M26K S **S** **16 48 36.1 -3.9**
baz=269

TEKE **Tekeli-Mersin** **94.70 306** P **P** **16 38 06.2 -0.3**
WAX **Waxell Ridge** **94.72 30** P **P** **16 38 06.9 +0.7**
WAX IAmb IAmb 16 38 11.8
comp=Z,240nm,1.0s

SNH **Sunshine Point** **94.72 30** P **P** **16 38 07.1 +1.0**
TGL **Tana Glacier** **94.73 30** P **P** **16 38 06.4 +0.1**
TGL IAmb IAmb 16 38 09.2
comp=Z,188nm,0.9s

SNKL **Senekal, Frees** **94.74 241**⇓*i*P **P** **16 38 06.9 -0.3**
SNKL IAmb IAmb 16 38 08.4
comp=Z,192nm,0.8s

MBAR **Mbarara** **94.82 269** P **P** **16 38 08.2 +0.5**
comp=Z,50nm,0.8s,baz=88,slow=6.3,SNR=66
comp=Z,50nm,0.8s

MBAR **Mbarara** **94.82 269** P **P** **16 38 07.4 -0.4**
MBAR **Mbarara** **94.82 269***d* *i*P **P** **16 38 08.3 +0.5**
MBAR pmax pmax
comp=Z,49nm,0.8s

MBAR **Mbarara** **94.82 269**⇓*e*P **P** **16 38 06.8 -1.0**
MBAR *e*S **SKSac** **16 47 59.5 -1.5**
MBAR **Mbarara** **94.82 269**⇓*e*P **P** **16 38 06.8 -1.0**
MBAR *e*S **SKSac** **16 47 59.5 -1.5**
MBAR **Mbarara** **94.82 269** *e*P **P** **16 38 07.3 -0.4**
MBAR *e*S **SKSac** **16 48 01.1 +0.1**
MBAR **Mbarara** **94.82 269**⇓*e*P **P** **16 38 08.3 +0.5**
MBAR ⇓*e*S **SKSac** **16 48 01.3 +0.3**
MBAR **Mbarara** **94.82 269**⇓*e*P **P** **16 38 08.0 +0.1**
MBAR **Mbarara** **94.82 269**⇓*e*P **P** **16 38 07.7 -0.7**
MBAR *e*S **SKSac** **16 47 60.0 -1.1**
MBAR **Mbarara** **94.82 269**⇓*e*P **P** **16 38 07.5 -0.3**
MBAR *e*S **SKSac** **16 48 00.6 -0.5**
MBAR **Mbarara** **94.82 269**⇓*e*P **P** **16 38 07.5 -0.3**
MBAR **Mbarara** **94.82 269**⇓*e*P **P** **16 38 07.5 -0.3**
MBAR **Mbarara** **94.82 269**⇓*e*P **P** **16 38 07.5 -0.3**
MBAR **Mbarara** **94.82 269**⇓*e*P **P** **16 38 06.8 -1.0**
MBAR ⇓*e*S **SKSac** **16 48 01.3 +0.3**
LEF **Lefka** **94.84 305** P **P** **16 38 07.1 -0.1**
AFSR **Afar-Bala (An** **94.86 309** P **P** **16 38 07.0 -0.3**
KULU **Kulu** **94.89 309** P **P** **16 38 07.5 0.0**
CHBY **Cihanbeyli** **94.97 308** P **P** **16 38 07.2 -0.7**
ISLE **Juniper Island** **94.97 30** P **P** **16 38 07.7 +0.3**
ISLE IAmb IAmb 16 38 12.8
comp=Z,274nm,1.0s

BLWY **Bulawayo** **95.00 249**⇓*i*P **P** **16 38 08.3 -0.1**
BLWY IAmb IAmb 16 38 09.6
comp=Z,621nm,1.0s

APA **Apatity** **95.06 337**⇓*i*P **P** **16 38 05.3 -2.1**
APA *i* 16 42 03.0
APA pmax pmax
comp=Z,80nm,1.0s

APA MLR MLR
comp=Z,2µm,16.0s

MATP **Matopo** **95.06 249**⇓*i*P **P** **16 38 07.8 -0.9**
MATP IAmb IAmb 16 38 09.9
comp=Z,5µm,1.2s

MATP **Matopo** **95.06 249** P **P** **16 38 08.5 -0.2**
comp=Z,62nm,0.7s,baz=110,slow=3.6,SNR=107

MATP PP **PP** **16 42 03.2 -2.2**
comp=Z,40nm,0.9s,baz=96,slow=6.2,SNR=8.6

MATP PKKPbc **PKKPbc** **16 55 02.9 +1.3**
comp=Z,4.6nm,0.6s,baz=284,slow=2.5,SNR=11
comp=Z,62nm,0.7s

MATP **Matopo** **95.06 249** *i* P **P** **16 38 09.1 +0.3**
MATP **Matopo** **95.06 249** *i* P **P** **16 38 09.1 +0.3**
MATP **Matopo** **95.06 249** *i* P **P** **16 38 09.1 +0.3**
ANTO **Ankara** **95.08 309** P **P** **16 38 07.8 -0.5**
ANTO **Ankara** **95.08 309** P **P** **16 38 08.0 -0.3**
ANTO **Ankara** **95.08 309** P **P** **16 38 08.0 -0.3**
ANTO pmax pmax
comp=Z,80nm,1.0s

BR231 **Keskin MP Arra** **95.09 309** P **P** **16 38 08.0 -0.5**
LOD **Lodumlu** **95.11 310** P **P** **16 38 08.5 +0.1**
K27K **Chicken** **95.11 26** P **P** **16 38 09.0 +1.2**
baz=270

K27K S **S** **16 48 40.8 -2.7**
baz=270

HRAO **HartRAO** **95.13 244**⇓*i*P **P** **16 38 09.1 +0.1**
HRAO IAmb IAmb 16 38 10.3
comp=Z,162nm,0.8s

MESA **MESA** **95.16 30** P **P** **16 38 09.1 +0.7**
MESA IAmb IAmb 16 38 13.1
comp=Z,117nm,0.8s

MESA **MESA** **95.16 30** P **P** **16 38 09.2 +0.9**
baz=270,SNR=14

MESA S **S** **16 48 42.5 -2.0**
baz=270

KURC **Kurucasile-Bar** **95.18 311** P **P** **16 38 04.7 -3.9**
M27K **Edge Creek, AK** **95.20 28** P **P** **16 38 08.7 +0.3**
M27K IAmb IAmb 16 38 13.3
comp=Z,77nm,0.8s

M27K **Edge Creek, AK** **95.20 28** P **P** **16 38 09.2 +0.8**
baz=270,SNR=66

M27K S **S** **16 48 41.8 -2.9**
baz=270

L27K **Beaver Creek,** **95.22 27** P **P** **16 38 08.6 +0.3**
L27K IAmb IAmb 16 38 12.0
comp=Z,192nm,0.8s

L27K **Beaver Creek,** **95.22 27** P **P** **16 38 09.5 +1.2**
baz=270,SNR=345

L27K S **S** **16 48 41.9 -2.8**
baz=270

HDMB **Hadim** **95.23 307** P **P** **16 38 09.2 -0.1**
BCAR **Beaver Creek A** **95.24 27** P **P** **16 38 08.9 +0.4**
GRNC **Granite Creek** **95.26 30** P **P** **16 38 09.3 +0.5**
GRNC IAmb IAmb 16 38 12.0
comp=Z,137nm,0.9s

YAH **Yahtse** **95.27 30** P **P** **16 38 09.6 +0.7**
YAH IAmb IAmb 16 38 11.7
comp=Z,157nm,1.0s

WDLM **Western Deep L** **95.29 243** *e*P **P** **16 38 09.3 -0.4**
WDLM IAmb IAmb 16 38 10.9
comp=Z,89nm,0.9s

BARN **Barnard Glacie** **95.31 29** P **P** **16 38 09.6 +0.6**
BARN IAmb IAmb 16 38 12.3
comp=Z,162nm,0.8s

GAZI **Gazipasa** **95.35 306** P **P** **16 38 08.9 -0.6**
KONT **Konya--Tatoy** **95.36 308** P **P** **16 38 09.2 -0.4**

TROLL Troll, Antarti 95.37 195 P P 16 38 09.5 +0.5
TROLL Troll, Antarti 95.37 195 P'P'df P'P'df 17 03 04.8 -8.8
TROLL Troll, Antarti 95.37 195 PKKPbc PKKPbc 16 54 59.3 -3.4
CTG Chitna Glacier 95.46 29 P P 16 38 10.1 +0.5
baz=270,SNR=39
CTG S S 16 48 44.2 -2.8
baz=270
CTGM Chitina Glacie 95.47 29 P P 16 38 09.9 +0.2
CTGM IAmb IAmb 16 38 15.4
comp=Z,161nm,1.0s
TABL Table Mountain 95.56 30 P P 16 38 10.5 +0.3
TABL IAmb IAmb 16 38 21.2
comp=Z,107nm,0.9s
LOGN Logan Glacier 95.63 29 P P 16 38 10.6 +0.2
LOGN IAmb IAmb 16 38 16.0
comp=Z,105nm,0.9s
BVCY Beaver Creek 95.67 28 P P 16 38 11.2 +0.8
baz=271,SNR=37
BVCY S S 16 48 47.9 -0.6
baz=271
KIZT Kizilcal 95.76 308 P P 16 38 10.9 -0.6
SEYD Seydisehir-KON 95.76 307 P P 16 38 11.6 +0.1
KSR Koster 95.84 244 eP P 16 38 11.8 -0.4
KSR IAmb IAmb 16 38 15.1
comp=Z,24nm,0.9s
YUK3 Moose Creek 95.88 28 P P 16 38 11.9 +0.3
baz=271,SNR=39
YUK3 S S 16 48 47.3 -3.3
baz=271
LSZ Lusaka 95.95 254 P P 16 38 13.4 +0.6
comp=Z,282nm,0.8s,baz=96,slow=4.2,SNR=480
LSZ pP pP 16 39 54.0 +1.3
comp=Z,18nm,0.8s,baz=66,slow=4.6,SNR=2.3
LSZ PP PP 16 42 10.4 -1.9
comp=Z,18nm,0.8s,baz=86,slow=8.1,SNR=8.9
LSZ PKiKP PKiKP 16 42 49.5 +0.3
comp=Z,12nm,0.8s,baz=195,slow=1.2,SNR=1.8
comp=Z,282nm,0.8s
SOE Somerset East 95.97 237 eP P 16 38 13.3 +0.7
SOE IAmb IAmb 16 38 14.7
comp=Z,125nm,0.9s
PINM Pinnacle 96.01 30 P P 16 38 12.8 +0.8
baz=271
AUSIV SIVRIHISAR 96.04 309 P P 16 38 12.4 -0.3
SVRH Sivrihisar-ESK 96.05 309 P P 16 38 12.4 -0.3
AUMIH MIHALICIK 96.09 309 P P 16 38 12.1 -0.9
YUK8 Steele Glacier 96.22 29 P P 16 38 14.1 +0.9
baz=272
YUK8 S S 16 48 49.4 -4.3
baz=272
DAWY Dawson 96.29 26 P P 16 38 13.7 +0.6
DAWY Dawson 96.29 26 P P 16 38 13.6 +0.4
baz=272,SNR=232
DAWY S S 16 48 49.4 -4.4
baz=272
MDUB Mudurnu 96.32 310 P P 16 38 13.0 -0.9
MDUB Mudurnu 96.32 310 P P 16 38 13.4 -0.5
HVD Gariep Dam 96.36 239 ⇓iP P 16 38 14.6 +0.2
HVD IAmb IAmb 16 38 16.0
comp=Z,125nm,1.1s
CIFT Cifteler, Eski 96.41 309 P P 16 38 13.6 -0.7
SUTC Sutluce-Ispart 96.43 307 P P 16 38 13.6 -0.9
PNL Peninsula 96.46 31 P P 16 38 14.8 +0.9
baz=272
KROM Kromhout 96.50 235 eP P 16 38 15.5 +0.7
KROM IAmb IAmb 16 38 16.7
comp=Z,119nm,1.2s
ROSN Rosenhof 96.58 235 eP P 16 38 16.1 +1.0
ROSN IAmb IAmb 16 38 17.5
comp=Z,111nm,1.4s
PUL Pulkovo 96.61 330 ceP P 16 38 14.0 -0.6
PUL pmax pmax
comp=Z,89nm,0.6s
I29M Ogilvie Camp, 96.69 25 P P 16 38 15.0 +0.2
I29M Ogilvie Camp, 96.69 25 P P 16 38 15.1 +0.2
baz=274,SNR=446
I29M S S 16 48 54.2 -2.8
baz=274
SRCK Saricakaya, Es 96.75 310 P P 16 38 15.0 -0.7
YUK4 Talbot Arm 96.76 29 P P 16 38 16.7 +1.2
baz=273,SNR=25
J29M Klondike Camp 96.78 26 P P 16 38 16.0 +0.6
J29M IAmb IAmb 16 38 18.9
comp=Z,183nm,0.8s
J29M Klondike Camp 96.78 26 P P 16 38 16.6 +1.2
baz=274
J29M S S 16 48 54.3 -3.6
baz=274
SHUT Suhut-Afyon 96.80 308 P P 16 38 16.0 -0.1
ISP Isparta 96.82 307 P P 16 38 15.3 -0.9
ISP IAmb IAmb 16 38 16.6
comp=Z,120nm,0.9s
ISP Isparta 96.82 307 P P 16 38 15.3 -0.9
ISP pmax pmax
comp=Z,120nm,0.9s
BOSA Boshof 96.88 241 ⇓iP P 16 38 16.8 +0.1
BOSA IAmb IAmb 16 38 18.1
comp=Z,249nm,0.8s
BOSA Boshof 96.88 241 P P 16 38 16.9 +0.1
comp=Z,215nm,0.8s,baz=106,slow=3.7,SNR=282
BOSA PKiKP PKiKP 16 42 51.7 +1.2
comp=Z,4.7nm,0.7s,baz=107,slow=2.6,SNR=4.6
BOSA PKKPbc PKKPdf 16 54 57.9 +0.1
comp=Z,10.0nm,0.7s,baz=278,slow=2.8,SNR=20
comp=Z,215nm,0.8s
BOSA Boshof 96.88 241 P P 16 38 16.8 +0.1
BOSA Boshof 96.88 241 iP P 16 38 16.9 +0.2
BOSA Boshof 96.88 241 iP P 16 38 16.9 +0.2
BOSA Boshof 96.88 241 iP P 16 38 16.9 +0.2
BORA Eskisehir 96.88 309 P P 16 38 15.9 -0.5
BORA Eskisehir 96.88 309 P P 16 38 16.0 -0.5
HOPEN Hopen 96.91 347 ⇓iP P 16 38 15.2 -0.5
HOPEN eSKSac SKSac 16 48 11.5 +2.5
HOPEN eSP SP 16 50 27.0 +4.0
YUK6 Outpost Mounta 96.92 29 P P 16 38 15.5 -0.8
baz=273
YUK6 S S 16 48 54.5 -5.0
baz=273
BELA Belgrano 2 96.93 184 P P 16 38 16.5 +0.7
BELA IAmb IAmb 16 38 18.9
comp=Z,102nm,1.3s
SNAA Sanae 96.93 194 P P 16 38 16.2 +0.2
SNAA Sanae 96.93 194 P'P'df P'P'df 17 02 59.7 -11
SNAA Sanae 96.93 194 PKKPbc PKKPbc 16 54 53.8 -4.6
SNAA Sanae 96.93 194 eP P 16 38 16.2 +0.2
SNAA IAmb IAmb 16 38 18.9
comp=Z,3µm,1.3s
SNAA Sanae 96.93 194 P P 16 38 16.7 +0.7
comp=Z,14nm,0.5s,baz=181,slow=4.7,SNR=62
SNAA S SKSac 16 48 06.6 -2.9
comp=Z,22nm,1.0s,baz=214,slow=20,SNR=19
SNAA PKKPbc PKKPdf 16 54 54.6 -3.6
comp=Z,9.6nm,0.7s,baz=268,slow=3.5,SNR=21
SNAA PKPPKP P'P'df 17 03 05.2 -5.2
comp=Z,2.7nm,0.8s,baz=257,slow=4.3,SNR=7.1
comp=Z,14nm,0.5s
SNAA Sanae 96.93 194 P P 16 38 16.0 0.0
SNAA Sanae 96.93 194 ceP P 16 38 16.5 +0.5
SNAA pmax pmax
comp=Z,36nm,1.0s
KORT Korkueli 96.94 307 P P 16 38 16.2 -0.7
SAUV Serdivan-Sakar 96.98 310 P P 16 38 15.6 -1.1
SWZ Schweizer 97.03 242⇑eP Pdif 16 38 17.9 +0.3
SWZ IAmb IAmb 16 38 18.8
comp=Z,205nm,1.2s
LBTB Lobatse 97.12 244 ⇓iP P 16 38 17.9 0.0
LBTB IAmb IAmb 16 38 19.2
comp=Z,101nm,1.2s
LBTB Lobatse 97.12 244 P P 16 38 17.8 -0.1
comp=Z,64nm,1.1s,baz=116,slow=4.5,SNR=32
LBTB PKKPbc PKKPdf 16 54 57.7 +0.4
comp=Z,8.3nm,0.8s,baz=274,slow=3.1,SNR=11
comp=Z,64nm,1.1s
LBTB Lobatse 97.12 244 P P 16 38 16.9 -1.0
LBTB IAmb IAmb 16 38 19.5
comp=Z,111nm,1.2s
LBTB Lobatse 97.12 244 iP Pdif 16 38 18.1 +0.2
LBTB Lobatse 97.12 244 iP Pdif 16 38 18.1 +0.2
LBTB Lobatse 97.12 244 iP Pdif 16 38 18.1 +0.2
AUBOZ BOZOYUK 97.21 310 P P 16 38 17.4 -0.5
EPYK Eagle Plains 97.26 24 P Pdif 16 38 17.5 0.0
EPYK IAmb IAmb 16 38 21.0
comp=Z,167nm,0.8s
EPYK Eagle Plains 97.26 24 P Pdif 16 38 17.6 +0.1
baz=275,SNR=162
EPYK S S 16 48 59.3 -2.5
baz=275
KEV Kevo 97.27 340 P P 16 38 16.3 -1.0
KEV IAmb IAmb 16 38 19.1
comp=Z,87nm,1.0s
KEV Kevo 97.27 340 P P 16 38 16.3 -1.0
KEV pmax pmax
comp=Z,87nm,1.0s
ELL Elmali 97.30 306 P P 16 38 17.8 -0.6
ELL Elmali 97.30 306 P P 16 38 17.6 -0.8
ELL Elmali 97.30 306 P P 16 38 17.6 -0.8
HYT Haines Junctio 97.34 29 P Pdif 16 38 18.2 +0.1
HYT Haines Junctio 97.34 29 P Pdif 16 38 18.8 +0.7
baz=274,SNR=24
HYT S S 16 48 59.3 -3.6
baz=274
ADVT Abdulvahap 97.43 310 P P 16 38 18.4 -0.4
SILT Sile 97.50 311 P P 16 38 18.7 -0.3
N30M Aishikik Lake 97.50 29 P Pdif 16 38 19.7 +1.0
baz=274,SNR=23
N30M S S 16 49 02.0 -2.1
baz=274
AKAS Kas 97.54 306 P P 16 38 18.3 -1.2
AKAS IAmb IAmb 16 38 31.4
comp=Z,75nm,0.9s
M30M Minto, Yukon 97.55 28 P Pdif 16 38 19.4 +0.5
M30M Minto, Yukon 97.55 28 P Pdif 16 38 20.0 +1.1
baz=275,SNR=76
M30M S S 16 49 01.7 -2.7
baz=275
AKASG Malin Array Be 97.58 320 P P 16 38 18.4 -0.8
comp=Z,98nm,0.9s,baz=58,slow=4.3,SNR=415
AKASG PP PP 16 42 21.0 -2.6
comp=Z,15nm,0.7s,baz=90,slow=6.9,SNR=4.5
AKASG PKiKP PKiKP 16 42 51.8 +0.9
comp=Z,6.7nm,0.5s,baz=40,slow=2.0,SNR=8.4
AKASG PKKPbc PKKPbc 16 54 53.0 -2.9
comp=Z,1.6nm,0.6s,baz=268,slow=3.2,SNR=6.3
AKASG SKKPbc SKKPbc 16 57 50.5 -3.2
comp=Z,1.9nm,0.6s,baz=273,slow=3.0,SNR=9.0
AKASG PKPPKP P'P'df 17 03 08.4 -0.5
comp=Z,0.1nm,0.3s,baz=256,slow=2.8,SNR=5.4
comp=Z,98nm,0.9s
AKASG Malin Array Be 97.58 320 P P 16 38 18.5 -0.6
AKASG IAmb IAmb 16 38 20.0
comp=Z,185nm,0.8s
AKBB Malin Array Si 97.58 320 P P 16 38 18.4 -0.8
AKBB IAmb IAmb 16 38 20.0
comp=Z,179nm,0.9s
AKBB Malin Array Si 97.58 320 P P 16 38 18.4 -0.8
AKBB pmax pmax
comp=Z,179nm,1.0s
TVSB Tavsanli 97.65 309 P P 16 38 19.5 -0.4
YLV Yalova 97.71 310 P P 16 38 19.6 -0.5
APMY Acipayam-Deniz 97.78 307 P P 16 38 19.4 -1.1
ARA0 ARCESS Array S 97.82 340 ⇓eP Pdif P 16 38 19.2 -0.6
ARA0 ePP PP 16 42 24.5 -0.3
ARCES ARCESS Array B 97.82 340 P P 16 38 19.2 -0.6
comp=Z,114nm,0.8s,baz=80,slow=5.3,SNR=109
ARCES PKiKP PKiKP 16 42 51.2 +0.4
comp=Z,5.2nm,0.4s,baz=104,slow=1.1,SNR=28
ARCES PKKPbc PKKPbc 16 54 51.8 -4.2
comp=Z,5.0nm,0.5s,baz=267,slow=2.4,SNR=19
comp=Z,114nm,0.8s
ARCES ARCESS Array B 97.82 340 P P 16 38 18.8 -1.0
ARCES IAmb IAmb 16 38 21.0
comp=Z,147nm,0.8s
GEMT Gemlik 97.85 310 P P 16 38 20.2 -0.4
KAVV Kandilli-Istan 97.94 311 P P 16 38 20.5 -0.5
ISK Istanbul-Kandi 97.94 311 P P 16 38 20.5 -0.5
FETY Fethiye 97.96 306 P P 16 38 20.7 -0.6
KIS Kishinev 97.98 317 ⇓iP P 16 38 20.0 -1.0
comp=Z,330nm,3.1s
KIS epP pwP 16 40 06.0 -0.8
KIS Kishinev 97.98 317 ePP PP 16 42 30.0 +3.3
KIS Kishinev 97.98 317 diP P 16 38 20.0 -1.0
KIS e 16 42 30.0
KIS ePPP PPP 16 44 42.0
KIS i 16 48 14.0
KIS pmax pmax
comp=Z,330nm,3.1s
KIS MLR MLR
comp=Z,300nm,16.0s
MILM Milestii Mici 97.98 317 ⇓iP P 16 38 20.0 -1.0
comp=Z,280nm,1.0s
MILM epP pP 16 39 59.0 -1.5
MILM Milestii Mici 97.98 317 ePP PP 16 42 30.0 +3.3
MILM Milestii Mici 97.98 317 ⇑P P 16 38 20.9 -0.2
MILM Milestii Mici 97.98 317 diP P 16 38 20.0 -1.0
MILM e*PP pP 16 39 59.0 -1.5
MILM e 16 40 41.0
MILM e 16 42 30.0
MILM i PPP PPP 16 44 40.0
MILM iS SKSac 16 48 14.0 -1.5
MILM e 16 51 20.0
MILM pmax pmax
comp=Z,800nm,4.9s
MILM MLR MLR
comp=Z,800nm,22.0s
PLBC Pleasant Camp 98.01 31 P Pdif 16 38 21.5 +0.6
baz=275
SIMA Simav-Kutahya 98.02 309 P P 16 38 20.9 -0.7
TLCR 98.03 315 ⇓P Pdif 16 38 21.4 +0.1
TLCR 98.03 315 ⇓P Pdif 16 38 21.4 +0.1
O30N Mendenhall 98.04 29 P Pdif 16 38 21.8 +0.7
baz=275,SNR=14
MDNY Mudanya-Bursa 98.08 310 P P 16 38 20.9 -0.8
ARMT Armutlu 98.10 310 P P 16 38 20.7 -1.1
N31M Braeburn, Yuko 98.12 29 P Pdif 16 38 21.6 +0.2
N31M Braeburn, Yuko 98.12 29 P Pdif 16 38 22.5 +1.1
baz=275,SNR=19
MANR Mangalia 98.23 313 ⇑P Pdif 16 38 22.5 +0.3
SORM Soroca 98.25 318 ⇑P P 16 38 21.9 -0.3
SORM Soroca 98.25 318 ⇑P P 16 38 21.9 -0.3
INK Inuvik 98.26 22 P P 16 38 21.6 -0.2
comp=Z,62nm,1.0s,baz=272,slow=6.1,SNR=35
INK PKiKP PKiKP 16 42 52.5 +1.0
comp=Z,16nm,0.8s,baz=322,slow=6.1,SNR=9.0
INK S SKSac 16 48 13.2 -2.7
comp=Z,6.0nm,0.8s,baz=324,slow=8.5,SNR=17
comp=Z,62nm,1.0s
INK Inuvik 98.26 22 P P 16 38 21.4 -0.3
baz=278,SNR=29
HAMF Hammerfest 98.26 341 ⇓ePdif P 16 38 21.0 -0.8
HAMF eSKSac SKSac 16 48 18.2 +2.3
KULA Kula-Manisa 98.28 308 P P 16 38 22.7 0.0
TPGR Topolog 98.32 315 ⇓P Pdif 16 38 22.9 +0.3
TIRR Tirgusor 98.34 314 ⇓P Pdif 16 38 22.7 0.0
TIRR Tirgusor 98.34 314 ⇓P P 16 38 22.7 0.0
MFTR Murfatlar 98.34 314 ⇑P Pdif 16 38 22.9 +0.2
CTKS Kestanelik-??a 98.35 311 P Pdif 16 38 21.9 -0.9
SPA0 Spitsbergen Ar 98.37 349 ⇓ePdif P 16 38 22.1 0.0
SPA0 ePP PP 16 42 29.3 +0.5
SPITS Spitsbergen Ar 98.37 349 P P 16 38 21.8 -0.3
comp=Z,160nm,0.7s,baz=100,slow=8.6,SNR=104
SPITS PKiKP PKiKP 16 42 52.9 +1.3
comp=Z,20nm,1.0s,baz=97,slow=5.8,SNR=5.6
comp=Z,160nm,0.7s
CFR Carcaliu 98.51 315 ⇑P Pdif 16 38 23.3 -0.1
CFR Carcaliu 98.51 315 ⇑P Pdif 16 38 23.3 -0.1
VLDR Vladesti 98.53 316 ⇑P P 16 38 24.4 +0.9
PSN Preselentsi 98.53 313 iP P 16 38 23.7 +0.1
SKAG Skagway 98.54 31 P Pdif 16 38 23.7 +0.5
baz=276
VNA2 Neumayer--Watz 98.54 194 P'P'df P'P'df 17 03 00.4 -6.9
VNA2 Neumayer--Watz 98.54 194 PKKPbc PKKPbc 16 54 50.0 -4.0
VNA2 Neumayer--Watz 98.54 194 Pdiff Pdif 16 38 23.1 +0.1
VSU Vasula 98.54 328 diP P 16 38 22.5 -0.7
VSU pmax pmax
comp=Z,342nm,1.1s
VSU Vasula 98.54 328 eP P 16 38 22.3 -1.0
FINES FINESS Array B 98.58 331 P P 16 38 22.1 -1.2
comp=Z,44nm,0.7s,baz=77,slow=4.5,SNR=72
FINES PKiKP PKiKP 16 42 53.4 +1.1
comp=Z,18nm,0.6s,baz=60,slow=1.7,SNR=19
FINES PKKPbc PKKPdf 16 54 55.7 +0.1
comp=Z,3.6nm,0.9s,baz=299,slow=1.4,SNR=3.7
comp=Z,44nm,0.7s
FINES FINESS Array B 98.58 331 P 16 38 21.7 -1.7
SLVT Silivri 98.58 311 P Pdif 16 38 23.7 -0.1
SCTR Scanteiesti 98.59 315 ⇓P P 16 38 24.3 +0.5
YER Yerkesik 98.60 307 P P 16 38 24.3 +0.2
TURN Turunc 98.63 306 P P 16 38 24.7 +0.5
HARR Harsova 98.68 314 ⇑P P 16 38 24.3 +0.1
HARR Harsova 98.68 314 ⇑P P 16 38 24.3 +0.1
VARL Varlezi 98.69 316 ⇑P P 16 38 25.1 +0.9
VASR Vaslui 98.69 316 ⇑P P 16 38 25.0 +0.7
KTK1 Kautokeino 98.69 339 ⇓ePdif P 16 38 22.8 -0.9
KTK1 eSKSac SKSac 16 48 18.8 +0.6
KTK1 ePS PS 16 51 39.9 +0.3
M31M Drury Creek, Y 98.70 28 P P 16 38 24.5 +0.5
baz=277,SNR=13
ARG Arkhangelos 98.74 306 P Pdif 16 38 24.5 -0.2
SIT Sitka 98.76 33 P P 16 38 25.3 +1.1
baz=275,SNR=5.3
IDID Didziasalis 98.81 325 eP P 16 38 25.0 +0.5
BJO1 Bjornoya 98.81 345 ⇓ePdif P 16 38 25.0 +0.8
BJO1 ePP PP 16 42 32.6 +0.4
NACGM Naroch 98.82 325 ⇓eP P 16 38 25.2 +0.6
baz=86
VNA3 Neumayer Olymp 98.86 193 P'P'df P'P'df 17 03 00.4 -6.3
VNA3 Neumayer Olymp 98.86 193 PKKPbc PKKPbc 16 54 48.0 -5.1
VNA3 Neumayer Olymp 98.86 193 Pdiff Pdif 16 38 25.0 +0.5
GRAN Grantham 98.86 236 ⇓iP P 16 38 26.5 +1.0
GRAN IAmb IAmb 16 38 27.9
comp=Z,27nm,0.8s
BALB Balikesir 98.87 309 P Pdif 16 38 25.1 -0.1
AYDB Zeytinkoy-Aydi 98.90 308 P P 16 38 25.7 +0.2
HSPB Hornsund (broa 98.91 348 eP Pdif 16 38 23.4 -1.1
HSPB ePP PP 16 42 33.9 +1.0
HSPB eS SKSac 16 48 14.4 -4.5
HSPB Hornsund (broa 98.91 348 ⇓ePdif Pdif 16 38 24.1 -0.5
VNA1 Neumayer--Stat 98.94 194 PKKPbc PKKPbc 16 54 48.9 -3.9
VNA1 Neumayer--Stat 98.94 194 Pdiff P 16 38 25.5 +0.7
CRLT Corlu 98.94 311 P Pdif 16 38 25.3 -0.2
KBS Kingsbay 98.94 350 ceP P 16 38 24.8 +0.1
KBS pmax pmax
comp=Z,147nm,0.6s
KBS Kingsbay 98.94 350 iP Pdif 16 38 23.7 -1.0
KBS Kingsbay 98.94 350 ⇓ePdif Pdif 16 38 24.6 -0.1
KBS eSKSac SKSac 16 48 20.7 +1.6
KBS ePS PS 16 51 42.4 +0.5
MRMT Marmara Adasi 99.06 310 P Pdif 16 38 25.4 -0.7
IGN Ignalina 99.10 325 eP Pdif 16 38 26.5 +0.8
PRD Provadia 99.12 313 iP Pdif 16 38 26.8 +0.6
ISAL Salakas 99.14 325 eP Pdif 16 38 26.6 +0.6
DAT Datca 99.17 306 P Pdif 16 38 26.2 -0.5
PANC Panciu 99.18 316 ⇓P Pdif 16 38 27.8 +1.5
FARO Faro, Yukon 99.18 28 P Pdif 16 38 26.9 +0.8
baz=278,SNR=62
ODBI Odobesti 99.25 315 ⇑P Pdif 16 38 28.1 +1.4
GZKV Gazikoy-Tekird 99.26 310 P Pdif 16 38 26.5 -0.4
MAR3 Marsite Statio 99.28 310 P Pdif 16 38 26.3 -0.7
KRBG Karabiga-Canak 99.29 310 P Pdif 16 38 26.4 -0.6
MAR6 Marsite Statio 99.31 310 P Pdif 16 38 26.9 -0.2
GRER 99.32 315 ⇓P Pdif 16 38 29.0 +1.9
BODT Bodrum 99.38 307 P Pdif 16 38 27.2 -0.3
VRI Vrincioaia 99.47 316 ⇓P Pdif 16 38 28.6 +0.8
VRI Vrincioaia 99.47 316 P Pdif 16 38 28.0 +0.3
VRI Vrincioaia 99.47 316 ⇓P Pdif 16 38 28.6 +0.8
BISRR Bisoca 99.50 315 ⇓P Pdif 16 38 29.3 +1.4
PLOR Plostina 99.53 316 ⇑P Pdif 16 38 28.9 +0.9
PLOR Plostina 99.53 316 ⇑P Pdif 16 38 28.9 +0.9
KARP Karpathos 99.53 305 P Pdif 16 38 28.9 +0.6
KARP Karpathos 99.53 305 P Pdif 16 38 29.1 +0.8
MEF Metsahovi 99.54 330 eP Pdif 16 38 27.2 -0.5
BLCB Balcova 99.56 308 P Pdif 16 38 28.3 0.0
JETT Jettan, Norway 99.57 340 ⇓ePdif Pdif 16 38 27.2 -0.5
JETT ePP PP 16 42 38.7 +0.6
JETT eSKSac SKSac 16 48 23.4 +0.9
DKL Dikili 99.64 309 P Pdif 16 38 28.2 -0.4
ISR Istrita 99.64 315 ⇑P Pdif 16 38 29.9 +1.3
ISR Istrita 99.64 315 ⇑P Pdif 16 38 29.9 +1.3
EDRB Edirne 99.66 312 P Pdif 16 38 28.0 -0.6
P33M Teslin, Yukon 99.71 30 P Pdif 16 38 29.3 +0.7
baz=278
JMB Yambol 99.75 312 iP Pdif 16 38 27.3 -1.7
RAZG Razgrad 99.75 313 ⇑P Pdif 16 38 29.5 +0.5
NEHR Nehoiu 99.80 315 ⇓P Pdif 16 38 30.2 +1.0
BIZ Bicaz 99.83 317 ⇓P Pdif 16 38 30.2 +0.9
COVR Voineasa-Covas 99.84 316 ⇑P Pdif 16 38 29.9 +0.5
COVR Voineasa-Covas 99.84 316 ⇑P PP 16 42 45.5 +4.7
SULR 99.87 314 ⇑P Pdif 16 38 30.4 +0.9
ERIK Erikli-Kesan 99.88 310 P Pdif 16 38 29.4 -0.2
URLA Izmir 99.91 308 P Pdif 16 38 29.7 -0.2
SUR Sutherland 99.97 236 P Pdif 16 38 31.6 +1.0
comp=Z,48nm,1.1s,baz=110,slow=3.4,SNR=17
SUR PKKPbc PKKPbc 16 54 49.6 +0.9
comp=Z,14nm,0.8s,baz=308,slow=1.3,SNR=13
comp=Z,48nm,1.1s
MATJ Matjiesfontein 99.98 235 eP Pdif 16 38 32.2 +1.8
MATJ IAmb IAmb 16 38 33.5
comp=Z,133nm,1.0s
MTSE Matsula 100.03 329 eP Pdif 16 38 30.5 +0.6
MLR Muntele Rosu 100.04 315 ⇓P Pdif 16 38 30.9 +0.5
MLR Muntele Rosu 100.04 315 ⇓P PP 16 42 46.9 +4.5
MLR Muntele Rosu 100.04 315 P Pdif 16 38 30.5 0.0
comp=Z,68nm,0.8s,baz=43,slow=1.3,SNR=117
MLR PP PP 16 42 43.9 +1.4
comp=Z,322nm,0.9s,baz=102,slow=5.1,SNR=16
MLR S SKSac 16 48 25.1 -0.9
comp=Z,17nm,1.0s,baz=158,slow=21,SNR=12
MLR Muntele Rosu 100.04 315 ⇓P Pdif 16 38 30.9 +0.5
TRO Tromso 100.06 340 ⇓ePdif Pdif 16 38 28.9 -0.9
TRO eSKSac SKSac 16 48 25.0 +0.2
MMPY Sheldon Lake, 100.08 27 P Pdif 16 38 31.4 +1.3
baz=280,SNR=35
SGRR Singureni 100.10 314 ⇑P Pdif 16 38 31.2 +0.7
PRK Paraskevi 100.13 309 P Pdif 16 38 31.5 +0.7
CRAG Craig 100.15 35 P Pdif 16 38 31.5 +1.1
baz=277
ENEZ Enez 100.15 310 P Pdif 16 38 30.7 -0.1
SZH Strazhica 100.18 313 iP Pdif 16 38 30.9 -0.1
A36M Sachs Harbour 100.21 17 P Pdif 16 38 32.1 +1.8
baz=287,SNR=6.9
ALN Alexandroupoli 100.23 311 P Pdif 16 38 30.5 -0.7
ALN Alexandroupoli 100.23 311 P Pdif 16 38 30.7 -0.5
BOZC Bozcaada 100.27 310 P Pdif 16 38 31.2 -0.2
ZKR Zakros 100.31 305 P Pdif 16 38 31.9 +0.2
ZKR Zakros 100.31 305 P Pdif 16 38 31.9 +0.2
VSVD Vaisvydziai 100.33 326 eP Pdif 16 38 31.5 +0.3
CHOS Chios island 100.33 308 P Pdif 16 38 31.6 -0.2
CHOS Chios island 100.33 308 P Pdif 16 38 31.6 -0.2
PABE Paberze 100.36 325 eP Pdif 16 38 32.1 +0.7
GADA Gvkgeada 100.37 310 P Pdif 16 38 31.3 -0.5
BURAR Bucovina Array 100.39 317 ⇓P PP 16 42 47.7 +2.7
UPI Upington 100.39 240 eP Pdif 16 38 32.6 +0.2
UPI IAmb IAmb 16 38 33.9
comp=Z,16nm,1.1s
DOPR Dopca 100.40 316 ⇑P Pdif 16 38 32.6 +0.7
DOPR Dopca 100.40 316 ⇑P PP 16 42 46.0 +1.1
SIGR SIGRI 100.45 309 P Pdif 16 38 31.7 -0.5
WRAK Wrangell Islan 100.46 34 P Pdif 16 38 33.0 +1.2
baz=278,SNR=13
DIM Dimitrovgrad 100.55 312 iP Pdif 16 38 32.7 +0.1
KEIM Keimoes 100.57 240 eP Pdif 16 38 33.6 +0.5
KEIM IAmb IAmb 16 38 35.0
comp=Z,39nm,0.9s
RDO Rodhopi 100.60 311 P Pdif 16 38 31.9 -0.9
RDO Rodhopi 100.60 311 P Pdif 16 38 32.3 -0.5
SMTH Samothraki Isl 100.64 310 P Pdif 16 38 32.2 -0.9
COPA Copaceanca 100.65 314 ⇑P PP 16 42 44.5 -2.3
KDZ Kurdzhali 100.66 311 iP Pdif 16 38 32.5 -0.6
VOIR 100.67 315 ⇑P Pdif 16 38 33.3 +0.1
VOIR 100.67 315 ⇑P Pdif 16 38 33.3 +0.1
RAF Rauma 100.70 331 eP Pdif 16 38 31.5 -1.3
STFAR Stefanesti-Arg 100.78 315 ⇑P Pdif 16 38 34.4 +0.8
NPS Neapolis 100.80 305 P Pdif 16 38 34.2 +0.3
SANT Santorini 100.89 306 ⇑P Pdif 16 38 33.6 -0.6
THR3 Thira Island, 100.93 306 P Pdif 16 38 34.1 -0.3
CVNA L'vov 100.97 320 ciP Pdif 16 38 34.5 +0.2
LVV eS Sdif 16 49 26.7 -6.7
LVV pmax pmax
comp=Z,400nm,1.4s
SUW Suwalki 101.00 324 eP Pdif 16 38 34.4 +0.1
SUW ePPP PPP 16 45 04.0
SUW eS SKSac 16 48 25.2 -4.8
SUW Suwalki 101.00 324 eP Pdif 16 38 34.4 +0.1
ARCR ARCALIA 101.02 317 ⇑P Pdif 16 38 35.6 +1.0
CVNA Calvinia 101.03 237 ⇓iP Pdif 16 38 36.8 +1.6
CVNA IAmb IAmb 16 38 37.7
comp=Z,48nm,0.9s
PLD Plovdiv 101.16 312 P Pdif 16 38 34.8 -0.5
PLD Plovdiv 101.16 312 iP Pdif 16 38 34.8 -0.5
RZN Rozhen 101.18 311 iP Pdif 16 38 34.8 -0.9
NOR Nord 101.22 355 iP Pdif 16 38 33.7 -1.1

VLAD	**Vladila**	**101.24**	**314**	⇑P		**Pdif**	**16 38 36.5**	**+0.9**
THAS	**Thassos island**	**101.25**	**310**	P		**Pdif**	**16 38 35.3**	**-0.4**
C36M	**Paulatuk**	**101.37**	**20**	P		**Pdif**	**16 38 35.7**	**+0.1**
	baz=288,SNR=15							
KAVA	**Kavala**	**101.38**	**311**	P		**Pdif**	**16 38 35.4**	**-0.9**
IDI	**Anoyia**	**101.39**	**305**	⇓P		**Pdif**	**16 38 36.7**	**+0.1**
IDI	**Anoyia**	**101.39**	**305**	P		**Pdif**	**16 38 36.6**	**-0.1**
	comp=Z,42nm,0.6s,baz=52,slow=7.3,SNR=55							
IDI				PP		**PP**	**16 42 51.2**	**-1.6**
	comp=Z,40nm,0.9s,baz=53,slow=5.9,SNR=6.7							
IDI				PKiKP		**PKiKP**	**16 42 59.1**	**+0.8**
	comp=Z,39nm,0.8s,baz=342,slow=3.2,SNR=11							
IDI				S		**SKSac**	**16 48 28.3**	**-4.6**
	comp=Z,18nm,1.0s,baz=208,slow=5.6,SNR=3.2							
IDI				PKKPbc		**PKKPbc**	**16 54 46.1**	**+1.5**
	comp=Z,19nm,0.7s,baz=307,slow=4.5,SNR=19							
IDI	**Anoyia**	**101.39**	**305**	P		**Pdif**	**16 38 36.4**	**-0.2**
IDI	**Anoyia**	**101.39**	**305**	P		**Pdif**	**16 38 36.5**	**-0.1**
DLBC	**Dease Lake**	**101.40**	**31**	P		**Pdif**	**16 38 36.5**	**+0.4**
	comp=Z,7.0nm,0.8s,baz=266,slow=2.4,SNR=21							
DLBC	**Dease Lake**	**101.40**	**31**	P		**Pdif**	**16 38 36.8**	**+0.7**
	baz=280							
PBUR	**Paburge**	**101.43**	**326**	*e*P		**Pdif**	**16 38 37.0**	**+0.8**
T35M	**Bob Quinn**	**101.52**	**33**	P		**Pdif**	**16 38 38.0**	**+1.4**
	baz=279,SNR=7.7							
BMR	**Baia Mare**	**101.54**	**318**	⇑P		**Pdif**	**16 38 38.3**	**+1.4**
BMR	**Baia Mare**	**101.54**	**318**	⇑P		**Pdif**	**16 38 38.3**	**+1.4**
CJR	**Cluj-Napoca**	**101.57**	**317**	⇓P		**Pdif**	**16 38 38.6**	**+1.5**
CJR	**Cluj-Napoca**	**101.57**	**317**	⇓P		**Pdif**	**16 38 38.6**	**+1.5**
LOT	**Lotru**	**101.57**	**315**	⇑P		**Pdif**	**16 38 38.4**	**+1.1**
LOT	**Lotru**	**101.57**	**315**	P		**Pdif**	**16 38 37.0**	**-0.2**
CBBR	**Cluj-Babes-Bol**	**101.60**	**317**	⇑P		**Pdif**	**16 38 38.8**	**+1.7**
KARY	**Karystos**	**101.62**	**308**	P		**Pdif**	**16 38 36.6**	**-0.9**
TGTN	**Hyland Airport**	**101.67**	**28**	P		**Pdif**	**16 38 38.5**	**+1.3**
	baz=282							
AAL	**Aland**	**101.72**	**331**	*e*P		**Pdif**	**16 38 36.2**	**-1.1**
STEI	**Steigen**	**101.82**	**339**	⇓*e*Pdif		**Pdif**	**16 38 36.8**	**-0.8**
STEI				*e*SKSac		**SKSac**	**16 48 34.0**	**+0.7**
OUR	**Ouranopolis**	**101.83**	**310**	P		**Pdif**	**16 38 37.5**	**-0.8**
OUR	**Ouranopolis**	**101.83**	**310**	P		**Pdif**	**16 38 37.7**	**-0.6**
KWP	**Kalwaria Pacla**	**101.84**	**320**	*e*P		**Pdif**	**16 38 39.1**	**+0.9**
KWP				*e*PP		**PKiKP**	**16 42 59.7**	**+1.1**
KWP				*e*PPP		PPP	16 45 09.3	
KWP				*e*S		**SKSac**	**16 48 32.2**	**-2.0**
NVR	**Nevrokopi**	**101.84**	**311**	P		**Pdif**	**16 38 37.5**	**-0.9**
KYMI	**Kymi, Euboea I**	**101.85**	**308**	P		**Pdif**	**16 38 36.7**	**-1.8**
MMB	**Musomiste**	**101.93**	**311**	*i* P		**Pdif**	**16 38 37.1**	**-1.7**
FAUS	**Fauske**	**101.96**	**338**	⇓*e*Pdif		**Pdif**	**16 38 37.6**	**-0.7**
FAUS				*e*PP		**PP**	**16 42 55.5**	**-0.3**
FAUS				*e*SKSac		**SKSac**	**16 48 34.7**	**+0.8**
FAUS				*e*PS		PS	16 52 14.1	+0.7
MESR	**Meseseni**	**101.97**	**317**	⇑P		**PKiKP**	**16 43 03.4**	**+4.5**
SRS	**Serrai**	**102.06**	**311**	P		**Pdif**	**16 38 38.1**	**-1.3**
PTL	**Penteli**	**102.07**	**308**	P		**Pdif**	**16 38 38.2**	**-1.3**
PAIG	**Paliouri**	**102.09**	**310**	P		**Pdif**	**16 38 38.6**	**-0.9**
IMMV	**Iera Moni Meta**	**102.13**	**305**	P		**Pdif**	**16 38 40.2**	**+0.4**
IMMV	**Iera Moni Meta**	**102.13**	**305**	P		**Pdif**	**16 38 40.1**	**+0.3**
DEV	**Deva**	**102.13**	**316**	⇑P		**Pdif**	**16 38 41.0**	**+1.5**
DEV	**Deva**	**102.13**	**316**	⇑P		**PKiKP**	**16 43 00.8**	**+1.6**
DEV	**Deva**	**102.13**	**316**	⇑P		**Pdif**	**16 38 41.0**	**+1.5**
VLY	**Voula,Athens**	**102.14**	**308**	P		**Pdif**	**16 38 38.5**	**-1.3**
DRGR		**102.17**	**317**	⇓P		**Pdif**	**16 38 40.6**	**+0.8**
DRGR		**102.17**	**317**	⇓P		**PKiKP**	**16 43 02.9**	**+3.5**
DRGR		**102.17**	**317**	⇓P		**Pdif**	**16 38 40.6**	**+0.8**
VTS	**Vitosha**	**102.21**	**312**	⇓P		**Pdif**	**16 38 39.8**	**-0.4**
VTS	**Vitosha**	**102.21**	**312**	⇓P		**Pdif**	**16 38 39.8**	**-0.4**
VTS	**Vitosha**	**102.21**	**312**	*i* P		**Pdif**	**16 38 39.4**	**-0.8**
KOLS	**Kolonicke sedl**	**102.21**	**319**	*e*P		**Pdif**	**16 38 41.9**	**+2.0**
KOLS	**Kolonicke sedl**	**102.21**	**319**	*e*PDIFF		**Pdif**	**16 38 41.9**	**+2.0**
UZH	**Uzhgorod**	**102.23**	**319**	⇑*i*P		**Pdif**	**16 38 38.7**	**-1.2**
UZH				*e*S		**Sdif**	**16 49 38.6**	**-5.4**
UZH				*e*SS		**SS**	**16 57 01.8**	**+0.5**
UZH				MLR		MLR		
	comp=Z,190nm,20.0s							
GZR	**Gura Zlata**	**102.27**	**315**	⇓P		**Pdif**	**16 38 41.0**	**+0.7**
GZR	**Gura Zlata**	**102.27**	**315**	⇓P		**Pdif**	**16 38 41.0**	**+0.7**
LOF	**Lofoten**	**102.36**	**339**	*e*Pdif		**Pdif**	**16 38 38.0**	**-2.1**
LOF				*e*SKSac		**SKSac**	**16 48 36.8**	**+1.0**
KNDR	**Palaiochora Ch**	**102.38**	**305**	P		**Pdif**	**16 38 41.3**	**+0.4**
KKB	**Krupnik**	**102.38**	**312**	*i* P		**Pdif**	**16 38 39.9**	**-0.9**
HORT	**Hortiatis**	**102.48**	**310**	P		**Pdif**	**16 38 39.7**	**-1.6**
HORT	**Hortiatis**	**102.48**	**310**	P		**Pdif**	**16 38 39.7**	**-1.7**
XOR	**Xorichti**	**102.50**	**309**	P		**Pdif**	**16 38 39.7**	**-1.7**
BLKB	**Belogradchik**	**102.52**	**314**	⇓P		**Pdif**	**16 38 41.8**	**+0.4**
DJES	**Djerdap**	**102.53**	**315**	⇓P		**Pdif**	**16 38 42.0**	**+0.7**
KNT	**Kendrikon**	**102.58**	**311**	P		**Pdif**	**16 38 40.5**	**-1.2**
KNT	**Kendrikon**	**102.58**	**311**	P		**Pdif**	**16 38 40.3**	**-1.4**
LTVH	**Ltavrtes, Hu**	**102.65**	**317**	⇓P		**Pdif**	**16 38 43.5**	**+1.7**
LTVH	**Ltavrtes, Hu**	**102.65**	**317**	P		**Pdif**	**16 38 43.3**	**+1.5**
MOR8	**Moi Rana**	**102.65**	**337**	⇓*e*Pdif		**Pdif**	**16 38 39.2**	**-2.2**
MOR8				*e*PP		**PKiKP**	**16 43 00.1**	**+0.5**
MOR8				*e*SKSac		**SKSac**	**16 48 37.1**	**-0.2**
ANKY	**Antikythira Is**	**102.66**	**306**	P		**Pdif**	**16 38 42.1**	**0.0**
KRND	**KRANIDI**	**102.68**	**307**	P		**Pdif**	**16 38 41.1**	**-1.1**
LKR	**Lokris**	**102.71**	**308**	P		**Pdif**	**16 38 39.6**	**-2.7**
CRVS	**Cervenica-Dubn**	**102.75**	**319**	⇑*e*P		**Pdif**	**16 38 43.9**	**+1.7**
CRVS				*e*			16 42 58.7	
CRVS				*e*			16 48 36.7	
CRVS	**Cervenica-Dubn**	**102.75**	**319**	*e*PDIFF		**Pdif**	**16 38 43.9**	**+1.7**
CRVS				*e*PP		**PKiKP**	**16 42 58.7**	**-1.6**
CRVS				*e*			16 10.4	
BEL	**Belsk**	**102.75**	**322**	*e*P		**Pdif**	**16 38 43.3**	**+1.2**
BEL				*e*PP		**PP**	**16 43 06.1**	**+3.9**
BEL				*e*PPP		PPP	16 45 16.5	
BEL				*e*S		**SKSac**	**16 48 39.2**	**+1.0**
BORR	**Bors**	**102.76**	**317**	⇑P		**PKiKP**	**16 43 01.7**	**+1.4**
KTHA	**Kythira Island**	**102.83**	**306**	P		**Pdif**	**16 38 41.7**	**-1.2**
KTHR	**Kythira**	**102.87**	**306**	P		**Pdif**	**16 38 42.5**	**-0.6**
VLI	**Veliai**	**102.89**	**306**	P		**Pdif**	**16 38 41.6**	**-1.6**
SIRR	**Siria**	**102.95**	**316**	⇓P		**Pdif**	**16 38 44.0**	**+0.8**
GRG	**Griva**	**102.98**	**311**	P		**Pdif**	**16 38 42.1**	**-1.4**
GRG	**Griva**	**102.98**	**311**	P		**Pdif**	**16 38 42.3**	**-1.2**
LIT	**Litokhoron**	**102.98**	**310**	P		**Pdif**	**16 38 42.3**	**-1.2**
KONS	**Konsvik**	**103.05**	**338**	*e*Pdif		**Pdif**	**16 38 42.5**	**-0.6**
KONS				*e*PP		**PP**	**16 43 04.5**	**+0.6**
KONS				*e*SKSac		**SKSac**	**16 48 40.9**	**+1.8**
BZS	**Buzias**	**103.06**	**316**	⇑P		**Pdif**	**16 38 43.7**	**0.0**
BZS	**Buzias**	**103.06**	**316**	⇓P		**PKiKP**	**16 43 02.5**	**+1.6**
BZS	**Buzias**	**103.06**	**316**	⇑P		**Pdif**	**16 38 43.7**	**0.0**
MDVR	**Moldovita**	**103.09**	**315**	⇓P		**Pdif**	**16 38 44.6**	**+0.7**
STOK	**Stokkvaagen**	**103.14**	**337**	*e*Pdif		**Pdif**	**16 38 43.0**	**-0.6**
STOK				*e*SKSac		**SKSac**	**16 48 40.9**	**+1.4**
KLV	**Kalavryta, Ach**	**103.42**	**308**	P		**Pdif**	**16 38 44.1**	**-1.5**
KECS	**Kecovo**	**103.44**	**319**	*e*P		**Pdif**	**16 38 46.6**	**+1.3**
KECS	**Kecovo**	**103.44**	**319**	*e*PDIFF		**Pdif**	**16 38 46.6**	**+1.3**
KECS				*e*			16 41 54.2	
SERG	**Sergoula**	**103.46**	**308**	P		**Pdif**	**16 38 44.7**	**-1.0**
LAKA	**Lakka**	**103.54**	**308**	P		**Pdif**	**16 38 45.3**	**-0.7**
EVR	**Evrytania**	**103.61**	**309**	P		**Pdif**	**16 38 45.4**	**-1.0**
OJC	**Ojcow**	**103.62**	**321**	*e*P		**Pdif**	**16 38 45.3**	**-0.8**
OJC				*e*PP		**PP**	**16 43 11.2**	**+2.5**
OJC				*e*PPP		PPP	16 45 22.5	
OJC				*e*S		**SKSac**	**16 48 40.6**	**-1.8**
ITM	**Ithomi**	**103.67**	**307**	P		**Pdif**	**16 38 45.5**	**-1.1**
ITM	**Ithomi**	**103.67**	**307**	P		**Pdif**	**16 38 45.6**	**-1.1**
FNA	**Florina**	**103.77**	**311**	P		**Pdif**	**16 38 45.4**	**-1.6**
FNA	**Florina**	**103.77**	**311**	P		**Pdif**	**16 38 45.4**	**-1.6**
DRO	**Drossia**	**103.78**	**308**	P		**Pdif**	**16 38 47.1**	**0.0**
PYL	**PYLOS**	**103.84**	**307**	P		**Pdif**	**16 38 46.4**	**-1.0**
PSZ	**Piszkesteto**	**103.92**	**318**	⇑P		**Pdif**	**16 38 48.6**	**+1.0**
PSZ	**Piszkesteto**	**103.92**	**318**	⇑P		**Pdif**	**16 38 48.6**	**+1.0**
PSZ	**Piszkesteto**	**103.92**	**318**	P		**Pdif**	**16 38 47.4**	**-0.1**
RLS	**Riolos of Patr**	**103.96**	**308**	P		**Pdif**	**16 38 47.8**	**0.0**
LANS	**Liptovska Anna**	**104.01**	**319**	*e*P		**Pdif**	**16 38 49.7**	**+1.8**
LANS	**Liptovska Anna**	**104.01**	**319**	*e*PDIFF		**Pdif**	**16 38 49.7**	**+1.8**
LANS	**Liptovska Anna**	**104.01**	**319**	*e*			16 42 00.3	
NSS	**Namsos**	**104.16**	**336**	⇓*e*Pdif		**Pdif**	**16 38 46.7**	**-1.4**
NSS				*e*SKSac		**SKSac**	**16 48 45.2**	**+1.0**
NSS				*e*SP		SP	16 51 43.0	+3.1
NSS				*e*PS		**PS**	**16 52 37.0**	**+1.1**
NSS				*e*SS		**SS**	**16 57 29.1**	**+2.7**
FRGS	**Fruska Gora**	**104.38**	**315**	⇓P		**Pdif**	**16 38 50.1**	**+0.4**
FRGS	**Fruska Gora**	**104.38**	**315**	*e*P		**Pdif**	**16 38 50.0**	**+0.4**
DIVS	**Divibare**	**104.39**	**314**	*e*P		**Pdif**	**16 38 49.9**	**+0.1**
NYDR	**Nydri-Lefkada**	**104.50**	**309**	P		**Pdif**	**16 38 50.2**	**0.0**
SJES	**Sjenica**	**104.52**	**313**	*e*P		**Pdif**	**16 38 51.1**	**+0.7**
LKD2	**Lefkada island**	**104.52**	**309**	P		**Pdif**	**16 38 49.8**	**-0.6**
BUD	**Budapest**	**104.57**	**318**	P		**Pdif**	**16 38 50.7**	**+0.4**
GKP	**Gorka Klasztor**	**104.62**	**324**	*e*P		**Pdif**	**16 38 50.2**	**-0.2**
GKP				*e*PP		**PP**	**16 43 21.0**	**+5.2**
GKP				*e*PPP		PPP	16 45 26.6	
GKP				*e*S		**SKSac**	**16 48 43.0**	**-3.8**
IGT	**Igoumenitsa**	**104.69**	**310**	P		**Pdif**	**16 38 50.2**	**-0.9**
OKC	**Ostrava-Krasne**	**104.74**	**320**	*e*P		**Pdif**	**16 38 52.2**	**+1.2**
OKC	**Ostrava-Krasne**	**104.74**	**320**	*e*PDIFF		**Pdif**	**16 38 52.2**	**+1.2**
OKC				*e*PP		**PKiKP**	**16 43 01.8**	**-2.1**
HFS	**Hagfors**	**104.78**	**331**	Pdiff		**Pdif**	**16 38 50.0**	**-1.0**
	comp=Z,24nm,0.6s,baz=92,slow=4.5,SNR=81							
HFS				PKKPbc		**PKKPbc**	**16 54 31.8**	**-3.8**
	comp=Z,1.9nm,0.7s,baz=123,slow=5.3,SNR=5.3							
BBLS	**Lazići**	**104.85**	**314**	*e*P		**Pdif**	**16 38 52.3**	**+0.5**
RUDO	**Rudo**	**104.91**	**314**	*e*P		**Pdif**	**16 38 52.1**	**+0.1**
SRO	**Srobarova**	**104.99**	**318**	*e*P		**Pdif**	**16 38 53.9**	**+1.7**
SRO				*e*			16 43 16.4	
SRO	**Srobarova**	**104.99**	**318**	*e*PDIFF		**Pdif**	**16 38 53.8**	**+1.6**
SRO				*e*PP		**PP**	**16 43 16.4**	**-2.4**
MAUC	**Maruska**	**105.03**	**320**	*e*PDIFF		**Pdif**	**16 38 54.2**	**+1.8**
MAUC				*e*PP		**PKiKP**	**16 43 10.8**	**+6.3**
MORH	**Mrgy, Hungar**	**105.03**	**317**	⇓P		**Pdif**	**16 38 53.0**	**+0.6**
MORH	**Mrgy, Hungar**	**105.03**	**317**	*e*P		**Pdif**	**16 38 52.6**	**+0.2**
MORH	**Mrgy, Hungar**	**105.03**	**317**	P		**Pdif**	**16 38 53.0**	**+0.6**
KEK	**Kerkira**	**105.08**	**310**	P		**Pdif**	**16 38 51.5**	**-1.3**
MORC	**Moravsky Berou**	**105.13**	**320**	*e*PDIFF		**Pdif**	**16 38 53.8**	**+0.9**
MORC				*e*PP		**PP**	**16 43 21.6**	**+1.8**
MORC				*e*			16 45 35.2	
MORC				*e*			16 45 58.5	
MORC				*e*SKS		**SKSac**	**16 48 50.7**	**+1.3**
PDG	**Podgorica**	**105.15**	**313**	⇓P		**Pdif**	**16 38 51.3**	**-1.7**
PDG	**Podgorica**	**105.15**	**313**	*e*P		**Pdif**	**16 38 52.5**	**-0.5**
JAVC	**Velka Javorina**	**105.22**	**319**	*e*PDIFF		**Pdif**	**16 38 55.1**	**+1.8**
JAVC				*e*PP		**PP**	**16 43 23.9**	**+3.4**
JAVC				*e*			16 45 39.2	
JAVC				*e*			16 45 59.6	
DRME	**Dracevica, Mon**	**105.24**	**312**	*e*P		**Pdif**	**16 38 53.2**	**-0.3**
DAG	**Danmarks Havn**	**105.29**	**352**	*i* P		**Pdif**	**16 38 52.0**	**-0.9**
UPM	**Unac-Piva**	**105.30**	**313**	*e*P		**Pdif**	**16 38 53.5**	**-0.5**
TBLU	**Trondheim**	**105.31**	**335**	⇓*e*Pdif		**Pdif**	**16 38 52.0**	**-1.3**
TBLU				*e*PP		**PP**	**16 43 20.0**	**-0.6**
TBLU				*e*SKSac		**SKSac**	**16 48 49.5**	**+0.1**
TBLU				*e*SKSac		**SKSac**	**16 48 49.5**	**+0.1**
TSUM	**Tsumeb**	**105.41**	**249**	⇓*i*P		**Pdif**	**16 38 55.6**	**+0.7**
TSUM				IAmb		IAmb	16 38 56.6	
	comp=Z,148nm,1.0s							
TSUM	**Tsumeb**	**105.41**	**249**	Pdiff		**Pdif**	**16 38 55.3**	**+0.4**
	comp=Z,15nm,1.0s,baz=81,slow=6.8,SNR=13							
TSUM				PKKPbc		**PKKPbc**	**16 54 33.4**	**+0.9**
	comp=Z,4.3nm,0.8s,baz=325,slow=11,SNR=5.2							
TSUM	**Tsumeb**	**105.41**	**249**			**Pdif**	**16 38 55.1**	**+0.2**
KOVH	**Kovagototos**	**105.42**	**316**	P		**Pdif**	**16 38 54.5**	**+0.3**
SMOL	**Smolenice**	**105.44**	**319**	*e*P		**Pdif**	**16 38 55.2**	**+1.0**
SMOL				*e*			16 43 20.6	
SMOL	**Smolenice**	**105.44**	**319**	*e*PDIFF		**Pdif**	**16 38 55.2**	**+1.0**
SMOL				*e*PP		**PP**	**16 43 20.6**	**-1.5**
BSD	**Bornholm Skovb**	**105.52**	**326**	*e*P		**Pdif**	**16 38 54.8**	**+0.5**
BSD	**Bornholm Skovb**	**105.52**	**326**	*i* P		**Pdif**	**16 38 53.8**	**-0.5**
KRLC	**Kraliky**	**105.56**	**321**	*e*P		**Pdif**	**16 38 55.5**	**+0.7**
KRLC	**Kraliky**	**105.56**	**321**	*e*PDIFF		**Pdif**	**16 38 55.5**	**+0.7**
KRLC				*e*PKP		**PKiKP**	**16 43 06.0**	**+0.6**
KRLC				*e*PP		PP	16 43 14.2	-8.7
KRLC				*e*SKKP			16 57 30.8	
MODS	**Modra-Piesok**	**105.57**	**319**	*e*P		**Pdif**	**16 38 55.9**	**+1.1**
MODS				*e*			16 43 21.1	
MODS				*e*			16 48 50.6	
MODS				*e*			16 51 51.2	
MODS	**Modra-Piesok**	**105.57**	**319**	*e*PDIFF		**Pdif**	**16 38 55.9**	**+1.1**
MODS				*e*			16 42 05.5	
MODS				*e*PP		**PP**	**16 43 21.1**	**-1.9**
MODS				*e*			16 45 33.5	
BRY	**Bratogost**	**105.61**	**313**	*e*P		**Pdif**	**16 38 54.9**	**-0.4**
NC602	**NORSAR Array S**	**105.61**	**332**	⇓*e*Pdif		**Pdif**	**16 38 53.5**	**-1.1**
NC602				*e*PP		**PP**	**16 43 23.5**	**+0.7**
NC602				*e*SKSac		**SKSac**	**16 48 52.5**	**+1.6**
NC602				*e*PS		**PS**	**16 52 50.5**	**+0.1**
MPLH	**Magyarpolny**	**105.62**	**318**	P		**Pdif**	**16 38 55.5**	**+0.5**
NB2	**NORSAR Subarra**	**105.66**	**333**	P		**Pdif**	**16 38 53.7**	**-1.2**
	baz=75,slow=4.6							
NB2	**NORSAR Subarra**	**105.66**	**333**	P		**Pdif**	**16 38 53.7**	**-1.2**
	comp=Z,32nm,0.9s,baz=75,slow=4.6							
NOA	**NORSAR Array B**	**105.66**	**333**	Pdiff		**Pdif**	**16 38 53.9**	**-1.0**
	comp=Z,22nm,0.7s,baz=73,slow=4.5,SNR=83							
NOA				PP		**PP**	**16 43 24.6**	**+1.3**
	comp=Z,12nm,0.9s,baz=75,slow=6.9,SNR=3.8							
NOA				SKP			16 45 57.6	
	comp=Z,7.9nm,0.8s,baz=263,slow=3.1,SNR=4.8							
NOA				PKKPbc		**PKKPbc**	**16 54 30.5**	**-2.5**
	comp=Z,1.6nm,0.8s,baz=74,slow=3.3,SNR=5.5							
KSP	**Ksiaz**	**105.70**	**322**	*e*P		**Pdif**	**16 38 55.4**	**+0.1**
KSP				*e*PP		**PP**	**16 43 27.3**	**+3.4**
KSP				*e*PPP		PPP	16 45 37.3	
KSP				*e*S		**SKSac**	**16 48 50.9**	**-0.8**
HCY	**Herceg Novi**	**105.71**	**313**	*e*P		**Pdif**	**16 38 53.8**	**-1.7**
EGYH	**Egyhazaskeszo**	**105.71**	**318**	P		**Pdif**	**16 38 55.9**	**+0.5**
ZST	**Bratislava**	**105.72**	**319**	⇑*e*P		**Pdif**	**16 38 56.0**	**+0.6**
ZST				*e*			16 43 19.8	
ZST				*e*			16 48 50.7	
ZST				*e*			16 51 54.1	
ZST	**Bratislava**	**105.72**	**319**	*e*PDIFF		**Pdif**	**16 38 56.0**	**+0.6**
ZST				*e*			16 42 06.9	
ZST				*e*PP		**PP**	**16 43 19.8**	**-4.3**
ZST				*e*			16 48	
DEL	**Delary**	**105.73**	**328**	*e*P		**Pdif**	**16 38 55.2**	**-0.1**
DPC	**Dobruska-Polom**	**105.79**	**321**	*e*P		**Pdif**	**16 38 56.7**	**+0.9**
DPC	**Dobruska-Polom**	**105.79**	**321**	*e*PDIFF		**Pdif**	**16 38 56.7**	**+0.9**
DPC				*e*PKP		**PKiKP**	**16 43 06.0**	**+0.1**
DPC				*e*PP		**PP**	**16 43 18.6**	**-6.0**
DPC				*e*SKKP			16 57 30.4	
OSTC	**Ostas**	**105.81**	**321**	*e*PDIFF		**Pdif**	**16 38 56.7**	**+0.9**
OSTC				*e*PKP		**PKiKP**	**16 43 06.4**	**+0.5**
OSTC				*e*PP		PP	16 43 14.7	-10
OSTC				*e*SKKP			16 57 30.0	
VRAC	**Vranov**	**105.83**	**320**	⇓P		**Pdif**	**16 38 57.4**	**+1.4**
VRAC	**Vranov**	**105.83**	**320**	Pdiff		**Pdif**	**16 38 57.2**	**+1.3**
	comp=Z,19nm,0.9s,baz=92,slow=4.2,SNR=38							
VRAC				PKiKP		**PKiKP**	**16 43 07.1**	**+1.2**
	comp=Z,18nm,0.8s,baz=67,slow=8.0,SNR=6.7							
VRAC				PP		**PP**	**16 43 26.1**	**+1.2**
	comp=Z,45nm,1.0s,baz=94,slow=7.3,SNR=4.3							
VRAC	**Vranov**	**105.83**	**320**	⇓P		**Pdif**	**16 38 57.4**	**+1.4**
VRAC	**Vranov**	**105.83**	**320**	*e*PDIFF		**Pdif**	**16 38 56.7**	**+0.8**
VRAC				*e*PP		**PP**	**16 43 24.8**	**-0.1**
VRAC				*e*			16 45 38.0	
VRAC				*e*			16 45 59.2	
VRAC				*e*SKS		**SKSac**	**16 48 54.5**	**+2.1**
CHVC	**Chvalec**	**105.91**	**321**	*e*PDIFF		**Pdif**	**16 38 57.1**	**+0.8**
CHVC				*e*PKP		**PKiKP**	**16 43 07.3**	**+1.2**
CHVC				*e*PP		**PP**	**16 43 20.1**	**-5.3**
CHVC				*e*SKKP			16 57 29.7	
UPC	**Upice**	**105.95**	**321**	*e*P		**Pdif**	**16 38 57.9**	**+1.5**
UPC				*e*			16 43 21.2	
UPC	**Upice**	**105.95**	**321**	*e*PDIFF		**Pdif**	**16 38 57.9**	**+1.5**
UPC				*e*PP		**PP**	**16 43 21.2**	**-4.5**
KRUC	**Moravsky**	**106.01**	**320**	*e*PDIFF		**Pdif**	**16 38 57.7**	**+1.0**
KRUC				*e*PP		**PP**	**16 43 27.7**	**+1.5**
KRUC				*e*			16 45 40.0	
KRUC				*e*			16 45 59.6	
KRUC				*e*SKS		**SKSac**	**16 48 54.8**	**+1.6**
RES	**Resolute Bay**	**106.14**	**10**	Pdiff		**Pdif**	**16 38 57.8**	**+1.1**
	comp=Z,82nm,0.7s,baz=307,slow=4.9,SNR=63							
RES				PKiKP		**PKiKP**	**16 43 05.9**	**+0.1**
	comp=Z,12nm,0.7s,baz=262,slow=2.1,SNR=14							
RES				PKKPbc		**PKKPbc**	**16 54 29.7**	**-2.2**
	comp=Z,5.3nm,0.8s,baz=183,slow=5.7,SNR=6.3							
SOP	**Sopron**	**106.17**	**318**	P		**Pdif**	**16 38 58.0**	**+0.5**
STON	**Ston**	**106.22**	**313**	*e*P		**Pdif**	**16 39 00.8**	**+3.0**
OSL	**Oslo**	**106.26**	**332**	*e*Pdif		**Pdif**	**16 38 57.2**	**-0.3**
BEHE	**Becsehely**	**106.26**	**317**	*e*P		**Pdif**	**16 38 59.3**	**+1.4**
BEHE	**Becsehely**	**106.26**	**317**	P		**Pdif**	**16 38 59.4**	**+1.6**
DOMB	**Dombas**	**106.27**	**334**	⇓*e*Pdif		**Pdif**	**16 38 57.2**	**-0.4**
DOMB				*e*PP		**PP**	**16 43 28.0**	**+0.4**
DOMB				*e*SKSac		**SKSac**	**16 48 55.3**	**+1.5**
DOMB				*e*SKSdf		**SKSdf**	**16 49 37.7**	**+2.1**
DOMB				*e*SP		SP	16 52 04.8	+3.1
BLY	**Banja Luka**	**106.28**	**315**	*e*P		**Pdif**	**16 38 59.0**	**+1.0**
RONA	**Rosalia, Austr**	**106.34**	**318**	*e*P		**Pdif**	**16 38 58.4**	**+0.1**
	comp=Z,15nm,1.7s,SNR=8.3							
RONA				*e*P		**PKiKP**	**16 43 07.5**	**+0.6**
	comp=Z,22nm,0.9s							
RONA				*e*P		**PKKPab**	**16 54 45.6**	**-1.1**
	comp=Z,8.5nm,1.2s							
SRKY	**Kupres RS**	**106.41**	**315**	*e*P		**Pdif**	**16 38 59.0**	**+0.2**
TREC	**Trest**	**106.54**	**320**	*e*P		**Pdif**	**16 39 00.3**	**+1.2**
TREC	**Trest**	**106.54**	**320**	*e*PDIFF		**Pdif**	**16 39 00.3**	**+1.2**
TREC				*e*PP		**PP**	**16 43 22.5**	**-7.6**
CONA	**Conrad Observa**	**106.59**	**319**	*e*P		**Pdif**	**16 38 59.9**	**+0.4**
	comp=Z,9.7nm,1.3s,SNR=10							
CONA				*e*P		**PKKPab**	**16 54 44.6**	**-1.1**
	comp=Z,5.3nm,1.0s							
CONA				*e*S		**SKKPbc**	**16 57 27.6**	**-2.4**
	comp=Z,6.1nm,0.9s							
KOGS	**Kog**	**106.62**	**317**	*i* Pdiff		**Pdif**	**16 39 00.2**	**+0.8**
KOGS				*i* PP		**PP**	**16 43 33.1**	**+2.4**
KOGS				*i* SKSac		**SKSac**	**16 48 55.3**	**-0.6**
KOGS				*e*Sdiff		SKKSac	16 50 20.0	+32
MOL	**Molde**

comp=Z,39nm,0.7s,baz=66,slow=3.1,SNR=56
GERES SKP 16 46 02.8
comp=Z,9.8nm,0.7s,baz=79,slow=1.4,SNR=8.0
GERES PKKPbc **PKKPbc** **16 54 24.4 -1.7**
comp=Z,1.5nm,0.8s,baz=228,slow=2.5,SNR=4.1
GERES SKKPbc SKKPbc 16 57 23.7 -3.0
comp=Z,2.8nm,0.9s,baz=232,slow=4.8,SNR=5.8
KHC Kasperske Hory 107.80 320 *e*P **Pdif** **16 39 05.6 +0.9**
KHC *e* 16 46 00.0
KHC Kasperske Hory 107.80 320 *e*PDIFF **Pdif** **16 39 05.6 +0.9**
KHC *ex* x 16 39 18.0
KHC *ex* x 16 42 12.0
KHC *ex* x 16 42 24.5
KHC *e*PKP **PKiKP** **16 43 10.0 +0.4**
KHC *e*PP PP 16 43 27.4 -12
KHC *ex* x 16 45 23.5
KHC *ex* x 16 46 00.0
KHC *e*SKKP 16 57 23.3
LJU Ljubljana 107.87 317 *e*P **Pdif** **16 39 04.7 -0.4**
LJU Ljubljana 107.87 317 *i* Pdiff **Pdif** **16 39 05.8 +0.7**
LJU *e* 16 41 27.0
LJU *i* PKiKP **PKiKP** **16 43 10.5 +0.7**
LJU *e* 16 43 33.0
LJU *i* PP **PP** **16 43 42.6 +2.8**
LJU *e*PPP PPP 16 45 57.3
LJU *e* 16 48 15.7
LJU *e*SKSac **SKSac** **16 49 01.2 -0.1**
LJU *e*SKKSac **SKKSac** **16 49 55.0 -1.8**
LJU *i* Sdiff **Sdif** **16 50 29.9 -1.3**
LJU *e*SP **SP** **16 52 18.4 -0.5**
LJU *e*SS **SS** **16 58 23.4 +5.7**
HYA Hoyanger 107.88 334 *e*Pdif **Pdif** **16 39 04.6 -0.1**
HYA *e*PP **PP** **16 43 39.6 +0.4**
HYA *e*SS SS 16 58 20.1 +3.5
HOMB Homborsund 107.91 330 *e*Pdif **Pdif** **16 39 04.7 -0.2**
HOMB *e*PP **PP** **16 43 39.9 +0.4**
GOET G??ttrup 107.99 329 *i* P **Pdif** **16 39 04.9 -0.3**
J01E Myrtle Point 108.00 46 P **PKiKP** **16 43 11.0 +0.9**
baz=281
CEY Cerknica 108.01 317 *e*P **Pdif** **16 39 06.2 +0.5**
F04D Rainier, OR 108.05 43 P **PKiKP** **16 43 11.6 +1.5**
baz=282
BIOA Bad Ischl, Aus 108.10 319 *e*P **Pdif** **16 39 06.4 +0.3**
comp=Z,13nm,1.5s,SNR=6.3
BIOA *e*P **PKiKP** **16 43 10.3 +0.1**
comp=Z,26nm,0.8s
BIOA *e*S **SKKPbc** **16 57 23.4 -2.2**
comp=Z,7.7nm,1.1s
ODD1 Odda 108.19 332 *e*Pdif **Pdif** **16 39 06.1 -0.1**
FOO Floro 108.20 334 *e*Pdif **Pdif** **16 39 06.7 +0.5**
FOO *e*PKSdf 16 46 47.2
FOO *e*SKSac **SKSac** **16 49 04.1 +2.1**
FOO *e*PS PS 16 53 14.1 0.0
MUD Monsted U'grnd 108.22 328 *i* P **Pdif** **16 39 03.9 -2.4**
NKC Novy Kostel 108.23 322 *e*P **Pdif** **16 39 07.6 +1.0**
NKC Novy Kostel 108.23 322 *e*PDIFF **Pdif** **16 39 07.6 +1.0**
NKC *e*PKP **PKiKP** **16 43 10.8 +0.4**
NKC *e*PP PP 16 43 32.5 -10
NKC *e*SKKP 16 57 23.1
E04D Cinebar 108.25 42 P **PKiKP** **16 43 11.6 +1.1**
baz=283
K02D Willamette Mer 108.28 47 P **PKiKP** **16 43 12.0 +1.2**
baz=281
I03D Drain, OR 108.31 45 P **PKiKP** **16 43 11.9 +1.2**
baz=282,SNR=5.1
SKDS Skadanscina 108.33 317 *e*P **Pdif** **16 39 06.3 -0.9**
SKDS Skadanscina 108.33 317 *i* Pdiff **Pdif** **16 39 07.2 0.0**
SKDS *e* 16 43 35.3
SKDS *e*PP **PP** **16 43 44.9 +1.7**
SKDS *e* 16 48 17.9
SKDS *i* SKSac **SKSac** **16 49 02.1 -1.3**
SKDS *e*SKKSac **SKKSac** **16 49 57.1 -2.9**
SKDS *e* 16 52 10.2
SKDS *e* 16 55 18.4
MYKA Terra Mystica 108.34 318 *e*P **Pdif** **16 39 07.1 -0.1**
comp=Z,2.7nm,0.4s
CADS Cadrg 108.37 317 *i* Pdiff **Pdif** **16 39 07.2 -0.1**
KBA Koelnbreinsper 108.44 318 *e*P **Pdif** **16 39 07.5 -0.3**
comp=Z,8.3nm,1.1s,SNR=5.7
KBA *e*P **PKiKP** **16 43 10.2 -0.9**
comp=Z,14nm,0.7s
KBA *e*S **SKSac** **16 49 05.4 +1.3**
comp=Z,16nm,1.0s
KBA *e*P **PKKPab** **16 54 38.2 +0.6**
comp=Z,7.1nm,0.8s
KBA *e*S **SKKPbc** **16 57 23.0 -1.8**
comp=Z,7.1nm,1.2s
L02F Cave Junction 108.46 47 P **PKiKP** **16 43 12.3 +1.3**
baz=281,SNR=8.3
BLS5 Blasjo 108.46 332‖ *e*Pdif **Pdif** **16 39 07.4 0.0**
BLS5 *e*PP **PP** **16 43 44.1 +0.6**
BLS5 *e*SKPdf **SKiKP** **16 46 05.2 +1.7**
BLS5 *e*PKSdf 16 46 47.8
BLS5 *e*SKSac **SKSac** **16 49 05.7 +2.4**
BLS5 *e*PS PS 16 53 17.7 +0.9
SNART Snartemo 108.52 331 *e*Pdif **Pdif** **16 39 07.6 -0.1**
SUE Sulen 108.55 334 *e*Pdif **Pdif** **16 39 08.3 +0.6**
SUE *e*PP **PP** **16 43 44.6 +0.6**
SUE *e*SS SS 16 58 28.9 +3.3
H04D Lebanon 108.58 45 P **PKiKP** **16 43 12.3 +1.2**
baz=282,SNR=7.5
BER Bergen 108.58 333 *e*Pdif **Pdif** **16 39 08.5 +0.6**
BER *e*PP **PP** **16 43 45.0 +0.7**
BER *e*PKSdf 16 46 48.3
BER *e*PS **PS** **16 53 17.0 -0.6**
ASK Askoy 108.61 333 *e*SKPdf **SKiKP** **16 46 05.2 +1.5**
I04A Tendick Farm, 108.96 45 P **PKiKP** **16 43 12.3 +0.3**
baz=282
ABTA Abfaltersbach 109.07 318 *e*P **Pdif** **16 39 10.1 -0.4**
comp=Z,9.0nm,1.1s,SNR=7.0
ABTA *e*P **PKiKP** **16 43 11.6 -0.6**
comp=Z,38nm,0.8s,SNR=12
ABTA *e*S **SKiKP** **16 46 04.2 -0.9**
comp=Z,29nm,1.0s,SNR=5.4
ABTA *e*S **SKSac** **16 49 05.1 -1.5**
comp=Z,24nm,1.2s
ABTA *e*S **SKKPbc** **16 57 21.1 -1.8**
comp=Z,11nm,1.1s
KMY Karmoy 109.11 332 *e*Pdif **Pdif** **16 39 10.4 +0.1**
KMY *e*SKPdf **SKiKP** **16 46 06.2 +1.6**
KMY *e*SS **SS** **16 58 36.7 +3.5**
J04D Umpqua Nationa 109.29 46 P **PKiKP** **16 43 14.0 +1.2**
baz=282,SNR=32
L04D Klamath Falls 109.36 47 P **PKiKP** **16 43 13.7 +0.7**
baz=282,SNR=16
G05D Wamic, OR 109.40 44 P **PKiKP** **16 43 14.8 +2.1**
baz=284
WTTA Wattenberg 109.52 319 *e*P **Pdif** **16 39 12.4 -0.2**
comp=Z,20nm,1.1s,SNR=14
WTTA *e*P **PKiKP** **16 43 13.1 -0.1**
comp=Z,106nm,0.7s,SNR=13
WTTA *e*S **SKiKP** **16 46 05.8 -0.3**
comp=Z,85nm,0.9s,SNR=7.5
WTTA *e*S **SKSac** **16 49 08.4 -0.2**
comp=Z,19nm,0.9s
WTTA *e*P **PKKPab** **16 54 33.3 +0.5**
comp=Z,12nm,1.2s
WATA Walderalm 109.54 319 *e*P **Pdif** **16 39 12.7 +0.1**
comp=Z,17nm,1.2s,SNR=16
WATA *i* P **PKiKP** **16 43 13.2 +0.1**
comp=Z,47nm,0.8s,SNR=5.9
WATA *e*S **SKiKP** **16 46 05.5 -0.6**
comp=Z,52nm,1.2s,SNR=5.2
WATA S **SKSac** **16 49 07.1 -1.6**
comp=Z,30nm,1.4s
WATA *e*P **PKKPab** **16 54 33.3 +0.6**
comp=Z,7.7nm,1.0s
VAE Valguarnera 109.58 308 Pdiff **Pdif** **16 39 19.6 +6.6**
comp=Z,5.5nm,0.4s,baz=42,slow=10,SNR=3.3
VAE PP **PP** **16 43 53.1 +0.8**
comp=Z,64nm,0.9s,baz=117,slow=11,SNR=5.5
I05D Terrebonne, OR 109.59 44 P **PKiKP** **16 43 14.9 +1.7**
baz=283
SQTA Sankt Quirin 109.81 319 *e*P **Pdif** **16 39 13.7 -0.2**
comp=Z,18nm,1.2s,SNR=12
SQTA *e*P **PKiKP** **16 43 13.6 0.0**
comp=Z,32nm,0.7s,SNR=7.5
SQTA *e*S **SKiKP** **16 46 06.7 +0.1**
comp=Z,148nm,1.6s
SQTA *e*S **SKSac** **16 49 09.8 0.0**
comp=Z,32nm,1.4s
SQTA *e*P **PKKPab** **16 54 30.8 -0.7**
comp=Z,10nm,1.3s
SQTA *e*S **SKKPbc** **16 57 19.0 -1.8**
comp=Z,6.0nm,0.7s
MOTA Moosalm 109.85 319 *e*P **Pdif** **16 39 13.8 -0.2**
comp=Z,18nm,1.1s,SNR=23
MOTA *e*P **PKiKP** **16 43 13.7 0.0**
comp=Z,47nm,0.7s,SNR=9.3
MOTA *e*S **SKiKP** **16 46 06.2 -0.5**
comp=Z,19nm,0.8s,SNR=5.8
MOTA *e*S **SKSac** **16 49 09.2 -0.8**
comp=Z,40nm,1.3s
MOTA *e*P **PKKPab** **16 54 31.8 +0.5**
comp=Z,7.7nm,1.0s
MOTA *e*S **SKKPbc** **16 57 18.8 -2.0**
comp=Z,6.9nm,0.9s
J05D Fort Rock, OR 109.91 46 P **PKiKP** **16 43 15.1 +1.2**
baz=283,SNR=26
RETA Reutte 110.04 319 *e*P **Pdif** **16 39 14.9 +0.1**
comp=Z,12nm,1.4s,SNR=6.0
RETA *e*P **PKiKP** **16 43 14.3 +0.4**
comp=Z,19nm,0.7s
RETA *e*S **SKSac** **16 49 13.1 +2.5**
comp=Z,25nm,1.1s
FETA Feichten 110.18 319 *e*P **Pdif** **16 39 16.1 +0.6**
comp=Z,14nm,1.2s,SNR=11
FETA *e*P **PKiKP** **16 43 14.1 -0.2**
comp=Z,46nm,0.8s,SNR=5.4
FETA *e*S **SKiKP** **16 46 07.2 -0.2**
comp=Z,26nm,0.9s
FETA S **SKSac** **16 49 08.9 -2.5**
comp=Z,22nm,1.2s
DAVA Damuels 110.67 319 *e*P **Pdif** **16 39 18.0 +0.3**
comp=Z,16nm,1.3s,SNR=7.2
DAVA *e*P **PKiKP** **16 43 15.6 +0.3**
comp=Z,86nm,0.7s,SNR=16
DAVA *e*S **SKiKP** **16 46 08.0 -0.3**
comp=Z,65nm,0.8s,SNR=9.5
DAVOX Davos/Dischmat 110.81 319 Pdiff **Pdif** **16 39 19.2 +0.8**
comp=Z,17nm,0.7s,baz=95,slow=4.5,SNR=36
DAVOX PKiKP **PKiKP** **16 43 16.3 +0.7**
comp=Z,51nm,0.7s,baz=75,slow=13,SNR=20
DAVOX SKP 16 46 08.4
comp=Z,18nm,0.8s,baz=149,slow=5.5,SNR=4.0
DAVOX S **SKSac** **16 49 12.8 -1.2**
comp=Z,17nm,1.1s,baz=277,slow=23,SNR=7.7
SCO Scoresbysund 110.96 349 *i* P **Pdif** **16 39 18.7 +0.5**
NEW Newport 111.36 40 P **PKiKP** **16 43 17.3 +0.9**
baz=288,SNR=14
LRW Lerwick 111.57 334‖ *e*P **PKiKP** **16 43 17.0 +0.7**
LRW IAmb IAmb 16 43 18.7
comp=Z,78nm,0.7s
BTNL Ternell 111.97 323 *d*Pdif **Pdif** **16 39 24.6 +1.4**
BTNL *d*PKiKP **PKiKP** **16 43 17.8 +0.4**
BTNL *d*PP **PP** **16 44 10.4 +1.7**
MEM Membach 112.03 323 *d*Pdif **Pdif** **16 39 24.2 +0.8**
MEM *d*PKiKP **PKiKP** **16 43 18.1 +0.6**
BHOU Houvegnez 112.12 323 *d*Pdif **Pdif** **16 39 25.4 +1.5**
BHOU *d*PKiKP **PKiKP** **16 43 18.6 +0.8**
BEBN Eben Emael 112.16 324 *d*PKiKP **PKiKP** **16 43 18.5 +0.8**
BEBN *d*PP **PP** **16 44 11.1 +1.0**
WLF Walferdange 112.28 322 *d*Pdif **Pdif** **16 39 26.9 +2.3**
WLF *d*PKiKP **PKiKP** **16 43 19.0 +1.0**
BSTI Sart Tilman 112.30 323 *d*PKiKP **PKiKP** **16 43 19.2 +1.2**
SMMC Simmler 112.48 54 P **PKiKP** **16 43 20.7 +1.8**
baz=281,SNR=9.1
RCHB Rochefort 112.66 323 *d*Pdif **Pdif** **16 39 31.0 +4.7**
RCHB *d*PKiKP **PKiKP** **16 43 18.8 +0.1**
RCHB *d*PP **PP** **16 44 15.1 +1.4**
BGES Gesves 112.66 323 *d*PKiKP **PKiKP** **16 43 19.4 +0.7**
BGES *d*PP **PP** **16 44 14.8 +1.2**
PKM Mcpherson Peak 112.70 54 P **PKiKP** **16 43 21.2 +1.7**
baz=281,SNR=26
SBC Santa Barbara 112.87 55 P **PKiKP** **16 43 21.3 +1.7**
baz=281
BMRD Maredsous 112.88 323 *d*Pdif **Pdif** **16 39 29.0 +1.8**
BMRD *d*PKiKP **PKiKP** **16 43 20.1 +1.0**
SCZ2 Santa Cruz Isl 113.01 55 P **PKiKP** **16 43 21.0 +1.0**
baz=280,SNR=7.0
DOU Dourbes 113.06 323 *d*Pdif **Pdif** **16 39 29.3 +1.2**
DOU *d*PKiKP **PKiKP** **16 43 20.3 +0.8**
DOU *d*PP **PP** **16 44 18.0 +1.5**
SNF Seneffe 113.09 324 *d*PKiKP **PKiKP** **16 43 20.1 +0.6**
VES Vestal, Richgr 113.11 53 P **PKiKP** **16 43 20.9 +0.8**
baz=282,SNR=7.9
NUUG Nuugaatsiaq 113.13 360 *i* P **PKiKP** **16 43 19.8 +0.7**
NVAR Mina Array Bea 113.17 50 Pdiff **Pdif** **16 39 31.6 +2.5**
comp=Z,1.2nm,0.7s,baz=281,slow=4.2,SNR=7.7
NVAR PKiKP **PKiKP** **16 43 21.7 +1.3**
comp=Z,24nm,0.7s,baz=254,slow=2.2,SNR=53
NVAR PP **PP** **16 44 19.3 +1.4**
comp=Z,3.9nm,0.7s,baz=287,slow=4.4,SNR=1.6
NVAR PKKPbc **PKKPbc** **16 54 08.6 0.0**
comp=Z,10nm,0.8s,baz=135,slow=4.4,SNR=21
NVAR PKKPab **PKKPab** **16 54 16.7 0.0**
comp=Z,21nm,0.8s,baz=125,slow=5.4,SNR=25
SNCC San Nicolas Is 113.24 56 P **PKiKP** **16 43 21.5 +1.1**
baz=280
ARVC Arvin 113.45 54 P **PKiKP** **16 43 22.2 +1.5**
baz=281,SNR=13
TIN Tinemaha, Big 113.53 52 P **PKiKP** **16 43 22.4 +1.5**
baz=283
ISA Isabella, Lake 113.63 53 P **PKiKP** **16 43 21.9 +0.8**
baz=282,SNR=18
OSI Osito Audit: C 113.64 54 P **PKiKP** **16 43 23.1 +1.9**
baz=281
CWC Cottonwood Cre 113.78 52 P **PKiKP** **16 43 22.5 +1.0**
baz=282
DRUM Mains of Drumt 113.82 332‖ *e*P **PKiKP** **16 43 20.1 -0.6**
MSO Missoula 113.86 40 P **PKiKP** **16 43 21.4 +0.1**
baz=290,SNR=36
KEST Kesra 113.91 307 Pdiff **Pdif** **16 39 33.5 +1.3**
comp=Z,5.4nm,0.9s,baz=330,slow=7.0,SNR=5.4
KEST PKiKP **PKiKP** **16 43 22.6 +0.9**
comp=Z,73nm,0.9s,baz=119,slow=1.1,SNR=32
KEST PKKPbc **PKKPbc** **16 54 06.0 +0.2**
comp=Z,5.2nm,0.8s,baz=149,slow=2.5,SNR=5.3
KEST SKKPbc SKKPbc 16 57 07.6 -0.6
comp=Z,6.9nm,0.8s,baz=223,slow=5.1,SNR=3.7
DECC Green Verdugo 114.02 55 P **PKiKP** **16 43 23.6 +1.7**
baz=281,SNR=5.8
CIS Catalina Islan 114.12 55 P **PKiKP** **16 43 23.1 +1.0**
baz=281,SNR=8.3
EDW2 Edwards Air Fo 114.17 54 P **PKiKP** **16 43 23.8 +1.6**
baz=282,SNR=76
GRAC Grapevine Rang 114.21 51 P **PKiKP** **16 43 23.7 +1.5**
baz=283,SNR=21
LRMC Laurel Mtn Rad 114.30 53 P **PKiKP** **16 43 24.2 +1.6**
baz=282,SNR=11
MPMC Manual Prospec 114.33 52 P **PKiKP** **16 43 24.1 +1.4**
baz=283,SNR=46
LINV Loch Inver, As 114.39 334‖ *e*P PKPdf 16 43 21.4 -0.4
LINV IAmb IAmb 16 43 23.4
comp=Z,173nm,1.3s
ESY Stoneypath 114.39 331‖ *e*P **PKiKP** **16 43 21.9 0.0**
MDO Dochfour 114.41 333‖ *e*P PKPdf 16 43 21.6 -0.3
BFSC Mount Baldy Ra 114.58 54 P **PKiKP** **16 43 23.9 +0.8**
baz=282,SNR=19
SOEG Soedalen 114.61 351 *i* P PKPdf 16 43 20.8 -1.1
HLID Hailey 114.62 44 P **PKiKP** **16 43 24.2 +1.3**
baz=288,SNR=104
EDMD Edmundbyers 114.62 330 *e*P PKPdf 16 43 22.1 -0.3
EBL Broad Law 114.68 331‖ *e*P **PKiKP** **16 43 23.0 +0.5**
FURC Furnace Creek, 114.73 52 P **PKiKP** **16 43 24.8 +1.7**
baz=283,SNR=31
KAC Achnashellach 114.80 333‖ *e*P PKPdf 16 43 22.1 -0.5
INVG Invergeldie, C 114.81 332‖ *e*P PKPdf 16 43 22.6 -0.1
SSB Saint Sauveur 114.81 318 PKPdf 16 43 22.5 -0.6
SSB Saint Sauveur 114.81 318 PKIKP PKPdf 16 43 22.5 -0.6
QSM Queen of Sheba 114.84 52 PKPdf 16 43 23.1 -0.3
ICESG Greenland Ices 114.85 354 *i* P PKPdf 16 43 21.9 -1.0
ELK Elko 114.87 47 PKPdf 16 43 23.5 -0.1
ELK Elko 114.87 47 PKIKP PKPdf 16 43 23.5 -0.1
HPK Haverah Park 114.88 329‖ *e*P **PKiKP** **16 43 23.0 +0.2**
ELS Elsinore Mount 114.88 55 **PKiKP** **16 43 23.6 0.0**
GWY Greenwater Val 114.94 52 **PKiKP** **16 43 24.1 +0.3**
EKA Eskdalemuir Ar 114.96 331 Pdiff **Pdif** **16 39 36.9 +0.5**
comp=Z,2.3nm,0.7s,baz=53,slow=5.2,SNR=12
EKA PKP **PKiKP** **16 43 23.4 +0.4**
comp=Z,14nm,0.5s,baz=34,slow=3.5,SNR=81
EKA SKP 16 46 16.2
comp=Z,7.0nm,0.6s,baz=24,slow=2.9,SNR=10
RRX Edison Barstow 114.98 54 P **PKiKP** **16 43 25.7 +2.0**
baz=282
ESK Eskdalemuir 114.99 331‖ *e*P PKPdf 16 43 22.7 -0.4
ESK Eskdalemuir 114.99 331 **PKiKP** **16 43 23.2 +0.2**
ESK Eskdalemuir 114.99 331 PKIKP **PKiKP** **16 43 23.3 +0.2**
GSC Goldstone, Bar 115.04 53 **PKiKP** **16 43 24.2 +0.3**
GSC Goldstone, Bar 115.04 53 PKIKP **PKiKP** **16 43 24.2 +0.3**
GSC Goldstone, Bar 115.04 53 P **PKiKP** **16 43 25.3 +1.4**
baz=283,SNR=50
KPL Plockton 115.05 333‖ *e*P **PKPdf** **16 43 22.9 -0.2**
KPL IAmb IAmb 16 43 25.2
comp=Z,59nm,0.8s
BCYI Bear Canyon 115.07 43 **PKiKP** **16 43 24.4 +0.5**
EAB Aberfoyle 115.08 332‖ *e*P **PKPdf** **16 43 23.1 -0.1**
MURC Murrieta 115.08 55 P **PKiKP** **16 43 25.4 +1.4**
baz=282,SNR=14
TPNV Topopah Spring 115.09 51 **PKiKP** **16 43 24.5 +0.4**
TPNV Topopah Spring 115.09 51 PKIKP **PKiKP** **16 43 24.5 +0.4**
TPNV Topopah Spring 115.09 51 P **PKiKP** **16 43 25.0 +1.0**
baz=284,SNR=22
LEWI Lewis, Hebride 115.12 334‖ *e*P **PKiKP** **16 43 23.8 +0.6**
LEWI IAmb IAmb 16 43 24.3
comp=Z,43nm,1.0s
LRM Limekiln Ridge 115.18 41 **PKiKP** **16 43 24.3 +0.2**
LBWR Ladybower, Pea 115.20 328 *e*P **PKiKP** **16 43 24.3 +0.8**
LBWR IAmb IAmb 16 43 25.3
comp=Z,93nm,0.9s
CMAH Djebel Manchou 115.22 308 P 16 43 24.9
DLMT Dillon 115.25 41 **PKiKP** **16 43 24.6 +0.5**
R11A Troy Canyon, C 115.26 50 **PKiKP** **16 43 25.1 +0.7**
R11A Troy Canyon, C 115.26 50 P **PKiKP** **16 43 25.5 +1.1**
baz=285
HRY Holter Researc 115.26 40 **PKiKP** **16 43 24.6 +0.6**
ABSA Djebel Ababsia 115.26 308 P 16 43 25.1
MCMT McKenzie Canyo 115.27 42 **PKiKP** **16 43 25.0 +0.7**
CLF Chambon-Foret 115.27 322 **PKiKP** **16 43 24.5 +0.7**
CWF Charnwood Fore 115.29 327‖ *e*P **PKPdf** **16 43 23.4 -0.3**
109C Camp Elliot, M 115.30 56 **PKiKP** **16 43 25.0 +0.7**
109C Camp Elliot, M 115.30 56 P **PKiKP** **16 43 25.2 +0.9**
baz=282
S11A Rachel 115.31 50 **PKPdf** **16 43 24.3 -0.1**
SHOC Shoshone, Teco 115.32 52 P **PKiKP** **16 43 25.9 +1.6**
baz=284,SNR=14
BORG Borgarnes 115.48 345 PKP **PKiKP** **16 43 25.3 +1.6**
comp=Z,17nm,0.8s,baz=302,slow=5.2,SNR=9.4
BORG PP **PP** **16 44 32.8 +0.2**
comp=Z,26nm,0.8s,baz=25,slow=2.5,SNR=5.1
BORG Borgarnes 115.48 345 **PKiKP** **16 43 25.6 +1.9**
BORG Borgarnes 115.48 345 PKIKP **PKiKP** **16 43 25.6 +1.9**
HEC Hector,Ludlow 115.52 54 P **PKiKP** **16 43 26.6 +1.8**
baz=283,SNR=18
LAWE Loch Awe, Argy 115.53 332‖ *e*P **PKPdf** **16 43 23.9 -0.1**
LAWE IAmb IAmb 16 43 26.4
comp=Z,38nm,0.7s
NEWG New Galloway 115.60 331‖ *e*P **PKPdf** **16 43 24.2 0.0**
NEWG IAmb IAmb 16 43 27.0
comp=Z,42nm,0.7s
PFO Pinyon Flats O 115.68 55 **PKiKP** **16 43 26.0 +0.7**
PFO Pinyon Flats O 115.68 55 PKIKP **PKiKP** **16 43 26.0 +0.7**
PFO Pinyon Flats O 115.68 55 P **PKiKP** **16 43 26.8 +1.6**
baz=282,SNR=17
TPFO Pinon Flats 115.69 55 P **PKiKP** **16 43 26.5 +1.2**
baz=282,SNR=32
BAR Barrett 115.70 56 **PKiKP** **16 43 25.8 +0.6**
TUQ Turquoise Moun 115.71 53 P **PKiKP** **16 43 26.8 +1.6**
baz=284,SNR=20
CBX Cerro Bola 115.78 56 **PKiKP** **16 43 26.1 +0.7**
BOZ Bozeman (W) 115.80 41 **PKiKP** **16 43 25.3 +0.1**
BOZ Bozeman (W) 115.80 41 PKIKP **PKiKP** **16 43 25.3 +0.1**
BOZ Bozeman (W) 115.80 41 P **PKiKP** **16 43 25.9 +0.8**
baz=291,SNR=40
CKFL Kef-Lekhel 115.83 308 P 16 43 24.5
MONP2 Monument Peak 115.86 56 P **PKiKP** **16 43 27.0 +1.3**
baz=282,SNR=27
CCX Cicese 115.86 57 **PKiKP** **16 43 26.1 +0.7**
PRN Pahroc Range 115.91 51 **PKiKP** **16 43 27.1 +1.6**
WOL Wolverton 115.92 326‖ *e*P **PKiKP** **16 43 25.0 +0.1**
GAL1 Galloway 115.96 331‖ *e*P **PKiKP** **16 43 25.1 +0.1**
BELC Belle Mtn. Jos 115.97 54 P **PKiKP** **16 43 27.2 +1.4**
baz=283,SNR=78
CASM Ain Smara 116.04 308 P 16 43 28.4
EGMT Eagleton 116.05 38 **PKPdf** **16 43 25.4 -0.1**
EGMT Eagleton 116.05 38 P **PKiKP** **16 43 25.9 +0.4**
baz=294
SHPR Sheep Range 116.05 52 **PKiKP** **16 43 27.0 +1.1**
GMRC Granite Mounta 116.07 53 P **PKiKP** **16 43 27.5 +1.5**
baz=283,SNR=66
SWN1 Swindon 116.14 326‖ *e*P **PKiKP** **16 43 25.6 +0.3**
SWN1 IAmb IAmb 16 43 28.4
comp=Z,214nm,0.6s
CTEI Djebel Teioual 116.15 308 P 16 43 24.0
IKP In-Ko-Pah, Jac 116.17 56 P **PKiKP** **16 43 27.6 +1.4**
baz=282,SNR=24
QLMT Earthquake Lak 116.21 42 **PKiKP** **16 43 27.1 +1.0**
STRD Stroud 116.22 327‖ *e*P **PKPdf** **16 43 25.4 -0.1**
STRD IAmb IAmb 16 43 26.6
comp=Z,145nm,0.8s
IOMK Kirk Michael 116.22 330‖ *e*P **PKPdf** **16 43 25.2 -0.3**
FOEL Foel Wylfa 116.22 328‖ *e*P **PKiKP** **16 43 25.8 +0.2**
HLM1 Long Mynd 116.24 328‖ *e*P **PKiKP** **16 43 25.6 0.0**
HLM1 IAmb IAmb 16 43 27.4
comp=Z,67nm,0.9s
YUH Yuha Desert 116.32 56 **PKiKP** **16 43 27.0 +0.7**
HVU Hansel Valley 116.33 45 **PKiKP** **16 43 26.8 +0.5**
HVU Hansel Valley 116.33 45 PKIKP **PKiKP** **16 43 26.8 +0.5**
WIM Isle of Man 116.33 330‖ *e*P **PKiKP** **16 43 25.9 +0.2**
SWSC Sam W. Stewart 116.36 55 P **PKiKP** **16 43 28.0 +1.6**
baz=282,SNR=18
YHL Hebgen Lake 116.37 42 **PKiKP** **16 43 27.6 +1.1**
BGU Big Grassy Mou 116.42 46 **PKiKP** **16 43 26.9 +0.5**
DFRA Djebel Bou Aff 116.45 309 P 16 43 28.9
LLW Llanuwchllyn 116.49 328‖ *e*P **PKiKP** **16 43 26.1 +0.1**
LDF La Druitiere 116.49 323 PKIKP **PKiKP** **16 43 27.8 +1.6**
BC3 Big Chuckawall 116.49 55 P **PKiKP** **16 43 28.2 +1.4**
baz=283,SNR=57
PSUT Pine Spring 116.52 49 **PKiKP** **16 43 27.4 +0.6**
CLGH Cloghs, Cushen 116.52 331‖ *e*P **PKPdf** **16 43 26.0 0.0**
MONM Monmouth 116.53 327 *e*P **PKiKP** **16 43 26.2 +0.1**
MONM IAmb IAmb 16 43 30.6
comp=Z,50nm,0.7s
WME Myndd Eilian 116.54 329‖ *e*P **PKiKP** **16 43 26.2 +0.1**
MCH1 Michaelchurch 116.56 327‖ *e*P **PKiKP** **16 43 26.5 +0.4**
MCH1 IAmb IAmb 16 43 28.9
comp=Z,63nm,0.9s
YLL Llanberis 116.60 329‖ *e*P **PKiKP** **16 43 26.8 +0.6**
IRM Iron Mountain 116.63 54 P **PKiKP** **16 43 28.6 +1.7**
baz=283,SNR=41
WPS Cemaes, Angles 116.63 329 *e*P **PKiKP** **16 43 26.3 0.0**
WPS IAmb IAmb 16 43 28.0
comp=Z,86nm,0.9s
WLF1 Llynfaes 116.64 329‖ *e*P **PKiKP** **16 43 26.5 +0.2**
WLF1 IAmb IAmb 16 43 28.6
comp=Z,226nm,0.8s
YNR Norris Junctio 116.75 42 **PKiKP** **16 43 28.1 +1.0**
YRC Rhoscolyn 116.75 329‖ *e*P **PKPdf** **16 43 26.4 0.0**
DUG Dugway, Tooele 116.80 47 **PKiKP** **16 43 27.7 +0.5**
DUG Dugway, Tooele 116.80 47 PKIKP **PKiKP** **16 43 27.7 +0.5**
DUG Dugway, Tooele 116.80 47 P **PKiKP** **16 43 28.3 +1.0**
baz=286
YPP Pitchstone Pla 116.83 42 **PKiKP** **16 43 28.7 +1.3**
CKHR Kef el Ahmar 116.87 308 P 16 43 29.0
ECR Eagle Creek 116.88 44 **PKiKP** **16 43 27.8 +0.3**
NEE2 Needles Airpor 116.91 53 P **PKiKP** **16 43 28.9 +1.5**
baz=284
SET Setif 116.91 308 P 16 43 29.0
FXWY Fox Creek 116.91 43 **PKPdf** **16 43 27.4 0.0**
H17A Grant Village 116.94 42 **PKiKP** **16 43 29.1 +1.6**
H17A Grant Village 116.94 42 P **PKiKP** **16 43 30.2 +2.6**
baz=292,SNR=19
FLWY Flagg Ranch 116.97 42 **PKiKP** **16 43 28.3 +0.8**
LKWY Lake 116.99 42 **PKiKP** **16 43 29.7 +2.1**
LKWY Lake 116.99 42 PKIKP **PKiKP** **16 43 29.7 +2.1**
GCMT Greycliff 117.00 40 **PKiKP** **16 43 27.7 +0.2**
TPAW Teton Pass 117.01 43 **PKiKP** **16 43 28.1 +0.3**
MOOW Moose Ponds 117.06 43 **PKiKP** **16 43 27.8 +0.1**
REDW Red Top Meadow 117.13 43 **PKiKP** **16 43 28.3 +0.4**
GLA Glamis 117.14 55 **PKiKP** **16 43 28.7 +0.7**
GLA Glamis 117.14 55 PKIKP **PKiKP** **16 43 28.7 +0.7**
GLA Glamis 117.14 55 P **PKiKP** **16 43 29.5 +1.5**
baz=283,SNR=16
SNOW Snow King Moun 117.16 43 **PKiKP** **16 43 28.5 +0.5**
CCUT Cedar City 117.16 50 **PKiKP** **16 43 28.9 +0.7**
AHID Auburn Hatcher 117.17 44 **PKiKP** **16 43 28.3 +0.4**
IDGL Inch Island, C 117.19 332‖ *e*P **PKPdf** **16 43 27.2 0.0**
LOHW Long Hollow 117.21 43 **PKiKP** **16 43 28.5 +0.5**
ILTH Belurgan, Co L 117.22 330 *e*P **PKPdf** **16 43 26.9 -0.4**
BLYC Blythe 117.22 54 **PKiKP** **16 43 28.9 +0.9**
HWUT Hardware Ranch 117.24 45 **PKiKP** **16 43 28.2 +0.1**
SZCU Shurtz Canyon 117.36 50 **PKiKP** **16 43 29.4 +0.9**
PDMCI Parker Dam,Lak 117.40 54 P **PKiKP** **16 43 29.7 +1.3**

baz=284,SNR=20
LCMT Little Creek M 117.40 51 PKiKP 16 43 29.4 +0.9
W13A Hualapai Mount 117.41 53 PKiKP 16 43 29.6 +1.0
NLU North Lily Min 117.41 47 PKPdf 16 43 28.4 -0.1
JSA Saint Aubin 117.44 324‖ eP PKPdf 16 43 27.9 0.0
JVM Valle D.L. Mar 117.44 324‖ eP PKiKP 16 43 28.0 0.0
RSBS Rosebush, Pemb 117.52 328‖ eP PKPdf 16 43 27.6 -0.4
RSBS IAmb IAmb 16 43 29.0
comp=Z,58nm,0.8s
RLMT Red Lodge 117.52 41 PKiKP 16 43 29.0 +0.4
RLMT Red Lodge 117.52 41 P PKiKP 16 43 29.7 +1.2
baz=293,SNR=30
SFX San Felipe 117.55 57 PKiKP 16 43 29.3 +0.6
SFJD Kangerlussuaq 117.65 358 PKP PKPdf 16 43 27.7 -0.1
comp=Z,49nm,0.6s,baz=9.5,slow=6.1,SNR=26
SFJD PP PP 16 44 48.4 +1.0
comp=Z,73nm,1.1s,baz=358,slow=6.8,SNR=8.3
SFJD SKP 16 46 20.6
comp=Z,63nm,0.8s,baz=14,slow=2.0,SNR=8.7
SFJD Kangerlussuaq 117.65 358 PKPdf 16 43 27.3 -0.5
SFJD Kangerlussuaq 117.65 358 i P PKPdf 16 43 26.6 -1.2
JLU Jordanelle 117.66 46 PKiKP 16 43 29.3 +0.3
DSB Dublin 117.67 330 PKPdf 16 43 28.3 0.0
MPU Maple Canyon 117.71 47 PKiKP 16 43 29.5 +0.4
MVU Marysvale 117.76 49 PKiKP 16 43 30.2 +0.9
MSU Marysvale 117.78 49 PKiKP 16 43 30.4 +1.1
MSU Marysvale 117.78 49 PKIKP PKiKP 16 43 30.4 +1.1
DYA Yadsworthy 117.84 326‖ eP PKPdf 16 43 28.7 0.0
HTL Hartland 117.87 327‖ eP PKiKP 16 43 29.1 +0.4
FCC Fort Churchill 117.87 22 PKPdf 16 43 27.8 -0.7
FCC Fort Churchill 117.87 22 PKIKP PKPdf 16 43 27.8 -0.7
MTPU Mount Pierson 117.92 49 PKiKP 16 43 30.7 +1.0
ANGG Ammassalik, Gr 117.94 352 PKPdf 16 43 27.8 -0.7
ANGG Ammassalik, Gr 117.94 352 i P PKPdf 16 43 27.7 -0.7
DY2G Dye2 117.97 356 i P PKPdf 16 43 28.2 -0.6
PKCU Pink Cliffs 118.00 50 PKiKP 16 43 31.3 +1.4
113A Mohawk Valley, 118.07 55 PKiKP 16 43 30.2 +0.5
ISOG Isortoq, Green 118.18 353 i P PKPdf 16 43 27.7 -1.2
BW06 Boulder Array 118.23 43 PKPdf 16 43 29.9 -0.1
BW06 Boulder Array 118.23 43 P PKiKP 16 43 30.3 +0.3
baz=292,SNR=25
PD31 Pinedale Array 118.23 43 PKPdf 16 43 29.7 -0.3
PDAR Pinedale Array 118.23 43 Pdiff Pdif 16 39 53.8 +2.2
comp=Z,0.5nm,0.5s,baz=292,slow=4.8,SNR=4.8
PDAR PKP PKiKP 16 43 30.3 +0.2
comp=Z,20nm,0.6s,baz=117,slow=1.4,SNR=44
PDAR PKKPbc PKKPbc 16 53 50.2 -1.2
comp=Z,31nm,0.8s,baz=108,slow=4.8,SNR=11
PDAR Pinedale Array 118.23 43 PKPdf 16 43 29.9 -0.1
TMUT Trail Mountain 118.25 48 PKiKP 16 43 30.5 +0.2
U15A North Rim 118.30 51 PKiKP 16 43 31.4 +1.0
IWEX Carrickbyrne, 118.35 329 eP PKPdf 16 43 29.1 -0.5
Q16A Castle Valley 118.40 48 PKiKP 16 43 30.9 +0.4
Y14A Wickenburg 118.40 54 PKiKP 16 43 30.9 +0.4
P17A Butcher Ranch, 118.54 47 PKiKP 16 43 30.9 +0.3
CCA1 Carnmenellis 118.69 326‖ eP PKiKP 16 43 30.6 +0.2
LAO LASA Array 118.79 38 PKiKP 16 43 31.2 +0.4
LAO LASA Array 118.79 38 P PKiKP 16 43 31.7 +0.9
baz=297,SNR=76
LAO LASA Array 118.79 38 P PKiKP 16 43 31.8 +0.9
baz=297,SNR=76
P18A Preston Nutter 118.85 47 PKPdf 16 43 31.4 0.0
RDMU Red Mountain 119.01 46 PKiKP 16 43 31.7 +0.1
214A Organ Pipe Nat 119.05 56 PKiKP 16 43 32.0 +0.3
214A Organ Pipe Nat 119.05 56 P PKiKP 16 43 32.7 +1.0
baz=284,SNR=26
DGMT Dagmar 119.17 36 PKiKP 16 43 31.7 +0.3
DGMT Dagmar 119.17 36 P PKiKP 16 43 31.8 +0.3
baz=299,SNR=12
DGMT Dagmar 119.17 36 P PKiKP 16 43 31.9 +0.4
baz=299,SNR=12
WUAZ Wupatki 119.27 52 PKiKP 16 43 32.4 +0.2
WUAZ Wupatki 119.27 52 P PKiKP 16 43 33.2 +1.0
baz=287,SNR=108
X16A Lo Mia Camp, P 119.53 53 PKiKP 16 43 32.8 0.0
USHA Ushuaia 119.64 171 PKP PKiKP 16 43 32.8 +0.7
comp=Z,55nm,0.7s,baz=203,slow=0.5,SNR=39
USHA SKP 16 46 25.6
comp=Z,31nm,0.8s,baz=198,slow=1.5,SNR=9.1
USHA PKKPbc PKKPbc 16 53 45.2 -1.5
comp=Z,7.7nm,0.8s,baz=104,slow=7.7,SNR=3.9
USHA SKKPbc SKKPbc 16 56 50.3 -0.2
comp=Z,12nm,0.9s,baz=318,slow=8.4,SNR=3.5
FRB Frobisher Bay 120.07 7 PKhKP PKPpre 16 43 18.0
comp=Z,10.0nm,1.0s,baz=326,slow=2.0,SNR=6.9
FRB PKP PKPdf 16 43 32.0 -0.6
comp=Z,84nm,0.7s,baz=350,slow=2.9,SNR=44
FRB PP PP 16 45 02.1 -1.9
comp=Z,45nm,0.9s,baz=339,slow=8.4,SNR=6.4
FRB SKP 16 46 24.6
baz=296,slow=3.2
FRB Frobisher Bay 120.07 7 PKiKP PKPdf 16 43 32.0 -0.6
O20A White River Ci 120.12 46 PKiKP 16 43 34.3 +0.5
O20A White River Ci 120.12 46 P PKiKP 16 43 34.6 +0.8
baz=292,SNR=212
PV23 Carpenter Ridg 120.15 48 PKiKP 16 43 34.8 +0.8
PV10 Paradox Valley 120.16 48 PKPdf 16 43 33.8 -0.1
MG03 Isla Dawson 120.23 169 PKPdf 16 43 33.2 0.0
RWWY Rawlins 120.25 44 PKPdf 16 43 33.9 -0.1
PV11 David Mesa, Pa 120.31 48 PKiKP 16 43 34.7 +0.5
K22A Casper 120.33 42 PKPdf 16 43 34.0 0.0
K22A Casper 120.33 42 P PKiKP 16 43 34.1 +0.1
baz=294
K22A Casper 120.33 42 P PKiKP 16 43 34.2 +0.1
baz=294,SNR=73
PV13 Radium Mtn., P 120.39 48 PKPdf 16 43 34.2 -0.1
NUUK Nuuk 120.50 359 i P PKiKP 16 43 33.5 0.0
DSPA Despedida 120.52 171 PKiKP 16 43 34.4 +0.5
ECRI Cripan 120.53 318 PKIKP PKPdf 16 43 27.8 -6.4
PV15 Paradox Valley 120.58 48 PKPdf 16 43 34.6 -0.1
TUC Tucson 120.62 55 P PKiKP 16 43 36.0 +1.1
baz=285
W18A Petrified Fore 120.67 52 PKiKP 16 43 35.4 +0.4
W18A Petrified Fore 120.67 52 P PKiKP 16 43 36.3 +1.3
baz=288,SNR=44
X18A Snowflake 120.68 52 PKPdf 16 43 34.9 0.0
MVCO Mesa Verde 120.95 49 PKiKP 16 43 36.2 +0.7
MVCO Mesa Verde 120.95 49 P PKiKP 16 43 36.6 +1.1
baz=296,SNR=97
RSSD Black Hills 121.33 40 P PKPdf 16 43 35.8 -0.1
baz=297
RSSD Black Hills 121.33 40 P PKPdf 16 43 35.7 -0.2
baz=297
CART Cartagena 121.38 312 PKP PKPdf 16 43 29.8 -6.1
CART Cartagena 121.38 312 PP PP 16 45 07.4 -6.6
CART Cartagena 121.38 312 PKPdf 16 43 35.6 -0.3
CART Cartagena 121.38 312 P PKiKP 16 43 36.1 +0.1
SMCO Snowmass 121.38 46 PKiKP 16 43 37.0 +0.4
N23A Red Feather La 121.44 44 PKiKP 16 43 36.5 +0.1
N23A Red Feather La 121.44 44 P PKiKP 16 43 36.9 +0.4
baz=294,SNR=39
PHWY Pilot Hill 121.61 43 PKPdf 16 43 36.4 -0.2
MG05 Puerto Natales 121.85 167 PKiKP 16 43 36.8 +0.3
UCM Universidad Co 121.97 315 PKP PKPdf 16 43 37.0 0.0
UCM Universidad Co 121.97 315 PP PP 16 45 13.8 -4.1
S22A 4UR Ranch, Cre 122.01 48 PKiKP 16 43 38.0 +0.3
S22A 4UR Ranch, Cre 122.01 48 P PKiKP 16 43 39.3 +1.6
baz=291,SNR=175
ISCO Idaho Springs 122.11 45 P PKiKP 16 43 38.6 +0.7
baz=294,SNR=53
MDND Maddock 122.12 34 PKPdf 16 43 37.0 -0.1
MDND Maddock 122.12 34 P PKPdf 16 43 37.1 +0.1
baz=303
MDND Maddock 122.12 34 P PKiKP 16 43 37.3 0.0
baz=303,SNR=18
E28A Huff 122.18 36 PKPdf 16 43 37.1 -0.1
E28A Huff 122.18 36 P PKiKP 16 43 37.7 +0.3
baz=302,SNR=18
GO09 Cerro Castillo 122.27 167 PKiKP 16 43 37.7 +0.3
ULM Lac du Bonnet 122.70 30 PKP PKPdf 16 43 37.7 -0.3
comp=Z,88nm,0.6s,baz=297,slow=1.6,SNR=58
ULM SKP 16 46 30.4
comp=Z,12nm,0.6s,baz=162,slow=0.3,SNR=3.9
ULM PKKPbc PKKPab 16 53 32.4 -1.9
comp=Z,8.5nm,0.7s,baz=103,slow=2.6,SNR=7.4
ULM Lac du Bonnet 122.70 30 PKPdf 16 43 37.3 -0.8
ESBB Sonseca Array 122.73 315 PKiKP 16 43 38.9 +0.1
ESDC Sonseca Array 122.74 315 PKhKP PKPpre 16 43 31.8
comp=Z,1.6nm,0.6s,baz=58,slow=1.0,SNR=12
ESDC PKP PKiKP 16 43 39.4 +0.6
comp=Z,53nm,1.0s,baz=14,slow=3.6,SNR=78
ESDC PP PP 16 45 20.2 -2.9
comp=Z,26nm,0.9s,baz=53,slow=7.1,SNR=8.8
ESDC SKP 16 46 30.4
comp=Z,37nm,1.2s,baz=32,slow=3.9,SNR=6.8
ESDC PKKPbc PKKPbc 16 53 35.0 +0.4
comp=Z,3.7nm,0.8s,baz=263,slow=4.2,SNR=13
ESDC PKKP PKKPdf 16 54 10.1 +0.2
comp=Z,1.4nm,0.8s,baz=269,slow=2.1,SNR=2.5
ESDC SKKPbc SKKPbc 16 56 40.4 -0.2
comp=Z,4.3nm,1.1s,baz=251,slow=3.6,SNR=5.9
ESDC Sonseca Array 122.74 315 PKPdf PKiKP 16 43 38.9 +0.2
Q24A Divide 122.77 46 PKiKP 16 43 39.4 +0.3
Q24A Divide 122.77 46 P PKiKP 16 43 39.5 +0.3
baz=293,SNR=15
TRIS Tristan da Cun 122.97 220 PKiKP 16 43 39.6 +0.4
SDCO Great Sand Dun 122.99 47 PKiKP 16 43 40.1 +0.4
SDCO Great Sand Dun 122.99 47 P PKiKP 16 43 40.5 +0.8
baz=292
SDCO Great Sand Dun 122.99 47 P PKiKP 16 43 40.7 +1.1
baz=292,SNR=82
121A Cookes Peak, D 122.99 54 PKiKP 16 43 40.4 +0.8
121A Cookes Peak, D 122.99 54 P PKiKP 16 43 40.8 +1.1
baz=288,SNR=39
121A Cookes Peak, D 122.99 54 P PKiKP 16 43 41.0 +1.3
baz=288,SNR=39
PAB San Pablo 123.06 315 PKPdf PKiKP 16 43 39.5 0.0
PAB San Pablo 123.06 315 PKIKP PKiKP 16 43 39.5 0.0
PAB San Pablo 123.06 315 P PKiKP 16 43 40.2 +0.8
LENM Lemitar 123.13 52 PKiKP 16 43 40.8 +0.9
NRS Narsarsuaq 123.16 355 PKPdf 16 43 38.1 -0.4
NRS Narsarsuaq 123.16 355 PKIKP PKPdf 16 43 38.2 -0.4
NRS Narsarsuaq 123.16 355 i P PKPdf 16 43 37.8 -0.8
Y22D IRIS PASSCAL I 123.20 52 PKiKP 16 43 41.0 +1.1
Y22D IRIS PASSCAL I 123.20 52 P PKiKP 16 43 41.6 +1.6
baz=289,SNR=20
Y22D IRIS PASSCAL I 123.20 52 P PKiKP 16 43 41.6 +1.6
baz=289
Y22A Socorro 123.21 52 P PKiKP 16 43 41.2 +1.1
baz=289,SNR=124
SLBS Sierra La Lagu 123.27 65 PKiKP 16 43 41.2 +0.9
ANMO Albuquerque 123.27 51 PKiKP 16 43 40.5 +0.3
ANMO Albuquerque 123.27 51 PKIKP PKiKP 16 43 40.5 +0.3
ANMO Albuquerque 123.27 51 P PKiKP 16 43 41.1 +1.0
baz=290,SNR=88
ANMO Albuquerque 123.27 51 P PKiKP 16 43 41.3 +1.1
baz=290
CHAS Isla Isabel II 123.29 309 PKP PKPdf 16 43 38.5 -1.2
CHAS Isla Isabel II 123.29 309 PP PP 16 45 14.0 -13
IVI Ivigtut 123.32 356 PKPdf 16 43 38.6 -0.3
IVI Ivigtut 123.32 356 i P PKPdf 16 43 37.2 -1.6
FIGM Figuig 123.34 306 P PKiKP 16 43 42.0 +1.7
CRNM Carthage 123.39 52 PKiKP 16 43 41.1 +0.7
TAF Taforalt 123.40 309 P PKiKP 16 43 42.0 +1.7
BNM Barren Site 123.41 52 PKiKP 16 43 40.8 +0.3
WMELI Melilla 123.64 310 PKP PKPdf 16 43 38.6 -1.7
TDRA Tendrara 123.68 307 P PKiKP 16 43 42.1 +1.1
JBK JBK 123.68 309 P PKiKP 16 43 42.0 +1.0
PBRG Braganca 123.71 318 ‖ iPKPdf PKiKP 16 43 41.0 +0.4
PBRG Braganca 123.71 318 ePP PP 16 45 30.7 +1.3
GOG Mont Gurugu 123.71 310 P PKiKP 16 43 42.0 +1.1
AGMN Agassiz Nation 123.91 32 P PKPdf 16 43 40.1 -0.3
baz=307,SNR=15
AGMN Agassiz Nation 123.91 32 P PKPdf 16 43 39.9 -0.5
baz=307,SNR=15
D32A Dogwood Acres, 123.97 34 PKPdf 16 43 40.2 -0.4
D32B Dogwood Acres, 123.97 34 P PKPdf 16 43 40.6 +0.1
baz=306,SNR=24
T25A Trinidad 124.02 48 PKiKP 16 43 42.1 +0.4
T25A Trinidad 124.02 48 P PKiKP 16 43 42.7 +1.1
baz=293,SNR=90
TOA0 Torodi Ar. Sit 124.05 283 PKPdf 16 43 41.0 -0.6
TORD Torodi Ar. Bea 124.05 283 PKhKP PKPpre 16 43 26.5
comp=Z,2.3nm,0.8s,baz=93,slow=2.7,SNR=7.8
TORD PKP PKiKP 16 43 42.0 +0.1
comp=Z,139nm,0.8s,baz=55,slow=2.1,SNR=143
TORD PP PP 16 45 30.8 -2.1
comp=Z,21nm,0.8s,baz=70,slow=7.9,SNR=4.0
TORD PKKPbc PKKPab 16 53 30.1 +1.1
comp=Z,19nm,1.1s,baz=278,slow=3.8,SNR=11
TORD SKKPbc SKKPbc 16 56 33.6 -1.6
comp=Z,6.0nm,0.8s,baz=259,slow=2.3,SNR=5.6
TORD Torodi Ar. Bea 124.05 283 PKPdf 16 43 41.5 -0.1
OGNE Ogallala 124.10 43 PKPdf 16 43 40.8 -0.3
OGNE Ogallala 124.10 43 P PKPdf 16 43 41.2 +0.1
baz=297
OGNE Ogallala 124.10 43 P PKPdf 16 43 41.2 +0.1
baz=297
MVO Moncorvo 124.20 318 ‖ iPKPdf PKiKP 16 43 42.6 +1.0
MVO Moncorvo 124.20 318 ePP PP 16 45 32.8 +0.1
KIDD KIDD Seismic O 124.26 54 P PKiKP 16 43 42.6 +0.5
baz=288,SNR=6.7
SUSD Miller 124.34 38 PKPdf 16 43 40.8 -0.6
SUSD Miller 124.34 38 P PKPdf 16 43 41.3 -0.2
baz=302
SUSD Miller 124.34 38 P PKPdf 16 43 41.2 -0.2
baz=302
PALE Palemas 124.43 310 P PKiKP 16 43 43.0 +0.7
KSCO Kaye Shedlock' 124.54 45 PKPdf 16 43 42.2 +0.1
KSCO Kaye Shedlock' 124.54 45 P PKiKP 16 43 42.8 +0.3
baz=296
KSCO Kaye Shedlock' 124.54 45 P PKiKP 16 43 43.0 +0.5
baz=296,SNR=27
PCAB Cabril 124.60 319 ‖ iPKPdf PKiKP 16 43 43.1 +0.7
PCAB Cabril 124.60 319 ePP PP 16 45 36.3 +1.0
PVRL Vila Real 124.60 318 ‖ ePKPdf PKiKP 16 43 43.4 +1.0
PVRL Vila Real 124.60 318 ePP PP 16 45 36.5 +1.1
POLO Lamas de Olo 124.61 318 ‖ iPKPdf PKiKP 16 43 43.0 +0.5
POLO Lamas de Olo 124.61 318 ePP PP 16 45 36.8 +1.3
AKLM AKL 124.63 309 P PKiKP 16 43 44.0 +1.3
PGAV Gavieira, Arco 124.64 319 ‖ iPKPdf PKiKP 16 43 43.2 +0.7
PGAV Gavieira, Arco 124.64 319 ePP PP 16 45 36.9 +1.3
PVLZ Peaen de 124.72 310 PKP PKPdf 16 43 36.4 -6.0
PVLZ Peaen de 124.72 310 PP PP 16 45 34.6 -1.8
GO08 Villa O'Higgin 124.82 165 PKiKP 16 43 43.4 +0.9
MTE Manteigas 124.90 317 ‖ iPKPdf PKiKP 16 43 43.5 +0.5
MTE Manteigas 124.90 317 ePP PP 16 45 37.9 +0.5
PVIS Viseu 124.98 318 ‖ ePKPdf PKiKP 16 43 43.9 +0.7
PVIS Viseu 124.98 318 ePP PP 16 45 38.9 +1.0
B35A Bob, Littlefor 124.99 31 PKPdf PKPdf 16 43 42.2 -0.3
B35A Bob, Littlefor 124.99 31 P PKPdf 16 43 42.2 -0.3
baz=310,SNR=19
PCBR Castelo Branco 125.11 317 ‖ ePKPdf PKiKP 16 43 44.1 +0.7
PCBR Castelo Branco 125.11 317 ePP PP 16 45 40.5 +1.8
F33A 5 Mile Ranch, 125.13 35 P PKPdf 16 43 43.0 +0.1
baz=306
MNTX Cornudas Mount 125.19 54 P PKiKP 16 43 43.9 +0.1
baz=289,SNR=54
MNTX Cornudas Mount 125.19 54 P PKiKP 16 43 44.3 +0.4
baz=289
PMRV Marv??o 125.23 316 ‖ iPKPdf PKiKP 16 43 44.0 +0.3
PMRV Marv??o 125.23 316 ePP PP 16 45 40.0 +0.4
CEU Ceuta 125.26 311 PKP PKPdf 16 43 35.5 -7.8
CEU Ceuta 125.26 311 PP PP 16 45 33.7 -6.2
SMIR Smir Dam 125.35 311 P PKiKP 16 43 45.0 +1.0
K31A O'Neill 125.42 39 PKPdf 16 43 43.2 -0.3
K31A O'Neill 125.42 39 P PKPdf 16 43 43.6 +0.1
baz=301
CHEFC Chefchaouen 125.54 310 P PKiKP 16 43 45.1 +0.6
COI Coimbra 125.57 317 ‖ ePKPdf PKiKP 16 43 44.8 +0.5
COI Coimbra 125.57 317 ePP PP 16 45 44.7 +3.0
COI Coimbra 125.57 317 PKiKP 16 43 44.5 +0.2
COI Coimbra 125.57 317 PKIKP PKiKP 16 43 44.5 +0.2
PESTR Estremoz 125.62 316 ‖ iPKPdf PKiKP 16 43 44.7 +0.2
PESTR Estremoz 125.62 316 ePP PP 16 45 41.7 -0.5
PESTR Estremoz 125.62 316 PKPdf PKiKP 16 43 44.8 +0.4
PESTR Estremoz 125.62 316 P PKiKP 16 43 45.4 +0.9
SFS San Fernando 125.66 312 PKP PKPdf 16 43 41.3 -2.8
SFS San Fernando 125.66 312 PP PP 16 45 41.3 -1.2
SFS San Fernando 125.66 312 PKiKP 16 43 45.6 +1.1
SFS San Fernando 125.66 312 PKIKP PKiKP 16 43 45.6 +1.1
LCRM LCR 125.69 309 P PKiKP 16 43 46.4 +1.5
PCAS Casmilo, Conde 125.70 317 ‖ iPKPdf PKiKP 16 43 44.6 0.0
PCAS Casmilo, Conde 125.70 317 ePP PP 16 45 45.2 +2.6
ARNO Arenosillo 125.78 313 PKP PKPdf 16 43 44.1 -0.2
ARNO Arenosillo 125.78 313 PP PP 16 45 41.2 -2.1
MDT Midelt 125.80 308 PKP PKiKP 16 43 46.2 +1.1
comp=Z,68nm,1.0s,baz=88,slow=3.4,SNR=54
MDT PP PP 16 45 40.3 -3.4
comp=Z,32nm,1.0s,baz=101,slow=5.2,SNR=5.3
MDT Midelt 125.80 308 P PKiKP 16 43 46.6 +1.5
SICH Sidi Chahed 125.90 309 P PKiKP 16 43 46.5 +1.3
IFR Ifrane 125.96 309 PKP PKPdf 16 43 44.5 -0.5
IFR Ifrane 125.96 309 PP PP 16 45 43.9 -0.9
PMTG Montargil 125.97 316 ‖ iPKPdf PKiKP 16 43 45.1 0.0
PMTG Montargil 125.97 316 ePP PP 16 45 44.6 +0.2
EVO Evora 126.07 315 PKP PKPdf 16 43 43.7 -1.2
EVO Evora 126.07 315 PP PP 16 45 43.9 -1.2
EVO Evora 126.07 315 ‖ iPKPdf PKiKP 16 43 45.9 +0.6
EVO Evora 126.07 315 ePP PP 16 45 44.7 -0.4
ECSD EROS Data Cent 126.14 37 PKPdf PKPdf 16 43 44.9 0.0
ECSD EROS Data Cent 126.14 37 P PKPdf 16 43 44.9 0.0
baz=304
ECSD EROS Data Cent 126.14 37 P PKPdf 16 43 45.1 +0.3
baz=304,SNR=19
PSBE So Bento 126.16 317 ‖ iPKPdf PKiKP 16 43 45.9 +0.4
PSBE So Bento 126.16 317 ePP PP 16 45 46.4 +0.7
PBEJ Beja 126.19 315 ‖ ePKPdf PKiKP 16 43 46.4 +0.8
PBEJ Beja 126.19 315 ePP PP 16 45 50.6 +4.7
PVAQ Vaqueiros 126.36 314 ‖ iPKPdf PKiKP 16 43 46.5 +0.6
PVAQ Vaqueiros 126.36 314 ePP PP 16 45 46.0 -1.0
PVAQ Vaqueiros 126.36 314 PKPdf PKiKP 16 43 46.2 +0.3
PVAQ Vaqueiros 126.36 314 P PKiKP 16 43 46.9 +1.0
EYMN Ely 126.39 30 P PKPdf 16 43 44.9 -0.2
baz=312
EYMN Ely 126.39 30 P PKPdf 16 43 45.0 -0.2
baz=312,SNR=13
BGNE Belgrade 126.43 40 PKPdf 16 43 45.3 -0.2
BGNE Belgrade 126.43 40 P PKPdf 16 43 45.6 +0.1
baz=301
BGNE Belgrade 126.43 40 P PKiKP 16 43 46.0 -0.1
baz=301,SNR=23
GOLM Goulmima 126.45 306 P PKiKP 16 43 48.0 +1.5
MSTX Muleshoe 126.47 51 PKPdf 16 43 46.1 +0.2
MSTX Muleshoe 126.47 51 P PKiKP 16 43 46.4 0.0
baz=292,SNR=18
MSTX Muleshoe 126.47 51 P PKiKP 16 43 46.6 +0.2
baz=292,SNR=18
PCVE Castro Verde 126.49 314 ‖ iPKPdf PKiKP 16 43 46.7 +0.5
PCVE Castro Verde 126.49 314 ePP PP 16 45 46.2 -1.7
MESJ Messejana 126.53 315 ePKPdf PKiKP 16 43 46.4 +0.2
MESJ ePP PP 16 45 49.0 +0.9
MESJ Messejana 126.53 315 ‖ iPKPdf PKiKP 16 43 47.0 +0.7
MESJ Messejana 126.53 315 ePP PP 16 45 46.8 -1.3
PBDV Barranco-do-Ve 126.58 314 ‖ iPKPdf PKiKP 16 43 47.2 +0.8
PBDV Barranco-do-Ve 126.58 314 ePP PP 16 45 47.1 -1.5
PNCL Nicolau / Gran 126.62 315 ‖ iPKPdf PKiKP 16 43 46.7 +0.3
PNCL Nicolau / Gran 126.62 315 ePP PP 16 45 47.7 -1.0
CBKS Cedar Bluff 126.65 44 PKPdf 16 43 45.9 -0.2
CBKS Cedar Bluff 126.65 44 PKIKP PKPdf 16 43 45.9 -0.2
CBKS Cedar Bluff 126.65 44 P PKPdf 16 43 46.2 +0.1
baz=298
CBKS Cedar Bluff 126.65 44 P PKiKP 16 43 46.4 -0.1
baz=298
F36A Milaca 126.66 33 P PKPdf 16 43 45.7 -0.1
baz=308
PMAFR Mafra 126.76 316 ‖ iPKPdf PKiKP 16 43 47.2 +0.5
PMAFR Mafra 126.76 316 ePP PP 16 45 50.1 +0.5
LIS Lisbon 126.78 316 ePKPdf PKiKP 16 43 46.9 +0.2
LIS ePP PP 16 45 50.6 +1.0
PMST Lisbon--Monsan 126.79 316 ‖ iPKPdf PKiKP 16 43 47.6 +0.8
PMST Lisbon--Monsan 126.79 316 ePP PP 16 45 50.2 +0.4
AMTX Amarillo 126.94 49 PKPdf 16 43 46.7 -0.1
AMTX Amarillo 126.94 49 P PKiKP 16 43 47.2 -0.1
baz=294,SNR=24
AMTX Amarillo 126.94 49 P PKiKP 16 43 47.6 +0.2
baz=294
PTEO Sao Teotonio 127.02 315 ‖ ePKPdf PKiKP 16 43 47.9 +0.7
PTEO Sao Teotonio 127.02 315 ePP PP 16 45 50.3 -1.0
MORF Marmelete 127.07 314 ePKPdf PKiKP 16 43 47.5 0.0
MORF ePP PP 16 45 52.6 +0.8
MORF Marmelete 127.07 314 ‖ iPKPdf PKiKP 16 43 48.2 +0.7
MORF Marmelete 127.07 314 ePP PP 16 45 48.9 -2.9
ZHG ZHG 127.17 309 P PKiKP 16 43 49.0 +1.2
N33A J Bar K, Exete 127.23 41 PKPdf 16 43 47.1 0.0
N33B J Bar K, Exete 127.23 41 P PKPdf 16 43 46.5 -0.6
baz=301
E38A The Farm, Brul 127.24 32 PKPdf PKPdf 16 43 46.9 0.0
E38A The Farm, Brul 127.24 32 P PKPdf 16 43 46.6 -0.2
baz=311
TZRR Tazzarine 127.26 306 P PKiKP 16 43 49.0 +0.9
L34A Svendsen Farm, 127.26 39 PKPdf PKPdf 16 43 47.0 0.0
L34A Svendsen Farm, 127.26 39 P PKiKP 16 43 47.5 -0.2
baz=303
PFVI Vila Bisbo 127.27 314 ‖ iPKPdf PKiKP 16 43 48.5 +0.7
PFVI Vila Bisbo 127.27 314 ePP PP 16 45 51.1 -1.9
PFVI Vila Bisbo 127.27 314 PKiKP 16 43 48.1 +0.3
PFVI Vila Bisbo 127.27 314 P PKiKP 16 43 49.1 +1.3
TX31 Lajitas Ar. Si 127.34 56 P PKPdf 16 43 47.7 0.0
baz=288,SNR=15
TXAR Lajitas Array 127.34 56 PKhKP PKPpre 16 43 30.3
comp=Z,2.7nm,0.7s,baz=305,slow=1.3,SNR=7.1
TXAR PKP PKiKP 16 43 49.1 +0.9
comp=Z,31nm,0.8s,baz=246,slow=1.7,SNR=48
TXAR SKPbc SKPbc 16 46 24.9
comp=Z,42nm,0.8s,baz=242,slow=2.9,SNR=26
TXAR PKKPbc PKKPbc 16 53 16.0
comp=Z,6.7nm,0.7s,baz=110,slow=5.3,SNR=17
TXAR SKKPbc SKKPbc 16 56 19.2 -5.6
comp=Z,3.4nm,0.9s,baz=67,slow=2.3,SNR=3.6
SPMN Marine on St. 127.46 34 PKPdf PKPdf 16 43 47.4 +0.1
SPMN Marine on St. 127.46 34 P PKPdf 16 43 47.4 +0.1
baz=309,SNR=7.9
ZGR Zagora 127.52 305 P PKiKP 16 43 50.0 +1.3
R32A Long Quarter, 127.54 44 PKPdf 16 43 47.9 +0.2
R32A Long Quarter, 127.54 44 P PKiKP 16 43 48.3 -0.1
baz=299
COYC Coyhaique 127.62 164 PKiKP 16 43 48.5 +0.2
AVE Averroes 127.82 309 PKP PKiKP 16 43 52.7 +3.7
AVE Averroes 127.82 309 PP PP 16 45 47.9 -8.9
AVE Averroes 127.82 309 P PKiKP 16 43 49.5 +0.5
I37B Waseca 127.87 35 P PKiKP 16 43 48.5 -0.2
baz=307
OUZM OUZ 128.18 306 P PKiKP 16 43 51.0 +1.0
U32A Winter Ranch, 128.28 46 PKiKP 16 43 49.9 +0.1
U32A Winter Ranch, 128.28 46 P PKiKP 16 43 49.8 -0.1
baz=297
N35A Tabor 128.33 40 PKPdf 16 43 49.5 +0.3
D41A Chassel 128.45 29 PKPdf PKPdf 16 43 49.3 +0.2
SRHM Skhour des Reh 128.51 308 P PKiKP 16 43 53.0 +2.5
KSU1 Kansas State U 128.63 42 PKPdf 16 43 49.4 -0.3
KSU1 Kansas State U 128.63 42 P PKiKP 16 43 50.1 -0.4
baz=301
KSU1 Kansas State U 128.63 42 P PKiKP 16 43 50.1 -0.4
baz=301
COWI Conover 128.83 31 PKPdf PKPdf 16 43 50.0 0.0
COWI Conover 128.83 31 P PKPdf 16 43 50.2 +0.3
baz=313
SCHQ Schefferville 128.90 9 PKhKP PKPpre 16 43 30.2
comp=Z,3.1nm,0.8s,baz=352,slow=4.2,SNR=5.1
SCHQ PKP PKiKP 16 43 50.7 +0.2
comp=Z,48nm,0.6s,baz=2.9,slow=3.0,SNR=26
SCHQ SKPbc SKPbc 16 46 28.1
comp=Z,53nm,0.8s,baz=30,slow=6.5,SNR=5.5
SCHQ PKKP PKKPdf 16 53 55.4 -2.8
comp=Z,3.7nm,0.6s,baz=152,slow=4.3,SNR=4.6
SCHQ SKKPbc SKKPbc 16 56 14.2 -6.4
comp=Z,9.3nm,0.9s,baz=69,slow=4.5,SNR=4.9
K38A Parkersburg 129.06 36 PKPdf PKPdf 16 43 50.9 +0.4
K38A Parkersburg 129.06 36 P PKPdf 16 43 50.8 +0.4
baz=307
WMOK Wichita Mounta 129.17 48 P PKPdf 16 43 49.2 -1.7
baz=296,SNR=10
WMOK Wichita Mounta 129.17 48 P PKPdf 16 43 51.1 +0.2
baz=296,SNR=10
SCIA State Center 129.24 37 P PKiKP 16 43 51.2 -0.4
baz=306
ABTX Abilene, Hawle 129.40 51 P PKPdf 16 43 49.8 -1.6
baz=294,SNR=7.7
ABTX Abilene, Hawle 129.40 51 P PKiKP 16 43 52.1 -0.1
baz=294
GO07 Milladeo Hill, 129.41 162 PKPdf PKPdf 16 43 51.4 +0.3
I40A Norwalk 129.51 34 PKPdf 16 43 51.1 -0.2
I40A Norwalk 129.51 34 P PKPdf 16 43 50.6 -0.7
baz=310
F42A Maple Grove Fa 129.57 30 PKPdf 16 43 51.7 +0.4
TTIG Tnine Tigouga, 129.66 306 P PKiKP 16 43 54.0 +1.0
E43A Lone Tree Farm 129.69 29 PKiKP 16 43 52.2 -0.2
E43A Lone Tree Farm 129.69 29 P PKiKP 16 43 51.3 -0.2
baz=316
T35B Sooner Cattle 129.79 44 P PKPdf 16 43 52.1 +0.1
baz=300
OKCFA Oklahoma City 129.84 47 PKiKP 16 43 52.8 -0.3
N38A Joes South For 129.88 38 PKPdf 16 43 51.9 -0.2
N38A Joes South For 129.88 38 P PKPdf 16 43 51.8 -0.2
baz=306
LL02 Futaleuf 129.88 163 PKiKP 16 43 52.7 -0.2
X34A Smith Ranch, M 129.93 48 PKiKP 16 43 52.9 -0.4
FNO Franklin 129.95 47 PKPdf 16 43 52.8 +0.4
JCT Junction City 130.10 54 P PKPdf 16 43 52.1 -0.8
baz=292,SNR=24

JCT	Junction City	130.10	54	P		PKiKP	16 43 53.3	-0.4	
	baz=292,SNR=24								
EAH	EAH	130.15	308	P		PKiKP	16 43 56.0	+2.2	
L40A	Anamosa	130.32	36	P		PKPdf	16 43 52.6	-0.3	
	baz=308								
JFWS	Jewell Farm	130.35	34	PKPdf		PKPdf	16 43 52.6	-0.3	
JFWS	Jewell Farm	130.35	34	PKiKP		PKPdf	16 43 52.6	-0.3	
JFWS	Jewell Farm	130.35	34	P		PKPdf	16 43 52.5	-0.3	
	baz=310								
JFWS	Jewell Farm	130.35	34	P		PKPdf	16 43 52.6	-0.3	
	baz=310								
P38A	Dawn	130.36	40	P		PKPdf	16 43 53.1	+0.1	
	baz=304								
I42A	Draeger Farm,	130.44	33	PKPdf		PKPdf	16 43 52.7	-0.3	
I42A	Draeger Farm,	130.44	33	P		PKPdf	16 43 52.5	-0.6	
	baz=312								
H43A	Windswept, Lux	130.65	31	PKPdf		PKPdf	16 43 53.0	-0.4	
H43A	Windswept, Lux	130.65	31	P		PKPdf	16 43 53.0	-0.4	
	baz=314								
DBIC	Dimbokro	130.69	275	eP		PKPdf	16 43 54.1	-0.2	
DBIC				IAmb		IAmb	16 43 56.7		
	comp=Z,174nm,1.1s								
DBIC	Dimbokro	130.69	275	PKhKP		PKPpre	16 43 35.6		
	comp=Z,12nm,0.6s,baz=111,slow=3.0,SNR=9.5								
DBIC				PKP		PKiKP	16 43 55.6	+0.3	
	comp=Z,81nm,0.7s,baz=107,slow=2.4,SNR=24								
DBIC				PP		PP	16 46 17.1	+0.9	
	comp=Z,20nm,0.7s,baz=86,slow=6.4,SNR=3.6								
DBIC				SKPbc		SKPab	16 46 37.1	+0.1	
	comp=Z,164nm,0.7s,baz=110,slow=4.5,SNR=24								
DBIC	Dimbokro	130.69	275	PKPdf		PKPdf	16 43 53.8	-0.5	
TUL1	Leonard	130.79	45	PKPdf		PKPdf	16 43 54.0	+0.1	
TUL1	Leonard	130.79	45	P		PKPdf	16 43 54.0	+0.1	
	baz=300								
TUL1	Leonard	130.79	45	P		PKPdf	16 43 54.4	+0.5	
	baz=300,SNR=8.7								
Z35A	Perchaven, San	130.93	49	P		PKPdf	16 43 54.7	+0.5	
	baz=296,SNR=7.0								
E46A	Sault Ste Mari	130.97	27			PKPpre	16 43 40.0		
E46A				PKPdf		PKPdf	16 43 54.3	+0.3	
E46A	Sault Ste Mari	130.97	27	P		PKPdf	16 43 53.9	-0.1	
	baz=319								
833A	Chaparral WMA,	131.21	56			PKPpre	16 43 40.4		
833A				PKPdf		PKiKP	16 43 56.2	+0.2	
833A	Chaparral WMA,	131.21	56	P		PKPdf	16 43 53.2	-1.8	
	baz=290,SNR=15								
833A	Chaparral WMA,	131.21	56	P		PKiKP	16 43 56.1	+0.2	
	baz=290,SNR=15								
G45A	Suttons Bay	131.31	29			PKPdf	16 43 54.2	-0.4	
G45A	Suttons Bay	131.31	29	P		PKPdf	16 43 54.6	-0.1	
	baz=316								
G45A				P		PKPdf	16 43 54.6	-0.1	
	baz=316								
WHTX	Lake Whitney,	131.35	51	P		PKPdf	16 43 55.3	+0.2	
	baz=295,SNR=6.0								
WHTX	Lake Whitney,	131.35	51	P		PKPdf	16 43 55.6	+0.5	
	baz=295,SNR=6.0								
P40A	Paris	131.35	39	P		PKPdf	16 43 54.8	-0.1	
	baz=306								
N41A	Harden Midland	131.38	37	PKPdf		PKPdf	16 43 54.2	-0.7	
N41A	Harden Midland	131.38	37	P		PKPdf	16 43 53.8	-1.1	
	baz=308								
K43A	Burlington	131.55	33	PKPdf		PKPdf	16 43 54.1	-1.1	
K43A	Burlington	131.55	33	P		PKPdf	16 43 54.9	-0.3	
	baz=312								
S39A	Bolivar	131.56	42	P		PKPdf	16 43 55.3	-0.1	
	baz=303								
LL03	Petrohue	131.60	162			PKPdf	16 43 55.7	+0.4	
X37A	Clayton	131.74	46			PKPpre	16 43 40.2		
X37A				PKPdf		PKPdf	16 43 56.0	+0.1	
X37A	Clayton	131.74	46	P		PKPdf	16 43 55.9	+0.1	
	baz=299,SNR=11								
435B	Jarrell	131.75	52			PKPdf	16 43 55.1	-0.8	
435B	Jarrell	131.75	52	P		PKPdf	16 43 55.3	-0.6	
	baz=294,SNR=13								
435B	Jarrell	131.75	52	P		PKiKP	16 43 56.6	-0.4	
	baz=294								
LL04	Puerto Octay	131.80	162			PKPdf	16 43 54.7	-1.1	
HHAR	Hobbs	131.90	44	P		PKPdf	16 43 55.8	-0.3	
	baz=302								
R40A	Maddies Statio	131.92	41	P		PKPdf	16 43 55.4	-0.6	
	baz=305								
GLMI	Grayling	131.97	29			PKPdf	16 43 55.4	-0.5	
GLMI	Grayling	131.97	29	P		PKPdf	16 43 55.2	-0.7	
	baz=318								
GLMI	Grayling	131.97	29	P		PKPdf	16 43 55.9	0.0	
	baz=318								
L44A	Lake County Fo	132.13	34			PKPdf	16 43 55.7	-0.6	
735A	Kenedy	132.32	55	P		PKiKP	16 43 58.4	+0.2	
	baz=292,SNR=11								
VLDQ	Val d'Or	132.35	21	PKPdf		PKPdf	16 43 55.8	-0.6	
HDIL	Hopedale	132.40	36	PKPdf		PKPdf	16 43 56.2	-0.6	
HDIL	Hopedale	132.40	36	P		PKPdf	16 43 55.9	-0.9	
	baz=310								
HDIL	Hopedale	132.40	36	P		PKPdf	16 43 56.8	0.0	
	baz=310								
PLCA	Paso Flores	132.52	163	PKhKP		PKPpre	16 43 44.0		
	comp=Z,1.4nm,0.7s,baz=127,slow=1.7,SNR=8.1								
PLCA				PKP		PKiKP	16 43 58.9	+0.5	
	comp=Z,47nm,0.7s,baz=200,slow=2.7,SNR=39								
PLCA				SKPbc		SKPbc	16 46 42.8	+0.4	
	comp=Z,250nm,1.1s,baz=211,slow=3.8,SNR=21								
PLCA				SKKPbc		SKKPbc	16 56 04.4	-2.2	
	comp=Z,6.0nm,0.8s,baz=47,slow=3.6,SNR=4.6								
PLCA	Paso Flores	132.52	163	PKPdf		PKiKP	16 43 58.3	-0.1	
W39A	Magazine	132.57	45			PKPpre	16 43 45.2		
W39A				PKPdf		PKPdf	16 43 57.0	-0.3	
W39A	Magazine	132.57	45	P		PKPdf	16 43 57.2	-0.1	
	baz=301,SNR=20								
W39A	Magazine	132.57	45	P		PKPdf	16 43 57.5	+0.2	
	baz=301,SNR=20								
M44A	Midewin, Midew	132.58	35	PKPdf		PKPdf	16 43 56.7	-0.4	
M44A	Midewin, Midew	132.58	35	P		PKPdf	16 43 56.6	-0.6	
	baz=312								
U40A	Yellville	132.60	43	PKPdf		PKPdf	16 43 57.2	-0.3	
U40A	Yellville	132.60	43	P		PKPdf	16 43 57.1	-0.3	
	baz=303								
U40A				P		PKPdf	16 43 57.1	-0.3	
	baz=303								
U40A	Yellville	132.60	43	P		PKPdf	16 43 57.3	-0.1	
	baz=303								
237A	Washetta, Mont	132.61	50	P		PKPdf	16 43 58.0	+0.6	
	baz=296,SNR=10								
Z38A	Mt. Pleasant	132.65	48	PKPdf		PKiKP	16 43 58.3	-0.4	
Z38A	Mt. Pleasant	132.65	48	P		PKPdf	16 43 58.1	+0.6	
	baz=298,SNR=15								
CCM	Cathedral Cave	132.72	40	P		PKPdf	16 43 57.4	0.0	
	baz=306								
CCM	Cathedral Cave	132.72	40	P		PKPdf	16 43 57.5	0.0	
	baz=306								
P43A	Skaggs, Pawnee	132.84	37	PKPdf		PKPdf	16 43 58.0	+0.4	
P43A	Skaggs, Pawnee	132.84	37	P		PKPdf	16 43 57.8	+0.1	
	baz=309								
J47A	Sunmer	133.03	30	PKPdf		PKiKP	16 43 59.1	0.0	
J47A	Sunmer	133.03	30	P		PKPdf	16 43 57.9	0.0	
	baz=316								
J47A				P		PKPdf	16 43 57.9	0.0	
	baz=316								
MIAR	Mount Ida	133.04	46	PKPpre		PKPpre	16 43 45.6		
MIAR				PKPdf		PKiKP	16 43 59.0	-0.5	
MIAR	Mount Ida	133.04	46	PKHKP		PKPpre	16 43 45.6		
MIAR							16 43 59.0		
MIAR	Mount Ida	133.04	46	P		PKPdf	16 43 58.6	+0.4	
	baz=301,SNR=11								
L46A	Eue Claire	133.12	33			PKPdf	16 43 58.2	+0.1	
O44A	Mansfield	133.14	36	P		PKPdf	16 43 57.3	-1.0	
	baz=310								
FVM	French Village	133.28	40	P		PKPdf	16 43 58.3	-0.3	
	baz=306								
I49A	Point Hope	133.48	28	PKPdf		PKPdf	16 43 59.2	+0.4	
I49A	Point Hope	133.48	28	P		PKPdf	16 43 58.5	-0.2	
	baz=319								
I49A				P		PKPdf	16 43 58.5	-0.2	
	baz=319								
WHAR	Wooly Hollow	133.56	44	PKPdf		PKPdf	16 43 59.5	+0.4	
NATX	Nacogdoches	133.59	49	PKPdf		PKPdf	16 43 58.3	-1.0	
X40A	Basin Creek Fa	133.60	45	P		PKPdf	16 43 59.1	-0.2	
	baz=301,SNR=9.7								
X40A				P		PKPdf	16 43 59.1	-0.2	
	baz=301,SNR=9.7								
X40A	Basin Creek Fa	133.60	45	P		PKPdf	16 43 59.3	+0.1	
	baz=301,SNR=9.7								
Q44A	Meyer Farm, Va	133.60	38	PKPdf		PKPdf	16 43 59.4	+0.3	
Q44A	Meyer Farm, Va	133.60	38	P		PKPdf	16 43 58.9	-0.3	
	baz=309								
W41B	Gary Mavity, V	133.65	44	PKPdf		PKPdf	16 43 60.0	+0.6	
W41B	Gary Mavity, V	133.65	44	P		PKPdf	16 43 59.0	-0.3	
	baz=302								
W41B	Gary Mavity, V	133.65	44	P		PKPdf	16 43 59.1	-0.2	
	baz=302								
SFIN	Lafayette	133.79	35	P		PKPdf	16 43 58.9	-0.5	
	baz=312								
SFIN	Lafayette	133.79	35	P		PKPdf	16 43 59.3	-0.1	
	baz=312								
LCAR	Lake Charles	133.91	42	P		PKPdf	16 43 59.7	-0.1	
	baz=304								
L48A	N Adams	134.16	31	P		PKPdf	16 44 00.1	0.0	
	baz=316								
L48A				P		PKPdf	16 44 00.1	0.0	
	baz=316								
S44A	Carbondale	134.20	39	PKPdf		PKPdf	16 43 59.8	-0.5	
N47A	Urbana	134.23	33	PKPdf		PKPdf	16 44 00.8	+0.5	
Z41A	Richland Creek	134.25	47	P		PKPdf	16 43 59.9	-0.6	
	baz=300								
Z41A				P		PKPdf	16 43 59.9	-0.6	
	baz=300								
Z41A	Richland Creek	134.25	47	P		PKPdf	16 44 00.2	-0.3	
	baz=300								
AAM	Ann Arbor	134.30	30	PKPdf		PKiKP	16 44 01.2	-0.6	
AAM	Ann Arbor	134.30	30	PKiKP		PKiKP	16 44 01.2	-0.6	
AAM	Ann Arbor	134.30	30	P		PKPpre	16 43 48.9		
	baz=317								
SADO	Sadowa	134.47	25	PKhKP		PKPpre	16 43 47.0		
	comp=Z,25nm,0.7s,baz=322,slow=6.3,SNR=14								
SADO				PKP		PKPdf	16 44 01.0	+0.4	
	comp=Z,63nm,0.8s,baz=340,slow=3.5,SNR=15								
SADO				SKPbc		SKPbc	16 46 48.0	-0.6	
	comp=Z,116nm,0.8s,baz=338,slow=4.2,SNR=28								
SADO	Sadowa	134.47	25	PKPdf		PKPdf	16 44 00.8	+0.2	
PMPST	Porto Santo, M	134.61	313	ePKPdf		PKiKP	16 44 02.1	-0.6	
PMPST	Porto Santo, M	134.61	313	ePP		PP	16 46 50.3	+10	
PMPS	Porto Santo	134.62	313	ePKPdf		PKPdf	16 43 56.4	-4.8	
PMPS	Porto Santo	134.62	313	ePP		PP	16 46 50.4	+10	
PEBM	Pemiscott Bayo	134.74	41			PKiKP	16 44 02.4	-0.5	
X43A	Marvell	134.95	44	P		PKPdf	16 43 48.7	-13	
	baz=303								
O48B	Farmland	134.96	34	P		PKPdf	16 44 01.3	-0.3	
	baz=314								
O48B	Farmland	134.96	34	P		PKPpre	16 43 48.7		
	baz=314								
N49A	Columbus Grove	135.02	32	PKPdf		PKPdf	16 44 02.1	+0.3	
N49A	Columbus Grove	135.02	32	P		PKPdf	16 44 01.2	-0.5	
	baz=316								
N49A				P		PKPdf	16 44 01.2	-0.5	
	baz=316								
441A	DeRidder	135.17	50			PKPdf	16 44 01.2	-1.1	
HALT	Halls	135.21	41			PKPdf	16 44 02.2	0.0	
PMAR	Madeira	135.21	313	ePKPdf		PKPdf	16 43 51.7	-11	
PMAR	Madeira	135.21	313	ePP		PP	16 46 52.4	+8.5	
M50A	Fremont	135.27	31	PKPdf		PKPdf	16 44 01.3	-0.9	
M50A	Fremont	135.27	31	P		PKPdf	16 44 02.0	-0.2	
	baz=317								
M50A				P		PKPdf	16 44 02.0	-0.2	
	baz=317								
P48A	Milroy	135.36	35	PKPdf		PKPdf	16 44 02.2	-0.2	
P48A	Milroy	135.36	35	P		PKPdf	16 44 02.2	-0.2	
	baz=313								
P48A				P		PKPdf	16 44 02.2	-0.2	
	baz=313								
PMOZ	Porto Moniz, M	135.36	314	ePKPdf		PKPdf	16 43 54.0	-8.8	
PMOZ	Porto Moniz, M	135.36	314	ePP		PP	16 46 52.8	+8.0	
O49A	Covington	135.46	33			PKPpre	16 43 48.9		
O49A				PKPdf		PKPdf	16 44 02.7	+0.1	
O49A	Covington	135.46	33	P		PKPdf	16 44 02.2	-0.4	
	baz=315								
O49A				P		PKPdf	16 44 02.2	-0.4	
	baz=315								
342A	Flagon Creek P	135.53	49	PKPdf		PKPdf	16 44 02.4	-0.5	
P49A	Miami Univ. Ec	135.71	34	PKPdf		PKPdf	16 44 02.9	-0.2	
P49A	Miami Univ. Ec	135.71	34	P		PKPdf	16 44 03.0	0.0	
	baz=314								
P49A	Miami Univ. Ec	135.71	34	P		PKPpre	16 43 51.2		
	baz=314								
N51A	Ashland	135.96	31			PKPpre	16 43 51.5		
OXF	Oxford	135.96	43			PKPpre	16 43 51.4		
OXF	Oxford	135.96	43	PKHKP		PKPpre	16 43 51.4		
OXF	Oxford	135.96	43	P		PKPpre	16 43 51.2		
	baz=305								
T47A	Sharon Grove	135.98	39	P		PKPdf	16 44 03.6	0.0	
	baz=309								
M52A	Cheserland	136.01	29			PKPdf	16 44 04.0	+0.4	
WVT	Waverly	136.06	40	PKPdf		PKiKP	16 44 04.9	-0.7	
WVT	Waverly	136.06	40	PKiKP		PKiKP	16 44 04.9	-0.7	
WVT	Waverly	136.06	40	P		PKPdf	16 44 03.2	-0.6	
	baz=308								
WVT	Waverly	136.06	40	P		PKPpre	16 43 52.3		
	baz=308								
MEDO	Medina	136.06	25	PKPdf		PKiKP	16 44 04.7	-0.7	
ACSO	Alum Creek Sta	136.15	32	P		PKPdf	16 44 03.8	0.0	
	baz=317								
ACSO	Alum Creek Sta	136.15	32	P		PKPpre	16 43 52.9		
	baz=317								
BMNY	Brushton-Moira	136.20	21	P		PKPdf	16 44 03.6	-0.2	
	baz=330								
ERPA	Erie	136.21	28	PKPdf		PKPdf	16 44 04.4	+0.5	
ERPA	Erie	136.21	28	P		PKPdf	16 44 03.5	-0.4	
	baz=322								
ERPA	Erie	136.21	28	P		PKPpre	16 43 52.9		
	baz=322								
J55A	Hilton	136.25	25	PKPdf		PKPdf	16 44 04.1	+0.2	
J55A	Hilton	136.25	25	P		PKPdf	16 44 03.6	-0.3	
	baz=325								
J55A				P		PKPdf	16 44 03.6	-0.3	
	baz=325								
R49A	Shelbyville	136.29	36	P		PKPdf	16 44 04.2	0.0	
	baz=312								
R49A				P		PKPdf	16 44 04.2	0.0	
	baz=312								
LONY	Lake Ozonia	136.36	21	P		PKPpre	16 43 54.8		
	baz=330								
M53A	WI Miller and	136.41	29	PKPdf		PKPdf	16 44 03.6	-0.7	
M53A	WI Miller and	136.41	29	P		PKPpre	16 43 53.4		
	baz=320								
VBMS	Vicksburg	136.43	46	P		PKPpre	16 43 55.3		
	baz=302								
FRNY	Flat Rock	136.52	20	PKPdf		PKPdf	16 44 04.3	-0.1	
FRNY	Flat Rock	136.52	20	P		PKPdf	16 44 03.8	-0.6	
	baz=332								
E63A	Oxbow	136.58	14	P		PKPdf	16 44 04.2	-0.3	
	baz=339								
E63A				P		PKPdf	16 44 04.2	-0.3	
	baz=339								
P51A	Williamsport	136.65	33			PKPpre	16 43 52.0		
P51A				PKPdf		PKPdf	16 44 05.3	+0.5	
344A	Westbrook Farm	136.67	48			PKPpre	16 43 53.8		
R50A	Paris	136.79	35			PKPpre	16 43 53.5		
R50A				PKPdf		PKPdf	16 44 05.2	+0.1	
N53A	Lisbon	136.82	30			PKPpre	16 43 53.1		
N53A				PKPdf		PKPdf	16 44 04.6	-0.5	
Q51A	Peebles	136.82	33	PKPdf		PKPdf	16 44 05.1	-0.1	
O52A	Adamsville	136.83	31			PKPpre	16 43 53.8		
MACI	Morro de la Ar	137.02	307			PKPdf	16 44 05.8	-0.2	
CLTN	Cedars of Leba	137.03	39			PKPpre	16 43 53.0		
P52A	Corning	137.03	32			PKPpre	16 43 53.2		
P52A	Corning	137.03	32	P		PKPpre	16 43 55.3		
	baz=317								
O53A	New Philadelph	137.05	30			PKPpre	16 43 54.0		
O53A	New Philadelph	137.05	30	P		PKPpre	16 43 55.7		
	baz=319								
NCB	Newcomb	137.06	21			PKPpre	16 43 54.3		
F64A	Sherman	137.12	14	PKPdf		PKPdf	16 44 05.8	+0.3	
K57A	Scipio Center	137.23	24	PKPdf		PKPdf	16 44 05.7	-0.2	
PKME	Peaks-Kenny Pk	137.44	16	PKPdf		PKPdf	16 44 05.7	-0.4	
PKME	Peaks-Kenny Pk	137.44	16	P		PKPpre	16 43 57.8		
	baz=338								
Q52A	Bidwell	137.45	33	PKPdf		PKPdf	16 44 06.2	-0.1	
H62A	Milan	137.54	18	PKPdf		PKPdf	16 44 07.0	+0.7	
BART	Pico Bartolome	137.55	325	ePKP		PP	16 46 57.0	-0.8	
LBNH	Lisbon	137.60	19	PKPdf		PKPdf	16 44 07.2	+0.8	
LBNH	Lisbon	137.60	19	PKiKP		PKPdf	16 44 07.2	+0.8	
S51A	Beattyville	137.65	35	PKPdf		PKPdf	16 44 06.8	0.0	
PCALD	Caldeiras da R	137.72	325	ePKP		PP	16 46 59.4	+0.7	
ACCN	Adirondack Com	137.76	21	PKPdf		PKPdf	16 44 07.0	+0.3	
SWET	Sewanee	137.83	40	PKPpre		PKPpre	16 43 55.0		
PSET	Sete Cidades	137.84	326	ePKP		PP	16 47 00.8	+1.3	
BINY	Binghamton	137.89	24	P		PKPpre	16 43 59.9		
	baz=327,SNR=10								
HNH	Hanover	137.96	19	PKPdf		PKPdf	16 44 07.5	+0.5	
PAGU	Agualva, Azore	137.96	328	ePKP		PP	16 47 00.1	0.0	
WVL	Waterville	137.99	16	PKPdf		PKPdf	16 44 07.4	+0.4	
PSMN	Pico do Norte,	138.03	324	ePKP		PP	16 46 59.1	-1.6	
PSMA	Santa Maria	138.07	324	ePKP		PP	16 47 00.1	-0.8	
ADH	Angra Heroismo	138.07	328	ePKP		PP	16 46 58.0	-2.7	
R53A	Hurricane	138.08	33	PKPdf		PKPdf	16 44 08.0	+0.5	
I62A	Tamworth	138.11	18	PKPdf		PKPdf	16 44 07.5	+0.1	
MCWV	Mont Chateau	138.19	30	P		PKPpre	16 43 58.1		
	baz=320,SNR=24								
Q54A	Coxs Mills	138.19	31	PKPdf		PKPdf	16 44 08.2	+0.6	
SRBC	Serra Branca	138.21	329	ePKP		PP	16 46 59.4	-2.2	
TRY	Troy	138.33	21	PKPdf		PKPdf	16 44 07.9	+0.1	
SSPA	Standing Stone	138.35	27	P		PKPpre	16 43 59.0		
	baz=323								
Y49A	Blount Mountai	138.36	42			PKPpre	16 43 58.2		
TZTN	Tazewell	138.43	36	P		PKPpre	16 44 00.0		
	baz=313,SNR=40								
LRAL	Lakeview Retre	138.46	43	PKPdf		PKPdf	16 44 08.2	-0.1	
LRAL	Lakeview Retre	138.46	43	P		PKPpre	16 44 00.9		
	baz=306,SNR=61								
KSPA	Keystone Colle	138.52	24	PKPpre		PKPpre	16 43 58.7		
KSPA				PKPdf		PKPdf	16 44 08.7	+0.6	
PMAN	Manadas	138.54	328	ePKP		PP	16 47 01.4	-2.2	
ROSA	Rosais	138.55	329	ePKP		PP	16 47 01.4	-2.3	
MT01	Popeta	138.56	159			PKPpre	16 43 59.0		
CPCT	Cooper Cave	138.57	38			PKPpre	16 43 58.9		
BO04	La Punta	138.68	159			PKPpre	16 44 00.4		
PID	Ribeirinha	138.69	328	ePKP		PP	16 47 00.8	-3.8	
N58A	Sunbury	138.71	26			PKPpre	16 43 58.2		
MT09	Talagante	138.74	159			PKPpre	16 43 59.8		
PPNO	Prainha do Nor	138.75	328	ePKP		PP	16 47 01.4	-3.6	
S54A	Dingess, Beckl	138.81	33			PKPpre	16 43 59.6		
CALA	Caldeira	138.89	329	ePKP		PKPpre	16 46 59.1		
X51A	Calhoun	138.93	40			PKPpre	16 44 00.4		
L61B	Northampton	138.93	21			PKPpre	16 44 00.2		
L61B	Northampton	138.93	21	P		PKPpre	16 44 02.6		
	baz=332								
MT02	Curacav	139.15	158			PKPpre	16 44 01.7		
HRV	Adam Dziewonsk	139.27	20	P		PKPpre	16 44 03.8		
	baz=333								
KSCT	Kent School, K	139.27	22			PKPpre	16 44 01.0		
ROC1	El Roble	139.44	158	i P		PKPpre	16 44 03.9		
U54A	Nelsons Funny	139.44	35			PKPpre	16 44 01.1		
BRAL	Brewton	139.49	45	P		PKPpre	16 44 04.5		
	baz=304,SNR=13								
TRNY	Table Rock, Ra	139.49	23			PKPpre	16 44 02.4		
H07S1	FLORES T-PHASE	139.51	332	ePKP			16 46 58.0		
BLA	Blacksburg	139.72	33	P		PKPpre	16 44 02.5		
	baz=318,SNR=22								
PAL	Palisades	139.73	23	P		PKPpre	16 44 03.4		
	baz=329,SNR=26								
M63A	Gales Ferry	140.08	21			PKPpre	16 44 03.6		
152A	Waverly Hall	140.21	42			PKPpre	16 44 05.0		
CBN	Corbin Frederi	140.53	29	P		PKPpre	16 44 05.6		
	baz=322								
GOGA	Godfrey	140.55	40	P		PKPpre	16 44 06.0		
	baz=310,SNR=31								
LPA	La Plata	140.57	175	PKiKP		PKPdf	16 44 12.8	+0.7	
LPA				PKiKP		PKPpre	16 44 03.9		
LPA				SKiKP			16 46 59.4		
LPA				SKiKP			16 47 11.0		
LPA				PP		PP	16 47 16.9	+1.7	
LPA				SKP			16 47 22.8		
LPA				PKiKS			16 47 41.5		
LPA				PKS		PKSdf	16 47 51.5	+3.4	
LPA				pPP			16 49 01.9		
LPA				PPP		PPP	16 50 21.6		
LPA				SKiKS			16 50 27.9		
LPA				SS		SS	17 04 51.1	-12	
LPA				SSS		SSS	17 10 31.5		
KMSC	Kings Mountain	140.69	36	P		PKPpre	16 44 05.9		
	baz=315,SNR=126								
AUSP	Uspallata	140.71	160	i P		PKPpre	16 44 07.1		
HODGE	Hodges	140.77	38			PKPpre	16 44 06.3		
CO02	Combarbal	141.03	157			PKPpre	16 44 07.3		
RTLS	Leoncito	141.12	160	i P		PKPpre	16 44 08.6		
MRA	San Martin	141.65	164	i P		PKPpre	16 44 09.0		
TIGA	Tifton	141.72	42	PKPpre		PKPpre	16 44 10.1		
TIGA	Tifton	141.72	42	P		PKPpre	16 44 09.6		
	baz=308,SNR=72								
HAW	Hawthorne Fire	141.75	38	P		PKPpre	16 44 09.9		
	baz=313								
U59A	Littleton	141.76	31			PKPpre	16 44 08.9		
M

LFRS	El Faro	144.64	73	eP		PKPab	16 44 21.1	+0.8
LFRS	El Faro	144.64	73	eP		PKPab	16 44 21.1	+0.8
AC06	Mina Casimiro	144.69	155			PKPbc	16 44 19.5	-0.1
SJTE	Alcalda de S	144.70	73	eP		PKPdf	16 44 19.4	-0.6
SJTE	Alcalda de S	144.70	73	eP		PKPdf	16 44 19.4	-0.6
COEG	Centro de Oper	144.82	73	eP		PKPab	16 44 21.1	+0.2
COEG	Centro de Oper	144.82	73	eP		PKPab	16 44 21.1	+0.2
TINO	Tinogasta	145.13	159	iP		PKPab	16 44 22.8	+1.1
DWPF	Disney Wildern	145.23	45		PKPdf	PKPbc	16 44 21.2	0.0
DWPF	Disney Wildern baz=308	145.23	45	P		PKPab	16 44 21.7	-0.2
DWPF	Disney Wildern baz=308	145.23	45	P		PKPbc	16 44 21.5	+0.3
PACA	Pacayal	145.38	73	eP		PKPab	16 44 23.5	+0.4
PACA	Pacayal	145.38	73	eP		PKPab	16 44 23.5	+0.4
AC01	Pan de Azucar	145.64	154		PKPbc	PKPbc	16 44 22.7	+0.2
LCND	La Caada	145.82	73	eP		PKPab	16 44 24.1	-0.6
LCND	La Caada	145.82	73	eP		PKPab	16 44 24.1	-0.6
ITQB	Itaqui	145.87	177		PKPbc	PKPbc	16 44 22.8	-0.2
CNCH	Conchagua	145.88	73	eP		PKPbc	16 44 24.1	+0.5
CNCH	Conchagua	145.88	73	eP		PKPbc	16 44 24.1	+0.5
TGUH	Tegucigalpa,Un	146.25	72			PKPdf	16 44 23.6	+0.9
TGUH	Tegucigalpa,Un	146.25	72	eP		PKPbc	16 44 23.8	-0.8
CRIN	San Cristobal	146.75	74			PKPdf	16 44 24.3	+0.9
061Z	Ochoppi	146.94	48		PKPbc	PKPbc	16 44 25.0	-1.0
GO02	Mina Guanaco	146.94	154			PKPbc	16 44 25.9	-0.6
SOR	Soroa	146.94	54			PKPbc	16 44 25.3	-0.9
SOR	Soroa	146.94	54		PKIKP	PKPbc	16 44 25.3	-0.9
PB14	IPOC Station P	147.04	153		PKPbc	PKPbc	16 44 25.8	-1.0
CNGN	Cerro Negro	147.12	74		PKPbc	PKPbc	16 44 26.5	-0.5
FSA	Cafayete	147.47	160	iP		PKPdf	16 44 26.1	+1.5
MATN	Matagalpa	147.77	73			PKPdf	16 44 24.6	-0.6
MATN					PKPbc	PKPbc	16 44 28.5	-0.2
PB10	IPOC Station P	147.92	151			PKPbc	16 44 28.1	-0.7
SACV	Santiago Islan	148.02	291			PKPbc	16 44 28.3	-0.9
BOAB	BOACO BROADBAN	148.12	74		PKPdf	PKPdf	16 44 25.9	+0.3
ITAB	Concordia	148.29	184		PKPdf	PKPdf	16 44 26.5	+0.9
GBS3	Finca Las Img	148.62	77	eP		PKPdf	16 44 28.0	+1.5
GUAI	GUAI	148.64	78	eP		PKPdf	16 44 27.0	+0.5
LAPC	Finca la Perla	148.64	77	eP		PKPdf	16 44 28.6	+2.0
BUEV	Buena Vista	148.66	77	eP		PKPbc	16 44 28.9	-2.0
ORTG	Ortega, Santa	148.67	78		PKPdf	PKPdf	16 44 27.0	+0.3
DUNO	Dulce Nombre,	148.68	78			PKPbc	16 44 29.3	-1.7
ACON	Acoyapa	148.68	75		PKPdf	PKPdf	16 44 26.5	-0.1
COLC	Colonia	148.88	77	eP		PKPdf	16 44 27.7	+0.8
HORNC	Hornillas	148.90	77	eP		PKPdf	16 44 27.3	+0.3
CUI	Cuipilapa	148.92	77	eP		PKPdf	16 44 27.3	+0.3
SLA	San Lorenzo	148.92	160	iP		PKPbc	16 44 30.2	-1.3
ACAL	Aguas Claras	149.05	77	eP		PKPdf	16 44 27.9	+0.6
PB06	IPOC Station P	149.07	152	iP		PKiKP	16 44 32.6	-0.3
PB04	IPOC Station P	149.11	151		PKPdf	PKPdf	16 44 26.5	-0.8
PB04	IPOC Station P	149.11	151	iP		PKiKP	16 44 32.6	-0.4
CPUP	Villa Florida comp=Z,38nm,0.7s,baz=192,slow=1.1,SNR=25	149.13	175	PKP		PKPdf	16 44 27.6	+0.6
CPUP	comp=Z,38nm,0.7s,baz=198,slow=0.9,SNR=39				PKPbc	PKPbc	16 44 31.7	0.0
CPUP	Villa Florida	149.13	175			PKPdf	16 44 27.3	+0.3
LVC	Limon Verde comp=Z,39nm,0.9s,baz=269,slow=2.8,SNR=14	149.46	153	PKP		PKPdf	16 44 29.7	+1.6
LVC	comp=Z,177nm,0.8s,baz=252,slow=4.2,SNR=35				PKPbc	PKiKP	16 44 34.1	+0.1
LVC	Limon Verde	149.46	153	iP		PKPdf	16 44 29.3	+1.2
PB07	IPOC Station P	149.75	150	iP		PKPbc	16 44 31.8	-1.8
PB09	IPOC Station P	150.01	152			PKPdf	16 44 28.6	-0.1
PB09	IPOC Station P	150.01	152	iP		PKPbc	16 44 31.6	-2.6
PB02	IPOC Station P	150.09	150	iP		PKiKP	16 44 35.8	+0.9
LCR2	La Lucha 2	150.18	78	eP		PKPdf	16 44 30.7	+1.5
RIMA	Rio Macho	150.31	78	eP		PKPdf	16 44 30.3	+0.8
HJA	Humahuaca	150.35	159	iP		PKPdf	16 44 31.9	+2.4
CDM	Cerro de Muert	150.44	79	eP		PKPdf	16 44 31.2	+1.3
PB01	IPOC Station P	150.53	150	iP		PKPdf	16 44 30.9	+1.5
PEZE	Perez Zeledon,	150.54	79		PKPdf	PKPdf	16 44 30.1	+0.4
BBSR	BB Station	150.72	18			PKPdf	16 44 30.1	+0.8
BATAN	Batan	150.74	78			PKPdf	16 44 32.2	+2.4
SRBA	San Rafael, Bu	150.87	79	eP		PKPdf	16 44 31.9	+1.7
DRK0	Durika	150.98	79			PKPdf	16 44 32.8	+2.4
PIRO	Carate, Puerto	150.99	81	eP		PKPdf	16 44 32.3	+2.1
CDITO	Canoas	151.43	81			PKPdf	16 44 32.9	+2.0
PB08	IPOC Station P	151.46	150			PKPdf	16 44 31.8	+0.6
PB08	IPOC Station P	151.46	150	iP		PKPdf	16 44 32.9	+1.6
PB11	IPOC Station P	151.52	149			PKPdf	16 44 31.2	+0.2
BRU2	Volcan	151.58	80	eP		PKPdf	16 44 32.3	+1.0
PRVC	Isla de Provid	151.98	70	eP		PKiKP	16 44 39.6	+0.8
PB12	IPOC Station P	152.10	146	iP		PKPdf	16 44 33.4	+1.5
CACAO	El Cacao, Vera	153.53	83	eP		PKPdf	16 44 34.1	+0.2
AZU	Azuero	154.07	82	eP		PKPdf	16 44 34.4	-0.3
BCIP	Isla Barro Col	154.33	78			PKPdf	16 44 34.3	-0.7
BCIP	Isla Barro Col	154.33	78		PKIKP	PKPdf	16 44 34.3	-0.7
BCIP	Isla Barro Col	154.33	78	eP		PKPdf	16 44 32.7	-2.4
UPA	Univ. de Panam	154.65	79	eP		PKPdf	16 44 35.3	-0.2
GTBY	Guantanamo Bay	154.70	51			PKPdf	16 44 35.5	+0.2
GTBY	Guantanamo Bay	154.70	51	eP		PKPdf	16 44 35.9	+0.5
LPAZ	La Paz comp=Z,30nm,0.8s,baz=186,slow=0.4,SNR=61	155.19	147	PKP		PKPdf	16 44 38.3	+1.4
LPAZ	comp=Z,48nm,0.7s,baz=209,slow=5.7,SNR=6.2				PKPab	PKPab	16 45 06.2	+2.0
LPAZ	La Paz	155.19	147	eP		PKPdf	16 44 37.9	+0.9
OTAV	Otavalo	155.57	100	‖eP		PKPdf	16 44 38.4	+1.0
GCUF	Volcan Galeras	156.83	98	eP		PKPdf	16 44 40.4	+1.3
CAPC	Capurgana	156.84	79	‖eP		PKPdf	16 44 38.8	+0.5
MALC	Bahia Malaga	157.10	91	eP		PKPdf	16 44 40.1	+1.3
POPC	Popayan, Colom	157.66	94	‖eP		PKPdf	16 44 39.8	+0.1
SOTA	Rioblanco	157.68	96	‖eP		PKPdf	16 44 41.2	+1.2
PCON	Cinco Dias	157.91	95	‖eP		PKPdf	16 44 41.1	+0.7
YOTC	Yotoco, Valle	158.09	91	‖eP		PKPdf	16 44 39.9	-0.2
DBBC	Dabeiba	158.15	83	eP		PKPdf	16 44 41.4	+1.3
SDDR	Presa de Saban	158.16	48	‖eP		PKPdf	16 44 39.4	-0.5
PLMC	San Jos del P	158.17	88	eP		PKPdf	16 44 41.1	+0.9
MARP	Paez Belalcaza	158.40	94	‖eP		PKPdf	16 44 41.8	+1.2
CBOC	Ciudad Bolivar	158.42	86	‖iP		PKPdf	16 44 40.8	+0.2
SIV	San Ignacio comp=Z,18nm,0.6s,baz=202,slow=1.4,SNR=69	158.50	162	PKP		PKPdf	16 44 41.4	+1.0
SIV	comp=Z,20nm,0.6s,baz=162,slow=4.3,SNR=8.4				PKPab	PKPab	16 45 18.5	+0.8
FLOC	Florencia	158.55	97	eP		PKPdf	16 44 41.0	+0.5
SJCC	San Jacinto, C	158.71	75	‖eP		PKPdf	16 44 41.4	+0.7
UREC	San Jos de Ur	158.74	80	‖eP		PKPdf	16 44 40.3	-0.4
GARC	Garzon, Huila	158.79	96	eP		PKPdf	16 44 42.0	+0.9
RCBR	Riachuelo comp=Z,50nm,0.9s,baz=128,slow=0.7,SNR=14	158.84	241	PKP		PKPdf	16 44 41.9	+1.0
RCBR					PKPab	PKPab	16 45 20.1	+0.6
RCBR	Riachuelo	158.84	241			PKPdf	16 44 41.1	+0.2
HELC	Santa Helena	158.89	85	eP		PKPdf	16 44 40.8	-0.5
BDFB	Brasilia comp=Z,26nm,0.8s,baz=156,slow=1.1,SNR=26	158.93	197	PKP		PKPdf	16 44 41.5	+0.5
BDFB					PKPab	PKPab	16 45 19.5	-0.2
BDFB	Brasilia	158.93	197			PKPdf	16 44 40.9	-0.1
ANIL	Santa Ana	159.04	99	‖iP		PKPdf	16 44 42.1	+0.7
PTLC	Puerto Leguiza	159.14	102	‖iP		PKPdf	16 44 43.1	0.0
ORTC	Ortega, Tolima	159.18	91	‖eP		PKPdf	16 44 41.2	-0.1
SMRC	Santa Marta, M	159.30	70	‖eP		PKPdf	16 44 41.1	-0.2
PRAC	Prado	159.53	92	‖eP		PKPdf	16 44 41.4	-0.3
NORC	Norcasia	159.57	86	‖eP		PKPdf	16 44 41.5	-0.3
ARGC	Ariguani, Magd	159.62	74	eP		PKPdf	16 44 43.0	+1.3
PTBC	PUERTO BERRIO	159.93	84	‖iP		PKPdf	16 44 41.8	-0.3
ROSC	El Rosal comp=Z,109nm,0.7s,baz=74,slow=2.0,SNR=30	160.13	88	PKP		PKPdf	16 44 43.2	+0.5
ROSC	comp=Z,52nm,0.8s,baz=84,slow=16,SNR=3.8				PKPab	PKPab	16 45 26.2	+0.6
ROSC	El Rosal	160.13	88	‖eP		PKPdf	16 44 41.8	-1.0
LL1C	La Loma 1 Cana	160.35	74	eP		PKPdf	16 44 43.4	+1.0
SPBC	San Pablo de B	160.36	86	‖eP		PKPdf	16 44 43.1	+0.5
MACC	Macarena, Meta	160.42	96	‖eP		PKPdf	16 44 43.1	+0.5
LL6C	La Loma 6 Bece	160.58	74	eP		PKPdf	16 44 43.4	+0.7
CRJC	Cerrejon, Guaj	160.60	70	‖iP		PKPdf	16 44 43.3	+0.5
BRRC	Barranca, Sant	160.61	82	‖iP		PKPdf	16 44 43.3	+0.5
CHIC	Chingaza	160.71	89	‖iP		PKPdf	16 44 43.0	-0.5
VILC	Villavicencio,	160.74	91	eP		PKPdf	16 44 43.5	+0.4
OCAC	Ocana	160.84	78			PKPdf	16 44 42.9	-0.4
OCAC	Ocana	160.84	78	‖eP		PKPdf	16 44 43.8	+0.6
BARC	Barichara	161.18	83	eP		PKPdf	16 44 44.0	+0.3
RUSC	La Rusia	161.33	85	‖eP		PKPdf	16 44 44.1	0.0
PAMC	Pamplona, Colo	161.58	81	eP		PKPdf	16 44 44.9	+0.4
CRPR	Cabo Rojo, PR	161.76	42			PKPdf	16 44 43.1	-0.8
MLPR	Magueyes Islan	161.83	42			PKPdf	16 44 43.3	-0.6
MLPR					PKPab	PKPab	16 45 32.0	-0.3
CELP	Cerrillos	162.06	41			PKPdf	16 44 43.3	-0.9
OBIP	Obispado Ponce	162.06	41			PKPdf	16 44 43.7	-0.5
GCPR	Guaynabo City	162.20	39			PKPdf	16 44 43.5	-0.8
ICMP	Isla Caja de M	162.23	41			PKPdf	16 44 43.7	-0.6
PTGC	Puerto Gaitan,	162.29	91	‖iP		PKPdf	16 44 43.6	-1.0
SJG	San Juan comp=Z,72nm,0.8s,baz=29,slow=4.0,SNR=8.7	162.31	40	PKP		PKPdf	16 44 44.1	-0.2
SJG	comp=Z,77nm,0.8s,baz=16,slow=4.2,SNR=7.0				PKPab	PKPab	16 45 35.0	+0.6
SJG	San Juan	162.31	40			PKPdf	16 44 43.8	-0.6
SJG	San Juan	162.31	40	eP		PKPdf	16 44 43.2	-1.2
SJG	San Juan	162.31	40	eP		PKPdf	16 44 53.0	+8.6
PDPR	Patillas Dam,	162.46	40			PKPdf	16 44 43.8	-0.8
HUMP	Col San Antoni	162.47	39			PKPdf	16 44 43.9	-0.6
TAMC	Tame, Arauca	162.57	83	eP		PKPdf	16 44 45.2	+0.4
MTP	Monte Pirata	162.69	38			PKPdf	16 44 44.1	-0.7
MTP						PKPab	16 45 35.6	-0.4
CUPR	Culebra, Puert	162.69	37			PKPdf	16 44 43.8	-0.9
STVI	Saint Thomas	162.86	36			PKPdf	16 44 44.1	-0.8
STVI						PKPab	16 45 36.3	-0.4
SDV	Santo Domingo	163.31	74			PKPdf	16 44 45.2	-0.5
SDV	Santo Domingo	163.31	74	‖eP		PKPdf	16 44 45.5	-0.2
CDVI	St. Croix	163.43	37			PKPdf	16 44 44.6	-0.8
CDVI	St. Croix	163.43	37	eP		PKPdf	16 44 43.7	-1.7
SMRT	St. Maarten	164.15	32			PKPdf	16 44 45.5	-0.6
SMRT						PKPab	16 45 41.7	-0.7
SMRT	St. Maarten	164.15	32	eP		PKPdf	16 44 39.1	-7.1
SEUS	St. Eustatius	164.66	33	eP		PKPdf	16 44 48.4	+1.8
ANWB	Willy Bob	165.12	29	eP		PKPdf	16 44 39.1	-7.9
ANBD	Bethesda, Anti	165.66	30	eP		PKPdf	16 44 43.7	-3.7
BAUV	El Baul	165.76	72			PKPdf	16 44 46.7	-0.9
ABD	La Joyeuse, An	166.28	30	eP		PKPdf	16 44 57.7	+10
GDHS	Morne Mazeau,	166.31	31			PKPab	16 45 51.4	-0.6
GDSD	La Dsirade Is	166.63	29			PKPdf	16 44 46.9	-1.4
DSLB	Salisbury	167.19	32	eP		PKPdf	16 45 02.3	+14
FDF	Fort de France	167.92	33	eP		PKPdf	16 44 48.4	-0.8
ILAM	Ilet Lapin Mar	168.03	32	eP		PKPdf	16 44 53.0	+3.8
BIM	Bigot	168.14	33	eP		PKPdf	16 44 48.4	-1.0
MPOM	Morne Pois Mar	168.31	33			PKPdf	16 44 49.1	-0.3
SLBI	Saint Lucia, B	168.59	34	eP		PKPdf	16 44 48.4	-1.2
TOSP	Speyside	170.97	42			PKPab	16 46 12.3	-0.5
MDP	Montagnes des comp=Z,28nm,0.9s,baz=128,slow=0.3,SNR=8.1	178.19	286	PKP		PKPdf	16 44 53.2	-0.1
MDP	comp=Z,62nm,1.0s,baz=42,slow=3.0,SNR=11				PKPab	pPKPdf	16 46 45.4	+5.8
MDP	comp=Z,62nm,1.2s,baz=34,slow=4.7,SNR=7.4				PP	PP	16 50 40.1	+1.0

ATH 05 16:36:37.0,38.14N×20.36E,h14km±2km,ML1.7/1 Error ellipse: s-maj=3.6km s-min=1.4km az=26.0,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.07	353	P	Pg	16 36 39.9	+0.1
KEF3				S	Sg	16 36 41.9	+0.2
DMLN	Damoulianata-K	0.10	6	P	Pg	16 36 40.0	-0.2
DMLN				S	Sg	16 36 42.3	-0.1
KEF4	Livadi, Kephal	0.13	23	P	Pg	16 36 40.4	-0.1
KEF4				S	Sg	16 36 43.1	+0.1
PSDA	Pessada-Kefalo	0.18	97	P	Pg	16 36 41.1	-0.1
PSDA				S	Sg	16 36 44.2	+0.2
VLS	Valsamata	0.19	77	P	Pg	16 36 41.1	-0.2
VLS				S	Sg	16 36 44.2	-0.1
VLS	comp=E,832μm,0.1s			AML	AML	16 36 44.3	
VLS	comp=N,503μm,0.1s			AML	AML	16 36 44.6	
FSK	Fiskardo	0.36	26	P	Pg	16 36 44.3	0.0
FSK				S	Sg	16 36 49.3	0.0

IDC 05 16:48:22.9±12.0,9.21S×116.50W,h0km,mb4.0/4, mbtmp4.0/4,MS3.9/1,Error ellipse: s-maj=282.1km s-min=162.0km az=148.0,Eastcentral Pacific Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero comp=Z,228nm,20.9s,baz=303,slow=28	33.75	39	LR	LR	17 04 24.3	
TXAR	Lajitas Array 1.3nm,0.8s,baz=190,slow=9.8,SNR=2.0 1.3nm,0.8s	40.26	17	P	P	16 56 02.1	+0.3
H03N2	Juan Fernandez baz=299	42.13	131	T	T	17 42 22.8	
H03N3	Juan Fernandez baz=299	42.15	131	T	T	17 42 22.8	
H03N1	Juan Fernandez baz=299	42.15	131	T	T	17 42 26.1	
NVAR	Mina Array Bea 1.4nm,0.7s,baz=182,slow=11,SNR=3.4 1.4nm,0.7s	47.42	358	P	P	16 56 59.4	-0.1
PDAR	Pinedale Array 2.2nm,0.8s,baz=159,slow=7.7,SNR=2.6 2.2nm,0.8s	52.11	6	P	P	16 57 34.5	-0.6
YKA	Yellowknife Ar 1.4nm,0.8s,baz=180,slow=6.0,SNR=6.2 1.4nm,0.8s	71.50	1	P	P	16 59 45.2	+0.1
H11S2	WAKE ISLAND Hy baz=103,slow=75,SNR=6.6	80.57	291	T	T	18 28 30.3	
H11S1	WAKE ISLAND Hy baz=103,slow=75,SNR=4.8	80.58	291	T	T	18 28 31.0	
H11S3	WAKE ISLAND Hy baz=103,slow=75,SNR=4.5	80.59	291	T	T	18 28 32.8	

ROM 05 17:00:11.8±0.1,42.782N±0.004×12.728E±0.006, h8km,ML1.3/8,3C-2D,Error ellipse: s-maj=0.4km s-min=0.4km az=92.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CESX	Cesi	0.20	212	P	Pg	17 00 16.6	+0.7
CESX				S	Sg	17 00 20.2	+1.5
CESX	comp=E,162μm,0.7s			AML	AML		
CESX	comp=N,164μm,1.4s			AML	AML		
CESX	comp=E,162μm,0.7s			AML	AML		
ARRO	Arrone	0.20	172	P	Pg	17 00 17.1	+1.2
ARRO				S	Sg	17 00 20.6	+1.9
ARRO	comp=E,120μm,1.5s			AML	AML		
ARRO	comp=E,120μm,1.5s			AML	AML		
ARRO	comp=E,120μm,1.5s			AML	AML		
ARRO	comp=N,130μm,0.2s			AML	AML		
CESI	CESI - Serrava	0.26	30	↑P	Pb	17 00 17.9	-0.7
CESI				S	Sb	17 00 22.4	-0.9
CESI	comp=N,117μm,1.1s			AML	AML		
CESI	comp=E,65μm,0.3s			AML	AML		
CESI	comp=N,117μm,1.1s			AML	AML		
ASSB	Assisi San Ben	0.27	349	P	Pg	17 00 17.7	+0.6
ASSB				S	Sb	17 00 22.5	-1.1
ASSB	comp=E,91μm,0.2s			AML	AML		
ASSB	comp=N,99μm,0.2s			AML	AML		
ASSB	comp=E,92μm,0.2s			AML	AML		
ASSB	comp=N,99μm,0.2s			AML	AML		
NRCA	Norcia	0.29	80	P	Pg	17 00 18.2	+0.7
NRCA				S	Sb	17 00 23.2	-1.0
LNSS	Leonessa	0.29	128	↑P	Pg	17 00 18.2	+0.6
LNSS				S	Sb	17 00 23.0	-1.3
LNSS	comp=E,178μm,0.4s			AML	AML		
LNSS	comp=N,127μm,0.3s			AML	AML		
LNSS	comp=E,178μm,0.4s			AML	AML		
FDMO	Fiordimonte	0.37	46	↑P	Pb	17 00 19.9	-0.6
FDMO				S	Sb	17 00 25.7	-0.7
FDMO	comp=N,28μm,1.5s			AML	AML		
FDMO	comp=E,38μm,1.0s			AML	AML		
FDMO	comp=N,28μm,1.5s			AML	AML		
ATCC	AVT- Casa Cast	0.41	351	P	Pg	17 00 20.3	+0.5
ATCC				S	Sb	17 00 27.2	-0.5
ATCC	comp=E,47μm,1.5s			AML	AML		
ATCC	comp=N,57μm,0.2s			AML	AML		
RM33	Pellescritta (	0.45	127	P	Pg	17 00 20.7	+0.2
RM33				S	Sb	17 00 28.2	-0.7
RM33	comp=E,40μm,1.6s			AML	AML		
RM33	comp=N,29μm,0.8s			AML	AML		
RM33	comp=E,40μm,1.6s			AML	AML		
RM33	comp=N,29μm,0.8s			AML	AML		
MGAB	Montegabbione	0.47	286	‖P	Pb	17 00 22.2	-0.1
MGAB	comp=E,74μm,0.5s			AML	AML		
MGAB	comp=N,45μm,0.4s			AML	AML		
SMA1	SAN MARTINO	0.47	109	‖P	Pg	17 00 21.6	+0.7
SMA1				S	Sb	17 00 29.4	-0.1
SACS	San Casciano d	0.61	277	P	Pg	17 00 23.2	-0.3

ROM 05 17:00:57.2±0.2,37.792N±0.010×14.97E±0.01,h28km±1km, ML1.3/6,2C-2D,Error ellipse: s-maj=0.9km s-min=0.9km az=335.0,Sicily

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EPZF	Pizzo Felice	0.09	291	↑P	Pb	17 01 01.9	-0.4
EPZF				AML	AML		
EPZF	comp=E,294μm,0.4s			AML	AML		
EPZF	comp=N,249μm,0.4s			AML	AML		
EPZF	Pizzo Felice	0.09	291	S	Sb	17 01 06.2	+0.2
EPZF				AML	AML		
EPZF	comp=E,294μm,0.4s			AML	AML		
EPZF	comp=N,249μm,0.4s			AML	AML		
ESML	S. M. di Licod	0.19	202	↑P	Pn	17 01 04.0	-0.1
NOV	Novara	0.27	30	‖P	Pb	17 01 04.2	+0.1
NOV				AML	AML		
NOV	comp=E,109μm,0.2s			AML	AML		
NOV	comp=N,78μm,1.1s			AML	AML		
NOV	Novara	0.27	30	P	Pb	17 01 04.2	0.0
NOV				S	Sb	17 01 09.1	+0.2
NOV	comp=E,110μm,0.2s			AML	AML		
NOV	comp=E,110μm,0.2s			AML	AML		
NOV	comp=N,78μm,1.1s			AML	AML		
AIO	Antillo	0.28	50	P	Pb	17 01 04.3	+0.1
AIO				AML	AML		
AIO	comp=E,48μm,1.2s			AML	AML		
AIO	comp=N,46μm,0.5s			AML	AML		
AIO	Antillo	0.28	50	P	Pb	17 01 04.2	0.0
AIO				S	Sb	17 01 09.7	+0.7
AIO	comp=N,46μm,0.5s			AML	AML		
AIO	comp=E,48μm,1.2s			AML	AML		
AIO	comp=N,46μm,0.5s			AML	AML		
EPOZ	Pozzillo	0.29	162	P	Pb	17 01 04.0	-0.4
EPOZ				AML	AML		
EPOZ	comp=E,73μm,0.8s			AML	AML		
EPOZ	comp=N,86μm,0.5s			AML	AML		
GALF	Gagliano Caste	0.33	256	‖P	Pn	17 01 05.7	-0.5
GALF				AML	AML		
GALF	comp=E,46μm,1.1s			AML	AML		
GALF	comp=N,51μm,0.4s			AML	AML		
GALF	Gagliano Caste	0.33	256	P	Pb	17 01 05.4	+0.5
GALF				S	Sn	17 01 12.2	+0.3
GALF	comp=E,46μm,1.1s			AML	AML		
GALF	comp=N,51μm,0.4s			AML	AML		
GALF	comp=E,46μm,1.1s			AML	AML		
MSFR	San Fratello	0.38	309	P	Pb	17 01 05.9	+0.2
MSFR				S	Sb	17 01 12.4	+0.9
HLNI	Lentini	0.45	190	P	Pb	17 01 06.0	-0.6
HLNI				S	Sb	17 01 13.6	+0.5
HLNI	comp=N,49μm,0.1s			AML	AML		
HLNI	comp=E,42μm,0.8s			AML	AML		
HLNI	comp=N,49μm,0.1s			AML	AML		
SSY	Sortino	0.64	172	P	Pb	17 01 09.8	-0.1
SSY				S	Sn	17 01 19.6	-0.1
HAVL	Avola	0.84	171	P	Pn	17 01 13.0	-0.1
HAVL				S	Sn	17 01 25.2	+0.6

*IDC **05** 17:06:19.1±1.6,1.75N×125.76E,h0km,mb3.3/4, mbtmp3.4/4,Error ellipse: s-maj=190.0km s-min=22.7km az=65.0*
*DJA **05** 17:06:23.1±1.0,2.7N±5.2×12.7E±°,h80km±30km,M3.5/7, mb4.0/1,MLv3.2/7*
ISC 05 17:06:24.2±1.1,2.08N±0.09×126.7E±0.1,h47km,n9, σ1§11/10,mb3.3/4,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.46	153	P	Pn	17 06 47.2	-1.0
SGSI	Sangihe	1.98	324	P	Pn	17 06 54.1	-1.1
LBMI	Labuha	2.82	163	P	Pn	17 07 05.5	-1.3
KMSI	Cibinong	3.10	241	P	Pn	17 07 10.0	-0.7
MRSI	Marisa	5.02	252	P	Pn	17 07 36.1	-0.9
WRA	Warramunga Arr 0.3nm,0.3s,baz=338,slow=11,SNR=10 0.3nm,0.3s	23.14	161	P	P	17 11 27.1	+0.6
ASAR	Alice Springs 0.4nm,0.8s,baz=344,slow=10,SNR=9.5	26.54	165	P	P	17 11 58.3	+0.6
ASAR				PcP	PcP	17 15 23.4	+1.7
MKAR	0.3nm,0.8s,baz=343,slow=2.1,SNR=1.3 0.4nm,0.8s Makanchi Array 0.1nm,0.4s,baz=119,slow=7.8,SNR=1.1 0.1nm,0.4s	58.89	326	P	P	17 16 18.4	0.0
KURBB	Kurchatov Arra 0.3nm,0.5s,baz=131,slow=5.6,SNR=2

	baz=140								
CBKS	**Cedar Bluff**	**2.12**	**320**	P		**Pn**	**17 08 54.9**	**+1.1**	
	baz=140								
CBKS				Sb		**Sb**	**17 09 24.4**	**+1.1**	
	baz=140								
TUL1	**Leonard**	**2.19**	**125**	P		**Pn**	**17 08 55.2**	**+0.6**	
	baz=306,SNR=46								
TUL1				S		**Sn**	**17 09 23.6**	**+1.2**	
	baz=306								
TUL1	**Leonard**	**2.19**	**125**	P		**Pn**	**17 08 56.0**	**+1.3**	
	baz=306,SNR=44								
TUL1				S		**Sb**	**17 09 24.3**	**-0.9**	
	baz=306								
KSU1	**Kansas State U**	**2.21**	**30**	Pn		**Pn**	**17 08 55.9**	**+1.0**	
KSU1	**Kansas State U**	**2.21**	**30**	P		**Pn**	**17 08 56.0**	**+1.1**	
	baz=210,SNR=35								
KSU1				S		**Sn**	**17 09 24.0**	**+1.2**	
	baz=210								
KSU1	**Kansas State U**	**2.21**	**30**	P		**Pn**	**17 08 55.9**	**+1.0**	
	baz=210,SNR=7.4								
KSU1				S		**Sn**	**17 09 24.4**	**+1.7**	
	baz=210								
WMOK	**Wichita Mounta**	**2.52**	**195**	Pn		**Pn**	**17 09 00.1**	**+0.8**	
WMOK	**Wichita Mounta**	**2.52**	**195**	P		**Pn**	**17 09 00.0**	**+0.8**	
	baz=14								
WMOK	**Wichita Mounta**	**2.52**	**195**	P		**Pn**	**17 09 00.1**	**+0.8**	
	baz=14								
X37A	**Clayton**	**3.36**	**140**			**Pn**	**17 09 11.8**	**+1.0**	
X37A	**Clayton**	**3.36**	**140**	P		**Pn**	**17 09 11.8**	**+1.0**	
	baz=321,SNR=56								
X37A				S		**Sn**	**17 09 51.9**	**+0.7**	
	baz=321								
HHAR	**Hobbs**	**3.39**	**104**			**Pn**	**17 09 11.9**	**+0.7**	
HHAR	**Hobbs**	**3.39**	**104**	P		**Pn**	**17 09 11.9**	**+0.7**	
	baz=287								
N33A	**J Bar K, Exete**	**3.57**	**7**	Pn		**Pn**	**17 09 13.5**	**-0.1**	
N33A				lAmb_Lg			17 10 10.6		
	comp=Z,44nm,0.7s								
AMTX	**Amarillo**	**3.76**	**233**	Pn		**Pn**	**17 09 18.5**	**+2.2**	
AMTX	**Amarillo**	**3.76**	**233**	P		**Pn**	**17 09 16.9**	**+0.5**	
	baz=51,SNR=15								
AMTX	**Amarillo**	**3.76**	**233**	P		**Pn**	**17 09 18.8**	**+2.5**	
	baz=51								
AMTX				S		**Sn**	**17 10 04.0**	**+2.8**	
	baz=51								
S39A	**Bolivar**	**3.76**	**81**			**Pn**	**17 09 16.5**	**+0.2**	
S39A				lAmb_Lg			17 10 19.6		
	comp=Z,63nm,0.8s								
S39A	**Bolivar**	**3.76**	**81**	P		**Pn**	**17 09 16.5**	**+0.2**	
	baz=264,SNR=129								
W39A	**Magazine**	**3.95**	**119**			**Pn**	**17 09 18.8**	**-0.1**	
W39A	**Magazine**	**3.95**	**119**	P		**Pn**	**17 09 18.9**	**0.0**	
	baz=302,SNR=18								
W39A	**Magazine**	**3.95**	**119**	P		**Pn**	**17 09 19.6**	**+0.7**	
	baz=302,SNR=16								
W39A				S		**Sn**	**17 10 05.0**	**-0.7**	
	baz=302								
KSCO	**Kaye Shedlock'**	**4.07**	**298**			**Pn**	**17 09 21.9**	**+1.3**	
KSCO	**Kaye Shedlock'**	**4.07**	**298**	P		**Pn**	**17 09 21.7**	**+1.1**	
	baz=115,SNR=7.8								
KSCO	**Kaye Shedlock'**	**4.07**	**298**	Pn		**Pn**	**17 09 22.1**	**+1.5**	
	baz=115								
KSCO				Pb		**Pb**	**17 09 32.1**	**+2.4**	
	baz=115,SNR=16								
N35A	**Tabor**	**4.11**	**26**	S		**Sn**	**17 10 10.5**	**+1.0**	
	baz=207								
BGNE	**Belgrade**	**4.22**	**359**	Pn		**Pn**	**17 09 22.6**	**+0.1**	
BGNE				lAmb_Lg			17 10 42.0		
	comp=Z,69nm,0.7s								
BGNE	**Belgrade**	**4.22**	**359**	P		**Pn**	**17 09 22.9**	**+0.4**	
	baz=178,SNR=15								
BGNE	**Belgrade**	**4.22**	**359**	P		**Pn**	**17 09 23.0**	**+0.5**	
	baz=178								
BGNE				S		**Sn**	**17 10 11.4**	**-0.9**	
	baz=178								
U40A	**Yellville**	**4.22**	**100**			**Pn**	**17 09 22.8**	**+0.3**	
U40A	**Yellville**	**4.22**	**100**	P		**Pn**	**17 09 23.0**	**+0.5**	
	baz=283,SNR=120								
U40A				P		**Pn**	**17 09 23.0**	**+0.5**	
	baz=283,SNR=120								
U40A	**Yellville**	**4.22**	**100**	P		**Pn**	**17 09 23.0**	**+0.5**	
	baz=283,SNR=33								
U40A				S		**Sn**	**17 10 11.7**	**-0.7**	
	baz=283								
P38A	**Dawn**	**4.28**	**54**			**Pn**	**17 09 23.6**	**+0.2**	
P38A	**Dawn**	**4.28**	**54**	P		**Pn**	**17 09 23.7**	**+0.4**	
	baz=237,SNR=33								
MIAR	**Mount Ida**	**4.46**	**125**			**Pn**	**17 09 26.9**	**+1.0**	
MIAR				lAmb_Lg			17 10 45.5		
	comp=Z,56nm,0.8s								
MIAR	**Mount Ida**	**4.46**	**125**	P		**Pn**	**17 09 26.2**	**+0.3**	
	baz=308,SNR=38								
MIAR	**Mount Ida**	**4.46**	**125**	P		**Pn**	**17 09 26.8**	**+1.0**	
	baz=308,SNR=12								
MIAR				S		**Sn**	**17 10 17.3**	**-1.0**	
	baz=308								
MGMO	**Mountain Grove**	**4.58**	**89**			**Pn**	**17 09 28.1**	**+0.5**	
MGMO				lAmb_Lg			17 10 48.3		
	comp=Z,38nm,0.8s								
Z38A	**Mt. Pleasant**	**4.63**	**147**	lAmb_Lg			17 10 57.3		
	comp=Z,68nm,0.9s								
R40A	**Maddies Statio**	**4.68**	**75**			**Pn**	**17 09 28.9**	**0.0**	
R40A				lAmb_Lg			17 10 49.4		
	comp=Z,38nm,0.8s								
R40A	**Maddies Statio**	**4.68**	**75**	P		**Pn**	**17 09 29.1**	**+0.2**	
	baz=258,SNR=104								
OGNE	**Ogallala**	**4.89**	**321**			**Pn**	**17 09 33.1**	**+1.3**	
OGNE				lAmb_Lg			17 11 02.8		
	comp=Z,56nm,0.7s								
OGNE	**Ogallala**	**4.89**	**321**	P		**Pn**	**17 09 32.9**	**+1.1**	
	baz=139,SNR=30								
OGNE	**Ogallala**	**4.89**	**321**	P		**Pn**	**17 09 33.6**	**+1.8**	
	baz=139								
OGNE				S		**Sn**	**17 10 29.8**	**+0.8**	
	baz=139								
FCAR	**Ozark Folk Cen**	**4.91**	**104**			**Pn**	**17 09 32.1**	**0.0**	
X40A	**Basin Creek Fa**	**4.99**	**121**			**Pn**	**17 09 33.8**	**+0.7**	
X40A				lAmb_Lg			17 11 05.6		
	comp=Z,36nm,0.9s								
X40A	**Basin Creek Fa**	**4.99**	**121**	P		**Pn**	**17 09 34.0**	**+0.9**	
	baz=304,SNR=19								
X40A				P		**Pn**	**17 09 34.0**	**+0.9**	
	baz=304,SNR=19								
X40A	**Basin Creek Fa**	**4.99**	**121**	P		**Pn**	**17 09 34.0**	**+0.9**	
	baz=304								
X40A				S		**Sn**	**17 10 30.8**	**-0.6**	
	baz=304								
WHAR	**Wooly Hollow**	**5.00**	**111**	lAmb_Lg			17 11 08.4		
	comp=Z,53nm,0.8s								
W41B	**Gary Mavity, V**	**5.07**	**112**			**Pn**	**17 09 34.6**	**+0.3**	
W41B				lAmb_Lg			17 11 03.7		
	comp=Z,63nm,0.7s								
W41B	**Gary Mavity, V**	**5.07**	**112**	P		**Pn**	**17 09 34.5**	**+0.2**	
	baz=295,SNR=26								
W41B	**Gary Mavity, V**	**5.07**	**112**	P		**Pn**	**17 09 34.6**	**+0.3**	
	baz=295								
W41B				Sb		**Sb**	**17 10 53.5**	**+5.4**	
	baz=295								
T25A	**Trinidad**	**5.11**	**271**	lAmb_Lg			17 11 06.5		
	comp=Z,52nm,1.0s								
T25A	**Trinidad**	**5.11**	**271**	P		**Pn**	**17 09 36.8**	**+1.7**	
	baz=88,SNR=19								
T25A				Sb		**Sg**	**17 10 56.9**	**-4.6**	
	baz=88								
N38A	**Joes South For**	**5.17**	**44**	Pn		**Pn**	**17 09 35.6**	**-0.1**	
N38A				lAmb_Lg			17 11 04.4		
	comp=Z,59nm,0.8s								
N38A	**Joes South For**	**5.17**	**44**	P		**Pn**	**17 09 35.7**	**+0.1**	
	baz=227,SNR=6.6								
UALR	**University of**	**5.19**	**116**	lAmb_Lg			17 11 09.7		
	comp=Z,39nm,0.9s								
WHTX	**Lake Whitney,**	**5.20**	**175**	lAmb_Lg			17 11 09.0		
	comp=Z,28nm,1.1s								
WHTX	**Lake Whitney,**	**5.20**	**175**	P		**Pn**	**17 09 36.4**	**+0.4**	
	baz=355,SNR=8.4								
WHTX	**Lake Whitney,**	**5.20**	**175**	P		**Pn**	**17 09 37.3**	**+1.3**	
	baz=355								
P40A	**Paris**	**5.24**	**62**			**Pn**	**17 09 36.6**	**+0.1**	
P40A				lAmb_Lg			17 11 05.1		
	comp=Z,29nm,0.9s								
P40A	**Paris**	**5.24**	**62**	P		**Pn**	**17 09 36.9**	**+0.4**	
	baz=245,SNR=11								
WLAR	**White Oak Lake**	**5.31**	**130**	lAmb_Lg			17 11 20.7		
	comp=Z,51nm,0.9s								
CCM	**Cathedral Cave**	**5.44**	**79**			**Pn**	**17 09 39.3**	**+0.1**	
CCM	**Cathedral Cave**	**5.44**	**79**	P		**Pn**	**17 09 39.0**	**-0.2**	
	baz=263,SNR=21								
CCM	**Cathedral Cave**	**5.44**	**79**	P		**Pn**	**17 09 39.8**	**+0.5**	
	baz=263								
K31A	**O'Neill**	**5.46**	**354**	Pn		**Pn**	**17 09 40.4**	**+0.8**	
LCAR	**Lake Charles**	**5.62**	**99**	lAmb_Lg			17 11 19.0		
	comp=Z,52nm,0.7s								
LCAR	**Lake Charles**	**5.62**	**99**	P		**Pn**	**17 09 42.3**	**+0.5**	
	baz=284,SNR=7.2								
Z41A	**Richland Creek**	**5.79**	**131**	lAmb_Lg			17 11 36.2		
	comp=Z,29nm,0.8s								
Z41A	**Richland Creek**	**5.79**	**131**	P		**Pn**	**17 09 44.5**	**+0.4**	
	baz=314,SNR=5.8								
Z41A				P		**Pn**	**17 09 44.5**	**+0.4**	
	baz=314,SNR=5.8								
Z41A	**Richland Creek**	**5.79**	**131**	P		**Pn**	**17 09 44.2**	**+0.1**	
	baz=314								
Z41A				S		**Sn**	**17 10 48.9**	**-2.1**	
	baz=314								
Q24A	**Divide**	**5.91**	**290**			**Pn**	**17 09 46.4**	**+0.4**	
Q24A	**Divide**	**5.91**	**290**	P		**Pn**	**17 09 46.5**	**+0.4**	
	baz=105								
Q24A				S		**Sn**	**17 10 52.8**	**-1.6**	
	baz=105								
SCIA	**State Center**	**5.99**	**37**	S		**Sn**	**17 10 54.6**	**-1.5**	
	baz=220								
CCAR	**Cane Creek**	**6.04**	**121**	lAmb_Lg			17 11 34.8		
	comp=Z,31nm,0.8s								
FVM	**French Village**	**6.07**	**80**			**Pn**	**17 09 47.5**	**-0.5**	
FVM	**French Village**	**6.07**	**80**	P		**Pn**	**17 09 47.6**	**-0.5**	
	baz=265,SNR=9.3								
PBMO	**Poplar Bluff**	**6.08**	**92**	lAmb_Lg			17 11 43.9		
	comp=Z,33nm,0.7s								
HBAR	**Harrisburg**	**6.15**	**103**	Pn		**Pn**	**17 09 48.8**	**-0.2**	
SLM	**Saint Louis**	**6.31**	**74**	lAmb_Lg			17 11 48.6		
	comp=Z,26nm,0.7s								
435B	**Jarrell**	**6.40**	**177**	lAmb_Lg			17 11 47.2		
	comp=Z,28nm,1.0s								
ISCO	**Idaho Springs**	**6.51**	**296**			**Pn**	**17 09 55.4**	**+1.1**	
ISCO	**Idaho Springs**	**6.51**	**296**	P		**Pn**	**17 09 56.4**	**+2.1**	
	baz=111								
N41A	**Harden Midland**	**6.59**	**56**	Pn		**Pn**	**17 09 55.2**	**+0.1**	
N41A				lAmb_Lg			17 11 46.8		
	comp=Z,49nm,0.8s								
N41A	**Harden Midland**	**6.59**	**56**	P		**Pn**	**17 09 55.4**	**+0.3**	
	baz=240,SNR=7.1								
ECSD	**EROS Data Cent**	**6.62**	**9**	P		**Pn**	**17 09 54.9**	**-0.7**	
	baz=190								
ECSD				S		**Sn**	**17 11 08.2**	**-3.5**	
	baz=190								
K38A	**Parkersburg**	**6.78**	**35**	lAmb_Lg			17 12 00.6		
	comp=Z,34nm,0.7s								
JCT	**Junction City**	**6.86**	**193**	lAmb_Lg			17 12 09.8		
	comp=Z,35nm,0.8s								
S44A	**Carbondale**	**6.98**	**83**			**Pn**	**17 10 00.6**	**+0.1**	
143A	**Socs Landing,**	**7.03**	**128**	lAmb_Lg			17 12 08.7		
	comp=Z,32nm,0.8s								
PHWY	**Pilot Hill**	**7.09**	**308**	lAmb_Lg			17 12 11.9		
	comp=Z,22nm,1.0s								
P43A	**Skaggs, Pawnee**	**7.10**	**67**	Pn		**Pn**	**17 10 01.7**	**-0.4**	
P43A				lAmb_Lg			17 12 11.5		
	comp=Z,36nm,0.8s								
P43A	**Skaggs, Pawnee**	**7.10**	**67**	P		**Pn**	**17 10 01.9**	**-0.1**	
	baz=252,SNR=16								
L40A	**Anamosa**	**7.15**	**45**	lAmb_Lg			17 12 07.8		
	comp=Z,41nm,0.8s								
ANMO	**Albuquerque**	**7.20**	**254**	Pg		Pg	17 10 30.5	-4.7	
	comp=Z,0.8nm,0.3s,baz=73,slow=14,SNR=14								
ANMO				Lg		Lg	17 12 01.1		
	comp=Z,1.3nm,0.3s,baz=64,slow=16,SNR=3.3								
SUSD	**Miller**	**7.28**	**355**	lAmb_Lg			17 12 11.6		
	comp=Z,34nm,0.8s								
Q44A	**Meyer Farm, Va**	**7.30**	**74**	lAmb_Lg			17 12 19.8		
	comp=Z,22nm,0.8s								
OXF	**Oxford**	**7.47**	**108**			**Pn**	**17 10 06.2**	**-1.0**	
OXF				lAmb_Lg			17 12 25.6		
	comp=Z,36nm,0.9s								
OXF	**Oxford**	**7.47**	**108**	P		**Pn**	**17 10 07.6**	**+0.3**	
	baz=293,SNR=7.4								
OXF				S		**Sn**	**17 11 29.9**	**-2.6**	
	baz=293								
HDIL	**Hopedale**	**7.58**	**61**			**Pn**	**17 10 09.1**	**+0.3**	
HDIL				lAmb_Lg			17 12 35.0		
	comp=Z,36nm,0.7s								
HDIL	**Hopedale**	**7.58**	**61**	P		**Pn**	**17 10 09.3**	**+0.5**	
	baz=246,SNR=9.0								
HDIL	**Hopedale**	**7.58**	**61**	P		**Pn**	**17 10 09.2**	**+0.5**	
	baz=246,SNR=6.1								
Y45A	**Yeager Farm, C**	**7.66**	**113**	lAmb_Lg			17 12 34.0		
	comp=Z,30nm,0.8s								
I37A	**Lemond, Waseca**	**7.67**	**26**	lAmb_Lg			17 12 24.9		
	comp=Z,39nm,1.1s								
Y22D	**IRIS PASSCAL I**	**7.89**	**249**	lAmb_Lg			17 12 51.9		
	comp=Z,22nm,0.7s								
O44A	**Mansfield**	**8.03**	**65**	lAmb_Lg			17 12 40.8		
	comp=Z,21nm,0.7s								
L42A	**Oliver, Polo**	**8.04**	**51**	lAmb_Lg			17 12 41.6		
	comp=Z,28nm,0.8s								
MNTX	**Coudas Mount**	**8.19**	**230**	P		**Pn**	**17 10 18.1**	**+1.1**	
	baz=46								
MNTX				S		**Sn**	**17 11 49.8**	**-0.4**	
	baz=46								
WVT	**Waverly**	**8.25**	**94**			**Pn**	**17 10 17.3**	**-0.6**	
JFWS	**Jewell Farm**	**8.25**	**44**			**Pn**	**17 10 17.3**	**-0.6**	
JFWS				lAmb_Lg			17 12 51.4		
	comp=Z,23nm,0.8s								
JFWS	**Jewell Farm**	**8.25**	**44**	P		**Pn**	**17 10 17.3**	**-0.6**	
	baz=229								
JFWS				S		**Sn**	**17 11 45.5**	**-6.2**	
	baz=229								
RSSD	**Black Hills**	**8.30**	**328**	Pn		**Pn**	**17 10 20.9**	**+2.1**	
RSSD	**Black Hills**	**8.30**	**328**	P		**Pn**	**17 10 20.9**	**+2.1**	
	baz=145								
RWWY	**Rawlins**	**8.42**	**305**	lAmb_Lg			17 12 48.8		
	comp=Z,20nm,0.8s								
K22A	**Casper**	**8.52**	**312**	lAmb_Lg			17 13 12.1		
	comp=Z,23nm,1.0s								
K22A	**Casper**	**8.52**	**312**	P		**Pn**	**17 10 22.1**	**+0.4**	
	baz=127								
146A	**Union**	**8.64**	**119**	lAmb_Lg			17 13 12.4		
	comp=Z,20nm,0.7s								
F33A	**5 Mile Ranch,**	**8.74**	**8**	lAmb_Lg			17 12 52.5		
	comp=Z,16nm,1.0s								
I40A	**Norwalk**	**8.74**	**38**	lAmb_Lg			17 13 01.4		
	comp=Z,15nm,0.7s								
M44A	**Midewin, Midew**	**8.79**	**58**	lAmb_Lg			17 13 01.3		
	comp=Z,23nm,1.1s								
Z47A	**Carrollton**	**9.05**	**113**	lAmb_Lg			17 13 12.5		
	comp=Z,14nm,0.7s								
TX31	**Lajitas Ar. Si**	**9.15**	**213**	Pn		**Pn**	**17 10 30.0**	**-0.3**	
TXAR	**Lajitas Array**	**9.15**	**213**	Pn		**Pn**	**17 10 30.3**	**-0.1**	
	comp=Z,0.4nm,0.3s,baz=35,slow=11,SNR=16								
TXAR				Lg		Lg	17 13 02.4		
	comp=Z,0.6nm,0.3s,baz=39,slow=33,SNR=3.7								
	comp=Z,0.7nm,0.3s								
I42A	**Dreger Farm,**	**9.63**	**43**	lAmb_Lg			17 13 21.4		
	comp=Z,17nm,0.9s								
PDAR	**Pinedale Array**	**10.47**	**306**	Pn		**Pn**	**17 10 48.0**	**-0.5**	
	comp=Z,0.3nm,0.3s,baz=124,slow=14,SNR=2.6								
PDAR				Pg			17 11 30.1		
	comp=Z,0.4nm,0.3s,baz=113,slow=16,SNR=2.3								
PDAR				Lg		Lg	17 13 42.2		
	comp=Z,0.4nm,0.3s,baz=99,slow=34,SNR=2.6								
	comp=Z,0.5nm,0.4s								
TKL	**Tuckaleechee C**	**11.57**	**93**	Pn		**Pn**	**17 11 01.7**	**-1.7**	
	comp=Z,0.8nm,0.3s,baz=274,slow=13,SNR=10								
TKL				Lg		Lg	17 14 18.4		
	comp=Z,1.0nm,0.3s,baz=171,slow=21,SNR=6.2								
	comp=Z,2.5nm,0.4s								
ULM	**Lac du Bonnet**	**13.15**	**6**	Pn		Pn	17 11 20.2	-4.7	
	comp=Z,1.2nm,0.5s,baz=178,slow=18,SNR=1.4								
ULM				Sn		Sn	17 13 34.2	-17	
	comp=Z,0.1nm,0.3s,baz=172,slow=12,SNR=1.3								
ULM				Lg		Lg	17 15 03.5		
	comp=Z,0.1nm,0.3s,baz=85,slow=18,SNR=1.3								
ILAR	**Eielson Array**	**39.75**	**330**	P		**P**	**17 15 52.0**	**+1.1**	
	comp=Z,0.3nm,0.7s,baz=113,slow=6.9,SNR=2.4								
	comp=Z,0.3nm,0.7s								

MAN 05 17:13:06.9, 6.67N×126.66E, h16km, mb4.4, ML3.3, MS3.1, 2C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	Time	Res	ISC
MATI	**Mati**	**0.49**	**305**	⇓*e*	P		17 13 17.0	+0.6	
DDMP	**Don Marcelino,**	**1.10**	**240**	⇓*e*	P		17 13 26.5	+2.2	
BIPH	**Bislig**	**1.54**	**349**	⇑*e*	P		17 13 33.6	+0.5	
BIPH				*e*	S		17 13 53.5		
KCP	**Kidapawan**	**1.60**	**282**	⇑*e*	P		17 13 34.9	+1.1	
KCP				*i*	S		17 13 53.8		
GSPH	**General Santos**	**1.80**	**251**	*e*	P		17 13 36.6	+0.2	
CTBH	**Cotabato--PC H**	**2.46**	**283**	*e*	P		17 13 47.3	+1.2	
CTBH				*i*	S		17 14 17.8		
GLSP	**General Luna,**	**3.14**	**350**	⇓*e*	P		17 13 57.4	+2.1	

NNC 05 17:15:22.3, 11.0, 37.53N×69.60E, h0km, mb3.6, mpv3.2, 3C-2D, Error ellipse: s-maj=93.8km s-min=62.3km az=171.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	Time	Res	ISC
KK31	**Karatay Array**	**5.61**	**7**	Pn		Pn	17 16 47.4	+0.4	
	0.3nm,0.2s,baz=190,slow=15,SNR=35								
KK31				⇑Sn		Sn	17 17 55.3	+3.2	
	1.1nm,0.4s,baz=192,slow=24								
TKM2	**Tokmak 2**	**7.07**	**39**	⇑Pn		Pn	17 17 08.1	+0.9	
	2.3nm,0.7s								
TKM2				⇓Sn		Sn	17 18 25.5	-2.8	
	1.0nm,0.6s								
AB31	**Akbulak array**	**13.64**	**332**	⇑P		Pn	17 18 34.1	-2.8	
	0.2nm,0.3s,baz=157,slow=12,SNR=13								
AKTO	**Aktyubinsk**	**15.33**	**331**	⇓P		Pn	17 19 02.3	+2.5	
	1.4nm,0.7s								

*DJA **05** 17:17:23.8±0.6, 5°S±3°×12°6E±°, h489km±8km, M4.1/13, mb4.2/11, mB4.7/6, MLv4.2/13, Mw(mB)4.0/6*
*IDC **05** 17:17:26.2±1.0, 4.63S×125.70E, h453km±13km, mb3.1/11, mbtmp4.1/15, Error ellipse: s-maj=17.6km s-min=9.3km az=73.0*
ISC 05 17:17:25.8±0.6, 4.68S±0.06×125.64E±0.08, h450km, n42, σ1s33/47, mb3.6/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	Time	Res	ISC
NLAI	**Namlea**	**2.04**	**45**	P		**P**	**17 18 25.8**	**-0.8**	
SANI	**Sanana**	**2.63**	**8**	P		**P**	**17 18 29.7**	**-0.6**	
SANI	**Sanana**	**2.63**	**8**	P		**P**	**17 18 29.7**	**-0.6**	
LUWI	**Luwuk**	**4.61**	**321**	P		**P**	**17 18 47.1**	**+0.6**	
LUWI	**Luwuk**	**4.61**	**321**	P		**P**	**17 18 46.9**	**+0.4**	
MMRI	**Maumere**	**5.18**	**221**	P		**P**	**17 18 53.8**	**+1.8**	
	0.2nm54nm,0.9s								
SOEI	**Soe**	**5.22**	**195**	P		**P**	**17 18 53.6**	**+1.1**	
APSI	**Ampana**	**5.47**	**313**	P		**P**	**17 18 55.8**	**+1.0**	
	0.1nm33nm,0.7s								
KMSI	**Cibinong**	**5.48**	**342**	P		**P**	**17 18 55.5**	**+0.6**	
	0.7nm2μm185nm,0.6s								
BNSI	**Bone**	**5.53**	**273**	P		**P**	**17 18 58.1**	**+2.7**	
	0.1nm25nm,0.7s								
BKSI	**Bulukumba**	**5.54**	**263**	P		**P**	**17 18 56.6**	**+1.1**	
	0.1nm15nm,0.5s								
EDFI	**Ende, Flores**	**5.64**	**224**	P		**P**	**17 18 58.2**	**+1.6**	
	0.1nm21nm,0.9s								
BATI	**Baumata**	**5.83**	**200**	P		**P**	**17 18 59.3**	**+0.8**	
	48nm,0.3s,baz=82,slow=2.7,SNR=40								
BATI				S		**S**	**17 20 11.2**	**-2.9**	
	26nm,0.5s,baz=83,slow=12,SNR=1.8								
BATI	**Baumata**	**5.83**	**200**	P		**P**	**17 18 59.6**	**+1.2**	
	0.2nm1μm52nm,0.6s								
KAPI	**Kappang**	**5.88**	**267**	P		**P**	**17 19 00.9**	**+1.9**	
	2.9nm,0.5s,baz=111,slow=5.3,SNR=4.1								
TTSI	**Tana Toraja**	**6.03**	**285**	P		**P**	**17 19 02.7**	**+2.2**	
	1.1nm18nm,0.7s								
MRSI	**Marisa**	**6.32**	**324**	P		**P**	**17 19 03.5**	**+0.1**	
	0.4nm1μm109nm,0.6s								
SIJI	**Sorong**	**6.77**	**56**	P		**P**	**17 19 08.2**	**0.0**	
	2.4nm,0.2s,baz=265,slow=22,SNR=10								
SIJI				S		**S**	**17 20 31.8**	**-0.1**	
	4.9nm,0.6s,baz=246,slow=23,SNR=5.7								
FAKI	**Fak Fak**	**6.82**	**75**	P		**P**	**17 19 08.5**	**-0.2**	
TOLI2	**Tolitoli**	**7.53**	**320**	P		**P**	**17 19 16.6**	**+0.4**	
PLAI	**Plampang**	**8.83**	**242**	P		**P**	**17 19 31.4**	**+1.1**	
MTN	**Manton Dam**	**9.76**	**147**	P		**P**	**17 19 41.1**	**+0.8**	
KDU	**Kakadu**	**10.43**	**140**	P		**P**	**17 19 47.7**	**+0.1**	
BBKI	**Banjar Baru**	**10.84**	**276**	P		**P**	**17 19 52.2**	**0.0**	
KNRA	**Kununurra**	**11.35**	**165**	P		**P**	**17 19 58.8**	**+1.2**	
WRAB	**Tennant Creek**	**17.37**	**152**	P		**P**	**17 21 02.2**	**+0.1**	
WRA	**Warramunga Arr**	**17.38**	**152**	P		**P**	**17 21 01.9**	**-0.2**	
	13nm,0.5s,baz=333,slow=10.0,SNR=56								
WRA				S		**S**	**17 23 58.8**	**-1.6**	
	1.2nm,0.9s,baz=322,slow=18,SNR=5.7								
SKJI	**Sukabumi**	**19.13**	**262**	P		**P**	**17 21 14.7**	**-4.7**	
WRKA	**Warakurna**	**20.40**	**173**	P		**P**	**17 21 32.4**	**+1.5**	
ASAR	**Alice Springs**	**20.49**	**158**	P		**P**	**17 21 32.9**	**+1.2**	
	4

TOIG				*e*S		**Sn**	17 22 23.9	-3.7	
YOIG	**Yosondua**	**4.68**	**284**	*e*P		**Pn**	17 21 34.2	+0.6	
YOIG				*e*S		**Sn**	17 22 25.8	-2.0	
TPIG	**Tehuac#an**	**5.08**	**302**	*i* P		**Pn**	17 21 38.9	+0.1	
TPIG				*e*P		**Pn**	17 21 39.5	+0.6	
PNIG	**Pinotepa**	**5.16**	**277**	*e*P		**Pn**	17 21 39.6	0.0	
PNIG				*i* S		**Sn**	17 22 37.6	-1.1	
HLIG	**Huajuapan de L**	**5.20**	**294**	*e*P		**Pn**	17 21 41.5	+1.1	
HLIG				*e*S		**Sn**	17 22 36.0	-4.1	
JAUV	**Jalcomulco**	**5.21**	**313**	*e*P		**Pn**	17 21 39.1	-1.3	
JAUV				*i* S		**Sn**	17 22 37.0	-3.1	
JTS	**Las Juntas de**	**9.40**	**125**	P		**Pn**	17 22 34.8	-1.3	
	4.8nm,0.3s,baz=24,slow=17,SNR=8.0								
JTS				S		**Sn**	17 24 14.8	-5.8	
	2.5nm,0.3s,baz=220,slow=15,SNR=1.3								
TXAR	**Lajitas Array**	**16.78**	**325**	P		**Pn**	17 24 12.3	+2.3	
	2.1nm,0.9s,baz=149,slow=12,SNR=10								
NVAR	**Mina Array Bea**	**31.80**	**320**	P		**P**	17 26 36.8	+2.8	
	1.0nm,0.7s,baz=133,slow=8.9,SNR=10.0								
	1.0nm,0.7s								
LPAZ	**La Paz**	**40.12**	**142**	P		**P**	17 27 44.6	-0.7	
	0.9nm,0.6s,baz=332,slow=11,SNR=4.0								
	0.9nm,0.6s								

IDC ***05*** *17:24:55.5±1.4, 32°.61N×47°.77E, h0km, mb3.7/10, mbtmp3.8/15, ML3.3/5, MS4.0/1, Error ellipse: s-maj=30.4km s-min=16.4km az=172.0*
TEH ***05*** *17:24:56.9, 32°.60N×47°.74E, h8km, ML3.6*
SGS ***05*** *17:24:57.9, 32°.87N×47°.88E, h26km, Ml4.0*
ISN ***05*** *17:24:58.2±1.1, 32°.61N×47°.75E, h16km±5km, ML3.5*
ISC 05 17:24:58.6±0.5, 32°.57N±0°.03×47°.75E±0°.03, h22km±3km, n79, σ2§12/87, mb3.7/10, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time	Res
DHL1	**Dehloran**	**0.41**	**286**	*e*Sg		**Sb**	**17 25 11.9**	**-0.9**
DHL1				*e*Pg		**Pb**	**17 25 04.4**	**-2.7**
IKFM	**Kafar-mosalman**	**0.95**	**5**	*e*Pg		**Pb**	**17 25 14.7**	**-1.8**
IKFM				*e*Sg		**Sb**	**17 25 29.3**	**+0.6**
IKFM				*e*			17 25 33.5	
	comp=Z,17μm,0.5s							
IDOB	**Doab**	**1.27**	**17**	*e*Pg		**Pn**	**17 25 20.5**	**-0.8**
AHWZ	**Ahwaz**	**1.45**	**148**	*e*Pg		**Pn**	**17 25 24.9**	**+1.3**
AHWZ				*e*Sg		**Sb**	**17 25 47.0**	**+4.0**
AMIS	**Naft Sefid**	**1.59**	**124**	*e*Pg		**Pn**	**17 25 27.4**	**+1.9**
AMIS				*e*Sg		**Sb**	**17 25 50.9**	**+3.9**
IKOM	**Komasi**	**1.61**	**353**	*e*Pg		**Pn**	**17 25 27.6**	**+1.6**
IKOM				*e*			17 25 31.5	
	comp=Z,9μm,0.7s							
IBDR	**Badra**	**1.62**	**290**	*e*Pg		**Pn**	**17 25 27.0**	**+1.1**
IBDR				*e*Sg		**Sb**	**17 25 49.0**	**+1.2**
IBDR				AML		AML	17 25 53.9	
	comp=N,523nm,0.8s							
IBDR				AML		AML	17 25 58.0	
	comp=E,377nm,0.8s							
RAFI	**Al-Rafai**	**1.62**	**239**	*e*Pn		**Pn**	**17 25 28.0**	**+2.1**
RAFI				*e*Sn		**Sb**	**17 25 51.0**	**+3.2**
RAFI				AML		AML	17 26 02.3	
	comp=E,1μm,0.9s							
HSAM	**Samen**	**1.79**	**23**	*e*Pn		**Pb**	**17 25 30.5**	**-0.3**
KCHF	**Cheshme Sefid,**	**1.80**	**341**	*e*Pn		**Pn**	**17 25 29.9**	**+1.3**
KCHF				*e*Sg		**Sb**	**17 25 55.6**	**+2.4**
KCHF				*e*			17 26 03.9	
	comp=Z,4μm,0.4s							
KER	**Kermanshah**	**1.88**	**344**	*e*Pn		**Pn**	**17 25 31.3**	**+1.7**
IBZA	**Bozab**	**1.90**	**3**	*e*Pn		**Pn**	**17 25 31.9**	**+1.9**
IBZA				*e*			17 26 06.4	
	comp=Z,4μm,0.6s							
IGHG	**Ghaleghazi**	**2.01**	**331**	*e*Pn		**Pn**	**17 25 33.0**	**+1.5**
IGHG				*e*			17 26 17.6	
	comp=Z,8μm,0.8s							
IDHR	**Dehrash**	**2.41**	**332**	*e*Pn		**Pn**	**17 25 38.2**	**+1.3**
IDHR				*e*			17 26 22.5	
	comp=Z,3μm,0.5s							
ILIN	**Lien**	**2.43**	**345**	*e*Pn		**Pn**	**17 25 38.6**	**+1.3**
ILIN				*e*			17 26 24.9	
	comp=Z,3μm,0.6s							
HAGD	**Aghdareh**	**2.53**	**27**	*e*Pn		**Pn**	**17 25 40.5**	**+1.9**
HAGD				*e*			17 26 27.1	
	comp=Z,4μm,0.8s							
IPIR	**Pirpir**	**2.66**	**87**	*e*Pn		**Pn**	**17 25 42.9**	**+2.4**
IPIR				*e*			17 26 34.0	
	comp=Z,3μm,0.6s							
SHK1	**Shahrekord**	**2.67**	**94**	*e*Pn		**Pn**	**17 25 42.4**	**+1.9**
SHK1				*e*			17 26 30.2	
	comp=Z,3μm,0.6s							
BHD	**Baghdad**	**2.92**	**285**	*e*Pn		**Pn**	**17 25 46.0**	**+2.3**
BHD				*e*Sn		**Sn**	**17 26 21.0**	**+2.9**
IBRJ	**Brojen**	**3.05**	**102**	*e*Pn		**Pn**	**17 25 47.5**	**+1.6**
IBRJ				*e*			17 26 48.6	
	comp=Z,2μm,0.8s							
QAMS	**Qamsar**	**3.28**	**68**	*e*Pn		**Pn**	**17 25 52.2**	**+3.3**
QAMS				*e*			17 26 52.3	
	comp=Z,3μm,0.5s							
IKLH	**Kolahrood**	**3.31**	**76**	*e*Pn		**Pn**	**17 25 52.2**	**+2.8**
IKLH				*e*			17 26 58.4	
	comp=Z,2μm,0.6s							
IRAZ	**Razeghan**	**3.36**	**32**	*e*Pn		**Pn**	**17 25 51.8**	**+1.8**
IRAZ				*e*			17 27 06.2	
	comp=Z,2μm,0.9s							
QABG	**Abgarm-Qazvin**	**3.48**	**25**	*e*Pn		**Pn**	**17 25 52.6**	**+0.9**
IQOM	**Qom**	**3.58**	**50**	*e*Pn		**Pn**	**17 25 54.9**	**+1.8**
IQOM				*e*			17 26 11.2	
	comp=Z,855nm,0.8s							
KLNJ	**Kolanjah**	**3.63**	**114**	*e*Pn		**Pn**	**17 25 55.6**	**+1.7**
IGAR	**Gharneh**	**3.63**	**91**	*e*Pn		**Pn**	**17 25 55.7**	**+1.9**
IGAR				*e*			17 26 47.3	
	comp=Z,932nm,0.5s							
IZEF	**Zefreh**	**3.88**	**84**	*e*Pn		**Pn**	**17 25 59.6**	**+2.4**
IZEF				*e*			17 27 08.3	
	comp=Z,685nm,0.8s							
KRSH	**Karshahi**	**3.93**	**68**	*e*Pn		**Pn**	**17 26 00.1**	**+2.2**
IMHD	**Mahdasht**	**3.94**	**37**	*e*Pn		**Pn**	**17 25 58.9**	**+1.0**
IKRK	**Kirkuk**	**4.00**	**316**	*e*Pn		**Pn**	**17 26 01.0**	**+2.4**
IKRK				*e*Sn		**Sn**	**17 26 46.0**	**+1.2**
IRAM	**Ramesheh**	**4.00**	**100**	*e*Pn		**Pn**	**17 26 00.6**	**+1.7**
IRAM				*e*			17 26 52.1	
	comp=Z,624nm,0.5s							
IVRN	**Varamin**	**4.10**	**53**	*e*Pn		**Pn**	**17 26 02.4**	**+2.3**
ISFB	**Sefidab**	**4.16**	**63**	*e*Pn		**Pn**	**17 26 02.8**	**+1.9**
IGZV	**Ghazvin**	**4.32**	**28**	*e*Pn		**Pn**	**17 26 05.2**	**+1.9**
SRFHA	**Rafha**	**4.44**	**218**	S		**Sn**	**17 26 57.3**	**+1.5**
SRFHA				P		**Pn**	**17 26 06.9**	**+2.1**
KAZ1	**Kazerun**	**4.45**	**130**	*e*Pn		**Pn**	**17 26 07.3**	**+2.4**
MAHB	**Mahabad**	**4.51**	**339**	*e*Pn		**Pn**	**17 26 07.3**	**+1.5**
QALM	**Alamut, Qazvin**	**4.54**	**31**	*e*Pn		**Pn**	**17 26 08.2**	**+2.0**
IDMV	**Damavand**	**4.65**	**49**	*e*Pn		**Pn**	**17 26 09.7**	**+1.8**
QYSM	**Um Kedad**	**4.76**	**189**	P		**Pn**	**17 26 10.4**	**+1.3**
QYSM	**Um Kedad**	**4.76**	**189**	S		**Sn**	**17 27 05.1**	**+1.4**
AHBU	**AHRAM**	**4.79**	**139**	*e*Pn		**Pn**	**17 26 10.9**	**+1.3**
ANAR	**Anarak**	**5.07**	**81**	*e*Pn		**Pn**	**17 26 15.1**	**+1.6**
ISAD	**Sadrabad**	**5.08**	**96**	*e*Pn		**Pn**	**17 26 15.4**	**+1.7**
ISAD				*e*			17 27 27.2	
	comp=N,284nm,0.5s							
IFIR	**Firoozkooh**	**5.16**	**52**	*e*Pn		**Pn**	**17 26 16.3**	**+1.4**
IPRN	**Peran**	**5.27**	**45**	*e*Pn		**Pn**	**17 26 17.7**	**+1.4**
SARAR	**Arar**	**5.42**	**248**	P		**Pn**	**17 26 18.3**	**0.0**
ISHM	**Shahmirzad**	**5.62**	**53**	*e*Pn		**Pn**	**17 26 23.1**	**+2.0**
ICHK	**Chekchek**	**5.64**	**92**	*e*Pn		**Pn**	**17 26 22.5**	**+1.0**
ICHK				*e*			17 27 15.2	
	comp=Z,256nm,0.5s							
IANJ	**Anjilo**	**5.88**	**59**	*e*Pn		**Pn**	**17 26 26.4**	**+1.7**
IGLO	**Ghaloghah**	**6.37**	**50**	*e*Pn		**Pn**	**17 26 34.0**	**+2.6**
IBAF	**Bafgh**	**6.71**	**96**	*e*Pn		**Pn**	**17 26 38.6**	**+2.6**
RMAH	**Rumah**	**7.24**	**186**	P		**Pn**	**17 26 44.2**	**+0.9**
NHRD	**Haradh**	**7.90**	**172**	P		**Pn**	**17 26 51.9**	**-0.3**
ASF	**Jabal al Asfar**	**9.18**	**270**	Pn		**Pn**	**17 27 10.1**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=152,slow=9.6,SNR=1.8							
ASF				Lg		Lg	17 29 45.7	
	comp=Z,0.2nm,0.3s,baz=250,slow=22,SNR=3.3							
ASF				LR		LR	17 31 01.1	
	comp=Z,838nm,20.4s,baz=38,slow=40							
	comp=Z,0.7nm,0.5s							
RAYN	**Ar Rayn**	**9.23**	**193**	Pn		**Pn**	**17 27 09.3**	**-1.3**
SHME	**Shamm**	**9.79**	**129**	Pn		**Pn**	**17 27 16.4**	**-1.8**
BANOM	**Banah**	**9.98**	**129**	Pn		**Pn**	**17 27 20.0**	**-0.8**
UOSS	**Minazif**	**10.62**	**134**	Pn		Pn	17 27 26.3	-3.2
HATD	**Hatta, Dubai**	**10.66**	**134**	Pn		Pn	17 27 26.9	-3.2
ASHO	**Ashiyiah**	**10.72**	**135**	Pn		Pn	17 27 28.2	-2.8
ASHO				Sn		**Sn**	**17 29 23.4**	**-7.0**
EIL	**Elat**	**11.34**	**259**	Lg		Lg	17 30 52.5	
	comp=Z,0.2nm,0.3s,baz=315,slow=14,SNR=3.7							

WSAR	**Wadi Sarin**	**13.37**	**131**	Pn		**Pn**	**17 28 04.8**	**-2.4**
	comp=Z,0.5nm,0.3s,baz=0.0,slow=7.1,SNR=2.7							
WSAR				Sn		**Sn**	**17 30 28.2**	**-7.0**
	comp=Z,0.2nm,0.3s,baz=359,slow=21,SNR=1.8							
	comp=Z,2.6nm,0.5s							
BRTR	**Keskin Array B**	**13.44**	**306**	Pn		**Pn**	**17 28 10.1**	**+1.9**
	baz=134,slow=14,SNR=5.5							
	comp=Z,0.8nm,0.8s							
IDI	**Anoyia**	**19.15**	**284**	P		**P**	**17 29 20.8**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=155,slow=14,SNR=3.5							
	comp=Z,8.4nm,0.9s							
AKTO	**Aktyubinsk**	**19.40**	**20**	P		**P**	**17 29 21.9**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=209,slow=12,SNR=8.2							
	comp=Z,2.3nm,0.7s							
AKASG	**Malin Array Be**	**22.69**	**328**	P		**P**	**17 29 56.9**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=135,slow=9.0,SNR=8.6							
	comp=Z,0.3nm,0.3s							
ARU	**Arti**	**25.01**	**14**	P		**P**	**17 30 20.2**	**-0.5**
	comp=Z,1.0nm,0.3s,baz=180,slow=5.1,SNR=3.8							
	comp=Z,1.0nm,0.3s							
KOLS	**Kolonicke sedl**	**25.11**	**318**	*e*P		**P**	**17 30 23.7**	**+1.9**
CRVS	**Cervenica-Dubn**	**25.56**	**317**	*e*P		**P**	**17 30 27.3**	**+1.4**
KURBB	**Kurchatov Arra**	**28.95**	**42**	P		**P**	**17 30 57.0**	**+0.8**
	comp=Z,0.7nm,0.8s,baz=248,slow=9.9,SNR=5.0							
	comp=Z,0.7nm,0.8s							
MKAR	**Makanchi Array**	**29.87**	**51**	P		**P**	**17 31 05.2**	**+0.7**
	comp=Z,1.3nm,0.8s,baz=245,slow=7.8,SNR=12							
	comp=Z,1.3nm,0.8s							
GERES	**GERESS Array B**	**30.18**	**313**	P		**P**	**17 31 08.7**	**+1.4**
	comp=Z,0.2nm,0.4s,baz=123,slow=7.2,SNR=3.6							
	comp=Z,0.2nm,0.4s							
FINES	**FINESS Array B**	**32.12**	**341**	P		**P**	**17 31 23.4**	**-0.7**
	comp=Z,5.0nm,1.2s,baz=152,slow=8.6,SNR=6.2							
	comp=Z,5.0nm,1.2s							
ZALV	**Zalesovo Beam**	**33.86**	**40**	P		**P**	**17 31 39.8**	**+0.4**
	comp=Z,1.1nm,0.6s,baz=243,slow=9.7,SNR=5.4							
	comp=Z,1.1nm,0.6s							
ESDC	**Sonseca Array**	**41.88**	**295**	P		**P**	**17 32 47.5**	**+0.1**
	comp=Z,1.1nm,1.0s,baz=69,slow=8.2,SNR=8.4							
	comp=Z,1.1nm,1.0s							
TORD	**Torodi Ar. Bea**	**46.22**	**256**	P		**P**	**17 33 23.1**	**+0.7**
	comp=Z,0.6nm,1.0s,baz=74,slow=5.7,SNR=2.7							
	comp=Z,0.6nm,1.0s							
KSRS	**Korea Array**	**63.96**	**61**	P		**P**	**17 35 28.8**	**-1.4**
	comp=Z,0.5nm,0.7s,baz=291,slow=6.7,SNR=2.4							
	comp=Z,0.5nm,0.7s							

IDC ***05*** *17:35:45.8±2.9, 17°.55S×173°.54W, h0km, mb4.1/4, mbtmp4.2/4, Error ellipse: s-maj=63.9km s-min=45.9km az=90.0*
ISC 05 17:35:47.2±1.7, 17°.3S±0°.2×173°.1W±0°.4, h35km, n6, σ1§46/6, mb4.2/4, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time	Res
AFI	**Afiamalu**	**3.61**	**20**	Pn		**Pn**	**17 36 40.3**	**-0.5**
	8.0nm,0.3s,baz=125,slow=12,SNR=6.4							
AFI				Sn		Sn	17 37 17.4	-4.8
	18nm,0.3s,baz=32,slow=22,SNR=7.9							
URZ	**Urewera**	**22.57**	**201**	P		**P**	**17 40 43.8**	**-0.7**
	6.8nm,0.6s,baz=309,slow=3.2,SNR=8.2							
	6.8nm,0.6s							
CTA	**Charters Tower**	**38.58**	**259**	P		P	17 43 07.9	+0.8
	2.1nm,0.8s,baz=26,slow=15,SNR=1.4							
	2.1nm,0.8s							
WRA	**Warramunga Arr**	**49.76**	**258**	P		**P**	**17 44 36.0**	**-0.7**
	0.9nm,0.6s,baz=96,slow=7.6,SNR=24							
	0.9nm,0.6s							
ASAR	**Alice Springs**	**49.86**	**253**	P		**P**	**17 44 36.9**	**-0.6**
	3.8nm,0.7s,baz=88,slow=8.5,SNR=59							
ASAR				PcP		**PcP**	**17 45 59.9**	**+2.1**
	0.6nm,0.8s,baz=105,slow=3.9,SNR=1.3							
	3.8nm,0.7s							
BRTR	**Keskin Array B**	**147.84**	**319**	PKPbc		**PKPab**	**17 55 32.1**	**+0.6**
	0.3nm,0.4s,baz=116,slow=3.4,SNR=2.8							

SOME ***05*** *18:29:27.5, 39°.60N×72°.73E, h15km*
KRNET ***05*** *18:29:27.7±0.1, 39°.31N×73°.43E, mb2.7*
NNC ***05*** *18:29:30.7±2.9, 39°.36N×73°.72E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=21.4km s-min=10.5km az=170.0*
ISC 05 18:29:30.2±1.4, 39°.40N±0°.07×73°.30E±0°.05, h10km, n24, σ2§19/41, 7C-13D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time	Res
DRK	**Karamyk**	**1.16**	**275**	⇑*i*P		**Pb**	**18 29 51.1**	**-1.4**
DRK				⇑*i*S		**Sn**	**18 30 08.7**	**-0.2**
	baz=78							
OHH	**Osh**	**1.19**	**341**	⇓*i*P		**Pn**	**18 29 52.2**	**-0.8**
	baz=38							
OHH				⇓*i*S		**Sn**	**18 30 09.9**	**+0.6**
	baz=38							
BTK	**Batken**	**2.02**	**290**	⇓*e*P		**Pb**	**18 30 05.9**	**-1.2**
	baz=91							
BTK				⇓*e*S		**Sb**	**18 30 33.8**	**+1.5**
	baz=91							
GAR	**Garm**	**2.35**	**261**	⇓*e*P		**Pn**	**18 30 10.0**	**+1.0**
	baz=64							
GAR				⇓*e*S		**Sb**	**18 30 41.0**	**-0.8**
	baz=64							
ARLS	**Aral**	**2.58**	**17**	⇓*i*P		**Pn**	**18 30 13.1**	**+0.9**
	baz=15							
ARLS				⇓*e*S		**Sn**	**18 30 45.1**	**+1.4**
	baz=15							
ARK	**Arkit**	**2.60**	**337**	⇑*i*P		**Pn**	**18 30 13.8**	**+1.3**
	baz=36							
ARK				⇑*i*S		**Sb**	**18 30 47.6**	**-1.5**
	baz=36							
TRKS	**Terek-Say**	**2.69**	**323**	⇑*i*P		**Pn**	**18 30 14.5**	**+0.8**
	baz=22							
TRKS				⇑*i*S		**Sn**	**18 30 48.7**	**+2.3**
	baz=22							
UCH	**Uchtor**	**2.97**	**18**	⇓*e*P		**Pn**	**18 30 18.4**	**+0.6**
	baz=15							
UCH				⇓*i*S		**Sn**	**18 30 55.2**	**+1.4**
	baz=15							
MRKS	**Merke**	**3.34**	**359**	*e*P		**Pb**	**18 30 28.8**	**-0.9**
	1.5nm,0.1s							
MRKS				*e*S		**Sb**	**18 31 12.7**	**+2.3**
	4.8nm,0.3s							
MRKS	**Merke**	**3.34**	**359**	Pg		**Pg**	**18 30 32.1**	**-2.1**
	3.2nm,0.3s							
MRKS				Lg		Lg	18 31 19.1	
	10nm,0.3s							
ULHL	**Ulahol**	**3.62**	**37**	⇓*e*P		**Pn**	**18 30 26.6**	**+0.1**
	baz=35							
ULHL				⇓*e*S		**Sn**	**18 31 09.2**	**-0.1**
	baz=35							
IUG	**Iuzhnay**	**3.70**	**319**	*e*P		**Pn**	**18 30 28.7**	**+1.2**
IUG				*e*S		**Sn**	**18 31 12.8**	**+1.5**
IUG	**Iuzhnay**	**3.70**	**319**	Pg		**Pg**	**18 30 44.2**	**+3.1**
	40nm,0.4s							
IUG				Lg		Lg	18 31 39.6	
	10nm,0.7s							
KST	**Kastek**	**4.16**	**28**	*e*P		**Pb**	**18 30 44.6**	**+1.1**
	1.4nm,0.4s							
KST				*e*S		**Sg**	**18 31 40.2**	**-3.6**
	4.2nm,0.7s							
KST	**Kastek**	**4.16**	**28**	Pg		**Pb**	**18 30 44.6**	**+1.1**
	1.4nm,0.4s							
KST				Lg		Lg	18 31 40.2	
	4.2nm,0.7s							
KK31	**Karatay Array**	**4.26**	**331**	⇓Pn		**Pn**	**18 30 38.9**	**+3.9**
	0.9nm,0.7s,baz=34,slow=81,SNR=5.0							
KK31				⇑Sn		**Sn**	**18 31 30.3**	**+5.5**
	0.4nm,0.3s,baz=153,slow=24,SNR=4.6							
BRLS	**Boroldaу**	**4.47**	**325**	*e*P		**Pn**	**18 30 38.7**	**+0.7**
	5.2nm,0.2s							
BRLS				*e*S		**Sn**	**18 31 30.1**	**0.0**
	7.0nm,0.4s							
BRLS	**Boroldaу**	**4.47**	**325**	Pg		**Pg**	**18 30 54.1**	**-1.7**
	2.3nm,0.2s							
BRLS				Lg		Lg	18 31 56.9	
	6.7nm,0.6s							
TNSS	**Tian-Shan**	**4.56**	**36**	*e*P		**Pb**	**18 30 52.9**	**+2.4**
	1.6nm,0.4s							
TNSS				*e*S		**Sg**	**18 31 54.1**	**-2.5**
	1.5nm,0.5s							
TNSS	**Tian-Shan**	**4.56**	**36**	Pg		**Pb**	**18 30 52.9**	**+2.4**
	1.6nm,0.4s							
TNSS				Lg		Lg	18 31 54.1	
	1.5nm,0.5s							
KRBS	**Karabastau**	**4.65**	**22**	*e*P		**Pb**	**18 30 52.8**	**+0.9**
	0.8nm,0.5s							
KRBS				*e*S		**Sg**	**18 31 54.9**	**-4.6**
	1.2nm,0.7s							
KRBS	**Karabastau**	**4.65**	**22**	Pg		**Pb**	**18 30 52.8**	**+0.9**
	0.8nm,0.5s							
KRBS				Lg		Lg	18 31 54.9	
	1.2nm,0.7s							
KTBS	**Karatobe**	**5.00**	**29**	*e*P		**Pb**	**18 30 59.6**	**+1.7**
	0.9nm,0.8s							
KTBS				*e*S		**Sg**	**18 32 05.7**	**-5.1**
	2.6nm,0.7s							
KTBS	**Karatobe**	**5.00**	**29**	Pg		**Pb**	**18 30 59.6**	**+1.7**
	0.9nm,0.8s							
KTBS				Lg		Lg	18 32 05.7	
	2.6nm,0.7s							

MAN 05 18:41:38.9, 17°.07N×120°.85E, h23km, mb4.6, ML3.5, MS3.3, 3D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time	Res
SIPP	**Brgy, Tapao**	**0.93**	**336**	⇓*e*P		**Pb**	**18 41 55.1**	**+1.9**
SIPP				*i* S			18 42 15.4	
SMPP	**San Manuel, Pa**	**0.93**	**190**	⇓*e*P		Pb	18 41 55.3	+0.7
PCPH	**Palayan**	**1.52**	**171**	⇓*e*P		Pn	18 42 05.1	+0.8
PCPH				*e*S			18 42 27.4	

NNC ***05*** *18:43:57.8±6.3, 36°.92N×71°.26E, h168km±80km, mb2.9, mpv3.8, Error ellipse: s-maj=61.3km s-min=41.8km az=177.0*
IDC ***05*** *18:44:04.7±7.8, 39°.60N×69°.96E, h0km, mbtmp3.4/3, ML3.0/3, Error ellipse: s-maj=217.6km s-min=24.3km az=157.0*
ISC 05 18:43:54.5±0.9, 36°.71N±0°.08×71°.15E±0°.07, h200km, n19, σ1§94/22, 2C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time	Res
AML	**Almayashu**	**5.76**	**19**	P		**Pn**	**18 45 18.9**	**-0.1**
	SNR=63							
UCH	**Uchtor**	**6.10**	**24**	P		**Pn**	**18 45 23.3**	**0.0**
	SNR=17							
EKS2	**Erkin-Say**	**6.28**	**18**	P		**Pn**	**18 45 26.5**	**+1.1**
	SNR=8.0							
KK31	**Karatay Array**	**6.41**	**356**	⇓P		**Pn**	**18 45 28.1**	**+1.2**
	3.2nm,0.3s,baz=175,slow=12,SNR=109							
KK31				⇓S		**Sn**	**18 46 37.0**	**-3.2**
	50nm,0.8s,baz=164,slow=31,SNR=5.4							
AAK	**Ala-Archa**	**6.46**	**23**	P		**Pn**	**18 45 28.4**	**+0.7**
	SNR=9.3							
CHMS	**Chumysh**	**6.87**	**23**	P		**Pn**	**18 45 33.3**	**+0.4**
	SNR=7.3							
TKM2	**Tokmak 2**	**7.09**	**28**	P		**Pn**	**18 45 36.3**	**+0.4**
	SNR=6.9							
TKM2	**Tokmak 2**	**7.09**	**28**	⇑P		**Pn**	**18 45 35.3**	**-0.6**
	1.6nm,0.3s							
TKM2				S		**Sn**	**18 46 54.4**	**-2.0**
	6.4nm,0.8s							
GEYT	**Alibeck**	**10.45**	**281**	Pn		**Pn**	**18 46 20.8**	**+1.3**
	0.3nm,0.3s,baz=99,slow=15,SNR=2.1							
GEYT				Sn		**Sn**	**18 48 10.9**	**-5.2**
	0.5nm,0.3s,baz=349,slow=23,SNR=3.7							
	0.7nm,0.4s							
MKAR	**Makanchi Array**	**13.05**	**36**	Pn		**Pn**	**18 46 50.1**	**-2.4**
	baz=232,slow=14,SNR=7.0							
	0.5nm,0.7s							
GKN	**Gorkha**	**14.32**	**123**	*e*P		**Pn**	**18 47 08.3**	**-0.2**
	12nm,0.4s							
AB31	**Akbulak array**	**14.96**	**330**	⇑P		**P**	**18 47 18.5**	**+1.8**
	0.4nm,0.3s,baz=148,slow=12,SNR=25							
PKIN	**Phulchoki**	**15.11**	**123**	*e*P		**P**	**18 47 18.5**	**-0.3**
	15nm,0.5s							
PKI	**Pulchoki**	**15.12**	**123**	*e*P		**P**	**18 47 18.7**	**-0.3**
	14nm,0.5s							
GUN	**Gumba**	**15.22**	**121**	*e*P		**P**	**18 47 20.0**	**-0.2**
	9.7nm,0.4s							
RAMN	**Ramite**	**16.32**	**122**	*e*P		**Pn**	**18 47 31.9**	**-1.1**
	8.1nm,0.4s							
AKTO	**Aktyubinsk**	**16.66**	**330**	⇓P		**Pn**	**18 47 39.8**	**+3.3**
	1.4nm,0.5s							
TAPN	**Taplejung**	**16.84**	**119**	*e*P		**P**	**18 47 37.5**	**-0.5**
	8.8nm,0.4s							
ZALV	**Zalesovo Beam**	**19.68**	**25**	P		**P**	**18 48 09.6**	**+1.5**
	0.2nm,0.3s,baz=219,slow=11,SNR=2.5							
	0.5nm,0.3s							

**DJA 05 18

baz=3.7,slow=15,SNR=1.9

TXAR Lg Lg 19 33 08.5

baz=356,slow=24,SNR=3.0
comp=E,0.3nm,1.0s

*TUL **05** 19:31:01.2±0.7, 35.64N±0.01×97.36W±0.01, h6km±2km, ML2.9, mb_Lg2.5/16(NEIC), Error ellipse: s-maj=1.7km s-min=1.1km az=145.0*
NEIC 05 19:31:02.0±0.6, 35.650N±0.009×97.36W±0.01, h4km±4km, Error ellipse: s-maj=1.9km s-min=0.8km az=132.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OK009	**Oakdale Elemen**	**0.08**	**215**		Pg		Pg	19 31 03.4	-0.3
OK009					Sg		Sg	19 31 04.9	0.0
OKCFA	**Oklahoma City**	**0.24**	**197**				Pg	19 31 06.2	-0.5
OKCFA					Sg		Sg	19 31 10.0	0.0
OKCSW	**OKLAHOMA CITY**	**0.25**	**194**		Pg		Pg	19 31 06.4	-0.5
OKCSW					Sg		Sg	19 31 10.4	+0.3
FNO	**Franklin**	**0.39**	**184**		Pg		Pg	19 31 09.0	-0.6
FNO					Sg		Sg	19 31 14.7	0.0
X34A	**Smith Ranch, M**	**1.11**	**200**		Pg		Pg	19 31 22.5	-0.8
TUL1	**Leonard**	**1.30**	**78**				Pn	19 31 24.6	-2.4
T35A	**Sooner Cattle**	**1.44**	**28**				Pn	19 31 27.4	-1.4
WMOK	**Wichita Mounta**	**1.48**	**232**				Pn	19 31 28.0	-1.3
U32A	**Winter Ranch,**	**1.51**	**299**				Pn	19 31 28.6	-1.3
X37A	**Clayton**	**1.95**	**122**	Pn		Pn	Pn	19 31 35.7	-0.1
Z35A	**Perchaven, San**	**2.32**	**178**	Pn		Pn	Pn	19 31 41.1	+0.2
W39A	**Magazine**	**2.96**	**98**	Pn		Pn	Pn	19 31 48.7	-1.0
W39A				IAmb_Lg				19 32 43.0	
	comp=Z,18nm,0.9s								
Z38A	**Mt. Pleasant**	**3.09**	**140**	IAmb_Lg				19 32 45.5	
	comp=Z,16nm,0.9s								
MIAR	**Mount Ida**	**3.29**	**108**	Pn		Pn		19 31 54.7	+0.4
MIAR				IAmb_Lg				19 32 53.6	
	comp=Z,14nm,1.1s								
U40A	**Yellville**	**3.72**	**78**	Pn		Pn		19 31 59.6	-0.6
S39A	**Bolivar**	**3.83**	**57**	Pn		Pn		19 32 01.3	-0.4
WHAR	**Wooly Hollow**	**4.16**	**93**	Pn		Pn		19 32 07.0	+0.8
WHAR				IAmb_Lg				19 33 13.9	
	comp=Z,12nm,1.1s								
UALR	**University of**	**4.20**	**101**	Pn		Pn		19 32 08.5	+1.6
W41B	**Gary Mavity, V**	**4.21**	**95**	Pn		Pn		19 32 06.4	-0.5
W41B				IAmb_Lg				19 33 24.7	
	comp=Z,11nm,1.1s								
FCAR	**Ozark Folk Cen**	**4.27**	**85**	IAmb_Lg				19 33 22.7	
	comp=Z,6.4nm,1.0s								
435B	**Jarrell**	**4.86**	**182**	IAmb_Lg				19 33 38.0	
	comp=Z,12nm,0.9s								
PBMO	**Poplar Bluff**	**5.72**	**77**	IAmb_Lg				19 34 04.2	
	comp=Z,7.1nm,0.8s								

*IDC **05** 20:26:16.9±0.6, 38.54N×26.77E, h0km, mb3.8/16, mbtmp3.8/25, ML3.4/7, MS3.2/18, Error ellipse: s-maj=12.7km s-min=11.7km az=23.0*
*MCSM **05** 20:26:18.3±0.4, 39.3N×2.7E±, h9km±2km, mb4.3*
*DDA **05** 20:26:19.4±0.0, 38.61N×26.70E, h21km±1km, MW4.2*
*ISK **05** 20:26:19.2, 38.61N×26.70E, h16km, ML4.3/45*
*ATH **05** 20:26:19.7, 38.59N×26.68E, h39km±1km, ML3.9/20, Error ellipse: s-maj=2.1km s-min=0.8km az=250.0*
*THE **05** 20:26:20.4, 38.59N×26.69E, h11km, ML4.3/7, Error ellipse: s-maj=0.8km s-min=0.3km az=128.0*
*NEIC **05** 20:26:20.2±2.5, 38.59N±0.04×26.71E±0.06, h10km±2km, Error ellipse: s-maj=8.4km s-min=6.6km az=256.0*
*GII **05** 20:26:26.8±0.0, 38.20N×27.09E, h30km, Mm4.5/3*
ISC 05 20:26:19.7±0.8, 38.59N±0.01×26.72E±0.02, h17km±5km, n369, σ1°35/406, mb3.9/20, MS3.2/12, 19C-23D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
FOCM	**Foa**	**0.12**	**4**		PG		**Pg**	**20 26 22.4**	**-1.1**
FOCM					SG		**Sg**	**20 26 24.7**	**-1.4**
URLA	**Izmir**	**0.25**	**203**		PG		**Pb**	**20 26 25.8**	**0.0**
URLA	**Izmir**	**0.25**	**203**		P		**Pb**	**20 26 25.8**	**0.0**
URLA					S		**Sb**	**20 26 30.9**	**+1.0**
URLA					*i*	AML	AML	20 26 32.0	
	comp=N,6μm,0.6s								
URLA					*i*	AML	AML	20 26 36.0	
	comp=E,4μm,0.7s								
BLCB	**Balcova**	**0.33**	**129**		P		**Pb**	**20 26 27.3**	**+0.2**
BLCB					S		**Sb**	**20 26 32.2**	**+0.2**
BLCB	**Balcova**	**0.33**	**129**		PG		**Pb**	**20 26 27.2**	**+0.2**
BLCB					SG		**Sb**	**20 26 32.3**	**+0.2**
CAND	**Candarli**	**0.37**	**10**		PG		**Pg**	**20 26 27.4**	**0.0**
ZEYE	**Izmir, Urla-Ze**	**0.39**	**206**		P		**Pb**	**20 26 28.2**	**0.0**
ZEYE					*i*	AML	AML	20 26 35.0	
	comp=N,3μm,0.3s								
ZEYE					*i*	AML	AML	20 26 35.0	
	comp=E,3μm,0.3s								
ZEYE					S		**Sb**	**20 26 35.0**	**+1.2**
ZEDA	**zmir-Bergama**	**0.47**	**36**		P		**Pg**	**20 26 29.1**	**-0.1**
ZEDA					S		**Sg**	**20 26 36.0**	**+0.4**
ZEDA					*i*	AML	AML	20 26 36.0	
	comp=N,2μm,0.3s								
ZEDA					*i*	AML	AML	20 26 36.0	
	comp=E,2μm,0.6s								
DKL	**Dikili**	**0.50**	**17**		PG		**Pg**	**20 26 29.5**	**-0.3**
GMLD	**Gumuldur**	**0.54**	**163**		PG		**Pb**	**20 26 30.9**	**+0.3**
GMLD					SG		**Sb**	**20 26 38.8**	**+0.8**
DGB	**zmir**	**0.55**	**166**		P		**Pb**	**20 26 31.0**	**+0.1**
DGB					S		**Sg**	**20 26 37.2**	**-0.8**
DGB					*i*	AML	AML	20 26 42.0	
	comp=N,2μm,0.4s								
DGB					*i*	AML	AML	20 26 42.0	
	comp=E,10μm,0.3s								
CHOS	**Chios island**	**0.56**	**249**		P		**Pb**	**20 26 31.2**	**+0.1**
CHOS					S		**Sb**	**20 26 39.9**	**+1.1**
CHOS					AML		AML	20 26 42.6	
CHOS					AML		AML	20 26 44.3	
CHOS	**Chios island**	**0.56**	**249**		P		**Pb**	**20 26 31.3**	**+0.2**
CHOS					S		**Sb**	**20 26 39.0**	**+0.2**
	58μm,0.3s								
CHOS	**Chios island**	**0.56**	**249**		PG		**Pb**	**20 26 31.3**	**+0.2**
AYVA	**Ayvalik**	**0.72**	**358**		P		**Pg**	**20 26 32.8**	**-1.1**
AYVA					S		**Sn**	**20 26 45.1**	**-0.6**
AYVA					*i*	AML	AML	20 26 46.0	
	comp=E,9μm,0.7s								
AYVA					*i*	AML	AML	20 26 53.0	
	comp=N,7μm,1.0s								
PRK	**Paraskevi**	**0.74**	**332**		P		**Pn**	**20 26 34.8**	**-0.6**
PRK					S		**Sb**	**20 26 45.0**	**+0.9**
PRK					AML		AML	20 26 48.1	
	comp=N,75433μm,0.6s								
PRK					AML		AML	20 26 48.3	
PRK	**Paraskevi**	**0.74**	**332**		P		**Pn**	**20 26 34.9**	**-0.6**
PRK					S		**Sb**	**20 26 44.8**	**+0.7**
	comp=N,50μm,0.6s								
SMG	**Samos**	**0.88**	**174**		P		**Pb**	**20 26 36.8**	**+0.2**
SMG					S		**Sn**	**20 26 50.1**	**+0.3**
SMG					AML		AML	20 26 53.0	
SMG					AML		AML	20 26 53.3	
SMG	**Samos**	**0.88**	**174**		P		**Pg**	**20 26 36.9**	**0.0**
SMG					S		**Sn**	**20 26 50.3**	**+0.5**
	comp=N,55μm,0.2s								
AKHS	**Akhisar**	**0.90**	**71**		P		**Pb**	**20 26 37.2**	**+0.2**
AKHS					S		**Sn**	**20 26 50.2**	**-0.1**
AKHS					*i*	AML	AML	20 26 51.0	
	comp=N,2μm,0.7s								
AKHS					*i*	AML	AML	20 26 52.0	
	comp=N,7.4nm,0.8s								
AKS	**Akhisar**	**0.90**	**71**		PG		**Pg**	**20 26 37.4**	**+0.1**
AKS					SG		**Sg**	**20 26 49.7**	**+0.5**
PSRA	**Psara**	**0.91**	**267**		P		**Pn**	**20 26 38.4**	**+0.7**
PSRA					S		**Sn**	**20 26 49.8**	**-0.5**
PSRA					AML		AML	20 26 52.3	
	comp=N,41853μm,0.3s								
PSRA					AML		AML	20 26 55.5	
	comp=E,39992μm,0.5s								
SIGR	**SIGRI**	**0.92**	**313**		P		**Pb**	**20 26 37.1**	**0.0**
SIGR					S		**Sg**	**20 26 49.3**	**-0.3**
SIGR					AML		AML	20 26 51.6	
	comp=E,30540μm,0.5s								
SIGR					AML		AML	20 26 52.4	
	comp=N,35724μm,0.5s								
SIGR	**SIGRI**	**0.92**	**313**		P		**Pb**	**20 26 37.1**	**0.0**
SIGR					S		**Sg**	**20 26 49.8**	**+0.2**
	comp=N,17μm,0.5s								
SIGR	**SIGRI**	**0.92**	**313**		Pg		**Pb**	**20 26 37.1**	**0.0**
SIGR					Sg		**Sn**	**20 26 50.1**	**-0.5**
GOMA	**Golmarmara-Man**	**0.94**	**82**		PG		**Pg**	**20 26 38.3**	**+0.2**
GOMA					SG		**Sn**	**20 26 51.6**	**+0.3**
BUHA	**Balikesir, Bur**	**0.95**	**17**		P		**Pb**	**20 26 36.9**	**-0.9**
BUHA					S		**Sn**	**20 26 52.0**	**+0.4**
BUHA					*i*	AML	AML	20 26 52.0	
	comp=N,2μm,0.8s								
BUHA					*i*	AML	AML	20 26 53.0	
	comp=N,2μm,0.8s								
GCAM	**G?zelcaml?**	**0.98**	**155**		PG		**Pg**	**20 26 38.7**	**+0.1**
GCAM					SG		**Sn**	**20 26 52.4**	**+0.4**
GCAM	**G?zelcaml?**	**0.98**	**155**		P		**Pn**	**20 26 38.9**	**+0.3**
GCAM					S		**Sg**	**20 26 51.8**	**+0.4**
GCAM					*i*	AML	AML	20 26 56.0	
	comp=N,6μm,0.6s								
GCAM					*i*	AML	AML	20 26 56.0	
	comp=N,8μm,0.3s								
GPNR	**Gulpinar-Canak**	**0.98**	**332**		PG		**Pb**	**20 26 37.8**	**-0.4**
KOCA	**Canakkale, Ayv**	**1.02**	**334**		P		**Pb**	**20 26 38.9**	**0.0**
KOCA					S		**Sg**	**20 26 52.5**	**-0.3**
KOCA					*i*	AML	AML	20 26 53.0	
	comp=N,8μm,0.4s								
KOCA					*i*	AML	AML	20 26 54.0	
	comp=N,10μm,1.2s								
STEP	**BALIKESIR_Sava**	**1.11**	**44**		P		**Pb**	**20 26 40.2**	**-0.2**
STEP					S		**Sg**	**20 26 56.5**	**+0.9**
STEP					*i*	AML	AML	20 26 57.0	
	comp=N,3μm,0.7s								
STEP					*i*	AML	AML	20 26 58.0	
	comp=N,2μm,0.8s								
AYDB	**Zeytinkoy-Aydi**	**1.12**	**124**		PN		**Pn**	**20 26 41.1**	**+0.3**
BAYC	**CANAKKALE_Bayr**	**1.16**	**353**		P		**Pn**	**20 26 40.3**	**-0.8**
BAYC					*i*	AML	AML	20 26 56.0	
	comp=N,3μm,0.6s								
BAYC					S		**Sb**	**20 26 56.3**	**+0.2**
BAYC					*i*	AML	AML	20 26 57.0	
	comp=N,5μm,0.6s								
DDIM	**Aydin, Didim**	**1.20**	**160**		P		**Pb**	**20 26 42.1**	**+0.1**
DDIM					S		**Sg**	**20 26 59.1**	**+0.5**
DDIM					*i*	AML	AML	20 27 05.0	
	comp=N,5μm,0.8s								
DDIM					*i*	AML	AML	20 27 07.0	
	comp=N,5μm,0.9s								
EZN	**Ezine**	**1.27**	**346**		P		**Pn**	**20 26 42.5**	**-0.2**
EZN					S		**Sn**	**20 26 59.6**	**+0.2**
	comp=N,6μm,0.4s								
EZN	**Ezine**	**1.27**	**346**		PN		**Pn**	**20 26 42.3**	**-0.4**
AYDN	**Tasoluk**	**1.30**	**135**		P		**Pn**	**20 26 43.6**	**+0.4**
AYDN					S		**Sn**	**20 27 01.0**	**+0.8**
AYDN					*i*	AML	AML	20 27 04.0	
	comp=N,4μm,0.5s								
AYDN					*i*	AML	AML	20 27 04.0	
	comp=N,3μm,0.4s								
BALY	**Balya**	**1.35**	**31**		P		**Pn**	**20 26 43.7**	**-0.1**
BALY					S		**Sb**	**20 27 02.2**	**+0.7**
BALY					*i*	AML	AML	20 27 05.0	
	comp=N,1μm,0.6s								
BALY					*i*	AML	AML	20 27 06.0	
	comp=N,6μm,0.6s								
BOZC	**Bozcaada**	**1.35**	**338**		PN		**Pn**	**20 26 43.4**	**-0.4**
BOZC	**Bozcaada**	**1.35**	**338**		P		**Pn**	**20 26 43.4**	**-0.4**
BOZC					S		**Sn**	**20 27 01.5**	**+0.1**
BOZC					*i*	AML	AML	20 27 05.0	
	comp=N,5μm,0.3s								
BOZC					*i*	AML	AML	20 27 06.0	
	comp=N,4μm,0.3s								
BALB	**Balikesir**	**1.38**	**40**		PN		**Pn**	**20 26 44.3**	**+0.1**
BALB					SN		**Sn**	**20 27 02.5**	**+0.4**
BALB	**Balikesir**	**1.38**	**40**		Pn		**Pn**	**20 26 44.3**	**+0.1**
BALB					Sn		**Sg**	**20 27 04.5**	**0.0**
ECEA	**Canakkale, Ece**	**1.51**	**344**		P		**Pn**	**20 26 45.9**	**-0.1**
ECEA					S		**Sb**	**20 27 07.2**	**+1.0**
ECEA					*i*	AML	AML	20 27 11.0	
	comp=N,5μm,0.4s								
ECEA					*i*	AML	AML	20 27 16.0	
	comp=N,6μm,0.9s								
KULA	**Kula-Manisa**	**1.52**	**92**		P		**Pn**	**20 26 47.0**	**+0.7**
KULA	**Kula-Manisa**	**1.52**	**92**		PN		**Pn**	**20 26 46.8**	**+0.5**
KULA					SN		**Sb**	**20 27 06.9**	**+0.3**
MLSB	**Milas**	**1.54**	**147**		PN		**Pn**	**20 26 46.8**	**+0.4**
BODT	**Bodrum**	**1.59**	**163**		P		**Pb**	**20 26 48.2**	**-0.5**
BODT	**Bodrum**	**1.59**	**163**		PN		**Pn**	**20 26 47.7**	**+0.5**
TNSA	**Tinos**	**1.61**	**230**		P		**Pn**	**20 26 46.8**	**-0.6**
TNSA						AML	AML	20 27 14.2	
	comp=N,8427μm,0.5s								
TNSA						AML	AML	20 27 15.0	
	comp=E,9303μm,0.6s								
DEMI	**Demirci**	**1.62**	**73**		P		**Pn**	**20 26 48.2**	**+0.5**
DEMI					S		**Sg**	**20 27 11.3**	**-0.8**
DEMI					*i*	AML	AML	20 27 16.0	
	comp=E,1μm,1.1s								
DEMI					*i*	AML	AML	20 27 21.0	
	comp=E,2μm,0.8s								
BDRM	**Kayabasi**	**1.63**	**159**		P		**Pn**	**20 26 48.0**	**+0.4**
BDRM					S		**Sb**	**20 27 09.5**	**0.0**
BDRM					*i*	AML	AML	20 27 19.0	
	comp=E,2μm,0.7s								
BDRM					*i*	AML	AML	20 27 19.0	
	comp=E,2μm,0.6s								
GONE	**Gonen-Balikesi**	**1.64**	**27**		PN		**Pn**	**20 26 48.2**	**+0.5**
EFSA	**Agios Efstrati**	**1.65**	**306**		P		**Pb**	**20 26 49.0**	**-0.6**
EFSA						AML	AML	20 27 15.3	
	comp=E,4008μm,0.8s								
EFSA						AML	AML	20 27 16.5	
	comp=N,7980μm,0.7s								
DURS	**Dursunbey**	**1.70**	**53**		P		**Pn**	**20 26 48.7**	**0.0**
DURS					S		**Sn**	**20 27 10.6**	**+0.5**
DURS					*i*	AML	AML	20 27 16.0	
	comp=N,3μm,0.5s								
DURS					*i*	AML	AML	20 27 18.0	
	comp=N,2μm,0.9s								
GADA	**Gvkgeada**	**1.72**	**339**		PN		**Pn**	**20 26 48.8**	**-0.1**
SKY	**Skiros Island**	**1.72**	**280**		P		**Pn**	**20 26 49.0**	**+0.1**
SKY						AML	AML	20 27 20.6	
	comp=E,2188μm,0.5s								
SKY						AML	AML	20 27 23.1	
	comp=N,5191μm,1.0s								
SKY	**Skiros Island**	**1.72**	**280**		P		**Pn**	**20 26 49.4**	**+0.5**
LIA	**Limnos Island**	**1.77**	**318**		P		**Pn**	**20 26 49.8**	**+0.2**
LIA					S		**Sn**	**20 27 10.8**	**-0.9**
LIA						AML	AML	20 27 18.1	
	comp=N,4349μm,0.7s								
LIA						AML	AML	20 27 21.6	
	comp=E,5932μm,0.6s								
LIA	**Limnos Island**	**1.77**	**318**		P		**Pn**	**20 26 49.8**	**+0.2**
APE	**Apeiranthos**	**1.79**	**212**	⇑	P		**Pn**	**20 26 49.8**	**0.0**
APE				⇑	S		**Sb**	**20 27 14.1**	**0.0**
APE	**Apeiranthos**	**1.79**	**212**		P		**Pn**	**20 26 49.2**	**-0.6**
APE						AML	AML	20 27 22.3	
	comp=N,4125μm,0.2s								
APE						AML	AML	20 27 22.9	
	comp=E,4207μm,0.4s								
APE	**Apeiranthos**	**1.79**	**212**		P		**Pn**	**20 26 49.2**	**-0.6**
APE					S		**Sn**	**20 27 12.9**	**+0.8**
	comp=E,2μm,0.3s								
APE	**Apeiranthos**	**1.79**	**212**		PN		**Pn**	**20 26 49.5**	**-0.3**
DST	**Dursunbey**	**1.79**	**55**		PN		**Pn**	**20 26 50.4**	**+0.5**
KNL	**Balıkesir**	**1.79**	**20**		P		**Pn**	**20 26 49.7**	**-0.1**
KNL					S		**Sn**	**20 27 13.3**	**+1.1**
KNL					*i*	AML	AML	20 27 22.0	
	comp=E,4μm,0.6s								
KNL					*i*	AML	AML	20 27 23.0	
	comp=E,3μm,0.7s								
USAK	**Uak-Merkez**	**1.80**	**85**		P		**Pn**	**20 26 51.0**	**+0.9**
USAK					S		**Sg**	**20 27 17.4**	**-0.5**
USAK					*i*	AML	AML	20 27 21.0	
	comp=E,294nm,0.5s								
USAK					*i*	AML	AML	20 28 03.0	
	comp=E,1.0nm,2.3s								
SIMA	**Simav-Kutahya**	**1.83**	**74**		PN		**Pn**	**20 26 51.2**	**+0.7**
MULA	**Mugla, Merkez-**	**1.84**	**136**		P		**Pn**	**20 26 51.1**	**+0.5**
MULA					S		**Sg**	**20 27 20.4**	**+1.4**
MULA					*i*	AML	AML	20 27 26.0	
	comp=E,620nm,0.7s								
MULA					*i*	AML	AML	20 27 27.0	
	comp=E,2μm,0.8s								
SMAA	**Simav-Kutahya**	**1.84**	**73**		PN		**Pn**	**20 26 51.4**	**+0.8**
KOSK	**Kos Island**	**1.85**	**174**		P		**Pn**	**20 26 50.7**	**+0.1**
KOSK						AML	AML	20 27 27.7	
	comp=N,31977μm,0.7s								
KOSK						AML	AML	20 27 27.9	
	comp=E,38605μm,0.4s								
KOSK	**Kos Island**	**1.85**	**174**		P		**Pn**	**20 26 50.7**	**+0.1**
KOSK	**Kos Island**	**1.85**	**174**		PN		**Pn**	**20 26 50.8**	**+0.2**
KRBG	**Karabiga-Canak**	**1.86**	**14**		PN		**Pn**	**20 26 50.7**	**0.0**
KARY	**Karystos**	**1.88**	**253**		P		**Pn**	**20 26 50.9**	**-0.1**
KARY	**Karystos**	**1.88**	**253**		P		**Pn**	**20 26 51.4**	**+0.3**
YER	**Yerkesik**	**1.91**	**139**		P		**Pn**	**20 26 52.6**	**+1.1**
YER	**Yerkesik**	**1.91**	**139**		PN		**Pn**	**20 26 52.3**	**+0.8**
EDC	**Edincik**	**1.97**	**26**		PN		**Pn**	**20 26 52.1**	**-0.2**
DAT	**Datca**	**1.98**	**160**		P		**Pn**	**20 26 52.8**	**+0.3**
DAT	**Datca**	**1.98**	**160**		PN		**Pn**	**20 26 52.9**	**+0.4**
DAT	**Datca**	**1.98**	**160**		P		**Pn**	**20 26 52.8**	**+0.3**
DAT					S		**Sn**	**20 27 16.9**	**0.0**
NISR	**Nisiros**	**2.00**	**171**		P		**Pn**	**20 26 53.7**	**+0.9**
NISR	**Nisiros**	**2.00**	**171**		P		**Pn**	**20 26 53.9**	**+1.2**
SHAP	**Saphane-Kutahy**	**2.00**	**77**		PN		**Pn**	**20 26 53.8**	**+0.9**
NIS1	**Nisyros Isl.**	**2.02**	**169**		P		**Pn**	**20 26 53.5**	**+0.5**
NIS1	**Nisyros Isl.**	**2.02**	**169**		PN		**Pn**	**20 26 53.9**	**+0.9**
KYMI	**Kymi, Euboea I**	**2.05**	**272**		P		**Pn**	**20 26 53.3**	**-0.2**
KYMI						AML	AML	20 27 29.6	
	comp=E,2211μm,0.7s								
KYMI						AML	AML	20 27 31.4	
	comp=N,1537μm,0.6s								
KYMI	**Kymi, Euboea I**	**2.05**	**272**		P		**Pn**	**20 26 53.5**	**+0.1**
TAVA	**DENIZLI_Tavas**	**2.06**	**122**		P		**Pn**	**20 26 54.5**	**+0.8**
TAVA					S		**Sg**	**20 27 27.9**	**+1.7**
ERIK	**Erikli-Kesan**	**2.08**	**356**		PN		**Pn**	**20 26 53.9**	**0.0**
SMTH	**Samothraki Isl**	**2.09**	**334**		P		**Pn**	**20 26 54.0**	**-0.1**
SMTH					S		**Sn**	**20 27 19.2**	**-0.4**
SMTH						AML	AML	20 27 29.6	
	comp=N,1658μm,0.3s								
SMTH						AML	AML	20 27 30.2	
	comp=E,1257μm,0.4s								
SMTH	**Samothraki Isl**	**2.09**	**334**		P		**Pn**	**20 26 53.9**	**-0.1**
SMTH	**Samothraki Isl**	**2.09**	**334**		Pn		**Pn**	**20 26 53.9**	**-0.1**
MRMT	**Marmara Adasi**	**2.12**	**18**		PN		**Pn**	**20 26 54.6**	**+0.1**
SART	**Tekirdag**	**2.13**	**9**		P		**Pn**	**20 26 54.5**	**-0.1**
SART					S		**Sg**	**20 27 28.1**	**0.0**
CAVK	**Edirne/Enez-Ca**	**2.14**	**349**		P		**Pn**	**20 26 55.2**	**+0.5**
CAVK					S		**Sn**	**20 27 21.9**	**+1.0**
GEDZ	**Gediz**	**2.15**	**77**		PN		**Pn**	**20 26 55.9**	**+1.0**
MAR6	**Marsite Statio**	**2.15**	**11**		PN		**Pn**	**20 26 55.1**	**+0.2**
TURN	**Turunc**	**2.18**	**146**		PN		**Pn**	**20 26 55.6**	**+0.5**
PASA	**Karahalli, USA**	**2.19**	**95**		P		**Pn**	**20 26 56.4**	**+1.0**
PASA					S		**Sg**	**20 27 30.1**	**0.0**
ENEZ	**Enez**	**2.19**	**349**		P		**Pn**	**20 26 56.2**	**+0.9**
ENEZ	**Enez**	**2.19**	**349**		PN		**Pn**	**20 26 55.8**	**+0.5**
MAR3	**Marsite Statio**	**2.20**	**11**		PN		**Pn**	**20 26 55.7**	**+0.3**
GZKV	**Gazikoy-Tekird**	**2.21**	**12**		PN		**Pn**	**20 26 55.7**	**+0.2**
GDZ	**Gediz**	**2.21**	**76**		P		**Pn**	**20 26 56.4**	**+0.6**
GDZ					S		**Sg**	**20 27 31.9**	**+0.9**
KHL	**Karahalli**	**2.22**	**96**		PN		**Pn**	**20 26 57.1**	**+1.3**
ORLT	**Orhaneli**	**2.23**	**49**		PN		**Pn**	**20 26 56.8**	**+0.9**
KESN	**Edirne-Kesan**	**2.23**	**359**		P		**Pn**	**20 26 56.2**	**-0.1**
KESN					S		**Sn**	**20 27 23.9**	**+0.3**
DION	**Dionisos Attik**	**2.25**	**258**		P		**Pn**	**20 26 56.3**	**+0.1**
DION	**Dionisos Attik**	**2.25**	**258**		P		**Pn**	**20 26 56.3**	**+0.1**
TVSB	**Tavsanli**	**2.30**	**67**		PN		**Pn**	**20 26 57.8**	**+0.8**
PTL	**Penteli**	**2.31**	**257**		P		**Pn**	**20 26 57.0**	**0.0**
APMY	**Acipayam-Deniz**	**2.32**	**118**		PN		**Pn**	**20 26 58.3**	**+1.0**
DALY	**Dalyan (Mula)**	**2.34**	**138**		PN		**Pn**	**20 26 58.6**	**+1.2**
CMBO	**Columbo, Santo**	**2.36**	**207**		P		**Pn**	**20 26 57.1**	**-0.6**
CMBO	**Columbo, Santo**	**2.36**	**207**		P		**Pn**	**20 26 57.4**	**-0.2**
ALN	**Alexandroupoli**	**2.36**	**348**		P		**Pn**	**20 26 57.6**	**-0.1**
ALN						AML	AML	20 27 37.2	
	comp=E,2099μm,0.4s								
ALN						AML	AML	20 27 38.5	
	comp=N,2488μm,0.7s								
ALN	**Alexandroupoli**	**2.36**	**348**		P		**Pn**	**20 26 57.7**	**0.0**
ALN	**Alexandroupoli**	**2.36**	**348**		PN		**Pn**	**20 26 58.3**	**+0.6**
ALN	**Alexandroupoli**	**2.36**	**348**		Pn		**Pn**	**20 26 57.8**	**0.0**
ALN	**Alexandroupoli**	**2.36**	**348**		Pn		**Pn**	**20 26 57.7**	**0.0**
ATHU	**Athens Univers**	**2.39**	**256**		P		**Pn**	**20 26 58.2**	**+0.1**
THR8	**Santorini-Mono**	**2.39**	**205**		P		**Pn**	**20 26 57.5**	**-0.6**
SAP3	**Santorini-Thir**	**2.41**	**207**		P		**Pn**	**20 26 56.5**	**-1.9**
THR3	**Thira Island,**	**2.42**	**206**		P		**Pn**	**20 26 57.8**	**-0.6**
VLY	**Voula,Athens**	**2.42**	**253**		P		**Pn**	**20 26 58.5**	**0.0**
VLY	**Voula,Athens**	**2.42**	**253**		P		**Pn**	**20 26 58.7**	**+0.2**
THR5	**Thira Island,**	**2.43**	**207**		P		**Pn**	**20 26 58.0**	**-0.6**
SANT	**Santorini**	**2.43**	**205**	⇑	P		**Pn**	**20 26 58.2**	**-0.5**
SANT				⇓	S		**Sn**	**20 27 29.2**	**+1.1**
SANT	**Santorini**	**2.43**	**205**		P		**Pn**	**20 26 57.9**	**-

IDI **Anoyia** 3.61 205 Pn **Pn** 20 27 14.5 -0.5
comp=E,6.2nm,0.3s,baz=38,slow=12,SNR=89
IDI Sn **Sn** 20 27 56.4 -0.7
comp=E,14nm,0.3s,baz=112,slow=23,SNR=6.4
comp=E,25nm,0.5s
IDI Anoyia 3.61 205 P **Pn** 20 27 14.4 -0.5
IDI Anoyia 3.61 205 Pn **Pn** 20 27 14.4 -0.5
LIT Litokhoron 3.61 296 **Pn** 20 27 16.1 +1.2
KLV Kalavryta, Ach 3.63 263 P **Pn** 20 27 16.1 +0.8
FRMA Ierapetra Chan 3.66 193 P **Pn** 20 27 16.4 +0.9
LAKA Lakka 3.74 266 P **Pn** 20 27 18.1 +1.4
KTHR Kythira 3.76 233 P **Pn** 20 27 17.0 0.0
EFP Efpalio 3.78 269 P **Pn** 20 27 18.4 +1.2
THL Klokotos Trika 3.79 286 P **Pn** 20 27 18.4 +1.1
IMMV Iera Moni Meta 3.81 216 P **Pn** 20 27 17.6 -0.1
EVR Evrytania 3.85 276 P **Pn** 20 27 19.8 +1.5
DRO Drossia 3.99 262 P **Pn** 20 27 20.7 +0.6
ITM Ithomi 4.04 251 P **Pn** 20 27 22.7 +1.8
ITM Ithomi 4.04 251 **Pn** 20 27 22.8 +2.0
GRG Griva 4.08 307 P **Pn** 20 27 22.8 +1.4
FNA Florina 4.67 300 **Pn** 20 27 31.4 +1.9
VTS Vitosha 4.82 328 ⇓P **Pn** 20 27 32.9 +1.3
VTS Vitosha 4.82 328 **Pn** 20 27 32.8 +1.2
RAZG Razgrad 4.97 358 ⇑P **Pn** 20 27 33.9 +0.3
KEK Kerkira 5.50 284 **Pn** 20 27 44.2 +3.4
BR131 Keskin Array S 5.50 76 **Pn** 20 27 42.8 +1.8
BRTR Keskin Array B 5.50 76 Pn **Pn** 20 27 42.9 +2.0
comp=E,4.3nm,0.3s,baz=254,slow=14,SNR=174
BRTR Sn **Sn** 20 28 41.5 -2.3
comp=E,1.4nm,0.3s,baz=257,slow=23,SNR=4.1
BRTR Lg Lg 20 29 12.0
baz=258,slow=25
BRTR LR LR 20 30 35.1
comp=E,153nm,18.7s,baz=272,slow=47
comp=E,15nm,0.4s
BRTR Keskin Array B 5.50 76 **Pn** 20 27 42.8 +1.8
COPA Copaceanca 5.65 349 ⇓P **Pn** 20 27 43.7 +0.8
MFTR Murfatlar 5.73 12 ⇓P **Pn** 20 27 45.2 +1.2
BLKB Belogradchik 5.88 330 ⇑P **Pn** 20 27 46.8 +0.7
ILGA Ilgaz 5.92 63 Pn **Pn** 20 27 48.0 +1.2
TIR Tirane 5.94 300 P **Pn** 20 27 47.2 +0.3
TIRR Tirgusor 6.00 12 ⇓P **Pn** 20 27 48.0 +0.3
TIRR ⇓P **Pn** 20 27 48.0 +0.3
TIRR Tirgusor 6.00 12 **Pn** 20 27 47.1 -0.5
TLBR Topalu 6.03 9 ⇑P **Pn** 20 27 48.5 +0.4
HUMR Humele 6.08 348 ⇓P **Pn** 20 27 49.4 +0.7
HARR Harsova 6.16 8 ⇑P **Pn** 20 27 50.2 +0.3
TPGR Topolog 6.39 11 P **Pn** 20 27 53.1 +0.1
CSS Mathiatis 6.42 122 **Pn** 20 27 54.8 +1.3
CSS Mathiatis 6.42 122 Pn **Pn** 20 27 54.4 +0.9
SCTE Santa Cesarea 6.57 286 **Pn** 20 27 56.9 +1.5
SRE Strehaia 6.61 338 ⇑P **Pn** 20 27 56.5 +0.4
CFR Carcaliu 6.67 9 ⇑P **Pn** 20 27 56.7 -0.1
TLCR 6.77 13 ⇑P **Pn** 20 27 59.3 +1.0
DRME Dracevica, Mon 6.78 304 *e*Pn **Pn** 20 28 03.0 +4.6
DJES Djerdap 6.84 334 ⇓P **Pn** 20 27 59.2 0.0
NEHR Nehoiu 6.84 357 ⇓P **Pn** 20 28 00.3 +1.1
PDG Podgorica 6.86 306 *e*Pn **Pn** 20 28 02.7 +3.2
SJES Sjenica 6.92 315 *e*Pn **Pn** 20 28 02.1 +1.7
MLR Muntele Rosu 6.92 355 ⇓P **Pn** 20 28 01.9 +1.4
MLR Muntele Rosu 6.92 355 Pn **Pn** 20 28 01.8 +1.4
comp=E,17nm,0.7s,baz=207,slow=4.5
ARR Arges 6.95 348 ⇓P **Pn** 20 28 01.0 +0.2
VOIR 6.96 350 ⇓P **Pn** 20 28 01.4 +0.5
TATR Tatarca 7.07 8 ⇓P **Pn** 20 28 03.2 +0.8
SCTR Scanteiesti 7.14 7 ⇓P **Pn** 20 28 04.4 +1.1
LOT Lotru 7.20 343 ⇓P **Pn** 20 28 04.4 +0.2
MDVR Moldovita 7.23 330 ⇓P **Pn** 20 28 05.1 +0.5
PLOR Plostina 7.26 360 ⇓P **Pn** 20 28 06.2 +1.2
COVR Voineasa-Covas 7.26 357 ⇑P **Pn** 20 28 06.7 +1.7
VRI Vrincioaia 7.27 0 P **Pn** 20 28 06.0 +0.9
VLDR Vladesti 7.32 7 ⇑P **Pn** 20 28 07.1 +1.3
VARL Varlezi 7.35 6 ⇑P **Pn** 20 28 07.5 +1.3
GZR Gura Zlata 7.41 338 ⇑P **Pn** 20 28 06.9 -0.1
DOPR Dopca 7.44 353 ⇑P **Pn** 20 28 08.4 +0.9
DIVS Divibare 7.47 320 **Pn** 20 28 09.1 +1.1
DIVS Divibare 7.47 320 *e*Pn **Pn** 20 28 08.7 +0.7
RUDO Rudo 7.48 314 *e*Pn **Pn** 20 28 09.1 +1.0
UPM Unac-Piva 7.50 310 *e*Pn **Pn** 20 28 10.8 +2.3
BBLS Lazići 7.62 316 *e*Pn **Pn** 20 28 10.0 -0.1
BBLS *e*Pn Pb 20 28 11.4 -20
MDB Medias 7.74 348 ⇓P **Pn** 20 28 12.9 +1.3
TIP Timpagrande 7.79 277 **Pn** 20 28 14.8 +2.4
DEV Deva 7.82 340 ⇑P **Pn** 20 28 13.0 +0.4
BZS Buzias 7.98 333 P **Pn** 20 28 14.6 -0.2
MATE Matera 8.00 288 P **Pn** 20 28 15.2 +0.1
BIZ Bicaz 8.36 357 ⇓P **Pn** 20 28 21.6 +1.6
CJR Cluj-Napoca 8.44 345 ⇓P **Pn** 20 28 22.9 +1.7
SIRR Siria 8.53 336 ⇓P **Pn** 20 28 23.8 +1.3
CUC Castrocucco 8.57 283 **Pn** 20 28 25.9 +2.9
ARCR ARCALIA 8.67 349 ⇓P **Pn** 20 28 25.9 +1.6
DRGR 8.71 342 ⇑P **Pn** 20 28 25.8 +0.8
SGRT San Giovanni R 8.98 294 **Pn** 20 28 28.8 +0.2
MMA0B Mount Meron ar 8.98 126 Pn **Pn** 20 28 28.0 -0.7
MMA0B Sn **Sn** 20 30 04.0 -5.5
MMAI Mount Meron Ar 8.98 126 Pn **Pn** 20 28 26.2 -2.4
comp=E,1.1nm,0.3s,baz=11,slow=19,SNR=18
MMAI Sn **Sn** 20 30 04.5 -5.0
comp=E,2.9nm,0.3s,baz=264,slow=12,SNR=2.7
GEM Giv'at Ha'Em 9.02 124 Pn **Pn** 20 28 28.5 -0.7
NATI Neve Ativ 9.04 123 Pn **Pn** 20 28 28.7 -0.7
NATI Sn **Sn** 20 30 05.8 -4.9
BURAR Bucovina Array 9.09 354 ⇑P **Pn** 20 28 31.5 +1.4
BURAR Bucovina Array 9.09 354 **Pn** 20 28 31.6 +1.4
BUR08 Bucovina Ar. S 9.12 354 **Pn** 20 28 31.9 +1.3
MMLI Mount Malkishu 9.38 128 Pn **Pn** 20 28 33.6 -0.5
BLY Banja Luka 9.42 314 *e*Pn **Pn** 20 28 37.1 +2.5
SALP Salfit 9.49 131 Pn **Pn** 20 28 35.6 -0.1
HMDT Nahal Hemdat 9.57 129 Pn **Pn** 20 28 36.6 -0.1
MORH Mrgy, Hungar 9.68 325 ⇑P **Pn** 20 28 38.9 +0.8
MORH Mrgy, Hungar 9.68 325 *e*Pn **Pn** 20 28 38.3 +0.2
MORH Mrgy, Hungar 9.68 325 P **Pn** 20 28 38.3 +0.2
KOVH Kovagotottos 9.84 322 P **Pn** 20 28 41.7 +1.4
KOVH S **Sn** 20 30 29.0 -1.3
KOVH Kovagotottos 9.84 322 Pn **Pn** 20 28 40.7 +0.4
RAFF Raffo Rosso 9.86 266 Pn **Pn** 20 28 41.6 +0.9
KZIT Kziot 9.93 138 Pn **Pn** 20 28 40.8 -0.8
KZIT Sn **Sn** 20 30 26.3 -6.3
GHAJ Ghor Haditha 10.27 132 Pn **Pn** 20 28 45.8 -0.4
ASF Jabal al Asfar 10.48 125 Pn **Pn** 20 28 47.7 -1.6
comp=E,0.5nm,0.3s,baz=318,slow=6.4,SNR=3.3
comp=E,1.3nm,0.3s
PSZ Piszkesteto 10.56 334 P Pn 20 28 55.6 +5.3
PRNI Paran 10.69 138 Pn **Pn** 20 28 51.9 -0.1
PRNI Sn **Sn** 20 30 45.4 -5.8
KRMI Paran Flat 10.73 140 Pn **Pn** 20 28 51.8 -0.8
KRMI Sn **Sn** 20 30 45.7 -6.6
KOLS Kolonicke sedl 10.83 344 *e*PN Pn 20 29 01.4 +7.6
MPLH Magyarpolny 10.90 325 P **Pn** 20 28 56.9 +2.1
HRFI Mount Harif 10.95 139 Pn **Pn** 20 28 55.3 -0.4
HRFI Sn **Sn** 20 30 51.2 -6.6
NRCA Norcia 11.16 297 **Pn** 20 28 58.6 +0.1
EIL Elat 11.20 140 Pn **Pn** 20 28 57.0 -2.1
comp=E,0.6nm,0.3s,baz=343,slow=4.7,SNR=10
EIL Sn **Sn** 20 30 56.1 -7.9
comp=E,1.6nm,0.3s,baz=62,slow=3.4,SNR=8.2
comp=E,1.5nm,0.3s
EIL Elat 11.20 140 Pn **Pn** 20 28 58.5 -0.6
LUBAR Lubar, Ukraine 11.35 3 Pn **Pn** 20 29 00.1 -0.9
comp=E,9.0nm,1.2s
LUBAR pP 20 29 03.1
comp=E,9.0nm,1.2s
SOKA Soboth 11.80 317 *e*P Pn 20 29 17.2 +10
comp=E,0.9nm,0.6s
RONA Rosalia, Austr 11.86 324 *e*P Pn 20 29 14.3 +6.3
comp=E,2.0nm,0.9s
MODS Modra-Piesok 11.93 328 *e*PN Pn 20 29 18.2 +9.2
OBKA Obir 11.96 315 *e*P **Pn** 20 29 12.4 +3.0
comp=E,0.9nm,0.6s
AK07 Malin Array Si 12.09 8 Pn **Pn** 20 29 11.1 0.0
AK07 sP P 20 29 14.4 -9.4
AK09 Malin Array Si 12.16 8 Pn **Pn** 20 29 11.9 -0.2
AK09 pP P 20 29 14.1 -11
AK08 Malin Array Si 12.18 8 Pn **Pn** 20 29 12.1 -0.2
CONA Conrad Observa 12.22 323 *e*P **Pn** 20 29 14.8 +1.8
comp=E,0.7nm,0.5s
AKASG Malin Array Be 12.24 8 Pn **Pn** 20 29 10.4 -2.7
comp=E,0.3nm,0.3s,baz=197,slow=13,SNR=4.9
AKASG LR LR 20 34 31.7
comp=E,86nm,20.7s,baz=184,slow=40
comp=E,0.3nm,0.4s
AKBB Malin Array Si 12.24 8 Pn **Pn** 20 29 13.2 +0.1

MAUC Maruska 12.52 332 AMS AMS 20 35 00.0
comp=E,600nm,10.7s
OKC Ostrava-Krasne 12.80 334 AMS AMS 20 34 50.0
comp=E,200nm,11.3s
VRAC Vranov 12.95 329 LR LR 20 34 11.3
comp=E,62nm,20.1s,baz=142,slow=36
ZCCA Zocca 13.13 301 Pn **Pn** 20 29 28.5 +3.2
KBZ Khabaz 13.22 62 Pn **Pn** 20 29 28.6 +2.1
comp=E,0.1nm,0.3s,baz=284,slow=10,SNR=1.7
KBZ LR LR 20 35 35.2
comp=E,69nm,19.3s,baz=232,slow=42
comp=E,0.5nm,0.4s
ABTA Abfaltersbach 13.24 313 *i* P **Pn** 20 29 31.0 +4.0
comp=E,2.5nm,0.7s
TREC Trest 13.40 327 AMS AMS 20 35 10.0
comp=E,200nm,11.5s
KRLC Kraliky 13.49 332 AMS AMS 20 35 30.0
comp=E,300nm,11.7s
CKRC Cesky Krumlov 13.59 323 *e*P P 20 29 47.2 +6.7
DPC Dobruska-Polom 13.89 331 *e*P P 20 29 53.7 +10
DPC AMS AMS 20 35 40.0
comp=E,200nm,10.9s
GERES GERESS Array B 13.90 322 Pn **Pn** 20 29 37.4 +1.5
baz=130,slow=13,SNR=2.1
comp=E,0.1nm,0.3s
WTTA Wattenberg 14.03 313 *e*P **P** 20 29 42.8 -2.8
comp=E,1.6nm,0.4s
GNI Garni 14.03 78 LR LR 20 35 12.0
comp=E,94nm,18.2s,baz=282,slow=38
OSTC Ostas 14.09 331 AMS AMS 20 35 50.0
comp=E,200nm,12.7s
WATA Walderalm 14.10 313 *e*P **P** 20 29 43.1 -3.2
comp=E,1.6nm,0.5s
UPC Upice 14.13 331 AMS AMS 20 35 50.0
comp=E,200nm,13.2s
KHC Kasperske Hory 14.15 322 *e*P **P** 20 29 48.4 +1.6
KHC epP Pn 20 29 53.0 +14
KHC AMS AMS 20 35 40.0
comp=E,300nm,9.6s
CHVC Chvalec 14.18 331 AMS AMS 20 35 50.0
comp=E,200nm,11.6s
SQTA Sankt Quirin 14.25 312 *e*P **P** 20 29 46.0 -2.0
comp=E,1.4nm,0.4s
PRU Pruhonice 14.33 327 AMS AMS 20 36 00.0
comp=E,200nm,12.6s
MOTA Moosalm 14.38 312 *e*P **P** 20 29 47.9 -1.5
comp=E,1.5nm,0.6s
FETA Feichten 14.43 311 *e*P **P** 20 29 53.9 +3.8
comp=E,9.4nm,0.9s
RETA Reutte 14.65 312 P P 20 29 58.7 +6.3
comp=E,3.1nm,0.9s
PVCC Panska Ves 14.72 328 AMS AMS 20 36 10.0
comp=E,100nm,12.0s
DAVOX Davos/Dischmat 14.82 309 LR LR 20 35 38.8
comp=E,107nm,19.1s,baz=112,slow=38
DAVA Davos 15.06 311 *e*P **P** 20 30 00.1 +3.0
comp=E,4.0nm,0.8s
NKC Novy Kostel 15.44 324 AMS AMS 20 36 30.0
comp=E,200nm,14.2s
BELG Belogornoye 20.03 40 LR LR 20 38 18.0
comp=E,28nm,19.1s,baz=249,slow=36
RAYN Ar Rayn 21.95 128 P **P** 20 31 12.8 +0.2
RAYN IAmb IAmb 20 31 16.2
comp=Z,4.4nm,1.1s
FINES FINESS Array B 22.88 359 P **P** 20 31 21.1 -1.1
comp=Z,2.6nm,0.8s,baz=156,slow=14,SNR=6.6
comp=Z,2.6nm,0.8s
FINES FINESS Array B 22.88 359 P **P** 20 31 23.1 +0.9
HFS Hagfors 23.09 343 P **P** 20 31 23.6 -0.7
comp=Z,1.6nm,0.8s,baz=155,slow=14,SNR=1.4
HFS LR LR 20 40 42.3
comp=Z,62nm,18.9s,baz=153,slow=37
comp=Z,1.6nm,0.8s
ESDC Sonseca Array 23.77 282 P **P** 20 31 32.8 +1.4
comp=Z,1.1nm,0.8s,baz=72,slow=8.2,SNR=15
comp=Z,1.1nm,0.8s
NOA NORSAR Array B 24.47 342 P **P** 20 31 37.4 -0.2
comp=Z,0.2nm,0.5s,baz=150,slow=11,SNR=1.6
NOA LR LR 20 43 27.4
comp=Z,62nm,18.3s,baz=160,slow=42
comp=Z,0.2nm,0.5s
GEYT Alibeck 24.61 82 P **P** 20 31 39.4 +0.3
comp=Z,6.0nm,0.6s,baz=274,slow=7.3,SNR=13
comp=Z,6.0nm,0.6s
GEYT Alibeck 24.61 82 P **P** 20 31 38.6 -0.5
GEYT IAmb IAmb 20 31 41.4
comp=Z,4.6nm,0.6s
GYA0B ALIBECK ARRAY 24.61 82 P **P** 20 31 40.1 +1.0
GYA0B IAmb IAmb 20 31 41.3
comp=Z,6.3nm,0.6s
AKTO Aktyubinsk 25.07 52 P **P** 20 31 43.7 +0.6
comp=Z,1.0nm,0.5s,baz=236,slow=11,SNR=2.4
AKTO LR LR 20 45 24.4
comp=Z,29nm,19.2s,baz=271,slow=46
comp=Z,1.0nm,0.5s
ABKAR Akbulak array 26.00 55 P **P** 20 31 50.6 -0.9
EKA Eskdalemuir Ar 26.10 320 P **P** 20 31 53.4 +1.1
comp=Z,0.5nm,0.6s,baz=112,slow=11,SNR=3.4
comp=Z,0.5nm,0.6s
ARU Arti 27.58 39 LR LR 20 43 52.6
comp=Z,21nm,18.9s,baz=108,slow=38
TORD Torodi Ar. Bea 33.68 228 P **P** 20 33 00.7 +0.8
comp=Z,0.6nm,0.6s,baz=38,slow=9.0,SNR=5.5
comp=Z,0.6nm,0.6s
KURBB Kurchatov Arra 38.05 54 P **P** 20 33 37.0 0.0
comp=Z,2.0nm,0.8s,baz=279,slow=8.9,SNR=15
comp=Z,2.0nm,0.8s
BORG Borgarnes 38.20 329 LR LR 20 51 23.3
comp=Z,19nm,18.6s,baz=88,slow=39
MKAR Makanchi Array 40.91 60 P **P** 20 34 01.5 +0.5
comp=Z,1.6nm,0.8s,baz=282,slow=6.2,SNR=16
comp=Z,1.6nm,0.8s
MKAR Makanchi Array 40.91 60 P **P** 20 34 01.3 +0.3
ZALV Zalesovo Beam 41.77 49 P **P** 20 34 08.0 +0.1
comp=Z,1.5nm,0.5s,baz=262,slow=8.8,SNR=7.6
comp=Z,1.5nm,0.5s
WMQ Urumqi 45.27 63 *e*P **P** 20 34 39.8 +3.5
SONM Songino Array 56.38 53 P **P** 20 35 59.9 -0.2
comp=Z,0.1nm,0.3s,baz=287,slow=9.9,SNR=1.5
comp=Z,0.1nm,0.3s
TIXI Tiksi 57.52 22 LR LR 21 04 21.2
comp=Z,24nm,18.9s,baz=354,slow=40
TSUM Tsumeb 58.12 190 LR LR 21 05 56.4
comp=Z,28nm,18.9s,baz=66,slow=41
MATP Matopo 58.73 178 P **P** 20 36 14.5 -2.2
comp=Z,2.3nm,0.9s,baz=307,slow=7.7,SNR=2.4
comp=Z,2.3nm,0.9s
SCHQ Schefferville 61.41 319 P **P** 20 36 34.9 +0.2
comp=Z,1.8nm,0.7s,baz=85,slow=4.9,SNR=5.0
comp=Z,1.8nm,0.7s
HHC Hu-ho-hao-te 62.73 58 *e*P **P** 20 36 44.8 +0.9
HHC pmax pmax
comp=Z,30nm,0.9s
HHC pmax pmax
comp=Z,99nm,4.5s
PZH PanZhiHua 62.79 77 P **P** 20 36 48.0 +3.4
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,100nm,5.0s
CMAR Chiang Mai Arr 65.00 86 P **P** 20 36 58.8 -0.3
comp=Z,1.1nm,0.7s,baz=303,slow=7.6,SNR=8.5
comp=Z,1.1nm,0.7s
MA2 Magadan 71.86 26 LR LR 21 13 34.2
comp=Z,19nm,19.8s,baz=316,slow=40
PSI Prapat 74.37 99 P **P** 20 37 56.1 -0.9
comp=Z,3.1nm,0.8s,baz=321,slow=17,SNR=6.0
comp=Z,3.1nm,0.8s
YKA Yellowknife Ar 74.57 342 LR LR 21 12 53.3
comp=Z,20nm,18.0s,baz=252,slow=38
KSRS Korea Array 75.23 54 LR LR 21 15 24.8
comp=Z,18nm,18.7s,baz=225,slow=39
DLBC Dease Lake 81.40 348 LR LR 21 18 56.4
comp=Z,24nm,21.1s,baz=259,slow=39
ASAR Alice Springs 117.40 99 PKP **PKPdf** 20 45 04.4 -0.2
comp=Z,0.5nm,0.8s,baz=332,slow=2.0,SNR=4.5

TUL ***05*** *20:51:24.9±0.9, 36°.58N±0°.01×97°.87W±0°.02, h6km±5km, ML2.5, mb_Lg2.2/21(NEIC), Error ellipse: s-maj=2.2km s-min=1.3km az=122.0*

NEIC 05 20:51:24.7±0.5, 36°.57N±0°.01×97°.86W±0°.02, h8km±4km, Error ellipse: s-maj=2.2km s-min=1.6km az=112.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
U32A	**Winter Ranch,**	**0.94**	**259**	Pg	Pg	20 51 42.5	-0.3
T35A	**Sooner Cattle**	**1.14**	**72**	Pg	Pg	20 51 46.2	-0.3
OKCSW	**OKLAHOMA CITY**	**1.21**	**164**		Pb	20 51 47.6	-0.3
FNO	**Franklin**	**1.36**	**164**	Pn	Pb	20 51 50.3	-0.2
WMOK	**Wichita Mounta**	**1.98**	**203**		Pn	20 51 59.2	+0.7
WMOK				IAmb_Lg		20 52 31.1	
	comp=Z,11nm,1.0s						
AMTX	**Amarillo**	**3.54**	**243**	IAmb_Lg		20 53 24.5	
	comp=Z,6.5nm,0.7s						
W39A	**Magazine**	**3.58**	**111**	IAmb_Lg		20 53 28.3	
	comp=Z,5.4nm,0.7s						
S39A	**Bolivar**	**3.79**	**71**	IAmb_Lg		20 53 29.7	
	comp=Z,7.5nm,0.7s						
MGMO	**Mountain Grove**	**4.52**	**81**	IAmb_Lg		20 53 46.3	
	comp=Z,5.5nm,0.8s						
P38A	**Dawn**	**4.58**	**47**	IAmb_Lg		20 53 52.0	
	comp=Z,4.3nm,0.7s						
X40A	**Basin Creek Fa**	**4.59**	**115**	IAmb_Lg		20 53 50.6	
	comp=Z,4.7nm,0.8s						
R40A	**Maddies Statio**	**4.77**	**67**	IAmb_Lg		20 53 59.2	
	comp=Z,5.3nm,0.9s						
T25A	**Trinidad**	**5.29**	**278**	IAmb_Lg		20 54 25.7	
	comp=Z,4.4nm,1.1s						
CCM	**Cathedral Cave**	**5.48**	**72**	IAmb_Lg		20 54 21.8	
	comp=Z,5.8nm,0.9s						
PBMO	**Poplar Bluff**	**5.97**	**86**	IAmb_Lg		20 54 33.2	
	comp=Z,4.1nm,0.7s						

IDC ***05*** *21:02:58.9±1.6, 14°.87S×177°.88W, h373km±16km, mb3.3/11, mbtmp4.1/14, Error ellipse: s-maj=23.9km s-min=13.1km az=141.0*

ISC 05 21:02:59.2±0.6, 14°.9S±0°.2×177°.8W±0°.1, h379km, n17, σ1§12/18, mb3.5/11, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.87**	**235**	P	**Pn**	**21 04 19.3**	**+0.4**
	95nm,0.8s,baz=54,slow=9.9,SNR=37						
AFI	**Afiamalu**	**5.91**	**81**	P	**Pn**	**21 04 28.9**	**-1.3**
	31nm,0.5s,baz=210,slow=20,SNR=5.4						
DZM	**Mont Dzumac**	**16.55**	**242**	P	**P**	**21 06 30.0**	**+0.6**
	6.5nm,0.9s,baz=117,slow=18,SNR=1.9						
URZ	**Urewera**	**23.67**	**190**	P	**P**	**21 07 36.9**	**-1.5**
	4.6nm,0.5s,baz=356,slow=19,SNR=2.4						
	4.6nm,0.5s						
STKA	**Stephens Creek**	**40.64**	**238**	P	**P**	**21 10 04.7**	**+0.5**
	2.5nm,0.8s,baz=88,slow=10,SNR=3.9						
	2.5nm,0.8s						
WRA	**Warramunga Arr**	**45.83**	**257**	P	**P**	**21 10 43.8**	**-1.6**
	0.2nm,0.3s,baz=81,slow=6.0,SNR=6.5						
WRA				PcP	**PcP**	**21 12 15.2**	**-0.4**
	0.7nm,1.1s,baz=97,slow=2.2,SNR=2.6						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**46.24**	**251**	P	**P**	**21 10 47.8**	**-0.7**
	3.5nm,0.4s,baz=85,slow=8.4,SNR=74						
ASAR				PcP	**PcP**	**21 12 17.1**	**0.0**
	0.5nm,0.5s,baz=106,slow=3.7,SNR=5.8						
	3.5nm,0.4s						
VNDA	**Vanda**	**63.45**	**185**	P	**P**	**21 12 50.5**	**+1.0**
	0.8nm,0.6s,baz=354,slow=7.4,SNR=10.0						
	0.8nm,0.6s						
KDAK	**Kodiak Island**	**75.38**	**14**	P	**P**	**21 14 02.0**	**+0.2**
	4.5nm,0.9s,baz=153,slow=4.5,SNR=1.3						
	4.5nm,0.9s						
NVAR	**Mina Array Bea**	**76.88**	**44**	P	**P**	**21 14 12.4**	**+1.4**
	0.3nm,0.5s,baz=232,slow=5.4,SNR=3.1						
	0.3nm,0.5s						
ILAR	**Eielson Array**	**82.86**	**13**	P	**P**	**21 14 42.0**	**+0.1**
	0.6nm,0.6s,baz=218,slow=5.4,SNR=5.3						
	0.6nm,0.6s						
TXAR	**Lajitas Array**	**83.90**	**58**	P	**P**	**21 14 49.8**	**+1.7**
	0.6nm,0.7s,baz=226,slow=6.5,SNR=9.9						
	0.6nm,0.7s						
PDAR	**Pinedale Array**	**84.79**	**43**	P	**P**	**21 14 52.1**	**-0.2**
	0.2nm,0.4s,baz=186,slow=7.4,SNR=2.2						
	0.2nm,0.4s						
MAW	**Mawson**	**86.85**	**200**	P	**P**	**21 15 02.3**	**+0.8**
	2.2nm,0.6s,baz=150,slow=7.4,SNR=8.9						
	2.2nm,0.6s						
ARCES	**ARCESS Array B**	**123.50**	**350**	PKP	**PKPdf**	**21 21 10.7**	**-0.7**
	2.6nm,0.8s,baz=29,slow=2.8,SNR=8.0						
BRTR	**Keskin Array B**	**143.05**	**318**	PKP	**PKPdf**	**21 21 47.0**	**-2.0**
	0.4nm,0.7s,baz=93,slow=3.2,SNR=3.4						
GERES	**GERESS Array B**	**144.88**	**347**	PKP	PKPbc	21 21 50.9	-1.0
	0.3nm,0.4s,baz=46,slow=3.9,SNR=4.9						

DDA ***05*** *21:05:05.3±0.0, 38°.59N×26°.73E, h7km±2km, ML1.1*

ISK 05 21:05:04.5, 38°.63N×26°.73E, h11km±1km, ML1.5/5, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FOCM	**Foa**	**0.08**	**1**	PG	Pg	21 05 07.5	+0.4
FOCM				SG	Sg	21 05 09.3	+0.4
URLA	**Izmir**	**0.29**	**201**	PG	Pg	21 05 10.7	+0.3
URLA				SG	Sg	21 05 15.3	+1.0
URLA	**Izmir**	**0.29**	**201**	P	Pg	21 05 10.7	+0.3
URLA				S	Sb	21 05 15.5	-1.0
URLA				*i* AML	AML	21 05 16.0	
	comp=N,39nm,0.7s						
URLA				*i* AML	AML	21 05 16.0	
	comp=E,21nm,0.2s						
BLCB	**Balcova**	**0.34**	**135**	PG	Pg	21 05 11.9	+0.5
BLCB				SG	Sb	21 05 17.2	-0.9
ZEYE	**Izmir, Urla-Ze**	**0.43**	**205**	P	Pg	21 05 13.1	+0.2
ZEYE				S	Sb	21 05 19.8	-0.7
ZEYE				*i* AML	AML	21 05 20.0	
	comp=N,42nm,0.3s						
ZEYE				*i* AML	AML	21 05 21.0	
	comp=E,24nm,0.2s						
ZEDA	**zmir-Bergama**	**0.43**	**39**	P	Pb	21 05 14.1	-0.1
ZEDA				S	Sb	21 05 20.9	+0.3
ZEDA				*i* AML	AML	21 05 21.0	
	comp=N,20nm,0.3s						
ZEDA				*i* AML	AML	21 05 21.0	
	comp=E,21nm,0.5s						
DKL	**Dikili**	**0.46**	**17**	PG	Pg	21 05 13.8	+0.2
CHOS	**Chios island**	**0.58**	**246**	PG	Pb	21 05 16.5	-0.2
DGB	**zmir**	**0.59**	**168**	P	Pg	21 05 16.0	+0.1
DGB				S	Sg	21 05 24.2	+0.5
DGB				*i* AML	AML	21 05 25.0	
	comp=N,17nm,1.4s						
DGB				*i* AML	AML	21 05 28.0	
	comp=E,10nm,0.9s						

SOF ***05*** *21:05:58.6, 45°.51N×25°.93E, h5km, MD4.1*
SIGU ***05*** *21:06:02.9, 45°.52N×25°.94E, h63km*
IDC ***05*** *21:06:02.5±0.9, 45°.54N×25°.97E, h56km±7km, mb3.1/4, mbtmp3.4/10, MS2.6/4, Error ellipse: s-maj=19.7km s-min=18.2km az=96.0*
BEO ***05*** *21:06:03.7±0.7, 45°.41N×26°.04E, h50km±4km, ML3.6/14*
MCSM ***05*** *21:06:04.2±0.6, 46°.N±6°×2°.6E±°, h46km±4km, ML4.0*
BUC ***05*** *21:06:04.1±0.1, 45°.46N×25°.94E, h55km±2km, ml3.7/68, Error ellipse: s-maj=1.2km s-min=0.9km az=10.0*
IASPEI ***05*** *21:06:04.8±1.2, 45°.48N±0°.02×25°.95E±0°.02, h49km±5km, mb3.6/4, Error ellipse: s-maj=3.4km s-min=3.1km az=4.9, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
PRU ***05*** *21:06:05.3±0.0, 45°.88N×26°.27E, h33km*
THE ***05*** *21:06:07.7, 44°.91N×25°.93E, h7km±23km, ML3.4/4, Error ellipse: s-maj=30.7km s-min=1.7km az=15.0*

ISC 05 21:06:02.5±0.7, 45°.47N±0°.02×25°.92E±0°.02, h55km±4km,

n352,σ1$99/557, mb3.6/4, 178C-161D, Romania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MLR	Muntele Rosu	0.03	32	eP	g	Pn	21 06 12.3	+1.4
MLR				eS	g	Sn	21 06 18.8	+1.8
MLR	Muntele Rosu	0.03	32	⇑P		Pn	21 06 12.4	+1.4
MLR				⇓S		Sn	21 06 19.0	+2.0
MLR	Muntele Rosu	0.03	32	⇑P		Pn	21 06 12.4	+1.4
MLR				⇓S		Sn	21 06 19.0	+2.0
MLR	Muntele Rosu	0.03	32	P		Pn	21 06 12.1	+1.2
	baz=333,slow=2.3							
MLR				S		Sn	21 06 18.3	+1.3
	4µm,0.4s,baz=106,slow=18,SNR=46							
MLR	Muntele Rosu	0.03	32	P		Pn	21 06 12.3	+1.4
NEHR	Nehoiu	0.27	98	⇑P		Pn	21 06 12.7	+0.9
NEHR				⇓S		Sn	21 06 20.1	+1.6
NEHR	Nehoiu	0.27	98	⇑P		Pn	21 06 12.7	+0.9
NEHR				⇓S		Sn	21 06 20.1	+1.6
COVR	Voineasa-Covas	0.43	27	⇓P		Pn	21 06 14.2	+0.9
COVR				⇑S		Sn	21 06 22.2	+1.1
COVR	Voineasa-Covas	0.43	27	⇓P		Pn	21 06 14.2	+0.9
COVR				⇑S		Sn	21 06 22.2	+1.1
PLAR	PLOIESTI	0.56	172	⇑P		Pn	21 06 17.1	+2.4
PLAR	PLOIESTI	0.56	172	⇑P		Pn	21 06 17.1	+2.4
ISR	Istrita	0.56	128	⇑P		Pn	21 06 16.9	+2.1
ISR				⇓S		Sn	21 06 25.6	+1.9
ISR	Istrita	0.56	128	⇑P		Pn	21 06 16.9	+2.1
ISR				⇓S		Sn	21 06 25.6	+1.9
BISRR	Bisoca	0.56	81	⇓P		Pn	21 06 17.2	+2.4
BISRR				⇑S		Sn	21 06 26.4	+2.6
BISRR	Bisoca	0.56	81	⇓P		Pn	21 06 17.2	+2.4
BISRR				⇑S		Sn	21 06 26.4	+2.6
VOIR		0.61	268	⇓P		Pn	21 06 17.5	+2.0
VOIR				⇓S		Sn	21 06 27.0	+2.1
VOIR		0.61	268	⇓P		Pn	21 06 17.5	+2.0
VOIR				⇓S		Sn	21 06 27.0	+2.1
DOPR	Dopca	0.63	324	⇓P		Pn	21 06 17.4	+1.8
DOPR				⇓S		Sn	21 06 27.1	+2.0
DOPR	Dopca	0.63	324	⇓P		Pn	21 06 17.4	+1.8
DOPR				⇓S		Sn	21 06 27.1	+2.0
PLOR	Plostina	0.64	53	⇑P		Pn	21 06 17.2	+1.5
PLOR				⇑S		Sn	21 06 26.7	+1.3
PLOR	Plostina	0.64	53	⇑P		Pn	21 06 17.2	+1.5
PLOR				⇑S		Sn	21 06 26.7	+1.3
PLOR	Plostina	0.64	53	P		Pn	21 06 16.8	+1.1
MTUR	Matau	0.65	249	⇑P		Pn	21 06 19.4	+3.4
MTUR	Matau	0.65	249	⇑P		Pn	21 06 19.4	+3.4
VRI	Vrincioaia	0.69	54	⇓P		Pn	21 06 17.6	+1.2
VRI				⇑S		Sn	21 06 28.3	+1.8
VRI	Vrincioaia	0.69	54	⇓P		Pn	21 06 17.6	+1.2
VRI				⇑S		Sn	21 06 28.3	+1.8
GRER		0.75	96	⇑P		Pn	21 06 20.1	+3.1
GRER				⇓S		Sn	21 06 29.8	+2.2
GRER		0.75	96	⇑P		Pn	21 06 20.1	+3.1
SULR		0.82	163	⇓P		Pn	21 06 20.0	+2.1
SULR				⇓S		Sn	21 06 31.3	+2.0
SULR		0.82	163	⇓P		Pn	21 06 20.0	+2.1
SULR				⇓S		Sn	21 06 31.3	+2.0
ODBI	Odobesti	0.85	69	⇑P		Pn	21 06 21.8	+3.5
ODBI				⇑S		Sn	21 06 33.7	+3.8
ODBI	Odobesti	0.85	69	⇑P		Pn	21 06 21.8	+3.5
STFAR	Stefanesti-Arg	0.91	229	⇑P		Pn	21 06 22.9	+3.7
STFAR				⇓S		Sn	21 06 32.9	+1.5
STFAR	Stefanesti-Arg	0.91	229	⇓S		Sn	21 06 32.9	+1.5
ARR	Arges	0.91	264	⇓P		Pn	21 06 22.0	+2.7
ARR				⇑S		Sn	21 06 34.9	+3.4
ARR	Arges	0.91	264	⇓P		Pn	21 06 22.0	+2.7
ARR				⇑S		Sn	21 06 34.9	+3.4
PGOR	Pogoanele	0.94	126	⇓P		Pn	21 06 21.2	+1.8
PGOR				⇓S		Sn	21 06 34.7	+2.7
PGOR	Pogoanele	0.94	126	⇓P		Pn	21 06 21.2	+1.8
PGOR				⇓S		Sn	21 06 34.7	+2.7
PANC	Panciu	0.95	64	⇓P		Pn	21 06 22.5	+2.9
PANC				⇑S		Sn	21 06 34.0	+1.7
PANC	Panciu	0.95	64	⇓P		Pn	21 06 22.5	+2.9
PANC				⇑S		Sn	21 06 34.0	+1.7
INCR	INCERC-Sediu C	1.04	171	⇓P		Pn	21 06 22.4	+1.6
INCR				⇓S		Sn	21 06 36.7	+2.4
INCR	INCERC-Sediu C	1.04	171	⇓P		Pn	21 06 22.4	+1.6
INCR				⇓S		Sn	21 06 36.7	+2.4
BUC1	Bucharest	1.12	176	⇓P		Pn	21 06 23.5	+1.6
BUC1				⇓S		Sn	21 06 38.6	+2.3
BUC1	Bucharest	1.12	176	⇓P		Pn	21 06 23.5	+1.6
BUC1				⇓S		Sn	21 06 38.6	+2.3
LEHL	Lehliu	1.18	147	⇓P		Pn	21 06 23.8	+1.2
LEHL				⇑S		Sn	21 06 40.7	+3.0
LEHL	Lehliu	1.18	147	⇓P		Pn	21 06 23.8	+1.2
LEHL				⇑S		Sn	21 06 40.7	+3.0
GHRR		1.20	60	⇑P		Pn	21 06 25.2	+2.2
GHRR				⇑S		Sn	21 06 41.2	+2.9
GHRR		1.20	60	⇑P		Pn	21 06 25.2	+2.2
GHRR				⇑S		Sn	21 06 41.2	+2.9
RMVG	GOVORA	1.23	250	⇑S		Sn	21 06 44.7	+5.6
TUDR		1.23	83	⇑P		Pn	21 06 25.9	+2.5
TUDR				⇑S		Sn	21 06 41.3	+2.3
TUDR		1.23	83	⇑P		Pn	21 06 25.9	+2.5
TUDR				⇑S		Sn	21 06 41.3	+2.3
SGRR	Singureni	1.24	178	⇓P		Pn	21 06 25.0	+1.5
SGRR				⇓S		Sn	21 06 42.0	+2.7
SGRR	Singureni	1.24	178	⇓P		Pn	21 06 25.0	+1.5
SGRR				⇓S		Sn	21 06 42.0	+2.7
JOSR	Joseni	1.27	347	⇓P		Pn	21 06 24.8	+0.8
JOSR				⇑S		Sn	21 06 41.4	+1.3
JOSR	Joseni	1.27	347	⇓P		Pn	21 06 24.8	+0.8
JOSR				⇑S		Sn	21 06 41.4	+1.3
MDB	Medias	1.27	303	⇑P		Pn	21 06 26.5	+2.5
MDB				⇑S		Sn	21 06 44.0	+3.9
MDB	Medias	1.27	303	⇑P		Pn	21 06 26.5	+2.5
MDB				⇑S		Sn	21 06 44.0	+3.9
IZVR	Izvoarele	1.30	86	⇓P		Pn	21 06 25.9	+1.6
IZVR				⇓S		Sn	21 06 41.2	+0.5
IZVR	Izvoarele	1.30	86	⇓P		Pn	21 06 25.9	+1.6
IZVR				⇓S		Sn	21 06 41.2	+0.5
SLCR	Slobozia Conac	1.30	84	⇓P		Pn	21 06 26.9	+2.5
SLCR				⇓S		Sn	21 06 43.9	+3.1
SLCR	Slobozia Conac	1.30	84	⇓P		Pn	21 06 26.9	+2.5
SLCR				⇓S		Sn	21 06 43.9	+3.1
AMRR	Amara	1.32	130	⇑P		Pn	21 06 25.5	+0.9
AMRR				⇑S		Sn	21 06 42.9	+1.9
AMRR	Amara	1.32	130	⇑P		Pn	21 06 25.5	+0.9
AMRR				⇑S		Sn	21 06 42.9	+1.9
SCHL	Schela	1.34	88	⇑P		Pn	21 06 25.6	+0.7
SCHL				⇑S		Sn	21 06 43.7	+2.0
SCHL	Schela	1.34	88	⇑P		Pn	21 06 25.6	+0.7
SCHL				⇑S		Sn	21 06 43.7	+2.0
VARL	Varlezi	1.42	71	⇓P		Pn	21 06 28.2	+2.3
VARL				⇓S		Sn	21 06 46.7	+3.2
VARL	Varlezi	1.42	71	⇓P		Pn	21 06 28.2	+2.3
VARL				⇓S		Sn	21 06 46.7	+3.2
COPA	Copaceanca	1.42	201	⇓S		Sn	21 06 45.5	+1.9
COPA	Copaceanca	1.42	201	⇓P		Pn	21 06 27.5	+1.5
COPA				⇓S		Sn	21 06 45.5	+1.9
COPA	Copaceanca	1.42	201	⇓P		Pn	21 06 27.5	+1.5
TGMR	Targu Mures	1.44	318	⇓P		Pn	21 06 28.6	+2.3
TGMR				⇑S		Sn	21 06 46.7	+2.5
TGMR	Targu Mures	1.44	318	⇓P		Pn	21 06 28.6	+2.3
TGMR				⇑S		Sn	21 06 46.7	+2.5
SCTR	Scanteiesti	1.47	81	⇓P		Pn	21 06 28.8	+2.2
SCTR				⇑S		Sn	21 06 46.6	+1.8
SCTR	Scanteiesti	1.47	81	⇓P		Pn	21 06 28.8	+2.2
SCTR				⇑S		Sn	21 06 46.6	+1.8
BIZ	Bicaz	1.48	5	⇓P		Pn	21 06 28.9	+2.1
BIZ				⇑S		Sn	21 06 46.4	+1.3
BIZ	Bicaz	1.48	5	⇓P		Pn	21 06 28.9	+2.1
BIZ				⇑S		Sn	21 06 46.4	+1.3
GISR	Galati	1.50	90	⇓P		Pn	21 06 28.7	+1.6
GISR				⇓S		Sn	21 06 46.7	+1.2
GISR	Galati	1.50	90	⇓P		Pn	21 06 28.7	+1.6
GISR				⇓S		Sn	21 06 46.7	+1.2
TATR	Tatarca	1.50	84	⇓P		Pn	21 06 29.3	+2.3
TATR				⇓S		Sn	21 06 47.9	+2.4
TATR	Tatarca	1.50	84	⇓P		Pn	21 06 29.3	+2.3
TATR				⇓S		Sn	21 06 47.9	+2.4
LOT	Lotru	1.52	270	⇑P		Pn	21 06 29.6	+2.2
LOT				⇓S		Sn	21 06 49.2	+3.1
LOT	Lotru	1.52	270	⇑P		Pn	21 06 29.6	+2.2
LOT				⇓S		Sn	21 06 49.2	+3.1
RASA	Rasa	1.52	145	⇓S		Sn	21 06 47.0	+0.9
RASA	Rasa	1.52	145	⇓P		Pn	21 06 28.1	+0.8
RASA				⇓S		Sn	21 06 47.0	+0.9
RASA	Rasa	1.52	145	⇓P		Pn	21 06 28.1	+0.8
VLDR				⇓S		Sn	21 06 49.4	+2.4
VLDR	Vladesti	1.56	75	⇑P		Pn	21 06 29.0	+1.1
VLDR				⇓S		Sn	21 06 49.4	+2.4
VLDR	Vladesti	1.56	75	⇑P		Pn	21 06 29.0	+1.1
VLDR				⇓S		Sn	21 06 49.4	+2.4
CFR	Carcaliu	1.59	100	⇓P		Pn	21 06 28.1	-0.1
CFR				⇓S		Sn	21 06 48.8	+1.2
CFR	Carcaliu	1.59	100	⇓P		Pn	21 06 28.1	-0.1
CFR				⇓S		Sn	21 06 48.8	+1.2
HARR	Harsova	1.62	118	⇑P		Pn	21 06 29.9	+1.2
HARR	Harsova	1.62	118	⇑P		Pn	21 06 29.9	+1.2
VASR	Vaslui	1.75	47	⇑P		Pn	21 06 32.0	+1.5
VASR				⇑S		Sn	21 06 52.7	+1.0
VASR	Vaslui	1.75	47	⇑P		Pn	21 06 32.0	+1.5
VASR				⇑S		Sn	21 06 52.7	+1.0
TLBR	Topalu	1.77	121	⇑S		Sn	21 06 54.4	+2.5
TLBR	Topalu	1.77	121	⇓P		Pn	21 06 32.5	+1.9
TLBR				⇑S		Sn	21 06 54.4	+2.5
TLBR	Topalu	1.77	121	⇓P		Pn	21 06 32.5	+1.9
VLAD	Vladila	1.82	217	⇑P		Pn	21 06 33.4	+1.9
VLAD				⇓S		Sn	21 06 54.4	+1.0
VLAD	Vladila	1.82	217	⇑P		Pn	21 06 33.4	+1.9
VLAD				⇓S		Sn	21 06 54.4	+1.0
ZIMR		1.85	193	⇓P		Pn	21 06 32.9	+1.1
ZIMR				⇓S		Sn	21 06 54.7	+0.7
ZIMR		1.85	193	⇓P		Pn	21 06 32.9	+1.1
ZIMR				⇓S		Sn	21 06 54.7	+0.7
TPGR	Topolog	1.87	108	⇑S		Sn	21 06 32.8	+0.7
TPGR				⇑S		Sn	21 06 56.7	+2.2
TPGR	Topolog	1.87	108	⇓P		Pn	21 06 32.8	+0.7
TPGR				⇑S		Sn	21 06 56.7	+2.2
CVDA	Cernavoda	1.88	126	⇑P		Pn	21 06 33.3	+1.1
CVDA				⇑S		Sn	21 06 57.7	+2.9
CVDA	Cernavoda	1.88	126	⇑P		Pn	21 06 33.3	+1.1
CVDA				⇑S		Sn	21 06 57.7	+2.9
LEOM	Leova	1.91	57	⇑P		Pn	21 06 34.9	+2.3
LEOM				⇑S		Sn	21 06 56.9	+1.5
LEOM	Leova	1.91	57	⇑P		Pn	21 06 34.9	+2.3
LEOM				⇑S		Sn	21 06 56.9	+1.5
PRAR	RASCA	1.91	6	⇓P		Pn	21 06 35.2	+2.6
PRAR	RASCA	1.91	6	⇓P		Pn	21 06 35.2	+2.6
RAZG	Razgrad	1.94	167	⇓P		Pn	21 06 34.0	+0.9
RAZG				⇑S		Sn	21 06 58.3	+2.0
RAZG	Razgrad	1.94	167	⇓P		Pn	21 06 34.0	+0.9
RAZG				⇑S		Sn	21 06 58.3	+2.0
ARCR	ARCALIA	1.95	327	⇑P		Pn	21 06 34.8	+1.6
ARCR				⇑S		Sn	21 06 58.4	+1.8
ARCR	ARCALIA	1.95	327	⇑P		Pn	21 06 34.8	+1.6
ARCR				⇓S		Sn	21 06 58.4	+1.8
TIRR	Tirgusor	2.04	119	⇓P		Pn	21 06 34.6	+0.3
TIRR				⇓S		Sn	21 06 59.6	+1.1
TIRR	Tirgusor	2.04	119	⇓P		Pn	21 06 34.6	+0.3
TIRR				⇓S		Sn	21 06 59.6	+1.1
CJR	Cluj-Napoca	2.04	308	⇑P		Pn	21 06 36.5	+2.0
CJR				⇑S		Sn	21 07 01.7	+2.8
CJR	Cluj-Napoca	2.04	308	⇑P		Pn	21 06 36.5	+2.0
CJR				⇑S		Sn	21 07 01.7	+2.8
TLCR		2.06	97	⇑P		Pn	21 06 35.6	+1.0
TLCR				⇓S		Sn	21 06 59.5	+0.3
TLCR		2.06	97	⇑P		Pn	21 06 35.6	+1.0
TLCR				⇓S		Sn	21 06 59.5	+0.3
IAS	Iasi	2.07	33	⇓P		Pn	21 06 36.0	+1.2
IAS				⇑S		Sn	21 07 00.0	+0.7
IAS	Iasi	2.07	33	⇓P		Pn	21 06 36.0	+1.2
IAS				⇑S		Sn	21 07 00.0	+0.7
SRE	Strehaia	2.09	248	⇑P		Pn	21 06 37.0	+2.0
SRE				⇑S		Sn	21 07 03.3	+3.4
SRE	Strehaia	2.09	248	⇑P		Pn	21 06 37.0	+2.0
SRE				⇑S		Sn	21 07 03.3	+3.4
CBBR	Cluj-Babes-Bol	2.10	309	⇑P		Pn	21 06 37.1	+1.9
CBBR	Cluj-Babes-Bol	2.10	309	⇑P		Pn	21 06 37.1	+1.9
DEV	Deva	2.16	282	⇑P		Pn	21 06 38.6	+2.6
DEV				⇑S		Sn	21 07 04.5	+2.9
DEV	Deva	2.16	282	⇑P		Pn	21 06 38.6	+2.6
DEV				⇑S		Sn	21 07 04.5	+2.9
MFTR	Murfatlar	2.20	125	⇑P		Pn	21 06 37.9	+1.4
MFTR				⇑S		Sn	21 07 05.1	+2.6
MFTR	Murfatlar	2.20	125	⇑P		Pn	21 06 37.9	+1.4
MFTR				⇑S		Sn	21 07 05.1	+2.6
SZH	Strazhica	2.20	180	i	P	Pn	21 06 37.6	+1.0
BURAR	Bucovina Array	2.21	347	⇓P		Pn	21 06 39.3	+2.5
BURAR				⇑S		Sn	21 07 05.8	+2.9
BURAR	Bucovina Array	2.21	347	⇓P		Pn	21 06 39.3	+2.5
BURAR				⇑S		Sn	21 07 05.8	+2.9
JURR	Jurilovca	2.21	107	⇑P		Pn	21 06 38.5	+1.9
JURR	Jurilovca	2.21	107	⇑P		Pn	21 06 38.5	+1.9
GZR	Gura Zlata	2.22	269	⇑P		Pn	21 06 39.5	+2.6
GZR				⇓S		Sn	21 07 05.8	+2.6
GZR	Gura Zlata	2.22	269	⇑P		Pn	21 06 39.5	+2.6
GZR				⇓S		Sn	21 07 05.8	+2.6
PVL	Pavlikeni	2.29	191	i	P	Pn	21 06 41.2	+3.4
TSCT	Constanta Port	2.34	123	⇑P		Pn	21 06 39.9	+1.4
TSCT				⇓S		Sn	21 07 06.7	+0.6
TSCT	Constanta Port	2.34	123	⇑P		Pn	21 06 39.9	+1.4
TSCT				⇓S		Sn	21 07 06.7	+0.6
PSN	Preselentsi	2.41	137	i	P	Pn	21 06 41.5	+2.1
RMGR	Halanga-Turnu	2.43	252	⇑P		Pn	21 06 41.4	+1.7
RMGR				⇑S		Sn	21 07 09.9	+1.8
RMGR	Halanga-Turnu	2.43	252	⇑P		Pn	21 06 41.4	+1.7
RMGR				⇑S		Sn	21 07 09.9	+1.8
PUNG	Punghina	2.44	242	⇑P		Pn	21 06 41.1	+1.3
PUNG	Punghina	2.44	242	⇑P		Pn	21 06 41.1	+1.3
MILM	Milestii Mici	2.48	53	eP		Pn	21 06 42.0	+1.6
	60nm,0.5s							
MILM				i	S	Sn	21 07 10.0	+0.6
	700nm,1.5s							
MILM				Lqm			21 07 50.0	
	300nm,4.2s							
MILM	Milestii Mici	2.48	53	⇑P		Pn	21 06 42.9	+2.5
MILM				⇑S		Sn	21 07 12.1	+2.7
MILM	Milestii Mici	2.48	53	⇑P		Pn	21 06 42.9	+2.5
MILM				⇑S		Sn	21 07 12.1	+2.7
PRD	Provadia	2.50	154	i	P	Pn	21 06 42.3	+1.6
MANR	Mangalia	2.52	130	⇑P		Pn	21 06 41.5	+0.6
MANR				⇓S		Sn	21 07 12.2	+1.9
MANR	Mangalia	2.52	130	⇑P		Pn	21 06 41.5	+0.6
MANR				⇓S		Sn	21 07 12.2	+1.9
KIS	Kishinev	2.53	52	eP		Pn	21 06 42.8	+1.8
	30nm,0.3s							
KIS				eS		Sn	21 07 11.4	+0.8
	200nm,0.8s							
KIS	Kishinev	2.53	52	eP		Pn	21 06 42.8	+1.8
KIS				Pm			21 06 45.5	
KIS				eS		Sn	21 07 11.4	+0.8
KIS				Sm			21 07 15.0	
TSMN	Mangalia Port-	2.53	130	⇑P		Pn	21 06 42.5	+1.4
TSMN				⇓S		Sn	21 07 13.1	+2.4
TSMN	Mangalia Port-	2.53	130	⇑P		Pn	21 06 42.5	+1.4
TSMN				⇓S		Sn	21 07 13.1	+2.4
DJES	Djerdap	2.54	253	ePn		Pn	21 06 43.2	+2.0
DJES	Djerdap	2.54	253	⇓P		Pn	21 06 42.9	+1.7
DJES				⇓S		Sn	21 07 13.0	+2.0
DJES	Djerdap	2.54	253	⇓P		Pn	21 06 42.9	+1.7
DJES				⇓S		Sn	21 07 13.0	+2.0
ROIA	ROIAK	2.59	156	i	P	Pn	21 06 43.4	+1.4
DRGR		2.60	302	ePn		Pn	21 06 43.6	+1.5
DRGR				eSn		Sn	21 07 13.3	+0.8
DRGR		2.60	302	⇑P		Pn	21 06 43.9	+1.8
DRGR				⇓S		Sn	21 07 13.1	+0.7
DRGR		2.60	302	⇑P		Pn	21 06 43.9	+1.8
DRGR				⇓S		Sn	21 07 13.1	+0.7
DRGR		2.60	302	P		Pn	21 06 43.6	+1.5
MESR	Meseseni	2.66	310	⇑P		Pn	21 06 44.9	+2.0
MESR				⇑S		Sn	21 07 15.6	+1.6
MESR	Meseseni	2.66	310	⇑P		Pn	21 06 44.9	+2.0
MESR				⇑S		Sn	21 07 15.6	+1.6
BMR	Baia Mare	2.77	324	⇑P		Pn	21 06 46.6	+2.2
BMR				⇑S		Sn	21 07 19.6	+3.0
BMR	Baia Mare	2.77	324	⇑P		Pn	21 06 46.6	+2.2
BMR				⇑S		Sn	21 07 19.6	+3.0
DRBR	Darabani	2.78	10	⇑P		Pn	21 06 45.8	+1.3
DRBR				⇑S		Sn	21 07 17.1	+0.2
DRBR	Darabani	2.78	10	⇑P		Pn	21 06 45.8	+1.3
RAKU	Rahkiv	2.83	335	⇓	iP	Pn	21 06 46.6	+1.4
KSV	Kosov	2.91	349	⇓	iP	Pn	21 06 48.4	+2.1
KSV				Pm			21 06 50.1	
KSV				eS		Sn	21 07 22.3	+2.2
KSV				Sm			21 07 26.0	
NSLU	Nyzhne Selyshc	2.91	340	⇑	iP	Pn	21 06 51.9	+5.6
NSLU				Pm			21 07 20.2	
NSLU				eS		Sn	21 07 27.5	+7.4
NSLU				Sm			21 07 37.2	
PURM	Purcari	2.95	67	⇓P		Pn	21 06 48.5	+1.7
PURM				⇑S		Sn	21 07 21.8	+0.8
PURM	Purcari	2.95	67	⇓P		Pn	21 06 48.5	+1.7
PURM				⇑S		Sn	21 07 21.8	+0.8
BLKB	Belogradchik	2.96	233	ePn		Pn	21 06 47.6	+0.5
BLKB				eSn		Sn	21 07 19.5	-1.9
BLKB	Belogradchik	2.96	233	⇑P		Pn	21 06 47.9	+0.8
BLKB				⇑S		Sn	21 07 20.1	-1.4
BLKB	Belogradchik	2.96	233	⇑P		Pn	21 06 47.9	+0.8
BZS	Buzias	3.03	274	ePn		Pn	21 06 50.1	+2.2
BZS				eSn		Sn	21 07 23.6	+0.6
BZS	Buzias	3.03	274	⇑P		Pn	21 06 49.9	+1.9
BZS				⇑S		Sn	21 07 24.0	+1.1
BZS	Buzias	3.03	274	⇑P		Pn	21 06 49.9	+1.9
BZS				⇑S		Sn	21 07 24.0	+1.1
MDVR	Moldovita	3.06	259	ePn		Pn	21 06 49.8	+1.4
MDVR				eSn		Sn	21 07 24.3	+0.6
MDVR	Moldovita	3.06	259	⇑P		Pn	21 06 50.7	+2.3
MDVR				⇓S		Sn	21 07 27.0	+3.2
MDVR	Moldovita	3.06	259	⇑P		Pn	21 06 50.7	+2.3
MDVR				⇓S		Sn	21 07 27.0	+3.2
SIRR	Siria	3.08	287	ePn		Pn	21 06 51.0	+2.4
SIRR	Siria	3.08	287	⇑P		Pn	21 06 51.1	+2.4
SIRR	Siria	3.08	287	⇑P		Pn	21 06 51.1	+2.4
ZAGS	Zajecar	3.11	239	ePn		Pn	21 06 49.5	+0.5
ZAGS				eSn		Sn	21 07 23.0	-1.9
KMPD	K-Podol'skiy	3.12	7	eP		Pn	21 06 49.9	+0.8
KMPD				eS		Sn	21 07 24.9	-0.3
KMPD	K-Podol'skiy	3.12	7	P			21 06 49.8	
KMPD				P		Pn	21 06 49.4	+0.3
SORM	Soroca	3.15	31	⇓P		Pn	21 06 50.0	+0.4
SORM				⇓S		Sn	21 07 24.7	-1.1
SORM	Soroca	3.15	31	⇓P		Pn	21 06 50.0	+0.4
PGB	Panagyurishte	3.18	204	i	P	Pn	21 06 52.5	+2.5
KUBS	Kucevo	3.19	252	ePn		Pn	21 06 51.1	+0.9
NDNU	Novodnistrovsk	3.28	17	eP		Pn	21 06 52.0	+0.6
NDNU				Pm			21 07 20.0	
NDNU				eS		Sn	21 07 27.7	-1.4
NDNU				Sm			21 07 45.6	
BORR	Bors	3.30	301	⇓P		Pn	21 06 53.4	+1.9
BORR	Bors	3.30	301	⇓P		Pn	21 06 53.4	+1.9
KORU	Korolevo	3.30	326	⇑	iP	Pn	21 06 53.4	+1.7
KORU				Pm			21 07 15.0	
KORU				eS		Sn	21 07 30.4	+0.7
KORU				Sm			21 07 32.5	
TRSU	Trosnyk	3.33	323	⇑	iP	Pn	21 06 53.7	+1.7
TRSU				Pm			21 07 19.9	
TRSU				eS		Sn	21 07 32.1	+1.9
TRSU				Sm			21 07 58.5	
BANR	Banloc	3.37	270	⇓P		Pn	21 06 55.3	+2.7
BANR				⇑S		Sn	21 07 32.9	+1.6
BANR	Banloc	3.37	270	⇓P		Pn	21 06 55.3	+2.7
BANR				⇑S		Sn	21 07 32.

SMTH	**Samothraki Isl**	**5.00 183**	P	**Pn**	**21 07 15.6 +0.6**
SMTH	**Samothraki Isl**	**5.00 183**	P	**Pn**	**21 07 15.6 +0.6**
SOH	**Sokhos**	**5.01 203**	P	**Pn**	**21 07 16.4 +1.3**
SOH	**Sokhos**	**5.01 203**	P	**Pn**	**21 07 16.4 +1.3**
RUDO	**Rudo**	**5.04 251**	*e*Pn	**Pn**	**21 07 15.5 +0.1**
STHS	**Stebnicka Huta**	**5.07 323**	*e*SN	**Sn**	**21 08 16.8 +3.7**
MI29	**MI29, Kamyanyy**	**5.12 14**	P	**Pn**	**21 07 17.1 +0.5**
MORH	**Mrgy, Hungar**	**5.14 281**	*e*Pn	**Pn**	**21 07 18.6 +1.8**
MORH	**Mrgy, Hungar**	**5.14 281**	⇓P	**Pn**	**21 07 18.9 +2.0**
MORH	**Mrgy, Hungar**	**5.14 281**	⇓P	**Pn**	**21 07 18.9 +2.0**
MORH	**Mrgy, Hungar**	**5.14 281**	*e*Pn	**Pn**	**21 07 18.6 +1.8**
MORH	**Mrgy, Hungar**	**5.14 281**	P	**Pn**	**21 07 18.6 +1.8**
GRG	**Griva**	**5.19 211**	P	**Pn**	**21 07 19.1 +1.5**
GRG	**Griva**	**5.19 211**	P	**Pn**	**21 07 19.1 +1.5**
OUR	**Ouranopolis**	**5.32 196**	P	**Pn**	**21 07 20.3 +1.0**
OUR	**Ouranopolis**	**5.32 196**	P	**Pn**	**21 07 20.3 +1.0**
PLG	**Polygyros**	**5.40 201**	P	**Pn**	**21 07 22.3 +1.8**
PLG	**Polygyros**	**5.40 201**	P	**Pn**	**21 07 22.3 +1.8**
MI30	**MI30,Zelenitsa**	**5.50 15**	P	**Pn**	**21 07 22.1 +0.4**
MI30			sP		21 07 36.9
KOVH	**Kovagotottos**	**5.51 279**	P	**Pn**	**21 07 24.3 +2.5**
UPM	**Unac-Piva**	**5.52 248**	*e*Pn	**Pn**	**21 07 23.2 +1.0**
AK07	**Malin Array Si**	**5.54 22**	P	**Pn**	**21 07 22.8 +0.5**
SEV	**Sevastopol'**	**5.57 97**	Sm		21 06 54.0
SEV			*e*P	**Pn**	**21 07 22.2 -0.5**
SEV			Pm		21 07 23.6
SEV			*e*S	**Sn**	**21 08 21.3 -4.0**
AK06	**Malin Array Si**	**5.58 22**	P	**Pn**	**21 07 23.1 +0.3**
LIA	**Limnos Island**	**5.59 186**	P	**Pn**	**21 07 23.8 +0.8**
LIA	**Limnos Island**	**5.59 186**	P	**Pn**	**21 07 23.8 +0.8**
AK14	**Malin Array Si**	**5.59 21**	P	**Pn**	**21 07 23.2 +0.2**
AK10	**Malin Array Si**	**5.60 22**	P	**Pn**	**21 07 23.5 +0.4**
AK05	**Malin Array Si**	**5.61 22**	P	**Pn**	**21 07 23.5 +0.3**
AK09	**Malin Array Si**	**5.62 22**	P	**Pn**	**21 07 23.8 +0.4**
CSKK	**Cskako**	**5.63 292**	P	**Pn**	**21 07 27.5 +4.0**
AK08	**Malin Array Si**	**5.63 22**	P	**Pn**	**21 07 23.8 +0.3**
AK02	**Malin Array Si**	**5.64 22**	P	**Pn**	**21 07 23.9 +0.2**
AK11	**Malin Array Si**	**5.65 21**	P	**Pn**	**21 07 24.1 +0.3**
SRO2	**Moca**	**5.67 297**	*e*PN	**Pn**	**21 07 25.9 +1.8**
AKASG	**Malin Array Be**	**5.69 22**	P	**Pn**	**21 07 23.9 -0.4**
	4.6nm,0.4s,baz=207,slow=11,SNR=35				
AKASG			S	**Sn**	**21 08 22.9 -5.2**
	3.6nm,0.3s,baz=208,slow=21,SNR=4.7				
AKBB	**Malin Array Si**	**5.69 22**	P	**Pn**	**21 07 24.6 +0.3**
AKBB			sP		21 07 39.8
PDG	**Podgorica**	**5.69 240**	⇓P	**Pn**	**21 07 25.2 +0.8**
PDG			⇓S	**Sn**	**21 08 29.5 +1.2**
PDG	**Podgorica**	**5.69 240**	⇓P	**Pn**	**21 07 25.2 +0.8**
PDG			⇓S	**Sn**	**21 08 29.5 +1.2**
PDG	**Podgorica**	**5.69 240**	*e*Pn	**Pn**	**21 07 24.9 +0.6**
AK04	**Malin Array Si**	**5.69 21**	P	**Pn**	**21 07 24.6 +0.3**
AK03	**Malin Array Si**	**5.71 22**	P	**Pn**	**21 07 24.8 +0.2**
LANS	**Liptovska Anna**	**5.73 312**	*e*PN	**Pn**	**21 07 27.5 +2.5**
LANS			*e*SN	**Sn**	**21 08 29.5 +0.1**
SRO	**Srobarova**	**5.74 297**	*e*PN	**Pn**	**21 07 27.8 +2.8**
SRO			*e*SN	**Sn**	**21 08 30.0 +0.5**
SIM	**Simferopol'**	**5.81 92**	*e*P	**Pn**	**21 07 25.2 -0.8**
SIM			Pm		21 07 30.0
SIM			*e*S	**Sn**	**21 08 27.1 -4.2**
SIM			Sm		21 08 28.3
DRME	**Dracevica, Mon**	**5.87 238**	*e*Pn	**Pn**	**21 07 29.9 +3.0**
BRY	**Bratogost**	**5.89 247**	*e*Pn	**Pn**	**21 07 29.1 +1.8**
YAL	**Yalta**	**5.92 97**	*e*P	**Pn**	**21 07 28.7 +1.2**
YAL			Pm		21 07 30.1
YAL			*e*S	**Sn**	**21 08 33.2 -0.8**
YAL			Sm		21 08 33.5
KOLL	**Kolacno**	**6.01 304**	*e*PN	**Pn**	**21 07 30.2 +1.5**
KOLL			*e*SN	**Sn**	**21 08 35.1 -1.1**
MPLH	**Magyarpolny**	**6.05 289**	P	**Pn**	**21 07 33.2 +3.9**
MPLH			S	**Sn**	**21 08 41.3 +4.1**
TREB	**Trebinje**	**6.11 246**	*e*Pn	**Pn**	**21 07 33.9 +3.8**
HCY	**Herceg Novi**	**6.15 243**	*e*Pn	**Pn**	**21 07 34.0 +3.3**
SIGR	**SIGRI**	**6.25 180**	P	**Pn**	**21 07 33.2 +1.1**
SIGR	**SIGRI**	**6.25 180**	P	**Pn**	**21 07 33.2 +1.1**
SRKY	**Kupres RS**	**6.39 260**	*e*Pn	**Pn**	**21 07 36.9 +2.8**
XOR	**Xorichti**	**6.42 199**	P	**Pn**	**21 07 35.2 +0.8**
XOR	**Xorichti**	**6.42 199**	P	**Pn**	**21 07 35.2 +0.8**
SUDU	**Sudak**	**6.44 92**	*e*P	**Pn**	**21 07 34.2 -0.5**
SUDU			Pm		21 07 35.8
SUDU			*e*S	**Sn**	**21 08 43.1 -3.7**
SUDU			Sm		21 08 45.2
STON	**Ston**	**6.46 249**	*e*Pn	**Pn**	**21 07 37.9 +3.1**
JAVC	**Velka Javorina**	**6.57 304**	*e*PN	**Pn**	**21 07 38.4 +1.9**
MAUC	**Maruska**	**6.74 308**	*e*PN	**Pn**	**21 07 41.2 +2.5**
MAUC			*e*SN	**Sn**	**21 08 53.4 -0.6**
BZK	**Bozkurt**	**6.82 118**	⇑P	**Pn**	**21 07 37.6 -2.2**
OKC	**Ostrava-Krasne**	**6.83 313**	*e*PN	**Pn**	**21 07 41.1 +1.1**
OKC			*e*SN	**Sn**	**21 08 53.5 -2.8**
RONA	**Rosalia, Austr**	**7.00 292**	*i* Pn	**Pn**	**21 07 45.7 +3.3**
	0.5nm,0.2s				
MORC	**Moravsky Berou**	**7.12 310**	⇓P	**Pn**	**21 07 46.4 +2.4**
MORC	**Moravsky Berou**	**7.12 310**	⇓P	**Pn**	**21 07 46.4 +2.4**
MORC	**Moravsky Berou**	**7.12 310**	*e*PN	**Pn**	**21 07 46.2 +2.3**
MORC			*e*SN	**Sn**	**21 09 00.5 -2.9**
CONA	**Conrad Observa**	**7.34 293**	*i* Pn	Pn	21 07 51.9 +4.8
	0.6nm,0.3s				
CRES	**Cresnjev**	**7.34 277**	*e*Pn	**Pn**	**21 07 48.6 +1.6**
VRAC	**Vranov**	**7.41 305**	⇓P	**Pn**	**21 07 50.4 +2.5**
VRAC	**Vranov**	**7.41 305**	⇓P	**Pn**	**21 07 50.4 +2.5**
VRAC	**Vranov**	**7.41 305**	P	**Pn**	**21 07 49.0 +1.1**
	0.8nm,0.4s,baz=113,slow=18,SNR=2.5				
VRAC			S	**Sn**	**21 09 07.3 -3.2**
	1.4nm,0.3s,baz=177,slow=19,SNR=1.4				
VRAC	**Vranov**	**7.41 305**	*e*PN	**Pn**	**21 07 49.9 +2.0**
KRUC	**Moravsky**	**7.41 302**	*e*PN	**Pn**	**21 07 49.6 +1.7**
SOKA	**Soboth**	**7.67 283**	*e*Pn	**Pn**	**21 07 55.3 +3.7**
	1.9nm,0.3s				
KRLC	**Kraliky**	**7.69 310**	*e*PN	**Pn**	**21 07 53.3 +1.5**
KRLC			*e*SN	**Sn**	**21 09 15.7 -1.8**
DIKM	**Dikmen**	**7.78 116**	⇑P	**Pn**	**21 07 52.5 -0.5**
BRTR	**Keskin Array B**	**8.08 133**	P	**Pn**	**21 07 57.4 +0.1**
	1.1nm,0.3s,baz=325,slow=13,SNR=32				
BRTR			S	**Sn**	**21 09 23.0 -4.2**
	0.8nm,0.6s,baz=299,slow=28,SNR=2.3				
DPC	**Dobruska-Polom**	**8.09 311**	*e*PN	**Pn**	**21 07 59.3 +2.0**
DPC			*e*SN	**Sn**	**21 09 24.0 -3.2**
OSTC	**Ostas**	**8.26 312**	*e*PN	**Pn**	**21 08 01.0 +1.4**
OSTC			*e*SN	**Sn**	**21 09 27.6 -3.8**
CHVC	**Chvalec**	**8.36 311**	*e*PN	**Pn**	**21 08 01.7 +0.7**
CHVC			*e*SN	**Sn**	**21 09 30.7 -3.2**
GERES	**GERESS Array B**	**8.99 296**	P	**Pn**	**21 08 10.5 +0.9**
	0.2nm,0.3s,baz=106,slow=17,SNR=2.9				
GERES			S	**Sn**	**21 09 46.9 -2.4**
	0.5nm,0.5s,baz=118,slow=26,SNR=5.6				
MNK	**Minsk**	**9.13 7**	*i* P	**Pn**	**21 08 12.2 +0.7**
	comp=E,1.0nm,1.0s				
MNK			*i* P	**Pn**	**21 08 12.2 +0.7**
MNK			*i* P	**Pn**	**21 08 12.2 +0.7**
	comp=Z,3.0nm,0.8s,baz=189				
MNK			*i* S	**Sn**	**21 09 53.5 +0.9**
MNK			*i* LQ	LQ	21 11 52.8
MNK			*i* LR	LR	21 11 21.6
MNK			*i* LRM	MLR	21 11 37.9
	comp=E,38nm,3.8s				
MNK			*i* LRM	MLR	21 11 39.8
	comp=Z,93nm,2.6s				
IDI	**Anoyia**	**10.20 185**	LR	LR	21 12 52.0
	comp=Z,26nm,20.9s,baz=88,slow=40				
KEST	**Kesra**	**15.88 238**	LR	LR	21 16 07.0
	comp=Z,22nm,19.4s,baz=326,slow=38				
FINES	**FINESS Array B**	**16.01 0**	P	**Pn**	**21 09 39.7 -4.1**
	comp=Z,1.2nm,0.4s,baz=172,slow=14,SNR=13				
FINES			S	Sn	21 12 27.6 -12
	comp=Z,1.5nm,0.9s,baz=170,slow=20,SNR=1.3				
HFS	**Hagfors**	**16.40 338**	P	**Pn**	**21 09 46.5 -2.3**
	comp=Z,1.2nm,0.7s,baz=81,slow=18,SNR=1.1				
HFS			LR	LR	21 16 47.3
	comp=Z,23nm,21.5s,baz=133,slow=40				
NOA	**NORSAR Array B**	**17.84 336**	P	**Pn**	**21 10 05.1 -1.5**
	comp=Z,0.3nm,0.6s,baz=68,slow=15,SNR=4.6				
NOA			LR	LR	21 17 41.7
	comp=Z,24nm,19.4s,baz=160,slow=39				
EKA	**Eskdalemuir Ar**	**20.86 309**	P	**P**	**21 10 37.3 -2.3**
	comp=Z,0.7nm,0.9s,baz=109,slow=13,SNR=2.5				
	comp=Z,0.7nm,0.9s				
ESDC	**Sonseca Array**	**22.68 266**	P	**P**	**21 10 59.4 +0.1**
	comp=Z,0.7nm,0.8s,baz=62,slow=10,SNR=8.7				
	comp=Z,0.7nm,0.8s				
ARU	**Arti**	**23.08 50**	P	**P**	**21 11 05.1 +1.9**
	comp=Z,1.5nm,0.6s,baz=292,slow=11,SNR=3.0				
ARU			pP	**pP**	**21 11 15.6 -0.5**
	comp=Z,5.2nm,0.8s,baz=251,slow=9.3,SNR=6.5				

TORD	**Torodi Ar. Bea**	**38.21 220**	P	**P**	**21 13 17.7 +0.7**
	comp=Z,1.6nm,0.5s,baz=29,slow=8.7,SNR=15				
	comp=Z,1.6nm,0.5s				
MKAR	**Makanchi Array**	**38.37 67**	P	**P**	**21 13 16.7 -1.4**
	comp=Z,0.1nm,0.4s,baz=259,slow=16,SNR=1.7				
	comp=Z,0.1nm,0.4s				

*DDA **05** 21:06:11.4±0.0,38°.58N×26°.75E,h7$^{km}_{\pm 1}$,ML1.0*
ISK 05 21:06:10.7,38.63N×26.74E,h13$^{km}_{\pm 1}$,ML1.5/5,
Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FOCM	**Foa**	**0.08**	**357**	PG	Pg	21 06 13.6	+0.2
FOCM				SG	Sg	21 06 15.8	+0.4
URLA	**Izmir**	**0.29**	**202**	PG	Pg	21 06 16.9	+0.1
URLA	**Izmir**	**0.29**	**202**	P	Pg	21 06 16.9	+0.1
URLA				S	Sg	21 06 21.7	+0.9
URLA				*i* AML	AML	21 06 22.0	
	comp=N,38nm,0.6s						
URLA				*i* AML	AML	21 06 23.0	
	comp=E,28nm,0.5s						
BLCB	**Balcova**	**0.34**	**136**	PG	Pb	21 06 18.3	-0.4
BLCB				SG	Sb	21 06 23.3	-0.8
ZEDA	**zmir-Bergama**	**0.43**	**38**	P	Pb	21 06 20.2	+0.1
ZEDA				S	Sb	21 06 27.0	+0.5
ZEDA				*i* AML	AML	21 06 27.0	
	comp=N,15nm,0.3s						
ZEDA				*i* AML	AML	21 06 28.0	
	comp=E,8.9nm,0.1s						
ZEYE	**Izmir, Urla-Ze**	**0.43**	**205**	P	Pg	21 06 19.3	0.0
ZEYE				S	Sb	21 06 25.9	-0.7
ZEYE				*i* AML	AML	21 06 26.0	
	comp=E,29nm,0.3s						
DKL	**Dikili**	**0.46**	**17**	PG	Pg	21 06 20.0	+0.2
CHOS	**Chios island**	**0.59**	**246**	PG	Pb	21 06 22.8	-0.1
DGB	**zmir**	**0.59**	**169**	P	Pg	21 06 22.2	-0.1
DGB				S	Sg	21 06 30.1	+0.1
DGB				*i* AML	AML	21 06 34.0	
	comp=N,7.1nm,0.2s						
DGB				*i* AML	AML	21 06 34.0	
	comp=E,9.1nm,0.2s						

*NEIC **05** 21:08:54.9±0.8,37°.33N±0°.04×115°.23W±0°.05,h10$^{km}_{\pm 7}$,*
Error ellipse: s-maj=6.4km s-min=5.4km az=163.0
*REN **05** 21:08:55.2±0.7,37°.31N±0°.04×115°.218W±0°.006,*
h11$^{km}_{\pm 6}$,ML2.5/12,ML2.6/76(NEIC),Error ellipse:
s-maj=6.0km s-min=0.5km az=174.0
*ANF **05** 21:08:56.0±0.5,37°.30N×115°.28W,h3$^{km}_{\pm 5}$,ML2.7/12,*
Error ellipse: s-maj=4.1km s-min=2.3km az=108.0
ISC 05 21:08:54.9±0.9,37°.31N±0°.02×115°.21W±0°.02,h12$^{km}_{\pm 8}$,
n55,σ0^{s}.71/61,Southern Nevada

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRN	**Pahroc Range**	**0.16**	**54**	Pg	**Pg**	**21 08 58.8**	**0.0**
PRN				Sg	**Sg**	**21 09 01.7**	**+0.2**
PRN				IAML		21 09 04.9	
	comp=E,2μm,0.6s						
PRN				IAML		21 09 04.9	
	comp=N,2μm,0.3s						
S11A	**Rachel**	**0.54**	**308**		**Pg**	**21 09 05.5**	**-0.1**
S11A				Sg	**Sb**	**21 09 13.0**	**-1.2**
SHPR	**Sheep Range**	**0.81**	**177**	Pg	**Pg**	**21 09 10.4**	**-0.2**
SHPR				IAML		21 09 25.6	
	comp=N,163nm,0.4s						
TPNV	**Topopah Spring**	**0.91**	**247**		**Pg**	**21 09 12.4**	**-0.1**
TPNV					**Sn**	**21 09 27.5**	**+0.8**
TPNV	**Topopah Spring**	**0.91**	**247**	P	**Pb**	**21 09 12.5**	**-0.2**
	baz=66,SNR=36						
TPNV				S	**Sb**	**21 09 25.7**	**+1.0**
	baz=66						
ICU	**Indian Springs**	**1.04**	**99**		**Pg**	**21 09 15.2**	**+0.2**
R11A	**Troy Canyon, C**	**1.07**	**344**	Pn	**Pb**	**21 09 15.5**	**-0.1**
R11A				IAML		21 09 32.4	
	comp=E,151nm,0.6s						
R11A	**Troy Canyon, C**	**1.07**	**344**	P	**Pb**	**21 09 15.5**	**-0.1**
	baz=164,SNR=71						
R11A				S	**Sn**	**21 09 32.0**	**+1.0**
	baz=164						
CCUT	**Cedar City**	**1.49**	**80**		**Pg**	**21 09 24.1**	**+0.6**
CCUT	**Cedar City**	**1.49**	**80**	IAML		21 09 47.0	
	comp=N,70nm,0.5s						
CCUT				IAML		21 09 47.6	
	comp=E,51nm,0.4s						
FURC	**Furnace Creek,**	**1.57**	**238**	P	**Pg**	**21 09 24.6**	**-0.5**
	baz=57						
FURC				S	**Sg**	**21 09 44.9**	**-0.6**
	baz=57						
LCMT	**Little Creek M**	**1.60**	**100**		**Pb**	**21 09 24.7**	**+0.2**
LCMT	**Little Creek M**	**1.60**	**100**	IAML		21 09 48.3	
	comp=N,46nm,0.5s						
PSUT	**Pine Spring**	**1.62**	**41**		**Pb**	**21 09 24.8**	**-0.1**
PSUT	**Pine Spring**	**1.62**	**41**	IAML		21 09 53.2	
	comp=E,80nm,0.6s						
PSUT				IAML		21 09 55.9	
	comp=N,52nm,0.8s						
GWY	**Greenwater Val**	**1.62**	**227**	Pn	**Pn**	**21 09 23.2**	**-0.3**
GWY				IAML		21 09 52.9	
	comp=N,77nm,0.6s						
GWY				IAML		21 09 58.6	
	comp=E,67nm,0.6s						
SHOC	**Shoshone, Teco**	**1.65**	**212**	Pb	**Pg**	**21 09 26.5**	**-0.1**
	baz=31,SNR=24						
SZCU	**Shurtz Canyon**	**1.71**	**80**		**Pn**	**21 09 24.9**	**+0.1**
SZCU				IAML		21 09 55.2	
	comp=N,55nm,0.3s						
SZCU				IAML		21 09 55.0	
	comp=E,45nm,0.3s						
GRAC	**Grapevine Rang**	**1.75**	**260**		**Pn**	**21 09 25.3**	**+0.2**
GRAC	**Grapevine Rang**	**1.75**	**260**	Pb	**Pg**	**21 09 27.7**	**-0.9**
	baz=79						
GRAC				Sg	**Sg**	**21 09 51.8**	**+0.6**
	baz=79						
TPH	**Tonopah**	**1.77**	**296**		**Pn**	**21 09 26.1**	**+0.6**
QSM	**Queen of Sheba**	**1.90**	**225**	Pn	**Pn**	**21 09 26.8**	**-0.3**
QSM				IAML		21 09 56.4	
	comp=N,31nm,0.6s						
LCH	**Last Change Ra**	**1.94**	**268**	Pn	**Pn**	**21 09 28.0**	**+0.1**
LCH				IAML		21 10 03.9	
	comp=N,34nm,0.8s						
LCH				IAML		21 10 18.8	
	comp=E,61nm,0.3s						
TUQ	**Turquoise Moun**	**1.96**	**197**	Pb	**Pb**	**21 09 31.5**	**+0.9**
	baz=17,SNR=6.5						
TUQ				Sb	**Sg**	**21 09 58.4**	**+0.3**
	baz=17						
MPMC	**Manual Prospec**	**2.22**	**236**	Pb	**Pb**	**21 09 35.1**	**0.0**
	baz=55,SNR=17						
MPMC				Sb	**Sg**	**21 10 05.4**	**-0.9**
	baz=55						
PKCU	**Pink Cliffs**	**2.31**	**86**	Pn	**Pn**	**21 09 33.3**	**+0.1**
PKCU				IAML		21 10 12.4	
	comp=N,38nm,0.5s						
PKCU				IAML		21 10 19.8	
	comp=E,53nm,0.4s						
GSC	**Goldstone, Bar**	**2.39**	**213**	Pn	**Pn**	**21 09 34.2**	**+0.3**
GSC				IAML		21 10 17.7	
	comp=N,18nm,0.9s						
GSC				IAML		21 10 20.7	
	comp=E,22nm,0.9s						
GSC	**Goldstone, Bar**	**2.39**	**213**	Pb	**Pb**	**21 09 39.3**	**+1.4**
	baz=32,SNR=12						
W13A	**Hualapai Mount**	**2.46**	**154**	Pn	**Pn**	**21 09 35.3**	**+0.3**
W13A				IAML		21 10 14.0	
	comp=N,21nm,0.6s						
U15A	**North Rim**	**2.50**	**110**		**Pn**	**21 09 35.7**	**0.0**
U15A				IAML		21 10 22.4	
	comp=E,22nm,0.7s						
MTPU	**Mount Pierson**	**2.51**	**72**	Pn	**Pn**	**21 09 35.8**	**0.0**
MTPU				IAML		21 10 17.3	
	comp=N,23nm,0.5s						
TCRU	**Three Creeks R**	**2.54**	**59**	Pn	**Pn**	**21 09 35.0**	**-1.1**
TCRU				IAML		21 10 21.3	
	comp=N,24nm,1.0s						
TCRU				IAML		21 10 22.1	
	comp=E,36nm,0.7s						
GMRC	**Granite Mounta**	**2.55**	**188**	Pb	**Pg**	**21 09 42.5**	**-1.4**
	baz=7.9,SNR=7.0						
NV11	**Mina Array Sit**	**2.58**	**296**		**Pn**	**21 09 36.9**	**+0.2**
HEC	**Hector,Ludlow**	**2.64**	**201**	Pb	**Pg**	**21 09 44.3**	**-1.3**
	baz=20						
MVU	**Marysvale**	**2.65**	**62**	Pn	**Pn**	**21 09 37.9**	**+0.2**

MSU	**Marysvale**	**2.68**	**63**	Pn	**Pn**	**21 09 38.2**	**+0.1**
NVAR	**Mina Array Bea**	**2.69**	**295**		**Pn**	**21 09 37.9**	**-0.3**
LHV	**Little Huntoon**	**2.77**	**291**		**Pn**	**21 09 39.2**	**+0.1**
LHV				IAML		21 10 34.5	
	comp=E,28nm,0.9s						
LHV				IAML		21 10 34.5	
	comp=N,27nm,0.6s						
KVN	**Kaiserville**	**2.86**	**308**	Pn	**Pn**	**21 09 40.2**	**-0.4**
MDRNC	**Doe Ridge**	**2.90**	**277**		**Pn**	**21 09 43.6**	**+2.5**
RYN	**Ryan**	**2.93**	**298**	Pn	**Pn**	**21 09 41.8**	**+0.4**
RYN				IAML		21 10 30.6	
	comp=E,19nm,0.6s						
RYN				IAML		21 10 31.8	
	comp=N,17nm,0.4s						
OMMB	**Old Mammoth Mi**	**3.03**	**277**	Pn	**Pn**	**21 09 42.2**	**-0.8**
MDCM	**Deadman Creek**	**3.07**	**279**		**Pn**	**21 09 43.5**	**0.0**
ELK	**Elko**	**3.43**	**360**	Pn	**Pn**	**21 09 48.4**	**0.0**
DUG	**Dugway, Tooele**	**3.43**	**32**	Pn	**Pn**	**21 09 48.5**	**+0.2**
DUG				IAML		21 10 50.3	
	comp=N,9.4nm,0.7s						
DUG				IAML		21 10 54.0	
	comp=N,10.0nm,0.8s						
DUG	**Dugway, Tooele**	**3.43**	**32**	Sb	**Sg**	**21 10 44.8**	**-0.4**
	baz=214						
WUAZ	**Wupatki**	**3.58**	**119**	Pn	**Pn**	**21 09 50.4**	**+0.1**
WUAZ				IAML		21 11 29.2	
	comp=N,14nm,0.2s						
WUAZ				IAML		21 11 29.8	
	comp=N,16nm,0.2s						
WUAZ	**Wupatki**	**3.58**	**119**	Pb	**Pg**	**21 10 01.3**	**-2.2**
	baz=301						
YERR	**Yerington**	**3.59**	**299**	Pn	**Pn**	**21 09 51.0**	**+0.4**
YERR				IAML		21 10 49.8	
	comp=N,15nm,0.4s						
NLU	**North Lily Min**	**3.60**	**42**	Pn	**Pn**	**21 09 50.9**	**+0.2**
TMUT	**Trail Mountain**	**3.72**	**57**	Pn	**Pn**	**21 09 52.7**	**+0.2**
TMUT				IAML		21 11 02.0	
	comp=N,6.3nm,0.8s						
PNTR	**Pine Nut**	**3.88**	**298**	Pn	**Pn**	**21 09 53.8**	**-0.9**
SRU	**San Rafael Swe**	**4.10**	**63**	Pn	**Pn**	**21 09 57.8**	**+0.2**
SRU				IAML		21 11 07.1	
	comp=E,6.1nm,0.8s						
PV23	**Carpenter Ridg**	**5.03**	**75**	Pn	**Pn**	**21 10 10.6**	**+0.1**

MAN 05 21:17:49.8,10°.25N×122°.67E,h47^{km},mb3.8,ML2.5,
MS2.0,2D,Panay

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUIM	**Jordan**	**0.38**	**348**	⇓*e*P	Pn	21 18 01.2	+0.2
CNOP	**Candoni, Negro**	**0.42**	**184**	⇓*e*P	Pn	21 18 01.6	+0.5

*IDC **05** 21:20:25.6±1.0,8°.55N×82°.67W,h0^{km},mb3.7/8,*
mbtmp3.8/11,ML4.0/3,MS3.2/9,Error ellipse:
s-maj=34.9km s-min=20.6km az=43.0
*INET **05** 21:20:27.8±1.7,8°.32N×82°.83W,h2$^{km}_{\pm 13}$,MW3.9*
*UPA **05** 21:20:29.1±1.2,8°.42N×82°.86W,h17$^{km}_{\pm 2}$,MW4.3*
*NEIC **05** 21:20:30.2±1.6,8°.51N±0°.06×82°.94W±0°.04,h24$^{km}_{\pm 5}$,*
mb4.4/15,Mwr4.2/27,ML4.7(UCR),Mwr5.0(UCR),Error
ellipse: s-maj=8.5km s-min=5.0km az=159.0
*NEIC **05** 21:20:30.3,8°.52N×82°.95W,h26^{km},Moment Tensor*
Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.97;
$M_{\theta\theta}$-0.67; $M_{\phi\phi}$-1.30; $M_{r\theta}$1.17; $M_{r\phi}$1.14; $M_{\theta\phi}$0.09; Fault
plane solution: $M_0$2.39000×10^{15} NP1:ϕ_s343.59000°,
δ40.59000°,λ125.61000°. NP2:ϕ_s120.27000°,δ58.06000°,
λ63.48000°. Principal axes: T 2.4855, Plg66.0000°,
Azm340.0000°; N -0.2089, Plg22.0000°, Azm135.0000°;
P -2.2766, Plg9.0000°, Azm229.0000°;
ISC 05 21:20:28.8±0.7,8°.41N±0°.03×82°.88W±0°.02,h24^{km}±5km,
n94,σ1^{s}17/112,mb4.3/16,MS3.1/6,1C-8D,Panama-Costa
Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CDITO	**Canoas**	**0.16**	**4**		**Pb**	**21 20 33.7**	**-0.2**
CDITO				Sg	**Sb**	**21 20 37.8**	**+0.5**
CDITO	**Canoas**	**0.16**	**4**	*e*P	**Pb**	**21 20 33.6**	**-0.2**
CDITO				*e*S	**Sb**	**21 20 36.8**	**-0.5**
PTPM	**Petroterminale**	**0.21**	**179**	⇑*i*P	**Pb**	**21 20 34.4**	**0.0**
PTPM				*e*P	**Pb**	**21 20 34.4**	**0.0**
PTPM				*e*S	**Sb**	**21 20 38.4**	**+0.2**
BRU2	**Volcan**	**0.42**	**27**		**Pb**	**21 20 37.8**	**+0.1**
BRU2	**Volcan**	**0.42**	**27**	⇓*i*P	**Pb**	**21 20 37.9**	**+0.1**
BRU2				*e*S	**Sb**	**21 20 44.5**	**+0.5**
DVD	**David**	**0.43**	**87**	*e*P	**Pb**	**21 20 37.7**	**0.0**
DVD				*e*S	**Sb**	**21 20 44.3**	**+0.4**
PIRO	**Carate, Puerto**	**0.45**	**269**	⇓*i*P	**Pb**	**21 20 37.6**	**-0.4**
PIRO				*e*S	**Sn**	**21 20 46.2**	**-0.8**
PIRO	**Carate, Puerto**	**0.45**	**269**	*e*P	**Pb**	**21 20 37.7**	**-0.4**

SJCC	San Jacinto, C	7.75	78	Pn	Pn	21 22 22.5	+2.3	
CMIG	Matias Romero	14.53	308	Pn	Pn	21 23 53.6	+0.6	
	comp=Z,0.2nm,0.3s,baz=112,slow=10,SNR=2.5							
CMIG				LR	LR	21 29 54.8		
	comp=Z,108nm,19.7s,baz=170,slow=39							
	comp=Z,0.8nm,0.3s							
ATAH	Atahualpa	16.08	164	LR	LR	21 29 43.2		
	comp=Z,145nm,20.7s,baz=338,slow=34							
SJG	San Juan	18.91	58	P	P	21 24 44.6	-3.2	
	comp=Z,0.5nm,0.3s,baz=229,slow=9.3,SNR=2.6							
SJG				LR	LR	21 31 14.8		
	comp=Z,70nm,19.3s,baz=234,slow=35							
	comp=Z,7.6nm,0.7s							
152A	Waverly Hall	24.20	356	P	P	21 25 43.3	-0.2	
LRAL	Lakeview Retre	24.80	352	P	P	21 25 49.1	+0.2	
LRAL				IAmb	IAmb	21 25 53.7		
	comp=Z,19nm,1.1s							
GOGA	Godfrey	24.88	359	P	P	21 25 49.5	-0.2	
GOGA				IAmb	IAmb	21 26 02.0		
	comp=Z,13nm,1.0s							
Z47A	Carrollton	25.13	350	P	P	21 25 51.8	-0.2	
Z47A				IAmb	IAmb	21 25 56.8		
	comp=Z,18nm,1.1s							
Y52A	Lilburn	25.35	358	P	P	21 25 53.5	-0.5	
Y52A				IAmb	IAmb	21 26 07.8		
	comp=Z,14nm,0.9s							
TKL	Tuckaleechee C	27.13	358	LR	LR	21 37 52.7		
	comp=Z,74nm,18.6s,baz=176,slow=39							
TXAR	Lajitas Array	28.54	320	P	P	21 26 23.6	+0.8	
	comp=Z,0.1nm,0.4s,baz=139,slow=5.9,SNR=1.7							
TXAR				PcP	PcP	21 29 35.8	+1.6	
	comp=Z,0.2nm,0.7s,baz=119,slow=5.2,SNR=3.5							
TXAR				LR	LR	21 39 29.8		
	comp=Z,27nm,19.1s,baz=118,slow=40							
	comp=Z,0.1nm,0.4s							
TXAR	Lajitas Array	28.54	320	P	P	21 26 21.9	-0.9	
TXAR					PcP	21 29 34.9	+0.7	
LCAR	Lake Charles	28.55	346	P	P	21 26 21.5	-1.2	
LCAR				IAmb	IAmb	21 26 23.6		
	comp=Z,6.0nm,0.8s							
LPAZ	La Paz	28.56	149	LR	LR	21 38 57.5		
	comp=Z,45nm,18.5s,baz=284,slow=39							
H06E1	SOCORRO T-PHAS	29.09	294	T	T	21 56 39.1		
	SNR=9.6							
MGMO	Mountain Grove	29.85	345	P	P	21 26 33.0	-1.3	
MGMO				IAmb	IAmb	21 26 36.1		
	comp=Z,6.9nm,1.1s							
CCM	Cathedral Cave	30.46	347	P	P	21 26 39.4	-0.3	
CCM				IAmb	IAmb	21 26 40.3		
	comp=Z,4.5nm,0.8s							
BLO	Bloomington	30.80	354	P	P	21 26 43.3	+0.6	
SIV	San Ignacio	32.47	138	LR	LR	21 39 06.1		
	comp=Z,39nm,20.3s,baz=104,slow=34							
ANMO	Albuquerque	34.13	324	LR	LR	21 44 00.0		
	comp=Z,28nm,18.9s,baz=136,slow=41							
L40A	Anamosa	34.31	349	P	P	21 27 13.4	+0.1	
214A	Organ Pipe Nat	36.35	314	P	P	21 27 31.1	-0.1	
214A				IAmb	IAmb	21 27 35.4		
	comp=Z,4.8nm,1.1s							
SADO	Sadowa	36.37	4	LR	LR	21 44 06.4		
	comp=Z,56nm,18.1s,baz=113,slow=39							
113A	Mohawk Valley,	37.47	315	P	P	21 27 40.3	-0.3	
WUAZ	Wupatki	37.49	320	P	P	21 27 40.6	-0.3	
PDAR	Pinedale Array	41.47	330	P	P	21 28 13.7	-0.3	
	comp=Z,0.2nm,0.3s,baz=119,slow=7.3,SNR=2.1							
	comp=Z,0.2nm,0.3s							
PDAR	Pinedale Array	41.47	330	P	P	21 28 12.5	-1.6	
H03N2	Juan Fernandez	41.79	175	T	T	22 12 51.5		
	baz=354,slow=76,SNR=3.4							
H03N1	Juan Fernandez	41.79	175	T	T	22 12 54.1		
	baz=354,slow=76,SNR=4.2							
H03N3	Juan Fernandez	41.80	175	T	T	22 12 51.2		
	baz=354,slow=76,SNR=3.9							
ULM	Lac du Bonnet	43.09	348	P	P	21 28 26.2	-0.7	
	comp=Z,6.4nm,0.9s,baz=198,slow=7.5,SNR=5.0							
	comp=Z,6.4nm,0.9s							
ULM	Lac du Bonnet	43.09	348	P	P	21 28 25.5	-1.4	
ULM				IAmb	IAmb	21 28 26.8		
	comp=Z,6.2nm,0.8s							
NVAR	Mina Array Bea	43.68	319	P	P	21 28 33.8	+1.7	
	comp=Z,0.8nm,0.6s,baz=132,slow=6.7,SNR=8.8							
NVAR				PcP	PcP	21 30 20.6	+1.5	
	comp=Z,0.2nm,0.4s,baz=165,slow=3.7,SNR=2.4							
	comp=Z,0.8nm,0.6s							
NVAR	Mina Array Bea	43.68	319	P	P	21 28 31.5	-0.7	
PLCA	Paso Flores	50.20	168	P	P	21 29 23.6	+0.8	
	comp=Z,1.9nm,0.9s,baz=350,slow=10,SNR=3.2							
	comp=Z,1.9nm,0.9s							
YKA	Yellowknife Ar	58.70	343	P	P	21 30 23.6	-0.6	
	comp=Z,1.0nm,0.6s,baz=130,slow=7.7,SNR=5.4							
	comp=Z,1.0nm,0.6s							
ILAR	Eielson Array	71.51	336	P	P	21 31 47.4	+0.1	
	comp=Z,0.6nm,0.7s,baz=118,slow=4.4,SNR=8.2							
	comp=Z,0.6nm,0.7s							
ESDC	Sonseca Array	76.16	51	P	P	21 32 15.9	+0.7	
	comp=Z,0.4nm,0.8s,baz=293,slow=5.6,SNR=2.9							
	comp=Z,0.4nm,0.8s							
BJI	Beijing	128.67	341	PKP	PKPdf	21 39 34.2	-0.2	
BJI				sPKP		21 39 46.7		
ASAR	Alice Springs	141.68	242	PKhKP	PKPpre	21 39 52.6		
ASAR				PKP	PKPdf	21 39 58.8	-0.3	
	comp=Z,0.3nm,0.7s,baz=127,slow=1.5,SNR=4.2							
ASAR	Alice Springs	141.68	242		PKPdf	21 39 58.9	-0.2	
WRA	Warramunga Arr	142.23	248	PKhKP	PKPpre	21 39 55.6		
	comp=Z,0.6nm,0.5s,baz=91,slow=2.5,SNR=9.2							
WRA				PKP	PKPdf	21 39 59.7	-0.4	
	comp=Z,0.8nm,0.9s,baz=105,slow=2.4,SNR=5.6							
PZH	PanZhiHua	145.00	353	PKP	PKPbc	21 40 04.8	+0.5	
CMAR	Chiang Mai Arr	153.24	356	PKP	PKPdf	21 40 18.4	+0.2	
	comp=Z,0.2nm,0.3s,baz=315,slow=1.5,SNR=3.5							
CMAR				PKPbc	PKPbc	21 40 25.1	-0.6	
	comp=Z,1.3nm,0.8s,baz=331,slow=2.5,SNR=7.5							

IDC 05 21:27:23.9±6.1, 0.50S×131.33E, h0km, mb3.2/2, mbtmp3.1/3, ML3.4/1, Error ellipse: s-maj=429.4km s-min=28.5km az=72.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	19.55	172	P	P	21 31 53.7	+0.3
	0.1nm,0.3s,baz=352,slow=13,SNR=7.1						
WRA				S	Sn	21 35 18.5	-16
	0.3nm,0.4s,baz=360,slow=24,SNR=2.0						
	0.2nm,0.4s						
ASAR	Alice Springs	23.17	174	P	P	21 32 32.2	-0.1
	0.3nm,0.6s,baz=353,slow=11,SNR=5.3						
	0.3nm,0.6s						
MKAR	Makanchi Array	63.63	325	P	P	21 37 56.9	-0.1
	0.2nm,0.5s,baz=103,slow=7.0,SNR=3.9						
	0.2nm,0.5s						

*IDC **05** 21:42:32.5±0.7, 9.14S×109.78W, h0km, mb4.2/24, mbtmp4.2/24, MS4.6/40, Error ellipse: s-maj=22.9km s-min=13.2km az=51.0*

*MOS **05** 21:42:34.0±1.5, 9.30S×109.61W, h10km, mb5.0/10, Error ellipse: s-maj=13.4km s-min=7.4km az=87.6*

*NEIC **05** 21:42:36.1±2.7, 9.5S±0.1×109.9W±0.1, h10km±1km, mb5.0/310, Error ellipse: s-maj=24.5km s-min=17.9km az=270.0*

*BJI **05** 21:42:36.0±0.0, 9.40S×109.80W, h10km, mB5.0/2, Ms5.4/7, Ms7 5.3/7*

*GCMT **05** 21:42:37.1±0.2, 9.23S±0.01×109.94W±0.01, h16km, MW5.2/135, Moment Tensor Solution. s90,c143; s135,c236; Duration: 1ſ0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.07±.01; $M_{\theta\theta}$-0.64±.02; $M_{\phi\phi}$0.71±.02; $M_{r\theta}$-0.27±.04; $M_{\theta\phi}$0.54±.01; $M_{\phi r}$0.12±.04; Best double couple: M0.91500×10^{17} NP1:ϕs63.00000°, δ75.00000°, λ-13.00000°. NP2:ϕs156.00000°, δ78.00000°, λ-165.00000°. Principal axes: T 0.9000, Plg2.0000°, Azm289.0000°; N 0.0290, Plg71.0000°, Azm194.0000°; P -0.9290, Plg19.0000°, Azm20.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 21:42:34.6±0.4, 9.37S±0.07×109.85W±0.10, h10km, n315, σ1ſ80/156, mb5.0/179, MS4.6/51, 6C-2D, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPN	Rapa Nui	17.67	178		Pn	21 46 40.9	0.0
RPN	Rapa Nui	17.67	178	P	Pn	21 46 40.9	0.0
RPN					pmax	pmax	
	comp=Z,391nm,1.4s						
H06S1	SOCORRO T	27.95	358	T	T	22 17 19.3	
	SNR=4.1						
TLIG	Tlapa	28.99	23	P	P	21 48 36.5	+1.6
TAOE	Nuku Hiva Isla	29.91	269	eLR	LR	21 55 50.6	
	comp=Z,3μm,25.6s						
CMIG	Matias Romero	30.17	29	P	P	21 48 41.5	-3.8
	comp=Z,2.2nm,0.9s,baz=209,slow=4.6,SNR=2.3						
CMIG				LR	LR	21 58 04.1	
	comp=Z,2μm,21.1s,baz=208,slow=31						
	comp=Z,2.2nm,0.9s						
ATAH	Atahualpa	31.21	88	P	P	21 48 54.2	-0.7
	comp=Z,5.0nm,1.1s,baz=279,slow=10,SNR=6.2						
ATAH				LR	LR	21 58 26.2	
	comp=Z,2μm,18.2s,baz=262,slow=31						
	comp=Z,5.0nm,1.1s						
JTS	Las Juntas de	31.55	52	P	P	21 48 56.0	-1.5
	comp=Z,3.1nm,0.8s,baz=221,slow=13,SNR=1.5						
JTS				LR	LR	21 58 40.2	
	comp=Z,686nm,18.8s,baz=289,slow=31						
	comp=Z,3.1nm,0.8s						
BOAB	BOACO BROADBAN	32.37	48	P	P	21 49 05.9	+1.3
ACON	Acoyapa	32.42	50	P	P	21 49 05.8	+0.7
MATN	Matagalpa	32.49	47	P	P	21 49 08.2	+2.3
MATN				IAmb	IAmb	21 49 08.5	
	comp=Z,23nm,1.3s						
NNA	Nana	32.53	98	LR	LR	21 58 36.0	
	comp=Z,2μm,20.3s,baz=280,slow=30						
OTAV	Otavalo	32.69	75	P	P	21 49 11.7	+3.7
PETF	Flores	32.76	37	P	P	21 49 10.4	+2.4
LPIG	La Paz	33.27	359	LR	LR	21 59 19.4	
	comp=Z,712nm,18.2s,baz=185,slow=30						
H03N2	Juan Fernandez	37.19	135	T	T	22 29 21.6	
	baz=306,slow=77,SNR=79						
H03N1	Juan Fernandez	37.21	135	T	T	22 29 24.6	
	baz=306,slow=77,SNR=78						
H03N3	Juan Fernandez	37.21	135	T	T	22 29 21.6	
	baz=306,slow=77,SNR=91						
ROSC	El Rosal	38.12	70	P	P	21 49 52.3	-2.5
	comp=Z,5.8nm,0.4s,baz=300,slow=20,SNR=1.4						
ROSC				LR	LR	22 02 49.9	
	comp=Z,414nm,19.4s,baz=246,slow=32						
	comp=Z,5.8nm,0.4s						
HSIG		38.18	358	P	P	21 49 54.8	+0.3
HSIG				IAmb	IAmb	21 50 05.0	
	comp=Z,30nm,1.2s						
833A	Chaparral WMA,	38.81	15	P	P	21 50 01.3	+1.5
	baz=196						
TX31	Lajitas Ar. Si	38.94	9	P	P	21 50 03.5	+2.5
TX32	Lajitas Array	38.94	9	P	P	21 50 03.5	+2.5
TXAR	Lajitas Array	38.94	9	P	P	21 49 56.5	-4.5
	comp=Z,0.1nm,0.8s,baz=152,slow=8.2,SNR=3.5						
TXAR				PcP	PcP	21 52 08.8	-2.9
	comp=Z,0.4nm,0.8s,baz=185,slow=4.3,SNR=3.2						
TXAR				LR	LR	22 03 01.2	
	comp=Z,624nm,19.2s,baz=176,slow=32						
TXAR	Lajitas Array	38.94	9	P	P	21 50 03.4	+2.4
TXAR	Lajitas Array	38.94	9	P	P	21 50 03.4	+2.4
PPT	Papeete	39.41	254	LR	LR	22 02 06.0	
	comp=Z,837nm,18.4s,baz=84,slow=30						
PPT2	Papeete2	39.41	254	eLR	LR	22 00 10.2	
	comp=Z,2μm,25.8s						
PB16	IPOC Station P	40.09	107	P	P	21 50 12.7	+1.3
TBI	Tubuai	40.31	245	eLR	LR	22 00 38.5	
	comp=Z,1μm,25.5s						
SFX	San Felipe	40.46	353	P	P	21 50 13.9	+0.4
MNTX	Comudas Mount	41.06	6	P	P	21 50 17.8	-0.7
214A	Organ Pipe Nat	41.19	356	P	P	21 50 20.4	+0.8
214A	Organ Pipe Nat	41.19	356	P	P	21 50 22.3	+2.7
	baz=176						
LPAZ	La Paz	41.20	104	P	P	21 50 19.9	-0.7
	comp=Z,3.2nm,0.9s,baz=296,slow=6.9,SNR=12						
LPAZ				LR	LR	22 04 31.1	
	comp=Z,1μm,18.1s,baz=272,slow=32						
	comp=Z,3.2nm,0.9s						
LPAZ	La Paz	41.20	104	P	P	21 50 20.6	0.0
LPAZ	La Paz	41.20	104	P	P	21 50 20.6	0.0
LPAZ				pmax	pmax		
	comp=Z,42nm,1.9s						
LVC	Limon Verde	41.35	114	P	P	21 50 20.4	-1.1
	comp=Z,3.4nm,0.8s,baz=302,slow=11,SNR=3.4						
LVC				LR	LR	22 03 00.2	
	comp=Z,1μm,19.7s,baz=292,slow=30						
	comp=Z,3.4nm,0.8s						
HKT	Hockley	41.36	19	P	P	21 50 21.4	+0.6
HKT	Hockley	41.36	19	iP	P	21 50 21.3	+0.5
HKT				pmax	pmax		
	comp=Z,15nm,1.5s						
TUC	Tucson	41.46	359	P	P	21 50 22.2	+0.4
TUC	Tucson	41.46	359	P	P	21 50 22.2	+0.4
TUC				pmax	pmax		
	comp=Z,9.0nm,1.5s						
435B	Jarrell	41.63	16	P	P	21 50 24.4	+1.3
	baz=198						
121A	Cookes Peak, D	41.72	3	P	P	21 50 25.2	+1.2
	baz=183						
YUH	Yuha Desert	42.18	352	P	P	21 50 29.1	+1.4
YUH				IAmb	IAmb	21 50 37.3	
	comp=Z,39nm,1.6s						
IKP	In-Ko-Pah, Jac	42.21	352	P	P	21 50 30.6	+2.6
	baz=171						
BAR	Barrett	42.32	351	IAmb	IAmb	21 50 38.3	
	comp=Z,44nm,1.7s						
GLA	Glamis	42.45	354	P	P	21 50 31.6	+1.7
	baz=173						
SWSC	Sam W. Stewart	42.46	353	P	P	21 50 31.5	+1.7
	baz=171						
MONP2	Monument Peak	42.49	352	P	P	21 50 31.5	+1.1
	baz=170						
WHTX	Lake Whitney,	42.80	16	P	P	21 50 33.7	+1.0
	baz=198						
SDV	Santo Domingo	43.06	66	P	P	21 50 34.7	-0.6
	comp=Z,6.5nm,0.3s,baz=233,slow=13,SNR=4.7						
	comp=Z,6.5nm,0.3s						
BLYC	Blythe	43.11	354	P	P	21 50 38.4	+3.2
PFO	Pinyon Flats O	43.20	352	P	P	21 50 34.1	-1.9
	comp=Z,0.5nm,0.3s,baz=181,slow=7.8,SNR=4.3						
PFO				LR	LR	22 04 20.9	
	comp=Z,391nm,18.2s,baz=175,slow=30						
	comp=Z,0.5nm,0.3s						
PFO	Pinyon Flats O	43.20	352	P	P	21 50 39.3	+3.2
PFO	Pinyon Flats O	43.20	352	P	P	21 50 39.3	+3.2
PFO				pmax	pmax		
	comp=Z,22nm,1.6s						
BO01	Tunca	43.34	131	P	P	21 50 38.9	+1.7
BO01				IAmb	IAmb	21 50 39.7	
	comp=Z,49nm,1.5s						
BNM	Barren Site	43.39	4	P	P	21 50 39.7	+2.0
BELC	Belle Mtn. Jos	43.53	353	P	P	21 50 39.8	+1.1
	baz=171						
IRM	Iron Mountain	43.58	354	P	P	21 50 40.0	+1.0
	baz=172						
MSTX	Muleshoe	43.62	9	IAmb	IAmb	21 50 42.1	
	comp=Z,33nm,1.6s						
X18A	Snowflake	43.66	360	IAmb	IAmb	21 50 47.8	
	comp=Z,33nm,1.7s						
LMEL	Las Melosas	43.78	130	P	P	21 50 42.8	+1.9
LMEL				IAmb	IAmb	21 51 05.0	
	comp=Z,65nm,1.6s						
ANMO	Albuquerque	44.19	4	P	P	21 50 41.7	-2.4
	comp=Z,0.3nm,0.3s,baz=140,slow=9.7,SNR=6.8						
ANMO				LR	LR	22 06 10.5	
	comp=Z,799nm,18.6s,baz=193,slow=32						
	comp=Z,0.3nm,0.3s						
ANMO	Albuquerque	44.19	4	P	P	21 50 46.2	+2.1
ANMO	Albuquerque	44.19	4	ceP	P	21 50 44.3	+0.2
ANMO				pmax	pmax		
	comp=Z,8.0nm,1.5s						
W18A	Petrified Fore	44.25	0	IAmb	IAmb	21 50 54.3	
	comp=Z,39nm,1.5s						
W13A	Hualapai Mount	44.39	355	IAmb	IAmb	21 50 56.5	
	comp=Z,19nm,1.1s						
AMTX	Amarillo	44.69	10	P	P	21 50 48.7	+0.7
GSC	Goldstone, Bar	44.91	352	IAmb	IAmb	21 50 59.6	
	comp=Z,57nm,1.9s						
BCW	Bitter Crk WRg	44.99	349	IAmb	IAmb	21 51 01.6	
	comp=Z,49nm,1.4s						
BAUV	El Baul	45.44	68	P	P	21 50 52.9	-1.3
ISA	Isabella, Lake	45.52	350	IAmb	IAmb	21 51 04.4	
	comp=Z,21nm,1.5s						
U15A	North Rim	45.61	357	IAmb	IAmb	21 51 06.5	
	comp=Z,25nm,1.8s						
WLAR	White Oak Lake	45.69	20	IAmb	IAmb	21 51 00.3	
	comp=Z,41nm,1.3s						
SHPR	Sheep Range	45.91	354	IAmb	IAmb	21 51 06.8	
	comp=Z,29nm,1.5s						
SAML	Samuel	46.05	93	P	P	21 50 58.6	-0.5
SAML				IAmb	IAmb	21 51 06.1	
	comp=Z,16nm,0.9s						
SAML	Samuel	46.05	93	P	P	21 50 58.6	-0.5
SAML				pmax	pmax		
	comp=Z,16nm,0.9s						
LCMT	Little Creek M	46.25	356	IAmb	IAmb	21 51 09.4	
	comp=Z,38nm,1.9s						
MIAR	Mount Ida	46.32	19	IAmb	IAmb	21 51 09.5	
	comp=Z,13nm,1.0s						
MVCO	Mesa Verde	46.35	1	IAmb	IAmb	21 51 11.4	
	comp=Z,70nm,1.2s						
TPNV	Topopah Spring	46.47	353	P	P	21 51 03.8	+1.7
X40A	Basin Creek Fa	46.51	19	IAmb	IAmb	21 51 34.1	
	comp=Z,8.2nm,0.7s						
PLCA	Paso Flores	46.73	139	P	P	21 51 05.5	+1.4
	comp=Z,3.7nm,0.9s,baz=309,slow=7.2,SNR=6.4						
PLCA				LR	LR	22 05 57.2	
	comp=Z,1μm,18.4s,baz=302,slow=30						
	comp=Z,3.7nm,0.9s						
PLCA	Paso Flores	46.73	139	P	P	21 51 06.2	+2.1
PLCA				IAmb	IAmb	21 51 06.5	
	comp=Z,15nm,1.2s						
PLCA	Paso Flores	46.73	139	P	P	21 51 06.2	+2.1
PLCA				pmax	pmax		
	comp=Z,15nm,1.3s						
CCUT	Cedar City	46.79	356	IAmb	IAmb	21 51 15.2	
	comp=Z,25nm,1.7s						
SZCU	Shurtz Canyon	46.82	356	IAmb	IAmb	21 51 15.2	
	comp=Z,28nm,1.6s						
LCH	Last Change Ra	46.93	351	IAmb	IAmb	21 51 09.7	
	comp=Z,19nm,1.9s						
SDCO	Great Sand Dun	47.05	5	IAmb	IAmb	21 51 10.5	
	comp=Z,41nm,2.0s						
MTPU	Mount Pierson	47.22	357	IAmb	IAmb	21 51 17.9	
	comp=Z,33nm,2.0s						
T35A	Sooner Cattle	47.72	14	IAmb	IAmb	21 51 16.0	
	comp=Z,15nm,0.8s						
OXF	Oxford	47.75	23	P	P	21 51 12.0	0.0
SIV	San Ignacio	47.96	103	P	P	21 51 12.8	-1.2
	comp=Z,4.4nm,1.0s,baz=279,slow=6.7,SNR=13						
SIV				LR	LR	22 08 27.4	
	comp=Z,871nm,20.8s,baz=290,slow=32						
	comp=Z,4.4nm,1.0s						
FCAR	Ozark Folk Cen	48.02	19	IAmb	IAmb	21 51 22.5	
	comp=Z,25nm,1.7s						
Q16A	Castle Valley	48.06	359	IAmb	IAmb	21 51 25.1	
	comp=Z,19nm,1.5s						
LHV	Little Huntoon	48.06	351	IAmb	IAmb	21 51 24.6	
	comp=Z,23nm,1.3s						
CMB	Columbia Colle	48.18	349	IAmb	IAmb	21 51 23.9	
	comp=Z,34nm,1.9s						
NVAR	Mina Array Bea	48.20	351	P	P	21 51 12.6	-3.1
	comp=Z,1.1nm,0.7s,baz=181,slow=11,SNR=11						
NVAR				LR	LR	22 07 08.5	
	comp=Z,300nm,20.4s,baz=182,slow=31						
	comp=Z,1.1nm,0.7s						
SRU	San Rafael Swe	48.24	359	IAmb	IAmb	21 51 18.5	
	comp=Z,22nm,1.8s						
Y49A	Blount Mountai	48.42	26	IAmb	IAmb	21 51 22.1	
	comp=Z,14nm,0.8s						
RYN	Ryan	48.43	351	IAmb	IAmb	21 51 28.0	
	comp=Z,17nm,1.2s						
LCAR	Lake Charles	48.51	20	IAmb	IAmb	21 51 26.5	
	comp=Z,28nm,1.4s						
Z51A	Franklin	48.52	28	IAmb	IAmb	21 51 26.9	
	comp=Z,26nm,1.1s						
P17A	Butcher Ranch,	48.60	359	IAmb	IAmb	21 51 29.5	
	comp=Z,12nm,1.1s						
X48A	Hartselle	48.65	25	IAmb	IAmb	21 51 22.5	
	comp=Z,26nm,1.6s						
P18A	Preston Nutter	48.75	360	IAmb	IAmb	21 51 30.9	
	comp=Z,17nm,1.3s						
YERR	Yerington	48.90	350	IAmb	IAmb	21 51 31.0	
	comp=Z,39nm,1.6s						
PNTR	Pine Nut	49.06	350	IAmb	IAmb	21 51 31.2	
	comp=Z,51nm,1.9s						
ISCO	Idaho Springs	49.08	4	P	P	21 51 22.8	+0.3
NLU	North Lily Min	49.12	358	IAmb	IAmb	21 51 26.7	
	comp=Z,28nm,1.8s						
MGMO	Mountain Grove	49.13	19	IAmb	IAmb	21 51 31.1	
	comp=Z,12nm,0.8s						
MPU	Maple Canyon	49.16	358	IAmb	IAmb	21 51 33.7	
	comp=Z,16nm,1.3s						
O20A	White River Ci	49.28	2	IAmb	IAmb	21 51 35.1	
	comp=Z,30nm,1.5s						
S39A	Bolivar	49.31	17	IAmb	IAmb	21 51 32.0	
	comp=Z,12nm,0.9s						
FPAL	Fort Paine	49.35	27	IAmb	IAmb	21 51 33.0	
	comp=Z,16nm,0.9s						
DUG	Dugway, Tooele	49.39	357	P	P	21 51 26.5	+1.8
PBMO	Poplar Bluff	49.40	21	IAmb	IAmb	21 51 33.2	
	comp=Z,17nm,1.1s						
GOGA	Godfrey	49.40	29	P	P	21 51 25.0	+0.3
Y52A	Lilburn	49.49	28	IAmb	IAmb	21 51 34.2	
	comp=Z,18nm,1.0s						
SWET	Sewanee	49.78	26	IAmb	IAmb	21 51 37.0	
	comp=Z,18nm,1.0s						
WVT	Waverly	49.79	23	P	P	21 51 29.4	+1.8
WVT	Waverly	49.79	23	P	P	21 51 29.4	+1.8
WVT				pmax	pmax		
	comp=Z,9.0nm,1.0s						
V48A	Smith Brothers	49.85	25	IAmb	IAmb	21 51 36.5	
	comp=Z,28nm,1.4s						
BEKR	Beckworth	49.95	349	IAmb	IAmb	21 51 31.8	
	comp=Z,30nm,1.9s						
ELK	Elko	50.11	355	LR	LR	22 09 15.7	
	comp=Z,400nm,18.5s,baz=179,slow=32						
ELK	Elko	50.11	355	IAmb	IAmb	21 51 40.3	
	comp=Z,36nm,1.9s						
ELK	Elko	50.11	355	P	P	21 51 31.3	+1.0
CCM	Cathedral Cave	50.28	19	P	P	21 51 29.6	-1.7
CCM	Cathedral Cave	50.28	19	P	P	21 51 29.6	-1.7
CCM				pmax	pmax		
	comp=Z,11nm,0.9s						
CLTN	Cedars of Leba	50.36	25	IAmb	IAmb	21 51 40.3	
	comp=Z,21nm,1.5s						
FVM	French Village	50.49	20	IAmb	IAmb	21 51 35.2	
	comp=Z,36nm,1.9s						
W52A	Murphy	50.57	28	IAmb	IAmb	21 51 42.6	
	comp=Z,22nm,0.8s						
CPCT

comp=Z,4.3nm,1.0s
V55A Taylorsville 52.46 29 IAmb IAmb 21 51 52.6
comp=Z,25nm,0.9s
U54A Nelsons Funny 52.71 28 IAmb IAmb 21 51 52.2
comp=Z,22nm,1.1s
R49A Shelbyville 52.72 24 IAmb IAmb 21 51 57.5
comp=Z,30nm,1.1s
BLO Bloomington 52.95 23 IAmb IAmb 21 51 59.2
comp=Z,14nm,0.8s
R50A Paris 53.06 25 IAmb IAmb 21 51 59.8
comp=Z,21nm,1.1s
J08A Circle Bar Ran 53.06 352 IAmb IAmb 21 52 03.6
comp=Z,37nm,1.8s
FLWY Flagg Ranch 53.21 359 IAmb IAmb 21 52 03.0
comp=Z,45nm,1.4s
U56A King 53.26 30 IAmb IAmb 21 51 56.3
comp=Z,42nm,1.4s
V58A Windy Hill, Pi 53.46 31 IAmb IAmb 21 51 59.5
comp=Z,12nm,0.9s
RSSD Black Hills 53.50 5 P **P** **21 51 55.6 +0.1**
RSSD IAmb IAmb 21 52 01.9
comp=Z,18nm,1.4s
RSSD Black Hills 53.50 5 P **P** **21 51 55.6 +0.1**
RSSD pmax pmax
comp=Z,17nm,1.4s
P48A Milroy 53.62 23 IAmb IAmb 21 52 03.4
comp=Z,18nm,1.0s
SFIN Lafayette 53.79 21 IAmb IAmb 21 52 01.1
comp=Z,10nm,0.9s
I07A Izee 53.92 351 IAmb IAmb 21 52 08.4
comp=Z,44nm,1.9s
BLA Blacksburg 53.93 29 P **P** **21 51 59.2 +0.6**
P49A Miami Univ. Ec 53.96 24 IAmb IAmb 21 52 06.1
comp=Z,20nm,1.2s
S54A Dingess, Becki 53.99 28 IAmb IAmb 21 52 07.3
comp=Z,24nm,0.9s
ECSD EROS Data Cent 54.21 12 IAmb IAmb 21 52 08.2
comp=Z,22nm,1.8s
T57A Hurt 54.33 30 IAmb IAmb 21 52 10.8
comp=Z,26nm,1.1s
BMO Blue Mountains 54.39 353 P **P** **21 52 01.9 +0.1**
BOZ Bozeman (W) 54.74 358 P **P** **21 52 03.9 -0.5**
JFWS Jewell Farm 55.03 18 IAmb IAmb 21 52 14.2
comp=Z,20nm,1.1s
S57A Dark Hollow, R 55.08 30 IAmb IAmb 21 52 15.2
comp=Z,13nm,1.0s
P52A Corning 55.12 26 IAmb IAmb 21 52 12.3
comp=Z,26nm,1.2s
Q54A Coxs Mills 55.17 27 IAmb IAmb 21 52 16.0
comp=Z,28nm,1.1s
T59A Double "B" Far 55.17 31 IAmb IAmb 21 52 16.0
comp=Z,14nm,1.0s
F10A Beach Ranch, E 55.49 354 IAmb IAmb 21 52 22.5
comp=Z,34nm,1.9s
O52A Adamsville 55.65 26 IAmb IAmb 21 52 14.8
comp=Z,13nm,0.9s
LAO LASA Array 55.90 3 IAmb IAmb 21 52 17.2
comp=Z,14nm,0.8s
USHA Ushuaia 55.94 152 LR LR 22 10 52.1
comp=Z,445nm,19.2s,baz=202,slow=30
O53A New Philadelph 56.03 26 IAmb IAmb 21 52 21.8
comp=Z,18nm,0.9s
SPMN Marine on St. 56.48 14 IAmb IAmb 21 52 24.6
comp=Z,16nm,1.2s
P57A Homestead Farm 56.89 29 IAmb IAmb 21 52 28.8
comp=Z,28nm,1.2s
F36A Milaca 56.90 14 IAmb IAmb 21 52 24.0
comp=Z,16nm,0.8s
G40A Rib Lake 57.20 16 IAmb IAmb 21 52 25.1
comp=Z,39nm,1.7s
NEW Newport 57.74 354 LR LR 22 13 36.6
comp=Z,272nm,18.4s,baz=180,slow=32
NEW Newport 57.74 354 P **P** **21 52 26.2 +0.5**
DGMT Dagmar 57.81 4 IAmb IAmb 21 52 31.4
comp=Z,26nm,1.1s
SSPA Standing Stone 57.85 28 P **P** **21 52 29.0 +2.5**
SSPA IAmb IAmb 21 52 36.1
comp=Z,32nm,1.2s
M55A Ridgway 58.10 27 IAmb IAmb 21 52 32.6
comp=Z,31nm,1.2s
COWI Conover 58.26 17 IAmb IAmb 21 52 37.7
comp=Z,13nm,0.8s
AGMN Agassiz Nation 58.74 11 IAmb IAmb 21 52 40.6
comp=Z,29nm,1.6s
MDP Montagnes des 58.80 78 LR LR 22 16 13.4
comp=Z,405nm,18.2s,baz=264,slow=34
BDFB Brasilia 60.52 103 P **P** **21 52 44.7 -1.1**
BDFB LR LR 22 16 05.2
comp=Z,978nm,21.0s,baz=302,slow=33
comp=Z,1.5nm,0.6s
SADO Sadowa 60.61 25 LR LR 22 18 14.9
comp=Z,483nm,18.0s,baz=254,slow=36
ULM Lac du Bonnet 60.61 10 P **P** **21 52 42.6 -2.9**
comp=Z,5.3nm,0.9s,baz=180,slow=11,SNR=2.9
ULM LR LR 22 16 11.7
comp=Z,191nm,19.7s,baz=154,slow=33
comp=Z,5.3nm,0.9s
ULM Lac du Bonnet 60.61 10 P **P** **21 52 46.3 +0.8**
ULM IAmb IAmb 21 52 57.2
comp=Z,19nm,1.2s
ULM Lac du Bonnet 60.61 10 P **P** **21 52 46.3 +0.8**
ULM pmax pmax
comp=Z,19nm,1.3s
J57A Williamstown 60.89 28 IAmb IAmb 21 52 52.5
comp=Z,13nm,0.8s
NCB Newcomb 62.15 28 P **P** **21 52 53.7 -2.3**
EDM Edmonton 62.42 358 P **P** **21 52 57.5 -0.1**
EDM Edmonton 62.42 358 P **P** **21 52 57.6 -0.1**
EDM pmax pmax
comp=Z,35nm,1.2s
LONY Lake Ozonia 62.48 28 P **P** **21 52 60.0 +1.7**
LONY IAmb IAmb 21 53 06.9
comp=Z,16nm,1.1s
FRNY Flat Rock 63.10 28 IAmb IAmb 21 53 11.1
comp=Z,21nm,1.1s
BBB Bella Bella 63.29 348 P **P** **21 53 00.7 -2.7**
comp=Z,6.0nm,0.8s,baz=172,slow=12,SNR=1.9
comp=Z,6.0nm,0.8s
LBNH Lisbon 63.45 30 P **P** **21 53 06.8 +2.2**
LBNH Lisbon 63.45 30 P **P** **21 53 06.9 +2.2**
LBNH pmax pmax
comp=Z,24nm,1.2s
PMSA Palmer Station 63.83 160 LR LR 22 11 51.0
comp=Z,169nm,20.3s,baz=296,slow=28
VLDQ Val d'Or 64.00 24 IAmb IAmb 21 53 15.8
comp=Z,34nm,1.8s
G62A West of Eustis 64.84 30 IAmb IAmb 21 53 23.0
comp=Z,15nm,1.1s
PKME Peaks-Kenny Pk 65.49 30 IAmb IAmb 21 53 22.5
comp=Z,14nm,0.8s
D62A Allapoint, All 66.90 29 IAmb IAmb 21 53 32.1
comp=Z,15nm,0.9s
LMN Caledonia Moun 68.19 32 IAmb IAmb 21 53 39.9
comp=Z,13nm,0.9s
DLBC Dease Lake 69.54 349 P **P** **21 53 41.9 -1.5**
comp=Z,1.8nm,0.7s,baz=190,slow=5.5,SNR=4.1
comp=Z,1.8nm,0.7s
DLBC Dease Lake 69.54 349 P P 21 53 48.5 +5.0
DLBC IAmb IAmb 21 53 56.3
comp=Z,13nm,1.3s
ORCD Orcadas 69.82 152 P **P** **21 53 45.5 +0.4**
YKA Yellowknife Ar 71.74 358 P **P** **21 53 55.5 -1.1**
comp=Z,1.3nm,0.9s,baz=168,slow=6.0,SNR=4.0
YKA LR LR 22 23 21.0
comp=Z,271nm,18.2s,baz=164,slow=34
comp=Z,1.3nm,0.9s
BFZ Birch Farm 71.75 230 P **P** **21 53 57.0 -0.3**
RCBR Riachuelo 73.28 93 LR LR 22 25 34.5
comp=Z,658nm,18.5s,baz=52,slow=35
HYT Haines Junctio 73.31 346 P P 21 54 11.6 +5.3
HYT IAmb IAmb 21 54 17.4
comp=Z,12nm,1.0s
SCHQ Schefferville 73.41 24 P **P** **21 54 05.8 -1.0**
comp=Z,4.4nm,0.8s,baz=243,slow=4.7,SNR=8.4
SCHQ LR LR 22 25 18.2
comp=Z,702nm,20.4s,baz=246,slow=35
comp=Z,4.4nm,0.8s
SCHQ Schefferville 73.41 24 IAmb IAmb 21 54 15.6
comp=Z,26nm,1.4s
GRNC Granite Creek 74.29 344 IAmb IAmb 21 54 22.6
comp=Z,13nm,1.0s
BMRM Bremner River 75.27 343 IAmb IAmb 21 54 28.7
comp=Z,37nm,1.4s
KDAK Kodiak Island 75.42 338 P **P** **21 54 17.7 -0.7**
comp=Z,12nm,1.1s,baz=184,slow=11,SNR=2.0
KDAK LR LR 22 20 13.8
comp=Z,289nm,18.3s,baz=160,slow=30
comp=Z,12nm,1.1s
GLB Gilahina Butte 75.44 344 IAmb IAmb 21 54 28.4
comp=Z,20nm,1.4s
M26K Nabesna, AK 76.02 345 IAmb IAmb 21 54 32.0
comp=Z,14nm,1.3s
KLU Klutina 76.07 343 IAmb IAmb 21 54 32.1
comp=Z,17nm,1.2s
L27K Beaver Creek, 76.28 346 IAmb IAmb 21 54 33.4
comp=Z,12nm,1.1s
DAWY Dawson 76.57 347 IAmb IAmb 21 54 35.3
comp=Z,16nm,1.1s
SCM Sheep Creek Mo 76.75 343 IAmb IAmb 21 54 36.5
comp=Z,24nm,1.1s
PMR Palmer 77.10 342 IAmb IAmb 21 54 32.7
comp=Z,13nm,0.9s
PAX Paxson 77.14 344 IAmb IAmb 21 54 37.1
comp=Z,17nm,1.4s
SCRK Sand Creek 77.58 345 IAmb IAmb 21 54 40.0
comp=Z,17nm,1.4s
DHY Denali Highway 77.75 344 IAmb IAmb 21 54 41.5
comp=Z,17nm,1.4s
J26L Joseph Creek 77.91 346 IAmb IAmb 21 54 41.0
comp=Z,15nm,1.4s
EPYK Eagle Plains 78.07 349 IAmb IAmb 21 54 42.8
comp=Z,31nm,1.2s
SKT Skwentna 78.14 341 IAmb IAmb 21 54 43.6
comp=Z,20nm,1.1s
N19K Bonanza Creek 78.28 339 IAmb IAmb 21 54 42.5
comp=Z,17nm,1.2s
J25K Salcha River, 78.45 345 IAmb IAmb 21 54 44.9
comp=Z,17nm,1.6s
N18K Kilae Creek 78.68 339 IAmb IAmb 21 54 46.5
comp=Z,24nm,1.3s
MCK McKinley 78.70 343 IAmb IAmb 21 54 46.0
comp=Z,29nm,1.4s
TRF Thorofare Moun 78.87 343 IAmb IAmb 21 54 46.5
comp=Z,18nm,1.1s
ILAR Eielson Array 78.96 345 P **P** **21 54 37.0 -1.2**
comp=Z,2.2nm,1.0s,baz=165,slow=5.2,SNR=11
comp=Z,2.2nm,1.0s
UNV Unalaska Valle 78.98 330 P **P** **21 54 40.0 +1.5**
WRH Wood River Hil 79.04 344 IAmb IAmb 21 54 44.1
comp=Z,18nm,1.0s
INK Inuvik 79.29 351 P **P** **21 54 39.8 -0.1**
comp=Z,3.8nm,0.8s,baz=92,slow=6.0,SNR=3.8
INK LR LR 22 26 40.8
comp=Z,122nm,20.2s,baz=142,slow=34
comp=Z,3.8nm,0.8s
COLA College 79.30 344 *i* P **P** **21 54 42.3 +2.3**
COLA pmax pmax
comp=Z,10.0nm,1.4s
FRB Frobisher Bay 79.35 17 LR LR 22 27 59.3
comp=Z,695nm,18.8s,baz=208,slow=34
NEA2 Nenana 79.40 344 IAmb IAmb 21 54 50.5
comp=Z,17nm,1.2s
MDM Murphy Dome 79.46 344 IAmb IAmb 21 54 49.6
comp=Z,24nm,1.5s
BPAW Bear Paw Mtn. 79.57 343 IAmb IAmb 21 54 50.5
comp=Z,28nm,1.4s
K20K Telida 79.95 341 IAmb IAmb 21 54 53.1
comp=Z,30nm,1.1s
MLY Manley 80.20 344 IAmb IAmb 21 54 54.9
comp=Z,18nm,1.3s
VNDA Vanda 80.54 193 P **P** **21 54 47.0 +0.3**
comp=Z,0.4nm,0.6s,baz=144,slow=5.3,SNR=1.8
VNDA LR LR 22 23 02.7
comp=Z,246nm,20.1s,baz=20,slow=30
comp=Z,0.4nm,0.6s
J20K Nowinta River 80.56 342 IAmb IAmb 21 54 56.5
comp=Z,16nm,1.1s
QSPA South Pole Qui 80.71 180 LR LR 22 25 47.7
comp=Z,202nm,18.5s,baz=58,slow=32
QSPA South Pole Qui 80.71 180 P **P** **21 54 50.0 +2.1**
QSPA IAmb IAmb 21 54 55.7
comp=Z,12nm,0.8s
DZM Mont Dzumac 80.74 249 *e*LR LR 22 19 20.4
comp=Z,517nm,20.5s
H21K Melozitna Rive 81.25 343 IAmb IAmb 21 55 00.4
comp=Z,17nm,1.1s
RES Resolute Bay 84.41 4 LR LR 22 30 22.2
comp=Z,416nm,20.5s,baz=226,slow=34
VNA3 Neumayer Olymp 84.45 161 P **P** **21 55 08.1 +0.8**
VNA1 Neumayer--Stat 85.04 161 P **P** **21 55 11.1 +1.0**
VNA1 S **S** **22 05 38.8 -0.4**
VNA2 Neumayer--Watz 85.25 161 P **P** **21 55 11.2 -0.1**
baz=239,slow=3.1
SNAA Sanae 86.44 162 P **P** **21 55 17.8 +0.5**
SNAA Sanae 86.44 162 P **P** **21 55 19.4 +2.1**
SNAA IAmb IAmb 21 55 21.7
comp=Z,26nm,1.7s
SNAA Sanae 86.44 162 *i* P **P** **21 55 18.5 +1.3**
SNAA pmax pmax
comp=Z,16nm,1.7s
H11S2 WAKE ISLAND Hy 86.79 289 T T 23 31 02.0
baz=101,slow=75,SNR=64
H11S1 WAKE ISLAND Hy 86.80 289 T T 23 31 03.0
baz=101,slow=75,SNR=69
H11S3 WAKE ISLAND Hy 86.81 289 T T 23 31 04.4
baz=101,slow=75,SNR=72
H11N3 WAKE ISLAND Hy 86.83 290 T T 23 31 11.0
baz=102,slow=74,SNR=142
H11N2 WAKE ISLAND Hy 86.85 290 T T 23 31 13.3
baz=102,slow=74,SNR=113
H11N1 WAKE ISLAND Hy 86.85 290 T T 23 31 12.4
baz=102,slow=74,SNR=110
SFJD Kangerlussuaq 87.16 20 LR LR 22 33 20.3
comp=Z,378nm,18.0s,baz=243,slow=35
SHEM Shemya Is, Ala 89.07 324 LR LR 22 27 29.8
comp=Z,355nm,20.4s,baz=128,slow=30
SUMG Summit 93.41 17 *i* P **P** **21 55 50.0 -0.2**
BILL Bilibino 96.33 338‖ *e*P **P** **21 56 04.9 +1.7**
BILL 22 00 06.0
BILL S **SKSac** **22 06 41.0 +1.4**
BILL PS **PS** **22 08 44.0 0.0**
BILL pmax pmax
comp=Z,2.0nm,0.4s
BILL MLR MLR
comp=Z,70nm,15.0s
BORG Borgarnes 97.77 26 LR LR 22 39 39.7
comp=Z,180nm,18.6s,baz=263,slow=35
KLR Kul'dur 115.46 320 *i* PKIKP **PKPdf** **22 01 17.9 +1.0**
CLL Collm 117.52 36 *e*PS PS 22 12 14.0 -3.5
CLL *e*PPS PPS 22 13 30.0
CLL *e*SS SS 22 18 48.0 +4.3
CLL *e*x x 22 19 36.0
CLL *e*SSS SSS 22 23 00.0
GERES GERESS Array B 118.80 39 PKP **PKPdf** **22 01 21.2 -2.3**
comp=Z,0.1nm,0.3s,baz=347,slow=4.0,SNR=2.5
NACGM Naroch 123.12 28‖ *e*PKP **PKPdf** **22 01 30.7 -0.7**
baz=306
KLMR Klimovskoe 123.83 17 *e*PKIKP **PKiKP** **22 01 34.9 +2.0**
KLMR *e* 22 03 15.2
KLMR pmax pmax
comp=Z,16nm,1.5s
KLMR Klimovskoe 123.83 17 *e*PKPdf **PKiKP** **22 01 34.9 +2.0**
KLMR AMP 22 01 38.6
comp=Z,16nm,1.5s
KLMR *e*PP **PP** **22 03 15.2 +0.1**
MNK Minsk 123.88 28 *i* PKIKP **PKiKP** **22 01 33.5 +0.4**
MNK *i* 22 03 16.5
MNK *i* PPP PPP 22 05 54.7
MNK *i* 22 08 38.1
MNK *i* SS SS 22 20 03.7 -0.9
MNK *i* SSS SSS 22 24 36.0
MNK pmax pmax
comp=E,1.0nm,1.1s
MNK pmax pmax
comp=Z,6.0nm,1.0s
MNK MLR MLR
comp=Z,180nm,10.0s
MNK MLR MLR
comp=E,12nm,13.0s
MNK Minsk 123.88 28 *i* PKP **PKiKP** **22 01 33.6 +0.4**
comp=E,1.0nm,1.1s
MNK *i* PKP **PKiKP** **22 01 33.6 +0.4**
MNK *i* PKP **PKiKP** **22 01 33.6 +0.4**
comp=Z,6.0nm,1.1s,baz=307
MNK *i* PP **PP** **22 03 16.6 +0.8**
MNK *i* SKP 22 05 09.5
MNK *i* PPP PPP 22 05 54.8
MNK *i* SKS **SKSdf** **22 08 38.1 -6.8**
MNK *i* SKKS **SKKSdf** **22 19 05.9 -8.0**
MNK *i* SS **SS** **22 20 03.8 -0.9**
MNK *i* SSS SSS 22 24 36.0
MNK *i* LR LR 22 50 40.7
MNK *i* LRM MLR 22 57 00.7
comp=Z,180nm,10.2s
MNK *i* LRM MLR 22 57 22.1
comp=E,12nm,12.8s
AKASG Malin Array Be 126.80 31 PKP **PKPdf** **22 01 36.5 -2.1**
comp=E,0.4nm,0.5s,baz=306,slow=2.4,SNR=4.1
OBN Obninsk 127.21 24‖ *i* PKIKP **PKiKP** **22 01 41.5 +1.8**
OBN *e* 22 01 44.8
OBN pmax pmax
comp=Z,9.0nm,0.9s
OBN MLR MLR
comp=Z,116nm,16.0s
ULN Ulaanbaatar 130.61 328 *i* PKIKP **PKiKP** **22 01 47.5 +0.4**
SONM Songino Array 130.98 328 PKP **PKPdf** **22 01 45.4 -1.5**
comp=Z,0.5nm,0.8s,baz=0.0,slow=2.1,SNR=5.2
HHC Hu-ho-hao-te 131.82 318 *e*PKP **PKiKP** **22 01 49.2 -0.5**
ZALV Zalesovo Beam 134.01 348 PKP **PKPdf** **22 01 52.1 -0.1**
comp=Z,0.3nm,0.4s,baz=46,slow=8.3,SNR=2.3
BRTR Keskin Array B 135.62 41 PKP **PKPdf** **22 01 55.0 -0.8**
comp=Z,2.3nm,0.8s,baz=310,slow=0.5,SNR=9.9
BRTR Keskin Array B 135.62 41 *c* *i* PKIKP **PKiKP** **22 01 58.2 +0.8**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
BRVK Borovoye 136.44 360 *c* *i* PKIKP **PKiKP** **22 01 58.1 -0.4**
BRVK *i* 22 02 02.6
BRVK pmax pmax
comp=Z,4.0nm,1.7s
KIV Kislovodsk 138.10 30 *i* PKIKP **PKiKP** **22 02 06.6 +4.3**
KIV pmax pmax
comp=Z,4.0nm,1.1s
KURK Kurchatov 138.19 352 *i* PKIKP **PKPdf** **22 01 59.2 -0.9**
KBZ Khabaz 138.37 30 PKP **PKPdf** **22 01 59.7 -0.9**
comp=Z,1.0nm,0.6s,baz=239,slow=4.6,SNR=2.6
KBZ Khabaz 138.37 30 *i* PKIKP **PKPdf** **22 02 00.8 +0.2**
GTA Gaotai 140.05 323 *e*PKP **PKPdf** **22 02 05.2 +1.2**
GTA LR LR
comp=Z,160nm,18.9s
GTA LR LR
comp=Z,350nm,19.6s
GTA LR LR
comp=Z,260nm,18.5s
MKAR Makanchi Array 141.30 347 PKP **PKPdf** **22 02 04.7 -1.2**
comp=Z,1.2nm,0.8s,baz=32,slow=1.6,SNR=7.9
WMQ Urumqi 142.44 339 *e*PKP **PKPdf** **22 02 09.2 +1.1**
WMQ LR LR
comp=Z,160nm,17.1s
WMQ LR LR
comp=Z,110nm,19.1s
GOMU GeErMu 145.13 324 PKPbc **PKPdf** **22 02 14.7 +1.3**
GOMU pPKP PKiKP 22 02 19.3 +2.0
GOMU sPKP 22 02 21.2
KMI Kunming 145.28 301‖ PKPbc **PKPbc** **22 02 12.6 -0.9**
KMI pPKP PKiKP 22 02 17.5 -0.2
KMI LR LR
comp=Z,92nm,17.3s
KMI LR LR
comp=Z,560nm,17.6s
KMI LR LR
comp=Z,470nm,19.5s
PZH PanZhiHua 145.59 304 PKPbc **PKPbc** **22 02 14.5 +0.2**
KMBO Kilima Mbogo 145.62 106 PKPbc **PKPab** **22 02 15.4 +0.1**
comp=Z,0.7nm,0.3s,baz=223,slow=5.9,SNR=1.5
KMBO Kilima Mbogo 145.62 106 *c* *i* PKIKP **PKiKP** **22 02 18.7 -0.1**
KMBO pmax pmax
comp=Z,1.0nm,0.7s
KSH Kashi 149.53 351 PKPbc **PKPbc** **22 02 24.9 0.0**
KSH LR LR
comp=Z,160nm,14.6s
KSH LR LR
comp=Z,240nm,14.9s
KSH LR LR
comp=Z,320nm,19.4s
GEYT Xilbeck 149.57 19 PKPbc **PKPdf** **22 02 22.0 +1.6**
comp=Z,2.3nm,0.7s,baz=36,slow=11,SNR=2.8
CMAR Chiang Mai Arr 150.66 291 PKP **PKPdf** **22 02 22.1 -0.4**
comp=Z,0.7nm,0.3s,baz=357,slow=1.8,SNR=4.0
CMAR PKPbc **PKPbc** **22 02 27.2 -0.9**
comp=Z,7.9nm,0.9s,baz=38,slow=0.7,SNR=23
HYBB Hyderabad (bro 168.56 315 *e*PKPdf **PKPdf** **22 02 41.8 -1.0**

*IDC **05** 21:48:23.3±0.9, 45°.38N×153°.16E, h0km, mb3.7/11, mbtmp3.7/14, ML3.3/3, MS2.1/2, Error ellipse: s-maj=22.0km s-min=21.6km az=132.0*
*JMA **05** 21:48:27.6±1.0, 46°.N±7°.×15°.3E±°, h30km, MV4.0/13, KURILE ISLANDS REGION*
ISC 05 21:48:28.0±1.0, 45°.4N±0°.1×152°.85E±0°.0, h35km, n25, σ1§96/21, mb3.7/11, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**5.47**	**251**	*e*P		**Pn**	**21 49 47.4**	**+0.5**
NEM2				*e*S		**Sn**	**21 50 47.2**	**-1.3**
JRA	**Rausu**	**5.69**	**258**	*e*P		**Pn**	**21 49 52.9**	**+2.9**
JAK	**Akkeshi**	**6.32**	**251**	*e*P		**Pn**	**21 49 59.4**	**+0.9**
JAK				*e*S		**Sn**	**21 51 07.8**	**-1.7**
JTKR	**Abashiri--Toko**	**6.52**	**261**	*e*P		**Pn**	**21 50 04.1**	**+2.7**
JAR	**Ashorobuto**	**6.83**	**256**	*e*P		**Pn**	**21 50 08.0**	**+2.4**
JOB	**Onbets**	**6.93**	**253**	*e*P		**Pn**	**21 50 08.8**	**+1.8**
JKK2	**Kamakawa 2**	**7.36**	**262**	*e*P		**Pn**	**21 50 16.2**	**+3.4**
JCH	**Churui**	**7.37**	**252**	*e*P		**Pn**	**21 50 14.5**	**+1.5**
JCH				*e*S		**Sn**	**21 51 33.4**	**-2.0**
ASAJ	**Asahikawa**	**7.40**	**264**	Pn		**Pn**	**21 50 16.7**	**+3.2**
	1.2nm,0.3s,baz=77,slow=14,SNR=8.3 2.7nm,0.3s							
JNBK	**Urakawa-nobuka**	**7.92**	**251**	*e*P		**Pn**	**21 50 20.7**	**+0.2**
PETK	**Petropavlovsk-**	**8.39**	**20**	Pn		Pn	21 50 24.6	-2.3
	0.2nm,0.3s,baz=143,slow=13,SNR=2.3							
PETK				LR		LR	21 53 52.4	
	comp=Z,8.2nm,19.8s,baz=168,slow=40 1.9nm,0.8s							
JANG	**Nango**	**9.69**	**243**	*e*S		Sn	21 52 26.7	-5.7
MA2	**Magadan**	**14.30**	**356**	LR		LR	21 57 54.6	
	comp=Z,12nm,20.0s,baz=76,slow=40							
KLR	**Kul'dur**	**14.82**	**293**	Pn		**P**	**21 51 58.1**	**-2.2**
	0.1nm,0.3s,baz=98,slow=13,SNR=4.4 0.8nm,0.7s							
YAK	**Yakutsk**	**21.41**	**329**	P		**P**	**21 53 12.7**	**+0.2**
	2.6nm,0.3s,baz=43,slow=2.1,SNR=1.1 2.6nm,0.3s							
TIXI	**Tiksi**	**28.76**	**344**	P		**P**	**21 54 20.4**	**-1.4**
	0.2nm,0.3s,baz=91,slow=24,SNR=2.4 0.2nm,0.3s							
SONM	**Songino Array**	**31.65**	**291**	P		P	21 54 50.1	+2.3
	0.2nm,0.5s,baz=64,slow=6.6,SNR=1.6 0.2nm,0.5s							
MKAR	**Makanchi Array**	**47.43**	**298**	P		**P**	**21 57 00.4**	**+1.5**
	0.6nm,0.7s,baz=79,slow=5.7,SNR=6.3 0.6nm,0.7s							
NVAR	**Mina Array Bea**	**63.26**	**62**	P		**P**	**21 58 53.1**	**-0.1**
	0.7nm,0.7s,baz=295,slow=7.3,SNR=5.7 0.7nm,0.7s							
FINES	**FINESS Array B**	**65.23**	**335**	P		P	21 59 06.3	+1.0
	2.1nm,0.9s,baz=35,slow=7.0,SNR=6.1 2.1nm,0.9s							
WRA	**Warramunga Arr**	**67.13**	**199**	P		**P**	**21 59 18.4**	**+0.4**
	0.5nm,0.8s,baz=12,slow=6.4,SNR=3.1 0.5nm,0.8s							
NOA	**NORSAR Array B**	**69.49**	**341**	P		P	21 59 34.8	+2.4
	0.3nm,0.7s,baz=29,slow=6.6,SNR=1.3 0.3nm,0.7s							
ASAR	**Alice Springs**	**70.82**	**198**	P		**P**	**21 59 42.3**	**+1.4**
	0.4nm,0.5s,baz=19,slow=8.0,SNR=4.8 0.4nm,0.5s							
AKASG	**Malin Array Be**	**72.61**	**326**	P		P	21 59 53.0	+1.6
	0.4nm,0.3s,baz=35,slow=6.6,SNR=5.0 0.4nm,0.3s							
TXAR	**Lajitas Array**	**78.35**	**60**	P		**P**	**22 00 24.2**	**-0.7**
	0.4nm,0.8s,baz=290,slow=3.7,SNR=5.5 0.4nm,0.8s							

WEL 05 21:52:46.5±0.6, 41°S±3°×17°3E±°, h135km±5km, M3.6/27, MLv3.6/27, Error ellipse: s-maj=0.0km s-min=0.0km az=125.0, South Island

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MRNZ	**Matariki Terra**	**0.11**	**217**	P		Pn	21 53 06.0	+1.1
MRNZ				S		Sn	21 53 20.7	+1.9
NNZ	**Nelson**	**0.41**	**77**	P		Pn	21 53 06.7	+1.0
NNZ				S		Sn	21 53 22.4	+2.2
THZ	**Tophouse**	**0.45**	**174**	P		Pn	21 53 07.5	+1.5
THZ				S		Sn	21 53 23.3	+2.4
QRZ	**Quartz Range**	**0.54**	**334**	P		Pn	21 53 06.8	+0.4
QRZ				S		Sn	21 53 21.8	+0.3
TUWZ	**Tuamarina**	**0.83**	**99**	P		Pn	21 53 09.8	+1.3

TUWZ				S		Sn	21 53 27.4	+2.3	
BSWZ	**Blackbirch Sta**	**0.87**	**118**	P		Pn	21 53 10.2	+1.4	
BSWZ				S		Sn	21 53 29.5	+3.8	
DSZ	**Denniston Nort**	**0.89**	**241**	P		Pn	21 53 09.3	+0.3	
DSZ				S		Sn	21 53 25.6	-0.6	
DUWZ	**D'Urville Isla**	**0.96**	**58**	P		Pn	21 53 10.5	+0.9	
DUWZ				S		Sn	21 53 28.9	+1.8	
TCW	**Tory Channel**	**1.08**	**85**	P		Pn	21 53 11.9	+1.2	
CMWZ	**Cape Campbell**	**1.12**	**114**	P		Pn	21 53 12.7	+1.8	
CMWZ				S		Sn	21 53 32.9	+3.3	
KHZ	**Kahutara**	**1.22**	**155**	P		Pn	21 53 13.5	+1.5	
KHZ				S		Sn	21 53 33.0	+1.5	
WEL	**Wellington**	**1.45**	**90**	P		Pn	21 53 15.1	+0.7	
BHW	**Baring Head**	**1.53**	**94**	P		Pn	21 53 15.8	+0.5	
BHW				S		Sn	21 53 37.0	-0.1	
LTZ	**Lake Taylor**	**1.53**	**196**	P		Pn	21 53 16.2	+0.8	
LTZ				S		Sn	21 53 37.2	-0.2	
KIW	**Kapiti Island**	**1.62**	**75**	P		Pn	21 53 16.7	+0.4	
GVZ	**Greta Valley S**	**1.66**	**175**	P		Pn	21 53 18.0	+1.2	
GVZ				S		Sn	21 53 40.4	+0.4	
CAW	**Cannon Point**	**1.69**	**84**	P		Pn	21 53 17.5	+0.4	
CAW				S		Sn	21 53 40.3	-0.1	
INZ	**Inchbonnie**	**1.76**	**216**	P		Pn	21 53 17.8	0.0	
INZ				S		Sn	21 53 40.8	-1.1	
MSWZ	**Moikau Station**	**1.81**	**94**	P		Pn	21 53 18.8	+0.3	
MSWZ				S		Sn	21 53 43.3	+0.3	
OGWZ	**Otaki Gorge**	**1.83**	**75**	P		Pn	21 53 18.9	+0.3	
PLWZ	**Palliser**	**1.83**	**99**	P		Pn	21 53 19.2	+0.4	
PLWZ				S		Sn	21 53 43.7	+0.2	
AMCZ	**Amberley**	**1.87**	**184**	P		Pn	21 53 20.2	+1.0	
AMCZ				S		Sn	21 53 44.0	-0.3	
PAWZ	**Paruwai Farm**	**1.94**	**93**	P		Pn	21 53 20.2	+0.1	
PAWZ				S		Sn	21 53 45.2	-0.7	
MTW	**Mount Morrison**	**2.01**	**87**	P		Pn	21 53 20.8	-0.1	
MTW				S		Sn	21 53 46.9	-0.3	
NMEZ	**Namu Road**	**2.05**	**23**	P		Pn	21 53 21.1	-0.3	
NMEZ				S		Sn	21 53 48.9	+0.8	
HOWZ	**Holdsworth Sta**	**2.06**	**79**	P		Pn	21 53 21.3	-0.2	
HOWZ				S		Sn	21 53 48.3	0.0	
OXZ	**Oxford**	**2.10**	**196**	P		Pn	21 53 21.8	-0.2	
OXZ				S		Sn	21 53 47.5	-1.7	
TRWZ	**Traveller**	**2.14**	**93**	P		Pn	21 53 22.8	+0.3	
TRWZ				S		Sn	21 53 49.5	-0.5	
MRZ	**Mangatainoka R**	**2.17**	**73**	P		Pn	21 53 22.5	-0.3	
MRZ				S		Sn	21 53 50.2	-0.4	
OHWZ	**Ohakea**	**2.18**	**60**	P		Pn	21 53 23.1	+0.2	
OHWZ				S		Sn	21 53 52.0	+1.2	
NBEZ	**Newall Road No**	**2.19**	**21**	P		Pn	21 53 22.7	-0.4	
NBEZ				S		Sn	21 53 51.3	+0.3	
LREZ	**Lake Rotokare**	**2.20**	**33**	P		Pn	21 53 23.2	0.0	
LREZ				S		Sn	21 53 52.5	+1.2	
KHEZ	**Kahui Hut**	**2.20**	**24**	P		Pn	21 53 22.7	-0.7	
KHEZ				S		Sn	21 53 50.9	-0.7	
PREZ	**Palmer Road**	**2.21**	**27**	P		Pn	21 53 22.9	-0.5	
PREZ				S		Sn	21 53 51.7	+0.1	
NEZ	**North Egmont**	**2.25**	**26**	P		Pn	21 53 23.6	-0.3	
WAZ	**Wanganui**	**2.25**	**47**	P		Pn	21 53 24.0	+0.1	
PKE	**Pukeiti**	**2.29**	**23**	P		Pn	21 53 23.9	-0.5	
TMWZ	**Te Maipa**	**2.31**	**86**	P		Pn	21 53 24.5	0.0	
DREZ	**Durham Road**	**2.36**	**27**	P		Pn	21 53 24.4	-0.8	
DREZ				S		Sn	21 53 54.8	-0.1	
WVZ	**Waitaha Valley**	**2.36**	**221**	P		Pn	21 53 24.5	-0.6	
WVZ				S		Sn	21 53 52.0	-2.8	
TIWZ	**Tintock**	**2.36**	**78**	P		Pn	21 53 25.0	-0.2	
TIWZ				S		Sn	21 53 54.5	-0.5	
MQZ	**McQueen's Vall**	**2.40**	**183**	P		Pn	21 53 25.5	-0.1	
MQZ				S		Sn	21 53 53.8	-2.0	
POWZ	**Post Office Ro**	**2.40**	**68**	P		Pn	21 53 25.1	-0.6	
POWZ				S		Sn	21 53 54.7	-1.1	
OKCZ	**Okains Bay**	**2.42**	**176**	P		Pn	21 53 26.2	+0.4	
OKCZ				S		Sn	21 53 55.5	-0.7	
RACZ	**Rakaia**	**2.47**	**192**	P		Pn	21 53 26.4	-0.1	
RACZ				S		Sn	21 53 55.5	-1.9	
PRWZ	**Pori Road**	**2.48**	**73**	P		Pn	21 53 26.5	-0.2	
PRWZ				S		Sn	21 53 57.4	-0.3	
AKCZ	**Akaroa Harbour**	**2.56**	**179**	P		Pn	21 53 27.9	+0.2	
VRZ	**Vera Road**	**2.63**	**34**	P		Pn	21 53 27.5	-1.0	
BFZ	**Birch Farm**	**2.65**	**77**	P		Pn	21 53 28.5	-0.4	
BFZ				S		Sn	21 54 00.2	-1.2	
DVHZ	**Dannevirke**	**2.72**	**69**	P		Pn	21 53 28.6	-1.0	
DVHZ				S		Sn	21 54 01.0	-1.9	
WACZ	**Wakanui South**	**2.73**	**195**	P		Pn	21 53 29.7	-0.1	
GCSZ	**Gaunt Creek Bo**	**2.74**	**222**	P		Pn	21 53 28.9	-1.0	
RPZ	**Rata Peaks**	**2.74**	**208**	P		Pn	21 53 28.9	-1.1	
MTVZ	**Mangateitei**	**2.78**	**47**	P		Pn	21 53 29.5	-1.1	
MTVZ				S		Sn	21 54 04.1	-0.4	
PKVZ	**Pokaka**	**2.78**	**44**	P		Pn	21 53 29.5	-1.1	
TRVZ	**Turoa**	**2.88**	**47**	P		Pn	21 53 31.0	-1.0	
WNVZ	**Wahianoa**	**2.89**	**48**	P		Pn	21 53 30.9	-1.2	
ARCZ	**Arundel**	**2.91**	**204**	P		Pn	21 53 31.0	-1.2	
PNHZ	**Pukenui**	**2.91**	**62**	P		Pn	21 53 30.8	-1.4	
FWVZ	**Far West T-bar**	**2.92**	**46**	P		Pn	21 53 31.3	-1.1	
WHVZ	**Whangaehu Hut**	**2.92**	**47**	P		Pn	21 53 31.3	-1.2	
MOVZ	**Moawhango**	**2.92**	**50**	P		Pn	21 53 31.0	-1.4	
TUVZ	**Tukino**	**2.96**	**47**	P		Pn	21 53 31.7	-1.3	
NGZ	**Ngauruhoe**	**3.00**	**46**	P		Pn	21 53 31.9	-1.6	
WPHZ	**Waipukurau**	**3.00**	**67**	P		Pn	21 53 32.2	-1.2	
SNVZ	**South Ngauruho**	**3.01**	**46**	P		Pn	21 53 32.5	-1.1	
WTVZ	**West Tongariro**	**3.04**	**45**	P		Pn	21 53 32.3	-1.7	
NNVZ	**North Ngauruho**	**3.04**	**45**	P		Pn	21 53 32.5	-1.5	
OTVZ	**Oturere**	**3.04**	**46**	P		Pn	21 53 32.6	-1.5	
BHHZ	**Black Hill Sta**	**3.06**	**55**	P		Pn	21 53 32.4	-1.7	
PRHZ	**Porangahau**	**3.06**	**71**	P		Pn	21 53 33.3	-0.8	
ETVZ	**East Tongariro**	**3.09**	**46**	P		Pn	21 53 33.1	-1.5	
NTVZ	**North Tongarir**	**3.10**	**45**	P		Pn	21 53 33.6	-1.1	
TMVZ	**Te Maari**	**3.10**	**46**	P		Pn	21 53 33.2	-1.5	
FOZ	**Fox Glacier**	**3.16**	**224**	P		Pn	21 53 33.7	-1.6	
KRHZ	**Kereru**	**3.16**	**59**	P		Pn	21 53 33.6	-1.8	
PXZ	**Pawanui**	**3.31**	**69**	P		Pn	21 53 36.2	-1.1	
KWHZ	**Kaweka Forest**	**3.32**	**57**	P		Pn	21 53 35.6	-1.9	
TMZ	**Timaru**	**3.36**	**203**	P		Pn	21 53 36.9	-1.0	
BKZ	**Black Stump Fm**	**3.52**	**54**	P		Pn	21 53 37.9	-2.2	
TLZ	**Tolley Road**	**3.63**	**36**	P		Pn	21 53 39.6	-2.0	
LBZ	**Lake Benmore**	**3.64**	**212**	P		Pn	21 53 40.0	-1.7	
MRHZ	**Matea Rd**	**3.69**	**49**	P		Pn	21 53 39.4	-2.9	
NMHZ	**Naumai**	**3.75**	**55**	P		Pn	21 53 41.2	-2.0	
MTHZ	**Maungataniwha**	**3.93**	**53**	P		Pn	21 53 42.7	-2.8	
RAHZ	**Arahi**	**4.04**	**55**	P		Pn	21 53 44.3	-2.6	
ODZ	**Otahua Downs**	**4.06**	**203**	P		Pn	21 53 46.0	-1.1	
JCZ	**Jackson Bay**	**4.07**	**226**	P		Pn	21 53 45.2	-2.1	
SNGZ	**Shannon Statio**	**4.28**	**55**	P		Pn	21 53 47.4	-2.7	
MHGZ	**Mahia Peninsul**	**4.43**	**63**	P		Pn	21 53 49.6	-2.5	
URZ	**Urewera**	**4.48**	**49**	P		Pn	21 53 48.9	-3.8	
WKZ	**Wanaka**	**4.50**	**217**	P		Pn	21 53 50.3	-2.6	
RAGZ	**Rawiri**	**4.50**	**53**	P		Pn	21 53 52.5	-0.6	
PRGZ	**Paritu Road**	**4.54**	**60**	P		Pn	21 53 50.5	-3.1	
MKAZ	**Moumakai**	**4.57**	**24**	P		Pn	21 53 52.0	-1.9	
RIGZ	**Rimuhau**	**4.58**	**57**	P		Pn	21 53 51.2	-3.0	
MWZ	**Matawai**	**4.67**	**52**	P		Pn	21 53 51.6	-3.8	
EAZ	**Earnscleugh**	**4.69**	**212**	P		Pn	21 53 53.1	-2.5	
MSZ	**Milford Sound**	**4.93**	**225**	P		Pn	21 53 56.6	-2.1	
CNGZ	**Carnagh Statio**	**5.00**	**57**	P		Pn	21 53 56.4	-3.2	
RUGZ	**Raukumara Rang**	**5.01**	**50**	P		Pn	21 53 55.6	-4.3	
TUZ	**Tuapeka**	**5.20**	**206**	P		Pn	21 54 00.7	-1.5	
PUZ	**Puketiti**	**5.28**	**54**	P		Pn	21 53 59.3	-4.2	
PKGZ	**Pakihiroa**	**5.29**	**51**	P		Pn	21 53 59.8	-3.8	
MLZ	**Mavora Lakes**	**5.32**	**219**	P		Pn	21 54 02.0	-1.9	
WMGZ	**Waiomatatini S**	**5.54**	**53**	P		Pn	21 54 03.0	-3.9	
WHZ	**Wether Hill Ro**	**5.80**	**216**	P		Pn	21 54 07.6	-2.7	
SYZ	**Scrubby Hill**	**5.87**	**206**	P		Pn	21 54 09.4	-1.8	
APZ	**The Paps**	**6.53**	**211**	P		Pn	21 54 17.3	-2.9	

HEL 05 22:04:32.7±0.1, 67.18N×20.66E, h0km, ML1.3, ML1.3(UPP), Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.07**	**209**	*i* P	Pg	22 04 33.8	-0.2
DUNU				*i* S	Sg	22 04 35.1	+0.2
RATU	**Laukkuluspa**	**0.76**	**328**	*i* P	Pg	22 04 46.2	-1.1
KUA	**Kurravaara**	**0.79**	**351**	*i* P	Pg	22 04 46.5	-1.2
SALU	**Saltoluokta**	**0.86**	**284**	*i* P	Pg	22 04 48.2	-0.9
ERTU	**Ertsjaerv**	**0.88**	**135**	*e*P	Pg	22 04 48.0	-1.4
ERTU				*e*SB	Sg	22 05 00.4	-0.3
NIKU	**Nikkaluokta**	**0.93**	**319**	*e*P	Pg	22 04 49.2	-1.2
PAJU	**Pajala** baz=283	**0.97**	**98**	*e*P	Pg	22 04 50.0	-1.3
PAJU				*e*SB	Sg	22 05 03.2	-0.7
LANU	**Lannavaara**	**1.01**	**30**	*e*P	Pg	22 04 50.7	-1.3
LANU				*e*SB	Sg	22 05 05.3	+0.2
HARU	**Harads**	**1.03**	**173**	*e*P	Pg	22 04 51.1	-1.3
KLF	**Kolari**	**1.29**	**86**	*e*P	Pg	22 04 55.7	-1.7
KLF				*e*SB	Sg	22 05 12.8	-1.3
HEF	**Hetta**	**1.68**	**41**	*e*P	Pn	22 05 02.5	-0.8
HEF	comp=Z,1.4nm,0.2s			MSG		22 05 23.2	
HEF				*e*S	Sn	22 05 24.2	-1.4
KALU	**Kalix**	**1.71**	**140**	*e*P	Pn	22 05 03.2	-0.5
SJUU	**Sjulsmark**	**1.73**	**167**	*e*P	Pn	22 05 03.2	-0.7
KIF	**Kilpisjarvi** baz=185	**1.83**	**2**	*e*PN	Pn	22 05 05.7	+0.3
KIF	comp=Z,1.6nm,0.2s			MSG		22 05 28.3	
KIF				*e*SG	Sb	22 05 30.9	+0.5
TOF	**Tornio**	**1.83**	**125**	*e*PN	Pn	22 05 05.2	-0.2
TOF	comp=Z,1.7nm,0.2s			MSG		22 05 27.0	
TOF				*e*SN	Sb	22 05 30.7	+0.2
KTK1	**Kautokeino**	**2.08**	**27**	*e*PG	Pb	22 05 10.7	-0.5
KTK1				*e*SG	Sb	22 05 37.3	-0.3
RNF	**Rovaniemi**	**2.19**	**103**	*e*PB	Pn	22 05 11.2	+0.9
RNF				*e*SG	Sb	22 05 40.4	-0.4
SGF	**Sodankyl**	**2.29**	**81**	*e*PB	Pn	22 05 12.9	+1.2
SGF				*e*SG	Sb	22 05 43.6	-0.1

HEL 05 22:05:30.6±0.1, 67.62N×33.81E, h0km, ML1.6, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVZ	**Lovozero** baz=225	**0.43**	**48**	PG	Pg	22 05 38.3	-0.5
LVZ				SG	Sg	22 05 43.9	-0.4
VRF	**Varrio**	**1.61**	**277**	*e*SG	Sn	22 06 19.2	-2.4
VRF	**Varrio**	**1.61**	**277**	PG	Pn	22 05 59.4	-0.9
VRF	comp=Z,2.7nm,0.2s			MSG		22 06 18.8	
VRF				SG	Sn	22 06 19.2	-2.4
OLKF	**Oulanka, Finla**	**2.17**	**235**	*e*S	Pb	22 06 09.4	-1.2
OLKF	**Oulanka, Finla**	**2.17**	**235**	PG	Pb	22 06 09.4	-1.2
OLKF				SG	Sb	22 06 38.0	0.0
KU6	**Riekki**	**2.23**	**226**	PG	Pb	22 06 10.3	-1.3
KU6	comp=Z,3.4nm,0.2s			MSG		22 06 36.4	
KU6				SG	Sb	22 06 40.2	+0.5
MSF	**Maaselka** baz=46	**2.55**	**230**	PG	Pb	22 06 16.0	-1.2
SGF	**Sodankyl**	**2.80**	**270**	SB	Sb	22 06 55.2	-1.0
RNF	**Rovaniemi**	**3.21**	**255**	PB	Pb	22 06 25.5	-2.9
RNF				SB	Sb	22 07 07.7	-0.3
KEV	**Kevo**	**3.28**	**314**	PN	Pn	22 06 23.3	+0.1
KEV				SB	Sb	22 07 08.4	-1.7
ARA0	**ARCESS Array S** baz=118	**3.60**	**306**	PN	Pn	22 06 26.6	-1.0
ARA0				SN	Sn	22 07 08.6	-2.2
HEF	**Hetta**	**3.90**	**286**	SN	Sn	22 07 18.0	0.0
TOF	**Tornio**	**4.05**	**252**	SG	Sg	22 07 37.3	-3.2
KTK1	**Kautokeino**	**4.17**	**295**	SB	Sb	22 07 37.2	+1.8
LANU	**Lannavaara**	**4.50**	**281**	SG	Sb	22 07 48.0	+3.0
ERTU	**Ertsjaerv**	**4.67**	**262**	SN	Sn	22 07 35.1	-1.9

*IDC **05** 22:12:19.9±0.8, 16.65S×173.32W, h0km, mb3.8/9, mbtmp3.8/11, ML4.0/2, MS3.3/1, Error ellipse: s-maj=33.8km s-min=17.3km az=129.0*
*NEIC **05** 22:12:23.1±1.1, 16.81S±0.06×172.7W±0.1, h44km±9km, mb4.6/8, Error ellipse: s-maj=20.5km s-min=7.3km az=78.0*

ISC 05 22:12:22.8±0.5, 16.81S±0.06×172.93W±0.09, h41km, n52, σ2s15/48, mb4.0/13, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu** 2.6nm,0.3s,baz=80,slow=20,SNR=1.8	**3.09**	**21**	Pn	**Pn**	**22 13 08.7**	**-0.5**
AFI	17nm,0.3s,baz=119,slow=14,SNR=5.5 14nm,0.2s			Sn	**Sn**	**22 13 39.5**	**-5.4**
AFI	**Afiamalu**	**3.09**	**21**	Pn	**Pn**	**22 13 08.3**	**-0.9**
AFI					**Sn**	**22 13 41.1**	**-3.9**
NIUE	**Niue**	**3.65**	**129**	Pn	**Pn**	**22 13 14.3**	**-2.5**
NIUE				Sn	Sn	22 13 50.5	-8.0
MSVF	**Nonsavu** 0.2nm,0.3s,baz=79,slow=17,SNR=1.9 10nm,0.9s	**8.66**	**263**	Pn	**Pn**	**22 14 21.2**	**-4.6**
RAR	**Rarotonga** 1.6nm,0.3s,baz=270,slow=8.1,SNR=2.2	**13.19**	**111**	Pn	**Pn**	**22 15 25.5**	**-2.2**
PPT	**Papeete** comp=Z,83nm,20.0s,baz=236,slow=31	**22.33**	**95**	LR	LR	22 23 54.7	
URZ	**Urewera** 4.6nm,0.7s,baz=95,slow=18,SNR=2.0	**23.09**	**200**	P	**P**	**22 17 26.2**	**+1.2**
URZ	5.9nm,0.9s,baz=12,slow=23,SNR=1.3 4.6nm,0.7s			S	**S**	**22 21 29.7**	**-3.5**
URZ	**Urewera**	**23.09**	**200**	P	**P**	**22 17 26.3**	**+1.3**
BKZ	**Black Stump Fm**	**24.12**	**200**	P	**P**	**22 17 35.3**	**+0.4**
LTZ	**Lake Taylor**	**28.81**	**203**	P	**P**	**22 18 17.4**	**+0.3**
LTZ	comp=Z,18nm,1.4s			IAmb	IAmb	22 18 53.7	
RPZ	**Rata Peaks** comp=Z,1.9nm,0.7s,baz=18,slow=20,SNR=0.9 comp=Z,1.9nm,0.7s	**30.06**	**204**	P	**P**	**22 18 31.5**	**+3.3**
H11S2	**WAKE ISLAND Hy** baz=146	**40.40**	**329**	T	T	23 02 57.1	
H11S3	**WAKE ISLAND Hy** baz=146	**40.41**	**329**	T	T	23 01 19.3	
H11S1	**WAKE ISLAND Hy** baz=146	**40.41**	**329**	T	T	23 03 20.0	
H11N3	**WAKE ISLAND Hy** baz=157	**41.35**	**331**	T	T	23 03 35.0	
H11N1	**WAKE ISLAND Hy** baz=157	**41.35**	**331**	T	T	23 04 12.3	
H11N2	**WAKE ISLAND Hy** baz=157	**41.37**	**331**	T	T	23 03 51.7	
WR0	**Warramunga Arr**	**49.78**	**258**	P	**P**	**22 21 12.8**	**+0.9**
WR0	comp=Z,7.1nm,1.3s			IAmb	IAmb	22 21 31.4	
WB2	**Warramunga Arr**	**49.96**	**258**	P	**P**	**22 21 12.8**	**-0.5**
WB2	comp=Z,6.2nm,1.2s			IAmb	IAmb	22 21 36.5	
WRA	**Warramunga Arr** comp=Z,0.6nm,0.7s,baz=96,slow=7.1,SNR=5.9 comp=Z,0.6nm,0.7s	**49.97**	**258**	P	**P**	**22 21 12.9**	**-0.4**
WRA	**Warramunga Arr**	**49.97**	**258**	P	**P**	**22 21 13.3**	**-0.1**
ASAR	**Alice Springs** comp=Z,3.3nm,0.7s,baz=88,slow=8.5,SNR=31 comp=Z,3.3nm,0.7s	**50.12**	**253**	P	**P**	**22 21 14.3**	**-0.1**
ASAR	**Alice Springs**	**50.12**	**253**	P	**P**	**22 21 14.2**	**-0.2**
VNDA	**Vanda** comp=Z,1.0nm,0.8s,baz=26,slow=6.7,SNR=6.4 comp=Z,1.0nm,0.8s	**62.03**	**186**	P	**P**	**22 22 42.4**	**+3.8**
VNDA	**Vanda**	**62.03**	**186**	P	**P**	**22 22 38.7**	**+0.1**
QSPA	**South Pole Qui**	**73.25**	**180**	P	**P**	**22 23 49.0**	**-0.7**
QSPA	comp=Z,12nm,1.4s			IAmb	IAmb	22 24 11.7	
NVAR	**Mina Array Bea** comp=Z,0.1nm,0.5s,baz=217,slow=8.9,SNR=1.8 comp=Z,0.1nm,0.5s	**75.07**	**42**	P	**P**	**22 24 04.3**	**+3.5**
TXAR	**Lajitas Array** comp=Z,0.1nm,0.6s,baz=224,slow=2.5,SNR=2.3 comp=Z,0.1nm,0.6s	**81.02**	**56**	P	**P**	**22 24 38.0**	**+4.1**
TXAR	**Lajitas Array**	**81.02**	**56**	P	**P**	**22 24 32.2**	**-1.6**
PDAR	**Pinedale Array** comp=Z,0.3nm,0.4s,baz=297,slow=12,SNR=2.4 comp=Z,0.3nm,0.4s	**83.01**	**42**	P	**P**	**22 24 47.6**	**+3.4**
ILAR	**Eielson Array** comp=Z,0.4nm,0.7s,baz=227,slow=6.2,SNR=4.8 comp=Z,0.4nm,0.7s	**83.73**	**11**	P	**P**	**22 24 49.9**	**+2.8**
KMBO	**Kilima Mbogo** comp=Z,2.0nm,0.7s,baz=49,slow=3.1,SNR=6.0	**145.30**	**242**	PKPbc	**PKiKP**	**22 32 00.6**	**-0.9**
OSTC	**Ostas**	**145.54**	**350**	*e*PKP	**PKiKP**	**22 32 00.6**	**0.0**
DPC	**Dobruska-Polom**	**145.72**	**349**	*e*PKP	**PKiKP**	**22 32 01.0**	**0.0**
KRLC	**Kraliky**	**145.90**	**349**	*e*PKP	**PKiKP**	**22 32 01.5**	**+0.1**
PRU	**Pruhonice**	**146.35**	**351**	*e*PKP	**PKiKP**	**22 32 02.9**	**+0.7**
KHC	**Kasperske Hory**	**147.33**	**352**	*e*PKP	**PKiKP**	**22 32 05.8**	**+1.5**
BRTR	**Keskin Array B** comp=Z,1.2nm,0.7s,baz=129,slow=3.2,SNR=8.9	**147.52**	**320**	PKPbc	**PKiKP**	**22 32 05.7**	**+0.5**
BRTR	**Keskin Array B**	**147.52**	**320**		**PKPdf**	**22 32 01.1**	**+0.6**
CKRC	**Cesky Krumlov**	**147.53**	**351**	*e*PKP	**PKiKP**	**22 32 06.1**	**+1.4**
GERES	**GERESS Array B** comp=Z,0.7nm,0.6s,baz=282,slow=2.6,SNR=9.5	**147.59**	**352**	PKPbc	**PKiKP**	**22 32 06.3**	**+1.3**
RONA	**Rosalia, Austr** comp=Z,3.5nm,1.1s	**148.27**	**348**	*e*P	**PKPab**	**22 32 08.9**	**+1.2**
MOA	**Molln** comp=Z,3.7nm,1.5s	**148.48**	**351**	*e*P	**PKPab**	**22 32 09.0**	**+0.5**
RETA	**Reutte** comp=Z,3.3nm,1.3s	**149.25**	**355**	*e*P	**PKPab**	**22 32 11.1**	**-0.6**
MOTA	**Moosalm** comp=Z,2.8nm,0.9s	**149.37**	**355**	*e*P	**PKPab**	**22 32 11.8**	**-0.5**
WTTA	**Wattenberg** comp=Z,3.1nm,0.7s	**149.39**	**354**	*e*P	**PKPab**	**22 32 11.4**	**-1.1**
SQTA	**Sankt Quirin** comp=Z,2.1nm,0.8s	**149.48**	**354**	*e*P	**PKPab**	**22 32 16.7**	**+4.0**
SOKA	**Soboth** comp=Z,2.9nm,1.1s	**149.49**	**349**	*i* P	**PKPab**	**22 32 11.9**	**-0.8**
DAVA	**Damuels** comp=Z,3.9nm,0.9s	**149.52**	**356**	*e*P	**PKPab**	**22 32 11.6**	**-1.3**
FETA	**Feichten** comp=Z,6.9nm,1.0s	**149.72**	**355**	*e*P	**PKPab**	**22 32 12.6**	**-1.2**
OBKA	**Obir** comp=Z,0.7nm,0.7s	**149.74**	**350**	*e*P	**PKiKP**	**22 32 10.4**	**+0.9**
ABTA	**Abfaltersbach** comp=Z,4.0nm,0.8s	**149.81**	**353**	*e*P	**PKPab**	**22 32 11.9**	**-2.1**

TAP 05 22:25:37.1, 24.14N×121.68E, h10km, ML1.5, 1C-1D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village** baz=285	**0.05**	**286**	P	Pg	22 25 40.0	+0.8
ETL	baz=285			S	Sg	22 25 41.5	+0.9
NACB	**Ninganchiao** baz=290	**0.08**	**291**	⇓P	Pg	22 25 40.3	+0.9
NACB	baz=290			S	Sg	22 25 42.1	+0.9
TWD	**Chiawan** baz=227	**0.10**	**230**	⇑*i*P	Pg	22 25 40.2	+0.5
TWD	baz=227			*i* S	Sg	22 25 42.1	+0.6
ETLH	**Xiulin Townshi** baz=289	**0.19**	**289**	P	Pg	22 25 42.3	+1.1
ETLH	baz=289			S	Sg	22 25 45.6	+1.6
ENA	**Nanau** baz=12	**0.29**	**11**	*i* P	Pb	22 25 43.9	-0.5
EWUT	**Wuta** baz=16	**0.31**	**17**	*e*P	Pg	22 25 44.1	+0.7
EWUT	baz=16			S	Sb	22 25 49.2	-0.8
WHF	**Hehuan Shan** baz=269	**0.38**	**270**	P	Pb	22 25 46.3	+0.1
WHF	baz=269			S	Sb	22 25 51.2	-1.2
NNSB	**Datong** baz=316	**0.39**	**316**	P	Pb	22 25 46.2	0.0
NNSB	baz=316			*e*S	Sb	22 25 52.1	-0.3
ESL	**Shilin** baz=213	**0.40**	**215**	*e*P	Pb	22 25 45.9	-0.4
ESL	baz=213			S	Sb	22 25 52.6	+0.2
NNS	**Nan Shan** baz=316	**0.41**	**317**	*e*S	Sb	22 25 52.5	-0.4
FUSS	**Fushou** baz=284	**0.41**	**285**	*e*P	Pb	22 25 46.7	+0.1
FUSS	baz=284			S	Sb	22 25 53.0	-0.1
LATG	**Datong** baz=340	**0.41**	**340**	*e*P	Pb	22 25 46.9	+0.2
LATG	baz=340			*e*S	Sb	22 25 53.0	0.0
CHGB	**Renai** baz=259	**0.47**	**260**	*e*P	Pb	22 25 47.2	-0.4
CHGB	baz=259			*e*S	Sb	22 25 54.1	-0.6
TWT	**Tachien** baz=282	**0.47**	**283**	*e*P	Pb	22 25 47.9	+0.3
TWT	baz=282			S	Sb	22 25 55.0	+0.3
TWC	**Suao** baz=19	**0.49**	**18**	*e*S	Sb	22 25 55.3	+0.2
NDS	**Dongshan** baz=3.0	**0.49**	**4**	*e*P	Pb	22 25 48.0	+0.2
NDS	baz=3.0			*e*S	Sb	22 25 54.6	-0.5
OWD	**Renai** baz=247	**0.50**	**248**	P	Pb	22 25 47.8	-0.3
OWD	baz=247			*e*S	Sg	22 25 54.1	+0.7
ENTT	**Nioudou** baz=348	**0.51**	**348**	P	Pb	22 25 48.6	+0.5
ENTT	baz=348			S	Sb	22 25 55.6	0.0
WUSB	**Renai** baz=253	**0.54**	**254**	*e*P	Pb	22 25 48.5	-0.2
WUSB	baz=253			*e*S	Sb	22 25 56.2	-0.4
TWE	**Neicheng**	**0.57**	**359**	*e*P	Pb	22 25 48.9	-0.3
TWE				*e*S	Sb	22 25 57.8	+0.3
YHNB	**Yeheng** baz=332	**0.59**	**332**	*e*P	Pb	22 25 49.6	0.0
YHNB

CBKS				IAmb_Lg			22 34 49.1	
	comp=Z,70nm,0.9s							
CBKS	**Cedar Bluff**	**2.38**	**345**	P		**Pn**	**22 34 09.6**	**+0.8**
	baz=165							
CBKS				S		**Sb**	**22 34 41.2**	**-0.9**
	baz=165							
TUL1	**Leonard**	**2.62**	**102**	Pn		**Pn**	**22 34 11.7**	**-0.3**
TUL1				IAmb_Lg			22 34 55.8	
	comp=Z,39nm,0.9s							
TUL1	**Leonard**	**2.62**	**102**	P		**Pn**	**22 34 11.5**	**-0.4**
	baz=284							
AMTX	**Amarillo**	**2.76**	**235**	Pn		**Pn**	**22 34 14.1**	**+0.1**
AMTX	**Amarillo**	**2.76**	**235**	P		**Pn**	**22 34 14.3**	**+0.3**
	baz=52							
KSU1	**Kansas State U**	**3.17**	**35**	Pn		**Pn**	**22 34 20.6**	**+1.1**
Z35A	**Perchaven, San**	**3.47**	**156**	Pn		**Pn**	**22 34 24.0**	**+0.4**
Z35A				IAmb_Lg			22 35 25.6	
	comp=Z,29nm,0.9s							
X37A	**Clayton**	**3.49**	**122**	Pn		**Pn**	**22 34 23.9**	**0.0**
X37A	**Clayton**	**3.49**	**122**	P		**Pn**	**22 34 23.9**	**0.0**
	baz=304							
KSCO	**Kaye Shedlock'**	**3.84**	**312**	Pn		**Pn**	**22 34 29.4**	**+0.6**
ABTX	**Abilene, Hawle**	**3.93**	**189**	Pn		**Pn**	**22 34 30.3**	**+0.3**
ABTX				IAmb_Lg			22 35 42.5	
	comp=Z,26nm,0.8s							
MSTX	**Muleshoe**	**4.04**	**232**	Pn		**Pn**	**22 34 32.5**	**+0.9**
MSTX				IAmb_Lg			22 35 37.8	
	comp=Z,31nm,0.8s							
HHAR	**Hobbs**	**4.04**	**92**	IAmb_Lg			22 35 37.0	
	comp=Z,39nm,1.1s							
N33A	**J Bar K, Exete**	**4.37**	**15**	Pn		**Pn**	**22 34 35.7**	**-0.4**
N33A				IAmb_Lg			22 35 50.6	
	comp=Z,38nm,0.8s							
W39A	**Magazine**	**4.39**	**106**	IAmb_Lg			22 35 56.5	
	comp=Z,49nm,0.8s							
T25A	**Trinidad**	**4.43**	**280**	Pn		**Pn**	**22 34 36.2**	**-0.9**
T25A				IAmb_Lg			22 35 54.1	
	comp=Z,48nm,0.8s							
Z38A	**Mt. Pleasant**	**4.60**	**134**	IAmb_Lg			22 35 58.4	
	comp=Z,34nm,0.7s							
S39A	**Bolivar**	**4.64**	**74**	Pn		**Pn**	**22 34 39.3**	**-0.5**
S39A				IAmb_Lg			22 35 57.3	
	comp=Z,23nm,0.8s							
MIAR	**Mount Ida**	**4.80**	**113**	Pn		**Pn**	**22 34 42.5**	**+0.6**
MIAR				IAmb_Lg			22 36 11.1	
	comp=Z,24nm,0.7s							
U40A	**Yellville**	**4.91**	**90**	Pn		**Pn**	**22 34 43.8**	**+0.3**
U40A				IAmb_Lg			22 36 09.8	
	comp=Z,23nm,0.8s							
OGNE	**Ogallala**	**5.04**	**332**	Pn		**Pn**	**22 34 46.1**	**+0.8**
P38A	**Dawn**	**5.28**	**52**	Pn		**Pn**	**22 34 48.8**	**+0.3**
X40A	**Basin Creek Fa**	**5.38**	**110**	Pn		**Pn**	**22 34 51.2**	**+1.3**
X40A				IAmb_Lg			22 36 26.3	
	comp=Z,22nm,1.1s							
SDCO	**Great Sand Dun**	**5.38**	**285**	Pn		**Pn**	**22 34 50.6**	**+0.3**
SDCO				IAmb_Lg			22 36 31.2	
	comp=Z,26nm,0.9s							
MGMO	**Mountain Grove**	**5.39**	**81**	IAmb_Lg			22 36 28.0	
	comp=Z,16nm,0.8s							
Q24A	**Divide**	**5.49**	**298**	Pn		**Pn**	**22 34 50.5**	**-1.3**
WHAR	**Wooly Hollow**	**5.54**	**101**	Pn		**Pn**	**22 34 53.8**	**+1.7**
FCAR	**Ozark Folk Cen**	**5.55**	**94**	IAmb_Lg			22 36 28.0	
	comp=Z,19nm,0.8s							
WLAR	**White Oak Lake**	**5.55**	**119**	IAmb_Lg			22 36 24.5	
	comp=Z,16nm,0.8s							
W41B	**Gary Mavity, V**	**5.60**	**102**	Pn		**Pn**	**22 34 54.8**	**+1.9**
W41B				IAmb_Lg			22 36 34.9	
	comp=Z,25nm,1.0s							
R40A	**Maddies Statio**	**5.60**	**70**	Pn		**Pn**	**22 34 53.5**	**+0.5**
435B	**Jarrell**	**5.83**	**168**	IAmb_Lg			22 36 37.1	
	comp=Z,37nm,0.8s							
NATX	**Nacogdoches**	**5.92**	**142**	IAmb_Lg			22 36 51.2	
	comp=Z,22nm,0.8s							
Z41A	**Richland Creek**	**6.00**	**121**	IAmb_Lg			22 36 49.9	
	comp=Z,15nm,0.7s							
ISCO	**Idaho Springs**	**6.20**	**304**	IAmb_Lg			22 36 54.7	
	comp=Z,18nm,0.8s							
LCAR	**Lake Charles**	**6.30**	**92**	IAmb_Lg			22 36 57.3	
	comp=Z,18nm,1.2s							
ANMO	**Albuquerque**	**6.31**	**258**	Pn		**Pn**	**22 35 02.8**	**-0.1**
CCM	**Cathedral Cave**	**6.33**	**74**	IAmb_Lg			22 36 48.6	
	comp=Z,16nm,0.8s							
S22A	**4UR Ranch, Cre**	**6.42**	**283**	IAmb_Lg			22 37 01.0	
	comp=Z,12nm,1.2s							
PBMO	**Poplar Bluff**	**6.85**	**85**	IAmb_Lg			22 37 21.6	
	comp=Z,17nm,0.7s							
FVM	**French Village**	**6.95**	**75**	IAmb_Lg			22 37 09.8	
	comp=Z,19nm,1.0s							
PHWY	**Pilot Hill**	**6.97**	**315**	IAmb_Lg			22 37 26.7	
	comp=Z,30nm,0.9s							
N23A	**Red Feather La**	**7.01**	**311**	IAmb_Lg			22 37 26.8	
	comp=Z,26nm,0.7s							
MNTX	**Cornudas Mount**	**7.18**	**230**	Pn		**Pn**	**22 35 14.2**	**-0.5**
MNTX				IAmb_Lg			22 37 29.1	
	comp=Z,22nm,0.8s							
SLM	**Saint Louis**	**7.23**	**70**	IAmb_Lg			22 37 15.8	
	comp=Z,16nm,0.8s							
143A	**Socs Landing,**	**7.29**	**119**	IAmb_Lg			22 37 23.5	
	comp=Z,13nm,0.7s							
ECSD	**EROS Data Cent**	**7.43**	**13**	IAmb_Lg			22 37 24.8	
	comp=Z,12nm,0.8s							
N41A	**Harden Midland**	**7.59**	**54**	IAmb_Lg			22 37 34.7	
	comp=Z,27nm,0.9s							
S44A	**Carbondale**	**7.83**	**78**	IAmb_Lg			22 37 50.8	
	comp=Z,14nm,0.8s							
SIUC	**Southern Illin**	**7.86**	**78**	IAmb_Lg			22 37 51.9	
	comp=Z,15nm,0.7s							
OXF	**Oxford**	**8.03**	**102**	IAmb_Lg			22 38 03.5	
	comp=Z,11nm,0.8s							
W45A	**Hickory Valley**	**8.04**	**97**	IAmb_Lg			22 37 46.2	
	comp=Z,19nm,0.8s							
833A	**Chaparral WMA,**	**8.18**	**183**	IAmb_Lg			22 37 54.5	
	comp=Z,20nm,0.9s							
Q44A	**Meyer Farm, Va**	**8.22**	**70**	IAmb_Lg			22 38 11.5	
	comp=Z,20nm,0.8s							
RWWY	**Rawlins**	**8.24**	**311**	IAmb_Lg			22 38 01.9	
	comp=Z,16nm,1.0s							
RSSD	**Black Hills**	**8.53**	**334**	IAmb_Lg			22 38 14.2	
	comp=Z,20nm,1.1s							
L42A	**Oliver, Polo**	**9.04**	**50**	IAmb_Lg			22 38 21.6	
	comp=Z,16nm,0.8s							
F33A	**5 Mile Ranch,**	**9.53**	**11**	IAmb_Lg			22 38 32.7	
	comp=Z,13nm,1.1s							
I40A	**Norwalk**	**9.73**	**38**	IAmb_Lg			22 38 46.0	
	comp=Z,8.4nm,0.8s							
SPMN	**Marine on St.**	**9.86**	**26**	IAmb_Lg			22 38 42.0	
	comp=Z,9.1nm,0.9s							

BJI ***05*** *22:33:46.3±0.0, 18˚.22S×172˚.08W, h10km, mb5.2/56, mB5.8/61, Ms5.4/64, Ms7 5.2/62*

NEIC ***05*** *22:33:48.6, 17˚.65S×172˚.64W, h9km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr2.63; Mθθ0.07; Mφφ-2.70; Mrθ0.75; Mθφ-1.26; Mφr1.29; Fault plane solution: M₀3.31000×10¹⁷ NP1:φs194.93000°, δ31.83000°, λ80.39000°. NP2:φs26.20000°, δ58.67000°, λ95.92000°. Principal axes: T 3.0042, Plg76.0000°, Azm313.0000°; N 0.5380, Plg5.0000°, Azm203.0000°; P -3.5422, Plg13.0000°, Azm112.0000°;*

NEIC ***05*** *22:33:49.4±2.1, 17˚.65S±0˚.06×172˚.63W±0˚.02, h10km±1km, mb5.4/95, Ms_20 5.2/384, Mwb5.6/37, Mww5.6 Error ellipse: s-maj=10.9km s-min=3.0km az=164.0*

IDC ***05*** *22:33:50.8±0.4, 17˚.77S×173˚.18W, h0km, mb4.9/32, mbtmp4.8/33, ML3.5/1, MS5.0/66, Error ellipse: s-maj=15.0km s-min=12.7km az=117.0*

NOU ***05*** *22:33:50.9, 17˚.63S×172˚.51W, h0km, mb5.7/20, Tonga Islands Region*

NEIC ***05*** *22:33:56, 17˚.29S×172˚.42W, h20km, Moment Tensor Solution. Duration: 8s0 Moment tensor: Scale 10¹⁷Nm; Mrr2.43; Mθθ0.27; Mφφ-2.69; Mrθ0.25; Mθφ-0.60; Mφr-0.32; Fault plane solution: M₀2.67000×10¹⁷ NP1:φs19.00000°, δ43.00000°, λ102.00000°. NP2:φs183.00000°, δ48.00000°, λ79.00000°. Principal axes: T 2.4844, Plg81.0000°, Azm30.0000°; N 0.3415, Plg8.0000°, Azm190.0000°; P -2.8259, Plg3.0000°, Azm281.0000°;*

MOS ***05*** *22:33:56.1±1.8, 17˚.01S×174˚.20W, h10km, mb5.3/31, MS5.1/24 Error ellipse: s-maj=14.2km s-min=9.6km az=123.2*

GCMT ***05*** *22:33:57.4±0.1, 17˚.83S±0˚.01×172˚.66W, h15km, MW5.5/158, Moment Tensor Solution. s132,c245; s158,c326; Duration: 1s5 Moment tensor: Scale 10¹⁷ Nm; Mrr2.30±.03; Mθθ-0.05±.02; Mφφ-2.24±.03; Mrθ0.34±.05; Mθφ-0.78±.02; Mφr1.21±.05; Best double couple: M₀2.70300×10¹⁷ NP1:φs199.00000°, δ31.00000°, λ92.00000°. NP2:φs17.00000°, δ59.00000°, λ89.00000°. Principal axes: T 2.6100, Plg76.0000°, Azm283.0000°; N 0.1940, Plg1.0000°, Azm17.0000°; P -2.7970, Plg14.0000°, Azm107.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 22:33:54.0±0.4, 17˚.77S±0˚.04×172˚.83W±0˚.04, h28km±2km, h27km:pP-P, n1036, σ2s28/859, mb5.3/127, MS5.2/287, 99C-70D, Fault plane solution: NP1:φs46.06886°, δ70.97959°, λ111.18002°. NP2:φs176.13614°, δ28.17125°, λ43.65527°. Principal axes: T Plg58.6266°, Azm345.4570°; N Plg19.9728°, Azm218.8717°; P Plg23.1347°, Azm119.9388°; **Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**3.04**	**116**	P			**Pn**	**22 34 36.1**	**-4.2**
	baz=3.0,SNR=50								
NIUE	**Niue**	**3.04**	**116**				**Pn**	**22 34 36.0**	**-4.2**
NIUE	**Niue**	**3.04**	**116**	P			**Pn**	**22 34 36.1**	**-4.2**
AFI	**Afiamalu**	**3.97**	**15**	Pn			Pn	22 34 47.9	-5.3
	9.3nm,0.3s,baz=179,slow=22,SNR=3.5								
AFI				Sn			**Sn**	**22 35 30.9**	**-7.9**
	66nm,0.3s,baz=234,slow=14,SNR=6.8								
AFI				T			T	22 39 11.1	
	792nm,0.8s,baz=213,slow=20,SNR=5.9								
AFI	**Afiamalu**	**3.97**	**15**	Pn			Pn	22 34 47.8	-5.3
AFI				Sn			**Sn**	**22 35 33.7**	**-5.2**
AFI	**Afiamalu**	**3.97**	**15**	P			Pn	22 34 47.8	-5.4
AFI								22 35 33.7	
AFI	**Afiamalu**	**3.97**	**15**	P			**Pn**	**22 34 49.3**	**-3.9**
MSVF	**Nonsavu**	**8.69**	**269**	Pn			**Pn**	**22 36 02.4**	**+4.3**
	2.6nm,0.3s,baz=106,slow=12,SNR=18								
MSVF				Sn			**Sn**	**22 37 35.9**	**+0.6**
	baz=127,slow=20								
MSVF				LR			LR	22 38 46.4	
	comp=Z,38µm,20.6s,baz=110,slow=35								
MSVF	**Nonsavu**	**8.69**	**269**	Pn			**Pn**	**22 35 57.6**	**-0.5**
MSVF	**Nonsavu**	**8.69**	**269**	P			**Pn**	**22 35 57.6**	**-0.5**
MSVF	**Nonsavu**	**8.69**	**269**	P			Pn	22 36 03.3	+5.2
RAO	**Raoul Island**	**12.34**	**201**	Sn			**Sn**	**22 39 10.2**	**+5.6**
	35nm,0.3s,baz=93,slow=22,SNR=1.7								
GLKZ	**Green Lake**	**12.35**	**201**	P			**Pn**	**22 36 44.1**	**-3.9**
RAR	**Rarotonga**	**12.78**	**108**	Pn			Pn	22 36 48.9	-5.0
	4.4nm,0.3s,baz=252,slow=8.6,SNR=19								
RAR				Sn			**Sn**	**22 39 20.1**	**+4.9**
	2.3nm,0.3s,baz=206,slow=13,SNR=1.8								
RAR				LR			LR	22 41 00.4	
	comp=Z,3µm,19.4s,baz=250,slow=33								
RAR	**Rarotonga**	**12.78**	**108**				Pn	22 36 48.3	-5.6
RAR	**Rarotonga**	**12.78**	**108**	P			**Pn**	**22 36 52.3**	**-1.6**
PINNC	**Pines Island,**	**19.13**	**252**	P			**Pn**	**22 38 16.2**	**+0.2**
PINNC				IAmb			IAmb	22 38 46.0	
	comp=Z,511nm,1.4s								
OUENC	**Ouen Island, N**	**19.64**	**253**	P			**P**	**22 38 20.7**	**0.0**
OUENC				IAmb			IAmb	22 38 43.3	
	comp=Z,200nm,1.4s								
DZM	**Mont Dzumac**	**19.95**	**254**	P			**P**	**22 38 21.5**	**-2.7**
	comp=Z,0.1nm,0.3s,baz=163,slow=19,SNR=2.5								
DZM				S			**Sn**	**22 42 09.5**	**-0.2**
	comp=Z,13nm,1.1s,baz=45,slow=2.9,SNR=1.9								
DZM				LR			LR	22 45 00.7	
	comp=Z,8µm,18.6s,baz=86,slow=34								
	comp=Z,16nm,0.8s								
DZM	**Mont Dzumac**	**19.95**	**254**	*e*P			P	22 38 15.0	-9.1
	comp=Z,275nm,1.4s								
DZM				*e*LR			LR	22 42 51.4	
	comp=Z,12µm,24.3s								
DZM	**Mont Dzumac**	**19.95**	**254**	P			**P**	**22 38 23.9**	**-0.3**
DZM	**Mont Dzumac**	**19.95**	**254**	P			**Pn**	**22 38 28.0**	**+2.1**
OUZ	**Omahuta**	**21.16**	**212**	P			**P**	**22 38 36.0**	**-1.1**
OUZ				IAMs_20			IAMs_20	22 45 34.3	
	comp=Z,9µm,18.0s								
OUZ	**Omahuta**	**21.16**	**212**	P			**P**	**22 38 38.1**	**+1.0**
MXZ	**Matakaoa Point**	**21.20**	**200**	P			**P**	**22 38 37.8**	**+0.4**
MXZ	**Matakaoa Point**	**21.20**	**200**	P			**P**	**22 38 41.1**	**+3.7**
WCZ	**Waipu Caves**	**21.37**	**210**	P			**P**	**22 38 38.3**	**-1.0**
KUZ	**Kuaotunu**	**21.43**	**206**	P			**P**	**22 38 40.5**	**+0.6**
HAZ	**Te Kaha**	**21.55**	**201**	P			**P**	**22 38 39.9**	**-1.3**
PUZ	**Puketiti**	**21.68**	**199**	P			**P**	**22 38 42.3**	**-0.3**
WIAZ	**Waiheke Island**	**21.72**	**207**	P			**P**	**22 38 44.2**	**+1.2**
RUGZ	**Raukumara Rang**	**21.77**	**201**	P			**P**	**22 38 43.1**	**-0.6**
KOUNC	**Koumac, New Ca**	**21.79**	**259**	P			**P**	**22 38 43.5**	**-0.4**
KOUNC				IAmb			IAmb	22 39 19.5	
	comp=Z,249nm,1.3s								
KOUNC				IAMs_20			IAMs_20	22 45 55.1	
	comp=Z,9µm,18.0s								
MBAZ	**Motutapu North**	**21.80**	**207**	P			**P**	**22 38 43.9**	**0.0**
ETAZ	**East Tamaki Re**	**21.95**	**207**	P			**P**	**22 38 46.4**	**+0.9**
MKAZ	**Moumakai**	**21.97**	**206**	P			**P**	**22 38 45.6**	**-0.1**
WTAZ	**Waiatarua**	**22.09**	**208**	P			**P**	**22 38 47.5**	**+0.5**
PAE	**Paea**	**22.14**	**93**	*e*T			T	23 01 04.7	
	comp=Z,2.7nm,0.3s								
PPT2	**Papeete2**	**22.15**	**93**	*e*LR			LR	22 44 09.7	
	comp=Z,13µm,26.5s								
PPT2	**Papeete2**	**22.15**	**93**	*e*T			T	23 01 06.2	
	comp=Z,2.9nm,0.3s								
PPT	**Papeete**	**22.15**	**93**	P			**P**	**22 38 51.7**	**+3.8**
	comp=Z,60nm,1.1s,baz=270,slow=20,SNR=3.9								
PPT				S			Sn	22 43 06.0	+3.4
	comp=Z,35nm,0.8s,baz=234,slow=19,SNR=3.1								
PPT				LR			LR	22 44 56.7	
	comp=Z,3µm,21.4s,baz=257,slow=30								
	comp=Z,60nm,1.1s								
AWAZ	**Awhitu Peninsu**	**22.16**	**207**	P			**P**	**22 38 49.0**	**+1.2**
URZ	**Urewera**	**22.23**	**201**	P			**P**	**22 38 47.7**	**-0.8**
	comp=Z,215nm,1.0s,baz=29,slow=6.6,SNR=22								
URZ				S			**S**	**22 42 45.3**	**-6.4**
	comp=Z,10nm,0.8s,baz=293,slow=8.2,SNR=2.6								
	comp=Z,215nm,1.0s								
URZ	**Urewera**	**22.23**	**201**	P			**P**	**22 38 47.7**	**-0.8**
URZ	**Urewera**	**22.23**	**201**	P			**P**	**22 38 49.8**	**+1.3**
TOZ	**Tahuroa Road**	**22.37**	**205**	P			**P**	**22 38 49.7**	**-0.2**
TBI	**Tubuai**	**22.56**	**108**	*e*LR			LR	22 44 16.5	
	comp=Z,14µm,30.2s								
BKZ	**Black Stump Fm**	**23.26**	**201**	P			**P**	**22 38 58.3**	**-1.0**
BKZ				IAmb			IAmb	22 39 20.2	
	comp=Z,97nm,0.9s								
BKZ	**Black Stump Fm**	**23.26**	**201**	P			**P**	**22 39 00.8**	**+1.5**
HIZ	**Hauiti**	**23.30**	**205**	P			**P**	**22 39 00.2**	**+0.6**
HIZ	**Hauiti**	**23.30**	**205**	P			**P**	**22 39 01.8**	**+2.1**
TMVZ	**Te Maari**	**23.50**	**203**	P			**P**	**22 39 01.8**	**+0.1**
PXZ	**Pawanui**	**23.91**	**200**	P			**P**	**22 39 07.6**	**+2.1**
BFZ	**Birch Farm**	**24.70**	**200**	P			**P**	**22 39 12.4**	**-0.3**
BFZ				IAmb			IAmb	22 39 36.2	
	comp=Z,150nm,1.4s								
BFZ	**Birch Farm**	**24.70**	**200**	P			**P**	**22 39 16.4**	**+3.6**
MRZ	**Mangatainoka R**	**24.91**	**201**	P			**P**	**22 39 16.8**	**+2.1**
TUWZ	**Tuamarina**	**26.17**	**203**	P			**P**	**22 39 27.5**	**+1.5**
NNZ	**Nelson**	**26.20**	**204**	P			**P**	**22 39 26.3**	**-0.1**
NNZ				IAmb			IAmb	22 40 03.1	
	comp=Z,129nm,1.2s								
QRZ	**Quartz Range**	**26.21**	**206**	P			**P**	**22 39 27.0**	**+0.5**
QRZ				IAmb			IAmb	22 39 44.1	
	comp=Z,76nm,0.9s								
QRZ				IAMs_20			IAMs_20	22 50 21.4	
	comp=Z,6µm,18.0s								
QRZ	**Quartz Range**	**26.21**	**206**	P			**P**	**22 39 27.8**	**+1.3**
THZ	**Tophouse**	**26.85**	**204**	P			**P**	**22 39 31.8**	**-0.5**
THZ				IAmb			IAmb	22 39 47.5	
	comp=Z,162nm,1.5s								
KHZ	**Kahutara**	**27.18**	**202**	P			**P**	**22 39 33.8**	**-1.3**
KHZ				IAmb			IAmb	22 39 52.6	
	comp=Z,49nm,0.9s								
KHZ	**Kahutara**	**27.18**	**202**	P			**P**	**22 39 37.7**	**+2.6**
DSZ	**Denniston Nort**	**27.28**	**206**	P			**P**	**22 39 39.4**	**+3.3**
HNR	**Honiara**	**27.70**	**284**	S			**S**	**22 44 25.4**	**+4.5**
	comp=Z,66nm,0.3s,baz=149,slow=2.7,SNR=1.7								
HNR				LR			LR	22 48 58.8	
	comp=Z,10µm,18.0s,baz=118,slow=33								
LTZ	**Lake Taylor**	**27.97**	**204**	P			**P**	**22 39 40.4**	**-1.9**
LTZ				IAmb			IAmb	22 40 06.8	
	comp=Z,67nm,0.8s								
OXZ	**Oxford**	**28.52**	**204**	P			**P**	**22 39 44.5**	**-2.6**
OXZ	**Oxford**	**28.52**	**204**	P			**P**	**22 39 49.3**	**+2.1**
RPZ	**Rata Peaks**	**29.23**	**204**	P			**P**	**22 39 54.1**	**+0.6**
	comp=Z,39nm,1.0s,baz=78,slow=12,SNR=3.7								
	comp=Z,39nm,1.0s								
RPZ	**Rata Peaks**	**29.23**	**204**	P			**P**	**22 39 52.0**	**-1.5**
RPZ				IAMs_20			IAMs_20	22 52 12.2	
	comp=Z,6µm,18.0s								
RPZ	**Rata Peaks**	**29.23**	**204**	P			**P**	**22 39 53.4**	**0.0**
RPZ	**Rata Peaks**	**29.23**	**204**	P			P	22 39 58.6	+5.1
FOZ	**Fox Glacier**	**29.58**	**206**	P			**P**	**22 39 54.6**	**-1.9**
FOZ				IAmb			IAmb	22 40 20.1	
	comp=Z,122nm,1.2s								
ODZ	**Otahua Downs**	**30.51**	**203**	IAMs_20			IAMs_20	22 52 13.9	
	comp=Z,4µm,18.0s								
MLZ	**Mavora Lakes**	**31.78**	**206**	IAMs_20			IAMs_20	22 54 49.8	
	comp=Z,5µm,19.0s								
DCZ	**Deep Cove**	**32.27**	**207**	IAMs_20			IAMs_20	22 53 31.7	
	comp=Z,5µm,18.0s								
WHZ	**Wether Hill Ro**	**32.27**	**206**	P			**P**	**22 40 19.2**	**-1.1**
WHZ				IAmb			IAmb	22 40 41.0	
	comp=Z,103nm,1.2s								
WHZ				IAMs_20			IAMs_20	22 55 22.5	
	comp=Z,4µm,18.0s								
KWAJ	**Kwajalein Atol**	**32.72**	**322**	IAMs_20			IAMs_20	22 52 10.4	
	comp=Z,5µm,18.0s								
TAOE	**Nuku Hiva Isla**	**32.96**	**79**	*e*LR			LR	22 49 17.0	
	comp=Z,5µm,27.2s								
KRVT	**Keravat (AS076**	**36.91**	**287**	LR			LR	22 54 30.2	
	comp=Z,6µm,19.5s,baz=267,slow=34								
CTA	**Charters Tower**	**38.71**	**260**	S			**S**	**22 47 16.5**	**+5.0**
	comp=Z,0.9nm,0.5s,baz=94,slow=20,SNR=1.2								
CTA				LR			LR	22 56 09.6	
	comp=Z,6µm,18.2s,baz=92,slow=35								
CTAO	**Charters Tower**	**38.71**	**260**	P			**P**	**22 41 14.0**	**-1.9**
CTAO	**Charters Tower**	**38.71**	**260**	P			**P**	**22 41 14.0**	**-1.9**
CTAO				pmax			pmax		
	comp=Z,27nm,0.9s								
CTAO				MLR			MLR		
	comp=Z,6µm,18.0s								
PMG	**Port Moresby**	**39.70**	**277**	LR			LR	22 55 48.8	
	comp=Z,2µm,18.6s,baz=148,slow=34								
PMG	**Port Moresby**	**39.70**	**277**	P			**P**	**22 41 22.6**	**-1.6**
PMG	**Port Moresby**	**39.70**	**277**	*ce*P			**P**	**22 41 22.0**	**-2.3**
PMG				pmax			pmax		
	comp=Z,29nm,1.3s								
MTSU	**Mount Surprise**	**40.70**	**263**	P			**P**	**22 41 29.0**	**-3.6**
	baz=41,SNR=4.2								
KIP	**Kipapa**	**41.57**	**21**	*i* P			**P**	**22 41 41.6**	**+2.1**
KIP				pmax			pmax		
	comp=Z,50nm,1.0s								
WAKE	**Wake Island**	**41.98**	**330**	IAMs_20			IAMs_20	22 58 53.0	
	comp=Z,3µm,18.0s								
MANU	**Manus Island**	**42.07**	**287**	P			**P**	**22 41 41.5**	**-2.4**
COEN	**Coen**	**42.42**	**269**	P			**P**	**22 41 43.6**	**-3.1**
	baz=42,SNR=7.3								
COEN	**Coen**	**42.42**	**269**	P			**P**	**22 41 45.0**	**-1.7**
STKA	**Stephens Creek**	**43.38**	**242**	P			**P**	**22 41 51.4**	**-2.8**
	comp=Z,10nm,1.1s,baz=107,slow=13,SNR=5.7								
STKA				LR			LR	22 58 01.4	
	comp=Z,2µm,18.1s,baz=72,slow=34								
	comp=Z,10nm,1.1s								
STKA	**Stephens Creek**	**43.38**	**242**	P			**P**	**22 41 52.7**	**-1.6**
	baz=44,SNR=3.7								
STKA	**Stephens Creek**	**43.38**	**242**	P			**P**	**22 41 51.5**	**-2.7**
STKA	**Stephens Creek**	**43.38**	**242**	P			**P**	**22 41 51.5**	**-2.7**
STKA				pmax			pmax		
	comp=Z,8.0nm,1.3s								
MIDW	**Midway**	**45.93**	**354**	P			P	22 42 09.4	-5.0
WR0	**Warramunga Arr**	**49.69**	**259**	P			**P**	**22 42 41.8**	**-2.2**
WB0	**Warramunga Arr**	**49.85**	**259**	P			**P**	**22 42 41.5**	**-3.6**
WB0				IAmb			IAmb	22 42 46.0	
	comp=Z,38nm,1.1s								
WB2	**Warramunga Arr**	**49.87**	**259**	P			**P**	**22 42 42.7**	**-2.5**
WB2				IAmb			IAmb	22 42 46.1	
	comp=Z,42nm,1.1s								
WRAB	**Tennant Creek**	**49.87**	**259**	P			**P**	**22 42 42.5**	**-2.8**
WRAB				IAmb			IAmb	22 42 46.1	
	comp=Z,35nm,1.0s								
WRAB	**Tennant Creek**	**49.87**	**259**	*i* P			**P**	**22 42 42.3**	**-3.0**
WRAB				pmax			pmax		
	comp=Z,18nm,0.7s								
WRA	**Warramunga Arr**	**49.88**	**259**	P			**P**	**22 42 42.2**	**-3.2**
	comp=Z,19nm,0.8s,baz=98,slow=6.4,SNR=177								
WRA				PcP			**PcP**	**22 44 06.7**	**+1.0**
	comp=Z,7.9nm,1.0s,baz=95,slow=4.6,SNR=1.3								
WRA

baz=236,SNR=11
CWC Cottonwood Cre 74.69 43 P **P** 22 45 33.2 +1.8
baz=234
PET Petropavlovsk 74.69 343 IAMs_20 IAMs_20 23 16 47.7
comp=Z,992nm,19.0s
PET Petropavlovsk 74.69 343 *e*P **P** **22 45 27.9 -2.9**
PET *e**SP **PcP** **22 45 47.8 +2.9**
PET *e* 22 48 12.5
PET *e*S **SKiKP** **22 54 58.8 +4.3**
PET *e*PS **PnS** **22 55 36.4 -5.8**
PET *e*PPS PPS 22 55 49.5
PET pmax pmax
comp=Z,600nm,6.6s
MPMC Manual Prospec 74.85 44 P **P** **22 45 35.0 +2.6**
baz=234,SNR=43
BC3 Big Chuckawall 74.86 47 P **P** **22 45 35.2 +2.8**
baz=236,SNR=14
GSC Goldstone, Bar 74.87 45 P **P** **22 45 34.9 +2.5**
baz=235,SNR=11
MLAC Mammoth, Mammo 74.91 42 P **P** **22 45 36.3 +3.5**
baz=233
HEC Hector,Ludlow 74.91 45 P **P** **22 45 35.1 +2.4**
baz=235
L02F Cave Junction 74.93 36 P **P** **22 45 36.2 +3.7**
baz=228
TIN Tinemaha, Big 74.95 42 P **P** **22 45 35.7 +2.8**
baz=233
UGM Wanagama 74.96 266 IAMs_20 IAMs_20 23 18 14.1
comp=Z,1µm,22.0s
GLA Glamis 74.97 48 P **P** **22 45 36.0 +3.0**
baz=237
PEA0B Petropavlovsk- 75.04 342 *i*P **P** **22 45 34.5 +1.6**
PETK Petropavlovsk- 75.04 342 P **P** **22 45 33.0 +0.1**
comp=Z,2.2nm,0.6s,baz=67,slow=10,SNR=3.2
comp=Z,2.2nm,0.6s
PETK Petropavlovsk- 75.04 342 P **P** **22 45 31.4 -1.5**
PETK Petropavlovsk- 75.04 342 P **P** **22 45 31.4 -1.5**
YBH Yreka Blue Hor 75.16 36 LR LR 23 13 52.6
comp=Z,1µm,18.5s,baz=231,slow=32
YBH Yreka Blue Hor 75.16 36 IAMs_20 IAMs_20 23 14 53.8
comp=Z,1µm,18.0s
SMRI Semarang 75.28 267 P **P** **22 45 32.9 -2.3**
SMRI Semarang 75.28 267 P **P** **22 45 34.6 -0.6**
comp=Z,102nm,1.4s
GMRC Granite Mounta 75.35 46 P **P** **22 45 38.2 +3.0**
baz=236,SNR=16
IRM Iron Mountain 75.35 46 P **P** **22 45 38.4 +3.3**
baz=236,SNR=24
GRAC Grapevine Rang 75.48 43 P **P** **22 45 38.7 +2.8**
baz=234
FURC Furnace Creek, 75.50 44 P **P** **22 45 38.6 +2.7**
baz=234
TUQ Turquoise Moun 75.53 45 P **P** **22 45 38.8 +2.5**
baz=235
SHOC Shoshone, Teco 75.56 44 P **P** **22 45 39.3 +3.0**
baz=235
HUMO Hull Mountain 75.59 36 IAMs_20 IAMs_20 23 17 51.4
comp=Z,1µm,18.0s
L04D Klamath Falls 75.70 36 P **P** **22 45 39.9 +2.8**
baz=229
NVAR Mina Array Bea 75.72 41 P **P** **22 45 39.9 +2.4**
comp=Z,18nm,1.1s,baz=227,slow=8.3,SNR=35
NVAR S **S** **22 55 17.8 +0.2**
comp=Z,0.1nm,0.3s,baz=208,slow=27,SNR=1.4
NVAR LR LR 23 12 00.1
comp=Z,615nm,20.0s,baz=242,slow=30
comp=Z,18nm,1.1s
NVAR Mina Array Bea 75.72 41 P **P** **22 45 34.6 -2.8**
YSS Yuzh-Sakhalins 75.81 330 IAMs_20 IAMs_20 23 20 08.6
comp=Z,914nm,19.0s
YSS Yuzh-Sakhalins 75.81 330 *o*e P **P** **22 45 38.6 +1.2**
YSS *e**PP **sP** **22 45 47.9 +0.3**
YSS *e* 22 48 32.0
YSS *e*S **S** **22 55 18.1 +0.5**
YSS pmax pmax
comp=Z,40nm,1.0s
YSS pmax pmax
comp=Z,700nm,8.5s
YSS smax smax
comp=E,200nm,7.5s
YSS MLR MLR
comp=Z,800nm,15.0s
214A Organ Pipe Nat 75.82 49 P **P** **22 45 40.2 +2.4**
baz=238
NEE2 Needles Airpor 76.05 46 P **P** **22 45 41.7 +2.6**
baz=236
PDMCI Parker Dam,Lak 76.13 47 P **P** **22 45 42.0 +2.5**
baz=237,SNR=5.3
TWG Pinlang 76.16 300 IAMs_20 IAMs_20 23 16 07.6
comp=Z,1µm,20.0s
TPNV Topopah Spring 76.18 44 IAMs_20 IAMs_20 23 17 17.8
comp=Z,1µm,18.0s
TPNV Topopah Spring 76.18 44 P **P** **22 45 43.1 +3.1**
baz=235,SNR=6.1
NACB Ninganchiao 76.33 301 IAMs_20 IAMs_20 23 12 20.1
comp=Z,1µm,22.0s
STKI Sinan 76.40 274 P **P** **22 45 42.0 +0.4**
comp=Z,46nm,1.5s
J04D Umpqua Nationa 76.48 36 IAMs_20 IAMs_20 23 16 28.8
comp=Z,1µm,18.0s
J04D Umpqua Nationa 76.48 36 P **P** **22 45 43.2 +1.6**
baz=229
SSLB Suanglung 76.69 301 IAMs_20 IAMs_20 23 18 50.5
comp=Z,974nm,18.0s
TPUB Ta-pu 76.74 300 P **P** **22 45 39.6 -3.6**
TPUB IAmb IAmb 22 46 00.8
comp=Z,49nm,1.1s
TPUB IAMs_20 IAMs_20 23 16 25.0
comp=Z,1µm,20.0s
J05D Fort Rock, OR 77.00 36 P **P** **22 45 47.1 +2.6**
baz=230
KDAK Kodiak Island 77.13 11 P **P** **22 45 48.0 +3.4**
comp=Z,14nm,1.1s,baz=169,slow=5.4,SNR=1.4
KDAK LR LR 23 18 28.7
comp=Z,968nm,18.1s,baz=222,slow=35
comp=Z,14nm,1.1s
KDAK Kodiak Island 77.13 11 IAMs_20 IAMs_20 23 20 21.4
comp=Z,1µm,18.0s
G03D McMinnville, O 77.16 33 IAMs_20 IAMs_20 23 13 01.7
comp=Z,1µm,20.0s
R11A Troy Canyon, C 77.41 43 P P 22 45 41.8 -5.2
R11A IAmb IAmb 22 46 01.4
comp=Z,45nm,1.4s
R11A Troy Canyon, C 77.41 43 P **P** **22 45 49.6 +2.7**
baz=235
TUC Tucson 77.47 50 P **P** **22 45 49.7 +2.4**
baz=239
P16K Nushagak River 77.49 8 P **P** **22 45 48.0 +1.4**
baz=194
TEY Ternei 77.57 326 *c*e P **P** **22 45 48.1 +0.7**
TEY pmax pmax
comp=Z,100nm,9.2s
I05D Terrebonne, OR 77.61 35 P **P** **22 45 50.3 +2.5**
baz=230
UGL Uglegorsk 77.66 332 *e*P **P** **22 45 50.1 +2.3**
UGL *e* 22 55 52.2
UGL pmax pmax
comp=Z,670nm,6.6s
P17K Kvichak River 77.86 9 P **P** **22 45 50.0 +1.4**
baz=196
KSM Kuching 77.95 275 P **P** **22 45 48.2 -2.0**
O16K Kokwok River B 78.02 8 P **P** **22 45 50.0 +0.5**
baz=194,SNR=7.4
LEM Lembang 78.03 267 LR LR 23 20 17.3
comp=Z,890nm,19.5s,baz=145,slow=36
G05D Wamic, OR 78.21 34 P P 22 45 57.6 +6.5
baz=229
P18K Big Mountain, 78.22 9 P **P** **22 45 49.4 -1.3**
P18K IAMs_20 IAMs_20 23 15 47.1
comp=Z,1µm,20.0s
P18K Big Mountain, 78.22 9 P **P** **22 45 51.3 +0.6**
baz=197
KSRS Korea Array 78.23 316 P **P** **22 45 53.0 +1.8**
comp=Z,15nm,1.1s,baz=132,slow=6.0,SNR=35
KSRS LR LR 23 17 58.1
comp=Z,546nm,19.1s,baz=120,slow=34
comp=Z,15nm,1.1s
KSAR Wonju Array Be 78.25 316 P **P** **22 45 48.9 -2.4**
KSAR Wonju Array Be 78.25 316 P **P** **22 45 48.9 -2.4**
O17K Koliganek Bris 78.32 8 P **P** **22 45 52.2 +0.9**
baz=195,SNR=11
CNJI Cibinong 78.36 266 P **P** **22 45 51.1 -1.4**
comp=Z,2µmcomp=Z,125nm,1.4s
E04D Cinebar 78.42 33 IAMs_20 IAMs_20 23 23 44.1
comp=Z,979nm,18.0s
E04D Cinebar 78.42 33 P **P** **22 45 55.0 +2.9**
baz=228
SEHB SEOHWA 78.46 317 P **P** **22 45 49.1 -3.4**
SEHB IAmb IAmb 22 45 55.6
comp=Z,46nm,1.5s
O18K Koktuh Hills 78.67 9 IAMs_20 IAMs_20 23 16 01.0
comp=Z,1µm,20.0s
O18K Koktuh Hills 78.67 9 P **P** **22 45 54.6 +1.4**
baz=197,SNR=7.8
WUAZ Wupatki 78.69 47 IAMs_20 IAMs_20 23 19 45.5
comp=Z,820nm,18.0s
WUAZ Wupatki 78.69 47 P **P** **22 45 56.8 +2.7**
baz=238,SNR=5.5
TYV Tymovskoe 78.70 333 *e*P **P** **22 45 54.8 +1.3**
TYV *e*S **S** **22 55 47.6 -1.4**
TYV pmax pmax
comp=Z,26nm,1.5s
TYV pmax pmax
comp=Z,400nm,5.1s
TYV smax smax
comp=N,200nm,5.4s
TYV smax smax
comp=E,300nm,5.4s
N16K Nishlik Lake 78.80 7 P **P** **22 45 53.6 -0.2**
baz=193
D03D Eldon 78.80 32 P **P** **22 45 55.5 +1.3**
baz=228
CBJI Citeko 78.88 267 P **P** **22 45 53.3 -2.1**
comp=E,5µmcomp=E,83nm,1.0s
ELK Elko 79.00 41 LR LR 23 17 03.2
comp=E,488nm,18.3s,baz=244,slow=33
CNPM China Poot 79.01 11 IAMs_20 IAMs_20 23 14 46.2
comp=Z,1µm,21.0s
HOM Homer 79.06 11 IAMs_20 IAMs_20 23 16 48.5
comp=Z,1µm,19.0s
INCN Inchon 79.11 315 IAMs_20 IAMs_20 23 18 05.0
comp=Z,1µm,20.0s
QZH Quanzhou 79.13 301 ⇑ *i*P **P** **22 45 57.3 +0.9**
QZH S **S** **22 56 01.1 +6.6**
QZH sS **SKSac** **22 56 11.2 +0.3**
QZH pmax pmax
comp=Z,550nm,8.9s
QZH LR LR
comp=Z,370nm,16.1s
QZH LR LR
comp=Z,630nm,18.9s
QZH LR LR
comp=Z,650nm,21.3s
O19K Port Alsworth 79.13 9 IAMs_20 IAMs_20 23 16 25.1
comp=Z,1µm,20.0s
O19K Port Alsworth 79.13 9 P **P** **22 45 57.1 +1.4**
baz=198
TPI Tanjungpandan 79.19 271 P **P** **22 45 57.4 +0.3**
comp=Z,620nmcomp=Z,30nm,1.3s
BRLK Bradley Lake 79.30 11 IAMs_20 IAMs_20 23 16 05.4
comp=Z,985nm,20.0s
BRSE Bradley Lake S 79.31 11 P **P** **22 45 59.0 +2.3**
baz=201
N18K Kilae Creek 79.36 8 P **P** **22 45 54.4 -2.6**
N18K IAMs_20 IAMs_20 23 16 42.4
comp=Z,951nm,19.0s
N18K Kilae Creek 79.36 8 P **P** **22 45 57.6 +0.6**
baz=196
USRK Ussuriysk Ar. 79.60 323 P **P** **22 46 00.0 +1.4**
comp=Z,12nm,1.2s,baz=93,slow=4.2,SNR=19
USRK LR LR 23 20 30.0
comp=Z,1µm,18.2s,baz=121,slow=35
comp=Z,12nm,1.2s
USRK Ussuriysk Ar. 79.60 323 P **P** **22 45 55.6 -3.0**
USRK Ussuriysk Ar. 79.60 323 P **P** **22 45 55.6 -3.0**
N19K Bonanza Creek 79.69 9 P **P** **22 45 56.9 -2.0**
N19K IAmb IAmb 22 46 12.6
comp=Z,53nm,1.1s
N19K Bonanza Creek 79.69 9 P **P** **22 46 00.2 +1.3**
baz=198,SNR=9.0
BBB Bella Bella 79.75 26 LR LR 23 17 29.0
comp=Z,512nm,18.0s,baz=224,slow=33
121A Cookes Peak, D 79.79 51 P **P** **22 46 03.7 +3.6**
baz=241
121A Cookes Peak, D 79.79 51 P **P** **22 46 03.3 +3.1**
baz=241
O22K Cooper Landing 80.18 11 IAMs_20 IAMs_20 23 20 28.2
comp=Z,1µm,18.0s
BMO Blue Mountains 80.19 37 IAMs_20 IAMs_20 23 19 44.9
comp=Z,1µm,18.0s
MFID Camas Ranch 80.19 38 IAMs_20 IAMs_20 23 19 19.9
comp=Z,908nm,19.0s
DUG Dugway, Tooele 80.22 42 P **P** **22 46 04.4 +2.1**
baz=237,SNR=14
SPCR Spurr Chakacha 80.42 10 P **P** **22 46 03.6 +0.9**
baz=200
SPU Mount Spurr 80.43 10 P **P** **22 46 00.1 -2.7**
RC01 Rabbit Creek A 80.75 11 P **P** **22 46 05.6 +1.2**
baz=202,SNR=8.0
M19K Big River Lodg 80.75 9 P **P** **22 46 02.3 -2.1**
M19K IAMs_20 IAMs_20 23 17 26.0
comp=Z,892nm,20.0s
M19K Big River Lodg 80.75 9 P P 22 46 10.3 +5.9
baz=198
HIN Hinchinbrook I 80.75 13 IAMs_20 IAMs_20 23 16 07.0
comp=Z,1µm,20.0s
SUA Susitna One 80.91 11 IAMs_20 IAMs_20 23 15 40.5
comp=Z,1µm,20.0s
SUA Susitna One 80.91 11 P **P** **22 46 06.7 +1.3**
baz=201
M20K Styx River 80.92 9 P **P** **22 46 03.0 -2.4**
M20K IAmb IAmb 22 46 21.4
comp=Z,39nm,1.2s
M20K Styx River 80.92 9 P **P** **22 46 06.4 +1.0**
baz=199
L19K White Mountain 80.95 8 **P** **22 46 02.7 -2.9**
L19K IAMs_20 IAMs_20 23 17 41.3
comp=Z,857nm,19.0s
L19K White Mountain 80.95 8 P **P** **22 46 06.8 +1.3**
baz=197
Y22A Socorro 81.06 50 P **P** **22 46 10.3 +3.3**
baz=242
GLI Glacier Island 81.07 12 IAMs_20 IAMs_20 23 16 49.4
comp=Z,1µm,20.0s
GLI Glacier Island 81.07 12 P **P** **22 46 07.1 +0.9**
baz=205,SNR=7.2
FID Port Fidalgo 81.08 13 IAMs_20 IAMs_20 23 16 17.5
comp=Z,1µm,19.0s
HLID Hailey 81.11 39 P **P** **22 46 09.5 +2.5**
baz=235,SNR=32
MNTX Cornudas Mount 81.20 53 P **P** **22 46 10.5 +2.9**
baz=243
MNTX Cornudas Mount 81.20 53 P **P** **22 46 10.1 +2.6**
baz=243
NKL Nikolayevsk 81.20 334 *e*P **P** **22 46 10.4 +3.4**
NKL *e* 22 49 06.8
NKL *e*S **S** **22 56 18.5 +3.3**
NKL pmax pmax
comp=N,3.0nm,0.6s
NKL pmax pmax
comp=Z,23nm,1.3s
NKL pmax pmax
comp=E,3.0nm,0.8s
NKL smax smax
comp=E,3.0nm,0.9s
NKL smax smax
comp=N,4.0nm,1.9s
NKL MLR MLR
comp=N,4.0nm,17.0s
NKL MLR MLR
comp=E,63nm,16.0s
NKL MLR MLR
comp=Z,604nm,16.0s
MDJ Mudanjiang 81.23 322 IAMs_20 IAMs_20 23 19 19.1
comp=Z,1µm,19.0s
MDJ Mudanjiang 81.23 322 P **P** **22 46 06.6 -0.8**
MDJ S **S** **22 56 16.0 +0.1**
MDJ sS ScS 22 56 38.2 +4.4
MDJ pmax pmax
comp=Z,5.0nm,1.3s
MDJ pmax pmax
comp=Z,850nm,9.0s
MDJ LR LR
comp=Z,520nm,19.3s
MDJ LR LR
comp=Z,740nm,20.5s
MDJ LR LR
comp=Z,1µm,19.5s
SKT Skwentna 81.27 10 P **P** **22 46 05.3 -1.9**
SKT IAmb IAmb 22 46 18.4
comp=Z,35nm,1.4s
SKT IAMs_20 IAMs_20 23 16 32.9
comp=Z,1µm,20.0s
SKT Skwentna 81.27 10 P **P** **22 46 07.7 +0.5**

baz=200,SNR=5.3
KNK Knik Glacier 81.29 12 IAMs_20 IAMs_20 23 17 01.3
comp=Z,878nm,19.0s
KNK Knik Glacier 81.29 12 P **P** **22 46 06.1 -1.2**
baz=203
M22K Willow 81.30 11 IAMs_20 IAMs_20 23 15 50.6
comp=Z,981nm,20.0s
M22K Willow 81.30 11 P **P** **22 46 08.6 +1.4**
baz=202
PMR Palmer 81.33 11 P **P** **22 46 08.9 +1.5**
baz=203,SNR=7.7
WRAK Wrangell Islan 81.34 21 IAMs_20 IAMs_20 23 20 57.9
comp=Z,772nm,18.0s
WRAK Wrangell Islan 81.34 21 P **P** **22 46 09.2 +1.6**
baz=219
L20K Farewell, AK 81.37 9 P **P** **22 46 09.1 +1.4**
baz=198
KASI Kota Agung 81.38 267 P **P** **22 46 08.0 -0.9**
GRNR Gornyy 81.46 330⇑*iP* **P** **22 46 09.8 +1.3**
GRNR pmax pmax
comp=Z,6.0nm,1.1s
GRNR MLR MLR
comp=N,320nm,17.0s
GRNR MLR MLR
comp=E,220nm,18.0s
GRNR MLR MLR
comp=Z,370nm,17.0s
TX31 Lajitas Ar. Si 81.48 56 P **P** **22 46 12.4 +3.2**
baz=244
TXAR Lajitas Array 81.48 56 P **P** **22 46 12.1 +2.9**
comp=Z,6.1nm,1.1s,baz=216,slow=6.2,SNR=32
TXAR S **S** **22 56 17.6 -1.8**
comp=Z,0.1nm,0.3s,baz=149,slow=14,SNR=1.2
TXAR LR LR 23 14 37.9
comp=Z,444nm,20.4s,baz=246,slow=30
comp=Z,6.1nm,1.1s
TXAR Lajitas Array 81.48 56 **P** **22 46 05.4 -3.8**
TXAR Lajitas Array 81.48 56 P **P** **22 46 05.4 -3.8**
TTA Tatalina 81.52 8 P **P** **22 46 10.4 +1.8**
baz=196,SNR=12
MVCO Mesa Verde 81.55 47 IAMs_20 IAMs_20 23 19 46.1
comp=Z,756nm,18.0s
MVCO Mesa Verde 81.55 47 P **P** **22 46 12.2 +2.6**
baz=240
BELA Belgrano 2 81.58 172 P **P** **22 46 06.9 -1.9**
BELA IAmb IAmb 22 46 14.8
comp=Z,25nm,1.0s
MESA MESA 81.60 15 IAMs_20 IAMs_20 23 16 27.4
comp=Z,1µm,19.0s
MESA MESA 81.60 15 P **P** **22 46 11.9 +2.6**
baz=209
SML Sawmill 81.67 11 IAMs_20 IAMs_20 23 24 52.5
comp=Z,898nm,18.0s
SML Sawmill 81.67 11 P **P** **22 46 10.0 +0.6**
baz=203
BMRM Bremner River 81.68 13 IAMs_20 IAMs_20 23 21 10.5
comp=Z,918nm,18.0s
BMRM Bremner River 81.68 13 P **P** **22 46 11.1 +1.6**
baz=207,SNR=13
M23K Glacier View 81.78 12 P **P** **22 46 10.9 +1.0**
baz=204
PMSA Palmer Station 81.80 156 LR LR 23 15 12.0
comp=Z,1µm,20.2s,baz=244,slow=30
PMSA Palmer Station 81.80 156 IAMs_20 IAMs_20 23 14 40.9
comp=Z,1µm,19.0s
YAH Yahtse 81.82 15 IAMs_20 IAMs_20 23 17 05.9
comp=Z,1µm,20.0s
PNL Peninsula 81.82 16 P **P** **22 46 12.3 +2.1**
baz=212
KLU Klutina 81.87 13 IAMs_20 IAMs_20 23 16 54.5
comp=Z,954nm,20.0s
KLU Klutina 81.87 13 P **P** **22 46 12.1 +1.6**
baz=206,SNR=5.7
CUT Chulitna 81.88 10 IAMs_20 IAMs_20 23 16 11.0
comp=Z,1µm,21.0s
CUT Chulitna 81.88 10 P **P** **22 46 11.9 +1.5**
baz=202
ISLE Juniper Island 81.88 15 IAMs_20 IAMs_20 23 17 27.7
comp=Z,1µm,20.0s
SCM Sheep Creek Mo 81.89 12 IAMs_20 IAMs_20 23 17 57.2
comp=Z,857nm,20.0s
SCM Sheep Creek Mo 81.89 12 P **P** **22 46 12.0 +1.4**
baz=204,SNR=5.9
TGL Tana Glacier 81.90 14 IAMs_20 IAMs_20 23 17 09.2
comp=Z,1µm,20.0s
ANMO Albuquerque 81.91 49 LR LR 23 17 59.9
ANMO Albuquerque 81.91 49*ceP* **P** **22 46 14.0 +2.5**
ANMO pmax pmax
comp=Z,36nm,2.5s
ANMO Albuquerque 81.91 49 P **P** **22 46 14.7 +3.2**
baz=242
ANMO Albuquerque 81.91 49 P **P** **22 46 14.6 +3.1**
baz=242
PINM Pinnacle 81.96 16 P **P** **22 46 12.9 +1.9**
baz=211
BCPM Bancas Point 82.00 16 IAMs_20 IAMs_20 23 25 03.9
comp=Z,886nm,18.0s
NJ2 Nanjing 82.03 307⇑P **P** **22 46 13.4 +1.5**
NJ2 pP **PcP** **22 46 16.7 -0.6**
NJ2 S **S** **22 56 31.0 +6.3**
NJ2 sS **sS** **22 56 38.3 +1.4**
NJ2 SS SS 23 01 57.2 +13
NJ2 pmax pmax
comp=Z,12nm,0.5s
NJ2 pmax pmax
comp=Z,790nm,8.2s
NJ2 LR LR
comp=Z,760nm,20.0s
NJ2 LR LR
comp=Z,720nm,20.2s
NJ2 LR LR
comp=Z,1µm,20.1s
TABL Table Mountain 82.03 15 IAMs_20 IAMs_20 23 17 40.7
comp=Z,1µm,19.0s
PV07 Paradox Valley 82.06 46 P **P** **22 46 08.1 -4.1**
PV07 IAmb IAmb 22 46 16.6
comp=Z,32nm,1.4s
GRNC Granite Creek 82.14 15 IAMs_20 IAMs_20 23 17 07.4
comp=Z,990nm,19.0s
JIS Juneau Island 82.14 19 IAMs_20 IAMs_20 23 22 01.2
comp=Z,884nm,18.0s
VRDI Verde Repeater 82.17 14 IAMs_20 IAMs_20 23 16 59.4
comp=Z,835nm,19.0s
K20K Telida 82.18 8 P **P** **22 46 13.5 +1.4**
baz=198,SNR=15
N25K Chitina, Valde 82.25 13 IAMs_20 IAMs_20 23 17 33.6
comp=Z,795nm,18.0s
N25K Chitina, Valde 82.25 13 P **P** **22 46 14.1 +1.6**
baz=207,SNR=8.2
ANM Nome 82.28 3 IAMs_20 IAMs_20 23 18 43.8
comp=Z,970nm,20.0s
GLB Gilahina Butte 82.28 14 IAMs_20 IAMs_20 23 21 48.3
comp=Z,742nm,18.0s
NEW Newport 82.35 34 LR LR 23 18 13.1
comp=Z,1µm,18.6s,baz=224,slow=32
NEW Newport 82.35 34 P **P** **22 46 15.1 +1.8**
baz=232,SNR=12
M24K Tolsona, Glenn 82.37 12 P **P** **22 46 15.3 +2.2**
baz=205,SNR=9.2
LOGN Logan Glacier 82.40 15 IAMs_20 IAMs_20 23 17 43.4
comp=Z,891nm,19.0s
MCARA McCarthy VSAT 82.41 14 IAMs_20 IAMs_20 23 18 04.7
comp=Z,878nm,19.0s
MCARA McCarthy VSAT 82.41 14 P **P** **22 46 14.9 +1.7**
baz=208
CTG Chitna Glacier 82.44 15 P **P** **22 46 15.3 +1.8**
baz=210,SNR=9.9
CTGM Chitina Glacie 82.44 15 IAMs_20 IAMs_20 23 17 27.5
comp=Z,826nm,19.0s
BARN Barnard Glacie 82.44 15 IAMs_20 IAMs_20 23 28 49.6
comp=Z,997nm,18.0s
WAT6 Susitna Watana 82.50 11 P **P** **22 46 15.3 +1.5**
baz=204,SNR=14
PLBC Pleasant Camp 82.50 18 P **P** **22 46 16.2 +2.5**
baz=215,SNR=7.9
T35M Bob Quinn 82.51 22 P **P** **22 46 16.1 +2.2**
baz=220
CAST Castle Rocks 82.53 9 IAMs_20 IAMs_20 23 16 40.1
comp=Z,1µm,21.0s
MA2 Magadan 82.58 342 P **P** **22 46 15.0 +0.9**
comp=Z,2.3nm,0.3s,baz=147,slow=6.5,SNR=4.2
MA2 LR LR 23 21 48.0
comp=Z,630nm,18.4s,baz=143,slow=35
comp=Z,2.3nm,0.3s
MA2 Magadan 82.58 342 P **P** **22 46 12.0 -2.1**
MA2 IAmb IAmb 22 46 33.2
comp=Z,44nm,1.5s
MA2 Magadan 82.58 342 P **P** **22 46 12.0 -2.1**
MA2 pmax pmax
comp=Z,44nm,1.5s
MA2 MLR MLR
comp=Z,600nm,19.0s
PAYG Puerto Ayora 82.69 88 IAMs_20 IAMs_20 23 16 39.4
comp=Z,903nm,18.0s
MCMT McKenzie Canyo 82.75 38 P **P** **22 46 11.9 -3.8**
KLR Kul'dur 82.80 327 P **P** **22 46 16.4 +1.0**
comp=Z,4.6nm,1.1s,baz=110,slow=5.0,SNR=16
KLR S **S** **22 56 28.0 -3.9**
comp=Z,0.2nm,0.3s,baz=219,slow=23,SNR=1.6
KLR LR LR 23 17 30.1
comp=Z,857nm,21.6s,baz=134,slow=32
comp=Z,4.6nm,1.1s
KLR Kul'dur 82.80 327*ceP* **P** **22 46 16.8 +1.3**
KLR pmax pmax
comp=Z,20nm,1.6s
SKAG Skagway 82.81 18 P **P** **22 46 17.9 +2.7**
baz=216
TRF Thorofare Moun 82.85 10 P **P** **22 46 13.4 -2.2**
TRF IAmb IAmb 22 46 33.7
comp=Z,31nm,1.1s
TRF Thorofare Moun 82.85 10 P **P** **22 46 16.7 +1.0**
baz=201
CHUM Lake Minchumin 82.94 9 P **P** **22 46 16.7 +0.8**
baz=200
J20K Nowinta River 82.96 8 IAMs_20 IAMs_20 23 19 14.4
comp=Z,761nm,19.0s
J20K Nowinta River 82.96 8 P **P** **22 46 17.8 +1.8**
baz=198,SNR=22
S22A 4UR Ranch, Cre 82.97 47 P **P** **22 46 20.0 +2.9**
baz=241
DHY Denali Highway 83.02 11 IAMs_20 IAMs_20 23 21 10.0
comp=Z,806nm,18.0s
DHY Denali Highway 83.02 11 P **P** **22 46 17.7 +1.2**
baz=204,SNR=6.5
RND Reindeer 83.05 11 IAMs_20 IAMs_20 23 17 38.0
comp=Z,1µm,20.0s
YUK8 Steele Glacier 83.11 15 P **P** **22 46 18.9 +1.8**
baz=211,SNR=12
BNX BinXian 83.14 322⇑P **P** **22 46 18.2 +0.8**
BNX pP **sP** **22 46 28.5 +0.8**
BNX sP **pwP** **22 46 32.5 +2.2**
BNX pmax pmax
comp=Z,35nm,0.8s
BNX pmax pmax
comp=Z,1µm,10.2s
BNX LR LR
comp=Z,1µm,18.5s
BNX LR LR
comp=Z,1µm,18.5s
BNX LR LR
comp=Z,2µm,17.2s
YUK6 Outpost Mounta 83.18 16 P **P** **22 46 20.0 +2.5**
baz=213,SNR=11
O20A White River Ci 83.18 44 P **P** **22 46 20.3 +2.3**
baz=240
DL2 Dalian 83.22 314⇑*iP* **P** **22 46 19.7 +1.8**
DL2 SKS **S** **22 56 38.3 +1.7**
DL2 S **SKKSac** **22 56 42.1 -0.5**
DL2 pmax pmax
comp=Z,24nm,1.2s
DL2 pmax pmax
comp=Z,650nm,6.7s
DL2 LR LR
comp=Z,500nm,16.2s
DL2 LR LR
comp=Z,530nm,15.7s
DL2 LR LR
comp=Z,690nm,17.7s
CN2 Changchun 83.25 320*eP* **P** **22 46 19.0 +1.0**
CN2 *eS* **S** **22 56 44.8 +8.2**
CN2 pmax pmax
comp=Z,20nm,1.5s
CN2 pmax pmax
comp=Z,700nm,9.0s
CN2 LR LR
comp=Z,300nm,19.0s
CN2 LR LR
comp=Z,600nm,19.0s
CN2 LR LR
comp=Z,600nm,21.3s
MSO Missoula 83.25 36 IAMs_20 IAMs_20 23 18 43.0
comp=Z,1µm,19.0s
MSO Missoula 83.25 36 P **P** **22 46 19.3 +1.3**
baz=235,SNR=14
PAX Paxson 83.29 12 P **P** **22 46 19.0 +1.1**
baz=206,SNR=7.4
M26K Nabesna, AK 83.31 13 IAMs_20 IAMs_20 23 22 33.6
comp=Z,754nm,19.0s
M26K Nabesna, AK 83.31 13 P **P** **22 46 19.7 +1.7**
baz=208,SNR=17
HYT Haines Junctio 83.31 17 P **P** **22 46 20.8 +2.7**
baz=214,SNR=11
MCK McKinley 83.34 10 IAMs_20 IAMs_20 23 16 34.6
comp=Z,1µm,20.0s
MCK McKinley 83.34 10 P **P** **22 46 19.2 +1.2**
baz=203,SNR=11
BPAW Bear Paw Mtn. 83.34 9 IAmb IAmb 22 46 33.6
comp=Z,29nm,1.5s
BPAW IAMs_20 IAMs_20 23 19 09.5
comp=Z,1µm,20.0s
BPAW Bear Paw Mtn. 83.34 9 P **P** **22 46 18.2 +0.2**
baz=201
YUK3 Moose Creek 83.36 15 P **P** **22 46 20.1 +1.7**
baz=211,SNR=16
SNY Shenyang 83.39 318⇑P **P** **22 46 20.2 +1.5**
SNY PP **PP** **22 49 31.5 +0.4**
SNY S S 22 56 47.6 +9.5
SNY pmax pmax
comp=Z,39nm,1.2s
SNY LR LR
comp=Z,420nm,15.9s
SNY LR LR
comp=Z,490nm,18.2s
SNY LR LR
comp=Z,790nm,17.5s
MOOW Moose Ponds 83.44 40 IAMs_20 IAMs_20 23 22 42.9
comp=Z,874nm,18.0s
H03S2 Juan Fernandez 83.44 123 T T 00 17 20.1
baz=251
LOHW Long Hollow 83.45 40 IAMs_20 IAMs_20 23 23 09.3
comp=Z,789nm,18.0s
H03S1 Juan Fernandez 83.46 123 T T 00 17 24.5
baz=251
H03S3 Juan Fernandez 83.46 123 T T 00 17 28.3
baz=251
M27K Edge Creek, AK 83.52 14 IAMs_20 IAMs_20 23 18 33.2
comp=Z,1µm,19.0s
M27K Edge Creek, AK 83.52 14 P **P** **22 46 21.6 +2.5**
baz=209,SNR=21
O30N Mendenhall 83.66 17 P **P** **22 46 22.0 +2.3**
baz=215,SNR=16
BW06 Boulder Array 83.66 41 P **P** **22 46 22.3 +1.9**
baz=239,SNR=25
PDAR Pinedale Array 83.66 41 P **P** **22 46 22.3 +1.9**
comp=Z,7.8nm,0.9s,baz=208,slow=2.9,SNR=36
PDAR PP **PP** **22 49 34.7 +1.0**
comp=Z,0.2nm,0.4s,baz=278,slow=6.3,SNR=2.0
PDAR S **S** **22 56 37.1 -4.4**
comp=Z,0.3nm,0.4s,baz=191,slow=4.4,SNR=1.6
PDAR LR LR 23 20 05.1
comp=Z,397nm,18.2s,baz=250,slow=33
comp=Z,7.8nm,0.9s
USHA Ushuaia 83.66 146 P **P** **22 46 22.6 +2.6**
comp=Z,13nm,0.8s,baz=211,slow=5.9,SNR=4.1
USHA LR LR 23 14 48.7
comp=Z,957nm,21.7s,baz=241,slow=29
comp=Z,13nm,0.8s
DLBC Dease Lake 83.70 21 LR LR 23 19 30.2
comp=Z,344nm,18.0s,baz=240,slow=33
DLBC Dease Lake 83.70 21 P **P** **22 46 22.6 +2.6**
baz=220,SNR=10
L26K Log Cabin Wild 83.78 13 IAMs_20 IAMs_20 23 17 57.2
comp=Z,931nm,20.0s
BVCY Beaver Creek 83.81 14 P **P** **22 46 22.9 +2.5**
baz=210
H17A Grant Village 83.88 40 P **P** **22 46 25.1 +3.5**
baz=238,SNR=17
BOZ Bozeman (W) 83.90 38 P **P** **22 46 23.9 +2.4**
baz=237,SNR=39
SDCO Great Sand Dun 83.90 47 P **P** **22 46 24.9 +3.0**
baz=242
SDCO Great Sand Dun 83.90 47 P **P** **22 46 24.9 +3.0**
baz=242
N30M Aishikik Lake 83.95 16 P **P** **22 46 23.5 +2.2**
baz=214
K24K Donnelly Dome 83.98 12 P **P** **22 46 23.2 +1.9**
baz=206,SNR=10
RIDG Independent Ri 84.11 12 IAMs_20 IAMs_20 23 19 07.9
comp=Z,1µm,20.0s
RIDG Independent Ri 84.11 12 P **P** **22 46 23.9 +1.9**
baz=206,SNR=16
NEA2 Nenana 84.11 10 IAmb IAmb 22 46 37.1
comp=Z,50nm,1.4s
NEA2 Nenana 84.11 10 P **P** **22 46 23.1 +1.1**
baz=202
L27K Beaver Creek, 84.15 14 IAMs_20 IAMs_20 23 19 03.8
comp=Z,762nm,18.0s
L27K Beaver Creek, 84.15 14 P **P** **22 46 24.0 +1.8**
baz=209,SNR=9.3
CMIG Matias Romero 84.16 70 LR LR 23 14 36.7
comp=Z,905nm,21.0s,baz=248,slow=29
WRH Wood River Hil 84.17 11 IAMs_20 IAMs_20 23 16 50.6
comp=Z,845nm,21.0s
P33M Teslin, Yukon 84.17 19 IAMs_20 IAMs_20 23 25 05.0
comp=Z,1µm,18.0s
P33M Teslin, Yukon 84.17 19 P **P** **22 46 24.6 +2.2**
baz=218,SNR=7.6
MSTX Muleshoe 84.18 52 P **P** **22 46 26.6 +3.5**
baz=244
MSTX Muleshoe 84.18 52 P **P** **22 46 26.0 +2.9**
baz=244
MYKOM Kota Tinggi 84.19 274 IAmb IAmb 22 46 25.1
comp=Z,63nm,1.5s
I21K Tanana 84.21 9 IAMs_20 IAMs_20 23 24 00.5
comp=Z,819nm,19.0s
MLY Manley 84.25 9 IAmb IAmb 22 46 36.3
comp=Z,46nm,1.2s
MLY IAMs_20 IAMs_20 23 19 56.6
comp=Z,854nm,20.0s
MLY Manley 84.25 9 P **P** **22 46 23.7 +1.0**
baz=201,SNR=15
QIZ Qiongzhong 84.30 292 IAMs_20 IAMs_20 23 18 25.0
comp=Z,940nm,20.0s
QIZ Qiongzhong 84.30 292 P **P** **22 46 20.6 -3.3**
QIZ S **S** **22 56 49.5 +1.3**
QIZ sS **sS** **22 57 06.2 +5.7**
QIZ SS **SS** **23 02 26.3 +7.7**
QIZ pmax pmax
comp=Z,630nm,9.8s
QIZ LR LR
comp=Z,480nm,21.6s
QIZ LR LR
comp=Z,610nm,20.7s
QIZ LR LR
comp=Z,1µm,21.5s
HDA Harding Lake 84.31 11 P **P** **22 46 24.2 +1.3**
baz=204,SNR=20
N31M Braeburn, Yuko 84.33 17 IAMs_20 IAMs_20 23 25 59.4
comp=Z,956nm,18.0s
N31M Braeburn, Yuko 84.33 17 P **P** **22 46 25.8 +2.6**
baz=215,SNR=9.5
CCB Clear Creek Bu 84.38 11 IAMs_20 IAMs_20 23 17 18.1
comp=Z,814nm,20.0s
T25A Trinidad 84.39 48 P **P** **22 46 27.0 +2.7**
baz=243
833A Chaparral WMA, 84.47 58 P **P** **22 46 27.4 +2.8**
baz=246
833A Chaparral WMA, 84.47 58 P **P** **22 46 27.4 +2.8**
baz=246
SCRK Sand Creek 84.50 12 IAMs_20 IAMs_20 23 19 19.0
comp=Z,918nm,19.0s
SCRK Sand Creek 84.50 12 P **P** **22 46 25.6 +1.5**
baz=207,SNR=12
H21K Melozitna Rive 84.55 8 IAMs_20 IAMs_20 23 20 06.4
comp=Z,901nm,19.0s
H21K Melozitna Rive 84.55 8 P **P** **22 46 26.2 +2.1**
baz=199
TCOL CIGO, UAF Yank 84.58 10 IAMs_20 IAMs_20 23 18 16.4
comp=Z,1µm,19.0s
TCOL CIGO, UAF Yank 84.58 10 P **P** **22 46 26.2 +1.9**
baz=204
COLA College 84.58 10 IAMs_20 IAMs_20 23 18 16.4
comp=Z,984nm,20.0s
COLA College 84.58 10⇑P **P** **22 46 25.6 +1.4**
COLA College 84.58 10 P **P** **22 46 25.8 +1.6**
baz=204
I23K Minto, Yukon-K 84.58 10 P **P** **22 46 25.5 +1.2**
baz=202,SNR=12
ILAR Nelson Array 84.66 11 P **P** **22 46 25.0 +0.3**
comp=Z,9.5nm,1.1s,baz=214,slow=5.4,SNR=45
ILAR S **S** **22 56 44.9 -5.0**
comp=Z,0.2nm,0.6s,baz=143,slow=23,SNR=1.2
ILAR LR LR 23 19 40.6
comp=Z,580nm,19.4s,baz=202,slow=32
comp=Z,9.5nm,1.1s
Q24A Divide 84.71 46 P **P** **22 46 29.1 +3.1**
baz=242
COYC Coyhaique 84.77 136 IAMs_20 IAMs_20 23 21 41.7
comp=Z,1µm,18.0s
ISCO Idaho Springs 84.78 45 IAMs_20 IAMs_20 23 23 19.6
comp=Z,840nm,18.0s
ISCO Idaho Springs 84.78 45 P **P** **22 46 28.8 +2.5**
baz=242
ISCO Idaho Springs 84.78 45 P **P** **22 46 28.9 +2.5**
baz=242
J25K Saicha River, 84.79 12 P **P** **22 46 26.9 +1.4**
baz=206,SNR=21
WHN Wuhan 84.87 304⇑P **P** **22 46 27.2 +0.7**
WHN S **S** **22 56 56.1 +2.6**
WHN pmax pmax
comp=Z,1µm,7.9s
WHN LR LR
comp=Z,800nm,13.7s
WHN LR LR
comp=Z,1µm,15.6s
WHN LR LR
comp=Z,2µm,19.2s
POKR Poker Plat Res 84.88 10 IAMs_20 IAMs_20 23 18 35.2
comp=Z,885nm,20.0s
POKR Poker Plat Res 84.88 10 P **P** **22 46 27.1 +1.3**
baz=204,SNR=6.5
SEY Seymchan 84.94 345 P **P** **22 46 26.6 +0.5**
comp=Z,5.2nm,0.8s,baz=137,slow=6.4,SNR=14
SEY S **S** **22 56 48.5 -4.3**
comp=Z,0.8nm,0.2s,baz=60,slow=20,SNR=1.0
SEY LR LR 23 23 00.4
comp=Z,609nm,18.8s,baz=151,slow=35
comp=Z,5.2nm,0.8s
SEY Seymchan 84.94 345*ceP* **P** **22 46 27.0 +0.9**
SEY pmax pmax
comp=Z,37nm,2.1s
K27K Chicken 84.94 13 IAMs_20 IAMs_20 23 19 21.8
comp=Z,776nm,19.0s
K27K Chicken 84.94 13 P **P** **22 46 28.6 +2.4**
baz=209
M30M Minto, Yukon 84.96 16 IAMs_20 IAMs_20 23 24 51.0
comp=Z,842nm,18.0s
M30M Minto, Yukon 84.96 16 P **P** **22 46 28.1 +1.8**
baz=214,SNR=11
J26L Joseph Creek 85.05 12 P **P** **22 46 29.2 +2.4**
baz=208,SNR=31
RLMT Red Lodge 85.06 40 P **P** **22 46 30.1 +2.6**
baz=239,SNR=13
N23A Red Feather La 85.08 44 P **P** **22 46 29.6 +1.9**
baz=242
TIA Tai'an 85.15 310 P **P** **22 46 29.6 +1.8**
TIA S **S** **22 56 57.4 +1.3**
TIA pmax pmax
comp=Z,14nm,1.2s
TIA pmax pmax
comp=Z,400nm,3.9s
TIA LR LR
comp=Z,430nm,20.6s
TIA LR LR
comp=Z,440nm,17.8s
TIA LR LR
comp=Z,830nm,16.4s
H23K Yukon River 85.18 9 IAmb IAmb 22 46 41.0
comp=Z,22nm,1.1s
H23K Yukon River 85.18 9 P **P** **22 46 27.9 +0.5**
baz=202
M31M Drury Creek, Y 85.30 17 IAMs_20 IAMs_20 23 25 25.0
comp=Z,769nm,18.0s
M31M Drury Creek, Y 85.30 17 P **P** **22 46 29.6 +1.6**
baz=216,SNR=9.6
AMTX Amarillo 85.39 51 P **P** **22 46 31.6 +2.4**
baz=245
AMTX Amarillo 85.39 51 P **P** **22 46 31.8 +2.6**
baz=245
KVTX Kingsville 85.39 59 IAMs_20 IAMs_20 23 25 09.0
comp=Z,728nm,18.0s
H24K Noodor Dome 85.46 10 P **P** **22 46 29.2 +0.5**
baz=204

DAWY Dawson 85.57 14 P **P** **22 46 31.5 +2.1**
baz=212,SNR=12
MAW Mawson 85.73 199 P **P** **22 46 30.9 +0.7**
comp=Z,12nm,1.1s,baz=129,slow=7.3,SNR=8.4
MAW S **S** **22 57 00.3 -0.5**
comp=Z,0.9nm,0.8s,baz=53,slow=9.0,SNR=1.4
MAW LR LR 23 23 55.6
comp=Z,2µm,18.3s,baz=112,slow=35
comp=Z,12nm,1.1s
MAW Mawson 85.73 199 P **P** **22 46 30.3 +0.1**
baz=86,SNR=12
RDOG Red Dog Mine 85.89 4 IAMs_20 IAMs_20 23 20 42.2
comp=Z,902nm,20.0s
ABTX Abilene, Hawle 85.99 54 P **P** **22 46 34.9 +2.7**
baz=246
ABTX Abilene, Hawle 85.99 54 P **P** **22 46 34.9 +2.7**
baz=246
GULI GuiLin 86.10 298 ⇓P **P** **22 46 31.3 -1.5**
EGMT Eagleton 86.28 37 P **P** **22 46 35.7 +2.4**
baz=238
COLD Coldfoot 86.39 9 P **P** **22 46 35.8 +2.5**
baz=201
MMPY Sheldon Lake, 86.52 18 P **P** **22 46 36.4 +2.4**
baz=219
435B Jarrell 86.88 56 IAMs_20 IAMs_20 23 17 05.4
comp=Z,815nm,20.0s
435B Jarrell 86.88 56 P **P** **22 46 40.0 +3.5**
baz=247
BILL Bilibino 86.92 352 P **P** **22 46 34.5 -1.3**
BILL Bilibino 86.92 352 *ce*P **P** **22 46 36.7 +0.9**
BILL *e* 22 46 38.7
BILL *i* *PP **pP** **22 46 42.5 -1.0**
BILL *e* 22 50 06.6
BILL *i* S **S** **22 57 19.1 +7.1**
BILL PS **PnS** **22 58 08.0 -6.3**
BILL pmax pmax
comp=Z,17nm,1.1s
I29M Ogilvie Camp, 86.92 14 IAmb IAmb 22 46 51.0
comp=Z,46nm,1.2s
I29M IAMs_20 IAMs_20 23 20 04.1
comp=Z,778nm,19.0s
I29M Ogilvie Camp, 86.92 14 P **P** **22 46 37.6 +1.7**
baz=213,SNR=14
HNS HongShan 87.41 311 ⇑P **P** **22 46 40.8 +1.9**
HNS pmax pmax
comp=Z,24nm,1.6s
HNS pmax pmax
comp=Z,630nm,8.3s
HNS LR LR
comp=Z,840nm,19.6s
HNS LR LR
comp=Z,920nm,18.8s
BJI Beijing 87.49 313 P **P** **22 46 41.0 +1.8**
BJI pmax pmax
comp=Z,28nm,1.4s
BJI pmax pmax
comp=Z,550nm,6.9s
BJI LR LR
comp=Z,330nm,18.6s
BJI LR LR
comp=Z,500nm,19.1s
BJI LR LR
comp=Z,790nm,18.8s
WMOK Wichita Mounta 87.50 52 P **P** **22 46 42.3 +2.9**
baz=246
PLCA Paso Flores 87.52 132 P **P** **22 46 41.7 +2.0**
comp=Z,5.0nm,1.1s,baz=272,slow=3.5,SNR=4.4
PLCA S S 22 57 04.0 -15
comp=Z,1.1nm,0.8s,baz=325,slow=21,SNR=1.6
PLCA LR LR 23 20 07.3
comp=Z,999nm,18.1s,baz=256,slow=32
comp=Z,5.0nm,1.1s
LAO LASA Array 87.68 39 IAMs_20 IAMs_20 23 26 57.2
comp=Z,785nm,18.0s
LAO LASA Array 87.68 39 P **P** **22 46 42.6 +2.5**
baz=241
LAO LASA Array 87.68 39 P **P** **22 46 42.9 +2.8**
baz=241
IPM Ipoh 87.69 275 IAMs_20 IAMs_20 23 22 55.3
comp=Z,883nm,20.0s
ZEA Zeya 87.73 329 *e*P **P** **22 46 41.2 +1.2**
ZEA *e* 22 57 13.5
ZEA pmax pmax
comp=Z,20nm,1.7s
ZEA pmax pmax
comp=E,100nm,9.6s
ZEA pmax pmax
comp=Z,300nm,9.1s
OGNE Ogallala 87.74 46 IAMs_20 IAMs_20 23 24 41.9
comp=Z,902nm,18.0s
RSSD Black Hills 87.83 42 P **P** **22 46 42.9 +1.8**
baz=243
RSSD Black Hills 87.83 42 P **P** **22 46 42.9 +1.8**
baz=243
LYN LuoYang 87.93 307 ⇑*i*P **P** **22 46 42.8 +1.3**
LYN pP sP 22 46 52.6 +0.8
LYN PP **PP** **22 50 09.4 +1.3**
LYN sS sS 22 57 40.5 +5.0
LYN pmax pmax
comp=Z,30nm,1.4s
LYN pmax pmax
comp=Z,760nm,9.4s
LYN LR LR
comp=Z,1µm,17.8s
LYN LR LR
comp=Z,840nm,20.2s
LYN LR LR
comp=Z,2µm,19.0s
HKT Hockley 87.97 58 IAMs_20 IAMs_20 23 23 44.3
comp=Z,792nm,19.0s
HKT Hockley 87.97 58 *i* P **P** **22 46 44.9 +3.2**
HKT pmax pmax
comp=Z,44nm,1.8s
EPYK Eagle Plains 88.13 14 P **P** **22 46 43.6 +1.8**
baz=214
SNET Serv Nac Est T 88.17 75 IAMs_20 IAMs_20 23 19 55.1
comp=Z,992nm,18.0s
KULM Kulim 88.30 276 IAmb IAmb 22 46 45.9
comp=Z,28nm,1.2s
KULM IAMs_20 IAMs_20 23 32 57.3
comp=Z,726nm,18.0s
ENH Enshi 88.65 302 IAMs_20 IAMs_20 23 25 06.0
comp=Z,791nm,19.0s
PSI Prapat 89.18 273 LR LR 23 29 16.7
comp=Z,684nm,18.0s,baz=120,slow=37
TIY Taiyuan 89.19 310 *e*P **P** **22 46 49.4 +1.9**
TIY S **S** **22 57 36.2 +1.1**
TIY pmax pmax
comp=Z,440nm,7.1s
TIY LR LR
comp=Z,490nm,17.4s
TIY LR LR
comp=Z,550nm,20.9s
TIY LR LR
comp=Z,800nm,21.3s
XLT XiLinHaoTe 89.22 317 ⇓*i*P **P** **22 46 49.6 +2.1**
XLT SS SS 23 03 36.7 +6.6
XLT pmax pmax
comp=Z,24nm,1.2s
XLT pmax pmax
comp=Z,660nm,8.9s
XLT LR LR
comp=Z,520nm,18.1s
XLT LR LR
comp=Z,650nm,18.5s
HIA Hailar 89.41 323 IAMs_20 IAMs_20 23 21 39.5
comp=Z,896nm,21.0s
A21K Barrow 89.56 5 IAMs_20 IAMs_20 23 22 56.2
comp=Z,817nm,20.0s
NATX Nacogdoches 89.57 56 IAMs_20 IAMs_20 23 19 31.5
comp=Z,768nm,21.0s
DGMT Dagmar 89.73 38 P **P** **22 46 51.9 +2.1**
baz=242
DGMT Dagmar 89.73 38 P **P** **22 46 51.8 +2.1**
baz=242
TGUH Tegucigalpa,Un 90.09 75 IAMs_20 IAMs_20 23 22 14.0
comp=Z,761nm,18.0s
PEL Peldehue 90.17 125 IAMs_20 IAMs_20 23 20 35.7
comp=Z,836nm,18.0s
INK Inuvik 90.43 14 P **P** **22 46 53.7 +1.3**
comp=Z,2.9nm,0.7s,baz=237,slow=2.2,SNR=1.7
INK S S 22 57 34.2 -11
comp=Z,1.5nm,0.6s,baz=121,slow=4.9,SNR=1.5
INK LR LR 23 22 22.8
comp=Z,647nm,19.7s,baz=205,slow=32
comp=Z,2.9nm,0.7s
INK Inuvik 90.43 14 IAmb IAmb 22 47 07.5
comp=Z,30nm,1.4s
INK Inuvik 90.43 14 P **P** **22 46 54.1 +1.7**
baz=217
XAN Xi'an 90.45 306 P **P** **22 46 55.0 +1.6**
XAN pP sP 22 47 04.0 +0.2
XAN PP **PP** **22 50 29.5 +1.1**
XAN pmax pmax
comp=Z,20nm,1.8s
XAN pmax pmax
comp=Z,570nm,8.1s
XAN LR LR
comp=Z,390nm,18.0s
XAN LR LR
comp=Z,640nm,16.7s
XAN LR LR
comp=Z,740nm,17.6s
VNA3 Neumayer Olymp 90.46 175 P P 22 46 58.1 +5.3
SNAA Sanae 90.52 177 P **P** **22 46 54.5 +1.3**
SNAA Sanae 90.52 177 P **P** **22 46 53.2 +0.1**
comp=Z,7.3nm,0.9s,baz=216,slow=3.1,SNR=4.8
SNAA LR LR 23 26 32.6
comp=Z,836nm,18.4s,baz=193,slow=35
comp=Z,7.3nm,0.9s
SNAA Sanae 90.52 177 P **P** **22 46 50.7 -2.5**
SNAA IAMs_20 IAMs_20 23 25 41.9
comp=Z,982nm,20.0s
SNAA Sanae 90.52 177 *ce*P **P** **22 46 53.0 -0.1**
SNAA pmax pmax
comp=Z,8.0nm,1.0s
VNA2 Neumayer--Watz 90.96 175 P **P** **22 46 58.5 +3.4**
HHC Hu-ho-hao-te 91.03 313 *e*P **P** **22 46 57.8 +1.8**
HHC S **S** **22 57 56.0 +3.9**
HHC pmax pmax
comp=Z,32nm,1.1s
HHC pmax pmax
comp=Z,890nm,6.5s
HHC LR LR
comp=Z,930nm,16.9s
HHC LR LR
comp=Z,880nm,18.1s
HHC LR LR
comp=Z,1µm,18.8s
JTS Las Juntas de 91.09 80 LR LR 23 20 45.9
comp=Z,762nm,18.1s,baz=309,slow=31
VNA1 Neumayer--Stat 91.15 175 P **P** **22 46 57.9 +2.0**
MIAR Mount Ida 91.41 54 P **P** **22 47 00.9 +3.1**
baz=249
MIAR Mount Ida 91.41 54 P **P** **22 47 00.6 +2.8**
baz=249
ORCD Orcadas 91.41 157 P **P** **22 46 54.5 -2.9**
ORCD IAmb IAmb 22 47 04.0
comp=Z,22nm,1.3s
W39A Magazine 91.47 54 IAMs_20 IAMs_20 23 20 24.9
comp=Z,963nm,21.0s
W39A Magazine 91.47 54 P **P** **22 47 01.1 +3.0**
baz=249
W39A Magazine 91.47 54 P **P** **22 47 01.0 +3.0**
baz=249
YAK Yakutsk 91.50 337 LR LR 23 25 20.0
comp=Z,326nm,19.5s,baz=90,slow=34
HHAR Hobbs 91.74 52 P **P** **22 47 02.0 +2.7**
baz=249
HDC Heredia 91.79 80 IAMs_20 IAMs_20 23 17 32.4
comp=Z,728nm,20.0s
NNA Nana 91.98 103 LR LR 23 20 46.1
comp=Z,513nm,18.7s,baz=250,slow=30
BTO Baotou 92.03 312 *e*P **P** **22 47 02.9 +2.3**
BTO S **S** **22 58 07.2 +6.1**
BTO LR LR
comp=Z,1µm,17.8s
BTO LR LR
comp=Z,2µm,17.6s
ATAH Atahualpa 92.04 98 P **P** **22 47 05.3 +3.6**
comp=Z,3.4nm,0.9s,baz=346,slow=13,SNR=1.9
ATAH LR LR 23 18 36.7
comp=Z,928nm,21.3s,baz=243,slow=29
comp=Z,3.4nm,0.9s
YKA Yellowknife Ar 92.05 23 P **P** **22 47 00.3 +0.3**
comp=Z,5.3nm,1.2s,baz=234,slow=4.6,SNR=9.5
YKA LR LR 23 24 16.0
comp=Z,430nm,18.9s,baz=250,slow=33
comp=Z,5.3nm,1.2s
KMI Kunming 92.54 295 ⇑P **P** **22 47 05.9 +2.4**
KMI pP pwP 22 47 15.6 -1.0
KMI S **S** **22 58 08.0 +1.4**
KMI SS **SS** **23 04 27.8 +8.7**
KMI pmax pmax
comp=Z,23nm,1.8s
KMI pmax pmax
comp=Z,460nm,6.3s
KMI LR LR
comp=Z,410nm,19.2s
KMI LR LR
comp=Z,380nm,20.2s
KMI LR LR
comp=Z,650nm,18.2s
U40A Yellville 92.59 53 P **P** **22 47 05.7 +2.5**
U40A baz=250 P **P** **22 47 05.7 +2.5**
baz=250
U40A Yellville 92.59 53 P **P** **22 47 05.7 +2.5**
baz=250
W41B Gary Mavity, V 92.65 54 P **P** **22 47 06.7 +3.2**
baz=250
W41B Gary Mavity, V 92.65 54 P **P** **22 47 06.7 +3.2**
baz=250
S39A Bolivar 92.69 51 P **P** **22 47 06.0 +2.3**
baz=250
C36M Paulatuk 93.48 16 IAMs_20 IAMs_20 23 30 24.4
comp=Z,631nm,19.0s
CD2 Chengdu 93.51 301 P **P** **22 47 09.0 +1.4**
CD2 S **S** **22 58 19.2 +4.7**
CD2 pmax pmax
comp=Z,340nm,8.2s
CD2 LR LR
comp=Z,740nm,17.2s
CD2 LR LR
comp=Z,650nm,17.7s
R40A Maddies Statio 93.68 51 P **P** **22 47 10.6 +2.4**
baz=250
PZH PanZhiHua 93.82 296 P **P** **22 47 11.8 +2.5**
PZH PP **PP** **22 50 59.2 +4.0**
PZH S **S** **22 58 25.6 +8.0**
PZH SS **SS** **23 04 42.3 +5.1**
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH pmax pmax
comp=Z,400nm,11.0s
PZH LR LR
comp=Z,980nm,18.4s
PZH LR LR
comp=Z,910nm,18.4s
PZH LR LR
comp=Z,500nm,17.5s
CMAR Chiang Mai Arr 93.87 288 P **P** **22 47 11.0 +1.4**
comp=Z,2.7nm,0.6s,baz=110,slow=2.8,SNR=30
CMAR LR LR 23 26 08.5
comp=Z,788nm,20.0s,baz=110,slow=34
comp=Z,2.7nm,0.6s
CMAR Chiang Mai Arr 93.87 288 *ce*P **P** **22 47 11.6 +2.1**
CMAR pmax pmax
comp=Z,2.0nm,0.4s
CHTO Chiang Mai 93.98 288 P **P** **22 47 06.2 -3.8**
CHTO IAmb IAmb 22 47 22.1
comp=Z,22nm,1.3s
CHTO Chiang Mai 93.98 288 IAMs_20 IAMs_20 23 25 49.9
comp=Z,906nm,20.0s
CHTO Chiang Mai 93.98 288 P **P** **22 47 06.2 -3.8**
CHTO pmax pmax
comp=Z,22nm,1.3s
CHTO MLR MLR
comp=Z,900nm,20.0s
CCM Cathedral Cave 94.36 52 P **P** **22 47 13.2 +1.8**
baz=251
CCM Cathedral Cave 94.36 52 P **P** **22 47 12.0 +0.7**
baz=251
PBMO Poplar Bluff 94.57 53 P **P** **22 47 14.5 +2.2**
baz=251
OXF Oxford 94.64 55 IAMs_20 IAMs_20 23 23 10.8
comp=Z,692nm,19.0s
AGMN Agassiz Nation 94.72 41 IAMs_20 IAMs_20 23 36 08.5
comp=Z,594nm,18.0s
LZH Lanzhou 95.06 306 *e*P **P** **22 47 17.0 +2.2**
LZH pP sP 22 47 25.3 +0.1
LZH pmax pmax
comp=Z,18nm,1.0s
LZH pmax pmax
comp=Z,330nm,5.7s
LZH LR LR
comp=Z,500nm,19.5s
LZH LR LR
comp=Z,340nm,17.9s
LZH LR LR
comp=Z,970nm,19.8s
A36M Sachs Harbour 95.07 13 IAMs_20 IAMs_20 23 24 51.4
comp=Z,694nm,21.0s
ULM Lac du Bonnet 95.42 39 P **P** **22 47 17.1 +1.3**
comp=Z,4.5nm,0.7s,baz=278,slow=8.3,SNR=3.8
ULM LR LR 23 26 48.7
comp=Z,1µm,18.3s,baz=281,slow=33
comp=Z,4.5nm,0.7s
ULM Lac du Bonnet 95.42 39 P **P** **22 47 11.9 -4.0**
ULM IAmb IAmb 22 47 22.8
comp=Z,23nm,1.2s
LVC Limon Verde 95.50 116 LR LR 23 20 06.6
comp=Z,938nm,21.0s,baz=230,slow=29
LVC Limon Verde 95.50 116 IAMs_20 IAMs_20 23 19 10.3
comp=Z,986nm,21.0s
WVT Waverly 96.36 54 IAMs_20 IAMs_20 23 23 47.4
comp=Z,664nm,20.0s
ULN Ulaanbaatar 96.56 318 *ce*P **P** **22 47 22.5 +1.2**
ULN pmax pmax
comp=Z,5.0nm,1.4s
HDIL Hopedale 96.59 50 IAMs_20 IAMs_20 23 24 16.1
comp=Z,764nm,20.0s
SONM Songino Array 96.97 318 P **P** **22 47 23.6 +0.4**
comp=Z,0.8nm,0.9s,baz=113,slow=3.0,SNR=4.2
SONM PP PP 22 51 09.5 -10
comp=Z,0.4nm,0.5s,baz=129,slow=1.7,SNR=2.4
SONM S **SKSac** **22 58 03.2 +4.8**
comp=Z,0.4nm,0.4s,baz=58,slow=5.4,SNR=1.8
SONM LR LR 23 29 21.7
comp=Z,400nm,19.1s,baz=112,slow=34
comp=Z,0.8nm,0.9s
EYMN Ely 97.36 42 IAMs_20 IAMs_20 23 30 21.2
comp=Z,865nm,18.0s
TIXI Tiksi 97.42 344 P **P** **22 47 24.2 -0.2**
comp=Z,1.3nm,0.9s,baz=90,slow=20,SNR=4.8
TIXI PP **PP** **22 51 16.6 -5.2**
comp=Z,0.4nm,0.3s,baz=90,slow=20,SNR=1.9
TIXI S **SKSac** **22 57 58.1 -1.3**
comp=Z,0.2nm,0.3s,baz=90,slow=20,SNR=1.1
TIXI LR LR 23 27 18.7
comp=Z,471nm,20.6s,baz=180,slow=33
comp=Z,1.3nm,0.9s
TIXI Tiksi 97.42 344 P **P** **22 47 20.2 -4.2**
TIXI IAmb IAmb 22 47 33.2
comp=Z,10.0nm,1.4s
TIXI Tiksi 97.42 344 *ce*P **P** **22 47 23.8 -0.6**
TIXI pmax pmax
comp=Z,5.0nm,1.4s
L44A Lake County Fo 98.06 48 IAMs_20 IAMs_20 23 31 17.0
comp=Z,754nm,18.0s
COWI Conover 98.34 44 IAMs_20 IAMs_20 23 29 47.3
comp=Z,702nm,19.0s
LPAZ La Paz 98.49 110 P Pdif 22 47 34.1 +2.8
comp=Z,0.5nm,0.6s,baz=326,slow=9.1,SNR=1.7
LPAZ PP **PP** **22 51 35.8 +4.0**
comp=Z,1.0nm,1.0s,baz=177,slow=3.9,SNR=3.7
LPAZ LR LR 23 21 30.8
comp=Z,1µm,22.0s,baz=256,slow=29
comp=Z,0.5nm,0.6s
GTA Gaotai 99.08 308 *e*P **Pdif** **22 47 34.1 +1.2**
GTA PP **PP** **22 51 36.3 +0.7**
GTA SKS **SKSac** **22 58 07.8 -1.7**
GTA pmax pmax
comp=Z,3.0nm,0.8s
GTA pmax pmax
comp=Z,140nm,8.7s
GTA LR LR
comp=Z,390nm,18.5s
GTA LR LR
comp=Z,750nm,19.3s
GTA LR LR
comp=Z,1µm,21.1s
TKL Tuckaleechee C 99.39 56 LR LR 23 25 60.0
comp=Z,485nm,20.9s,baz=251,slow=31
ROSC El Rosal 99.55 88 LR LR 23 23 55.1
comp=Z,315nm,19.4s,baz=237,slow=30
P49A Miami Univ, Ec 99.67 52 IAMs_20 IAMs_20 23 32 35.9
comp=Z,568nm,18.0s
ZAK Zakamensk 99.68 320 *e*P **Pdif** **22 47 35.9 +0.7**
ZAK pmax pmax
comp=Z,3.0nm,1.4s
TZTN Tazewell 99.80 55 IAMs_20 IAMs_20 23 25 55.4
comp=Z,640nm,21.0s
GLMI Grayling 101.07 46 IAMs_20 IAMs_20 23 31 44.5
comp=Z,560nm,18.0s
AAM Ann Arbor 101.14 49 IAMs_20 IAMs_20 23 26 13.6
comp=Z,579nm,20.0s
ACSO Alum Creek Sta 101.14 51 IAMs_20 IAMs_20 23 35 15.7
comp=Z,615nm,18.0s
GOMU GeErMu 102.13 304 Pdif **Pdif** **22 47 50.3 +3.5**
GOMU SS SS 23 06 41.4 +7.2
GOMU AMB AMB
comp=Z,81nm,4.6s
GOMU LR LR
comp=Z,330nm,20.8s
GOMU LR LR
comp=Z,320nm,19.9s
GOMU LR LR
comp=Z,360nm,20.0s
BLA Blacksburg 102.39 55 IAMs_20 IAMs_20 23 34 19.0
comp=Z,669nm,18.0s
O53A New Philadelph 102.46 52 IAMs_20 IAMs_20 23 27 57.7
comp=Z,630nm,20.0s
M53A WI Miller and 103.11 50 IAMs_20 IAMs_20 23 31 02.0
comp=Z,562nm,18.0s
MCWV Mont Chateau 103.36 52 IAMs_20 IAMs_20 23 36 35.6
comp=Z,660nm,18.0s
ERPA Erie 103.76 50 IAMs_20 IAMs_20 23 29 06.9
comp=Z,676nm,20.0s
CBN Corbin Frederi 104.96 54 IAMs_20 IAMs_20 23 28 54.0
comp=Z,845nm,21.0s
SSPA Standing Stone 105.02 52 IAMs_20 IAMs_20 23 31 28.5
comp=Z,523nm,19.0s
SDDR Presa de Saban 106.17 75 IAMs_20 IAMs_20 23 26 26.1
comp=Z,811nm,21.0s
BINY Binghamton 106.70 50 IAMs_20 IAMs_20 23 29 48.8
comp=Z,646nm,21.0s
LONY Lake Ozonia 108.06 48 IAMs_20 IAMs_20 23 29 44.5
comp=Z,565nm,22.0s
PAL Palisades 108.06 52 IAMs_20 IAMs_20 23 33 48.0
comp=Z,548nm,19.0s
WMQ Urumqi 108.84 311 *e*Pdif **Pdif** **22 48 14.1 -2.0**
WMQ AMB AMB
comp=Z,110nm,5.1s
WMQ LR LR
comp=Z,350nm,19.7s
WMQ LR LR
comp=Z,530nm,17.9s
WMQ LR LR
comp=Z,430nm,18.5s
QUA2 Belchertown 109.38 51 IAMs_20 IAMs_20 23 32 40.9
comp=Z,672nm,20.0s
HNH Hanover 109.59 49 IAMs_20 IAMs_20 23 33 02.2
comp=Z,521nm,19.0s
LBNH Lisbon 109.90 49 IAMs_20 IAMs_20 23 38 36.5
comp=Z,703nm,18.0s
BRYW Bryant College 109.94 51 IAMs_20 IAMs_20 23 34 46.7
comp=Z,628nm,19.0s
HRV Adam Dziewonsk 109.99 51 IAMs_20 IAMs_20 23 34 31.0
comp=Z,741nm,19.0s
FFD Franklin Falls 110.02 49 IAMs_20 IAMs_20 23 33 26.7
comp=Z,650nm,20.0s
ALE Alert 110.15 8 IAMs_20 IAMs_20 23 35 27.0
comp=Z,547nm,20.0s
ZALV Zalesovo Beam 111.42 322 PKiKP **PKiKP** **22 52 25.9 +0.6**
comp=Z,0.4nm,0.3s,baz=135,slow=0.4,SNR=4.6
PKME Peaks-Kenny Pk 111.86 48 IAMs_20 IAMs_20 23 38 28.1
comp=Z,634nm,19.0s
HYBB Hyderabad (bro 112.38 282 *e*Pdif **Pdif** **22 48 30.0 -2.4**
HYBB ⇓*e*PKiK 22 52 25.7
HYBB *e*SKSac **SKSac** **22 59 08.7 -1.1**
MK31 Makanchi Array 112.87 314 *i* PKiKP **PKiKP** **22 52 28.4 0.0**
MKAR Makanchi Array 112.87 314 PKiKP **PKiKP** **22 52 28.8 +0.4**
comp=Z,2.5nm,1.0s,baz=72,slow=4.0,SNR=9.4
MKAR Makanchi Array 112.87 314 *c* *i*PKiKP **PKiKP** **22 52 29.7 +1.3**
MKAR pmax pmax
comp=Z,3.0nm,1.0s
MAKZ Makanchi 113.08 314 IAMs_20 IAMs_20 23 39 52.1
comp=Z,653nm,19.0s
KURK Kurchatov 115.27 318 PKiKP **PKiKP** **22 52 30.0 -2.7**
KURK Kurchatov 115.27 318 IAMs_20 IAMs_20 23 43 49.3
comp=Z,559nm,18.0s

KURK **Kurchatov** **115.27 318***c* /PKIKP **PKPdf** **22 52 33.7 +0.9**
KURK pmax pmax
comp=Z,7.0nm,1.7s
KURBB **Kurchatov Arra** **115.33 318** PKP **PKPdf** **22 52 33.1 +0.2**
comp=Z,3.0nm,1.0s,baz=93,slow=1.7,SNR=13
KURBB PP **PP** **22 53 29.8 -4.4**
comp=Z,1.1nm,1.0s,baz=89,slow=7.9,SNR=7.8
KURBB PKKPbc **PKKPab** **23 03 12.9 +1.2**
comp=Z,0.7nm,0.9s,baz=270,slow=4.5,SNR=4.4
SUMG Summit **119.34 14** IAMs_20 IAMs_20 23 42 44.7
comp=Z,630nm,20.0s
BRVK Borovoye **120.13 322** IAMs_20 IAMs_20 23 41 32.2
comp=Z,533nm,19.0s
BRVK Borovoye **120.13 322***c* /PKIKP **PKiKP** **22 52 43.0 +0.8**
BRVK pmax pmax
comp=Z,10.0nm,1.0s
SVE Sverdlovsk **124.42 328** */* PKIKP **PKiKP** **22 52 51.9 +1.4**
SVE pmax pmax
comp=Z,15nm,1.5s
SCO Scoresbysund **124.44 11** IAMs_20 IAMs_20 23 50 47.4
comp=Z,545nm,18.0s
ARU Arti **125.63 328** PKP **PKiKP** **22 52 53.6 +0.7**
comp=Z,1.3nm,0.4s,baz=49,slow=2.8,SNR=7.7
ARU Arti **125.63 328** IAMs_20 IAMs_20 23 47 35.5
comp=Z,633nm,20.0s
ARU Arti **125.63 328** */* PKIKP **PKiKP** **22 52 54.5 +1.6**
ARU 22 54 44.8
ARU PPP PPP 22 57 23.1
ARU 23 00 05.9
ARU SP SP 23 04 32.2 -10
ARU SSS SSS 23 16 05.8
ARU MLR MLR
comp=Z,580nm,18.0s
ARCES ARCESS Array B **127.02 352** PKP **PKiKP** **22 52 58.0 +2.6**
comp=Z,5.7nm,1.0s,baz=343,slow=1.3,SNR=7.2
AKTO Aktyubinsk **128.17 321** PKP **PKiKP** **22 52 58.7 +0.5**
comp=Z,2.2nm,1.0s,baz=51,slow=2.3,SNR=6.8
KIRV Kirov **128.90 333** PKP **PKiKP** **22 52 59.5 +0.2**
comp=Z,2.6nm,0.4s,baz=96,slow=5.4,SNR=5.6
KIRV Kirov **128.90 333***c* /PKIKP **PKiKP** **22 53 01.1 +1.8**
BORG Borgarnes **129.29 15** /PKIKP **PKPdf** **22 52 58.5 -0.8**
KLMR Klimovskoe **131.19 340** *e*PKIKP **PKPdf** **22 53 01.9 -1.1**
KLMR pmax pmax
comp=Z,21nm,1.5s
KLMR Klimovskoe **131.19 340** *e*PKPdf **PKPdf** **22 53 01.9 -1.1**
KLMR AMP 22 53 05.5
comp=Z,21nm,1.5s
GEYT Alibeck **131.34 305** PKP **PKiKP** **22 53 04.9 -0.1**
comp=Z,1.4nm,0.6s,baz=62,slow=16,SNR=2.0
GEYT SKPbc **SKPab** **22 56 28.1 +0.4**
comp=Z,0.5nm,0.4s,baz=52,slow=17,SNR=1.1
GEYT Alibeck **131.34 305** PKPdf **PKPdf** **22 52 59.8 -4.3**
BELG Belogornoye **133.16 327** PKP **PKPdf** **22 53 07.2 +0.3**
comp=Z,9.5nm,1.0s,baz=349,slow=10,SNR=4.0
BELG SKPbc **SKPbc** **22 56 33.0 -0.2**
comp=Z,3.7nm,0.8s,baz=65,slow=22,SNR=2.1
BELG Belogornoye **133.16 327** */* PKIKP **PKiKP** **22 53 08.0 -0.1**
FINES FINESS Array B **134.36 347** PKP **PKiKP** **22 53 10.4 0.0**
comp=Z,2.7nm,1.0s,baz=29,slow=3.2,SNR=2.1
FINES FINESS Array B **134.36 347** **PKPdf** **22 53 05.6 -3.3**
FINES FINESS Array B **134.36 347** PKIKP **PKPdf** **22 53 05.6 -3.3**
MOS Moscow **135.62 336** *e*PKIKP PKiKP 22 53 28.2 +16
MOS *e* 22 55 45.2
OBN Obninsk **136.49 336** IAMs_20 IAMs_20 23 57 13.2
comp=Z,513nm,20.0s
OBN Obninsk **136.49 336**⇓*i* /PKIKP **PKiKP** **22 53 15.8 +1.0**
OBN pmax pmax
comp=Z,8.0nm,0.4s
NOA NORSAR Array B **136.69 357** PKP **PKPdf** **22 53 12.2 -1.2**
comp=Z,0.4nm,0.9s,baz=291,slow=13,SNR=3.5
VRH Novokhopyorsk **136.85 329** *e*PKIKP **PKPdf** **22 53 13.2 -0.7**
VRH pmax pmax
comp=Z,20nm,1.4s
LPSR Galich'ya Gora **137.27 332** *e*PKIKP **PKiKP** **22 53 17.0 +0.5**
LPSR pmax pmax
comp=Z,8.0nm,0.9s
MAK Makhachkala **137.67 315** *e*P **Pdif** **22 50 12.2 -12**
MAK *e* 23 00 23.9
MAK *e*SS SS 23 14 04.0 -5.6
MAK pmax pmax
comp=Z,155nm,1.8s
VORR Voronezh **137.76 331** *e*PKIKP **PKiKP** **22 53 17.7 +0.2**
VORR pmax pmax
comp=Z,10.0nm,0.4s
VSR Storozhevoye **138.08 330** *e*PKIKP **PKPdf** **22 53 16.0 -0.2**
VSR pmax pmax
comp=Z,10.0nm,1.2s
KONO Kongsberg **138.14 358** IAMs_20 IAMs_20 00 00 10.0
comp=Z,371nm,20.0s
VORD Divnogorie **138.19 330** *e*PKIKP **PKPdf** **22 53 16.7 +0.3**
VORD pmax pmax
comp=Z,10.0nm,1.4s
GOF Gofitskoye **139.58 320**⇑⇑ *e*PKIKP **PKiKP** **22 53 23.0 +1.5**
MNK Minsk **140.02 341** */* PKHKP PKPpre 22 53 17.3
MNK *i* 22 56 13.7
MNK /PPP PPP 22 59 19.1
MNK *i* 23 00 26.2
MNK */* SS SS 23 14 28.9 -6.8
MNK */* SSS SSS 23 19 43.7
MNK pmax pmax
comp=Z,10.0nm,1.3s
MNK pmax pmax
comp=E,2.0nm,1.3s
MNK pmax pmax
comp=N,6.0nm,0.9s
MNK MLR MLR
comp=Z,465nm,22.0s
MNK MLR MLR
comp=E,56nm,21.0s
MNK Minsk **140.02 341** */* PKP **PKPdf** **22 53 17.3 -2.3**
comp=E,2.0nm,1.3s
MNK */* PKP **PKPdf** **22 53 17.3 -2.3**
comp=N,6.0nm,0.9s
MNK */* PKP **PKPdf** **22 53 17.3 -2.3**
comp=Z,10.0nm,1.3s,baz=32
MNK */* PP **PP** **22 56 13.7 -2.3**
MNK */* SKP 22 56 16.1
MNK */* PKS **PKSdf** **22 56 53.3 -2.1**
MNK */* PPP PPP 22 59 19.2
MNK */* SKS **SKSdf** **23 00 26.2 -1.8**
MNK */* SKKS SKKSdf 23 09 40.2 -17
MNK */* SS **SS** **23 14 28.9 -6.8**
MNK */* SSS SSS 23 19 43.8
MNK */* LR LR 23 53 48.5
MNK */* LRM MLR 23 56 25.8
comp=Z,465nm,21.9s
MNK */* LRM MLR 23 56 32.2
comp=E,56nm,20.6s
ZEI Tsey **140.13 317** */* PKIKP **PKiKP** **22 53 23.1 +0.1**
ZEI pmax pmax
comp=Z,5.0nm,1.0s
KBZ Khabaz **140.33 318** PKP **PKPdf** **22 53 20.2 -0.3**
comp=Z,1.3nm,0.7s,baz=70,slow=2.9,SNR=2.4
KVAR Kislovodsk Arr **140.35 319** PKP **PKiKP** **22 53 23.0 -0.3**
comp=Z,0.7nm,0.5s,baz=106,slow=7.4,SNR=1.5
KIV Kislovodsk **140.35 319** IAMs_20 IAMs_20 00 00 59.7
comp=Z,495nm,20.0s
KIV Kislovodsk **140.35 319** */* PKIKP **PKiKP** **22 53 22.4 -0.8**
KIV *e* 22 56 17.4
KIV pmax pmax
comp=Z,4.0nm,1.1s
GNI Garni **140.69 312** PKP **PKPdf** **22 53 21.9 +0.4**
comp=Z,1.5nm,0.4s,baz=137,slow=10,SNR=2.3
GNI Garni **140.69 312** IAMs_20 IAMs_20 23 58 59.0
comp=Z,429nm,20.0s
SUW Suwalki **141.76 345** *e*P **PKPdf** **22 53 18.1 -4.7**
SOC Sochi **142.38 320** */* PKHKP PKPpre 22 53 08.9
SOC pmax pmax
comp=Z,4.0nm,0.5s
SOC MLR MLR
comp=Z,373nm,19.0s
AKASG Malin Array Be **142.73 337** PKP **PKPdf** **22 53 23.1 -1.5**
comp=Z,1.9nm,0.8s,baz=18,slow=2.8,SNR=8.3
GKP Gorka Klasztor **143.71 350** *e*P PKPab 22 53 16.6 -6.4
RAYN Ar Rayn **143.75 286** PKPdf PKPab 22 53 24.2 0.0
RAYN Ar Rayn **143.75 286** IAMs_20 IAMs_20 23 59 58.9
comp=Z,416nm,19.0s
RAYN Ar Rayn **143.75 286** PKHKP PKPpre 22 53 25.1
HARA HARA **143.95 261** *e*P **PKiKP** **22 53 31.6 -0.1**
HARA HARA **143.95 261** *e*P PKPab 22 53 20.2 -5.2
HARA HARA **143.95 261** *e*P **PKiKP** **22 53 30.9 -0.7**
HARA HARA **143.95 261** *e*P PKPab 22 53 19.5 -6.0
HARA HARA **143.95 261** *e*P **PKiKP** **22 53 32.1 +0.5**
HARA HARA **143.95 261** *e*P **PKiKP** **22 53 30.9 -0.7**
HARA HARA **143.95 261** *e*P **PKiKP** **22 53 31.5 -0.1**
HARA HARA **143.95 261** *e*P PKPab 22 53 23.9 -1.5
HARA HARA **143.95 261** *e*Pdif PKPab 22 53 23.0 -2.4
HARA HARA **143.95 261** *e*P **PKiKP** **22 53 31.6 -0.1**
HARA HARA **143.95 261** *e*PKiKP **PKiKP** **22 53 32.4 +0.8**
HARA HARA **143.95 261** *e*PKPdf **PKPdf** **22 53 27.2 -1.0**
BEL Belsk **144.34 345** *e*P **PKPdf** **22 53 28.0 +0.6**
SIM Simferopol' **144.77 326** *e*PKIKP **PKPdf** **22 53 29.6 +1.2**
SIM *e* 22 56 53.0
SIM pmax pmax
comp=Z,21nm,1.0s
KMBO Kilima Mbogo **144.93 241** PKP **PKPdf** **22 53 30.6 +0.7**
comp=Z,26nm,1.1s,baz=94,slow=3.7,SNR=37
KMBO Kilima Mbogo **144.93 241** *e*P **PKiKP** **22 53 32.3 -1.4**
KMBO Kilima Mbogo **144.93 241** *e*P **PKPab** **22 53 28.9 -0.2**
KMBO Kilima Mbogo **144.93 241** *e*P **PKPab** **22 53 27.8 -1.3**
KMBO Kilima Mbogo **144.93 241** *e*P **PKPdf** **22 53 30.2 +0.3**
KMBO Kilima Mbogo **144.93 241** *e*P **PKPab** **22 53 28.9 -0.2**
KMBO Kilima Mbogo **144.93 241** *e*P **PKiKP** **22 53 32.3 -1.4**
KMBO Kilima Mbogo **144.93 241** *e*PKPdf **PKPab** **22 53 28.9 -0.2**
KMBO Kilima Mbogo **144.93 241** *e*P **PKPdf** **22 53 30.1 +0.2**
KMBO Kilima Mbogo **144.93 241** *e*PKPdf **PKPab** **22 53 23.9 -5.2**
ATD Arta Tunnel **144.97 265** PKP **PKPdf** **22 53 30.4 +0.7**
comp=Z,3.8nm,0.5s,baz=134,slow=3.8,SNR=6.5
ATD Arta Tunnel **144.97 265** *e*P **PKiKP** **22 53 33.1 -0.4**
ATD Arta Tunnel **144.97 265** *e*P **PKPab** **22 53 24.9 -4.0**
ATD Arta Tunnel **144.97 265** *e*P **PKPdf** **22 53 30.3 +0.7**
ATD Arta Tunnel **144.97 265** *e*P **PKPdf** **22 53 31.1 +1.4**
ATD Arta Tunnel **144.97 265** *e*P **PKPab** **22 53 24.9 -4.0**
ATD Arta Tunnel **144.97 265** *e*P **PKiKP** **22 53 34.7 +1.2**
ATD Arta Tunnel **144.97 265** *e*P **PKPdf** **22 53 30.9 +1.2**
ATD Arta Tunnel **144.97 265** *e*P **PKiKP** **22 53 33.1 -0.4**
ATD Arta Tunnel **144.97 265** *e*PKPdf **PKiKP** **22 53 35.7 +2.2**
ATD Arta Tunnel **144.97 265** *e*P **PKiKP** **22 53 32.5 -1.0**
ATD Arta Tunnel **144.97 265** *e*PKPdf **PKPdf** **22 53 29.5 -0.2**
SORM Soroca **145.13 335** P **PKPdf** **22 53 29.3 +0.4**
SORM Soroca **145.13 335** PKIKP **PKPdf** **22 53 29.3 +0.4**
LVV L'vov **145.27 341** */* PKIKP **PKPdf** **22 53 30.0 +0.9**
LVV *e* 22 56 47.9
LVV *e*PPP PPP 22 59 59.4
LVV *e* 23 00 33.5
LVV MLR MLR
comp=N,300nm,20.0s
LVV MLR MLR
comp=E,300nm,20.0s
LVV MLR MLR
comp=Z,400nm,20.0s
PURM Purcari **145.73 332** ⇓⇓P **PKPab** **22 53 32.0 +1.3**
KIS Kishinev **145.83 333**⇑⇑ /PKP **PKPab** **22 53 31.0 -0.1**
comp=Z,80nm,1.2s
KIS LRM MLR 00 04 30.0
comp=Z,200nm,17.0s
KIS Kishinev **145.83 333***c* /PKIKP **PKPab** **22 53 31.0 -0.1**
KIS pmax pmax
comp=Z,350nm,6.4s
KWP Kalwaria Pacla **145.84 342** *e*P **PKPab** **22 53 32.3 +1.2**
MILM Milestii Mici **145.90 333**⇑⇑ /PKP **PKPdf** **22 53 30.0 -0.2**
comp=Z,470nm,3.4s
MILM Milestii Mici **145.90 333** ⇑P **PKPab** **22 53 32.0 +0.6**
MILM Milestii Mici **145.90 333***c* /PKHKP PKPpre 22 53 30.0
MILM pmax pmax
comp=Z,470nm,3.4s
OJC Ojcow **146.08 345** *e*P **PKPab** **22 53 33.0 +1.0**
IAS Iasi **146.20 335** ⇑P **PKiKP** **22 53 34.0 -1.0**
IAS Iasi **146.20 335** ⇑PKIKP **PKiKP** **22 53 34.0 -1.0**
KSP Ksiaz **146.21 350** *e*P **PKiKP** **22 53 33.6 -1.3**
CLL Collm **146.22 353** */* PKP2 **PKPab** **22 53 32.9 +0.5**
CLL pmax pmax
comp=Z,134nm,1.3s
CLL MLR MLR
comp=Z,800nm,18.7s
CLL Collm **146.22 353** */* PKiKP **PKPab** **22 53 32.9 +0.5**
comp=Z,134nm,1.3s
CLL *e*pPKiKP **pPKPdf** **22 53 37.0 -1.2**
CLL *e*PKPlp 22 53 42.0
comp=Z,700nm,16.2s
CLL */* x x 22 53 43.3
comp=Z,182nm,1.3s
CLL *e*PP **PP** **22 56 54.0 +0.9**
CLL *e*SKPdf **SKPdf** **22 57 05.0 +2.0**
CLL *e*PPP PPP 23 00 12.0
CLL *ex* x 23 01 12.0
CLL *e*(PKKSdf) 23 06 06.0
CLL *e*PSKS 23 07 12.0
CLL *e*PPS PPS 23 09 36.0
CLL *ex* x 23 10 30.0
CLL *e*SS **SS** **23 15 47.0 +0.1**
CLL *e*PSPS 23 16 54.0
CLL *ex* x 23 18 18.0
CLL *ex* x 23 20 00.0
CLL *e*SSS SSS 23 21 12.0
CLL LmV 00 05 00.0
comp=Z,800nm,18.7s
CHVC Chvalec **146.50 350** *e*PKP **PKPab** **22 53 33.7 +0.1**
CHVC AMS AMS 23 57 50.0
comp=Z,500nm,20.8s
OSTC Ostas **146.50 350** *e*PKP **PKiKP** **22 53 34.8 -0.8**
OSTC AMS AMS 23 58 00.0
comp=Z,500nm,25.1s
BRG Berggiesshubel **146.53 352** *e*PKP **PKPab** **22 53 34.4 +0.8**
BRG Amp 22 53 36.1
comp=Z,101nm,1.5s
BRG *ex* x 22 53 41.3
BRG Amp 22 53 43.4
comp=Z,71nm,1.6s
BRG *ex* x 22 53 45.6
BRG Amp 22 53 52.2
comp=Z,210nm,1.7s
BRG Berggiesshubel **146.53 352** *e*PKP2 **PKPab** **22 53 34.4 +0.8**
BRG pmax pmax
comp=Z,101nm,1.5s
BRG pmax pmax
comp=Z,71nm,1.6s
BRG pmax pmax
comp=Z,210nm,1.7s
VASR Vaslui **146.55 334** ⇓P **PKiKP** **22 53 35.1 -0.6**
UPC Upice **146.58 350** *e*PKP2 **PKPab** **22 53 34.4 +0.5**
UPC MLR MLR
comp=Z,600nm,21.9s
UPC Upice **146.58 350** *e*PKP **PKPab** **22 53 34.4 +0.5**
UPC AMS AMS 23 58 00.0
comp=Z,600nm,21.9s
KOLS Kolonicke sedl **146.59 342** *e*PKIKP **PKiKP** **22 53 35.5 -0.3**
KOLS Kolonicke sedl **146.59 342** *e*PKP **PKiKP** **22 53 35.5 -0.3**
DPC Dobruska-Polom **146.68 349** *e*PKP2 **PKPab** **22 53 34.7 +0.4**
DPC MLR MLR
comp=Z,500nm,20.8s
DPC Dobruska-Polom **146.68 349** *e*PKP **PKPab** **22 53 34.7 +0.4**
DPC AMS AMS 23 58 10.0
comp=Z,500nm,20.8s
BURAR Bucovina Array **146.76 338** ⇑P **PKPab** **22 53 35.3 +0.5**
BURAR Bucovina Array **146.76 338** ⇑PKIKP **PKPab** **22 53 35.3 +0.5**
PVCC Panska Ves **146.79 351** *e*PKP2 **PKPab** **22 53 35.3 +0.7**
PVCC MLR MLR
comp=Z,300nm,20.7s
PVCC Panska Ves **146.79 351** *e*PKP **PKPab** **22 53 35.3 +0.7**
PVCC AMS AMS 23 56 50.0
comp=Z,300nm,20.7s
TEND Ethiopian Broa **146.79 264** *e*P **PKPab** **22 53 36.3 +0.5**
TEND Ethiopian Broa **146.79 264** *e*P **PKPab** **22 53 35.3 -0.5**
OKC Ostrava-Krasne **146.81 347** *e*PKP2 **PKiKP** **22 53 35.8 -0.4**
OKC MLR MLR
comp=Z,300nm,22.7s
OKC Ostrava-Krasne **146.81 347** *e*PKP **PKiKP** **22 53 35.8 -0.4**
OKC AMS AMS 23 53 30.0
comp=Z,300nm,22.7s
CRVS Cervenica-Dubn **146.85 343** *e*PKIKP **PKPab** **22 53 34.7 -0.3**
CRVS Cervenica-Dubn **146.85 343** *e*PKP **PKPab** **22 53 34.7 -0.3**
UZH Uzhgorod **146.85 342**⇑⇑ PKIKP **PKPab** **22 53 34.3 -0.6**
UZH *i* 22 53 36.7
UZH *i* 22 53 40.1
KRLC Kraliky **146.86 349** *e*PKIKP **PKPab** **22 53 34.9 -0.1**
KRLC MLR MLR
comp=Z,400nm,20.4s
KRLC Kraliky **146.86 349** *e*PKP **PKPab** **22 53 34.9 -0.1**
KRLC AMS AMS 23 55 20.0
comp=Z,400nm,20.4s
BIZ Bicaz **146.99 336** ⇓P **PKPab** **22 53 35.6 0.0**
MORC Moravsky Berou **147.00 348** ⇑P **PKPab** **22 53 36.0 +0.5**
MORC Moravsky Berou **147.00 348** ⇑PKP2 **PKPab** **22 53 36.0 +0.5**
MORC Moravsky Berou **147.00 348** *e*PKP **PKPab** **22 53 35.0 -0.5**
BEBN Eben Emael **147.03 2** *dx* x 22 53 35.6
LANS Liptovska Anna **147.15 345** *e*PKP2 **PKiKP** **22 53 37.0 0.0**
LANS Liptovska Anna **147.15 345** *e*PKP **PKiKP** **22 53 37.0 0.0**
GHRR **147.17 334** ⇓P **PKPab** **22 53 36.0 -0.3**
SCTR Scanteiesti **147.22 333** ⇓P **PKPab** **22 53 36.6 +0.1**
MEM Membach **147.23 1** *dx* x 22 53 36.9
BSTI Sart Tilman **147.24 2** *dx* x 22 53 37.0
BTNL Ternell **147.25 1** *dx* x 22 53 36.6
SNF Seneffe **147.26 3** *dx* x 22 53 35.6
BMR Baia Mare **147.31 339** ⇓P **PKPab** **22 53 36.7 -0.1**
BMR Baia Mare **147.31 339** ⇓PKP2 **PKPab** **22 53 36.7 -0.1**
PRU Pruhonice **147.32 351** *e*PKIKP **PKPab** **22 53 36.2 -0.5**
PRU MLR MLR
comp=Z,500nm,19.6s
PRU Pruhonice **147.32 351** *e*PKP **PKPab** **22 53 36.2 -0.5**
PRU AMS AMS 23 57 50.0
comp=Z,500nm,19.6s
MAUC Maruska **147.33 347** *e*PKP **PKPab** **22 53 36.4 -0.4**
NKC Novy Kostel **147.34 354** *e*PKP2 **PKPab** **22 53 36.9 +0.1**
NKC MLR MLR
comp=Z,300nm,16.3s
NKC Novy Kostel **147.34 354** *e*PKP **PKPab** **22 53 36.9 +0.1**
NKC AMS AMS 23 59 00.0
comp=Z,300nm,16.3s
ANKE Ethiopia-Afar **147.38 260**⇓⇓ *e*P **PKiKP** **22 53 39.8 +0.9**
ANKE Ethiopia-Afar **147.38 260** *e*P **PKPab** **22 53 38.1 -0.4**
ANKE Ethiopia-Afar **147.38 260** *e*P **PKPdf** **22 53 34.6 +0.4**
ANKE Ethiopia-Afar **147.38 260** *e*P **PKPab** **22 53 38.1 -0.4**
ANKE Ethiopia-Afar **147.38 260** *e*PKPdf **PKiKP** **22 53 38.9 +0.1**
ANKE Ethiopia-Afar **147.38 260** *e*PKPdf **PKPab** **22 53 38.7 +0.1**
ANKE Ethiopia-Afar **147.38 260** *e*PKPdf **PKPdf** **22 53 32.6 -1.6**
BGES Gesves **147.42 2** *dx* x 22 53 37.1
SCHL Schela **147.43 333** ⇑P **PKiKP** **22 53 38.3 +0.7**
BHOU Houvegnez **147.48 1** *dx* x 22 53 37.5
BMRD Maredsous **147.49 3** *d*PKPdf **PKPdf** **22 53 26.9 -6.0**
BMRD *dx* x 22 53 36.6
ARCR ARCALIA **147.52 338** ⇓P **PKiKP** **22 53 38.0 +0.3**
CFR Carcaliu **147.54 332** ⇓P **PKiKP** **22 53 37.8 0.0**
CFR Carcaliu **147.54 332** ⇓PKP2 **PKiKP** **22 53 37.8 0.0**
VRI Vrincioaia **147.61 334** ⇑P **PKPbc** **22 53 36.7 +0.8**
VRI Vrincioaia **147.61 334** ⇑PKIKP **PKPbc** **22 53 36.7 +0.8**
DILA Dilla **147.62 254** *e*P **PKPbc** **22 53 38.1 +1.1**
DILA Dilla **147.62 254** *e*P **PKPbc** **22 53 38.1 +1.1**
VRAC Vranov **147.63 348** *e*PKP **PKiKP** **22 53 37.6 -0.3**
RCHB Rochefort **147.66 2** *dx* x 22 53 38.1
PLOR Plostina **147.66 334** ⇑P **PKiKP** **22 53 37.7 -0.4**
PLOR Plostina **147.66 334** ⇑PKP2 **PKiKP** **22 53 37.7 -0.4**
TPGR Topolog **147.66 331** ⇓P **PKiKP** **22 53 37.6 -0.5**
DOU Dourbes **147.69 3** *dx* x 22 53 36.7
JAVC Velka Javorina **147.84 347** *e*PKP **PKPab** **22 53 39.0 +0.1**
TREC Trest **147.84 350** *e*PKIKP **PKPab** **22 53 38.0 -0.4**
TREC MLR MLR
comp=Z,500nm,21.8s
TREC Trest **147.84 350** *e*PKP **PKiKP** **22 53 38.0 -0.4**
TREC AMS AMS 23 58 30.0
comp=Z,500nm,21.8s
COVR Voineasa-Covas **147.84 335** ⇓P **PKiKP** **22 53 37.5 -0.9**
KRUC Moravsky **147.90 349** *e*PKP **PKPbc** **22 53 35.1 -1.5**
KOLL Kolacno **147.94 346** *e*PKP **PKPdf** **22 53 38.7 +0.2**
MESR Meseni **147.95 340** ⇑P **PKPab** **22 53 39.5 +0.2**
TIRR Tirgusor **147.97 331** ⇓P **PKiKP** **22 53 38.9 +0.2**
TIRR Tirgusor **147.97 331** ⇓PKP2 **PKiKP** **22 53 38.9 +0.2**
HARR Harsova **148.01 331** ⇓P **PKiKP** **22 53 38.6 -0.2**
HARR Harsova **148.01 331** ⇓PKP2 **PKiKP** **22 53 38.6 -0.2**
DOPR Dopca **148.07 336** ⇑P **PKPab** **22 53 39.6 -0.3**
LTVH Ltavrtes, Hu **148.08 341** ⇑P **PKPab** **22 53 39.3 -0.5**
LTVH Ltavrtes, Hu **148.08 341** PKP **PKPab** **22 53 39.8 0.0**
AAE Adis Abeba **148.11 258** *e*P **PKPab** **22 53 43.5 +2.2**
AAE Adis Abeba **148.11 258** *e*P **PKPdf** **22 53 36.9 +1.6**
AAE Adis Abeba **148.11 258** *e*P **PKPdf** **22 53 35.0 -0.3**
AAE Adis Abeba **148.11 258**⇓⇓ *e*P **PKPab** **22 53 41.3 -0.1**
AAE Adis Abeba **148.11 258** *e*P **PKPdf** **22 53 36.9 +1.6**
AAE Adis Abeba **148.11 258** *e*P PKPdf 22 53 25.9 -9.4
AAE Adis Abeba **148.11 258** *e*P **PKPab** **22 53 40.9 -0.5**
AAE Adis Abeba **148.11 258** *e*PKPdf **PKPbc** **22 53 38.7 +0.2**
AAE Adis Abeba **148.11 258** *e*PKPdf **PKPbc** **22 53 38.7 +0.2**
AAE Adis Abeba **148.11 258** *e*P **PKPdf** **22 53 30.9 -4.4**
AAE Adis Abeba **148.11 258** *e*PKPdf **PKPdf** **22 53 33.6 -1.7**
CJR Cluj-Napoca **148.11 338** ⇑P **PKPbc** **22 53 37.9 +0.6**
CJR Cluj-Napoca **148.11 338** ⇑PKIKP **PKPbc** **22 53 37.9 +0.6**
FURI Furi **148.15 258**⇓⇓ *e*P **PKPab** **22 53 41.5 0.0**
FURI Furi **148.15 258** *e*P **PKPbc** **22 53 38.9 +0.2**
FURI Furi **148.15 258** *e*P **PKiKP** **22 53 40.9 +0.5**
FURI Furi **148.15 258** *e*P **PKPdf** **22 53 33.0 -2.4**
FURI Furi **148.15 258** *e*P **PKPab** **22 53 41.8 +0.2**
FURI Furi **148.15 258** *e*P **PKiKP** **22 53 40.9 +0.5**
FURI Furi **148.15 258** *e*P **PKPbc** **22 53 38.9 +0.2**
FURI Furi **148.15 258** *e*P PKPdf 22 53 26.4 -9.0
FURI Furi **148.15 258** *e*PKPdf **PKiKP** **22 53 40.7 +0.3**
FURI Furi **148.15 258** *e*PKPdf **PKPbc** **22 53 38.6 0.0**
FURI Furi **148.15 258** *e*PKPdf **PKPbc** **22 53 38.4 -0.2**
FURI Furi **148.15 258** *e*P **PKPdf** **22 53 30.4 -5.0**
FURI Furi **148.15 258** *e*P **PKPdf** **22 53 33.0 -2.4**
WLF Walferdange **148.18 1** IAMs_20 IAMs_20 00 11 50.4
comp=Z,422nm,18.0s
WLF Walferdange **148.18 1** *dx* x 22 53 39.8
PSZ Piszkesteto **148.18 344** IAMs_20 IAMs_20 00 00 46.0
comp=Z,493nm,21.0s
PSZ Piszkesteto **148.18 344** PKP **PKPab** **22 53 39.7 -0.6**
SMOL Smolenice **148.22 347** *e*PKP2 **PKPab** **22 53 39.8 -0.6**
SMOL Smolenice **148.22 347** *e*PKP **PKPab** **22 53 39.8 -0.6**
MLR Muntele Rosu **148.24 335** ⇑P **PKPbc** **22 53 36.6 -1.1**
MLR Muntele Rosu **148.24 335** PKPbc **PKPbc** **22 53 36.9 -0.8**
comp=Z,14nm,1.1s,baz=39,slow=2.9,SNR=20
MLR Muntele Rosu **148.24 335** **PKPbc** **22 53 37.0 -0.8**
MLR Muntele Rosu **148.24 335** ⇑PKIKP **PKPbc** **22 53 36.6 -1.1**
ISR Istrita **148.29 333** ⇑P **PKPab** **22 53 38.9 -0.6**
ISR Istrita **148.29 333** ⇑PKP2 **PKiKP** **22 53 38.9 -0.6**
KHC Kasperske Hory **148.29 352** *e*PKP2 **PKiKP** **22 53 39.5 +0.2**
KHC MLR MLR
comp=Z,500nm,23.5s
KHC Kasperske Hory **148.29 352** *e*PKP **PKiKP** **22 53 39.5 +0.2**
KHC *ex* x 22 53 55.5
KHC AMS AMS 23 58 30.0
comp=Z,500nm,23.5s
BR131 Keskin Array S **148.32 319** PKPdf **PKPdf** **22 53 31.5 -3.2**
BR131 Keskin Array S **148.32 319** PKHKP PKPpre 22 53 31.5
BRTR Keskin Array B **148.32 319** PKP **PKPdf** **22 53 36.3 +1.6**
comp=Z,14nm,1.1s,baz=147,slow=2.4,SNR=41
BRTR PKPbc **PKiKP** **22 53 39.3 -0.5**
comp=Z,15nm,1.1s,baz=129,slow=1.6,SNR=36
BRTR Keskin Array B **148.32 319** **PKPdf** **22 53 30.3 -4.5**
BRTR Keskin Array B **148.32 319** PKHKP PKPpre 22 53 30.3
DRGR **148.34 339** ⇓P **PKiKP** **22 53 39.8 +0.3**
DRGR **148.34 339** ⇓PKP2 **PKiKP** **22 53 39.8 +0.3**
MODS Modra-Piesok **148.38 347** *e*PKP2 **PKiKP** **22 53 39.8 +0.3**
MODS Modra-Piesok **148.38 347** *e*PKP **PKiKP** **22 53 39.8 +0.3**
CKRC Cesky Krumlov **148.49 351** *e*PKP **PKPdf** **22 53 35.7 +1.1**
GERES GERESS Array B **148.55 352** PKPbc **PKiKP** **22 53 39.3 -0.6**
comp=Z,3.6nm,0.9s,baz=297,slow=0.3,SNR=32
ZST Bratislava **148.59 347** *e*PKP2 **PKPab** **22 53 41.1 -0.7**
ZST Bratislava **148.59 347** *e*PKP **PKPab** **22 53 41.1 -0.7**
VOIR **148.64 335** ⇓P **PKiKP** **22 53 40.5 +0.3**
VOIR **148.64 335** ⇓PKP2 **PKiKP** **22 53 40.5 +0.3**
PSN Preselentsi **148.66 330** *e*P **PKiKP** **22 53 39.9 -0.3**
ANTO Ankara **148.75 320** **PKPdf** **22 53 36.9 +1.5**
ANTO Ankara **148.75 320** PKIKP **PKPdf** **22 53 36.9 +1.5**
ARR Arges **148.86 336** ⇑P **PKPbc** **22 53 38.2 -1.0**
LODK Lodwar **148.91 246** **PKiKP** **22 53 41.9 +0.2**
LODK IAMs_20 IAMs_20 23 55 12.9
comp=Z,436nm,19.0s
LODK Lodwar **148.91 246** *e*P **PKPdf** **22 53 30.8 -5.6**
LODK Lodwar **148.91 246** *e*P **PKiKP** **22 53 42.9 +1.2**
LODK Lodwar **148.91 246** *e*P **PKPdf** **22 53 29.3 -7.1**
LODK Lodwar **148.91 246** *e*P **PKPdf** **22 53 31.7 -4.7**
LODK Lodwar **148.91 246** *e*P **PKiKP** **22 53 42.9 +1.2**
LODK Lodwar **148.91 246** *e*Pdif **PKiKP** **22 53 32.9 -3.5**
LODK Lodwar **148.91 246** *e*PKPdf **PKiKP** **22 53 37.5 +1.1**
LODK Lodwar **148.91 246** *e*PKPdf **PKPdf** **22 53 35.7 -0.7**
LODK Lodwar **148.91 246** *e*P **PKPab** **22 53 45.0 +0.7**
LODK Lodwar **148.91 246** *e*PKPdf **PKPdf** **22 53 31.3 -5.1**
DEV Deva **149.07 338** ⇓P **PKiKP** **22 53 41.8 +0.9**
DEV Deva **149.07 338** ⇓PKP2 **PKiKP** **22 53 41.8 +0.9**
CONA Conrad Observa **149.09 349** *e*P **PKiKP** **22 53 41.6 +0.6**
comp=Z,27nm,1.2s,SNR=14
CSKK Cskako **149.11 345** PKP **PKPab** **22 53 42.7 -1.3**
LOT Lotru **149.13 337** ⇑P **PKiKP** **22 53 40.7 -0.5**
SIRR Siria **149.15 340** ⇑P **PKiKP** **22 53 41.9 +0.8**
SOP Sopron **149.19 348** PKP **PKiKP** **22 53 42.6 +1.5**
RONA Rosalia, Austr **149.23 348** *e*P **PKiKP** **22 53 41.9 +0.6**
comp=Z,25nm,1.2s,SNR=12
EGYH Egyhazaskeszo **149.28 346** PKP **PKPab** **22 53 43.1 -1.5**
PRD Provadia **149.40 330** *e*P **PKiKP** **22 53 42.3 +0.6**
MOA Molln **149.44 351** *e*P **PKiKP** **22 53 42.0 +0

	comp=Z,11nm,1.2s,SNR=8.9							
MPLH	**Magyarpolny**	**149.46**	**346**	PKP	**PKiKP**	**22 53 42.5**	**+0.8**
BFO	**Black Forest**	**149.51**	**358**	PKPab	**PKiKP**	**22 53 42.6**	**+0.8**
BFO				IAMs_20	IAMs_20	00 12 59.5	
	comp=Z,431nm,18.0s						
BFO	**Black Forest**	**149.51**	**358**	PKIKP	**PKiKP**	**22 53 42.6**	**+0.8**
GZR	**Gura Zlata**	**149.53**	**338**	⇓P	**PKPbc**	**22 53 40.6**	**-0.3**
GZR	**Gura Zlata**	**149.53**	**338**	⇓PKIKP	**PKPbc**	**22 53 40.6**	**-0.3**
CLF	**Chambon-Foret**	**149.56**	**7**		**PKiKP**	**22 53 41.8**	**0.0**
ASF	**Jabal al Asfar**	**149.60**	**304**	PKPbc	**PKiKP**	**22 53 42.3**	**-0.3**
	comp=Z,4.5nm,1.1s,baz=72,slow=0.4,SNR=14						
ECH	**Echery**	**149.63**	**0**		**PKiKP**	**22 53 42.4**	**+0.3**
ECH				IAMs_20	IAMs_20	00 02 02.1	
	comp=Z,403nm,20.0s						
ECH	**Echery**	**149.63**	**0**	PKIKP	**PKiKP**	**22 53 42.4**	**+0.3**
ECH				MLR	MLR		
	comp=Z,400nm,20.0s						
BIOA	**Bad Ischl, Aus**	**149.69**	**351**	*e*P	**PKiKP**	**22 53 42.3**	**+0.1**
	comp=Z,14nm,1.2s,SNR=8.8						
BZS	**Buzias**	**149.74**	**340**	⇑P	**PKiKP**	**22 53 42.7**	**+0.4**
BZS	**Buzias**	**149.74**	**340**	⇑PKIKP	**PKiKP**	**22 53 42.7**	**+0.4**
ARSA	**Arzberg**	**149.81**	**349**	*i* P	**PKiKP**	**22 53 42.7**	**+0.2**
	comp=Z,7.5nm,1.2s						
SRE	**Strehaia**	**150.00**	**337**	⇓P	**PKiKP**	**22 53 44.2**	**+1.3**
SRE	**Strehaia**	**150.00**	**337**	⇓PKP2	**PKiKP**	**22 53 44.2**	**+1.3**
SZH	**Strazhica**	**150.03**	**332**	*e*P	**PKPbc**	**22 53 42.0**	**-0.1**
MORH	**Mrgy, Hungar**	**150.08**	**344**	⇑P	**PKiKP**	**22 53 43.8**	**+0.8**
MORH	**Mrgy, Hungar**	**150.08**	**344**	*e*P	**PKPdf**	**22 53 37.7**	**+0.6**
MORH	**Mrgy, Hungar**	**150.08**	**344**	PKP	**PKPdf**	**22 53 39.1**	**+2.0**
RETA	**Reutte**	**150.22**	**355**	*e*P	**PKiKP**	**22 53 44.0**	**+0.7**
	comp=Z,18nm,1.1s,SNR=9.8						
WATA	**Walderalm**	**150.29**	**354**	*e*P	**PKiKP**	**22 53 44.0**	**+0.3**
	comp=Z,20nm,1.1s,SNR=12						
BEHE	**Becsehely**	**150.30**	**347**	*e*P	**PKiKP**	**22 53 43.8**	**+0.3**
MOTA	**Moosalm**	**150.33**	**355**	*i* P	**PKiKP**	**22 53 44.2**	**+0.5**
	comp=Z,22nm,1.1s,SNR=9.9						
KBA	**Koelnbreinsper**	**150.33**	**351**	*i* P	**PKiKP**	**22 53 43.8**	**0.0**
	comp=Z,6.2nm,1.1s						
KOVH	**Kovagototos**	**150.34**	**345**	PKP	**PKPdf**	**22 53 40.1**	**+2.6**
WTTA	**Wattenberg**	**150.36**	**354**	*e*P	**PKiKP**	**22 53 44.2**	**+0.4**
	comp=Z,27nm,1.1s,SNR=11						
MDVR	**Moldovita**	**150.44**	**339**	⇑P	**PKiKP**	**22 53 44.7**	**+0.8**
SQTA	**Sankt Quirin**	**150.44**	**354**	*i* P	**PKiKP**	**22 53 44.8**	**+0.9**
	comp=Z,19nm,1.1s,SNR=9.5						
SOKA	**Soboth**	**150.45**	**349**	*i* P	**PKiKP**	**22 53 43.9**	**0.0**
	comp=Z,17nm,1.2s,SNR=9.9						
DAVA	**Damuels**	**150.48**	**356**	*i* P	**PKiKP**	**22 53 44.8**	**+0.8**
	comp=Z,24nm,1.2s,SNR=9.9						
MBAR	**Mbarara**	**150.48**	**234**	PKPdf	**PKPdf**	**22 53 34.6**	**-4.4**
MBAR	**Mbarara**	**150.48**	**234***c*	*i* PKHKP	PKPpre	22 53 46.8	
MBAR				pmax	pmax		
	comp=Z,13nm,1.7s						
MBAR	**Mbarara**	**150.48**	**234**	*e*P	**PKPdf**	**22 53 37.0**	**-2.1**
MBAR	**Mbarara**	**150.48**	**234**	*e*P	**PKPdf**	**22 53 32.5**	**-6.5**
MBAR	**Mbarara**	**150.48**	**234**	⇓*e*P	**PKPdf**	**22 53 38.6**	**-0.4**
MBAR	**Mbarara**	**150.48**	**234**	*e*Pdif	**PKPdf**	**22 53 37.8**	**-1.3**
MBAR	**Mbarara**	**150.48**	**234**	*e*P	**PKPdf**	**22 53 37.0**	**-2.1**
MBAR	**Mbarara**	**150.48**	**234**	*e*PKPdf	**PKPdf**	**22 53 37.7**	**-1.3**
MBAR	**Mbarara**	**150.48**	**234**	*e*PKPdf	**PKPdf**	**22 53 33.5**	**-5.5**
FETA	**Feichten**	**150.68**	**355**	*e*P	**PKiKP**	**22 53 45.2**	**+0.7**
	comp=Z,20nm,1.2s,SNR=7.5						
OBKA	**Obir**	**150.70**	**350**	*e*P	**PKiKP**	**22 53 44.4**	**0.0**
	comp=Z,9.0nm,1.3s,SNR=6.6						
FRGS	**Fruska Gora**	**150.72**	**342**	*e*P	**PKPdf**	**22 53 38.9**	**+0.7**
MYKA	**Terra Mystica**	**150.73**	**351**	*e*P	**PKiKP**	**22 53 44.3**	**-0.2**
	comp=Z,9.5nm,1.1s						
ABTA	**Abfaltersbach**	**150.77**	**352**	*i* P	**PKiKP**	**22 53 44.9**	**+0.3**
	comp=Z,23nm,1.1s,SNR=12						
MPEP	**Malo Peshtene**	**150.89**	**335**	*e*P	**PKiKP**	**22 53 46.2**	**+1.4**
VNDS	**Vrh nad Dolski**	**151.07**	**349**	*i* PKPdf	**PKPdf**	**22 53 39.4**	**+0.6**
LJU	**Ljubljana**	**151.15**	**349**	*e*P	**PKPdf**	**22 53 39.6**	**+0.8**
DIM	**Dimitrovgrad**	**151.16**	**331**	*e*P	**PKiKP**	**22 53 46.9**	**+1.5**
CRES	**Cresnjev**	**151.19**	**348**	*e*P	**PKPdf**	**22 53 39.6**	**+0.7**
TUE	**Stuetta**	**151.32**	**357**		**PKPdf**	**22 53 40.9**	**+1.5**
CEY	**Cerknica**	**151.47**	**349**	*e*P	**PKPdf**	**22 53 40.5**	**+1.1**
CEY	**Cerknica**	**151.47**	**349**	*i* PKPdf	**PKPdf**	**22 53 40.3**	**+1.0**
CEY				*i* PKPbc	**pPKPdf**	**22 53 46.8**	**+0.1**
SENIN	**Lac Senin/Sane**	**151.49**	**360**		**PKPdf**	**22 53 41.6**	**+2.0**
BOJS	**Bojanci**	**151.54**	**348**	*i* PKPdf	**PKPdf**	**22 53 41.0**	**+1.5**
BOJS				*i* PKPbc	**pPKPdf**	**22 53 47.4**	**+0.6**
DIVS	**Divibare**	**151.62**	**340**	IAMs_20	IAMs_20	23 58 02.5	
	comp=Z,429nm,22.0s						
DIVS	**Divibare**	**151.62**	**340**	*e*P	**PKPdf**	**22 53 39.7**	**0.0**
VTS	**Vitosha**	**151.71**	**334**	⇑P	**PKPbc**	**22 53 45.9**	**-0.4**
VTS	**Vitosha**	**151.71**	**334**		**PKPdf**	**22 53 41.4**	**+1.4**
VTS	**Vitosha**	**151.71**	**334**	PKIKP	**PKPdf**	**22 53 41.4**	**+1.4**
VTS	**Vitosha**	**151.71**	**334**	*e*P	**PKiKP**	**22 53 47.4**	**+0.7**
SKDS	**Skadanscina**	**151.72**	**350**	*e*P	**PKPdf**	**22 53 38.9**	**-0.9**
BLY	**Banja Luka**	**151.82**	**345**	*e*P	**PKPdf**	**22 53 39.7**	**-0.2**
BBLS	**Lazići**	**152.01**	**341**	*e*P	**PKPdf**	**22 53 41.6**	**+1.3**
EIL	**Elat**	**152.02**	**300**	PKP	**PKPdf**	**22 53 42.0**	**+1.4**
	comp=Z,4.5nm,1.0s,baz=38,slow=7.1,SNR=4.4						
EIL				PKPbc	**pPKPdf**	**22 53 48.9**	**+0.3**
	comp=Z,13nm,1.0s,baz=29,slow=3.7,SNR=11						
RUDO	**Rudo**	**152.25**	**341**	*e*P	**PKPbc**	**22 53 46.4**	**-0.9**
MMB	**Musomiste**	**152.28**	**333**	*e*P	**PKiKP**	**22 53 48.5**	**+0.6**
SJES	**Sjenica**	**152.37**	**340**	*e*P	**PKPdf**	**22 53 42.4**	**+1.5**
KKB	**Krupnik**	**152.40**	**334**	*e*P	**PKiKP**	**22 53 49.5**	**+1.5**
PGAV	**Gavieira, Arco**	**152.51**	**25**	*e*LR	LR	23 57 15.7	
	comp=Z,533nm,20.0s						
PCAB	**Cabril**	**152.82**	**25**	*e*PKPab	**PKiKP**	**22 53 53.8**	**+4.9**
POLO	**Lamas de Olo**	**153.20**	**26**	*e*PKPbc	**PKPbc**	**22 53 48.7**	**-0.9**
PBRG	**Braganca**	**153.25**	**24**	*e*PKPab	**PKPab**	**22 53 57.9**	**-3.5**
PDG	**Podgorica**	**153.35**	**340**	⇓P	**PKPdf**	**22 53 44.1**	**+1.9**
PDG	**Podgorica**	**153.35**	**340**	IAMs_20	IAMs_20	00 06 19.4	
	comp=Z,399nm,20.0s						
PDG	**Podgorica**	**153.35**	**340**	*e*P	**PKPdf**	**22 53 42.3**	**+0.1**
STON	**Ston**	**153.43**	**343**	*e*P	**PKPbc**	**22 53 49.3**	**-0.6**
DRNE	**Dracevica, Mon**	**153.59**	**340**	*e*P	**PKPdf**	**22 53 43.3**	**+0.7**
MVO	**Moncorvo**	**153.68**	**25**	*e*PKPab	**PKPab**	**22 53 58.1**	**-5.2**
MVO	**Moncorvo**	**153.68**	**25**	*e*LR	LR	23 53 03.9	
	comp=Z,397nm,18.0s						
PVIS	**Viseu**	**153.70**	**26**	*e*PKPab	**PKiKP**	**22 53 55.5**	**+4.7**
MTE	**Manteigas**	**154.12**	**26**	*e*LR	LR	23 51 34.0	
	comp=Z,394nm,18.0s						
PCBR	**Castelo Branco**	**154.61**	**27**	*e*PKPbc	**PKPdf**	**22 53 47.2**	**+3.1**
PMTG	**Montargil**	**154.90**	**29**	*e*PKPbc	**PKPbc**	**22 53 52.4**	**-0.8**
PMRV	**Marv??o**	**154.98**	**27**	*e*PKPab	**PKPab**	**22 54 03.4**	**-5.4**
PMRV	**Marv??o**	**154.98**	**27**	*e*LR	LR	23 55 37.2	
	comp=Z,436nm,18.0s						
MESJ	**Messejana**	**155.88**	**31**	*e*PKPab	**PKPab**	**22 54 07.5**	**-5.1**
PBEJ	**Beja**	**155.90**	**30**	*e*PKPab	**PKPab**	**22 54 07.5**	**-5.2**
MORF	**Marmelete**	**156.07**	**32**	*e*PKPab	**PKPab**	**22 54 07.9**	**-5.7**
PCVE	**Castro Verde**	**156.13**	**31**	*e*PKPab	**PKPab**	**22 54 08.9**	**-4.8**
ESDC	**Sonseca Array**	**156.13**	**22**	PKP	**PKPdf**	**22 53 47.7**	**+1.5**
	comp=Z,0.9nm,1.1s,baz=352,slow=3.0,SNR=4.2						
ESDC				PKPab	**PKPab**	**22 54 15.6**	**+1.9**
	comp=Z,5.9nm,1.3s,baz=338,slow=3.8,SNR=7.4						
ESDC				PP	**PP**	**22 57 48.1**	**-2.2**
	comp=Z,0.1nm,0.6s,baz=351,slow=3.7,SNR=3.7						
PVAQ	**Vaqueiros**	**156.47**	**31**	*e*PKPdf	**PKPdf**	**22 53 48.2**	**+1.6**
PVAQ	**Vaqueiros**	**156.47**	**31**	*e*LR	LR	23 57 39.5	
	comp=Z,462nm,18.0s						
IDI	**Anoyia**	**156.50**	**321**	IAMs_20	IAMs_20	00 10 15.3	
	comp=Z,304nm,21.0s						
CART	**Cartagena**	**158.99**	**18**	IAMs_20	IAMs_20	23 58 44.1	
	comp=Z,416nm,20.0s						
TORD	**Torodi Ar. Bea**	**173.00**	**130**	PKP	**PKPdf**	**22 54 01.3**	**-0.3**
	comp=Z,2.5nm,1.1s,baz=233,slow=2.3,SNR=7.5						
TORD				PKPab	**PKPab**	**22 55 30.3**	**+1.9**
	comp=Z,5.4nm,0.9s,baz=250,slow=2.5,SNR=7.8						
TORD				PP	**PP**	**22 59 22.7**	**+3.1**
	comp=Z,1.0nm,1.0s,baz=240,slow=2.1,SNR=2.7						

DJA 05 22:42:01.0±0.7, **7°S**±5°×**10°7E**±°, **h10**km, **M2.7/4, MLv2.7/4, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBJI	**Dramaga**	**0.20**	**23**	P	Pg	22 42 06.3	+1.1
SKJI	**Sukabumi**	**0.29**	**203**	P	Pb	22 42 07.6	-0.7
CBJI	**Citeko**	**0.36**	**29**	P	Pg	22 42 07.2	-1.0
CNJI	**Cibinong**	**0.73**	**141**	P	Pb	22 42 15.5	-0.3

*IDC **05** 22:47:55.1±2.9, 35°.41N×70°.59E, h0km, mb4.1/4, mbtmp3.9/9, ML3.6/5, MS3.9/1, Error ellipse: s-maj=59.9km s-min=23.1km az=146.0*
*NNC **05** 22:48:09.0±5.5, 36°.49N×70°.26E, h0km, mb4.3, mpv4.0, Error ellipse: s-maj=58.5km s-min=32.4km az=152.0*
*NEIC **05** 22:48:10.2±1.7, 36°.15N±0°.07×70°.31E±0°.08, h105km±10km, mb4.1/6, Error ellipse: s-maj=11.4km s-min=8.2km az=137.0*

ISC 05 22:48:08.5±0.7, **35°.97N**±0°.06×**70°.45E**±0°.06, **h110**km, **n49, σ1§74/52, mb4.0/6, 4C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**1.83**	**219**	Pn	**Pn**	**22 48 42.2**	**+2.6**
CHGR	**Chuyangaron**	**2.87**	**339**	Pn	**Pn**	**22 48 52.5**	**-0.4**
GAR	**Garm**	**3.03**	**358**		**Pn**	**22 48 54.9**	**-0.1**
THN	**Thein Dam**	**5.61**	**127**	*e*S	**Sn**	**22 50 32.6**	**-0.2**
AML	**Almayashu**	**6.65**	**21**	P	**Pn**	**22 49 43.7**	**-0.2**
	SNR=41						
BHK	**Bhakra**	**6.74**	**131**	*e*S	**Sn**	**22 50 57.8**	**-2.2**
UCH	**Uchtor**	**7.00**	**26**	P	**Pn**	**22 49 48.5**	**-0.2**
	SNR=24						
KK31	**Karatay Array**	**7.12**	**0**		**Pn**	**22 49 49.2**	**-0.8**
KK31	**Karatay Array**	**7.12**	**0**	P	**Pn**	**22 49 49.0**	**-1.0**
	5.5nm,0.5s,baz=185,slow=14,SNR=84						
KK31				⇑S	**Sn**	**22 51 05.0**	**-4.4**
	3.6nm,0.5s,baz=192,slow=23,SNR=6.0						
KKAR	**Karatay Array**	**7.12**	**0**	Pn	**Pn**	**22 49 49.0**	**-1.0**
KKAR	**Karatay Array**	**7.12**	**0**		**Pn**	**22 49 49.2**	**-0.8**
EKS2	**Erkin-Say**	**7.16**	**20**	P	**Pn**	**22 49 50.8**	**+0.2**
	SNR=19						
AAK	**Ala-Archa**	**7.36**	**24**	P	**Pn**	**22 49 53.2**	**-0.1**
	SNR=11						
AAK	**Ala-Archa**	**7.36**	**24**	Pn	**Pn**	**22 49 52.5**	**-0.8**
	4.4nm,0.3s,baz=207,slow=6.7,SNR=13						
AAK				Sn	**Sn**	**22 51 12.2**	**-3.1**
	2.1nm,0.3s,baz=151,slow=18,SNR=2.9						
	8.4nm,0.3s						
AAK	**Ala-Archa**	**7.36**	**24**	Pn	**Pn**	**22 49 53.0**	**-0.4**
SMLA	**Simla**	**7.40**	**129**	*e*P	**Pn**	**22 49 54.3**	**+0.5**
SMLA				*e*S	**Sn**	**22 51 11.6**	**-4.6**
SMLA				IAML		22 51 15.7	
	comp=E,390nm,0.3s						
SMLA				IAML		22 51 15.8	
	comp=N,348nm,0.3s						
KBK	**Karagaybulak**	**7.53**	**26**	P	**Pn**	**22 49 56.2**	**+0.6**
	SNR=9.9						
ULHL	**Ulahol**	**7.72**	**34**	P	**Pn**	**22 49 57.7**	**-0.5**
	SNR=9.2						
CHMS	**Chumysh**	**7.77**	**24**	P	**Pn**	**22 49 59.0**	**+0.3**
	SNR=6.7						
USP	**Ospenovka**	**7.93**	**22**	P	**Pn**	**22 50 01.4**	**+0.5**
	SNR=16						
TKM2	**Tokmak 2**	**8.00**	**28**	P	**Pn**	**22 50 02.0**	**-0.1**
	SNR=6.0						
TKM2	**Tokmak 2**	**8.00**	**28**	⇑P	**Pn**	**22 50 01.4**	**-0.7**
	comp=N,1.9nm,0.2s						
TKM2				⇑S	**Sn**	**22 51 29.6**	**-1.4**
	comp=N,3.7nm,0.8s						
KHET	**Khetri**	**9.09**	**149**	*e*P	**Pn**	**22 50 15.4**	**-1.3**
KHET				*e*S	Sn	22 51 50.2	-7.1
GEYT	**Alibeck**	**10.06**	**285**	Pn	**Pn**	**22 50 26.5**	**-3.4**
	comp=N,0.8nm,0.3s,baz=105,slow=17,SNR=9.3						
GEYT				Sn	**Sn**	**22 52 16.6**	**-4.2**
	comp=N,0.5nm,0.3s,baz=120,slow=20,SNR=2.6						
	comp=N,1.5nm,0.3s						
GEYT	**Alibeck**	**10.06**	**285**		**Pn**	**22 50 29.2**	**-0.6**
GYA0B	**ALIBECK ARRAY**	**10.06**	**285**	Pn	**Pn**	**22 50 29.4**	**-0.5**
LGTI	**Lohaghat**	**10.50**	**125**	*e*S	Sn	22 52 20.7	-11
MAKZ	**Makanchi**	**13.84**	**35**	Pn	**Pn**	**22 51 20.4**	**+0.5**
MK31	**Makanchi Array**	**13.98**	**36**	Pn	**Pn**	**22 51 21.6**	**0.0**
MKAR	**Makanchi Array**	**13.98**	**36**	Pn	**Pn**	**22 51 21.2**	**-0.5**
	comp=N,0.1nm,0.3s,baz=226,slow=14,SNR=4.7						
	comp=N,0.5nm,0.7s						
MKAR	**Makanchi Array**	**13.98**	**36**		**Pn**	**22 51 22.2**	**+0.5**
AB31	**Akbulak array**	**15.34**	**333**	⇑P	**Pn**	**22 51 37.5**	**-1.4**
	comp=N,4.0nm,0.5s,baz=153,slow=12,SNR=74						
ABKAR	**Akbulak array**	**15.34**	**333**	P	**Pn**	**22 51 38.3**	**-0.5**
ABKAR				IAmb	IAmb	22 51 39.0	
	comp=Z,7.5nm,0.6s						
ABKAR	**Akbulak array**	**15.34**	**333**	Pn	**Pn**	**22 51 38.2**	**-0.7**
KURBB	**Kurchatov Arra**	**15.77**	**19**	Pn	**Pn**	**22 51 42.8**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=207,slow=10,SNR=7.4						
	comp=Z,0.3nm,0.5s						
KURK	**Kurchatov**	**15.88**	**19**	Pn	**Pn**	**22 51 45.1**	**-0.4**
AKTO	**Aktyubinsk**	**17.03**	**332**	P	**P**	**22 52 01.1**	**+1.4**
	comp=Z,0.4nm,0.3s,baz=145,slow=13,SNR=13						
	comp=Z,2.9nm,0.6s						
AKTO	**Aktyubinsk**	**17.03**	**332**	⇓P	**P**	**22 52 01.5**	**+1.8**
	comp=Z,3.0nm,0.6s						
ZAA0	**Zalesovo Array**	**20.58**	**25**	P	**P**	**22 52 40.0**	**+1.6**
ZALV	**Zalesovo Beam**	**20.58**	**25**	P	**P**	**22 52 39.6**	**+1.2**
	comp=Z,8.7nm,0.4s,baz=219,slow=11,SNR=31						
	comp=Z,8.7nm,0.4s						
ZALV	**Zalesovo Beam**	**20.58**	**25**	P	**P**	**22 52 40.0**	**+1.6**
ARU	**Arti**	**21.99**	**342**		**P**	**22 52 52.5**	**-0.9**
ARU				IAmb	IAmb	22 53 12.8	
	comp=Z,22nm,1.4s						
KIV	**Kislovodsk**	**22.65**	**299**	P	**P**	**22 52 59.1**	**-1.3**
KIV				IAmb	IAmb	22 53 38.4	
	comp=Z,3.6nm,0.9s						
IDI	**Anoyia**	**36.78**	**283**	LR	LR	23 12 07.6	
	comp=Z,157nm,19.0s,baz=110,slow=39						
FINES	**FINESS Array B**	**37.67**	**327**	P	**P**	**22 55 15.3**	**+2.7**
	comp=Z,1.7nm,0.8s,baz=126,slow=9.3,SNR=1.7						
	comp=Z,1.7nm,0.8s						
FINES	**FINESS Array B**	**37.67**	**327**	P	**P**	**22 55 15.1**	**+2.4**
TIP	**Timpagrande**	**42.16**	**291**	P	**P**	**22 55 51.9**	**+1.7**
TIP				IAmb	IAmb	22 56 17.9	
	comp=Z,3.6nm,1.0s						
TIXI	**Tiksi**	**46.43**	**22**	P	**P**	**22 56 27.0**	**+3.4**
	comp=Z,1.3nm,0.3s,baz=270,slow=22,SNR=7.4						
	comp=Z,1.3nm,0.3s						
TORD	**Torodi Ar. Bea**	**65.26**	**269**	P	**P**	**22 58 39.5**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=49,slow=5.8,SNR=2.5						
	comp=Z,0.4nm,0.6s						

*ISK **05** 23:32:07.6, 39°.37N×39°.32E, h2km, ML2.5/6*
*DDA **05** 23:32:08.6±0.0, 39°.39N×39°.30E, h7km±1km, ML1.7*

ISC 05 23:32:08.2±1.2, **39°.39N**±0°.03×**39°.30E**±0°.02, **h4**km±11km, **n19, σ0§83/32, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERZN	**Erzincan**	**0.38**	**59**	PG	**Pg**	**23 32 16.1**	**+0.5**
ERZN				SG	**Sg**	**23 32 22.0**	**+1.4**
EUZM	**Uzumlu**	**0.44**	**44**	P	**Pg**	**23 32 17.4**	**+0.6**
EUZM				*i* AML	AML	23 32 24.0	
	comp=E,164nm,0.5s						
EUZM				*i* AML	AML	23 32 24.0	
	comp=N,91nm,0.2s						
EUZM				S	**Sb**	**23 32 24.1**	**-1.6**
ILIC	**ilic-Erzincan**	**0.57**	**277**	PG	**Pg**	**23 32 19.3**	**+0.1**
ILIC				SG	**Sb**	**23 32 28.7**	**-0.7**
KEMA	**Kemaliye**	**0.64**	**260**	P	**Pg**	**23 32 20.5**	**+0.1**
KEMA				S	**Sb**	**23 32 30.9**	**-0.4**
KEMA				*i* AML	AML	23 32 32.0	
	comp=E,52nm,0.1s						
KEMA				*i* AML	AML	23 32 33.0	
	comp=N,38nm,0.3s						
REFA	**Refahiye_ERZN**	**0.66**	**322**	P	**Pg**	**23 32 21.4**	**+0.4**
REFA				S	**Sg**	**23 32 26.9**	**-2.7**
REFA				*i* AML	AML	23 32 32.0	
	comp=E,22nm,0.4s						
REFA				*i* AML	AML	23 32 34.0	
	comp=N,28nm,0.3s						
KELT	**Kelkit**	**0.76**	**357**	P	**Pg**	**23 32 23.2**	**+0.4**
KELT				S	**Sg**	**23 32 33.8**	**+1.1**
KELT				*i* AML	AML	23 32 34.0	
	comp=E,25nm,0.2s						
KELT				*i* AML	AML	23 32 34.0	
	comp=N,48nm,0.2s						
KOVA	**Elazig, Kovanc**	**0.79**	**149**	P	**Pb**	**23 32 24.1**	**-0.4**
KOVA				*i* AML	AML	23 32 35.0	
	comp=N,29nm,0.2s						
KOVA				*i* AML	AML	23 32 35.0	
	comp=E,45nm,0.2s						
KOVA				S	**Sb**	**23 32 35.2**	**-0.4**
ARPR	**Arapgir-MALATY**	**0.81**	**249**	PG	**Pb**	**23 32 24.2**	**-0.7**
ELZG	**Elazig**	**0.92**	**196**	P	**Pb**	**23 32 26.3**	**-0.6**
ELZG				S	**Sb**	**23 32 40.2**	**+0.7**
ELZG				*i* AML	AML	23 32 41.0	
	comp=N,47nm,0.2s						
ELZG				*i* AML	AML	23 32 42.0	
	comp=E,66nm,0.5s						
YEDI	**Yedisu-Bingol**	**0.96**	**87**	PG	**Pg**	**23 32 26.6**	**-0.1**
ALUC	**Giresun/Alucra**	**1.04**	**337**	P	**Pb**	**23 32 28.7**	**-0.2**
ALUC				S	**Sb**	**23 32 42.8**	**-0.1**
ALUC				*i* AML	AML	23 32 43.0	
	comp=E,51nm,0.7s						
ALUC				*i* AML	AML	23 32 43.0	
	comp=N,45nm,0.5s						

KOPT	**Kop Dagi**	**1.12**	**55**	P	**Pg**	**23 32 29.6**	**0.0**
KOPT				S	**Sn**	**23 32 46.9**	**0.0**
KOPT				*i* AML	AML	23 32 48.0	
	comp=N,9.6nm,0.3s						
BAYB	**BAYBURT**	**1.14**	**40**	P	**Pn**	**23 32 31.0**	**-0.2**
BAYB				S	**Sn**	**23 32 47.5**	**+0.1**
BAYB				*i* AML	AML	23 32 50.0	
	comp=N,14nm,0.6s						
BAYB				*i* AML	AML	23 32 50.0	
	comp=E,9.3nm,0.5s						
BNGB	**Bingl**	**1.14**	**110**	PN	**Pg**	**23 32 29.9**	**-0.2**
HEKM	**Malatya_Hekimh**	**1.16**	**244**	P	**Pn**	**23 32 31.9**	**+0.4**
CUZAR	**Zara_SIVAS**	**1.28**	**293**	P	**Pb**	**23 32 33.1**	**+0.1**
CUZAR				*i* AML	AML	23 32 51.0	
	comp=E,18nm,0.5s						
CUZAR				S	**Sn**	**23 32 51.4**	**+0.6**
CUZAR				*i* AML	AML	23 32 53.0	
	comp=N,11nm,0.5s						
KARO	**Karliova-Bingo**	**1.36**	**93**	PN	**Pb**	**23 32 34.2**	**-0.1**
CUKAN	**kangal_SIVAS**	**1.42**	**268**	P	**Pb**	**23 32 35.2**	**-0.2**
CUKAN				S	**Sn**	**23 32 55.8**	**+1.5**
CUKAN				*i* AML	AML	23 32 58.0	
	comp=E,12nm,0.8s						
CUKAN				*i* AML	AML	23 32 58.0	
	comp=N,13nm,0.3s						
ESPY	**Espiye-Giresun**	**1.59**	**344**	PN	**Pb**	**23 32 37.9**	**-0.3**

*NEIC **05** 23:54:33.8±1.6, 24°.3S±0°.2×179°.92E±0°.09, h535km±19km, mb4.0/12, Error ellipse: s-maj=26.3km s-min=7.2km az=158.0*
*IDC **05** 23:54:33.4±16.0, 24°.76S×179°.95E, h535km±182km, mb2.9/4, mbtmp3.8/4, Error ellipse: s-maj=232.6km s-min=64.5km az=163.0*

ISC 05 23:54:33.4±0.7, **24°.4S**±0°.1×**179°.8E**±0°.1, **h517**km, **n27, σ1§26/26, mb3.9/10, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.80**	**346**	P	**P**	**23 56 16.6**	**-1.7**
NIUE	**Niue**	**10.87**	**63**	P	**P**	**23 57 01.7**	**+1.6**
MARNC	**Mare, Loyalty**	**11.25**	**282**	P	**P**	**23 57 04.1**	**+0.1**
PINNC	**Pines Island,**	**11.50**	**276**	P	**P**	**23 57 08.4**	**+1.7**
DZM	**Mont Dzumac**	**12.52**	**278**	P	**P**	**23 57 18.1**	**+0.6**
QRZ	**Quartz Range**	**17.52**	**199**	P	**P**	**23 58 08.6**	**+0.3**
TUWZ	**Tuamarina**	**17.72**	**195**	P	**P**	**23 58 09.7**	**-0.4**
THZ	**Tophouse**	**18.29**	**197**	P	**P**	**23 58 15.1**	**-0.3**
LTZ	**Lake Taylor**	**19.41**	**197**	P	**P**	**23 58 26.4**	**+0.9**
ODZ	**Otahua Downs**	**21.95**	**198**	P	**P**	**23 58 49.2**	**+0.8**
DCZ	**Deep Cove**	**23.43**	**203**	P	**P**	**23 59 00.8**	**-0.9**
DCZ				IAmb	IAmb	23 59 15.7	
	comp=Z,8.7nm,1.1s						
CTA	**Charters Tower**	**31.33**	**271**	P	**P**	**00 00 11.6**	**+0.3**
	comp=Z,1.4nm,0.3s,baz=99,slow=10.0,SNR=2.1

baz=55
U32A Winter Ranch, 1.57 299 Pn Pn 00 36 02.1 +1.5
U32A Winter Ranch, 1.57 299 P Pn 00 36 02.1 +1.5
baz=120
U32A S Sg 00 36 24.5 +0.7
baz=120
X37A Clayton 1.89 122 Pn Pn 00 36 06.6 +1.6
X37A IAmb_Lg 00 36 33.2
comp=Z,335nm,0.9s
X37A Clayton 1.89 122 P Pn 00 36 06.0 +1.1
baz=303,SNR=79
X37A S Sb 00 36 31.5 +0.7
baz=303
Z35A Perchaven, San 2.28 179 Pn Pn 00 36 11.7 +1.3
Z35A IAmb_Lg 00 36 48.7
comp=Z,208nm,1.1s
Z35A Perchaven, San 2.28 179 P Pn 00 36 11.9 +1.5
baz=359,SNR=28
Z35A S Sb 00 36 41.5 -0.7
baz=359
HHAR Hobbs 2.81 75 Pn Pn 00 36 18.6 +1.0
HHAR Hobbs 2.81 75 P Pn 00 36 19.0 +1.4
baz=256
W39A Magazine 2.91 97 Pn 00 36 19.7 +0.8
W39A IAmb_Lg 00 37 07.1
comp=Z,110nm,0.7s
W39A Magazine 2.91 97 P Pn 00 36 19.8 +0.8
baz=279,SNR=42
R32A Long Quarter, 3.02 338 Pn Pn 00 36 23.1 +2.6
Z38A Mt. Pleasant 3.04 140 Pn Pn 00 36 21.4 +0.7
Z38A Mt. Pleasant 3.04 140 P Pn 00 36 21.4 +0.7
baz=321
MIAR Mount Ida 3.24 108 Pn Pn 00 36 25.0 +1.5
MIAR IAmb_Lg 00 37 20.4
comp=Z,95nm,0.9s
MIAR Mount Ida 3.24 108 P Pn 00 36 25.1 +1.5
baz=290,SNR=40
MIAR S Sn 00 37 04.3 +2.5
baz=290
KSU1 Kansas State U 3.52 9 Pn Pn 00 36 29.6 +2.3
ABTX Abilene, Hawle 3.56 214 Pn Pn 00 36 29.4 +1.4
ABTX IAmb_Lg 00 37 30.8
comp=Z,78nm,0.8s
WHTX Lake Whitney, 3.62 182 Pn Pn 00 36 29.6 +0.8
AMTX Amarillo 3.66 260 Pn Pn 00 36 31.6 +2.2
AMTX IAmb_Lg 00 37 34.7
comp=Z,68nm,0.7s
U40A Yellville 3.68 77 Pn 00 36 30.3 +0.7
U40A IAmb_Lg 00 37 31.5
comp=Z,93nm,0.8s
U40A Yellville 3.68 77 P Pn 00 36 30.6 +1.0
baz=259,SNR=59
U40A P Pn 00 36 30.6 +1.0
baz=259,SNR=59
CBKS Cedar Bluff 3.73 329 Pn Pn 00 36 32.1 +1.8
CBKS IAmb_Lg 00 37 36.6
comp=Z,145nm,0.8s
S39A Bolivar 3.81 56 Pn Pn 00 36 32.3 +0.9
S39A IAmb_Lg 00 37 33.1
comp=Z,68nm,0.9s
S39A Bolivar 3.81 56 P Pn 00 36 32.4 +1.1
baz=238,SNR=19
237A Washetta, Mont 3.82 161 Pn Pn 00 36 31.8 +0.3
X40A Basin Creek Fa 3.84 106 Pn Pn 00 36 32.8 +1.1
WLAR White Oak Lake 3.96 118 Pn Pn 00 36 34.9 +1.5
WLAR IAmb_Lg 00 37 36.4
comp=Z,70nm,0.8s
WHAR Wooly Hollow 4.11 93 Pn Pn 00 36 36.0 +0.6
WHAR IAmb_Lg 00 37 54.3
comp=Z,80nm,0.8s
UALR University of 4.15 100 Pn Pn 00 36 37.3 +1.3
UALR IAmb_Lg 00 37 51.9
comp=Z,132nm,0.8s
W41B Gary Mavity, V 4.15 95 Pn 00 36 36.8 +0.7
W41B IAmb_Lg 00 37 47.3
comp=Z,110nm,0.8s
W41B Gary Mavity, V 4.15 95 P Pn 00 36 37.0 +0.9
baz=277,SNR=24
FCAR Ozark Folk Cen 4.22 85 Pn Pn 00 36 37.5 +0.5
FCAR IAmb_Lg 00 37 47.8
comp=Z,75nm,0.8s
MGMO Mountain Grove 4.34 68 Pn Pn 00 36 39.6 +0.9
MGMO IAmb_Lg 00 37 51.5
comp=Z,78nm,0.7s
Z41A Richland Creek 4.40 121 Pn Pn 00 36 40.9 +1.4
Z41A IAmb_Lg 00 38 00.7
comp=Z,65nm,0.8s
MSTX Muleshoe 4.79 251 Pn Pn 00 36 47.5 +2.5
MSTX IAmb_Lg 00 38 09.8
comp=Z,67nm,0.8s
435B Jarrell 4.83 183 Pn Pn 00 36 48.5 +3.1
435B IAmb_Lg 00 38 11.8
comp=Z,92nm,0.7s
R40A Maddies Statio 4.83 55 Pn 00 36 46.1 +0.7
R40A Maddies Statio 4.83 55 P Pn 00 36 46.1 +0.7
baz=237,SNR=15
CCAR Cane Creek 4.86 109 IAmb_Lg 00 38 16.7
comp=Z,104nm,0.9s
P38A Dawn 4.99 36 Pn Pn 00 36 48.9 +1.2
P38A IAmb_Lg 00 38 23.4
comp=Z,60nm,0.7s
LCAR Lake Charles 5.01 83 Pn Pn 00 36 48.2 +0.3
LCAR IAmb_Lg 00 38 13.4
comp=Z,68nm,0.8s
N33A J Bar K, Exete 5.11 359 Pn Pn 00 36 49.9 +0.7
N33A IAmb_Lg 00 38 26.6
comp=Z,80nm,0.7s
HBAR Harrisburg 5.42 89 Pn Pn 00 36 53.1 -0.3
KSCO Kaye Shedlock' 5.43 310 Pn Pn 00 36 55.6 +1.9
KSCO Pg Pg 00 37 13.5 -3.6
KSCO IAmb_Lg 00 38 28.8
comp=Z,42nm,0.7s
CCM Cathedral Cave 5.43 62 Pn Pn 00 36 53.7 +0.1
JCT Junction City 5.54 203 Pg Pg 00 37 14.8 -4.4
PBMO Poplar Bluff 5.68 76 Pn Pn 00 36 58.4 +1.3
143A Socs Landing, 5.69 119 IAmb_Lg 00 38 38.5
comp=Z,54nm,0.7s
P40A Paris 5.71 45 Pn Pn 00 36 59.1 +1.6
P40A IAmb_Lg 00 38 47.6
comp=Z,74nm,0.8s
BGNE Belgrade 5.82 354 Pn Pn 00 36 59.5 +0.6
T25A Trinidad 5.93 287 Pn Pn 00 37 02.2 +1.5
FVM French Village 6.00 65 IAmb_Lg 00 38 46.7
comp=Z,51nm,0.8s
SLM Saint Louis 6.40 60 IAmb_Lg 00 38 57.1
comp=Z,63nm,0.9s
HALT Halls 6.48 85 IAmb_Lg 00 39 02.0
comp=Z,87nm,0.8s
OGNE Ogallala 6.49 326 Pn Pn 00 37 09.5 +1.3
OGNE IAmb_Lg 00 39 02.2
comp=Z,57nm,0.8s
OXF Oxford 6.57 97 Pn Pn 00 37 08.6 -0.7
OXF IAmb_Lg 00 39 11.0
comp=Z,60nm,0.9s
Y45A Yeager Farm, C 6.62 103 Pn Pn 00 37 10.5 +0.5
Y45A IAmb_Lg 00 39 19.0
comp=Z,43nm,0.7s
W45A Hickory Valley 6.65 92 Pn Pn 00 37 10.0 -0.4
W45A IAmb_Lg 00 39 12.7
comp=Z,88nm,0.8s
S44A Carbondale 6.79 70 Pn Pn 00 37 12.8 +0.5
S44A IAmb_Lg 00 39 21.4
comp=Z,67nm,0.8s
SIUC Southern Illin 6.83 70 Pn Pn 00 37 13.3 +0.5
SIUC IAmb_Lg 00 39 09.9
comp=Z,75nm,0.9s
SDCO Great Sand Dun 6.92 290 Pn 00 37 16.6 +2.2
SDCO IAmb_Lg 00 39 15.6
comp=Z,40nm,1.1s
SCIA State Center 7.04 26 IAmb_Lg 00 39 33.6
comp=Z,61nm,0.7s
Q24A Divide 7.09 300 Pn Pn 00 37 18.0 +1.3
Q24A IAmb_Lg 00 39 30.1
comp=Z,42nm,0.8s
T45A Paducah 7.13 76 Pn Pn 00 37 17.8 +0.9
N41A Harden Midland 7.18 43 Pn Pn 00 37 18.2 +0.5
P43A Skaggs, Pawnee 7.36 55 Pn Pn 00 37 20.8 +0.6
P43A IAmb_Lg 00 39 26.8
comp=Z,77nm,0.9s
Q44A Meyer Farm, Va 7.37 61 Pn Pn 00 37 21.8 +1.5
146A Union 7.46 111 IAmb_Lg 00 39 49.0
comp=Z,28nm,0.8s
833A Chaparral WMA, 7.49 194 Pn Pn 00 37 23.0 +1.1
833A IAmb_Lg 00 39 38.0
comp=Z,29nm,0.9s

ANMO Albuquerque 7.52 268 Pn Pn 00 37 23.3 +0.8
comp=Z,0.1nm,0.3s,baz=86,slow=15,SNR=1.8
ANMO Pg Pb 00 37 50.6 +7.2
comp=Z,0.7nm,0.3s,baz=87,slow=18,SNR=9.3
ANMO Lg Lg 00 39 26.4
comp=Z,2.9nm,0.3s,baz=43,slow=10,SNR=7.6
comp=Z,0.3nm,0.5s
PLAL Pickwick Lake 7.57 92 Pn Pn 00 37 23.1 0.0
WVT Waverly 7.71 83 Pn Pn 00 37 24.0 -0.9
WVT IAmb_Lg 00 39 35.3
comp=Z,27nm,0.8s
MNTX Cornudas Mount 7.79 242 Pn Pn 00 37 26.8 +0.8
ISCO Idaho Springs 7.79 305 Pn Pn 00 37 27.5 +1.1
L40A Anamosa 7.99 35 Pn Pn 00 37 29.0 +0.2
L40A IAmb_Lg 00 39 48.4
comp=Z,47nm,0.7s
KVTX Kingsville 8.06 184 Pn Pn 00 37 29.2 -0.6
LENM Lemitar 8.08 262 Pn Pn 00 37 29.9 -0.2
ECSD EROS Data Cent 8.12 4 Pn Pn 00 37 30.6 0.0
ECSD IAmb_Lg 00 40 00.3
comp=Z,31nm,1.1s
TX31 Lajitas Ar. Si 8.26 222 Pn Pn 00 37 32.6 +0.1
TX32 Lajitas Array 8.26 222 Pn Pn 00 37 32.9 +0.4
TXAR Lajitas Array 8.26 222 Pn Pn 00 37 32.1 -0.4
comp=Z,0.2nm,0.3s,baz=44,slow=12,SNR=12
TXAR Pg Pb 00 38 00.6 +4.7
comp=Z,1.9nm,0.3s,baz=45,slow=14,SNR=12
TXAR Lg Lg 00 39 48.0
comp=Z,1.5nm,0.3s,baz=48,slow=31,SNR=3.6
comp=Z,0.4nm,0.5s
O44A Mansfield 8.32 54 IAmb_Lg 00 40 02.3
comp=Z,50nm,0.8s
PHWY Pilot Hill 8.55 314 Pn Pn 00 37 37.4 +0.7
N23A Red Feather La 8.60 310 Pn Pn 00 37 38.9 +1.5
N23A IAmb_Lg 00 40 17.7
comp=Z,51nm,1.0s
L42A Oliver, Polo 8.72 41 Pn Pn 00 37 39.5 +0.7
SUSD Miller 8.90 352 IAmb_Lg 00 40 37.0
comp=Z,45nm,0.8s
JFWS Jewell Farm 9.11 35 IAmb_Lg 00 40 38.1
comp=Z,47nm,0.9s
M44A Midewin, Midew 9.26 49 IAmb_Lg 00 40 30.4
comp=Z,56nm,1.1s
BLO Bloomington 9.28 64 Pn Pn 00 37 47.9 +1.5
I40A Norwalk 9.73 30 Pn Pn 00 37 53.5 +0.9
I40A IAmb_Lg 00 40 50.1
comp=Z,25nm,0.9s
L44A Lake County Fo 9.82 45 IAmb_Lg 00 40 45.9
comp=Z,44nm,0.9s
RWWY Rawlins 9.83 311 IAmb_Lg 00 40 49.2
comp=Z,21nm,1.1s
K43A Burington 9.92 42 IAmb_Lg 00 41 04.9
comp=Z,44nm,0.9s
RSSD Black Hills 9.94 331 Pn Pn 00 37 55.9 +0.3
K22A Casper 10.02 317 Pn Pn 00 37 57.9 +1.1
I42A Draeger Farm, 10.48 35 Pn Pn 00 38 01.9 -1.0
TKL Tuckaleechee C 11.01 86 Pn Pn 00 38 08.2 -2.0
comp=Z,0.1nm,0.3s,baz=287,slow=17,SNR=1.1
TKL Lg Lg 00 41 13.5
comp=Z,0.5nm,0.3s,baz=360,slow=20,SNR=3.9
comp=Z,0.5nm,0.3s
PDAR Pinedale Array 11.88 311 Pn Pn 00 38 19.6 -2.7
comp=Z,0.1nm,0.3s,baz=112,slow=9.8,SNR=1.9
PDAR Pg 00 39 05.1
comp=Z,0.3nm,0.3s,baz=124,slow=14,SNR=2.4
PDAR Lg Lg 00 41 40.3
comp=Z,0.4nm,0.3s,baz=111,slow=27,SNR=3.6
comp=Z,0.3nm,0.4s
ULM Lac du Bonnet 14.66 4 Lg Lg 00 43 02.4
comp=Z,0.3nm,0.3s,baz=357,slow=7.0,SNR=2.3
NVAR Mina Array Bea 17.00 286 Pn Pn 00 39 30.4 -0.3
baz=101,slow=13,SNR=1.5
comp=Z,0.1nm,0.5s

MAN 06 00:35:39.1, 4.87N×126.18E, h13km, mb4.5, ML3.3, MS3.1, Talaud Islands

*ARE **06** 00:51:14±6.6, 11.00S±0.05×74.08W±0.08, h144km±6km, Error ellipse: s-maj=0.0km s-min=0.0km az=194.0*
*IDC **06** 00:51:15.6±0.7, 11.11S×74.01W, h108km±7km, mb3.6/10, mbtmp4.1/16, MS3.5/1, Error ellipse: s-maj=11.4km s-min=10.3km az=135.0*
*NEIC **06** 00:51:15.5±2.0, 11.04S±0.06×74.07W±0.07, h96km±2km, mb4.4/41, ML4.7(ARE), Error ellipse: s-maj=10.0km s-min=8.3km az=109.0*
*VAO **06** 00:51:16.2±0.4, 11.05S×73.95W, h97km±3km, mb4.3*
ISC 06 00:51:15.3±0.5, 11.07S±0.04×74.00W±0.05, h100km±5km, h101km:pP-P, n122, σ1.933/132, mb4.2/23, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.93**	**252**	P	**Pn**	**00 52 00.5**	**+0.4**
	666nm,0.3s,baz=65,slow=10.0,SNR=586						
NNA				S	**Sn**	**00 52 34.6**	**-0.1**
	446nm,0.3s,baz=56,slow=14,SNR=8.6						
NNA	**Nana**	**2.93**	**252**	Pn	**Pn**	**00 51 59.7**	**-0.5**
NNA				Sn	**Sn**	**00 52 34.9**	**+0.2**
CZSB	**Cruzeiro do Su**	**3.56**	**21**	*eP*	**Pn**	**00 52 09.9**	**+1.3**
CZSB				*eS*	**Sn**	**00 52 50.7**	**+0.9**
ATAH	**Atahualpa**	**5.84**	**312**	P	**Pn**	**00 52 40.7**	**+0.9**
	28nm,0.3s,baz=129,slow=11,SNR=59						
ATAH				S	**Sn**	**00 53 39.3**	**-6.3**
	88nm,0.8s,baz=293,slow=17,SNR=2.0						
LPAZ	**La Paz**	**7.71**	**133**	P	**Pn**	**00 53 06.3**	**+0.8**
	5.7nm,0.7s,baz=320,slow=13,SNR=22						
LPAZ	**La Paz**	**7.71**	**133**	Pn	**Pn**	**00 53 06.5**	**+1.1**
LPAZ	**La Paz**	**7.71**	**133**	*eP*	**Pn**	**00 53 05.1**	**-0.4**
ETMB	**Extrema**	**7.76**	**81**	*eP*	**Pn**	**00 53 05.5**	**-0.1**
ETMB				*eS*	**Sn**	**00 54 32.2**	**+0.3**
PB18	**Visviri**	**7.82**	**146**		**Pn**	**00 53 07.5**	**+0.6**
TBTG	**Tabatinga, AM**	**7.95**	**31**	*eP*	**Pn**	**00 53 08.2**	**0.0**
TBTG				*eS*	**Sn**	**00 54 36.5**	**-0.1**
PB12	**IPOC Station P**	**8.30**	**155**		**Pn**	**00 53 13.5**	**+0.5**
PB16	**IPOC Station P**	**8.43**	**149**	Pn	**Pn**	**00 53 16.6**	**+1.5**
BOSC	**San Juan Bosco**	**9.04**	**330**	Pn	**Pn**	**00 53 18.9**	**-4.3**
ARNL	**Arenillas**	**9.59**	**321**		**Pn**	**00 53 28.9**	**-1.6**
COHC	**Cochancay**	**10.01**	**328**		**Pn**	**00 53 34.1**	**-2.1**
PORT	**Chimborazo Vol**	**10.65**	**333**		**Pn**	**00 53 45.7**	**+0.2**
SAML	**Samuel**	**10.86**	**80**	Pn	**Pn**	**00 53 46.3**	**-1.5**
SLOR	**San Lorenzo -**	**11.20**	**336**		**Pn**	**00 53 51.6**	**-1.3**
OTAV	**Otavalo**	**12.07**	**338**		**Pn**	**00 54 03.8**	**-0.7**
OTAV	**Otavalo**	**12.07**	**338**	*eP*	**Pn**	**00 54 06.6**	**+2.1**
OTAV	**Otavalo**	**12.07**	**338**	*eP*	**Pn**	**00 54 05.7**	**+1.3**
LVC	**Limon Verde**	**12.46**	**158**	P	**Pn**	**00 54 09.2**	**-0.3**
	3.0nm,0.8s,baz=301,slow=13,SNR=2.3						
LVC	**Limon Verde**	**12.46**	**158**	Pn	**Pn**	**00 54 09.1**	**-0.4**
GCUF	**Volcan Galeras**	**12.66**	**345**	*eP*	**Pn**	**00 54 11.9**	**-0.3**
FLOC	**Florencia**	**12.68**	**352**	*eP*	**Pn**	**00 54 10.8**	**-1.3**
MACC	**Macarena, Meta**	**13.13**	**1**	*eP*	**Pn**	**00 54 15.2**	**-2.8**
SOTA	**Rioblanco**	**13.37**	**349**	*eP*	**Pn**	**00 54 22.0**	**+0.4**
SIV	**San Ignacio**	**13.49**	**113**	P	**Pn**	**00 54 22.6**	**-0.1**
	1.9nm,0.3s,baz=286,slow=10,SNR=17						
SIV				S	**Sn**	**00 56 45.0**	**-6.3**
	9.9nm,0.7s,baz=185,slow=11,SNR=5.4						
PCON	**Cinco Dias**	**13.52**	**350**	*eP*	**Pn**	**00 54 24.9**	**+1.2**
POPC	**Popayan, Colom**	**13.78**	**349**	*eP*	**Pn**	**00 54 26.8**	**+0.1**
GO02	**Mina Guanaco**	**14.63**	**164**	Pn	**Pn**	**00 54 38.3**	**+0.7**
PRAC	**Prado**	**14.71**	**357**	*eP*	**Pn**	**00 54 38.4**	**-0.1**
ORTC	**Ortega, Tolima**	**14.93**	**355**	*eP*	**Pn**	**00 54 41.3**	**0.0**
VILC	**Villavicencio,**	**15.09**	**1**	*eP*	**Pn**	**00 54 43.2**	**-0.1**
PTLB	**Pontes e Lacer**	**15.11**	**108**	*eP*	**Pn**	**00 54 43.4**	**-0.1**
AC01	**Pan de Azucar**	**15.34**	**168**	Pn	**Pn**	**00 54 46.0**	**-0.4**
AC01				IAmb	IAmb	00 54 51.7	
	comp=Z,49nm,1.1s						
MACA	**Manacapuru-AM**	**15.37**	**60**	*eP*	**Pn**	**00 54 45.5**	**-1.3**
ANIL	**Santa Ana**	**15.52**	**355**	*eP*	**P**	**00 54 54.8**	**+3.5**
CHIC	**Chingaza**	**15.60**	**1**	*eP*	**P**	**00 54 52.9**	**+0.7**
ROSC	**El Rosal**	**15.81**	**359**	P	**P**	**00 54 54.7**	**+0.2**
	comp=Z,5.5nm,0.4s,baz=256,slow=12,SNR=5.3						
ROSC				S	**Sn**	**00 57 50.2**	**+2.3**
	comp=Z,2.4nm,0.3s,baz=54,slow=22,SNR=1.1						
ROSC				LR	LR	01 02 19.9	
	comp=Z,157nm,19.0s,baz=175,slow=42						
ROSC	**El Rosal**	**15.81**	**359**	P	**Pn**	**00 54 52.3**	**-0.4**
ROSC				IAmb	IAmb	00 55 15.2	
	comp=Z,15nm,0.6s						
AC02	**Maricunga**	**16.34**	**164**	P	**Pn**	**00 54 59.5**	**+0.2**
AC02				IAmb	IAmb	00 55 02.8	
	comp=Z,28nm,1.1s						
AC06	**Mina Casimiro**	**16.56**	**169**		**Pn**	**00 55 01.5**	**-0.1**
CBOC	**Ciudad Bolivar**	**16.94**	**353**	*eP*	**P**	**00 55 09.2**	**+2.4**

PDRB Porto dos Gac 16.95 94 *eP* **P 00 55 06.8 +0.1**
POCN Pocone 17.65 110 *eP* **Pn 00 55 17.0 +2.1**
CLDB Colider 17.88 91 *eP* **Pn 00 55 17.7 0.0**
NBRS Nobres 18.07 102 *eP* **Pn 00 55 20.8 +0.7**
SALV Santo Antonio 18.44 107 *eP* **P 00 55 23.5 +0.3**
NPGB Novo Progresso 18.84 79 *eP* **P 00 55 27.5 0.0**
BOAV Boa Vista 18.94 46 *eP* **P 00 55 28.8 +0.2**
CO01 Juntas del Tor 19.16 170 P **Pn 00 55 32.4 -0.7**
ITTB Itaituba 19.28 71 *eP* **P 00 55 32.2 -0.1**
ITTB *epP* **pP 00 55 49.7 -1.7**
SDV Santo Domingo 20.11 10 P **P 00 55 41.5 0.0**
comp=Z,3.6nm,0.2s,baz=195,slow=16,SNR=4.3
SDV S **S 00 59 21.9 -0.2**
comp=Z,2.9nm,0.2s,baz=358,slow=1.9,SNR=1.7
comp=Z,3.6nm,0.2s
SDV Santo Domingo 20.11 10 P **P 00 55 41.2 -0.3**
SDV Santo Domingo 20.11 10 *eP* **P 00 55 42.0 +0.5**
SDV *epP* **pP 00 56 00.3 -0.3**
CO02 Combarbal 20.23 173 P Pn 00 55 44.0 -1.3
BAUV El Baul 20.75 17 P **P 00 55 47.8 -0.4**
BAUV IAmb IAmb 00 56 14.1
comp=Z,14nm,0.6s
SJCC San Jacinto, C 20.86 357 P **P 00 55 49.5 +0.1**
MALB Monte Alegre 21.63 66 *eP* **P 00 55 59.2 +1.6**
CPUP Villa Florida 21.86 136 P **P 00 55 59.6 -0.4**
comp=Z,7.4nm,1.0s,baz=314,slow=11,SNR=6.2
comp=Z,7.4nm,1.0s
CPUP Villa Florida 21.86 136 P **P 00 56 00.4 +0.4**
CPUP IAmb IAmb 00 56 01.0
comp=Z,16nm,1.2s
CPUP Villa Florida 21.86 136 *eP* **P 00 56 00.5 +0.4**
CPUP *epP* **pP 00 56 19.4 -0.2**
ROC1 El Roble 21.98 173 P **P 00 56 02.6 +1.2**
ROC1 IAmb IAmb 00 56 04.2
comp=Z,16nm,1.0s
MT02 Curacav 22.24 174 P **P 00 56 04.9 +1.0**
MT02 IAmb IAmb 00 56 35.7
comp=Z,32nm,1.5s
SNDB Serra Nova Dou 22.27 95 *eP* **P 00 56 06.3 +1.9**
MT09 Talagante 22.77 173 P **P 00 56 09.6 +0.1**
MT09 IAmb IAmb 00 56 13.9
comp=Z,15nm,1.1s
MT01 Popeta 22.83 174 P **P 00 56 10.6 +0.7**
LMEL Las Melosas 22.94 172 P **P 00 56 12.6 +1.5**
LMEL IAmb IAmb 00 56 13.3
comp=Z,10nm,0.8s
BO04 La Punta 23.02 173 P **P 00 56 12.7 +0.9**
BO04 IAmb IAmb 00 56 13.4
comp=Z,10nm,0.8s
JACO JACO, Garabito 23.16 332 P **P 00 56 12.5 -0.8**
BO01 Tunca 23.37 174 P **P 00 56 15.9 +0.9**
BO01 IAmb IAmb 00 56 18.1
comp=Z,22nm,1.4s
MCPB Macapa, AP 24.26 65 *eP* **P 00 56 23.3 0.0**
ITRB Iturama 24.34 114 *eP* **P 00 56 25.0 +1.0**
ITQB Itaqui 24.59 141 P **P 00 56 27.2 +1.1**
ITQB Itaqui 24.59 141 *eP* **P 00 56 27.4 +1.3**
PEXB Peixe 25.20 95 *eP* **P 00 56 32.5 +0.6**
IPMB Ipameri, GO 25.88 108 *eP* **P 00 56 40.4 +2.3**
SMTB Santa Maria do 26.11 88 *eP* **P 00 56 41.0 +0.9**
ITAB Concordia 26.11 131 P **P 00 56 41.2 +1.3**
ITAB Concordia 26.11 131 *eP* **P 00 56 40.3 +0.3**
CPSB Cacapava Do Su 27.11 138 *eP* **P 00 56 50.0 +1.1**
PLTB Pedras Altas 27.91 141 P **P 00 56 55.0 -1.1**
PLTB Pedras Altas 27.91 141 *eP* **P 00 56 56.6 +0.6**
SDBA SAO DESIDERIO 28.52 96 *eP* **P 00 57 02.5 +0.8**
BANI BANI 29.50 7 P **P 00 57 10.8 +0.5**
MAGL Barre de l'ile 29.65 25 P **P 00 57 11.1 -0.5**
PLCA Paso Flores 29.70 175 P **P 00 57 10.4 -1.5**
comp=Z,1.7nm,0.8s,baz=356,slow=6.0,SNR=4.2
comp=Z,1.7nm,0.8s
PLCA Paso Flores 29.70 175 P **P 00 57 12.0 +0.1**
PLCA IAmb IAmb 00 57 39.7
comp=Z,8.7nm,1.4s
PLCA Paso Flores 29.70 175 *eP* **P 00 57 12.4 +0.5**
CELP Cerrillos 29.87 14 P **P 00 57 12.5 -1.0**
CELP IAmb IAmb 00 57 12.8
comp=Z,9.0nm,0.8s
PDPR Patillas Dam, 29.96 15 P **P 00 57 13.5 -0.7**
DR12 Loma Pena Alta 30.02 9 P **P 00 57 14.7 -0.1**
CUPR Culebra, Puert 30.43 17 P **P 00 57 16.5 -1.9**
CUPR IAmb IAmb 00 57 51.2
comp=Z,10nm,0.8s
ROSB Rosrio 30.72 77 *eP* **P 00 57 20.8 -0.3**
NBPN Ponto Novo - B 33.18 93 *eP* **P 00 57 43.0 +0.2**
NBPB Pedra_Branca-C 34.48 84 *eP* **P 00 57 54.3 +0.3**
NBLA Lagarto - SE 35.53 93 *eP* **P 00 58 03.6 +0.6**
NBAN Anadia - AL 37.12 91 *eP* **P 00 58 16.6 +0.1**
MIAR Mount Ida 49.02 339 P **P 00 59 52.8 +0.7**
MIAR IAmb IAmb 01 00 07.0
comp=Z,5.2nm,0.8s
TXAR Lajitas Array 49.32 325 P **P 00 59 54.0 -0.5**
comp=Z,0.2nm,0.5s,baz=151,slow=8.5,SNR=5.9
TXAR pP **pP 01 00 20.2 +1.3**
comp=Z,1.2nm,0.7s,baz=143,slow=7.7,SNR=9.9
comp=Z,0.2nm,0.5s
TX31 Lajitas Ar. Si 49.32 325 P **P 00 59 54.2 -0.4**
TX31 IAmb IAmb 01 00 21.3
comp=Z,5.6nm,0.8s
Q44A Meyer Farm, Va 51.65 345 P **P 01 00 12.3 +0.5**
ORCD Orcadas 54.06 163 P **P 01 00 27.7 -1.5**
ORCD IAmb IAmb 01 00 58.4
comp=Z,8.8nm,1.4s
PDAR Pinedale Array 62.67 331 pP pP 01 01 55.5 +0.4
comp=Z,0.8nm,0.9s,baz=142,slow=7.4,SNR=2.9
NVAR Mina Array Bea 64.30 322 P **P 01 01 41.6 +1.1**
comp=Z,0.1nm,0.3s,baz=105,slow=12,SNR=2.0
NVAR pP **pP 01 02 07.7 +1.8**
comp=Z,1.5nm,1.0s,baz=145,slow=7.6,SNR=4.1
comp=Z,0.1nm,0.3s
SNAA Sanae 73.67 162 P **P 01 02 37.4 -0.3**
comp=Z,1.7nm,0.8s,baz=306,slow=5.4,SNR=5.0
comp=Z,1.7nm,0.8s
SNAA Sanae 73.67 162 P **P 01 02 37.9 +0.1**
SNAA IAmb IAmb 01 02 39.0
comp=Z,5.4nm,1.2s
TOA0 Torodi Ar. Sit 78.87 74 P **P 01 03 07.5 -0.6**
TOA0 IAmb IAmb 01 03 28.4
comp=Z,7.1nm,1.4s
TORD Torodi Ar. Bea 78.87 74 P **P 01 03 06.0 -2.1**
comp=Z,0.6nm,0.5s,baz=257,slow=4.3,SNR=9.3
TORD pP **pP 01 03 34.8 +0.7**
comp=Z,2.3nm,0.9s,baz=256,slow=4.6,SNR=5.8
comp=Z,0.6nm,0.5s
QSPA South Pole Qui 79.06 180 P **P 01 03 09.4 +1.0**
PESTR Estremoz 79.20 47 P **P 01 03 10.0 +0.5**
YKA Yellowknife Ar 79.80 342 pP pP 01 03 39.0 +0.5
comp=Z,2.5nm,0.9s,baz=138,slow=6.6,SNR=7.0
ESDC Sonseca Array 82.11 47 P **P 01 03 24.6 -0.4**
comp=Z,1.3nm,1.0s,baz=267,slow=6.3,SNR=7.9
comp=Z,1.3nm,1.0s
ESDC Sonseca Array 82.11 47 P **P 01 03 25.3 +0.3**
VNDA Vanda 86.19 190 P **P 01 03 45.5 +0.5**
comp=Z,1.3nm,0.8s,baz=127,slow=2.9,SNR=8.4
comp=Z,1.3nm,0.8s
VNDA Vanda 86.19 190 P **P 01 03 45.9 +0.9**
GERES GERESS Array B 96.73 42 P **P 01 04 34.3 -0.4**
comp=Z,0.4nm,0.7s,baz=252,slow=9.2,SNR=3.3
comp=Z,0.4nm,0.7s
ZALV Zalesovo Beam 134.02 17 pPKP pPKPdf 01 10 50.3 +1.5
comp=Z,0.4nm,0.3s,baz=316,slow=4.0,SNR=2.4
WMQ Urumqi 143.73 23 *eP* **PKPdf 01 10 39.2 +0.2**
KSRS Korea Array 147.16 327 pPKPbc pPKPbc 01 11 15.9 +0.9
comp=Z,1.1nm,0.4s,baz=44,slow=3.2,SNR=2.8
PZH PanZhiHua 164.13 14 PKP **PKPdf 01 11 07.3 -0.5**

*IDC **06** 00:56:24.8±1.6, 12.70S×14.71W, h0km, mb3.8/8, mbtmp3.8/8, MS3.4/12, Error ellipse: s-maj=117.6km s-min=33.8km az=104.0*
*NEIC **06** 00:56:26.8±1.2, 12.63S±0.10×14.8W±0.1, h10km±1km, mb4.8/63, Error ellipse: s-maj=17.5km s-min=15.7km az=121.0*
ISC 06 00:56:26.8±0.5, 12.66S±0.09×14.76W±0.08, h15km, n103, σ0.996/87, mb4.6/54, MS3.3/12, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10S2	**ASCENSION HYDR**	**3.68**	**2**	T	T	01 01 30.5	
	baz=38,slow=74,SNR=75						
H10S3	**ASCENSION HYDR**	**3.69**	**1**	T	T	01 01 18.9	
	baz=182,slow=74,SNR=244						
ASCN	**Ascension**	**4.72**	**5**	Pn	**Pn**	**00 57 36.8**	**-0.6**

H10N1 ASCENSION HYDR 4.80 3 T T 01 02 45.1
baz=180,slow=73,SNR=26
H10N3 ASCENSION HYDR 4.80 3 T T 01 02 38.7
baz=180,slow=73,SNR=136
H10N2 ASCENSION HYDR 4.81 3 T T 01 02 44.5
baz=180,slow=73,SNR=29
DBIC Dimbokro 21.58 28 LR LR 01 07 34.5
comp=Z,122nm,19.1s,baz=196,slow=31
RCBR Riachuelo 21.93 286 P **P** **01 01 20.3 +0.2**
RCBR IAmb IAmb 01 01 52.5
comp=Z,33nm,1.2s
TOA0 Torodi Ar. Sit 30.39 33 P **P** **01 02 38.5 -0.1**
TOA0 IAmb IAmb 01 02 50.7
comp=Z,15nm,1.8s
TORD Torodi Ar. Bea 30.39 33 P **P** **01 02 38.5 0.0**
comp=Z,0.8nm,0.8s,baz=208,slow=9.9,SNR=3.9
comp=Z,0.8nm,0.8s
TSUM Tsumeb 31.73 106 LR LR 01 12 14.2
comp=Z,65nm,20.5s,baz=31,slow=30
TSUM Tsumeb 31.73 106 P **P** **01 02 50.5 -0.1**
TSUM IAmb IAmb 01 03 01.0
comp=Z,14nm,1.6s
BDFB Brasilia 32.36 261 P **P** **01 02 56.8 +0.7**
BDFB IAmb IAmb 01 03 09.9
comp=Z,16nm,1.4s
ITAB Concordia 37.84 242 P **P** **01 03 43.6 +0.5**
ITAB IAmb IAmb 01 04 08.0
comp=Z,40nm,1.5s
LBTB Lobatse 39.97 114 P **P** **01 04 00.8 -0.3**
BOSA Boshof 40.45 119 LR LR 01 18 58.4
comp=Z,44nm,18.7s,baz=0.5,slow=34
BOSA Boshof 40.45 119 P **P** **01 04 03.9 -1.2**
BOSA IAmb IAmb 01 04 17.6
comp=Z,25nm,1.8s
MDP Montagnes des 41.58 293 LR LR 01 18 04.7
comp=Z,26nm,20.1s,baz=146,slow=31
LSZ Lusaka 41.71 99 LR LR 01 17 47.3
comp=Z,76nm,21.9s,baz=290,slow=31
CPUP Villa Florida 42.17 245 LR LR 01 19 07.7
comp=Z,52nm,19.9s,baz=58,slow=32
CPUP Villa Florida 42.17 245 P **P** **01 04 19.2 +0.1**
SIV San Ignacio 44.93 260 LR LR 01 20 40.6
comp=Z,30nm,21.4s,baz=112,slow=32
MBAR Mbarara 46.66 79 LR LR 01 22 36.5
comp=Z,66nm,18.3s,baz=245,slow=34
CMLA Cha da Macela 51.17 349 P **P** **01 05 28.2 -1.1**
TOSP Speyside 51.30 296 P **P** **01 05 30.6 -0.1**
LPAZ La Paz 51.69 259 LR LR 01 28 55.5
comp=Z,29nm,18.1s,baz=44,slow=38
PESTR Estremoz 51.70 7 P **P** **01 05 32.8 -0.5**
ORCD Orcadas 52.77 198 P **P** **01 05 40.6 -0.4**
ESDC Sonseca Array 53.03 10 P **P** **01 05 42.7 -0.5**
comp=Z,0.5nm,0.9s,baz=206,slow=8.6,SNR=3.9
comp=Z,0.5nm,0.9s
PB04 IPOC Station P 53.45 252 P **P** **01 05 46.2 -0.7**
CO01 Juntas del Tor 53.85 242 P **P** **01 05 49.6 -0.2**
CO01 IAmb IAmb 01 06 14.9
comp=Z,29nm,1.7s
AC01 Pan de Azucar 53.98 247 P **P** **01 05 50.8 +0.2**
AC01 IAmb IAmb 01 05 55.4
comp=Z,25nm,1.1s
TDBA Terre de Bas, 54.34 300 P **P** **01 05 51.6 -1.6**
CO03 El Pedregal 54.45 241 P **P** **01 05 54.3 +0.2**
CO03 IAmb IAmb 01 06 27.4
comp=Z,12nm,1.1s
VA01 Torpederas 55.52 239 P **P** **01 06 01.4 -0.2**
VA05 Santo Domingo 55.58 238 P **P** **01 06 02.7 +0.7**
CLTB Caltabellotta 56.46 27 P **P** **01 06 08.3 +0.1**
CLTB IAmb IAmb 01 06 12.3
comp=Z,7.2nm,1.1s
VSL Villasalto 56.55 22 P **P** **01 06 08.7 -0.1**
VSL IAmb IAmb 01 06 20.6
comp=Z,6.5nm,1.3s
SJG San Juan 59.21 300 P **P** **01 06 26.0 -1.7**
SJG IAmb IAmb 01 06 46.1
comp=Z,25nm,1.2s
NNA Nana 60.52 263 LR LR 01 31 17.9
comp=Z,22nm,21.4s,baz=135,slow=35
AQU L'Aquila 60.55 24 P **P** **01 06 36.6 0.0**
AQU IAmb IAmb 01 06 45.5
comp=Z,4.6nm,0.9s
OSSC Osservatorio P 60.75 21 P **P** **01 06 38.7 +0.8**
KEK Kerkira 61.22 30 P **P** **01 06 40.4 -0.8**
KEK IAmb IAmb 01 06 42.7
comp=Z,10nm,1.2s
SANT Santorini 61.78 36 P **P** **01 06 46.0 +0.9**
SANT IAmb IAmb 01 06 52.0
comp=Z,33nm,1.3s
KARP Karpathos 62.22 38 P **P** **01 06 46.8 -1.2**
FNA Florina 62.82 30 P **P** **01 06 51.6 -0.4**
PDG Podgorica 63.09 28 P **P** **01 06 53.7 +0.1**
PDG IAmb IAmb 01 06 56.3
comp=Z,4.4nm,1.0s
CTI Castel Tesino 63.10 20 P **P** **01 06 54.4 +0.7**
DAVA Damuels 63.62 18 *eP* **P** **01 06 58.0 +0.8**
comp=Z,5.8nm,1.1s
FETA Feichten 63.65 19 *eP* **P** **01 06 58.3 +0.8**
comp=Z,3.2nm,0.9s
SQTA Sankt Quirin 63.98 19 *eP* **P** **01 07 00.7 +1.1**
comp=Z,4.0nm,1.1s
ABTA Abfaltersbach 64.00 21 *eP* **P** **01 07 02.3 +2.6**
comp=Z,1.2nm,0.7s
MOTA Moosalm 64.05 19 *eP* **P** **01 07 01.2 +1.1**
comp=Z,4.0nm,1.0s
RETA Reute 64.07 19 *eP* **P** **01 07 00.4 +0.2**
comp=Z,3.8nm,1.4s
BFO Black Forest 64.09 17 P **P** **01 07 00.1 -0.2**
WTTA Wattenberg 64.16 20 *eP* **P** **01 07 02.6 +1.8**
comp=Z,2.7nm,0.8s
WATA Walderalm 64.20 20 *eP* **P** **01 07 02.4 +1.4**
comp=Z,2.8nm,1.4s
KBA Koelnbreinsper 64.57 21 *eP* **P** **01 07 05.2 +1.6**
comp=Z,3.5nm,1.7s
COHC Cochancay 64.59 273 P **P** **01 07 03.9 -0.3**
WLF Walferdange 64.73 15 P **P** **01 07 04.7 +0.3**
WLF IAmb IAmb 01 07 06.4
comp=Z,7.9nm,1.2s
DIVS Divibare 64.74 27 P **P** **01 07 05.7 +1.0**
DIVS IAmb IAmb 01 07 07.3
comp=Z,5.6nm,1.4s
SOKA Soboth 64.84 22 *eP* **P** **01 07 06.7 +1.6**
comp=Z,2.9nm,1.0s
VTS Vitosha 65.11 30 P **P** **01 07 07.4 +0.2**
RDO Rodhopi 65.20 33 P **P** **01 07 07.9 +0.4**
RDO IAmb IAmb 01 07 15.6
comp=Z,4.8nm,1.1s
ARSA Arzberg 65.50 22 *eP* **P** **01 07 09.9 +0.5**
comp=Z,2.3nm,0.8s
MOA Molln 65.56 21 *eP* **P** **01 07 11.2 +1.5**
comp=Z,3.5nm,1.5s
RONA Rosalia, Austr 66.16 22 *eP* **P** **01 07 15.8 +2.2**
comp=Z,3.2nm,1.0s
CONA Conrad Observa 66.19 22 *eP* **P** **01 07 15.4 +1.5**
comp=Z,3.5nm,1.5s
GEC2 GERESS Array S 66.22 20 P **P** **01 07 13.6 -0.5**
GERES GERESS Array B 66.22 20 P **P** **01 07 15.1 +1.0**
comp=Z,0.1nm,0.4s,baz=190,slow=5.0,SNR=3.7
comp=Z,0.1nm,0.4s
GERES GERESS Array B 66.22 20 P **P** **01 07 14.0 -0.1**
PSZ Piszkesteto 67.74 24 P **P** **01 07 24.2 +0.4**
PSZ IAmb IAmb 01 07 31.7
comp=Z,5.6nm,1.2s
MORC Moravsky Berou 68.35 22 P **P** **01 07 28.7 +1.2**
MORC IAmb IAmb 01 07 40.7
comp=Z,5.7nm,1.4s
MLR Muntele Rosu 68.55 30 P **P** **01 07 29.2 +0.2**
MLR IAmb IAmb 01 07 30.5
comp=Z,4.1nm,1.1s
BR131 Keskin Array S 68.83 38 P **P** **01 07 29.8 -1.1**
BR131 IAmb IAmb 01 07 39.5
comp=Z,4.5nm,1.1s
BRTR Keskin Array B 68.83 38 P **P** **01 07 32.0 +1.1**
comp=Z,0.5nm,0.8s,baz=211,slow=8.2,SNR=3.1
BRTR LR LR 01 38 05.5
comp=Z,20nm,18.1s,baz=181,slow=36
comp=Z,0.5nm,0.8s
BRTR Keskin Array B 68.83 38 P **P** **01 07 30.9 0.0**
RAYN Ar Rayn 69.03 59 P **P** **01 07 32.0 -0.3**
BNN Bunyan 69.66 40 P **P** **01 07 37.0 +0.9**
BNN IAmb IAmb 01 07 44.2
comp=Z,9.2nm,1.0s
MSEY Mahe Island 69.72 90 P **P** **01 07 37.1 +0.3**
BZK Bozkurt 70.44 37 P **P** **01 07 40.5 -0.1**
PEZE Perez Zeledon, 71.87 284 P **P** **01 07 50.3 +0.3**
PEZE IAmb IAmb 01 08 08.9
comp=Z,44nm,1.5s

AKASG Malin Array Be 73.83 27 P **P** **01 08 00.6 -0.1**
comp=Z,1.8nm,0.8s,baz=223,slow=5.6,SNR=7.0
comp=Z,1.8nm,0.8s
SUW Suwalki 73.83 22 P **P** **01 07 59.9 -0.7**
SUW IAmb IAmb 01 08 02.2
comp=Z,16nm,1.2s
F64A Sherman 75.58 325 P **P** **01 08 11.3 +0.4**
F64A IAmb IAmb 01 08 17.2
comp=Z,22nm,1.4s
QUA2 Belchertown 75.99 320 P **P** **01 08 14.0 +0.7**
NB2 NORSAR Subarra 76.31 13 P **P** **01 08 16.4 +1.6**
comp=Z,3.7nm,1.2s,baz=206,slow=5.9
NOA NORSAR Array B 76.31 13 P **P** **01 08 16.4 +1.6**
comp=Z,0.8nm,0.8s,baz=206,slow=6.0,SNR=4.4
comp=Z,0.8nm,0.8s
H62A Milan 76.49 322 P **P** **01 08 15.9 -0.2**
H62A IAmb IAmb 01 08 33.0
comp=Z,19nm,1.2s
TGUH Tegucigalpa,Un 76.59 288 P **P** **01 08 17.1 -0.4**
KIV Kislovodsk 76.78 39 P **P** **01 08 18.6 +0.6**
KIV IAmb IAmb 01 08 31.6
comp=Z,14nm,1.7s
ODNJ Ogdensburg 76.82 318 P **P** **01 08 19.2 +1.1**
JSRW J. Sargeant Re 77.44 314 P **P** **01 08 21.7 0.0**
QSPA South Pole Qui 77.49 180 LR LR 01 39 44.0
comp=Z,35nm,20.8s,baz=308,slow=34
NRS Narsarsuaq 77.49 345 P **P** **01 08 23.6 +2.2**
U56A King 78.66 311 P **P** **01 08 29.0 +0.5**
U56A IAmb IAmb 01 08 40.3
comp=Z,24nm,1.8s
FIA0 FINESS Array S 80.57 19 P **P** **01 08 38.4 +0.1**
FINES FINESS Array B 80.57 19 P **P** **01 08 39.1 +0.8**
comp=Z,2.3nm,0.9s,baz=202,slow=6.0,SNR=3.8
comp=Z,2.3nm,0.9s
FINES FINESS Array B 80.57 19 P **P** **01 08 38.4 +0.1**
L48A N Adams 83.81 315 P **P** **01 08 57.6 +1.8**
L48A IAmb IAmb 01 09 11.8
comp=Z,34nm,1.6s
OXF Oxford 84.81 307 P **P** **01 09 01.4 +0.4**
OXF IAmb IAmb 01 09 06.0
comp=Z,25nm,1.6s
344A Westbrook Farm 84.89 304 P **P** **01 08 58.9 -2.6**
344A IAmb IAmb 01 08 59.8
comp=Z,30nm,1.6s
VNDA Vanda 89.96 179 P **P** **01 09 25.2 +0.1**
comp=Z,1.4nm,0.9s,baz=214,slow=3.9,SNR=5.9
comp=Z,1.4nm,0.9s

*MAN **06** 01:03:35.5, 11.°31N×126.°43E, h15km, mb5.1, ML4.0, MS4.1*
*IDC **06** 01:03:35.7±0.6, 11.°16N×126.°09E, h0km, mb4.3/24, mbtmp4.3/26, ML4.0/2, MS3.6/31, Error ellipse: s-maj=21.2km s-min=11.2km az=83.0*
*NEIC **06** 01:03:37.1±2.2, 11.°21N±0.°07×126.°24E±0.°10, h10km±1km, mb4.8/75, Error ellipse: s-maj=16.4km s-min=11.3km az=72.0*
*BJI **06** 01:03:40.2±0.0, 11.°38N×126.°07E, h24km, mb4.5/43, mB4.8/22, Ms4.2/20, Ms7 4.1/23*
ISC 06 01:03:40.1±0.3, 11.°13N±0.°03×126.°38E±0.°05, h37km, n215, *σ2*s**22**/198, **mb4.7**/77, **MS3.8**/34, **12C-15D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time h m s	Res ISC
GLSP	**General Luna,**	**1.36**	**191**	***e*P**		**Pn**	**01 03 58.4**	**-4.2**
GLSP				*e*S		**Sn**	**01 04 17.6**	**-1.8**
GLSP	**General Luna,**	**1.36**	**191**	***e*P**		**Pn**	**01 04 01.5**	**-1.1**
OCLP	**Ormoc**	**1.74**	**268**	***e*S**		**Sn**	**01 04 31.4**	**+2.7**
OCLP	**Ormoc**	**1.74**	**268**	***e*P**		**Pn**	**01 04 06.1**	**-1.7**
MSLP	**Maasin**	**1.79**	**237**	***e*P**		**Pn**	**01 04 08.2**	**-0.3**
MSLP				*e*S		**Sn**	**01 04 33.3**	**+3.2**
BUTP	**Butuan**	**2.27**	**199**	***e*P**		**Pn**	**01 04 16.0**	**+0.9**
BUTP	**Butuan**	**2.27**	**199**	***e*P**		Pn	01 04 27.5	+12
BUTP				*e*S		**Sn**	**01 04 39.0**	**-2.9**
LLP	**Lapu-Lapu**	**2.51**	**251**	***e*P**		**Pn**	**01 04 18.5**	**+0.2**
LLP				*i* S		**Sn**	**01 04 52.6**	**+4.9**
TBP	**Tagbilaran**	**2.86**	**240**	***i*P**		**Pn**	**01 04 23.0**	**-0.2**
TBP				*i* S		**Sn**	**01 05 04.8**	**+8.4**
BIPH	**Bislig**	**2.93**	**180**	***i*P**		**Pn**	**01 04 27.4**	**+3.3**
CGP	**Cagayan de Oro**	**3.14**	**212**	***e*P**		**Pn**	**01 04 28.3**	**+1.3**
CGP				*e*S		**Sn**	**01 05 10.4**	**+7.2**
PVCP	**Virac**	**3.28**	**319**	***e*P**		**Pn**	**01 04 28.0**	**-0.9**
PVCP	**Virac**	**3.28**	**319**	***e*P**		**Pn**	**01 04 28.4**	**-0.5**
BUKP	**Musuan**	**3.48**	**202**	***i*P**		**Pn**	**01 04 33.0**	**+1.2**
SNPH	**Sibulan**	**3.57**	**240**	***e*P**		**Pn**	**01 04 33.4**	**+0.4**
SNPH				*e*S		**Sn**	**01 05 18.8**	**+4.8**
RCP	**Roxas**	**3.59**	**277**	***e*P**		**Pn**	**01 04 33.1**	**-0.2**
RCP				*e*S		**Sn**	**01 05 14.8**	**+0.3**
GUIM	**Jordan**	**3.76**	**263**	***e*P**		**Pn**	**01 04 39.3**	**+3.8**
CNOP	**Candoni, Negro**	**3.90**	**251**	***e*P**		**Pn**	**01 04 36.8**	**-0.8**
CNOP				*e*S		**Sn**	**01 05 29.6**	**+7.5**
DAV	**Davao City (W)**	**4.11**	**191**	Pn		**Pn**	**01 04 44.8**	**+4.4**
	70nm,0.3s,baz=58,slow=13,SNR=2.1							
DAV				LR		LR	01 06 18.4	
	comp=Z,450nm,19.0s,baz=2.0,slow=40							
DAV	**Davao City (W)**	**4.11**	**191**	Pn		**Pn**	**01 04 41.3**	**+0.9**
KCP	**Kidapawan**	**4.29**	**197**	***e*P**		**Pn**	**01 04 44.0**	**+1.1**
KCP				*i* S		Sn	01 05 40.8	+9.0
PAGZ	**Pagadian**	**4.40**	**222**	***e*P**		**Pn**	**01 04 44.7**	**+0.2**
PAGZ				*e*S		Sn	01 05 45.8	+11
CTBH	**Cotabato--PC H**	**4.42**	**209**	***e*P**		**Pn**	**01 04 48.2**	**+3.5**
CTBH				*i* S		**Sn**	**01 05 31.1**	**-3.8**
JCNP	**Jose Panganiba**	**4.77**	**312**	***e*P**		**Pn**	**01 04 47.6**	**-1.9**
JCNP				*e*S		Sn	01 05 54.4	+11
DDMP	**Don Marcelino,**	**5.04**	**188**	***e*P**		Pn	01 05 02.5	+9.3
DDMP				*e*S		**Sn**	**01 05 46.6**	**-3.5**
TGY	**Tagaytay City**	**6.08**	**300**	Pn		**Pn**	**01 05 08.9**	**+1.4**
	26nm,0.3s,baz=329,slow=22,SNR=4.2							
LUBP	**Lubang**	**6.53**	**294**	***e*P**		**Pn**	**01 05 14.5**	**+0.8**
SGSI	**Sangihe**	**7.45**	**187**	P		Pn	01 05 37.4	+11
	5μm71nm,0.7s							
SMPP	**San Manuel, Pa**	**7.46**	**313**	***e*P**		**Pn**	**01 05 24.3**	**-2.1**
SMPP				*e*S		**Sn**	**01 06 45.8**	**-3.9**
MYLDM	**Lahad Datu**	**9.79**	**233**	Pn		**Pn**	**01 05 56.4**	**-2.0**
TNTI	**Ternate**	**10.34**	**175**			**Pn**	**01 06 06.6**	**+0.7**
TOLI2	**Tolitoli**	**11.40**	**210**	Pn		**Pn**	**01 06 18.6**	**-1.9**
MPSI	**Mapaga**	**12.51**	**211**	P		**P**	**01 06 43.5**	**-3.3**
	11nm,0.8s							
LUWI	**Luwuk**	**12.61**	**197**	Pn		**Pn**	**01 06 40.1**	**+3.1**
LUWI	**Luwuk**	**12.61**	**197**	P		**P**	**01 06 45.9**	**-2.1**
	89nm,1.3s							
SWI	**Sorong**	**12.86**	**158**	P		**Pn**	**01 06 35.9**	**-4.6**
	24nm,1.0s							
SIJI	**Sorong**	**12.87**	**158**	Pn		**Pn**	**01 06 43.9**	**+3.3**
	1.7nm,0.3s,baz=301,slow=5.9,SNR=4.0							
SIJI				LR		LR	01 14 04.4	
	comp=Z,86nm,18.1s,baz=316,slow=48							
	3.9nm,0.3s							
SANI	**Sanana**	**13.10**	**182**	P		**Pn**	**01 06 47.8**	**+4.1**
	617nm34nm,1.0s							
NLAI	**Namlea**	**14.29**	**177**	P		**Pn**	**01 07 00.9**	**+0.9**
	606nm31nm,1.2s							
MSAI	**Masohi**	**14.60**	**170**	P		**Pn**	**01 07 02.1**	**-2.1**
	14nm,0.9s							
FAKI	**Fak Fak**	**15.13**	**157**	Pn		**Pn**	**01 07 10.5**	**-0.8**
FAKI				IAmb	IAmb		01 07 29.1	
	comp=Z,49nm,1.0s							
FAKI	**Fak Fak**	**15.13**	**157**	P		Pn	01 07 00.8	-10
	comp=Z,962nmcomp=Z,49nm,0.9s							
BKB	**Balikpapan**	**15.51**	**218**	Pn		**Pn**	**01 07 12.8**	**-3.3**
BKB				IAmb	IAmb		01 07 25.1	
	comp=Z,66nm,0.8s							
TTSI	**Tana Toraja**	**15.52**	**205**	P		**Pn**	**01 07 17.8**	**+1.4**
	comp=Z,1μmcomp=Z,42nm,1.5s							
JOW	**Kunigami**	**15.72**	**6**	LR		LR	01 13 19.6	
	comp=Z,284nm,18.8s,baz=170,slow=37							
SPSI	**Sidrap Palu**	**16.38**	**204**	P		**Pn**	**01 07 25.8**	**-1.5**
	comp=Z,22nm,0.8s							
BNSI	**Bone**	**16.64**	**202**	P		**Pn**	**01 07 29.6**	**-1.1**
KAPI	**Kappang**	**17.34**	**203**	P		**Pn**	**01 07 39.5**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=36,slow=19,SNR=2.6							
KAPI				LR		LR	01 16 21.0	
	comp=Z,225nm,18.1s,baz=350,slow=44							
	comp=Z,4.5nm,0.9s							
KAPI	**Kappang**	**17.34**	**203**	Pn		**Pn**	**01 07 38.6**	**-0.8**
QIZ	**Qiongzhong**	**17.79**	**298**	P		**Pn**	**01 07 40.5**	**-4.4**
QIZ				S		**Sn**	**01 11 02.5**	**+0.3**
QIZ				LR		LR		
	comp=Z,200nm,11.1s							
QIZ				LR		LR		
	comp=Z,190nm,14.3s							
QIZ				LR		LR		

	comp=Z,270nm,17.5s							
GUMO	**Guam**	**18.22**	**80**	LR		LR	01 14 34.8	
	comp=Z,128nm,18.2s,baz=263,slow=36							
KSM	**Kuching**	**18.62**	**240**			**P**	**01 07 53.0**	**-1.6**
SAUI	**Saumlaki**	**19.61**	**165**	P		**Pn**	**01 08 08.4**	**+1.4**
MMRI	**Maumere**	**20.07**	**192**	P		**P**	**01 08 11.3**	**+0.9**
MMRI				IAmb	IAmb		01 08 30.0	
	comp=Z,50nm,0.8s							
SOEI	**Soe**	**20.86**	**186**	P		Pn	01 08 20.8	-0.9
SOEI				IAmb	IAmb		01 08 49.8	
	comp=Z,66nm,1.0s							
BATI	**Baumata**	**21.37**	**187**	P		**P**	**01 08 26.3**	**+1.8**
	comp=Z,27nm,0.4s,baz=131,slow=5.4,SNR=8.2							
BATI				LR		LR	01 17 18.6	
	comp=Z,213nm,19.2s,baz=258,slow=38							
	comp=Z,27nm,0.4s							
JCJ	**Chichijima**	**21.76**	**41**	LR		LR	01 16 27.4	
	comp=Z,146nm,19.0s,baz=184,slow=35							
JAGI	**Jajag, Banyuwa**	**22.96**	**212**	P		**P**	**01 08 41.2**	**-0.3**
SMRI	**Semarang**	**24.04**	**222**	P		**P**	**01 08 52.4**	**+0.5**
GYA	**Guiyang**	**24.05**	**312**	⇑P		**P**	**01 08 55.2**	**+3.1**
GYA				S		**S**	**01 13 10.0**	**+2.9**
GYA				pmax		pmax		
	comp=Z,120nm,9.8s							
GYA				LR		LR		
	comp=Z,380nm,21.4s							
MYKOM	**Kota Tinggi**	**24.21**	**249**	P		**P**	**01 08 52.3**	**-1.2**
MYKOM				IAmb	IAmb		01 09 05.4	
	comp=Z,37nm,1.4s							
MTN	**Manton Dam**	**24.28**	**169**	P		**P**	**01 08 53.6**	**-0.5**
ENH	**Enshi**	**24.69**	**323**	P		**P**	**01 08 54.0**	**-3.8**
ENH				IAmb	IAmb		01 09 26.9	
	comp=Z,19nm,1.2s							
JHJ	**Hachijo jima 2**	**25.11**	**27**	LR		LR	01 19 29.6	
	comp=Z,169nm,18.9s,baz=317,slow=38							
LEM	**Lembang**	**25.83**	**227**	P		**P**	**01 09 07.3**	**-1.1**
	comp=Z,16nm,0.3s,baz=323,slow=20,SNR=2.1							
	comp=Z,16nm,0.3s							
IPM	**Ipoh**	**25.96**	**257**	P		**P**	**01 09 08.7**	**-0.8**
IPM				IAmb	IAmb		01 09 13.4	
	comp=Z,22nm,1.1s							
KULM	**Kulim**	**26.11**	**259**	P		**P**	**01 09 09.9**	**-0.9**
KULM				IAmb	IAmb		01 09 12.7	
	comp=Z,23nm,1.0s							
KSAR	**Wonju Array Be**	**26.23**	**3**	P		**P**	**01 09 12.8**	**+1.2**
KSRS	**Korea Array**	**26.25**	**3**	P		**P**	**01 09 13.1**	**+1.3**
	comp=Z,3.8nm,1.1s,baz=185,slow=10,SNR=15							
KSRS				LR		LR	01 20 08.8	
	comp=Z,116nm,19.1s,baz=245,slow=38							
	comp=Z,3.8nm,1.1s							
TIA	**Tai'an**	**26.34**	**343**	***e*P**		**P**	**01 09 13.7**	**+1.1**
TIA				pmax		pmax		
	comp=Z,11nm,1.2s							
KMI	**Kunming**	**26.37**	**305**	⇑P		**P**	**01 09 14.8**	**+1.5**
KMI				pmax		pmax		
	comp=Z,14nm,0.6s							
SRIT	**Nakonsritamara**	**26.50**	**267**	P		**P**	**01 09 10.5**	**-3.8**
SRIT				IAmb	IAmb		01 09 47.5	
	comp=Z,17nm,1.0s							
KNRA	**Kununurra**	**26.74**	**175**	P		**P**	**01 09 18.3**	**+2.0**
MJAR	**Matsushiro Arr**	**27.46**	**21**	P		**P**	**01 09 22.7**	**-0.1**
	comp=Z,0.9nm,0.4s,baz=180,slow=7.0,SNR=4.9							
MJAR				LR		LR	01 19 53.2	
	comp=Z,218nm,19.0s,baz=194,slow=36							
	comp=Z,0.9nm,0.4s							
MJAR	**Matsushiro Arr**	**27.46**	**21**	P		**P**	**01 09 21.4**	**-1.4**
CM31	**Chiang Mai Arr**	**27.48**	**289**	P		**P**	**01 09 21.3**	**-1.9**
CM31				IAmb	IAmb		01 09 32.3	
	comp=Z,13nm,0.4s							
CMAR	**Chiang Mai Arr**	**27.48**	**289**	P		**P**	**01 09 21.4**	**-1.8**
	comp=Z,2.5nm,0.5s,baz=100,slow=7.5,SNR=21							
CMAR				LR		LR	01 19 57.8	
	comp=Z,55nm,19.6s,baz=120,slow=36							
	comp=Z,2.5nm,0.5s							
CMAR	**Chiang Mai Arr**	**27.48**	**289**	P		**P**	**01 09 20.7**	**-2.4**
CHTO	**Chiang Mai**	**27.56**	**289**	P		**P**	**01 09 20.6**	**-3.2**
PZH	**PanZhiHua**	**27.81**	**307**	P		**P**	**01 09 26.1**	**0.0**
PZH				pmax		pmax		
	comp=Z,10.0nm,0.5s							
PZH				pmax		pmax		
	comp=Z,80nm,5.7s							
PZH				LR		LR		
	comp=Z,350nm,12.7s							
PZH				LR		LR		
	comp=Z,320nm,13.5s							
PZH				LR		LR		
	comp=Z,490nm,13.2s							
XAN	**Xi'an**	**27.84**	**328**	P		**P**	**01 09 25.3**	**-0.9**
XAN				pP		pP	01 09 29.9	-4.6
XAN				pmax		pmax		
	comp=Z,17nm,1.0s							
XAN				LR		LR		
	comp=Z,260nm,15.1s							
XAN				LR		LR		
	comp=Z,290nm,15.1s							
XAN				LR		LR		
	comp=Z,340nm,13.9s							
HNS	**HongShan**	**28.18**	**340**	⇓P		**P**	**01 09 29.7**	**+0.6**
HNS				pmax		pmax		
	comp=Z,10.0nm,1.0s							
PSI	**Prapat**	**28.46**	**255**	P		**P**	**01 09 30.8**	**-1.3**
	comp=Z,1.6nm,0.2s,baz=67,slow=6.6,SNR=4.0							
PSI				LR		LR	01 22 17.7	
	comp=Z,175nm,19.8s,baz=94,slow=40							
	comp=Z,1.6nm,0.2s							
CD2	**Chengdu**	**28.76**	**317**	P		**P**	**01 09 35.1**	**+0.7**
CD2				LR		LR		
	comp=Z,330nm,17.2s							
CD2				LR		LR		
	comp=Z,450nm,17.7s							
KRVT	**Keravat (AS076**	**29.77**	**120**	LR		LR	01 21 20.9	
	comp=Z,95nm,18.9s,baz=67,slow=36							
COEN	**Coen**	**29.98**	**146**	P		**P**	**01 09 44.6**	**-0.7**
COEN				IAmb	IAmb		01 10 02.8	
	comp=Z,27nm,0.9s							
WB0	**Warramunga Arr**	**31.70**	**166**	P		**P**	**01 10 02.1**	**+1.7**
WB0				IAmb	IAmb		01 10 03.3	
	comp=Z,6.0nm,0.8s							
WRAB	**Tennant Creek**	**31.85**	**166**	P		**P**	**01 10 03.0**	**+1.3**
WRAB				IAmb	IAmb		01 10 12.0	
	comp=Z,12nm,1.1s							
WRA	**Warramunga Arr**	**31.86**	**166**	P		**P**	**01 10 02.0**	**+0.2**
	comp=Z,2.7nm,0.6s,baz=352,slow=9.0,SNR=36							
	comp=Z,2.7nm,0.6s							
WRA	**Warramunga Arr**	**31.86**	**166**	P		**P**	**01 10 03.6**	**+1.8**
WB2	**Warramunga Arr**	**31.86**	**166**	P		**P**	**01 10 03.4**	**+1.5**
WB2				IAmb	IAmb		01 10 12.1	
	comp=Z,8.9nm,1.0s							
WR0	**Warramunga Arr**	**31.92**	**165**	P		**P**	**01 10 02.7**	**+0.4**
WR0				IAmb	IAmb		01 10 12.6	
	comp=Z,14nm,1.1s							
LZH	**Lanzhou**	**32.14**	**324**	***e*P**		P	01 10 14.9	+10
LZH				sP		pwP	01 10 21.1	-1.1
LZH				pmax		pmax		
	comp=Z,23nm,1.5s							
LZH				LR		LR		
	comp=N,280nm,16.3s							
LZH				LR		LR		
	comp=E,260nm,15.2s							
LZH				LR		LR		
	comp=Z,460nm,15.7s							
BTO	**Baotou**	**32.72**	**337**	***e*P**		P	01 10 19.9	+11
MBWA	**Marble Bar**	**32.75**	**192**	P		**P**	**01 10 09.4**	**-0.2**
MBWA				IAmb	IAmb		01 10 11.8	
	comp=Z,8.8nm,0.7s							
PSA00	**Pilbara Seismi**	**33.13**	**191**	P		**P**	**01 10 12.7**	**-0.3**
USRK	**Ussuriysk Ar.**	**33.30**	**7**	P		**P**	**01 10 15.9**	**+1.7**
	comp=Z,2.0nm,0.7s,baz=204,slow=4.2,SNR=5.6							
USRK				LR		LR

GTA	**Gaotai**	**36.74**	**325**	‖P		**P**		**01 10 44.8**	**+0.7**
GTA				sP		pP		01 10 52.1	-0.5
GTA				PcP		**PcP**		**01 13 13.5**	**+7.4**
GTA				pmax		pmax			
	comp=Z,9.0nm,0.9s								
GTA				pmax		pmax			
	comp=Z,83nm,4.4s								
GTA				LR		LR			
	comp=Z,94nm,14.2s								
GTA				LR		LR			
	comp=Z,140nm,16.0s								
GTA				LR		LR			
	comp=Z,150nm,17.1s								
LSA	**Lhasa**	**37.62**	**305**	P		**P**		**01 10 50.0**	**-2.1**
GOMU	**GeErMu**	**37.89**	**316**	P		**P**		**01 10 57.7**	**+3.5**
GOMU				pP		pP		01 11 00.9	-1.9
GOMU				sP		sP		01 11 02.8	-5.2
GOMU				S		**S**		**01 16 37.8**	**-5.8**
GOMU				pmax		pmax			
	comp=Z,3.0nm,0.6s								
GOMU				pmax		pmax			
	comp=Z,55nm,4.1s								
GOMU				LR		LR			
	comp=Z,160nm,14.8s								
GOMU				LR		LR			
	comp=Z,170nm,16.2s								
GOMU				LR		LR			
	comp=Z,240nm,16.5s								
KLR	**Kul'dur**	**38.24**	**6**	P		**P**		**01 10 58.1**	**+1.6**
	comp=Z,2.1nm,1.0s,baz=196,slow=7.5,SNR=6.8								
KLR				LR		LR		01 27 14.0	
	comp=Z,83nm,18.2s,baz=228,slow=37								
	comp=Z,2.1nm,1.0s								
YSS	**Yuzh-Sakhalins**	**38.30**	**18**	P		**P**		**01 10 58.9**	**+1.9**
YSS				IAmb		IAmb		01 11 00.0	
	comp=Z,42nm,1.4s								
TAPN	**Taplejung**	**39.72**	**300**	*eP*		**P**		**01 11 07.8**	**-1.8**
H11N1	**WAKE ISLAND Hy**	**39.89**	**73**	T		T		01 54 35.9	
	baz=265,slow=74,SNR=19								
H11N2	**WAKE ISLAND Hy**	**39.90**	**73**	T		T		01 54 34.1	
	baz=265,slow=74,SNR=9.7								
H11N3	**WAKE ISLAND Hy**	**39.91**	**73**	T		T		01 54 38.7	
	baz=265,slow=74,SNR=13								
ULN	**Ulaanbaatar**	**40.06**	**340**	P		**P**		**01 11 11.9**	**0.0**
SONM	**Songino Array**	**40.26**	**339**	P		**P**		**01 11 14.4**	**+0.9**
	comp=Z,2.0nm,0.9s,baz=166,slow=7.1,SNR=8.3								
	comp=Z,2.0nm,0.9s								
SONM	**Songino Array**	**40.26**	**339**	P		**P**		**01 11 13.3**	**-0.2**
RAMN	**Ramite**	**40.56**	**299**	*eP*		**P**		**01 11 12.3**	**-4.2**
	comp=Z,42nm,1.0s								
JIRN	**Jiri**	**41.10**	**299**	*eP*		**P**		**01 11 19.3**	**-1.8**
	comp=Z,61nm,0.9s								
MORW	**Morawa**	**41.19**	**194**	P		**P**		**01 11 22.8**	**+1.5**
MORW				IAmb		IAmb		01 11 48.6	
	comp=Z,34nm,1.4s								
GUN	**Gumba**	**41.43**	**300**	*eP*		**P**		**01 11 21.8**	**-2.0**
	comp=Z,70nm,0.9s								
FORT	**Forrest**	**41.70**	**178**	P		**P**		**01 11 27.2**	**+1.8**
FORT				IAmb		IAmb		01 11 52.8	
	comp=Z,24nm,0.9s								
PKI	**Pulchoki**	**41.75**	**299**	*eP*		**P**		**01 11 23.8**	**-2.5**
	comp=Z,21nm,0.9s								
PKIN	**Phulchoki**	**41.76**	**299**	*eP*		**P**		**01 11 23.9**	**-2.5**
DMN	**Daman**	**42.02**	**299**	*eP*		**P**		**01 11 26.0**	**-2.5**
GKN	**Gorkha**	**42.52**	**299**	*eP*		**P**		**01 11 30.3**	**-2.1**
PYUN	**Piuthan**	**43.95**	**299**	*eP*		**P**		**01 11 42.3**	**-1.8**
NWAO	**Narrogin (SRO)**	**44.67**	**191**	P		**P**		**01 11 49.5**	**+0.1**
STKA	**Stephens Creek**	**45.18**	**162**	P		**P**		**01 11 55.6**	**+2.1**
	comp=Z,12nm,1.0s,baz=6.3,slow=6.7,SNR=5.9								
	comp=Z,12nm,1.0s								
STKA	**Stephens Creek**	**45.18**	**162**	P		**P**		**01 11 54.6**	**+1.2**
STKA				IAmb		IAmb		01 12 06.0	
	comp=Z,6.8nm,0.9s								
PALK	**Pallekele**	**45.22**	**269**	LR		LR		01 30 16.8	
	comp=Z,51nm,19.9s,baz=194,slow=36								
WMQ	**Urumqi**	**46.62**	**322**	*eP*		**P**		**01 12 05.4**	**+0.6**
WMQ				pmax		pmax			
	comp=Z,16nm,0.7s								
WMQ				LR		LR			
	comp=Z,460nm,13.3s								
WMQ				LR		LR			
	comp=Z,160nm,17.3s								
WMQ				LR		LR			
	comp=Z,150nm,15.3s								
YAK	**Yakutsk**	**50.87**	**2**	P		**P**		**01 12 37.8**	**+0.7**
MK31	**Makanchi Array**	**51.41**	**322**	P		**P**		**01 12 41.2**	**-0.2**
MKAR	**Makanchi Array**	**51.41**	**322**	P		**P**		**01 12 41.9**	**+0.4**
	comp=Z,6.1nm,0.8s,baz=121,slow=8.5,SNR=54								
MKAR				ScP		**ScP**		**01 17 51.9**	**+2.4**
	comp=Z,0.5nm,0.8s,baz=99,slow=4.5,SNR=2.6								
	comp=Z,6.1nm,0.8s								
MKAR	**Makanchi Array**	**51.41**	**322**	P		**P**		**01 12 41.0**	**-0.5**
MAKZ	**Makanchi**	**51.61**	**322**	P		**P**		**01 12 42.8**	**-0.1**
MAKZ				IAmb		IAmb		01 12 53.9	
	comp=Z,16nm,1.3s								
ZAA0	**Zalesovo Array**	**53.93**	**331**	P		**P**		**01 12 58.4**	**-1.5**
ZAA0				IAmb		IAmb		01 13 10.5	
	comp=Z,10nm,0.9s								
ZALV	**Zalesovo Beam**	**53.93**	**331**	P		**P**		**01 13 00.0**	**+0.1**
	comp=Z,1.9nm,0.6s,baz=108,slow=4.8,SNR=7.7								
	comp=Z,1.9nm,0.6s								
ZALV	**Zalesovo Beam**	**53.93**	**331**	P		**P**		**01 12 58.4**	**-1.5**
AAK	**Ala-Archa**	**54.80**	**315**	LR		LR		01 36 57.6	
	comp=Z,89nm,19.0s,baz=71,slow=37								
KURK	**Kurchatov**	**55.43**	**325**	P		**P**		**01 13 10.5**	**-0.2**
KURBB	**Kurchatov Arra**	**55.43**	**325**	LR		LR		01 38 15.0	
	comp=Z,74nm,18.1s,baz=110,slow=38								
GAR	**Garm**	**56.83**	**309**	P		**P**		**01 13 19.8**	**-1.4**
KBL	**Kabul**	**56.94**	**304**	P		**P**		**01 13 20.0**	**-2.2**
KBL				IAmb		IAmb		01 13 31.2	
	comp=Z,5.3nm,0.7s								
CHGR	**Chuyangaron**	**57.64**	**309**	P		**P**		**01 13 25.0**	**-1.8**
CHGR				IAmb		IAmb		01 13 27.5	
	comp=Z,17nm,0.9s								
KK31	**Karatay Array**	**57.73**	**314**	P		**P**		**01 13 25.9**	**-1.5**
KK31				IAmb		IAmb		01 13 38.3	
	comp=Z,7.0nm,1.1s								
KKAR	**Karatay Array**	**57.73**	**314**	P		**P**		**01 13 26.1**	**-1.3**
TIXI	**Tiksi**	**60.49**	**1**	P		**P**		**01 13 46.1**	**+0.2**
TIXI				IAmb		IAmb		01 14 10.4	
	comp=Z,8.2nm,0.5s								
BRVK	**Borovoye**	**61.10**	**325**	P		**P**		**01 13 50.0**	**-0.4**
BILL	**Bilibino**	**62.55**	**16**	P		**P**		**01 14 00.0**	**+0.1**
BILL				IAmb		IAmb		01 14 15.9	
	comp=Z,13nm,1.5s								
NRIK	**Noril'sk**	**63.21**	**346**	P		**P**		**01 14 05.5**	**+1.3**
	comp=Z,1.2nm,0.4s,baz=160,slow=7.1,SNR=8.3								
	comp=Z,1.2nm,0.4s								
NRIK	**Noril'sk**	**63.21**	**346**	P		**P**		**01 14 04.5**	**+0.2**
NRIK				IAmb		IAmb		01 14 16.1	
	comp=Z,16nm,1.2s								
GEYT	**Alibeck**	**66.12**	**307**	P		**P**		**01 14 23.8**	**-0.1**
	comp=Z,0.9nm,0.4s,baz=202,slow=7.3,SNR=4.0								
	comp=Z,0.9nm,0.4s								
GEYT	**Alibeck**	**66.12**	**307**	P		**P**		**01 14 22.7**	**-1.2**
GEYT				IAmb		IAmb		01 14 37.0	
	comp=Z,9.9nm,1.5s								
GYA0B	**ALIBECK ARRAY**	**66.12**	**307**	P		**P**		**01 14 22.4**	**-1.5**
GYA0B				IAmb		IAmb		01 14 36.3	
	comp=Z,9.9nm,1.2s								
ABKAR	**Akbulak array**	**66.30**	**319**	P		**P**		**01 14 24.0**	**-0.8**
AKTO	**Aktyubinsk**	**67.74**	**320**	LR		LR		01 44 31.9	
	comp=Z,37nm,19.1s,baz=102,slow=36								
BKZ	**Black Stump Fm**	**68.37**	**140**	P		**P**		**01 14 40.6**	**+2.6**
ARU	**Arti**	**68.57**	**326**	P		**P**		**01 14 37.1**	**-1.9**
BELG	**Belogornoye**	**74.41**	**321**	LR		LR		01 47 46.4	
	comp=Z,26nm,19.0s,baz=187,slow=36								
O18K	**Koktuh Hills**	**74.63**	**31**	P		**P**		**01 15 17.1**	**+1.7**
L19K	**White Mountain**	**74.98**	**28**	P		**P**		**01 15 20.1**	**+2.6**
M20K	**Styx River**	**75.77**	**29**	P		**P**		**01 15 24.1**	**+2.0**
M20K				IAmb		IAmb		01 15 28.2	
	comp=Z,13nm,1.4s								
IMAR	**Indian Mountai**	**75.78**	**25**	P		**P**		**01 15 23.6**	**+1.6**
KDAK	**Kodiak Island**	**75.88**	**33**	LR		LR		01 47 52.7	
	comp=Z,29nm,19.1s,baz=239,slow=35								
H21K	**Melozitna Rive**	**76.14**	**25**	P		**P**		**01 15 25.0**	**+0.9**
BPAW	**Bear Paw Mtn.**	**76.84**	**27**	P		**P**		**01 15 28.4**	**+0.4**
MLY	**Manley**	**76.98**	**26**	P		**P**		**01 15 29.8**	**+1.0**
NEA2	**Nenana**	**77.69**	**26**	P		**P**		**01 15 34.1**	**+1.4**
KBZ	**Khabaz**	**77.71**	**313**	P		**P**		**01 15 33.2**	**0.0**
	comp=Z,3.0nm,0.8s,baz=149,slow=12,SNR=5.0								
KBZ				LR		LR		01 52 13.9	
	comp=Z,45nm,20.4s,baz=90,slow=38								
	comp=Z,3.0nm,0.8s								
MCK	**McKinley**	**77.75**	**27**	P		**P**		**01 15 33.5**	**+0.4**
MCK				IAmb		IAmb		01 15 35.7	
	comp=Z,13nm,1.0s								
KIV	**Kislovodsk**	**77.85**	**313**	P		**P**		**01 15 32.4**	**-1.8**
KIV				IAmb		IAmb		01 15 45.0	
	comp=Z,6.3nm,0.9s								
H24K	**Noodor Dome**	**78.18**	**25**	P		**P**		**01 15 36.5**	**+1.0**
CCB	**Clear Creek Bu**	**78.23**	**26**	P		**P**		**01 15 36.3**	**+0.6**
CCB				IAmb		IAmb		01 16 04.6	
	comp=Z,9.2nm,1.3s								
ILAR	**Eielson Array**	**78.62**	**26**	P		**P**		**01 15 39.3**	**+1.4**
	comp=Z,0.6nm,0.9s,baz=254,slow=5.4,SNR=5.5								
	comp=Z,0.6nm,0.9s								
ILAR	**Eielson Array**	**78.62**	**26**	P		**P**		**01 15 38.0**	**+0.2**
GURO	**Guroymak-BITLI**	**78.77**	**307**	P		**P**		**01 15 36.3**	**-3.1**
KLMR	**Klimovskoe**	**78.84**	**330**	*eP*		**P**		**01 15 36.6**	**-2.5**
KLMR				AMP				01 15 49.6	
	comp=Z,24nm,1.2s								
RIDG	**Independent Ri**	**79.56**	**27**	P		**P**		**01 15 45.0**	**+1.9**
RIDG				IAmb		IAmb		01 15 45.7	
	comp=Z,12nm,1.2s								
L27K	**Beaver Creek,**	**80.98**	**27**	P		**P**		**01 15 52.4**	**+1.6**
BCAR	**Beaver Creek A**	**81.00**	**27**	P		**P**		**01 15 51.5**	**+0.7**
DAWY	**Dawson**	**81.93**	**26**	P		**P**		**01 15 56.4**	**+0.7**
SPITS	**Spitsbergen Ar**	**83.20**	**349**	LR		LR		01 58 03.9	
	comp=Z,38nm,19.2s,baz=40,slow=39								
ARCES	**ARCESS Array B**	**83.43**	**340**	P		**P**		**01 16 04.7**	**+1.3**
	comp=Z,4.2nm,0.9s,baz=74,slow=6.4,SNR=4.8								
	comp=Z,4.2nm,0.9s								
BRTR	**Keskin Array B**	**85.07**	**309**	P		**P**		**01 16 11.3**	**-1.2**
	comp=Z,0.9nm,0.9s,baz=95,slow=6.2,SNR=6.7								
	comp=Z,0.9nm,0.9s								
BRTR	**Keskin Array B**	**85.07**	**309**	P		**P**		**01 16 10.8**	**-1.7**
FINES	**FINESS Array B**	**85.19**	**332**	P		**P**		**01 16 11.7**	**-0.8**
	comp=Z,4.1nm,0.9s,baz=114,slow=4.8,SNR=7.8								
	comp=Z,4.1nm,0.9s								
FINES	**FINESS Array B**	**85.19**	**332**	P		**P**		**01 16 11.1**	**-1.3**
EIL	**Elat**	**85.81**	**299**	LR		LR		01 59 03.2	
	comp=Z,40nm,19.1s,baz=94,slow=39								
AKASG	**Malin Array Be**	**85.97**	**321**	P		**P**		**01 16 15.7**	**-0.8**
	comp=Z,1.8nm,0.8s,baz=52,slow=4.3,SNR=14								
	comp=Z,1.8nm,0.8s								
AKASG	**Malin Array Be**	**85.97**	**321**	P		**P**		**01 16 15.1**	**-1.5**
AKASG				IAmb		IAmb		01 16 26.5	
	comp=Z,9.2nm,1.1s								
KMBO	**Kilima Mbogo**	**89.36**	**269**	LR		LR		01 54 19.3	
	comp=Z,34nm,19.8s,baz=92,slow=34								
VNDA	**Vanda**	**90.76**	**173**	P		**P**		**01 16 41.9**	**+3.2**
	comp=Z,0.9nm,0.9s,baz=306,slow=4.8,SNR=5.0								
	comp=Z,0.9nm,0.9s								
VNDA	**Vanda**	**90.76**	**173**	P		**P**		**01 16 40.0**	**+1.3**
VNDA				IAmb		IAmb		01 16 51.4	
	comp=Z,8.9nm,1.1s								
CRVS	**Cervenica-Dubn**	**91.30**	**320**	*eP*		P		01 16 52.6	+11
HFS	**Hagfors**	**91.34**	**332**	LR		LR		02 01 14.7	
	comp=Z,49nm,18.7s,baz=72,slow=38								
NOA	**NORSAR Array B**	**92.04**	**334**	LR		LR		02 01 59.9	
	comp=Z,36nm,18.3s,baz=65,slow=38								
LANS	**Liptovska Anna**	**92.45**	**321**	*eP*		P		01 16 59.6	+12
IDI	**Anoyia**	**92.85**	**307**	LR		LR		02 03 12.3	
	comp=Z,14nm,18.7s,baz=106,slow=39								
VRAC	**Vranov**	**94.16**	**322**	LR		LR		02 01 00.5	
	comp=Z,32nm,18.7s,baz=96,slow=37								
CONA	**Conrad Observa**	**95.13**	**321**	*eP*		**P**		**01 17 00.5**	**+0.7**
	comp=Z,2.4nm,1.4s								
MBAR	**Mbarara**	**95.65**	**270**	LR		LR		01 57 39.3	
	comp=Z,47nm,21.0s,baz=48,slow=34								
GERES	**GERESS Array B**	**96.08**	**322**	P		**P**		**01 17 05.2**	**+1.2**
	comp=Z,0.1nm,0.4s,baz=120,slow=9.5,SNR=2.1								
	comp=Z,0.1nm,0.4s								
SOKA	**Soboth**	**96.14**	**320**	*eP*		**P**		**01 17 03.8**	**-0.5**
	comp=Z,2.5nm,1.1s								
MOA	**Molln**	**96.15**	**321**	*eP*		**P**		**01 17 04.4**	**+0.1**
	comp=Z,3.5nm,0.9s								
OBKA	**Obir**	**96.51**	**320**	*eP*		**P**		**01 17 05.9**	**-0.2**
	comp=Z,2.8nm,1.0s								
BIOA	**Bad Ischl, Aus**	**96.60**	**321**	*eP*		**P**		**01 17 10.2**	**+3.9**
	comp=Z,2.7nm,1.0s								
KBA	**Koenlbreinsper**	**97.03**	**321**	*eP*		Pdif		01 17 08.6	0.0
	comp=Z,3.1nm,1.5s								
ABTA	**Abfaltersbach**	**97.69**	**321**	*eP*		**P**		**01 17 11.3**	**0.0**
	comp=Z,2.2nm,1.1s								
WTTA	**Wattenberg**	**98.01**	**321**	*eP*		**P**		**01 17 12.3**	**-0.6**
	comp=Z,2.2nm,0.9s								
WATA	**Walderalm**	**98.02**	**321**	*eP*		**P**		**01 17 12.8**	**-0.1**
	comp=Z,1.9nm,1.2s								
SQTA	**Sankt Quirin**	**98.29**	**321**	*eP*		Pdif		01 17 19.5	+5.4
	comp=Z,2.2nm,0.6s								
MOTA	**Moosalm**	**98.30**	**322**	*eP*		**P**		**01 17 13.9**	**-0.3**
	comp=Z,3.0nm,1.2s								
FETA	**Feichten**	**98.67**	**321**	*eP*		**P**		**01 17 13.3**	**-2.6**
	comp=Z,1.8nm,0.8s								
DAVA	**Damuels**	**99.07**	**322**	*eP*		**Pdif**		**01 17 16.5**	**-1.1**
	comp=Z,1.1nm,0.6s								
PLCA	**Paso Flores**	**146.95**	**156**	PKPbc		**PKPab**		**01 23 20.4**	**-0.2**
	comp=Z,2.7nm,0.8s,baz=193,slow=5.0,SNR=3.8								

*NOU **06** 01:04:15.0, 17°.96S×178°.74W, h750km, MLv3.8/4, Fiji Islands Region*
*IDC **06** 01:04:27.5±1.0, 17°.99S×179°.32W, h599km±12km, mb3.7/23, mbtmp4.7/26, Error ellipse: s-maj=12.8km s-min=10.6km az=123.0*
*NEIC **06** 01:04:27.8±2.0, 18°.0S±0°.1×179°.3W±0°.1, h598km±6km, mb4.5/79, Error ellipse: s-maj=18.0km s-min=13.2km az=135.0*

ISC 06 01:04:28.9±0.4, 17°.99S±0°.07×179°.30W±0°.07, h622km, n292, σ1§11/298, mb4.4/72, 36C-44D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**0.52**	**118**	P		**P**	**01 05 38.8**	**-2.7**
TAVE	**Taveuni**	**1.40**	**335**	P		**P**	**01 05 41.0**	**-2.4**
DGTI	**Dogotuki**	**1.91**	**331**	P		**P**	**01 05 42.4**	**-2.6**
MSVF	**Nonsavu**	**2.54**	**275**	P		**P**	**01 05 45.9**	**-1.8**
	289nm,0.5s,baz=165,slow=2.5,SNR=279							
MSVF				S		**S**	**01 06 50.4**	**-1.3**
	114nm,1.1s,baz=50,slow=22,SNR=15							
MSVF	**Nonsavu**	**2.54**	**275**	P		**P**	**01 05 45.9**	**-1.8**
AFI	**Afiamalu**	**8.29**	**62**	P		**P**	**01 06 28.8**	**-3.1**
	31nm,0.5s,baz=156,slow=4.2,SNR=6.9							
AFI	**Afiamalu**	**8.29**	**62**	P		**P**	**01 06 28.2**	**-3.8**
MARNC	**Mare, Loyalty**	**12.43**	**252**	P		**P**	**01 07 10.0**	**-1.8**
PINNC	**Pines Island,**	**13.26**	**247**	P		**P**	**01 07 18.3**	**-1.6**
OUENC	**Ouen Island, N**	**13.73**	**249**	P		**P**	**01 07 22.7**	**-1.8**
DZM	**Mont Dzumac**	**14.00**	**251**	P		**P**	**01 07 25.3**	**-1.9**
	8.7nm,0.5s,baz=105,slow=19,SNR=17							
DZM	**Mont Dzumac**	**14.00**	**251**	P		**P**	**01 07 24.9**	**-2.2**
ONTNC	**Ouen Toro**	**14.05**	**250**	P		**P**	**01 07 27.2**	**-0.3**
KOUNC	**Kounac, New Ca**	**15.71**	**258**	P		**P**	**01 07 43.0**	**+0.3**
KNTN	**Kanton**	**16.85**	**27**	P		**P**	**01 07 50.7**	**-2.5**
OUZ	**Omahuta**	**18.29**	**199**	P		**P**	**01 08 08.2**	**+2.1**
URZ	**Urewera**	**20.44**	**188**	P		**P**	**01 08 23.2**	**-2.2**
	2.5nm,0.4s,baz=359,slow=11,SNR=2.3							
	2.5nm,0.4s							
THZ	**Tophouse**	**24.62**	**194**	P		**P**	**01 09 01.3**	**-1.2**
LTZ	**Lake Taylor**	**25.73**	**194**	P		**P**	**01 09 10.0**	**-2.3**
LTZ				IAmb		IAmb	01 09 12.5	
	comp=Z,16nm,0.8s							
RPZ	**Rata Peaks**	**26.91**	**196**	P		**P**	**01 09 20.9**	**-1.7**
	comp=Z,7.2nm,0.7s,baz=356,slow=1.1,SNR=7.5							
	comp=Z,7.2nm,0.7s							
FOZ	**Fox Glacier**	**27.08**	**198**	P		**P**	**01 09 22.7**	**-1.2**
EIDS	**Eidsvold**	**28.44**	**250**	P		**P**	**01 09 35.9**	**-0.3**
EIDS				IAmb		IAmb	01 09 38.2	
	comp=Z,30nm,1.4s							
WKZ	**Wanaka**	**28.50**	**198**	P		**P**	**01 09 34.6**	**-1.7**
WKZ				IAmb		IAmb	01 09 37.8	
	comp=Z,26nm,1.0s							
ARMA	**Armidale**	**29.17**	**239**	P		**P**	**01 09 42.3**	**-0.2**
ARMA				IAmb		IAmb	01 09 43.6	
	comp=Z,13nm,0.7s							
MLZ	**Mavora Lakes**	**29.25**	**198**	P		**P**	**01 09 42.5**	**-0.4**
XMAS	**Kiritimati**	**29.32**	**49**	P		**P**	**01 09 43.3**	**-0.6**
WHZ	**Wether Hill Ro**	**29.78**	**198**	P		**P**	**01 09 47.0**	**-0.3**
CTAO	**Charters Tower**	**32.60**	**261**	P		**P**	**01 10 11.0**	**-0.7**
CTAO				IAmb		IAmb	01 10 12.1	
	comp=Z,7.9nm,0.8s							
PMG	**Port Moresby**	**33.64**	**280**	P		**P**	**01 10 20.6**	**+0.2**
	comp=Z,26nm,0.8s,baz=93,slow=7.3,SNR=7.1							
	comp=Z,26nm,0.8s							
PMG	**Port Moresby**	**33.64**	**280**	P		**P**	**01 10 20.2**	**-0.2**
MANU	**Manus Island**	**36.34**	**292**	P		**P**	**01 10 43.2**	**+0.5**
STKA	**Stephens Creek**	**37.85**	**241**	P		**P**	**01 10 55.2**	**+0.4**
	comp=Z,10nm,0.5s,baz=93,slow=10,SNR=41							
	comp=Z,10nm,0.5s							
STKA	**Stephens Creek**	**37.85**	**241**	P		**P**	**01 10 54.6**	**-0.2**

BBOO	**Buckleboo**	**42.63**	**241**	P		**P**		**01 11 32.5**	**-0.2**
WR0	**Warramunga Arr**	**43.59**	**260**	P		**P**		**01 11 39.7**	**-0.7**
WR0				IAmb		IAmb		01 12 04.3	
	comp=Z,18nm,1.4s								
WB0	**Warramunga Arr**	**43.75**	**260**	P		**P**		**01 11 40.4**	**-1.2**
WB0				IAmb		IAmb		01 11 41.4	
	comp=Z,8.2nm,0.7s								
WB2	**Warramunga Arr**	**43.77**	**260**	P		**P**		**01 11 40.5**	**-1.2**
WB2				IAmb		IAmb		01 11 41.7	
	comp=Z,11nm,0.5s								
WRAB	**Tennant Creek**	**43.77**	**260**	P		**P**		**01 11 40.4**	**-1.3**
WRAB				IAmb		IAmb		01 11 41.6	
	comp=Z,10nm,0.6s								
WRA	**Warramunga Arr**	**43.78**	**260**	P		**P**		**01 11 40.8**	**-1.0**
	comp=Z,6.4nm,0.5s,baz=96,slow=7.0,SNR=67								
WRA				PcP		**PcP**		**01 13 14.8**	**+0.6**
	comp=Z,3.8nm,0.9s,baz=93,slow=3.8,SNR=6.1								
	comp=Z,6.4nm,0.5s								
WRA	**Warramunga Arr**	**43.78**	**260**	P		**P**		**01 11 40.4**	**-1.5**
AS31	**Alice Springs**	**43.95**	**254**	P		**P**		**01 11 42.5**	**-0.6**
AS31				IAmb		IAmb		01 11 43.5	
	comp=Z,17nm,0.7s								
ASAR	**Alice Springs**	**43.95**	**254**	P		**P**		**01 11 42.5**	**-0.7**
	comp=Z,60nm,0.4s,baz=90,slow=7.7,SNR=9.2								
ASAR	**Alice Springs**	**43.95**	**254**	P		**P**		**01 11 42.9**	**-0.2**
HMH	**Humu'ula Sheep**	**44.07**	**33**	P		**P**		**01 11 44.4**	**+0.1**
HLK	**Haleakala**	**44.65**	**31**	P		**P**		**01 11 48.9**	**+0.3**
MTN	**Manton Dam**	**47.95**	**269**	P		**P**		**01 12 12.4**	**-0.9**
MTN				IAmb		IAmb		01 12 13.6	
	comp=Z,14nm,0.9s								
FORT	**Forrest**	**49.21**	**245**	P		**P**		**01 12 21.5**	**-0.9**
KNRA	**Kununurra**	**49.64**	**264**	P		**P**		**01 12 25.0**	**-0.7**
SIJI	**Sorong**	**51.43**	**284**	P		**P**		**01 12 38.8**	**0.0**
	comp=Z,42nm,0.7s,baz=83,slow=6.6,SNR=17								
	comp=Z,42nm,0.7s								
SOEI	**Soe**	**55.22**	**270**	P		**P**		**01 13 06.9**	**+1.3**
PSA00	**Pilbara Seismi**	**57.07**	**256**	P		**P**		**01 13 17.0**	**-1.0**
MBWA	**Marble Bar**	**57.23**	**256**	P		**P**		**01 13 18.6**	**-0.5**
NWAO	**Narrogin (SRO)**	**58.42**	**242**	P		**P**		**01 13 27.4**	**+0.4**
NWAO				IAmb		IAmb		01 13 31.3	
	comp=Z,26nm,1.1s								
MORW	**Morawa**	**59.67**	**246**	P		**P**		**01 13 34.9**	**-0.4**
MORW				IAmb		IAmb		01 13 35.0	
	comp=Z,32nm,1.4s								
VNDA	**Vanda**	**60.30**	**185**	P		**P**		**01 13 39.6**	**+1.1**
	comp=Z,0.7nm,0.5s,baz=9.0,slow=7.9,SNR=11								
	comp=Z,0.7nm,0.5s								
VNDA	**Vanda**	**60.30**	**185**	P		**P**		**01 13 39.6**	**+1.1**
GIRL	**Giralia**	**62.06**	**253**	P		**P**		**01 13 51.5**	**+0.5**
MJAR	**Matsushiro Arr**	**67.47**	**324**	P		**P**		**01 14 24.3**	**-0.2**
	comp=Z,6.5nm,0.7s,baz=154,slow=6.3,SNR=17								
	comp=Z,6.5nm,0.7s								
MJAR	**Matsushiro Arr**	**67.47**	**324**	P		**P**		**01 14 24.7**	**+0.2**
MAJO	**Matsushiro**	**67.47**	**324**	P		**P**		**01 14 24.9**	**+0.3**
MAJO				IAmb		IAmb		01 14 25.1	
	comp=Z,11nm,0.7s								
MJB9	**Matsu-Tunnel**	**67.47**	**324**	P		**P**		**01 14 23.8**	**-0.8**
MJB9				IAmb		IAmb		01 14 25.1	
	comp=Z,10nm,0.7s		

		comp=Z,20nm,0.9s							
BJI	**Beijing**		**83.25**	**316**	P		**P**		**01 15 52.2 +0.6**
BJI					pmax		pmax		
		comp=Z,11nm,1.4s							
G08A	**Pilot Rock**		**83.39**	**38**	P		**P**		**01 15 52.8 +0.4**
K20K	**Telida**		**83.44**	**11**	P		**P**		**01 15 52.5 +0.4**
K20K					IAmb		IAmb		01 15 53.2
		comp=Z,7.9nm,0.8s							
MAW	**Mawson**		**83.50**	**200**	P		**P**		**01 15 53.9 +1.5**
		comp=Z,4.3nm,0.6s,baz=129,slow=5.5,SNR=13							
		comp=Z,4.3nm,0.6s							
MAW	**Mawson**		**83.50**	**200**	P		**P**		**01 15 53.2 +0.8**
SCM	**Sheep Creek Mo**		**83.52**	**15**	P		**P**		**01 15 52.3 -0.3**
SCM					IAmb		IAmb		01 15 53.4
		comp=Z,17nm,0.7s							
VRDI	**Verde Repeater**		**83.99**	**17**	P		**P**		**01 15 55.1 0.0**
VRDI					IAmb		IAmb		01 15 56.0
		comp=Z,17nm,1.3s							
GLB	**Gilahina Butte**		**84.08**	**16**	P		**P**		**01 15 54.6 -0.6**
GLB					IAmb		IAmb		01 15 56.1
		comp=Z,7.6nm,0.7s							
DHY	**Denali Highway**		**84.58**	**14**	P		**P**		**01 15 57.0 -0.9**
DHY					IAmb		IAmb		01 16 07.2
		comp=Z,8.0nm,1.4s							
B08A	**Colville Reser**		**84.89**	**35**	P		**P**		**01 15 59.7 +0.2**
B08A					IAmb		IAmb		01 16 00.7
		comp=Z,4.4nm,0.8s							
XAN	**Xi'an**		**85.63**	**308**	P		**P**		**01 16 04.7 +1.2**
XAN					sP		sP		01 19 12.2 -5.4
XAN					pmax		pmax		
		comp=Z,23nm,1.2s							
ILAR	**Eielson Array**		**86.16**	**13**	P		**P**		**01 16 04.5 -0.6**
		comp=Z,2.1nm,0.8s,baz=232,slow=6.1,SNR=15							
		comp=Z,2.1nm,0.8s							
HHC	**Hu-ho-hao-te**		**86.72**	**315**	*e*P		**P**		**01 16 09.9 +1.4**
HHC					pmax		pmax		
		comp=Z,29nm,1.0s							
HHC					pmax		pmax		
		comp=Z,100nm,6.3s							
TX31	**Lajitas Ar. Si**		**86.75**	**58**	P		**P**		**01 16 11.0 +2.1**
TX31					IAmb		IAmb		01 16 11.8
		comp=Z,9.6nm,0.8s							
TX32	**Lajitas Array**		**86.75**	**58**	P		**P**		**01 16 10.7 +1.8**
TXAR	**Lajitas Array**		**86.75**	**58**	P		**P**		**01 16 10.9 +2.0**
		comp=Z,3.7nm,0.9s,baz=218,slow=5.5,SNR=34							
		comp=Z,3.7nm,0.9s							
TXAR	**Lajitas Array**		**86.75**	**58**	P		**P**		**01 16 10.8 +1.9**
KMI	**Kunming**		**87.11**	**297**	⇑P		**P**		**01 16 12.5 +1.7**
KMI					sP		PcP		01 16 20.1 +7.9
KMI					pmax		pmax		
		comp=Z,11nm,0.8s							
PDAR	**Pinedale Array**		**87.99**	**44**	P		**P**		**01 16 15.3 +0.7**
		comp=Z,1.3nm,0.6s,baz=213,slow=2.8,SNR=13							
		comp=Z,1.3nm,0.6s							
CMAR	**Chiang Mai Arr**		**88.11**	**290**	P		**P**		**01 16 16.7 +1.3**
		comp=Z,3.3nm,0.7s,baz=107,slow=2.7,SNR=22							
		comp=Z,3.3nm,0.7s							
PZH	**PanZhiHua**		**88.44**	**298**	P		**P**		**01 16 18.1 +1.2**
PZH					pmax		pmax		
		comp=Z,10.0nm,0.5s							
PZH					pmax		pmax		
		comp=Z,120nm,6.1s							
TROLL	**Troll, Antarti**		**90.22**	**181**	P		**P**		**01 16 24.2 -0.1**
LZH	**Lanzhou**		**90.27**	**308**	⇑P		**P**		**01 16 26.8 +1.6**
LZH					sP		sP		01 19 37.1 -3.3
LZH					pmax		pmax		
		comp=Z,22nm,1.4s							
SNAA	**Sanae**		**90.54**	**179**	P		**P**		**01 16 25.7 0.0**
VNA3	**Neumayer Olymp**		**90.71**	**177**	P		**P**		**01 16 26.8 +0.4**
VNA2	**Neumayer--Watz**		**91.14**	**177**	P		**P**		**01 16 28.2 -0.2**
	baz=191,slow=2.8								
VNA1	**Neumayer--Stat**		**91.38**	**177**	P		**P**		**01 16 30.3 +0.9**
SONM	**Songino Array**		**93.06**	**319**	P		**P**		**01 16 36.9 -0.8**
		comp=Z,0.2nm,0.3s,baz=94,slow=2.1,SNR=4.4							
		comp=Z,0.2nm,0.3s							
GTA	**Gaotai**		**94.43**	**310**	⇓P		**P**		**01 16 45.4 +1.3**
GTA					pP		pP		01 18 53.3 -4.9
GTA					sP		sP		01 19 50.4 -9.3
GTA					pmax		pmax		
		comp=Z,5.0nm,0.7s							
ZALV	**Zalesovo Beam**		**107.77**	**322**	PKiKP		**PKiKP**		**01 21 46.1 -0.4**
		comp=Z,0.6nm,0.4s,baz=63,slow=0.7,SNR=4.4							
ZALV	**Zalesovo Beam**		**107.77**	**322**			**PKiKP**		**01 21 43.3 -3.2**
MKAR	**Makanchi Array**		**108.58**	**314**	PKiKP		**PKiKP**		**01 21 47.9 -0.4**
		comp=Z,0.8nm,0.6s,baz=83,slow=0.9,SNR=12							
MKAR	**Makanchi Array**		**108.58**	**314**			**PKiKP**		**01 21 47.3 -1.0**
BRVK	**Borovoye**		**116.43**	**321**			**PKdf**		**01 22 02.5 -0.6**
ABKAR	**Akbulak array**		**123.42**	**318**	PKPdf		**PKPdf**		**01 22 15.9 -0.7**
SCO	**Scoresbysund**		**125.75**	**9**	*i* P		**Pdif**		**01 19 08.0 +5.4**
ARCES	**ARCESS Array B**		**126.24**	**349**	PKP		**PKPdf**		**01 22 21.5 +0.1**
		comp=Z,3.5nm,0.8s,baz=13,slow=1.5,SNR=13							
ARCES	**ARCESS Array B**		**126.24**	**349**			**PKPdf**		**01 22 21.0 -0.4**
GEYT	**Alibeck**		**126.38**	**304**	PKP		**PKPdf**		**01 22 23.2 +0.6**
		comp=Z,2.7nm,0.7s,baz=68,slow=14,SNR=5.4							
GEYT	**Alibeck**		**126.38**	**304**			**PKPdf**		**01 22 23.1 +0.4**
FINES	**FINESS Array B**		**133.03**	**344**	PKP		**PKPdf**		**01 22 33.4 -1.1**
		comp=Z,1.8nm,0.6s,baz=116,slow=4.4,SNR=8.0							
FINES					SKPbc		**SKPab**		**01 25 08.0 +0.1**
		comp=Z,3.4nm,1.1s,baz=27,slow=3.4,SNR=4.5							
AKASG	**Malin Array Be**		**140.23**	**332**	PKhKP		PKPpre		01 22 41.7
		comp=Z,1.1nm,0.6s,baz=38,slow=4.6,SNR=8.0							
AKASG					PKP		**PKPdf**		**01 22 48.3 +0.3**
		comp=Z,1.1nm,0.5s,baz=41,slow=2.3,SNR=9.9							
AKASG	**Malin Array Be**		**140.23**	**332**			PKPpre		01 22 39.2
SORM	**Soroca**		**142.43**	**329**	⇑P		**PKPdf**		**01 22 49.1 -3.0**
GKP	**Gorka Klasztor**		**142.50**	**344**	*e*PKP		**PKPdf**		**01 22 49.6 -2.5**
BEL	**Belsk**		**142.68**	**339**	*e*PKP		**PKPdf**		**01 22 49.8 -2.6**
BNN	**Bunyan**		**143.07**	**312**	PKPdf		PKPbc		01 22 53.0 +0.8
LODK	**Lodwar**		**143.10**	**251**	PKPdf		PKPbc		01 22 53.5 +0.6
LEOM	**Leova**		**143.61**	**327**	⇑P		PKPbc		01 22 53.2 -0.1
VASR	**Vaslui**		**143.73**	**328**	⇓P		PKPbc		01 22 53.9 +0.2
KWP	**Kalwaria Pacla**		**143.80**	**336**	*e*PKP		PKPbc		01 22 54.4 +0.6
VLDR	**Vladesti**		**144.12**	**327**	⇓P		**PKPab**		**01 22 55.9 +0.6**
TLCR			**144.16**	**325**	⇓P		PKPbc		01 22 55.6 +0.6
BR131	**Keskin Array S**		**144.23**	**314**			PKPbc		01 22 55.5 -0.2
BRTR	**Keskin Array B**		**144.23**	**314**	PKP		PKPbc		01 22 55.6 -0.1
		comp=Z,7.1nm,0.8s,baz=122,slow=2.7,SNR=55							
BRTR	**Keskin Array B**		**144.23**	**314**	PKPbc		PKPbc		01 22 56.0 +0.3
BURAR	**Bucovina Array**		**144.28**	**331**	⇑P		**PKPdf**		**01 22 54.0 -1.5**
BURAR	**Bucovina Array**		**144.28**	**331**	PKPdf		**PKPdf**		**01 22 55.8 +0.3**
BIZ	**Bicaz**		**144.35**	**330**	⇑P		**PKPdf**		**01 22 56.0 +0.5**
DSB	**Dublin**		**144.38**	**7**	PKPdf		**PKPdf**		**01 22 55.3 0.0**
OJC	**Ojcow**		**144.38**	**339**	*e*PKP		**PKPdf**		**01 22 55.8 +0.4**
OJC	**Ojcow**		**144.38**	**339**	PKPdf		**PKPdf**		**01 22 56.0 +0.5**
KOLS	**Kolonicke sedl**		**144.53**	**335**	*e*PKP		PKPbc		01 22 56.8 +0.7
CFR	**Carcaliu**		**144.53**	**326**	⇑P		**PKPdf**		**01 22 51.2 -4.6**
TPGR	**Topolog**		**144.58**	**325**	⇑P		**PKPdf**		**01 22 56.2 +0.2**
VRI	**Vrincioaia**		**144.80**	**328**	⇑P		**PKPdf**		**01 22 56.5 +0.2**
VRI					⇑P		PKPbc		01 22 57.9 +0.9
TIRR	**Tirgusor**		**144.84**	**325**	⇓P		**PKPdf**		**01 22 57.2 +0.8**
TIRR	**Tirgusor**		**144.84**	**325**	PKPbc		**PKPdf**		**01 22 57.3 +0.9**
PLOR	**Plostina**		**144.85**	**328**	⇑P		**PKPdf**		**01 22 57.3 +0.9**
CRVS	**Cervenica-Dubn**		**144.87**	**336**	*e*PKP		PKPbc		01 22 58.0 +0.9
KSP	**Ksiaz**		**144.94**	**343**	*e*PKP		**PKPdf**		**01 22 57.3 +0.9**
ARCR	**ARCALIA**		**145.06**	**331**	⇓P		**PKPbc**		**01 22 58.2 +0.4**
OSTC	**Ostas**		**145.22**	**343**	*e*PKP		**PKPbc**		**01 22 59.2 +1.1**
CHVC	**Chvalec**		**145.23**	**343**	*e*PKP		**PKPbc**		**01 22 59.1 +0.9**
OKC	**Ostrava-Krasne**		**145.26**	**340**	*e*PKP		**PKPbc**		**01 22 59.0 +0.8**
UPC	**Upice**		**145.32**	**343**	*e*PKP		**PKPbc**		**01 22 59.4 +1.0**
NEHR	**Nehoiu**		**145.32**	**328**	⇑P		**PKPdf**		**01 22 57.8 +0.6**
CLL	**Collm**		**145.35**	**346**			**PKPbc**		**01 22 58.9 +0.5**
CLL	**Collm**		**145.35**	**346**	⇓*i* PKPbc		**PKPbc**		**01 22 58.8 +0.4**
		comp=Z,41nm,0.8s							
CLL					*e*pPKPdf		pPKPab		01 25 17.0 -0.2
DPC	**Dobruska-Polom**		**145.37**	**342**	⇑*e*PKP		**PKPbc**		**01 22 59.7 +1.1**
DOPR	**Dopca**		**145.39**	**329**	⇓P		**PKPdf**		**01 22 58.6 +1.2**
LANS	**Liptovska Anna**		**145.40**	**338**	*e*PKP		**PKPab**		**01 23 00.1 -0.2**
ISR	**Istrita**		**145.41**	**327**	⇑P		**PKPbc**		**01 22 59.5 +0.6**
MLR	**Muntele Rosu**		**145.45**	**328**	⇑P		**PKPbc**		**01 22 59.3 +0.2**
MLR	**Muntele Rosu**		**145.45**	**328**	PKPbc		**PKPdf**		**01 22 58.7 +1.1**
KRLC	**Kraliky**		**145.48**	**342**	*e*PKP		**PKPbc**		**01 22 59.8 +0.9**
MORC	**Moravsky Berou**		**145.51**	**341**	⇑P		**PKPdf**		**01 22 57.6 +0.2**
MORC	**Moravsky Berou**		**145.51**	**341**	*e*PKP		**PKPbc**		**01 22 59.7 +0.7**
MORC					*e*				01 25 21.7
BRG	**Berggiesshubel**		**145.53**	**345**	*i* PKP		**PKPbc**		**01 22 59.9 +0.9**
BRG					Amp				01 23 00.7
		comp=Z,26nm,1.1s							
BRG					*ex*		x		01 23 06.6
BRG					Amp				01 23 07.8
		comp=Z,9.0nm,1.1s							
CBBR	**Cluj-Babes-Bol**		**145.67**	**332**	⇑P		**PKPbc**		**01 22 59.3 -0.2**
PVCC	**Panska Ves**		**145.69**	**344**	⇑*e*PKP		**PKPbc**		**01 23 00.5 +1.1**
MAUC	**Maruska**		**145.78**	**340**	*e*PKP		**PKPbc**		**01 23 00.9 +1.1**
LTVH	**Ltavrtes, Hu**		**145.91**	**334**	⇑P		**PKPbc**		**01 23 00.8 +0.7**
LTVH	**Ltavrtes, Hu**		**145.91**	**334**	PKP		**PKPdf**		**01 22 59.1 +1.0**
LTVH	**Ltavrtes, Hu**		**145.91**	**334**	PKP		**PKPbc**		**01 23 01.4 +1.3**
VOIR				**145.94**	**329**	⇓P		**PKPbc**	**01 23 00.1 -0.3**
DRGR				**146.02**	**333**	⇓P		**PKPbc**	**01 23 00.2 -0.4**
PRU	**Pruhonice**		**146.19**	**344**	⇑*e*PKP		**PKPbc**		**01 23 01.6 +0.8**
PRU					*e*PKPAB		**PKPab**		**01 23 03.9 +0.6**
ARR	**Arges**		**146.19**	**329**	⇑P		**PKPdf**		**01 22 59.5 +0.7**
VRAC	**Vranov**		**146.22**	**341**	⇑P		**PKPbc**		**01 23 01.3 +0.3**
VRAC	**Vranov**		**146.22**	**341**	*e*PKP		**PKPbc**		**01 23 01.7 +0.7**
KOLL	**Kolacno**		**146.26**	**339**	*e*PKP		**PKPbc**		**01 23 02.2 +1.1**
JAVC	**Velka Javorina**		**146.27**	**340**	*e*PKP		**PKiKP**		**01 23 03.0 -0.4**
JAVC					*e*				01 25 21.4
PSZ	**Piszkesteto**		**146.27**	**337**	⇓P		**PKPbc**		**01 23 01.1 -0.1**
PSZ	**Piszkesteto**		**146.27**	**337**	PKP		**PKPbc**		**01 23 02.2 +1.0**
NKC	**Novy Kostel**		**146.48**	**346**	⇑*e*PKP		**PKPbc**		**01 23 02.5 +0.9**
NKC					*e*PKPAB		**PKPab**		**01 23 05.1 +0.6**
KRUC	**Moravsky**		**146.50**	**341**	*e*PKP		**PKPbc**		**01 23 02.1 +0.4**
KRUC					*e*				01 25 20.9
TREC	**Trest**		**146.56**	**342**	⇑*e*PKP		**PKPbc**		**01 23 02.5 +0.6**
TREC					*e*PKPAB		**PKPab**		**01 23 05.7 +0.8**
SMOL	**Smolenice**		**146.65**	**340**	*e*PKP		**PKPbc**		**01 23 03.6 +1.5**
MODS	**Modra-Piesok**		**146.82**	**340**	*e*PKP		**PKPbc**		**01 23 03.9 +1.3**
SIRR	**Siria**		**146.89**	**333**	⇑P		**PKPbc**		**01 23 03.6 +0.7**
BUD	**Budapest**		**146.96**	**337**	PKP		**PKPbc**		**01 23 03.8 +0.9**
ZST	**Bratislava**		**147.03**	**340**	*e*PKP		**PKPbc**		**01 23 04.0 +0.9**
GZR	**Gura Zlata**		**147.06**	**331**	⇓P		**PKPbc**		**01 23 04.1 +0.7**
MEM	**Membach**		**147.18**	**354**	*d*PKPdf		**PKPdf**		**01 23 00.6 +0.5**
MEM					*d*PKP		**PKPbc**		**01 23 04.0 +0.5**
BTNL	**Ternell**		**147.19**	**354**	*d*PKP		**PKPbc**		**01 23 03.8 +0.3**
KHC	**Kasperske Hory**		**147.23**	**344**	*e*PKPDF		**PKPdf**		**01 23 00.9 +0.6**
KHC					⇑*e*PKP		**PKPbc**		**01 23 04.4 +0.7**
KHC					*e*PKPAB		**PKPab**		**01 23 08.4 +0.8**
BSTI	**Sart Tilman**		**147.25**	**354**	*d*PKPdf		**PKPdf**		**01 23 00.6 +0.3**
BSTI					*d*PKP		**PKPbc**		**01 23 04.4 +0.8**
VLAD	**Vladila**		**147.28**	**328**	⇑P		**PKPbc**		**01 23 03.8 -0.1**
CKRC	**Cesky Krumlov**		**147.32**	**343**	*e*PKPDF		**PKPdf**		**01 23 01.3 +0.8**
CKRC					⇑*e*PKP		**PKPbc**		**01 23 04.7 +0.8**
CKRC					*e*PKPAB		**PKPab**		**01 23 08.4 +0.4**
CSKK	**Cskako**		**147.34**	**338**	PKP		**PKPbc**		**01 23 04.6 +0.6**
SRE	**Strehaia**		**147.40**	**330**	⇑P		**PKPbc**		**01 23 04.7 +0.4**
BZS	**Buzias**		**147.41**	**332**	⇑P		**PKPdf**		**01 23 00.7 0.0**
SNF	**Seneffe**		**147.43**	**356**	*d*PKP		**PKPbc**		**01 23 04.6 +0.5**
SNF					*d*PKPab		**PKPab**		**01 23 08.2 0.0**
BHOU	**Houvegnez**		**147.43**	**354**	*d*PKP		**PKPbc**		**01 23 05.0 +0.9**
GEC2	**GERESS Array S**		**147.46**	**344**			**PKPbc**		**01 23 04.3 -0.1**
GERES	**GERESS Array B**		**147.46**	**344**	PKPbc		**PKPbc**		**01 23 05.0 +0.6**
		comp=Z,6.7nm,0.8s,baz=13,slow=1.8,SNR=55							
GERES	**GERESS Array B**		**147.46**	**344**			**PKPbc**		**01 23 04.3 -0.1**
BGES	**Gesves**		**147.49**	**355**	*d*PKP		**PKPbc**		**01 23 04.1 -0.1**
BGES					*d*PKPab		**PKPab**		**01 23 07.8 -0.7**
EGYH	**Egyhazaskeszo**		**147.63**	**339**	PKP		**PKPbc**		**01 23 05.9 +1.2**
CONA	**Conrad Observa**		**147.66**	**341**	*i* P		**PKPbc**		**01 23 05.7 +0.8**
		comp=Z,27nm,1.7s,SNR=13							
RCHB	**Rochefort**		**147.70**	**355**	*d*PKPdf		**PKPdf**		**01 23 01.5 +0.5**
RCHB					*d*PKP		**PKPbc**		**01 23 05.1 +0.4**
RONA	**Rosalia, Austr**		**147.73**	**340**	*i* P		**PKPbc**		**01 23 05.8 +0.8**
		comp=Z,10nm,0.8s,SNR=10							
MPLH	**Magyarpolny**		**147.77**	**338**	PKP		**PKPbc**		**01 23 05.8 +0.8**
DOU	**Dourbes**		**147.81**	**355**	*d*PKP		**PKPbc**		**01 23 05.8 +0.7**
DOU					*d*PKPab		**PKPab**		**01 23 09.3 -0.5**
MDVR	**Moldovita**		**148.01**	**331**	⇓P		**PKPbc**		**01 23 05.9 +0.1**
WLF	**Walferdange**		**148.09**	**353**	*d*PKP		**PKPbc**		**01 23 04.0 +2.4**
MORH	**Mrgy, Hungar**		**148.16**	**336**	⇓P		**PKPdf**		**01 23 01.1 -0.7**
MORH	**Mrgy, Hungar**		**148.16**	**336**	*e*P		**PKPdf**		**01 23 01.6 -0.3**
MORH	**Mrgy, Hungar**		**148.16**	**336**	PKP		**PKPdf**		**01 23 03.9 +2.1**
MOA	**Molln**		**148.21**	**343**	*i* P		**PKPbc**		**01 23 06.4 +0.2**
		comp=Z,5.3nm,0.8s,SNR=7.0							
BLKB	**Belogradchik**		**148.42**	**329**	⇓P		**PKPdf**		**01 23 03.0 +0.6**
KOVH	**Kovagotottos**		**148.48**	**337**	PKP		**PKPbc**		**01 23 07.0 +0.2**
BIOA	**Bad Ischl, Aus**		**148.53**	**343**	*i* P		**PKPbc**		**01 23 07.0 0.0**
		comp=Z,10nm,1.1s,SNR=6.6							
FRGS	**Fruska Gora**		**148.56**	**334**	⇓P		**PKPbc**		**01 23 07.5 +0.4**
FRGS	**Fruska Gora**		**148.56**	**334**	⇓*i* P		**PKPbc**		**01 23 07.0 -0.1**
KOGS	**Kog**		**148.84**	**339**	*i* PKPbc		**PKPbc**		**01 23 07.5 -0.2**
VTS	**Vitosha**		**148.86**	**327**	PKPbc		**PKPbc**		**01 23 08.1 -0.1**
SOKA	**Soboth**		**149.03**	**341**	*i* P		**PKPbc**		**01 23 08.2 -0.2**
		comp=Z,12nm,1.1s,SNR=10							
KBA	**Koelnbreinsper**		**149.17**	**343**	*i* P		**PKPbc**		**01 23 08.7 -0.1**
		comp=Z,8.5nm,0.7s,SNR=8.8							
DIVS	**Divibare**		**149.32**	**332**	⇓*i* P		**PKPbc**		**01 23 09.2 +0.1**
OBKA	**Obir**		**149.34**	**341**	*i* P		**PKPbc**		**01 23 08.6 -0.4**
		comp=Z,5.1nm,0.8s,SNR=6.0							
WATA	**Walderalm**		**149.39**	**345**	*i* P		**PKPbc**		**01 23 09.3 +0.1**
		comp=Z,23nm,1.7s,SNR=11							
RETA	**Reutte**		**149.44**	**347**	*i* P		**PKPbc**		**01 23 09.5 +0.3**
		comp=Z,6.4nm,0.8s,SNR=6.3							
WTTA	**Wattenberg**		**149.45**	**345**	*i* P		**PKPbc**		**01 23 09.6 +0.2**
		comp=Z,17nm,0.8s,SNR=9.4							
MOTA	**Moosalm**		**149.50**	**346**	*i* P		**PKPbc**		**01 23 09.4 -0.1**
		comp=Z,18nm,0.9s,SNR=9.8							
MYKA	**Terra Mystica**		**149.50**	**342**	*i* P		**PKPbc**		**01 23 08.8 -0.6**
		comp=Z,9.5nm,0.8s,SNR=6.4							
SQTA	**Sankt Quirin**		**149.59**	**346**	*i* P		**PKPbc**		**01 23 09.9 +0.2**
		comp=Z,17nm,1.0s,SNR=7.6							
CRES	**Cresnjev**		**149.65**	**339**	⇓*i* P		**PKPbc**		**01 23 09.6 -0.1**
CRES	**Cresnjev**		**149.65**	**339**	*i* PKPbc		**PKPbc**		**01 23 09.7 0.0**
ABTA	**Abfaltersbach**		**149.70**	**344**	*i* P		**PKPbc**		**01 23 09.5 -0.4**
		comp=Z,23nm,0.9s,SNR=14							
LJU	**Ljubljana**		**149.76**	**341**	⇓*i* P		**PKPbc**		**01 23 10.0 0.0**
LJU	**Ljubljana**		**149.76**	**341**	*i* PKPbc		**PKPbc**		**01 23 10.1 +0.1**
BBLS	**Lazići**		**149.76**	**333**	⇓*i* P		**PKPbc**		**01 23 10.4 +0.3**
DAVA	**Damuels**		**149.82**	**348**	*i* P		**PKPbc**		**01 23 10.5 +0.2**
		comp=Z,18nm,1.3s,SNR=8.2							
FETA	**Feichten**		**149.89**	**346**	*i* P		**PKPbc**		**01 23 11.1 +0.7**
		comp=Z,10nm,0.8s,SNR=8.1							
RUDO	**Rudo**		**149.98**	**332**	⇓*i* P		**PKPbc**		**01 23 10.2 -0.4**
SJES	**Sjenica**		**149.98**	**331**	⇓*i* P		**PKPbc**		**01 23 10.7 0.0**
CEY	**Cerknica**		**150.06**	**341**	⇓*i* P		**PKPbc**		**01 23 10.7 0.0**
MGRS	**Mrkonjic Grad**		**150.27**	**336**	*e*P		**PKPab**		**01 23 19.3 -1.0**
SKDS	**Skadanscina**		**150.36**	**341**	⇓*i* P		**PKPbc**		**01 23 11.0 -0.4**
UPM	**Unac-Piva**		**150.51**	**332**	*e*P		**PKPbc**		**01 23 11.5 -0.5**
SRKY	**Kupres RS**		**150.53**	**335**	*e*P		**PKPbc**		**01 23 11.7 -0.2**
BRY	**Bratogost**		**150.91**	**332**	*e*P		**PKPbc**		**01 23 12.4 -0.5**
PDG	**Podgorica**		**150.96**	**331**	⇓P		**PKPbc**		**01 23 12.4 -0.4**
PDG	**Podgorica**		**150.96**	**331**	PKPbc		**PKPbc**		**01 23 12.6 -0.2**
PDG					PKPab		**PKPab**		**01 23 22.8 -0.4**
PDG	**Podgorica**		**150.96**	**331**	⇓*i* P		**PKPbc**		**01 23 12.4 -0.4**
TREB	**Trebinje**		**151.14**	**332**	*e*P		**PKPbc**		**01 23 13.0 -0.2**
DRME	**Dracevica, Mon**		**151.19**	**331**	⇓*i* P		**PKPbc**		**01 23 13.3 -0.1**
HCY	**Herceg Novi**		**151.30**	**332**	*e*P		**PKPbc**		**01 23 12.6 -1.0**
STON	**Ston**		**151.30**	**333**	*e*P		**PKPbc**		**01 23 12.2 -1.3**
ESDC	**Sonseca Array**		**158.01**	**10**	PKPbc		**PKPab**		**01 23 53.6 0.0**
		comp=Z,0.9nm,0.8s,baz=355,slow=3.3,SNR=7.6							
ESDC	**Sonseca Array**		**158.01**	**10**	PKPab		**PKPab**		**01 23 52.7 -1.0**
TORD	**Torodi Ar. Bea**		**175.09**	**191**	PKP		**PKPdf**		**01 23 28.7 -0.8**
		comp=Z,1.3nm,0.8s,baz=270,slow=0.4,SNR=5.9							
TORD	**Torodi Ar. Bea**		**175.09**	**191**			**PKPdf**		**01 23 27.7 -1.8**

DDA **06** *01:14:07.3±0.0, 41.52N×44.17E, h7km±6km, ML1.6*
TIF **06** *01:14:09.1, 41.39N×44.09E, h10km*
NORS **06** *01:14:12.1±0.0, 41.46N×44.12E, h10km, MPVA2.9*
ISC 06 01:14:08.3±1.0, 41.28N±0.04×44.20E±0.02, h15km±5km, n27, σ1°42/49, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DMNI	**Dmanisi**	**0.05**	**356**	S		**Sg**	**01 14 13.9 +0.8**
DMNI	**Dmanisi**	**0.05**	**356**	P		**Pg**	**01 14 12.3 +1.1**
TRLG	**Trialeti**	**0.27**	**345**	S		**Sg**	**01 14 15.5 -2.5**
TRLG	**Trialeti**	**0.27**	**345**	P		**Pg**	**01 14 13.1 -1.0**
BGD	**Bogdanovka**	**0.45**	**268**	P		**Pg**	**01 14 17.8 +0.4**
BGD				S		**Sg**	**01 14 23.5 0.0**
AKH	**Akhalkalaki**	**0.54**	**284**	P		**Pg**	**01 14 18.7 -0.4**
AKH				S		**Sg**	**01 14 25.0 -1.3**
BTNK	**Botanikuri**	**0.60**	**48**	P		**Pg**	**01 14 16.1 -4.1**
BTNK				S		**Sg**	**01 14 25.4 -2.9**
BTNK	**Botanikuri**	**0.60**	**48**	P		**Pg**	**01 14 16.1 -4.1**
BTNK				S		**Sg**	**01 14 24.8 -3.4**
SEAG	**Tbilisi Sea**	**0.66**	**43**	P		**Pb**	**01 14 22.4 +0.8**
SEAG				S		**Sb**	**01 14 31.9 +1.1**
BKRG	**Bakuriani**	**0.69**	**314**	P		**Pg**	**01 14 20.9 -0.9**
BKRG				S		**Sg**	**01 14 29.2 -1.9**
EAK	**Akyaka**	**0.74**	**217**	P		**Pn**	**01 14 24.7 +0.3**
EAK				*i* AML		AML	01 14 39.0
	comp=E,15nm,0.6s						
EAK				*i* AML		AML	01 14 43.0
	comp=N,23nm,0.3s						
EPOS	**Posof**	**1.12**	**282**	P		**Pg**	**01 14 29.2 -0.8**
EPOS				S		**Sg**	**01 14 43.3 -1.4**
EPOS				*i* AML		AML	01 14 44.0
	comp=E,16nm,0.3s						
EPOS				*i* AML		AML	01 14 45.0
	comp=N,29nm,0.7s						
ABS	**Abastumani**	**1.14**	**295**	P		**Pb**	**01 14 28.8 -1.0**
ABS				S		**Sg**	**01 14 43.8 -1.4**
GUDG	**Gudauri**	**1.20**	**10**	P		**Pb**	**01 14 30.8 -0.1**
GUDG				S

Plg5.4727°, Azm130.0579°; **Fault plane solution: NP1:**$\phi_0$176.48785°,δ34.45815°,λ89.61150°. **NP2:** ϕ356.95902°,δ55.54275°,λ90.26659°. **Principal axes:** T Plg79.4553°, Azm267.9891°; N Plg0.2198°, Azm176.8082°; P Plg10.5424°, Azm86.7673°; **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**0.95**	**353**	P	**Pn**	**02 35 46.8**	**-0.7**
GLKZ				S	**Sn**	**02 35 57.0**	**-2.8**
RAO	**Raoul Island**	**0.96**	**353**	P	**Pn**	**02 35 46.6**	**-1.0**
	39μm,0.3s,baz=136,slow=5.3,SNR=480						
RAO	**Raoul Island**	**0.96**	**353**	Pn	**Pn**	02 35 46.6	-1.0
RAO				Sn	**Sn**	02 35 57.9	-2.2
RAO	**Raoul Island**	**0.96**	**353**	⇓P	**Pn**	02 35 46.6	-1.0
RIZ	**Raoul Island**	**0.97**	**353**	P	**Pn**	**02 35 47.2**	**-0.5**
RIZ				S	**Sn**	**02 35 59.1**	**-1.1**
MXZ	**Matakaoa Point**	**8.02**	**203**	Pn	**Pn**	**02 37 22.5**	**-2.1**
MXZ	**Matakaoa Point**	**8.02**	**203**	P	**Pn**	**02 37 22.4**	**-2.2**
MXZ				S	**Sn**	**02 38 54.5**	**+0.5**
WMGZ	**Waiomatatini S**	**8.22**	**201**	P	**Pn**	**02 37 25.5**	**-1.8**
WMGZ				S	**Sn**	**02 38 59.2**	**+0.3**
GRZ	**Great Barrier**	**8.26**	**221**	P	Pn	02 37 33.7	+5.8
HAZ	**Te Kaha**	**8.38**	**205**	P	**Pn**	**02 37 27.5**	**-1.9**
HAZ				S	**Sn**	**02 39 05.8**	**+3.1**
PKGZ	**Pakihiroa**	**8.39**	**203**	P	**Pn**	**02 37 27.3**	**-2.5**
PKGZ				S	**Sn**	**02 39 01.6**	**-1.6**
WIZ	**White Island**	**8.41**	**208**	P	**Pn**	**02 37 31.9**	**+2.0**
WIZ				S	**Sn**	**02 39 09.6**	**+6.1**
KUZ	**Kuaotunu**	**8.48**	**218**	P	**Pn**	**02 37 34.2**	**+3.4**
PUZ	**Puketiti**	**8.50**	**202**	P	**Pn**	**02 37 28.5**	**-2.7**
PUZ				S	**Sn**	**02 39 03.9**	**-1.9**
RUGZ	**Raukumara Rang**	**8.60**	**205**	P	**Pn**	**02 37 30.3**	**-2.4**
RUGZ				S	**Sn**	**02 39 08.6**	**+0.2**
TWGZ	**Tauwhareparae**	**8.69**	**203**	P	**Pn**	**02 37 31.5**	**-2.3**
TWGZ				S	**Sn**	**02 39 06.7**	**-3.7**
WCZ	**Waipu Caves**	**8.73**	**227**	P	Pn	02 37 40.8	+6.5
WHRZ	**Whale Island**	**8.78**	**208**	P	**Pn**	**02 37 35.9**	**+0.9**
WHRZ				S	**Sn**	**02 39 14.3**	**+1.7**
OUZ	**Omahuta**	**8.81**	**233**	P	Pn	02 37 43.6	+8.2
OUZ	**Omahuta**	**8.81**	**233**	P	Pn	02 37 44.0	+8.6
OUZ	**Omahuta**	**8.81**	**233**	⇑P	Pn	02 37 41.1	+5.7
CNGZ	**Carnagh Statio**	**8.89**	**201**	P	**Pn**	**02 37 34.3**	**-2.3**
CNGZ				S	**Sn**	**02 39 18.0**	**+2.6**
TKGZ	**Te Karaka**	**8.97**	**203**	P	**Pn**	**02 37 35.0**	**-2.6**
TKGZ				S	**Sn**	**02 39 17.1**	**-0.1**
MKAZ	**Moumakai**	**9.04**	**219**	P	**Pn**	**02 37 41.7**	**+3.1**
URZ	**Urewera**	**9.07**	**206**	P	**Pn**	**02 37 37.2**	**-1.8**
	97nm,0.6s,baz=259,slow=3.2,SNR=44						
URZ				S	**Sn**	**02 39 19.0**	**-0.8**
	3μm,0.8s,baz=201,slow=22,SNR=24						
URZ	**Urewera**	**9.07**	**206**	P	**Pn**	**02 37 36.7**	**-2.3**
URZ				S	**Sn**	**02 39 19.9**	**+0.1**
URZ	**Urewera**	**9.07**	**206**	⇓P	**Pn**	**02 37 36.6**	**-2.4**
EDRZ	**Edgecumbe**	**9.09**	**208**	P	**Pn**	**02 37 41.0**	**+1.7**
EDRZ				S	**Sn**	**02 39 24.6**	**+4.3**
RAGZ	**Rawiri**	**9.17**	**204**	P	**Pn**	**02 37 37.5**	**-2.9**
RAGZ				S	**Sn**	**02 39 19.0**	**-3.3**
KMRZ	**Kaimai**	**9.22**	**213**	P	**Pn**	**02 37 45.4**	**+4.3**
KARZ	**Kaharoa**	**9.23**	**211**	P	**Pn**	**02 37 44.3**	**+3.1**
MKRZ	**Makatiti**	**9.23**	**209**	P	**Pn**	**02 37 40.7**	**-0.6**
RIGZ	**Rimuhau**	**9.24**	**202**	P	**Pn**	**02 37 38.2**	**-3.1**
RIGZ				S	**Sn**	**02 39 23.7**	**-0.3**
TARZ	**Mount Tarawera**	**9.29**	**209**	P	**Pn**	**02 37 44.0**	**+1.8**
HLRZ	**Highlands Stat**	**9.37**	**210**	P	**Pn**	**02 37 46.6**	**+3.4**
RRRZ	**Republican Roa**	**9.38**	**209**	P	**Pn**	**02 37 46.0**	**+2.7**
MUGZ	**Murupara**	**9.39**	**207**	P	Pn	02 37 39.5	-3.9
PRGZ	**Paritu Road**	**9.39**	**201**	P	**Pn**	**02 37 40.4**	**-3.1**
PRGZ				S	**Sn**	**02 39 26.5**	**-1.3**
RTZ	**Ruatahuna**	**9.43**	**206**	P	**Pn**	**02 37 40.7**	**-3.4**
RTZ				S	**Sn**	**02 39 27.5**	**-1.3**
SNGZ	**Shannon Statio**	**9.45**	**204**	P	**Pn**	**02 37 41.7**	**-2.5**
SNGZ				S	**Sn**	**02 39 29.3**	**+0.2**
HRRZ	**Handcock Road**	**9.52**	**209**	P	**Pn**	**02 37 47.4**	**+2.3**
KNZ	**Kokohu**	**9.55**	**202**	P	**Pn**	**02 37 43.3**	**-2.2**
GRRZ	**Galatos Road**	**9.56**	**210**	P	Pn	02 37 50.4	+4.6
PRRZ	**Plateau Road**	**9.56**	**209**	P	**Pn**	**02 37 44.8**	**-1.0**
MHGZ	**Mahia Peninsul**	**9.60**	**200**	P	Pn	02 37 42.2	-4.0
RAHZ	**Arahi**	**9.66**	**205**	P	**Pn**	**02 37 44.1**	**-3.0**
WPRZ	**Whakapapatarin**	**9.68**	**209**	P	**Pn**	**02 37 49.3**	**+1.9**
TLZ	**Tolley Road**	**9.80**	**212**	P	**Pn**	**02 37 52.9**	**+3.9**
WHTZ	**Whakaora**	**9.89**	**210**	P	**Pn**	**02 37 54.4**	**+4.1**
NMHZ	**Naumai**	**9.92**	**205**	P	**Pn**	**02 37 48.2**	**-2.5**
ARHZ	**Aropaoanui**	**10.00**	**204**	P	**Pn**	**02 37 48.3**	**-3.4**
HATZ	**Hinemaiaia**	**10.02**	**209**	P	**Pn**	**02 37 50.0**	**-2.1**
WATZ	**Wairara**	**10.02**	**210**	P	**Pn**	**02 37 53.1**	**+1.0**
BKZ	**Black Stump Fm**	**10.10**	**206**	P	Pn	02 37 49.3	-3.9
BKZ	**Black Stump Fm**	**10.10**	**206**	P	Pn	02 38 01.0	+7.9
RATZ	**Rangitukua**	**10.13**	**210**	P	**Pn**	**02 37 55.1**	**+1.4**
RITZ	**Rihia Road**	**10.16**	**209**	P	**Pn**	**02 37 55.2**	**+0.9**
KATZ	**Kakaramea**	**10.26**	**210**	P	**Pn**	**02 37 57.4**	**+2.0**
MCHZ	**McNeill Hill**	**10.27**	**205**	P	**Pn**	**02 37 52.3**	**-3.0**
HIZ	**Hauiti**	**10.27**	**214**	Pn	**Pn**	**02 37 55.7**	**+0.2**
HIZ	**Hauiti**	**10.27**	**214**	P	**Pn**	**02 37 59.3**	**+3.9**
CKHZ	**Cape Kidnapper**	**10.32**	**203**	P	Pn	02 37 52.5	-3.7
KWHZ	**Kaweka Forest**	**10.35**	**206**	P	Pn	02 37 52.0	-4.6
NTVZ	**North Tongarir**	**10.37**	**209**	P	**Pn**	**02 37 54.2**	**-2.7**
TMVZ	**Te Maari**	**10.37**	**209**	P	**Pn**	**02 37 54.4**	**-2.6**
ETVZ	**East Tongariro**	**10.39**	**209**	P	**Pn**	**02 37 54.8**	**-2.4**
WTVZ	**West Tongariro**	**10.42**	**210**	P	**Pn**	**02 37 56.7**	**-0.9**
NNVZ	**North Ngauruho**	**10.42**	**210**	P	**Pn**	**02 37 56.9**	**-0.7**
OTVZ	**Oturere**	**10.43**	**209**	P	**Pn**	**02 37 54.9**	**-2.9**
TWVZ	**Taurewa**	**10.45**	**210**	P	**Pn**	**02 37 57.8**	**-0.2**
SNVZ	**South Ngauruho**	**10.46**	**209**	P	**Pn**	**02 37 55.2**	**-2.9**
NGZ	**Ngauruhoe**	**10.47**	**209**	P	**Pn**	**02 37 56.7**	**-1.5**
KAHZ	**Kahuranaki**	**10.51**	**203**	P	Pn	02 37 54.0	-4.8
TUVZ	**Tukino**	**10.52**	**209**	P	**Pn**	**02 37 57.9**	**-1.1**
BHHZ	**Black Hill Sta**	**10.54**	**207**	P	Pn	02 37 54.7	-4.5
KRHZ	**Kereru**	**10.56**	**205**	P	Pn	02 37 54.3	-5.1
WHVZ	**Whangaehu Hut**	**10.56**	**209**	P	**Pn**	**02 37 59.1**	**-0.5**
TRVZ	**Turoa**	**10.59**	**209**	P	**Pn**	**02 38 00.7**	**+0.6**
WNVZ	**Wahianoa**	**10.59**	**209**	P	**Pn**	**02 38 00.4**	**+0.3**
MOVZ	**Moawhango**	**10.60**	**208**	P	Pn	02 37 55.9	-4.1
MTVZ	**Mangateitei**	**10.70**	**209**	P	**Pn**	**02 37 59.7**	**-1.6**
VRZ	**Vera Road**	**10.80**	**213**	P	Pn	02 38 07.1	+4.4
PNHZ	**Pukenui**	**10.86**	**205**	P	Pn	02 37 58.4	-5.1
PRHZ	**Porangahau**	**11.02**	**203**	P	Pn	02 38 00.1	-5.6
TSZ	**Takapari Road**	**11.07**	**206**	P	**Pn**	**02 38 05.9**	**-0.6**
DVHZ	**Dannevirke**	**11.21**	**204**	P	Pn	02 38 03.6	-4.7
WAZ	**Wanganui**	**11.21**	**210**	P	**Pn**	**02 38 05.6**	**-2.8**
PKE	**Pukeiti**	**11.22**	**215**	P	Pn	02 38 17.9	+9.4
NEZ	**North Egmont**	**11.23**	**214**	P	Pn	02 38 14.2	+5.5
LREZ	**Lake Rotokare**	**11.23**	**213**	P	Pn	02 38 13.4	+4.8
POWZ	**Post Office Ro**	**11.44**	**206**	P	**Pn**	**02 38 08.4**	**-3.0**
BFZ	**Birch Farm**	**11.52**	**203**	P	Pn	02 38 19.8	+7.2
TIWZ	**Tintock**	**11.73**	**204**	P	Pn	02 38 09.3	-6.2
CPWZ	**Castlepoint**	**11.74**	**203**	P	**Pn**	**02 38 17.4**	**+1.9**
LKBA	**Tubou, Lakemba**	**11.96**	**355**	P	Pn	02 38 25.6	+7.0
NFK	**Norfolk Island**	**12.47**	**272**	P	**Pn**	**02 38 30.0**	**+4.5**
	baz=13,SNR=6.5						
NFK	**Norfolk Island**	**12.47**	**272**	P	**P**	**02 38 32.9**	**-3.8**
NFK	**Norfolk Island**	**12.47**	**272**	⇓P	Pn	02 38 30.8	+5.2
SNZO	**South Karori**	**12.64**	**207**	⇑P	**Pn**	**02 38 26.8**	**-0.9**
MSVF	**Nonsavu**	**12.98**	**342**	P	**Pn**	**02 38 35.2**	**+2.5**
	153nm,0.9s,baz=151,slow=13,SNR=31						
MSVF				LR	LR	02 42 50.2	
	comp=Z,48μm,19.9s,baz=177,slow=34						
MSVF	**Nonsavu**	**12.98**	**342**	Pn	**Pn**	**02 38 31.8**	**-0.9**
MSVF	**Nonsavu**	**12.98**	**342**	P	**Pn**	**02 38 31.8**	**-0.9**
MSVF	**Nonsavu**	**12.98**	**342**	P	P	02 38 37.6	-4.9
MSVF	**Nonsavu**	**12.98**	**342**	⇑P	**Pn**	**02 38 34.9**	**+2.2**
NIUE	**Niue**	**13.18**	**35**	P	**Pn**	**02 38 30.7**	**-4.7**
	baz=13,SNR=7.2						
NIUE	**Niue**	**13.18**	**35**	Pn	Pn	02 38 29.1	-6.3
NIUE	**Niue**	**13.18**	**35**	⇑P	Pn	02 38 30.1	-5.2
QRZ	**Quartz Range**	**13.20**	**214**	P	**P**	**02 38 42.3**	**-2.4**
CMWZ	**Cape Campbell**	**13.20**	**207**	P	**Pn**	**02 38 35.3**	**-0.2**
TAVE	**Taveuni**	**13.58**	**351**	P	**P**	**02 38 47.4**	**-1.6**
DGTI	**Dogotuki**	**14.03**	**350**	P	**P**	**02 38 53.6**	**-0.5**
LTZ	**Lake Taylor**	**14.86**	**210**	P	**Pn**	**02 38 55.4**	**-2.7**
AMCZ	**Amberley**	**15.03**	**208**	P	**Pn**	**02 38 58.5**	**-1.7**
PINNC	**Pines Island,**	**15.22**	**296**	P	**P**	**02 39 07.4**	**+0.1**
PINNC				IAmb	IAmb	02 39 22.6	
	comp=Z,1μm,1.2s						
PINNC	**Pines Island,**	**15.22**	**296**	P	**P**	**02 39 09.7**	**+2.4**
MARNC	**Mare, Loyalty**	**15.43**	**301**	P	**P**	**02 39 09.6**	**0.0**
MARNC	**Mare, Loyalty**	**15.43**	**301**	P	**P**	**02 39 12.2**	**+2.6**
MARNC	**Mare, Loyalty**	**15.43**	**301**	⇓P	**P**	**02 39 09.6**	**0.0**
WVZ	**Waitaha Valley**	**15.78**	**212**	P	**Pn**	**02 39 09.7**	**-0.3**
OUENC	**Ouen Island, N**	**15.80**	**296**	P	**P**	**02 39 14.9**	**+1.1**
OUENC				IAmb	IAmb	02 39 38.6	
	comp=Z,1μm,1.3s						
OUENC	**Ouen Island, N**	**15.80**	**296**	P	**P**	**02 39 18.5**	**+4.8**
YATNC	**Mamie plateau,**	**15.96**	**297**	P	**P**	**02 39 19.1**	**+3.6**
WACZ	**Wakanui South**	**15.99**	**208**	P	**Pn**	**02 39 09.1**	**-3.6**
RPZ	**Rata Peaks**	**16.14**	**210**	P	**Pn**	**02 39 13.8**	**-0.8**
	comp=Z,81nm,0.5s,baz=76,slow=1.1,SNR=36						
RPZ				S	Sn	02 41 57.2	-15
	comp=Z,228nm,0.6s,baz=130,slow=24,SNR=12						
RPZ				LR	LR	02 46 04.7	
	comp=Z,7μm,20.5s,baz=45,slow=39						
RPZ	**Rata Peaks**	**16.14**	**210**	P	**Pn**	**02 39 15.6**	**+1.0**
ONTNC	**Ouen Toro**	**16.16**	**295**		**P**	**02 39 18.4**	**+0.6**
ONTNC	**Ouen Toro**	**16.16**	**295**	P	**P**	**02 39 21.6**	**+3.8**
ONTNC	**Ouen Toro**	**16.16**	**295**	⇑P	**P**	**02 39 20.1**	**+2.3**
DZM	**Mont Dzumac**	**16.30**	**296**	P	**P**	**02 39 20.4**	**+1.0**
	comp=Z,335nm,0.9s,baz=103,slow=14,SNR=36						
DZM				LR	LR	02 44 23.2	
	comp=Z,57μm,18.9s,baz=128,slow=33						
DZM	**Mont Dzumac**	**16.30**	**296**	*e*P	**P**	**02 39 21.0**	**+1.6**
	comp=Z,2μm,1.4s						
DZM				*e*LR	LR	02 43 14.2	
	comp=Z,120μm,25.4s						
DZM	**Mont Dzumac**	**16.30**	**296**		**P**	**02 39 19.8**	**+0.4**
DZM				IAmb	IAmb	02 39 25.6	
	comp=Z,1μm,1.3s						
DZM	**Mont Dzumac**	**16.30**	**296**	P	**P**	**02 39 23.3**	**+3.9**
DZM	**Mont Dzumac**	**16.30**	**296**	⇑P	**P**	**02 39 21.8**	**+2.4**
NOUC	**Port Laguerre**	**16.39**	**296**	P	**P**	**02 39 24.2**	**+3.9**
AFI	**Afiamalu**	**17.14**	**20**	P	Pn	02 39 19.7	-7.8
	comp=Z,44nm,0.6s,baz=24,slow=3.5,SNR=6.0						
AFI				S	Sn	02 42 19.7	-17
	comp=Z,47nm,0.6s,baz=59,slow=18,SNR=2.1						
AFI	**Afiamalu**	**17.14**	**20**	Pn	**Pn**	**02 39 24.9**	**-2.5**
AFI	**Afiamalu**	**17.14**	**20**	P	**Pn**	**02 39 24.9**	**-2.5**
AFI				pmax	pmax		
	comp=Z,291nm,1.0s						
AFI	**Afiamalu**	**17.14**	**20**	⇑P	**P**	**02 39 27.6**	**-1.2**
ODZ	**Otahua Downs**	**17.39**	**208**	P	**Pn**	**02 39 30.7**	**+0.5**
RTV	**Rentapao**	**17.62**	**311**	P	**P**	**02 39 39.3**	**+5.4**
RAR	**Rarotonga**	**18.52**	**65**	P	**Pn**	**02 39 44.1**	**-0.2**
	comp=Z,5.6nm,0.3s,baz=219,slow=5.8,SNR=13						
RAR				S	Sn	02 42 54.0	-16
	comp=Z,295nm,1.1s,baz=65,slow=17,SNR=4.3						
RAR				LR	LR	02 46 10.2	
	comp=Z,7μm,18.4s,baz=242,slow=34						
	comp=Z,178nm,0.9s						
RAR	**Rarotonga**	**18.52**	**65**		**P**	**02 39 43.2**	**-0.7**
RAR	**Rarotonga**	**18.52**	**65**	P	**P**	**02 39 43.2**	**-0.7**
RAR				pmax	pmax		
	comp=Z,1μm,1.8s						
RAR	**Rarotonga**	**18.52**	**65**	P	**P**	**02 39 43.4**	**-0.5**
TUZ	**Tuapeka**	**18.54**	**209**	P	**P**	**02 39 44.9**	**+1.1**
KOUNC	**Koumac, New Ca**	**18.81**	**297**	P	**Pn**	**02 39 49.1**	**+1.3**
KOUNC	**Koumac, New Ca**	**18.81**	**297**	P	**Pn**	**02 39 51.2**	**+3.4**
KOUNC	**Koumac, New Ca**	**18.81**	**297**	⇓P	**Pn**	**02 39 51.4**	**+3.6**
LHI	**Lord Howe Isla**	**19.91**	**260**	P	**Pn**	**02 40 03.6**	**+2.8**
	baz=20,SNR=5.6						
LHI	**Lord Howe Isla**	**19.91**	**260**	Pn	**Pn**	**02 40 01.3**	**+0.5**
LHI				IAmb	IAmb	02 40 06.1	
	comp=Z,806nm,1.1s						
LHI	**Lord Howe Isla**	**19.91**	**260**	P	**Pn**	**02 40 05.2**	**+4.4**
LHI	**Lord Howe Isla**	**19.91**	**260**	⇓P	**Pn**	**02 40 04.8**	**+4.0**
FUNA	**Funafuti**	**21.75**	**352**	IAMs_20	IAMs_20	02 46 37.1	
	comp=Z,27μm,22.0s						
NTLH	**Newcastle Hard**	**26.09**	**256**	P	**P**	**02 41 05.5**	**+4.8**
TBI	**Tubuai**	**26.16**	**82**	*e*LR	LR	02 47 23.2	
	comp=Z,47μm,26.5s						
TBI	**Tubuai**	**26.16**	**82**	*e*T	T	03 08 04.4	
	comp=Z,263nm,0.3s						
ARMA	**Armidale**	**26.36**	**262**	P	**P**	**02 41 06.3**	**+3.0**
	baz=27,SNR=190						
ARMA	**Armidale**	**26.36**	**262**	P	**P**	**02 41 06.2**	**+2.8**
ARMA				IAmb	IAmb	02 41 08.4	
	comp=Z,290nm,0.8s						
ARMA	**Armidale**	**26.36**	**262**	P	**P**	**02 41 07.5**	**+4.1**
ARMA	**Armidale**	**26.36**	**262**	⇑P	**P**	**02 41 06.9**	**+3.5**
MGCD	**Mangrove Creek**	**26.58**	**255**	P	**P**	**02 41 08.9**	**+3.8**
	baz=27,SNR=94						
MGCD	**Mangrove Creek**	**26.58**	**255**	P	**P**	**02 41 09.4**	**+4.2**
KNTN	**Kanton**	**27.88**	**13**	P	**P**	**02 41 15.5**	**-1.5**
KNTN	**Kanton**	**27.88**	**13**	P	**P**	**02 41 16.2**	**-0.8**
KNTN	**Kanton**	**27.88**	**13**	⇓P	**P**	**02 41 16.0**	**-1.0**
EIDS	**Eidsvold**	**27.91**	**272**	P	**P**	**02 41 19.2**	**+2.0**
	baz=28,SNR=75						
EIDS	**Eidsvold**	**27.91**	**272**	P	**P**	**02 41 18.5**	**+1.4**
EIDS				IAmb	IAmb	02 41 20.4	
	comp=Z,268nm,0.9s						
EIDS	**Eidsvold**	**27.91**	**272**	P	**P**	**02 41 19.3**	**+2.1**
EIDS	**Eidsvold**	**27.91**	**272**	⇑P	**P**	**02 41 18.7**	**+1.6**
CNB	**Canberra Magne**	**28.01**	**251**	P	**P**	**02 41 21.2**	**+3.2**
	baz=28,SNR=53						
CNB	**Canberra Magne**	**28.01**	**251**	P	**P**	**02 41 21.5**	**+3.4**
CAN	**Canberra**	**28.31**	**251**	P	**P**	**02 41 22.7**	**+2.0**
CAN				IAmb	IAmb	02 41 24.8	
	comp=Z,380nm,0.8s						
CAN				IAMs_20	IAMs_20	02 50 13.4	
	comp=Z,17μm,22.0s						
CAN	**Canberra**	**28.31**	**251**	P	**P**	**02 41 22.7**	**+2.0**
CAN				pmax	pmax		
	comp=Z,380nm,0.8s						
CAN	**Canberra**	**28.31**	**251**	P	**P**	**02 41 23.7**	**+3.0**
CAN	**Canberra**	**28.31**	**251**	⇑P	**P**	**02 41 23.4**	**+2.7**
PAE	**Paea**	**28.56**	**71**	*e*T	T	03 11 03.0	
	comp=Z,59nm,0.2s						
PPT2	**Papeete2**	**28.60**	**70**	*e*LR	LR	02 48 32.2	
PPT2	**Papeete2**	**28.60**	**70**	*e*T	T	03 11 04.6	
	comp=Z,54nm,0.3s						
PPTF	**Pamatai, Papee**	**28.61**	**70**		**P**	**02 41 24.3**	**+0.7**
PPTF	**Pamatai, Papee**	**28.61**	**70**	P	**P**	**02 41 23.8**	**+0.2**
PPT	**Papeete**	**28.62**	**70**	P	**P**	**02 41 24.9**	**+1.4**
	comp=Z,44nm,0.9s,baz=87,slow=20,SNR=4.6						
PPT				LR	LR	02 50 02.9	
	comp=Z,8μm,21.1s,baz=240,slow=30						
	comp=Z,44nm,0.9s						
TIAR	**Tiarei**	**28.81**	**71**	*e*T	T	03 11 03.2	
	comp=Z,7.4nm,0.3s						
RK1H	**Rockhampton Ha**	**29.05**	**276**	P	**P**	**02 41 30.1**	**+2.8**
HNR	**Honiara**	**29.31**	**310**	P	**P**	**02 41 29.8**	**+0.1**
	comp=Z,95nm,0.4s,baz=172,slow=7.1,SNR=2.0						
HNR				LR	LR	02 51 20.1	
	comp=Z,11μm,21.3s,baz=145,slow=33						
	comp=Z,95nm,0.4s						
HNR	**Honiara**	**29.31**	**310**	P	**P**	**02 41 29.1**	**-0.6**
HNR				IAmb	IAmb	02 41 47.3	
	comp=Z,381nm,1.1s						
HNR	**Honiara**	**29.31**	**310**	P	**P**	**02 41 29.1**	**-0.6**
HNR				pmax	pmax		
	comp=Z,381nm,1.1s						
HNR	**Honiara**	**29.31**	**310**	P	**P**	**02 41 30.4**	**+0.7**
RMQ	**Roma**	**29.61**	**269**	P	**P**	**02 41 35.3**	**+3.1**
	baz=30,SNR=256						
RMQ	**Roma**	**29.61**	**269**	P	**P**	**02 41 35.4**	**+3.1**
GLAD	**Gladstone**	**29.64**	**239**	P	**P**	**02 41 34.8**	**+2.4**
MEH	**Mehetia**	**29.70**	**72**	*e*T	T	03 12 35.2	
	comp=Z,102nm,0.2s						
CORO	**Coronation Par**	**30.37**	**239**	P	**P**	**02 41 42.0**	**+3.2**
	comp=Z,140nm,1.3s						
MOO	**Moorlands**	**30.53**	**237**	P	**P**	**02 41 42.3**	**+2.0**
	baz=31,SNR=15						
MOO	**Moorlands**	**30.53**	**237**	P	**P**	**02 41 42.3**	**+2.0**
TAU	**Tasmania Unive**	**30.54**	**236**	P	**P**	**02 41 41.2**	**+1.0**
TAU				IAmb	IAmb	02 41 43.0	
	comp=Z,230nm,0.9s						
TAU	**Tasmania Unive**	**30.54**	**236**	IAMs_20	IAMs_20	02 52 16.3	
	comp=Z,21μm,20.0s						
TAU	**Tasmania Unive**	**30.54**	**236**	P	**P**	**02 41 41.3**	**+1.0**
TAU				pmax	pmax		
	comp=Z,231nm,0.9s						
TAU	**Tasmania Unive**	**30.54**	**236**	P	**P**	**02 41 41.8**	**+1.5**
TAU	**Tasmania Unive**	**30.54**	**236**	⇓P	**P**	**02 41 42.0**	**+1.7**
TOO	**Toolangi**	**31.20**	**246**	P	**P**	**02 41 48.5**	**+2.2**
	baz=32,SNR=128						
TOO	**Toolangi**	**31.20**	**246**	P	**P**	**02 41 47.8**	**+1.5**
TOO				IAmb	IAmb	02 41 51.5	
	comp=Z,232nm,0.7s						
TOO	**Toolangi**	**31.20**	**246**	P	**P**	**02 41 47.8**	**+1.5**
TOO				pmax	pmax		
	comp=Z,232nm,0.7s						
TOO	**Toolangi**	**31.20**	**246**	P	**P**	**02 41 48.6**	**+2.2**
TOO	**Toolangi**	**31.20**	**246**	⇑P	**P**	**02 41 48.3**	**+2.0**
CMSA	**Cobar Meteorol**	**31.28**	**258**	P	**P**	**02 41 49.3**	**+2.3**
	baz=32,SNR=149						
CMSA	**Cobar Meteorol**	**31.28**	**258**	P	**P**	**02 41 49.4**	**+2.4**
MLBS	**Spotswood, Mel**	**31.69**	**246**	P	**P**	**02 41 53.0**	**+2.5**
GEXS	**Deakin Univers**	**32.18**	**245**	P	**P**	**02 41 58.5**	**+3.7**
	comp=Z,320nm,0.8s						
BRAT	**Ballarat**	**32.44**	**247**	P	**P**	**02 42 00.3**	**+3.2**
TARA	**Tarawa**	**32.61**	**343**	IAMs_20	IAMs_20	02 52 09.8	
	comp=Z,15μm,21.0s						
TARA	**Tarawa**	**32.61**	**343**	P	**P**	**02 42 00.5**	**+1.8**
QLP	**Quilpie**	**33.50**	**267**	P	**P**	**02 42 08.4**	**+1.9**
	baz=34,SNR=50						
QLP	**Quilpie**	**33.50**	**267**	P	**P**	**02 42 08.8**	**+2.3**
CTA	**Charters Tower**	**33.95**	**279**	LR	LR	02 54 49.6	
	comp=Z,26μm,18.1s,baz=115,slow=34						
CTA	**Charters Tower**	**33.95**	**279**	P	**P**	**02 42 12.9**	**+2.5**
CTAO	**Charters Tower**	**33.95**	**279**	P	**P**	**02 42 12.1**	**+1.6**
CTAO	**Charters Tower**	**33.95**	**279**	P	**P**	**02 42 12.1**	**+1.6**
CTAO				pmax	pmax		
	comp=Z,768nm,0.8s						
CTAO	**Charters Tower**	**33.95**	**279**	P	**P**	**02 42 13.0**	**+2.5**
CTAO	**Charters Tower**	**33.95**	**279**	⇑P	**P**	**02 42 12.1**	**+1.6**
CTAO	**Charters Tower**	**33.95**	**279**	⇑P	**P**	**02 42 12.4**	**+1.9**
CTAO				⇑pP	**pP**	**02 42 18.1**	**-2.5**
ARPS	**Mount Arapiles**	**34.11**	**248**	P	**P**	**02 42 13.7**	**+2.0**
	baz=34,SNR=35						
ARPS	**Mount Arapiles**	**34.11**	**248**	P	**P**	**02 42 14.1**	**+2.4**
STKA	**Stephens Creek**	**34.70**	**257**	P	**P**	**02 42 18.7**	**+1.9**
	comp=Z,380nm,0.7s,baz=95,slow=9.7,SNR=357						
STKA				LR	LR	02 55 35.4	
	comp=Z,20μm,18.6s,baz=95,slow=35						
	comp=Z,380nm,0.7s						
STKA	**Stephens Creek**	**34.70**	**257**	P	**P**	**02 42 18.8**	**+1.9**
	baz=35,SNR=152						
STKA	**Stephens Creek**	**34.70**	**257**	P	**P**	**02 42 18.2**	**+1.4**
STKA	**Stephens Creek**	**34.70**	**257**	P	**P**	**02 42 18.2**	**+1.4**
STKA				pmax	pmax		
	comp=Z,97nm,0.9s						
STKA	**Stephens Creek**	**34.70**	**257**	P	**P**	**02 42 19.3**	**+2.5**
INKA	**Innaminka**	**36.22**	**263**	P	**P**	**02 42 32.5**	**+2.6**
MTSU	**Mount Surprise**	**36.44**	**280**	P	**P**	**02 42 33.5**	**+1.6**
	baz=37,SNR=545						
MTSU	**Mount Surprise**	**36.44**	**280**	P	**P**	**02 42 34.2**	**+2.3**
HTT	**Hallett**	**36.73**	**253**	P	**P**	**02 42 35.6**	**+1.3**
	baz=37,SNR=

baz=51,SNR=57
KNRA Kununurra 50.87 274 IAmb IAmb 02 44 35.9
comp=Z,111nm,0.6s
KNRA Kununurra 50.87 274 P P 02 44 28.6 +0.6
WAKE Wake Island 51.43 341 P P 02 44 30.9 -1.1
WAKE Wake Island 51.43 341 IAMs_20 IAMs_20 03 04 44.6
comp=Z,9µm,19.0s
WAKE Wake Island 51.43 341 P P 02 44 32.3 +0.3
comp=Z,316nm,0.9s
WAKE Wake Island 51.43 341 ⇓P P 02 44 31.7 -0.3
H11N3 WAKE ISLAND Hy 51.77 342 P P 02 44 34.0 -0.3
baz=182,slow=10,SNR=15
H11N1 WAKE ISLAND Hy 51.78 342 P P 02 44 34.4 +0.1
baz=182,slow=10,SNR=15
H11N2 WAKE ISLAND Hy 51.79 342 P P 02 44 34.5 +0.1
baz=182,slow=10,SNR=20
SRPI Serui, Papua 51.86 294 P P 02 44 35.3 -0.1
BAKI Biak 52.38 295 P P 02 44 39.7 +0.5
comp=Z,5µmcomp=Z,271nm,1.0s
SAUI Saumlaki 52.43 284 P P 02 44 40.7 +1.0
comp=Z,12µmcomp=Z,12µmcomp=Z,323nm,1.1s
SAUI Saumlaki 52.43 284 P P 02 44 41.2 +1.5
comp=Z,333nm,1.1s
PUH Pauahi 53.88 27 IAmb IAmb 02 45 10.7
comp=Z,218nm,0.9s
MLOA Mauna Loa Obse 53.88 26 IAmb IAmb 02 45 11.0
comp=Z,252nm,1.2s
HUH Hualalai 53.92 26 P P 02 44 50.5 -0.2
HUH IAmb IAmb 02 44 54.5
comp=Z,220nm,1.3s
POHA Pohakuloa 54.10 26 P P 02 44 50.6 -1.4
POHA IAmb IAmb 02 45 02.0
comp=Z,127nm,0.9s
POHA Pohakuloa 54.10 26 P P 02 44 53.3 +1.3
comp=Z,176nm,1.5s
POHA Pohakuloa 54.10 26 ⇑P P 02 44 52.3 +0.3
POHA Pohakuloa 54.10 26 P P 02 44 51.4 -0.6
POHA ⇑pP pP 02 45 01.4 -0.9
POHA sP sP 02 45 05.7 -0.6
MHA Mahukona 54.35 26 P P 02 44 53.9 +0.4
MHA Mahukona 54.35 26 P P 02 44 53.9 +0.4
RKGY Rocky Gully 54.40 247 P P 02 44 53.6 -0.3
baz=55,SNR=9.5
RKGY Rocky Gully 54.40 247 P P 02 44 53.5 -0.3
FAKI Fak Fak 54.44 290 P P 02 44 53.4 -1.0
FAKI IAmb IAmb 02 44 55.0
comp=Z,149nm,0.9s
FAKI Fak Fak 54.44 290 P P 02 44 54.1 -0.3
comp=Z,7µmcomp=Z,3µmcomp=Z,187nm,1.7s
FAKI Fak Fak 54.44 290 P P 02 44 53.8 -0.6
FAKI Fak Fak 54.44 290 ⇑P P 02 44 53.2 -1.3
KLBR Kellerberrin 54.58 251 P P 02 44 54.2 -1.1
baz=55,SNR=65
KLBR Kellerberrin 54.58 251 P P 02 44 54.3 -1.0
NWAO Narrogin (SRO) 54.63 249 P P 02 44 52.1 -3.5
NWAO IAmb IAmb 02 44 57.0
comp=Z,160nm,1.4s
NWAO Narrogin (SRO) 54.63 249 IAMs_20 IAMs_20 03 06 51.3
comp=Z,9µm,20.0s
NWAO Narrogin (SRO) 54.63 249 P P 02 44 52.1 -3.5
NWAO pmax pmax
comp=Z,160nm,1.4s
NWAO Narrogin (SRO) 54.63 249 P P 02 44 54.3 -1.3
NWAO P P 02 44 54.3 -1.3
NWAO Narrogin (SRO) 54.63 249 P P 02 44 54.9 -0.7
KIP Kipapa 54.74 23 P P 02 44 55.8 -0.5
KIP IAmb IAmb 02 45 00.6
comp=Z,144nm,0.9s
KIP Kipapa 54.74 23 *i* P P 02 44 55.9 -0.5
KIP Kipapa 54.74 23 P P 02 44 57.9 +1.5
comp=Z,176nm,1.1s
KIP Kipapa 54.74 23 ⇑P P 02 44 56.9 +0.5
KIP sP sP 02 45 10.6 -0.2
KHLH Kahului Airpor 54.81 25 IAmb IAmb 02 45 00.1
comp=Z,376nm,1.7s
OPA Opana 54.99 23 IAmb IAmb 02 45 01.7
comp=Z,256nm,1.5s
CASY Casey 55.39 208 P P 02 45 00.6 0.0
CASY Casey 55.39 208 ⇑P P 02 45 00.7 +0.2
CASY Casey 55.39 208 ⇑P P 02 45 01.0 +0.4
CASY pP pP 02 45 13.8 +2.9
BLDU Ballidu 55.72 252 P P 02 45 02.1 -1.4
baz=56,SNR=11
BLDU Ballidu 55.72 252 P P 02 45 02.3 -1.2
MUN Mundaring 55.73 250 P P 02 45 02.4 -1.1
baz=56,SNR=18
MUN Mundaring 55.73 250 P P 02 45 02.8 -0.8
MTKN Mount Kenneth 56.10 250 P P 02 45 07.9 +1.7
comp=Z,328nm,0.8s
PSA00 Pilbara Seismi 56.17 263 P P 02 45 05.8 -1.0
MBWA Marble Bar 56.42 263 P P 02 45 06.6 -2.0
MBWA Marble Bar 56.42 263 P P 02 45 07.6 -1.0
MBWA P P 02 45 07.6 -1.0
MBWA Marble Bar 56.42 263 P P 02 45 07.7 -1.0
MBWA Marble Bar 56.42 263 ⇑P P 02 45 07.1 -1.5
MBWA Marble Bar 56.42 263 P P 02 45 07.5 -1.2
MBWA pP pP 02 45 21.3 +2.1
SIJI Sorong 56.43 291 LR LR 03 09 30.0
comp=Z,4µm,18.9s,baz=117,slow=36
SWI Sorong 56.44 291 P P 02 45 08.6 -0.2
comp=Z,6µmcomp=Z,4µmcomp=Z,284nm,0.8s
GUMO Guam 56.47 315 P P 02 45 08.0 -0.9
comp=Z,327nm,0.9s,baz=190,slow=6.0,SNR=6.5
GUMO LR LR 03 06 25.3
comp=Z,4µm,21.0s,baz=133,slow=33
comp=Z,327nm,0.9s
GUMO Guam 56.47 315 P P 02 45 06.9 -2.0
GUMO Guam 56.47 315 P P 02 45 06.9 -2.0
GUMO pmax pmax
comp=Z,246nm,0.9s
GUMO Guam 56.47 315 P P 02 45 08.2 -0.7
H01W1 Cape Leeuwin H 56.56 246 P P 02 45 10.0 +0.8
baz=211,slow=74,SNR=2.9
H01W2 Cape Leeuwin H 56.58 246 P P 02 45 09.9 +0.6
H01W3 Cape Leeuwin H 56.58 246 P P 02 45 09.9 +0.6
baz=37,slow=74,SNR=3.0
MORW Morawa 56.76 253 P P 02 45 09.7 -1.2
baz=57,SNR=48
MORW Morawa 56.76 253 IAmb IAmb 02 45 12.7
comp=Z,111nm,1.0s
MORW Morawa 56.76 253 P P 02 45 10.1 -0.8
MORW Morawa 56.76 253 ⇑P P 02 45 09.4 -1.5
MSAI Masohi 56.92 287 P P 02 45 12.3 +0.1
comp=Z,945nmcomp=Z,28nm,0.7s
AAI Ambon 57.34 286 P P 02 45 14.8 -0.4
comp=Z,3µmcomp=Z,125nm,1.1s
SOEI Soe 57.51 278 P P 02 45 17.1 +0.6
comp=Z,9µmcomp=Z,3µmcomp=Z,292nm,0.8s
SOEI Soe 57.51 278 P P 02 45 18.2 +1.7
BATI Baumata 57.80 277 LR LR 03 10 10.5
comp=Z,33µm,19.9s,baz=135,slow=36
BATI Baumata 57.80 277 P P 02 45 19.0 +0.5
comp=Z,4µmcomp=Z,2µmcomp=Z,122nm,0.7s
MIDW Midway 58.10 0 IAMs_20 IAMs_20 03 05 19.3
comp=Z,6µm,21.0s
NLAI Namlea 58.50 286 P P 02 45 22.6 -0.7
comp=Z,3µmcomp=Z,218nm,0.9s
LBMI Labuha 59.62 289 P P 02 45 30.5 -0.6
comp=Z,5µmcomp=Z,2µmcomp=Z,143nm,1.2s
MMRI Maumere 59.80 278 P P 02 45 31.5 -0.8
MMRI Maumere 59.80 278 P P 02 45 31.8 -0.5
comp=Z,7µmcomp=Z,355nm,1.5s
MMRI Maumere 59.80 278 P P 02 45 32.1 -0.2
comp=Z,356nm,1.1s
QSPA South Pole Qui 59.90 180 LR LR 03 08 51.2
comp=Z,3µm,19.4s,baz=36,slow=33
QSPA South Pole Qui 59.90 180 P P 02 45 35.1 +2.6
QSPA South Pole Qui 59.90 180 ⇑p P 02 45 35.3 +2.8
QSPA South Pole Qui 59.90 180 ⇑P P 02 45 35.5 +3.1
QSPA ⇑pP pP 02 45 41.7 -1.2
SANI Sanana 60.08 287 P P 02 45 32.9 -1.4
comp=Z,6µmcomp=Z,3µmcomp=Z,295nm,1.0s
SANI Sanana 60.08 287 P P 02 45 33.4 -0.8
SANI Sanana 60.08 287 ⇑P P 02 45 32.8 -1.4
EDFI Ende, Flores 60.21 277 P P 02 45 34.0 -1.3
comp=Z,4µmcomp=Z,1µmcomp=Z,76nm,0.8s
BASI Baing, Sumba 60.45 275 P P 02 45 36.5 -0.3
comp=Z,5µmcomp=Z,3µmcomp=Z,344nm,1.2s
TNTI Ternate 60.54 290 P P 02 45 36.0 -1.4
TNTI IAmb IAmb 02 45 37.7
comp=Z,189nm,1.1s
TNTI Ternate 60.54 290 P P 02 45 36.2 -1.2
comp=Z,4µmcomp=Z,2µmcomp=Z,169nm,1.1s
TNTI Ternate 60.54 290 P P 02 45 36.8 -0.6
comp=Z,171nm,1.1s
GIRL Giralia 60.56 260 P P 02 45 37.9 +0.4
baz=61,SNR=28
GIRL Giralia 60.56 260 P P 02 45 37.4 -0.1
GIRL Giralia 60.56 260 P P 02 45 38.1 +0.6
GIRL Giralia 60.56 260 ⇓P P 02 45 38.0 +0.6
BBSI Bau Bau 61.11 281 P P 02 45 41.1 -0.2
comp=Z,14nm,0.8s
WBSI Waikabubak, Su 61.75 275 P P 02 45 45.2 -0.5
comp=Z,138nm,0.9s
BSSI Bau Bau, Buton 62.54 279 P P 02 45 49.5 -1.4
comp=Z,3µmcomp=Z,1µmcomp=Z,70nm,0.8s
KMSI Cibinong 63.20 288 P P 02 45 54.9 -0.4
comp=Z,250nm,0.8s
BKSI Bulukumba 63.28 280 P P 02 45 54.6 -1.2
comp=Z,6µmcomp=Z,2µmcomp=Z,119nm,0.6s
LUWI Luwuk 63.31 286 P P 02 45 54.6 -1.4
LUWI Luwuk 63.31 286 P P 02 45 55.2 -0.8
comp=Z,7µmcomp=Z,4µmcomp=Z,342nm,1.2s
LUWI Luwuk 63.31 286 P P 02 45 55.8 -0.2
comp=Z,342nm,1.2s
LUWI Luwuk 63.31 286 ⇑P P 02 45 54.6 -1.4
PLAI Plampang 63.54 275 P P 02 45 56.7 -0.9
comp=Z,7µmcomp=Z,3µmcomp=Z,317nm,0.8s
PLAI Plampang 63.54 275 P P 02 45 57.6 0.0
SGSI Sangihe 63.73 292 P P 02 45 57.9 -0.9
comp=Z,3µmcomp=Z,124nm,0.7s
KAPI Kappang 63.75 280 LR LR 03 14 29.4
comp=Z,4µm,18.3s,baz=126,slow=37
KAPI Kappang 63.75 280 P P 02 45 57.5 -1.4
KAPI IAmb IAmb 02 46 01.5
comp=Z,187nm,1.6s
KAPI Kappang 63.75 280 P P 02 45 57.5 -1.4
KAPI pmax pmax
comp=Z,187nm,1.6s
KAPI Kappang 63.75 280 P P 02 45 59.1 +0.1
KAPI P P 02 45 59.1 +0.1
KAPI Kappang 63.75 280 P P 02 46 00.7 +1.8
KAPI Kappang 63.75 280 P P 02 45 58.8 -0.2
BNSI Bone 63.77 281 P P 02 45 58.4 -0.6
comp=Z,3µmcomp=Z,144nm,1.4s
SPSI Sidrap Palu 64.28 281 P P 02 46 00.8 -1.6
comp=Z,2µmcomp=Z,66nm,0.7s
APSI Ampana 64.32 285 P P 02 46 02.2 -0.5
comp=Z,3µmcomp=Z,2µmcomp=Z,139nm,1.3s
TTSI Tana Toraja 64.72 282 P P 02 46 04.2 -1.1
comp=Z,6µmcomp=Z,2µmcomp=Z,115nm,0.9s
MRSI Marisa 64.84 286 P P 02 46 03.9 -2.1
DAV Davao City (W) 65.71 295 P P 02 46 10.6 -1.1
comp=Z,206nm,0.4s,baz=41,slow=5.6
DAV LR LR 03 13 44.5
comp=Z,957nm,21.2s,baz=130,slow=35
comp=Z,206nm,0.4s
DAV Davao City (W) 65.71 295 P P 02 46 14.1 +2.4
comp=Z,502nm,0.9s
IGBI Denpasar 65.81 274 P P 02 46 11.9 -0.5
comp=Z,4µmcomp=Z,3µmcomp=Z,285nm,0.7s
DNP Denpasar 65.83 274 P P 02 46 12.2 -0.3
comp=Z,28µmcomp=Z,352nm,0.4s
SRBI Singaraja 66.11 275 P P 02 46 13.5 -0.8
comp=Z,4µmcomp=Z,240nm,1.3s
TOLI2 Tolitoli 66.15 286 P P 02 46 12.5 -2.1
TOLI2 Tolitoli 66.15 286 P P 02 46 14.1 -0.4
MPSI Mapaga 66.46 285 P P 02 46 15.1 -1.4
comp=Z,6µmcomp=Z,2µmcomp=Z,125nm,0.9s
JAGI Jajag, Banyuwa 66.84 274 IAmb IAmb 02 46 18.7
comp=Z,247nm,1.1s
JAGI IAMs_20 IAMs_20 03 15 07.0
comp=Z,6µm,21.0s
JAGI Jajag, Banyuwa 66.84 274 P P 02 46 17.3 -1.7
comp=Z,7µmcomp=Z,3µmcomp=Z,215nm,1.4s
JAGI Jajag, Banyuwa 66.84 274 P P 02 46 19.6 +0.6
JAGI Jajag, Banyuwa 66.84 274 ⇑P P 02 46 17.0 -2.0
ABJI Asem Bagus 67.10 274 P P 02 46 20.0 -0.6
comp=Z,8µmcomp=Z,3µmcomp=Z,129nm,1.0s
GMJI Gumukmas 67.55 273 P P 02 46 22.3 -1.1
comp=Z,3µmcomp=Z,165nm,0.8s
BLJI Banyuglugur 67.67 274 P P 02 46 23.6 -0.6
comp=Z,7µmcomp=Z,150nm,0.9s
KMMI Kalianget 67.69 275 P P 02 46 23.6 -0.8
comp=Z,9µmcomp=Z,5µmcomp=Z,335nm,1.2s
BKB Balikpapan 68.13 282 IAmb IAmb 02 46 30.5
comp=Z,128nm,0.9s
BKB Balikpapan 68.13 282 P P 02 46 27.0 -0.1
comp=Z,7µmcomp=Z,3µmcomp=Z,152nm,0.8s
BKB Balikpapan 68.13 282 P P 02 46 30.1 +3.0
comp=Z,161nm,0.9s
SMKI Samarinda 68.30 283 P P 02 46 29.3 +1.1
comp=Z,7µmcomp=Z,10µmcomp=Z,339nm,0.9s
JCJ Chichijima 68.64 322 P P 02 46 29.0 -1.0
comp=Z,102nm,0.6s,baz=134,slow=2.4,SNR=11
JCJ LR LR 03 10 57.8
comp=Z,2µm,21.0s,baz=156,slow=31
comp=Z,102nm,0.6s
JCJ Chichijima 68.64 322 P P 02 46 27.9 -2.1
JCJ Chichijima 68.64 322 P P 02 46 29.3 -0.7
comp=Z,487nm,1.3s
JCJ Chichijima 68.64 322 ⇑P P 02 46 28.0 -2.0
BBKI Banjar Baru 68.74 279 P P 02 46 30.6 -0.4
comp=Z,210nm,1.0s
GRJI Gresik 69.04 274 P P 02 46 32.6 -0.2
comp=Z,2µmcomp=Z,197nm,0.9s
PWJI Pagerwojo 69.09 273 P P 02 46 32.3 -0.8
comp=Z,3µmcomp=Z,201nm,1.2s
BWJI Bawean 69.41 275 P P 02 46 34.3 -0.8
comp=Z,258nm,1.2s
SMAI San Martin Ant 69.54 158 IAmb IAmb 02 46 56.1
comp=Z,218nm,1.0s
PCJI Pacitan 69.55 272 P P 02 46 35.5 -0.4
comp=Z,6µmcomp=Z,865nm,0.9s
WOJI Wonogiri, Jawa 69.94 273 P P 02 46 37.8 -0.5
comp=Z,11µmcomp=Z,260nm,0.9s
BELA Belgrano 2 69.95 172 P P 02 46 38.2 +0.7
BELA IAmb IAmb 02 46 57.4
comp=Z,268nm,1.1s
UGM Wanagama 70.25 272 IAmb IAmb 02 46 40.7
comp=Z,187nm,0.9s
UGM Wanagama 70.25 272 P P 02 46 40.2 -0.1
MYLDM Lahad Datu 70.31 288 IAmb IAmb 02 47 06.1
comp=Z,214nm,1.2s
MYLDM Lahad Datu 70.31 288 ⇑P P 02 46 41.1 +0.5
YOGI Yogyakarta 70.49 272 P P 02 46 41.5 -0.3
comp=Z,246nm,1.1s
SMRI Semarang 70.74 273 P P 02 46 42.0 -1.3
SMRI IAmb IAmb 02 46 45.1
comp=Z,119nm,0.8s
SMRI Semarang 70.74 273 P P 02 46 43.1 -0.2
comp=Z,168nm,0.8s
SMRI Semarang 70.74 273 P P 02 46 43.4 +0.1
comp=Z,168nm,0.8s
PBKI Pangkalan Bun 71.84 278 P P 02 46 49.9 0.0
comp=Z,7µmcomp=Z,705nm,1.0s
CMJI Cimerak 72.11 271 P P 02 46 50.1 -1.4
comp=Z,2µmcomp=Z,159nm,1.0s
PMSA Palmer Station 72.37 156 LR LR 03 14 57.4
comp=Z,3µm,18.0s,baz=240,slow=33
PMSA Palmer Station 72.37 156 P P 02 46 53.8 +1.6
PMSA IAmb IAmb 02 47 12.9
comp=Z,546nm,2.0s
PMSA Palmer Station 72.37 156 IAMs_20 IAMs_20 03 14 54.9
comp=Z,4µm,18.0s
PMSA Palmer Station 72.37 156 ⇑P P 02 46 55.0 +2.8
MAW Mawson 72.55 200 P P 02 46 55.1 +1.8
comp=Z,112nm,0.8s,baz=126,slow=7.3,SNR=162
MAW LR LR 03 17 21.9
comp=Z,8µm,20.8s,baz=118,slow=34
comp=Z,112nm,0.8s
MAW Mawson 72.55 200 P P 02 46 54.5 +1.2
baz=72,SNR=118
MAW Mawson 72.55 200 P P 02 46 54.0 +0.8
MAW Mawson 72.55 200 P P 02 46 54.0 +0.8
MAW pmax pmax
comp=Z,30nm,0.9s
MAW Mawson 72.55 200 ⇑P P 02 46 54.4 +1.2
MAW ⇑P P 02 46 54.5 +1.2
JCJI Jatiwangi 72.89 272 P P 02 46 54.9 -1.3
comp=Z,6µmcomp=Z,329nm,0.8s
XMI Christmas Isla 73.22 268 P P 02 46 57.9 -0.2
comp=Z,318nm,1.1s
XMI Christmas Isla 73.22 268 ⇓P P 02 46 57.9 -0.2
XMIS Christmas Isla 73.24 267 IAmb IAmb 02 46 58.5
comp=Z,175nm,0.9s
XMIS Christmas Isla 73.24 267 P P 02 46 58.2 0.0
comp=Z,215nm,1.2s
LEM Lembang 73.29 272 LR LR 03 21 18.8
comp=Z,5µm,18.5s,baz=108,slow=38
LEM Lembang 73.29 272 P P 02 46 58.2 -0.5
comp=Z,3µmcomp=Z,3µmcomp=Z,155nm,1.0s
STKI Sintang 73.43 280 P P 02 46 59.3 -0.1
comp=Z,225nm,1.1s
CNJI Cibinong 73.48 271 P P 02 46 58.5 -1.1
comp=Z,4µmcomp=Z,403nm,0.9s
TGY Tagaytay City 73.59 298 P P 02 47 00.1 -0.2
comp=Z,168nm,0.2s,baz=292,slow=1.4,SNR=35
TGY LR LR 03 18 06.1
comp=Z,1µm,20.3s,baz=130,slow=35
comp=Z,168nm,0.2s
SBUM Sibu 74.05 282 IAmb IAmb 02 47 04.1
comp=Z,170nm,1.0s
SBUM IAMs_20 IAMs_20 03 19 06.0
comp=Z,4µm,22.0s
SKJI Sukabumi 74.12 271 P P 02 47 02.1 -1.3
comp=Z,3µmcomp=Z,129nm,0.5s
DBJI Dramaga 74.17 272 P P 02 47 03.0 -0.8
comp=Z,22µmcomp=Z,374nm,1.0s
JHJ Hachijo jima 2 74.69 324 LR LR 03 15 59.6
comp=Z,2µm,20.3s,baz=138,slow=33
SBJI Serang 74.92 272 P P 02 47 07.1 -1.0
comp=Z,7µmcomp=Z,101nm,0.6s
KSM Kuching 75.16 281 IAmb IAmb 02 47 10.0
comp=Z,173nm,0.9s
KSM Kuching 75.16 281 P P 02 47 08.6 -0.8
comp=Z,214nm,1.2s
TPI Tanjungpandan 75.27 275 P P 02 47 09.3 -0.8
comp=Z,2µmcomp=Z,92nm,1.4s
MG03 Isla Dawson 75.50 144 IAmb IAmb 02 47 31.2
comp=Z,186nm,1.2s
GO10 Punta Arenas 75.56 143 IAmb IAmb 02 47 32.9
comp=Z,243nm,1.1s
GO10 Punta Arenas 75.56 143 ⇓P P 02 47 14.4 +3.3
GO09 Cerro Castillo 75.84 141 P P 02 47 14.2 +1.4
GO09 IAmb IAmb 02 47 34.8
comp=Z,494nm,1.8s
USHA Ushuaia 75.98 146 LR LR 03 12 52.2
comp=Z,3µm,21.7s,baz=239,slow=29
BLSI Bandar Lampung 76.06 272 P P 02 47 13.2 -1.4
comp=Z,219nm,0.4s
KASI Kota Agung 76.63 271 P P 02 47 16.3 -1.5
comp=Z,6µmcomp=Z,3µmcomp=Z,211nm,1.1s
KLI Kotabumi 76.64 272 P P 02 47 16.3 -1.6
comp=Z,5µmcomp=Z,8µmcomp=Z,421nm,0.8s
JOW Kunigami 76.67 312 P P 02 47 16.9 -0.8
comp=Z,94nm,0.8s,baz=150,slow=6.0,SNR=25
JOW LR LR 03 16 47.1
comp=Z,3µm,21.5s,baz=134,slow=32
comp=Z,94nm,0.8s
JOW Kunigami 76.67 312 IAmb IAmb 02 47 34.8
comp=Z,172nm,1.1s
JOW Kunigami 76.67 312 P P 02 47 17.8 +0.1
PPBI Pangkal Pinang 76.88 275 P P 02 47 18.5 -0.7
comp=Z,20µmcomp=Z,78nm,0.8s
LWLI Liwa 77.25 272 P P 02 47 20.1 -1.4
comp=Z,3µmcomp=Z,228nm,0.7s
JIE Ise 77.27 323 P P 02 47 20.7 -0.2
MDSI Maura Dua 77.41 272 P P 02 47 20.2 -2.0
comp=Z,3µmcomp=Z,2µmcomp=Z,195nm,0.8s
JRY Ryogami san 77.43 325 P P 02 47 20.7 -1.1
INU Inuyama 77.85 324 IAMs_20 IAMs_20 03 19 11.5
comp=Z,3µm,21.0s
INU Inuyama 77.85 324 P P 02 47 24.1 0.0
comp=Z,93nm,0.9s
INU Inuyama 77.85 324 ⇑P P 02 47 22.9 -1.2
JGF Kuroka 77.88 324 IAmb IAmb 02 47 42.9
comp=Z,123nm,1.0s
JMM Marumori 78.00 328 IAmb IAmb 02 47 45.1
comp=Z,233nm,1.6s
TROLL Troll, Antarti 78.06 180 P P 02 47 26.9 +1.8
TROLL S S 02 57 22.2 +6.2
TROLL Troll, Antarti 78.06 180 pP pP 02 47 38.2 +2.3
TROLL Troll, Antarti 78.06 180 sP sP 02 47 43.9 +4.1
MJAR Matsushiro Arr 78.19 325 P P 02 47 25.1 -0.8
comp=Z,60nm,1.1s,baz=158,slow=5.7,SNR=62
MJAR LR LR 03 18 20.0
comp=Z,1µm,20.5s,baz=139,slow=33
comp=Z,60nm,1.1s
MAJO Matsushiro 78.19 325 P P 02 47 24.5 -1.5
MAJO IAmb IAmb 02 47 44.8
comp=Z,109nm,1.0s
MAJO Matsushiro 78.19 325 *i* P P 02 47 24.7 -1.3
MAJO pmax pmax
comp=Z,47nm,1.0s
MAJO MLR MLR
comp=Z,1µm,17.0s
MAJO Matsushiro 78.19 325 P P 02 47 27.2 +1.2
MAJO Matsushiro 78.19 325 ⇑P P 02 47 24.7 -1.3
MJB9 Matsu-Tunnel 78.19 325 IAmb IAmb 02 47 44.7
comp=Z,117nm,1.1s
SNAA Sanae 78.34 178 P P 02 47 27.8 +1.2
SNAA Sanae 78.34 178 PKKP 03 06 26.7
SNAA S S 02 57 20.8 +1.9
SNAA Sanae 78.34 178 pP pP 02 47 40.5 +3.2
SNAA Sanae 78.34 178 sP sP 02 47 45.2 +3.9
SNAA Sanae 78.34 178 P P 02 47 28.2 +1.7
comp=Z,56nm,0.9s,baz=198,slow=5.1,SNR=120
SNAA LR LR 03 21 54.4
comp=Z,2µm,18.7s,baz=198,slow=35
comp=Z,56nm,0.9s
SNAA Sanae 78.34 178 P P 02 47 27.1 +0.5
SNAA IAmb IAmb 02 47 46.6
comp=Z,176nm,1.0s
SNAA Sanae 78.34 178 *ce*P P 02 47 27.0 +0.5
SNAA pmax pmax
comp=Z,112nm,1.1s
SNAA MLR MLR
comp=Z,3µm,18.0s
SNAA Sanae 78.34 178 ⇑P P 02 47 27.6 +1.0
JGN Niukaw 78.38 324 P P 02 47 26.5 -0.6
VNA3 Neumayer Olymp 78.48 176 P P 02 47 28.3 +1.1
VNA3 Neumayer Olymp 78.48 176 PKKP 03 06 26.4
VNA3 Neumayer Olymp 78.48 176 PcP PcP 02 47 35.4 -0.9
VNA3 S S 02 57 21.0 +0.7
VNA3 Neumayer Olymp 78.48 176 sP sP 02 47 46.6 +4.6
YOJ Yonaguni jima 78.59 307 IAmb IAmb 02 47 45.8
comp=Z,261nm,1.3s
YOJ Yonaguni jima 78.59 307 P P 02 47 29.1 +0.7
comp=Z,128nm,0.9s
JSU Suzuyama 78.61 317 IAmb IAmb 02 47 45.6
comp=Z,198nm,1.1s
VNA2 Neumayer--Watz 78.92 177 P P 02 47 31.1 +1.5
baz=178,slow=0.2
VNA2 Neumayer--Watz 78.92 177 PKKP 03 06 25.6
VNA2 Neumayer--Watz 78.92 177 PcP PcP 02 47 38.0 -0.2
VNA2 S S 02 57 32.1 +7.2
VNA2 Neumayer--Watz 78.92 177 sP sP 02 47 49.2 +4.8
COYC Coyhaique 78.95 136 IAmb IAmb 02 47 52.7
comp=Z,224nm,1.1s
COYC Coyhaique 78.95 136 ⇑P P 02 47 32.6 +2.3
COYC ⇑p P 02 47 32.9 +2.6
JAD Aida 79.04 322 P P 02 47 30.2 -0.5
DSRI Dabo 79.07 276 P P 02 47 30.7 -0.7
comp=Z,3µmcomp=Z,72nm,0.9s
NVL N'lazarevskaya 79.08 183 *e*P P 02 47 28.8 -1.7
NVL *e*PPP PPP 02 52 24.0
NVL *e*S S 02 57 17.7 -8.8
NVL *e*SS SS 03 02 36.0 +4.4
NVL *e*SSS SSS 03 06 02.5
NVL pmax pmax
comp=Z,125nm,0.9s
NVL MLR MLR
comp=Z,3µm,19.0s
JOM Ohasama 79.08 329 P P 02 47 30.6 -0.2
VNA1 Neumayer--Stat 79.15 176 P P 02 47 32.4 +1.5
VNA1 Neumayer--Stat 79.15 176 PcP PcP 02 47 39.1 0.0
VNA1 Neumayer--Stat 79.15 176 pP pP 02 47 44.8 +3.2
VNA1 Neumayer--Stat 79.15 176 sP sP 02 47 50.7 +5.1
JSD Sado 79.34 326 IAmb IAmb 02 47 50.6
comp=Z,486nm,1.8s
TPUB Ta-pu 79.52 305 P P 02 47 31.9 -1.7
JNU Nakatsue 79.53 318 P P 02 47 33.3 -0.2
comp=Z,46nm,0.9s,baz=148,slow=5.2,SNR=10
JNU LR LR 03 17 32.9
comp=Z,1µm,22.0s,baz=103,slow=32
comp=Z,46nm,0.9s
JNU Nakatsue 79.53 318 IAmb IAmb 02 47 51.4
comp=Z,427nm,1.6s
JNU Nakatsue 79.53 318 P P 02 47 34.9 +1.4
comp=Z,167nm,1.6s
SSLB Suanglung 79.59 305 P P 02 47 35.5 +1.5
JHS Saijyo 79.66 321 IAmb IAmb 02 47 51.7
comp=Z,175nm,1.0s
TPRI Tanjung Pinang 79.82 277 P P 02 47 35.1 -0.4
comp=Z,178nm,1.1s
YHNB Yeheng 79.86 306 P P 02 47 35.1 -0.4
TATO Taipei 79.98 306 P P 02 47 33.4 -2.6

JTM Tenmabayashi 80.25 330 P P 02 47 37.4 +0.3
LL02 Futaleuf 80.36 134 IAmb IAmb 02 48 00.0
comp=Z,270nm,1.6s
ERM Erimo 80.38 332 P P 02 47 39.9 +2.2
ERM IAmb IAmb 02 47 45.0
comp=Z,109nm,0.8s
ERM Erimo 80.38 332 P P 02 47 39.9 +2.2
ERM pmax pmax
comp=Z,109nm,0.9s
ERM Erimo 80.38 332 P P 02 47 39.0 +1.3
JEM Erimo 80.38 332 P P 02 47 40.8 +3.1
PAF Port-aux-Franc 80.40 218 P P 02 47 40.0 +2.0
PAF Port-aux-Franc 80.40 218 P P 02 47 40.0 +2.0
PAF pmax pmax
comp=Z,644nm,1.2s
PAF Port-aux-Franc 80.40 218 ⇓P P 02 47 40.1 +2.0
H03S2 Juan Fernandez 80.42 123 T T 04 16 52.9
SNR=219
H03S1 Juan Fernandez 80.43 124 T T 04 16 55.3
SNR=214
H03S3 Juan Fernandez 80.44 123 T T 04 16 53.7
SNR=216
H03N3 Juan Fernandez 80.61 123 T T 04 17 06.3
baz=242,slow=72,SNR=134
H03N2 Juan Fernandez 80.61 123 T T 04 17 06.3
baz=242,slow=72,SNR=183
H03N1 Juan Fernandez 80.63 123 T T 04 17 01.4
baz=242,slow=72,SNR=188
MYKOM Kota Tinggi 80.85 277 IAmb IAmb 02 47 41.7
comp=Z,139nm,0.9s
MYKOM IAMs_20 IAMs_20 03 29 15.1
comp=Z,3μm,19.0s
KRJI Kerinci 80.95 273 P P 02 47 40.4 -1.3
comp=Z,6μmcomp=Z,698nm,0.8s
YUK Yuzh-Kuril'sk 81.02 334 eP P 02 47 40.2 -0.9
YUK e 02 50 46.1
YUK ePPP PPP 02 52 36.3
YUK eS S 02 57 51.9 +4.6
YUK eSS SS 03 03 08.3 +5.2
YUK pmax pmax
comp=Z,159nm,1.4s
YUK pmax pmax
comp=Z,163nm,1.1s
YUK pmax pmax
comp=E,279nm,1.0s
YUK pmax pmax
comp=N,163nm,1.2s
LL03 Petrohue 81.11 133 IAmb IAmb 02 48 02.9
comp=Z,295nm,1.6s
LL04 Puerto Octay 81.23 132 IAmb IAmb 02 48 04.5
comp=Z,222nm,1.6s
KUR Kuril'sk 81.32 336 eP P 02 47 41.2 -1.5
KUR e 02 50 49.3
KUR ePPP PPP 02 52 38.5
KUR eS S 02 57 50.9 +0.5
KUR eSS SS 03 03 05.8 -1.9
KUR pmax pmax
comp=Z,260nm,1.2s
KUR pmax pmax
comp=N,144nm,1.0s
KUR pmax pmax
comp=E,101nm,0.7s
KUR pmax pmax
comp=Z,2μm,20.8s
KUR MLR MLR
comp=Z,3μm,16.0s
KUR MLR MLR
comp=N,2μm,19.0s
KUR MLR MLR
comp=E,1μm,14.0s
ORCD Orcadas 81.62 159 IAmb IAmb 02 48 04.6
comp=Z,172nm,1.3s
ADK Adak 81.74 1 P P 02 47 43.6 -1.1
ADK Adak 81.74 1 P P 02 47 43.6 -1.1
ADK pmax pmax
comp=Z,347nm,1.1s
ADK Adak 81.74 1 P P 02 47 45.0 +0.2
ADK Adak 81.74 1 ⇑P P 02 47 44.3 -0.5
ADK ⇓P PcP 02 47 44.8 -5.6
JEW Eniwo 81.77 331 IAmb IAmb 02 48 11.9
comp=Z,114nm,0.8s
PPSI Pulau Pagai 81.87 272 P P 02 47 46.6 +0.1
comp=Z,6μmcomp=Z,464nm,1.4s
QZH Quanzhou 81.99 305 ⇑iP P 02 47 45.8 -0.9
QZH S S 02 57 54.6 -3.6
QZH SKS SKKSac 02 58 07.2 -0.2
QZH pmax pmax
comp=Z,58nm,1.3s
QZH pmax pmax
comp=Z,880nm,7.8s
QZH LR LR
comp=Z,440nm,21.8s
QZH LR LR
comp=Z,840nm,18.0s
QZH LR LR
comp=Z,1μm,18.9s
ATKA Atka Island 82.12 2 P P 02 47 46.7 0.0
JKA Kamikawa-asahi 82.35 332 IAmb IAmb 02 47 53.7
comp=Z,117nm,0.9s
ASAJ Asahikawa 82.35 332 P P 02 47 48.8 +0.6
comp=Z,102nm,0.8s,baz=230,slow=9.6,SNR=16
ASAJ LR LR 03 20 08.3
comp=Z,6μm,20.9s,baz=164,slow=33
comp=Z,102nm,0.8s
PLCA Paso Flores 82.51 133 P P 02 47 51.6 +2.1
comp=Z,40nm,1.0s,baz=238,slow=5.2,SNR=53
PLCA PKKPbc PKKPbc 03 06 15.3 +0.6
comp=Z,3.7nm,0.9s,baz=273,slow=1.3,SNR=5.7
PLCA LR LR 03 15 46.0
comp=Z,6μm,21.7s,baz=266,slow=29
comp=Z,40nm,1.0s
PLCA Paso Flores 82.51 133 P P 02 47 50.5 +1.0
PLCA IAmb IAmb 02 48 10.9
comp=Z,196nm,1.2s
PLCA Paso Flores 82.51 133 P P 02 47 50.5 +1.0
PLCA pmax pmax
comp=Z,196nm,1.3s
BKNI Bangkinang 82.53 275 P P 02 47 48.6 -1.3
comp=Z,6μmcomp=Z,3μmcomp=Z,277nm,0.9s
BKNI Bangkinang 82.53 275 P P 02 47 48.7 -1.2
comp=Z,280nm,0.9s
SHEM Shemya Is, Ala 82.89 355 LR LR 03 18 05.9
comp=Z,4μm,21.6s,baz=168,slow=31
NIKH Nikolski High 83.19 5 P P 02 47 51.8 -0.5
NIKH Nikolski High 83.19 5 P P 02 47 52.4 +0.1
baz=188,SNR=21
SISI Saibi 83.38 272 P P 02 47 54.2 -0.1
comp=Z,70nm,1.7s
HKPS Hong Kong Po S 83.64 300 IAmb IAmb 02 47 58.0
comp=Z,199nm,1.4s
SNCC San Nicolas Is 83.78 46 P P 02 47 57.6 +1.7
baz=228
SKR Severo-Kuril's 83.78 344 eP P 02 47 54.9 -0.5
SKR eS S 02 58 09.3 -5.9
SKR pmax pmax
comp=Z,99nm,0.9s
SKR pmax pmax
comp=Z,400nm,7.8s
SKR MLR MLR
comp=Z,2μm,19.0s
TJN Taejon 83.88 318 ceP P 02 47 56.2 0.0
TJN Taejon 83.88 318 P P 02 47 56.4 +0.2
comp=Z,546nm,1.2s
MNSI Mandailing Nat 84.02 274 P P 02 47 55.3 -2.3
comp=Z,3μmcomp=Z,86nm,0.9s
SSE Sheshan 84.11 311 P P 02 47 57.1 -0.5
SSE S S 02 58 26.0 +6.5
SSE pmax pmax
comp=Z,18nm,1.4s
SSE pmax pmax
comp=Z,490nm,5.4s
SSE LR LR
comp=Z,560nm,22.3s
SSE LR LR
comp=Z,810nm,21.2s
SCI2 San Clemente I 84.21 47 P P 02 47 59.4 +1.3
baz=228
SCZ2 Santa Cruz Isl 84.21 45 P P 02 47 59.3 +1.2
baz=228
UNV Unalaska Valle 84.27 7 IAmb IAmb 02 48 00.8
comp=Z,114nm,0.8s
UNV Unalaska Valle 84.27 7 P P 02 47 57.7 -0.1
baz=190,SNR=12
LPIG La Paz 84.28 58 P P 02 48 00.6 +2.0
comp=Z,9.8nm,0.3s,baz=52,slow=2.0,SNR=6.0
LPIG LR LR 03 20 45.0
comp=Z,4μm,18.1s,baz=240,slow=32
comp=Z,9.8nm,0.3s
SLBS Sierra La Lagu 84.30 59 P P 02 47 59.5 +0.7
SLBS IAmb IAmb 02 48 19.8
comp=Z,215nm,1.4s
KSRS Korea Array 84.32 320 P P 02 47 59.0 +0.5
comp=Z,29nm,0.9s,baz=143,slow=5.9,SNR=58
KSRS LR LR 03 25 11.2
comp=Z,883nm,18.1s,baz=120,slow=35
comp=Z,29nm,0.9s
SBC Santa Barbara 84.47 45 P P 02 48 01.1 +1.8
baz=228
CIS Catalina Islan 84.57 46 P P 02 48 01.0 +1.1
baz=228
AKUT Akutan 84.64 7 P P 02 47 58.4 -1.2
IPM Ipoh 84.64 278 IAmb IAmb 02 48 01.0
comp=Z,107nm,0.9s
IPM IAMs_20 IAMs_20 03 30 02.5
comp=Z,4μm,20.0s
IPM Ipoh 84.64 278 P P 02 48 00.6 -0.1
YSS Yuzh-Sakhalins 84.65 334 P P 02 48 00.3 +0.4
YSS Yuzh-Sakhalins 84.65 334 αiP P 02 48 00.8 +0.9
YSS e 02 51 13.9
YSS eS S 02 58 26.4 +2.2
YSS eSS SS 03 03 48.6 -8.4
YSS pmax pmax
comp=Z,1μm,4.6s
YSS pmax pmax
comp=Z,370nm,1.0s
YSS smax smax
comp=N,2μm,12.4s
YSS Yuzh-Sakhalins 84.65 334 P P 02 48 00.7 +0.9
comp=N,393nm,0.9s
ML02 Panimavida 84.68 128 IAmb IAmb 02 48 21.2
comp=Z,110nm,0.9s
PKM Mcpherson Peak 84.70 44 P P 02 48 02.6 +1.8
baz=228
PKM S S 02 58 27.3 +1.6
baz=228
SRIG Santa Rosalia 84.82 54 IAmb IAmb 02 48 21.7
comp=Z,256nm,1.4s
FMP Fort Macarthur 84.85 46 P P 02 48 02.7 +1.4
baz=228
SMMC Simmler 84.88 44 P P 02 48 03.4 +1.9
baz=227
CBX Cerro Bola 84.97 48 P P 02 48 03.3 +1.2
SAO San Andreas Ge 85.01 42 IAmb IAmb 02 48 22.6
comp=Z,135nm,1.4s
109C Camp Elliot, M 85.06 47 IAmb IAmb 02 48 23.5
comp=Z,160nm,1.4s
109C Camp Elliot, M 85.06 47 P P 02 48 03.7 +1.4
baz=229
109C S S 02 58 29.9 +1.0
baz=229
INCN Inchon 85.07 319 P P 02 48 01.9 -0.4
INCN IAmb IAmb 02 48 23.5
comp=Z,107nm,1.2s
INCN Inchon 85.07 319 P P 02 48 01.9 -0.4
INCN pmax pmax
comp=Z,107nm,1.2s
INCN Inchon 85.07 319 P P 02 48 03.9 +1.6
comp=Z,74nm,0.9s
QIZ Qiongzhong 85.07 295 P P 02 48 01.7 -1.0
QIZ SKS SKSac 02 58 18.6 -6.0
QIZ S ScS 02 58 36.0 -4.1
QIZ SS SS 03 04 05.6 +1.5
QIZ pmax pmax
comp=Z,31nm,1.1s
QIZ pmax pmax
comp=Z,1μm,13.1s
QIZ LR LR
comp=Z,820nm,27.1s
QIZ LR LR
comp=Z,940nm,25.5s
QIZ LR LR
comp=Z,3μm,35.8s
QIZ Qiongzhong 85.07 295 P P 02 48 05.7 +3.0
MCCM Marconi Confer 85.16 40 IAmb IAmb 02 48 23.1
comp=Z,159nm,1.4s
TKX Tecate 85.17 48 IAmb IAmb 02 48 24.3
comp=Z,238nm,1.4s
OSI Osito Audit: C 85.19 45 P P 02 48 04.5 +1.5
baz=228
DECC Green Verdugo 85.19 46 P P 02 48 04.0 +1.0
baz=228
DECC S S 02 58 31.0 +0.8
baz=228
BAR Barrett 85.20 48 IAmb IAmb 02 48 23.7
comp=Z,155nm,1.4s
PASC Pasadena Art C 85.22 46 IAmb IAmb 02 48 24.1
comp=Z,147nm,1.2s
PASC Pasadena Art C 85.22 46 IAMs_20 IAMs_20 03 21 44.4
comp=Z,4μm,19.0s
ELS Elsinore Mount 85.36 47 IAmb IAmb 02 48 24.6
comp=Z,182nm,1.3s
KULM Kulim 85.37 279 IAmb IAmb 02 48 06.0
comp=Z,123nm,1.0s
KULM IAMs_20 IAMs_20 03 27 34.9
comp=Z,4μm,21.0s
PET Petropavlovsk 85.39 346 IAMs_20 IAMs_20 03 22 17.5
comp=Z,3μm,20.0s
PET Petropavlovsk 85.39 346 PET Petropavlovsk 85.39 346 ciP P 02 48 03.4 0.0
PET e*SP pwP 02 48 24.4 +5.7
PET e 02 51 22.1
PET e 02 58 19.3
PET eS S 02 58 32.5 +1.3
PET ePPS PPS 02 59 33.3
PET pmax pmax
comp=Z,104nm,1.4s
PET pmax pmax
comp=Z,2μm,18.9s
PET pmax pmax
comp=Z,500nm,15.0s
PET Petropavlovsk 85.39 346 P P 02 48 04.0 +0.6
ARVC Arvin 85.46 45 P P 02 48 05.9 +1.6
baz=228
ARVC S S 02 58 37.0 +4.2
baz=228
MURC Murrieta 85.47 47 P P 02 48 06.0 +1.6
baz=229,SNR=35
MURC S S 02 58 32.9 -0.1
baz=229
MONP2 Monument Peak 85.50 48 P P 02 48 06.7 +1.9
baz=230,SNR=25
MONP2 S S 02 58 33.7 -0.1
baz=230
IKP In-Ko-Pah, Jac 85.55 48 P P 02 48 06.8 +1.9
baz=230,SNR=15
IKP S S 02 58 33.6 -0.4
baz=230
PSI Prapat 85.59 276 LR LR 03 26 34.5
comp=Z,7μm,21.7s,baz=134,slow=36
BFSC Mount Baldy Ra 85.60 46 P P 02 48 06.5 +1.3
baz=229,SNR=30
TEY Ternei 85.62 329 ⇑eP P 02 48 04.9 +0.1
TEY e 02 58 24.1
TEY pmax pmax
comp=E,10.0nm,1.0s
TEY pmax pmax
comp=N,10.0nm,0.9s
TEY pmax pmax
comp=Z,10.0nm,1.0s
TEY pmax pmax
comp=Z,100nm,6.7s
HOPS Hopland Field 85.65 40 P P 02 48 06.3 +1.2
HOPS IAMs_20 IAMs_20 03 23 39.8
comp=Z,4μm,18.0s
BO01 Tunca 85.66 127 IAmb IAmb 02 48 26.9
comp=Z,147nm,1.6s
YUH Yuha Desert 85.67 48 IAmb IAmb 02 48 26.2
comp=Z,180nm,1.4s
GDXM Geysers 85.67 40 IAmb IAmb 02 48 26.2
comp=Z,126nm,1.4s
PETK Petropavlovsk- 85.67 345 P P 02 48 05.4 +0.5
comp=Z,216nm,0.9s,baz=113,slow=4.8,SNR=55
PETK LR LR 03 20 02.1
comp=Z,2μm,21.4s,baz=170,slow=31
comp=Z,216nm,0.9s
VA05 Santo Domingo 85.70 127 IAmb IAmb 02 48 26.0
comp=Z,121nm,1.1s
VES Vestal, Richgr 85.78 44 P P 02 48 07.2 +1.3
baz=228
VES S S 02 58 40.6 +4.7
baz=228
EDW2 Edwards Air Fo 85.81 45 P P 02 48 07.7 +1.6
baz=229,SNR=37
EDW2 S S 02 58 41.3 +4.9
baz=229
MT01 Popeta 85.84 127 P P 02 48 07.6 +1.1
KCPM Cahto Peak 85.86 39 IAmb IAmb 02 48 27.6
comp=Z,158nm,1.2s
VOG Valley Oaks Go 85.93 44 P P 02 48 07.6 +1.0
baz=228
SWSC Sam W. Stewart 85.94 48 P P 02 48 08.5 +1.8
baz=230,SNR=8.6
TPFO Pinon Flats 85.94 47 P P 02 48 08.6 +1.7
baz=230,SNR=22
TPFO S S 02 58 44.8 +6.9
baz=230
PFO Pinyon Flats O 85.94 47 P P 02 48 08.2 +1.3
comp=Z,35nm,1.1s,baz=243,slow=4.3,SNR=23
PFO LR LR 03 19 08.1
comp=Z,3μm,20.7s,baz=252,slow=30
comp=Z,35nm,1.1s
PFO Pinyon Flats O 85.94 47 P P 02 48 07.9 +1.0
PFO IAmb IAmb 02 48 27.7
comp=Z,194nm,1.4s
PFO Pinyon Flats O 85.94 47 IAMs_20 IAMs_20 03 21 17.5
comp=Z,3μm,20.0s
PFO Pinyon Flats O 85.94 47 P P 02 48 07.9 +1.0
PFO pmax pmax
comp=Z,194nm,1.4s
PFO Pinyon Flats O 85.94 47 P P 02 48 08.6 +1.7
baz=230,SNR=14
PFO S S 02 58 44.4 +6.5
baz=230
HJU Haeju 85.97 319 P P 02 48 07.0 +0.2
HJU pP PcP 02 48 09.6 +0.2
HJU S S 02 58 46.3 +8.7
HJU AmB
comp=Z,927nm,3.2s
HJU AMS AMS
comp=N,386nm,2.8s
HJU AMS AMS
comp=E,2μm,15.8s
HJU AMS AMS
comp=Z,430nm,3.1s
CCAC Calif City Air 85.98 45 IAmb IAmb 02 48 27.7
comp=Z,207nm,1.4s
GSI Gunungsitoli 86.01 274 P P 02 48 07.6 0.0
comp=Z,10μmcomp=Z,420nm,0.8s
GSI Gunungsitoli 86.01 274 P P 02 48 08.1 +0.5
ISA Isabella, Lake 86.04 45 P P 02 48 09.0 +1.7
baz=228,SNR=54
ISA S S 02 58 45.4 +6.8
baz=228
MT09 Talagante 86.07 127 IAmb IAmb 02 48 28.1
comp=Z,154nm,1.1s
BBRC Big Bear Solar 86.07 46 P P 02 48 09.3 +1.6
baz=229
CNBA Chernabura Isl 86.12 10 IAMs_20 IAMs_20 03 20 59.6
comp=Z,3μm,21.0s
CHNA Chernabura Isl 86.13 10 P P 02 48 07.6 +0.5
baz=196,SNR=29
BO04 La Punta 86.21 127 IAmb IAmb 02 48 28.9
comp=Z,248nm,1.7s
MT02 Curacav 86.25 126 IAmb IAmb 02 48 31.1
comp=Z,125nm,1.1s
NJ2 Nanjing 86.25 310 ⇑P P 02 48 08.3 0.0
NJ2 SKS SKSac 02 58 31.8 +0.3
NJ2 S ScS 02 58 46.0 -3.2
NJ2 pmax pmax
comp=Z,58nm,0.9s
NJ2 pmax pmax
comp=Z,1μm,4.1s
NJ2 LR LR
comp=Z,2μm,21.4s
NJ2 LR LR
comp=Z,1μm,21.8s
NJ2 LR LR
comp=Z,3μm,23.3s
HHU Hamhung 86.28 321 P P 02 48 08.3 +0.2
HHU sP pP 02 48 21.3 +2.0
HHU S S 02 58 41.2 +0.7
HHU AmB
comp=Z,515nm,2.2s
HHU AMS AMS
comp=N,328nm,3.8s
HHU AMS AMS
comp=E,342nm,3.9s
HHU AMS AMS
comp=Z,347nm,4.0s
LRMC Laurel Mtn Rad 86.40 45 P P 02 48 10.7 +1.6
baz=229,SNR=9.3
RRX Edison Barstow 86.43 46 P P 02 48 10.9 +1.8
baz=229
BELC Belle Mtn. Jos 86.49 47 P P 02 48 11.5 +1.9
baz=230,SNR=31
SDPT Sand Point 86.50 10 P P 02 48 09.2 +0.4
baz=195,SNR=25
CMB Columbia Colle 86.50 42 IAmb IAmb 02 48 29.5
comp=Z,166nm,1.4s
BC3 Big Chuckawall 86.61 48 P P 02 48 12.4 +2.2
baz=230,SNR=23
KHMM Horse Mountain 86.62 38 IAmb IAmb 02 48 31.4
comp=Z,99nm,1.1s
PEL Peldehue 86.63 127 IAMs_20 IAMs_20 03 17 54.1
comp=Z,5μm,21.0s
GLA Glamis 86.63 49 P P 02 48 12.0 +1.8
GLA Glamis 86.63 49 P P 02 48 12.0 +1.8
GLA pmax pmax
comp=Z,227nm,1.2s
GLA Glamis 86.63 49 P P 02 48 12.6 +2.4
baz=231,SNR=10
GLA S S 02 58 50.4 +5.9
baz=231
PYAG Pyongyang 86.65 319 P P 02 48 10.3 +0.3
PYAG pP PcP 02 48 16.0 +3.7
PYAG S S 02 58 49.3 +5.1
PYAG AmB
comp=Z,101nm,0.8s
PYAG AMS AMS
comp=N,52nm,2.1s
PYAG AMS AMS
comp=E,134nm,5.4s
PYAG AMS AMS
comp=Z,63nm,2.5s
KRPM Rodgers 86.67 38 IAmb IAmb 02 48 15.4
comp=Z,102nm,1.1s
UGL Uglegorsk 86.68 335 ciP P 02 48 10.5 +0.6
UGL e 02 48 28.9
UGL pmax pmax
comp=Z,2μm,5.0s
UGL pmax pmax
comp=Z,230nm,1.0s
HSIG 86.76 54 IAmb IAmb 02 48 31.3
comp=Z,171nm,1.3s
CWC Cottonwood Cre 86.79 44 P P 02 48 12.2 +1.2
baz=228
CWC S S 02 58 52.0 +6.0
baz=228
HEC Hector,Ludlow 86.81 46 P P 02 48 12.8 +1.7
baz=230,SNR=26
HEC S S 02 58 52.3 +6.2
baz=230
GSC Goldstone, Bar 86.82 46 P P 02 48 12.8 +1.7
baz=229,SNR=64
GSC S S 02 58 49.2 +2.9
baz=229
MPMC Manual Prospec 86.90 45 P P 02 48 13.2 +1.6
baz=229,SNR=86
MPMC S S 02 58 53.8 +6.6
baz=229
ORV Oroville 86.91 40 IAmb IAmb 02 48 33.1
comp=Z,202nm,1.6s
ORV IAMs_20 IAMs_20 03 24 20.3
comp=Z,3μm,18.0s
KCSI Kotacane, Aceh 86.95 276 P P 02 48 10.3 -1.9
MDPB Devils Postpil 86.99 43 IAmb IAmb 02 48 33.2
comp=Z,140nm,1.5s
OMMB Old Mammoth Mi 87.02 43 IAmb IAmb 02 48 34.4
comp=Z,220nm,1.6s
USA0B Ussuriysk Arra 87.10 326 P P 02 48 11.9 -0.2
USA0B IAmb IAmb 02 48 16.3
comp=Z,128nm,1.2s
USA0B Ussuriysk Arra 87.10 326 iP P 02 48 12.7 +0.6
USRK Ussuriysk Ar. 87.10 326 P P 02 48 13.0 +0.9
comp=Z,72nm,0.9s,baz=139,slow=3.6,SNR=40
USRK LR LR 03 22 51.3
comp=Z,2μm,21.1s,baz=136,slow=33
comp=Z,72nm,0.9s
TIN Tinemaha, Big 87.11 44 P P 02 48 13.9 +1.4
baz=228
TIN S S 02 58 55.9 +6.9
baz=228

MLAC	**Mammoth, Mammo**	**87.13**	**43**	P	**P**	**02 48 14.4**	**+1.7**
	baz=228						
MLAC				S	**S**	**02 58 56.7**	**+7.3**
	baz=228						
IRM	**Iron Mountain**	**87.13**	**48**	P	**P**	**02 48 14.8**	**+2.2**
	baz=230,SNR=28						
IRM				S	**S**	**02 58 55.1**	**+5.9**
	baz=230						
113A	**Mohawk Valley,**	**87.15**	**49**	IAmb	IAmb	02 48 33.7	
	comp=Z,206nm,1.5s						
GMRC	**Granite Mounta**	**87.20**	**47**	P	**P**	**02 48 14.9**	**+1.8**
	baz=230,SNR=34						
GMRC				S	**S**	**02 58 56.2**	**+6.1**
	baz=230						
KSXB	**Camp Six Broad**	**87.22**	**37**	IAmb	IAmb	02 48 35.5	
	comp=Z,116nm,1.2s						
BLYC	**Blythe**	**87.27**	**48**	IAmb	IAmb	02 48 34.5	
	comp=Z,184nm,1.3s						
214A	**Organ Pipe Nat**	**87.28**	**50**	IAmb	IAmb	02 48 34.6	
	comp=Z,84nm,1.1s						
214A	**Organ Pipe Nat**	**87.28**	**50**	P	**P**	**02 48 15.3**	**+2.0**
	baz=232						
214A				S	**S**	**02 58 56.3**	**+5.6**
	baz=232						
SPIA	**Saint Paul Isl**	**87.28**	**4**	P	**P**	**02 48 13.8**	**+1.2**
	baz=187						
SPIA	**Saint Paul Isl**	**87.28**	**4**	P	**P**	**02 48 14.3**	**+1.7**
EMB	**Emerald Bay**	**87.30**	**41**	IAmb	IAmb	02 48 33.8	
	comp=Z,76nm,1.0s						
TUQ	**Turquoise Moun**	**87.46**	**46**	P	**P**	**02 48 16.1**	**+1.8**
	baz=230,SNR=9.4						
TUQ				S	**S**	**02 58 59.4**	**+6.9**
	baz=230						
GWY	**Greenwater Val**	**87.48**	**45**	IAmb	IAmb	02 48 34.9	
	comp=Z,151nm,1.3s						
PAYG	**Puerto Ayora**	**87.51**	**89**	IAMs_20	IAMs_20	03 17 50.6	
	comp=Z,4µm,22.0s						
SHOC	**Shoshone, Teco**	**87.54**	**46**	P	**P**	**02 48 16.1**	**+1.6**
	baz=230						
FURC	**Furnace Creek,**	**87.55**	**45**	P	**P**	**02 48 16.0**	**+1.5**
	baz=229,SNR=13						
LCH	**Last Change Ra**	**87.58**	**44**	IAmb	IAmb	02 48 35.1	
	comp=Z,125nm,1.4s						
GRAC	**Grapevine Rang**	**87.59**	**44**	P	**P**	**02 48 16.5**	**+1.8**
	baz=229,SNR=26						
GRAC				S	**S**	**02 58 59.5**	**+6.0**
	baz=229						
L02F	**Cave Junction**	**87.59**	**37**	P	**P**	**02 48 16.0**	**+1.4**
	baz=225						
LHV	**Little Huntoon**	**87.74**	**43**	P	**P**	**02 48 15.9**	**+0.6**
LHV				IAmb	IAmb	02 48 36.0	
	comp=Z,203nm,1.5s						
CHIR	**Chirikof Islan**	**87.75**	**12**	P	**P**	**02 48 15.6**	**+0.6**
	baz=199						
BEKR	**Beckworth**	**87.76**	**40**	IAmb	IAmb	02 48 37.4	
	comp=Z,114nm,1.4s						
YBH	**Yreka Blue Hor**	**87.77**	**38**	P	**P**	**02 48 16.9**	**+1.3**
	comp=Z,19nm,1.0s,baz=174,slow=2.8,SNR=20						
YBH				LR	LR	03 19 56.8	
	comp=Z,2µm,21.9s,baz=231,slow=30						
	comp=Z,19nm,1.0s						
VCNR	**Virginia City**	**87.78**	**41**	IAmb	IAmb	02 48 37.5	
	comp=Z,119nm,1.4s						
YERR	**Yerington**	**87.80**	**42**	IAmb	IAmb	02 48 36.1	
	comp=Z,110nm,1.2s						
NEE2	**Needles Airpor**	**87.85**	**47**	P	**P**	**02 48 18.1**	**+2.1**
	baz=231,SNR=12						
PDMCI	**Parker Dam,Lak**	**87.87**	**48**	P	**P**	**02 48 18.1**	**+2.1**
	baz=231,SNR=38						
SRIT	**Nakonsritamara**	**87.94**	**281**	IAmb	IAmb	02 48 19.4	
	comp=Z,147nm,1.4s						
TYV	**Tymovskoe**	**87.95**	**336**	*e*P	**P**	**02 48 16.8**	**+0.8**
TYV				*e*S	**S**	**02 59 01.5**	**+5.4**
TYV				pmax	pmax		
	comp=Z,2µm,7.0s						
TYV				pmax	pmax		
	comp=Z,155nm,1.0s						
TYV				smax	smax		
	comp=N,600nm,8.5s						
TYV				smax	smax		
	comp=E,600nm,8.5s						
K02D	**Willamette Mer**	**87.95**	**37**	P	**P**	**02 48 17.9**	**+1.5**
	baz=225,SNR=7.0						
K02D				S	**S**	**02 59 04.6**	**+7.9**
	baz=225						
NVAR	**Mina Array Bea**	**87.98**	**43**	P	**P**	**02 48 17.9**	**+1.1**
	comp=E,43nm,0.9s,baz=221,slow=8.3,SNR=138						
NVAR				PKKP	**PKKPbc**	**03 06 02.4**	**-0.9**
	comp=E,2.2nm,0.6s,baz=105,slow=2.9,SNR=12						
NVAR				PKPPKP	**P'P'df**	**03 14 10.5**	**+3.2**
	comp=E,2.8nm,0.9s,baz=91,slow=3.6,SNR=8.8						
NVAR				LR	LR	03 24 14.8	
	comp=E,4µm,18.1s,baz=238,slow=33						
	comp=E,43nm,0.9s						
RYN	**Ryan**	**87.98**	**42**	P	**P**	**02 48 17.2**	**+0.5**
RYN				IAmb	IAmb	02 48 37.8	
	comp=Z,195nm,1.7s						
CO05	**La Serena**	**88.03**	**124**	IAmb	IAmb	02 48 37.2	
	comp=Z,106nm,1.1s						
NV11	**Mina Array Sit**	**88.06**	**43**	IAmb	IAmb	02 48 37.4	
	comp=Z,132nm,1.4s						
SUJ	**Sinuiju**	**88.08**	**320**	P	**P**	**02 48 16.7**	**-0.2**
SUJ				sP	**pP**	**02 48 24.1**	**-3.9**
SUJ				S	**S**	**02 59 03.8**	**+5.9**
SUJ				AmB			
	comp=Z,492nm,1.6s						
SUJ				AMS	AMS		
	comp=N,248nm,3.3s						
SUJ				AMS	AMS		
	comp=E,174nm,2.3s						
SUJ				AMS	AMS		
	comp=Z,257nm,3.5s						
J01E	**Myrtle Point**	**88.15**	**36**	IAmb	IAmb	02 48 39.4	
	comp=Z,188nm,1.4s						
J01E	**Myrtle Point**	**88.15**	**36**	P	**P**	**02 48 18.8**	**+1.6**
	baz=224						
J01E				S	**S**	**02 59 06.2**	**+7.9**
	baz=224						
GULI	**GuiLin**	**88.19**	**301**	⇑P	**P**	**02 48 14.8**	**-3.0**
GULI				PP	**PP**	**02 51 45.6**	**0.0**
GULI				pmax	pmax		
	comp=Z,40nm,0.8s						
GULI				LR	LR		
	comp=Z,1µm,20.6s						
GULI				LR	LR		
	comp=Z,1µm,22.8s						
GULI				LR	LR		
	comp=Z,2µm,22.8s						
PAHR	**Pah Rah Range**	**88.21**	**41**	IAmb	IAmb	02 48 37.9	
	comp=Z,73nm,1.2s						
TPNV	**Topopah Spring**	**88.23**	**45**	IAmb	IAmb	02 48 38.0	
	comp=Z,164nm,1.3s						
TPNV	**Topopah Spring**	**88.23**	**45**	P	**P**	**02 48 19.6**	**+1.7**
	baz=230,SNR=38						
TPNV				S	**S**	**02 59 06.8**	**+6.9**
	baz=230						
L04D	**Klamath Falls**	**88.33**	**38**	IAmb	IAmb	02 48 38.4	
	comp=Z,124nm,1.3s						
L04D	**Klamath Falls**	**88.33**	**38**	P	**P**	**02 48 19.3**	**+1.1**
	baz=226,SNR=10						
L04D				S	**S**	**02 59 06.3**	**+5.9**
	baz=226						
WHN	**Wuhan**	**88.37**	**307**	⇑P	**P**	**02 48 18.1**	**-0.4**
WHN				PP	**PP**	**02 51 43.4**	**-3.6**
WHN				SKS	**SKSac**	**02 58 41.2**	**-3.2**
WHN				S	**S**	**02 59 03.0**	**+1.9**
WHN				pmax	pmax		
	comp=Z,100nm,1.1s						
WHN				LR	LR		
	comp=Z,2µm,19.4s						
WHN				LR	LR		
	comp=Z,4µm,21.3s						
WHN				LR	LR		
	comp=Z,6µm,25.8s						
DBO	**Dodson Butte**	**88.47**	**37**	P	**P**	**02 48 19.6**	**+0.7**
DBO				IAmb	IAmb	02 48 41.1	
	comp=Z,180nm,1.7s						
KVN	**Kaiserville**	**88.51**	**42**	IAmb	IAmb	02 48 39.3	
	comp=Z,97nm,1.3s						
W13A	**Hualapai Mount**	**88.53**	**47**	IAmb	IAmb	02 48 40.6	
	comp=Z,188nm,1.4s						
MDJ	**Mudanjiang**	**88.57**	**325**	IAmb	IAmb	02 48 25.2	
	comp=Z,50nm,0.9s						
MDJ	**Mudanjiang**	**88.57**	**325**	P	**P**	**02 48 19.3**	**+0.2**
MDJ				pP	pwP	02 48 32.4	-1.5
MDJ				S	**S**	**02 59 04.9**	**+2.6**
MDJ				pmax	pmax		
	comp=Z,28nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,2µm,6.1s						
MDJ				LR	LR		
	comp=Z,300nm,5.7s						
MDJ				LR	LR		
	comp=Z,360nm,7.4s						
MDJ				LR	LR		
	comp=Z,4µm,23.9s						
MDJ	**Mudanjiang**	**88.57**	**325**	P	**P**	**02 48 19.9**	**+0.8**
	comp=Z,60nm,0.9s						
SHPR	**Sheep Range**	**88.62**	**46**	IAmb	IAmb	02 48 41.0	
	comp=Z,152nm,1.3s						
SII	**Sitkinak Islan**	**88.72**	**13**	IAMs_20	IAMs_20	03 23 08.3	
	comp=Z,4µm,22.0s						
SII	**Sitkinak Islan**	**88.72**	**13**	P	**P**	**02 48 20.5**	**+0.9**
	baz=200,SNR=11						
SII	**Sitkinak Islan**	**88.72**	**13**	P	**P**	**02 48 20.5**	**+0.9**
I03D	**Drain, OR**	**88.83**	**36**	P	**P**	**02 48 21.9**	**+1.5**
	baz=225						
I03D				S	**S**	**02 59 08.8**	**+4.0**
	baz=225						
TUC	**Tucson**	**88.85**	**51**	P	**P**	**02 48 22.6**	**+1.7**
TUC	**Tucson**	**88.85**	**51**	P	**P**	**02 48 22.6**	**+1.7**
TUC				pmax	pmax		
	comp=Z,292nm,1.4s						
TUC	**Tucson**	**88.85**	**51**	P	**P**	**02 48 23.5**	**+2.6**
	baz=233						
TUC				S	**S**	**02 59 09.0**	**+3.2**
	baz=233						
I02E	**Swisshome, OR**	**88.86**	**36**	IAMs_20	IAMs_20	03 19 23.7	
	comp=Z,3µm,22.0s						
I02E	**Swisshome, OR**	**88.86**	**36**	P	**P**	**02 48 21.5**	**+1.0**
	baz=224						
I02E				S	**S**	**02 59 09.7**	**+4.5**
	baz=224						
K04D	**Chiloquin, OR**	**88.90**	**38**	P	**P**	**02 48 21.7**	**+0.8**
	baz=226						
K04D				S	**S**	**02 59 10.4**	**+4.5**
	baz=226						
DL2	**Dalian**	**88.93**	**317**	P	**P**	**02 48 20.8**	**-0.1**
DL2				S	**S**	**02 59 05.9**	**-0.1**
DL2				pmax	pmax		
	comp=Z,68nm,0.8s						
DL2				pmax	pmax		
	comp=Z,1µm,4.7s						
DL2				LR	LR		
	comp=Z,910nm,26.7s						
DL2				LR	LR		
	comp=Z,2µm,26.1s						
DL2				LR	LR		
	comp=Z,3µm,26.3s						
LCO	**Las Campanas**	**88.93**	**123**	P	**P**	**02 48 22.4**	**+0.7**
LCO				IAmb	IAmb	02 48 42.3	
	comp=Z,96nm,0.9s						
LCO	**Las Campanas**	**88.93**	**123**	P	**P**	**02 48 22.5**	**+0.7**
LCO				pmax	pmax		
	comp=Z,96nm,1.0s						
ZON	**Zonda**	**88.93**	**126**	IAmb	IAmb	02 48 42.5	
	comp=Z,107nm,1.2s						
S11A	**Rachel**	**88.99**	**45**	IAmb	IAmb	02 49 02.5	
	comp=Z,129nm,1.3s						
J04D	**Umpqua Nationa**	**89.14**	**37**	P	**P**	**02 48 23.5**	**+1.3**
	baz=226,SNR=16						
J04D				S	**S**	**02 59 10.2**	**+1.9**
	baz=226						
MOD	**Modoc Plateau**	**89.19**	**39**	IAmb	IAmb	02 48 42.3	
	comp=Z,113nm,1.4s						
MOD				IAMs_20	IAMs_20	03 26 15.4	
	comp=Z,3µm,18.0s						
HPIG		**89.33**	**58**	IAmb	IAmb	02 48 44.4	
	comp=Z,79nm,1.1s						
ZAIG	**Zacatecas**	**89.36**	**63**	IAmb	IAmb	02 48 45.8	
	comp=Z,173nm,2.0s						
I04A	**Tendick Farm,**	**89.38**	**37**	P	**P**	**02 48 23.8**	**+0.8**
	baz=226,SNR=15						
I04A				S	**S**	**02 59 13.0**	**+2.9**
	baz=226						
HOPE	**Hope Point**	**89.47**	**158**	IAMs_20	IAMs_20	03 23 47.9	
	comp=Z,4µm,20.0s						
COR	**Corvallis**	**89.48**	**36**	IAMs_20	IAMs_20	03 19 41.9	
	comp=Z,4µm,22.0s						
OHAK	**Old Harbor**	**89.52**	**13**	P	**P**	**02 48 24.0**	**+0.8**
	baz=201,SNR=24						
OHAK				S	**S**	**02 59 12.0**	**+1.4**
	baz=201						
R11A	**Troy Canyon, C**	**89.54**	**44**	P	**P**	**02 48 25.2**	**+1.1**
	baz=230,SNR=21						
R11A				S	**S**	**02 59 14.6**	**+2.4**
	baz=230						
J05D	**Fort Rock, OR**	**89.64**	**38**	P	**P**	**02 48 25.8**	**+1.4**
	baz=226,SNR=22						
H04D	**Lebanon**	**89.72**	**36**	IAMs_20	IAMs_20	03 19 51.4	
	comp=Z,3µm,22.0s						
H04D	**Lebanon**	**89.72**	**36**	P	**P**	**02 48 26.0**	**+1.5**
	baz=225,SNR=11						
H04D				S	**S**	**02 59 14.6**	**+1.5**
	baz=225						
TLIG	**Tlapa**	**89.76**	**70**	IAmb	IAmb	02 48 47.8	
	comp=Z,142nm,1.3s						
SNY	**Shenyang**	**89.76**	**320**	⇑P	**P**	**02 48 24.6**	**-0.2**
SNY				pmax	pmax		
	comp=Z,89nm,1.0s						
SNY				pmax	pmax		
	comp=Z,1µm,5.1s						
SNY				LR	LR		
	comp=Z,1µm,22.1s						
SNY				LR	LR		
	comp=Z,1µm,28.4s						
SNY				LR	LR		
	comp=Z,3µm,26.5s						
G03D	**McMinnville, O**	**89.94**	**35**	IAMs_20	IAMs_20	03 20 30.2	
	comp=Z,3µm,22.0s						
G03D	**McMinnville, O**	**89.94**	**35**	P	**P**	**02 48 26.6**	**+1.0**
	baz=225						
TIA	**Tai'an**	**89.97**	**313**	⇑P	**P**	**02 48 26.1**	**+0.2**
TIA				PP	**PP**	**02 52 05.5**	**+5.9**
TIA				S	**S**	**02 59 14.7**	**-1.2**
TIA				pmax	pmax		
	comp=Z,60nm,1.6s						
TIA				pmax	pmax		
	comp=Z,1µm,8.2s						
TIA				LR	LR		
	comp=Z,1µm,23.5s						
TIA				LR	LR		
	comp=Z,1µm,24.5s						
TIA				LR	LR		
	comp=Z,3µm,23.0s						
CN2	**Changchun**	**90.10**	**323**	*e*P	**P**	**02 48 25.0**	**-1.3**
CN2				*e*PP	**PP**	**02 52 02.4**	**+1.9**
CN2				SKS	**SKSac**	**02 58 54.0**	**0.0**
CN2				*es*S	pS	02 59 25.8	-5.2
CN2				pmax	pmax		
	comp=Z,140nm,0.9s						
CN2				pmax	pmax		
	comp=Z,960nm,4.0s						
CN2				LR	LR		
	comp=Z,1µm,23.0s						
CN2				LR	LR		
	comp=Z,2µm,23.0s						
CN2				LR	LR		
	comp=Z,3µm,25.0s						
AC06	**Mina Casimiro**	**90.11**	**122**	IAmb	IAmb	02 48 47.9	
	comp=Z,227nm,2.0s						
LCMT	**Little Creek M**	**90.13**	**46**	IAmb	IAmb	02 48 47.8	
	comp=Z,127nm,1.4s						
KDAK	**Kodiak Island**	**90.18**	**13**	P	**P**	**02 48 27.0**	**+0.7**
	comp=Z,54nm,1.0s,baz=168,slow=1.7,SNR=16						
KDAK				LR	LR	03 22 03.5	
	comp=Z,1µm,21.8s,baz=228,slow=31						
	comp=Z,54nm,1.0s						
KDAK	**Kodiak Island**	**90.18**	**13**	P	**P**	**02 48 26.1**	**-0.2**
KDAK				IAmb	IAmb	02 48 28.5	
	comp=Z,128nm,1.2s						
KDAK	**Kodiak Island**	**90.18**	**13**	IAMs_20	IAMs_20	03 24 22.8	
	comp=Z,2µm,21.0s						
KDAK	**Kodiak Island**	**90.18**	**13**	P	**P**	**02 48 26.1**	**-0.2**
KDAK				pmax	pmax		
	comp=Z,128nm,1.2s						
KDAK	**Kodiak Island**	**90.18**	**13**	P	**P**	**02 48 26.9**	**+0.6**
	baz=202						
KDAK				S	**S**	**02 59 18.3**	**+1.6**
	baz=202						
UNM	**Universidad Na**	**90.19**	**68**	IAMs_20	IAMs_20	03 18 54.6	
	comp=Z,4µm,22.0s						
GRNR	**Gornyy**	**90.19**	**333**	⇑*i*P	**P**	**02 48 27.5**	**+0.9**
GRNR				pmax	pmax		
	comp=E,7.0nm,1.1s						
GRNR				pmax	pmax		
	comp=N,9.0nm,1.3s						
GRNR				pmax	pmax		
	comp=Z,30nm,1.0s						
I05D	**Terrebonne, OR**	**90.31**	**37**	P	**P**	**02 48 28.6**	**+1.2**
	baz=226,SNR=7.0						
I05D				S	**S**	**02 59 18.3**	**-0.5**
	baz=226						
CCUT	**Cedar City**	**90.39**	**46**	IAmb	IAmb	02 48 50.9	
	comp=Z,148nm,1.5s						
WUAZ	**Wupatki**	**90.40**	**48**	P	**P**	**02 48 30.2**	**+2.0**
	baz=232						
P16K	**Nushagak River**	**90.42**	**10**	P	**P**	**02 48 27.2**	**-0.2**
	baz=197,SNR=12						
P16K				S	**S**	**02 59 20.3**	**+1.4**
	baz=197						
BNX	**BinXian**	**90.45**	**325**	⇓P	**P**	**02 48 27.3**	**-0.6**
BNX				pP	**pP**	**02 48 40.1**	**+1.0**
BNX				PP	**PP**	**02 52 02.2**	**-1.1**
BNX				sS	**sS**	**02 59 33.2**	**-6.0**
BNX				pmax	pmax		
	comp=Z,99nm,1.1s						
BNX				pmax	pmax		
	comp=Z,1µm,4.8s						
BNX				LR	LR		
	comp=Z,990nm,15.3s						
BNX				LR	LR		
	comp=Z,2µm,21.1s						
BNX				LR	LR		
	comp=Z,1µm,18.3s						
WVOR	**Wild Horse Val**	**90.46**	**39**	IAmb	IAmb	02 48 49.1	
	comp=Z,151nm,1.4s						
NKL	**Nikolayevsk**	**90.53**	**336**	*e*P	**P**	**02 48 26.9**	**-1.1**
NKL				*e*S	**SKSac**	**02 58 58.2**	**+2.2**
NKL				pmax	pmax		
	comp=N,2.0nm,0.8s						
NKL				pmax	pmax		
	comp=E,3.0nm,0.8s						
NKL				pmax	pmax		
	comp=Z,237nm,1.0s						
NKL				smax	smax		
	comp=E,3.0nm,1.9s						
NKL				smax	smax		
	comp=N,2.0nm,1.5s						
NKL				MLR	MLR		
	comp=E,12nm,11.0s						
NKL				MLR	MLR		
	comp=N,5.0nm,16.0s						
NKL				MLR	MLR		
	comp=Z,3µm,19.0s						
SZCU	**Shurtz Canyon**	**90.59**	**46**	IAmb	IAmb	02 48 50.2	
	comp=Z,104nm,1.3s						
F04D	**Rainier, OR**	**90.69**	**35**	P	**P**	**02 48 30.9**	**+1.9**
	baz=225						
PSUT	**Pine Spring**	**90.70**	**45**	P	**P**	**02 48 30.6**	**+1.0**
PSUT				IAmb	IAmb	02 48 50.2	
	comp=Z,67nm,1.3s						
P17K	**Kvichak River**	**90.82**	**11**	P	**P**	**02 48 29.2**	**0.0**
	baz=198,SNR=36						
P17K				S	**S**	**02 59 24.0**	**+1.5**
	baz=198						
HOOD	**Mount Hood Mea**	**90.83**	**36**	IAmb	IAmb	02 48 55.0	
	comp=Z,112nm,1.1s						
O16K	**Kokwok River B**	**90.94**	**10**	P	**P**	**02 48 29.3**	**-0.6**
	baz=197,SNR=21						
O16K				S	**S**	**02 59 23.7**	**0.0**
	baz=197						
G05D	**Wamic, OR**	**90.95**	**36**	P	**P**	**02 48 31.3**	**+1.0**
	baz=226,SNR=12						
G05D				S	**S**	**02 59 25.2**	**+0.7**
	baz=226						
KLR	**Kul'dur**	**90.96**	**330**	P	**P**	**02 48 30.5**	**+0.3**
	comp=Z,46nm,0.8s,baz=122,slow=3.6,SNR=46						
KLR				PKKPbc	**PKKPbc**	**03 05 55.4**	**-0.7**
	comp=Z,1.5nm,1.0s,baz=320,slow=9.9,SNR=3.7						
KLR				LR	LR	03 24 31.8	
	comp=Z,4µm,21.6s,baz=143,slow=32						
	comp=Z,46nm,0.8s						
KLR	**Kul'dur**	**90.96**	**330**	*ce*P	**P**	**02 48 30.4**	**+0.3**
KLR				pmax	pmax		
	comp=Z,84nm,1.0s						
KLR				MLR	MLR		
	comp=Z,3µm,19.0s						
Q20K	**Shuyak Island**	**90.99**	**13**	P	**P**	**02 48 30.6**	**+0.6**
	baz=202,SNR=13						
Q20K				S	**S**	**02 59 26.7**	**+2.6**
	baz=202						
121A	**Cookes Peak, D**	**91.03**	**53**	P	**P**	**02 48 32.6**	**+1.4**
121A	**Cookes Peak, D**	**91.03**	**53**	P	**P**	**02 48 33.0**	**+1.8**
	baz=234						
121A	**Cookes Peak, D**	**91.03**	**53**	P	**P**	**02 48 33.1**	**+2.0**
	baz=234,SNR=25						
121A				S	**S**	**02 59 24.3**	**-1.9**
	baz=234						
Q19K	**Cape Douglas,**	**91.05**	**12**	IAMs_20	IAMs_20	03 24 34.8	
	comp=Z,3µm,21.0s						
Q19K	**Cape Douglas,**	**91.05**	**12**	P	**P**	**02 48 30.7**	**+0.3**
	baz=201,SNR=20						
WISH	**Wishkah**	**91.05**	**34**	IAmb	IAmb	02 48 50.9	
	comp=Z,111nm,1.3s						
I07A	**Izee**	**91.09**	**38**	IAmb	IAmb	02 48 52.0	
	comp=Z,83nm,1.1s						
J08A	**Circle Bar Ran**	**91.16**	**39**	IAmb	IAmb	02 48 52.3	
	comp=Z,118nm,1.3s						
NLWA	**Neilton Lookou**	**91.20**	**33**	IAmb	IAmb	02 48 55.3	
	comp=Z,60nm,1.1s						
NLWA				IAMs_20	IAMs_20	03 20 39.3	
	comp=Z,3µm,22.0s						
P18K	**Big Mountain,**	**91.21**	**11**	P	**P**	**02 48 30.9**	**-0.2**
	baz=199						
P18K				S	**S**	**02 59 25.1**	**-1.1**
	baz=199						
W18A	**Petrified Fore**	**91.23**	**50**	P	**P**	**02 48 33.9**	**+1.8**
	baz=234						
W18A				S	**S**	**02 59 34.6**	**+6.7**
	baz=234						
E04D	**Cinebar**	**91.24**	**35**	P	**P**	**02 48 32.7**	**+1.2**
	baz=225,SNR=10						
E04D				S	**S**	**02 59 26.0**	**-1.0**
	baz=225						
O17K	**Koliganek Bris**	**91.27**	**10**	P	**P**	**02 48 30.7**	**-0.6**
	baz=198						
O17K				S	S	02 59 46.0	+19
	baz=198						
ELK	**Elko**	**91.28**	**42**	P	**P**	**02 48 33.3**	**+1.1**
	comp=Z,19nm,1.0s,baz=228,slow=5.2,SNR=34						
ELK				LR	LR	03 26 28.0	
	comp=Z,4µm,18.1s,baz=246,slow=34						
	comp=Z,19nm,1.0s						
ELK	**Elko**	**91.28**	**42**	IAmb	IAmb	02 48 53.9	
	comp=Z,68nm,1.4s						
AC02	**Maricunga**	**91.30**	**122**	IAmb	IAmb	02 48 55.3	
	comp=Z,67nm,1.1s						
MTPU	**Mount Pierson**	**91.43**	**46**	IAmb	IAmb	02 48 54.7	
	comp=Z,112nm,1.2s						
KIDD	**KIDD Seismic O**	**91.47**	**54**	P	**P**	**02 48 34.5**	**+1.3**
	baz=235						
D04E	**Lakebay**	**91.58**	**34**	P	**P**	**02 48 35.0**	**+1.9**
	baz=225						
D04E				S	**S**	**02 59 29.9**	**-0.1**
	baz=225						
GYA	**Guiyang**	**91.61**	**300**	⇓*i*P	**P**	**02 48 34.5**	**+0.5**
GYA				SKS	**SKSac**	**02 59 04.6**	**+0.8**
GYA				S	**S**	**02 59 29.8**	**-1.8**
GYA				pmax	pmax		
	comp=Z,61nm,1.2s						
GYA				pmax	pmax		
	comp=Z,810nm,5.3s						
GYA				LR	LR		
	comp=Z,780nm,22.9s						
GYA				LR	LR		
	comp=Z,790nm,20.8s						
GYA				LR	LR		
	comp=Z,2µm,21.6s						
TCRU	**Three Creeks R**	**91.61**	**45**	IAmb	IAmb	02 48 55.5	
	comp=Z,67nm,1.3s						
O18K	**Koktuh Hills**	**91.65**	**11**	P	**P**	**02 48 33.4**	**+0.2**
	baz=200						
O18K				S	**S**	**02 59 28.5**	**-1.7**
	baz=200						
D03D	**Eldon**	**91.67**	**34**	P	**P**	**02 48 35.0**	**+1.4**
	baz=225,SNR=11						
D03D				S	**S**	**02 59 29.7**	**-1.2**
	baz=225						
N16K	**Nishlik Lake**	**91.69**	**9**	P	**P**	**02 48 34.5**	**+1.2**
	baz=196,SNR=72						
N16K				S	**S**	**02 59 32.4**	**+1.9**
	baz=196						

MVU	**Marysvale**	**91.69**	**46**	P	**P**	**02 48 35.4**	**+1.2**	
HG4B	**Hotspring**	**91.70**	**27**	IAmb	IAmb	02 48 38.3		
	comp=Z,81nm,1.0s							
DIB	**Dawson Inlet,**	**91.93**	**25**	IAmb	IAmb	02 48 57.9		
	comp=Z,44nm,1.1s							
LYN	**LuoYang**	**92.02**	**309**	⇑*e*P	**P**	**02 48 35.5**	**0.0**	
LYN				pP	PcP	02 48 40.5	+4.2	
LYN				S	**S**	**02 59 36.4**	**+1.8**	
LYN				pmax	pmax			
	comp=Z,50nm,0.7s							
LYN				pmax	pmax			
	comp=Z,1µm,4.6s							
LYN				LR	LR			
	comp=Z,2µm,22.6s							
LYN				LR	LR			
	comp=Z,2µm,21.8s							
LYN				LR	LR			
	comp=Z,3µm,22.6s							
F07A	**Phinny Hill Vi**	**92.10**	**36**	IAmb	IAmb	02 48 56.3		
	comp=Z,93nm,1.3s							
HOM	**Homer**	**92.11**	**13**	IAMs_20	IAMs_20	03 25 05.7		
	comp=Z,3µm,21.0s							
HOM	**Homer**	**92.11**	**13**	P	**P**	**02 48 35.7**	**+0.5**	
	baz=202,SNR=5.2							
O19K	**Port Alsworth**	**92.12**	**11**	P	**P**	**02 48 35.2**	**-0.1**	
	baz=200							
O19K				S	**S**	**02 59 33.3**	**-1.0**	
	baz=200							
TX31	**Lajitas Ar. Si**	**92.13**	**57**	P	**P**	**02 48 37.1**	**+0.9**	
	baz=236							
TX32	**Lajitas Array**	**92.13**	**57**	P	**P**	**02 48 37.1**	**+0.8**	
TX32				IAmb	IAmb	02 48 56.2		
	comp=Z,78nm,1.4s							
TXAR	**Lajitas Array**	**92.13**	**57**	P	**P**	**02 48 37.5**	**+1.3**	
	comp=Z,9.8nm,0.9s,baz=214,slow=6.0,SNR=65							
TXAR				PKKP	PKKPdf	03 05 40.9	-9.4	
	comp=Z,0.7nm,0.8s,baz=116,slow=4.1,SNR=2.9							
TXAR				PKPPKP	**P'P'df**	**03 13 58.7**	**-2.3**	
	comp=Z,0.7nm,0.9s,baz=116,slow=2.9,SNR=4.4							
TXAR				LR	LR	03 25 05.2		
	comp=Z,2µm,18.0s,baz=218,slow=32							
	comp=Z,9.8nm,0.9s							
MNTX	**Cornudas Mount**	**92.22**	**54**	IAmb	IAmb	02 48 57.0		
	comp=Z,74nm,1.3s							
MNTX	**Cornudas Mount**	**92.22**	**54**	P	**P**	**02 48 37.6**	**+1.1**	
	baz=236							
MNTX				S	**S**	**02 59 42.4**	**+5.8**	
	baz=236							
MNTX	**Cornudas Mount**	**92.22**	**54**	P	**P**	**02 48 37.7**	**+1.1**	
	baz=236,SNR=34							
MNTX				S	**S**	**02 59 32.3**	**-4.3**	
	baz=236							
HNS	**HongShan**	**92.23**	**313**	⇑P	**P**	**02 48 36.7**	**+0.3**	
HNS				pP	**pwP**	**02 48 49.8**	**-1.4**	
HNS				S	**S**	**02 59 29.2**	**-7.1**	
HNS				pmax	pmax			
	comp=Z,33nm,1.3s							
HNS				pmax	pmax			
	comp=Z,860nm,8.3s							
HNS				LR	LR			
	comp=Z,1µm,23.5s							
HNS				LR	LR			
	comp=Z,2µm,24.3s							
O20K	**Slope Mountain**	**92.32**	**12**	P	**P**	**02 48 36.2**	**-0.1**	
	baz=202,SNR=5.6							
N18K	**Kilae Creek**	**92.32**	**11**	P	**P**	**02 48 36.0**	**-0.3**	
	baz=199,SNR=14							
N18K				S	**S**	**02 59 36.8**	**+0.7**	
	baz=199							
BRSE	**Bradley Lake S**	**92.36**	**13**	P	**P**	**02 48 36.9**	**+0.5**	
	baz=203,SNR=17							
BRSE				S	**S**	**02 59 38.5**	**+2.0**	
	baz=203							
DUG	**Dugway, Tooele**	**92.37**	**44**	P	**P**	**02 48 38.2**	**+1.0**	
	baz=232,SNR=11							
DUG				S	**S**	**02 59 33.6**	**-4.2**	
	baz=232							
Y22A	**Socorro**	**92.40**	**52**	P	**P**	**02 48 39.0**	**+1.5**	
	baz=235							
Y22A				S	**S**	**02 59 45.3**	**+6.9**	
	baz=235							
CBB	**Campbell River**	**92.42**	**31**	IAmb	IAmb	02 48 59.4		
	comp=Z,59nm,1.1s							
Y22D	**IRIS PASSCAL I**	**92.50**	**52**	IAMs_20	IAMs_20	03 26 16.5		
	comp=Z,3µm,18.0s							
Y22D	**IRIS PASSCAL I**	**92.50**	**52**	P	**P**	**02 48 39.9**	**+2.0**	
	baz=235							
Y22D	**IRIS PASSCAL I**	**92.50**	**52**	P	**P**	**02 48 39.4**	**+1.4**	
	baz=235							
Y22D				S	**S**	**02 59 36.4**	**-2.9**	
	baz=235							
CMIG	**Matias Romero**	**92.52**	**72**	LR	LR	03 20 11.3		
	comp=Z,1µm,21.6s,baz=239,slow=29							
CRNM	**Carthage**	**92.56**	**52**	P	**P**	**02 48 40.0**	**+1.7**	
E07A	**Sunnyside**	**92.59**	**36**	IAmb	IAmb	02 48 58.8		
	comp=Z,111nm,1.3s							
Q16A	**Castle Valley**	**92.59**	**46**	IAmb	IAmb	02 49 00.8		
	comp=Z,93nm,1.5s							
HAWA	**Hanford**	**92.64**	**36**	IAmb	IAmb	02 48 58.9		
	comp=Z,91nm,1.2s							
HAWA				IAMs_20	IAMs_20	03 25 32.7		
	comp=Z,2µm,19.0s							
MFID	**Camas Ranch**	**92.66**	**40**	IAmb	IAmb	02 48 59.0		
	comp=Z,82nm,1.1s							
MFID				IAMs_20	IAMs_20	03 27 11.4		
	comp=Z,2µm,18.0s							
LTY	**Liberty**	**92.66**	**35**	IAmb	IAmb	02 48 57.2		
	comp=Z,112nm,1.9s							
N19K	**Bonanza Creek**	**92.67**	**11**	IAmb	IAmb	02 48 38.8		
	comp=Z,51nm,1.1s							
N19K				IAMs_20	IAMs_20	03 28 54.7		
	comp=Z,2µm,20.0s							
N19K	**Bonanza Creek**	**92.67**	**11**	P	**P**	**02 48 37.4**	**-0.6**	
	baz=200,SNR=18							
N19K				S	**S**	**02 59 38.1**	**-1.4**	
	baz=200							
BGU	**Big Grassy Mou**	**92.69**	**43**	IAmb	IAmb	02 49 00.3		
	comp=Z,72nm,1.5s							
SVW2	**Sparrevohn**	**92.76**	**11**	IAmb	IAmb	02 48 41.2		
	comp=Z,104nm,1.8s							
BMO	**Blue Mountains**	**92.78**	**38**	P	**P**	**02 48 39.1**	**+0.2**	
BMO				IAmb	IAmb	02 48 58.5		
	comp=Z,55nm,1.3s							
BMO				IAMs_20	IAMs_20	03 22 49.6		
	comp=Z,2µm,22.0s							
BMO	**Blue Mountains**	**92.78**	**38**	P	**P**	**02 48 39.1**	**+0.2**	
BMO				pmax	pmax			
	comp=Z,55nm,1.3s							
TMUT	**Trail Mountain**	**92.80**	**45**	IAmb	IAmb	02 49 08.2		
	comp=Z,80nm,1.3s							
BBB	**Bella Bella**	**92.84**	**28**	P	**P**	**02 48 39.6**	**+0.8**	
	comp=Z,28nm,1.0s,baz=223,slow=3.1,SNR=6.7							
BBB				LR	LR	03 22 25.9		
	comp=Z,1µm,21.9s,baz=232,slow=30							
	comp=Z,28nm,1.0s							
BBB	**Bella Bella**	**92.84**	**28**	IAmb	IAmb	02 49 02.5		
	comp=Z,77nm,1.2s							
BJI	**Beijing**	**92.91**	**315**	P	**P**	**02 48 39.1**	**-0.3**	
BJI				pP	**PcP**	**02 48 43.1**	**+3.0**	
BJI				sP	**pP**	**02 48 46.3**	**-4.3**	
BJI				PP	**PP**	**02 52 22.1**	**-0.7**	
BJI				SKS	**SKSac**	**02 59 09.2**	**-0.9**	
BJI				S	**ScS**	**02 59 45.0**	**+0.9**	
BJI				pmax	pmax			
	comp=Z,21nm,1.1s							
BJI				pmax	pmax			
	comp=Z,670nm,8.4s							
BJI				LR	LR			
	comp=Z,1µm,22.3s							
BJI				LR	LR			
	comp=Z,1µm,21.0s							
BJI				LR	LR			
	comp=Z,2µm,22.4s							
SEW	**Seward**	**92.96**	**14**	IAmb	IAmb	02 49 01.9		
	comp=Z,94nm,1.2s							
SEW	**Seward**	**92.96**	**14**	P	**P**	**02 48 39.1**	**0.0**	
	baz=204							
SEW				S	**S**	**02 59 41.9**	**+0.2**	
	baz=204							
Q23K	**Middleton Isla**	**93.02**	**15**	P	**P**	**02 48 39.7**	**+0.3**	
	baz=207							
PB15	**IPOC Station P**	**93.11**	**119**	IAmb	IAmb	02 49 02.3		
	comp=Z,64nm,0.9s							
SRU	**San Rafael Swe**	**93.11**	**46**	IAmb	IAmb	02 49 02.4		
	comp=Z,143nm,1.5s							
MA2	**Magadan**	**93.15**	**345**	P	**P**	**02 48 40.2**	**+0.1**	
	comp=Z,38nm,0.8s,baz=174,slow=6.9,SNR=7.6							
MA2				LR	LR	03 25 11.1		
	comp=Z,4µm,22.0s,baz=166,slow=32							
	comp=Z,38nm,0.8s							
MA2	**Magadan**	**93.15**	**345**	P	**P**	**02 48 38.3**	**-1.8**	
MA2				IAmb	IAmb	02 48 44.2		
	comp=Z,51nm,0.9s							
MA2	**Magadan**	**93.15**	**345**	*ce*P	**P**	**02 48 39.6**	**-0.5**	
MA2				pmax	pmax			
	comp=Z,43nm,0.8s							
MA2	**Magadan**	**93.15**	**345**	P	**P**	**02 48 39.7**	**-0.4**	
P17A	**Butcher Ranch,**	**93.19**	**46**	IAmb	IAmb	02 49 03.1		
	comp=Z,126nm,1.6s							
CAPN	**Captain Cook N**	**93.23**	**13**	IAMs_20	IAMs_20	03 26 35.4		
	comp=Z,3µm,19.0s							
O22K	**Cooper Landing**	**93.25**	**13**	P	**P**	**02 48 40.4**	**-0.1**	
	baz=204							
MVCO	**Mesa Verde**	**93.27**	**48**	P	**P**	**02 48 42.5**	**+0.9**	
	baz=234,SNR=6.3							
P23K	**Montague Islan**	**93.30**	**15**	P	**P**	**02 48 41.3**	**+0.6**	
	baz=206							
P23K				S	**S**	**02 59 46.7**	**+1.9**	
	baz=206							
NNA	**Nana**	**93.30**	**106**	LR	LR	03 20 50.9		
	comp=Z,3µm,21.8s,baz=250,slow=29							
NNA	**Nana**	**93.30**	**106**	IAMs_20	IAMs_20	03 20 25.8		
	comp=Z,3µm,22.0s							
ANMO	**Albuquerque**	**93.32**	**51**	P	**P**	**02 48 43.0**	**+1.3**	
	comp=Z,12nm,0.9s,baz=202,slow=5.4,SNR=35							
ANMO				LR	LR	03 26 56.5		
	comp=Z,2µm,18.1s,baz=245,slow=33							
	comp=Z,12nm,0.9s							
ANMO	**Albuquerque**	**93.32**	**51**	P	**P**	**02 48 42.7**	**+0.9**	
ANMO				IAmb	IAmb	02 49 02.2		
	comp=Z,81nm,1.4s							
ANMO	**Albuquerque**	**93.32**	**51**	IAMs_20	IAMs_20	03 27 03.0		
	comp=Z,3µm,19.0s							
ANMO	**Albuquerque**	**93.32**	**51**	*i*P	**P**	**02 48 41.7**	**0.0**	
ANMO				pmax	pmax			
	comp=Z,22nm,1.1s							
ANMO				MLR	MLR			
	comp=Z,1µm,17.0s							
ANMO	**Albuquerque**	**93.32**	**51**	P	**P**	**02 48 42.9**	**+1.1**	
	baz=235							
ANMO				S	**S**	**02 59 51.0**	**+4.4**	
	baz=235							
ANMO	**Albuquerque**	**93.32**	**51**	P	**P**	**02 48 42.8**	**+1.1**	
	baz=235							
ANMO				S	**S**	**02 59 49.9**	**+3.4**	
	baz=235							
SPCR	**Spurr Chakacha**	**93.43**	**12**	P	**P**	**02 48 40.6**	**-0.9**	
	baz=202,SNR=11							
E09A	**Wood Farm, Sta**	**93.44**	**37**	IAmb	IAmb	02 49 02.0		
	comp=Z,90nm,1.4s							
JLU	**Jordanelle**	**93.44**	**44**	IAmb	IAmb	02 49 04.1		
	comp=Z,161nm,2.0s							
CRAG	**Craig**	**93.49**	**24**	P	**P**	**02 48 43.1**	**+1.4**	
CRAG	baz=218							
				S	**S**	**02 59 49.1**	**+2.4**	
	baz=218							
CM31	**Chiang Mai Arr**	**93.51**	**289**	IAmb	IAmb	02 48 46.6		
	comp=Z,54nm,1.1s							
CM31	**Chiang Mai Arr**	**93.51**	**289**	P	**P**	**02 48 43.9**	**+1.2**	
	SNR=15							
CM31				P	**P**	**02 48 43.9**	**+1.2**	
	SNR=15							
CMAR	**Chiang Mai Arr**	**93.51**	**289**	P	**P**	**02 48 43.0**	**+0.3**	
	comp=Z,17nm,0.8s,baz=140,slow=2.9,SNR=43							
CMAR				PP	**PP**	**02 52 26.1**	**-1.8**	
	comp=Z,2.3nm,0.4s,baz=132,slow=6.1,SNR=4.6							
CMAR				PKKPbc	**PKKPbc**	**03 05 49.4**	**+1.3**	
	comp=Z,1.7nm,0.3s,baz=304,slow=4.1,SNR=5.9							
CMAR				LR	LR	03 33 06.1		
	comp=Z,664nm,19.7s,baz=115,slow=37							
	comp=Z,17nm,0.8s							
CMAR	**Chiang Mai Arr**	**93.51**	**289**	P	**P**	**02 48 42.6**	**-0.1**	
CMAR	**Chiang Mai Arr**	**93.51**	**289**	P	**P**	**02 48 42.6**	**-0.1**	
HLID	**Hailey**	**93.54**	**41**	IAmb	IAmb	02 49 03.4		
	comp=Z,47nm,1.1s							
HLID				IAMs_20	IAMs_20	03 28 57.0		
	comp=Z,3µm,18.0s							
HLID	**Hailey**	**93.54**	**41**	P	**P**	**02 48 43.7**	**+1.1**	
	baz=231,SNR=53							
HLID				S	**S**	**02 59 52.6**	**+4.4**	
	baz=231							
F10A	**Beach Ranch, E**	**93.56**	**37**	IAmb	IAmb	02 49 04.0		
	comp=Z,48nm,1.0s							
P18A	**Preston Nutter**	**93.59**	**46**	IAmb	IAmb	02 49 04.1		
	comp=Z,86nm,1.7s							
PV10	**Paradox Valley**	**93.61**	**47**	IAmb	IAmb	02 49 03.6		
	comp=Z,110nm,1.6s							
PV13	**Radium Mtn., P**	**93.62**	**48**	IAmb	IAmb	02 49 03.1		
	comp=Z,55nm,1.4s							
PLID	**Pearl Lake**	**93.64**	**39**	IAmb	IAmb	02 49 03.3		
	comp=Z,102nm,1.1s							
PV11	**David Mesa, Pa**	**93.67**	**47**	IAmb	IAmb	02 49 04.0		
	comp=Z,104nm,1.7s							
PV23	**Carpenter Ridg**	**93.67**	**47**	IAmb	IAmb	02 49 04.1		
	comp=Z,127nm,1.9s							
CHTO	**Chiang Mai**	**93.69**	**290**	P	**P**	**02 48 42.7**	**-0.9**	
CHTO				IAmb	IAmb	02 48 47.1		
	comp=Z,82nm,1.4s							
CHTO	**Chiang Mai**	**93.69**	**290**	P	**P**	**02 48 42.7**	**-0.9**	
CHTO				pmax	pmax			
	comp=Z,82nm,1.4s							
CHTO	**Chiang Mai**	**93.69**	**290**	P	**P**	**02 48 44.6**	**+1.0**	
CHTO				P	**P**	**02 48 44.6**	**+1.0**	
CHTO	**Chiang Mai**	**93.69**	**290**	P	**P**	**02 48 44.5**	**+1.0**	
	comp=Z,29nm,1.1s							
M19K	**Big River Lodg**	**93.72**	**11**	P	**P**	**02 48 42.5**	**-0.1**	
M19K	baz=200							
				S	**S**	**02 59 48.1**	**-0.3**	
	baz=200							
GAMB	**Gambell**	**93.79**	**3**	IAMs_20	IAMs_20	03 23 59.7		
	comp=Z,3µm,22.0s							
GAMB	**Gambell**	**93.79**	**3**	P	**P**	**02 48 43.5**	**+0.6**	
GAMB	baz=185							
				S	**S**	**02 59 51.4**	**+2.6**	
	baz=185							
RC01	**Rabbit Creek A**	**93.80**	**13**	IAmb	IAmb	02 48 44.7		
	comp=Z,89nm,1.3s							
RC01	**Rabbit Creek A**	**93.80**	**13**	P	**P**	**02 48 43.1**	**0.0**	
	baz=204,SNR=10.0							
RC01				S	**S**	**02 59 49.4**	**+0.2**	
	baz=204							
HIN	**Hinchinbrook I**	**93.86**	**15**	IAMs_20	IAMs_20	03 26 05.1		
	comp=Z,3µm,21.0s							
LVC	**Limon Verde**	**93.87**	**119**	LR	LR	03 22 17.2		
	comp=Z,3µm,21.0s,baz=270,slow=30							
LVC	**Limon Verde**	**93.87**	**119**	P	**P**	**02 48 45.5**	**+0.6**	
LVC				IAmb	IAmb	02 49 06.5		
	comp=Z,66nm,0.9s							
LVC	**Limon Verde**	**93.87**	**119**	IAMs_20	IAMs_20	03 20 52.8		
	comp=Z,4µm,22.0s							
LVC	**Limon Verde**	**93.87**	**119**	P	**P**	**02 48 45.5**	**+0.6**	
LVC				pmax	pmax			
	comp=Z,67nm,1.0s							
TIY	**Taiyuan**	**93.87**	**312**	⇑P	**P**	**02 48 44.3**	**+0.2**	
TIY				SKS	**SKSac**	**02 59 16.0**	**+0.2**	
TIY				S	**S**	**02 59 50.4**	**-0.7**	
TIY				pmax	pmax			
	comp=Z,570nm,5.2s							
TIY				LR	LR			
	comp=Z,970nm,20.6s							
TIY				LR	LR			
	comp=Z,1µm,17.9s							
TIY				LR	LR			
	comp=Z,2µm,21.3s							
PV07	**Paradox Valley**	**93.89**	**47**	P	**P**	**02 48 40.1**	**-4.2**	
KMI	**Kunming**	**93.89**	**297**	⇑P	**P**	**02 48 44.9**	**+0.2**	
KMI				pP	pP	02 48 55.8	+0.1	
KMI				SKS	**SKSac**	**02 59 16.0**	**-0.8**	
KMI				S	**S**	**02 59 52.8**	**+0.7**	
KMI				SS	**SS**	**03 06 10.2**	**-2.3**	
KMI				pmax	pmax			
	comp=Z,39nm,1.4s							
KMI				pmax	pmax			
	comp=Z,550nm,8.1s							
KMI				LR	LR			
	comp=Z,2µm,21.2s							
KMI				LR	LR			
	comp=Z,680nm,20.6s							
KMI				LR	LR			
	comp=Z,2µm,19.8s							
L19K	**White Mountain**	**93.91**	**11**	IAmb	IAmb	02 48 47.7		
	comp=Z,101nm,1.1s							
L19K	**White Mountain**	**93.91**	**11**	P	**P**	**02 48 43.8**	**+0.3**	
	baz=200,SNR=66							
L19K				S	**S**	**02 59 50.9**	**+0.8**	
	baz=200							
M20K	**Styx River**	**93.91**	**11**	IAMs_20	IAMs_20	03 29 44.3		
	comp=Z,2µm,20.0s							
M20K	**Styx River**	**93.91**	**11**	P	**P**	**02 48 42.8**	**-0.9**	
	baz=201,SNR=11							
M20K				S	**S**	**02 59 50.9**	**+0.6**	
	baz=201							
SUA	**Susitna One**	**93.95**	**13**	IAmb	IAmb	02 48 49.9		
	comp=Z,47nm,0.8s							
SUA				IAMs_20	IAMs_20	03 26 28.5		
	comp=Z,3µm,20.0s							
SUA	**Susitna One**	**93.95**	**13**	P	**P**	**02 48 43.8**	**-0.1**	
	baz=203,SNR=7.3							
PB09	**IPOC Station P**	**94.08**	**118**	IAmb	IAmb	02 49 07.8		
	comp=Z,85nm,0.9s							
XAN	**Xi'an**	**94.14**	**307**	⇑P	**P**	**02 48 45.4**	**0.0**	
XAN				pP	PcP	02 48 49.9	+4.1	
XAN				PP	**PP**	**02 52 36.9**	**+4.3**	
XAN				SKS	**SKSac**	**02 59 19.2**	**+1.9**	
XAN				S	**ScS**	**02 59 59.0**	**+4.2**	
XAN				pmax	pmax			
	comp=Z,32nm,1.0s							
XAN				pmax	pmax			
	comp=Z,820nm,7.1s							
XAN				LR	LR			
	comp=Z,830nm,17.6s							
XAN				LR	LR			
	comp=Z,1µm,18.1s							
XAN				LR	LR			
	comp=Z,3µm,19.0s							
GLI	**Glacier Island**	**94.16**	**14**	IAmb	IAmb	02 48 47.8		
	comp=Z,78nm,1.0s							
GLI	**Glacier Island**	**94.16**	**14**	P	**P**	**02 48 44.7**	**0.0**	
	baz=206,SNR=13							
GLI				S	**S**	**02 59 54.8**	**+2.5**	
	baz=206							
EYAK	**Cordova Ski Ar**	**94.16**	**15**	P	**P**	**02 48 45.0**	**+0.3**	
	baz=208,SNR=7.9							
EYAK				S	**S**	**02 59 54.8**	**+2.5**	
	baz=208							
FID	**Port Fidalgo**	**94.18**	**15**	IAmb	IAmb	02 48 46.3		
	comp=Z,49nm,1.2s							
FID				IAMs_20	IAMs_20	03 26 45.4		
	comp=Z,3µm,20.0s							
SUCK	**Suckling Hills**	**94.20**	**16**	IAMs_20	IAMs_20	03 26 32.4		
	comp=Z,3µm,20.0s							
SKT	**Skwentna**	**94.28**	**12**	IAMs_20	IAMs_20	03 26 50.2		
	comp=Z,3µm,21.0s							
SKT	**Skwentna**	**94.28**	**12**	P	**P**	**02 48 44.1**	**-1.2**	
	baz=203,SNR=10							
PB01	**IPOC Station P**	**94.32**	**117**	P	**P**	**02 48 47.4**	**+0.7**	
PB01				IAmb	IAmb	02 49 08.1		
	comp=Z,60nm,1.0s							
HMT	**Hamilton**	**94.32**	**16**	IAMs_20	IAMs_20	03 26 36.4		
	comp=Z,4µm,20.0s							
M22K	**Willow**	**94.33**	**13**	IAmb	IAmb	02 48 49.6		
	comp=Z,96nm,1.1s							
M22K				IAMs_20	IAMs_20	03 26 28.7		
	comp=Z,3µm,21.0s							
M22K	**Willow**	**94.33**	**13**	P	**P**	**02 48 45.3**	**-0.2**	
	baz=204,SNR=6.7							
L20K	**Farewell, AK**	**94.34**	**11**	P	**P**	**02 48 45.3**	**-0.2**	
	baz=201,SNR=10.0							
L20K				S	**S**	**02 59 55.2**	**+1.3**	
	baz=201							
KNK	**Knik Glacier**	**94.35**	**14**	P	**P**	**02 48 45.7**	**0.0**	
	baz=205,SNR=7.0							
PMR	**Palmer**	**94.38**	**13**	IAmb	IAmb	02 48 47.2		
	comp=Z,43nm,1.1s							
PMR	**Palmer**	**94.38**	**13**	P	**P**	**02 48 45.7**	**0.0**	
	baz=205,SNR=12							
PMR				S	**S**	**02 59 57.2**	**+3.1**	
	baz=205							
TTA	**Tatalina**	**94.44**	**10**	P	**P**	**02 48 46.4**	**+0.4**	
	baz=199,SNR=38							
ATAH	**Atahualpa**	**94.50**	**101**	PKKPbc	PKKPbc	03 05 51.1	+5.6	
	comp=Z,5.9nm,0.8s,baz=160,slow=3.4,SNR=4.1							
ATAH				LR	LR	03 21 43.0		
	comp=Z,2µm,21.1s,baz=253,slow=29							
WRAK	**Wrangell Islan**	**94.51**	**23**	P	**P**	**02 48 46.6**	**+0.2**	
	baz=218,SNR=5.8							
WRAK				S	**S**	**02 59 58.0**	**+2.4**	
	baz=218							
SNH	**Sunshine Point**	**94.53**	**17**	IAMs_20	IAMs_20	03 23 25.0		
	comp=Z,3µm,20.0s							
S22A	**4UR Ranch, Cre**	**94.67**	**49**	IAmb	IAmb	02 49 09.2		
	comp=Z,64nm,1.6s							
S22A	**4UR Ranch, Cre**	**94.67**	**49**	P	**P**	**02 48 49.0**	**+1.0**	
	baz=235,SNR=18							
SML	**Sawmill**	**94.74**	**14**	P	**P**	**02 48 47.0**	**-0.4**	
	baz=205							
SML				S	**S**	**03 00 01.1**	**+3.6**	
	baz=205							
833A	**Chaparral WMA,**	**94.75**	**60**	P	**P**	**02 48 48.6**	**+0.4**	
	baz=238							
833A	**Chaparral WMA,**	**94.75**	**60**	P	**P**	**02 48 48.9**	**+0.6**	
	baz=238							
833A				S	**S**	**02 59 58.6**	**-0.4**	
	baz=238							
MESA	**MESA**	**94.75**	**17**	IAMs_20	IAMs_20	03 22 46.9		
	comp=Z,3µm,22.0s							
MESA	**MESA**	**94.75**	**17**	S	**S**	**03 00 00.7**	**+2.7**	
	baz=211							
WAX	**Waxell Ridge**	**94.76**	**17**	IAMs_20	IAMs_20	03 27 01.1		
	comp=Z,3µm,20.0s							
BMRM	**Bremner River**	**94.80**	**16**	P	**P**	**02 48 46.8**	**-0.9**	
BMRM				IAmb	IAmb	02 48 58.2		
	comp=Z,48nm,1.1s							
BMRM				IAMs_20	IAMs_20	03 26 36.0		
	comp=Z,3µm,20.0s							
BMRM	**Bremner River**	**94.80**	**16**	P	**P**	**02 48 48.0**	**+0.3**	
	baz=208,SNR=10							
BMRM				S	**S**	**02 59 59.6**	**+1.6**	
	baz=208							
M23K	**Glacier View**	**94.85**	**14**	P	**P**	**02 48 47.7**	**-0.2**	
	baz=206,SNR=6.5							
CUT	**Chulitna**	**94.91**	**12**	IAMs_20	IAMs_20	03 27 08.8		
	comp=Z,3µm,20.0s							
CUT	**Chulitna**	**94.91**	**12**	P	**P**	**02 48 47.4**	**-0.7**	
	baz=204,SNR=8.7							
ANM	**Nome**	**94.96**	**5**	P	**P**	**02 48 52.2**	**+3.9**	
	baz=191							
AHID	**Auburn Hatcher**	**94.96**	**43**	IAMs_20	IAMs_20	03 23 23.7		
	comp=Z,3µm,22.0s							
KLU	**Klutina**	**94.96**	**15**	P	**P**	**02 48 48.8**	**+0.3**	
	baz=207,SNR=5.6							
KLU				S	**S**	**03 00 02.7**	**+3.2**	
	baz=207							
YAH	**Yahtse**	**94.96**	**17**	IAmb	IAmb	02 51 08.1		
	comp=Z,38nm,0.7s							
YAH				IAMs_20	IAMs_20	03 23 17.4		
	comp=Z,3µm,22.0s							
SCM	**Sheep Creek Mo**	**94.97**	**14**	IAmb	IAmb	02 48 59.5		
	comp=Z,44nm,0.9s							
SCM	**Sheep Creek Mo**	**94.97**	**14**	P	**P**	**02 48 48.8**	**+0.3**	
	baz=206,SNR=16							
SCM				S	**S**	**03 00 03.1**	**+3.6**	
	baz=206							
PNL	**Peninsula**	**94.99**	**18**	P	**P**	**02 48 50.9**	**+2.3**	
	baz=213							
PPLA	**Purkeypile**	**95.02**	**11**	P	**P**	**02 48 48.4**	**-0.4**	
	baz=202							
ISLE	**Juniper Island**	**95.02**	**17**	P	**P**	**02 48 48.9**	**+0.1**	
ISLE				IAMs_20	IAMs_20	03 23

BCPM	Bancas Point	95.17	18		IAMs_20	IAMs_20	03 23 32.0		
	comp=Z,3µm,22.0s								
TABL	Table Mountain	95.18	17		IAMs_20	IAMs_20	03 23 01.4		
	comp=Z,3µm,22.0s								
GRNC	Granite Creek	95.28	17		IAMs_20	IAMs_20	03 23 26.9		
	comp=Z,3µm,22.0s								
VRDI	Verde Repeater	95.30	16		IAMs_20	IAMs_20	03 27 18.2		
	comp=Z,2µm,20.0s								
MSTX	Muleshoe	95.31	54		P	**P**	**02 48 51.3**	**+0.4**	
	baz=237								
MSTX	Muleshoe	95.31	54		P	**P**	**02 48 51.2**	**+0.4**	
	baz=237								
XLT	XiLinHaoTe	95.31	318	*e*	P	**P**	**02 48 52.6**	**+2.1**	
XLT					S	**S**	**03 00 02.2**	**-1.2**	
XLT					pmax	pmax			
	comp=Z,23nm,1.2s								
XLT					pmax	pmax			
	comp=Z,650nm,6.7s								
XLT					LR	LR			
	comp=Z,2µm,24.0s								
XLT					LR	LR			
	comp=Z,3µm,24.0s								
JIS	Juneau Island	95.32	21		IAMs_20	IAMs_20	03 26 09.2		
	comp=Z,3µm,20.0s								
N25K	Chitina, Valde	95.36	15		IAMs_20	IAMs_20	03 27 33.9		
	comp=Z,3µm,20.0s								
N25K	Chitina, Valde	95.36	15		P	**P**	**02 48 50.8**	**+0.5**	
	baz=208,SNR=11								
N25K					S	**S**	**03 00 03.9**	**+0.9**	
	baz=208								
PZH	PanZhiHua	95.38	297		P	**P**	**02 48 48.8**	**-2.5**	
PZH					sP	**pP**	**02 49 02.4**	**0.0**	
PZH					PP	**PP**	**02 52 44.9**	**+2.4**	
PZH					S	**S**	**03 00 03.8**	**-1.0**	
PZH					pmax	pmax			
	comp=Z,10.0nm,0.9s								
PZH					pmax	pmax			
	comp=Z,390nm,7.1s								
PZH					LR	LR			
	comp=Z,4µm,20.1s								
PZH					LR	LR			
	comp=Z,3µm,19.6s								
PZH					LR	LR			
	comp=Z,5µm,21.1s								
SMCO	Snowmass	95.39	48		P	**P**	**02 48 51.9**	**+0.5**	
M24K	Tolsona, Glenn	95.46	14		IAmb	IAmb	02 49 09.5		
	comp=Z,56nm,1.2s								
M24K	Tolsona, Glenn	95.46	14		P	**P**	**02 48 51.2**	**+0.5**	
	baz=207								
M24K					S	**S**	**03 00 05.6**	**+1.9**	
	baz=207								
REDW	Red Top Meadow	95.46	42		IAmb	IAmb	02 49 12.1		
	comp=Z,96nm,1.3s								
KVTX	Kingsville	95.48	61		IAMs_20	IAMs_20	03 29 18.3		
	comp=Z,3µm,18.0s								
KVTX	Kingsville	95.48	61		P	**P**	**02 48 53.3**	**+1.8**	
	baz=239								
TPAW	Teton Pass	95.48	42		IAmb	IAmb	02 49 11.8		
	comp=Z,74nm,1.4s								
CAST	Castle Rocks	95.52	11		IAMs_20	IAMs_20	03 32 33.9		
	comp=Z,2µm,20.0s								
CAST	Castle Rocks	95.52	11		P	**P**	**02 48 49.8**	**-1.1**	
	baz=202								
MCARA	McCarthy VSAT	95.53	16		IAMs_20	IAMs_20	03 27 25.5		
	comp=Z,2µm,21.0s								
MCARA	McCarthy VSAT	95.53	16		P	**P**	**02 48 51.4**	**+0.4**	
	baz=210,SNR=10.0								
MCARA					S	**S**	**03 00 06.2**	**+1.9**	
	baz=210								
SDCO	Great Sand Dun	95.53	49		P	**P**	**02 48 49.2**	**-2.7**	
SDCO	Great Sand Dun	95.53	49		P	**P**	**02 48 52.5**	**+0.5**	
	baz=236								
SNET	Serv Nac Est T	95.54	77		IAMs_20	IAMs_20	03 21 28.9		
	comp=Z,4µm,21.0s								
LOGN	Logan Glacier	95.55	17		IAMs_20	IAMs_20	03 23 35.0		
	comp=Z,3µm,22.0s								
WAT6	Susitna Watana	95.56	13		P	**P**	**02 48 51.2**	**0.0**	
	baz=206,SNR=23								
WAT6					S	**S**	**03 00 07.4**	**+2.6**	
	baz=206								
JCT	Junction City	95.58	58		IAmb	IAmb	02 49 11.9		
	comp=Z,38nm,1.1s								
JCT	Junction City	95.58	58		P	**P**	**02 48 52.0**	**0.0**	
	baz=238								
JCT					S	**S**	**03 00 09.8**	**+3.7**	
	baz=238								
JCT	Junction City	95.58	58		P	**P**	**02 48 51.8**	**-0.2**	
	baz=238								
JCT					S	**S**	**03 00 08.4**	**+2.2**	
	baz=238								
SNOW	Snow King Moun	95.58	42		IAmb	IAmb	02 49 12.7		
	comp=Z,53nm,1.0s								
CTG	Chitna Glacier	95.58	17		P	**P**	**02 48 51.8**	**+0.4**	
	baz=211								
BARN	Barnard Glacie	95.58	17		IAMs_20	IAMs_20	03 23 35.9		
	comp=Z,3µm,22.0s								
CTGM	Chitina Glacie	95.59	17		IAMs_20	IAMs_20	03 23 47.9		
	comp=Z,3µm,22.0s								
PLBC	Pleasant Camp	95.67	20		P	**P**	**02 48 52.1**	**+0.4**	
	baz=215								
PLBC					S	**S**	**03 00 12.5**	**+7.0**	
	baz=215								
DLMT	Dillon	95.68	40		IAmb	IAmb	02 49 13.0		
	comp=Z,50nm,1.3s								
DLMT					IAMs_20	IAMs_20	03 29 09.5		
	comp=Z,2µm,19.0s								
LOHW	Long Hollow	95.76	42		IAmb	IAmb	02 49 12.8		
	comp=Z,58nm,1.4s								
MOOW	Moose Ponds	95.76	42		IAmb	IAmb	02 49 14.4		
	comp=Z,87nm,1.9s								
TNA	Tin City	95.76	4		P	**P**	**02 48 52.4**	**+0.6**	
	baz=189								
SEY	Seymchan	95.83	347		P	**P**	**02 48 51.9**	**-0.4**	
	comp=Z,40nm,0.9s,baz=148,slow=5.1,SNR=28								
SEY					PKKPbc	**PKKPbc**	**03 05 44.2**	**+0.5**	
	comp=Z,1.7nm,0.3s,baz=314,slow=3.8,SNR=4.2								
SEY					LR	LR	03 27 58.7		
	comp=Z,3µm,21.0s,baz=165,slow=33								
	comp=Z,40nm,0.9s								
SEY	Seymchan	95.83	347	*i*	P	**P**	**02 48 51.5**	**-0.8**	
SEY					pmax	pmax			
	comp=Z,33nm,0.9s								
SEY					MLR	MLR			
	comp=Z,2µm,19.0s								
KTH	Kantishna Hill	95.84	12		IAMs_20	IAMs_20	03 27 50.5		
	comp=Z,3µm,21.0s								
MSO	Missoula	95.86	38		IAMs_20	IAMs_20	03 23 30.9		
	comp=Z,3µm,22.0s								
MSO	Missoula	95.86	38		S	**S**	**03 00 10.7**	**+2.8**	
	baz=231								
TRF	Thorofare Moun	95.86	12		P	**P**	**02 48 52.2**	**-0.5**	
	baz=204								
TRF					S	**S**	**03 00 13.5**	**+6.0**	
	baz=204								
BW06	Boulder Array	95.87	43		P	**P**	**02 48 53.4**	**+0.1**	
	baz=234,SNR=9.2								
BW06					S	**S**	**03 00 11.2**	**+2.6**	
	baz=234								
PD31	Pinedale Array	95.87	43		P	**P**	**02 48 53.8**	**+0.5**	
PDAR	Pinedale Array	95.87	43		P	**P**	**02 48 54.2**	**+0.9**	
	comp=Z,5.9nm,0.8s,baz=204,slow=3.3,SNR=25								
PDAR					PKKPbc	**PKKPbc**	**03 05 43.0**	**-0.1**	
	comp=Z,4.1nm,0.6s,baz=79,slow=4.4,SNR=22								
PDAR					PKPPKP	**P'P'df**	**03 13 52.6**	**-0.2**	
	comp=Z,0.6nm,0.7s,baz=85,slow=2.3,SNR=3.0								
PDAR					LR	LR	03 29 28.0		
	comp=Z,3µm,18.0s,baz=232,slow=34								
	comp=Z,5.9nm,0.8s								
J20K	Nowinta River	95.90	10		IAmb	IAmb	02 48 54.1		
	comp=Z,41nm,1.2s								
J20K	Nowinta River	95.90	10		P	**P**	**02 48 52.6**	**0.0**	
	baz=200,SNR=23								
J20K					S	**S**	**03 00 07.8**	**+0.5**	
	baz=200								
CHUM	Lake Minchumin	95.91	11		P	**P**	**02 48 52.2**	**-0.4**	
	baz=202								
T25A	Trinidad	95.92	50		P	**P**	**02 48 54.4**	**+0.8**	
	baz=237,SNR=7.3								
HARP	HAARP	95.94	15		P	**P**	**02 48 53.4**	**+0.6**	
	baz=208								
HARP					S	**S**	**03 00 12.4**	**+4.6**	
	baz=208								
FLWY	Flagg Ranch	95.98	42		IAmb	IAmb	02 49 14.2		
	comp=Z,69nm,1.2s								
SKAG	Skagway	95.99	20		P	**P**	**02 48 54.3**	**+1.2**	
	baz=216								
SKAG					S	**S**	**03 00 15.2**	**+7.0**	
	baz=216								
LRM	Limekiln Ridge	96.04	40		P	**P**	**02 48 54.8**	**+0.7**	
GCSA	Galena City Sc	96.05	9		P	**P**	**02 48 53.6**	**+0.4**	
	baz=198								
DHY	Denali Highway	96.08	13		P	**P**	**02 48 53.4**	**-0.2**	
	baz=206,SNR=12								
RND	Reindeer	96.09	13		IAMs_20	IAMs_20	03 27 34.0		
	comp=Z,3µm,21.0s								
CD2	Chengdu	96.14	302		P	**P**	**02 48 54.8**	**+0.2**	
CD2					PP	**PP**	**02 52 53.7**	**+5.5**	
CD2					SKS	**SKSac**	**02 59 29.2**	**+1.1**	
CD2					S	**ScS**	**03 00 13.6**	**+2.0**	
CD2					pmax	pmax			
	comp=Z,30nm,1.1s								
CD2					pmax	pmax			
	comp=Z,460nm,5.9s								
CD2					LR	LR			
	comp=Z,950nm,24.0s								
CD2					LR	LR			
	comp=Z,1µm,24.5s								
YHL	Hebgen Lake	96.17	41		IAmb	IAmb	02 49 16.8		
	comp=Z,119nm,1.5s								
ZEA	Zeya	96.17	331	*e*	P	**P**	**02 48 54.3**	**+0.3**	
ZEA				*e*			02 59 28.7		
ZEA					pmax	pmax			
	comp=N,20nm,1.1s								
ZEA					pmax	pmax			
	comp=Z,30nm,0.9s								
ZEA					pmax	pmax			
	comp=Z,200nm,13.1s								
YMR	Madison River	96.18	41		IAmb	IAmb	02 49 16.1		
	comp=Z,84nm,1.2s								
HHC	Hu-ho-hao-te	96.23	314	*e*	P	**P**	**02 48 58.3**	**+3.5**	
HHC					S	**S**	**03 00 14.2**	**+2.7**	
HHC					pmax	pmax			
	comp=Z,33nm,0.9s								
HHC					pmax	pmax			
	comp=Z,520nm,6.6s								
HHC					LR	LR			
	comp=Z,1µm,20.9s								
HHC					LR	LR			
	comp=Z,3µm,21.6s								
HHC					LR	LR			
	comp=Z,8µm,20.9s								
H17A	Grant Village	96.24	42		P	**P**	**02 48 57.0**	**+2.0**	
	baz=234,SNR=11								
YUK8	Steele Glacier	96.26	17		P	**P**	**02 48 55.1**	**+0.4**	
	baz=212								
BPAW	Bear Paw Mtn.	96.34	11		P	**P**	**02 48 53.2**	**-1.4**	
	baz=203,SNR=7.4								
YUK6	Outpost Mounta	96.34	18		P	**P**	**02 48 55.2**	**+0.2**	
	baz=214								
BOZ	Bozeman (W)	96.36	40		IAmb	IAmb	02 49 16.2		
	comp=Z,54nm,1.2s								
BOZ					IAMs_20	IAMs_20	03 29 47.5		
	comp=Z,2µm,18.0s								
BOZ	Bozeman (W)	96.36	40		P	**P**	**02 48 56.3**	**+0.9**	
	baz=233,SNR=23								
BOZ					S	**S**	**03 00 15.9**	**+3.3**	
	baz=233								
MCK	McKinley	96.37	12		IAmb	IAmb	02 48 58.4		
	comp=Z,50nm,1.0s								
MCK					IAMs_20	IAMs_20	03 27 54.4		
	comp=Z,3µm,21.0s								
MCK	McKinley	96.37	12		P	**P**	**02 48 54.5**	**-0.3**	
	baz=205,SNR=18								
MCK					S	**S**	**03 00 13.1**	**+1.6**	
	baz=205								
PAX	Paxson	96.38	14		P	**P**	**02 48 54.4**	**-0.5**	
	baz=208,SNR=9.8								
PAX					S	**S**	**03 00 12.4**	**+0.7**	
	baz=208								
M26K	Nabesna, AK	96.43	16		IAMs_20	IAMs_20	03 27 58.1		
	comp=Z,3µm,20.0s								
M26K	Nabesna, AK	96.43	16		P	**P**	**02 48 55.5**	**+0.4**	
	baz=210,SNR=11								
M26K					S	**S**	**03 00 14.8**	**+2.7**	
	baz=210								
Q24A	Divide	96.44	48		P	**P**	**02 48 56.8**	**+0.7**	
	baz=236								
LKWY	Lake	96.44	42		IAmb	IAmb	02 49 18.8		
	comp=Z,73nm,1.6s								
HYT	Haines Junctio	96.48	19		P	**P**	**02 48 55.5**	**+0.1**	
	baz=214								
HYT					S	**S**	**03 00 17.5**	**+4.8**	
	baz=214								
YUK3	Moose Creek	96.50	17		P	**P**	**02 48 56.1**	**+0.5**	
	baz=212,SNR=14								
YUK3					S	**S**	**03 00 16.4**	**+3.3**	
	baz=212								
AMTX	Amarillo	96.56	53		IAMs_20	IAMs_20	03 28 40.9		
	comp=Z,2µm,19.0s								
AMTX	Amarillo	96.56	53		P	**P**	**02 48 56.8**	**+0.4**	
	baz=238								
AMTX	Amarillo	96.56	53		P	**P**	**02 48 56.7**	**+0.3**	
	baz=238								
AMTX					S	**S**	**03 00 17.3**	**+2.7**	
	baz=238								
ISCO	Idaho Springs	96.61	48		P	**P**	**02 48 57.6**	**+0.8**	
	baz=236								
ISCO					S	**S**	**03 00 21.7**	**+6.4**	
	baz=236								
ISCO	Idaho Springs	96.61	48		P	**P**	**02 48 57.7**	**+0.9**	
	baz=236								
ISCO					S	**S**	**03 00 20.1**	**+4.9**	
	baz=236								
M27K	Edge Creek, AK	96.65	16		IAmb	IAmb	02 49 17.1		
	comp=Z,40nm,1.1s								
M27K					IAMs_20	IAMs_20	03 27 24.1		
	comp=Z,2µm,20.0s								
M27K	Edge Creek, AK	96.65	16		P	**P**	**02 48 57.0**	**+0.8**	
	baz=211,SNR=21								
M27K					S	**S**	**03 00 18.1**	**+3.9**	
	baz=211								
HIA	Hailar	96.67	324		IAMs_20	IAMs_20	03 28 13.5		
	comp=Z,2µm,20.0s								
RWWY	Rawlins	96.67	45		IAmb	IAmb	02 49 18.0		
	comp=Z,76nm,1.4s								
RWWY					IAMs_20	IAMs_20	03 25 47.2		
	comp=Z,3µm,21.0s								
BWN	Browne	96.67	12		IAMs_20	IAMs_20	03 27 55.3		
	comp=Z,4µm,20.0s								
ABTX	Abilene, Hawle	96.81	56		P	**P**	**02 48 58.2**	**+0.6**	
	baz=239								
ABTX					S	**S**	**03 00 19.6**	**+2.8**	
	baz=239								
ABTX	Abilene, Hawle	96.81	56		P	**P**	**02 48 57.1**	**-0.4**	
	baz=239								
ABTX					S	**S**	**03 00 18.3**	**+1.6**	
	baz=239								
O30N	Mendenhall	96.83	19		P	**P**	**02 48 57.5**	**+0.6**	
	baz=216								
O30N					S	**S**	**03 00 20.4**	**+4.8**	
	baz=216								
DLBC	Dease Lake	96.88	23		P	**P**	**02 48 58.0**	**+0.8**	
	comp=Z,8.9nm,1.1s,baz=217,slow=8.5,SNR=6.3								
DLBC					LR	LR	03 25 04.9		
	comp=Z,2µm,21.6s,baz=232,slow=31								
	comp=Z,8.9nm,1.1s								
DLBC	Dease Lake	96.88	23		P	**P**	**02 48 59.3**	**+2.0**	
DLBC	Dease Lake	96.88	23		P	**P**	**02 48 58.3**	**+1.1**	
	baz=220								
DLBC					S	**S**	**03 00 22.7**	**+6.5**	
	baz=220								
L26K	Log Cabin Wild	96.89	15		IAMs_20	IAMs_20	03 28 25.3		
	comp=Z,3µm,20.0s								
L26K	Log Cabin Wild	96.89	15		P	**P**	**02 48 57.6**	**+0.5**	
	baz=210,SNR=7.5								
BVCY	Beaver Creek	96.94	16		P	**P**	**02 48 57.8**	**+0.4**	
	baz=212								
N23A	Red Feather La	97.01	47		P	**P**	**02 48 59.0**	**+0.5**	
	baz=236								
K24K	Donnelly Dome	97.05	14		P	**P**	**02 48 58.3**	**+0.4**	
	baz=208,SNR=16								
BTO	Baotou	97.06	313	*e*	P	Pdif	02 49 00.2	+1.5	
BTO					S	**S**	**03 00 22.2**	**+3.5**	
BTO					LR	LR			
	comp=Z,5µm,24.5s								
BTO					LR	LR			
	comp=Z,8µm,23.5s								
N30M	Aishikik Lake	97.12	18		P	Pdif	02 48 58.5	+0.2	
	baz=215								
N30M					S	**S**	**03 00 22.7**	**+4.6**	
	baz=215								
NEA2	Nenana	97.13	12		IAMs_20	IAMs_20	03 28 28.5		
	comp=Z,3µm,21.0s								
NEA2	Nenana	97.13	12		P	**P**	**02 48 57.3**	**-0.9**	
	baz=205,SNR=17								
NEA2					S	**S**	**03 00 21.4**	**+3.5**	
	baz=205								
I21K	Tanana	97.17	11		P	**P**	**02 48 58.2**	**-0.1**	
	baz=202								
RIDG	Independent Ri	97.19	14		IAMs_20	IAMs_20	03 28 16.2		
	comp=Z,2µm,20.0s								
RIDG	Independent Ri	97.19	14		P	Pdif	02 48 58.6	0.0	
	baz=208								
WRH	Wood River Hil	97.20	12		IAmb	IAmb	02 49 01.2		
	comp=Z,46nm,1.0s								
WRH					IAMs_20	IAMs_20	03 32 00.4		
	comp=Z,2µm,20.0s								
MLY	Manley	97.24	11		P	**P**	**02 48 57.8**	**-1.0**	
	baz=203,SNR=21								
L27K	Beaver Creek,	97.27	16		P	Pdif	02 48 59.2	+0.3	
	baz=211,SNR=8.3								
L27K					S	**S**	**03 00 22.5**	**+3.2**	
	baz=211								
BCAR	Beaver Creek A	97.28	16		P	Pdif	02 48 59.2	+0.1	
P33M	Teslin, Yukon	97.35	21		IAMs_20	IAMs_20	03 26 32.9		
	comp=Z,2µm,20.0s								
P33M	Teslin, Yukon	97.35	21		P	Pdif	02 48 59.4	0.0	
	baz=218								
P33M					S	**S**	**03 00 25.6**	**+5.4**	
	baz=218								
HDA	Harding Lake	97.36	13		P	**P**	**02 48 58.8**	**-0.4**	
	baz=207,SNR=12								
HDA					S	**S**	**03 00 23.1**	**+3.1**	
	baz=207								
HDA					S	**S**	**03 00 23.1**	**+3.1**	
	baz=207								
435B	Jarrell	97.37	59		IAMs_20	IAMs_20	03 28 26.1		
	comp=Z,3µm,19.0s								
435B	Jarrell	97.37	59		P	**P**	**02 48 59.7**	**-0.3**	
	baz=239								
435B					S	**S**	**03 00 24.9**	**+3.4**	
	baz=239								
TGUH	Tegucigalpa,Un	97.38	78		IAMs_20	IAMs_20	03 22 25.6		
	comp=Z,3µm,22.0s								
CCB	Clear Creek Bu	97.41	13		IAmb	IAmb	02 49 01.9		
	comp=Z,59nm,1.6s								
CCB					IAMs_20	IAMs_20	03 32 15.9		
	comp=Z,2µm,20.0s								
RLMT	Red Lodge	97.42	42		P	Pdif	02 49 01.4	+1.0	
	baz=234								
H21K	Melozitna Rive	97.49	10		P	Pdif	02 48 59.8	-0.1	
	baz=202,SNR=21								
H21K					S	**S**	**03 00 24.1**	**+3.1**	
	baz=202								
N31M	Braeburn, Yuko	97.50	19		IAMs_20	IAMs_20	03 25 07.8		
	comp=Z,3µm,22.0s								
N31M	Braeburn, Yuko	97.50	19		S	**S**	**03 00 26.7**	**+5.3**	
	baz=216								
JTS	Las Juntas de	97.53	83		LR	LR	03 23 40.9		
	comp=Z,3µm,20.0s,baz=306,slow=30								
JTS	Las Juntas de	97.53	83		IAMs_20	IAMs_20	03 23 28.4		
	comp=Z,2µm,20.0s								
SCRK	Sand Creek	97.58	14		IAMs_20	IAMs_20	03 28 27.6		
	comp=Z,2µm,20.0s								
SCRK	Sand Creek	97.58	14		P	Pdif	02 49 00.4	0.0	
	baz=209								
SCRK					S	**S**	**03 00 24.0**	**+1.9**	
	baz=209								
I23K	Minto, Yukon-K	97.58	12		IAMs_20	IAMs_20	03 28 52.5		
	comp=Z,3µm,21.0s								
I23K	Minto, Yukon-K	97.58	12		P	**P**	**02 48 59.3**	**-0.9**	
	baz=205,SNR=14								
TCOL	CIGO, UAF Yank	97.61	12		IAmb	IAmb	02 49 04.7		
	comp=Z,35nm,0.9s								
TCOL					IAMs_20	IAMs_20	03 32 12.1		
	comp=Z,3µm,20.0s								
TCOL	CIGO, UAF Yank	97.61	12		P	**P**	**02 48 59.5**	**-0.8**	
	baz=206								
COLA	College	97.61	12		P	**P**	**02 48 59.9**	**-0.3**	
COLA					IAmb	IAmb	02 49 04.7		
	comp=Z,32nm,0.9s								
COLA	College	97.61	12		IAMs_20	IAMs_20	03 28 22.1		
	comp=Z,2µm,20.0s								
COLA	College	97.61	12		P	**P**	**02 48 59.9**	**-0.3**	
COLA					pmax	pmax			
	comp=Z,32nm,0.9s								
COLA	College	97.61	12		P	**P**	**02 48 59.7**	**-0.5**	
	baz=206								
MDM	Murphy Dome	97.61	12		IAmb	IAmb	02 49 02.8		
	comp=Z,55nm,1.4s								
MDM					IAMs_20	IAMs_20	03 28 43.4		
	comp=Z,3µm,20.0s								
K22A	Casper	97.63	45		IAmb	IAmb	02 49 22.4		
	comp=Z,49nm,1.1s								
K22A	Casper	97.63	45		P	Pdif	02 49 01.9	+0.7	
	baz=236								
K22A	Casper	97.63	45		P	Pdif	02 49 01.6	+0.3	
	baz=236,SNR=14								
K22A					S	**S**	**03 00 24.9**	**+1.3**	
	baz=236								
IL31		97.70	13		P	**P**	**02 49 00.3**	**-0.3**	
ILAR	Eielson Array	97.70	13		P	**P**	**02 49 00.2**	**-0.5**	
	comp=Z,7.2nm,0.9s,baz=221,slow=5.7,SNR=48								
ILAR					PP	**PP**	**02 52 54.2**	**-5.2**	
	comp=Z,2.7nm,0.8s,baz=226,slow=7.5,SNR=4.7								
ILAR					PKIKP	**PKiKP**	**02 53 34.4**	**-0.2**	
	comp=Z,1.9nm,0.8s,baz=295,slow=2.4,SNR=6.8								
ILAR					PKKPbc	**PKKPbc**	**03 05 31.8**	**-6.8**	
	comp=Z,1.2nm,0.9s,baz=347,slow=2.6,SNR=4.4								
ILAR					PKPPKP	**P'P'df**	**03 13 43.9**	**-2.9**	
	comp=Z,0.4nm,0.9s,baz=328,slow=3.3,SNR=4.3								
ILAR					LR	LR	03 27 46.5		
	comp=Z,626nm,20.0s,baz=210,slow=32								
	comp=Z,7.2nm,0.9s								
J25K	Salcha River,	97.86	13		P	Pdif	02 49 01.4	-0.1	
	baz=208,SNR=22								
J25K					S	**S**	**03 00 25.9**	**+1.6**	
	baz=208								
POKR	Poker Plat Res	97.91	12		IAMs_20	IAMs_20	03 28 42.0		
	comp=Z,3µm,20.0s								
POKR	Poker Plat Res	97.91	12		P	**P**	**02 49 01.0**	**-0.6**	
	baz=206								
POKR					S	**S**	**03 00 24.8**	**+0.3**	
	baz=206								
LPAZ	La Paz	98.06	114		P	Pdif	02 49 06.5	+2.1	
	comp=Z,1.6nm,0.6s,baz=325,slow=6.5,SNR=10								
LPAZ					PKKP	**PKKPdf**	**03 05 40.0**	**+1.4**	
	comp=Z,4.0nm,0.9s,baz=25,slow=3.2,SNR=5.9								
LPAZ					LR	LR	03 24 31.4		
	comp=Z,2µm,21.7s,baz=209,slow=30								
	comp=Z,1.6nm,0.6s								
HDC	Heredia	98.11	83		IAMs_20	IAMs_20	03 22 39.8		
	comp=Z,3µm,22.0s								
KSCO	Kaye Shedlock'	98.11	50		P	Pdif	02 49 03.6	+0.1	
	baz=238								
M30M	Minto, Yukon	98.12	18		IAMs_20	IAMs_20	03 25 07.0		
	comp=Z,2µm,21.0s								
M30M	Minto, Yukon	98.12	18		Pdiff	**P**	**02 49 02.1**	**-0.7**	
	baz=215								
M30M					S	**S**	**03 00 30.7**	**+4.2**	
	baz=215								
J26L	Joseph Creek	98.13	14		IAmb	IAmb	02 49 07.3		
	comp=Z,32nm,0.8s								
J26L					IAMs

WMOK					S	**S**	**03 00 32.8**	**+1.6**	
	baz=239								
WMOK	**Wichita Mounta**	**98.52**	**55**		Pdiff	**P**	**02 49 04.6**	**-0.6**	
	baz=239								
RDOG	**Red Dog Mine**	**98.59**	**6**		IAMs_20	IAMs_20	03 28 22.8		
	comp=Z,2µm,22.0s								
RDOG	**Red Dog Mine**	**98.59**	**6**		Pdiff	Pdif	02 49 07.2	+2.5	
	baz=193								
BILL	**Bilibino**	**98.67**	**354**		P	**P**	**02 49 03.5**	**-1.5**	
BILL	**Bilibino**	**98.67**	**354**	*d*	*i*P	**P**	**02 49 04.4**	**-0.6**	
BILL					*i*		02 53 08.2		
BILL					pmax	pmax			
	comp=Z,10.0nm,1.1s								
BILL					MLR	MLR			
	comp=Z,2µm,19.0s								
DAWY	**Dawson**	**98.70**	**16**		Pdiff	Pdif	02 49 05.3	0.0	
	baz=213								
DAWY					S	**S**	**03 00 34.7**	**+3.3**	
	baz=213								
LZH	**Lanzhou**	**98.75**	**307**	⇑	P	Pdif	02 49 06.7	+0.3	
LZH					sP	pP	02 49 14.2	-3.3	
LZH					PP	**PP**	**02 53 05.0**	**-3.4**	
LZH					SKS	**SKSac**	**02 59 41.3**	**-0.3**	
LZH					S	**ScS**	**03 00 37.0**	**+3.6**	
LZH					pmax	pmax			
	comp=Z,14nm,1.4s								
LZH					pmax	pmax			
	comp=Z,330nm,5.4s								
LZH					LR	LR			
	comp=Z,900nm,20.6s								
LZH					LR	LR			
	comp=Z,1µm,20.6s								
LZH					LR	LR			
	comp=Z,3µm,20.6s								
EGMT	**Eagleton**	**98.84**	**39**		IAMs_20	IAMs_20	03 31 12.0		
	comp=Z,3µm,19.0s								
EGMT	**Eagleton**	**98.84**	**39**		Pdiff	Pdif	02 49 06.6	+0.2	
	baz=234								
J29M	**Klondike Camp**	**99.31**	**16**		IAMs_20	IAMs_20	03 26 09.4		
	comp=Z,2µm,22.0s								
COLD	**Coldfoot**	**99.35**	**11**		Pdiff	**Pdif**	**02 49 08.6**	**+0.6**	
	baz=204								
OGNE	**Ogallala**	**99.53**	**48**		IAMs_20	IAMs_20	03 27 15.1		
	comp=Z,2µm,21.0s								
OGNE	**Ogallala**	**99.53**	**48**		Pdiff	**Pdif**	**02 49 09.4**	**-0.2**	
	baz=238								
MMPY	**Sheldon Lake,**	**99.70**	**20**		Pdiff	**Pdif**	**02 49 10.2**	**+0.4**	
	baz=220								
MMPY					S	**S**	**03 00 44.8**	**+4.9**	
	baz=220								
CBKS	**Cedar Bluff**	**99.93**	**51**		IAMs_20	IAMs_20	03 30 55.1		
	comp=Z,3µm,19.0s								
RSSD	**Black Hills**	**99.96**	**45**		P	**Pdif**	**02 49 12.2**	**+0.6**	
	baz=238								
RSSD	**Black Hills**	**99.96**	**45**		Pdiff	**Pdif**	**02 49 11.7**	**0.0**	
	baz=238								
CPUP	**Villa Florida**	**99.96**	**128**		P	**Pdif**	**02 49 16.4**	**+4.4**	
	comp=Z,4.4nm,1.1s,baz=334,slow=3.3,SNR=3.9								
CPUP						PKKPbc	**PKKPbc**	**03 05 30.5**	**+0.2**
	comp=Z,8.4nm,0.8s,baz=64,slow=2.2,SNR=9.2								
NATX	**Nacogdoches**	**100.02**	**59**		IAMs_20	IAMs_20	03 31 49.4		
	comp=Z,2µm,18.0s								
I29M	**Ogilvie Camp,**	**100.04**	**16**		IAMs_20	IAMs_20	03 30 21.7		
	comp=Z,2µm,21.0s								
I29M	**Ogilvie Camp,**	**100.04**	**16**		Pdiff	**Pdif**	**02 49 11.5**	**+0.2**	
	baz=214								
LAO	**LASA Array**	**100.06**	**42**		IAMs_20	IAMs_20	03 32 57.6		
	comp=Z,3µm,18.0s								
LAO	**LASA Array**	**100.06**	**42**		Pdiff	**Pdif**	**02 49 10.1**	**-1.7**	
	baz=237								
TOLK	**Toolik Lake Re**	**100.74**	**10**		IAMs_20	IAMs_20	03 34 03.8		
	comp=Z,2µm,20.0s								
TOLK	**Toolik Lake Re**	**100.74**	**10**		Pdiff	**Pdif**	**02 49 15.0**	**+0.7**	
	baz=205								
YAK	**Yakutsk**	**101.14**	**338**		P	**Pdif**	**02 49 18.6**	**+2.5**	
	comp=Z,12nm,0.5s,baz=117,slow=0.7,SNR=6.5								
YAK	**Yakutsk**	**101.14**	**338**			**Pdif**	**02 49 15.1**	**-1.0**	
YAK	**Yakutsk**	**101.14**	**338**		*e*P	**Pdif**	**02 49 16.8**	**+0.7**	
YAK					*e*S	**SKSac**	**02 59 50.5**	**-1.1**	
YAK					*e*SS	**SS**	**03 07 44.2**	**-8.4**	
YAK					*e*SSS	SSS	03 11 43.0		
YAK					pmax	pmax			
	comp=Z,37nm,0.9s								
YAK					pmax	pmax			
	comp=N,3.0nm,0.9s								
YAK					pmax	pmax			
	comp=E,4.0nm,0.9s								
YAK					pmax	pmax			
	comp=Z,68nm,1.5s								
YAK					pmax	pmax			
	comp=N,34nm,1.6s								
YAK					pmax	pmax			
	comp=E,19nm,1.6s								
YAK					smax	smax			
	comp=N,12nm,1.4s								
YAK					smax	smax			
	comp=E,10.0nm,1.4s								
TUL1	**Leonard**	**101.22**	**55**		IAMs_20	IAMs_20	03 33 55.4		
	comp=Z,2µm,18.0s								
EPYK	**Eagle Plains**	**101.25**	**16**		Pdiff	**Pdif**	**02 49 16.8**	**+0.2**	
	baz=216								
DGMT	**Dagmar**	**102.18**	**41**		IAMs_20	IAMs_20	03 28 06.5		
	comp=Z,3µm,22.0s								
KSU1	**Kansas State U**	**102.19**	**52**		IAMs_20	IAMs_20	03 39 07.0		
	comp=Z,2µm,18.0s								
A21K	**Barrow**	**102.35**	**7**		IAMs_20	IAMs_20	03 31 45.1		
	comp=Z,2µm,21.0s								
X40A	**Basin Creek Fa**	**102.67**	**57**		IAMs_20	IAMs_20	03 32 47.4		
	comp=Z,3µm,18.0s								
SONM	**Songino Array**	**103.12**	**318**		P	**Pdif**	**02 49 25.1**	**-0.3**	
	comp=Z,0.5nm,0.5s,baz=126,slow=3.7,SNR=3.7								
SONM					PKiKP	**PKiKP**	**02 53 43.2**	**-1.9**	
	comp=Z,3.0nm,0.9s,baz=122,slow=4.4,SNR=4.0								
SONM					PKKPbc	**PKKPbc**	**03 05 21.0**	**-1.4**	
	comp=Z,2.1nm,0.9s,baz=280,slow=3.7,SNR=8.1								
U40A	**Yellville**	**103.52**	**56**		IAMs_20	IAMs_20	03 33 20.5		
	comp=Z,3µm,18.0s								
INK	**Inuvik**	**103.55**	**15**		Pdiff	**Pdif**	**02 49 26.4**	**-0.3**	
	baz=218								
SIV	**San Ignacio**	**103.73**	**118**		PKKPbc	PKKPbc	03 05 20.1	+0.8	
	comp=Z,3.4nm,0.8s,baz=26,slow=4.6,SNR=9.4								
ECSD	**EROS Data Cent**	**104.40**	**48**		IAMs_20	IAMs_20	03 35 56.9		
	comp=Z,2µm,18.0s								
ECSD	**EROS Data Cent**	**104.40**	**48**		Pdiff	**Pdif**	**02 49 28.7**	**-2.5**	
	baz=242								
YKA	**Yellowknife Ar**	**105.19**	**25**		Pdiff	**Pdif**	**02 49 35.8**	**+1.6**	
	comp=Z,0.6nm,0.8s,baz=193,slow=2.5,SNR=2.4								
YKA					PKiKP	**PKiKP**	**02 53 47.9**	**-0.2**	
	comp=Z,1.7nm,0.6s,baz=259,slow=1.7,SNR=11								
YKA					PKKPbc	**PKKPbc**	**03 05 15.8**	**-0.7**	
	comp=Z,11nm,0.8s,baz=40,slow=3.3,SNR=23								
YKA					PKKP	**PKKPab**	**03 05 31.7**	**+2.0**	
	comp=Z,9.2nm,0.9s,baz=48,slow=5.1,SNR=11								
YKA	**Yellowknife Ar**	**105.19**	**25**		PKiKP	**PKiKP**	**02 53 47.4**	**-0.7**	
OXF	**Oxford**	**105.20**	**59**		IAMs_20	IAMs_20	03 35 29.5		
	comp=Z,3µm,18.0s								
GOMU	**GeErMu**	**105.22**	**303**		Pdif	**Pdif**	**02 49 35.7**	**+0.3**	
GOMU					AMB	AMB			
	comp=Z,140nm,7.7s								
GOMU					LR	LR			
	comp=Z,390nm,19.6s								
GOMU					LR	LR			
	comp=Z,220nm,18.0s								
GOMU					LR	LR			
	comp=Z,460nm,19.8s								
SCIA	**State Center**	**105.79**	**51**		IAMs_20	IAMs_20	03 34 10.0		
	comp=Z,2µm,18.0s								
ZAK	**Zakamensk**	**106.15**	**319**	*e*P		**Pdif**	**02 49 40.3**	**+1.5**	
ZAK					pmax	pmax			
	comp=Z,5.0nm,1.5s								
C36M	**Paulatuk**	**106.64**	**17**		IAMs_20	IAMs_20	03 30 10.1		
	comp=Z,2µm,22.0s								
MTDJ	**Mount Denham**	**107.59**	**79**		IAMs_20	IAMs_20	03 28 18.7		
	comp=Z,3µm,22.0s								
ULM	**Lac du Bonnet**	**107.80**	**42**		PKKPbc	PKKPbc	03 05 05.7	-2.2	
	comp=Z,4.3nm,0.8s,baz=23,slow=0.5,SNR=3.2								
ULM					PKKP	**PKKPdf**	**03 05 20.9**	**-1.2**	
	comp=Z,16nm,0.8s,baz=62,slow=5.0,SNR=16								
TIXI	**Tiksi**	**108.13**	**344**		Pdiff	**Pdif**	**02 49 48.4**	**+1.4**	
	comp=Z,5.0nm,0.9s,baz=271,slow=24,SNR=5.1								
TIXI					PKiKP	**PKiKP**	**02 53 52.2**	**-1.2**	
	comp=Z,5.7nm,0.7s,baz=302,slow=11,SNR=7.5								
TIXI	**Tiksi**	**108.13**	**344**			**Pdif**	**02 49 47.4**	**+0.4**	
TIXI					PKiKP	**PKiKP**	**02 53 51.6**	**-1.8**	
TIXI	**Tiksi**	**108.13**	**344**		P	**Pdif**	**02 49 47.4**	**+0.4**	
TIXI					MLR	MLR			
	comp=Z,2µm,20.0s								
JFWS	**Jewell Farm**	**108.20**	**51**		IAMs_20	IAMs_20	03 36 29.9		
	comp=Z,2µm,19.0s								
JFWS	**Jewell Farm**	**108.20**	**51**		P	**PKiKP**	**02 53 53.7**	**-0.7**	
	baz=246								
PCHI	**Peechi**	**108.88**	**271**		*e*P	**PKiKP**	**02 53 54.3**	**-2.2**	
PCHI					*ex*	x	03 03 52.2		
SDV	**Santo Domingo**	**109.22**	**91**		PKKP		03 05 16.6		
	comp=Z,4.8nm,0.4s,baz=357,slow=5.2,SNR=4.8								
SDV	**Santo Domingo**	**109.22**	**91**		IAMs_20	IAMs_20	03 30 50.2		
	comp=Z,3µm,22.0s								
EYMN	**Ely**	**109.45**	**45**		IAMs_20	IAMs_20	03 37 51.4		
	comp=Z,3µm,19.0s								
EYMN	**Ely**	**109.45**	**45**		PKiKP	**PKiKP**	**02 53 53.9**	**-2.7**	
	baz=246								
L44A	**Lake County Fo**	**109.48**	**52**		IAMs_20	IAMs_20	03 36 50.0		
	comp=Z,2µm,19.0s								
TKL	**Tuckaleechee C**	**109.87**	**60**		PKiKP	**PKiKP**	**02 53 56.8**	**-1.0**	
	comp=Z,4.5nm,0.9s,baz=76,slow=4.2,SNR=4.4								
HYBB	**Hyderabad (bro**	**110.12**	**279**		*e*PKiKP	**PKiKP**	**02 53 58.8**	**0.0**	
HYBB					*es*PKiKP	**sPKiKP**	**02 54 17.5**	**+3.4**	
HYBB					*e*PP	**PP**	**02 54 32.7**	**-0.3**	
HYBB					*e*SKSdf	**SKSdf**	**03 01 06.5**	**-1.6**	
HYBB					*e*SKKSac	**SKKSac**	**03 01 30.1**	**-3.0**	
HYBB					*e*SS	**SS**	**03 09 56.6**	**-0.4**	
HYBB					IVMs_BB	IVMs_BB	03 38 23.0		
	comp=Z,438nm,19.3s								
COWI	**Conover**	**110.21**	**48**		IAMs_20	IAMs_20	03 35 24.7		
	comp=Z,2µm,20.0s								
TZTN	**Tazewell**	**110.39**	**59**		PKiKP	**PKiKP**	**02 53 55.2**	**-3.6**	
	baz=247								
O48B	**Farmland**	**110.65**	**55**		PKiKP	**PKiKP**	**02 53 56.7**	**-2.4**	
	baz=248								
P49A	**Miami Univ. Ec**	**110.69**	**56**		PKiKP	**PKiKP**	**02 53 56.5**	**-2.7**	
	baz=248								
ACSO	**Alum Creek Sta**	**112.19**	**55**		PKiKP	**PKiKP**	**02 53 59.3**	**-2.7**	
	baz=249								
AAM	**Ann Arbor**	**112.46**	**53**		IAMs_20	IAMs_20	03 38 25.8		
	comp=Z,2µm,19.0s								
P52A	**Corning**	**112.58**	**56**		IAMs_20	IAMs_20	03 38 14.3		
	comp=Z,3µm,19.0s								
P52A	**Corning**	**112.58**	**56**		PKiKP	**PKiKP**	**02 53 59.8**	**-2.9**	
	baz=249								
GLMI	**Grayling**	**112.69**	**50**		IAMs_20	IAMs_20	03 39 18.8		
	comp=Z,2µm,18.0s								
VOI	**Vohitsoka**	**112.76**	**225**		P	**PKiKP**	**02 54 04.4**	**+0.4**	
BLA	**Blacksburg**	**112.96**	**59**		IAMs_20	IAMs_20	03 39 33.1		
	comp=Z,2µm,18.0s								
BLA	**Blacksburg**	**112.96**	**59**		PKiKP	**PKiKP**	**02 54 00.4**	**-3.3**	
	baz=249								
WMQ	**Urumqi**	**113.25**	**308**		PKP	**PKiKP**	**02 54 02.4**	**-1.6**	
WMQ					SS	SS	03 10 40.1	+2.1	
WMQ					AMB	AMB			
	comp=Z,480nm,4.5s								
WMQ					LR	LR			
	comp=Z,1µm,19.1s								
WMQ					LR	LR			
	comp=Z,830nm,18.5s								
WMQ					LR	LR			
	comp=Z,1µm,19.7s								
O53A	**New Philadelph**	**113.46**	**56**		PKiKP	**PKiKP**	**02 54 01.4**	**-3.0**	
	baz=250								
BDFB	**Brasilia**	**113.55**	**126**		PKiKP	**PKiKP**	**02 54 05.4**	**-0.1**	
	comp=Z,5.4nm,0.8s,baz=219,slow=1.6,SNR=9.0								
BDFB					PKKPbc	**PKKPbc**	**03 04 48.2**	**-0.2**	
	comp=Z,3.0nm,0.7s,baz=180,slow=2.0,SNR=2.3								
CNNC	**Cliffs of the**	**114.17**	**62**		IAMs_20	IAMs_20	03 46 04.2		
	comp=Z,2µm,18.0s								
MCWV	**Mont Chateau**	**114.24**	**57**		IAMs_20	IAMs_20	03 40 17.4		
	comp=Z,2µm,18.0s								
OPO	**Ambohidratompo**	**114.98**	**228**		PKP	**PKPdf**	**02 54 09.1**	**+0.9**	
	comp=Z,9.0nm,0.6s,baz=148,slow=0.9,SNR=13								
SUR	**Sutherland**	**115.30**	**197**		PKP	**PKPdf**	**02 54 09.9**	**+1.2**	
	comp=Z,15nm,0.7s,baz=158,slow=5.6,SNR=9.6								
SUR	**Sutherland**	**115.30**	**197**			**PKiKP**	**02 54 08.0**	**-0.7**	
SUR					IAMs_20	IAMs_20	03 38 05.8		
	comp=Z,2µm,20.0s								
SUR	**Sutherland**	**115.30**	**197**		P	**PKPdf**	**02 54 09.9**	**+1.2**	
CBN	**Corbin Frederi**	**115.57**	**59**		IAMs_20	IAMs_20	03 40 45.1		
	comp=Z,2µm,18.0s								
SSPA	**Standing Stone**	**115.98**	**57**		IAMs_20	IAMs_20	03 40 12.3		
	comp=Z,2µm,19.0s								
SSPA	**Standing Stone**	**115.98**	**57**		PKiKP	**PKPdf**	**02 54 07.6**	**-1.7**	
	baz=252								
ZSN	**Zaisan**	**116.28**	**311**		*e*PKIKP	**PKPdf**	**02 54 08.5**	**-1.1**	
ZSN	**Zaisan**	**116.28**	**311**		*e*PKP	**PKPdf**	**02 54 08.6**	**-1.1**	
	baz=311								
RES	**Resolute Bay**	**117.01**	**17**		PKPdf	**PKPdf**	**02 54 08.7**	**-1.5**	
RES	**Resolute Bay**	**117.01**	**17**		PKiKP	**PKPdf**	**02 54 08.7**	**-1.5**	
SJG	**San Juan**	**117.28**	**84**		PKPdf	**PKPdf**	**02 54 11.7**	**-0.7**	
SJG	**San Juan**	**117.28**	**84**		PKiKP	**PKPdf**	**02 54 11.7**	**-0.7**	
PDPR	**Patillas Dam,**	**117.35**	**84**		PKPdf	**PKPdf**	**02 54 11.5**	**-1.0**	
BOSA	**Boshof**	**117.51**	**203**		PKP	**PKiKP**	**02 54 13.8**	**+0.9**	
	comp=Z,21nm,0.8s,baz=157,slow=1.8,SNR=23								
BOSA					PKKPab	**PKKPab**	**03 04 40.9**	**-0.7**	
	comp=Z,2.6nm,0.9s,baz=347,slow=8.6,SNR=5.2								
HUMP	**Col San Antoni**	**117.55**	**84**		PKPdf	**PKPdf**	**02 54 12.0**	**-0.9**	
MK31	**Makanchi Array**	**117.78**	**310**	*i*	PKiKP	**PKPdf**	**02 54 10.9**	**-1.7**	
MKAR	**Makanchi Array**	**117.78**	**310**		PKP	**PKPdf**	**02 54 11.4**	**-1.2**	
	comp=Z,16nm,0.8s,baz=68,slow=3.3,SNR=65								
MKAR					PKKPbc	**PKKPbc**	**03 04 34.4**	**+0.2**	
	comp=Z,1.9nm,0.8s,baz=298,slow=3.6,SNR=7.6								
BINY	**Binghamton**	**117.82**	**55**			**PKPdf**	**02 54 12.3**	**-0.4**	
BINY	**Binghamton**	**117.82**	**55**		PKiKP	**PKPdf**	**02 54 11.2**	**-1.6**	
	baz=254								
MAKZ	**Makanchi**	**118.00**	**310**		IAMs_20	IAMs_20	03 40 55.8		
	comp=Z,2µm,22.0s								
MAKZ	**Makanchi**	**118.00**	**310**		PKIKP	**PKPdf**	**02 54 10.9**	**-2.1**	
ZALV	**Zalesovo Beam**	**118.01**	**318**		PKP	**PKPdf**	**02 54 11.8**	**-0.9**	
	comp=Z,11nm,0.8s,baz=144,slow=1.1,SNR=33								
SHLS	**Shalkode**	**118.75**	**306**		*e*PKIKP	**PKPdf**	**02 54 12.6**	**-2.1**	
SHLS	**Shalkode**	**118.75**	**306**		*e*PKP	**PKPdf**	**02 54 12.6**	**-2.1**	
	baz=306								
PDGK	**Podgornoye**	**118.77**	**306**		PKIKP	**PKPdf**	**02 54 13.4**	**-1.3**	
PAL	**Palisades**	**118.97**	**57**		PKiKP	**PKPdf**	**02 54 13.4**	**-1.6**	
	baz=254								
KPKS	**Kokpek**	**119.38**	**306**	*c*	*i*PKIKP	**PKPdf**	**02 54 14.7**	**-1.1**	
KPKS	**Kokpek**	**119.38**	**306**	⇑	*i*PKP	**PKPdf**	**02 54 14.8**	**-1.1**	
	baz=306								
WSPT	**Westport, CT**	**119.44**	**57**		IAMs_20	IAMs_20	03 44 25.0		
	comp=Z,2µm,18.0s								
LONY	**Lake Ozonia**	**119.45**	**53**		IAMs_20	IAMs_20	03 42 18.8		
	comp=Z,2µm,20.0s								
LONY	**Lake Ozonia**	**119.45**	**53**		PKiKP	**PKPdf**	**02 54 14.8**	**-1.0**	
	baz=256								
SATY	**Saty**	**119.47**	**305**	*c*	*i*PKIKP	**PKPdf**	**02 54 14.9**	**-1.2**	
SATY	**Saty**	**119.47**	**305**	⇑	*i*PKP	**PKPdf**	**02 54 14.9**	**-1.2**	
	baz=305								
NRIK	**Noril'sk**	**119.53**	**336**		PKP	**PKPdf**	**02 54 14.6**	**-0.6**	
	comp=Z,29nm,0.8s,baz=129,slow=2.1,SNR=24								
YLE	**Yale**	**119.77**	**57**		IAMs_20	IAMs_20	03 42 27.8		
	comp=Z,2µm,19.0s								
TDK	**Taldyqorghan**	**119.95**	**307**		*e*PKIKP	**PKPdf**	**02 54 15.4**	**-1.4**	
TDK	**Taldyqorghan**	**119.95**	**307**		*e*PKP	**PKPdf**	**02 54 15.5**	**-1.4**	
	baz=307								
SEM	**Semipalatinsk**	**119.97**	**314**	*c*	*i*PKIKP	**PKPdf**	**02 54 15.2**	**-1.7**	
SEM	**Semipalatinsk**	**119.97**	**314**	⇑	*i*PKP	**PKPdf**	**02 54 15.2**	**-1.7**	
	baz=314								
SVN	**Savane Anatole**	**120.17**	**90**		IAMs_20	IAMs_20	03 38 19.4		
	comp=Z,1µm,21.0s								
TDBA	**Terre de Bas,**	**120.21**	**89**		IAMs_20	IAMs_20	03 42 46.4		
	comp=Z,1µm,19.0s								
KSH	**Kashi**	**120.30**	**301**		PKP	**PKiKP**	**02 54 18.4**	**+0.5**	
KSH					PP	**PP**	**02 55 44.7**	**+0.2**	
KSH					SKKS		03 02 36.2		
KSH					AMB	AMB			
	comp=Z,550nm,13.3s								
KSH					LR	LR			
	comp=Z,1µm,23.4s								
KSH					LR	LR			
	comp=Z,1µm,23.2s								
KSH					LR	LR			
	comp=Z,2µm,25.3s								
QUA2	**Belchertown**	**120.44**	**56**		PKPdf	**PKPdf**	**02 54 17.1**	**-0.6**	
MDOK	**Medeo**	**120.45**	**305**		PKIKP	**PKPdf**	**02 54 16.5**	**-1.5**	
MDOK	**Medeo**	**120.45**	**305**	*i*	PKP	**PKPdf**	**02 54 16.4**	**-1.7**	
	baz=305								
TNSS	**Tian-Shan**	**120.50**	**305**		*e*PKIKP	**PKPdf**	**02 54 16.6**	**-1.8**	
TNSS	**Tian-Shan**	**120.50**	**305**		*e*PKP	**PKPdf**	**02 54 16.7**	**-1.8**	
	baz=305								
AAA	**Alma-Ata**	**120.56**	**305**		*e*PKIKP	**PKPdf**	**02 54 16.6**	**-1.4**	
AAA	**Alma-Ata**	**120.56**	**305**		*e*PKP	**PKPdf**	**02 54 16.7**	**-1.4**	
	baz=305								
ABD	**La Joyeuse, An**	**120.61**	**88**		IAMs_20	IAMs_20	03 36 50.9		
	comp=Z,1µm,20.0s								
CHKK	**Chushkaly**	**120.67**	**306**		*e*PKIKP	**PKPdf**	**02 54 16.7**	**-1.5**	
CHKK	**Chushkaly**	**120.67**	**306**		*e*PKP	**PKPdf**	**02 54 16.8**	**-1.5**	
	baz=306								
LBTB	**Lobatse**	**120.69**	**205**		PKP	**PKPdf**	**02 54 19.3**	**+0.2**	
	comp=Z,10nm,0.9s,baz=156,slow=3.1,SNR=12								
LBTB					PKKPbc	**PKKPbc**	**03 04 24.9**	**+1.4**	
	comp=Z,4.0nm,0.9s,baz=315,slow=5.7,SNR=3.8								
LBTB	**Lobatse**	**120.69**	**205**		PKPdf	**PKPdf**	**02 54 18.9**	**-0.2**	
LBTB	**Lobatse**	**120.69**	**205**		PKiKP	**PKPdf**	**02 54 18.9**	**-0.2**	
ULHL	**Ulahol**	**120.81**	**304**		P	**PKPdf**	**02 54 18.5**	**-0.3**	
	SNR=70								
HNH	**Hanover**	**120.83**	**54**		IAMs_20	IAMs_20	03 43 54.5		
	comp=Z,2µm,18.0s								
GDSD	**La Dsirade Is**	**120.90**	**88**		IAMs_20	IAMs_20	03 38 28.7		
	comp=Z,2µm,22.0s								
KURK	**Kurchatov**	**121.05**	**314**		PKPdf	**PKPdf**	**02 54 17.0**	**-1.6**	
KURK	**Kurchatov**	**121.05**	**314**		IAMs_20	IAMs_20	03 54 03.1		
	comp=Z,2µm,22.0s								
KURK	**Kurchatov**	**121.05**	**314**	*c*	*i*PKIKP	**PKPdf**	**02 54 17.4**	**-1.2**	
KURK					pmax	pmax			
	comp=Z,81nm,0.8s								
KURK	**Kurchatov**	**121.05**	**314**		P	**PKPdf**	**02 54 18.0**	**-0.7**	
KURBB	**Kurchatov Arra**	**121.08**	**314**		PKKPbc	PKKPbc	03 04 22.6	+0.5	
	comp=Z,2.1nm,0.9s,baz=282,slow=4.7,SNR=8.7								
KUU	**Kurty**	**121.13**	**306**	*c*	*i*PKIKP	**PKPdf**	**02 54 17.3**	**-1.8**	
KUU	**Kurty**	**121.13**	**306**	⇑	*i*PKP	**PKPdf**	**02 54 17.4**	**-1.8**	
	baz=306								
LBNH	**Lisbon**	**121.21**	**54**		PKiKP	**PKPdf**	**02 54 18.9**	**-0.3**	
	baz=257								
TKM2	**Tokmak 2**	**121.43**	**304**		P	**PKPdf**	**02 54 19.1**	**-0.8**	
	SNR=45								
KBK	**Karagaybulak**	**121.83**	**304**		P	**PKPdf**	**02 54 20.3**	**-0.4**	
	SNR=31								
UCH	**Uchtor**	**122.05**	**303**		P	**PKPdf**	**02 54 20.8**	**-0.7**	
	SNR=104								
CHMS	**Chumysh**	**122.05**	**304**		P	**PKPdf**	**02 54 20.4**	**-0.6**	
	SNR=27								
AAK	**Ala-Archa**	**122.15**	**304**		P	**PKPdf**	**02 54 21.3**	**0.0**	
	SNR=16								
AAK	**Ala-Archa**	**122.15**	**304**		PKP	**PKPdf**	**02 54 21.4**	**+0.1**	
	baz=161,slow=4.2								
AAK						PKKPbc	**PKKPbc**	**03 04 19.3**	**+1.2**
	comp=Z,3.8nm,0.9s,baz=250,slow=2.4,SNR=4.5								
AAK	**Ala-Archa**	**122.15**	**304**		PKPdf	**PKPdf**	**02 54 20.2**	**-1.1**	
AAK	**Ala-Archa**	**122.15**	**304**	*c*	*i*PKIKP	**PKPdf**	**02 54 20.5**	**-0.8**	
AAK					pmax	pmax			
	comp=Z,42nm,0.8s								
AAK	**Ala-Archa**	**122.15**	**304**		P	**PKPdf**	**02 54 20.8**	**-0.5**	
AAK	**Ala-Archa**	**122.15**	**304**	*i*	PKiKP	**PKPdf**	**02 54 21.3**	**0.0**	
	SNR=24								
SGDS	**Sogindy**	**122.24**	**305**	*c*	*i*PKIKP	**PKPdf**	**02 54 20.0**	**-1.3**	
SGDS	**Sogindy**	**122.24**	**305**	⇑	*i*PKP	**PKPdf**	**02 54 20.1**	**-1.3**	
	baz=305								
USP	**Ospenovka**	**122.29**	**305**		P	**PKPdf**	**02 54 20.8**	**-0.6**	
	SNR=41								
G62A	**West of Eustis**	**122.39**	**53**		PKPdf	**PKPdf**	**02 54 21.1**	**-0.4**	
AML	**Almayashu**	**122.62**	**303**		P	**PKPdf**	**02 54 22.4**	**-0.1**	

ABTO Aybut 131.89 267 P **PKiKP** 02 54 41.3 -0.2
SNR=5.6
UOSS Minazif 132.22 277 PKPdf **PKPdf** 02 54 39.4 -1.4
UOSS Minazif 132.22 277 P **PKPdf** 02 54 39.8 -1.0
UOSS Minazif 132.22 277 *i* PKPdf **PKPdf** 02 54 39.8 -1.0
SNR=24
HATD Hatta, Dubai 132.24 277 P **PKPdf** 02 54 41.1 +0.2
SNR=16
HATD Hatta, Dubai 132.24 277 *i* PKPdf **PKPdf** 02 54 40.3 -0.6
SNR=27
ASHO Ashiyiah 132.25 277 P **PKPdf** 02 54 41.1 +0.2
SNR=17
ASHO Ashiyiah 132.25 277 *i* PKPdf **PKPdf** 02 54 40.4 -0.6
SNR=24
ALNE Al Ain 132.31 276 P **PKPdf** 02 54 41.6 +0.6
SNR=20
ALNE Al Ain 132.31 276 *i* PKPdf **PKPdf** 02 54 40.7 -0.4
SNR=6.4
NUUK Nuuk 132.31 29 *i* P **PKPdf** 02 54 39.9 +0.2
DAG Danmarks Havn 132.33 6 *i* P **PKPdf** 02 54 37.0 -2.5
UMZA Um Al Zommool 132.36 274 P **PKPdf** 02 54 40.6 -0.5
HOPEN Hopen 132.37 353 *e*PKPdf **PKPdf** 02 54 39.2 -0.4
HOPEN *e*PP **PP** 02 57 00.7 -2.4
HOPEN *e*SS SS 03 14 49.5 +11
MSFE Esma-Masafi 132.39 278 *i* PKPdf **PKPdf** 02 54 40.8 -0.3
SNR=22
MASF Masafi 132.39 278 P **PKPdf** 02 54 41.5 +0.4
SNR=12
BANOM Banah 132.44 279 P **PKPdf** 02 54 41.8 +0.6
BANOM Banah 132.44 279 *i* PKiKP **PKPdf** 02 54 41.6 +0.3
SNR=7.5
SUMG Summit 132.47 15 IAMs_20 IAMs_20 03 58 29.5
comp=Z,2μm,19.0s
SUMG Summit 132.47 15 *i* P **PKPdf** 02 54 40.0 -0.4
SHME Shamm 132.62 279 P **PKiKP** 02 54 42.5 -0.2
SNR=5.9
FAQ Al Faqa, Dubai 132.68 277 P **PKPdf** 02 54 42.1 +0.4
SNR=9.0
FAQ Al Faqa, Dubai 132.68 277 *i* PKiKP **PKPdf** 02 54 42.1 +0.4
SNR=6.7
NAZ Nazwa, Dubai 132.69 277 P **PKiKP** 02 54 43.0 +0.1
SNR=20
NAZ Nazwa, Dubai 132.69 277 *i* PKPdf **PKPdf** 02 54 41.4 -0.3
SNR=20
HSPB Hornsund (broa 132.71 356 *e*PKPdf **PKPdf** 02 54 40.7 +0.5
HSPB *e*PP **PP** 02 57 05.8 +0.6
ASUD Al Ashush, Dub 132.86 277 P **PKPdf** 02 54 42.4 +0.4
SNR=13
ASUD Al Ashush, Dub 132.86 277 *i* PKPdf **PKPdf** 02 54 41.5 -0.5
SNR=20
UMQ Umm Al-Quwin 132.87 278 P **PKiKP** 02 54 43.5 +0.3
SNR=7.4
UMQ Umm Al-Quwin 132.87 278 *i* PKiKP **PKPdf** 02 54 42.5 +0.5
SNR=7.8
KIBK Kibwezi 132.91 233 PKPpre PKPpre 02 54 30.8
KIBK **PKPdf** 02 54 42.8 +0.2
KIBK Kibwezi 132.91 233 P **PKPdf** 02 54 43.2 +0.5
AB31 Akbulak array 132.92 311 *i* PKiKP **PKPdf** 02 54 35.7 -5.7
ABKAR Akbulak array 132.92 311 PKPpre 02 54 31.9
ARU Arti 133.06 321 PKPdf **PKPdf** 02 54 40.4 -1.0
ARU Arti 133.06 321 *i* PKiKP **PKPdf** 02 54 34.3 -7.1
ARU MLR MLR
comp=Z,3μm,23.0s
AJN Ajban 133.14 276 P **PKiKP** 02 54 43.5 -0.2
SNR=9.8
AJN Ajban 133.14 276 *i* PKPdf **PKPdf** 02 54 42.1 -0.4
SNR=7.6
DY2G Dye2 133.54 24 *i* P **PKPdf** 02 54 41.5 -0.9
GEYT Alibeck 133.64 295 PKhKP PKPpre 02 54 33.3
comp=Z,8.5nm,0.9s,baz=180,slow=1.5,SNR=9.8
GEYT PKP **PKPdf** 02 54 43.4 +0.3
comp=Z,29nm,0.8s,baz=202,slow=3.9,SNR=20
GEYT SKPbc **SKPbc** 02 58 06.8 -2.0
comp=Z,17nm,0.8s,baz=224,slow=7.8,SNR=7.7
GYA0 ALIBECK ARRAY 133.64 295 PKHKP PKPpre 02 54 32.8
MZR Muzera 133.91 274 P **PKPdf** 02 54 44.7 +0.6
SNR=19
MZR Muzera 133.91 274 *i* PKiKP **PKPdf** 02 54 44.5 +0.4
SNR=24
ICESG Greenland Ices 134.32 20 *i* P **PKPdf** 02 54 43.4 -0.5
KMBO Kilima Mbogo 134.33 233 PKP **PKiKP** 02 54 47.2 +0.4
comp=Z,18nm,0.9s,baz=15,slow=1.3,SNR=7.9
KMBO SKPbc **SKPbc** 02 58 12.9 +0.8
comp=Z,12nm,0.9s,baz=96,slow=1.0,SNR=8.6
KMBO Kilima Mbogo 134.33 233 PKPdf **PKPdf** 02 54 45.9 +0.4
KMBO Kilima Mbogo 134.33 233 IAMs_20 IAMs_20 03 47 17.8
comp=Z,2μm,21.0s
KMBO Kilima Mbogo 134.33 233 PKiKP **PKPdf** 02 54 45.9 +0.4
KMBO Kilima Mbogo 134.33 233 *e*PKiKP PKPdf 02 54 35.8 -10
DBG Daneborg 134.39 8 *i* P **PKPdf** 02 54 41.8 -1.6
BJO1 Bjornoya 134.83 354 *e*PKPdf **PKPdf** 02 54 42.5 -1.7
BJO1 *e*PP **PP** 02 57 18.6 -0.1
BJO1 *e*SKPdf **SKiKP** 02 58 17.5 -1.1
JRN Qarnain Island 135.10 276 P **PKiKP** 02 54 48.0 +0.3
SNR=7.8
NRS Narsarsuaq 136.11 31 IAMs_20 IAMs_20 03 54 55.5
comp=Z,2μm,20.0s
HARA HARA 136.42 250 *e*P PKPdf 02 54 41.5 -7.8
HARA *e*S SKPbc 02 58 03.0 -16
ISOG Isortoq, Green 136.58 24 *i* P **PKPdf** 02 54 48.1 +0.5
SMRA Abu-Samra 136.78 275 P **PKiKP** 02 54 50.6 -0.5
SHMA Al-Shehemyia 137.00 277 P **PKPdf** 02 54 50.7 +1.0
SCO Scoresbysund 137.47 12 PKPdf **PKPdf** 02 54 48.2 -1.0
SCO IAMs_20 IAMs_20 03 50 09.4
comp=Z,2μm,22.0s
SCO Scoresbysund 137.47 12 PKiKP **PKPdf** 02 54 48.2 -1.0
SCO Scoresbysund 137.47 12 *i* P **PKPdf** 02 54 48.1 -1.1
PRGR Permogore 137.74 331 ⇑*i*PKiKP **PKPdf** 02 54 48.6 -1.3
PRGR *e* 02 57 34.5
PRGR pmax pmax
comp=Z,116nm,1.0s
HAMF Hammerfest 137.78 350 *e*PKPdf **PKPdf** 02 54 46.2 -3.6
ATD Arta Tunnel 138.01 253 PKP **PKiKP** 02 54 53.6 -0.4
comp=Z,31nm,0.9s,baz=302,slow=5.6,SNR=11
ATD Arta Tunnel 138.01 253 P **PKPdf** 02 54 52.8 +0.9
SNR=6.3
ATD Arta Tunnel 138.01 253 *e*P PKPdf 02 54 38.7 -13
ATD Arta Tunnel 138.01 253 *e*P PKPdf 02 54 39.7 -12
ATD *e*S SKPbc 02 58 12.4 -11
APA Apatity 138.28 343 ⇓*i*PKiKP **PKPdf** 02 54 51.4 +0.6
APA pmax pmax
comp=Z,40nm,0.9s
ARA0 ARCESS Array S 138.44 348 *e* PKPdf 02 54 42.5 -8.6
ARA0 *e*PKPdf **PKiKP** 02 54 50.3 -2.9
ARA0 *e*PP **PP** 02 57 40.4 -1.0
ARCES ARCESS Array B 138.44 348 PKhKP PKPpre 02 54 42.9
comp=Z,11nm,0.6s,baz=90,slow=2.4,SNR=19
DILA Dilla 138.68 242 *e*P **PKPdf** 02 54 50.6 -2.8
JMIC Jan Mayen 138.74 5 *e*PKPdf **PKPdf** 02 54 45.2 -6.3
JMIC *e*PP **PP** 02 57 41.8 -1.3
LODK Lodwar 138.86 236 IAMs_20 IAMs_20 03 53 06.0
comp=Z,1μm,20.0s
LODK Lodwar 138.86 236 P **PKPdf** 02 54 53.9 +0.2
SNR=6.3
LODK Lodwar 138.86 236 *e*PKPdf PKPdf 02 54 42.2 -11
LODK Lodwar 138.86 236 *e*P PKPdf 02 54 44.5 -9.2
MBAR Mbarara 139.05 227*c* *i*PKiKP **PKiKP** 02 54 58.0 +1.6
MBAR pmax pmax
comp=Z,32nm,1.7s
MBAR Mbarara 139.05 227 *e*P **PKPdf** 02 54 48.0 -6.1
MBAR *e*S **PP** 02 57 41.3 -4.8
MBAR Mbarara 139.05 227 *e*P **PKPdf** 02 54 48.0 -6.1
MBAR *e*S **PP** 02 57 41.3 -4.8
MBAR Mbarara 139.05 227 *e*PKPdf PKPdf 02 54 45.7 -8.4
JETT Jettan, Norway 139.25 350 *e*PKPdf **PKPdf** 02 54 52.7 +0.1
KTK1 Kautokeino 139.30 349 *e*PKPdf **PKPdf** 02 54 48.3 -4.4
TRO Tromso 139.39 351 *e*PKPdf **PKPdf** 02 54 46.4 -6.3
TRO *e*PP **PP** 02 57 46.9 -0.3
TRO *e*SS SS 03 16 06.8 +4.5
ANKE Ethiopia-Afar 139.46 248 *e*P PKPdf 02 54 43.8 -11
ANKE Ethiopia-Afar 139.46 248 *e*P PKPdf 02 54 46.7 -8.4
ANKE Ethiopia-Afar 139.46 248 *e*P PKPdf 02 54 47.0 -8.1
ANKE *e*S SKPbc 02 58 11.7 -16
FURI Furi 139.89 246 *e*P PKPdf 02 54 42.1 -14
FURI *e*S **PP** 02 57 48.7 -3.4
FURI Furi 139.89 246 *e*P PKPdf 02 54 42.1 -14
FURI *e*S **PP** 02 57 48.7 -3.4
FURI Furi 139.89 246 *e*P **PKPdf** 02 54 50.0 -5.8
FURI Furi 139.89 246 *e*P PKPdf 02 54 42.7 -13
FURI Furi 139.89 246 *e*P **PKPdf** 02 54 54.6 -1.1
FURI *e*S **SKPbc** 02 58 28.5 -0.2
FURI Furi 139.89 246 *e*P PKPdf 02 54 42.1 -14
FURI *e*S SKPbc 02 58 10.8 -18
AAE Adis Abeba 139.90 246 *e*P PKPdf 02 54 42.1 -14
AAE Adis Abeba 139.90 246 *e*P **PKPdf** 02 54 50.6 -5.2
KLMR Klimovskoe 140.68 332 *e*PKiKP **PKPdf** 02 54 50.7 -4.6
KLMR *e*SS SS 03 16 17.7 -0.3
KLMR pmax pmax
comp=Z,150nm,1.0s
KLMR Klimovskoe 140.68 332 *e*PKPdf **PKPdf** 02 54 50.7 -4.6
KLMR AMP 02 55 00.2
comp=Z,150nm,1.0s
KLMR *e*PP **PP** 02 57 50.5 -4.9
KLMR *e*PKS **PKSdf** 02 58 23.7 -7.2
KLMR *e*PKS **PKSdf** 02 58 23.7 -7.2
KLMR *e*SKKS **SKKSdf** 03 11 25.9 -2.9
KLMR *e*SKKS **SKKSdf** 03 11 25.9 -2.9
KLMR *e*SS **SS** 03 16 17.7 -0.3
KLMR *e*SS **SS** 03 16 17.7 -0.3
KLMR LQ LQ 03 48 09.2
KLMR LQ LQ 03 48 09.2
KLMR LR LR 03 49 01.0
KLMR AMP 03 53 15.9
comp=Z,3μm,23.1s
RAYN Ar Rayn 140.99 271 PKPpre 02 54 50.9
RAYN Ar Rayn 140.99 271 IAMs_20 IAMs_20 03 54 59.0
comp=Z,2μm,20.0s
RAYN Ar Rayn 140.99 271 PKHKP PKPpre 02 54 50.9
RAYN MLR MLR
comp=Z,2μm,20.0s
RAYN Ar Rayn 140.99 271 P **PKPdf** 02 54 56.2 -0.9
RAYN Ar Rayn 140.99 271 *i* PKPdf **PKPdf** 02 54 51.6 -5.6
SNR=7.3
LOF Lofoten 141.46 353 *e*PKPdf **PKPdf** 02 54 52.7 -3.8
STEI Steigen 141.46 352 *e*PKPdf **PKPdf** 02 54 52.6 -4.0
MAK Makhachkala 141.90 302 *e*P **Pdif** 02 52 12.6 -5.3
MAK *e*PPP PPP 03 01 09.3
MAK *e*SS SS 03 16 33.7 -0.2
MAK *e*SSS SSS 03 21 42.7
MAK pmax pmax
comp=Z,166nm,1.0s
FAUS Fauske 141.98 352 *e* **PKPdf** 02 54 52.2 -5.3
FAUS *e*PKPdf **PKiKP** 02 54 56.6 -3.8
FAUS *e*PP **PP** 02 58 02.3 -0.6
FAUS *e*PKSdf **PKSdf** 02 58 33.7 +0.8
FAUS *e*SS SS 03 16 42.4 +10
BORG Borgarnes 142.43 16 IAMs_20 IAMs_20 03 57 22.9
comp=Z,2μm,20.0s
KONS Konsvik 143.08 353 *e*PKPdf **PKPdf** 02 54 58.4 -1.0
GROC Groznyy 143.13 303 *e*PKiKP PKPab 02 54 56.4 +0.5
GROC *e* 02 58 08.0
GROC pmax pmax
comp=Z,65nm,0.9s
MORB Moi Rana 143.24 352 *e*PKPdf PKPbc 02 54 57.4 +0.5
VRH Novokhopyorsk 144.03 317 *e*PKiKP PKPab 02 54 59.1 0.0
VRH pmax pmax
comp=Z,160nm,0.8s
VRH MLR MLR
comp=Z,3μm,23.0s
GNI Garni 144.14 298 PKP PKPbc 02 55 01.3 +0.7
comp=Z,61nm,0.9s,baz=160,slow=1.2,SNR=29
GNI Garni 144.14 298 PKPdf **PKPab** 02 55 00.0 -0.1
GNI Garni 144.14 298 IAMs_20 IAMs_20 04 03 07.0
comp=Z,2μm,22.0s
GNI Garni 144.14 298 PKiKP **PKPab** 02 55 00.0 -0.1
GNI Garni 144.14 298 PKPdf PKPbc 02 55 00.6 0.0
MOS Moscow 144.28 326 *e*PKHKP PKPpre 02 54 57.6
MOS *e* 03 02 07.2
MOS *e*SS SS 03 16 55.6 -4.4
MOS pmax pmax
comp=Z,185nm,1.2s
MOS MLR MLR
comp=Z,2μm,24.0s
ZEI Tsey 144.55 302 *i* PKiKP **PKiKP** 02 55 13.3 +6.5
ZEI pmax pmax
comp=Z,218nm,1.3s
GOF Gofitskoye 144.82 306⇑ *e*PKiKP **PKPab** 02 55 01.8 -0.5
GOF pmax pmax
comp=Z,130nm,0.7s
PUL Pulkovo 144.90 336*c* *i*PKiKP **PKPab** 02 55 01.7 -0.3
PUL pmax pmax
comp=Z,583nm,0.8s
AKH Akhalkalaki 145.00 300 ⇑P **PKPdf** 02 55 04.8 +0.9
FINES FINESS Array B 145.03 340 PKP **PKPab** 02 55 01.7 -0.7
comp=Z,310nm,0.7s,baz=58,slow=3.1,SNR=516
LPSR Galich'ya Gora 145.08 320 *e*PKiKP **PKPbc** 02 55 01.9 -1.0
LPSR pmax pmax
comp=Z,190nm,0.9s
LPSR MLR MLR
comp=Z,2μm,23.0s
NSS Namsos 145.11 353 *e*PKPbc **PKPbc** 02 55 02.0 -0.6
OBN Obninsk 145.12 325 ⇑P **PKPbc** 02 55 02.4 -0.5
OBN Obninsk 145.12 325 **PKPbc** 02 55 02.1 -0.9
OBN IAMs_20 IAMs_20 04 03 42.4
comp=Z,2μm,22.0s
OBN Obninsk 145.12 325*c* *i*PKiKP **PKPbc** 02 55 02.0 -0.9
OBN *i* 02 58 25.4
OBN pmax pmax
comp=Z,340nm,0.8s
KBZ Khabaz 145.15 304 PKP **PKPbc** 02 55 02.8 -0.6
comp=Z,109nm,0.9s,baz=96,slow=3.5,SNR=68
KBZ Khabaz 145.15 304 *i* PKiKP **PKPbc** 02 55 02.0 -1.4
KIV Kislovodsk 145.27 305 ⇑P **PKPbc** 02 55 03.1 -0.8
KIV Kislovodsk 145.27 305 **PKPbc** 02 55 02.7 -1.3
KIV IAMs_20 IAMs_20 04 11 23.9
comp=Z,1μm,19.0s
KIV Kislovodsk 145.27 305 *e*PKHKP PKPpre 02 54 58.5
KIV *i* 02 55 02.7
KIV *e* 02 58 18.3
KIV *e*SS SS 03 17 06.1 -6.7
KIV *e*SSS SSS 03 22 37.0
KIV pmax pmax
comp=Z,120nm,1.1s
KIV MLR MLR
comp=Z,1μm,25.0s
KIV Kislovodsk 145.27 305 P **PKPbc** 02 55 03.4 -0.6
KIV Kislovodsk 145.27 305 *i* PKPdf **PKPbc** 02 55 03.4 -0.6
SNR=34
VORR Voronezh 145.31 319 *e*PKiKP **PKPbc** 02 55 02.9 -0.8
VORR pmax pmax
comp=Z,198nm,0.6s
VSR Storozhevoye 145.51 318 *e*PKiKP **PKPdf** 02 55 03.3 -0.9
VSR pmax pmax
comp=Z,340nm,0.7s
VSR MLR MLR
comp=Z,3μm,26.0s
VORD Divnogorie 145.54 318 *e*PKiKP **PKPdf** 02 55 03.8 -0.4
VORD pmax pmax
comp=Z,250nm,0.8s
CHVG Ch'k'valeri 145.89 303 ⇓P **PKPbc** 02 55 05.9 +0.1
CHVG Ch'k'valeri 145.89 303 ⇓PKP2 **PKPbc** 02 55 05.9 +0.1
BATM Batumi 146.32 301 ⇓P **PKPbc** 02 55 06.9 -0.3
BATM Batumi 146.32 301 ⇓PKP2 **PKPbc** 02 55 06.9 -0.3
MEF Metsahovi 146.50 340 *e*P **PKPdf** 02 55 06.0 +0.5
TBLU Trondheim 146.54 353 *e*PKPdf **PKPdf** 02 55 04.7 -0.9
RAF Rauma 146.56 343 *e*P **PKPdf** 02 55 05.5 -0.1
VSU Vasula 147.12 336 *e*P **PKPbc** 02 55 08.2 -0.7
MOL Molde 147.44 355 *e*PKPbc **PKPbc** 02 55 09.2 -0.5
SOC Sochi 147.45 305*c* *i*PKiKP **PKPdf** 02 55 05.9 -1.8
SOC *i* 02 55 11.2
SOC *e*PPP PPP 03 01 52.7
SOC *e*SSS SSS 03 23 06.0
SOC pmax pmax
comp=Z,124nm,1.0s
SOC pmax pmax
comp=Z,89nm,0.5s
SOC MLR MLR
comp=Z,1μm,21.0s
AAL Aland 147.74 343 *e*P **PKPbc** 02 55 09.2 -1.3
DOMB Dombas 147.84 354 *e*PKPbc **PKPbc** 02 55 10.2 -0.6
KTUT Trabzon 147.84 300 ⇓P **PKPbc** 02 55 11.3 -0.2
AKN Aaknes 147.87 356 *e*PKPbc **PKPbc** 02 55 10.2 -0.6
AKN IVmB_BB 02 55 18.3
comp=Z,3μm,0.9s
MTSE Matsula 147.89 339 *e*P **PKPbc** 02 55 10.0 -0.9
JAWL J.Aulia 148.47 249 *i* P **PKPbc** 02 55 14.1 +0.3
JAWL IAML 02 55 19.5
comp=N,889nm,0.6s
JAWL *i* 02 55 21.7
baz=240,slow=16
JAWL *i* S **SKPbc** 02 58 45.4 -3.2
FOO Floro 148.55 357 *e*PKPbc **PKPbc** 02 55 12.1 -0.5
NB2 NORSAR Subarra 148.59 352 PKPab **PKPbc** 02 55 12.2 -0.6
baz=12,slow=2.8
NB2 NORSAR Subarra 148.59 352 PKP **PKPbc** 02 55 12.2 -0.6
comp=Z,294nm,1.1s,baz=12,slow=2.8
NOA NORSAR Array B 148.59 352 PKP **PKPdf** 02 55 09.3 +0.2
comp=Z,114nm,0.9s,baz=14,slow=4.3,SNR=205
NOA PKPbc **PKPbc** 02 55 12.1 -0.7
comp=Z,84nm,0.9s,baz=14,slow=4.4,SNR=152
ANN Anapa 148.76 308 *i* PKP2 **PKPbc** 02 55 12.6 -1.1
ANN pmax pmax
comp=Z,569nm,0.9s
NC602 NORSAR Array S 148.84 351 *e*PKPdf **PKPdf** 02 55 08.9 -0.6
NC602 *e*PKPbc **PKPbc** 02 55 12.8 -0.5
HYA Hoyanger 148.92 356 *e*PKPbc **PKPbc** 02 55 13.1 -0.4
SUE Sulen 149.10 358 *e*PKPdf **PKPdf** 02 55 08.4 -1.4
SUE *e*PKPbc **PKPbc** 02 55 13.6 -0.4
SLIT Slitere, Latvi 149.25 339 *e*P **PKPbc** 02 55 12.6 -1.9
SKAR Skarslia 149.25 354 *e*PKPbc **PKPbc** 02 55 14.1 -0.4
IDID Didziasalis 149.42 332 *e*P **PKPdf** 02 55 12.8 +2.2
ISAL Salakas 149.48 333 *e*P **PKPbc** 02 55 14.3 -0.9
MNK Minsk 149.51 330 *i* PKHKP PKPpre 02 55 10.7
MNK *i* 03 02 18.5
MNK pmax pmax
comp=Z,628nm,0.9s
MNK pmax pmax
comp=E,48nm,1.4s
MNK MLR MLR
comp=Z,4μm,22.0s
MNK Minsk 149.51 330 *i* PKP **PKPdf** 02 55 10.8 +0.1
comp=E,48nm,1.4s
MNK *i* PKP **PKPdf** 02 55 10.8 +0.1
MNK *i* PKP **PKPdf** 02 55 10.8 +0.1
comp=Z,628nm,0.9s,baz=230
MNK *i* PP PP 02 58 57.6 +10
MNK *i* SKS **SKSdf** 03 02 18.6 +3.1
MNK *i* SKKS **SKKSdf** 03 11 06.3 -5.1
MNK *i* SS SS 03 18 23.7 +25
MNK *i* SSS SSS 03 24 08.1
MNK *i* LR LR 03 57 51.5
MNK *i* LRM MLR 03 58 36.3
comp=E,279nm,21.9s
MNK *i* LRM MLR 03 58 36.3
comp=Z,4μm,22.2s
IIGN Ignalina 149.60 333 *e*P **PKPdf** 02 55 13.2 +2.3
ASK Askoy 149.66 357 *e*PKPbc **PKPbc** 02 55 15.0 -0.4
NACGM Naroch 149.69 332⇑ *e*PKP **PKPdf** 02 55 11.5 +0.5
baz=45
OSL Oslo 149.72 351 *e*PKPdf **PKPdf** 02 55 10.1 -0.7
OSL *e*PKPbc **PKPbc** 02 55 15.2 -0.4
BER Bergen 149.75 357 *e*PKPdf **PKPdf** 02 55 10.3 -0.6
BER *e*PKPbc **PKPbc** 02 55 15.3 -0.3
BER IVmB_BB 02 55 16.1
comp=Z,1μm,1.5s
BER *e*SS SS 03 18 04.9 +4.2
VSVD Vaisvydziai 150.00 335 *e*P **PKPbc** 02 55 16.1 -0.3
KONO Kongsberg 150.13 352 PKPdf **PKPdf** 02 55 10.9 -0.7
KONO PKPbc **PKPbc** 02 55 16.1 -0.6
KONO Kongsberg 150.13 352 IAMs_20 IAMs_20 04 08 16.5
comp=Z,1μm,20.0s
KONO Kongsberg 150.13 352 ⇑PKHKP PKPpre 02 55 15.2
ODD1 Odda 150.15 356 *e*PKPbc **PKPbc** 02 55 16.3 -0.4
ASF Jabal al Asfar 150.33 283 PKP **PKPdf** 02 55 13.0 +0.1
comp=Z,21nm,1.1s,baz=66,slow=2.3,SNR=9.7
ASF PKPbc **PKiKP** 02 55 19.5 +0.6
comp=Z,185nm,0.9s,baz=171,slow=0.7,SNR=43
PABE Paberze 150.35 335 *e*P **PKPbc** 02 55 14.7 -2.5
STRU Stroemstad 150.53 351 *i* P **PKPdf** 02 55 10.5 -1.7
BLS5 Blasjo 150.64 356 *e*PKPdf **PKPdf** 02 55 11.8 -0.5
BLS5 *e*PKPbc **PKPbc** 02 55 18.0 +0.1
PBUR Paburge 150.66 337 *e*P **PKPdf** 02 55 15.3 +2.8
KMY Karmoy 150.92 357 *e*PKPbc **PKPbc** 02 55 18.1 -0.3
SIM Simferopol' 150.96 309 *i* PKiKP **PKPbc** 02 55 18.8 -0.3
SIM *e* 02 55 37.0
SIM pmax pmax
comp=Z,420nm,0.9s
DIKM Dikmen 151.07 302 ⇓P **PKiKP** 02 55 19.9 -0.1
H07S1 FLORES T-PHASE 151.21 62 *e*PKP **PKPbc** 02 55 19.7 -0.2
HWQ Hawqa 151.25 287 *e*P **PKPdf** 02 55 13.0 -1.3
AKASG Malin Array Be 151.25 323 PKP **PKPdf** 02 55 12.1 -1.5
comp=Z,7.5nm,0.8s,baz=34,slow=2.0,SNR=32
AKASG PKPbc **PKPbc** 02 55 18.9 -0.6
comp=Z,190nm,0.8s,baz=36,slow=2.5,SNR=194
TJOU Tjoern 151.43 350 *i* P **PKPdf** 02 55 11.5 -2.0
BHL Bhannes 151.49 286 *e*P **PKPdf** 02 55 12.8 -1.8
HOMB Homborsund 151.61 353 *i* P **PKPdf** 02 55 13.1 -0.7
HOMB Homborsund 151.61 353 *e*PKPbc **PKPbc** 02 55 19.9 -0.2
SNART Snartemo 151.66 354 *i* P **PKPbc** 02 55 18.0 -2.2
SNART Snartemo 151.66 354 *e*PKPdf **PKPdf** 02 55 13.1 -0.9
EIL Elat 151.67 277 PKP **PKPdf** 02 55 14.6 -0.3
comp=Z,27nm,0.9s,baz=7.1,slow=1.7,SNR=17
EIL PKPbc **PKPbc** 02 55 21.6 +0.4
comp=Z,387nm,0.8s,baz=80,slow=0.8,SNR=42
SUW Suwalki 151.78 333 *e*PKP **PKPdf** 02 55 13.5 -0.7
SUW Suwalki 151.78 333 *e*P **PKPdf** 02 55 17.1 +2.8
SACV Santiago Islan 151.84 117 IAMs_20 IAMs_20 04 15 44.2
comp=Z,1μm,19.0s
BZK Bozkurt 151.91 303 ⇓P **PKPbc** 02 55 21.1 -0.2
ONAU Onsala 151.99 349 *i* P **PKPdf** 02 55 13.1 -1.3
BLEU Blekinge 152.20 344 *i* P **PKPdf** 02 55 12.6 -2.2
OVD Ostervraa, Den 152.33 351 *i* P **PKPbc** 02 55 21.4 -0.3
DEL Delary 152.49 346 *e*P **PKPbc** 02 55 20.4 -1.8
DEL Delary 152.49 346 *i* P **PKPdf** 02 55 13.1 -2.1
BR131 Keskin Array S 152.66 299 P **PKPdf** 02 55 17.1 +0.9
SNR=110
BRTR Keskin Array B 152.66 299 PKP **PKPdf** 02 55 15.3 -1.0
comp=Z,9.2nm,1.0s,baz=139,slow=2.6,SNR=35
BRTR PKPbc **PKiKP** 02 55 23.8 +0.2
comp=Z,94nm,0.9s,baz=134,slow=2.7,SNR=36
GOET G??ttrup 152.73 352 *i* P **PKPdf** 02 55 13.6 -1.9
BJUU Bjuv 153.03 347 *i* P **PKPdf** 02 55 14.2 -1.9
SORM Soroca 153.16 319 ⇑P **PKPbc** 02 55 23.9 0.0
SORM Soroca 153.16 319 ⇑PKiKP **PKPbc** 02 55 23.9 0.0
PCED Cedros 153.25 63 *e*PKP **PKPdf** 02 55 15.7 -1.2
CALA Caldeira 153.26 63 *e*PKP **PKPdf** 02 55 19.2 +2.1
ANTO Ankara 153.28 299 **PKPdf** 02 55 16.4 -0.6
ANTO PKPbc **PKPbc** 02 55 24.6 0.0
ANTO IAMs_20 IAMs_20 04 13 00.6
comp=Z,1μm,22.0s
ANTO Ankara 153.28 299 PKiKP **PKPdf** 02 55 16.4 -0.6
ANTO 02 55 24.6
EKNA AfricaArray - 153.30 196 *e*P **PKPab** 02 55 40.1 +3.0
MUD Monsted U'grnd 153.31 351 *i* P **PKPdf** 02 55 14.7 -1.7
LUNU Lund 153.36 346 *i* P **PKPdf** 02 55 14.2 -2.3
KIS Kishinev 153.47 317 *e*PKP **PKPdf** 02 55 14.0 -3.0
comp=Z,340nm,6.5s
KIS Kishinev 153.47 317 *e*PP PP 02 59 06.0 -5.1
KIS *e*L L 03 52 22.0
KIS LRM MLR 04 01 35.0
comp=Z,700nm,23.5s
KIS Kishinev 153.47 317 *e*PKiKP **PKPdf** 02 55 14.0 -3.0
KIS *e* 02 55 25.0
KIS *e* 02 59 16.0
KIS pmax pmax
comp=Z,340nm,6.5s
PICO Pico 153.48 64 *e*PKP **PKPdf** 02 55 15.7 -1.7
BSD Bornholm Skovb 153.50 344 *e*P **PKPbc** 02 55 21.9 -2.5
BSD Bornholm Skovb 153.50 344 *i* P **PKPdf** 02 55 14.7 -2.0
COP Copenhagen 153.51 347 *i* P **PKPdf** 02 55 15.7 -1.0
MILM Milestii Mici 153.51 316⇑ *e*PKP **PKPdf** 02 55 15.0 -2.0
comp=Z,360nm,4.1s
MILM Milestii Mici 153.51 316 *e*PP PP 02 59 06.0 -5.4
MILM *e*L L 03 51 51.0
MILM LRM MLR 04 01 30.0
comp=Z,2μm,22.5s
MILM Milestii Mici 153.51 316 ⇑P **PKPdf** 02 55 18.9 +1.9
MILM Milestii Mici 153.51 316*c* *i*PKiKP **PKPdf** 02 55 15.0 -2.0
MILM *i* 02 55 24.0
MILM *e* 02 59 06.0
MILM pmax pmax
comp=Z,640nm,6.1s
ROSA Rosais 153.59 63 *e*PKP **PKPdf** 02 55 16.8 -0.6
PPNO Prainha do Nor 153.61 64 *e*PKP **PKPdf** 02 55 14.1 -3.5
SRBC Serra Branca 153.69 62 *e*PKP **PKPbc** 02 55 22.2 -3.2
PMAN Manadas 153.72 63 *e*PKP **PKPdf** 02 55 10.1 -7.5
PID Ribeirinha 153.73 64 *e*PKP **PKPdf** 02 55 18.7 +1.0
LLD Lille Linde 153.89 347 *i* P **PKPdf** 02 55 16.3 -1.0
VASR Vaslui 154.26 317 ⇑P **PKiKP** 02 55 26.6 +0.2
TLCR 154.33 313 ⇑P **PKiKP** 02 55 27.0 +0.5
TLCR 154.33 313 ⇑PKiKP **PKiKP** 02 55 27.0 +0.5
BEL Belsk 154.38 333 *e*PKP **PKPdf** 02 55 17.5 -0.6
PAGU Agualva, Azore 154.40 63 *e*PKP **PKPbc** 02 55 25.2 -1.7
LVV L'vov 154.41 326 *i* PKiKP **PKPdf** 02 55 16.9 -1.3
LVV *e* 02 55 26.2
LVV *e* 03 02 23.3
GKP Gorka Klasztor 154.48 339 *e*PKP **PKPdf** 02 55 17.9 -0.3
GKP Gorka Klasztor 154.48 339 *e*P **PKPdf** 02 55 17.5 -0.7
VARL Varlezi 154.60 315 ⇓P **PKPbc** 02 55 27.0 0.0
ESK Eskdalemuir 154.61 7 PKPdf **PKPdf** 02 55 17.2 -1.1

ESK PKPbc **PKiKP** **02 55 27.2 +0.3**
ESK PKPab **PKPab** **02 55 40.7 -0.8**
ESK Eskdalemuir 154.61 7 IAMs_20 IAMs_20 04 00 48.1
comp=Z,2µm,21.0s
ESK Eskdalemuir 154.61 7 PKIKP **PKPdf** **02 55 17.2 -1.1**
ESK 02 55 27.2
ESK 02 55 40.7
SCTR Scanteiesti 154.62 315 ⇓P **PKiKP** **02 55 27.6 +0.4**
TPGR Topolog 154.73 313 ⇓P **PKPbc** **02 55 26.8 -0.7**
CFR Carcaliu 154.76 314 ⇑P **PKPdf** **02 55 18.8 0.0**
CFR Carcaliu 154.76 314 ⇑PKIKP **PKPdf** **02 55 18.8 0.0**
IZVR Izvoarele 154.82 315 ⇑P **PKiKP** **02 55 28.7 +1.2**
MANR Mangalia 155.06 310 ⇓P PKPdf 02 55 27.9 +8.6
BIZ Bicaz 155.09 319 ⇑P **PKPdf** **02 55 22.5 +3.3**
HARR Harsova 155.11 313 ⇓P **PKPdf** **02 55 20.6 +1.3**
HARR Harsova 155.11 313 ⇓PKIKP **PKPdf** **02 55 20.6 +1.3**
KWP Kalwaria Pacla 155.17 327 *e*PKP **PKPdf** **02 55 18.5 -0.8**
LIC Lamto 155.19 163 *eP* **PKPdf** **02 55 21.6 +1.2**
comp=Z,94nm,1.0s
BURAR Bucovina Array 155.19 321 ⇑P PKPdf 02 55 29.0 +10
BURAR Bucovina Array 155.19 321 ⇑PKIKP PKPdf 02 55 29.0 +9.5
VRI Vrincioaia 155.29 316 ⇓P PKPdf 02 55 30.1 +11
VRI Vrincioaia 155.29 316 ⇓PKIKP PKPdf 02 55 30.1 +11
PLOR Plostina 155.35 316 ⇑P **PKPab** **02 55 44.3 -0.8**
PLOR Plostina 155.35 316 ⇑PKP2 **PKPab** **02 55 44.3 -0.8**
KIC Kosan Boka 155.39 163 *e*PKIKP **PKPdf** **02 55 21.1 +0.4**
comp=Z,70nm,0.6s
TIC Toumodi 155.60 162 *e*PKIKP **PKPdf** **02 55 21.5 +0.5**
comp=Z,84nm,0.8s
PGOR Pogoanele 155.61 314 ⇓P **PKPab** **02 55 48.1 +1.9**
COVR Voineasa-Covas 155.62 316 ⇑P PKPdf 02 55 32.1 +12
DBIC Dimbokro 155.66 163 PKP **PKPdf** **02 55 21.6 +0.6**
comp=Z,8.7nm,0.9s,baz=177,slow=3.8,SNR=6.7
DBIC PKPab **PKPab** **02 55 48.7 +1.6**
comp=Z,36nm,0.7s,baz=208,slow=2.8,SNR=11
DBIC Dimbokro 155.66 163 ⇓PKIKP **PKPdf** **02 55 22.3 +1.3**
PSET Sete Cidades 155.70 64 *e*PKP **PKPdf** **02 55 19.2 -1.2**
GRON Grota Negra 155.85 64 *e*PKP **PKPdf** **02 55 18.7 -1.9**
KOLS Kolonicke sedl 155.86 326 *e*PKIKP **PKPdf** **02 55 20.1 -0.1**
KOLS Kolonicke sedl 155.86 326 *e*PKP **PKPdf** **02 55 20.1 -0.1**
KOLS *e* 02 55 50.1
CMLA Cha da Macela 155.86 64 *e*PKP **PKPdf** **02 55 19.2 -1.4**
ARCR ARCALIA 155.98 321 ⇑P **PKPdf** **02 55 20.7 +0.3**
OJC Ojcow 156.03 331 *e*PKP **PKPdf** **02 55 19.3 -1.1**
DOPR Dopca 156.03 317 ⇑P **PKPdf** **02 55 20.8 +0.2**
UZH Uzhgorod 156.06 326 *e*PKIKP **PKPdf** **02 55 19.3 -1.2**
UZH *e* 02 55 25.4
UZH *i* 02 55 30.6
UZH *i* 02 55 36.4
UZH *i* 02 55 44.8
PRD Provadia 156.10 310 *eP* **PKPdf** **02 55 20.1 -0.6**
DSB Dublin 156.14 13 PKPdf **PKPdf** **02 55 20.1 -0.3**
DSB PKPab **PKPab** **02 55 47.1 -1.1**
CRVS Cervenica-Dubn 156.26 327 *e*PKIKP **PKPdf** **02 55 20.1 -0.7**
CRVS Cervenica-Dubn 156.26 327 *e*PKP **PKPdf** **02 55 20.1 -0.7**
CRVS *e* 02 55 52.1
PSMA Santa Maria 156.29 66 *e*PKP PKPdf 02 55 29.3 +8.1
PSMN Pico do Norte, 156.34 66 *e*PKP **PKPdf** **02 55 20.2 -1.1**
ARR Arges 156.80 317 ⇓P **PKPdf** **02 55 21.3 -0.4**
KSP Ksiaz 156.85 337 *e*PKP **PKPdf** **02 55 20.7 -0.7**
JMB Yambol 156.95 309 *eP* **PKPdf** **02 55 20.6 -1.3**
LANS Liptovska Anna 156.98 330 *e*PKIKP **PKPdf** **02 55 21.8 +0.1**
LANS Liptovska Anna 156.98 330 *e*PKP **PKPdf** **02 55 21.8 +0.1**
LANS *e* 02 55 52.9
OKC Ostrava-Krasne 156.99 333 *e*PKIKP **PKPdf** **02 55 22.2 +0.5**
OKC *e* 02 59 28.3
OKC MLR MLR
comp=Z,2µm,22.5s
OKC Ostrava-Krasne 156.99 333 *e*PKPDF **PKPdf** **02 55 22.2 +0.5**
OKC *e*PKPAB **PKPab** **02 55 55.5 +3.5**
OKC *e*PP **PP** **02 59 28.3 -2.0**
OKC AMS AMS 04 03 30.0
comp=Z,2µm,22.5s
KECS Kecovo 157.02 328 *e*PKP2 **PKPab** **02 55 54.5 +2.4**
SZH Strazhica 157.04 311 *eP* **PKPdf** **02 55 20.9 -1.1**
COPA Copaceanca 157.09 314 ⇑P **PKPab** **02 55 51.6 -1.0**
EDRB Edirne 157.09 307 P **PKPdf** **02 55 19.6 -2.4**
OSTC Ostas 157.12 337 *e*PKPDF **PKPdf** **02 55 22.2 +0.4**
OSTC *e*PKPAB **PKPab** **02 55 55.8 +3.3**
OSTC *e*PP **PP** **02 59 28.3 -2.6**
OSTC AMS AMS 04 07 30.0
comp=Z,4µm,22.0s
CHVC Chvalec 157.15 337 *e*PKPDF **PKPdf** **02 55 21.8 -0.1**
CHVC *e*PKPAB **PKPab** **02 55 53.3 +0.7**
CHVC *e*PP **PP** **02 59 29.6 -1.4**
CHVC AMS AMS 04 07 20.0
comp=Z,4µm,21.5s
UPC Upice 157.23 337 *e*PKIKP **PKPdf** **02 55 22.5 +0.5**
UPC *e* 02 59 29.7
UPC MLR MLR
comp=Z,4µm,21.0s
UPC Upice 157.23 337 *e*PKPDF **PKPdf** **02 55 22.5 +0.5**
UPC *e*PKPAB **PKPab** **02 55 53.4 +0.4**
UPC *e*PP **PP** **02 59 29.7 -1.8**
UPC AMS AMS 04 07 40.0
comp=Z,4µm,21.0s
DPC Dobruska-Polom 157.25 336 *e*PKIKP **PKPdf** **02 55 22.3 +0.2**
DPC *e* 02 59 29.9
DPC MLR MLR
comp=Z,3µm,22.7s
DPC Dobruska-Polom 157.25 336 *e*PKPDF **PKPdf** **02 55 22.3 +0.2**
DPC *e*PKPAB **PKPab** **02 55 53.7 +0.6**
DPC *e*PP **PP** **02 59 29.9 -1.8**
DPC AMS AMS 04 06 40.0
comp=Z,3µm,22.7s
LOT Lotru 157.26 318 ⇑P **PKPdf** **02 55 28.2 +5.8**
MORC Moravsky Berou 157.28 334 *e*PKP **PKPdf** **02 55 21.4 -0.7**
MORC *e* 02 55 52.7
KRLC Kraliky 157.32 335 *e*PKIKP **PKPdf** **02 55 21.8 -0.3**
KRLC *e* 02 59 30.3
KRLC MLR MLR
comp=Z,2µm,22.2s
KRLC Kraliky 157.32 335 *e*PKPDF **PKPdf** **02 55 21.8 -0.3**
KRLC *e*PKPAB **PKPab** **02 55 53.6 +0.2**
KRLC *e*PP **PP** **02 59 30.3 -1.8**
KRLC AMS AMS 04 04 50.0
comp=Z,2µm,22.2s
CLL Collm 157.44 342 *e*PKIKP **PKPdf** **02 55 21.0 -1.2**
CLL *i* 02 55 33.0
CLL pmax pmax
comp=Z,47nm,1.8s
CLL pmax pmax
comp=Z,33nm,1.0s
CLL pmax pmax
comp=Z,987nm,1.1s
CLL MLR MLR
comp=Z,2µm,21.6s
CLL Collm 157.44 342 *e*PKPdf **PKPdf** **02 55 21.0 -1.2**
comp=Z,47nm,1.8s
CLL *i* PKPdif **pPKPdf** **02 55 33.0 -0.5**
comp=Z,33nm,1.0s
CLL *i* PKPab **PKPab** **02 55 53.2 -0.6**
comp=Z,987nm,1.1s
CLL *i* x x 02 55 56.8
comp=Z,127nm,0.8s
CLL *e*PP **PP** **02 59 31.0 -1.5**
comp=Z,700nm,23.0s
CLL *e*PPP PPP 03 03 07.0
CLL *e*PPPP 03 05 30.0
CLL *e*PPPrev 03 08 18.0
CLL *e*PSKS 03 09 52.0
CLL *e*x x 03 11 30.0
CLL *e*PPS PPS 03 12 49.0
CLL *e*x x 03 14 36.0
CLL *e*x x 03 17 18.0
CLL *e*SS SS 03 19 30.0 +5.0
CLL *e*PSS PSS 03 20 21.0
CLL *e*SSS SSS 03 25 48.0
CLL *e*x x 03 28 00.0
CLL *e*SSSS 03 29 30.0
CLL LmV 04 16 00.0
comp=Z,2µm,21.6s
MAUC Maruska 157.49 333 *e*PKPDF **PKPdf** **02 55 22.6 +0.2**
MAUC *e*PKPAB **PKPab** **02 55 57.9 +3.7**
MAUC *e*PP **PP** **02 59 28.3 -4.8**
MAUC AMS AMS 04 11 20.0
comp=Z,4µm,20.0s
BRG Berggiesshubel 157.56 340 ⇓*i* PKPf 02 55 21.8
BRG Amp 02 55 25.1
comp=Z,52nm,1.5s
BRG *ex* x 02 55 33.4
BRG Amp 02 55 35.6
comp=Z,32nm,1.2s
BRG PKPab **PKPab** **02 55 54.4 0.0**
BRG Amp 02 55 58.3
comp=Z,211nm,1.5s
BRG *ex* x 02 56 06.1
BRG Amp 02 56 08.7
comp=Z,28nm,0.8s
BRG Berggiesshubel 157.56 340 PP PP 02 59 34.0 +0.8
BRG Berggiesshubel 157.56 340 PKP2 **PKPab** **02 55 54.4 0.0**
BRG 02 59 34.0
BRG pmax pmax
comp=Z,211nm,1.5s
BRG pmax pmax
comp=Z,28nm,0.8s
PVCC Panska Ves 157.68 339 *e*PKIKP **PKPdf** **02 55 22.4 -0.1**
PVCC *e* 02 59 29.9
PVCC MLR MLR
comp=Z,2µm,22.1s
PVCC Panska Ves 157.68 339 *e*PKPDF **PKPdf** **02 55 22.4 -0.1**
PVCC *e*PKPAB **PKPab** **02 55 55.4 +0.5**
PVCC *e*PP **PP** **02 59 29.9 -4.0**
PVCC AMS AMS 04 03 40.0
comp=Z,2µm,22.1s
DIM Dimitrovgrad 157.84 309 *eP* **PKPdf** **02 55 22.6 -0.4**
GZR Gura Zlata 157.87 319 ⇑P **PKPdf** **02 55 21.4 -1.6**
GZR Gura Zlata 157.87 319 ⇑PKIKP **PKPdf** **02 55 21.4 -1.6**
KOLL Kolacno 157.87 331 *e*PKP **PKPdf** **02 55 22.5 -0.3**
KOLL *e* 02 55 59.1
JAVC Velka Javorina 157.96 332 *e*PKP **PKPdf** **02 55 22.8 -0.2**
VRAC Vranov 158.02 334 *e*PKP **PKPdf** **02 55 22.1 -0.9**
VRAC *e* 02 55 55.7
KDZ Kurdzhali 158.08 308 *eP* **PKPdf** **02 55 21.9 -1.4**
PRU Pruhonice 158.16 338 *e*PKIKP **PKPdf** **02 55 23.2 +0.1**
PRU *e* 02 55 56.9
PRU *e* 02 59 32.9
PRU MLR MLR
comp=Z,2µm,19.2s
PRU Pruhonice 158.16 338 *e*PKPDF **PKPdf** **02 55 23.2 +0.1**
PRU *e*PKPAB **PKPab** **02 55 56.9 -0.1**
PRU *e*PP **PP** **02 59 32.9 -3.6**
PRU AMS AMS 04 14 40.0
comp=Z,2µm,19.2s
RDO Rodhopi 158.19 306 P **PKPdf** **02 55 22.0 -1.4**
KRUC Moravsky 158.29 334 *e*PKP **PKPdf** **02 55 22.3 -1.0**
KRUC *e* 02 55 57.0
SMOL Smolenice 158.33 332 *e*PKIKP **PKPdf** **02 55 23.1 -0.3**
SMOL Smolenice 158.33 332 *e*PKP **PKPdf** **02 55 23.1 -0.3**
SMOL *e* 02 56 01.4
PLD Plovdiv 158.37 309 *eP* **PKPdf** **02 55 22.2 -1.4**
MPEP Malo Peshtene 158.41 313 *eP* **PKPdf** **02 55 22.7 -0.9**
TREC Trest 158.43 336 *e*PKIKP **PKPdf** **02 55 23.4 -0.1**
TREC *e* 02 55 57.3
TREC *e* 02 59 34.3
TREC MLR MLR
comp=Z,2µm,23.5s
TREC Trest 158.43 336 *e*PKPDF **PKPdf** **02 55 23.4 -0.1**
TREC *e*PKPAB **PKPab** **02 55 57.3 -0.9**
TREC *e*PP **PP** **02 59 34.3 -3.8**
TREC AMS AMS 04 05 50.0
comp=Z,2µm,23.5s
SRO2 Moca 158.50 329 *e*PKP2 **PKPab** **02 56 01.0 +2.5**
MODS Modra-Piesok 158.50 332 *e*PKIKP **PKPdf** **02 55 23.4 -0.2**
MODS Modra-Piesok 158.50 332 *e*PKP **PKPdf** **02 55 23.4 -0.2**
MODS *e* 02 56 01.5
PGB Panagyurishte 158.52 311 *eP* **PKPdf** **02 55 22.9 -1.0**
RZN Rozhen 158.54 308 *eP* **PKPdf** **02 55 22.7 -1.4**
NKC Novy Kostel 158.56 342 *e*PKIKP **PKPdf** **02 55 24.9 +1.3**
NKC *e* 02 55 58.6
NKC MLR MLR
comp=Z,2µm,25.1s
NKC Novy Kostel 158.56 342 *e*PKPDF **PKPdf** **02 55 24.9 +1.3**
NKC *e*PKPAB **PKPab** **02 55 58.6 -0.1**
NKC *e*PP **PP** **02 59 33.0 -5.7**
NKC AMS AMS 03 57 30.0
comp=Z,2µm,25.1s
ZST Bratislava 158.71 332 *e*PKIKP **PKPdf** **02 55 23.8 0.0**
ZST Bratislava 158.71 332 *e*PKP **PKPdf** **02 55 23.8 0.0**
ZST *e* 02 56 00.6
CSKK Cskako 158.86 329 PKP **PKPdf** **02 55 23.6 -0.5**
BLKB Belogradchik 158.93 315 ⇑P **PKPdf** **02 55 23.4 -0.9**
VTS Vitosha 159.09 312 ⇓P **PKPdf** **02 55 23.9 -0.8**
VTS Vitosha 159.09 312 ⇓PKIKP **PKPdf** **02 55 23.9 -0.8**
VTS Vitosha 159.09 312 *e*P **PKPdf** **02 55 23.3 -1.4**
KHC Kasperske Hory 159.22 339 *e*PKIKP **PKPdf** **02 55 24.0 -0.5**
KHC *e* 02 59 38.0
KHC MLR MLR
comp=Z,3µm,22.1s
KHC Kasperske Hory 159.22 339 *e*PKPDF **PKPdf** **02 55 24.0 -0.5**
KHC x x 02 55 28.0
KHC *e*PKPAB **PKPab** **02 56 02.0 +0.4**
KHC x x 02 56 25.0
KHC *e*PP **PP** **02 59 38.0 -4.4**
KHC AMS AMS 04 05 50.0
comp=Z,3µm,22.1s
CKRC Cesky Krumlov 159.25 337 *e*PKPDF **PKPdf** **02 55 24.3 -0.2**
CKRC *e*PKPAB **PKPab** **02 56 02.1 +0.3**
CKRC *e*PP **PP** **02 59 41.1 -1.4**
CKRC AMS AMS 04 12 20.0
comp=Z,2µm,21.2s
MMB Musomiste 159.25 309 *eP* **PKPdf** **02 55 23.5 -1.3**
NVR Nevrokopi 159.26 308 P **PKPdf** **02 55 22.7 -2.1**
BEBN Eben Emael 159.27 354 *d*PKP **PKPab** **02 56 01.4 -0.3**
MPLH Magyarpolny 159.32 329 PKP **PKPdf** **02 55 24.1 -0.5**
GRFO Grafenberg 159.38 343 **PKPdf** **02 55 24.1 -0.5**
GRFO PKPab **PKPab** **02 56 01.6 -0.7**
GRFO Grafenberg 159.38 343 PKIKP **PKPdf** **02 55 24.1 -0.5**
GRFO 02 56 01.6
MEM Membach 159.42 353 *d*PKPdf **PKPdf** **02 55 23.8 -0.8**
MEM *d*PKP **PKPab** **02 56 01.9 -0.5**
CONA Conrad Observa 159.43 333 *i* P **PKPdf** **02 55 23.9 -1.0**
comp=Z,13nm,1.3s,SNR=13
CONA *eP* **PKPab** **02 56 02.7 +0.1**
comp=Z,38nm,1.0s
CONA *eP* **PP** **02 59 44.7 +1.0**
comp=Z,22nm,1.4s
GERES GERESS Array B 159.43 338 PKP **PKPdf** **02 55 24.2 -0.5**
comp=Z,5.1nm,0.9s,baz=222,slow=1.8,SNR=37
GERES PKPab **PKPab** **02 56 02.6 0.0**
comp=Z,23nm,0.8s,baz=11,slow=0.7,SNR=15
BTNL Ternell 159.43 353 *d*PKPdf **PKPdf** **02 55 23.6 -1.0**
BTNL *d*PKP **PKPab** **02 56 01.6 -0.8**
RONA Rosalia, Austr 159.44 332 *i* P **PKPdf** **02 55 23.8 -0.9**
comp=Z,21nm,1.6s,SNR=10
RONA *i* P **PKPab** **02 56 02.7 +0.1**
comp=Z,91nm,1.0s,SNR=5.6
RONA *eP* **PP** **02 59 46.1 +2.4**
comp=Z,13nm,1.2s
BSTI Sart Tilman 159.49 354 *d*PKPdf **PKPdf** **02 55 24.4 -0.3**
BSTI *d*PKP **PKPab** **02 56 02.1 -0.6**
MORH Mrgy, Hungar 159.52 326 ⇓P **PKPdf** **02 55 22.7 -2.1**
MORH Mrgy, Hungar 159.52 326 ⇑*i* P **PKPdf** **02 55 23.4 -1.4**
MORH Mrgy, Hungar 159.52 326 PKP **PKPdf** **02 55 23.7 -1.1**
KKB Krupnik 159.55 310 *eP* **PKPdf** **02 55 23.7 -1.4**
SANT Santorini 159.64 294 ⇓P **PKPdf** **02 55 26.2 +0.8**
FRGS Fruska Gora 159.65 322 ⇓P **PKPdf** **02 55 23.8 -1.3**
FRGS Fruska Gora 159.65 322 ⇑*i* P **PKPdf** **02 55 23.6 -1.5**
SNF Seneffe 159.66 356 *d*PKPdf **PKPdf** **02 55 24.1 -0.7**
SNF *d*PKP **PKPab** **02 56 03.0 -0.4**
BHOU Houvegnez 159.67 353 *d*PKPdf **PKPdf** **02 55 24.1 -0.8**
BHOU *d*PKP **PKPab** **02 56 02.6 -0.9**
BGES Gesves 159.73 355 *d*PKPdf **PKPdf** **02 55 24.6 -0.3**
BGES *d*PKP **PKPab** **02 56 03.0 -0.8**
BMRD Maredsous 159.83 355 *d*PKPdf **PKPdf** **02 55 24.5 -0.6**
BMRD *d*PKP **PKPab** **02 56 03.7 -0.5**
KOVH Kovagotottos 159.87 326 PKP **PKPdf** **02 55 24.4 -0.9**
RCHB Rochefort 159.94 354 *d*PKPdf **PKPdf** **02 55 25.1 -0.1**
RCHB *d*PKP **PKPab** **02 56 04.1 -0.6**
DOU Dourbes 160.05 355 *d*PKPdf **PKPdf** **02 55 24.9 -0.5**
DOU *d*PKP **PKPab** **02 56 04.0 -1.2**
MOA Molln 160.09 336 *i* P **PKPdf** **02 55 24.0 -1.5**
comp=Z,8.6nm,1.4s,SNR=7.0
MOA *eP* **PKPab** **02 56 05.0 -0.5**
comp=Z,64nm,1.3s
MOA *eP* **PP** **02 59 48.8 +1.7**
comp=Z,7.7nm,1.1s
ARSA Arzberg 160.11 333 *i* P **PKPdf** **02 55 24.6 -0.9**
comp=Z,25nm,2.1s,SNR=9.5
ARSA *eP* **PKPab** **02 56 04.6 -1.0**
comp=Z,19nm,1.3s
ARSA *eP* **PP** **02 59 47.6 +0.3**
comp=Z,11nm,1.2s
ARSA *eS* **SKSdf** **03 02 25.4 -2.2**
comp=Z,4.0nm,1.2s
BEHE Becsehely 160.20 329 ⇑*i* P **PKPdf** **02 55 24.5 -1.1**
DIVS Divibare 160.23 319 ⇑*i* P **PKPdf** **02 55 23.1 -2.7**
IDI Anoyia 160.27 291 ⇓P **PKPdf** **02 55 25.9 -0.2**
IDI Anoyia 160.27 291 PKP **PKPdf** **02 55 26.4 +0.3**
comp=Z,47nm,0.9s,baz=134,slow=3.7,SNR=14
IDI Anoyia 160.27 291 P **PKPdf** **02 55 25.9 -0.2**
BIOA Bad Ischl, Aus 160.45 336 *i* P **PKPdf** **02 55 24.7 -1.2**
comp=Z,23nm,1.5s,SNR=11
BIOA *i* P **PKPab** **02 56 06.0 -1.0**
comp=Z,89nm,1.4s,SNR=8.8
BIOA *eP* **PP** **02 59 50.4 +1.3**
comp=Z,12nm,1.3s
BIOA *eS* **SKSdf** **03 02 31.8 +3.8**
comp=Z,6.0nm,1.0s
KOGS Kog 160.45 330 *i* PKPdf **PKPdf** **02 55 24.4 -1.5**
KOGS *i* PKPab **PKPab** **02 56 05.7 -1.3**
KOGS *eP* **PP** **02 59 47.5 -1.7**
KOGS *e* 03 03 49.2
KOGS *e* 03 26 49.3
BBLS Lazići 160.70 320 ⇑*i* P **PKPdf** **02 55 25.1 -1.3**
STU Stuttgart 160.71 346 PKPdf **PKPdf** **02 55 25.5 -0.6**
STU PKPab **PKPab** **02 56 07.2 -0.9**
STU Stuttgart 160.71 346 PKIKP **PKPdf** **02 55 25.5 -0.6**
STU 02 56 07.2
SJES Sjenica 160.75 317 ⇑*i* P **PKPdf** **02 55 25.2 -1.3**
SOKA Soboth 160.77 332 *i* P **PKPdf** **02 55 25.2 -1.1**
comp=Z,29nm,1.2s,SNR=26
SOKA *eP* **PKPab** **02 56 08.0 -0.5**
comp=Z,53nm,1.1s
SOKA *eP* **PP** **02 59 51.1 +0.1**
comp=Z,16nm,1.2s
RUDO Rudo 160.88 319 *eP* **PKPdf** **02 55 24.6 -1.9**
KBA Koelnbreinsper 161.07 336 *i* P **PKPdf** **02 55 25.5 -1.3**
comp=Z,25nm,1.3s,SNR=17
KBA *eP* **PKPab** **02 56 09.4 -0.6**
comp=Z,32nm,0.8s
KBA *eP* **PP** **02 59 52.7 0.0**
comp=Z,28nm,1.1s
KBA *eS* **SKSdf** **03 02 26.4 -2.4**
comp=Z,7.7nm,1.3s
OBKA Obir 161.10 333 *i* P **PKPdf** **02 55 25.3 -1.5**
comp=Z,14nm,1.4s,SNR=7.7
OBKA *eP* **PKPab** **02 56 09.6 -0.4**
comp=Z,28nm,1.2s
OBKA *eP* **PP** **02 59 54.4 +1.7**
comp=Z,8.9nm,1.1s
OBKA *eS* **SKSdf** **03 02 35.1 +6.4**
comp=Z,9.0nm,1.8s
FNA Florina 161.20 309 P **PKPdf** **02 55 25.4 -1.6**
CRES Cresnjev 161.28 330 ⇑*i* P **PKPdf** **02 55 25.5 -1.3**
BLY Banja Luka 161.28 325 ⇑*i* P **PKPdf** **02 55 25.5 -1.3**
THL Klokotos Trika 161.29 305 P **PKPdf** **02 55 24.8 -2.2**
BFO Black Forest 161.30 347 PKPdf **PKPdf** **02 55 23.5 -1.5**
BFO PKPab **PKPab** **02 56 09.1 -1.7**
BFO Black Forest 161.30 347 PKIKP **PKPdf** **02 55 25.2 -1.5**
BFO 02 56 09.1
MYKA Terra Mystica 161.35 335 *i* P **PKPdf** **02 55 25.3 -1.7**
comp=Z,14nm,1.1s,SNR=6.6
MYKA *eP* **PKPab** **02 56 10.5 -0.6**
comp=Z,47nm,1.1s
MYKA *eP* **PP** **02 59 56.3 +2.3**
comp=Z,5.5nm,0.9s
PHP Peshkopia 161.36 313 P **PKPdf** **02 55 25.8 -1.3**
UPM Unac-Piva 161.40 319 *eP* **PKPdf** **02 55 25.3 -2.0**
MAKR Makrakomi, Fth 161.42 304 P **PKPdf** **02 55 26.6 -0.6**
WATA Walderalm 161.43 340 *i* P **PKPdf** **02 55 25.9 -1.2**
comp=Z,27nm,1.5s,SNR=9.2
WATA *i* P **PKPab** **02 56 11.4 -0.1**
comp=Z,119nm,1.3s,SNR=9.1
WATA *eP* **PP** **02 59 54.3 -0.1**
comp=Z,18nm,1.4s
WTTA Wattenberg 161.47 339 *i* P **PKPdf** **02 55 26.3 -0.9**
comp=Z,36nm,1.4s,SNR=20
WTTA *i* P **PKPab** **02 56 11.9 +0.2**
comp=Z,77nm,0.9s,SNR=7.2
WTTA *eP* **PP** **02 59 54.3 -0.3**
comp=Z,14nm,1.1s
WTTA *eS* **SKSdf** **03 02 26.2 -3.0**
comp=Z,14nm,1.4s
LJU Ljubljana 161.49 332 ⇑*i* P **PKPdf** **02 55 25.9 -1.1**
LJU Ljubljana 161.49 332 *i* PKPdf **PKPdf** **02 55 26.0 -1.1**
LJU *eP* **PP** **02 59 53.3 -1.5**
RETA Reutte 161.52 341 *i* P **PKPdf** **02 55 25.8 -1.3**
comp=Z,12nm,1.4s,SNR=6.8
RETA *i* P **PKPab** **02 56 11.7 -0.1**
comp=Z,152nm,1.0s,SNR=20
RETA *eP* **PP** **02 59 56.2 +1.4**
comp=Z,17nm,1.4s
MOTA Moosalm 161.56 341 *i* P **PKPdf** **02 55 25.9 -1.4**
comp=Z,27nm,1.2s,SNR=15
MOTA *i* P **PKPab** **02 56 11.9 -0.2**
comp=Z,182nm,1.0s,SNR=16
MOTA *eP* **PP** **02 59 55.2 +0.1**
comp=Z,18nm,1.2s
MOTA *eS* **SKSdf** **03 02 27.4 -1.8**
comp=Z,5.8nm,1.0s
MGRS Mrkonjic Grad 161.57 324 *eP* **PKPdf** **02 55 21.9 -5.3**
KPRO Kipourio 161.58 307 P **PKPdf** **02 55 26.3 -1.1**
SQTA Sankt Quirin 161.64 340 *i* P **PKPdf** **02 55 26.2 -1.1**
comp=Z,23nm,1.3s,SNR=9.8
SQTA *i* P **PKPab** **02 56 12.4 +0.1**
comp=Z,133nm,1.1s,SNR=14
SQTA *eP* **PP** **02 59 56.6 +1.2**
comp=Z,13nm,1.2s
SQTA *eS* **SKSdf** **03 02 30.4 +1.2**
comp=Z,5.9nm,0.8s
ABTA Abfaltersbach 161.65 337 *i* P **PKPdf** **02 55 25.9 -1.4**
comp=Z,37nm,1.3s,SNR=22
ABTA *eP* **PKPab** **02 56 12.0 -0.4**
comp=Z,67nm,1.0s
ABTA *eS* **SKSdf** **03 02 25.3 -3.9**
comp=Z,5.8nm,1.1s
CADS Cadrg 161.65 334 *i* PKPdf **PKPdf** **02 55 25.5 -1.7**
CADS *e*PKPab **PKPab** **02 56 09.7 -2.7**
CADS *e* 03 07 20.2
PDG Podgorica 161.67 316 ⇑*i* P **PKPdf** **02 55 25.5 -1.8**
EVR Evrytania 161.69 304 P **PKPdf** **02 55 26.5 -1.1**
KLV Kalavryta, Ach 161.75 301 P **PKPdf** **02 55 26.6 -1.0**
CEY Cerknica 161.78 332 ⇑*i* P **PKPdf** **02 55 25.8 -1.6**
BRY Bratogost 161.80 319 *eP* **PKPdf** **02 55 26.7 -0.9**
DRME Dracevica, Mon 161.85 316 ⇑*i* P **PKPdf** **02 55 25.9 -1.6**
DAVA Damuels 161.94 343 *i* P **PKPdf** **02 55 26.7 -0.9**
comp=Z,15nm,1.3s,SNR=8.7
DAVA *i* P **PKPab** **02 56 13.7 0.0**
comp=Z,175nm,1.4s,SNR=15
DAVA *eP* **PP** **02 59 57.5 +0.4**
comp=Z,10nm,1.0s
DAVA *eS* **SKSdf** **03 02 34.5 +5.0**
comp=Z,10nm,1.5s
FETA Feichten 161.96 341 *i* P **PKPdf** **02 55 26.5 -1.2**
comp=Z,35nm,1.2s,SNR=16
FETA *eP* **PKPab** **02 56 13.8 0.0**
comp=Z,115nm,1.1s
FETA *eS* **SKSdf** **03 02 31.1 +1.5**
comp=Z,8.4nm,1.1s
PVO Paravola 162.01 303 P **PKPdf** **02 55 27.7 -0.1**
LSK Leskovik 162.02 308 P **PKPdf** **02 55 27.5 -0.4**
SKDS Skadanscina 162.10 332 ⇑*i* P **PKPdf** **02 55 26.0 -1.7**
HCY Herceg Novi 162.11 317 *eP* **PKPdf** **02 55 25.8 -2.0**
ITM Ithomi 162.19 298 PKPdf **PKPdf** **02 55 26.2 -1.9**
ITM PKPab **PKPab** **02 56 14.9 -0.2**
STON Ston 162.30 320 ⇑*i* P **PKPdf** **02 55 25.9 -2.0**
IGT Igoumenitsa 162.48 307 P **PKPdf** **02 55 27.2 -1.1**
SRN Sarande 162.55 308 P **PKPdf** **02 55 26.5 -1.8**
KEK Kerkira 162.77 308 P **PKPdf** **02 55 27.7 -0.8**
TORD Torodi Ar. Bea 163.02 178 PKP **PKPdf** **02 55 29.3 -0.2**
comp=Z,22nm,1.0s,baz=278,slow=0.3,SNR=41
TORD PKPab **PKPab** **02 56 20.2 +1.3**
comp=Z,45nm,0.7s,baz=143,slow=2.2,SNR=7.8
TORD Torodi Ar. Bea 163.02 178 **PKPdf** **02 55 28.5 -1.0**
TORD PKPab **PKPab** **02 56 18.5 -0.4**
PMOZ Porto Moniz, M 163.25 76 *e*LR LR 03 52 27.7
comp=Z,1µm,20.0s
MATE Matera 164.27 315 ⇓P **PKPdf** **02 55 28.6 -1.3**
CUC Castrocucco 165.20 315 PKPdf **PKPdf** **02 55 29.3 -1.5**
CUC PKPab **PKPab** **02 56 27.5 -0.8**
PGAV Gavieira, Arco 165.54 33 *e*PKPdf **PKPdf** **02 55 32.0 +0.9**
PGAV Gavieira, Arco 165.54 33 *e*SS SS 03 20 55.3 +4.7
PGAV Gavieira, Arco 165.54 33 *e*LR LR 03 57 05.6
comp=Z,2µm,18.0s
PCAB Cabril 165.86 33 *e*PKPdf **PKPdf** **02 55 32.0 +0.7**
PCAB Cabril 165.86 33 *e*PKPab **PKPab** **02 56 31.0 0.0**
POLO Lamas de Olo 166.23 33 *e*PKPdf **PKPdf** **02 55 32.5 +0.8**
POLO Lamas de Olo 166.23 33 *e*PKPab **PKPab** **02 56 32.8 +0.1**
POLO Lamas de Olo 166.23 33 *e*SS SS 03 21 05.6 +8.0

PVRL	Vila Real	166.34	33	ePKPdf	PKPdf	02 55 32.7	+1.0
PVRL	Vila Real	166.34	33	ePKPab	PKPab	02 56 33.1	0.0
PBRG	Braganca	166.36	30	ePKPdf	PKPdf	02 55 31.5	-0.2
PBRG	Braganca	166.36	30	ePKPab	PKPab	02 56 32.9	-0.3
PVIS	Viseu	166.68	35	ePKPdf	PKPdf	02 55 32.7	+0.7
PVIS	Viseu	166.68	35	ePKPab	PKPab	02 56 34.4	-0.3
MVO	Moncorvo	166.75	32	ePKPdf	PKPdf	02 55 32.9	+0.9
MVO	Moncorvo	166.75	32	ePKPab	PKPab	02 56 33.4	-1.6
MVO	Moncorvo	166.75	32	eSS	SS	03 21 14.7	+12
MVO	Moncorvo	166.75	32	eLR	LR	03 54 26.5	
	comp=Z,2µm,20.0s						
COI	Coimbra	166.78	38	ePKPdf	PKPdf	02 55 32.6	+0.6
PCAS	Casmilo, Conde	166.85	39	ePKPdf	PKPdf	02 55 32.7	+0.6
PCAS	Casmilo, Conde	166.85	39	eSS	SS	03 21 20.3	+16
PSBE	So Bento	167.06	41	ePKPdf	PKPdf	02 55 33.3	+1.0
PSBE	So Bento	167.06	41	ePKPab	PKPab	02 56 36.5	+0.1
PSBE	So Bento	167.06	41	eSS	SS	03 21 10.9	+4.6
MTE	Manteigas	167.09	35	ePKPdf	PKPdf	02 55 32.9	+0.6
MTE	Manteigas	167.09	35	ePKPab	PKPab	02 56 36.0	-0.5
MTE	Manteigas	167.09	35	eSS	SS	03 21 08.2	+1.8
MTE	Manteigas	167.09	35	eLR	LR	03 54 59.7	
	comp=Z,2µm,22.0s						
PMAFR	Mafra	167.13	44	ePKPdf	PKPdf	02 55 33.2	+0.9
PMAFR	Mafra	167.13	44	ePKPab	PKPab	02 56 36.8	+0.1
PMAFR	Mafra	167.13	44	eSS	SS	03 21 10.0	+2.8
LIS	Lisbon	167.37	45	ePKPdf	PKPdf	02 55 29.5	-2.9
LIS				ePP	PP	03 00 22.2	-3.8
LIS				IAMs_20	IAMs_20	04 17 49.6	
	comp=Z,3µm,23.7s						
LIS	Lisbon	167.37	45	ePKIKP	PKPdf	02 55 29.5	-2.9
LIS				e		03 00 22.2	
PCBR	Castelo Branco	167.54	37	ePKPdf	PKPdf	02 55 33.2	+0.7
PMTG	Montargil	167.68	41	ePKPdf	PKPdf	02 55 33.6	+0.9
PMTG	Montargil	167.68	41	ePKPab	PKPab	02 56 38.7	-0.4
PMRV	Marv??o	167.89	38	ePKPdf	PKPdf	02 55 33.7	+0.8
PMRV	Marv??o	167.89	38	ePKPab	PKPab	02 56 39.8	-0.2
PMRV	Marv??o	167.89	38	eSS	SS	03 21 23.6	+9.1
PMRV	Marv??o	167.89	38	eLR	LR	03 54 36.8	
	comp=Z,2µm,20.0s						
PNCL	Nicolau / Gran	168.12	46	ePKPdf	PKPdf	02 55 34.3	+1.3
PNCL	Nicolau / Gran	168.12	46	ePKPab	PKPab	02 56 40.9	-0.2
PNCL	Nicolau / Gran	168.12	46	eSS	SS	03 21 28.3	+11
EVO	Evora	168.16	43	PKP	PKPdf	02 55 34.4	+1.4
EVO	Evora	168.16	43	PP	PP	03 00 28.4	-1.6
EVO	Evora	168.16	43	ePKPdf	PKPdf	02 55 34.1	+1.1
EVO	Evora	168.16	43	ePKPab	PKPab	02 56 40.5	-0.8
PESTR	Estremoz	168.18	40	ePKPdf	PKPdf	02 55 34.0	+0.9
PESTR	Estremoz	168.18	40	ePKPab	PKPab	02 56 40.6	-0.7
PESTR	Estremoz	168.18	40	eSS	SS	03 21 19.6	+2.1
PESTR	Estremoz	168.18	40		PKPdf	02 55 32.6	-0.4
PESTR	Estremoz	168.18	40	P	PKPdf	02 55 34.4	+1.3
PTEO	Sao Teotonio	168.34	48	ePKPdf	PKPdf	02 55 34.5	+1.3
MESJ	Messejana	168.48	46	ePKPdf	PKPdf	02 55 30.2	-3.0
MESJ				ePP	PP	03 00 28.0	-3.8
MESJ				eSS	SS	03 21 19.5	-1.3
MESJ				IAMs_20	IAMs_20	04 09 09.2	
	comp=Z,3µm,31.8s						
MESJ	Messejana	168.48	46	ePKPdf	PKPdf	02 55 34.1	+0.8
MESJ	Messejana	168.48	46	ePKPab	PKPab	02 56 42.6	-0.1
MESJ	Messejana	168.48	46	ePKIKP	PKPdf	02 55 30.2	-3.0
MESJ				e		03 00 28.0	
MESJ				eSS	SS	03 21 19.5	-1.3
PFVI	Vila Bisbo	168.51	50	ePKPdf	PKPdf	02 55 34.6	+1.3
PFVI	Vila Bisbo	168.51	50	ePKPab	PKPab	02 56 41.3	-1.6
PFVI	Vila Bisbo	168.51	50	eSS	SS	03 21 29.1	+7.7
PFVI	Vila Bisbo	168.51	50	P	PKPdf	02 55 35.6	+2.3
MORF	Marmelete	168.53	49	ePKPdf	PKPdf	02 55 30.3	-3.1
MORF				ePP	PP	03 00 28.1	-4.1
MORF				eSS	SS	03 21 19.8	-1.8
MORF				IAMs_20	IAMs_20	04 08 18.2	
	comp=Z,3µm,21.4s						
MORF	Marmelete	168.53	49	ePKPdf	PKPdf	02 55 34.5	+1.1
MORF	Marmelete	168.53	49	eSS	SS	03 21 31.6	+10
MORF	Marmelete	168.53	49	ePKIKP	PKPdf	02 55 30.3	-3.1
MORF				e		03 00 28.1	
MORF				eSS	SS	03 21 19.8	-1.8
PBEJ	Beja	168.58	44	ePKPdf	PKPdf	02 55 34.5	+1.2
PCVE	Castro Verde	168.72	46	ePKPdf	PKPdf	02 55 34.6	+1.2
PCVE	Castro Verde	168.72	46	eSS	SS	03 21 27.5	+4.2
PBAR	Barrancos	168.97	41	eSS	SS	03 21 39.1	+14
UCM	Universidad Co	168.98	22	PKP	PKPdf	02 55 32.6	-0.9
UCM	Universidad Co	168.98	22	PP	PP	03 00 34.1	+0.5
PBDV	Barranco-do-Ve	169.03	48	ePKPdf	PKPdf	02 55 35.2	+1.5
PBDV	Barranco-do-Ve	169.03	48	eSS	SS	03 21 30.1	+3.6
PVAQ	Vaqueiros	169.07	46	ePKPdf	PKPdf	02 55 35.1	+1.4
PVAQ	Vaqueiros	169.07	46	ePKPab	PKPab	02 56 45.0	-0.3
PVAQ	Vaqueiros	169.07	46	eSS	SS	03 21 33.0	+6.3
PVAQ	Vaqueiros	169.07	46	eLR	LR	03 54 43.6	
	comp=Z,2µm,18.0s						
PAB	San Pablo	169.24	28	PKPdf	PKPdf	02 55 33.8	0.0
PAB	San Pablo	169.24	28	⇑PKIKP	PKPdf	02 55 34.2	+0.4
PAB	San Pablo	169.24	28	P	PKPdf	02 55 34.7	+0.8
ESDC	Sonseca Array	169.29	27	PKP	PKPdf	02 55 34.5	+0.7
	comp=Z,18nm,1.2s,baz=339,slow=2.3,SNR=66						
ESDC				PKPab	PKPab	02 56 46.9	+0.7
	comp=Z,6.2nm,0.9s,baz=318,slow=3.8,SNR=6.2						
ESDC				PP	PP	03 00 34.6	-0.7
	comp=Z,22nm,1.4s,baz=339,slow=4.3,SNR=9.3						
ARNO	Arenosillo	169.87	45	PKP	PKPdf	02 55 31.1	-3.0
ARNO	Arenosillo	169.87	45	PP	PP	03 00 41.4	+2.7
MAHO	Mahon	170.19	351	PKP	PKPdf	02 55 34.3	+0.1
MAHO	Mahon	170.19	351	PP	PP	03 00 34.0	-4.6
SFS	San Fernando	170.60	46	PKP	PKPdf	02 55 34.7	+0.1
SFS	San Fernando	170.60	46	PP	PP	03 00 45.7	+3.3
TTIG	Tnine Tigouga,	170.79	85	P	PKPdf	02 55 39.0	+3.9
SRHM	Skhour des Reh	171.07	73	P	PKPdf	02 55 37.0	+1.9
AVE	Averroes	171.25	67	PKP	PKPdf	02 55 35.3	+0.2
AVE	Averroes	171.25	67	PP	PP	03 00 48.4	+2.1
OUK	Oukaimeden	171.27	81	P	PKPdf	02 55 38.0	+2.4
CEU	Ceuta	171.48	46	PKP	PKPdf	02 55 32.2	-2.8
CEU	Ceuta	171.48	46	PP	PP	03 00 47.0	+0.3
ZHG	ZHG	171.81	65	P	PKPdf	02 55 37.0	+1.6
KEST	Kesra	171.86	314	PKP	PKPdf	02 55 36.4	+1.1
	comp=Z,20nm,1.0s,baz=240,slow=2.6,SNR=17						
KEST				PKPab	PKPab	02 56 59.0	+1.1
	comp=Z,19nm,0.9s,baz=51,slow=1.0,SNR=9.4						
CHEFC	Chefchaouen	171.98	51	P	PKPdf	02 55 38.0	+2.5
CART	Cartagena	172.17	19	PKP	PKPdf	02 55 35.4	+0.1
CART	Cartagena	172.17	19	PP	PP	03 00 48.4	-0.9
CART	Cartagena	172.17	19	PKPdf	PKPdf	02 55 35.1	-0.2
CART	Cartagena	172.17	19	P	PKPdf	02 55 36.3	+1.0
OUZM	OUZ	172.24	83	P	PKPdf	02 55 38.0	+2.2
CMAH	Djebel Manchou	172.26	327	P		02 55 35.3	
ABSA	Djebel Ababsia	172.51	325	P		02 55 35.7	
SICH	Sidi Chahed	172.53	57	P	PKPdf	02 55 38.0	+2.4
PVLZ	Peæn de	172.61	46	PKP	PKPdf	02 55 31.0	-4.6
PVLZ	Peæn de	172.61	46	PP	PP	03 00 54.5	+2.1
CKFL	Kef-Lekhel	172.76	330	P		02 55 36.5	
PALE	Palemas	172.81	44	P	PKPdf	02 55 36.0	+0.2
IFR	Ifrane	172.94	60	PKP	PKPdf	02 55 36.7	+0.6
IFR	Ifrane	172.94	60	PP	PP	03 00 59.3	+4.5
DFRA	Djebel Bou Aff	172.97	335	P		02 55 37.3	
LCRM	LCR	173.07	58	P	PKPdf	02 55 38.0	+1.9
ZGR	Zagora	173.22	89	P	PKPdf	02 55 39.0	+2.8
TZRR	Tazzarine	173.26	83	P	PKPdf	02 55 38.0	+1.8
WMELI	Melilla	173.30	39	PKP	PKPdf	02 55 35.5	-0.4
WMELI	Melilla	173.30	39	PP	PP	03 00 56.6	+1.0
AKLM	AKL	173.31	49	P	PKPdf	02 55 37.0	+1.0
GOG	Mont Gurugu	173.35	40	P	PKPdf	02 55 37.0	+1.0
MDT	Midelt	173.63	64	P	PKPdf	02 55 37.8	+1.6
GOLM	Goulmima	173.67	75	P	PKPdf	02 55 38.6	+2.3
CHAS	Isla Isabel II	173.68	37	PKP	PKPdf	02 55 38.0	+2.0
CHAS	Isla Isabel II	173.68	37	PP	PP	03 00 55.2	-2.1
TAF	Taforalt	173.97	39	P	PKPdf	02 55 38.0	+1.7
JBK	JBK	174.23	43	P	PKPdf	02 55 38.0	+1.5
TDRA	Tendrara	175.41	51	P	PKPdf	02 55 39.0	+2.1
FIGM	Figuig	176.46	56	P	PKPdf	02 55 39.0	+1.9

*IDC **06** 03:03:26.0±0.8, 35.°69N×3.°78W, h0km, mb3.9/10, mbtmp3.8/15, ML3.8/5, MS4.1/6 Error ellipse: s-maj=22.4km s-min=16.4km az=100.0*
*IGIL **06** 03:03:26.8, 35.°59N×3.°65W, h0km, ML3.6*
*CRAAG **06** 03:03:27.7, 35.°70N×3.°67W, Ml3.7, Hypocentre not reviewed by the ISC*
*LDG **06** 03:03:27.4±0.2, 35.°52N×3.°66W, h2km, Ml3.5/19, Error ellipse: s-maj=3.9km s-min=2.1km az=177.0*
*CNRM **06** 03:03:27.1, 35.°67N×3.°61W, h9km, ml4.2*
*SFS **06** 03:03:27.0, 35.°58N×3.°65W, ML3.7, ALBORAN SUR*

*MDD **06** 03:03:27.1±0.2, 35.°59N×3.°65W, h0km, mb_Lg3.7/36, Error ellipse: s-maj=2.4km s-min=1.6km az=169.0*
*INMG **06** 03:03:28.3±1.4, 35.°61N×3.°66W, h17km±6km, MD3.8, ML3.6, Error ellipse: s-maj=4.4km s-min=2.7km az=158.0*
ISC 06 03:03:27.4±1.0, 35.°67N±0.°02×3.°64W±0.°02, h14km±7km, n185, σ1°65/280, mb4.0/11, MS4.3/4, 5C-4D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALE	Palemas	0.51	209	P	Pg	03 03 37.7	+0.2
PALE	Palemas	0.51	209	P	Pb	03 03 38.1	-0.1
PALE				S	Sg	03 03 44.4	+0.1
EALB	Alboran	0.56	61	Pg	Pb	03 03 39.1	+0.2
EALB				Sg	Sb	03 03 48.0	+1.2
EALB				*i* Vmb_Lg		03 03 49.2	
WMELI	Melilla	0.66	122	P	Pg	03 03 40.1	-0.1
WMELI				S	Sg	03 03 48.9	-0.1
EMEL	Melilla	0.67	123	Pg	Pg	03 03 40.4	0.0
EMEL				Sg	Sg	03 03 49.2	+0.1
GOG	Mont Gurugu	0.69	130	P	Pg	03 03 40.4	-0.4
GOG	Mont Gurugu	0.69	130	P	Pg	03 03 40.7	-0.1
GOG				S	Sg	03 03 49.5	-0.4
PVLZ	Peæn de	0.73	228	P	Pg	03 03 40.5	-1.2
PVLZ				S	Sb	03 03 51.7	0.0
CHAS	Isla Isabel II	1.10	116	P	Pb	03 03 46.3	-1.8
CHAS				S	Sb	03 04 01.9	-0.4
AKLM	AKL	1.17	189	P	Pn	03 03 49.1	-0.3
AKLM	AKL	1.17	189	P	Pn	03 03 49.2	-0.2
AKLM				S	Sn	03 04 05.3	+0.2
ELQU	Los Guajares,	1.20	0	Pg	Pn	03 03 48.2	-1.5
ELQU				Sg	Sb	03 04 04.7	-0.6
ELQU				*i* Vmb_Lg		03 04 07.0	
EMIJ	Mijas	1.28	315	Pg	Pn	03 03 49.3	-1.6
EMIJ				Sg	Sb	03 04 06.0	-1.7
EMIJ				*i* Vmb_Lg		03 04 11.3	
TAF	Taforalt	1.31	130	P	Pn	03 03 51.0	-0.4
TAF	Taforalt	1.31	130	P	Pn	03 03 50.5	-0.9
TAF				S	Sb	03 04 08.2	-0.3
EBER	Berja	1.37	26	Pn	Pn	03 03 51.0	-1.3
EBER				Sn	Sg	03 04 11.4	-0.2
EBER				*i* Vmb_Lg		03 04 18.2	
SMIR	Smir Dam	1.42	271	P	Pn	03 03 50.0	-2.7
SMIR	Smir Dam	1.42	271	P	Pn	03 03 50.2	-2.5
SMIR				S	Sn	03 04 09.6	-1.6
CEU	Ceuta	1.43	280	P	Pn	03 03 49.6	-3.3
CEU				S	Sn	03 04 07.5	-4.0
ECEU	Ceuta	1.43	280	Pn	Pn	03 03 50.6	-2.3
ECEU				Sn	Sn	03 04 09.8	-1.7
ECEU				*i* Vmb_Lg		03 04 10.4	
EGOR	Sierra Gorda,	1.49	345	Pn	Pn	03 03 53.5	-0.4
EGOR				Sn	Sg	03 04 16.2	+0.7
EGOR				*i* Vmb_Lg		03 04 23.9	
CHEFC	Chefchaouen	1.50	249	P	Pn	03 03 54.0	+0.1
CHEFC	Chefchaouen	1.50	249	P	Pn	03 03 53.5	-0.5
CHEFC				S	Sn	03 04 13.2	0.0
EQUE	Quentar	1.54	6	Pn	Pn	03 03 54.3	-0.3
EQUE				Sn	Sn	03 04 14.6	+0.2
EQUE				*i* Vmb_Lg		03 04 18.6	
JBK	JBK	1.59	146	P	Pn	03 03 55.0	-0.3
JBK	JBK	1.59	146	P	Pn	03 03 54.1	-1.2
JBK				S	Sn	03 04 13.2	-2.6
EJIF	Jimena Fronter	1.68	298	Pn	Pn	03 03 55.5	-0.8
EJIF				Sn	Sn	03 04 17.8	+0.2
ENIJ	Nijar	1.74	41	Pn	Pn	03 03 55.6	-1.6
ENIJ				Sn	Sn	03 04 19.1	-0.1
ENIJ				*i* Vmb_Lg		03 04 22.6	
SICH	Sidi Chahed	2.08	222	P	Pn	03 04 02.9	+1.0
LCRM	LCR	2.22	207	P	Pb	03 04 07.0	-0.3
LCRM	LCR	2.22	207	P	Pn	03 04 04.2	+0.3
LCRM				S	Sg	03 04 36.8	-1.9
SFS	San Fernando	2.23	292	P	Pb	03 04 06.9	-0.5
SFS				S	Sg	03 04 42.6	+3.5
OTSS	Djebel Tessala	2.35	99	P		03 04 22.0	
IFR	Ifrane	2.47	210	P	Pn	03 04 07.1	-0.3
IFR				S	Sn	03 04 35.9	-1.6
USTO	Oran	2.51	88	P		03 04 23.0	
TLOR	Lorca, Murcia	2.53	38	Pn	Pn	03 04 09.3	+1.3
TLOR				Sn	Sn	03 04 39.1	+0.4
EADA	Adamuz	2.61	343	Pn	Pn	03 04 09.6	+0.5
EADA				Pg	Pb	03 04 13.7	-0.2
EADA				Sn	Sb	03 04 46.2	+0.4
EADA				Sg	Sg	03 04 47.3	-3.9
EADA				*i* Vmb_Lg		03 04 48.5	
EZAR	Zarzadilla de	2.70	35	Pn	Pn	03 04 09.9	-0.6
EZAR				Sn	Sn	03 04 42.3	-0.7
ECAB	El Cabril	2.80	330	Pn	Pn	03 04 12.3	+0.6
ECAB				Pg	Pb	03 04 17.1	-0.1
ECAB				Sn	Sn	03 04 47.3	+2.1
ECAB				Sg	Sb	03 04 53.4	+2.2
ECAB				*i* Vmb_Lg		03 04 53.9	
CART	Cartagena	2.86	47	P	Pn	03 04 12.0	-0.5
CART				S	Sn	03 04 41.7	-5.0
CART	Cartagena	2.86	47	P	Pn	03 04 12.5	0.0
CART	Cartagena	2.86	47	P	Pn	03 04 10.6	-1.9
CART				S	Sn	03 04 42.7	-4.0
ODJA	Bouhanifia	2.87	96	P		03 04 24.0	
EMUR	La Murta	2.90	41	Pn	Pn	03 04 13.6	+0.5
EMUR				Sn	Sn	03 04 47.2	-0.6
EMUR				*i* Vmb_Lg		03 04 51.0	
TDRA	Tendrara	2.94	153	P	Pn	03 04 14.0	+0.2
TDRA	Tendrara	2.94	153	P	Pg	03 04 25.0	+1.3
TDRA	Tendrara	2.94	153	P	Pn	03 04 13.5	-0.3
TDRA				S	Sn	03 04 47.6	-1.3
MD31	MD31	2.94	199	P	Pn	03 04 14.1	+0.3
MD31				S	Sn	03 04 48.8	-0.1
MDT	Midelt	2.96	196	Pn	Pn	03 04 14.3	+0.4
	5.8nm,0.3s,baz=110,slow=7.8,SNR=110						
MDT				LR	LR	03 04 47.7	
	comp=Z,488nm,21.0s,baz=9.0,slow=28						
MDT				Sn	Sn	03 04 49.0	-0.3
	19nm,0.3s,baz=340,slow=21,SNR=6.0						
	14nm,0.3s						
MDT	Midelt	2.96	196	P	Pn	03 04 14.1	+0.1
MDT	Midelt	2.96	196	P	Pn	03 04 14.4	+0.4
MDT				S	Sn	03 04 48.8	-0.5
EMIN	Mina Concepcio	3.22	312	Pn	Pn	03 04 17.1	-0.3
EMIN				Sn	Sn	03 04 55.0	-0.5
OJBR	Djebel Berber	3.25	90	P		03 04 34.0	
ETRV	Los Montesinos	3.29	44	Pn	Pn	03 04 21.4	+3.0
ETRV				Sn	Sn	03 04 56.3	-1.0
ETRV				*i* Vmb_Lg		03 05 01.0	
ZHG	ZHG	3.33	229	P	Pn	03 04 18.6	-0.5
ZHG	ZHG	3.33	229	P	Pn	03 04 18.6	-0.5
ETOB	Tobarra	3.41	29	Pn	Pn	03 04 21.4	+1.2
ETOB				Sn	Sn	03 05 02.5	+2.1
ETOB				*i* Vmb_Lg		03 05 08.5	
EGRO	El Granado	3.61	302	Pn	Pn	03 04 22.5	-0.4
EGRO				Sn	Sn	03 05 04.7	-0.6
EGRO				*i* Vmb_Lg		03 05 07.5	
PBAR	Barrancos	3.70	314	ePn	Pn	03 04 24.4	+0.3
PBAR				*e*Sn	Sn	03 05 06.6	-0.9
PVAQ	Vaqueiros	3.71	299	⇑*e*Pn	Pn	03 04 23.8	-0.5
PVAQ				*e*Sn	Sn	03 05 06.9	-0.9
PVAQ				A	A	03 05 08.8	
	87nm,0.4s						
PVAQ	Vaqueiros	3.71	299	P	Pn	03 04 25.2	+0.9
PVAQ	Vaqueiros	3.71	299	P	Pn	03 04 23.7	-0.5
PBDV	Barranco-do-Ve	3.80	296	ePn	Pn	03 04 25.0	-0.5
PBDV				*e*Sn	Sn	03 05 09.0	-1.0
PBDV				A	A	03 05 19.4	
	70nm,0.6s						
AFON	Font Roja	3.88	39	Pn	Pn	03 04 28.3	+1.6
AFON				Sn	Sn	03 05 14.5	+2.4
AVE	Averroes	3.91	234	P	Pn	03 04 26.3	-0.7
AVE				S	Sn	03 05 10.9	-1.8
AVE	Averroes	3.91	234	P	Pn	03 04 27.4	+0.3
AVE	Averroes	3.91	234	P	Pn	03 04 27.3	+0.3
PAB	San Pablo	3.91	352	Pn	Pn	03 04 27.7	+0.6
PAB	San Pablo	3.91	352	P	Pn	03 04 28.1	+1.0
ESDC	Sonseca Array	4.01	356	Pn	Pn	03 04 29.8	+1.4
	4.2nm,0.3s,baz=179,slow=12,SNR=195						
ESDC				Sn	Sn	03 05 15.6	+0.4
	3.7nm,0.3s,baz=172,slow=19,SNR=6.1						
	11nm,0.4s						
ESDC	Sonseca Array	4.01	356	Pn	Pn	03 04 28.9	+0.5
ESDC				Sn	Sn	03 05 16.2	+1.0
ESDC				*i* Vmb_Lg		03 05 35.5	
FIGM	Figuig	4.04	150	P	Pn	03 04 30.0	+1.1
FIGM	Figuig	4.04	150	P	Pn	03 04 29.3	+0.4
PCVE	Castro Verde	4.05	300	⇑*e*Pn	Pn	03 04 28.4	-0.5
PCVE				*e*Sn	Sn	03 05 14.8	-1.2
PCVE				A	A	03 05 17.6	
	86nm,0.5s						
EBAD	Badajoz	4.09	320	Pn	Pn	03 04 29.6	+0.1
EBAD				Sn	Sn	03 05 17.2	-0.1
EBAD				*i* Vmb_Lg		03 05 20.0	
GOLM	Goulmima	4.10	196	P	Pn	03 04 34.0	+4.2
GOLM	Goulmima	4.10	196	P	Pn	03 04 31.7	+2.0
PBEJ	Beja	4.13	306	ePn	Pn	03 04 29.7	-0.3
PBEJ				*e*Sn	Sn	03 05 16.3	-1.8
PBEJ				A	A	03 05 19.3	
	49nm,0.4s						
MESJ	Messejana	4.27	302	*e*P	Pn	03 04 31.4	-0.5
MESJ				*e*S	Sn	03 05 18.7	-2.8
MESJ				IAML		03 05 28.9	
	comp=N,97nm,0.3s						
MESJ	Messejana	4.27	302	⇑ePn	Pn	03 04 31.5	-0.5
MESJ				*e*Sn	Sn	03 05 20.3	-1.3
MESJ				A	A	03 05 23.4	
	comp=N,64nm,0.6s						
MORF	Marmelete	4.36	294	*e*P	Pn	03 04 32.5	-0.7
MORF				*e*S	Sn	03 05 20.8	-3.0
MORF				IAML		03 05 36.3	
	comp=N,126nm,0.5s						
MORF	Marmelete	4.36	294	ePn	Pn	03 04 32.8	-0.4
MORF				*e*Sn	Sn	03 05 21.8	-2.0
MORF				A	A	03 05 26.3	
	comp=N,35nm,0.3s						
PFVI	Vila Bisbo	4.43	291	ePn	Pn	03 04 34.3	+0.1
PFVI				*e*Sn	Sn	03 05 23.3	-2.3
PFVI				A	A	03 05 42.2	
	comp=N,54nm,0.6s						
PFVI	Vila Bisbo	4.43	291	P	Pn	03 04 34.6	+0.4
PFVI	Vila Bisbo	4.43	291	P	Pn	03 04 34.6	+0.4
ECHE	Chera	4.45	28	Pn	Pn	03 04 35.5	+1.0
ECHE				*i* Vmb_Lg		03 06 13.0	
PESTR	Estremoz	4.49	317	ePn	Pn	03 04 35.4	+0.4
PESTR				*e*Sn	Sn	03 05 24.8	-2.1
PESTR				A	A	03 05 41.8	
	comp=N,70nm,0.5s						
PESTR	Estremoz	4.49	317	P	Pn	03 04 35.3	+0.4
PESTR	Estremoz	4.49	317	P	Pn	03 04 35.1	+0.1
PTEO	Sao Teotonio	4.50	296	ePn	Pn	03 04 35.2	+0.1
PTEO				*e*Sn	Sn	03 05 26.4	-0.8
PTEO				A	A	03 05 42.0	
	comp=N,70nm,0.5s						
EVO	Evora	4.52	311	P	Pn	03 04 35.4	+0.1
EVO				S	Sn	03 05 25.9	-1.8
EVO	Evora	4.52	311	ePn	Pn	03 04 35.4	+0.1
EVO				*e*Sn	Sn	03 05 25.7	-1.9
EVO				A	A	03 05 27.4	
	comp=N,94nm,0.4s						
PNCL	Nicolau / Gran	4.62	303	⇑ePn	Pn	03 04 36.4	-0.3
PNCL				*e*Sn	Sn	03 05 28.8	-1.3
PNCL				A	A	03 05 35.6	
	comp=N,41nm,0.4s						
UCM	Universidad Co	4.64	4	P	Pn	03 04 38.2	+1.1
UCM				S	Sb	03 05 41.9	-2.5
PMRV	Marv??o	4.80	323	ePn	Pn	03 04 39.9	+0.7
PMRV				*e*Sn	Sn	03 05 32.4	-2.1
PMRV				A	A	03 05 57.7	
	comp=N,66nm,0.5s						
EPLA	Plasencia	4.80	337	Pn	Pn	03 04 40.0	+0.8
EPLA				Sn	Sn	03 05 33.8	-0.8
EPLA				*i* Vmb_Lg		03 05 42.7	
GUD	Guadarrama	4.99	355	Pn	Pn	03 04 42.6	+0.7
GUD				Sn	Sn	03 05 39.0	-0.3
PMTG	Montargil	4.99	314	ePn	Pn	03 04 41.8	0.0
PMTG				*e*Sn	Sn	03 05 37.1	-2.1
PMTG				A	A	03 06 12.9	
	comp=N,54nm,0.6s						
TZRR	Tazzarine	5.13	199	P	Pn	03 04 45.2	+1.3
PCBR	Castelo Branco	5.16	325	ePn	Pn	03 04 44.9	+0.8
PCBR				*e*Sn	Sn	03 05 41.6	-1.8
PCBR				A	A	03 05 44.9	
	comp=N,64nm,0.6s						
EIBI	Ibiza	5.20	48	Pn	Pn	03 04 44.6	0.0
EI

EORO	**Oroz-Betelu**	**7.44**	**13**	Pn		**Pn**	**03 05 17.2**	**+1.7**
EORO				*i* Vmb_Lg			03 07 40.3	
ELAN	**Lanestosa**	**7.56**	**1**	Pn		**Pn**	**03 05 18.2**	**+1.1**
ELAN				Sn		**Sn**	**03 06 42.3**	**-0.2**
EZAM	**Zamans**	**7.58**	**330**	Pn		**Pn**	**03 05 20.0**	**+2.7**
EZAM				Sn		**Sn**	**03 06 40.8**	**-2.2**
EZAM				*i* Vmb_Lg			03 06 47.7	
ETSF	**Etsaut**	**7.61**	**17**	*e*Pn		**Pn**	**03 05 19.3**	**+1.5**
ETSF	**Etsaut**	**7.61**	**17**	*e*P		Pn	03 05 23.7	+5.9
ETSF				*e*Sn		**Sn**	**03 06 42.0**	**-1.8**
ETSF				*e*Sg		**Sg**	**03 07 30.4**	**-1.0**
	comp=N,23nm,0.9s							
SJPF	**Ste Jean**	**7.67**	**13**	*e*Pn		**Pn**	**03 05 19.5**	**+0.9**
SJPF	**Ste Jean**	**7.67**	**13**	*e*P		Pn	03 05 24.7	+6.1
SJPF				*e*Sn		**Sn**	**03 06 43.2**	**-2.0**
	comp=N,29nm,1.0s							
SJPF				*e*Sg		**Sg**	**03 07 32.2**	**-1.1**
	comp=N,49nm,1.1s							
EALK	**Alkurruntz**	**7.72**	**12**	Pn		**Pn**	**03 05 20.9**	**+1.5**
EARI	**Arriondas**	**7.72**	**351**	Pn		**Pn**	**03 05 20.3**	**+0.9**
EARI				Sn		**Sn**	**03 06 46.6**	**0.0**
EARI				*i* Vmb_Lg			03 08 08.9	
EAGO	**Agolada(Pontev**	**7.92**	**335**	Pn		**Pn**	**03 05 24.1**	**+2.0**
EAGO				Sn		**Sn**	**03 06 49.8**	**-1.6**
EAGO				*i* Vmb_Lg			03 07 53.0	
EPF	**Esparros**	**7.97**	**22**	*e*Pn		**Pn**	**03 05 24.2**	**+1.4**
EPF	**Esparros**	**7.97**	**22**	*e*P		Pn	03 05 27.7	+4.9
EPF				*e*Sn		**Sn**	**03 06 51.9**	**-0.9**
	comp=N,5.2nm,0.7s							
EPF				*e*Sg		**Sg**	**03 07 40.7**	**-2.4**
	comp=N,26nm,1.1s							
EMAZ	**Mazaricos**	**8.37**	**332**	Pn		**Pn**	**03 05 29.7**	**+1.6**
EMAZ				*i* Vmb_Lg			03 08 09.4	
MTLF	**Montolieu**	**8.90**	**29**	*e*Pn		**Pn**	**03 05 36.7**	**+1.2**
MTLF	**Montolieu**	**8.90**	**29**	*e*P		Pn	03 05 42.1	+6.6
MTLF				*e*Sn		**Sn**	**03 07 14.1**	**-1.3**
MTLF				*e*Sg		**Sg**	**03 08 10.0**	**-2.7**
	comp=N,3.5nm,0.6s							
TANT	**Tantan**	**9.69**	**224**	P		**Pn**	**03 05 45.7**	**-0.6**
LFF	**La Frestale**	**9.85**	**18**	*e*Pn		**Pn**	**03 05 52.3**	**+3.9**
LFF				*e*Sn		**Sn**	**03 07 35.3**	**-3.4**
	comp=N,2.1nm,0.4s							
LASF	**Ste Croix**	**10.18**	**32**	*e*Pn		**Pn**	**03 05 53.9**	**+0.9**
CAF	**Calviac**	**10.22**	**23**	*e*Pn		**Pn**	**03 05 55.2**	**+1.6**
RJF	**Les Rejaudoux**	**10.39**	**21**	*e*Pn		**Pn**	**03 05 56.8**	**+0.9**
KEST	**Kesra**	**10.56**	**86**	Pn		**Pn**	**03 06 02.3**	**+4.0**
	comp=N,0.2nm,0.3s,baz=169,slow=4.3,SNR=5.4							
	comp=N,1.6nm,0.7s							
LMR	**La Mourre**	**10.95**	**43**	*e*P		Pn	03 06 10.4	+6.8
LMR				*e*Sn		**Sn**	**03 08 01.3**	**-4.5**
LMR				*e*Sg				
	comp=N,1.1nm,0.4s							
VIVF	**Saint-Julien-l**	**11.15**	**32**	*e*P		Pn	03 06 12.5	+6.1
MFF	**Saint Martin d**	**11.24**	**12**	*e*Pn		**Pn**	**03 06 09.0**	**+1.5**
MFF				*e*Sn		**Sn**	**03 08 09.4**	**-3.4**
	comp=N,1.0nm,0.5s							
PMAR	**Madeira**	**11.38**	**259**	P		**Pn**	**03 06 06.9**	**-2.7**
TCF	**Toulx Ste Croi**	**11.49**	**21**	*e*Pn		**Pn**	**03 06 12.2**	**+1.2**
SBF	**Sospel**	**11.81**	**43**	*e*Sn		**Sn**	**03 08 22.7**	**-4.2**
	comp=N,11nm,1.0s							
SBF				*e*Sg				
	comp=N,1.1nm,0.2s							
BGF	**Bois d'Agland**	**11.92**	**22**	*e*Pn		**Pn**	**03 06 17.8**	**+0.9**
PGF	**Pioggiola**	**11.97**	**51**	*e*Pn		**Pn**	**03 06 18.3**	**+0.6**
PGF	**Pioggiola**	**11.97**	**51**	*e*P		Pn	03 06 22.9	+5.2
QUIF	**Quistinic**	**12.25**	**1**	*e*Pn		**Pn**	**03 06 21.2**	**0.0**
QUIF				*e*Sn		**Sn**	**03 08 33.8**	**-3.6**
	comp=N,0.9nm,0.3s							
AVF	**Avril sur Loir**	**12.29**	**23**	*e*Pn		**Pn**	**03 06 22.8**	**+1.0**
SMF	**Signal de Mont**	**12.32**	**25**	*e*Pn		**Pn**	**03 06 23.4**	**+1.1**
SSF	**Saint Saulge**	**12.58**	**23**	*e*P		P	03 06 31.8	-5.5
SGMF	**Saint Gilles**	**12.60**	**3**	*e*Pn		**Pn**	**03 06 26.3**	**+0.2**
SGMF				*e*Sn		**Sn**	**03 08 43.5**	**-2.7**
	comp=N,1.3nm,0.5s							
ROSF	**Rostrenen**	**12.66**	**1**	*e*Pn		**Pn**	**03 06 27.3**	**+0.3**
ROSF				*e*Sn		**Sn**	**03 08 43.0**	**-4.7**
	comp=N,1.1nm,0.3s							
GRR	**Gorron**	**12.88**	**8**	*e*Pn		**Pn**	**03 06 29.8**	**-0.1**
GRR				*e*Sn		**Sn**	**03 08 48.6**	**-4.3**
	comp=N,1.0nm,0.3s							
CABF	**La Chapelle**	**13.15**	**31**	*e*P		**P**	**03 06 39.9**	**-3.9**
LDF	**La Druitiere**	**13.18**	**10**	*e*Pn		**Pn**	**03 06 34.9**	**+0.9**
LDF				*e*Sn		**Sn**	**03 08 55.6**	**-4.6**
	comp=N,0.4nm,0.2s							
FLN	**La Foliniere**	**13.29**	**9**	*e*Pn		**Pn**	**03 06 36.5**	**+1.0**
	baz=193							
GERES	**GERESS Array B**	**18.33**	**39**	P		**P**	**03 07 42.9**	**+1.7**
	comp=N,0.2nm,0.3s,baz=225,slow=9.6,SNR=2.3							
GERES				LR		LR	03 13 49.8	
	comp=N,1μm,21.1s,baz=308,slow=34							
	comp=N,0.3nm,0.6s							
EKA	**Eskdalemuir Ar**	**19.67**	**1**	P		**Pn**	**03 07 57.7**	**+0.5**
	baz=177,slow=11							
	comp=N,0.5nm,0.5s							
TORD	**Torodi Ar. Bea**	**22.93**	**167**	P		**P**	**03 08 33.1**	**+2.0**
	comp=N,3.4nm,0.7s,baz=344,slow=11,SNR=9.0							
	comp=N,3.4nm,0.7s							
IDI	**Anoyia**	**23.20**	**83**	LR		LR	03 17 52.0	
	comp=N,368nm,21.6s,baz=0.0,slow=37							
HFS	**Hagfors**	**26.93**	**19**	P		**P**	**03 09 08.2**	**+0.3**
	comp=N,1.1nm,0.5s,baz=207,slow=9.2,SNR=8.8							
	comp=N,1.1nm,0.5s							
NOA	**NORSAR Array B**	**27.11**	**16**	LR		LR	03 21 07.9	
	comp=N,101nm,19.1s,baz=15,slow=39							
ARCES	**ARCESS Array B**	**37.48**	**16**	P		**P**	**03 10 44.0**	**+3.8**
	comp=N,3.7nm,1.0s,baz=198,slow=8.5,SNR=4.3							
SCHQ	**Schefferville**	**46.69**	**315**	P		**P**	**03 11 55.8**	**+0.3**
	comp=N,0.8nm,0.5s,baz=72,slow=9.6,SNR=5.6							
	comp=N,0.8nm,0.5s							
SADO	**Sadowa**	**56.45**	**304**	LR		LR	03 36 48.8	
	comp=N,1μm,20.8s,baz=265,slow=36							
SJG	**San Juan**	**57.53**	**270**	LR		LR	03 34 19.7	
	comp=N,904nm,21.5s,baz=251,slow=32							
KURBB	**Kurchatov Arra**	**58.79**	**48**	P		**P**	**03 13 25.7**	**+0.8**
	comp=N,1.4nm,0.6s,baz=295,slow=7.5,SNR=8.0							
	comp=N,1.4nm,0.6s							
MKAR	**Makanchi Array**	**62.52**	**51**	P		**P**	**03 13 51.4**	**+0.9**
	comp=N,1.0nm,0.5s,baz=290,slow=6.1,SNR=9.8							
	comp=N,1.0nm,0.5s							
YKA	**Yellowknife Ar**	**67.74**	**332**	P		**P**	**03 14 24.6**	**+0.5**
	comp=N,1.8nm,0.6s,baz=61,slow=6.4,SNR=6.9							
	comp=N,1.8nm,0.6s							
ILAR	**Eielson Array**	**75.83**	**345**	P		**P**	**03 15 13.4**	**+0.8**
	comp=N,0.1nm,0.6s,baz=4.0,slow=3.9,SNR=5.3							
	comp=N,0.1nm,0.6s							
PDAR	**Pinedale Array**	**76.81**	**313**	P		**P**	**03 15 19.4**	**+0.5**
	comp=N,0.4nm,0.6s,baz=77,slow=10,SNR=2.7							
	comp=N,0.4nm,0.6s							
CPUP	**Villa Florida**	**79.83**	**227**	P		**P**	**03 15 35.5**	**+0.2**
	comp=N,2.6nm,0.7s,baz=110,slow=2.9,SNR=4.2							
	comp=N,2.6nm,0.7s							
TXAR	**Lajitas Array**	**80.85**	**299**	P		**P**	**03 15 41.7**	**+0.5**
	comp=N,0.5nm,0.9s,baz=90,slow=6.7,SNR=3.4							
	comp=N,0.5nm,0.9s							

TAP 06 03:49:25.1,24°14N×121°60E,h3km±1km,ML0.9,D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.02**	**46**	*e*P	Pg	03 49 26.1	+0.3
	baz=47						
ETL				*e*S	Sg	03 49 26.7	+0.4
	baz=47						
NACB	**Ninganchiao**	**0.03**	**345**	P	Pg	03 49 26.5	+0.6
	baz=344						
NACB				S	Sg	03 49 27.1	+0.7
	baz=344						
TWD	**Chiawan**	**0.06**	**187**	*e*P	Pg	03 49 27.2	+0.9
	baz=179						
TWD				*e*S	Sg	03 49 28.2	+1.0
	baz=179						
ETLH	**Xiulin Townshi**	**0.13**	**300**	*e*P	Pg	03 49 28.8	+1.1
	baz=299						
ETLH				*e*S	Sg	03 49 31.0	+1.6
	baz=299						

JMA 06 03:49:47.3±0.2,24°8N±0°8×123°8E±0°5,h0km,MV1.5/7, NW OFF ISHIGAKIJIMA IS,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.47**	**192**	P	Pg	03 49 57.0	+0.6
JISG	**Ishigakijimahi**	**0.48**	**116**	*e*P	Pg	03 49 57.2	+0.7
JISG				*e*S	Sg	03 50 04.5	+1.7
JIJ	**Ishigaki jima**	**0.52**	**147**	*i* P	Pg	03 49 57.5	+0.3
JIJ				S	Sg	03 50 04.7	+0.8
JKRS	**Kuro-shima**	**0.58**	**164**	*e*P	Pg	03 49 59.0	+0.5
JKRS				*e*S	Sg	03 50 07.5	+1.4
HATJ	**Hateruma jima**	**0.74**	**182**	P	Pg	03 50 02.0	+0.5
HATJ				*e*S	Sg	03 50 12.3	+1.2
JTJ	**Tarama**	**0.81**	**101**	*e*S	Sb	03 50 15.0	-0.6

TEH ***06*** *04:06:55.5,29°.52N×51°.37E,h8km,ML3.4*
IDC ***06*** *04:06:55.2±2.0,29°.66N×51°.16E,h0km,mb3.7/9, mbtmp3.6/11,ML3.3/2,Error ellipse: s-maj=41.3km s-min=22.0km az=160.0*
DSN ***06*** *04:07:01.7±1.9,28°.88N×51°.41E,h10km,ML3.5/7,Error ellipse: s-maj=28.4km s-min=8.9km az=8.0*
OMAN ***06*** *04:07:05.2±0.1,28°.96N×51°.47E,h158km±1km,mb4.2/10, ml3.7/2,Error ellipse: s-maj=1.9km s-min=1.3km az=5.0*

ISC 06 04:06:55.2±0.6,29°48N±0°03×51°39E±0°04,h10km,n78, σ2936/94,mb3.5/10,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAZ1	**Kazerun**	**0.26**	**56**	*e*Pg	**Pg**	**04 07 01.0**	**+0.4**
KAZ1				*e*		04 07 10.6	
	comp=Z,30μm,0.2s						
AHBU	**AHRAM**	**0.62**	**188**	*e*Pg	**Pg**	**04 07 08.1**	**+0.9**
SHI	**Shiraz**	**0.99**	**80**	*e*Pg	**Pb**	**04 07 15.2**	**+0.6**
SHI				*e*Sg	**Sb**	**04 07 29.3**	**+1.5**
SHI				*e*		04 07 41.3	
	comp=Z,11μm,0.5s						
KLNJ	**Kolanjah**	**1.54**	**7**	*e*Pg	**Pg**	**04 07 24.3**	**-0.4**
KLNJ				*e*Sg	**Sg**	**04 07 46.3**	**+1.6**
KLNJ				*e*		04 07 55.7	
	comp=Z,5μm,0.4s						
QIR1	**Qir**	**1.76**	**124**	*e*Pg	**Pg**	**04 07 30.2**	**+1.2**
JHRM	**Jahrom**	**2.15**	**116**	*e*Pn	**Pb**	**04 07 34.6**	**+0.3**
IRAM	**Ramesheh**	**2.48**	**20**	*e*Pn	**Pb**	**04 07 38.0**	**-1.9**
IRAM				*e*		04 08 20.8	
	comp=Z,2μm,0.8s						
AMIS	**Naft Sefid**	**2.84**	**321**	*e*Pn	**Pn**	**04 07 42.4**	**+1.8**
AMIS				*e*		04 08 19.7	
	comp=Z,3μm,0.3s						
SHK1	**Shahrekord**	**2.87**	**351**	*e*Pn	**Pn**	**04 07 43.3**	**+2.0**
ISAD	**Sadrabad**	**3.13**	**39**	*e*Pn	**Pb**	**04 07 48.3**	**-2.9**
ISAD				*e*		04 08 47.2	
	comp=N,1μm,0.8s						
IPIR	**Pirpir**	**3.22**	**353**	*e*Pn	**Pn**	**04 07 48.3**	**+2.1**
IPIR				*e*		04 07 50.7	
	comp=Z,559nm,0.4s						
IMEH	**Mehriz**	**3.37**	**55**	*e*Pn	**Pn**	**04 07 51.9**	**+3.7**
IMEH				*e*		04 07 54.9	
	comp=Z,481nm,0.2s						
IZEF	**Zefreh**	**3.50**	**13**	*e*Pn	**Pn**	**04 07 52.7**	**+2.7**
NASN	**Na'in**	**3.53**	**20**	*e*Pn	**Pn**	**04 07 52.9**	**+2.5**
SHMA	**Al-Shehemyia**	**3.63**	**186**	P	**Pn**	**04 07 54.3**	**+2.9**
SHMA				S	**Sn**	**04 08 32.3**	**+2.0**
ICHK	**Chekchek**	**3.79**	**43**	*e*Pn	**Pn**	**04 07 56.7**	**+2.8**
ICHK				*e*		04 08 11.1	
	comp=Z,494nm,0.5s						
IKLH	**Kolahrood**	**3.83**	**2**	*e*Pn	**Pn**	**04 07 56.5**	**+2.0**
IKLH				*e*		04 08 24.8	
	comp=Z,361nm,0.4s						
YZKH	**Yazd**	**4.00**	**43**	*e*Pn	**Pn**	**04 07 59.9**	**+3.2**
IBAF	**Bafgh**	**4.17**	**59**	*e*Pn	**Pn**	**04 08 01.0**	**+1.9**
IBAF				*e*		04 08 15.5	
	comp=Z,322nm,0.6s						
ANAR	**Anarak**	**4.21**	**28**	*e*Pn	**Pn**	**04 08 02.0**	**+2.5**
QAMS	**Qamsar**	**4.25**	**0**	*e*Pn	**Pn**	**04 08 02.3**	**+2.1**
QAMS				*e*		04 09 05.1	
	comp=Z,413nm,0.4s						
KHMZ	**Khomeyn**	**4.42**	**344**	*e*Pn	**Pn**	**04 08 04.7**	**+2.1**
KHGB	**Koh Gabri**	**4.51**	**77**	*e*Pn	**Pn**	**04 08 06.3**	**+2.5**
KHGB				*e*		04 09 29.8	
	comp=Z,627nm,0.8s						
NGRK	**Negar Kerman**	**4.66**	**87**	*e*Pn	**Pn**	**04 08 09.0**	**+3.1**
KRBR	**Kerman**	**4.70**	**83**	*e*Pn	**Pn**	**04 08 10.1**	**+3.6**
TVBK	**TV Kerman**	**4.70**	**82**	*e*Pn	**Pn**	**04 08 08.5**	**+2.0**
SMRA	**Abu-Samra**	**4.74**	**186**	P	**Pn**	**04 08 07.0**	**+0.2**
SMRA				S	**Sn**	**04 09 03.2**	**+1.4**
ISFB	**Sefidab**	**4.91**	**8**	*e*Pn	**Pn**	**04 08 11.3**	**+2.1**
GHVR	**GHOM**	**4.99**	**359**	*e*Pn	**Pn**	**04 08 12.7**	**+2.5**
IKFM	**Kafar-mosalman**	**5.04**	**324**	*e*Pn	**Pn**	**04 08 12.5**	**+1.6**
ASAO	**Ashtian**	**5.19**	**347**	*e*Pn	**Pn**	**04 08 15.4**	**+2.3**
HSAM	**Samen**	**5.28**	**334**	*e*Pn	**Pn**	**04 08 16.2**	**+1.8**
IQOM	**Qom**	**5.36**	**357**	*e*Pn	**Pn**	**04 08 17.0**	**+1.6**
CHMN	**Cheshme madani**	**5.37**	**84**	*e*Pn	**Pn**	**04 08 17.6**	**+1.9**
CHMN				*e*		04 09 24.8	
	comp=Z,293nm,0.8s						
SHME	**Shamm**	**5.42**	**128**	P	**Pn**	**04 08 18.0**	**+1.8**
SHME				S	**Sn**	**04 09 17.6**	**-1.0**
IVRN	**Varamin**	**5.51**	**3**	*e*Pn	**Pn**	**04 08 18.3**	**+0.9**
BANOM	**Banah**	**5.61**	**128**	P	**Pn**	**04 08 20.1**	**+1.4**
	SNR=12						
BANOM	**Banah**	**5.61**	**128**	P	**Pn**	**04 08 19.5**	**+0.7**
BANOM				S	**Sn**	**04 09 21.9**	**-1.4**
IBZA	**Bozab**	**5.81**	**330**	*e*Pn	**Pn**	**04 08 23.1**	**+1.4**
NAZ	**Nazwa, Dubai**	**5.87**	**139**	P	**Pn**	**04 08 22.3**	**0.0**
MSFE	**Esma-Masafi**	**5.90**	**133**	P	**Pn**	**04 08 23.7**	**+1.0**
ASUD	**Al Ashush, Dub**	**5.97**	**143**	P	**Pn**	**04 08 25.7**	**+2.0**
FAQ	**Al Faqa, Dubai**	**6.02**	**141**	P	**Pn**	**04 08 26.9**	**+2.5**
FAQ				S	**Sn**	**04 09 30.6**	**-2.8**
KBAM	**BAM**	**6.18**	**91**	*e*Pn	**Pn**	**04 08 29.4**	**+2.8**
UOSS	**Minazif**	**6.22**	**135**	P	**Pn**	**04 08 27.9**	**+0.7**
HATD	**Hatta, Dubai**	**6.27**	**137**	P	**Pn**	**04 08 29.8**	**+2.0**
HATD				S	**Sn**	**04 09 36.5**	**-3.1**
HATD	**Hatta, Dubai**	**6.27**	**137**	P	**Pn**	**04 08 29.7**	**+1.9**
HATD				S	**Sn**	**04 09 35.5**	**-4.0**
ASHO	**Ashiyiah**	**6.33**	**138**	P	**Pn**	**04 08 29.4**	**+0.7**
	SNR=10						
ASHO				S	**Sn**	**04 09 39.9**	**-1.2**
ASHO	**Ashiyiah**	**6.33**	**138**	P	**Pn**	**04 08 28.3**	**-0.4**
TKDS	**Koohdasht(Taba**	**6.40**	**48**	*e*Pn	**Pn**	**04 08 32.8**	**+3.2**
CHTH	**Charan**	**6.42**	**358**	*e*Pn	**Pn**	**04 08 32.4**	**+2.4**
TABS	**Tabas**	**6.42**	**48**	*e*Pn	**Pn**	**04 08 33.0**	**+3.1**
IDHR	**Dehrash**	**6.72**	**322**	*e*Pn	**Pn**	**04 08 34.9**	**+0.8**
MZR	**Muzera**	**6.72**	**163**	P	**Pn**	**04 08 34.2**	**+0.3**
HOQ	**Hoqain**	**7.91**	**137**	P	**Pn**	**04 08 51.8**	**+1.5**
HOQ				S	**Sn**	**04 10 16.7**	**-3.3**
RAYN	**Ar Rayn**	**7.94**	**223**	P	**Pn**	**04 08 50.7**	**0.0**
SMDO	**Samad**	**8.75**	**135**	P	**Pn**	**04 09 02.9**	**+1.0**
SMDO				S	**Sn**	**04 10 37.1**	**-3.6**
WSAR	**Wadi Sarin**	**8.98**	**132**	Sn	**Sn**	**04 10 42.2**	**-4.2**
	comp=Z,0.6nm,0.3s,baz=131,slow=20,SNR=1.6						
MRVT	**Maraveh tapeh**	**9.05**	**24**	*e*Pn	**Pn**	**04 09 09.3**	**+3.3**
JMDO	**Jabal Madar**	**9.30**	**138**	P	**Pn**	**04 09 10.7**	**+1.2**
JMDO				S	**Sn**	**04 10 50.0**	**-4.3**
MHTO	**MHTO**	**10.34**	**143**	P	**Pn**	**04 09 24.2**	**+0.6**
	SNR=12						
MHTO				S	**Sn**	**04 11 12.9**	**-6.7**
DQM	**DQM**	**11.03**	**148**	P	**Pn**	**04 09 32.5**	**-0.5**
DQM				S	**Sn**	**04 11 29.3**	**-7.2**
DOK	**Doka**	**11.10**	**166**	P	**Pn**	**04 09 33.2**	**-0.8**
DOK				S	Sn	04 11 28.9	-9.4
WHFO	**Wadi Hawf**	**11.71**	**169**	P	**Pn**	**04 09 42.1**	**-0.4**
	SNR=14						
WHFO				S	Sn	04 11 42.6	-11
DMTO	**DMTO**	**12.15**	**164**	P	**Pn**	**04 09 47.5**	**-0.9**
	SNR=21						
DMTO				S	**Sn**	**04 11 57.6**	**-6.5**
ABTO	**Aybut**	**12.20**	**171**	P	**Pn**	**04 09 48.1**	**-1.0**
ABTO				S	Sn	04 11 56.7	-8.6
KBZ	**Khabaz**	**15.76**	**337**	Pn	**Pn**	**04 10 36.4**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=307,slow=5.1,SNR=1.7						
	comp=Z,0.6nm,0.5s						
BRTR	**Keskin Array B**	**17.80**	**310**	P	**Pn**	**04 11 03.0**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=126,slow=12,SNR=5.1						
	comp=Z,0.6nm,0.6s						
AKTO	**Aktyubinsk**	**21.52**	**12**	P	**P**	**04 11 45.2**	**+0.9**
	comp=Z,1.0nm,0.4s,baz=169,slow=13,SNR=4.3						
	comp=Z,1.0nm,0.4s						
MLR	**Muntele Rosu**	**25.60**	**316**	P	**P**	**04 12 26.8**	**+2.1**
	comp=Z,2.5nm,0.6s,baz=221,slow=9.3,SNR=4.7						
AKASG	**Malin Array Be**	**26.96**	**328**	P	**P**	**04 12 35.6**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=126,slow=9.3,SNR=4.1						
	comp=Z,0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**29.35**	**36**	P	**P**	**04 12 59.5**	**+1.4**
	comp=Z,0.7nm,0.8s,baz=233,slow=9.2,SNR=4.2						
	comp=Z,0.7nm,0.8s						
MKAR	**Makanchi Array**	**29.57**	**46**	P	**P**	**04 13 01.4**	**+1.2**
	comp=Z,0.5nm,0.7s,baz=248,slow=7.6,SNR=4.3						
	comp=Z,0.5nm,0.7s						
ZALV	**Zalesovo Beam**	**34.41**	**35**	P	**P**	**04 13 43.8**	**+1.3**
	comp=Z,1.5nm,0.7s,baz=251,slow=9.0,SNR=6.0						
	comp=Z,1.5nm,0.7s						
HFS	**Hagfors**	**39.72**	**331**	P	**P**	**04 14 26.7**	**-0.8**
	comp=Z,1.2nm,0.5s,baz=140,slow=8.4,SNR=9.7						
	comp=Z,1.2nm,0.5s						
NOA	**NORSAR Array B**	**41.24**	**332**	P	**P**	**04 14 38.9**	**-1.3**
	comp=Z,0.5nm,0.7s,baz=122,slow=8.4,SNR=3.4						
	comp=Z,0.5nm,0.7s						
EKA	**Eskdalemuir Ar**	**46.31**	**320**	P	**P**	**04 15 20.4**	**-0.6**
	comp=Z,0.2nm,0.4s,baz=99,slow=8.7,SNR=5.5						
	comp=Z,0.2nm,0.4s						
TORD	**Torodi Ar. Bea**	**48.69**	**261**	P	**P**	**04 15 40.2**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=60,slow=8.3,SNR=22						
	comp=Z,0.4nm,0.3s						

IDC ***06*** *04:10:54.6±0.8,14°.66N×91°.56W,h0km,mb4.2/17, mbtmp4.2/19,ML4.4/2,MS4.2/2,Error ellipse: s-maj=30.7km s-min=13.8km az=51.0*
SNET ***06*** *04:11:01.5±0.9,14°.48N×92°.14W,h35km±999km,ML4.6*
UCR ***06*** *04:11:01.8±1.5,14°.66N×91°.79W,h0km±332km,ML4.2, MW3.5,mb4.3(NEIC)*
NEIC ***06*** *04:11:03.4±2.3,14°.39N±0°.07×92°.10W±0°.07,h67km±5km, mb4.3/10,Error ellipse: s-maj=11.6km s-min=8.5km az=214.0*
INET ***06*** *04:11:04.3±0.3,13°.66N×92°.13W,h15km±2km,MW4.1*
GCG ***06*** *04:11:10.2±0.7,14°.51N×91°.58W,h22km±7km,MD4.5*

ISC 06 04:11:03.4±0.8,14°40N±0°07×92°08W±0°06,h79km±6km, n202,σ1°19/218,mb4.3/54,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	**0.39**	**71**	Pn	**Pn**	**04 11 13.2**	**-3.0**
RTAL				Sn	**Sn**	**04 11 23.3**	**-2.3**
STG3	**Santiaguito 3,**	**0.58**	**57**	*e*P	**Pn**	**04 11 16.2**	**-1.8**
HUEH	**Huehuetenango**	**1.07**	**31**		**Pn**	**04 11 23.4**	**-0.1**
FUG	**Fuego 3**	**1.20**	**87**	*e*P	**Pn**	**04 11 24.2**	**-0.8**
PCG	**Pacaya**	**1.42**	**90**	*e*P	**Pn**	**04 11 27.7**	**-0.3**
NBG	**Las Nubes**	**1.69**	**83**	*e*P	**Pn**	**04 11 32.8**	**+1.4**
CCIG	**Comitan**	**1.88**	**358**	Pn	**Pn**	**04 11 34.3**	**+0.5**
SLOZ	**Alcaldia de Sa**	**2.25**	**99**	*e*P	**Pn**	**04 11 38.0**	**-0.7**
SLOZ				*e*S	**Sn**	**04 12 05.4**	**-0.4**
NUBE	**Las Nubes**	**2.28**	**102**	*e*P	**Pn**	**04 11 38.1**	**-1.1**
NUBE				*e*S	**Sn**	**04 12 05.7**	**-0.9**
NUBE	**Las Nubes**	**2.28**	**102**	*e*P	**Pn**	**04 11 38.1**	**-1.1**
NUBE				*e*S	**Sn**	**04 12 05.7**	**-0.9**
MRL	**Marmol**	**2.41**	**73**	*e*P	**Pn**	**04 11 42.3**	**+1.2**
CEVE	**Cerro Verde**	**2.44**	**103**	*e*P	**Pn**	**04 11 40.7**	**-0.8**
CEVE				*e*S	**Sn**	**04 12 12.0**	**+1.3**
CEVE				IAML		04 12 17.7	
	comp=Z,5μm,0.5s						
CEVE	**Cerro Verde**	**2.44**	**103**	*e*P	**Pn**	**04 11 40.7**	**-0.8**
CEVE				*e*S	**Sn**	**04 12 12.0**	**+1.3**
CEVE				IAML		04 12 17.7	
	comp=Z,5μm,0.5s						
ESQI	**Esquipulas**	**2.65**	**86**	Pn	**Pn**	**04 11 44.0**	**-0.2**
JAYA	**Jayaque - finc**	**2.66**	**106**	*e*P	**Pn**	**04 11 42.8**	**-1.4**
JAYA				*e*S	**Sn**	**04 12 15.7**	**+0.1**
JAYA				IAML		04 12 23.5	
	comp=Z,3μm,0.2s						
JAYA	**Jayaque - finc**	**2.66**	**106**	*e*P	**Pn**	**04 11 42.8**	**-1.4**
JAYA				*e*S	**Sn**	**04 12 15.7**	**+0.1**
JAYA				IAML		04 12 23.5	
	comp=Z,3μm,0.2s						

NORC Norcasia 19.07 116 eP Pn 04 15 22.4 +1.0
Z47A Carrollton 19.07 10 P Pn 04 15 21.5 +0.3
Z47A IAmb IAmb 04 15 23.4
comp=Z,13nm,0.7s
LRAL Lakeview Retre 19.12 13 P Pn 04 15 21.2 -0.6
WLAR White Oak Lake 19.23 357 P Pn 04 15 22.9 -0.1
WLAR IAmb IAmb 04 15 27.3
comp=Z,18nm,0.8s
POPC Popayan, Colom 19.23 126 eP Pn 04 15 24.0 +0.4
152A Waverly Hall 19.39 19 P Pn 04 15 25.5 +0.6
152A IAmb IAmb 04 15 30.9
comp=Z,9.5nm,0.5s
ABTX Abilene, Hawle 19.41 340 P Pn 04 15 25.0 -0.3
Z35A Perchaven, San 19.43 347 P P 04 15 23.3 -0.2
Z35A IAmb IAmb 04 15 30.7
comp=Z,12nm,0.9s
CCAR Cane Creek 19.44 1 P Pn 04 15 24.9 -0.6
CCAR IAmb IAmb 04 15 31.9
comp=Z,17nm,1.1s
Y45A Yeager Farm, C 19.52 6 P P 04 15 25.2 +0.7
Y45A IAmb IAmb 04 15 26.6
comp=Z,36nm,1.5s
SOTA Rioblanco 19.54 127 eP Pn 04 15 28.9 +1.4
ORTC Ortega, Tolima 19.59 121 eP Pn 04 15 28.3 +0.7
Z51A Franklin 19.85 17 P Pn 04 15 31.0 +0.6
ROSC El Rosal 19.90 117 P Pn 04 15 30.4 -1.1
comp=Z,9.6nm,0.7s,baz=176,slow=19,SNR=6.9
ROSC El Rosal 19.90 117 P P 04 15 29.6 +0.3
ROSC IAmb IAmb 04 15 33.7
comp=Z,9.6nm,0.8s
PRAC Prado 20.00 120 eP Pn 04 15 32.3 -0.1
X40A Basin Creek Fa 20.02 358 P Pn 04 15 32.5 +0.2
Y49A Blount Mountai 20.05 14 P P 04 15 31.6 +1.3
MIAR Mount Ida 20.11 356 P P 04 15 30.9 0.0
UALR University of 20.29 359 P P 04 15 33.4 +0.5
UALR IAmb IAmb 04 15 40.3
comp=Z,9.6nm,0.8s
X37A Clayton 20.32 352 P Pn 04 15 34.9 -1.0
X37A IAmb IAmb 04 15 42.2
comp=Z,8.9nm,0.8s
X48A Hartselle 20.48 12 P P 04 15 35.5 +0.5
GOGA Godfrey 20.48 21 P Pn 04 15 37.0 -0.8
GOGA IAmb IAmb 04 15 42.2
comp=Z,8.6nm,0.8s
RUSC La Rusia 20.50 112 eP Pn 04 15 37.7 -1.0
W41B Gary Mavity, V 20.69 360 P Pn 04 15 39.2 -0.9
Y52A Lilburn 20.70 19 P Pn 04 15 39.7 -0.6
WHAR Wooly Hollow 20.81 360 P P 04 15 39.5 +1.1
PLAL Pickwick Lake 20.81 9 P P 04 15 38.0 -0.5
WMOK Wichita Mounta 21.14 345 P P 04 15 42.2 +0.2
FNO Franklin 21.32 348 P P 04 15 43.7 -0.2
FCAR Ozark Folk Cen 21.40 360 P P 04 15 45.0 +0.2
SWET Sewanee 21.46 14 P P 04 15 45.7 +0.3
SWET IAmb IAmb 04 15 47.1
comp=Z,12nm,1.0s
NHSC New Hope 21.54 28 P P 04 15 46.7 +0.4
NHSC IAmb IAmb 04 15 50.0
comp=Z,23nm,1.1s
W50A Signal Mountai 21.59 15 P P 04 15 47.3 +0.4
HODGE Hodges 21.65 23 P P 04 15 49.3 +1.8
HODGE IAmb IAmb 04 15 49.6
comp=Z,5.6nm,0.5s
MSTX Muleshoe 21.76 335 P P 04 15 49.3 +0.5
V48A Smith Brothers 21.77 12 P P 04 15 48.2 -0.6
V48A IAmb IAmb 04 15 50.8
comp=Z,6.9nm,0.7s
WVT Waverly 21.98 9 P P 04 15 51.4 +0.5
WVT IAmb IAmb 04 15 52.2
comp=Z,5.8nm,0.4s
CPCT Cooper Cave 22.04 17 P P 04 15 51.9 +0.3
CPCT IAmb IAmb 04 15 53.7
comp=Z,7.3nm,0.7s
AMTX Amarillo 22.16 339 P P 04 15 54.0 +0.9
AMTX IAmb IAmb 04 15 55.6
comp=Z,11nm,0.8s
CLTN Cedars of Leba 22.21 12 P P 04 15 53.4 -0.1
CLTN IAmb IAmb 04 15 54.6
comp=Z,7.2nm,0.8s
PBMO Poplar Bluff 22.34 3 P P 04 15 53.6 -1.2
TKL Tuckaleechee C 22.45 18 P P 04 15 57.0 +1.0
comp=Z,4.5nm,0.5s,baz=192,slow=13,SNR=16
TKL LR LR 04 24 47.9
comp=Z,375nm,18.2s,baz=33,slow=38
TKL Tuckaleechee C 22.45 18 P P 04 15 56.6 +0.5
TKL IAmb IAmb 04 15 57.9
comp=Z,5.6nm,0.6s
MGMO Mountain Grove 22.66 360 P P 04 15 57.6 -0.7
V52A Sevierville 22.67 18 P P 04 15 58.9 +0.6
U49A Red Boiling Sp 22.73 13 P P 04 15 58.5 -0.5
U49A IAmb IAmb 04 15 59.3
comp=Z,7.6nm,0.7s
V53A Saluda 22.76 20 P P 04 15 59.7 +0.4
KMSC Kings Mountain 22.81 23 P P 04 15 59.2 -0.6
KMSC IAmb IAmb 04 16 01.0
comp=Z,6.7nm,0.6s
T47A Sharon Grove 22.93 10 P P 04 16 01.0 0.0
X58A Rowland 23.13 28 P P 04 16 03.0 0.0
X58A IAmb IAmb 04 16 03.4
comp=Z,7.5nm,0.7s
S39A Bolivar 23.23 357 P P 04 16 02.5 -1.4
TZTN Tazewell 23.34 18 P P 04 16 05.1 +0.2
TZTN IAmb IAmb 04 16 07.6
comp=Z,14nm,1.3s
S44A Carbondale 23.34 6 P P 04 16 04.5 -0.4
SIUC Southern Illin 23.36 6 P P 04 16 04.5 -0.6
SIUC IAmb IAmb 04 16 05.8
comp=Z,17nm,0.8s
T50A Nancy 23.44 15 P P 04 16 05.3 -0.5
T50A IAmb IAmb 04 16 06.6
comp=Z,7.4nm,0.8s
U54A Nelsons Funny 23.87 21 P P 04 16 10.0 +0.2
U54A IAmb IAmb 04 16 11.4
comp=Z,8.0nm,0.7s
S51A Beattyville 24.35 17 P P 04 16 13.8 -0.2
S51A IAmb IAmb 04 16 17.0
comp=Z,8.4nm,0.8s
P40A Paris 25.04 0 P P 04 16 20.1 -0.1
T25A Trinidad 25.18 336 P P 04 16 24.8 +2.9
T25A IAmb IAmb 04 16 32.0
comp=Z,22nm,1.1s
W18A Petrified Fore 26.05 326 P P 04 16 31.6 +1.9
W18A IAmb IAmb 04 16 37.1
comp=Z,15nm,0.9s
Q54A Coxs Mills 26.42 20 P P 04 16 32.7 -0.1
Q54A IAmb IAmb 04 16 33.4
comp=Z,7.6nm,0.9s
O54A Avella 27.66 20 P P 04 16 43.6 -0.3
PV23 Carpenter Ridg 28.26 331 P P 04 16 50.5 +0.9
PV23 IAmb IAmb 04 16 58.0
comp=Z,10nm,0.9s
SRU San Rafael Swe 29.50 330 P P 04 17 00.9 +0.4
Q16A Castle Valley 29.67 329 P P 04 17 04.6 +2.6
Q16A IAmb IAmb 04 17 11.5
comp=Z,14nm,1.2s
P17A Butcher Ranch, 29.89 330 P P 04 17 05.9 +2.0
P17A IAmb IAmb 04 17 06.8
comp=Z,5.0nm,0.7s
MPU Maple Canyon 30.74 330 P P 04 17 13.6 +2.1
MPU IAmb IAmb 04 17 14.2
comp=Z,5.0nm,0.6s
PDAR Pinedale Array 32.03 335 P P 04 17 24.0 +1.2
comp=Z,0.4nm,0.5s,baz=140,slow=7.1,SNR=2.7
PDAR PcP PcP 04 20 11.5 +0.6
comp=Z,0.6nm,0.4s,baz=141,slow=5.8,SNR=4.5
comp=Z,0.4nm,0.5s
PDAR Pinedale Array 32.03 335 P P 04 17 23.1 +0.3
BGU Big Grassy Mou 32.12 329 P P 04 17 25.1 +1.5
BGU IAmb IAmb 04 17 26.5
comp=Z,4.1nm,0.6s
SADO Sadowa 32.21 17 P P 04 17 22.4 -1.6
comp=Z,6.6nm,1.0s,baz=232,slow=6.2,SNR=4.3
comp=Z,6.6nm,1.0s
HVU Hansel Valley 32.65 331 P P 04 17 29.7 +1.5
HVU IAmb IAmb 04 17 31.2
comp=Z,4.3nm,0.7s
REDW Red Top Meadow 33.06 335 P P 04 17 32.9 +1.2
REDW IAmb IAmb 04 17 34.1
comp=Z,5.4nm,0.7s
SNOW Snow King Moun 33.10 335 P P 04 17 33.0 +0.9
ELK Elko 33.12 327 P P 04 17 33.7 +1.4
comp=Z,2.8nm,0.9s,baz=133,slow=6.6,SNR=12
comp=Z,2.8nm,0.9s
NVAR Mina Array Bea 33.32 321 P P 04 17 36.8 +2.7
comp=Z,4.8nm,0.7s,baz=141,slow=8.8,SNR=26
NVAR PcP PcP 04 20 16.7 +2.1
comp=Z,1.0nm,0.6s,baz=158,slow=3.7,SNR=2.8
comp=Z,4.8nm,0.7s
LHV Little Huntoon 33.33 320 P P 04 17 35.4 +1.5
HLID Hailey 34.80 331 P P 04 17 49.0 +2.2
HLID IAmb IAmb 04 17 50.0
comp=Z,3.4nm,0.9s
MFID Camas Ranch 35.36 330 P P 04 17 52.8 +1.2
MFID IAmb IAmb 04 17 56.1
comp=Z,10nm,1.4s
LRM Limekiln Ridge 35.73 335 P P 04 17 56.1 +1.3
SAML Samuel 36.87 127 P P 04 18 03.8 -0.8
SAML IAmb IAmb 04 18 04.7
comp=Z,4.9nm,0.7s
BMO Blue Mountains 37.14 330 P P 04 18 07.3 +0.6
I07A Izee 37.71 327 P P 04 18 12.9 +1.3
I07A IAmb IAmb 04 18 17.8
comp=Z,5.1nm,1.1s
LPAZ La Paz 38.59 141 P P 04 18 19.1 -0.6
comp=Z,0.5nm,0.5s,baz=307,slow=7.8,SNR=2.0
comp=Z,0.5nm,0.5s
H04A Detroit Lake 39.55 326 P P 04 18 28.1 +1.3
NEW Newport 39.61 334 P P 04 18 27.3 0.0
comp=Z,1.0nm,0.7s,baz=149,slow=13,SNR=4.0
comp=Z,1.0nm,0.7s
BUCK Buck Mountain 39.68 325 P P 04 18 29.0 +1.0
C09A Chrisman Ranch 39.77 332 P P 04 18 28.9 +0.3
B08A Colville Reser 40.66 332 P P 04 18 36.2 +0.2
EDM Edmonton 42.24 341 P P 04 18 48.4 -0.4
SIV San Ignacio 43.02 133 P P 04 18 55.6 +0.1
comp=Z,2.8nm,0.7s,baz=310,slow=9.2,SNR=13
comp=Z,2.8nm,0.7s
LLLB Lillooet 43.44 333 P P 04 18 59.2 +0.7
LLLB IAmb IAmb 04 19 03.0
comp=Z,5.5nm,0.8s
SCHQ Schefferville 44.88 20 P P 04 19 07.5 -2.4
comp=Z,1.3nm,0.5s,baz=214,slow=9.8,SNR=7.1
comp=Z,1.3nm,0.5s
YKA Yellowknife Ar 50.62 347 P P 04 19 54.2 0.0
comp=Z,3.1nm,0.5s,baz=135,slow=9.3,SNR=21
comp=Z,3.1nm,0.5s
YKA Yellowknife Ar 50.62 347 P P 04 19 54.6 +0.4
FRB Frobisher Bay 51.95 13 P P 04 20 02.0 -2.1
comp=Z,1.0nm,0.3s,baz=213,slow=6.7,SNR=5.9
comp=Z,1.0nm,0.3s
DLBC Dease Lake 52.26 336 P P 04 20 08.7 +2.0
BDFB Brasilia 52.80 123 P P 04 20 11.7 +0.5
comp=Z,2.7nm,0.7s,baz=285,slow=6.2,SNR=6.2
comp=Z,2.7nm,0.7s
BDFB Brasilia 52.80 123 P P 04 20 11.1 -0.1
DAWY Dawson 59.28 338 P P 04 20 56.8 +0.1
DAWY IAmb IAmb 04 20 58.4
comp=Z,2.0nm,0.7s
BCAR Beaver Creek A 59.65 336 P P 04 21 00.8 +1.6
L27K Beaver Creek, 59.66 336 P P 04 21 00.9 +1.6
INK Inuvik 60.04 343 LR LR 04 51 20.8
comp=Z,274nm,19.8s,baz=45,slow=40
RES Resolute Bay 60.30 359 P P 04 21 02.2 -1.3
comp=Z,1.8nm,0.8s,baz=174,slow=10,SNR=6.5
comp=Z,1.8nm,0.8s
RES Resolute Bay 60.30 359 P P 04 21 02.4 -1.0
J26L Joseph Creek 61.06 337 P P 04 21 09.7 +0.7
J26L IAmb IAmb 04 21 11.5
comp=Z,3.0nm,0.8s
J25K Salcha River, 61.80 337 P P 04 21 14.6 +0.8
J25K IAmb IAmb 04 21 16.9
comp=Z,3.1nm,0.7s
IL31 62.45 337 P P 04 21 18.6 +0.5
ILAR Eielson Array 62.45 337 P P 04 21 18.9 +0.8
comp=Z,3.2nm,0.9s,baz=122,slow=5.4,SNR=28
comp=Z,3.2nm,0.9s
ILAR Eielson Array 62.45 337 P P 04 21 18.0 -0.1
COLA College 62.86 337 P P 04 21 20.4 -0.4
BMAR Burnt Mountain 62.90 340 P P 04 21 21.9 +0.9
H24K Noodor Dome 63.30 338 P P 04 21 24.6 +0.8
H24K IAmb IAmb 04 21 25.8
comp=Z,4.6nm,0.8s
BPAW Bear Paw Mtn. 63.79 335 P P 04 21 27.3 +0.3
BPAW IAmb IAmb 04 21 28.8
comp=Z,4.1nm,0.9s
MLY Manley 64.05 336 P P 04 21 29.4 +0.7
N19K Bonanza Creek 64.19 331 P P 04 21 29.6 -0.2
EKA Eskdalemuir Ar 77.69 36 P P 04 22 50.0 -1.5
comp=Z,0.8nm,0.4s,baz=278,slow=6.0,SNR=11
comp=Z,0.8nm,0.4s
BILL Bilibino 81.06 338 P P 04 23 10.6 +1.0
BILL IAmb IAmb 04 23 12.0
comp=Z,6.2nm,0.9s
ARCES ARCESS Array B 85.79 18 P P 04 23 32.2 -1.6
comp=Z,1.2nm,0.6s,baz=310,slow=3.4,SNR=4.6
comp=Z,1.2nm,0.6s
ARCES ARCESS Array B 85.79 18 P P 04 23 34.6 +0.8
TIXI Tiksi 89.86 348 P P 04 23 52.6 -0.6
TORD Torodi Ar. Bea 90.36 76 P P 04 23 54.1 -2.6
comp=Z,1.6nm,1.2s,baz=277,slow=2.8,SNR=5.1
comp=Z,1.6nm,1.2s
WRA Warramunga Arr 135.42 256 PKP PKPdf 04 30 15.7 +0.5
comp=Z,0.4nm,0.5s,baz=85,slow=1.8,SNR=9.1
WRA Warramunga Arr 135.42 256 PKPdf 04 30 15.5 +0.2
ASAR Alice Springs 135.73 251 PKP PKPdf 04 30 16.3 +0.6
comp=Z,0.3nm,0.5s,baz=108,slow=2.1,SNR=2.3
ASAR Alice Springs 135.73 251 PKPdf 04 30 14.1 -1.7
PZH PanZhiHua 137.18 342 PKP PKPdf 04 30 18.0 -0.5
PZH PKP sPKPdf 04 30 53.0 +4.0
CMAR Chiang Mai Arr 145.59 341 PKPbc PKPab 04 30 35.0 +0.8
comp=Z,8.9nm,0.9s,baz=338,slow=3.8,SNR=34

*IDC **06** 04:11:30.3±1.1, 15.73N×97.62W, h0km, mb4.2/13, mbtmp4.2/14, ML3.3/1, MS4.1/7, Error ellipse: s-maj=35.3km s-min=19.4km az=60.0*
*MEX **06** 04:11:32.0±1.4, 15.58N×97.32W, h10km, MD4.6*
*NEIC **06** 04:11:36.0±2.8, 16.03N±0.10×97.41W±0.08, h10km±1km, mb4.6/156, Md4.6/27(MEX), Error ellipse: s-maj=18.7km s-min=8.0km az=214.0*
ISC 06 04:11:34.4±1.3, **15.92N**±0.06×**97.42W**±0.04, **h12**km±7km, **n371**,σ1°17/342, **mb4.6**/66, **MS3.9**/5, **Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PEIG	Puerto Escondi	0.28	74	*i* P		Pg	04 11 40.5	+0.4
PEIG				*i* S		Sb	04 11 46.0	0.0
PNIG	Pinotepa	0.82	305			Pg	04 11 49.2	-1.1
PNIG						Sg	04 12 01.1	-0.1
PNIG	Pinotepa	0.82	305	*i* P		Pg	04 11 49.2	-1.1
PNIG				eS		Sg	04 12 01.1	-0.1
YOIG	Yosondua	0.94	353	eP		Pb	04 11 53.0	+0.1
YOIG				eS		Sn	04 12 08.4	+1.2
TXIG	Tlaxiaco	1.37	346	eP		Pn	04 11 59.3	-0.3
TXIG				eS		Sn	04 12 19.4	+1.6
CRIG	Cruz Grande	1.83	297			Pn	04 12 03.0	-2.7
CRIG	Cruz Grande	1.83	297	eP		Pn	04 12 03.0	-2.7
TLIG	Tlapa	1.97	326	Pn		Pn	04 12 07.5	-0.2
FTIG	Fresnillo de T	2.09	341	eP		Pn	04 12 10.0	+0.6
FTIG				eS		Sb	04 12 38.4	+0.1
UNM	Universidad Na	3.78	334	Pn		Pn	04 12 34.9	+2.1
MOIG	Morelia	5.18	317	Pn		Pn	04 12 53.6	+1.6
COIG	Colima	6.80	299	eP		Pn	04 13 15.7	+1.5
COIG				eS		Sn	04 14 32.8	+1.1
JUBC	Volcan de Coli	6.86	302	eP		Pn	04 13 16.3	+1.1
JUBC				eS		Sn	04 14 34.2	+0.8
EZ5V		6.87	302			Pn	04 13 17.6	+2.4
EZ5V		6.87	302	eP		Pn	04 13 17.6	+2.4
EZ5V				eS		Sn	04 14 34.6	+1.0
MNGA	Volcan de Coli	6.88	302	eP		Pn	04 13 17.6	+2.2
MNGA				eS		Sn	04 14 35.3	+1.5
INCO	Volcan de Coli	6.90	302	eP		Pn	04 13 19.0	+3.3
INCO				eS		Sn	04 14 35.2	+0.8
CDAR	Ciudad de Arme	6.97	296	eP		Pn	04 13 18.0	+1.7
CDAR				eS		Sn	04 14 37.7	+2.0
R15V		7.04	298			Pn	04 13 18.1	+0.6
R15V		7.04	298	eP		Pn	04 13 18.1	+0.6
R15V				eS		Sn	04 14 40.4	+2.8
ZAIG	Zacatecas	8.37	325	Pn		Pn	04 13 35.6	-0.3
833A	Chaparral WMA,	12.48	352	Pn		Pn	04 14 33.3	+1.4
833A	Chaparral WMA, baz=170	12.48	352	P		Pn	04 14 32.2	+0.3
H06E1	SOCORRO T-PHAS SNR=9.9	13.20	284	T		T	04 28 09.6	
HPIG		13.37	326	Pn		Pn	04 14 46.5	+2.2
TXAR	Lajitas Array baz=146,slow=13,SNR=10	14.54	338	Pn		Pn	04 15 02.0	+1.9
TXAR				LR		LR	04 21 09.7	
comp=Z,1μm,19.6s,baz=139,slow=40
1.1nm,1.0s
TXAR Lajitas Array 14.54 338 Pn Pn 04 15 02.2 +2.0
TX31 Lajitas Ar. Si 14.54 338 Pn Pn 04 15 02.6 +2.5
TX32 Lajitas Array 14.54 338 Pn Pn 04 15 02.3 +2.2
RIMA Rio Macho 14.56 113 Pn Pn 04 15 02.6 +1.9
LPIG La Paz 14.58 306 LR LR 04 19 57.1
comp=Z,554nm,18.8s,baz=106,slow=35
JCT Junction City 14.66 352 Pn Pn 04 15 02.7 +1.0
JCT Junction City baz=170 14.66 352 P Pn 04 15 02.6 +0.8
435B Jarrell 14.80 359 Pn 04 15 00.7 -2.9
435B Jarrell baz=179 14.80 359 P Pn 04 15 02.8 -0.7
SRBA San Rafael, Bu 15.24 114 Pn Pn 04 15 12.4 +2.7
SRBA IAmb IAmb 04 15 28.5
comp=Z,18nm,0.8s
DRK0 Durika 15.33 114 Pn Pn 04 15 13.5 +2.6
NATX Nacogdoches baz=189 15.97 9 P Pn 04 15 19.4 +0.4
WHTX Lake Whitney, 16.00 360 Pn 04 15 21.4 +2.0
WHTX IAmb IAmb 04 15 36.3
comp=Z,49nm,1.2s
WHTX Lake Whitney, baz=179 16.00 360 P Pn 04 15 19.6 +0.2
ABTX Abilene, Hawle baz=172,SNR=5.6 16.75 353 P Pn 04 15 29.5 +0.4
MNTX Cornudas Mount 17.30 337 Pn 04 15 37.0 +1.0
MNTX Cornudas Mount baz=153,SNR=24 17.30 337 P Pn 04 15 37.2 +1.3
Z35A Perchaven, San 17.34 0 P 04 15 38.2 +0.5
143A Socs Landing, 17.58 17 Pn Pn 04 15 38.8 -0.5
143A IAmb IAmb 04 16 01.2
comp=Z,44nm,1.1s
Z41A Richland Creek baz=194 17.76 13 P Pn 04 15 41.5 0.0
BRAL Brewton baz=214 17.89 30 P Pn 04 15 42.0 -1.2
HSIG 18.04 319 P 04 15 46.9 +1.4
WLAR White Oak Lake 18.11 12 P 04 15 47.6 +1.3
WLAR IAmb IAmb 04 16 16.9
comp=Z,55nm,1.2s
X34A Smith Ranch, M 18.61 359 P P 04 15 52.3 +0.6
MSTX Muleshoe baz=163,SNR=13 18.61 346 P P 04 15 51.2 -0.6
WMOK Wichita Mounta baz=176 18.78 357 P P 04 15 52.8 -0.8
MIAR Mount Ida 18.87 10 P Pn 04 15 55.8 +0.7
MIAR Mount Ida baz=191 18.87 10 P P 04 15 54.4 -0.1
X40A Basin Creek Fa baz=193 18.94 12 P P 04 15 54.9 -0.5
121A Cookes Peak, D 19.03 332 P Pn 04 15 59.4 +2.1
121A Cookes Peak, D baz=147,SNR=17 19.03 332 P P 04 15 56.8 +0.3
DWPF Disney Wildern baz=234 19.13 48 P P 04 15 56.6 -0.8
OKCFA Oklahoma City 19.41 360 P Pn 04 16 02.0 +0.3
OKCFA IAmb IAmb 04 16 07.7
comp=Z,28nm,0.8s
W39A Magazine 19.47 9 P P 04 16 01.7 +0.6
W39A Magazine baz=190 19.47 9 P P 04 16 01.1 -0.1
LRAL Lakeview Retre baz=211 19.48 27 P P 04 16 00.9 -0.4
CRNM Carthage 19.82 337 P Pn 04 16 07.2 +0.5
OXF Oxford 19.87 20 P P 04 16 05.6 +0.1
OXF IAmb IAmb 04 16 13.1
comp=Z,64nm,1.2s
OXF Oxford baz=203 19.87 20 P P 04 16 04.8 -0.6
TIGA Tifton baz=222 19.95 37 P P 04 16 05.3 -1.1
BNM Barren Site 19.96 337 P Pn 04 16 09.2 +0.8
TUL1 Leonard 19.96 4 P P 04 16 07.7 +1.2
TUL1 IAmb IAmb 04 16 33.8
comp=Z,33nm,1.1s
TUL1 Leonard baz=184 19.96 4 P P 04 16 06.5 -0.1
Y22D IRIS PASSCAL I baz=152 20.00 336 P Pn 04 16 08.9 +0.1
LENM Lemitar 20.10 336 P P 04 16 07.9 -0.3
TUC Tucson 20.34 326 P P 04 16 12.4 +1.6
TUC Tucson baz=140 20.34 326 P Pn 04 16 12.8 +0.1
U32A Winter Ranch, 20.43 356 IAmb IAmb 04 16 14.2
comp=Z,31nm,1.1s
Y49A Blount Mountai 20.44 27 P P 04 16 10.5 -1.2
Y49A IAmb IAmb 04 16 12.5
comp=Z,41nm,1.0s
ANMO Albuquerque 20.61 338 P P 04 16 15.2 +1.4
comp=Z,12nm,0.7s,baz=144,slow=12,SNR=43
ANMO Albuquerque 20.61 338 LR LR 04 23 57.0
comp=Z,12nm,21.3s,baz=154,slow=36
ANMO Albuquerque 20.61 338 P P 04 16 14.2 +0.4
ANMO Albuquerque baz=154 20.61 338 P P 04 16 14.8 +1.0
ANMO Albuquerque 20.61 338
comp=Z,12nm,0.7s
U40A Yellville baz=192 20.76 10 P P 04 16 15.2 0.0
T35A Sooner Cattle 20.93 2 P P 04 16 16.9 -0.1
T35A IAmb IAmb 04 16 21.4
comp=Z,46nm,1.1s
214A Organ Pipe Nat 21.23 321 P P 04 16 22.5 +2.1
214A Organ Pipe Nat baz=134,SNR=6.4 21.23 321 P P 04 16 21.2 +0.8
GOGA Godfrey 21.50 33 P P 04 16 20.9 -2.3
GOGA IAmb IAmb 04 16 26.4
comp=Z,39nm,1.1s
GOGA Godfrey baz=219,SNR=7.1 21.50 33 P P 04 16 21.5 -1.7
Y52A Lilburn 21.55 32 P P 04 16 21.9 -1.9
Y52A IAmb IAmb 04 16 23.0
comp=Z,31nm,1.0s
X51A Calhoun 21.73 29 IAmb IAmb 04 16 28.1
comp=Z,20nm,0.8s
WVT Waverly 21.87 21 P P 04 16 25.1 -2.1
WVT IAmb IAmb 04 16 29.7
comp=Z,51nm,1.2s
WVT Waverly baz=205 21.87 21 P P 04 16 25.8 -1.3
V48A Smith Brothers 21.89 24 IAmb IAmb 04 16 30.0
comp=Z,25nm,0.8s
SFX San Felipe 21.91 316 P P 04 16 29.9 +2.4
SFX IAmb IAmb 04 16 31.3
comp=Z,21nm,1.1s
S39A Bolivar 21.99 9 P P 04 16 27.3 -1.1
T25A Trinidad baz=161,SNR=16 22.02 345 P P 04 16 29.1 0.0
W18A Petrified Fore baz=146,SNR=9.0 22.07 332 P P 04 16 31.1 +1.6
X16A Lo Mia Camp, P 22.32 328 P P 04 16 34.4 +2.1
CLTN Cedars of Leba 22.39 24 P P 04 16 31.6 -1.2
CLTN IAmb IAmb 04 16 34.8
comp=Z,40nm,1.2s
R32A Long Quarter, comp=Z,48nm,1.2s 22.45 357 IAmb IAmb 04 16 36.3
CCM Cathedral Cave baz=195 22.71 13 P P 04 16 35.5 -0.7
HODGE Hodges comp=Z,30nm,1.0s 22.78 34 IAmb IAmb 04 16 39.1
FVM French Village comp=Z,28nm,1.2s 22.83 14 IAmb IAmb 04 16 38.8
S44A Carbondale 22.86 17 P P 04 16 37.2 -0.5
SDCO Great Sand Dun baz=159,SNR=26 22.88 343 P P 04 16 39.3 +1.0
CBKS Cedar Bluff comp=Z,30nm,0.9s 22.90 355 IAmb IAmb 04 16 41.2
CBKS Cedar Bluff baz=174,SNR=6.5 22.90 355 P P 04 16 38.4 +0.3
KSU1 Kansas State U baz=182 23.11 2 P P 04 16 40.1 -0.1
TKL Tuckaleechee C comp=Z,15nm,0.9s,baz=172,slow=7.1,SNR=6.4 23.13 29 P P 04 16 41.7 +1.1
comp=Z,15nm,0.9s
TKL Tuckaleechee C comp=Z,26nm,1.1s 23.13 29 IAmb IAmb 04 16 42.4
NHSC New Hope baz=226 23.16 39 P P 04 16 41.4 +0.6
WUAZ Wupatki baz=143,SNR=12 23.16 330 P P 04 16 43.4 +2.4
GLA Glamis 23.22 320 P P 04 16 42.3 +0.8
GLA Glamis baz=132 23.22 320 P P 04 16 42.9 +1.4
S22A 4UR Ranch, Cre 23.28 341 P P 04 16 44.1 +1.8

baz=156,SNR=8.6
V52A **Sevierville** 23.37 29 IAmb IAmb 04 16 44.0
comp=Z,21nm,0.9s
MVCO **Mesa Verde** 23.37 337 P P **04 16 45.2 +2.1**
MVCO IAmb IAmb 04 16 51.4
comp=Z,20nm,0.9s
MVCO **Mesa Verde** 23.37 337 P P **04 16 44.7 +1.5**
baz=152,SNR=14
KSCO **Kaye Shedlock'** 23.45 350 IAmb IAmb 04 16 45.8
comp=Z,25nm,1.1s
KSCO **Kaye Shedlock'** 23.45 350 P P **04 16 44.2 +0.3**
baz=167
BLYC **Blythe** 23.52 322 P P **04 16 45.5 +1.0**
PDMCI **Parker Dam,Lak** 23.69 324 P P **04 16 47.8 +1.7**
baz=136
SWSC **Sam W. Stewart** 23.75 319 P P **04 16 48.5 +1.7**
baz=131
IKP **In-Ko-Pah, Jac** 23.76 318 P P **04 16 47.6 +0.7**
baz=130
P38A **Dawn** 23.86 7 IAmb IAmb 04 16 48.7
comp=Z,24nm,1.2s
Q24A **Divide** 23.94 345 P P **04 16 49.6 +0.8**
baz=161
KMSC **Kings Mountain** 23.96 34 P P **04 16 48.0 -0.8**
baz=221
TZTN **Tazewell** 23.96 28 P P **04 16 47.5 -1.2**
TZTN **Tazewell** 23.96 28 P P **04 16 48.0 -0.7**
baz=214
P40A **Paris** 23.99 10 IAmb IAmb 04 16 49.7
comp=Z,24nm,1.2s
BC3 **Big Chuckawall** 24.01 321 P P **04 16 51.2 +1.9**
baz=132,SNR=5.5
MONP2 **Monument Peak** 24.11 318 P P **04 16 51.9 +1.5**
baz=129
IRM **Iron Mountain** 24.17 322 P P **04 16 52.0 +1.2**
baz=134,SNR=6.1
NEE2 **Needles Airpor** 24.30 324 P P **04 16 53.4 +1.6**
baz=136
U15A **North Rim** 24.34 330 IAmb IAmb 04 16 57.2
comp=Z,28nm,1.2s
PV11 **David Mesa, Pa** 24.47 338 P P **04 16 55.5 +1.9**
PV11 IAmb IAmb 04 16 58.0
comp=Z,20nm,1.1s
109C **Camp Elliot, M** 24.56 317 P P **04 16 56.4 +2.2**
baz=128
BELC **Belle Mtn. Jos** 24.58 320 P P **04 16 56.1 +1.5**
baz=132,SNR=8.5
TPFO **Pinon Flats** 24.60 319 P P **04 16 55.9 +1.2**
baz=130
PFO **Pinyon Flats O** 24.61 319 P P **04 16 53.9 -0.9**
comp=Z,3.8nm,0.7s,baz=155,slow=11,SNR=3.4
PFO LR LR 04 26 31.1
comp=Z,243nm,19.1s,baz=16,slow=37
comp=Z,3.8nm,0.7s
PFO **Pinyon Flats O** 24.61 319 P P **04 16 56.5 +1.6**
PFO **Pinyon Flats O** 24.61 319 P P **04 16 56.5 +1.6**
baz=130
ISCO **Idaho Springs** 24.84 345 P P **04 16 58.0 +0.9**
baz=160,SNR=27
GMRC **Granite Mounta** 24.91 322 P P **04 16 59.1 +1.5**
baz=134,SNR=7.2
MURC **Murrieta** 25.07 318 P P **04 17 00.6 +1.7**
baz=129
PKCU **Pink Cliffs** 25.16 331 IAmb IAmb 04 17 25.6
comp=Z,21nm,1.1s
OGNE **Ogallala** 25.25 352 P P **04 17 01.4 +0.9**
baz=169,SNR=5.0
BGNE **Belgrade** 25.41 359 P P **04 17 02.5 +0.7**
baz=178
TUQ **Turquoise Moun** 25.52 323 P P **04 17 04.5 +1.4**
baz=134
HDIL **Hopedale** 25.54 14 P P **04 17 01.5 -1.5**
HDIL **Hopedale** 25.54 14 P P **04 17 02.1 -0.9**
baz=198,SNR=6.3
MTPU **Mount Pierson** 25.59 332 IAmb IAmb 04 17 13.1
comp=Z,14nm,1.0s
SZCU **Shurtz Canyon** 25.65 330 IAmb IAmb 04 17 13.2
comp=Z,21nm,1.5s
CCUT **Cedar City** 25.75 330 IAmb IAmb 04 17 09.1
comp=Z,9.9nm,1.0s
BFSC **Mount Baldy Ra** 25.77 319 P P **04 17 06.7 +1.4**
baz=130
O20A **White River Ci** 25.90 341 P P **04 17 08.0 +1.5**
baz=155
GSC **Goldstone, Bar** 25.95 322 P P **04 17 08.5 +1.6**
baz=133
N23A **Red Feather La** 25.96 345 IAmb IAmb 04 17 30.4
comp=Z,16nm,1.1s
N23A **Red Feather La** 25.96 345 P P **04 17 08.5 +1.3**
baz=161,SNR=6.5
SFIN **Lafayette** 25.97 18 IAmb IAmb 04 17 06.9
comp=Z,15nm,0.7s
SFIN **Lafayette** 25.97 18 P P **04 17 06.6 -0.3**
baz=203
MVU **Marysvale** 25.99 333 IAmb IAmb 04 17 17.2
comp=Z,24nm,1.0s
CNNC **Cliffs of the** 26.00 39 P P **04 17 06.0 -1.2**
baz=227
BLA **Blacksburg** 26.01 32 P P **04 17 06.4 -1.0**
BLA **Blacksburg** 26.01 32 P P **04 17 07.1 -0.3**
baz=220,SNR=7.4
P49A **Miami Univ. Ec** 26.02 23 P P **04 17 06.6 -0.8**
baz=209,SNR=7.7
S54A **Dingess, Beckl** 26.03 30 IAmb IAmb 04 17 12.9
comp=Z,16nm,1.0s
P18A **Preston Nutter** 26.14 337 P P **04 17 11.4 +2.5**
P18A IAmb IAmb 04 17 20.2
comp=Z,12nm,1.1s
SCIA **State Center** 26.15 7 P P **04 17 08.7 +0.1**
baz=189
DECC **Green Verdugo** 26.21 318 P P **04 17 10.8 +1.6**
baz=128
SNCC **San Nicolas Is** 26.39 315 P P **04 17 11.7 +0.8**
baz=125
EDW2 **Edwards Air Fo** 26.39 319 P P **04 17 12.2 +1.3**
baz=130
QSM **Queen of Sheba** 26.44 323 IAmb IAmb 04 17 17.1
comp=Z,13nm,1.3s
PRN **Pahroc Range** 26.48 327 IAmb IAmb 04 17 22.5
comp=Z,11nm,1.0s
O48B **Farmland** 26.50 21 P P **04 17 10.3 -1.4**
baz=207,SNR=6.2
TPNV **Topopah Spring** 26.79 325 IAmb IAmb 04 17 21.3
comp=Z,19nm,1.2s
TPNV **Topopah Spring** 26.79 325 P P **04 17 16.8 +2.2**
baz=136,SNR=5.7
MPMC **Manual Prospec** 26.87 322 P P **04 17 16.4 +1.1**
baz=133
ARVC **Arvin** 27.08 319 P P **04 17 19.1 +2.1**
baz=129
P52A **Corning** 27.14 27 P P **04 17 18.5 +1.0**
baz=214
ISA **Isabella, Lake** 27.20 320 P P **04 17 19.1 +0.9**
baz=130
ACSO **Alum Creek Sta** 27.29 25 IAmb IAmb 04 17 22.8
comp=Z,18nm,1.0s
ACSO **Alum Creek Sta** 27.29 25 P P **04 17 19.1 +0.2**
baz=211
L44A **Lake County Fo** 27.42 15 P P **04 17 19.7 -0.3**
baz=200
GRAC **Grapevine Rang** 27.45 324 P P **04 17 21.6 +1.2**
baz=134
R11A **Troy Canyon, C** 27.47 328 P P **04 17 22.0 +1.2**
R11A **Troy Canyon, C** 27.47 328 P P **04 17 20.9 +0.2**
baz=139,SNR=9.5
PKM **Mcpherson Peak** 27.56 317 P P **04 17 21.8 +0.2**
baz=127
JFWS **Jewell Farm** 27.60 11 IAmb IAmb 04 17 50.2
comp=Z,12nm,0.8s
JFWS **Jewell Farm** 27.60 11 P P **04 17 21.0 -0.5**
baz=195
DUG **Dugway, Tooele** 27.65 334 P P **04 17 24.0 +1.7**
baz=146
VES **Vestal, Richgr** 27.70 320 P P **04 17 24.2 +1.7**
baz=130
ECSD **EROS Data Cent** 27.73 1 P P **04 17 22.3 -0.4**
baz=181
K22A **Casper** 27.76 345 P P **04 17 24.3 +1.1**
baz=161
Q56A **Snyder Ridge,** 28.04 31 P P **04 17 24.6 -1.0**
O53A **New Philadelph** 28.05 27 P P **04 17 25.9 +0.3**
baz=215
MCWV **Mont Chateau** 28.20 30 P P **04 17 26.3 -0.7**
baz=218,SNR=5.6
O54A **Avella** 28.37 28 P P **04 17 27.8 -0.7**
RSSD **Black Hills** 28.67 350 P P **04 17 31.5 +0.1**
RSSD **Black Hills** 28.67 350 P P **04 17 32.1 +0.7**
baz=166

BW06 **Boulder Array** 28.71 341 P P **04 17 32.5 +0.7**
baz=155
PDAR **Pinedale Array** 28.71 341 P P **04 17 33.2 +1.5**
comp=Z,1.0nm,0.8s,baz=154,slow=11,SNR=5.3
PDAR LR LR 04 29 34.1
comp=Z,249nm,19.0s,baz=64,slow=38
ELK **Elko** 29.17 332 LR LR 04 28 40.1
comp=Z,370nm,20.3s,baz=144,slow=35
SNOW **Snow King Moun** 29.71 340 P P **04 17 42.3 +1.6**
SNOW IAmb IAmb 04 17 44.6
comp=Z,5.6nm,0.8s
SSPA **Standing Stone** 29.90 31 P P **04 17 41.8 -0.3**
baz=220
M55A **Ridgway** 30.13 29 IAmb IAmb 04 17 45.7
comp=Z,17nm,1.1s
MVL **Millersville** 30.21 33 IAmb IAmb 04 17 47.3
comp=Z,13nm,1.1s
EMB **Emerald Bay** 30.38 324 P P **04 17 48.9 +2.3**
EMB IAmb IAmb 04 17 56.0
comp=Z,9.6nm,0.8s
RLMT **Red Lodge** 30.78 344 P P **04 17 49.8 -0.2**
RLMT IAmb IAmb 04 17 52.6
comp=Z,13nm,1.1s
RLMT **Red Lodge** 30.78 344 P P **04 17 50.3 +0.3**
baz=157,SNR=7.3
GCMT **Greycliff** 31.50 344 P P **04 17 56.7 +0.3**
LAO **LASA Array** 31.54 348 P P **04 17 56.9 +0.2**
baz=163
MDND **Maddock** 31.89 357 P P **04 18 00.3 +0.7**
baz=176
BOZ **Bozeman (W)** 31.90 341 P P **04 18 01.2 +1.3**
BOZ IAmb IAmb 04 18 03.3
comp=Z,8.6nm,1.3s
BOZ **Bozeman (W)** 31.90 341 P P **04 18 01.6 +1.8**
baz=153
BINY **Binghamton** 32.02 31 P P **04 18 00.4 -0.4**
baz=222
WVOR **Wild Horse Val** 32.09 330 P P **04 18 02.6 +1.1**
PAL **Palisades** 32.23 34 P P **04 18 02.6 0.0**
baz=226
EYMN **Ely** 32.31 7 P P **04 18 02.9 -0.3**
baz=190
AGMN **Agassiz Nation** 32.31 2 P P **04 18 03.2 -0.1**
baz=183
LRM **Limekiln Ridge** 32.37 340 P P **04 18 06.0 +2.0**
DGMT **Dagmar** 32.93 352 P P **04 18 09.1 +0.3**
baz=168
BMO **Blue Mountains** 33.37 334 P P **04 18 13.3 +0.6**
BMO IAmb IAmb 04 18 14.0
comp=Z,7.8nm,1.4s
EGMT **Eagleton** 33.59 345 P P **04 18 14.8 +0.3**
baz=158
YBH **Yreka Blue Hor** 33.70 325 P P 04 18 12.0 -3.6
comp=Z,0.8nm,0.6s,baz=113,slow=13,SNR=1.4
comp=Z,0.8nm,0.6s
YBH **Yreka Blue Hor** 33.70 325 P P **04 18 14.5 -1.1**
MSO **Missoula** 33.74 339 P P **04 18 16.7 +0.8**
baz=150
L04D **Klamath Falls** 33.81 326 P P **04 18 17.1 +0.4**
baz=133
J04D **Umpqua Nationa** 34.42 327 P P **04 18 21.9 0.0**
baz=134
LONY **Lake Ozonia** 34.51 29 P P **04 18 21.9 -0.6**
baz=221
HRV **Adam Dziewonsk** 34.54 35 P P **04 18 21.5 -1.3**
baz=228
JTMT **Jette** 34.66 340 P P **04 18 24.3 +0.4**
JTMT IAmb IAmb 04 18 26.2
comp=Z,14nm,1.3s
K02D **Willamette Mer** 34.88 325 P P **04 18 27.3 +1.5**
baz=132
I04A **Tendick Farm,** 34.97 328 P P **04 18 27.1 +0.6**
baz=134
I03D **Drain, OR** 35.39 327 P P **04 18 30.4 +0.3**
baz=133
H04D **Lebanon** 35.65 328 P P **04 18 32.2 -0.1**
baz=135
NEW **Newport** 36.09 338 LR LR 04 32 56.5
comp=Z,273nm,19.1s,baz=30,slow=36
NEW **Newport** 36.09 338 P P **04 18 36.6 +0.4**
NEW **Newport** 36.09 338 P P **04 18 36.5 +0.4**
baz=146
C09A **Chrisman Ranch** 36.15 336 P P **04 18 37.0 +0.4**
C09A IAmb IAmb 04 18 39.1
comp=Z,11nm,1.2s
G03D **McMinnville, O** 36.40 329 P P **04 18 38.6 -0.1**
baz=135
B08A **Colville Reser** 37.02 336 P P **04 18 44.2 +0.2**
B08A IAmb IAmb 04 18 45.5
comp=Z,3.7nm,0.9s
E04D **Cinebar** 37.03 331 P P **04 18 43.6 -0.5**
baz=137
D04E **Lakebay** 37.58 331 P P **04 18 49.2 +0.5**
baz=137
PKME **Peaks-Kenny Pk** 37.61 33 P P **04 18 48.3 -0.6**
baz=228
D03D **Eldon** 37.99 332 P P **04 18 52.8 +0.5**
baz=137
SCHQ **Schefferville** 45.45 24 P P **04 19 52.8 -0.5**
comp=Z,9.3nm,1.0s,baz=213,slow=11,SNR=8.1
comp=Z,9.3nm,1.0s
SCHQ **Schefferville** 45.45 24 P P **04 19 52.2 -1.0**
SCHQ IAmb IAmb 04 19 54.1
comp=Z,12nm,1.1s
SIV **San Ignacio** 47.88 130 P P 04 20 09.9 -2.9
comp=Z,1.3nm,0.6s,baz=276,slow=10.0,SNR=5.2
comp=Z,1.3nm,0.6s
YKA **Yellowknife Ar** 48.07 349 P P **04 20 12.3 -1.3**
comp=Z,1.3nm,0.6s,baz=154,slow=7.5,SNR=7.0
comp=Z,1.3nm,0.6s
DLBC **Dease Lake** 48.84 338 P P **04 20 22.4 +2.8**
DLBC **Dease Lake** 48.84 338 P P **04 20 20.3 +0.7**
baz=136
TGTN **Hyland Airport** 50.57 341 P P **04 20 33.7 +0.9**
baz=140
FRB **Frobisher Bay** 51.77 16 P P **04 20 41.5 -0.1**
comp=Z,5.1nm,0.8s,baz=213,slow=5.5,SNR=6.3
comp=Z,5.1nm,0.8s
H03N2 **Juan Fernandez** 52.16 160 T T 05 16 45.0
baz=337,slow=77,SNR=101
H03N1 **Juan Fernandez** 52.17 160 T T 05 16 46.0
baz=337,slow=77,SNR=105
H03N3 **Juan Fernandez** 52.18 160 T T 05 16 47.7
baz=337,slow=77,SNR=69
MMPY **Sheldon Lake,** 52.33 341 P P **04 20 47.2 +1.3**
baz=137
O30N **Mendenhall** 52.68 337 P P **04 20 49.9 +1.3**
baz=131
FARO **Faro, Yukon** 52.72 340 P P **04 20 49.7 +0.9**
baz=135
N31M **Braeburn, Yuko** 53.05 338 P P **04 20 51.7 +0.4**
baz=131
M31M **Drury Creek, Y** 53.05 339 P P **04 20 52.0 +0.8**
baz=133
HYT **Haines Junctio** 53.25 337 P P **04 20 53.3 +0.4**
baz=129
N30M **Aishikik Lake** 53.50 338 P P **04 20 54.9 +0.3**
baz=130
YUK6 **Outpost Mounta** 53.65 337 P P **04 20 57.6 +1.7**
baz=128
PINM **Pinnacle** 53.88 335 P P **04 20 58.8 +1.3**
baz=126
M30M **Minto, Yukon** 54.13 339 P P **04 21 00.4 +1.2**
baz=131
CTG **Chitna Glacier** 54.83 336 P P **04 21 04.6 +0.2**
baz=125
YUK3 **Moose Creek** 54.96 337 P P **04 21 05.9 +0.4**
baz=126
M27K **Edge Creek, AK** 55.84 337 P P **04 21 12.3 +0.6**
baz=125
C36M **Patuk** 55.95 349 P P **04 21 12.1 0.0**
baz=148
DAWY **Dawson** 55.99 339 P P **04 21 13.6 +1.1**
baz=129
BMRM **Bremner River** 56.16 334 P P **04 21 14.9 +1.1**
baz=122
BCAR **Beaver Creek A** 56.23 337 P P **04 21 15.0 +0.7**
L27K **Beaver Creek,** 56.24 337 P P **04 21 13.7 -0.7**
L27K IAmb IAmb 04 21 17.0
comp=Z,10nm,1.3s
L27K **Beaver Creek,** 56.24 337 P P **04 21 15.5 +1.1**
baz=126
M26K **Nabesna, AK** 56.30 336 P P **04 21 16.0 +1.2**
baz=124
EYAK **Cordova Ski Ar** 56.42 334 P P **04 21 16.8 +1.2**
baz=120
I29M **Ogilvie Camp,** 56.47 341 P P **04 21 15.4 -0.5**
I29M IAmb IAmb 04 21 16.7
comp=Z,4.2nm,0.8s
I29M **Ogilvie Camp,** 56.47 341 P P **04 21 16.3 +0.4**
baz=131
N25K **Chitina, Valde** 56.49 335 P P **04 21 17.8 +1.5**
baz=122
EPYK **Eagle Plains** 56.66 342 P P **04 21 18.4 +1.0**
baz=133
L26K **Log Cabin Wild** 56.78 337 P P **04 21 19.4 +1.1**
baz=124
P23K **Montague Islan** 56.87 333 P P **04 21 19.9 +1.1**
baz=118
KLU **Klutina** 56.97 335 P P **04 21 20.9 +1.2**
baz=120
HARP **HAARP** 57.14 336 P P **04 21 21.5 +0.8**
baz=122
GLI **Glacier Island** 57.16 334 P P **04 21 21.6 +0.7**
baz=119
INK **Inuvik** 57.17 345 P P **04 21 20.9 0.0**
INK **Inuvik** 57.17 345 P P **04 21 21.1 +0.2**
baz=137
M24K **Tolsona, Glenn** 57.39 335 P P **04 21 23.5 +0.8**
baz=121
SCRK **Sand Creek** 57.56 338 P P **04 21 24.8 +1.0**
baz=124
PAX **Paxson** 57.56 336 P P **04 21 24.4 +0.5**
PAX IAmb IAmb 04 21 25.9
comp=Z,7.8nm,1.0s
PAX **Paxson** 57.56 336 P P **04 21 24.7 +0.8**
baz=122
J26L **Joseph Creek** 57.70 338 P P **04 21 25.9 +1.1**
J26L **Joseph Creek** 57.70 338 P P **04 21 25.9 +1.1**
baz=125
RIDG **Independent Ri** 57.74 337 P P **04 21 26.0 +0.9**
baz=123
SEW **Seward** 57.83 332 P P **04 21 26.4 +0.8**
baz=116
KNK **Knik Glacier** 57.99 334 P P **04 21 27.7 +0.9**
baz=118
K24K **Donnelly Dome** 58.13 337 P P **04 21 28.4 +0.6**
baz=122
SML **Sawmill** 58.13 334 P P **04 21 27.6 -0.2**
baz=118
BRSE **Bradley Lake S** 58.26 331 P P **04 21 29.7 +1.0**
baz=115
WAT6 **Susitna Watana** 58.26 335 P P **04 21 29.6 +0.7**
baz=119
NRS **Narsarsuaq** 58.29 27 *i* P P 04 21 24.9 -3.9
NRS IAmb IAmb 04 21 27.8
comp=Z,14nm,0.6s
DHY **Denali Highway** 58.36 336 P P **04 21 29.6 0.0**
baz=120
PMR **Palmer** 58.36 334 P P **04 21 29.7 +0.4**
baz=117
RC01 **Rabbit Creek A** 58.40 333 P P **04 21 30.0 +0.4**
baz=116
J25K **Salcha River,** 58.41 338 P P **04 21 30.2 +0.5**
baz=123
Q20K **Shuyak Island** 58.58 330 P P **04 21 31.4 +0.5**
baz=112
RES **Resolute Bay** 58.79 1 P P **04 21 31.6 -0.5**
comp=Z,5.3nm,0.8s,baz=207,slow=9.0,SNR=2.5
comp=Z,5.3nm,0.8s
RES **Resolute Bay** 58.79 1 P P **04 21 31.2 -0.8**
RES IAmb IAmb 04 21 38.3
comp=Z,7.1nm,0.9s
M22K **Willow** 58.86 334 P P **04 21 33.1 +0.3**
baz=116
CAPN **Captain Cook N** 58.88 332 P P **04 21 33.9 +1.0**
baz=115
HDA **Harding Lake** 58.88 337 P P **04 21 33.7 +0.8**
baz=121
SUA **Susitna One** 59.00 333 P P **04 21 34.5 +0.6**
baz=116
ILAR **Eielson Array** 59.05 338 P P **04 21 32.5 -1.7**
comp=Z,3.6nm,0.9s,baz=137,slow=4.8,SNR=17
comp=Z,3.6nm,0.9s
ILAR **Eielson Array** 59.05 338 P P **04 21 34.0 -0.1**
CUT **Chulitna** 59.21 334 P P **04 21 36.2 +0.9**
baz=116
CHIR **Chirikof Islan** 59.26 326 P P **04 21 36.5 +0.8**
baz=108
O20K **Slope Mountain** 59.26 331 P P **04 21 36.6 +0.9**
baz=113
MCK **McKinley** 59.30 336 P P **04 21 36.6 +0.7**
baz=119
Q19K **Cape Douglas,** 59.30 330 P P **04 21 36.4 +0.5**
baz=111
POKR **Poker Plat Res** 59.43 338 P P **04 21 36.9 +0.2**
baz=121
COLA **College** 59.46 338 P P **04 21 36.2 -0.7**
COLA **College** 59.46 338 P P **04 21 37.5 +0.6**
baz=120
TCOL **CIGO, UAF Yank** 59.46 338 P P **04 21 37.2 +0.3**
baz=120
SKT **Skwentna** 59.56 334 P P **04 21 38.6 +0.9**
baz=115
TRF **Thorofare Moun** 59.70 335 P P **04 21 39.5 +0.7**
baz=117
BMAR **Burnt Mountain** 59.73 341 P P **04 21 39.1 +0.3**
NEA2 **Nenana** 59.77 337 P P **04 21 39.3 +0.2**
baz=119
H24K **Noodor Dome** 59.96 338 P P **04 21 41.0 +0.6**
baz=121
I23K **Minto, Yukon-K** 60.15 337 P P **04 21 42.1 +0.5**
baz=119
M20K **Styx River** 60.21 333 P P **04 21 42.6 +0.3**
baz=113
PPLA **Purkeypile** 60.23 334 P P **04 21 42.6 +0.2**
baz=115
P18K **Big Mountain,** 60.23 330 P P **04 21 42.4 0.0**
baz=110
BPAW **Bear Paw Mtn.** 60.27 336 P P **04 21 42.9 +0.3**
baz=117
O18K **Koktuh Hills** 60.38 331 P P **04 21 44.3 +0.9**
baz=110
N19K **Bonanza Creek** 60.39 332 P P **04 21 43.6 0.0**
N19K **Bonanza Creek** 60.39 332 P P **04 21 44.1 +0.6**
baz=112
H23K **Yukon River** 60.55 338 P P **04 21 44.9 +0.5**
baz=119
MLY **Manley** 60.61 337 P P **04 21 44.9 0.0**
baz=117
P17K **Kvichak River** 60.75 330 P P **04 21 45.6 -0.3**
baz=109
M19K **Big River Lodg** 60.77 333 P P **04 21 46.5 +0.5**
baz=112
L20K **Farewell, AK** 60.77 334 P P **04 21 46.4 +0.4**
baz=113
N18K **Kilae Creek** 60.99 331 P P **04 21 47.1 -0.4**
N18K **Kilae Creek** 60.99 331 P P **04 21 47.8 +0.3**
baz=110
L19K **White Mountain** 61.07 333 P P **04 21 47.6 -0.5**
L19K IAmb IAmb 04 21 49.4
comp=Z,5.0nm,0.9s
L19K **White Mountain** 61.07 333 P P **04 21 47.9 -0.2**
baz=112
I21K **Tanana** 61.14 337 P P **04 21 48.3 -0.1**
baz=116
CHNA **Chernabura Isl** 61.17 324 P P **04 21 48.5 -0.2**
baz=104
K20K **Telida** 61.20 335 P P **04 21 48.7 -0.2**
baz=113
P16K **Nushagak River** 61.46 329 P P **04 21 50.5 -0.1**
baz=107
COLD **Coldfoot** 61.47 339 P P **04 21 50.8 +0.2**
baz=119
J20K **Nowinta River** 61.56 335 P P **04 21 51.5 +0.2**
baz=114
PLCA **Paso Flores** 61.64 157 P P **04 21 50.3 -1.9**
comp=Z,1.2nm,0.8s,baz=339,slow=11,SNR=3.5
comp=Z,1.2nm,0.8s
PLCA **Paso Flores** 61.64 157 P P **04 21 53.4 +1.2**
H21K **Melozitna Rive** 61.66 337 IAmb IAmb 04 21 56.8
comp=Z,4.3nm,0.9s
H21K **Melozitna Rive** 61.66 337 P P **04 21 52.1 +0.2**
baz=116
O16K **Kokwok River B** 61.68 330 P P **04 21 52.8 +0.6**
baz=107
TTA **Tatalina** 61.85 334 P P **04 21 53.8 +0.5**
baz=111
TOLK **Toolik Lake Re** 61.97 341 P P **04 21 54.6 +0.5**
baz=120
N16K **Nishlik Lake** 62.27 331 P P **04 21 56.5 +0.3**
baz=107
GCSA **Galena City Sc** 62.87 335 P P **04 22 00.8 +0.8**
baz=111
ICESG **Greenland Ices** 63.98 20 *i* P P **04 22 06.2 -1.5**
ICESG IAmb IAmb 04 22 08.1

	comp=Z,12nm,1.0s							
SUMG	**Summit**	**65.84**	**16**	*i* P	**P**	**04 22 19.7**	**-0.1**
DBG	**Daneborg**	**71.32**	**16**	*i* P	**P**	**04 22 52.3**	**-1.3**
DBG				IAmb	IAmb	04 22 58.0	
	comp=Z,5.6nm,1.2s						
DAG	**Danmarks Havn**	**72.04**	**14**	*i* P	**P**	**04 22 55.3**	**-2.6**
DAG				IAmb	IAmb	04 22 57.8	
	comp=Z,6.1nm,1.0s						
NOR	**Nord**	**73.00**	**9**	*i* P	**P**	**04 23 02.6**	**-1.0**
NOR				IAmb	IAmb	04 23 03.8	
	comp=Z,6.5nm,1.1s						
BILL	**Bilibino**	**77.71**	**338**	P	**P**	**04 23 30.9**	**+0.1**
BILL				IAmb	IAmb	04 23 36.8	
	comp=Z,8.0nm,1.0s						
EKA	**Eskdalemuir Ar**	**79.47**	**35**	P	**P**	**04 23 39.1**	**-1.6**
	comp=Z,1.8nm,0.9s,baz=280,slow=4.2,SNR=4.3						
	comp=Z,1.8nm,0.9s						
ESDC	**Sonseca Array**	**82.62**	**51**	P	**P**	**04 23 57.4**	**-0.5**
	comp=Z,1.8nm,0.8s,baz=300,slow=5.2,SNR=12						
	comp=Z,1.8nm,0.8s						
ESDC	**Sonseca Array**	**82.62**	**51**	P	**P**	**04 23 55.8**	**-2.1**
GERES	**GERESS Array B**	**91.40**	**38**	P	**P**	**04 24 39.9**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=298,slow=5.7,SNR=5.2						
	comp=Z,0.6nm,0.7s						
XAN	**Xi'an**	**124.34**	**333**	*e*PKP	**PKiKP**	**04 30 37.8**	**+3.5**
XAN				sPKP		04 30 52.2	

NNC 06 04:15:53.6±9.3, 37.66N×71.52E, h0km, mb 4.2, mpv 3.9, 3C-2D, Error ellipse: s-maj=75.8km s-min=53.1km az=168.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**5.49**	**352**	⇑Pn	Pn	04 17 18.7	+2.1
	15nm,0.5s,baz=177,slow=13,SNR=101						
KK31				⇑Sn	Sn	04 18 22.7	+2.2
	3.2nm,0.3s,baz=177,slow=23,SNR=7.8						
TKM2	**Tokmak 2**	**6.11**	**29**	⇑Pn	Pn	04 17 25.9	+0.5
	3.9nm,0.8s						
TKM2				⇓Sn	Sn	04 18 34.8	-1.2
	4.0nm,1.1s						
AB31	**Akbulak array**	**14.29**	**328**	Pn	Pn	04 19 14.6	-2.6
	1.2nm,0.3s,baz=130,slow=12,SNR=76						
AKTO	**Aktyubinsk**	**16.00**	**327**	⇓Pn	Pn	04 19 38.0	-2.0
	2.9nm,0.6s						

*NIC **06** 04:20:42.5±0.0, 34.52N×31.17E, h11km±1km, Ml3.6/8*
*HLW **06** 04:20:43.4, 34.34N×30.76E, h11km±12km, Md3.5, Ml4.0*
*DDA **06** 04:20:43.5±0.0, 34.95N×31.16E, h6km±1km, ML2.9*
*ISK **06** 04:20:44.4, 34.86N×31.36E, h7km, ML3.5/13*
*GII **06** 04:20:45.5±0.3, 34.37N×31.15E, h80km, MD2.9/4, Mm2.8/1*

ISC 06 04:20:40.1±1.2, 34.57N±0.03×30.93E±0.03, h31km±12km, n83, σ2°18/122, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OSC1	**CSNet OBS 1**	**1.10**	**165**	P	**Pb**	**04 21 01.6**	**+1.0**
OSC1				S	**Sn**	**04 21 16.3**	**+2.9**
AKMS	**Akamas**	**1.24**	**68**	P	**Pb**	**04 21 02.9**	**-0.1**
AKMS				S	**Sb**	**04 21 18.5**	**-0.1**
AKMS				AML	AML	04 21 19.1	
	6.7nm,0.3s						
AKMS				AML	AML	04 21 19.1	
	6.7nm,0.3s						
AKMS				AML	AML	04 21 19.6	
	6.0nm,0.3s						
AKMS				AML	AML	04 21 19.6	
	6.0nm,0.3s						
NATA	**Nata**	**1.37**	**81**	P	**Pb**	**04 21 05.2**	**+0.1**
NATA				S	**Sb**	**04 21 22.1**	**-0.1**
NATA				AML	AML	04 21 24.4	
	4.2nm,0.3s						
NATA				AML	AML	04 21 24.4	
	4.2nm,0.3s						
NATA				AML	AML	04 21 26.2	
	7.5nm,0.6s						
NATA				AML	AML	04 21 26.2	
	7.5nm,0.6s						
ALFC	**Alefka**	**1.49**	**66**	P	**Pb**	**04 21 06.2**	**-1.0**
ALFC				AML	AML	04 21 24.7	
	4.5nm,0.4s						
ALFC				AML	AML	04 21 24.8	
	2.6nm,0.6s						
SZAC	**Souni**	**1.62**	**83**	P	**Pb**	**04 21 08.5**	**-0.9**
SZAC				S	**Sb**	**04 21 28.4**	**-1.1**
SZAC				AML	AML	04 21 28.9	
	2.3nm,0.3s						
SZAC				AML	AML	04 21 28.9	
	2.3nm,0.3s						
SZAC				AML	AML	04 21 30.7	
	3.0nm,0.3s						
SZAC				AML	AML	04 21 30.7	
	3.0nm,0.3s						
LEF	**Lefka**	**1.70**	**70**	PN	**Pn**	**04 21 08.6**	**+0.9**
LEF				SN	**Sn**	**04 21 26.1**	**-2.3**
LEF	**Lefka**	**1.70**	**70**	P	**Pb**	**04 21 09.3**	**-1.5**
AKDN	**Akdeniz- Kıbrı**	**1.82**	**66**	PN	**Pb**	**04 21 11.6**	**-1.2**
AKDN				SN	**Sn**	**04 21 30.0**	**-1.4**
OSC2	**CSNet OBS 4**	**1.85**	**143**	P	**Pb**	**04 21 12.6**	**-0.8**
OSC2				S	**Sb**	**04 21 35.4**	**-0.7**
DEMR	**Demre-Antalya**	**1.87**	**334**	PN	**Pb**	**04 21 16.3**	**+2.7**
ASGA	**Asgata**	**1.92**	**83**	P	**Pn**	**04 21 12.3**	**+1.6**
ASGA				S	**Sn**	**04 21 35.6**	**+1.8**
ASGA				AML	AML	04 21 38.8	
	6.1nm,0.4s						
ASGA				AML	AML	04 21 38.8	
	6.1nm,0.4s						
ASGA				AML	AML	04 21 39.0	
	2.8nm,0.4s						
ASGA				AML	AML	04 21 39.0	
	2.8nm,0.4s						
AKAS	**Kas**	**1.99**	**327**	P	**Pb**	**04 21 14.2**	**-1.5**
GAZI	**Gazipasa**	**2.01**	**34**	PN	**Pn**	**04 21 13.3**	**+1.3**
GAZI				SN	**Sn**	**04 21 34.7**	**-1.4**
GAZI	**Gazipasa**	**2.01**	**34**	P	**Pn**	**04 21 13.3**	**+1.3**
GAZI				S	**Sn**	**04 21 36.0**	**-0.1**
GAZI				*i* AML	AML	04 21 37.0	
	comp=E,203nm,0.4s						
GAZI				*i* AML	AML	04 21 38.0	
	comp=N,134nm,0.5s						
CSS	**Mathiatis**	**2.01**	**78**	PN	**Pn**	**04 21 13.5**	**+1.5**
CSS				SN	**Sn**	**04 21 35.8**	**-0.3**
CSS	**Mathiatis**	**2.01**	**78**	P	**Pn**	**04 21 13.5**	**+1.5**
CSS				S	**Sn**	**04 21 37.7**	**+1.6**
AKIN	**Akıncılar- Kıb**	**2.13**	**77**	PN	**Pb**	**04 21 15.8**	**-2.3**
LFK	**Lefkose**	**2.25**	**71**	PN	**Pb**	**04 21 17.6**	**-2.5**
MVOU	**Mavrovouni**	**2.27**	**78**	P	**Pn**	**04 21 17.6**	**+2.2**
MVOU				S	**Sn**	**04 21 44.8**	**+2.5**
MVOU				AML	AML	04 21 46.8	
	0.7nm,0.5s						
MVOU				AML	AML	04 21 46.8	
	0.7nm,0.5s						
MVOU				AML	AML	04 21 52.0	
	0.7nm,0.3s						
MVOU				AML	AML	04 21 52.0	
	0.7nm,0.3s						
ANTB	**Antalya**	**2.34**	**355**	PN	**Pb**	**04 21 20.8**	**-0.8**
TEKE	**Tekeli-Mersin**	**2.38**	**48**	PN	**Pn**	**04 21 18.6**	**+1.6**
KORT	**Korkueli**	**2.48**	**349**	P	**Pb**	**04 21 22.4**	**-1.6**
KORT				*i* AML	AML	04 21 55.0	
	comp=N,60nm,0.3s						
KORT				*i* AML	AML	04 21 56.0	
	comp=E,94nm,0.5s						
BERE	**Bereket-Mersin**	**2.58**	**46**	PN	**Pn**	**04 21 21.8**	**+1.9**
ERMK	**Ermenek**	**2.63**	**37**	P	**Pb**	**04 21 23.9**	**-2.8**
ERMK				*i* AML	AML	04 21 56.0	
	comp=N,174nm,0.5s						
ERMK				*i* AML	AML	04 21 57.0	
	comp=E,154nm,0.5s						
OREN	**Orenkoy-Mersin**	**2.64**	**51**	PN	**Pn**	**04 21 22.3**	**+1.8**
AKK1	**Akkuyu-Mersin**	**2.65**	**53**	PN	**Pn**	**04 21 22.4**	**+1.7**
AKK2	**Akkuyu-Mersin**	**2.65**	**53**	PN	**Pn**	**04 21 22.1**	**+1.4**
AKKU	**Akkuyu-Mersin**	**2.67**	**53**	PN	**Pn**	**04 21 22.3**	**+1.4**
TEPK	**Tepekoy-MERSIN**	**2.70**	**51**	PN	**Pn**	**04 21 23.1**	**+1.7**
HDMB	**Hadim**	**2.71**	**27**	PN	**Pn**	**04 21 23.7**	**+2.0**
YESI	**Yesilovacik-Me**	**2.75**	**53**	PN	**Pn**	**04 21 23.5**	**+1.5**
TISA	**Tisan-Mersin**	**2.75**	**54**	PN	**Pn**	**04 21 23.6**	**+1.5**
TEVE	**Tevekalti-Mers**	**2.77**	**47**	PN	**Pn**	**04 21 24.5**	**+2.1**
KARG	**Kargicak-Mersi**	**2.80**	**53**	PN	**Pn**	**04 21 24.4**	**+1.7**
EREN	**Erenkoy**	**2.83**	**69**	PN	**Pn**	**04 21 25.5**	**+2.4**
EREN	**Erenkoy**	**2.83**	**69**	P	**Pn**	**04 21 25.9**	**+2.8**
SEYD	**Seydisehir-KON**	**2.93**	**14**	PN	**Pn**	**04 21 27.5**	**+2.9**
KEBE	**Keben-Mersin**	**2.94**	**50**	PN	**Pn**	**04 21 27.3**	**+2.5**
SEDI	**Konya, Seydise**	**2.96**	**13**	P	**Pb**	**04 21 29.0**	**-3.2**
SEDI				S	**Sn**	**04 22 01.1**	**+1.6**
SEDI				*i* AML	AML	04 22 05.0	
	comp=E,77nm,0.4s						
SEDI				*i* AML	AML	04 22 06.0	
	comp=N,52nm,0.7s						
SILI	**Silifke-Mersin**	**3.03**	**53**	PN	**Pn**	**04 21 28.2**	**+2.3**
KKBE	**Karaman, Kazim**	**3.11**	**31**	P	**Pn**	**04 21 30.5**	**+3.4**
KKBE				S	**Sn**	**04 22 05.5**	**+2.2**
KKBE				*i* AML	AML	04 22 07.0	
	comp=E,39nm,0.6s						
KKBE				*i* AML	AML	04 22 09.0	
	comp=N,55nm,0.6s						
KRMN	**Karaman**	**3.22**	**35**	PN	**Pn**	**04 21 30.6**	**+2.0**
MERS	**Mersin**	**3.72**	**51**	PN	**Pn**	**04 21 37.4**	**+2.0**
KERG	**Konya-Eregli**	**3.85**	**41**	P	**Pn**	**04 21 40.3**	**+3.1**
KERG				S	**Sn**	**04 22 22.8**	**+1.3**
KERG				*i* AML	AML	04 22 27.0	
	comp=N,52nm,0.4s						
KERG				*i* AML	AML	04 22 29.0	
	comp=E,53nm,0.3s						
OFRI	**`Ofer**	**3.90**	**119**	Pn	**Pn**	**04 21 40.4**	**+2.5**
DQRL	**Deir Qamar**	**3.94**	**101**	*e*P	**Pn**	**04 21 39.9**	**+1.4**
MMA0B	**Mount Meron ar**	**4.03**	**111**	Pn	**Pn**	**04 21 42.3**	**+2.5**
MMA0B				Sn	**Sn**	**04 22 26.4**	**+0.5**
QRWL	**Qaraoun**	**4.07**	**103**	*e*P	**Pn**	**04 21 41.4**	**+1.1**
GULE	**Gulek**	**4.13**	**48**	P	**Pn**	**04 21 45.3**	**+4.0**
GULE				S	**Sn**	**04 22 32.4**	**+3.8**
GULE				*i* AML	AML	04 22 36.0	
	comp=E,50nm,0.3s						
GULE				*i* AML	AML	04 22 38.0	
	comp=N,47nm,0.8s						
SLTI	**Sal'it**	**4.14**	**123**	Pn	**Pn**	**04 21 43.0**	**+1.8**
HWQ	**Hawqa**	**4.15**	**93**	*e*P	**Pn**	**04 21 42.6**	**+1.1**
GEM	**Giv'at Ha'Em**	**4.16**	**108**	Pn	**Pn**	**04 21 43.5**	**+2.0**
GEM				Sn	**Sn**	**04 22 28.6**	**-0.4**
SHBL	**Chebaa**	**4.18**	**106**	*e*P	**Pn**	**04 21 43.2**	**+1.4**
NATI	**Neve Ativ**	**4.20**	**107**	Pn	**Pn**	**04 21 43.5**	**+1.5**
NATI				Sn	**Sn**	**04 22 30.1**	**+0.1**
RCY	**Rachaya**	**4.21**	**103**	*e*P	**Pn**	**04 21 43.6**	**+1.3**
MMLI	**Mount Malkishu**	**4.31**	**118**	Pn	**Pn**	**04 21 45.3**	**+1.8**
KSHT	**Keshet**	**4.36**	**110**	Pn	**Pn**	**04 21 46.5**	**+2.2**
MATC	**Matruh**	**4.47**	**225**	P	**Pn**	**04 21 48.1**	**+2.4**
	baz=226						
MATC				S	**Sn**	**04 22 34.5**	**-2.1**
	baz=226						
HMDT	**Nahal Hemdat**	**4.48**	**120**	Pn	**Pn**	**04 21 48.1**	**+2.2**
HMDT				Sn	**Sn**	**04 22 37.1**	**+0.2**
KZIT	**Kziot**	**4.67**	**140**	Pn	**Pn**	**04 21 50.4**	**+1.9**
KZIT				Sn	**Sn**	**04 22 40.4**	**-1.3**
KOT	**Kottamia**	**4.69**	**170**	P	**Pn**	**04 21 51.5**	**+2.8**
	baz=168						
KOT				S	**Sn**	**04 22 39.6**	**-2.4**
	baz=168						
HHAG	**Hagoal**	**4.70**	**168**	P	**Pn**	**04 21 52.2**	**+3.3**
	baz=165						
YTIR	**Yattir**	**4.75**	**131**	Pn	**Pn**	**04 21 52.1**	**+2.5**
YTIR				Sn	**Sn**	**04 22 42.4**	**-1.3**
HMYD	**Mayadein**	**4.76**	**181**	P	**Pn**	**04 21 53.0**	**+3.3**
	baz=179						
DSI	**Dead Sea**	**4.78**	**127**	Pn	**Pn**	**04 21 52.1**	**+2.1**
DSI				Sn	**Sn**	**04 22 44.1**	**-0.2**
HNAT	**Natroun**	**4.92**	**183**	P	**Pn**	**04 21 55.1**	**+3.1**
	baz=182						
HNAT				S	**Sn**	**04 22 46.5**	**-1.4**
	baz=182						
HSAF	**As Saff**	**4.96**	**174**	P	**Pn**	**04 21 55.2**	**+2.7**
	baz=171						
SUZ	**Suez**	**4.98**	**161**	P	**Pn**	**04 21 55.2**	**+2.5**
	baz=158						
GLL	**Jalalah**	**5.02**	**172**	P	**Pn**	**04 21 56.1**	**+2.8**
	baz=170						
PRNI	**Paran**	**5.43**	**140**	Pn	**Pn**	**04 22 00.5**	**+1.6**
PRNI				Sn	**Sn**	**04 22 58.4**	**-2.0**
ZAF	**Zafarana**	**5.44**	**165**	S	**Sn**	**04 22 59.5**	**-1.2**
	baz=162						
KRMI	**Paran Flat**	**5.47**	**143**	Pn	**Pn**	**04 22 01.1**	**+1.5**
KRMI				Sn	**Sn**	**04 23 00.1**	**-1.4**
RYAN	**Fayoum**	**5.50**	**186**	P	**Pn**	**04 22 02.2**	**+2.4**
	baz=185						
RYAN				S	**Sn**	**04 22 58.8**	**-3.2**
	baz=185						
HRFI	**Mount Harif**	**5.70**	**141**	Pn	**Pn**	**04 22 04.5**	**+1.9**
HRFI				Sn	**Sn**	**04 23 05.5**	**-1.5**
SLUM	**Salum**	**5.70**	**239**	P	**Pn**	**04 22 03.5**	**+0.9**
	baz=241						
SLUM				S	**Sn**	**04 23 02.1**	**-4.8**
	baz=241						
MBRI	**Mt Berech**	**5.83**	**144**	Pn	**Pn**	**04 22 06.2**	**+1.7**
MBRI				Sn	**Sn**	**04 23 09.6**	**-0.8**
NBNS	**Bani Suef**	**5.93**	**177**	P	**Pn**	**04 22 08.2**	**+2.4**
	baz=175						
NBNS				S	**Sn**	**04 23 09.4**	**-3.4**
	baz=175						
EIL	**Elat**	**5.95**	**144**	Pn	**Pn**	**04 22 07.8**	**+1.7**
EIL				Sn	**Sn**	**04 23 11.3**	**-1.9**
HKAT	**Jabal Katrina**	**6.56**	**156**	P	**Pn**	**04 22 16.3**	**+1.6**
	baz=153						
HKAT				S	**Sn**	**04 23 26.8**	**-1.8**
	baz=153						
TAMRE	**El Minia**	**6.86**	**180**	P	**Pn**	**04 22 20.8**	**+2.2**
	baz=178						
TAMRE				S	**Sn**	**04 23 30.5**	**-5.1**
	baz=178						
SWA2		**7.06**	**223**	P	**Pn**	**04 22 22.4**	**+1.1**
	baz=223						
SWA2				S	**Sn**	**04 23 36.3**	**-4.2**
	baz=223						
HHRG	**Al Ghardaqah**	**7.66**	**162**	P	**Pn**	**04 22 33.2**	**+3.6**
	baz=160						
HFRF	**Wahat Farafira**	**7.73**	**198**	P	**Pn**	**04 22 32.4**	**+1.9**
	baz=197						
HFRF				S	**Sn**	**04 23 51.7**	**-5.3**
	baz=197						

*BJI **06** 04:25:55.6±0.0, 37.84N×71.98E, h10km, mb4.6/20, mB4.6/9, ML4.4/4, Ms4.1/6, Ms7 3.8/6*
*IDC **06** 04:26:00.7±0.8, 37.86N×72.69E, h0km, mb4.0/16, mbtmp4.0/22, ML3.5/6, Error ellipse: s-maj=17.0km s-min=13.9km az=173.0*
*MOS **06** 04:26:01.0±1.6, 37.91N×72.66E, h10km, mb4.4/12, Error ellipse: s-maj=7.7km s-min=4.0km az=82.2*
*NEIC **06** 04:26:02.2±2.0, 37.90N±0.06×72.53E±0.06, h10km±1km, mb4.5/47, Error ellipse: s-maj=12.4km s-min=5.8km az=146.0*
*NNC **06** 04:26:05.8±2.3, 38.11N×72.56E, h0km, mb4.5, mpv4.1, Error ellipse: s-maj=18.0km s-min=12.8km az=4.0*
*SOME **06** 04:26:05.8, 38.20N×72.65E, h0km*

ISC 06 04:26:02.0±0.3, 37.89N±0.03×72.59E±0.03, h10km, n295, σ2°33/325, mb 4.4/56, 14C-6D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk**	**1.70**	**339**	Pn	**Pn**	**04 26 30.7**	**-1.4**
GAR	**Garm**	**2.10**	**303**	Pn	**Pb**	**04 26 39.6**	**-0.6**
BTK	**Batken**	**2.57**	**328**	Pn	**Pb**	**04 26 46.8**	**-1.4**
BTK	**Batken**	**2.57**	**328**	PN	**Pb**	**04 26 46.8**	**-1.4**
CHGR	**Chuyangaron**	**2.80**	**287**	Pn	**Pb**	**04 26 50.2**	**-2.0**
CHGR	**Chuyangaron**	**2.80**	**287**	PN	**Pb**	**04 26 50.2**	**-2.0**
KSH	**Kashi**	**3.11**	**57**	Pn	**Pn**	**04 26 50.0**	**-1.2**
KSH				Sn	**Sn**	**04 27 22.5**	**-6.0**
KSH				smax	smax		
	comp=N,3μm,1.1s						
KSH				smax	smax		
	comp=E,2μm,0.7s						
CEP	**Cherat**	**4.09**	**188**	P	**Pb**	**04 27 12.8**	**-1.5**
CEP				S	**Sb**	**04 28 05.0**	**+1.2**
CHCP	**Chirah Chowk**	**4.26**	**172**	P	**Pb**	**04 27 14.1**	**-2.9**
TAS	**Tashkent**	**4.27**	**324**	Pn	**Pn**	**04 27 09.4**	**+2.3**
TAS	**Tashkent**	**4.27**	**324**	PN	**Pn**	**04 27 09.4**	**+2.3**
AML	**Almayashu**	**4.32**	**11**	P	**Pn**	**04 27 10.9**	**+2.8**
	SNR=78						
UCH	**Uchtor**	**4.58**	**18**	P	**Pn**	**04 27 14.9**	**+3.3**
	SNR=10						
IUG	**Iuzhnay**	**4.68**	**336**	*e*PN	**Pn**	**04 27 15.5**	**+2.7**
IUG				*e*		04 27 26.6	
IUG	**Iuzhnay**	**4.68**	**336**	*e*P	**Pb**	**04 27 26.7**	**+2.5**
	2μm,0.5s						
IUG				*e*S	**Sb**	**04 28 25.4**	**+4.7**
	368nm,0.7s						
IUG	**Iuzhnay**	**4.68**	**336**	*e*Pn	**Pn**	**04 27 15.6**	**+2.7**
	baz=334						
IUG				*e*Pg	**Pb**	**04 27 26.7**	**+2.5**
	baz=334						
IUG				*e*Lg	Lg	04 28 28.1	
	baz=334						
EKS2	**Erkin-Say**	**4.85**	**10**	P	**Pn**	**04 27 18.3**	**+3.1**
	SNR=14						
MRKS	**Merke**	**4.87**	**6**	*e*P	**Pg**	**04 27 33.5**	**-1.9**
	47nm,0.6s						
MRKS				*e*S	**Sg**	**04 28 36.5**	**-2.0**
	52nm,0.6s						
AAK	**Ala-Archa**	**4.96**	**17**	P	**Pn**	**04 27 20.3**	**+3.6**
	SNR=13						
AAK	**Ala-Archa**	**4.96**	**17**	Pn	**Pn**	**04 27 20.5**	**+3.8**
	2.8nm,0.3s,baz=202,slow=9.0,SNR=26						
AAK					Lg	Lg	04 28 21.4
	3.1nm,0.3s,baz=105,slow=5.6,SNR=4.2						
	14nm,0.5s						
AAK	**Ala-Archa**	**4.96**	**17**	Pn	**Pn**	**04 27 20.0**	**+3.3**
AAK	**Ala-Archa**	**4.96**	**17**	PN	**Pn**	**04 27 20.0**	**+3.3**
CHM	**Chimkent**	**4.98**	**334**	*e*P	**Pg**	**04 27 33.9**	**-3.4**
	8.3nm,0.4s						
CHM				*e*S	**Sg**	**04 28 37.0**	**-4.8**
	357nm,0.5s						
DZA	**Taraz**	**5.09**	**350**	*e*PN	**Pn**	**04 27 18.7**	**+0.4**
DZA	**Taraz**	**5.09**	**350**	*e*Pn	**Pn**	**04 27 18.7**	**+0.4**
	baz=348						
DZA				*e*Sn	**Sn**	**04 28 11.9**	**-5.2**
	baz=348						
KBK	**Karagaybulak**	**5.09**	**20**	P	**Pn**	**04 27 22.7**	**+4.2**
	SNR=7.2						
ULHL	**Ulahol**	**5.18**	**32**	P	Pn	04 27 25.1	+5.4
	SNR=9.5						
BOOM	**Boomskoye usch**	**5.26**	**28**	Pn	**Pn**	**04 27 23.8**	**+2.9**
BOOM	**Boomskoye usch**	**5.26**	**28**	PN	**Pn**	**04 27 23.8**	**+2.9**
CHMS	**Chumysh**	**5.36**	**17**	⇓Pn	**Pn**	**04 27 24.7**	**+2.6**
	40nm,0.7s						
CHMS				⇑Lg	Lg	04 28 54.6	
	93nm,0.8s						
KK31	**Karatay Array**	**5.44**	**344**	Pn	**Pn**	**04 27 25.4**	**+2.2**
KK31	**Karatay Array**	**5.44**	**344**	PN	**Pn**	**04 27 25.4**	**+2.2**
KK31	**Karatay Array**	**5.44**	**344**	⇑Pn	**Pn**	**04 27 25.5**	**+2.3**
	3.8nm,0.3s,baz=171,slow=15,SNR=88						
KK31				⇑Sn	**Sn**	**04 28 29.1**	**+3.3**
	36nm,0.6s						
KK31				⇑Lg	Lg	04 28 51.8	
	52nm,0.7s,baz=180,slow=30,SNR=4.2						
KKAR	**Karatay Array**	**5.44**	**344**	Pn	**Pn**	**04 27 25.5**	**+2.4**
KKAR	**Karatay Array**	**5.44**	**344**	PN	**Pn**	**04 27 25.5**	**+2.4**
KDJ	**Kajisay**	**5.51**	**38**	Pn	**Pn**	**04 27 27.0**	**+2.7**
KDJ	**Kajisay**	**5.51**	**38**	PN	**Pn**	**04 27 27.0**	**+2.7**
TKM2	**Tokmak 2**	**5.53**	**24**	P	Pn	04 27 30.3	+5.8
	SNR=16						
TKM2	**Tokmak 2**	**5.53**	**24**	⇓Pn	**Pn**	**04 27 27.4**	**+2.9**
	7.3nm,0.5s						
TKM2				⇓Pg	**Pb**	**04 27 42.6**	**+3.9**
	16nm,0.7s						
TKM2				⇑Lg	Lg	04 29 01.1	
	104nm,1.1s						
BRLS	**Borolday**	**5.55**	**339**	*e*PN	**Pb**	**04 27 39.1**	**+0.2**
BRLS	**Borolday**	**5.55**	**339**	*e*P	**Pb**	**04 27 40.8**	**+2.0**
	11nm,0.6s						
BRLS				*e*S	**Sb**	**04 28 48.9**	**+3.4**
	59nm,0.8s						
BRLS	**Borolday**	**5.55**	**339**	*e*Pg	**Pb**	**04 27 39.2**	**+0.2**
	baz=335						
BRLS				*e*Sn	**Sn**	**04 28 24.4**	**-4.0**
	baz=335						
BRLS				*e*Lg	Lg	04 28 50.6	
	baz=335						
BRLS	**Borolday**	**5.55**	**339**	Pg	**Pb**	**04 27 40.8**	**+2.0**
	11nm,0.6s						
BRLS				Lg	Lg	04 28 48.9	
	59nm,0.8s						
KST	**Kastek**	**5.75**	**26**	*e*P	**Pg**	**04 27 48.0**	**-4.2**
	24nm,0.8s						
KST				*e*S	**Sg**	**04 29 00.7**	**-6.0**
	54nm,0.6s						
KST	**Kastek**	**5.75**	**26**	Pg	**Pg**	**04 27 48.0**	**-4.2**
	24nm,0.8s						
KST				Lg	Lg	04 29 00.7	
	54nm,0.6s						
SGDS	**Sogindy**	**5.77**	**15**	*e*PN	**Pn**	**04 27 29.2**	**+1.5**
SGDS				*e*		04 27 44.5	
SGDS	**Sogindy**	**5.77**	**15**	*e*P	**Pb**	**04 27 45.8**	**+3.0**
	29nm,0.6s						
SGDS				*e*S	**Sb**	**04 28 56.8**	**+4.8**
	12nm,0.6s						
SGDS	**Sogindy**	**5.77**	**15**	*e*Pn	**Pn**	**04 27 29.3**	**+1.5**
	baz=14						
SGDS				*e*Pg	**Pb**	**04 27 44.5**	**+1.8**
	baz=14						
SGDS	**Sogindy**	**5.77**	**15**	Pg	**Pb**	**04 27 45.8**	**+3.0**
	29nm,0.6s						
SGDS				Lg	Lg	04 28 56.8	
	12nm,0.6s						
MTBS	**Maitube**	**6.00**	**28**	*e*P	Pb	04 27 51.8	+5.2
	18nm,0.8s						
MTBS				*e*S	**Sg**	**04 29 07.1**	**-7.4**
	27nm,1.2s						
MTBS	**Maitube**	**6.00**	**28**	Pg	Pb	04 27 51.8	+5.2
	18nm,0.8s						
MTBS				Lg	Lg	04 29 07.1	
	27nm,1.2s						
THN	**Thein Dam**	**6.02**	**154**	*e*P	**Pn**	**04 27 35.7**	**+4.7**
TNSS	**Tian-Shan**	**6.12**	**32**	*e*PN	**Pn**	**04 27 34.0**	**+1.2**
TNSS				*e*		04 27 51.6	
TNSS	**Tian-Shan**	**6.12**	**32**	*e*P	**Pg**	**04 27 55.4**	**-3.8**
	12nm,0.6s						
TNSS				*e*S	**Sg**	**04 29 13.7**	**-4.8**
	22nm,1.2s						
TNSS	**Tian-Shan**	**6.12**	**32**	*e*Pn	**Pn**	**04 27 34.0**	**+1.2**
	baz=31						
TNSS				*e*Pg	**Pb**	**04 27 51.7**	**+2.8**
	baz=31						
TNSS				*e*Sn	**Sn**	**04 28 38.4**	**-4.8**
	baz=31						
TNSS				*e*Lg	Lg	04 29 13.3	
	baz=31

KUU e 04 28 01.2
KUU Kurty 6.64 24 eP Pb 04 28 02.8 +5.3
9.3nm,0.7s
KUU eS **Sg** **04 29 27.1 -7.9**
38nm,0.7s
KUU Kurty 6.64 24 ePn **Pn** **04 27 39.1 -0.5**
baz=24
KUU ePg **Pb** **04 28 01.3 +3.8**
baz=24
KUU eLg Lg 04 29 26.5
baz=24
KUU Kurty 6.64 24 Pg Pb 04 28 02.8 +5.3
9.3nm,0.7s
KUU Lg Lg 04 29 27.1
38nm,0.7s
SATY Saty 6.81 39 ePN **Pn** **04 27 42.1 +0.1**
SATY e 04 28 03.5
SATY e 04 28 58.7
SATY Saty 6.81 39 eP **Pg** **04 28 09.1 -3.2**
22nm,0.8s
SATY eS **Sg** **04 29 36.7 -3.7**
78nm,0.9s
SATY Saty 6.81 39 ePn **Pn** **04 27 42.1 +0.1**
baz=39
SATY ePg **Pb** **04 28 03.5 +3.1**
baz=39
SATY eSn **Sn** **04 28 58.8 -0.8**
baz=39
SATY eLg Lg 04 29 34.6
baz=39
CHKK Chushkaly 6.83 28 ePg **Pb** **04 28 02.7 +2.0**
baz=28
CHKK eLg Lg 04 29 34.6
baz=28
BHK Bhakra 7.19 153 eP **Pn** **04 27 51.8 +4.7**
BTLS Baital 7.23 8 eP **Pn** **04 27 47.1 -0.6**
BTLS Baital 7.23 8 ePn **Pn** **04 27 47.2 -0.5**
baz=7.7
BTLS ePg Pb 04 28 12.5 +5.0
baz=7.7
KPKS Kokpek 7.24 38 ePN **Pn** **04 27 46.5 -1.5**
KPKS e 04 28 12.2
KPKS Kokpek 7.24 38 ePn **Pn** **04 27 46.5 -1.5**
baz=38
KPKS ePg **Pb** **04 28 12.2 +4.4**
baz=38
KPKS eLg Lg 04 29 46.9
baz=38
SHLS Shalkode 7.42 43 eP Pn 04 27 55.9 +5.5
SHLS Shalkode 7.42 43 ePn **Pn** **04 27 55.1 +4.7**
baz=44
SHLS eLg Lg 04 30 01.1
baz=44
PDGK Podgornoye 7.55 42 Pg Pb 04 28 20.5 +7.3
4.9nm,0.6s
PDGK Lg Lg 04 29 56.2
22nm,1.1s
PDGK Podgornoye 7.55 42 ⇑Pn **Pn** **04 27 56.1 +3.8**
21nm,0.9s
PDGK ⇓Lg Lg 04 30 07.2
69nm,1.0s
SMLA Simla 7.73 149 eP **Pn** **04 27 56.3 +1.7**
SMLA eS **Sn** **04 29 23.2 +1.0**
SMLA IAML 04 29 25.4
comp=E,118nm,0.5s
SMLA IAML 04 29 25.8
comp=N,141nm,0.4s
TDK Taldyqorghan 8.34 30 eP **Pn** **04 28 02.4 -0.5**
TDK Taldyqorghan 8.34 30 ePn **Pn** **04 28 02.4 -0.5**
baz=30
TDK eLg Lg 04 30 21.2
baz=30
HRA Herat 9.06 250 Pn **Pn** **04 28 17.0 +3.9**
AYAN Aya Nagar 10.12 157 eP **Pn** **04 28 29.7 +2.4**
KUDL Kundal 10.26 160 eP **Pn** **04 28 31.0 +1.8**
KUDL eS **Sn** **04 30 21.8 -2.4**
LGTI Lohaghat 10.56 141 eP **Pn** **04 28 32.1 -1.2**
LGTI eS **Sn** **04 30 28.4 -3.3**
MAKZ Makanchi 11.29 35 Pn **Pn** **04 28 44.9 +1.5**
MAKZ Makanchi 11.29 35 P **Pn** **04 28 44.9 +1.5**
MK31 Makanchi Array 11.43 36 Pn **Pn** **04 28 46.5 +1.3**
MK31 Makanchi Array 11.43 36 *i* P **Pn** **04 28 47.6 +2.4**
MKAR Makanchi Array 11.43 36 Pn **Pn** **04 28 47.5 +2.4**
comp=N,0.1nm,0.3s,baz=221,slow=15,SNR=16
comp=N,2.2nm,0.8s
MKAR Makanchi Array 11.43 36 Pn **Pn** **04 28 46.6 +1.4**
GEYT Alibeck 11.43 275 Pn **Pn** **04 28 47.0 +1.6**
comp=N,0.7nm,0.3s,baz=114,slow=10,SNR=5.0
GEYT Sn **Sn** **04 30 48.5 -4.6**
comp=N,0.3nm,0.3s,baz=138,slow=12,SNR=2.5
comp=N,3.8nm,0.6s
GEYT Alibeck 11.43 275 Pn **Pn** **04 28 46.6 +1.2**
GYA0 ALIBECK ARRAY 11.43 275 P **Pn** **04 28 46.5 +1.2**
GYA0B ALIBECK ARRAY 11.43 275 Pn **Pn** **04 28 46.5 +1.1**
AJM Ajmer 11.51 171 eS **Sn** **04 30 52.7 -2.4**
BRZS Berezniki 12.09 0 eP **Pn** **04 28 53.1 -1.1**
BRZS Berezniki 12.09 0 ePn **Pn** **04 28 53.2 -1.0**
baz=360
WMQ Urumqi 12.88 58 eP **Pn** **04 29 08.7 +3.6**
WMQ sP 04 29 14.8
WMQ PP **PnPn** **04 29 18.3 +5.5**
WMQ S **Sn** **04 31 33.2 +4.8**
WMQ pmax pmax
comp=N,32nm,0.7s
WMQ LR LR
comp=N,500nm,16.5s
WMQ LR LR
comp=N,480nm,14.7s
WMQ LR LR
comp=N,320nm,12.9s
PYUN Piuthan 13.09 135 eP **Pn** **04 29 05.8 -2.4**
JHNI Jhansi 13.38 156 ex **Sn** **04 31 37.6 -3.2**
KURBB Kurchatov Arra 13.42 17 Pn **Pn** **04 29 10.4 -1.9**
comp=N,0.1nm,0.3s,baz=208,slow=12,SNR=13
KURBB Lg Lg 04 32 54.5
baz=203,slow=30,SNR=4.4
comp=N,1.4nm,0.7s
KURK Kurchatov 13.52 17 Pn **Pn** **04 29 12.6 -1.2**
KURK Kurchatov 13.52 17 *ce*P **Pn** **04 29 12.7 -1.1**
KURK pmax pmax
comp=Z,6.0nm,1.0s
SEM Semipalatinsk 13.66 21 eP **Pn** **04 29 13.8 -2.0**
SEM Semipalatinsk 13.66 21 ePn **Pn** **04 29 13.9 -2.0**
baz=21
GKN Gorkha 14.11 131 eP **Pn** **04 29 19.3 -2.8**
AB31 Akbulak array 14.57 325 ⇑Pn **Pn** **04 29 25.5 -2.7**
comp=Z,3.5nm,0.6s,baz=154,slow=9.9,SNR=8.5
AB31 Sn **Sn** **04 32 09.4 -0.2**
comp=Z,6.7nm,0.7s,baz=133,slow=24,SNR=8.9
ABKAR Akbulak array 14.57 325 Pn **Pn** **04 29 25.4 -2.8**
PKIN Phulchoki 14.88 130 eP **Pn** **04 29 29.7 -3.0**
PKI Pulchoki 14.89 130 eP **Pn** **04 29 29.8 -3.1**
GUN Gumba 14.94 128 eP Pn 04 29 29.3 -4.3
BHPL Bhopal 15.18 163 eP **Pn** **04 29 38.5 +2.0**
BHPL ex **Sn** **04 32 19.6 -5.1**
BRVK Borovoye 15.25 355 Pn **Pn** **04 29 35.2 -2.1**
BRVK Borovoye 15.25 355 *ce*P **Pn** **04 29 35.7 -1.6**
BRVK pmax pmax
comp=Z,21nm,1.7s
JIRN Jiri 15.31 128 eP **Pn** **04 29 34.6 -3.9**
RAMN Ramite 16.07 129 eP **Pn** **04 29 45.2 -3.1**
AKTO Aktyubinsk 16.29 325 Pn **Pn** **04 29 50.0 -0.7**
comp=Z,0.6nm,0.3s,baz=132,slow=16,SNR=9.6
comp=Z,4.8nm,0.7s
AKTO Aktyubinsk 16.29 325 ⇑Pn **Pn** **04 29 49.4 -1.3**
comp=Z,10nm,0.8s
AKTO ⇑Sn **Sn** **04 32 55.3 +3.9**
comp=Z,15nm,1.0s
TAPN Taplejung 16.50 125 eP **Pn** **04 29 49.5 -4.3**
GOMU GeErMu 17.82 89 P **Pn** **04 30 08.1 -2.4**
GOMU pP P 04 30 12.0 +0.8
BOK Bokaro 18.08 137 eP **Pn** **04 30 13.9 +0.6**
ZAA0 Zalesovo Array 18.13 24 P **Pn** **04 30 12.4 -1.3**
ZALV Zalesovo Beam 18.13 24 P **Pn** **04 30 13.0 -0.7**
comp=Z,0.8nm,0.3s,baz=218,slow=10,SNR=21
comp=Z,7.6nm,0.6s
ZALV Zalesovo Beam 18.13 24 P **Pn** **04 30 12.7 -1.0**
UOSS Minazif 18.99 232 P **Pn** **04 30 25.5 +1.1**
ARU Arti 20.78 338 P **P** **04 30 42.1 -0.9**
comp=Z,8.8nm,0.2s,baz=97,slow=18,SNR=4.3
comp=Z,8.8nm,0.2s
ARU Arti 20.78 338 P **P** **04 30 41.9 -1.1**
ARU Arti 20.78 338 *d* iP **P** **04 30 43.9 +0.9**
ARU S Sn 04 34 37.0 -2.7
ARU SS **SnSn** **04 34 54.5 0.0**

ARU pmax pmax
comp=Z,11nm,1.0s
GTA Gaotai 21.29 77 eP **P** **04 30 49.9 +1.1**
GTA pP sP 04 30 55.7 +0.9
GTA sP pP 04 30 58.0 +5.0
GTA pmax pmax
comp=Z,4.0nm,1.2s
GNI Garni 21.72 285 P **P** **04 30 53.8 +0.4**
comp=Z,3.2nm,0.3s,baz=0.0,slow=6.1,SNR=1.7
comp=Z,3.2nm,0.3s
GNI Garni 21.72 285 P **P** **04 30 51.2 -2.2**
GNI Garni 21.72 285 P **P** **04 30 51.2 -2.2**
GNI pmax pmax
comp=Z,57nm,1.5s
KNGR Kungurtug, Tuv 21.80 46 *i* P **P** **04 30 54.7 +0.6**
ZEI Tsey 22.35 292 eP **P** **04 31 03.2 +3.0**
ZEI pmax pmax
comp=Z,6.0nm,0.7s
BELG Belogornoye 22.66 318 P **P** **04 31 04.2 +1.1**
comp=Z,7.7nm,0.6s,baz=178,slow=2.6,SNR=4.9
comp=Z,7.7nm,0.6s
BELG Belogornoye 22.66 318 *i* P **P** **04 31 05.9 +2.8**
BELG pmax pmax
comp=Z,3.0nm,1.0s
KBZ Khabaz 23.14 294 P **P** **04 31 12.8 +4.6**
comp=Z,2.3nm,1.0s,baz=243,slow=2.3,SNR=3.1
KBZ Khabaz 23.14 294 *i* P **P** **04 31 09.7 +1.4**
KBZ pmax pmax
comp=Z,6.0nm,0.9s
KIV Kislovodsk 23.31 295 P **P** **04 31 12.0 +1.8**
KIV Kislovodsk 23.31 295 eP **P** **04 31 12.3 +2.2**
KIV eS **S** **04 35 26.5 +3.8**
KIV pmax pmax
comp=Z,7.0nm,0.9s
MOY Mondy 24.23 46 eP **P** **04 31 20.8 +1.8**
ZAK Zakamensk 25.13 50 eP **P** **04 31 23.0 -4.1**
ZAK pmax pmax
comp=Z,4.0nm,1.2s
KIRV Kirov 25.58 331 *ce*P **P** **04 31 31.3 +0.4**
SONM Songino Array 26.51 57 P **P** **04 31 41.0 +1.3**
comp=Z,2.4nm,0.9s,baz=255,slow=11,SNR=14
comp=Z,2.4nm,0.9s
SONM Songino Array 26.51 57 P **P** **04 31 40.6 +0.9**
SONM Songino Array 26.51 57 P **P** **04 31 40.6 +0.9**
SONM pmax pmax
comp=Z,2.0nm,1.0s
ULN Ulaanbaatar 26.95 57 *ce*P **P** **04 31 44.5 +0.8**
ULN pmax pmax
comp=Z,2.0nm,0.4s
PZH PanZhiHua 27.05 106 P **P** **04 31 46.0 +1.3**
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,30nm,4.5s
ANN Anapa 27.12 296 eP **P** **04 31 44.5 -0.5**
ANN e*PP **pP** **04 31 48.1 -1.4**
ANN ePPP PPP 04 32 36.3
ANN eS **S** **04 36 23.8 +0.6**
ANN pmax pmax
comp=Z,34nm,1.1s
XAN Xi'an 29.54 86 P **P** **04 32 02.8 -4.0**
XAN pmax pmax
comp=Z,7.0nm,0.5s
CMAR Chiang Mai Arr 30.07 123 P **P** **04 32 14.5 +2.9**
comp=Z,6.6nm,0.6s,baz=103,slow=14,SNR=22
HHC Hu-ho-hao-te 30.11 72 eP **P** **04 32 10.7 -1.1**
HHC pmax pmax
comp=Z,40nm,1.1s
HHC pmax pmax
comp=Z,160nm,6.0s
BRTR Keskin Array B 30.25 286 P **P** **04 32 15.6 +2.5**
comp=Z,0.4nm,0.8s,baz=220,slow=3.8,SNR=2.1
comp=Z,0.4nm,0.8s
GYA Guiyang 30.85 102 ⇓*i* P **P** **04 32 21.1 +2.6**
GYA pmax pmax
comp=Z,12nm,1.2s
NRIK Noril'sk 32.54 10 eP **P** **04 32 34.2 +1.5**
NRIK pmax pmax
comp=Z,3.0nm,0.4s
AKASG Malin Array Be 33.09 307 P **P** **04 32 39.0 +1.2**
comp=Z,0.2nm,0.3s,baz=74,slow=6.9,SNR=5.8
comp=Z,0.2nm,0.3s
AKASG Malin Array Be 33.09 307 P **P** **04 32 36.9 -0.9**
AKASG Malin Array Be 33.09 307 P **P** **04 32 36.9 -0.9**
AKASG pmax pmax
comp=Z,3.0nm,1.3s
FIA1 FINESS Array S 37.06 325 P **P** **04 33 12.9 +1.1**
FIA1 IAmb IAmb 04 33 17.8
comp=Z,12nm,1.1s
FINES FINESS Array B 37.06 325 P **P** **04 33 12.6 +0.8**
comp=Z,1.6nm,0.6s,baz=113,slow=10,SNR=9.9
comp=Z,1.6nm,0.6s
NJ2 Nanjing 38.05 85 eP **P** **04 33 18.2 -2.4**
NJ2 pmax pmax
comp=Z,12nm,0.5s
ARCES ARCESS Array B 40.36 337 P **P** **04 33 39.9 +0.4**
comp=Z,1.8nm,0.7s,baz=108,slow=4.0,SNR=7.2
comp=Z,1.8nm,0.7s
ARCES ARCESS Array B 40.36 337 *e*P **P** **04 33 38.2 -1.3**
ARCES pmax pmax
comp=Z,2.0nm,0.6s
GERES GERESS Array B 43.18 304 P **P** **04 34 05.4 +2.5**
comp=Z,0.3nm,0.5s,baz=72,slow=9.4,SNR=2.3
comp=Z,0.3nm,0.5s
TIXI Tiksi 44.01 22 P **P** **04 34 08.9 -0.2**
TIXI IAmb IAmb 04 34 09.9
comp=Z,7.4nm,0.7s
TIXI Tiksi 44.01 22 *ce*P **P** **04 34 09.0 -0.2**
TIXI pmax pmax
comp=Z,6.0nm,0.8s
NB2 NORSAR Subarra 44.05 322 P **P** **04 34 10.0 +0.3**
comp=Z,0.9nm,0.6s,baz=91,slow=7.9
NOA NORSAR Array B 44.05 322 P **P** **04 34 09.9 +0.2**
comp=Z,1.0nm,0.7s,baz=92,slow=7.7,SNR=6.3
comp=Z,1.0nm,0.7s
JEW Eniwo 51.38 61 P **P** **04 35 05.2 -1.5**
DAG Danmarks Havn 53.76 343 *i* P **P** **04 35 24.0 +0.1**
BILL Bilibino 56.80 27 *i* P **P** **04 35 46.2 +0.2**
BILL pmax pmax
comp=Z,3.0nm,1.1s
BILL MLR MLR
comp=Z,232nm,18.0s
ESDC Sonseca Array 57.93 298 P **P** **04 35 55.4 +0.9**
comp=Z,0.9nm,0.8s,baz=55,slow=7.1,SNR=11
comp=Z,0.9nm,0.8s
ESDC Sonseca Array 57.93 298 P **P** **04 35 55.3 +0.9**
TOA0 Torodi Ar. Sit 67.01 269 P **P** **04 36 55.9 +0.5**
TOA0 IAmb IAmb 04 37 07.9
comp=Z,7.4nm,1.5s
TORD Torodi Ar. Bea 67.01 269 P **P** **04 36 55.8 +0.4**
comp=Z,0.6nm,0.5s,baz=50,slow=5.4,SNR=16
comp=Z,0.6nm,0.5s
TORD Torodi Ar. Bea 67.01 269 P **P** **04 36 55.2 -0.2**
TORD IAmb IAmb 04 37 07.9
comp=Z,4.9nm,1.4s
TOLK Toolik Lake Re 69.26 15 P **P** **04 37 09.3 +0.5**
TOLK Toolik Lake Re 69.26 15 P **P** **04 37 09.3 +0.5**
baz=326
COLD Coldfoot 70.29 16 P **P** **04 37 15.7 +0.6**
baz=325
IMAR Indian Mountai 70.46 18 P **P** **04 37 16.1 -0.1**
GCSA Galena City Sc 70.62 20 P **P** **04 37 16.9 -0.2**
H21K Melozitna Rive 70.96 18 P **P** **04 37 19.2 0.0**
baz=324
BMAR Burnt Mountain 71.29 14 P **P** **04 37 22.6 +1.4**
I21K Tanana 71.55 18 P **P** **04 37 22.1 -0.7**
baz=324
H23K Yukon River 71.60 17 P **P** **04 37 24.1 +1.0**
H23K IAmb IAmb 04 37 24.7
comp=Z,3.5nm,0.7s
H23K Yukon River 71.60 17 P **P** **04 37 23.5 +0.4**
baz=326
J20K Nowinta River 71.80 20 P **P** **04 37 24.4 +0.1**
J20K Nowinta River 71.80 20 P **P** **04 37 24.2 -0.1**
baz=323,SNR=7.2
H24K Noodor Dome 71.97 16 P **P** **04 37 25.2 -0.1**
H24K IAmb IAmb 04 37 26.5
comp=Z,2.5nm,0.6s
H24K Noodor Dome 71.97 16 P **P** **04 37 25.3 -0.1**
baz=327,SNR=6.1
MLY Manley 71.97 18 P **P** **04 37 25.6 +0.2**
MLY IAmb IAmb 04 37 26.4
comp=Z,2.0nm,0.6s
MLY Manley 71.97 18 P **P** **04 37 25.5 +0.2**
baz=325

I23K Minto, Yukon-K 72.21 17 P **P** **04 37 26.8 +0.1**
I23K IAmb IAmb 04 37 28.1
comp=Z,3.0nm,0.7s
I23K Minto, Yukon-K 72.21 17 P **P** **04 37 26.9 +0.3**
baz=326
TTA Tatalina 72.28 21 P **P** **04 37 28.0 +0.7**
TTA IAmb IAmb 04 37 28.6
comp=Z,3.9nm,1.3s
TTA Tatalina 72.28 21 P **P** **04 37 28.0 +0.7**
TTA pmax pmax
comp=Z,4.0nm,1.3s
TTA Tatalina 72.28 21 P **P** **04 37 27.0 -0.2**
baz=322
INK Inuvik 72.33 10 P **P** **04 37 28.1 +0.7**
INK IAmb IAmb 04 37 28.2
comp=Z,3.8nm,0.6s
INK Inuvik 72.33 10 P **P** **04 37 28.1 +0.7**
INK pmax pmax
comp=Z,4.0nm,0.6s
INK Inuvik 72.33 10 P **P** **04 37 27.3 -0.1**
baz=339
C36M Paulatuk 72.37 6 P **P** **04 37 27.7 +0.1**
C36M Paulatuk 72.37 6 P **P** **04 37 27.3 -0.3**
baz=346
K20K Telida 72.48 20 P **P** **04 37 28.8 +0.4**
baz=323
CHUM Lake Minchumin 72.52 19 P **P** **04 37 27.8 -0.8**
baz=324
MDM Murphy Dome 72.63 17 P **P** **04 37 29.7 +0.4**
MDM IAmb IAmb 04 37 30.0
comp=Z,2.8nm,0.7s
POKR Poker Plat Res 72.68 17 P **P** **04 37 28.6 -0.9**
baz=328
BPAW Bear Paw Mtn. 72.68 18 P **P** **04 37 29.2 -0.4**
baz=325
NEA2 Nenana 72.74 17 P **P** **04 37 30.5 +0.5**
NEA2 IAmb IAmb 04 37 30.7
comp=Z,3.9nm,0.6s
NEA2 Nenana 72.74 17 P **P** **04 37 29.9 0.0**
baz=327
TCOL CIGO, UAF Yank 72.78 17 P **P** **04 37 30.4 +0.3**
TCOL CIGO, UAF Yank 72.78 17 P **P** **04 37 30.4 +0.3**
baz=328
COLA College 72.79 17 P **P** **04 37 30.0 -0.1**
COLA College 72.79 17 P **P** **04 37 30.0 -0.1**
COLA pmax pmax
comp=Z,9.0nm,0.8s
COLA College 72.79 17 P **P** **04 37 30.3 +0.1**
baz=328
CCB Clear Creek Bu 72.99 17 P **P** **04 37 31.5 +0.1**
ILAR Eielson Array 73.09 17 P **P** **04 37 31.5 -0.5**
comp=Z,1.7nm,0.8s,baz=315,slow=4.9,SNR=22
comp=Z,1.7nm,0.8s
ILAR Eielson Array 73.09 17 P **P** **04 37 31.2 -0.8**
ILAR Eielson Array 73.09 17 P **P** **04 37 31.2 -0.8**
L19K White Mountain 73.20 21 P **P** **04 37 33.7 +1.0**
L19K IAmb IAmb 04 37 38.9
comp=Z,3.2nm,1.1s
L19K White Mountain 73.20 21 P **P** **04 37 33.2 +0.5**
baz=323
L20K Farewell, AK 73.24 21 P **P** **04 37 32.1 -0.9**
baz=323
N16K Nishlik Lake 73.35 24 P **P** **04 37 34.3 +0.7**
baz=320
PPLA Purkeypile 73.36 20 P **P** **04 37 34.0 +0.2**
PPLA IAmb IAmb 04 37 34.8
comp=Z,4.1nm,1.0s
PPLA Purkeypile 73.36 20 P **P** **04 37 33.7 -0.1**
baz=324
HDA Harding Lake 73.39 17 P **P** **04 37 32.7 -1.1**
baz=328
TRF Thorofare Moun 73.39 19 P **P** **04 37 34.6 +0.6**
baz=326
MCK McKinley 73.49 18 P **P** **04 37 34.2 -0.2**
baz=327
M19K Big River Lodg 73.55 21 P **P** **04 37 35.1 +0.3**
baz=323
J25K Salcha River, 73.57 16 P **P** **04 37 34.6 -0.3**
J25K IAmb IAmb 04 37 38.6
comp=Z,3.0nm,1.1s
J25K Salcha River, 73.57 16 P **P** **04 37 34.2 -0.7**
baz=330,SNR=5.0
J26L Joseph Creek 74.05 15 P **P** **04 37 38.1 +0.3**
J26L IAmb IAmb 04 37 38.6
comp=Z,3.0nm,0.6s
J26L Joseph Creek 74.05 15 P **P** **04 37 36.9 -0.8**
baz=331,SNR=5.7
K24K Donnelly Dome 74.17 17 P **P** **04 37 37.9 -0.5**
baz=329,SNR=7.3
O16K Kokwok River B 74.25 24 P **P** **04 37 39.1 +0.3**
baz=321
SKT Skwentna 74.28 20 P **P** **04 37 39.0 -0.1**
SKT IAmb IAmb 04 37 39.4
comp=Z,6.7nm,0.8s
SKT Skwentna 74.28 20 P **P** **04 37 38.0 -1.1**
baz=325,SNR=8.0
I29M Ogilvie Camp, 74.30 13 P **P** **04 37 38.5 -0.6**
baz=335
SCRK Sand Creek 74.42 16 P **P** **04 37 39.5 -0.4**
SCRK IAmb IAmb 04 37 40.5
comp=Z,2.7nm,0.7s
SCRK Sand Creek 74.42 16 P **P** **04 37 38.9 -1.1**
baz=331,SNR=5.4
DHY Denali Highway 74.43 18 P **P** **04 37 39.2 -0.8**
baz=328
RIDG Independent Ri 74.44 16 P **P** **04 37 39.6 -0.4**
RIDG IAmb IAmb 04 37 40.4
comp=Z,6.1nm,1.1s
RIDG Independent Ri 74.44 16 P **P** **04 37 39.2 -0.8**
baz=330
P16K Nushagak River 74.71 24 P **P** **04 37 41.3 -0.2**
baz=321
WAT6 Susitna Watana 74.76 18 P **P** **04 37 41.5 -0.5**
baz=328
SUA Susitna One 74.92 20 P **P** **04 37 42.8 -0.1**
O18K Koktuh Hills 74.95 23 P **P** **04 37 43.2 +0.3**
baz=323
PAX Paxson 74.97 17 P **P** **04 37 42.4 -0.7**
PAX IAmb IAmb 04 37 43.4
comp=Z,2.8nm,0.6s
PAX Paxson 74.97 17 P **P** **04 37 42.4 -0.7**
PAX pmax pmax
comp=Z,3.0nm,0.6s
PAX Paxson 74.97 17 P **P** **04 37 42.7 -0.4**
baz=330,SNR=5.0
P17K Kvichak River 75.09 24 P **P** **04 37 44.4 +0.7**
baz=322
PMR Palmer 75.25 19 P **P** **04 37 44.2 -0.3**
baz=327
SML Sawmill 75.27 19 P **P** **04 37 44.1 -0.7**
SML Sawmill 75.27 19 P **P** **04 37 44.2 -0.6**
baz=328,SNR=5.6
DAWY Dawson 75.28 14 P **P** **04 37 45.2 +0.4**
DAWY IAmb IAmb 04 37 45.8
comp=Z,3.0nm,0.8s
DAWY Dawson 75.28 14 P **P** **04 37 44.7 -0.1**
baz=334
P18K Big Mountain, 75.31 23 P **P** **04 37 44.7 -0.3**
baz=323
M23K Glacier View 75.44 19 P **P** **04 37 45.4 -0.3**
baz=328,SNR=5.8
SCM Sheep Creek Mo 75.50 18 P **P** **04 37 46.4 +0.2**
SCM Sheep Creek Mo 75.50 18 P **P** **04 37 46.4 +0.2**
SCM pmax pmax
comp=Z,9.0nm,0.7s
SCM Sheep Creek Mo 75.50 18 P **P** **04 37 45.6 -0.6**
baz=328
HARP HAARP 75.53 17 P **P** **04 37 46.7 +0.4**
baz=330
M24K Tolsona, Glenn 75.55 18 P **P** **04 37 47.0 +0.6**
baz=329
KNK Knik Glacier 75.57 19 P **P** **04 37 46.7 +0.1**
baz=328
L27K Beaver Creek, 75.69 15 P **P** **04 37 47.8 +0.6**
L27K Beaver Creek, 75.69 15 P **P** **04 37 47.7 +0.5**
baz=333
BCAR Beaver Creek A 75.69 15 P **P** **04 37 48.0 +0.8**
M26K Nabesna, AK 76.02 16 P **P** **04 37 49.3 +0.2**
baz=332
KLU Klutina 76.14 18 P **P** **04 37 49.9 +0.1**
baz=330
M27K Edge Creek, AK 76.31 16 P **P** **04 37 51.1 +0.2**
baz=333
N25K Chitina, Valde 76.36 17 P **P** **04 37 51.2 +0.2**
baz=331
BVCY Beaver Creek 76.47 15 P **P** **04 37 52.0 +0.4**
baz=333

BMRM	**Bremner River**	**76.91**	**18**	P		**P**	**04 37 54.3**	**+0.1**
	baz=331							
EYAK	**Cordova Ski Ar**	**77.00**	**18**	P		**P**	**04 37 55.1**	**+0.6**
EYAK				IAmb		IAmb	04 37 55.6	
	comp=Z,4.0nm,0.7s							
EYAK	**Cordova Ski Ar**	**77.00**	**18**	P		**P**	**04 37 54.5**	**0.0**
	baz=330							
YUK3	**Moose Creek**	**77.13**	**15**	P		**P**	**04 37 55.0**	**-0.6**
	baz=334							
OHAK	**Old Harbor**	**77.67**	**24**	P		**P**	**04 37 58.6**	**+0.2**
	baz=325							
YAH	**Yahtse**	**78.11**	**17**	P		**P**	**04 37 59.2**	**-1.9**
N31M	**Braeburn, Yuko**	**78.32**	**13**	P		**P**	**04 38 01.6**	**-0.3**
	baz=338							
HYT	**Haines Junctio**	**78.60**	**15**	P		**P**	**04 38 03.1**	**-0.6**
	baz=336							
YKA	**Yellowknife Ar**	**79.79**	**3**	P		**P**	**04 38 10.2**	**+0.3**
	comp=Z,2.6nm,0.8s,baz=348,slow=5.1,SNR=9.3							
	comp=Z,2.6nm,0.8s							
WB0	**Warramunga Arr**	**81.58**	**123**	P		**P**	**04 38 19.8**	**-0.3**
WB0				IAmb		IAmb	04 38 20.7	
	comp=Z,3.5nm,0.9s							
WRA	**Warramunga Arr**	**81.67**	**123**	P		**P**	**04 38 20.5**	**-0.1**
	comp=Z,2.5nm,0.7s,baz=325,slow=4.9,SNR=44							
	comp=Z,2.5nm,0.7s							
WB2	**Warramunga Arr**	**81.68**	**123**	P		**P**	**04 38 20.4**	**-0.3**
WB2				IAmb		IAmb	04 38 37.0	
	comp=Z,7.2nm,1.3s							
WR0	**Warramunga Arr**	**81.81**	**123**	P		**P**	**04 38 20.9**	**-0.5**
WR0				IAmb		IAmb	04 38 42.9	
	comp=Z,9.1nm,1.4s							
ASAR	**Alice Springs**	**84.03**	**126**	P		**P**	**04 38 32.5**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=318,slow=5.2,SNR=8.9							
	comp=Z,0.9nm,0.7s							
ASAR	**Alice Springs**	**84.03**	**126**	P		**P**	**04 38 33.3**	**+0.4**
NHSC	**New Hope**	**104.95**	**337**	P		**Pdif**	**04 40 08.7**	**-0.8**
	baz=22							
SCZ2	**Santa Cruz Isl**	**107.58**	**11**	P		**PKiKP**	**04 44 29.0**	**-0.3**
	baz=350							

*IDC **06** 04:54:20.1±3.7,7°.79S×124°.30E,h210km±42km,mb3.5/2, mbtmp4.2/6,Error ellipse: s-maj=85.2km s-min=15.0km az=55.0*

*DJA **06** 04:54:20.6±0.4,8°.5±3°×12°.4E±°,h218km±4km,M3.9/13, mb4.2/7,mB5.1/1,MLv3.8/13,Mw(mB)4.5/1*

*NEIC **06** 04:54:20.8±1.2,7°.8S±0°.1×124°.3E±0°.1,h217km±12km, mb4.1/9,Error ellipse: s-maj=17.9km s-min=11.1km az=220.0*

ISC 06 04:54:20.0±0.7,**7°.80S**±0°.06×**124°.34E**±0°.08,**h200**km,**n44,** σ1§**35**/47,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**1.95**	**182**	Pn	**Pn**	**04 55 00.2**	**+2.1**
SOEI	**Soe**	**1.95**	**182**	P	**Pn**	**04 55 00.2**	**+2.1**
SOEI	**Soe**	**1.95**	**182**	P	**Pn**	**04 54 59.9**	**+1.8**
MMRI	**Maumere**	**2.25**	**248**	Pn	**Pn**	**04 55 02.5**	**+1.4**
MMRI	**Maumere**	**2.25**	**248**	P	**Pn**	**04 55 02.5**	**+1.4**
BATI	**Baumata**	**2.49**	**196**	P	**Pn**	**04 55 05.7**	**+1.9**
	146nm,0.3s,baz=285,slow=4.7,SNR=18						
BATI				S	**Sn**	**04 55 39.2**	**+1.1**
	734nm,0.6s,baz=223,slow=3.1,SNR=14						
BATI	**Baumata**	**2.49**	**196**	P	**Pn**	**04 55 05.4**	**+1.6**
BATI				S	**Sn**	**04 55 40.1**	**+2.0**
EDFI	**Ende, Flores**	**2.79**	**250**	P	**Pn**	**04 55 09.0**	**+1.7**
BBSI	**Bau Bau**	**2.89**	**322**	P	**Pn**	**04 55 10.8**	**+2.4**
BSSI	**Bau Bau, Buton**	**4.16**	**293**	P	**Pn**	**04 55 24.9**	**+1.1**
BASI	**Baing, Sumba**	**4.43**	**237**	P	**Pn**	**04 55 27.3**	**+0.1**
BKSI	**Bulukumba**	**4.86**	**300**	P	**Pn**	**04 55 33.7**	**+1.0**
WBSI	**Waikabubak, Su**	**5.23**	**249**	P	**Pn**	**04 55 37.3**	**-0.1**
	0.3nm32nm,0.6s						
KAPI	**Kappang**	**5.33**	**301**	P	**Pn**	**04 55 40.1**	**+1.4**
	4.8nm,0.5s,baz=130,slow=6.7,SNR=7.3						
KAPI	**Kappang**	**5.33**	**301**	Pn	**Pn**	**04 55 38.7**	**0.0**
BNSI	**Bone**	**5.40**	**308**	P	**Pn**	**04 55 40.7**	**+1.2**
	0.1nm48nm,0.8s						
PLAI	**Plampang**	**6.58**	**261**	P	**Pn**	**04 55 54.6**	**-0.2**
	0.2nm36nm,0.6s						
PLAI	**Plampang**	**6.58**	**261**	P	**Pn**	**04 55 53.2**	**-1.6**
LBMI	**Labuha**	**7.78**	**24**	P	**Pn**	**04 56 11.9**	**+1.5**
	0.1nm36nm,0.8s						
MTN	**Manton Dam**	**8.35**	**127**	Pn	**Pn**	**04 56 18.3**	**+0.5**
MTN	**Manton Dam**	**8.35**	**127**	P	**Pn**	**04 56 18.4**	**+0.5**
KNRA	**Kununurra**	**8.95**	**151**	Pn	**Pn**	**04 56 25.4**	**-0.2**
KNRA	**Kununurra**	**8.95**	**151**	P	**Pn**	**04 56 25.0**	**-0.6**
KDU	**Kakadu**	**9.36**	**122**	P	**Pn**	**04 56 31.1**	**+0.1**
ABJI	**Asem Bagus**	**10.02**	**269**	P	**Pn**	**04 56 39.3**	**-0.2**
MBWA	**Marble Bar**	**14.01**	**198**	P	**Pn**	**04 57 31.7**	**+1.6**
WB0	**Warramunga Arr**	**15.38**	**142**	P	**Pn**	**04 57 46.0**	**-0.9**
WB0				IAmb	IAmb	04 57 46.7	
	comp=Z,10.0nm,1.1s						
WRA	**Warramunga Arr**	**15.48**	**142**	P	**Pn**	**04 57 47.2**	**-1.0**
	comp=Z,6.1nm,0.5s,baz=314,slow=13,SNR=122						
WRA				S	**S**	**05 00 36.4**	**-3.7**
	comp=Z,2.1nm,0.6s,baz=322,slow=23,SNR=7.1						
WRA	**Warramunga Arr**	**15.48**	**142**	P	**Pn**	**04 57 47.8**	**-0.4**
WRAB	**Tennant Creek**	**15.48**	**142**	P	**Pn**	**04 57 47.7**	**-0.5**
WB2	**Warramunga Arr**	**15.49**	**142**	P	**Pn**	**04 57 48.0**	**-0.3**
WR0	**Warramunga Arr**	**15.62**	**142**	P	**P**	**04 57 49.0**	**-0.8**
WR0				IAmb	IAmb	04 57 49.6	
	comp=Z,10nm,0.6s						
SBUM	**Sibu**	**15.81**	**310**	P	**P**	**04 57 51.9**	**0.0**
SBUM				IAmb	IAmb	04 57 52.5	
	comp=Z,2.7nm,0.6s						
WRKA	**Warakurna**	**17.56**	**168**	P	**P**	**04 58 11.3**	**+0.2**
AS31	**Alice Springs**	**18.25**	**151**	P	**P**	**04 58 19.8**	**+1.1**
AS31				IAmb	IAmb	04 58 22.7	
	comp=Z,3.2nm,0.6s						
ASAR	**Alice Springs**	**18.25**	**151**	P	**P**	**04 58 19.8**	**+1.1**
	comp=Z,6.6nm,0.5s,baz=332,slow=12,SNR=45						
QIS	**Mount Isa**	**19.47**	**132**	P	**P**	**04 58 33.0**	**+1.2**
COEN	**Coen**	**19.47**	**110**	P	**P**	**04 58 32.1**	**+0.2**
COEN				IAmb	IAmb	04 58 32.4	
	comp=Z,4.4nm,0.9s						
FORT	**Forrest**	**23.13**	**172**	P	**P**	**04 59 07.5**	**-1.1**
STKA	**Stephens Creek**	**28.85**	**148**	P	**P**	**04 59 59.6**	**-0.3**
	comp=Z,1.2nm,0.4s,baz=348,slow=7.1,SNR=3.6						
	comp=Z,1.2nm,0.4s						
STKA	**Stephens Creek**	**28.85**	**148**	P	**P**	**04 59 59.5**	**-0.4**
MK31	**Makanchi Array**	**65.94**	**330**	P	**P**	**05 04 43.1**	**-1.5**
MKAR	**Makanchi Array**	**65.94**	**330**	P	**P**	**05 04 42.8**	**-1.9**
	comp=Z,0.6nm,0.5s,baz=131,slow=7.5,SNR=8.5						
	comp=Z,0.6nm,0.5s						
MKAR	**Makanchi Array**	**65.94**	**330**	P	**P**	**05 04 43.0**	**-1.7**

*ARE **06** 05:39:14±2.9,16°.79S±0°.05×70°.56W±0°.10,h13km±4km, Error ellipse: s-maj=13.2km s-min=7.2km az=102.0*

*NEIC **06** 05:39:16.5±2.1,16°.87S±0°.03×70°.55W±0°.09,h10km±1km, mb4.1/8,ML4.1(ARE),Error ellipse: s-maj=14.6km s-min=4.3km az=254.0*

*GUC **06** 05:39:16.7±0.9,16°.86S×70°.60W,h10km,ML4.0*

*IDC **06** 05:39:24.0±3.1,16°.92S×70°.24W,h81km±29km,mb3.4/4, mbtmp3.8/7,MS2.7/1,Error ellipse: s-maj=38.5km s-min=23.8km az=105.0*

ISC 06 05:39:15.4±0.8,**16°.81S**±0°.05×**70°.62W**±0°.07,**h10**km,**n51,** σ1§**23**/60,**mb4.0**/5,**3C-1D,Southern Peru**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB18	**Visviri**	**1.34**	**126**		**Pn**	**05 39 39.8**	**-0.8**
PB18	**Visviri**	**1.34**	**126**	*e*P	**Pn**	**05 39 39.3**	**-1.3**
AP01	**Chacalluta**	**1.57**	**170**		**Pn**	**05 39 42.9**	**-0.6**
AP01				S	**Sb**	**05 40 04.2**	**-0.3**
AP01	**Chacalluta**	**1.57**	**170**	*i* P	**Pn**	**05 39 42.8**	**-0.6**
AP01				*i* S	**Sn**	**05 40 03.8**	**-0.1**
AP01				IAML		05 40 08.9	
	comp=E,5μm,0.3s						
AP01	**Chacalluta**	**1.57**	**170**	*e*P	**Pn**	**05 39 42.8**	**-0.6**
AP01				*i* S	**Sb**	**05 40 04.3**	**-0.3**
AP01				IAML		05 40 08.9	
	comp=E,5μm,0.3s						
PB12	**IPOC Station P**	**1.81**	**171**	Pn	**Pn**	**05 39 46.7**	**-0.1**
PB12	**IPOC Station P**	**1.81**	**171**	⇑*i*P	**Pn**	**05 39 46.6**	**-0.2**
PB12				*i* S	**Sb**	**05 40 11.2**	**-0.5**
PB12				IAML		05 40 13.0	
	comp=N,2μm,0.3s						
PB12	**IPOC Station P**	**1.81**	**171**	⇑*i*P	**Pn**	**05 39 46.6**	**-0.2**
PB12				*i* S	**Sb**	**05 40 11.1**	**-0.5**
PB12				IAML		05 40 13.1	
	comp=N,2μm,0.4s						
PB16	**IPOC Station P**	**1.85**	**145**		**Pn**	**05 39 47.5**	**-0.2**
PB16	**IPOC Station P**	**1.85**	**145**	*i* P	**Pn**	**05 39 47.6**	**-0.2**
PB16	**IPOC Station P**	**1.85**	**145**	⇓*i*P	**Pn**	**05 39 47.5**	**-0.2**
PB16				*i* S	**Sb**	**05 40 12.4**	**-0.7**
PB16				IAML		05 40 30.5	
	comp=N,1μm,1.1s						
LPAZ	**La Paz**	**2.45**	**78**	P	**Pb**	**05 39 59.3**	**-0.5**
	comp=N,74nm,0.4s,baz=255,slow=13,SNR=303						
LPAZ				S	**Sb**	**05 40 31.6**	**+1.3**
	comp=N,20nm,0.4s,baz=332,slow=17,SNR=1.5						
LPAZ	**La Paz**	**2.45**	**78**	⇑*i*P	**Pb**	**05 39 59.4**	**-0.5**
PB11	**IPOC Station P**	**3.07**	**163**	Pn	**Pn**	**05 40 05.1**	**+0.9**
PB11	**IPOC Station P**	**3.07**	**163**	*e*P	**Pn**	**05 40 05.0**	**+0.9**
PB11				*i* S	**Sb**	**05 40 48.0**	**0.0**
PB11				IAML		05 40 50.5	
	comp=E,530nm,0.3s						
TA02	**Huaiquique**	**3.47**	**172**		**Pn**	**05 40 10.7**	**+1.2**
PB08	**IPOC Station P**	**3.59**	**157**		**Pn**	**05 40 13.5**	**+2.0**
PB08	**IPOC Station P**	**3.59**	**157**	*e*P	**Pn**	**05 40 13.8**	**+2.2**
PB08				IAML		05 41 10.3	
	comp=N,140nm,0.2s						
PB08	**IPOC Station P**	**3.59**	**157**	*e*P	**Pn**	**05 40 13.8**	**+2.2**
PB08				*i* S	**Sb**	**05 41 02.6**	**-0.5**
PB08				IAML		05 41 10.2	
	comp=N,146nm,0.4s						
TA01	**Diego Aracena**	**3.76**	**174**	Pn	**Pn**	**05 40 14.5**	**+1.1**
TA01	**Diego Aracena**	**3.76**	**174**	*e*P	**Pn**	**05 40 14.7**	**+1.2**
TA01				*i* S	**Sn**	**05 41 00.4**	**+2.7**
PATCX	**Punta Patache**	**4.01**	**174**		**Pn**	**05 40 17.4**	**+0.4**
PATCX	**Punta Patache**	**4.01**	**174**	*e*P	**Pn**	**05 40 18.6**	**+1.5**
PATCX				*i* S	**Sn**	**05 41 06.6**	**+2.4**
PB01	**IPOC Station P**	**4.34**	**166**		**Pn**	**05 40 23.5**	**+1.9**
PB02	**IPOC Station P**	**4.54**	**171**		**Pn**	**05 40 24.5**	**+0.2**
PB07	**IPOC Station P**	**4.94**	**172**		**Pn**	**05 40 31.4**	**+1.5**
PB09	**IPOC Station P**	**5.13**	**165**		**Pn**	**05 40 32.4**	**-0.1**
PB04	**IPOC Station P**	**5.51**	**175**	Pn	**Pn**	**05 40 38.0**	**+0.3**
PB06	**IPOC Station P**	**5.95**	**171**		**Pn**	**05 40 41.5**	**-2.2**
LVC	**Limon Verde**	**5.99**	**165**	P	**Pn**	**05 40 47.0**	**+2.5**
	comp=N,10nm,0.5s,baz=3.8,slow=5.7,SNR=14						
LVC				LR	LR	05 43 54.4	
	comp=N,72nm,19.7s,baz=310,slow=47						
LVC	**Limon Verde**	**5.99**	**165**	Pn	**Pn**	**05 40 43.2**	**-1.2**
PB15	**IPOC Station P**	**6.46**	**171**		**Pn**	**05 40 51.5**	**+0.7**
AF01	**San Pedro de A**	**6.53**	**160**	Pn	**Pn**	**05 40 52.3**	**+0.5**
PB10	**IPOC Station P**	**6.67**	**179**	Pn	**Pn**	**05 40 52.8**	**-0.6**
GO02	**Mina Guanaco**	**8.37**	**174**	Pn	**Pn**	**05 41 17.0**	**-0.1**
SIV	**San Ignacio**	**9.20**	**86**	P	**Pn**	**05 41 27.5**	**-0.8**
	comp=N,2.5nm,0.7s,baz=268,slow=12,SNR=11						
AC01	**Pan de Azucar**	**9.29**	**180**	Pn	**Pn**	**05 41 27.6**	**-1.9**
AC02	**Maricunga**	**10.07**	**172**	Pn	**Pn**	**05 41 39.0**	**-1.6**
AC06	**Mina Casimiro**	**10.50**	**179**	Pn	**Pn**	**05 41 45.2**	**-0.9**
SAML	**Samuel**	**10.66**	**44**	Pn	**Pn**	**05 41 47.9**	**-0.4**
MT01	**Popeta**	**16.99**	**182**	Pn	**Pn**	**05 43 13.7**	**+0.4**
MT01				IAmb	IAmb	05 43 21.2	
	comp=Z,13nm,0.9s						
PLCA	**Paso Flores**	**23.84**	**180**	P	**P**	**05 44 29.3**	**+0.5**
	comp=Z,2.6nm,0.8s,baz=338,slow=15,SNR=6.3						
	comp=Z,2.6nm,0.8s						
PLCA	**Paso Flores**	**23.84**	**180**	IAmb	IAmb	05 44 35.0	
	comp=Z,8.4nm,1.2s						
TXAR	**Lajitas Array**	**55.88**	**325**	P	**P**	**05 48 55.4**	**+1.8**
	comp=Z,0.2nm,0.6s,baz=137,slow=8.3,SNR=3.7						
	comp=Z,0.2nm,0.6s						
TX31	**Lajitas Ar. Si**	**55.88**	**325**	P	**P**	**05 48 55.0**	**+1.4**
TX32	**Lajitas Array**	**55.88**	**325**	P	**P**	**05 48 55.2**	**+1.6**
TX32				IAmb	IAmb	05 49 08.5	
	comp=Z,2.5nm,1.4s						
QSPA	**South Pole Qui**	**73.35**	**180**	P	**P**	**05 50 47.8**	**+0.4**
TORD	**Torodi Ar. Bea**	**77.38**	**72**	P	**P**	**05 51 08.5**	**-2.7**
	comp=Z,0.9nm,0.7s,baz=252,slow=4.9,SNR=3.8						
	comp=Z,0.9nm,0.7s						
TORD	**Torodi Ar. Bea**	**77.38**	**72**	IAmb	IAmb	05 51 12.2	
	comp=Z,1.3nm,0.9s						
YKA	**Yellowknife Ar**	**86.25**	**341**	P	**P**	**05 51 56.9**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=142,slow=3.7,SNR=4.8						
	comp=Z,0.8nm,0.7s						
SONM	**Songino Array**	**148.96**	**4**	PKPbc	**PKPbc**	**05 59 03.5**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=90,slow=1.9,SNR=3.9						

*NNC **06** 05:49:57.3±9.2,53°.73N×86°.91E,h0km,mb2.6,mpv2.5, Error ellipse: s-maj=82.1km s-min=38.7km az=38.0, Suspected Mining explosion.*

*IDC **06** 05:49:58.9±2.6,53°.73N×86°.75E,h0km,mbtmp2.9/2, ML2.4/2,Error ellipse: s-maj=22.7km s-min=13.7km az=64.0*

ISC 06 05:49:57.2±4.2,**53°.8N**±0°.2×**86°.9E**±0°.2,**h0**km,**n7,**σ1§**45**/9, **4C-4D,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.25**	**276**	*i*		05 58 10.0	
	baz=99,slow=310,SNR=4.6						
ZAA0	**Zalesovo Array**	**1.25**	**276**	⇓P	**Pg**	**05 50 21.5**	**+0.4**
	0.1nm,0.2s						
ZAA0				⇑S	**Sb**	**05 50 37.8**	**-0.4**
	4.2nm,0.9s						
ZALV	**Zalesovo Beam**	**1.25**	**276**	Pg	**Pg**	**05 50 21.3**	**+0.2**
	0.8nm,0.3s,baz=100,slow=18,SNR=14						
ZALV				Lg	Lg	05 50 36.1	
	1.5nm,0.3s,baz=103,slow=29,SNR=14						
KURBB	**Kurchatov Arra**	**6.08**	**241**	Pn	**Pn**	**05 51 29.5**	**+1.3**
	0.1nm,0.3s,baz=59,slow=14,SNR=4.2						
KURBB				Lg	Lg	05 53 07.3	
	baz=64,slow=35,SNR=2.9						
	1.0nm,0.7s						
KURBB	**Kurchatov Arra**	**6.08**	**241**	⇓Pn	**Pn**	**05 51 25.4**	**-2.8**
	2.7nm,0.9s						
KURBB				⇓Sn	**Sn**	**05 52 39.6**	**+1.2**
	1.1nm,0.4s						
KURBB				⇑Lg	Lg	05 53 08.8	
	3.6nm,0.8s						
MK31	**Makanchi Array**	**7.65**	**205**	⇑Pn	**Pn**	**05 51 50.0**	**+0.2**
	0.2nm,0.4s,baz=27,slow=15,SNR=7.7						
MK31				⇑Sn	**Sn**	**05 53 16.3**	**-0.9**
	0.2nm,0.4s						
MK31				⇓Lg	Lg	05 53 54.6	
	1.9nm,1.0s,baz=36,slow=30						
MKAR	**Makanchi Array**	**7.65**	**205**	Pn	**Pn**	**05 51 50.3**	**+0.4**
	0.1nm,0.3s,baz=25,slow=14,SNR=8.2						
	0.3nm,0.3s						

*NOU **06** 06:25:51.5,18°.26S×169°.91E,h300km,mb4.9/10, Vanuatu Islands*

*NEIC **06** 06:26:01.1±0.6,18°.1S±0°.2×168°.7E±0°.1,h159km±14km, mb4.3/7,Error ellipse: s-maj=23.6km s-min=17.5km az=151.0*

*IDC **06** 06:26:04.3±5.3,18°.41S×168°.73E,h200km±50km,mb3.8/5, mbtmp4.3/6,MS3.3/1,Error ellipse: s-maj=85.4km s-min=29.5km az=171.0*

ISC 06 06:26:05.2±1.2,**18°.57S**±0°.10×**168°.6E**±0°.1,**h200**km,**n26,** σ1§**18**/24,**mb4.0**/9,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RTV	**Rentapao**	**0.79**	**347**	P	**Pn**	**06 26 35.1**	**+1.4**
MARNC	**Mare, Loyalty**	**2.94**	**191**		**Pn**	**06 26 53.3**	**-0.9**
MARNC	**Mare, Loyalty**	**2.94**	**191**	P	**Pn**	**06 26 53.4**	**-0.7**
YATNC	**Mamie plateau,**	**3.83**	**205**	P	**Pn**	**06 27 04.4**	**-0.4**
DZM	**Mont Dzumac**	**4.03**	**210**	P	**Pn**	**06 27 08.9**	**+1.5**
	30nm,0.4s,baz=149,slow=11,SNR=79						
DZM	**Mont Dzumac**	**4.03**	**210**		**Pn**	**06 27 08.0**	**+0.6**
DZM	**Mont Dzumac**	**4.03**	**210**	P	**Pn**	**06 27 09.1**	**+1.7**
NOUC	**Port Laguerre**	**4.12**	**211**	P	**Pn**	**06 27 10.5**	**+2.0**
OUENC	**Ouen Island, N**	**4.17**	**203**		**Pn**	**06 27 09.5**	**+0.5**
OUENC	**Ouen Island, N**	**4.17**	**203**	P	**Pn**	**06 27 10.3**	**+1.2**
ONTNC	**Ouen Toro**	**4.23**	**208**		**Pn**	**06 27 10.2**	**+0.4**
ONTNC	**Ouen Toro**	**4.23**	**208**	P	**Pn**	**06 27 11.3**	**+1.5**
KOUNC	**Koumac, New Ca**	**4.53**	**244**	Pn	**Pn**	**06 27 11.4**	**-2.2**
MSVF	**Nonsavu**	**9.02**	**86**	LR	LR	06 31 08.2	
	comp=Z,178nm,20.1s,baz=160,slow=34						
CTA	**Charters Tower**	**21.15**	**262**	P	**P**	**06 30 36.0**	**+1.1**
	2.2nm,0.5s,baz=89,slow=11,SNR=5.4						
	2.2nm,0.5s						
STKA	**Stephens Creek**	**27.71**	**236**	P	**P**	**06 31 36.3**	**+1.3**
	1.1nm,0.3s,baz=83,slow=8.1,SNR=2.1						
	1.1nm,0.3s						
STKA	**Stephens Creek**	**27.71**	**236**	IAmb	IAmb	06 31 37.7	
	comp=Z,3.0nm,1.4s						
WR0	**Warramunga Arr**	**32.16**	**262**	P	**P**	**06 32 14.2**	**-0.1**
WR0				IAmb	IAmb	06 32 15.1	
	comp=Z,3.7nm,1.1s						
WB0	**Warramunga Arr**	**32.31**	**262**	P	**P**	**06 32 15.4**	**-0.2**
WB0				IAmb	IAmb	06 32 16.0	
	comp=Z,3.9nm,0.5s						
WB2	**Warramunga Arr**	**32.34**	**262**	P	**P**	**06 32 15.8**	**-0.1**
WB2				IAmb	IAmb	06 32 26.5	
	comp=Z,9.7nm,1.5s						
WRA	**Warramunga Arr**	**32.35**	**262**	P	**P**	**06 32 15.8**	**-0.2**
	comp=Z,1.0nm,0.4s,baz=95,slow=8.3,SNR=61						
	comp=Z,1.0nm,0.4s						
WRA	**Warramunga Arr**	**32.35**	**262**	P	**P**	**06 32 15.1**	**-0.9**
AS31	**Alice Springs**	**32.72**	**255**	P	**P**	**06 32 19.6**	**+0.4**
ASAR	**Alice Springs**	**32.72**	**255**	P	**P**	**06 32 19.6**	**+0.4**
	comp=Z,8.1nm,0.4s,baz=82,slow=8.7,SNR=169						
	comp=Z,8.1nm,0.4s						
JAGI	**Jajag, Banyuwa**	**53.71**	**273**	P	**P**	**06 35 06.7**	**-0.4**
JAGI				IAmb	IAmb	06 35 23.4	
	comp=Z,11nm,0.8s						
TXAR	**Lajitas Array**	**96.97**	**62**	P	**P**	**06 39 12.7**	**-1.7**
	comp=Z,0.7nm,1.2s,baz=243,slow=6.0,SNR=4.2						
	comp=Z,0.7nm,1.2s						

*SKHL **06** 06:43:30.5±0.6,44°.30N×148°.20E,h36km±3km,mb4.4/4*

*JMA **06** 06:43:31.5±0.6,44°.N±2°×14°.8E±°,h0km,MV4.0/24,SE OFF ETOROFU*

ISC 06 06:43:29.5±3.1,**44°.3N**±0°.1×**148°.3E**±0°.2,**h35**km,**n17,** σ1§**31**/25,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.00**	**344**	*i* P	**Pn**	**06 43 47.2**	**+0.1**
KUR				AMB	AMB	06 43 48.9	
	140nm,0.5s						
KUR				*i* S	**Sn**	**06 43 59.1**	**-0.9**
KUR				A	A	06 44 01.9	
	550nm,0.2s						
KUR				A	A	06 44 01.9	
	440nm,0.2s						
SHO	**Shikotan**	**1.11**	**249**	*i* P	**Pn**	**06 43 48.5**	**-0.1**
SHO				AMB	AMB	06 43 48.9	
	130nm,0.3s						
SHO				*e*S	**Sn**	**06 44 01.1**	**-1.6**
SHO				A	A	06 44 01.7	
	380nm,0.3s						
SHO				A	A	06 44 01.7	
	910nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.75**	**263**	*e*P	**Pn**	**06 43 56.0**	**-1.4**
YUK				AMB	AMB	06 43 57.0	
	170nm,0.3s						
YUK				*e*S	**Sn**	**06 44 16.3**	**-2.1**
YUK				A	A	06 44 24.1	
	660nm,0.4s						
YUK				A	A	06 44 24.1	
	620nm,0.4s						
NEM2	**Nemuro 2**	**2.04**	**245**	P	**Pn**	**06 44 01.3**	**-0.1**
NMR	**Nemuro--Hokkai**	**2.05**	**245**	*i* P	**Pn**	**06 44 01.3**	**-0.2**
NMR				*e*S	**Sn**	**06 44 24.7**	**-1.1**
GLVR	**Golovnino**	**2.06**	**256**	*e*P	**Pn**	**06 44 02.0**	**+0.5**
GLVR				AMB	AMB	06 44 04.9	
	180nm,0.2s						
GLVR				*e*S	**Sn**	**06 44 25.0**	**-0.9**
GLVR				A	A	06 44 31.6	
	810nm,0.3s						
GLVR				A	A	06 44 31.6	
	630nm,0.3s						
JRA	**Rausu**	**2.29**	**263**	*e*P	**Pn**	**06 44 06.2**	**+1.4**
JNSB	**Nemuroshibetsu**	**2.41**	**259**	*e*P	**Pn**	**06 44 07.8**	**+1.4**
JKHN	**Kushirohamanak**	**2.55**	**243**	P	**Pn**	**06 44 08.8**	**+0.4**
JNK	**Nakash**	**2.66**	**256**	*e*P	**Pn**	**06 44 11.0**	**+1.2**
AKK	**Akkeshi**	**2.79**	**244**	*e*P	**Pn**	**06 44 11.9**	**+0.3**
JAK	**Akkeshi**	**2.89**	**245**	*e*P	**Pn**	**06 44 13.5**	**+0.5**
JAK				*e*S	**Sn**	**06 44 45.0**	**-1.5**
JTKR	**Abashiri--Toko**	**3.15**	**266**	*e*P	**Pn**	**06 44 19.6**	**+2.9**
JAR	**Ashorobuto**	**3.40**	**255**	*e*P	**Pn**	**06 44 21.8**	**+1.7**
JAR				*e*S	**Sn**	**06 44 59.7**	**+0.5**
JOB	**Onbets**	**3.50**	**249**	*e*P	**Pn**	**06 44 22.7**	**+1.2**
JCH	**Churui**	**3.94**	**247**	*e*P	**Pn**	**06 44 29.1**	**+1.6**
JCH				*e*S	**Sn**	**06 45 12.2**	**-0.3**
JNBK	**Urakawa-nobuka**	**4.49**	**246**	*e*P	**Pn**	**06 44 36.5**	**+1.5**

*SJA **06** 06:53:08.2±0.8,31°.99S×71°.64W,h15km±2km,ML4.4, MW4.2*

*GUC **06** 06:53:10.7±0.8,32°.01S×71°.54W,h40km±2km,ML4.4*

*NEIC **06** 06:53:11.0±2.4,32°.00S±0°.03×71°.64W±0°.09,h35km±6km, mb4.5/23,Mwr4.3/22,ML4.6(GUC),

comp=Z,5µm,0.5s
MT05 Renca 1.56 153 Pn **Pn 06 53 37.0 +1.2**
MT05 Renca 1.56 153 ⇑*i*P **Pn 06 53 37.0 +1.2**
MT05 *i* S **Sb 06 53 57.0 -0.9**
MT05 IAML 06 53 59.1
comp=E,14µm,0.3s
MT05 Renca 1.56 153 *e*P **Pb 06 53 37.4 -1.2**
MT05 *e*S **Sb 06 53 57.3 -0.6**
MT05 IAML 06 54 00.4
comp=Z,5µm,0.6s
VA05 Santo Domingo 1.66 181 **Pn 06 53 38.2 +1.1**
VA05 Santo Domingo 1.66 181 ⇑*i*P **Pn 06 53 38.4 +1.3**
VA05 *i* S **Sb 06 53 59.7 -1.0**
FCH Farellones 1.71 141 ⇑*i*P **Pn 06 53 39.3 +1.1**
FCH *i* S **Sb 06 54 00.8 -1.8**
FCH IAML 06 54 01.4
comp=E,3µm,0.4s
FCH IAML 06 54 03.5
comp=N,3µm,0.3s
MT03 Universidad Ad 1.74 149 **Pn 06 53 39.7 +1.4**
MT03 Universidad Ad 1.74 149 ⇑*i*P **Pn 06 53 39.8 +1.4**
MT03 IAML 06 54 03.9
comp=E,13µm,0.2s
MT03 Universidad Ad 1.74 149 *e*P **Pn 06 53 39.9 +1.5**
MT03 IAML 06 54 07.0
comp=Z,5µm,0.4s
MT09 Talagante 1.84 165 **Pn 06 53 41.2 +1.4**
MT09 Talagante 1.84 165 ⇑*i*P **Pn 06 53 41.3 +1.5**
MT09 *i* S **Sb 06 54 04.7 -1.4**
MT09 IAML 06 54 09.8
comp=E,8µm,0.4s
AUSP Uspallata 1.87 98 *e*P **Pb 06 53 43.5 -0.4**
AUSP *e*S **Sb 06 54 07.4 +0.4**
MT01 Popeta 1.88 172 **Pn 06 53 41.9 +1.7**
MT01 Popeta 1.88 172 ⇑*i*P **Pn 06 53 41.9 +1.7**
MT01 *i* S **Sb 06 54 05.2 -1.9**
MT01 IAML 06 54 11.7
comp=E,6µm,0.2s
MT01 Popeta 1.88 172 *e*P **Pn 06 53 42.0 +1.7**
MT01 IAML 06 54 13.7
comp=Z,4µm,0.7s
GO04 Tololo Observa 1.94 20 **Pn 06 53 42.8 +1.6**
GO04 Tololo Observa 1.94 20 *i* P **Pn 06 53 42.9 +1.7**
GO04 *i* S **Sb 06 54 08.0 -0.9**
GO04 Tololo Observa 1.94 20 *e*P **Pb 06 53 43.2 -1.9**
GO04 *e*S **Sb 06 54 08.7 -0.3**
RTLS Leoncito 1.94 85 *e*P **Pb 06 53 44.5 -0.8**
RTLS *e*S **Sb 06 54 10.9 +1.7**
RTLS IAML 06 54 16.6
comp=Z,3µm,1.1s
CO05 La Serena 2.09 8 **Pn 06 53 44.6 +1.5**
CO05 La Serena 2.09 8 *i* P **Pn 06 53 44.5 +1.4**
CO05 IAML 06 54 20.3
comp=E,4µm,0.6s
BO04 La Punta 2.14 158 **Pn 06 53 45.5 +1.6**
BO04 La Punta 2.14 158 ⇑*i*P **Pn 06 53 45.6 +1.7**
BO04 *i* S **Sb 06 54 12.0 -2.7**
BO04 IAML 06 54 16.4
comp=N,5µm,0.3s
LMEL Las Melosas 2.17 148 **Pn 06 53 46.0 +1.6**
LMEL Las Melosas 2.17 148 ⇑*i*P **Pn 06 53 46.3 +1.9**
LMEL IAML 06 54 22.3
comp=E,4µm,0.5s
CO01 Juntas del Tor 2.38 33 **Pn 06 53 49.7 +2.4**
CO01 Juntas del Tor 2.38 33 *i* P **Pn 06 53 49.9 +2.6**
CO01 *i* S **Sn 06 54 18.4 +2.9**
CO01 IAML 06 54 30.4
comp=N,2µm,0.2s
CO01 Juntas del Tor 2.38 33 *e*P **Pb 06 53 50.1 -2.6**
CO01 *e*S **Sb 06 54 19.2 -2.4**
CO01 IAML 06 54 22.6
comp=Z,2µm,0.6s
ARCO CERRO ARCO 2.38 111 *e*P **Pb 06 53 52.4 -0.3**
ARCO *e*S **Sb 06 54 23.3 +1.6**
ARCO IAML 06 54 28.4
comp=Z,2µm,0.8s
BO01 Tunca 2.42 170 Pn **Pn 06 53 49.1 +1.5**
BO01 Tunca 2.42 170 ⇑*i*P **Pn 06 53 49.2 +1.5**
BO01 *i* S **Sn 06 54 18.9 +2.7**
BO01 IAML 06 54 26.5
comp=E,1µm,0.3s
BO01 Tunca 2.42 170 *e*P **Pn 06 53 49.2 +1.6**
BO01 *e*S **Sb 06 54 21.1 -1.6**
BO01 IAML 06 54 32.8
comp=Z,2µm,0.9s
ZON Zonda 2.50 80 Pn **Pb 06 53 52.1 -2.5**
ZON Zonda 2.50 80 *e*P **Pb 06 53 53.0 -1.6**
ZON *e*S **Sn 06 54 11.6 -6.7**
ZON IAML 06 54 41.9
comp=Z,1µm,0.5s
BO03 Pichilemu 2.51 187 ⇑*i*P **Pn 06 53 49.5 +0.6**
BO03 IAML 06 54 32.1
comp=N,1µm,0.4s
AAGR Agrelo 2.56 116 *e*P **Pb 06 53 54.2 -1.3**
AROD Rodeo 2.56 45 *e*P **Pb 06 53 53.9 -1.9**
AROD *e*P **Pb 06 53 54.2 -1.6**
AROD *e*S **Sb 06 54 26.8 -0.2**
ACCO Cerro Coronel 2.56 57 *e*P **Pb 06 53 54.2 -1.6**
ACCO *e*S **Sb 06 54 28.8 +2.8**
RTLL Cerro Villicun 2.72 77 *e*P **Pb 06 53 55.9 -2.5**
RTLL *e*S **Sb 06 54 29.3 -2.0**
ACDV Cuesta del Vie 2.78 50 *e*P **Pb 06 53 56.9 -2.6**
ACDV *e*S **Sb 06 54 35.8 +2.7**
ACDV IAML 06 54 42.1
comp=Z,898nm,0.6s
AVIZ Vizcacheras 2.96 121 *e*P **Pb 06 53 59.4 -3.1**
GO05 Huala 3.02 186 Pn **Pn 06 53 56.5 +0.6**
GO05 Huala 3.02 186 ⇑*i*P **Pn 06 53 56.4 +0.6**
GO05 IAML 06 54 56.8
comp=E,1µm,0.8s
GO05 Huala 3.02 186 *e*P **Pn 06 53 56.5 +0.6**
LCO Las Campanas 3.07 14 Pn **Pn 06 53 58.5 +1.7**
LCO Las Campanas 3.07 14 *i* P **Pn 06 53 57.8 +0.9**
LCO *i* S **Sn 06 54 34.6 +2.0**
ML02 Panimavida 3.76 178 **Pn 06 54 07.1 +1.0**
AC04 Llanos de Chal 3.80 7 Pn **Pn 06 54 07.6 +1.0**
GO03 Copiap 4.54 15 Pn **Pn 06 54 18.5 +1.7**
AC06 Mina Casimiro 4.74 13 **Pn 06 54 20.9 +1.3**
BI05 Punta Hualpn 4.92 195 Pn **Pn 06 54 21.8 -0.3**
AC02 Maricunga 5.57 23 Pn **Pn 06 54 32.8 +1.5**
AC01 Pan de Azucar 5.89 9 Pn **Pn 06 54 34.9 -0.5**
H03N1 Juan Fernandez 6.35 255 T T 07 01 18.2
baz=83,slow=73,SNR=5939
H03N3 Juan Fernandez 6.37 255 T T 07 01 17.9
baz=83,slow=73,SNR=4105
H03N2 Juan Fernandez 6.37 255 T T 07 01 22.4
baz=83,slow=73,SNR=4540
H03S3 Juan Fernandez 6.43 252 T T 07 01 26.5
baz=82,SNR=140
H03S1 Juan Fernandez 6.44 251 T T 07 01 25.1
baz=82,SNR=78
H03S2 Juan Fernandez 6.45 252 T T 07 01 23.8
baz=82,SNR=142
LC02 Puerto Saavedr 6.94 192 Pn **Pn 06 54 49.0 -0.7**
GO02 Mina Guanaco 7.03 15 Pn **Pn 06 54 52.7 +1.4**
LR03 Panguipulli 7.64 185 Pn **Pn 06 54 58.7 -0.7**
LR04 Corral 8.01 190 Pn **Pn 06 55 03.6 -0.8**
PB10 IPOC Station P 8.50 6 Pn **Pn 06 55 12.2 +1.0**
PLCA Paso Flores 8.76 175 Pn **Pn 06 55 16.2 +1.5**
comp=E,1.0nm,0.3s,baz=339,slow=13,SNR=52
PLCA LR LR 06 58 38.3
comp=E,173nm,20.4s,baz=322,slow=37
comp=E,2.2nm,0.4s
PLCA Paso Flores 8.76 175 Pn **Pn 06 55 14.8 +0.1**
LL04 Puerto Octay 8.92 184 Pn **Pn 06 55 16.1 -0.8**
PB15 IPOC Station P 8.95 13 Pn **Pn 06 55 16.1 -1.4**
LL03 Petrohue 9.15 184 Pn **Pn 06 55 19.2 -0.8**
PB06 IPOC Station P 9.42 11 Pn **Pn 06 55 22.5 -1.5**
LL05 Los Muermos 9.51 189 Pn **Pn 06 55 22.9 -2.1**
LVC Limon Verde 9.64 15 Pn **Pn 06 55 26.0 -1.2**
comp=E,0.2nm,0.3s,baz=252,slow=16,SNR=1.2
LVC LR LR 06 59 20.6
comp=E,133nm,19.4s,baz=209,slow=39
comp=E,0.6nm,0.3s
LVC Limon Verde 9.64 15 Pn **Pn 06 55 25.5 -1.7**
PB04 IPOC Station P 9.71 8 Pn **Pn 06 55 27.6 -0.3**
PB07 IPOC Station P 10.34 9 Pn **Pn 06 55 35.0 -1.6**
PB09 IPOC Station P 10.37 12 Pn **Pn 06 55 36.5 -0.5**
PB02 IPOC Station P 10.74 8 Pn **Pn 06 55 40.6 -1.4**
PATCX Punta Patache 11.20 7 Pn **Pn 06 55 47.8 -0.5**
TA01 Diego Aracena 11.45 7 Pn **Pn 06 55 50.1 -1.5**
ITQB Itaqui 13.05 84 Pn **Pn 06 56 14.1 +0.6**
COYC Coyhaique 13.56 182 Pn **Pn 06 56 18.9 -1.4**

CPUP Villa Florida 13.66 69 Pn **Pn 06 56 22.0 +0.2**
comp=E,0.1nm,0.3s,baz=236,slow=13,SNR=2.3
CPUP LR LR 07 02 13.5
comp=E,141nm,18.8s,baz=234,slow=40
comp=E,3.4nm,0.9s
CPUP Villa Florida 13.66 69 Pn **Pn 06 56 21.5 -0.3**
PB16 IPOC Station P 13.73 8 Pn **Pn 06 56 21.4 -1.9**
PLTB Pedras Altas 15.27 94 Pn **Pn 06 56 43.7 +0.2**
LPAZ La Paz 15.95 12 Pn **Pn 06 56 54.3 +1.3**
comp=E,0.1nm,0.3s,baz=205,slow=7.1,SNR=4.2
LPAZ LR LR 07 03 27.6
comp=E,106nm,18.1s,baz=180,slow=39
comp=E,1.6nm,0.6s
LPAZ La Paz 15.95 12 Pn **Pn 06 56 53.4 +0.5**
ITAB Concordia 17.55 79 **Pn 06 57 12.6 +0.1**
ITAB IAmb IAmb 06 57 39.2
comp=Z,28nm,1.1s
SIV San Ignacio 18.58 33 P **P 06 57 24.7 -0.1**
baz=205,slow=8.8,SNR=15
SIV LR LR 07 04 26.6
comp=Z,59nm,21.0s,baz=160,slow=37
comp=Z,2.8nm,0.8s
NNA Nana 20.50 345 LR LR 07 04 00.6
comp=Z,68nm,21.2s,baz=172,slow=32
USHA Ushuaia 22.93 175 P **P 06 58 13.2 +1.7**
comp=Z,15nm,0.8s,baz=357,slow=8.8,SNR=13
comp=Z,15nm,0.8s
MG01 Puerto William 23.10 174 P **P 06 58 13.2 +0.1**
SAML Samuel 24.22 21 P **P 06 58 23.8 -0.5**
ATAH Atahualpa 25.54 344 LR LR 07 07 42.1
comp=Z,56nm,19.3s,baz=207,slow=34
BDFB Brasilia 26.92 58 P **P 06 58 48.1 -0.7**
comp=Z,3.2nm,0.7s,baz=216,slow=5.8,SNR=4.2
BDFB pP **pP 06 58 57.2 -1.0**
comp=Z,5.9nm,0.8s,baz=239,slow=11,SNR=6.2
comp=Z,3.2nm,0.7s
BDFB Brasilia 26.92 58 P **P 06 58 48.0 -0.8**
BDFB IAmb IAmb 06 58 58.7
comp=Z,13nm,1.1s
ARNL Arenillas 29.41 343 P **P 06 59 09.8 -1.0**
PMSA Palmer Station 33.13 174 LR LR 07 12 38.4
comp=Z,58nm,18.0s,baz=344,slow=35
PMSA Palmer Station 33.13 174 P **P 06 59 45.1 +2.0**
MDP Montagnes des 41.06 29 LR LR 07 19 24.8
comp=Z,33nm,21.6s,baz=294,slow=38
RCBR Riachuelo 42.27 60 LR LR 07 19 48.5
comp=Z,113nm,18.6s,baz=359,slow=38
VNA3 Neumayer Olymp 51.07 158 P **P 07 02 09.8 +0.7**
VNA3 Neumayer Olymp 51.07 158 pP pP 07 02 19.2 +0.4
VNA2 Neumayer--Watz 51.71 158 P **P 07 02 14.7 +0.7**
baz=285,slow=8.1
VNA2 Neumayer--Watz 51.71 158 PcP **PcP 07 03 24.8 -2.1**
SNAA Sanae 53.29 158 P **P 07 02 26.4 +0.7**
SNAA Sanae 53.29 158 P **P 07 02 26.3 +0.5**
comp=Z,5.9nm,0.7s,baz=272,slow=8.1,SNR=24
SNAA LR LR 07 24 08.7
comp=Z,28nm,18.1s,baz=324,slow=35
comp=Z,5.9nm,0.7s
SNAA Sanae 53.29 158 P **P 07 02 26.3 +0.5**
TROLL Troll, Antarti 55.00 159 P **P 07 02 38.9 +0.6**
TROLL Troll, Antarti 55.00 159 pP pP 07 02 49.4 +1.4
QSPA South Pole Qui 58.23 180 P **P 07 03 02.7 +1.3**
comp=Z,3.2nm,0.6s,baz=149,slow=1.3,SNR=29
comp=Z,3.2nm,0.6s
H06E1 SOCORRO T-PHAS 63.02 318 T T 08 12 00.6
SNR=8.1
TX32 Lajitas Array 68.19 330 P **P 07 04 08.7 +1.1**
TXAR Lajitas Array 68.19 330 P **P 07 04 08.8 +1.1**
comp=Z,0.6nm,0.9s,baz=156,slow=6.9,SNR=6.4
TXAR pP **pP 07 04 18.9 +1.3**
comp=Z,0.3nm,0.5s,baz=159,slow=8.5,SNR=5.3
TXAR LR LR 07 28 31.3
comp=Z,25nm,19.2s,baz=164,slow=31
comp=Z,0.6nm,0.9s
TXAR Lajitas Array 68.19 330 P **P 07 04 07.7 +0.1**
TX31 Lajitas Ar. Si 68.19 330 P **P 07 04 07.9 +0.2**
TX31 IAmb IAmb 07 04 22.7
comp=Z,8.8nm,1.4s
MIAR Mount Ida 69.35 341 P **P 07 04 12.9 -1.7**
MIAR IAmb IAmb 07 04 22.8
comp=Z,4.5nm,0.9s
WVT Waverly 69.46 346 P **P 07 04 15.2 -0.1**
WVT IAmb IAmb 07 04 32.0
comp=Z,9.4nm,1.2s
ABTX Abilene, Hawle 69.53 335 P **P 07 04 15.4 -0.4**
ABTX IAmb IAmb 07 04 17.5
comp=Z,4.2nm,0.8s
R40A Maddies Statio 72.54 343 P **P 07 04 34.6 +0.7**
R40A IAmb IAmb 07 04 35.0
comp=Z,3.7nm,0.8s
DBIC Dimbokro 74.17 72 LR LR 07 35 55.1
comp=Z,26nm,19.3s,baz=156,slow=35
DBIC Dimbokro 74.17 72 P **P 07 04 43.4 -0.7**
ANMO Albuquerque 74.22 331 LR LR 07 31 43.9
comp=Z,30nm,21.3s,baz=193,slow=31
MAW Mawson 74.98 164 LR LR 07 38 31.5
comp=Z,47nm,19.3s,baz=338,slow=36
BOSA Boshof 80.65 118 LR LR 07 37 45.1
comp=Z,28nm,19.4s,baz=185,slow=33
PDAR Pinedale Array 82.16 333 LR LR 07 39 10.7
comp=Z,20nm,18.1s,baz=228,slow=34
NVAR Mina Array Bea 82.47 325 P **P 07 05 32.0 +2.3**
comp=Z,0.2nm,0.5s,baz=134,slow=7.7,SNR=2.6
NVAR pP **sP 07 05 42.2 -1.2**
comp=Z,0.3nm,0.5s,baz=123,slow=6.7,SNR=3.3
comp=Z,0.2nm,0.5s
NVAR Mina Array Bea 82.47 325 P **P 07 05 28.3 -1.4**
LBTB Lobatse 82.79 115 LR LR 07 38 03.3
comp=Z,43nm,18.4s,baz=196,slow=33
TORD Torodi Ar. Bea 83.16 70 P **P 07 05 33.5 0.0**
comp=Z,1.8nm,0.8s,baz=237,slow=3.5,SNR=7.3
TORD pP **pP 07 05 44.7 +0.9**
comp=Z,7.3nm,0.8s,baz=269,slow=5.1,SNR=10.0
TORD sP **sP 07 05 49.0 +1.6**
comp=Z,6.1nm,0.7s,baz=268,slow=4.9,SNR=17
comp=Z,1.8nm,0.8s
LSZ Lusaka 90.05 108 LR LR 07 41 51.6
comp=Z,22nm,19.2s,baz=166,slow=32
MBAR Mbarara 100.11 97 LR LR 07 47 56.1
comp=Z,28nm,20.0s,baz=124,slow=33
WRA Warramunga Arr 122.70 209 PKP **PKPdf 07 12 02.5 -0.9**
comp=Z,0.3nm,0.7s,baz=153,slow=1.6,SNR=2.3
H11S2 WAKE ISLAND Hy 126.17 270 T T 09 31 12.9
baz=118,slow=75,SNR=446
H11S1 WAKE ISLAND Hy 126.19 270 T T 09 31 10.7
baz=118,slow=75,SNR=462
H11S3 WAKE ISLAND Hy 126.19 270 T T 09 31 11.0
baz=118,slow=75,SNR=346
H11N3 WAKE ISLAND Hy 126.54 272 T T 09 31 36.8
baz=116,slow=75,SNR=300
H11N1 WAKE ISLAND Hy 126.55 272 T T 09 31 39.0
baz=116,slow=75,SNR=96
H11N2 WAKE ISLAND Hy 126.55 272 T T 09 31 40.2
baz=116,slow=75,SNR=543
ZALV Zalesovo Beam 152.32 31 PKPbc **PKiKP 07 13 02.8 +0.2**
comp=Z,2.5nm,0.5s,baz=287,slow=3.3,SNR=9.9
ZALV Zalesovo Beam 152.32 31 **PKiKP 07 13 02.6 0.0**
KSH Kashi 152.72 65 PKPbc **PKiKP 07 13 04.9 +0.8**
MKAR Makanchi Array 155.12 46 PKPbc PKPdf 07 13 08.8 +9.0
comp=Z,0.3nm,0.7s,baz=228,slow=3.1,SNR=3.6
MKAR PKPab **PKPab 07 13 24.5 -0.1**
comp=Z,0.3nm,0.5s,baz=301,slow=2.3,SNR=3.8
GOMU GeErMu 167.96 66 PKP **PKPdf 07 13 15.6 +1.6**
GOMU pPKP sPKPdf 07 13 32.2 +4.0
GOMU sPKP 07 13 37.0
GOMU AMB AMB
comp=Z,82nm,5.0s
PZH PanZhiHua 172.00 131 PKP **PKPdf 07 13 15.5 -0.8**

IDC **06** *06:53:19.3±3.4,* **30°.38S×177°.28W,h0**km**,mb3.9**/3,
mbtmp3.9/3**,Error ellipse: s-maj=67.3km s-min=40.0km az=108.0,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.25**	**333**	Pn		Pn		06 53 44.0	-0.1
	135nm,0.3s,baz=323,slow=20,SNR=3.1								
RAO				Sn		Sg		06 53 55.4	-4.2
	381nm,0.3s,baz=40,slow=18,SNR=10.0								
CTA	**Charters Tower**	**34.41**	**279**	P		P		07 00 09.7	+1.1
	1.4nm,0.4s,baz=124,slow=10,SNR=2.2								
	1.4nm,0.4s								
ASAR	**Alice Springs**	**43.73**	**267**	P		P		07 01 25.9	-0.7
	0.4nm,0.5s,baz=103,slow=7.4,SNR=7.1								
	0.4nm,0.5s								
WRA	**Warramunga Arr**	**44.72**	**272**	P		P		07 01 34.2	-0.3
	0.5nm,0.3s,baz=110,slow=8.2,SNR=21								
	0.5nm,0.3s								
FINES	**FINESS Array B**	**145.34**	**340**	PKPbc		PKPbc		07 12 57.4	-0.8
	0.7nm,0.5s,baz=77,slow=11,SNR=4.3								

NEIC **06** *07:02:58.6±1.9,* **17°.7S±0°.2×178°.78W±0°.08,h549**km**±8**km**,**
mb4.1/20,Error ellipse: s-maj=22.4km s-min=10.5km az=166.0
IDC **06** *07:02:58.0±1.7,* **17°.74S×178°.78W,h548**km**±18**km**,mb3.3/9,*
mbtmp4.2/11,Error ellipse: s-maj=29.1km s-min=17.8km az=149.0
ISC 06 07:02:58.0±0.7**,17°.7S**±0°.1×**178°.8W**±0°.1**,h550**km**,n39,**
σ0°**80/39,mb4.0/17,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.01**	**269**	P		P		**07 04 13.6**	**+0.4**
	25nm,0.7s,baz=93,slow=6.0,SNR=15								
MSVF	**Nonsavu**	**3.01**	**269**	P		P		**07 04 13.8**	**+0.5**
DZM	**Mont Dzumac**	**14.55**	**250**	P		P		**07 06 02.1**	**-0.9**
	3.1nm,0.9s,baz=144,slow=19,SNR=1.0								
DZM	**Mont Dzumac**	**14.55**	**250**	P		P		**07 06 02.5**	**-0.5**
KOUNC	**Koumac, New Ca**	**16.24**	**257**	P		P		**07 06 19.0**	**-0.9**
KOUNC				IAmb		IAmb		07 06 28.4	
	comp=Z,11nm,1.0s								
URZ	**Urewera**	**20.81**	**189**	P		P		**07 06 59.4**	**-1.8**
	comp=Z,6.5nm,0.8s,baz=308,slow=20,SNR=2.3								
	comp=Z,6.5nm,0.8s								
EIDS	**Eidsvold**	**29.00**	**249**	P		P		**07 08 14.1**	**+0.2**
EIDS				IAmb		IAmb		07 08 36.4	
	comp=Z,13nm,1.2s								
ARMA	**Armidale**	**29.73**	**239**	P		P		**07 08 21.9**	**+1.5**
CTA	**Charters Tower**	**33.12**	**260**	P		P		**07 08 49.2**	**0.0**
	comp=Z,2.9nm,0.7s,baz=82,slow=7.1,SNR=5.5								
	comp=Z,2.9nm,0.7s								
COEN	**Coen**	**36.73**	**270**	P		P		**07 09 20.4**	**+1.0**
COEN				IAmb		IAmb		07 09 20.8	
	comp=Z,3.1nm,0.7s								
STKA	**Stephens Creek**	**38.41**	**241**	P		P		**07 09 33.9**	**+1.0**
	comp=Z,3.8nm,0.5s,baz=95,slow=9.0,SNR=10								
	comp=Z,3.8nm,0.5s								
STKA	**Stephens Creek**	**38.41**	**241**	P		P		**07 09 33.3**	**+0.4**
BBOO	**Buckleboo**	**43.19**	**241**	P		P		**07 10 11.5**	**+0.7**
WR0	**Warramunga Arr**	**44.12**	**259**	P		P		**07 10 17.5**	**-0.7**
WR0				IAmb		IAmb		07 10 20.6	
	comp=Z,6.0nm,1.4s								
WB0	**Warramunga Arr**	**44.27**	**260**	P		P		**07 10 18.8**	**-0.7**
WB0				IAmb		IAmb		07 10 41.0	
	comp=Z,5.8nm,1.4s								
WB2	**Warramunga Arr**	**44.30**	**259**	P		P		**07 10 19.0**	**-0.7**
WB2				IAmb		IAmb		07 10 22.9	
	comp=Z,4.4nm,1.1s								
WRAB	**Tennant Creek**	**44.30**	**259**	P		P		**07 10 18.9**	**-0.8**
WRA	**Warramunga Arr**	**44.31**	**259**	P		P		**07 10 18.9**	**-0.8**
	comp=Z,1.3nm,0.6s,baz=96,slow=7.8,SNR=27								
WRA				PcP		**PcP**		**07 11 52.2**	**+0.3**
	comp=Z,0.7nm,1.0s,baz=86,slow=3.3,SNR=6.0								
	comp=Z,1.3nm,0.6s								
WRA	**Warramunga Arr**	**44.31**	**259**	IAmb		IAmb		07 10 22.4	
	comp=Z,0.2nm,1.0s								
AS31	**Alice Springs**	**44.49**	**254**	P		P		**07 10 21.1**	**0.0**
AS31				IAmb		IAmb		07 10 21.9	
	comp=Z,4.5nm,0.6s								
ASAR	**Alice Springs**	**44.50**	**254**	P		P		**07 10 21.3**	**+0.1**
	comp=Z,14nm,0.6s,baz=88,slow=8.1,SNR=203								
ASAR				PcP		**PcP**		**07 11 53.0**	**+0.4**
	comp=Z,0.9nm,0.5s,baz=102,slow=3.9,SNR=6.3								
	comp=Z,14nm,0.6s								
ASAR	**Alice Springs**	**44.50**	**254**	P		P		**07 10 20.9**	**-0.3**
MIDW	**Midway**	**45.65**	**2**	P		P		**07 10 29.5**	**-0.2**
MTN	**Manton Dam**	**48.44**	**268**	P		P		**07 10 50.6**	**-0.4**
MTN				IAmb		IAmb		07 10 59.3	
	comp=Z,12nm,1.4s								
FORT	**Forrest**	**49.77**	**244**	P		P		**07 11 01.0**	**+0.3**
KNRA	**Kununurra**	**50.14**	**264**	P		P		**07 11 03.1**	**-0.5**
SIJI	**Sorong**	**51.83**	**283**	P		P		**07 11 16.1**	**+0.3**
	comp=Z,11nm,0.6s,baz=74,slow=3.6,SNR=6.0								
	comp=Z,11nm,0.6s								
PSA00	**Pilbara Seismi**	**57.61**	**255**	P		P		**07 11 56.1**	**-0.1**
MORW	**Morawa**	**60.23**	**246**	P		P		**07 12 14.0**	**+0.3**
MORW				IAmb		IAmb		07 12 29.0	
	comp=Z,20nm,1.3s								
VNDA	**Vanda**	**60.63**	**185**	P		P		**07 12 14.2**	**-1.3**
QSPA	**South Pole Qui**	**72.37**	**180**	P		P		**07 13 29.9**	**+1.6**
QSPA				IAmb		IAmb		07 13 32.8	
	comp=Z,6.3nm,1.4s								
NVAR	**Mina Array Bea**	**79.52**	**44**	P		P		**07 14 08.5**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=231,slow=8.0,SNR=2.8								
	comp=Z,0.3nm,0.6s								
SEY	**Seymchan**	**83.48**	**347**	P		P		**07 14 26.4**	**-1.3**
	comp=Z,0.6nm,0.4s,baz=83,slow=17,SNR=2.3								
	comp=Z,0.6nm,0.4s								
TXAR	**Lajitas Array**	**86.19**	**58**	P		P		**07 14 43.0**	**+1.2**
	comp=Z,0.3nm,0.7s,baz=205,slow=6.4,SNR=4.7								
	comp=Z,0.3nm,0.7s								
MKAR	**Makanchi Array**	**108.72**	**314**	PKiKP		**PKiKP**		**07 20 23.7**	**-1.1**
	comp=Z,0.3nm,0.5s,baz=124,slow=1.2,SNR=2.9								
BRTR	**Keskin Array B**	**144.37**	**315**	PKP		PKPbc		07 21 31.6	-0.5
	comp=Z,1.1nm,0.7s,baz=107,slow=4.1,SNR=4.6								
CLL	**Collm**	**145.17**	**347**	*i* PKPbc		**PKPbc**		**07 21 33.8**	**-0.2**
	comp=Z,4.0nm,0.6s								
GERES	**GERESS Array B**	**147.30**	**345**	PKPbc		**PKPbc**		**07 21 39.9**	**-0.2**
	comp=Z,1.0nm,0.4s,baz=30,slow=2.4,SNR=10								
FNA	**Florina**	**151.16**	**327**			**PKPbc**		**07 21 49.3**	**-0.3**

INET **06** *07:03:20.0±0.2,* **12°.91N×87°.72W,h146**km**±4**km**,MW3.0**
SNET **06** *07:03:21.3±1.1,* **12°.89N×87°.74W,h136**km**±9**km**,ML2.9*
ISC 06 07:03:20.6±2.4**,12°.9N**±0°.1×**87°.66W**±0°.08**,h144**km**±17**km**,**
n14,σ0°**51/21,Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.38**	**334**	*e*P		P		**07 03 40.6**	**-0.2**
CNCH				IAML				07 04 04.3	
	comp=Z,404nm,0.2s								
LCND	**La Caada**	**0.43**	**329**	*e*P		**Pn**		**07 03 40.5**	**-0.4**
LCND				*e*S		**Sn**		**07 03 56.6**	**+0.1**
LCND				IAML				07 04 07.0	
	comp=Z,169nm,0.3s								
CRIN	**San Cristobal**	**0.64**	**111**	*e*P		**Pn**		**07 03 42.4**	**+0.2**
RANC	**El Ranchito**	**0.78**	**309**	*e*P		**Pn**		**07 03 43.3**	**0.0**
PACA	**Pacayal**	**0.83**	**310**	*e*P		**Pn**		**07 03 43.7**	**+0.1**
PACA				*e*S		**Sn**		**07 04 00.8**	**-0.2**
TELN	**Telica**	**0.88**	**112**	*e*P		**Pn**		**07 03 44.1**	**+0.2**
PQSS	**Presa 15 de Se**	**1.11**	**308**	*e*P		**Pn**		**07 03 45.9**	**+0.1**
PQSS				*e*S		**Sn**		**07 04 04.7**	**-0.2**
TGUH	**Tegucigalpa,Un**	**1.18**	**19**	*e*P		**Pn**		**07 03 47.1**	**+0.5**
COEG	**Centro de Oper**	**1.36**	**300**	*e*P		**Pn**		**07 03 48.3**	**-0.1**
COEG				*e*S		**Sn**		**07 04 10.4**	**+0.9**
APYN	**Apoyeque**	**1.46**	**118**	*e*P		**Pn**		**07 03 49.2**	**-0.1**
APYN				*e*S		**Sn**		**07 04 11.9**	**+0.7**
SJTE	**Alcalda de S**	**1.47**	**297**	*e*P		**Pn**		**07 03 49.7**	**+0.2**
SJTE				*e*S		**Sn**		**07 04 11.2**	**-0.4**
SJTE				IAML				07 04 18.4	
	comp=Z,40nm,0.2s								
LFRS	**El Faro**	**1.52**	**297**	*e*P		**Pn**		**07 03 50.3**	**+0.2**
MATN	**Matagalpa**	**1.69**	**90**	*e*P		**Pn**		**07 03 51.2**	**-0.8**
JAYA	**Jayaque - finc**	**1.88**	**293**	*e*P		**Pn**		**07 03 54.7**	**+0.6**
JAYA				*e*S		**Sn**		**07 04 18.7**	**-1.1**
JAYA				IAML				07 04 21.1	
	comp=Z,167nm,0.2s								

RSNC **06** *07:07:28.4±1.6,* **6°.90N×73°.06W,h156**km**±7**km**,ML3.3,**
Mw3.7
IDC **06** *07:07:28.5±1.2,* **6°.77N×72°.86W,h166**km**±14**km**,mb2.6/1,*
mbtmp3.4/3,Error ellipse: s-maj=46.5km s-min=14.9km az=132.0
ISC 06 07:07:28.0±0.9**,6°.89N**±0°.03×**73°.08W**±0°.04**,h157**km**±6**km**,**
n34,σ1°**23/61,3C-7D,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.31**	**199**	⇓*e*P		**Pn**		**07 07 49.5**	**-0.2**
BARC				*i*				07 08 05.6	
	comp=Z,248nm,0.3s								
PAMC	**Pamplona, Colo**	**0

BRRC				*i*			07 08 11.6	
	comp=Z,184nm,0.3s							
RUSC	**La Rusia**	**0.99**	**180**	*eP*	**Pn**		**07 07 53.4**	**-0.5**
RUSC				*eS*	**Sn**		**07 08 12.5**	**-1.3**
RUSC				*i*			07 08 14.2	
	comp=Z,218nm,0.3s							
TAMC	**Tame, Arauca**	**1.36**	**109**⇓	*iP*	**Pn**		**07 07 57.9**	**+1.2**
TAMC				*eS*	**Sn**		**07 08 19.3**	**+0.6**
TAMC				*i*			07 08 20.8	
	comp=Z,129nm,0.4s							
OCAC	**Ocana**	**1.36**	**350**⇑	*eP*	**Pn**		**07 07 57.1**	**+0.2**
OCAC				*eS*	**Sn**		**07 08 18.7**	**-0.4**
OCAC				*i*			07 08 23.1	
	comp=Z,569nm,0.2s							
PTBC	**PUERTO BERRIO,**	**1.41**	**256**⇓	*eP*	**Pn**		**07 07 56.1**	**-1.1**
PTBC				*eS*	**Sn**		**07 08 18.1**	**-1.5**
PTBC				*i*			07 08 23.5	
	comp=Z,121nm,0.3s							
SPBC	**San Pablo de B**	**1.58**	**219**	*eP*	**Pn**		**07 07 58.7**	**-0.3**
SPBC				*eS*	**Sn**		**07 08 21.1**	**-1.7**
SPBC				*i*			07 08 27.5	
	comp=Z,252nm,0.3s							
NORC	**Norcasia**	**2.21**	**234**	*eP*	**Pn**		**07 08 06.1**	**0.0**
NORC				*eS*	**Sn**		**07 08 34.6**	**-0.9**
NORC				*i*			07 08 39.6	
	comp=Z,120nm,0.3s							
CHIC	**Chingaza**	**2.34**	**196**⇓	*eP*	**Pn**		**07 08 08.3**	**+0.4**
CHIC				*eS*	**Sn**		**07 08 39.0**	**+0.3**
CHIC				*i*			07 08 45.5	
	comp=Z,95nm,0.5s							
ROSC	**El Rosal**	**2.38**	**211**	P	**Pn**		**07 08 09.6**	**+1.1**
	comp=Z,134nm,0.4s,baz=90,slow=19,SNR=74							
ROSC				S	**Sn**		**07 08 37.8**	**-1.9**
	comp=Z,102nm,0.3s,baz=84,slow=17,SNR=9.2							
ROSC	**El Rosal**	**2.38**	**211**	*eP*	**Pn**		**07 08 09.6**	**+1.1**
ROSC				*eS*	**Sn**		**07 08 40.5**	**+0.9**
ROSC				*i*			07 08 47.0	
	comp=Z,232nm,0.5s							
HELC	**Santa Helena**	**2.53**	**254**	*eP*	**Pn**		**07 08 11.2**	**+1.0**
HELC				*eS*	**Sn**		**07 08 43.4**	**+0.6**
HELC				*i*			07 08 49.0	
	comp=Z,120nm,0.3s							
UREC	**San Jos de Ur**	**2.58**	**290**	*eP*	**Pn**		**07 08 09.6**	**-0.8**
UREC				*eS*	**Sn**		**07 08 41.5**	**-1.7**
VILC	**Villavicencio,**	**2.83**	**193**⇓	*eP*	**Pn**		**07 08 13.4**	**-0.3**
VILC				*eS*	**Sn**		**07 08 48.8**	**-0.2**
LL6C	**La Loma 6 Bece**	**2.83**	**356**	*eP*	**Pn**		**07 08 13.4**	**-0.1**
LL6C				*eS*	**Sn**		**07 08 48.0**	**-1.0**
LL6C				*i*			07 08 50.2	
	comp=Z,45nm,0.3s							
PTGC	**Puerto Gaitan,**	**2.83**	**161**⇑	*iP*	**Pn**		**07 08 13.0**	**-0.6**
PTGC				*eS*	**Sn**		**07 08 47.1**	**-1.8**
PTGC				*i*			07 08 49.2	
	comp=Z,71nm,0.3s							
CBOC	**Ciudad Bolivar**	**3.09**	**251**	*eP*	**Pn**		**07 08 17.6**	**+0.7**
CBOC				*eS*	**Sn**		**07 08 57.1**	**+2.3**
CBOC				*i*			07 09 05.1	
	comp=Z,43nm,0.5s							
DBBC	**Dabeiba**	**3.11**	**273**	*eP*	**Pn**		**07 08 17.2**	**0.0**
DBBC				*i*			07 09 00.7	
	comp=Z,162nm,0.3s							
SDV	**Santo Domingo**	**3.13**	**51**	P	**Pn**		**07 08 18.7**	**+1.2**
	comp=Z,7.3nm,0.3s,baz=215,slow=7.6,SNR=3.6							
SDV				S	**Sn**		**07 08 55.1**	**-0.7**
	comp=Z,59nm,0.4s,baz=68,slow=24,SNR=25							
SDV	**Santo Domingo**	**3.13**	**51**	*eP*	**Pn**		**07 08 18.7**	**+1.2**
SDV				*eS*	**Sn**		**07 08 55.5**	**-0.3**
SDV				*i*			07 08 58.7	
	comp=Z,52nm,0.5s							
ANIL	**Santa Ana**	**3.32**	**224**⇓	*eP*	**Pn**		**07 08 21.4**	**+1.4**
ANIL				*eS*	**Sn**		**07 09 02.2**	**+1.9**
PRAC	**Prado**	**3.63**	**210**	*eP*	**Pn**		**07 08 23.8**	**+0.1**
PRAC				*eS*	**Sn**		**07 09 08.0**	**+0.9**
PRAC				*i*			07 09 13.0	
	comp=Z,98nm,0.5s							
SJCC	**San Jacinto, C**	**3.64**	**325**	*eP*	**Pn**		**07 08 23.0**	**-0.8**
SJCC				*eS*	**Sn**		**07 09 04.2**	**-3.0**
SJCC				*i*			07 09 08.2	
	comp=Z,35nm,0.5s							
ORTC	**Ortega, Tolima**	**3.66**	**216**	*eP*	**Pn**		**07 08 25.1**	**+0.9**
ORTC				*eS*	**Sn**		**07 09 09.2**	**+1.4**
ORTC				*i*			07 09 16.1	
	comp=Z,84nm,0.7s							
PLMC	**San Jos del P**	**3.75**	**238**	*eP*	**Pn**		**07 08 25.5**	**+0.3**
PLMC				*eS*	**Sn**		**07 09 10.4**	**+0.7**
PLMC				*i*			07 09 22.2	
	comp=Z,27nm,0.4s							
CRJC	**Cerrejon, Guaj**	**4.11**	**3**⇑	*eP*	**Pn**		**07 08 29.1**	**-0.8**
CRJC				*eS*	**Sn**		**07 09 17.8**	**-0.4**
CRJC				*i*			07 09 20.5	
	comp=Z,46nm,0.3s							
GUVC	**San Jose del G**	**4.34**	**174**	*eP*	**Pn**		**07 08 30.8**	**-2.1**
GUVC				*eS*	**Sn**		**07 09 23.3**	**-0.2**
GUVC				*i*			07 09 46.6	
	comp=Z,53nm,0.1s							
MACC	**Macarena, Meta**	**4.78**	**189**	*eP*	**Pn**		**07 08 37.0**	**-1.7**
MACC				*eS*	**Sn**		**07 09 29.9**	**-3.9**
MACC				*i*			07 09 34.8	
	comp=Z,24nm,0.6s							
GARC	**Garzon, Huila**	**5.25**	**207**	*eP*	**Pn**		**07 08 45.5**	**+0.3**
GARC				*eS*	**Sn**		**07 09 45.6**	**+0.2**
GARC				*i*			07 09 51.7	
	comp=Z,22nm,0.2s							
LPAZ	**La Paz**	**23.54**	**168**	pP	pP		07 12 55.1	-0.2
	comp=Z,0.9nm,0.7s,baz=330,slow=9.1,SNR=2.9							
TXAR	**Lajitas Array**	**36.45**	**312**	P	**P**		**07 14 19.7**	**+1.7**
	comp=Z,0.2nm,0.9s,baz=119,slow=9.4,SNR=2.5							
	comp=Z,0.2nm,0.9s							
ASAR	**Alice Springs**	**149.19**	**234**	PKPbc	**PKPbc**		**07 26 58.0**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=109,slow=3.9,SNR=4.1							
WRA	**Warramunga Arr**	**150.41**	**241**	PKPbc	**PKPbc**		**07 27 01.3**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=107,slow=2.8,SNR=18							

*NOU **06** 07:13:56.8,41.°68S×174.°54E,h53km,MLv3.8/9,Cook Strait, New Zealand*
*WEL **06** 07:13:57.7,42.°5±4.°×17.°4E±.°,h51km±6km, M2.9/19, ML3.3/19,MLv2.9/19,Error ellipse: s-maj=0.0km s-min=0.0km az=125.4*

ISC 06 07:13:56.7±1.3,41.°65S±0.°03×174.°41E±0.°03,h61km±7km, n94,σ1°04/108,Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.18**	**237**	P	**Pn**	**07 14 07.0**	**+0.9**
CMWZ				S	**Sn**	**07 14 14.1**	**+1.1**
SNZO	**South Karori**	**0.41**	**33**	P	**Pn**	**07 14 08.2**	**+0.5**
BSWZ	**Blackbirch Sta**	**0.41**	**261**	P	**Pn**	**07 14 08.1**	**+0.3**
TUWZ	**Tuamarina**	**0.42**	**302**	P	**Pn**	**07 14 07.4**	**-0.4**
TUWZ				S	**Sn**	**07 14 14.1**	**-1.9**
BHW	**Baring Head**	**0.42**	**55**	P	**Pn**	**07 14 08.6**	**+0.7**
BHW				S	**Sn**	**07 14 16.1**	**0.0**
TCW	**Tory Channel**	**0.45**	**347**	P	**Pn**	**07 14 07.9**	**-0.3**
TCW				S	**Sn**	**07 14 14.7**	**-1.9**
WEL	**Wellington**	**0.45**	**36**	P	**Pn**	**07 14 08.8**	**+0.5**
PLWZ	**Palliser**	**0.64**	**83**	P	**Pn**	**07 14 11.3**	**+1.0**
MSWZ	**Moikau Station**	**0.67**	**70**	P	**Pn**	**07 14 11.6**	**+0.9**
MSWZ				S	**Sn**	**07 14 21.5**	**+0.6**
CAW	**Cannon Point**	**0.73**	**42**	P	**Pn**	**07 14 11.9**	**+0.6**
CAW				S	**Sn**	**07 14 22.5**	**+0.3**
PAWZ	**Paruwai Farm**	**0.81**	**71**	P	**Pn**	**07 14 13.1**	**+0.7**
KIW	**Kapiti Island**	**0.87**	**26**	P	**Pn**	**07 14 13.7**	**+0.5**
KIW				S	**Sn**	**07 14 24.8**	**-0.5**
NNZ	**Nelson**	**0.89**	**299**	P	**Pn**	**07 14 13.2**	**-0.1**
NNZ				S	**Sn**	**07 14 24.0**	**-1.5**
DUWZ	**D'Urville Isla**	**0.93**	**336**	P	**Pn**	**07 14 13.8**	**0.0**
DUWZ				S	**Sn**	**07 14 25.1**	**-1.3**
MTW	**Mount Morrison**	**0.96**	**59**	P	**Pn**	**07 14 14.6**	**+0.4**
MTW				S	**Sn**	**07 14 27.6**	**+0.5**
TRWZ	**Traveller**	**0.99**	**76**	P	**Pn**	**07 14 15.6**	**+1.0**
TRWZ				S	**Sn**	**07 14 28.8**	**+0.8**
KHZ	**Kahutara**	**1.00**	**220**	P	**Pn**	**07 14 16.0**	**+1.3**
KHZ				S	**Sn**	**07 14 28.9**	**+0.7**
KHZ	**Kahutara**	**1.00**	**220**	P	**Pn**	**07 14 16.1**	**+1.3**
OGWZ	**Otaki Gorge**	**1.01**	**35**	P	**Pn**	**07 14 15.4**	**+0.5**
OGWZ				S	**Sn**	**07 14 28.2**	**-0.1**
HOWZ	**Holdsworth Sta**	**1.12**	**48**	P	**Pn**	**07 14 16.6**	**+0.2**
HOWZ				S	**Sn**	**07 14 31.2**	**+0.2**
THZ	**Tophouse**	**1.13**	**264**	P	**Pn**	**07 14 16.8**	**+0.2**
TMWZ	**Te Maipa**	**1.24**	**64**	P	**Pn**	**07 14 18.2**	**+0.3**
MRNZ	**Matariki Terra**	**1.27**	**281**	P	**Pn**	**07 14 18.8**	**+0.5**
MRZ	**Mangatainoka R**	**1.32**	**42**	P	**Pn**	**07 14 19.3**	**+0.3**
TIWZ	**Tintock**	**1.41**	**52**	P	**Pn**	**07 14 20.3**	**0.0**
OHWZ	**Ohakea**	**1.60**	**26**	P	**Pn**	**07 14 24.1**	**+1.4**
PRWZ	**Pori Road**	**1.61**	**48**	P	**Pn**	**07 14 23.0**	**+0.1**
POWZ	**Post Office Ro**	**1.62**	**40**	P	**Pn**	**07 14 23.2**	**+0.1**
QRZ	**Quartz Range**	**1.64**	**300**	P	**Pn**	**07 14 23.9**	**+0.6**
QRZ	**Quartz Range**	**1.64**	**300**	P	**Pn**	**07 14 24.4**	**+1.1**
GVZ	**Greta Valley S**	**1.67**	**217**	P	**Pn**	**07 14 24.6**	**+1.0**
BFZ	**Birch Farm**	**1.69**	**56**	P	**Pn**	**07 14 23.6**	**-0.4**
BFZ	**Birch Farm**	**1.69**	**56**	P	**Pn**	**07 14 23.9**	**0.0**
DVHZ	**Dannevirke**	**1.90**	**45**	P	**Pn**	**07 14 26.2**	**-0.5**
WAZ	**Wanganui**	**1.94**	**13**	P	**Pn**	**07 14 29.4**	**+2.0**
LTZ	**Lake Taylor**	**1.95**	**234**	P	**Pn**	**07 14 28.2**	**+0.7**
DSZ	**Denniston Nort**	**1.96**	**266**	P	**Pn**	**07 14 28.2**	**+0.6**
ANWZ	**Angora Road**	**1.96**	**53**	P	**Pn**	**07 14 27.1**	**-0.5**
TSZ	**Takapari Road**	**1.98**	**37**	P	**Pn**	**07 14 27.9**	**0.0**
AMCZ	**Amberley**	**2.01**	**220**	P	**Pn**	**07 14 28.6**	**+0.4**
PRHZ	**Porangahau**	**2.18**	**51**	P	**Pn**	**07 14 29.9**	**-0.7**
LREZ	**Lake Rotokare**	**2.19**	**360**	P	**Pn**	**07 14 33.6**	**+2.9**
PNHZ	**Pukenui**	**2.20**	**39**	P	**Pn**	**07 14 30.6**	**-0.3**
WPHZ	**Waipukurau**	**2.21**	**45**	P	**Pn**	**07 14 30.5**	**-0.4**
NMEZ	**Namu Road**	**2.27**	**350**	P	**Pn**	**07 14 34.0**	**+2.2**
OKCZ	**Okains Bay**	**2.30**	**205**	P	**Pn**	**07 14 32.7**	**+0.5**
KHEZ	**Kahui Hut**	**2.37**	**353**	P	**Pn**	**07 14 35.3**	**+2.0**
NEZ	**North Egmont**	**2.39**	**354**	P	**Pn**	**07 14 36.0**	**+2.4**
MTVZ	**Mangateitei**	**2.40**	**20**	P	**Pn**	**07 14 35.2**	**+1.5**
NBEZ	**Newall Road No**	**2.42**	**350**	P	**Pn**	**07 14 35.9**	**+2.1**
OXZ	**Oxford**	**2.42**	**226**	P	**Pn**	**07 14 33.5**	**-0.4**
MQZ	**McQueen's Vall**	**2.43**	**212**	P	**Pn**	**07 14 33.5**	**-0.4**
INZ	**Inchbonnie**	**2.45**	**243**	P	**Pn**	**07 14 34.7**	**+0.4**
MOVZ	**Moawhango**	**2.46**	**25**	P	**Pn**	**07 14 34.9**	**+0.3**
PXZ	**Pawanui**	**2.46**	**50**	P	**Pn**	**07 14 33.5**	**-0.9**
WNVZ	**Wahianoa**	**2.49**	**22**	P	**Pn**	**07 14 37.3**	**+2.3**
BHHZ	**Black Hill Sta**	**2.50**	**31**	P	**Pn**	**07 14 35.0**	**0.0**
KRHZ	**Kereru**	**2.50**	**37**	P	**Pn**	**07 14 34.4**	**-0.6**
VRZ	**Vera Road**	**2.54**	**6**	P	**Pn**	**07 14 37.4**	**+1.9**
TUVZ	**Tukino**	**2.56**	**22**	P	**Pn**	**07 14 37.0**	**+1.1**
NGZ	**Ngauruhoe**	**2.63**	**21**	P	**Pn**	**07 14 38.3**	**+1.3**
SNVZ	**South Ngauruho**	**2.63**	**21**	P	**Pn**	**07 14 38.2**	**+1.2**
KAHZ	**Kahuranaki**	**2.64**	**46**	P	**Pn**	**07 14 35.9**	**-0.9**
OTVZ	**Oturere**	**2.66**	**21**	P	**Pn**	**07 14 38.4**	**+1.0**
RACZ	**Rakaia**	**2.67**	**218**	P	**Pn**	**07 14 36.7**	**-0.5**
NNVZ	**North Ngauruho**	**2.68**	**20**	P	**Pn**	**07 14 38.8**	**+1.3**
WTVZ	**West Tongariro**	**2.69**	**20**	P	**Pn**	**07 14 38.8**	**+1.2**
ETVZ	**East Tongariro**	**2.70**	**22**	P	**Pn**	**07 14 38.8**	**+1.0**
KWHZ	**Kaweka Forest**	**2.70**	**35**	P	**Pn**	**07 14 37.1**	**-0.6**
TMVZ	**Te Maari**	**2.72**	**22**	P	**Pn**	**07 14 38.9**	**+0.9**
KRVZ	**Karewarewa**	**2.72**	**21**	P	**Pn**	**07 14 39.7**	**+1.6**
NTVZ	**North Tongarir**	**2.73**	**21**	P	**Pn**	**07 14 39.3**	**+1.1**
MCHZ	**McNeill Hill**	**2.81**	**39**	P	**Pn**	**07 14 38.5**	**-0.7**
BKZ	**Black Stump Fm**	**2.95**	**33**	P	**Pn**	**07 14 40.2**	**-0.9**
BKZ	**Black Stump Fm**	**2.95**	**33**	P	**Pn**	**07 14 39.8**	**-1.3**
WACZ	**Wakanui South**	**2.97**	**219**	P	**Pn**	**07 14 41.1**	**-0.3**
WVZ	**Waitaha Valley**	**3.07**	**241**	P	**Pn**	**07 14 43.0**	**+0.3**
HIZ	**Hauiti**	**3.15**	**6**	P	**Pn**	**07 14 45.4**	**+1.6**
HIZ	**Hauiti**	**3.15**	**6**	P	**Pn**	**07 14 45.0**	**+1.1**
MRHZ	**Matea Rd**	**3.21**	**29**	P	**Pn**	**07 14 43.7**	**-1.0**
RPZ	**Rata Peaks**	**3.22**	**229**	P	**Pn**	**07 14 44.7**	**-0.1**
RPZ	**Rata Peaks**	**3.22**	**229**	P	**Pn**	**07 14 45.8**	**+1.0**
ARCZ	**Arundel**	**3.31**	**225**	P	**Pn**	**07 14 45.6**	**-0.3**
RTZ	**Ruatahuna**	**3.62**	**34**	P	**Pn**	**07 14 49.1**	**-1.2**
TMZ	**Timaru**	**3.70**	**221**	P	**Pn**	**07 14 50.9**	**-0.5**
FOZ	**Fox Glacier**	**3.88**	**239**	P	**Pn**	**07 14 53.8**	**+0.1**
URZ	**Urewera**	**3.97**	**32**	P	**Pn**	**07 14 53.1**	**-2.0**
URZ	**Urewera**	**3.97**	**32**	P	**Pn**	**07 14 54.5**	**-0.6**
LBZ	**Lake Benmore**	**4.13**	**227**	P	**Pn**	**07 14 57.3**	**+0.1**
ODZ	**Otahua Downs**	**4.36**	**218**	P	**Pn**	**07 14 59.7**	**-0.7**
ODZ	**Otahua Downs**	**4.36**	**218**	P	**Pn**	**07 14 59.9**	**-0.5**
RUMZ	**Raukumara Rang**	**4.46**	**35**	P	**Pn**	**07 15 00.4**	**-1.4**
JCZ	**Jackson Bay**	**4.79**	**238**	P	**Pn**	**07 15 06.4**	**+0.1**
CTZ	**Chatham Island**	**6.93**	**110**	P	**Pn**	**07 15 37.0**	**+1.5**

*IDC **06** 07:19:26.6±1.7,23.°86S×66.°84W,h198km±20km,mb3.2/1, mbtmp3.8/6,Error ellipse: s-maj=30.4km s-min=19.8km az=136.0*
*GUC **06** 07:19:26.9±0.6,24.°00S×67.°16W,h229km±11km,ML4.0*
*NEIC **06** 07:19:26.1±1.9,24.°03S±0.°02×66.°9W±0.°1,h197km±10km, mb4.4/3,Md3.2(SJA),Error ellipse: s-maj=18.8km s-min=2.0km az=97.0*

ISC 06 07:19:24.5±0.7,24.°02S±0.°05×66.°84W±0.°07,h200km,n57, σ1°58/75,9C,Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AF01	**San Pedro de A**	**1.63**	**310**		**Pn**	**07 20 02.1**	**+2.4**
LVC	**Limon Verde**	**2.37**	**306**	P	**Pn**	**07 20 08.8**	**+1.5**
	94nm,0.3s,baz=120,slow=8.5,SNR=961						
LVC				S	**Sn**	**07 20 40.7**	**+0.1**
	63nm,0.2s,baz=283,slow=19,SNR=19						
LVC	**Limon Verde**	**2.37**	**306**		**Pn**	**07 20 09.0**	**+1.7**
LVC	**Limon Verde**	**2.37**	**306**⇑	*iP*	**Pn**	**07 20 09.0**	**+1.7**
LVC				*i* S	**Sn**	**07 20 41.2**	**+0.6**
PB15	**IPOC Station P**	**2.55**	**288**		**Pn**	**07 20 10.5**	**+1.4**
PB15	**IPOC Station P**	**2.55**	**288**⇑	*iP*	**Pn**	**07 20 10.8**	**+1.6**
PB15				*i* S	**Sn**	**07 20 43.6**	**-0.3**
GO02	**Mina Guanaco**	**2.75**	**245**		**Pn**	**07 20 12.9**	**+1.3**
GO02	**Mina Guanaco**	**2.75**	**245**⇑	*iP*	**Pn**	**07 20 12.9**	**+1.3**
GO02				IAML		07 20 49.1	
	comp=E,752nm,0.2s						
PB06	**IPOC Station P**	**2.83**	**297**		**Pn**	**07 20 13.4**	**+1.0**
PB06	**IPOC Station P**	**2.83**	**297**⇑	*iP*	**Pn**	**07 20 13.8**	**+1.4**
PB06				*i* S	**Sn**	**07 20 48.8**	**-0.9**
PB06				IAML		07 20 51.2	
	comp=N,294nm,0.2s						
PB09	**IPOC Station P**	**3.13**	**314**		**Pn**	**07 20 17.7**	**+1.8**
PB09	**IPOC Station P**	**3.13**	**314**⇑	*iP*	**Pn**	**07 20 17.6**	**+1.8**
PB09				*i* S	**Sn**	**07 20 56.4**	**+0.3**
PB09				IAML		07 20 58.9	
	comp=E,137nm,0.7s						
PB10	**IPOC Station P**	**3.44**	**278**		**Pn**	**07 20 20.2**	**+0.7**
PB10	**IPOC Station P**	**3.44**	**278**⇑	*iP*	**Pn**	**07 20 20.4**	**+1.0**
PB10				*i* S	**Sn**	**07 21 00.9**	**-1.5**
PB10				IAML		07 21 04.0	
	comp=N,92nm,0.4s						
PB04	**IPOC Station P**	**3.48**	**298**		**Pn**	**07 20 20.8**	**+0.7**
PB04	**IPOC Station P**	**3.48**	**298**⇑	*iP*	**Pn**	**07 20 20.8**	**+0.7**
PB04				*i* S	**Sn**	**07 21 01.5**	**-2.0**
AC02	**Maricunga**	**3.49**	**216**		**Pn**	**07 20 22.1**	**+1.7**
PB07	**IPOC Station P**	**3.62**	**308**		**Pn**	**07 20 22.1**	**+0.3**
PB07	**IPOC Station P**	**3.62**	**308**⇑	*iP*	**Pn**	**07 20 22.6**	**+0.8**
PB07				*i* S	**Sn**	**07 21 04.4**	**-2.3**
PB01	**IPOC Station P**	**3.84**	**320**		**Pn**	**07 20 25.1**	**+0.7**
PB01	**IPOC Station P**	**3.84**	**320**	*i* P	**Pn**	**07 20 25.2**	**+0.7**
PB01				*i* S	**Sn**	**07 21 09.2**	**-2.3**
PB02	**IPOC Station P**	**3.90**	**313**		**Pn**	**07 20 25.6**	**+0.4**
PB02	**IPOC Station P**	**3.90**	**313**	*i* P	**Pn**	**07 20 25.6**	**+0.4**
PB02				*i* S	**Sn**	**07 21 10.2**	**-2.6**
AC01	**Pan de Azucar**	**4.02**	**237**		**Pn**	**07 20 26.3**	**-0.2**
AC01	**Pan de Azucar**	**4.02**	**237**⇑	*iP*	**Pn**	**07 20 26.3**	**-0.2**
AC01				*i* S	**Sn**	**07 21 12.4**	**-2.8**
PB08	**IPOC Station P**	**4.42**	**330**		**Pn**	**07 20 33.4**	**+1.5**
PB08	**IPOC Station P**	**4.42**	**330**	*i* P	**Pn**	**07 20 33.4**	**+1.5**
PB08				*i* S	**Sn**	**07 21 24.4**	**-0.4**
PATCX	**Punta Patache**	**4.42**	**315**		**Pn**	**07 20 31.6**	**0.0**
PATCX	**Punta Patache**	**4.42**	**315**	*i* P	**Pn**	**07 20 31.5**	**-0.2**
PATCX				*i* S	**Sn**	**07 21 21.2**	**-3.3**
AC06	**Mina Casimiro**	**4.60**	**223**		**Pn**	**07 20 33.8**	**0.0**
AC06	**Mina Casimiro**	**4.60**	**223**	*eP*	**Pn**	**07 20 33.5**	**-0.3**
AC06				*i* S	**Sn**	**07 21 25.9**	**-2.4**
TA01	**Diego Aracena**	**4.63**	**317**	Pn	**Pn**	**07 20 34.5**	**+0.4**
GO03	**Copiap**	**4.70**	**220**	Pn	**Pn**	**07 20 35.8**	**+0.7**
GO03	**Copiap**	**4.70**	**220**	*eP*	**Pn**	**07 20 35.0**	**0.0**
GO03				*eS*	**Sn**	**07 21 28.3**	**-2.4**
TA02	**Huaiquique**	**4.82**	**320**	Pn	**Pn**	**07 20 36.1**	**-0.6**
PB11	**IPOC Station P**	**4.98**	**328**	Pn	**Pn**	**07 20 38.6**	**-0.2**
PB11	**IPOC Station P**	**4.98**	**328**	*i* P	**Pn**	**07 20 38.7**	**-0.2**
PB11				*i* S	**Sn**	**07 21 34.3**	**-3.2**
AC04	**Llanos de Chal**	**5.65**	**222**	Pn	**Pn**	**07 20 47.3**	**+0.1**
LCO	**Las Campanas**	**6.06**	**214**	Pn	**Pn**	**07 20 52.1**	**-0.6**
PB16	**IPOC Station P**	**6.18**	**336**		**Pn**	**07 20 55.1**	**+0.4**
PB12	**IPOC Station P**	**6.29**	**328**	Pn	**Pn**	**07 20 55.7**	**+0.1**
CO01	**Juntas del Tor**	**6.61**	**205**	Pn	**Pn**	**07 21 02.7**	**+2.9**
PB18	**Visviri**	**6.86**	**338**	Pn	**Pn**	**07 21 04.4**	**+0.9**
CO03	**El Pedregal**	**7.61**	**206**	Pn	**Pn**	**07 21 13.2**	**+0.5**
LPAZ	**La Paz**	**7.79**	**351**	P	**Pn**	**07 21 17.0**	**+1.3**
	comp=N,0.7nm,0.3s,baz=186,slow=4.1,SNR=12						
LPAZ				S	**Sn**	**07 22 42.0**	**-2.0**
	comp=N,1.1nm,0.7s,baz=38,slow=25,SNR=2.1						
LPAZ	**La Paz**	**7.79**	**351**	Pn	**Pn**	**07 21 18.2**	**+2.6**
SIV	**San Ignacio**	**9.65**	**35**	P	**Pn**	**07 21 39.2**	**-0.1**
	comp=N,1.7nm,0.3s,baz=223,slow=11,SNR=26						
SIV				S	**Sn**	**07 23 22.3**	**-5.1**
	comp=N,0.6nm,0.8s,baz=299,slow=19,SNR=1.0						
BO01	**Tunca**	**10.98**	**199**	Pn	**Pn**	**07 21 55.6**	**-0.7**
PLCA	**Paso Flores**	**16.96**	**190**	P	**Pn**	**07 23 12.7**	**+2.5**
	comp=N,1.2nm,0.9s,baz=355,slow=12,SNR=1.7						
PLCA	**Paso Flores**	**16.96**	**190**	P	**Pn**	**07 23 10.7**	**+0.5**
PLCA				IAmb	IAmb	07 23 39.7	
	comp=Z,6.1nm,1.4s						
BDFB	**Brasilia**	**19.55**	**68**	P	**Pn**	**07 23 39.9**	**-1.3**
	comp=Z,8.3nm,0.7s,baz=241,slow=12,SNR=15						
BDFB	**Brasilia**	**19.55**	**68**	P	**Pn**	**07 23 39.2**	**-1.9**
BDFB				IAmb	IAmb	07 23 40.7	
	comp=Z,7.8nm,0.7s						
BIRV	**Birongo**	**34.29**	**1**	P	**P**	**07 25 53.9**	**+2.0**
BIRV				IAmb	IAmb	07 26 08.4	
	comp=Z,57nm,1.5s						
TORD	**Torodi Ar. Bea**	**76.44**	**69**	P	**P**	**07 30 53.4**	**+0.8**
	comp=Z,0.3nm,0.4s,baz=256,slow=5.2,SNR=5.5						
	comp=Z,0.3nm,0.4s						
TORD	**Torodi Ar. Bea**	**76.44**	**69**	P	**P**	**07 30 54.1**	**+1.6**
WRA	**Warramunga Arr**	**131.68**	**207**	PKP	**PKiKP**	**07 38 16.9**	**+1.5**
	comp=Z,0.3nm,0.7s,baz=176,slow=1.6,SNR=5.7						
MKAR	**Makanchi Array**	**146.44**	**40**	PKPbc	**PKiKP**	**07 38 44.1**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=327,slow=2.4,SNR=4.7						

*NNC **06** 07:22:28.8±1.1,49.°99N×78.°64E,h0km,mb3.4,mpv3.1, Error ellipse: s-maj=11.7km s-min=5.2km az=72.0, Suspected Mining explosion.*
*IDC **06** 07:22:30.1±1.0,50.°05N×78.°71E,h0km,mbtmp2.9/2, ML2.4/2,Error ellipse: s-maj=13.0km s-min=6.2km az=67.0*

ISC 06 07:22:30.1±1.0,50.°11N±0.°04×78.°82E±0.°05,h0km,n19, σ1°04/32,18C-6D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.51**	**338**	⇑P	**Pb**	**07 22 41.0**	**-1.0**
KUR07				⇓S	**Sb**	**07 22 49.9**	**-0.1**
KUR14	**Kurchatov Arra**	**0.53**	**344**	⇑P	**Pb**	**07 22 41.2**	**-1.1**
KUR14				⇑S	**Sb**	**07 22 50.2**	**-0.2**
KUR06	**Kurchatov Arra**	**0.53**	**339**	⇑P	**Pb**	**07 22 41.2**	**-1.1**
KUR06				⇑S	**Sb**	**07 22 50.2**	**-0.3**
KUR15	**Kurchatov Arra**	**0.54**	**342**	⇑P	**Pb**	**07 22 41.3**	**-1.1**
KUR15				⇑S	**Sb**	**07 22 50.9**	**+0.2**
KURBB	**Kurchatov Arra

comp=Z,320nm,0.3s
UREC San Jos de Ur 2.59 291 *e*P Pn 07 24 48.4 -1.0
UREC *e*S Sn 07 25 19.7 -2.7
UREC *i* 07 25 31.9
comp=Z,233nm,0.3s
LL1C La Loma 1 Cana 2.74 350 *e*P Pn 07 24 53.8 +2.5
LL1C *e*S Sn 07 25 28.6 +3.0
VILC Villavicencio, 2.76 193⇓ *e*P Pn 07 24 51.3 -0.3
VILC *e*S Sn 07 25 26.3 0.0
PTGC Puerto Gaitan, 2.77 160⇓ *i*P Pn 07 24 51.2 -0.5
PTGC *e*S Sn 07 25 25.2 -1.2
PTGC *i* 07 25 27.4
comp=Z,221nm,0.3s
LL6C La Loma 6 Bece 2.90 356⇑ *e*P Pn 07 24 52.7 -0.5
LL6C *e*S Sn 07 25 28.7 -0.4
LL6C *i* 07 25 35.1
comp=Z,150nm,0.5s
SDV Santo Domingo 3.18 50 P Pn 07 24 56.9 0.0
comp=Z,178nm,0.4s,baz=231,slow=8.7,SNR=55
SDV S Sn 07 25 33.9 -1.8
comp=Z,104nm,0.5s,baz=270,slow=20,SNR=6.9
SDV Santo Domingo 3.18 50 Pn Pn 07 24 57.1 +0.2
ARGC Ariguani, Magd 3.23 339 *e*P Pn 07 24 58.1 +0.8
ARGC *e*S Sn 07 25 39.7 +3.2
ARGC *i* 07 25 43.9
comp=Z,77nm,0.4s
ANIL Santa Ana 3.27 225 *e*P Pn 07 24 58.4 +0.2
ANIL *e*S Sn 07 25 40.2 +2.3
PRAC Prado 3.57 210 *e*P Pn 07 25 01.3 -0.5
PRAC *e*S Sn 07 25 43.9 -0.6
PRAC *i* 07 25 50.4
comp=Z,419nm,0.4s
ORTC Ortega, Tolima 3.61 217 *e*P Pn 07 25 02.6 +0.3
ORTC *e*S Sn 07 25 46.4 +1.1
ORTC *i* 07 25 49.6
comp=Z,232nm,0.2s
SJCC San Jacinto, C 3.69 326 Pn Pn 07 25 01.9 -1.5
SJCC San Jacinto, C 3.69 326 *e*P Pn 07 25 02.3 -1.0
SJCC *e*S Sn 07 25 43.2 -4.0
SJCC *i* 07 25 58.0
comp=Z,98nm,0.6s
PLMC San Jos del P 3.71 239⇑ *e*P Pn 07 25 03.4 -0.2
PLMC *e*S Sn 07 25 46.1 -1.5
PLMC *i* 07 25 51.1
comp=Z,70nm,0.2s
CRJC Cerrejon, Guaj 4.17 3 *e*P Pn 07 25 08.5 -1.1
CRJC *e*S Sn 07 25 56.3 -2.3
CRJC *i* 07 26 03.5
comp=Z,132nm,0.3s
GUVC San Jose del G 4.28 174 *e*P Pn 07 25 10.9 0.0
GUVC *e*S Sn 07 25 59.7 -1.2
GUVC *i* 07 26 05.7
comp=Z,118nm,0.4s
YOTC Yotoco, Valle 4.30 229 *e*P Pn 07 25 10.6 -0.7
YOTC *e*S Sn 07 25 57.5 -4.0
SMRC Santa Marta, M 4.46 345 *e*P Pn 07 25 13.3 +0.1
SMRC *e*S Sn 07 26 02.1 -3.0
SMRC *i* 07 26 03.9
comp=Z,76nm,0.4s
MACC Macarena, Meta 4.71 189 *e*P Pn 07 25 15.0 -1.7
MACC *e*S Sn 07 26 07.5 -3.6
MACC *i* 07 26 18.7
comp=Z,57nm,0.4s
MARP Paez Belalcaza 4.88 216 *e*P Pn 07 25 19.7 +0.6
MARP *e*S Sn 07 26 16.2 +0.8
MARP *i* 07 26 19.8
comp=Z,18nm,0.4s
URIC Uribia, Colomb 4.97 12 Pn Pn 07 25 18.3 -1.6
GARC Garzon, Huila 5.19 208⇓ *e*P Pn 07 25 22.1 -1.1
GARC *e*S Sn 07 26 19.7 -3.1
GARC *i* 07 26 24.8
comp=Z,73nm,0.5s
BAUV El Baul 5.42 67 P Pn 07 25 24.3 -1.7
PCON Cinco Dias 5.55 217 *e*P Pn 07 25 29.4 +1.1
PCON *e*S Sn 07 26 35.5 +3.7
PCON *i* 07 27 08.5
comp=Z,27nm,0.4s
POPC Popayan, Colom 5.56 220 *e*P Pn 07 25 27.8 -0.2
POPC *e*S Sn 07 26 34.7 +3.2
SOTA Rioblanco 5.83 217 *e*P Pn 07 25 32.9 +1.0
SOTA *i* 07 26 50.8
comp=Z,20nm,0.7s
OTAV Otavalo 8.45 219 Pn Pn 07 26 05.6 -1.1
COHC Cochancay 11.09 214 Pn Pn 07 26 42.9 +1.6
MTDJ Mount Denham 12.13 339 Pn Pn 07 26 54.2 -0.6
CBYP Canovanas 13.38 31 Pn Pn 07 27 09.7 -1.2
CDVI St. Croix 13.56 36 Pn Pn 07 27 13.5 +0.5
SAML Samuel 18.52 148 P P 07 28 10.0 -1.5
PAYG Puerto Ayora 18.71 247 P P 07 28 15.1 +1.5
LPAZ La Paz 23.48 168 pP pP 07 29 34.2 +0.7
comp=Z,1.1nm,0.8s,baz=344,slow=12,SNR=3.1
Y49A Blount Mountai 29.59 337 P P 07 29 59.0 +1.6
Y49A IAmb IAmb 07 30 30.2
comp=Z,7.4nm,1.1s
U54A Nelsons Funny 30.62 346 P P 07 30 06.8 +0.4
V48A Smith Brothers 31.42 338 P P 07 30 15.2 +1.9
V48A IAmb IAmb 07 30 15.8
comp=Z,5.1nm,0.8s
WVT Waverly 32.14 337 P P 07 30 20.9 +1.2
WVT IAmb IAmb 07 30 21.2
comp=Z,5.3nm,1.3s
WLAR White Oak Lake 32.53 328 P P 07 30 23.2 +0.1
WLAR IAmb IAmb 07 30 55.3
comp=Z,4.9nm,0.8s
WHAR Wooly Hollow 33.38 331 P P 07 30 31.3 +0.9
WHAR IAmb IAmb 07 30 45.6
comp=Z,4.3nm,1.2s
LCAR Lake Charles 33.48 333 P P 07 30 31.5 +0.2
LCAR IAmb IAmb 07 31 02.6
comp=Z,5.6nm,1.4s
P52A Corning 33.66 347 P P 07 30 32.3 -0.6
P52A IAmb IAmb 07 30 46.4
comp=Z,9.9nm,1.3s
PBMO Poplar Bluff 33.76 334 P P 07 30 35.2 +1.5
PBMO IAmb IAmb 07 30 35.4
comp=Z,3.9nm,0.8s
FCAR Ozark Folk Cen 33.79 332 P P 07 30 33.4 -0.5
FCAR IAmb IAmb 07 30 34.6
comp=Z,2.2nm,0.5s
SIUC Southern Illin 34.06 337 P P 07 30 37.7 +1.4
SIUC IAmb IAmb 07 30 59.7
comp=Z,4.0nm,0.8s
U40A Yellville 34.51 331 P P 07 30 41.3 +1.1
CCM Cathedral Cave 35.18 335 P P 07 30 46.1 +0.1
S39A Bolivar 35.81 332 P P 07 30 50.8 -0.4
R40A Maddies Statio 35.82 334 P P 07 30 50.9 -0.5
R40A IAmb IAmb 07 30 52.0
comp=Z,2.4nm,0.6s
TXAR Lajitas Array 36.48 312 P P 07 30 57.8 +0.5
comp=Z,0.4nm,0.4s,baz=130,slow=9.2,SNR=9.9
TXAR PcP PcP 07 33 19.1 +1.2
comp=Z,0.1nm,0.4s,baz=134,slow=5.2,SNR=2.2
comp=Z,0.4nm,0.4s
TXAR Lajitas Array 36.48 312 P P 07 30 57.7 +0.4
TX31 Lajitas Ar. Si 36.49 312 P P 07 30 58.2 +0.9
TX31 IAmb IAmb 07 31 37.2
comp=Z,10nm,1.5s
TX32 Lajitas Array 36.49 312 P P 07 30 58.3 +1.0
P38A Dawn 37.48 334 P P 07 31 05.4 0.0
MNTX Cornudas Mount 38.99 314 P P 07 31 18.9 +0.7
MNTX IAmb IAmb 07 31 19.5
comp=Z,4.3nm,1.4s
JFWS Jewell Farm 39.00 340 P P 07 31 18.4 +0.3
I42A Draeger Farm, 39.44 342 P P 07 31 22.0 +0.3
BATG Bathurst New B 40.75 7 P P 07 31 33.8 +1.3
ECSD EROS Data Cent 42.16 334 P P 07 31 44.3 +0.3
SDCO Great Sand Dun 42.57 321 P P 07 31 47.9 +0.1
EYMN Ely 43.88 342 P P 07 31 57.9 +0.1
EYMN IAmb IAmb 07 31 58.4
comp=Z,3.8nm,0.6s
B35A Bob, Littlefor 44.95 341 P P 07 32 05.7 -0.5
B35A IAmb IAmb 07 32 12.8
comp=Z,9.5nm,1.5s
ULM Lac du Bonnet 47.29 340 P P 07 32 24.1 -0.4
comp=Z,2.0nm,0.5s,baz=150,slow=7.8,SNR=2.2
comp=Z,2.0nm,0.5s
BW06 Boulder Array 48.09 324 P P 07 32 28.9 -2.2
PDAR Pinedale Array 48.09 324 P P 07 32 30.9 -0.2
comp=Z,0.4nm,0.6s,baz=110,slow=9.7,SNR=2.4
comp=Z,0.4nm,0.6s
PDAR Pinedale Array 48.09 324 P P 07 32 30.4 -0.7
SCHQ Schefferville 48.13 5 P P 07 32 32.0 +1.1
comp=Z,1.4nm,0.6s,baz=193,slow=5.6,SNR=4.2
comp=Z,1.4nm,0.6s
SCHQ Schefferville 48.13 5 P P 07 32 29.9 -1.1
BGU Big Grassy Mou 49.16 320 P P 07 32 40.2 +1.0
DGMT Dagmar 49.16 333 P P 07 32 40.4 +1.4
REDW Red Top Meadow 49.21 324 P P 07 32 40.4 +0.8
REDW IAmb IAmb 07 32 41.4
comp=Z,5.1nm,1.4s
NVAR Mina Array Bea 51.50 315 P P 07 32 57.2 +0.2
comp=Z,0.3nm,0.6s,baz=128,slow=7.1,SNR=2.5
comp=Z,0.3nm,0.6s
F10A Bench Ranch, E 54.44 323 P P 07 33 18.0 -0.2
I07A Izee 54.89 320 P P 07 33 20.3 -1.2
I07A IAmb IAmb 07 33 43.1
comp=Z,5.2nm,1.5s
G08A Pilot Rock 55.13 322 P P 07 33 24.4 +1.1
G08A IAmb IAmb 07 33 24.4
comp=Z,1.6nm,0.7s
YBH Yreka Blue Hor 55.96 317 P P 07 33 28.1 -1.0
YKA Yellowknife Ar 63.27 340 P P 07 34 18.5 -0.1
comp=Z,1.5nm,0.6s,baz=131,slow=7.1,SNR=9.5
comp=Z,1.5nm,0.6s
M30M Minto, Yukon 72.04 334 P P 07 35 13.6 -0.1
M30M IAmb IAmb 07 35 23.7
comp=Z,5.7nm,1.4s
BCAR Beaver Creek A 74.37 334 P P 07 35 27.2 -0.1
SEHB SEOHWA 130.94 338 PKPdf PKPdf 07 43 00.5 +0.1
ASAR Alice Springs 149.14 234 PKPbc PKPbc 07 43 36.8 -1.0
comp=Z,0.4nm,0.7s,baz=128,slow=3.4,SNR=2.3
WRA Warramunga Arr 150.37 241 PKPbc PKPbc 07 43 39.8 -1.0
comp=Z,0.2nm,0.4s,baz=105,slow=2.9,SNR=5.7

*NOU **06** 07:25:33.7,37.76S×176.04E,h313km,mb3.8/9,North Island, New Zealand*
*WEL **06** 07:25:38.6±0.9,38.3S±7.7×17.6E±.,h266km±7km,M2.6/22, ML2.8/7,MLv2.6/22, Error ellipse: s-maj=0.0km s-min=0.0km az=116.9*
ISC 06 07:25:33.0±2.1,37.81S±0.08×176.05E±0.07, h308km±12km,n132,σ1963/144,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGRZ	**Tauranga**	**0.18**	**64**	P	Pn	07 26 12.8	+0.7
TOZ	**Tahuroa Road**	**0.44**	**280**	P	Pn	07 26 14.0	+1.6
HSRZ	**Hossack Road**	**0.53**	**163**	P	Pn	07 26 13.0	+0.4
TLZ	**Tolley Road**	**0.66**	**218**	P	Pn	07 26 15.0	+2.0
WPRZ	**Whakapapataran**	**0.72**	**173**	P	Pn	07 26 14.7	+1.6
MUGZ	**Murupara**	**0.88**	**140**	P	Pn	07 26 14.8	+1.1
URZ	**Urewera**	**0.95**	**119**	P	Pn	07 26 14.7	+0.7
URZ				S	S	07 26 43.9	-2.7
URZ	**Urewera**	**0.95**	**119**	P	Pn	07 26 15.0	+1.0
MKAZ	**Moumakai**	**1.00**	**314**	P	Pn	07 26 15.9	+1.6
MRHZ	**Matea Rd**	**1.06**	**164**	P	Pn	07 26 15.9	+1.3
MRHZ				S	S	07 26 45.0	-2.6
RATZ	**Rangitukua**	**1.08**	**192**	P	Pn	07 26 15.9	+1.3
RTZ	**Ruatahuna**	**1.09**	**138**	P	Pn	07 26 16.0	+1.3
RTZ				S	S	07 26 45.9	-2.0
KUZ	**Kuaotunu**	**1.09**	**346**	P	Pn	07 26 15.6	+0.8
HIZ	**Hauiti**	**1.18**	**233**	P	Pn	07 26 17.2	+2.1
HIZ	**Hauiti**	**1.18**	**233**	P	Pn	07 26 17.3	+2.3
KATZ	**Kakaramea**	**1.20**	**193**	P	Pn	07 26 17.0	+1.7
MTHZ	**Maungataniwha**	**1.21**	**149**	P	Pn	07 26 16.9	+1.6
MTHZ				S	S	07 26 46.9	-2.1
ETAZ	**East Tamaki Re**	**1.24**	**313**	P	Pn	07 26 17.0	+1.6
WIAZ	**Waiheke Island**	**1.25**	**324**	P	Pn	07 26 16.1	+0.5
RAGZ	**Rawiri**	**1.27**	**123**	P	Pn	07 26 17.4	+1.8
RAGZ				S	S	07 26 47.7	-2.0
MWZ	**Matawai**	**1.28**	**115**	P	Pn	07 26 17.1	+1.4
MWZ				S	S	07 26 47.0	-2.6
RUGZ	**Raukumara Rang**	**1.29**	**97**	P	Pn	07 26 16.1	+0.2
NTVZ	**North Tongarir**	**1.32**	**193**	P	Pn	07 26 17.8	+1.8
KRVZ	**Karewarewa**	**1.32**	**194**	P	Pn	07 26 17.7	+1.7
TMVZ	**Te Maari**	**1.33**	**192**	P	Pn	07 26 17.8	+1.8
TMVZ				S	S	07 26 48.4	-1.9
AWAZ	**Awhitu Peninsu**	**1.35**	**303**	P	Pn	07 26 17.9	+1.8
TWVZ	**Taurewa**	**1.35**	**201**	P	Pn	07 26 17.9	+1.8
ETVZ	**East Tongariro**	**1.35**	**191**	P	Pn	07 26 18.0	+1.8
ETVZ				S	S	07 26 49.8	-0.7
WTVZ	**West Tongariro**	**1.35**	**195**	P	Pn	07 26 17.9	+1.7
WTVZ				S	S	07 26 49.6	-0.9
NNVZ	**North Ngauruho**	**1.36**	**194**	P	Pn	07 26 18.0	+1.7
HAZ	**Te Kaha**	**1.37**	**88**	P	Pn	07 26 16.5	+0.3
RAHZ	**Arahi**	**1.37**	**144**	P	Pn	07 26 18.2	+2.1
RAHZ				S	S	07 26 49.6	-0.9
OTVZ	**Oturere**	**1.39**	**193**	P	Pn	07 26 18.0	+1.8
OTVZ				S	S	07 26 50.4	-0.6
BKZ	**Black Stump Fm**	**1.40**	**166**	P	Pn	07 26 18.0	+1.7
BKZ	**Black Stump Fm**	**1.40**	**166**	P	Pn	07 26 18.0	+1.7
SNGZ	**Shannon Statio**	**1.40**	**134**	P	Pn	07 26 18.3	+1.9
NGZ	**Ngauruhoe**	**1.41**	**194**	P	Pn	07 26 18.3	+1.8
SNVZ	**South Ngauruho**	**1.41**	**193**	P	Pn	07 26 18.3	+1.8
NMHZ	**Naumai**	**1.42**	**156**	P	Pn	07 26 18.9	+2.5
WTAZ	**Waiatarua**	**1.47**	**306**	P	Pn	07 26 18.9	+2.1
TUVZ	**Tukino**	**1.49**	**192**	P	Pn	07 26 17.4	+0.4
TUVZ				S	S	07 26 51.3	-0.8
FWVZ	**Far West T-bar**	**1.50**	**195**	P	Pn	07 26 18.9	+1.7
WHVZ	**Whangaehu Hut**	**1.52**	**194**	P	Pn	07 26 18.9	+1.7
TRVZ	**Turoa**	**1.54**	**195**	P	Pn	07 26 19.3	+1.8
TKGZ	**Te Karaka**	**1.55**	**115**	P	Pn	07 26 19.0	+1.8
WNVZ	**Wahianoa**	**1.56**	**193**	P	Pn	07 26 19.2	+1.8
RVAZ	**Riverhead Bore**	**1.57**	**311**	P	Pn	07 26 19.1	+1.7
TWGZ	**Tauwhareparae**	**1.57**	**104**	P	Pn	07 26 19.5	+2.1
PKVZ	**Pokaka**	**1.58**	**200**	P	Pn	07 26 20.2	+1.8
PKGZ	**Pakihiroa**	**1.60**	**93**	P	Pn	07 26 19.1	+1.4
MOVZ	**Moawhango**	**1.61**	**188**	P	Pn	07 26 19.1	+1.4
RIGZ	**Rimuhau**	**1.62**	**124**	P	Pn	07 26 19.7	+2.0
ARHZ	**Aropaoanui**	**1.63**	**153**	P	Pn	07 26 20.0	+2.3
KWHZ	**Kaweka Forest**	**1.64**	**170**	P	Pn	07 26 19.9	+2.1
MTVZ	**Mangateitei**	**1.64**	**196**	P	Pn	07 26 19.7	+1.8
BHHZ	**Black Hill Sta**	**1.68**	**180**	P	Pn	07 26 19.8	+1.7
MCHZ	**McNeill Hill**	**1.71**	**163**	P	Pn	07 26 20.7	+2.4
PUZ	**Puketiti**	**1.76**	**99**	P	Pn	07 26 20.2	+1.4
MXZ	**Matakaoa Point**	**1.81**	**83**	P	Pn	07 26 20.0	+1.0
PRGZ	**Paritu Road**	**1.82**	**128**	P	Pn	07 26 21.2	+2.1
CNGZ	**Carnagh Statio**	**1.83**	**112**	P	Pn	07 26 21.3	+2.1
KRHZ	**Kereru**	**1.85**	**172**	P	Pn	07 26 21.2	+1.9
WMGZ	**Waiomatatini S**	**1.87**	**91**	P	Pn	07 26 21.0	+1.6
MHGZ	**Mahia Peninsul**	**1.98**	**133**	P	Pn	07 26 22.4	+2.1
CKHZ	**Cape Kidnapper**	**2.01**	**157**	P	Pn	07 26 22.8	+2.3
KAHZ	**Kahuranaki**	**2.08**	**162**	P	Pn	07 26 23.4	+2.3
LREZ	**Lake Rotokare**	**2.10**	**218**	P	Pn	07 26 23.8	+2.7
PNHZ	**Pukenui**	**2.10**	**177**	P	Pn	07 26 23.0	+1.7
WAZ	**Wanganui**	**2.12**	**203**	P	Pn	07 26 23.4	+2.0
NEZ	**North Egmont**	**2.12**	**226**	P	Pn	07 26 24.4	+2.9
KHEZ	**Kahui Hut**	**2.18**	**226**	P	Pn	07 26 24.9	+2.9
TSZ	**Takapari Road**	**2.25**	**182**	P	Pn	07 26 24.1	+1.7
WPHZ	**Waipukurau**	**2.27**	**172**	P	Pn	07 26 24.5	+1.9
PXZ	**Pawanui**	**2.31**	**164**	P	Pn	07 26 25.0	+2.1
WCZ	**Waipu Caves**	**2.31**	**323**	P	Pn	07 26 24.8	+1.7
OHWZ	**Ohakea**	**2.46**	**193**	P	Pn	07 26 26.6	+2.4
DVHZ	**Dannevirke**	**2.49**	**178**	P	Pn	07 26 26.0	+1.5
PRHZ	**Porangahau**	**2.50**	**170**	P	Pn	07 26 26.6	+2.0
POWZ	**Post Office Ro**	**2.59**	**185**	P	Pn	07 26 26.9	+1.5
ANWZ	**Angora Road**	**2.67**	**173**	P	Pn	07 26 28.2	+2.2
PRWZ	**Pori Road**	**2.74**	**181**	P	Pn	07 26 28.7	+1.9
MRZ	**Mangatainoka R**	**2.87**	**187**	P	Pn	07 26 29.3	+1.3
BFZ	**Birch Farm**	**2.87**	**177**	P	Pn	07 26 29.7	+1.8
BFZ	**Birch Farm**	**2.87**	**177**	P	Pn	07 26 29.8	+1.8
TIWZ	**Tintock**	**2.97**	**182**	P	Pn	07 26 30.5	+1.6
OGWZ	**Otaki Gorge**	**3.08**	**193**	P	Pn	07 26 31.5	+1.5
HOWZ	**Holdsworth Sta**	**3.11**	**188**	P	Pn	07 26 31.5	+1.2
KIW	**Kapiti Island**	**3.17**	**196**	P	Pn	07 26 32.2	+1.3
OUZ	**Omahuta**	**3.25**	**322**	P	Pn	07 26 33.5	+1.6
TMWZ	**Te Maipa**	**3.30**	**182**	P	Pn	07 26 33.6	+1.4
MTW	**Mount Morrison**	**3.37**	**187**	P	Pn	07 26 34.1	+1.2
CAW	**Cannon Point**	**3.38**	**193**	P	Pn	07 26 34.3	+1.3
DUWZ	**D'Urville Isla**	**3.42**	**208**	P	Pn	07 26 34.5	+1.1
TRWZ	**Traveller**	**3.60**	**184**	P	Pn	07 26 36.8	+1.5
PAWZ	**Paruwai Farm**	**3.60**	**188**	P	Pn	07 26 36.5	+1.2
WEL	**Wellington**	**3.61**	**196**	P	Pn	07 26 37.0	+1.6
SNZO	**South Karori**	**3.65**	**196**	P	Pn	07 26 37.2	+1.5
MSWZ	**Moikau Station**	**3.66**	**190**	P	Pn	07 26 37.1	+1.2
TCW	**Tory Channel**	**3.67**	**201**	P	Pn	07 26 37.2	+1.3
BHW	**Baring Head**	**3.71**	**194**	P	Pn	07 26 38.1	+1.7
PLWZ	**Palliser**	**3.81**	**199**	P	Pn	07 26 38.2	+1.8
TUWZ	**Tuamarina**	**3.97**	**204**	P	Pn	07 26 40.4	+1.2
NNZ	**Nelson**	**3.98**	**210**	P	Pn	07 26 40.1	+0.8
QRZ	**Quartz Range**	**4.07**	**221**	P	Pn	07 26 40.4	+0.1
QRZ	**Quartz Range**	**4.07**	**221**	P	Pn	07 26 40.9	+0.6
CMWZ	**Cape Campbell**	**4.18**	**199**	P	Pn	07 26 43.9	+2.4
BSWZ	**Blackbirch Sta**	**4.25**	**203**	P	Pn	07 26 43.8	+1.6
MRNZ	**Matariki Terra**	**4.40**	**214**	P	Pn	07 26 44.1	+0.2
THZ	**Tophouse**	**4.63**	**211**	P	Pn	07 26 47.3	+0.7
KHZ	**Kahutara**	**4.99**	**202**	P	Pn	07 26 51.9	+1.3
KHZ	**Kahutara**	**4.99**	**202**	P	Pn	07 26 52.0	+1.5
DSZ	**Denniston Nort**	**5.12**	**218**	P	Pn	07 26 52.1	0.0
GVZ	**Greta Valley S**	**5.64**	**203**	P	Pn	07 26 59.2	+1.0
LTZ	**Lake Taylor**	**5.75**	**209**	P	Pn	07 27 00.1	+0.6
AMCZ	**Amberley**	**5.96**	**205**	P	Pn	07 27 03.1	+1.2
INZ	**Inchbonnie**	**6.04**	**214**	P	Pn	07 27 03.5	+0.6
OXZ	**Oxford**	**6.30**	**208**	P	Pn	07 27 06.4	+0.4
OKCZ	**Okains Bay**	**6.33**	**200**	P	Pn	07 27 07.7	+1.4
MQZ	**McQueen's Vall**	**6.43**	**203**	P	Pn	07 27 07.7	+0.2
RACZ	**Rakaia**	**6.62**	**205**	P	Pn	07 27 10.7	+1.0
WVZ	**Waitaha Valley**	**6.64**	**216**	P	Pn	07 27 10.5	+0.5
WACZ	**Wakanui South**	**6.91**	**206**	P	Pn	07 27 14.5	+1.2
RPZ	**Rata Peaks**	**7.01**	**211**	P	Pn	07 27 15.3	+0.8
RPZ	**Rata Peaks**	**7.01**	**211**	P	Pn	07 27 15.6	+1.1
GCSZ	**Gaunt Creek Bo**	**7.02**	**217**	P	Pn	07 27 15.2	+0.6
ARCZ	**Arundel**	**7.16**	**210**	P	Pn	07 27 16.7	+0.4
FOZ	**Fox Glacier**	**7.42**	**218**	P	Pn	07 27 19.3	-0.2
TMZ	**Timaru**	**7.59**	**209**	P	Pn	07 27 22.5	+0.9
ODZ	**Otahua Downs**	**8.29**	**208**	P	Pn	07 27 31.7	+1.7
ODZ	**Otahua Downs**	**8.29**	**208**	P	Pn	07 27 32.1	+2.1
JCZ	**Jackson Bay**	**8.33**	**219**	P	Pn	07 27 30.4	-0.2
WKZ	**Wanaka**	**8.78**	**215**	P	Pn	07 27 36.5	+0.5

*IDC **06** 07:47:05.7±1.2,32.90N×131.00E,h0km,mb3.2/4, mbtmp3.2/6,ML2.7/2,MS2.7/1,Error ellipse: s-maj=36.6km s-min=7.1km az=68.0*
*JMA **06** 07:47:06.3±0.0,33.0N±0.1×131.1E±0.1,h10km,MV3.8/20, NE KUMAMOTO PREF*
JMA Felt III J1 at NE KUMAMOTO PREF .
*NIED **06** 07:47:06.3,32.98N×131.11E,h10km,MW3.7,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr0.22; Mθθ2.88; Mϕϕ-3.09; Mrθ-0.78; Mθϕ-0.74; Mϕr1.54; Fault plane solution: M₀3.51000×10¹⁴ NP1: ϕs233.00000°,δ61.00000°,λ-179.00000°. NP2: ϕs142.00000°,δ89.00000°,λ-29.00000°.*
ISC 06 07:47:07.6±0.8,32.96N±0.06×131.11E±0.04,h12km,n12, σ1s70/15,mb3.2/4,6D,Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNU	**Nakatsue**	**0.25**	**310**	Pg	Pg	07 47 10.2	-2.6
	1μm,0.3s,baz=117,slow=9.0,SNR=2498						
JNU				Lg	Lg	07 47 13.6	
	3μm,0.3s,baz=204,slow=19,SNR=48						
JNU	**Nakatsue**	**0.25**	**310**⇓	*e*P	Pg	07 47 11.4	-1.4
JNU				⇓*e*S	Sg	07 47 14.8	-1.5
JIU3	**Izumi3**	**0.48**	**211**	*i* P	Pg	07 47 16.1	-1.0
JTA	**Tamana**	**0.48**	**270**⇓	*i*P	Pg	07 47 15.8	-1.2
JTA				⇓S	Sg	07 47 22.4	-1.0
JUS	**Usuki**	**0.55**	**79**⇓	*i*P	Sg	07 47 16.5	-1.9
JUS				⇓S	Sg	07 47 24.0	-1.7
KSRS	**Korea Array**	**5.18**	**331**	Pn	Pn	07 48 25.0	+0.1
	0.2nm,0.3s,baz=152,slow=15,SNR=2.0						
KSRS				Pg	Pb	07 48 40.5	+2.3
	0.5nm,0.3s,baz=153,slow=19,SNR=4.4						
KSRS				Lg	Lg	07 49 47.9	
	1.0nm,0.3s,baz=148,slow=33,SNR=5.3						
	0.4nm,0.3s						
MJAR	**Matsushiro Arr**	**6.85**	**57**	Pn	Pn	07 48 49.9	+2.0
	0.2nm,0.3s,baz=240,slow=14,SNR=7.1						
	2.7nm,0.5s						
SONM	**Songino Array**	**23.84**	**316**	P	P	07 52 21.0	+0.4
	0.2nm,0.4s,baz=106,slow=9.1,SNR=1.8						
	0.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**32.23**	**251**	LR	LR	08 08 15.1	
	comp=Z,14nm,20.8s,baz=235,slow=40						
KURBB	**Kurchatov Arra**	**42.02**	**311**	P	P	07 54 59.8	+1.2
	0.2nm,0.5s,baz=101,slow=10.0,SNR=3.1						
	0.2nm,0.5s						
WRA	**Warramunga Arr**	**52.70**	**176**	P	P	07 56 20.3	-1.8
	0.4nm,1.0s,baz=356,slow=8.4,SNR=1.9						
	0.4nm,1.0s						
ASAR	**Alice Springs**	**56.38**	**177**	P	P	07 56 48.5	-0.2
	0.4nm,0.9s,baz=8.5,slow=13,SNR=2.7						
	0.4nm,0.9s						

*SSNC **06** 07:50:48.7±2.2,18.31N×76.68W,h5km±11km,MD2.8, ML2.9,MW3.1*
*JSN **06** 07:50:48.4±0.6,18.11N×76.64W,h14km±7km,MD3.2*
ISC 06 07:50:42.9±1.6,18.24N±0.07×76.42W±0.06,h18km±6km, n13,σ1s33/20,5C-2D,Jamaica region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMJ	**Castle Mountai**	**0.12**	**156**⇓	*i*P	Pg	07 50 53.8	+7.1
GWJ	**Greenwich**	**0.34**	**240**⇑	*i*P	Pb	07 50 51.6	+1.2
HOJ	**Hope**	**0.39**	**232**⇑	*i*P	Pb	07 50 51.9	+0.6
STH	**Stony Hill**	**0.40**	**246**⇑	*i*P	Pb	07 50 52.2	+0.7
CVJ	**Coleyville**	**1.06**	**269**⇑	*i*P	Pb	07 51 03.6	+0.9
MTDJ	**Mount Denham**	**1.06**	**269**	*e*P	Pb	07 51 03.5	+0.8
MTDJ				*e*S	Sb	07 51 15.2	-1.0
MCJ	**Malvern**	**1.24**	**255**⇑	*i*P	Pn	07 51 06.0	+0.6
MCJ				⇑*i*S	Sn	07 51 20.1	-1.6
RCC	**Rio Carpintero**	**1.87**	**21**	*e*P	Pg	07 51 19.9	+1.0
RCC				*e*S	Sg	07 51 41.8	-1.5
LMGC	**Las Mercedes**	**1.89**	**343**	*e*P	Pb	07 51 17.8	+0.9
LMGC				*e*S	Sb	07 51 40.5	+0.3
LMGC				IAML		07 51 41.6	
	comp=N,156nm,0.1s						
LMGC				IAML		07 51 41.7	
	comp=E,88nm,0.1s						
GTBY	**Guantanamo Bay**	**2.08**	**36**	*e*P	Pg	07 51 23.6	+0.7
GTBY				*e*S	Sg	07 51 51.7	+1.7
GTMO	**Guantanamo**	**2.19**	**33**	*e*P	Pg	07 51 24.8	-0.2
GTMO				*e*S	Sg	07 51 50.6	-2.9
MOAC	**Moa**	**2.77**	**30**	*e*P	Pg	07 51 35.4	-0.7
MOAC				*e*S	Sb	07 52 05.9	+0.3
MASC	**Masc**	**2.83**	**47**	*e*P	Pb	07 51 34.0	+1.1
MASC				*e*S	Sb	07 52 05.4	-1.7

**IDC 06 07:57:59.9±2.9,54.31N×86.54E,h0km,mbtmp2.8/2, ML2.4/2,Error ellipse: s-maj=23

OXBJ				*e*S		**Sn**	08 05 20.3	**-0.2**
VHO	**Vista Hermosa**	**1.71**	**263**	*e*P		**Pn**	08 04 57.8	**+0.6**
VHO				*e*S		**Sn**	08 05 20.7	**0.0**
TGIG		**1.83**	**106**	*e*P		**Pn**	08 04 58.7	**+0.3**
TGIG				*e*S		**Sn**	08 05 21.2	**-1.7**
TOIG	**Toxpalan**	**2.16**	**292**	*e*P		**Pn**	08 05 03.8	**+1.3**
TOIG				*e*S		**Sn**	08 05 28.4	**-1.8**
YOIG	**Yosondua**	**2.51**	**261**	*e*P		**Pn**	08 05 06.8	**-0.3**
YOIG				*e*S		**Sn**	08 05 36.3	**-2.0**
TPIG	**Tehuac#an**	**2.55**	**297**	*e*P		**Pn**	08 05 09.0	**+1.6**
TPIG				*e*S		**Sn**	08 05 37.4	**-1.6**
OZST	**Orizaba**	**2.56**	**308**	*e*P		**Pn**	08 05 08.2	**+0.6**
OZST				*i* S		**Sn**	08 05 37.0	**-2.3**
TXIG	**Tlaxiaco**	**2.68**	**270**	*e*P		**Pn**	08 05 09.8	**+0.5**
TXIG				*e*S		**Sn**	08 05 38.2	**-4.0**
JAUV	**Jalcomulco**	**2.71**	**320**	*e*P		**Pn**	08 05 09.8	**+0.4**
JAUV				*e*S		**Sn**	08 05 42.1	**-0.4**
HLIG	**Huajuapan de L**	**2.77**	**282**	*i* P		**Pn**	08 05 11.7	**+1.4**
HLIG				*i* S		**Sn**	08 05 42.8	**-1.2**
LVIG	**Laguna Verde**	**2.79**	**330**	*i* P		**Pn**	08 05 10.1	**-0.2**
LVIG				*e*S		**Sn**	08 05 36.9	**-7.4**
CCIG	**Comitan**	**2.88**	**110**	Pn		**Pn**	08 05 12.5	**+0.8**
CCIG	**Comitan**	**2.88**	**110**	*e*P		**Pn**	08 05 12.3	**+0.6**
CCIG				*e*S		**Sn**	08 05 43.2	**-3.4**
FTIG	**Fresnillo de T**	**3.09**	**282**	*e*P		**Pn**	08 05 16.0	**+1.7**
FTIG				*e*S		**Sn**	08 05 49.3	**-2.0**
PAVE	**Pavencul**	**3.39**	**128**	*e*P		**Pn**	08 05 18.6	**+0.3**
PAVE				*e*S		**Sn**	08 05 57.0	**-1.4**
TLIG	**Tlapa**	**3.46**	**275**	Pn		**Pn**	08 05 20.2	**+1.1**
TLIG	**Tlapa**	**3.46**	**275**	*e*P		**Pn**	08 05 19.8	**+0.7**
TLIG				*e*S		**Sn**	08 05 55.1	**-4.8**
CHUJ	**Union Juarez**	**3.50**	**128**	*e*P		**Pn**	08 05 20.1	**+0.3**
CHUJ				*e*S		**Sn**	08 05 54.5	**-6.6**
CHUJ				*e*S		**Sn**	08 05 59.3	**-1.9**
HUEH	**Huehuetenango**	**3.85**	**120**	Pn		**Pn**	08 05 24.2	**-0.2**
RTAL	**Retalhuleu**	**4.17**	**131**	Pn		**Pn**	08 05 30.1	**+1.7**
PLIG	**Platanillo**	**4.46**	**285**	*e*P		**Pn**	08 05 34.7	**+2.3**
PLIG				*i* S		**Sn**	08 06 19.4	**-4.4**
MEIG	**Mezcala**	**4.49**	**279**	*e*P		**Pn**	08 05 34.0	**+1.3**
MEIG				*e*S		**Sn**	08 06 17.3	**-7.0**
PETF	**Flores**	**4.88**	**94**			**Pn**	08 05 37.8	**-0.1**
CAIG	**El Cayaco**	**5.08**	**268**	*e*P		**Pn**	08 05 40.1	**-0.5**
CAIG				*e*S		**Sn**	08 06 33.8	**-4.5**
ARIG	**Puente Sto Nin**	**5.23**	**282**	*i* P		**Pn**	08 05 45.0	**+2.4**
ARIG				*e*S		**Sn**	08 06 40.3	**-1.6**
ESQI	**Esquipulas**	**6.05**	**116**	Pn		**Pn**	08 05 53.8	**+0.1**
MOIG	**Morelia**	**6.37**	**293**	Pn		**Pn**	08 05 58.4	**+0.3**
SNET	**Serv Nac Est T**	**6.58**	**122**	Pn		**Pn**	08 06 01.7	**+0.9**
CNGN	**Cerro Negro**	**9.29**	**120**	Pn		**Pn**	08 06 38.5	**+1.2**
BOAB	**BOACO BROADBAN**	**10.19**	**117**	Pn		**Pn**	08 06 48.9	**-0.4**
ACON	**Acoyapa**	**10.84**	**118**	Pn		**Pn**	08 06 59.4	**+1.4**
HZTE	**Horizontes, Gu**	**11.19**	**125**	Pn		**Pn**	08 07 04.0	**+1.3**
ORTG	**Ortega, Santa**	**11.51**	**126**	Pn		**Pn**	08 07 07.9	**+1.0**
DUNO	**Dulce Nombre,**	**11.65**	**127**	Pn		**Pn**	08 07 09.8	**+1.1**
JTS	**Las Juntas de**	**11.95**	**124**	Pn		**Pn**	08 07 13.6	**+1.0**
RIMA	**Rio Macho**	**13.12**	**123**	Pn		**Pn**	08 07 28.7	**+0.7**
MIAR	**Mount Ida**	**17.23**	**4**	P		**Pn**	08 08 20.6	**+1.6**
U40A	**Yellville**	**19.09**	**5**	P		**Pn**	08 08 40.2	**-0.8**
W50A	**Signal Mountai**	**19.81**	**24**	P		**Pn**	08 08 48.4	**-1.1**
W50A				IAmb		IAmb	08 09 01.1	
	comp=Z,12nm,1.5s							
U54A	**Nelsons Funny**	**22.41**	**29**	P		**P**	08 09 16.2	**+2.0**
U54A				IAmb		IAmb	08 09 20.2	
	comp=Z,8.3nm,1.1s							
O49A	**Covington**	**24.61**	**20**	P		**P**	08 09 35.6	**+1.2**
O49A				IAmb		IAmb	08 09 36.0	
	comp=Z,6.3nm,0.9s							
N47A	**Urbana**	**24.83**	**17**	P		**P**	08 09 38.9	**+2.5**
P52A	**Corning**	**24.90**	**24**	P		**P**	08 09 37.7	**+0.6**
P52A				IAmb		IAmb	08 09 47.6	
	comp=Z,16nm,1.5s							
TCRU	**Three Creeks R**	**26.18**	**328**	P		**P**	08 09 49.1	**+0.2**

IDC 06 08:04:42.2±3.4, 55°.54N×86°.22E, h0km, mbtmp2.8/2, ML2.6/2, Error ellipse: s-maj=29.3km s-min=26.0km az=61.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.79**	**208**	*i*		08 16 48.6	
	0.1nm,0.7s,baz=25,slow=320,SNR=4.5						
ZALV	**Zalesovo Beam**	**1.79**	**208**	Pn	Pn	08 05 13.7	-0.6
ZALV	4.4nm,0.3s,baz=27,slow=17,SNR=23			Lg	Lg	08 05 39.3	
	4.0nm,0.3s,baz=29,slow=27,SNR=9.8						
KURBB	**Kurchatov Arra**	**6.76**	**226**	Pn	Pn	08 06 22.5	0.0
	0.1nm,0.3s,baz=47,slow=14,SNR=4.8						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**9.09**	**197**	Pn	Pn	08 06 55.0	+0.4
MKAR	0.1nm,0.3s,baz=14,slow=13,SNR=2.8			Lg	Lg	08 09 28.2	
	baz=14,slow=27						
	0.2nm,0.4s						

IDC 06 08:14:10.8±5.8, 3°.61N×123°.43E, h465km±71km, mb2.8/3, mbtmp3.6/3, Error ellipse: s-maj=135.7km s-min=21.5km az=64.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.74**	**156**	P	P	08 19 03.0	0.0
	0.6nm,1.2s,baz=333,slow=10,SNR=1.6						
WRA				PcP	PcP	08 22 18.1	-0.2
	0.1nm,0.4s,baz=334,slow=1.7,SNR=1.8						
	0.6nm,1.2s						
SONM	**Songino Array**	**46.44**	**344**	P	P	08 21 54.1	-0.5
	0.5nm,0.5s,baz=160,slow=8.9,SNR=2.4						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**55.81**	**327**	P	P	08 23 03.0	+0.1
	0.5nm,0.3s,baz=120,slow=7.6,SNR=15						
MKAR				PcP	PcP	08 23 54.6	-0.7
	0.5nm,0.6s,baz=132,slow=2.1,SNR=4.3						
	0.5nm,0.3s						

NNC 06 08:23:36.0±6.4, 53°.76N×90°.24E, h0km, mb3.6, mpv3.3, 4C-9D, Error ellipse: s-maj=46.6km s-min=31.5km az=55.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**3.22**	**276**	⇓Pg	Pb	08 24 34.8	+0.8
	1.1nm,0.5s						
ZAA0				⇓Lg	Lg	08 25 21.4	
	14nm,1.0s						
KURK	**Kurchatov**	**7.76**	**252**	⇑Sn	Sn	08 26 59.2	+0.6
	9.6nm,0.9s						
KURK				⇓Lg	Lg	08 27 43.2	
	26nm,1.0s						
KURBB	**Kurchatov Arra**	**7.85**	**251**	⇑Pn	Pn	08 25 32.3	+0.9
	2.0nm,0.4s						
KURBB				⇓Sn	Sn	08 27 02.5	+1.6
	46nm,1.1s						
KURBB				⇑Lg	Lg	08 27 47.0	
	52nm,1.0s						
MK31	**Makanchi Array**	**8.63**	**219**	⇓Pn	Pn	08 25 42.0	-0.1
	1.0nm,0.7s,baz=33,slow=12,SNR=25						
MK31				⇓Sn	Sn	08 27 20.9	+0.8
	1.5nm,0.8s						
MK31				⇑Lg	Lg	08 28 11.6	
	13nm,1.2s,baz=25,slow=28						
MAKZ	**Makanchi**	**8.74**	**221**	⇓Pn	Pn	08 25 41.3	-2.3
	1.3nm,0.7s						
MAKZ				⇓Sn	Sn	08 27 23.5	+0.8
	5.7nm,1.1s						
MAKZ				⇓Lg	Lg	08 28 15.1	
	9.5nm,1.3s						

IDC 06 08:34:16.9±3.0, 54°.15N×86°.97E, h0km, mbtmp2.9/2, ML2.5/2, Error ellipse: s-maj=26.3km s-min=15.8km az=67.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.28**	**262**	*i*		08 43 18.3	
	baz=78,slow=315,SNR=7.5						
ZALV	**Zalesovo Beam**	**1.28**	**262**	Pg	Pg	08 34 39.9	-1.7
	0.7nm,0.3s,baz=79,slow=16,SNR=11						
ZALV				Lg	Lg	08 34 58.1	
	0.7nm,0.3s,baz=85,slow=32,SNR=3.1						
ZALV				Rg	Rg	08 35 05.0	
	5.4nm,0.5s,baz=80,slow=34,SNR=6.2						
KURBB	**Kurchatov Arra**	**6.26**	**239**	Pn	Pn	08 35 51.9	+1.4
	0.1nm,0.3s,baz=54,slow=14,SNR=8.6						
KURBB				Lg	Lg	08 37 35.0	
	baz=58,slow=33						
	0.8nm,0.6s						
MKAR	**Makanchi Array**	**7.95**	**204**	Pn	Pn	08 36 14.9	+1.3
	0.1nm,0.3s,baz=24,slow=13,SNR=5.0						
MKAR				Sn	Sn	08 37 43.1	-1.1
	0.2nm,0.3s,baz=24,slow=28,SNR=9.3						
MKAR				Lg	Lg	08 38 29.4	
	baz=27,slow=29,SNR=2.2						
	0.3nm,0.5s						

*TEH **06** 08:44:02.3, 28°.45N×57°.25E, h8km, ML3.2*
*OMAN **06** 08:44:10.5±0.2, 28°.01N×57°.50E, h33km, mb4.5/1, ml3.2/5, Error ellipse: s-maj=2.8km s-min=2.1km az=356.0*
ISC 06 08:44:02.7±1.7, 28°.36N±0°.03×57°.42E±0°.06, h16km±13km, n20, σ1s98/29, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHNJ	**Kahnooj**	**0.48**	**149**	*e*Pg	**Pn**	**08 44 14.9**	**-0.1**
KHNJ				*e*Sg	**Sb**	**08 44 24.6**	**+4.9**
IBND	**Bandar-abas**	**1.20**	**221**	*e*Pg	**Pg**	**08 44 25.7**	**-0.1**
IBND				*e*		08 44 47.4	
	comp=Z,7μm,0.4s						
NGRK	**Negar Kerman**	**1.42**	**335**	*e*Pg	**Pn**	**08 44 27.2**	**-1.1**
NGRK				*e*		08 44 28.4	
	comp=Z,5μm,0.2s						
NGRK				*e*Sg	**Sb**	**08 44 45.6**	**-1.5**
GENO	**Geno**	**1.46**	**230**	*e*Pg	**Pn**	**08 44 29.0**	**+0.3**
GENO				*e*		08 44 52.0	
	comp=Z,6μm,0.2s						
CHMN	**Cheshme madani**	**1.50**	**4**	*e*Pg	**Pn**	**08 44 30.4**	**+1.0**
CHMN				*e*Sg	**Sn**	**08 44 49.3**	**+0.5**
CHMN				*e*		08 44 50.4	
	comp=Z,4μm,0.4s						
KRBR	**Kerman**	**1.72**	**340**	*e*Pg	**Pn**	**08 44 33.2**	**+0.9**
TVBK	**TV Kerman**	**1.72**	**340**	*e*Pg	**Pn**	**08 44 33.1**	**+0.7**
TVBK				*e*		08 44 39.0	
	comp=Z,6μm,0.2s						
KHGB	**Koh Gabri**	**2.17**	**338**	*e*Pg	**Pn**	**08 44 40.5**	**+2.0**
KHGB				*e*		08 44 44.0	
	comp=Z,1μm,0.4s						
JASK	**Jask - Hormozg**	**2.51**	**171**	*e*Pn	**Pb**	**08 44 46.0**	**-1.5**
SHME	**Shamm**	**2.57**	**207**	P	**Pn**	**08 44 44.3**	**+0.6**
	SNR=9.3						
SHME				S	**Sn**	**08 45 15.3**	**+0.6**
BANOM	**Banah**	**2.62**	**203**	P	**Pn**	**08 44 45.2**	**+0.7**
	SNR=11						
BANOM				S	**Sn**	**08 45 16.2**	**+0.1**
	SNR=12						
ZHSF	**Zahedan**	**3.19**	**66**	*e*Pn	**Pb**	**08 44 57.7**	**-1.5**
HATD	**Hatta, Dubai**	**3.70**	**198**	P	**Pn**	**08 45 01.5**	**+2.1**
IMEH	**Mehriz**	**3.88**	**322**	*e*Pn	**Pn**	**08 45 02.6**	**+0.6**
IMEH				*e*		08 45 20.6	
	comp=Z,175nm,0.2s						
ASUD	**Al Ashush, Dub**	**4.17**	**207**	P	**Pn**	**08 45 07.3**	**+1.6**
	SNR=14						
ASUD				S	**Sn**	**08 45 53.7**	**-0.3**
YZKH	**Yazd**	**4.70**	**329**	*e*Pn	**Pn**	**08 45 14.5**	**+1.3**
HOQ	**Hoqain**	**4.76**	**181**	P	**Sn**	**08 45 12.5**	**-1.5**
HOQ				S	**Sn**	**08 46 06.6**	**-2.2**
WBK	**Wadi Bani Khal**	**5.89**	**166**	P	**Pn**	**08 45 32.0**	**+2.5**
	SNR=6.8						
WBK				S	**Sn**	**08 46 32.6**	**-4.2**
JLN	**Jalan Bani Buh**	**6.44**	**163**	P	**Pn**	**08 45 38.6**	**+1.6**
JLN				S	**Sn**	**08 46 47.0**	**-3.1**
MRVT	**Maraveh tapeh**	**9.34**	**353**	*e*Pn	**Pn**	**08 46 19.1**	**+2.3**

*NNC **06** 09:01:03.5±2.4, 53°.36N×87°.92E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=18.4km s-min=10.6km az=68.0, Suspected Mining explosion.*
*IDC **06** 09:01:06.3±2.7, 53°.55N×87°.87E, h0km, mbtmp3.1/2, ML2.8/2, Error ellipse: s-maj=23.0km s-min=15.6km az=62.0*
ISC 06 09:01:03.9±3.7, 53°.5N±0°.1×87°.9E±0°.2, h0km, n9, σ2s00/11, 7C-5D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.86**	**284**	*i*		09 13 10.0	
	0.1nm,0.9s,baz=98,slow=320,SNR=5.7						
ZAA0	**Zalesovo Array**	**1.86**	**284**	⇑Pg	**Pb**	**09 01 38.9**	**+0.1**
	1.3nm,0.6s						
ZAA0				⇓Lg	Lg	09 02 05.2	
	7.5nm,0.8s						
ZALV	**Zalesovo Beam**	**1.86**	**284**	Pn	**Pb**	**09 01 38.9**	**+0.1**
	2.6nm,0.3s,baz=101,slow=16,SNR=14						
ZALV				Lg	Lg	09 02 05.0	
	7.2nm,0.3s,baz=100,slow=32,SNR=15						
KURK	**Kurchatov**	**6.36**	**247**	⇑Pn	**Pn**	**09 02 36.5**	**-2.3**
	3.0nm,0.9s						
KURK				⇓Sn	**Sn**	**09 03 52.2**	**+0.1**
	2.8nm,0.9s						
KURK				⇑Lg	Lg	09 04 26.8	
	14nm,1.1s						
KURBB	**Kurchatov Arra**	**6.46**	**247**	Pn	**Pn**	**09 02 43.2**	**+3.1**
	0.2nm,0.3s,baz=61,slow=14,SNR=16						
KURBB				Sn	**Sn**	**09 03 56.1**	**+1.6**
	0.1nm,0.3s,baz=62,slow=28,SNR=4.5						
KURBB				Lg	Lg	09 04 29.8	
	baz=64,slow=33,SNR=12						
	0.9nm,0.3s						
KURBB	**Kurchatov Arra**	**6.46**	**247**	⇓Pn	**Pn**	**09 02 39.3**	**-0.8**
	1.3nm,0.5s						
KURBB				⇓Sn	**Sn**	**09 03 52.9**	**-1.6**
	8.4nm,0.9s						
KURBB				⇑Lg	Lg	09 04 27.1	
	10nm,0.8s						
MK31	**Makanchi Array**	**7.64**	**210**	⇓Pn	**Pn**	**09 02 56.3**	**-0.2**
	0.7nm,0.7s,baz=27,slow=13,SNR=5.9						
MK31				⇑Lg	Lg	09 05 03.0	
	8.7nm,1.1s,baz=29,slow=30,SNR=7.5						
MKAR	**Makanchi Array**	**7.64**	**210**	Pn	Pn	09 03 00.3	+3.8
	0.2nm,0.3s,baz=28,slow=14,SNR=6.2						
MKAR				Sn	**Sn**	**09 04 26.3**	**+2.5**
	0.1nm,0.3s,baz=33,slow=24,SNR=3.2						
MKAR				Lg	Lg	09 05 06.6	
	0.1nm,0.3s,baz=29,slow=31,SNR=3.6						
	0.2nm,0.3s						
MAKZ	**Makanchi**	**7.73**	**212**	⇑Sn	**Sn**	**09 04 23.5**	**-2.3**
	2.7nm,1.2s						
MAKZ				⇑Lg	Lg	09 05 04.7	
	6.0nm,1.3s						

*ISK **06** 09:01:53.9, 35°.53N×31°.66E, h10km, ML2.5/7*
*DDA **06** 09:01:55.4±0.0, 35°.57N×31°.71E, h22km±1km, MW3.3*
*NIC **06** 09:01:59.7±0.0, 35°.52N×31°.96E, h7km±3km, Ml2.5/5*
ISC 06 09:01:55.5±1.3, 35°.54N±0°.03×31°.74E±0°.04, h14km±10km, n21, σ1s05/34, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKMS	**Akamas**	**0.71**	**136**	P	**Pb**	**09 02 09.5**	**-0.2**
AKMS				S	**Sn**	**09 02 20.7**	**-1.2**
AKMS				AML	AML	09 02 29.6	
	1.0nm,0.8s						
AKMS				AML	AML	09 02 29.6	
	1.0nm,0.8s						
AKMS				AML	AML	09 02 30.9	
	0.9nm,0.7s						
AKMS				AML	AML	09 02 30.9	
	0.9nm,0.7s						
ALFC	**Alefka**	**0.80**	**118**	P	**Pn**	**09 02 11.6**	**-0.8**
ALFC				S	**Sb**	**09 02 22.3**	**+0.4**
ALFC				AML	AML	09 02 31.8	
	1.0nm,0.6s						
ALFC				AML	AML	09 02 31.8	
	1.0nm,0.6s						
ALFC				AML	AML	09 02 33.6	
	0.8nm,0.6s						
ALFC				AML	AML	09 02 33.6	
	0.8nm,0.6s						
GAZI	**Gazipasa**	**0.84**	**34**	PG	**Pb**	**09 02 11.8**	**-0.1**
GAZI				SG	**Sb**	**09 02 23.9**	**+0.8**
GAZI	**Gazipasa**	**0.84**	**34**	P	**Pb**	**09 02 11.7**	**-0.1**
GAZI				S	**Sg**	**09 02 22.3**	**-0.5**
GAZI				*i* AML	AML	09 02 28.0	
	comp=E,104nm,0.5s						
GAZI				*i* AML	AML	09 02 39.0	
	comp=N,55nm,0.9s						
NATA	**Nata**	**1.02**	**138**	P	**Pn**	**09 02 17.0**	**+1.6**
NATA				S	**Sn**	**09 02 29.7**	**+0.2**
NATA				AML	AML	09 02 39.6	
	1.2nm,0.6s						
NATA				AML	AML	09 02 39.6	
	1.2nm,0.6s						
NATA				AML	AML	09 02 43.7	
	2.1nm,0.9s						
NATA				AML	AML	09 02 43.7	
	2.1nm,0.9s						
LEF	**Lefka**	**1.03**	**113**	PG	**Pb**	**09 02 14.4**	**-0.7**
LEF	**Lefka**	**1.03**	**113**	P	**Pn**	**09 02 15.0**	**-0.5**
SZAC	**Souni**	**1.22**	**129**	P	**Pg**	**09 02 20.6**	**+1.6**
SZAC				AML	AML	09 02 42.4	
	0.3nm,0.7s						
SZAC				AML	AML	09 02 45.2	
	0.4nm,1.0s						
AKUM	**Antalya-Kumluc**	**1.38**	**305**	P	**Pn**	**09 02 18.9**	**-1.4**
AKUM				S	**Sg**	**09 02 39.7**	**-0.1**
AKUM				*i* AML	AML	09 02 43.0	
	comp=N,39nm,0.7s						
AKUM				*i* AML	AML	09 02 46.0	
	comp=E,33nm,1.0s						
ERMK	**Ermenek**	**1.46**	**41**	P	**Pg**	**09 02 24.7**	**+1.2**
ERMK				S	**Sg**	**09 02 42.7**	**+0.2**
ERMK				*i* AML	AML	09 02 49.0	
	comp=N,31nm,0.7s						
ERMK				*i* AML	AML	09 03 11.0	
	comp=E,22nm,0.5s						
HDMB	**Hadim**	**1.55**	**23**	PN	**Pn**	**09 02 22.8**	**-0.1**
HDMB				SN	**Sb**	**09 02 43.7**	**0.0**
GULN	**MERSIN_Gulnar**	**1.60**	**66**	P	**Pg**	**09 02 25.2**	**-1.0**
GULN				S	**Sg**	**09 02 46.3**	**-0.9**
GULN				*i* AML	AML	09 02 50.0	
	comp=N,11nm,0.6s						
GULN				*i* AML	AML	09 02 55.0	
	comp=E,14nm,0.8s						
KORT	**Korkueli**	**1.84**	**323**	PN	**Pn**	**09 02 25.9**	**-0.9**
SEYD	**Seydisehir-KON**	**1.87**	**3**	PN	**Pn**	**09 02 27.1**	**-0.1**
SEYD				SN	**Sn**	**09 02 51.1**	**+0.5**
SEDI	**Konya, Seydise**	**1.91**	**0**	P	**Pn**	**09 02 28.0**	**+0.3**
SEDI				S	**Sn**	**09 02 51.2**	**-0.5**
SEDI				*i* AML	AML	09 02 57.0	
	comp=E,29nm,0.6s						
SEDI				*i* AML	AML	09 03 02.0	
	comp=N,26nm,1.0s						
KKBE	**Karaman, Kazim**	**1.94**	**30**	P	**Pb**	**09 02 29.9**	**-0.8**
KKBE				S	**Sb**	**09 02 55.8**	**+0.9**
KKBE				*i* AML	AML	09 02 59.0	
	comp=N,13nm,0.4s						
KKBE				*i* AML	AML	09 03 03.0	
	comp=E,16nm,0.4s						
SUTC	**Sutluce-Ispart**	**2.02**	**343**	PN	**Pn**	**09 02 28.9**	**-0.4**
BAGO	**Egridir - ISPA**	**2.56**	**343**	P	**Pn**	**09 02 38.6**	**+1.9**
BAGO				S	**Sn**	**09 03 09.8**	**+2.0**
BAGO				*i* AML	AML	09 03 21.0	
	comp=E,6.9nm,1.0s						
BAGO				*i* AML	AML	09 03 30.0	
	comp=N,5.4nm,0.6s						
YVAC	**Isparta, Yalva**	**2.76**	**352**	P	**Pn**	**09 02 40.7**	**+1.3**
YVAC				*i* AML	AML	09 03 14.0	
	comp=N,3.5nm,1.3s						
YVAC				*i* AML	AML	09 03 22.0	
	comp=E,5.5nm,0.6s						
DALY	**Dalyan (Mula)**	**2.80**	**298**	PN	**Pn**	**09 02 38.6**	**-1.3**
GULE	**Gulek**	**3.01**	**54**	P	**Pb**	**09 02 46.8**	**-2.2**
GULE				*i* AML	AML	09 03 37.0	
	comp=E,19nm,0.5s						
GULE				*i* AML	AML	09 03 43.0	
	comp=N,13nm,0.7s						

*NNC **06** 09:11:36.0±0.7, 42°.56N×72°.10E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=10.5km s-min=2.9km az=2.0*
*KRNET **06** 09:11:36.0±0.1, 42°.45N×72°.20E, h19km, mb2.8*
*SOME **06** 09:11:36.4, 42°.68N×72°.15E, h5km*
*KNET **06** 09:11:37.3±0.6, 42°.48N×72°.27E, h20km±4km, ml2.2, Error ellipse: s-maj=3.6km s-min=2.8km az=167.0*
ISC 06 09:11:35.7±1.2, 42°.35N±0°.04×72°.15E±0°.02, h10km±11km, n39, σ1s31/71, 25C-18D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARK	**Arkit**	**0.57**	**194**	⇓*i*P	**Pn**	**09 11 48.8**	**-1.2**
	baz=95						
ARK				⇓*i*S	**Sn**	**09 11 58.7**	**-0.9**
	baz=95						
MRKS	**Merke**	**0.89**	**63**	*e*P	**Pn**	**09 11 55.6**	**+1.3**
	3.4nm,0.1s						
MRKS				*e*S	**Sn**	**09 12 07.3**	**-0.1**
	45nm,0.2s						
AML	**Almayashu**	**1.17**	**100**	⇓P	**Pb**	**09 11 57.7**	**-0.5**
	5.4nm,0.1s,SNR=15						
AML				⇑S	**Sn**	**09 12 13.7**	**-1.0**
	18nm,0.2s						
EKS2	**Erkin-Say**	**1.24**	**75**	⇓P	**Pn**	**09 11 58.5**	**-0.7**
	3.8nm,0.1s,SNR=9.3						
EKS2				⇓S	**Sb**	**09 12 15.0**	**-0.5**
	13nm,0.1s						
EKS2	**Erkin-Say**	**1.24**	**75**	⇑*i*P	**Pn**	**09 11 58.4**	**-0.9**
	baz=79						
EKS2				⇑*i*S	**Sb**	**09 12 14.7**	**-0.8**
	baz=79						
KK31	**Karatay Array**	**1.42**	**302**	⇑P	**Pn**	**09 11 60.0**	**-1.6**
	2.1nm,0.2s,baz=122,slow=17,SNR=148						
KK31				S	**Sn**	**09 12 18.1**	**-2.4**
	8.2nm,0.2s,baz=121,slow=28,SNR=18						
IUG	**luzhnay**	**1.59**	**263**	*e*P	**Pg**	**09 12 06.8**	**+0.8**
	389nm,0.4s						
IUG				*e*S	**Sg**	**09 12 27.6**	**+1.0**
	52nm,0.3s						
IUG	**luzhnay**	**1.59**	**263**	P	**Pg**	**09 12 06.9**	**+0.8**
	389nm,0.4s						
IUG				S	**Sg**	**09 12 26.6**	**0.0**
	52nm,0.3s						
ARLS	**Aral**	**1.69**	**106**	⇓*i*P	**Pb**	**09 12 06.9**	**-0.1**
	baz=10.0						
ARLS				⇓*i*S	**Sg**	**09 12 30.0**	**0.0**
	baz=10.0						
AAK	**Ala-Archa**	**1.76**	**80**	⇓P	**Pb**	**09 12 07.5**	**-0.6**
	10nm,0.2s,SNR=6.7						
AAK				⇑S	**Sb**	**09 12 30.3**	**0.0**
	8.2nm,0.2s

CHMS				⇑Sn		**Sb**	**09 12 37.8**	**-0.1**
	29nm,0.4s							
KBK	**Karagaybulak**	**2.09**	**81**	⇓P		**Pb**	**09 12 13.1**	**-0.7**
	5.7nm,0.1s,SNR=6.1							
KBK	**Karagaybulak**	**2.09**	**81**	⇓*i*P		**Pb**	**09 12 13.1**	**-0.7**
KBK	baz=83			⇓*i*S		**Sb**	**09 12 40.5**	**+0.6**
	baz=83							
SGDS	**Sogindy**	**2.13**	**58**	*e*P		**Pb**	**09 12 14.3**	**-0.1**
	2.4nm,0.1s							
SGDS				*e*S		**Sb**	**09 12 40.1**	**-0.7**
	46nm,0.3s							
SGDS	**Sogindy**	**2.13**	**58**	Pg		**Pb**	**09 12 14.8**	**+0.5**
	2.4nm,0.1s							
SGDS				Lg		Lg	09 12 40.1	
	46nm,0.3s							
TKM2	**Tokmak 2**	**2.61**	**76**	⇑P		**Pn**	**09 12 19.4**	**+1.3**
	2.8nm,0.2s,SNR=5.7							
TKM2	**Tokmak 2**	**2.61**	**76**	⇑*i*P		**Pn**	**09 12 19.8**	**+1.7**
	baz=78							
TKM2				⇑*i*S		**Sb**	**09 12 52.5**	**-2.3**
	baz=78							
TKM2	**Tokmak 2**	**2.61**	**76**	⇑Pn		**Pn**	**09 12 19.2**	**+1.1**
	2.4nm,0.5s							
TKM2				⇓Lg		Lg	09 12 56.2	
	8.9nm,0.3s							
BOOM	**Boomskoye usch**	**2.81**	**86**	⇓*i*P		**Pb**	**09 12 23.2**	**-2.9**
	baz=88							
BOOM				⇓*i*S		**Sb**	**09 12 57.6**	**-3.0**
	baz=88							
KST	**Kastek**	**2.90**	**75**	*e*P		**Pb**	**09 12 27.7**	**+0.2**
	2.4nm,0.3s							
KST				*e*S		**Sb**	**09 13 04.4**	**+1.4**
	33nm,0.4s							
KST	**Kastek**	**2.90**	**75**	Pg		**Pb**	**09 12 29.0**	**+1.6**
	2.4nm,0.3s							
KST				Lg		Lg	09 13 04.4	
	33nm,0.4s							
BTLS	**Baital**	**3.02**	**26**	*e*P		**Pb**	**09 12 28.5**	**-1.0**
	1.4nm,0.2s							
BTLS				*e*S		**Sb**	**09 13 06.1**	**-0.3**
	12nm,0.2s							
BTLS	**Baital**	**3.02**	**26**	Pg		**Pb**	**09 12 29.9**	**+0.4**
	1.4nm,0.2s							
BTLS				Lg		Lg	09 13 06.1	
	12nm,0.2s							
ULHL	**Ulahol**	**3.04**	**91**	⇓*i*P		**Pn**	**09 12 26.2**	**+2.2**
	baz=93							
ULHL				⇓*i*S		**Sn**	**09 13 03.1**	**+2.5**
	baz=93							
KUU	**Kurty**	**3.43**	**62**	*e*P		**Pb**	**09 12 36.1**	**-0.5**
	1.2nm,0.2s							
KUU				*e*S		**Sb**	**09 13 19.3**	**+0.9**
	13nm,0.4s							
TNSS	**Tian-Shan**	**3.60**	**77**	*e*P		**Pb**	**09 12 40.0**	**+0.3**
	1.6nm,0.2s							
TNSS				*e*S		**Sb**	**09 13 26.0**	**+2.3**
	4.1nm,0.4s							
MDOK	**Medeo**	**3.70**	**76**	*e*P		**Pb**	**09 12 42.1**	**+0.9**
	1.3nm,0.2s							
MDOK				*e*S		**Sb**	**09 13 29.1**	**+3.0**
	6.4nm,0.4s							
MDOK	**Medeo**	**3.70**	**76**	Pg		**Pg**	**09 12 44.1**	**-2.4**
	2.9nm,0.6s							
MDOK				Lg		Lg	09 13 32.2	
	6.9nm,0.8s							
CHKK	**Chushkaly**	**3.85**	**65**	*e*P		**Pb**	**09 12 45.5**	**+1.9**
	1.1nm,0.1s							
CHKK				*e*S		**Sb**	**09 13 33.9**	**+3.6**
	11nm,0.2s							

*IDC **06** 09:20:41.2±2.8, 11°.97S×166°.54E, h162km±24km, mb3.9/18, mbtmp4.4/20, MS3.6/2, Error ellipse: s-maj=18.9km s-min=11.5km az=75.0*

*NEIC **06** 09:20:41.8±1.4, 11°.9S±0°.1×166°.6E±0°.1, h163km±7km, mb4.5/31, Error ellipse: s-maj=19.0km s-min=14.4km az=71.0*

*NOU **06** 09:20:52.3, 12°.70S×166°.56E, h106km, mb4.5/10, Santa Cruz Islands*

ISC 06 09:20:39.7±0.5, 11°.93S±0°.06×166°.62E±0°.10, h150km, n77, σ1s38/75, mb4.3/31, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**7.01**	**290**	P	**Pn**	**09 22 20.7**	**+0.8**
	125nm,0.7s,baz=155,slow=4.2,SNR=6.0						
HNR	**Honiara**	**7.01**	**290**		**Pn**	**09 22 20.0**	**+0.1**
KOUNC	**Koumac, New Ca**	**8.86**	**194**		**Pn**	**09 22 45.2**	**+0.6**
KOUNC	**Koumac, New Ca**	**8.86**	**194**	P	**Pn**	**09 22 47.1**	**+2.5**
MARNC	**Mare, Loyalty**	**9.60**	**172**	Pn	**Pn**	**09 22 54.5**	**+0.1**
YATNC	**Mamie plateau,**	**10.08**	**179**	P	**Pn**	**09 23 02.1**	**+1.3**
DZM	**Mont Dzumac**	**10.09**	**181**	P	**Pn**	**09 23 03.0**	**+2.0**
	12nm,0.3s,baz=313,slow=12,SNR=52						
DZM				S	**Sn**	**09 24 49.0**	**-3.8**
	3.1nm,0.4s,baz=332,slow=20,SNR=1.7						
DZM	**Mont Dzumac**	**10.09**	**181**	P	**Pn**	**09 23 03.9**	**+2.9**
NOUC	**Port Laguerre**	**10.12**	**182**	P	**Pn**	**09 23 04.5**	**+3.2**
ONTNC	**Ouen Toro**	**10.32**	**181**	Pn	**Pn**	**09 23 06.8**	**+2.8**
ONTNC	**Ouen Toro**	**10.32**	**181**	P	**Pn**	**09 23 07.6**	**+3.6**
OUENC	**Ouen Island, N**	**10.44**	**179**		**Pn**	**09 23 07.8**	**+2.3**
OUENC	**Ouen Island, N**	**10.44**	**179**	P	**Pn**	**09 23 08.9**	**+3.4**
PINNC	**Pines Island,**	**10.65**	**176**	Pn	**Pn**	**09 23 10.3**	**+2.0**
MSVF	**Nonsavu**	**12.47**	**119**	LR	LR	09 27 46.1	
	comp=Z,222nm,18.5s,baz=150,slow=34						
EIDS	**Eidsvold**	**19.86**	**226**		**P**	**09 25 00.3**	**+1.1**
EIDS				IAmb	IAmb	09 25 07.3	
	comp=Z,34nm,1.4s						
CTA	**Charters Tower**	**21.17**	**245**	P	**P**	**09 25 13.8**	**+0.4**
	comp=Z,2.5nm,0.6s,baz=78,slow=11,SNR=7.0						
	comp=Z,2.5nm,0.6s						
CTAO	**Charters Tower**	**21.17**	**245**	P	**P**	**09 25 13.8**	**+0.4**
CTAO				IAmb	IAmb	09 25 38.5	
	comp=Z,12nm,1.0s						
COEN	**Coen**	**22.93**	**262**	P	**P**	**09 25 31.8**	**+0.7**
COEN					**pP**	**09 25 56.5**	**-1.4**
ARMA	**Armidale**	**23.06**	**215**	P	**P**	**09 25 32.3**	**+0.2**
ARMA				IAmb	IAmb	09 25 43.6	
	comp=Z,31nm,1.4s						
URZ	**Urewera**	**27.85**	**162**	P	**P**	**09 26 14.3**	**-0.8**
	comp=Z,5.5nm,0.5s,baz=286,slow=3.3,SNR=7.2						
	comp=Z,5.5nm,0.5s						
URZ	**Urewera**	**27.85**	**162**	P	**P**	**09 26 15.7**	**+0.6**
URZ				IAmb	IAmb	09 26 35.8	
	comp=Z,25nm,1.4s						
BKZ	**Black Stump Fm**	**28.51**	**164**	P	**P**	**09 26 21.5**	**+0.4**
QRZ	**Quartz Range**	**29.25**	**171**	P	**P**	**09 26 28.8**	**+1.3**
H11S2	**WAKE ISLAND Hy**	**30.23**	**0**	T	T	09 57 23.5	
	baz=181,slow=76,SNR=3.8						
THZ	**Tophouse**	**30.23**	**171**	P	**P**	**09 26 37.0**	**+0.8**
H11S3	**WAKE ISLAND Hy**	**30.23**	**0**	T	T	09 57 23.8	
	baz=181,slow=76,SNR=3.1						
H11S1	**WAKE ISLAND Hy**	**30.24**	**0**	T	T	09 57 24.9	
	baz=181,slow=76,SNR=3.8						
BSWZ	**Blackbirch Sta**	**30.35**	**169**	P	**P**	**09 26 39.0**	**+1.8**
STKA	**Stephens Creek**	**30.41**	**225**	P	**P**	**09 26 37.4**	**-0.6**
	comp=Z,3.3nm,0.7s,baz=66,slow=9.9,SNR=5.7						
	comp=Z,3.3nm,0.7s						
LTZ	**Lake Taylor**	**31.13**	**172**	P	**P**	**09 26 45.0**	**+0.8**
OXZ	**Oxford**	**31.63**	**172**	P	**P**	**09 26 49.0**	**+0.5**
TOO	**Toolangi**	**31.78**	**213**	P	**P**	**09 26 50.3**	**+0.4**
TOO				IAmb	IAmb	09 27 32.1	
	comp=Z,17nm,1.2s						
RPZ	**Rata Peaks**	**31.90**	**174**	P	**P**	**09 26 51.6**	**+0.7**
	comp=Z,12nm,0.7s,baz=338,slow=1.5,SNR=11						
	comp=Z,12nm,0.7s						
RPZ	**Rata Peaks**	**31.90**	**174**	IAmb	IAmb	09 27 33.9	
	comp=Z,27nm,1.3s						
WB0	**Warramunga Arr**	**31.92**	**252**	P	**P**	**09 26 50.5**	**-0.9**
WB0				IAmb	IAmb	09 27 25.8	
	comp=Z,4.1nm,0.9s						
WRAB	**Tennant Creek**	**31.99**	**251**	P	**P**	**09 26 51.4**	**-0.6**
WRAB				IAmb	IAmb	09 27 26.2	
	comp=Z,4.4nm,1.0s						
WB2	**Warramunga Arr**	**31.99**	**251**	P	**P**	**09 26 50.8**	**-1.2**
WB2				IAmb	IAmb	09 27 07.0	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**32.00**	**251**	P	**P**	**09 26 51.0**	**-1.1**
	comp=Z,1.6nm,0.8s,baz=84,slow=8.7,SNR=14						
	comp=Z,1.6nm,0.8s						
WRA	**Warramunga Arr**	**32.00**	**251**	IAmb	IAmb	09 26 51.9	
	comp=Z,0.4nm,1.4s						
AS31	**Alice Springs**	**33.17**	**245**	P	**P**	**09 27 01.4**	**-0.9**
ASAR	**Alice Springs**	**33.18**	**245**	P	**P**	**09 27 00.9**	**-1.4**
	comp=Z,3.6nm,0.7s,baz=69,slow=9.7,SNR=51						
ASAR				PcP	**PcP**	**09 29 41.2**	**-0.6**
	comp=Z,3.1nm,0.8s,baz=72,slow=3.5,SNR=7.9						
	comp=Z,3.6nm,0.7s						
ASAR	**Alice Springs**	**33.18**	**245**	P	**P**	**09 27 01.5**	**-0.8**
WHZ	**Wether Hill Ro**	**33.87**	**178**	P	**P**	**09 27 07.6**	**-0.3**
BBOO	**Buckleboo**	**34.87**	**228**	P	**P**	**09 27 16.1**	**-0.6**
PSA00	**Pilbara Seismi**	**45.65**	**252**	P	**P**	**09 28 45.1**	**-0.6**
MBWA	**Marble Bar**	**45.73**	**252**	P	**P**	**09 28 46.4**	**+0.1**
MBWA				IAmb	IAmb	09 29 18.4	
	comp=Z,18nm,1.1s						
MORW	**Morawa**	**49.96**	**242**	P	**P**	**09 29 18.6**	**-0.1**
MORW				IAmb	IAmb	09 29 56.7	
	comp=Z,13nm,1.1s						
JOW	**Kunigami**	**53.58**	**316**	P	**P**	**09 29 46.0**	**+0.6**
JOW				IAmb	IAmb	09 29 47.0	
	comp=Z,13nm,0.8s						
MJAR	**Matsushiro Arr**	**55.14**	**332**	P	**P**	**09 29 56.0**	**-0.6**
	comp=Z,1.5nm,0.7s,baz=169,slow=9.3,SNR=5.6						
	comp=Z,1.5nm,0.7s						
KSRS	**Korea Array**	**61.08**	**325**	P	**P**	**09 30 37.4**	**-0.4**
	comp=Z,1.7nm,0.7s,baz=136,slow=8.4,SNR=6.2						
	comp=Z,1.7nm,0.7s						
USRK	**Ussuriysk Ar.**	**64.12**	**333**	P	**P**	**09 30 58.2**	**+0.3**
	comp=Z,2.8nm,0.7s,baz=134,slow=6.2,SNR=7.2						
	comp=Z,2.8nm,0.7s						
USRK	**Ussuriysk Ar.**	**64.12**	**333**	P	**P**	**09 30 58.4**	**+0.5**
VNDA	**Vanda**	**65.63**	**181**	P	**P**	**09 31 07.3**	**+0.1**
	comp=Z,1.6nm,0.5s,baz=357,slow=7.7,SNR=13						
	comp=Z,1.6nm,0.5s						
VNDA	**Vanda**	**65.63**	**181**	P	**P**	**09 31 07.6**	**+0.4**
SBA	**Scott Base**	**65.92**	**180**	P	**P**	**09 31 09.9**	**+0.8**
SBA				IAmb	IAmb	09 31 11.3	
	comp=Z,5.1nm,0.8s						
KLR	**Kul'dur**	**68.20**	**336**	P	**P**	**09 31 24.8**	**+1.0**
	comp=Z,2.6nm,0.6s,baz=117,slow=5.9,SNR=11						
KLR				LR	LR	09 59 08.2	
	comp=Z,47nm,19.6s,baz=209,slow=34						
	comp=Z,2.6nm,0.6s						
CMAR	**Chiang Mai Arr**	**73.25**	**294**	P	**P**	**09 31 56.0**	**+0.9**
	comp=Z,2.2nm,0.4s,baz=120,slow=4.3,SNR=14						
	comp=Z,2.2nm,0.4s						
QSPA	**South Pole Qui**	**78.08**	**180**	P	**P**	**09 32 21.9**	**0.0**
QSPA				IAmb	IAmb	09 32 23.0	
	comp=Z,23nm,1.1s						
SONM	**Songino Array**	**79.88**	**324**	P	**P**	**09 32 32.1**	**+0.2**
	comp=Z,1.3nm,0.4s,baz=137,slow=5.8,SNR=7.4						
	comp=Z,1.3nm,0.4s						
SONM	**Songino Array**	**79.88**	**324**	IAmb	IAmb	09 32 35.3	
	comp=Z,2.1nm,0.7s						
HDA	**Harding Lake**	**83.80**	**18**	P	**P**	**09 32 51.9**	**0.0**
HDA				IAmb	IAmb	09 32 52.6	
	comp=Z,8.7nm,1.1s						
ILAR	**Eielson Array**	**84.08**	**18**	P	**P**	**09 32 52.7**	**-0.5**
	comp=Z,2.2nm,0.9s,baz=230,slow=5.8,SNR=11						
	comp=Z,2.2nm,0.9s						
ILAR	**Eielson Array**	**84.08**	**18**	P	**P**	**09 32 52.0**	**-1.2**
DOT	**Dot Lake**	**84.21**	**20**	IAmb	IAmb	09 32 55.4	
	comp=Z,5.5nm,1.0s						
MAW	**Mawson**	**84.23**	**202**	P	**P**	**09 32 53.7**	**-0.4**
	comp=Z,3.6nm,0.9s,baz=46,slow=6.4,SNR=4.2						
	comp=Z,3.6nm,0.9s						
J25K	**Salcha River,**	**84.44**	**19**	P	**P**	**09 32 53.2**	**-2.0**
J25K				IAmb	IAmb	09 32 56.6	
	comp=Z,5.1nm,0.9s						
NVAR	**Mina Array Bea**	**85.94**	**50**	P	**P**	**09 33 03.7**	**+0.3**
	comp=Z,2.3nm,0.7s,baz=221,slow=9.1,SNR=4.7						
	comp=Z,0.3nm,0.7s						
MKAR	**Makanchi Array**	**94.75**	**317**	P	**P**	**09 33 44.2**	**0.0**
	comp=Z,6.2nm,0.7s,baz=94,slow=6.6,SNR=17						
MKAR				PKKPbc	**PKKPdf**	**09 50 38.8**	**-3.4**
	comp=Z,0.3nm,0.6s,baz=298,slow=3.1,SNR=3.7						
	comp=Z,6.2nm,0.7s						
MKAR	**Makanchi Array**	**94.75**	**317**	P	**P**	**09 33 44.4**	**+0.1**
ZALV	**Zalesovo Beam**	**94.77**	**324**	P	**P**	**09 33 43.2**	**-0.9**
	comp=Z,1.7nm,0.6s,baz=120,slow=5.2,SNR=2.4						
	comp=Z,1.7nm,0.6s						
ARCES	**ARCESS Array B**	**117.40**	**346**	PKP	**PKPdf**	**09 39 06.4**	**-0.6**
	comp=Z,2.6nm,0.7s,baz=65,slow=2.2,SNR=14						
FINES	**FINESS Array B**	**122.90**	**339**	PKP	**PKPdf**	**09 39 17.4**	**-0.3**
	comp=Z,1.1nm,0.5s,baz=5.7,slow=3.8,SNR=7.6						
GERES	**GERESS Array B**	**136.87**	**334**	PKP	**PKPdf**	**09 39 45.5**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=118,slow=2.0,SNR=5.6						
KEST	**Kesra**	**148.63**	**323**	PKPbc	**PKPbc**	**09 40 10.0**	**+0.3**
	comp=Z,6.5nm,0.7s,baz=28,slow=0.8,SNR=7.0						
ESDC	**Sonseca Array**	**151.13**	**345**	PKPbc	**PKPbc**	**09 40 15.7**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=6.6,slow=2.0,SNR=15						
ESDC				PKPab	**PKPab**	**09 40 23.7**	**0.0**
	comp=Z,0.4nm,0.6s,baz=20,slow=4.3,SNR=4.8						
TORD	**Torodi Ar. Bea**	**165.23**	**276**	PKP	**PKPdf**	**09 40 26.4**	**-0.7**
	comp=Z,2.5nm,1.0s,baz=355,slow=1.9,SNR=9.2						
TORD				PKPab	**sPKPdf**	**09 41 23.9**	**+2.2**
	comp=Z,0.8nm,0.9s,baz=90,slow=4.4,SNR=3.1						

KRSC 06 09:21:12.6±0.5, 55°.99N×162°.45E, h45km±13km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBG	**Krutoberegovo**	**0.30**	**29**	*e*P	Pn	09 21 21.6	+0.4
KBG				*e*S	Sn	09 21 27.8	+0.5
KBTR	**Krutoberegovo**	**0.30**	**44**	*e*P	Pn	09 21 21.7	+0.5
KBTR				*e*S	Sn	09 21 28.3	+1.0
SMKR	**Semkarok**	**0.80**	**318**	*e*P	Pn	09 21 28.4	+0.8
SMKR				*e*S	Sn	09 21 39.5	+1.0
BDR	**Baidarnaya**	**0.90**	**310**	*e*P	Pn	09 21 30.0	+1.1
BDR				*e*S	Sn	09 21 42.3	+1.5
ZLN	**Zelenaya**	**0.92**	**272**	*e*P	Pn	09 21 30.6	+1.4
ZLN				*e*S	Sn	09 21 43.0	+1.6
CIRR	**Tsirk**	**0.96**	**278**	*e*P	Pn	09 21 29.9	+0.1
SRKR	**Sorokina**	**0.97**	**314**	*e*P	Pn	09 21 30.9	+1.0
SRKR				*e*S	Sn	09 21 44.3	+1.7
BZGR	**Bezymyannyi-Gr**	**0.98**	**268**	*e*P	Pn	09 21 31.2	+1.1
BZGR				*e*S	Sn	09 21 44.0	+1.1
LGNR	**Loginova**	**0.99**	**276**	*e*P	Pn	09 21 31.5	+1.2
LGNR				*e*S	Sn	09 21 44.6	+1.3
KLY	**Klyuchi**	**1.05**	**289**	*e*P	Pn	09 21 30.3	-0.6
KLY				*e*S	Sn	09 21 43.0	-1.4
KRSR	**Krestovskiy**	**1.08**	**283**	*e*P	Pn	09 21 32.0	+0.7
KRSR				*e*S	Sn	09 21 44.9	-0.3
BZWR	**Bezymyannyi-We**	**1.10**	**269**	*e*P	Pn	09 21 32.9	+1.3
BZWR				*e*S	Sn	09 21 47.6	+1.9
KIRR	**Kirishev**	**1.18**	**269**	*e*P	Pn	09 21 34.4	+1.6
KIRR				*e*S	Sn	09 21 49.6	+1.8
KPT	**Kopyto**	**1.25**	**270**	*e*P	Pn	09 21 35.3	+1.6
KPT				*e*S	Sn	09 21 51.3	+1.9
KMNR	**Kamenistaya**	**1.27**	**260**	*e*P	Pn	09 21 36.4	+2.5
KMNR				*e*S	Sn	09 21 52.8	+3.0
TUMR	**Tumrok**	**1.48**	**242**	*e*P	Pn	09 21 39.4	+2.5
TUMR				*e*S	Sn	09 21 58.6	+3.5
ESO	**Esso**	**2.11**	**270**	*e*P	Pn	09 21 49.9	+4.6
BKI	**Bering**	**2.15**	**110**	*e*P	Pn	09 21 49.4	+3.5
BKI				*e*S	Sn	09 22 15.9	+4.6
SPN	**Mys Shipunski**	**3.23**	**207**	*e*P	Pn	09 22 01.9	+1.3
SDLR	**Sedlovina**	**3.42**	**219**	*e*P	Pn	09 22 06.2	+2.8
KRX	**Arik**	**3.44**	**221**	*e*P	Pn	09 22 07.4	+3.7
KRER	**Koryakskii**	**3.44**	**220**	*e*P	Pn	09 22 07.5	+3.6
SMAR	**Somma**	**3.46**	**219**	*e*P	Pn	09 22 07.1	+3.0
GNL	**Ganaly**	**3.48**	**230**	*e*P	Pn	09 22 08.2	+4.0
AVH	**Avacha**	**3.48**	**220**	*e*P	Pn	09 22 07.8	+3.6
UGLR	**Uglovaya**	**3.50**	**219**	*e*P	Pn	09 22 07.8	+3.3
KOK	**Koryaka**	**3.50**	**221**	*e*P	Pn	09 22 07.9	+3.4
DALK	**Dalny**	**3.67**	**217**	*e*P	Pn	09 22 09.5	+2.8
KRMR	**Karymshinskiy**	**4.05**	**220**	*e*P	Pn	09 22 15.8	+3.9
MTVR	**Mutnovka**	**4.31**	**217**	*e*P	Pn	09 22 19.6	+3.9
ASAK	**Asacha**	**4.50**	**218**	*e*P	Pn	09 22 21.8	+3.7

*BJI **06** 09:21:24.7±0.0, 6°.40S×103°.40E, h20km, mb4.7/36, mB4.8/22, Ms4.3/10, Ms7 4.1/10*

*DJA **06** 09:21:27.3±0.3, 6°.5S×10°.3E±°, h41km±2km, M5.1/76, mb5.0/76, mB5.6/25, MLv5.0/24, Mw(mB)5.1/25, MwMwp6.7/1, Mwp6.5/1*

*IDC **06** 09:21:29.6±0.6, 6°.20S×103°.65E, h52km±4km, mb4.0/23, mbtmp4.3/25, MS3.6/44, Error ellipse: s-maj=15.3km s-min=8.1km az=34.0*

*NEIC **06** 09:21:29.0±2.2, 6°.47S±0°.06×103°.54E±0°.07, h47km±5km, mb4.8/30, Error ellipse: s-maj=10.5km s-min=8.5km az=48.0*

ISC 06 09:21:28.7±0.5, 6°.39S±0°.07×103°.56E±0°.05, h48km±4km, h48km:pP-P, n192, σ1s32/166, mb4.7/56, MS3.7/46, 1C-6D, Southwest of Sumatera

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

KASI	**Kota Agung**	**1.27**	**48**	P		**Pn**	**09 21 48.1**	**-2.0**
LWLI	**Liwa**	**1.45**	**20**	P		**Pn**	**09 21 51.1**	**-1.5**
BLSI	**Bandar Lampung**	**1.96**	**59**	P		**Pn**	**09 21 58.8**	**-0.8**
MDSI	**Maura Dua**	**1.99**	**18**	P		**Pn**	**09 21 58.7**	**-1.2**
KLI	**Kotabumi**	**1.99**	**41**	P		**Pn**	**09 21 59.5**	**-0.5**
MNAI	**Manna**	**2.10**	**343**	Pn		**Pn**	**09 22 00.4**	**-1.1**
MNAI	**Manna**	**2.10**	**343**	P		**Pn**	**09 21 59.8**	**-1.6**
SBJI	**Serang**	**2.57**	**84**	P		**Pn**	**09 22 07.9**	**0.0**
SKJI	**Sukabumi**	**3.04**	**102**	P		**Pn**	**09 22 14.6**	**+0.2**
TNG	**Tangerang**	**3.08**	**86**	P		**Pn**	**09 22 15.1**	**+0.2**
DBJI	**Dramaga**	**3.18**	**93**	P		**Pn**	**09 22 16.2**	**-0.1**
CBJI	**Citeko**	**3.27**	**91**	P		**Pn**	**09 22 19.8**	**+2.2**
PMBI	**Palembang**	**3.64**	**19**	P		**Pn**	**09 22 23.4**	**+0.8**
CNJI	**Cibinong**	**3.67**	**105**	P		**Pn**	**09 22 21.9**	**-1.0**
LEM	**Lembang**	**4.06**	**96**	P		**Pn**	**09 22 29.8**	**+1.3**
	212nm,0.5s,baz=206,slow=9.9,SNR=38							
LEM				S		**Sn**	**09 23 15.5**	**+0.6**
	272nm,0.5s,baz=184,slow=15,SNR=2.1							
LEM				LR		LR	09 24 16.8	
	comp=Z,872nm,19.9s,baz=280,slow=42							
LEM	**Lembang**	**4.06**	**96**	P		**Pn**	**09 22 29.8**	**+1.3**
XMIS	**Christmas Isla**	**4.57**	**153**			Pn	09 22 30.6	-4.7
JCJI	**Jatiwangi**	**4.69**	**92**	P		**Pn**	**09 22 37.0**	**0.0**
PPBI	**Pangkal Pinang**	**4.92**	**32**	P		**Pn**	**09 22 40.0**	**-0.2**
	2.2nm20µm67nm,0.7s							
PPSI	**Pulau Pagai**	**5.04**	**315**	P		**Pn**	**09 22 39.8**	**-2.1**
	3.1nm5µm203nm,0.9s							
CMJI	**Cimerak**	**5.05**	**106**	P		**Pn**	**09 22 41.5**	**-0.5**
	0.7nm3µm223nm,0.8s							
KPJI	**Karang Pucung**	**5.42**	**100**	P		**Pn**	**09 22 48.2**	**+1.2**
	0.6nm158nm,0.6s							
TPI	**Tanjungpandan**	**5.45**	**49**	P		**Pn**	**09 22 47.4**	**0.0**
DSRI	**Dabo**	**5.95**	**10**	P		**Pn**	**09 22 54.6**	**+0.2**
	0.2nm44nm,0.6s							
SISI	**Saibi**	**6.71**	**318**	P		**Pn**	**09 23 02.0**	**-2.8**
	0.3nm53nm,0.7s							
YOGI	**Yogyakarta**	**6.84**	**102**	P		**Pn**	**09 23 06.5**	**0.0**
	0.8nm161nm,0.7s							
SMRI	**Semarang**	**6.87**	**96**	P		**Pn**	**09 23 07.8**	**+0.8**
	0.7nm127nm,0.7s							
UGM	**Wanagama**	**7.08**	**103**	Pn		**Pn**	**09 23 10.6**	**+0.8**
UGM	**Wanagama**	**7.08**	**103**	P		**Pn**	**09 23 10.1**	**+0.3**
	2.3nm5µm590nm,0.7s							
WOJI	**Wonogiri, Jawa**	**7.45**	**102**	P		**Pn**	**09 23 15.8**	**+0.9**
	0.4nm2µm69nm,0.5s							
PCJI	**Pacitan**	**7.77**	**104**	P		**Pn**	**09 23 19.3**	**0.0**
	1.2nm433nm,0.9s							
MYKOM	**Kota Tinggi**	**8.13**	**2**			**Pn**	**09 23 27.0**	**+2.8**
MNSI	**Mandailing Nat**	**8.16**	**331**	P		**Pn**	**09 23 24.1**	**-0.6**
	2µm21nm,0.7s							
PWJI	**Pagerwojo**	**8.34**	**102**	P		**Pn**	**09 23 27.3**	**+0.1**
	3µm362nm,0.8s							
GRJI	**Gresik**	**8.88**	**94**	P		**Pn**	**09 23 37.1**	**+2.6**
	3µm388nm,0.8s							
BWJI	**Bawean**	**9.07**	**87**	P		**Pn**	**09 23 37.1**	**0.0**
	160nm,1.4s							
GSI	**Gunungsitoli**	**9.69**	**322**	P		**Pn**	**09 23 44.7**	**-1.0**
	19nm,0.5s							
GMJI	**Gumukmas**	**9.99**	**101**	P		**Pn**	**09 23 50.4**	**+0.7**
	101nm,0.9s							
BLJI	**Banyuglugur**	**10.05**	**98**	P		**Pn**	**09 23 51.2**	**+0.6**
	2µm81nm,0.5s							
STKI	**Sintang**	**10.18**	**51**	P		**Pn**	**09 23 53.2**	**+0.9**
	44nm,1.0s							
KMMI	**Kalianget**	**10.36**	**94**	P		**Pn**	**09 23 54.6**	**-0.2**
	145nm,0.9s							
ABJI	**Asem Bagus**	**10.69**	**98**	P		**Pn**	**09 23 59.8**	**+0.5**
	5µm372nm,0.8s							
JAGI	**Jajag, Banyuwa**	**10.71**	**102**	Pn		**Pn**	**09 23 58.2**	**-1.4**
JAGI	**Jajag, Banyuwa**	**10.71**	**102**	P		**Pn**	**09 23 59.0**	**-0.6**
	3µm173nm,0.8s

H08S2	**Diego Garcia H**	**30.85**	**266**	T	T	09 59 57.1			
	baz=90,slow=75,SNR=58								
H08S3	**Diego Garcia H**	**30.86**	**266**	T	T	09 59 55.3			
	baz=90,slow=75,SNR=45								
H08S1	**Diego Garcia H**	**30.87**	**266**	T	T	09 59 56.3			
	baz=90,slow=75,SNR=20								
PZH	**PanZhiHua**	**32.74**	**357**	P	P	09 28 02.5	+5.3		
PZH				pmax	pmax				
	comp=Z,10.0nm,0.7s								
PZH				pmax	pmax				
	comp=Z,80nm,5.5s								
WRA	**Warramunga Arr**	**32.78**	**117**	P	**P**	**09 27 57.5**	**-0.1**		
	comp=Z,2.7nm,0.6s,baz=286,slow=12,SNR=26								
WRA				LR	LR	09 43 38.4			
	comp=Z,82nm,19.0s,baz=232,slow=40								
	comp=Z,2.7nm,0.6s								
WRAB	**Tennant Creek**	**32.79**	**117**	P	**P**	**09 27 57.7**	**0.0**		
WRAB				IAmb	IAmb	09 28 16.2			
	comp=Z,14nm,1.1s								
WB2	**Warramunga Arr**	**32.79**	**117**	IAmb	IAmb	09 28 13.5			
	comp=Z,8.1nm,0.8s								
SRPI	**Serui, Papua**	**32.90**	**84**	P	**P**	**09 27 58.9**	**+0.2**		
	comp=Z,6µmcomp=Z,74nm,0.4s								
WR0	**Warramunga Arr**	**32.97**	**117**	P	**P**	**09 27 59.2**	**-0.1**		
WR0				IAmb	IAmb	09 28 15.2			
	comp=Z,6.9nm,0.7s								
FORT	**Forrest**	**33.43**	**140**	P	**P**	**09 28 01.8**	**-1.3**		
FORT				IAmb	IAmb	09 28 02.6			
	comp=Z,18nm,0.7s								
ASAR	**Alice Springs**	**33.85**	**124**	P	**P**	**09 28 07.2**	**+0.2**		
	comp=Z,2.6nm,0.9s,baz=291,slow=8.4,SNR=12								
ASAR				LR	LR	09 43 24.0			
	comp=Z,72nm,20.2s,baz=278,slow=39								
	comp=Z,2.6nm,0.9s								
MMPI	**Merauke**	**36.57**	**96**	P	**P**	**09 28 30.9**	**+0.5**		
	comp=Z,12nm,0.7s								
GENI	**Genyem**	**36.69**	**86**	P	**P**	**09 28 31.2**	**-0.2**		
	comp=Z,35nm,0.7s								
WHN	**Wuhan**	**38.15**	**15**	⇓P	**P**	**09 28 45.0**	**+1.5**		
COEN	**Coen**	**39.67**	**104**	P	**P**	**09 28 55.9**	**-0.6**		
COEN				IAmb	IAmb	09 29 06.9			
	comp=Z,12nm,1.1s								
XAN	**Xi'an**	**40.52**	**7**	*e*P	**P**	**09 29 02.0**	**-1.3**		
XAN				pP	pwP	09 29 17.5	-0.8		
XAN				pmax	pmax				
	comp=Z,9.0nm,0.7s								
XAN				LR	LR				
	comp=Z,160nm,15.4s								
XAN				LR	LR				
	comp=Z,150nm,14.7s								
XAN				LR	LR				
	comp=Z,190nm,19.0s								
XAN	**Xi'an**	**40.52**	**7**	⇓P	**P**	**09 29 08.1**	**+4.8**		
XAN				pP	**pP**	**09 29 14.6**	**-1.0**		
JOW	**Kunigami**	**40.79**	**35**	LR	LR	09 45 43.3			
	comp=Z,57nm,20.8s,baz=248,slow=36								
NJ2	**Nanjing**	**40.91**	**20**	*e*P	**P**	**09 29 10.3**	**+3.8**		
NJ2				pmax	pmax				
	comp=Z,10.0nm,0.6s								
GOMU	**GeErMu**	**43.15**	**350**	P	**P**	**09 29 25.0**	**-0.1**		
GOMU				pP	pP	09 29 29.0	-8.4		
GOMU				pmax	pmax				
	comp=Z,2.0nm,0.7s								
GOMU				pmax	pmax				
	comp=Z,51nm,4.8s								
PMG	**Port Moresby**	**43.27**	**97**	P	**P**	**09 29 25.5**	**-0.6**		
	comp=Z,30nm,0.9s,baz=283,slow=3.6,SNR=8.5								
PMG				LR	LR	09 49 54.5			
	comp=Z,99nm,18.4s,baz=253,slow=40								
	comp=Z,30nm,0.9s								
PMG	**Port Moresby**	**43.27**	**97**	P	**P**	**09 29 25.4**	**-0.6**		
PMG				IAmb	IAmb	09 29 26.6			
	comp=Z,36nm,0.9s								
CTA	**Charters Tower**	**43.59**	**112**	P	**P**	**09 29 29.0**	**+0.4**		
	comp=Z,2.5nm,0.7s,baz=270,slow=5.1,SNR=2.8								
CTA				pP	**pP**	**09 29 42.3**	**+1.3**		
	comp=Z,7.5nm,1.0s,baz=280,slow=9.0,SNR=4.6								
CTA				LR	LR	09 47 45.4			
	comp=Z,78nm,21.4s,baz=256,slow=36								
	comp=Z,2.5nm,0.7s								
STKA	**Stephens Creek**	**43.61**	**131**	P	**P**	**09 29 29.7**	**+1.1**		
	comp=Z,2.3nm,0.5s,baz=308,slow=10.0,SNR=9.0								
	comp=Z,2.3nm,0.5s								
GTA	**Gaotai**	**45.70**	**356**	⇓P	**P**	**09 29 44.8**	**-0.4**		
GTA				pP	pP	09 29 54.5	-3.0		
GTA				sP	pwP	09 29 57.3	-3.1		
GTA				pmax	pmax				
	comp=Z,6.0nm,0.9s								
GTA				pmax	pmax				
	comp=Z,16nm,5.5s								
GTA				LR	LR				
	comp=Z,91nm,18.5s								
GTA				LR	LR				
	comp=Z,110nm,18.5s								
GTA				LR	LR				
	comp=Z,120nm,20.0s								
HHC	**Hu-ho-hao-te**	**47.58**	**8**	*e*P	**P**	**09 30 03.0**	**+3.2**		
HHC				pmax	pmax				
	comp=Z,21nm,0.9s								
HHC				pmax	pmax				
	comp=Z,180nm,5.2s								
HHC				LR	LR				
	comp=Z,220nm,12.7s								
HHC				LR	LR				
	comp=Z,240nm,12.7s								
HHC				LR	LR				
	comp=Z,270nm,13.3s								
KSAR	**Wonju Array Be**	**49.16**	**26**	P	**P**	**09 30 10.6**	**-1.4**		
KSRS	**Korea Array**	**49.19**	**26**	P	**P**	**09 30 11.3**	**-0.8**		
	comp=Z,5.5nm,1.0s,baz=222,slow=7.6,SNR=22								
KSRS				pP	**pP**	**09 30 25.4**	**+0.7**		
	comp=Z,6.4nm,0.8s,baz=223,slow=7.7,SNR=10								
	comp=Z,5.5nm,1.0s								
KS19	**Wonju Array Si**	**49.20**	**26**	P	**P**	**09 30 11.5**	**-0.8**		
KS19				IAmb	IAmb	09 30 26.4			
	comp=Z,21nm,1.1s								
JCJ	**Chichijima**	**50.05**	**47**	LR	LR	09 50 30.1			
	comp=Z,16nm,21.4s,baz=253,slow=35								
XLT	**XiLinHaoTe**	**51.32**	**12**	*e*P	**P**	**09 30 31.9**	**+3.6**		
XLT				pP	pP	09 30 36.6	-4.3		
XLT				sP	pwP	09 30 38.1	-5.1		
XLT				pmax	pmax				
	comp=Z,10.0nm,1.3s								
XLT				pmax	pmax				
	comp=Z,86nm,4.6s								
WMQ	**Urumqi**	**51.99**	**345**	*e*P	**P**	**09 30 34.0**	**+0.7**		
WMQ				pP	pP	09 30 41.6	-4.3		
WMQ				pmax	pmax				
	comp=Z,19nm,1.1s								
JHJ	**Hachijo jima 2**	**52.21**	**39**	LR	LR	09 53 54.0			
	comp=Z,25nm,20.0s,baz=300,slow=37								
KSH	**Kashi**	**52.31**	**333**	P	**P**	**09 30 40.3**	**+4.5**		
KSH				pP	pP	09 30 45.9	-2.5		
KSH				sP	pwP	09 30 48.2	-2.9		
WSAR	**Wadi Sarin**	**52.85**	**305**	LR	LR	09 50 58.6			
	comp=Z,117nm,19.5s,baz=148,slow=34								
MJAR	**Matsushiro Arr**	**53.63**	**35**	P	**P**	**09 30 42.7**	**-2.8**		
	comp=Z,1.3nm,0.7s,baz=203,slow=5.8,SNR=2.9								
MJAR				LR	LR	09 54 36.1			
	comp=Z,21nm,20.0s,baz=208,slow=37								
	comp=Z,1.3nm,0.7s								
CN2	**Changchun**	**53.73**	**20**	*e*P	**P**	**09 30 44.7**	**-1.3**		
CN2				*e*PP	**PP**	**09 32 47.5**	**0.0**		
CN2				*e*S	**S**	**09 38 18.0**	**+1.1**		
CN2				*e*SS	**SS**	**09 41 58.8**	**+0.3**		
CN2				pmax	pmax				
	comp=Z,10.0nm,1.2s								
CN2				LR	LR				
	comp=Z,90nm,16.0s								
CN2				LR	LR				
	comp=Z,100nm,16.0s								
CN2				LR	LR				
	comp=Z,160nm,18.0s								
KDJ	**Kajisay**	**53.95**	**336**	P	**P**	**09 30 48.0**	**+0.1**		
SONM	**Songino Array**	**54.04**	**2**	P	**P**	**09 30 47.5**	**-0.9**		
	comp=Z,9.4nm,1.1s,baz=183,slow=8.7,SNR=39								
SONM				pP	**pP**	**09 31 01.3**	**+0.2**		
	comp=Z,6.2nm,0.8s,baz=180,slow=7.8,SNR=11								
SONM				LR	LR	09 57 02.8			
	comp=Z,112nm,18.1s,baz=230,slow=40								
	comp=Z,9.4nm,1.1s								
SONM	**Songino Array**	**54.04**	**2**	P	**P**	**09 30 48.4**	**-0.1**		
SONM				IAmb	IAmb	09 30 49.7			
	comp=Z,12nm,1.1s								
ULN	**Ulaanbaatar**	**54.10**	**3**	P	**P**	**09 30 48.6**	**-0.2**		
ULN				IAmb	IAmb	09 30 49.3			
	comp=Z,8.2nm,1.1s								

DRK	**Karamyk**	**54.26**	**330**	P	**P**	**09 30 50.6**	**+0.2**		
AAK	**Ala-Archa**	**55.49**	**334**	P	**P**	**09 30 58.1**	**-0.9**		
	comp=Z,0.9nm,0.3s,baz=217,slow=10,SNR=1.5								
AAK				pP	**pwP**	**09 31 13.3**	**-1.1**		
	comp=Z,1.4nm,0.3s,baz=169,slow=4.2,SNR=1.9								
AAK				LR	LR	09 58 41.4			
	comp=Z,51nm,19.4s,baz=137,slow=40								
	comp=Z,0.9nm,0.3s								
BNX	**BinXian**	**56.10**	**20**	⇓P	**P**	**09 31 03.3**	**+0.2**		
BNX				pmax	pmax				
	comp=Z,85nm,1.5s								
BNX				pmax	pmax				
	comp=Z,200nm,5.4s								
MK31	**Makanchi Array**	**56.21**	**343**	P	**P**	**09 31 03.8**	**-0.2**		
MK31				IAmb	IAmb	09 31 17.7			
	comp=Z,7.3nm,1.1s								
MKAR	**Makanchi Array**	**56.21**	**343**	P	**P**	**09 31 03.8**	**-0.2**		
	comp=Z,2.6nm,0.6s,baz=150,slow=8.1,SNR=25								
	comp=Z,2.6nm,0.6s								
MKAR	**Makanchi Array**	**56.21**	**343**	P	**P**	**09 31 03.5**	**-0.5**		
USRK	**Ussuriysk Ar.**	**56.51**	**24**	P	**P**	**09 31 05.0**	**-1.0**		
	comp=Z,6.6nm,0.6s,baz=200,slow=3.8,SNR=11								
USRK				pP	**pP**	**09 31 18.7**	**-0.1**		
	comp=Z,14nm,0.7s,baz=215,slow=5.7,SNR=9.7								
	comp=Z,6.6nm,0.6s								
USRK	**Ussuriysk Ar.**	**56.51**	**24**	P	**P**	**09 31 05.6**	**-0.4**		
KLR	**Kul'dur**	**60.61**	**21**	P	**P**	**09 31 33.4**	**-1.1**		
	comp=Z,2.2nm,0.6s,baz=246,slow=7.2,SNR=6.2								
	comp=Z,2.2nm,0.6s								
KURBB	**Kurchatov Arra**	**60.76**	**342**	P	**P**	**09 31 34.8**	**-0.7**		
	comp=Z,2.6nm,0.9s,baz=158,slow=6.3,SNR=12								
	comp=Z,2.6nm,0.9s								
KURK	**Kurchatov**	**60.81**	**342**	P	**P**	**09 31 36.5**	**+0.6**		
KURK				IAmb	IAmb	09 31 50.0			
	comp=Z,12nm,0.9s								
KURK	**Kurchatov**	**60.81**	**342**	⇑P	**P**	**09 31 35.6**	**-0.2**		
KURK				pP	**pP**	**09 31 49.1**	**+0.4**		
ZAA0	**Zalesovo Array**	**62.14**	**348**	P	**P**	**09 31 44.4**	**-0.4**		
ZALV	**Zalesovo Beam**	**62.14**	**348**	P	**P**	**09 31 44.0**	**-0.8**		
	comp=Z,4.0nm,0.4s,baz=145,slow=5.4,SNR=8.4								
ZALV				LR	LR	10 01 33.4			
	comp=Z,63nm,18.9s,baz=86,slow=39								
	comp=Z,4.0nm,0.4s								
ZALV	**Zalesovo Beam**	**62.14**	**348**	P	**P**	**09 31 43.9**	**-0.8**		
DZM	**Mont Dzumac**	**62.52**	**111**	LR	LR	10 00 41.4			
	comp=Z,52nm,19.2s,baz=220,slow=38								
RAYN	**Ar Rayn**	**63.97**	**300**	P	**P**	**09 31 57.2**	**-0.4**		
RAYN	**Ar Rayn**	**63.97**	**300**	⇓P	**P**	**09 31 57.7**	**+0.1**		
RAYN				⇓pP	**pP**	**09 32 11.2**	**+0.5**		
DRV	**Dumont d'Urvil**	**65.18**	**165**	P	P	09 31 56.7	-7.9		
KMBO	**Kilima Mbogo**	**66.33**	**272**	LR	LR	09 55 47.9			
	comp=Z,82nm,21.2s,baz=92,slow=31								
MAW	**Mawson**	**66.99**	**196**	P	**P**	**09 32 18.1**	**+1.8**		
	comp=Z,2.7nm,0.9s,baz=37,slow=10,SNR=4.0								
MAW				LR	LR	09 56 55.8			
	comp=Z,83nm,20.0s,baz=29,slow=32								
	comp=Z,2.7nm,0.9s								
ABKAR	**Akbulak array**	**67.17**	**331**	P	**P**	**09 32 17.0**	**-0.7**		
AKTO	**Aktyubinsk**	**68.89**	**331**	P	**P**	**09 32 28.4**	**0.0**		
	comp=Z,1.0nm,0.6s,baz=111,slow=6.2,SNR=3.5								
	comp=Z,1.0nm,0.6s								
RPZ	**Rata Peaks**	**69.40**	**134**	LR	LR	10 05 02.6			
	comp=Z,64nm,18.2s,baz=324,slow=38								
GNI	**Garni**	**71.12**	**316**	LR	LR	10 04 34.2			
	comp=Z,19nm,22.0s,baz=149,slow=36								
ARU	**Arti**	**72.63**	**336**	LR	LR	10 07 21.6			
	comp=Z,25nm,21.8s,baz=172,slow=38								
MBAR	**Mbarara**	**72.86**	**271**	LR	LR	09 59 24.4			
	comp=Z,70nm,18.3s,baz=135,slow=31								
URZ	**Urewera**	**73.17**	**128**	LR	LR	10 07 48.6			
	comp=Z,69nm,18.1s,baz=32,slow=38								
KBZ	**Khabaz**	**73.92**	**319**	P	**P**	**09 32 59.4**	**+0.5**		
	comp=Z,4.7nm,0.9s,baz=146,slow=3.9,SNR=12								
KBZ				pP	**PcP**	**09 33 14.1**	**0.0**		
	comp=Z,4.9nm,0.9s,baz=134,slow=6.5,SNR=6.2								
	comp=Z,4.7nm,0.9s								
LSZ	**Lusaka**	**74.26**	**256**	LR	LR	10 00 25.1			
	comp=Z,94nm,21.9s,baz=152,slow=31								
EIL	**Elat**	**74.86**	**303**	LR	LR	10 03 41.1			
	comp=Z,38nm,20.6s,baz=90,slow=34								
MMAI	**Mount Meron Ar**	**75.47**	**306**	LR	LR	10 06 08.4			
	comp=Z,63nm,21.1s,baz=230,slow=36								
NRIK	**Noril'sk**	**76.36**	**354**	LR	LR	10 09 06.1			
	comp=Z,49nm,20.8s,baz=266,slow=38								
LBTB	**Lobatse**	**76.43**	**246**	LR	LR	10 00 34.9			
	comp=Z,78nm,21.4s,baz=100,slow=31								
BOSA	**Boshof**	**76.71**	**242**	P	**P**	**09 33 16.8**	**+1.2**		
	comp=Z,4.0nm,0.9s,baz=177,slow=8.9,SNR=4.8								
	comp=Z,4.0nm,0.9s								
BOSA	**Boshof**	**76.71**	**242**	IAmb	IAmb	09 33 17.6			
	comp=Z,5.0nm,0.9s								
VNDA	**Vanda**	**77.21**	**169**	P	**P**	**09 33 18.5**	**+1.3**		
	comp=Z,1.0nm,0.9s,baz=300,slow=8.1,SNR=3.6								
	comp=Z,1.0nm,0.9s								
BRTR	**Keskin Array B**	**78.88**	**312**	P	**P**	**09 33 27.1**	**-0.2**		
	comp=Z,1.0nm,0.8s,baz=132,slow=7.3,SNR=5.5								
BRTR				LR	LR	10 10 01.4			
	comp=Z,36nm,19.5s,baz=130,slow=37								
	comp=Z,1.0nm,0.8s								
TIXI	**Tiksi**	**79.64**	**8**	P	**P**	**09 33 28.9**	**-1.7**		
	comp=Z,1.0nm,0.3s,baz=270,slow=19,SNR=3.3								
	comp=Z,1.0nm,0.3s								
SUR	**Sutherland**	**80.50**	**238**	LR	LR	10 07 55.1			
	comp=Z,61nm,18.3s,baz=139,slow=34								
QSPA	**South Pole Qui**	**83.60**	**180**	LR	LR	10 11 23.4			
	comp=Z,29nm,18.6s,baz=350,slow=36								
TSUM	**Tsumeb**	**84.14**	**251**	LR	LR	10 06 36.1			
	comp=Z,72nm,21.3s,baz=148,slow=32								
IDI	**Anoyia**	**84.48**	**306**	LR	LR	10 11 45.0			
	comp=Z,28nm,21.1s,baz=89,slow=36								
AKASG	**Malin Array Be**	**85.10**	**322**	P	**P**	**09 33 59.1**	**-0.4**		
	comp=Z,0.2nm,0.2s,baz=76,slow=3.9,SNR=7.0								
AKASG				pP	**pP**	**09 34 14.2**	**+1.1**		
	comp=Z,3.2nm,0.7s,baz=78,slow=3.8,SNR=5.1								
AKASG				LR	LR	10 16 53.0			
	comp=Z,18nm,19.5s,baz=53,slow=39								
	comp=Z,0.2nm,0.2s								
AKASG	**Malin Array Be**	**85.10**	**322**	IAmb	IAmb	09 34 15.4			
	comp=Z,2.8nm,0.8s								
MLR	**Muntele Rosu**	**85.90**	**316**	LR	LR	10 16 24.8			
	comp=Z,23nm,20.0s,baz=108,slow=38								
BURAR	**Bucovina Array**	**86.87**	**318**	P	**P**	**09 34 09.1**	**+0.5**		
BURAR				IAmb	IAmb	09 34 26.6			
	comp=Z,5.5nm,0.8s								
KOLS	**Kolonicke sedl**	**89.07**	**319**	*e*P	**P**	**09 34 21.1**	**+2.3**		
KOLS				*e*		09 34 34.0			
FINES	**FINESS Array B**	**89.62**	**332**	P	**P**	**09 34 23.2**	**+2.2**		
	comp=Z,1.2nm,0.8s,baz=108,slow=8.9,SNR=1.7								
FINES				pP	**pP**	**09 34 35.4**	**+0.7**		
	comp=Z,2.5nm,0.6s,baz=106,slow=6.8,SNR=4.3								
FINES				LR	LR	10 19 05.6			
	comp=Z,24nm,19.1s,baz=181,slow=39								
FINES	**FINESS Array B**	**89.62**	**332**	P	**P**	**09 34 22.0**	**+1.0**		
ARCES	**ARCESS Array B**	**91.78**	**340**	pP	**pP**	**09 34 45.5**	**+0.8**		
	comp=Z,2.5nm,0.8s,baz=66,slow=6.8,SNR=2.2								
ARCES				LR	LR	10 20 14.4			
	comp=Z,29nm,19.8s,baz=76,slow=38								
VRAC	**Vranov**	**92.81**	**319**	LR	LR	10 20 41.3			
	comp=Z,10nm,20.2s,baz=68,slow=38								
GERES	**GERESS Array B**	**94.66**	**318**	pP	pP	09 35 00.9	+2.5		
	comp=Z,0.4nm,0.2s,baz=132,slow=2.0,SNR=1.6								
CLL	**Collm**	**95.28**	**321**	*i* P	**P**	**09 34 47.6**	**+0.1**		
CLL	**Collm**	**95.28**	**321**	*i* PKPdf	PKiKP	09 39 41.2	+13		
CLL				*i* PKiKP	PKiKP	09 39 43.1	+15		
HFS	**Hagfors**	**95.42**	**330**	LR	LR	10 23 08.1			
	comp=Z,27nm,18.3s,baz=34,slow=39								
SPITS	**Spitsbergen Ar**	**95.63**	**348**	LR	LR	10 23 16.5			
	comp=Z,61nm,21.6s,baz=39,slow=39								
NOA	**NORSAR Array B**	**96.68**	**331**	LR	LR	10 22 06.8			
	comp=Z,10nm,20.9s,baz=85,slow=38								
NVAR	**Mina Array Bea**	**130.52**	**44**	PKP	**PKPdf**	**09 40 35.3**	**+0.4**		
	comp=Z,0.2nm,0.6s,baz=251,slow=2.8,SNR=2.2								
TXAR	**Lajitas Array**	**145.65**	**45**	PKPbc	**PKPbc**	**09 41 03.6**	**+0.6**		
	comp=Z,3.4nm,0.8s,baz=289,slow=1.1,SNR=32								

IDC 06 09:28:52.2±2.7, 53.56N×87.67E, h0km, mbtmp3.1/2, ML2.7/2, Error ellipse: s-maj=24.4km s-min=14.8km az=66.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.74**	**284**	*i*		09 40 11.3	
	0.7nm,0.8s,baz=101,slow=317,SNR=3.7						
ZALV	**Zalesovo Beam**	**1.74**	**284**	Pn	Pn	09 29 23.2	-0.5
	1.4nm,0.3s,baz=103,slow=13,SNR=13						
ZALV				Lg	Lg	09 29 47.2	
	2.7nm,0.3s,baz=106,slow=26,SNR=11						

KURBB	**Kurchatov Arra**	**6.35**	**246**	Pn	Pn	09 30 27.4	+0.5		
	0.1nm,0.3s,baz=62,slow=14,SNR=7.9								
KURBB				Lg	Lg	09 32 12.9			
	baz=63,slow=32,SNR=6.5								
	1.2nm,0.6s								
MKAR	**Makanchi Array**	**7.60**	**209**	Pn	Pn	09 30 45.2	+1.1		
	0.3nm,0.3s,baz=30,slow=12,SNR=12								
MKAR				Sn	Sn	09 32 12.4	+1.5		
	0.2nm,0.3s,baz=29,slow=27,SNR=2.0								
MKAR				Lg	Lg	09 32 50.7			
	baz=29,slow=31								
	0.5nm,0.4s								

*IDC **06** 09:35:10.5±3.5, 39.50N×20.77E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=372.4km s-min=28.9km az=136.0*
*TIR **06** 09:35:10.1, 39.41N×20.53E, h0km±4km, Md3.4, Ml3.1*
*ATH **06** 09:35:10.7, 39.50N×20.62E, h9km±7km, ML3.0/2, Error ellipse: s-maj=8.0km s-min=1.3km az=338.0*
*THE **06** 09:35:11.4, 39.49N×20.58E, h0km±4km, ML2.8/5, Error ellipse: s-maj=4.6km s-min=0.9km az=150.0*

ISC 06 09:35:11.0±1.2, 39.49N±0.02×20.60E±0.02, h0km±10km, n32, σ1s14/43, mb3.4/3, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGT	**Igoumenitsa**	**0.21**	**281**	P	**Pg**	**09 35 14.9**	**-0.2**
IGT				S	**Sg**	**09 35 18.7**	**+0.9**
IGT				AML	AML	09 35 19.1	
	comp=N,15757µm,0.5s						
IGT				AML	AML	09 35 19.5	
	comp=E,14649µm,0.5s						
IGT	**Igoumenitsa**	**0.21**	**281**	P	**Pg**	**09 35 14.8**	**-0.2**
IGT				S	**Sg**	**09 35 18.6**	**+0.7**
	comp=E,8µm,0.5s						
IGT	**Igoumenitsa**	**0.21**	**281**	P	**Pg**	**09 35 14.6**	**-0.4**
	baz=310						
IGT				S	**Sg**	**09 35 18.5**	**+0.6**
	baz=310						
JAN	**Janina**	**0.25**	**49**	P	**Pg**	**09 35 15.2**	**-0.6**
JAN				S	**Sg**	**09 35 19.5**	**+0.4**
JAN				AML	AML	09 35 21.0	
	comp=N,7408µm,0.3s						
JAN				AML	AML	09 35 21.8	
	comp=E,9880µm,0.2s						
JAN	**Janina**	**0.25**	**49**	P	**Pg**	**09 35 15.1**	**-0.7**
JAN				S	**Sg**	**09 35 21.1**	**+2.0**
	comp=E,4µm,0.3s						
KASA	**Kassiopi**	**0.58**	**296**	P	**Pg**	**09 35 21.8**	**-0.2**
SRN	**Sarande**	**0.61**	**310**	P	**Pg**	**09 35 22.1**	**-0.5**
SRN				S	**Sg**	**09 35 31.4**	**+0.9**
	comp=E,345nm,0.7s						
SRN	**Sarande**	**0.61**	**310**	P	**Pg**	**09 35 22.6**	**0.0**
	baz=320						
SRN				S	**Sb**	**09 35 33.1**	**-0.4**
	baz=320						
SRN				AMP			
	comp=E,1.2nm,1.0s,baz=320						
LSK	**Leskovik**	**0.66**	**360**	P	**Pb**	**09 35 24.3**	**-1.1**
LSK				S	**Sb**	**09 35 34.3**	**-0.9**
	comp=E,1µm,0.9s						
LSK	**Leskovik**	**0.66**	**360**	P	**Pb**	**09 35 24.7**	**-0.7**
	baz=4.0						
LSK				S	**Sn**	**09 35 38.6**	**-0.2**
	baz=4.0						
LSK				AMP			
	comp=E,3.8nm,1.0s,baz=4.0						
KEK	**Kerkira**	**0.66**	**290**	P	**Pg**	**09 35 23.0**	**-0.7**
KEK	**Kerkira**	**0.66**	**290**	P	**Pg**	**09 35 23.4**	**-0.2**
KEK				S	**Sg**	**09 35 33.4**	**+1.2**
	comp=E,972nm,0.6s						
LKD2	**Lefkada island**	**0.70**	**177**	P	**Pg**	**09 35 23.7**	**-0.7**
LKD2	**Lefkada island**	**0.70**	**177**	P	**Pg**	**09 35 24.1**	**-0.3**
LKD2	**Lefkada island**	**0.70**	**177**	P	**Pg**	**09 35 24.0**	**-0.4**
	baz=170						
KPRO	**Kipourio**	**0.75**	**51**	P	**Pg**	**09 35 24.3**	**-1.0**
KPRO	**Kipourio**	**0.75**	**51**	P	**Pg**	**09 35 25.5**	**+0.2**
NEST	**Nestorio**	**0.98**	**20**	P	**Pb**	**09 35 30.4**	**-0.6**
FSK	**Fiskardo**	**1.03**	**182**	P	**Pg**	**09 35 30.7**	**0.0**
FSK	**Fiskardo**	**1.03**	**182**	P	**Pb**	**09 35 31.7**	**0.0**
THL	**Klokotos Trika**	**1.09**	**86**	P	**Pb**	**09 35 32.6**	**-0.2**
EVR	**Evrytania**	**1.10**	**121**	P	**Pb**	**09 35 32.8**	**-0.1**
KZN	**Kozani**	**1.21**	**47**	P	**Pg**	**09 35 33.8**	**-0.4**
MAKR	**Makrakomi, Fth**	**1.28**	**111**	P	**Pn**	**09 35 35.9**	**-0.2**
KEF3	**Kipouria, Keph**	**1.30**	**189**	P	**Pn**	**09 35 36.4**	**0.0**
VLS

GLVR	**Golovnino**	**0.93**	**27**	⇓*i*	PN	**Pn**	**10 16 20.8**	**+0.6**
GLVR				*e*	S	**Sn**	**10 16 34.2**	**+0.5**
GLVR					pmax	pmax		
	comp=Z,2μm,0.1s							
GLVR					smax	smax		
	comp=N,6μm,0.3s							
GLVR					smax	smax		
	comp=E,9μm,0.2s							
GLVR	**Golovnino**	**0.93**	**27**	*i*	P	**Pn**	**10 16 20.8**	**+0.6**
GLVR					AMB	AMB	10 16 21.3	
	comp=E,2μm,0.4s							
GLVR				*e*	S	**Sn**	**10 16 34.2**	**+0.5**
GLVR					A	A	10 16 35.7	
	comp=E,6μm,0.4s							
GLVR					A	A	10 16 35.7	
	comp=E,9μm,0.4s							
JAR	**Ashorobuto**	**0.94**	**295**	⇓	P	**Pn**	**10 16 20.5**	**+0.1**
JAR				⇓*e*	S	**Sn**	**10 16 33.5**	**-0.3**
JRA	**Rausu**	**1.04**	**7**	⇓	P	**Pn**	**10 16 21.9**	**+0.5**
JRA				⇓*e*	S	**Sn**	**10 16 36.2**	**+0.3**
JCH	**Churui**	**1.20**	**256**		P	**Pn**	**10 16 23.9**	**+0.4**
JCH				*e*	S	**Sn**	**10 16 39.0**	**-0.5**
RUSJ	**Misakicho**	**1.22**	**11**	*e*	PN	**Pn**	**10 16 24.4**	**+0.7**
RUSJ				*e*	S	**Sn**	**10 16 40.9**	**+1.0**
JTKR	**Abashiri--Toko**	**1.30**	**325**		P	**Pn**	**10 16 25.2**	**+0.4**
JTKR				*e*	S	**Sn**	**10 16 41.5**	**-0.3**
YUK	**Yuzh-Kuril'sk**	**1.31**	**31**	*e*	PN	**Pn**	**10 16 25.5**	**+0.6**
YUK				*e*	S	**Sn**	**10 16 42.5**	**+0.5**
YUK					pmax	pmax		
	comp=E,80nm,0.2s							
YUK					pmax	pmax		
	comp=Z,731nm,0.2s							
YUK					pmax	pmax		
	comp=N,120nm,0.1s							
YUK					smax	smax		
	comp=N,7μm,0.5s							
YUK					smax	smax		
	comp=E,1μm,0.2s							
YUK	**Yuzh-Kuril'sk**	**1.31**	**31**	*e*	P	**Pn**	**10 16 25.5**	**+0.6**
YUK					AMB	AMB	10 16 26.2	
	comp=E,460nm,0.2s							
YUK				*e*	S	**Sn**	**10 16 42.6**	**+0.5**
YUK					A	A	10 16 43.2	
	comp=E,7μm,0.5s							
YUK					A	A	10 16 43.2	
	comp=E,1μm,0.5s							
JMP	**Maruseppu**	**1.59**	**314**		P	**Pn**	**10 16 28.8**	**+0.2**
JMP				*e*	S	**Sn**	**10 16 48.0**	**-0.5**
ERM	**Erimo**	**1.59**	**236**	*ce*	PN	**Pn**	**10 16 29.3**	**+0.7**
SHO	**Shikotan**	**1.68**	**55**	*d*	PN	**Pn**	**10 16 29.9**	**+0.2**
SHO				*i*	S	**Sn**	**10 16 49.6**	**-1.0**
SHO					pmax	pmax		
	comp=E,48nm,0.2s							
SHO					pmax	pmax		
	comp=Z,149nm,0.2s							
SHO					smax	smax		
	comp=E,1μm,0.2s							
SHO					smax	smax		
	comp=N,3μm,0.5s							
SHO	**Shikotan**	**1.68**	**55**	*i*	P	**Pn**	**10 16 29.9**	**+0.2**
SHO					AMB	AMB	10 16 30.6	
	comp=N,150nm,0.2s							
SHO				*i*	S	**Sn**	**10 16 49.8**	**-0.8**
SHO					A	A	10 16 51.1	
	comp=N,3μm,0.5s							
SHO					A	A	10 16 51.1	
	comp=N,1μm,0.5s							
JKA	**Kamikawa-asahi**	**2.08**	**306**	*e*	P	**Pn**	**10 16 36.1**	**+1.0**
ASAJ	**Asahikawa**	**2.09**	**306**		P	**Pn**	**10 16 36.0**	**+0.9**
	comp=N,31nm,0.3s,baz=142,slow=8.9,SNR=108							
ASAJ					S	**Sn**	**10 17 00.2**	**-0.1**
	comp=N,58nm,0.6s,baz=89,slow=32,SNR=3.7							
KUR	**Kuril'sk**	**3.14**	**41**	*e*	PN	**Pn**	**10 16 51.5**	**+2.2**
KUR				*i*	S	**Sn**	**10 17 27.3**	**+1.7**
KUR					pmax	pmax		
	comp=Z,43nm,0.4s							
KUR					smax	smax		
	comp=E,174nm,0.3s							
KUR					smax	smax		
	comp=N,68nm,0.4s							
KUR	**Kuril'sk**	**3.14**	**41**	*e*	P	**Pn**	**10 16 50.2**	**+0.9**
KUR					AMB	AMB	10 16 54.9	
	comp=N,40nm,0.4s							
KUR				*i*	S	**Sn**	**10 17 26.6**	**+1.0**
KUR					A	A	10 17 29.3	
	comp=N,180nm,0.4s							
KUR					A	A	10 17 29.3	
	comp=N,210nm,0.4s							
YSS	**Yuzh-Sakhalins**	**4.33**	**340**	*e*	PN	**Pn**	**10 17 05.7**	**+0.2**
YSS				*e*	S	**Sn**	**10 17 53.9**	**-0.8**
YSS					pmax	pmax		
	comp=Z,10.0nm,0.5s							
YSS					smax	smax		
	comp=N,20nm,1.0s							
YSS					smax	smax		
	comp=E,10.0nm,0.8s							
YSS					MLR	MLR		
	comp=Z,100nm,14.0s							
YSS	**Yuzh-Sakhalins**	**4.33**	**340**	*e*	P	**Pn**	**10 17 05.9**	**+0.4**
YSS					AMB	AMB	10 17 08.3	
	comp=Z,10.0nm,0.5s							
TYV	**Tymovskoe**	**8.11**	**350**	*e*	PN	**Pn**	**10 18 00.0**	**+3.0**
TYV					pmax	pmax		
	comp=Z,6.0nm,0.7s							
TYV	**Tymovskoe**	**8.11**	**350**	*e*	P	**Pn**	**10 18 00.0**	**+3.0**
TYV					AMB	AMB	10 18 01.3	
	comp=Z,10.0nm,0.7s							
MJA0	**Matsu Arr-Jizo**	**8.18**	**221**	*e*	PN	**Pn**	**10 17 58.4**	**+0.2**
MAJO	**Matsushiro**	**8.20**	**221**	⇑	PN	**Pn**	**10 17 58.6**	**+0.2**
MJAR	**Matsushiro Arr**	**8.20**	**221**		P	**Pn**	**10 17 58.4**	**0.0**
	comp=Z,2.5nm,0.8s,baz=40,slow=12,SNR=5.7							
MJAR					LR	LR	10 21 45.0	
	comp=Z,30nm,19.3s,baz=28,slow=41							
KLR	**Kul'dur**	**11.12**	**309**	⇑	PN	**Pn**	**10 18 38.5**	**+0.4**
KLR	**Kul'dur**	**11.12**	**309**	*e*	P	**Pn**	**10 18 38.5**	**+0.4**
PETK	**Petropavlovsk-**	**13.29**	**35**		P	**Pn**	**10 19 04.9**	**-2.5**
	comp=Z,1.2nm,0.8s,baz=198,slow=12,SNR=1.5							
ZEA	**Zeya**	**15.94**	**319**	*e*	P	**P**	**10 19 49.1**	**+5.4**
MA2	**Magadan**	**17.07**	**10**	⇑	PN	**Pn**	**10 19 54.8**	**-0.8**
MA2					pmax	pmax		
	comp=Z,16nm,1.1s							
MA2	**Magadan**	**17.07**	**10**	*e*	P	**Pn**	**10 19 54.8**	**-0.8**
SEY	**Seymchan**	**20.53**	**10**		P	**P**	**10 20 31.1**	**-2.8**
	comp=Z,0.9nm,0.4s,baz=195,slow=10,SNR=4.1							
	comp=Z,0.9nm,0.4s							
SEY	**Seymchan**	**20.53**	**10**	⇑	*e*	**P**	**10 20 31.7**	**-2.2**
SEY					pmax	pmax		
	comp=Z,5.0nm,1.8s							
SONM	**Songino Array**	**27.32**	**294**		P	**P**	**10 21 39.2**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=85,slow=9.6,SNR=7.8							
	comp=Z,1.3nm,0.6s							
SONM	**Songino Array**	**27.32**	**294**	*e*	P	**P**	**10 21 40.2**	**+0.6**
SONM					pmax	pmax		
	comp=Z,1.0nm,0.6s							
XAN	**Xi'an**	**29.37**	**265**	*e*	P	P	10 21 52.4	-5.5
XAN					pP	pP	10 22 09.6	-6.4
XAN					pmax	pmax		
	comp=Z,6.0nm,0.7s							
H11N2	**WAKE ISLAND Hy**	**29.59**	**134**		T	T	10 53 08.5	
	baz=327,slow=75,SNR=280							
H11N1	**WAKE ISLAND Hy**	**29.61**	**135**		T	T	10 53 10.4	
	baz=327,slow=75,SNR=231							
H11N3	**WAKE ISLAND Hy**	**29.61**	**134**		T	T	10 53 13.2	
	baz=327,slow=75,SNR=208							
H11S1	**WAKE ISLAND Hy**	**30.51**	**136**		T	T	10 54 21.0	
	baz=328,slow=76,SNR=400							
H11S3	**WAKE ISLAND Hy**	**30.52**	**136**		T	T	10 54 23.2	
	baz=328,slow=76,SNR=261							
H11S2	**WAKE ISLAND Hy**	**30.53**	**136**		T	T	10 54 20.1	
	baz=328,slow=76,SNR=240							
ZALV	**Zalesovo Beam**	**40.22**	**307**		P	**P**	**10 23 29.4**	**-1.4**
	comp=Z,0.7nm,0.5s,baz=87,slow=10,SNR=3.6							
	comp=Z,0.7nm,0.5s							
ZALV	**Zalesovo Beam**	**40.22**	**307**	*e*	P	**P**	**10 23 29.9**	**-0.9**
ZALV					pmax	pmax		
	comp=Z,1.0nm,0.5s							
COLA	**College**	**42.70**	**35**	⇓	*i*	**P**	**10 23 52.1**	**+1.2**
COLA					pmax	pmax		
	comp=Z,4.0nm,0.8s							
ILAR	**Eielson Array**	**43.11**	**36**		P	**P**	**10 23 54.0**	**-0.4**
	comp=Z,1.7nm,0.8s,baz=277,slow=8.4,SNR=21							
	comp=Z,1.7nm,0.8s							
ILAR	**Eielson Array**	**43.11**	**36**	*e*	P	**P**	**10 23 56.1**	**+1.8**
ILAR					pmax	pmax		
	comp=Z,2.0nm,0.8s							
MK31	**Makanchi Array**	**43.54**	**298**	*c*	*i*	**P**	**10 23 58.5**	**+0.4**
MKAR	**Makanchi Array**	**43.54**	**298**		P	**P**	**10 23 57.8**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=81,slow=9.5,SNR=7.8							
	comp=Z,0.6nm,0.6s							
MKAR	**Makanchi Array**	**43.54**	**298**	*e*	P	**P**	**10 23 58.3**	**+0.2**
MKAR					pmax	pmax		
	comp=Z,1.0nm,0.6s							
MKAR	**Makanchi Array**	**43.54**	**298**	*e*	P	**P**	**10 23 58.3**	**+0.2**
KURK	**Kurchatov**	**44.66**	**304**	⇑	*e*	**P**	**10 24 06.5**	**-0.4**
KURK					pmax	pmax		
	comp=Z,2.0nm,0.7s							
KURK	**Kurchatov**	**44.66**	**304**	*e*	P	**P**	**10 24 06.5**	**-0.4**
INK	**Inuvik**	**47.94**	**30**		P	**P**	**10 24 32.3**	**0.0**
	comp=Z,1.7nm,0.4s,baz=295,slow=9.1,SNR=9.4							
	comp=Z,1.7nm,0.4s							
ARU	**Arti**	**53.85**	**317**	*d*	*i*	**P**	**10 25 16.6**	**-0.2**
ARU							10 26 20.0	
ARU					S	**S**	**10 32 45.5**	**-0.2**
ARU					SS	**SKiKP**	**10 36 20.3**	**-1.8**
ARU					pmax	pmax		
	comp=Z,7.0nm,1.3s							
ARU	**Arti**	**53.85**	**317**	*e*	P	**P**	**10 25 16.6**	**-0.2**
WRA	**Warramunga Arr**	**63.30**	**191**		P	**P**	**10 26 23.4**	**+0.6**
	comp=Z,0.5nm,0.9s,baz=9.5,slow=7.0,SNR=5.6							
	comp=Z,0.5nm,0.9s							
WRA	**Warramunga Arr**	**63.30**	**191**	*e*	P	**P**	**10 26 25.0**	**+2.2**
FINES	**FINESS Array B**	**64.88**	**332**		P	**P**	**10 26 31.7**	**-1.0**
	comp=Z,2.3nm,0.5s,baz=49,slow=7.4,SNR=22							
	comp=Z,2.3nm,0.5s							
FINES	**FINESS Array B**	**64.88**	**332**	*e*	P	**P**	**10 26 32.2**	**-0.5**
FINES					pmax	pmax		
	comp=Z,2.0nm,0.5s							
ASAR	**Alice Springs**	**67.02**	**191**		P	**P**	**10 26 47.2**	**+0.4**
	comp=Z,0.7nm,0.9s,baz=21,slow=6.6,SNR=5.9							
	comp=Z,0.7nm,0.9s							
NB2	**NORSAR Subarra**	**69.79**	**338**		P	**P**	**10 27 03.5**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=32,slow=6.5							
NOA	**NORSAR Array B**	**69.79**	**338**		P	**P**	**10 27 01.8**	**-2.0**
	comp=Z,0.4nm,0.5s,baz=34,slow=6.4,SNR=4.1							
	comp=Z,0.4nm,0.5s							
NOA	**NORSAR Array B**	**69.79**	**338**	*e*	P	**P**	**10 27 03.6**	**-0.2**
NOA					pmax	pmax		
	comp=Z,1.0nm,0.5s							
TXAR	**Lajitas Array**	**84.45**	**55**		P	**P**	**10 28 26.3**	**-0.3**
	comp=Z,0.4nm,1.0s,baz=343,slow=4.7,SNR=3.5							
	comp=Z,0.4nm,1.0s							

*IDC **06** 10:21:46.4±1.1, 26°.96N×130°.26E, h0km, mb3.7/6, mbtmp3.8/6, Error ellipse: s-maj=35.4km s-min=19.6km az=66.0*
*NIED **06** 10:21:48.6, 26°.96N×130°.27E, h54km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-7.78; $M_{\theta\theta}$3.98; $M_{\phi\phi}$3.80; $M_{r\theta}$3.73; $M_{\theta\phi}$3.03; $M_{\phi r}$1.49; Fault plane solution: $M_0$8.36000×10^{14} NP1:ϕ_s38.00000°, δ32.00000°, λ-105.00000°. NP2:ϕ_s235.00000°, δ59.00000°, λ-81.00000°.*
*JMA **06** 10:21:48.6±0.1, 27°.0N±0°.4×130°.3E±0°.4, h54km, MV3.5/25, NEAR MINAMI-DAITOJIMA IS*

ISC 06 10:21:47.3±3.4, 27°.00N±0°.03×130°.31E±0°.04, h13km±22km, n29, σ1s71/45, mb3.9/6, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JZK	**Kikaishima**	**1.34**	**347**	P	**Pb**	**10 22 12.5**	**+0.2**
JKDJ	**Kitadaitoujima**	**1.38**	**139**	P	**Pn**	**10 22 11.6**	**-0.5**
JKDJ				S	**Sb**	**10 22 29.1**	**-1.1**
JTK	**Tokunoshima**	**1.44**	**303**	P	**Pn**	**10 22 12.9**	**-0.1**
JTK				*e*S	**Sn**	**10 22 30.5**	**-1.2**
JMZ	**Minamidaito 2**	**1.44**	**145**	P	**Pn**	**10 22 12.6**	**-0.4**
JMZ				S	**Sn**	**10 22 29.9**	**-1.8**
JAM	**Amami Oshima**	**1.53**	**336**	P	**Pn**	**10 22 14.5**	**+0.2**
JAM				S	**Sn**	**10 22 32.9**	**-1.2**
JOKE	**Okinoerabujima**	**1.59**	**283**	P	**Pn**	**10 22 14.9**	**-0.1**
JOKE				S	**Sn**	**10 22 33.7**	**-1.7**
JAMN	**Amaminishikomi**	**1.59**	**321**	P	**Pn**	**10 22 15.0**	**-0.1**
JAMN				S	**Sn**	**10 22 34.1**	**-1.4**
JYRO	**Yoronjima**	**1.66**	**271**	P	**Pn**	**10 22 15.6**	**-0.3**
JYRO				S	**Sn**	**10 22 35.2**	**-1.9**
JOW	**Kunigami**	**1.82**	**265**	Pn	**Pn**	**10 22 18.0**	**-0.3**
	52nm,0.3s,baz=103,slow=12,SNR=346						
JOW				Sn	**Sn**	**10 22 38.6**	**-2.6**
	33nm,0.3s,baz=233,slow=29,SNR=17						
JOW	**Kunigami**	**1.82**	**265**	P	**Pn**	**10 22 18.0**	**-0.3**
JOW				S	**Sn**	**10 22 39.6**	**-1.6**
JIH	**Iheya**	**2.09**	**271**	P	**Pn**	**10 22 22.1**	**+0.1**
JIH				*e*S	**Sn**	**10 22 46.2**	**-1.5**
JNTH	**Nagotoyohara**	**2.10**	**257**	P	**Pn**	**10 22 21.4**	**-0.6**
JNTH				S	**Sn**	**10 22 45.3**	**-2.7**
JTAJ	**Takarajima**	**2.35**	**336**	P	**Pn**	**10 22 25.5**	**-0.1**
JTAJ				*e*S	**Sn**	**10 22 51.4**	**-2.9**
JJT3	**Tamagusuku3**	**2.42**	**250**	P	**Pn**	**10 22 26.5**	**0.0**
JJT3				S	**Sn**	**10 22 54.2**	**-1.7**
JAGN	**Aguni-jima**	**2.77**	**262**	P	**Pn**	**10 22 31.0**	**-0.3**
JAGN				*e*S	**Sn**	**10 23 01.6**	**-2.9**
JNN	**Nakanoshima**	**2.85**	**352**	*e*S	**Sn**	**10 23 05.5**	**-1.2**
JKE	**Kume jima 2**	**3.22**	**259**	P	**Pn**	**10 22 36.5**	**-1.0**
JKE				S	**Sn**	**10 23 13.5**	**-2.3**
JYAK	**Yakushimahirau**	**3.23**	**3**	S	**Sn**	**10 23 13.0**	**-2.9**
JMTN	**Minamitane**	**3.42**	**9**	*e*P	**Pn**	**10 22 41.8**	**+1.5**
JMTN				*e*S	**Sn**	**10 23 19.0**	**-1.7**
JKC	**Kuchinoerabu**	**3.45**	**358**	*e*S	**Sn**	**10 23 18.9**	**-2.5**
JTN	**Tanegashima 3**	**3.69**	**9**	*e*S	**Sn**	**10 23 24.8**	**-2.5**
KSRS	**Korea Array**	**10.61**	**350**	Pn	**Pn**	**10 24 16.6**	**-2.4**
	0.1nm,0.3s,baz=170,slow=17,SNR=1.3						
MJAR	**Matsushiro Arr**	**11.64**	**33**	Pn	**Pn**	**10 24 29.3**	**-3.8**
	0.1nm,0.3s,baz=205,slow=9.2,SNR=5.0						
KLR	**Kul'dur**	**22.22**	**3**	P	**P**	**10 26 44.1**	**+0.7**
	0.6nm,0.5s,baz=166,slow=8.3,SNR=2.5						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**42.42**	**311**	P	**P**	**10 29 44.0**	**+2.4**
	0.3nm,0.6s,baz=107,slow=8.3,SNR=2.7						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**46.83**	**175**	P	**P**	**10 30 17.6**	**+0.7**
	1.4nm,0.7s,baz=354,slow=8.6,SNR=21						
	1.4nm,0.7s						
CTA	**Charters Tower**	**49.30**	**160**	P	**P**	**10 30 37.2**	**+1.1**
	3.0nm,0.7s,baz=347,slow=5.6,SNR=5.7						
	3.0nm,0.7s						
ASAR	**Alice Springs**	**50.49**	**176**	P	**P**	**10 30 46.0**	**+0.9**
	0.9nm,0.7s,baz=5.9,slow=14,SNR=22						
	0.9nm,0.7s						
FINES	**FINESS Array B**	**73.10**	**331**	P	**P**	**10 33 18.2**	**+1.3**
	1.3nm,1.0s,baz=53,slow=7.1,SNR=1.5						
	1.3nm,1.0s						

*IDC **06** 10:43:55.8±1.9, 11°.16S×119°.36E, h0km, mb3.8/3, mbtmp3.8/6, ML3.7/3, Error ellipse: s-maj=54.5km s-min=27.8km az=44.0*

ISC 06 10:43:56.2±1.2, 11°.3S±0°.1×119°.7E±0°.1, h10km, n10, σ2s97/10, mb4.0/3, South of Sumba

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**3.99**	**75**	Pn	**Pb**	**10 45 04.7**	**-1.9**
	25nm,0.3s,baz=250,slow=3.6,SNR=12						
BATI				Sn	**Sn**	**10 45 48.0**	**+3.7**
	6.3nm,0.3s,baz=28,slow=22,SNR=8.6						
	70nm,0.4s						
KAPI	**Kappang**	**6.19**	**0**	Pn	**Pn**	**10 45 27.5**	**-0.2**
	1.0nm,0.3s,baz=150,slow=19,SNR=2.1						
	2.2nm,0.3s						
WRA	**Warramunga Arr**	**16.49**	**123**	Pn	**Pn**	**10 47 48.0**	**+0.1**
	0.1nm,0.3s,baz=308,slow=14,SNR=7.8						
WRA				Sn	**Sn**	**10 50 47.4**	**-3.7**
	0.1nm,0.3s,baz=291,slow=26,SNR=4.8						
ASAR	**Alice Springs**	**18.28**	**134**	P	**P**	**10 48 15.0**	**+4.6**
	0.1nm,0.3s,baz=315,slow=12,SNR=13						
ASAR				S	**Sn**	**10 51 32.0**	**-2.5**
	0.4nm,0.5s,baz=300,slow=20,SNR=3.6						
	0.9nm,0.8s						
H08S2	**Diego Garcia H**	**46.71**	**270**	T	T	11 43 16.5	
	baz=97						
H08S3	**Diego Garcia H**	**46.72**	**270**	T	T	11 43 18.7	
	baz=97						
H08S1	**Diego Garcia H**	**46.73**	**270**	T	T	11 43 14.3	
	baz=97						
SONM	**Songino Array**	**60.00**	**350**	P	**P**	**10 54 01.7**	**-1.4**
	0.7nm,0.6s,baz=163,slow=6.9,SNR=4.3						
	0.7nm,0.6s						
MKAR	**Makanchi Array**	**66.78**	**333**	P	**P**	**10 54 48.5**	**+0.7**
	0.2nm,0.6s,baz=132,slow=8.2,SNR=3.7						
	0.2nm,0.6s						
ZALV	**Zalesovo Beam**	**71.39**	**339**	P	**P**	**10 55 16.3**	**0.0**
	1.0nm,0.4s,baz=141,slow=4.8,SNR=4.2						
	1.0nm,0.4s						

*ISU **06** 10:44:04.5, 41°.55N×70°.19E, h10km*
*KRNET **06** 10:44:08.4±0.1, 41°.19N×70°.14E, h15km, mb2.8*
*SOME **06** 10:44:10.3, 41°.18N×69°.80E, h20km*
*NNC **06** 10:44:12.2±6.4, 41°.21N×69°.94E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=44.6km s-min=33.2km az=44.0*

ISC 06 10:44:09.6±1.2, 41°.22N±0°.03×70°.07E±0°.03, h10km±10km, n20, σ1s56/39, 14C-6D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAS	**Tashkent**	**0.60**	**280**	⇑	*i*P	**Pg**	**10 44 20.9**	**-0.2**
	baz=83						
TAS				⇑	*i*S	**Sb**	**10 44 29.9**	**-0.6**
	baz=83						
TRKS	**Terek-Say**	**0.86**	**69**	⇑	*i*P	**Pg**	**10 44 23.6**	**-2.6**
	baz=70						
TRKS				⇑	*i*P	**Sg**	**10 44 35.8**	**-1.6**
	baz=70						
IUG	**luzhnay**	**0.92**	**358**	*e*	P	**Pn**	**10 44 28.8**	**+0.1**
	83nm,0.4s						
IUG				*e*	S	**Sn**	**10 44 40.9**	**-1.2**
	134nm,0.3s						
IUG	**luzhnay**	**0.92**	**358**		P	**Pn**	**10 44 28.8**	**+0.1**
	83nm,0.4s						
IUG					S	**Sn**	**10 44 40.9**	**-1.2**
	134nm,0.3s						
MINT	**Mingtut**	**1.02**	**138**		P	**Pb**	**10 44 28.1**	**-1.2**
MINT					S	**Sn**	**10 44 45.6**	**+1.4**
BTK	**Batken**	**1.29**	**154**	⇓	*i*P	**Pn**	**10 44 32.0**	**-1.7**
	baz=55							
BTK				⇓	*i*S	**Sb**	**10 44 48.6**	**-2.1**
	baz=55							
CHMI	**Chimion**	**1.46**	**130**		P	**Pn**	**10 44 34.3**	**-1.6**
CHMI					S	**Sg**	**10 44 56.5**	**+0.1**
ARK	**Arkit**	**1.53**	**67**	⇑	*i*P	**Pn**	**10 44 36.2**	**-0.8**
	baz=66							
ARK				⇑	*i*S	**Sn**	**10 44 56.4**	**-0.6**
	baz=66							
FRG	**Fergana**	**1.55**	**123**		P	**Pn**	**10 44 35.8**	**-1.4**
FRG					S	**Sb**	**10 44 58.8**	**+0.8**
SHAK	**Shakhimardan**	**1.79**	**134**		P	**Pn**	**10 44 39.4**	**-1.3**
SHAK					S	**Sb**	**10 45 06.1**	**+1.0**
BRLS	**Boroldday**	**1.81**	**354**	*e*	P	**Pn**	**10 44 40.8**	**0.0**
	6.0nm,0.8s							
BRLS				*e*	S	**Sn**	**10 45 01.5**	**-2.4**
	8.9nm,0.5s							
BRLS	**Boroldday**	**1.81**	**354**		P	**Pn**	**10 44 40.8**	**0.0**
	6.0nm,0.8s							
BRLS					S	**Sn**	**10 45 01.5**	**-2.4**
	8.9nm,0.5s							
KK31	**Karatay Array**	**1.91**	**10**	⇓	Pn	**Pg**	**10 44 46.0**	**-0.2**
	1.9nm,0.3s,baz=192,slow=17,SNR=44							
KK31				⇓	Sn	**Sg**	**10 45 14.9**	**+4.0**
	10nm,0.7s,baz=189,slow=26,SNR=6.2							
DRK	**Karamyk**	**2.18**	**142**	⇑	*i*P	**Pn**	**10 44 46.7**	**+0.5**
	baz=43							
DRK				⇑	*i*S	**Sn**	**10 45 14.4**	**+1.0**
	baz=43							
GAR	**Garm**	**2.23**	**175**	⇑	*e*P	**Pn**	**10 44 47.4**	**+0.8**
	baz=76							
GAR				⇑	*i*S	**Sn**	**10 45 15.7**	**+1.5**
	baz=76							
CHGR	**Chuyangaron**	**2.66**	**196**	⇑	*i*P	**Pn**	**10 44 52.9**	**+0.4**
	baz=97							
CHGR				⇑	*i*S	**Sn**	**10 45 26.4**	**+1.6**
	baz=97							
MRKS	**Merke**	**2.80**	**56**	*e*	P	**Pg**	**10 45 04.6**	**+1.4**
	5.2nm,0.2s							
MRKS				*e*	S	**Sg**	**10 45 42.9**	**+3.4**
	10.0nm,0.6s							
MRKS	**Merke**	**2.80**	**56**	Pg		**Pg**	**10 45 04.6**	**+1.4**
	5.2nm,0.2s							
MRKS				Lg	Lg		10 45 42.9	
	10.0nm,0.6s							
ARLS	**Aral**	**3.25**	**77**	⇓	*i*P	**Pn**	**10 45 02.1**	**+1.4**
	baz=77							
ARLS				⇓	*i*S	**Sn**	**10 45 40.1**	**+0.5**
	baz=77							
UCH	**Uchtor**	**3.47**	**72**	⇑	*i*P	**Pn**	**10 45 04.5**	**+0.5**
	baz=71							
UCH				⇑	*i*S	**Sn**	**10 45 46.5**	**+1.1**
	baz=71							

*KRNET **06** 11:06:37.9±0.1, 41°.33N×75°.80E, h20km, mb2.9*
*SOME **06** 11:06:38.2, 41°.28N×75°.85E, h20km*
*KNET **06** 11:06:39.5±0.6, 41°.45N×75°.72E, h1km±3km, ml2.4, Error ellipse: s-maj=3.5km s-min=3.2km az=173.0*
*NNC **06** 11:06:39.0±1.0, 41°.36N×75°.84E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=6.8km s-min=5.0km az=174.0*

ISC 06 11:06:38.1±1.5, 41°.33N±0°.05×75°.72E±0°.02, h6km±12km, n58, σ1s30/99, 33C-14D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULHL	**Ulahol**	**0.99**	**23**	⇓	P	**Pg**	**11 06 56.4**	**-0.9**
	17nm,0.1s,SNR=16							
ULHL				⇓	S	**Sg**	**11 07 09.1**	**-1.0**
	51nm,0.2s							
ULHL	**Ulahol**	**0.99**	**23**	⇑	*i*P	**Pg**	**11 06 56.2**	**-1.0**
	baz=20							
ULHL				⇑	*i*S	**Sg**	**11 07 09.2**	**-0.9**
	baz=20							

CHMS	**Chumysh** 6.6nm,0.5s	**1.81**	**337**	⇑Pg		**Pb**	**11 07 11.9**	**+0.2**
CHMS	21nm,0.5s			⇓Lg		Lg	11 07 38.3	
IZV	**Izvestkoviy** 31nm,0.2s	**1.83**	**21**	*eP*		**Pg**	**11 07 13.9**	**+0.8**
IZV	20nm,0.3s			*eS*		**Sg**	**11 07 39.8**	**+2.9**
MTBS	**Maitube** 5.1nm,0.1s	**1.87**	**16**	*eP*		**Pb**	**11 07 13.1**	**+0.3**
MTBS	23nm,0.2s			*eS*		**Sg**	**11 07 38.4**	**+0.1**
TNSS	**Tian-Shan** 20nm,0.2s	**1.93**	**28**	*eP*		**Pb**	**11 07 13.8**	**-0.3**
TNSS	18nm,0.2s			*eS*		**Sg**	**11 07 40.0**	**-0.3**
TNSS	**Tian-Shan** 20nm,0.2s	**1.93**	**28**	Pg		**Pb**	**11 07 13.8**	**-0.3**
TNSS	18nm,0.2s			Lg		Lg	11 07 40.0	
EKS2	**Erkin-Say** baz=12	**1.96**	**313**	⇑*eP*		**Pb**	**11 07 13.4**	**-0.9**
EKS2	baz=12			⇑*iS*		**Sb**	**11 07 39.4**	**+0.3**
ANVS	**Anan'yevo** baz=43	**2.05**	**44**	⇑*iP*		**Pn**	**11 07 13.7**	**+0.3**
ANVS	baz=43			⇑*iS*		**Sb**	**11 07 40.1**	**-1.7**
MDOK	**Medeo** 12nm,0.2s	**2.08**	**28**	*eP*		**Pb**	**11 07 16.0**	**-0.4**
MDOK	20nm,0.4s			*eS*		**Sb**	**11 07 43.4**	**+0.9**
MDOK	**Medeo** 4.0nm,0.3s	**2.08**	**28**	Pn		**Pb**	**11 07 15.8**	**-0.5**
MDOK	12nm,0.2s			Pg		**Pb**	**11 07 16.0**	**-0.4**
MDOK	20nm,0.4s			Lg		Lg	11 07 43.4	
MDOK	12nm,0.4s			Lg		Lg	11 07 44.3	
USP	**Ospenovka** 16nm,0.2s,SNR=15	**2.13**	**335**	⇑P		**Pb**	**11 07 18.1**	**+0.9**
USP	46nm,0.3s			⇑S		**Sg**	**11 07 46.6**	**0.0**
USP	**Ospenovka** baz=34	**2.13**	**335**	⇑*eP*		**Pb**	**11 07 15.6**	**-1.6**
USP	baz=34			⇑*iS*		**Sb**	**11 07 43.0**	**-0.9**
SGDS	**Sogindy** 31nm,0.2s	**2.27**	**340**	*eP*		**Pb**	**11 07 20.4**	**+0.9**
SGDS	43nm,0.6s			*eS*		**Sg**	**11 07 51.3**	**+0.4**
SGDS	**Sogindy** 31nm,0.2s	**2.27**	**340**	Pg		**Pb**	**11 07 20.4**	**+0.9**
SGDS	43nm,0.6s			Lg		Lg	11 07 51.3	
PRZ	**Przheval'sk** baz=58	**2.31**	**59**	⇑*iP*		**Pn**	**11 07 16.9**	**0.0**
PRZ	baz=58			⇑*iS*		**Sn**	**11 07 45.4**	**-0.4**
MRKS	**Merke** 8.6nm,0.5s	**2.33**	**308**	*eP*		**Pg**	**11 07 23.9**	**+1.2**
MRKS	32nm,0.4s			*eS*		**Sg**	**11 07 57.3**	**+4.3**
MRKS	**Merke** 8.6nm,0.5s	**2.33**	**308**	Pg		**Pg**	**11 07 23.9**	**+1.2**
MRKS	32nm,0.4s			Lg		Lg	11 07 57.3	
KRBS	**Karabastau** 23nm,0.3s	**2.36**	**359**	*eP*		**Pb**	**11 07 21.7**	**+0.6**
KRBS	67nm,0.6s			*eS*		**Sg**	**11 07 53.0**	**-0.9**
KRBS	**Karabastau** 23nm,0.3s	**2.36**	**359**	Pg		**Pb**	**11 07 21.7**	**+0.6**
KRBS	67nm,0.6s			Lg		Lg	11 07 53.1	
KTBS	**Karatobe** 12nm,0.3s	**2.48**	**16**	*eP*		**Pb**	**11 07 23.6**	**+0.4**
KTBS	75nm,0.5s			*eS*		**Sg**	**11 07 56.3**	**-1.6**
KTBS	**Karatobe** 12nm,0.3s	**2.48**	**16**	Pg		**Pb**	**11 07 23.6**	**+0.4**
KTBS	75nm,0.5s			Lg		Lg	11 07 56.3	
KUU	**Kurty** 7.7nm,0.4s	**2.60**	**10**	*eP*		**Pb**	**11 07 25.6**	**+0.5**
KUU	40nm,0.6s			*eS*		**Sg**	**11 08 00.2**	**-1.5**
KUU	**Kurty** 7.7nm,0.4s	**2.60**	**10**	Pg		**Pb**	**11 07 25.6**	**+0.5**
KUU	40nm,0.6s			Lg		Lg	11 08 00.2	
SATY	**Saty** 3.7nm,0.2s	**2.64**	**48**	*eP*		**Pb**	**11 07 25.7**	**-0.2**
SATY	24nm,0.2s			*eS*		**Sb**	**11 08 00.1**	**+1.4**
SATY	**Saty** 3.7nm,0.2s	**2.64**	**48**	Pg		**Pb**	**11 07 25.7**	**-0.2**
SATY	24nm,0.2s			Lg		Lg	11 08 00.1	
CHKK	**Chushkaly** 4.0nm,0.2s	**2.69**	**20**	*eP*		**Pb**	**11 07 27.6**	**+0.9**
CHKK	46nm,0.2s			*eS*		**Sg**	**11 08 03.3**	**-1.2**
CHKK	**Chushkaly** 4.0nm,0.2s	**2.69**	**20**	Pg		**Pb**	**11 07 27.6**	**+0.9**
CHKK	46nm,0.2s			Lg		Lg	11 08 03.3	
KPKS	**Kokpek** 2.0nm,0.2s	**3.06**	**45**	*eP*		**Pb**	**11 07 32.6**	**-0.4**
KPKS	42nm,0.5s			*eS*		**Sb**	**11 08 11.9**	**+1.2**
KPKS	**Kokpek** 2.0nm,0.2s	**3.06**	**45**	Pg		**Pb**	**11 07 32.6**	**-0.4**
KPKS	42nm,0.5s			Lg		Lg	11 08 11.9	
ARXS	**Arharly** 3.3nm,0.4s	**3.27**	**28**	*eP*		**Pb**	**11 07 37.2**	**+0.6**
ARXS	27nm,0.5s			*eS*		**Sb**	**11 08 19.5**	**+2.7**
SHLS	**Shalkode** 2.5nm,0.2s	**3.33**	**56**	*eP*		**Pg**	**11 07 42.5**	**+0.6**
SHLS	16nm,0.6s			*eS*		**Sg**	**11 08 28.5**	**+3.6**
PDGK	**Podgornoye** 0.9nm,0.4s	**3.44**	**53**	Pg		**Pb**	**11 07 39.5**	**0.0**
PDGK	4.0nm,0.7s			Lg		Lg	11 08 23.7	
PDGK	**Podgornoye** 2.2nm,0.8s	**3.44**	**53**	⇑Pg		**Pb**	**11 07 38.3**	**-1.2**
PDGK	5.7nm,0.5s			⇑Lg		Lg	11 08 23.3	
BTLS	**Baital** 1.0nm,0.2s	**3.90**	**342**	*eP*		**Pb**	**11 07 48.8**	**+1.5**
BTLS	7.0nm,0.3s			*eS*		**Sg**	**11 08 39.7**	**-3.7**
DJR	**Jarkent** 1.0nm,0.1s	**4.24**	**44**	*eP*		**Pb**	**11 07 53.7**	**+0.6**
DJR	6.4nm,0.4s			*eS*		**Sb**	**11 08 47.8**	**+3.2**
KK31	**Karatay Array** 0.7nm,0.5s,baz=120,slow=16,SNR=8.2	**4.25**	**296**	Pg		**Pg**	**11 07 58.9**	**-0.6**
KK31	1.5nm,0.4s,baz=115,slow=27,SNR=6.2			⇑Lg		Lg	11 08 55.1	
IUG	**luzhnay** 63nm,0.4s	**4.33**	**283**	*eP*		**Pg**	**11 07 60.0**	**-1.1**
IUG	11nm,0.8s			*eS*		**Sg**	**11 08 59.0**	**+1.8**
IUG	**luzhnay** 63nm,0.4s	**4.33**	**283**	Pg		**Pg**	**11 07 60.0**	**-1.1**
IUG	11nm,0.8s			Lg		Lg	11 08 59.0	
BRLS	**Boroldaу** 4.0nm,0.5s	**4.69**	**293**	*eP*		**Pg**	**11 08 05.2**	**-2.6**
BRLS	2.5nm,0.6s			*eS*		**Sg**	**11 09 07.8**	**-0.8**
BRLS	**Boroldaу** 4.0nm,0.5s	**4.69**	**293**	Pg		**Pg**	**11 08 05.2**	**-2.6**
BRLS	2.5nm,0.6s			Lg		Lg	11 09 07.8	
KAPS	**Kapalarasan** 0.6nm,0.2s	**4.76**	**33**	*eP*		**Pb**	**11 08 02.5**	**+0.5**
KAPS	3.9nm,0.5s			*eS*		**Sb**	**11 09 02.9**	**+3.4**

*IDC **06** 11:08:05.1±1.5, 14°.90S×173°.44W, h0km, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=96.8km s-min=19.5km az=150.0*

ISC 06 11:08:09.2±1.3, 14°.9S±0°.6×173°.3W±0°.3, h30km, n12, σ2s09/7, mb3.6/5, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu** 41nm,0.3s,baz=243,slow=6.8,SNR=23	**1.73**	**57**	Pn		**Pn**		**11 08 37.3**	**-0.1**
AFI	159nm,0.3s,baz=324,slow=11,SNR=9.1			Sn		**Sn**		**11 08 55.9**	**-2.5**
H11S2	**WAKE ISLAND Hy** baz=149,slow=76,SNR=12	**38.58**	**329**	T		T		11 56 56.8	
H11S3	**WAKE ISLAND Hy** baz=149,slow=76,SNR=9.7	**38.59**	**329**	T		T		11 57 05.7	
H11S1	**WAKE ISLAND Hy** baz=149,slow=76,SNR=10	**38.60**	**329**	T		T		11 56 54.3	
H11N3	**WAKE ISLAND Hy** baz=150,slow=76,SNR=6.7	**39.52**	**330**	T		T		11 58 10.0	
H11N1	**WAKE ISLAND Hy** baz=150,slow=76,SNR=9.4	**39.52**	**330**	T		T		11 58 09.4	
H11N2	**WAKE ISLAND Hy** baz=150,slow=76,SNR=5.7	**39.53**	**330**	T		T		11 58 10.1	
STKA	**Stephens Creek** 1.2nm,0.4s,baz=67,slow=7.7,SNR=1.7 1.2nm,0.4s	**44.41**	**240**	P		**P**		**11 16 16.8**	**-0.7**
WRA	**Warramunga Arr** 0.3nm,0.5s,baz=94,slow=7.1,SNR=13 0.3nm,0.5s	**50.09**	**256**	P		**P**		**11 17 00.6**	**-1.3**
ASAR	**Alice Springs** 1.8nm,0.5s,baz=86,slow=8.4,SNR=58 1.8nm,0.5s	**50.40**	**251**	P		**P**		**11 17 03.2**	**-1.0**
TXAR	**Lajitas Array** 0.4nm,0.9s,baz=218,slow=5.9,SNR=4.5 0.4nm,0.9s	**80.21**	**56**	P		**P**		**11 20 20.0**	**+2.6**
ILAR	**Eielson Array** 0.3nm,0.8s,baz=213,slow=4.4,SNR=7.0 0.3nm,0.8s	**81.90**	**11**	P		**P**		**11 20 26.4**	**+1.0**

*IDC **06** 11:14:12.0±1.9, 27°.23S×112°.73W, h0km, mb3.8/2, mbtmp3.8/2, MS3.5/15, Error ellipse: s-maj=115.8km s-min=56.3km az=99.0*

ISC 06 11:14:11.0±1.8, 27°.6S±0°.5×111°.7W±0°.7, h10km, n30, σ0s72/6, MS3.5/15, Easter Island region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NNA	**Nana** comp=Z,58nm,21.2s,baz=236,slow=29	**36.13**	**71**	LR		LR		11 32 16.6	
PLCA	**Paso Flores** comp=Z,42nm,18.4s,baz=245,slow=31	**36.15**	**122**	LR		LR		11 33 06.8	
ATAH	**Atahuipa** comp=Z,65nm,18.4s,baz=215,slow=30	**37.55**	**63**	LR		LR		11 33 32.9	
LPAZ	**La Paz** comp=Z,43nm,20.3s,baz=243,slow=30	**41.76**	**84**	LR		LR		11 35 43.3	
JTS	**Las Juntas de** comp=Z,42nm,19.5s,baz=288,slow=30	**45.73**	**38**	LR		LR		11 37 10.1	
CMIG	**Matias Romero** comp=Z,25nm,18.1s,baz=174,slow=30	**47.34**	**22**	LR		LR		11 38 05.9	
PMSA	**Palmer Station** comp=Z,46nm,19.6s,baz=244,slow=31	**47.71**	**155**	LR		LR		11 39 05.5	
SIV	**San Ignacio** comp=Z,32nm,21.8s,baz=266,slow=31	**48.11**	**87**	LR		LR		11 39 33.3	
PFO	**Pinyon Flats O** comp=Z,66nm,18.0s,baz=202,slow=30	**61.06**	**355**	LR		LR		11 44 46.4	
QSPA	**South Pole Qui** comp=Z,42nm,19.2s,baz=7.0,slow=32	**62.56**	**180**	LR		LR		11 47 16.3	
SJG	**San Juan** comp=Z,20nm,21.2s,baz=200,slow=32	**63.35**	**49**	LR		LR		11 48 02.3	
MDP	**Montagnes Aes** comp=Z,30nm,18.3s,baz=69,slow=33	**65.56**	**70**	LR		LR		11 50 54.5	
NVAR	**Mina Array Bea** 1.1nm,0.7s,baz=184,slow=9.2,SNR=11 1.1nm,0.7s	**65.99**	**354**	P		**P**		**11 24 58.3**	**+0.5**
YBH	**Yreka Blue Hor** comp=Z,45nm,18.5s,baz=218,slow=30	**69.75**	**351**	LR		LR		11 49 16.8	
PDAR	**Pinedale Array** 0.2nm,0.4s,baz=184,slow=7.2,SNR=2.2 0.2nm,0.4s	**70.06**	**2**	P		**P**		**11 25 22.9**	**-0.4**
RCBR	**Riachuelo** comp=Z,36nm,18.3s,baz=334,slow=34	**74.74**	**89**	LR		LR		11 57 35.5	
NEW	**Newport** comp=Z,44nm,18.5s,baz=210,slow=32	**75.69**	**356**	LR		LR		11 54 40.6	
H11S2	**WAKE ISLAND Hy** baz=120,slow=76,SNR=6.1	**91.28**	**290**	T		T		13 07 52.8	
H11S1	**WAKE ISLAND Hy** baz=120,slow=76,SNR=7.7	**91.29**	**290**	T		T		13 07 53.6	
H11S3	**WAKE ISLAND Hy** baz=120,slow=76,SNR=4.8	**91.30**	**290**	T		T		13 07 52.0	
H11N3	**WAKE ISLAND Hy** baz=118	**91.69**	**291**	T		T		13 08 25.3	
H11N1	**WAKE ISLAND Hy** baz=118,slow=74,SNR=6.2	**91.71**	**291**	T		T		13 08 27.4	
H11N2	**WAKE ISLAND Hy** baz=118,slow=74,SNR=3.2	**91.71**	**291**	T		T		13 08 26.1	
H01W1	**Cape Leeuwin H** baz=138,slow=76,SNR=3.9	**104.21**	**217**	T		T		13 24 01.3	
H01W2	**Cape Leeuwin H** baz=138,slow=76,SNR=4.7	**104.22**	**217**	T		T		13 24 05.1	
H01W3	**Cape Leeuwin H** baz=138,slow=76,SNR=2.9	**104.23**	**217**	T		T		13 24 02.2	
SONM	**Songino Array** 0.3nm,0.3s,baz=96,slow=1.4,SNR=1.5	**144.22**	**315**	PKP		**PKPdf**		**11 33 47.4**	**+0.2**
BRTR	**Keskin Array B** 0.5nm,0.8s,baz=298,slow=3.1,SNR=1.6	**148.91**	**58**	PKPbc		**PKPab**		**11 34 03.6**	**+0.3**
CMAR	**Chiang Mai Arr** 0.6nm,0.6s,baz=141,slow=3.0,SNR=2.1	**150.43**	**259**	PKPbc		**PKiKP**		**11 34 04.5**	**+0.3**
ZALV	**Zalesovo Beam** 0.6nm,0.5s,baz=30,slow=3.5,SNR=1.9	**151.02**	**340**	PKPbc		**PKPbc**		**11 34 02.8**	**-1.0**

*KRNET **06** 11:22:23.4±0.1, 40°.88N×74°.89E, h21km, mb3.2*
*NNC **06** 11:22:24.4±1.0, 40°.88N×74°.91E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=7.9km s-min=4.3km az=162.0*
*SOME **06** 11:22:24.4, 40°.95N×74°.93E, h5km*
*KNET **06** 11:22:25.1±1.4, 40°.94N×74°.90E, h19km±9km, ml2.7, Error ellipse: s-maj=8.5km s-min=4.2km az=6.0*

ISC 06 11:22:23.0±1.2, 40°.71N±0°.04×74°.73E±0°.02, h18km±9km, n63, σ1s15/109, 29C-22D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ARLS	**Aral** baz=37	**1.19**	**345**	⇓*iP*		**Pn**		**11 22 43.4**	**-1.6**
ARLS	baz=37			⇓*iS*		**Sb**		**11 22 58.0**	**-2.4**
OHH	**Osh** baz=58	**1.49**	**264**	⇑*iP*		**Pg**		**11 22 53.5**	**+1.7**
OHH	baz=58			⇑*iS*		**Sg**		**11 23 15.6**	**+4.3**
UCH	**Uchtor** 19nm,0.3s,SNR=51	**1.53**	**354**	⇑P		**Pn**		**11 22 49.6**	**-0.3**
UCH	22nm,0.2s			⇓S		**Sn**		**11 23 09.3**	**-0.2**
UCH	**Uchtor** baz=48	**1.53**	**354**	⇓*iP*		**Pn**		**11 22 49.1**	**-0.8**
UCH	baz=48			⇓*iS*		**Sn**		**11 23 08.0**	**-1.6**
AML	**Almayashu** 9.5nm,0.1s,SNR=11	**1.62**	**332**	⇓P		**Pb**		**11 22 52.6**	**-0.1**
AML	75nm,0.4s			⇓S		**Sb**		**11 23 13.1**	**+0.1**
ULHL	**Ulahol** 13nm,0.2s,SNR=26	**1.91**	**36**	⇓P		**Pn**		**11 22 54.9**	**-0.1**
ULHL	67nm,0.2s			⇑S		**Sn**		**11 23 17.3**	**-1.3**
ULHL	**Ulahol** baz=36	**1.91**	**36**	⇓*iP*		**Pn**		**11 22 54.7**	**-0.2**
ULHL	baz=36			⇓*iS*		**Sn**		**11 23 17.5**	**-1.1**
AAK	**Ala-Archa** 24nm,0.3s,SNR=17	**1.94**	**355**	⇑P		**Pb**		**11 22 56.6**	**-1.4**
AAK	40nm,0.4s			⇓S		**Sn**		**11 23 20.6**	**+1.4**
AAK	**Ala-Archa** baz=50	**1.94**	**355**	⇑*iP*		**Pb**		**11 22 56.2**	**-1.7**
AAK	baz=50			⇑*iS*		**Sn**		**11 23 20.3**	**+1.1**
KBK	**Karagaybulak** 17nm,0.1s,SNR=16	**1.95**	**5**	⇓P		**Pb**		**11 22 57.1**	**-1.1**
KBK	39nm,0.1s			⇓S		**Sn**		**11 23 21.1**	**+1.5**
KBK	**Karagaybulak** baz=1.0	**1.95**	**5**	⇑*iP*		**Pn**		**11 22 56.0**	**+0.5**
KBK	baz=1.0			⇑*iS*		**Sn**		**11 23 19.9**	**+0.2**
BOOM	**Boomskoye usch** baz=26	**2.00**	**27**	⇑*iP*		**Pn**		**11 22 56.4**	**+0.3**
BOOM	baz=26			⇑*iS*		**Sn**		**11 23 20.6**	**-0.2**
EKS2	**Erkin-Say** baz=35	**2.08**	**340**	⇓*iP*		**Pb**		**11 22 58.9**	**-1.4**
EKS2	baz=35			⇓*iS*		**Sb**		**11 23 24.9**	**-1.0**
CHMS	**Chumysh** baz=57	**2.29**	**0**	⇑*iP*		**Pn**		**11 23 01.1**	**+1.1**
CHMS	baz=57			⇑*iS*		**Sn**		**11 23 28.8**	**+1.1**
CHMS	**Chumysh** 7.7nm,0.4s	**2.29**	**0**	⇓Pg		**Pb**		**11 23 03.0**	**-0.9**
CHMS	30nm,0.6s			⇓Lg		Lg		11 23 33.1	
TKM2	**Tokmak 2** 14nm,0.2s,SNR=25	**2.30**	**16**	⇑P		**Pb**		**11 23 02.6**	**-1.6**
TKM2	27nm,0.2s			⇑S		**Sn**		**11 23 30.5**	**+2.1**
TKM2	**Tokmak 2** baz=14	**2.30**	**16**	⇓*iP*		**Pn**		**11 23 01.0**	**+0.7**
TKM2	baz=14			⇓*iS*		**Sn**		**11 23 28.5**	**+0.1**
TKM2	**Tokmak 2** 4.8nm,0.3s	**2.30**	**16**	⇓Pg		**Pb**		**11 23 02.6**	**-1.6**
TKM2	27nm,0.6s			⇑Lg		Lg		11 23 31.8	
MRKS	**Merke**	**2.33**	**332**	*eP*		**Pg**		**11 23 07.8**	**+0.1**
MRKS				*eS*		**Sg**		**11 23 38.8**	**+0.9**
ARK	**Arkit** baz=94	**2.36**	**298**	⇑*iP*		**Pb**		**11 23 05.0**	**0.0**
ARK	baz=94			⇑*iS*		**Sb**		**11 23 35.3**	**+1.5**
KST	**Kastek** 4.8nm,0.3s	**2.51**	**21**	*eP*		**Pb**		**11 23 06.7**	**-0.9**
KST	57nm,0.4s			*eS*		**Sb**		**11 23 37.3**	**-1.0**
KST	**Kastek** 4.8nm,0.3s	**2.51**	**21**	Pg		**Pb**		**11 23 06.7**	**-0.9**
KST	57nm,0.4s			Lg		Lg		11 23 37.3	
DRK	**Karamyk** baz=41	**2.56**	**242**	⇑*iP*		**Pg**		**11 23 10.0**	**-2.2**
DRK	baz=41			⇑*iS*		**Sg**		**11 23 44.0**	**-1.4**
USP	**Ospenovka** baz=53	**2.56**	**356**	⇓*iP*		**Pn**		**11 23 05.1**	**+1.4**
USP	baz=53			⇓*iS*		**Sn**		**11 23 35.5**	**+1.0**
IZV	**Izvestkoviy** 24nm,0.1s	**2.72**	**30**	*eP*		**Pb**		**11 23 11.8**	**+0.6**
IZV	46nm,0.5s			*eS*		**Sb**		**11 23 46.0**	**+1.7**
IZV	**Izvestkoviy** 24nm,0.1s	**2.72**	**30**	Pg		**Pb**		**11 23 11.8**	**+0.6**
IZV	46nm,0.5s			Lg		Lg		11 23 46.0	
MTBS	**Maitube** 9.1nm,0.2s	**2.73**	**27**	*eP*		**Pb**		**11 23 10.8**	**-0.6**
MTBS	70nm,0.4s			*eS*		**Sb**		**11 23 44.3**	**-0.3**
MTBS	**Maitube** 9.1nm,0.2s	**2.73**	**27**	Pg		**Pb**		**11 23 10.8**	**-0.6**
MTBS	70nm,0.4s			Lg		Lg		11 23 44.3	
SGDS	**Sogindy** 12nm,0.5s	**2.74**	**358**	*eP*		**Pb**		**11 23 11.6**	**0.0**
SGDS	40nm,0.8s			*eS*		**Sb**		**11 23 45.7**	**+0.8**
SGDS	**Sogindy** 12nm,0.5s	**2.74**	**358**	Pg		**Pb**		**11 23 11.6**	**0.0**
SGDS	40nm,0.8s			Lg		Lg		11 23 45.7	
TRKS	**Terek-Say** baz=83	**2.84**	**288**	⇑*iP*		**Pb**		**11 23 11.7**	**-1.5**
TRKS	baz=83			⇑*iS*		**Sb**		**11 23 46.8**	**-0.9**
TNSS	**Tian-Shan** 6.7nm,0.3s	**2.85**	**35**	*eP*		**Pb**		**11 23 12.8**	**-0.9**
TNSS	40nm,0.6s			*eS*		**Sb**		**11 23 47.8**	**-0.7**
TNSS	**Tian-Shan** 6.7nm,0.3s	**2.85**	**35**	Pg		**Pb**		**11 23 12.8**	**-0.9**
TNSS	40nm,0.6s			Lg		Lg		11 23 47.8	
AAA	**Alma-Ata** 27nm,0.2s	**2.98**	**32**	*eP*		**Pb**		**11 23 16.0**	**+0.3**
AAA	107nm,0.4s			*eS*		**Sb**		**11 23 52.8**	**+1.0**
MDOK	**Medeo** 10nm,0.4s	**3.00**	**34**	*eP*		**Pb**		**11 23 15.3**	**-0.7**
MDOK	56nm,0.9s			*eS*		**Sb**		**11 23 52.4**	**0.0**
MDOK	**Medeo** 12nm,0.5s	**3.00**	**34**	Pg		**Pb**		**11 23 15.3**	**-0.7**
MDOK	10nm,0.4s			Pg		**Pb**		**11 23 15.3**	**-0.7**
MDOK	56nm,0.9s			Lg		Lg		11 23 52.4	
MDOK	58nm,0.7s			Lg		Lg		11 23 53.1	
ANVS	**Anan'yevo** baz=46	**3.02**	**46**	⇑*iP*		**Pn**		**11 23 10.9**	**+0.8**
ANVS	baz=46			⇑*iS*		**Sn**		**11 23 45.6**	**-0.4**
BTK	**Batken** baz=57	**3.06**	**259**	⇑*iP*		**Pb**		**11 23 16.2**	**-0.8**
BTK	baz=57			⇑*iS*		**Sb**		**11 23 55.0**	**+1.0**
KRBS	**Karabastau** 12nm,0.3s	**3.07**	**13**	*eP*		**Pb**		**11 23 16.1**	**-1.0**
KRBS	55nm,0.4s			*eS*		**Sb**		**11 23 53.0**	**-1.2**
PRZ	**Przheval'sk** baz=57	**3.27**	**56**	⇑*iP*		**Pn**		**11 23 14.7**	**+1.1**
PRZ	baz=57			⇑*iS*		**Sn**		**11 23 52.1**	**-0.1**
KTBS	**Karatobe** 7.5nm,0.3s	**3.33**	**25**	*eP*		**Pb**		**11 23 21.1**	**-0.6**
KTBS	70nm,0.5s			*eS*		**Sb**		**11 24 02.1**	**+0.3**
KTBS	**Karatobe** 7.5nm,0.3s	**3.33**	**25**	Pg		**Pb**		**11 23 21.0**	**-0.6**
KTBS	70nm,0.5s			Lg		Lg		11 24 02.1	
KUU	**Kurty** 5.6nm,0.3s	**3.40**	**20**	*eP*		**Pb**		**11 23 22.0**	**-0.7**
KUU	44nm,0.7s			*eS*		**Sb**		**11 24 04.0**	**+0.3**
KUU	**Kurty** 5.6nm,0.3s	**3.40**	**20**	Pg		**Pb**		**11 23 22.0**	**-0.7**
KUU	44nm,0.7s			Lg		Lg		11 24 04.0	
CHKK	**Chushkaly** 2.9nm,0.4s	**3.56**	**27**	*eP*		**Pb**		**11 23 25.1**	**-0.4**
CHKK	21nm,0.4s			*eS*		**Sb**		**11 24 09.0**	**+0.6**
CHKK	**Chushkaly** 2.9nm,0.4s	**3.56**	**27**	Pg		**Pb**		**11 23 25.1**	**-0.4**
CHKK	21nm,0.4s			Lg		Lg		11 24 09.0	
SATY	**Saty** 7.1nm,0.4s	**3.61**	**48**	*eP*		**Pb**		**11 23 26.4**	**0.0**
SATY	35nm,0.5s			*eS*		**Sb**		**11 24 10.7**	**+0.7**
KURS	**Kuram** 4.5nm,0.5s	**3.78**	**41**	*eP*		**Pb**		**11 23 28.6**	**-0.5**
KURS	9.1nm,0.6s			*eS*		**Sb**		**11 24 15.4**	**+0.7**
KURS	**Kuram** 4.5nm,0.5s	**3.78**	**41**	Pg		**Pb**		**11 23 28.7**	**-0.5**
KURS	9.1nm,0.6s			Lg		Lg		11 24 15.4	
IUG	**luzhnay** 174nm,0.3s	**3.82**	**294**	*eP*		**Pg**		**11 23 35.2**	**-0.9**
IUG	25nm,0.4s			*eS*		**Sg**		**11 24 25.7**	**+0.1**
IUG	**luzhnay** 174nm,0.3s	**3.82**	**294**	Pg		**Pg**		**11 23 35.2**	**-0.9**
IUG	25nm,0.4s			Lg		Lg		11 24 25.7	
KK31	**Karatay Array** 0.7nm,0.3s,baz=125,slow=16,SNR=9.0	**3.96**	**309**	⇑Pg		**Pg**		**11 23 35.5**	**-3.3**
KK31	4.1nm,0.3s,baz=128,slow=28,SNR=7.2			Lg		Lg		11 24 27.2	
KPKS	**Kokpek** 2.8nm,0.3s	**4.03**	**46**	*eP*		**Pb**		**11 23 33.4**	**-0.1**
KPKS				*eS*		**Sb**		**11 24 23.0**	**+1.0**

	19nm,0.6s								
KPKS	**Kokpek**	**4.03**	**46**	Pg		**Pb**	**11 23 33.4**	**-0.1**	
	2.8nm,0.3s								
KPKS				Lg		Lg	11 24 23.0		
	19nm,0.6s								
ARXS	**Arharly**	**4.18**	**32**	*e*P		**Pb**	**11 23 35.7**	**-0.4**	
	6.0nm,0.5s								
ARXS				*e*S		**Sb**	**11 24 26.9**	**+0.5**	
	16nm,0.5s								
ARXS	**Arharly**	**4.18**	**32**	Pg		**Pb**	**11 23 35.7**	**-0.4**	
	6.0nm,0.5s								
ARXS				Lg		Lg	11 24 26.9		
	16nm,0.5s								
SHLS	**Shalkode**	**4.29**	**54**	*e*P		**Pg**	**11 23 43.9**	**-1.3**	
	3.8nm,0.3s								
SHLS				*e*S		**Sg**	**11 24 40.8**	**-0.1**	
	15nm,0.5s								
BRLS	**Boroldey**	**4.33**	**304**	*e*P		**Pg**	**11 23 44.9**	**-1.1**	
	4.6nm,0.9s								
BRLS				*e*S		**Sg**	**11 24 42.8**	**+0.7**	
	14nm,0.6s								
BRLS	**Boroldey**	**4.33**	**304**	Pg		**Pg**	**11 23 44.9**	**-1.1**	
BRLS				Lg		Lg	11 24 42.8		
BTLS	**Baital**	**4.36**	**354**	*e*P		**Pb**	**11 23 40.2**	**+1.1**	
	1.1nm,0.3s								
BTLS				*e*S		**Sb**	**11 24 34.5**	**+3.1**	
	5.6nm,0.7s								
PDGK	**Podgornoye**	**4.41**	**52**	Pg		**Pb**	**11 23 40.0**	**0.0**	
	0.9nm,0.3s								
PDGK				Lg		Lg	11 24 34.3		
	9.9nm,0.8s								
DJR	**Jarkent**	**5.20**	**44**	*e*P		**Pb**	**11 23 52.7**	**-0.8**	
	0.4nm,0.1s								
DJR				*e*S		**Sb**	**11 24 55.9**	**+0.1**	
	17nm,0.1s								
KAPS	**Kapalarasan**	**5.69**	**35**	*e*P		**Pb**	**11 24 02.4**	**+0.6**	
	1.0nm,0.3s								
KAPS				*e*S		**Sb**	**11 25 12.5**	**+2.7**	
	8.3nm,0.5s								

IDC 06 12:01:14.6±1.7,0°.50N×121°.80E,h0km,mb3.4/3, mbtmp3.5/3,Error ellipse: s-maj=188.5km s-min=27.3km az=61.0,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.74**	**150**	P	P	12 06 28.3	-0.4
	1.2nm,0.6s,baz=326,slow=11,SNR=48						
	1.2nm,0.6s						
ASAR	**Alice Springs**	**26.74**	**155**	P	P	12 06 56.7	+0.5
	0.5nm,0.6s,baz=344,slow=15,SNR=23						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**57.57**	**329**	P	P	12 11 06.0	-0.2
	0.1nm,0.4s,baz=130,slow=7.1,SNR=1.7						
	0.1nm,0.4s						

IDC 06 12:07:40.9±1.6,1°.22S×126°.94E,h0km,mb3.3/2, mbtmp3.3/4,ML3.2/2,Error ellipse: s-maj=36.1km s-min=26.2km az=54.0,Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.34**	**85**	Pn	Pn	12 08 49.5	+1.2
	1.6nm,0.3s,baz=259,slow=6.5,SNR=13						
SIJI				Sn	Sn	12 09 39.4	-0.3
	0.5nm,0.3s,baz=307,slow=20,SNR=3.5						
	17nm,0.7s						
WRA	**Warramunga Arr**	**19.96**	**159**	P	P	12 12 14.8	-0.1
	0.1nm,0.3s,baz=340,slow=11,SNR=7.7						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**23.31**	**164**	P	P	12 12 50.8	0.0
	0.3nm,0.5s,baz=345,slow=11,SNR=8.5						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**61.75**	**327**	P	P	12 18 01.2	-0.2
	0.3nm,0.4s,baz=118,slow=8.5,SNR=4.8						
	0.3nm,0.4s						

IDC 06 12:13:06.9±11.0,37°.53S×51°.30E,h0km,mb3.4/2, mbtmp3.4/2,MS2.9/1,Error ellipse: s-maj=667.1km s-min=68.6km az=37.0,South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	**Boshof**	**23.51**	**285**	LR	LR	12 26 40.3	
	comp=Z,28nm,18.3s,baz=181,slow=35						
H01W2	**Cape Leeuwin H**	**49.92**	**107**	T	T	13 15 31.8	
	baz=247,slow=75,SNR=5.9						
H01W3	**Cape Leeuwin H**	**49.93**	**107**	T	T	13 15 33.9	
	baz=247,slow=75,SNR=7.8						
H01W1	**Cape Leeuwin H**	**49.94**	**107**	T	T	13 15 32.6	
	baz=247,slow=75,SNR=4.9						
ASAR	**Alice Springs**	**70.37**	**105**	P	P	12 24 22.9	-0.1
	0.2nm,0.7s,baz=236,slow=6.1,SNR=6.2						
	0.2nm,0.7s						
WRA	**Warramunga Arr**	**72.76**	**102**	P	P	12 24 37.6	+0.2
	0.3nm,0.6s,baz=231,slow=5.3,SNR=6.7						
	0.3nm,0.6s						
ILAR	**Eielson Array**	**150.67**	**16**	PKPbc	PKPbc	12 32 59.6	-0.4
	0.4nm,0.8s,baz=323,slow=1.4,SNR=3.1						

*IDC **06** 12:17:49.6±1.3,26°.95N×92°.87E,h0km,mb3.3/4, mbtmp3.3/4,Error ellipse: s-maj=89.1km s-min=27.5km az=50.0*
*NDI **06** 12:17:53.2±2.8,27°.93N×94°.10E,h10km,ML4.1*
ISC 06 12:17:53.4±1.7,27°.85N±0°.07×94°.05E±0°.04,h9km±10km, n13,σ1§20/22,mb3.5/4,Northeastern India

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIRO	**ZIRO**	**0.36**	**209**	*e*P	**Pg**	**12 18 00.7**	**0.0**
ZIRO				*e*S	**Sb**	**12 18 07.4**	**-0.6**
ITAN	**ITANAGAR**	**0.76**	**203**	*e*P	**Pb**	**12 18 08.9**	**+0.2**
ITAN				*e*S	**Sn**	**12 18 23.1**	**+1.3**
ITAN				IAML		12 18 28.4	
	comp=E,31μm,0.3s						
DIBR	**DIBRUGARH**	**0.85**	**116**	*e*P	**Pb**	**12 18 10.9**	**+0.5**
DIBR				*e*S	**Sg**	**12 18 21.4**	**+0.4**
DIBR				IAML		12 18 21.5	
	comp=E,2μm,0.2s						
DIBR				IAML		12 18 22.6	
	comp=N,1μm,0.1s						
JORH	**JORHAT**	**1.11**	**171**	*e*P	**Pg**	**12 18 14.4**	**-0.4**
JORH				*e*S	**Sn**	**12 18 33.3**	**+2.7**
MOKO	**MOKOCHONG**	**1.57**	**165**	*e*P	**Pn**	**12 18 21.9**	**+0.2**
MOKO				*e*S	**Sg**	**12 18 43.6**	**-0.5**
MOKO				IAML		12 18 47.4	
	comp=N,1μm,0.3s						
TEZP	**TEZPUR**	**1.65**	**223**	*e*P	**Pb**	**12 18 23.5**	**-0.5**
TEZP				*e*S	**Sg**	**12 18 47.1**	**+0.6**
LKP	**Lekhapani**	**1.68**	**107**	*e*P	**Pn**	**12 18 23.2**	**+0.3**
LKP				*e*S	**Sn**	**12 18 43.8**	**-0.7**
LKP				IAML		12 18 47.0	
	comp=E,1μm,0.3s						
KOHI	**KOHIMA**	**2.12**	**179**	*e*P	**Pn**	**12 18 29.2**	**+0.1**
KOHI				*e*S	**Sb**	**12 18 58.6**	**+0.1**
KOHI				IAML		12 19 03.6	
	comp=E,7μm,0.2s						
GUWA	**GUWAHATI**	**2.67**	**232**	*e*P	**Pb**	**12 18 40.6**	**-0.8**
GUWA				*e*S	**Sn**	**12 19 09.7**	**+0.7**
GUWA				*e*S	**Sn**	**12 19 09.8**	**+0.7**
GUWA				IAML		12 19 23.6	
	comp=E,2μm,0.4s						
GUWA				IAML		12 19 24.2	
	comp=N,2μm,0.3s						
MKAR	**Makanchi Array**	**21.05**	**337**	P	**P**	**12 22 39.9**	**+2.3**
	comp=N,0.3nm,0.6s,baz=162,slow=10.0,SNR=2.9						
	comp=N,0.3nm,0.6s						
WRA	**Warramunga Arr**	**61.45**	**136**	P	**P**	**12 28 08.9**	**-1.5**
	comp=N,0.3nm,0.5s,baz=324,slow=7.5,SNR=12						
	comp=N,0.3nm,0.5s						
ASAR	**Alice Springs**	**64.04**	**139**	P	**P**	**12 28 25.4**	**-2.3**
	comp=N,0.3nm,0.6s,baz=325,slow=7.1,SNR=8.3						
	comp=N,0.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**86.01**	**283**	P	P	12 30 28.3	-6.5
	comp=N,0.2nm,0.9s,baz=54,slow=4.6,SNR=1.7						
	comp=N,0.2nm,0.9s						

*IDC **06** 12:17:56.2±0.7,16°.43N×99°.57W,h0km,mb4.2/16, mbtmp4.2/19,ML3.5/3,MS3.8/47,Error ellipse: s-maj=20.2km s-min=14.1km az=50.0*
*MEX **06** 12:17:58.2±2.4,16°.28N×99°.74W,h16km±26km,MD4.9 NEIC **06** 12:17:59.6±3.3,16°.49N±0°.04×99°.61W±0°.04,h14km±4km, mb4.5/92,Md4.9/161(MEX),Error ellipse: s-maj=6.4km s-min=4.9km az=213.0*
*GCMT **06** 12:18:01.6±0.4,16°.60N±0°.02×99°.40W±0°.04,h13km±1km, MW4.8/84,Moment Tensor Solution. s21,c24; s84,c110; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr~1.57±.12; Mθθ 1.46±.08; Mφφ 0.11±.07; Mrθ -0.64±.19; Mφθ -0.29±.05; Mφr~0.98±.29; Best double couple: M₀1.87800×10¹⁶ NP1:φs301.00000°,δ41.00000°,λ-51.00000°. NP2: φs74.00000°,δ60.00000°,λ-119.00000°. Principal axes: T 1.5970, Plg10.0000°, Azm184.0000°; N 0.5670, Plg25.0000°, Azm90.0000°; P -2.1590, Plg63.0000°, Azm295.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 12:17:56.4±1.2,16°.48N±0°.03×99°.61W±0°.02,h5km±7km, n449,σ1§86/502,mb4.5/55,MS3.9/45,Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACP2	**Acapulco**	**0.47**	**326**		**Pb**	**12 18 07.2**	**+0.1**
ACP2					**Sb**	**12 18 15.8**	**+1.3**
ACP2	**Acapulco**	**0.47**	**326**	*e*P	**Pb**	**12 18 07.2**	**+0.1**
ACP2				*i* S	**Sb**	**12 18 15.8**	**+1.3**
CRIG	**Cruz Grande**	**0.53**	**61**		**Pn**	**12 18 09.5**	**-1.0**
CRIG					**Sn**	**12 18 19.2**	**-0.6**
CRIG	**Cruz Grande**	**0.53**	**61**	*e*P	**Pn**	**12 18 09.5**	**-1.0**
CRIG				*e*S	**Sn**	**12 18 19.2**	**-0.6**
DAIG	**Los Arroyos**	**0.54**	**356**		**Pn**	**12 18 09.0**	**+0.7**
DAIG					**Sn**	**12 18 18.4**	**-1.8**
DAIG	**Los Arroyos**	**0.54**	**356**	*e*P	**Pb**	**12 18 09.0**	**+0.7**
DAIG				*e*S	**Sn**	**12 18 18.4**	**-1.8**
CAIG	**El Cayaco**	**0.84**	**312**		**Pg**	**12 18 11.9**	**-0.7**
CAIG					**Sg**	**12 18 24.3**	**+0.6**
CAIG	**El Cayaco**	**0.84**	**312**	*e*P	**Pg**	**12 18 11.9**	**-0.7**
CAIG				*e*S	**Sg**	**12 18 24.3**	**+0.6**
ATYC	**Atoyac**	**1.07**	**313**	*e*P	**Pg**	**12 18 15.4**	**-1.5**
ATYC				*i* S	**Sn**	**12 18 32.6**	**-0.6**
MGIG	**Malinaltepec**	**1.20**	**51**	*e*P	**Pn**	**12 18 20.1**	**+0.2**
MGIG				*e*S	**Sn**	**12 18 37.1**	**+0.4**
PNIG	**Pinotepa**	**1.43**	**93**		**Pn**	**12 18 22.0**	**-0.9**
PNIG					**Sb**	**12 18 39.3**	**-2.6**
PNIG	**Pinotepa**	**1.43**	**93**	*e*P	**Pn**	**12 18 22.0**	**-0.9**
PNIG				*i* S	**Sb**	**12 18 39.3**	**-2.6**
MEIG	**Mezcala**	**1.44**	**360**		**Pn**	**12 18 23.1**	**0.0**
MEIG					**Sg**	**12 18 43.0**	**+0.3**
MEIG	**Mezcala**	**1.44**	**360**	*e*P	**Pn**	**12 18 23.1**	**0.0**
MEIG				*e*S	**Sg**	**12 18 43.0**	**+0.3**
TLIG	**Tlapa**	**1.47**	**43**		**Pg**	**12 18 24.4**	**+0.1**
TLIG					**Sg**	**12 18 45.4**	**+1.8**
TLIG	**Tlapa**	**1.47**	**43**	*e*P	**Pb**	**12 18 24.4**	**+0.1**
TLIG				*e*S	**Sg**	**12 18 45.4**	**+1.8**
PLIG	**Platanillo**	**1.90**	**3**		**Pn**	**12 18 30.2**	**+0.6**
PLIG					**Sb**	**12 18 55.2**	**-0.6**
PLIG	**Platanillo**	**1.90**	**3**	*e*P	**Pn**	**12 18 30.2**	**+0.6**
PLIG				*e*S	**Sb**	**12 18 55.2**	**-0.6**
ARIG	**Puente Sto Nin**	**1.92**	**339**		**Pn**	**12 18 29.8**	**0.0**
ARIG					**Sn**	**12 18 53.4**	**-1.0**
ARIG	**Puente Sto Nin**	**1.92**	**339**	*e*P	**Pn**	**12 18 29.8**	**0.0**
ARIG				*e*S	**Sn**	**12 18 53.4**	**-1.0**
TXIG	**Tlaxiaco**	**1.92**	**66**	*e*P	**Pn**	**12 18 30.8**	**+0.7**
TXIG				*e*S	**Sn**	**12 18 53.9**	**-0.9**
FTIG	**Fresnillo de T**	**2.00**	**45**	*e*P	**Pb**	**12 18 32.3**	**-1.0**
FTIG				*e*S	**Sn**	**12 18 57.3**	**+0.8**
YOIG	**Yosondua**	**2.01**	**79**	*e*P	**Pn**	**12 18 32.1**	**+0.5**
YOIG				*e*S	**Sn**	**12 18 56.8**	**-0.2**
ZIIG	**Zihuatanejo**	**2.10**	**303**		**Pn**	**12 18 29.9**	**-2.2**
ZIIG					**Sn**	**12 18 54.3**	**-4.3**
ZIIG	**Zihuatanejo**	**2.10**	**303**	*e*P	**Pn**	**12 18 29.9**	**-2.2**
ZIIG				*e*S	**Sn**	**12 18 54.3**	**-4.3**
HLIG	**Huajuapan de L**	**2.19**	**52**	*e*P	**Pn**	**12 18 34.2**	**+0.6**
HLIG				*e*S	**Sb**	**12 19 02.8**	**-1.3**
PEIG	**Puerto Escondi**	**2.41**	**101**	*e*P	**Pn**	**12 18 36.0**	**-0.5**
PEIG				*i* S	**Sn**	**12 19 03.5**	**-3.0**
YAIG	**Yautepec**	**2.42**	**12**		**Pn**	**12 18 37.0**	**+0.2**
YAIG					**Sg**	**12 19 13.7**	**-0.7**
YAIG	**Yautepec**	**2.42**	**12**	*e*P	**Pn**	**12 18 37.0**	**+0.2**
YAIG				*e*S	**Sg**	**12 19 13.7**	**-0.7**
MAVM	**Malinalco, Edo**	**2.46**	**3**		**Pb**	**12 18 39.5**	**-1.8**
MAVM					**Sn**	**12 19 06.0**	**-2.0**
MAVM	**Malinalco, Edo**	**2.46**	**3**	*e*P	**Pb**	**12 18 39.5**	**-1.8**
MAVM				*e*S	**Sn**	**12 19 06.0**	**-2.0**
TEJU	**Tejupilco**	**2.47**	**348**	*e*P	**Pn**	**12 18 39.9**	**+1.3**
TEJU				*e*S	**Sn**	**12 19 08.9**	**+0.9**
UON	**La Union**	**2.58**	**305**	*e*	**Pb**	**12 18 41.9**	**-1.1**
UON				*e*S	**Sn**	**12 19 06.9**	**-3.5**
PPM	**Popocatepetl**	**2.74**	**20**	*e*P	**Pb**	**12 18 47.0**	**+0.8**
PPM				*e*S	**Sb**	**12 19 18.1**	**-2.1**
TLVM	**San Miguel Top**	**2.75**	**9**	*e*P	**Pb**	**12 18 44.7**	**-1.5**
TLVM				*e*S	**Sn**	**12 19 12.1**	**-3.1**
AMVM	**AMECAMECA**	**2.75**	**16**		**Pb**	**12 18 47.6**	**+1.4**
AMVM					**Sn**	**12 19 15.6**	**+0.4**
AMVM	**AMECAMECA**	**2.75**	**16**	*e*P	**Pb**	**12 18 47.6**	**+1.4**
AMVM				*e*S	**Sn**	**12 19 15.6**	**+0.4**
AOVM	**Tlapan**	**2.79**	**6**	*e*P	**Pb**	**12 18 46.7**	**-0.2**
AOVM				*e*S	**Sn**	**12 19 14.9**	**-1.3**
TOVM	**TOLUCA**	**2.79**	**359**		**Pb**	**12 18 46.8**	**-0.1**
TOVM					**Sn**	**12 19 14.8**	**-1.4**
TOVM	**TOLUCA**	**2.79**	**359**	*e*P	**Pb**	**12 18 46.8**	**-0.1**
TOVM				*e*S	**Sn**	**12 19 14.8**	**-1.4**
XCVM	**Xochimilco**	**2.80**	**10**	*e*P	**Pb**	**12 18 43.0**	**+1.5**
XCVM				*e*S	**Sn**	**12 19 15.8**	**-0.4**
VHO	**Vista Hermosa**	**2.82**	**78**	*e*P	**Pn**	**12 18 43.4**	**+1.1**
VHO				*e*S	**Sn**	**12 19 17.8**	**+1.1**
OXBJ	**Oaxaca**	**2.83**	**78**		**Pn**	**12 18 42.9**	**+0.5**
OXBJ					**Sn**	**12 19 18.0**	**+1.1**
OXBJ	**Oaxaca**	**2.83**	**78**	*e*P	**Pn**	**12 18 42.9**	**+0.5**
OXBJ				*e*S	**Sn**	**12 19 18.0**	**+1.1**
MCRU	**Las Cruces**	**2.84**	**7**	*e*P	**Pb**	**12 18 46.0**	**-1.8**
MCRU				*e*S	**Sn**	**12 19 13.0**	**-4.5**
OXLC	**Oaxaca**	**2.84**	**78**	*e*P	**Pn**	**12 18 43.0**	**+0.4**
OXLC				*e*S	**Sn**	**12 19 18.0**	**+0.6**
UNM	**Universidad Na**	**2.86**	**8**		**Pb**	**12 18 49.4**	**+1.3**
UNM	**Universidad Na**	**2.86**	**8**	*e*P	**Pb**	**12 18 47.6**	**-0.6**
UNM				*e*S	**Sb**	**12 19 21.6**	**-1.9**
THVM	**De Xico**	**2.88**	**12**	*e*P	**Pb**	**12 18 46.9**	**-1.5**
THVM				*e*S	**Sn**	**12 19 15.7**	**-2.6**
CJVM	**Cuajimalpa**	**2.88**	**6**	*e*P	**Pn**	**12 18 47.1**	**-0.1**
CJVM				*e*S	**Sn**	**12 19 19.1**	**+0.8**
TPIG	**Tehuac#an**	**2.88**	**48**		**Pn**	**12 18 44.1**	**+0.9**
TPIG					**Sg**	**12 19 26.8**	**-2.3**
TPIG	**Tehuac#an**	**2.88**	**48**	*e*P	**Pn**	**12 18 44.1**	**+0.9**
TPIG				*e*S	**Sg**	**12 19 26.8**	**-2.3**
PHPU	**Puebla**	**2.90**	**28**		**Pg**	**12 18 53.1**	**+1.1**
PHPU					**Sb**	**12 19 22.0**	**-2.5**
PHPU	**Puebla**	**2.90**	**28**	*e*P	**Pg**	**12 18 53.1**	**+1.1**
PHPU				*e*S	**Sb**	**12 19 22.0**	**-2.5**
BJVM	**Benito Juarez**	**2.91**	**8**	*e*P	**Pb**	**12 18 49.6**	**+0.7**
BJVM				*e*S	**Sn**	**12 19 18.3**	**-0.8**
THEZ	**Tehuacan**	**2.91**	**47**	*e*P	**Pn**	**12 18 42.6**	**-0.9**
THEZ				*e*S	**Sn**	**12 19 20.1**	**+1.2**
TOIG	**Toxpalan**	**2.91**	**56**	*e*P	**Pn**	**12 18 44.5**	**+1.0**
TOIG				*e*S	**Sn**	**12 19 20.3**	**+1.4**
MHVM	**Bosque de Chap**	**2.94**	**7**	*e*P	**Pb**	**12 18 49.5**	**+0.1**
MHVM				*e*S	**Sn**	**12 19 17.7**	**-2.0**
PBVM	**Pinon**	**2.99**	**10**		**Pn**	**12 18 42.6**	**-1.7**
PBVM					**Sn**	**12 19 18.0**	**-2.6**
PBVM	**Pinon**	**2.99**	**10**	*e*P	**Pn**	**12 18 42.6**	**-1.7**
PBVM				*e*S	**Sn**	**12 19 18.0**	**-2.6**
APVM	**Azcapotzalco**	**3.02**	**7**	*e*P	**Pb**	**12 18 48.3**	**-2.4**
APVM				*e*S	**Sn**	**12 19 21.5**	**-0.2**
GMVM	**Gustavo A Made**	**3.03**	**9**	*e*P	**Pb**	**12 18 51.9**	**+0.9**
GMVM				*e*S	**Sn**	**12 19 18.1**	**-4.1**
AZVM	**Cuida Lopez Ma**	**3.10**	**6**		**Pb**	**12 18 52.2**	**0.0**
AZVM					**Sn**	**12 19 23.5**	**-0.3**
AZVM	**Cuida Lopez Ma**	**3.10**	**6**	*e*P	**Pb**	**12 18 52.2**	**0.0**
AZVM				*e*S	**Sn**	**12 19 23.5**	**-0.3**
PTVM	**Pico Tres Padr**	**3.13**	**9**		**Pb**	**12 18 53.5**	**+0.8**
PTVM					**Sn**	**12 19 21.7**	**-2.8**
PTVM	**Pico Tres Padr**	**3.13**	**9**	*e*P	**Pb**	**12 18 53.5**	**+0.8**
PTVM				*e*S	**Sn**	**12 19 21.7**	**-2.8**
VTVM	**Tizayuca**	**3.37**	**14**		**Pb**	**12 18 56.9**	**+0.1**
VTVM					**Sb**	**12 19 35.1**	**-3.0**
VTVM	**Tizayuca**	**3.37**	**14**	*e*P	**Pb**	**12 18 56.9**	**+0.1**
VTVM				*e*S	**Sb**	**12 19 35.1**	**-3.0**
ZUVM	**ZUMPANGO**	**3.37**	**9**		**Pb**	**12 18 57.4**	**+0.7**
ZUVM					**Sn**	**12 19 28.9**	**-1.4**
ZUVM	**ZUMPANGO**	**3.37**	**9**	*e*P	**Pb**	**12 18 57.4**	**+0.7**
ZUVM				*e*S	**Sn**	**12 19 28.9**	**-1.4**
OZST	**Orizaba**	**3.37**	**45**	*e*P	**Pn**	**12 18 50.3**	**+0.5**
OZST				*e*S	**Sn**	**12 19 29.6**	**-0.7**
MOIG	**Morelia**	**3.52**	**335**	Pn	**Pb**	**12 18 59.0**	**-0.3**
MOIG	**Morelia**	**3.52**	**335**		**Sb**	**12 19 39.1**	**-3.2**
MOIG	**Morelia**	**3.52**	**335**	*e*P	**Pb**	**12 18 58.9**	**-0.4**
MOIG				*e*S	**Sb**	**12 19 39.1**	**-3.2**
URUA	**Uruapan**	**3.75**	**322**		**Pb**	**12 19 03.1**	**-0.1**
URUA					**Sn**	**12 19 41.9**	**+2.2**
URUA	**Uruapan**	**3.75**	**322**	*e*P	**Pb**	**12 19 03.1**	**-0.1**
URUA				*e*S	**Sn**	**12 19 41.9**	**+2.2**
DEIG	**Demacu**	**3.84**	**8**	*e*P	**Pb**	**12 19 07.0**	**+2.3**
DEIG				*e*S	**Sn**	**12 19 39.7**	**-2.2**
NEUV	**Arroyo Zacate**	**3.84**	**71**	*e*P	**Pn**	**12 18 57.2**	**+1.0**
NEUV				*e*S	**Sb**	**12 19 48.7**	**-2.8**
JAUV	**Jalcomulco**	**3.92**	**43**	*e*P	**Pn**	**12 18 57.3**	**0.0**
JAUV				*e*S	**Sn**	**12 19 46.5**	**+2.8**
MMIG	**Aquila**	**3.99**	**297**		**Pn**	**12 18 57.0**	**-1.3**
MMIG					**Sn**	**12 19 50.3**	**+4.8**
MMIG	**Aquila**	**3.99**	**297**	*e*P	**Pn**	**12 18 57.0**	**-1.3**
MMIG				*e*S	**Sn**	**12 19 50.3**	**+4.8**
CXUV	**Coxquihui**	**4.14**	**27**	*e*P	**Pb**	**12 19 10.2**	**+0.3**
CXUV				*e*S	**Sb**	**12 19 59.5**	**-0.7**
LVIG	**Laguna Verde**	**4.43**	**43**		**Pg**	**12 19 19.2**	**-2.1**
LVIG					**Sb**	**12 20 06.3**	**-2.1**
LVIG	**Laguna Verde**	**4.43**	**43**	*e*P	**Pg**	**12 19 19.2**	**-2.1**
LVIG				*e*S	**Sb**	**12 20 06.3**	**-2.1**
CMIG	**Matias Romero**	**4.57**	**82**	Pn	**Pn**	**12 19 06.8**	**+0.6**
	3.1nm,0.3s,baz=267,slow=11,SNR=12						
CMIG				Sn	**Sn**	**12 19 57.6**	**-2.0**
	16nm,0.3s,baz=268,slow=14,SNR=4.8						
CMIG				Lg	Lg	12 20 20.8	
	22nm,0.3s,baz=201,slow=15,SNR=5.4						
CMIG				LR	LR	12 20 43.5	
	comp=Z,682nm,18.3s,baz=271,slow=37						
	7.7nm,0.4s						
CMIG	**Matias Romero**	**4.57**	**82**		**Pn**	**12 19 06.7**	**+0.5**
CMIG					**Sn**	**12 19 55.1**	**-4.6**
CMIG	**Matias Romero**	**4.57**	**82**	*e*P	**Pn**	**12 19 06.7**	**+0.5**
CMIG				*e*S	**Sn**	**12 19 55.1**	**-4.6**
COIG	**Colima**	**4.72**	**305**	*e*P	**Pn**	**12 19 08.7**	**+0.3**
COIG				*e*S	**Sn**	**12 20 07.5**	**+4.0**
JUBC	**Volcan de Coli**	**4.83**	**309**	*e*P	**Pn**	**12 19 13.2**	**+3.2**
JUBC				*e*S	**Sb**	**12 20 13.4**	**-6.7**
EZ5V		**4.83**	**309**		**Pn**	**12 19 07.7**	**-2.3**
EZ5V		**4.83**	**309**	*e*P	**Pn**	**12 19 07.7**	**-2.3**
EZ5V				*e*S	**Sn**	**12 20 04.8**	**-1.6**
MNGA	**Volcan de Coli**	**4.83**	**308**	*e*P	**Pn**	**12 19 12.7**	**+2.7**
MNGA				*e*S	**Sb**	**12 20 16.2**	**-4.1**
CDAR	**Ciudad de Arme**	**4.86**	**301**	*e*P	**Pn**	**12 19 09.2**	**-0.9**
CDAR				*e*S	**Sn**	**12 20 04.6**	**-2.1**
INCO	**Volcan de Coli**	**4.86**	**309**	*e*P	**Pn**	**12 19 13.7**	**+3.1**
INCO				*e*S	**Sn**	**12 20 14.1**	**+6.7**
R15V		**4.95**	**303**		**Pn**	**12 19 12.6**	**+1.2**
R15V		**4.95**	**303**	*e*P	**Pn**	**12 19 12.6**	**+1.2**
R15V				*e*S	**Sb**	**12 20 19.1**	**-4.3**
UXUV	**UXUV**	**5.30**	**80**	*e*P	**Pn**	**12 19 17.4**	**+1.3**
UXUV				*e*S	**Sn**	**12 20 15.8**	**-1.8**
RPIG	**Rio Verde**	**5.39**	**356**	*e*P	**Pb**	**12 19 35.2**	**+4.2**
RPIG				*e*S	**Sb**	**12 20 39.3**	**+3.3**
CJM	**Chamela**	**5.98**	**301**	*e*P	**Pn**	**12 19 26.1**	**+0.6**
CJM				*e*S	**Sn**	**12 20 34.1**	**-0.3**
AAIG	**Aguscalientes**	**6.05**	**335**	*e*P	**Pb**	**12 19 47.2**	**+4.7**
AAIG				*e*S	**Sn**	**12 20 40.0**	**+3.5**
ANIG	**Ahuacatlan**	**6.50**	**315**		**Pn**	12 19 41.0	+8.1
ANIG	**Ahuacatlan**	**6.50**	**315**	*e*P	**Pn**	12 19 41.0	+8.1
GTIG	**Gomez Farias**	**6.56**	**4**	*e*P	**Pn**	12 19 39.9	+6.3
ZAIG	**Zacatecas**	**6.85**	**336**		**Pn**	**12 19 40.4**	**+2.7**
CCIG	**Comitan**	**7.18**	**91**	Pn	**Pn**	**12 19 45.7**	**+3.5**
CCIG	**Comitan**	**7.18**	**91**	*e*P	**Pn**	**12 19 44.2**	**+2.0**
PAVE	**Pavencul**	**7.27**	**99**	*e*P	**Pn**	**12 19 44.8**	**+1.3**
CHUJ	**Union Juarez**	**7.35**	**100**	*e*P	**Pn**	**12 19 46.1**	**+1.4**
HUEH	**Huehuetenango**	**7.89**	**97**	Pn	**Pn**	**12 19 55.2**	**+3.2**
LNIG	**Linares**	**8.38**	**1**	*e*P	**Pg**	**12 20 35.1**	**-1.7**
LNIG				*e*S	**Sb**	12 21 59.1	-2.8
PETF	**

baz=160
214A Organ Pipe Nat 19.52 324 P Pn 12 22 27.0 +1.1
214A Organ Pipe Nat 19.52 324 P Pn 12 22 26.4 +0.4
baz=139
TUL1 Leonard 19.65 9 P P 12 22 26.1 +0.1
baz=191
LRAL Lakeview Retre 20.04 32 P P 12 22 30.9 +0.6
LRAL Lakeview Retre 20.04 32 P P 12 22 28.6 -1.6
baz=217
OXF Oxford 20.15 25 P P 12 22 30.7 -0.8
baz=209
X18A Snowflake 20.23 335 P Pn 12 22 35.6 +1.2
X18A IAmb IAmb 12 22 45.7
comp=Z,20nm,0.8s
DWPF Disney Wildern 20.39 52 P P 12 22 31.7 -2.4
baz=239
FCAR Ozark Folk Cen 20.45 18 P P 12 22 35.0 +0.3
W18A Petrified Fore 20.65 336 P Pn 12 22 41.1 +1.7
W18A IAmb IAmb 12 22 50.1
comp=Z,19nm,0.8s
W18A Petrified Fore 20.65 336 P P 12 22 37.6 +0.4
baz=152,SNR=11
U40A Yellville 20.69 16 P P 12 22 37.9 +0.6
U40A Yellville 20.69 16 P P 12 22 36.1 -1.2
baz=198,SNR=8.2
X16A Lo Mia Camp, P 20.78 331 P Pn 12 22 41.5 +0.5
X16A IAmb IAmb 12 22 51.5
comp=Z,32nm,0.9s
W45A Hickory Valley 20.80 25 P Pn 12 22 43.7 +2.7
TIGA Tifton 20.84 42 P P 12 22 36.2 -2.8
baz=228
LCAR Lake Charles 20.91 19 Pn 12 22 42.4 +0.2
Y49A Blount Mountai 20.99 32 Pn 12 22 43.9 +0.7
Y49A IAmb IAmb 12 22 47.6
comp=Z,28nm,0.9s
152A Waverly Hall 21.01 37 P P 12 22 43.4 +2.6
152A IAmb IAmb 12 22 51.5
comp=Z,12nm,0.8s
T25A Trinidad 21.01 349 P P 12 22 43.5 +2.4
T25A IAmb IAmb 12 22 54.0
comp=Z,17nm,0.9s
T25A Trinidad 21.01 349 P P 12 22 41.6 +0.5
baz=167,SNR=7.5
PLAL Pickwick Lake 21.12 27 P P 12 22 43.7 +1.7
PLAL IAmb IAmb 12 22 50.2
comp=Z,17nm,1.0s
X48A Hartselle 21.15 30 P P 12 22 42.5 +0.2
X48A IAmb IAmb 12 22 48.8
comp=Z,27nm,0.9s
Y14A Wickenburg 21.15 328 P P 12 22 45.5 +3.1
GLA Glamis 21.48 323 P P 12 22 48.1 +2.2
GLA Glamis 21.48 323 P P 12 22 45.9 0.0
baz=137
WUAZ Wupatki 21.67 333 P P 12 22 50.4 +2.3
WUAZ IAmb IAmb 12 22 59.9
comp=Z,29nm,0.9s
WUAZ Wupatki 21.67 333 P P 12 22 48.5 +0.3
baz=148,SNR=21
PBMO Poplar Bluff 21.80 20 P P 12 22 50.4 +1.1
PBMO IAmb IAmb 12 23 02.5
comp=Z,10nm,0.8s
SDCO Great Sand Dun 21.81 347 P P 12 22 50.6 +0.9
SDCO Great Sand Dun 21.81 347 P P 12 22 48.9 -0.8
baz=165,SNR=12
BLYC Blythe 21.82 325 P P 12 22 51.9 +2.4
BLYC IAmb IAmb 12 22 58.3
comp=Z,26nm,0.9s
FPAL Fort Paine 21.93 32 P P 12 22 51.3 +0.5
IKP In-Ko-Pah, Jac 21.96 320 P P 12 22 51.3 +0.1
baz=134
SWSC Sam W. Stewart 21.97 321 P P 12 22 51.7 +0.5
baz=135
PDMCI Parker Dam,Lak 22.03 326 P P 12 22 52.3 +0.6
baz=140
MVCO Mesa Verde 22.09 341 P P 12 22 54.5 +1.8
MVCO Mesa Verde 22.09 341 P P 12 22 52.9 +0.2
baz=157,SNR=6.1
S22A 4UR Ranch, Cre 22.12 345 P P 12 22 55.0 +1.9
S22A 4UR Ranch, Cre 22.12 345 P P 12 22 53.3 +0.3
baz=162,SNR=12
WVT Waverly 22.20 26 P P 12 22 53.1 -0.5
baz=211
CBKS Cedar Bluff 22.25 360 P P 12 22 54.3 +0.1
baz=180
BC3 Big Chuckawall 22.27 323 P P 12 22 54.4 -0.2
baz=137
GOGA Godfrey 22.27 38 P P 12 22 52.8 -1.6
baz=224
SWET Sewanee 22.31 31 P P 12 22 54.7 -0.1
SWET IAmb IAmb 12 23 07.4
comp=Z,22nm,1.0s
MONP2 Monument Peak 22.32 320 P P 12 22 55.0 -0.1
baz=133
IRM Iron Mountain 22.46 324 P P 12 22 55.9 -0.6
baz=138
W13A Hualapai Mount 22.51 328 P P 12 22 59.8 +2.6
W13A IAmb IAmb 12 23 07.5
comp=Z,16nm,0.9s
W50A Signal Mountai 22.60 32 P P 12 22 57.9 0.0
NEE2 Needles Airpor 22.64 326 P P 12 22 57.7 -0.6
baz=140
KSU1 Kansas State U 22.69 6 P P 12 22 57.1 -1.6
baz=187
CCM Cathedral Cave 22.72 17 P P 12 22 58.2 -0.9
baz=201
109C Camp Elliot, M 22.74 319 P P 12 22 57.9 -1.5
baz=132
TPFO Pinon Flats 22.83 321 P P 12 22 59.9 -0.5
baz=134
PFO Pinyon Flats O 22.83 321 P P 12 23 02.5 +2.0
comp=Z,2.6nm,0.8s,baz=137,slow=13,SNR=3.5
PFO LR LR 12 31 55.8
comp=Z,190nm,18.2s,baz=135,slow=37
comp=Z,2.6nm,0.8s
PFO Pinyon Flats O 22.83 321 P P 12 23 00.5 -0.1
baz=134
BELC Belle Mtn. Jos 22.84 323 P P 12 23 00.6 0.0
baz=136,SNR=9.3
U15A North Rim 22.84 333 P P 12 23 03.1 +2.4
U15A IAmb IAmb 12 23 16.6
comp=Z,18nm,1.2s
PV15 Paradox Valley 23.13 342 P P 12 23 06.4 +2.7
PV15 IAmb IAmb 12 23 09.7
comp=Z,13nm,0.9s
CPCT Cooper Cave 23.20 33 P P 12 23 06.1 +1.9
GMRC Granite Mounta 23.21 325 P P 12 23 04.5 0.0
baz=138,SNR=12
MURC Murrieta 23.27 320 P P 12 23 05.1 +0.1
baz=133
ELS Elsinore Mount 23.45 320 P P 12 23 09.2 +2.5
BBRC Big Bear Solar 23.56 322 P P 12 23 08.0 -0.1
baz=135
HEC Hector,Ludlow 23.62 324 P P 12 23 08.2 -0.4
baz=137,SNR=12
SCI2 San Clemente I 23.72 317 P P 12 23 09.7 +0.4
baz=130
LCMT Little Creek M 23.75 332 P P 12 23 12.0 +2.3
LCMT IAmb IAmb 12 23 13.8
comp=Z,11nm,1.1s
TKL Tuckaleechee C 23.75 33 P P 12 23 10.5 +0.8
comp=Z,11nm,0.8s,baz=198,slow=11,SNR=12
TKL LR LR 12 35 23.4
comp=Z,70nm,18.6s,baz=226,slow=44
comp=Z,11nm,0.8s
TKL Tuckaleechee C 23.75 33 P P 12 23 10.9 +1.3
ISCO Idaho Springs 23.82 348 P P 12 23 11.9 +1.3
ISCO Idaho Springs 23.82 348 P P 12 23 10.7 +0.1
baz=166,SNR=7.5
TUQ Turquoise Moun 23.84 325 P P 12 23 11.2 +0.5
baz=138,SNR=9.3
CIS Catalina Islan 23.90 318 P P 12 23 11.0 -0.1
baz=130
BFSC Mount Baldy Ra 23.99 321 P P 12 23 12.5 +0.4
baz=133
RRX Edison Barstow 24.04 323 P P 12 23 12.6 +0.2
baz=136
GSC Goldstone, Bar 24.23 324 P P 12 23 14.4 +0.1
baz=136
PAULI Pauline 24.24 38 P P 12 23 15.4 +1.2
PAULI IAmb IAmb 12 23 21.6
comp=Z,10nm,0.9s
T50A Nancy 24.28 30 P P 12 23 15.6 +0.9
SHOC Shoshone, Teco 24.38 326 P P 12 23 15.1 -0.5
baz=138
DECC Green Verdugo 24.41 320 P P 12 23 16.8 +1.0
baz=132
OGNE Ogallala 24.47 356 P P 12 23 17.2 +0.8
baz=174
SNCC San Nicolas Is 24.53 317 P P 12 23 17.0 +0.1
baz=128
TZTN Tazewell 24.55 32 P P 12 23 17.0 0.0
baz=220
MSU Marysvale 24.57 336 P P 12 23 20.1 +2.6
EDW2 Edwards Air Fo 24.63 322 P P 12 23 18.5 +0.6
baz=134
O20A White River Ci 24.73 344 P P 12 23 19.7 +0.8
baz=160
KMSC Kings Mountain 24.74 38 P P 12 23 18.2 -0.6
baz=226,SNR=6.0
QSM Queen of Sheba 24.75 325 P P 12 23 22.2 +3.3
LRMC Laurel Mtn Rad 24.86 323 P P 12 23 20.7 +0.6
baz=135
BGNE Belgrade 24.87 3 P P 12 23 20.4 +0.5
baz=183
OSI Osito Audit: C 24.89 320 P P 12 23 21.5 +1.3
baz=132
N23A Red Feather La 24.94 349 P P 12 23 19.2 -1.7
baz=166,SNR=8.6
SCZ2 Santa Cruz Isl 25.06 318 P P 12 23 20.5 -1.2
baz=129
FURC Furnace Creek, 25.12 326 P P 12 23 21.8 -0.3
baz=138
TPNV Topopah Spring 25.15 327 P P 12 23 25.9 +3.2
TPNV Topopah Spring 25.15 327 P P 12 23 22.4 -0.3
baz=140,SNR=22
MPMC Manual Prospec 25.16 324 P P 12 23 22.3 -0.5
baz=136,SNR=14
ARVC Arvin 25.30 321 P P 12 23 23.2 -0.7
baz=133
S51A Beattyville 25.37 31 P P 12 23 25.9 +1.4
ISA Isabella, Lake 25.45 322 P P 12 23 25.4 0.0
baz=134,SNR=9.9
HDIL Hopedale 25.60 18 P P 12 23 25.7 -0.9
baz=203
PKM Mcpherson Peak 25.75 319 P P 12 23 27.1 -1.0
baz=131
CWC Cottonwood Cre 25.77 324 P P 12 23 27.1 -1.2
baz=136
GRAC Grapevine Rang 25.78 326 P P 12 23 27.3 -1.0
baz=138
R11A Troy Canyon, C 25.91 330 P P 12 23 32.5 +2.8
R11A IAmb IAmb 12 23 36.5
comp=Z,9.2nm,1.1s
R11A Troy Canyon, C 25.91 330 P P 12 23 28.7 -0.9
baz=143,SNR=15
SCIA State Center 25.93 11 P P 12 23 27.8 -1.7
baz=194
VES Vestal, Richgr 25.93 322 P P 12 23 28.1 -1.5
baz=133
SMMC Simmler 26.14 320 P P 12 23 31.0 -0.5
baz=131
SFIN Lafayette 26.17 22 P P 12 23 30.2 -1.5
baz=208
DUG Dugway, Tooele 26.27 337 P P 12 23 31.5 -1.3
baz=150
TIN Tinemaha, Big 26.29 325 P P 12 23 33.2 +0.2
baz=136
P49A Miami Univ. Ec 26.39 27 P P 12 23 31.9 -1.8
baz=214,SNR=9.1
BLA Blacksburg 26.72 36 P P 12 23 34.3 -2.5
baz=224
K22A Casper 26.75 349 P P 12 23 36.3 -0.8
baz=165
O48B Farmland 26.81 25 P P 12 23 36.3 -1.2
baz=212,SNR=5.9
CNNC Cliffs of the 26.93 42 P P 12 23 36.3 -2.3
baz=231
Q52A Bidwell 27.06 31 P P 12 23 40.6 +0.9
NV11 Mina Array Sit 27.26 327 P P 12 23 44.6 +2.8
NV11 IAmb IAmb 12 23 51.1
comp=Z,17nm,1.2s
ECSD EROS Data Cent 27.28 5 P P 12 23 42.8 +1.1
ECSD IAmb IAmb 12 23 44.9
comp=Z,7.8nm,1.0s
ECSD EROS Data Cent 27.28 5 P P 12 23 40.8 -1.0
baz=186,SNR=6.5
NVAR Mina Array Bea 27.34 327 P P 12 23 44.8 +2.2
comp=Z,4.6nm,0.8s,baz=145,slow=11,SNR=21
NVAR PcP PcP 12 27 03.2 +1.2
comp=Z,0.4nm,0.6s,baz=144,slow=3.4,SNR=2.5
NVAR LR LR 12 33 50.8
comp=Z,53nm,20.4s,baz=145,slow=35
comp=Z,4.6nm,0.8s
NVAR Mina Array Bea 27.34 327 P P 12 23 45.2 +2.7
ROSC El Rosal 27.37 112 LR LR 12 34 37.2
comp=Z,67nm,18.2s,baz=340,slow=37
JFWS Jewell Farm 27.53 15 P P 12 23 42.6 -1.3
baz=200
BW06 Boulder Array 27.55 344 P P 12 23 46.0 +1.6
BW06 IAmb IAmb 12 23 52.1
comp=Z,13nm,1.1s
BW06 Boulder Array 27.55 344 P P 12 23 43.8 -0.5
baz=159,SNR=15
PD31 Pinedale Array 27.55 344 P P 12 23 46.2 +1.8
PD31 IAmb IAmb 12 23 52.1
comp=Z,12nm,1.1s
PDAR Pinedale Array 27.55 344 P P 12 23 46.0 +1.6
comp=Z,6.3nm,0.9s,baz=145,slow=11,SNR=36
PDAR PcP PcP 12 27 02.0 -0.4
comp=Z,0.4nm,0.6s,baz=163,slow=3.5,SNR=1.9
PDAR LR LR 12 36 15.5
comp=Z,638nm,20.0s,baz=174,slow=40
comp=Z,6.3nm,0.9s
PDAR Pinedale Array 27.55 344 P P 12 23 45.2 +0.9
P52A Corning 27.65 30 P P 12 23 43.1 -1.9
baz=218
KVN Kaiserville 27.70 328 P P 12 23 48.8 +3.1
KVN IAmb IAmb 12 24 00.2
comp=Z,15nm,1.1s
ELK Elko 27.71 334 P P 12 23 47.0 +1.1
comp=Z,0.7nm,0.7s,baz=176,slow=9.7,SNR=4.3
ELK LR LR 12 34 51.7
comp=Z,388nm,21.8s,baz=160,slow=37
comp=Z,0.7nm,0.7s
ACSO Alum Creek Sta 27.73 28 P P 12 23 43.2 -2.5
baz=216
RSSD Black Hills 27.81 353 P P 12 23 45.9 -0.8
baz=171
SUSD Miller 27.88 1 P P 12 23 46.2 -0.9
baz=181
REDW Red Top Meadow 28.45 343 P P 12 23 54.3 +1.8
REDW IAmb IAmb 12 24 01.6
comp=Z,9.3nm,0.9s
SNOW Snow King Moun 28.52 343 P P 12 23 54.9 +1.8
O53A New Philadelph 28.57 30 P P 12 23 51.1 -2.2
baz=219
LOHW Long Hollow 28.61 343 P P 12 23 55.5 +1.6
LOHW IAmb IAmb 12 24 03.2
comp=Z,8.1nm,0.9s
SDV Santo Domingo 29.23 101 P P 12 24 04.4 +4.7
comp=Z,5.5nm,0.3s,baz=183,slow=11,SNR=3.1
SDV LR LR 12 36 28.2
comp=Z,124nm,20.7s,baz=276,slow=38
RLMT Red Lodge 29.69 346 P P 12 24 01.2 -2.2
baz=161
HLID Hailey 29.78 338 P P 12 24 02.7 -1.5
baz=151
YHL Hebgen Lake 29.92 343 P P 12 24 07.5 +1.9
YHL IAmb IAmb 12 24 15.4
comp=Z,8.2nm,1.2s
BCYI Bear Canyon 30.10 340 P P 12 24 10.0 +2.9
MFID Camas Ranch 30.18 336 P P 12 24 09.7 +2.0
MFID IAmb IAmb 12 24 17.5
comp=Z,8.0nm,1.1s
SSPA Standing Stone 30.55 34 P P 12 24 07.9 -2.9
baz=224
LAO LASA Array 30.62 351 P P 12 24 10.7 -0.7
baz=168
BOZ Bozeman (W) 30.73 343 P P 12 24 14.6 +2.1
BOZ IAmb IAmb 12 24 21.1
comp=Z,7.5nm,0.9s
BOZ Bozeman (W) 30.73 343 P P 12 24 11.7 -0.8
baz=157,SNR=12
LRM Limekiln Ridge 31.16 343 P P 12 24 18.7 +2.2
J08A Circle Bar Ran 31.23 333 P P 12 24 19.2 +2.3
MDND Maddock 31.28 0 P P 12 24 16.2 -1.0
baz=180
ATAH Atahualpa 31.48 137 LR LR 12 34 30.7
comp=Z,226nm,18.8s,baz=301,slow=32
AGMN Agassiz Nation 31.88 5 P P 12 24 23.6 +1.1
AGMN Agassiz Nation 31.88 5 P P 12 24 20.8 -1.6
baz=187
SJG San Juan 31.96 82 LR LR 12 38 32.0
comp=Z,68nm,18.4s,baz=232,slow=39
BMO Blue Mountains 31.97 336 P P 12 24 24.6 +1.2
BMO IAmb IAmb 12 24 30.9
comp=Z,6.0nm,1.0s
YBH Yreka Blue Hor 32.06 326 LR LR 12 37 41.6
comp=Z,188nm,18.1s,baz=151,slow=37
J05D Fort Rock, OR 32.44 330 P P 12 24 26.0 -1.6
baz=139
MSO Missoula 32.52 342 P P 12 24 30.4 +2.2
MSO IAmb IAmb 12 24 36.2
comp=Z,9.9nm,1.1s
MSO Missoula 32.52 342 P P 12 24 26.8 -1.4
baz=154,SNR=8.7
EGMT Eagleton 32.54 347 P P 12 24 27.1 -1.3
baz=162
J04D Umpqua Nationa 32.84 329 P P 12 24 29.4 -1.7
baz=138
F10A Beach Ranch, E 32.88 337 P P 12 24 33.0 +1.6
SADO Sadowa 33.05 27 LR LR 12 42 07.6
comp=Z,81nm,18.1s,baz=235,slow=44
I04A Tendick Farm, 33.39 329 P P 12 24 34.0 -1.8
baz=138
JTMT Jette 33.44 342 P P 12 24 38.0 +1.7
JTMT IAmb IAmb 12 24 45.3
comp=Z,6.9nm,0.9s
J01E Myrtle Point 33.70 327 P P 12 24 36.7 -1.7
baz=135
I03D Drain, OR 33.79 328 P P 12 24 37.8 -1.4
baz=136
ULM Lac du Bonnet 33.82 4 P P 12 24 39.0 -0.4
comp=Z,6.1nm,0.8s,baz=176,slow=8.3,SNR=6.1
ULM LR LR 12 40 37.2
comp=Z,89nm,18.0s,baz=142,slow=40
comp=Z,6.1nm,0.8s
G05D Wamic, OR 33.97 332 P P 12 24 39.4 -1.5
baz=141
HOOD Mount Hood Mea 34.18 332 P P 12 24 44.6 +1.8
I02E Swisshome, OR 34.33 328 P P 12 24 42.9 -1.0
baz=136
WALA Waterton Lakes 34.52 343 P P 12 24 47.6 +1.9
WALA IAmb IAmb 12 24 53.8
comp=Z,10nm,1.0s
NEW Newport 34.80 339 P P 12 24 45.8 -2.2
baz=150
G03D McMinnville, O 34.85 330 P P 12 24 46.8 -1.6
baz=138
LONY Lake Ozonia 35.09 32 P P 12 24 48.2 -2.4
baz=225
LTY Liberty 35.28 335 P P 12 24 53.8 +1.6
HRV Adam Dziewonsk 35.32 37 P P 12 24 50.0 -2.5
baz=231
E04D Cinebar 35.54 332 P P 12 24 53.2 -1.1
baz=140
B08A Colville Reser 35.66 337 P P 12 24 56.7 +1.3
B08A IAmb IAmb 12 25 04.5
comp=Z,5.4nm,1.1s
NNA Nana 36.15 140 LR LR 12 36 40.9
comp=Z,233nm,20.6s,baz=322,slow=31
LBNH Lisbon 36.23 34 P P 12 24 58.3 -2.0
baz=229
EDM Edmonton 38.22 347 P P 12 25 18.0 +0.9
BBB Bella Bella 42.16 334 LR LR 12 43 01.7
comp=Z,165nm,18.4s,baz=145,slow=36
LPAZ La Paz 44.99 135 P P 12 26 14.4 +0.7
comp=Z,0.5nm,0.5s,baz=297,slow=6.8,SNR=2.0
LPAZ LR LR 12 43 33.4
comp=Z,176nm,18.8s,baz=284,slow=34
comp=Z,0.5nm,0.5s
SCHQ Schefferville 45.84 26 P P 12 26 20.1 +0.8
comp=Z,6.9nm,0.9s,baz=230,slow=8.0,SNR=8.8
SCHQ LR LR 12 49 33.3
comp=Z,82nm,18.6s,baz=240,slow=41
comp=Z,6.9nm,0.9s
SCHQ Schefferville 45.84 26 P P 12 26 20.4 +1.1
T35M Bob Quinn 46.54 337 P P 12 26 22.3 -2.4
baz=138
YKA Yellowknife Ar 47.16 351 P P 12 26 30.3 +0.9
comp=Z,8.4nm,0.9s,baz=159,slow=7.2,SNR=12
YKA LR LR 12 47 34.5
comp=Z,516nm,18.1s,baz=129,slow=38
comp=Z,8.4nm,0.9s
YKA Yellowknife Ar 47.16 351 P P 12 26 30.0 +0.5
MDP Montagnes des 47.39 98 LR LR 12 49 41.1
comp=Z,38nm,18.8s,baz=268,slow=40
DLBC Dease Lake 47.55 339 LR LR 12 47 02.6
comp=Z,350nm,21.1s,baz=128,slow=37
SIT Sitka 48.56 335 P P 12 26 38.7 -1.7
baz=132
LVC Limon Verde 49.12 141 LR LR 12 45 17.2
comp=Z,37nm,18.6s,baz=324,slow=34
P33M Teslin, Yukon 49.83 339 P P 12 26 47.9 -2.3
baz=137
SIV San Ignacio 49.87 128 LR LR 12 45 48.7
comp=Z,110nm,22.0s,baz=301,slow=34
MMPY Sheldon Lake, 51.13 342 P P 12 26 57.6 -2.3
baz=140
O30N Mendenhall 51.37 338 P P 12 26 59.5 -2.3
baz=133
FARO Faro, Yukon 51.48 341 P P 12 27 00.3 -2.3
baz=137
N31M Braeburn, Yuko 51.76 339 P P 12 27 06.7 +2.0
N31M Braeburn, Yuko 51.76 339 P P 12 27 02.1 -2.5
baz=134
M31M Drury Creek, Y 51.80 340 P P 12 27 02.3 -2.7
baz=186
FRB Frobisher Bay 51.83 17 LR LR 12 50 45.7
comp=Z,146nm,20.5s,baz=196,slow=38
HYT Haines Junctio 51.92 338 P P 12 27 03.7 -2.4
baz=132
M30M Minto, Yukon 52.86 339 P P 12 27 10.0 -2.8
baz=133
YUK8 Steele Glacier 53.06 337 P P 12 27 11.5 -3.1
baz=129
YUK3 Moose Creek 53.62 337 P P 12 27 15.9 -2.8
baz=129
DAWY Dawson 54.73 340 P P 12 27 23.7 -2.9
baz=131
C36M Paulatuk 55.01 350 P P 12 27 25.7 -2.6
baz=151
I29M Ogilvie Camp, 55.26 341 P P 12 27 27.2 -3.1
baz=133
P23K Montague Islan 55.41 333 P P 12 27 29.2 -2.3
baz=126
L26K Log Cabin Wild 55.46 337 P P 12 27 29.2 -2.5
baz=126
KLU Klutina 55.58 335 P P 12 27 30.0 -2.7
baz=123
INK Inuvik 56.10 346 LR LR 12 54 05.1
comp=Z,376nm,19.9s,baz=142,slow=39
INK Inuvik 56.10 346 P P 12 27 37.2 +1.0
INK IAmb IAmb 12 27 43.7
comp=Z,6.7nm,0.9s
INK Inuvik 56.10 346 P P 12 27 33.7 -2.5
baz=140
SCRK Sand Creek 56.25 338 P P 12 27 34.9 -2.7
baz=126
J26L Joseph Creek 56.42 339 P P 12 27 36.1 -2.7
baz=127
RIDG Independent Ri 56.42 338 P P 12 27 36.4 -2.3
baz=125
KDAK Kodiak Island 56.80 329 LR LR 12 52 03.6
comp=Z,146nm,18.1s,baz=141,slow=36
PMR Palmer 56.94 334 P P 12 27 40.1 -2.3
baz=120
ILAR Eielson Array 57.74 338 PcP PcP 12 28 41.6 +0.8
comp=Z,0.9nm,0.8s,baz=142,slow=4.6,SNR=2.0
ILAR LR LR 12 55 33.5
comp=Z,284nm,18.3s,baz=92,slow=39
ILAR Eielson Array 57.74 338 P P 12 27 48.6 +0.6
O20K Slope Mountain 57.77 332 P P 12 27 45.1 -3.3
baz=115
POKR Poker Flat Res 58.13 338 P P 12 27 46.5 -4.2
baz=123
SKT Skwentna 58.13 334 P P 12 27 46.8 -4.0
baz=117
RES Resolute Bay 58.27 1 LR LR 12 52 50.4
comp=Z,106nm,18.5s,baz=208,slow=36
H24K Noodor Dome 58.68 339 P P 12 27 55.3 +0.7
H24K IAmb IAmb 12 28 03.5
comp=Z,5.8nm,1.1s
H24K Noodor Dome 58.68 339 P P 12 27 50.5 -4.0
baz=123
P18K Big Mountain, 58.70 330 P P 12 27 52.1 -2.7
baz=112
M20K Styx River 58.77 334 P P 12 27 52.5 -2.8
baz=116
I23K Minto, Yukon-K 58.83 338 P P 12 27 57.1 +1.6
I23K IAmb IAmb 12 28 06.6
comp=Z,5.0nm,0.9s

I23K	**Minto, Yukon-K**	**58.83**	**338**	P		**P**	**12 27 52.8**	**-2.7**
	baz=121							
O18K	**Koktuh Hills**	**58.87**	**331**	P		**P**	**12 27 53.7**	**-2.3**
	baz=112							
N19K	**Bonanza Creek**	**58.91**	**332**	P		**P**	**12 27 53.7**	**-2.6**
	baz=114							
CPUP	**Villa Florida**	**59.16**	**135**	LR		LR	12 53 05.0	
	comp=Z,61nm,19.2s,baz=342,slow=36							
MLY	**Manley**	**59.28**	**337**	P		**P**	**12 27 55.9**	**-2.8**
	baz=120							
M19K	**Big River Lodg**	**59.32**	**333**	P		**P**	**12 27 56.2**	**-2.8**
	baz=114							
L20K	**Farewell, AK**	**59.34**	**334**	P		**P**	**12 27 55.8**	**-3.4**
	baz=115							
CHNA	**Chernabura Isl**	**59.49**	**324**	P		**P**	**12 27 57.1**	**-3.2**
	baz=106							
N18K	**Kilae Creek**	**59.50**	**332**	P		**P**	**12 27 57.8**	**-2.5**
	baz=112							
SFJD	**Kangerlussuaq**	**59.56**	**20**	LR		LR	12 54 43.8	
	comp=Z,48nm,21.4s,baz=237,slow=37							
L19K	**White Mountain**	**59.63**	**333**	P		**P**	**12 27 57.6**	**-3.6**
	baz=114							
K20K	**Telida**	**59.80**	**335**	P		**P**	**12 27 59.6**	**-2.7**
	baz=116							
I21K	**Tanana**	**59.81**	**337**	P		**P**	**12 27 59.4**	**-3.0**
	baz=118							
BDFB	**Brasília**	**60.09**	**119**	P		**P**	**12 28 05.5**	**+0.4**
	comp=Z,4.9nm,0.9s,baz=219,slow=10,SNR=4.0							
	comp=Z,4.9nm,0.9s							
O16K	**Kokwok River B**	**60.14**	**330**	P		**P**	**12 28 02.4**	**-2.3**
	baz=110							
J20K	**Nowinta River**	**60.18**	**336**	P		**P**	**12 28 05.3**	**+0.3**
J20K					IAmb	IAmb	12 28 11.5	
	comp=Z,6.0nm,1.0s							
J20K	**Nowinta River**	**60.18**	**336**	P		**P**	**12 28 02.2**	**-2.7**
	baz=116							
H21K	**Melozitna Rive**	**60.34**	**338**	P		**P**	**12 28 03.6**	**-2.4**
	baz=118							
TTA	**Tatalina**	**60.42**	**334**	P		**P**	**12 28 04.3**	**-2.4**
	baz=113							
N16K	**Nishlik Lake**	**60.75**	**331**	P		**P**	**12 28 06.9**	**-2.0**
	baz=109							
TOLK	**Toolik Lake Re**	**60.76**	**341**	P		**P**	**12 28 06.2**	**-2.7**
	baz=123							
PLCA	**Paso Flores**	**63.00**	**156**	P		**P**	**12 28 24.1**	**-0.2**
	comp=Z,4.6nm,1.1s,baz=342,slow=6.9,SNR=4.0							
PLCA					LR	LR	12 49 11.0	
	comp=Z,86nm,20.6s,baz=325,slow=30							
	comp=Z,4.6nm,1.1s							
UNV	**Unalaska Valle**	**63.24**	**322**	P		**P**	**12 28 24.0**	**-1.7**
	baz=99							
ICESG	**Greenland Ices**	**64.18**	**20**	*eP*		**P**	**12 28 31.6**	**-0.5**
SUMG	**Summit**	**65.90**	**17**	P		**P**	**12 28 44.1**	**+0.8**
SUMG	**Summit**	**65.90**	**17**	*iP*		**P**	**12 28 43.4**	**+0.1**
SUMG					IAmb	IAmb	12 28 53.3	
	comp=Z,24nm,1.6s							
SOEG	**Soedalen**	**66.77**	**22**	*iP*		**P**	**12 28 48.7**	**+0.3**
SOEG					IAmb	IAmb	12 28 56.4	
	comp=Z,8.4nm,0.9s							
RCBR	**Riachuelo**	**66.77**	**104**	LR		LR	12 59 32.6	
	comp=Z,67nm,18.0s,baz=80,slow=37							
BORG	**Borgarnes**	**70.23**	**27**	LR		LR	13 01 56.8	
	comp=Z,32nm,18.2s,baz=288,slow=38							
SCO	**Scoresbysund**	**70.46**	**20**	*iP*		**P**	**12 29 14.8**	**+3.4**
SCO					IAmb	IAmb	12 29 21.2	
	comp=Z,1.1nm,0.9s							
DAG	**Danmarks Havn**	**72.00**	**14**	*i* P		**P**	**12 29 20.3**	**-0.3**
DAG					IAmb	IAmb	12 29 21.5	
	comp=Z,3.5nm,0.9s							
NOR	**Nord**	**72.77**	**9**	*iP*		**P**	**12 29 25.7**	**+0.5**
NOR					IAmb	IAmb	12 29 32.5	
	comp=Z,5.7nm,1.1s							
JMIC	**Jan Mayen**	**74.91**	**20**	LR		LR	13 07 29.2	
	comp=Z,38nm,16.5s,baz=292,slow=40							
SPITS	**Spitsbergen Ar**	**79.09**	**11**	LR		LR	13 09 14.4	
	comp=Z,78nm,18.0s,baz=272,slow=39							
EKA	**Eskdalemuir Ar**	**80.22**	**35**	LR		LR	13 04 27.7	
	comp=Z,43nm,21.0s,baz=186,slow=35							
SEY	**Seymchan**	**83.39**	**334**	P		**P**	**12 30 25.6**	**+1.1**
	comp=Z,1.6nm,0.8s,baz=130,slow=3.3,SNR=6.9							
SEY					LR	LR	13 09 58.8	
	comp=Z,76nm,18.6s,baz=67,slow=37							
	comp=Z,1.6nm,0.8s							
ESDC	**Sonseca Array**	**83.89**	**51**	P		**P**	**12 30 29.1**	**+1.5**
	comp=Z,0.5nm,0.8s,baz=283,slow=5.4,SNR=2.7							
	comp=Z,0.5nm,0.8s							
PETK	**Petropavlovsk-**	**84.38**	**324**	P		**P**	**12 30 29.3**	**-0.4**
MDT	**Midelt**	**85.32**	**57**	LR		LR	13 04 22.7	
	comp=Z,47nm,20.3s,baz=334,slow=33							
NOA	**NORSAR Array B**	**85.39**	**27**	P		**P**	**12 30 35.9**	**+1.2**
	comp=Z,0.4nm,0.7s,baz=303,slow=5.0,SNR=3.1							
	comp=Z,0.4nm,0.7s							
MA2	**Magadan**	**85.48**	**331**	P		**P**	**12 30 35.5**	**+0.4**
	comp=Z,2.2nm,0.8s,baz=77,slow=7.8,SNR=1.4							
MA2					LR	LR	13 11 23.3	
	comp=Z,46nm,18.2s,baz=75,slow=38							
	comp=Z,2.2nm,0.8s							
ARCES	**ARCESS Array B**	**86.00**	**17**	LR		LR	13 09 29.4	
	comp=Z,50nm,21.4s,baz=294,slow=36							
TIXI	**Tiksi**	**86.22**	**346**	P		**P**	**12 30 38.9**	**+0.4**
	comp=Z,2.2nm,0.6s,baz=342,slow=3.2,SNR=2.6							
TIXI					LR	LR	13 13 20.0	
	comp=Z,53nm,20.6s,baz=359,slow=38							
	comp=Z,2.2nm,0.6s							
HFS	**Hagfors**	**86.90**	**27**	LR		LR	13 11 24.0	
	comp=Z,27nm,18.1s,baz=324,slow=37							
DAVOX	**Davos/Dischmat**	**90.87**	**40**	LR		LR	13 14 55.5	
	comp=Z,29nm,18.5s,baz=264,slow=38							
FINES	**FINESS Array B**	**91.24**	**23**	LR		LR	13 13 15.9	
	comp=Z,78nm,20.7s,baz=316,slow=36							
VRAC	**Vranov**	**93.68**	**36**	LR		LR	13 16 23.1	
	comp=Z,55nm,18.6s,baz=316,slow=37							
TORD	**Torodi Ar. Bea**	**96.86**	**74**	P		**P**	**12 31 27.1**	**-2.1**
TORD					IAmb	IAmb	12 31 34.2	
	comp=Z,1.5nm,1.4s							
AKASG	**Malin Array Be**	**99.50**	**30**	LR		LR	13 18 35.8	
	comp=Z,40nm,20.4s,baz=58,slow=37							
OBN	**Obninsk**	**99.61**	**24**	LR		LR	13 18 15.7	
	comp=Z,10nm,20.8s,baz=5.0,slow=36							
STKA	**Stephens Creek**	**122.78**	**242**	PKP		**PKiKP**		**12 36 55.0**	**+0.9**
	comp=Z,1.9nm,0.8s,baz=344,slow=16,SNR=2.0							
WRA	**Warramunga Arr**	**128.81**	**257**	PKP		**PKPdf**		**12 37 06.1**	**+0.2**
	comp=Z,1.0nm,0.9s,baz=77,slow=1.4,SNR=7.6							
WRA	**Warramunga Arr**	**128.81**	**257**			**PKiKP**		**12 37 06.6**	**+0.1**
ASAR	**Alice Springs**	**129.47**	**253**	PKP		**PKiKP**		**12 37 07.5**	**-0.2**
	comp=Z,0.6nm,0.9s,baz=83,slow=1.6,SNR=5.2								
ASAR	**Alice Springs**	**129.47**	**253**			**PKPdf**		**12 37 07.1**	**+0.1**
CMAR	**Chiang Mai Arr**	**140.77**	**331**	PKhKP		PKPpre		12 37 23.2	
	comp=Z,0.5nm,0.3s,baz=3.5,slow=3.0,SNR=1.7								

*TRN **06** 12:24:56.6, 11.64N×64.28W, h30km, MD3.7*
*FUNV **06** 12:24:59.6, 11.72N×64.17W, h15km, MW3.6*
ISC 06 12:24:59.4±1.1, 11.74N±0.06×64.21W±0.05, h35km, n33, σ1§57/45, Caribbean Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CUMV	**Cumana_UDO**	**1.30**	**179**	*eP*		**Pn**	**12 25 22.6**	**+1.5**
CUMV				*eS*		**Sn**	**12 25 39.9**	**+2.6**
PCRV	**Puerto La Cruz**	**1.61**	**195**	*eP*		**Pn**	**12 25 27.0**	**+1.6**
PCRV				*eS*		**Sn**	**12 25 47.3**	**+2.3**
BIRV	**Birongo**	**2.38**	**238**	*eP*		**Pn**	**12 25 36.9**	**+1.0**
BIRV				*eS*		**Sn**	**12 26 05.4**	**+1.5**
GRFF	**Grenada Fort F**	**2.44**	**82**	*eP*		**Pn**	**12 25 35.6**	**-1.2**
GRGR	**Grenville**	**2.53**	**81**	*eP*		**Pn**	**12 25 37.0**	**-1.0**
GCMP	**Grenada, Carri**	**2.82**	**74**	*eP*		**Pn**	**12 25 41.6**	**-0.4**
TRN	**Trinidad (W)**	**2.96**	**111**	*eP*		**Pn**	**12 25 43.2**	**-0.8**
MCLT	**Moule a Chique**	**3.74**	**58**	*eP*		**Pn**	**12 25 54.6**	**-0.1**
MCLT				*eS*		**Sn**	**12 26 36.7**	**-1.0**
BENV	**Beln**	**3.77**	**242**	*eP*		**Pn**	**12 25 57.1**	**+2.0**
BENV				*eS*		**Sn**	**12 26 39.2**	**+0.9**
TURV	**Turiamo**	**3.79**	**251**	*eP*		**Pn**	**12 25 55.9**	**+0.5**
TURV				*eS*		**Sn**	**12 26 37.5**	**-1.1**
SLBI	**Saint Lucia, B**	**3.89**	**54**	*eP*		**Pn**	**12 25 56.5**	**-0.2**
BIM	**Bigot**	**4.12**	**48**	*eP*		**Pn**	**12 25 59.4**	**-0.6**
FDF	**Fort de France**	**4.21**	**45**	*eP*		**Pn**	**12 26 01.2**	**0.0**
MPOM	**Morne Pois Mar**	**4.23**	**50**	*eP*		**Pn**	**12 26 01.1**	**-0.4**
MPOM	**Morne Pois Mar**	**4.23**	**50**	*eS*		**Sn**	**12 26 49.0**	**-0.7**
DSLB	**Salisbury**	**4.57**	**36**	*eP*		**Pn**	**12 26 06.4**	**+0.3**
DSLB	**Salisbury**	**4.57**	**36**	*eS*		**Sn**	**12 26 57.9**	**-0.1**
MAPV	**Macapo**	**4.58**	**246**	*eP*		**Pn**	**12 26 08.8**	**+2.5**
MAPV				*eS*		**Sn**	**12 26 57.7**	**-0.7**
BAUV	**El Baul**	**4.68**	**234**	*eP*		**Pn**	**12 26 08.9**	**+1.2**
BAUV				*eS*		**Sn**	**12 27 00.2**	**-0.6**
CACV	**CAICARA DEL OR**	**4.74**	**209**	*eP*		**Pn**	**12 26 06.6**	**-1.9**
CACV				*eS*		**Sn**	**12 26 56.5**	**-5.8**
BBGH	**Gun Hill**	**4.75**	**72**	*eP*		**Pn**	**12 26 09.0**	**+0.3**
CBE	**Ff, Capester**	**4.99**	**30**	*eP*		**Pn**	**12 26 12.7**	**+0.7**
MAGL	**Barre de l'ile**	**5.06**	**34**	*eP*		**Pn**	**12 26 13.2**	**+0.3**
MAGL	**Barre de l'ile**	**5.06**	**34**	*eS*		**Sn**	**12 27 08.2**	**-1.9**
ABD	**La Joyeuse, An**	**5.40**	**29**	*eP*		**Pn**	**12 26 17.9**	**+0.5**
SIQV	**Siquisique**	**5.60**	**259**	*eP*		**Pn**	**12 26 21.0**	**+0.7**
SIQV				*eS*		**Sn**	**12 27 21.8**	**-1.7**
BPA	**Boggy Peak**	**5.75**	**23**	*eP*		**Pn**	**12 26 22.3**	**-0.1**
ANBD	**Bethesda, Anti**	**5.79**	**24**	*eP*		**Pn**	**12 26 23.2**	**+0.4**
ANBD	**Bethesda, Anti**	**5.79**	**24**	*eS*		**Sn**	**12 27 26.7**	**-1.2**
CURV	**Curarigua**	**5.90**	**254**	*eP*		**Pn**	**12 26 25.3**	**+0.8**
CURV				*eS*		**Sn**	**12 27 28.8**	**-2.2**
ANWB	**Willy Bob**	**6.34**	**21**	*eP*		**Pn**	**12 26 31.1**	**+0.6**
DABV	**Dabajuro**	**6.35**	**263**	*eP*		**Pn**	**12 26 31.1**	**+0.5**
DABV				*eS*		**Sn**	**12 27 38.9**	**-3.2**
SOCV	**Socops**	**7.39**	**243**	*eP*		**Pn**	**12 26 45.1**	**+0.2**

*JMA **06** 12:37:00.5±0.3, 24.8N±0.9×121.9E±0.8, h111km±2km, MV2.1/10, TAIWAN REGION*
*TAP **06** 12:37:01.1, 24.93N×121.88E, h110km, ML2.9, B*
ISC 06 12:37:01.1±1.8, 24.91N±0.06×121.92E±0.04, h108km±10km, n49, σ0§48/93, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
NTC	**Toucheng**	**0.10**	**235**	*i* P		**Pn**	**12 37 16.3**	**+0.2**
	baz=210							
NTC				*i* S		**Sn**	**12 37 27.5**	**+0.2**
	baz=210							
TIPB	**Shuangxi**	**0.10**	**305**	P		**Pn**	**12 37 15.9**	**-0.2**
	baz=315							
TIPB				*e*S		**Sn**	**12 37 26.4**	**-1.0**
	baz=315							
TWB1	**Santiao Chiao**	**0.11**	**33**	P		**Pn**	**12 37 16.1**	**0.0**
	baz=53							
TWB1				*e*S		**Sn**	**12 37 26.5**	**-0.9**
	baz=53							
SXI1	**Grass Mountain**	**0.18**	**347**	P		**Pn**	**12 37 15.9**	**-0.5**
	baz=359							
SXI1				S		**Sn**	**12 37 28.7**	**+0.9**
	baz=359							
NWF	**Wu-fen Shan**	**0.20**	**321**	*i* P		**Pn**	**12 37 16.4**	**-0.1**
	baz=329							
NWF				S		**Sn**	**12 37 27.5**	**-0.4**
	baz=329							
WFSB	**Wu-fen Shan**	**0.20**	**321**	P		**Pn**	**12 37 16.3**	**0.0**
	baz=329							
WFSB				S		**Sn**	**12 37 27.5**	**-0.2**
	baz=329							
TWE	**Neicheng**	**0.30**	**230**	*i* P		**Pn**	**12 37 17.1**	**+0.4**
	baz=220							
TWE				*e*S		**Sn**	**12 37 29.1**	**+0.8**
	baz=220							
TWC	**Suao**	**0.31**	**192**	*i* P		**Pn**	**12 37 17.4**	**+0.7**
	baz=182							
TWC				*e*S		**Sn**	**12 37 27.6**	**-0.8**
	baz=182							
TWA	**Mucha**	**0.31**	**283**	P		**Pn**	**12 37 17.2**	**+0.4**
	baz=281							
TWA				S		**Sn**	**12 37 28.1**	**-0.4**
	baz=281							
NDS	**Dongshan**	**0.33**	**214**	P		**Pn**	**12 37 17.6**	**+0.7**
	baz=206							
NDS				S		**Sn**	**12 37 29.3**	**+0.6**
	baz=206							
FUSB	**Fushanzhiwuyua**	**0.34**	**243**	P		**Pn**	**12 37 17.2**	**+0.3**
	baz=237							
FUSB				*i* S		**Sn**	**12 37 28.9**	**+0.1**
	baz=237							
NHDH	**Xindian Distri**	**0.36**	**278**	*i* P		**Pn**	**12 37 17.4**	**+0.4**
	baz=276							
NHDH				*e*S		**Sn**	**12 37 29.2**	**+0.3**
	baz=276							
YM01	**YM01**	**0.39**	**306**	P		**Pn**	**12 37 17.7**	**+0.5**
	baz=308							
YM01				*e*S		**Sn**	**12 37 30.1**	**+0.9**
	baz=308							
TATO	**Taipei**	**0.40**	**279**	*i* P		**Pn**	**12 37 17.2**	**+0.1**
	baz=278							
TATO				*i* S		**Sn**	**12 37 29.0**	**-0.1**
	baz=278							
NWLT	**Wulai**	**0.40**	**251**	*i* P		**Pn**	**12 37 17.1**	**-0.1**
	baz=246							
NWLT				*i* S		**Sn**	**12 37 29.0**	**-0.3**
	baz=246							
ENTT	**Nioudou**	**0.42**	**230**	*i* P		**Pn**	**12 37 17.5**	**+0.2**
	baz=223							
ENTT				*e*S		**Sn**	**12 37 29.8**	**+0.3**
	baz=223							
EWUT	**Wuta**	**0.48**	**196**	P		**Pn**	**12 37 17.9**	**+0.2**
	baz=190							
EWUT				*i* S		**Sn**	**12 37 30.4**	**+0.3**
	baz=190							
TWS1	**Kuangyinshan**	**0.49**	**292**	P		**Pn**	**12 37 18.2**	**+0.5**
	baz=293							
TWS1				S		**Sn**	**12 37 30.9**	**+0.7**
	baz=293							
ENA	**Nanau**	**0.51**	**199**	*i* P		**Pn**	**12 37 18.2**	**+0.3**
	baz=193							
ENA				S		**Sn**	**12 37 30.8**	**+0.4**
	baz=193							
LATG	**Datong**	**0.52**	**224**	*i* P		**Pn**	**12 37 18.1**	**0.0**
	baz=219							
LATG				S		**Sn**	**12 37 30.7**	**-0.1**
	baz=219							
YHNB	**Yeheng**	**0.55**	**244**	P		**Pn**	**12 37 17.8**	**-0.4**
	baz=240							
YHNB				S		**Sn**	**12 37 30.3**	**-0.8**
	baz=240							
NSK	**Sanguang**	**0.56**	**245**	*i* P		**Pn**	**12 37 18.0**	**-0.3**
	baz=241							
NSK				S		**Sn**	**12 37 30.1**	**-1.2**
	baz=241							
NNS	**Nan Shan**	**0.69**	**227**	*i* P		**Pn**	**12 37 19.4**	**0.0**
	baz=222							
NNS				*i* S		**Sn**	**12 37 32.6**	**-0.4**
	baz=222							
NNSB	**Datong**	**0.69**	**226**	*i* P		**Pn**	**12 37 19.3**	**0.0**
	baz=222							
NNSB				S		**Sn**	**12 37 32.9**	**-0.1**
	baz=222							
NFF	**Wufeng Townshi**	**0.78**	**249**	P		**Pn**	**12 37 19.8**	**-0.4**
	baz=247							
NFF				S		**Sn**	**12 37 33.2**	**-1.2**
	baz=247							
NACB	**Ninganchiao**	**0.79**	**202**	S		**Sn**	**12 37 34.5**	**+0.1**
	baz=198							
ETL	**Fush Village**	**0.80**	**200**	P		**Pn**	**12 37 20.2**	**0.0**
	baz=196							
ETL				S		**Sn**	**12 37 34.5**	**-0.2**
	baz=196							
ETLH	**Xiulin Townshi**	**0.81**	**210**	P		**Pn**	**12 37 20.1**	**-0.3**
	baz=206							
HSN1	**Hsinchu**	**0.83**	**261**	P		**Pn**	**12 37 20.4**	**-0.1**
	baz=259							
HSN1				S		**Sn**	**12 37 35.2**	**+0.1**
	baz=259							
LIOB	**Emei**	**0.86**	**252**	*i* P		**Pn**	**12 37 20.8**	**0.0**
	baz=250							
LIOB				S		**Sn**	**12 37 35.2**	**-0.5**
	baz=250							
NSTT	**Nanjuang**	**0.88**	**252**	*i* P		**Pn**	**12 37 20.9**	**-0.1**
	baz=249							
NSTT				*e*S		**Sn**	**12 37 35.2**	**-0.8**
	baz=249							
FUSS	**Fushou**	**0.90**	**223**	P		**Pn**	**12 37 21.7**	**+0.2**
	baz=220							
FUSS				S		**Sn**	**12 37 36.5**	**-0.3**
	baz=220							
TWT	**Tachien**	**0.94**	**226**	P		**Pn**	**12 37 22.3**	**+0.5**
	baz=224							
TWT				S		**Sn**	**12 37 37.4**	**0.0**
	baz=224							
TDCB	**Techi**	**0.95**	**227**	P		**Pn**	**12 37 22.4**	**+0.5**
	baz=224							
TDCB				*i* S		**Sn**	**12 37 37.3**	**-0.3**
	baz=224							
WHF	**Hehuan Shan**	**0.97**	**218**	P		**Pn**	**12 37 22.4**	**+0.1**
	baz=215							
WHF				S		**Sn**	**12 37 37.7**	**-0.6**
	baz=215							
ETM	**Tongmen**	**1.02**	**203**	*i* P		**Pn**	**12 37 22.8**	**+0.4**
	baz=200							
ETM				S		**Sn**	**12 37 39.0**	**+0.5**
	baz=200							
JYNG	**Yonagunijimaku**	**1.04**	**116**	P		**Pn**	**12 37 22.4**	**-0.2**
JYNG				*e*S		**Sn**	**12 37 38.2**	**-0.5**
CHGB	**Renai**	**1.09**	**219**	P		**Pn**	**12 37 23.8**	**+0.4**
	baz=216							
CHGB				*i* S		**Sn**	**12 37 39.8**	**-0.3**
	baz=216							
WHP	**Taichung City**	**1.09**	**235**	*i* P		**Pn**	**12 37 23.5**	**+0.2**
	baz=232							
WHP				*e*S		**Sn**	**12 37 38.9**	**-1.0**
	baz=232							
YOJ	**Yonaguni jima**	**1.09**	**114**	P		**Pn**	**12 37 22.9**	**-0.2**
OWD	**Renai**	**1.17**	**216**	*i* P		**Pn**	**12 37 24.6**	**+0.4**
	baz=213							
WUSB	**Renai**	**1.17**	**219**	*i* P		**Pn**	**12 37 24.8**	**+0.6**
	baz=216							
WUSB				*i* S		**Sn**	**12 37 41.4**	**-0.2**
	baz=216							
VWDT	**VWDT**	**1.35**	**212**	P		**Pn**	**12 37 26.6**	**+0.5**
	baz=209							
VWDT				S		**Sn**	**12 37 45.2**	**+0.1**
	baz=209							
SSLB	**Suanglung**	**1.43**	**218**	P		**Pn**	**12 37 27.0**	**0.0**
	baz=216							
SSLB				S		**Sn**	**12 37 46.6**	**0.0**
	baz=216							
IRIF	**Iriomote-Funau**	**1.75**	**109**	*e*P		**Pn**	**12 37 30.9**	**+0.1**
IRIF				S		**Sn**	**12 37 52.9**	**-0.5**
JKRS	**Kuro-shima**	**2.02**	**109**	P		**Pn**	**12 37 34.4**	**+0.2**
JKRS				S		**Sn**	**12 37 59.3**	**-0.3**
JIJ	**Ishigaki jima**	**2.10**	**105**	P		**Pn**	**12 37 35.2**	**0.0**
JIJ				S		**Sn**	**12 38 00.3**	**-1.1**
JISG	**Ishigakijimahi**	**2.20**	**98**	P		**Pn**	**12 37 37.0**	**+0.4**
JISG				S		**Sn**	**12 38 04.0**	**+0.4**
JTJ	**Tarama**	**2.54**	**96**	P		**Pn**	**12 37 41.8**	**+0.8**

*IDC **06** 13:06:22.6±2.5, 3.73S×103.03E, h147km±22km, mb3.4/10, mbtmp3.9/12, Error ellipse: s-maj=40.9km s-min=12.5km az=51.0*
*DJA **06** 13:06:22.9±0.3, 4.3S±9.1×10.3E±0.7, h165km±5km, M4.3/13, mb4.4/7, MLv4.3/13*
*NEIC **06** 13:06:23.1±1.1, 3.62S±0.06×103.11E±0.08, h148km±6km, mb4.2/13, Error ellipse: s-maj=12.8km s-min=6.3km az=118.0*
ISC 06 13:06:22.9±0.6, 3.63S±0.08×103.15E±0.07, h150km, n55, σ1§18/62, mb4.0/16, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
MNAI	**Manna**	**0.75**	**195**	Pn		**Pn**	**13 06 46.5**	**+0.7**
MNAI				Sn		**Sn**	**13 07 02.0**	**-1.3**
MNAI	**Manna**	**0.75**	**195**	P		**Pn**	**13 06 46.9**	**+1.1**
MNAI				S		**Sn**	**13 07 04.3**	**+1.0**
LWLI	**Liwa**	**1.65**	**147**	P		**Pn**	**13 06 55.7**	**+1.4**
LWLI				S		**Sn**	**13 07 19.0**	**+0.7**
KRJI	**Kerinci**	**2.27**	**312**	P		**Pn**	**13 07 05.1**	**+3.7**
KASI	**Kota Agung**	**2.31**	**144**	P		**Pn**	**13 07 01.9**	**+0.1**
KASI				S		**Sn**	**13 07 30.2**	**-1.6**
BLSI	**Bandar Lampung**	**2.71**	**130**	P		**Pn**	**13 07 07.6**	**+0.9**
PPSI	**Pulau Pagai**	**3.25**	**285**	P		**Pn**	**13 07 15.0**	**+1.6**
PPSI				S		**Sn**	**13 07 52.1**	**-0.4**
DBJI	**Dramaga**	**4.62**	**129**	P		**Pn**	**13 07 31.6**	**+0.3**
SISI	**Saibi**	**4.65**	**299**	P		**Pn**	**13 07 33.5**	**+1.7**
SISI				S		**Sn**	**13 08 23.7**	**-1.7**
SKJI	**Sukabumi**	**4.77**	**135**	P		**Pn**	**13 07 32.5**	**-0.9**
CNJI	**Cibinong**	**5.39**	**133**	P		**Pn**	**13 07 39.6**	**-2.0**
	0.2nm32nm,0.6s							
MYKOM	**Kota Tinggi**	**5.43**	**7**	Pn		**Pn**	**13 07 42.3**	**+0.2**
LEM	**Lembang**	**5.47**	**126**	P		**Pn**	**13 07 43.4**	**+0.7**
	18nm,0.4s,baz=333,slow=20,SNR=5.1							
MNSI	**Mandailing Nat**	**5.66**	**321**	P		**Pn**	**13 07 47.1**	**+2.0**
CMJI	**Cimerak**	**6.70**	**128**	P		**Pn**	**13 07 57.1**	**-1.9**
	0.1nm22nm,0.7s							
GSI	**Gunungsitoli**	**7.42**	**311**	Pn		**Pn**	**13 08 08.8**	**+0.2**
GSI	**Gunungsitoli**	**7.42**	**311**	P		**Pn**	**13 08 08.8**	**+0.2**
	0.4nm64nm,0.5s							
RPSI	**Rantau Prapat**	**7.57**	**326**			**Pn**	**13 08 10.2**	**-0.3**
PSI	**Prapat**	**7.65**	**326**	P		**Pn**	**13 08 10.2**	**-1.6**
	4.4nm,0.7s,baz=155,slow=19,SNR=4.8							
UGM	**Wanagama**	**8.48**	**120**	Pn		**Pn**	**13 08 22.6**	**-0.2**
UGM	**Wanagama**	**8.48**	**120**	P		**Pn**	**13 08 22.1**	**-0.8**
	87nm,0.5s							
PCJI	**Pacitan**	**9.19**	**120**	P		**Pn**	**13 08 30.9**	**-1.3**
	42nm,1.3s							
LHMI	**Lhok Sumawe**	**10.76**	**325**	Pn		**Pn**	**13 08 49.8**	**-3.2**
GMJI	**Gumukmas**	**11.23**	**115**	P		**Pn**	**13 08 59.6**	**+0.3**
	22nm,1.3s							
JAGI	**Jajag, Banyuwa**	**11.95**	**114**	Pn		**Pn**	**13 09 07.1**	**-1.6**
JAGI	**Jajag, Banyuwa**	**11.95**	**114**	P		**Pn**	**13 09 07.4**	**-1.3**
CMAR	**Chiang Mai Arr**	**22.33**	**349**	P		**P**	**13 11 09.3**	**+0.8**
	0.7nm,0.5s,baz=182,slow=8.5,SNR=7.3							
	0.7nm,0.5s							
CMAR	**Chiang Mai Arr**	**22.33**	**349**	P		**P**	**13 11 08.9**	**+0.3**
KNRA	**Kununurra**	**27.90**	**117**	P		**P**

s-maj=25.8km s-min=15.4km az=170.0
*NEIC **06** 13:08:02.6±3.0,34.6°N±0.1°×23.89°E±0.07,h10km±2km, mb4.2/4, ML3.5(ISK), ML3.1(THE), Error ellipse: s-maj=18.0km s-min=10.4km az=182.0*
*ISK **06** 13:08:04.8,34.58°N×23.94°E,h24km, ML3.4/10*
*THE **06** 13:08:05.7,34.55°N×23.88°E,h10km±1km, ML3.1/12, Error ellipse: s-maj=1.8km s-min=0.9km az=19.0*
*DDA **06** 13:08:06.3±0.0,34.77°N×24.34°E,h19km±9km, ML3.3*
*ATH **06** 13:08:06.7,34.69°N×23.98°E,h32km±1km, ML3.4/8, Error ellipse: s-maj=6.6km s-min=1.5km az=21.0*
*GII **06** 13:08:09.5±0.6,34.66°N×24.61°E,h40km*

ISC 06 13:08:01.2±1.4,**34.41N**±0.05×**23.87E**±0.03,**h16**km±9km, **n106**,σ1§**95**/127,**mb4.1**/11,**Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GVD	**Gavdhos**	**0.46**	**23**	P	**Pn**	**13 08 12.7**	**-0.6**
GVD				S	**Sb**	**13 08 17.3**	**-0.3**
GVD				AML	AML	13 08 20.8	
	comp=E,21976μm,0.3s						
GVD				AML	AML	13 08 22.9	
	comp=N,29704μm,0.3s						
GVD	**Gavdhos**	**0.46**	**23**	P	**Pn**	**13 08 12.6**	**-0.6**
GVD				S	**Sb**	**13 08 17.5**	**-0.1**
	comp=N,13μm,0.3s						
GVD	**Gavdhos**	**0.46**	**23**	PG	**Pn**	**13 08 12.4**	**-0.8**
GVD				SG	**Sb**	**13 08 17.4**	**-0.1**
GVDS	**Gavdos**	**0.47**	**23**	P	**Pn**	**13 08 12.5**	**-0.8**
GVDS				S	**Sb**	**13 08 17.9**	**+0.2**
	comp=N,9μm,0.4s						
KNDR	**Palaiochora Ch**	**0.83**	**350**	P	**Pn**	**13 08 19.9**	**+1.6**
KNDR				AML	AML	13 08 35.2	
	comp=E,8232μm,0.5s						
KNDR				AML	AML	13 08 37.1	
	comp=N,8396μm,0.8s						
KNDR	**Palaiochora Ch**	**0.83**	**350**	P	**Pn**	**13 08 19.6**	**+1.3**
KNDR				S	**Sn**	**13 08 30.1**	**-0.1**
	comp=N,1μm,0.7s						
KNDR	**Palaiochora Ch**	**0.83**	**350**	PG	**Pn**	**13 08 19.4**	**+1.1**
KNDR				SG	**Sn**	**13 08 29.8**	**-0.4**
SIVA	**Sivas**	**0.98**	**52**	P	**Pn**	**13 08 22.7**	**+2.4**
SIVA				S	**Sn**	**13 08 35.5**	**+1.6**
TMBK	**Timbaki Herakl**	**0.99**	**48**	P	**Pn**	**13 08 22.2**	**+1.8**
TMBK				AML	AML	13 08 44.0	
	comp=N,7398μm,0.4s						
TMBK				AML	AML	13 08 47.0	
	comp=E,4891μm,0.9s						
TMBK	**Timbaki Herakl**	**0.99**	**48**	P	**Pn**	**13 08 22.6**	**+2.2**
TMBK				S	**Sn**	**13 08 35.8**	**+1.7**
	comp=E,1μm,0.5s						
IMMV	**Iera Moni Meta**	**1.05**	**5**	P	**Pn**	**13 08 22.3**	**+1.0**
IMMV				AML	AML	13 08 41.0	
	comp=E,7918μm,0.4s						
IMMV				AML	AML	13 08 41.6	
	comp=N,8218μm,0.4s						
IMMV	**Iera Moni Meta**	**1.05**	**5**	P	**Pn**	**13 08 22.3**	**+1.0**
IMMV				S	**Sn**	**13 08 36.1**	**+0.5**
	comp=N,4μm,0.4s						
IMMV	**Iera Moni Meta**	**1.05**	**5**	PG	**Pn**	**13 08 22.1**	**+0.8**
CHAN	**Chania**	**1.11**	**7**	P	**Pn**	**13 08 23.0**	**+0.9**
CHAN				AML	AML	13 08 43.1	
	comp=E,6090μm,0.4s						
CHAN				AML	AML	13 08 43.9	
	comp=N,6884μm,0.8s						
RODP	**Rodopos**	**1.15**	**355**	P	**Pn**	**13 08 24.6**	**+1.9**
RODP				S	**Sn**	**13 08 39.0**	**+0.9**
	comp=N,480nm,0.5s						
RODP	**Rodopos**	**1.15**	**355**	PG	**Pn**	**13 08 23.9**	**+1.2**
IDI	**Anoyia**	**1.21**	**44**	Pn	**Pn**	**13 08 24.8**	**+1.2**
	comp=N,39nm,0.3s,baz=230,slow=16,SNR=87						
IDI				Sn	**Sn**	**13 08 40.5**	**+0.8**
	comp=N,65nm,0.3s,baz=318,slow=23,SNR=25						
IDI	**Anoyia**	**1.21**	**44**	P	**Pn**	**13 08 25.0**	**+1.4**
IDI				AML	AML	13 08 46.2	
	comp=N,1636μm,0.8s						
IDI				AML	AML	13 08 50.0	
	comp=E,2170μm,0.5s						
IDI	**Anoyia**	**1.21**	**44**	P	**Pn**	**13 08 25.0**	**+1.4**
IDI				S	**Sn**	**13 08 42.9**	**+3.2**
	comp=E,952nm,0.6s						
IDI	**Anoyia**	**1.21**	**44**	PG	**Pn**	**13 08 24.6**	**+1.0**
KSTL	**Kastelli Herak**	**1.33**	**48**	P	Pg	13 08 30.3	+3.5
KSTL				AML	AML	13 09 00.2	
	comp=N,2115μm,0.6s						
KSTL				AML	AML	13 09 01.2	
	comp=E,1014μm,0.5s						
KSTL	**Kastelli Herak**	**1.33**	**48**	P	Pg	13 08 30.4	+3.5
KSTL				S	**Sn**	**13 08 47.9**	**+5.4**
	comp=E,265nm,0.6s						
IACM	**Heraklion**	**1.33**	**48**	P	**Pg**	**13 08 29.0**	**+2.1**
IACM				S	**Sn**	**13 08 45.4**	**+2.9**
	comp=E,5μm,0.6s						
ANKY	**Antikythira Is**	**1.52**	**342**	P	**Pg**	**13 08 30.4**	**-0.2**
ANKY	**Antikythira Is**	**1.52**	**342**	P	**Pg**	**13 08 30.4**	**-0.2**
ANKY				S	**Sg**	**13 08 49.6**	**-0.8**
	comp=E,468nm,0.7s						
NPS	**Neapolis**	**1.67**	**59**	P	**Pg**	**13 08 32.8**	**-0.5**
KTHA	**Kythira Island**	**1.95**	**340**	P	**Pb**	**13 08 36.5**	**0.0**
KTHA	**Kythira Island**	**1.95**	**340**	P	**Pb**	**13 08 36.5**	**0.0**
KTHA				S	**Sb**	**13 08 59.8**	**-0.8**
	comp=E,322nm,1.0s						
KTHR	**Kythira**	**1.97**	**339**	P	**Pb**	**13 08 36.4**	**-0.4**
KTHR				AML	AML	13 09 15.1	
	comp=E,1480μm,0.4s						
KTHR				AML	AML	13 09 18.7	
	comp=N,815μm,0.4s						
KTHR	**Kythira**	**1.97**	**339**	P	**Pb**	**13 08 36.6**	**-0.2**
KTHR				S	**Sb**	**13 08 59.8**	**-1.4**
	comp=N,225nm,0.5s						
ZKR	**Zakros**	**2.06**	**69**	P	**Pb**	**13 08 38.3**	**+0.1**
ZKR	**Zakros**	**2.06**	**69**	PN	**Pn**	**13 08 37.4**	**+2.3**
THR6	**Thira Island,**	**2.31**	**32**	P	**Pn**	**13 08 40.3**	**+1.8**
THR6	**Thira Island,**	**2.31**	**32**	P	**Pn**	**13 08 40.4**	**+1.8**
MHLO	**Agia Marina, M**	**2.31**	**11**	P	**Pn**	**13 08 40.2**	**+1.5**
THR5	**Thira Island,**	**2.33**	**31**	P	**Pn**	**13 08 40.2**	**+1.3**
THR5	**Thira Island,**	**2.33**	**31**	P	**Pn**	**13 08 40.4**	**+1.4**
SANT	**Santorini**	**2.34**	**33**	P	**Pn**	**13 08 40.5**	**+1.3**
SANT	**Santorini**	**2.34**	**33**	PN	**Pn**	**13 08 39.9**	**+0.8**
SANT	**Santorini**	**2.34**	**33**		**Pn**	**13 08 39.5**	**+0.4**
SANT	**Santorini**	**2.34**	**33**	P	**Pn**	**13 08 40.2**	**+1.1**
SANT				S	**Sn**	**13 09 07.5**	**-0.1**
SAP3	**Santorini-Thir**	**2.35**	**30**	P	**Pn**	**13 08 40.5**	**+1.3**
THR3	**Thira Island,**	**2.35**	**32**	P	**Pn**	**13 08 40.5**	**+1.3**
THR8	**Santorini-Mono**	**2.38**	**33**	P	**Pn**	**13 08 40.9**	**+1.3**
THR8	**Santorini-Mono**	**2.38**	**33**	P	**Pn**	**13 08 40.9**	**+1.3**
VLI	**Veliai**	**2.42**	**342**	P	**Pb**	**13 08 43.8**	**-0.6**
KARP	**Karpathos**	**2.93**	**66**	P	**Pn**	**13 08 50.7**	**+3.5**
KARP	**Karpathos**	**2.93**	**66**	PN	**Pn**	**13 08 49.7**	**+2.5**
KARP	**Karpathos**	**2.93**	**66**		**Pn**	**13 08 49.3**	**+2.1**
APE	**Apeiranthos**	**2.97**	**27**	PN	**Pn**	**13 08 47.8**	**0.0**
APE	**Apeiranthos**	**2.97**	**27**	Pn	**Pn**	**13 08 47.9**	**+0.1**
APE	**Apeiranthos**	**2.97**	**27**	P	**Pn**	**13 08 47.7**	**0.0**
APE				S	**Sn**	**13 09 19.2**	**-4.0**
ITM	**Ithomi**	**3.18**	**331**	PN	**Pn**	**13 08 53.5**	**+2.9**
ITM	**Ithomi**	**3.18**	**331**	Pn	**Pn**	**13 08 52.3**	**+1.7**
DAT	**Datca**	**3.80**	**52**	P	**Pn**	**13 08 59.9**	**+0.7**
DAT				S	**Sn**	**13 09 37.6**	**-6.1**
DAT				*i* AML	AML	13 09 48.0	
	comp=N,20nm,0.8s						
ARG	**Arkhangelos**	**3.92**	**61**	PN	**Pn**	**13 09 03.2**	**+2.5**
ARG	**Arkhangelos**	**3.92**	**61**	Pn	**Pn**	**13 09 02.6**	**+1.9**
TURN	**Turunc**	**4.27**	**55**	PN	**Pn**	**13 09 08.2**	**+2.6**
TURN	**Turunc**	**4.27**	**55**	P	**Pn**	**13 09 06.7**	**+1.1**
TURN				S	**Sn**	**13 09 49.4**	**-5.7**
YER	**Yerkesik**	**4.50**	**52**	P	**Pn**	**13 09 10.9**	**+2.2**
YER				S	**Sn**	**13 09 52.2**	**-8.6**
AKAS	**Kas**	**5.03**	**67**	Pn	**Pn**	**13 09 17.4**	**+1.3**
AKAS	**Kas**	**5.03**	**67**	P	**Pn**	**13 09 17.2**	**+1.1**
AKAS				S	**Sn**	**13 10 11.4**	**-2.5**
AKAS				*i* AML	AML	13 10 28.0	
	comp=N,74nm,0.5s						
AKAS				*i* AML	AML	13 10 32.0	
	comp=N,57nm,1.8s						
TAVA	**DENIZLI_Tavas**	**5.10**	**52**	P	**Pn**	**13 09 17.6**	**+0.6**
TAVA				S	**Sn**	**13 10 13.8**	**-1.9**
GOLH	**Golhisar**	**5.41**	**57**	P	**Pn**	**13 09 22.7**	**+1.3**
GOLH				S	**Sn**	**13 10 21.5**	**-2.0**
GOLH				*i* AML	AML	13 10 27.0	
	comp=N,17nm,0.5s						
GOLH				*i* AML	AML	13 10 31.0	
	comp=N,14nm,0.5s						
ELL	**Elmali**	**5.44**	**63**	Pn	**Pn**	**13 09 23.2**	**+1.4**
AKUM	**Antalya-Kumluc**	**5.62**	**68**	P	**Pn**	**13 09 24.3**	**+0.2**
LIT	**Litokhoron**	**5.78**	**349**	Pn	**Pn**	**13 09 26.5**	**+0.1**
KEK	**Kerkira**	**6.21**	**330**	Pn	**Pn**	**13 09 33.4**	**+1.2**
FNA	**Florina**	**6.66**	**343**	Pn	**Pn**	**13 09 37.6**	**-0.8**
SCTE	**Santa Cesarea**	**7.10**	**324**	Pn	**Pn**	**13 09 45.4**	**+0.9**
TIP	**Timpagrande**	**7.42**	**312**	Pn	**Pn**	**13 09 50.1**	**+1.1**
CSS	**Mathiatis**	**7.81**	**83**	Pn	**Pn**	**13 09 54.1**	**-0.2**
CSS	**Mathiatis**	**7.81**	**83**	Pn	**Pn**	**13 09 53.7**	**-0.6**
RAFF	**Raffo Rosso**	**8.21**	**293**	Pn	**Pn**	**13 10 01.5**	**+1.7**
CUC	**Castrocucco**	**8.50**	**313**	Pn	**Pn**	**13 10 03.4**	**-0.4**
BRTR	**Keskin Array B**	**9.43**	**53**	Pn	**Pn**	**13 10 16.9**	**+0.4**
	comp=N,0.1nm,0.3s,baz=228,slow=15,SNR=3.4						
	comp=N,0.6nm,0.5s						
KZIT	**Kziot**	**9.54**	**109**	Sn	Sn	13 11 58.7	-6.1
MMAI	**Mount Meron Ar**	**9.71**	**95**	Pn	**Pn**	**13 10 22.4**	**+2.1**
	comp=N,1.2nm,0.3s,baz=287,slow=15,SNR=1.9						
MMAI				Sn	Sn	13 11 57.0	-12
	comp=N,1.4nm,0.3s,baz=226,slow=20,SNR=1.5						
	comp=N,0.5nm,0.3s						
SALP	**Salfit**	**9.77**	**101**	Pn	**Pn**	**13 10 20.6**	**-0.5**
SALP				Sn	Sn	13 12 03.3	-7.1
YTIR	**Yattir**	**9.93**	**105**	Pn	**Pn**	**13 10 23.8**	**+0.4**
YTIR				Sn	Sn	13 12 08.1	-6.5
HMDT	**Nahal Hemdat**	**9.99**	**99**	Pn	**Pn**	**13 10 22.8**	**-1.3**
DSI	**Dead Sea**	**10.07**	**103**	Pn	**Pn**	**13 10 25.3**	**0.0**
DSI				Sn	Sn	13 12 11.3	-6.6
HRFI	**Mount Harif**	**10.41**	**112**	Pn	**Pn**	**13 10 30.7**	**+0.7**
HRFI				Sn	**Sn**	**13 12 21.5**	**-4.8**
EIL	**Elat**	**10.52**	**114**	Pn	**Pn**	**13 10 32.0**	**+0.6**
	comp=N,0.5nm,0.3s,baz=7.6,slow=5.9,SNR=8.0						
EIL				Sn	Sn	13 12 20.0	-9.0
	comp=N,0.4nm,0.3s,baz=351,slow=22,SNR=1.7						
EIL	**Elat**	**10.52**	**114**	Pn	**Pn**	**13 10 32.4**	**+1.0**
EIL				Sn	Sn	13 12 23.4	-5.6
KOPT	**Kop Dagi**	**14.38**	**62**	P	**P**	**13 11 29.4**	**-1.8**
GERES	**GERESS Array B**	**16.28**	**335**	Pn	**Pn**	**13 11 46.4**	**-2.8**
	comp=N,0.1nm,0.3s,baz=154,slow=9.5,SNR=1.5						
	comp=N,0.2nm,0.3s						
KHC	**Kasperske Hory**	**16.56**	**336**	*e*P	**P**	**13 11 55.0**	**-0.2**
AKASG	**Malin Array Be**	**16.74**	**12**	Pn	**Pn**	**13 11 51.4**	**-3.5**
	comp=N,0.6nm,0.3s,baz=204,slow=8.9,SNR=2.1						
	comp=N,0.2nm,0.3s						
ESDC	**Sonseca Array**	**22.78**	**291**	P	**P**	**13 13 02.7**	**-0.4**
	comp=N,0.5nm,0.6s,baz=83,slow=9.3,SNR=6.3						
	comp=N,0.5nm,0.6s						
HFS	**Harfa,es**	**26.58**	**349**	P	**P**	**13 13 36.8**	**-1.5**
	comp=N,2.4nm,0.5s,baz=148,slow=8.7,SNR=17						
	comp=N,2.4nm,0.5s						
FINES	**FINESS Array B**	**27.08**	**2**	P	**P**	**13 13 40.7**	**-2.2**
	comp=N,0.5nm,0.4s,baz=164,slow=7.7,SNR=5.2						
	comp=N,0.5nm,0.4s						
FINES	**FINESS Array B**	**27.08**	**2**	P	**P**	**13 13 41.2**	**-1.7**
NOA	**NORSAR Array B**	**27.86**	**347**	P	**P**	**13 13 47.4**	**-2.5**
	comp=N,0.3nm,0.5s,baz=150,slow=10,SNR=1.7						
	comp=N,0.3nm,0.5s						
TORD	**Torodi Ar. Bea**	**29.20**	**229**	P	**P**	**13 14 05.8**	**+3.7**
	comp=N,0.7nm,0.7s,baz=40,slow=8.4,SNR=4.5						
	comp=N,0.7nm,0.7s						
TORD	**Torodi Ar. Bea**	**29.20**	**229**	IAmb	IAmb	13 14 11.1	
	comp=Z,11nm,1.8s						
AKTO	**Aktyubinsk**	**29.53**	**47**	P	**P**	**13 14 04.2**	**-0.6**
	comp=Z,1.7nm,0.5s,baz=247,slow=6.2,SNR=6.4						
	comp=Z,1.7nm,0.5s						
ARCES	**ARCESS Array B**	**35.19**	**1**	P	**P**	**13 14 51.6**	**-2.5**
	comp=Z,0.8nm,0.5s,baz=184,slow=9.2,SNR=5.2						
	comp=Z,0.8nm,0.5s						
KK31	**Karatay Array**	**36.99**	**62**	P	**P**	**13 15 10.5**	**+0.6**
KKAR	**Karatay Array**	**36.99**	**62**	P	**P**	**13 15 10.4**	**+0.5**
KURK	**Kurchatov**	**42.47**	**50**	P	**P**	**13 15 54.6**	**-0.7**
KURK				IAmb	IAmb	13 16 03.2	
	comp=Z,9.3nm,1.9s						
MK31	**Makanchi Array**	**45.07**	**56**	P	**P**	**13 16 16.2**	**-0.1**
MK31				IAmb	IAmb	13 16 17.2	
	comp=Z,1.8nm,0.5s						
MKAR	**Makanchi Array**	**45.07**	**56**	P	**P**	**13 16 16.6**	**+0.2**
	comp=Z,1.6nm,0.4s,baz=276,slow=6.9,SNR=18						
	comp=Z,1.6nm,0.4s						
MKAR	**Makanchi Array**	**45.07**	**56**	P	**P**	**13 16 16.4**	**0.0**
ZALV	**Zalesovo Beam**	**46.28**	**46**	P	**P**	**13 16 24.8**	**-1.0**
	comp=Z,1.4nm,0.4s,baz=269,slow=8.3,SNR=6.8						
	comp=Z,1.4nm,0.4s						
NRIK	**Noril'sk**	**49.00**	**25**	LR	LR	13 38 35.9	
	comp=Z,80nm,21.3s,baz=192,slow=38						

*IDC **06** 13:10:10.3±0.7,4.83°N×125.32°E,h0km, mb4.1/10, mbtmp4.1/11, ML4.0/1, MS2.8/3, Error ellipse: s-maj=57.5km s-min=14.0km az=73.0*
*MAN **06** 13:10:12.2,5.28°N×126.56°E,h9km, mb4.7, ML3.6, MS3.5*
*DJA **06** 13:10:15.5±0.5,5°N±3°×127°E±°,h10km, M4.3/12, mb4.3/7, MLv4.2/12*
*NEIC **06** 13:10:18.5±1.3,5.30°N±0.07°×126.4°E±0.1°,h65km±7km, mb4.4/17, Error ellipse: s-maj=21.8km s-min=7.9km az=73.0*

ISC 06 13:10:17.0±0.5,**5.28N**±0.05×**126.54E**±0.08,**h50**km,**n60**, σ§**21**/57,**mb4.2**/16,**2C-6D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**1.17**	**315**	‖*e*P	**Pn**	**13 10 33.4**	**-3.6**
MATI	**Mati**	**1.68**	**350**	‖*e*P	**Pn**	**13 10 41.7**	**-2.3**
GSPH	**General Santos**	**1.78**	**297**	‖*i*P	**Pn**	**13 10 40.8**	**-4.7**
GSPH				*e*S	**Sn**	**13 11 13.3**	**+6.3**
SGSI	**Sangihe**	**1.88**	**213**	P	**Pn**	**13 10 45.7**	**-1.0**
DAV	**Davao City (W)**	**2.02**	**332**	Pn	**Pn**	**13 10 49.7**	**+1.1**
	45nm,0.3s,baz=69,slow=9.0,SNR=4.3						
DAV				Sn	**Sn**	**13 11 20.0**	**+7.3**
	74nm,0.3s,baz=73,slow=18,SNR=2.0						
DAV				LR	LR	13 11 46.5	
	comp=Z,252nm,18.4s,baz=152,slow=43						
	126nm,0.3s						
DAV	**Davao City (W)**	**2.02**	**332**		**Pn**	**13 10 49.3**	**+0.6**
KCP	**Kidapawan**	**2.25**	**320**	‖*e*P	**Pn**	**13 10 47.2**	**-4.6**
KCP				*i* S	**Sn**	**13 11 24.2**	**+5.9**
BIPH	**Bislig**	**2.89**	**356**	‖*i*P	**Pn**	**13 10 58.9**	**-1.7**
BIPH				*i* S	**Sn**	**13 11 40.8**	**+6.6**
BUKP	**Musuan**	**2.97**	**330**	‖*e*P	**Pn**	**13 10 59.8**	**-1.9**
CTBH	**Cotabato--PC H**	**2.99**	**310**	*e*P	**Pn**	**13 11 02.3**	**+0.4**
CTBH				*i* S	**Sn**	**13 11 38.2**	**+1.6**
BUTP	**Butuan**	**3.78**	**346**	‖*e*P	**Pn**	**13 11 11.4**	**-1.4**
GLSP	**General Luna,**	**4.49**	**355**	‖*e*P	**Pn**	**13 11 22.1**	**-0.5**
TNTI	**Ternate**	**4.55**	**170**	Pn	**Pn**	**13 11 24.4**	**+1.0**
TNTI	**Ternate**	**4.55**	**170**	P	**Pn**	**13 11 24.4**	**+1.0**
KMSI	**Cibinong**	**5.33**	**209**	P	**Pn**	**13 11 33.6**	**-0.5**
	0.3nm81nm,0.7s						
LBMI	**Labuha**	**5.96**	**171**	P	**Pn**	**13 11 43.4**	**+0.7**
	0.1nm26nm,0.8s						
MRSI	**Marisa**	**6.62**	**224**	P	**Pn**	**13 11 52.3**	**+0.4**
	0.2nm42nm,0.6s						
TOLI2	**Tolitoli**	**7.09**	**234**	Pn	**Pn**	**13 11 56.8**	**-1.4**
SANI	**Sanana**	**7.30**	**184**	P	**Pn**	**13 12 01.2**	**+0.1**
	0.1nm6.1nm,1.0s						
LUWI	**Luwuk**	**7.32**	**211**	Pn	**Pn**	**13 12 03.7**	**+2.3**
LUWI	**Luwuk**	**7.32**	**211**	P	**Pn**	**13 12 01.8**	**+0.4**
	0.4nm77nm,0.6s						
APSI	**Ampana**	**7.86**	**219**	P	**Pn**	**13 12 09.2**	**+0.5**
	0.1nm24nm,0.9s						
MPSI	**Mapaga**	**8.26**	**234**	P	**Pn**	**13 12 15.6**	**+1.4**
KAPI	**Kapsang**	**12.27**	**214**	LR	LR	13 17 25.6	
	comp=Z,32nm,21.3s,baz=83,slow=39						
MTN	**Manton Dam**	**18.57**	**166**	P	**P**	**13 14 28.1**	**-1.9**
KNRA	**Kununurra**	**20.94**	**174**	P	**P**	**13 14 55.8**	**+0.1**
KNRA				IAmb	IAmb	13 15 05.3	
	comp=Z,27nm,1.4s						
JOW	**Kunigami**	**21.50**	**4**	LR	LR	13 25 52.4	
	comp=Z,34nm,18.1s,baz=342,slow=43						
WB0	**Warramunga Arr**	**26.06**	**163**	P	**P**	**13 15 45.7**	**-0.3**
WB0				IAmb	IAmb	13 15 50.2	
	comp=Z,6.5nm,0.8s						
WRAB	**Tennant Creek**	**26.20**	**163**	P	**P**	**13 15 47.4**	**+0.1**
WRAB				IAmb	IAmb	13 15 51.4	
	comp=Z,5.7nm,0.8s						
WRA	**Warramunga Arr**	**26.21**	**163**	P	**P**	**13 15 47.2**	**-0.1**
	comp=Z,3.3nm,0.8s,baz=341,slow=10,SNR=27						
WRA				PcP	**PcP**	**13 19 12.9**	**-0.5**
	comp=Z,0.4nm,1.1s,baz=336,slow=2.5,SNR=1.9						
	comp=Z,3.3nm,0.8s						
WRA	**Warramunga Arr**	**26.21**	**163**	P	**P**	**13 15 47.1**	**-0.2**
WB2	**Warramunga Arr**	**26.21**	**163**	P	**P**	**13 15 47.1**	**-0.2**
WB2				IAmb	IAmb	13 15 51.4	
	comp=Z,7.3nm,0.8s						
WR0	**Warramunga Arr**	**26.29**	**163**	P	**P**	**13 15 48.4**	**+0.4**
ASAR	**Alice Springs**	**29.65**	**166**	P	**P**	**13 16 18.2**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=357,slow=6.9,SNR=10						
ASAR				PcP	**PcP**	**13 19 21.1**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=331,slow=1.6,SNR=5.6						
	comp=Z,0.7nm,0.8s						
BBOO	**Buckleboo**	**38.94**	**167**	P	**P**	**13 17 38.9**	**+0.7**
STKA	**Stephens Creek**	**39.64**	**160**	P	**P**	**13 17 43.6**	**-0.4**
	comp=Z,4.3nm,0.8s,baz=45,slow=6.5,SNR=5.8						
	comp=Z,4.3nm,0.8s						
STKA	**Stephens Creek**	**39.64**	**160**	IAmb	IAmb	13 18 18.1	
	comp=Z,7.4nm,1.6s						
H11S3	**WAKE ISLAND Hy**	**41.30**	**68**	T	T	14 01 49.9	
	baz=255,slow=72,SNR=6.3						
H11S1	**WAKE ISLAND Hy**	**41.32**	**68**	T	T	14 01 50.4	
	baz=255,slow=72,SNR=4.1						
H11S2	**WAKE ISLAND Hy**	**41.78**	**66**	T	T	14 01 49.3	
	baz=255,slow=72,SNR=7.7						
H11N1	**WAKE ISLAND Hy**	**41.78**	**66**	T	T	14 02 23.2	
	baz=255,slow=75,SNR=22						
H11N2	**WAKE ISLAND Hy**	**41.79**	**66**	T	T	14 02 24.5	
	baz=255,slow=75,SNR=17						
H11N3	**WAKE ISLAND Hy**	**41.80**	**66**	T	T	14 02 25.3	
	baz=255,slow=75,SNR=26						
ARMA	**Armidale**	**42.86**	**147**	P	**P**	**13 18 12.4**	**+1.7**
SONM	**Songino Array**	**45.78**	**341**	P	**P**	**13 18 33.8**	**0.0**
	comp=Z,0.4nm,0.3s,baz=162,slow=6.1,SNR=2.3						
	comp=Z,0.4nm,0.3s						
SONM	**Songino Array**	**45.78**	**341**	IAmb	IAmb	13 18 59.8	
	comp=Z,5.1nm,1.6s						
MK31	**Makanchi Array**	**56.19**	**325**	P	**P**	**13 19 50.8**	**-1.1**
MKAR	**Makanchi Array**	**56.19**	**325**	P	**P**	**13 19 50.9**	**-1.0**
	comp=Z,1.3nm,0.5s,baz=121,slow=8.3,SNR=20						
MKAR				PcP	**PcP**	**13 20 48.3**	**-0.9**
	comp=Z,1.0nm,0.7s,baz=128,slow=4.5,SNR=5.1						
	comp=Z,1.3nm,0.5s						
MKAR	**Makanchi Array**	**56.19**	**325**	P	**P**	**13 19 50.5**	**-1.4**
ZALV	**Zalesovo Beam**	**59.13**	**333**	P	**P**	**13 20 10.7**	**-1.7**
	comp=Z,0.5nm,0.3s,baz=123,slow=5.3,SNR=1.6						
	comp=Z,0.5nm,0.3s						
KURBB	**Kurchatov Array**	**60.34**	**327**	P	**P**	**13 20 19.9**	**-0.9**
	comp=Z,1.6nm,0.6s,baz=125,slow=6.8,SNR=23						
	comp=Z,1.6nm,0.6s						
KURK	**Kurchatov**	**60.34**	**327**	P	**P**	**13 20 19.2**	**-1.6**
KURK				IAmb	IAmb	13 20 27.3	
	comp=Z,3.4nm,0.7s						
NRIK	**Noril'sk**	**68.89**	**346**	P	**P**	**13 21 17.2**	**+1.0**
	comp=Z,1.6nm,0.5s,baz=124,slow=7.3,SNR=2.1						
	comp=Z,1.6nm,0.5s						
ABKAR	**Akbulak array**	**70.84**	**320**	P	**P**	**13 21 27.8**	**-0.8**
CASY	**Casey**	**72.32**	**187**	P	**P**	**13 21 37.4**	**+0.3**
CASY				IAmb	IAmb	13 23 14.8	
	comp=Z,17nm,1.6s						
IMAR	**Indian Mountai**	**81.01**	**24**	P	**P**	**13 22 25.6**	**-0.6**
H23K	**Yukon River**	**82.72**	**24**	P	**P**	**13 22 35.3**	**+0.1**
H23K				IAmb	IAmb	13 25 21.3	
	comp=Z,15nm,1.8s						
SBA	**Scott Base**	**85.89**	**172**	P	**P**	**13 22 50.8**	**-0.1**
ARCES	**ARCESS Array B**	**88.94**	**340**	P	**P**	**13 23 04.7**	**-1.2**
	comp=Z,3.7nm,1.0s,baz=76,slow=6.7,SNR=4.3						
	comp=Z,3.7nm,1.0s						
FINES	**FINESS Array B**	**90.39**	**332**	P	**P**	**13 23 11.3**	**-1.5**
	comp=Z,0.7nm,0.6s,baz=157,slow=35,SNR=1.4						
	comp=Z,0.7nm,0.6s						

*IDC **06** 13:15:57.2±0.3,30.09°N×71.44°W,h0km, mb5.1/23, mbtmp5.0/28, ML4.8/5, MS4.7/11, Error ellipse: s-maj=14.6km s-min=10.3km az=84.0*
*SJA **06** 13:15:59.7±0.7,30.03°N×71.62°W,h15km, ML5.3, MW5.3*
*MOS **06** 13:16:01.8±0.9,30.16°N×71.29°W,h34km, mb5.5/14, Error ellipse: s-maj=14.8km s-min=9.7km az=90.8*
*GUC **06** 13:16:01.3±0.8,30.12°N×71.48°W,h37km±3km, ML5.8*
*NEIC **06** 13:16:02.2±1.6,30.04°N±0.03°×71.46°W±0.05°,h28km±2km, mb5.5/495,Ms_20 4.9/218,Mwb5.4

comp=Z,2µm,1.2s
VA06 Catapilco 2.52 175 Pn 13 16 40.8 +0.2
VA06 Catapilco 2.52 175 *eP* **Pn 13 16 40.7 +0.2**
VA06 IAML 13 17 23.3
comp=N,67µm,0.5s
RTLS Leoncito 2.60 133 *eP* **Pb 13 16 45.2 -3.0**
RTLS *eS* **Sn 13 17 15.1 +2.6**
RTLS IAML 13 17 31.4
comp=Z,11µm,1.3s
VA03 San Esteban 2.84 163 Pn 13 16 46.2 +1.1
VA03 San Esteban 2.84 163 *eP* **Pn 13 16 46.4 +1.3**
VA03 IAML 13 17 29.2
comp=E,50µm,0.5s
VA03 San Esteban 2.84 163 *eP* **Pn 13 16 46.6 +1.5**
VA03 *eS* **Sb 13 17 23.6 -2.9**
VA03 IAML 13 17 32.0
comp=Z,26µm,1.1s
AUSP Uspallata 2.85 140 *eP* **Pn 13 16 47.1 +1.7**
AC06 Mina Casimiro 2.87 21 Pn 13 16 46.6 +1.0
AC06 Mina Casimiro 2.87 21 *eP* **Pn 13 16 46.5 +1.0**
AC06 *eS* **Sb 13 17 25.4 -2.0**
AC06 IAML 13 17 33.9
comp=E,9µm,0.3s
ZON Zonda 2.88 122 Pn 13 16 48.2 +2.6
ZON Zonda 2.88 122 *eP* **Pn 13 16 48.6 +3.0**
ZON *eS* **Sb 13 17 29.1 +1.5**
ZON IAML 13 17 40.3
comp=Z,13µm,1.3s
RTLL Cerro Villicun 2.93 117 *eP* **Pn 13 16 43.6 -2.7**
RTLL *eP* Pb 13 16 48.6 -5.1
RTLL *eS* **Sb 13 17 24.6 -4.5**
ROCH El Roble 2.95 171 *eP* **Pn 13 16 47.1 +0.3**
ROCH *eP* Pb 13 16 47.4 -6.8
ROCH *eS* **Sn 13 17 23.7 +2.5**
ROCH IAML 13 17 36.8
comp=N,36µm,0.6s
ROC1 El Roble 2.96 172 Pn 13 16 47.3 +0.4
ROC1 El Roble 2.96 172 *eP* **Pn 13 16 47.4 +0.5**
ROC1 *eS* **Sn 13 17 17.1 -4.1**
VA01 Torpederas 2.97 182 Pn **Pn 13 16 46.9 0.0**
VA01 Torpederas 2.97 182 *eP* **Pn 13 16 46.4 -0.4**
RTCV Cerro Valdivia 3.15 126 *eP* **Pn 13 16 52.9 +3.6**
RTCV *eS* **Sb 13 17 34.1 -1.2**
RTCV IAML 13 17 47.4
comp=Z,145nm,0.8s
MT02 Curacav 3.22 174 Pn 13 16 50.5 +0.2
MT02 Curacav 3.22 174 *eP* **Pn 13 16 50.2 -0.1**
MT02 *eS* **Sn 13 17 28.1 +0.6**
MT02 Curacav 3.22 174 *eP* **Pn 13 16 50.4 +0.2**
MT02 *eS* **Sb 13 17 37.6 +0.1**
MT02 IAML 13 17 44.5
comp=Z,12µm,0.9s
MT05 Renca 3.41 169 Pn **Pn 13 16 53.6 +0.8**
MT05 Renca 3.41 169 *eP* **Pn 13 16 53.8 +0.9**
MT05 *eS* **Sn 13 17 33.7 +1.6**
MT05 Renca 3.41 169 *eP* **Pn 13 16 54.0 +1.1**
MT05 *eS* **Sn 13 17 35.1 +3.0**
MT05 IAML 13 17 51.5
comp=Z,28µm,1.3s
FCH Farellones 3.44 162 *eP* **Pn 13 16 55.5 +1.9**
FCH *eS* **Sn 13 17 37.6 +4.3**
FCH IAML 13 17 48.8
comp=E,15µm,0.3s
MT03 Universidad Ad 3.55 166 Pn 13 16 54.4 +1.6
MT03 Universidad Ad 3.55 166 *eP* **Pn 13 16 55.6 +0.8**
MT03 *eS* **Sn 13 17 37.5 +1.9**
MT03 Universidad Ad 3.55 166 *eP* **Pn 13 16 56.5 +1.6**
MT03 *eS* **Sn 13 17 40.9 +5.3**
MT03 IAML 13 17 59.5
comp=Z,15µm,0.8s
AVFE Valle Fertil 3.58 101 *eP* **Pn 13 16 58.0 +2.7**
AVFE *eS* **Sb 13 17 43.6 -4.1**
AVFE IAML 13 17 52.6
comp=Z,12µm,0.5s
VA05 Santo Domingo 3.60 181 Pn 13 16 55.0 -0.5
VA05 Santo Domingo 3.60 181 *eP* **Pn 13 16 54.8 -0.7**
MT09 Talagante 3.75 173 Pn 13 16 58.4 +0.7
MT09 Talagante 3.75 173 *eP* **Pn 13 16 58.2 +0.6**
MT01 Popeta 3.82 176 Pn 13 16 58.7 +0.2
MT01 Popeta 3.82 176 *eP* **Pn 13 16 58.5 0.0**
MT01 *eS* **Sn 13 17 44.5 +2.4**
MT01 Popeta 3.82 176 *eP* **Pn 13 16 58.7 +0.2**
MT01 *eS* **Sn 13 17 47.1 +5.0**
MT01 IAML 13 17 54.8
comp=Z,11µm,0.8s
AC02 Maricunga 3.83 34 Pn **Pn 13 17 01.2 +2.0**
AC02 Maricunga 3.83 34 *eP* **Pn 13 17 01.3 +2.1**
AC02 Maricunga 3.83 34 *eP* **Pn 13 17 01.4 +2.3**
AC02 *eS* **Sb 13 17 53.1 -2.5**
AC02 IAML 13 18 05.5
comp=Z,4µm,0.6s
LMEL Las Melosas 3.96 164 Pn 13 17 02.5 +2.0
LMEL Las Melosas 3.96 164 *eP* **Pn 13 17 02.7 +2.1**
LMEL *eS* **Sn 13 17 48.5 +2.7**
AC01 Pan de Azucar 3.97 12 Pn **Pn 13 16 60.0 -0.6**
AC01 Pan de Azucar 3.97 12 *eP* **Pn 13 16 59.7 -0.9**
AC01 Pan de Azucar 3.97 12 *eP* **Pn 13 17 00.0 -0.6**
AC01 *eS* **Sb 13 18 00.1 +1.2**
AC01 IAML 13 18 06.8
comp=Z,2µm,0.8s
BO04 La Punta 4.01 169 Pn 13 17 01.9 +0.8
BO04 La Punta 4.01 169 *eP* **Pn 13 17 02.1 +0.9**
BO04 *eS* **Sn 13 17 48.7 +1.7**
ACLC CERRO LA CRUZ 4.03 82 *eP* **Pn 13 17 04.4 +2.8**
ACLC *eS* **Sn 13 17 53.1 +5.4**
ACLC IAML 13 18 01.2
comp=Z,12µm,1.6s
ACLC *eS* Sb 13 18 09.3 +8.4
ACHE Chepes 4.34 106 *eP* **Pn 13 17 07.8 +2.0**
BO01 Tunca 4.35 175 Pn **Pn 13 17 06.2 +0.3**
BO01 Tunca 4.35 175 *eP* **Pn 13 17 05.8 -0.1**
BO01 *eS* **Sn 13 17 55.8 +0.5**
BO01 Tunca 4.35 175 *eP* **Pn 13 17 06.0 +0.2**
BO01 *eS* **Sn 13 18 01.1 +5.8**
BO01 IAML 13 18 18.4
comp=Z,9µm,1.3s
BO03 Pichilemu 4.45 185 *eP* **Pn 13 17 05.7 -1.5**
GO05 Huala 4.96 184 Pn **Pn 13 17 12.5 -1.7**
GO05 Huala 4.96 184 *eP* **Pn 13 17 12.6 -1.6**
GO02 Mina Guanaco 5.16 20 Pn **Pn 13 17 16.7 -0.6**
GO02 Mina Guanaco 5.16 20 *eP* **Pn 13 17 16.5 -0.7**
PB14 IPOC Station P 5.49 11 Pn **Pn 13 17 19.9 -1.9**
ML02 Panimavida 5.70 179 Pn 13 17 23.6 -0.8
PB10 IPOC Station P 6.56 8 Pn 13 17 34.3 -2.0
Bl05 Punta Hualpn 6.83 191 Pn **Pn 13 17 37.2 -2.6**
PB15 IPOC Station P 7.05 16 Pn 13 17 41.5 -1.7
H03N1 Juan Fernandez 7.14 240 Pn **Pn 13 17 42.0 -1.9**
baz=114,slow=18
H03N1 Sn Sn 13 18 54.7 -8.9
baz=134,slow=74
H03N1 T T 13 24 51.0
baz=65,slow=72
H03N2 Juan Fernandez 7.15 240 Pn **Pn 13 17 42.4 -1.6**
baz=114,slow=18
H03N2 Sn Sn 13 18 54.4 -10
baz=134,slow=74
H03N2 T T 13 24 49.8
baz=65,slow=72
H03N3 Juan Fernandez 7.15 240 Pn **Pn 13 17 41.9 -2.2**
baz=114,slow=18
H03N3 Sn Sn 13 18 54.7 -9.4
baz=134,slow=74
H03N3 T T 13 24 49.5
baz=65,slow=72
H03S3 Juan Fernandez 7.32 237 Pn **Pn 13 17 43.7 -2.6**
H03S3 Sn Sn 13 18 59.7 -8.3
H03S1 Juan Fernandez 7.32 237 Pn **Pn 13 17 43.6 -2.7**
H03S1 Sn Sn 13 18 58.9 -9.2
H03S2 Juan Fernandez 7.33 237 Pn **Pn 13 17 43.7 -2.8**
H03S2 Sn Sn 13 18 59.3 -9.1
PB06 IPOC Station P 7.52 14 Pn 13 17 47.5 -2.0
AF01 San Pedro de A 7.67 24 Pn **Pn 13 17 51.3 -0.5**
LVC Limon Verde 7.77 18 Pn **Pn 13 17 52.0 -1.1**
comp=Z,6.0nm,0.3s,baz=163,slow=8.9,SNR=29
LVC Sn **Sn 13 19 18.8 -1.3**
comp=Z,25nm,0.3s,baz=201,slow=7.3,SNR=1.8
comp=Z,18nm,0.4s
LVC Limon Verde 7.77 18 Pn 13 17 51.5 -1.6
LVC Limon Verde 7.77 18 P **Pn 13 17 52.0 -1.1**
PB04 IPOC Station P 7.78 10 Pn 13 17 50.5 -2.6
PB07 IPOC Station P 8.41 11 Pn 13 17 59.2 -2.6
PB09 IPOC Station P 8.47 15 Pn 13 18 01.6 -1.0
PB02 IPOC Station P 8.81 10 Pn 13 18 05.0 -2.2

LC02 Puerto Saavedr 8.86 189 Pn **Pn 13 18 06.0 -1.6**
PB01 IPOC Station P 9.15 12 Pn 13 18 09.0 -2.9
PATCX Punta Patache 9.27 8 Pn **Pn 13 18 10.2 -3.2**
LR03 Panguipulli 9.59 184 Pn 13 18 16.9 -0.8
LR04 Corral 9.94 188 Pn **Pn 13 18 20.2 -2.2**
PB08 IPOC Station P 10.09 13 Pn 13 18 21.3 -3.7
PB11 IPOC Station P 10.38 10 Pn 13 18 26.7 -2.0
PLCA Paso Flores 10.69 176 Pn **Pn 13 18 32.5 -0.4**
comp=Z,1.3nm,0.3s,baz=343,slow=13,SNR=13
PLCA Lg Lg 13 21 26.5
comp=Z,0.7nm,0.3s,baz=53,slow=7.5,SNR=3.4
comp=Z,6.1nm,0.5s
PLCA Paso Flores 10.69 176 Pn **Pn 13 18 31.9 -1.0**
LL03 Petrohue 11.09 183 Pn 13 18 36.8 -1.5
PB12 IPOC Station P 11.43 6 Pn 13 18 39.8 -3.3
LL05 Los Muermos 11.45 187 Pn **Pn 13 18 42.0 -1.1**
PB16 IPOC Station P 11.80 9 Pn 13 18 47.5 -1.1
LPA La Plata 12.46 116 SN **Sn 13 21 13.9 -0.7**
LPA sS 13 21 23.5
LPA SSS SSS 13 21 39.0
LPA SS **SbSb 13 22 15.6 +7.2**
LPA PCP **PcP 13 24 32.5 -3.2**
LPA SCS **ScS 13 31 42.7 +0.5**
LPA PKIKP **PKiKP 13 32 33.3 +0.1**
LPA SKIKP 13 35 54.3
LPA PKIKS 13 36 00.1
LPA SKIKS 13 39 31.9
ITQB Itaqui 12.95 92 Pn 13 19 01.1 -2.6
CPUP Villa Florida 13.06 77 Pn **Pn 13 19 04.1 -1.1**
comp=Z,1.5nm,0.3s,baz=248,slow=11,SNR=15
CPUP Lg Lg 13 22 38.5
comp=Z,2.5nm,0.3s,baz=331,slow=18,SNR=2.2
comp=Z,7.8nm,0.5s
CPUP Villa Florida 13.06 77 Pn **Pn 13 19 03.0 -2.3**
LPAZ La Paz 14.04 14 Pn **Pn 13 19 16.9 -2.4**
comp=Z,1.2nm,0.3s,baz=194,slow=7.6,SNR=18
comp=Z,2.2nm,0.4s
LPAZ La Paz 14.04 14 Pn **Pn 13 19 21.5 +2.3**
PLTB Pedras Altas 15.49 101 Pn 13 19 35.6 -2.4
COYC Coyhaique 15.51 181 P **P 13 19 41.8 -0.3**
SIV San Ignacio 16.96 37 Pn **Pn 13 19 57.0 +0.1**
comp=Z,1.1nm,0.3s,baz=200,slow=10,SNR=91
comp=Z,161nm,0.8s
ITAB Concordia 17.26 85 Pn **Pn 13 19 59.2 -1.3**
ITAB IAmb IAmb 13 20 04.7
comp=Z,419nm,1.2s
TRCB Terra Rica 18.39 71 P **Pn 13 20 15.7 +1.2**
NNA Nana 18.63 344*ce* P **Pn 13 20 21.3 +3.8**
NNA pmax pmax
comp=Z,45nm,1.3s
GO09 Cerro Castillo 21.21 181 P **P 13 20 45.8 +1.0**
GO09 IAmb IAmb 13 20 56.2
comp=Z,240nm,1.1s
MG05 Puerto Natales 21.62 182 P **P 13 20 50.1 +1.0**
MG05 IAmb IAmb 13 21 07.4
comp=Z,229nm,1.4s
ATAH Atahualpa 23.68 343 P **P 13 21 12.8 +1.6**
comp=Z,7.7nm,0.7s,baz=162,slow=7.1,SNR=8.6
comp=Z,7.7nm,0.7s
MG03 Isla Dawson 23.80 178 P **P 13 21 11.8 +0.3**
MG03 IAmb IAmb 13 21 25.5
comp=Z,118nm,1.0s
DSPA Despedida 24.01 175 P **P 13 21 13.8 +0.4**
USHA Ushuaia 24.87 176 P **P 13 21 22.2 +0.8**
comp=Z,41nm,0.8s,baz=352,slow=7.9,SNR=17
comp=Z,41nm,0.8s
BDFB Brasilia 25.91 62 P **P 13 21 30.8 -0.5**
comp=Z,50nm,0.6s,baz=232,slow=7.7,SNR=70
comp=Z,50nm,0.6s
BDFB Brasilia 25.91 62 P **P 13 21 30.6 -0.7**
BDFB IAmb IAmb 13 21 32.2
comp=Z,81nm,0.8s
BOSC San Juan Bosco 27.55 345 P **P 13 21 46.4 +0.3**
COHC Cochancay 28.39 344 P **P 13 21 54.6 +1.3**
PTLC Puerto Leguiza 30.21 354 *eP* **P 13 22 08.4 -1.1**
OTAV Otavalo 30.83 346 P **P 13 22 13.8 -1.7**
OTAV Otavalo 30.83 346 *eP* **P 13 22 19.0 +3.5**
GCUF Volcan Galeras 31.59 349 *eP* **P 13 22 22.9 +0.7**
FLOC Florencia 31.70 352 *eP* **P 13 22 22.9 +0.2**
SOTA Rioblanco 32.36 350 *eP* **P 13 22 32.5 +3.5**
PCON Cinco Dias 32.52 351 *eP* **P 13 22 34.5 +3.9**
POPC Popayan, Colom 32.77 350 *eP* **P 13 22 34.5 +2.1**
MARP Paez Belalcaza 32.98 352 *eP* **P 13 22 35.4 +1.3**
PRAC Prado 33.72 354 *eP* **P 13 22 43.1 +2.7**
ORTC Ortega, Tolima 33.95 353 *eP* **P 13 22 43.1 +0.8**
VILC Villavicencio, 34.03 356 *eP* **P 13 22 45.0 +1.9**
VILC *eP* **pP 13 22 47.0 -5.9**
PTGC Puerto Gaitan, 34.05 359 *eP* **P 13 22 41.2 -2.0**
PAYG Puerto Ayora 34.23 325 IAMs_20 IAMs_20 13 39 07.2
comp=Z,2µm,18.0s
ANIL Santa Ana 34.54 353 *eP* **P 13 22 47.9 +0.2**
CHIC Chingaza 34.54 356 *eP* **P 13 22 47.9 0.0**
ROSC El Rosal 34.79 355 P **P 13 22 51.9 +1.9**
comp=Z,26nm,0.9s,baz=180,slow=6.7,SNR=9.9
comp=Z,26nm,0.9s
ROSC El Rosal 34.79 355 *eP* **P 13 22 51.8 +1.8**
HOPE Hope Point 34.94 144 IAMs_20 IAMs_20 13 36 18.7
comp=Z,2µm,21.0s
PLMC San Jos del P 35.05 352 *eP* **P 13 22 51.8 -0.1**
PMSA Palmer Station 35.06 174 P **P 13 22 51.6 +0.2**
comp=Z,16nm,0.8s,baz=354,slow=6.2,SNR=4.3
PMSA LR LR 13 36 42.0
comp=Z,3µm,21.7s,baz=345,slow=36
comp=Z,16nm,0.8s
PMSA Palmer Station 35.06 174 P **P 13 22 51.9 +0.4**
PMSA IAmb IAmb 13 23 11.9
comp=Z,65nm,1.2s
PMSA Palmer Station 35.06 174 IAMs_20 IAMs_20 13 36 41.6
comp=Z,2µm,21.0s
ORCD Orcadas 35.50 158 P **P 13 22 54.7 -0.5**
ORCD IAmb IAmb 13 23 05.1
comp=Z,78nm,0.9s
NORC Norcasia 35.55 354 *eP* **P 13 22 53.7 -2.5**
SPBC San Pablo de B 35.58 356 *eP* **P 13 22 57.6 +1.1**
RUSC La Rusia 35.76 357 *eP* **P 13 22 59.5 +1.0**
CBOC Ciudad Bolivar 35.96 352 *eP* **P 13 22 59.5 -0.4**
HELC Santa Helena 36.23 353 *eP* **P 13 23 02.4 0.0**
TAMC Tame, Arauca 36.27 360 *eP* **P 13 23 00.5 -1.9**
BARC Barichara 36.46 357 *eP* **P 13 23 04.3 +0.1**
PTBC PUERTO BERRIO, 36.48 355 *eP* **P 13 23 02.4 -1.7**
BRRC Barranca, Sant 37.00 356 *eP* **P 13 23 06.2 -2.3**
DBBC Dabeiba 37.12 352 *eP* **P 13 23 13.0 +3.3**
PAMC Pamplona, Colo 37.19 358 *eP* **P 13 23 11.1 +0.4**
UREC San Jos de Ur 37.77 354 *eP* **P 13 23 13.0 -2.1**
SMAI San Martin Ant 38.21 177 P **P 13 23 18.1 0.0**
SDV Santo Domingo 38.72 1 P **P 13 23 23.2 -0.1**
BAUV El Baul 38.91 5 P **P 13 23 23.9 -0.7**
MDP Montagnes des 39.36 31 LR LR 13 41 47.8
comp=Z,µm,18.6s,baz=202,slow=39
MPGF Montagnes des 39.37 31 ⇑P **P 13 23 28.5 0.0**
MPGF pP **sP 13 23 41.9 -0.7**
ARGC Ariguani, Magd 39.76 356 *eP* **P 13 23 30.3 -1.4**
SJCC San Jacinto, C 39.87 354 P **P 13 23 33.6 +0.9**
SJCC IAmb IAmb 13 23 36.1
comp=Z,72nm,1.2s
SJCC San Jacinto, C 39.87 354 *eP* **P 13 23 33.2 +0.6**
BIRV Birongo 40.60 8 P **P 13 23 38.6 -0.1**
BIRV IAmb IAmb 13 23 40.4
comp=Z,76nm,1.1s
SRBA San Rafael, Bu 40.67 342 P **P 13 23 39.2 -0.3**
RCBR Riachuelo 41.29 61 P **P 13 23 44.1 -0.4**
comp=Z,36nm,1.0s,baz=15,slow=8.4,SNR=6.2
comp=Z,36nm,1.0s
RCBR Riachuelo 41.29 61 P **P 13 23 44.7 +0.2**
HATO Hato, Curacao 42.05 4 IAMs_20 IAMs_20 13 43 25.0
comp=Z,1µm,18.0s
JTS Las Juntas de 42.13 340 P **P 13 23 53.4 +2.1**
comp=Z,10nm,0.9s,baz=201,slow=5.7,SNR=8.1
comp=Z,10nm,0.9s
JTS Las Juntas de 42.13 340 P **P 13 23 52.9 +1.6**
JTS Las Juntas de 42.13 340*ci* P **P 13 23 53.9 +2.6**
JTS pmax pmax
comp=Z,23nm,1.1s
ORTG Ortega, Santa 42.35 339 P **P 13 23 55.6 +2.4**
TOSP Speyside 42.45 16 P **P 13 23 54.4 +0.6**
TOSP IAmb IAmb 13 24 09.5
comp=Z,97nm,1.2s
BOAB BOACO BROADBAN 44.39 340 IAMs_20 IAMs_20 13 44 53.9
comp=Z,1µm,20.0s
MPOM Morne Pois Mar 45.41 15 P **P 13 24 16.8 -0.8**
MPOM IAMs_20 IAMs_20 13 46 01.6
comp=Z,1µm,22.0s
BIM Bigot 45.44 14 P **P 13 24 17.3 -0.5**
FDF Fort de France 45.63 14 IAMs_20 IAMs_20 13 47 05.4

comp=Z,1µm,21.0s
ILAM Ilet Lapin Mar 45.73 14 IAMs_20 IAMs_20 13 45 59.5
comp=Z,1µm,21.0s
TDBA Terre de Bas, 46.61 13 P **P 13 24 28.1 +1.1**
CBE Ff, Capester 46.83 13 IAMs_20 IAMs_20 13 47 11.4
comp=Z,1µm,21.0s
ABD La Joyeuse, An 47.25 13 IAMs_20 IAMs_20 13 48 04.6
comp=Z,1µm,21.0s
ICMP Isla Caja de M 47.90 6 P **P 13 24 37.3 +0.3**
MLPR Magueyes Islan 47.93 6 P **P 13 24 37.3 0.0**
CRPR Cabo Rojo, PR 47.96 6 P **P 13 24 37.0 -0.5**
OBIP Obispado Ponce 48.04 6 P **P 13 24 38.4 +0.2**
CELP Cerrillos 48.08 6 P **P 13 24 38.3 -0.1**
PDPR Patillas Dam, 48.08 7 P **P 13 24 37.7 -0.7**
PDPR IAmb IAmb 13 24 39.0
comp=Z,71nm,1.1s
SJG San Juan 48.16 7 P **P 13 24 38.3 -0.7**
BANI BANI 48.17 1 P **P 13 24 40.0 +0.8**
MTP Monte Pirata 48.21 8 P **P 13 24 39.0 -0.4**
MTP IAmb IAmb 13 24 39.8
comp=Z,61nm,1.3s
HUMP Col San Antoni 48.22 7 P **P 13 24 39.4 -0.1**
HUMP IAmb IAmb 13 24 40.2
comp=Z,39nm,1.2s
AOPR Arecibo Observ 48.33 6 P **P 13 24 39.0 -1.4**
CBYP Canovanas 48.35 7 P **P 13 24 39.9 -0.7**
ANWB Willy Bob 48.36 12 P **P 13 24 38.9 -1.6**
ANWB IAMs_20 IAMs_20 13 46 44.7
comp=Z,1µm,22.0s
GCPR Guaynabo City 48.36 7 P **P 13 24 39.3 -1.3**
GCPR IAmb IAmb 13 24 40.9
comp=Z,46nm,1.0s
DR12 Loma Pena Alta 48.59 3 P **P 13 24 41.8 -0.6**
GTBY Guantanamo Bay 49.80 356 P **P 13 24 51.7 +0.1**
CCIG Comitan 50.16 334 P **P 13 24 54.6 0.0**
BELA Belgrano 2 50.69 171 P **P 13 24 57.9 +0.1**
BELA IAmb IAmb 13 25 09.7
comp=Z,44nm,0.9s
VNA3 Neumayer Olymp 52.87 159 P **P 13 25 13.8 -0.3**
VNA1 Neumayer--Stat 53.10 158 P **P 13 25 16.9 +0.8**
VNA2 Neumayer--Watz 53.50 158 P **P 13 25 18.6 -0.1**
baz=284,slow=8.4
SOR Soroa 53.68 347 P **P 13 25 21.4 +0.9**
SOR IAmb IAmb 13 25 22.4
comp=Z,79nm,1.1s
SNAA Sanae 55.09 159 P **P 13 25 29.9 -0.5**
SNAA Sanae 55.09 159 P **P 13 25 30.1 -0.3**
comp=Z,45nm,0.8s,baz=279,slow=6.8,SNR=298
comp=Z,45nm,0.8s
SNAA Sanae 55.09 159 P **P 13 25 29.9 -0.5**
SNAA IAMs_20 IAMs_20 13 51 51.5
comp=Z,1µm,22.0s
SNAA Sanae 55.09 159*ci* P **P 13 25 29.9 -0.5**
SNAA pmax pmax
comp=Z,112nm,1.3s
UNM Universidad Na 55.84 328 IAMs_20 IAMs_20 13 50 46.8
comp=Z,1µm,18.0s
TROLL Troll, Antarti 56.81 159 P **P 13 25 42.5 -0.2**
ASCN Ascension 57.73 80 P **P 13 25 49.5 -0.5**
NVL N'lazarevskaya 59.79 158 *eP* **P 13 26 02.9 -0.4**
NVL *eS* S 13 34 02.9 -9.0
NVL pmax pmax
comp=Z,51nm,1.0s
QSPA South Pole Qui 60.18 180 P **P 13 26 06.9 +0.6**
comp=Z,27nm,0.9s,baz=161,slow=1.1,SNR=86
comp=Z,27nm,0.9s
QSPA South Pole Qui 60.18 180 ⇑P **P 13 26 06.9 +0.6**
QSPA ⇓pP **pP 13 26 17.3 +0.5**
QSPA sP **sP 13 26 23.4 +2.8**
ZAIG Zacatecas 60.39 327 P **P 13 26 09.7 +1.3**
456A Hilliard 61.25 350 P **P 13 26 14.6 +0.9**
H06S1 SOCORRO T 61.59 317 T T 14 33 15.5
SNR=8.6
H06E1 SOCORRO T-PHAS 61.61 317 T T 14 33 16.9
SNR=26
TIGA Tifton 62.21 348 P **P 13 26 18.8 -1.3**
baz=168
352A Blakely 62.50 347 P **P 13 26 22.7 +0.6**
352A Blakely 62.50 347 P **P 13 26 23.2 +1.1**
baz=167,SNR=5.2
BRAL Brewton 62.64 345 P **P 13 26 23.3 +0.2**
baz=165
250A Grady 63.25 346 P **P 13 26 27.8 +0.7**
154A Montrose 63.27 349 P **P 13 26 27.3 0.0**
154A IAmb IAmb 13 26 28.8
comp=Z,52nm,1.1s
NHSC New Hope 63.34 352 P **P 13 26 27.2 -0.5**
baz=172
346A Big Creek Wild 63.43 343 P **P 13 26 28.8 +0.5**
152A Waverly Hall 63.61 348 P **P 13 26 29.6 +0.1**
152A IAmb IAmb 13 26 30.8
comp=Z,31nm,1.1s
152A Waverly Hall 63.61 348 P **P 13 26 29.9 +0.3**
baz=167,SNR=7.5
735A Kenedy 63.71 334 P **P 13 26 32.4 +2.2**
735A Kenedy 63.71 334 P **P 13 26 32.8 +2.6**
baz=155,SNR=5.9
344A Westbrook Farm 63.82 342 P **P 13 26 31.7 +0.8**
833A Chaparral WMA, 63.85 333 P **P 13 26 32.1 +1.0**
833A Chaparral WMA, 63.85 333 P **P 13 26 33.0 +1.8**
baz=153,SNR=24
833A Chaparral WMA, 63.85 333 P **P 13 26 32.7 +1.5**
baz=153
HKT Hockley 64.00 337 P **P 13 26 33.2 +1.2**
HKT IAmb IAmb 13 26 35.2
comp=Z,59nm,1.4s
HKT Hockley 64.00 337*ci* P **P 13 26 33.5 +1.5**
HKT pmax pmax
comp=Z,46nm,1.4s
HKT Hockley 64.00 337 P **P 13 26 33.9 +1.9**
baz=157
HKT Hockley 64.00 337 ⇑P **P 13 26 33.6 +1.6**
Y58A Scranton 64.07 352 P **P 13 26 32.9 +0.4**
Y58A Scranton 64.07 352 P **P 13 26 33.5 +1.1**
baz=172
Y58A P **P 13 26 33.5 +1.1**
baz=172
GOGA Godfrey 64.11 349 P **P 13 26 32.8 0.0**
GOGA Godfrey 64.11 349 P **P 13 26 32.5 -0.3**
baz=168
342A Flagon Creek P 64.20 340 P **P 13 26 34.4 +1.1**
LRAL Lakeview Retre 64.42 346 P **P 13 26 34.4 -0.5**
LRAL IAmb IAmb 13 26 36.4
comp=Z,42nm,1.4s
LRAL Lakeview Retre 64.42 346 P **P 13 26 35.6 +0.8**
baz=165,SNR=7.3
LRAL Lakeview Retre 64.42 346 P **P 13 26 35.2 +0.4**
baz=165,SNR=7.3
VBMS Vicksburg 64.49 342 P **P 13 26 36.1 +0.9**
VBMS Vicksburg 64.49 342 P **P 13 26 37.5 +2.3**
baz=162,SNR=6.3
VBMS Vicksburg 64.49 342 P **P 13 26 36.8 +1.6**
baz=162,SNR=6.3
146A Union 64.52 344 P **P 13 26 36.7 +1.2**
146A Union 64.52 344 P **P 13 26 37.3 +1.9**
baz=163
JSC Jenkinsville 64.64 351 P **P 13 26 36.5 +0.3**
JSC Jenkinsville 64.64 351 P **P 13 26 36.8 +0.6**
baz=171
Y52A Lilburn 64.66 348 P **P 13 26 36.6 +0.2**
Y52A IAmb IAmb 13 26 38.0
comp=Z,67nm,1.3s
Y52A Lilburn 64.66 348 P **P 13 26 36.7 +0.4**
baz=168,SNR=7.3
Y52A P **P 13 26 36.7 +0.4**
baz=168,SNR=7.3
X58A Rowland 64.67 353 P **P 13 26 36.9 +0.5**
X58A IAmb IAmb 13 26 37.9
comp=Z,28nm,0.8s
HODGE Hodges 64.73 350 P **P 13 26 36.5 -0.2**
HODGE Hodges 64.73 350 P **P 13 26 37.4 +0.7**
baz=170
Z47A Carrollton 64.82 345 P **P 13 26 37.4 0.0**
Z47A IAmb IAmb 13 26 39.2
comp=Z,37nm,0.8s
BIRD Birdtown, Kers 64.89 352 P **P 13 26 38.4 +0.5**
SLBS Sierra La Lagu 64.92 321 P **P 13 26 39.2 +0.8**
SLBS IAmb IAmb 13 26 42.0
comp=Z,32nm,0.9s
Y49A Blount Mountai 65.10 346 P **P 13 26 40.0 +0.7**
baz=166
143A Socs Landing, 65.19 342 P **P 13 26 41.1 +1.3**
143A Socs Landing, 65.19 342 P **P 13 26 42.4 +2.6**
baz=161,SNR=5.8
CNNC Cliffs of the 65.21 354 P **P 13 26 40.6 +0.7**

baz=174
PAULI Pauline 65.24 351 P **P** 13 26 41.2 +1.1
baz=170
NATX Nacogdoches 65.27 338 P **P** 13 26 42.0 +1.6
NATX Nacogdoches 65.27 338 P **P** 13 26 42.7 +2.3
baz=158
NATX Nacogdoches 65.27 338 P **P** 13 26 41.9 +1.6
baz=158
W57A Gilead 65.34 352 P **P** 13 26 40.7 0.0
W57A IAmb IAmb 13 26 42.5
comp=Z,37nm,1.1s
W57A Gilead 65.34 352 P **P** 13 26 41.8 +1.0
baz=172,SNR=6.5
W57A P **P** 13 26 41.8 +1.0
baz=172,SNR=6.5
435B Jarrell 65.37 335 P **P** 13 26 42.7 +1.6
435B IAmb IAmb 13 26 43.9
comp=Z,57nm,1.1s
435B Jarrell 65.37 335 P **P** 13 26 42.2 +1.1
baz=155
HPIG 65.40 327 P **P** 13 26 42.7 +1.1
HPIG IAmb IAmb 13 26 44.7
comp=Z,42nm,1.0s
X51A Calhoun 65.48 348 P **P** 13 26 42.2 +0.5
X51A Calhoun 65.48 348 P **P** 13 26 42.4 +0.7
baz=167,SNR=17
X51A P **P** 13 26 42.4 +0.7
baz=167,SNR=17
KMSC Kings Mountain 65.49 351 P **P** 13 26 42.2 +0.5
KMSC IAmb IAmb 13 26 43.6
comp=Z,35nm,1.2s
KMSC Kings Mountain 65.49 351 P **P** 13 26 42.9 +1.2
baz=171,SNR=5.8
KMSC Kings Mountain 65.49 351 P **P** 13 26 42.1 +0.3
baz=171,SNR=5.8
BG3 Lake Jocassee 65.58 350 P **P** 13 26 42.8 +0.5
BG3 IAmb IAmb 13 26 44.4
comp=Z,47nm,1.3s
CASEE Lake Jocassee 65.58 350 P **P** 13 26 43.6 +1.3
baz=169,SNR=7.2
FPAL Fort Paine 65.60 347 P **P** 13 26 42.7 +0.2
FPAL IAmb IAmb 13 26 44.0
comp=Z,47nm,1.2s
X48A Hartselle 65.80 346 P **P** 13 26 43.8 +0.1
X48A Hartselle 65.80 346 P **P** 13 26 44.4 +0.7
baz=165,SNR=25
Y45A Yeager Farm, C 65.81 344 P **P** 13 26 45.0 +1.2
Y45A Yeager Farm, C 65.81 344 P **P** 13 26 45.3 +1.5
baz=163,SNR=8.2
W52A Murphy 65.84 349 P **P** 13 26 44.5 +0.5
W52A IAmb IAmb 13 26 46.0
comp=Z,53nm,1.2s
W52A Murphy 65.84 349 P **P** 13 26 45.2 +1.2
baz=168,SNR=7.2
237A Washetta, Mont 65.87 337 P **P** 13 26 45.6 +1.4
V58A Windy Hill, Pi 65.88 353 P **P** 13 26 44.8 +0.6
baz=173
V58A P **P** 13 26 44.8 +0.6
baz=173
JCT Junction City 65.93 333 P **P** 13 26 45.6 +0.9
JCT Junction City 65.93 333 P **P** 13 26 46.2 +1.4
baz=153,SNR=22
JCT Junction City 65.93 333 P **P** 13 26 46.2 +1.4
baz=153
Z41A Richland Creek 66.10 341 P **P** 13 26 47.4 +1.7
Z41A IAmb IAmb 13 26 49.3
comp=Z,33nm,0.6s
Z41A Richland Creek 66.10 341 P **P** 13 26 46.7 +1.0
baz=160
V55A Taylorsville 66.18 351 P **P** 13 26 46.7 +0.5
V55A IAmb IAmb 13 26 48.2
comp=Z,39nm,1.1s
V55A Taylorsville 66.18 351 P **P** 13 26 46.9 +0.8
baz=171,SNR=8.4
V55A P **P** 13 26 46.9 +0.8
baz=171,SNR=8.4
W50A Signal Mountai 66.18 348 P **P** 13 26 46.0 -0.2
W50A IAmb IAmb 13 26 48.1
comp=Z,65nm,1.1s
W50A Signal Mountai 66.18 348 P **P** 13 26 46.9 +0.6
baz=167,SNR=16
V53A Saluda 66.22 350 P **P** 13 26 46.7 +0.2
V53A IAmb IAmb 13 26 48.2
comp=Z,34nm,1.1s
V53A Saluda 66.22 350 P **P** 13 26 47.5 +1.0
baz=169,SNR=11
V53A P **P** 13 26 47.5 +1.0
baz=169,SNR=11
CPCT Cooper Cave 66.28 348 P **P** 13 26 47.0 +0.2
CPCT IAmb IAmb 13 26 48.7
comp=Z,54nm,1.0s
U59A Littleton 66.31 354 P **P** 13 26 47.5 +0.5
U59A IAmb IAmb 13 26 49.5
comp=Z,54nm,1.1s
U59A Littleton 66.31 354 P **P** 13 26 47.1 +0.2
baz=174,SNR=9.3
U59A P **P** 13 26 47.1 +0.2
baz=174,SNR=9.3
SWET Sewanee 66.32 347 P **P** 13 26 47.0 -0.1
SWET IAmb IAmb 13 26 48.9
comp=Z,51nm,0.8s
TKL Tuckaleechee C 66.36 349 P **P** 13 26 47.5 +0.1
TKL IAmb IAmb 13 26 48.9
comp=Z,44nm,1.0s
TKL Tuckaleechee C 66.36 349 P **P** 13 26 47.9 +0.5
baz=168,SNR=16
OXF Oxford 66.39 344 P **P** 13 26 47.7 +0.1
OXF Oxford 66.39 344 P **P** 13 26 48.5 +1.0
baz=163,SNR=15
OXF Oxford 66.39 344 P **P** 13 26 47.6 +0.1
baz=163,SNR=15
WHTX Lake Whitney, 66.42 336 P **P** 13 26 48.7 +1.0
WHTX Lake Whitney, 66.42 336 P **P** 13 26 49.5 +1.7
baz=156,SNR=9.4
WHTX Lake Whitney, 66.42 336 P **P** 13 26 48.8 +1.0
baz=156
V52A Sevierville 66.51 349 P **P** 13 26 48.3 0.0
V52A IAmb IAmb 13 26 49.8
comp=Z,54nm,1.0s
V52A Sevierville 66.51 349 P **P** 13 26 49.1 +0.8
baz=169,SNR=12
TX32 Lajitas Array 66.53 330 P **P** 13 26 49.3 +0.7
TXAR Lajitas Array 66.53 330 P **P** 13 26 49.8 +1.2
comp=Z,12nm,0.7s,baz=151,slow=8.1,SNR=112
TXAR PKP2bc **P'P'bc** 13 55 21.7 +2.6
comp=Z,0.1nm,0.4s,baz=302,slow=2.4,SNR=4.1
comp=Z,12nm,0.7s
TXAR Lajitas Array 66.53 330 P **P** 13 26 49.3 +0.6
TX31 Lajitas Ar. Si 66.53 330 P **P** 13 26 49.4 +0.7
TX31 Lajitas Ar. Si 66.53 330 P **P** 13 26 50.0 +1.3
baz=150,SNR=37
PLAL Pickwick Lake 66.53 345 P **P** 13 26 48.6 +0.1
PLAL IAmb IAmb 13 26 49.9
comp=Z,35nm,0.9s
U56A King 66.56 352 P **P** 13 26 49.5 +0.9
U56A IAmb IAmb 13 26 50.8
comp=Z,41nm,1.1s
U56A King 66.56 352 P **P** 13 26 49.7 +1.1
baz=172
U56A P **P** 13 26 49.7 +1.1
baz=172
WLAR White Oak Lake 66.59 340 P **P** 13 26 50.4 +1.5
V51A Loudon 66.60 349 P **P** 13 26 48.6 -0.2
V51A IAmb IAmb 13 26 50.4
comp=Z,37nm,1.0s
V51A Loudon 66.60 349 P **P** 13 26 49.8 +1.0
baz=168,SNR=12
Z38A Mt. Pleasant 66.76 339 P **P** 13 26 50.8 +0.9
Z38A IAmb IAmb 13 26 52.7
comp=Z,48nm,0.9s
Z38A Mt. Pleasant 66.76 339 P **P** 13 26 51.9 +2.0
baz=158
T59A Double "B" Far 66.90 355 P **P** 13 26 51.8 +1.1
T59A Double "B" Far 66.90 355 P **P** 13 26 51.6 +0.9
baz=174,SNR=12
T59A P **P** 13 26 51.6 +0.9
baz=174,SNR=12
U54A Nelsons Funny 66.92 351 P **P** 13 26 50.9 0.0
U54A IAmb IAmb 13 26 52.6
comp=Z,47nm,0.9s
U54A Nelsons Funny 66.92 351 P **P** 13 26 51.9 +0.9
baz=170,SNR=7.3
U54A P **P** 13 26 51.9 +0.9
baz=170,SNR=7.3
W45A Hickory Valley 66.95 344 P **P** 13 26 51.7 +0.6
V48A Smith Brothers 67.00 347 P **P** 13 26 51.8 +0.4
baz=166,SNR=20
V48A Smith Brothers 67.00 347 P **P** 13 26 52.1 +0.8
baz=166,SNR=20
T60A Surry 67.01 355 P **P** 13 26 52.6 +1.2
SBA Scott Base 67.03 191 P **P** 13 26 52.0 +0.9
T57A Hurt 67.08 353 P **P** 13 26 52.7 +0.8
TAOE Nuku Hiva Isla 67.13 273 *e*LR LR 13 46 32.1
comp=Z,601nm,28.1s
TZTN Tazewell 67.19 350 P **P** 13 26 52.3 -0.3
TZTN Tazewell 67.19 350 P **P** 13 26 53.4 +0.7
baz=169,SNR=7.3
TZTN Tazewell 67.19 350 P **P** 13 26 52.5 -0.1
baz=169,SNR=7.3
CLTN Cedars of Leba 67.24 347 P **P** 13 26 52.9 0.0
CLTN IAmb IAmb 13 26 54.8
comp=Z,46nm,0.9s
X40A Basin Creek Fa 67.26 341 P **P** 13 26 52.8 -0.3
X40A Basin Creek Fa 67.26 341 P **P** 13 26 53.7 +0.7
baz=160
UALR University of 67.39 342 P **P** 13 26 54.6 +0.7
BLA Blacksburg 67.42 352 P **P** 13 26 54.6 +0.5
baz=172
MIAR Mount Ida 67.53 340 P **P** 13 26 55.3 +0.5
MIAR IAmb IAmb 13 26 57.1
comp=Z,55nm,1.3s
MIAR Mount Ida 67.53 340 P **P** 13 26 55.7 +1.0
baz=159,SNR=14
MIAR Mount Ida 67.53 340 P **P** 13 26 55.4 +0.6
baz=159,SNR=14
U49A Red Boiling Sp 67.55 348 P **P** 13 26 54.5 -0.4
U49A IAmb IAmb 13 26 56.4
comp=Z,67nm,1.4s
U49A Red Boiling Sp 67.55 348 P **P** 13 26 55.2 +0.4
baz=167,SNR=10
Z35A Perchaven, San 67.57 337 P **P** 13 26 55.8 +0.7
Z35A Perchaven, San 67.57 337 P **P** 13 26 56.4 +1.4
baz=156,SNR=12
WVT Waverly 67.58 346 P **P** 13 26 54.8 -0.3
WVT Waverly 67.58 346 P **P** 13 26 55.2 +0.2
baz=165,SNR=29
WVT Waverly 67.58 346 P **P** 13 26 55.1 +0.1
baz=165
WVT Waverly 67.58 346 P **P** 13 26 55.4 +0.3
WVT pP **sP** 13 27 08.7 -0.8
JSRW J. Sargeant Re 67.65 355 P **P** 13 26 56.3 +0.9
HALT Halls 67.71 344 P **P** 13 26 56.8 +1.0
W41B Gary Mavity, V 67.74 342 P **P** 13 26 56.8 +0.7
W41B IAmb IAmb 13 26 58.3
comp=Z,27nm,1.0s
W41B Gary Mavity, V 67.74 342 P **P** 13 26 57.0 +0.9
baz=161,SNR=11
W41B Gary Mavity, V 67.74 342 P **P** 13 26 56.6 +0.5
baz=161,SNR=11
ABTX Abilene, Hawle 67.78 335 P **P** 13 26 57.1 +0.7
ABTX Abilene, Hawle 67.78 335 P **P** 13 26 57.7 +1.2
baz=154,SNR=19
ABTX Abilene, Hawle 67.78 335 P **P** 13 26 57.6 +1.2
baz=154
S57A Dark Hollow, R 67.81 354 P **P** 13 26 56.9 +0.4
S57A IAmb IAmb 13 26 58.8
comp=Z,54nm,1.2s
S57A Dark Hollow, R 67.81 354 P **P** 13 26 56.8 +0.4
baz=173,SNR=10.0
S57A P **P** 13 26 56.8 +0.4
baz=173,SNR=10.0
WHAR Wooly Hollow 67.86 342 P **P** 13 26 57.8 +0.9
WHAR IAmb IAmb 13 26 59.1
comp=Z,45nm,1.1s
T50A Nancy 67.87 349 P **P** 13 26 57.2 +0.4
T50A Nancy 67.87 349 P **P** 13 26 57.3 +0.4
baz=168
T50A P **P** 13 26 57.3 +0.4
baz=168
R58B Mineral 67.92 355 P **P** 13 26 58.4 +1.3
R58B Mineral 67.92 355 P **P** 13 26 58.3 +1.2
baz=174,SNR=14
R58B P **P** 13 26 58.3 +1.2
baz=174,SNR=14
GNAR Gosnell 67.92 344 P **P** 13 26 58.9 +1.7
LNXT Lenox 67.93 344 P **P** 13 26 58.5 +1.2
PEBM Pemiscott Bayo 68.03 344 P **P** 13 26 59.3 +1.5
VNDA Vanda 68.05 191 P **P** 13 26 59.0 +1.4
comp=Z,4.3nm,0.9s,baz=132,slow=4.9,SNR=12
VNDA LR LR 13 51 48.9
comp=Z,276nm,21.8s,baz=144,slow=32
comp=Z,4.3nm,0.9s
VNDA Vanda 68.05 191 P **P** 13 26 58.8 +1.1
VNDA IAmb IAmb 13 27 10.7
comp=Z,41nm,1.4s
S54A Dingess, Beckl 68.11 352 P **P** 13 26 58.4 0.0
S54A IAmb IAmb 13 26 60.0
comp=Z,36nm,1.1s
S54A Dingess, Beckl 68.11 352 P **P** 13 26 58.4 0.0
baz=171,SNR=5.3
S54A P **P** 13 26 58.4 0.0
baz=171,SNR=5.3
X37A Clayton 68.11 339 P **P** 13 26 58.8 +0.4
X37A IAmb IAmb 13 27 00.9
comp=Z,39nm,1.1s
X37A Clayton 68.11 339 P **P** 13 26 59.5 +1.0
baz=158,SNR=11
CBN Corbin Frederi 68.11 355 P **P** 13 26 59.5 +1.1
baz=174
W39A Magazine 68.20 340 P **P** 13 26 59.5 +0.5
W39A Magazine 68.20 340 P **P** 13 27 00.6 +1.6
baz=159,SNR=40
W39A Magazine 68.20 340 P **P** 13 27 00.1 +1.2
baz=159,SNR=40
T47A Sharon Grove 68.26 347 P **P** 13 26 58.9 -0.4
T47A Sharon Grove 68.26 347 P **P** 13 26 59.9 +0.6
baz=166,SNR=16
S51A Beattyville 68.27 350 P **P** 13 26 58.4 -0.9
S51A IAmb IAmb 13 27 00.9
comp=Z,36nm,0.9s
S51A Beattyville 68.27 350 P **P** 13 27 00.0 +0.6
baz=169,SNR=11
S51A P **P** 13 27 00.0 +0.6
baz=169,SNR=11
LCAR Lake Charles 68.30 343 P **P** 13 26 59.5 0.0
LCAR Lake Charles 68.30 343 P **P** 13 26 59.9 +0.3
baz=162,SNR=32
FCAR Ozark Folk Cen 68.39 342 P **P** 13 27 00.5 +0.3
FCAR IAmb IAmb 13 27 01.9
comp=Z,25nm,1.0s
R55A Marlinton 68.45 353 P **P** 13 27 01.4 +0.9
R55A IAmb IAmb 13 27 03.1
comp=Z,44nm,1.1s
R55A Marlinton 68.45 353 P **P** 13 27 01.5 +0.9
baz=172,SNR=9.1
R55A P **P** 13 27 01.5 +0.9
baz=172,SNR=9.1
PARMO Parma 68.53 344 P **P** 13 27 02.0 +1.0
T45B Paducah 68.61 345 P **P** 13 27 02.1 +0.6
baz=164,SNR=5.6
T45A Paducah 68.62 345 P **P** 13 27 02.2 +0.7
MBO M'Bour 68.66 58 P **P** 13 27 01.4 -0.9
R53A Hurricane 68.72 351 P **P** 13 27 03.1 +1.0
baz=170
R53A P **P** 13 27 03.1 +1.0
baz=170
TBI Tubuai 68.72 255 *e*LR LR 13 47 19.0
comp=Z,1μm,27.0s
TBI Tubuai 68.72 255 *e*T T 14 41 45.1
comp=Z,23nm,0.2s
PBMO Poplar Bluff 68.80 344 P **P** 13 27 03.1 +0.5
PBMO Poplar Bluff 68.80 344 P **P** 13 27 02.8 +0.2
baz=162,SNR=5.8
X34A Smith Ranch, M 68.92 337 **P** 13 27 04.4 +0.9
R50A Paris 69.02 349 P **P** 13 27 04.2 +0.2
R50A Paris 69.02 349 P **P** 13 27 04.3 +0.3
baz=168
R50A P **P** 13 27 04.3 +0.3
baz=168
U40A Yellville 69.02 342 P **P** 13 27 04.1 0.0
U40A IAmb IAmb 13 27 06.1
comp=Z,57nm,1.1s
U40A Yellville 69.02 342 P **P** 13 27 04.6 +0.5
baz=160,SNR=29
U40A P **P** 13 27 04.6 +0.5
baz=160,SNR=29
U40A Yellville 69.02 342 P **P** 13 27 04.3 +0.2
baz=160,SNR=29
Q56A Snyder Ridge, 69.10 354 P **P** 13 27 06.4 +1.9
baz=173
Q56A P **P** 13 27 06.4 +1.9
baz=173
R49A Shelbyville 69.17 349 P **P** 13 27 04.5 -0.4
baz=167
R49A Shelbyville 69.17 349 P **P** 13 27 05.4 +0.4
R49A P **P** 13 27 05.4 +0.4
baz=167
Q54A Coxs Mills 69.22 352 P **P** 13 27 04.8 -0.4
Q54A Coxs Mills 69.22 352 P **P** 13 27 05.5 +0.3
baz=171,SNR=5.0
Q54A P **P** 13 27 05.5 +0.3
baz=171,SNR=5.0
HHAR Hobbs 69.25 341 P **P** 13 27 05.7 +0.2
HHAR Hobbs 69.25 341 P **P** 13 27 06.5 +1.0
baz=159
MNTX Cornudas Mount 69.31 330 P **P** 13 27 05.8 -0.2
MNTX IAmb IAmb 13 27 07.6
comp=Z,26nm,0.8s
MNTX Cornudas Mount 69.31 330 P **P** 13 27 06.2 +0.2
baz=149,SNR=47
MNTX Cornudas Mount 69.31 330 P **P** 13 27 06.1 +0.2
baz=149
WMOK Wichita Mounta 69.37 336 P **P** 13 27 06.7 +0.3
WMOK IAmb IAmb 13 27 08.3
comp=Z,30nm,1.1s
WMOK Wichita Mounta 69.37 336 P **P** 13 27 07.2 +0.8
baz=155,SNR=17
WMOK Wichita Mounta 69.37 336 P **P** 13 27 06.6 +0.3
baz=155,SNR=17
FNO Franklin 69.38 338 **P** 13 27 07.4 +1.1
FNO IAmb IAmb 13 27 09.1
comp=Z,77nm,1.2s
Q52A Bidwell 69.38 351 P **P** 13 27 06.7 +0.5
Q52A IAmb IAmb 13 27 07.9
comp=Z,50nm,1.0s
Q52A Bidwell 69.38 351 P **P** 13 27 07.2 +1.0
baz=170,SNR=8.5
Q52A P **P** 13 27 07.2 +1.0
baz=170,SNR=8.5
S44A Carbondale 69.40 345 P **P** 13 27 06.8 +0.5
S44A Carbondale 69.40 345 P **P** 13 27 06.8 +0.5
baz=164,SNR=24
SIUC Southern Illin 69.41 345 P **P** 13 27 06.6 +0.2
P57A Homestead Farm 69.44 355 P **P** 13 27 08.2 +1.6
P57A IAmb IAmb 13 27 09.6
comp=Z,60nm,1.1s
P57A Homestead Farm 69.44 355 P **P** 13 27 08.1 +1.6
baz=174,SNR=13
P57A P **P** 13 27 08.1 +1.6
baz=174,SNR=13
TUL1 Leonard 69.46 339 **P** 13 27 07.6 +0.8
TUL1 Leonard 69.46 339 P **P** 13 27 07.8 +1.0
baz=158,SNR=14
TUL1 Leonard 69.46 339 P **P** 13 27 07.1 +0.3
baz=158,SNR=14
Q51A Peebles 69.59 350 P **P** 13 27 08.4 +0.8
Q51A IAmb IAmb 13 27 09.2
comp=Z,44nm,0.9s
Q51A Peebles 69.59 350 P **P** 13 27 08.6 +1.0
baz=169,SNR=7.3
Q51A P **P** 13 27 08.6 +1.0
baz=169,SNR=7.3
GEDE Greenville 69.61 357 P **P** 13 27 09.7 +2.1
baz=176
MGMO Mountain Grove 69.62 342 P **P** 13 27 08.8 +1.0
MGMO IAmb IAmb 13 27 09.9
comp=Z,33nm,0.9s
WUPA West Chester U 69.72 357 P **P** 13 27 09.5 +1.2
WUPA IAmb IAmb 13 27 11.2
comp=Z,34nm,1.1s
HSIG 69.74 324 P **P** 13 27 09.7 +1.0
HSIG IAmb IAmb 13 27 11.8
comp=Z,26nm,0.9s
MCWV Mont Chateau 69.78 353 P **P** 13 27 09.6 +1.0
MCWV IAmb IAmb 13 27 10.9
comp=Z,32nm,0.9s
MCWV Mont Chateau 69.78 353 P **P** 13 27 10.3 +1.6
baz=172
MCWV Mont Chateau 69.78 353 P **P** 13 27 09.3 +0.7
baz=172
P53A Whipple 69.78 352 P **P** 13 27 09.3 +0.6
P53A IAmb IAmb 13 27 10.5
comp=Z,43nm,1.1s
P53A Whipple 69.78 352 P **P** 13 27 09.6 +0.9
baz=171,SNR=6.9
P53A P **P** 13 27 09.6 +0.9
baz=171,SNR=6.9
MVL Millersville 69.83 356 P **P** 13 27 09.8 +0.8
MVL IAmb IAmb 13 27 11.9
comp=Z,53nm,1.2s
MEH Mehetia 69.86 261 *e*T T 14 43 13.3
comp=Z,48nm,0.2s
EPT El Paso 69.87 329 IAMs_20 IAMs_20 13 58 45.3
comp=Z,933nm,20.0s
FVM French Village 69.94 344 P **P** 13 27 10.1 +0.3
FVM French Village 69.94 344 P **P** 13 27 10.6 +0.9
baz=163,SNR=23
P51A Williamsport 70.00 351 P **P** 13 27 09.8 -0.3
P51A IAmb IAmb 13 27 11.4
comp=Z,42nm,0.8s
P51A Williamsport 70.00 351 P **P** 13 27 10.6 +0.5
baz=169,SNR=7.8
P51A P **P** 13 27 10.6 +0.5
baz=169,SNR=7.8
P52A Corning 70.02 351 P **P** 13 27 10.2 0.0
P52A IAmb IAmb 13 27 11.6
comp=Z,52nm,1.1s
P52A Corning 70.02 351 P **P** 13 27 09.9 -0.3
baz=170,SNR=5.1
PAGS Pennsylvania G 70.08 356 P **P** 13 27 11.7 +1.1
PAGS IAmb IAmb 13 27 13.1
comp=Z,63nm,1.1s
MSTX Muleshoe 70.18 333 P **P** 13 27 11.9 +0.4
MSTX Muleshoe 70.18 333 P **P** 13 27 12.6 +1.1
baz=152,SNR=33
MSTX Muleshoe 70.18 333 P **P** 13 27 12.2 +0.8
baz=152
CCM Cathedral Cave 70.21 344 P **P** 13 27 11.5 +0.2
CCM Cathedral Cave 70.21 344 P **P** 13 27 12.0 +0.6
baz=162,SNR=39
CCM Cathedral Cave 70.21 344 P **P** 13 27 12.2 +0.8
baz=162
CCM Cathedral Cave 70.21 344 ⇑P **P** 13 27 11.8 +0.5
CCM sP **sP** 13 27 28.5 +2.5
BLO Bloomington 70.26 348 P **P** 13 27 11.7 0.0
BLO IAmb IAmb 13 27 12.3
comp=Z,36nm,0.9s
P49A Miami Univ. Ec 70.30 349 P **P** 13 27 11.4 -0.5
P49A IAmb IAmb 13 27 12.5
comp=Z,29nm,0.9s
P49A Miami Univ. Ec 70.30 349 P **P** 13 27 11.8 -0.1
baz=168,SNR=6.1
P49A Miami Univ. Ec 70.30 349 P **P** 13 27 11.2 -0.7
baz=168,SNR=6.1
P48A Milroy 70.35 349 P **P** 13 27 11.8 -0.4
P48A IAmb IAmb 13 27 13.2
comp=Z,34nm,0.8s
P48A Milroy 70.35 349 P **P** 13 27 12.2 0.0
baz=167,SNR=6.7
P48A P **P** 13 27 12.2 0.0
baz=167,SNR=6.7
O54A Avella 70.35 353 P **P** 13 27 12.8 +0.6
baz=172
O54A P **P** 13 27 12.8 +0.6
baz=172
LUPA Lehigh Univers 70.38 357 P **P** 13 27 12.7 +0.3
LUPA IAmb IAmb 13 27 15.2
comp=Z,40nm,1.1s
S39A Bolivar 70.40 342 P **P** 13 27 12.7 +0.2
S39A IAmb IAmb 13 27 14.7
comp=Z,66nm,1.1s
S39A Bolivar 70.40 342 P **P** 13 27 13.3 +0.7
baz=160,SNR=34
O52A Adamsville 70.46 352 P **P** 13 27 12.7 -0.2
O52A IAmb IAmb 13 27 14.4
comp=Z,29nm,0.9s
O52A Adamsville 70.46 352 P **P** 13 27 13.0 +0.1
baz=170,SNR=5.3
O52A P **P** 13 27 13.0 +0.1
baz=170,SNR=5.3
Q44A Meyer Farm, Va 70.50 346 P **P** 13 27 12.8 -0.3
Q44A IAmb IAmb 13 27 14.4
comp=Z,40nm,1.1s
Q44A Meyer Farm, Va 70.50 346 P **P** 13 27 13.7 +0.6
baz=164,SNR=6.1
O53A New Philadelph 70.51 352 P **P** 13 27 13.3 +0.1
O53A New Philadelph 70.51 352 P **P** 13 27 13.1 0.0
baz=171
SLM Saint Louis 70.52 345 P **P** 13 27 13.3 +0.1

AMTX Amarillo 70.56 334 P **P** **13 27 14.3 +0.6**
AMTX Amarillo 70.56 334 P **P** **13 27 15.4 +1.7**
baz=153,SNR=22
AMTX Amarillo 70.56 334 P **P** **13 27 14.8 +1.1**
baz=153
SSPA Standing Stone 70.57 355 P **P** **13 27 14.1 +0.6**
SSPA IAmb IAmb 13 27 16.0
comp=Z,83nm,1.4s
SSPA Standing Stone 70.57 355 P **P** **13 27 14.7 +1.2**
baz=174,SNR=8.6
SSPA Standing Stone 70.57 355 P **P** **13 27 14.4 +0.9**
baz=174
SSPA Standing Stone 70.57 355 ⇑P **P** **13 27 14.6 +1.0**
SSPA pP **pP** **13 27 24.6 +0.6**
SSPA ⇑sP **PcP** **13 27 31.1 -3.4**
T35A Sooner Cattle 70.61 339 **P** **13 27 14.3 +0.4**
T35A IAmb IAmb 13 27 16.8
comp=Z,52nm,1.1s
T35B Sooner Cattle 70.61 339 P **P** **13 27 15.5 +1.6**
baz=157,SNR=17
R40A Maddies Statio 70.69 343 P **P** **13 27 14.4 +0.1**
R40A Maddies Statio 70.69 343 P **P** **13 27 14.8 +0.6**
baz=161,SNR=54
N58A Sunbury 70.69 356 P **P** **13 27 15.4 +1.2**
N58A IAmb IAmb 13 27 17.0
comp=Z,52nm,1.2s
N58A Sunbury 70.69 356 P **P** **13 27 15.7 +1.5**
baz=175
N58A P **P** **13 27 15.7 +1.5**
baz=175
ACSO Alum Creek Sta 70.72 351 P **P** **13 27 14.3 -0.2**
ACSO Alum Creek Sta 70.72 351 P **P** **13 27 14.5 +0.1**
baz=170,SNR=7.9
ACSO Alum Creek Sta 70.72 351 P **P** **13 27 14.6 +0.1**
baz=170,SNR=7.9
PAL Palisades 70.73 358 P **P** **13 27 15.3 +0.9**
baz=178
P46A Rosedale 70.83 347 P **P** **13 27 15.0 -0.1**
P46A Rosedale 70.83 347 P **P** **13 27 14.8 -0.3**
baz=166,SNR=9.3
ODNJ Ogdensburg 70.83 358 P **P** **13 27 16.2 +1.1**
ODNJ IAmb IAmb 13 27 17.8
comp=Z,41nm,1.1s
ODNJ Ogdensburg 70.83 358 P **P** **13 27 17.2 +2.1**
baz=177
TRNY Table Rock, Ra 70.88 358 P **P** **13 27 16.2 +0.9**
TRNY IAmb IAmb 13 27 18.1
comp=Z,43nm,1.1s
WSPT Westport, CT 70.88 359 P **P** **13 27 16.7 +1.4**
WSPT IAmb IAmb 13 27 18.1
comp=Z,43nm,1.2s
O49A Covington 70.88 350 P **P** **13 27 15.6 +0.2**
O49A IAmb IAmb 13 27 16.9
comp=Z,52nm,0.9s
O49A Covington 70.88 350 P **P** **13 27 15.9 +0.4**
baz=168,SNR=9.1
O49A P **P** **13 27 15.9 +0.4**
baz=168,SNR=9.1
U32A Winter Ranch, 70.93 337 **P** **13 27 17.0 +1.1**
U32A Winter Ranch, 70.93 337 P **P** **13 27 17.4 +1.5**
baz=155,SNR=5.7
N53A Lisbon 71.02 353 P **P** **13 27 16.7 +0.4**
N53A IAmb IAmb 13 27 18.2
comp=Z,41nm,1.3s
N53A Lisbon 71.02 353 P **P** **13 27 17.7 +1.5**
baz=171
N53A P **P** **13 27 17.7 +1.5**
baz=171
O48B Farmland 71.08 349 P **P** **13 27 16.7 +0.1**
baz=168,SNR=7.8
O48B Farmland 71.08 349 P **P** **13 27 16.3 -0.3**
baz=168,SNR=7.8
121A Cookes Peak, D 71.09 328 P **P** **13 27 18.1 +1.0**
121A IAmb IAmb 13 27 20.7
comp=Z,50nm,1.0s
121A Cookes Peak, D 71.09 328 P **P** **13 27 19.5 +2.4**
baz=147,SNR=37
121A Cookes Peak, D 71.09 328 P **P** **13 27 19.0 +1.8**
baz=147
TIAR Tiarei 71.10 260 *e*T T 14 44 46.1
comp=Z,6.6nm,0.3s
M57A Sunshine Farm, 71.21 356 P **P** **13 27 18.5 +1.1**
M57A Sunshine Farm, 71.21 356 P **P** **13 27 18.0 +0.6**
baz=175,SNR=6.9
M57A P **P** **13 27 18.0 +0.6**
baz=175,SNR=6.9
PPT2 Papeete2 71.28 260 *e*LR LR 13 48 28.6
comp=Z,1µm,23.8s
PPT Papeete 71.29 260 LR LR 13 50 18.0
comp=Z,821nm,18.1s,baz=150,slow=29
N51A Ashland 71.32 351 P **P** **13 27 18.5 +0.4**
N51A IAmb IAmb 13 27 19.5
comp=Z,50nm,1.1s
P43A Skaggs, Pawnee 71.32 345 P **P** **13 27 18.1 +0.1**
P43A IAmb IAmb 13 27 19.7
comp=Z,55nm,0.9s
P43A Skaggs, Pawnee 71.32 345 P **P** **13 27 18.6 +0.5**
baz=164,SNR=6.4
KSCT Kent School, K 71.44 358 P **P** **13 27 19.9 +1.1**
M55A Ridgway 71.47 354 P **P** **13 27 19.5 +0.6**
M55A IAmb IAmb 13 27 21.1
comp=Z,44nm,0.9s
M55A Ridgway 71.47 354 P **P** **13 27 20.0 +1.0**
baz=173,SNR=8.3
M55A P **P** **13 27 20.0 +1.0**
baz=173,SNR=8.3
NPNY Mohonk Preserv 71.48 358 P **P** **13 27 20.4 +1.4**
baz=178,SNR=10
SFIN Lafayette 71.54 348 P **P** **13 27 19.0 -0.3**
SFIN IAmb IAmb 13 27 20.3
comp=Z,48nm,1.2s
SFIN Lafayette 71.54 348 P **P** **13 27 19.1 -0.3**
baz=166
SFIN Lafayette 71.54 348 P **P** **13 27 18.6 -0.8**
baz=166
N49A Columbus Grove 71.58 350 P **P** **13 27 19.4 -0.2**
N49A Columbus Grove 71.58 350 P **P** **13 27 19.9 +0.3**
baz=168,SNR=19
N49A P **P** **13 27 19.9 +0.3**
baz=168,SNR=19
O44A Mansfield 71.59 346 P **P** **13 27 19.8 +0.1**
O44A IAmb IAmb 13 27 20.8
comp=Z,80nm,1.4s
M53A WI Miller and 71.63 353 P **P** **13 27 20.1 +0.2**
M53A IAmb IAmb 13 27 21.6
comp=Z,40nm,0.9s
M53A WI Miller and 71.63 353 P **P** **13 27 19.8 -0.1**
baz=172
N47A Urbana 71.78 349 P **P** **13 27 20.3 -0.5**
N47A IAmb IAmb 13 27 21.8
comp=Z,53nm,0.8s
N47A Urbana 71.78 349 P **P** **13 27 20.7 -0.1**
baz=167,SNR=9.3
N47A P **P** **13 27 20.7 -0.1**
baz=167,SNR=9.3
M52A Chesterland 71.80 352 P **P** **13 27 20.9 -0.1**
M52A IAmb IAmb 13 27 22.7
comp=Z,56nm,0.9s
P40A Paris 71.80 343 P **P** **13 27 21.1 +0.1**
P40A Paris 71.80 343 P **P** **13 27 21.5 +0.5**
baz=161,SNR=44
M50A Fremont 71.88 351 P **P** **13 27 21.6 +0.2**
M50A IAmb IAmb 13 27 22.9
comp=Z,59nm,0.8s
M50A Fremont 71.88 351 P **P** **13 27 22.0 +0.6**
baz=170
M50A P **P** **13 27 22.0 +0.6**
baz=170
Y22A Socorro 71.91 330 P **P** **13 27 24.1 +2.1**
baz=148,SNR=6.2
BNM Barren Site 71.94 330 P **P** **13 27 23.6 +1.3**
L59A Walton 71.95 357 P **P** **13 27 23.2 +1.4**
L59A IAmb IAmb 13 27 24.6
comp=Z,54nm,0.9s
L59A Walton 71.95 357 P **P** **13 27 23.5 +1.6**
baz=177,SNR=11
L59A P **P** **13 27 23.5 +1.6**
baz=177,SNR=11
QUA2 Belchertown 71.97 359 P **P** **13 27 23.6 +1.6**
QUA2 IAmb IAmb 13 27 25.1
comp=Z,54nm,1.2s
BINY Binghamton 72.00 357 P **P** **13 27 22.8 +0.6**
BINY IAmb IAmb 13 27 24.7
comp=Z,51nm,1.2s
BINY Binghamton 72.00 357 P **P** **13 27 23.1 +1.0**
baz=176

Y22D IRIS PASSCAL I 72.00 330 IAMs_20 IAMs_20 14 00 27.8
comp=Z,880nm,19.0s
Y22D IRIS PASSCAL I 72.00 330 P **P** **13 27 24.6 +2.0**
baz=148
L56A Greenwood 72.04 355 P **P** **13 27 22.9 +0.5**
L56A IAmb IAmb 13 27 24.8
comp=Z,62nm,1.0s
L56A Greenwood 72.04 355 P **P** **13 27 23.3 +0.9**
baz=174,SNR=12
L56A P **P** **13 27 23.3 +0.9**
baz=174,SNR=12
WES Weston 72.07 0 P **P** **13 27 23.7 +1.2**
WES IAmb IAmb 13 27 24.2
comp=Z,66nm,1.5s
LENM Lemitar 72.11 330 P **P** **13 27 24.8 +1.6**
L61B Northampton 72.14 359 P **P** **13 27 23.9 +0.9**
L61B IAmb IAmb 13 27 25.6
comp=Z,42nm,0.9s
L61B Northampton 72.14 359 P **P** **13 27 24.4 +1.4**
baz=179
HDIL Hopedale 72.15 346 P **P** **13 27 23.4 +0.4**
baz=164
HRV Adam Dziewonsk 72.19 360 P **P** **13 27 25.1 +1.9**
baz=180
ERPA Erie 72.23 353 P **P** **13 27 23.7 +0.2**
baz=172
P38A Dawn 72.27 342 P **P** **13 27 23.7 -0.1**
P38A IAmb IAmb 13 27 25.6
comp=Z,53nm,0.9s
P38A Dawn 72.27 342 P **P** **13 27 24.8 +0.9**
baz=160,SNR=13
TUC Tucson 72.33 326 P **P** **13 27 25.5 +1.0**
TUC Tucson 72.33 326 IAMs_20 IAMs_20 14 01 04.5
comp=Z,560nm,19.0s
TUC Tucson 72.33 326 P **P** **13 27 26.0 +1.5**
baz=145
WVNY West Valley, N 72.39 355 P **P** **13 27 25.5 +1.0**
WVNY West Valley, N 72.39 355 P **P** **13 27 25.9 +1.4**
baz=174,SNR=6.2
TRY Troy 72.44 358 P **P** **13 27 26.3 +1.6**
TRY IAmb IAmb 13 27 27.8
comp=Z,62nm,1.0s
TRY IAMs_20 IAMs_20 13 59 48.4
comp=Z,441nm,19.0s
TRY Troy 72.44 358 P **P** **13 27 26.5 +1.8**
baz=178,SNR=7.3
ANMO Albuquerque 72.54 330 P **P** **13 27 26.8 +1.0**
ANMO IAmb IAmb 13 27 29.2
comp=Z,47nm,1.4s
ANMO Albuquerque 72.54 330 IAMs_20 IAMs_20 14 00 39.0
comp=Z,634nm,19.0s
ANMO Albuquerque 72.54 330 *c i*P **P** **13 27 27.2 +1.4**
ANMO pmax pmax
comp=Z,31nm,1.3s
ANMO Albuquerque 72.54 330 P **P** **13 27 27.9 +2.1**
baz=149,SNR=22
ANMO Albuquerque 72.54 330 P **P** **13 27 27.3 +1.5**
baz=149
L48A N Adams 72.61 350 P **P** **13 27 25.3 -0.5**
L48A IAmb IAmb 13 27 27.1
comp=Z,49nm,0.9s
L48A N Adams 72.61 350 P **P** **13 27 26.3 +0.5**
baz=168
L48A P **P** **13 27 26.3 +0.5**
baz=168
N41A Harden Midland 72.64 345 P **P** **13 27 26.0 +0.1**
N41A Harden Midland 72.64 345 P **P** **13 27 26.1 +0.1**
baz=162,SNR=7.3
KSU1 Kansas State U 72.65 340 P **P** **13 27 26.4 +0.2**
KSU1 IAmb IAmb 13 27 27.8
comp=Z,49nm,1.2s
KSU1 Kansas State U 72.65 340 P **P** **13 27 26.3 +0.2**
baz=157
MMNY Mt. Morris Dam 72.66 355 P **P** **13 27 26.2 +0.2**
MMNY IAmb IAmb 13 27 28.2
comp=Z,44nm,0.9s
R32A Long Quarter, 72.69 338 P **P** **13 27 27.3 +1.0**
R32A IAmb IAmb 13 27 28.9
comp=Z,76nm,1.2s
M44A Midewin, Midew 72.70 347 P **P** **13 27 25.6 -0.7**
M44A IAmb IAmb 13 27 27.6
comp=Z,60nm,1.0s
M44A Midewin, Midew 72.70 347 P **P** **13 27 26.6 +0.3**
baz=165,SNR=5.8
AAM Ann Arbor 72.85 351 IAMs_20 IAMs_20 14 03 48.4
comp=Z,460nm,20.0s
AAM Ann Arbor 72.85 351 P **P** **13 27 27.6 +0.4**
baz=169
214A Organ Pipe Nat 73.05 324 P **P** **13 27 29.9 +1.2**
214A IAmb IAmb 13 27 32.3
comp=Z,59nm,1.1s
214A Organ Pipe Nat 73.05 324 P **P** **13 27 30.5 +1.8**
baz=143
ACCN Adirondack Com 73.10 358 P **P** **13 27 29.5 +0.9**
ACCN IAmb IAmb 13 27 31.4
comp=Z,44nm,1.2s
ACCN Adirondack Com 73.10 358 P **P** **13 27 30.3 +1.7**
baz=178,SNR=5.6
MEDO Medina 73.13 355 P **P** **13 27 29.1 +0.3**
MEDO IAmb IAmb 13 27 30.8
comp=Z,38nm,0.9s
LIC Lamto 73.14 72 *e*P **P** **13 27 30.7 +1.1**
comp=Z,56nm,1.1s
K50A Casco 73.18 351 P **P** **13 27 28.8 -0.3**
K50A Casco 73.18 351 P **P** **13 27 29.6 +0.5**
baz=170,SNR=5.8
K50A P **P** **13 27 29.6 +0.5**
baz=170,SNR=5.8
J59A Piesco 73.20 358 P **P** **13 27 29.9 +0.6**
J59A Piesco 73.20 358 P **P** **13 27 30.4 +1.1**
baz=177,SNR=7.3
J59A P **P** **13 27 30.4 +1.1**
baz=177,SNR=7.3
J57A Williamstown 73.21 357 P **P** **13 27 30.3 +1.0**
J57A IAmb IAmb 13 27 31.5
comp=Z,38nm,0.9s
J54A Appleton 73.25 355 P **P** **13 27 30.2 +0.7**
J54A IAmb IAmb 13 27 31.4
comp=Z,44nm,0.8s
N38A Joes South For 73.29 343 P **P** **13 27 30.3 +0.5**
N38A IAmb IAmb 13 27 31.7
comp=Z,69nm,0.9s
N38A Joes South For 73.29 343 P **P** **13 27 30.7 +0.9**
baz=160
TIC Toumodi 73.38 72 *e*P **P** **13 27 31.7 +0.7**
comp=Z,50nm,0.2s
CBKS Cedar Bluff 73.38 337 P **P** **13 27 31.2 +0.7**
CBKS Cedar Bluff 73.38 337 P **P** **13 27 32.0 +1.5**
baz=155,SNR=8.3
CBKS Cedar Bluff 73.38 337 P **P** **13 27 31.4 +0.9**
baz=155,SNR=8.3
SFX San Felipe 73.39 322 P **P** **13 27 31.3 +0.7**
L44A Lake County Fo 73.44 347 P **P** **13 27 31.0 +0.4**
L44A IAmb IAmb 13 27 32.1
comp=Z,51nm,0.8s
L44A Lake County Fo 73.44 347 P **P** **13 27 30.7 +0.1**
baz=165
KIC Kosan Boka 73.45 72 *e*P **P** **13 27 32.1 +0.7**
comp=Z,57nm,0.8s
DBIC Dimbokro 73.53 72 P **P** **13 27 32.4 +0.5**
comp=Z,39nm,0.7s,baz=240,slow=5.9,SNR=42
comp=Z,39nm,0.7s
DBIC Dimbokro 73.53 72 P **P** **13 27 31.5 -0.3**
DBIC IAmb IAmb 13 27 33.2
comp=Z,60nm,0.9s
T25A Trinidad 73.59 333 P **P** **13 27 33.4 +1.4**
T25A IAmb IAmb 13 27 35.4
comp=Z,66nm,0.9s
T25A Trinidad 73.59 333 P **P** **13 27 33.8 +1.8**
baz=151,SNR=40
L42A Oliver, Polo 73.62 346 P **P** **13 27 32.0 +0.3**
L42A IAmb IAmb 13 27 33.3
comp=Z,43nm,1.1s
L42A Oliver, Polo 73.62 346 P **P** **13 27 32.6 +0.9**
baz=164,SNR=7.7
NCB Newcomb 73.70 358 P **P** **13 27 32.5 +0.4**
NCB IAmb IAmb 13 27 34.5
comp=Z,47nm,1.4s
X18A Snowflake 73.75 328 P **P** **13 27 34.6 +1.7**
WCNY West Carthage 73.76 357 P **P** **13 27 33.9 +1.4**
baz=176,SNR=5.7
PECO Prince Edward 73.79 356 P **P** **13 27 33.1 +0.4**
PECO IAmb IAmb 13 27 34.7
comp=Z,45nm,1.0s
LBNH Lisbon 73.93 360 P **P** **13 27 36.2 +2.7**
baz=180
J47A Sunmer 73.94 350 P **P** **13 27 33.5 0.0**

J47A IAmb IAmb 13 27 34.8
comp=Z,38nm,0.7s
J47A Sunmer 73.94 350 P **P** **13 27 34.0 +0.5**
baz=168
J47A P **P** **13 27 34.0 +0.5**
baz=168
N35A Tabor 74.00 341 P **P** **13 27 34.2 +0.2**
N35A Tabor 74.00 341 P **P** **13 27 34.6 +0.6**
baz=158,SNR=9.5
L40A Anamosa 74.01 345 P **P** **13 27 34.3 +0.2**
L40A Anamosa 74.01 345 P **P** **13 27 34.6 +0.5**
baz=162,SNR=19
K43A Burlington 74.02 347 P **P** **13 27 34.4 +0.3**
K43A IAmb IAmb 13 27 35.7
comp=Z,28nm,0.8s
W18A Petrified Fore 74.14 328 P **P** **13 27 36.8 +1.6**
W18A IAmb IAmb 13 27 38.6
comp=Z,75nm,1.2s
W18A Petrified Fore 74.14 328 P **P** **13 27 36.9 +1.7**
baz=146
SCIA State Center 74.34 343 P **P** **13 27 36.6 +0.7**
baz=161
LONY Lake Ozonia 74.36 358 P **P** **13 27 37.0 +1.0**
LONY IAmb IAmb 13 27 38.4
comp=Z,38nm,1.1s
LONY Lake Ozonia 74.36 358 P **P** **13 27 36.9 +0.8**
baz=177
X16A Lo Mia Camp, P 74.36 327 P **P** **13 27 37.6 +1.1**
X16A IAmb IAmb 13 27 40.0
comp=Z,49nm,1.2s
N33A J Bar K, Exete 74.41 340 P **P** **13 27 37.4 +1.0**
FRNY Flat Rock 74.54 358 P **P** **13 27 37.2 +0.2**
FRNY IAmb IAmb 13 27 39.5
comp=Z,32nm,0.9s
FRNY Flat Rock 74.54 358 P **P** **13 27 38.3 +1.2**
baz=178,SNR=9.0
SDCO Great Sand Dun 74.55 333 P **P** **13 27 38.6 +0.9**
SDCO IAMs_20 IAMs_20 14 03 17.1
comp=Z,496nm,18.0s
SDCO Great Sand Dun 74.55 333 P **P** **13 27 39.3 +1.6**
baz=150,SNR=42
SDCO Great Sand Dun 74.55 333 P **P** **13 27 38.9 +1.3**
baz=150,SNR=42
KSCO Kaye Shedlock' 74.56 335 P **P** **13 27 39.4 +1.8**
baz=152
BMNY Brushton-Moira 74.58 358 P **P** **13 27 38.6 +1.4**
baz=177,SNR=8.4
JFWS Jewell Farm 74.61 346 P **P** **13 27 37.6 +0.1**
JFWS IAmb IAmb 13 27 39.4
comp=Z,44nm,0.9s
JFWS Jewell Farm 74.61 346 P **P** **13 27 38.3 +0.8**
baz=163,SNR=9.5
JFWS Jewell Farm 74.61 346 P **P** **13 27 37.9 +0.4**
baz=163,SNR=9.5
HAL Halifax 74.68 6 P **P** **13 27 38.9 +1.1**
HAL IAmb IAmb 13 27 40.8
comp=Z,67nm,1.0s
Y14A Wickenburg 74.73 325 P **P** **13 27 39.5 +1.0**
SADO Sadowa 74.78 354 P **P** **13 27 38.7 +0.3**
SADO IAmb IAmb 13 27 40.2
comp=Z,40nm,0.9s
G62A West of Eustis 74.91 1 P **P** **13 27 40.5 +1.3**
G62A IAmb IAmb 13 27 42.2
comp=Z,58nm,0.9s
G62A West of Eustis 74.91 1 P **P** **13 27 41.1 +1.9**
baz=181,SNR=7.4
G62A P **P** **13 27 41.1 +1.9**
baz=181,SNR=7.4
K38A Parkersburg 74.93 344 P **P** **13 27 39.6 +0.3**
K38A IAmb IAmb 13 27 40.9
comp=Z,40nm,0.9s
GLA Glamis 74.95 323 P **P** **13 27 41.0 +1.2**
GLA IAmb IAmb 13 27 43.2
comp=Z,44nm,1.4s
GLA Glamis 74.95 323 P **P** **13 27 41.4 +1.6**
baz=142,SNR=7.6
PKME Peaks-Kenny Pk 74.98 2 P **P** **13 27 40.7 +1.2**
PKME IAmb IAmb 13 27 44.8
comp=Z,46nm,1.3s
PKME Peaks-Kenny Pk 74.98 2 P **P** **13 27 41.3 +1.8**
baz=182
S22A 4UR Ranch, Cre 75.09 332 P **P** **13 27 41.7 +0.9**
S22A 4UR Ranch, Cre 75.09 332 P **P** **13 27 42.3 +1.5**
baz=149,SNR=17
MNTQ Montreal, Queb 75.21 358 P **P** **13 27 42.3 +1.4**
YUH Yuha Desert 75.21 322 P **P** **13 27 43.1 +1.9**
WUAZ Wupatki 75.23 327 P **P** **13 27 43.1 +1.6**
WUAZ IAmb IAmb 13 27 45.1
comp=Z,59nm,1.1s
WUAZ IAMs_20 IAMs_20 14 01 43.2
comp=Z,693nm,22.0s
WUAZ Wupatki 75.23 327 P **P** **13 27 43.4 +1.9**
baz=145,SNR=24
L34A Svendsen Farm, 75.23 341 P **P** **13 27 41.1 -0.1**
L34A Svendsen Farm, 75.23 341 P **P** **13 27 41.4 +0.3**
baz=158,SNR=7.6
BGNE Belgrade 75.23 340 P **P** **13 27 42.4 +1.2**
BGNE Belgrade 75.23 340 P **P** **13 27 42.2 +1.0**
baz=156
I42A Draeger Farm, 75.28 347 P **P** **13 27 41.7 +0.3**
I42A IAmb IAmb 13 27 43.2
comp=Z,34nm,1.0s
I42A Draeger Farm, 75.28 347 P **P** **13 27 41.9 +0.6**
baz=164,SNR=7.2
IKP In-Ko-Pah, Jac 75.31 322 P **P** **13 27 43.7 +1.8**
baz=141,SNR=7.1
MVCO Mesa Verde 75.34 330 P **P** **13 27 43.1 +0.9**
MVCO IAmb IAmb 13 27 45.4
comp=Z,37nm,0.9s
MVCO IAMs_20 IAMs_20 14 02 26.7
comp=Z,651nm,18.0s
MVCO Mesa Verde 75.34 330 P **P** **13 27 43.4 +1.2**
baz=147,SNR=16
BLYC Blythe 75.35 324 P **P** **13 27 43.4 +1.5**
CBX Cerro Bola 75.35 322 P **P** **13 27 43.8 +1.6**
SWSC Sam W. Stewart 75.38 323 P **P** **13 27 43.8 +1.7**
baz=141
Q24A Divide 75.47 334 P **P** **13 27 44.2 +1.3**
Q24A Divide 75.47 334 P **P** **13 27 44.5 +1.5**
baz=150,SNR=51
TKX Tecate 75.51 322 P **P** **13 27 44.0 +1.0**
TKX IAmb IAmb 13 27 46.4
comp=Z,61nm,1.5s
PDMCI Parker Dam,Lak 75.59 325 P **P** **13 27 44.9 +1.5**
baz=143
F64A Sherman 75.60 2 P **P** **13 27 44.6 +1.5**
F64A IAmb IAmb 13 27 46.1
comp=Z,50nm,1.1s
H43A Windswept, Lux 75.62 348 P **P** **13 27 43.6 +0.3**
H43A IAmb IAmb 13 27 45.0
comp=Z,44nm,0.8s
H43A Windswept, Lux 75.62 348 P **P** **13 27 44.1 +0.8**
baz=166,SNR=6.0
I40A Norwalk 75.62 346 P **P** **13 27 43.5 +0.2**
I40A Norwalk 75.62 346 P **P** **13 27 44.4 +1.0**
baz=163,SNR=5.2
BAR Barrett 75.63 322 P **P** **13 27 44.6 +0.9**
GBN Guysborough 75.64 7 P **P** **13 27 44.5 +1.2**
MONP2 Monument Peak 75.66 322 P **P** **13 27 45.9 +1.8**
baz=141,SNR=9.0
BC3 Big Chuckawall 75.75 323 P **P** **13 27 46.0 +1.6**
baz=142,SNR=24
LMN Caledonia Moun 75.78 5 P **P** **13 27 45.0 +0.8**
TRQ Mont Tremblant 75.96 358 P **P** **13 27 45.8 +0.6**
TRQ IAmb IAmb 13 27 47.2
comp=Z,47nm,0.9s
IRM Iron Mountain 75.98 324 P **P** **13 27 47.4 +1.7**
baz=142,SNR=8.4
109C Camp Elliot, M 76.03 322 P **P** **13 27 47.3 +1.4**
baz=140
OGNE Ogallala 76.07 337 P **P** **13 27 47.1 +1.1**
OGNE IAmb IAmb 13 27 48.8
comp=Z,39nm,0.8s
OGNE Ogallala 76.07 337 P **P** **13 27 46.8 +0.8**
baz=153
W13A Hualapai Mount 76.10 325 P **P** **13 27 47.9 +1.3**
E63A Oxbow 76.16 2 P **P** **13 27 48.6 +2.3**
baz=183,SNR=6.0
E63A P **P** **13 27 48.6 +2.3**
baz=183,SNR=6.0
NEE2 Needles Airpor 76.20 325 P **P** **13 27 48.2 +1.4**
baz=142
TPFO Pinon Flats 76.23 323 P **P** **13 27 49.2 +2.0**
baz=141,SNR=15
PFO Pinyon Flats O 76.24 323 P **P** **13 27 48.4 +1.2**
PFO IAmb IAmb 13 27 50.9

comp=Z,42nm,1.2s
PFO Pinyon Flats O 76.24 323 P P 13 27 48.9 +1.7
baz=141,SNR=19
PV13 Radium Mtn., P 76.27 331 P P 13 27 48.6 +1.1
PV13 IAmb IAmb 13 27 50.6
comp=Z,39nm,1.0s
PV15 Paradox Valley 76.28 331 P P 13 27 48.6 +1.1
PV15 IAmb IAmb 13 27 51.1
comp=Z,48nm,1.3s
BELC Belle Mtn. Jos 76.30 323 P P 13 27 49.4 +1.8
baz=141,SNR=10.0
ISCO Idaho Springs 76.37 334 P P 13 27 49.1 +1.0
ISCO IAMs_20 IAMs_20 14 04 07.2
comp=Z,423nm,19.0s
ISCO Idaho Springs 76.37 334 P P 13 27 49.8 +1.7
baz=150,SNR=24
ISCO Idaho Springs 76.37 334 P P 13 27 49.5 +1.4
baz=150,SNR=24
I37A Lemond, Waseca 76.37 344 P P 13 27 47.7 +0.1
SMCO Snowmass 76.37 332 P P 13 27 49.8 +1.6
SMCO IAmb IAmb 13 27 51.8
comp=Z,63nm,0.9s
I37B Waseca 76.37 344 P P 13 27 48.5 +1.0
baz=161,SNR=10.0
SUR Sutherland 76.38 120 P P 13 27 48.9 +0.5
comp=Z,19nm,1.0s,baz=231,slow=8.5,SNR=12
comp=Z,19nm,1.0s
SUR Sutherland 76.38 120 P P 13 27 48.8 +0.4
SUR IAmb IAmb 13 28 01.7
comp=Z,38nm,1.0s
U15A North Rim 76.40 327 P P 13 27 49.6 +1.3
PV11 David Mesa, Pa 76.41 331 P P 13 27 49.5 +1.3
PQI Presque Isle 76.42 2 P P 13 27 49.2 +1.4
PQI IAmb IAmb 13 27 50.6
comp=Z,70nm,1.1s
PQI IAMs_20 IAMs_20 14 00 21.1
comp=Z,398nm,18.0s
K31A O'Neill 76.53 340 P P 13 27 49.6 +1.1
K31A O'Neill 76.53 340 P P 13 27 50.1 +1.6
baz=156,SNR=15
PV10 Paradox Valley 76.55 331 P P 13 27 50.0 +0.9
PV10 IAmb IAmb 13 27 51.6
comp=Z,36nm,0.9s
MURC Murrieta 76.62 322 P P 13 27 51.6 +2.3
baz=140,SNR=9.3
GMRC Granite Mounta 76.74 324 P P 13 27 51.8 +1.8
baz=142,SNR=21
ELS Elsinore Mount 76.78 322 P P 13 27 52.0 +1.8
ELS IAmb IAmb 13 27 53.7
comp=Z,44nm,1.1s
D62A Allapoint, All 76.80 2 P P 13 27 51.1 +1.2
D62A Allapoint, All 76.80 2 P P 13 27 51.4 +1.5
baz=182,SNR=12
D62A P P 13 27 51.4 +1.5
baz=182,SNR=12
MAW Mawson 76.84 164 P P 13 27 49.9 -0.2
comp=Z,18nm,1.0s,baz=218,slow=7.5,SNR=29
comp=Z,18nm,1.0s
MAW Mawson 76.84 164 P P 13 27 49.7 -0.3
G40A Rib Lake 76.86 347 P P 13 27 50.4 +0.1
G40A Rib Lake 76.86 347 P P 13 27 51.4 +1.1
baz=163,SNR=9.4
SCI2 San Clemente I 76.88 321 P P 13 27 52.7 +2.0
baz=139
E46A Sault Ste Mari 76.93 351 P P 13 27 51.0 +0.4
E46A IAmb IAmb 13 27 52.2
comp=Z,60nm,0.9s
E46A Sault Ste Mari 76.93 351 P P 13 27 51.3 +0.7
baz=169,SNR=12
ECSD EROS Data Cent 76.93 342 P P 13 27 50.7 -0.1
ECSD EROS Data Cent 76.93 342 P P 13 27 51.3 +0.5
baz=158,SNR=47
ECSD EROS Data Cent 76.93 342 P P 13 27 51.2 +0.4
baz=158,SNR=47
BBRC Big Bear Solar 76.99 323 P P 13 27 53.8 +2.3
baz=141
BATG Bathurst New B 77.12 4 P P 13 27 52.8 +1.1
BATG IAmb IAmb 13 27 54.6
comp=Z,47nm,0.9s
HEC Hector,Ludlow 77.12 324 P P 13 27 54.1 +1.9
baz=141,SNR=10
CIS Catalina Islan 77.13 321 P P 13 27 54.1 +2.0
baz=140,SNR=5.3
PKCU Pink Cliffs 77.23 328 P P 13 27 54.2 +1.1
LMQ La Malbaie 77.24 1 P P 13 27 53.2 +0.8
LMQ IAmb IAmb 13 27 54.8
comp=Z,48nm,1.2s
FMP Fort Macarthur 77.30 322 P P 13 27 54.6 +1.6
baz=140
LCMT Little Creek M 77.32 327 P P 13 27 54.6 +1.3
E43A Lone Tree Farm 77.34 349 P P 13 27 53.7 +0.7
E43A IAmb IAmb 13 27 54.8
comp=Z,33nm,0.8s
E43A Lone Tree Farm 77.34 349 P P 13 27 53.8 +0.8
baz=166,SNR=6.8
BFSC Mount Baldy Ra 77.36 322 P P 13 27 55.0 +1.5
baz=140,SNR=19
SPMN Marine on St. 77.37 345 P P 13 27 53.4 +0.2
SPMN IAmb IAmb 13 27 54.6
comp=Z,47nm,1.3s
SPMN Marine on St. 77.37 345 P P 13 27 53.7 +0.5
baz=161
SPMN Marine on St. 77.37 345 P P 13 27 53.2 0.0
baz=161
TUQ Turquoise Moun 77.38 324 P P 13 27 55.4 +1.7
baz=142,SNR=12
N23A Red Feather La 77.44 334 P P 13 27 55.9 +1.8
N23A IAmb IAmb 13 27 57.3
comp=Z,44nm,1.2s
N23A Red Feather La 77.44 334 P P 13 27 55.4 +1.4
baz=150,SNR=19
COWI Conover 77.45 348 P P 13 27 54.1 +0.5
RRX Edison Barstow 77.50 323 P P 13 27 56.5 +2.3
baz=141
PASC Pasadena Art C 77.59 322 P P 13 27 56.1 +1.4
PASC IAmb IAmb 13 27 58.1
comp=Z,54nm,1.4s
PHWY Pilot Hill 77.61 334 P P 13 27 56.0 +1.0
PHWY IAmb IAmb 13 27 57.9
comp=Z,27nm,0.8s
SNCC San Nicolas Is 77.62 320 P P 13 27 56.9 +2.0
baz=139
MTPU Mount Pierson 77.66 328 P P 13 27 56.3 +0.8
O20A White River Ci 77.70 332 P P 13 27 56.3 +0.9
O20A IAmb IAmb 13 27 58.6
comp=Z,72nm,1.1s
O20A White River Ci 77.70 332 P P 13 27 57.1 +1.7
baz=148,SNR=38
SZCU Shurtz Canyon 77.72 327 P P 13 27 57.0 +1.4
DECC Green Verdugo 77.73 322 P P 13 27 57.3 +1.8
baz=140
GSC Goldstone, Bar 77.73 324 P P 13 27 56.8 +1.2
GSC Goldstone, Bar 77.73 324 P P 13 27 57.2 +1.7
baz=141,SNR=16
SRU San Rafael Swe 77.80 330 P P 13 27 56.8 +0.8
SRU IAmb IAmb 13 27 58.7
comp=Z,31nm,1.0s
CCUT Cedar City 77.81 327 P P 13 27 57.7 +1.6
CCUT IAmb IAmb 13 28 00.0
comp=Z,38nm,1.0s
SHPR Sheep Range 77.84 325 P P 13 27 57.6 +1.3
SHOC Shoshone, Teco 77.92 324 P P 13 27 58.3 +1.8
baz=142
VLDQ Val d'Or 77.98 356 P P 13 27 57.5 +1.0
VLDQ IAmb IAmb 13 27 58.6
comp=Z,41nm,0.9s
EDW2 Edwards Air Fo 78.03 322 P P 13 27 58.4 +1.2
baz=140,SNR=9.7
MSU Marysvale 78.04 329 P P 13 27 58.7 +1.3
MVU Marysvale 78.05 328 P P 13 27 59.0 +1.5
P18A Preston Nutter 78.11 330 P P 13 27 58.1 +0.3
P18A IAmb IAmb 13 28 01.1
comp=Z,65nm,1.2s
F36A Milaca 78.14 344 P P 13 27 57.2 -0.3
F36A Milaca 78.14 344 P P 13 27 57.5 0.0
baz=161,SNR=12
OSI Osito Audit: C 78.21 322 P P 13 27 60.0 +1.7
baz=140
RAR Rarotonga 78.23 252 LR LR 13 53 43.4
comp=Z,497nm,21.5s,baz=110,slow=29
SCZ2 Santa Cruz Isl 78.24 321 P P 13 27 60.0 +1.6
baz=139
CCAC Calif City Air 78.25 323 P P 13 27 59.9 +1.5
CCAC IAmb IAmb 13 28 01.6
comp=Z,39nm,1.0s
SUSD Miller 78.25 340 P P 13 27 58.7 +0.6
SUSD IAmb IAmb 13 27 60.0
comp=Z,81nm,1.2s
SUSD Miller 78.25 340 P P 13 27 59.1 +1.0
baz=156
SUSD Miller 78.25 340 P P 13 27 58.7 +0.6
baz=156
TMUT Trail Mountain 78.25 330 P P 13 27 59.9 +1.3
D41A Chassel 78.27 348 P P 13 27 58.7 +0.6
D41A Chassel 78.27 348 P P 13 27 58.9 +0.8
baz=165,SNR=11
QSM Queen of Sheba 78.28 324 P P 13 27 59.5 +1.0
LRMC Laurel Mtn Rad 78.32 323 P P 13 28 00.4 +1.5
baz=140
GWY Greenwater Val 78.35 324 P P 13 27 60.0 +0.9
PRN Pahroc Range 78.50 326 P P 13 28 00.8 +0.9
PRN IAmb IAmb 13 28 03.5
comp=Z,45nm,1.0s
RDMU Red Mountain 78.61 331 P P 13 28 01.4 +0.9
RDMU IAmb IAmb 13 28 03.2
comp=Z,43nm,1.0s
RWWY Rawlins 78.61 334 P P 13 28 01.3 +0.8
RWWY IAmb IAmb 13 28 03.5
comp=Z,73nm,1.1s
RWWY IAMs_20 IAMs_20 14 04 40.0
comp=Z,515nm,22.0s
ARVC Arvin 78.66 322 P P 13 28 02.4 +1.8
baz=140
FURC Furnace Creek, 78.66 324 P P 13 28 02.6 +2.1
baz=141,SNR=12
MPMC Manual Prospec 78.67 324 P P 13 28 02.1 +1.3
baz=141,SNR=14
TPNV Topopah Spring 78.73 325 P P 13 28 02.3 +1.2
TPNV IAmb IAmb 13 28 04.7
comp=Z,43nm,1.2s
TPNV Topopah Spring 78.73 325 P P 13 28 03.2 +2.0
baz=142,SNR=28
F33A 5 Mile Ranch, 78.80 343 P P 13 28 01.3 +0.2
F33A 5 Mile Ranch, 78.80 343 P P 13 28 01.9 +0.8
baz=158
BCW Bitter Crk WRg 78.83 322 P P 13 28 03.7 +2.0
BCW IAmb IAmb 13 28 05.3
comp=Z,69nm,1.1s
PSUT Pine Spring 78.83 327 P P 13 28 03.3 +1.5
ISA Isabella, Lake 78.88 323 P P 13 28 03.8 +1.9
ISA IAmb IAmb 13 28 05.4
comp=Z,33nm,1.0s
ISA Isabella, Lake 78.88 323 P P 13 28 03.9 +2.0
baz=140,SNR=24
PKM Mcpherson Peak 79.01 321 P P 13 28 04.6 +1.9
baz=139,SNR=26
MPU Maple Canyon 79.03 330 P P 13 28 03.5 +0.8
NLU North Lily Min 79.17 329 P P 13 28 04.4 +0.8
K22A Casper 79.18 334 P P 13 28 04.4 +0.9
K22A IAmb IAmb 13 28 06.5
comp=Z,65nm,1.1s
K22A Casper 79.18 334 P P 13 28 05.1 +1.6
baz=150,SNR=28
K22A Casper 79.18 334 P P 13 28 04.9 +1.4
baz=150,SNR=28
CWC Cottonwood Cre 79.27 323 P P 13 28 05.9 +1.8
baz=140
GRAC Grapevine Rang 79.33 324 P P 13 28 05.4 +1.1
GRAC Grapevine Rang 79.33 324 P P 13 28 06.2 +2.0
baz=141,SNR=15
VES Vestal, Richgr 79.33 322 P P 13 28 06.0 +1.8
baz=140,SNR=7.8
SMMC Simmler 79.42 321 P P 13 28 07.0 +2.1
baz=139,SNR=7.4
JLU Jordanelle 79.43 330 P P 13 28 06.2 +1.2
R11A Troy Canyon, C 79.50 326 P P 13 28 06.8 +1.4
R11A Troy Canyon, C 79.50 326 P P 13 28 07.1 +1.7
baz=142,SNR=36
RSSD Black Hills 79.57 337 P P 13 28 06.9 +1.3
RSSD Black Hills 79.57 337 P P 13 28 07.4 +1.8
baz=152,SNR=19
RSSD Black Hills 79.57 337 P P 13 28 06.8 +1.1
baz=152
LCH Last Change Ra 79.65 324 P P 13 28 07.3 +1.2
EYMN Ely 79.68 347 P P 13 28 05.7 -0.2
EYMN Ely 79.68 347 P P 13 28 06.1 +0.3
baz=162,SNR=7.6
EYMN Ely 79.68 347 P P 13 28 06.2 +0.3
baz=162,SNR=7.6
DUG Dugway, Tooele 79.70 329 P P 13 28 07.1 +0.8
DUG IAmb IAmb 13 28 09.5
comp=Z,49nm,1.4s
DUG Dugway, Tooele 79.70 329 P P 13 28 07.8 +1.4
baz=144,SNR=14
TIN Tinemaha, Big 79.81 324 P P 13 28 08.9 +1.9
baz=140
PAGB Antelope Grade 79.87 322 P P 13 28 08.9 +1.6
PAGB IAmb IAmb 13 28 10.7
comp=Z,45nm,1.1s
TSUM Tsumeb 79.89 106 P P 13 28 07.8 -0.2
TSUM IAmb IAmb 13 28 09.9
comp=Z,57nm,1.1s
TPH Tonopah 80.09 325 P P 13 28 09.3 +0.7
D32A Dogwood Acres, 80.19 343 P P 13 28 09.4 +0.7
D32B Dogwood Acres, 80.19 343 P P 13 28 09.9 +1.3
baz=158
HWUT Hardware Ranch 80.31 331 P P 13 28 10.6 +1.0
HWUT IAmb IAmb 13 28 12.1
comp=Z,37nm,1.0s
HWUT IAMs_20 IAMs_20 14 06 40.0
comp=Z,675nm,19.0s
BGU Big Grassy Mou 80.39 329 P P 13 28 10.8 +0.8
BW06 Boulder Array 80.45 333 P P 13 28 10.2 -0.3
BW06 IAMs_20 IAMs_20 14 06 40.2
comp=Z,490nm,19.0s
BW06 Boulder Array 80.45 333 P P 13 28 11.2 +0.7
baz=147,SNR=10.0
PD31 Pinedale Array 80.45 333 P P 13 28 10.6 +0.1
PDAR Pinedale Array 80.45 333 P P 13 28 11.3 +0.9
comp=Z,2.4nm,0.6s,baz=145,slow=5.4,SNR=29
PDAR LR LR 14 00 45.0
comp=Z,367nm,20.6s,baz=152,slow=33
comp=Z,2.4nm,0.6s
PDAR Pinedale Array 80.45 333 P P 13 28 10.4 0.0
PMPB Monarch Peak 80.53 322 P P 13 28 12.4 +1.6
PMPB IAmb IAmb 13 28 29.0
comp=Z,46nm,1.3s
B35A Bob, Littlefor 80.55 345 P P 13 28 10.5 0.0
B35A IAmb IAmb 13 28 11.6
comp=Z,25nm,0.8s
MLAC Mammoth, Mammo 80.56 324 P P 13 28 13.1 +1.9
baz=140
OMMB Old Mammoth Mi 80.64 324 P P 13 28 12.8 +1.1
Q09A Carvers 80.66 326 P P 13 28 13.1 +1.5
Q09A IAmb IAmb 13 28 14.7
comp=Z,42nm,0.9s
MDPB Devils Postpil 80.69 324 P P 13 28 13.0 +1.1
E28A Huff 80.69 340 P P 13 28 12.5 +1.1
E28A IAmb IAmb 13 28 13.8
comp=Z,59nm,0.9s
E28A Huff 80.69 340 P P 13 28 12.5 +1.1
baz=155,SNR=5.5
NV11 Mina Array Sit 80.83 325 P P 13 28 13.8 +1.3
LHV Little Huntoon 80.87 324 P P 13 28 13.9 +1.4
NVAR Mina Array Bea 80.90 325 P P 13 28 14.3 +1.3
comp=Z,7.7nm,0.8s,baz=154,slow=6.3,SNR=53
comp=Z,7.7nm,0.8s
NVAR Mina Array Bea 80.90 325 P P 13 28 14.0 +1.0
BBGB Big Mountain B 80.93 322 P P 13 28 15.0 +2.0
BBGB IAmb IAmb 13 28 18.5
comp=Z,44nm,0.9s
HVU Hansel Valley 80.97 330 P P 13 28 13.5 +0.4
AGMN Agassiz Nation 80.98 344 P P 13 28 13.0 +0.2
AGMN IAmb IAmb 13 28 14.6
comp=Z,30nm,0.8s
AGMN Agassiz Nation 80.98 344 P P 13 28 13.4 +0.6
baz=159,SNR=17
AGMN Agassiz Nation 80.98 344 P P 13 28 13.4 +0.6
baz=159,SNR=17
AHID Auburn Hatcher 81.07 332 P P 13 28 14.2 +0.4
AHID IAMs_20 IAMs_20 14 06 59.2
comp=Z,594nm,20.0s
RYN Ryan 81.17 325 P P 13 28 14.9 +0.6
ELK Elko 81.24 328 P P 13 28 15.1 +0.4
ELK IAMs_20 IAMs_20 14 06 39.2
comp=Z,476nm,20.0s
KVN Kaiserville 81.28 325 P P 13 28 15.5 +0.6
SAO San Andreas Ge 81.29 322 P P 13 28 16.4 +1.6
ECR Eagle Creek 81.42 332 P P 13 28 16.4 +0.8
REDW Red Top Meadow 81.47 332 P P 13 28 15.8 0.0
REDW IAMs_20 IAMs_20 14 07 00.1
comp=Z,415nm,20.0s
SNOW Snow King Moun 81.51 332 P P 13 28 16.3 +0.2
SNOW IAMs_20 IAMs_20 14 07 01.3
comp=Z,467nm,20.0s
BOSA Boshof 81.53 118 P P 13 28 16.2 -0.4
comp=Z,15nm,0.8s,baz=233,slow=6.2,SNR=22
comp=Z,15nm,0.8s
BOSA Boshof 81.53 118 P P 13 28 15.9 -0.8
BOSA IAmb IAmb 13 28 29.4
comp=Z,38nm,0.9s
MDND Maddock 81.54 341 P P 13 28 15.0 -0.8
MDND Maddock 81.54 341 P P 13 28 16.5 +0.7
baz=156,SNR=7.1
LOHW Long Hollow 81.57 332 P P 13 28 15.9 -0.5
LOHW IAMs_20 IAMs_20 14 07 24.4
comp=Z,585nm,18.0s
CMB Columbia Colle 81.67 323 P P 13 28 16.9 0.0
MOOW Moose Ponds 81.74 332 P P 13 28 17.5 +0.2
MOOW IAMs_20 IAMs_20 14 01 03.9
comp=Z,529nm,21.0s
YERR Yerington 81.80 324 P P 13 28 17.6 0.0
YERR IAmb IAmb 13 28 20.9
comp=Z,33nm,1.1s
BMN Battle Mountai 81.92 327 P P 13 28 17.5 -0.7
FLWY Flagg Ranch 82.00 333 P P 13 28 18.7 +0.1
FLWY IAMs_20 IAMs_20 14 07 38.8
comp=Z,637nm,18.0s
PNTR Pine Nut 82.06 324 P P 13 28 19.9 +0.9
PNTR IAmb IAmb 13 28 22.4
comp=Z,44nm,0.9s
YPP Pitchstone Pla 82.20 333 P P 13 28 20.8 +1.0
H17A Grant Village 82.22 333 P P 13 28 21.4 +1.6
baz=147
EMB Emerald Bay 82.23 324 P P 13 28 21.4 +1.4
VCNR Virginia City 82.24 324 P P 13 28 21.0 +1.0
RLMT Red Lodge 82.32 334 P P 13 28 20.9 +0.6
RLMT IAMs_20 IAMs_20 14 02 47.6
comp=Z,393nm,21.0s
RLMT Red Lodge 82.32 334 P P 13 28 21.4 +1.1
baz=148,SNR=7.3
PAHR Pah Rah Range 82.42 325 P P 13 28 22.1 +1.2
PAHR IAmb IAmb 13 28 24.1
comp=Z,47nm,1.1s
MPK Martis Peak 82.44 324 P P 13 28 22.4 +1.3
MPK IAmb IAmb 13 28 24.4
comp=Z,50nm,1.1s
TOA0 Torodi Ar. Sit 82.46 70 P P 13 28 21.2 -0.2
TOA0 IAmb IAmb 13 28 22.9
comp=Z,71nm,1.1s
TORD Torodi Ar. Bea 82.46 70 P P 13 28 21.2 -0.2
comp=Z,47nm,0.9s,baz=278,slow=6.6,SNR=142
comp=Z,47nm,0.9s
TORD Torodi Ar. Bea 82.46 70 P P 13 28 21.0 -0.4
LAO LASA Array 82.56 337 P P 13 28 22.3 +1.0
LAO IAmb IAmb 13 28 23.5
comp=Z,61nm,1.4s
LAO LASA Array 82.56 337 P P 13 28 22.6 +1.3
baz=150
LAO LASA Array 82.56 337 P P 13 28 22.2 +1.0
baz=150
ULM Lac du Bonnet 82.81 345 P P 13 28 22.5 +0.2
comp=Z,28nm,0.9s,baz=161,slow=4.0,SNR=20
comp=Z,28nm,0.9s
ULM Lac du Bonnet 82.81 345 P P 13 28 22.6 +0.2
ULM IAmb IAmb 13 28 23.9
comp=Z,46nm,1.1s
YHL Hebgen Lake 82.83 333 P P 13 28 24.1 +1.0
QLMT Earthquake Lak 82.92 333 P P 13 28 25.0 +1.6
BEKR Beckworth 83.03 324 P P 13 28 24.8 +0.7
BEKR IAmb IAmb 13 28 37.3
comp=Z,31nm,1.1s
GCMT Greycliff 83.03 334 P P 13 28 24.2 +0.4
HLID Hailey 83.12 330 P P 13 28 25.3 +0.9
HLID IAMs_20 IAMs_20 14 08 05.5
comp=Z,551nm,18.0s
HLID Hailey 83.12 330 P P 13 28 25.9 +1.5
baz=144,SNR=28
BCYI Bear Canyon 83.30 331 P P 13 28 26.4 +1.0
ORV Oroville 83.38 323 P P 13 28 26.6 +0.9
ORV IAmb IAmb 13 28 28.8
comp=Z,49nm,1.1s
DGMT Dagmar 83.46 339 P P 13 28 26.7 +0.9
DGMT Dagmar 83.46 339 P P 13 28 27.3 +1.5
baz=152,SNR=12
DGMT Dagmar 83.46 339 P P 13 28 26.8 +1.0
baz=152,SNR=12
MCMT McKenzie Canyo 83.49 332 P P 13 28 26.7 +0.3
LBTB Lobatse 83.58 115 P P 13 28 26.9 -0.4
comp=Z,26nm,0.9s,baz=244,slow=6.1,SNR=39
comp=Z,26nm,0.9s
LBTB Lobatse 83.58 115 P P 13 28 26.7 -0.6
LBTB IAmb IAmb 13 28 38.8
comp=Z,46nm,0.8s
MFID Camas Ranch 83.62 329 P P 13 28 27.2 +0.3
BOZ Bozeman (W) 83.63 333 P P 13 28 27.2 +0.2
BOZ Bozeman (W) 83.63 333 P P 13 28 27.7 +0.8
baz=146,SNR=6.9
CASY Casey 83.97 181 P P 13 28 28.5 +0.1
CASY IAmb IAmb 13 28 40.5
comp=Z,26nm,1.2s
LRM Limekiln Ridge 84.14 333 P P 13 28 30.0 +0.3
WVOR Wild Horse Val 84.14 327 P P 13 28 30.6 +1.0
WVOR IAMs_20 IAMs_20 14 00 14.2
comp=Z,459nm,22.0s
MOD Modoc Plateau 84.54 326 P P 13 28 32.6 +0.9
MOD IAMs_20 IAMs_20 14 05 25.8
comp=Z,539nm,20.0s
SCHQ Schefferville 84.63 3 P P 13 28 31.9 +0.3
comp=Z,24nm,1.1s,baz=174,slow=4.1,SNR=15
SCHQ LR LR 14 04 06.4
comp=Z,153nm,21.9s,baz=212,slow=34
comp=Z,24nm,1.1s
SCHQ Schefferville 84.63 3 P P 13 28 31.8 +0.1
SCHQ IAmb IAmb 13 28 33.3
comp=Z,55nm,1.3s
HRY Holter Researc 84.63 333 P P 13 28 33.0 +1.0
J08A Circle Bar Ran 84.78 328 P P 13 28 33.7 +0.9
J08A IAmb IAmb 13 28 35.7
comp=Z,50nm,1.1s
EGMT Eagleton 84.95 335 P P 13 28 34.0 +0.6
EGMT IAMs_20 IAMs_20 14 12 03.6
comp=Z,351nm,19.0s
EGMT Eagleton 84.95 335 P P 13 28 34.1 +0.6
baz=147
PLID Pearl Lake 85.02 330 P P 13 28 34.5 +0.4
PLID IAmb IAmb 13 28 36.5
comp=Z,26nm,1.1s
KMRM Mail Ridge 85.03 323 P P 13 28 35.7 +1.6
KMRM IAmb IAmb 13 28 37.6
comp=Z,55nm,1.2s
BMO Blue Mountains 85.41 329 P P 13 28 36.7 +0.7
BMO IAMs_20 IAMs_20 14 08 45.1
comp=Z,663nm,20.0s
K05A Summer Lake 85.45 326 P P 13 28 37.2 +1.0
K05A IAmb IAmb 13 28 49.7
comp=Z,53nm,1.2s
MSO Missoula 85.56 332 P P 13 28 37.3 +0.7
MSO IAMs_20 IAMs_20 14 09 48.4
comp=Z,448nm,18.0s
MSO Missoula 85.56 332 P P 13 28 38.0 +1.4
baz=144
YBH Yreka Blue Hor 85.61 324 P P 13 28 37.2 +0.2
L04D Klamath Falls 85.77 325 P P 13 28 38.5 +0.7
L04D IAmb IAmb 13 28 39.9
comp=Z,38nm,1.3s
L04D Klamath Falls 85.77 325 P P 13 28 38.4 +0.6
baz=138,SNR=5.6
K04D Chiloquin, OR 85.79 325 P P 13 28 38.8 +0.9
baz=138
I07A Izee 85.81 328 P P 13 28 38.9 +0.9
I07A IAmb IAmb 13 28 51.1
comp=Z,28nm,1.1s
J05D Fort Rock, OR 86.03 326 P P 13 28 40.2 +1.1
baz=138,SNR=10
F10A Beach Ranch, E 86.25 330 P P 13 28 40.2 +0.1
PINE Pine Mountain 86.27 327 P P 13 28 41.2 +0.9
PINE IAmb IAmb 13 28 43.4
comp=Z,30nm,0.9s
KSXB Camp Six Broad 86.28 324 P P 13 28 41.7 +1.3
KSXB IAmb IAmb 13 28 47.3
comp=Z,29nm,1.2s
ODZ Otahua Downs 86.31 219 P P 13 28 41.8 +1.3
ODZ IAmb IAmb 13 28 43.1
comp=Z,28nm,1.0s
KHZ Kahutara 86.32 222 P P 13 28 41.4 +0.8
J04D Umpqua Nationa 86.43 326 P P 13 28 41.5 +0.4
J04D IAmb IAmb 13 28 53.9

comp=Z,34nm,1.0s
J04D Umpqua Nationa 86.43 326 P **P** **13 28 42.3 +1.2**
baz=138,SNR=6.8
JTMT Jette 86.44 333 P **P** **13 28 41.1 +0.1**
G08A Pilot Rock 86.49 329 P **P** **13 28 41.7 +0.4**
OXZ Oxford 86.62 221 P **P** **13 28 42.8 +0.7**
OXZ IAmb IAmb 13 28 45.1
comp=Z,30nm,1.0s
URZ Urewera 86.64 227 LR LR 13 58 00.1
comp=Z,456nm,21.2s,baz=211,slow=29
K02D Willamette Mer 86.80 324 P **P** **13 28 44.5 +1.7**
baz=137,SNR=7.0
LTZ Lake Taylor 86.83 221 P **P** **13 28 44.6 +1.4**
I05D Terrebonne, OR 86.87 327 P **P** **13 28 44.8 +1.7**
baz=138,SNR=5.8
DBO Dodson Butte 86.90 325 P **P** **13 28 44.4 +1.2**
DBO IAmb IAmb 13 28 46.2
comp=Z,25nm,1.1s
RPZ Rata Peaks 86.93 220 LR LR 14 00 40.6
comp=Z,409nm,18.3s,baz=114,slow=31
RPZ Rata Peaks 86.93 220 P **P** **13 28 44.8 +1.2**
I04A Tendick Farm, 86.98 326 P **P** **13 28 44.3 +0.7**
baz=138
THZ Tophouse 87.10 223 P **P** **13 28 46.4 +1.9**
WHZ Wether Hill Ro 87.19 217 P **P** **13 28 45.5 +0.6**
WHZ IAmb IAmb 13 28 47.2
comp=Z,46nm,1.3s
KEBM Edson Butte 87.27 324 P **P** **13 28 47.2 +2.1**
J01E Myrtle Point 87.27 325 P **P** **13 28 45.9 +0.9**
baz=137
WALA Waterton Lakes 87.36 334 P **P** **13 28 45.6 +0.2**
WALA IAmb IAmb 13 28 47.5
comp=Z,37nm,1.1s
I03D Drain, OR 87.37 325 P **P** **13 28 46.6 +1.2**
baz=137
F07A Phinny Hill Vi 87.39 328 P **P** **13 28 46.5 +1.1**
H04A Detroit Lake 87.53 326 P **P** **13 28 46.9 +0.6**
H04A IAmb IAmb 13 28 48.1
comp=Z,23nm,0.9s
G05D Wamic, OR 87.54 327 P **P** **13 28 47.9 +1.6**
baz=138
BUCK Buck Mountain 87.56 326 P **P** **13 28 47.2 +0.8**
BUCK IAmb IAmb 13 28 48.9
comp=Z,25nm,0.9s
HAWA Hanford 87.59 329 P **P** **13 28 47.4 +1.0**
HAWA IAmb IAmb 13 28 49.0
comp=Z,36nm,1.4s
H04D Lebanon 87.68 326 P **P** **13 28 47.2 +0.3**
baz=138
D08A Wollman Farm, 87.83 330 P **P** **13 28 48.0 +0.4**
HIZ Hauiti 87.91 226 P **P** **13 28 49.7 +1.3**
I02E Swisshome, OR 87.92 325 P **P** **13 28 48.6 +0.6**
baz=137
NEW Newport 88.00 331 P **P** **13 28 48.1 -0.3**
NEW Newport 88.00 331 IAMs_20 IAMs_20 14 11 07.6
comp=Z,510nm,18.0s
NEW Newport 88.00 331 P **P** **13 28 48.6 +0.2**
baz=142
C09A Chrisman Ranch 88.13 331 P **P** **13 28 49.5 +0.6**
C09A IAmb IAmb 13 28 51.0
comp=Z,31nm,1.4s
G03D McMinnville, O 88.44 326 P **P** **13 28 51.9 +1.4**
baz=137
F04A Amboy 88.57 327 P **P** **13 28 51.8 +0.8**
F04A IAmb IAmb 13 28 53.2
comp=Z,29nm,1.1s
LTY Liberty 88.76 329 P **P** **13 28 52.8 +0.7**
F04D Rainier, OR 88.96 327 P **P** **13 28 54.3 +1.4**
baz=137
MDT Midelt 89.00 51 LR LR 14 06 09.2
comp=Z,371nm,21.9s,baz=240,slow=34
B08A Colville Reser 89.01 330 P **P** **13 28 52.4 -0.8**
E04D Cinebar 89.10 328 IAMs_20 IAMs_20 14 09 22.3
comp=Z,603nm,21.0s
E04D Cinebar 89.10 328 P **P** **13 28 55.1 +1.5**
baz=138
MORF Marmelete 89.17 45 *e*P **P** **13 28 55.0 +0.8**
MORF IAmb IAmb 13 28 55.9
comp=Z,28nm,1.2s
MORF Marmelete 89.17 45 *e*P **P** **13 28 55.4 +1.2**
MORF Marmelete 89.17 45 *e*P **P** **13 28 55.0 +0.8**
D05A Enumclaw 89.30 328 P **P** **13 28 55.1 +0.6**
D05A IAmb IAmb 13 29 06.8
comp=Z,28nm,1.1s
E03A Lebam 89.56 327 P **P** **13 28 56.4 +0.7**
E03A IAmb IAmb 13 29 10.5
comp=Z,36nm,1.1s
PBDV Barranco-do-Ve 89.57 46 *e*P **P** **13 28 57.3 +1.2**
comp=Z,24nm,1.4s
PCVE Castro Verde 89.75 45 *e*P **P** **13 28 58.1 +1.2**
comp=Z,25nm,1.8s
PNCL Nicolau / Gran 89.75 45 *e*P **P** **13 28 58.6 +1.8**
comp=Z,21nm,1.7s
MESJ Messejana 89.77 45 *e*P **P** **13 28 57.9 +1.0**
MESJ IAmb IAmb 13 28 59.5
comp=Z,26nm,1.5s
MESJ Messejana 89.77 45 *e*P **P** **13 28 57.9 +1.0**
PVAQ Vaqueiros 89.81 46 *e*P **P** **13 28 58.5 +1.4**
comp=Z,16nm,1.8s
PVAQ Vaqueiros 89.81 46 P **P** **13 28 57.7 +0.6**
D03D Eldon 90.06 328 P **P** **13 28 59.2 +1.2**
baz=137
FCC Fort Churchill 90.45 348 P **P** **13 28 60.0 +0.4**
FCC IAmb IAmb 13 29 01.6
comp=Z,31nm,1.1s
EDM Edmonton 90.54 336 P **P** **13 28 59.6 -0.6**
EDM IAmb IAmb 13 29 00.8
comp=Z,20nm,1.2s
PMTG Montargil 90.54 44 *e*P **P** **13 29 01.5 +1.0**
comp=Z,34nm,1.4s
PESTR Estremoz 90.80 45 *e*P **P** **13 29 02.5 +0.7**
comp=Z,16nm,1.4s
PESTR Estremoz 90.80 45 P **P** **13 29 01.7 0.0**
PMRV Marv??o 91.27 44 *e*P **P** **13 29 04.4 +0.5**
PCBR Castelo Branco 91.48 44 *e*P **P** **13 29 05.2 +0.4**
comp=Z,11nm,1.4s
MVO Moncorvo 92.57 43 *e*P **P** **13 29 10.9 +0.9**
comp=Z,22nm,1.7s
PAB San Pablo 93.21 46 P **P** **13 29 12.3 -0.6**
PAB IAmb IAmb 13 29 14.7
comp=Z,16nm,1.3s
FRB Frobisher Bay 93.50 1 LR LR 14 13 51.9
comp=Z,197nm,19.9s,baz=180,slow=37
ESDC Sonseca Array 93.52 46 P **P** **13 29 14.6 +0.2**
comp=Z,3.0nm,1.0s,baz=243,slow=4.7,SNR=19
comp=Z,3.0nm,1.0s
ESDC Sonseca Array 93.52 46 P **P** **13 29 13.9 -0.5**
YKA Yellowknife Ar 98.46 341 P **P** **13 29 35.8 -0.3**
comp=Z,1.5nm,0.6s,baz=146,slow=4.1,SNR=3.4
comp=Z,1.5nm,0.6s
ILULI Ilulissat 100.09 7 IAMs_20 IAMs_20 14 13 52.3
comp=Z,317nm,21.0s
DLBC Dease Lake 100.68 333 Pdiff **Pdif** **13 29 47.6 +1.3**
baz=131
SIT Sitka 102.00 330 Pdiff **Pdif** **13 29 54.6 +2.5**
baz=127
VSL Villasalto 102.10 51 IAMs_20 IAMs_20 14 19 05.6
comp=Z,472nm,19.0s
JIS Juneau Island 102.35 331 IAMs_20 IAMs_20 14 19 29.0
comp=Z,447nm,21.0s
DZM Mont Dzumac 103.91 234 *e*LR LR 14 03 45.2
comp=Z,1µm,24.2s
FARO Faro, Yukon 104.38 335 Pdiff **Pdif** **13 30 04.1 +1.5**
baz=128
M31M Drury Creek, Y 104.75 334 IAMs_20 IAMs_20 14 22 39.3
comp=Z,453nm,21.0s
SUMG Summit 104.84 10 IAMs_20 IAMs_20 14 21 39.2
comp=Z,443nm,22.0s
ECH Echery 104.87 43 IAMs_20 IAMs_20 14 21 03.3
comp=Z,454nm,20.0s
VLC Villacollemand 104.96 48 IAMs_20 IAMs_20 14 21 22.7
comp=Z,293nm,21.0s
BFO Black Forest 105.61 43 IAMs_20 IAMs_20 14 19 25.0
comp=Z,436nm,21.0s
AQU L'Aquila 106.12 50 IAMs_20 IAMs_20 14 20 19.1
comp=Z,485nm,21.0s
C36M Paulatuk 106.18 343 IAMs_20 IAMs_20 14 24 49.6
comp=Z,380nm,21.0s
SCO Scoresbysund 106.28 15 IAMs_20 IAMs_20 14 15 11.1
comp=Z,385nm,21.0s
STU Stuttgart 106.33 43 IAMs_20 IAMs_20 14 21 53.9
comp=Z,420nm,20.0s
TULEG Thule 106.34 1 IAMs_20 IAMs_20 14 20 14.1
comp=Z,314nm,21.0s
TABL Table Mountain 106.43 331 IAMs_20 IAMs_20 14 22 27.4
comp=Z,319nm,20.0s
YAH Yahtse 106.64 331 IAMs_20 IAMs_20 14 20 23.5
comp=Z,346nm,20.0s
CTGM Chitina Glacie 106.79 331 IAMs_20 IAMs_20 14 13 53.9
comp=Z,257nm,20.0s
GRNC Granite Creek 106.84 331 IAMs_20 IAMs_20 14 22 37.7
comp=Z,356nm,21.0s
BARN Barnard Glacie 106.97 331 IAMs_20 IAMs_20 14 23 57.8
comp=Z,309nm,20.0s
J29M Klondike Camp 107.46 335 IAMs_20 IAMs_20 14 23 33.9
comp=Z,378nm,19.0s
MCARA McCarthy VSAT 107.70 331 IAMs_20 IAMs_20 14 20 52.1
comp=Z,357nm,22.0s
M27K Edge Creek, AK 107.74 333 IAMs_20 IAMs_20 14 19 36.9
comp=Z,254nm,20.0s
GRFO Grafenberg 107.92 43 IAMs_20 IAMs_20 14 22 33.1
comp=Z,351nm,21.0s
GRA1 Grafenberg Arr 107.93 43 IAMs_20 IAMs_20 14 20 40.6
comp=Z,352nm,21.0s
GLB Gilahina Butte 108.06 331 IAMs_20 IAMs_20 14 23 14.6
comp=Z,274nm,21.0s
L27K Beaver Creek, 108.08 333 IAMs_20 IAMs_20 14 22 58.4
comp=Z,386nm,21.0s
BMRM Bremner River 108.16 331 IAMs_20 IAMs_20 14 19 31.8
comp=Z,375nm,20.0s
M26K Nabesna, AK 108.21 332 IAMs_20 IAMs_20 14 22 31.8
comp=Z,271nm,20.0s
L26K Log Cabin Wild 108.66 333 IAMs_20 IAMs_20 14 17 47.7
comp=Z,286nm,20.0s
FID Port Fidalgo 108.86 330 IAMs_20 IAMs_20 14 26 13.0
comp=Z,294nm,21.0s
NKC Novy Kostel 108.87 42 AMS AMS 14 19 50.0
comp=Z,400nm,20.3s
KHC Kasperske Hory 109.09 44 AMS AMS 14 19 00.0
comp=Z,500nm,22.6s
GLI Glacier Island 109.19 330 IAMs_20 IAMs_20 14 26 20.6
comp=Z,273nm,22.0s
M24K Tolsona, Glenn 109.37 331 PKiKP **PKiKP** **13 34 30.3 +2.3**
baz=118
SCRK Sand Creek 109.38 334 IAMs_20 IAMs_20 14 23 48.7
comp=Z,366nm,20.0s
CKRC Cesky Krumlov 109.41 44 AMS AMS 14 21 20.0
comp=Z,700nm,21.6s
J26L Joseph Creek 109.47 334 IAMs_20 IAMs_20 14 19 12.0
comp=Z,372nm,20.0s
RIDG Independent Ri 109.60 333 IAMs_20 IAMs_20 14 18 26.5
comp=Z,337nm,20.0s
RIDG Independent Ri 109.60 333 PKiKP **PKiKP** **13 34 30.2 +1.7**
baz=118
CLL Collm 109.63 42 *e*PKiKP **PKiKP** **13 34 30.0 +1.2**
comp=Z,7.0nm,1.3s
CLL *e*PP **PP** **13 34 58.0 -2.7**
CLL *e*PPP PPP 13 37 30.0
CLL *e*PS **PS** **13 44 30.0 +1.2**
CLL *e*PPS PPS 13 45 30.0
CLL *e*SSS SSS 13 54 30.0
CLL LmH 14 21 00.0
comp=N,300nm,20.3s
CLL LmH 14 21 00.0
comp=E,600nm,20.7s
CLL LmV 14 22 00.0
comp=Z,800nm,20.7s
PRU Pruhonice 110.01 43 AMS AMS 14 20 40.0
comp=Z,500nm,21.6s
KNK Knik Glacier 110.02 330 IAMs_20 IAMs_20 14 26 54.0
comp=Z,330nm,21.0s
PVCC Panska Ves 110.23 43 AMS AMS 14 22 10.0
comp=Z,500nm,20.6s
DHY Denali Highway 110.30 332 IAMs_20 IAMs_20 14 15 28.3
comp=Z,287nm,22.0s
TREC Trest 110.31 44 AMS AMS 14 20 50.0
comp=Z,600nm,20.8s
HDA Harding Lake 110.73 333 IAMs_20 IAMs_20 14 27 03.9
comp=Z,289nm,20.0s
SUA Susitna One 111.04 330 PKiKP **PKiKP** **13 34 33.3 +1.9**
baz=114
RND Reindeer 111.05 332 IAMs_20 IAMs_20 14 21 48.1
comp=Z,273nm,19.0s
UPC Upice 111.08 43 AMS AMS 14 23 20.0
comp=Z,500nm,21.0s
CHVC Chvalec 111.14 43 AMS AMS 14 23 30.0
comp=Z,400nm,16.8s
CHIR Chirikof Islan 111.15 323 IAMs_20 IAMs_20 14 23 04.9
comp=Z,256nm,21.0s
CCB Clear Creek Bu 111.16 333 IAMs_20 IAMs_20 14 20 50.9
comp=Z,297nm,20.0s
KONO Kongsberg 111.18 33 IAMs_20 IAMs_20 14 26 52.9
comp=Z,344nm,20.0s
DPC Dobruska-Polom 111.21 43 AMS AMS 14 23 30.0
comp=Z,400nm,17.7s
OSTC Ostas 111.22 43 AMS AMS 14 23 20.0
comp=Z,500nm,27.3s
MCK McKinley 111.22 332 IAMs_20 IAMs_20 14 23 29.5
comp=Z,374nm,21.0s
COLA College 111.28 334 IAMs_20 IAMs_20 14 27 28.6
comp=Z,273nm,22.0s
TCOL CIGO, UAF Yank 111.28 334 IAMs_20 IAMs_20 14 20 17.6
comp=Z,261nm,20.0s
KRLC Kraliky 111.38 44 AMS AMS 14 21 40.0
comp=Z,400nm,22.7s
MDM Murphy Dome 111.46 334 IAMs_20 IAMs_20 14 19 37.8
comp=Z,284nm,21.0s
SKT Skwentna 111.59 330 PKiKP **PKiKP** **13 34 34.2 +2.0**
baz=113
BWN Browne 111.62 333 IAMs_20 IAMs_20 14 25 05.2
comp=Z,381nm,22.0s
NEA2 Nenana 111.64 333 IAMs_20 IAMs_20 14 27 42.4
comp=Z,296nm,20.0s
NEA2 Nenana 111.64 333 PKiKP **PKiKP** **13 34 33.9 +1.7**
baz=114
H24K Noodor Dome 111.70 335 IAMs_20 IAMs_20 14 25 14.0
comp=Z,441nm,20.0s
MAUC Maruska 111.75 45 AMS AMS 14 22 40.0
comp=Z,800nm,20.1s
I23K Minto, Yukon-K 111.98 334 IAMs_20 IAMs_20 14 20 40.4
comp=Z,262nm,19.0s
OKC Ostrava-Krasne 112.12 44 AMS AMS 14 22 50.0
comp=Z,500nm,20.3s
M20K Styx River 112.25 330 IAMs_20 IAMs_20 14 19 58.5
comp=Z,243nm,20.0s
H23K Yukon River 112.32 334 IAMs_20 IAMs_20 14 20 15.4
comp=Z,292nm,22.0s
H23K Yukon River 112.32 334 PKiKP **PKiKP** **13 34 35.7 +2.2**
baz=114
CAST Castle Rocks 112.39 331 IAMs_20 IAMs_20 14 22 16.4
comp=Z,297nm,22.0s
O18K Koktuh Hills 112.45 327 PKiKP **PKiKP** **13 34 35.8 +1.9**
baz=111
N19K Bonanza Creek 112.46 328 IAMs_20 IAMs_20 14 32 18.1
comp=Z,247nm,21.0s
MLY Manley 112.47 333 IAMs_20 IAMs_20 14 20 56.4
comp=Z,279nm,20.0s
MLY Manley 112.47 333 PKiKP **PKiKP** **13 34 35.9 +2.0**
baz=113
M19K Big River Lodg 112.81 329 PKiKP **PKiKP** **13 34 36.7 +2.2**
baz=111
I21K Tanana 113.01 333 IAMs_20 IAMs_20 14 26 20.7
comp=Z,345nm,20.0s
N18K Kilae Creek 113.06 328 PKiKP **PKiKP** **13 34 37.0 +2.0**
baz=111
L19K White Mountain 113.12 330 IAMs_20 IAMs_20 14 20 26.8
comp=Z,299nm,19.0s
TOLK Toolik Lake Re 113.43 337 IAMs_20 IAMs_20 14 24 41.2
comp=Z,268nm,19.0s
TOLK Toolik Lake Re 113.43 337 PKiKP **PKiKP** **13 34 37.5 +1.9**
baz=112
H21K Melozitna Rive 113.50 333 IAMs_20 IAMs_20 14 20 50.7
comp=Z,349nm,21.0s
J20K Nowinta River 113.52 332 PKiKP **PKiKP** **13 34 37.1 +1.3**
baz=110
SDPT Sand Point 113.56 321 PKiKP **PKiKP** **13 34 37.5 +1.4**
baz=109
O16K Kokwok River B 113.73 326 PKiKP **PKiKP** **13 34 38.2 +1.9**
baz=109
TTA Tatalina 113.88 330 PKiKP **PKiKP** **13 34 38.5 +1.8**
baz=109
BURAR Bucovina Array 115.83 48 **PKPdf** **13 34 41.2 +0.3**
ISP Isparta 116.59 60 IAMs_20 IAMs_20 14 31 31.8
comp=Z,437nm,22.0s
A21K Barrow 116.59 339 IAMs_20 IAMs_20 14 25 32.0
comp=Z,261nm,20.0s
ATD Arta Tunnel 116.73 92 IAMs_20 IAMs_20 14 32 44.3
comp=Z,400nm,20.0s
MILM Milestii Mici 118.00 50⇑ *i*PKP **PKPdf** **13 34 39.0 -5.9**
comp=Z,5.0nm,0.3s
MILM Milestii Mici 118.00 50 *e*PP PP 13 36 15.0 +15
MILM LRM MLR 14 29 42.0
comp=Z,300nm,18.0s
MILM Milestii Mici 118.00 50*c i*PKIKP **PKPdf** **13 34 39.0 -5.9**
MILM pmax pmax
comp=Z,5.0nm,0.3s
RDOG Red Dog Mine 118.00 335 IAMs_20 IAMs_20 14 29 40.4
comp=Z,244nm,19.0s
ANM Nome 118.32 331 IAMs_20 IAMs_20 14 28 34.8
comp=Z,217nm,18.0s
NACGM Naroch 118.63 41 PP PP 13 36 01.8 -2.4
AKASG Malin Array Be 119.17 46 PKP **PKPdf** **13 34 45.7 -1.3**
comp=Z,4.7nm,0.8s,baz=279,slow=1.9,SNR=14
AKBB Malin Array Si 119.17 46 PKPdf **PKPdf** **13 34 46.3 -0.8**
AKBB Malin Array Si 119.17 46*d i*PKIKP **PKPdf** **13 34 46.6 -0.4**
BR131 Keskin Array S 119.48 59⇑ *i*PKIKP **PKPdf** **13 34 48.7 +0.5**
BRTR Keskin Array B 119.48 59 PKP **PKPdf** **13 34 47.4 -0.9**
comp=Z,2.4nm,0.8s,baz=191,slow=3.8,SNR=9.2
BRTR Keskin Array B 119.48 59 PKPdf **PKPdf** **13 34 47.7 -0.5**
TNA Tin City 119.55 332 PKiKP **PKiKP** **13 34 48.7 +1.3**
baz=98
ILGA Ilgaz 119.89 57 **PKPdf** **13 34 49.0 -0.1**
ASAR Alice Springs 121.27 207 PKP **PKPdf** **13 34 51.0 -1.2**
comp=Z,5.6nm,0.9s,baz=148,slow=2.2,SNR=36
ASAR PKKPbc **PKKPbc** **13 44 53.9 +0.6**
comp=Z,1.2nm,0.9s,baz=343,slow=2.4,SNR=6.8
ASAR Alice Springs 121.27 207 PKPdf **PKPdf** **13 34 50.8 -1.4**
ASAR Alice Springs 121.27 207 PKiKP **PKPdf** **13 34 51.0 -1.2**
AS31 Alice Springs 121.27 207 PKPdf **PKPdf** **13 34 50.9 -1.2**
APA Apatity 123.08 26⇓ *i*PKIKP **PKPdf** **13 34 50.6 -3.5**
APA *i* 13 36 37.6
RAYN Ar Rayn 124.02 81 PKPdf **PKPdf** **13 34 57.1 -0.2**
OBN Obninsk 124.23 41 PKP **PKPdf** **13 34 56.6 0.0**
comp=Z,4.2nm,0.4s,baz=329,slow=5.8,SNR=3.8
OBN Obninsk 124.23 41 *i* PKIKP **PKPdf** **13 34 56.1 -0.5**
OBN pmax pmax
comp=Z,16nm,1.3s
WR0 Warramunga Arr 124.30 210 PKPdf **PKPdf** **13 34 57.3 -0.7**
WB2 Warramunga Arr 124.40 210 PKPdf **PKPdf** **13 34 57.0 -1.2**
WRA Warramunga Arr 124.41 210 PKP **PKPdf** **13 34 57.3 -0.9**
comp=Z,11nm,0.8s,baz=156,slow=1.6,SNR=105
WRA Warramunga Arr 124.41 210 **PKPdf** **13 34 57.1 -1.1**
WRAB Tennant Creek 124.41 210 **PKPdf** **13 34 57.2 -1.0**
WRAB Tennant Creek 124.41 210*c i*PKIKP **PKPdf** **13 34 57.7 -0.5**
WRAB pmax pmax
comp=Z,31nm,1.7s
WB0 Warramunga Arr 124.54 210 PKPdf **PKPdf** **13 34 57.3 -1.1**
COEN Coen 124.93 222 PKPdf **PKPdf** **13 34 59.0 -0.3**
LPSR Galich'ya Gora 125.42 45 *e*PKIKP **PKPdf** **13 34 58.1 -0.9**
LPSR pmax pmax
comp=Z,10.0nm,0.9s
VSR Storozhevoye 125.45 46 *e*PKIKP **PKPdf** **13 34 58.1 -1.0**
VSR pmax pmax
comp=Z,10.0nm,1.0s
VORD Divnogorie 125.51 47 *e*PKIKP **PKPdf** **13 34 58.3 -0.9**
VORD pmax pmax
comp=Z,10.0nm,0.5s
VORR Voronezh 125.52 46 *e*PKIKP **PKPdf** **13 34 58.3 -0.9**
VORR pmax pmax
comp=Z,50nm,0.4s
KLMR Klimovskoe 125.93 34 *e*PKIKP **PKPdf** **13 34 58.7 -1.0**
KLMR pmax pmax
comp=Z,33nm,1.2s
KLMR Klimovskoe 125.93 34 *e*PKPdf **PKPdf** **13 34 58.8 -1.0**
KLMR AMP 13 35 01.7
comp=Z,33nm,1.2s
KLMR *e*PP **PP** **13 36 48.8 -4.8**
H11S2 WAKE ISLAND Hyl 126.17 272 T T 15 53 52.5
baz=114,slow=75
H11S1 WAKE ISLAND Hyl 126.18 272 T T 15 53 50.4
baz=114,slow=75
H11S3 WAKE ISLAND Hyl 126.19 272 T T 15 53 53.8
baz=114,slow=75
H11N3 WAKE ISLAND Hyl 126.48 273 T T 15 54 19.0
baz=116,slow=76
H11N1 WAKE ISLAND Hyl 126.50 273 T T 15 54 17.2
baz=116,slow=76
H11N2 WAKE ISLAND Hyl 126.50 273 T T 15 54 19.2
baz=116,slow=76
KIV Kislovodsk 126.97 56 *e*PKIKP **PKiKP** **13 35 03.7 +0.8**
KIV pmax pmax
comp=Z,14nm,1.1s
VRH Novokhopyorsk 127.06 46 *e*PKIKP **PKPdf** **13 35 01.5 -0.7**
VRH pmax pmax
comp=Z,10.0nm,0.9s
KBZ Khabaz 127.09 56 PKP **PKPdf** **13 35 03.6 +1.1**
comp=Z,7.1nm,1.0s,baz=271,slow=4.1,SNR=12
ZEI Tsey 127.68 57 *i* PKIKP **PKPdf** **13 35 03.2 -0.8**
ZEI pmax pmax
comp=Z,7.0nm,1.1s
GNI Garni 127.89 61 PKP **PKPdf** **13 35 05.3 +0.9**
comp=Z,2.4nm,0.3s,baz=179,slow=8.6,SNR=4.3
GNI Garni 127.89 61 IAMs_20 IAMs_20 14 40 58.0
comp=Z,192nm,20.0s
GNI Garni 127.89 61‖ *e*PKIKP **PKPdf** **13 35 05.0 +0.6**
PRGR Permogore 128.81 33 *e*PKIKP **PKPdf** **13 35 04.6 -0.6**
BILL Bilibino 129.45 336 PKPdf **PKPdf** **13 35 06.9 +0.6**
BILL Bilibino 129.45 336*de*PKIKP **PKPdf** **13 35 06.7 +0.4**
BILL *i* 13 35 18.4
BILL *i* 13 37 18.1
BILL pmax pmax
comp=Z,7.0nm,1.1s
MAK Makhachkala 130.33 57 *e*P **Pdif** **13 31 57.2 -1.2**
MAK *i* 13 35 08.6
MAK *e* 13 37 21.3
MAK pmax pmax
comp=Z,138nm,1.0s
BELG Belogornoye 130.73 45 PKP **PKPdf** **13 35 09.4 +0.3**
comp=Z,11nm,0.6s,baz=7.9,slow=4.3,SNR=5.1
BELG Belogornoye 130.73 45*d* PKIKP **PKPdf** **13 35 09.2 +0.1**
KIRV Kirov 131.14 37 PKP **PKPdf** **13 35 09.8 +0.1**
comp=Z,8.0nm,0.7s,baz=240,slow=1.0,SNR=6.7
KIRV Kirov 131.14 37‖ *e*PKIKP **PKPdf** **13 35 10.4 +0.7**
ARU Arti 136.42 38 PKP **PKPdf** **13 35 20.5 +0.8**
comp=Z,4.9nm,0.5s,baz=322,slow=4.4,SNR=9.4
ARU Arti 136.42 38 PKPdf **PKPdf** **13 35 20.2 +0.5**
ARU Arti 136.42 38 *i* PKIKP **PKPdf** **13 35 20.3 +0.5**
ARU 13 37 59.0
ARU MLR MLR
comp=Z,368nm,19.0s
COCO West Island 136.54 163 *i* PKIKP **PKPdf** **13 35 19.6 -1.6**
SEY Seymchan 136.78 332 *ce*PKIKP **PKPdf** **13 35 21.2 +1.0**
TIXI Tiksi 136.88 351 PKPdf **PKPdf** **13 35 20.6 +0.5**
TIXI Tiksi 136.88 351‖ *e*PKIKP **PKPdf** **13 35 20.3 +0.2**
AKTO Aktyubinsk 137.40 47 PKP **PKPdf** **13 35 22.4 +0.7**
comp=Z,4.9nm,0.8s,baz=317,slow=1.9,SNR=3.8
AKTO Aktyubinsk 137.40 47 PKPdf **PKPdf** **13 35 22.1 +0.4**
PETK Petropavlovsk- 137.63 317 PKP **PKPdf** **13 35 22.6 +0.5**
comp=Z,8.8nm,0.9s,baz=90,slow=4.3,SNR=5.4
GEYT Alibeck 137.94 65 PKP **PKPdf** **13 35 22.1 -1.0**
comp=Z,6.3nm,0.9s,baz=251,slow=7.5,SNR=6.9
GEYT Alibeck 137.94 65 PKPdf **PKPdf** **13 35 23.2 0.0**
AB31 Akbulak array 138.82 48 *i* PKIKP **PKPdf** **13 35 23.6 -0.8**
ABKAR Akbulak array 138.82 48 PKPdf **PKPdf** **13 35 25.0 +0.7**
NRIK Noril'sk 138.87 11 PKP **PKPdf** **13 35 23.9 0.0**
comp=Z,1.0nm,0.3s,baz=1.4,slow=2.0,SNR=4.2
NRIK Noril'sk 138.87 11*ce*PKIKP **PKPdf** **13 35 24.5 +0.6**
MA2 Magadan 139.04 328 IAMs_20 IAMs_20 14 47 00.2
comp=Z,251nm,22.0s
EDFI Ende, Flores 139.39 200 PKP **PKPdf** **13 35 25.4 -1.3**
HRA Herat 140.91 71 PKPdf **PKPdf** **13 35 28.9 0.0**
AAI Ambon 141.51 213 PKP **PKPdf** **13 35 30.2 -0.2**
BKSI Bulukumba 143.10 200 PKP PKPbc 13 35 31.6 +1.6
KAPI Kappang 143.50 199 PKPab 13 35 31.7 +1.5
BRVK Borovoye 143.96 39 PKPab 13 35 31.6 +0.8
BRVK Borovoye 143.96 39 *i* PKIKP **PKPdf** **13 35 33.8 +0.3**
SANI Sanana 143.96 211 PKP PKPab 13 35 33.0 +1.0
BNSI Bone 143.98 200 PKP PKPbc 13 35 34.0 +1.4
KASI Kota Agung 144.43 173 PKP **PKPab** **13 35 34.0 +0.3**
SPSI Sidrap Palu 144.49 200 PKP **PKPab** **13 35 34.3 +0.4**
LBMI Labuha 144.50 214 PKP **PKPab** **13 35 34.8 +0.8**
BLSI Bandar Lampung 144.66 174 PKP **PKPab** **13 35 34.2 -0.3**
LWLI Liwa 144.88 172 PKP **PKPab** **13 35 35.6 +0.1**
YAK Yakutsk 145.13 343 PKPbc **PKPbc** **13 35 34.7 0.0**
comp=Z,21nm,0.7s,baz=39,slow=0.8,SNR=27
YAK Yakutsk 145.13 343 **PKPbc** **13 35 35.1 +0.4**
YAK IAMs_20 IAMs_20 14 49 31.8
comp=Z,223nm,21.0s
YAK Yakutsk 145.13 343*c i*PKP2 **PKPbc** **13 35 34.8 0.0**
YAK *e* 13 38 54.4
YAK pmax pmax
comp=Z,83nm,0.9s
YAK pmax pmax
comp=N,17nm,1.3s
YAK pmax pmax
comp=E,12nm,1.2s
YAK pmax pmax
comp=Z,22nm,1.3s
YAK pmax pmax

comp=N,10.0nm,1.3s
YAK pmax pmax
comp=E,14nm,1.5s
TTSI Tana Toraja 145.35 200 PKP PKPbc 13 35 36.6 -0.3
KUR Kuril'sk 145.69 307 *e*PKIKP **PKPdf 13 35 37.0 +0.3**
KUR *i* 13 35 41.6
TNTI Ternate 145.78 215 PKPdf 13 35 37.5 -0.4
KBL Kabul 146.52 72 PKPdf 13 35 39.9 +1.1
BRZS Berezniki 146.56 43 *e*PKIKP **PKPdf 13 35 37.9 -0.2**
BRZS Berezniki 146.56 43 *e*PKP **PKPdf 13 35 37.9 -0.2**
baz=43
CHGR Chuvangaron 146.63 64 PKPbc 13 35 40.5 +0.1
BRLS Boroldaу 146.66 56 *e*PKIKP **PKPdf 13 35 38.4 0.0**
BRLS Boroldaу 146.66 56 *e*PKP **PKPdf 13 35 38.5 0.0**
baz=57
IUG luzhnay 146.94 58 *e*PKIKP **PKPdf 13 35 39.3 +0.2**
IUG luzhnay 146.94 58 *e*PKP **PKPdf 13 35 39.3 +0.2**
baz=58
KK31 Karatay Array 147.13 56 PKPbc 13 35 41.6 +0.1
KK31 Karatay Array 147.13 56 *i* PKIKP **PKPdf 13 35 40.3 +1.0**
KKAR Karatay Array 147.13 56 PKPdf **PKPdf 13 35 40.5 +1.2**
GAR Garm 147.52 64 PKPdf 13 35 42.2 +2.0
DZA Taraz 147.76 56 *e*PKIKP **PKPdf 13 35 40.6 +0.3**
DZA Taraz 147.76 56 *e*PKP **PKPdf 13 35 40.6 +0.3**
baz=56
BTK Batken 147.81 62 PKPdf **PKPdf 13 35 41.1 +0.6**
YSS Yuzh-Sakhalins 148.61 312 PKPdf **PKPdf 13 35 42.0 +0.5**
YSS **PKPbc 13 35 45.8 +0.5**
YSS Yuzh-Sakhalins 148.61 312||*e*PKIKP **PKPdf 13 35 43.1 +1.6**
DRK Karamyk 148.62 63 PKPdf **PKPdf 13 35 42.7 +0.4**
TOLI2 Tolitoli 148.93 204 PKPbc 13 35 46.4 -0.8
BTLS Baital 149.14 51 *e*PKIKP **PKPdf 13 35 42.9 +0.4**
BTLS Baital 149.14 51 *e*PKP **PKPdf 13 35 42.9 +0.4**
baz=52
EKS2 Erkin-Say 149.57 56 P PKPbc 13 35 49.1 +1.1
SNR=36
JKA Kamikawa-asahi 149.60 307 PKPdf **PKPdf 13 35 43.2 0.0**
JKA PKPbc **PKPbc 13 35 48.4 +0.6**
KURBB Kurchatov Arra 149.61 39 PKIKP **PKPdf 13 35 42.7 -0.3**
KURK Kurchatov 149.62 39 PKPdf **PKPdf 13 35 43.4 +0.4**
KURK PKPbc **PKPbc 13 35 48.0 +0.4**
KURK Kurchatov 149.62 39*c i*PKHKP PKPpre 13 35 42.9
AML Almayashu 149.63 57 P PKiKP 13 35 50.2 +0.7
SNR=17
ERM Erimo 149.71 303||*i*PKP2 **PKPbc 13 35 49.3 +1.1**
USP Ospenovka 149.94 55 P PKPbc 13 35 49.6 +0.8
SNR=18
HYBB Hyderabad (bro 149.97 108 *e*P **PKPbc 13 35 48.4 -1.1**
HYBB *e*PKiKP **PKiKP 13 35 48.7 -1.8**
HYBB *es*PKiKP **sPKiKP 13 36 04.5 -0.9**
SGDS Sogindy 149.99 54 *e*PKIKP **PKPdf 13 35 43.3 -0.6**
SGDS Sogindy 149.99 54 *e*PKP **PKPdf 13 35 43.4 -0.6**
baz=54
AAK Ala-Archa 150.09 56 P PKPbc 13 35 50.5 +1.2
SNR=30
AAK Ala-Archa 150.09 56 PKPbc **PKPbc 13 35 50.3 +1.0**
AAK Ala-Archa 150.09 56*de*PKHKP PKPpre 13 35 46.1
CHMS Chumysh 150.19 55 P PKPbc 13 35 50.3 +0.9
SNR=20
UCH Uchtor 150.20 57 P PKPdf 13 35 46.8 +1.9
SNR=7.6
KBK Karagaybulak 150.41 56 P PKiKP 13 35 51.5 +0.6
SNR=25
GRNR Gornyy 150.60 323 *e*PKIKP **PKPdf 13 35 45.8 +1.2**
ZAA0 Zalesovo Array 150.61 29 PKPdf **PKPdf 13 35 44.7 +0.2**
ZAA0 PKPbc **PKPbc 13 35 50.3 +0.3**
ZALV Zalesovo Beam 150.61 29 PKP **PKPdf 13 35 45.2 +0.7**
comp=E,3.7nm,0.4s,baz=286,slow=3.5,SNR=22
ZALV PKPbc **PKPbc 13 35 50.2 +0.3**
comp=E,68nm,0.7s,baz=309,slow=3.2,SNR=120
SEM Semipalatinsk 150.66 38 *e*PKIKP **PKPdf 13 35 44.4 -0.6**
SEM *i* 13 35 50.5
SEM Semipalatinsk 150.66 38 *e*PKP **PKPdf 13 35 44.5 -0.6**
baz=38
SEM *e*PKiKP **PKPbc 13 35 50.6 +0.1**
baz=38
TKM2 Tokmak 2 150.81 55 P PKPdf 13 35 46.6 +1.2
SNR=6.3
KUU Kurty 151.05 53 *e*PKIKP **PKPdf 13 35 44.9 -0.6**
KUU *i* 13 35 52.0
KUU Kurty 151.05 53 *e*PKP **PKPdf 13 35 45.0 -0.6**
baz=53
KUU *e*PKiKP **PKPbc 13 35 52.0 +0.6**
baz=53
ULHL Ulahol 151.44 56 P PKPdf 13 35 48.1 +1.6
SNR=5.2
JTM Tenmabayashi 151.50 301 PKPbc 13 35 52.9 +0.4
CHKK Chushkaly 151.51 52 *e*PKIKP **PKPdf 13 35 45.6 -0.6**
CHKK *i* 13 35 52.9
CHKK Chushkaly 151.51 52 *e*PKP **PKPdf 13 35 45.6 -0.6**
baz=52
CHKK *e*PKiKP **PKPbc 13 35 53.0 +0.5**
baz=52
KSM Kuching 151.53 184 PKPdf **PKPdf 13 35 45.7 -1.5**
KSM **PKPbc 13 35 52.8 -0.6**
AAA Alma-Ata 151.65 54 *i* PKIKP **PKPbc 13 35 53.5 +0.6**
AAA Alma-Ata 151.65 54 *e*PKIKP **PKPbc 13 35 53.5 +0.6**
baz=54
TNSS Tian-Shan 151.73 54 *i* PKIKP **PKPbc 13 35 53.9 +0.5**
TNSS Tian-Shan 151.73 54 *e*PKiKP **PKPbc 13 35 54.0 +0.5**
baz=54
MDOK Medeo 151.76 54 *e*PKIKP **PKPdf 13 35 46.7 -0.1**
MDOK *i* 13 35 53.7
MDOK Medeo 151.76 54 *e*PKP **PKPdf 13 35 46.8 -0.1**
baz=54
MDOK *e*PKiKP **PKPbc 13 35 53.8 +0.6**
baz=54
KSH Kashi 151.81 62 PKPbc **PKPdf 13 35 48.7 +1.7**
KSH pPKP PKiKP 13 35 55.0 +1.2
KSH sPKP 13 36 03.4
KSH PP **PP 13 39 32.4 -2.1**
KSH AMB AMB
comp=E,300nm,5.2s
ARXS Arharly 151.96 51 *e*PKIKP **PKPdf 13 35 47.7 +0.7**
BOD Bodaibo 151.97 354 *e*PKIKP **PKPdf 13 35 46.4 0.0**
BOD pmax pmax
comp=Z,34nm,1.6s
KDJ Kajisay 152.15 56 PKPdf 13 35 48.0 +0.5
KDJ PKPbc **PKPbc 13 35 54.5 +0.3**
JMM Marumori 152.18 295 PKPbc 13 35 53.8 -0.3
SBUM Sibu 152.32 188 PKPbc 13 35 54.9 -0.2
ZEA Zeya 152.67 335 *i* PKIKP **PKPdf 13 35 48.2 +0.6**
ZEA pmax pmax
comp=Z,100nm,7.0s
ZEA pmax pmax
comp=Z,10.0nm,1.1s
SATY Saty 152.74 53 *i* PKIKP **PKPbc 13 35 55.7 +0.3**
SATY Saty 152.74 53 *e*PKiKP **PKPbc 13 35 55.7 +0.3**
baz=53
KPKS Kokpek 152.80 52 *e*PKIKP **PKPdf 13 35 47.5 -0.8**
KPKS *i* 13 35 55.9
KPKS Kokpek 152.80 52 *e*PKP **PKPdf 13 35 47.5 -0.8**
baz=52
KPKS *e*PKiKP **PKPbc 13 35 55.9 +0.5**
baz=52
JYT Yasato 152.80 292 PKPbc 13 35 55.6 +0.1
SHLS Shalkode 153.44 53 *e*PKIKP **PKPdf 13 35 49.9 +0.7**
SHLS *i* 13 35 58.3
SHLS Shalkode 153.44 53 *e*PKP **PKPdf 13 35 50.0 +0.7**
baz=52
SHLS *e*PKiKP **PKiKP 13 35 58.4 +1.3**
baz=52
MAKZ Makanchi 153.52 43 PKPdf **PKPdf 13 35 49.1 0.0**
MAKZ PKPbc **PKPbc 13 35 56.6 -0.3**
MK31 Makanchi Array 153.72 43 PKPdf 13 35 49.5 +0.1
MK31 PKPbc **PKPbc 13 35 57.3 0.0**
MK31 PKPab **sPKPbc 13 36 10.8 -1.4**
MK31 Makanchi Array 153.72 43*d i*PKIKP **PKPdf 13 35 49.7 +0.3**
MKAR Makanchi Array 153.72 43 PKP **PKPdf 13 35 49.7 +0.3**
comp=Z,3.3nm,0.9s,baz=318,slow=1.6,SNR=22
MKAR PKPbc **PKPbc 13 35 57.5 +0.2**
comp=Z,5.9nm,0.7s,baz=309,slow=2.3,SNR=26
MKAR Makanchi Array 153.72 43 PKPdf 13 35 49.3 -0.1
MKAR PKPbc **PKPbc 13 35 57.3 0.0**
MKAR PKPab **sPKPbc 13 36 10.3 -1.9**
KLR Kul'dur 153.94 324*c i*PKIKP **PKPdf 13 35 49.1 -0.5**
JSD Sado 154.14 296 PKPbc 13 35 57.9 -0.5
MJAR Matsushiro Arr 154.37 293 PKP **PKPdf 13 35 51.1 +0.4**
comp=Z,2.2nm,0.8s,baz=107,slow=2.2,SNR=8.3
MJAR PKPbc **PKPbc 13 35 58.7 -0.3**
comp=Z,4.4nm,1.0s,baz=309,slow=0.2,SNR=5.0
MJAR PKPab **PKPab 13 36 14.2 +0.9**
comp=Z,5.5nm,0.8s,baz=98,slow=2.1,SNR=9.8
MJAR Matsushiro Arr 154.37 293 PKPdf 13 35 49.8 -0.8
MJAR PKPbc **PKPbc 13 35 58.8 -0.3**
MJAR PKPab **PKPab 13 36 14.3 +1.0**
MAJO Matsushiro 154.37 293 PKPab PKPab 13 36 14.1 +0.8
MAJO Matsushiro 154.37 293*c i*PKIKP **PKPdf 13 35 49.8 -0.9**
MJB9 Matsu-Tunnel 154.38 293 PKPab **PKPab 13 36 14.0 +0.6**
ZSN Zaisan 154.84 40 *e*PKIKP **PKPdf 13 35 49.2 -1.7**
ZSN Zaisan 154.84 40 *e*PKP **PKPdf 13 35 49.2 -1.7**
baz=40
INU Inuyama 155.44 290 PKPdf **PKPdf 13 35 52.4 +0.3**
USA0B Ussuriysk Arra 156.62 314*c i*PKIKP **PKPdf 13 35 52.4 -1.0**
USRK Ussuriysk Ar. 156.62 314 PKP **PKPdf 13 35 53.5 +0.1**
comp=Z,1.3nm,0.6s,baz=101,slow=1.9,SNR=5.8
USRK PKPab **PKPab 13 36 23.6 +1.0**
comp=Z,4.6nm,0.9s,baz=63,slow=5.1,SNR=5.1
IRK Irkutsk 157.61 7 *e*PKIKP **PKPdf 13 35 54.6 +0.2**
IRK *e* 13 36 25.7
IRK *e* 13 40 07.7
IRK pmax pmax
comp=Z,37nm,2.2s
MDJ Mudanjiang 157.87 317 PKPdf 13 35 55.1 +0.1
WMQ Urumqi 158.52 45 *e*PKP **PKPdf 13 35 56.7 +0.8**
WMQ LR LR
comp=Z,310nm,16.5s
WMQ LR LR
comp=Z,320nm,18.1s
WMQ LR LR
comp=Z,380nm,20.7s
HIA Hailar 158.97 339 IAMs_20 IAMs_20 14 45 16.2
comp=Z,275nm,22.0s
ZAK Zakamensk 159.31 9 *e*PKIKP **PKPdf 13 35 57.1 +0.4**
ZAK pmax pmax
comp=Z,6.0nm,1.6s
CN2 Changchun 160.74 320 *e*PKP **PKPdf 13 35 54.2 -4.1**
CN2 *e*PP **PP 13 40 21.8 -1.3**
CN2 SKS **SKSdf 13 42 54.2 -6.6**
CN2 SKKS **SKKSac 13 47 04.6 -4.4**
CN2 *e*SS **SS 14 00 28.2 -5.3**
CN2 AMB AMB
comp=Z,150nm,11.0s
CN2 LR LR
comp=Z,120nm,19.0s
CN2 LR LR
comp=Z,200nm,19.0s
CN2 LR LR
comp=Z,340nm,20.0s
SONM Songino Array 162.16 5 PKP **PKPdf 13 36 00.3 +0.4**
comp=Z,1.6nm,0.8s,baz=266,slow=0.6,SNR=11
SONM PKPab **PKPab 13 36 48.1 +1.5**
comp=Z,3.7nm,0.9s,baz=329,slow=3.7,SNR=11
SONM PP **PP 13 40 28.7 -1.4**
comp=Z,4.2nm,1.2s,baz=333,slow=3.1,SNR=12
SONM Songino Array 162.16 5 PKPdf **PKPdf 13 36 00.3 +0.4**
SONM PKPab **PKPab 13 36 47.5 +0.9**
ULN Ulaanbaatar 162.17 3 PKPdf **PKPdf 13 36 00.3 +0.4**
ULN PKPab **PKPab 13 36 48.4 +1.7**
KSRS Korea Array 162.23 300 PKP **PKPdf 13 36 00.3 +0.3**
comp=Z,2.7nm,1.0s,baz=133,slow=0.3,SNR=11
KSAR Wonju Array Be 162.26 300 PKPdf **PKPdf 13 36 00.0 -0.1**
XLT XiLinHaoTe 164.90 338 *e*PKP **PKPdf 13 36 02.4 -0.1**
CMAR Chiang Mai Arr 165.57 141 PKP **PKPdf 13 36 04.2 +0.5**
comp=Z,2.6nm,1.0s,baz=246,slow=2.2,SNR=14
CMAR PKPab **PKPab 13 37 04.1 +1.9**
comp=Z,0.5nm,0.3s,baz=224,slow=2.5,SNR=1.7
CMAR Chiang Mai Arr 165.57 141 PKPdf 13 36 02.9 -0.8
GOMU GeErMu 167.02 58 PKP **PKPdf 13 36 04.9 +0.1**
GOMU pPKP pPKPdf 13 36 10.6 -5.4
GOMU sPKP 13 36 16.0
GOMU AMB AMB
comp=Z,120nm,4.8s
GOMU LR LR
comp=Z,310nm,19.7s
GOMU LR LR
comp=Z,200nm,20.0s
GOMU LR LR
comp=Z,220nm,19.0s
BJI Beijing 168.20 330 PKP **PKPdf 13 36 05.0 0.0**
BJI pPKP **pPKPdf 13 36 16.7 +0.5**
BJI PP **PP 13 41 02.0 +0.2**
BJI AMB AMB
comp=Z,170nm,8.1s
GTA Gaotai 168.26 35⇑PKP **PKPdf 13 36 05.9 +0.6**
GTA sPKP 13 36 17.5
GTA PKPab **PKPab 13 37 14.1 +0.3**
GTA PP **PP 13 41 01.7 -0.7**
GTA AMB AMB
comp=Z,180nm,6.2s
GTA LR LR
comp=Z,240nm,20.7s
GTA LR LR
comp=Z,240nm,21.1s
GTA LR LR
comp=Z,420nm,22.2s
HHC Hu-ho-hao-te 168.93 348 *e*PKP **PKPdf 13 36 06.0 +0.4**
HHC PP **PP 13 41 03.0 -2.2**
HHC LR LR
comp=Z,490nm,19.0s
HHC LR LR
comp=Z,470nm,18.4s
HHC LR LR
comp=Z,750nm,18.4s
QIZ Qiongzhong 168.96 187 PKP **PKPdf 13 36 07.2 +1.0**
QIZ PP **PP 13 41 03.1 -2.1**
QIZ LR LR
comp=Z,260nm,21.1s
QIZ LR LR
comp=Z,180nm,17.2s
QIZ LR LR
comp=Z,240nm,20.7s
BTO Baotou 169.39 354 *e*PKP **PKPdf 13 36 05.4 -0.5**
NJ2 Nanjing 170.87 285 *e*PKP **PKPdf 13 36 10.1 +3.2**
HNS HongShan 171.01 326||PKP **PKPdf 13 36 08.0 +1.2**
HNS PP **PP 13 41 14.8 -1.2**
HNS AMB AMB
comp=Z,230nm,9.2s
HNS LR LR
comp=Z,200nm,17.9s
HNS LR LR
comp=Z,220nm,18.1s
HNS LR LR
comp=Z,380nm,21.4s
LZH Lanzhou 172.83 32||PKP **PKPdf 13 36 09.6 +1.7**
LZH pPKP sPKPdf 13 36 20.5 -2.4
LZH PKPab **PKPab 13 37 35.9 +1.7**
LZH PP **PP 13 41 23.8 -1.4**
LZH AMB AMB
comp=Z,200nm,4.3s
LZH LR LR
comp=Z,350nm,19.0s
LZH LR LR
comp=Z,220nm,17.9s
LZH LR LR
comp=Z,350nm,17.4s
KMI Kunming 172.94 133⇑PKP **PKPdf 13 36 08.6 +0.2**
KMI sPKP 13 36 19.8
KMI LR LR
comp=Z,220nm,23.2s
KMI LR LR
comp=Z,210nm,25.7s
KMI LR LR
comp=Z,370nm,24.4s
PZH PanZhiHua 173.10 119 PKP **PKPdf 13 36 07.3 -1.0**
PZH pPKP **pPKPdf 13 36 19.6 +0.2**
PZH PKPab **PKPab 13 37 36.1 +0.4**
PZH SKKS 13 48 13.6
PZH AMB AMB
comp=Z,140nm,4.4s
PZH LR LR
comp=Z,670nm,26.3s
PZH LR LR
comp=Z,680nm,24.3s
PZH LR LR
comp=Z,410nm,23.7s
WHN Wuhan 174.89 277 PKP **PKPdf 13 36 09.8 +1.2**
WHN PP **PP 13 41 33.5 -3.0**
WHN LR LR
comp=Z,880nm,22.8s
CD2 Chengdu 175.84 77 PKP **PKPdf 13 36 09.2 +0.3**
CD2 pPKP pPKPdf 13 36 20.5 +0.4
CD2 PP **PP 13 41 38.2 -2.9**
CD2 SKKS 13 48 26.0
CD2 AMB AMB
comp=Z,250nm,8.8s
CD2 LR LR
comp=Z,300nm,20.6s
CD2 LR LR
comp=Z,320nm,19.6s
XAN Xi'an 176.00 355||PKP **PKPdf 13 36 09.6 +0.8**
XAN pPKP pPKPdf 13 36 20.4 +0.4
XAN PKPab **PKPab 13 37 48.2 +0.2**
XAN PP **PP 13 41 39.1 -0.7**
XAN SKKS 13 48 22.6
XAN AMB AMB
comp=Z,310nm,5.3s
XAN LR LR
comp=Z,230nm,17.9s
XAN LR LR
comp=Z,260nm,16.4s
XAN LR LR
comp=Z,490nm,20.6s
GYA Guiyang 176.09 156||PKP **PKPdf 13 36 09.4 +0.2**
GYA sPKP 13 36 22.2
GYA PP **PP 13 41 39.2 -1.5**
GYA SS SS 14 03 09.8 +3.3
GYA AMB AMB
comp=Z,160nm,8.0s
GYA LR LR
comp=Z,280nm,20.1s
ENH Enshi 179.09 285 PKPdf 13 36 08.6 -0.8

IDC ***06*** *13:21:54.4±0.3,30.07S×71.48W,h0km,mb5.2/21, mbtmp5.2/26,ML4.8/5,MS4.6/16,Error ellipse: s-maj=15.6km s-min=10.7km az=85.0*
SJA ***06*** *13:21:54.6±0.6,30.02S×71.79W,h15km,ML5.5,MW5.2*
MOS ***06*** *13:21:58.5±0.9,29.95S×71.46W,h33km,mb5.5/56,Error ellipse: s-maj=10.7km s-min=5.9km az=96.5*
NEIC ***06*** *13:21:58.3,30.00S×71.58W,h39km,Moment Tensor Solution. Moment tensor: Scale 10^16Nm; Mrr6.54; Mθθ0.60; Mϕϕ-7.14; Mrθ1.01; Mθϕ-1.20; Mϕr-2.23; Fault plane solution: M0 7.38000×10^16 NP1:ϕs177.23000°, δ54.40000°,λ75.84000°. NP2:ϕs20.66000°,δ37.97000°, λ108.86000°. Principal axes: T 7.1148, Plg76.0000°, Azm43.0000°; N 0.5063, Plg11.0000°, Azm186.0000°; P -7.6211, Plg8.0000°, Azm277.0000°;*
GUC ***06*** *13:21:58.7±0.7,30.06S×71.53W,h44km±2km,ML5.5*
BJI ***06*** *13:21:59.0±0.0,30.00S×71.50W,h30km,mB5.3/25, Ms5.3/26,Ms7 5.1/26*
NEIC ***06*** *13:21:59,30.00S×71.70W,h36km,Moment Tensor Solution. Duration: 2s0 Moment tensor: Scale 10^17Nm; Mrr1.32; Mθθ0.18; Mϕϕ-1.50; Mrθ-0.04; Mθϕ-0.21; Mϕr-0.54; Fault plane solution: M0 1.53000×10^17 NP1:ϕs9.00000°, δ35.00000°,λ92.00000°. NP2:ϕs186.00000°,δ55.00000°, λ88.00000°. Principal axes: T 1.4173, Plg80.0000°, Azm89.0000°; N 0.2061, Plg1.0000°, Azm187.0000°; P -1.6234, Plg10.0000°, Azm277.0000°;*
NEIC ***06*** *13:21:59.2±1.4,30.07S±0.03×71.52W±0.05,h30km±3km, mb5.5/452,Mwr5.2/87,Mww5.4,Mwr5.5(GUC) Error ellipse: s-maj=6.7km s-min=4.1km az=110.0*
GCMT ***06*** *13:22:03.2±0.2,30.06S±0.01×71.66W±0.01,h40km, MW5.5/105,Moment Tensor Solution. s84,c126; s105,c150; Duration: 1s3 Moment tensor: Scale 10^17 Nm; Mrr1.60±.04; Mθθ0.49±.03; Mϕϕ-2.08±.03; Mrθ0.02±.03; Mθϕ-0.00±.02; Mϕr-0.62±.04; Best double couple: M0 1.94200×10^17 NP1:ϕs1.00000°,δ36.00000°, λ91.00000°. NP2:ϕs179.00000°,δ54.00000°,λ89.00000°. Principal axes: T 1.7020, Plg81.0000°, Azm85.0000°; N 0.4870, Plg1.0000°, Azm180.0000°; P -2.1820, Plg9.0000°, Azm270.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 13:21:58.9±0.7,30.08S±0.02×71.50W±0.03,h33km±3km, n1146,s1s08/1227,mb5.4/257,MS4.8/23,31C-10D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
CO05	**La Serena**	**0.28**	**55**	Pg	**Pn**	**13 22 07.0**	**+0.3**
CO05				Sg	**Sn**	**13 22 12.4**	**+0.7**
CO05	**La Serena**	**0.28**	**55**	*i* P	**Pn**	**13 22 07.1**	**+0.3**
CO05				*i* S	**Sn**	**13 22 12.6**	**+0.9**
CO06	**Fray Jorge**	**0.60**	**191**	Pn	**Pb**	**13 22 10.8**	**-0.3**
CO06				Sg	**Sb**	**13 22 19.6**	**+0.1**
CO06	**Fray Jorge**	**0.60**	**191**⇑	*i*P	**Pb**	**13 22 10.8**	**-0.3**
CO06				*i* S	**Sn**	**13 22 20.3**	**+0.4**
CO06				IAML		13 22 23.8	
	comp=N,137μm,0.6s						
GO04	**Tololo Observa**	**0.61**	**99**	Pn	**Pn**	**13 22 12.0**	**+0.4**
GO04				Sg	**Sb**	**13 22 20.3**	**+0.1**
GO04	**Tololo Observa**	**0.61**	**99**	*i* P	**Pn**	**13 22 11.8**	**+0.2**
GO04				*i* S	**Sn**	**13 22 21.3**	**+0.8**
GO04				IAML		13 22 23.2	
	comp=E,1019μm,0.4s						
GO04	**Tololo Observa**	**0.61**	**99**	*e*P	Pb	13 21 59.2	-12
GO04				*e*S	**Pn**	**13 22 11.8**	**+0.2**
CO02	**Combarbal**	**1.20**	**159**	Pn	**Pn**	**13 22 20.4**	**+0.9**
CO02	**Combarbal**	**1.20**	**159**	*i* P	**Pn**	**13 22 20.4**	**+0.9**
CO02				*i* S	**Sb**	**13 22 37.1**	**+0.6**
CO02				IAML		13 22 40.1	
	comp=E,243μm,0.5s						
CO02	**Combarbal**	**1.20**	**159**	*e*P	**Pn**	**13 22 20.0**	**+0.5**
CO02				*e*S	**Sb**	**13 22 37.0**	**+0.6**
CO02				IAML		13 22 40.0	
	comp=Z,69μm,0.2s						
CO01	**Juntas del Tor**	**1.23**	**86**	Pn	**Pb**	**13 22 21.2**	**-0.5**
CO01	**Juntas del Tor**	**1.23**	**86**		*i*P	**Pb**	**13 22 21.1**	**-0.5**
CO01				*i* S	**Sb**	**13 22 37.3**	**+0.1**
CO01	**Juntas del Tor**	**1.23**	**86**	*e*P	**Pb**	**13 22 21.0**	**-0.7**
CO01				*e*P	**Pb**	**13 22 21.1**	**-0.5**
CO01				*e*S	**Sb**	**13 22 37.9**	**+0.6**
CO01				IAML		13 22 43.5	
	comp=Z,30μm,0.3s						
LCO	**Las Campanas**	**1.27**	**33**	Pn	**Pn**	**13 22 20.9**	**+0.3**
LCO	**Las Campanas**	**1.27**	**33**	P	**Pn**	**13 22 21.0**	**+0.3**
LCO	**Las Campanas**	**1.27**	**33**		*e*P	**Pn**	**13 22 20.7**	**0.0**
LCO				*i* S	**Sb**	**13 22 38.0**	**-0.7**
LCO	**Las Campanas**	**1.27**	**33**	*e*P	**Pn**	**13 22 21.0**	**+0.3**
AROD	**Rodeo**	**1.76**	**93**	*e*P	**Pb**	**13 22 30.0**	**-0.8**
AC04	**Llanos de Chal**	**1.91**	**11**	Pn	**Pn**	**13 22 29.8**	**+0.6**
AC04	**Llanos de Chal**	**1.91**	**11**		*e*P	**Pn**	**13 22 29.7**	**+0.6**
AC04				*i* S	**Sn**	**13 22 53.9**	**+1.9**
AC04				IAML		13 23 00.8	
	comp=E,33μm,0.4s						
AC04	**Llanos de Chal**	**1.91**	**11**	*e*P	**Pn**	**13 22 29.0**	**-0.1**
AC04				*e*S	**Sb**	**13 22 56.5**	**0.0**
AC04				IAML		13 23 00.5	
	comp=Z,22μm,0.7s						
ACDV	**Cuesta del Vie**	**2.07**	**93**	*e*P	**Pb**	**13 22 35.0**	**-0.9**
ACDV				*e*S	**Sn**	**13 22 57.0**	**+0.8**
ACDV				IAML		13 23 19.1	
	comp=Z,13μm,1.2s						
ACCO	**Cerro Coronel**	**2.17**	**104**	*e*P	**Pb**	**13 22 37.0**	**-0.7**
VA06	**Catapilco**	**2.48**	**176**	Pn	**Pn**	**13 22 38.1**	**+1.1**
VA06	**Catapilco**	**2.48**	**176**	*i* P	**Pn**	**13 22 38.1**	**+1.1**
VA06				IAML		13 23 21.6	
	comp=N,49μm,0.5s						
RTLS	**Leoncito**	**2.55**	**133**	*e*P	**Pb**	**13 22 42.0**	**-2.2**
RTLS				*e*S	**Sb**	**13 23 21.5**	**+6.2**
RTLS				IAML		13 23 28.2	
	comp=Z,19μm,1.1s						
VA03	**San Esteban**	**2.79**	**163**	Pn	**Pn**	**13 22 43.6**	**+2.1**
VA03	**San Esteban**	**2.79**	**163**		*e*P	**Pn**	**13 22 42.9**	**+1.4**
VA03				*i* S	**Sn**	**13 23 15.9**	**+1.8**
VA03				IAML		13 23 31.1	
	comp=E,33μm,0.5s						
VA03	**San Esteban**	**2.79**	**163**	*e*P	**Pn**	**13 22 44.0**	**+2.5**
VA03				*e*S	**Sb**	**13 23 22.1**	**0.0**
VA03				IAML		13 23 29.5	
	comp=Z,19μm,0.7s						
AUSP	**Uspallata**	**2.80**	**140**	*e*P	**Pb**	**13 22 46.0**	**-2.4**
ZON	**Zonda**	**2.83**	**122**	Pn	**Pn**	**13 22 44.0**	**+2.1**
ZON	**Zonda**	**2.83**	**122**	P	**Pn**	**13 22 44.0**	**+2.1**
ZON	**Zonda**	**2.83**	**122**	*e*P	**Pb**	**13 22 46.0**	**-2.9**
ZON				IAML		13 23 40.5	
	comp=Z,12μm,1.3s						
RTLL	**Cerro Vililcun**	**2.89**	**116**	*e*P	**Pb**	**13 22 47.0**	**-2.8**
AC06	**Mina Casimiro**	**2.90**	**21**	Pn	**Pn**	**13 22 43.8**	**+1.0**
ROCH	**El Roble**	**2.91**	**172**	*i* P	**Pn**	**13 22 44.7**	**+1.5**
ROC1	**El Roble**	**2.92**	**172**	Pn	**Pn**	**13 22 44.4**	**+1.1**
ROC1	**El Roble**	**2.92**	**172**	*e*P	**Pn**	**13 22 45.0**	**+1.8**
VA01	**Torpederas**	**2.94**	**182**	Pn	**Pn**	**13 22 43.5**	**+0.2**
VA01	**Torpederas**	**2.94**	**182**⇑	*e*P	**Pn**	**13 22 43.7**	**+0.4**
VA01				IAML		13 23 33.7	

comp=E,13µm,0.5s
VA01 Torpederas 2.94 182 *e*P **Pn 13 22 44.0 +0.7**
VA01 IAML 13 23 32.8
comp=Z,10µm,1.9s
RTCV Cerro Valdivia 3.10 126 *e*P **Pn 13 22 45.0 -0.6**
RTCV *e*P **Pb 13 22 50.0 -3.4**
MT02 Curacav 3.18 174 Pn **Pn 13 22 48.0 +1.3**
MT02 Curacav 3.18 174ǁ *e*P **Pn 13 22 47.5 +0.7**
MT02 *e*S **Sn 13 23 24.0 +0.4**
MT02 IAML 13 23 44.7
comp=E,11µm,0.1s
MT02 Curacav 3.18 174 *e*P **Pn 13 22 48.0 +1.3**
MT02 *e*S **Sb 13 23 30.5 -2.6**
MT02 *e*S Sn 13 23 37.0 +13
MT02 IAML 13 23 40.9
comp=Z,9µm,0.6s
MT05 Renca 3.37 169 Pn **Pn 13 22 50.5 +1.3**
MT05 Renca 3.37 169 *e*P **Pn 13 22 51.3 +2.1**
MT05 *e*S **Sb 13 23 36.0 -2.4**
MT05 IAML 13 23 51.0
comp=Z,19µm,1.1s
FCH Farellones 3.40 163ǁ *e*P **Pn 13 22 51.9 +2.0**
FCH *e*S **Sn 13 23 32.0 +2.7**
FCH IAML 13 23 44.0
comp=E,8µm,0.3s
MT03 Universidad Ad 3.51 166 Pn **Pn 13 22 52.6 +1.4**
MT03 Universidad Ad 3.51 166 *e*P **Pn 13 22 53.8 +2.5**
MT03 *e*S **Sb 13 23 38.5 -4.0**
MT03 IAML 13 23 53.9
comp=Z,18µm,0.7s
AVFE Valle Fertil 3.54 100 *e*P **Pn 13 22 55.0 +3.3**
AVFE IAML 13 23 58.4
comp=Z,8µm,0.5s
VA05 Santo Domingo 3.57 182 Pn **Pn 13 22 52.0 +0.1**
MT09 Talagante 3.71 173 Pn **Pn 13 22 54.5 +0.5**
MT09 Talagante 3.71 173 *e*P **Pn 13 22 55.2 +1.2**
MT09 *i* S **Sn 13 23 38.4 +1.7**
MT01 Popeta 3.78 177 Pn **Pn 13 22 55.8 +0.9**
MT01 Popeta 3.78 177 *e*P **Pn 13 22 56.0 +1.1**
MT01 IAML 13 24 01.8
comp=Z,7µm,0.8s
AC02 Maricunga 3.85 33 Pn **Pn 13 22 56.7 +0.4**
BO04 La Punta 3.97 169 Pn **Pn 13 22 58.7 +1.1**
AC01 Pan de Azucar 4.00 12 Pn **Pn 13 22 56.6 -1.3**
AC01 Pan de Azucar 4.00 12 *e*P **Pn 13 22 57.0 -0.9**
AC01 *e*S **Sb 13 24 02.8 +6.2**
AC01 IAML 13 24 06.4
comp=Z,4µm,0.7s
ACLC CERRO LA CRUZ 4.01 82 *e*P **Pn 13 22 56.5 -1.7**
ACLC *e*P Pb 13 23 01.4 -7.5
ACLC *e*S **Sb 13 23 57.2 +0.1**
ACLC IAML 13 24 00.5
comp=Z,24µm,0.5s
ACHE Chepes 4.31 106 *e*P **Pn 13 23 05.0 +2.7**
BO01 Tunca 4.31 175 Pn **Pn 13 23 02.9 +0.7**
APLL PUNTA DE LOS L 4.32 95 *e*P **Pn 13 23 05.0 +2.7**
GO05 Huala 4.93 184 Pn **Pn 13 23 10.0 -0.7**
GO02 Mina Guanaco 5.18 20 Pn **Pn 13 23 14.3 -0.2**
PB14 IPOC Station P 5.52 10 Pn **Pn 13 23 17.4 -1.7**
ML02 Panimavida 5.67 179 Pn **Pn 13 23 21.3 +0.5**
PB10 IPOC Station P 6.60 8 Pn **Pn 13 23 31.3 -2.3**
BI05 Punta Hualpn 6.80 192 **Pn 13 23 34.2 -2.1**
PB15 IPOC Station P 7.08 15 Pn **Pn 13 23 38.5 -2.0**
H03N1 Juan Fernandez 7.14 240 Pn **Pn 13 23 40.3 -0.5**
H03N1 T T 13 31 04.7
baz=65,slow=72
H03N2 Juan Fernandez 7.16 240 Pn **Pn 13 23 40.3 -0.7**
H03N2 T T 13 31 04.4
baz=65,slow=72
H03N3 Juan Fernandez 7.16 240 Pn **Pn 13 23 40.1 -1.0**
H03N3 T T 13 31 03.5
baz=65,slow=72
H03S3 Juan Fernandez 7.32 237 Pn **Pn 13 23 41.3 -2.0**
H03S1 Juan Fernandez 7.32 237 Pn **Pn 13 23 41.0 -2.3**
H03S2 Juan Fernandez 7.33 237 Pn **Pn 13 23 41.2 -2.2**
AF01 San Pedro de A 7.70 24 Pn **Pn 13 23 45.4 -3.6**
LVC Limon Verde 7.79 18 Pn **Pn 13 23 49.5 -0.9**
comp=Z,4.8nm,0.3s,baz=161,slow=7.3,SNR=36
LVC Sn **Sn 13 25 11.1 -6.6**
comp=Z,34nm,0.3s,baz=206,slow=10,SNR=3.7
comp=Z,12nm,0.3s
LVC Limon Verde 7.79 18 Pn **Pn 13 23 48.8 -1.6**
LVC Limon Verde 7.79 18 P **Pn 13 23 48.8 -1.6**
LC02 Puerto Saavedr 8.83 190 Pn **Pn 13 24 03.4 -0.8**
PATCX Punta Patache 9.30 8 Pn **Pn 13 24 08.6 -2.3**
TA01 Diego Aracena 9.55 7 Pn **Pn 13 24 12.2 -2.0**
LR03 Panguipulli 9.55 184 **Pn 13 24 11.6 -2.6**
LR04 Corral 9.90 189 Pn **Pn 13 24 17.6 -1.3**
PLCA Paso Flores 10.66 176 Pn **Pn 13 24 30.0 +0.7**
comp=Z,2.0nm,0.3s,baz=80,slow=22,SNR=1.2
comp=Z,27nm,0.8s
LL03 Petrohue 11.06 184 Pn **Pn 13 24 35.0 +0.3**
LL05 Los Muermos 11.41 188 Pn **Pn 13 24 39.6 0.0**
ITQB Itaqui 12.92 92 Pn **Pn 13 25 00.1 -0.1**
CPUP Villa Florida 13.04 77 Pn **Pn 13 25 01.6 -0.3**
comp=Z,1.1nm,0.3s,baz=272,slow=8.3,SNR=6.5
CPUP LR LR 13 30 35.8
comp=Z,8µm,18.1s,baz=259,slow=40
comp=Z,92nm,1.0s
CPUP Villa Florida 13.04 77 Pn **Pn 13 25 02.1 +0.1**
GO07 Milladeo Hill, 13.12 187 **Pn 13 25 02.2 -0.7**
LPAZ La Paz 14.07 13 Pn **Pn 13 25 16.5 -0.1**
comp=Z,2.3nm,0.3s,baz=177,slow=3.6,SNR=23
comp=Z,47nm,0.9s
LPAZ La Paz 14.07 13 Pn **Pn 13 25 15.8 -0.8**
LPAZ La Paz 14.07 13 P **Pn 13 25 15.8 -0.8**
COYC Coyhaique 15.47 182 Pn **Pn 13 25 35.3 +0.7**
SIV San Ignacio 16.98 37 Pn **P 13 25 54.9 -0.8**
comp=Z,0.9nm,0.3s,baz=218,slow=11,SNR=93
comp=Z,267nm,0.9s
NNA Nana 18.68 343 LR LR 13 31 59.6
comp=Z,2µm,20.3s,baz=168,slow=32
GO09 Cerro Castillo 21.18 181 P **P 13 26 42.1 +0.7**
GO09 IAmb IAmb 13 27 02.5
comp=Z,184nm,1.2s
SAML Samuel 22.42 22 P **P 13 26 54.4 -0.5**
SAML Samuel 22.42 22 P **P 13 26 54.4 -0.5**
SAML pmax pmax
comp=Z,72nm,1.2s
MG02 Cerro Sombrero 22.74 176 P **P 13 26 59.1 +1.1**
ATAH Atahualpa 23.73 343 P **P 13 27 10.1 +1.5**
comp=Z,7.2nm,0.8s,baz=181,slow=5.6,SNR=5.1
ATAH LR LR 13 34 36.3
comp=Z,1µm,20.9s,baz=177,slow=32
comp=Z,7.2nm,0.8s
MG03 Isla Dawson 23.76 178 P **P 13 27 08.8 +0.6**
DSPA Despedida 23.97 175 P **P 13 27 10.2 +0.1**
USHA Ushuaia 24.84 176 P **P 13 27 19.2 +1.2**
comp=Z,59nm,0.7s,baz=356,slow=6.2,SNR=25
USHA LR LR 13 37 33.6
comp=Z,4µm,19.2s,baz=355,slow=38
comp=Z,59nm,0.7s
BDFB Brasilia 25.91 62 P **P 13 27 28.2 0.0**
comp=Z,79nm,0.6s,baz=236,slow=7.8,SNR=41
comp=Z,79nm,0.6s
BDFB Brasilia 25.91 62 P **P 13 27 27.5 -0.7**
BDFB IAmb IAmb 13 27 28.8
comp=Z,101nm,0.7s
BDFB Brasilia 25.91 62 P **P 13 27 27.5 -0.7**
BDFB pmax pmax
comp=Z,101nm,0.7s
BOSC San Juan Bosco 27.59 345 P **P 13 27 42.9 -0.6**
OTAV Otavalo 30.87 346 P **P 13 28 13.4 +0.5**
OTAV Otavalo 30.87 346 P **P 13 28 13.4 +0.5**
OTAV pmax pmax
comp=Z,16nm,1.2s
ROSC El Rosal 34.83 355 P **P 13 28 49.1 +1.8**
comp=Z,38nm,0.8s,baz=320,slow=22,SNR=11
ROSC LR LR 13 44 34.6
comp=Z,956nm,19.9s,baz=189,slow=39
comp=Z,38nm,0.8s
HOPE Hope Point 34.89 144 P **P 13 28 48.1 +1.0**
HOPE IAmb IAmb 13 29 02.7
comp=Z,41nm,1.1s
HOPE Hope Point 34.89 144 *i* P **P 13 28 44.0 -3.1**
PMSA Palmer Station 35.03 174 P **P 13 28 50.0 +1.9**
comp=Z,64nm,1.1s,baz=355,slow=5.6,SNR=8.5
comp=Z,64nm,1.1s
PMSA Palmer Station 35.03 174 P **P 13 28 49.8 +1.7**
ORCD Orcadas 35.45 158 P **P 13 28 51.9 0.0**
SDV Santo Domingo 38.75 1 P **P 13 29 19.8 -0.7**
BAUV El Baul 38.94 5 P **P 13 29 21.4 -0.5**
BCIP Isla Barro Col 39.84 347 P **P 13 29 29.7 +0.3**
BCIP Isla Barro Col 39.84 347 P **P 13 29 29.7 +0.3**
BCIP pmax pmax
comp=Z,57nm,1.3s
SJCC San Jacinto, C 39.90 354 P **P 13 29 30.5 +0.5**
SJCC IAmb IAmb 13 29 34.1
comp=Z,82nm,1.2s
BIRV Birongo 40.63 8 P **P 13 29 35.7 -0.3**
BIRV IAmb IAmb 13 29 37.3
comp=Z,114nm,1.2s
RCBR Riachuelo 41.28 61 P **P 13 29 41.5 0.0**
RCBR IAmb IAmb 13 29 43.7
comp=Z,72nm,1.1s
RCBR Riachuelo 41.28 61 P **P 13 29 41.5 0.0**
RCBR pmax pmax
comp=Z,72nm,1.1s
JTS Las Juntas de 42.17 340 LR LR 13 43 54.1
comp=Z,491nm,21.5s,baz=226,slow=31
ORTG Ortega, Santa 42.39 339 P **P 13 29 51.6 +1.1**
TOSP Speyside 42.47 16 P **P 13 29 51.1 +0.1**
TOSP IAmb IAmb 13 29 52.5
comp=Z,111nm,1.1s
MPOM Morne Pois Mar 45.44 15 P **P 13 30 14.5 -0.3**
ICMP Isla Caja de M 47.93 6 P **P 13 30 33.1 -1.1**
MLPR Magueyes Islan 47.96 6 P **P 13 30 34.0 -0.5**
CRPR Cabo Rojo, PR 47.99 6 P **P 13 30 34.3 -0.5**
OBIP Obispado Ponce 48.08 6 P **P 13 30 34.4 -1.0**
CELP Cerrillos 48.11 6 P **P 13 30 34.6 -1.1**
PDPR Patillas Dam, 48.11 7 P **P 13 30 34.3 -1.4**
PDPR IAmb IAmb 13 30 36.0
comp=Z,60nm,1.1s
SJG San Juan 48.19 7 P **P 13 30 34.8 -1.5**
SJG San Juan 48.19 7 P **P 13 30 34.8 -1.5**
SJG pmax pmax
comp=Z,93nm,1.1s
MTP Monte Pirata 48.24 8 P **P 13 30 34.9 -1.8**
MTP IAmb IAmb 13 30 36.7
comp=Z,51nm,1.3s
HUMP Col San Antoni 48.25 7 P **P 13 30 35.5 -1.3**
HUMP IAmb IAmb 13 30 37.1
comp=Z,52nm,1.2s
CBYP Canovanas 48.38 7 P **P 13 30 36.2 -1.6**
ANWB Willy Bob 48.39 12 P **P 13 30 35.5 -2.4**
GCPR Guaynabo City 48.39 7 P **P 13 30 36.0 -1.8**
GCPR IAmb IAmb 13 30 37.8
comp=Z,51nm,1.0s
EMPR Esperanza - Ma 48.51 6 P **P 13 30 36.7 -2.0**
DR12 Loma Pena Alta 48.63 3 P **P 13 30 38.7 -1.0**
BELA Belgrano 2 50.65 171 P **P 13 30 54.9 +0.4**
BELA IAmb IAmb 13 30 57.0
comp=Z,91nm,1.2s
CMIG Matias Romero 52.03 331 LR LR 13 47 56.3
comp=Z,554nm,20.9s,baz=157,slow=30
VNA3 Neumayer Olymp 52.83 159 P **P 13 31 11.6 +0.8**
VNA1 Neumayer--Stat 53.11 158 P **P 13 31 14.0 +1.1**
VNA2 Neumayer--Watz 53.46 158 P **P 13 31 16.2 +0.7**
baz=285,slow=8.7
SNAA Sanae 55.05 159 P **P 13 31 27.3 +0.3**
SNAA Sanae 55.05 159 P **P 13 31 27.5 +0.4**
comp=Z,54nm,0.7s,baz=269,slow=4.8,SNR=124
SNAA LR LR 13 53 23.0
comp=Z,680nm,21.9s,baz=314,slow=34
comp=Z,54nm,0.7s
SNAA Sanae 55.05 159 P **P 13 31 27.1 0.0**
SNAA Sanae 55.05 159 *de*P **P 13 31 27.4 +0.3**
SNAA pmax pmax
comp=Z,144nm,1.3s
TROLL Troll, Antarti 56.76 159 P **P 13 31 40.1 +0.7**
ASCN Ascension 57.71 80 P **P 13 31 47.3 +0.5**
NVL N'lazarevskaya 59.74 158 *e*P **P 13 31 58.7 -1.4**
NVL pmax pmax
comp=Z,94nm,1.2s
QSPA South Pole Qui 60.14 180 P **P 13 32 04.2 +1.1**
comp=Z,12nm,0.5s,baz=171,slow=0.2,SNR=24
comp=Z,12nm,0.5s
QSPA South Pole Qui 60.14 180 P **P 13 32 03.8 +0.7**
QSPA IAmb IAmb 13 32 05.4
comp=Z,64nm,1.2s
H06S1 SOCORRO T 61.64 317 T T 14 39 12.6
SNR=8.1
H06E1 SOCORRO T-PHAS 61.66 317 T T 14 39 11.7
SNR=17
352A Blakely 62.54 347 P **P 13 32 18.3 -1.0**
BRAL Brewton 62.68 345 P **P 13 32 19.6 -0.8**
baz=165
250A Grady 63.29 346 P **P 13 32 23.8 -0.6**
154A Montrose 63.32 349 P **P 13 32 24.3 -0.2**
154A IAmb IAmb 13 32 25.7
comp=Z,40nm,1.1s
NHSC New Hope 63.38 352 P **P 13 32 25.5 +0.6**
baz=172
152A Waverly Hall 63.65 348 P **P 13 32 26.1 -0.6**
152A IAmb IAmb 13 32 27.8
comp=Z,41nm,1.2s
152A Waverly Hall 63.65 348 P **P 13 32 26.8 0.0**
baz=167,SNR=6.2
344A Westbrook Farm 63.87 342 P **P 13 32 28.7 +0.5**
833A Chaparral WMA, 63.90 333 P **P 13 32 28.8 +0.3**
833A Chaparral WMA, 63.90 333 P **P 13 32 30.1 +1.7**
baz=153,SNR=18
833A Chaparral WMA, 63.90 333 P **P 13 32 30.2 +1.7**
baz=153,SNR=18
HKT Hockley 64.04 337 P **P 13 32 30.1 +0.8**
HKT IAmb IAmb 13 32 32.3
comp=Z,44nm,1.4s
HKT Hockley 64.04 337 *c i*P **P 13 32 30.8 +1.5**
HKT pmax pmax
comp=Z,41nm,1.5s
HKT Hockley 64.04 337 P **P 13 32 31.0 +1.7**
baz=157
GOGA Godfrey 64.16 349 P **P 13 32 29.9 -0.2**
GOGA Godfrey 64.16 349 P **P 13 32 29.9 -0.2**
GOGA pmax pmax
comp=Z,15nm,1.1s
GOGA Godfrey 64.16 349 P **P 13 32 29.9 -0.2**
baz=169
342A Flagon Creek P 64.24 340 P **P 13 32 31.1 +0.4**
LRAL Lakeview Retre 64.47 346 P **P 13 32 31.5 -0.6**
LRAL IAmb IAmb 13 32 33.5
comp=Z,35nm,1.4s
LRAL Lakeview Retre 64.47 346 P **P 13 32 32.1 0.0**
baz=165,SNR=6.0
LRAL Lakeview Retre 64.47 346 P **P 13 32 32.2 0.0**
baz=165,SNR=6.0
VBMS Vicksburg 64.53 342 P **P 13 32 32.6 0.0**
VBMS Vicksburg 64.53 342 P **P 13 32 34.3 +1.8**
baz=162
VBMS Vicksburg 64.53 342 P **P 13 32 34.1 +1.6**
baz=162
146A Union 64.56 344 P **P 13 32 32.8 +0.1**
146A IAmb IAmb 13 32 35.2
comp=Z,51nm,1.1s
JSC Jenkinsville 64.68 351 P **P 13 32 33.1 -0.3**
JSC Jenkinsville 64.68 351 P **P 13 32 33.1 -0.3**
JSC pmax pmax
comp=Z,26nm,1.3s
JSC Jenkinsville 64.68 351 P **P 13 32 33.9 +0.4**
baz=171
Y52A Lilburn 64.70 348 P **P 13 32 33.0 -0.6**
Y52A IAmb IAmb 13 32 35.0
comp=Z,36nm,1.1s
Y52A Lilburn 64.70 348 P **P 13 32 33.6 0.0**
baz=168,SNR=6.0
Y52A P **P 13 32 33.6 0.0**
baz=168,SNR=6.0
X58A Rowland 64.71 353 P **P 13 32 33.8 +0.1**
X58A IAmb IAmb 13 32 34.8
comp=Z,26nm,0.8s
X58A Rowland 64.71 353 P **P 13 32 34.5 +0.8**
baz=173
X58A P **P 13 32 34.5 +0.8**
baz=173
HODGE Hodges 64.77 350 P **P 13 32 33.9 -0.1**
BIRD Birdtown, Kers 64.93 352 P **P 13 32 35.0 -0.2**
Y49A Blount Mountai 65.14 346 P **P 13 32 36.5 -0.1**
Y49A Blount Mountai 65.14 346 P **P 13 32 36.4 -0.1**
baz=166,SNR=5.2
143A Socs Landing, 65.23 342 P **P 13 32 38.1 +1.0**
143A Socs Landing, 65.23 342 P **P 13 32 39.5 +2.5**
baz=161
CNNC Cliffs of the 65.25 354 P **P 13 32 37.7 +0.5**
baz=174
NATX Nacogdoches 65.31 338 P **P 13 32 38.9 +1.2**
baz=158
W57A Gilead 65.38 352 P **P 13 32 38.4 +0.5**
baz=172
W57A P **P 13 32 38.4 +0.5**
baz=172
435B Jarrell 65.42 335 P **P 13 32 38.9 +0.5**
435B IAmb IAmb 13 32 41.0
comp=E,38nm,1.1s
435B Jarrell 65.42 335 P **P 13 32 39.4 +1.0**
baz=155
HPIG 65.44 327 P **P 13 32 38.8 -0.1**
HPIG IAmb IAmb 13 32 41.9
comp=Z,47nm,1.3s
X51A Calhoun 65.52 348 P **P 13 32 39.0 0.0**
X51A Calhoun 65.52 348 P **P 13 32 39.3 +0.3**
baz=167,SNR=12
X51A P **P 13 32 39.3 +0.3**
baz=167,SNR=12
KMSC Kings Mountain 65.53 351 P **P 13 32 38.6 -0.4**
KMSC Kings Mountain 65.53 351 P **P 13 32 40.0 +1.0**
baz=171
KMSC Kings Mountain 65.53 351 P **P 13 32 39.0 0.0**
baz=171
BG3 Lake Jocassee 65.62 350 P **P 13 32 39.6 0.0**
BG3 IAmb IAmb 13 32 41.4
comp=Z,32nm,1.2s
CASEE Lake Jocassee 65.62 350 P **P 13 32 40.0 +0.4**
baz=169,SNR=6.0
FPAL Fort Paine 65.64 347 P **P 13 32 39.3 -0.5**
FPAL IAmb IAmb 13 32 41.0
comp=Z,36nm,1.1s
X48A Hartselle 65.84 346 P **P 13 32 40.7 -0.3**
X48A Hartselle 65.84 346 P **P 13 32 41.5 +0.5**
baz=165,SNR=25
Y45A Yeager Farm, C 65.85 344 P **P 13 32 41.3 +0.3**
Y45A Yeager Farm, C 65.85 344 P **P 13 32 42.2 +1.1**
baz=163,SNR=8.2
W52A Murphy 65.88 349 P **P 13 32 41.4 +0.1**
W52A IAmb IAmb 13 32 43.0
comp=Z,45nm,1.2s
W52A Murphy 65.88 349 P **P 13 32 41.6 +0.3**
baz=168,SNR=7.3
237A Washetta, Mont 65.91 337 P **P 13 32 42.5 +0.9**
237A Washetta, Mont 65.91 337 P **P 13 32 43.1 +1.6**
baz=157,SNR=5.4
V58A Windy Hill, Pi 65.92 353 P **P 13 32 41.0 -0.4**
V58A IAmb IAmb 13 32 43.0
comp=Z,35nm,1.3s
V58A Windy Hill, Pi 65.92 353 P **P 13 32 41.4 -0.1**
baz=173
V58A P **P 13 32 41.4 -0.1**
baz=173
JCT Junction City 65.97 333 P **P 13 32 42.9 +0.9**
JCT Junction City 65.97 333 P **P 13 32 42.9 +0.9**
JCT pmax pmax
comp=Z,126nm,1.4s
JCT Junction City 65.97 333 P **P 13 32 43.4 +1.3**
baz=153,SNR=16
JCT Junction City 65.97 333 P **P 13 32 43.3 +1.3**
baz=153,SNR=16
Z41A Richland Creek 66.14 341 P **P 13 32 43.9 +0.9**
baz=160
V55A Taylorsville 66.22 351 P **P 13 32 43.4 0.0**
V55A IAmb IAmb 13 32 45.2
comp=Z,55nm,1.2s
V55A Taylorsville 66.22 351 P **P 13 32 43.8 +0.4**
baz=171,SNR=9.4
V55A P **P 13 32 43.8 +0.4**
baz=171,SNR=9.4
W50A Signal Mountai 66.22 348 P **P 13 32 43.4 -0.2**
W50A IAmb IAmb 13 32 45.2
comp=Z,60nm,1.2s
W50A Signal Mountai 66.22 348 P **P 13 32 44.0 +0.5**
baz=167,SNR=12
V53A Saluda 66.26 350 P **P 13 32 43.6 -0.1**
V53A IAmb IAmb 13 32 44.7
comp=Z,28nm,1.1s
V53A Saluda 66.26 350 P **P 13 32 44.0 +0.3**
baz=169,SNR=7.2
V53A P **P 13 32 44.0 +0.3**
baz=169,SNR=7.2
CPCT Cooper Cave 66.33 348 P **P 13 32 43.8 -0.3**
CPCT IAmb IAmb 13 32 45.7
comp=Z,50nm,1.1s
U59A Littleton 66.35 354 P **P 13 32 44.7 +0.5**
U59A IAmb IAmb 13 32 46.5
comp=Z,63nm,1.2s
U59A Littleton 66.35 354 P **P 13 32 45.1 +0.9**
baz=174,SNR=8.8
U59A P **P 13 32 45.1 +0.9**
baz=174,SNR=8.8
SWET Sewanee 66.36 347 P **P 13 32 44.1 -0.3**
SWET IAmb IAmb 13 32 45.9
comp=Z,63nm,1.1s
TKL Tuckaleechee C 66.40 349 P **P 13 32 44.3 -0.3**
TKL IAmb IAmb 13 32 45.9
comp=Z,38nm,1.1s
TKL Tuckaleechee C 66.40 349 P **P 13 32 44.3 -0.3**
TKL pmax pmax
comp=Z,38nm,1.1s
TKL Tuckaleechee C 66.40 349 P **P 13 32 44.8 +0.2**
baz=168,SNR=10.0
OXF Oxford 66.43 344 P **P 13 32 44.6 -0.2**
OXF Oxford 66.43 344 P **P 13 32 44.6 -0.2**
OXF pmax pmax
comp=Z,118nm,1.1s
OXF Oxford 66.43 344 P **P 13 32 44.9 +0.1**
baz=163,SNR=13
OXF Oxford 66.43 344 P **P 13 32 44.9 +0.1**
baz=163,SNR=13
WHTX Lake Whitney, 66.47 336 P **P 13 32 44.7 -0.4**
WHTX Lake Whitney, 66.47 336 P **P 13 32 46.2 +1.1**
baz=156,SNR=12
WHTX Lake Whitney, 66.47 336 P **P 13 32 46.1 +1.1**
baz=156,SNR=12
CCAR Cane Creek 66.47 342 P **P 13 32 45.0 0.0**
CCAR IAmb IAmb 13 32 47.0
comp=Z,65nm,1.1s
V52A Sevierville 66.55 349 P **P 13 32 45.1 -0.5**
V52A IAmb IAmb 13 32 46.8
comp=Z,70nm,1.2s
V52A Sevierville 66.55 349 P **P 13 32 45.7 +0.1**
baz=169,SNR=11
TX31 Lajitas Ar. Si 66.57 330 P **P 13 32 46.7 +0.7**
TX31 IAmb IAmb 13 32 48.0
comp=Z,50nm,1.1s
TX31 Lajitas Ar. Si 66.57 330 P **P 13 32 47.3 +1.4**
baz=150,SNR=18
TX32 Lajitas Array 66.57 330 P **P 13 32 46.0 0.0**
TXAR Lajitas Array 66.57 330 P **P 13 32 47.2 +1.3**
comp=Z,11nm,1.0s,baz=148,slow=8.0,SNR=42
TXAR LR LR 13 57 21.9
comp=Z,568nm,20.5s,baz=136,slow=32
TXAR PKP2bc **P'P'bc 14 01 17.5 +1.6**
comp=Z,0.4nm,0.9s,baz=341,slow=2.7,SNR=3.6
comp=Z,11nm,1.0s
TXAR Lajitas Array 66.57 330 P **P 13 32 46.5 +0.5**
TXAR Lajitas Array 66.57 330 P **P 13 32 46.5 +0.5**
PLAL Pickwick Lake 66.58 345 P **P 13 32 45.3 -0.5**
PLAL IAmb IAmb 13 32 46.9
comp=Z,41nm,1.1s
U56A King 66.60 352 P **P 13 32 45.9 0.0**
U56A IAmb IAmb 13 32 47.8
comp=Z,29nm,1.1s
U56A King 66.60 352 P **P 13 32 46.7 +0.9**
baz=172
U56A P **P 13 32 46.7 +0.9**
baz=172
WLAR White Oak Lake 66.64 340 P **P 13 32 46.5 +0.4**
V51A Loudon 66.64 349 P **P 13 32 45.7 -0.4**
V51A IAmb IAmb 13 32 47.4
comp=Z,30nm,1.0s
V51A Loudon 66.64 349 P **P 13 32 46.1 0.0**
baz=168,SNR=8.4
Z38A Mt. Pleasant 66.80 339 P **P 13 32 47.6 +0.4**
Z38A IAmb IAmb 13 32 49.2
comp=Z,32nm,0.9s
T59A Double "B" Far 66.94 355 P **P 13 32 48.0 0.0**
T59A Double "B" Far 66.94 355 P **P 13 32 48.9 +0.9**
baz=174,SNR=14
T59A P **P 13 32 48.9 +0.9**
baz=174,SNR=14
U54A Nelsons Funny 66.96 351 P **P 13 32 48.0 -0.2**
U54A IAmb IAmb 13 32 49.6
comp=Z,48nm,1.1s
U54A Nelsons Funny 66.96 351 P **P 13 32 48.3 +0.1**
baz=170,SNR=6.0
U54A P **P 13 32 48.3 +0.1**
baz=170,SNR=6.0
SBA Scott Base 67.00 191 P **P 13 32 48.1 +0.2**

SBA	**Scott Base**	**67.00 191**	P	**P**	**13 32 48.1**	**+0.2**
SBA	comp=Z,34nm,1.5s		pmax	pmax		
V48A	**Smith Brothers**	**67.04 347**	P	**P**	**13 32 48.5**	**-0.2**
V48A	**Smith Brothers**	**67.04 347**	P	**P**	**13 32 49.1**	**+0.5**
	baz=166,SNR=20					
T57A	**Hurt**	**67.12 353**	P	**P**	**13 32 49.4**	**+0.2**
TAOE	**Nuku Hiva Isla**	**67.16 273**	*e*LR	LR	13 52 21.4	
	comp=Z,575nm,28.1s					
TZTN	**Tazewell**	**67.23 349**	P	**P**	**13 32 49.6**	**-0.3**
TZTN			IAmb	IAmb	13 32 51.3	
	comp=Z,60nm,1.5s					
TZTN	**Tazewell**	**67.23 349**	P	**P**	**13 32 50.0**	**+0.1**
	baz=169,SNR=5.2					
TZTN	**Tazewell**	**67.23 349**	P	**P**	**13 32 49.8**	**-0.1**
	baz=169,SNR=5.2					
CLTN	**Cedars of Leba**	**67.28 347**	P	**P**	**13 32 50.0**	**-0.2**
CLTN			IAmb	IAmb	13 32 51.7	
	comp=Z,40nm,1.0s					
X40A	**Basin Creek Fa**	**67.31 341**	P	**P**	**13 32 50.3**	**-0.1**
	baz=160					
UALR	**University of**	**67.44 342**	P	**P**	**13 32 50.8**	**-0.4**
BLA	**Blacksburg**	**67.46 352**	P	**P**	**13 32 51.5**	**+0.1**
	baz=172					
MIAR	**Mount Ida**	**67.57 340**	P	**P**	**13 32 52.3**	**+0.2**
MIAR			IAmb	IAmb	13 32 54.1	
	comp=Z,34nm,1.1s					
MIAR	**Mount Ida**	**67.57 340**	P	**P**	**13 32 52.3**	**+0.2**
MIAR			pmax	pmax		
	comp=Z,33nm,1.2s					
MIAR	**Mount Ida**	**67.57 340**	P	**P**	**13 32 52.8**	**+0.7**
	baz=160,SNR=7.1					
MIAR	**Mount Ida**	**67.57 340**	P	**P**	**13 32 52.7**	**+0.7**
	baz=160,SNR=7.1					
U49A	**Red Boiling Sp**	**67.59 348**	P	**P**	**13 32 51.9**	**-0.3**
U49A			IAmb	IAmb	13 32 52.9	
	comp=Z,24nm,0.9s					
U49A	**Red Boiling Sp**	**67.59 348**	P	**P**	**13 32 52.3**	**+0.2**
	baz=167,SNR=11					
Z35A	**Perchaven, San**	**67.61 337**	P	**P**	**13 32 52.5**	**+0.2**
Z35A	**Perchaven, San**	**67.61 337**	P	**P**	**13 32 53.4**	**+1.0**
	baz=156,SNR=10					
WVT	**Waverly**	**67.63 346**	P	**P**	**13 32 52.2**	**-0.1**
WVT			IAmb	IAmb	13 32 53.8	
	comp=Z,63nm,1.1s					
WVT	**Waverly**	**67.63 346**	P	**P**	**13 32 52.2**	**-0.1**
WVT			pmax	pmax		
	comp=Z,63nm,1.1s					
WVT	**Waverly**	**67.63 346**	P	**P**	**13 32 52.6**	**+0.2**
	baz=165,SNR=26					
WVT	**Waverly**	**67.63 346**	P	**P**	**13 32 52.5**	**+0.2**
	baz=165					
JSRW	**J. Sargeant Re**	**67.69 355**	P	**P**	**13 32 53.0**	**+0.3**
HALT	**Halls**	**67.75 344**	P	**P**	**13 32 53.5**	**+0.4**
W41B	**Gary Mavity, V**	**67.79 342**	P	**P**	**13 32 53.5**	**+0.1**
W41B	**Gary Mavity, V**	**67.79 342**	P	**P**	**13 32 54.1**	**+0.8**
	baz=161,SNR=7.9					
W41B	**Gary Mavity, V**	**67.79 342**	P	**P**	**13 32 53.9**	**+0.6**
	baz=161,SNR=7.9					
ABTX	**Abilene, Hawle**	**67.83 335**	P	**P**	**13 32 54.1**	**+0.4**
ABTX	**Abilene, Hawle**	**67.83 335**	P	**P**	**13 32 54.9**	**+1.2**
	baz=154,SNR=14					
ABTX	**Abilene, Hawle**	**67.83 335**	P	**P**	**13 32 54.8**	**+1.0**
	baz=154,SNR=14					
S57A	**Dark Hollow, R**	**67.85 354**	P	**P**	**13 32 54.0**	**+0.3**
S57A			IAmb	IAmb	13 32 55.8	
	comp=Z,30nm,1.1s					
S57A	**Dark Hollow, R**	**67.85 354**	P	**P**	**13 32 54.6**	**+0.9**
	baz=173,SNR=7.0					
S57A			P	**P**	**13 32 54.6**	**+0.9**
	baz=173,SNR=7.0					
WHAR	**Wooly Hollow**	**67.91 342**	P	**P**	**13 32 54.4**	**+0.2**
WHAR			IAmb	IAmb	13 32 55.5	
	comp=Z,30nm,1.1s					
T50A	**Nancy**	**67.91 349**	P	**P**	**13 32 53.5**	**-0.6**
T50A	**Nancy**	**67.91 349**	P	**P**	**13 32 54.3**	**+0.1**
	baz=168					
T50A			P	**P**	**13 32 54.3**	**+0.1**
	baz=168					
R58B	**Mineral**	**67.95 355**	P	**P**	**13 32 54.5**	**+0.1**
R58B	**Mineral**	**67.95 355**	P	**P**	**13 32 55.5**	**+1.2**
	baz=174,SNR=14					
R58B			P	**P**	**13 32 55.5**	**+1.2**
	baz=174,SNR=14					
GNAR	**Gosnell**	**67.97 344**	P	**P**	**13 32 54.9**	**+0.4**
LNXT	**Lenox**	**67.97 344**	P	**P**	**13 32 54.9**	**+0.4**
VNDA	**Vanda**	**68.02 191**	P	**P**	**13 32 55.8**	**+1.3**
	comp=Z,8.3nm,1.2s,baz=141,slow=4.1,SNR=8.1					
	comp=Z,8.3nm,1.2s					
VNDA	**Vanda**	**68.02 191**	P	**P**	**13 32 55.5**	**+1.1**
VNDA	**Vanda**	**68.02 191**	P	**P**	**13 32 55.5**	**+1.1**
VNDA			pmax	pmax		
	comp=Z,28nm,1.4s					
PEBM	**Pemiscott Bayo**	**68.07 344**	P	**P**	**13 32 55.4**	**+0.3**
S54A	**Dingess, Beckl**	**68.15 352**	P	**P**	**13 32 55.2**	**-0.5**
S54A	**Dingess, Beckl**	**68.15 352**	P	**P**	**13 32 55.8**	**+0.2**
	baz=171					
S54A			P	**P**	**13 32 55.8**	**+0.2**
	baz=171					
CBN	**Corbin Frederi**	**68.15 355**	P	**P**	**13 32 56.5**	**+0.9**
	baz=175					
X37A	**Clayton**	**68.15 339**	P	**P**	**13 32 56.5**	**+0.8**
	baz=158,SNR=8.1					
W39A	**Magazine**	**68.24 340**	P	**P**	**13 32 57.0**	**+0.7**
W39A	**Magazine**	**68.24 340**	P	**P**	**13 32 57.6**	**+1.3**
	baz=159,SNR=31					
W39A	**Magazine**	**68.24 340**	P	**P**	**13 32 57.4**	**+1.2**
	baz=159,SNR=31					
T47A	**Sharon Grove**	**68.30 347**	P	**P**	**13 32 56.5**	**-0.2**
T47A	**Sharon Grove**	**68.30 347**	P	**P**	**13 32 56.6**	**0.0**
	baz=166,SNR=14					
S51A	**Beattyville**	**68.31 350**	P	**P**	**13 32 56.5**	**-0.2**
S51A			IAmb	IAmb	13 32 57.9	
	comp=Z,29nm,1.0s					
S51A	**Beattyville**	**68.31 350**	P	**P**	**13 32 56.9**	**+0.2**
	baz=169,SNR=6.7					
S51A			P	**P**	**13 32 56.9**	**+0.2**
	baz=169,SNR=6.7					
LCAR	**Lake Charles**	**68.35 343**	P	**P**	**13 32 56.7**	**-0.2**
LCAR			IAmb	IAmb	13 32 58.5	
	comp=Z,54nm,1.0s					
LCAR	**Lake Charles**	**68.35 343**	P	**P**	**13 32 57.4**	**+0.5**
	baz=162,SNR=26					
FCAR	**Ozark Folk Cen**	**68.43 342**	P	**P**	**13 32 57.4**	**0.0**
R55A	**Marlinton**	**68.48 353**	P	**P**	**13 32 58.4**	**+0.6**
R55A			IAmb	IAmb	13 33 00.1	
	comp=Z,43nm,1.1s					
R55A	**Marlinton**	**68.48 353**	P	**P**	**13 32 58.8**	**+1.0**
	baz=172,SNR=9.9					
R55A			P	**P**	**13 32 58.8**	**+1.0**
	baz=172,SNR=9.9					
PARMO	**Parma**	**68.57 344**	P	**P**	**13 32 58.9**	**+0.6**
MBO	**M'Bour**	**68.65 58**	P	**P**	**13 32 59.6**	**+0.4**
T45A	**Paducah**	**68.66 345**	P	**P**	**13 32 59.1**	**+0.3**
TBI	**Tubuai**	**68.73 255**	*e*LR	LR	13 53 02.0	
	comp=Z,912nm,25.8s					
TBI	**Tubuai**	**68.73 255**	*e*T	T	14 47 46.7	
	comp=Z,14nm,0.2s					
R53A	**Hurricane**	**68.75 351**	P	**P**	**13 32 59.0**	**-0.4**
PBMO	**Poplar Bluff**	**68.84 344**	P	**P**	**13 32 59.7**	**-0.3**
X34A	**Smith Ranch, M**	**68.97 337**		**P**	**13 33 01.1**	**+0.2**
R50A	**Paris**	**69.06 349**	P	**P**	**13 33 00.7**	**-0.6**
U40A	**Yellville**	**69.06 342**	P	**P**	**13 33 01.5**	**+0.1**
U40A			IAmb	IAmb	13 33 03.1	
	comp=Z,47nm,1.1s					
U40A	**Yellville**	**69.06 342**	P	**P**	**13 33 02.0**	**+0.6**
	baz=160,SNR=21					
U40A			P	**P**	**13 33 02.0**	**+0.6**
	baz=160,SNR=21					
U40A	**Yellville**	**69.06 342**	P	**P**	**13 33 01.9**	**+0.6**
	baz=160,SNR=21					
R49A	**Shelbyville**	**69.21 349**	P	**P**	**13 33 01.8**	**-0.5**
HHAR	**Hobbs**	**69.30 341**	P	**P**	**13 33 03.1**	**+0.3**
HHAR			IAmb	IAmb	13 33 04.6	
	comp=Z,51nm,1.0s					
HHAR	**Hobbs**	**69.30 341**	P	**P**	**13 33 03.4**	**+0.5**
	baz=159					
MNTX	**Cornudas Mount**	**69.35 329**	P	**P**	**13 33 03.4**	**+0.1**
MNTX	**Cornudas Mount**	**69.35 329**	P	**P**	**13 33 03.6**	**+0.3**
	baz=149,SNR=32					
MNTX	**Cornudas Mount**	**69.35 329**	P	**P**	**13 33 03.4**	**+0.1**
	baz=149,SNR=32					
WMOK	**Wichita Mounta**	**69.42 336**	P	**P**	**13 33 03.3**	**-0.3**
WMOK	**Wichita Mounta**	**69.42 336**	P	**P**	**13 33 03.3**	**-0.3**
WMOK			pmax	pmax		
	comp=Z,23nm,1.1s					
WMOK	**Wichita Mounta**	**69.42 336**	P	**P**	**13 33 04.0**	**+0.3**
	baz=155,SNR=12					
WMOK	**Wichita Mounta**	**69.42 336**	P	**P**	**13 33 03.7**	**+0.1**
	baz=155,SNR=12					
Q52A	**Bidwell**	**69.42 351**	P	**P**	**13 33 03.4**	**-0.1**
Q52A			IAmb	IAmb	13 33 04.9	
	comp=Z,47nm,1.1s					
Q52A	**Bidwell**	**69.42 351**	P	**P**	**13 33 03.6**	**+0.1**
	baz=170,SNR=5.3					
Q52A			P	**P**	**13 33 03.6**	**+0.1**
	baz=170,SNR=5.3					
FNO	**Franklin**	**69.42 338**		**P**	**13 33 03.7**	**+0.1**
FNO			IAmb	IAmb	13 33 06.2	
	comp=Z,84nm,1.4s					
S44A	**Carbondale**	**69.44 345**	P	**P**	**13 33 03.6**	**0.0**
S44A	**Carbondale**	**69.44 345**	P	**P**	**13 33 04.0**	**+0.4**
	baz=164,SNR=17					
SIUC	**Southern Illin**	**69.45 345**	P	**P**	**13 33 03.8**	**+0.1**
P57A	**Homestead Farm**	**69.47 355**	P	**P**	**13 33 04.9**	**+1.1**
P57A			IAmb	IAmb	13 33 06.6	
	comp=Z,65nm,1.1s					
P57A	**Homestead Farm**	**69.47 355**	P	**P**	**13 33 04.9**	**+1.1**
	baz=174,SNR=11					
P57A			P	**P**	**13 33 04.9**	**+1.1**
	baz=174,SNR=11					
TUL1	**Leonard**	**69.50 339**		**P**	**13 33 04.2**	**+0.1**
TUL1	**Leonard**	**69.50 339**	P	**P**	**13 33 04.6**	**+0.5**
	baz=158,SNR=9.1					
TUL1	**Leonard**	**69.50 339**	P	**P**	**13 33 04.4**	**+0.3**
	baz=158,SNR=9.1					
Q51A	**Peebles**	**69.63 350**	P	**P**	**13 33 04.4**	**-0.4**
Q51A			IAmb	IAmb	13 33 06.1	
	comp=Z,50nm,1.1s					
Q51A	**Peebles**	**69.63 350**	P	**P**	**13 33 05.1**	**+0.3**
	baz=169,SNR=7.7					
Q51A			P	**P**	**13 33 05.1**	**+0.3**
	baz=169,SNR=7.7					
MGMO	**Mountain Grove**	**69.66 342**	P	**P**	**13 33 05.3**	**+0.3**
MGMO			IAmb	IAmb	13 33 06.9	
	comp=Z,36nm,1.1s					
WUPA	**West Chester U**	**69.76 357**	P	**P**	**13 33 06.1**	**+0.5**
WUPA			IAmb	IAmb	13 33 08.2	
	comp=Z,33nm,1.1s					
HSIG		**69.78 324**	P	**P**	**13 33 06.2**	**+0.2**
MCWV	**Mont Chateau**	**69.82 353**	P	**P**	**13 33 06.1**	**+0.1**
MCWV			IAmb	IAmb	13 33 07.3	
	comp=Z,31nm,1.1s					
MCWV	**Mont Chateau**	**69.82 353**	P	**P**	**13 33 06.5**	**+0.6**
	baz=172					
P53A	**Whipple**	**69.82 352**	P	**P**	**13 33 06.1**	**+0.1**
P53A			IAmb	IAmb	13 33 07.5	
	comp=Z,33nm,1.1s					
MVL	**Millersville**	**69.87 356**	P	**P**	**13 33 06.8**	**+0.5**
MVL			IAmb	IAmb	13 33 09.0	
	comp=Z,47nm,1.2s					
MEH	**Mehetia**	**69.88 261**	*e*T	T	14 49 15.2	
	comp=Z,31nm,0.2s					
FVM	**French Village**	**69.99 344**	P	**P**	**13 33 07.2**	**+0.1**
FVM	**French Village**	**69.99 344**	P	**P**	**13 33 07.2**	**+0.1**
FVM			pmax	pmax		
	comp=Z,91nm,1.1s					
FVM	**French Village**	**69.99 344**	P	**P**	**13 33 07.4**	**+0.4**
	baz=163,SNR=16					
P51A	**Williamsport**	**70.04 351**	P	**P**	**13 33 06.7**	**-0.6**
P51A			IAmb	IAmb	13 33 08.4	
	comp=Z,56nm,1.1s					
P52A	**Corning**	**70.06 351**	P	**P**	**13 33 07.0**	**-0.4**
P52A			IAmb	IAmb	13 33 08.7	
	comp=Z,56nm,1.1s					
P52A	**Corning**	**70.06 351**	P	**P**	**13 33 07.4**	**-0.1**
	baz=170,SNR=6.4					
MSTX	**Muleshoe**	**70.22 333**	P	**P**	**13 33 08.6**	**-0.1**
MSTX	**Muleshoe**	**70.22 333**	P	**P**	**13 33 09.6**	**+0.9**
	baz=152,SNR=19					
MSTX	**Muleshoe**	**70.22 333**	P	**P**	**13 33 09.5**	**+0.8**
	baz=152,SNR=19					
CCM	**Cathedral Cave**	**70.25 344**	P	**P**	**13 33 08.8**	**+0.2**
CCM	**Cathedral Cave**	**70.25 344**	P	**P**	**13 33 08.8**	**+0.2**
CCM			pmax	pmax		
	comp=Z,102nm,1.3s					
CCM	**Cathedral Cave**	**70.25 344**	P	**P**	**13 33 09.3**	**+0.7**
	baz=162,SNR=30					
CCM	**Cathedral Cave**	**70.25 344**	P	**P**	**13 33 09.2**	**+0.6**
	baz=162					
P49A	**Miami Univ. Ec**	**70.34 349**	P	**P**	**13 33 08.6**	**-0.6**
P49A			IAmb	IAmb	13 33 10.1	
	comp=Z,65nm,1.5s					
P49A	**Miami Univ. Ec**	**70.34 349**	P	**P**	**13 33 08.9**	**-0.3**
	baz=168					
P48A	**Milroy**	**70.39 349**	P	**P**	**13 33 08.7**	**-0.7**
P48A			IAmb	IAmb	13 33 09.7	
	comp=Z,31nm,0.9s					
P48A	**Milroy**	**70.39 349**	P	**P**	**13 33 09.0**	**-0.5**
	baz=167,SNR=5.1					
P48A			P	**P**	**13 33 09.0**	**-0.5**
	baz=167,SNR=5.1					
LUPA	**Lehigh Univers**	**70.41 357**	P	**P**	**13 33 10.4**	**+0.8**
S39A	**Bolivar**	**70.44 342**	P	**P**	**13 33 10.1**	**+0.2**
S39A			IAmb	IAmb	13 33 11.7	
	comp=Z,67nm,1.1s					
S39A	**Bolivar**	**70.44 342**	P	**P**	**13 33 10.5**	**+0.6**
	baz=160,SNR=29					
BRNJ	**Basking Ridge**	**70.46 358**	P	**P**	**13 33 10.9**	**+1.0**
BRNJ			IAmb	IAmb	13 33 12.5	
	comp=Z,62nm,1.2s					
O52A	**Adamsville**	**70.50 352**	P	**P**	**13 33 09.8**	**-0.3**
O52A	**Adamsville**	**70.50 352**	P	**P**	**13 33 09.9**	**-0.2**
	baz=171					
O52A			P	**P**	**13 33 09.9**	**-0.2**
	baz=171					
Q44A	**Meyer Farm, Va**	**70.55 346**	P	**P**	**13 33 09.9**	**-0.5**
Q44A			IAmb	IAmb	13 33 11.5	
	comp=Z,48nm,1.1s					
Q44A	**Meyer Farm, Va**	**70.55 346**	P	**P**	**13 33 10.4**	**0.0**
	baz=164,SNR=5.6					
O53A	**New Philadelph**	**70.55 352**	P	**P**	**13 33 10.3**	**-0.1**
O53A	**New Philadelph**	**70.55 352**	P	**P**	**13 33 10.3**	**-0.1**
	baz=171					
AMTX	**Amarillo**	**70.61 334**	P	**P**	**13 33 11.5**	**+0.5**
AMTX			IAmb	IAmb	13 33 13.3	
	comp=Z,63nm,1.1s					
AMTX	**Amarillo**	**70.61 334**	P	**P**	**13 33 11.8**	**+0.8**
	baz=153,SNR=16					
AMTX	**Amarillo**	**70.61 334**	P	**P**	**13 33 11.6**	**+0.6**
	baz=153					
SSPA	**Standing Stone**	**70.61 355**	P	**P**	**13 33 11.4**	**+0.7**
SSPA			IAmb	IAmb	13 33 13.1	
	comp=Z,41nm,1.2s					
SSPA	**Standing Stone**	**70.61 355**	P	**P**	**13 33 11.6**	**+0.8**
	baz=174,SNR=6.9					
SSPA	**Standing Stone**	**70.61 355**	P	**P**	**13 33 11.5**	**+0.7**
	baz=174					
T35A	**Sooner Cattle**	**70.65 339**		**P**	**13 33 11.5**	**+0.4**
T35A			IAmb	IAmb	13 33 13.3	
	comp=Z,68nm,1.2s					
T35B	**Sooner Cattle**	**70.65 339**	P	**P**	**13 33 11.8**	**+0.6**
	baz=157,SNR=12					
N58A	**Sunbury**	**70.73 356**	P	**P**	**13 33 11.8**	**+0.3**
N58A			IAmb	IAmb	13 33 14.0	
	comp=Z,47nm,1.2s					
N58A	**Sunbury**	**70.73 356**	P	**P**	**13 33 12.6**	**+1.1**
	baz=175,SNR=6.7					
N58A			P	**P**	**13 33 12.6**	**+1.1**
	baz=175,SNR=6.7					
R40A	**Maddies Statio**	**70.73 343**	P	**P**	**13 33 11.6**	**0.0**
R40A	**Maddies Statio**	**70.73 343**	P	**P**	**13 33 12.0**	**+0.4**
	baz=161,SNR=40					
ACSO	**Alum Creek Sta**	**70.76 351**	P	**P**	**13 33 11.6**	**-0.2**
ACSO	**Alum Creek Sta**	**70.76 351**	P	**P**	**13 33 11.8**	**+0.1**
	baz=170,SNR=8.5					
ACSO	**Alum Creek Sta**	**70.76 351**	P	**P**	**13 33 11.8**	**+0.1**
	baz=170,SNR=8.5					
PAL	**Palisades**	**70.76 358**	P	**P**	**13 33 12.3**	**+0.6**
PAL			IAmb	IAmb	13 33 13.9	
	comp=Z,36nm,1.1s					
PAL	**Palisades**	**70.76 358**	P	**P**	**13 33 12.3**	**+0.6**
PAL			pmax	pmax		
	comp=Z,36nm,1.1s					
PAL	**Palisades**	**70.76 358**	P	**P**	**13 33 12.1**	**+0.5**
	baz=178					
ODNJ	**Ogdensburg**	**70.86 358**	P	**P**	**13 33 13.5**	**+1.2**
	baz=177,SNR=5.3					
P46A	**Rosedale**	**70.87 347**	P	**P**	**13 33 11.7**	**-0.6**
P46A	**Rosedale**	**70.87 347**	P	**P**	**13 33 12.1**	**-0.3**
	baz=166,SNR=9.0					
WSPT	**Westport, CT**	**70.91 359**	P	**P**	**13 33 12.8**	**+0.2**
WSPT			IAmb	IAmb	13 33 15.1	
	comp=Z,65nm,1.1s					
O49A	**Covington**	**70.92 350**	P	**P**	**13 33 12.2**	**-0.5**
O49A			IAmb	IAmb	13 33 13.9	
	comp=Z,58nm,1.1s					
O49A	**Covington**	**70.92 350**	P	**P**	**13 33 12.5**	**-0.2**
	baz=168,SNR=7.9					
O49A			P	**P**	**13 33 12.5**	**-0.2**
	baz=168,SNR=7.9					
U32A	**Winter Ranch,**	**70.98 337**		**P**	**13 33 13.2**	**+0.1**
U32A	**Winter Ranch,**	**70.98 337**	P	**P**	**13 33 14.2**	**+1.0**
	baz=155					
YLE	**Yale**	**71.05 359**	P	**P**	**13 33 14.8**	**+1.4**
N53A	**Lisbon**	**71.06 353**	P	**P**	**13 33 13.8**	**+0.3**
N53A			IAmb	IAmb	13 33 25.4	
	comp=Z,52nm,1.5s					
N53A	**Lisbon**	**71.06 353**	P	**P**	**13 33 14.9**	**+1.4**
	baz=172					
N53A			P	**P**	**13 33 14.9**	**+1.4**
	baz=172					
TIAR	**Tiarei**	**71.12 260**	*e*T	T	14 50 46.9	
	comp=Z,5.4nm,0.2s					
O48B	**Farmland**	**71.12 349**	P	**P**	**13 33 13.7**	**-0.2**
	baz=168,SNR=6.1					
O48B	**Farmland**	**71.12 349**	P	**P**	**13 33 13.5**	**-0.4**
	baz=168,SNR=6.1					
121A	**Cookes Peak, D**	**71.14 328**	P	**P**	**13 33 15.7**	**+1.3**
121A			IAmb	IAmb	13 33 17.8	
	comp=Z,40nm,1.1s					
121A	**Cookes Peak, D**	**71.14 328**	P	**P**	**13 33 16.5**	**+2.1**
	baz=147,SNR=25					
121A	**Cookes Peak, D**	**71.14 328**	P	**P**	**13 33 16.3**	**+1.9**
	baz=147,SNR=25					
M57A	**Sunshine Farm,**	**71.25 356**	P	**P**	**13 33 15.6**	**+1.0**
M57A			IAmb	IAmb	13 33 17.2	
	comp=Z,60nm,1.4s					
M57A	**Sunshine Farm,**	**71.25 356**	P	**P**	**13 33 15.5**	**+0.8**
	baz=175,SNR=6.5					
M57A			P	**P**	**13 33 15.5**	**+0.8**
	baz=175,SNR=6.5					
PPT2	**Papeete2**	**71.30 260**	*e*LR	LR	13 54 26.0	
	comp=Z,1μm,23.8s					
N51A	**Ashland**	**71.36 351**	P	**P**	**13 33 14.9**	**-0.4**
N51A			IAmb	IAmb	13 33 16.6	
	comp=Z,50nm,1.1s					
P43A	**Skaggs, Pawnee**	**71.36 345**	P	**P**	**13 33 14.9**	**-0.5**
P43A	**Skaggs, Pawnee**	**71.36 345**	P	**P**	**13 33 15.5**	**+0.1**
	baz=164,SNR=7.2					
KSPA	**Keystone Colle**	**71.39 357**	P	**P**	**13 33 16.2**	**+0.7**
KSPA			IAmb	IAmb	13 33 27.4	
	comp=Z,36nm,1.3s					
M55A	**Ridgway**	**71.51 354**	P	**P**	**13 33 16.4**	**+0.2**
M55A			IAmb	IAmb	13 33 17.6	
	comp=Z,51nm,1.1s					
M55A	**Ridgway**	**71.51 354**	P	**P**	**13 33 16.9**	**+0.7**
	baz=173,SNR=9.9					
M55A			P	**P**	**13 33 16.9**	**+0.7**
	baz=173,SNR=9.9					
NPNY	**Mohonk Preserv**	**71.52 358**	P	**P**	**13 33 17.7**	**+1.5**
	baz=178,SNR=9.1					
SFIN	**Lafayette**	**71.58 347**	P	**P**	**13 33 15.8**	**-0.8**
SFIN			IAmb	IAmb	13 33 17.3	
	comp=Z,43nm,1.2s					
SFIN	**Lafayette**	**71.58 347**	P	**P**	**13 33 16.0**	**-0.7**
	baz=166					
N49A	**Columbus Grove**	**71.62 350**	P	**P**	**13 33 16.5**	**-0.4**
N49A	**Columbus Grove**	**71.62 350**	P	**P**	**13 33 16.9**	**0.0**
	baz=168,SNR=16					
N49A			P	**P**	**13 33 16.9**	**0.0**
	baz=168,SNR=16					
O44A	**Mansfield**	**71.63 346**	P	**P**	**13 33 16.7**	**-0.3**
O44A			IAmb	IAmb	13 33 17.9	
	comp=Z,65nm,1.2s					
BRYW	**Bryant College**	**71.64 360**	P	**P**	**13 33 17.0**	**0.0**
BRYW			IAmb	IAmb	13 33 19.1	
	comp=Z,62nm,1.0s					
M53A	**WI Miller and**	**71.67 353**	P	**P**	**13 33 16.6**	**-0.6**
M53A			IAmb	IAmb	13 33 18.7	
	comp=Z,38nm,1.0s					
M53A	**WI Miller and**	**71.67 353**	P	**P**	**13 33 17.4**	**+0.2**
	baz=172					
N47A	**Urbana**	**71.82 349**	P	**P**	**13 33 17.1**	**-1.0**
N47A			IAmb	IAmb	13 33 18.9	
	comp=Z,73nm,1.1s					
N47A	**Urbana**	**71.82 349**	P	**P**	**13 33 17.7**	**-0.4**
	baz=167,SNR=8.6					
N47A			P	**P**	**13 33 17.7**	**-0.4**
	baz=167,SNR=8.6					
P40A	**Paris**	**71.85 343**	P	**P**	**13 33 18.6**	**+0.3**
P40A	**Paris**	**71.85 343**	P	**P**	**13 33 18.9**	**+0.6**
	baz=161,SNR=36					
M50A	**Fremont**	**71.92 351**	P	**P**	**13 33 18.3**	**-0.4**
M50A			IAmb	IAmb	13 33 19.4	
	comp=Z,50nm,0.9s					
BNM	**Barren Site**	**71.99 330**	P	**P**	**13 33 19.1**	**-0.4**
L59A	**Walton**	**71.99 357**	P	**P**	**13 33 19.4**	**+0.3**
L59A			IAmb	IAmb	13 33 21.7	
	comp=Z,65nm,1.1s					
L59A	**Walton**	**71.99 357**	P	**P**	**13 33 20.5**	**+1.4**
	baz=177,SNR=8.8					
L59A			P	**P**	**13 33 20.5**	**+1.4**
	baz=177,SNR=8.8					
QUA2	**Belchertown**	**72.01 359**	P	**P**	**13 33 19.7**	**+0.6**
QUA2			IAmb	IAmb	13 33 21.6	
	comp=Z,48nm,1.1s					
BINY	**Binghamton**	**72.04 356**	P	**P**	**13 33 19.8**	**+0.3**
BINY			IAmb	IAmb	13 33 21.8	
	comp=Z,55nm,1.4s					
BINY	**Binghamton**	**72.04 356**	P	**P**	**13 33 20.7**	**+1.3**
	baz=176					
BINY	**Binghamton**	**72.04 356**	P	**P**	**13 33 20.4**	**+0.9**
	baz=176					
Y22D	**IRIS PASSCAL I**	**72.05 330**	P	**P**	**13 33 21.7**	**+1.8**
	baz=148					
L56A	**Greenwood**	**72.08 355**	P	**P**	**13 33 20.0**	**+0.3**
L56A	**Greenwood**	**72.08 355**	P	**P**	**13 33 20.4**	**+0.7**
	baz=174,SNR=10					
L56A			P	**P**	**13 33 20.4**	**+0.7**
	baz=174,SNR=10					
WES	**Weston**	**72.11 0**	P	**P**	**13 33 19.6**	**-0.2**
WES			IAmb	IAmb	13 33 22.0	
	comp=Z,41nm,1.2s					
WES	**Weston**	**72.11 0**	P	**P**	**13 33 19.6**	**-0.2**
WES			pmax	pmax		
	comp=Z,41nm,1.2s					
LENM	**Lemitar**	**72.15 330**	P	**P**	**13 33 21.8**	**+1.3**
L61B	**Northampton**	**72.18 359**	P	**P**	**13 33 21.0**	**+0.8**
L61B			IAmb	IAmb	13 33 22.7	
	comp=Z,82nm,1.2s					
L61B	**Northampton**	**72.18 359**	P	**P**	**13 33 21.7**	**+1.5**
	baz=179					
L61B	**Northampton**	**72.18 359**	P	**P**	**13 33 20.9**	**+0.7**
	baz=179					
HDIL	**Hopedale**	**72.19 346**

ANMO Albuquerque 72.59 330 LR LR 14 00 49.8
comp=Z,622nm,20.6s,baz=154,slow=32
ANMO Albuquerque 72.59 330 P **P** **13 33 24.0 +0.9**
ANMO Albuquerque 72.59 330*c i* P **P** **13 33 24.8 +1.7**
ANMO pmax pmax
comp=Z,23nm,1.3s
ANMO Albuquerque 72.59 330 P **P** **13 33 24.9 +1.8**
baz=149,SNR=16
ANMO Albuquerque 72.59 330 P **P** **13 33 24.9 +1.8**
baz=149
K57A Scipio Center 72.60 356 P **P** **13 33 22.4 -0.3**
L48A N Adams 72.65 350 P **P** **13 33 22.7 -0.4**
L48A IAmb IAmb 13 33 24.0
comp=Z,60nm,1.1s
L48A N Adams 72.65 350 P **P** **13 33 23.1 0.0**
baz=168,SNR=6.6
L48A P **P** **13 33 23.1 0.0**
baz=168,SNR=6.6
N41A Harden Midland 72.68 345 P **P** **13 33 23.0 -0.2**
MMNY Mt. Morris Dam 72.69 355 P **P** **13 33 23.5 +0.2**
KSU1 Kansas State U 72.69 340 P **P** **13 33 23.4 0.0**
baz=157
R32A Long Quarter, 72.73 338 P **P** **13 33 24.0 +0.4**
R32A IAmb IAmb 13 33 26.0
comp=Z,80nm,1.2s
M44A Midewin, Midew 72.74 347 P **P** **13 33 23.2 -0.3**
M44A IAmb IAmb 13 33 24.6
comp=Z,58nm,1.1s
M44A Midewin, Midew 72.74 347 P **P** **13 33 23.8 +0.2**
baz=165
AAM Ann Arbor 72.89 351 P **P** **13 33 24.6 +0.2**
baz=169
J61A Chester 73.08 359 P **P** **13 33 26.8 +1.3**
J61A IAmb IAmb 13 33 28.4
comp=Z,57nm,1.3s
J61A Chester 73.08 359 P **P** **13 33 27.5 +2.0**
baz=179
J61A P **P** **13 33 27.5 +2.0**
baz=179
214A Organ Pipe Nat 73.10 324 P **P** **13 33 27.0 +1.0**
214A IAmb IAmb 13 33 29.4
comp=Z,56nm,1.2s
214A Organ Pipe Nat 73.10 324 P **P** **13 33 28.0 +2.0**
baz=143,SNR=14
LIC Lamto 73.13 72 *e* P **P** **13 33 27.2 +0.7**
comp=Z,99nm,1.1s
ACCN Adirondack Com 73.13 358 P **P** **13 33 26.4 +0.5**
ACCN IAmb IAmb 13 33 28.4
comp=Z,94nm,1.4s
ACCN Adirondack Com 73.13 358 P **P** **13 33 27.1 +1.2**
baz=178,SNR=6.5
MEDO Medina 73.17 355 P **P** **13 33 26.3 +0.3**
MEDO IAmb IAmb 13 33 27.8
comp=Z,47nm,1.1s
K50A Casco 73.22 351 P **P** **13 33 25.9 -0.5**
J55A Hilton 73.22 355 P **P** **13 33 26.4 +0.1**
J55A IAmb IAmb 13 33 28.2
comp=Z,41nm,1.1s
J59A Piesco 73.24 358 P **P** **13 33 27.1 +0.6**
J59A IAmb IAmb 13 33 28.7
comp=Z,35nm,1.1s
J59A Piesco 73.24 358 P **P** **13 33 27.5 +0.9**
baz=177,SNR=6.0
J59A P **P** **13 33 27.5 +0.9**
baz=177,SNR=6.0
J57A Williamstown 73.25 357 P **P** **13 33 27.1 +0.6**
J57A IAmb IAmb 13 33 28.5
comp=Z,60nm,1.1s
J57A Williamstown 73.25 357 P **P** **13 33 27.1 +0.6**
baz=176,SNR=5.4
J57A P **P** **13 33 27.1 +0.6**
baz=176,SNR=5.4
J54A Appleton 73.29 355 P **P** **13 33 27.0 +0.2**
J54A IAmb IAmb 13 33 27.9
comp=Z,37nm,0.9s
N38A Joes South For 73.34 343 P **P** **13 33 27.2 +0.1**
N38A Joes South For 73.34 343 P **P** **13 33 27.6 +0.4**
baz=160,SNR=5.7
TIC Toumodi 73.37 72 *e* P **P** **13 33 28.1 +0.1**
comp=Z,22nm,0.2s
CBKS Cedar Bluff 73.42 337 P **P** **13 33 28.4 +0.6**
CBKS IAmb IAmb 13 33 30.1
comp=Z,72nm,1.0s
CBKS Cedar Bluff 73.42 337 P **P** **13 33 28.4 +0.6**
CBKS pmax pmax
comp=Z,72nm,1.0s
CBKS Cedar Bluff 73.42 337 P **P** **13 33 29.1 +1.3**
baz=155,SNR=7.4
CBKS Cedar Bluff 73.42 337 P **P** **13 33 29.0 +1.2**
baz=155,SNR=7.4
KIC Kosan Boka 73.44 72 *e* P **P** **13 33 28.6 +0.2**
comp=Z,170nm,1.0s
L44A Lake County Fo 73.48 347 P **P** **13 33 27.7 -0.2**
baz=165
DBIC Dimbokro 73.52 72 P **P** **13 33 28.9 +0.1**
comp=Z,75nm,0.9s,baz=241,slow=5.9,SNR=48
comp=Z,75nm,0.9s
DBIC Dimbokro 73.52 72 P **P** **13 33 29.0 +0.1**
T25A Trinidad 73.64 333 P **P** **13 33 30.8 +1.5**
T25A IAmb IAmb 13 33 32.4
comp=Z,70nm,1.1s
T25A Trinidad 73.64 333 P **P** **13 33 31.1 +1.8**
baz=151,SNR=29
L42A Oliver, Polo 73.66 346 P **P** **13 33 28.9 -0.1**
L42A IAmb IAmb 13 33 30.3
comp=Z,49nm,1.1s
L42A Oliver, Polo 73.66 346 P **P** **13 33 29.0 0.0**
baz=164,SNR=7.8
X18A Snowflake 73.80 328 P **P** **13 33 31.6 +1.4**
WCNY West Carthage 73.80 357 P **P** **13 33 30.8 +1.0**
baz=176,SNR=5.6
PECO Prince Edward 73.83 356 P **P** **13 33 30.4 +0.5**
PECO IAmb IAmb 13 33 31.2
comp=Z,32nm,1.0s
LBNH Lisbon 73.96 360 P **P** **13 33 32.8 +2.0**
baz=180
J47A Sunmer 73.98 350 P **P** **13 33 30.4 -0.5**
J47A IAmb IAmb 13 33 31.3
comp=Z,37nm,0.8s
N35A Tabor 74.04 341 P **P** **13 33 31.4 +0.1**
N35A Tabor 74.04 341 P **P** **13 33 31.5 +0.2**
baz=158,SNR=6.0
L40A Anamosa 74.06 345 P **P** **13 33 31.3 0.0**
L40A Anamosa 74.06 345 P **P** **13 33 31.6 +0.3**
baz=162,SNR=26
W18A Petrified Fore 74.18 328 P **P** **13 33 32.3 -0.2**
W18A IAmb IAmb 13 33 35.7
comp=Z,109nm,1.5s
W18A Petrified Fore 74.18 328 P **P** **13 33 34.2 +1.7**
baz=146,SNR=6.0
SCIA State Center 74.38 343 P **P** **13 33 33.7 +0.5**
baz=161
LONY Lake Ozonia 74.39 358 P **P** **13 33 33.9 +0.6**
LONY IAmb IAmb 13 33 35.4
comp=Z,47nm,1.2s
LONY Lake Ozonia 74.39 358 P **P** **13 33 34.0 +0.8**
baz=177,SNR=5.9
X16A Lo Mia Camp, P 74.41 327 P **P** **13 33 35.4 +1.6**
X16A IAmb IAmb 13 33 37.1
comp=Z,40nm,1.2s
N33A J Bar K, Exete 74.45 340 P **P** **13 33 34.1 +0.4**
FRNY Flat Rock 74.58 358 P **P** **13 33 34.9 +0.6**
FRNY IAmb IAmb 13 33 36.5
comp=Z,50nm,1.2s
FRNY Flat Rock 74.58 358 P **P** **13 33 35.5 +1.2**
baz=178,SNR=8.9
SDCO Great Sand Dun 74.59 333 P **P** **13 33 36.0 +1.0**
SDCO Great Sand Dun 74.59 333 P **P** **13 33 36.7 +1.8**
baz=150,SNR=27
SDCO Great Sand Dun 74.59 333 P **P** **13 33 36.5 +1.6**
baz=150,SNR=27
KSCO Kaye Shedlock' 74.61 335 P **P** **13 33 36.5 +1.8**
baz=152
BMNY Brushton-Moira 74.61 358 P **P** **13 33 35.2 +0.7**
baz=177,SNR=7.1
JFWS Jewell Farm 74.65 346 P **P** **13 33 34.9 +0.1**
JFWS IAmb IAmb 13 33 36.5
comp=Z,72nm,1.2s
JFWS Jewell Farm 74.65 346 P **P** **13 33 34.9 +0.1**
JFWS pmax pmax
comp=Z,73nm,1.3s
JFWS Jewell Farm 74.65 346 P **P** **13 33 35.4 +0.6**
baz=163,SNR=6.7
JFWS Jewell Farm 74.65 346 P **P** **13 33 35.3 +0.5**
baz=163,SNR=6.7
HAL Halifax 74.71 6 P **P** **13 33 36.1 +1.1**
HAL IAmb IAmb 13 33 37.8
comp=Z,53nm,1.1s
HAL Halifax 74.71 6 P **P** **13 33 36.1 +1.1**
HAL pmax pmax
comp=Z,53nm,1.1s
Y14A Wickenburg 74.78 325 P **P** **13 33 36.8 +0.9**
SADO Sadowa 74.82 354 P **P** **13 33 35.6 -0.1**
SADO IAmb IAmb 13 33 37.3
comp=Z,54nm,1.1s
G62A West of Eustis 74.95 1 P **P** **13 33 37.7 +1.2**
G62A IAmb IAmb 13 33 38.7
comp=Z,40nm,0.9s
G62A West of Eustis 74.95 1 P **P** **13 33 38.0 +1.6**
baz=181,SNR=9.0
G62A P **P** **13 33 38.0 +1.6**
baz=181,SNR=9.0
K38A Parkersburg 74.97 344 P **P** **13 33 36.6 0.0**
K38A IAmb IAmb 13 33 37.4
comp=Z,33nm,0.9s
K38A Parkersburg 74.97 344 P **P** **13 33 37.2 +0.6**
baz=161
GLA Glamis 75.00 323 P **P** **13 33 38.4 +1.4**
GLA Glamis 75.00 323 P **P** **13 33 38.4 +1.4**
GLA pmax pmax
comp=Z,18nm,1.1s
GLA Glamis 75.00 323 P **P** **13 33 38.7 +1.6**
baz=142
PKME Peaks-Kenny Pk 75.01 2 P **P** **13 33 37.5 +0.8**
PKME IAmb IAmb 13 33 38.8
comp=Z,48nm,1.1s
PKME Peaks-Kenny Pk 75.01 2 P **P** **13 33 38.3 +1.5**
baz=182
S22A 4UR Ranch, Cre 75.13 332 P **P** **13 33 39.2 +1.1**
S22A 4UR Ranch, Cre 75.13 332 P **P** **13 33 39.9 +1.8**
baz=149,SNR=12
MNTQ Montreal, Queb 75.25 358 P **P** **13 33 38.9 +0.8**
MNTQ IAmb IAmb 13 33 40.4
comp=Z,68nm,1.4s
YUH Yuha Desert 75.25 322 P **P** **13 33 39.2 +0.7**
WUAZ Wupatki 75.27 327 P **P** **13 33 39.1 +0.4**
WUAZ IAmb IAmb 13 33 42.2
comp=Z,54nm,1.2s
WUAZ Wupatki 75.27 327 P **P** **13 33 40.8 +2.1**
baz=145,SNR=21
L34A Svendsen Farm, 75.27 341 P **P** **13 33 38.5 +0.1**
L34A IAmb IAmb 13 33 39.8
comp=Z,70nm,1.0s
L34A Svendsen Farm, 75.27 341 P **P** **13 33 38.7 +0.3**
baz=158,SNR=5.1
BGNE Belgrade 75.28 340 P **P** **13 33 39.0 +0.5**
BGNE Belgrade 75.28 340 P **P** **13 33 39.3 +0.8**
baz=156,SNR=6.9
BGNE Belgrade 75.28 340 P **P** **13 33 39.4 +0.9**
baz=156,SNR=6.9
I42A Draeger Farm, 75.32 347 P **P** **13 33 38.6 0.0**
I42A IAmb IAmb 13 33 39.6
comp=Z,32nm,0.9s
I42A Draeger Farm, 75.32 347 P **P** **13 33 38.8 +0.2**
baz=164,SNR=6.5
IKP In-Ko-Pah, Jac 75.36 322 P **P** **13 33 41.2 +2.0**
baz=141,SNR=6.6
MVCO Mesa Verde 75.38 330 P **P** **13 33 40.9 +1.5**
MVCO IAmb IAmb 13 33 42.4
comp=Z,42nm,1.1s
MVCO Mesa Verde 75.38 330 P **P** **13 33 41.3 +1.8**
baz=148,SNR=18
BLYC Blythe 75.39 324 P **P** **13 33 40.6 +1.4**
CBX Cerro Bola 75.39 322 P **P** **13 33 40.8 +1.3**
SWSC Sam W. Stewart 75.42 323 P **P** **13 33 41.2 +1.8**
baz=141
Q24A Divide 75.51 334 P **P** **13 33 41.5 +1.3**
Q24A IAmb IAmb 13 33 43.1
comp=Z,57nm,0.9s
Q24A Divide 75.51 334 P **P** **13 33 42.1 +1.8**
baz=150,SNR=28
PDMCI Parker Dam,Lak 75.64 325 P **P** **13 33 42.2 +1.5**
baz=143
F64A Sherman 75.64 2 P **P** **13 33 41.7 +1.4**
F64A IAmb IAmb 13 33 43.1
comp=Z,52nm,1.2s
H43A Windswept, Lux 75.67 348 P **P** **13 33 40.5 -0.1**
H43A IAmb IAmb 13 33 42.0
comp=Z,43nm,0.9s
H43A Windswept, Lux 75.67 348 P **P** **13 33 40.9 +0.3**
baz=166,SNR=6.4
I40A Norwalk 75.67 346 P **P** **13 33 40.5 -0.1**
I40A IAmb IAmb 13 33 42.1
comp=Z,37nm,1.1s
GBN Guysborough 75.68 7 P **P** **13 33 41.1 +0.6**
GBN IAmb IAmb 13 33 42.5
comp=Z,54nm,1.1s
BAR Barrett 75.68 322 P **P** **13 33 42.5 +1.5**
MONP2 Monument Peak 75.71 322 P **P** **13 33 43.4 +2.1**
baz=141,SNR=7.8
BC3 Big Chuckawall 75.80 323 P **P** **13 33 43.6 +1.9**
baz=142,SNR=15
LMN Caledonia Moun 75.82 5 P **P** **13 33 42.3 +0.9**
TRQ Mont Tremblant 76.00 358 P **P** **13 33 42.9 +0.4**
TRQ IAmb IAmb 13 33 44.2
comp=Z,64nm,1.1s
IRM Iron Mountain 76.03 324 P **P** **13 33 44.8 +1.8**
baz=142,SNR=5.1
109C Camp Elliot, M 76.07 322 P **P** **13 33 44.8 +1.6**
baz=140
OGNE Ogallala 76.11 337 P **P** **13 33 43.2 -0.1**
OGNE IAmb IAmb 13 33 45.9
comp=Z,71nm,1.4s
OGNE Ogallala 76.11 337 P **P** **13 33 44.5 +1.2**
baz=153
W13A Hualapai Mount 76.14 325 P **P** **13 33 45.0 +1.2**
E63A Oxbow 76.19 2 P **P** **13 33 44.9 +1.4**
baz=183,SNR=7.5
E63A P **P** **13 33 44.9 +1.4**
baz=183,SNR=7.5
NEE2 Needles Airpor 76.24 325 P **P** **13 33 45.2 +1.1**
baz=143
TPFO Pinon Flats 76.28 323 P **P** **13 33 46.6 +2.1**
baz=141,SNR=12
PFO Pinyon Flats O 76.29 323 LR LR 14 01 06.1
comp=Z,411nm,19.4s,baz=132,slow=31
PFO Pinyon Flats O 76.29 323 P **P** **13 33 45.9 +1.4**
PFO IAmb IAmb 13 33 58.0
comp=Z,43nm,1.3s
PFO Pinyon Flats O 76.29 323 P **P** **13 33 45.9 +1.4**
PFO pmax pmax
comp=Z,43nm,1.3s
PFO Pinyon Flats O 76.29 323 P **P** **13 33 46.6 +2.0**
baz=141,SNR=11
PV13 Radium Mtn., P 76.32 331 P **P** **13 33 45.7 +0.9**
PV13 IAmb IAmb 13 33 47.6
comp=Z,58nm,1.3s
PV15 Paradox Valley 76.33 331 P **P** **13 33 45.9 +1.1**
PV15 IAmb IAmb 13 33 48.2
comp=Z,51nm,1.4s
SUR Sutherland 76.34 120 P **P** **13 33 46.9 +1.7**
comp=Z,43nm,0.9s,baz=212,slow=5.7,SNR=24
comp=Z,43nm,0.9s
SUR Sutherland 76.34 120 P **P** **13 33 46.5 +1.3**
SUR IAmb IAmb 13 33 48.1
comp=Z,64nm,1.0s
BELC Belle Mtn. Jos 76.35 323 P **P** **13 33 46.8 +1.9**
baz=141,SNR=7.9
I37A Lemond, Waseca 76.41 344 P **P** **13 33 44.9 +0.1**
I37A IAmb IAmb 13 33 46.6
comp=Z,93nm,1.3s
I37B Waseca 76.41 344 P **P** **13 33 45.2 +0.4**
baz=161,SNR=5.6
ISCO Idaho Springs 76.41 334 P **P** **13 33 46.5 +1.1**
ISCO Idaho Springs 76.41 334 P **P** **13 33 46.5 +1.1**
ISCO pmax pmax
comp=Z,31nm,1.2s
ISCO Idaho Springs 76.41 334 P **P** **13 33 46.9 +1.5**
baz=150,SNR=18
ISCO Idaho Springs 76.41 334 P **P** **13 33 47.1 +1.7**
baz=150,SNR=18
SMCO Snowmass 76.41 332 P **P** **13 33 46.7 +1.3**
SMCO IAmb IAmb 13 33 48.8
comp=Z,83nm,1.2s
U15A North Rim 76.44 327 P **P** **13 33 46.7 +1.2**
PV11 David Mesa, Pa 76.46 331 P **P** **13 33 46.1 +0.7**
PV11 IAmb IAmb 13 33 48.5
comp=Z,56nm,1.5s
PQI Presque Isle 76.46 2 P **P** **13 33 46.2 +1.2**
PQI IAmb IAmb 13 33 47.6
comp=Z,60nm,1.1s
K31A O'Neill 76.57 340 P **P** **13 33 46.7 +0.9**
K31A O'Neill 76.57 340 P **P** **13 33 47.2 +1.4**
baz=156,SNR=14
MURC Murrieta 76.67 322 P **P** **13 33 48.6 +2.1**
baz=140,SNR=7.1
GMRC Granite Mounta 76.78 324 P **P** **13 33 49.5 +2.1**
baz=142,SNR=20
MAW Mawson 76.80 164 P **P** **13 33 47.5 +0.7**
comp=Z,20nm,0.9s,baz=215,slow=7.6,SNR=36
comp=Z,20nm,0.9s
MAW Mawson 76.80 164 P **P** **13 33 47.1 +0.3**
MAW Mawson 76.80 164 P **P** **13 33 47.2 +0.3**
MAW pmax pmax
comp=Z,9.0nm,1.2s
ELS Elsinore Mount 76.83 322 P **P** **13 33 48.8 +1.2**
ELS IAmb IAmb 13 34 00.9
comp=Z,38nm,1.1s
D62A Allapoint, All 76.84 2 P **P** **13 33 48.2 +1.2**
D62A Allapoint, All 76.84 2 P **P** **13 33 48.3 +1.2**
baz=182,SNR=16
D62A P **P** **13 33 48.3 +1.2**
baz=182,SNR=16
G40A Rib Lake 76.90 347 P **P** **13 33 47.5 -0.1**
G40A Rib Lake 76.90 347 P **P** **13 33 48.0 +0.4**
baz=164,SNR=8.1
SCI2 San Clemente I 76.92 321 P **P** **13 33 49.6 +1.6**
baz=140
E46A Sault Ste Mari 76.97 351 P **P** **13 33 47.7 -0.2**
E46A IAmb IAmb 13 33 49.2
comp=Z,76nm,1.1s
E46A Sault Ste Mari 76.97 351 P **P** **13 33 48.0 +0.1**
baz=169,SNR=9.5
ECSD EROS Data Cent 76.97 342 P **P** **13 33 48.4 +0.4**
ECSD IAmb IAmb 13 33 49.9
comp=Z,71nm,1.1s
ECSD EROS Data Cent 76.97 342 P **P** **13 33 48.8 +0.7**
baz=158,SNR=36
ECSD EROS Data Cent 76.97 342 P **P** **13 33 48.7 +0.7**
baz=158,SNR=36
F42A Maple Grove Fa 76.98 348 P **P** **13 33 47.9 -0.1**
F42A Maple Grove Fa 76.98 348 P **P** **13 33 49.0 +1.0**
baz=165
BBRC Big Bear Solar 77.03 323 P **P** **13 33 50.8 +1.9**
baz=141
LATQ La Tuque 77.11 359 P **P** **13 33 49.2 +0.5**
LATQ IAmb IAmb 13 33 50.8
comp=Z,62nm,1.2s
BATG Bathurst New B 77.16 4 P **P** **13 33 50.0 +1.1**
BATG IAmb IAmb 13 33 51.6
comp=Z,68nm,1.1s
HEC Hector,Ludlow 77.17 323 P **P** **13 33 51.7 +2.2**
baz=141,SNR=17
CIS Catalina Islan 77.17 321 P **P** **13 33 51.1 +1.7**
baz=140
PKCU Pink Cliffs 77.28 328 P **P** **13 33 51.5 +1.2**
LMQ La Malbaie 77.28 1 P **P** **13 33 50.3 +0.7**
LMQ IAmb IAmb 13 33 51.9
comp=Z,54nm,1.3s
FMP Fort Macarthur 77.34 321 P **P** **13 33 52.0 +1.7**
baz=140
LCMT Little Creek M 77.36 327 P **P** **13 33 51.7 +1.2**
E43A Lone Tree Farm 77.38 349 P **P** **13 33 50.3 +0.1**
E43A IAmb IAmb 13 33 51.8
comp=Z,40nm,1.1s
E43A Lone Tree Farm 77.38 349 P **P** **13 33 50.8 +0.5**
baz=166,SNR=7.3
BFSC Mount Baldy Ra 77.40 322 P **P** **13 33 52.7 +1.9**
baz=140,SNR=10
SPMN Marine on St. 77.42 345 P **P** **13 33 50.2 -0.3**
SPMN IAmb IAmb 13 33 51.6
comp=Z,38nm,1.2s
SPMN Marine on St. 77.42 345 P **P** **13 33 50.3 -0.1**
baz=161
TUQ Turquoise Moun 77.43 324 P **P** **13 33 52.8 +1.9**
baz=142
N23A Red Feather La 77.49 334 P **P** **13 33 51.5 +0.2**
N23A IAmb IAmb 13 34 04.4
comp=Z,36nm,1.1s
N23A Red Feather La 77.49 334 P **P** **13 33 53.1 +1.8**
baz=150,SNR=16
COWI Conover 77.49 348 P **P** **13 33 51.0 +0.1**
COWI IAmb IAmb 13 33 52.7
comp=Z,32nm,1.1s
COWI Conover 77.49 348 P **P** **13 33 51.5 +0.6**
baz=164
RRX Edison Barstow 77.54 323 P **P** **13 33 54.0 +2.6**
baz=141
PASC Pasadena Art C 77.63 322 P **P** **13 33 51.9 -0.1**
PASC IAmb IAmb 13 34 05.4
comp=Z,46nm,1.3s
PHWY Pilot Hill 77.66 334 P **P** **13 33 53.0 +0.7**
SNCC San Nicolas Is 77.66 320 P **P** **13 33 53.7 +1.6**
baz=139
MTPU Mount Pierson 77.70 328 P **P** **13 33 53.8 +1.1**
O20A White River Ci 77.74 332 P **P** **13 33 53.9 +1.2**
O20A IAmb IAmb 13 33 55.7
comp=Z,70nm,1.1s
O20A White River Ci 77.74 332 P **P** **13 33 54.3 +1.7**
baz=148,SNR=35
SZCU Shurtz Canyon 77.76 327 P **P** **13 33 54.6 +1.7**
DECC Green Verdugo 77.77 322 P **P** **13 33 54.8 +2.0**
baz=140
GSC Goldstone, Bar 77.78 323 P **P** **13 33 54.4 +1.5**
GSC Goldstone, Bar 77.78 323 P **P** **13 33 54.4 +1.5**
GSC pmax pmax
comp=Z,33nm,1.2s
GSC Goldstone, Bar 77.78 323 P **P** **13 33 54.8 +2.0**
baz=141,SNR=12
SRU San Rafael Swe 77.84 330 P **P** **13 33 54.3 +1.0**
SRU IAmb IAmb 13 33 55.8
comp=Z,40nm,1.3s
SRU San Rafael Swe 77.84 330 P **P** **13 33 54.3 +1.0**
SRU pmax pmax
comp=Z,40nm,1.3s
CCUT Cedar City 77.85 327 P **P** **13 33 55.3 +1.9**
CCUT IAmb IAmb 13 34 07.2
comp=Z,32nm,1.1s
SHPR Sheep Range 77.89 325 P **P** **13 33 55.0 +1.4**
SHOC Shoshone, Teco 77.97 324 P **P** **13 33 55.3 +1.5**
baz=142
VLDQ Val d'Or 78.02 356 P **P** **13 33 54.4 +0.7**
VLDQ IAmb IAmb 13 33 55.7
comp=Z,58nm,1.1s
EDW2 Edwards Air Fo 78.07 322 P **P** **13 33 56.0 +1.5**
baz=140,SNR=7.8
MSU Marysvale 78.08 328 P **P** **13 33 55.8 +1.1**
MSU Marysvale 78.08 328 P **P** **13 33 55.8 +1.1**
MVU Marysvale 78.09 328 P **P** **13 33 56.0 +1.3**
P18A Preston Nutter 78.15 330 P **P** **13 33 56.5 +1.4**
P18A IAmb IAmb 13 33 58.2
comp=Z,71nm,1.2s
F36A Milaca 78.18 344 P **P** **13 33 54.6 -0.1**
F36A IAmb IAmb 13 33 55.9
comp=Z,34nm,1.1s
F36A Milaca 78.18 344 P **P** **13 33 54.9 +0.2**
baz=161,SNR=12
P17A Butcher Ranch, 78.24 330 P **P** **13 33 56.3 +0.9**
P17A IAmb IAmb 13 33 58.1
comp=Z,38nm,1.1s
OSI Osito Audit: C 78.26 322 P **P** **13 33 56.8 +1.3**
baz=140
SCZ2 Santa Cruz Isl 78.28 321 P **P** **13 33 57.4 +1.8**
baz=139
SUSD Miller 78.29 340 P **P** **13 33 55.7 +0.4**
SUSD IAmb IAmb 13 33 57.0
comp=Z,68nm,1.2s
SUSD Miller 78.29 340 P **P** **13 33 55.6 +0.3**
baz=156
CCAC Calif City Air 78.29 323 P **P** **13 33 57.0 +1.3**
CCAC IAmb IAmb 13 34 08.9
comp=Z,54nm,1.2s
TMUT Trail Mountain 78.30 330 P **P** **13 33 56.5 +0.6**
D41A Chassel 78.31 348 P **P** **13 33 55.9 +0.5**
D41A Chassel 78.31 348 P **P** **13 33 56.1 +0.7**
baz=165,SNR=10
QSM Queen of Sheba 78.32 324 P **P** **13 33 56.9 +1.2**
LRMC Laurel Mtn Rad 78.37 323 P **P** **13 33 57.7 +1.5**
baz=140
GWY Greenwater Val 78.39 324 P **P** **13 33 56.8 +0.5**
E38A The Farm, Brul 78.45 346 P **P** **13 33 55.6 -0.6**
PRN Pahroc Range 78.55 326 P **P** **13 33 58.7 +1.6**
PRN IAmb IAmb 13 34 00.6
comp=Z,41nm,1.1s
RDMU Red Mountain 78.65 331 P **P** **13 33 58.8 +1.1**
RDMU IAmb IAmb 13 34 00.3
comp=Z,53nm,1.2s
RWWY Rawlins 78.66 334 P **P** **13 33 59.0 +1.3**

RWWY IAmb IAmb 13 34 00.6
comp=Z,74nm,1.1s
ARVC Arvin 78.70 322 P **P** **13 33 59.5 +1.6**
baz=140
FURC Furnace Creek, 78.71 324 P **P** **13 33 59.7 +1.9**
baz=141,SNR=10
MPMC Manual Prospec 78.71 324 P **P** **13 33 59.6 +1.5**
baz=141,SNR=12
TPNV Topopah Spring 78.77 325 P **P** **13 33 59.9 +1.5**
TPNV IAmb IAmb 13 34 12.0
comp=Z,33nm,1.1s
TPNV Topopah Spring 78.77 325 P **P** **13 33 59.9 +1.5**
TPNV pmax pmax
comp=Z,33nm,1.1s
TPNV Topopah Spring 78.77 325 P **P** **13 34 00.6 +2.1**
baz=142,SNR=27
F33A 5 Mile Ranch, 78.84 343 P **P** **13 33 58.4 0.0**
BCW Bitter Crk WRg 78.87 322 P **P** **13 34 00.6 +1.6**
BCW IAmb IAmb 13 34 12.6
comp=Z,64nm,1.1s
PSUT Pine Spring 78.87 327 P **P** **13 34 00.3 +1.3**
ISA Isabella, Lake 78.92 323 P **P** **13 34 01.3 +2.1**
baz=140,SNR=15
PKM Mcpherson Peak 79.05 321 P **P** **13 34 02.2 +2.2**
baz=139,SNR=16
MPU Maple Canyon 79.07 330 P **P** **13 34 00.7 +0.6**
NLU North Lily Min 79.22 329 P **P** **13 34 02.0 +1.2**
K22A Casper 79.22 334 P **P** **13 34 01.8 +1.1**
K22A IAmb IAmb 13 34 03.6
comp=Z,86nm,1.2s
K22A Casper 79.22 334 P **P** **13 34 02.4 +1.6**
baz=150,SNR=21
K22A Casper 79.22 334 P **P** **13 34 02.3 +1.6**
baz=150,SNR=21
CWC Cottonwood Cre 79.31 323 P **P** **13 34 02.8 +1.5**
baz=140
GRAC Grapevine Rang 79.37 324 P **P** **13 34 02.8 +1.2**
GRAC Grapevine Rang 79.37 324 P **P** **13 34 03.6 +2.1**
baz=141,SNR=7.8
VES Vestal, Richgr 79.38 322 P **P** **13 34 03.5 +2.0**
baz=140
SMMC Simmler 79.47 321 P **P** **13 34 04.3 +2.2**
baz=139,SNR=7.6
JLU Jordanelle 79.48 330 P **P** **13 34 02.2 0.0**
R11A Troy Canyon, C 79.55 326 P **P** **13 34 04.0 +1.4**
R11A Troy Canyon, C 79.55 326 P **P** **13 34 04.6 +2.0**
baz=142,SNR=24
RSSD Black Hills 79.61 337 P **P** **13 34 03.8 +0.9**
RSSD Black Hills 79.61 337 P **P** **13 34 03.8 +0.9**
RSSD pmax pmax
comp=Z,30nm,1.1s
RSSD Black Hills 79.61 337 P **P** **13 34 04.1 +1.2**
baz=152,SNR=19
RSSD Black Hills 79.61 337 P **P** **13 34 04.0 +1.1**
baz=152
LCH Last Change Ra 79.70 324 P **P** **13 34 04.2 +0.7**
EYMN Ely 79.72 346 P **P** **13 34 02.9 -0.2**
EYMN Ely 79.72 346 P **P** **13 34 03.7 +0.6**
baz=162,SNR=7.3
EYMN Ely 79.72 346 P **P** **13 34 03.3 +0.2**
baz=162,SNR=7.3
DUG Dugway, Tooele 79.74 329 P **P** **13 34 04.3 +0.7**
DUG IAmb IAmb 13 34 06.6
comp=Z,56nm,1.5s
DUG Dugway, Tooele 79.74 329 P **P** **13 34 04.3 +0.7**
DUG pmax pmax
comp=Z,56nm,1.5s
DUG Dugway, Tooele 79.74 329 P **P** **13 34 05.2 +1.6**
baz=145,SNR=10
TSUM Tsumeb 79.86 106 P **P** **13 34 05.3 +0.4**
TIN Tinemaha, Big 79.86 324 P **P** **13 34 06.4 +2.1**
baz=140
VOG Valley Oaks Go 79.90 323 P **P** **13 34 05.0 +0.7**
baz=139
PAGB Antelope Grade 79.92 322 P **P** **13 34 04.7 +0.1**
PAGB IAmb IAmb 13 34 18.1
comp=Z,46nm,1.0s
TPH Tonopah 80.14 325 P **P** **13 34 06.2 +0.4**
TPH Tonopah 80.14 325 P **P** **13 34 06.2 +0.4**
TPH pmax pmax
comp=Z,158nm,1.2s
D32A Dogwood Acres, 80.23 343 P **P** **13 34 06.5 +0.6**
D32A IAmb IAmb 13 34 07.6
comp=Z,72nm,1.1s
HWUT Hardware Ranch 80.35 331 P **P** **13 34 07.6 +0.7**
HWUT IAmb IAmb 13 34 19.4
comp=Z,39nm,1.1s
BGU Big Grassy Mou 80.43 329 P **P** **13 34 07.8 +0.5**
BW06 Boulder Array 80.49 333 P **P** **13 34 07.8 +0.1**
BW06 Boulder Array 80.49 333 P **P** **13 34 08.3 +0.6**
baz=147,SNR=10
PD31 Pinedale Array 80.49 333 P **P** **13 34 07.8 +0.1**
PDAR Pinedale Array 80.49 333 P **P** **13 34 08.3 +0.6**
comp=Z,6.3nm,1.0s,baz=154,slow=4.8,SNR=22
comp=Z,6.3nm,1.0s
PDAR Pinedale Array 80.49 333 P **P** **13 34 07.8 +0.1**
PMPB Monarch Peak 80.58 322 P **P** **13 34 08.3 +0.2**
PMPB IAmb IAmb 13 34 25.5
comp=Z,42nm,1.2s
B35A Bob, Littlefor 80.59 345 P **P** **13 34 07.5 -0.2**
B35A Bob, Littlefor 80.59 345 P **P** **13 34 08.0 +0.3**
baz=161
MLAC Mammoth, Mammo 80.61 324 P **P** **13 34 10.4 +2.0**
baz=140
OMMB Old Mammoth Mi 80.68 324 P **P** **13 34 09.9 +0.9**
Q09A Carvers 80.70 326 P **P** **13 34 09.8 +1.0**
Q09A IAmb IAmb 13 34 22.0
comp=Z,38nm,1.0s
MDPB Devils Postpil 80.73 324 P **P** **13 34 10.0 +0.9**
E28A Huff 80.74 340 P **P** **13 34 09.5 +0.8**
NV11 Mina Array Sit 80.88 325 P **P** **13 34 10.8 +1.0**
LHV Little Huntoon 80.91 324 P **P** **13 34 11.0 +1.3**
NVAR Mina Array Bea 80.95 325 P **P** **13 34 11.7 +1.5**
comp=Z,7.2nm,0.9s,baz=151,slow=6.0,SNR=29
comp=Z,7.2nm,0.9s
NVAR Mina Array Bea 80.95 325 P **P** **13 34 11.0 +0.8**
BBGB Big Mountain B 80.97 322 P **P** **13 34 11.2 +0.9**
BBGB IAmb IAmb 13 34 23.7
comp=Z,50nm,1.0s
HVU Hansel Valley 81.01 330 P **P** **13 34 10.4 0.0**
HVU Hansel Valley 81.01 330 P **P** **13 34 10.4 0.0**
HVU pmax pmax
comp=Z,26nm,1.2s
AGMN Agassiz Nation 81.02 344 P **P** **13 34 09.9 -0.2**
AGMN Agassiz Nation 81.02 344 P **P** **13 34 10.6 +0.5**
baz=159,SNR=12
AGMN Agassiz Nation 81.02 344 P **P** **13 34 10.5 +0.5**
baz=159,SNR=12
AHID Auburn Hatcher 81.12 332 P **P** **13 34 11.2 +0.2**
RYN Ryan 81.21 325 P **P** **13 34 12.2 +0.6**
ELK Elko 81.28 328 LR LR 14 07 00.3
comp=Z,419nm,19.0s,baz=146,slow=33
ELK Elko 81.28 328 P **P** **13 34 12.4 +0.4**
ELK Elko 81.28 328 P **P** **13 34 12.4 +0.4**
ELK pmax pmax
comp=Z,23nm,1.1s
KVN Kaiserville 81.33 325 P **P** **13 34 12.8 +0.6**
KVN Kaiserville 81.33 325 P **P** **13 34 12.8 +0.6**
KVN pmax pmax
comp=Z,26nm,1.1s
SAO San Andreas Ge 81.33 322 P **P** **13 34 12.5 +0.5**
SAO San Andreas Ge 81.33 322 P **P** **13 34 12.5 +0.5**
SAO pmax pmax
comp=Z,22nm,1.2s
BOSA Boshof 81.49 118 P **P** **13 34 13.7 +0.3**
comp=Z,26nm,0.8s,baz=254,slow=4.6,SNR=30
comp=Z,26nm,0.8s
BOSA Boshof 81.49 118 P **P** **13 34 13.5 +0.1**
BOSA IAmb IAmb 13 34 14.4
comp=Z,36nm,0.9s
BOSA Boshof 81.49 118 P **P** **13 34 13.5 +0.1**
BOSA pmax pmax
comp=Z,36nm,0.9s
SNOW Snow King Moun 81.55 332 P **P** **13 34 14.0 +0.6**
MDND Maddock 81.58 341 P **P** **13 34 13.7 +0.7**
MDND Maddock 81.58 341 P **P** **13 34 14.1 +1.0**
baz=156,SNR=7.1
MDND Maddock 81.58 341 P **P** **13 34 14.0 +1.0**
baz=156,SNR=7.1
LOHW Long Hollow 81.62 332 P **P** **13 34 13.9 +0.2**
TPAW Teton Pass 81.66 332 P **P** **13 34 14.4 +0.5**
PMPS Porto Santo 81.66 44 *e*P **P** **13 34 14.3 +0.5**
comp=Z,135nm,1.6s
CMB Columbia Colle 81.72 323 P **P** **13 34 14.5 +0.4**
CMB Columbia Colle 81.72 323 P **P** **13 34 14.5 +0.4**
CMB pmax pmax
comp=Z,19nm,1.2s
MOOW Moose Ponds 81.79 332 P **P** **13 34 14.9 +0.4**
YERR Yerington 81.85 324 P **P** **13 34 15.9 +1.0**
YERR IAmb IAmb 13 34 28.3
comp=Z,40nm,1.1s
FLWY Flagg Ranch 82.05 333 P **P** **13 34 16.6 +0.7**
PNTR Pine Nut 82.11 324 P **P** **13 34 17.4 +1.1**
PNTR IAmb IAmb 13 34 29.7
comp=Z,66nm,1.1s
RLMT Red Lodge 82.36 334 P **P** **13 34 17.9 +0.3**
RLMT Red Lodge 82.36 334 P **P** **13 34 18.5 +1.0**
baz=148,SNR=6.3
TOA0 Torodi Ar. Sit 82.45 70 P **P** **13 34 18.4 0.0**
TORD Torodi Ar. Bea 82.45 70 P **P** **13 34 18.8 +0.4**
comp=Z,116nm,1.0s,baz=277,slow=6.0,SNR=172
comp=Z,116nm,1.0s
TORD Torodi Ar. Bea 82.45 70 P **P** **13 34 18.3 -0.1**
PAHR Pah Rah Range 82.47 325 P **P** **13 34 19.4 +1.2**
PAHR IAmb IAmb 13 34 31.4
comp=Z,52nm,1.1s
MPK Martis Peak 82.48 324 P **P** **13 34 19.5 +1.1**
MPK IAmb IAmb 13 34 31.7
comp=Z,60nm,1.1s
LAO LASA Array 82.61 337 P **P** **13 34 18.4 -0.1**
LAO IAmb IAmb 13 34 20.7
comp=Z,51nm,1.4s
LAO LASA Array 82.61 337 P **P** **13 34 19.3 +0.7**
baz=150
ULM Lac du Bonnet 82.85 345 P **P** **13 34 19.6 0.0**
comp=Z,29nm,1.0s,baz=161,slow=3.6,SNR=20
ULM LR LR 14 08 18.7
comp=Z,114nm,21.9s,baz=142,slow=34
comp=Z,29nm,1.0s
ULM Lac du Bonnet 82.85 345 P **P** **13 34 19.2 -0.4**
ULM IAmb IAmb 13 34 21.0
comp=Z,50nm,1.1s
ULM Lac du Bonnet 82.85 345 P **P** **13 34 19.2 -0.4**
ULM pmax pmax
comp=Z,50nm,1.1s
YHL Hebgen Lake 82.88 333 P **P** **13 34 20.6 +0.3**
BEKR Beckworth 83.08 324 P **P** **13 34 21.7 +0.4**
BEKR IAmb IAmb 13 34 34.4
comp=Z,35nm,1.0s
GCMT Greycliff 83.08 334 P **P** **13 34 21.6 +0.5**
HLID Hailey 83.17 330 P **P** **13 34 22.6 +0.9**
HLID Hailey 83.17 330 P **P** **13 34 23.2 +1.5**
baz=144,SNR=24
BCYI Bear Canyon 83.34 331 P **P** **13 34 23.5 +0.9**
ORV Oroville 83.43 323 P **P** **13 34 23.9 +1.0**
ORV Oroville 83.43 323 P **P** **13 34 23.9 +1.0**
ORV pmax pmax
comp=Z,72nm,1.3s
DGMT Dagmar 83.50 339 P **P** **13 34 23.6 +0.5**
DGMT Dagmar 83.50 339 P **P** **13 34 24.1 +1.0**
baz=152,SNR=11
DGMT Dagmar 83.50 339 P **P** **13 34 24.4 +1.3**
baz=152,SNR=11
MCMT McKenzie Canyo 83.53 332 P **P** **13 34 23.4 -0.3**
LBTB Lobatse 83.54 115 P **P** **13 34 24.4 +0.2**
comp=Z,53nm,0.9s,baz=248,slow=4.3,SNR=50
comp=Z,53nm,0.9s
LBTB Lobatse 83.54 115 P **P** **13 34 24.1 -0.1**
LBTB Lobatse 83.54 115 P **P** **13 34 24.1 -0.1**
LBTB pmax pmax
comp=Z,87nm,1.0s
MFID Camas Ranch 83.67 329 P **P** **13 34 24.4 +0.2**
BOZ Bozeman (W) 83.67 333 P **P** **13 34 24.2 0.0**
BOZ Bozeman (W) 83.67 333 P **P** **13 34 24.2 0.0**
BOZ pmax pmax
comp=Z,8.0nm,1.3s
BOZ Bozeman (W) 83.67 333 P **P** **13 34 25.0 +0.8**
baz=146
CASY Casey 83.94 181 P **P** **13 34 25.8 +0.5**
CASY IAmb IAmb 13 34 27.4
comp=Z,34nm,1.3s
LRM Limekiln Ridge 84.19 333 P **P** **13 34 27.7 +0.7**
WVOR Wild Horse Val 84.19 327 P **P** **13 34 27.4 +0.5**
WVOR Wild Horse Val 84.19 327 P **P** **13 34 27.4 +0.5**
WVOR pmax pmax
comp=Z,14nm,1.2s
MOD Modoc Plateau 84.58 326 P **P** **13 34 29.4 +0.4**
MOD IAmb IAmb 13 34 41.8
comp=Z,28nm,1.1s
SCHQ Schefferville 84.66 3 P **P** **13 34 28.9 +0.1**
comp=Z,31nm,1.1s,baz=168,slow=3.1,SNR=17
comp=Z,31nm,1.1s
SCHQ Schefferville 84.66 3 P **P** **13 34 28.9 +0.1**
HRY Holter Researc 84.67 333 P **P** **13 34 29.9 +0.7**
J08A Circle Bar Ran 84.82 328 P **P** **13 34 30.9 +0.9**
J08A IAmb IAmb 13 34 43.0
comp=Z,51nm,1.1s
EGMT Eagleton 84.99 335 P **P** **13 34 30.3 -0.5**
EGMT Eagleton 84.99 335 P **P** **13 34 30.9 +0.2**
baz=148
PLID Pearl Lake 85.07 330 P **P** **13 34 31.8 +0.4**
PLID IAmb IAmb 13 34 33.0
comp=Z,22nm,1.1s
K05A Summer Lake 85.49 326 P **P** **13 34 34.6 +1.1**
MSO Missoula 85.60 332 P **P** **13 34 34.9 +1.1**
MSO Missoula 85.60 332 P **P** **13 34 34.8 +0.9**
baz=144
YBH Yreka Blue Hor 85.66 324 P **P** **13 34 34.1 -0.1**
YBH Yreka Blue Hor 85.66 324 P **P** **13 34 34.1 -0.1**
YBH pmax pmax
comp=Z,16nm,1.2s
L04D Klamath Falls 85.81 325 P **P** **13 34 35.4 +0.3**
L04D IAmb IAmb 13 34 47.3
comp=Z,32nm,1.1s
L04D Klamath Falls 85.81 325 P **P** **13 34 35.7 +0.6**
baz=138
PLWZ Palliser 85.81 224 P **P** **13 34 35.5 +0.2**
K04D Chiloquin, OR 85.84 325 P **P** **13 34 36.0 +0.9**
baz=138
I07A Izee 85.86 328 P **P** **13 34 35.9 +0.7**
I07A IAmb IAmb 13 34 48.2
comp=Z,32nm,1.1s
J05D Fort Rock, OR 86.08 326 P **P** **13 34 37.7 +1.3**
baz=139,SNR=8.9
KHZ Kahutara 86.31 222 P **P** **13 34 39.2 +1.6**
PINE Pine Mountain 86.32 327 P **P** **13 34 38.5 +0.9**
PINE IAmb IAmb 13 34 50.8
comp=Z,51nm,1.1s
L02F Cave Junction 86.38 324 P **P** **13 34 39.0 +1.3**
baz=137
J04D Umpqua Nationa 86.47 326 P **P** **13 34 38.7 +0.3**
J04D IAmb IAmb 13 34 51.1
comp=Z,48nm,1.1s
J04D Umpqua Nationa 86.47 326 P **P** **13 34 39.2 +0.9**
baz=138
JTMT Jette 86.48 333 P **P** **13 34 38.7 +0.5**
G08A Pilot Rock 86.53 329 P **P** **13 34 38.9 +0.4**
LTZ Lake Taylor 86.82 221 P **P** **13 34 41.2 +1.0**
K02D Willamette Mer 86.84 324 P **P** **13 34 41.8 +1.8**
baz=137
I05D Terrebonne, OR 86.92 327 P **P** **13 34 41.9 +1.6**
baz=139,SNR=7.3
RPZ Rata Peaks 86.92 220 P **P** **13 34 40.9 +0.2**
DBO Dodson Butte 86.94 325 P **P** **13 34 41.0 +0.5**
DBO IAmb IAmb 13 34 53.6
comp=Z,41nm,1.2s
I04A Tendick Farm, 87.03 326 P **P** **13 34 41.7 +0.8**
baz=138
J01E Myrtle Point 87.32 325 P **P** **13 34 43.1 +0.9**
baz=137
WALA Waterton Lakes 87.40 334 P **P** **13 34 43.0 +0.3**
WALA IAmb IAmb 13 34 55.0
comp=Z,32nm,1.1s
I03D Drain, OR 87.42 325 P **P** **13 34 43.6 +0.9**
baz=137
F07A Phinny Hill Vi 87.44 328 P **P** **13 34 43.2 +0.5**
F07A IAmb IAmb 13 34 55.8
comp=Z,20nm,1.2s
H04A Detroit Lake 87.58 326 P **P** **13 34 43.5 0.0**
H04A IAmb IAmb 13 34 55.6
comp=Z,30nm,1.1s
G05D Wamic, OR 87.58 327 P **P** **13 34 45.0 +1.5**
baz=139
HAWA Hanford 87.64 329 P **P** **13 34 44.1 +0.4**
HAWA IAmb IAmb 13 34 56.5
comp=Z,26nm,1.2s
H04D Lebanon 87.72 326 P **P** **13 34 44.8 +0.7**
baz=138
D08A Wollman Farm, 87.88 330 P **P** **13 34 45.2 +0.4**
I02E Swisshome, OR 87.96 325 P **P** **13 34 46.6 +1.4**
baz=137
COR Corvallis 88.04 326 P **P** **13 34 46.3 +0.7**
COR Corvallis 88.04 326 P **P** **13 34 46.3 +0.7**
COR pmax pmax
comp=Z,105nm,1.4s
NEW Newport 88.05 331 LR LR 14 11 27.0
comp=Z,462nm,18.1s,baz=146,slow=34
NEW Newport 88.05 331 P **P** **13 34 45.9 +0.2**
NEW Newport 88.05 331 P **P** **13 34 45.9 +0.2**
NEW pmax pmax
comp=Z,8.0nm,1.2s
NEW Newport 88.05 331 P **P** **13 34 45.4 -0.2**
baz=142
C09A Chrisman Ranch 88.17 331 P **P** **13 34 46.5 +0.2**
C09A IAmb IAmb 13 34 48.2
comp=Z,16nm,1.0s
G03D McMinnville, O 88.48 326 P **P** **13 34 48.8 +1.0**
baz=137
LTY Liberty 88.80 329 P **P** **13 34 49.3 0.0**
F04D Rainier, OR 89.00 327 P **P** **13 34 51.1 +0.9**
baz=137
B08A Colville Reser 89.05 330 P **P** **13 34 50.0 -0.4**
E04D Cinebar 89.14 328 P **P** **13 34 51.3 +0.5**
baz=138
MORF Marmelete 89.17 45 *e*P **P** **13 34 52.3 +1.0**
MORF IAmb IAmb 13 34 53.1
comp=Z,32nm,1.3s
MORF Marmelete 89.17 45 *e*P **P** **13 34 52.4 +1.1**
comp=Z,28nm,1.3s
MORF Marmelete 89.17 45 *e*P **P** **13 34 52.2 +1.0**
PTEO Sao Teotonio 89.28 45 *e*P **P** **13 34 52.6 +0.9**
comp=Z,49nm,1.2s
D05A Enumclaw 89.34 328 P **P** **13 34 51.8 +0.1**
D05A IAmb IAmb 13 35 03.9
comp=Z,37nm,1.1s
PBDV Barranco-do-Ve 89.58 46 *e*P **P** **13 34 54.5 +1.4**
comp=Z,35nm,1.4s
PCVE Castro Verde 89.76 45 *e*P **P** **13 34 55.1 +1.2**
PNCL Nicolau / Gran 89.76 45 *e*P **P** **13 34 54.9 +1.0**
comp=Z,28nm,1.1s
MESJ Messejana 89.78 45 *e*P **P** **13 34 55.1 +1.1**
MESJ IAmb IAmb 13 34 55.3
comp=Z,21nm,1.3s
MESJ Messejana 89.78 45 *e*P **P** **13 34 55.1 +1.1**
comp=Z,30nm,1.6s
MESJ Messejana 89.78 45 *e*P **P** **13 34 55.0 +1.1**
PVAQ Vaqueiros 89.81 46 *e*P **P** **13 34 55.4 +1.2**
comp=Z,44nm,1.5s
PVAQ Vaqueiros 89.81 46 P **P** **13 34 54.9 +0.7**
D03D Eldon 90.11 328 P **P** **13 34 56.4 +1.1**
baz=137
PBEJ Beja 90.11 45 *e*P **P** **13 34 56.6 +1.0**
comp=Z,18nm,1.7s
FCC Fort Churchill 90.49 348 P **P** **13 34 57.0 +0.3**
FCC IAmb IAmb 13 34 58.1
comp=Z,22nm,0.9s
FCC Fort Churchill 90.49 348 P **P** **13 34 57.0 +0.3**
FCC pmax pmax
comp=Z,22nm,1.0s
PMTG Montargil 90.55 44 *e*P **P** **13 34 58.4 +0.8**
comp=Z,33nm,1.2s
PESTR Estremoz 90.81 45 *e*P **P** **13 34 59.9 +1.1**
comp=Z,20nm,1.2s
PESTR Estremoz 90.81 45 P **P** **13 34 58.9 +0.1**
PMRV Marv??o 91.28 44 *e*P **P** **13 35 01.9 +0.9**
comp=Z,14nm,2.0s
PCBR Castelo Branco 91.49 44 *e*P **P** **13 35 02.7 +0.8**
comp=Z,19nm,1.3s
PAB San Pablo 93.21 46 P **P** **13 35 10.1 +0.1**
PAB IAmb IAmb 13 35 11.8
comp=Z,14nm,1.2s
PAB San Pablo 93.21 46 P **P** **13 35 10.1 +0.1**
PAB pmax pmax
comp=Z,14nm,1.2s
ESDC Sonseca Array 93.53 46 P **P** **13 35 12.4 +0.9**
comp=Z,4.4nm,1.1s,baz=235,slow=5.1,SNR=18
comp=Z,4.4nm,1.1s
ESDC Sonseca Array 93.53 46 P **P** **13 35 11.1 -0.3**
ESBB Sonseca Array 93.53 46 P **P** **13 35 11.2 -0.2**
SFJD Kangerlussuaq 98.06 8 LR LR 14 19 43.6
comp=Z,88nm,20.6s,baz=196,slow=35
YKA Yellowknife Ar 98.50 341 P **P** **13 35 32.7 -0.7**
comp=Z,5.7nm,1.1s,baz=147,slow=4.6,SNR=4.4
YKA LR LR 14 19 48.9
comp=Z,187nm,21.3s,baz=118,slow=35
comp=Z,5.7nm,1.1s
T35M Bob Quinn 99.85 332 Pdiff **Pdif** **13 35 40.0 +0.4**
baz=131
CRAG Craig 100.10 329 Pdiff **Pdif** **13 35 42.0 +1.4**
baz=129
WRAK Wrangell Islan 100.37 330 Pdiff **Pdif** **13 35 42.5 +0.7**
baz=130
DLBC Dease Lake 100.72 333 Pdiff **Pdif** **13 35 45.2 +1.7**
baz=131
P33M Teslin, Yukon 102.97 333 Pdiff **Pdif** **13 35 54.5 +1.1**
baz=129
DZM Mont Dzumac 103.91 234 *e*LR LR 14 09 30.5
comp=Z,970nm,24.1s
FARO Faro, Yukon 104.42 335 Pdiff **Pdif** **13 36 01.0 +1.1**
baz=128
C36M Paulatuk 106.22 343 PKiKP **PKiKP** **13 40 22.1 +3.2**
baz=134
GERES GERESS Array B 109.06 44 PKiKP **PKiKP** **13 40 24.6 -0.3**
comp=Z,0.7nm,0.7s,baz=222,slow=3.6,SNR=5.8
CLL Collm 109.64 42 *e*PKiKP **PKiKP** **13 40 27.0 +1.2**
CLL *e*PP **PP** **13 40 54.0 -3.8**
CLL *e*PPP PPP 13 43 30.0
CLL *e*PS **PS** **13 50 24.0 -1.9**
CLL *e*PPS PPS 13 51 30.0
CLL *e*SS SS 13 56 24.0 +5.2
CLL *e*SSS SSS 14 00 24.0
ILAR Eielson Array 110.91 334 PKiKP **PKiKP** **13 40 26.5 -1.3**
comp=Z,0.1nm,0.5s,baz=94,slow=5.4,SNR=1.7
ILAR PP **PP** **13 41 08.2 +1.7**
comp=Z,1.3nm,1.0s,baz=95,slow=5.1,SNR=5.9
BURAR Bucovina Array 115.84 48 **PKiKP** **13 40 38.2 +0.2**
AKASG Malin Array Be 119.17 46 PKP **PKPdf** **13 40 43.4 -0.7**
comp=Z,0.9nm,0.4s,baz=280,slow=2.0,SNR=14
AKASG Malin Array Be 119.17 46 **PKPdf** **13 40 43.1 -1.0**
AKASG Malin Array Be 119.17 46 PKiKP **PKPdf** **13 40 43.1 -1.0**
AKBB Malin Array Si 119.17 46 PKPdf **PKPdf** **13 40 43.1 -1.0**
AKBB Malin Array Si 119.17 46 *d*iPKiKP **PKPdf** **13 40 41.1 -3.0**
VSU Vasula 119.31 37 *c*iPKiKP **PKPdf** **13 40 43.6 -0.5**
BRTR Keskin Array B 119.48 59 PKP **PKPdf** **13 40 45.3 0.0**
comp=Z,2.1nm,0.8s,baz=190,slow=3.8,SNR=8.2
BRTR Keskin Array B 119.48 59 PKPdf **PKPdf** **13 40 44.9 -0.3**
FINES FINESS Array B 119.49 33 PKKPbc PKKPbc 13 50 57.8 +0.4
comp=Z,0.5nm,0.4s,baz=83,slow=4.3,SNR=7.7
ILGA Ilgaz 119.89 57 **PKiKP** **13 40 46.3 +0.1**
ARCES ARCESS Array B 120.27 24 PKP **PKPdf** **13 40 45.5 -0.2**
comp=Z,2.0nm,0.9s,baz=250,slow=2.5,SNR=5.9
ASAR Alice Springs 121.25 207 PKP **PKPdf** **13 40 48.4 -0.8**
comp=Z,5.1nm,0.9s,baz=154,slow=2.0,SNR=24
ASAR PKKPbc **PKKPbc** **13 50 50.8 +0.4**
comp=Z,1.2nm,0.9s,baz=339,slow=3.6,SNR=7.3
ASAR Alice Springs 121.25 207 **PKPdf** **13 40 48.1 -1.1**
ASAR Alice Springs 121.25 207 PKiKP **PKPdf** **13 40 48.1 -1.1**
AS31 Alice Springs 121.25 207 **PKPdf** **13 40 48.0 -1.2**
APA Apatity 123.10 26 ⇓*i*PKiKP **PKPdf** **13 40 49.3 -1.9**
APA pmax pmax
comp=Z,10.0nm,1.1s
ANN Anapa 123.40 54 *i* PKiKP **PKPdf** **13 40 47.3 -5.1**
ANN *e* 13 40 57.1
ANN pmax pmax
comp=Z,25nm,0.7s
RAYN Ar Rayn 124.00 81 **PKPdf** **13 40 54.3 0.0**
RAYN Ar Rayn 124.00 81 PKiKP **PKPdf** **13 40 54.3 0.0**
RAYN Ar Rayn 124.00 81 *i* PKiKP **PKiKP** **13 40 55.1 +0.6**
SNR=6.3
OBN Obninsk 124.24 41 ⇑*i*PKiKP **PKPdf** **13 40 53.2 -0.5**
OBN pmax pmax
comp=Z,14nm,1.0s
WR0 Warramunga Arr 124.29 210 **PKPdf** **13 40 54.1 -0.9**
WB2 Warramunga Arr 124.38 210 PKPdf **PKPdf** **13 40 54.5 -0.7**
WRA Warramunga Arr 124.39 210 PKP **PKPdf** **13 40 54.8 -0.5**
comp=Z,8.6nm,0.7s,baz=154,slow=1.7,SNR=58
WRA PKKPbc **PKKPbc** **13 50 38.5 +0.4**
comp=Z,1.3nm,1.0s,baz=342,slow=4.0,SNR=5.5
WRA Warramunga Arr 124.39 210 **PKPdf** **13 40 54.4 -0.8**
WRA Warramunga Arr 124.39 210 PKiKP **PKPdf** **13 40 54.4 -0.8**
WRAB Tennant Creek 124.39 210 **PKPdf** **13 40 54.6 -0.6**
WRAB Tennant Creek 124.39 210 ⇑*i*PKiKP **PKPdf** **13 40 54.9 -0.3**
WB0 Warramunga Arr 124.52 210 PKPdf **PKPdf** **13 40 54.9 -0.6**
COEN Coen 124.92 222 PKPdf **PKPdf** **13 40 56.1 -0.2**
LPSR Galich'ya Gora 125.43 45 *e*PKiKP **PKPdf** **13 40 55.8 -0.2**

LPSR pmax pmax
comp=Z,20nm,1.1s
VSR Storozhevoye 125.46 46 *e*PKIKP **PKPdf 13 40 55.8 -0.4**
VSR pmax pmax
comp=Z,10.0nm,1.1s
VORD Divnogorie 125.52 47 *e*PKIKP **PKPdf 13 40 55.7 -0.6**
VORD pmax pmax
comp=Z,9.0nm,0.7s
VORR Voronezh 125.53 46 *e*PKIKP **PKPdf 13 40 54.9 -1.4**
VORR pmax pmax
comp=Z,80nm,0.4s
PMG Port Moresby 125.94 230 ‖ *i*PKIKP **PKiKP 13 40 59.0 +0.3**
KLMR Klimovskoe 125.95 34 *e*PKIKP **PKPdf 13 40 55.9 -0.9**
KLMR *e* 13 42 46.8
KLMR pmax pmax
comp=Z,37nm,1.2s
KLMR Klimovskoe 125.95 34 *e*PKPdf **PKPdf 13 40 55.9 -0.9**
KLMR AMP 13 40 58.9
comp=Z,37nm,1.2s
KLMR *e*PP **PP 13 42 46.8 -3.9**
H11S2 WAKE ISLAND Hyl 126.20 272 T T 15 59 43.5
baz=114,slow=75,SNR=351
H11S1 WAKE ISLAND Hyl 126.21 272 T T 15 59 46.9
baz=114,slow=75,SNR=438
H11S3 WAKE ISLAND Hyl 126.22 272 T T 15 59 44.8
baz=114,slow=75,SNR=562
KIV Kislovodsk 126.97 56 *i* PKIKP **PKiKP 13 41 00.1 +0.2**
KIV pmax pmax
comp=Z,16nm,1.1s
KIV Kislovodsk 126.97 56 PKPdf **PKiKP 13 41 00.3 +0.3**
VRH Novokhopyorsk 127.06 46 *e*PKIKP **PKPdf 13 40 59.3 +0.1**
VRH pmax pmax
comp=Z,10.0nm,0.6s
KBZ Khabaz 127.09 56 PKP **PKiKP 13 41 00.2 +0.2**
comp=Z,7.0nm,1.0s,baz=243,slow=3.6,SNR=10
KBZ Khabaz 127.09 56*c i*PKIKP **PKiKP 13 41 00.0 0.0**
ZEI Tsey 127.68 57 *i* PKIKP **PKPdf 13 41 01.1 +0.1**
ZEI pmax pmax
comp=Z,9.0nm,1.2s
GNI Garni 127.88 61 PKP **PKiKP 13 41 02.2 +0.3**
comp=Z,2.4nm,0.3s,baz=50,slow=1.8,SNR=6.0
GNI Garni 127.88 61 ⇑ *i*PKIKP **PKiKP 13 41 02.5 +0.5**
GNI Garni 127.88 61 PKiKP **PKiKP 13 41 02.5 +0.5**
PRGR Permogore 128.82 33 *e*PKIKP **PKPdf 13 40 56.3 -5.9**
DGAR Diego Garcia 129.13 131 ⇑ *e*PKIKP **PKPdf 13 41 02.6 -1.8**
BILL Bilibino 129.49 336 **PKPdf 13 41 03.7 +0.3**
BILL Bilibino 129.49 336*c i*PKIKP **PKiKP 13 41 04.4 +0.3**
BILL *i* 13 41 11.0
BILL *i* 13 43 18.7
BILL pmax pmax
comp=Z,6.0nm,1.4s
BILL MLR MLR
comp=Z,171nm,19.0s
MZR Muzera 130.67 84 *i* PKPdf **PKiKP 13 41 07.6 -0.3**
SNR=11
BELG Belogornoye 130.74 45 *d i*PKIKP **PKPdf 13 41 06.3 +0.1**
KIRV Kirov 131.15 37 ‖ *i*PKIKP **PKPdf 13 41 05.8 -0.9**
MTN Manton Dam 132.07 210 PKPdf **PKPdf 13 41 09.3 -0.7**
FAQ Al Faqa, Dubai 133.07 83 PKiKP **PKiKP 13 41 12.5 -0.2**
NAZ Nazwa, Dubai 133.21 83 PKPdf **PKPdf 13 41 12.1 +0.3**
UOSS Minazif 133.66 83 PKPdf **PKPdf 13 41 11.9 -0.7**
SOHO SOHO 133.69 84 *i* PKPdf **PKPdf 13 41 12.0 -0.7**
SNR=7.3
SHME Shamm 133.95 82 *i* PKPdf **PKPdf 13 41 12.9 -0.2**
SNR=5.4
BANOM Banah 134.05 82 PKPdf **PKPdf 13 41 12.7 -0.6**
ARU Arti 136.44 38 **PKPdf 13 41 17.1 +0.4**
ARU Arti 136.44 38 *i* PKIKP **PKPdf 13 41 17.5 +0.7**
ARU 13 43 57.0
SEY Seymchan 136.82 332 PKP **PKPdf 13 41 18.0 +0.7**
comp=Z,2.7nm,0.9s,baz=92,slow=4.1,SNR=5.0
SEY Seymchan 136.82 332*c i*PKIKP **PKiKP 13 41 18.3 -0.8**
TIXI Tiksi 136.92 351 ⇑ *e*PKIKP **PKPdf 13 41 16.9 -0.3**
BATI Baumata 137.37 202 PKP **PKiKP 13 41 21.6 -0.2**
AKTO Aktyubinsk 137.40 47 PKIKP **PKPdf 13 41 18.2 -0.6**
SOEI Soe 137.59 203 PKP **PKiKP 13 41 21.6 -0.8**
PETK Petropavlovsk- 137.67 317 PKPbc **PKPdf 13 41 19.9 +0.7**
comp=Z,9.9nm,1.1s,baz=64,slow=8.4,SNR=6.6
GEYT Alibeck 137.93 65 PKPdf **PKPdf 13 41 20.5 +0.3**
AB31 Akbulak array 138.82 48 *i* PKHKP PKPpre 13 41 12.7
ABKAR Akbulak array 138.82 48 PKPdf **PKPdf 13 41 21.9 +0.5**
NRIK Noril'sk 138.90 11 ⇑ *i*PKIKP **PKPdf 13 41 21.9 +0.9**
MA2 Magadan 139.09 328*c i*PKIKP **PKPdf 13 41 22.0 +0.4**
EDFI Ende, Flores 139.36 200 PKP **PKPdf 13 41 22.4 -1.3**
HRA Herat 140.90 71 PKPdf **PKPdf 13 41 26.1 +0.1**
AAI Ambon 141.49 213 PKP **PKPdf 13 41 27.9 +0.5**
LEM Lembang 143.29 179 PKP PKPbc 13 41 27.6 -0.2
SANI Sanana 143.95 211 PKP PKPbc 13 41 29.5 0.0
BNSI Bone 143.96 200 PKP PKPbc 13 41 30.1 +0.6
BRVK Borovoye 143.97 39*c i*PKIKP PKPbc 13 41 29.0 +0.6
LBMI Labuha 144.49 214 PKP PKPbc 13 41 31.7 +0.5
YAK Yakutsk 145.17 343 PKPbc **PKPdf 13 41 32.2 -0.1**
comp=Z,18nm,0.7s,baz=21,slow=0.6,SNR=17
YAK Yakutsk 145.17 343 **PKPbc 13 41 31.9 -0.1**
YAK Yakutsk 145.17 343*c i*PKIKP **PKPab 13 41 32.0 0.0**
YAK *e* 13 41 41.5
YAK *e* 13 44 51.3
YAK *e* 13 48 42.8
YAK *e*SS SS 14 03 43.5 +4.6
YAK pmax pmax
comp=Z,89nm,1.1s
YAK pmax pmax
comp=N,11nm,1.0s
YAK pmax pmax
comp=E,11nm,1.1s
YAK pmax pmax
comp=Z,20nm,1.4s
YAK pmax pmax
comp=N,16nm,1.6s
YAK pmax pmax
comp=E,10.0nm,1.5s
TTSI Tana Toraja 145.33 200 PKP **PKPbc 13 41 33.6 -0.3**
KUR Kuril'sk 145.73 307 *e*PKIKP **PKPdf 13 41 33.4 -0.4**
KUR *i* 13 41 37.9
KUR MLR MLR
comp=Z,200nm,14.0s
TNTI Ternate 145.77 215 PKPdf **PKPdf 13 41 34.0 -0.9**
KBL Kabul 146.51 72 PKPdf **PKPdf 13 41 36.0 +0.2**
KBL Kabul 146.51 72 PKIKP **PKPdf 13 41 36.0 +0.2**
POO Pooma 146.52 102 *e*P **PKPdf 13 41 35.0 -1.0**
BRZS Berezniki 146.57 43 *e*PKIKP **PKPdf 13 41 35.0 -0.1**
BRZS Berezniki 146.57 43 *e*PKP **PKPdf 13 41 35.0 -0.1**
baz=43
CHGR Chuyangaron 146.63 64 PKPdf **PKPdf 13 41 36.0 +0.3**
CHGR Chuyangaron 146.63 64 PKIKP **PKPdf 13 41 36.0 +0.3**
IUG luzhnay 146.94 58 *i* PKP2 **PKPbc 13 41 38.5 +0.4**
IUG luzhnay 146.94 58 *e*PKiKP **PKPbc 13 41 38.6 +0.4**
baz=58
KK31 Karatay Array 147.13 56 PKPdf **PKPdf 13 41 37.1 +0.8**
KK31 PKPbc **PKPbc 13 41 38.9 +0.4**
KK31 Karatay Array 147.13 56 PKIKP **PKPdf 13 41 37.1 +0.8**
KK31 13 41 38.9
KKAR Karatay Array 147.13 56 PKPdf **PKPdf 13 41 36.9 +0.6**
KKAR PKPbc **PKPbc 13 41 38.9 +0.4**
KKAR Karatay Array 147.13 56 PKPdf **PKPdf 13 41 37.0 +0.7**
KKAR Karatay Array 147.13 56 PKIKP **PKPdf 13 41 36.9 +0.6**
KKAR 13 41 38.9
GAR Garm 147.51 64 PKPdf **PKPdf 13 41 38.0 +0.8**
GAR **PKPbc 13 41 40.6 +0.8**
DZA Taraz 147.76 56 *i* PKP2 **PKPbc 13 41 40.8 +0.5**
DZA Taraz 147.76 56 *e*PKiKP **PKPbc 13 41 40.8 +0.5**
baz=56
BTK Batken 147.80 62 PKPdf **PKPdf 13 41 38.2 +0.7**
BTK Batken 147.80 62 PKIKP **PKPdf 13 41 38.3 +0.7**
YSS Yuzh-Sakhalins 148.66 312 PKPdf **PKPdf 13 41 39.1 +0.5**
YSS Yuzh-Sakhalins 148.66 312 *i* PKIKP **PKPdf 13 41 40.0 +1.4**
YSS *e* 13 41 53.0
YSS *e* 13 45 14.0
YSS *e*SS SS 14 04 25.0 +5.0
YSS pmax pmax
comp=Z,20nm,1.0s
YSS MLR MLR
comp=Z,200nm,21.0s
TOLI2 Tolitoli 148.91 204 PKPdf **PKPdf 13 41 39.2 -0.9**
TOLI2 PKPbc **PKPbc 13 41 43.3 -0.8**
BTLS Baital 149.14 51 *i* PKP2 **PKPbc 13 41 44.2 +0.5**
BTLS Baital 149.14 51 *e*PKiKP **PKPbc 13 41 44.2 +0.5**
baz=52
EKS2 Erkin-Say 149.57 56 P **PKiKP 13 41 46.4 +0.3**
SNR=17
AML Almayashu 149.62 57 P **PKiKP 13 41 46.7 +0.1**
SNR=14
AML Almayashu 149.62 57 *i* PKPdf **PKPdf 13 41 42.8 +1.9**
SNR=14
KURK Kurchatov 149.63 39 **PKPdf 13 41 40.3 +0.3**
KURK PKPbc **PKiKP 13 41 45.3 -0.5**
KURK Kurchatov 149.63 39*c i*PKHKP PKPpre 13 41 40.6
JKA Kamikawa-asahi 149.64 307 PKPdf **PKPdf 13 41 40.4 +0.1**
ASAJ Asahikawa 149.65 307 PKP **PKPdf 13 41 41.0 +0.7**
baz=261,slow=6.5
ASAJ PKPbc **PKPbc 13 41 45.5 +0.5**
comp=Z,15nm,1.0s,baz=252,slow=6.3,SNR=2.1
ERM Erimo 149.75 303*c i*PKP2 **PKiKP 13 41 45.9 -0.4**
HYBB Hyderabad (bro 149.93 108 *e*PKiKP **PKPbc 13 41 46.1 -0.4**
HYBB *ep*PKiKP **pPKiKP 13 41 58.2 0.0**
HYBB *e*PP **PP 13 45 17.9 -2.8**
HYBB *e*SKSdf **SKSdf 13 48 42.0 -5.5**
USP Ospenovka 149.94 55 P **PKiKP 13 41 47.1 +0.3**
SNR=20
SGDS Sogindy 149.98 54 *i* PKP2 **PKPbc 13 41 45.6 -0.3**
SGDS Sogindy 149.98 54 *e*PKiKP **PKPbc 13 41 45.7 -0.3**
baz=54
AAK Ala-Archa 150.09 56 P **PKiKP 13 41 48.0 +0.8**
SNR=34
AAK Ala-Archa 150.09 56*ce*PKHKP PKPpre 13 41 42.4
AAK Ala-Archa 150.09 56 *i* PKPdf **PKPdf 13 41 43.6 +2.3**
SNR=36
CHMS Chumysh 150.19 55 P **PKiKP 13 41 47.5 +0.3**
SNR=21
UCH Uchtor 150.20 57 P **PKPdf 13 41 43.1 +1.3**
SNR=7.7
KBK Karagaybulak 150.41 56 P **PKiKP 13 41 48.4 +0.5**
SNR=24
ZAA0 Zalesovo Array 150.63 29 **PKPdf 13 41 41.5 0.0**
ZAA0 PKPbc **PKPbc 13 41 47.3 +0.3**
ZALV Zalesovo Beam 150.63 29 PKP **PKPdf 13 41 41.5 -0.1**
comp=Z,60nm,0.7s,baz=302,slow=2.3,SNR=42
ZALV PKPbc **PKiKP 13 41 47.5 -0.2**
comp=Z,89nm,0.8s,baz=310,slow=2.9,SNR=97
ZALV Zalesovo Beam 150.63 29 **PKPdf 13 41 41.9 +0.3**
ZALV PKPbc **PKPbc 13 41 47.3 +0.3**
GRNR Gornyy 150.64 323 *e*PKIKP **PKPdf 13 41 43.3 +1.6**
SEM Semipalatinsk 150.67 38 *i* PKIKP **PKPbc 13 41 47.3 -0.2**
SEM Semipalatinsk 150.67 38 *e*PKiKP **PKPbc 13 41 47.4 -0.2**
baz=38
TKM2 Tokmak 2 150.81 55 P **PKiKP 13 41 48.6 -0.1**
SNR=23
TKM2 Tokmak 2 150.81 55 PKIKP **PKPdf 13 41 44.0 +1.5**
KUU Kurty 151.05 53 *i* PKIKP **PKPbc 13 41 48.1 -0.3**
KUU Kurty 151.05 53 *e*PKiKP **PKPbc 13 41 48.1 -0.3**
baz=53
ULHL Ulahol 151.44 56 P **PKiKP 13 41 51.2 +1.1**
SNR=27
KSM Kuching 151.50 184 PKPdf **PKPdf 13 41 43.5 -0.7**
KSM PKPbc **PKPbc 13 41 49.8 -0.5**
CHKK Chushkaly 151.51 52 *i* PKIKP **PKPbc 13 41 49.0 -0.4**
CHKK Chushkaly 151.51 52 *e*PKiKP **PKPbc 13 41 49.1 -0.4**
baz=52
JTM Tennabayashi 151.54 301 **PKPbc 13 41 49.3 -0.2**
AAA Alma-Ata 151.65 54 *i* PKIKP **PKiKP 13 41 50.2 -0.1**
AAA Alma-Ata 151.65 54 *e*PKiKP **PKiKP 13 41 50.2 -0.1**
baz=54
TNSS Tian-Shan 151.73 54 *i* PKIKP **PKPbc 13 41 49.8 -0.7**
TNSS Tian-Shan 151.73 54 *e*PKiKP **PKPbc 13 41 49.9 -0.7**
baz=54
MDOK Medeo 151.76 54 *i* PKIKP **PKPbc 13 41 50.0 -0.2**
MDOK Medeo 151.76 54 *e*PKiKP **PKPbc 13 41 50.1 -0.2**
baz=54
KSH Kashi 151.81 62 PKPbc **PKPdf 13 41 45.4 +1.4**
KSH pPKP PKiKP 13 41 51.6 +0.8
KSH sPKP 13 42 00.2
KSH PP **PP 13 45 28.8 -2.7**
KSH AMB AMB
comp=Z,230nm,5.8s
KSH LR LR
comp=Z,330nm,17.5s
KSH LR LR
comp=Z,210nm,15.1s
KSH LR LR
comp=Z,450nm,18.9s
KPKS *e*PKiKP **PKPbc 13 41 52.2 -0.3**
baz=52
ARXS Arharly 151.96 51 *e*PKIKP **PKPdf 13 41 42.9 -1.1**
BOD Bodaibo 152.01 354 *e*PKIKP **PKPdf 13 41 43.2 -0.3**
BOD pmax pmax
comp=Z,32nm,1.6s
ZEA Zeya 152.72 335 *e*PKIKP **PKPdf 13 41 44.9 +0.2**
ZEA *e* 13 41 52.4
ZEA pmax pmax
comp=Z,10.0nm,1.2s
SATY Saty 152.74 53 *i* PKIKP **PKPbc 13 41 51.4 -1.0**
SATY Saty 152.74 53 *e*PKiKP **PKPbc 13 41 51.5 -1.0**
baz=54
KPKS Kokpek 152.80 52 *e*PKIKP **PKPdf 13 41 44.3 -1.0**
KPKS *i* 13 41 52.1
KPKS Kokpek 152.80 52 *e*PKP **PKPdf 13 41 44.3 -1.0**
baz=52
KPKS *e*PKiKP **PKPbc 13 41 52.2 -0.3**
baz=52
SHLS Shalkode 153.44 53 *i* PKIKP **PKiKP 13 41 54.4 +0.4**
SHLS Shalkode 153.44 53 *e*PKiKP **PKiKP 13 41 54.5 +0.4**
baz=52
MAKZ Makanchi 153.53 43 **PKPdf 13 41 45.8 -0.4**
MAKZ **PKPbc 13 41 53.7 -0.2**
MAKZ Makanchi 153.53 43 PKIKP **PKPdf 13 41 53.8 -0.4**
MAKZ 13 41 53.7
IPM Ipoh 153.57 163 **PKPdf 13 41 46.1 -1.2**
IPM PKPbc **PKPbc 13 41 54.1 -0.9**
MK31 Makanchi Array 153.72 43 **PKPdf 13 41 45.6 -0.9**
MK31 **PKPbc 13 41 54.2 -0.1**
MK31 PKPab **sPKPbc 13 42 07.8 -0.9**
MK31 Makanchi Array 153.72 43*ce*PKIKP **PKPdf 13 41 46.1 -0.4**
MKAR Makanchi Array 153.72 43 PKP **PKPdf 13 41 46.7 +0.2**
comp=Z,3.6nm,0.9s,baz=318,slow=1.6,SNR=7.3
MKAR PKPbc **PKiKP 13 41 54.5 +0.1**
comp=Z,7.7nm,0.9s,baz=300,slow=2.7,SNR=14
MKAR Makanchi Array 153.72 43 **PKPdf 13 41 46.1 -0.3**
MKAR PKPbc **PKPbc 13 41 54.4 0.0**
MKAR PKPab **sPKPbc 13 42 07.8 -0.9**
MKAR Makanchi Array 153.72 43 PKIKP **PKPdf 13 41 46.1 -0.3**
MKAR 13 41 54.4
KLR Kul'dur 153.98 324 ‖ *i*PKIKP **PKPdf 13 41 46.0 -0.7**
MJAR Matsushiro Arr 154.41 292 PKP **PKPdf 13 41 47.1 -0.7**
comp=Z,2.6nm,1.0s,baz=103,slow=2.6,SNR=7.8
MJAR PKPbc **PKPbc 13 41 55.0 -1.1**
comp=Z,2.9nm,1.0s,baz=140,slow=1.6,SNR=7.2
MJAR PKPab **PKPab 13 42 11.3 +0.8**
comp=Z,6.3nm,1.0s,baz=82,slow=1.4,SNR=7.3
MJAR Matsushiro Arr 154.41 292 PKPdf **PKPdf 13 41 46.5 -1.2**
MJAR **PKPbc 13 41 55.5 -0.6**
MJAR Matsushiro Arr 154.41 292 PKIKP **PKPdf 13 41 46.5 -1.2**
MJAR 13 41 55.5
MAJO Matsushiro 154.41 292*ce*PKIKP **PKPdf 13 41 46.6 -1.2**
MJB9 Matsu-Tunnel 154.41 292 PKPdf **PKPdf 13 41 47.4 -0.4**
USA0B Ussuriysk Arra 156.67 314*c i*PKIKP **PKPdf 13 41 50.1 -0.4**
USRK Ussuriysk Ar. 156.67 314 PKP **PKPdf 13 41 51.4 +0.9**
comp=Z,1.4nm,0.7s,baz=75,slow=2.2,SNR=5.3
USRK Ussuriysk Ar. 156.67 314 PKPdf **PKPdf 13 41 50.5 0.0**
USRK Ussuriysk Ar. 156.67 314 PKIKP **PKPdf 13 41 50.5 0.0**
IRK Irkutsk 157.64 7 *e*PKIKP **PKPdf 13 41 51.9 +0.4**
IRK *e* 13 46 02.6
IRK pmax pmax
comp=Z,38nm,1.9s
MOY Mondy 157.72 12 *e*PKIKP **PKPdf 13 41 53.4 +1.6**
WMQ Urumqi 158.53 45 *e*PKP **PKPdf 13 41 54.0 +1.1**
WMQ LR LR
comp=Z,250nm,17.1s
WMQ LR LR
comp=Z,340nm,17.7s
WMQ LR LR
comp=Z,260nm,20.3s
ZAK Zakamensk 159.34 10 *e*PKIKP **PKPdf 13 41 54.1 +0.4**
ZAK pmax pmax
comp=Z,8.0nm,1.6s
SONM Songino Array 162.20 5 PKP **PKPdf 13 41 57.0 0.0**
comp=Z,3.9nm,1.1s,baz=247,slow=0.9,SNR=6.7
SONM PKPab **PKPab 13 42 45.0 +1.2**
comp=Z,4.8nm,0.9s,baz=336,slow=3.3,SNR=9.3
SONM PP **PP 13 46 28.4 +1.1**
comp=Z,4.8nm,1.1s,baz=328,slow=3.5,SNR=10
SONM Songino Array 162.20 5 PKPdf **PKPdf 13 41 56.8 -0.1**
SONM Songino Array 162.20 5 PKIKP **PKPdf 13 41 56.8 -0.1**
ULN Ulaanbaatar 162.21 3 PKPdf **PKPdf 13 41 56.7 -0.3**
ULN Ulaanbaatar 162.21 3 PKIKP **PKPdf 13 41 56.7 -0.3**
KSRS Korea Array 162.27 300 PKP **PKPdf 13 41 57.4 +0.3**
comp=Z,2.3nm,1.0s,baz=134,slow=1.0,SNR=8.5
KSAR Wonju Array Be 162.30 300 PKPdf **PKPdf 13 41 56.6 -0.6**
KSAR Wonju Array Be 162.30 300 PKIKP **PKPdf 13 41 56.6 -0.6**
SHL Shillong 164.63 103 **PKPab 13 42 55.0 -0.4**
SHL Shillong 164.63 103 PKP2 **PKPab 13 42 55.0 -0.4**
LSA Lhasa 164.94 87 PKPdf **PKPdf 13 42 01.9 +1.4**
XLT XiLinHaoTe 164.95 338 *e*PKP **PKPdf 13 41 59.2 -0.4**
CMAR Chiang Mai Arr 165.53 141 PKP **PKPdf 13 42 01.1 +0.4**
comp=Z,3.5nm,1.0s,baz=258,slow=1.9,SNR=13
GOMU GeErMu 167.02 58 PKP **PKPdf 13 42 03.2 +1.3**
GOMU pPKP pPKPdf 13 42 07.8 -4.8
GOMU sPKP 13 42 12.7
GOMU AMB AMB
comp=Z,140nm,6.0s
GOMU LR LR
comp=Z,240nm,18.2s
GOMU LR LR
comp=Z,160nm,20.2s
GOMU LR LR
comp=Z,270nm,19.8s
BJI Beijing 168.25 330 PKP **PKPdf 13 42 02.4 +0.3**
GTA Gaotai 168.28 35 ⇑ PKP **PKPdf 13 42 03.2 +0.9**
GTA sPKP 13 42 14.5
GTA PKPab **PKPab 13 43 11.7 +0.8**
GTA PP **PP 13 46 58.6 -0.9**
GTA AMB AMB
comp=Z,160nm,6.9s
GTA LR LR
comp=Z,200nm,18.2s
GTA LR LR
comp=Z,240nm,21.1s
GTA LR LR
comp=Z,430nm,20.7s
HHC Hu-ho-hao-te 168.97 348 *e*PKP **PKPdf 13 42 01.3 -1.4**
HHC LR LR
comp=Z,650nm,17.8s
HHC LR LR
comp=Z,340nm,16.5s
HHC LR LR
comp=Z,720nm,16.5s
NJ2 Nanjing 170.90 285 *e*PKP **PKPdf 13 42 05.7 +1.8**
HNS HongShan 171.06 326 ⇑ PKP **PKPdf 13 42 04.4 +0.6**
LZH Lanzhou 172.85 32 *e*PKP **PKPdf 13 42 06.2 +1.2**
LZH pPKP sPKPdf 13 42 17.3 -1.9
LZH PKPab **PKPab 13 43 32.9 +1.6**
LZH AMB AMB
comp=Z,180nm,4.3s
KMI Kunming 172.90 133 ⇑ PKP **PKPdf 13 42 05.9 +0.5**
KMI sPKP 13 42 15.9
KMI LR LR
comp=Z,230nm,21.3s
KMI LR LR
comp=Z,140nm,22.2s
KMI LR LR
comp=Z,270nm,21.9s
PZH PanZhiHua 173.06 119 PKP **PKPdf 13 42 04.5 -0.8**
PZH PKPab **PKPab 13 43 32.6 0.0**
PZH PP **PP 13 47 27.8 +3.5**
PZH SS SS 14 08 36.4 -0.4
PZH AMB AMB
comp=Z,170nm,6.9s
PZH LR LR
comp=Z,370nm,17.1s
PZH LR LR
comp=Z,310nm,16.8s
PZH LR LR
comp=Z,250nm,18.1s
CD2 Chengdu 175.83 77 PKP **PKPdf 13 42 07.0 +1.1**
CD2 PKPab **PKPab 13 43 45.1 +0.3**
CD2 PP **PP 13 47 35.8 -2.2**
CD2 SKKS 13 54 24.3
CD2 AMB AMB
comp=Z,210nm,10.6s
XAN Xi'an 176.04 355 ‖ PKP **PKPdf 13 42 06.7 +0.8**
XAN pPKP pPKPdf 13 42 17.4 +0.9
XAN SKS **SKSdf 13 49 04.4 -2.2**
XAN SS **SS 14 09 00.5 -1.9**
XAN AMB AMB
comp=Z,310nm,6.3s
XAN LR LR
comp=Z,340nm,18.6s
XAN LR LR
comp=Z,180nm,18.5s
XAN LR LR
comp=Z,430nm,19.2s

*IDC **06** 13:23:48.3±5.6,57.1°S×27.0°W,h149km±50km,mb4.1/9, mbtmp4.5/10,Error ellipse: s-maj=20.1km s-min=17.8km az=126.0*
*NEIC **06** 13:23:49.1±1.2,57.1°S±0.1°×27.1°W±0.2,h157km±4km, mb4.6/22,Error ellipse: s-maj=15.9km s-min=12.3km az=209.0*

ISC 06 13:23:48.1±0.5,57.16S±0.09°-27.1W±0.1,h150km,n40, σ0677/35,mb4.5/13,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
HOPE	**Hope Point**	**6.06**	**294**	Pn	**Pn**	**13 25 16.6**	**+1.2**
ORCD	**Orcadas**	**9.80**	**241**		**Pn**	**13 26 05.3**	**+0.1**
SNAA	**Sanae**	**17.70**	**155**	P	**P**	**13 27 43.4**	**-0.2**
	7.2nm,0.7s,baz=309,slow=9.0,SNR=2.1						
BELA	**Belgrano 2**	**20.97**	**184**	P	**P**	**13 28 18.1**	**-0.7**
QSPA	**South Pole Qui**	**33.08**	**180**	P	**P**	**13 30 10.0**	**+0.7**
	4.9nm,0.6s,baz=45,slow=4.5,SNR=10						
	4.9nm,0.6s						
QSPA	**South Pole Qui**	**33.08**	**180**	IAmb	IAmb	13 30 10.8	
	comp=Z,5.4nm,0.8s						
MAW	**Mawson**	**39.21**	**143**	P	**P**	**13 31 00.8**	**-0.2**
	comp=Z,1.4nm,0.3s,baz=43,slow=14,SNR=2.0						
	comp=Z,1.4nm,0.3s						
MAW	**Mawson**	**39.21**	**143**	P	**P**	**13 31 01.1**	**+0.1**
SUR	**Sutherland**	**40.88**	**74**	P	**P**	**13 31 16.2**	**+0.8**
	comp=Z,7.3nm,0.8s,baz=186,slow=9.2,SNR=6.0						
	comp=Z,7.3nm,0.8s						
SUR	**Sutherland**	**40.88**	**74**	IAmb	IAmb	13 31 17.4	
	comp=Z,7.8nm,0.8s						
AF01	**San Pedro de A**	**45.29**	**301**	P	**P**	**13 31 48.9**	**-2.1**
VNDA	**Vanda**	**45.46**	**183**	P	**P**	**13 31 52.3**	**+1.0**
	comp=Z,1.2nm,0.6s,baz=180,slow=5.9,SNR=4.0						
	comp=Z,1.2nm,0.6s						
VNDA	**Vanda**	**45.46**	**183**	IAmb	IAmb	13 31 53.7	
	comp=Z,2.4nm,1.1s						
PB06	**IPOC Station P**	**46.16**	**300**	P	**P**	**13 31 55.0**	**-2.6**
BOSA	**Boshof**	**46.19**	**75**	P	**P**	**13 31 57.3**	**-0.5**
	comp=Z,4.0nm,0.7s,baz=220,slow=8.1,SNR=3.3						
	comp=Z,4.0nm,0.7s						
BOSA	**Boshof**	**46.19**	**75**	IAmb	IAmb	13 32 16.1	
	comp=Z,14nm,1.4s						
PB01	**IPOC Station P**	**47.55**	**301**	P	**P**	**13 32 08.1**	**-0.2**
PB01				IAmb	IAmb	13 32 25.8	
	comp=Z,16nm,1.3s						
LBTB	**Lobatse**	**49.27**	**72**	P	**P**	**13 32 21.5**	**0.0**
	comp=Z,7.0nm,0.6s,baz=217,slow=8.8,SNR=9.0						
	comp=Z,7.0nm,0.6s						
LBTB	**Lobatse**	**49.27**	**72**	IAmb	IAmb	13 32 22.2	
	comp=Z,9.7nm,0.7s						
LPAZ	**La Paz**	**51.08**	**306**	P	**P**	**13 32 35.5**	**-0.3**
	comp=Z,4.4nm,0.5s,baz=129,slow=4.8,SNR=11						
	comp=Z,4.4nm,0.5s						
LPAZ	**La Paz**	**51.08**	**306**	P	**P**	**13 32 35.0**	**-0.8**
LPAZ				IAmb	IAmb	13 32 37.3	
	comp=Z,6.3nm,0.6s						
CASY	**Casey**	**52.84**	**160**	P	**P**	**13 32 48.0**	**+0.6**
SAML	**Samuel**	**55.64**	**315**	P	**P**	**13 33 07.9**	**-0.4**
SAML				IAmb	IAmb	13 33 21.1	
	comp=Z,8.3nm,1.4s						
VOI	**Vohitsoka**	**63.15**	**89**	P	**P**	**13 33 59.9**	**-0.1**
VOI				IAmb	IAmb	13 34 24.6	
	comp=Z,14nm,1.1s						
TOA0	**Torodi Ar. Sit**	**74.00**	**29**	P	**P**	**13 35 06.9**	**-0.1**
TORD	**Torodi Ar. Bea**	**74.00**	**29**	P	**P**	**13 35 07.3**	**+0.4**
	comp=Z,17nm,0.8s,baz=199,slow=6.4,SNR=6.9						
	comp=Z,17nm,0.8s						
TORD	**Torodi Ar. Bea**	**74.00**	**29**	P	**P**	**13 35 06.8**	**-0.2**
TORD				IAmb	IAmb	13 35 09.2	
	comp=Z,19nm,0.8s						
BIRV	**Birongo**	**74.71**	**320**	P	**P**	**13 35 11.8**	**+0.7**
BIRV				IAmb	IAmb	13 35 13.2	
	comp=Z,25nm,1.1s						
BBOO	**Buckleboo**	**89.24**	**166**	P	**P**	**13 36 26.6**	**-0.3**
ASAR	**Alice Springs**	**97.90**	**162**	P	**P**	**13 37 06.2**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=184,slow=3.5,SNR=4.6						
	comp=Z,0.8nm,0.7s						
WRA	**Warramunga Arr**	**101.62**	**162**	P	**Pdif**	**13 37 22.2**	**-1.0**
	comp=Z,0.6nm,0.8s,baz=190,slow=4.2,SNR=1.5						
NOA	**NORSAR Array B**	**121.63**	**21**	PKP	**PKPdf**	**13 42 22.3**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=205,slow=1.9,SNR=2.6						
FINES	**FINESS Array B**	**125.34**	**28**	PKP	**PKPdf**	**13 42 29.3**	**-0.1**

comp=Z,2.2nm,0.5s,baz=177,slow=2.7,SNR=13
ARCES ARCESS Array B 131.95 22 PKP **PKPdf 13 42 41.5 -0.3**
comp=Z,2.8nm,0.9s,baz=236,slow=0.9,SNR=7.0
YKA Yellowknife Ar 137.04 317 PKP **PKPdf 13 42 51.1 -0.4**
comp=Z,0.9nm,0.6s,baz=97,slow=11,SNR=4.8
INK Inuvik 146.70 319 PKPbc **PKPbc 13 43 10.5 0.0**
comp=Z,1.9nm,0.3s,baz=60,slow=3.5,SNR=13
SONM Songino Array 150.71 88 PKPbc **PKPbc 13 43 21.3 -0.2**
comp=Z,4.4nm,0.4s,baz=220,slow=3.7,SNR=16
ILAR Eielson Array 150.90 310 PKPbc **PKPbc 13 43 21.3 0.0**
comp=Z,1.3nm,0.4s,baz=125,slow=2.7,SNR=21
ILAR Eielson Array 150.90 310 PKPbc PKPbc 13 43 21.1 -0.1
KDAK Kodiak Island 151.36 295 PKPbc **PKPbc 13 43 22.6 +0.1**
comp=Z,2.2nm,0.4s,baz=83,slow=3.8,SNR=12

KRSC 06 13:32:41.6±1.0, 52°68'N×160°47'E, h33km±13km, ML3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	**0.50**	**327**	*e*P	Pn	13 32 52.9	+0.5
SPN				*e*S	Sn	13 33 00.1	+0.2
NLC	**Nalytchevo**	**0.84**	**306**	*e*P	Pb	13 32 57.7	-0.1
NLC				*e*S	Sb	13 33 08.7	-0.1
DALK	**Dalny**	**1.10**	**289**	*e*P	Pb	13 33 01.7	-0.4
DALK				*e*S	Sb	13 33 16.0	-0.1
UGLR	**Uglovaya**	**1.13**	**299**	*e*P	Pb	13 33 02.4	-0.3
SDLR	**Sedlovina**	**1.13**	**303**	*e*P	Pb	13 33 02.3	-0.4
PET	**Petropavlovsk**	**1.16**	**288**	*e*P	Pb	13 33 02.6	-0.4
PET				*e*S	Sb	13 33 17.6	-0.1
SMAR	**Somma**	**1.17**	**301**	*e*P	Pb	13 33 02.8	-0.6
AVH	**Avacha**	**1.20**	**300**	*e*P	Pb	13 33 03.7	-0.2
KRER	**Koryakskii**	**1.21**	**302**	*e*P	Pb	13 33 03.8	-0.4
KRER				*e*S	Sb	13 33 19.5	-0.1
RUS	**Russkaya**	**1.22**	**259**	*e*P	Pb	13 33 03.8	-0.3
RUS				*e*S	Sb	13 33 19.3	-0.2
KOK	**Koryaka**	**1.27**	**300**	*e*P	Pb	13 33 04.5	-0.5
KRX	**Arik**	**1.29**	**302**	*e*P	Pb	13 33 04.6	-0.9
KRX				*e*S	Sb	13 33 20.8	-1.0
MTVR	**Mutnovka**	**1.41**	**263**	*e*P	Pb	13 33 06.5	-0.9
MTVR				*e*S	Sb	13 33 24.7	-0.4
KRMR	**Karymshinskiy**	**1.43**	**277**	*e*P	Pn	13 33 06.3	+1.1
KRMR				*e*S	Sn	13 33 24.1	+1.3
GRL	**Gorelyy**	**1.47**	**266**	*e*P	Pb	13 33 08.1	-0.3
GRL				*e*S	Sb	13 33 26.5	-0.2
KII	**Karymskiy**	**1.49**	**336**	*e*P	Pb	13 33 08.1	-0.6
ASAK	**Asacha**	**1.60**	**260**	*e*P	Pb	13 33 09.7	-0.9
KDTR	**Khodutka, Kamc**	**1.71**	**240**	*e*P	Pn	13 33 10.4	+1.4
KDTR				*e*S	Sn	13 33 30.5	+0.8
GNL	**Ganaly**	**1.83**	**305**	*e*P	Pb	13 33 13.6	-0.9
GNL				*e*S	Sb	13 33 36.7	-0.4
APC	**Apacha**	**2.03**	**278**	*e*P	Pb	13 33 16.6	-1.1
APC				*e*S	Sb	13 33 41.9	-0.6
MIPR	**Malaya Ipel'ka**	**2.31**	**261**	*e*P	Pb	13 33 20.2	-2.3
TUMR	**Tumrok**	**2.62**	**356**	*e*P	Pn	13 33 24.5	+2.9
KMNR	**Kamenistaya**	**3.09**	**358**	*e*P	Pb	13 33 32.4	-3.4
KBTR	**Krutoberegovo**	**3.79**	**20**	*e*P	Pn	13 33 40.3	+2.7
SRKR	**Sorokina**	**4.00**	**6**	*e*P	Pn	13 33 45.0	+4.4

MAN 06 13:45:22.9, 6°52'N×124°11'E, h14km, mb4.1, ML2.9, MS2.6, 6D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTBH	**Cotabato--PC H**	**0.71**	**11**	⇓*i*P	Pb	13 45 36.4	+0.5
CTBH				*i* S		13 45 46.6	
KCP	**Kidapawan**	**1.09**	**63**	⇓*e*P	Pb	13 45 43.3	0.0
PAGZ	**Pagadian**	**1.51**	**332**	⇓*e*P	Pn	13 45 49.4	+0.5
PAGZ				*e*S		13 46 13.1	
DDMP	**Don Marcelino,**	**1.65**	**104**	⇓*e*P	Pn	13 45 50.9	+0.3
DDMP				*e*S		13 46 08.7	
BUKP	**Musuan**	**1.65**	**35**	⇓*e*P	Pn	13 45 51.5	+0.7
CGP	**Cagayan de Oro**	**2.01**	**17**	⇓*e*P	Pb	13 46 00.2	+1.2
CGP				*e*S		13 46 25.4	

*JMA **06** 14:30:12.8±0.1, 37°.4N±0°.3×141°.8E±0°.7, h44km±2km, MD4.0/40, MV4.4/40, E OFF FUKUSHIMA PREF*
JMA Felt II J1 at E OFF FUKUSHIMA PREF .
*NEIC **06** 14:30:13.5±2.2, 37°.42N±0°.05×141°.75E±0°.07, h38km±8km, mb4.3/22, Error ellipse: s-maj=9.2km s-min=5.8km az=52.0*
*IDC **06** 14:30:13.0±2.5, 37°.35N×141°.86E, h39km±23km, mb3.6/11, mbtmp3.9/15, ML3.8/4, Error ellipse: s-maj=22.1km s-min=13.9km az=98.0*
ISC 06 14:30:10.6±1.6, 37°.37'N±0°.04×141°.89'E±0°.06, h21km±11km, n92, σ1°40/83, mb4.3/25, 19D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**0.81**	**270**	⇓*i*P	Pn	**14 30 26.8**	**+0.1**
JFK				⇓S	Sb	**14 30 36.6**	**+0.2**
JFK	**Kawauchi**	**0.81**	**270**	A	A	14 30 26.8	
	comp=E,9.0nm,0.8s,comp=E,4.0nm,0.5s						
JMST	**Minamisoumatoc**	**0.87**	**294**	⇓*i*P	Pb	**14 30 27.3**	**+0.4**
JMST				⇓S	Sb	**14 30 37.6**	**-0.6**
JMST	**Minamisoumatoc**	**0.87**	**294**	A	A	14 30 27.3	
	comp=E,7.0nm,0.7s,comp=E,14nm,0.3s						
ONAJ	**Iwakimizuishiy**	**0.91**	**253**	⇓*i*P	Pn	**14 30 28.5**	**+0.4**
ONAJ				⇓S	Sb	**14 30 39.3**	**0.0**
ONAJ	**Iwakimizuishiy**	**0.91**	**253**	A	A	14 30 28.5	
	comp=E,16nm,0.3s,comp=E,14nm,0.3s						
JIKH	**Ishinomakikobu**	**1.00**	**341**	*i* P	Pn	**14 30 29.4**	**+0.1**
JIKH				S	Sb	**14 30 40.8**	**-1.0**
JMM	**Marumori**	**1.00**	**300**		Pn	**14 30 29.2**	**0.0**
JMM				Sn	Sb	**14 30 38.4**	**-3.5**
JMM	**Marumori**	**1.00**	**300**	⇓*i*P	Pn	**14 30 29.3**	**0.0**
JMM				⇓S	Sb	**14 30 41.1**	**-0.8**
JMM	**Marumori**	**1.00**	**300**	A	A	14 30 29.3	
	comp=E,9.0nm,0.8s,comp=E,12nm,0.5s						
JFFD	**Fukushimafurud**	**1.09**	**256**	A	A	14 30 31.2	
	comp=E,4.0nm,0.6s,comp=E,4.0nm,0.3s						
JIO	**Ouri**	**1.17**	**339**	⇓*i*P	Pn	**14 30 31.8**	**+0.2**
JIO				⇓S	Sn	**14 30 44.9**	**-1.9**
JFT	**Otama**	**1.24**	**277**	⇓*i*P	Pb	**14 30 33.6**	**+0.3**
JFT				⇓*e*S	Sn	**14 30 48.5**	**-0.3**
JFT	**Otama**	**1.24**	**277**	A	A	14 30 33.6	
	comp=E,10.0nm,0.7s,comp=E,8.0nm,0.5s						
JHO	**Hitachi**	**1.39**	**235**	A	A	14 30 34.7	
	comp=E,3.0nm,0.2s,comp=E,4.0nm,0.2s						
JOU	**Okura**	**1.39**	**316**	⇓*i*P	Pn	**14 30 35.1**	**+0.4**
JOU				⇓*e*S	Sn	**14 30 51.8**	**-0.6**
JOU	**Okura**	**1.39**	**316**	A	A	14 30 35.1	
	comp=E,8.0nm,0.7s,comp=E,5.0nm,0.3s						
JOFO	**Osakifurukawao**	**1.45**	**328**	A	A	14 30 35.9	
	comp=E,6.0nm,0.7s,comp=E,7.0nm,3.7s						
JYAR	**Yonezawaarcadi**	**1.49**	**292**	A	A	14 30 36.4	
	comp=E,6.0nm,1.2s,comp=E,7.0nm,0.5s						
JSB	**Shiboa**	**1.62**	**256**	A	A	14 30 38.9	
	comp=E,6.0nm,0.7s,comp=E,4.0nm,0.8s						
JMK	**Ichinoseki**	**1.67**	**342**	⇓*i*P	Pn	**14 30 39.3**	**+0.8**
JYS	**Shirataka**	**1.68**	**301**	⇓*i*P	Pn	**14 30 39.3**	**+0.7**
JFY	**Yanaizu**	**1.74**	**272**	⇓*i*P	Pn	**14 30 40.4**	**+1.0**
JFY				⇓S	Sn	**14 31 01.5**	**+0.5**
JYT	**Yasato**	**1.77**	**231**	Pn	Pn	**14 30 40.8**	**+0.9**
JYT	**Yasato**	**1.77**	**231**	A	A	14 30 41.6	
	comp=E,6.0nm,0.3s,comp=E,4.0nm,0.3s						
JYK	**Kaneyama**	**1.96**	**323**	⇓*i*P	Pn	**14 30 43.4**	**+0.8**
JSD	**Sado**	**2.95**	**284**	Pn	Pn	**14 30 56.5**	**+0.4**
MJAR	**Matsushiro Arr**	**3.06**	**255**	Pn	Pn	**14 30 59.4**	**+1.7**
	2.2nm,0.3s,baz=56,slow=13,SNR=52						
MJAR				Sn	Sn	**14 31 34.0**	**+0.4**
	1.8nm,0.3s,baz=82,slow=12,SNR=3.0 12nm,0.3s						
MJAR	**Matsushiro Arr**	**3.06**	**255**	Pn	Pn	**14 30 58.0**	**+0.3**
MAJO	**Matsushiro**	**3.06**	**256**	Pn	Pn	**14 30 58.9**	**+1.3**
MJB9	**Matsu-Tunnel**	**3.06**	**256**		Pn	**14 30 58.8**	**+1.1**
JTM	**Tenmabayashi**	**3.47**	**350**	Pn	Pn	**14 31 03.9**	**+0.6**
JGF	**Kuroka**	**4.05**	**246**	Pn	Pn	**14 31 13.6**	**+2.2**
INU	**Inuyama**	**4.42**	**244**	Pn	Pn	**14 31 18.7**	**+2.5**
JHJ2	**Mitsune**	**4.57**	**202**	Pn	Pn	**14 31 19.7**	**+1.3**
JHJ	**Hachijo jima 2**	**4.57**	**203**	Pn	Pn	**14 31 19.5**	**+1.0**
	30nm,0.3s,baz=139,slow=22,SNR=22						
JHJ				Sn	Sn	**14 32 10.3**	**-0.7**
	54nm,0.3s,baz=125,slow=23,SNR=5.6 69nm,0.3s						
ERM	**Erimo**	**4.74**	**12**	Pn	Pn	**14 31 20.6**	**-0.1**
JKA	**Kamikawa-asahi**	**6.76**	**4**	Pn	Pn	**14 31 48.5**	**0.0**
ASAJ	**Asahikawa**	**6.76**	**4**	Pn	Pn	**14 31 49.2**	**+0.7**
	1.2nm,0.3s,baz=208,slow=12,SNR=15						
ASAJ				Sn	Sn	**14 33 05.1**	**+0.3**
	1.0nm,0.3s,baz=168,slow=27,SNR=6.3 2.8nm,0.3s						
JHS	**Saijyo**	**7.47**	**254**	Pn	Pn	**14 32 01.2**	**+2.8**
YSS	**Yuzh-Sakhalins**	**9.60**	**4**	Pn	Pn	**14 32 28.7**	**+1.3**
USRK	**Ussuriysk Ar.**	**10.14**	**315**	Pn	Pn	14 32 40.2	+5.5
	0.5nm,0.3s,baz=121,slow=14,SNR=6.6						
JCJ	**Chichijima**	**10.24**	**179**	Pn	Pn	**14 32 36.1**	**-0.2**
	3.8nm,0.3s,baz=292,slow=23,SNR=8.4						
JCJ				Sn	Sn	**14 34 22.9**	**-7.6**
	2.8nm,0.3s,baz=279,slow=18,SNR=1.6 45nm,0.8s						
KSRS	**Korea Array**	**11.11**	**275**	Pn	Pn	14 32 53.3	+5.3
	0.2nm,0.3s,baz=88,slow=14,SNR=12						
HHC	**Hu-ho-hao-te**	**23.73**	**288**	*e*P	P	**14 35 21.3**	**+0.1**
HHC				pmax	pmax		
	comp=Z,38nm,1.1s						
HHC				LR	LR		
	comp=N,210nm,16.5s						
HHC				LR	LR		
	comp=E,220nm,17.1s						
HHC				LR	LR		
	comp=Z,400nm,17.1s						
YAK	**Yakutsk**	**25.83**	**347**	P	P	**14 35 38.4**	**-1.6**
YAK				IAmb	IAmb	14 35 41.3	
	comp=Z,6.0nm,0.7s						
SEY	**Seymchan**	**26.39**	**11**	P	P	**14 35 45.8**	**+0.7**
	comp=Z,1.0nm,0.7s,baz=246,slow=5.0,SNR=5.1 comp=Z,1.0nm,0.7s						
SONM	**Songino Array**	**27.91**	**303**	P	P	**14 35 59.8**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=96,slow=9.9,SNR=4.6 comp=Z,0.6nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**28.00**	**122**	T	T	15 06 20.7	
	baz=315,slow=75,SNR=5.1						
H11N1	**WAKE ISLAND Hy**	**28.01**	**122**	T	T	15 06 26.2	
	baz=315,slow=75,SNR=217						
H11N3	**WAKE ISLAND Hy**	**28.02**	**122**	T	T	15 06 22.6	
	baz=315,slow=75,SNR=173						
H11S1	**WAKE ISLAND Hy**	**28.73**	**124**	T	T	15 07 01.6	
	baz=318,slow=74						
H11S3	**WAKE ISLAND Hy**	**28.73**	**124**	T	T	15 06 27.2	
	baz=318						
H11S2	**WAKE ISLAND Hy**	**28.74**	**124**	T	T	15 07 22.3	
	baz=318,slow=74						
PZH	**PanZhiHua**	**35.51**	**264**	P	P	**14 37 06.3**	**+0.3**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PZH				pmax	pmax		
	comp=Z,80nm,5.0s						
WMQ	**Urumqi**	**41.03**	**297**	*e*P	P	**14 37 53.3**	**+1.1**
MK31	**Makanchi Array**	**44.26**	**302**	P	P	**14 38 17.8**	**-0.6**
MKAR	**Makanchi Array**	**44.26**	**302**	P	P	**14 38 17.6**	**-0.8**
	comp=Z,0.9nm,0.7s,baz=83,slow=10,SNR=11 comp=Z,0.9nm,0.7s						
MAKZ	**Makanchi**	**44.47**	**302**	P	P	**14 38 20.5**	**+0.4**
L19K	**White Mountain**	**45.42**	**36**	P	P	**14 38 29.4**	**+2.0**
L19K				IAmb	IAmb	14 38 41.0	
	comp=Z,7.2nm,1.5s						
K20K	**Telida**	**45.84**	**34**	P	P	**14 38 32.4**	**+1.7**
K20K				IAmb	IAmb	14 38 55.9	
	comp=Z,6.0nm,1.5s						
A21K	**Barrow**	**46.00**	**23**	P	P	**14 38 33.3**	**+1.5**
A21K				IAmb	IAmb	14 38 50.3	
	comp=Z,6.8nm,1.1s						
KURK	**Kurchatov**	**46.02**	**308**	P	P	**14 38 31.0**	**-1.2**
KURK				IAmb	IAmb	14 38 36.4	
	comp=Z,4.8nm,0.9s						
KDAK	**Kodiak Island**	**46.60**	**42**	P	P	**14 38 37.5**	**+0.8**
BPAW	**Bear Paw Mtn.**	**47.24**	**33**	P	P	**14 38 43.6**	**+2.0**
MLY	**Manley**	**47.37**	**32**	P	P	**14 38 44.0**	**+1.4**
MLY				IAmb	IAmb	14 38 44.2	
	comp=Z,3.7nm,1.3s						
RND	**Reindeer**	**48.19**	**34**	P	P	**14 38 49.8**	**+0.7**
RND				IAmb	IAmb	14 39 08.9	
	comp=Z,4.3nm,1.4s						
WRH	**Wood River Hil**	**48.50**	**33**	P	P	**14 38 52.4**	**+1.1**
WRH				IAmb	IAmb	14 38 55.8	
	comp=Z,3.1nm,1.3s						
H24K	**Noodor Dome**	**48.57**	**31**	P	P	**14 38 53.6**	**+1.6**
ILAR	**Eielson Array**	**49.01**	**33**	P	P	**14 38 55.3**	**0.0**
	comp=Z,0.9nm,0.7s,baz=263,slow=6.5,SNR=14 comp=Z,0.9nm,0.7s						
KNRA	**Kununurra**	**54.19**	**196**	P	P	**14 39 34.8**	**+0.4**
WB0	**Warramunga Arr**	**57.26**	**188**	P	P	**14 39 56.2**	**-0.3**
WB0				IAmb	IAmb	14 39 56.6	
	comp=Z,2.8nm,0.8s						
WRAB	**Tennant Creek**	**57.43**	**188**	P	P	**14 39 57.1**	**-0.6**
WRAB				IAmb	IAmb	14 40 02.0	
	comp=Z,7.3nm,1.4s						
WR0	**Warramunga Arr**	**57.44**	**188**	P	P	**14 39 57.1**	**-0.6**
WR0				IAmb	IAmb	14 40 10.1	
	comp=Z,4.1nm,1.2s						
WB2	**Warramunga Arr**	**57.44**	**188**	P	P	**14 39 57.1**	**-0.6**
WRA	**Warramunga Arr**	**57.44**	**188**	P	P	**14 39 57.5**	**-0.3**
	comp=Z,1.0nm,0.5s,baz=6.1,slow=7.3,SNR=44 comp=Z,1.0nm,0.5s						
WRA	**Warramunga Arr**	**57.44**	**188**	P	P	**14 39 57.1**	**-0.7**
ABKAR	**Akbulak array**	**58.01**	**310**	P	P	**14 40 00.2**	**-1.3**
ASAR	**Alice Springs**	**61.17**	**188**	P	P	**14 40 23.4**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=356,slow=3.7,SNR=8.2 comp=Z,0.7nm,0.8s						
KEV	**Kevo**	**63.26**	**339**	P	P	**14 40 37.0**	**0.0**
ARCES	**ARCESS Array B**	**63.82**	**339**	P	P	**14 40 42.4**	**+1.7**
	comp=Z,2.9nm,0.8s,baz=47,slow=7.9,SNR=2.6 comp=Z,2.9nm,0.8s						
ARCES	**ARCESS Array B**	**63.82**	**339**	P	P	**14 40 41.9**	**+1.2**
FINES	**FINESS Array B**	**68.69**	**332**	P	P	**14 41 11.1**	**-0.9**
	comp=Z,1.1nm,0.7s,baz=27,slow=6.5,SNR=2.1 comp=Z,1.1nm,0.7s						
LRM	**Limekiln Ridge**	**73.64**	**45**	P	P	**14 41 44.8**	**+2.2**
DLMT	**Dillon**	**73.84**	**45**	P	P	**14 41 44.7**	**+1.0**
DLMT				IAmb	IAmb	14 41 58.1	
	comp=Z,4.6nm,1.4s						
NOA	**NORSAR Array B**	**74.02**	**337**	P	P	**14 41 43.7**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=61,slow=4.5,SNR=2.8 comp=Z,0.3nm,0.6s						
NVAR	**Mina Array Bea**	**74.49**	**53**	P	P	**14 41 48.3**	**+0.7**
	comp=Z,0.5nm,0.7s,baz=299,slow=6.4,SNR=5.0 comp=Z,0.5nm,0.7s						
TXAR	**Lajitas Array**	**89.62**	**53**	P	P	**14 43 07.5**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=291,slow=2.6,SNR=4.8 comp=Z,0.3nm,0.5s						
TXAR	**Lajitas Array**	**89.62**	**53**	P	P	**14 43 07.0**	**+0.1**
H03N2	**Juan Fernandez**	**146.68**	**96**	T	T	17 34 01.5	
	baz=292,slow=74,SNR=3.8						
H03N3	**Juan Fernandez**	**146.69**	**96**	T	T	17 34 00.2	
	baz=292						
H03N1	**Juan Fernandez**	**146.70**	**96**	T	T	17 34 00.7	
	baz=292,slow=74,SNR=4.3						

*IDC **06** 14:37:51.6±2.0, 5°.06N×126°.15E, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=160.8km s-min=24.5km az=65.0*
*MAN **06** 14:38:01.4, 5°.49N×127°.32E, h80km, mb4.2, ML3.1, MS2.8*
*DJA **06** 14:38:02.8±0.6, 5°N±4°×12°.7E±°, h128km±8km, M4.0/8, mb3.9/4, MLv4.0/8*
ISC 06 14:38:01.6±1.1, 5°.48N±0°.05×127°.3E±0°.1, h100km, n13, σ1°38/17, mb3.3/3, 1C-4D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**1.67**	**292**	⇓*e*P	Pn	**14 38 30.3**	**+0.4**
DDMP				*e*S		14 39 52.7	
MATI	**Mati**	**1.77**	**326**	⇓*e*P	Pn	**14 38 31.2**	**0.0**
SGSI	**Sangihe**	**2.48**	**224**	P	Pn	**14 38 40.8**	**+0.3**
SGSI				S	Sn	**14 39 09.1**	**-1.2**
KCP	**Kidapawan**	**2.64**	**305**	⇓*e*P	Pn	**14 38 43.5**	**+0.9**
KCP				*i* S	Sn	**14 39 15.9**	**+1.6**
BIPH	**Bislig**	**2.83**	**342**	⇑*i*P	Pn	**14 38 46.0**	**+0.9**
BIPH				*i* S	Sn	**14 39 18.3**	**-0.4**
GLSP	**General Luna,**	**4.42**	**345**	⇓*e*P	Pn	**14 39 07.8**	**+1.3**
GLSP				*e*S	Sn	**14 39 54.4**	**-2.6**
TNTI	**Ternate**	**4.67**	**179**	P	Pn	**14 39 11.8**	**+1.8**
LBMI	**Labuha**	**6.08**	**178**	P	Pn	**14 39 30.5**	**+1.5**
	0.1nm11nm,0.6s						
MRSI	**Marisa**	**7.27**	**227**	P	Pn	**14 39 45.6**	**+0.3**
	0.1nm22nm,0.6s						
SANI	**Sanana**	**7.58**	**190**	P	Pn	**14 39 47.0**	**-2.5**
WRA	**Warramunga Arr**	**26.20**	**165**	P	P	**14 43 27.5**	**+0.4**
	0.3nm,0.3s,baz=342,slow=11,SNR=8.0 0.3nm,0.3s						
ASAR	**Alice Springs**	**29.68**	**168**	P	P	**14 43 58.2**	**+0.1**
	0.2nm,0.6s,baz=344,slow=6.9,SNR=5.6 0.2nm,0.6s						
MKAR	**Makanchi Array**	**56.44**	**324**	P	P	**14 47 33.0**	**0.0**
	1.7nm,0.4s,baz=115,slow=7.5,SNR=39 1.7nm,0.4s						

*IDC **06** 14:41:44.2±1.8, 5°.54S×147°.01E, h172km±22km, mb3.3/5, mbtmp4.0/8, Error ellipse: s-maj=39.5km s-min=10.1km az=113.0*
*NEIC **06** 14:41:45.6±0.9, 5°.45S±0°.06×147°.1E±0°.1, h178km±8km, mb4.3/17, Error ellipse: s-maj=16.0km s-min=9.3km az=87.0*
*DJA **06** 14:41:46.0±0.4, 5°S±4°×14°7E±°, h186km±6km, M4.3/11, mB4.6/2, mb4.2/11, MLv4.3/3, Mw(mB)3.9/2*
ISC 06 14:41:46.2±0.7, 5°.52S±0°.06×147°.1E±0°.08, h195km, n51, σ1°67/52, mb3.8/7, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MANU	**Manus Island**	**3.46**	**4**	Pn	Pn	**14 42 40.4**	**-0.8**
PMG	**Port Moresby**	**3.86**	**179**	P	Pn	**14 42 43.7**	**-2.4**
	73nm,0.3s,baz=11,slow=10,SNR=249						
PMG				S	Sn	**14 43 28.1**	**-5.1**
	59nm,0.4s,baz=16,slow=9.0,SNR=3.0						
PMG	**Port Moresby**	**3.86**	**179**	Pn	Pn	**14 42 43.8**	**-2.3**
PMG	**Port Moresby**	**3.86**	**179**	P	Pn	**14 42 43.8**	**-2.3**
PMG	**Port Moresby**	**3.86**	**179**	P	Pn	**14 42 44.5**	**-1.6**
KRVT	**Keravat (AS076**	**5.05**	**76**	P	Pn	**14 43 00.1**	**-1.1**
	77nm,0.5s,baz=52,slow=0.6,SNR=22						
RABL	**Rabaul**	**5.21**	**76**	Pn	Pn	**14 43 02.0**	**-1.2**
COEN	**Coen**	**9.23**	**205**		Pn	**14 43 56.9**	**+1.2**
COEN	**Coen**	**9.23**	**205**	P	Pn	**14 43 57.4**	**+1.7**
MTSU	**Mount Surprise**	**12.83**	**192**	P	Pn	**14 44 43.5**	**+1.7**
CTA	**Charters Tower**	**14.50**	**183**	P	P	**14 45 06.5**	**+2.5**
	5.8nm,0.6s,baz=359,slow=12,SNR=24						
CTA	**Charters Tower**	**14.50**	**183**	P	P	**14 45 05.1**	**+1.1**
CTAO	**Charters Tower**	**14.50**	**183**		Pn	**14 45 03.7**	**+1.1**
CTAO	**Charters Tower**	**14.50**	**183**	P	P	**14 45 05.3**	**+1.3**
SAUI	**Saumlaki**	**15.89**	**260**		P	**14 45 19.0**	**-0.3**
SAUI	**Saumlaki**	**15.89**	**260**	P	Pn	**14 45 20.8**	**+1.2**
	56nm,0.5s						
KDU	**Kakadu**	**16.10**	**243**	P	P	**14 45 21.7**	**0.0**
SWI	**Sorong**	**16.48**	**286**	P	P	**14 45 25.5**	**-0.4**
	13nm,0.7s						
QIS	**Mount Isa**	**16.63**	**205**	P	Pn	**14 45 29.5**	**+1.1**
MTN	**Manton Dam**	**17.36**	**244**	P	P	**14 45 35.4**	**-0.2**
MTN				IAmb	IAmb	14 45 36.7	
	comp=Z,26nm,0.9s						
WB0	**Warramunga Arr**	**18.80**	**220**	P	P	**14 45 51.7**	**+0.4**
WB0				IAmb	IAmb	14 45 52.7	
	comp=Z,9.4nm,1.1s						
WR0	**Warramunga Arr**	**18.85**	**219**	P	P	**14 45 52.4**	**+0.7**
WR0				IAmb	IAmb	14 45 53.1	
	comp=Z,10nm,1.0s						
WRAB	**Tennant Creek**	**18.95**	**220**	P	P	**14 45 53.2**	**+0.4**
WRAB				IAmb	IAmb	14 45 58.3	
	comp=Z,9.2nm,1.0s						
WRAB	**Tennant Creek**	**18.95**	**220**	P	P	**14 45 53.6**	**+0.8**
WB2	**Warramunga Arr**	**18.96**	**220**	P	P	**14 45 53.5**	**+0.6**
WB2				IAmb	IAmb	14 45 58.5	
	comp=Z,16nm,1.2s						
WRA	**Warramunga Arr**	**18.97**	**220**	P	P	**14 45 53.5**	**+0.5**
	comp=Z,3.6nm,0.5s,baz=38,slow=11,SNR=50						
WRA				S	S	**14 49 16.6**	**-1.5**
	comp=Z,3.0nm,0.8s,baz=40,slow=21,SNR=12						
WRA	**Warramunga Arr**	**18.97**	**220**	IAmb	IAmb	14 45 58.6	
	comp=Z,0.2nm,1.1s						
EIDS	**Eidsvold**	**20.10**	**169**	P	P	**14 46 06.1**	**+1.0**
EIDS				IAmb	IAmb	14 46 15.1	
	comp=Z,12nm,1.4s						
KNRA	**Kununurra**	**20.64**	**239**	P	P	**14 46 10.1**	**-0.9**
KNRA				IAmb	IAmb	14 46 14.4	
	comp=Z,15nm,0.9s						
KNRA	**Kununurra**	**20.64**	**239**	P	P	**14 46 10.8**	**-0.1**
QLP	**Quilpie**	**21.12**	**187**	P	P	**14 46 16.9**	**+1.0**
AS31	**Alice Springs**	**22.07**	**214**	P	P	**14 46 26.6**	**+0.9**
AS31				IAmb	IAmb	14 46 27.4	
	comp=Z,3.5nm,0.2s						
ASAR	**Alice Springs**	**22.07**	**214**	P	P	**14 46 26.4**	**+0.7**
	comp=Z,1.0nm,0.3s,baz=37,slow=11,SNR=43						
ASAR				S	S	**14 50 16.8**	**+1.9**
	comp=Z,4.0nm,0.8s,baz=29,slow=22,SNR=22 comp=Z,1.0nm,0.3s						
INKA	**Innaminka**	**22.91**	**195**	P	P	**14 46 34.5**	**+1.3**
SOEI	**Soe**	**23.02**	**258**	P	P	**14 46 27.8**	**-6.7**
ARMA	**Armidale**	**25.13**	**171**	P	P	**14 46 54.6**	**+1.1**
EDFI	**Ende, Flores**	**25.42**	**261**	P	P	**14 46 54.6**	**-1.7**
LCRK	**Leigh Creek**	**26.17**	**198**	P	P	**14 47 03.3**	**+0.6**
SPSI	**Sid

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKCFA	**Oklahoma City**	0.98	167	Pg	Pg	14 50 07.8	-0.4
OKCFA	**Oklahoma City** baz=347	0.98	167	P	Pg	14 50 07.8	-0.4
OKCSW	**OKLAHOMA CITY**	1.00	166		Pg	14 50 08.0	-0.5
U32A	**Winter Ranch,**	1.03	271	Pg	Pg	14 50 08.6	-0.5
U32A	**Winter Ranch,** baz=90	1.03	271	P	Pg	14 50 08.7	-0.5
U32A	baz=90			S	Sb	14 50 23.1	+0.3
T35A	**Sooner Cattle**	1.11	61		Pb	14 50 10.2	-0.4
T35B	**Sooner Cattle** baz=241	1.11	61	P	Pb	14 50 10.3	-0.4
T35B	baz=241			S	Sb	14 50 26.0	+0.7
FNO	**Franklin**	1.15	167		Pb	14 50 10.7	-0.6
TUL1	**Leonard**	1.63	106	Pn	Pn	14 50 18.6	+0.5
TUL1	comp=Z,85nm,0.8s			lAmb_Lg		14 50 42.0	
TUL1	**Leonard** baz=287	1.63	106	P	Pn	14 50 18.6	+0.5
TUL1	baz=287			S	Sb	14 50 40.9	+0.7
X34A	**Smith Ranch, M**	1.77	183		Pn	14 50 20.8	+0.8
WMOK	**Wichita Mounta**	1.85	208		Pn	14 50 21.9	+0.8
WMOK	**Wichita Mounta** baz=27	1.85	208	P	Pn	14 50 22.2	+1.1
WMOK	baz=27			S	Sb	14 50 46.9	+0.5
R32A	**Long Quarter,**	2.19	339	Pn	Pn	14 50 26.8	+1.0
X37A	**Clayton**	2.62	132	Pn	Pn	14 50 31.7	0.0
X37A	comp=Z,38nm,0.7s			lAmb_Lg		14 51 19.0	
X37A	**Clayton** baz=314	2.62	132	P	Pn	14 50 33.1	+1.4
KSU1	**Kansas State U**	2.86	18	Pn	Pn	14 50 35.1	+0.1
KSU1	comp=Z,26nm,0.9s			lAmb_Lg		14 51 22.4	
CBKS	**Cedar Bluff**	2.91	327	Pn	Pn	14 50 35.2	-0.5
HHAR	**Hobbs**	3.06	91	Pn	Pn	14 50 37.0	-0.7
Z35A	**Perchaven, San**	3.06	173	Pn	Pn	14 50 37.3	-0.5
W39A	**Magazine**	3.41	109	Pn	Pn	14 50 41.8	-0.8
AMTX	**Amarillo**	3.55	246	Pn	Pn	14 50 44.9	+0.4
AMTX	comp=Z,23nm,0.8s			lAmb_Lg		14 51 42.3	
S39A	**Bolivar**	3.76	68	Pn	Pn	14 50 47.7	+0.3
S39A	**Bolivar** baz=251	3.76	68	P	Pn	14 50 48.7	+1.3
Z38A	**Mt. Pleasant**	3.84	143	Pn	Pn	14 50 48.3	-0.1
Z38A	comp=Z,36nm,0.9s			lAmb_Lg		14 51 56.5	
MIAR	**Mount Ida**	3.85	117	Pn	Pn	14 50 49.3	+0.8
MIAR	comp=Z,31nm,0.8s			lAmb_Lg		14 51 57.5	
U40A	**Yellville**	3.93	89	Pn	Pn	14 50 50.1	+0.4
ABTX	**Abilene, Hawle** comp=Z,28nm,1.1s	4.06	203	lAmb_Lg		14 52 02.0	
N33A	**J Bar K, Exete**	4.36	3	Pn	Pn	14 50 55.8	+0.1
N33A	comp=Z,24nm,0.8s			lAmb_Lg		14 52 14.2	
WHTX	**Lake Whitney,**	4.38	177	Pn	Pn	14 50 56.0	+0.1
X40A	**Basin Creek Fa**	4.42	114	Pn	Pn	14 50 56.7	+0.3
MGMO	**Mountain Grove**	4.45	78	Pn	Pn	14 50 57.8	+0.9
WHAR	**Wooly Hollow** comp=Z,25nm,0.7s	4.55	102	Pn	Pn	14 50 58.5	+0.4
WHAR				lAmb_Lg		14 52 19.2	
FCAR	**Ozark Folk Cen**	4.56	94	Pn	Pn	14 50 58.5	+0.1
W41B	**Gary Mavity, V** comp=Z,17nm,0.7s	4.61	103	lAmb_Lg		14 52 18.1	
P38A	**Dawn** comp=Z,29nm,0.8s	4.63	44	lAmb_Lg		14 52 18.2	
WLAR	**White Oak Lake** comp=Z,17nm,0.7s	4.64	124	lAmb_Lg		14 52 20.6	
UALR	**University of** comp=Z,18nm,0.8s	4.67	108	lAmb_Lg		14 52 20.8	
KSCO	**Kaye Shedlock'**	4.69	306	Pn	Pn	14 51 01.0	+0.7
KSCO	comp=Z,15nm,0.8s			lAmb_Lg		14 52 26.7	
R40A	**Maddies Static**	4.75	65		Pn	14 51 01.8	+0.8
MSTX	**Muleshoe**	4.78	241	Pn	Pn	14 51 02.0	+0.5
BGNE	**Belgrade**	5.04	356	Pn	Pn	14 51 05.1	+0.2
T25A	**Trinidad** comp=Z,16nm,0.7s	5.42	280	lAmb_Lg		14 52 43.0	
CCM	**Cathedral Cave**	5.44	70	Pn	Pn	14 51 10.7	+0.2
P40A	**Paris** comp=Z,16nm,0.7s	5.48	53	lAmb_Lg		14 52 53.3	
435B	**Jarrell** comp=Z,13nm,0.7s	5.58	179	lAmb_Lg		14 52 55.8	
OGNE	**Ogallala**	5.67	325	Pn	Pn	14 51 14.8	+1.1
OGNE	comp=Z,14nm,0.8s			lAmb_Lg		14 53 00.1	
PBMO	**Poplar Bluff** comp=Z,20nm,0.8s	5.88	84	lAmb_Lg		14 52 55.7	
143A	**Socs Landing,** comp=Z,14nm,0.7s	6.37	123	lAmb_Lg		14 53 23.4	
Q24A	**Divide** comp=Z,13nm,0.8s	6.43	296	lAmb_Lg		14 53 24.7	
S44A	**Carbondale** comp=Z,12nm,0.7s	6.90	76	lAmb_Lg		14 53 36.2	
N41A	**Harden Midland** comp=Z,20nm,0.9s	6.91	49	lAmb_Lg		14 53 42.0	
SIUC	**Southern Illin** comp=Z,13nm,0.8s	6.93	76	lAmb_Lg		14 53 39.1	
Q44A	**Meyer Farm, Va** comp=Z,17nm,0.9s	7.36	67	lAmb_Lg		14 53 45.8	
ECSD	**EROS Data Cent** comp=Z,9.4nm,1.1s	7.40	6	lAmb_Lg		14 53 53.1	
L40A	**Anamosa** comp=Z,14nm,0.8s	7.60	40	lAmb_Lg		14 53 55.1	
PHWY	**Pilot Hill** comp=Z,12nm,0.9s	7.78	312	lAmb_Lg		14 54 06.0	
N23A	**Red Feather La** comp=Z,13nm,1.1s	7.86	308	lAmb_Lg		14 53 59.9	
I37A	**Lemond, Waseca** comp=Z,10nm,0.8s	8.31	22	lAmb_Lg		14 54 22.9	
L42A	**Oliver, Polo** comp=Z,14nm,0.8s	8.41	46	lAmb_Lg		14 54 17.4	
JFWS	**Jewell Farm** comp=Z,12nm,0.7s	8.71	39	lAmb_Lg		14 54 42.8	
K22A	**Casper** comp=Z,11nm,1.1s	9.24	315	lAmb_Lg		14 54 53.7	

*DJA **06** 14:52:20.0±0.6,9°S±4°×11°8E±°, h28km±5km, M4.3/13, mb4.5/2, mB4.8/1, MLv4.1/13, Mw(mB)4.0/1*
*IDC **06** 14:52:23.3±2.0, 10°.29S×118°.41E, h0km, mb3.4/1, mbtmp3.6/4, ML3.7/3, Error ellipse: s-maj=53.5km s-min=17.9km az=47.0*
ISC 06 14:52:19.6±1.1, 9°.57S±0°.08×118°.01E±0°.05, h35km, n23, σ1°38/25, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	0.77	343	P	Pn	14 52 33.0	-0.9
PLAI				S	Sn	14 52 43.2	-1.1
WBSI	**Waikabubak, Su**	1.37	93	P	Pn	14 52 41.9	-0.3
WBSI				S	Sn	14 52 59.6	+0.4
BASI	**Baing, Sumba**	2.62	105	P	Pn	14 52 59.9	+0.5
DNP	**Denpasar**	2.90	288	P	Pn	14 53 05.2	+2.0
IGBI	**Denpasar**	2.92	285	P	Pn	14 53 04.4	+0.9
SRBI	**Singaraja**	3.13	298	P	Pn	14 53 07.6	+1.2
SRBI				S	Sn	14 53 42.5	-0.1
EDFI	**Ende, Flores**	3.73	78	P	Pn	14 53 15.1	+0.3
JAGI	**Jajag, Banyuwa**	3.96	286	P	Pn	14 53 18.6	+0.7
ABJI	**Asem Bagus**	4.12	295	P	Pn	14 53 21.9	+1.8
BSSI	**Bau Bau, Buton**	4.20	36	P	Pn	14 53 22.4	+1.2
BSSI				S	Sn	14 54 07.8	-1.2
GMJI	**Gumukmas**	4.69	286	P	Pn	14 53 29.0	+1.2
BKSI	**Bulukumba**	4.71	27	P	Pn	14 53 29.2	+1.0
BLJI	**Banyuglugur**	4.72	292	P	Pn	14 53 29.7	+1.4
BATI	**Baumata** 13nm,0.3s,baz=280,slow=8.6,SNR=13	5.61	97	Pn	Pn	14 53 42.5	+1.9
BATI				Sn	Sn	14 54 44.5	+0.6
	3.4nm,0.3s,baz=194,slow=9.7,SNR=1.6 24nm,0.3s						
BATI	**Baumata** 0.1nm15nm,0.5s	5.61	97	P	Pn	14 53 41.7	+1.1
GRJI	**Gresik**	6.07	295	P	Pn	14 53 48.3	+1.4
SOEI	**Soe**	6.18	92	P	Pn	14 53 49.3	+0.8
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=300,slow=13,SNR=11	18.85	125	P	P	14 56 36.5	-0.3
WRA				S	Sn	14 59 52.7	-15
	0.3nm,0.7s,baz=289,slow=23,SNR=3.0 0.8nm,0.8s						
ASAR	**Alice Springs** 0.1nm,0.3s,baz=316,slow=9.2,SNR=16	20.67	135	P	P	14 56 57.0	+0.3
ASAR				S	S	15 00 42.1	-3.8
	0.5nm,0.6s,baz=307,slow=22,SNR=5.6 0.8nm,0.7s						
H08S2	**Diego Garcia H** baz=96	45.02	269	T	T	15 48 38.3	
H08S3	**Diego Garcia H** baz=96	45.03	269	T	T	15 48 38.8	
H08S1	**Diego Garcia H** baz=96	45.03	269	T	T	15 48 42.3	
MKAR	**Makanchi Array** 0.2nm,0.4s,baz=153,slow=6.5,SNR=2.9 0.2nm,0.4s	64.52	334	P	P	15 03 07.1	+14

MAN 06 15:01:15.6, 16°.01N×120°.78E, h9km, mb3.8, ML2.6, MS2.1, Luzon

MAN 06 15:06:30.3, 16°.66N×120°.83E, h33km, mb3.8, ML2.6, MS2.1, Luzon

*ISK **06** 15:09:25.6, 35°.47N×31°.60E, h8km, ML3.7/41*
*IDC **06** 15:09:25.1±0.8, 35°.54N×31°.54E, h0km, mb3.9/13, mbtmp3.9/20, ML3.6/6, MS2.7/2, Error ellipse: s-maj=16.0km s-min=13.0km az=27.0*
*NIC **06** 15:09:25.8±0.0, 35°.76N×31°.61E, h5km±31km, MI3.9/8*
*GII **06** 15:09:26.0±0.0, 35°.56N×31°.30E, h18km, mb4.2/3, MD4.0/3, Mm4.0/7*
*NEIC **06** 15:09:27.9±2.2, 35°.43N±0°.06×31°.62E±0°.06, h20km±5km, mb4.1/19, ML3.8(ISK), Error ellipse: s-maj=9.0km s-min=6.2km az=201.0*
*DDA **06** 15:09:27.7±0.0, 35°.58N×31°.64E, h18km±1km, MW3.9*
ISC 06 15:09:27.4±1.0, 35°.62N±0°.02×31°.62E±0°.02, h15km±7km, n206, σ1°66/238, mb4.0/23, 6C-1D, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAZI	**Gazipasa**	0.83	42	PG	Pn	15 09 44.3	-0.4
GAZI	**Gazipasa**	0.83	42	P	Pn	15 09 44.2	-0.4
GAZI				S	Sn	15 09 55.8	-0.9
AKMS	**Akamas**	0.84	136	P	Pg	15 09 42.0	-1.6
AKMS	17nm,0.8s			AML	AML	15 10 01.5	
AKMS	12nm,0.8s			AML	AML	15 10 07.0	
ALFC	**Alefka**	0.92	120	P	Pg	15 09 44.0	-1.3
ALFC	11nm,0.7s			AML	AML	15 10 04.8	
ALFC	10nm,0.8s			AML	AML	15 10 05.3	
NATA	**Nata**	1.14	137	P	Pn	15 09 49.6	+0.7
NATA				S	Sn	15 10 07.7	+3.4
AKDN	**Akdeniz- Kıbrı**	1.14	106	PN	Pb	15 09 48.2	-0.7
AKDN				SN	Sb	15 10 03.8	+0.2
LEF	**Lefka**	1.15	115	PG	Pb	15 09 46.6	-2.4
LEF	**Lefka**	1.15	115	P	Pb	15 09 47.9	-1.1
LEF				S	Sb	15 10 02.0	-1.8
AKUM	**Antalya-Kumluc**	1.25	305	P	Pg	15 09 51.2	-0.4
KEPZ	**Antalya-Kepez**	1.28	359	P	Pg	15 09 50.8	-1.3
KEPZ				S	Sg	15 10 06.9	-1.9
TEKE	**Tekeli-Mersin**	1.32	66	PN	Pb	15 09 51.3	-0.6
TEKE				SN	Sg	15 10 11.3	+1.3
SZAC	**Souni**	1.34	129	P	Pb	15 09 52.7	+0.3
SZAC				S	Sg	15 10 14.7	+3.9
SZAC	6.5nm,0.8s			AML	AML	15 10 32.2	
SZAC	6.5nm,0.8s			AML	AML	15 10 32.2	
SZAC	5.9nm,0.9s			AML	AML	15 10 35.3	
SZAC	5.9nm,0.9s			AML	AML	15 10 35.3	
ERMK	**Ermenek**	1.46	45	P	Pg	15 09 56.2	+0.7
ERMK				S	Sg	15 10 16.3	+1.7
BERE	**Bereket-Mersin**	1.49	60	PN	Pb	15 09 54.7	-0.2
ANTB	**Antalya**	1.50	329	PN	Pg	15 09 55.5	-0.8
HDMB	**Hadim**	1.51	27	PN	Pg	15 09 55.3	-1.3
ATHAL	**Athalassa**	1.53	108	P	Pg	15 09 56.3	-0.5
ATHAL	9.0nm,1.1s			AML	AML	15 10 39.3	
ATHAL	12nm,1.0s			AML	AML	15 10 43.1	
CSS	**Mathiatis**	1.54	115	PN	Pn	15 09 53.3	-1.1
CSS				SN	Sn	15 10 14.1	-0.1
CSS	**Mathiatis**	1.54	115	Pn	Pn	15 09 52.7	-1.7
CSS	**Mathiatis**	1.54	115	P	Pn	15 09 53.7	-0.7
ASGA	**Asgata**	1.57	121	P	Pb	15 09 56.1	-0.1
ASGA	6.9nm,0.8s			AML	AML	15 10 26.5	
ASGA	4.5nm,0.8s			AML	AML	15 10 36.6	
LFK	**Lefkose**	1.60	102	PN	Pn	15 09 54.6	-0.6
AKIN	**Akıncılar- Kıb**	1.62	111	PN	Pn	15 09 54.6	-0.9
AKK1	**Akkuyu-Mersin**	1.64	71	PN	Pb	15 09 56.6	-0.8
AKKU	**Akkuyu-Mersin**	1.66	70	PN	Pb	15 09 56.7	-0.9
GULN	**MERSIN_Gulnar**	1.66	70	P	Pg	15 09 58.4	-0.9
GULN				S	Sg	15 10 20.9	+0.1
TEPK	**Tepekoy-MERSIN**	1.67	68	PN	Pb	15 09 57.1	-0.9
TEVE	**Tevekalti-Mers**	1.69	61	PN	Pb	15 09 57.6	-0.6
KORT	**Korkueli**	1.72	324	PN	Pb	15 09 58.6	-0.2
KORT	**Korkueli**	1.72	324	P	Pg	15 10 01.3	+0.8
KORT				S	Sg	15 10 28.6	+5.8
AKAS	**Kas**	1.75	291	PN	Pn	15 09 58.0	+0.7
AKAS	**Kas**	1.75	291		Pb	15 09 59.0	-0.2
AKAS	**Kas**	1.75	291	P	Pg	15 10 01.6	+0.6
MVOU	**Mavrovouni**	1.75	109	P	Pn	15 09 56.6	-0.6
MVOU	1.8nm,0.7s			AML	AML	15 10 23.7	
MVOU	2.5nm,1.0s			AML	AML	15 10 27.8	
TISA	**Tisan-Mersin**	1.76	71	PN	Pb	15 09 58.2	-1.1
ELL	**Elmali**	1.79	310	PN	Pb	15 09 59.3	-0.7
ELL	**Elmali**	1.79	310	Pn	Pb	15 09 60.0	0.0
KARG	**Kargicak-Mersi**	1.79	70	PN	Pb	15 09 58.9	-1.1
SEYD	**Seydisehir-KON**	1.79	6	PN	Pb	15 09 59.8	-0.2
SEDI	**Konya, Seydise**	1.83	3	P	Pb	15 10 00.4	-0.3
SEDI				S	Sb	15 10 23.5	-0.1
BUCA	**Burdur, Bucak-**	1.91	334	P	Pg	15 10 03.1	-0.9
BUCA				S	Sg	15 10 33.3	+4.5
KKBE	**Karaman, Kazim**	1.92	33	P	Pb	15 10 02.1	-0.1
KKBE				S	Sg	15 10 27.5	-1.7
SUTC	**Sutluce-Ispart**	1.92	345	PN	Pb	15 10 01.5	-0.8
SILI	**Silifke-Mersin**	2.01	68	PN	Pb	15 10 02.7	-1.0
BCK	**Bucak**	2.02	336	PN	Pb	15 10 03.0	-0.9
KRMN	**Karaman**	2.04	40	PN	Pb	15 10 03.2	-1.1
PARAL	**Paralimni**	2.07	107	P	Pg	15 10 09.7	+2.6
PARAL	5.3nm,0.9s			AML	AML	15 10 46.4	
PARAL	4.2nm,0.8s			AML	AML	15 10 54.1	
EREN	**Erenkoy**	2.08	92	PN	Pn	15 10 02.3	+0.6
EREN	**Erenkoy**	2.08	92	P	Pb	15 10 05.6	+0.8
EREN				S	Sg	15 10 35.0	+0.7
OSC1	**CSNet OBS 1**	2.13	188	P	Pb	15 10 04.8	-1.0
KMER	**Konya-Meram**	2.23	15	P	Pb	15 10 07.7	+0.3
KMER				S	Sg	15 10 35.9	-3.2
FETY	**Fethiye**	2.29	297	PN	Pn	15 10 05.3	+0.6
FETY	**Fethiye**	2.29	297	P	Pb	15 10 07.8	-0.7
FETY				S	Sn	15 10 33.9	+1.2
GOLH	**Golhisar**	2.32	315	P	Pb	15 10 08.4	-0.6
ISP	**Isparta**	2.37	338	Pn	Pb	15 10 08.4	-1.5
CAEL	**Denizli, Camel**	2.39	310	P	Pg	15 10 13.7	+0.4
KONT	**Konya--Tatoy**	2.40	14	PN	Pb	15 10 09.5	-0.8
KONT	**Konya--Tatoy**	2.40	14	P	Pb	15 10 09.6	-0.8
KONT				S	Sb	15 10 40.5	+0.7
BRDR	**BURDUR-Merkez**	2.42	329	P	Pb	15 10 11.5	+0.7
BAGO	**Egridir - ISPA**	2.46	344	P	Pb	15 10 11.8	+0.4
BAGO				S	Sb	15 10 42.2	+0.7
DOGA	**KONYA_Doganhis**	2.48	1	P	Pb	15 10 09.8	-2.0
DOGA				S	Sb	15 10 42.9	+0.6
OSC2	**CSNet OBS 4**	2.59	168	P	Pn	15 10 10.6	+1.8
OSC2	0.4nm,0.8s			AML	AML	15 10 53.9	
OSC2	0.3nm,1.5s			AML	AML	15 11 11.9	
BASM	**Basmaki-Afyon**	2.62	332	PN	Pb	15 10 11.5	-2.6
APMY	**Acipayam-Deniz**	2.63	315	PN	Pn	15 10 11.5	+2.1
LADK	**Ladik-KONYA**	2.65	13	PN	Pb	15 10 12.2	-2.4
MERS	**Mersin**	2.66	61	PN	Pn	15 10 11.3	+1.5
YVAC	**Isparta, Yalva**	2.67	354	P	Pn	15 10 11.6	+1.6
YVAC				S	Sb	15 10 44.9	-2.7
DALY	**Dalyan (Mula)**	2.68	297	PN	Pn	15 10 10.8	+0.8
KERG	**Konya-Eregli**	2.70	48	P	Pb	15 10 13.4	-2.1
KERG				S	Sb	15 10 47.7	-0.8
YESY	**Yesilyurt**	2.75	38	PN	Pb	15 10 13.3	-3.1
TAVA	**DENİZLİ_Tavas**	2.86	311	P	Pn	15 10 13.9	+1.4
ALIN	**Konya, Altinte**	2.86	20	P	Pb	15 10 15.8	-2.4
ALIN				S	Sb	15 10 51.7	-1.3
KZIL	**AFYON_Kizioren**	2.89	336	P	Pb	15 10 17.5	-1.2
KZIL				S	Sb	15 10 52.7	-1.3
ARG	**Arkhangelos**	2.90	283	Pn	Pn	15 10 11.8	-1.2
KDHN	**Kadinhani**	2.92	8	P	Pb	15 10 19.1	-0.3
TURN	**Turunc**	2.97	294	PN	Pn	15 10 14.8	+0.9
TURN	**Turunc**	2.97	294	P	Pn	15 10 14.6	+0.6
SULT	**Sultanhani-AKS**	2.99	30	PN	Pb	15 10 16.9	-3.5
GULE	**Gulek**	3.04	56	P	Pb	15 10 19.1	-2.2
GULE				S	Sb	15 10 59.8	+1.5
SHUT	**Suhut-Afyon**	3.05	344	PN	Pn	15 10 17.6	+2.3
YER	**Yerkesik**	3.09	300	PN	Pn	15 10 17.1	+1.4
CHBY	**Cihanbeyli**	3.13	19	PN	Pb	15 10 19.1	-3.7
PASA	**Karahalli, USA**	3.22	329	P	Pn	15 10 20.2	+2.7
KARA	**Karaisali**	3.22	58	PN	Pn	15 10 19.8	+2.4
CMRD	**Camardi-Nigde**	3.39	52	PN	Pn	15 10 22.4	+2.5
YURE	**YUREGIR**	3.46	68	P	Pn	15 10 23.6	+2.9
MLSB	**Milas**	3.52	299	PN	Pn	15 10 23.1	+1.4
KARP	**Karpathos**	3.64	270	PN	Pn	15 10 23.1	-0.1
KARP	**Karpathos**	3.64	270	Pn	Pn	15 10 22.7	-0.5
YAYL	**Yayladag**	3.67	82	P	Pn	15 10 27.1	+3.4
KKUL	**Konya-Kulu**	3.69	16	P	Pb	15 10 29.2	-3.3
NIS1	**Nisyros Isl.**	3.73	287	PN	Pn	15 10 25.8	+1.3
BODT	**Bodrum**	3.77	294	PN	Pn	15 10 25.3	+0.3
KOZT	**Kozan**	3.86	60	PN	Pn	15 10 28.7	+2.4
YAHY	**KAYSERI_Yahyal**	3.89	49	P	Pb	15 10 32.5	-3.2
KIRS	**Kirsehir-Merke**	3.96	27	P	Pn	15 10 31.7	+4.0
MMA0B	**Mount Meron ar**	4.07	129	Pn	Pn	15 10 30.6	+1.4
MMA0B				Sn	Sn	15 11 19.2	+2.7
MMAI	**Mount Meron Ar** 7.6nm,0.3s,baz=103,slow=35,SNR=4.3	4.07	129	Pn	Pn	15 10 28.2	-0.9
MMAI				Sn	Sn	15 11 18.2	+1.7
	14nm,0.3s,baz=73,slow=18,SNR=5.0						
MMAI				LR	LR	15 12 19.1	
	comp=Z,54nm,22.0s,baz=264,slow=43 2.5nm,0.2s						
OFRI	**Ofer**	4.09	136	Pn	Pn	15 10 30.7	+1.3
OFRI				Sn	Sn	15 11 18.4	+1.4
GCAM	**G?zelcaml?**	4.09	302	PN	Pn	15 10 31.3	+1.8
GEM	**Giv'at Ha'Em**	4.11	125	Pn	Pn	15 10 31.0	+1.3
GEM				Sn	Sn	15 11 20.6	+3.0
NATI	**Neve Ativ**	4.13	123	Pn	Pn	15 10 31.0	+1.0
NATI				Sn	Sn	15 11 21.3	+3.3
BR231	**Keskin MP Arra**	4.32	12	Pn	Pb	15 10 37.5	-5.6
ANTO	**Ankara**	4.34	12	Pn	Pn	15 10 37.5	+4.6
KSHT	**Keshet**	4.35	126	Pn	Pn	15 10 34.4	+1.3
BR131	**Keskin Array S**	4.40	21	Pn	Pn	15 10 37.1	+3.3
BRTR	**Keskin Array B** 0.9nm,0.3s,baz=193,slow=16,SNR=14	4.40	21	Pn	Pn	15 10 36.9	+3.1
BRTR				Sn	Sn	15 11 28.6	+3.6
	0.7nm,0.3s,baz=200,slow=21,SNR=5.2 3.6nm,0.5s						
BRTR	**Keskin Array B**	4.40	21	Pn	Pn	15 10 37.5	+3.6
SLTI	**Sal'it**	4.41	139	Pn	Pn	15 10 34.6	+0.8
MMLI	**Mount Malkishu**	4.47	134	PN	Pn	15 10 34.8	+0.1
MMLI	**Mount Malkishu**	4.47	134	Pn	Pn	15 10 36.1	+1.4
BNN	**Bunyan**	4.67	45	Pn	Pn	15 10 39.8	+2.4
HMDT	**Nahal Hemdat**	4.67	135	Pn	Pn	15 10 38.3	+0.9
HMDT				Sn	Sn	15 11 33.0	+1.7
MDUB	**Mudurnu**	4.86	356	Pn	Pn	15 10 42.3	+2.3
BALB	**Balikesir**	4.99	325	Pn	Pn	15 10 44.7	+2.9
SANT	**Santorini**	5.05	280	Pn	Pn	15 10 41.7	-1.0
DSI	**Dead Sea**	5.11	141	Pn	Pn	15 10 43.7	+0.2
DSI				Sn	Sn	15 11 43.6	+1.4
APE	**Apeiranthos**	5.13	288	⇑P	Pn	15 10 44.4	+0.7
YTIR	**Yattir**	5.15	144	Pn	Pn	15 10 43.3	-0.8
YTIR				Sn	Sn	15 11 45.0	+1.7
KZIT	**Kziot**	5.24	153	Pn	Pn	15 10 44.4	-0.9
KZIT				Sn	Sn	15 11 45.4	-0.1
GHAJ	**Ghor Haditha**	5.42	141		Pn	15 10 44.8	-2.9
GHAJ	**Ghor Haditha**	5.42	141	Pn	Pn	15 10 48.3	+0.6
IDI	**Anoyia**	5.50	269	⇑P	Pn	15 10 49.3	+0.4
IDI	**Anoyia** 1.6nm,0.3s,baz=72,slow=17,SNR=11	5.50	269	Pn	Pn	15 10 49.0	+0.1
IDI				Sn	Sn	15 11 49.6	-2.4
	4.1nm,0.3s,baz=296,slow=12,SNR=8.2 7.9nm,0.4s						
IDI	**Anoyia**	5.50	269	Pn	Pn	15 10 48.1	-0.9
ASF	**Jabal al Asfar** 0.7nm,0.3s,baz=225,slow=3.2,SNR=3.0	5.57	127	Pn	Pn	15 10 50.5	+0.6
ASF				Sn	Sn	15 11 56.5	+2.8
	0.6nm,0.3s,baz=157,slow=8.7,SNR=1.4 1.8nm,0.3s						
ZFRI	**Zfri**	5.87	148	Sn	Sn	15 12 01.8	+1.0
PRNI	**Paran**	5.97	151	Pn	Pn	15 10 55.1	-0.2
PRNI				Sn	Sn	15 12 04.1	+0.7
KRMI	**Paran Flat**	6.07	154	Pn	Pn	15 10 55.9	-0.8
KRMI				Sn	Sn	15 12 06.9	+0.9
HRFI	**Mount Harif**	6.26	152	Pn	Pn	15 10 58.9	-0.4
HRFI				Sn	Sn	15 12 11.2	+0.5
EIL	**Elat** 2.2nm,0.3s,baz=336,slow=10,SNR=30	6.56	154	Pn	Pn	15 11 02.4	-1.0
EIL				Sn	Sn	15 12 16.8	-1.2
	1.7nm,0.3s,baz=324,slow=19,SNR=1.7						
EIL				LR	LR	15 13 54.4	
	comp=Z,106nm,18.2s,baz=284,slow=41 39nm,0.7s						
EIL	**Elat**	6.56	154	Pn	Pn	15 11 02.6	-0.8
EIL				Sn	Sn	15 12 18.1	+0.1
ALN	**Alexandroupoli**	6.86	322	Pn	Pn	15 11 10.6	+3.2
RDO	**Rodhopi**	7.30	321		Pn	15 11 14.6	+1.1
ITM	**Ithomi**	7.97	284	Pn	Pn	15 11 22.4	-0.4
LIT	**Litokhoron**	8.49	305	Pn	Pn	15 11 30.6	+0.7
HARR	**Harsova**	9.49	344	⇓P	Pn	15 11 58.0	+14
VTS	**Vitosha**	9.55	320

	comp=Z,4.8nm,0.9s								
DAVA	**Damuels**	**19.96**	**312**	*e*P		**P**		**15 13 59.4**	**+0.3**
	comp=Z,9.2nm,0.6s								
CLL	**Collm**	**20.61**	**325**	*e*sP		sP		15 14 17.0	+6.0
	comp=Z,4.0nm,1.0s								
SENIN	**Lac Senin/Sane**	**21.18**	**308**	P		**P**		**15 14 11.9**	**-0.5**
SENIN				IAmb		IAmb		15 14 28.6	
	comp=Z,6.4nm,0.8s								
BFO	**Black Forest**	**21.38**	**314**	P		**P**		**15 14 13.5**	**-0.8**
BFO				IAmb		IAmb		15 14 28.9	
	comp=Z,17nm,1.5s								
ECH	**Echery**	**22.02**	**312**	P		**P**		**15 14 20.2**	**-1.0**
ECH				IAmb		IAmb		15 14 32.0	
	comp=Z,4.5nm,0.8s								
AKTO	**Aktyubinsk**	**24.15**	**44**	P		**P**		**15 14 43.6**	**+0.8**
	comp=Z,3.0nm,0.9s,baz=250,slow=9.9,SNR=8.2								
	comp=Z,3.0nm,0.9s								
ABKAR	**Akbulak array**	**24.78**	**48**	P		**P**		**15 14 48.1**	**-0.4**
ABKAR	**Akbulak array**	**24.78**	**48**	P		**P**		**15 14 48.6**	**+0.1**
ABKAR				IAmb		IAmb		15 14 50.5	
	comp=Z,2.5nm,1.1s								
FIA1	**FINESS Array S**	**26.09**	**354**	P		**P**		**15 14 58.9**	**-1.3**
FINES	**FINESS Array B**	**26.09**	**354**	P		**P**		**15 14 59.6**	**-0.6**
	comp=Z,0.9nm,0.6s,baz=161,slow=12,SNR=5.6								
	comp=Z,0.9nm,0.6s								
FINES	**FINESS Array B**	**26.09**	**354**	P		**P**		**15 14 58.8**	**-1.4**
CART	**Cartagena**	**26.20**	**284**	P		**P**		**15 14 57.4**	**-4.0**
HFS	**Hagfors**	**27.14**	**340**	P		**P**		**15 15 10.5**	**+0.8**
	comp=Z,0.9nm,0.7s,baz=126,slow=7.3,SNR=1.7								
	comp=Z,0.9nm,0.7s								
ESDC	**Sonseca Array**	**28.35**	**289**	P		**P**		**15 15 20.6**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=80,slow=9.3,SNR=8.1								
	comp=Z,0.8nm,0.7s								
NOA	**NORSAR Array B**	**28.58**	**339**	P		**P**		**15 15 22.5**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=142,slow=9.2,SNR=2.0								
	comp=Z,0.3nm,0.6s								
EKA	**Eskdalemuir Ar**	**30.89**	**321**	P		**P**		**15 15 40.8**	**-2.3**
	comp=Z,0.2nm,0.3s,baz=117,slow=10,SNR=2.1								
ARCES	**ARCESS Array B**	**34.14**	**356**	P		**P**		**15 16 11.1**	**-0.3**
	comp=Z,2.7nm,0.8s,baz=183,slow=2.4,SNR=5.4								
	comp=Z,2.7nm,0.8s								
ARCES	**ARCESS Array B**	**34.14**	**356**	P		**P**		**15 16 10.9**	**-0.5**
TORD	**Torodi Ar. Bea**	**35.03**	**238**	P		**P**		**15 16 18.3**	**-1.3**
	comp=Z,1.0nm,0.8s,baz=27,slow=5.4,SNR=6.0								
	comp=Z,1.0nm,0.8s								
TORD	**Torodi Ar. Bea**	**35.03**	**238**	IAmb		IAmb		15 16 41.1	
	comp=Z,3.8nm,1.5s								
MAKZ	**Makanchi**	**38.88**	**57**	P		**P**		**15 16 52.9**	**+0.7**
MAKZ				IAmb		IAmb		15 16 54.6	
	comp=Z,3.6nm,0.9s								
MK31	**Makanchi Array**	**39.10**	**57**	P		**P**		**15 16 54.8**	**+0.8**
MK31				IAmb		IAmb		15 16 56.3	
	comp=Z,4.1nm,0.8s								
MKAR	**Makanchi Array**	**39.10**	**57**	P		**P**		**15 16 55.3**	**+1.3**
	comp=Z,4.4nm,0.8s,baz=278,slow=6.4,SNR=50								
	comp=Z,4.4nm,0.8s								
MKAR	**Makanchi Array**	**39.10**	**57**	P		**P**		**15 16 54.7**	**+0.7**
ZALV	**Zalesovo Beam**	**40.87**	**46**	P		**P**		**15 17 09.3**	**+0.7**
	comp=Z,0.6nm,0.5s,baz=254,slow=10,SNR=2.4								
	comp=Z,0.6nm,0.5s								
ZALV	**Zalesovo Beam**	**40.87**	**46**	P		**P**		**15 17 08.2**	**-0.3**
WMQ	**Urumqi**	**43.18**	**61**	*e*P		**P**		**15 17 29.4**	**+1.7**
SONM	**Songino Array**	**55.07**	**52**	P		**P**		**15 18 59.5**	**+0.8**
	comp=Z,1.7nm,0.7s,baz=282,slow=7.4,SNR=6.0								
	comp=Z,1.7nm,0.7s								
SONM	**Songino Array**	**55.07**	**52**	IAmb		IAmb		15 19 01.1	
	comp=Z,1.8nm,0.9s								
TIXI	**Tiksi**	**58.84**	**22**	P		**P**		**15 19 24.6**	**-0.2**
TIXI				IAmb		IAmb		15 19 26.4	
	comp=Z,3.1nm,1.2s								
PZH	**PanZhiHua**	**59.63**	**78**	P		**P**		**15 19 30.7**	**-0.5**
PZH				pmax		pmax			
	comp=Z,10.0nm,0.6s								
PZH				pmax		pmax			
	comp=Z,90nm,4.8s								
HHC	**Hu-ho-hao-te**	**60.94**	**59**	*e*P		**P**		**15 19 41.2**	**+1.2**
HHC				pmax		pmax			
	comp=Z,21nm,1.0s								
HHC				pmax		pmax			
	comp=Z,180nm,6.3s								
CMAR	**Chiang Mai Arr**	**61.27**	**87**	P		**P**		**15 19 42.6**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=293,slow=8.3,SNR=5.7								
	comp=Z,0.7nm,0.8s								
KSRS	**Korea Array**	**73.74**	**55**	P		**P**		**15 21 01.6**	**+0.7**
	comp=Z,0.8nm,0.8s,baz=316,slow=5.2,SNR=4.1								
	comp=Z,0.8nm,0.8s								
FCC	**Fort Churchill**	**75.70**	**334**	P		**P**		**15 21 13.6**	**+1.8**
IMAR	**Indian Mountai**	**78.64**	**2**	P		**P**		**15 21 28.7**	**+0.4**
MJAR	**Matsushiro Arr**	**81.00**	**51**	P		**P**		**15 21 42.2**	**+0.5**
	comp=Z,2.6nm,1.0s,baz=308,slow=6.0,SNR=4.6								
	comp=Z,2.6nm,1.0s								
MJAR	**Matsushiro Arr**	**81.00**	**51**	IAmb		IAmb		15 21 42.9	
	comp=Z,2.8nm,1.1s								

JMA 06 15:10:05.8±0.2,24°.1N±0°.4×122°.8E±0°.7,h9km,NW OFF ISHIGAKIJIMA IS,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.44**	**23**	P	Pg	15 10 14.6	+0.2
YOJ				*e*S	Sg	15 10 20.8	+0.6
IRIF	**Iriomote-Funau**	**0.88**	**71**	P	Pg	15 10 22.2	-0.5
IRIF				*e*S	Sb	15 10 34.7	-0.3
JKRS	**Kuro-shima**	**1.10**	**80**	P	Pg	15 10 26.8	-0.1
JKRS				*e*S	Sb	15 10 41.7	+0.3
JIJ	**Ishigaki jima**	**1.25**	**75**	P	Pn	15 10 28.8	-0.7
JIJ				*e*S	Sb	15 10 45.2	-0.5
JISG	**Ishigakijimahi**	**1.46**	**68**	*e*P	Pn	15 10 32.1	-0.3

TAP 06 15:10:26.7,22°.84N×120°.90E,h12km±1km,ML0.6,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**0.16**	**98**	*i* P	Pb	15 10 31.0	-0.6
	baz=99						
TWG				*i* S	Sg	15 10 33.6	+0.7
	baz=99						
TWGBT	**Beinan**	**0.16**	**99**	P	Pg	15 10 31.0	+0.6
	baz=99						
TWGBT				*i* S	Sg	15 10 33.7	+0.6
	baz=99						
LONT	**Longtian**	**0.22**	**73**	P	Pg	15 10 31.8	+0.4
	baz=73						
LONT				*e*S	Sg	15 10 34.6	+0.1
	baz=73						
ECL	**Taimali**	**0.25**	**169**	*e*S	Sg	15 10 36.0	+0.6
	baz=163						
SSD	**Sandimen**	**0.27**	**249**	P	Pg	15 10 32.4	+0.1
	baz=249						
SSD				*e*S	Sg	15 10 36.5	+0.5
	baz=249						
TSMG	**Majia**	**0.28**	**240**	P	Pg	15 10 32.5	+0.1
	baz=246						
MASBT	**Mashibuluo**	**0.34**	**227**	*e*P	Pg	15 10 33.8	+0.3
	baz=227						
MASBT				*e*S	Sg	15 10 38.4	+0.2
	baz=227						
EDH	**Donghe**	**0.39**	**71**	*e*P	Pb	15 10 36.1	+0.5
	baz=67						
EDH				*e*S	Sb	15 10 42.2	+0.6
	baz=67						

MAN 06 15:12:44.2,9°.52N×123°.80E,h32km,mb3.9,ML2.6,MS2.2, Negros

*NNC **06** 15:33:21.8±0.9,41°.56N×78°.78E,h0km,mb3.7,mpv3.5, Error ellipse: s-maj=6.1km s-min=3.9km az=171.0*
*KRNET **06** 15:33:21.3±0.1,41°.55N×78°.81E,h8km,mb3.3*
*SOME **06** 15:33:21.8,41.65N×78°.72E,h0km*
ISC 06 15:33:23.0±1.4,41°.57N±0°.06×78°.76E±0°.03,h10km,n65, σ1§52/104,26C-11D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**0.95**	**344**	⇑*i* P	**Pg**	**15 33 39.6**	**-1.8**
	baz=43						
PRZ				⇑*i* S	**Sb**	**15 33 54.5**	**0.0**
	baz=43						
KDJ	**Kajisay**	**1.31**	**296**	⇑*i* P	**Pn**	**15 33 45.8**	**-1.7**
	baz=96						
KDJ				⇑*i* S	**Sg**	**15 34 04.3**	**-0.8**
	baz=96						
ANVS	**Anan'yevo**	**1.46**	**327**	⇓*i* P	**Pn**	**15 33 49.4**	**-0.2**
	baz=26						
ANVS				⇓*i* S	**Sg**	**15 34 10.0**	**0.0**
	baz=26						
SATY	**Saty**	**1.51**	**350**	*e*P	**Pb**	**15 33 50.8**	**-0.5**
	baz=49						
SATY				*e*S	**Sg**	**15 34 11.9**	**+0.2**
	baz=49						
SATY	**Saty**	**1.51**	**350**	*e*P	**Pb**	**15 33 50.8**	**-0.5**
	12nm,0.2s						
SATY				*e*S	**Sg**	**15 34 11.9**	**+0.2**
	123nm,0.1s						
SATY	**Saty**	**1.51**	**350**	P	**Pb**	**15 33 50.8**	**-0.5**
	12nm,0.2s						
SATY				S	**Sg**	**15 34 12.1**	**+0.4**
	123nm,0.1s						
SHLS	**Shalkode**	**1.67**	**18**	*e*P	**Pg**	**15 33 54.8**	**-0.3**
	baz=26						
SHLS				*e*S	**Sg**	**15 34 18.2**	**+1.4**
	baz=26						
SHLS	**Shalkode**	**1.67**	**18**	*e*P	**Pg**	**15 33 54.8**	**-0.3**
	51nm,0.4s						
SHLS				*e*S	**Sg**	**15 34 18.1**	**+1.4**
	103nm,0.2s						
PDGK	**Podgornoye**	**1.84**	**17**	P	**Pn**	**15 33 55.2**	**+0.3**
	14nm,0.3s						
PDGK				S	**Sb**	**15 34 19.4**	**-0.6**
	40nm,0.3s						
PDGK	**Podgornoye**	**1.84**	**17**	⇓Pn	**Pn**	**15 33 55.0**	**+0.2**
	17nm,0.5s						
PDGK				⇑Lg	Lg	15 34 21.1	
	47nm,0.5s						
KPKS	**Kokpek**	**1.90**	**358**	*e*P	**Pb**	**15 33 56.9**	**-0.9**
	baz=57						
KPKS				*e*S	**Sg**	**15 34 22.3**	**-1.7**
	baz=57						
KPKS	**Kokpek**	**1.90**	**358**	*e*P	**Pb**	**15 33 56.9**	**-0.9**
	29nm,0.2s						
KPKS				*e*S	**Sg**	**15 34 22.2**	**-1.7**
	218nm,0.4s						
KPKS	**Kokpek**	**1.90**	**358**	Pg	**Pb**	**15 33 56.9**	**-0.9**
	29nm,0.2s						
KPKS				Lg	Lg	15 34 22.2	
	218nm,0.4s						
KURS	**Kuram**	**1.97**	**347**	*e*P	**Pb**	**15 33 58.3**	**-0.7**
	baz=47						
KURS				*e*S	**Sg**	**15 34 24.6**	**-1.6**
	baz=47						
KURS	**Kuram**	**1.97**	**347**	*e*P	**Pb**	**15 33 58.3**	**-0.7**
	34nm,0.5s						
KURS				*e*S	**Sg**	**15 34 24.6**	**-1.6**
	54nm,0.4s						
KURS	**Kuram**	**1.97**	**347**	Pg	**Pb**	**15 33 58.3**	**-0.7**
	34nm,0.5s						
KURS				Lg	Lg	15 34 24.6	
	54nm,0.4s						
TNSS	**Tian-Shan**	**1.99**	**318**	*e*P	**Pb**	**15 33 58.5**	**-1.1**
	baz=18						
TNSS				*e*S	**Sb**	**15 34 24.6**	**0.0**
	baz=18						
TNSS	**Tian-Shan**	**1.99**	**318**	*e*P	**Pb**	**15 33 58.5**	**-1.1**
	11nm,0.2s						
TNSS				*e*S	**Sb**	**15 34 24.6**	**0.0**
	67nm,0.4s						
TNSS	**Tian-Shan**	**1.99**	**318**	Pg	**Pb**	**15 33 58.5**	**-1.1**
	11nm,0.2s						
TNSS				Lg	Lg	15 34 24.6	
	67nm,0.4s						
ULHL	**Ulahol**	**2.00**	**291**	⇓*i* P	**Pb**	**15 33 58.5**	**-1.1**
	baz=91						
ULHL				⇓*i* S	**Sg**	**15 34 25.9**	**-1.3**
	baz=91						
MDOK	**Medeo**	**2.04**	**322**	*e*P	**Pb**	**15 33 59.2**	**-1.0**
	baz=22						
MDOK				*e*S	**Sb**	**15 34 25.9**	**+0.3**
	baz=22						
MDOK	**Medeo**	**2.04**	**322**	*e*P	**Pb**	**15 33 59.2**	**-1.0**
	15nm,0.4s						
MDOK				*e*S	**Sb**	**15 34 25.9**	**+0.3**
	145nm,0.5s						
MDOK	**Medeo**	**2.04**	**322**	Pg	**Pb**	**15 33 59.2**	**-1.0**
	15nm,0.4s						
MDOK				Pg	**Pb**	**15 33 59.3**	**-1.0**
	9.0nm,0.5s						
MDOK				Lg	Lg	15 34 25.9	
	145nm,0.5s						
MDOK				⇓Lg	Lg	15 34 27.9	
	122nm,0.6s						
KNDC	**Almaty**	**2.12**	**322**	⇑Pg	**Pb**	**15 34 00.8**	**-0.7**
	20nm,0.4s						
KNDC				⇑Lg	Lg	15 34 31.4	
	360nm,1.0s						
AAA	**Alma-Ata**	**2.13**	**321**	*e*P	**Pg**	**15 34 02.7**	**-1.2**
	29nm,0.1s						
AAA				*e*S	**Sg**	**15 34 31.9**	**+0.3**
	227nm,0.3s						
AAA	**Alma-Ata**	**2.13**	**321**	Pg	**Pg**	**15 34 02.7**	**-1.2**
	29nm,0.1s						
AAA				Lg	Lg	15 34 31.9	
	227nm,0.3s						
KTMS	**Ketmen**	**2.21**	**32**	*e*P	**Pb**	**15 34 02.6**	**-0.6**
	9.6nm,0.6s						
KTMS				*e*S	**Sg**	**15 34 32.0**	**-2.2**
	23nm,0.4s						
KTMS	**Ketmen**	**2.21**	**32**	Pg	**Pb**	**15 34 02.6**	**-0.6**
	9.6nm,0.6s						
KTMS				Lg	Lg	15 34 32.0	
	23nm,0.4s						
BOOM	**Boomskoye usch**	**2.29**	**295**	⇑*e*P	**Pb**	**15 34 02.5**	**-2.1**
	baz=95						
BOOM				⇑*i* S	**Sb**	**15 34 32.8**	**-0.3**
	baz=95						
MTBS	**Maitube**	**2.33**	**313**	*e*P	**Pb**	**15 34 04.8**	**-0.3**
	7.7nm,0.1s						
MTBS				*e*S	**Sg**	**15 34 35.6**	**-2.2**
	101nm,0.2s						
MTBS	**Maitube**	**2.33**	**313**	Pg	**Pb**	**15 34 04.8**	**-0.3**
	7.7nm,0.1s						
MTBS				Lg	Lg	15 34 35.6	
	101nm,0.2s						
KST	**Kastek**	**2.54**	**306**	*e*P	**Pb**	**15 34 09.3**	**+0.4**
	3.3nm,0.2s						
KST				*e*S	**Sg**	**15 34 43.2**	**-1.6**
	81nm,0.5s						
KST	**Kastek**	**2.54**	**306**	Pg	**Pb**	**15 34 09.3**	**+0.4**
	3.3nm,0.2s						
KST				Lg	Lg	15 34 43.2	
	81nm,0.5s						
CHKK	**Chushkaly**	**2.63**	**331**	*e*P	**Pb**	**15 34 10.3**	**+0.1**
	10nm,0.4s						
CHKK				*e*S	**Sg**	**15 34 45.2**	**-2.3**
	100nm,0.5s						
CHKK	**Chushkaly**	**2.63**	**331**	Pg	**Pb**	**15 34 10.3**	**+0.1**
	10nm,0.4s						
CHKK				Lg	Lg	15 34 45.2	
	100nm,0.5s						
KTBS	**Karatobe**	**2.63**	**325**	*e*P	**Pb**	**15 34 10.6**	**+0.3**
	8.6nm,0.2s						
KTBS				*e*S	**Sg**	**15 34 45.5**	**-2.2**
	84nm,0.5s						
KTBS	**Karatobe**	**2.63**	**325**	Pg	**Pb**	**15 34 10.6**	**+0.3**
	8.6nm,0.2s						
KTBS				Lg	Lg	15 34 45.5	
	84nm,0.5s						
TKM2	**Tokmak 2**	**2.71**	**301**	⇑*i* P	**Pn**	**15 34 08.3**	**+1.5**
	baz=1.0						
TKM2				⇑*i* S	**Sb**	**15 34 42.7**	**-2.4**
	baz=1.0						
TKM2	**Tokmak 2**	**2.71**	**301**	⇑Pg	**Pb**	**15 34 10.7**	**-1.0**
	3.5nm,0.3s						
TKM2				⇑Lg	Lg	15 34 48.7	
	41nm,0.5s						
ARXS	**Arharly**	**2.73**	**346**	*e*P	**Pb**	**15 34 12.6**	**+0.6**
	5.0nm,0.2s						
ARXS				*e*S	**Sg**	**15 34 48.7**	**-2.0**
	111nm,0.6s						
DJR	**Jarkent**	**2.86**	**15**	*e*P	**Pb**	**15 34 14.1**	**-0.2**
	5.2nm,0.2s						
DJR				*e*S	**Sg**	**15 34 51.6**	**-3.3**
	45nm,0.2s						
DJR	**Jarkent**	**2.86**	**15**	Pg	**Pb**	**15 34 14.1**	**-0.2**
	5.2nm,0.2s						
DJR				Lg	Lg	15 34 51.7	
	45nm,0.2s						
KUU	**Kurty**	**2.93**	**323**	*e*P	**Pb**	**15 34 15.5**	**+0.2**
	5.9nm,0.5s						
KUU				Lg	Lg	15 34 53.9	
	32nm,0.4s						
KBK	**Karagaybulak**	**3.04**	**292**	⇓*i* P	**Pn**	**15 34 12.8**	**+1.5**
	baz=92						
KBK				⇓*i* S	**Sn**	**15 34 50.5**	**+2.7**
	baz=92						
KRBS	**Karabastau**	**3.11**	**314**	*e*P	**Pb**	**15 34 18.8**	**+0.2**
	5.8nm,0.2s						
KRBS				*e*S	**Sg**	**15 34 59.4**	**-3.6**
	22nm,0.3s						
KRBS	**Karabastau**	**3.11**	**314**	Pg	**Pb**	**15 34 18.8**	**+0.2**
	5.8nm,0.2s						
KRBS				Lg	Lg	15 34 59.4	
	22nm,0.3s						
UCH	**Uchtor**	**3.24**	**283**	⇑*e*P	**Pn**	**15 34 15.8**	**+1.5**
	baz=83						
UCH				⇑*i* S	**Sn**	**15 34 55.9**	**+2.8**
	baz=83						
ARLS	**Aral**	**3.33**	**276**	⇑*i* P	**Pn**	**15 34 16.8**	**+1.4**
	baz=77						
ARLS				⇑*i* S	**Sn**	**15 34 57.7**	**+2.6**
	baz=77						
AAK	**Ala-Archa**	**3.35**	**290**	⇑*e*P	**Pn**	**15 34 16.9**	**+1.3**
	baz=90						
AAK				⇑*i* S	**Sn**	**15 34 58.2**	**+2.7**
	baz=90						
TDK	**Taldyqorghan**	**3.44**	**356**	*e*P	**Pb**	**15 34 25.2**	**+1.1**
	41nm,0.1s						
TDK				*e*S	**Sg**	**15 35 10.6**	**-2.9**
	98nm,0.7s						
TDK	**Taldyqorghan**	**3.44**	**356**	Pg	**Pb**	**15 34 25.2**	**+1.1**
	41nm,0.1s						
TDK				Lg	Lg	15 35 10.6	
	98nm,0.7s						
USP	**Ospenovka**	**3.58**	**300**	⇓*i* P	**Pn**	**15 34 20.2**	**+1.5**
	baz=0.0						
USP				⇓*i* S	**Sn**	**15 35 03.2**	**+2.2**
	baz=0.0						
SGDS	**Sogindy**	**3.58**	**303**	*e*P	**Pb**	**15 34 26.6**	**+0.1**
	2.1nm,0.3s						
SGDS				*e*S	**Sb**	**15 35 12.8**	**+2.7**
	15nm,0.5s						
SGDS	**Sogindy**	**3.58**	**303**	Pg	**Pb**	**15 34 26.6**	**+0.1**
	2.1nm,0.3s						
SGDS				Lg	Lg	15 35 12.8	
	15nm,0.5s						
KAPS	**Kapalarasan**	**3.74**	**6**	*e*P	**Pb**	**15 34 29.1**	**0.0**
	2.4nm,0.3s						
KAPS				*e*S	**Sb**	**15 35 17.4**	**+2.9**
	19nm,0.6s						
KAPS	**Kapalarasan**	**3.74**	**6**	Pg	**Pb**	**15 34 29.1**	**0.0**
	2.4nm,0.3s						
KAPS				Lg	Lg	15 35 17.4	
	19nm,0.6s						
MRKS	**Merke**	**4.28**	**288**	*e*P	**Pg**	**15 34 42.0**	**-2.9**
	2.0nm,0.2s						
MRKS				*e*S	**Sg**	**15 35 39.1**	**-1.2**
	3.4nm,0.1s						
BTLS	**Baital**	**4.88**	**317**	*e*P	**Pb**	**15 34 50.0**	**+1.3**
	0.9nm,0.5s						
BTLS				*e*S	**Sb**	**15 35 52.9**	**+5.5**
	2.3nm,0.4s						
BTLS	**Baital**	**4.88**	**317**	Pg	**Pb**	**15 34 50.0**	**+1.3**
	0.9nm,0.5s						
BTLS				Lg	Lg	15 35 52.9	
	2.3nm,0.4s						
MAKZ	**Makanchi**	**5.72**	**23**	⇑Pn	**Pn**	**15 34 48.1**	**0.0**
	1.5nm,0.8s						
MAKZ				⇓Lg	Lg	15 36 22.1	
	1.0nm,0.6s						
MK31	**Makanchi Array**	**5.81**	**25**	Pn	**Pn**	**15 34 48.6**	**-0.6**
	0.6nm,0.5s,baz=210,slow=15,SNR=22						
MK31				⇑Sn	**Sn**	**15 35 55.8**	**-0.1**
	0.4nm,0.3s						
MK31				⇑Lg	Lg	15 36 26.4	
	0.8nm,0.5s,baz=206,slow=28						
KK31	**Karatay Array**	**6.30**	**287**	⇑Pg	Pg	15 35 17.8	-5.9
	0.4nm,0.4s,baz=96,slow=15,SNR=3.5						
KK31				⇑Lg	Lg	15 36 40.7	
	0.6nm,0.4s,baz=104,slow=27,SNR=4.8						
KURBB	**Kurchatov Arra**	**9.06**	**359**	⇑Lg	Lg	15 38 09.6	
	7.5nm,0.8s						
KURK	**Kurchatov**	**9.15**	**359**	⇑Lg	Lg	15 38 10.4	
	2.7nm,0.7s						

*IDC **06** 15:37:46.8±0.8,30°.56N×129°.42E,h250km±8km,mb3.0/3, mbtmp3.7/6,Error ellipse: s-maj=28.9km s-min=9.7km az=107.0*
*JMA **06** 15:37:47.2±0.2,30°.7N±0°.6×12°.9E±°,h268km±2km, MV3.4/40,SW OFF KYUSHU*
ISC 06 15:37:47.1±1.0,30°.64N±0°.06×129°.5E±0°.1,h268km±8km, n20,σ1§19/26,mb3.2/3,Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKC	**Kuchinoerabu**	**0.62**	**107**	*e*P	**Pn**	**15 38 23.1**	**+0.8**
JNN	**Nakanoshima**	**0.86**	**158**	*e*P	**Pn**	**15 38 24.1**	**+0.7**
JYAK	**Yakushimahirau**	**0.96**	**115**	*e*P	**Pn**	**15 38 24.3**	**+0.5**
JYAK				*e*S	**S**	**15 38 51.6**	**-1.2**
JSJ	**Shimokoshiki**	**1.05**	**10**	*e*P	**Pn**	**15 38 23.8**	**-0.4**
JSJ				*e*S	**S**	**15 38 52.4**	**-1.2**
JSU	**Suzuyama**	**1.18**	**43**	*e*P	**Pn**	**15 38 25.4**	**+0.3**
JMTN	**Minamitane**	**1.23**	**101**	P	**Pn**	**15 38 25.8**	**+0.5**
JTN	**Tanegashima 3**	**1.27**	**89**	*e*P	**Pn**	**15 38 26.1**	**+0.5**
JTAJ	**Takarajima**	**1.51**	**190**	*e*P	**Pn**	**15 38 27.9**	**+0.7**
JTAJ				*e*S	**S**	**15 39 00.3**	**+1.3**
JTZ	**Takazaki**	**1.84**	**47**	*e*P	**Pn**	**15 38 29.6**	**0.0**
JIU3	**Izumi3**	**2.20**	**30**	*e*P	**Pn**	**15 38 32.8**	**0.0**
JIU3				*e*S	**S**	**15 39 08.7**	**-0.4**
JAM	**Amami Oshima**	**2.23**	**178**	*e*P	**Pn**	**15 38 33.1**	**0.0**
JAMN	**Amaminishikomi**	**2.41**	**187**	*e*P	**Pn**	**15 38 34.8**	**0.0**
JNU	**Nakatsue**	**2.73**	**25**	P	**Pn**	**15 38 37.4**	**-0.5**
	82nm,0.6s,baz=158,slow=3.7,SNR=19						
JNU				S	**S**	**15 39 18.3**	**0.0**
	15nm,0.3s,baz=96,slow=22,SNR=9.3						
JTK	**Tokunoshima**	**2.89**	**190**	*e*P	**Pn**	**15 38 39.4**	**-0.2**
JTO	**Tosashimizu**	**3.57**	**51**	*e*P	**Pn**	**15 38 45.2**	**-1.5**
JOW	**Kunigami**	**3.95**	**196**	P	**Pn**	**15 38 49.5**	**-1.7**
	17nm,0.3s,baz=49,slow=20,SNR=59						
JOW				S	**S**	**15 39 38.3**	**-4.0**
	38nm,0.3s,baz=173,slow=29,SNR=26						
KSRS	**Korea Array**	**6.92**	**349**	P	**Pn**	**15 39 26.5**	**-0.3**
	3.1nm,0.7s,baz=170,slow=13,SNR=10						
CMAR	**Chiang Mai Arr**	**30.23**	**253**	P	**P**	**15 43 33.8**	**+0.5**
	0.4nm,0.5s,baz=50,slow=8.4,SNR=4.3						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**50.51**	**174**	P	**P**	**15 46 19.0**	**+0.6**
	0.3nm,0.4s,baz=356,slow=7.9,SNR=8.7						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**54.17**	**175**	P	**P**	**15 46 46.1**	**+1.0**
	0.3nm,0.3s,baz=359,slow=7.1,S

9.9nm,0.3s,baz=54,slow=24,SNR=1.6
JYT Yasato 7.44 345 Pn Pn 15 39 40.1 -2.4
INU Inuyama 7.85 325 Pn Pn 15 39 43.8 -4.4
JGF Kuroka 7.89 327 Pn Pn 15 39 43.3 -5.5
MJA0 Matsu Arr-Jizo 8.32 335 *eP* **Pn 15 39 53.7 -1.0**
MJA0 pmax pmax
comp=Z,1.0nm,0.3s
MJAR Matsushiro Arr 8.33 335 Pn **Pn 15 39 53.7 -1.1**
comp=Z,0.5nm,0.3s,baz=158,slow=10,SNR=43
comp=Z,5.9nm,0.6s
MAJO Matsushiro 8.33 335 Pn **Pn 15 39 54.5 -0.3**
MAJO Matsushiro 8.33 335*c iP* **Pn 15 39 54.8 0.0**
MJB9 Matsu-Tunnel 8.34 335 Pn 15 39 54.5 -0.4
JMM Marumori 8.92 351 Pn 15 39 59.0 -3.9
JSD Sado 9.66 339 Pn **Pn 15 40 10.3 -2.8**
JTM Tenmabayashi 11.78 354 Pn **Pn 15 40 41.3 -0.7**
JOW Kunigami 12.84 264 LR LR 15 45 18.7
comp=Z,94nm,20.7s,baz=60,slow=35
ERM Erimo 12.95 2 Pn Pn 15 40 53.0 -5.0
ERM Erimo 12.95 2 P Pn 15 40 53.0 -5.0
JEW Eniwo 13.80 357 Pn **Pn 15 41 07.2 -2.4**
KSRS Korea Array 14.84 308 Pn **P 15 41 26.5 -2.8**
comp=Z,0.2nm,0.3s,baz=120,slow=12,SNR=7.5
KSRS LR LR 15 46 58.1
comp=Z,50nm,18.8s,baz=115,slow=37
ASAJ Asahikawa 15.04 0 Pn **Pn 15 41 23.1 -3.4**
comp=Z,0.6nm,0.3s,baz=202,slow=10,SNR=8.3
ASAJ LR LR 15 47 52.4
comp=Z,44nm,21.0s,baz=169,slow=40
ASAJ Asahikawa 15.04 0 P **Pn 15 41 23.1 -3.4**
ASAJ pmax pmax
comp=Z,7.0nm,1.0s
JKA Kamikawa-asahi 15.04 0 Pn 15 41 23.1 -3.4
USA0B Ussuriysk Arra 17.32 334 Pn **Pn 15 41 54.9 -0.8**
USA0B Ussuriysk Arra 17.32 334 P **Pn 15 41 54.9 -0.8**
USA0B pmax pmax
comp=Z,9.0nm,1.2s
USRK Ussuriysk Ar. 17.32 334 P **P 15 41 58.2 +1.3**
comp=Z,1.1nm,0.4s,baz=153,slow=8.4,SNR=5.8
USRK Ussuriysk Ar. 17.32 334 Pn **Pn 15 41 54.9 -0.7**
USRK Ussuriysk Ar. 17.32 334 P **Pn 15 41 54.9 -0.7**
YSS Yuzh-Sakhalins 17.88 0 Pn 15 42 02.2 -0.2
YSS Yuzh-Sakhalins 17.88 0*de*P **Pn 15 42 02.9 +0.4**
YSS pmax pmax
comp=Z,12nm,1.0s
MDJ Mudanjiang 18.66 330 P 15 42 11.6 0.0
MDJ Mudanjiang 18.66 330 P **P 15 42 11.0 -0.6**
MDJ S **Sn 15 45 39.7 -0.1**
MDJ sS S 15 45 43.1 +0.6
MDJ ScP **ScP 15 50 14.9 +1.8**
MDJ PcS **PcS 15 50 16.5 +0.5**
MDJ pmax pmax
comp=Z,7.0nm,1.1s
MDJ pmax pmax
comp=Z,66nm,5.1s
MDJ LR LR
comp=N,130nm,12.7s
MDJ LR LR
comp=E,210nm,15.0s
MDJ LR LR
comp=Z,140nm,16.8s
YULB Yu-li 19.89 259 Pn **Pn 15 42 26.3 -0.7**
YULB IAmb IAmb 15 42 52.6
comp=Z,23nm,1.0s
BNX BinXian 20.51 328 ⇑P **P 15 42 32.2 +0.5**
BNX pmax pmax
comp=Z,19nm,0.7s
BNX pmax pmax
comp=Z,120nm,5.8s
NJ2 Nanjing 20.64 284 *e*P Pn 15 42 37.3 +1.6
NJ2 pmax pmax
comp=Z,8.0nm,0.6s
KLR Kul'dur 21.79 341 P **P 15 42 45.8 +0.2**
comp=Z,1.6nm,0.5s,baz=154,slow=5.2,SNR=5.7
comp=Z,1.6nm,0.5s
KLR Kul'dur 21.79 341*de*P **P 15 42 47.2 +1.7**
KLR pmax pmax
comp=Z,6.0nm,1.3s
WHN Wuhan 24.52 280 ⇓P **P 15 43 15.8 +2.7**
XLT XiLinHaoTe 25.81 312 *e*P **P 15 43 27.2 +2.4**
XLT pP pP 15 43 31.8 +0.7
XLT sP sP 15 43 34.0 +0.7
XLT pmax pmax
comp=Z,9.0nm,0.7s
XLT pmax pmax
comp=Z,54nm,4.1s
PET Petropavlovsk 26.73 22⇓*e*P **P 15 43 30.3 -2.5**
PET pmax pmax
comp=Z,32nm,1.3s
ZEA Zeya 27.10 340 *e*P **P 15 43 39.6 +3.4**
ZEA pmax pmax
comp=Z,10.0nm,0.8s
HHC Hu-ho-hao-te 27.87 303 *e*P **P 15 43 43.5 +0.1**
HHC pmax pmax
comp=Z,22nm,0.9s
HHC pmax pmax
comp=Z,190nm,5.9s
HHC LR LR
comp=N,160nm,12.7s
HHC LR LR
comp=E,190nm,14.0s
HHC LR LR
comp=Z,240nm,14.6s
XAN Xi'an 29.03 289 P **P 15 43 52.3 -1.4**
XAN pP pP 15 43 56.3 -3.6
XAN pmax pmax
comp=Z,5.0nm,0.8s
MA2 Magadan 31.03 8 P **P 15 44 11.1 +0.1**
MA2 IAmb IAmb 15 44 22.3
comp=Z,16nm,1.4s
MA2 Magadan 31.03 8 P **P 15 44 11.1 +0.1**
MA2 pmax pmax
comp=Z,16nm,1.4s
SIJI Sorong 31.65 202 P **P 15 44 16.7 -0.2**
comp=Z,4.5nm,0.4s,baz=347,slow=17,SNR=6.5
comp=Z,4.5nm,0.4s
ULN Ulaanbaatar 33.18 314⇓*e*P **P 15 44 32.9 +2.6**
ULN pmax pmax
comp=Z,3.0nm,0.8s
FAKI Fak Fak 33.29 199 P **P 15 44 30.7 -0.6**
SONM Songino Array 33.58 314 P **P 15 44 34.4 +0.7**
comp=Z,2.4nm,0.8s,baz=114,slow=7.7,SNR=10
SONM LR LR 15 58 59.2
comp=Z,51nm,18.4s,baz=120,slow=38
comp=Z,2.4nm,0.8s
SONM Songino Array 33.58 314 P **P 15 44 32.8 -0.9**
SONM Songino Array 33.58 314 *eP* **P 15 44 35.0 +1.3**
SONM pmax pmax
comp=Z,2.0nm,0.8s
YAK Yakutsk 34.07 349⇑*e*P **P 15 44 39.6 +2.0**
YAK pmax pmax
comp=Z,3.0nm,0.5s
SEY Seymchan 34.49 8 P **P 15 44 41.2 0.0**
comp=Z,2.6nm,0.6s,baz=197,slow=8.4,SNR=19
comp=Z,2.6nm,0.6s
SEY Seymchan 34.49 8*ce*P **P 15 44 41.5 +0.3**
SEY pmax pmax
comp=Z,3.0nm,0.7s
PZH PanZhiHua 36.10 276 P **P 15 44 55.2 -0.5**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,40nm,5.7s
ZAK Zakamensk 36.40 317 *e*P **P 15 44 59.5 +1.5**
ZAK pmax pmax
comp=Z,4.0nm,1.6s
MOY Mondy 38.21 318 *eP* **P 15 45 17.7 +4.4**
GOMU GeErMu 40.53 293 P **P 15 45 31.5 -1.7**
GOMU pP pP 15 45 34.6 -4.8
GOMU sP sP 15 45 35.7 -6.2
GOMU pmax pmax
comp=Z,1.0nm,0.5s
GOMU pmax pmax
comp=Z,52nm,5.8s
CHTO Chiang Mai 40.97 266 P **P 15 45 36.2 -0.2**
CHTO IAmb IAmb 15 45 39.9
comp=Z,5.5nm,1.0s
CHTO Chiang Mai 40.97 266 P **P 15 45 36.3 -0.2**
CHTO pmax pmax
comp=Z,6.0nm,1.0s
CMAR Chiang Mai Arr 41.10 265 P **P 15 45 37.9 +0.3**
comp=Z,0.9nm,0.6s,baz=80,slow=5.7,SNR=7.2
CMAR LR LR 16 02 43.4
comp=Z,30nm,20.3s,baz=200,slow=36
comp=Z,0.9nm,0.6s
BILL Bilibino 41.48 13 P **P 15 45 39.3 -0.8**

BILL Bilibino 41.48 13 *i* P **P 15 45 39.2 -0.9**
BILL *i* 15 47 16.7
BILL *i* 15 47 40.7
BILL pmax pmax
comp=Z,3.0nm,1.1s
MMRI Maumere 42.29 211 P **P 15 45 47.1 -0.1**
MMRI IAmb IAmb 15 46 14.6
comp=Z,16nm,0.9s
SOEI Soe 42.43 207 P **P 15 45 47.5 -1.1**
SOEI IAmb IAmb 15 46 09.9
comp=Z,13nm,0.8s
BATI Baumata 43.08 208 P **P 15 45 53.8 +0.1**
comp=Z,12nm,0.4s,baz=223,slow=1.4,SNR=4.1
comp=Z,12nm,0.4s
MTN Manton Dam 43.09 196 P **P 15 45 53.1 -0.6**
MTN IAmb IAmb 15 46 06.4
comp=Z,6.9nm,0.8s
TIXI Tiksi 43.32 354 P **P 15 45 54.7 -0.3**
comp=Z,1.8nm,0.5s,baz=267,slow=19,SNR=10
comp=Z,1.8nm,0.5s
TIXI Tiksi 43.32 354 P **P 15 45 54.5 -0.4**
WMQ Urumqi 45.75 304 *eP* **P 15 46 15.9 +1.0**
KULM Kulim 46.14 247 P **P 15 46 18.1 -0.1**
JAGI Jajag, Banyuwa 46.28 221 P **P 15 46 18.7 -0.5**
KNRA Kununurra 46.42 199 P **P 15 46 20.4 +0.2**
KNRA IAmb IAmb 15 46 39.2
comp=Z,5.5nm,0.9s
SDPT Sand Point 47.99 40 P **P 15 46 30.6 -1.5**
ZALV Zalesovo Beam 48.26 318 P **P 15 46 34.9 +0.7**
comp=Z,1.1nm,0.5s,baz=113,slow=6.8,SNR=5.2
ZALV PcP **PcP 15 48 00.9 -0.1**
comp=Z,0.8nm,0.5s,baz=112,slow=3.6,SNR=2.4
ZALV LR LR 16 07 08.3
comp=Z,26nm,20.1s,baz=108,slow=36
comp=Z,1.1nm,0.5s
ZALV Zalesovo Beam 48.26 318 P **P 15 46 34.8 +0.5**
ZALV Zalesovo Beam 48.26 318 *eP* **P 15 46 38.5 +4.2**
ZALV pmax pmax
comp=Z,1.0nm,0.5s
CNBA Chernabura Isl 48.42 41 P **P 15 46 33.6 -1.8**
CNBA IAmb IAmb 15 46 40.1
comp=Z,9.0nm,1.0s
WB0 Warramunga Arr 49.17 190 P **P 15 46 40.9 -0.6**
WR0 Warramunga Arr 49.33 190 P **P 15 46 42.2 -0.5**
WR0 IAmb IAmb 15 46 43.7
comp=Z,7.7nm,0.8s
WRAB Tennant Creek 49.34 190 P **P 15 46 42.1 -0.7**
WRAB Tennant Creek 49.34 190*de*P **P 15 46 43.2 +0.4**
WRAB pmax pmax
comp=Z,14nm,1.0s
WB2 Warramunga Arr 49.34 190 P **P 15 46 42.4 -0.5**
WRA Warramunga Arr 49.35 190 P **P 15 46 42.5 -0.4**
comp=Z,11nm,0.9s,baz=10,slow=8.2,SNR=61
comp=Z,11nm,0.9s
WRA Warramunga Arr 49.35 190 P **P 15 46 41.8 -1.1**
MK31 Makanchi Array 49.52 308 P **P 15 46 43.8 -0.4**
MK31 Makanchi Array 49.52 308*d iP* **P 15 46 46.4 +2.3**
MKAR Makanchi Array 49.52 308 P **P 15 46 44.3 +0.2**
comp=Z,1.2nm,0.6s,baz=90,slow=9.8,SNR=12
comp=Z,1.2nm,0.6s
MKAR Makanchi Array 49.52 308 P **P 15 46 43.4 -0.7**
MKAR Makanchi Array 49.52 308 *eP* **P 15 46 45.8 +1.7**
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MAKZ Makanchi 49.74 308 P **P 15 46 45.1 -0.6**
MAKZ Makanchi 49.74 308 P **P 15 46 45.1 -0.6**
MAKZ pmax pmax
comp=Z,2.0nm,0.7s
NRIK Noril'sk 50.97 338 P **P 15 46 54.8 +0.2**
comp=Z,1.7nm,0.5s,baz=104,slow=4.6,SNR=3.6
comp=Z,1.7nm,0.5s
NRIK Noril'sk 50.97 338 *eP* **P 15 46 57.9 +3.2**
NRIK pmax pmax
comp=Z,2.0nm,0.5s
N18K Kilae Creek 51.25 34 P **P 15 46 57.7 +0.8**
N18K IAmb IAmb 15 47 16.7
comp=Z,3.8nm,1.1s
SVW2 Sparrevohn 51.47 33 P **P 15 46 59.5 +0.9**
SVW2 IAmb IAmb 15 47 00.3
comp=Z,3.5nm,0.8s
KURK Kurchatov 51.89 313 P **P 15 47 01.8 +0.1**
KURK IAmb IAmb 15 47 05.6
comp=Z,7.0nm,0.8s
KURK Kurchatov 51.89 313 P **P 15 47 02.5 +0.7**
KURBB Kurchatov Arra 51.95 313 P **P 15 47 02.5 +0.2**
comp=Z,4.1nm,0.4s,baz=90,slow=7.4,SNR=18
comp=Z,4.1nm,0.4s
KURBB Kurchatov Arra 51.95 313 P **P 15 47 02.2 0.0**
L19K White Mountain 51.99 32 P **P 15 47 03.0 +0.5**
K20K Telida 52.54 31 P **P 15 47 07.0 +0.5**
K20K IAmb IAmb 15 47 08.4
comp=Z,3.9nm,0.8s
KDAK Kodiak Island 52.61 38 P **P 15 47 06.4 -0.6**
comp=Z,3.3nm,0.6s,baz=266,slow=5.9,SNR=5.1
comp=Z,3.3nm,0.6s
KDAK Kodiak Island 52.61 38 P **P 15 47 06.4 -0.6**
KDAK Kodiak Island 52.61 38 P **P 15 47 06.4 -0.6**
KDAK pmax pmax
comp=Z,27nm,1.5s
J20K Nowinta River 52.65 29 P **P 15 47 08.1 +0.8**
J20K IAmb IAmb 15 47 23.7
comp=Z,3.6nm,0.9s
ASAR Alice Springs 53.07 190 P **P 15 47 10.3 -0.5**
comp=Z,1.0nm,0.5s,baz=3.6,slow=7.4,SNR=6.7
comp=Z,1.0nm,0.5s
IMAR Indian Mountai 53.16 27 P **P 15 47 11.2 +0.2**
PPLA Purkeypile 53.32 31 P **P 15 47 13.0 +0.6**
PPLA IAmb IAmb 15 47 33.0
comp=Z,12nm,1.3s
CAST Castle Rocks 53.43 31 P **P 15 47 14.2 +1.1**
CAST IAmb IAmb 15 47 25.8
comp=Z,3.3nm,0.9s
KDJ Kajisay 53.56 303 P **P 15 47 14.4 -0.2**
KDJ Kajisay 53.56 303 P **P 15 47 14.4 -0.2**
KDJ pmax pmax
comp=Z,3.0nm,1.1s
MLY Manley 54.24 29 P **P 15 47 18.8 -0.2**
TRF Thorofare Moun 54.24 31 P **P 15 47 18.9 -0.2**
TRF IAmb IAmb 15 47 23.2
comp=Z,9.3nm,1.2s
EIDS Eidsvold 54.72 171 P **P 15 47 23.7 +0.9**
PSA00 Pilbara Seismi 54.89 206 P **P 15 47 22.6 -1.5**
PSA00 IAmb IAmb 15 47 26.2
comp=Z,13nm,1.4s
SML Sawmill 55.01 33 P **P 15 47 24.6 0.0**
TOLK Toolik Lake Re 55.22 24 P **P 15 47 25.4 -0.7**
TOLK IAmb IAmb 15 47 36.7
comp=Z,6.2nm,1.2s
MDM Murphy Dome 55.29 29 P **P 15 47 26.5 0.0**
MDM IAmb IAmb 15 47 40.0
comp=Z,2.9nm,1.0s
AAK Ala-Archa 55.45 304 LR LR 16 12 29.5
comp=Z,32nm,18.2s,baz=110,slow=37
SCM Sheep Creek Mo 55.48 33 P **P 15 47 28.1 0.0**
SCM IAmb IAmb 15 47 56.3
comp=Z,6.8nm,0.8s
SCM Sheep Creek Mo 55.48 33 P **P 15 47 28.1 0.0**
SCM pmax pmax
comp=Z,7.0nm,0.8s
ILAR Eielson Array 55.84 29 P **P 15 47 29.9 -0.6**
comp=Z,0.8nm,0.8s,baz=257,slow=6.4,SNR=10
comp=Z,0.8nm,0.8s
ILAR Eielson Array 55.84 29 *eP* **P 15 47 30.0 -0.6**
ILAR pmax pmax
comp=Z,1.0nm,0.8s
OTUK Ortayu 56.14 311 P **P 15 47 32.7 -0.3**
KLU Klutina 56.15 33 P **P 15 47 32.9 +0.1**
KLU IAmb IAmb 15 47 37.3
comp=Z,10.0nm,1.4s
BRVK Borovoye 56.92 317 P **P 15 47 38.5 +0.1**
BRVK IAmb IAmb 15 47 53.1
comp=Z,5.4nm,0.8s
BRVK Borovoye 56.92 317 P **P 15 47 38.5 +0.1**
BRVK pmax pmax
comp=Z,5.0nm,0.8s
J26L Joseph Creek 57.26 30 P **P 15 47 40.3 -0.4**
J26L IAmb IAmb 15 48 03.9
comp=Z,2.3nm,0.9s
KK31 Karatay Array 58.24 305 P **P 15 47 47.4 -0.5**
KK31 IAmb IAmb 15 47 59.9
comp=Z,3.2nm,0.8s
KK31 Karatay Array 58.24 305 *eP* **P 15 47 47.8 -0.1**
KKAR Karatay Array 58.24 305 P **P 15 47 47.2 -0.7**
KKAR Karatay Array 58.24 305 P **P 15 47 47.2 -0.7**
STKA Stephens Creek 60.59 181 P **P 15 48 03.8 -0.2**

comp=Z,0.9nm,0.3s,baz=36,slow=10,SNR=3.6
comp=Z,0.9nm,0.3s
STKA Stephens Creek 60.59 181 P **P 15 48 03.6 -0.4**
INK Inuvik 61.12 25 P **P 15 48 07.8 +0.7**
comp=Z,2.4nm,0.8s,baz=147,slow=2.0,SNR=3.6
comp=Z,2.4nm,0.8s
INK Inuvik 61.12 25 P **P 15 48 08.7 +1.5**
INK IAmb IAmb 15 48 31.2
comp=Z,3.7nm,0.8s
INK Inuvik 61.12 25 P **P 15 48 08.7 +1.5**
INK pmax pmax
comp=Z,4.0nm,0.9s
ARU Arti 63.11 322 P **P 15 48 20.0 -0.8**
ARU Arti 63.11 322*d iP* **P 15 48 20.8 0.0**
ARU 15 48 57.8
ARU 15 50 39.6
ARU S **S 15 56 55.2 +5.3**
ARU SS **SS 16 00 54.3 -1.1**
ARU pmax pmax
comp=Z,2.0nm,0.6s
AB31 Akbulak array 64.00 314 *eP* **P 15 48 26.5 -0.3**
ABKAR Akbulak array 64.00 314 P **P 15 48 26.8 0.0**
AKTO Aktyubinsk 64.89 315 P **P 15 48 31.3 -1.3**
NWAO Narrogin (SRO) 66.16 203 P **P 15 48 41.9 +1.1**
NWAO Narrogin (SRO) 66.16 203 P **P 15 48 41.9 +1.1**
NWAO pmax pmax
comp=Z,99nm,1.5s
RES Resolute Bay 70.09 14 P **P 15 49 05.2 +0.2**
RES Resolute Bay 70.09 14 P **P 15 49 05.2 +0.2**
RES pmax pmax
comp=Z,9.0nm,1.1s
YKA Yellowknife Ar 70.27 29 P **P 15 49 06.5 +0.1**
comp=Z,2.7nm,0.6s,baz=295,slow=6.2,SNR=6.4
comp=Z,2.7nm,0.6s
YKA Yellowknife Ar 70.27 29 P **P 15 49 07.5 +1.2**
ARCES ARCESS Array B 71.82 341 LR LR 16 26 11.2
comp=Z,25nm,18.0s,baz=68,slow=40
ARCES ARCESS Array B 71.82 341 P **P 15 49 16.4 +0.8**
ARCES ARCESS Array B 71.82 341 P **P 15 49 16.5 +0.8**
ARCES pmax pmax
comp=Z,33nm,1.5s
FINES FINESS Array B 76.36 334 P **P 15 49 42.4 +0.2**
comp=Z,1.0nm,0.6s,baz=38,slow=7.2,SNR=6.4
comp=Z,1.0nm,0.6s
FINES FINESS Array B 76.36 334 P **P 15 49 41.5 -0.7**
FINES FINESS Array B 76.36 334 *eP* **P 15 49 42.3 +0.1**
FINES pmax pmax
comp=Z,1.0nm,0.6s
KBZ Khabaz 76.94 313 P **P 15 49 46.8 +0.9**
comp=Z,1.4nm,0.7s,baz=104,slow=6.9,SNR=3.9
KBZ LR LR 16 26 07.7
comp=Z,24nm,19.7s,baz=92,slow=38
comp=Z,1.4nm,0.7s
KBZ Khabaz 76.94 313 *eP* **P 15 49 49.8 +4.0**
KBZ pmax pmax
comp=Z,2.0nm,0.8s
KIV Kislovodsk 76.97 313 *eP* **P 15 49 46.0 -0.2**
KIV pmax pmax
comp=Z,5.0nm,1.1s
KIV MLR MLR
comp=Z,25nm,18.0s
KVN Kaiserville 78.89 52 P **P 15 49 56.7 -0.4**
KVN IAmb IAmb 15 49 58.7
comp=Z,3.0nm,0.7s
KVN Kaiserville 78.89 52 P **P 15 49 56.7 -0.4**
KVN pmax pmax
comp=Z,3.0nm,0.7s
NVAR Mina Array Bea 79.05 52 P **P 15 49 58.1 +0.2**
comp=Z,1.4nm,0.6s,baz=303,slow=5.6,SNR=13
comp=Z,1.4nm,0.6s
NVAR Mina Array Bea 79.05 52 P **P 15 49 58.6 +0.6**
LRM Limekiln Ridge 79.22 43 P **P 15 49 59.5 +0.7**
DLMT Dillon 79.36 44 P **P 15 50 00.4 +0.9**
DLMT IAmb IAmb 15 50 19.4
comp=Z,5.5nm,1.4s
BOZ Bozeman (W) 79.83 43 P **P 15 50 02.3 +0.3**
BOZ Bozeman (W) 79.83 43 P **P 15 50 02.3 +0.3**
BOZ pmax pmax
comp=Z,1.0nm,0.7s
QSM Queen of Sheba 81.24 54 P **P 15 50 09.6 0.0**
QSM IAmb IAmb 15 50 11.3
comp=Z,2.9nm,0.9s
AKASG Malin Array Be 81.25 324 P **P 15 50 09.1 -0.2**
comp=Z,0.3nm,0.3s,baz=42,slow=5.0,SNR=2.2
comp=Z,0.3nm,0.3s
PRN Pahroc Range 81.79 52 P **P 15 50 12.4 -0.2**
PRN IAmb IAmb 15 50 17.4
comp=Z,3.1nm,0.8s
DUG Dugway, Tooele 81.87 48 P **P 15 50 12.1 -0.9**
DUG IAmb IAmb 15 50 34.5
comp=Z,2.9nm,0.9s
DUG Dugway, Tooele 81.87 48 P **P 15 50 12.1 -0.9**
DUG pmax pmax
comp=Z,3.0nm,1.0s
NOA NORSAR Array B 81.93 338 P **P 15 50 12.7 -0.1**
comp=Z,0.4nm,0.6s,baz=45,slow=5.1,SNR=3.0
comp=Z,0.4nm,0.6s
PDAR Pinedale Array 82.59 45 P **P 15 50 16.3 -0.6**
comp=Z,0.3nm,0.4s,baz=289,slow=4.5,SNR=3.7
comp=Z,0.3nm,0.4s
RAYN Ar Rayn 84.68 294 P **P 15 50 27.9 +0.2**
RAYN Ar Rayn 84.68 294 P **P 15 50 27.9 +0.2**
RAYN pmax pmax
comp=Z,8.0nm,0.9s
BRTR Keskin Array B 84.94 313 P **P 15 50 29.2 +0.4**
comp=Z,0.6nm,0.5s,baz=66,slow=5.4,SNR=2.2
comp=Z,0.6nm,0.5s
PV13 Radium Mtn., P 85.58 49 P **P 15 50 32.3 +0.1**
PV13 IAmb IAmb 15 50 33.4
comp=Z,2.9nm,0.7s
TXAR Lajitas Array 94.16 53 P **P 15 51 13.3 +0.7**
comp=Z,0.7nm,0.7s,baz=298,slow=2.7,SNR=8.1
comp=Z,0.7nm,0.7s
TORD Torodi Ar. Bea 123.55 312 PKP **PKPdf 15 56 51.3 -0.2**
comp=Z,0.3nm,0.6s,baz=14,slow=1.8,SNR=1.9
LPAZ La Paz 149.05 72 PKPbc **PKPbc 15 57 42.0 -0.9**
comp=Z,2.2nm,0.8s,baz=23,slow=3.1,SNR=6.6
LPAZ La Paz 149.05 72 PKiKP 15 57 44.1 0.0
LPAZ La Paz 149.05 72 PKP2 **PKPbc 15 57 42.0 -0.9**

IDC 06 15:40:18.1±2.1, 10°.73S×120°.11E, h0km, mb3.6/2, mbtmp3.5/5, ML3.2/3, Error ellipse: s-maj=66.9km s-min=26.2km az=42.0, Sumba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**3.54**	**82**	Pn	Pn	15 41 14.6	+0.3
	6.8nm,0.3s,baz=288,slow=3.2,SNR=8.3						
BATI				Sn	Sn	15 41 53.9	-3.0
	2.6nm,0.3s,baz=16,slow=18,SNR=1.9						
	22nm,0.4s						
WRA	**Warramunga Arr**	**16.49**	**125**	Pn	Pn	15 44 09.2	-1.8
	0.1nm,0.3s,baz=297,slow=13,SNR=7.7						
	0.6nm,0.9s						
ASAR	**Alice Springs**	**18.39**	**136**	P	P	15 44 35.5	+0.7
	0.1nm,0.3s,baz=314,slow=12,SNR=12						
	0.8nm,0.8s						
SONM	**Songino Array**	**59.57**	**349**	P	P	15 50 23.2	-0.4
	0.5nm,0.5s,baz=161,slow=6.0,SNR=4.2						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**66.49**	**333**	P	P	15 51 09.8	+0.3
	0.4nm,0.7s,baz=141,slow=7.8,SNR=4.4						
	0.4nm,0.7s						

*NIC **06** 16:06:12.3±0.0, 35°.30N×31°.12E, h5km±31km, MI3.0/5*
*DDA **06** 16:06:17.5±0.0, 35°.81N×31°.55E, h8km±4km, ML2.1*
ISC 06 16:06:15.6±1.3, **35°.62N**±0°.03×**31°.62E**±0°.05, **h11**km±10km, **n13**, σ1s**54**/25, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKMS	**Akamas**	**0.84**	**135**	P	**Pg**	**16 06 29.8**	**-1.9**
AKMS				S	**Sn**	**16 06 47.8**	**+2.1**
AKMS				AML	AML	16 06 48.6	
	1.5nm,0.7s						
AKMS				AML	AML	16 06 48.6	
	1.6nm,0.5s						
AKMS				AML	AML	16 06 48.6	
	1.5nm,0.7s						
AKMS				AML	AML	16 06 48.6	
	1.6nm,0.5s						
GAZI	**Gazipasa**	**0.84**	**42**	P	**Pg**	**16 06 31.8**	**0.0**
GAZI				S	**Sg**	**16 06 42.9**	**+0.1**
GAZI				*i* AML	AML	16 06 46.0	
	comp=N,84nm,0.5s						

GAZI				*i* AML	AML	16 06 47.0		
	comp=E,75nm,0.4s							
NATA	**Nata**	**1.14**	**137**	P	**Pb**	**16 06 37.4**	**0.0**	
NATA				S	**Sn**	**16 06 55.9**	**+2.5**	
NATA				AML	AML	16 07 01.7		
	1.4nm,0.8s							
NATA				AML	AML	16 07 01.7		
	1.4nm,0.8s							
NATA				AML	AML	16 07 02.5		
	1.6nm,0.5s							
NATA				AML	AML	16 07 02.5		
	1.6nm,0.5s							
AKUM	**Antalya-Kumluc**	**1.25**	**305**	P	**Pn**	**16 06 39.0**	**-0.1**	
AKUM				S	**Sg**	**16 06 58.3**	**+2.4**	
AKUM				*i* AML	AML	16 07 02.0		
	comp=E,57nm,0.6s							
AKUM				*i* AML	AML	16 07 09.0		
	comp=Z,53nm,1.0s							
AKUM				*i* AML	AML	16 07 16.0		
	comp=N,50nm,0.7s							
KEPZ	**Antalya-Kepez**	**1.28**	**360**	P	**Pn**	**16 06 38.6**	**-1.0**	
KEPZ				S	**Sb**	**16 06 53.8**	**-2.6**	
KEPZ				*i* AML	AML	16 06 56.0		
	comp=Z,47nm,0.4s							
KEPZ				*i* AML	AML	16 06 56.0		
	comp=N,55nm,0.3s							
KEPZ				*i* AML	AML	16 06 58.0		
	comp=E,41nm,0.2s							
SZAC	**Souni**	**1.35**	**129**	P	**Pn**	**16 06 39.8**	**-0.6**	
SZAC				AML	AML	16 07 07.2		
	0.4nm,0.9s							
SZAC				AML	AML	16 07 09.7		
	0.5nm,0.9s							
ERMK	**Ermenek**	**1.47**	**45**	P	**Pg**	**16 06 45.2**	**+1.4**	
ERMK				S	**Sn**	**16 07 00.7**	**-0.9**	
ERMK				*i* AML	AML	16 07 12.0		
	comp=N,34nm,0.5s							
ERMK				*i* AML	AML	16 07 20.0		
	comp=E,25nm,0.5s							
GULN	**MERSIN_Gulnar**	**1.66**	**70**	P	**Pn**	**16 06 45.5**	**+0.7**	
GULN				S	**Sn**	**16 07 06.7**	**+0.5**	
SEDI	**Konya, Seydise**	**1.83**	**3**	P	**Pn**	**16 06 48.0**	**+0.8**	
SEDI				S	**Sn**	**16 07 10.8**	**+0.2**	
SEDI				*i* AML	AML	16 07 16.0		
	comp=N,27nm,0.4s							
SEDI				*i* AML	AML	16 07 22.0		
	comp=Z,22nm,0.9s							
SEDI				*i* AML	AML	16 07 22.0		
	comp=E,32nm,1.2s							
KKBE	**Karaman, Kazim**	**1.92**	**33**	P	**Pb**	**16 06 50.4**	**-0.4**	
KKBE				S	**Sb**	**16 07 14.9**	**0.0**	
KKBE				*i* AML	AML	16 07 19.0		
	comp=E,16nm,0.5s							
KKBE				*i* AML	AML	16 07 25.0		
	comp=N,17nm,0.3s							
KMER	**Konya-Meram**	**2.23**	**15**	P	**Pb**	**16 06 55.4**	**-0.7**	
KMER				S	**Sn**	**16 07 18.5**	**-1.9**	
KMER				*i* AML	AML	16 07 29.0		
	comp=N,27nm,0.6s							
KMER				*i* AML	AML	16 07 34.0		
	comp=E,17nm,0.5s							
KMER				*i* AML	AML	16 07 36.0		
	comp=Z,11nm,0.6s							
KONT	**Konya--Tatoy**	**2.40**	**14**	P	**Pb**	**16 06 58.5**	**-0.4**	
KONT				S	**Sn**	**16 07 26.3**	**+1.9**	
KONT				*i* AML	AML	16 07 39.0		
	comp=E,11nm,0.5s							
KERG	**Konya-Eregli**	**2.70**	**48**	P	**Pn**	**16 07 01.3**	**+2.1**	
KERG				S	**Sb**	**16 07 35.0**	**-2.3**	
KERG				*i* AML	AML	16 07 46.0		
	comp=E,9.6nm,0.4s							
KERG				*i* AML	AML	16 07 48.0		
	comp=Z,9.9nm,0.9s							
KERG				*i* AML	AML	16 07 51.0		
	comp=N,11nm,0.4s							

UCR ***06*** *16:16:11.5±1.8,4.°17N×82.°25W,h10km,mb4.6(NEIC)*
NEIC ***06*** *16:16:27.4±1.6,5.°20N±0.°06×82.°65W±0.°03,h10km±1km, mb4.6/33,Error ellipse: s-maj=10.8km s-min=5.3km az=184.0*
IDC ***06*** *16:16:28.6±1.3,5.°40N×82.°74W,h0km,mb3.8/7, mbtmp4.1/11,ML3.2/3,MS3.6/43,Error ellipse: s-maj=35.3km s-min=17.4km az=34.0*
UPA ***06*** *16:16:31.0±2.1,5.°64N×82.°58W,h0km±14km,MW4.8*
GCMT ***06*** *16:16:32.4±0.3,5.°16N±0.°01×82.°54W±0.°03,h27km±1km, MW4.8/89,Moment Tensor Solution. s22,c22; s89,c111; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr0.12±.11; Mθθ-0.12±.10; Mϕϕ0.00±.12; Mrθ0.03±.16; Mϕθ2.36±.08; Mϕr0.03±.15; Best double couple: M0 2.36100×10^16^ NP1:ϕs359.00000°,δ89.00000°,λ179.00000°. NP2: ϕs89.00000°,δ89.00000°,λ1.00000°. Principal axes: T 2.3010, Plg1.0000°, Azm314.0000°; N 0.1210, Plg89.0000°, Azm134.0000°; P -2.4220, Plg0.0000°, Azm224.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 16:16:27.7±0.6,5.°26N±0.°05×82.°66W±0.°05,h15km,n241, σ1.9/61/205,mb4.5/23,MS3.6/39,8C-20D,South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
CACAO	**El Cacao, Vera**	**2.73**	**41**	*eP*	**Pn**	**16 17 08.0**	**-3.0**
CACAO	**El Cacao, Vera**	**2.73**	**41**	*ǁiP*	**Pn**	**16 17 09.4**	**-1.6**
CACAO				*i* S	**Sn**	**16 17 41.1**	**-2.7**
LIMO3	**Limones**	**2.83**	**356**	*ǁiP*	**Pn**	**16 17 11.1**	**-1.2**
LIMO3				*i* S	**Sn**	**16 17 40.0**	**-6.2**
GMAL	**Guarumal, Vera**	**2.86**	**30**	*ǁeP*	**Pn**	**16 17 12.0**	**-0.8**
GMAL				*i* S	**Sn**	**16 17 44.2**	**-2.8**
MARI3	**Mariato, Verag**	**2.89**	**35**	*ǁeP*	**Pn**	**16 17 12.9**	**-0.3**
PTPM	**Petroterminale**	**2.93**	**356**	*ǁeP*	**Pn**	**16 17 12.7**	**-1.0**
PTPM				*eS*	**Sn**	**16 17 45.2**	**-3.5**
RSUS3	**Rio de Jesus,**	**3.08**	**29**	*eP*	**Pn**	**16 17 15.8**	**-0.1**
LESP3	**La Esperanza,**	**3.12**	**358**	*ǁeP*	**Pn**	**16 17 16.0**	**-0.5**
CHIR3	**Chiriqui UPA,**	**3.13**	**6**	*eP*	**Pn**	**16 17 14.6**	**-1.9**
DVD	**David**	**3.16**	**4**	*ǁiP*	**Pn**	**16 17 16.5**	**-0.4**
DVD				*i* S	**Sn**	**16 17 50.5**	**-3.9**
BAGA3	**Bagala, Chiriq**	**3.19**	**2**	*ǁeP*	**Pn**	**16 17 17.1**	**-0.2**
ACHO3	**Achotines, Los**	**3.27**	**49**	*eP*	**Pn**	**16 17 18.3**	**-0.1**
GUAL3	**Gualaca, Chiri**	**3.27**	**6**	*eP*	**Pn**	**16 17 18.4**	**0.0**
CDITO	**Canoas**	**3.29**	**356**		**Pn**	**16 17 17.6**	**-1.2**
CDITO	**Canoas**	**3.29**	**356**	*ǁeP*	**Pn**	**16 17 17.9**	**-0.9**
PTAR3	**Potrerillos Ar**	**3.41**	**3**	*ǁeP*	**Pn**	**16 17 20.7**	**+0.2**
PSOM3	**Paja de Sombre**	**3.42**	**6**	*ǁeP*	**Pn**	**16 17 20.1**	**-0.4**
BCO2	**Palmira**	**3.44**	**2**	*ǁiP*	**Pn**	**16 17 20.4**	**-0.5**
BCO2				*i* S	**Sn**	**16 17 56.1**	**-5.3**
PEDA3	**Pedasi**	**3.45**	**49**	*eP*	**Pn**	**16 17 21.3**	**+0.3**
AZU	**Azuero**	**3.45**	**43**	*eP*	**Pn**	**16 17 20.3**	**-0.7**
AZU				*eS*	**Sn**	**16 17 59.1**	**-2.5**
AZU				*i*		16 18 02.6	
	comp=Z,171nm,0.4s						
AZU	**Azuero**	**3.45**	**43**	*ǁeP*	**Pn**	**16 17 20.2**	**-0.7**
AZU				*i* S	**Sn**	**16 17 59.0**	**-2.6**
CHIT3	**Chitre**	**3.48**	**40**	*iP*	**Pn**	**16 17 20.7**	**-0.7**
CHIT3				*i* S	**Sn**	**16 18 00.2**	**-2.1**
BRU2	**Volcan**	**3.51**	**359**	*ǁiP*	**Pn**	**16 17 21.4**	**-0.4**
BRU2				*i* S	**Sn**	**16 17 58.3**	**-4.9**
MLIR3	**Monte Lirio, C**	**3.51**	**357**	*eP*	**Pn**	**16 17 22.2**	**+0.3**
LNBQ3	**Los Naranjos,**	**3.51**	**4**	*ǁiP*	**Pn**	**16 17 21.3**	**-0.6**
LNBQ3				*i* S	**Sn**	**16 17 59.3**	**-4.0**
CALO3	**Calobre, Verag**	**3.53**	**31**	*eP*	**Pn**	**16 17 21.9**	**-0.2**
EDSV	**San Vito**	**3.55**	**355**	*eP*	**Pn**	**16 17 23.1**	**+0.7**
SAFE3	**Santa Fe, Vera**	**3.59**	**26**	*eP*	**Pn**	**16 17 21.1**	**-1.8**
EDPN	**Palmar Norte**	**3.76**	**348**	*eP*	**Pn**	**16 17 25.1**	**0.0**
POTG	**Potrero Grande**	**3.79**	**353**	*eP*	**Pn**	**16 17 24.9**	**-0.8**
EDBA	**Buenos Aires**	**3.92**	**351**	*eP*	**Pn**	**16 17 27.6**	**+0.1**
PNME	**Penonome**	**3.95**	**36**	*eP*	**Pn**	**16 17 28.6**	**+0.8**
SRBA	**San Rafael, Bu**	**4.00**	**350**		**Pn**	**16 17 27.9**	**-0.7**
SRBA	**San Rafael, Bu**	**4.00**	**350**	*ǁeP*	**Pn**	**16 17 28.0**	**-0.7**
DRK0	**Durika**	**4.02**	**352**		**Pn**	**16 17 29.2**	**+0.4**
DRK0	**Durika**	**4.02**	**352**	*eP*	**Pn**	**16 17 28.8**	**-0.1**
DRK0	**Durika**	**4.02**	**352**	*ǁeP*	**Pn**	**16 17 29.5**	**+0.6**
CNI2	**El Empalme, Bo**	**4.14**	**3**	*eP*	**Pn**	**16 17 31.1**	**+0.8**
EDDO	**Dominical**	**4.14**	**343**	*eP*	**Pn**	**16 17 29.9**	**-0.5**
VTON	**El Valle, Cocl**	**4.18**	**37**	*eP*	**Pn**	**16 17 31.9**	**+0.9**
PEZE	**Perez Zeledon,**	**4.21**	**346**		**Pn**	**16 17 30.8**	**-0.8**
PEZE	**Perez Zeledon,**	**4.21**	**346**	*eP*	**Pn**	**16 17 31.4**	**-0.2**
RGM0	**Gandoca**	**4.30**	**1**	Pn	**Pn**	**16 17 33.8**	**+1.2**
RGM0	**Gandoca**	**4.30**	**1**	*eP*	**Pn**	**16 17 32.3**	**-0.3**
CDM	**Cerro de Muert**	**4.40**	**346**	*ǁeP*	**Pn**	**16 17 34.1**	**-0.3**
ZANG	**Zanguenga, Cho**	**4.60**	**37**	*eP*	**Pn**	**16 17 38.1**	**+1.4**
ZANG	**Zanguenga, Cho**	**4.60**	**37**	*ǁiP*	**Pn**	**16 17 38.3**	**+1.6**
CHOR3	**La Chorrera**	**4.61**	**38**	*eP*	**Pn**	**16 17 38.9**	**+2.0**
RIMA	**Rio Macho**	**4.63**	**345**		**Pn**	**16 17 36.7**	**-0.6**
RIMA	**Rio Macho**	**4.63**	**345**	*ǁeP*	**Pn**	**16 17 37.2**	**-0.1**
LCR2	**La Lucha 2**	**4.64**	**343**	*eP*	**Pn**	**16 17 36.6**	**-0.9**
OCM	**Ochomogo**	**4.78**	**344**	*eP*	**Pn**	**16 17 39.0**	**-0.4**
BCIP	**Isla Barro Col**	**4.78**	**36**	Pn	**Pn**	**16 17 39.6**	**+0.3**
BCIP	**Isla Barro Col**	**4.78**	**36**	*eP*	**Pn**	**16 17 39.9**	**+0.7**
BCIP	**Isla Barro Col**	**4.78**	**36**	*ǁeP*	**Pn**	**16 17 39.8**	**+0.5**
JACO	**JACO, Garabito**	**4.80**	**336**	Pn	**Pn**	**16 17 38.4**	**-1.0**
JACO	**JACO, Garabito**	**4.80**	**336**	*ǁiP*	**Pn**	**16 17 38.2**	**-1.3**
VTCV	**VTCV, Calle Va**	**4.81**	**347**	*eP*	**Pn**	**16 17 39.4**	**-0.4**
GAMB1	**Gamboa**	**4.82**	**37**	*ǁeP*	**Pn**	**16 17 41.5**	**+1.8**
UPA	**Univ. de Panam**	**4.82**	**40**	*eP*	**Pn**	**16 17 40.6**	**+0.9**
MLIR	**Monte Lirio**	**4.83**	**35**	*eP*	**Pn**	**16 17 41.4**	**+1.5**
VTRT	**Volcan Turrial**	**4.84**	**347**	*eP*	**Pn**	**16 17 40.1**	**-0.3**
BATAN	**Batan**	**4.86**	**352**		**Pn**	**16 17 41.2**	**+0.9**
BATAN	**Batan**	**4.86**	**352**	*eP*	**Pn**	**16 17 41.5**	**+1.2**
FRIJ	**El Hiral**	**4.89**	**36**	*eP*	**Pn**	**16 17 41.2**	**+0.5**
HDC	**Heredia**	**4.92**	**343**	Pn	**Pn**	**16 17 41.4**	**+0.1**
HDC	**Heredia**	**4.92**	**343**	*eP*	**Pn**	**16 17 41.4**	**+0.1**
HDC	**Heredia**	**4.92**	**343**	*ǁiP*	**Pn**	**16 17 42.0**	**+0.7**
HDC				*i* S	**Sn**	**16 18 35.5**	**-2.6**
HDC3	**Heredia 3**	**4.92**	**343**	*eP*	**Pn**	**16 17 41.4**	**+0.1**
GR1C	**Gorgona, Isla**	**5.01**	**116**	*eP*	**Pn**	**16 17 38.9**	**-3.5**
LAFE	**Finca La Fe, P**	**5.04**	**334**	*eP*	**Pn**	**16 17 41.8**	**-1.0**
SRA1	**San Ramn**	**5.12**	**339**	*eP*	**Pn**	**16 17 43.9**	**-0.1**
CRPO	**Crater poas**	**5.14**	**343**	*eP*	**Pn**	**16 17 44.6**	**+0.2**
PTAC	**Punta Ardita,**	**5.17**	**69**	*eP*	**Pn**	**16 17 45.7**	**+1.1**
PTAC	**Punta Ardita,**	**5.17**	**69**	*ǁeP*	**Pn**	**16 17 45.7**	**+1.1**
RIFO	**Rio Frio, Sara**	**5.17**	**346**	*eP*	**Pn**	**16 17 44.8**	**+0.1**
TUMC	**Tumaco**	**5.20**	**131**	*eP*	**Pn**	**16 17 41.8**	**-3.2**
INDI	**Punta indio, G**	**5.37**	**329**	*eP*	**Pn**	**16 17 45.9**	**-1.4**
MALC	**Bahia Malaga**	**5.45**	**103**	*eP*	**Pn**	**16 17 47.5**	**-1.0**
MALC				*eS*	**Sn**	**16 18 49.0**	**-2.0**
MALC				*i*		16 18 52.6	
	comp=Z,115nm,0.5s						
JTS	**Las Juntas de**	**5.49**	**336**	Pn	**Pn**	**16 17 49.1**	**+0.1**
	comp=Z,87nm,0.3s,baz=348,slow=23,SNR=88						
JTS				Sn	**Sn**	**16 18 52.5**	**+0.6**
	comp=Z,62nm,0.3s,baz=1.2,slow=23,SNR=27						
JTS	**Las Juntas de**	**5.49**	**336**		**Pn**	**16 17 48.2**	**-0.8**
JTS	**Las Juntas de**	**5.49**	**336**	*eP*	**Pn**	**16 17 47.9**	**-1.1**
JTS	**Las Juntas de**	**5.49**	**336**	*ǁiP*	**Pn**	**16 17 49.3**	**+0.3**
JTS				*i* S	**Sn**	**16 18 49.0**	**-2.9**
CASO	**Castillo**	**5.53**	**338**	*eP*	**Pn**	**16 17 50.4**	**+0.8**
DUNO	**Dulce Nombre,**	**5.55**	**330**		**Pn**	**16 17 49.0**	**-0.8**
DUNO	**Dulce Nombre,**	**5.55**	**330**	*eP*	**Pn**	**16 17 49.4**	**-0.4**
NICO	**Nicoya**	**5.57**	**330**	*eP*	**Pn**	**16 17 50.1**	**0.0**
UPD2	**Meteti**	**5.65**	**54**	*eP*	**Pn**	**16 17 52.6**	**+1.4**
SAJU	**San Juanillo,**	**5.65**	**328**	*ǁeP*	**Pn**	**16 17 50.4**	**-0.8**
GUAI	**GUAI**	**5.72**	**331**	*eP*	**Pn**	**16 17 51.8**	**-0.4**
ORTG	**Ortega, Santa**	**5.78**	**331**		**Pn**	**16 17 52.0**	**-1.0**
ACAL	**Aguas Claras**	**5.83**	**336**	*eP*	**Pn**	**16 17 55.0**	**+1.2**
PTEN	**Parque Tenorio**	**5.89**	**337**	*eP*	**Pn**	**16 17 55.5**	**+1.0**
CUI	**Cuipilapa**	**5.91**	**335**	*eP*	**Pn**	**16 17 55.6**	**+0.9**
COLC	**Colonia**	**5.93**	**335**	*eP*	**Pn**	**16 17 56.5**	**+1.4**
HORNC	**Hornillas**	**5.96**	**335**	*eP*	**Pn**	**16 17 56.1**	**+0.5**
GUAB	**Guayabo de Bag**	**5.98**	**335**	*eP*	**Pn**	**16 17 57.3**	**+1.5**
LIM1	**Limonal**	**5.98**	**335**	*eP*	**Pn**	**16 17 56.9**	**+1.1**
VMAR	**Armenia, Volca**	**6.03**	**336**	*eP*	**Pn**	**16 17 57.6**	**+1.2**
GPS2	**Hotel Rincn d**	**6.07**	**334**	*eP*	**Pn**	**16 17 58.4**	**+1.3**
VRLE	**La Escondida,**	**6.11**	**334**	*eP*	**Pn**	**16 17 59.9**	**+2.3**
LAPC	**Finca la Perla**	**6.12**	**334**	*eP*	**Pn**	**16 17 58.2**	**+0.6**
BUEV	**Buena Vista**	**6.13**	**334**	*eP*	**Pn**	**16 17 58.8**	**+0.8**
GBS3	**Finca Las Img**	**6.14**	**333**	*eP*	**Pn**	**16 17 59.2**	**+1.2**
HZTE	**Horizontes, Gu**	**6.15**	**332**	Pn	**Pn**	**16 17 57.9**	**-0.1**
HZTE	**Horizontes, Gu**	**6.15**	**332**	*eP*	**Pn**	**16 17 59.0**	**+0.9**
GB1A	**Boringuen Arri**	**6.15**	**334**	*eP*	**Pn**	**16 17 59.0**	**+0.8**
BUAI	**Buenos Aires**	**6.17**	**335**	*eP*	**Pn**	**16 17 59.4**	**+1.0**
PAC1	**Pacto, Paraso**	**6.29**	**142**	*eP*	**Pn**	**16 17 59.2**	**-0.9**
PLMC	**San Jos del P**	**6.36**	**93**	*eP*	**Pn**	**16 18 00.4**	**-0.7**
PLMC				*eS*	**Sn**	**16 19 09.8**	**-3.7**
PLMC				*i*		16 19 16.5	
	comp=Z,87nm,0.3s						
YOTC	**Yotoco, Valle**	**6.42**	**101**	*eP*	**Pn**	**16 18 00.8**	**-1.1**
YOTC				*eS*	**Sn**	**16 19 09.6**	**-5.5**
YOTC				*i*		16 19 16.2	
	comp=Z,76nm,0.6s						
CUSE	**Cuicocha Este**	**6.51**	**139**	*eP*	**Pn**	**16 18 02.1**	**-1.3**
OTAV	**Otavalo**	**6.53**	**140**	Pn	**Pn**	**16 18 01.2**	**-2.4**
POPC	**Popayan, Colom**	**6.55**	**114**	*eP*	**Pn**	**16 18 02.1**	**-1.7**
CBOC	**Ciudad Bolivar**	**6.64**	**85**	*eP*	**Pn**	**16 18 06.0**	**+1.0**
CCUFI	**Cufio, Nario**	**6.65**	**127**	*eP*	**Pn**	**16 18 05.0**	**-0.4**
GCUF	**Volcan Galeras**	**6.65**	**127**	*eP*	**Pn**	**16 18 03.1**	**-2.3**
CRUC	**La Cruz**	**6.78**	**123**	*eP*	**Pn**	**16 18 06.0**	**-1.0**
SOTA	**Rioblanco**	**6.79**	**117**	*eP*	**Pn**	**16 18 07.9**	**+0.6**
PCON	**Cinco Dias**	**6.89**	**115**	*eP*	**Pn**	**16 18 09.8**	**+1.0**
MARP	**Paez Belalcaza**	**7.11**	**110**	*eP*	**Pn**	**16 18 11.8**	**+0.3**
ACON	**Acoyapa**	**7.11**	**340**		**Pn**	**16 18 11.3**	**0.0**
HELE	**Santa Helena**	**7.16**	**82**	*eP*	**Pn**	**16 18 16.6**	**+4.4**
LCBC	**Los cerritos,**	**7.19**	**60**	*eP*	**Pn**	**16 18 18.5**	**+6.2**
SLOR	**San Lorenzo -**	**7.26**	**145**		**Pn**	**16 18 13.5**	**-0.2**
ANIL	**Santa Ana**	**7.27**	**96**	*eP*	**Pn**	**16 18 15.6**	**+1.9**
UREC	**San Jos de Ur**	**7.50**	**70**	*eP*	**Pn**	**16 18 20.5**	**+3.8**
UREC	**San Jos de Ur**	**7.50**	**70**	*eP*	**Pn**	**16 18 18.9**	**+2.3**
ORTC	**Ortega, Tolima**	**7.51**	**100**	*eP*	**Pn**	**16 18 16.6**	**-0.2**
BETC	**Betania**	**7.64**	**109**	*eP*	**Pn**	**16 18 18.5**	**-0.1**
PORT	**Chimborazo Vol**	**7.73**	**150**		**Pn**	**16 18 19.3**	**-1.0**
BOAB	**BOACO BROADBAN**	**7.73**	**338**		**Pn**	**16 18 19.9**	**+0.1**
NORC	**Norcasia**	**7.76**	**87**	*eP*	**Pn**	**16 18 22.4**	**+2.1**
PRAC	**Prado**	**7.90**	**101**	*eP*	**Pn**	**16 18 24.3**	**+2.2**
CNGN	**Cerro Negro**	**8.22**	**331**	Pn	**Pn**	**16 18 27.3**	**+0.7**
MATN	**Matagalpa**	**8.27**	**337**	Pn	**Pn**	**16 18 27.7**	**+0.4**
ROSC	**El Rosal**	**8.32**	**93**	Pn	**Pn**	**16 18 31.8**	**+3.6**
	comp=Z,4.2nm,0.3s,baz=17,slow=21,SNR=3.5						
ROSC				Sn	Sn	16 20 09.6	+7.4
	comp=Z,3.5nm,0.3s,baz=60,slow=21,SNR=2.0						
	comp=Z,18nm,0.4s						
ROSC	**El Rosal**	**8.32**	**93**	Pn	**Pn**	**16 18 28.1**	**-0.2**
COHC	**Cochancay**	**8.40**	**156**	Pn	**Pn**	**16 18 25.9**	**-3.0**
CRIN	**San Cristobal**	**8.57**	**330**		**Pn**	**16 18 31.6**	**+0.3**
SJCC	**San Jacinto, C**	**8.73**	**58**	Pn	**Pn**	**16 18 36.4**	**+2.9**
SJCC	**San Jacinto, C**	**8.73**	**58**	*eP*	Pn	16 18 37.9	+4.3
CHIC	**Chingaza**	**8.92**	**94**	*eP*	**Pn**	**16 18 37.9**	**+1.4**
BRRC	**Barranca, Sant**	**9.08**	**78**	*eP*	**Pn**	**16 18 40.8**	**+2.4**
ARGC	**Ariguani, Magd**	**9.51**	**61**	*eP*	Pn	16 18 48.5	+4.3
BARC	**Barichara**	**9.52**	**82**	*eP*	**Pn**	**16 18 45.6**	**+1.0**
PAYG	**Puerto Ayora**	**9.63**	**232**	Pn	**Pn**	**16 18 46.4**	**+0.5**
OCAC	**Ocana**	**9.73**	**72**		**Pn**	**16 18 48.2**	**+0.7**
OCAC	**Ocana**	**9.73**	**72**	*eP*	Pn	16 18 52.4	+4.9
CRJC	**Cerrejon, Guaj**	**11.24**	**59**	*eP*	**Pn**	**16 19 09.7**	**+1.7**
SDV	**Santo Domingo**	**12.46**	**73**	Pn	**Pn**	**16 19 27.6**	**+2.8**
	comp=Z,1.7nm,0.3s,baz=249,slow=9.1,SNR=12						
SDV				LR	LR	16 24 04.7	
	comp=Z,216nm,20.4s,baz=176,slow=36						
	comp=Z,5.1nm,0.3s						
SDV	**Santo Domingo**	**12.46**	**73**	Pn	**Pn**	**16 19 24.7**	**-0.1**
ATAH	**Atahualpa**	**13.03**	**161**	LR	LR	16 24 05.8	
	comp=Z,1μm,19.7s,baz=336,slow=35						
BAUV	**El Baul**	**14.96**	**75**	Pn	**Pn**	**16 19 56.8**	**-2.0**
CMIG	**Las Romero**	**16.78**	**315**	Pn	**Pn**	**16 20 23.4**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=93,slow=18,SNR=2.0						
CMIG				LR	LR	16 25 54.8	
	comp=Z,241nm,19.3s,baz=134,slow=34						
	comp=Z,2.0nm,0.6s						
NNA	**Nana**	**18.09**	**161**	LR	LR	16 26 59.5	
	comp=Z,197nm,18.9s,baz=318,slow=35						
AOPR	**Arecibo Observ**	**20.26**	**49**		Pn	16 21 04.8	0.0
SJG	**San Juan**	**20.57**	**50**	P	Pn	16 21 09.0	+0.6
	comp=Z,14nm,0.3s,baz=253,slow=11,SNR=3.9						
SJG				LR	LR	16 28 44.7	
	comp=Z,117nm,21.9s,baz=258,slow=36						
	comp=Z,14nm,0.3s						
SJG	**San Juan**	**20.57**	**50**	P	**P**	**16 21 06.2**	**0.0**
GCPR	**Guaynabo City**	**20.74**	**50**	P	Pn	16 21 09.7	-0.7
SAML	**Samuel**	**24.01**	**126**	P	**P**	**16 21 40.1**	**-2.0**
LPAZ	**La Paz**	**25.79**	**146**	P	**P**	**16 22 03.5**	**+4.5**
	comp=Z,0.9nm,0.6s,baz=334,slow=10,SNR=4.2						
LPAZ				LR	LR	16 33 14.0	
	comp=Z,402nm,19.6s,baz=296,slow=39						
	comp=Z,0.9nm,0.6s						
MDP	**Montagnes des**	**29.89**	**89**	LR	LR	16 34 52.8	
	comp=Z,161nm,18.6s,baz=279,slow=37						
PB04	**IPOC Station P**	**30.04**	**156**	P	**P**	**16 22 35.1**	**-1.4**
SIV	**San Ignacio**	**30.04**	**135**	LR	LR	16 34 44.0	
	comp=Z,522nm,18.9s,baz=300,slow=36						
TKL	**Tuckaleechee C**	**30.27**	**358**	LR	LR	16 35 39.7	
	comp=Z,103nm,18.5s,baz=183,slow=38						
V48A	**Smith Brothers**	**30.57**	**353**	P	**P**	**16 22 41.1**	**+0.2**
V48A				IAmb	IAmb	16 22 42.7	
	comp=Z,7.2nm,0.7s						
WVT	**Waverly**	**31.08**	**352**	P	**P**	**16 22 45.4**	**0.0**
WVT				IAmb	IAmb	16 22 46.3	
	comp=Z,5.2nm,0.8s						
TXAR	**Lajitas Array**	**31.11**	**323**	P	**P**	**16 22 47.8**	**+1.9**
	comp=Z,0.2nm,0.5s,baz=136,slow=11,SNR=3.5						
TXAR				LR	LR	16 35 24.8	
	comp=Z,62nm,18.5s,baz=136,slow=37						
	comp=Z,0.2nm,0.5s						
TXAR	**Lajitas Array**	**31.11**	**323**	P	**P**	**16 22 46.0**	**+0.1**
LCAR	**Lake Charles**	**31.64**	**347**	P	**P**	**16 22 50.5**	**+0.2**
FCAR	**Ozark Folk Cen**	**31.70**	**345**	P	**P**	**16 22 51.2**	**+0.4**
FCAR				IAmb	IAmb	16 22 51.9	
	comp=Z,3.4nm,0.7s						
T47A	**Sharon Grove**	**31.84**	**353**	P	**P**	**16 22 52.7**	**+0.7**
T47A				IAmb	IAmb	16 22 54.1	
	comp=Z,16nm,1.2s						
LPIG	**La Paz**	**32.53**	**308**	LR	LR	16 33 49.8	
	comp=Z,83nm,18.8s,baz=188,slow=32						
MGMO	**Mountain Grove**	**32.94**	**346**	P	**P**	**16 23 01.8**	**+0.1**
MGMO				IAmb	IAmb	16 23 04.5	
	comp=Z,6.0nm,0.8s						
FVM	**French Village**	**33.33**	**349**	P	**P**	**16 23 05.5**	**+0.4**
FVM				IAmb	IAmb	16 23 07.0	
	comp=Z,18nm,1.4s						
CCM	**Cathedral Cave**	**33.56**	**348**		**P**	**16 23 07.0**	**-0.2**
CCM				IAmb	IAmb	16 23 08.1	
	comp=Z,7.2nm,0.8s						
P48A	**Milroy**	**34.13**	**356**	P	**P**	**16 23 12.4**	**+0.3**
P48A				IAmb	IAmb	16 23 26.9	
	comp=Z,5.6nm,0.6s						
N38A	**Joes South For**	**36.63**	**346**	P	**P**	**16 23 34.1**	**+0.6**
ANMO	**Albuquerque**	**36.82**	**326**	LR	LR	16 39 24.3	
	comp=Z,68nm,21.5s,baz=140,slow=38						
T25A	**Trinidad**	**37.45**	**331**	P	**P**	**16 23 41.4**	**+0.6**
SADO	**Sadowa**	**39.47**	**4**	LR	LR	16 40 01.4	
	comp=Z,82nm,19.1s,baz=318,slow=36						
CPUP	**Villa Florida**	**39.86**	**143**	LR	LR	16 41 42.7	
	comp=Z,91nm,18.5s,baz=324,slow=38						
BDFB	**Brasilia**	**40.10**	**122**	LR	LR	16 40 30.3	

*SOME **06** 16:19:23.9, 39°.93N × 77°.47E, h0km*
*NNC **06** 16:19:25.3 ± 1.1, 39°.93N × 77°.40E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=7.4km s-min=6.4km az=2.0*
*KRNET **06** 16:19:25.5 ± 0.1, 39°.89N × 77°.62E, mb3.2*

ISC 06 16:19:32.1 ± 2.1, **40°.21N** ± 0°.10 × **77°.38E** ± 0°.04, **h10**km, **n45, σ1§35/72, 20C-8D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDJ	**Kajisay**	**1.93**	**356**	⇑*iP*	**Pb**	**16 20 06.3**	**-1.2**
	baz=52						
KDJ				⇑*iS*	**Sg**	**16 20 36.2**	**+2.1**
	baz=52						
ULHL	**Ulahol**	**2.21**	**338**	⇑*eP*	**Pb**	**16 20 10.7**	**-1.6**
	baz=37						
ULHL				⇑*iS*	**Sg**	**16 20 44.2**	**+1.1**
	baz=37						
PRZ	**Przheval'sk**	**2.40**	**18**	⇑*iP*	**Pn**	**16 20 12.8**	**+1.1**
	baz=12						
PRZ				⇑*iS*	**Sb**	**16 20 46.3**	**+1.0**
	baz=12						
BOOM	**Boomskoye usch**	**2.52**	**335**	⇑*iP*	**Pb**	**16 20 15.1**	**-2.5**
	baz=35						
BOOM				⇑*iS*	**Sg**	**16 20 51.9**	**-1.3**
	baz=35						
ANVS	**Anan'yevo**	**2.58**	**5**	⇓*iP*	**Pn**	**16 20 15.0**	**+0.8**
	baz=1.0						
ANVS				⇓*iS*	**Sb**	**16 20 50.8**	**+0.3**
	baz=1.0						
ARLS	**Aral**	**2.84**	**307**	⇑*eP*	**Pb**	**16 20 19.1**	**+1.4**
	baz=9.0						
ARLS				⇑*iS*	**Sb**	**16 20 58.6**	**+0.7**
	baz=9.0						
TNSS	**Tian-Shan**	**2.85**	**354**	*eP*	**Pb**	**16 20 22.8**	**-0.5**
	5.7nm,0.4s						
TNSS				*eS*	**Sg**	**16 21 05.5**	**+1.9**
	18nm,0.8s						
TNSS	**Tian-Shan**	**2.85**	**354**	Pg	**Pb**	**16 20 22.8**	**-0.5**
	5.7nm,0.4s						
TNSS				Lg	Lg	16 21 05.5	
	18nm,0.8s						
SATY	**Saty**	**2.95**	**15**	*eP*	**Pb**	**16 20 24.6**	**-0.3**
	7.1nm,0.4s						
SATY				*eS*	**Sg**	**16 21 09.1**	**+2.1**
	19nm,0.5s						
SATY	**Saty**	**2.95**	**15**	Pg	**Pb**	**16 20 24.6**	**-0.3**
	7.1nm,0.4s						
SATY				Lg	Lg	16 21 09.1	
	19nm,0.5s						
UCH	**Uchtor**	**2.96**	**314**	⇑*eP*	**Pn**	**16 20 21.3**	**+1.8**
	baz=16						
UCH				⇑*eS*	**Sb**	**16 21 02.4**	**+0.9**
	baz=16						
MDOK	**Medeo**	**2.96**	**355**	*eP*	**Pb**	**16 20 24.7**	**-0.5**
	6.9nm,0.4s						
MDOK				*eS*	**Sg**	**16 21 08.7**	**+1.4**
	35nm,0.6s						
MDOK	**Medeo**	**2.96**	**355**	Pg	**Pb**	**16 20 24.7**	**-0.5**
	6.9nm,0.4s						
MDOK				Pg	**Pg**	**16 20 25.2**	**-3.7**
	2.8nm,0.3s						
MDOK				Lg	Lg	16 21 08.7	
	30nm,0.6s						
MDOK				Lg	Lg	16 21 08.7	
	35nm,0.6s						
MTBS	**Maitube**	**3.01**	**347**	*eP*	**Pb**	**16 20 25.4**	**-0.4**
MTBS				*eS*	**Sg**	**16 21 10.1**	**+1.5**
MTBS	**Maitube**	**3.01**	**347**	Pg	**Pb**	**16 20 25.4**	**-0.4**
MTBS				Lg	Lg	16 21 10.1	
TKM2	**Tokmak 2**	**3.02**	**334**	⇑*eP*	**Pn**	**16 20 22.0**	**+1.8**
	baz=34						
TKM2				⇑*iS*	**Sb**	**16 21 03.8**	**+0.6**
	baz=34						
TKM2	**Tokmak 2**	**3.02**	**334**	⇑Pg	**Pb**	**16 20 25.2**	**-1.0**
	2.1nm,0.4s						
TKM2				⇑Lg	Lg	16 21 09.5	
	8.2nm,0.8s						
KNDC	**Almaty**	**3.02**	**354**	⇑Pg	**Pb**	**16 20 23.6**	**-2.4**
	11nm,0.4s						
KNDC				⇓Lg	Lg	16 21 11.5	
	103nm,0.6s						
KST	**Kastek**	**3.03**	**340**	*eP*	**Pb**	**16 20 26.0**	**-0.1**
	1.5nm,0.3s						
KST				*eS*	**Sg**	**16 21 10.9**	**+1.6**
	9.6nm,0.4s						
KST	**Kastek**	**3.03**	**340**	Pg	**Pb**	**16 20 26.0**	**-0.1**
	1.5nm,0.3s						
KST				Lg	Lg	16 21 10.9	
	9.6nm,0.4s						
KBK	**Karagaybulak**	**3.05**	**324**	⇑*eP*	**Pn**	**16 20 22.5**	**+1.9**
	baz=25						
KBK				⇑*iS*	**Sb**	**16 21 04.5**	**+0.5**
	baz=25						
AAK	**Ala-Archa**	**3.25**	**319**	⇓*eP*	**Pn**	**16 20 25.4**	**+2.0**
	baz=20						
AAK				⇓*iS*	**Sb**	**16 21 09.4**	**-0.4**
	baz=20						
KURS	**Kuram**	**3.33**	**10**	*eP*	**Pb**	**16 20 31.1**	**-0.2**
	2.3nm,0.5s						
KURS				*eS*	**Sg**	**16 21 19.4**	**+0.3**
	7.8nm,0.5s						
KURS	**Kuram**	**3.33**	**10**	Pg	**Pb**	**16 20 31.1**	**-0.2**
	2.3nm,0.5s						
KURS				Lg	Lg	16 21 19.4	
	7.8nm,0.5s						
SHLS	**Shalkode**	**3.34**	**27**	*eP*	**Pb**	**16 20 33.4**	**-2.6**
	2.9nm,0.4s						
SHLS				*eS*	**Sg**	**16 21 23.0**	**+3.8**
	19nm,0.6s						
KPKS	**Kokpek**	**3.40**	**16**	*eP*	**Pb**	**16 20 32.5**	**0.0**
	3.8nm,0.3s						
KPKS				*eS*	**Sg**	**16 21 21.9**	**+0.6**
	13nm,0.6s						
KPKS	**Kokpek**	**3.40**	**16**	Pg	**Pb**	**16 20 32.5**	**0.0**
	3.8nm,0.3s						
KPKS				Lg	Lg	16 21 21.9	
	13nm,0.6s						
CHMS	**Chumysh**	**3.41**	**326**	⇓Pg	**Pb**	**16 20 31.4**	**-1.3**
	1.8nm,0.6s						
CHMS				⇑Lg	Lg	16 21 21.2	
	7.2nm,0.6s						
PDGK	**Podgornoye**	**3.50**	**26**	Pg	**Pb**	**16 20 32.5**	**-1.7**
	1.4nm,0.3s						
PDGK				Lg	Lg	16 21 22.3	
	6.1nm,0.6s						
PDGK	**Podgornoye**	**3.50**	**26**	⇓Pg	**Pb**	**16 20 32.7**	**-1.5**
	4.4nm,0.6s						
PDGK				⇓Lg	Lg	16 21 21.9	
	24nm,0.8s						
KTBS	**Karatobe**	**3.54**	**352**	*eP*	**Pb**	**16 20 35.0**	**+0.2**
	2.6nm,0.4s						
KTBS				*eS*	**Sg**	**16 21 26.1**	**+0.2**
	17nm,0.5s						
KTBS	**Karatobe**	**3.54**	**352**	Pg	**Pb**	**16 20 35.0**	**+0.2**
	2.6nm,0.4s						
KTBS				Lg	Lg	16 21 26.1	
	17nm,0.5s						
CHKK	**Chushkaly**	**3.66**	**356**	*eP*	**Pb**	**16 20 37.0**	**+0.1**
	2.4nm,0.2s						
CHKK				*eS*	**Sg**	**16 21 29.3**	**-0.2**
	20nm,0.5s						
CHKK	**Chushkaly**	**3.66**	**356**	Pg	**Pb**	**16 20 37.0**	**+0.1**
	2.4nm,0.2s						
CHKK				Lg	Lg	16 21 29.3	
	20nm,0.5s						
KUU	**Kurty**	**3.76**	**349**	*eP*	**Pb**	**16 20 39.2**	**+0.5**
	1.2nm,0.1s						
KUU				*eS*	**Sg**	**16 21 33.4**	**+0.4**
	23nm,0.6s						
KUU	**Kurty**	**3.76**	**349**	Pg	**Pb**	**16 20 39.2**	**+0.5**
KUU				Lg	Lg	16 21 33.4	
SGDS	**Sogindy**	**3.84**	**329**	*eP*	**Pb**	**16 20 40.4**	**+0.4**
	1.2nm,0.3s						
SGDS				*eS*	**Sg**	**16 21 35.4**	**0.0**
	2.5nm,0.5s						
SGDS	**Sogindy**	**3.84**	**329**	Pg	**Pb**	**16 20 40.4**	**+0.4**
	1.2nm,0.3s						
SGDS				Lg	Lg	16 21 35.4	
	2.5nm,0.5s						
KTMS	**Ketmen**	**3.93**	**34**	*eP*	**Pb**	**16 20 42.3**	**+0.8**
	0.8nm,0.4s						
KTMS				*eS*	**Sg**	**16 21 38.4**	**+0.2**
	2.1nm,0.2s						
KTMS	**Ketmen**	**3.93**	**34**	Pg	**Pb**	**16 20 42.3**	**+0.8**
	0.8nm,0.4s						
KTMS				Lg	Lg	16 21 38.4	
	2.1nm,0.2s						
ARXS	**Arharly**	**4.02**	**5**	*eP*	**Pb**	**16 20 44.3**	**+1.3**
	1.6nm,0.5s						
ARXS				*eS*	**Sg**	**16 21 41.8**	**+0.7**
	7.9nm,0.5s						
ARXS	**Arharly**	**4.02**	**5**	Pg	**Pb**	**16 20 44.3**	**+1.3**
	1.6nm,0.5s						
ARXS				Lg	Lg	16 21 41.8	
	7.9nm,0.5s						
DJR	**Jarkent**	**4.50**	**23**	*eP*	**Pb**	**16 20 51.2**	**+0.1**
	1.2nm,0.2s						
DJR				*eS*	**Sg**	**16 21 53.7**	**-2.7**
	2.6nm,0.4s						
DJR	**Jarkent**	**4.50**	**23**	Pg	**Pb**	**16 20 51.2**	**+0.1**
	1.2nm,0.2s						
DJR				Lg	Lg	16 21 53.7	
	2.6nm,0.4s						
BTLS	**Baital**	**5.42**	**334**	*eP*	**Pb**	**16 21 09.7**	**+2.8**
	1.3nm,0.6s						
BTLS				*eS*	**Sg**	**16 22 25.2**	**-0.8**
	2.5nm,0.7s						

*NOU **06** 16:22:33.9, 36°.82S × 177°.92E, h201km, MLv4.4/9, Off E. Coast of N. Island, N.Z.*
*WEL **06** 16:22:37.6 ± 3.0, 37°.5S ± 15° × 17°.8E ± °, h164km ± 24km, M3.3/31, ML3.5/30, MLv3.3/31, Error ellipse: s-maj=0.0km s-min=0.0km az=20.5*

ISC 06 16:22:36.8 ± 1.9, **36°.94S** ± 0°.08 × **177°.57E** ± 0°.07, **h180**km, **n117, σ1§37/117, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HAZ	**Te Kaha**	**0.83**	**168**	P	**Pn**	**16 23 03.3**	**0.0**
MXZ	**Matakaoa Point**	**0.86**	**137**	P	**Pn**	**16 23 04.2**	**+0.7**
RUGZ	**Raukumara Rang**	**1.03**	**175**	P	**Pn**	**16 23 04.6**	**-0.2**
WHRZ	**Whale Island**	**1.03**	**207**	P	**Pn**	**16 23 06.3**	**+1.6**
PKGZ	**Pakihiroa**	**1.03**	**157**	P	**Pn**	**16 23 05.5**	**+0.8**
WMGZ	**Waiomatatini S**	**1.11**	**143**	P	**Pn**	**16 23 06.2**	**+0.9**
MYRZ	**Mayor Island**	**1.11**	**252**	P	**Pn**	**16 23 04.8**	**-0.6**
PUZ	**Puketiti**	**1.26**	**154**	P	**Pn**	**16 23 07.4**	**+0.9**
MARZ	**Manawahe**	**1.26**	**214**	P	**Pn**	**16 23 06.7**	**+0.1**
TWGZ	**Tauwhareparae**	**1.28**	**165**	P	**Pn**	**16 23 08.3**	**+1.6**
TGRZ	**Tauranga**	**1.30**	**232**	P	**Pn**	**16 23 06.7**	**-0.2**
EDRZ	**Edgecumbe**	**1.34**	**209**	P	**Pn**	**16 23 08.2**	**+0.9**
URZ	**Urewera**	**1.37**	**195**	P	**Pn**	**16 23 07.9**	**+0.5**
URZ	**Urewera**	**1.37**	**195**	P	**Pn**	**16 23 08.3**	**+0.8**
MWZ	**Matawai**	**1.39**	**181**	P	**Pn**	**16 23 08.5**	**+0.8**
KUZ	**Kuaotunu**	**1.49**	**277**	P	**Pn**	**16 23 07.6**	**-1.0**
OMRZ	**Omania**	**1.50**	**219**	P	**Pn**	**16 23 09.4**	**+0.6**
KARZ	**Kaharoa**	**1.51**	**224**	P	**Pn**	**16 23 09.1**	**+0.3**
TKGZ	**Te Karaka**	**1.51**	**172**	P	**Pn**	**16 23 10.0**	**+1.2**
TARZ	**Mount Tarawera**	**1.54**	**213**	P	**Pn**	**16 23 11.1**	**+1.8**
RAGZ	**Rawiri**	**1.56**	**184**	P	**Pn**	**16 23 10.7**	**+1.3**
CNGZ	**Carnagh Statio**	**1.62**	**162**	P	**Pn**	**16 23 11.8**	**+1.9**
HLRZ	**Highlands Stat**	**1.63**	**216**	P	**Pn**	**16 23 11.8**	**+1.8**
RRRZ	**Republican Roa**	**1.63**	**211**	P	**Pn**	**16 23 11.7**	**+1.7**
MUGZ	**Murupara**	**1.66**	**202**	P	**Pn**	**16 23 11.1**	**+0.8**
HSRZ	**Hossack Road**	**1.73**	**217**	P	**Pn**	**16 23 12.4**	**+1.4**
RTZ	**Ruatahuna**	**1.74**	**195**	P	**Pn**	**16 23 11.8**	**+0.6**
HRRZ	**Handcock Road**	**1.77**	**215**	P	**Pn**	**16 23 12.7**	**+1.2**
RIGZ	**Rimuhau**	**1.77**	**175**	P	**Pn**	**16 23 12.7**	**+1.2**
PRRZ	**Plateau Road**	**1.81**	**211**	P	**Pn**	**16 23 13.3**	**+1.5**
GRRZ	**Galatos Road**	**1.82**	**219**	P	**Pn**	**16 23 13.7**	**+1.7**
TOZ	**Tahuroa Road**	**1.82**	**244**	P	**Pn**	**16 23 12.5**	**+0.6**
SNGZ	**Shannon Statio**	**1.85**	**186**	P	**Pn**	**16 23 13.3**	**+1.0**
ALRZ	**Allen Road**	**1.89**	**211**	P	**Pn**	**16 23 13.9**	**+1.3**
WPRZ	**Whakapapataran**	**1.93**	**215**	P	**Pn**	**16 23 15.0**	**+1.9**
MKAZ	**Mokaumaui**	**1.93**	**264**	P	**Pn**	**16 23 13.3**	**+0.2**
MTHZ	**Maungataniwha**	**1.99**	**197**	P	**Pn**	**16 23 14.7**	**+0.9**
PRGZ	**Paritu Road**	**2.00**	**173**	P	**Pn**	**16 23 15.3**	**+1.5**
RAHZ	**Arahi**	**2.01**	**191**	P	**Pn**	**16 23 15.2**	**+1.3**
KUTZ	**Kaahu Road**	**2.08**	**221**	P	**Pn**	**16 23 16.4**	**+1.8**
KNZ	**Kokohu**	**2.08**	**178**	P	**Pn**	**16 23 15.9**	**+1.2**
MRHZ	**Matea Rd**	**2.10**	**205**	P	**Pn**	**16 23 16.0**	**+1.1**
ETAZ	**East Tamaki Re**	**2.11**	**269**	P	**Pn**	**16 23 16.0**	**+0.9**
TLZ	**Tolley Road**	**2.13**	**229**	P	**Pn**	**16 23 16.5**	**+1.2**
MHGZ	**Mahia Peninsul**	**2.23**	**173**	P	**Pn**	**16 23 17.9**	**+1.6**
NMHZ	**Naumai**	**2.24**	**195**	P	**Pn**	**16 23 18.4**	**+1.9**
ARHZ	**Aropaoanui**	**2.36**	**191**	P	**Pn**	**16 23 19.2**	**+1.3**
BKZ	**Black Stump Fm**	**2.38**	**201**	P	**Pn**	**16 23 19.0**	**+0.9**
BKZ	**Black Stump Fm**	**2.38**	**201**	P	**Pn**	**16 23 19.5**	**+1.4**
RATZ	**Rangitukua**	**2.39**	**216**	P	**Pn**	**16 23 20.6**	**+2.4**
RITZ	**Rihia Road**	**2.44**	**213**	P	**Pn**	**16 23 21.0**	**+2.2**
MCHZ	**McNeill Hill**	**2.59**	**195**	P	**Pn**	**16 23 22.0**	**+1.5**
NTVZ	**North Tongariro**	**2.62**	**214**	P	**Pn**	**16 23 23.0**	**+2.0**
TMVZ	**Te Maari**	**2.62**	**214**	P	**Pn**	**16 23 22.7**	**+1.7**
ETVZ	**East Tongariro**	**2.64**	**213**	P	**Pn**	**16 23 22.7**	**+1.5**
KWHZ	**Kaweka Forest**	**2.64**	**200**	P	**Pn**	**16 23 21.9**	**+0.8**
HIZ	**Hauiti**	**2.66**	**233**	P	**Pn**	**16 23 23.3**	**+2.0**
HIZ	**Hauiti**	**2.66**	**233**	P	**Pn**	**16 23 23.4**	**+2.0**
WTVZ	**West Tongariro**	**2.67**	**215**	P	**Pn**	**16 23 23.6**	**+2.0**
NNVZ	**North Ngauruho**	**2.68**	**215**	P	**Pn**	**16 23 23.7**	**+2.1**
OTVZ	**Oturere**	**2.68**	**213**	P	**Pn**	**16 23 23.2**	**+1.5**
SNVZ	**South Ngauruho**	**2.71**	**214**	P	**Pn**	**16 23 23.7**	**+1.6**
TWVZ	**Taurewa**	**2.71**	**218**	P	**Pn**	**16 23 24.3**	**+2.2**
NGZ	**Ngauruhoe**	**2.72**	**214**	P	**Pn**	**16 23 24.3**	**+2.1**
CKHZ	**Cape Kidnapper**	**2.74**	**188**	P	**Pn**	**16 23 21.7**	**-0.6**
TUVZ	**Tukino**	**2.77**	**212**	P	**Pn**	**16 23 24.7**	**+1.9**
BHHZ	**Black Hill Sta**	**2.81**	**204**	P	**Pn**	**16 23 24.0**	**+0.9**
WNVZ	**Wahianoa**	**2.84**	**212**	P	**Pn**	**16 23 26.5**	**+2.8**
MOVZ	**Moawhango**	**2.85**	**210**	P	**Pn**	**16 23 24.2**	**+0.6**
KRHZ	**Kereru**	**2.86**	**199**	P	**Pn**	**16 23 24.0**	**+0.3**
KAHZ	**Kahuranaki**	**2.90**	**191**	P	**Pn**	**16 23 25.1**	**+0.8**
MTVZ	**Mangateitei**	**2.95**	**213**	P	**Pn**	**16 23 26.5**	**+1.7**
VRZ	**Vera Road**	**3.11**	**225**	P	**Pn**	**16 23 29.9**	**+3.2**
PXZ	**Pawanui**	**3.13**	**190**	P	**Pn**	**16 23 27.4**	**+0.4**
PNHZ	**Pukenui**	**3.16**	**199**	P	**Pn**	**16 23 27.4**	**0.0**
WPHZ	**Waipukurau**	**3.24**	**195**	P	**Pn**	**16 23 28.4**	**0.0**
TSZ	**Takapari Road**	**3.36**	**202**	P	**Pn**	**16 23 29.7**	**-0.1**
PRHZ	**Porangahau**	**3.40**	**192**	P	**Pn**	**16 23 30.7**	**+0.4**
WAZ	**Wanganui**	**3.47**	**215**	P	**Pn**	**16 23 32.8**	**+1.7**
DVHZ	**Dannevirke**	**3.53**	**198**	P	**Pn**	**16 23 32.1**	**+0.1**
NEZ	**North Egmont**	**3.59**	**229**	P	**Pn**	**16 23 36.7**	**+3.9**
ANWZ	**Angora Road**	**3.62**	**193**	P	**Pn**	**16 23 33.5**	**+0.5**
OUZ	**Omahuta**	**3.65**	**297**	P	**Pn**	**16 23 33.8**	**+0.4**
POWZ	**Post Office Ro**	**3.72**	**202**	P	**Pn**	**16 23 34.5**	**+0.2**
PRWZ	**Pori Road**	**3.82**	**199**	P	**Pn**	**16 23 36.0**	**+0.4**
BFZ	**Birch Farm**	**3.88**	**195**	P	**Pn**	**16 23 35.9**	**-0.3**
BFZ	**Birch Farm**	**3.88**	**195**	P	**Pn**	**16 23 36.1**	**-0.2**
MRZ	**Mangatainoka R**	**4.03**	**202**	P	**Pn**	**16 23 37.3**	**-0.8**
TIWZ	**Tiwai**	**4.05**	**198**	P	**Pn**	**16 23 38.1**	**-0.3**
HOWZ	**Holdsworth Sta**	**4.26**	**201**	P	**Pn**	**16 23 40.0**	**-1.2**
OGWZ	**Otaki Gorge**	**4.30**	**205**	P	**Pn**	**16 23 40.9**	**-0.8**
TMWZ	**Te Maipa**	**4.36**	**197**	P	**Pn**	**16 23 41.6**	**-0.8**
KIW	**Kapiti Island**	**4.43**	**207**	P	**Pn**	**16 23 42.4**	**-0.9**
MTW	**Mount Morrison**	**4.51**	**200**	P	**Pn**	**16 23 43.1**	**-1.3**
CAW	**Cannon Point**	**4.59**	**204**	P	**Pn**	**16 23 44.1**	**-1.3**
TRWZ	**Traveller**	**4.69**	**198**	P	**Pn**	**16 23 46.0**	**-0.6**
PAWZ	**Paruwai Farm**	**4.74**	**200**	P	**Pn**	**16 23 45.9**	**-1.4**
DUWZ	**D'Urville Isla**	**4.79**	**215**	P	**Pn**	**16 23 47.6**	**-0.4**
SNZO	**South Karori**	**4.90**	**206**	P	**Pn**	**16 23 50.0**	**+0.7**
PLWZ	**Palliser**	**4.96**	**200**	P	**Pn**	**16 23 48.4**	**-1.7**
TCW	**Tory Channel**	**4.97**	**210**	P	**Pn**	**16 23 48.9**	**-1.4**
TUWZ	**Tuamarina**	**5.29**	**211**	P	**Pn**	**16 23 53.3**	**-1.2**
NNZ	**Nelson**	**5.37**	**216**	P	**Pn**	**16 23 54.4**	**-1.1**
QRZ	**Quartz Range**	**5.52**	**224**	P	**Pn**	**16 23 56.5**	**-1.0**
QRZ	**Quartz Range**	**5.52**	**224**	P	**Pn**	**16 23 57.6**	**+0.1**
BSWZ	**Blackbirch Sta**	**5.56**	**210**	P	**Pn**	**16 23 57.2**	**-0.7**
MRNZ	**Matariki Terra**	**5.81**	**219**	P	**Pn**	**16 24 00.1**	**-1.2**
THZ	**Tophouse**	**6.02**	**215**	P	**Pn**	**16 24 02.9**	**-1.1**
KHZ	**Kahutara**	**6.29**	**208**	P	**Pn**	**16 24 06.0**	**-1.4**
KHZ	**Kahutara** 33nm,1.9s	**6.29**	**208**	P	**Pn**	**16 24 07.5**	**0.0**
GVZ	**Greta Valley S**	**6.95**	**209**	P	**Pn**	**16 24 15.1**	**-1.1**
LTZ	**Lake Taylor**	**7.11**	**213**	P	**Pn**	**16 24 16.7**	**-1.6**
OKCZ	**Okains Bay**	**7.60**	**206**	P	**Pn**	**16 24 23.3**	**-1.5**
OXZ	**Oxford**	**7.65**	**212**	P	**Pn**	**16 24 23.3**	**-2.1**
MQZ	**McQueen's Vall**	**7.73**	**208**	P	**Pn**	**16 24 23.8**	**-2.5**
RPZ	**Rata Peaks**	**8.40**	**214**	P	**Pn**	**16 24 36.5**	**+1.3**
TMZ	**Timaru**	**8.95**	**212**	P	**Pn**	**16 24 40.9**	**-1.6**

*IDC **06** 16:30:57.5 ± 1.0, 52°.35N × 169°.58W, h0km, mb3.8/17, mbtmp3.8/19, ML3.6/2, MS2.8/2, Error ellipse: s-maj=29.1km s-min=16.4km az=173.0*
*AEIC **06** 16:30:59 ± 2.6, 52°.12N ± 0°.04 × 169°.33W ± 0°.09, h13km ± 3km, Error ellipse: s-maj=7.6km s-min=5.7km az=85.0*
*NEIC **06** 16:31:01.8 ± 2.0, 52°.21N ± 0°.05 × 169°.47W ± 0°.05, h35km ± 2km, mb3.9/48, ML3.8/6, ML3.5/26(AEIC), Error ellipse: s-maj=9.1km s-min=3.1km az=149.0*

ISC 06 16:31:01.3 ± 0.6, **52°.22N** ± 0°.08 × **169°.47W** ± 0°.06, **h30**km, **n116, σ1§00/109, mb4.0/22, 3C-1D, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIKH	**Nikolski High**	**0.84**	**26**	Pn	**Pn**	**16 31 16.4**	**-0.7**
NIKH	**Nikolski High**	**0.84**	**26**		**Sn**	**16 31 31.4**	**+3.0**
OKSO	**Okmok South**	**1.39**	**35**		**Pn**	**16 31 24.9**	**+0.2**
OKSO					**Sb**	**16 31 44.2**	**+0.2**
OKFG	**Magazine Ridge**	**1.52**	**38**		**Pn**	**16 31 26.4**	**-0.1**
MSW	**Makushin Switc**	**2.35**	**43**		**Pn**	**16 31 38.1**	**+0.3**
UNV	**Unalaska Valle**	**2.42**	**47**	Pn	**Pn**	**16 31 38.7**	**-0.1**
MTBL	**Makushin Table**	**2.43**	**43**		**Pn**	**16 31 39.9**	**+0.8**
AKBBA	**Akutan Broad B**	**2.84**	**47**		**Pn**	**16 31 45.7**	**+1.1**
AKGG	**Akutan Green G**	**2.88**	**45**		**Pn**	**16 31 47.0**	**+1.8**
AKUT	**Akutan**	**2.94**	**48**	Pn	**Pn**	**16 31 45.6**	**-0.3**
AKUT				IAML		16 32 36.9	
	comp=N,165nm,0.8s						
AKSA	**Akutan Strait**	**2.97**	**48**		**Pn**	**16 31 47.8**	**+1.4**
GSTR	**Great Sitkin T**	**4.06**	**271**		**Pn**	**16 32 02.1**	**+0.8**
GSMY	**Great Sitkin M**	**4.06**	**270**		**Pn**	**16 32 02.9**	**+1.5**
GSTD	**Great Sitkin T**	**4.11**	**270**		**Pn**	**16 32 03.4**	**+1.2**
GSCK	**Great Sitkin C**	**4.13**	**270**		**Pn**	**16 32 03.7**	**+1.4**
ADK	**Adak**	**4.46**	**268**	IAML		16 33 24.0	
	comp=N,106nm,0.8s						
ADK				IAML		16 33 25.4	
	comp=N,87nm,0.9s						
ADK	**Adak**	**4.46**	**268**		**Pn**	**16 32 07.9**	**+1.0**
KIWB	**Kanaga Island**	**4.75**	**269**		**Pn**	**16 32 12.1**	**+1.2**
SPIA	**Saint Paul Isl**	**4.99**	**355**	Pn	**Pn**	**16 32 15.1**	**+1.1**
TAFP	**Tanaga Falls P**	**5.26**	**270**		**Pn**	**16 32 19.3**	**+1.5**
TASE	**Tanaga Southea**	**5.30**	**269**		**Pn**	**16 32 20.3**	**+1.8**
SDPT	**Sand Point**	**6.18**	**56**	Pn	**Pn**	**16 32 30.0**	**-0.4**
CNBA	**Chernabura Isl**	**6.44**	**62**	Pn	**Pn**	**16 32 33.3**	**-0.7**
CHIR	**Chirikof Islan**	**8.91**	**61**	Pn	**Pn**	**16 33 07.9**	**0.0**
SII	**Sitkinak Islan**	**9.91**	**58**	Pn	**Pn**	**16 33 21.1**	**-0.6**
SHEM	**Shemya Is, Ala**	**10.04**	**279**	LR	LR	16 36 51.4	
	comp=N,52nm,20.8s,baz=102,slow=36						
OHAK	**Old Harbor**	**10.61**	**55**	Pn	**Pn**	**16 33 29.6**	**-1.4**
KDAK	**Kodiak Island**	**11.17**	**53**	Pn	**Pn**	**16 33 38.1**	**-0.6**
	comp=N,0.3nm,0.3s,baz=266,slow=13,SNR=1.2						
KDAK	**Kodiak Island**	**11.17**	**53**	Pn	**Pn**	**16 33 38.2**	**-0.5**
TNA	**Tin City**	**13.40**	**3**	Pn	**Pn**	**16 34 08.7**	**-0.5**
SEW	**Seward**	**13.62**	**47**	Pn	**Pn**	**16 34 10.9**	**-1.3**
D22K	**Cooper Landing**	**13.67**	**45**	Pn	**Pn**	**16 34 11.8**	**-1.1**
SUA	**Susitna One**	**13.76**	**40**	Pn	**Pn**	**16 34 14.6**	**+0.4**
CAST	**Castle Rocks**	**14.48**	**33**	P	**P**	**16 34 30.8**	**+0.4**
TRF	**Thorofare Moun**	**15.12**	**34**	P	**P**	**16 34 36.4**	**-1.1**
TRF				IAmb	IAmb	16 34 39.8	
	comp=Z,5.2nm,1.3s						
BPAW	**Bear Paw Mtn.**	**15.31**	**32**	P	**P**	**16 34 37.6**	**-1.9**
BPAW				IAmb	IAmb	16 34 40.0	
	comp=Z,4.6nm,1.0s						
SCM	**Sheep Creek Mo**	**15.34**	**43**	Pn	**Pn**	**16 34 33.7**	**-1.8**
SCM				IAmb	IAmb	16 34 56.7	
	comp=Z,7.5nm,1.0s						
KLU	**Klutina**	**15.79**	**45**	Pn	**Pn**	**16 34 39.2**	**-2.0**
KLU				IAmb	IAmb	16 34 55.2	
	comp=Z,4.7nm,0.5s						
M24K	**Tolsona, Glenn**	**15.95**	**43**	Pn	**Pn**	**16 34 42.0**	**-1.4**
M24K				IAmb	IAmb	16 35 04.1	
	comp=Z,7.8nm,0.9s						
DHY	**Denali Highway**	**15.96**	**39**	Pn	**Pn**	**16 34 43.7**	**+0.1**
MLY	**Manley**	**16.03**	**30**	P	**P**	**16 34 47.6**	**+0.2**
HMT	**Hamilton**	**16.10**

	comp=Z,0.3nm,0.6s								
TXAR	**Lajitas Array**	52.81	89	P		P		16 40 14.6	+0.7
SCO	**Scoresbysund**	55.38	13	P		P		16 40 31.7	-0.1
SCO				IAmb		IAmb		16 40 32.4	
	comp=Z,1.5nm,0.7s								
ARCES	**ARCESS Array B**	58.06	354	P		P		16 40 50.3	-0.7
	comp=Z,0.9nm,0.4s,baz=39,slow=6.2,SNR=11								
	comp=Z,0.9nm,0.4s								
ARCES	**ARCESS Array B**	58.06	354	P		P		16 40 50.4	-0.5
LVZ	**Lovozero**	58.85	350	P		P		16 40 56.1	-0.4
KURK	**Kurchatov**	62.44	318	P		P		16 41 20.9	-0.3
KURBB	**Kurchatov Arra**	62.55	318	P		P		16 41 21.9	0.0
	comp=Z,0.8nm,0.4s,baz=45,slow=7.1,SNR=6.3								
	comp=Z,0.8nm,0.4s								
BRVK	**Borovoye**	63.80	324	P		P		16 41 29.9	-0.2
BRVK				IAmb		IAmb		16 41 30.5	
	comp=Z,1.2nm,0.5s								
MK31	**Makanchi Array**	63.86	313	P		P		16 41 28.8	-1.9
MK31				IAmb		IAmb		16 41 37.7	
	comp=Z,2.2nm,1.5s								
MK31	**Makanchi Array**	63.86	313	⇑Pg		P		16 41 28.8	-1.9
	comp=Z,0.2nm,0.3s,baz=69,slow=15,SNR=4.9								
MK31				⇑Lg		Lg		16 42 10.1	
	comp=Z,0.4nm,0.4s,baz=64,slow=30,SNR=6.4								
MKAR	**Makanchi Array**	63.86	313	P		P		16 41 30.1	-0.6
	comp=Z,0.3nm,0.3s,baz=48,slow=6.4,SNR=9.4								
	comp=Z,0.3nm,0.3s								
MKAR	**Makanchi Array**	63.86	313	P		P		16 41 28.5	-2.2
MAKZ	**Makanchi**	63.99	314	P		P		16 41 30.4	-1.2
MAKZ				IAmb		IAmb		16 41 36.7	
	comp=Z,1.1nm,0.9s								
MAKZ	**Makanchi**	63.99	314	⇓Pg		P		16 41 30.1	-1.5
	comp=Z,1.4nm,0.9s								
MAKZ				⇑Lg		Lg		16 42 15.1	
	comp=Z,0.4nm,0.4s								
FINES	**FINESS Array B**	66.00	352	P		P		16 41 44.0	-0.3
	comp=Z,1.3nm,0.7s,baz=17,slow=7.1,SNR=8.4								
	comp=Z,1.3nm,0.7s								
NC204	**NORSAR Array S**	66.85	360	P		P		16 41 49.4	-0.4
NC303	**NORSAR Array S**	66.90	360	P		P		16 41 49.8	-0.3
NC405	**NORSAR Array S**	67.01	359	P		P		16 41 50.8	-0.1
NB201	**NORSAR Array S**	67.08	360	P		P		16 41 51.2	0.0
NB2	**NORSAR Subarra**	67.09	360	P		P		16 41 51.3	0.0
	comp=Z,0.5nm,0.6s,baz=360,slow=6.2								
NOA	**NORSAR Array B**	67.09	360	P		P		16 41 51.2	-0.1
	comp=Z,0.6nm,0.6s,baz=0.7,slow=6.3,SNR=3.9								
	comp=Z,0.6nm,0.6s								
ABKAR	**Akbulak array**	70.53	328	P		P		16 42 12.8	-0.1
KKAR	**Karatay Array**	71.86	318	P		P		16 42 20.7	-0.3
AKASG	**Malin Array Be**	76.24	348	P		P		16 42 45.2	-1.3
	comp=Z,0.6nm,0.4s,baz=17,slow=5.9,SNR=4.7								
	comp=Z,0.6nm,0.4s								
AKASG	**Malin Array Be**	76.24	348	IAmb		IAmb		16 43 06.5	
	comp=Z,1.2nm,0.9s								
CMAR	**Chiang Mai Arr**	76.59	283	P		P		16 42 49.7	+0.7
	comp=Z,1.6nm,0.9s,baz=24,slow=6.7,SNR=5.3								
	comp=Z,1.6nm,0.9s								
GERES	**GERESS Array B**	79.27	358	P		P		16 43 03.8	+0.3
	comp=Z,0.2nm,0.5s,baz=316,slow=5.6,SNR=3.6								
	comp=Z,0.2nm,0.5s								
ESDC	**Sonseca Array**	87.61	11	P		P		16 43 47.0	+0.5
	comp=Z,0.7nm,0.8s,baz=7.8,slow=2.8,SNR=2.2								
	comp=Z,0.7nm,0.8s								
ASAR	**Alice Springs**	90.25	230	P		P		16 43 58.6	-0.3
	comp=Z,0.4nm,0.8s,baz=28,slow=4.3,SNR=4.8								
	comp=Z,0.4nm,0.8s								

IDC ***06*** *16:45:07.8±0.7,0.°56N×79.°94W,h0km,mb4.3/12, mbtmp4.3/14,ML3.8/2,MS3.5/21,Error ellipse: s-maj=30.9km s-min=13.9km az=52.0*
IGQ ***06*** *16:45:08±0.6, 1.°1N×4.°8W±.°, h10km*
NEIC ***06*** *16:45:10.0±1.4, 0.°58N±0.°05×80.°03W±0.°06,h13km±4km, mb4.5/34,Error ellipse: s-maj=8.8km s-min=7.0km az=72.0*
VAO ***06*** *16:45:16.6±1.0, 0.°05S×79.°43W,h14km,mb4.8*

ISC 06 16:45:09.4±0.4, 0.°62N±0.°03×80.°03W±0.°04, h17km, n210, σ1§56/180, mb4.5/22, MS3.4/18, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res
				Op		ISC	h	m	s	ISC
AMA1	**Acelerografo,**	0.44	45	P		Pn	16 45 20.0			-1.0
AV21	**Acelerografo,**	0.49	85	P		Pn	16 45 21.0			-0.7
AV18	**Acelerografo,**	0.63	119	P		Pn	16 45 23.0			-0.7
MAG1	**Magdalena**	0.73	159	P		Pb	16 45 24.0			+0.2
JAMA	**Jama**	0.89	191	P		Pb	16 45 24.0			-2.5
BV15	**Puerto Quito-O**	0.93	119	P		Pn	16 45 27.0			-0.8
CABP	**Cabo Pasado**	1.07	202	P		Pb	16 45 27.0			-2.6
APR2	**Miler**	1.19	117	P		Pb	16 45 24.0			-7.7
ASDO	**Santo Domingo**	1.26	134	P		Pn	16 45 31.0			-1.4
PAC1	**Pacto, Paraso**	1.29	106	*eP*		Pg	16 45 33.0			-1.4
PAC1	**Pacto, Paraso**	1.29	106	P		Pg	16 45 33.0			-1.4
APR1	**Acelerografo,**	1.57	115	P		Pg	16 45 38.0			-1.7
HPAL	**Hacienda Las P**	1.61	121	P		Pb	16 45 38.0			-1.0
PINO	**Pino**	1.62	118	P		Pb	16 45 38.0			-1.3
OTAV	**Otavalo**	1.63	103			Pb	16 45 38.8			-0.5
OTAV	**Otavalo**	1.63	103	*eP*		Pb	16 45 38.9			-0.5
OTAV	**Otavalo**	1.63	103	P		Pb	16 45 38.0			-1.3
TERV	**Terraza Guagua**	1.63	119	P		Pb	16 45 39.0			-0.4
YANA	**Yana**	1.64	117	P		Pb	16 45 38.0			-1.5
GGPC	**Guagua Pichinc**	1.64	119	P		Pb	16 45 38.0			-1.6
JUA2	**San Juan 2**	1.65	120	P		Pb	16 45 39.0			-0.7
CUSE	**Cuicocha Este**	1.66	101	*eP*		Pg	16 45 39.8			-1.7
CUSE	**Cuicocha Este**	1.66	101	P		Pb	16 45 39.0			-0.9
ALIT	**Ecuador-Imbabu**	1.68	84	P		Pb	16 45 39.0			-1.0
CUIC	**Cuicocha-Domo**	1.70	101	P		Pb	16 45 40.0			-0.5
CUSW	**Cuicocha Oeste**	1.71	101	P		Pb	16 45 40.0			-0.8
TUMC	**Tumaco**	1.77	48			Pn	16 45 39.6			+0.3
TUMC	**Tumaco**	1.77	48	*eP*		Pg	16 45 55.3			+12
TUMC	**Tumaco**	1.77	48	P		Pn	16 45 40.0			+0.7
URCU	**Urcuqui**	1.79	96	P		Pb	16 45 41.0			-1.0
AV11	**Acelerografo,**	1.80	112	P		Pg	16 45 43.0			-1.1
ILLI	**Illinizas Sur**	1.86	135	P		Pn	16 45 41.0			0.0
PAST	**Pastocalle**	1.91	133	P		Pn	16 45 42.0			+0.4
TOMA	**Boca Toma-Volc**	1.95	125	P		Pb	16 45 44.0			-0.7
AIB2	**Ibarra (Univer**	1.95	98	P		Pg	16 45 45.0			-1.9
YAHU	**Yahuarcocha**	1.98	97	P		Pb	16 45 45.0			-0.2
SUCR	**Mariscal Sucre**	1.98	129	P		Pb	16 45 44.0			-1.4
CHMA	**Chilma**	1.98	83	P		Pn	16 45 42.0			-0.6
CAMI	**Rancho Maria**	2.00	130	P		Pb	16 45 44.0			-1.6
NAS2	**Nasa**	2.01	129	P		Pb	16 45 45.0			-0.8
BNAS	**Cotopaxi Volca**	2.01	130	P		Pb	16 45 45.0			-0.9
LNGL	**El Angel-Carch**	2.03	87	P		Pn	16 45 44.0			+0.6
SLOR	**San Lorenzo -**	2.04	131			Pb	16 45 45.4			-1.0
SLOR	**San Lorenzo -**	2.04	131	P		Pb	16 45 45.0			-1.3
BREF	**Cotopaxi Volca**	2.04	129	P		Pb	16 45 45.0			-1.5
BVC2	**Cotopaxi Volca**	2.06	128	P		Pb	16 45 46.0			-0.7
BMOR	**Cotopaxi Volca**	2.07	130	P		Pb	16 45 46.0			-0.9
ECEN	**Cerro Negro**	2.07	84	P		Pb	16 45 45.0			-1.9
BTAM	**Cotopaxi Volca**	2.08	128	P		Pb	16 45 46.0			-1.1
BRRN	**Barrancas-Volc**	2.09	132	P		Pb	16 45 46.0			-1.2
CHL1	**Volc¡n Chiles**	2.09	85	P		Pb	16 45 46.0			-1.3
ANTG	**Antisana-Guama**	2.10	122	P		Pb	16 45 46.0			-1.4
CAYR	**Refugio Cayamb**	2.11	106	P		Pg	16 45 48.0			-2.1
TAMB	**Tambo**	2.12	128	P		Pb	16 45 47.0			-0.7
CHL2	**Volc¡n Chiles**	2.12	85	P		Pb	16 45 46.0			-1.8
ISPT	**Isla de la Pla**	2.14	209	P		Pn	16 45 41.0			-3.4
ANTM	**Antisana-La Mi**	2.14	122	P		Pb	16 45 47.0			-1.2
ANTI	**Antisana**	2.15	123	P		Pb	16 45 47.0			-1.3
VCES	**Cotopaxi**	2.16	131	P		Pb	16 45 47.0			-1.5
ANTS	**Antisana-Sarah**	2.17	121	P		Pb	16 45 47.0			-1.6
TULM	**Tulcn-Chalpat**	2.25	88			Pb	16 45 47.9			-2.0
TULM	**Tulcn-Chalpat**	2.25	88	*eP*		Pg	16 45 50.5			-2.2
TULM	**Tulcn-Chalpat**	2.25	88	P		Pb	16 45 49.0			-0.9
PPLP	**Puerto Lpez**	2.27	199	P		Pn	16 45 47.0			+0.7
PIAT	**Ana Tenorio**	2.39	132	P		Pb	16 45 50.0			-2.3
CHSH	**Refugio Sur-Vo**	2.40	151	P		Pn	16 45 49.0			+0.5
PORT	**Chimborazo Vol**	2.42	149			Pn	16 45 50.0			+1.1
PORT	**Chimborazo Vol**	2.42	149	P		Pn	16 45 49.0			+0.2
CONE	**Cono NE Rev Vo**	2.49	106	P		Pb	16 45 54.0			+0.1
TAMH	**Tambohuasha Ch**	2.49	150	P		Pn	16 45 51.0			+1.4
BONI	**La Bonita**	2.51	94	P		Pb	16 45 53.0			-1.2
CCUFI	**Cufio, Nario**	2.75	77	*eP*		Pb	16 45 59.2			+0.7
GCUF	**Volcan Galeras**	2.75	77	*eP*		Pb	16 45 56.3			-2.3
CPAS2	**Pasto**	2.84	78	*eP*		Pb	16 46 00.2			+0.2
GRIC	**Gorgona, Isla**	3.01	38	*eP*		Pg	16 46 05.0			-2.2
COHC	**Cochancay**	3.16	166			Pn	16 45 57.6			-0.9
SOTA	**Rioblanco**	3.74	66	*eP*		Pn	16 46 11.8			-3.5
POPC	**Popayan, Colom**	3.86	60	*eP*		Pn	16 46 10.9			+2.6
PCON	**Cinco Dias**	4.01	65	*eP*		Pn	16 46 13.8			+3.1
BOSC	**San Juan Bosco**	4.05	158	Pn		Pn	16 46 10.6			-0.2
ARNL	**Arenillas**	4.14	180			Pn	16 46 12.6			+0.7
FLOC	**Florencia**	4.48	78	*eP*		Pb	16 46 26.4			-1.4
MARP	**Paez Belalcaza**	4.64	62	*eP*		Pb	16 46 25.4			-5.1
GARC	**Garzon, Huila**	4.80	71	*eP*		Pn	16 46 23.5			+2.3
YOTC	**Yotoco, Valle**	4.97	48	*eP*		Pb	16 46 33.2			-3.0
PTLC	**Puerto Leguiza**	5.25	95	*eP*		Pb	16 46 34.1			-6.8
PLMC	**San Jos del P**	5.67	41	*eP*		Pb	16 46 45.8			-2.3
ORTC	**Ortega, Tolima**	5.79	56	*eP*		Pn	16 46 39.0			+4.3
PRAC	**Prado**	5.99	59	*eP*		Pn	16 46 43.9			+6.4
ANIL	**Santa Ana**	6.01	50	*eP*		Pb	16 46 47.7			-6.3
MACC	**Macarena, Meta**	6.37	76	*eP*		Pn	16 46 46.8			+4.2
CBOC	**Ciudad Bolivar**	6.58	38	*eP*		Pb	16 46 59.4			-4.2
ROSC	**El Rosal**	7.08	54	Pn		Pn	16 46 57.0			+4.2
	1.7nm,0.3s,baz=70,slow=22,SNR=2.3									
ROSC				Sn		Sn	16 48 15.7			+2.6
	2.6nm,0.3s,baz=90,slow=20,SNR=1.3									
ROSC				LR		LR	16 50 32.7			
	comp=Z,444nm,18.6s,baz=208,slow=46									
ROSC	**El Rosal**	7.08	54			Pn	16 46 53.6			+0.9
ROSC	**El Rosal**	7.08	54	*eP*		Pn	16 47 01.3			+8.6
NORC	**Norcasia**	7.12	46	*eP*		Pb	16 47 04.2			-8.5
VILC	**Villavicencio,**	7.22	61	*eP*		Pn	16 47 00.3			+5.9
DBBC	**Dabeiba**	7.41	31	*eP*		Pn	16 47 03.3			+6.3
CHIC	**Chingaza**	7.45	58	*eP*		Pn	16 47 03.3			+5.5
SPBC	**San Pablo de B**	7.77	50	*eP*		Pn	16 47 08.1			+6.2
ATAH	**Atahualpa**	7.88	168	Pn		Pn	16 47 06.6			+2.9
	2.0nm,0.3s,baz=19,slow=6.1,SNR=12									
ATAH				Sn		Sn	16 48 35.5			+2.9
	0.4nm,0.3s,baz=39,slow=19,SNR=1.3									
PTBC	**PUERTO BERRIO,**	8.10	43	*eP*		Pn	16 47 13.9			+7.6
BCIP	**Isla Barro Col**	8.49	1	Pn		Pn	16 47 11.9			+0.1
DRK0	**Durika**	9.16	340			Pn	16 47 22.1			+1.0
SRBA	**San Rafael, Bu**	9.18	339			Pn	16 47 21.4			+0.2
RIMA	**Rio Macho**	9.85	337			Pn	16 47 32.8			+2.2
PAYG	**Puerto Ayora**	10.33	263	Pn		Pn	16 47 37.3			+0.3
SJCC	**San Jacinto, C**	10.40	27	Pn		Pn	16 47 38.5			+0.4
JTS	**Las Juntas de**	10.78	333	Pn		Pn	16 47 45.9			+2.7
	0.4nm,0.3s,baz=26,slow=21,SNR=1.6									
JTS				LR		LR	16 51 02.8			
	comp=Z,255nm,21.3s,baz=234,slow=33									
	2.1nm,0.4s									
CZSB	**Cruzeiro do Su**	11.05	139	*eP*		Pn	16 47 42.6			-4.3
SDV	**Santo Domingo**	12.45	48	*eP*		P	16 48 13.8			-4.3
NNA	**Nana**	12.92	166	Pn		Pn	16 48 12.7			+0.2
	1.1nm,0.3s,baz=328,slow=7.0,SNR=2.0									
NNA				LR		LR	16 53 42.7			
	comp=Z,96nm,18.4s,baz=338,slow=40									
	6.6nm,0.5s									
BAUV	**El Baul**	14.52	55	P		P	16 48 41.7			+0.8
BIRV	**Birongo**	16.83	54			P	16 49 06.1			-0.4
BIRV				IAmb		IAmb	16 49 19.1			
	comp=Z,50nm,1.5s									
ETMB	**Extrema**	17.23	127	*eP*		Pn	16 49 03.7			-5.7
SAML	**Samuel**	19.29	120	P		P	16 49 33.5			-0.2
SAML				IAmb		IAmb	16 49 38.0			
	comp=Z,17nm,0.8s									
BOAV	**Boa Vista**	19.58	85	*eP*		Pn	16 49 37.9			-0.4
MACA	**Manacapuru-AM**	19.70	101	*eP*		P	16 49 36.5			-1.7
LPAZ	**La Paz**	20.50	146	LR		LR	16 59 26.7			
	comp=Z,267nm,19.6s,baz=315,slow=42									
DR12	**Loma Pena Alta**	20.86	29	P		Pn	16 49 52.5			-0.8
PB12	**IPOC Station P**	21.36	154	P		P	16 49 56.1			-0.1
PB12				IAmb		IAmb	16 49 57.3			
	comp=Z,31nm,0.9s									
CMIG	**Matias Romero**	21.95	319	P		P	16 50 04.1			+1.7
	comp=Z,2.0nm,0.7s,baz=80,slow=3.9,SNR=3.6									
CMIG				LR		LR	16 57 01.0			
	comp=Z,83nm,19.2s,baz=160,slow=32									
	comp=Z,2.0nm,0.7s									
SJG	**San Juan**	22.10	37	LR		LR	17 00 05.8			
	comp=Z,66nm,21.4s,baz=236,slow=41									
VILB	**Vilhena**	23.85	125	*eP*		P	16 50 19.8			-2.4
ITTB	**Itaituba**	24.78	102	*eP*		P	16 50 30.5			-0.2
SIV	**San Ignacio**	24.96	132	P		P	16 50 32.8			+0.4
	comp=Z,4.0nm,0.7s,baz=305,slow=9.4,SNR=7.4									
SIV				LR		LR	17 01 57.7			
	comp=Z,343nm,18.3s,baz=316,slow=41									
	comp=Z,4.0nm,0.7s									
LVC	**Limon Verde**	25.51	156	LR		LR	17 02 24.4			
	comp=Z,108nm,19.6s,baz=335,slow=41									
NPGB	**Novo Progresso**	25.77	108	*eP*		P	16 50 38.7			-1.0
MALB	**Monte Alegre**	25.88	95	*eP*		P	16 50 40.5			-0.2
PTLB	**Pontes e Lacer**	26.10	129	*eP*		P	16 50 41.9			-0.7
PDRB	**Porto dos Gac**	26.15	118	*eP*		P	16 50 42.6			-0.5
CLDB	**Colider**	26.67	116	*eP*		P	16 50 47.3			-0.5
MDP	**Montagnes des**	27.71	80	P		P	16 50 57.9			+0.7
	comp=Z,18nm,1.1s,baz=259,slow=9.0,SNR=3.4									
MDP				LR		LR	17 03 55.3			
	comp=Z,75nm,18.9s,baz=340,slow=41									
	comp=Z,18nm,1.1s									
SNDB	**Serra Nova Dou**	31.16	115	*eP*		P	16 51 26.5			-1.3
SMTB	**Santa Maria do**	33.67	107	*eP*		P	16 51 50.2			+0.4
CPUP	**Villa Florida**	34.60	142	P		P	16 51 58.0			+0.2
	comp=Z,1.9nm,0.8s,baz=310,slow=11,SNR=3.7									
CPUP				LR		LR	17 09 24.7			
	comp=Z,256nm,18.1s,baz=335,slow=42									
	comp=Z,1.9nm,0.8s									
CPUP	**Villa Florida**	34.60	142	IAmb		IAmb	16 52 07.5			
	comp=Z,11nm,1.5s									
CPUP	**Villa Florida**	34.60	142	*eP*		P	16 51 56.5			-1.3
CPCT	**Cooper Cave**	34.90	354	P		P	16 52 01.1			+0.9
CPCT				IAmb		IAmb	16 52 07.0			
	comp=Z,9.1nm,1.1s									
BDFB	**Brasilia**	35.52	118	P		P	16 52 06.2			+0.2
	comp=Z,6.5nm,0.8s,baz=257,slow=11,SNR=4.4									
	comp=Z,6.5nm,0.8s									
BDFB	**Brasilia**	35.52	118	IAmb		IAmb	16 52 11.6			
	comp=Z,7.3nm,0.8s									
BDFB	**Brasilia**	35.52	118	*eP*		P	16 52 06.0			+0.1
PCMB	**Pacaembu**	35.74	130	*eP*		P	16 52 06.5			-1.1
TZTN	**Tazewell**	35.89	355	P		P	16 52 08.8			0.0
TZTN				IAmb		IAmb	16 52 25.1			
	comp=Z,8.3nm,1.1s									
IPMB	**Ipameri, GO**	36.35	122	*eP*		P	16 52 12.6			-0.4
TXAR	**Lajitas Array**	36.38	324	LR		LR	17 06 21.6			
	comp=Z,36nm,19.4s,baz=174,slow=35									
LCAR	**Lake Charles**	36.75	345	P		P	16 52 15.3			-0.7
S51A	**Beattyville**	36.98	355	P		P	16 52 17.7			-0.4
S51A				IAmb		IAmb	16 52 29.7			
	comp=Z,18nm,1.4s									
PTGB	**Pitanga**	36.99	135	*eP*		P	16 52 17.7			-0.7
SDBA	**SAO DESIDERIO**	37.19	112	*eP*		P	16 52 20.5			+0.3
LPIG	**La Paz**	37.48	311	LR		LR	17 04 17.3			
	comp=Z,45nm,19.3s,baz=116,slow=31									
ITQB	**Itaqui**	37.50	145	*eP*		P	16 52 23.0			+0.4
ITAB	**Concordia**	38.56	138	P		P	16 52 30.9			-0.7
ITAB	**Concordia**	38.56	138	*eP*		P	16 52 31.4			-0.2
JANB	**Januaria**	38.60	115	*eP*		P	16 52 31.7			-0.4
MNTX	**Cornudas Mount**	39.11	325	P		P	16 52 37.0			+0.8
CPSB	**Cacapava Do Su**	39.91	143	*eP*		P	16 52 42.4			-0.3
PET01	**Itanhaem-SP**	40.27	130	*eP*		P	16 52 45.1			-0.8
BNM	**Barren Site**	41.62	326	P		P	16 52 57.3			+0.1
LENM	**Lemitar**	41.83	326	P		P	16 52 59.6			+0.9
ESAR	**Angra dos Reis**	41.84	127	*eP*		P	16 52 57.9			-0.9
PLCA	**Paso Flores**	42.05	169	P		P	16 53 00.9			+0.5
	comp=Z,8.6nm,0.8s,baz=332,slow=9.5,SNR=12									
	comp=Z,8.6nm,0.8s									
PLCA	**Paso Flores**	42.05	169	P		P	16 53 00.4			0.0
PLCA				IAmb		IAmb	16 53 01.9			
	comp=Z,13nm,0.9s									
PLCA	**Paso Flores**	42.05	169	*eP*		P	16 53 00.8			+0.5
ANMO	**Albuquerque**	42.12	327	P		P	16 53 03.3			+2.2
	comp=Z,2.2nm,0.3s,baz=213,slow=1.2,SNR=11									
ANMO				LR		LR	17 11 09.9			
	comp=Z,50nm,18.6s,baz=141,slow=37									
	comp=Z,2.2nm,0.3s									
CMC01	**Camacam, BA**	43.07	113	*eP*		P	16 53 08.3			-0.6
NBLA	**Lagarto - SE**	43.55	107	*eP*		P	16 53 12.2			-0.6
RCBR	**Riachuelo**	44.52	99	LR		LR	17 12 28.9			
	comp=Z,138nm,19.8s,baz=41,slow=37									
SMCO	**Snowmass**	45.60	330	P		P	16 53 31.4			+2.1
PV13	**Radium Mtn., P**	45.78	328	P		P	16 53 31.3			+0.8
PV07	**Paradox Valley**	45.89	328	P		P	16 53 32.6			+1.2
PV07				IAmb		IAmb	16 53 35.0			
	comp=Z,3.7nm,0.9s									
D62A	**Allapoint, All**	47.26	10	P		P	16 53 43.0			+1.3
RSSD	**Black Hills**	48.29	337	P		P	16 53 50.9			+0.8
RSSD				IAmb		IAmb	16 53 57.3			
	comp=Z,3.1nm,0.7s									
PDAR	**Pinedale Array**	49.61	332	P		P	16 54 02.8			+2.6
	comp=Z,0.8nm,0.7s,baz=106,slow=8.0,SNR=4.8									
PDAR				LR		LR	17 15 59.5			
	comp=Z,57nm,20.5s,baz=128,slow=37									
	comp=Z,0.8nm,0.7s									
ELK	**Elko**	51.12	326	LR		LR	17 15 41.8			
	comp=Z,17nm,20.9s,baz=174,slow=36									
NV11	**Mina Array Sit**	51.36	322	P		P	16 54 14.5			+1.1
NV11				IAmb		IAmb	16 54 21.4			
	comp=Z,8.0nm,1.4s									
NVAR	**Mina Array Bea**	51.45	322	P		P	16 54 15.8			+1.6
	comp=Z,2.3nm,0.9s,baz=135,slow=6.6,SNR=11									
	comp=Z,2.3nm,0.9s									
BOZ	**Bozeman (W)**	52.73	332	P		P	16 54 23.7			+0.2
MCMT	**McKenzie Canyo**	52.73	331	P		P	16 54 24.8			+1.1
DLMT	**Dillon**	53.00	332	P		P	16 54 26.1			+0.5
WVOR	**Wild Horse Val**	54.15	325	P		P	16 54 35.0			+1.0
WVOR				IAmb		IAmb	16 54 39.2			
	comp=Z,7.1nm,1.4s									
SCHQ	**Schefferville**	55.11	9	LR		LR	17 21 20.8			
	comp=Z,23nm,18.0s,baz=232,slow=39									
DBIC	**Dimbokro**	75.21	83	LR		LR	17 29 08.9			
	comp=Z,39nm,18.3s,baz=188,slow=35									
INK	**Inuvik**	76.64	342	P		P	16 57 00.6			+1.7
	comp=Z,2.6nm,0.8s,baz=131,slow=10,SNR=3.4									
	comp=Z,2.6nm,0.8s									
INK	**Inuvik**	76.64	342	P		P	16 57 00.0			+1.1
INK				IAmb		IAmb	16 57 04.4			
	comp=Z,3.4nm,0.8s									
BCAR	**Beaver Creek A**	76.99	336	P		P	16 57 01.9			+0.8
ESDC	**Sonseca Array**	78.89	50	P		P	16 57 13.6			+1.3
	comp=Z,1.7nm,0.9s,baz=268,slow=5.7,SNR=12									
	comp=Z,1.7nm,0.9s									
ESDC	**Sonseca Array**	78.89

LPAZ	**La Paz**	**4.12**	**17**		**Pn**		**16 48 05.9**	**+1.4**
GO02	**Mina Guanaco**	**4.89**	**182**		**Pn**		**16 48 14.1**	**-0.6**
AC01	**Pan de Azucar**	**5.97**	**190**	Pn	**Pn**		**16 48 26.7**	**-2.5**
AC02	**Maricunga**	**6.56**	**178**	Pn	**Pn**		**16 48 37.5**	**-0.1**
AC06	**Mina Casimiro**	**7.13**	**187**	Pn	**Pn**		**16 48 43.3**	**-1.6**
LCO	**Las Campanas**	**8.80**	**187**	Pn	**Pn**		**16 49 04.6**	**-3.3**
SIV	**San Ignacio**	**8.98**	**63**	P	**Pn**		**16 49 08.1**	**-2.0**
	comp=E,9.4nm,0.5s,baz=258,slow=9.2,SNR=58							
CO01	**Juntas del Tor**	**9.71**	**184**	Pn	**Pn**		**16 49 18.2**	**-2.0**
GO04	**Tololo Observa**	**9.96**	**187**	Pn	**Pn**		**16 49 20.2**	**-3.4**
MT02	**Curacav**	**13.05**	**186**	Pn	**Pn**		**16 50 06.3**	**+1.2**
H03N1	**Juan Fernandez**	**15.63**	**211**	T	T		17 05 44.8	
	baz=35,slow=72,SNR=8.8							
H03N2	**Juan Fernandez**	**15.64**	**211**	T	T		17 05 29.1	
	baz=35,slow=72,SNR=8.5							
H03N3	**Juan Fernandez**	**15.65**	**211**	T	T		17 05 33.0	
	baz=35,slow=72,SNR=8.0							
PLCA	**Paso Flores**	**20.44**	**183**	P	**P**		**16 51 34.4**	**+1.1**
	comp=E,4.3nm,0.9s,baz=355,slow=11,SNR=8.1							
	comp=E,4.3nm,0.9s							
PLCA	**Paso Flores**	**20.44**	**183**	P	**P**		**16 51 34.1**	**+0.8**
BDFB	**Brasilia**	**20.85**	**81**	P	**P**		**16 51 35.9**	**-2.0**
	comp=E,2.6nm,0.4s,baz=242,slow=8.8,SNR=3.6							
	comp=E,2.6nm,0.4s							
BDFB	**Brasilia**	**20.85**	**81**	P	**P**		**16 51 37.3**	**-0.6**
BDFB				IAmb	IAmb		16 51 47.6	
	comp=Z,13nm,1.5s							
TORD	**Torodi Ar. Bea**	**77.37**	**71**	P	**P**		**16 58 47.1**	**-1.5**
	comp=Z,0.8nm,0.4s,baz=258,slow=5.5,SNR=7.8							
	comp=Z,0.8nm,0.4s							
H11S2	**WAKE ISLAND Hy**	**27.26**	**278**	T	T		19 25 44.8	
	baz=102,slow=75,SNR=40							
H11S1	**WAKE ISLAND Hy**	**27.27**	**278**	T	T		19 25 42.1	
	baz=102,slow=75,SNR=24							
H11S3	**WAKE ISLAND Hy**	**27.28**	**278**	T	T		19 25 43.7	
	baz=102,slow=75,SNR=24							
H11N3	**WAKE ISLAND Hy**	**27.31**	**280**	T	T		19 25 46.4	
	baz=102,slow=75,SNR=13							
H11N2	**WAKE ISLAND Hy**	**27.32**	**280**	T	T		19 25 44.7	
	baz=102,slow=75,SNR=13							
H11N1	**WAKE ISLAND Hy**	**27.33**	**280**	T	T		19 25 48.6	
	baz=102,slow=75,SNR=8.4							
ASAR	**Alice Springs**	**130.79**	**209**	PKP	**PKPdf**		**17 06 04.6**	**0.0**
	comp=Z,0.1nm,0.5s,baz=118,slow=1.5,SNR=1.0							
WRA	**Warramunga Arr**	**133.78**	**212**	PKP	**PKPdf**		**17 06 11.0**	**+0.8**
	comp=Z,0.2nm,0.6s,baz=169,slow=1.7,SNR=1.2							
MKAR	**Makanchi Array**	**144.88**	**35**	PKP	**PKPab**		**17 06 29.1**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=4.6,slow=3.7,SNR=2.3							
PZH	**PanZhiHua**	**169.76**	**51**	PKP	**PKPdf**		**17 07 00.8**	**0.0**

IDC 06 16:47:50.0±1.9, 1°.25N×125°.45E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=181.8km s-min=24.1km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.79**	**158**	P	P	16 52 54.1	-0.3
	0.8nm,0.4s,baz=336,slow=10,SNR=20						
	0.8nm,0.4s						
ASAR	**Alice Springs**	**26.09**	**162**	P	P	16 53 25.7	+0.1
	0.3nm,0.6s,baz=347,slow=12,SNR=14						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**58.88**	**327**	P	P	16 57 50.8	0.0
	0.7nm,0.7s,baz=127,slow=8.5,SNR=8.1						
	0.7nm,0.7s						

*IDC **06** 16:51:43.2±0.7,54°.18N×169°.30E, h0km, mb3.7/15, mbtmp3.7/18, ML3.4/3, MS2.9/5, Error ellipse: s-maj=19.2km s-min=13.8km az=6.0*
*KRSC **06** 16:51:45.4±1.5,53°.87N×168°.67E, h18km±31km, ML4.1*
*MOS **06** 16:51:47.4±0.9,54°.10N×169°.00E, h44km, mb4.2/8, Error ellipse: s-maj=9.4km s-min=6.3km az=12.3*

ISC 06 16:51:46.7±0.6, 54°.05N±0°.07×169°.11E±0°.05, h25km, n96, σ1s59/104, mb3.7/18, 1C-8D, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**2.16**	**304**	PN	**Pn**	**16 52 19.6**	**-1.4**
BKI				S	**Sb**	**16 52 50.6**	**-0.7**
BKI	**Bering**	**2.16**	**304**	*eP*	**Pn**	**16 52 19.8**	**-1.2**
BKI				*eS*	**Sn**	**16 52 46.0**	**-0.9**
SHEM	**Shemya Is, Ala**	**3.27**	**112**	Pn	**Pn**	**16 52 34.6**	**-1.7**
	24nm,0.3s,baz=2.7,slow=4.4,SNR=19						
SHEM				Sn	**Sn**	**16 53 13.9**	**-0.4**
	8.7nm,0.3s,baz=226,slow=20,SNR=1.2						
	92nm,0.4s						
KBTR	**Krutoberegovo**	**4.21**	**303**	PN	**Pn**	**16 52 49.9**	**+0.7**
KBTR	**Krutoberegovo**	**4.21**	**303**	*eP*	**Pn**	**16 52 49.9**	**+0.7**
KBTR				*eS*	**Sn**	**16 53 39.9**	**+2.5**
SMKR	**Semkarok**	**5.05**	**303**	PN	**Pn**	**16 53 03.1**	**+2.3**
SMKR	**Semkarok**	**5.05**	**303**	*eP*	**Pn**	**16 53 03.0**	**+2.3**
BDR	**Baidarnaya**	**5.17**	**302**	PN	**Pn**	**16 53 05.2**	**+2.8**
BDR	**Baidarnaya**	**5.17**	**302**	*eP*	**Pn**	**16 53 04.3**	**+1.9**
TUMR	**Tumrok**	**5.35**	**287**	PN	**Pn**	**16 53 06.0**	**+1.1**
TUMR	**Tumrok**	**5.35**	**287**	*eP*	**Pn**	**16 53 05.7**	**+0.8**
KLY	**Klyuchi**	**5.35**	**298**	*eP*	**Pn**	**16 53 06.9**	**+2.1**
KLY				*eS*	**Sn**	**16 54 05.4**	**-0.1**
KMNR	**Kamenistaya**	**5.40**	**292**	PN	**Pn**	**16 53 07.6**	**+2.0**
KMNR	**Kamenistaya**	**5.40**	**292**	*eP*	**Pn**	**16 53 07.6**	**+2.0**
SPN	**Mys Shipunski**	**5.50**	**264**	PN	**Pn**	**16 53 06.8**	**-0.1**
SPN	**Mys Shipunski**	**5.50**	**264**	*eS*	**Sn**	**16 54 07.6**	**-1.7**
KII	**Karymskiy**	**5.69**	**274**	PN	**Pn**	**16 53 10.9**	**+1.3**
KII	**Karymskiy**	**5.69**	**274**	*eP*	**Pn**	**16 53 10.9**	**+1.3**
KII				*eS*	**Sn**	**16 54 13.8**	**-0.4**
NLC	**Nalytchevo**	**5.88**	**265**	*eP*	**Pn**	**16 53 12.2**	**+0.1**
NLC				*eS*	**Sn**	**16 54 15.3**	**-3.3**
SDLR	**Sedlovina**	**6.13**	**267**	PN	**Pn**	**16 53 16.0**	**+0.3**
SDLR	**Sedlovina**	**6.13**	**267**	*eP*	**Pn**	**16 53 15.6**	**-0.1**
UGLR	**Uglovaya**	**6.18**	**266**	PN	**Pn**	**16 53 17.1**	**+0.8**
UGLR	**Uglovaya**	**6.18**	**266**	*eP*	**Pn**	**16 53 16.7**	**+0.4**
SMAR	**Somma**	**6.18**	**267**	PN	**Pn**	**16 53 17.0**	**+0.5**
SMAR	**Somma**	**6.18**	**267**	*eP*	**Pn**	**16 53 16.9**	**+0.5**
OSSR	**Ossora**	**6.19**	**268**	PN	**Pn**	**16 53 18.0**	**+1.7**
KRER	**Koryakskii**	**6.20**	**267**	PN	**Pn**	**16 53 17.6**	**+0.8**
KRER	**Koryakskii**	**6.20**	**267**	*eP*	**Pn**	**16 53 17.6**	**+0.8**
AVH	**Avacha**	**6.22**	**267**	PN	**Pn**	**16 53 17.7**	**+0.9**
AVH	**Avacha**	**6.22**	**267**	*eP*	**Pn**	**16 53 17.8**	**+0.9**
AVH				*eS*	**Sn**	**16 54 26.3**	**-0.8**
KRX	**Arik**	**6.25**	**268**	PN	**Pn**	**16 53 18.0**	**+0.6**
KRX	**Arik**	**6.25**	**268**	*eP*	**Pn**	**16 53 17.8**	**+0.4**
KRX				*eS*	**Sn**	**16 54 25.2**	**-2.8**
DALK	**Dalny**	**6.26**	**265**	PN	**Pn**	**16 53 18.2**	**+0.9**
DALK	**Dalny**	**6.26**	**265**	*eP*	**Pn**	**16 53 17.5**	**+0.2**
DALK				*eS*	**Sn**	**16 54 25.7**	**-2.3**
KOK	**Koryaka**	**6.27**	**267**	PN	**Pn**	**16 53 18.1**	**+0.5**
KOK	**Koryaka**	**6.27**	**267**	*eP*	**Pn**	**16 53 18.1**	**+0.5**
ESO	**Esso**	**6.28**	**292**	PN	**Pn**	**16 53 20.4**	**+2.8**
ESO	**Esso**	**6.28**	**292**	*eP*	**Pn**	**16 53 20.8**	**+3.2**
PET	**Petropavlovsk**	**6.32**	**265**	↓*e*PN	**Pn**	**16 53 19.1**	**+0.9**
PET	**Petropavlovsk**	**6.32**	**265**	*eP*	**Pn**	**16 53 18.6**	**+0.4**
PET				*eS*	**Sn**	**16 54 26.6**	**-2.9**
RUS	**Russkaya**	**6.56**	**260**	*eS*	**Sn**	**16 54 33.9**	**-1.6**
GNL	**Ganaly**	**6.62**	**271**	PN	**Pn**	**16 53 23.8**	**+1.5**
GNL	**Ganaly**	**6.62**	**271**	*eP*	**Pn**	**16 53 23.6**	**+1.3**
KRMR	**Karymshinskiy**	**6.67**	**264**	PN	**Pn**	**16 53 23.7**	**+0.7**
KRMR	**Karymshinskiy**	**6.67**	**264**	*eP*	**Pn**	**16 53 23.1**	**+0.1**
KRMR				*eS*	**Sn**	**16 54 36.2**	**-2.0**
MTVR	**Mutnovka**	**6.74**	**261**	PN	**Pn**	**16 53 24.3**	**+0.2**
MTVR	**Mutnovka**	**6.74**	**261**	*eP*	**Pn**	**16 53 24.4**	**+0.3**
MTVR				*eS*	**Sn**	**16 54 38.8**	**-1.3**
GRL	**Gorelyy**	**6.79**	**262**	PN	**Pn**	**16 53 26.4**	**+1.7**
GRL	**Gorelyy**	**6.79**	**262**	*eP*	**Pn**	**16 53 26.3**	**+1.6**
PEA0B	**Petropavlovsk-**	**6.86**	**267**	*de*PN	**Pn**	**16 53 27.2**	**+1.6**
PETK	**Petropavlovsk-**	**6.86**	**267**	Pn	**Pn**	**16 53 26.3**	**+0.7**
	2.2nm,0.3s,baz=92,slow=21,SNR=27						
PETK				Sn	**Sn**	**16 54 46.4**	**+3.5**
	0.7nm,0.3s,baz=203,slow=32,SNR=1.7						
PETK				LR	LR	16 56 14.7	
	comp=Z,33nm,21.1s,baz=15,slow=39						
	4.2nm,0.6s						
ASAK	**Asacha**	**6.94**	**261**	PN	**Pn**	**16 53 27.7**	**+1.0**
ASAK	**Asacha**	**6.94**	**261**	*eP*	**Pn**	**16 53 27.8**	**+1.0**
ASAK				*eS*	**Sn**	**16 54 42.8**	**-2.0**
KDTR	**Khodutka, Kamc**	**7.04**	**256**	PN	**Pn**	**16 53 28.4**	**+0.4**
KDTR	**Khodutka, Kamc**	**7.04**	**256**	*eP*	**Pn**	**16 53 28.3**	**+0.3**
KDTR				*eS*	**Sn**	**16 54 43.7**	**-3.4**
APC	**Apacha**	**7.22**	**266**	PN	**Pn**	**16 53 32.3**	**+1.8**
MIPR	**Malaya Ipel'ka**	**7.64**	**262**	PN	**Pn**	**16 53 37.0**	**+0.8**
MIPR	**Malaya Ipel'ka**	**7.64**	**262**	*eP*	**Pn**	**16 53 37.7**	**+1.5**
SKR	**Severo-Kuril's**	**8.64**	**252**	↓*e*PN	**Pn**	**16 53 50.6**	**+0.7**
MA2	**Magadan**	**11.45**	**306**	LR	LR	16 58 41.6	
	comp=Z,39nm,19.4s,baz=102,slow=36						
SEY	**Seymchan**	**12.44**	**322**	Pn	**Pn**	**16 54 41.6**	**-0.3**
	baz=151,slow=19,SNR=1.8						
SEY				LR	LR	16 59 09.0	
	comp=Z,67nm,20.9s,baz=70,slow=36						
	0.8nm,0.8s						
BILL	**Bilibino**	**14.10**	**356**	*i* P	Pn	16 55 01.4	-3.1
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
YAK	**Yakutsk**	**22.03**	**307**	P	**P**	**16 56 38.8**	**-0.1**
	comp=Z,4.7nm,0.5s,baz=277,slow=1.3,SNR=8.6						
	comp=Z,4.7nm,0.5s						
YAK	**Yakutsk**	**22.03**	**307**	*eP*	**P**	**16 56 37.0**	**-1.9**
YAK				pmax	pmax		
	comp=Z,12nm,0.9s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.3s						
KLR	**Kul'dur**	**23.49**	**274**	P	**P**	**16 56 55.0**	**+0.8**
	comp=E,0.8nm,0.6s,baz=65,slow=9.0,SNR=4.5						
	comp=E,0.8nm,0.6s						
KLR	**Kul'dur**	**23.49**	**274**	↓*e*P	**P**	**16 56 55.3**	**+1.1**
KLR				pmax	pmax		
	comp=Z,3.0nm,1.6s						
ILAR	**Eielson Array**	**24.29**	**46**	P	**P**	**16 57 00.6**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=251,slow=7.2,SNR=8.1						
	comp=Z,0.5nm,0.5s						
ZEA	**Zeya**	**24.41**	**286**	*eP*	**P**	**16 57 02.0**	**-0.8**
TIXI	**Tiksi**	**24.68**	**331**	P	**P**	**16 57 04.7**	**-0.4**
	comp=Z,1.0nm,0.3s,baz=92,slow=23,SNR=18						
	comp=Z,1.0nm,0.3s						
TIXI	**Tiksi**	**24.68**	**331**	↑*eP*	**P**	**16 57 04.5**	**-0.6**
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MAJO	**Matsushiro**	**27.59**	**243**	↓*eP*	**P**	**16 57 33.3**	**+1.6**
MAJO				pmax	pmax		
	comp=Z,12nm,1.8s						
KSRS	**Korea Array**	**32.63**	**256**	P	**P**	**16 58 18.7**	**+2.5**
	comp=Z,1.5nm,0.7s,baz=45,slow=9.6,SNR=8.2						
	comp=Z,1.5nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**34.30**	**184**	T	T	17 34 53.5	
	baz=2.7,slow=76,SNR=577						
H11N3	**WAKE ISLAND Hy**	**34.32**	**184**	T	T	17 34 52.2	
	baz=2.7,slow=76,SNR=349						
H11N1	**WAKE ISLAND Hy**	**34.32**	**184**	T	T	17 34 52.6	
	baz=2.7,slow=76,SNR=345						
H11S1	**WAKE ISLAND Hy**	**35.53**	**184**	T	T	17 36 24.8	
	baz=2.5,slow=76,SNR=185						
H11S3	**WAKE ISLAND Hy**	**35.54**	**184**	T	T	17 36 27.6	
	baz=2.5,slow=76,SNR=65						
H11S2	**WAKE ISLAND Hy**	**35.54**	**184**	T	T	17 36 24.9	
	baz=2.5,slow=76,SNR=103						
ULN	**Ulaanbaatar**	**38.45**	**287**	↓*eP*	**P**	**16 59 05.6**	**-0.7**
ULN				pmax	pmax		
	comp=Z,2.0nm,1.3s						
SONM	**Songino Array**	**38.84**	**287**	P	**P**	**16 59 10.5**	**+1.0**
	comp=Z,0.7nm,0.5s,baz=61,slow=8.2,SNR=7.4						
	comp=Z,0.7nm,0.5s						
YBH	**Yreka Blue Hor**	**45.60**	**77**	LR	LR	17 18 18.3	
	comp=Z,33nm,18.1s,baz=164,slow=35						
NVAR	**Mina Array Bea**	**50.32**	**77**	P	**P**	**17 00 41.2**	**-0.1**
	comp=Z,0.2nm,0.4s,baz=306,slow=7.7,SNR=2.0						
	comp=Z,0.2nm,0.4s						
MKAR	**Makanchi Array**	**52.46**	**300**	P	**P**	**17 00 56.0**	**-0.9**
	comp=Z,0.4nm,0.6s,baz=50,slow=7.9,SNR=5.5						
	comp=Z,0.4nm,0.6s						
BRVK	**Borovoye**	**53.89**	**312**	↓*iP*	**P**	**17 01 07.3**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
ARCES	**ARCESS Array B**	**53.90**	**345**	P	**P**	**17 01 06.3**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=34,slow=8.8,SNR=5.4						
	comp=Z,0.4nm,0.4s						
ARU	**Arti**	**56.18**	**321**	*d iP*	**P**	**17 01 23.3**	**-0.5**
ARU						17 02 16.7	
ARU				S	**S**	**17 09 13.6**	**+2.3**
ARU				SS	**SS**	**17 12 50.3**	**-6.7**
ARU				pmax	pmax		
	comp=Z,11nm,3.6s						
CMAR	**Chiang Mai Arr**	**63.64**	**265**	P	**P**	**17 02 16.9**	**+1.3**
	comp=Z,0.6nm,0.7s,baz=21,slow=8.7,SNR=4.6						
	comp=Z,0.6nm,0.7s						
NOA	**NORSAR Array B**	**63.91**	**348**	P	**P**	**17 02 16.4**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=17,slow=6.5,SNR=3.5						
	comp=Z,0.2nm,0.5s						
NOA	**NORSAR Array B**	**63.91**	**348**	*eP*	**P**	**17 02 17.7**	**+0.8**
TXAR	**Lajitas Array**	**65.25**	**74**	P	**P**	**17 02 25.6**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=300,slow=4.3,SNR=6.7						
	comp=Z,0.5nm,0.6s						
AKASG	**Malin Array Be**	**70.33**	**334**	P	**P**	**17 02 57.6**	**-0.1**
	comp=Z,1.3nm,0.5s,baz=26,slow=6.3,SNR=5.3						
	comp=Z,1.3nm,0.5s						
AKASG	**Malin Array Be**	**70.33**	**334**	*eP*	**P**	**17 02 57.2**	**-0.5**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
GNI	**Garni**	**74.72**	**319**	LR	LR	17 41 01.6	
	comp=Z,17nm,18.1s,baz=27,slow=40						
WRA	**Warramunga Arr**	**79.53**	**213**	P	**P**	**17 03 52.6**	**+1.6**
	comp=Z,0.8nm,1.0s,baz=22,slow=6.2,SNR=4.9						
	comp=Z,0.8nm,1.0s						
WRA	**Warramunga Arr**	**79.53**	**213**	*i* P	**P**	**17 03 52.2**	**+1.1**
WRA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
ASAR	**Alice Springs**	**83.15**	**212**	P	**P**	**17 04 11.6**	**+1.3**
	comp=Z,0.5nm,0.9s,baz=20,slow=5.0,SNR=11						
	comp=Z,0.5nm,0.9s						

MAN 06 16:55:07.6, 13°.17N×120°.54E, h111km, mb3.7, ML2.4, MS1.9, Mindoro

DJA 06 17:20:08.4±0.4, 2°.5S±3°.3×132°.6E±°, h14km±4km, M3.6/11, mb3.8/5, MLv3.5/11, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANI	**Sanana**	**0.27**	**100**	P	Pb	17 20 15.2	+0.1
SANI				S	Sb	17 20 20.2	+0.6
NLAI	**Namlea**	**1.85**	**132**	P	Pn	17 20 38.5	-1.2
LBMI	**Labuha**	**2.24**	**53**	P	Pb	17 20 47.3	-1.3
LUWI	**Luwuk**	**3.10**	**288**	P	Pn	17 20 56.5	-0.4
APSI	**Ampana**	**4.21**	**285**	P	Pn	17 21 12.3	+0.1
MRSI	**Marisa**	**4.51**	**303**	P	Pn	17 21 16.2	-0.1
BBSI	**Bau Bau**	**4.68**	**222**	P	Pn	17 21 19.0	+0.3
BKSI	**Bulukumba**	**6.49**	**239**	P	Pn	17 21 44.1	+0.6
	0.0nm7.1nm,1.3s						
FAKI	**Fak Fak**	**6.59**	**98**	P	Pn	17 21 44.3	-0.6
	0.2nm31nm,1.2s						
BSSI	**Bau Bau, Buton**	**6.64**	**232**	P	Pn	17 21 45.5	-0.2
	0.1nm14nm,1.2s						
EDFI	**Ende, Flores**	**7.81**	**211**	P	Pn	17 22 01.9	0.0

*PDG **06** 17:28:46.6±0.3, 43°.19N×17°.04E, h0km±11km, ML2.9/11, Error ellipse: s-maj=0.5km s-min=0.5km az=0.0*
*BEO **06** 17:28:47.1±0.7, 43°.09N×16°.94E, h2km±2km, ML2.7/8*
*PRU **06** 17:28:48.0±0.0, 43°.11N×17°.19E, h0km*
*RHSSO **06** 17:28:48.4±0.3, 43°.14N×17°.09E, h9km±1km, ML2.8/17*

ISC 06 17:28:47.7±1.1, 43°.15N±0°.02×17°.08E±0°.02, h1km±9km, n98, σ1s00/181, 11C-14D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MAKA	**Makarska**	**0.15**	**342**	*e*Pg	**Pg**	**17 28 50.9**	**+0.3**
MAKA				Sg	**Sg**	**17 28 52.9**	**+0.4**
RICI	**Ricice**	**0.35**	**6**	*e*Pg	**Pg**	**17 28 54.2**	**-0.3**
RICI				Sg	**Sg**	**17 28 59.5**	**+0.6**
LSTV	**Lastovo**	**0.40**	**200**	*i* Pg	**Pg**	**17 28 54.7**	**-0.8**
LSTV				Sg	**Sg**	**17 29 00.8**	**+0.1**
HVAR	**Hvar**	**0.46**	**274**	*e*Pg	**Pg**	**17 28 55.9**	**-0.8**
HVAR				Sg	**Sg**	**17 29 02.3**	**-0.3**
STON	**Ston**	**0.53**	**121**	*e*Pg	**Pg**	**17 28 57.5**	**-0.4**
STON				*e*Sg	**Sb**	**17 29 06.6**	**-1.4**
STON	**Ston**	**0.53**	**121**	*i* Pg	**Pg**	**17 28 57.2**	**-0.7**
STON				*e*Sg	**Sg**	**17 29 05.8**	**+1.0**
STON	**Ston**	**0.53**	**121**	*e*Pg	**Pg**	**17 28 57.4**	**-0.5**
STON				Sg	**Sg**	**17 29 05.8**	**+1.0**
DBRK	**Dubrovnik**	**0.92**	**121**	*e*Pg	**Pg**	**17 29 04.4**	**-0.9**
DBRK				Sg	**Sb**	**17 29 18.7**	**-0.4**
SRKY	**Kupres RS**	**0.92**	**4**	*e*Pg	**Pg**	**17 29 04.4**	**-1.0**
SRKY				*e*Sg	**Sg**	**17 29 18.4**	**+1.0**
KIJV	**Kijevo**	**0.99**	**330**	*e*Pg	**Pg**	**17 29 05.9**	**-0.8**
KIJV				Sg	**Sg**	**17 29 20.5**	**+1.0**
TREB	**Trebinje**	**1.03**	**114**	*e*Pg	**Pg**	**17 29 05.8**	**-1.6**
TREB				*e*Sg	**Sb**	**17 29 22.8**	**+0.5**
TREB	**Trebinje**	**1.03**	**114**	⇑*i*Pg	**Pg**	**17 29 06.0**	**-1.4**
TREB				*e*Sg	**Sb**	**17 29 21.4**	**-0.9**
BRY	**Bratogost**	**1.10**	**102**	*e*Pg	**Pg**	**17 29 07.4**	**-1.3**
BRY				*e*Sg	**Sg**	**17 29 23.2**	**+0.2**
BRY	**Bratogost**	**1.10**	**102**	⇓*i*Pg	**Pg**	**17 29 07.5**	**-1.3**
BRY				*i* Sg	**Sn**	**17 29 25.8**	**-0.4**
ZIRJ	**Zirje**	**1.16**	**296**	*e*Pg	**Pg**	**17 29 09.3**	**-0.7**
ZIRJ				Sg	**Sg**	**17 29 25.6**	**+0.5**
HCY	**Herceg Novi**	**1.25**	**123**	*e*Pg	**Pg**	**17 29 10.9**	**-0.8**
HCY				*e*Sg	**Sb**	**17 29 28.4**	**-0.4**
HCY	**Herceg Novi**	**1.25**	**123**	⇓*i*Pg	**Pg**	**17 29 10.4**	**-1.3**
HCY				*i* Sg	**Sn**	**17 29 31.2**	**+1.3**
MGRS	**Mrkonjic Grad**	**1.27**	**0**	*e*Pg	**Pg**	**17 29 11.3**	**-0.8**
MGRS				*e*Sg	**Sb**	**17 29 29.5**	**+0.2**
UPM	**Unac-Piva**	**1.34**	**87**	*e*Pg	**Pg**	**17 29 12.7**	**-0.6**
UPM				*e*Sg	**Sb**	**17 29 31.3**	**-0.1**
UPM	**Unac-Piva**	**1.34**	**87**	*e*Pg	**Pg**	**17 29 12.0**	**-1.3**
UPM				*i* Sg	**Sn**	**17 29 33.1**	**+0.9**
A050A	**Klekovaca**	**1.39**	**344**	*e*Pg	**Pn**	**17 29 12.9**	**-1.5**
A050A				*e*Sg	**Sb**	**17 29 33.4**	**+0.5**
NKY	**Niksic**	**1.44**	**103**	⇑*i*Pg	**Pn**	**17 29 13.9**	**-1.2**
NKY				*i* Sg	**Sn**	**17 29 37.2**	**+2.5**
CEME	**Cevo**	**1.48**	**113**	⇑*i*Pg	**Pn**	**17 29 14.2**	**-1.3**
CEME				*i* Sg	**Sn**	**17 29 38.0**	**+2.5**
BUM	**Brajici-Budva**	**1.58**	**122**	⇑*i*Pn	**Pn**	**17 29 16.9**	**-0.1**
BUM				*i* Sn	**Sg**	**17 29 41.1**	**+2.6**
BLY	**Banja Luka**	**1.60**	**3**	*e*Pg	**Pn**	**17 29 17.8**	**+0.6**
BLY				*e*Sg	**Sg**	**17 29 42.2**	**+3.0**
BLY	**Banja Luka**	**1.60**	**3**	*e*Pn	**Pn**	**17 29 16.8**	**-0.4**
BLY				*e*Sn	**Sn**	**17 29 38.2**	**-0.3**
UDBI	**Udbina**	**1.68**	**326**	*e*Pn	**Pn**	**17 29 18.9**	**+0.6**
UDBI				Sn	**Sg**	**17 29 42.3**	**+0.7**
DUGI	**Dugi Otok**	**1.69**	**301**	*e*Pn	**Pn**	**17 29 18.5**	**+0.1**
DUGI				Sn	**Sb**	**17 29 42.3**	**+0.7**
PLE	**Pljevlja**	**1.70**	**83**	⇓*i*Pn	**Pn**	**17 29 18.7**	**+0.1**
PLE				*i* Sn	**Sg**	**17 29 44.6**	**+2.4**
RUDO	**Rudo**	**1.73**	**73**	*e*Pn	**Pn**	**17 29 18.8**	**-0.2**
RUDO				*e*Sn	**Sn**	**17 29 40.8**	**-1.0**
DOB	**Doboj**	**1.75**	**25**	*e*Pn	**Pn**	**17 29 19.3**	**+0.1**
DOB				*e*Sn	**Sn**	**17 29 41.6**	**-0.5**
PDG	**Podgorica**	**1.75**	**113**	*e*Pg	**Pb**	**17 29 20.6**	**-0.1**
PDG				*e*Sg	**Sg**	**17 29 44.6**	**+0.5**
PDG	**Podgorica**	**1.75**	**113**	⇑P	**Pb**	**17 29 20.6**	**-0.1**
PDG				⇓S	**Sg**	**17 29 44.8**	**+0.8**
PDG	**Podgorica**	**1.75**	**113**	*e*Pn	**Pn**	**17 29 19.0**	**-0.2**
PDG				*e*Sn	**Sn**	**17 29 40.8**	**-1.4**
TTG	**Podgorica**	**1.75**	**113**	⇓*i*Pn	**Pn**	**17 29 19.9**	**+0.7**
KOME	**Kolasin**	**1.81**	**99**	⇑*i*Pn	**Pn**	**17 29 20.7**	**+0.6**
KOME				*i* Sn	**Sg**	**17 29 45.7**	**+1.6**
DRME	**Dracevica, Mon**	**1.82**	**121**	*e*Pn	**Pn**	**17 29 20.3**	**+0.1**
DRME				*e*Sn	**Sn**	**17 29 43.4**	**-0.6**
DRME	**Dracevica, Mon**	**1.82**	**121**	*e*Pn	**Pn**	**17 29 20.8**	**+0.6**
DRME				*i

MOA	**Mollη** 3.9nm,0.5s	**5.10**	**338**	*i* Sn	**Sn**	**17 31 05.1**	**+0.3**
PSZ	**Piszkesteto**	**5.16**	**22**	⇑P	**Pn**	**17 30 06.4**	**+0.2**
MODS	**Modra-Piesok**	**5.23**	**1**	*e*PN	**Pn**	**17 30 07.8**	**+0.8**
MODS				*e*SN	**Sn**	**17 31 07.3**	**-0.7**
DRGR		**5.41**	**46**	⇓S	**Sn**	**17 31 13.1**	**+0.7**
KOLL	**Kolacno**	**5.51**	**9**	*e*PN	**Pn**	**17 30 12.4**	**+1.5**
KOLL				*e*SN	**Sn**	**17 31 13.2**	**-1.6**
WATA	**Walderalm** 2.3nm,0.2s	**5.71**	**319**	*i* Pn	**Pn**	**17 30 15.3**	**+1.5**
SQTA	**Sankt Quirin** 1.4nm,0.2s	**5.81**	**316**	*i* Pn	**Pn**	**17 30 16.4**	**+1.2**
KHC	**Kasperske Hory**	**6.46**	**339**	*e*SN	**Sn**	**17 31 37.3**	**-1.0**

MAN 06 17:38:16.0,9°92N×122°44E,h26km,mb3.6,ML2.3,MS1.8, Negros

*IDC **06** 17:39:33.3±1.0,31°12S×177°67W,h0km,mb4.1/6, mbtmp4.1/7,ML3.7/1,MS3.7/10,Error ellipse: s-maj=28.3km s-min=20.7km az=112.0*
*NEIC **06** 17:39:39.0±1.8,31°14S±0°07×177°7W±0°2,h35km±1km, mb4.4/16,Error ellipse: s-maj=26.6km s-min=11.4km az=99.0*
ISC 06 17:39:36.6±0.8,31°20S±0°07×177°7W±0°1,h27km,n52, σ2§23/45,mb4.3/10,MS3.5/9,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island** 95nm,0.3s,baz=96,slow=24,SNR=2.6	**1.95**	**354**	Pn	**Pn**	**17 40 06.5**	**-1.4**
RAO				Sn	**Sn**	**17 40 31.3**	**-0.1**
	375nm,0.3s,baz=71,slow=23,SNR=5.9						
RAO	**Raoul Island**	**1.95**	**354**		**Pn**	**17 40 06.0**	**-1.8**
MXZ	**Matakaoa Point**	**7.16**	**206**	Pn	**Pn**	**17 41 18.8**	**-0.7**
URZ	**Urewera** 0.9nm,0.3s,baz=277,slow=6.7,SNR=8.6	**8.24**	**210**	Pn	**Pn**	**17 41 33.8**	**-0.5**
URZ				Sn	**Sn**	**17 43 06.2**	**-0.4**
	3.5nm,0.3s,baz=41,slow=22,SNR=7.2 3.6nm,0.3s						
URZ	**Urewera**	**8.24**	**210**	Pn	**Pn**	**17 41 32.4**	**-2.0**
OUZ	**Omahuta**	**8.33**	**239**	Pn	Pn	17 41 42.1	+6.5
BKZ	**Black Stump Fm**	**9.27**	**209**	Pn	**Pn**	**17 41 46.8**	**-1.7**
HIZ	**Hauiti**	**9.53**	**218**	Pn	**Pn**	**17 41 53.7**	**+1.8**
BFZ	**Birch Farm**	**10.66**	**206**	Pn	**Pn**	**17 42 05.0**	**-2.5**
THZ	**Tophouse**	**12.97**	**213**	Pn	**Pn**	**17 42 38.5**	**-0.7**
KHZ	**Kahutara**	**13.21**	**210**	Pn	Pn	17 42 36.9	-5.5
LTZ	**Lake Taylor**	**14.06**	**212**	Pn	**Pn**	**17 42 50.7**	**-3.3**
OXZ	**Oxford**	**14.60**	**211**		Pn	17 42 55.9	-5.3
RPZ	**Rata Peaks** 0.6nm,0.3s,baz=25,slow=14,SNR=2.0	**15.35**	**212**	Pn	**Pn**	**17 43 08.3**	**-3.0**
RPZ				Sn	Sn	17 45 45.7	-15
	0.4nm,0.3s,baz=82,slow=22,SNR=1.9						
RPZ	**Rata Peaks**	**15.35**	**212**	Pn	**Pn**	**17 43 05.7**	**-5.6**
RPZ				IAmb	IAmb	17 43 06.2	
	comp=Z,20nm,1.1s						
ODZ	**Otahua Downs**	**16.57**	**210**	Pn	**Pn**	**17 43 24.9**	**-2.1**
ODZ				IAmb	IAmb	17 43 40.8	
	comp=Z,54nm,1.4s						
DZM	**Mont Dzumac** comp=Z,468nm,18.9s,baz=132,slow=33	**16.83**	**299**	LR	LR	17 48 51.2	
WKZ	**Wanaka**	**17.14**	**214**	Pn	**Pn**	**17 43 31.4**	**-2.8**
WKZ				IAmb	IAmb	17 43 31.9	
	comp=Z,49nm,1.4s						
MLZ	**Mavora Lakes**	**17.97**	**214**	Pn	**P**	**17 43 42.7**	**-2.1**
WHZ	**Wether Hill Ro**	**18.44**	**213**	P	**P**	**17 43 47.4**	**-2.5**
WHZ				IAmb	IAmb	17 43 53.1	
	comp=Z,33nm,1.3s						
HNR	**Honiara** comp=Z,99nm,20.3s,baz=310,slow=33	**30.02**	**311**	LR	LR	17 56 01.1	
CTA	**Charters Tower** comp=Z,2.3nm,0.5s,baz=92,slow=11,SNR=5.7	**34.20**	**280**	P	**P**	**17 46 21.7**	**+1.7**
CTA				LR	LR	17 58 40.4	
	comp=Z,229nm,18.9s,baz=180,slow=34 comp=Z,2.3nm,0.5s						
STKA	**Stephens Creek** comp=Z,1.4nm,0.5s,baz=90,slow=8.1,SNR=2.0 comp=Z,1.4nm,0.5s	**34.57**	**258**	P	**P**	**17 46 25.0**	**+2.0**
BBOO	**Buckleboo**	**39.02**	**255**	P	**P**	**17 47 01.2**	**+0.3**
COEN	**Coen**	**39.75**	**287**	P	**P**	**17 47 09.5**	**+2.3**
AS31	**Alice Springs**	**43.34**	**268**	P	**P**	**17 47 37.4**	**+0.8**
ASAR	**Alice Springs** comp=Z,1.1nm,0.4s,baz=106,slow=7.4,SNR=77	**43.34**	**268**	P	**P**	**17 47 36.8**	**+0.2**
ASAR				ScP	**ScP**	**17 53 18.2**	**+3.6**
	comp=Z,0.8nm,0.9s,baz=86,slow=4.3,SNR=4.4 comp=Z,1.1nm,0.4s						
WR0	**Warramunga Arr**	**44.22**	**273**	P	**P**	**17 47 44.4**	**+0.7**
WR0				IAmb	IAmb	17 47 50.0	
	comp=Z,14nm,1.5s						
WB2	**Warramunga Arr**	**44.39**	**273**	P	**P**	**17 47 45.2**	**+0.2**
WB2				IAmb	IAmb	17 47 51.5	
	comp=Z,14nm,1.4s						
WRAB	**Tennant Creek**	**44.40**	**273**	P	**P**	**17 47 45.7**	**+0.6**
WRA	**Warramunga Arr** comp=Z,2.3nm,0.3s,baz=112,slow=7.8,SNR=107	**44.40**	**273**	P	**P**	**17 47 45.3**	**+0.1**
WRA				LR	LR	18 06 25.7	
	comp=Z,168nm,18.3s,baz=338,slow=36 comp=Z,2.3nm,0.3s						
WRA	**Warramunga Arr**	**44.40**	**273**	P	**P**	**17 47 44.5**	**-0.7**
WB0	**Warramunga Arr**	**44.43**	**273**	P	**P**	**17 47 45.4**	**0.0**
WB0				IAmb	IAmb	17 48 05.1	
	comp=Z,4.6nm,1.0s						
KNRA	**Kununurra**	**51.04**	**275**	P	**P**	**17 48 37.3**	**+0.7**
CASY	**Casey**	**54.57**	**208**	P	**P**	**17 49 02.8**	**+0.8**
CASY				IAmb	IAmb	17 49 15.9	
	comp=Z,6.5nm,1.1s						
SIJI	**Sorong** comp=Z,76nm,19.1s,baz=126,slow=36	**56.88**	**292**	LR	LR	18 13 17.0	
GUMO	**Guam** comp=Z,30nm,19.4s,baz=154,slow=34	**57.23**	**315**	LR	LR	18 11 56.0	
QSPA	**South Pole Qui** comp=Z,2.0nm,0.9s,baz=34,slow=5.7,SNR=3.4 comp=Z,2.0nm,0.9s	**58.92**	**180**	P	**P**	**17 49 35.1**	**+2.0**
DAV	**Davao City (W)** comp=Z,32nm,21.0s,baz=146,slow=34	**66.20**	**295**	LR	LR	18 17 05.1	
SHEM	**Shemya Is, Ala** comp=Z,47nm,22.0s,baz=120,slow=30	**83.88**	**355**	LR	LR	18 21 54.5	
NVAR	**Mina Array Bea** comp=Z,0.2nm,0.3s,baz=227,slow=5.3,SNR=3.9 comp=Z,0.2nm,0.3s	**88.64**	**43**	P	**P**	**17 52 28.5**	**+1.1**
KLR	**Kul'dur** comp=Z,14nm,18.1s,baz=166,slow=36	**91.86**	**330**	LR	LR	18 35 11.3	
CMAR	**Chiang Mai Arr** comp=Z,17nm,20.2s,baz=155,slow=37	**93.92**	**289**	LR	LR	18 37 17.5	
KURK	**Kurchatov**	**121.79**	**313**		**PKiKP**	**17 58 27.3**	**-0.5**
KURBB	**Kurchatov Arra** comp=Z,0.3nm,0.6s,baz=114,slow=1.9,SNR=4.6	**121.83**	**313**	PKP	**PKiKP**	**17 58 27.3**	**-0.6**
ARCES	**ARCESS Array B** comp=Z,2.4nm,0.8s,baz=46,slow=2.6,SNR=1.8	**139.42**	**348**	PKP	**PKiKP**	**17 59 01.5**	**-1.3**
FINES	**FINESS Array B** comp=Z,1.9nm,0.6s,baz=56,slow=4.0,SNR=16	**145.98**	**340**	PKPbc	**PKPab**	**17 59 12.6**	**-0.9**
NB2	**NORSAR Subarra** comp=Z,2.8nm,0.5s,baz=17,slow=2.6	**149.57**	**351**	PKP	**PKiKP**	**17 59 22.9**	**-1.0**
NOA	**NORSAR Array B** comp=Z,0.2nm,0.4s,baz=15,slow=4.2,SNR=1.8	**149.57**	**351**	PKPbc	**PKiKP**	**17 59 23.1**	**-0.8**
AKASG	**Malin Array Be** comp=Z,0.6nm,0.4s,baz=36,slow=3.1,SNR=5.3	**152.09**	**322**	PKPbc	**PKiKP**	**17 59 29.9**	**+0.6**
AKASG				PKPab	**sPKPbc**	**17 59 40.5**	**+1.8**
	comp=Z,2.8nm,0.6s,baz=32,slow=2.4,SNR=14						
BRTR	**Keskin Array B** comp=Z,0.7nm,0.5s,baz=116,slow=3.9,SNR=1.8	**153.21**	**297**	PKPbc	**PKPab**	**17 59 37.0**	**-6.9**
TORD	**Torodi Ar. Bea** comp=Z,0.3nm,0.5s,baz=167,slow=3.4,SNR=2.3	**162.03**	**178**	PKPab	**PKPab**	**18 00 26.9**	**+4.8**

TEH 06 17:40:06.7,30°13N×57°57E,h8km,ML3.6,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHMN	**Cheshme madani**	**0.27**	**186**	*e*Pg	Pg	17 40 13.1	+0.9
CHMN				*e*Sg	Sg	17 40 16.9	+1.1
TVBK	**TV Kerman**	**0.72**	**259**	*e*Pg	Pb	17 40 21.2	-0.5
TVBK				*e*		17 40 31.7	
	comp=Z,30μm,0.2s						
KRBR	**Kerman**	**0.72**	**258**	*e*Pn	Pb	17 40 21.2	-0.5
NGRK	**Negar Kerman**	**0.88**	**237**	*e*Pg	Pb	17 40 24.4	0.0
NGRK				*e*Sg	Sb	17 40 36.1	-0.3
NGRK				*e*		17 40 37.1	
	comp=Z,18μm,0.2s						
KHGB	**Koh Gabri**	**0.98**	**285**	*e*Pg	Pg	17 40 25.0	-0.6
KBAM	**BAM**	**1.25**	**142**	*e*Pg	Pg	17 40 31.0	+0.3
KBAM				*e*Sg	Sn	17 40 48.8	+1.1
KBAM				*e*		17 40 50.7	
	comp=Z,16μm,0.2s						
IBAF	**Bafgh**	**2.26**	**311**	*e*Pn	Pb	17 40 46.7	-1.1
IBAF				*e*		17 40 52.8	
	comp=Z,4μm,0.2s						
NHDN	**Nehbandan**	**2.48**	**59**	*e*Pn	Pb	17 40 49.6	-2.0
IKOO	**Kooshah**	**2.59**	**28**	*e*Pn	Pn	17 40 50.6	+1.4
ZHSF	**Zahedan**	**2.83**	**100**	*e*Pn	Pn	17 40 54.7	+2.3
IMEH	**Mehriz**	**2.84**	**297**	*e*Pn	Pn	17 40 55.2	+2.6
IMEH				*e*		17 40 59.6	
	comp=Z,2μm,0.2s						
ZHDN	**Zahedan**	**2.91**	**104**	*e*Pn	Pn	17 40 54.5	+1.1
ITEG	**Tejag**	**2.94**	**20**	*e*Pn	Pn	17 40 55.2	+1.3
ITEG				*e*		17 41 47.9	
	comp=Z,1μm,0.4s						
GENO	**Geno**	**2.98**	**205**	*e*Pn	Pb	17 40 57.9	-2.3
TPRV	**Parvadeh(Tabas**	**2.99**	**346**	*e*Pn	Pn	17 40 56.5	+2.0
TPRV				*e*		17 41 50.8	
	comp=Z,3μm,0.6s						
IDAH	**Dahanechah**	**3.26**	**36**	*e*Pn	Pn	17 41 01.0	+2.6
IDAH				*e*		17 41 48.3	
	comp=Z,536nm,0.5s						
YZKH	**Yazd**	**3.41**	**312**	*e*Pn	Pn	17 41 02.8	+2.6
TKDS	**Koohdasht(Taba**	**3.50**	**354**	*e*Pn	Pn	17 41 03.6	+2.1
TKDS				*e*		17 42 01.6	
	comp=Z,935nm,0.3s						
AFRZ	**Afriz**	**3.51**	**20**	*e*Pn	Pn	17 41 02.8	+1.1
TABS	**Tabas**	**3.53**	**354**	*e*Pn	Pn	17 41 04.1	+2.1
IMON	**Monand**	**3.54**	**30**	*e*		17 41 16.6	
	comp=Z,829nm,0.4s						
IMON				*e*Pn	Pn	17 41 04.2	+2.0
TNSJ	**Nastanj**	**3.91**	**348**	*e*Pn	Pn	17 41 09.1	+1.9
TNSJ				*e*		17 42 17.9	
	comp=Z,2μm,0.4s						
SHRT	**Shahrakht**	**4.20**	**33**	*e*Pn	Pn	17 41 13.0	+1.9
ANAR	**Anarak**	**4.48**	**314**	*e*Pn	Pn	17 41 16.5	+1.5
NASN	**Na'in**	**4.86**	**304**	*e*Pn	Pn	17 41 22.6	+2.1
SHRO	**Shahrood**	**5.99**	**348**	*e*Pn	Pn	17 41 38.6	+2.8

TAP 06 17:44:21.2,22°18N×121°46E,h30km±1km,ML2.0,C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LAY	**Lan-yu** baz=140	**0.16**	**149**	*i* P	Pb	17 44 27.3	+0.2
LAY				S	Sb	17 44 31.2	+0.2
	baz=140						
LYUB	**Lan-yu** baz=141	**0.21**	**147**	*i* P	Pb	17 44 26.9	-0.6
LYUB				S	Sb	17 44 30.3	-1.5
	baz=141						
LDUT	**Ludao** baz=9.0	**0.49**	**1**	*e*P	Pb	17 44 31.8	+0.2
LDUT				S	Sb	17 44 39.0	+0.3
	baz=9.0						
TAW	**Tawu** baz=290	**0.55**	**289**	*e*P	Pb	17 44 31.9	-0.6
TAW				*e*S	Sb	17 44 39.3	-0.9
	baz=290						
TAWH	**Dawu Township** baz=288	**0.56**	**287**	*i* P	Pb	17 44 32.0	-0.6
TAWH				*i* S	Sb	17 44 39.8	-0.4
	baz=288						
TSEB	**Hengchuen, Pin** baz=253	**0.59**	**242**	*e*P	Pb	17 44 32.4	-0.7
TSEB				*e*S	Sn	17 44 42.7	+0.6
	baz=253						
SMST	**Manzhou Townsh** baz=262	**0.60**	**255**	*e*P	Pb	17 44 32.4	-0.8
SMST				*e*S	Sb	17 44 41.2	-0.2
	baz=262						
EAST	**Anshuo** baz=290	**0.60**	**290**	P	Pb	17 44 33.1	-0.2
EAST				*e*S	Sb	17 44 40.6	-1.0
	baz=290						
SLIU	**Shizi** baz=274	**0.61**	**274**	*e*P	Pb	17 44 32.8	-0.7
SLIU				*e*S	Sb	17 44 41.2	-0.8
	baz=274						
ECL	**Taimali** baz=304	**0.63**	**312**	P	Pb	17 44 33.1	-0.7
ECL				*e*S	Sb	17 44 40.5	-1.8
	baz=304						
TWKBT	**Hengchun** baz=256	**0.65**	**249**	P	Pb	17 44 33.8	-0.2
TWKBT				*e*S	Sb	17 44 42.6	-0.1
	baz=256						
TWK1	**Hengchun** baz=256	**0.65**	**249**	*e*P	Pb	17 44 33.4	-0.8
TWK1				*e*S	Sb	17 44 42.6	-0.3
	baz=256						
HEN	**Hengchun** baz=260	**0.69**	**256**	*e*P	Pn	17 44 34.9	0.0
HEN				*e*S	Sn	17 44 44.6	-0.1
	baz=260						
TWGBT	**Beinan** baz=319	**0.73**	**331**	*e*P	Pb	17 44 35.2	-0.3
TWGBT				*e*S	Sb	17 44 45.1	-0.1
	baz=319						
TWG	**Pinlang** baz=319	**0.73**	**331**	*e*P	Pb	17 44 34.9	-0.6
TWG				*e*S	Sn	17 44 45.6	-0.2
	baz=319						
TWG	**Pinlang** baz=160	**0.73**	**331**	*e*S	Sb	17 44 45.4	+0.1
LONT	**Longtian** baz=344	**0.79**	**337**	*e*P	Pn	17 44 35.4	-0.9
SCZT	**Fangliau** baz=290	**0.80**	**284**	*e*P	Pn	17 44 36.4	-0.1
SCZT				*e*S	Sb	17 44 47.0	-0.3
	baz=290						
EDH	**Donghe** baz=357	**0.81**	**350**	*e*P	Pn	17 44 36.0	-0.5
EDH				*e*S	Sn	17 44 47.6	+0.1
	baz=357						
MASBT	**Mashibuluo** baz=299	**0.88**	**300**	*e*P	Pn	17 44 37.1	-0.4
SSPT	**Xinbi** baz=290	**0.88**	**290**	*e*P	Pn	17 44 37.1	-0.5
TSMG	**Majia** baz=309	**0.92**	**305**	*e*P	Pb	17 44 39.0	+0.3
TSMG				*e*S	Sn	17 44 50.5	+0.1
	baz=309						
SSD	**Sandimen** baz=311	**0.95**	**307**	*e*P	Pn	17 44 38.0	-0.5
SSD				*e*S	Sn	17 44 50.9	-0.3
	baz=311						
SCST	**Cishan** baz=310	**1.14**	**308**	*e*P	Pb	17 44 43.8	+1.5
EYUL	**Yuli** baz=342	**1.17**	**354**	*e*P	Pn	17 44 42.2	+0.6
EYUL	**Yuli** baz=55	**1.17**	**354**	*e*P	Pb	17 44 42.4	-0.5
YULB	**Yu-li** baz=343	**1.22**	**353**	*e*P	Pn	17 44 42.3	0.0
CHN1	**Nanshi** baz=319	**1.32**	**320**	*e*P	Pn	17 44 44.0	+0.3
CHN1	**Nanshi** baz=280	**1.32**	**320**	*e*P	Pn	17 44 44.1	+0.4
EHY	**Hungye** baz=342	**1.33**	**354**	*e*P	Pn	17 44 44.1	+0.3
EHY				*e*S	Sb	17 45 01.8	-0.4
	baz=342						
VWDT	**VWDT** baz=357	**1.60**	**349**	*e*P	Pn	17 44 46.6	-0.9
VWDT	**VWDT** baz=2.0	**1.60**	**349**	*e*P	Pn	17 44 46.6	-0.9
SMLT	**Sun Moon Lake** baz=348	**1.77**	**343**	*e*P	Pb	17 44 52.8	-0.4
WUSB	**Renai** baz=357	**1.83**	**350**	*e*P	Pb	17 44 53.3	-0.9

TAP 06 17:44:34.3,23°12N×120°96E,h1km,ML1.2,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ELDTW	**Lidau** baz=39	**0.09**	**35**	*i* P	Pg	17 44 37.1	+1.0
ELDTW				S	Sg	17 44 38.5	+1.2
	baz=39						
STYH	**Taoyuan** baz=288	**0.18**	**288**	P	Pg	17 44 38.6	+0.9
STYH				*e*S	Sg	17 44 41.5	+1.4
	baz=288						
LONT	**Longtian** baz=143	**0.26**	**143**	P	Pg	17 44 40.0	+0.7
LONT				*e*S	Sg	17 44 43.7	+1.0
	baz=143						
TWG	**Pinlang** baz=160	**0.31**	**161**	*e*P	Pb	17 44 42.0	-0.6
TWGBT	**Beinan** baz=160	**0.32**	**160**	*e*P	Pb	17 44 41.6	-1.1
TWGBT				*e*S	Sg	17 44 45.6	+1.2
	baz=160						
FULB	**Fuli** baz=61	**0.32**	**75**	P	Pb	17 44 41.9	-0.9
FULB				S	Sb	17 44 46.6	-1.9
	baz=61						
WTP	**Ta-pu** baz=292	**0.34**	**292**	*e*P	Pb	17 44 42.4	-0.8
WTP				*e*S	Sb	17 44 48.0	-1.2
	baz=292						
EDH	**Donghe** baz=127	**0.35**	**114**	*e*P	Pb	17 44 42.2	-1.1
EDH				*e*S	Sb	17 44 48.4	-0.8
	baz=127						
TPUB	**Ta-pu** baz=301	**0.36**	**301**	*e*P	Pb	17 44 42.4	-1.0
TPUB				*e*S	Sb	17 44 48.7	-0.9
	baz=301						
YUS	**Yu-Shan** baz=14	**0.37**	**359**	P	Pg	17 44 42.2	+0.7
YUS				*e*S	Sg	17 44 47.9	+1.5
	baz=14						
EYUL	**Yuli** baz=55	**0.40**	**55**	*e*S	Sg	17 44 47.8	+0.5
CHN1	**Nanshi** baz=280	**0.40**	**280**	*e*S	Sb	17 44 50.2	-0.7
ALS	**Alishan** baz=341	**0.42**	**340**	P	Pg	17 44 43.4	+1.0
ALS				*e*S	Sg	17 44 49.6	+1.7
	baz=341						
HGSD	**Ruisui** baz=37	**0.57**	**49**	*e*P	Pb	17 44 47.4	+0.3
HGSD				*e*S	Sb	17 44 55.5	-0.1
	baz=37						
SMLT	**Sun Moon Lake** baz=1.0	**0.77**	**356**	*e*P	Pn	17 44 51.7	-0.7
WUSB	**Renai** baz=7.0	**0.89**	**9**	*e*P	Pb	17 44 52.4	-0.2

*IDC **06** 17:48:16.4±3.0,32°56N×130°58E,h0km,mb3.3/1, mbtmp3.1/3,ML2.3/2,MS2.8/3,Error ellipse: s-maj=31.0km s-min=15.5km az=135.0*
*JMA **06** 17:48:16.0±0.0,32°5N±0°2×130°6E±0°2,h7km±1km, MV3.6/20,SOUTHERN KUMAMOTO PREF*
JMA Felt III J1 at SOUTHERN KUMAMOTO PREF .
*NIED **06** 17:48:16.0,32°53N×130°59E,h7km,MW3.9,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.44; $M_{\theta\theta}$4.94; $M_{\phi\phi}$-4.50; $M_{r\theta}$-1.39; $M_{\theta\phi}$-1.16; $M_{\phi r}$4.64; Fault plane solution: $M_0$6.73000×10^{14} NP1: ϕ_s238.00000°,δ49.00000°,λ-172.00000°. NP2: ϕ_s142.00000°,δ84.00000°,λ-42.00000°.*
ISC 06 17:48:17.2±0.9,32°55N±0°04×130°58E±0°04,h11km,n13, σ2§16/15,4D,Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIU3	**Izumi3**	**0.20**	**90**	⇓*i*P	**Pg**	**17 48 19.8**	**-1.6**
JIU3				⇓*e*S	**Sg**	**17 48 23.0**	**-1.3**
JHD	**Hondo**	**0.38**	**258**	⇓P	**Pg**	**17 48 23.5**	**-1.3**
JHD				⇓*e*S	**Sg**	**17 48 29.4**	**-0.5**
JZO	**Okuchi**	**0.41**	**178**	*e*P	**Pg**	**17 48 23.6**	**-1.7**
JZO				*e*S	**Sg**	**17 48 29.1**	**-1.5**
JTA	**Tamana**	**0.42**	**354**	P	**Pg**	**17 48 24.7**	**-0.7**
JNU	**Nakatsue** 182nm,0.3s,baz=360,slow=1.3,SNR=435	**0.62**	**24**	Pg	**Pg**	**17 48 27.8**	**-1.6**
JNU				Lg	Lg	17 48 36.9	
	472nm,0.3s,baz=277,slow=23,SNR=20						
JTZ	**Takazaki**	**0.78**	**146**	P	**Pg**	**17 48 31.2**	**-0.9**
JTZ				*e*S	**Sg**	**17 48 40.9**	**-1.4**
KSRS	**Korea Array** 0.1nm,0.3s,baz=158,slow=14,SNR=2.5	**5.36**	**337**	Pn	**Pn**	**17 49 39.0**	**+2.0**
KSRS				Pg	**Pg**	**17 49 55.0**	**-4.7**
	0.7nm,0.3s,baz=156,slow=16,SNR=11						
KSRS				Lg	Lg	17 51 05.2	
	1.2nm,0.3s,baz=160,slow=29,SNR=15 0.3nm,0.4s						
MJAR	**Matsushiro Arr** 0.1nm,0.3s,baz=240,slow=13,SNR=2.2 1.3nm,0.5s	**7.45**	**56**	Pn	**Pn**	**17 50 06.7**	**+0.9**
JHJ	**Hachijo jima 2** comp=Z,39nm,22.0s,baz=31,slow=36	**7.77**	**83**	LR	LR	17 52 56.9	
KLR	**Kul'dur** 0.1nm,0.3s,baz=163,slow=9.4,SNR=8.1	**16.69**	**3**	Pn	**P**	**17 52 16.6**	**+3.4**
SONM	**Songino Array** 0.4nm,0.5s,baz=121,slow=10,SNR=4.3 0.4nm,0.5s	**23.83**	**317**	P	**P**	**17 53 31.0**	**+0.7**
PETK	**Petropavlovsk-** comp=Z,17nm,18.4s,baz=221,slow=36	**28.31**	**35**	LR	LR	18 05 05.6	
SEY	**Seymchan** comp=Z,33nm,19.6s,baz=238,slow=38	**33.40**	**18**	LR	LR	18 09 07.5	

*TIR **06** 17:54:09.6,40°06N×20°00E,h20km,Md2.4*
ATH 06 17:54:09.7,40°10N×19°98E,h12km±6km,ML1.7/3,Error ellipse: s-maj=7.3km s-min=1.4km az=148.0,Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TPE	**Tepelena** baz=2.0	**0.20**	**6**	S	Sg	17 54 17.6	+0.6
TPE	**Tepelena** baz=2.0	**0.20**	**6**	P	Pg	17 54 13.6	-0.4
KEK	**Kerkira**	**0.41**	**200**	P	Pg	17 54 17.0	-0.8
KEK				S	Sb	17 54 24.4	-0.7
KEK				AML	AML	17 54 26.4	
	comp=E,338μm,0.3s						
KEK				AML	AML	17 54 27.1	
	comp=N,349μm,0.3s						
IGT	**Igoumenitsa**	**0.63**	**154**	P	Pg	17 54 21.0	-0.9
IGT				S	Sg	17 54 30.4	+0.3
IGT				AML	AML	17 54 32.1	
	comp=E,144μm,0.5s						
IGT				AML	AML	17 54 32.9	
	comp=N,123μm,0.4s						
NEST	**Nestorio**	**0.88**	**69**	P	Pg	17 54 26.0	-0.6
NEST				S	Sg	17 54 38.3	+0.2
NEST				AML	AML	17 54 43.2	
	comp=E,91μm,0.5s						
NEST				AML	AML	17 54 44.6	
	comp=N,63μm,0.4s						
KPRO	**Kipourio**	**1.07**	**97**	P	Pb	17 54 29.3	-0.9
SCTE	**Santa Cesarea**	**1.16**	**269**	P	Pb	17 54 31.6	-0.2
SCTE				S	Sb	17 54 46.5	-0.3
FNA	**Florina**	**1.27**	**57**	P	Pb	17 54 33.6	0.0
FNA	**Florina** baz=55	**1.27**	**57**	P	Pb	17 54 33.6	+0.1
FNA	**Florina** baz=55	**1.27**	**57**	S	Sg	17 54 52.7	+2.2

*IDC **06** 18:06:54.7±1.2,8.72N×70.79W,h19km±6km,mb3.9/17, mbtmp4.1/18,ML5.1/2,MS3.4/18,Error ellipse: s-maj=16.7km s-min=15.6km az=56.0*
*NEIC **06** 18:06:54.1±1.9,8.72N±0.05×70.78W±0.05,h10km±1km, mb4.5/96,Mwr4.4(CAR),Error ellipse: s-maj=9.5km s-min=6.3km az=141.0*
*FUNV **06** 18:06:55.6,8.68N×70.83W,h7km,MW4.6*
*CAR **06** 18:06:56.2±2.3,8.66N±0.05×70.83W±0.05,h12km±3km, Error ellipse: s-maj=8.0km s-min=5.4km az=141.0*
ISC 06 18:06:54.8±0.9,8.72N±0.02×70.78W±0.02,h20km±4km, n241,σ1§36/251,mb4.5/69,MS3.5/14,1C,Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SDV	**Santo Domingo** 3μm,0.3s,baz=261,slow=21,SNR=3380	**0.23**	**41**	Pg	**Pg**	**18 07 00.4**	**-0.1**
SDV				Lg	Lg	18 07 05.7	
	4μm,0.3s,baz=147,slow=17,SNR=28						

SANV eS Sg 18 07 42.6 +0.5
CURV Curarigua 1.52 32 eP Pg 18 07 25.1 +0.9
CURV eS Sg 18 07 44.2 0.0
CAPV Capacho 1.73 241 eP Pb 18 07 25.6 -0.6
CAPV eS Sn 18 07 46.5 +0.7
ELOV Elorza 2.14 143 eP Pn 18 07 31.1 +1.6
ELOV eS Sb 18 07 57.9 -1.1
SIQV Siquisique 2.15 27 eP Pb 18 07 31.9 -1.3
SIQV eS Sb 18 07 58.4 -1.0
MCQV Machiques 2.18 308 eP Pn 18 07 30.4 +0.4
MCQV eS Sb 18 07 58.4 -1.9
DABV Dabajuro 2.20 4⃝ eP Pn 18 07 31.9 +1.6
DABV eS Sb 18 07 58.9 -1.8
PAMC Pamplona, Colo 2.34 234 eP Pb 18 07 35.5 -1.1
TAMC Tame, Arauca 2.48 204 eP Pb 18 07 37.4 -1.3
TAMC IAML 18 08 14.0
comp=Z,2µm,0.3s
MAPV Macapo 2.55 64 eP Pn 18 07 37.6 +2.4
MAPV eS Sb 18 08 08.7 -2.2
OCAC Ocana 2.55 259 Pn Pn 18 07 35.8 +0.6
OCAC Sn Sn 18 08 07.6 +1.8
OCAC Ocana 2.55 259 eP Pb 18 07 40.1 +0.1
LL6C La Loma 6 Bece 2.66 293 eP Pn 18 07 37.4 +0.8
BAUV El Baul 2.72 85 Pn Pn 18 07 37.8 +0.4
BAUV El Baul 2.72 85 eP Pg 18 07 46.3 -0.7
BAUV eS Sg 18 08 20.8 -1.6
BAUV El Baul 2.72 85 eP Pn 18 07 38.7 +1.3
BAUV eS Sn 18 08 12.1 +2.3
LL1C La Loma 1 Cana 2.86 287 eP Pb 18 07 42.9 -2.3
JACV Jacura 3.04 39 eP Pn 18 07 45.0 +3.1
JACV eS Sn 18 08 19.3 +1.4
CRJC Cerrejon, Guaj 3.08 318 eP Pn 18 07 44.8 +2.2
BARC Barichara 3.18 229 eP Pb 18 07 52.1 +1.3
BARC IAML 18 08 40.5
comp=Z,2µm,0.4s
URIC Uribia, Colomb 3.20 338 Pn Pn 18 07 43.1 -0.9
URIC Uribia, Colomb 3.20 338 eP Pg 18 07 56.7 +0.6
URIC IAML 18 08 33.4
comp=Z,3µm,0.3s
BRRC Barranca, Sant 3.31 241 eP Pg 18 07 55.8 -2.6
BRRC IAML 18 08 41.9
comp=Z,939nm,0.5s
TURV Turiamo 3.38 59 eP Pn 18 07 48.7 +2.2
TURV eS Sn 18 08 27.5 +1.5
BENV Beln 3.38 68 eP Pn 18 07 48.6 +2.0
BENV eS Sn 18 08 27.4 +1.2
ARGC Ariguani, Magd 3.60 289 eP Pn 18 07 50.3 +0.7
ARGC IAML 18 08 49.5
comp=Z,382nm,0.4s
RUSC La Rusia 3.62 219 eP Pn 18 07 52.1 +1.9
RUSC IAML 18 08 38.0
comp=Z,618nm,0.3s
HATO Hato, Curacao 3.88 27 Pn 18 07 52.4 -1.0
SMRC Santa Marta, M 4.17 306 eP Pn 18 08 00.4 +3.0
SMRC IAML 18 09 17.6
comp=Z,548nm,0.5s
CARV Caracas 4.20 65 eP Pn 18 07 59.5 +1.6
CARV eS Sn 18 08 46.6 +0.2
PTBC PUERTO BERRIO, 4.23 240 eP Pn 18 08 01.3 +3.0
CACV CAICARA DEL OR 4.35 105 eP Pb 18 08 07.9 -2.8
CACV eS Sb 18 09 01.6 -1.3
SPBC San Pablo de B 4.46 227 eP Pn 18 08 02.2 +0.7
SPBC IAML 18 08 59.9
comp=Z,466nm,0.4s
SJCC San Jacinto, C 4.49 285 Pn Pn 18 08 03.0 +1.1
SJCC San Jacinto, C 4.49 285 eP Pn 18 08 04.1 +2.2
SJCC IAML 18 08 58.5
comp=Z,346nm,0.4s
PAYV Puerto Ayacuch 4.51 136 eP Pn 18 08 02.5 +0.4
PAYV eS Sn 18 08 52.9 -1.2
PTGC Puerto Gaitan, 4.68 197 eP Pn 18 08 05.0 +0.5
BIRV Birongo 4.78 68 Pn Pn 18 08 07.4 +1.6
BIRV Birongo 4.78 68 eP Pn 18 08 07.6 +1.8
BIRV eS Sn 18 09 00.3 -0.4
UREC San Jos de Ur 4.80 259 eP Pn 18 08 09.6 +3.6
UREC IAML 18 09 26.7
comp=Z,621nm,0.8s
CHIC Chingaza 5.00 216 eP Pn 18 08 11.4 +2.2
CHIC IAML 18 09 16.9
comp=Z,400nm,0.5s
NORC Norcasia 5.12 233 eP Pn 18 08 11.4 +0.9
ROSC El Rosal 5.21 223 Pn Pn 18 08 15.4 +3.4
comp=Z,39nm,0.3s,baz=93,slow=0.6,SNR=73
ROSC Sn Sn 18 09 15.6 +3.7
comp=Z,41nm,0.3s,baz=80,slow=18,SNR=1.8
ROSC LR LR 18 10 08.6
comp=Z,453nm,18.4s,baz=285,slow=37
ROSC El Rosal 5.21 223 eP Pn 18 08 17.0 +4.9
ROSC IAML 18 09 49.9
comp=Z,241nm,0.5s
HELC Santa Helena 5.33 242 eP Pn 18 08 16.1 +2.3
VILC Villavicencio, 5.41 212 eP Pn 18 08 17.0 +2.4
VILC IAML 18 10 18.6
comp=Z,22µm,0.5s
LCBC Los crdobas, 5.52 272 eP Pn 18 08 17.9 +1.9
CBOC Ciudad Bolivar 5.91 242 eP Pn 18 08 26.2 +4.7
CBOC IAML 18 09 38.6
comp=Z,192nm,0.6s
ANIL Santa Ana 6.22 228 eP Pn 18 08 28.0 +2.2
ANIL IAML 18 09 42.5
comp=Z,398nm,0.4s
PCRV Puerto La Cruz 6.24 76 eP Pn 18 08 26.6 +0.8
PCRV eS Sn 18 09 36.1 -0.6
GUVC San Jose del G 6.40 197 eP Pn 18 08 28.9 +0.9
PRAC Prado 6.43 220 eP Pn 18 08 29.9 +1.4
CAPC Capurgana 6.49 270 eP Pn 18 08 29.9 +0.5
CAPC IAML 18 09 41.8
comp=Z,79nm,0.5s
ORTC Ortega, Tolima 6.52 223 eP Pn 18 08 31.7 +2.0
PLMC San Jos del P 6.64 236 eP Pn 18 08 33.5 +2.1
CUMV Cumana_UDO 6.72 75 eP Pn 18 08 33.1 +0.6
CUMV eS Sn 18 09 45.0 -3.4
COAV Cumanacoa 7.01 78 eP Pn 18 08 37.2 +0.6
MACC Macarena, Meta 7.20 205 eP Pn 18 08 40.0 +0.8
YOTC Yotoco, Valle 7.25 230 eP Pn 18 08 40.0 +0.1
YOTC IAML 18 10 12.2
comp=Z,30nm,0.5s
BETC Betania 7.58 218 eP Pn 18 08 45.5 +1.2
BETC IAML 18 09 39.1
comp=Z,134nm,0.7s
CRUV Carupano 7.69 75 eP Pn 18 08 45.8 -0.1
CRUV eS Sn 18 10 09.0 -3.4
MARP Paez Belalcaza 7.78 222 eP Pn 18 08 48.3 +1.0
GARC Garzon, Huila 8.00 216 eP Pn 18 08 51.0 +0.7
PCON Cinco Dias 8.45 222 eP Pn 18 08 58.4 +1.6
POPC Popayan, Colom 8.48 224 eP Pn 18 08 58.4 +1.5
FLOC Florencia 8.59 215 eP Pn 18 08 58.4 +0.3
SOTA Rioblanco 8.74 222 eP Pn 18 09 01.2 +0.6
BCIP Isla Barro Col 8.96 274 Pn Pn 18 09 02.4 -0.7
BANI BANI 9.63 2 Pn 18 09 12.2 -0.2
DR12 Loma Pena Alta 10.11 8 Pn 18 09 18.4 -0.5
OBIP Obispado Ponce 10.12 23 Pn 18 09 18.2 -0.9
SDDR Presa de Saban 10.22 357 Pn 18 09 21.3 +0.8
SDDR Sn Sn 18 11 10.7 -3.9
SDDR Presa de Saban 10.22 357 IAML 18 11 17.7
comp=Z,55nm,0.6s
PDPR Patillas Dam, 10.34 26 Pn Pn 18 09 18.9 -3.2
SJG San Juan 10.37 25 Pn Pn 18 09 22.3 -0.3
comp=Z,42nm,0.3s,baz=197,slow=13,SNR=32
SJG Sn Sn 18 11 12.9 -5.3
comp=Z,4.4nm,0.3s,baz=233,slow=20,SNR=1.9
SJG LR LR 18 14 27.3
comp=Z,86nm,18.1s,baz=96,slow=44
SJG San Juan 10.37 25 Pn 18 09 20.9 -1.7
TULM Tulcn-Chalpat 10.57 222 Pn 18 09 27.4 +1.7
CBYP Canovanas 10.64 26 Pn Pn 18 09 26.1 -0.1
BIM Bigot 11.12 58 Pn Pn 18 09 32.6 -0.3
STVI Saint Thomas 11.13 30 Pn 18 09 33.5 +0.6
MPOM Morne Pois Mar 11.27 59 Pn Pn 18 09 33.5 -1.3
MTDJ Mount Denham 11.51 326 Pn Pn 18 09 37.5 -0.7
GTBY Guantanamo Bay 11.91 340 Pn Pn 18 09 43.4 -0.2
JTS Las Juntas de 14.06 278 LR LR 18 16 34.4
comp=Z,85nm,19.2s,baz=158,slow=41
BOSC San Juan Bosco 14.07 213 Pn 18 10 13.0 -0.4
ATAH Atahualpa 17.48 206 P P 18 11 01.5 +2.4
comp=Z,29nm,1.0s,baz=25,slow=6.1,SNR=11
ATAH LR LR 18 18 43.2
comp=Z,182nm,19.4s,baz=11,slow=40
MDP Montagnes des 18.36 100 P Pn 18 11 09.0 +0.5
comp=Z,1.8nm,0.3s,baz=281,slow=14,SNR=7.9
comp=Z,7.1nm,0.5s
SAML Samuel 19.11 156 P P 18 11 16.1 -0.6

CCIG Comitan 22.15 292 P P 18 11 48.4 -1.4
CMIG Matias Romero 24.90 292 P P 18 12 17.2 +0.5
comp=Z,1.4nm,0.5s,baz=50,slow=7.9,SNR=2.0
comp=Z,1.4nm,0.5s
LPAZ La Paz 24.98 174 P P 18 12 19.6 +1.5
comp=Z,3.2nm,0.8s,baz=22,slow=12,SNR=5.8
LPAZ LR LR 18 21 37.0
comp=Z,42nm,19.4s,baz=290,slow=35
comp=Z,3.2nm,0.8s
LPAZ La Paz 24.98 174 P P 18 12 18.6 +0.5
LPAZ IAmb IAmb 18 12 35.8
comp=Z,7.4nm,0.8s
SIV San Ignacio 26.36 159 P P 18 12 33.3 +3.3
comp=Z,1.1nm,0.5s,baz=337,slow=19,SNR=1.7
Y49A Blount Mountai 28.87 332 P 18 12 52.4 +0.2
MIAR Mount Ida 33.14 324 P P 18 13 30.0 +0.1
MIAR IAmb IAmb 18 13 45.8
comp=Z,6.9nm,1.1s
N53A Lisbon 33.18 346 P P 18 13 31.6 +1.3
W39A Magazine 33.73 325 P P 18 13 35.9 +0.9
W39A IAmb IAmb 18 13 52.1
comp=Z,7.4nm,0.8s
X37A Clayton 34.23 322 P P 18 13 42.2 +2.7
MMNY Mt. Morris Dam 34.45 351 P P 18 13 41.6 +0.4
ABTX Abilene, Hawle 35.77 316 P P 18 13 53.0 +0.2
SADO Sadowa 36.64 350 LR LR 18 29 31.6
comp=Z,60nm,19.2s,baz=218,slow=37
TXAR Lajitas Array 37.03 308 P P 18 14 03.5 -0.2
comp=Z,0.5nm,0.6s,baz=137,slow=8.4,SNR=5.2
comp=Z,0.5nm,0.6s
RCBR Riachuelo 37.66 111 LR LR 18 29 47.5
comp=Z,78nm,19.0s,baz=85,slow=36
L40A Anamosa 37.79 335 P P 18 14 09.4 -0.4
L40A IAmb IAmb 18 14 19.8
comp=Z,6.3nm,0.6s
AMTX Amarillo 38.45 317 P P 18 14 14.4 -1.2
AMTX IAmb IAmb 18 14 43.3
comp=Z,9.1nm,0.6s
MSTX Muleshoe 38.69 315 P P 18 14 17.4 -0.2
MSTX IAmb IAmb 18 14 19.0
comp=Z,12nm,1.1s
MNTX Cornudas Mount 39.43 310 P 18 14 24.1 +0.4
T25A Trinidad 41.55 318 P P 18 14 42.5 +1.0
121A Cookes Peak, D 41.63 310 P P 18 14 43.1 +1.0
ANMO Albuquerque 41.79 314 P P 18 14 43.9 +0.4
SDCO Great Sand Dun 42.61 318 P P 18 14 51.1 +0.9
SDCO IAmb IAmb 18 14 52.3
comp=Z,5.4nm,0.7s
S22A 4UR Ranch, Cre 43.50 317 P P 18 14 58.8 +1.4
TUC Tucson 43.83 308 P P 18 15 00.4 +0.4
B35A Bob, Littlefor 44.00 338 P P 18 14 59.4 -1.5
B35A IAmb IAmb 18 15 13.7
comp=Z,16nm,1.4s
X18A Snowflake 44.13 312 P P 18 15 01.5 -0.9
W18A Petrified Fore 44.24 312 P P 18 15 03.4 +0.2
SMCO Snowmass 44.37 319 P P 18 15 05.8 +1.3
SMCO IAmb IAmb 18 15 27.8
comp=Z,4.8nm,0.8s
AGMN Agassiz Nation 44.77 336 P P 18 15 06.5 -0.6
AGMN IAmb IAmb 18 15 32.0
comp=Z,5.7nm,0.7s
PV15 Paradox Valley 44.92 317 P P 18 15 10.2 +1.5
PV13 Radium Mtn., P 45.05 317 P P 18 15 11.0 +1.2
PV07 Paradox Valley 45.08 317 P P 18 15 07.3 -2.7
PV07 IAmb IAmb 18 15 14.4
comp=Z,4.6nm,0.7s
PV11 David Mesa, Pa 45.16 317 P P 18 15 11.9 +1.3
214A Organ Pipe Nat 45.29 307 P P 18 15 11.7 +0.2
214A IAmb IAmb 18 15 12.9
comp=Z,3.4nm,0.7s
K22A Casper 46.08 323 P P 18 15 16.6 -1.2
K22A IAmb IAmb 18 15 37.9
comp=Z,3.8nm,0.7s
SCHQ Schefferville 46.10 3 P P 18 15 17.8 +0.2
comp=Z,2.2nm,0.5s,baz=207,slow=5.8,SNR=6.9
comp=Z,2.2nm,0.5s
SCHQ Schefferville 46.10 3 IAmb IAmb 18 15 26.7
comp=Z,6.0nm,1.1s
ULM Lac du Bonnet 46.35 338 P P 18 15 20.0 +0.4
comp=Z,4.7nm,0.6s,baz=147,slow=8.0,SNR=5.9
comp=Z,4.7nm,0.6s
U15A North Rim 46.68 313 P P 18 15 24.0 +1.3
U15A IAmb IAmb 18 15 24.9
comp=Z,4.7nm,1.1s
SRU San Rafael Swe 46.69 317 P P 18 15 22.2 -0.4
SRU IAmb IAmb 18 15 45.4
comp=Z,3.7nm,0.8s
P18A Preston Nutter 46.76 318 P P 18 15 24.1 +0.7
P18A IAmb IAmb 18 15 25.4
comp=Z,4.1nm,1.0s
P17A Butcher Ranch, 47.01 317 P P 18 15 26.0 +0.9
PKCU Pink Cliffs 47.14 314 P P 18 15 26.7 +0.3
PKCU IAmb IAmb 18 15 28.0
comp=Z,5.6nm,1.1s
TMUT Trail Mountain 47.24 317 P P 18 15 27.4 +0.3
TMUT IAmb IAmb 18 15 43.0
comp=Z,6.0nm,1.4s
GLA Glamis 47.27 307 P P 18 15 27.5 +0.4
GLA IAmb IAmb 18 15 28.5
comp=Z,4.5nm,0.8s
MTPU Mount Pierson 47.32 315 P P 18 15 28.6 +0.8
MTPU IAmb IAmb 18 15 37.9
comp=Z,3.6nm,0.7s
MSU Marysvale 47.53 315 P P 18 15 30.4 +1.1
MVU Marysvale 47.55 315 P P 18 15 30.6 +1.1
BW06 Boulder Array 47.98 322 P P 18 15 33.1 +0.4
BW06 IAmb IAmb 18 15 34.1
comp=Z,7.4nm,1.3s
PD31 Pinedale Array 47.98 322 P P 18 15 32.8 +0.2
PD31 IAmb IAmb 18 15 34.0
comp=Z,5.8nm,1.2s
PDAR Pinedale Array 47.98 322 P P 18 15 32.9 +0.2
comp=Z,1.7nm,0.5s,baz=128,slow=11,SNR=14
comp=Z,1.7nm,0.5s
PDAR Pinedale Array 47.98 322 P P 18 15 32.5 -0.1
JLU Jordanelle 48.05 318 P P 18 15 33.9 +0.7
JLU IAmb IAmb 18 15 35.8
comp=Z,3.9nm,0.9s
NLU North Lily Min 48.14 317 P P 18 15 34.0 0.0
NLU IAmb IAmb 18 15 35.8
comp=Z,4.2nm,0.8s
DUG Dugway, Tooele 48.76 317 P P 18 15 39.3 +0.7
DUG IAmb IAmb 18 15 46.8
comp=Z,3.1nm,0.7s
LOHW Long Hollow 49.08 322 P P 18 15 41.0 -0.1
LOHW IAmb IAmb 18 15 57.0
comp=Z,3.2nm,0.7s
REDW Red Top Meadow 49.10 322 P P 18 15 40.5 -0.8
REDW IAmb IAmb 18 16 00.4
comp=Z,4.2nm,0.7s
PLCA Paso Flores 49.20 180 P P 18 15 41.9 +0.1
comp=Z,2.5nm,0.9s,baz=12,slow=9.9,SNR=3.9
PLCA LR LR 18 38 06.7
comp=Z,44nm,19.5s,baz=178,slow=38
comp=Z,2.5nm,0.9s
TPAW Teton Pass 49.23 322 P P 18 15 42.4 +0.1
TPAW IAmb IAmb 18 15 47.9
comp=Z,3.7nm,0.8s
MOOW Moose Ponds 49.24 322 P P 18 15 42.5 +0.2
BGU Big Grassy Mou 49.25 318 P P 18 15 43.2 +0.8
HVU Hansel Valley 49.50 319 P P 18 15 43.0 -1.3
GCMT Greycliff 49.76 325 P P 18 15 46.2 0.0
TPNV Topopah Spring 49.79 312 P P 18 15 47.0 +0.4
YHL Hebgen Lake 50.11 323 P P 18 15 50.9 +1.9
YHL IAmb IAmb 18 16 06.0
comp=Z,9.7nm,1.2s
MCMT McKenzie Canyo 51.10 322 P P 18 15 56.0 -0.4
LRM Limekiln Ridge 51.39 323 P P 18 15 58.8 +0.2
HLID Hailey 51.42 320 P P 18 15 59.4 +0.5
HRY Holter Researc 51.52 325 P P 18 15 58.8 -0.7
NVAR Mina Array Bea 51.86 313 P P 18 16 02.6 +0.4
comp=Z,1.1nm,0.5s,baz=116,slow=7.1,SNR=10
comp=Z,1.1nm,0.5s
NVAR Mina Array Bea 51.86 313 P P 18 16 02.3 0.0
LHV Little Huntoon 51.94 312 P P 18 16 03.3 +0.8
KVN Kaiserville 51.95 313 P P 18 16 02.9 +0.1
MFID Camas Ranch 52.26 319 P P 18 16 05.7 +0.7
YERR Yerington 52.75 313 P P 18 16 09.6 +0.8
JTMT Jette 53.48 325 P P 18 16 13.8 -0.2
F10A Beach Ranch, E 54.34 322 P P 18 16 20.5 +0.2
F10A IAmb IAmb 18 16 30.2
comp=Z,3.5nm,0.9s
I07A Izee 54.94 319 P P 18 16 25.6 +0.9
G08A Pilot Rock 55.11 320 P P 18 16 25.8 -0.1
E09A Wood Farm, Sta 55.16 322 P P 18 16 26.1 +0.1

E09A IAmb IAmb 18 16 44.6
comp=Z,6.0nm,1.2s
PINE Pine Mountain 55.77 318 P P 18 16 31.7 +0.9
YBH Yreka Blue Hor 56.21 315 P P 18 16 32.9 -0.9
comp=Z,1.2nm,0.4s,baz=176,slow=5.1,SNR=5.7
comp=Z,1.2nm,0.4s
YBH Yreka Blue Hor 56.21 315 IAmb IAmb 18 16 53.7
comp=Z,8.3nm,1.4s
H04A Detroit Lake 56.94 318 P P 18 16 39.4 +0.4
YKA Yellowknife Ar 62.32 339 P P 18 17 16.0 +0.5
comp=Z,1.0nm,0.6s,baz=130,slow=7.1,SNR=2.1
YKA LR LR 18 46 14.3
comp=Z,35nm,18.6s,baz=194,slow=38
comp=Z,1.0nm,0.6s
MDT Midelt 65.33 58 LR LR 18 43 43.3
comp=Z,13nm,19.8s,baz=56,slow=34
ESDC Sonseca Array B 66.67 51 P P 18 17 44.7 +0.2
comp=Z,1.1nm,0.6s,baz=268,slow=6.3,SNR=11
comp=Z,1.1nm,0.6s
SUMG Summit 66.72 10 P P 18 17 44.6 -0.1
DLBC Dease Lake 66.80 331 LR LR 18 48 57.7
comp=Z,33nm,18.1s,baz=308,slow=38
TORD Torodi Ar. Bea 71.10 79 P P 18 18 12.2 -0.3
comp=Z,0.9nm,0.5s,baz=287,slow=6.9,SNR=11
comp=Z,0.9nm,0.5s
M30M Minto, Yukon 71.36 333 P P 18 18 13.3 +0.1
M30M IAmb IAmb 18 18 26.8
comp=Z,3.5nm,0.9s
INK Inuvik 72.06 340 LR LR 18 51 47.1
comp=Z,42nm,18.3s,baz=186,slow=37
JMIC Jan Mayen 72.97 18 LR LR 18 45 48.5
comp=Z,14nm,21.5s,baz=188,slow=32
DAG Danmarks Havn 73.37 11 *i* P P 18 18 23.0 -1.9
SSB Saint Sauveur 73.53 45 P P 18 18 27.4 +0.9
SSB IAmb IAmb 18 18 28.8
comp=Z,7.4nm,1.2s
M27K Edge Creek, AK 73.59 333 P P 18 18 27.4 +0.8
M27K IAmb IAmb 18 18 37.5
comp=Z,4.4nm,1.1s
BCAR Beaver Creek A 73.70 333 P P 18 18 27.5 +0.3
BMRM Bremner River 74.59 331 P P 18 18 31.6 -0.7
ECH Echery 75.52 42 P P 18 18 37.4 -0.6
ECH IAmb IAmb 18 18 45.1
comp=Z,4.8nm,0.9s
SENIN Lac Senin/Sane 75.52 44 P P 18 18 36.8 -1.5
J25K Salcha River, 75.58 335 P P 18 18 39.0 +1.0
ILAR Eielson Array 76.25 335 P P 18 18 41.4 -0.3
comp=Z,0.5nm,0.5s,baz=107,slow=4.1,SNR=5.3
ILAR LR LR 18 53 39.3
comp=Z,40nm,19.4s,baz=188,slow=37
comp=Z,0.5nm,0.5s
RND Reindeer 76.91 333 P P 18 18 46.1 +0.5
TUE Stuetta 76.94 44 P P 18 18 46.5 +0.1
TUE IAmb IAmb 18 18 53.9
comp=Z,5.6nm,0.8s
KEST Kesra 76.97 55 P P 18 18 47.4 +0.8
KEST IAmb IAmb 18 18 48.4
comp=Z,4.7nm,1.0s
DAVA Damuels 77.32 44 *i* P P 18 18 49.4 +1.0
comp=Z,6.6nm,1.1s
TRF Thorofare Moun 77.56 333 P P 18 18 49.6 +0.1
TRF IAmb IAmb 18 19 01.1
comp=Z,4.7nm,0.9s
FETA Feichten 77.90 44 *i* P P 18 18 52.7 +1.1
comp=Z,12nm,1.3s
RETA Reutte 77.92 43 *i* P P 18 18 52.5 +0.8
comp=Z,3.6nm,0.8s
BPAW Bear Paw Mtn. 77.93 334 P P 18 18 51.6 +0.3
BPAW IAmb IAmb 18 19 04.9
comp=Z,8.7nm,1.4s
MOTA Moosalm 78.16 43 *e*P P 18 18 53.6 +0.6
comp=Z,2.3nm,0.9s
SQTA Sankt Quirin 78.23 44 *i* P P 18 18 54.2 +0.7
comp=Z,6.8nm,1.2s
CAST Castle Rocks 78.36 333 P P 18 18 52.6 -1.1
CAST IAmb IAmb 18 19 04.5
comp=Z,2.9nm,0.8s
PPLA Purkeypile 78.38 332 P P 18 18 54.0 0.0
WTTA Wattenberg 78.52 44 *e*P P 18 18 55.4 +0.3
comp=Z,2.1nm,0.5s
NB2 NORSAR Subarra 78.55 29 P P 18 18 55.5 +0.7
comp=Z,0.4nm,0.5s,baz=269,slow=5.9
NOA NORSAR Array B 78.55 29 P P 18 18 54.9 +0.1
comp=Z,0.6nm,0.6s,baz=270,slow=5.4,SNR=3.3
NOA LR LR 18 50 06.2
comp=Z,11nm,20.2s,baz=255,slow=33
comp=Z,0.6nm,0.6s
H21K Melozitna Rive 78.82 335 P P 18 18 55.8 -0.3
H21K IAmb IAmb 18 19 16.0
comp=Z,3.3nm,0.9s
IMAR Indian Mountai 79.23 336 P P 18 18 58.2 -0.2
J20K Nowinta River 79.32 334 P P 18 18 59.1 +0.3
J20K IAmb IAmb 18 19 07.2
comp=Z,4.1nm,0.7s
CLL Collm 79.38 39 *e*P P 18 19 00.0 +0.5
GERES GERESS Array B 79.88 42 P P 18 19 02.8 +0.4
comp=Z,0.3nm,0.4s,baz=237,slow=4.4,SNR=7.1
comp=Z,0.3nm,0.4s
GERES GERESS Array B 79.88 42 P P 18 19 02.1 -0.2
OBKA Obir 80.54 44 *e*P P 18 19 07.3 +1.3
comp=Z,3.3nm,1.0s
ARSA Arzberg 81.17 43 *i* P P 18 19 10.8 +1.5
comp=Z,2.5nm,1.2s
CONA Conrad Observa 81.36 43 *e*P P 18 19 11.0 +0.7
comp=Z,3.0nm,1.0s
RONA Rosalia, Austr 81.66 43 *e*P P 18 19 12.5 +0.6
comp=Z,3.7nm,1.2s
ARCES ARCESS Array B 84.10 21 P P 18 19 24.4 +0.4
comp=Z,1.7nm,0.9s,baz=274,slow=4.4,SNR=1.3
comp=Z,1.7nm,0.9s
FINES FINESS Array B 85.68 29 P P 18 19 32.3 +0.2
comp=Z,1.7nm,0.6s,baz=249,slow=3.7,SNR=9.7
comp=Z,1.7nm,0.6s
FINES FINESS Array B 85.68 29 P P 18 19 31.9 -0.2
BELA Belgrano 2 88.76 173 P P 18 19 47.4 +0.8
BELA IAmb IAmb 18 20 01.7
comp=Z,3.5nm,1.0s
VNA3 Neumayer Olymp 89.31 164 P P 18 19 50.6 +1.2
VNA1 Neumayer--Stat 89.42 163 P P 18 19 51.6 +1.8
VNA1 Neumayer--Stat 89.42 163 PKKP 18 37 12.8
VNA2 Neumayer--Watz 89.81 163 P P 18 19 52.8 +1.1
baz=323,slow=4.6
SNAA Sanae 91.45 163 P P 18 20 00.4 +1.0
TROLL Troll, Antarti 93.15 163 P P 18 20 08.6 +1.3
KIRV Kirov 97.60 27 LR LR 18 59 48.0
comp=Z,19nm,21.2s,baz=52,slow=32
TIXI Tiksi 98.75 354 LR LR 19 10 30.5
comp=Z,18nm,18.3s,baz=358,slow=39
LBTB Lobatse 99.38 114 LR LR 19 05 15.4
comp=Z,28nm,18.3s,baz=140,slow=35
MKAR Makanchi Array 119.75 21 PKP **PKPdf** 18 25 42.4 -1.5
comp=Z,0.2nm,0.4s,baz=281,slow=2.1,SNR=6.1
KSRS Korea Array 130.84 340 PKP **PKPdf** 18 26 04.8 -0.6
comp=Z,0.4nm,0.6s,baz=358,slow=1.9,SNR=2.6
PZH PanZhiHua 144.25 12 PKP **PKPdf** 18 26 30.0 -0.4
CMAR Chiang Mai Arr 151.16 21 PKPbc **PKPbc** 18 26 47.3 -0.4
comp=Z,0.9nm,0.7s,baz=334,slow=2.4,SNR=7.0
CMAR Chiang Mai Arr 151.16 21 **PKPbc** 18 26 46.8 -0.9
ASAR Alice Springs 152.09 235 PKPbc **PKPbc** 18 26 48.5 -1.3
comp=Z,1.0nm,0.5s,baz=115,slow=3.2,SNR=32
WRA Warramunga Arr 153.27 243 PKPbc **PKPbc** 18 26 51.4 -1.0
comp=Z,0.7nm,0.3s,baz=272,slow=0.2,SNR=75
WRA Warramunga Arr 153.27 243 **PKPbc** 18 26 51.1 -1.4

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*JMA **06** 18:15:34.6±0.0,36.6′N±0.1′×139.4′E±0.1′,1,h6km,MV3.5/20, TOCHIGI GUNMA BORDER*
JMA Felt III J1 at TOCHIGI GUNMA BORDER .
*IDC **06** 18:15:34.6±2.0,36.40′N×139.33′E,h0km,mb3.4/2, mbtmp3.6/3,ML3.5/1,MS3.3/2,Error ellipse: s-maj=29.6km s-min=11.5km az=29.0*
*NIED **06** 18:15:34.6,36.55′N×139.42′E,h6km,MW3.4,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.19; $M_{\theta\theta}$0.13; $M_{\phi\phi}$-0.33; $M_{r\theta}$-0.23; $M_{\theta\phi}$-1.34; $M_{\phi r}$0.08; Fault plane solution: $M_0$1.39000×10^{14} NP1: ϕ_s356.00000°,δ80.00000°,λ6.00000°. NP2:ϕ_s265.00000°, δ84.00000°,λ170.00000°.*
ISC 06 18:15:34.3±0.9,36.54N±0.03×139.39E±0.04,h9km±7km, n20,σ0:60/19,4D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAG	**Ashikaga**	**0.12**	**154**	⇓*i*P	**Pg**	**18 15 37.2**	**+0.1**
JAG				⇓S	**Sg**	**18 15 38.9**	**-0.1**
JKT	**Katashina**	**0.26**	**334**	⇓*i*P	**Pg**	**18 15 39.9**	**+0.4**

JKT				⇓S		Sg	18 15 43.6	+0.6
JGK	**Kuni**	**0.60**	**273**	*i* P		**Pb**	**18 15 46.8**	**-0.3**
JGK				S		**Sb**	**18 15 55.4**	**-0.4**
JSB	**Shiboa**	**0.61**	**44**	*i* P		**Pb**	**18 15 46.4**	**-0.8**
JRY	**Ryogami san**	**0.65**	**217**	*i* P		**Pb**	**18 15 47.2**	**-0.7**
JUON	**Uonuma**	**0.72**	**339**	*i* P		**Pg**	**18 15 48.3**	**0.0**
JUON				S		**Sg**	**18 15 57.8**	**0.0**
JFY	**Yanaizu**	**0.91**	**16**	*i* P		**Pg**	**18 15 51.7**	**-0.1**
JFY				S		**Sg**	**18 16 03.1**	**-0.5**
MJAR	**Matsushiro Arr**	**0.95**	**271**	Pg		**Pg**	**18 15 51.6**	**-1.0**
	15nm,0.3s,baz=98,slow=17,SNR=914							
MJAR				Lg		Lg	18 16 03.8	
	31nm,0.3s,baz=119,slow=19,SNR=32							
MAT	**Matsushiro**	**0.95**	**271**	*i* P		**Pg**	**18 15 52.7**	**0.0**
MAT				S		**Sg**	**18 16 05.3**	**+0.3**
JHJ	**Hachijo jima 2**	**3.42**	**174**	Pn		**Pn**	**18 16 28.8**	**+0.8**
	12nm,0.3s,baz=7.8,slow=18,SNR=1.8							
JHJ				Sn		**Sn**	**18 17 08.3**	**-0.4**
	20nm,0.3s,baz=276,slow=18,SNR=1.6 88nm,0.5s							
YAK	**Yakutsk**	**26.23**	**350**	LR		LR	18 32 06.7	
	comp=Z,29nm,18.6s,baz=93,slow=38							
H11N2	**WAKE ISLAND Hy**	**29.33**	**117**	T		T	18 51 45.5	
	baz=312,slow=75,SNR=7.0							
H11N1	**WAKE ISLAND Hy**	**29.33**	**117**	T		T	18 51 47.0	
	baz=312,slow=75,SNR=6.4							
H11N3	**WAKE ISLAND Hy**	**29.34**	**117**	T		T	18 51 45.6	
	baz=312,slow=75,SNR=6.7							
H11S1	**WAKE ISLAND Hy**	**29.99**	**119**	T		T	18 52 35.2	
	baz=314,slow=76,SNR=9.1							
H11S3	**WAKE ISLAND Hy**	**29.99**	**119**	T		T	18 52 32.7	
	baz=314,slow=76,SNR=7.6							
H11S2	**WAKE ISLAND Hy**	**30.01**	**119**	T		T	18 52 33.8	
	baz=314,slow=76,SNR=7.7							
PMG	**Port Moresby**	**46.28**	**169**	LR		LR	18 42 49.1	
	comp=Z,93nm,21.4s,baz=228,slow=35							
WRA	**Warramunga Arr**	**56.37**	**186**	P		**P**	**18 25 15.8**	**-0.2**
	0.4nm,0.7s,baz=360,slow=7.6,SNR=11 0.4nm,0.7s							
ASAR	**Alice Springs**	**60.10**	**186**	P		**P**	**18 25 43.1**	**+1.1**
	0.3nm,0.7s,baz=12,slow=13,SNR=3.7 0.3nm,0.7s							

MAN 06 18:39:15.8, 16°.26N × 122°.26E, h2km, mb3.8, ML2.5, MS2.0, Luzon

*JMA **06** 18:50:49.4±0.2, 24°.1N × 122°.0E±0°.8, h46km±3km, MV2.5/11, TAIWAN REGION*
*TAP **06** 18:50:50.0, 23°.80N × 122°.01E, h38km, ML2.5, C*
ISC 06 18:50:50.4±3.0, 23°.76N±0°.02 × 122°.04E±0°.02, h38km±4km, n99, σ1§27/188, 1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TEYL	**Yanliau Villag**	**0.42**	**284**	P			**Pn**	**18 50 58.9**	**-0.8**
	baz=284								
TEYL				S			**Sn**	**18 51 06.2**	**-0.4**
	baz=284								
HWA	**Hwalien**	**0.45**	**298**	P			**Pn**	**18 50 59.3**	**-0.9**
	baz=291								
HWA				S			**Sn**	**18 51 07.7**	**+0.4**
	baz=291								
TEGC	**Jichi Village**	**0.46**	**263**	P			**Pn**	**18 50 59.4**	**-0.9**
	baz=249								
TEGC				S			**Sn**	**18 51 07.1**	**-0.4**
	baz=249								
TWD	**Chiawan**	**0.51**	**308**	*i* P			**Pn**	**18 50 59.8**	**-1.4**
	baz=306								
TWD				*i* S			**Sn**	**18 51 07.0**	**-1.9**
	baz=306								
ETM	**Tongmen**	**0.54**	**292**	P			**Pn**	**18 51 00.0**	**-1.6**
	baz=289								
ETM				S			**Sn**	**18 51 08.5**	**-1.0**
	baz=289								
ETL	**Fush Village**	**0.55**	**316**	P			**Pn**	**18 51 00.3**	**-1.5**
	baz=309								
ETL				S			**Sn**	**18 51 07.7**	**-2.0**
	baz=309								
ESL	**Shilin**	**0.56**	**275**	⇓*i* P			**Pn**	**18 51 00.3**	**-1.6**
	baz=265								
ESL				*i* S			**Sn**	**18 51 07.9**	**-2.0**
	baz=265								
EGFH	**Guangfu**	**0.57**	**260**	*i* P			**Pn**	**18 51 01.2**	**-0.8**
	baz=250								
EGFH				S			**Sn**	**18 51 10.0**	**-0.3**
	baz=250								
NACB	**Ninganchiao**	**0.57**	**315**	P			**Pn**	**18 51 00.4**	**-1.7**
	baz=311								
NACB				S			**Sn**	**18 51 08.1**	**-2.3**
	baz=311								
HGSD	**Ruisui**	**0.63**	**244**	P			**Pn**	**18 51 01.6**	**-1.2**
	baz=240								
HGSD				S			**Sn**	**18 51 10.4**	**-1.2**
	baz=240								
ETLH	**Xiulin Townshi**	**0.67**	**311**	P			**Pn**	**18 51 02.4**	**-1.2**
	baz=310								
ETLH				S			**Sn**	**18 51 11.3**	**-1.6**
	baz=310								
EHY	**Hungye**	**0.71**	**249**	*i* P			**Pn**	**18 51 02.8**	**-1.0**
	baz=258								
EHY				S			**Sn**	**18 51 12.6**	**-0.9**
	baz=258								
ENA	**Nanau**	**0.71**	**338**	*i* P			**Pn**	**18 51 02.8**	**-1.2**
	baz=329								
ENA				*i* S			**Sn**	**18 51 12.6**	**-1.2**
	baz=329								
EWUT	**Wuta**	**0.72**	**341**	P			**Pn**	**18 51 03.3**	**-0.7**
	baz=332								
EWUT				S			**Sn**	**18 51 12.6**	**-1.3**
	baz=332								
YULB	**Yu-li**	**0.77**	**242**	P			**Pn**	**18 51 04.0**	**-0.8**
	baz=251								
YULB				S			**Sn**	**18 51 14.4**	**-0.8**
	baz=251								
EYUL	**Yuli**	**0.78**	**238**	*i* P			**Pn**	**18 51 04.5**	**-0.4**
	baz=227								
EYUL				*i* S			**Sn**	**18 51 15.7**	**+0.4**
	baz=227								
WHF	**Hehuan Shan**	**0.80**	**298**	P			**Pn**	**18 51 03.6**	**-2.0**
	baz=289								
WHF				S			**Sn**	**18 51 14.8**	**-1.8**
	baz=289								
OWD	**Renai**	**0.81**	**284**	*i* P			**Pn**	**18 51 04.5**	**-1.0**
	baz=286								
OWD				*i* S			**Sn**	**18 51 14.6**	**-1.8**
	baz=286								
VWDT	**VWDT**	**0.82**	**269**	P			**Pn**	**18 51 04.8**	**-0.6**
	baz=266								
VWDT				S			**Sn**	**18 51 15.9**	**-0.5**
	baz=266								
CHGB	**Renai**	**0.84**	**291**	P			**Pn**	**18 51 05.1**	**-0.9**
	baz=288								
CHGB				S			**Sn**	**18 51 15.5**	**-1.8**
	baz=288								
TWC	**Suao**	**0.86**	**348**	P			**Pn**	**18 51 05.7**	**-0.3**
	baz=350								
TWC				*i* S			**Sn**	**18 51 16.4**	**-1.0**
	baz=350								
FUSS	**Fushou**	**0.87**	**304**	*e*P			**Pn**	**18 51 05.4**	**-1.0**
	baz=302								
FUSS				*e*S			**Sn**	**18 51 16.8**	**-1.2**
	baz=302								
WUSB	**Renai**	**0.87**	**285**	P			**Pn**	**18 51 05.6**	**-0.7**
	baz=283								
WUSB				S			**Sn**	**18 51 16.9**	**-1.0**
	baz=283								
FULB	**Fuli**	**0.89**	**231**	*i* P			**Pn**	**18 51 05.3**	**-1.1**
	baz=217								
FULB				*i* S			**Sn**	**18 51 17.1**	**-1.0**
	baz=217								
NNSB	**Datong**	**0.89**	**318**	P			**Pn**	**18 51 05.5**	**-1.1**
	baz=317								
NNSB				S			**Sn**	**18 51 16.5**	**-1.9**
	baz=317								
LATG	**Datong**	**0.90**	**329**	P			**Pn**	**18 51 05.7**	**-0.9**
	baz=329								
LATG				S			**Sn**	**18 51 17.1**	**-1.4**
	baz=329								
NNS	**Nan Shan**	**0.91**	**318**	P			**Pn**	**18 51 07.3**	**+0.6**
	baz=318								
NNS				S			**Sn**	**18 51 17.2**	**-1.5**
	baz=318								
NDS	**Dongshan**	**0.91**	**341**	*e*P			**Pn**	**18 51 06.2**	**-0.5**
	baz=342								
NDS				*e*S			**Sn**	**18 51 18.4**	**-0.3**
	baz=342								
TWT	**Tachien**	**0.93**	**302**	*i* P			**Pn**	**18 51 06.6**	**-0.4**
	baz=300								
TWT				*i* S			**Sn**	**18 51 19.0**	**-0.2**
	baz=300								
TDCB	**Techi**	**0.94**	**301**	P			**Pn**	**18 51 07.2**	**0.0**
	baz=300								
TDCB				S			**Sn**	**18 51 18.2**	**-1.3**
	baz=300								
ENTT	**Nioudou**	**0.97**	**334**	*i* P			**Pn**	**18 51 07.2**	**-0.3**
	baz=334								
ENTT				*i* S			**Sn**	**18 51 19.5**	**-0.6**
	baz=334								
SSLB	**Suanglung**	**0.99**	**272**	P			**Pn**	**18 51 07.2**	**-0.6**
	baz=269								
SSLB				*e*S			**Sn**	**18 51 21.2**	**+0.5**
	baz=269								
EDH	**Donghe**	**1.04**	**221**	*i* P			**Pn**	**18 51 07.5**	**-0.8**
	baz=211								
EDH				*i* S			**Sn**	**18 51 20.8**	**-0.9**
	baz=211								
SMLT	**Sun Moon Lake**	**1.05**	**277**	*i* P			**Pn**	**18 51 08.4**	**-0.2**
	baz=274								
SMLT				*i* S			**Sn**	**18 51 21.5**	**-0.6**
	baz=274								
WCS	**Beigang Elemen**	**1.07**	**286**	P			**Pn**	**18 51 08.7**	**-0.2**
	baz=279								
WCS				*e*S			**Sn**	**18 51 22.0**	**-0.5**
	baz=279								
FUSB	**Fushanzhiwuyua**	**1.07**	**338**	*e*P			**Pn**	**18 51 08.3**	**-0.6**
	baz=338								
FUSB				*e*S			**Sn**	**18 51 21.9**	**-0.8**
	baz=338								
JYNG	**Yonaguni jima**	**1.07**	**50**	P			**Pn**	**18 51 08.9**	**+0.1**
JYNG				*e*S			**Sn**	**18 51 22.9**	**+0.4**
EGS		**1.08**	**355**	P			**Pn**	**18 51 10.1**	**+1.1**
	baz=7.0								
EGS				S			**Sn**	**18 51 22.4**	**-0.3**
	baz=7.0								
YHNB	**Yeheng**	**1.09**	**326**	P			**Pn**	**18 51 09.0**	**-0.2**
	baz=315								
YHNB				S			**Sn**	**18 51 21.9**	**-1.1**
	baz=315								
TYC	**Yuchr**	**1.09**	**278**	*i* P			**Pn**	**18 51 08.8**	**-0.3**
	baz=275								
TYC				*i* S			**Sn**	**18 51 23.3**	**+0.4**
	baz=275								
ELDTW	**Lidau**	**1.10**	**239**	*i* P			**Pn**	**18 51 08.4**	**-0.9**
	baz=225								
ELDTW				S			**Sn**	**18 51 22.2**	**-1.1**
	baz=225								
NSK	**Sanguang**	**1.10**	**326**	*i* P			**Pn**	**18 51 08.9**	**-0.4**
	baz=315								
NSK				S			**Sn**	**18 51 22.4**	**-0.9**
	baz=315								
NWLT	**Wulai**	**1.12**	**334**	*e*P			**Pn**	**18 51 09.5**	**-0.1**
	baz=323								
NWLT				*e*S			**Sn**	**18 51 22.5**	**-1.3**
	baz=323								
WHP	**Taichung City**	**1.12**	**297**	P			**Pn**	**18 51 11.0**	**+1.4**
	baz=302								
WHP				S			**Sn**	**18 51 23.8**	**0.0**
	baz=302								
YOJ	**Yonaguni jima**	**1.13**	**52**	P			**Pn**	**18 51 09.8**	**+0.1**
	baz=54								
YOJ				S			**Sn**	**18 51 24.1**	**+0.2**
	baz=54								
YOJ	**Yonaguni jima**	**1.13**	**52**	P			**Pn**	**18 51 09.7**	**+0.1**
YOJ				*e*S			**Sn**	**18 51 23.8**	**0.0**
ALS	**Alishan**	**1.16**	**258**	*i* P			**Pn**	**18 51 10.5**	**+0.2**
	baz=263								
ALS				*i* S			**Sn**	**18 51 25.1**	**0.0**
	baz=263								
LONT	**Longtian**	**1.20**	**225**	P			**Pn**	**18 51 09.8**	**-0.8**
	baz=232								
LONT				S			**Sn**	**18 51 25.2**	**-0.4**
	baz=232								
WJS	**Zhushan**	**1.20**	**273**	*e*P			**Pn**	**18 51 11.7**	**+1.1**
	baz=271								
NFF	**Wufeng Townshi**	**1.21**	**316**	P			**Pn**	**18 51 10.2**	**-0.6**
	baz=315								
NFF				S			**Sn**	**18 51 25.1**	**-0.8**
	baz=315								
LDUT	**Ludao**	**1.21**	**206**	*e*P			**Pn**	**18 51 09.3**	**-1.4**
	baz=203								
LDUT				S			**Sn**	**18 51 23.4**	**-2.4**
	baz=203								
TIPB	**Shuangxi**	**1.22**	**351**	*i* P			**Pn**	**18 51 11.2**	**+0.3**
	baz=3.0								
TIPB				S			**Sn**	**18 51 26.5**	**+0.3**
	baz=3.0								
WNT	**Mingjian**	**1.25**	**275**	*i* P			**Pn**	**18 51 11.8**	**+0.6**
	baz=273								
WNT				S			**Sn**	**18 51 28.1**	**+1.4**
	baz=273								
LIOB	**Emei**	**1.28**	**313**	P			**Pn**	**18 51 12.7**	**+0.9**
	baz=312								
LIOB				*e*S			**Sn**	**18 51 29.1**	**+1.4**
	baz=312								
NSTT	**Nanjuang**	**1.28**	**313**	P			**Pn**	**18 51 12.5**	**+0.7**
	baz=312								
NSTT				S			**Sn**	**18 51 28.6**	**+0.9**
	baz=312								
TWGBT	**Beinan**	**1.29**	**223**	*e*P			**Pn**	**18 51 10.8**	**-1.0**
	baz=231								
TWGBT				*e*S			**Sn**	**18 51 27.4**	**-0.5**
	baz=231								
TWG	**Pinlang**	**1.29**	**224**	*e*P			**Pn**	**18 51 10.5**	**-1.4**
	baz=231								
TWG				*e*S			**Sn**	**18 51 26.1**	**-1.9**
	baz=231								
TWQ1	**Liyutan**	**1.29**	**297**	P			**Pn**	**18 51 13.2**	**+1.2**
	baz=295								
TWQ1				S			**Sn**	**18 51 29.6**	**+1.6**
	baz=295								
STYH	**Taoyuan**	**1.30**	**243**	P			**Pn**	**18 51 12.2**	**+0.2**
	baz=234								
STYH				*e*S			**Sn**	**18 51 29.0**	**+0.8**
	baz=234								
TCU	**Taichung**	**1.30**	**287**	P			**Pn**	**18 51 13.7**	**+1.7**
	baz=285								
TCU				S			**Sn**	**18 51 30.3**	**+2.1**
	baz=285								
SXI1	**Grass Mountain**	**1.33**	**354**	P			**Pn**	**18 51 12.5**	**-0.1**
	baz=9.0								
SXI1				*e*S			**Sn**	**18 51 28.6**	**-0.5**
	baz=9.0								
TPUB	**Ta-pu**	**1.37**	**251**	P			**Pn**	**18 51 14.1**	**+1.1**
	baz=248								
TPUB				*e*S			**Sn**	**18 51 31.8**	**+1.9**
	baz=248								
WDLH	**Douliu**	**1.38**	**267**	*e*P			**Pn**	**18 51 14.3**	**+1.3**
	baz=265								
WDLH				*e*S			**Sn**	**18 51 31.2**	**+1.2**
	baz=265								
WTP	**Ta-pu**	**1.41**	**249**	P			**Pn**	**18 51 14.4**	**+0.9**
	baz=246								
YM01	**YM01**	**1.44**	**343**	*e*P			**Pn**	**18 51 13.8**	**-0.2**
	baz=358								
YM01				*e*S			**Sn**	**18 51 31.8**	**+0.2**
	baz=358								
TWS1	**Kuangyinshan**	**1.45**	**337**	S			**Sn**	**18 51 33.2**	**+1.4**
	baz=337								
SGST	**Jiashian**	**1.50**	**243**	P			**Pn**	**18 51 15.7**	**+1.0**
	baz=231								
SGST				*e*S			**Sn**	**18 51 35.1**	**+2.0**
	baz=231								
CHN1	**Nanshi**	**1.50**	**248**	*i* P			**Pn**	**18 51 16.2**	**+1.5**
	baz=245								
CHN1				*i* S			**Sn**	**18 51 36.4**	**+3.2**
	baz=245								
TWK	**Hsinying**	**1.51**	**251**	*i* P			**Pn**	**18 51 16.1**	**+1.3**
	baz=248								
TWK				S			**Sn**	**18 51 36.9**	**+3.5**
	baz=248								
WTK	**Tuku**	**1.51**	**267**	*e*P			**Pn**	**18 51 16.4**	**+1.4**
	baz=265								
WTK				*e*S			**Sn**	**18 51 36.7**	**+3.3**
	baz=265								
SNST	**Tainan City**	**1.52**	**249**	P			**Pn**	**18 51 16.6**	**+1.6**
	baz=247								
SNST				S			**Sn**	**18 51 37.3**	**+3.8**
	baz=247								
WRL	**Guolierlin Hig**	**1.53**	**275**	*e*P			**Pn**	**18 51 16.5**	**+1.4**
	baz=264								
WRL				*e*S			**Sn**	**18 51 35.9**	**+2.2**
	baz=264								
ECL	**Taimali**	**1.53**	**221**	P			**Pn**	**18 51 14.0**	**-1.2**
	baz=218								
ECL				S			**Sn**	**18 51 32.2**	**-1.6**
	baz=218								
HATJ	**Hateruma jima**	**1.64**	**79**	P			**Pn**	**18 51 16.9**	**+0.2**
HATJ				S			**Sn**	**18 51 36.9**	**+0.3**
SSD	**Sandimen**	**1.64**	**232**	*e*P			**Pn**	**18 51 17.7**	**+1.0**
	baz=226								
SSD				*e*S			**Sn**	**18 51 38.6**	**+2.0**
	baz=226								
IRIF	**Iriomote-Funau**	**1.65**	**69**	P			**Pn**	**18 51 17.0**	**+0.2**
IRIF				*e*S			**Sn**	**18 51 37.4**	**+0.7**
TSMG	**Majia**	**1.66**	**231**	*e*P			**Pn**	**18 51 18.2**	**+1.3**
	baz=226								
TSMG				*e*S			**Sn**	**18 51 36.9**	**-0.1**
	baz=226								
ICHU	**Yijhu**	**1.66**	**256**	*e*P			**Pn**	**18 51 18.5**	**+1.5**
	baz=254								
SCST	**Cishan**	**1.67**	**239**	*e*P			**Pn**	**18 51 19.5**	**+2.5**
	baz=224								
SCST				*e*S			**Sn**	**18 51 40.5**	**+3.3**
	baz=224								
WSF	**Szhu**	**1.67**	**266**	*e*P			**Pn**	**18 51 17.7**	**+0.7**
	baz=264								
WSF				*e*S			**Sn**	**18 51 37.2**	**0.0**
	baz=264								
WSL	**Shuilin Townsh**	**1.68**	**262**	P			**Pn**	**18 51 17.3**	**+0.1**
	baz=260								
WSL				S			**Sn**	**18 51 39.2**	**+1.8**
	baz=260								
CHN8	**Yiju**	**1.73**	**256**	P			**Pn**	**18 51 18.8**	**+1.0**
	baz=254								
CHN8				*e*S			**Sn**	**18 51 41.5**	**+2.8**
	baz=254								
MASBT	**Mashibuluo**	**1.73**	**229**	*e*P			**Pn**	**18 51 18.1**	**+0.2**
	baz=225								
MASBT				*e*S			**Sn**	**18 51 39.0**	**+0.3**
	baz=225								
EAST	**Anshuo**	**1.76**	**219**	*e*P			**Pn**	**18 51 17.8**	**-0.5**
	baz=217								
TAWH	**Dawu Township**	**1.77**	**217**	*e*P			**Pn**	**18 51 17.3**	**-1.2**
	baz=215								
TAWH				*e*S			**Sn**	**18 51 37.6**	**-2.1**
	baz=215								
LAY	**Lan-yu**	**1.77**	**195**	*e*P			**Pn**	**18 51 17.9**	**-0.7**
	baz=193								
LAY				*e*S			**Sn**	**18 51 37.4**	**-2.5**
	baz=193								
LYUB	**Lan-yu**	**1.80**	**194**	*e*P			**Pn**	**18 51 17.6**	**-1.3**
	baz=192								
LYUB				*e*S			**Sn**	**18 51 37.8**	**-2.8**
	baz=192								
SSPT	**Xinbi**	**1.86**	**227**	*e*P			**Pn**	**18 51 21.7**	**+2.0**
	baz=220								
JKRS	**Kuro-shima**	**1.86**	**75**	P			**Pn**	**18 51 20.5**	**+0.8**
JKRS				*e*S			**Sn**	**18 51 43.2**	**+1.2**
SCZT	**Fangliau**	**1.91**	**224**	*e*P			**Pn**	**18 51 22.6**	**+2.3**
	baz=218								
JIJ	**Ishigaki jima**	**2.01**	**72**	P			**Pn**	**18 51 21.8**	**0.0**
JIJ				S			**Sn**	**18 51 45.5**	**-0.3**
JISG	**Ishigakijimahi**	**2.23**	**68**	P			**Pn**	**18 51 24.6**	**-0.1**
JISG				*e*S			**Sn**	**18 51 50.5**	**-0.5**
WDGT	**Dungji**	**2.24**	**258**	P			**Pn**	**18 51 25.5**	**+0.6**
	baz=255								
PHUB	**P'eng-hu**	**2.28**	**264**	P			**Pn**	**18 51 25.7**	**+0.3**
	baz=250								
PHUB				*e*S			**Sn**	**18 51 52.5**	**+0.3**
	baz=250								
PNG	**Penghu**	**2.29**	**266**	*e*P			**Pn**	**18 51 25.9**	**+0.4**
	baz=263								
PNG				*e*S			**Sn**	**18 51 52.8**	**+0.3**
	baz=263								
VCHM	**Qimei**	**2.46**	**258**	*e*P			**Pn**	**18 51 28.5**	**+0.5**
	baz=255								
VCHM				*e*S			**Sn**	**18 51 57.2**	**+0.5**
	baz=255								
JTJ	**Tarama**	**2.58**	**70**	P			**Pn**	**18 51 29.9**	**+0.3**
VWUC	**VWUC**	**2.66**	**298**	*e*P			**Pn**	**18 51 30.0**	**-0.7**
	baz=296								
VWUC				*e*S			**Sn**	**18 51 59.8**	**-1.8**
	baz=296								
PTMZ	**Houxiangcun**	**2.95**	**296**	*e*P			**Pn**	**18 51 34.6**	**0.0**
	baz=295								

*IDC **06** 18:52:15.7±1.0, 36°.77N × 97°.12W, h0km, mb3.4/1, mbtmp3.4/5, ML3.7/4, Error ellipse: s-maj=16.6km s-min=10.1km az=177.0*
*TUL **06** 18:52:16.6±1.0, 36°.43N±0°.02 × 96°.92W±0°.04, h9km±7km, ML3.8, mb_Lg3.6/108(NEIC), Mwr3.3/18(SLM), Error ellipse: s-maj=4.5km s-min=2.2km az=65.0*
*NEIC **06** 18:52:16.6, 36°.42N × 96°.93W, h9km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.07; $M_{\theta\theta}$0.83; $M_{\phi\phi}$-0.90; $M_{r\theta}$-0.43; $M_{r\phi}$-0.46; $M_{\theta\phi}$-0.18; Fault plane solution: $M_0$1.08000×10^{14} NP1:ϕ_s330.00000°, δ65.00000°, λ5.00000°. NP2:ϕ_s238.00000°, δ85.00000°, λ155.00000°. Principal axes: T 1.0841, Plg21.0000°, Azm191.0000°; N 0.0000, Plg65.0000°, Azm48.0000°; P -1.0841, Plg14.0000°, Azm287.0000°;*
*ANF **06** 18:52:17.0±0.2, 36°.42N × 96°.92W, h9km, ML4.4/17 Error ellipse: s-maj=2.6km s-min=2.4km az=121.0*
*NEIC **06** 18:52:17.3±0.7, 36°.416N±0°.008 × 96°.94W±0°.03, h5km±2km, Error ellipse: s-maj=3.8km s-min=3.0km az=96.0*
ISC 06 18:52:16.3±1.1, 36°.42N±0°.02 × 96°.92W±0°.02, h3km±9km, n145, σ1§25/143, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
T35A	**Sooner Cattle**	**0.59**	**34**				**Pg**	**18 52 28.1**	**+0.5**
T35B	**Sooner Cattle**	**0.59**	**34**	P			**Pg**	**18 52 28.0**	**+0.3**
	baz=214,SNR=225								
T35B				S			**Sg**	**18 52 35.9**	**+0.5**
	baz=214								
OK005	**Luther M Schoo**	**0.80**	**196**	Pg			**Pg**	**18 52 31.6**	**+0.1**
OK009	**Oakdale Elemen**	**0.93**	**206**				**Pg**	**18 52 34.2**	**0.0**
TUL1	**Leonard**	**1.05**	**119**	Pg			**Pg**	**18 52 36.3**	**-0.1**
TUL1	**Leonard**	**1.05**	**119**	P			**Pg**	**18 52 36.3**	**-0.1**
	baz=300,SNR=566								
TUL1				S			**Sg**	**18 52 50.0**	**0.0**
	baz=300								
TUL1	**Leonard**	**1.05**	**119**	P			**Pg**	**18 52 36.4**	**-0.1**
	baz=300,SNR=120								
TUL1				S			**Sg**	**18 52 50.1**	**+0.2**
	baz=300								
OKCFA	**Oklahoma City**	**1.09**	**203**				**Pg**	**18 52 36.9**	**-0.4**
OKCFA	**Oklahoma City**	**1.09**	**203**	P			**Pg**	**18 52 36.8**	**-0.4**
	baz=23								
OKCFA				S			**Sg**	**18 52 52.0**	**+0.6**
	baz=23								
OKCSW	**OKLAHOMA CITY**	**1.10**	**203**				**Pg**	**18 52 36.8**	**-0.6**
FNO	**Franklin**	**1.23**	**199**				**Pn**	**18 52 39.0**	**-1.4**
U32A	**Winter Ranch,**	**1.68**	**269**				**Pn**	**18 52 46.7**	**+0.1**
U32A	**Winter Ranch,**	**1.68**	**269**	P			**Pn**	**18 52 46.9**	**+0.3**
	baz=88,SNR=74								
U32A				Sb			**Sb**	**18 53 10.0**	**+0.6**
	baz=88								
X34A	**Smith Ranch, M**	**1.96**	**203**				**Pn**	**18 52 51.5**	**+0.9**
X37A	**Clayton**	**2.22**	**145**	Pn			**Pn**	**18 52 54.5**	**+0.5**
X37A				IAmb_Lg				18 53 27.2

	comp=Z,182nm,0.7s								
KSU1	**Kansas State U**	**2.68**	**5**	P		**Pn**	**18 53 01.6**	**+1.2**	
	baz=185,SNR=13								
KSU1				Sb		**Sg**	**18 53 41.8**	**-0.8**	
	baz=185								
W39A	**Magazine**	**2.83**	**115**			**Pn**	**18 53 03.7**	**+1.4**	
W39A				IAmb_Lg			18 53 53.6		
	comp=Z,177nm,0.7s								
W39A	**Magazine**	**2.83**	**115**	P		**Pn**	**18 53 03.0**	**+0.6**	
	baz=297,SNR=80								
W39A				S		**Sn**	**18 53 39.1**	**+2.1**	
	baz=297								
Z35A	**Perchaven, San**	**3.10**	**185**			**Pn**	**18 53 06.9**	**+0.8**	
Z35A	**Perchaven, San**	**3.10**	**185**	P		**Pn**	**18 53 06.5**	**+0.4**	
	baz=5.0								
Z35A				S		**Sn**	**18 53 44.8**	**+1.1**	
	baz=5.0								
S39A	**Bolivar**	**3.14**	**65**			**Pn**	**18 53 07.7**	**+0.9**	
S39A				IAmb_Lg			18 53 55.8		
	comp=Z,175nm,0.7s								
CBKS	**Cedar Bluff**	**3.27**	**318**			**Pn**	**18 53 08.6**	**0.0**	
CBKS	**Cedar Bluff**	**3.27**	**318**	P		**Pn**	**18 53 08.3**	**-0.2**	
	baz=136,SNR=15								
CBKS	**Cedar Bluff**	**3.27**	**318**	P		**Pn**	**18 53 08.6**	**0.0**	
	baz=136,SNR=10								
CBKS				Sb		**Sb**	**18 53 58.0**	**+2.8**	
	baz=136								
U40A	**Yellville**	**3.28**	**90**			**Pn**	**18 53 09.2**	**+0.6**	
U40A	**Yellville**	**3.28**	**90**	P		**Pn**	**18 53 09.3**	**+0.6**	
	baz=272								
U40A				P		**Pn**	**18 53 09.3**	**+0.6**	
	baz=272								
U40A	**Yellville**	**3.28**	**90**	P		**Pn**	**18 53 09.4**	**+0.7**	
	baz=272,SNR=43								
U40A				S		**Sn**	**18 53 49.4**	**+1.2**	
	baz=272								
MIAR	**Mount Ida**	**3.31**	**123**			**Pn**	**18 53 09.6**	**+0.6**	
MIAR				IAmb_Lg			18 54 04.0		
	comp=Z,138nm,0.8s								
MIAR	**Mount Ida**	**3.31**	**123**	P		**Pn**	**18 53 09.7**	**+0.6**	
	baz=306,SNR=81								
MIAR	**Mount Ida**	**3.31**	**123**	P		**Pn**	**18 53 09.5**	**+0.6**	
	baz=306,SNR=9.7								
MIAR				S		**Sn**	**18 53 49.4**	**+0.6**	
	baz=306								
Z38A	**Mt. Pleasant**	**3.53**	**153**	IAmb_Lg			18 54 17.5		
	comp=Z,218nm,0.8s								
Z38A	**Mt. Pleasant**	**3.53**	**153**	P		**Pn**	**18 53 12.7**	**+0.6**	
	baz=334								
MGMO	**Mountain Grove**	**3.81**	**78**			**Pn**	**18 53 16.8**	**+0.9**	
X40A	**Basin Creek Fa**	**3.85**	**119**			**Pn**	**18 53 17.3**	**+0.8**	
X40A				IAmb_Lg			18 54 29.2		
	comp=Z,130nm,0.7s								
X40A	**Basin Creek Fa**	**3.85**	**119**	P		**Pn**	**18 53 17.5**	**+1.0**	
	baz=301,SNR=37								
X40A				P		**Pn**	**18 53 17.5**	**+1.0**	
	baz=301,SNR=37								
X40A	**Basin Creek Fa**	**3.85**	**119**	P		**Pn**	**18 53 17.3**	**+0.8**	
	baz=301,SNR=9.4								
X40A				S		**Sn**	**18 54 03.7**	**+1.4**	
	baz=301								
FCAR	**Ozark Folk Cen**	**3.92**	**96**			**Pn**	**18 53 17.7**	**+0.3**	
WHAR	**Wooly Hollow**	**3.93**	**105**			**Pn**	**18 53 17.8**	**+0.3**	
WHAR				IAmb_Lg			18 54 20.9		
	comp=Z,160nm,0.8s								
W41B	**Gary Mavity, V**	**4.00**	**107**			**Pn**	**18 53 19.1**	**+0.7**	
W41B				IAmb_Lg			18 54 33.7		
	comp=Z,140nm,0.7s								
W41B	**Gary Mavity, V**	**4.00**	**107**	P		**Pn**	**18 53 18.7**	**+0.2**	
	baz=290,SNR=24								
W41B	**Gary Mavity, V**	**4.00**	**107**	P		**Pn**	**18 53 18.7**	**+0.2**	
	baz=290,SNR=14								
W41B				S		**Sn**	**18 54 05.9**	**0.0**	
	baz=290								
UALR	**University of**	**4.08**	**112**			**Pn**	**18 53 19.8**	**+0.3**	
UALR				IAmb_Lg			18 54 26.3		
	comp=Z,106nm,0.7s								
WLAR	**White Oak Lake**	**4.15**	**130**	IAmb_Lg			18 54 31.3		
	comp=Z,124nm,0.8s								
R40A	**Maddies Statio**	**4.15**	**62**			**Pn**	**18 53 20.4**	**-0.2**	
R40A				IAmb_Lg			18 54 27.4		
	comp=Z,173nm,0.8s								
P38A	**Dawn**	**4.17**	**39**	IAmb_Lg			18 54 37.1		
	comp=Z,99nm,0.7s								
AMTX	**Amarillo**	**4.17**	**250**			**Pn**	**18 53 21.6**	**+0.7**	
AMTX				IAmb_Lg			18 54 35.1		
	comp=Z,210nm,0.7s								
AMTX	**Amarillo**	**4.17**	**250**	P		**Pn**	**18 53 21.1**	**+0.2**	
	baz=67								
AMTX				Sb		**Sb**	**18 54 24.1**	**+2.9**	
	baz=67								
N33A	**J Bar K, Exete**	**4.33**	**355**			**Pn**	**18 53 22.3**	**-0.7**	
N33A				IAmb_Lg			18 54 43.9		
	comp=Z,114nm,0.7s								
ABTX	**Abilene, Hawle**	**4.41**	**211**			**Pb**	**18 53 32.9**	**-1.4**	
ABTX	**Abilene, Hawle**	**4.41**	**211**	P		**Pn**	**18 53 23.9**	**-0.2**	
	baz=30								
ABTX	**Abilene, Hawle**	**4.41**	**211**	P		**Pn**	**18 53 23.5**	**-0.6**	
	baz=30								
ABTX				Sb		**Sb**	**18 54 29.8**	**+1.8**	
	baz=30								
WHTX	**Lake Whitney,**	**4.44**	**186**			**Pn**	**18 53 24.3**	**-0.3**	
WHTX	**Lake Whitney,**	**4.44**	**186**	P		**Pn**	**18 53 24.7**	**+0.1**	
	baz=5.6,SNR=18								
WHTX	**Lake Whitney,**	**4.44**	**186**	P		**Pn**	**18 53 24.4**	**-0.2**	
	baz=5.6								
WHTX				Sb		**Sb**	**18 54 33.0**	**+4.0**	
	baz=5.6								
237A	**Washetta, Mont**	**4.51**	**168**			**Pn**	**18 53 24.6**	**-0.9**	
N35A	**Tabor**	**4.54**	**12**			**Pn**	**18 53 26.2**	**+0.2**	
N35A	**Tabor**	**4.54**	**12**	P		**Pn**	**18 53 25.9**	**-0.1**	
	baz=193								
Z41A	**Richland Creek**	**4.63**	**132**	IAmb_Lg			18 54 55.9		
	comp=Z,94nm,0.7s								
Z41A	**Richland Creek**	**4.63**	**132**	S		**Sn**	**18 54 19.9**	**-1.5**	
	baz=314								
LCAR	**Lake Charles**	**4.67**	**93**			**Pn**	**18 53 28.2**	**+0.5**	
LCAR				IAmb_Lg			18 54 51.8		
	comp=Z,84nm,0.9s								
CCM	**Cathedral Cave**	**4.81**	**69**			**Pb**	**18 53 41.2**	**-0.1**	
CCM	**Cathedral Cave**	**4.81**	**69**	P		**Pn**	**18 53 30.2**	**+0.5**	
	baz=252								
CCM				Sb		**Sb**	**18 54 44.8**	**+5.2**	
	baz=252								
CCAR	**Cane Creek**	**4.90**	**119**	IAmb_Lg			18 55 01.8		
	comp=Z,103nm,0.9s								
P40A	**Paris**	**4.94**	**50**			**Pb**	**18 53 41.1**	**-2.4**	
NATX	**Nacogdoches**	**5.01**	**157**	IAmb_Lg			18 55 09.5		
	comp=Z,68nm,0.9s								
NATX	**Nacogdoches**	**5.01**	**157**	P		**Pn**	**18 53 32.1**	**-0.4**	
	baz=339								
BGNE	**Belgrade**	**5.07**	**349**	IAmb_Lg			18 55 07.3		
	comp=Z,99nm,0.7s								
KSCO	**Kaye Shedlock'**	**5.21**	**301**			**Pn**	**18 53 33.9**	**-1.4**	
KSCO				IAmb_Lg			18 55 12.5		
	comp=Z,104nm,0.8s								
KSCO	**Kaye Shedlock'**	**5.21**	**301**	P		**Pn**	**18 53 35.3**	**0.0**	
	baz=118								
KSCO	**Kaye Shedlock'**	**5.21**	**301**	P		**Pn**	**18 53 35.1**	**-0.2**	
	baz=118,SNR=10.0								
N38A	**Joes South For**	**5.23**	**32**			**Pg**	**18 53 53.9**	**-2.7**	
N38A				IAmb_Lg			18 55 16.0		
	comp=Z,159nm,0.7s								
PBMO	**Poplar Bluff**	**5.23**	**84**			**Pn**	**18 53 36.0**	**+0.6**	
MSTX	**Muleshoe**	**5.38**	**245**			**Pn**	**18 53 35.1**	**-2.5**	
MSTX	**Muleshoe**	**5.38**	**245**	P		**Pn**	**18 53 37.1**	**-0.5**	
	baz=61								
FVM	**French Village**	**5.41**	**71**	IAmb_Lg			18 55 20.9		
	comp=Z,80nm,0.7s								
435B	**Jarrell**	**5.65**	**186**	IAmb_Lg			18 55 28.8		
	comp=Z,81nm,0.9s								
435B	**Jarrell**	**5.65**	**186**	P		**Pn**	**18 53 40.9**	**-0.4**	
	baz=5.4,SNR=5.1								
435B	**Jarrell**	**5.65**	**186**	P		**Pn**	**18 53 40.8**	**-0.4**	
	baz=5.4								
MET	**Memphis--Engin**	**5.83**	**101**	IAmb_Lg			18 55 23.9		
	comp=Z,159nm,0.8s								
143A	**Socs Landing,**	**5.87**	**128**	IAmb_Lg			18 55 38.1		
	comp=Z,88nm,0.8s								
OGNE	**Ogallala**	**6.03**	**320**			**Pn**	**18 53 46.4**	**-0.1**	
OGNE				IAmb_Lg			18 55 43.3		
	comp=Z,128nm,0.7s								
OGNE	**Ogallala**	**6.03**	**320**	P		**Pn**	**18 53 46.8**	**+0.4**	
	baz=137,SNR=12								
OGNE	**Ogallala**	**6.03**	**320**	P		**Pn**	**18 53 46.9**	**+0.4**	
	baz=137								
T25A	**Trinidad**	**6.05**	**279**			**Pn**	**18 53 46.5**	**-0.5**	
T25A						Pg	**Pb**	**18 54 07.1**	**+4.5**
T25A						IAmb_Lg		18 55 34.2	
	comp=Z,117nm,1.1s								
T25A	**Trinidad**	**6.05**	**279**	P		**Pn**	**18 53 46.6**	**-0.3**	
	baz=94,SNR=6.1								
HALT	**Halls**	**6.15**	**93**	IAmb_Lg			18 55 43.4		
	comp=Z,106nm,0.7s								
S44A	**Carbondale**	**6.26**	**76**	IAmb_Lg			18 55 42.1		
	comp=Z,136nm,0.7s								
S44A	**Carbondale**	**6.26**	**76**	P		**Pn**	**18 53 49.9**	**+0.4**	
	baz=261								
JCT	**Junction City**	**6.40**	**203**			**Pn**	**18 53 50.5**	**-1.0**	
JCT				IAmb_Lg			18 55 43.9		
	comp=Z,139nm,1.2s								
JCT	**Junction City**	**6.40**	**203**	P		**Pn**	**18 53 50.5**	**-1.0**	
	baz=21,SNR=7.5								
JCT	**Junction City**	**6.40**	**203**	P		**Pn**	**18 53 50.4**	**-1.0**	
	baz=21								
W45A	**Hickory Valley**	**6.41**	**99**	IAmb_Lg			18 55 45.1		
	comp=Z,112nm,0.7s								
OXF	**Oxford**	**6.42**	**105**			**Pn**	**18 53 51.2**	**-0.6**	
OXF				IAmb_Lg			18 55 38.6		
	comp=Z,96nm,0.9s								
OXF	**Oxford**	**6.42**	**105**	P		**Pn**	**18 53 51.4**	**-0.3**	
	baz=290								
Y45A	**Yeager Farm, C**	**6.56**	**111**	IAmb_Lg			18 55 49.1		
	comp=Z,63nm,0.7s								
Q44A	**Meyer Farm, Va**	**6.74**	**66**	IAmb_Lg			18 56 02.7		
	comp=Z,122nm,0.8s								
SDCO	**Great Sand Dun**	**6.99**	**283**			**Pn**	**18 53 58.9**	**-0.9**	
SDCO				IAmb_Lg			18 55 58.8		
	comp=Z,48nm,1.2s								
K38A	**Parkersburg**	**6.99**	**26**	IAmb_Lg			18 56 05.8		
	comp=Z,68nm,0.7s								
Q24A	**Divide**	**7.00**	**294**			**Pb**	**18 54 21.9**	**+3.2**	
Q24A				IAmb_Lg			18 56 11.5		
	comp=Z,46nm,0.9s								
L40A	**Anamosa**	**7.16**	**36**	Pn		**Pn**	**18 54 01.1**	**-0.8**	
L40A				IAmb_Lg			18 56 03.4		
	comp=Z,107nm,0.8s								
HDIL	**Hopedale**	**7.26**	**53**	P		**Pn**	**18 54 04.0**	**+0.6**	
	baz=238								
ECSD	**EROS Data Cent**	**7.31**	**2**			**Pn**	**18 54 04.3**	**+0.4**	
ECSD	**EROS Data Cent**	**7.31**	**2**	P		**Pn**	**18 54 04.3**	**+0.4**	
	baz=182								
PLAL	**Pickwick Lake**	**7.34**	**99**			**Pn**	**18 54 05.1**	**+0.7**	
735A	**Kenedy**	**7.58**	**186**			**Pn**	**18 54 08.6**	**+0.8**	
O44A	**Mansfield**	**7.62**	**58**	IAmb_Lg			18 56 17.3		
	comp=Z,93nm,0.8s								
ISCO	**Idao Springs**	**7.64**	**299**			**Pn**	**18 54 08.0**	**-0.7**	
ISCO	**Idaho Springs**	**7.64**	**299**	P		**Pn**	**18 54 08.0**	**-0.7**	
	baz=114								
ANMO	**Albuquerque**	**7.90**	**262**	Pn		**Pn**	**18 54 11.4**	**-0.9**	
	comp=Z,0.1nm,0.3s,baz=63,slow=9.7,SNR=1.4								
ANMO				Pg		Pb	18 54 39.4	+5.4	
	comp=Z,1.0nm,0.3s,baz=84,slow=16,SNR=8.4								
ANMO				Lg		Lg	18 56 22.8		
	comp=Z,2.3nm,0.3s,baz=354,slow=18,SNR=3.8								
	comp=Z,0.5nm,0.3s								
T47A	**Sharon Grove**	**7.90**	**83**	IAmb_Lg			18 56 34.9		
	comp=Z,111nm,1.2s								
I37A	**Lemond, Waseca**	**8.05**	**18**	IAmb_Lg			18 56 36.3		
	comp=Z,40nm,0.7s								
PHWY	**Pilot Hill**	**8.25**	**309**			**Pn**	**18 54 16.2**	**-0.9**	
PHWY				IAmb_Lg			18 56 41.0		
	comp=Z,56nm,0.8s								
JFWS	**Jewell Farm**	**8.27**	**36**	IAmb_Lg			18 56 46.3		
	comp=Z,57nm,0.7s								
JFWS	**Jewell Farm**	**8.27**	**36**	P		**Pn**	**18 54 17.7**	**+0.5**	
	baz=220								
P46A	**Rosedale**	**8.30**	**64**	IAmb_Lg			18 56 43.8		
	comp=Z,93nm,0.8s								
N23A	**Red Feather La**	**8.35**	**305**			**Pn**	**18 54 18.2**	**-0.3**	
N23A	**Red Feather La**	**8.35**	**305**	P		**Pn**	**18 54 18.0**	**-0.5**	
	baz=120								
MNTX	**Cornudas Mount**	**8.45**	**239**	Pn		**Pn**	**18 54 19.4**	**-0.4**	
MNTX	**Cornudas Mount**	**8.45**	**239**	P		**Pn**	**18 54 19.0**	**-0.7**	
	baz=54								
SFIN	**Lafayette**	**8.66**	**60**	IAmb_Lg			18 56 58.7		
	comp=Z,69nm,0.7s								
I40A	**Norwalk**	**8.88**	**31**	IAmb_Lg			18 57 05.3		
	comp=Z,34nm,0.7s								
I40A	**Norwalk**	**8.88**	**31**	P		**Pn**	**18 54 26.0**	**+0.5**	
	baz=215								
TX31	**Lajitas Ar. Si**	**9.06**	**221**	Pn		**Pn**	**18 54 26.3**	**-1.8**	
TX31	**Lajitas Ar. Si**	**9.06**	**221**	P		**Pn**	**18 54 27.4**	**-0.7**	
	baz=37								
TXAR	**Lajitas Array**	**9.06**	**221**	Pn		**Pn**	**18 54 27.9**	**-0.2**	
	comp=Z,0.2nm,0.3s,baz=37,slow=11,SNR=9.0								
TXAR				Pg			18 55 00.6		
	comp=Z,1.0nm,0.3s,baz=41,slow=16,SNR=6.9								
TXAR				Lg		Lg	18 57 00.5		
	comp=Z,2.3nm,0.3s,baz=37,slow=26,SNR=10.0								
	comp=Z,0.3nm,0.3s								
TXAR	**Lajitas Array**	**9.06**	**221**			**Pn**	**18 54 27.2**	**-0.9**	
SPMN	**Marine on St.**	**9.33**	**18**	IAmb_Lg			18 57 27.4		
	comp=Z,31nm,0.8s								
RSSD	**Black Hills**	**9.41**	**327**			**Pn**	**18 54 32.3**	**-0.7**	
RSSD				IAmb_Lg			18 57 21.0		
	comp=Z,38nm,0.8s								
RSSD	**Black Hills**	**9.41**	**327**	P		**Pn**	**18 54 32.9**	**-0.1**	
	baz=142								
RWWY	**Rawlins**	**9.57**	**306**	Pn		**Pn**	**18 54 33.9**	**-1.3**	
I42A	**Draeger Farm,**	**9.65**	**37**	IAmb_Lg			18 57 22.7		
	comp=Z,45nm,0.9s								
K22A	**Casper**	**9.68**	**313**	IAmb_Lg			18 57 28.8		
	comp=Z,44nm,0.9s								
TKL	**Tuckaleechee C**	**10.67**	**90**	Pn		**Pn**	**18 54 52.5**	**+2.4**	
	comp=Z,0.2nm,0.3s,baz=274,slow=15,SNR=1.5								
TKL				Sn		**Sn**	**18 56 52.4**	**+2.2**	
	comp=Z,0.7nm,0.3s,baz=132,slow=19,SNR=8.7								
TKL				Lg		Lg	18 57 49.9		
	comp=Z,2.5nm,0.3s,baz=19,slow=22,SNR=5.8								
	comp=Z,1.6nm,0.5s								
ACSO	**Alum Creek Sta**	**11.59**	**67**	P		**Pn**	**18 55 02.1**	**-0.5**	
	baz=255								
PDAR	**Pinedale Array**	**11.62**	**307**	Pn		**Pn**	**18 54 59.3**	**-4.0**	
	comp=Z,0.2nm,0.3s,baz=115,slow=14,SNR=4.1								
PDAR				Lg		Lg	18 58 07.5		
	comp=Z,0.4nm,0.3s,baz=95,slow=22,SNR=2.3								
	comp=Z,0.7nm,0.5s								
ILAR	**Eielson Array**	**40.85**	**330**	P		**P**	**18 59 55.4**	**-3.6**	
	comp=Z,0.4nm,0.7s,baz=115,slow=8.1,SNR=1.4								
	comp=Z,0.4nm,0.7s								

*ANF **06** 18:54:50.8±0.3,36°.26N×96°.75W,h5km,ML3.7/4,Error ellipse: s-maj=3.0km s-min=2.1km az=127.0*

*NEIC **06** 18:54:50.9±0.7,36°.273N±0°.010×96°.79W±0°.03,h5km±2km, Error ellipse: s-maj=3.8km s-min=3.1km az=76.0*

*TUL **06** 18:54:51±1.5,36°.25N±0°.02×96°.76W±0°.02,h5km±7km, ML3.6,mb_Lg3.5/44(NEIC),Mwr3.2/16(SLM), Error ellipse: s-maj=3.2km s-min=2.4km az=224.0*

*NEIC **06** 18:54:51,36°.25N×96°.76W,h2km,Moment Tensor Solution. Moment tensor: Scale 10^{13}Nm; M_{rr}-2.45; $M_{\theta\theta}$6.18; $M_{\phi\phi}$-3.73; $M_{r\theta}$1.41; $M_{\theta\phi}$-2.12; $M_{\phi r}$3.03; Fault plane solution: $M_0$6.68000×10^{13} NP1:φs140.00000°, δ60.00000°, λ-25.00000°. NP2:φs243.00000°, δ69.00000°, λ-148.00000°. Principal axes: T 6.6877, Plg5.0000°, Azm10.0000°; N -0.0011, Plg52.0000°, Azm273.0000°; P -6.6865, Plg38.0000°, Azm104.0000°;*

ISC 06 18:54:51.1±0.9,36°25N±0°.03×96°77W±0°.04,h10km,n37, σθ64/23,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK005	**Luther M Schoo**	**0.69**	**210**		**Pg**	**18 55 04.4**	**-0.1**
T35A	**Sooner Cattle**	**0.69**	**17**	Pg	**Pg**	**18 55 04.5**	**0.0**
T35B	**Sooner Cattle**	**0.69**	**17**	P	**Pg**	**18 55 04.2**	**-0.3**
	baz=197						
T35B				S	**Sg**	**18 55 13.3**	**-0.3**
	baz=197						
ADOK	**Arcadia Dam**	**0.78**	**219**		**Pg**	**18 55 05.8**	**-0.3**
TUL1	**Leonard**	**0.86**	**113**	Pg	**Pg**	**18 55 07.5**	**-0.2**
TUL1	**Leonard**	**0.86**	**113**	P	**Pg**	**18 55 07.4**	**-0.3**
	baz=294,SNR=9.4						
TUL1				S	**Sg**	**18 55 18.7**	**-0.3**
	baz=294						
OKCFA	**Oklahoma City**	**1.00**	**214**		**Pg**	**18 55 09.7**	**-0.8**
OKCFA	**Oklahoma City**	**1.00**	**214**	P	**Pg**	**18 55 09.7**	**-0.8**
	baz=34,SNR=11						
OKCFA				S	**Sg**	**18 55 24.0**	**+0.4**
	baz=34						
OKCSW	**OKLAHOMA CITY**	**1.01**	**213**		**Pg**	**18 55 09.8**	**-0.8**
FNO	**Franklin**	**1.12**	**208**	Pg	**Pb**	**18 55 11.7**	**-0.9**
U32A	**Winter Ranch,**	**1.81**	**275**	Pg	**Pb**	**18 55 24.1**	**-0.3**
U32A	**Winter Ranch,**	**1.81**	**275**	Pb	**Pb**	**18 55 24.4**	**0.0**
	baz=93,SNR=12						
X34A	**Smith Ranch, M**	**1.86**	**208**	Pg	**Pb**	**18 55 25.1**	**-0.2**
X37A	**Clayton**	**2.02**	**145**		**Pn**	**18 55 25.9**	**+0.8**
WMOK	**Wichita Mounta**	**2.23**	**228**	IAmb_Lg		18 56 04.6	
	comp=Z,212nm,0.8s						
WMOK	**Wichita Mounta**	**2.23**	**228**	P	**Pn**	**18 55 29.4**	**+1.2**
	baz=47						
WMOK				S	**Sb**	**18 55 59.1**	**-0.2**
	baz=47						
W39A	**Magazine**	**2.65**	**113**	Pn	**Pn**	**18 55 34.8**	**+0.9**
W39A				IAmb_Lg		18 56 21.3	
	comp=Z,243nm,0.9s						
R32A	**Long Quarter,**	**2.66**	**325**	IAmb_Lg		18 56 15.1	
	comp=Z,159nm,0.8s						
KSU1	**Kansas State U**	**2.84**	**2**	Pn	**Pn**	**18 55 36.8**	**+0.2**
KSU1				IAmb_Lg		18 56 27.8	
	comp=Z,138nm,0.8s						
Z35A	**Perchaven, San**	**2.94**	**188**	Pn	**Pn**	**18 55 39.1**	**+1.2**
U40A	**Yellville**	**3.16**	**87**	IAmb_Lg		18 56 31.8	
	comp=Z,146nm,0.8s						
Z38A	**Mt. Pleasant**	**3.33**	**153**	Pn	**Pn**	**18 55 43.9**	**+0.6**
Z38A				IAmb_Lg		18 56 36.7	
	comp=Z,176nm,0.7s						
CBKS	**Cedar Bluff**	**3.48**	**318**	IAmb_Lg		18 56 48.5	
	comp=Z,173nm,0.9s						
X40A	**Basin Creek Fa**	**3.67**	**118**	IAmb_Lg		18 56 51.9	
	comp=Z,168nm,0.8s						
MGMO	**Mountain Grove**	**3.72**	**75**	IAmb_Lg		18 56 53.2	
	comp=Z,146nm,0.8s						
WHAR	**Wooly Hollow**	**3.77**	**103**	IAmb_Lg		18 56 50.6	
	comp=Z,114nm,1.0s						
UALR	**University of**	**3.90**	**111**	IAmb_Lg		18 57 00.1	
	comp=Z,127nm,1.0s						
WLAR	**White Oak Lake**	**3.94**	**129**	IAmb_Lg		18 56 56.3	
	comp=Z,97nm,0.9s						
R40A	**Maddies Statio**	**4.12**	**59**	IAmb_Lg		18 57 03.1	
	comp=Z,146nm,0.8s						
P38A	**Dawn**	**4.23**	**36**	IAmb_Lg		18 57 04.7	
	comp=Z,121nm,0.8s						
AMTX	**Amarillo**	**4.23**	**253**	IAmb_Lg		18 57 12.0	
	comp=Z,120nm,0.8s						
ABTX	**Abilene, Hawle**	**4.33**	**214**	IAmb_Lg		18 57 16.0	
	comp=Z,149nm,1.3s						
Z41A	**Richland Creek**	**4.42**	**131**	IAmb_Lg		18 57 16.9	
	comp=Z,86nm,0.8s						
CCM	**Cathedral Cave**	**4.76**	**66**	IAmb_Lg		18 57 28.5	
	comp=Z,124nm,0.7s						
NATX	**Nacogdoches**	**4.81**	**158**	IAmb_Lg		18 57 36.9	
	comp=Z,92nm,0.9s						
435B	**Jarrell**	**5.50**	**187**	IAmb_Lg		18 57 57.0	
	comp=Z,69nm,0.7s						
143A	**Socs Landing,**	**5.67**	**127**	IAmb_Lg		18 57 57.5	
	comp=Z,68nm,0.8s						

*NEIC **06** 19:08:12.9±2.5, 17°.35N±0°.05×94°.29W±0°.03, h155km±4km, mb4.3/81, Error ellipse: s-maj=7.0km s-min=4.2km az=160.0*

*IDC **06** 19:08:12.0±1.0, 17°.39N×94°.01W, h150km±12km, mb3.7/19, mbtmp4.2/21, MS2.1/1, Error ellipse: s-maj=28.8km s-min=13.0km az=47.0*

*MEX **06** 19:08:14.0±1.1, 17°.35N×94°.31W, h160km±6km, MD5.0*

ISC 06 19:08:12.4±0.6, 17°28N±0°.04×94°35W±0°.04, h163km±5km, n207, σt1s80/261, mb4.3/45, 17C-5D, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UXUV	**UXUV**	**0.20**	**78**	*i* P	**Pn**	**19 08 34.2**	**-0.1**
UXUV				*i* S	**Sn**	**19 08 49.6**	**-1.4**
CMIG	**Matias Romero**	**0.55**	**250**	P	**Pn**	**19 08 35.6**	**+0.1**
	1μm,0.5s,baz=86,slow=5.4,SNR=4344						
CMIG				S	**Sn**	**19 08 52.6**	**-0.6**
	2μm,0.3s,baz=305,slow=21,SNR=20						
CMIG				LR	LR	19 09 08.4	
	comp=Z,528nm,18.7s,baz=170,slow=63						
CMIG	**Matias Romero**	**0.55**	**250**	*i* P	**Pn**	**19 08 35.6**	**+0.1**
CMIG				*i* S	**Sn**	**19 08 52.5**	**-0.6**
MIHL	**Minatitlan**	**0.73**	**345**	*e*P	**Pn**	**19 08 35.1**	**-1.5**
MIHL				*e*S	**Sn**	**19 08 53.9**	**-1.3**
TUIG	**Tuzandepetl**	**0.76**	**354**		**Pn**	**19 08 36.8**	**+0.1**
TUIG					**Sn**	**19 08 52.7**	**-2.8**
TUIG	**Tuzandepetl**	**0.76**	**354**	*e*P	**Pn**	**19 08 36.8**	**+0.1**
TUIG				*e*S	**Sn**	**19 08 52.7**	**-2.8**
TGIG		**1.27**	**113**		**Pn**	**19 08 40.8**	**-0.1**
TGIG					**Sn**	**19 09 01.1**	**-1.6**
TGIG		**1.27**	**113**	⇓*i*P	**Pn**	**19 08 40.8**	**-0.1**
TGIG				*e*S	**Sn**	**19 09 01.1**	**-1.6**
**

TLVM	San Miguel Top	4.96	294	*e*P		Pn	19 09 27.2	+1.4
UNM	Universidad Na	5.02	295		Pn	Pn	19 09 25.7	-0.9
PLIG	Platanillo	5.04	284			Pn	19 09 28.1	+1.4
PLIG						Sn	19 10 21.8	-2.9
PLIG	Platanillo	5.04	284⇑	*e*P		Pn	19 09 28.1	+1.4
PLIG				*e*S		Sn	19 10 21.8	-2.9
MEIG	Mezcala	5.07	278			Pn	19 09 28.3	+1.2
MEIG						Sn	19 10 22.0	-3.5
MEIG	Mezcala	5.07	278	*e*P		Pn	19 09 28.3	+1.2
MEIG				*e*S		Sn	19 10 22.0	-3.5
DAIG	Los Arroyos	5.08	268			Pn	19 09 26.8	-0.4
DAIG						Sn	19 10 22.4	-3.2
DAIG	Los Arroyos	5.08	268⇑	*i*P		Pn	19 09 26.8	-0.4
DAIG				*e*S		Sn	19 10 22.4	-3.2
PTVM	Pico Tres Padr	5.08	298			Pn	19 09 29.1	+1.7
PTVM	Pico Tres Padr	5.08	298	*e*P		Pn	19 09 29.1	+1.7
MCRU	Las Cruces	5.09	294	*e*P		Pn	19 09 29.6	+2.0
AOVM	Tlapan	5.13	293	*e*P		Pn	19 09 30.1	+1.9
AOVM				*e*S		Sn	19 10 26.6	-0.8
ZUVM	ZUMPANGO	5.16	300			Pn	19 09 30.8	+2.4
ZUVM	ZUMPANGO	5.16	300	*i* P		Pn	19 09 30.8	+2.4
MAVM	Malinalco, Edo	5.17	290			Pn	19 09 30.7	+2.1
MAVM						Sn	19 10 26.4	-1.7
MAVM	Malinalco, Edo	5.17	290⇑	*i*P		Pn	19 09 30.7	+2.1
MAVM				*e*S		Sn	19 10 26.4	-1.7
DEIG	Demacu	5.37	305	*e*P		Pn	19 09 33.3	+2.2
ESQI	Esquipulas	5.52	119	Pn		Pn	19 09 27.8	-5.3
CAIG	El Cayaco	5.67	269			Pn	19 09 34.5	-0.3
CAIG						Sn	19 10 36.1	-3.4
CAIG	El Cayaco	5.67	269⇑	*e*P		Pn	19 09 34.5	-0.3
CAIG				*e*S		Sn	19 10 36.1	-3.4
ARIG	Puente Sto Nin	5.80	281			Pn	19 09 38.3	+1.8
ARIG						Sn	19 10 40.4	-2.4
ARIG	Puente Sto Nin	5.80	281⇑	*i*P		Pn	19 09 38.6	+1.8
ARIG				*i* S		Sn	19 10 40.4	-2.4
ACIG	Acambay	5.90	298	*i* P		Pn	19 09 40.7	+2.6
ZIIG	Zihuatanejo	6.80	274			Pn	19 09 51.0	+1.1
ZIIG						Sn	19 11 03.7	-2.9
ZIIG	Zihuatanejo	6.80	274⇑	*e*P		Pn	19 09 51.0	+1.1
ZIIG				*e*S		Sn	19 11 03.7	-2.9
MOIG	Morelia	6.92	291	Pn		Pn	19 09 49.7	-2.0
TGUH	Tegucigalpa,Un	7.53	114	Pn		Pn	19 09 54.9	-4.8
MMIG	Aquila	8.63	278			Pn	19 10 15.8	+1.6
MMIG	Aquila	8.63	278	*e*P		Pn	19 10 15.8	+1.6
JUBC	Volcan de Coli	9.04	286	*e*P		Pn	19 10 23.8	+4.0
JUBC				*e*S		Sn	19 12 02.9	+2.3
EZ5V		9.06	285			Pn	19 10 22.4	+2.3
EZ5V		9.06	285	*e*P		Pn	19 10 22.4	+2.3
EZ5V				*e*S		Sn	19 12 01.7	+0.7
INCO	Volcan de Coli	9.07	286	*e*P		Pn	19 10 23.8	+3.2
INCO				*e*S		Sn	19 12 03.7	+0.2
MNGA	Volcan de Coli	9.07	285	*e*P		Pn	19 10 19.1	-1.2
MNGA				*e*S		Sn	19 11 58.8	-2.6
COIG	Colima	9.08	283	*e*P		Pn	19 10 22.6	+2.4
COIG				*i* S		Sn	19 12 00.8	-0.5
CDAR	Ciudad de Arme	9.34	282	*e*P		Pn	19 10 25.8	+2.2
CDAR				*e*S		Sn	19 12 04.7	-2.7
R15V		9.35	283			Pn	19 10 26.6	+2.9
R15V		9.35	283	*e*P		Pn	19 10 26.6	+2.9
R15V				*e*S		Sn	19 12 06.6	-1.2
ZAIG	Zacatecas	9.46	307	Pn		Pn	19 10 23.3	-2.1
ORTG	Ortega, Santa	11.03	127			Pn	19 10 46.0	+0.1
JTS	Las Juntas de	11.46	126	P		Pn	19 10 50.3	-1.2
	3.7nm,0.3s,baz=343,slow=12,SNR=3.6							
JTS				LR		LR	19 15 17.1	
	comp=Z,11nm,21.3s,baz=348,slow=38							
JTS	Las Juntas de	11.46	126	Pn		Pn	19 10 51.7	+0.2
JACO	JACO, Garabito	12.08	128	Pn		Pn	19 10 58.3	-1.2
RIMA	Rio Macho	12.63	125			Pn	19 11 06.5	-0.2
PEZE	Perez Zeledon,	13.01	126			Pn	19 11 11.2	-0.2
SRBA	San Rafael, Bu	13.35	125			Pn	19 11 15.8	0.0
DRK0	Durika	13.42	125	P		Pn	19 11 18.4	+1.7
JCT	Junction City	14.05	340			Pn	19 11 24.8	+0.3
HPIG		14.22	314			Pn	19 11 28.2	+1.4
TXAR	Lajitas Array	14.73	326	P		P	19 11 35.1	+0.2
	5.9nm,0.8s,baz=147,slow=14,SNR=62							
TXAR	Lajitas Array	14.73	326			P	19 11 34.6	-0.3
TX31	Lajitas Ar. Si	14.73	326	P		Pn	19 11 34.3	+1.2
TX32	Lajitas Array	14.73	326			Pn	19 11 32.6	-0.5
352A	Blakely	16.52	29	P		P	19 11 54.5	-0.1
MIAR	Mount Ida	17.21	2	P		P	19 12 02.6	+0.5
X37A	Clayton	17.27	357	P		P	19 12 03.1	+0.4
MNTX	Cornudas Mount	17.50	327			Pn	19 12 06.8	+0.2
W39A	Magazine	17.86	2	P		P	19 12 08.0	-1.1
MSTX	Muleshoe	18.26	337	P		P	19 12 14.1	+0.3
MSTX					IAmb	IAmb	19 12 18.1	
	comp=Z,14nm,0.8s							
FCAR	Ozark Folk Cen	18.64	6	P		P	19 12 17.4	-0.4
FCAR					IAmb	IAmb	19 12 22.0	
	comp=Z,11nm,0.6s							
AMTX	Amarillo	18.72	341	P		P	19 12 19.6	+0.9
GOGA	Godfrey	18.81	29	P		P	19 12 18.6	-1.0
GOGA					IAmb	IAmb	19 12 32.1	
	comp=Z,8.2nm,0.8s							
FPAL	Fort Paine	18.89	23	P		P	19 12 18.8	-1.6
FPAL					IAmb	IAmb	19 12 19.8	
	comp=Z,8.3nm,0.4s							
LCAR	Lake Charles	18.93	8			P	19 12 20.1	-0.8
HHAR	Hobbs	18.93	1	P		P	19 12 19.7	-1.2
U40A	Yellville	19.05	4	P		P	19 12 21.8	-0.4
U40A					IAmb	IAmb	19 12 23.2	
	comp=Z,7.9nm,0.7s							
SWET	Sewanee	19.38	21	P		P	19 12 23.4	-2.4
121A	Cookes Peak, D	19.45	324			Pn	19 12 29.4	-0.3
W50A	Signal Mountai	19.59	23	P		P	19 12 27.2	-0.8
W50A					IAmb	IAmb	19 12 32.8	
	comp=Z,7.6nm,0.7s							
WVT	Waverly	19.65	16			P	19 12 26.8	-1.8
WVT					IAmb	IAmb	19 12 41.7	
	comp=Z,13nm,1.4s							
BNM	Barren Site	20.09	329	P		Pn	19 12 36.0	-1.3
LENM	Lemitar	20.27	328	P		P	19 12 37.6	+2.1
TKL	Tuckaleechee C	20.58	25	P		P	19 12 36.7	-1.9
	comp=Z,3.5nm,0.7s,baz=186,slow=9.2,SNR=4.7							
	comp=Z,3.5nm,0.7s							
TKL	Tuckaleechee C	20.58	25		IAmb	IAmb	19 12 54.7	
	comp=Z,22nm,1.5s							
U49A	Red Boiling Sp	20.61	20	P		P	19 12 36.8	-2.1
U49A					IAmb	IAmb	19 12 39.4	
	comp=Z,8.1nm,0.8s							
T47A	Sharon Grove	20.65	17	P		P	19 12 37.9	-1.4
T47A					IAmb	IAmb	19 12 40.0	
	comp=Z,10nm,0.6s							
ANMO	Albuquerque	20.65	331	P		P	19 12 41.4	+1.8
	comp=Z,4.2nm,0.6s,baz=141,slow=12,SNR=13							
	comp=Z,4.2nm,0.6s							
ANMO	Albuquerque	20.65	331			P	19 12 41.1	+1.5
ANMO					IAmb	IAmb	19 12 42.7	
	comp=Z,4.9nm,0.7s							
CCM	Cathedral Cave	20.88	7	P		P	19 12 40.8	-1.0
CCM					IAmb	IAmb	19 12 42.3	
	comp=Z,8.9nm,0.5s							
R40A	Maddies Statio	21.02	5	P		P	19 12 42.4	-0.9
TZTN	Tazewell	21.44	24	P		P	19 12 45.5	-2.3
TZTN					IAmb	IAmb	19 12 56.2	
	comp=Z,8.2nm,0.9s							
T25A	Trinidad	21.69	338	P		P	19 12 54.4	+1.7
T25A					IAmb	IAmb	19 12 54.8	
	comp=Z,9.0nm,0.9s							
X18A	Snowflake	22.14	324	P		P	19 12 56.5	+1.3
P40A	Paris	22.26	5	P		P	19 12 54.7	-1.4
P40A					IAmb	IAmb	19 12 55.4	
	comp=Z,8.5nm,0.6s							
W18A	Petrified Fore	22.45	325	P		P	19 12 58.3	+0.1
W18A					IAmb	IAmb	19 13 01.5	
	comp=Z,15nm,1.1s							
SDCO	Great Sand Dun	22.63	337	P		P	19 13 01.4	+1.5
KSCO	Kaye Shedlock'	22.83	343	P		P	19 13 02.1	+0.5
KSCO					IAmb	IAmb	19 13 03.7	
	comp=Z,26nm,1.3s							
X16A	Lo Mia Camp, P	22.92	321	P		P	19 13 04.7	+2.2
X16A					IAmb	IAmb	19 13 07.2	
	comp=Z,15nm,0.8s							
P46A	Rosedale	23.11	14	P		P	19 13 00.9	-3.1
113A	Mohawk Valley,	23.34	315	P		P	19 13 09.4	+3.2
113A					IAmb	IAmb	19 13 10.3	
	comp=Z,12nm,0.8s							
P48A	Milroy	23.43	18	P		P	19 13 04.6	-2.2
MVCO	Mesa Verde	23.45	331	P		P	19 13 09.2	+1.8
MVCO					IAmb	IAmb	19 13 09.9	
	comp=Z,9.6nm,0.7s							
WUAZ	Wupatki	23.66	323	P		P	19 13 11.4	+2.2
WUAZ					IAmb	IAmb	19 13 14.0	
	comp=Z,11nm,0.8s							
PORT	Chimborazo Vol	24.13	139	P		P	19 13 16.4	+2.2
PORT					IAmb	IAmb	19 13 21.5	
	comp=Z,9.1nm,0.8s							
PV13	Radium Mtn., P	24.37	331	P		P	19 13 16.8	+1.1
O49A	Covington	24.42	19	P		P	19 13 14.2	-1.7
ISCO	Idaho Springs	24.48	339	P		P	19 13 18.1	+1.2
PV11	David Mesa, Pa	24.51	332	P		P	19 13 17.4	+0.4
PV07	Paradox Valley	24.52	332	P		P	19 13 15.0	-2.1
PV23	Carpenter Ridg	24.70	332	P		P	19 13 20.4	+1.6
CCUT	Cedar City	26.23	324	P		P	19 13 30.3	-2.2
PDAR	Pinedale Array	28.52	336	P		P	19 13 54.7	+1.8
	comp=Z,0.2nm,0.3s,baz=152,slow=9.9,SNR=2.1							
	comp=Z,0.2nm,0.3s							
ELK	Elko	29.53	327	P		P	19 14 03.9	+2.1
	comp=Z,1.6nm,0.7s,baz=134,slow=8.9,SNR=8.2							
	comp=Z,1.6nm,0.7s							
ELK	Elko	29.53	327	P		P	19 14 03.9	+2.1
REDW	Red Top Meadow	29.54	335	P		P	19 14 03.2	+1.4
REDW					IAmb	IAmb	19 14 04.2	
	comp=Z,8.0nm,1.1s							
SNOW	Snow King Moun	29.58	335	P		P	19 14 03.9	+1.7
SNOW					IAmb	IAmb	19 14 04.6	
	comp=Z,6.9nm,0.8s							
NV11	Mina Array Sit	29.63	320	P		P	19 14 05.3	+2.6
NV11					IAmb	IAmb	19 14 06.4	
	comp=Z,5.8nm,0.9s							
NVAR	Mina Array Bea	29.72	320	P		P	19 14 06.7	+3.1
	comp=Z,7.3nm,0.7s,baz=133,slow=9.3,SNR=8.3							
	comp=Z,7.3nm,0.7s							
NVAR	Mina Array Bea	29.72	320	P		P	19 14 05.9	+2.4
LHV	Little Huntoon	29.73	319	P		P	19 14 06.6	+3.3
LHV					IAmb	IAmb	19 14 07.5	
	comp=Z,6.0nm,0.8s							
MOOW	Moose Ponds	29.82	336	P		P	19 14 04.7	+0.4
KVN	Kaiserville	29.99	321	P		P	19 14 08.7	+2.8
KVN					IAmb	IAmb	19 14 09.2	
	comp=Z,4.3nm,0.9s							
BMN	Battle Mountai	30.39	324	P		P	19 14 11.9	+2.6
BMN					IAmb	IAmb	19 14 12.4	
	comp=Z,3.7nm,0.9s							
PNTR	Pine Nut	30.92	320	P		P	19 14 14.6	+0.4
PNTR					IAmb	IAmb	19 14 17.8	
	comp=Z,5.0nm,0.8s							
AGMN	Agassiz Nation	30.96	358	P		P	19 14 13.3	-0.8
AGMN					IAmb	IAmb	19 14 13.8	
	comp=Z,7.1nm,0.7s							
LRM	Limekiln Ridge	32.22	336	P		P	19 14 26.8	+1.4
J08A	Circle Bar Ran	33.08	327	P		P	19 14 34.5	+1.7
PLID	Pearl Lake	33.13	331	P		P	19 14 34.2	+0.8
PLID					IAmb	IAmb	19 14 35.3	
	comp=Z,4.5nm,0.8s							
BMO	Blue Mountains	33.57	330	P		P	19 14 37.7	+0.7
F10A	Beach Ranch, E	34.37	331	P		P	19 14 44.1	+0.3
F10A					IAmb	IAmb	19 14 45.5	
	comp=Z,9.3nm,0.8s							
HOOD	Mount Hood Mea	36.09	327	P		P	19 15 00.2	+1.6
LPAZ	La Paz	42.19	141	P		P	19 15 50.7	+0.7
	comp=Z,2.1nm,0.5s,baz=332,slow=3.6,SNR=7.4							
	comp=Z,2.1nm,0.5s							
LPAZ	La Paz	42.19	141	IAmb		IAmb	19 15 51.8	
	comp=Z,2.3nm,0.6s							
YKA	Yellowknife Ar	47.34	347	P		P	19 16 29.1	-0.4
	comp=Z,1.2nm,0.5s,baz=153,slow=7.5,SNR=3.1							
	comp=Z,1.2nm,0.5s							
BCAR	Beaver Creek A	56.15	336	P		P	19 17 36.1	+1.2
INK	Inuvik	56.68	344	P		P	19 17 38.2	-0.2
	comp=Z,1.2nm,0.4s,baz=114,slow=4.0,SNR=2.2							
	comp=Z,1.2nm,0.4s							
KDAK	Kodiak Island	58.76	328	P		P	19 17 54.3	+1.3
	comp=Z,3.6nm,0.7s,baz=76,slow=8.3,SNR=2.2							
	comp=Z,3.6nm,0.7s							
IL31		58.95	337	P		P	19 17 54.8	+0.6
IL31					IAmb	IAmb	19 17 55.9	
	comp=Z,2.1nm,0.7s							
ILAR	Eielson Array	58.95	337	P		P	19 17 54.9	+0.5
	comp=Z,0.7nm,0.5s,baz=135,slow=4.7,SNR=13							
	comp=Z,0.7nm,0.5s							
ILAR	Eielson Array	58.95	337	P		P	19 17 55.0	+0.7
TRF	Thorofare Moun	59.73	334	P		P	19 18 00.5	+0.7
H24K	Noodor Dome	59.82	337	P		P	19 18 01.2	+0.9
H24K					IAmb	IAmb	19 18 01.9	
	comp=Z,2.8nm,1.0s							
BPAW	Bear Paw Mtn.	60.27	335	P		P	19 18 03.7	+0.3
BPAW					IAmb	IAmb	19 18 04.6	
	comp=Z,5.1nm,1.0s							
MLY	Manley	60.55	336	P		P	19 18 05.9	+0.6
MLY					IAmb	IAmb	19 18 06.4	
	comp=Z,3.2nm,0.6s							
K20K	Telida	61.27	334	P		P	19 18 10.8	+0.7
K20K					IAmb	IAmb	19 18 11.3	
	comp=Z,3.8nm,0.7s							
H21K	Melozitna Rive	61.59	336	P		P	19 18 12.2	0.0
H21K					IAmb	IAmb	19 18 23.0	
	comp=Z,5.7nm,1.5s							
ESDC	Sonseca Array	79.47	52	P		P	19 20 00.3	-0.8
	comp=Z,2.4nm,1.0s,baz=295,slow=5.3,SNR=13							
	comp=Z,2.4nm,1.0s							
ESDC	Sonseca Array	79.47	52	P		P	19 20 00.3	-0.8
NB2	NORSAR Subarra	82.35	28	P		P	19 20 15.8	-0.1
	comp=Z,3.2nm,0.9s,baz=293,slow=5.3							
NOA	NORSAR Array B	82.35	28	P		P	19 20 15.9	+0.1
	comp=Z,1.5nm,0.8s,baz=292,slow=5.2,SNR=12							
	comp=Z,1.5nm,0.8s							
WLF	Walferdange	83.61	40	P		P	19 20 22.7	+0.2
ARCES	ARCESS Array B	83.74	18	P		P	19 20 22.9	+0.1
	comp=Z,3.5nm,0.7s,baz=303,slow=2.5,SNR=9.0							
	comp=Z,3.5nm,0.7s							
ARCES	ARCESS Array B	83.74	18	IAmb		IAmb	19 20 27.8	
	comp=Z,15nm,1.5s							
SSB	Saint Sauveur	83.98	45	P		P	19 20 24.6	+0.1
SSB					IAmb	IAmb	19 20 25.1	
	comp=Z,5.0nm,0.7s							
SENIN	Lac Senin/Sane	85.45	43	P		P	19 20 31.8	-0.3
SENIN					IAmb	IAmb	19 20 33.1	
	comp=Z,6.0nm,0.8s							
TUE	Stuetta	86.73	42	P		P	19 20 38.3	-0.1
DBIC	Dimbokro	87.56	84	P		P	19 20 41.7	-1.0
	comp=Z,1.7nm,0.4s,baz=287,slow=4.7,SNR=5.7							
	comp=Z,1.7nm,0.4s							
DBIC	Dimbokro	87.56	84	IAmb		IAmb	19 20 47.9	
	comp=Z,15nm,1.2s							
FINES	FINESS Array B	88.49	24	P		P	19 20 46.1	0.0
	comp=Z,1.6nm,0.8s,baz=330,slow=4.8,SNR=4.9							
	comp=Z,1.6nm,0.8s							
GERES	GERESS Array B	88.51	39	P		P	19 20 46.3	-0.3
	comp=Z,0.3nm,0.5s,baz=258,slow=4.9,SNR=5.7							
	comp=Z,0.3nm,0.5s							
ZCCA	Zocca	88.60	44	P		P	19 20 47.2	+0.1
VSL	Villasalto	89.34	49	P		P	19 20 50.0	-0.7
KEST	Kesra	90.71	52	P		P	19 20 57.0	-0.2
	comp=Z,2.6nm,0.8s,baz=248,slow=4.3,SNR=5.5							
	comp=Z,2.6nm,0.8s							
TORD	Torodi Ar. Bea	91.79	76	P		P	19 21 00.9	-1.5
	comp=Z,0.7nm,0.8s,baz=276,slow=5.0,SNR=3.6							
	comp=Z,0.7nm,0.8s							
AKASG	Malin Array Be	96.21	32	P		P	19 21 21.2	-0.8
	comp=Z,0.1nm,0.2s,baz=291,slow=4.7,SNR=1.8							
	comp=Z,0.1nm,0.2s							
PZH	PanZhiHua	133.76	340	PKP		PKPdf	19 27 11.5	+0.8
WRA	Warramunga Arr	133.91	259	PKP		PKPdf	19 27 11.8	+0.9
	comp=Z,0.5nm,0.4s,baz=80,slow=2.2,SNR=16							
ASAR	Alice Springs	134.52	254	PKP		PKPdf	19 27 12.1	0.0
	comp=Z,0.5nm,0.6s,baz=111,slow=2.1,SNR=5.6							

KRSC 06 19:17:08.7±2.1, 49.69N×157.05E, h45km±33km, ML3.8, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
SKR	Severo-Kuril's	1.16	329	*e*P		Pn	19 17 28.6	+0.1
SKR				*e*S		Sn	19 17 42.1	-1.1
PAU	Pauzhetka	1.79	355	*e*P		Pn	19 17 39.2	+2.2
PAU				*e*S		Sn	19 18 00.8	+2.3
KDTR	Khodutka, Kamc	2.22	17	*e*P		Pn	19 17 46.3	+3.3
KDTR				*e*S		Sn	19 18 13.3	+4.2
ASAK	Asacha	2.75	11	*e*P		Pn	19 17 53.7	+3.4
MTVR	Mutnovka	2.89	14	*e*P		Pn	19 17 55.7	+3.4
MTVR				*e*S		Sn	19 18 30.3	+4.5
RUS	Russkaya	2.90	18	*e*P		Pn	19 17 55.4	+3.1
RUS				*e*S		Sn	19 18 29.0	+3.2
GRL	Gorelyy	2.94	12	*e*P		Pn	19 17 56.7	+3.7
GRL				*e*S		Sn	19 18 31.9	+4.9
KRMR	Karymshinskiy	3.22	12	*e*P		Pn	19 18 01.0	+4.3
DALK	Dalny	3.51	17	*e*P		Pn	19 18 04.5	+3.8
UGLR	Uglovaya	3.69	17	*e*P		Pn	19 18 07.2	+3.9
AVH	Avacha	3.73	16	*e*P		Pn	19 18 08.4	+4.6
KOK	Koryaka	3.74	15	*e*P		Pn	19 18 08.6	+4.7
SMAR	Somma	3.74	16	*e*P		Pn	19 18 08.3	+4.2
SDLR	Sedlovina	3.77	17	*e*P		Pn	19 18 07.8	+3.4
KRER	Koryakskii	3.77	16	*e*P		Pn	19 18 08.7	+4.2
KRX	Arik	3.81	15	*e*P		Pn	19 18 09.4	+4.5
SPN	Mys Shipunski	3.89	27	*e*P		Pn	19 18 09.7	+3.8
GNL	Ganaly	4.05	8	*e*P		Pn	19 18 11.9	+3.7
KBTR	Krutoberegovo	7.40	26	*e*P		Pn	19 18 56.9	+2.9

TUL ***06*** *19:59:38.4±0.8, 36.67N±0.01×97.74W±0.02, h7km±5km, ML3.0, mb_Lg2.5/33(NEIC), Error ellipse: s-maj=2.3km s-min=1.5km az=116.0*

NEIC 06 19:59:38.3±0.6, 36.644N±0.010×97.74W±0.02, h5km±6km, Error ellipse: s-maj=2.4km s-min=0.9km az=120.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
T35A	Sooner Cattle	1.02	74	Pg		Pg	19 59 57.5	-0.4
U32A	Winter Ranch,	1.05	256	Pg		Pg	19 59 57.9	-0.5
OKCFA	Oklahoma City	1.25	169			Pg	20 00 02.2	-0.1
FNO	Franklin	1.41	169			Pn	20 00 04.8	+0.2
TUL1	Leonard	1.73	114	Pn		Pn	20 00 09.8	+0.7
TUL1				IAmb_Lg			20 00 34.7	
	comp=Z,27nm,0.9s							
R32A	Long Quarter,	1.94	337	Pn		Pn	20 00 12.9	+1.0
X34A	Smith Ranch, M	2.04	182			Pb	20 00 15.8	-0.1
WMOK	Wichita Mounta	2.08	204			Pn	20 00 13.9	0.0
CBKS	Cedar Bluff	2.68	324	IAmb_Lg			20 01 05.9	
	comp=Z,12nm,0.8s							
X37A	Clayton	2.81	136	Pn		Pn	20 00 24.7	+0.7
HHAR	Hobbs	3.08	96	Pn		Pn	20 00 27.6	-0.1
W39A	Magazine	3.52	113			Pb	20 00 42.4	+1.3
AMTX	Amarillo	3.66	242	Pn		Pn	20 00 35.5	-0.1
AMTX				IAmb_Lg			20 01 34.5	
	comp=Z,10nm,0.8s							
S39A	Bolivar	3.68	72			Pb	20 00 43.1	-0.7
U40A	Yellville	3.95	93			Pn	20 00 39.1	-0.4
MIAR	Mount Ida	3.99	120			Pb	20 00 48.3	-0.7
MIAR				IAmb_Lg			20 01 54.6	
	comp=Z,11nm,0.8s							
MGMO	Mountain Grove	4.41	82			Pn	20 00 45.5	-0.5
MGMO				IAmb_Lg			20 02 06.6	
	comp=Z,9.1nm,1.0s							
P38A	Dawn	4.46	47	IAmb_Lg			20 02 00.9	
	comp=Z,14nm,0.7s							
KSCO	Kaye Shedlock'	4.53	303	IAmb_Lg			20 02 06.4	
	comp=Z,7.7nm,0.8s							
X40A	Basin Creek Fa	4.54	117			Pb	20 00 58.6	+0.2
X40A				IAmb_Lg			20 02 04.4	
	comp=Z,13nm,0.7s							
WHAR	Wooly Hollow	4.62	105	IAmb_Lg			20 02 11.3	
	comp=Z,9.8nm,1.0s							
R40A	Maddies Statio	4.65	68	IAmb_Lg			20 02 13.5	
	comp=Z,8.4nm,0.7s							
W41B	Gary Mavity, V	4.69	107	IAmb_Lg			20 02 05.5	
	comp=Z,7.6nm,0.7s							
CCM	Cathedral Cave	5.36	73	IAmb_Lg			20 02 35.2	
	comp=Z,1.1nm,0.7s							
T25A	Trinidad	5.37	277	IAmb_Lg			20 02 33.6	
	comp=Z,8.2nm,1.0s							
OGNE	Ogallala	5.45	323	IAmb_Lg			20 02 41.8	
	comp=Z,9.4nm,0.8s							
FVM	French Village	5.98	75	IAmb_Lg			20 02 44.8	
	comp=Z,6.7nm,1.0s							
Q24A	Divide	6.31	294	IAmb_Lg			20 03 05.3	
	comp=Z,9.0nm,1.1s							
N23A	Red Feather La	7.69	306	IAmb_Lg			20 03 49.7	
	comp=Z,7.1nm,0.9s							

MAN 06 20:27:18.4, 10.20N×124.95E, h19km, mb4.3, ML3.2, MS2.9, Leyte

TUL ***06*** *20:48:14.9±1.0, 36.25N±0.01×96.77W±0.02, h5km±6km, ML2.7, mb_Lg2.3/25(NEIC), Error ellipse: s-maj=2.4km s-min=1.9km az=69.0*

NEIC 06 20:48:14.8±0.8, 36.27N±0.01×96.78W±0.02, h12km±5km, Error ellipse: s-maj=2.9km s-min=1.9km az=72.0, Oklahoma

| Code | Station Name | Δ° | AZ° | Phase | ID |

R11A				Sg	Sg	20 48 59.9	-0.8	
R11A				IAML		20 49 03.5		
	comp=N,655nm,0.5s							
R11A	**Troy Canyon, C**	**1.09**	**345**	P	**Pg**	**20 48 46.2**	**-0.4**	
	baz=164,SNR=446							
R11A				S	**Sg**	**20 49 01.0**	**+0.3**	
	baz=164							
CCUT	**Cedar City**	**1.50**	**80**		**Pb**	**20 48 54.4**	**+0.7**	
CCUT	**Cedar City**	**1.50**	**80**	IAML		20 49 17.9		
	comp=N,377nm,0.5s							
CCUT				IAML		20 49 18.5		
	comp=E,321nm,0.4s							
FURC	**Furnace Creek,**	**1.56**	**238**	Pb	**Pb**	**20 48 55.0**	**+0.6**	
	baz=57,SNR=126							
FURC				S	**Sg**	**20 49 16.0**	**+0.3**	
	baz=57							
LCMT	**Little Creek M**	**1.61**	**100**		**Pb**	**20 48 55.5**	**+0.1**	
LCMT	**Little Creek M**	**1.61**	**100**	IAML		20 49 19.2		
	comp=N,379nm,0.5s							
LCMT				IAML		20 49 19.2		
	comp=E,280nm,0.6s							
GWY	**Greenwater Val**	**1.61**	**227**	Pn	**Pn**	**20 48 54.5**	**+0.3**	
GWY				IAML		20 49 23.7		
	comp=N,470nm,0.6s							
GWY				IAML		20 49 30.3		
	comp=E,418nm,0.8s							
SHOC	**Shoshone, Teco**	**1.64**	**212**	P	**Pb**	**20 48 55.3**	**-0.5**	
	baz=31,SNR=36							
SHOC				Sb	**Sg**	**20 49 19.1**	**+0.8**	
	baz=31							
PSUT	**Pine Spring**	**1.64**	**41**		**Pn**	**20 48 55.6**	**+0.9**	
PSUT				IAML		20 49 24.1		
	comp=E,427nm,0.6s							
PSUT				IAML		20 49 26.3		
	comp=N,303nm,1.0s							
SZCU	**Shurtz Canyon**	**1.72**	**80**	Pn	**Pn**	**20 48 56.0**	**+0.2**	
SZCU				IAML		20 49 26.1		
	comp=N,371nm,0.3s							
SZCU				IAML		20 49 28.8		
	comp=E,389nm,0.3s							
GRAC	**Grapevine Rang**	**1.74**	**261**	Pn	**Pn**	**20 48 56.5**	**+0.7**	
GRAC	**Grapevine Rang**	**1.74**	**261**	P	**Pn**	**20 48 56.7**	**+0.9**	
	baz=80,SNR=50							
GRAC				S	**Sg**	**20 49 20.7**	**-1.0**	
	baz=80							
TPH	**Tonopah**	**1.77**	**297**		**Pn**	**20 48 57.0**	**+0.6**	
QSM	**Queen of Sheba**	**1.88**	**225**	Pn	**Pn**	**20 48 58.3**	**+0.6**	
QSM				IAML		20 49 27.3		
	comp=N,182nm,0.7s							
QSM				IAML		20 49 28.2		
	comp=E,198nm,1.0s							
LCH	**Last Change Ra**	**1.94**	**269**	Pn	**Pn**	**20 48 59.2**	**+0.6**	
LCH				IAML		20 49 34.7		
	comp=N,232nm,0.9s							
LCH				IAML		20 49 35.2		
	comp=E,279nm,0.6s							
TUQ	**Turquoise Moun**	**1.94**	**197**	P	**Pn**	**20 48 59.5**	**+0.8**	
	baz=17,SNR=69							
TUQ				Sb	**Sg**	**20 49 28.2**	**0.0**	
	baz=17							
Q09A	**Carvers**	**2.18**	**315**	Pn	**Pn**	**20 49 02.2**	**+0.3**	
MPMC	**Manual Prospec**	**2.21**	**236**	P	**Pn**	**20 49 03.1**	**+0.8**	
	baz=55,SNR=79							
MPMC				Sb	**Sg**	**20 49 35.4**	**-1.1**	
	baz=55							
PKCU	**Pink Cliffs**	**2.32**	**86**	Pn	**Pn**	**20 49 04.5**	**+0.4**	
GSC	**Goldstone, Bar**	**2.37**	**213**	Pn	**Pn**	**20 49 05.1**	**+0.6**	
GSC				IAML		20 49 48.5		
	comp=N,85nm,0.8s							
GSC				IAML		20 49 54.3		
	comp=E,130nm,1.0s							
GSC	**Goldstone, Bar**	**2.37**	**213**	P	**Pn**	**20 49 05.5**	**+0.9**	
	baz=32,SNR=34							
GSC				Sg	**Sg**	**20 49 42.8**	**+1.0**	
	baz=32							
TIN	**Tinemaha, Big**	**2.42**	**265**	Pg	**Pg**	**20 49 11.8**	**-0.2**	
	baz=83,SNR=13							
TIN				Sg	**Sg**	**20 49 44.2**	**+0.9**	
	baz=83							
CWC	**Cottonwood Cre**	**2.45**	**250**	Pg	**Pg**	**20 49 12.5**	**-0.1**	
	baz=69							
CWC				Sb	**Sg**	**20 49 42.6**	**-1.7**	
	baz=69							
W13A	**Hualapai Mount**	**2.45**	**153**	Pn	**Pn**	**20 49 06.1**	**+0.4**	
W13A				IAML		20 49 44.8		
	comp=N,116nm,0.6s							
W13A				IAML		20 49 50.4		
	comp=E,74nm,0.7s							
U15A	**North Rim**	**2.50**	**109**	Pn	**Pn**	**20 49 08.6**	**+2.0**	
U15A				IAML		20 49 51.0		
	comp=N,120nm,0.7s							
U15A				IAML		20 49 53.3		
	comp=E,154nm,0.8s							
MTPU	**Mount Pierson**	**2.52**	**72**	Pn	**Pn**	**20 49 08.0**	**+1.1**	
MTPU				IAML		20 49 48.2		
	comp=N,150nm,0.5s							
MTPU				IAML		20 50 00.1		
	comp=E,78nm,0.9s							
GMRC	**Granite Mounta**	**2.54**	**188**	P	**Pn**	**20 49 07.3**	**+0.5**	
	baz=8.0,SNR=38							
GMRC				Sb	**Sg**	**20 49 45.7**	**-1.4**	
	baz=8.0							
TCRU	**Three Creeks R**	**2.55**	**58**	Pn	**Pn**	**20 49 09.1**	**+1.8**	
TCRU				IAML		20 49 52.2		
	comp=N,153nm,1.0s							
NEE2	**Needles Airpor**	**2.57**	**169**	Pg	**Pg**	**20 49 14.3**	**-0.6**	
	baz=349							
NEE2				Sb	**Sg**	**20 49 47.0**	**-1.3**	
	baz=349							
NV11	**Mina Array Sit**	**2.58**	**297**	Pn	**Pn**	**20 49 07.5**	**0.0**	
HEC	**Hector,Ludlow**	**2.62**	**200**	Pg	**Pg**	**20 49 15.2**	**-0.7**	
	baz=20,SNR=46							
HEC				Sb	**Sg**	**20 49 48.8**	**-1.2**	
	baz=20							
MVU	**Marysvale**	**2.67**	**62**	Pn	**Pn**	**20 49 08.4**	**-0.4**	
NVAR	**Mina Array Bea**	**2.69**	**296**	Pn	**Pn**	**20 49 08.5**	**-0.5**	
LRMC	**Laurel Mtn Rad**	**2.69**	**228**	Pg	**Pg**	**20 49 17.3**	**+0.1**	
	baz=47,SNR=11							
MSU	**Marysvale**	**2.69**	**62**	Pn	**Pn**	**20 49 08.5**	**-0.7**	
LHV	**Little Huntoon**	**2.77**	**291**	Pn	**Pn**	**20 49 10.2**	**+0.3**	
LHV				IAML		20 50 07.1		
	comp=N,138nm,0.7s							
KVN	**Kaiserville**	**2.86**	**308**	Pn	**Pn**	**20 49 11.5**	**0.0**	
KVN				IAML		20 50 08.9		
	comp=E,54nm,0.8s							
MLAC	**Mammoth, Mammo**	**2.90**	**278**	Sg	**Sg**	**20 50 01.0**	**+2.3**	
	baz=96							
RYN	**Ryan**	**2.93**	**298**	Pn	**Pn**	**20 49 11.7**	**-0.6**	
RYN				IAML		20 50 01.5		
	comp=E,100nm,0.6s							
RYN				IAML		20 50 02.6		
	comp=N,96nm,0.4s							
OMMB	**Old Mammoth Mi**	**3.02**	**277**	Pn	**Pn**	**20 49 12.7**	**-1.1**	
MDPB	**Devils Postpil**	**3.09**	**277**	Pn	**Pn**	**20 49 13.8**	**-0.7**	
ISA	**Isabella, Lake**	**3.09**	**239**	Pn	**Pn**	**20 49 14.9**	**+0.5**	
ISA	**Isabella, Lake**	**3.09**	**239**	Pg	**Pg**	**20 49 23.6**	**-1.2**	
	baz=57,SNR=9.0							
ISA				Sb	**Sg**	**20 50 02.7**	**-2.2**	
	baz=57							
CCAC	**Calif City Air**	**3.11**	**227**		**Pb**	**20 49 22.8**	**+1.7**	
CCAC				IAML		20 50 15.1		
	comp=N,83nm,1.4s							
CCAC				IAML		20 50 15.4		
	comp=E,68nm,1.2s							
PDMCI	**Parker Dam,Lak**	**3.12**	**163**	Pg	**Pg**	**20 49 24.9**	**-0.5**	
	baz=344,SNR=10							
IRM	**Iron Mountain**	**3.14**	**179**	P	**Pn**	**20 49 16.3**	**+1.3**	
	baz=359,SNR=23							
IRM				Sb	**Sg**	**20 50 04.3**	**-2.1**	
	baz=359							
EDW2	**Edwards Air Fo**	**3.30**	**224**	Pg	**Pg**	**20 49 27.8**	**-1.0**	
	baz=42,SNR=12							
EDW2				Sb	**Sg**	**20 50 08.8**	**-2.8**	
	baz=42							
BELC	**Belle Mtn. Jos**	**3.35**	**191**	P	**Pn**	**20 49 19.5**	**+1.4**	
	baz=11,SNR=15							
BELC				Sb	**Sg**	**20 50 10.6**	**-2.7**	
	baz=11							
ELK	**Elko**	**3.44**	**360**		**Pn**	**20 49 20.5**	**+1.1**	
DUG	**Dugway, Tooele**	**3.45**	**32**	Pg	**Pb**	**20 49 28.3**	**+1.4**	
DUG				IAML		20 50 21.1		
	comp=E,52nm,0.8s							
DUG				IAML		20 50 24.9		
	comp=E,73nm,0.8s							
DUG	**Dugway, Tooele**	**3.45**	**32**	Pb	**Pb**	**20 49 28.2**	**+1.4**	
	baz=214,SNR=29							
DUG				Sb	**Sg**	**20 50 13.7**	**-2.7**	
	baz=214							
BMN	**Battle Mountai**	**3.50**	**334**		**Pn**	**20 49 19.9**	**-0.2**	
BMN				IAML		20 50 19.1		
	comp=E,47nm,0.6s							
BMN				IAML		20 50 24.1		
	comp=N,61nm,0.6s							
WUAZ	**Wupatki**	**3.58**	**119**		**Pb**	**20 49 30.3**	**+1.2**	
WUAZ	**Wupatki**	**3.58**	**119**	Pb	**Pb**	**20 49 30.7**	**+1.7**	
	baz=301,SNR=38							
WUAZ				Sb	**Sb**	**20 50 16.2**	**+3.7**	
	baz=301							
YERR	**Yerington**	**3.59**	**299**	Pn	**Pn**	**20 49 19.6**	**-1.8**	
YERR				IAML		20 50 21.4		
	comp=N,48nm,0.7s							
YERR				IAML		20 50 26.1		
	comp=E,64nm,0.5s							
NLU	**North Lily Min**	**3.62**	**42**		**Pn**	**20 49 20.9**	**-0.9**	
NLU				IAML		20 50 24.2		
	comp=E,32nm,0.7s							
BC3	**Big Chuckawall**	**3.64**	**183**	P	**Pn**	**20 49 23.4**	**+1.3**	
	baz=3.0,SNR=9.0							
TMUT	**Trail Mountain**	**3.73**	**57**		**Pn**	**20 49 23.5**	**0.0**	
TMUT				IAML		20 50 32.2		
	comp=E,36nm,0.7s							
TMUT				IAML		20 50 38.6		
	comp=N,38nm,0.7s							
Y14A	**Wickenburg**	**3.81**	**151**	Pn	**Pn**	**20 49 23.6**	**-0.7**	
Y14A				IAML		20 50 30.8		
	comp=N,61nm,0.8s							
Y14A				IAML		20 50 32.5		
	comp=E,54nm,0.8s							
PFO	**Pinyon Flats O**	**3.82**	**196**		**Pn**	**20 49 24.7**	**+0.2**	
PFO	**Pinyon Flats O**	**3.82**	**196**	Pg	**Pg**	**20 49 38.0**	**-0.7**	
	baz=15							
PNTR	**Pine Nut**	**3.88**	**299**		**Pn**	**20 49 25.4**	**-0.1**	
PNTR				IAML		20 50 33.6		
	comp=E,60nm,0.9s							
PNTR				IAML		20 50 37.6		
	comp=N,52nm,0.7s							
MPU	**Maple Canyon**	**3.90**	**45**		**Pn**	**20 49 25.7**	**0.0**	
BGU	**Big Grassy Mou**	**4.00**	**25**		**Pn**	**20 49 26.4**	**-0.6**	
BGU				IAML		20 50 38.6		
	comp=N,22nm,1.1s							
BGU				IAML		20 50 44.9		
	comp=E,33nm,0.6s							
VCNR	**Virginia City**	**4.01**	**301**		**Pn**	**20 49 25.7**	**-1.5**	
VCNR				IAML		20 50 38.2		
	comp=N,63nm,0.5s							
PAHR	**Pah Rah Range**	**4.05**	**308**		**Pn**	**20 49 26.8**	**-1.0**	
ELS	**Elsinore Mount**	**4.06**	**207**		**Pn**	**20 49 27.5**	**-0.3**	
SRU	**San Rafael Swe**	**4.12**	**63**		**Pb**	**20 49 38.2**	**-0.1**	
SRU				IAML		20 50 38.0		
	comp=E,34nm,0.8s							
SRU				IAML		20 50 38.7		
	comp=N,24nm,1.0s							
P17A	**Butcher Ranch,**	**4.13**	**57**		**Pb**	**20 49 36.6**	**-1.9**	
CMB	**Columbia Colle**	**4.16**	**282**	Pg	**Pb**	**20 49 40.4**	**+1.4**	
EMB	**Emerald Bay**	**4.20**	**295**		**Pb**	**20 49 40.4**	**+0.8**	
EMB				IAML		20 50 45.4		
	comp=N,21nm,0.6s							
X16A	**Lo Mia Camp, P**	**4.21**	**132**		**Pb**	**20 49 40.4**	**+0.6**	
GLA	**Glamis**	**4.25**	**176**	Pg	**Pg**	**20 49 46.8**	**-0.3**	
	baz=356							
PAGB	**Antelope Grade**	**4.34**	**250**	Pn	**Pn**	**20 49 31.0**	**-0.6**	
PAGB				IAML		20 50 46.6		
	comp=E,31nm,1.5s							
PAGB				IAML		20 50 59.8		
	comp=N,29nm,1.3s							
JLU	**Jordanelle**	**4.42**	**41**		**Pn**	**20 49 32.6**	**-0.2**	
MONP2	**Monument Peak**	**4.51**	**193**	Pg	**Pg**	**20 49 50.1**	**-1.9**	
	baz=12,SNR=7.2							
P18A	**Preston Nutter**	**4.54**	**58**		**Pn**	**20 49 32.2**	**-2.4**	
P18A				IAML		20 50 57.7		
	comp=E,16nm,0.8s							
BEKR	**Beckworth**	**4.77**	**304**	Pn	**Pn**	**20 49 37.9**	**+0.2**	
BEKR				IAML		20 51 24.5		
	comp=E,12nm,0.3s							
HVU	**Hansel Valley**	**4.86**	**22**	Pn	**Pn**	**20 49 38.3**	**-0.5**	
HVU				IAML		20 51 07.7		
	comp=E,32nm,0.8s							
HVU				IAML		20 51 19.3		
	comp=N,34nm,0.7s							
X18A	**Snowflake**	**5.09**	**121**	Pn	**Pn**	**20 49 40.8**	**-1.3**	
X18A				IAML		20 51 06.8		
	comp=N,27nm,1.0s							
PV11	**David Mesa, Pa**	**5.13**	**77**	Pn	**Pn**	**20 49 40.5**	**-2.1**	
PV13	**Radium Mtn., P**	**5.15**	**78**	Pn	**Pn**	**20 49 41.3**	**-1.5**	
HWUT	**Hardware Ranch**	**5.15**	**32**	Pn	**Pn**	**20 49 42.5**	**-0.3**	
HWUT				IAML		20 51 15.5		
	comp=N,12nm,0.9s							
HWUT				IAML		20 51 19.5		
	comp=N,12nm,1.1s							
PV07	**Paradox Valley**	**5.32**	**76**	Pn	**Pn**	**20 49 44.2**	**-1.1**	
PV07				Pg	**Pb**	**20 49 59.0**	**+0.2**	
MVCO	**Mesa Verde**	**5.36**	**89**		**Pn**	**20 49 45.2**	**-0.6**	

*SOME **06** 21:28:16.2, 39°.45N × 75°.93E, h15km*
*NNC **06** 21:28:18.4 ± 2.2, 39°.57N × 76°.06E, h0km, mb3.6, mpv3.3,*
Error ellipse: s-maj=17.6km s-min=11.8km az=137.0
*KRNET **06** 21:28:24.0 ± 0.1, 39°.60N × 75°.83E, mb3.3*
ISC 06 21:28:27.0 ± 1.4, **39°.89N** ± 0°.06 × **75°.82E** ± 0°.03, **h10km, n53,**
σ 1°57/84, 20C-15D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARLS	**Aral**	**2.27**	**330**	⇑*i*P	**Pb**	**21 29 08.0**	**-0.2**
	baz=34						
ARLS				⇑*i*S	**Sg**	**21 29 40.1**	**+0.1**
	baz=34						
ULHL	**Ulahol**	**2.37**	**8**	P	**Pb**	**21 29 10.3**	**+0.4**
	SNR=26						
ULHL	**Ulahol**	**2.37**	**8**	⇓*e*P	**Pb**	**21 29 10.1**	**+0.1**
	baz=7.0						
ULHL				⇓*i*S	**Sg**	**21 29 43.5**	**+0.3**
	baz=7.0						
OHH	**Osh**	**2.41**	**286**	⇑*i*P	**Pb**	**21 29 07.6**	**-2.9**
	baz=93						
OHH				⇑*i*S	**Sb**	**21 29 40.5**	**+0.2**
	baz=93						
KDJ	**Kajisay**	**2.46**	**24**	⇓*i*P	**Pb**	**21 29 11.0**	**-0.4**
	baz=22						
KDJ				⇓*i*S	**Sg**	**21 29 45.1**	**-1.0**
	baz=22						
UCH	**Uchtor**	**2.53**	**337**	P	**Pb**	**21 29 11.8**	**-1.0**
	SNR=19						
UCH	**Uchtor**	**2.53**	**337**	⇑*i*P	**Pb**	**21 29 12.2**	**-0.7**
	baz=40						
UCH				⇑*i*S	**Sg**	**21 29 47.2**	**-1.3**
	baz=40						
BOOM	**Boomskoye usch**	**2.60**	**2**	⇑*i*P	**Pb**	**21 29 13.3**	**-0.5**
	baz=2.0						
BOOM				⇑*i*S	**Sg**	**21 29 49.0**	**-1.4**
	baz=2.0						
AML	**Almayashu**	**2.76**	**325**	P	**Pb**	**21 29 14.8**	**-1.7**
	SNR=16						
KBK	**Karagaybulak**	**2.84**	**347**	P	**Pb**	**21 29 17.1**	**-0.8**
	SNR=7.4						
KBK	**Karagaybulak**	**2.84**	**347**	⇑*i*P	**Pb**	**21 29 16.5**	**-1.4**
	baz=48						
KBK				⇑*i*S	**Sb**	**21 29 54.8**	**+2.0**
	baz=48						
AAK	**Ala-Archa**	**2.92**	**340**	P	**Pb**	**21 29 17.8**	**-1.5**
	SNR=11						
AAK	**Ala-Archa**	**2.92**	**340**	⇑*i*P	**Pb**	**21 29 17.4**	**-1.8**
	baz=42						
AAK				⇑*i*S	**Sb**	**21 29 56.4**	**+1.3**
	baz=42						
TKM2	**Tokmak 2**	**3.03**	**357**	P	**Pb**	**21 29 19.5**	**-1.7**
	SNR=10						
TKM2	**Tokmak 2**	**3.03**	**357**	⇑*i*P	**Pb**	**21 29 19.2**	**-2.0**
	baz=57						
TKM2				⇑*i*S	**Sb**	**21 29 59.5**	**+1.2**
	baz=57						
TKM2	**Tokmak 2**	**3.03**	**357**	⇓Pg	**Pb**	**21 29 19.3**	**-1.9**
	4.8nm,0.4s						
TKM2				⇓Lg	Lg	21 30 04.6	
	26nm,0.6s						
DRK	**Karamyk**	**3.13**	**264**	⇓*i*P	**Pn**	**21 29 16.7**	**0.0**
	baz=69						
DRK				⇓*i*S	**Sn**	**21 29 54.5**	**+0.2**
	baz=69						
KST	**Kastek**	**3.15**	**2**	*e*P	**Pb**	**21 29 21.4**	**-1.7**
	14nm,0.5s						
KST				*e*S	**Sg**	**21 30 08.1**	**0.0**
	22nm,0.6s						
EKS2	**Erkin-Say**	**3.17**	**332**	⇑*e*P	**Pb**	**21 29 20.5**	**-2.9**
	baz=34						
EKS2				⇑*i*S	**Sb**	**21 30 01.9**	**-0.2**
	baz=34						
PRZ	**Przheval'sk**	**3.24**	**36**	⇓*i*P	**Pb**	**21 29 21.6**	**-3.1**
	baz=33						
PRZ				⇓*i*S	**Sb**	**21 30 03.2**	**-1.0**
	baz=33						
TNSS	**Tian-Shan**	**3.25**	**15**	*e*P	**Pb**	**21 29 22.6**	**-2.5**
	13nm,0.4s						
TNSS				*e*S	**Sg**	**21 30 10.2**	**-1.3**
	11nm,0.5s						
TNSS	**Tian-Shan**	**3.25**	**15**	Pg	**Pb**	**21 29 22.6**	**-2.5**
	13nm,0.4s						
TNSS				Lg	Lg	21 30 11.2	
	11nm,0.5s						
MTBS	**Maitube**	**3.27**	**8**	*e*P	**Pb**	**21 29 23.9**	**-1.2**
	4.5nm,0.2s						
MTBS				*e*S	**Sg**	**21 30 12.5**	**+0.6**
	12nm,0.2s						
MTBS	**Maitube**	**3.27**	**8**	Pg	**Pb**	**21 29 23.6**	**-1.6**
	7.6nm,0.1s						
MTBS				Lg	Lg	21 30 12.8	
	12nm,0.2s						
MDOK	**Medeo**	**3.40**	**15**	*e*P	**Pb**	**21 29 25.8**	**-1.6**
	3.5nm,0.4s						
MDOK				*e*S	**Sg**	**21 30 15.7**	**-0.4**
	29nm,0.8s						
MDOK	**Medeo**	**3.40**	**15**	Pg	**Pb**	**21 29 24.5**	**-2.8**
	3.9nm,0.6s						
MDOK				Pg	Pn	21 29 25.1	+4.9
	5.4nm,0.4s						
MDOK				Lg	Lg	21 30 15.5	
	29nm,0.8s						
MDOK				Lg	Lg	21 30 15.5	
	20nm,0.9s						
KNDC	**Almaty**	**3.43**	**14**	⇓Pg	**Pb**	**21 29 25.7**	**-2.2**
	6.5nm,0.3s						
KNDC				⇑Lg	Lg	21 30 18.0	
	67nm,0.8s						
MRKS	**Merke**	**3.46**	**326**	*e*P	**Pb**	**21 29 27.9**	**-0.5**
	4.7nm,0.5s						
MRKS				*e*S	**Sg**	**21 30 19.5**	**+1.5**
	22nm,0.6s						
SGDS	**Sogindy**	**3.67**	**346**	*e*P	**Pb**	**21 29 28.7**	**-3.2**
	1.5nm,0.3s						
SGDS				*e*S	**Sg**	**21 30 21.7**	**-3.1**
	11nm,0.7s						
SGDS	**Sogindy**	**3.67**	**346**	Pg	**Pb**	**21 29 28.7**	**-3.2**
	1.8nm,0.3s						
SGDS				Lg	Lg	21 30 21.7	
	11nm,0.7s						
SATY	**Saty**	**3.71**	**31**	*e*P	**Pb**	**21 29 31.9**	**-0.8**
	1.5nm,0.1s						
SATY				*e*S	**Sg**	**21 30 26.4**	**+0.3**
	14nm,0.6s						
KRBS	**Karabastau**	**3.80**	**358**	*e*P	**Pb**	**21 29 32.5**	**-1.7**
	3.3nm,0.4s						
KRBS				*e*S	**Sg**	**21 30 27.4**	**-1.7**
	11nm,0.6s						
BTK	**Batken**	**3.85**	**274**	⇑*i*P	**Pn**	**21 29 26.5**	**+0.1**
	baz=78						
BTK				⇑*i*S	**Sn**	**21 30 13.0**	**+1.3**
	baz=78						
KTBS	**Karatobe**	**3.87**	**9**	*e*P	**Pb**	**21 29 34.5**	**-0.9**
	0.7nm,0.4s						
KTBS				*e*S	**Sg**	**21 30 30.7**	**-0.5**
	28nm,0.6s						
KTBS	**Karatobe**	**3.87**	**9**	Pg	**Pb**	**21 29 33.8**	**-1.6**
	0.6nm,0.4s						
KTBS				Lg	Lg	21 30 30.5	
	28nm,0.6s						
KURS	**Kuram**	**4.00**	**25**	*e*P	**Pb**	**21 29 36.4**	**-1.1**
	1.6nm,0.7s						
KURS				*e*S	**Sg**	**21 30 34.8**	**-0.6**
	8.6nm,0.6s						
KURS	**Kuram**	**4.00**	**25**	Pg	**Pb**	**21 29 36.4**	**-1.1**
	1.6nm,0.7s						
KURS				Lg	Lg	21 30 34.8	
	8.6nm,0.6s						
KUU	**Kurty**	**4.02**	**5**	*e*P	**Pb**	**21 29 36.6**	**-1.2**
	0.7nm,0.2s						
KUU				*e*S	**Sg**	**21 30 34.9**	**-1.1**
	21nm,0.6s						
KUU	**Kurty**	**4.02**	**5**	Pg	**Pb**	**21 29 36.6**	**-1.2**
KUU				Lg	Lg	21 30 34.9	
CHKK	**Chushkaly**	**4.05**	**12**	*e*P	**Pb**	**21 29 37.5**	**-1.0**
	0.5nm,0.1s						
CHKK				*e*S	**Sg**	**21 30 36.1**	**-1.0**
	18nm,0.7s						
CHKK	**Chushkaly**	**4.05**	**12**	Pg	**Pb**	**21 29 37.4**	**-1.0**
CHKK				Lg	Lg	21 30 36.1	
KPKS	**Kokpek**	**4.16**	**30**	*e*P	**Pb**	**21 29 39.7**	**-0.7**
	2.2nm,0.3s						
KPKS				*e*S	**Sg**	**21 30 40.0**	**-0.7**
	18nm,0.6s						
KPKS	**Kokpek**	**4.16**	**30**	Pg	**Pb**	**21 29 39.7**	**-0.7**
	2.2nm,0.3s						
KPKS				Lg	Lg	21 30 40.0	
	18nm,0.6s						
PDGK	**Podgornoye**	**4.40**	**37**	⇑Pg	**Pn**	**21 29 37.3**	**+3.3**
	4.0nm,0.6s						
PDGK				⇓Lg	Lg	21 30 41.7	
	11nm,0.8s						
ARXS	**Arharly**	**4.57**	**18**	*e*P	**Pb**	**21 29 47.0**	**-0.2**
	1.2nm,0.6s						
ARXS				*e*S	**Sg**	**21 30 52.5**	**-1.1**
	7.3nm,0.6s						
ARXS	**Arharly**	**4.57**	**18**	Pg	**Pb**	**21 29 47.0**	**-0.2**
ARXS				Lg	Lg	21 30 52.5	
BLB	**Baldybastay**	**4.64**	**24**	*e*P	**Pb**	**21 29 47.8**	**-0.9**
	2.1nm,0.4s						
BLB				*e*S	**Sg**	**21 30 53.7**	**-2.4**
	9.5nm,0.4s						
BLB	**Baldybastay**	**4.64**	**24**	Pg	**Pb**	**21 29 47.7**	**-0.9**
BLB				Lg	Lg	21 30 53.7	
IUG	**luzhnay**	**4.93**	**299**	Pg	**Pn**	**21 29 41.6**	**+0.4**
IUG				Lg	Lg	21 30 43.3	
KK31	**Karatay Array**	**5.12**	**311**	⇓Pn	**Pn**	**21 29 44.2**	**+0.5**
	0.1nm,0.2s,baz=0.0,slow=0.1,SNR=9.4						
KK31				⇓Pg	**Pb**	**21 29 59.1**	**+2.5**
	0.4nm,0.4s,baz=136,slow=17,SNR=4.7						
KK31				⇓Lg	Lg	21 31 12.1	
	2.6nm,0.6s,baz=131,slow=29,SNR=5.3						
BTLS	**Baital**	**5.31**	**346**	*e*P	**Pb**	**21 29 59.9**	**0.0**
	0.5nm,0.2s						
BTLS				*e*S	**Sg**	**21 31 14.4**	**-3.1**
	5.8nm,0.8s						
BRLS	**Borolday**	**5.48**	**307**	*e*P	**Pb**	**21 30 04.3**	**+1.5**
	3.0nm,0.2s						
BRLS				*e*S	**Sg**	**21 31 21.9**	**-1.0**
	3.6nm,1.1s						

*IDC **06** 21:35:47.2 ± 2.9, 31°.14S × 177°.67W, h0km, mb4.0/4,*
*mbtmp4.0/4, MS3.

BRTR	**Keskin Array B**		**153.09**	**298**	PKPab	**PKPab**	**21 55 59.1**	**+0.6**
	0.2nm,0.5s,baz=145,slow=5.3,SNR=1.8							

*KRNET **06** 21:41:47.7±0.1, 41.67N×79.11E, h21km, mb3.4*
*SOME **06** 21:41:47.3, 41.70N×79.03E, h5km*
*NNC **06** 21:41:48.4±0.9, 41.72N×79.07E, h0km, mb3.7, mpv3.4,*
Error ellipse: s-maj=6.3km s-min=3.6km az=157.0

ISC 06 21:41:47.9±2.7, 41.67N±0.09×79.12E±0.05, h1km±18km, n54, σ0.98/85, 27C-3D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PRZ	**Przheval'sk**	**0.98**	**327**	⇑	*iP*	**Pb**	**21 42 06.4**	**-1.4**
	baz=28							
PRZ				⇑	*iS*	**Sb**	**21 42 20.2**	**-1.1**
	baz=28							
SATY	**Saty**	**1.49**	**339**		*eP*	**Pn**	**21 42 15.4**	**-0.5**
	baz=40							
SATY					*eS*	**Sb**	**21 42 35.3**	**-0.6**
	baz=40							
SATY	**Saty**	**1.49**	**339**		*eP*	**Pn**	**21 42 15.4**	**-0.5**
	24nm,0.2s							
SATY					*eS*	**Sb**	**21 42 35.3**	**-0.6**
	141nm,0.1s							
SATY	**Saty**	**1.49**	**339**	P		**Pn**	**21 42 15.4**	**-0.5**
	24nm,0.2s							
SATY				S		**Sb**	**21 42 35.3**	**-0.6**
	141nm,0.1s							
KDJ	**Kajisay**	**1.52**	**288**	⇑	*iP*	**Pn**	**21 42 15.5**	**-1.0**
	baz=88							
KDJ				⇑	*iS*	**Sn**	**21 42 35.7**	**-1.3**
	baz=88							
ANVS	**Anan'yevo**	**1.55**	**316**	⇑	*iP*	**Pn**	**21 42 16.4**	**-0.5**
	baz=17							
ANVS				⇑	*iS*	**Sb**	**21 42 37.4**	**-0.4**
	baz=17							
PDGK	**Podgornoye**	**1.68**	**9**	P		**Pn**	**21 42 18.3**	**-0.3**
	15nm,0.3s							
PDGK				S		**Sb**	**21 42 40.4**	**-1.1**
	21nm,0.5s							
PDGK	**Podgornoye**	**1.68**	**9**	⇑	P	**Pn**	**21 42 18.1**	**-0.5**
	9.8nm,0.3s							
PDGK				⇓	S	**Sb**	**21 42 40.4**	**-1.1**
	78nm,0.6s							
KPKS	**Kokpek**	**1.83**	**350**		*eP*	**Pn**	**21 42 21.1**	**+0.5**
	baz=50							
KPKS					*eS*	**Sb**	**21 42 45.0**	**-0.6**
	baz=50							
KPKS	**Kokpek**	**1.83**	**350**		*eP*	**Pn**	**21 42 21.1**	**+0.5**
	37nm,0.2s							
KPKS					*eS*	**Sb**	**21 42 45.0**	**-0.6**
	179nm,0.3s							
KPKS	**Kokpek**	**1.83**	**350**	P		**Pn**	**21 42 21.1**	**+0.5**
	37nm,0.2s							
KPKS				S		**Sb**	**21 42 45.0**	**-0.6**
	179nm,0.3s							
KURS	**Kuram**	**1.95**	**339**		*eP*	**Pn**	**21 42 23.3**	**+1.1**
	baz=39							
KURS					*eS*	**Sb**	**21 42 49.4**	**+0.2**
	baz=39							
KURS	**Kuram**	**1.95**	**339**		*eP*	**Pn**	**21 42 23.3**	**+1.1**
	17nm,0.2s							
KURS					*eS*	**Sb**	**21 42 49.4**	**+0.2**
	70nm,0.3s							
KURS	**Kuram**	**1.95**	**339**	Pg		**Pn**	**21 42 23.3**	**+1.1**
	17nm,0.2s							
KURS				Lg		Lg	21 42 49.4	
	70nm,0.3s							
KTMS	**Ketmen**	**2.00**	**27**		*eP*	**Pb**	**21 42 25.7**	**+0.6**
	7.9nm,0.4s							
KTMS					*eS*	**Sg**	**21 42 52.7**	**+0.6**
	10nm,0.2s							
KTMS	**Ketmen**	**2.00**	**27**	Pg		**Pb**	**21 42 25.7**	**+0.6**
	7.9nm,0.4s							
KTMS				Lg		Lg	21 42 52.7	
	10nm,0.2s							
TNSS	**Tian-Shan**	**2.11**	**311**		*eP*	**Pn**	**21 42 26.1**	**+1.3**
	baz=11							
TNSS					*eS*	**Sb**	**21 42 53.7**	**-0.5**
	baz=11							
TNSS	**Tian-Shan**	**2.11**	**311**		*eP*	**Pn**	**21 42 26.1**	**+1.3**
	23nm,0.3s							
TNSS					*eS*	**Sb**	**21 42 53.8**	**-0.5**
	103nm,0.4s							
TNSS	**Tian-Shan**	**2.11**	**311**	Pg		**Pn**	**21 42 26.1**	**+1.3**
	23nm,0.3s							
TNSS				Lg		Lg	21 42 53.8	
	103nm,0.4s							
MDOK	**Medeo**	**2.14**	**315**		*eP*	**Pn**	**21 42 26.3**	**+1.3**
	baz=15							
MDOK					*eS*	**Sb**	**21 42 54.3**	**-0.5**
	baz=15							
MDOK	**Medeo**	**2.14**	**315**		*eP*	**Pn**	**21 42 26.3**	**+1.3**
	11nm,0.5s							
MDOK					*eS*	**Sb**	**21 42 54.3**	**-0.5**
	102nm,0.6s							
MDOK	**Medeo**	**2.14**	**315**	Pg		**Pn**	**21 42 26.2**	**+1.2**
	11nm,0.5s							
MDOK				Pg		**Pn**	**21 42 26.3**	**+1.3**
	11nm,0.5s							
MDOK				Lg		Lg	21 42 54.3	
	102nm,0.6s							
MDOK				Lg		Lg	21 42 55.3	
	97nm,0.6s							
KNDC	**Almaty**	**2.22**	**315**	⇑	Pg	**Pn**	**21 42 27.1**	**+1.0**
	19nm,0.6s							
KNDC				⇑	Lg	Lg	21 42 58.4	
	66nm,0.5s							
ULHL	**Ulahol**	**2.22**	**286**	⇑	*iP*	**Pn**	**21 42 27.2**	**+1.0**
	baz=86							
ULHL				⇑	*iS*	**Sb**	**21 42 56.2**	**-1.0**
	baz=86							
AAA	**Alma-Ata**	**2.25**	**314**		*eP*	**Pn**	**21 42 28.7**	**-0.6**
	35nm,0.3s							
AAA					*eS*	**Sb**	**21 42 58.5**	**+0.9**
	216nm,0.3s							
AAA	**Alma-Ata**	**2.25**	**314**	Pg		**Pb**	**21 42 28.7**	**-0.6**
	35nm,0.3s							
AAA				Lg		Lg	21 42 58.5	
	216nm,0.3s							
MTBS	**Maitube**	**2.47**	**307**		*eP*	**Pb**	**21 42 32.5**	**-0.8**
	5.2nm,0.1s							
MTBS					*eS*	**Sb**	**21 43 05.0**	**+0.8**
	41nm,0.4s							
MTBS	**Maitube**	**2.47**	**307**	Pg		**Pb**	**21 42 32.5**	**-0.8**
	5.2nm,0.1s							
MTBS				Lg		Lg	21 43 05.0	
	41nm,0.4s							
BOOM	**Boomskoye usch**	**2.51**	**290**	⇑	*iP*	**Pn**	**21 42 31.1**	**+1.1**
	baz=90							
BOOM				⇑	*iS*	**Sb**	**21 43 03.2**	**-2.1**
	baz=90							
CHKK	**Chushkaly**	**2.69**	**325**		*eP*	**Pb**	**21 42 36.3**	**-0.6**
	7.9nm,0.3s							
CHKK					*eS*	**Sb**	**21 43 11.1**	**+0.7**
	139nm,0.3s							
CHKK	**Chushkaly**	**2.69**	**325**	Pg		**Pb**	**21 42 36.3**	**-0.6**
	7.9nm,0.3s							
CHKK				Lg		Lg	21 43 11.1	
	139nm,0.3s							
DJR	**Jarkent**	**2.71**	**10**		*eP*	**Pb**	**21 42 36.3**	**-1.0**
	2.9nm,0.3s							
DJR					*eS*	**Sb**	**21 43 10.9**	**-0.1**
	78nm,0.4s							
DJR	**Jarkent**	**2.71**	**10**	Pg		**Pb**	**21 42 36.3**	**-1.0**
	2.9nm,0.3s							
DJR				Lg		Lg	21 43 10.9	
	78nm,0.4s							
KST	**Kastek**	**2.71**	**301**		*eP*	**Pb**	**21 42 35.8**	**-1.6**
	3.7nm,0.4s							
KST					*eS*	**Sb**	**21 43 10.1**	**-1.1**
	88nm,0.5s							
KST	**Kastek**	**2.71**	**301**	Pg		**Pb**	**21 42 35.8**	**-1.6**
	3.7nm,0.4s							
KST				Lg		Lg	21 43 10.1	
	88nm,0.5s							
KTBS	**Karatobe**	**2.72**	**319**		*eP*	**Pb**	**21 42 36.4**	**-1.1**
	1.8nm,0.2s							
KTBS					*eS*	**Sb**	**21 43 11.5**	**+0.2**
	87nm,0.4s							
KTBS	**Karatobe**	**2.72**	**319**	Pg		**Pb**	**21 42 36.3**	**-1.1**
	1.8nm,0.2s							
KTBS				Lg		Lg	21 43 11.5	
	87nm,0.4s							
TKM2	**Tokmak 2**	**2.90**	**297**	⇑	*iP*	**Pn**	**21 42 36.7**	**+1.3**
	baz=97							
TKM2				⇑	*iS*	**Sn**	**21 43 12.7**	**+1.6**
	baz=97							
TKM2	**Tokmak 2**	**2.90**	**297**	⇑	Pn	**Pn**	**21 42 36.6**	**+1.1**
	4.8nm,0.5s							
TKM2				⇑	Lg	Lg	21 43 17.9	
	28nm,0.5s							
KUU	**Kurty**	**3.02**	**318**		*eP*	**Pb**	**21 42 41.6**	**-0.9**
	2.6nm,0.3s							
KUU					*eS*	**Sb**	**21 43 20.1**	**+0.1**
	55nm,0.3s							
KUU	**Kurty**	**3.02**	**318**	Pg		**Pb**	**21 42 41.6**	**-0.9**
	2.6nm,0.3s							
KUU				Lg		Lg	21 43 20.1	
	55nm,0.3s							
KBK	**Karagaybulak**	**3.26**	**289**	⇑	*eP*	**Pn**	**21 42 41.5**	**+1.2**
	baz=89							
KBK				⇑	*iS*	**Sn**	**21 43 21.2**	**+1.4**
	baz=89							
TDK	**Taldyqorghan**	**3.37**	**351**		*eP*	**Pb**	**21 42 48.4**	**-0.2**
	45nm,0.2s							
TDK					*eS*	**Sb**	**21 43 31.6**	**+1.5**
	65nm,0.3s							
TDK	**Taldyqorghan**	**3.37**	**351**	Pg		**Pb**	**21 42 48.4**	**-0.2**
TDK				Lg		Lg	21 43 31.6	
KAPS	**Kapalarasan**	**3.62**	**3**		*eP*	**Pb**	**21 42 52.6**	**-0.1**
	1.5nm,0.3s							
KAPS					*eS*	**Sb**	**21 43 39.2**	**+2.0**
	15nm,0.3s							
KAPS	**Kapalarasan**	**3.62**	**3**	Pg		**Pb**	**21 42 52.7**	**-0.1**
	1.5nm,0.3s							
KAPS				Lg		Lg	21 43 39.2	
	15nm,0.3s							
SGDS	**Sogindy**	**3.77**	**300**		*eP*	**Pb**	**21 42 55.2**	**-0.1**
	0.4nm,0.2s							
SGDS					*eS*	**Sb**	**21 43 43.4**	**+2.0**
	8.7nm,0.4s							
SGDS	**Sogindy**	**3.77**	**300**	Pg		**Pb**	**21 42 55.2**	**-0.1**
SGDS				Lg		Lg	21 43 43.4	
MAKZ	**Makanchi**	**5.53**	**21**	⇑	Pn	**Pn**	**21 43 11.6**	**+0.1**
	0.4nm,0.3s							
MAKZ				⇑	Sn	**Sn**	**21 44 15.4**	**-0.3**
	1.0nm,0.7s							
MAKZ				⇓	Lg	Lg	21 44 42.9	
	2.5nm,0.8s							
MK31	**Makanchi Array**	**5.61**	**23**	⇑	Pn	**Pn**	**21 43 12.2**	**-0.3**
	0.2nm,0.3s,baz=197,slow=12,SNR=20							
MK31				⇑	Sn	**Sn**	**21 44 16.2**	**-1.3**
	0.4nm,0.4s,baz=198,slow=22,SNR=4.5							
MK31				⇑	Lg	Lg	21 44 43.3	
	1.7nm,0.5s							
KK31	**Karatay Array**	**6.54**	**286**	⇓	Lg	Lg	21 45 14.8	
	0.7nm,0.4s,baz=101,slow=26,SNR=3.9							
OTUK	**Ortayu**	**8.14**	**326**	⇑	Lg	Lg	21 46 06.4	
	3.4nm,0.8s							
KURBB	**Kurchatov Arra**	**8.97**	**358**	⇑	Lg	Lg	21 46 30.2	
	6.2nm,0.6s							
KURK	**Kurchatov**	**9.06**	**358**	⇑	Lg	Lg	21 46 35.6	
	3.6nm,0.8s							

*IDC **06** 21:48:09.9±4.6, 5.34S×142.87E, h78km±52km, mb3.8/10, mbtmp4.1/13, ML3.7/1, MS3.0/4, Error ellipse: s-maj=37.0km s-min=25.0km az=143.0*
*NEIC **06** 21:48:10.3±1.2, 5.2S±0.1×142.8E±0.1, h70km±9km, mb4.2/23, Error ellipse: s-maj=21.1km s-min=11.9km az=141.0*

ISC 06 21:48:11.7±0.5, 5.46S±0.06×142.77E±0.08, h100km, n51, σ1.980/49, mb4.2/21, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PMG	**Port Moresby**	**5.86**	**132**	P		**Pn**	**21 49 34.4**	**-1.7**
	7.3nm,0.5s,baz=323,slow=9.9,SNR=4.8							
PMG				S		**Sn**	**21 50 41.8**	**-0.2**
	5.8nm,0.3s,baz=111,slow=22,SNR=1.8							
PMG	**Port Moresby**	**5.86**	**132**	Pn		**Pn**	**21 49 35.2**	**-0.9**
COEN	**Coen**	**8.46**	**177**	Pn		**Pn**	**21 50 13.7**	**+2.2**
FAKI	**Fak Fak**	**10.79**	**283**	Pn		Pn	21 50 36.1	-7.1
SIJI	**Sorong**	**12.35**	**291**	LR		LR	21 56 05.3	
	comp=Z,107nm,21.2s,baz=248,slow=38							
WB0	**Warramunga Arr**	**16.40**	**209**	Pn		**Pn**	**21 51 54.7**	**-1.3**
WR0	**Warramunga Arr**	**16.49**	**208**	Pn		**Pn**	**21 51 55.9**	**-1.2**
WR0				IAmb		IAmb	21 52 12.7	
	comp=Z,13nm,1.4s							
WRAB	**Tennant Creek**	**16.56**	**209**			**P**	**21 52 00.6**	**+1.8**
WB2	**Warramunga Arr**	**16.57**	**209**	Pn		**Pn**	**21 51 57.1**	**-0.9**
WRA	**Warramunga Arr**	**16.57**	**209**	P		**Pn**	**21 51 57.5**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=29,slow=12,SNR=9.6							
WRA				S		**Sn**	**21 54 55.9**	**-6.3**
	comp=Z,0.5nm,0.5s,baz=28,slow=23,SNR=2.3							
	comp=Z,1.0nm,0.8s							
WRA	**Warramunga Arr**	**16.57**	**209**	Pn		**Pn**	**21 51 55.6**	**-2.5**
KNRA	**Kununurra**	**17.10**	**232**	Pn		**Pn**	**21 52 00.6**	**-4.0**
KNRA				IAmb		IAmb	21 52 25.0	
	comp=Z,17nm,0.9s							
BATI	**Baumata**	**19.50**	**255**	P		**Pn**	**21 52 32.7**	**-0.7**
	comp=Z,6.7nm,0.5s,baz=13,slow=4.7,SNR=1.8							
BATI				S		**S**	**21 56 04.2**	**-2.1**
	comp=Z,6.2nm,0.3s,baz=145,slow=23,SNR=1.5							
AS31	**Alice Springs**	**20.02**	**204**			Pn	21 52 39.5	+0.2
ASAR	**Alice Springs**	**20.02**	**204**	P		**P**	**21 52 38.9**	**+2.1**
	comp=Z,1.1nm,0.6s,baz=32,slow=12,SNR=16							
ASAR				S		**S**	**21 56 23.1**	**+6.6**
	comp=Z,0.4nm,0.5s,baz=20,slow=31,SNR=1.7							
	comp=Z,1.1nm,0.6s							
ASAR	**Alice Springs**	**20.02**	**204**	P		**P**	**21 52 38.1**	**+1.4**
DAV	**Davao City (W)**	**21.19**	**306**	LR		LR	22 02 25.6	
	comp=Z,21nm,18.2s,baz=158,slow=40							
TOLI2	**Tolitoli**	**22.91**	**286**	P		**P**	**21 53 06.6**	**-0.7**
TOLI2				IAmb		IAmb	21 53 07.3	
	comp=Z,4.7nm,0.7s							
JSD	**Sado**	**43.47**	**355**	P		**P**	**21 56 04.4**	**-0.6**
JSD				IAmb		IAmb	21 56 15.4	
	comp=Z,8.3nm,1.1s							
NJ2	**Nanjing**	**43.70**	**330**		*eP*	P	21 56 08.9	+2.0
NJ2					pmax	pmax		
	comp=Z,7.0nm,0.7s							
KSRS	**Korea Array**	**44.88**	**343**	P		**P**	**21 56 15.8**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=178,slow=7.1,SNR=1.7							
KSRS				LR		LR	22 13 03.2	
	comp=Z,9.9nm,20.9s,baz=175,slow=33							
	comp=Z,0.6nm,0.6s							
JTM	**Tenmabayashi**	**46.04**	**358**	P		**P**	**21 56 24.6**	**-0.7**
CM31	**Chiang Mai Arr**	**49.31**	**300**	P		**P**	**21 56 50.8**	**-0.2**
CM31				IAmb		IAmb	21 56 52.0	
	comp=Z,4.4nm,0.9s							
CMAR	**Chiang Mai Arr**	**49.31**	**300**	P		**P**	**21 56 51.0**	**0.0**
	comp=Z,1.6nm,0.3s,baz=120,slow=5.9,SNR=2.2							
	comp=Z,1.6nm,0.3s							
USRK	**Ussuriysk Ar.**	**50.37**	**350**	P		**P**	**21 56 58.8**	**+0.2**
	comp=Z,1.9nm,0.8s,baz=190,slow=7.3,SNR=2.6							
	comp=Z,1.9nm,0.8s							
GTA	**Gaotai**	**59.69**	**322**		*eP*	**P**	**21 58 07.2**	**+1.3**
GTA					pmax	pmax		
	comp=Z,3.0nm,0.9s							
PETK	**Petropavlovsk-**	**59.70**	**10**	P		**P**	**21 58 05.5**	**0.0**
	comp=Z,1.3nm,0.6s,baz=197,slow=4.8,SNR=2.3							
	comp=Z,1.3nm,0.6s							
SONM	**Songino Array**	**61.95**	**333**	P		**P**	**21 58 21.3**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=159,slow=8.6,SNR=4.1							
	comp=Z,0.7nm,0.7s							
MK31	**Makanchi Array**	**74.43**	**322**	P		**P**	**21 59 39.3**	**+0.4**
MK31				IAmb		IAmb	21 59 40.8	
	comp=Z,2.1nm,0.8s							
MKAR	**Makanchi Array**	**74.43**	**322**	P		**P**	**21 59 39.9**	**+0.9**
	comp=Z,4.1nm,0.9s,baz=111,slow=7.2,SNR=29							
	comp=Z,4.1nm,0.9s							
MKAR	**Makanchi Array**	**74.43**	**322**	P		**P**	**21 59 39.5**	**+0.6**
MAKZ	**Makanchi**	**74.63**	**322**	P		**P**	**21 59 41.1**	**+0.9**
MAKZ				IAmb		IAmb	21 59 41.9	
	comp=Z,4.5nm,1.0s							
ZAA0	**Zalesovo Array**	**76.34**	**329**	P		**P**	**21 59 49.7**	**0.0**
ZAA0				IAmb		IAmb	21 59 50.3	
	comp=Z,3.4nm,1.1s							
ZALV	**Zalesovo Beam**	**76.34**	**329**	P		**P**	**21 59 49.8**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=104,slow=6.3,SNR=4.9							
	comp=Z,1.0nm,0.5s							
ZALV	**Zalesovo Beam**	**76.34**	**329**	P		**P**	**21 59 49.6**	**-0.1**
TIXI	**Tiksi**	**77.50**	**356**	P		**P**	**21 59 55.7**	**-0.1**
TIXI				IAmb		IAmb	21 59 57.5	
	comp=Z,1.8nm,0.8s							
AAK	**Ala-Archa**	**77.98**	**316**	LR		LR	22 38 06.0	
	comp=Z,13nm,18.5s,baz=171,slow=38							
KURK	**Kurchatov**	**78.28**	**324**	P		**P**	**22 00 01.0**	**+0.4**
KURK				IAmb		IAmb	22 00 01.7	
	comp=Z,2.5nm,0.9s							

KKAR	**Karatay Array**	**80.92**	**315**	P		**P**	**22 00 15.3**	**+0.2**
N19K	**Bonanza Creek**	**81.89**	**26**	P		**P**	**22 00 21.0**	**+1.1**
K20K	**Telida**	**83.20**	**24**	P		**P**	**22 00 27.8**	**+1.2**
NRIK	**Noril'sk**	**83.50**	**343**	P		**P**	**22 00 28.0**	**+0.1**
	comp=Z,1.2nm,0.4s,baz=132,slow=6.7,SNR=4.0							
	comp=Z,1.2nm,0.4s							
NRIK	**Noril'sk**	**83.50**	**343**	P		**P**	**22 00 27.2**	**-0.7**
NRIK				IAmb		IAmb	22 00 29.8	
	comp=Z,5.6nm,1.2s							
J20K	**Nowinta River**	**83.54**	**23**	P		**P**	**22 00 29.3**	**+1.0**
J20K				IAmb		IAmb	22 00 30.7	
	comp=Z,3.7nm,0.9s							
BRVK	**Borovoye**	**83.94**	**325**	P		**P**	**22 00 31.0**	**+0.4**
IMAR	**Indian Mountai**	**84.50**	**22**	P		**P**	**22 00 34.3**	**+1.2**
MLY	**Manley**	**85.24**	**23**	P		**P**	**22 00 37.7**	**+0.8**
H23K	**Yukon River**	**86.01**	**22**	P		**P**	**22 00 41.4**	**+0.8**
H23K				IAmb		IAmb	22 00 43.3	
	comp=Z,3.0nm,0.8s							
ILAR	**Eielson Array**	**86.66**	**24**	P		**P**	**22 00 43.5**	**-0.4**
	comp=Z,4.3nm,0.7s,baz=253,slow=5.0,SNR=41							
	comp=Z,4.3nm,0.7s							
TORD	**Torodi Ar. Bea**	**140.88**	**284**	PKP		**PKiKP**	**22 07 32.5**	**-1.2**
	comp=Z,0.6nm,0.7s,baz=48,slow=2.2,SNR=4.6							
TORD	**Torodi Ar. Bea**	**140.88**	**284**			**PKiKP**	**22 07 32.3**	**-1.4**

IDC 06 22:06:46.6±7.4, 30.73S×178.09W, h68km±50km, mb3.4/2, mbtmp3.7/2, Error ellipse: s-maj=90.3km s-min=38.8km az=135.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RAO	**Raoul Island**	**1.48**	**6**	P		Pn	22 07 11.0	-0.2
	154nm,0.4s,baz=90,slow=23,SNR=1.7							
RAO				S		Sn	22 07 29.6	-0.1
	210nm,0.4s,baz=201,slow=22,SNR=1.7							
ASAR	**Alice Springs**	**43.01**	**267**	P		P	22 14 39.3	-0.3
	0.4nm,0.6s,baz=102,slow=7.6,SNR=6.9							
	0.4nm,0.6s							
WRA	**Warramunga Arr**	**44.03**	**273**	P		P	22 14 47.8	0.0
	0.8nm,0.4s,baz=114,slow=7.5,SNR=6.1							
	0.8nm,0.4s							
FINES	**FINESS Array B**	**145.42**	**340**	PKPbc		PKPdf	22 26 15.2	-0.8
	0.4nm,0.5s,baz=48,slow=2.1,SNR=7.2							

JMA 06 22:24:46.4±0.5, 37.7N±1.1×14.2E±.1, h13km, MV1.7/8, E OFF FUKUSHIMA PREF, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JFK	**Kawauchi**	**0.82**	**274**	P		Pg	22 25 01.8	-0.6
JFK				S		Sb	22 25 13.7	+0.1
ONAJ	**Iwakimizuishiy**	**0.91**	**257**	S		Sg	22 25 15.9	+0.1

JMA 06 22:24:57.6±0.3, 38.9N±0.9×14.2E±., h31km±4km, MV1.6/21, E OFF MIYAGI PREF, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
OFUJ	**Ofunato**	**0.61**	**291**	P		Pb	22 25 09.8	-0.1
OFUJ				S		Sb	22 25 18.2	-0.1
JKMT	**Kesennumamotoy**	**0.73**	**266**	P		Pn	22 25 11.2	-0.5
JKMT				S		Sb	22 25 20.6	-0.8
JIO	**Ouri**	**0.92**	**244**	S		Sn	22 25 25.1	-1.5
JIO	**Ouri**	**0.92**	**244**	eS		Sn	22 25 25.1	-1.5
JMK	**Ichinoseki**	**0.93**	**276**	eP		Pn	22 25 14.6	+0.1
JMK				eS		Sn	22 25 26.5	-0.2
JOM	**Ohasama**	**1.06**	**306**	eS		Sn	22 25 30.2	+0.2

IDC 06 22:30:59.8±3.0, 30.37S×177.59W, h0km, mb3.6/2, mbtmp3.7/3, ML3.0/1, Error ellipse: s-maj=68.5km s-min=23.9km az=105.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RAO	**Raoul Island**	**1.15**	**345**	Pn		Pn	22 31 23.4	+0.3
	128nm,0.3s,baz=24,slow=20,SNR=11							
RAO				Sn		Sg	22 31 34.9	-1.8
	1µm,0.3s,baz=256,slow=23,SNR=22							
URZ	**Urewera**	**9.01**	**208**	Pn		Pn	22 33 12.3	+1.2
	0.2nm,0.3s,baz=61,slow=11,SNR=2.0							
URZ				Sn		Sn	22 34 53.2	-0.1
	1.0nm,0.3s,baz=202,slow=21,SNR=1.9							
	7.7nm,0.9s							
ASAR	**Alice Springs**	**43.47**	**267**	P		P	22 39 05.6	+0.6
	0.3nm,0.5s,baz=100,slow=7.3,SNR=2.0							
	0.3nm,0.5s							
WRA	**Warramunga Arr**	**44.45**	**272**	P		P	22 39 12.2	-0.8
	0.4nm,0.2s,baz=111,slow=8.0,SNR=32							
	0.4nm,0.2s							
H03S2	**Juan Fernandez**	**80.19**	**123**	T		T	00 12 42.3	
	baz=239,SNR=4.5							
H03S1	**Juan Fernandez**	**80.20**	**123**	T		T	00 12 47.3	
	baz=239,SNR=4.9							
H03S3	**Juan Fernandez**	**80.20**	**123**	T		T	00 12 42.2	
	baz=239,SNR=6.0							
H03N3	**Juan Fernandez**	**80.38**	**123**	T		T	00 12 46.3	
	baz=232							
H03N2	**Juan Fernandez**	**80.38**	**123**	T		T	00 12 42.8	
	baz=232							
H03N1	**Juan Fernandez**	**80.39**	**123**	T		T	00 12 43.8	
	baz=232							
FINES	**FINESS Array B**	**145.24**	**340**	PKPbc		PKPbc	22 50 37.3	-1.1
	0.8nm,0.6s,baz=66,slow=1.7,SNR=8.6							

IDC 06 22:41:46.5±5.4, 6.34S×102.56E, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=217.3km s-min=71.0km az=54.0, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
H08S2	**Diego Garcia H**	**29.86**	**266**	T		T	23 20 06.7	
	baz=88,slow=74							
H08S3	**Diego Garcia H**	**29.87**	**266**

NMHZ	**Naumai**	**9.13**	**200**	P	**P**		**22 46 15.8**	**+0.7**
NMHZ				S	**S**		**22 48 03.3**	**+3.3**
BKZ	**Black Stump Fm**	**9.29**	**202**	P	**P**		**22 46 16.9**	**+0.1**
BKZ				S	**S**		**22 48 03.5**	**+0.3**
KWHZ	**Kaweka Forest**	**9.55**	**201**	P	**P**		**22 46 20.6**	**+1.0**
KWHZ				S	**S**		**22 48 10.1**	**+1.7**
OTVZ	**Oturere**	**9.57**	**205**	P	**P**		**22 46 19.8**	**-0.2**
BHHZ	**Black Hill Sta**	**9.72**	**203**	P	**P**		**22 46 22.4**	**+0.8**
BHHZ				S	**S**		**22 48 13.5**	**+1.6**
KAHZ	**Kahuranaki**	**9.76**	**199**	P	**P**		**22 46 22.9**	**+1.0**
KAHZ				S	**S**		**22 48 13.9**	**+1.4**
ASAR	**Alice Springs**	**42.15**	**268**	P	**P**		**22 51 18.9**	**-0.4**
	0.3nm,0.4s,baz=96,slow=6.6,SNR=7.4							
	0.3nm,0.4s							
WRA	**Warramunga Arr**	**43.16**	**273**	P	**P**		**22 51 26.3**	**-0.9**
	2.9nm,0.6s,baz=112,slow=6.8,SNR=49							
	2.9nm,0.6s							
FINES	**FINESS Array B**	**144.99**	**339**	PKPbc	**PKPdf**		**23 02 52.3**	**+0.5**
	1.5nm,0.4s,baz=53,slow=4.4,SNR=20							
AKASG	**Malin Array Be**	**150.87**	**322**	PKPbc	**PKPbc**		**23 03 09.1**	**+1.2**
	0.3nm,0.3s,baz=24,slow=1.9,SNR=4.5							

*JMA **06** 22:58:54.6±0.2,35°.6N±0°.6×140°.7E±0°.7,h51km±1km, MV3.1/36,NEAR CHOSHI CITY*
*IDC **06** 22:58:56.0±2.4,35°.53N×140°.66E,h58km±25km,mb3.4/8, mbtmp3.6/10,ML3.1/2,MS2.3/2,Error ellipse: s-maj=27.6km s-min=14.2km az=81.0*
ISC 06 22:58:54.9±0.8,35°.63N±0°.05×140°.80E±0°.06,h52km±6km, n29,σ1s74/31,mb3.6/8,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
CHOJ	**Chosi**	**0.09**	**31**	P		**Pn**	**22 59 02.9**	**0.0**
CHOJ				*e*S		**Sn**	**22 59 09.1**	**+0.6**
JSMT	**Sammumatsuo**	**0.29**	**274**	P		**Pn**	**22 59 03.3**	**-0.8**
JSMT				*e*S		**Sn**	**22 59 10.1**	**-0.5**
JIHU	**Itakohorinouch**	**0.41**	**327**	*i* P		**Pn**	**22 59 05.1**	**-0.1**
JIHU				*e*S		**Sn**	**22 59 13.1**	**+0.5**
JCN	**Nagara**	**0.53**	**247**	P		**Pn**	**22 59 05.9**	**-0.7**
JCN				S		**Sn**	**22 59 14.4**	**-0.7**
BSO4	**Boso 4**	**0.74**	**211**	P		**Pn**	**22 59 08.8**	**-0.3**
JYT	**Yasato**	**0.78**	**321**	P		**Pn**	**22 59 08.6**	**-1.2**
JYT				*e*S		**Sn**	**22 59 18.6**	**-1.9**
BSO3	**Boso 3**	**0.85**	**196**	P		**Pn**	**22 59 10.4**	**-0.1**
BSO1	**Boso 1**	**0.98**	**171**	P		**Pn**	**22 59 12.1**	**+0.3**
JAG	**Ashikaga**	**1.35**	**307**	P		**Pn**	**22 59 16.3**	**-1.1**
JAG				*e*S		**Sn**	**22 59 32.2**	**-2.2**
JOD2	**Odawara 2**	**1.45**	**256**	P		**Pn**	**22 59 17.3**	**-1.4**
MJAR	**Matsushiro Arr**	**2.29**	**294**	P		**Pn**	**22 59 30.3**	**0.0**
	1.0nm,0.3s,baz=100,slow=14,SNR=27							
MJAR				S		**Sn**	**22 59 59.6**	**+2.3**
	15nm,0.6s,baz=146,slow=18,SNR=3.4							
MJAR				LR		LR	23 00 27.2	
	comp=Z,53nm,21.6s,baz=84,slow=41							
	6.8nm,0.5s							
JHJ	**Hachijo jima 2**	**2.64**	**199**	P		**Pn**	**22 59 34.0**	**-1.0**
	56nm,0.3s,baz=337,slow=19,SNR=42							
JHJ				S		**Sn**	**23 00 04.3**	**-1.4**
	147nm,0.3s,baz=91,slow=22,SNR=6.9							
	103nm,0.3s							
JCJ	**Chichijima**	**8.59**	**172**	P		**Pn**	**23 00 52.9**	**-3.7**
	29nm,0.3s,baz=303,slow=24,SNR=12							
JCJ				S		Sn	23 02 22.0	-10
	16nm,0.3s,baz=292,slow=22,SNR=2.1							
ASAJ	**Asahikawa**	**8.59**	**9**	P		**Pn**	**23 00 55.9**	**-0.6**
	2.5nm,0.5s,baz=194,slow=16,SNR=4.5							
ASAJ				S		**Sn**	**23 02 26.3**	**-5.8**
	1.6nm,0.4s,baz=46,slow=3.9,SNR=1.1							
KSRS	**Korea Array**	**10.52**	**284**	LR		LR	23 05 13.1	
	comp=Z,19nm,21.7s,baz=130,slow=36							
H11N2	**WAKE ISLAND Hy**	**27.89**	**118**	T		T	23 33 56.7	
	baz=309,slow=75,SNR=26							
H11N1	**WAKE ISLAND Hy**	**27.90**	**118**	T		T	23 34 02.2	
	baz=309,slow=75,SNR=24							
H11N3	**WAKE ISLAND Hy**	**27.91**	**118**	T		T	23 33 59.1	
	baz=309,slow=75,SNR=22							
SONM	**Songino Array**	**28.19**	**306**	P		**P**	**23 04 43.7**	**+1.1**
	0.2nm,0.5s,baz=94,slow=9.4,SNR=2.3							
	0.2nm,0.5s							
SEY	**Seymchan**	**28.27**	**11**	P		**P**	**23 04 43.8**	**+0.9**
	1.1nm,0.3s,baz=82,slow=16,SNR=4.7							
	1.1nm,0.3s							
H11S1	**WAKE ISLAND Hy**	**28.55**	**120**	T		T	23 34 44.0	
	baz=312,slow=75,SNR=32							
H11S3	**WAKE ISLAND Hy**	**28.55**	**120**	T		T	23 34 41.0	
	baz=312,slow=75,SNR=26							
H11S2	**WAKE ISLAND Hy**	**28.56**	**120**	T		T	23 34 40.9	
	baz=312,slow=75,SNR=19							
ZALV	**Zalesovo Beam**	**42.51**	**314**	P		**P**	**23 06 46.0**	**+1.0**
	0.6nm,0.5s,baz=94,slow=10,SNR=2.1							
	0.6nm,0.5s							
MKAR	**Makanchi Array**	**44.46**	**303**	P		**P**	**23 07 00.3**	**-0.6**
	0.4nm,0.6s,baz=82,slow=9.4,SNR=4.9							
	0.4nm,0.6s							
ILAR	**Eielson Array**	**50.95**	**32**	P		**P**	**23 07 52.6**	**+1.8**
	0.9nm,0.9s,baz=266,slow=6.3,SNR=6.4							
	0.9nm,0.9s							
WRA	**Warramunga Arr**	**55.60**	**187**	P		**P**	**23 08 24.9**	**-0.5**
	0.3nm,0.5s,baz=1.5,slow=7.5,SNR=6.6							
	0.3nm,0.5s							
NOA	**NORSAR Array B**	**75.29**	**337**	P		**P**	**23 10 31.2**	**-1.1**
	0.5nm,0.7s,baz=43,slow=5.5,SNR=2.4							
	0.5nm,0.7s							
NVAR	**Mina Array Bea**	**76.23**	**53**	P		**P**	**23 10 39.9**	**+1.6**
	0.4nm,0.6s,baz=279,slow=6.4,SNR=5.2							
	0.4nm,0.6s							

*WEL **06** 23:00:00,45°.54S×166°.82E,h6km,ML4.2,Mw3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^14 Nm; Mrr-5.33; Mθθ4.46; Mϕϕ0.87; Mrθ7.84; Mrϕ3.22; Mθϕ1.71; Fault plane solution: Mo9.95000×10^14 NP1: ϕs42.00000°,δ20.00000°,λ-121.00000°. NP2: ϕs255.00000°,δ73.00000°,λ-79.00000°. Principal axes: T 102.2800, Plg27.0000°, Azm336.0000°; N -96.8100, Plg10.0000°, Azm71.0000°; P -5.4700, Plg61.0000°, Azm181.0000°;*
*IDC **06** 23:00:45.3±1.0,45°.49S×167°.10E,h0km,mb3.7/3, mbtmp3.8/4,ML4.2/1,MS3.4/3 Error ellipse: s-maj=29.2km s-min=26.2km az=180.0*
*WEL **06** 23:00:47.1,46°.5±7°×16°.7E±1°.2,h15km±11km,M4.2/5, ML4.5/5,MLv4.2/5,Error ellipse: s-maj=0.6km s-min=0.0km az=85.1*
*NEIC **06** 23:00:47.4±1.5,45°.52S±0°.02×166°.77E±0°.02,h12km±5km, mb4.1/5,Error ellipse: s-maj=3.8km s-min=1.6km az=202.0*
ISC 06 23:00:47.3±1.2,45°.51S±0°.04×166°.80E±0°.04,h12km±8km, n89,σ1s39/88,mb3.9/4,Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
DCZ	**Deep Cove**	**0.25**	**80**			**Pb**	**23 00 53.5**	**-0.3**
DCZ	**Deep Cove**	**0.25**	**80**	P		**Pb**	**23 00 53.7**	**0.0**
DCZ				S		**Sg**	**23 00 58.2**	**+2.2**
PYZ	**Puysegur Point**	**0.66**	**187**			**Pb**	**23 01 00.2**	**-0.5**
PYZ				Sg		**Sg**	**23 01 08.5**	**-0.3**
PYZ	**Puysegur Point**	**0.66**	**187**	P		**Pb**	**23 01 00.3**	**-0.5**
PYZ				S		**Sg**	**23 01 08.5**	**-0.3**
WHZ	**Wether Hill Ro**	**0.89**	**116**			**Pn**	**23 01 04.9**	**-0.7**
WHZ				Sg		**Sn**	**23 01 18.1**	**-0.4**
WHZ	**Wether Hill Ro**	**0.89**	**116**	P		**Pn**	**23 01 04.9**	**-0.7**
WHZ				S		**Sn**	**23 01 18.5**	**0.0**
MLZ	**Mavora Lakes**	**0.94**	**82**			**Pg**	**23 01 04.7**	**-0.6**
MLZ				Sg		**Sb**	**23 01 17.8**	**-0.2**
MLZ	**Mavora Lakes**	**0.94**	**82**	P		**Pg**	**23 01 04.9**	**-0.5**
MLZ				S		**Sb**	**23 01 18.0**	**+0.1**
MSZ	**Milford Sound**	**1.16**	**44**	P		**Pb**	**23 01 07.1**	**-2.0**
APZ	**The Paps**	**1.56**	**148**	P		**Pg**	**23 01 16.2**	**-1.0**
WKZ	**Wanaka**	**1.71**	**67**			**Pn**	**23 01 17.3**	**+0.4**
WKZ	**Wanaka**	**1.71**	**67**	P		**Pb**	**23 01 17.5**	**-1.1**
EAZ	**Earnscleugh**	**1.79**	**82**	P		**Pn**	**23 01 18.4**	**+0.4**
SYZ	**Scrubby Hill**	**1.93**	**123**	P		**Pb**	**23 01 21.1**	**-1.2**
JCZ	**Jackson Bay**	**2.02**	**45**	P		**Pn**	**23 01 20.8**	**-0.4**
TUZ	**Tuapeka**	**2.03**	**104**	P		**Pb**	**23 01 22.6**	**-1.5**
LBZ	**Lake Benmore**	**2.65**	**66**	Pn		**Pn**	**23 01 31.4**	**+1.5**
LBZ	**Lake Benmore**	**2.65**	**66**	P		**Pn**	**23 01 28.9**	**-1.0**
HHSZ	**Highcliff Hill**	**2.69**	**99**	P		**Pn**	**23 01 31.0**	**+0.6**
ODZ	**Otahua Downs**	**2.75**	**82**	Pn		**Pn**	**23 01 30.6**	**-0.6**
ODZ	**Otahua Downs**	**2.75**	**82**	P		**Pn**	**23 01 30.6**	**-0.6**
FOZ	**Fox Glacier**	**2.93**	**49**	Pn		**Pn**	**23 01 35.2**	**+1.6**
FOZ	**Fox Glacier**	**2.93**	**49**	P		**Pn**	**23 01 32.7**	**-0.9**
TMZ	**Timaru**	**3.19**	**71**	P		**Pn**	**23 01 35.8**	**-1.5**
GCSZ	**Gaunt Creek Bo**	**3.35**	**50**	P		**Pn**	**23 01 39.0**	**-0.4**
ARCZ	**Arundel**	**3.49**	**65**	P		**Pn**	**23 01 39.6**	**-1.8**
RPZ	**Rata Peaks**	**3.53**	**61**	Pn		**Pn**	**23 01 40.0**	**-1.9**
	24nm,0.3s,baz=258,slow=3.5,SNR=82							
RPZ				Sn		**Sn**	**23 02 21.9**	**-1.7**
	38nm,0.3s,baz=323,slow=21,SNR=10							
	136nm,0.5s							
RPZ	**Rata Peaks**	**3.53**	**61**	Pn		**Pn**	**23 01 41.6**	**-0.3**
RPZ	**Rata Peaks**	**3.53**	**61**	P		**Pn**	**23 01 40.2**	**-1.7**
WVZ	**Waitaha Valley**	**3.73**	**51**	P		**Pn**	**23 01 44.4**	**-0.2**
WACZ	**Wakanui South**	**3.92**	**68**	P		**Pn**	**23 01 46.9**	**-0.3**
RACZ	**Rakaia**	**4.21**	**67**	P		**Pn**	**23 01 51.7**	**+0.5**
OXZ	**Oxford**	**4.34**	**62**	Pn		**Pn**	**23 01 52.8**	**-0.2**
OXZ	**Oxford**	**4.34**	**62**	P		**Pn**	**23 01 53.3**	**+0.2**
MQZ	**McQueen's Vall**	**4.55**	**69**	Pn		**Pn**	**23 01 55.8**	**-0.2**
MQZ	**McQueen's Vall**	**4.55**	**69**	P		**Pn**	**23 01 56.0**	**0.0**
AKCZ	**Akaroa Harbour**	**4.65**	**72**	P		**Pn**	**23 01 57.8**	**+0.4**
LTZ	**Lake Taylor**	**4.79**	**57**	Pn		**Pn**	**23 01 59.4**	**+0.1**
LTZ	**Lake Taylor**	**4.79**	**57**	P		**Pn**	**23 01 59.6**	**+0.4**
AMCZ	**Amberley**	**4.80**	**63**	P		**Pn**	**23 01 59.7**	**+0.4**
OKCZ	**Okains Bay**	**4.81**	**70**	P		**Pn**	**23 02 00.4**	**+0.8**
GVZ	**Greta Valley S**	**5.15**	**63**	P		**Pn**	**23 02 04.0**	**-0.2**
DSZ	**Denniston Nort**	**5.23**	**46**	P		**Pn**	**23 02 02.9**	**-2.4**
KHZ	**Kahutara**	**5.76**	**60**	Pn		**Pn**	**23 02 13.2**	**+0.6**
KHZ	**Kahutara**	**5.76**	**60**	P		**Pn**	**23 02 13.6**	**+1.1**
THZ	**Tophouse**	**5.80**	**52**	Pn		**Pn**	**23 02 13.2**	**+0.1**
THZ	**Tophouse**	**5.80**	**52**	P		**Pn**	**23 02 13.1**	**-0.1**
MRNZ	**Matariki Terra**	**5.97**	**49**	P		**Pn**	**23 02 15.1**	**-0.4**
QRZ	**Quartz Range**	**6.28**	**44**	Pn		**Pn**	**23 02 17.6**	**-2.2**
QRZ	**Quartz Range**	**6.28**	**44**	P		**Pn**	**23 02 17.9**	**-1.8**
NNZ	**Nelson**	**6.43**	**50**	Pn		**Pn**	**23 02 22.4**	**+0.6**
NNZ	**Nelson**	**6.43**	**50**	P		**Pn**	**23 02 23.0**	**+1.2**
TUWZ	**Tuamarina**	**6.61**	**54**	Pn		**Pn**	**23 02 24.7**	**+0.5**
TCW	**Tory Channel**	**6.94**	**54**	P		**Pn**	**23 02 31.5**	**+2.8**
DUWZ	**D'Urville Isla**	**7.02**	**50**	P		**Pn**	**23 02 29.8**	**0.0**
MSWZ	**Moikau Station**	**7.38**	**59**	Pn		**Pn**	**23 02 34.7**	**-0.1**
KIW	**Kapiti Island**	**7.53**	**55**	P		**Pn**	**23 02 39.6**	**+2.8**
KHEZ	**Kahui Hut**	**8.19**	**43**	P		**Pn**	**23 02 46.2**	**+0.2**
WAZ	**Wanganui**	**8.33**	**49**	P		**Pn**	**23 02 51.9**	**+4.1**
VRZ	**Vera Road**	**8.68**	**46**	P		**Pn**	**23 02 54.4**	**+1.8**
NNVZ	**North Ngauruho**	**9.12**	**49**	P		**Pn**	**23 03 03.0**	**+4.2**
OTVZ	**Oturere**	**9.12**	**49**	P		**Pn**	**23 03 03.1**	**+4.2**
HIZ	**Hauiti**	**9.21**	**43**	Pn		**Pn**	**23 03 00.1**	**+0.4**
HIZ	**Hauiti**	**9.21**	**43**	P		**Pn**	**23 03 00.2**	**+0.4**
TLZ	**Tolley Road**	**9.68**	**45**	P		**Pn**	**23 03 07.3**	**+0.9**
MRHZ	**Matea Rd**	**9.77**	**50**	P		**Pn**	**23 03 10.6**	**+3.0**
URZ	**Urewera**	**10.56**	**50**	LR		LR	23 07 52.3	
	comp=Z,172nm,19.2s,baz=212,slow=41							
TOO	**Toolangi**	**17.78**	**289**	Pn		**Pn**	**23 04 53.2**	**-1.3**
TOO				IAmb		IAmb	23 04 55.9	
	comp=Z,13nm,1.2s							
EIDS	**Eidsvold**	**23.75**	**323**	P		**P**	**23 05 59.0**	**-0.4**
EIDS				IAmb		IAmb	23 06 17.7	
	comp=Z,18nm,1.4s							
STKA	**Stephens Creek**	**23.80**	**296**	P		**P**	**23 06 01.3**	**+1.4**
CTA	**Charters Tower**	**30.50**	**319**	LR		LR	23 19 40.5	
	comp=Z,113nm,18.5s,baz=218,slow=37							
VNDA	**Vanda**	**32.18**	**182**	LR		LR	23 18 06.5	
	comp=Z,53nm,18.5s,baz=340,slow=32							
ASAR	**Alice Springs**	**34.40**	**298**	P		**P**	**23 07 35.8**	**+1.4**
	comp=Z,0.2nm,0.5s,baz=133,slow=8.2,SNR=1.9							
	comp=Z,0.2nm,0.5s							
WRA	**Warramunga Arr**	**36.94**	**303**	P		**P**	**23 07 58.8**	**+2.5**
	comp=Z,0.6nm,0.3s,baz=139,slow=8.6,SNR=23							
	comp=Z,0.6nm,0.3s							
H01W1	**Cape Leeuwin H**	**40.92**	**266**	T		T	23 51 49.3	
	baz=121,slow=75,SNR=679							
H01W2	**Cape Leeuwin H**	**40.93**	**266**	T		T	23 51 46.3	
	baz=121,slow=75,SNR=865							
H01W3	**Cape Leeuwin H**	**40.94**	**266**	T		T	23 51 47.0	
	baz=121,slow=75,SNR=711							
QSPA	**South Pole Qui**	**44.62**	**180**	P		**P**	**23 09 00.2**	**+1.0**
	comp=Z,1.3nm,0.9s,baz=34,slow=7.0,SNR=5.4							
	comp=Z,1.3nm,0.9s							
QSPA	**South Pole Qui**	**44.62**	**180**	P		**P**	**23 09 00.4**	**+1.1**
QSPA				IAmb		IAmb	23 09 04.8	
	comp=Z,2.3nm,1.0s							
SNAA	**Sanae**	**62.89**	**184**	P		**P**	**23 11 13.2**	**+0.4**
H08S2	**Diego Garcia H**	**87.61**	**262**	T		T	00 50 01.0	
	baz=136,slow=76,SNR=164							
H08S1	**Diego Carcia H**	**87.63**	**262**	T		T	00 50 02.5	
	baz=136,slow=76,SNR=104							
H08S3	**Diego Garcia H**	**87.63**	**262**	T		T	00 50 02.4	
	baz=136,slow=76,SNR=294							
TORD	**Torodi Ar. Bea**	**145.35**	**206**	PKPbc		**PKPbc**	**23 20 24.4**	**-0.8**
	comp=Z,5.6nm,0.8s,baz=143,slow=2.5,SNR=53							
TORD	**Torodi Ar. Bea**	**145.35**	**206**			**PKPbc**	**23 20 24.2**	**-0.9**
BRTR	**Keskin Array B**	**145.44**	**277**	PKPbc		**PKPbc**	**23 20 24.9**	**-0.1**
	comp=Z,1.7nm,0.8s,baz=128,slow=4.4,SNR=11							
BRTR	**Keskin Array B**	**145.44**	**277**			**PKPdf**	**23 20 24.7**	**-0.2**
ARCES	**ARCESS Array B**	**149.16**	**335**	PKPbc		**PKPbc**	**23 20 32.4**	**-1.9**
	comp=Z,2.6nm,0.9s,baz=72,slow=2.9,SNR=5.2							
FINES	**FINESS Array B**	**152.26**	**319**	PKPbc		**PKPbc**	**23 20 40.6**	**-1.1**
	comp=Z,0.6nm,0.4s,baz=66,slow=4.1,SNR=11							

*DDA **06** 23:17:27.4±0.0,35°.83N×31°.75E,h31km±2km,ML2.6*
*ISK **06** 23:17:27.1,35°.71N×31°.84E,h18km,ML3.1/23*
*NIC **06** 23:17:28.3±0.0,35°.88N×32°.15E,h9km±5km,Ml2.8/6*
ISC 06 23:17:28.6±0.9,35°.75N±0°.02×31°.88E±0°.03,h22km±11km, n55,σ1s05/87,Cyprus region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
GAZI	**Gazipasa**	**0.60**	**36**	PG		**Pb**	**23 17 40.8**	**+0.2**
GAZI				SG		**Sn**	**23 17 49.9**	**-1.1**
GAZI	**Gazipasa**	**0.60**	**36**	P		**Pb**	**23 17 40.7**	**+0.2**
GAZI				S		**Sb**	**23 17 48.9**	**+0.3**
AKMS	**Akamas**	**0.82**	**153**	P		**Pb**	**23 17 44.4**	**+0.3**
AKMS				AML	AML		23 18 03.3	
	2.4nm,0.3s							
AKMS				AML	AML		23 18 03.7	
	2.2nm,0.3s							
ALFC	**Alefka**	**0.83**	**135**	P		**Pn**	**23 17 45.2**	**+0.2**
ALFC				S		**Sb**	**23 17 55.3**	**+0.2**
ALFC				AML	AML		23 17 59.6	
	1.5nm,0.2s							
ALFC				AML	AML		23 17 59.6	
	1.5nm,0.2s							
ALFC				AML	AML		23 17 59.6	
	1.2nm,0.2s							
ALFC				AML	AML		23 17 59.6	
	1.2nm,0.2s							
AKDN	**Akdeniz- Kıbrı**	**1.00**	**116**	PG		**Pn**	**23 17 47.5**	**+0.3**
AKDN				SG		**Sn**	**23 18 01.8**	**+1.3**
LEF	**Lefka**	**1.04**	**127**	PG		**Pb**	**23 17 46.6**	**-1.2**
LEF	**Lefka**	**1.04**	**127**	P		**Pn**	**23 17 48.2**	**+0.2**
LEF				S		**Sb**	**23 17 59.5**	**-1.5**
TEKE	**Tekeli-Mersin**	**1.08**	**68**	PN		**Pb**	**23 17 48.1**	**-0.5**
NATA	**Nata**	**1.12**	**149**	P		**Pb**	**23 17 49.3**	**0.0**
NATA				S		**Sn**	**23 18 07.2**	**+3.6**
NATA				AML	AML		23 18 16.8	
	1.8nm,0.5s							
NATA				AML	AML		23 18 16.8	
	1.8nm,0.5s							
NATA				AML	AML		23 18 18.5	
	2.9nm,0.5s							
NATA				AML	AML		23 18 18.5	
	2.9nm,0.5s							
KEPZ	**Antalya-Kepez**	**1.18**	**349**	P		**Pn**	**23 17 47.9**	**-1.8**
KEPZ				S		**Sb**	**23 18 02.3**	**-2.7**
ERMK	**Ermenek**	**1.23**	**43**	P		**Pb**	**23 17 50.9**	**-0.3**
ERMK				S		**Sn**	**23 18 06.7**	**+0.2**
ERMK				*i* AML		AML	23 18 10.0	
	comp=Z,102nm,0.3s							
ERMK				*i* AML		AML	23 18 11.0	
	comp=N,172nm,0.3s							
BERE	**Bereket-Mersin**	**1.25**	**61**	PN		**Pn**	**23 17 50.7**	**-0.1**
BERE				SN		**Sn**	**23 18 08.3**	**+1.3**
SZAC	**Souni**	**1.29**	**140**	P		**Pn**	**23 17 51.7**	**+0.4**
SZAC				S		**Sb**	**23 18 10.5**	**+2.3**
SZAC				AML	AML		23 18 17.9	
	0.5nm,0.3s							
SZAC				AML	AML		23 18 17.9	
	0.5nm,0.3s							
SZAC				AML	AML		23 18 19.4	
	0.6nm,0.7s							
SZAC				AML	AML		23 18 19.4	
	0.6nm,0.7s							
HDMB	**Hadim**	**1.31**	**22**	PN		**Pb**	**23 17 52.3**	**-0.4**
OREN	**Orenkoy-Mersin**	**1.36**	**70**	PN		**Pn**	**23 17 52.5**	**+0.3**
AKUM	**Antalya-Kumluc**	**1.37**	**295**	P		**Pn**	**23 17 50.1**	**-2.2**
AKUM				S		**Sb**	**23 18 12.7**	**+2.1**
ATHAL	**Athalassa**	**1.38**	**115**	P		**Pn**	**23 17 51.9**	**-0.5**
ATHAL				S		**Sn**	**23 18 09.7**	**-0.3**
AKK1	**Akkuyu-Mersin**	**1.41**	**73**	PN		**Pn**	**23 17 53.2**	**+0.4**
AKK2	**Akkuyu-Mersin**	**1.41**	**73**	PN		**Pn**	**23 17 53.3**	**+0.4**
AKKU	**Akkuyu-Mersin**	**1.42**	**73**	PN		**Pn**	**23 17 53.3**	**+0.3**
GULN	**MERSIN_Gulnar**	**1.42**	**72**	P		**Pn**	**23 17 53.3**	**+0.3**
GULN				S		**Sb**	**23 18 11.4**	**-0.7**
GULN				*i* AML		AML	23 18 13.0	
	comp=N,125nm,0.6s							
GULN				*i* AML		AML	23 18 14.0	
	comp=E,81nm,0.5s							
CSS	**Mathiatis**	**1.42**	**123**	PN		**Pn**	**23 17 51.9**	**-1.2**
CSS	**Mathiatis**	**1.42**	**123**	P		**Pn**	**23 17 52.1**	**-0.9**
CSS				S		**Sn**	**23 18 09.4**	**-1.8**
LFK	**Lefkose**	**1.43**	**109**	PN		**Pn**	**23 17 52.8**	**-0.4**
TEVE	**Tevekalti-Mers**	**1.44**	**61**	PN		**Pn**	**23 17 53.9**	**+0.5**
ASGA	**Asgata**	**1.48**	**130**	P		**Pb**	**23 17 54.8**	**-0.5**
ASGA				AML	AML		23 18 23.8	
	0.3nm,0.4s							
ASGA				AML	AML		23 18 24.1	
	0.2nm,0.5s							
YESI	**Yesilovacik-Me**	**1.50**	**72**	PN		**Pn**	**23 17 54.5**	**+0.4**
TISA	**Tisan-Mersin**	**1.52**	**74**	PN		**Pn**	**23 17 54.8**	**+0.4**
KARG	**Kargicak-Mersi**	**1.56**	**72**	PN		**Pn**	**23 17 55.3**	**+0.4**
MVOU	**Mavrovouni**	**1.61**	**116**	P		**Pn**	**23 17 54.3**	**-1.3**
MVOU				S		**Sn**	**23 18 13.4**	**-2.2**
MVOU				AML	AML		23 18 14.3	
	0.3nm,0.4s							
MVOU				AML	AML		23 18 14.3	
	0.3nm,0.4s							
KEBE	**Keben-Mersin**	**1.64**	**64**	PN		**Pn**	**23 17 56.7**	**+0.5**
SEYD	**Seydisehir-KON**	**1.66**	**359**	PN		**Pn**	**23 17 56.5**	**+0.1**
KKBE	**Karaman, Kazim**	**1.70**	**30**	P		**Pn**	**23 17 57.6**	**+0.6**
KKBE				S		**Sn**	**23 18 18.8**	**+0.6**
SEDI	**Konya, Seydise**	**1.71**	**357**	P		**Pn**	**23 17 57.9**	**+0.8**
SEDI				S		**Sn**	**23 18 18.9**	**+0.6**
SEDI				*i* AML		AML	23 18 24.0	
	comp=E,89nm,0.4s							
KORT	**Korkueli**	**1.76**	**316**	PN		**Pn**	**23 17 57.9**	**+0.1**
KORT	**Korkueli**	**1.76**	**316**	P		**Pb**	**23 18 00.2**	**0.0**
KORT				S		**Sb**	**23 18 24.8**	**+2.9**
KRMN	**Karaman**	**1.81**	**38**	PN		**Pn**	**23 17 59.1**	**+0.6**
SUTC	**Sutluce-Ispart**	**1.87**	**338**	PN		**Pn**	**23 17 59.1**	**-0.2**
ELL	**Elmali**	**1.88**	**303**	PN		**Pn**	**23 17 59.4**	**-0.1**
BUCA	**Burdur, Bucak-**	**1.90**	**327**	P		**Pb**	**23 18 02.5**	**-0.1**
BUCA				S		**Sn**	**23 18 23.7**	**+0.6**
KMER	**Konya-Meram**	**2.06**	**11**	P		**Pn**	**23 18 02.5**	**+0.5**
KMER				S		**Sn**	**23 18 27.8**	**+0.8**
KONT	**Konya--Tatoy**	**2.23**	**10**	PN		**Pn**	**23 18 04.9**	**+0.7**
KONT	**Konya--Tatoy**	**2.23**	**10**	P		**Pn**	**23 18 04.6**	**+0.4**
KONT				S		**Sn**	**23 18 31.9**	**+0.8**
DOGA	**KONYA_Doganhis**	**2.36**	**356**	P		**Pn**	**23 18 06.3**	**+0.2**
DOGA				S		**Sn**	**23 18 35.0**	**+0.5**
GOLH	**Golhisar**	**2.39**	**309**	P		**Pn**	**23 18 05.8**	**-0.6**
GOLH				S		**Sn**	**23 18 34.2**	**-0.8**
BAGO	**Egridir - ISPA**	**2.41**	**339**	P		**Pn**	**23 18 06.8**	**+0.2**
B

WFSB eS Sn 23 49 19.7 -0.8
baz=329
NWLT Wulai 0.68 292⇓ eP Pn 23 49 11.5 0.0
baz=290
NWLT eS Sn 23 49 20.5 -0.4
baz=290
JYNG Yonagunijimaku 0.69 96 P Pn 23 49 12.0 +0.4
JYNG S Sn 23 49 21.8 +0.6
TWD Chiawan 0.70 231 eP Pn 23 49 11.9 0.0
baz=223
TWD eS Sn 23 49 22.1 +0.5
baz=223
TWA Mucha 0.71 309 ⇓P Pn 23 49 11.8 -0.2
baz=311
TWA eS Sn 23 49 20.9 -0.9
baz=311
ETLH Xiulin Townshi 0.72 244⇑ eP Pn 23 49 12.3 +0.1
baz=237
ETLH eS Sn 23 49 22.6 +0.4
baz=237
TNOU National Taiwa 0.73 328 ⇓P Pn 23 49 11.5 -0.6
baz=332
TNOU eS Sn 23 49 20.9 -1.3
baz=332
NNSB Datong 0.75 262⇑ eP Pn 23 49 12.9 +0.4
baz=258
NNSB eS Sn 23 49 23.9 +1.2
baz=258
NHDH Xindian Distri 0.75 306 eP Pn 23 49 12.1 -0.3
baz=306
NHDH eS Sn 23 49 21.9 -0.7
baz=306
YOJ Yonaguni jima 0.75 95⇑ iP Pn 23 49 12.8 +0.4
baz=97
YOJ i S Sn 23 49 23.0 +0.4
baz=97
YOJ Yonaguni jima 0.75 95 P Pn 23 49 12.8 +0.4
YOJ eS Sn 23 49 22.9 +0.4
NNS Nan Shan 0.75 263 eP Pn 23 49 13.1 +0.5
baz=258
NNS eS Sn 23 49 24.2 +1.3
baz=258
YHNB Yeheng 0.76 281⇓ eP Pn 23 49 13.0 +0.4
baz=278
YHNB eS Sn 23 49 23.1 +0.1
baz=278
HWA Hwalien 0.77 225 eP Pn 23 49 13.5 +0.8
baz=217
NSK Sanguang 0.78 281 ⇓P Pn 23 49 13.2 +0.3
baz=279
NSK eS Sn 23 49 23.6 +0.2
baz=279
TATO Taipei 0.78 305 eP Pn 23 49 12.5 -0.4
baz=306
TATO eS Sn 23 49 22.7 -0.7
baz=306
TAP Taipei 0.81 309 eP Pn 23 49 12.6 -0.6
baz=311
TAP eS Sn 23 49 23.4 -0.6
baz=311
YM01 YM01 0.84 317⇓ eP Pn 23 49 13.1 -0.6
baz=320
YM01 eS Sn 23 49 23.6 -1.3
baz=320
ETM Tongmen 0.85 229 eP Pn 23 49 13.6 -0.3
baz=223
TEYL Yanliau Villag 0.85 220 eP Pn 23 49 13.7 -0.2
baz=215
TEYL eS Sn 23 49 25.4 +0.2
baz=215
TWS1 Kuangyinshan 0.91 309 ⇓P Pn 23 49 14.3 -0.3
baz=310
TWS1 S Sn 23 49 26.0 -0.5
baz=310
FUSS Fushou 0.91 252 eP Pn 23 49 15.2 +0.3
baz=248
FUSS eS Sn 23 49 27.0 0.0
baz=248
TWY Chenhua 0.92 324 eP Pn 23 49 14.4 -0.3
baz=327
TWY eS Sn 23 49 26.4 -0.4
baz=327
NTST Danshui 0.93 313 eP Pn 23 49 14.6 -0.3
baz=315
WHF Hehuan Shan 0.93 246 eP Pn 23 49 15.2 -0.1
baz=241
WHF eS Sn 23 49 28.0 +0.3
baz=241
TDCB Techi 0.98 254 eP Pn 23 49 16.1 +0.4
baz=250
TDCB eS Sn 23 49 28.9 +0.3
baz=250
NFF Wufeng Townshi 0.99 276⇓ eP Pn 23 49 16.7 +1.0
baz=274
NFF eS Sn 23 49 29.9 +1.4
baz=274
ESL Shilin 0.99 225 eP Pn 23 49 15.5 -0.3
baz=219
ESL eS Sn 23 49 28.0 -0.6
baz=219
CHGB Renai 1.04 244 eP Pn 23 49 16.1 -0.5
baz=239
CHGB eS Sn 23 49 30.3 +0.2
baz=239
LIOB Emei 1.08 276 eP Pn 23 49 17.7 +0.7
baz=274
LIOB eS Sn 23 49 32.8 +2.1
baz=274
NSTT Nanjuang 1.09 276 eP Pn 23 49 18.2 +1.1
baz=273
NSTT eS Sn 23 49 32.7 +1.7
baz=273
OWD Renai 1.09 239 P Pn 23 49 17.3 0.0
baz=234
OWD eS Sn 23 49 30.6 -0.6
baz=234
PCYT Pengchaiyu 1.10 354 eP Pn 23 49 17.1 -0.2
baz=359
EGFH Guangfu 1.11 219 eP Pn 23 49 17.5 +0.2
baz=215
EGFH eS Sn 23 49 30.0 -1.4
baz=215
WUSB Renai 1.12 242⇑ eP Pn 23 49 18.0 +0.4
baz=237
WUSB eS Sn 23 49 31.0 -0.8
baz=237
WHP Taichung City 1.17 258 eP Pn 23 49 19.4 +1.2
baz=254
VWDT VWDT 1.23 231 eP Pn 23 49 19.5 +0.4
baz=227
VWDT eS Sn 23 49 34.3 -0.2
baz=227
HGSD Ruisui 1.25 214 eP Pn 23 49 18.9 -0.4
baz=210
HGSD eS Sn 23 49 34.5 -0.4
baz=210
EHY Hungye 1.29 218 eP Pn 23 49 18.9 -0.9
baz=214
EHY eS Sn 23 49 34.1 -1.9
baz=214
SMLT Sun Moon Lake 1.34 242 eP Pn 23 49 22.2 +1.5
baz=238
SMLT eS Sn 23 49 38.6 +1.1
baz=238
SSLB Suanglung 1.35 237 eP Pn 23 49 21.1 +0.3
baz=233
TYC Yuchr 1.37 243 eP Pn 23 49 21.2 +0.3
baz=239
YULB Yu-li 1.40 216 eP Pn 23 49 20.4 -0.9
baz=212
YULB eS Sn 23 49 36.2 -2.4
baz=212
IRIF Iriomote-Funau 1.41 98 S Sn 23 49 38.9 -0.1
EYUL Yuli 1.42 214 eP Pn 23 49 21.4 -0.2
baz=210
TWF1 Yuli 1.43 215 eP Pn 23 49 20.8 -0.9
baz=211
TWF1 eS Sn 23 49 36.7 -2.7
baz=211
FULB Fuli 1.56 212 eP Pn 23 49 22.2 -1.3
baz=208
FULB eS Sn 23 49 41.1 -1.5
baz=208
ALS Alishan 1.62 232 eP Pn 23 49 25.6 +0.9
baz=228
JKRS Kuro-shima 1.68 100 P Pn 23 49 25.9 +0.7
JKRS S Sn 23 49 46.0 +0.5
EDH Donghe 1.75 208 eP Pn 23 49 25.3 -0.9
baz=205
EDH eS Sn 23 49 44.8 -2.4
baz=205
JIJ Ishigaki jima 1.78 95 P Pn 23 49 27.0 +0.4
JIJ S Sn 23 49 47.7 -0.4
TPUB Ta-pu 1.88 230 eP Pn 23 49 28.5 +0.5
baz=227
TPUB eS Sn 23 49 52.4 +1.8
baz=227
LDUT Ludao 1.96 200 eP Pn 23 49 27.8 -1.3
baz=197
LDUT eS Sn 23 49 49.0 -3.4
baz=197
TWK Hsinying 2.00 232 eP Pn 23 49 31.6 +1.9
baz=228
TWK eS Sn 23 49 55.8 +2.2
baz=228
JTJ Tarama 2.29 87 P Pn 23 49 34.6 +1.1
JTJ eS Sn 23 50 01.2 +0.7

IDC ***07*** *00:02:15.9±1.1, 33°.07S×153°.13E, h0km, mb3.6/2, mbtmp3.7/4, ML3.7/2, MS3.4/1, Error ellipse: s-maj=32.5km s-min=25.9km az=51.0*
ISC 07 00:02:19.2±1.1, 33°.52S±0°.06×152°.50E±0°.09, h10km, n17, σ1§22/19, Near southeast coast of Australia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
MGCD	**Mangrove Creek**	**1.20**	**284**	P		**Pb**	**00 02 41.6**	**-0.5**
	baz=1.2							
MGCD				S		**Sn**	**00 02 57.9**	**-0.6**
	baz=1.2							
CNB	**Canberra Magne**	**3.15**	**234**	P		**Pn**	**00 03 10.0**	**+0.9**
	baz=3.2							
CNB				S		**Sb**	**00 03 55.4**	**+1.5**
	baz=3.2							
ARMA	**Armidale**	**3.17**	**346**	P		**Pn**	**00 03 09.3**	**0.0**
	baz=3.2							
ARMA				S		**Sb**	**00 03 55.3**	**+0.7**
	baz=3.2							
MILA	**Mila**	**4.47**	**217**	P		**Pn**	**00 03 28.1**	**+1.1**
	baz=4.5							
MILA				S		**Sn**	**00 04 15.7**	**-3.4**
	baz=4.5							
CMSA	**Cobar Meteorol**	**6.08**	**287**	P		**Pn**	**00 03 49.9**	**+0.8**
	baz=6.1							
TOO	**Toolangi**	**7.00**	**233**	P		**Pn**	**00 04 03.6**	**+1.7**
	baz=7.0							
ARPS	**Mount Arapiles**	**9.32**	**247**	P		**Pn**	**00 04 34.2**	**+0.7**
	baz=9.3							
STKA	**Stephens Creek**	**9.34**	**277**	Pn		Pn	00 04 39.9	+6.1
	0.4nm,0.3s,baz=77,slow=14,SNR=3.2							
STKA				Sn		Sn	00 06 28.9	+10
	0.9nm,0.3s,baz=78,slow=19,SNR=2.3							
STKA				Lg		Lg	00 07 12.8	
	2.0nm,0.3s,baz=19,slow=18,SNR=5.2 1.9nm,0.6s							
STKA	**Stephens Creek**	**9.34**	**277**	P		**Pn**	**00 04 34.6**	**+0.8**
	baz=9.3							
CTA	**Charters Tower**	**14.48**	**336**	LR		LR	00 10 33.5	
	comp=Z,150nm,20.9s,baz=247,slow=35							
ASAR	**Alice Springs**	**19.02**	**296**	P		**Pn**	**00 06 42.1**	**0.0**
	0.2nm,0.3s,baz=129,slow=10,SNR=32 2.1nm,0.6s							
WRA	**Warramunga Arr**	**21.07**	**305**	P		**P**	**00 07 03.1**	**-0.5**
	0.8nm,0.5s,baz=132,slow=9.9,SNR=30							
WRA				PcP		**PcP**	**00 11 09.3**	**-1.0**
	0.2nm,0.6s,baz=118,slow=2.3,SNR=4.6 0.8nm,0.5s							
HNR	**Honiara**	**24.93**	**18**	P		P	00 07 35.0	-7.7
	109nm,0.5s,baz=83,slow=3.0,SNR=4.1							
QSPA	**South Pole Qui**	**56.59**	**180**	P		**P**	**00 12 02.7**	**+0.8**
	0.9nm,0.7s,baz=294,slow=1.0,SNR=6.3 0.9nm,0.7s							
GERES	**GERESS Array B**	**145.88**	**309**	PKPbc		**PKPdf**	**00 21 57.8**	**-0.1**
	0.9nm,0.7s,baz=126,slow=1.8,SNR=8.7							
DBIC	**Dimbokro**	**146.03**	**223**	PKPbc		**PKPdf**	**00 21 59.4**	**+0.3**
	2.1nm,0.4s,baz=215,slow=2.5,SNR=9.2							
TORD	**Torodi Ar. Bea**	**146.58**	**240**	PKPbc		**PKPbc**	**00 22 01.1**	**-0.4**
	0.5nm,0.4s,baz=99,slow=4.2,SNR=12							

NEIC ***07*** *00:16:29.2±0.6, 29°.4S±0°.2×177°.7W±0°.1, h80km±8km, mb4.0/10, Error ellipse: s-maj=22.8km s-min=15.8km az=156.0*
IDC ***07*** *00:16:30.4±0.8, 29°.34S×178°.04W, h79km±25km, mb3.6/3, mbtmp3.9/3, Error ellipse: s-maj=64.3km s-min=13.2km az=50.0*
ISC 07 00:16:28.1±1.1, 29°.2S±0°.1×177°.6W±0°.1, h86km±6km, n21, σ1§60/22, mb4.1/6, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
RAO	**Raoul Island**	**0.25**	**264**	P		**Pn**	**00 16 40.7**	**-0.2**
	228nm,0.3s,baz=270,slow=20,SNR=2.6							
RAO				S		**Sn**	**00 16 51.7**	**+1.4**
	1µm,0.2s,baz=233,slow=20,SNR=15							
RAO	**Raoul Island**	**0.25**	**264**			**Pn**	**00 16 40.6**	**-0.2**
RAO						**Sn**	**00 16 50.1**	**-0.2**
BFZ	**Birch Farm**	**12.48**	**202**	Pn		**Pn**	**00 19 21.4**	**-1.0**
ODZ	**Otahua Downs**	**18.32**	**207**	P		**P**	**00 20 35.0**	**-0.3**
ODZ				IAmb		IAmb	00 20 40.7	
	comp=Z,7.8nm,1.1s							
MLZ	**Mavora Lakes**	**19.65**	**211**	Pn		**Pn**	**00 20 51.4**	**-0.8**
MLZ				IAmb		IAmb	00 21 09.0	
	comp=Z,20nm,1.2s							
DCZ	**Deep Cove**	**20.17**	**212**	P		**P**	**00 20 55.0**	**-0.5**
DCZ				IAmb		IAmb	00 21 05.3	
	comp=Z,6.4nm,1.0s							
ARMA	**Armidale**	**26.66**	**260**	P		**P**	**00 21 57.1**	**-2.0**
ARMA				IAmb		IAmb	00 21 57.2	
	comp=Z,7.6nm,1.0s							
CTAO	**Charters Tower**	**33.95**	**277**	P		**P**	**00 23 05.5**	**+2.1**
CTAO				IAmb		IAmb	00 23 19.0	
	comp=Z,2.2nm,0.8s							
STKA	**Stephens Creek**	**35.07**	**255**	P		**P**	**00 23 12.3**	**-0.7**
	comp=Z,0.8nm,0.2s,baz=107,slow=12,SNR=3.2 comp=Z,0.8nm,0.2s							
STKA	**Stephens Creek**	**35.07**	**255**	P		**P**	**00 23 12.7**	**-0.2**
PTCN	**Pitcairn Islan**	**42.28**	**96**	P		**P**	**00 24 13.4**	**+0.1**
ASAR	**Alice Springs**	**43.51**	**266**	P		**P**	**00 24 23.2**	**0.0**
	comp=Z,0.4nm,0.5s,baz=104,slow=7.7,SNR=6.6 comp=Z,0.4nm,0.5s							
ASAR	**Alice Springs**	**43.51**	**266**	P		**P**	**00 24 22.5**	**-0.8**
WR0	**Warramunga Arr**	**44.21**	**271**	P		**P**	**00 24 29.5**	**+0.6**
WR0				IAmb		IAmb	00 24 41.9	
	comp=Z,2.2nm,1.1s							
WB2	**Warramunga Arr**	**44.38**	**271**	P		**P**	**00 24 31.0**	**+0.7**
WRA	**Warramunga Arr**	**44.39**	**271**	P		**P**	**00 24 31.1**	**+0.7**
	comp=Z,0.9nm,0.3s,baz=110,slow=8.2,SNR=41 comp=Z,0.9nm,0.3s							
WRA	**Warramunga Arr**	**44.39**	**271**	IAmb		IAmb	00 24 31.4	
	comp=Z,0.1nm,0.8s							
WB0	**Warramunga Arr**	**44.41**	**271**	P		**P**	**00 24 31.1**	**+0.6**
QSPA	**South Pole Qui**	**60.88**	**180**	P		**P**	**00 26 33.3**	**+1.8**
FINES	**FINESS Array B**	**144.15**	**341**	PKP		**PKPdf**	**00 35 55.1**	**+2.0**
	comp=Z,0.7nm,0.5s,baz=28,slow=3.6,SNR=7.1							
CLL	**Collm**	**156.54**	**343**	*e*PKPab		**PKPab**	**00 36 37.0**	**-4.8**

DDA ***07*** *00:25:01.1±0.0, 35°.52N×31°.65E, h7km±5km, ML1.9*
NIC ***07*** *00:25:02.0±0.0, 35°.50N×31°.44E, h4km±3km, Ml2.5/3*
ISC 07 00:25:01.9±1.3, 35°.59N±0°.03×31°.65E±0°.04, h8km±10km, n17, σ1§34/29, Cyprus region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
AKMS	**Akamas**	**0.80**	**135**	P		**Pb**	**00 25 16.9**	**-1.2**
AKMS				AML		AML	00 25 35.5	
	0.5nm,0.5s							
AKMS				AML		AML	00 25 36.0	
	0.7nm,0.8s							
GAZI	**Gazipasa**	**0.84**	**40**	P		**Pb**	**00 25 19.1**	**+0.3**
GAZI				S		**Sg**	**00 25 30.4**	**+1.4**
GAZI				*i* AML		AML	00 25 40.0	
	comp=N,38nm,0.6s							
ALFC	**Alefka**	**0.89**	**119**	P		**Pn**	**00 25 21.5**	**+0.7**
ALFC				AML		AML	00 25 38.4	
	0.3nm,0.9s							
ALFC				AML		AML	00 25 39.2	
	0.4nm,0.6s							
NATA	**Nata**	**1.11**	**137**	P		**Pn**	**00 25 24.5**	**+0.7**
NATA				S		**Sn**	**00 25 41.9**	**+2.6**
NATA				AML		AML	00 25 48.6	
	1.0nm,0.7s							
NATA				AML		AML	00 25 51.7	
	0.6nm,0.6s							
NATA				AML		AML	00 25 51.7	
	0.6nm,0.6s							
LEF	**Lefka**	**1.12**	**115**	P		**Pg**	**00 25 21.5**	**-1.9**
LEF				S		**Sg**	**00 25 36.0**	**-1.9**
AKUM	**Antalya-Kumluc**	**1.28**	**305**	P		**Pg**	**00 25 26.6**	**+0.1**
AKUM				S		**Sn**	**00 25 45.2**	**+1.6**
AKUM				*i* AML		AML	00 25 55.0	
	comp=E,25nm,0.8s							
KEPZ	**Antalya-Kepez**	**1.31**	**358**	P		**Pn**	**00 25 25.8**	**-0.8**
KEPZ				S		**Sb**	**00 25 41.5**	**-2.2**
KEPZ				*i* AML		AML	00 25 48.0	
	comp=N,21nm,0.4s							
SZAC	**Souni**	**1.31**	**129**	P		**Pg**	**00 25 27.9**	**+0.8**
ERMK	**Ermenek**	**1.46**	**44**	P		**Pg**	**00 25 30.4**	**+0.3**
ERMK				S		**Sg**	**00 25 51.7**	**+2.6**
ERMK				*i* AML		AML	00 26 10.0	
	comp=N,18nm,0.4s							
ASGA	**Asgata**	**1.54**	**121**	P		**Pg**	**00 25 31.7**	**+0.3**
GULN	**MERSIN_Gulnar**	**1.65**	**68**	P		**Pg**	**00 25 34.4**	**+0.9**
GULN				S		**Sn**	**00 25 53.1**	**+0.5**
GULN				*i* AML		AML	00 26 29.0	
	comp=Z,14nm,1.6s							
KORT	**Korkueli**	**1.75**	**324**	P		**Pg**	**00 25 35.8**	**+0.3**
KORT				S		**Sg**	**00 25 59.0**	**+0.7**
KORT				*i* AML		AML	00 26 05.0	
	comp=N,11nm,1.5s							
KORT				*i* AML		AML	00 26 15.0	
	comp=E,17nm,1.6s							
SEDI	**Konya, Seydise**	**1.86**	**3**	P		**Pn**	**00 25 32.9**	**-1.3**
SEDI				S		**Sn**	**00 25 57.7**	**-0.3**
SEDI				*i* AML		AML	00 26 02.0	
	comp=E,12nm,0.6s							
SEDI				*i* AML		AML	00 26 08.0	
	comp=N,18nm,0.5s							
SEDI				*i* AML		AML	00 26 15.0	
	comp=Z,11nm,0.7s							
KKBE	**Karaman, Kazim**	**1.93**	**32**	P		**Pb**	**00 25 36.9**	**-0.5**
KKBE				S		**Sb**	**00 26 01.9**	**+0.2**
KKBE				*i* AML		AML	00 26 17.0	
	comp=N,9.3nm,0.6s							
GOLH	**Golhisar**	**2.35**	**315**	P		Pn	00 25 33.1	-7.8
GOLH				S		**Sn**	**00 26 11.9**	**+1.7**
YVAC	**Isparta, Yalva**	**2.69**	**353**	P		**Pn**	**00 25 45.8**	**+0.1**
YVAC				S		**Sn**	**00 26 17.7**	**-0.8**
YVAC				*i* AML		AML	00 26 20.0	
	comp=Z,4.9nm,2.1s							
KERG	**Konya-Eregli**	**2.70**	**47**	P		**Pb**	**00 25 49.0**	**-1.6**
KERG				S		**Sb**	**00 26 23.5**	**-0.4**
KERG				*i* AML		AML	00 26 35.0	
	comp=E,5.9nm,1.1s							
KERG				*i* AML		AML	00 27 03.0	
	comp=Z,7.8nm,1.8s							
KERG				*i* AML		AML	00 27 33.0	
	comp=N,6.3nm,2.4s							

IDC 07 00:26:00.1±2.4, 6°.64S×129°.93E, h153km±28km, mb3.3/1, mbtmp3.7/5, MS3.7/2, Error ellipse: s-maj=39.8km s-min=22.9km az=89.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
SIJI	**Sorong**	**5.88**	**13**	P		Pn	00 27 25.6	+0.3
	2.9nm,0.3s,baz=270,slow=23,SNR=1.2							
SIJI				S		Sn	00 28 27.2	-4.8
	12nm,0.2s,baz=192,slow=22,SNR=6.9							
BATI	**Baumata**	**7.14**	**240**	P		Pn	00 27 42.0	-0.1
	15nm,0.5s,baz=90,slow=20,SNR=1.2							
WRA	**Warramunga Arr**	**13.90**	**162**	P		Pn	00 29 09.2	-1.5
	0.2nm,0.3s,baz=346,slow=13,SNR=19							
WRA				S		Sn	00 31 39.6	-5.3
	0.4nm,0.3s,baz=343,slow=21,SNR=2.9							
DAV	**Davao City (W)**	**14.29**	**342**	LR		LR	00 34 54.1	
	comp=Z,731nm,18.4s,baz=171,slow=37							
ASAR	**Alice Springs**	**17.36**	**168**	P		Pn	00 29 53.8	+0.6
	0.5nm,0.5s,baz=349,slow=14,SNR=11							
KSRS	**Korea Array**	**43.90**	**358**	LR		LR	00 54 57.4	
	comp=Z,32nm,18.7s,baz=190,slow=40							
MKAR	**Makanchi Array**	**67.88**	**327**	P		P	00 36 41.9	-0.1
	0.4nm,0.4s,baz=112,slow=7.1,SNR=6.7 0.4nm,0.4s							

BJI ***07*** *00:29:34.5±0.0, 0°.16S×126°.58E, h52km, mb4.8/37, mB4.8/22, Ms4.0/5, Ms7 3.8/6*
NEIC ***07*** *00:29:34.3±2.2, 0°.44N±0°.06×126°.37E±0°.05, h10km±4km, mb4.9/115, Error ellipse: s-maj=9.3km s-min=7.6km az=168.0*
IDC ***07*** *00:29:36.9±2.6, 0°.39N×126°.19E, h30km±18km, mb4.4/24, mbtmp4.6/27, ML4.7/3, MS3.6/21, Error ellipse: s-maj=16.7km s-min=10.2km az=73.0*
GCMT ***07*** *00:29:37.3±0.4, 0°.57N±0°.02×126°.54E±0°.03, h33km±1km, MW4.8/61, Moment Tensor Solution. s23,c32; s61,c83; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr 1.60±.23; Mθθ 0.31±.12; Mθφ -1.92±.15; Mrθ 0.34±.15; Mφφ -1.30±.09; Mφr -0.19±.16; Best double couple: Mo 2.14500×10¹⁶ NP1: φs 47.00000°, δ 49.00000°, λ 123.00000°. NP2: φs 183.00000°, δ 50.00000°, λ 58.00000°. Principal axes: T 1.7730, Plg 66.0000°, Azm 25.0000°; N 0.7380, Plg 24.0000°, Azm 204.0000°; P -2.5170, Plg 0.0000°, Azm 295.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
DJA ***07*** *00:29:38.5±0.2, 0°.N±2°×12°.6E±°, h44km±3km, M4.6/36, mb4.9/36, mB5.1/12, MLv 4.6/21, Mw(mB) 4.5/12, MwMwp 4.3/1, Mwp 4.7/1*
ISC 07 00:29:38.6±0.3, 0°.35N±0°.04×126°.37E±0°.04, h47km, n218, σ1§36/209, mb4.8/82, MS3.7/23, 24C-11D, Fault plane solution: NP1: φs 186.33278°, δ 50.06705°, λ 73.99538°. **NP2:** φs 30.41053°, δ 42.51718°, λ 108.23013°. **Principal axes:** T Plg 77.1810°, Azm 34.8463°; N Plg 12.2054°, Azm 196.7650°; P Plg 3.8592°, Azm 287.6010°; **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
TNTI	**Ternate**	**1.08**	**67**			Pn	00 29 55.1	-2.3
TNTI					Sn	**Sn**	**00 30 09.0**	**-2.3**
TNTI	**Ternate**	**1.08**	**67**		P	Pn	00 29 55.0	-2.1
LBMI	**Labuha**	**1.50**	**131**		P	**Pn**	**00 30 01.6**	**-1.6**
LBMI					S	**Sn**	**00 30 19.9**	**-1.7**
KMSI	**Cibinong**	**2.39**	**275**		P	**Pn**	**00 30 16.1**	**+0.7**
SANI	**Sanana**	**2.42**	**189**		P	**Pn**	**00 30 14.5**	**-1.2**
SGSI	**Sangihe**	**3.41**	**346**		P	**Pn**	**00 30 30.4**	**+1.0**
NLAI	**Namlea**	**3.64**	**168**		P	**Pn**	**00 30 32.1**	**-0.4**
LUWI	**Luwuk**	**3.85**	**249**	Pn		**Pn**	**00 30 38.7**	**+3.3**
LUWI	**Luwuk**	**3.85**	**249**		P	**Pn**	**00 30 37.1**	**+1.7**
AAI	**Ambon**	**4.41**	**156**		P	**Pn**	**00 30 43.8**	**+0.7**
MRSI	**Marisa**	**4.43**	**272**		P	**Pn**	**00 30 42.3**	**-1.0**
MSAI	**Masohi**	**4.48**	**145**		P	**Pn**	**00 30 47.9**	**+3.9**
APSI	**Ampana**	**4.88**	**255**		P	**Pn**	**00 30 50.1**	**+0.6**
SWI	**Sorong**	**5.04**	**104**		P	**Pn**	**00 30 52.7**	**+1.0**
	0.3nm1µm47nm,0.8s							
SIJI	**Sorong**	**5.05**	**104**	Pn		**Pn**	**00 30 53.0**	**+1.1**
	6.7nm,0.3s,baz=258,slow=14,SNR=7.9							
SIJI					Sn	**Sn**	**00 31 49.1**	**+0.1**
	1.5nm,0.3s,baz=301,slow=18,SNR=1.1 14nm,0.3s							
TOLI2	**Tolitoli**	**5.63**	**278**	Pn		**Pn**	**00 30 59.7**	**-0.2**
DDMP	**Don Marcelino,**	**5.75**	**353**	‖	*e*P	**Pn**	**00 31 05.7**	**+4.2**
MPSI	**Mapaga**	**6.47**	**270**	P		**Pn**	**00 31 12.7**	**+1.4**
	0.2nm767nm51nm,0.8s							
FAKI	**Fak Fak**	**6.72**	**119**	Pn		**Pn**	**00 31 13.9**	**-0.9**
FAKI	**Fak Fak**	**6.72**	**119**	P		**Pn**	**00 31 14.9**	**+0.1**
	0.2nm33nm,0.9s							
KCP	**Kidapawan**	**6.73**	**349⇑**	*i*	P	Pn	00 31 19.9	+4.9
BBSI	**Bau Bau**	**6.93**	**213**	P		**Pn**	**00 31 19.6**	**+1.9**
	0.1nm34nm,0.9s							
TTSI	**Tana Toraja**	**7.36**	**243**	P		**Pn**	**00 31 24.4**	**+0.8**
	0.8nm3µm214nm,0.6s							
BNSI	**Bone**	**7.84**	**233**	P		**Pn**	**00 31 31.1**	**+1.0**
	0.5nm1µm138nm,0.9s							
SPSI	**Sidrap Palu**	**7.86**	**237**	P		**Pn**	**00 31 31.8**	**+1.3**
	1.1nm3µm314nm,0.6s							
BKSI	**Bulukumba**	**8.41**	**228**	P		**Pn**	**00 31 39.0**	**+1.1**
	924nm117nm,0.8s							
KAPI	**Kappang**	**8.49**	**231**	Pn		**Pn**	**00 31 37.9**	**-1.2**

14nm,0.3s,baz=357,slow=8.7,SNR=32
26nm,0.3s
KAPI Kappang 8.49 231 Pn Pn 00 31 37.3 -1.8
BSSI Bau Bau, Buton 8.72 222 P Pn 00 31 42.6 +0.4
47nm,1.0s
MYLDM Lahad Datu 9.20 302 Pn Pn 00 31 49.6 +0.8
GLSP General Luna, 9.37 359u eP Pn 00 31 52.7 +1.6
MMRI Maumere 9.83 205 Pn Pn 00 31 57.0 -0.4
EDFI Ende, Flores 10.17 207 P Pn 00 32 03.0 +0.8
215nm30nm,0.9s
SOEI Soe 10.26 192 Pn Pn 00 32 07.3 +3.9
SOEI Soe 10.26 192 P Pn 00 32 03.8 +0.4
72nm,1.1s
MTN Manton Dam 13.94 160 Pn Pn 00 32 52.7 -0.9
JAGI Jajag, Banyuwa 15.00 234 P P 00 33 12.1 -0.2
JAGI IAmb IAmb 00 33 26.5
comp=Z,58nm,1.1s
JAGI Jajag, Banyuwa 15.00 234 P Pn 00 33 09.3 +1.6
comp=Z,55nm,1.0s
KSM Kuching 16.09 274 P Pn 00 33 23.7 +1.9
KSM IAmb IAmb 00 33 25.9
comp=Z,111nm,0.9s
KNRA Kununurra 16.10 172 Pn Pn 00 33 20.9 -1.0
PWJI Pagerwojo 16.73 240 P P 00 33 33.7 +2.2
comp=Z,87nm,1.2s
PCJI Pacitan 17.36 240 P P 00 33 39.6 +1.1
comp=Z,76nm,1.0s
WOJI Wonogiri, Jawa 17.41 242 P P 00 33 41.2 +2.1
comp=Z,42nm,1.6s
SMRI Semarang 17.51 245 P Pn 00 33 39.2 -0.3
SMRI IAmb IAmb 00 34 04.4
comp=Z,54nm,0.9s
SMRI Semarang 17.51 245 P P 00 33 42.3 +2.2
comp=Z,68nm,1.1s
SMRI pP pP 00 33 47.8 -2.6
comp=Z,68nm,1.1s
CMJI Cimerak 19.61 245 P P 00 34 04.1 +0.9
comp=Z,33nm,1.4s
LEM Lembang 20.02 249 P P 00 34 06.7 -1.2
comp=Z,5.6nm,0.3s,baz=334,slow=23,SNR=2.0
comp=Z,16nm,0.4s
LEM Lembang 20.02 249 P P 00 34 08.1 +0.2
comp=Z,21nm,1.0s
PPBI Pangkal Pinang 20.38 263 P P 00 34 10.7 -0.9
CBJI Citeko 20.61 251 P P 00 34 11.5 -2.6
comp=Z,77nm,0.7s
WB0 Warramunga Arr 21.49 159 P P 00 34 22.7 -0.8
WB0 IAmb IAmb 00 34 39.2
comp=Z,82nm,1.1s
WRAB Tennant Creek 21.63 159 P P 00 34 24.1 -0.9
WRAB IAmb IAmb 00 34 30.2
comp=Z,51nm,0.8s
WRA Warramunga Arr 21.63 159 P P 00 34 24.6 -0.4
comp=Z,14nm,0.6s,baz=335,slow=11,SNR=61
WRA PcP PcP 00 38 26.3 +0.7
comp=Z,0.7nm,0.5s,baz=342,slow=1.8,SNR=3.5
WRA ScP ScP 00 42 01.7 +2.7
comp=Z,0.7nm,0.8s,baz=349,slow=2.6,SNR=5.2
comp=Z,14nm,0.6s
WRA Warramunga Arr 21.63 159 P P 00 34 22.7 -2.3
WB2 Warramunga Arr 21.64 159 P P 00 34 24.3 -0.8
WB2 IAmb IAmb 00 34 30.3
comp=Z,52nm,0.8s
WR0 Warramunga Arr 21.72 159 P P 00 34 25.0 -1.0
WR0 IAmb IAmb 00 34 30.7
comp=Z,27nm,0.8s
COEN Coen 21.89 131 P P 00 34 25.4 -2.5
COEN IAmb IAmb 00 34 35.7
comp=Z,45nm,1.1s
MBWA Marble Bar 22.34 196 P P 00 34 32.0 -0.7
MBWA IAmb IAmb 00 34 37.3
comp=Z,83nm,1.4s
PSA00 Pilbara Seismi 22.70 196 P P 00 34 35.4 -1.2
PSA00 Pilbara Seismi 22.70 196 P P 00 34 35.8 -0.8
PSA00 IAmb IAmb 00 34 38.0
comp=Z,18nm,0.8s
PMG Port Moresby 22.86 116 P P 00 34 39.6 +1.4
comp=Z,9.7nm,0.5s,baz=5.1,slow=4.7,SNR=3.7
PMG LR LR 00 46 22.4
comp=Z,203nm,20.1s,baz=300,slow=44
comp=Z,9.7nm,0.5s
XMIS Christmas Isla 23.24 242 P P 00 34 40.6 -1.5
XMIS IAmb IAmb 00 34 45.8
comp=Z,49nm,0.9s
YULB Yu-li 23.42 348 P P 00 34 40.6 -3.1
TPUB Ta-pu 23.48 347 P P 00 34 42.2 -2.1
TPUB IAmb IAmb 00 34 59.0
comp=Z,36nm,0.7s
SSLB Suanglung 23.88 348 P P 00 34 47.9 -0.1
SSLB IAmb IAmb 00 34 56.3
comp=Z,21nm,0.6s
NACB Ninganchiao 24.13 349 P P 00 34 48.2 -2.0
YHNB Yeheng 24.65 349 P P 00 34 53.9 -1.1
YHNB IAmb IAmb 00 34 58.0
comp=Z,20nm,0.7s
AS31 Alice Springs 24.97 163 P P 00 34 58.8 +0.8
AS31 IAmb IAmb 00 35 13.3
comp=Z,14nm,0.8s
ASAR Alice Springs 24.98 163 P P 00 34 58.6 +0.6
comp=Z,17nm,0.5s,baz=343,slow=9.7,SNR=113
ASAR PcP PcP 00 38 32.6 0.0
comp=Z,0.9nm,0.5s,baz=346,slow=2.1,SNR=4.4
ASAR ScP ScP 00 42 10.0 +2.1
comp=Z,0.8nm,0.8s,baz=350,slow=2.5,SNR=5.7
comp=Z,17nm,0.5s
ASAR Alice Springs 24.98 163 P P 00 34 59.5 +1.5
IPM Ipoh 25.64 280 P P 00 35 02.3 -1.9
IPM IAmb IAmb 00 35 06.3
comp=Z,18nm,1.0s
GIRL Giralia 25.73 207 P P 00 35 06.5 +1.7
JOW Kunigami 26.39 4 P P 00 35 11.2 +0.4
comp=Z,34nm,0.6s,baz=184,slow=9.6,SNR=14
comp=Z,34nm,0.6s
JOW Kunigami 26.39 4 P P 00 35 11.3 +0.6
RPSI Rantau Prapat 27.53 275 P P 00 35 19.9 -1.3
PSI Prapat 27.54 275 P P 00 35 19.9 -1.5
comp=Z,16nm,1.3s,baz=99,slow=7.5,SNR=5.1
comp=Z,16nm,1.3s
CTA Charters Tower 28.15 137 P P 00 35 28.2 +1.6
comp=Z,2.4nm,0.6s,baz=330,slow=13,SNR=5.1
CTA LR LR 00 47 14.7
comp=Z,56nm,19.2s,baz=272,slow=37
comp=Z,2.4nm,0.6s
JCJ Chichijima 30.63 28 P P 00 35 46.9 -1.7
MORW Morawa 30.88 198 P P 00 35 50.1 -0.6
MORW IAmb IAmb 00 35 52.0
comp=Z,32nm,1.3s
FORT Forrest 31.00 177 P P 00 35 51.5 -0.3
NJ2 Nanjing 32.32 348 eP P 00 36 05.5 +2.2
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
CMAR Chiang Mai Arr 32.39 305 P P 00 36 02.8 -1.3
comp=Z,0.8nm,0.3s,baz=138,slow=7.1,SNR=1.0
CMAR LR LR 00 51 54.6
comp=Z,46nm,18.1s,baz=125,slow=42
comp=Z,0.8nm,0.3s
CMAR Chiang Mai Arr 32.39 305 P P 00 36 03.3 -0.8
CHTO Chiang Mai 32.57 306 P P 00 36 05.5 -0.3
JNU Nakatsue 32.87 7 P P 00 36 06.0 -2.2
HNR Honiara 34.82 107 P P 00 36 24.4 -0.9
NAWB Namwon 34.90 1 P P 00 36 25.1 -0.7
JHS Saijyo 35.04 10 P P 00 36 27.8 +0.8
JHS IAmb IAmb 00 36 29.6
comp=Z,9.1nm,0.7s
STKA Stephens Creek 35.15 157 P P 00 36 28.7 +0.7
comp=Z,8.0nm,0.6s,baz=332,slow=10,SNR=15
STKA PcP PcP 00 38 58.8 +0.1
comp=Z,1.2nm,0.4s,baz=307,slow=5.4,SNR=2.9
comp=Z,8.0nm,0.6s
STKA Stephens Creek 35.15 157 P P 00 36 28.1 +0.1
PZH PanZhiHua 35.18 320 P P 00 36 27.2 -1.3
PZH pmax pmax
comp=Z,10.0nm,0.6s
PZH pmax pmax
comp=Z,100nm,5.8s
INU Inuyama 36.20 15 P P 00 36 36.9 -0.1
INU IAmb IAmb 00 36 38.7
comp=Z,14nm,0.8s
KSCHJ Chungju 36.37 2 P P 00 36 38.5 +0.2
JGF Kuroka 36.53 15 P P 00 36 39.4 -0.4
KSAR Wonju Array Be 36.93 2 P P 00 36 42.3 -0.8
KSRS Korea Array 36.95 2 P P 00 36 44.0 +0.9
comp=Z,4.3nm,0.6s,baz=179,slow=9.9,SNR=26
comp=Z,4.3nm,0.6s
KS19 Wonju Array Si 36.99 2 P P 00 36 42.6 -1.1
XAN Xi'an 37.29 336 P P 00 36 49.1 +2.8
XAN pP pP 00 36 58.8 +0.8
XAN pmax pmax
comp=Z,8.0nm,0.6s
MAJO Matsushiro 37.65 16 P P 00 36 48.0 -1.2
MJAR Matsushiro Arr 37.65 16 P P 00 36 48.5 -0.7
comp=Z,3.8nm,0.7s,baz=177,slow=9.5,SNR=9.1
comp=Z,3.8nm,0.7s
MJAR Matsushiro Arr 37.65 16 IAmb IAmb 16 02 49.8
comp=Z,28nm,1.3s
MJB9 Matsu-Tunnel 37.65 16 P P 00 36 48.0 -1.2
MJB9 IAmb IAmb 16 02 33.0
comp=Z,31nm,0.8s
ARMA Armidale 38.91 144 P P 00 37 00.7 +0.6
ARMA IAmb IAmb 00 37 03.7
comp=Z,28nm,1.0s
JSD Sado 39.07 15 P P 00 36 59.5 -1.5
JMM Marumori 39.63 18 P P 00 37 05.0 -0.8
JMM IAmb IAmb 00 37 08.6
comp=Z,32nm,0.8s
BJT Baijiatuan 40.56 348 P P 00 37 13.2 -0.3
BJT IAmb IAmb 00 37 17.0
comp=Z,10nm,0.6s
BJI Beijing 40.58 348 P P 00 37 15.2 +1.6
BJI pP pP 00 37 24.2 -1.3
BJI pmax pmax
comp=Z,14nm,0.6s
LZH Lanzhou 41.25 332 eP P 00 37 07.2 -12
LZH pP pP 00 37 17.3 -14
LZH pmax pmax
comp=Z,20nm,1.4s
LZH pmax pmax
comp=Z,110nm,5.4s
LZH LR LR
comp=N,97nm,14.0s
LZH LR LR
comp=E,140nm,14.1s
LZH LR LR
comp=Z,260nm,15.2s
SHL Shillong 41.66 310 P P 00 37 21.7 -1.3
JTM Tenmabayashi 42.40 17 P P 00 37 25.4 -3.2
JTM IAmb IAmb 00 37 30.2
comp=Z,18nm,0.7s
HHC Hu-ho-hao-te 42.49 343 eP P 00 37 31.6 +2.2
HHC pmax pmax
comp=Z,34nm,1.1s
HHC pmax pmax
comp=Z,140nm,5.2s
USA0B Ussuriysk Arra 43.94 6 P P 00 37 41.0 0.0
USA0B IAmb IAmb 00 37 42.5
comp=Z,18nm,0.8s
USRK Ussuriysk Ar. 43.94 6 P P 00 37 41.0 +0.1
comp=Z,14nm,0.7s,baz=202,slow=6.5,SNR=11
comp=Z,14nm,0.7s
USRK Ussuriysk Ar. 43.94 6 P P 00 37 41.4 +0.4
MDJ Mudanjiang 44.16 3 P P 00 37 43.0 +0.3
MDJ IAmb IAmb 00 37 45.1
comp=Z,9.7nm,0.7s
MDJ Mudanjiang 44.16 3 P P 00 37 44.2 +1.5
MDJ pmax pmax
comp=Z,15nm,0.8s
MDJ pmax pmax
comp=Z,72nm,4.5s
XLT XiLinHaoTe 44.32 349 eP P 00 37 45.6 +1.5
XLT pP pP 00 37 55.6 -0.5
XLT pmax pmax
comp=Z,13nm,0.7s
XLT pmax pmax
comp=Z,75nm,4.7s
LSA Lhasa 44.45 314 P P 00 37 44.9 -1.0
LSA IAmb IAmb 00 37 49.8
comp=Z,8.0nm,0.5s
GTA Gaotai 45.82 331 eP P 00 37 57.5 +1.3
GTA pmax pmax
comp=Z,3.0nm,0.8s
GTA pmax pmax
comp=Z,72nm,6.9s
GTA LR LR
comp=Z,72nm,17.4s
GTA LR LR
comp=Z,97nm,18.2s
GTA LR LR
comp=Z,190nm,19.3s
JKA Kamikawa-asahi 45.91 16 P P 00 37 56.8 +0.2
JKA IAmb IAmb 00 37 58.5
comp=Z,11nm,0.9s
ULN Ulaanbaatar 50.21 343 P P 00 38 31.3 +1.4
ULN IAmb IAmb 00 38 36.9
comp=Z,14nm,1.1s
SONM Songino Array 50.38 343 P P 00 38 31.0 -0.2
comp=Z,3.9nm,0.5s,baz=161,slow=9.4,SNR=29
comp=Z,3.9nm,0.5s
SONM Songino Array 50.38 343 P P 00 38 31.4 +0.2
WMQ Urumqi 55.30 327 eP P 00 39 09.2 +1.7
PETK Petropavlovsk- 58.68 22 P P 00 39 32.6 +1.4
comp=Z,9.7nm,0.7s,baz=202,slow=11,SNR=13
PETK LR LR 01 02 44.9
comp=Z,23nm,20.7s,baz=211,slow=34
comp=Z,9.7nm,0.7s
PETK Petropavlovsk- 58.68 22 P P 00 39 29.4 -1.8
RPZ Rata Peaks 59.25 144 LR LR 01 05 43.3
comp=Z,92nm,20.0s,baz=299,slow=36
OXZ Oxford 59.62 143 P P 00 39 39.1 +1.1
TUWZ Tuamarina 59.79 140 P P 00 39 38.6 -0.4
MK31 Makanchi Array 60.13 327 P P 00 39 39.7 -1.7
MK31 IAmb IAmb 00 39 45.5
comp=Z,8.2nm,1.1s
MKAR Makanchi Array 60.13 327 P P 00 39 40.4 -0.9
comp=Z,5.2nm,0.4s,baz=121,slow=8.1,SNR=57
MKAR PcP PcP 00 40 27.3 +0.6
comp=Z,2.4nm,0.6s,baz=104,slow=6.1,SNR=4.0
comp=Z,5.2nm,0.4s
MKAR Makanchi Array 60.13 327 P P 00 39 39.7 -1.7
KSH Kashi 60.20 317 P P 00 39 43.7 +1.6
KSH sP sP 00 40 03.5 +3.9
KSH pmax pmax
comp=Z,5.0nm,1.1s
MAKZ Makanchi 60.31 326 P P 00 39 41.4 -1.3
MAKZ IAmb IAmb 00 39 46.7
comp=Z,12nm,1.0s
KDJ Kajisay 60.64 320 P P 00 39 43.5 -1.7
YAK Yakutsk 61.57 2 LR LR 01 10 21.7
comp=Z,24nm,18.0s,baz=96,slow=40
MA2 Magadan 62.05 14 P P 00 39 55.0 +0.9
AAK Ala-Archa 62.63 319 LR LR 01 08 19.3
comp=Z,63nm,21.8s,baz=112,slow=37
AAK Ala-Archa 62.63 319 P P 00 39 59.1 +0.6
DRK Karamyk 63.09 315 P P 00 40 01.0 -0.8
KBL Kabul 63.31 309 P P 00 40 02.1 -1.1
KBL IAmb IAmb 00 40 05.1
comp=Z,5.0nm,0.6s
ZAA0 Zalesovo Array 63.43 334 P P 00 40 02.6 -0.7
ZAA0 IAmb IAmb 00 40 07.4
comp=Z,4.1nm,0.6s
ZALV Zalesovo Beam 63.43 334 P P 00 40 02.0 -1.3
comp=Z,2.9nm,0.5s,baz=119,slow=6.3,SNR=11
ZALV LR LR 01 10 15.9
comp=Z,29nm,19.6s,baz=133,slow=38
comp=Z,2.9nm,0.5s
ZALV Zalesovo Beam 63.43 334 P P 00 40 02.2 -1.1
GAR Garm 63.96 314 P P 00 40 05.0 -2.4
BTK Batken 64.02 315 P P 00 40 05.9 -1.8
BTK IAmb IAmb 00 40 24.2
comp=Z,4.6nm,0.6s
KURK Kurchatov 64.39 329 P P 00 40 08.3 -1.4
CHGR Chuyangaron 64.67 313 P P 00 40 11.1 -0.9
CHGR IAmb IAmb 00 40 32.3
comp=Z,11nm,0.8s
SEY Seymchan 65.38 13 LR LR 01 09 14.9
comp=Z,19nm,20.7s,baz=18,slow=36
KK31 Karatay Array 65.46 318 P P 00 40 16.0 -1.0
KKAR Karatay Array 65.46 318 P P 00 40 15.4 -1.5
KKAR Karatay Array 65.46 318 P P 00 40 16.7 -0.2
KKAR IAmb IAmb 00 40 21.8
comp=Z,3.9nm,0.9s
BRVK Borovoye 70.02 328 P P 00 40 44.3 -1.1
BRVK IAmb IAmb 00 40 48.8
comp=Z,21nm,1.2s
TIXI Tiksi 71.20 1 LR LR 01 13 09.4
comp=Z,32nm,21.6s,baz=181,slow=37
TIXI Tiksi 71.20 1 P P 00 40 51.4 -0.8
GEYT Alibeck 72.73 310 P P 00 41 01.6 -0.6
comp=Z,1.6nm,0.6s,baz=58,slow=3.6,SNR=2.8
comp=Z,1.6nm,0.6s
GEYT Alibeck 72.73 310 P P 00 41 03.0 +0.8
GYA0B ALIBECK ARRAY 72.73 310 P P 00 41 02.4 +0.2
GYA0B IAmb IAmb 00 41 07.1
comp=Z,6.3nm,0.6s
BILL Bilibino 72.89 15 P P 00 41 02.8 +0.3
NRIK Noril'sk 73.60 347 P P 00 41 06.7 +0.1
comp=Z,6.7nm,0.7s,baz=142,slow=6.1,SNR=11
comp=Z,6.7nm,0.7s
NRIK Noril'sk 73.60 347 P P 00 41 06.3 -0.3
NRIK IAmb IAmb 00 41 09.0
comp=Z,6.2nm,0.7s
ABKAR Akbulak array 74.53 321 P P 00 41 11.5 -1.0
ABKAR Akbulak array 74.53 321 P P 00 41 11.9 -0.5
ABKAR IAmb IAmb 00 41 13.9
comp=Z,6.9nm,0.6s
AKTO Aktyubinsk 76.07 322 LR LR 01 17 23.5
comp=Z,52nm,20.1s,baz=105,slow=38
AKUT Akutan 76.90 34 P P 00 41 26.5 +0.7
ARU Arti 77.59 328 P P 00 41 29.7 +0.1
ARU IAmb IAmb 00 41 31.5
comp=Z,8.1nm,0.8s
KHU Kahuku 78.57 71 P P 00 41 37.5 +1.3
TNA Tin City 79.82 23 P P 00 41 42.1 +0.4
TNA IAmb IAmb 00 41 51.8
comp=Z,12nm,1.0s
ABPO Ambohimpanom 79.85 251 P P 00 41 39.2 -3.8
VNDA Vanda 80.15 173 P P 00 41 43.8 +0.5
comp=Z,0.8nm,0.5s,baz=338,slow=6.5,SNR=6.5
comp=Z,0.8nm,0.5s
SDPT Sand Point 80.18 34 P P 00 41 44.8 +0.9
VOI Vohitsoka 80.46 248 P P 00 41 47.8 +1.5
VOI IAmb IAmb 00 42 16.7
comp=Z,17nm,1.1s
MAW Mawson 80.48 200 P P 00 41 46.1 +0.9
comp=Z,1.9nm,0.5s,baz=64,slow=4.3,SNR=8.8
comp=Z,1.9nm,0.5s
MAW Mawson 80.48 200 IAmb IAmb 00 41 48.3
comp=Z,0.8nm,0.8s
CNBA Chernabura Isl 80.56 34 P P 00 41 46.5 +0.6
RAYN Ar Rayn 81.48 294 P P 00 41 51.3 -0.2
RAYN IAmb IAmb 00 41 52.3
comp=Z,9.6nm,0.7s
BELG Belogornoye 82.85 323 LR LR 01 21 26.0
comp=Z,36nm,19.2s,baz=142,slow=38
CHIR Chirikof Islan 82.98 34 P P 00 41 59.9 +1.2
ATD Arta Tunnel 83.58 281 P P 00 42 03.2 +0.5
ATD IAmb IAmb 00 42 09.2
comp=Z,10nm,0.9s
N18K Kilae Creek 83.69 29 P P 00 42 04.5 +2.2
N18K IAmb IAmb 00 42 08.2
comp=Z,12nm,1.3s
O18K Koktuh Hills 83.88 30 P P 00 42 05.1 +1.8
SII Sitkinak Islan 83.89 33 P P 00 42 05.8 +2.4
SVW2 Sparrevohn 83.92 29 P P 00 42 04.5 +1.0
SVW2 IAmb IAmb 00 42 06.6
comp=Z,7.5nm,0.8s
TTA Tatalina 84.06 27 P P 00 42 02.8 -1.4
TTA IAmb IAmb 00 42 07.7
comp=Z,10nm,1.2s
N19K Bonanza Creek 84.40 29 P P 00 42 08.0 +2.0
L19K White Mountain 84.45 28 P P 00 42 06.7 +0.6
L19K IAmb IAmb 00 42 09.3
comp=Z,7.4nm,1.0s
OHAK Old Harbor 84.47 33 P P 00 42 06.8 +0.5
GEVA Gevas 84.52 308 P P 00 42 07.1 -0.1
Q19K Cape Douglas, 84.53 31 P P 00 42 07.0 +0.4
M19K Big River Lodg 84.62 28 P P 00 42 09.2 +2.3
M19K IAmb IAmb 00 42 12.8
comp=Z,9.8nm,1.1s
KARS Kars 84.67 311 P P 00 42 07.3 -0.5
KDAK Kodiak Island 84.92 32 LR LR 01 14 03.5
comp=Z,61nm,20.8s,baz=268,slow=31
KDAK Kodiak Island 84.92 32 P P 00 42 10.0 +1.5
K20K Telida 85.00 26 P P 00 42 10.5 +1.7
K20K IAmb IAmb 00 42 15.5
comp=Z,7.6nm,1.4s
KBZ Khabaz 85.03 314 P P 00 42 08.9 -0.5
comp=Z,7.2nm,1.0s,baz=106,slow=2.7,SNR=12
KBZ LR LR 01 24 17.7
comp=Z,17nm,19.3s,baz=122,slow=39
comp=Z,7.2nm,1.0s
GURO Guroymak-BITLI 85.34 308 P P 00 42 12.0 +0.8
GURO IAmb IAmb 00 42 16.5
comp=Z,17nm,1.3s
KOPT Kop Dagi 86.60 310 P P 00 42 18.8 +1.1
MLY Manley 86.67 25 P P 00 42 17.9 +0.8
TOLK Toolik Lake Re 87.50 21 P P 00 42 22.2 +1.1
TOLK IAmb IAmb 00 42 24.5
comp=Z,4.1nm,0.9s
KLMR Klimovskoe 88.15 331 eP P 00 42 24.2 0.0
KLMR AMP 00 42 26.8
comp=Z,16nm,1.4s
ILAR Eielson Array 88.29 25 P P 00 42 23.3 -1.5
comp=Z,0.5nm,0.6s,baz=272,slow=5.4,SNR=5.1
ILAR LR LR 01 18 29.4
comp=Z,15nm,20.0s,baz=236,slow=33
comp=Z,0.5nm,0.6s
J26L Joseph Creek 89.71 26 P P 00 42 32.2 +0.5
BCAR Beaver Creek A 90.53 27 P P 00 42 36.7 +1.3
EIL Elat 91.06 300 LR LR 01 26 56.2
comp=Z,28nm,21.7s,baz=103,slow=38
BRTR Keskin Array B 91.88 310 P P 00 42 40.2 -2.2
comp=Z,1.4nm,0.8s,baz=134,slow=5.4,SNR=11
comp=Z,1.4nm,0.8s
ARCES ARCESS Array B 93.47 340 P P 00 42 47.2 -1.7
comp=Z,1.7nm,0.7s,baz=76,slow=5.1,SNR=7.5
comp=Z,1.7nm,0.7s
ARCES ARCESS Array B 93.47 340 P P 00 42 48.7 -0.2
ARCES IAmb IAmb 00 43 11.2
comp=Z,9.4nm,1.2s
SPITS Spitsbergen Ar 93.70 349 LR LR 01 29 50.9
comp=Z,29nm,20.7s,baz=34,slow=39
AKASG Malin Array Be 94.26 321 LR LR 01 28 21.1
comp=Z,42nm,21.1s,baz=52,slow=37
FINES FINESS Array B 94.61 332 P P 00 42 53.6 -0.6
comp=Z,0.8nm,0.8s,baz=96,slow=4.2,SNR=1.4
FINES LR LR 01 28 20.5
comp=Z,36nm,20.8s,baz=46,slow=37
comp=Z,0.8nm,0.8s
MBAR Mbarara 95.63 269 LR LR 01 22 44.9
comp=Z,39nm,19.0s,baz=80,slow=33
CRAG Craig 95.67 34 P P 00 42 57.5 -1.7
BURAR Bucovina Array 97.25 318 P P 00 43 06.5 -0.3
BURAR IAmb IAmb 00 43 07.9
comp=Z,2.4nm,0.7s
BUR08 Bucovina Ar. S 97.26 318 P P 00 43 06.8 0.0
BUR08 IAmb IAmb 00 43 07.3
comp=Z,2.2nm,0.8s
BOSA Boshof 99.92 241 LR LR 01 25 27.5
comp=Z,38nm,18.2s,baz=182,slow=34
NOA NORSAR Array B 101.62 333 P Pdif 00 43 23.6 -2.3
comp=Z,0.4nm,0.8s,baz=68,slow=4.8,SNR=2.5
TORD Torodi Ar. Bea 123.56 286 PKP PKPdf 00 48 32.1 +0.1
comp=Z,1.6nm,0.7s,baz=55,slow=1.8,SNR=10
TORD PKKPbc PKKPbc 00 58 21.4 +1.3
comp=Z,0.8nm,1.1s,baz=249,slow=6.0,SNR=2.5
TXAR Lajitas Array 123.91 54 PKP PKPdf 00 48 33.5 +1.1
comp=Z,0.5nm,0.7s,baz=224,slow=1.1,SNR=7.2

IDC 07 00:39:04.1±2.2, 0°33N×126°45E, h0km, mb3.4/3, mbtmp3.4/3 Error ellipse: s-maj=177.5km s-min=28.5km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	21.58	159	P	P	00 43 54.9	-0.7
	0.3nm,0.4s,baz=338,slow=10,SNR=6.7						
	0.3nm,0.4s						
ASAR	Alice Springs	24.93	164	P	P	00 44 29.6	+0.4
	1.5nm,0.9s,baz=345,slow=11,SNR=9.8						
	1.5nm,0.9s						
MKAR	Makanchi Array	60.19	327	P	P	00 49 13.8	-0.1
	0.2nm,0.4s,baz=121,slow=7.2,SNR=2.4						
	0.2nm,0.4s						

IDC 07 00:40:56.2±3.5, 31°10S×177°75W, h0km, mb3.6/2, mbtmp3.7/3, ML3.3/1, Error ellipse: s-maj=77.8km s-min=49.3km az=116.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	8.30	209	Pn	Pn	00 42 57.3	-0.6
	0.4nm,0.3s,baz=101,slow=12,SNR=2.5						
URZ				Sn	Sn	00 44 27.7	-4.6
	0.7nm,0.3s,baz=308,slow=20,SNR=2.1						
	7.1nm,0.8s						
ASAR	Alice Springs	43.29	268	P	P	00 48 59.5	-0.4
	0.5nm,0.7s,baz=107,slow=7.0,SNR=4.8						

0.5nm,0.7s
WRA **Warramunga Arr** **44.34 273** P P 00 49 08.5 +0.1
0.6nm,0.5s,baz=112,slow=7.6,SNR=13
0.6nm,0.5s
FINES **FINESS Array B** **145.87 340** PKPbc PKPdf 01 00 36.0 -0.2
2.2nm,0.9s,baz=29,slow=3.2,SNR=3.0

IDC 07 00:45:08.9±2.2, 0°.07S×126°.69E, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=171.3km s-min=28.8km az=65.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.13**	**160**	P	P	00 49 55.4	-0.1
	0.4nm,0.5s,baz=338,slow=11,SNR=4.9						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**24.48**	**164**	P	P	00 50 30.0	0.0
	1.0nm,0.7s,baz=346,slow=14,SNR=11						
	1.0nm,0.7s						
MKAR	**Makanchi Array**	**60.66**	**327**	P	P	00 55 21.9	0.0
	0.1nm,0.4s,baz=134,slow=6.2,SNR=2.1						
	0.1nm,0.4s						

*TUL **07** 01:24:42±1.0, 36°.67N±0°.01×97°.74W±0°.02, h6km±6km, ML2.5, mb_Lg2.4/33(NEIC), Error ellipse: s-maj=2.4km s-min=1.2km az=47.0*

NEIC 07 01:24:42.0±0.6, 36°.65N±0°.02×97°.74W±0°.02, h7km±7km, Error ellipse: s-maj=2.5km s-min=2.1km az=69.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T35A	**Sooner Cattle**	**1.02**	**74**		Pg	01 25 01.1	-0.4
U32A	**Winter Ranch,**	**1.05**	**256**	Pg	Pg	01 25 01.8	-0.4
OKCFA	**Oklahoma City**	**1.25**	**169**	Pn	Pn	01 25 05.8	-0.2
OKCSW	**OKLAHOMA CITY**	**1.26**	**169**		Pn	01 25 06.0	-0.2
FNO	**Franklin**	**1.41**	**169**	Pn	Pn	01 25 08.4	+0.2
TUL1	**Leonard**	**1.74**	**114**		Pn	01 25 11.9	-0.7
TUL1				IAmb_Lg		01 25 38.8	
	comp=Z,26nm,1.1s						
R32A	**Long Quarter,**	**1.93**	**337**		Pn	01 25 15.0	-0.4
X34A	**Smith Ranch, M**	**2.04**	**182**	Pn	Pn	01 25 17.1	+0.3
WMOK	**Wichita Mounta**	**2.08**	**204**		Pn	01 25 17.9	+0.5
X37A	**Clayton**	**2.82**	**136**	Pn	Pn	01 25 27.4	-0.1
HHAR	**Hobbs**	**3.08**	**96**		Pn	01 25 30.9	-0.3
W39A	**Magazine**	**3.52**	**113**	IAmb_Lg		01 26 42.9	
	comp=Z,15nm,0.7s						
AMTX	**Amarillo**	**3.66**	**242**	IAmb_Lg		01 26 38.2	
	comp=Z,7.2nm,0.7s						
S39A	**Bolivar**	**3.68**	**72**		Pn	01 25 39.0	-0.3
U40A	**Yellville**	**3.95**	**93**	Pn	Pn	01 25 42.9	-0.1
U40A				IAmb_Lg		01 26 45.9	
	comp=Z,11nm,0.8s						
MIAR	**Mount Ida**	**3.99**	**121**	IAmb_Lg		01 26 49.0	
	comp=Z,8.0nm,0.8s						
MGMO	**Mountain Grove**	**4.41**	**82**	IAmb_Lg		01 27 00.3	
	comp=Z,5.2nm,0.9s						
P38A	**Dawn**	**4.45**	**47**	Pn	Pn	01 25 49.4	-0.5
KSCO	**Kaye Shedlock'**	**4.53**	**303**	IAmb_Lg		01 27 12.3	
	comp=Z,7.3nm,0.8s						
X40A	**Basin Creek Fa**	**4.54**	**117**	IAmb_Lg		01 27 08.1	
	comp=Z,7.4nm,0.7s						
R40A	**Maddies Statio**	**4.65**	**68**	IAmb_Lg		01 27 19.1	
	comp=Z,6.8nm,0.8s						
W41B	**Gary Mavity, V**	**4.69**	**107**	IAmb_Lg		01 27 10.0	
	comp=Z,7.7nm,0.9s						
UALR	**University of**	**4.77**	**111**	IAmb_Lg		01 27 13.4	
	comp=Z,6.7nm,0.8s						
MSTX	**Muleshoe**	**4.91**	**238**	IAmb_Lg		01 27 25.6	
	comp=Z,4.3nm,0.9s						
P40A	**Paris**	**5.33**	**56**	IAmb_Lg		01 27 38.0	
	comp=Z,9.1nm,0.8s						
T25A	**Trinidad**	**5.37**	**277**	IAmb_Lg		01 27 36.4	
	comp=Z,6.2nm,1.0s						
OGNE	**Ogallala**	**5.45**	**323**	IAmb_Lg		01 27 46.7	
	comp=Z,7.0nm,0.8s						
Q24A	**Divide**	**6.31**	**294**	IAmb_Lg		01 28 18.2	
	comp=Z,6.0nm,0.7s						
N23A	**Red Feather La**	**7.68**	**306**	IAmb_Lg		01 29 00.9	
	comp=Z,5.6nm,0.8s						

*IDC **07** 01:27:08.0±1.0, 4°.96S×102°.73E, h0km, mb4.1/11, mbtmp4.1/11, MS3.0/1, Error ellipse: s-maj=53.6km s-min=15.5km az=52.0*
*NEIC **07** 01:27:13.1±1.6, 5°.10S±0°.06×102°.6E±0°.1, h38km±8km, mb4.4/11, Error ellipse: s-maj=15.7km s-min=8.7km az=95.0*
*DJA **07** 01:27:16.4±0.3, 5°S±3°×10°.3E±°, h41km±4km, M4.3/13, mb4.3/11, MLv4.3/13*

ISC 07 01:27:13.7±0.6, 5°.13S±0°.07×102°.75E±0°.07, h44km, n57, σ1°43/57, mb4.3/17, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.79**	**15**		**Pn**	**01 27 29.1**	**+0.6**
MNAI				Sn	**Sn**	**01 27 38.7**	**-0.5**
MNAI	**Manna**	**0.79**	**15**	P	**Pn**	**01 27 29.1**	**+0.6**
MNAI				S	**Sn**	**01 27 38.7**	**-0.5**
LWLI	**Liwa**	**1.31**	**85**	P	**Pn**	**01 27 36.0**	**+0.3**
LWLI				S	**Sn**	**01 27 49.8**	**-2.3**
MDSI	**Maura Dua**	**1.56**	**66**	P	**Pn**	**01 27 38.9**	**-0.1**
MDSI				S	**Sn**	**01 27 55.6**	**-2.4**
KASI	**Kota Agung**	**1.79**	**103**	P	**Pn**	**01 27 43.2**	**+1.1**
KASI				S	**Sn**	**01 28 02.0**	**-1.6**
KLI	**Kotabumi**	**2.12**	**83**	P	**Pn**	**01 27 47.1**	**+0.5**
BLSI	**Bandar Lampung**	**2.50**	**96**	P	**Pn**	**01 27 52.9**	**+1.0**
KRJI	**Kerinci**	**3.28**	**337**	P	**Pn**	**01 28 06.1**	**+3.4**
PPSI	**Pulau Pagai**	**3.60**	**311**	P	Pn	01 28 11.6	+4.5
DBJI	**Dramaga**	**4.23**	**110**	P	**Pn**	**01 28 17.2**	**+1.5**
CBJI	**Citeko**	**4.28**	**108**	P	**Pn**	**01 28 20.9**	**+4.5**
PPBI	**Pangkal Pinang**	**4.48**	**49**	P	**Pn**	**01 28 19.4**	**+0.2**
CNJI	**Cibinong**	**4.87**	**117**	P	**Pn**	**01 28 25.5**	**+1.1**
DSRI	**Dabo**	**4.96**	**22**	P	**Pn**	**01 28 26.9**	**+1.1**
SISI	**Saibi**	**5.25**	**316**	P	**Pn**	**01 28 33.0**	**+3.2**
	0.2nm18nm,0.6s						
XMIS	**Christmas Isla**	**6.05**	**152**	Pn	**Pn**	**01 28 39.5**	**-1.2**
CMJI	**Cimerak**	**6.25**	**115**	P	**Pn**	**01 28 44.6**	**+1.2**
	0.1nm25nm,1.1s						
UGM	**Wanagama**	**8.21**	**110**	Pn	**Pn**	**01 29 13.4**	**+3.1**
UGM	**Wanagama**	**8.21**	**110**	P	**Pn**	**01 29 12.4**	**+2.1**
	77nm,1.9s						
PWJI	**Pagerwojo**	**9.44**	**108**	P	**Pn**	**01 29 27.2**	**-0.1**
	27nm,2.2s						
PLAI	**Plampang**	**15.36**	**105**	P	**Pn**	**01 30 47.9**	**+0.2**
	15nm,1.3s						
MPSI	**Magaga**	**17.97**	**73**	P	**P**	**01 31 21.4**	**+0.8**
	4.1nm,0.7s						
BASI	**Baing, Sumba**	**18.38**	**107**	P	**Pn**	**01 31 26.1**	**+0.7**
	53nm,1.0s						
CMAR	**Chiang Mai Arr**	**23.73**	**351**	P	**P**	**01 32 20.7**	**-1.4**
	1.8nm,0.5s,baz=184,slow=8.7,SNR=9.5						
CMAR				LR	LR	01 41 58.4	
	comp=Z,36nm,19.8s,baz=180,slow=38						
	1.8nm,0.5s						
CMAR	**Chiang Mai Arr**	**23.73**	**351**	P	**P**	**01 32 20.1**	**-2.0**
TNTI	**Ternate**	**25.28**	**77**	P	**P**	**01 32 35.8**	**-0.5**
H08S2	**Diego Garcia H**	**30.17**	**264**	T	T	02 05 25.8	
	baz=86,slow=76,SNR=7.8						
H08S3	**Diego Garcia H**	**30.18**	**264**	T	T	02 05 24.1	
	baz=86,slow=76,SNR=12						
H08S1	**Diego Garcia H**	**30.19**	**264**	T	T	02 05 23.5	
	baz=86,slow=76,SNR=5.9						
H01W3	**Cape Leeuwin H**	**31.43**	**162**	T	T	02 06 56.2	
	baz=340,slow=76,SNR=10						
H01W2	**Cape Leeuwin H**	**31.44**	**162**	T	T	02 07 02.6	
	baz=340,slow=76,SNR=8.6						
H01W1	**Cape Leeuwin H**	**31.45**	**162**	T	T	02 07 02.4	
	baz=340,slow=76,SNR=8.7						
WB0	**Warramunga Arr**	**34.06**	**118**	P	**P**	**01 33 54.2**	**+0.1**
WB0				IAmb	IAmb	01 33 55.8	
	comp=Z,3.4nm,0.5s						
WRA	**Warramunga Arr**	**34.08**	**118**	P	**P**	**01 33 54.7**	**+0.4**
	comp=Z,1.1nm,0.7s,baz=305,slow=8.6,SNR=32						
WRA				PcP	**PcP**		**01 36 31.8**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=299,slow=2.0,SNR=5.1						
	comp=Z,1.1nm,0.7s						
WRA	**Warramunga Arr**	**34.08**	**118**	P	**P**	**01 33 54.4**	**+0.1**
WB2	**Warramunga Arr**	**34.09**	**118**	P	**P**	**01 33 54.4**	**0.0**
WB2				IAmb	IAmb	01 34 24.0	
	comp=Z,8.5nm,1.4s						
WR0	**Warramunga Arr**	**34.26**	**118**	P	**P**	**01 33 56.1**	**+0.2**
WR0				IAmb	IAmb	01 34 28.7	
	comp=Z,8.9nm,1.4s						
ASAR	**Alice Springs**	**35.22**	**125**	P	**P**	**01 34 05.3**	**+1.1**
	comp=Z,1.0nm,0.3s,baz=305,slow=8.4,SNR=14						
ASAR				PcP	**PcP**	**01 36 36.0**	**+1.4**
	comp=Z,0.6nm,0.5s,baz=302,slow=2.3,SNR=6.0						
	comp=Z,1.0nm,0.3s						
AS31	**Alice Springs**	**35.22**	**125**	P	**P**	**01 34 05.0**	**+0.8**
BBOO	**Buckleboo**	**41.51**	**136**	P	**P**	**01 34 58.6**	**+1.7**
BBOO				IAmb	IAmb	01 35 14.6	
	comp=Z,25nm,1.4s						
STKA	**Stephens Creek**	**45.04**	**131**	P	**P**	**01 35 27.0**	**+1.6**
	comp=Z,3.0nm,0.8s,baz=316,slow=7.2,SNR=4.7						
	comp=Z,3.0nm,0.8s						
STKA	**Stephens Creek**	**45.04**	**131**	P	**P**	**01 35 27.2**	**+1.8**
STKA				IAmb	IAmb	01 35 27.5	
	comp=Z,1.9nm,1.4s						
SONM	**Songino Array**	**52.83**	**3**	P	**P**	**01 36 24.6**	**-0.3**
	comp=Z,2.4nm,0.8s,baz=184,slow=9.1,SNR=13						
	comp=Z,2.4nm,0.8s						
MK31	**Makanchi Array**	**54.78**	**343**	P	**P**	**01 36 38.3**	**-0.8**
MK31				IAmb	IAmb	01 36 39.4	
	comp=Z,1.8nm,0.8s						
MKAR	**Makanchi Array**	**54.78**	**343**	P	**P**	**01 36 38.5**	**-0.6**
	comp=Z,2.2nm,0.6s,baz=141,slow=8.0,SNR=25						
	comp=Z,2.2nm,0.6s						
MKAR	**Makanchi Array**	**54.78**	**343**	P	**P**	**01 36 37.8**	**-1.3**
ZALV	**Zalesovo Beam**	**60.75**	**348**	P	**P**	**01 37 19.2**	**-1.6**
	comp=Z,1.7nm,0.4s,baz=160,slow=4.7,SNR=10						
	comp=Z,1.7nm,0.4s						
ZALV	**Zalesovo Beam**	**60.75**	**348**	P	**P**	**01 37 19.7**	**-1.1**
ABKAR	**Akbulak array**	**65.69**	**331**	P	**P**	**01 37 52.5**	**-1.2**
ABKAR				IAmb	IAmb	01 37 54.2	
	comp=Z,4.6nm,1.1s						
ABKAR	**Akbulak array**	**65.69**	**331**	P	**P**	**01 37 53.1**	**-0.5**
BRTR	**Keskin Array B**	**77.44**	**312**	P	**P**	**01 39 05.3**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=135,slow=6.4,SNR=7.1						
	comp=Z,0.9nm,0.7s						
AKASG	**Malin Array Be**	**83.62**	**322**	P	**P**	**01 39 37.1**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=82,slow=4.3,SNR=4.3						
	comp=Z,0.2nm,0.3s						
FINES	**FINESS Array B**	**88.14**	**332**	P	**P**	**01 40 00.1**	**+0.6**
	comp=Z,1.2nm,0.6s,baz=111,slow=4.8,SNR=12						
	comp=Z,1.2nm,0.6s						
ARCES	**ARCESS Array B**	**90.33**	**340**	P	**P**	**01 40 09.3**	**-0.4**
	comp=Z,1.4nm,0.7s,baz=103,slow=5.2,SNR=8.9						
	comp=Z,1.4nm,0.7s						
ARCES	**ARCESS Array B**	**90.33**	**340**	P	**P**	**01 40 09.8**	**0.0**
TXAR	**Lajitas Array**	**145.30**	**43**	PKPbc	**PKPab**	**01 46 47.5**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=272,slow=0.8,SNR=18						
TXAR	**Lajitas Array**	**145.30**	**43**		**PKPdf**	**01 46 47.7**	**+0.1**

IDC 07 02:14:54.8±1.9, 12°.66S×166°.59E, h0km, mb3.6/3, mbtmp3.8/4, ML4.0/1, Error ellipse: s-maj=53.2km s-min=33.2km az=127.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**9.37**	**181**	Pn	Pn	02 17 11.4	+0.2
	1.6nm,0.3s,baz=18,slow=20,SNR=21						
DZM				Sn	Sn	02 18 51.0	-6.3
	0.1nm,0.3s,baz=356,slow=19,SNR=1.2						
	4.7nm,0.3s						
WRA	**Warramunga Arr**	**31.75**	**253**	P	P	02 21 21.0	+0.1
	0.4nm,0.5s,baz=85,slow=9.5,SNR=9.6						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**32.85**	**246**	P	P	02 21 30.4	-0.2
	0.6nm,0.6s,baz=72,slow=9.5,SNR=8.6						
	0.6nm,0.6s						
ILAR	**Eielson Array**	**84.77**	**18**	P	P	02 27 30.5	-0.1
	0.1nm,0.4s,baz=238,slow=4.6,SNR=4.4						
	0.1nm,0.4s						

*TUL **07** 02:28:35.7±0.8, 36°.29N±0°.02×97°.51W±0°.02, h7km±7km, ML2.8, mb_Lg2.7/64(NEIC), Error ellipse: s-maj=2.6km s-min=2.1km az=221.0*
*ANF **07** 02:28:35.6±0.4, 36°.30N×97°.51W, h7km, ML3.1/8, Error ellipse: s-maj=4.3km s-min=3.8km az=146.0*
*NEIC **07** 02:28:35.6±0.7, 36°.29N±0°.02×97°.52W±0°.02, h5km, Error ellipse: s-maj=2.6km s-min=2.3km az=48.0*

ISC 07 02:28:35.7±0.9, 36°.28N±0°.03×97°.51W±0°.04, h10km, n60, σ0°70/42, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKCFA	**Oklahoma City**	**0.86**	**177**	Pg	**Pg**	**02 28 52.1**	**-0.2**
OKCFA	**Oklahoma City**	**0.86**	**177**	P	**Pg**	**02 28 52.1**	**-0.2**
	baz=357						
OKCSW	**OKLAHOMA CITY**	**0.87**	**176**		**Pg**	**02 28 52.3**	**-0.3**
FNO	**Franklin**	**1.02**	**175**	Pg	**Pg**	**02 28 55.0**	**-0.4**
T35A	**Sooner Cattle**	**1.02**	**51**	Pg	**Pg**	**02 28 55.2**	**-0.3**
T35B	**Sooner Cattle**	**1.02**	**51**	P	**Pg**	**02 28 55.1**	**-0.3**
	baz=232						
T35B				S	**Sg**	**02 29 08.2**	**-0.6**
	baz=232						
U32A	**Winter Ranch,**	**1.21**	**275**	Pg	**Pb**	**02 28 57.9**	**-0.8**
U32A	**Winter Ranch,**	**1.21**	**275**	P	**Pb**	**02 28 57.9**	**-0.8**
	baz=94						
TUL1	**Leonard**	**1.44**	**104**		**Pn**	**02 29 01.6**	**-0.2**
TUL1				IAmb_Lg		02 29 22.8	
	comp=Z,34nm,0.9s						
TUL1	**Leonard**	**1.44**	**104**	P	**Pn**	**02 29 01.6**	**-0.2**
	baz=286						
TUL1				S	**Sn**	**02 29 21.2**	**+0.4**
	baz=286						
X34A	**Smith Ranch, M**	**1.69**	**189**		**Pb**	**02 29 06.8**	**-0.1**
WMOK	**Wichita Mounta**	**1.85**	**214**		**Pn**	**02 29 08.3**	**+0.8**
WMOK	**Wichita Mounta**	**1.85**	**214**	P	**Pn**	**02 29 08.4**	**+0.8**
	baz=33						
R32A	**Long Quarter,**	**2.34**	**336**	Pn	**Pn**	**02 29 14.5**	**+0.1**
R32A	**Long Quarter,**	**2.34**	**336**	S	**Sn**	**02 29 44.3**	**+1.1**
	baz=156						
X37A	**Clayton**	**2.43**	**133**	Pn	**Pn**	**02 29 16.1**	**+0.6**
X37A				IAmb_Lg		02 29 54.7	
	comp=Z,30nm,0.7s						
X37A	**Clayton**	**2.43**	**133**	P	**Pn**	**02 29 16.6**	**+1.1**
	baz=315						
HHAR	**Hobbs**	**2.88**	**89**		**Pn**	**02 29 22.6**	**+0.9**
W39A	**Magazine**	**3.22**	**109**	IAmb_Lg		02 30 25.2	
	comp=Z,24nm,0.7s						
S39A	**Bolivar**	**3.64**	**66**		**Pn**	**02 29 32.6**	**+0.5**
S39A				IAmb_Lg		02 30 34.0	
	comp=Z,20nm,0.7s						
S39A	**Bolivar**	**3.64**	**66**	P	**Pn**	**02 29 33.6**	**+1.5**
	baz=248						
MIAR	**Mount Ida**	**3.65**	**117**		**Pn**	**02 29 32.7**	**+0.5**
MIAR	**Mount Ida**	**3.65**	**117**	P	**Pn**	**02 29 33.4**	**+1.2**
	baz=300						
Z38A	**Mt. Pleasant**	**3.66**	**145**	Pn	**Pn**	**02 29 32.1**	**-0.2**
AMTX	**Amarillo**	**3.67**	**249**	Pn	**Pn**	**02 29 33.2**	**+0.5**
AMTX				IAmb_Lg		02 30 34.6	
	comp=Z,20nm,0.9s						
U40A	**Yellville**	**3.76**	**87**	Pn	**Pn**	**02 29 34.5**	**+0.7**
U40A				IAmb_Lg		02 30 34.2	
	comp=Z,24nm,0.8s						
ABTX	**Abilene, Hawle**	**4.05**	**206**	Pn	**Pn**	**02 29 38.0**	**+0.2**
X40A	**Basin Creek Fa**	**4.22**	**114**	Pn	**Pn**	**02 29 41.2**	**+1.1**
WHTX	**Lake Whitney,**	**4.28**	**179**	Pn	**Pn**	**02 29 40.4**	**-0.5**
MGMO	**Mountain Grove**	**4.30**	**77**	Pn	**Pn**	**02 29 41.5**	**+0.3**
WHAR	**Wooly Hollow**	**4.36**	**102**	Pn	**Pn**	**02 29 42.2**	**+0.3**
FCAR	**Ozark Folk Cen**	**4.38**	**93**	Pn	**Pn**	**02 29 42.0**	**-0.3**
W41B	**Gary Mavity, V**	**4.42**	**103**	Pn	**Pn**	**02 29 43.2**	**+0.4**
N33A	**J Bar K, Exete**	**4.45**	**1**	IAmb_Lg		02 31 07.5	
	comp=Z,20nm,0.8s						
UALR	**University of**	**4.47**	**108**	IAmb_Lg		02 31 02.6	
	comp=Z,11nm,0.8s						
P38A	**Dawn**	**4.59**	**42**	Pn	**Pn**	**02 29 45.9**	**+0.8**
P38A				IAmb_Lg		02 31 08.8	
	comp=Z,16nm,0.7s						
R40A	**Maddies Statio**	**4.64**	**63**	Pn	**Pn**	**02 29 46.2**	**+0.4**
N35A	**Tabor**	**4.80**	**17**	Pn	**Pn**	**02 29 47.9**	**-0.2**
MSTX	**Muleshoe**	**4.89**	**243**	Pn	**Pn**	**02 29 49.5**	**+0.1**
KSCO	**Kaye Shedlock'**	**4.89**	**305**	Pn	**Pn**	**02 29 51.3**	**+1.8**
KSCO				IAmb_Lg		02 31 10.0	
	comp=Z,17nm,0.7s						
Z41A	**Richland Creek**	**4.91**	**127**	IAmb_Lg		02 31 20.3	
	comp=Z,13nm,0.8s						
CCM	**Cathedral Cave**	**5.31**	**69**	Pn	**Pn**	**02 29 55.1**	**0.0**
CCM				IAmb_Lg		02 31 21.8	
	comp=Z,19nm,0.8s						
435B	**Jarrell**	**5.48**	**181**	IAmb_Lg		02 31 44.2	
	comp=Z,10nm,1.0s						
HBAR	**Harrisburg**	**5.61**	**95**	IAmb_Lg		02 31 40.0	
	comp=Z,20nm,0.7s						
T25A	**Trinidad**	**5.61**	**281**	Pn	**Pn**	**02 30 00.1**	**+0.8**
T25A				IAmb_Lg		02 31 40.0	
	comp=Z,9.0nm,0.7s						
N38A	**Joes South For**	**5.62**	**35**	IAmb_Lg		02 31 42.8	
	comp=Z,18nm,0.9s						
PBMO	**Poplar Bluff**	**5.72**	**83**	IAmb_Lg		02 31 41.0	
	comp=Z,18nm,0.8s						
L34A	**Svendsen Farm,**	**5.75**	**8**	IAmb_Lg		02 31 52.4	
	comp=Z,16nm,0.8s						
FVM	**French Village**	**5.91**	**71**	IAmb_Lg		02 31 45.9	
	comp=Z,14nm,0.8s						
JCT	**Junction City**	**6.09**	**199**	IAmb_Lg		02 31 54.1	
	comp=Z,12nm,0.8s						
143A	**Socs Landing,**	**6.17**	**124**	IAmb_Lg		02 32 00.1	
	comp=Z,9.0nm,0.8s						
Q24A	**Divide**	**6.63**	**296**		**Pn**	**02 30 13.6**	**+0.1**
Q24A				IAmb_Lg		02 32 14.2	
	comp=Z,12nm,1.0s						
S44A	**Carbondale**	**6.76**	**75**	IAmb_Lg		02 32 16.0	
	comp=Z,10nm,0.7s						
ISCO	**Idaho Springs**	**7.30**	**301**	IAmb_Lg		02 32 36.6	
	comp=Z,5.7nm,0.8s						
PHWY	**Pilot Hill**	**7.98**	**311**	IAmb_Lg		02 32 56.7	
	comp=Z,5.6nm,0.7s						
N23A	**Red Feather La**	**8.05**	**307**	IAmb_Lg		02 32 56.8	
	comp=Z,8.3nm,0.7s						
L42A	**Oliver, Polo**	**8.35**	**44**	IAmb_Lg		02 33 01.3	
	comp=Z,10.0nm,0.9s						
JFWS	**Jewell Farm**	**8.68**	**38**	IAmb_Lg		02 33 32.0	
	comp=Z,9.0nm,0.8s						
RWWY	**Rawlins**	**9.28**	**309**	IAmb_Lg		02 33 40.7	
	comp=Z,6.8nm,1.1s						
K22A	**Casper**	**9.43**	**315**	IAmb_Lg		02 33 54.9	
	comp=Z,6.2nm,0.8s						

IDC 07 02:35:59.6±14.0, 18°.39S×178°.40W, h519km±175km, mb2.7/4, mbtmp3.6/4, Error ellipse: s-maj=132.6km s-min=47.5km az=165.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**44.56**	**260**	P	P	02 43 24.9	-0.4
	0.3nm,0.5s,baz=96,slow=7.6,SNR=8.1						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**44.67**	**255**	P	P	02 43 26.2	+0.1
	0.6nm,0.4s,baz=90,slow=8.8,SNR=11						
	0.6nm,0.4s						
TXAR	**Lajitas Array**	**86.25**	**58**	P	P	02 47 46.4	0.0
	0.4nm,0.7s,baz=212,slow=7.0,SNR=6.6						
	0.4nm,0.7s						
ILAR	**Eielson Array**	**86.36**	**13**	P	P	02 47 45.8	-0.2
	0.1nm,0.4s,baz=219,slow=4.3,SNR=1.9						
	0.1nm,0.4s						
BRTR	**Keskin Array B**	**145.13**	**314**	PKPbc	PKPdf	02 54 38.1	0.0
	0.4nm,0.8s,baz=64,slow=3.4,SNR=2.3						

*WEL **07** 02:55:00, 45°.19S×166°.91E, h36km, ML5.6, Mw5.5, Moment Tensor Solution. s14 Moment tensor: Scale 10^17Nm; Mrr1.80; Mθθ-0.27; Mφφ-1.54; Mrθ-1.06; Mrφ-0.77; Mθφ-0.35; Fault plane solution: Mo2.16000×10^17 NP1:φs7.00000°, δ37.00000°, λ57.00000°. NP2: φs226.00000°, δ60.00000°, λ112.00000°. Principal axes: T 22496.7200, Plg67.0000°, Azm180.0000°; N -1868.6800, Plg19.0000°, Azm34.0000°; P -20628.0400, Plg12.0000°, Azm300.0000°;*
*NOU **07** 02:55:20.8, 45°.27S×166°.88E, h4km, mb5.4/80, Off W. Coast of S. Island, N.Z.*
*WEL **07** 02:55:22.6±1.0, 45°.S±4°×16°.7E±°, h17km±5km, M5.8/61, ML5.9/7, MLv5.8/61, Error ellipse: s-maj=0.0km s-min=0.0km az=113.7*
*BJI **07** 02:55:22.2±0.0, 45°.45S×166°.73E, h38km, mb5.4/38, mB5.6/26, Ms5.2/48, Ms7 5.0/46*
*NEIC **07** 02:55:23.9±1.6, 45°.15S±0°.04×166°.83E±0°.02, h40km±4km, mb5.6/87, Ms_20 5.2/313, Mwr5.4/33, Mww5.5, Error ellipse: s-maj=7.0km s-min=0.9km az=160.0*
*MOS **07** 02:55:23.5±0.9, 45°.16S×166°.88E, h46km, mb5.6/24, MS5.0/13, Error ellipse: s-maj=19.5km s-min=8.9km az=121.3*
*NEIC **07** 02:55:25, 45°.26S×166°.86E, h39km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr1.04; Mθθ0.47; Mφφ-1.51; Mrθ-0.80; Mθφ0.05; Mφr-0.51; Fault plane solution: Mo1.64000×10^17 NP1:φs329.03000°, δ43.51000°, λ39.08000°. NP2:φs208.54000°, δ64.28000°, λ126.39000°. Principal axes: T 1.6671, Plg55.0000°, Azm166.0000°; N -0.0515, Plg32.0000°, Azm11.0000°; P -1.6156, Plg12.0000°, Azm273.0000°;*
*NEIC **07** 02:55:25, 45°.14S×166°.72E, h50km, Moment Tensor Solution. Duration: 2s6 Moment tensor: Scale 10^17Nm; Mrr1.59; Mθθ0.29; Mφφ-1.88; Mrθ-1.59; Mθφ-0.90; Mφr-0.55; Fault plane solution: Mo2.59000×10^17 NP1: φs352.00000°, δ38.00000°, λ39.00000°. NP2: φs230.00000°, δ67.00000°, λ122.00000°. Principal axes: T 2.6583, Plg56.0000°, Azm181.0000°; N -0.1385, Plg29.0000°, Azm36.0000°; P -2.5198, Plg16.0000°, Azm297.0000°;*
*IDC **07** 02:55:27.0±2.0, 45°.03S×167°.10E, h67km±18km, mb4.8/14, mbtmp5.0/16, MS4.9/41 Error ellipse: s-maj=14.7km s-min=12.8km az=66.0*
*GCMT **07** 02:55:26.9±0.1, 45°.08S±0°.01×166°.52E±0°.01, h49km, MW5.5/140, Moment Tensor Solution. s140, c239; s137, c228; Duration: 1s3 Moment tensor: Scale 10^17 Nm; Mrr1.29±.03; Mθθ-0.15±.03; Mφφ-1.14±.02; Mrθ-1.15±.02; Mθφ-0.88±.02; Mφr-0.65±.02; Best double couple: Mo1.99800×10^17 NP1:φs7.00000°, δ30.00000°, λ50.00000°. NP2:φs231.00000°, δ67.00000°, λ111.00000°. Principal axes: T 1.9330, Plg62.0000°, Azm173

ODZ Otahua Downs 2.56 88 P Pn 02 56 05.0 +1.9
ODZ Otahua Downs 2.56 88 P Pn 02 56 05.0 +1.9
HHSZ Highcliff Hill 2.59 106 P Pn 02 56 06.2 +2.6
FOZ Fox Glacier 2.60 51 Pn 02 56 03.8 +0.1
FOZ Fox Glacier 2.60 51 P Pn 02 56 02.8 -0.9
TMZ Timaru 2.94 75 P Pn 02 56 09.4 +0.9
GCSZ Gaunt Creek Bo 3.03 52 P Pn 02 56 08.8 -0.7
ARCZ Arundel 3.22 68 P Pn 02 56 12.4 +0.3
RPZ Rata Peaks 3.24 64 P Pn 02 56 13.1 +0.6
2µm,0.5s,baz=226,slow=4.6,SNR=310
RPZ S Sn 02 56 50.9 +1.0
2µm,0.4s,baz=289,slow=2.3,SNR=2.6
RPZ LR LR 02 57 45.5
comp=Z,44µm,20.1s,baz=242,slow=44
RPZ Rata Peaks 3.24 64 Pn Pn 02 56 12.8 +0.3
RPZ Rata Peaks 3.24 64 P Pn 02 56 12.9 +0.4
RPZ Rata Peaks 3.24 64 P Pn 02 56 13.8 +1.3
WVZ Waitaha Valley 3.41 53 P Pn 02 56 14.2 -0.6
MHCZ Mount Hutt 3.66 64 P Pn 02 56 20.8 +2.6
WACZ Wakanui South 3.66 71 P Pn 02 56 18.6 +0.4
RACZ Rakaia 3.94 70 P Pn 02 56 22.7 +0.6
INZ Inchbonnie 4.04 54 P Pn 02 56 23.4 -0.1
OXZ Oxford 4.06 64 Pn 02 56 23.0 -0.7
OXZ Oxford 4.06 64 P Pn 02 56 23.3 -0.4
MQZ McQueen's Vall 4.29 72 Pn Pn 02 56 27.1 +0.2
MQZ McQueen's Vall 4.29 72 P Pn 02 56 27.1 +0.2
AKKZ Akaroa Harbour 4.41 74 P Pn 02 56 28.7 +0.2
LTZ Lake Taylor 4.49 59 Pn 02 56 29.0 -0.7
LTZ Lake Taylor 4.49 59 P Pn 02 56 28.6 -1.0
AMCZ Amberley 4.52 65 P Pn 02 56 30.3 +0.3
OKCZ Okains Bay 4.56 73 P Pn 02 56 31.4 +0.7
GVZ Greta Valley S 4.87 65 P Pn 02 56 34.8 -0.1
DSZ Denniston Nort 4.90 47 P Pn 02 56 34.0 -1.3
KHZ Kahutara 5.47 62 Pn 02 56 44.0 +0.9
KHZ Kahutara 5.47 62 P Pn 02 56 43.4 +0.3
KHZ Kahutara 5.47 62 P Pn 02 56 44.0 +0.9
THZ Tophouse 5.49 53 Pn 02 56 42.5 -0.9
THZ Tophouse 5.49 53 P Pn 02 56 42.7 -0.7
MRNZ Matariki Terra 5.65 50 P Pn 02 56 45.2 -0.4
QRZ Quartz Range 5.95 45 Pn Pn 02 56 48.6 -1.0
QRZ Quartz Range 5.95 45 P Pn 02 56 48.4 -1.3
BSWZ Blackbirch Sta 6.08 57 Pn 02 56 52.7 +1.2
BSWZ Blackbirch Sta 6.08 57 P Pn 02 56 53.3 +1.8
NNZ Nelson 6.12 52 Pn 02 56 52.2 +0.2
NNZ Nelson 6.12 52 P Pn 02 56 51.6 -0.3
CMWZ Cape Campbell 6.26 59 P Pn 02 56 58.9 +4.9
TUWZ Tuamarina 6.30 56 Pn 02 56 56.0 +1.6
TUWZ Tuamarina 6.30 56 P Pn 02 56 55.8 +1.4
TCW Tory Channel 6.63 55 P Pn 02 57 00.6 +1.6
DUWZ D'Urville Isla 6.70 51 P Pn 02 57 00.6 +0.6
SNZO South Karori 6.82 58 Pn 02 57 01.5 -0.1
BHW Baring Head 6.86 59 Pn 02 57 03.8 +1.6
BHW Baring Head 6.86 59 P Pn 02 57 03.5 +1.3
WEL Wellington 6.87 58 P Pn 02 57 01.8 -0.5
PLWZ Palliser 7.00 62 Pn 02 57 05.6 +1.4
PLWZ Palliser 7.00 62 P Pn 02 57 03.7 -0.5
MSWZ Moikau Station 7.09 61 Pn 02 57 06.2 +0.9
MSWZ Moikau Station 7.09 61 P Pn 02 57 05.1 -0.3
CAW Cannon Point 7.16 58 P Pn 02 57 05.8 -0.5
PAWZ Paruwai Farm 7.22 61 P Pn 02 57 07.1 0.0
KIW Kapiti Island 7.22 56 P Pn 02 57 06.7 -0.4
TRWZ Traveller 7.37 62 P Pn 02 57 09.2 +0.6
MTW Mount Morrison 7.39 60 P Pn 02 57 08.8 -0.6
OGWZ Otaki Gorge 7.40 56 P Pn 02 57 08.3 -1.3
HOWZ Holdsworth Sta 7.56 58 P Pn 02 57 11.7 -0.1
TMWZ Te Maipa 7.66 61 P Pn 02 57 13.8 +0.6
NMEZ Namu Road 7.70 44 P Pn 02 57 13.5 -0.1
MRZ Mangatainoka R 7.74 57 P Pn 02 57 12.5 -1.8
NBEZ Newall Road No 7.80 43 P Pn 02 57 14.4 -0.7
KHEZ Kahui Hut 7.85 44 P Pn 02 57 15.3 -0.6
TIWZ Tintock 7.85 59 P Pn 02 57 15.1 -0.7
PREZ Palmer Road 7.89 44 P Pn 02 57 16.7 +0.3
NEZ North Egmont 7.91 44 P Pn 02 57 16.5 -0.2
PKE Pukeiti 7.92 43 P Pn 02 57 16.3 -0.5
LREZ Lake Rotokare 7.92 46 P Pn 02 57 17.9 +1.2
WAZ Wanganui 8.01 50 P Pn 02 57 19.1 +1.1
POWZ Post Office Ro 8.02 56 P Pn 02 57 25.5 +7.4
DREZ Durham Road 8.03 44 P Pn 02 57 19.3 +1.1
PRWZ Pori Road 8.04 58 P Pn 02 57 18.5 +0.1
BFZ Birch Farm 8.13 59 Pn 02 57 20.5 +0.9
BFZ Birch Farm 8.13 59 P Pn 02 57 18.7 -0.9
BFZ Birch Farm 8.13 59 P Pn 02 57 22.9 +3.3
DVHZ Dannevirke 8.32 57 P Pn 02 57 23.4 +1.2
TSZ Takapari Road 8.35 55 P Pn 02 57 28.3 +5.6
VRZ Vera Road 8.36 46 P Pn 02 57 23.3 +0.6
MTVZ Mangateitei 8.54 50 P Pn 02 57 27.5 +2.3
PKVZ Pokaka 8.54 49 P Pn 02 57 25.9 +0.7
PNHZ Pukenui 8.58 55 P Pn 02 57 25.9 0.0
WPHZ Waipukurau 8.63 57 P Pn 02 57 32.7 +6.3
TRVZ Turoa 8.64 50 P Pn 02 57 29.5 +2.7
WNVZ Wahianoa 8.65 50 P Pn 02 57 28.8 +1.9
WHVZ Whangaehu Hut 8.67 50 P Pn 02 57 30.0 +2.7
FWVZ Far West T-bar 8.68 50 P Pn 02 57 29.0 +1.7
MOVZ Moawhango 8.68 51 P Pn 02 57 29.3 +2.1
TUVZ Tukino 8.72 50 P Pn 02 57 29.2 +1.3
TWVZ Taurewa 8.75 48 P Pn 02 57 29.6 +1.4
NGZ Ngauruhoe 8.76 49 P Pn 02 57 27.7 +1.3
SNVZ South Ngauruho 8.77 50 P Pn 02 57 30.3 +1.8
BHHZ Black Hill Sta 8.79 53 P Pn 02 57 28.9 +0.2
WTVZ West Tongariro 8.80 49 P Pn 02 57 30.7 +1.9
NNVZ North Ngauruho 8.80 49 P Pn 02 57 29.5 +0.6
OTVZ Oturere 8.80 50 P Pn 02 57 29.3 +0.4
KRVZ Karewarewa 8.84 49 P Pn 02 57 31.8 +2.4
ETVZ East Tongariro 8.85 50 P Pn 02 57 31.1 +1.5
NTVZ North Tongarir 8.85 49 P Pn 02 57 31.2 +1.6
TMVZ Te Maari 8.86 50 P Pn 02 57 31.7 +2.0
HIZ Hauiti 8.87 44 Pn 02 57 29.3 -0.5
HIZ Hauiti 8.87 44 P Pn 02 57 29.0 -0.7
HIZ Hauiti 8.87 44 P Pn 02 57 30.2 +0.4
KATZ Kakaramea 8.95 49 P Pn 02 57 33.1 +2.1
RITZ Rihia Road 9.04 50 P Pn 02 57 36.5 +4.4
KAHZ Kahuranaki 9.06 57 P Pn 02 57 32.2 -0.2
RATZ Rangitukua 9.07 49 P Pn 02 57 33.8 +1.2
WATZ Wairara 9.17 48 P Pn 02 57 35.7 +1.8
BKZ Black Stump Fm 9.26 53 Pn Pn 02 57 35.2 +0.1
BKZ Black Stump Fm 9.26 53 P Pn 02 57 35.7 +0.6
BKZ Black Stump Fm 9.26 53 P Pn 02 57 36.7 +1.6
TLZ Tolley Road 9.35 46 P Pn 02 57 35.8 -0.6
NMHZ Naumai 9.48 53 P Pn 02 57 38.4 +0.2
MTHZ Maungataniwha 9.67 52 P Pn 02 57 41.0 +0.3
RAHZ Arahi 9.76 53 P Pn 02 57 44.8 +2.9
TOZ Tahuroa Road 9.80 43 P Pn 02 57 42.5 0.0
RTZ Ruatahuna 9.91 52 P Pn 02 57 43.8 -0.2
AWAZ Awhitu Peninsu 9.95 38 P Pn 02 57 44.2 -0.4
WTAZ Waiatarua 10.03 37 P Pn 02 57 45.3 -0.4
MHGZ Mahia Peninsul 10.08 57 P Pn 02 57 45.8 -0.5
MKAZ Moumakai 10.15 40 P Pn 02 57 47.2 0.0
RVAZ Riverhead Bore 10.17 37 P Pn 02 57 47.5 -0.1
URZ Urewera 10.24 51 P Pn 02 57 47.1 -1.3
10.0nm,0.3s,baz=228,slow=6.1,SNR=11
URZ S Sn 02 59 32.6 -9.2
54nm,0.6s,baz=25,slow=8.7,SNR=2.0
URZ LR LR 03 02 38.6
comp=Z,22µm,19.4s,baz=216,slow=43
RAGZ Rawiri 10.24 53 P Pn 02 57 49.6 +1.0
MBAZ Motutapu North 10.31 38 P Pn 02 57 49.1 -0.3
WIAZ Waiheke Island 10.39 39 P Pn 02 57 51.0 +0.4
ABAZ Army Bay 10.42 37 P Pn 02 57 50.8 -0.2
MCQ Macquarie Isla 10.65 206 P Pn 02 57 55.3 +1.3
baz=11
WCZ Waipu Caves 10.79 33 P Pn 02 57 55.2 -0.9
OUZ Omahuta 11.16 29 P Pn 02 58 01.1 0.0
TAU Tasmania Unive 14.36 272 P Pn 02 58 41.7 -3.0
GLAD Gladstone 14.52 280 P Pn 02 58 44.2 -2.7
482nm,0.9s
MOO Moorlands 14.59 274 P Pn 02 58 45.6 -2.2
baz=14,SNR=25
MOO Moorlands 14.59 274 P Pn 02 58 46.0 -1.8
CORO Coronation Par 14.95 278 P Pn 02 58 50.2 -2.4
354nm,0.9s
CNB Canberra Magne 16.69 300 P Pn 02 59 12.8 -2.2
baz=16,SNR=31
CNB Canberra Magne 16.69 300 P Pn 02 59 13.0 -2.0
CAN Canberra 16.91 299 Pn 02 59 15.5 -2.2
CAN Canberra 16.91 299 P Pn 02 59 15.5 -2.2
CAN pmax pmax
comp=Z,260nm,1.1s
CAN Canberra 16.91 299 P Pn 02 59 16.7 -1.1
SYDH Sydney Hard Ro 16.96 307 P Pn 02 59 18.5 +0.2
comp=Z,100nm,0.8s
NTLH Newcastle Hard 17.08 311 P P 02 59 20.6 -0.6

MGCD Mangrove Creek 17.16 309 P Pn 02 59 19.4 -1.5
baz=17,SNR=16
MGCD Mangrove Creek 17.16 309 P Pn 02 59 20.3 -0.6
TOO Toolangi 17.84 288 P P 02 59 29.9 +0.2
baz=18,SNR=118
TOO Toolangi 17.84 288 Pn 02 59 28.2 -1.1
TOO Toolangi 17.84 288 P Pn 02 59 28.2 -1.1
TOO pmax pmax
comp=Z,203nm,0.9s
TOO Toolangi 17.84 288 P P 02 59 29.5 -0.2
MLBS Spotswood, Mel 18.11 286 P P 02 59 33.8 +1.3
GEXS Deakin Univers 18.34 284 P Pn 02 59 35.3 0.0
BRAT Ballarat 18.91 286 P Pn 02 59 42.3 +0.1
ARMA Armidale 19.09 315 P P 02 59 43.2 -0.2
baz=19,SNR=16
ARMA Armidale 19.09 315 P P 02 59 42.9 -0.6
ARMA Armidale 19.09 315 P Pn 02 59 45.0 +0.5
ARPS Mount Arapiles 20.74 285 P P 03 00 01.2 -0.1
baz=21,SNR=8.4
ARPS Mount Arapiles 20.74 285 P P 03 00 02.1 +0.8
CMSA Cobar Meteorol 21.51 302 P P 03 00 09.3 -0.2
baz=21,SNR=45
CMSA Cobar Meteorol 21.51 302 P P 03 00 09.8 +0.2
PINNC Pines Island, 22.54 1 P P 03 00 24.3 +3.6
ONTNC Ouen Toro 22.85 359 P P 03 00 26.7 +2.8
NOUC Port Laguerre 23.06 358 P P 03 00 27.5 +1.5
DZM Mont Dzumac 23.08 359 P P 03 00 27.0 +0.6
comp=Z,29nm,0.8s,baz=197,slow=11,SNR=15
DZM LR LR 03 08 21.6
comp=Z,2µm,19.5s,baz=172,slow=34
comp=Z,29nm,0.8s
DZM Mont Dzumac 23.08 359 eLR LR 03 05 47.4
comp=Z,5µm,29.9s
DZM Mont Dzumac 23.08 359 P P 03 00 26.2 -0.2
DZM IAmb IAmb 03 00 45.6
comp=Z,204nm,1.3s
DZM Mont Dzumac 23.08 359 P P 03 00 28.6 +2.2
YATNC Mamie plateau, 23.09 360 P P 03 00 27.7 +1.3
EIDS Eidsvold 23.61 322 P P 03 00 31.8 +0.4
baz=24,SNR=12
EIDS Eidsvold 23.61 322 P P 03 00 31.5 0.0
EIDS IAmb IAmb 03 01 00.7
comp=Z,230nm,1.3s
EIDS Eidsvold 23.61 322 P P 03 00 31.9 +0.4
comp=Z,117nm,1.0s
RMQ Roma 23.75 316 P P 03 00 33.2 +0.5
baz=24,SNR=14
RMQ Roma 23.75 316 P P 03 00 33.9 +1.2
STKA Stephens Creek 23.82 295 P P 03 00 33.8 +0.4
comp=Z,35nm,1.0s,baz=123,slow=11,SNR=28
STKA PcP PcP 03 04 15.0 -0.8
comp=Z,11nm,0.9s,baz=99,slow=5.7,SNR=2.8
STKA LR LR 03 08 27.3
comp=Z,5µm,21.1s,baz=170,slow=33
comp=Z,35nm,1.0s
STKA Stephens Creek 23.82 295 P P 03 00 33.9 +0.5
baz=24,SNR=19
STKA Stephens Creek 23.82 295 P P 03 00 33.1 -0.3
STKA Stephens Creek 23.82 295 P P 03 00 34.9 +1.5
HTT Hallett 24.60 289 P P 03 00 41.0 +0.4
baz=24,SNR=6.1
HTT Hallett 24.60 289 P P 03 00 41.5 +0.9
KOUNC Koumac, New Ca 24.70 354 P P 03 00 40.1 -1.3
KOUNC IAmb IAmb 03 01 10.9
comp=Z,215nm,1.5s
KOUNC Koumac, New Ca 24.70 354 P P 03 00 43.1 +1.7
NAPP Napperby 25.26 288 P P 03 00 48.5 +2.0
comp=Z,107nm,1.1s
RK1H Rockhampton Ha 25.60 323 P P 03 00 51.0 +1.4
comp=Z,34nm,1.0s
WHYH Whyalla 25.74 288 P P 03 00 52.9 +2.1
QLP Quilpie 26.05 308 P P 03 00 54.2 +0.5
baz=26,SNR=9.0
QLP Quilpie 26.05 308 P P 03 00 55.3 +1.5
BBOO Buckleboo 26.89 287 P P 03 01 01.5 +0.2
LCRK Leigh Creek 26.94 293 P P 03 01 02.3 +0.6
INKA Innaminka 27.22 301 P P 03 01 07.2 +3.0
MSVF Nonsavu 28.90 22 LR LR 03 11 20.7
comp=Z,3µm,19.3s,baz=182,slow=33
MULG Mulgathing 29.79 289 P P 03 01 27.6 +0.5
OOD Oodnadatta 30.35 294 P P 03 01 33.4 +1.3
CTA Charters Tower 30.38 319 LR LR 03 12 05.3
comp=Z,4µm,21.4s,baz=156,slow=33
CTA Charters Tower 30.38 319 P P 03 01 32.1 -0.3
CTAO Charters Tower 30.38 319 P P 03 01 31.7 -0.7
CTAO Charters Tower 30.38 319 IAMs_20 IAMs_20 03 11 17.6
comp=Z,4µm,22.0s
CTAO Charters Tower 30.38 319 P P 03 01 31.7 -0.7
CTAO pmax pmax
comp=Z,43nm,1.1s
CTAO Charters Tower 30.38 319 P P 03 01 32.2 -0.2
CTAO Charters Tower 30.38 319 P P 03 01 32.6 +0.2
CTAO pP pP 03 01 43.9 +1.2
VNDA Vanda 32.49 182 P P 03 01 52.0 +1.7
comp=Z,14nm,1.0s,baz=0.0,slow=8.7,SNR=36
VNDA LR LR 03 12 40.1
comp=Z,4µm,21.4s,baz=12,slow=32
comp=Z,14nm,1.0s
VNDA Vanda 32.49 182 P P 03 01 51.6 +1.2
VNDA Vanda 32.49 182 P P 03 01 52.1 +1.7
VNDA pP pP 03 02 02.7 +1.2
VNDA sP sP 03 02 08.7 +2.3
SBA Scott Base 32.76 180 P P 03 01 53.5 +0.8
SBA IAmb IAmb 03 01 56.5
comp=Z,106nm,1.1s
SBA Scott Base 32.76 180 IAMs_20 IAMs_20 03 12 22.3
comp=Z,4µm,20.0s
SBA Scott Base 32.76 180 P P 03 01 53.5 +0.8
SBA pmax pmax
comp=Z,106nm,1.2s
SBA Scott Base 32.76 180 P P 03 01 55.7 +3.0
SBA pP pP 03 02 03.1 -0.7
SBA sP sP 03 02 07.6 -1.0
SBA x PcP 03 04 38.4 +1.4
MTSU Mount Surprise 32.98 318 P P 03 01 55.6 +0.4
baz=33,SNR=16
MTSU Mount Surprise 32.98 318 P P 03 01 56.0 +0.7
QIS Mount Isa 33.40 308 P P 03 01 58.6 -0.4
baz=33,SNR=19
QIS Mount Isa 33.40 308 P P 03 01 58.5 -0.4
comp=Z,66nm,1.3s
FORT Forrest 33.58 282 P P 03 02 01.4 +1.0
AS31 Alice Springs 34.40 298 P P 03 02 05.8 -1.8
ASAR Alice Springs 34.40 298 P P 03 02 06.2 -1.4
comp=Z,6.8nm,1.0s,baz=140,slow=7.9,SNR=29
ASAR PcP PcP 03 04 41.4 -1.2
comp=Z,5.9nm,0.8s,baz=132,slow=3.7,SNR=6.4
ASAR LR LR 03 15 57.5
comp=Z,3µm,18.0s,baz=162,slow=36
comp=Z,6.8nm,1.0s
ASAR Alice Springs 34.40 298 P P 03 02 06.5 -1.2
ASAR PcP 03 04 41.3 -1.4
ASAR Alice Springs 34.40 298 P P 03 02 06.5 -1.2
ASAR 03 04 41.3
HNR Honiara 36.17 348 LR LR 03 16 14.9
comp=Z,4µm,18.6s,baz=184,slow=35
HNR Honiara 36.17 348 IAMs_20 IAMs_20 03 15 16.4
comp=Z,4µm,20.0s
RAR Rarotonga 36.25 60 LR LR 03 15 47.1
comp=Z,2µm,20.7s,baz=256,slow=34
CASY Casey 36.42 215 P P 03 02 24.8 +0.3
CASY PcP 03 04 48.0 +0.2
CASY Casey 36.42 215 P P 03 02 25.3 +0.9
CASY x PcP 03 04 48.0 +0.2
WR0 Warramunga Arr 36.79 302 P P 03 02 26.2 -1.9
WR0 IAmb IAmb 03 02 43.6
comp=Z,110nm,1.2s
WB2 Warramunga Arr 36.91 302 P P 03 02 27.2 -1.9
WB2 IAmb IAmb 03 02 44.6
comp=Z,139nm,1.2s
WRA Warramunga Arr 36.92 302 P P 03 02 27.6 -1.6
comp=Z,13nm,1.0s,baz=136,slow=8.1,SNR=57
WRA PcP PcP 03 04 49.0 -1.1
comp=Z,11nm,0.9s,baz=136,slow=2.8,SNR=9.7
WRA LR LR 03 16 26.3
comp=Z,3µm,21.4s,baz=144,slow=34
comp=Z,13nm,1.0s
WRA Warramunga Arr 36.92 302 P P 03 02 27.1 -2.1
WRAB Tennant Creek 36.92 302 P P 03 02 26.9 -2.3
WRAB IAmb IAmb 03 02 44.6
comp=Z,132nm,1.2s
WRAB Tennant Creek 36.92 302 eP P 03 02 27.1 -2.1
WRAB pmax pmax
comp=Z,42nm,1.7s
WRAB Tennant Creek 36.92 302 P P 03 02 28.1 -1.1

WRAB Tennant Creek 36.92 302 P P 03 02 27.8 -1.5
WRAB pP pP 03 02 38.9 -0.9
WRAB sP sP 03 02 43.7 -0.1
WRAB x x 03 03 00.5
WB0 Warramunga Arr 37.02 302 P P 03 02 27.8 -2.3
WB0 IAmb IAmb 03 02 45.5
comp=Z,93nm,1.2s
WRKA Warakurna 37.07 290 P P 03 02 29.6 -0.9
baz=37,SNR=18
WRKA Warakurna 37.07 290 P P 03 02 29.9 -0.6
COEN Coen 37.14 319 P P 03 02 31.2 +0.1
baz=37,SNR=8.3
COEN Coen 37.14 319 P P 03 02 29.6 -1.5
COEN Coen 37.14 319 P P 03 02 31.4 +0.3
PMG Port Moresby 39.57 328 LR LR 03 16 55.3
comp=Z,2µm,20.1s,baz=139,slow=33
PMG Port Moresby 39.57 328 P P 03 02 51.2 -0.3
PMG Port Moresby 39.57 328 IAMs_20 IAMs_20 03 16 31.7
comp=Z,3µm,19.0s
PMG Port Moresby 39.57 328 dP P 03 02 52.6 +1.1
PMG pmax pmax
comp=Z,43nm,1.2s
PMG Port Moresby 39.57 328 P P 03 02 53.2 +1.7
comp=Z,55nm,1.1s
PMG Port Moresby 39.57 328 P P 03 02 52.7 +1.2
PMG pP pP 03 03 02.3 +0.1
PMG sP sP 03 03 07.5 +0.8
KLBR Kellerberrin 40.34 272 P P 03 02 57.8 0.0
baz=40,SNR=6.3
H01W1 Cape Leeuwin H 41.11 265 T T 03 46 42.3
baz=121,slow=75,SNR=5185
H01W2 Cape Leeuwin H 41.12 265 T T 03 46 42.5
baz=121,slow=75,SNR=5205
H01W3 Cape Leeuwin H 41.13 265 T T 03 46 45.1
baz=121,slow=75,SNR=2505
TBI Tubuai 41.41 73 eLR LR 03 14 19.3
comp=Z,2µm,23.2s
KRVT Keravat (AS076 42.81 338 LR LR 03 18 22.0
comp=Z,1µm,21.6s,baz=272,slow=32
RABL Rabaul 42.88 338 P P 03 03 21.5 +2.8
MORW Morawa 43.00 274 P P 03 03 20.2 +0.6
KNRA Kununurra 43.57 300 P P 03 03 23.6 -0.7
baz=43,SNR=9.9
KNRA Kununurra 43.57 300 P P 03 03 23.2 -1.1
KNRA IAmb IAmb 03 03 40.2
comp=Z,132nm,1.1s
KNRA Kununurra 43.57 300 P P 03 03 23.6 -0.7
KDU Kakadu 43.74 307 P P 03 03 25.0 -0.7
baz=44,SNR=6.8
KDU Kakadu 43.74 307 P P 03 03 25.3 -0.4
comp=Z,61nm,1.3s
MTN Manton Dam 44.38 305 P P 03 03 29.8 -1.0
MTN IAmb IAmb 03 03 46.9
comp=Z,123nm,1.1s
MTN Manton Dam 44.38 305 P P 03 03 30.5 -0.3
QSPA South Pole Qui 44.92 180 P P 03 03 36.6 +1.8
comp=Z,86nm,0.9s,baz=9.8,slow=1.8,SNR=312
QSPA PcP PcP 03 05 15.0 -0.5
comp=Z,19nm,0.8s,baz=327,slow=2.9,SNR=3.6
QSPA LR LR 03 19 52.1
comp=Z,3µm,20.5s,baz=34,slow=32
comp=Z,86nm,0.9s
QSPA South Pole Qui 44.92 180 P P 03 03 36.1 +1.3
QSPA South Pole Qui 44.92 180 IAMs_20 IAMs_20 03 19 29.7
comp=Z,3µm,20.0s
QSPA South Pole Qui 44.92 180 P P 03 03 36.7 +2.0
QSPA pP pP 03 03 44.8 -1.4
QSPA PP PcP 03 05 14.8 -0.7
PSA00 Pilbara Seismi 45.11 285 P P 03 03 36.2 -0.5
PSA00 IAmb IAmb 03 03 53.1
comp=Z,139nm,1.2s
PSA00 Pilbara Seismi 45.11 285 P P 03 03 35.0 -1.6
PSA00 IAmb IAmb 03 03 53.1
comp=Z,60nm,1.2s
PSA00 Pilbara Seismi 45.11 285 P P 03 03 37.3 +0.7
PPT2 Papeete2 45.38 67 eLR LR 03 16 07.1
comp=Z,3µm,24.0s
PPT Papeete 45.39 67 LR LR 03 20 35.8
comp=Z,1µm,18.3s,baz=213,slow=33
MBWA Marble Bar 45.47 286 P P 03 03 42.4 +2.9
MBWA Marble Bar 45.47 286 P P 03 03 37.0 -2.5
MBWA pP pP 03 03 46.8 -3.3
MANU Manus Island 46.35 332 P P 03 03 45.5 -0.9
GENI Genyem 48.57 323 P P 03 04 06.9 +3.3
SOEI Soe 50.91 300 IAMs_20 IAMs_20 03 25 24.9
comp=Z,2µm,20.0s
BATI Baumata 50.92 299 LR LR 03 26 21.8
comp=Z,2µm,18.9s,baz=168,slow=36
FAKI Fak Fak 52.00 314 P P 03 04 28.4 -1.2
FAKI IAMs_20 IAMs_20 03 26 16.5
comp=Z,2µm,21.0s
FAKI Fak Fak 52.00 314 P P 03 04 29.3 -0.3
comp=Z,38nm,1.3s
PATS Pohnpei 52.40 349 IAMs_20 IAMs_20 03 24 55.8
comp=Z,2µm,19.0s
MMRI Maumere 53.02 299 IAMs_20 IAMs_20 03 28 02.0
comp=Z,1µm,18.0s
MMRI Maumere 53.02 299 P P 03 04 39.2 +2.0
MAW Mawson 54.05 207 P P 03 04 45.2 +1.2
comp=Z,58nm,0.9s,baz=117,slow=9.3,SNR=63
MAW PcP PcP 03 05 49.0 +0.5
comp=Z,31nm,1.0s,baz=117,slow=5.2,SNR=4.5
MAW LR LR 03 26 28.5
comp=Z,872nm,18.9s,baz=112,slow=34
comp=Z,58nm,0.9s
MAW Mawson 54.05 207 P P 03 04 45.2 +1.2
baz=54,SNR=18
MAW Mawson 54.05 207 P P 03 04 44.8 +0.7
SIJI Sorong 54.26 314 LR LR 03 27 35.4
comp=Z,2µm,21.7s,baz=143,slow=36
SANI Sanana 56.09 308 P P 03 04 59.6 +0.2
BELA Belgrano 2 56.47 175 P P 03 05 02.1 +0.8
KAPI Kappang 57.37 300 LR LR 03 29 51.3
comp=Z,1µm,20.0s,baz=139,slow=36
KAPI Kappang 57.37 300 P P 03 05 08.0 -0.6
KAPI IAmb IAmb 03 05 26.0
comp=Z,103nm,1.2s
KAPI Kappang 57.37 300 P P 03 05 08.0 -0.6
KAPI pmax pmax
comp=Z,103nm,1.2s
KAPI Kappang 57.37 300 P P 03 05 11.6 +3.0
TAOE Nuku Hiva Isla 57.97 68 eLR LR 03 22 11.7
comp=Z,2µm,24.7s
JAGI Jajag, Banyuwa 58.30 292 IAMs_20 IAMs_20 03 30 17.7
comp=Z,1µm,21.0s
SMAI San Martin Ant 59.96 159 P P 03 05 27.8 +2.0
TOLI2 Tolitoli 61.63 305 P P 03 05 36.7 -1.2
TOLI2 Tolitoli 61.63 305 P P 03 05 38.3 +0.4
BKB Balikpapan 62.07 300 IAMs_20 IAMs_20 03 36 01.8
comp=Z,1µm,18.0s
TROLL Troll, Antarti 62.58 185 P P 03 05 44.2 +0.5
NVL N'lazarevskaya 62.96 189 eP P 03 05 43.7 -2.3
NVL eS S 03 14 26.0 +13
NVL pmax pmax
comp=Z,125nm,0.8s
SNAA Sanae 63.20 184 P P 03 05 48.0 +0.3
SNAA Sanae 63.20 184 LR LR 03 30 57.1
comp=Z,2µm,21.6s,baz=158,slow=34
SNAA Sanae 63.20 184 P P 03 05 48.4 +0.6
SNAA Sanae 63.20 184 cP P 03 05 48.1 +0.3
SNAA pmax pmax
comp=Z,327nm,1.4s
PMSA Palmer Station 63.34 158 LR LR 03 29 04.3
comp=Z,2µm,20.1s,baz=226,slow=32
VNA3 Neumayer Olymp 63.84 181 P P 03 05 51.6 -0.2
LEM Lembang 63.85 288 LR LR 03 33 03.5
comp=Z,2µm,20.4s,baz=122,slow=35
DAV Davao City (W) 63.94 313 LR LR 03 34 32.3
comp=Z,1µm,20.6s,baz=158,slow=37
DAV Davao City (W) 63.94 313 IAMs_20 IAMs_20 03 34 10.8
comp=Z,2µm,20.0s
VNA2 Neumayer--Watz 64.11 182 P P 03 05 54.0 +0.3
baz=165,slow=5.0
VNA1 Neumayer--Stat 64.40 182 P P 03 05 55.9 +0.3
MYLDM Lahad Datu 66.25 305 P P 03 06 05.9 -2.3
MYLDM IAmb IAmb 03 06 38.1
comp=Z,70nm,1.3s
KSM Kuching 68.31 296 P P 03 06 24.1 +2.8
comp=Z,24nm,1.1s
USHA Ushuaia 69.81 149 LR LR 03 33 53.3
comp=Z,888nm,18.1s,baz=213,slow=33
GO09 Cerro Castillo 71.09 145 P P 03 06 38.7 +0.8
GO09 IAmb IAmb 03 06 48.1
comp=Z,83nm,1.1s
ORCD Orcadas 71.29 164 P P 03 06 38.4 -0.6

ORCD IAmb IAmb 03 06 39.5
comp=Z,45nm,1.0s
MYKOM **Kota Tinggi 72.73 291** IAMs_20 IAMs_20 03 36 46.4
comp=Z,1µm,22.0s
BKNI **Bangkinang 73.53 288** IAMs_20 IAMs_20 03 37 47.2
comp=Z,1µm,20.0s
COYC **Coyhaique 75.61 142** P **P** **03 07 06.0 +1.3**
AY01 **Puyuhuapi 76.25 140** P **P** **03 07 09.1 +0.8**
AY01 IAmb IAmb 03 07 10.6
comp=Z,70nm,1.4s
GSI **Gunungsitoli 76.59 286** P **P** **03 07 10.0 -0.7**
GSI **Gunungsitoli 76.59 286** P **P** **03 07 12.8 +2.1**
IPM **Ipoh 76.60 291** IAMs_20 IAMs_20 03 41 08.8
comp=Z,1µm,21.0s
PSI **Prapat 76.77 288** LR LR 03 40 43.2
comp=Z,2µm,21.7s,baz=140,slow=35
KULM **Kulim 77.45 291** P **P** **03 07 13.8 -1.7**
KULM IAmb IAmb 03 07 16.1
comp=Z,64nm,1.3s
KULM IAMs_20 IAMs_20 03 41 43.4
comp=Z,1µm,20.0s
LL02 **Futaleuf 77.57 140** P **P** **03 07 16.2 +0.3**
HOPE **Hope Point 78.88 166** P **P** **03 07 22.6 -0.1**
HOPE IAmb IAmb 03 07 26.5
comp=Z,101nm,1.4s
HOPE **Hope Point 78.88 166** P **P** **03 07 22.7 -0.1**
HOPE pmax pmax
comp=Z,101nm,1.4s
LL03 **Petrohue 78.93 138** P **P** **03 07 23.0 -0.3**
LL03 IAmb IAmb 03 07 25.2
comp=Z,62nm,1.1s
LL04 **Puerto Octay 79.10 138** P **P** **03 07 24.4 +0.1**
LL04 IAmb IAmb 03 07 26.3
comp=Z,60nm,1.3s
JOW **Kunigami 79.92 325** LR LR 03 41 48.1
comp=Z,749nm,20.4s,baz=148,slow=35
YULB **Yu-li 79.97 318** P **P** **03 07 27.2 -1.9**
YOJ **Yonaguni jima 80.10 320** P **P** **03 07 29.0 -0.7**
YOJ IAmb IAmb 03 07 44.5
comp=Z,93nm,1.3s
YOJ **Yonaguni jima 80.10 320** P **P** **03 07 29.0 -0.7**
YOJ pmax pmax
comp=Z,93nm,1.3s
YOJ **Yonaguni jima 80.10 320** P **P** **03 07 31.8 +2.1**
comp=Z,59nm,1.5s
PLCA **Paso Flores 80.11 139** P **P** **03 07 31.0 +1.1**
comp=Z,36nm,1.0s,baz=222,slow=5.6,SNR=38
PLCA LR LR 03 35 16.1
comp=Z,905nm,21.6s,baz=210,slow=30
comp=Z,36nm,1.0s
PLCA **Paso Flores 80.11 139** P **P** **03 07 31.1 +1.1**
PLCA IAmb IAmb 03 07 32.2
comp=Z,91nm,1.2s
PLCA **Paso Flores 80.11 139** P **P** **03 07 31.1 +1.2**
PLCA pmax pmax
comp=Z,91nm,1.2s
LR03 **Panguipulli 80.14 138** P **P** **03 07 29.9 0.0**
LR03 IAmb IAmb 03 07 32.1
comp=Z,101nm,1.4s
TPUB **Ta-pu 80.21 317** P **P** **03 07 29.5 -0.9**
TPUB **Ta-pu 80.21 317** P **P** **03 07 31.1 +0.7**
comp=Z,21nm,1.3s
SSLB **Suanglung 80.47 318** P **P** **03 07 29.4 -2.5**
SSLB IAmb IAmb 03 07 31.8
comp=Z,49nm,1.3s
SSLB **Suanglung 80.47 318** P **P** **03 07 32.7 +0.9**
JHJ **Hachijo jima 2 81.79 337** LR LR 03 40 23.7
comp=Z,233nm,22.0s,baz=92,slow=33
BI05 **Punta Hualpn 81.99 135** P **P** **03 07 40.7 +0.9**
BI05 IAmb IAmb 03 07 41.8
comp=Z,105nm,1.2s
QIZ **Qiongzhong 82.35 307** P **P** **03 07 40.8 -1.0**
QIZ IAmb IAmb 03 07 43.4
comp=Z,53nm,1.2s
QIZ **Qiongzhong 82.35 307** P **P** **03 07 41.2 -0.6**
QIZ S **S** **03 17 58.3 +3.5**
QIZ SS **SS** **03 23 20.5 +3.9**
QIZ LR LR
comp=Z,320nm,15.5s
QIZ LR LR
comp=Z,330nm,18.6s
QIZ LR LR
comp=Z,380nm,20.0s
QIZ **Qiongzhong 82.35 307** P **P** **03 07 43.4 +1.6**
QZH **Quanzhou 82.58 317**⇑ *i*P **P** **03 07 43.2 +0.3**
QZH S **S** **03 17 59.9 +2.9**
QZH LR LR
comp=Z,290nm,26.1s
QZH LR LR
comp=Z,260nm,22.7s
QZH LR LR
comp=Z,610nm,27.0s
HKPS **Hong Kong Po S 82.62 312** IAMs_20 IAMs_20 03 46 00.8
comp=Z,861nm,21.0s
JSU **Suzuyama 83.28 329** P **P** **03 07 45.4 -1.0**
ML02 **Panimavida 83.64 136** P **P** **03 07 48.4 -0.1**
ML02 IAmb IAmb 03 07 49.5
comp=Z,39nm,0.9s
GO05 **Huala 83.98 135** P **P** **03 07 50.5 +0.2**
GO05 IAmb IAmb 03 07 51.7
comp=Z,62nm,1.2s
INU **Inuyama 84.67 336** P **P** **03 07 52.8 -0.5**
INU IAmb IAmb 03 07 54.7
comp=Z,57nm,1.3s
INU **Inuyama 84.67 336** P **P** **03 07 54.0 +0.7**
comp=Z,34nm,1.3s
BO01 **Tunca 84.90 135** P **P** **03 07 54.8 0.0**
BO01 IAmb IAmb 03 07 55.5
comp=Z,26nm,1.1s
MT01 **Popeta 85.23 135** P **P** **03 07 56.4 -0.2**
MT09 **Talagante 85.44 135** P **P** **03 07 57.7 0.0**
MT09 IAmb IAmb 03 07 58.9
comp=Z,86nm,1.5s
MJAR **Matsushiro Arr 85.44 337** P **P** **03 07 56.3 -0.9**
comp=Z,7.4nm,0.9s,baz=170,slow=6.1,SNR=15
MJAR LR LR 03 40 03.8
comp=Z,138nm,20.9s,baz=168,slow=31
comp=Z,7.4nm,0.9s
MJAR **Matsushiro Arr 85.44 337** P **P** **03 07 55.4 -1.8**
MAJO **Matsushiro 85.44 337** P **P** **03 07 55.9 -1.3**
MAJO IAmb IAmb 03 07 58.0
comp=Z,31nm,1.4s
MAJO **Matsushiro 85.44 337**⇑ *e*P **P** **03 07 56.0 -1.2**
MAJO pmax pmax
comp=Z,23nm,1.3s
MAJO **Matsushiro 85.44 337** P **P** **03 07 57.3 +0.1**
comp=Z,20nm,1.4s
MJB9 **Matsu-Tunnel 85.45 337** P **P** **03 07 55.8 -1.4**
MJB9 IAmb IAmb 03 07 58.0
comp=Z,29nm,1.3s
BO04 **La Punta 85.45 135** P **P** **03 07 56.3 -1.4**
BO04 IAmb IAmb 03 08 07.1
comp=Z,52nm,1.1s
LMEL **Las Melosas 85.77 135** P **P** **03 07 59.5 +0.1**
MT02 **Curacav 85.77 134** P **P** **03 07 58.9 -0.3**
MT02 IAmb IAmb 03 08 08.0
comp=Z,55nm,1.2s
MT05 **Renca 85.87 135** P **P** **03 07 59.6 -0.2**
RFA **San Rafael 85.88 137** *i*P **P** **03 08 00.4 +0.6**
MT03 **Universidad Ad 85.90 135** P **P** **03 08 00.2 +0.2**
MT03 IAmb IAmb 03 08 01.4
comp=Z,32nm,1.0s
ROC1 **El Roble 86.06 134** P **P** **03 08 01.0 0.0**
ROC1 IAmb IAmb 03 08 18.3
comp=Z,29nm,0.9s
PEL **Peldehue 86.09 135** P **P** **03 08 00.5 -0.4**
PEL **Peldehue 86.09 135** P **P** **03 08 00.5 -0.4**
PEL pmax pmax
comp=Z,76nm,1.0s
VA03 **San Esteban 86.46 135** P **P** **03 08 02.3 -0.5**
VA03 IAmb IAmb 03 08 04.2
comp=Z,41nm,0.8s
SSE **Sheshan 86.62 322** P **P** **03 08 03.0 -0.1**
SSE S **S** **03 18 39.2 +2.3**
SSE SS **SS** **03 24 22.3 +2.9**
SSE pmax pmax
comp=Z,11nm,0.8s
SSE pmax pmax
comp=Z,100nm,3.9s
SSE LR LR
comp=Z,180nm,21.8s
AUSP **Uspallata 87.48 135** *i*P **P** **03 08 09.2 +1.2**
H08S2 **Diego Garcia H 87.82 261** T T 04 45 11.7
baz=135,slow=76,SNR=8879
H08S1 **Diego Carcia H 87.84 261** T T 04 45 14.0
baz=135,slow=76,SNR=3224
H08S3 **Diego Garcia H 87.84 261** T T 04 45 13.9
baz=135,slow=76,SNR=9270
RTLS **Leoncito 87.87 135** *i*P **P** **03 08 10.5 +0.6**
CO03 **El Pedregal 87.93 133** P **P** **03 08 10.1 +0.2**
CNSH **ChangSha 88.08 314**⇑ P **P** **03 08 10.6 +0.4**
CNSH S **S** **03 18 49.9 -1.1**
CNSH pmax pmax
comp=Z,18nm,1.2s
CNSH LR LR
comp=Z,300nm,21.7s
CNSH LR LR
comp=Z,310nm,21.3s
CNSH LR LR
comp=Z,550nm,24.9s
ZON **Zonda 88.38 135** P **P** **03 08 11.8 -0.2**
ZON IAmb IAmb 03 08 14.3
comp=Z,24nm,0.9s
ZON **Zonda 88.38 135** P **P** **03 08 11.8 -0.2**
ZON pmax pmax
comp=Z,24nm,0.9s
ZON **Zonda 88.38 135** *i*P **P** **03 08 12.5 +0.5**
CM31 **Chiang Mai Arr 88.41 298** P **P** **03 08 10.5 -1.5**
CMAR **Chiang Mai Arr 88.41 298** P **P** **03 08 12.5 +0.5**
comp=Z,30nm,1.0s,baz=154,slow=3.4,SNR=106
CMAR LR LR 03 48 52.8
comp=Z,841nm,21.1s,baz=135,slow=36
comp=Z,30nm,1.0s
CMAR **Chiang Mai Arr 88.41 298** P **P** **03 08 10.8 -1.2**
NJ2 **Nanjing 88.47 321**⇓ *i*P **P** **03 08 12.9 +0.9**
NJ2 PP **PP** **03 11 46.6 +5.8**
NJ2 SKS **SKSac** **03 18 36.4 -1.1**
NJ2 S **ScS** **03 18 58.6 -1.6**
NJ2 SS **SS** **03 24 52.1 +5.8**
NJ2 pmax pmax
comp=Z,37nm,0.9s
NJ2 pmax pmax
comp=Z,150nm,3.5s
NJ2 LR LR
comp=Z,410nm,20.8s
NJ2 LR LR
comp=Z,240nm,13.3s
NJ2 LR LR
comp=Z,720nm,24.6s
RTLL **Cerro Villicun 88.66 135** *i*P **P** **03 08 13.7 +0.4**
CHTO **Chiang Mai 88.67 298** P **P** **03 08 12.6 -0.7**
CHTO IAmb IAmb 03 08 14.9
comp=Z,56nm,1.4s
CHTO **Chiang Mai 88.67 298** IAMs_20 IAMs_20 03 48 16.9
comp=Z,735nm,20.0s
CHTO **Chiang Mai 88.67 298** P **P** **03 08 12.6 -0.7**
CHTO pmax pmax
comp=Z,56nm,1.4s
CHTO MLR MLR
comp=Z,700nm,20.0s
CHTO **Chiang Mai 88.67 298** P **P** **03 08 14.5 +1.2**
JTM **Tenmabayashi 88.72 341** P **P** **03 08 12.0 -0.9**
CO01 **Juntas del Tor 88.93 133** P **P** **03 08 14.3 -0.6**
ACCO **Cerro Coronel 88.96 134** *i*P **P** **03 08 15.9 +0.8**
AROD **Rodeo 89.09 134** *i*P **P** **03 08 16.6 +0.8**
MRA **San Martin 89.11 138** *i*P **P** **03 08 15.8 +0.3**
ACDV **Cuesta del Vie 89.27 134** *i*P **P** **03 08 17.1 +0.8**
WHN **Wuhan 89.31 317**⇑ P **P** **03 08 16.6 +0.7**
WHN pP **pP** **03 08 29.5 +1.4**
WHN S **S** **03 19 08.0 +5.5**
WHN pmax pmax
comp=Z,160nm,1.2s
WHN LR LR
comp=Z,6µm,35.2s
WHN LR LR
comp=Z,2µm,26.9s
WHN LR LR
comp=Z,2µm,26.1s
LCO **Las Campanas 89.39 132** P **P** **03 08 17.1 +0.1**
LCO IAmb IAmb 03 08 18.5
comp=Z,46nm,1.1s
LCO **Las Campanas 89.39 132** P **P** **03 08 17.1 +0.1**
LCO pmax pmax
comp=Z,46nm,1.1s
KSRS **Korea Array 89.53 330** P **P** **03 08 17.6 +0.9**
comp=Z,4.8nm,1.0s,baz=148,slow=6.1,SNR=16
comp=Z,4.8nm,1.0s
KSAR **Wonju Array Be 89.53 330** P **P** **03 08 16.1 -0.7**
KSAR **Wonju Array Be 89.53 330** P **P** **03 08 16.1 -0.7**
ACHE **Chepes 89.69 136** *i*P **P** **03 08 18.5 +0.2**
AVFE **Valle Fertil 89.71 135** *i*P **P** **03 08 18.6 +0.3**
GYA **Guiyang 90.01 309**⇓ P **P** **03 08 19.9 +0.4**
GYA pP pP 03 08 33.0 +1.3
GYA PP **PP** **03 11 58.4 +5.0**
GYA SKS **SKSac** **03 18 43.7 -3.5**
GYA S **S** **03 19 10.6 +1.1**
GYA pmax pmax
comp=Z,21nm,1.5s
GYA pmax pmax
comp=Z,210nm,4.7s
GYA LR LR
comp=Z,410nm,22.0s
GYA LR LR
comp=Z,290nm,23.3s
GYA LR LR
comp=Z,680nm,23.2s
SEHB **SEOHWA 90.14 330** P **P** **03 08 18.3 -1.4**
APLL **PUNTA DE LOS L 90.38 136** *i*P **P** **03 08 21.9 +0.6**
TCA **Tanti 90.54 138** *i*P **P** **03 08 22.6 +0.4**
GO03 **Copiap 90.76 132** P **P** **03 08 22.8 -0.4**
AC06 **Mina Casimiro 90.89 131** P **P** **03 08 23.4 -0.3**
AC06 IAmb IAmb 03 08 25.5
comp=Z,35nm,0.9s
ACLC **CERRO LA CRUZ 90.97 135** *i*P **P** **03 08 24.1 -0.2**
KMI **Kunming 91.19 305**⇑ P **P** **03 08 26.3 +1.1**
KMI pP pP 03 08 37.7 +0.4
KMI S **S** **03 19 25.0 +4.4**
KMI pmax pmax
comp=Z,21nm,0.9s
KMI pmax pmax
comp=Z,150nm,3.8s
KMI LR LR
comp=Z,400nm,23.6s
KMI LR LR
comp=Z,310nm,20.1s
KMI LR LR
comp=Z,740nm,23.0s
ASAJ **Asahikawa 91.55 343** LR LR 03 48 44.4
comp=Z,466nm,19.3s,baz=172,slow=35
KUR **Kuril'sk 91.64 347** *e*P **P** **03 08 27.3 +0.9**
KUR *e* 03 12 06.0
AC02 **Maricunga 91.95 132** P **P** **03 08 28.2 -1.1**
AC02 IAmb IAmb 03 08 43.0
comp=Z,25nm,1.4s
PALK **Pallekele 92.53 278** LR LR 03 47 07.4
comp=Z,363nm,18.5s,baz=231,slow=34
PZH **PanZhiHua 92.82 305** P **P** **03 08 32.9 +0.3**
PZH pP **pP** **03 08 44.7 0.0**
PZH sP **sP** **03 08 50.4 +1.7**
PZH SKS **SKSac** **03 19 05.0 +1.8**
PZH S **ScS** **03 19 37.1 +0.2**
PZH SS **SS** **03 25 53.5 +3.9**
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH pmax pmax
comp=Z,100nm,6.5s
PZH LR LR
comp=Z,1µm,22.4s
PZH LR LR
comp=Z,1µm,21.8s
PZH LR LR
comp=Z,2µm,24.1s
GO02 **Mina Guanaco 93.06 131** P **P** **03 08 33.9 -0.2**
VOI **Vohitsoka 93.92 234** P **P** **03 08 35.2 -2.7**
VOI **Vohitsoka 93.92 234** P **P** **03 08 40.8 +2.9**
YSS **Yuzh-Sakhalins 94.24 344** IAMs_20 IAMs_20 03 51 00.6
comp=Z,692nm,20.0s
YSS **Yuzh-Sakhalins 94.24 344** *ce*P **P** **03 08 39.7 +1.4**
YSS *e**SP **pP** **03 08 51.7 +1.3**
YSS *e*S **S** **03 19 47.4 +1.2**
YSS *e*PS **PS** **03 21 05.9 -0.7**
YSS pmax pmax
comp=Z,20nm,1.2s
YSS pmax pmax
comp=Z,100nm,3.1s
YSS smax smax
comp=N,300nm,6.7s
USRK **Ussuriysk Ar. 94.31 336** P **P** **03 08 38.8 0.0**
comp=N,1.5nm,0.7s,baz=188,slow=7.1,SNR=4.3
USRK LR LR 03 48 02.4
comp=N,160nm,21.4s,baz=159,slow=34
comp=N,1.5nm,0.7s
HNS **HongShan 94.80 321**⇓ P **P** **03 08 42.2 +1.0**
HNS S **S** **03 19 56.2 +4.6**
HNS LR LR
comp=N,270nm,20.0s
HNS LR LR
comp=N,470nm,24.1s
XAN **Xi'an 94.82 315**⇑ P **P** **03 08 41.8 +0.3**
XAN pP pP 03 08 52.6 -1.0
XAN sP sP 03 08 56.4 -1.1
XAN SKS **SKSac** **03 19 11.6 -2.0**
XAN S **ScS** **03 19 55.6 +2.5**
XAN pmax pmax
comp=N,15nm,1.1s
XAN LR LR
comp=N,320nm,18.2s
XAN LR LR
comp=N,340nm,22.0s
XAN LR LR
comp=N,520nm,24.7s
CD2 **Chengdu 95.07 310** P **P** **03 08 43.1 +0.4**
CD2 pmax pmax
comp=N,20nm,0.9s
CD2 LR LR
comp=N,280nm,19.6s
CD2 LR LR
comp=N,370nm,24.5s
LVC **Limon Verde 95.48 130** LR LR 03 41 58.8
comp=N,581nm,21.9s,baz=220,slow=29
LVC **Limon Verde 95.48 130** IAMs_20 IAMs_20 03 41 35.8
comp=Z,684nm,22.0s
ITQB **Itaqui 95.55 143** P **P** **03 08 44.6 -0.5**
CN2 **Changchun 96.03 331** *e*P P 03 08 54.9 +8.2
CN2 *e*PP PP 03 12 51.4 +11
CN2 **Changchun 96.03 331** *es*S sS 03 20 27.4 +5.8
CN2 **Changchun 96.03 331** *e*SS SS 03 26 46.8 +12
CN2 LR LR
comp=N,200nm,23.0s
CN2 LR LR
comp=E,180nm,23.0s
CN2 LR LR
comp=Z,380nm,24.0s
SUR **Sutherland 96.90 208** LR LR 03 52 43.1
comp=Z,289nm,18.0s,baz=168,slow=35
SUR **Sutherland 96.90 208** P **P** **03 08 50.1 -1.4**
ADK **Adak 97.73 10** IAMs_20 IAMs_20 03 46 28.5
comp=Z,638nm,22.0s
SHEM **Shemya Is, Ala 97.75 4** LR LR 03 45 11.8
comp=Z,269nm,21.6s,baz=134,slow=31
PET **Petropavlovsk 98.12 355** IAMs_20 IAMs_20 03 47 57.8
comp=Z,574nm,20.0s
PET **Petropavlovsk 98.12 355** *e*P Pdif 03 09 00.3 +4.4
PET *e* 03 13 01.8
PET *e* 03 19 24.9
PET *e*S **S** **03 20 22.9 +3.6**
PET *e*PS **PS** **03 21 47.6 -1.3**
CPUP **Villa Florida 98.14 141** P **P** **03 08 56.8 -0.1**
comp=Z,4.3nm,0.9s,baz=233,slow=6.7,SNR=4.7
CPUP LR LR 03 48 11.4
comp=Z,580nm,20.2s,baz=206,slow=32
comp=Z,4.3nm,0.9s
CPUP **Villa Florida 98.14 141** P **P** **03 08 54.8 -2.1**
CPUP IAmb IAmb 03 09 11.6
comp=Z,14nm,1.2s
PETK **Petropavlovsk- 98.27 354** LR LR 03 48 37.3
comp=Z,388nm,20.2s,baz=182,slow=32
BOSA **Boshof 98.70 213** P **P** **03 08 58.5 -1.1**
comp=Z,5.4nm,0.8s,baz=151,slow=3.0,SNR=15
BOSA LR LR 03 48 04.4
comp=Z,293nm,18.8s,baz=177,slow=32
comp=Z,5.4nm,0.8s
BOSA **Boshof 98.70 213** P **P** **03 08 57.1 -2.4**
KLR **Kul'dur 98.97 337** PKKPbc PKKPbc 03 25 24.2 -2.4
comp=Z,1.6nm,0.9s,baz=304,slow=7.2,SNR=3.6
KLR LR LR 03 51 28.5
comp=Z,165nm,19.7s,baz=161,slow=34
LZH **Lanzhou 99.00 313** *e*P **Pdif** **03 08 55.1 -5.4**
LZH sP pP 03 09 13.5 +0.8
LZH PP PKiKP 03 13 46.2 +15
LZH **Lanzhou 99.00 313** S **S** **03 20 30.1 +2.0**
LZH **Lanzhou 99.00 313** SS SS 03 27 04.5 -13
LZH pmax pmax
comp=Z,18nm,1.4s
LZH LR LR
comp=N,270nm,20.6s
LZH LR LR
comp=E,330nm,20.6s
LZH LR LR
comp=Z,610nm,21.7s
HHC **Hu-ho-hao-te 99.03 321** *e*P **Pdif** **03 09 02.3 +1.9**
HHC sP sP 03 09 21.2 +4.0
HHC SKS **SKSac** **03 19 37.5 +2.4**
HHC S **ScS** **03 20 31.1 +3.1**
HHC pmax pmax
comp=Z,33nm,0.9s
HHC pmax pmax
comp=Z,110nm,4.7s
HHC LR LR
comp=Z,450nm,19.2s
HHC LR LR
comp=Z,230nm,17.8s
HHC LR LR
comp=Z,650nm,21.5s
NNA **Nana 99.12 117** LR LR 03 43 52.6
comp=Z,1µm,21.9s,baz=218,slow=29
XLT **XiLinHaoTe 99.60 325** *e*P **Pdif** **03 09 05.4 +2.5**
XLT pP pP 03 09 15.7 +0.7
XLT sP sP 03 09 19.7 +0.1
XLT S S 03 20 23.2 -9.4
XLT sS sS 03 20 56.4 +4.9
XLT pmax pmax
comp=Z,9.0nm,0.9s
XLT pmax pmax
comp=Z,88nm,4.5s
XLT LR LR
comp=Z,39nm,20.7s
XLT LR LR
comp=Z,250nm,20.1s
XLT LR LR
comp=Z,550nm,21.4s
HYBB **Hyderabad (bro 101.10 283** *e*Pdif **Pdif** **03 09 07.4 -2.7**
HYBB *e*PP **PP** **03 13 18.5 -0.9**
HYBB *e*SKSac **SKSac** **03 19 44.5 -1.7**
109C **Camp Elliot, M 103.71 57** IAMs_20 IAMs_20 03 48 23.6
comp=Z,500nm,20.0s
GOMU **GeErMu 103.96 307** Pdif **Pdif** **03 09 25.7 +2.9**
GOMU PP **PP** **03 13 42.7 +1.6**
GOMU AMB AMB
comp=Z,100nm,5.3s
GOMU LR LR
comp=Z,310nm,20.0s
GOMU LR LR
comp=Z,280nm,20.4s
GOMU LR LR
comp=Z,400nm,20.5s
PASC **Pasadena Art C 103.98 56** IAMs_20 IAMs_20 03 49 40.7
comp=Z,670nm,19.0s
MCCM **Marconi Confer 104.19 50** IAMs_20 IAMs_20 03 51 24.0
comp=Z,576nm,19.0s
ZEA **Zeya 104.26 337** *e*P **Pdif** **03 09 39.5 +16**
ZEA pmax pmax
comp=Z,10.0nm,0.4s
PFO **Pinyon Flats O 104.60 57** IAMs_20 IAMs_20 03 49 20.3
comp=Z,638nm,20.0s
HOPS **Hopland Field 104.71 49** IAMs_20 IAMs_20 03 52 02.5
comp=Z,555nm,20.0s
SONM **Songino Array 106.81 322** PKiKP **PKiKP** **03 13 42.9 -1.8**
comp=Z,0.7nm,0.7s,baz=70,slow=1.7,SNR=3.3
SONM PKKPbc **PKKPbc** **03 25 03.1 -0.2**
comp=Z,1.8nm,0.8s,baz=274,slow=2.7,SNR=9.2
NVAR **Mina Array Bea 106.92 52** PKiKP **PKiKP** **03 13 44.8 -0.5**
comp=Z,0.4nm,0.7s,baz=224,slow=3.8,SNR=2.3
NVAR PKKPbc **PKKPbc** **03 25 03.5 +0.8**
comp=Z,1.3nm,0.7s,baz=53,slow=4.6,SNR=10
TPNV **Topopah Spring 107.05 55** IAMs_20 IAMs_20 03 52 21.0
comp=Z,630nm,19.0s
TUC **Tucson 107.14 61** IAMs_20 IAMs_20 03 50 33.9
comp=Z,750nm,20.0s
L04D **Klamath Falls 107.44 47** IAMs_20 IAMs_20 03 48 33.6
comp=Z,499nm,21.0s
MOD **Modoc Plateau 108.26 49** IAMs_20 IAMs_20 03 54 47.6
comp=Z,514nm,20.0s
P18K **Big Mountain, 108.76 19** IAMs_20 IAMs_20 03 51 34.1
comp=Z,748nm,22.0s
H04D **Lebanon 108.86 45** IAMs_20 IAMs_20 03 53 09.0
comp=Z,607nm,22.0s

WUAZ Wupatki 108.95 59 IAMs_20 IAMs_20 03 51 51.5
comp=Z,539nm,20.0s
LSZ Lusaka 109.18 222 IAMs_20 IAMs_20 03 53 29.8
comp=Z,579nm,19.0s
O18K Koktuh Hills 109.18 19 IAMs_20 IAMs_20 03 51 59.1
comp=Z,686nm,22.0s
EPT El Paso 109.48 64 IAMs_20 IAMs_20 03 50 57.8
comp=Z,506nm,20.0s
O19K Port Alsworth 109.69 19 IAMs_20 IAMs_20 03 52 24.6
comp=Z,611nm,21.0s
TXAR Lajitas Array 109.70 68 PKiKP **PKiKP 03 13 48.1 -2.5**
comp=Z,0.4nm,0.8s,baz=230,slow=5.6,SNR=3.4
TXAR PKKPbc **PKKPbc 03 24 53.7 +0.3**
comp=Z,1.3nm,0.9s,baz=76,slow=4.3,SNR=12
SAML Samuel 109.73 126 IAMs_20 IAMs_20 03 51 12.9
comp=Z,645nm,21.0s
N18K Kilae Creek 109.76 18 IAMs_20 IAMs_20 03 52 18.5
comp=Z,714nm,21.0s
JTS Las Juntas de 109.92 95 IAMs_20 IAMs_20 03 49 37.9
comp=Z,546nm,21.0s
GAMB Gambell 109.94 10 IAMs_20 IAMs_20 03 56 06.4
comp=Z,481nm,21.0s
TSUM Tsumeb 110.13 211 IAMs_20 IAMs_20 03 59 16.0
comp=Z,546nm,18.0s
MNTX Cornudas Mount 110.15 65 IAMs_20 IAMs_20 03 51 30.6
comp=Z,660nm,20.0s
BRLK Bradley Lake 110.15 21 IAMs_20 IAMs_20 03 54 48.6
comp=Z,734nm,20.0s
N19K Bonanza Creek 110.20 19 IAMs_20 IAMs_20 03 52 30.1
comp=Z,829nm,22.0s
HDC Heredia 110.31 96 IAMs_20 IAMs_20 03 53 11.3
comp=Z,640nm,20.0s
NLWA Neilton Lookou 110.34 43 IAMs_20 IAMs_20 03 51 09.0
comp=Z,762nm,21.0s
E04D Cinebar 110.38 44 IAMs_20 IAMs_20 03 50 50.2
comp=Z,642nm,22.0s
Y22D IRIS PASSCAL I 110.73 62 IAMs_20 IAMs_20 03 52 31.9
comp=Z,753nm,21.0s
TGUH Tegucigalpa,Un 110.87 91 IAMs_20 IAMs_20 03 51 18.3
comp=Z,492nm,20.0s
O22K Cooper Landing 111.07 21 IAMs_20 IAMs_20 03 56 05.3
comp=Z,673nm,19.0s
M19K Big River Lodg 111.19 18 IAMs_20 IAMs_20 03 53 02.1
comp=Z,746nm,21.0s
DUG Dugway, Tooele 111.23 54 IAMs_20 IAMs_20 03 53 55.5
comp=Z,622nm,20.0s
L19K White Mountain 111.33 18 IAMs_20 IAMs_20 03 52 54.9
comp=Z,777nm,21.0s
ANM Nome 111.56 12 IAMs_20 IAMs_20 03 55 34.4
comp=Z,459nm,20.0s
RC01 Rabbit Creek A 111.58 21 IAMs_20 IAMs_20 03 51 44.9
comp=Z,693nm,22.0s
MVCO Mesa Verde 111.81 59 IAMs_20 IAMs_20 03 52 40.1
comp=Z,448nm,20.0s
HIN Hinchinbrook I 111.85 23 IAMs_20 IAMs_20 03 52 00.1
comp=Z,714nm,22.0s
BMO Blue Mountains 111.88 48 IAMs_20 IAMs_20 03 51 44.2
comp=Z,540nm,22.0s
SKT Skwentna 111.91 20 IAMs_20 IAMs_20 03 53 34.5
comp=Z,781nm,22.0s
GLI Glacier Island 112.09 22 IAMs_20 IAMs_20 03 52 24.5
comp=Z,700nm,22.0s
FID Port Fidalgo 112.15 23 IAMs_20 IAMs_20 03 53 41.7
comp=Z,616nm,21.0s
KNK Knik Glacier 112.19 21 IAMs_20 IAMs_20 03 56 59.9
comp=Z,496nm,20.0s
GHO Glory Hole Cre 112.37 21 IAMs_20 IAMs_20 03 52 47.7
comp=Z,682nm,22.0s
K20K Telida 112.54 18 IAMs_20 IAMs_20 03 53 32.8
comp=Z,721nm,22.0s
SML Sawmill 112.55 21 IAMs_20 IAMs_20 03 56 02.6
comp=Z,499nm,20.0s
CUT Chulitna 112.58 20 IAMs_20 IAMs_20 03 54 17.2
comp=Z,764nm,21.0s
KNGR Kungurtug, Tuv 112.80 320 ⇓*i* PKIKP **PKiKP 03 13 54.0 -1.9**
SCM Sheep Creek Mo 112.83 22 IAMs_20 IAMs_20 03 52 36.0
comp=Z,706nm,22.0s
HWUT Hardware Ranch 112.87 54 IAMs_20 IAMs_20 03 54 57.9
comp=Z,640nm,20.0s
KLU Klutina 112.92 22 IAMs_20 IAMs_20 03 52 48.4
comp=Z,580nm,22.0s
WAX Waxell Ridge 112.93 24 IAMs_20 IAMs_20 03 54 28.7
comp=Z,608nm,21.0s
MESA MESA 112.97 25 IAMs_20 IAMs_20 03 56 00.1
comp=Z,486nm,21.0s
JCT Junction City 113.00 69 IAMs_20 IAMs_20 03 54 50.3
comp=Z,673nm,19.0s
CAST Castle Rocks 113.03 19 IAMs_20 IAMs_20 03 55 22.0
comp=Z,704nm,20.0s
WMQ Urumqi 113.17 309 *e*PKP **PKiKP 03 13 58.5 +1.8**
WMQ LR LR
comp=Z,340nm,21.5s
WMQ LR LR
comp=Z,430nm,18.9s
YAH Yahtse 113.19 25 IAMs_20 IAMs_20 03 56 39.4
comp=Z,581nm,21.0s
ISLE Juniper Island 113.20 25 IAMs_20 IAMs_20 04 03 14.0
comp=Z,450nm,20.0s
WRAK Wrangell Islan 113.28 32 IAMs_20 IAMs_20 03 58 13.9
comp=Z,461nm,19.0s
M24K Tolsona, Glenn 113.36 22 IAMs_20 IAMs_20 03 52 41.1
comp=Z,675nm,22.0s
N25K Chitina, Valde 113.38 23 IAMs_20 IAMs_20 03 55 12.5
comp=Z,594nm,21.0s
VRDI Verde Repeater 113.39 24 IAMs_20 IAMs_20 03 54 36.8
comp=Z,530nm,21.0s
GLB Gilahina Butte 113.46 23 IAMs_20 IAMs_20 03 54 39.7
comp=Z,509nm,22.0s
BCPM Bancas Point 113.50 26 IAMs_20 IAMs_20 03 56 25.1
comp=Z,432nm,20.0s
DHY Denali Highway 113.86 21 IAMs_20 IAMs_20 03 53 18.1
comp=Z,656nm,22.0s
JIS Juneau Island 113.94 30 IAMs_20 IAMs_20 03 56 21.0
comp=Z,483nm,20.0s
NEW Newport 114.25 45 IAMs_20 IAMs_20 03 53 34.7
comp=Z,614nm,21.0s
M26K Nabesna, AK 114.47 23 IAMs_20 IAMs_20 03 55 37.3
comp=Z,561nm,22.0s
AMTX Amarillo 114.56 65 IAMs_20 IAMs_20 03 54 41.6
comp=Z,640nm,20.0s
KIBK Kibwezi 114.56 239 IAMs_20 IAMs_20 03 52 11.5
comp=Z,527nm,22.0s
I21K Tanana 114.58 18 IAMs_20 IAMs_20 03 53 54.8
comp=Z,644nm,22.0s
435B Jarrell 114.66 71 IAMs_20 IAMs_20 03 54 52.4
comp=Z,714nm,20.0s
MLY Manley 114.72 18 IAMs_20 IAMs_20 03 56 33.6
comp=Z,636nm,20.0s
BW06 Boulder Array 114.76 54 IAMs_20 IAMs_20 03 55 59.9
comp=Z,559nm,20.0s
PDAR Pinedale Array 114.76 54 PKP PKPdf 03 13 58.1 -1.9
comp=Z,0.2nm,0.4s,baz=228,slow=2.3,SNR=2.3
PDAR PP **PP 03 14 55.9 -3.3**
comp=Z,0.6nm,0.8s,baz=255,slow=5.8,SNR=4.0
PDAR PKKPbc **PKKPbc 03 24 36.2 -0.9**
comp=Z,0.3nm,0.5s,baz=58,slow=6.7,SNR=2.4
L26K Log Cabin Wild 114.87 23 IAMs_20 IAMs_20 04 00 41.0
comp=Z,518nm,20.0s
RIDG Independent Ri 115.06 21 IAMs_20 IAMs_20 03 53 43.8
comp=Z,486nm,22.0s
I23K Minto, Yukon-K 115.13 19 IAMs_20 IAMs_20 03 55 34.5
comp=Z,510nm,22.0s
RDOG Red Dog Mine 115.18 12 IAMs_20 IAMs_20 03 56 44.1
comp=Z,534nm,22.0s
ISCO Idaho Springs 115.20 58 IAMs_20 IAMs_20 03 55 57.0
comp=Z,597nm,20.0s
COLA College 115.25 20 ⇓*i* PKIKP **PKPdf 03 13 58.3 -1.6**
HKT Hockley 115.31 72 IAMs_20 IAMs_20 03 59 01.8
comp=Z,386nm,18.0s
L27K Beaver Creek, 115.32 23 PKPdf 03 13 58.6 -1.6
L27K IAMs_20 IAMs_20 03 55 51.9
comp=Z,641nm,20.0s
BCAR Beaver Creek A 115.33 23 PKPdf 03 13 59.1 -1.2
BOZ Bozeman (W) 115.40 50 PKPdf 03 13 59.3 -1.8
BOZ Bozeman (W) 115.40 50 PKIKP **PKPdf 03 13 59.3 -1.8**
IL31 115.40 20 PKPdf 03 13 58.7 -1.4
ILAR Eielson Array 115.40 20 PKP **PKPdf 03 13 58.4 -1.9**
comp=Z,3.7nm,0.7s,baz=289,slow=3.3,SNR=45
ILAR PKKPbc **PKKPbc 03 24 33.7 -1.5**
comp=Z,2.2nm,0.7s,baz=360,slow=3.1,SNR=30
ILAR SKKPbc SKKPbc 03 28 20.1 -0.4
comp=Z,0.6nm,1.0s,baz=20,slow=2.9,SNR=4.0
ILAR Eielson Array 115.40 20 PKPdf 03 13 58.7 -1.5
ILAR Eielson Array 115.40 20 PKIKP **PKPdf 03 13 58.7 -1.5**
SCRK Sand Creek 115.47 22 PKPdf 03 13 59.4 -1.2
SCRK IAMs_20 IAMs_20 03 55 41.8
comp=Z,534nm,21.0s
J25K Salcha River, 115.64 21 IAMs_20 IAMs_20 03 54 12.1
comp=Z,542nm,22.0s
H23K Yukon River 115.66 18 IAMs_20 IAMs_20 03 55 29.5
comp=Z,728nm,22.0s
P33M Teslin, Yukon 115.92 29 IAMs_20 IAMs_20 03 57 51.3
comp=Z,426nm,20.0s
HRY Holter Researc 115.99 49 PKPdf 03 14 01.7 -0.4
KMBO Kilima Mbogo 116.00 239 PKP **PKiKP 03 14 03.6 +0.2**
comp=Z,8.3nm,0.9s,baz=64,slow=2.1,SNR=15
KMBO Kilima Mbogo 116.00 239 *d i* PKiKP **PKiKP 03 14 03.8 +0.4**
KMBO Kilima Mbogo 116.00 239 *i* PKiKP **PKiKP 03 14 03.8 +0.4**
SNR=8.4
J26L Joseph Creek 116.01 21 IAMs_20 IAMs_20 03 56 07.9
comp=Z,464nm,20.0s
K27K Chicken 116.02 22 IAMs_20 IAMs_20 03 56 29.3
comp=Z,559nm,20.0s
H24K Noodor Dome 116.05 19 IAMs_20 IAMs_20 03 57 45.8
comp=Z,636nm,20.0s
WMOK Wichita Mounta 116.34 66 PKPdf 03 14 02.2 -0.9
WMOK Wichita Mounta 116.34 66 PKIKP **PKPdf 03 14 02.2 -0.9**
M30M Minto, Yukon 116.41 25 IAMs_20 IAMs_20 04 01 06.8
comp=Z,467nm,19.0s
M31M Drury Creek, Y 116.87 27 IAMs_20 IAMs_20 04 00 47.2
comp=Z,517nm,20.0s
ZSN Zaisan 117.01 311 *e*PKIKP **PKPdf 03 14 02.1 -1.8**
ZSN Zaisan 117.01 311 *e*PKP **PKPdf 03 14 02.2 -1.8**
baz=311
NATX Nacogdoches 117.22 71 IAMs_20 IAMs_20 03 56 53.3
comp=Z,478nm,20.0s
KSH Kashi 117.28 300 PKP **PKiKP 03 14 05.9 +1.0**
KSH LR LR
comp=Z,250nm,16.5s
KSH LR LR
comp=Z,280nm,16.5s
KSH LR LR
comp=Z,400nm,14.8s
J29M Klondike Camp 117.42 24 IAMs_20 IAMs_20 03 56 45.3
comp=Z,479nm,21.0s
EGMT Eagleton 117.91 49 IAMs_20 IAMs_20 04 06 30.0
comp=Z,380nm,18.0s
SATY Saty 117.95 304 *e*PKIKP **PKPdf 03 14 04.1 -1.9**
SATY Saty 117.95 304 *e*PKP **PKPdf 03 14 04.2 -1.9**
baz=304
MK31 Makanchi Array 118.00 309 ⇓*i* PKIKP **PKPdf 03 14 04.6 -1.3**
MKAR Makanchi Array 118.00 309 PKP **PKPdf 03 14 04.6 -1.3**
comp=Z,12nm,1.0s,baz=113,slow=2.8,SNR=58
MKAR PKKPbc **PKKPbc 03 24 25.1 -0.4**
comp=Z,1.9nm,0.8s,baz=332,slow=4.1,SNR=14
TOLK Toolik Lake Re 118.03 17 PKPdf 03 14 04.9 -0.4
KPKS Kokpek 118.04 304 *e*PKIKP **PKPdf 03 14 04.2 -1.9**
KPKS Kokpek 118.04 304 *e*PKP **PKPdf 03 14 04.3 -1.9**
baz=304
OGNE Ogallala 118.06 59 IAMs_20 IAMs_20 03 57 56.8
comp=Z,531nm,20.0s
I29M Ogilvie Camp, 118.08 23 IAMs_20 IAMs_20 03 55 03.8
comp=Z,519nm,22.0s
MAKZ Makanchi 118.18 309 PKPdf **PKPdf 03 14 04.0 -2.2**
MAKZ Makanchi 118.18 309 ⇓PKIKP **PKPdf 03 14 04.9 -1.3**
CBKS Cedar Bluff 118.20 62 IAMs_20 IAMs_20 03 57 20.8
comp=Z,567nm,20.0s
KBL Kabul 118.71 291 PKPdf **PKPdf 03 14 05.6 -2.3**
KBL Kabul 118.71 291 PKIKP **PKPdf 03 14 05.6 -2.3**
ULHL Ulahol 118.75 302 P **PKPdf 03 14 07.4 -0.4**
SNR=18
RSSD Black Hills 118.76 55 PKPdf 03 14 05.6 -2.1
RSSD Black Hills 118.76 55 IAMs_20 IAMs_20 04 00 00.0
comp=Z,554nm,20.0s
RSSD Black Hills 118.76 55 PKIKP **PKPdf 03 14 05.6 -2.1**
TNSS Tian-Shan 118.80 303 *e*PKIKP **PKPdf 03 14 06.9 -1.1**
TNSS Tian-Shan 118.80 303 *e*PKP **PKPdf 03 14 07.0 -1.1**
baz=303
MDOK Medeo 118.82 303 *e*PKIKP **PKPdf 03 14 06.0 -1.7**
MDOK Medeo 118.82 303 *e*PKP **PKPdf 03 14 06.0 -1.7**
baz=303
SDV Santo Domingo 118.83 108 IAMs_20 IAMs_20 04 01 31.4
comp=Z,475nm,19.0s
AAA Alma-Ata 118.92 303 *e*PKIKP **PKPdf 03 14 07.1 -0.7**
AAA Alma-Ata 118.92 303 *e*PKP **PKPdf 03 14 07.2 -0.7**
baz=303
TUL1 Leonard 118.99 67 IAMs_20 IAMs_20 03 57 17.9
comp=Z,665nm,20.0s
CHKK Chushkaly 119.26 304 *e*PKIKP **PKPdf 03 14 06.2 -2.2**
CHKK Chushkaly 119.26 304 *e*PKP **PKPdf 03 14 06.2 -2.2**
baz=304
TKM2 Tokmak 2 119.54 302 P **PKPdf 03 14 08.2 -1.0**
SNR=8.8
TKM2 Tokmak 2 119.54 302 PKIKP **PKPdf 03 14 07.6 -1.6**
MIAR Mount Ida 119.63 70 IAMs_20 IAMs_20 03 57 19.0
comp=Z,405nm,20.0s
TIXI Tiksi 119.66 347 ⇓PKIKP **PKPdf 03 14 06.3 -1.9**
KUU Kurty 119.66 304 *e*PKIKP **PKPdf 03 14 07.0 -2.2**
KUU Kurty 119.66 304 *e*PKP **PKPdf 03 14 07.0 -2.2**
baz=304
KBK Karagaybulak 119.77 302 P **PKPdf 03 14 09.4 -0.2**
SNR=8.3
UCH Uchtor 119.78 301 P **PKPdf 03 14 09.9 -0.1**
SNR=16
AAK Ala-Archa 120.03 302 PKPdf **PKPdf 03 14 08.1 -2.0**
AAK Ala-Archa 120.03 302 *c i* PKIKP **PKPdf 03 14 09.5 -0.6**
AAK pmax pmax
comp=Z,10.0nm,1.0s
CHMS Chumysh 120.09 302 P **PKPdf 03 14 09.7 -0.3**
SNR=5.9
X40A Basin Creek Fa 120.09 70 IAMs_20 IAMs_20 03 59 20.2
comp=Z,536nm,20.0s
AML Almayashu 120.22 301 P **PKPdf 03 14 10.6 -0.2**
SNR=11
AML Almayashu 120.22 301 *i* PKPdf **PKPdf 03 14 10.6 -0.2**
SNR=11
MBAR Mbarara 120.24 233 PKPdf 03 14 09.0 -2.5
MBAR Mbarara 120.24 233 *c i* PKIKP **PKiKP 03 14 11.9 +0.3**
MBAR pmax pmax
comp=Z,13nm,1.7s
USP Ospenovka 120.39 302 P **PKPdf 03 14 09.6 -1.0**
SNR=12
SGDS Sogindy 120.42 302 *e*PKIKP **PKPdf 03 14 09.0 -1.7**
SGDS Sogindy 120.42 302 *e*PKP **PKPdf 03 14 09.1 -1.7**
baz=302
EKS2 Erkin-Say 120.48 301 P **PKPdf 03 14 10.7 -0.2**
SNR=13
LODK Lodwar 120.74 240 PKPdf 03 14 10.0 -2.3
LODK IAMs_20 IAMs_20 03 55 59.6
comp=Z,414nm,21.0s
BTK Batken 120.81 297 PKPdf **PKPdf 03 14 10.6 -1.0**
BTK **PKiKP 03 14 11.3 -0.4**
BTK Batken 120.81 297 PKIKP **PKPdf 03 14 10.6 -1.0**
SOHO SOHO 120.92 274 PKPdf **PKPdf 03 14 11.5 -0.6**
ZALV Zalesovo Beam 120.92 317 PKP **PKPdf 03 14 09.4 -1.8**
comp=Z,8.2nm,0.9s,baz=132,slow=2.2,SNR=21
ZALV PKKPbc **PKKPab 03 24 13.4 0.0**
comp=Z,1.4nm,0.7s,baz=294,slow=4.7,SNR=5.0
U40A Yellville 121.17 68 P **PKPdf 03 14 10.3 -2.0**
baz=234
U40A P **PKPdf 03 14 10.3 -2.0**
baz=234
DGMT Dagmar 121.19 51 IAMs_20 IAMs_20 04 00 27.8
comp=Z,414nm,21.0s
SEM Semipalatinsk 121.21 312 *e*PKIKP **PKPdf 03 14 09.2 -3.0**
SEM Semipalatinsk 121.21 312 *e*PKP **PKPdf 03 14 09.2 -3.0**
baz=312
ASHO Ashiyiah 121.60 274 *i* PKPdf **PKPdf 03 14 12.3 -1.3**
SNR=6.7
HATD Hatta, Dubai 121.64 274 *i* PKPdf **PKPdf 03 14 12.5 -1.1**
SNR=2.2
S39A Bolivar 121.64 67 P **PKPdf 03 14 11.4 -1.8**
baz=235
UOSS Minazif 121.66 275 PKPdf **PKPdf 03 14 12.3 -1.3**
UOSS Minazif 121.66 275 PKPdf **PKPdf 03 14 11.9 -1.7**
BTLS Baital 121.67 304 *e*PKIKP **PKPdf 03 14 11.6 -1.3**
BTLS Baital 121.67 304 *e*PKP **PKPdf 03 14 11.7 -1.3**
baz=304
MSFE Esma-Masafi 121.95 275 PKPdf **PKPdf 03 14 13.4 -0.7**
FAQ Al Faqa, Dubai 121.97 274 PKPdf **PKPdf 03 14 12.0 -2.2**
ATD Arta Tunnel 121.99 253 IAMs_20 IAMs_20 03 59 32.0
comp=Z,472nm,20.0s
NAZ Nazwa, Dubai 122.07 274 PKPdf **PKPdf 03 14 13.3 -1.1**
ASUD Al Ashush, Dub 122.08 274 PKPdf **PKPdf 03 14 13.5 -0.9**
KURK Kurchatov 122.25 311 PKPdf **PKPdf 03 14 12.1 -1.8**
KURK Kurchatov 122.25 311 *c* PKIKP **PKPdf 03 14 12.0 -1.8**
MZR Muzera 122.35 271 *i* PKPdf **PKiKP 03 14 15.1 0.0**
SNR=6.6
OXF Oxford 122.39 72 IAMs_20 IAMs_20 03 59 56.3
comp=Z,409nm,21.0s
IUG Iuzhnay 122.48 299 *e*PKIKP **PKPdf 03 14 13.4 -1.3**
IUG Iuzhnay 122.48 299 *e*PKP **PKPdf 03 14 13.4 -1.3**
baz=299
KK31 Karatay Array 122.71 300 *i* PKIKP **PKPdf 03 14 14.0 -1.1**
CHM Chimkent 122.84 299 PKIKP PKPpre 03 14 09.2
ECSD EROS Data Cent 122.95 59 IAMs_20 IAMs_20 04 00 24.2
comp=Z,620nm,21.0s
ECSD EROS Data Cent 122.95 59 P **PKPdf 03 14 13.9 -1.5**
baz=237
MDND Maddock 123.42 54 P **PKPdf 03 14 15.0 -1.3**
baz=238,SNR=5.5
P40A Paris 123.50 66 P **PKPdf 03 14 14.5 -2.1**
baz=236
PLAL Pickwick Lake 123.56 72 IAMs_20 IAMs_20 04 01 45.2
comp=Z,604nm,21.0s
SCIA State Center 124.06 63 IAMs_20 IAMs_20 04 01 27.7
comp=Z,524nm,19.0s
YKA Yellowknife Ar 124.07 33 PKP **PKPdf 03 14 14.7 -2.3**
comp=Z,3.2nm,0.7s,baz=272,slow=1.8,SNR=6.3
YKA PKKPbc **PKKPbc 03 24 01.3 -1.5**
comp=Z,5.7nm,0.7s,baz=50,slow=4.4,SNR=9.0
YKA Yellowknife Ar 124.07 33 *c i* PKIKP **PKPdf 03 14 15.6 -1.4**
YKA pmax pmax
comp=Z,3.0nm,0.7s
F33A 5 Mile Ranch, 124.28 57 P **PKPdf 03 14 16.8 -1.2**
baz=238,SNR=14
WVT Waverly 124.38 71 IAMs_20 IAMs_20 04 05 04.7
comp=Z,428nm,19.0s
WVT Waverly 124.38 71 P **PKPdf 03 14 16.4 -2.0**
baz=236
OTUK Ortayu 124.39 306 PKIKP **PKPdf 03 14 16.9 -1.2**
K38A Parkersburg 124.73 62 P **PKPdf 03 14 17.5 -1.4**
baz=238
I37B Waseca 125.06 60 P **PKPdf 03 14 18.5 -1.0**
baz=238
BRZS Berezniki 125.09 308 *e*PKIKP **PKPdf 03 14 16.4 -2.9**
BRZS Berezniki 125.09 308 *e*PKP **PKPdf 03 14 16.5 -2.9**
baz=308
RCBR Riachuelo 125.19 152 IAMs_20 IAMs_20 04 06 25.0
comp=Z,531nm,18.0s
AGMN Agassiz Nation 125.79 55 IAMs_20 IAMs_20 04 04 33.0
comp=Z,387nm,20.0s
AGMN Agassiz Nation 125.79 55 P **PKPdf 03 14 18.0 -2.8**
baz=240
HDIL Hopedale 125.83 66 IAMs_20 IAMs_20 04 01 45.9
comp=Z,506nm,20.0s
F36A Milaca 125.94 58 P **PKPdf 03 14 19.3 -1.8**
baz=240,SNR=14
SPMN Marine on St. 126.05 59 P **PKPdf 03 14 19.7 -1.6**
baz=240,SNR=5.6
JFWS Jewell Farm 126.45 63 P **PKPdf 03 14 20.3 -1.9**
baz=239,SNR=11
ULM Lac du Bonnet 126.75 53 PKP **PKPdf 03 14 20.0 -2.5**
comp=Z,4.6nm,0.8s,baz=289,slow=2.2,SNR=5.3
ULM Lac du Bonnet 126.75 53 PKIKP **PKPdf 03 14 20.0 -2.5**
V52A Sevierville 127.07 74 P **PKPdf 03 14 22.1 -1.5**
baz=237,SNR=5.3
GRTK Grand Turk 127.23 96 IAMs_20 IAMs_20 03 59 36.7
comp=Z,427nm,19.0s
TZTN Tazewell 127.49 73 IAMs_20 IAMs_20 04 03 37.1
comp=Z,455nm,20.0s
V53A Saluda 127.51 75 P **PKPdf 03 14 23.8 -0.8**
baz=237,SNR=6.8
V53A P **PKPdf 03 14 23.8 -0.8**
baz=237,SNR=6.8
L44A Lake County Fo 127.56 65 IAMs_20 IAMs_20 04 03 06.6
comp=Z,500nm,20.0s
G40A Rib Lake 127.67 60 P **PKPdf 03 14 22.9 -1.5**
baz=241
P48A Milroy 127.78 69 P **PKPdf 03 14 23.6 -1.2**
baz=239
P48A P **PKPdf 03 14 23.6 -1.2**
baz=239
I42A Draeger Farm, 127.79 63 P **PKPdf 03 14 22.8 -1.9**
baz=240
BRVK Borovoye 127.89 311 PKPdf **PKPdf 03 14 23.6 -1.0**
BRVK Borovoye 127.89 311 *c i* PKIKP **PKPdf 03 14 23.4 -1.2**
R50A Paris 127.89 71 P **PKPdf 03 14 23.3 -1.8**
baz=238
R50A P **PKPdf 03 14 23.3 -1.8**
baz=238
GEYT Alibeck 127.89 289 PKP **PKPdf 03 14 24.7 -0.5**
comp=Z,8.7nm,0.9s,baz=220,slow=11,SNR=13
NRIK Noril'sk 127.98 334 PKP **PKPdf 03 14 22.9 -1.3**
comp=Z,16nm,0.8s,baz=100,slow=2.9,SNR=23
NRIK Noril'sk 127.98 334 PKPdf **PKPdf 03 14 22.7 -1.5**
NRIK Noril'sk 127.98 334 *c i* PKIKP **PKPdf 03 14 22.8 -1.5**
S51A Beattyville 128.04 72 P **PKPdf 03 14 24.0 -1.4**
baz=238,SNR=5.8
S51A P **PKPdf 03 14 24.0 -1.4**
baz=238,SNR=5.8
EYMN Ely 128.18 57 IAMs_20 IAMs_20 04 04 15.3
comp=Z,562nm,19.0s
KMSC Kings Mountain 128.23 76 P **PKPdf 03 14 24.4 -1.4**
baz=237
P49A Miami Univ. Ec 128.29 69 IAMs_20 IAMs_20 04 05 26.1
comp=Z,482nm,20.0s
P49A Miami Univ. Ec 128.29 69 P **PKPdf 03 14 24.5 -1.3**
baz=239,SNR=5.1
RAYN Ar Rayn 128.32 266 PKPdf **PKPdf 03 14 25.6 -0.8**
RAYN Ar Rayn 128.32 266 IAMs_20 IAMs_20 04 06 39.8
comp=Z,350nm,19.0s
RAYN Ar Rayn 128.32 266 ⇑PKIKP **PKPdf 03 14 26.4 0.0**
RAYN Ar Rayn 128.32 266 *i* PKPdf **PKPdf 03 14 26.7 +0.3**
SNR=18
O48B Farmland 128.37 68 P **PKPdf 03 14 24.5 -1.5**
baz=239,SNR=9.2
SJG San Juan 128.42 104 IAMs_20 IAMs_20 04 06 01.9
comp=Z,341nm,19.0s
HUMP Col San Antoni 128.65 104 PKPdf 03 14 25.9 -1.2
Q51A Peebles 128.94 71 P **PKPdf 03 14 25.7 -1.3**
baz=239
Q51A P **PKPdf 03 14 25.7 -1.3**
baz=239
P51A Williamsport 129.36 70 P **PKPdf 03 14 26.8 -1.1**
baz=239
P51A P **PKPdf 03 14 26.8 -1.1**
baz=239
Q52A Bidwell 129.62 71 P **PKPdf 03 14 27.1 -1.2**
baz=239
Q52A P **PKPdf 03 14 27.1 -1.2**
baz=239
ACSO Alum Creek Sta 129.79 69 IAMs_20 IAMs_20 04 05 41.9
comp=Z,536nm,20.0s
BLA Blacksburg 129.96 74 IAMs_20 IAMs_20 04 03 21.8
comp=Z,404nm,21.0s
SMRT St. Maarten 130.48 106 IAMs_20 IAMs_20 04 11 05.3
comp=Z,424nm,20.0s
O53A New Philadelph 130.97 70 IAMs_20 IAMs_20 04 05 11.3
comp=Z,548nm,22.0s
MCWV Mont Chateau 131.60 72 IAMs_20 IAMs_20 04 06 20.9
comp=Z,486nm,20.0s
AB31 Akbulak array 132.10 302 *i* PKIKP **PKPdf 03 14 31.7 -1.0**
CBN Corbin Frederi 132.55 75 IAMs_20 IAMs_20 04 10 46.2
comp=Z,410nm,20.0s
AKTO Aktyubinsk 133.72 303 PKIKP **PKPdf 03 14 33.2 -2.5**
SVE Sverdlovsk 134.47 312 *i* PKIKP **PKPdf 03 14 36.7 -0.2**
SVE pmax pmax
comp=Z,33nm,1.0s
ARU Arti 135.44 311 PKPdf **PKPdf 03 14 38.1 -0.7**
ARU Arti 135.44 311 *i* PKIKP **PKPdf 03 14 37.3 -1.4**
ARU MLR MLR
comp=Z,398nm,24.0s
GNI Garni 138.05 284 *ce* PKIKP **PKPdf 03 14 44.2 -0.2**
GNI Garni 138.05 284 PKPdf **PKPdf 03 14 43.6 -0.8**
GROC Groznyy 138.64 289 *e*PKIKP **PKPdf 03 14 42.9 -2.2**
GROC pmax pmax
comp=Z,38nm,1.4s
AKH Akhalkalaki 139.45 285 ⇑P **PKPdf 03 14 47.4 +0.5**
ZEI Tsey 139.74 287 *i* PKIKP **PKPdf 03 14 45.5 -1.9**
ZEI pmax pmax
comp=Z,8.0nm,1.2s
GHAJ Ghor Haditha 140.03 267 IAMs_20 IAMs_20 04 08 46.0
comp=Z,356nm,21.0s
BELG Belogornoye 140.50 303 *ce* PKIKP **PKPdf 03 14 46.8 -1.3**
LIC Lamto 140.56 192 *e*PKIKP PKPpre 03 14 41.6
comp=Z,38nm,1.0s
KIC Kosan Boka 140.65 193 *e*PKIKP PKPpre 03 14 41.4
comp=Z,29nm,0.7s
KIRV Kirov 140.73 313 *ce* PKIKP **PKPdf 03 14 46.8 -1.6**
KBZ Khabaz 140.79 288 PKhKP PKPpre 03 14 42.0
comp=Z,6.6nm,0.9s,baz=70,slow=0.4,SNR=12
KBZ Khabaz 140.79 288 *de* PKIKP **PKPdf 03 14 46.7 -2.3**
DBIC Dimbokro 140.97 193 PKhKP PKPpre 03 14 42.5
comp=Z,13nm,0.9s,baz=179,slow=3.0,SNR=24
DBIC Dimbokro 140.97 193 ⇓PKHKP PKPpre 03 14 42.8
TIC Toumodi 140.97 193 *e*PKIKP PKPpre 03 14 42.0
comp=Z,54nm,1.0s
KIV Kislovodsk 141.01 289 ⇓P **PKPdf 03 14 48.8 -0.8**
KIV Kislovodsk 141.01 289 PKPdf **PKPdf 03 14 47.6 -1.9**
KIV Kislovodsk 141.01 289 *i* PKIKP **PKPdf 03 14 48.2 -1.3**

KIV pmax pmax
comp=Z,24nm,1.1s
KIV MLR MLR
comp=Z,174nm,24.0s
KIV Kislovodsk 141.01 289 *i* PKPdf **PKPdf 03 14 48.4 -1.2**
SNR=5.7
TULEG Thule 141.31 18 IAMs_20 IAMs_20 04 11 38.2
comp=Z,488nm,22.0s
SOC Sochi 142.88 287 *i* PKIKP **PKiKP 03 14 54.4 -1.5**
SOC *e* 03 17 59.0
SOC *e*PPP PPP 03 21 13.1
SOC *e*SS SS 03 36 33.3 -5.0
SOC *e*SSS SSS 03 41 59.8
SOC pmax pmax
comp=Z,12nm,0.5s
PRGR Permogore 142.88 318 *e*PKHKP PKPpre 03 14 46.2
CSS Mathiatis 143.58 270 IAMs_20 IAMs_20 04 22 40.9
comp=Z,347nm,20.0s
VRH Novokhopyorsk 143.79 300 *e*PKIKP PKPab 03 14 50.6 -0.5
VRH pmax pmax
comp=Z,30nm,0.7s
HAL Halifax 144.63 72 PKPdf **PKPab 03 14 53.9 -0.6**
HAL Halifax 144.63 72 PKIKP **PKPab 03 14 53.9 -0.6**
ANN Anapa 144.84 288*c* i PKIKP **PKPab 03 14 54.2 -1.0**
ANN pmax pmax
comp=Z,103nm,1.4s
ANN pmax pmax
comp=Z,206nm,1.6s
KBS Kingsbay 144.88 352 **PKPab 03 14 53.9 -0.6**
KBS Kingsbay 144.88 352 PKIKP **PKPab 03 14 53.9 -0.6**
KBS Kingsbay 144.88 352 *e* **PKPab 03 14 54.3 -0.2**
SCHQ Schefferville 144.89 54 PKP **PKPab 03 14 53.4 -1.8**
comp=Z,15nm,1.0s,baz=299,slow=2.8,SNR=11
SCHQ Schefferville 144.89 54 **PKPab 03 14 53.7 -1.5**
HOPEN Hopen 144.92 345 *e* **PKPab 03 14 54.2 -0.4**
SPA0 Spitsbergen Ar 145.00 350 *e* PKPbc 03 14 53.8 -1.2
VORD Divnogorie 145.24 299 *e*PKIKP **PKPbc 03 14 55.7 -0.7**
VORD pmax pmax
comp=Z,290nm,1.9s
VSR Storozhevoye 145.37 299 *e*PKIKP **PKPbc 03 14 55.8 -1.0**
VSR pmax pmax
comp=Z,220nm,1.8s
VORR Voronezh 145.43 300 *e*PKIKP **PKPdf 03 14 56.0 -0.9**
VORR pmax pmax
comp=Z,130nm,0.7s
BR131 Keskin Array S 145.57 278*c* i PKIKP **PKPdf 03 14 57.3 -0.5**
BRTR Keskin Array B 145.57 278 PKPbc **PKPdf 03 14 57.0 -0.8**
comp=Z,62nm,1.1s,baz=142,slow=4.2,SNR=134
BRTR Keskin Array B 145.57 278 PKIKP **PKPdf 03 14 57.0 -0.8**
TORD Torodi Ar. Bea 145.70 206 PKPbc **PKPdf 03 14 58.4 -0.2**
comp=Z,222nm,0.7s,baz=155,slow=2.2,SNR=1018
LPSR Galich'ya Gora 145.75 301 *e*PKP2 **PKPdf 03 14 57.2 -0.2**
LPSR pmax pmax
comp=Z,220nm,1.2s
KLMR Klimovskoe 145.84 316 *e*PKHKP PKPpre 03 14 53.4
KLMR pmax pmax
comp=Z,476nm,1.5s
KLMR Klimovskoe 145.84 316 *e*PKPdf **PKPdf 03 14 53.4 -3.9**
KLMR AMP 03 14 59.2
comp=Z,476nm,1.5s
UPNV Upernavik 145.97 21 *i* P **PKPdf 03 14 56.1 -1.2**
HSPB Hornsund (broa 146.06 349 *e* **PKPdf 03 14 56.9 -0.4**
BZK Bozkurt 146.20 281 ⇑P **PKPdf 03 14 54.0 -4.5**
LVZ Lovozero 146.62 329 **PKPdf 03 14 57.9 -0.6**
LVZ Lovozero 146.62 329 ⇓PKP2 **PKPdf 03 14 59.0 +0.5**
MOS Moscow 146.84 307 *e*PKIKP **PKPdf 03 14 58.3 -0.9**
MOS *i* 03 15 09.2
MOS pmax pmax
comp=Z,179nm,1.7s
ISP Isparta 146.94 273 IAMs_20 IAMs_20 04 18 32.3
comp=Z,415nm,21.0s
SIM Simferopol' 147.12 287 *e*PKP2 **PKPbc 03 15 01.2 -1.1**
SIM pmax pmax
comp=Z,68nm,1.0s
APA Apatity 147.18 329 ⇓*i* PKIKP **PKPdf 03 14 57.6 -1.8**
APA *i* 03 15 12.3
APA pmax pmax
comp=Z,40μm,1.0s
APA pmax pmax
comp=Z,20μm,1.0s
NUUG Nuugaatsiaq 147.39 22 *i* P **PKPdf 03 15 00.5 +0.9**
OBN Obninsk 147.41 306 ⇑P **PKPbc 03 15 02.8 +0.2**
OBN Obninsk 147.41 306 PKPdf **PKPdf 03 14 59.6 -0.5**
OBN Obninsk 147.41 306 IAMs_20 IAMs_20 04 20 13.3
comp=Z,334nm,20.0s
OBN Obninsk 147.41 306*c* i PKIKP **PKPdf 03 14 59.1 -1.0**
OBN *e* 03 21 56.0
OBN *e* 03 31 11.8
OBN *i* SS SS 03 37 22.4 -7.0
OBN pmax pmax
comp=Z,301nm,1.6s
BJO1 Bjornoya 147.41 345 *e*PKPdf **PKPbc 03 15 01.0 -1.1**
ARG Arkhangelos 147.88 268 P **PKPbc 03 15 03.9 -0.7**
YER Yerkesik 148.20 270 P **PKPbc 03 15 05.2 -0.3**
KARP Karpathos 148.23 267 P **PKPbc 03 15 05.2 -0.4**
KARP Karpathos 148.23 267 IAMs_20 IAMs_20 04 17 12.1
comp=Z,361nm,21.0s
DAG Danmarks Havn 148.24 2 *i* P **PKPdf 03 14 58.0 -2.9**
KEV Kevo 148.39 335 PKPdf **PKPdf 03 15 01.2 -0.1**
KEV Kevo 148.39 335 PKIKP **PKPdf 03 15 01.2 -0.1**
DAT Datca 148.51 269 P **PKPbc 03 15 05.4 -1.0**
KULA Kula-Manisa 148.56 273 P **PKPbc 03 15 06.1 -0.3**
ZKR Zakros 148.68 265 P **PKPbc 03 15 06.0 -0.7**
NIS1 Nisyros Isl. 148.73 268 P **PKPbc 03 15 06.0 -0.8**
NISR Nisiros 148.77 268 P **PKPbc 03 15 06.1 -0.8**
HAMF Hammerfest 148.86 337 *e*PKPdf **PKPbc 03 15 04.6 -1.5**
ARA0 ARCESS Array S 148.96 335 *e*PKPdf **PKPbc 03 15 05.6 -0.7**
ARCES ARCESS Array B 148.96 335 PKP **PKPdf 03 15 01.2 -1.1**
comp=Z,58nm,1.0s,baz=86,slow=1.4,SNR=17
ARCES PKPbc **PKPbc 03 15 05.5 -0.9**
comp=Z,64nm,0.8s,baz=78,slow=1.9,SNR=65
ARCES ARCESS Array B 148.96 335 **PKPdf 03 15 00.8 -1.5**
NPS Neapolis 149.18 265 P **PKPbc 03 15 07.5 -0.5**
ILULI Ilulissat 149.22 26 *i* P **PKPdf 03 15 03.6 +0.9**
ISK Istanbul-Kandi 149.31 277 P **PKPbc 03 15 07.0 -1.1**
SMG Samos 149.49 270 P **PKPbc 03 15 07.8 -0.9**
BLCB Balcova 149.65 271 P **PKPbc 03 15 08.3 -0.7**
IDI Anoyia 149.70 264 ⇑P **PKPbc 03 15 08.7 -0.7**
IDI Anoyia 149.70 264 P **PKPbc 03 15 08.9 -0.5**
SANT Santorini 149.84 267 ⇑P **PKPdf 03 15 02.5 -2.3**
SANT Santorini 149.84 267 P **PKPbc 03 15 08.5 -1.3**
SANT Santorini 149.84 267 PKPbc **PKPbc 03 15 08.4 -1.3**
THR8 Santorini-Mono 149.84 267 P **PKPbc 03 15 08.5 -1.0**
THR3 Thira Island, 149.90 267 P **PKPbc 03 15 08.9 -0.8**
KTK1 Kautokeino 149.92 335 *e*PKPdf **PKPbc 03 15 07.4 -1.3**
SAP3 Santorini-Thir 149.95 267 P **PKPbc 03 15 08.9 -0.9**
GVD Gavdhos 150.03 263 P **PKPbc 03 15 09.3 -0.8**
GVDS Gavdos 150.03 263 P **PKPbc 03 15 09.4 -0.7**
SUMG Summit 150.07 15 **PKPdf 03 15 02.9 -1.6**
SUMG IAMs_20 IAMs_20 04 18 13.4
comp=Z,413nm,21.0s
SUMG Summit 150.07 15 PKIKP **PKPdf 03 15 02.9 -1.6**
SUMG Summit 150.07 15 *i* P **PKPdf 03 15 03.0 -1.6**
APE Apeiranthos 150.12 268 ⇑P **PKPbc 03 15 09.3 -1.0**
APE Apeiranthos 150.12 268 ⇑PKIKP **PKPbc 03 15 09.3 -1.0**
CHOS Chios island 150.34 271 P **PKPbc 03 15 10.0 -0.8**
PURM Purcari 150.41 288 ⇑P **PKPbc 03 15 10.6 0.0**
JETT Jettan, Norway 150.41 337 *e*PKPdf **PKPbc 03 15 08.9 -1.1**
IMMV Iera Moni Meta 150.43 264 P **PKPbc 03 15 10.7 -0.3**
SFJD Kangerlussuaq 150.50 29 **PKPdf 03 15 03.0 -1.8**
SFJD Kangerlussuaq 150.50 29 PKIKP **PKPdf 03 15 03.0 -1.8**
SFJD Kangerlussuaq 150.50 29 *i* P **PKPdf 03 15 07.0 +2.2**
PUL Pulkovo 150.51 315⇑ *e*PKIKP **PKPdf 03 15 04.1 -0.9**
KNDR Palaiochora Ch 150.52 263 P **PKPbc 03 15 10.9 -0.3**
PRK Paraskevi 150.56 272 P **PKiKP 03 15 11.5 -0.4**
DBG Daneborg 150.63 4 *i* P **PKPdf 03 15 03.1 -1.7**
RODP Rodopos 150.63 264 P **PKPbc 03 15 11.8 +0.3**
JURR Jurilovca 150.64 284 ⇓P **PKPbc 03 15 10.4 -0.8**
MHLO Agia Marina, M 150.74 266 P **PKPbc 03 15 10.6 -1.1**
EZN Ezine 150.75 273 P **PKPbc 03 15 10.9 -0.7**
TRO Tromso 150.77 338 *e*PKPdf **PKPbc 03 15 09.5 -1.2**
MFTR Murfatlar 150.79 283 ⇓P **PKPbc 03 15 11.2 -0.4**
TLCR 150.79 285 ⇑P **PKPbc 03 15 11.0 -0.5**
TLCR 150.79 285 ⇑PKIKP **PKPbc 03 15 11.0 -0.5**
SIGR SIGRI 150.84 272 P **PKPbc 03 15 10.9 -0.9**
TIRR Tirgusor 150.87 283 ⇑P **PKPbc 03 15 11.4 -0.4**
TIRR Tirgusor 150.87 283 ⇑P **PKPbc 03 15 11.4 -0.4**
TIRR Tirgusor 150.87 283 ⇑PKIKP **PKPbc 03 15 11.4 -0.4**
TPGR Topolog 150.98 284 ⇓P **PKPbc 03 15 12.0 0.0**
ANKY Antikythira Is 151.11 264 P **PKPbc 03 15 12.5 -0.1**
MILM Milestii Mici 151.21 289 *e*PKP **PKPdf 03 15 04.0 -2.5**
comp=Z,380nm,1.8s
MILM Milestii Mici 151.21 289 ⇑P **PKPbc 03 15 11.9 -0.5**
MILM Milestii Mici 151.21 289*c* i PKIKP **PKPbc 03 15 11.0 -1.4**
MILM *e* 03 15 24.0
MILM *e* 03 15 30.0
MILM pmax pmax
comp=Z,380nm,1.8s
KIS Kishinev 151.22 289 *e*PKP **PKPbc 03 15 11.0 -1.5**
comp=Z,140nm,1.5s
KIS Kishinev 151.22 289 *e*PKIKP **PKPbc 03 15 11.0 -1.5**
KIS *e* 03 15 24.0
KIS pmax pmax
comp=Z,140nm,1.5s
CFR Carcaliu 151.26 285 ⇑P **PKPbc 03 15 12.0 -0.6**
CFR Carcaliu 151.26 285 ⇑PKIKP **PKPbc 03 15 12.0 -0.6**
HARR Harsova 151.27 284 ⇑P **PKPbc 03 15 12.5 -0.1**
HARR Harsova 151.27 284 ⇑PKIKP **PKPbc 03 15 12.5 -0.1**
NUUK Nuuk 151.31 35 *i* P **PKPbc 03 15 10.1 -2.0**
KARY Karystos 151.33 269 P **PKPbc 03 15 12.0 -1.1**
ALN Alexandroupoli 151.37 275 P **PKPbc 03 15 11.3 -1.7**
VLDR Vladesti 151.46 286 ⇑P **PKPbc 03 15 12.8 -0.2**
KTHA Kythira Island 151.47 264 P **PKPbc 03 15 12.8 -0.7**
KTHR Kythira 151.51 264 P **PKPbc 03 15 13.3 -0.2**
AKASG Malin Array Be 151.51 296 PKP **PKPdf 03 15 06.8 -0.1**
comp=Z,1.6nm,0.6s,baz=60,slow=1.8,SNR=10
AKASG PKPbc **PKPbc 03 15 12.3 -0.8**
comp=Z,33nm,0.8s,baz=53,slow=2.3,SNR=94
AKBB Malin Array Si 151.51 296*c* i PKIKP **PKPdf 03 15 04.2 -2.6**
SMTH Samothraki Isl 151.57 274 P **PKPbc 03 15 12.4 -1.1**
VARL Varlezi 151.63 286 ⇓P **PKiKP 03 15 14.1 +0.2**
VLY Voula,Athens 151.71 268 P **PKPbc 03 15 12.2 -1.7**
DION Dionisos Attik 151.71 269 P **PKPbc 03 15 12.5 -1.5**
SORM Soroca 151.74 291 ⇓P **PKPbc 03 15 12.6 -1.0**
SORM Soroca 151.74 291 ⇓PKIKP **PKPbc 03 15 12.6 -1.0**
PTL Penteli 151.74 268 P **PKPbc 03 15 12.6 -1.4**
ATHU Athens Univers 151.76 268 P **PKPbc 03 15 12.7 -1.4**
VLI Veliai 151.78 265 P **PKPbc 03 15 12.7 -1.4**
RDO Rodhopi 151.81 276 P **PKPbc 03 15 12.6 -1.4**
KYMI Kymi, Euboea I 151.83 270 P **PKPbc 03 15 13.2 -1.0**
VASR Vaslui 151.83 288 ⇓P **PKiKP 03 15 14.2 -0.1**
BIR Birlad 151.86 287 ⇑P **PKiKP 03 15 14.3 -0.1**
BIR Birlad 151.86 287 ⇑PKIKP **PKiKP 03 15 14.3 -0.1**
KRND KRANIDI 151.94 267 P **PKPbc 03 15 13.0 -1.5**
GHRR 151.97 286 ⇑P **PKiKP 03 15 15.1 +0.5**
EPID Epidavros 152.07 267 P **PKPbc 03 15 13.6 -1.2**
PANC Panciu 152.10 286 ⇑P **PKiKP 03 15 14.8 0.0**
FINES FINESS Array B 152.14 320 PKP **PKPdf 03 15 05.9 -1.5**
comp=Z,2.1nm,0.8s,baz=96,slow=1.9,SNR=7.9
FINES PKPbc **PKPbc 03 15 13.6 -0.6**
comp=Z,69nm,0.8s,baz=90,slow=4.8,SNR=183
VILL Villia 152.18 268 P **PKPbc 03 15 13.4 -1.7**
DY2G Dye2 152.25 28 *i* P **PKPbc 03 15 12.0 -2.6**
LTK Loutraki 152.37 268 P **PKPbc 03 15 13.9 -1.5**
VRI Vrincioaia 152.38 286 ⇑P **PKPbc 03 15 14.4 -0.8**
VRI Vrincioaia 152.38 286 ⇑PKIKP **PKPbc 03 15 14.4 -0.8**
MNK Minsk 152.43 304 *i* PKIKP **PKiKP 03 15 15.4 +0.2**
MNK *i* 03 19 05.4
MNK *i* PPP PPP 03 22 35.0
MNK *i* SSS SSS 03 44 10.8
MNK pmax pmax
comp=Z,120nm,0.9s
MNK pmax pmax
comp=E,7.0nm,1.2s
MNK pmax pmax
comp=N,9.0nm,1.0s
MNK Minsk 152.43 304 *i* PKP **PKiKP 03 15 15.4 +0.2**
comp=E,7.0nm,1.2s
MNK *i* PKP **PKiKP 03 15 15.4 +0.2**
comp=N,9.0nm,1.0s
MNK *i* PKP **PKiKP 03 15 15.4 +0.2**
comp=Z,120nm,0.9s,baz=87
MNK *i* SKP 03 18 46.1
MNK *i* PKS PKSdf 03 18 50.0 +7.8
MNK *i* PP **PP 03 19 05.4 +6.8**
MNK *i* SKS **SKSdf 03 22 20.2 +8.5**
MNK *i* PPP PPP 03 22 35.1
MNK *i* SKKS **SKKSac 03 25 44.0 -0.7**
MNK *i* SS **SS 03 38 33.6 +8.3**
MNK *i* SSS SSS 03 44 10.9
MNK *i* LR LR 04 20 03.1
MNK *i* LRM MLR 04 23 29.6
comp=E,23nm,20.4s
MNK *i* LRM MLR 04 23 29.6
MNK *i* LRM MLR 04 23 29.6
comp=Z,13μm,23.6s
PLOR Plostina 152.43 286 ⇑P **PKPbc 03 15 14.9 -0.5**
PLOR Plostina 152.43 286 ⇑PKIKP **PKPbc 03 15 14.9 -0.5**
KAVA Kavala 152.48 275 P **PKPbc 03 15 14.6 -1.0**
ICESG Greenland Ices 152.49 20 *i* P **PKPbc 03 15 12.0 -3.2**
VSU Vasula 152.57 313*de*PKIKP **PKPdf 03 15 06.3 -1.8**
VSU Vasula 152.57 313 *e*P **PKPbc 03 15 14.9 -0.2**
NEHR Nehoiu 152.58 285 ⇑P **PKPbc 03 15 15.6 -0.1**
LKR Lokris 152.62 269 P **PKPbc 03 15 13.4 -2.5**
ATAL Atalanti 152.62 269 P **PKPbc 03 15 14.4 -1.6**
PYL PYLOS 152.71 265 P **PKPbc 03 15 15.0 -1.2**
COVR Voineasa-Covas 152.74 285 ⇑P **PKPdf 03 15 10.4 +1.5**
XOR Xorichti 152.78 270 P **PKPbc 03 15 15.2 -1.1**
MLR Muntele Rosu 152.83 285 ⇓P **PKPbc 03 15 16.1 -0.3**
MLR Muntele Rosu 152.83 285 ⇓PKIKP **PKPbc 03 15 16.1 -0.3**
STEI Steigen 152.91 337 *e*PKPdf **PKPbc 03 15 14.3 -1.3**
KLV Kalavryta, Ach 152.95 267 P **PKPbc 03 15 16.1 -0.7**
BIZ Bicaz 153.03 288 ⇑P **PKPdf 03 15 08.9 -0.3**
IDID Didziasalis 153.03 306 *e*P **PKiKP 03 15 16.7 +0.2**
NACGM Naroch 153.04 305 *e*PKP **PKiKP 03 15 17.1 +0.6**
NVR Nevrokopi 153.07 275 P **PKPbc 03 15 15.5 -1.4**
SRS Serrai 153.17 274 P **PKPbc 03 15 15.2 -1.9**
SERG Sergoula 153.18 268 P **PKPbc 03 15 16.5 -0.7**
LOF Lofoten 153.23 338 *e*PKPdf **PKPbc 03 15 14.3 -2.0**
FAUS Fauske 153.27 336 *e*PKPdf **PKPbc 03 15 15.2 -1.2**
MEF Metsahovi 153.30 318 *e*P **PKPbc 03 15 16.1 -0.6**
DOPR Dopca 153.32 285 ⇑P **PKPdf 03 15 12.6 +2.8**
IIGN Ignalina 153.32 307 *e*P **PKiKP 03 15 17.4 +0.4**
ISAL Salakas 153.35 307 *e*P **PKiKP 03 15 17.3 +0.2**
MTUR Matau 153.37 284 ⇑P **PKPbc 03 15 16.6 -0.9**
MTUR Matau 153.37 284 ⇑PKIKP **PKPbc 03 15 16.6 -0.9**
MAKR Makrakomi, Fth 153.38 269 P **PKPbc 03 15 17.0 -0.7**
VOIR 153.43 284 ⇓P **PKPbc 03 15 16.3 -1.3**
VOIR 153.43 284 ⇓PKIKP **PKPbc 03 15 16.3 -1.3**
VLAD Vladila 153.52 281 ⇓P **PKPbc 03 15 14.7 -3.1**
LIT Litokhoron 153.57 271 P **PKPbc 03 15 16.7 -1.3**
THL Klokotos Trika 153.69 270 P **PKPbc 03 15 17.0 -1.3**
ARR Arges 153.70 284 ⇑P **PKPdf 03 15 09.7 -0.6**
BURAR Bucovina Array 153.74 289 ⇓P **PKPdf 03 15 11.3 +0.9**
BURAR Bucovina Array 153.74 289 ⇓PKIKP **PKPdf 03 15 11.3 +0.9**
VTS Vitosha 153.93 277 ⇑P **PKPdf 03 15 10.8 -0.1**
VTS Vitosha 153.93 277 ⇑PKIKP **PKPdf 03 15 10.8 -0.1**
MTSE Matsula 154.00 315 *e*P **PKiKP 03 15 18.4 +0.1**
RAF Rauma 154.25 320 *e*P **PKPbc 03 15 17.8 -1.0**
SCO Scoresbysund 154.27 7 IAMs_20 IAMs_20 04 27 49.4
comp=Z,398nm,21.0s
MOR8 Moi Rana 154.32 334 *e*PKPdf **PKPbc 03 15 16.9 -1.9**
KONS Konsvik 154.50 336 *e*PKPdf **PKPdf 03 15 14.5 +3.8**
PABE Paberze 154.58 307 IAMs_20 IAMs_20 04 39 31.8
comp=Z,434nm,22.0s
PABE Paberze 154.58 307 *e*P **PKiKP 03 15 20.1 +0.4**
BLKB Belogradchik 154.62 279 ⇓P **PKPdf 03 15 10.0 -1.6**
LVV L'vov 154.77 294 *e*PKIKP **PKPdf 03 15 09.8 -1.8**
SUW Suwalki 155.22 304 *e*PKP **PKPdf 03 15 18.5 +6.5**
SUW Suwalki 155.22 304 *e*P PKPdf 03 15 19.8 +7.8
BOVS Bovan 155.30 279 ⇑P **PKPdf 03 15 19.1 +6.6**
AAL Aland 155.38 319 *e*P PKPdf 03 15 20.5 +8.5
MDVR Moldovita 155.58 281 ⇓P **PKPdf 03 15 19.6 +6.7**
KWP Kalwaria Pacla 155.61 293 *e*PKP **PKPdf 03 15 11.1 -1.6**
UZH Uzhgorod 155.81 291 *e*PKIKP **PKPdf 03 15 19.9 +6.9**
UZH *e* 03 15 27.9
BZS Buzias 155.83 283 ⇓P **PKPdf 03 15 12.1 -1.1**
BZS Buzias 155.83 283 ⇓PKIKP **PKPdf 03 15 12.1 -1.1**
KOLS Kolonicke sedl 155.85 292 *e*PKIKP **PKPdf 03 15 13.9 +0.8**
KOLS Kolonicke sedl 155.85 292 *e*PKP **PKPdf 03 15 13.9 +0.8**
KOLS *e* 03 15 40.7
TIR Tirane 155.88 272 ⇑P **PKPab 03 15 38.6 -2.0**
TIR Tirane 155.88 272 ⇑PKP2 **PKPab 03 15 38.6 -2.0**
NSS Namsos 156.20 333 *e*PKPdf **PKPdf 03 15 18.6 +5.6**
CRVS Cervenica-Dubn 156.38 291 *e*PKIKP **PKPdf 03 15 15.5 +1.7**
CRVS Cervenica-Dubn 156.38 291 *e*PKP **PKPdf 03 15 15.5 +1.7**
DIVS Divibare 156.62 279 IAMs_20 IAMs_20 04 38 40.8
comp=Z,337nm,20.0s
PDG Podgorica 156.67 275 ⇓P **PKPab 03 15 43.3 -0.6**
PDG Podgorica 156.67 275 IAMs_20 IAMs_20 04 38 47.3
comp=Z,348nm,22.0s
KECS Kecovo 156.99 290 *e*PKIKP **PKPdf 03 15 17.6 +3.0**
KECS Kecovo 156.99 290 *e*PKP **PKPdf 03 15 17.6 +3.0**
NIE Niedzica 157.17 293 *e*PKP **PKPdf 03 15 13.5 -1.4**
TIP Timpagrande 157.25 265 ⇑P **PKPdf 03 15 14.3 -1.0**
TIP Timpagrande 157.25 265 IAMs_20 IAMs_20 04 37 59.9
comp=Z,356nm,20.0s
PSZ Piszkesteto 157.34 289 IAMs_20 IAMs_20 04 33 30.7
comp=Z,379nm,22.0s
OJC Ojcow 157.51 295 *e*PKP **PKPdf 03 15 13.8 -1.4**
MORH Mrgy, Hungar 157.98 284 ⇑P **PKPdf 03 15 14.9 -1.0**
KOVH Kovagotottos 158.33 283 PKP **PKPdf 03 15 14.5 -1.9**
OKC Ostrava-Krasne 158.57 294 *e*PKP2 **PKPab 03 15 52.2 +0.3**
OKC MLR MLR
comp=Z,300nm,17.5s
OKC Ostrava-Krasne 158.57 294 *e*PKPAB **PKPab 03 15 52.2 +0.3**
OKC AMS AMS 04 36 10.0
comp=Z,300nm,17.5s
NB2 NORSAR Subarra158.71 327 PKP **PKPdf 03 15 13.5 -2.9**
comp=Z,68nm,2.5s,baz=52,slow=4.4
NOA NORSAR Array B158.71 327 PKP **PKPdf 03 15 13.7 -2.7**
comp=Z,1.2nm,0.9s,baz=47,slow=1.3,SNR=6.6
NOA PKPab **PKPab 03 15 50.2 -2.0**
comp=Z,3.0nm,0.9s,baz=56,slow=4.6,SNR=9.0
MAUC Maruska 158.78 292 *e*PKPAB **PKPab 03 15 52.1 -0.8**
MAUC AMS AMS 04 37 00.0
comp=Z,600nm,15.1s
JAVC Velka Javorina 158.88 291 *e*PKP **PKPdf 03 15 15.9 -1.1**
JAVC *e* 03 15 53.6
MORC Moravsky Berou 158.97 294 ⇑P **PKPdf 03 15 15.3 -1.8**
MORC Moravsky Berou 158.97 294 ⇑PKIKP **PKPdf 03 15 15.3 -1.8**
MORC Moravsky Berou 158.97 294 *e*PKP **PKPdf 03 15 15.0 -2.1**
MORC *e* 03 15 53.7
MODS Modra-Piesok 159.12 290 *e*PKIKP **PKPdf 03 15 16.5 -0.7**
MODS *e* 03 15 53.4
MODS Modra-Piesok 159.12 290 *e*PKP **PKPdf 03 15 16.5 -0.7**
MODS *e* 03 15 53.4
BEHE Becsehely 159.29 284 PKP **PKPdf 03 15 16.0 -1.5**
AKN Aaknes 159.45 333 *e*PKPdf **PKPdf 03 15 21.7 +4.5**
KRLC Kraliky 159.45 294 *e*PKP2 **PKPab 03 15 55.3 -0.5**
KRLC MLR MLR
comp=Z,300nm,18.1s
KRLC Kraliky 159.45 294 *e*PKPAB **PKPab 03 15 55.3 -0.5**
KRLC AMS AMS 04 39 10.0
comp=Z,300nm,18.1s
VRAC Vranov 159.59 292 ⇑P **PKPdf 03 15 17.0 -0.7**
VRAC Vranov 159.59 292 ⇑PKIKP **PKPdf 03 15 17.0 -0.7**
VRAC Vranov 159.59 292 *e*PKP **PKPdf 03 15 16.3 -1.4**
VRAC *e* 03 15 56.5
KOGS Kog 159.65 284 *i* PKPdf **PKPdf 03 15 15.6 -2.3**
KOGS *e*PKPab **PKPab 03 15 55.9 -0.8**
KOGS *e*PKPab **pPKPab 03 16 08.3 -0.5**
KSP Ksiaz 159.72 297 *e*PKP **PKPdf 03 15 16.5 -1.3**
KRUC Moravsky 159.72 291 *e*PKP **PKPdf 03 15 15.7 -2.2**
KRUC *e* 03 15 56.7
DPC Dobruska-Polom 159.73 295 *e*PKP2 **PKPab 03 15 56.7 -0.3**
DPC MLR MLR
comp=Z,400nm,22.7s
DPC Dobruska-Polom 159.73 295 *e*PKPAB **PKPab 03 15 56.7 -0.3**
DPC *e*pPKP **pPKPab 03 16 07.4 -2.0**
DPC AMS AMS 04 33 10.0
comp=Z,400nm,22.7s
RONA Rosalia, Austr 159.74 288 *e*P **PKPdf 03 15 16.5 -1.6**
comp=Z,8.2nm,1.4s
RONA *e*P **PKPab 03 15 56.4 -0.7**
comp=Z,7.2nm,1.3s
RONA *e*P **pPKPab 03 16 08.6 -0.6**
comp=Z,10nm,1.7s
RONA *e*P **PP 03 19 39.2 -0.3**
comp=Z,6.2nm,1.5s
OSTC Ostas 159.79 296 *e*PKPAB **PKPab 03 15 57.4 +0.2**
OSTC AMS AMS 04 34 30.0
comp=Z,300nm,21.2s
CHVC Chvalec 159.89 296 *e*PKPAB **PKPab 03 15 56.9 -0.7**
CHVC AMS AMS 04 38 30.0
comp=Z,400nm,18.4s
UPC Upice 159.92 296 *e*PKP2 **PKPab 03 15 57.7 -0.1**
UPC MLR MLR
comp=Z,400nm,22.5s
UPC Upice 159.92 296 *e*PKPAB **PKPab 03 15 57.7 -0.1**
UPC AMS AMS 04 34 40.0
comp=Z,400nm,22.5s
CONA Conrad Observa 160.04 288 *i* P **PKPdf 03 15 16.6 -1.8**
comp=Z,7.3nm,1.3s,SNR=5.2
CONA *e*P **PKPab 03 15 57.1 -1.4**
comp=Z,5.5nm,1.2s
CONA *e*P **pPKPab 03 16 11.4 +0.8**
comp=Z,5.7nm,1.2s
BOJS Bojanci 160.21 281 *i* PKPdf **PKPdf 03 15 16.4 -2.1**
BOJS *i* PKPab **PKPab 03 15 58.1 -1.0**
BOJS *i* pPKPab **pPKPab 03 16 10.5 -0.7**
ARSA Arzberg 160.23 286 *e*P **PKPdf 03 15 17.2 -1.3**
comp=Z,4.9nm,1.1s
ARSA *i* P **PKPab 03 15 59.2 -0.1**
comp=Z,27nm,2.1s,SNR=5.6
ARSA *e*P **pPKPab 03 16 12.4 +1.0**
comp=Z,13nm,1.1s
ARSA *e*P **PP 03 19 40.8 -1.4**
comp=Z,6.5nm,1.5s
TREC Trest 160.31 292 AMS AMS 04 39 40.0
comp=Z,500nm,21.9s
SOKA Soboth 160.51 284 *i* P **PKPdf 03 15 17.6 -1.3**
comp=Z,14nm,1.3s,SNR=9.1
SOKA *i* P **PKPab 03 16 00.3 -0.3**
comp=Z,40nm,1.6s,SNR=8.1
SOKA *e*P **pPKPab 03 16 13.4 +0.7**
comp=Z,32nm,1.5s
SOKA *e*P **PP 03 19 43.0 -0.8**
comp=Z,5.4nm,1.1s
KEST Kesra 160.62 249 PKP **PKPdf 03 15 18.4 -1.0**
comp=Z,3.0nm,0.9s,baz=195,slow=19,SNR=4.5
KEST PKPab **PKPab 03 16 01.9 +0.7**
comp=Z,35nm,1.0s,baz=124,slow=1.8,SNR=28
OBKA Obir 160.82 284 *e*P **PKPdf 03 15 19.0 -0.3**
comp=Z,9.1nm,1.6s
OBKA *i* P **PKPab 03 16 01.2 -0.8**
comp=Z,17nm,1.4s,SNR=5.1
OBKA *e*P **pPKPab 03 16 14.9 +0.8**
comp=Z,14nm,1.6s
OBKA *e*P **PP 03 19 43.2 -2.3**
comp=Z,4.5nm,1.1s
PVCC Panska Ves 160.84 296 *e*PKP2 **PKPab 03 16 02.0 +0.3**
PVCC MLR MLR
comp=Z,400nm,22.0s
PVCC Panska Ves 160.84 296 *e*PKPAB **PKPab 03 16 02.0 +0.3**
PVCC AMS AMS 04 36 50.0
comp=Z,400nm,22.0s
PRU Pruhonice 160.90 294 AMS AMS 04 31 30.0
comp=Z,300nm,17.8s
CKRC Cesky Krumlov 161.10 291 *e*PKPAB **PKPab 03 16 02.3 -0.7**
CKRC *e*pPKP **pPKPab 03 16 15.5 +0.1**
MOA Molln 161.11 288 *e*P **PKPdf 03 15 17.2 -2.3**
comp=Z,6.6nm,1.5s
MOA *e*P **PKPab 03 16 02.1 -1.0**
comp=Z,9.2nm,1.4s
MOA *e*P **pPKPab 03 16 15.7 +0.4**
comp=Z,8.5nm,1.3s
MOA *e*P **PP 03 19 47.3 +0.4**
comp=Z,4.2nm,1.4s
BRG Berggiesshubel 161.19 297⇓ *e*PKPf 03 15 17.9
BRG Amp 03 15 19.0
comp=Z,25nm,1.8s
BRG PKPab **PKPab 03 16 03.4 0.0**
BRG Amp 03 16 04.9
comp=Z,24nm,1.3s
BRG *ex* x 03 16 16.4
BRG Amp 03 16 20.2
comp=Z,41nm,1.7s
BRG Berggiesshubel 161.19 297 PKP2 **PKPab 03 16 03.3 0.0**
BRG pmax pmax
comp=Z,24nm,1.3s
BRG pmax pmax
comp=E,130nm,23.9s
CADS Cadrg 161.35 283 *i* PKPdf **PKPdf 03 15 17.4 -2.5**
CADS *e*PKPab **PKPab 03 16 03.2 -1.1**
MYKA Terra Mystica 161.46 284 *e*P **PKPdf 03 15 18.5 -1.5**
comp=E,5.0nm,1.0s
MYKA *e*P **PKPab 03 16 04.4 -0.3**
comp=E,13nm,1.1s
MYKA *e*P **pPKPab 03 16 17.5 +0.7**
comp=E,16nm,1.7s
MYKA *e*P **PP 03 19 46.6 -2.3**
comp=E,5.8nm,1.1s
GERES GERESS Array B 161.50 291 PKP **PKPdf 03 15 17.9 -2.0**
comp=E,1.7nm,0.9s,baz=219,slow=1.7,SNR=21
GERES PKPab **PKPab 03 16 04.2 -0.6**
comp=E,8.9nm,1.1s,baz=124,slow=2.4,SNR=19
BIOA Bad Ischl, Aus 161.53 287 *e*P **PKPdf 03 15 17.8 -2.2**

comp=E,4.2nm,0.8s
BIOA *e*P **PKPab** 03 16 03.7 -1.3
comp=E,10nm,1.3s
BIOA *e*P **pPKPab** 03 16 17.4 +0.3
comp=E,12nm,1.6s
KHC Kasperske Hory 161.57 292 *e*PKP2 **PKPab** 03 16 04.0 -1.1
KHC MLR MLR
comp=Z,400nm,21.4s
KHC Kasperske Hory 161.57 292 *e*PKPAB **PKPab** 03 16 04.0 -1.1
KHC AMS AMS 04 32 40.0
comp=Z,400nm,21.4s
BLS5 Blasjo 161.57 327 *e*PKPdf **PKPdf** 03 15 22.0 +2.4
KBA Koelnbreinsper 161.70 285 *i* P **PKPdf** 03 15 17.9 -2.4
comp=Z,12nm,1.9s,SNR=5.5
KBA *e*P **PKPab** 03 16 04.1 -1.8
comp=Z,7.0nm,1.1s
KBA *e*P **pPKPab** 03 16 17.0 -1.0
comp=Z,8.6nm,1.3s
KBA *e*P **PP** 03 19 43.8 -6.5
comp=Z,3.7nm,1.4s
CLL Collm 161.72 299 *i* PKIKP **PKPdf** 03 15 18.1 -1.9
CLL *i* 03 16 04.4
CLL pmax pmax
comp=Z,110nm,2.8s
CLL pmax pmax
comp=Z,22nm,1.6s
CLL MLR MLR
comp=Z,400nm,19.1s
CLL Collm 161.72 299 *i* PKPdf **PKPdf** 03 15 18.1 -1.9
comp=Z,110nm,2.8s
CLL ⇑*i*PKPab **PKPab** 03 16 04.4 -1.2
comp=Z,22nm,1.6s
CLL ⇓*i*pPKPab **pPKPab** 03 16 18.0 +0.3
comp=Z,26nm,1.7s
CLL *e*PP **PP** 03 19 47.0 -2.9
CLL *e*pPP 03 20 00.0
CLL *e*SKSdf SKSdf 03 22 36.0 +15
CLL *e*PPP PPP 03 23 36.0
CLL *ex* x 03 25 18.0
CLL *e*SKKSac **SKKSac** **03 26 30.0 -4.1**
CLL *ex* x 03 27 12.0
CLL *ex* x 03 28 54.0
CLL *e*PSKS 03 30 20.0
CLL *e*PPS PPS 03 33 22.0
CLL *ex* x 03 35 12.0
CLL *e*SS **SS** **03 40 07.0 +1.9**
CLL *e*SSS SSS 03 46 23.0
CLL *ex* x 03 49 48.0
CLL *e*SSSS 03 50 36.0
CLL Lm MLR 04 41 00.0
comp=N,100nm,20.7s
CLL Lm MLR 04 41 00.0
comp=E,300nm,19.7s
CLL Lm MLR 04 41 00.0
comp=Z,400nm,19.1s
NKC Novy Kostel 162.22 296 AMS AMS 04 38 20.0
comp=Z,400nm,17.9s
ABTA Abfaltersbach 162.25 284 *i* P **PKPdf** 03 15 18.0 -2.8
comp=Z,8.4nm,1.2s,SNR=5.5
ABTA *e*P **PKPab** 03 16 06.7 -1.5
comp=Z,6.2nm,1.0s
ABTA *e*P **pPKPab** 03 16 20.5 +0.2
comp=Z,8.1nm,1.3s
ABTA *e*P **PP** 03 19 48.2 -4.8
comp=Z,5.1nm,1.2s
WTTA Wattenberg 162.87 286 *i* P **PKPdf** 03 15 19.1 -2.4
comp=Z,29nm,1.8s,SNR=8.8
WTTA *e*P **PKPab** 03 16 10.1 -0.9
comp=Z,31nm,2.3s
WTTA *e*P **pPKPab** 03 16 25.1 +1.9
comp=Z,17nm,1.2s
WTTA *e*P **PP** 03 19 58.7 +2.1
comp=Z,8.2nm,1.3s
WATA Walderalm 162.92 286 *i* P **PKPdf** 03 15 19.4 -2.1
comp=Z,19nm,1.6s,SNR=5.6
WATA *e*P **PKPab** 03 16 09.9 -1.3
comp=Z,16nm,1.3s
WATA *e*P **pPKPab** 03 16 24.1 +0.8
comp=Z,14nm,1.3s
SQTA Sankt Quirin 163.16 285 *i* P **PKPdf** 03 15 19.8 -1.9
comp=Z,18nm,1.7s,SNR=5.6
SQTA *e*P **PKPab** 03 16 11.1 -1.1
comp=Z,8.4nm,0.9s
SQTA *e*P **pPKPab** 03 16 25.5 +1.1
comp=Z,22nm,1.6s
SQTA *e*P **PP** 03 19 58.8 +0.9
comp=Z,12nm,1.4s
MOTA Moosalm 163.24 286 *e*P **PKPdf** 03 15 19.5 -2.4
comp=Z,12nm,1.3s
MOTA *i* P **PKPab** 03 16 10.9 -1.7
comp=Z,19nm,1.2s,SNR=5.9
MOTA *e*P **pPKPab** 03 16 24.9 +0.1
comp=Z,17nm,1.3s
MOTA *e*P **PP** 03 19 56.3 -2.1
comp=Z,9.2nm,1.4s
RETA Reutte 163.47 286 *e*P **PKPdf** 03 15 20.0 -1.9
comp=Z,13nm,1.7s
RETA *i* P **PKPab** 03 16 12.7 -0.8
comp=Z,21nm,1.3s,SNR=5.5
RETA *e*P **pPKPab** 03 16 26.9 +1.2
comp=Z,29nm,1.7s
RETA *e*P **PP** 03 19 58.3 -1.3
comp=Z,2.7nm,0.7s
FETA Feichten 163.48 285 *i* P **PKPdf** 03 15 19.4 -2.7
comp=Z,7.0nm,1.2s,SNR=5.4
FETA *e*P **PKPab** 03 16 13.2 -0.5
comp=Z,10nm,1.1s
ZGR Zagora 163.87 203 P **PKPab** 03 16 16.0 +0.4
DAVA Damuels 164.07 286 *i* P **PKPdf** 03 15 20.1 -2.5
comp=Z,9.8nm,1.3s,SNR=5.6
DAVA *i* P **PKPab** 03 16 15.4 -0.9
comp=Z,30nm,1.2s,SNR=11
DAVA *e*P **pPKPab** 03 16 29.0 +0.6
comp=Z,32nm,1.6s
DAVA *e*P **PP** 03 20 08.7 +5.9
comp=Z,2.4nm,0.6s
FIGM Figuig 164.09 219 P **PKPab** 03 16 17.0 +0.4
TZRR Tazzarine 164.48 204 P **PKPab** 03 16 19.0 +0.8
OUZM OUZ 164.92 201 P **PKPab** 03 16 21.0 +0.8
BFO Black Forest 165.09 290 PKPab **PKPab** 03 16 19.1 -1.4
BFO Black Forest 165.09 290 PKP2 **PKPab** 03 16 19.1 -1.4
TDRA Tendrara 165.20 219 P **PKPab** 03 16 22.2 +0.7
SENIN Lac Senin/Sane 165.81 282 PKPdf **PKPdf** 03 15 22.1 -2.2
BNI Bardonecchia 166.13 276 **PKPdf** 03 15 21.9 -2.5
BNI PKPab **PKPab** 03 16 23.7 -1.7
BNI Bardonecchia 166.13 276 PKIKP **PKPdf** 03 15 21.9 -2.5
BNI 03 16 23.7
MEM Membach 166.19 300 *d*PKP **PKPab** 03 16 24.4 -0.9
WLF Walferdange 166.32 296 *d*PKP **PKPab** 03 16 26.5 +0.7
SRHM Skhour des Reh 166.69 199 P **PKPab** 03 16 29.0 +1.1
BGES Gesves 166.82 300 *d*PKP **PKPab** 03 16 27.8 -0.3
BMRD Maredsous 167.03 299 *d*PKPdf **PKPdf** 03 15 22.8 -1.9
BMRD PKP **PKPab** 03 16 28.4 -0.6
DOU Dourbes 167.20 299 *d*PKP **PKPab** 03 16 28.5 -1.2
PMOZ Porto Moniz, M 167.21 164 *e*LR LR 04 21 36.7
comp=Z,289nm,18.0s
AKLM AKL 167.24 216 P **PKPab** 03 16 31.0 +0.6
PMPST Porto Santo, M 167.61 167 *e*PKPdf **PKPdf** 03 15 27.2 +1.5
PBDV Barranco-do-Ve 171.19 207 *e*PKPab **PKPab** 03 16 47.8 +0.2
PVAQ Vaqueiros 171.26 209 *e*PKPdf **PKPdf** 03 15 27.6 -0.2
PVAQ Vaqueiros 171.26 209 *e*PKPab **PKPab** 03 16 48.0 +0.1
PVAQ Vaqueiros 171.26 209 *e*LR LR 04 17 25.7
comp=Z,524nm,22.0s
ESDC Sonseca Array 171.35 233 PKP **PKPdf** 03 15 26.8 -1.0
comp=Z,3.1nm,0.9s,baz=346,slow=1.4,SNR=23
ESDC PKPab **PKPab** 03 16 48.6 +0.2
comp=Z,22nm,1.2s,baz=137,slow=3.3,SNR=44
ESDC PP PP 03 20 30.0 -10
comp=Z,1.2nm,1.0s,baz=166,slow=5.9,SNR=4.2
PAB San Pablo 171.48 231 **PKPdf** 03 15 26.1 -1.9
PAB PKPab **PKPab** 03 16 47.0 -2.0
PAB San Pablo 171.48 231 PKIKP **PKPdf** 03 15 26.1 -1.9
PAB 03 16 47.0
PCVE Castro Verde 171.58 208 *e*PKPdf **PKPdf** 03 15 28.5 +0.6
PCVE Castro Verde 171.58 208 *e*PKPab **PKPab** 03 16 49.6 +0.3
MESJ Messejana 171.82 207 *e*PKPab **PKPab** 03 16 50.6 +0.2
PBEJ Beja 171.87 210 *e*PKPdf **PKPdf** 03 15 28.4 +0.3
PBEJ Beja 171.87 210 *e*PKPab **PKPab** 03 16 51.4 +0.8
PNCL Nicolau / Gran 172.17 207 *e*PKPdf **PKPdf** 03 15 28.5 +0.3
PNCL Nicolau / Gran 172.17 207 *e*PKPab **PKPab** 03 16 52.1 +0.2
EVO Evora 172.38 211 *e*PKPdf **PKPdf** 03 15 28.4 +0.1
EVO Evora 172.38 211 *e*PKPab **PKPab** 03 16 52.9 +0.1
PESTR Estremoz 172.51 214 *e*PKPdf **PKPdf** 03 15 28.3 -0.1
PESTR Estremoz 172.51 214 **PKPdf** 03 15 26.2 -2.2
PMRV Marv??o 172.90 217 *e*PKPab **PKPab** 03 16 54.7 -0.5
PMRV Marv??o 172.90 217 *e*LR LR 04 18 23.2
comp=Z,537nm,18.0s
PMTG Montargil 172.93 211 *e*PKPab **PKPab** 03 16 55.4 +0.1
PCBR Castelo Branco 173.28 219 *e*PKPdf **PKPdf** 03 15 28.3 -0.3
PCBR Castelo Branco 173.28 219 *e*PKPab **PKPab** 03 16 56.4 -0.4
MTE Manteigas 173.76 222 *e*PKPdf **PKPdf** 03 15 29.3 +0.4
MTE Manteigas 173.76 222 *e*LR LR 04 18 38.9
comp=Z,595nm,20.0s
MVO Moncorvo 174.07 229 *e*PKPdf **PKPdf** 03 15 29.8 +0.8
MVO Moncorvo 174.07 229 *e*LR LR 04 18 43.8
comp=Z,536nm,20.0s
PVIS Viseu 174.17 221 *e*PKPdf **PKPdf** 03 15 29.3 +0.3
PVIS Viseu 174.17 221 *e*PKPab **PKPab** 03 17 00.9 0.0
PBRG Braganca 174.34 235 *e*PKPab **PKPab** 03 17 02.3 +0.6
PGAV Gavieira, Arco 175.29 228 *e*LR LR 04 25 45.6
comp=Z,655nm,24.0s

IDC 07 03:45:49.1±4.3, 10°.06S×114°.91E, h0km, mb3.0/3, mbtmp3.1/3 Error ellipse: s-maj=263.7km s-min=29.4km az=47.0, South of Bali

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.16**	**120**	P	P	03 50 34.9	-1.3
	0.2nm,0.6s,baz=287,slow=9.8,SNR=4.8						
	0.2nm,0.6s						
ASAR	**Alice Springs**	**22.62**	**129**	P	P	03 50 52.7	+0.9
	0.5nm,0.8s,baz=306,slow=9.2,SNR=5.2						
	0.5nm,0.8s						
MKAR	**Makanchi Array**	**63.65**	**336**	P	P	03 56 22.3	+0.1
	0.1nm,0.4s,baz=134,slow=6.2,SNR=1.6						
	0.1nm,0.4s						

*IDC **07** 03:46:14.7±1.8, 5°.31S×68°.56E, h0km, mb3.8/7, mbtmp3.8/7, Error ellipse: s-maj=62.0km s-min=22.2km az=51.0*
*NEIC **07** 03:46:17.3±0.4, 5°.13S±0°.09×68°.4E±0°.2, h10km±1km, mb4.4/7, Error ellipse: s-maj=38.3km s-min=15.2km az=271.0*

ISC 07 03:46:17.3±0.8, 5°.2S±0°.2×68°.7E±0°.2, h13km, n23, σ1s01/23, mb4.1/11, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S3	**Diego Garcia H**	**4.50**	**123**	Pn	**Pn**	**03 47 23.6**	**-1.4**
	baz=317,slow=19						
H08S3				T	T	03 52 01.5	
	baz=311,slow=75,SNR=8.9						
H08S1	**Diego Garcia H**	**4.50**	**123**	Pn	**Pn**	**03 47 23.7**	**-1.4**
	baz=317,slow=19						
H08S1				T	T	03 52 04.4	
	baz=311,slow=75,SNR=12						
H08S2	**Diego Garcia H**	**4.52**	**123**	Pn	**Pn**	**03 47 23.9**	**-1.3**
	baz=317,slow=19						
H08S2				T	T	03 52 05.4	
	baz=311,slow=75,SNR=15						
MKAR	**Makanchi Array**	**53.12**	**12**	P	**P**	**03 55 34.9**	**+0.2**
	0.5nm,0.6s,baz=187,slow=7.3,SNR=6.0						
MKAR				PcP	**PcP**	**03 56 42.5**	**-0.4**
	0.7nm,1.0s,baz=180,slow=1.4,SNR=3.0						
	0.5nm,0.6s						
BR131	**Keskin Array S**	**55.11**	**327**	P	**P**	**03 55 47.9**	**-1.6**
BR131				IAmb	IAmb	03 55 51.4	
	comp=Z,2.1nm,1.1s						
BRTR	**Keskin Array B**	**55.11**	**327**	P	**P**	**03 55 49.1**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=134,slow=10,SNR=4.2						
	comp=Z,0.3nm,0.5s						
BRTR	**Keskin Array B**	**55.11**	**327**	P	**P**	**03 55 48.1**	**-1.3**
ZAA0	**Zalesovo Array**	**60.44**	**11**	P	**P**	**03 56 25.7**	**-0.7**
ZAA0				IAmb	IAmb	03 57 00.0	
	comp=Z,1.9nm,0.8s						
ZALV	**Zalesovo Beam**	**60.44**	**11**	P	**P**	**03 56 26.5**	**+0.1**
	comp=Z,1.2nm,0.6s,baz=201,slow=7.6,SNR=4.5						
	comp=Z,1.2nm,0.6s						
ZALV	**Zalesovo Beam**	**60.44**	**11**	P	**P**	**03 56 26.6**	**+0.2**
SONM	**Songino Array**	**62.30**	**28**	P	**P**	**03 56 40.8**	**+1.4**
	comp=Z,0.9nm,0.8s,baz=224,slow=6.2,SNR=6.5						
	comp=Z,0.9nm,0.8s						
ASAR	**Alice Springs**	**65.27**	**114**	P	**P**	**03 56 58.9**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=280,slow=5.9,SNR=4.2						
	comp=Z,0.4nm,0.6s						
WRA	**Warramunga Arr**	**65.39**	**109**	P	**P**	**03 57 00.5**	**+0.4**
	comp=Z,1.4nm,1.0s,baz=280,slow=6.6,SNR=9.0						
	comp=Z,1.4nm,1.0s						
WRA	**Warramunga Arr**	**65.39**	**109**	P	**P**	**03 57 00.6**	**+0.5**
WB2	**Warramunga Arr**	**65.40**	**109**	P	**P**	**03 57 01.2**	**+1.0**
WB2				IAmb	IAmb	03 57 24.2	
	comp=Z,6.6nm,1.4s						
WR0	**Warramunga Arr**	**65.58**	**109**	P	**P**	**03 57 02.3**	**+0.9**
WR0				IAmb	IAmb	03 57 02.5	
	comp=Z,3.5nm,0.9s						
LSTV	**Lastovo**	**66.85**	**321**	*e*Pn	P	03 57 16.6	+7.5
LSTV				Sn		03 57 39.5	
RICI	**Ricice**	**67.08**	**322**	*e*Pn	**P**	**03 57 10.1**	**-0.5**
RICI				Sn		03 57 30.4	
CASY	**Casey**	**67.55**	**163**	P	**P**	**03 57 15.1**	**+2.0**
KLR	**Kul'dur**	**76.81**	**37**	P	**P**	**03 58 09.4**	**+0.6**
	comp=Z,1.1nm,0.6s,baz=162,slow=21,SNR=2.2						
	comp=Z,1.1nm,0.6s						
QSPA	**South Pole Qui**	**84.85**	**180**	P	**P**	**03 58 51.4**	**-0.2**
QSPA				IAmb	IAmb	03 59 03.2	
	comp=Z,4.0nm,1.3s						
NVAR	**Mina Array Bea**	**146.28**	**10**	PKPbc	**PKPbc**	**04 05 57.9**	**-0.5**
	comp=Z,1.0nm,0.8s,baz=351,slow=1.2,SNR=9.2						
TXAR	**Lajitas Array**	**154.89**	**344**	PKPab	**PKPab**	**04 06 34.5**	**0.0**
	comp=Z,0.5nm,0.8s,baz=5.7,slow=2.5,SNR=5.1						

MAN 07 03:49:00.8, 9°.87N×122°.45E, h32km, mb3.8, ML2.6, MS2.1, Negros

*IDC **07** 03:54:16.6±1.1, 45°.37N×153°.68E, h0km, mb3.7/5, mbtmp3.7/6, ML3.4/1, Error ellipse: s-maj=33.7km s-min=30.3km az=105.0*

ISC 07 03:54:23.7±1.1, 45°.4N±0°.2×153°.5E±0°.2, h50km, n7, σ1s02/7, mb3.6/5, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAJ	**Asahikawa**	**7.83**	**265**	Pn	**Pn**	**03 56 14.0**	**-0.8**
	0.5nm,0.3s,baz=83,slow=17,SNR=2.0						
	1.9nm,0.4s						
MKAR	**Makanchi Array**	**47.80**	**299**	P	**P**	**04 02 57.4**	**+1.4**
	0.4nm,0.5s,baz=71,slow=7.9,SNR=3.8						
	0.4nm,0.5s						
FINES	**FINESS Array B**	**65.41**	**335**	P	**P**	**04 05 00.1**	**-0.5**
	2.1nm,1.1s,baz=18,slow=5.0,SNR=5.1						
	2.1nm,1.1s						
WRA	**Warramunga Arr**	**67.27**	**200**	P	**P**	**04 05 12.7**	**-0.2**
	0.3nm,0.7s,baz=18,slow=6.3,SNR=1.8						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**70.95**	**199**	P	**P**	**04 05 36.6**	**+0.8**
	0.6nm,0.7s,baz=11,slow=5.2,SNR=4.9						
	0.6nm,0.7s						
TXAR	**Lajitas Array**	**77.98**	**60**	P	**P**	**04 06 16.5**	**-0.4**
	0.4nm,0.7s,baz=309,slow=3.1,SNR=5.0						
	0.4nm,0.7s						
TXAR	**Lajitas Array**	**77.98**	**60**	PKPbc	**P**	**04 06 16.4**	**-0.5**

*JMA **07** 03:54:56.1±0.2, 25°.3N±1°.0×12°6E±°, h31km±3km, MV3.8/14, NEAR MIYAKOJIMA ISLAND*
*NIED **07** 03:54:56.1, 25°.32N×125°.69E, h31km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr-3.84; Mθθ0.69; Mϕϕ3.15; Mrθ-4.05; Mθϕ-1.04; Mϕr0.80; Fault plane solution: M₀5.31000×10¹⁴ NP1: ϕs353.00000°, δ30.00000°, λ-45.00000°. NP2: ϕs124.00000°, δ69.00000°, λ-112.00000°.*
*IDC **07** 03:55:05.7±4.4, 25°.28N×126°.32E, h83km±40km, mb3.3/3, mbtmp3.7/5 Error ellipse: s-maj=53.1km s-min=25.8km az=99.0*

ISC 07 03:54:54.1±1.3, 25°.44N±0°.07×125°.63E±0°.07, h11km±10km, n17, σ1s10/27, mb3.8/3, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIKM	**Ikemajima**	**0.62**	**214**	*i* P	**Pg**	**03 55 07.2**	**+1.0**
JIKM				S	**Sb**	**03 55 15.7**	**0.0**
JOGS	**Gusukube**	**0.71**	**197**	*i* P	**Pg**	**03 55 08.0**	**+0.1**
JOGS				S	**Sg**	**03 55 16.4**	**-0.8**
JIRB	**Irabujima**	**0.74**	**214**	*i* P	**Pb**	**03 55 08.8**	**-0.2**
JIRB				S	**Sg**	**03 55 18.1**	**0.0**
JMJ2	**Miyako jima3**	**0.75**	**201**	*i* P	**Pb**	**03 55 08.8**	**-0.4**
JMJ2				S	**Sb**	**03 55 18.2**	**-1.2**
JTJ	**Tarama**	**1.16**	**227**	P	**Pn**	**03 55 15.7**	**-0.5**
JTJ				*e*S	**Sb**	**03 55 30.7**	**-0.5**
JKE	**Kume jima 2**	**1.36**	**50**	P	**Pg**	**03 55 21.1**	**+0.8**
JISG	**Ishigakijimahi**	**1.47**	**235**	P	**Pb**	**03 55 21.3**	**-0.1**
JISG				S	**Sb**	**03 55 40.5**	**+0.5**
JIJ	**Ishigaki jima**	**1.73**	**232**	*i* P	**Pn**	**03 55 24.2**	**+0.2**
JIJ				S	**Sn**	**03 55 45.7**	**-0.3**
JAGN	**Aguni-jima**	**1.84**	**51**	P	**Pb**	**03 55 27.9**	**+0.1**
JAGN				S	**Sb**	**03 55 51.5**	**+0.7**
JKRS	**Kuro-shima**	**1.90**	**231**	P	**Pn**	**03 55 27.5**	**+1.1**
IRIF	**Iriomote-Funau**	**2.05**	**238**	P	**Pn**	**03 55 29.5**	**+1.1**
IRIF				*e*S	**Sb**	**03 55 55.4**	**-1.4**
HATJ	**Hateruma jima**	**2.16**	**231**	P	**Pn**	**03 55 30.7**	**+0.8**
JOW	**Kunigami**	**2.75**	**59**	P	**Pb**	**03 55 41.8**	**-1.4**
	43nm,0.3s,baz=154,slow=18,SNR=34						
JOW				S	**Sn**	**03 56 10.9**	**-0.4**
	87nm,0.3s,baz=283,slow=29,SNR=5.2						
KSRS	**Korea Array**	**12.13**	**9**	P	**P**	**03 57 56.4**	**-3.2**
	2.3nm,1.0s,baz=179,slow=18,SNR=7.1						
WRA	**Warramunga Arr**	**45.90**	**169**	P	**P**	**04 03 17.7**	**+0.9**
	1.5nm,0.8s,baz=351,slow=8.7,SNR=12						
	1.5nm,0.8s						
ASAR	**Alice Springs**	**49.47**	**170**	P	**P**	**04 03 45.9**	**+1.3**
	0.5nm,0.5s,baz=354,slow=7.7,SNR=7.0						
	0.5nm,0.5s						
ILAR	**Eielson Array**	**66.23**	**28**	P	**P**	**04 05 43.4**	**+1.7**
	0.2nm,0.6s,baz=262,slow=4.6,SNR=2.1						
	0.2nm,0.6s						

*NEIC **07** 04:01:48.3±0.9, 36°.06N±0°.06×139°.88E±0°.06, h51km±6km, mb4.4/9, Error ellipse: s-maj=9.0km s-min=6.7km az=153.0*
*JMA **07** 04:01:49.0±0.1, 36°.1N±0°.3×139°.8E±0°.3, h44km, MV3.8/39, SW IBARAKI PREF*
JMA Felt II J1 at SW IBARAKI PREF .
*IDC **07** 04:01:49.5±1.5, 35°.97N×139°.78E, h59km±14km, mb3.7/13, mbtmp4.0/15, MS3.0/4, Error ellipse: s-maj=19.2km s-min=7.3km az=64.0*
*NIED **07** 04:01:49.0, 36°.06N×139°.83E, h44km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr0.12; Mθθ0.22; Mϕϕ-0.34; Mrθ-0.15; Mθϕ-0.41; Mϕr1.32; Fault plane solution: M₀1.42000×10¹⁵ NP1: ϕs252.00000°, δ19.00000°, λ169.00000°. NP2: ϕs352.00000°, δ86.00000°, λ71.00000°.*

ISC 07 04:01:48.3±0.8, 36°.03N±0°.04×139°.86E±0°.04, h51km±7km, n62, σ0s98/70, mb4.1/18, 4D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYT	**Yasato**	**0.34**	**54**		**Pn**	**04 01 58.0**	**+0.1**
JYT				Sn	**Sn**	**04 02 04.2**	**-0.4**
JYT	**Yasato**	**0.34**	**54**	P	**Pn**	**04 01 58.0**	**+0.1**
JYT				S	**Sn**	**04 02 04.3**	**-0.4**
JAG	**Ashikaga**	**0.51**	**320**	⇓P	**Pn**	**04 01 59.7**	**-0.2**
JAG				⇓S	**Sn**	**04 02 07.2**	**-0.8**
JRY	**Ryogami san**	**0.78**	**269**	⇓P	**Pn**	**04 02 03.2**	**0.0**
JRY				⇓*e*S	**Sn**	**04 02 13.8**	**-0.2**
JKT	**Katashina**	**0.89**	**326**	P	**Pn**	**04 02 04.3**	**-0.3**
JKT				S	**Sn**	**04 02 15.7**	**-0.9**
JOD2	**Odawara 2**	**0.99**	**220**	P	**Pn**	**04 02 06.8**	**+0.8**
JYN	**Shimob**	**1.19**	**244**	P	**Pn**	**04 02 10.0**	**+1.2**
JFNN	**Fujinakano**	**1.27**	**229**	*e*P	**Pn**	**04 02 10.9**	**+1.2**
BSO3	**Boso 3**	**1.34**	**156**	P	**Pn**	**04 02 11.3**	**+0.9**
JUON	**Uonuma**	**1.34**	**331**	*e*P	**Pn**	**04 02 10.8**	**+0.1**
JUON				*e*S	**Sn**	**04 02 27.4**	**0.0**
JIM2	**Oshima 3**	**1.35**	**195**	P	**Pn**	**04 02 11.3**	**+0.4**
JIM2				*e*S	**Sn**	**04 02 29.1**	**+1.3**
JFY	**Yanaizu**	**1.38**	**355**	P	**Pn**	**04 02 11.6**	**+0.3**
JFY				S	**Sn**	**04 02 28.9**	**+0.5**
MJAR	**Matsushiro Arr**	**1.43**	**291**	P	**Pn**	**04 02 11.0**	**-0.9**
	244nm,0.4s,baz=92,slow=15,SNR=518						
MJAR				LR	LR	04 02 24.8	
	comp=Z,87nm,21.7s,baz=146,slow=25						
MJAR				S	**Sn**	**04 02 29.8**	**+0.3**
	83nm,0.4s,baz=66,slow=31,SNR=4.8						
MJAR	**Matsushiro Arr**	**1.43**	**291**		**Pn**	**04 02 11.3**	**-0.6**
MAJO	**Matsushiro**	**1.43**	**291**		**Pn**	**04 02 11.5**	**-0.4**
MAJO				Sn	**Sn**	**04 02 30.1**	**+0.5**
MJB9	**Matsu-Tunnel**	**1.43**	**292**		**Pn**	**04 02 11.4**	**-0.6**
MJB9				Sn	**Sn**	**04 02 30.4**	**+0.7**
JMM	**Marumori**	**1.98**	**22**		**Pn**	**04 02 19.8**	**+0.4**
JGF	**Kuroka**	**2.08**	**259**	Pn	**Pn**	**04 02 22.7**	**+2.0**
JSD	**Sado**	**2.38**	**328**	Pn	**Pn**	**04 02 24.7**	**-0.1**
INU	**Inuyama**	**2.41**	**254**	Pn	**Pn**	**04 02 26.6**	**+1.3**
JHJ	**Hachijo jima 2**	**2.90**	**181**	P	**Pn**	**04 02 33.0**	**+0.9**
	112nm,0.3s,baz=321,slow=22,SNR=41						
JHJ				S	**Sn**	**04 03 05.8**	**+0.1**
	286nm,0.4s,baz=63,slow=23,SNR=15						
JHJ2	**Mitsune**	**2.91**	**181**	Pn	**Pn**	**04 02 32.4**	**+0.3**
JTM	**Tenmabayashi**	**4.84**	**11**	Pn	**Pn**	**04 02 59.5**	**+0.9**
JHS	**Saijyo**	**5.59**	**261**	Pn	**Pn**	**04 03 09.0**	**0.0**
ERM	**Erimo**	**6.50**	**22**		**Pn**	**04 03 20.4**	**-0.9**
ASAJ	**Asahikawa**	**8.35**	**14**	P	**Pn**	**04 03 49.7**	**+3.1**
	2.4nm,0.3s,baz=153,slow=13,SNR=4.6						
JCJ	**Chichijima**	**9.12**	**167**	LR	LR	04 07 08.0	
	comp=Z,47nm,21.3s,baz=314,slow=35						
KSRS	**Korea Array**	**9.69**	**282**	P	**Pn**	**04 04 08.9**	**+3.9**
	1.6nm,0.4s,baz=97,slow=14,SNR=9.8						
KSRS				LR	LR	04 07 44.4	
	comp=Z,46nm,20.0s,baz=55,slow=37						
JOW	**Kunigami**	**13.48**	**230**	LR	LR	04 10 02.1	
	comp=Z,66nm,21.3s,baz=25,slow=37						
SONM	**Songino Array**	**27.33**	**306**	P	**P**	**04 07 29.4**	**+0.9**
	0.6nm,0.6s,baz=112,slow=9.9,SNR=2.6						
	0.6nm,0.6s						
ZALV	**Zalesovo Beam**	**41.68**	**313**	P	**P**	**04 09 31.6**	**-0.1**
	3.4nm,0.7s,baz=92,slow=6.9,SNR=9.6						
	3.4nm,0.7s						
ZALV	**Zalesovo Beam**	**41.68**	**313**	P	**P**	**04 09 31.5**	**-0.2**
MK31	**Makanchi Array**	**43.60**	**303**	P	**P**	**04 09 46.4**	**-1.1**
MKAR	**Makanchi Array**	**43.60**	**303**	P	**P**	**04 09 47.1**	**-0.3**
	1.0nm,0.6s,baz=89,slow=10,SNR=8.8						
	1.0nm,0.6s						
KURK	**Kurchatov**	**45.57**	**309**	P	**P**	**04 10 02.3**	**-0.7**
KURK				IAmb	IAmb	04 10 03.1	
	comp=Z,4.0nm,0.8s						
PSI	**Prapat**	**50.20**	**238**	LR	LR	04 31 44.3	
	comp=Z,51nm,20.4s,baz=212,slow=36						
ILAR	**Eielson Array**	**51.01**	**32**	P	**P**	**04 10 45.2**	**+0.5**
	comp=Z,0.8nm,0.8s,baz=263,slow=5.9,SNR=10						
	comp=Z,0.8nm,0.8s						
ILAR	**Eielson Array**	**51.01**	**32**	P	**P**	**04 10 44.2**	**-0.5**
KK31	**Karatay Array**	**52.55**	**300**	P	**P**	**04 10 55.3**	**-1.3**
KK31				IAmb	IAmb	04 10 57.2	
	comp=Z,2.4nm,0.8s						
KKAR	**Karatay Array**	**52.55**	**300**	P	**P**	**04 10 55.6**	**-0.9**
KKAR				IAmb	IAmb	04 10 57.2	
	comp=Z,2.4nm,0.8s						
KKAR	**Karatay Array**	**52.55**	**300**	P	**P**	**04 10 55.3**	**-1.2**
CHGR	**Chuyangaron**	**54.97**	**296**	P	**P**	**04 11 12.7**	**-1.7**
WB0	**Warramunga Arr**	**55.73**	**186**	P	**P**	**04 11 18.4**	**-0.4**
WB0				IAmb	IAmb	04 11 21.1	
	comp=Z,4.4nm,0.8s						
WB2	**Warramunga Arr**	**55.91**	**186**	P	**P**	**04 11 20.9**	**-0.2**
WB2				IAmb	IAmb	04 11 41.1	
	comp=Z,5.9nm,1.2s						
WR0	**Warramun

comp=Z,0.9nm,0.7s,baz=62,slow=13,SNR=1.3
comp=Z,0.9nm,0.7s

NB2	**NORSAR Subarra**	74.62	337	P		P	04 13 21.3	-0.5
	comp=Z,0.5nm,0.5s,baz=42,slow=5.9							
NOA	**NORSAR Array B**	74.62	337	P		P	04 13 21.7	-0.1
	comp=Z,0.6nm,0.5s,baz=41,slow=5.8,SNR=5.4							
	comp=Z,0.6nm,0.5s							
NVAR	**Mina Array Bea**	76.59	52	P		P	04 13 35.4	+1.6
	comp=Z,0.7nm,0.6s,baz=291,slow=5.7,SNR=6.9							
	comp=Z,0.7nm,0.6s							
NVAR	**Mina Array Bea**	76.59	52	P		P	04 13 32.9	-0.9
TXAR	**Lajitas Array**	91.72	51	P		P	04 14 51.9	+1.2
	comp=Z,0.4nm,0.6s,baz=308,slow=2.3,SNR=9.0							
	comp=Z,0.4nm,0.6s							
TXAR	**Lajitas Array**	91.72	51	P		P	04 14 50.0	-0.7

*NOU **07** 04:07:35.5, 40°.11S × 174°.35E, h112km, MLv4.0/10, Cook Strait, New Zealand*
*WEL **07** 04:07:36.9 ± 1.0, 40°.5S ± 5°.1 × 17°.4E ± 1°, h86km ± 11km, M3.7/13, ML3.9/13, MLv3.7/13, Error ellipse: s-maj=0.0km s-min=0.0km az=98.6*
ISC 07 04:07:35.3 ± 1.3, **40°.10S** ± 0°.03 × **174°.28E** ± 0°.04, **h112km, n116,** σ 0.9 **97**/120, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WAZ	**Wanganui**	**0.64**	**57**	P		**Pn**	**04 07 53.3**	**-0.1**
WAZ				S		**Sn**	**04 08 06.2**	**-0.9**
LREZ	**Lake Rotokare**	**0.65**	**8**	P		**Pn**	**04 07 53.4**	**-0.1**
LREZ				S		**Sn**	**04 08 06.9**	**-0.2**
DUWZ	**D'Urville Isla**	**0.75**	**201**	P		**Pn**	**04 07 54.4**	**0.0**
DUWZ				S		**Sn**	**04 08 07.7**	**-1.0**
NMEZ	**Namu Road**	**0.76**	**336**	P		**Pn**	**04 07 54.2**	**-0.2**
PREZ	**Palmer Road**	**0.77**	**353**	P		**Pn**	**04 07 54.4**	**-0.1**
OHWZ	**Ohakea**	**0.80**	**98**	P		**Pn**	**04 07 55.0**	**+0.3**
KHEZ	**Kahui Hut**	**0.83**	**346**	P		**Pn**	**04 07 55.1**	**-0.1**
NEZ	**North Egmont**	**0.84**	**350**	P		**Pn**	**04 07 54.9**	**-0.4**
NBEZ	**Newall Road No**	**0.89**	**339**	P		**Pn**	**04 07 55.8**	**+0.1**
NBEZ				S		**Sn**	**04 08 10.4**	**-0.5**
KIW	**Kapiti Island**	**0.90**	**148**	P		**Pn**	**04 07 55.2**	**-0.4**
DREZ	**Durham Road**	**0.92**	**356**	P		**Pn**	**04 07 55.9**	**0.0**
PKE	**Pukeiti**	**0.94**	**346**	P		**Pn**	**04 07 55.9**	**-0.2**
OGWZ	**Otaki Gorge**	**0.98**	**137**	P		**Pn**	**04 07 56.4**	**-0.1**
VRZ	**Vera Road**	**1.04**	**21**	P		**Pn**	**04 07 57.1**	**-0.1**
TCW	**Tory Channel**	**1.10**	**180**	P		**Pn**	**04 07 58.1**	**+0.3**
MRZ	**Mangatainoka R**	**1.14**	**120**	P		**Pn**	**04 07 58.0**	**-0.1**
PKVZ	**Pokaka**	**1.16**	**46**	P		**Pn**	**04 07 58.6**	**+0.2**
MTVZ	**Mangateitei**	**1.16**	**52**	P		**Pn**	**04 07 58.8**	**+0.2**
CAW	**Cannon Point**	**1.17**	**149**	P		**Pn**	**04 07 58.7**	**+0.3**
POWZ	**Post Office Ro**	**1.17**	**105**	P		**Pn**	**04 07 58.2**	**-0.3**
HOWZ	**Holdsworth Sta**	**1.23**	**131**	P		**Pn**	**04 07 59.0**	**-0.1**
WEL	**Wellington**	**1.23**	**163**	P		**Pn**	**04 07 59.6**	**+0.4**
SNZO	**South Karori**	**1.25**	**165**	P		**Pn**	**04 08 00.0**	**+0.7**
TRVZ	**Turoa**	**1.27**	**51**	P		**Pn**	**04 08 00.3**	**+0.5**
WNVZ	**Wahianoa**	**1.28**	**53**	P		**Pn**	**04 07 59.9**	**0.0**
TSZ	**Takapari Road**	**1.29**	**89**	P		**Pn**	**04 07 59.4**	**-0.4**
FWVZ	**Far West T-bar**	**1.30**	**50**	P		**Pn**	**04 08 00.5**	**+0.4**
WHVZ	**Whangaehu Hut**	**1.30**	**51**	P		**Pn**	**04 08 01.2**	**+1.0**
NNZ	**Nelson**	**1.31**	**211**	P		**Pn**	**04 08 00.6**	**+0.6**
MOVZ	**Moawhango**	**1.33**	**59**	P		**Pn**	**04 08 00.0**	**-0.4**
TUVZ	**Tukino**	**1.35**	**52**	P		**Pn**	**04 08 01.6**	**+1.0**
TUWZ	**Tuamarina**	**1.35**	**191**	P		**Pn**	**04 08 00.8**	**+0.3**
TWVZ	**Taurewa**	**1.36**	**41**	P		**Pn**	**04 08 00.9**	**+0.1**
PRWZ	**Pori Road**	**1.37**	**110**	P		**Pn**	**04 08 00.7**	**0.0**
NGZ	**Ngauruhoe**	**1.38**	**48**	P		**Pn**	**04 08 01.8**	**+0.8**
BHW	**Baring Head**	**1.38**	**161**	P		**Pn**	**04 08 01.0**	**+0.2**
SNWZ	**South Ngauruho**	**1.39**	**49**	P		**Pn**	**04 08 01.2**	**0.0**
TIWZ	**Tintock**	**1.40**	**119**	P		**Pn**	**04 08 00.9**	**-0.2**
MTW	**Mount Morrison**	**1.40**	**139**	P		**Pn**	**04 08 01.0**	**-0.1**
WTVZ	**West Tongariro**	**1.41**	**46**	P		**Pn**	**04 08 01.3**	**0.0**
NNVZ	**North Ngauruho**	**1.42**	**47**	P		**Pn**	**04 08 01.6**	**+0.2**
OTVZ	**Oturere**	**1.42**	**49**	P		**Pn**	**04 08 01.5**	**0.0**
KRVZ	**Karewarewa**	**1.46**	**47**	P		**Pn**	**04 08 02.5**	**+0.6**
DVHZ	**Dannevirke**	**1.46**	**98**	P		**Pn**	**04 08 01.3**	**-0.5**
ETVZ	**East Tongariro**	**1.47**	**49**	P		**Pn**	**04 08 02.0**	**0.0**
NTVZ	**North Tongarir**	**1.47**	**47**	P		**Pn**	**04 08 02.7**	**+0.6**
TMVZ	**Te Maari**	**1.48**	**49**	P		**Pn**	**04 08 02.4**	**+0.2**
PNHZ	**Pukenui**	**1.48**	**83**	P		**Pn**	**04 08 02.0**	**-0.1**
MSWZ	**Moikau Station**	**1.50**	**151**	P		**Pn**	**04 08 02.5**	**+0.2**
BHHZ	**Black Hill Sta**	**1.50**	**66**	P		**Pn**	**04 08 02.0**	**-0.4**
QRZ	**Quartz Range**	**1.52**	**241**	P		**Pn**	**04 08 02.6**	**+0.2**
QRZ	**Quartz Range**	**1.52**	**241**	P		**Pn**	**04 08 02.8**	**+0.3**
PAWZ	**Paruwai Farm**	**1.54**	**146**	P		**Pn**	**04 08 02.9**	**+0.1**
KATZ	**Kakaramea**	**1.57**	**45**	P		**Pn**	**04 08 04.1**	**+0.9**
TMWZ	**Te Maipa**	**1.58**	**221**	P		**Pn**	**04 08 03.3**	**+0.1**
BFZ	**Birch Farm**	**1.61**	**112**	P		**Pn**	**04 08 03.1**	**-0.4**
BFZ	**Birch Farm**	**1.61**	**112**	P		**Pn**	**04 08 03.3**	**-0.2**
BSWZ	**Blackbirch Sta**	**1.64**	**191**	P		**Pn**	**04 08 04.9**	**+1.0**
PLWZ	**Palliser**	**1.64**	**154**	P		**Pn**	**04 08 04.0**	**+0.1**
CMWZ	**Cape Campbell**	**1.64**	**182**	P		**Pn**	**04 08 05.3**	**+1.4**
HIZ	**Hauiti**	**1.65**	**16**	P		**Pn**	**04 08 04.1**	**0.0**
HIZ	**Hauiti**	**1.65**	**16**	P		**Pn**	**04 08 04.1**	**0.0**
WPHZ	**Waipukurau**	**1.66**	**89**	P		**Pn**	**04 08 08.0**	**+3.9**
TRWZ	**Traveller**	**1.68**	**141**	P		**Pn**	**04 08 04.7**	**+0.3**
RATZ	**Rangitukua**	**1.69**	**43**	P		**Pn**	**04 08 05.9**	**+1.3**
ANWZ	**Angora Road**	**1.71**	**103**	P		**Pn**	**04 08 04.8**	**0.0**
MRNZ	**Matariki Terra**	**1.74**	**221**	P		**Pn**	**04 08 06.0**	**+0.9**
WATZ	**Wairara**	**1.79**	**39**	P		**Pn**	**04 08 06.9**	**+1.1**
PRHZ	**Porangahau**	**1.81**	**96**	P		**Pn**	**04 08 06.7**	**+0.7**
BKZ	**Black Stump Fm**	**1.95**	**62**	P		**Pn**	**04 08 07.2**	**-0.6**
BKZ	**Black Stump Fm**	**1.95**	**62**	P		**Pn**	**04 08 07.3**	**-0.5**
THZ	**Tophouse**	**1.96**	**212**	P		**Pn**	**04 08 08.2**	**+0.9**
KAHZ	**Kahuranaki**	**2.02**	**89**	P		**Pn**	**04 08 08.2**	**+0.5**
TLZ	**Tolley Road**	**2.02**	**29**	P		**Pn**	**04 08 08.8**	**+0.0**
MRHZ	**Matea Rd**	**2.08**	**53**	P		**Pn**	**04 08 09.0**	**-0.5**
NMHZ	**Naumai**	**2.19**	**64**	P		**Pn**	**04 08 11.2**	**+0.3**
ARHZ	**Aropaoanui**	**2.26**	**69**	P		**Pn**	**04 08 15.8**	**+4.1**
MTHZ	**Maungataniwha**	**2.34**	**59**	P		**Pn**	**04 08 12.2**	**-0.7**
KHZ	**Kahutara**	**2.38**	**193**	P		**Pn**	**04 08 13.9**	**+0.8**
KHZ	**Kahutara**	**2.38**	**193**	P		**Pn**	**04 08 14.0**	**+0.8**
RAHZ	**Arahi**	**2.47**	**62**	P		**Pn**	**04 08 17.4**	**+3.0**
DSZ	**Denniston Nort**	**2.49**	**228**	P		**Pn**	**04 08 15.3**	**+0.6**
MUGZ	**Murupara**	**2.52**	**51**	P		**Pn**	**04 08 18.8**	**+3.7**
TOZ	**Tahuroa Road**	**2.55**	**22**	P		**Pn**	**04 08 15.6**	**+0.1**
RTZ	**Ruatahuna**	**2.57**	**55**	P		**Pn**	**04 08 14.4**	**-1.3**
URZ	**Urewera**	**2.87**	**51**	P		**Pn**	**04 08 18.6**	**-1.0**
RAGZ	**Rawiri**	**2.91**	**58**	P		**Pn**	**04 08 22.1**	**+1.8**
GVZ	**Greta Valley S**	**3.01**	**198**	P		**Pn**	**04 08 21.5**	**0.0**
AWAZ	**Awhitu Peninsu**	**3.05**	**5**	P		**Pn**	**04 08 22.8**	**+0.8**
LTZ	**Lake Taylor**	**3.09**	**205**	P		**Pn**	**04 08 22.7**	**-0.2**
MKAZ	**Moumakai**	**3.07**	**13**	P		**Pn**	**04 08 22.7**	**+0.3**
MWZ	**Matawai**	**3.08**	**56**	P		**Pn**	**04 08 25.1**	**+2.7**
ETAZ	**East Tamaki Re**	**3.19**	**9**	P		**Pn**	**04 08 24.6**	**+0.7**
AMCZ	**Amberley**	**3.30**	**201**	P		**Pn**	**04 08 25.0**	**-0.4**
WIAZ	**Waiheke Island**	**3.37**	**12**	P		**Pn**	**04 08 27.0**	**+0.6**
INZ	**Inchbonnie**	**3.38**	**218**	P		**Pn**	**04 08 27.8**	**+1.5**
RUGZ	**Raukumara Rang**	**3.40**	**52**	P		**Pn**	**04 08 25.6**	**-1.2**
TWGZ	**Tauwhareparae**	**3.46**	**57**	P		**Pn**	**04 08 26.9**	**-0.6**
KUZ	**Kuaotunu**	**3.54**	**19**	P		**Pn**	**04 08 28.4**	**-0.1**
OXZ	**Oxford**	**3.63**	**207**	P		**Pn**	**04 08 29.3**	**-0.4**
OKCZ	**Okains Bay**	**3.73**	**194**	P		**Pn**	**04 08 30.3**	**-0.8**
MQZ	**McQueen's Vall**	**3.80**	**198**	P		**Pn**	**04 08 30.5**	**-1.5**
AKCZ	**Akaroa Harbour**	**3.90**	**195**	P		**Pn**	**04 08 32.9**	**-0.5**
WVZ	**Waitaha Valley**	**3.98**	**221**	P		**Pn**	**04 08 37.2**	**+2.8**
WACZ	**Wakanui South**	**4.25**	**205**	P		**Pn**	**04 08 37.9**	**0.0**
RPZ	**Rata Peaks**	**4.34**	**213**	P		**Pn**	**04 08 40.7**	**+1.5**
RPZ	**Rata Peaks**	**4.34**	**213**	P		**Pn**	**04 08 39.0**	**-0.2**
GCZ	**Gaunt Creek Bo**	**4.37**	**221**	P		**Pn**	**04 08 40.3**	**+0.7**
ARCZ	**Arundel**	**4.48**	**210**	P		**Pn**	**04 08 41.7**	**+0.5**
FOZ	**Fox Glacier**	**4.78**	**223**	P		**Pn**	**04 08 45.9**	**+0.8**
OUZ	**Omahuta**	**4.91**	**353**	P		**Pn**	**04 08 48.2**	**+1.3**
TMZ	**Timaru**	**4.92**	**209**	P		**Pn**	**04 08 47.1**	**0.0**
ODZ	**Otahua Downs**	**5.62**	**207**	P		**Pn**	**04 08 56.5**	**0.0**
ODZ	**Otahua Downs**	**5.62**	**207**	P		**Pn**	**04 08 57.0**	**+0.5**
JCZ	**Jackson Bay**	**5.70**	**224**	P		**Pn**	**04 08 58.1**	**+0.5**
CTZ	**Chatham Island**	**7.69**	**121**	P		**Pn**	**04 09 24.5**	**0.0**

*IDC **07** 04:09:44.7 ± 0.7, 40°.25N × 29°.20E, h0km, mb3.8/14, mbtmp3.8/23, ML3.5/9, MS4.0/5, Error ellipse: s-maj=11.4km s-min=9.4km az=15.0*
*MOS **07** 04:09:45.6 ± 1.3, 40°.35N × 29°.10E, h12km, mb4.3/10, Error ellipse: s-maj=5.4km s-min=3.8km az=79.5*
*ISK **07** 04:09:45.7, 40°.27N × 29°.15E, h16km, ML4.6/35*
*THE **07** 04:09:45.5, 40°.31N × 29°.17E, h0km ± 1km, ML4.3/5, Error ellipse: s-maj=2.1km s-min=1.0km az=91.0*
*MED_RC **07** 04:09:45.0 ± 0.7, 40°.26N × 29°.15E, h10km, MW4.5/5, Moment Tensor Solution.Mantle waves: s5,c6; Duration:*

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1s0 Moment tensor: Scale 10^{15}Nm; M_{rr}-5.00±1.06; $M_{\theta\theta}$5.28±.68; $M_{\phi\phi}$-0.29±.54; $M_{r\theta}$-0.48±1.28; $M_{r\phi}$0.81±.62; $M_{\theta\phi}$-3.30±1.52; Best double couple: $M_0$6.10000×10^{15} NP1:ϕ_s56.00000°, δ56.00000°, λ-122.00000°. NP2: ϕ_s285.00000°, δ45.00000°, λ-51.00000°. Principal axes: T 5.5000, Plg6.0000°, Azm169.0000°; N 1.2000, Plg26.0000°, Azm76.0000°; P -6.7000, Plg63.0000°, Azm271.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.
*SOF **07** 04:09:46.6, 40°.40N × 28°.97E, h5km, MD4.5*
*DDA **07** 04:09:46.0 ± 0.0, 40°.26N × 29°.16E, h14km, MW4.3*
*IASPEI **07** 04:09:46.3 ± 0.8, 40°.27N ± 0°.02 × 29°.15E ± 0°.02, h14km ± 4km, mb4.0/25, MS4.1/5, Error ellipse: s-maj=2.3km s-min=2.2km az=73.9, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
*NEIC **07** 04:09:46.7 ± 1.9, 40°.27N ± 0°.03 × 29°.16E ± 0°.03, h10km ± 1km, Error ellipse: s-maj=5.0km s-min=4.0km az=216.0*
ISC 07 04:09:46.8 ± 0.6, **40°.27N** ± 0°.01 × **29°.15E** ± 0°.01, **h14km** ± 4km, **n394,** σ 1 **$\hat{s}$31**/455, **mb4.0**/25, **MS4.1**/5, **31C-21D, Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
IGD	**Bursa**	**0.04**	**103**	P		**Pg**	**04 09 48.8**	**-0.7**
IGD				S		**Sg**	**04 09 50.3**	**-0.8**
ULDT	**Uludag**	**0.13**	**183**	P		**Pg**	**04 09 50.1**	**-0.5**
ULDT				S		**Sg**	**04 09 52.4**	**-0.6**
STBT	**Saitabat**	**0.15**	**151**	P		**Pg**	**04 09 50.0**	**-0.6**
STBT				S		**Sg**	**04 09 52.6**	**-0.6**
GEMT	**Gemlik**	**0.16**	**12**	PG		**Pg**	**04 09 50.7**	**-0.1**
GEMT				SG		**Sg**	**04 09 53.6**	**0.0**
GEMT	**Gemlik**	**0.16**	**12**	Pg		**Pg**	**04 09 50.4**	**-0.4**
GEMT				Sg		**Sg**	**04 09 53.6**	**0.0**
MDNY	**Mudanya-Bursa**	**0.22**	**295**	PG		**Pg**	**04 09 51.5**	**-0.2**
MDNY				SG		**Sg**	**04 09 55.1**	**+0.1**
MDNY	**Mudanya-Bursa**	**0.22**	**295**	Pg		**Pg**	**04 09 51.5**	**-0.2**
MDNY				Sg		**Sg**	**04 09 55.1**	**+0.1**
ORLT	**Orhaneli**	**0.30**	**220**	PG		**Pb**	**04 09 52.7**	**-1.2**
ORLT				SG		**Sg**	**04 09 56.9**	**-0.4**
ORLT	**Orhaneli**	**0.30**	**220**	Pg		**Pb**	**04 09 52.8**	**-1.2**
KURT	**Yalova, Merkez**	**0.32**	**9**	P		**Pb**	**04 09 53.3**	**-1.1**
KURT				P		**Pg**	**04 09 53.5**	**+0.1**
KURT				S		**Sg**	**04 09 57.6**	**-0.3**
KURT				S		**Sb**	**04 09 57.8**	**-1.6**
TRML	**Termal-Yalova**	**0.34**	**4**	PG		**Pb**	**04 09 53.5**	**-1.1**
TRML	**Termal-Yalova**	**0.34**	**4**	Pg		**Pb**	**04 09 53.5**	**-1.1**
YLV	**Yalova**	**0.34**	**31**	PG		**Pb**	**04 09 53.7**	**-1.0**
YLV				SG		**Sb**	**04 09 58.7**	**-1.3**
YLV	**Yalova**	**0.34**	**31**	Pg		**Pb**	**04 09 53.7**	**-1.0**
YLV				Sg		**Sb**	**04 09 58.7**	**-1.3**
YLV	**Yalova**	**0.34**	**31**	P		**Pb**	**04 09 53.7**	**-1.0**
YLV							04 09 58.7	
ARMT	**Armutlu**	**0.36**	**323**	PG		**Pg**	**04 09 53.7**	**-0.5**
ARMT	**Armutlu**	**0.36**	**323**	Pg		**Pb**	**04 09 54.1**	**-1.0**
ARMT				Sg		**Sb**	**04 09 59.4**	**-1.2**
ESNK	**Esenk¶y**	**0.38**	**340**	P		**Pg**	**04 09 54.0**	**-0.5**
ESNK				P		**Pb**	**04 09 54.4**	**-0.9**
ADVT	**Abdulvahap**	**0.48**	**71**	PG		**Pb**	**04 09 55.9**	**-1.1**
ADVT				SG		**Sb**	**04 10 02.8**	**-1.2**
ADVT	**Abdulvahap**	**0.48**	**71**	Pg		**Pb**	**04 09 55.9**	**-1.1**
TUZL	**Tuzla-Istanbul**	**0.55**	**10**	P		**Pb**	**04 09 57.4**	**-0.8**
BILE	**Bilecik/Merkez**	**0.57**	**101**	P		**Pg**	**04 09 57.0**	**-1.1**
BILE				S		**Sg**	**04 10 04.7**	**-1.0**
AUBOZ	**BOZOYUK**	**0.77**	**118**	PG		**Pg**	**04 10 00.6**	**-1.2**
AUBOZ	**BOZOYUK**	**0.77**	**118**	P		**Pg**	**04 10 00.6**	**-1.2**
AUBOZ				S		**Sb**	**04 10 11.2**	**-1.2**
DST	**Dursunbey**	**0.78**	**211**	PG		**Pb**	**04 10 01.1**	**-1.1**
DST	**Dursunbey**	**0.78**	**211**	Pg		**Pb**	**04 10 01.2**	**-1.0**
DST	**Dursunbey**	**0.78**	**211**	P		**Pb**	**04 10 01.2**	**-1.0**
AVCI	**Avcilar-stanb**	**0.79**	**336**	PG		**Pb**	**04 10 01.5**	**-0.8**
AVCI	**Avcilar-stanb**	**0.79**	**336**	Pg		**Pb**	**04 10 02.1**	**-0.2**
KAVV	**Kandilli-Istan**	**0.79**	**355**	PG		**Pb**	**04 10 01.6**	**-0.8**
KAVV	**Kandilli-Istan**	**0.79**	**355**	Pg		**Pb**	**04 10 01.6**	**-0.8**
ISK	**Istanbul-Kandi**	**0.79**	**355**	P		**Pb**	**04 10 01.5**	**-0.9**
ISK				S		**Sb**	**04 10 12.3**	**-0.7**
	21µm,0.4s							
ISK	**Istanbul-Kandi**	**0.79**	**355**	PG		**Pb**	**04 10 01.5**	**-0.9**
ISK	**Istanbul-Kandi**	**0.79**	**355**	Pg		**Pb**	**04 10 01.9**	**-0.5**
ISK	**Istanbul-Kandi**	**0.79**	**355**	P		**Pb**	**04 10 01.9**	**-0.5**
DURS	**Dursunbey**	**0.85**	**218**	P		**Pb**	**04 10 02.5**	**-0.8**
DURS				S		**Sb**	**04 10 14.1**	**-0.5**
TVSB	**Tavsanli**	**0.86**	**163**	PG		**Pb**	**04 10 02.8**	**-0.8**
TVSB	**Tavsanli**	**0.86**	**163**	Pg		**Pb**	**04 10 02.8**	**-0.8**
GPA	**Golpazari**	**0.89**	**89**	PG		**Pg**	**04 10 02.8**	**-1.3**
GPA	**Golpazari**	**0.89**	**89**	Pg		**Pb**	**04 10 03.0**	**-1.1**
GPA	**Golpazari**	**0.89**	**89**	P		**Pb**	**04 10 03.0**	**-1.1**
GEYV	**SAKARYA_Geyve**	**0.90**	**76**	P		**Pg**	**04 10 03.1**	**-1.2**
GEYV				S		**Sb**	**04 10 16.9**	**-0.3**
BGKT	**Bogazkoy**	**0.95**	**343**	PG		**Pg**	**04 10 03.7**	**-1.5**
BGKT	**Bogazkoy**	**0.95**	**343**	Pg		**Pb**	**04 10 04.5**	**-0.6**
SILT	**Sile**	**0.96**	**23**	PG		**Pb**	**04 10 04.7**	**-0.5**
SILT	**Sile**	**0.96**	**23**	Pg		**Pb**	**04 10 04.4**	**-0.7**
ANDZ	**Kutahya, Merke**	**0.96**	**143**	P		**Pb**	**04 10 04.5**	**-0.8**
ANDZ				S		**Sg**	**04 10 16.6**	**-1.4**
KLYT	**Kilyos**	**0.98**	**355**	PG		**Pb**	**04 10 05.1**	**-0.5**
KLYT	**Kilyos**	**0.98**	**355**	Pg		**Pb**	**04 10 05.1**	**-0.5**
EDC	**Edincik**	**0.98**	**275**	PG		**Pg**	**04 10 04.3**	**-1.5**
EDC	**Edincik**	**0.98**	**275**	Pg		**Pg**	**04 10 04.5**	**-1.3**
EDC	**Edincik**	**0.98**	**275**	P		**Pg**	**04 10 04.5**	**-1.3**
SAUV	**Serdivan-Sakar**	**1.01**	**62**	PG		**Pb**	**04 10 05.4**	**-0.8**
SAUV	**Serdivan-Sakar**	**1.01**	**62**			**Pn**	**04 10 05.8**	**-0.8**
ELBA	**Catalca**	**1.03**	**328**	P		**Pb**	**04 10 06.0**	**-0.4**
ELBA				S		**Sb**	**04 10 19.5**	**-0.2**
GULT	**Gulveren**	**1.06**	**81**	PG		**Pg**	**04 10 05.9**	**-1.4**
GULT	**Gulveren**	**1.06**	**81**			**Pn**	**04 10 06.4**	**-0.6**
CTKS	**Kestanelik-??a**	**1.08**	**333**	PN		**Pb**	**04 10 06.4**	**-0.8**
CTKS	**Kestanelik-??a**	**1.08**	**333**	Pn		**Pb**	**04 10 06.6**	**-0.6**
BORA	**Eskisehir**	**1.08**	**111**	PG		**Pg**	**04 10 05.9**	**-1.7**
BORA	**Eskisehir**	**1.08**	**111**	Pn		**Pg**	**04 10 05.9**	**-1.7**
BORA				Sn		**Sn**	**04 10 21.6**	**-0.7**
BORA	**Eskisehir**	**1.08**	**111**	P		**Pg**	**04 10 06.0**	**-1.7**
BORA				S		**Sn**	**04 10 22.5**	**+0.1**
GONE	**Gonen-Balikesi**	**1.14**	**259**	PN		**Pb**	**04 10 07.5**	**-0.8**
GONE	**Gonen-Balikesi**	**1.14**	**259**	Pn		**Pb**	**04 10 07.3**	**-1.0**
KAND	**Kocaeli-Kandir**	**1.14**	**44**	P		**Pn**	**04 10 07.8**	**-0.6**
KAND				S		**Sn**	**04 10 22.9**	**-0.9**
KAYN	**Sakarya, Kayna**	**1.14**	**52**	P		**Pg**	**04 10 07.6**	**-1.2**
KAYN				S		**Sg**	**04 10 22.4**	**-1.3**
SRCK	**Saricakaya, Es**	**1.16**	**101**	PN		**Pb**	**04 10 07.4**	**-1.2**
SRCK	**Saricakaya, Es**	**1.16**	**101**	Pn		**Pn**	**04 10 08.4**	**-0.2**
BALB	**Balikesir**	**1.16**	**237**	PN		**Pg**	**04 10 08.4**	**-0.8**
BALB	**Balikesir**	**1.16**	**237**	Pn		**Pb**	**04 10 07.9**	**-0.8**
BALB				Sn		**Sn**	**04 10 24.9**	**-0.6**
SMAA	**Simav-Kutahya**	**1.18**	**186**	Pn		**Pg**	**04 10 09.3**	**-0.2**
SLVT	**Silivri**	**1.19**	**324**	PN		**Pg**	**04 10 08.8**	**-1.0**
SLVT	**Silivri**	**1.19**	**324**	Pn		**Pg**	**04 10 08.8**	**-1.0**
SIMA	**Simav-Kutahya**	**1.20**	**186**	PN		**Pb**	**04 10 08.4**	**-0.9**
SIMA	**Simav-Kutahya**	**1.20**	**186**	Pn		**Pg**	**04 10 08.8**	**-1.0**
GDZ	**Gediz**	**1.21**	**168**	P		**Pg**	**04 10 09.2**	**-1.0**
GDZ				S		**Sn**	**04 10 26.8**	**+1.1**
MRMT	**Marmara Adasi**	**1.23**	**286**	PN		**Pn**	**04 10 09.1**	**-0.5**
MRMT	**Marmara Adasi**	**1.23**	**286**	Pn		**Pn**	**04 10 09.1**	**-0.5**
KNL	**Balıkesir**	**1.24**	**270**	P		**Pn**	**04 10 08.8**	**-0.9**
KNL				S		**Sn**	**04 10 26.2**	**0.0**
GEDZ	**Gediz**	**1.25**	**170**	PN		**Pg**	**04 10 09.9**	**-0.9**
GEDZ	**Gediz**	**1.25**	**170**	Pn		**Pg**	**04 10 09.6**	**-1.3**
DEMI	**Demirci**	**1.27**	**195**	P		**Pg**	**04 10 10.2**	**-1.1**
DEMI				S		**Sn**	**04 10 28.7**	**+1.5**
BALY	**Balya**	**1.29**	**246**	P		**Pb**	**04 10 10.1**	**-0.8**
BALY				S		**Sg**	**04 10 28.6**	**+0.2**
CTYL	**Yalikoy Yolu**	**1.36**	**332**	PN		**Pn**	**04 10 11.1**	**-0.3**
CTYL	**Yalikoy Yolu**	**1.36**	**332**	Pn		**Pn**	**04 10 11.1**	**-0.3**
CRLT	**Corlu**	**1.37**	**309**	PN		**Pn**	**04 10 11.1**	**-0.4**
CRLT	**Corlu**	**1.37**	**309**	Pn		**Pb**	**04 10 11.6**	**-0.6**
KRBG	**Karabiga-Canak**	**1.42**	**275**	PN		**Pn**	**04 10 11.1**	**-1.0**
KRBG	**Karabiga-Canak**	**1.42**	**275**	Pn		**Pn**	**04 10 11.7**	**-0.4**
STEP	**BALIKESIR_Sava**	**1.42**	**231**	P		**Pn**	**04 10 11.9**	**-0.3**
STEP				S		**Sg**	**04 10 31.3**	**-1.2**
TKR	**Tekirdag**	**1.42**	**301**	PN		**Pn**	**04 10 10.6**	**-1.6**
TKR	**Tekirdag**	**1.42**	**301**	Pn		**Pn**	**04 10 11.5**	**-0.7**
SAHE	**Sakarya_HENDEK**	**1.42**	**66**	P		**Pb**	**04 10 12.3**	**-0.9**
SAHE				S		**Sg**	**04 10 31.5**	**-1.2**
BTAS	**Taskesti**	**1.45**	**78**	P		**Pg**	**04 10 13.0**	**-1.6**
BTAS				S		**Sg**	**04 10 34.4**	**+1.0**
AUKIR	**Kırka- Seyitga**	**1.46**	**133**	P		**Pg**	**04 10 13.2**	**-1.6**
AUKIR				S		**Sg**	**04 10 33.7**	**-0.2**
GZKV	**Gazikoy-Tekird**	**1.46**	**289**	PN		**Pn**	**04 10 12.0**	**-0.8**
GZKV	**Gazikoy-Tekird**	**1.46**	**289**	Pn		**Pn**	**04 10 12.6**	**-0.2**
MAR3	**Marsite Statio**	**1.49**	**289**	PN		**Pn**	**04 10 12.1**	**-1.0**
MAR3	**Marsite Statio**	**1.49**	**289**	Pn		**Pn**	**04 10 13.0**	**-0.1**
MAR6	**Marsite Statio**	**1.50**	**287**	PN		**Pn**	**04 10 12.7**	**-0.6**
MAR6	**Marsite Statio**	**1.50**	**287**	Pn		**Pb**	**04 10 13.6**	**-0.8**
SGAZ	**Eskisehir, Sey**	**1.50**	**119**	P		**Pb**	**04 10 13.4**	**-1.1**
SGAZ				S		**Sg**	**04 10 35.2**	**0.0**
ESKT	**Eskisehir**	**1.51**	**119**	PN		**Pn**	**04 10 12.4**	**-1.2**
ESKT	**Eskisehir**	**1.51**	**119**	Pn		**Pb**	**04 10 13.6**	**-1.2**
SART	**Tek

SULR 4.89 335 Pn 04 11 00.6 +0.6
TLCR 4.92 357 ⇑P Pn 04 11 00.9 +0.7
TLCR 4.92 357 Pn 04 11 00.9 +0.7
TLCR 4.92 357 P Pn 04 11 00.9 +0.7
CFR Carcaliu 4.96 352 ⇑P Pn 04 11 00.8 0.0
CFR Carcaliu 4.96 352 Pn 04 11 00.8 0.0
CFR Carcaliu 4.96 352 P Pn 04 11 00.8 0.0
KARP Karpathos 4.97 199 Pn Pn 04 11 00.1 -1.0
VILL Villia 5.00 247 P Pn 04 11 01.5 +0.1
VTS Vitosha 5.02 300 ⇓P Pn 04 11 02.1 +0.3
VTS Vitosha 5.02 300 Pn Pn 04 11 02.0 +0.1
VTS Vitosha 5.02 300 P Pn 04 11 02.0 +0.1
VTS Vitosha 5.02 300 *i* P Pn 04 11 02.0 +0.1
MPEP Malo Peshtene 5.08 309 P Pn 04 11 02.6 +0.1
LIT Litokhoron 5.10 270 Pn Pn 04 11 02.1 -0.6
LIT Litokhoron 5.10 270 P Pn 04 11 02.2 -0.6
VLAD Vladila 5.12 318 ⇓P Pn 04 11 02.2 -0.9
VLAD Vladila 5.12 318 Pn 04 11 02.2 -0.9
BNN Bunyan 5.37 103 Pn Pn 04 11 07.9 +1.2
SCTR Scanteiesti 5.46 351 ⇓P Pn 04 11 09.1 +1.3
SCTR Scanteiesti 5.46 351 Pn 04 11 09.1 +1.3
NEHR Nehoiu 5.56 339 ⇑P Pn 04 11 10.5 +1.4
NEHR Nehoiu 5.56 339 Pn 04 11 10.5 +1.4
TOKA Tokat 5.61 87 Pn 04 11 10.7 +0.9
YAL Yalta 5.61 40 *e*P Pn 04 11 08.5 -1.3
YAL *e*S Sn 04 12 10.1 -3.9
YAL pmax pmax
comp=Z,117nm,0.5s
YAL smax smax
comp=E,83nm,0.4s
YAL smax smax
comp=N,39nm,0.2s
VLDR Vladesti 5.62 352 ⇓P Pn 04 11 11.2 +1.3
VLDR Vladesti 5.62 352 Pn 04 11 11.2 +1.3
MLR Muntele Rosu 5.72 337 ⇑P Pn 04 11 12.5 +1.1
MLR Muntele Rosu 5.72 337 Pn Pn 04 11 12.9 +1.5
comp=N,1.5nm,0.3s,baz=5.9,slow=0.4,SNR=18
MLR Lg Lg 04 12 47.7
comp=N,1.8nm,0.3s,baz=104,slow=16,SNR=2.2
comp=N,8.7nm,0.5s
MLR Muntele Rosu 5.72 337 Pn Pn 04 11 11.9 +0.5
VRI Vrincioaia 5.86 343 ⇓P Pn 04 11 14.2 +0.9
VRI Vrincioaia 5.86 343 Pn 04 11 14.2 +0.9
VRI Vrincioaia 5.86 343 P Pn 04 11 14.2 +0.9
PLOR Plostina 5.87 343 ⇓P Pn 04 11 14.4 +1.0
PLOR Plostina 5.87 343 Pn 04 11 14.4 +1.0
PLOR Plostina 5.87 343 P Pn 04 11 14.4 +1.0
BLKB Belogradchik 5.87 307 ⇓P Pn 04 11 13.1 -0.3
BLKB Belogradchik 5.87 307 Pn 04 11 13.2 -0.3
ALU Alushta 5.87 40 *e*P Pn 04 11 14.2 +0.8
ALU *e*S Sn 04 12 21.1 +0.6
ALU pmax pmax
comp=Z,40nm,0.4s
ALU smax smax
comp=E,14nm,0.3s
ALU smax smax
comp=N,34nm,0.4s
SIM Simferopol' 5.94 36 *e*P Pn 04 11 13.9 -0.4
SIM *e*S Sn 04 12 17.5 -4.6
SIM pmax pmax
comp=Z,58nm,0.6s
FNA Florina 5.94 277 Pn Pn 04 11 13.4 -1.0
FNA Florina 5.94 277 P Pn 04 11 13.4 -1.0
COVR Voineasa-Covas 5.97 340 ⇑P Pn 04 11 15.9 +1.1
COVR Voineasa-Covas 5.97 340 Pn 04 11 15.8 +1.1
VOIR 5.97 331 ⇑P Pn 04 11 15.3 +0.4
VOIR 5.97 331 Pn 04 11 15.3 +0.4
VOIR 5.97 331 P Pn 04 11 15.3 +0.4
IDI Anoyia 6.01 215 Pn Pn 04 11 15.5 +0.1
comp=Z,0.3nm,0.3s,baz=321,slow=4.3,SNR=1.5
IDI Sn Sn 04 12 21.9 -2.1
comp=Z,0.6nm,0.3s,baz=317,slow=18,SNR=1.5
IDI Lg Lg 04 12 55.6
comp=Z,0.9nm,0.3s,baz=275,slow=10,SNR=3.1
comp=Z,1.7nm,0.6s
IDI Anoyia 6.01 215 Pn 04 11 15.2 -0.2
DOPR Dopca 6.32 335 ⇑P Pn 04 11 20.2 +0.7
DOPR Dopca 6.32 335 Pn 04 11 20.2 +0.7
SUDU Sudak 6.32 41 ⇓*e*P Pn 04 11 19.6 +0.1
SUDU *e*S Sn 04 12 28.9 -2.5
SUDU pmax pmax
comp=Z,120nm,0.5s
SUDU smax smax
comp=E,77nm,0.6s
SUDU smax smax
comp=N,113nm,0.5s
ITM Ithomi 6.43 244 Pn Pn 04 11 23.3 +2.2
BOVS Bovan 6.48 304 ⇑P Pn 04 11 21.3 -0.4
BOVS Bovan 6.48 304 Pn 04 11 21.3 -0.4
LOT Lotru 6.51 324 ⇑P Pn 04 11 21.8 -0.4
LOT Lotru 6.51 324 Pn 04 11 21.8 -0.4
MILM Milestii Mici 6.65 358 ⇑*i*P Pn 04 11 23.7 -0.3
comp=N,60nm,0.5s
MILM ⇓*i*S Sn 04 12 35.4 -4.1
MILM LqM 04 13 49.0
comp=N,500nm,15.0s
MILM LRM MLR 04 14 13.0
comp=N,200nm,12.0s
MILM Milestii Mici 6.65 358 ⇓P Pn 04 11 24.2 +0.2
MILM Milestii Mici 6.65 358 Pn 04 11 24.2 +0.2
MILM Milestii Mici 6.65 358 *c* *i*P Pn 04 11 23.7 -0.3
MILM *i*S Sn 04 12 35.0 -4.5
MILM pmax pmax
comp=Z,60nm,0.5s
MILM MLR MLR
comp=Z,200nm,12.0s
GZR Gura Zlata 6.93 320 ⇑P Pn 04 11 27.2 -0.9
GZR Gura Zlata 6.93 320 Pn 04 11 27.1 -0.9
BIZ Bicaz 7.02 343 ⇑P Pn 04 11 30.4 +1.3
BIZ Bicaz 7.02 343 Pn 04 11 30.4 +1.3
MDVR Moldovita 7.10 312 ⇑P Pn 04 11 29.8 -0.5
MDVR Moldovita 7.10 312 Pn 04 11 29.8 -0.5
TIR Tirane 7.12 282 Pn Pn 04 11 33.1 +2.6
TIR Tirane 7.12 282 P Pn 04 11 33.1 +2.6
ANN Anapa 7.61 51 *e*P Pn 04 11 35.4 -1.8
ANN *e*S Sn 04 12 58.6 -4.5
ANN pmax pmax
comp=Z,16nm,0.5s
BZS Buzias 7.68 317 ⇑P Pn 04 11 36.9 -1.3
BZS Buzias 7.68 317 Pn 04 11 36.9 -1.3
BZS Buzias 7.68 317 P Pn 04 11 36.9 -1.3
DIVS Divibare 7.80 302 Pn 04 11 39.1 -0.8
BURAR Bucovina Array 7.87 340 Pn Pn 04 11 40.8 0.0
SORM Soroca 7.88 356 ⇓P Pn 04 11 40.4 -0.5
SORM Soroca 7.88 356 Pn 04 11 40.4 -0.5
SORM Soroca 7.88 356 P Pn 04 11 40.4 -0.5
BUR08 Bucovina Ar. S 7.90 340 Pn 04 11 42.0 +0.8
SOC Sochi 8.54 64 *e*P Pn 04 11 50.7 +0.6
SOC *e* 04 13 28.6
SOC MLR MLR
comp=Z,136nm,16.0s
TIP Timpagrande 9.61 267 ⇑P Pn 04 12 05.2 +0.5
TIP Timpagrande 9.61 267 Pn 04 12 04.6 -0.2
MORH Mrgy, Hungar 9.69 311 P Pn 04 12 05.7 0.0
MORH S Sn 04 13 47.5 -6.8
KOVH Kovagotottos 9.94 309 P Pn 04 12 08.5 -0.7
AKASG Malin Array Be 10.43 0 Pn Pn 04 12 13.8 -2.0
comp=Z,2.6nm,0.3s,baz=185,slow=12,SNR=13
AKASG Sn Sn 04 14 10.4 -2.0
comp=Z,1.3nm,0.3s,baz=170,slow=22,SNR=2.1
comp=Z,0.5nm,0.4s
AKASG Malin Array Be 10.43 0 Pn Pn 04 12 14.6 -1.2
AKASG Malin Array Be 10.43 0 P Pn 04 12 14.6 -1.2
AKBB Malin Array Si 10.43 0 Pn Pn 04 12 15.0 -0.8
AKBB Malin Array Si 10.43 0 ⇓*e*P Pn 04 12 15.8 0.0
AKBB pmax pmax
comp=Z,13nm,1.9s
KIV Kislovodsk 10.71 65 *e*P Pn 04 12 22.9 +3.1
KIV pmax pmax
comp=Z,5.0nm,1.1s
KBZ Khabaz 10.80 67 Pn Pn 04 12 21.5 +0.6
comp=Z,0.1nm,0.3s,baz=135,slow=12,SNR=1.5
comp=Z,0.7nm,0.6s
KBZ Khabaz 10.80 67 ⇓*e*P Pn 04 12 25.7 +4.8
KBZ pmax pmax
comp=Z,2.0nm,0.8s
MPLH Magyarpolny 10.86 313 P Pn 04 12 22.0 +0.2
ZEI Tsey 11.34 72 *e*P Pn 04 12 32.3 +3.7
ZEI pmax pmax
comp=Z,2.0nm,0.5s
GNI Garni 11.93 86 ⇑*e*P Pn 04 12 41.7 +5.1
GNI pmax pmax
comp=Z,13nm,1.3s

VORD Divnogorie 12.82 30 *e*P Pn 04 12 48.9 +0.4
VORD pmax pmax
comp=Z,10.0nm,0.6s
VSR Storozhevoye 12.97 29 *e*P Pn 04 12 50.0 -0.6
VSR pmax pmax
comp=Z,20nm,0.7s
GERES GERESS Array B 13.93 313 Pn Pn 04 13 05.5 +1.7
comp=Z,0.1nm,0.3s,baz=136,slow=14,SNR=1.8
comp=Z,0.1nm,0.3s
VRH Novokhopyorsk 14.00 34 *e*P Pn 04 13 05.9 +1.3
VRH pmax pmax
comp=Z,10.0nm,0.4s
LPSR Galich'ya Gora 14.04 25 *e*P Pn 04 13 03.2 -1.9
LPSR pmax pmax
comp=Z,30nm,0.6s
SUW Suwalki 14.32 346 *e*P P 04 13 15.5 -0.6
NACGM Naroch 14.72 355 *e*P Pn 04 13 14.2 -0.3
MSSA Maissana 15.07 292 Pn Pn 04 13 19.8 +0.4
MSSA IAmb IAmb 04 13 26.8
comp=Z,11nm,0.9s
IDID Didziasalis 15.13 355 *e*P P 04 13 24.3 -0.8
IDID IAmb IAmb 04 13 30.1
comp=Z,5.4nm,0.8s
IIGN Ignalina 15.21 354 *e*P P 04 13 24.6 -1.4
DAVOX Davos/Dischmat 15.39 301 Pn Pn 04 13 25.1 +1.4
comp=Z,0.1nm,0.3s,baz=83,slow=10,SNR=3.1
comp=Z,2.3nm,0.9s
ISAL Salakas 15.44 354 *e*P P 04 13 27.0 -1.5
ISAL IAmb IAmb 04 13 32.8
comp=Z,14nm,1.2s
OBN Obninsk 15.65 16 ⇓*e*P P 04 13 30.6 -0.2
OBN pmax pmax
comp=Z,11nm,0.5s
KEST Kesra 16.25 260 Pn P 04 13 36.0 -1.7
comp=Z,0.1nm,0.3s,baz=357,slow=7.3,SNR=8.2
comp=Z,5.9nm,1.1s
KEST Kesra 16.25 260 Pn 04 13 35.2 +0.6
KEST IAmb IAmb 04 13 41.9
comp=Z,36nm,1.4s
MOS Moscow 16.46 17 *e*P Pn 04 13 33.0 -4.1
MOS *e*S Sn 04 16 33.7 -5.8
MOS pmax pmax
comp=Z,30nm,0.8s
BNI Bardonecchia 17.18 294 P 04 13 47.6 -0.5
BNI Bardonecchia 17.18 294 P P 04 13 47.6 -0.5
BNI pmax pmax
comp=Z,6.0nm,1.2s
BELG Belogornoye 17.54 40 P Pn 04 13 50.3 -0.4
comp=Z,1.1nm,0.3s,baz=67,slow=14,SNR=4.1
comp=Z,9.4nm,0.7s
BELG Belogornoye 17.54 40 *de*P P 04 13 51.2 -0.5
BELG pmax pmax
comp=Z,3.0nm,1.0s
VSU Vasula 18.27 356 ⇓*e*P P 04 14 00.6 +0.8
VSU Vasula 18.27 356 *e*P Pn 04 13 59.2 -0.5
FINES FINESS Array B 21.28 356 P P 04 14 31.9 -0.7
comp=Z,4.2nm,0.6s,baz=170,slow=12,SNR=12
comp=Z,4.2nm,0.6s
FINES FINESS Array B 21.28 356 P P 04 14 33.2 +0.7
FINES FINESS Array B 21.28 356 *i* P P 04 14 33.0 +0.5
FINES pmax pmax
comp=Z,4.0nm,0.6s
KLMR Klimovskoe 21.58 14 *e*P P 04 14 38.8 +3.0
KLMR pmax pmax
comp=Z,13nm,0.9s
KLMR Klimovskoe 21.58 14 *e*P P 04 14 38.8 +3.0
KLMR AMP 04 14 48.6
comp=Z,13nm,0.9s
HFS Hagfors 22.10 339 P P 04 14 42.4 +1.1
comp=Z,1.5nm,0.6s,baz=176,slow=26,SNR=2.9
comp=Z,1.5nm,0.6s
KIRV Kirov 22.41 28 P P 04 14 45.0 +0.3
comp=Z,3.7nm,0.6s,baz=126,slow=3.8,SNR=1.5
comp=Z,3.7nm,0.6s
KIRV Kirov 22.41 28 ⇑*e*P P 04 14 46.2 +1.5
AKTO Aktyubinsk 22.56 54 P P 04 14 46.7 +0.3
comp=Z,5.1nm,1.0s,baz=258,slow=10,SNR=7.6
comp=Z,5.1nm,1.0s
GEYT Alibeck 22.56 87 P P 04 14 47.1 +0.5
comp=Z,1.1nm,0.4s,baz=217,slow=24,SNR=1.9
comp=Z,1.1nm,0.4s
NAO01 NORSAR Array S 23.48 337 P P 04 14 57.8 +2.0
ABKAR Akbulak array 23.50 57 P P 04 14 56.6 +0.5
ABKAR Akbulak array 23.50 57 P P 04 14 58.0 +1.9
ABKAR IAmb IAmb 04 15 35.9
comp=Z,3.1nm,1.0s
NB2 NORSAR Subarra 23.54 338 P P 04 14 56.0 -0.4
comp=Z,3.1nm,1.2s,baz=145,slow=10
NOA NORSAR Array B 23.54 338 P P 04 14 55.3 -1.1
comp=Z,0.6nm,0.9s,baz=141,slow=9.8,SNR=3.7
comp=Z,0.6nm,0.9s
PRGR Permogore 23.64 20 *e*P P 04 14 56.9 -0.4
ARU Arti 25.09 40 P P 04 15 11.0 +0.3
comp=Z,6.2nm,0.2s,baz=224,slow=5.6,SNR=9.2
ARU Arti 25.09 40 P P 04 15 11.0 +0.3
ARU Arti 25.09 40 *c* *i*P P 04 15 11.2 +0.5
ARU 04 15 42.2
ARU S S 04 19 38.0 +3.4
ARU pmax pmax
comp=Z,11nm,0.9s
ESDC Sonseca Array 25.30 279 P P 04 15 12.6 -0.3
comp=Z,3.0nm,0.8s,baz=68,slow=9.3,SNR=34
comp=Z,3.0nm,0.8s
ESDC Sonseca Array 25.30 279 P P 04 15 12.0 -0.9
PAB San Pablo 25.62 279 P P 04 15 14.9 -0.9
PAB IAmb IAmb 04 15 19.4
comp=Z,6.3nm,1.2s
PAB San Pablo 25.62 279 P P 04 15 14.9 -0.9
PAB pmax pmax
comp=Z,6.0nm,1.2s
EKA Eskdalemuir Ar 26.11 316 P P 04 15 18.7 -1.3
comp=Z,0.7nm,0.7s,baz=115,slow=11,SNR=3.8
comp=Z,0.7nm,0.7s
MDT Midelt 28.00 265 P P 04 15 37.6 +0.3
comp=Z,1.6nm,0.8s,baz=85,slow=4.7,SNR=4.1
comp=Z,1.6nm,0.8s
BRVK Borovoye 30.55 51 ⇑*e*P P 04 16 04.1 +4.5
BRVK pmax pmax
comp=Z,3.0nm,0.7s
KK31 Karatay Array 30.80 71 P P 04 16 03.4 +1.4
KK31 IAmb IAmb 04 16 07.1
comp=Z,2.7nm,1.1s
KK31 Karatay Array 30.80 71 P P 04 16 03.4 +1.4
KK31 pmax pmax
comp=Z,3.0nm,1.2s
KKAR Karatay Array 30.80 71 P P 04 16 03.8 +1.8
KKAR Karatay Array 30.80 71 P P 04 16 03.8 +1.8
GAR Garm 31.53 79 P P 04 16 10.1 +1.4
AAK Ala-Archa 33.76 71 ⇑*e*P P 04 16 31.2 +3.0
AAK pmax pmax
comp=Z,5.0nm,1.3s
KURK Kurchatov 35.60 56 ⇑*e*P P 04 16 45.1 +1.4
KURK pmax pmax
comp=Z,4.0nm,1.3s
TORD Torodi Ar. Bea 36.20 229 P P 04 16 49.2 0.0
comp=Z,1.1nm,0.8s,baz=43,slow=9.3,SNR=7.5
comp=Z,1.1nm,0.8s
MK31 Makanchi Array 38.45 62 P P 04 17 08.3 +0.2
MK31 Makanchi Array 38.45 62 ⇑*e*P P 04 17 11.6 +3.6
MKAR Makanchi Array 38.45 62 P P 04 17 08.9 +0.9
comp=Z,0.8nm,0.7s,baz=316,slow=4.0,SNR=6.4
comp=Z,0.8nm,0.7s
MKAR Makanchi Array 38.45 62 P P 04 17 09.2 +1.2
ZAA0 Zalesovo Array 39.25 50 P P 04 17 13.2 -1.4
ZAA0 IAmb IAmb 04 17 19.7
comp=Z,2.9nm,0.8s
ZALV Zalesovo Beam 39.25 50 P P 04 17 14.2 -0.4
comp=Z,1.6nm,0.7s,baz=251,slow=9.2,SNR=4.6
comp=Z,1.6nm,0.7s
ZALV Zalesovo Beam 39.25 50 P P 04 17 14.9 +0.3
ZALV Zalesovo Beam 39.25 50 P P 04 17 14.9 +0.3
WMQ Urumqi 42.84 65 *e*P P 04 17 47.4 +3.0
SFJD Kangerlussuaq 49.80 330 LR LR 04 41 15.7
comp=Z,342nm,19.2s,baz=114,slow=38
SONM Songino Array 53.87 54 P P 04 19 10.4 +0.9
comp=Z,0.3nm,0.4s,baz=225,slow=3.9,SNR=3.0
comp=Z,0.3nm,0.4s
ULN Ulaanbaatar 54.27 54 ⇓*e*P P 04 19 15.1 +2.7
ULN pmax pmax
comp=Z,10.0nm,4.8s
TIXI Tiksi 55.26 22 ⇓*e*P P 04 19 22.3 +3.3
TIXI pmax pmax
comp=Z,2.0nm,0.7s
HHC Hu-ho-hao-te 60.26 60 *e*P P 04 19 53.9 -0.9
HHC pmax pmax
comp=Z,31nm,1.2s
HHC pmax pmax
comp=Z,240nm,7.7s
KSRS Korea Array 72.72 55 P P 04 21 16.1 +1.7
comp=Z,0.9nm,0.6s,baz=297,slow=4.5,SNR=4.7
comp=Z,0.9nm,0.6s
MDP Montagnes des 80.46 269 LR LR 04 55 23.4
comp=Z,79nm,20.1s,baz=13,slow=34
ELK Elko 93.09 334 LR LR 05 09 22.7
comp=Z,36nm,18.5s,baz=42,slow=38
ANMO Albuquerque 94.70 325 LR LR 05 07 50.8
comp=Z,99nm,19.4s,baz=40,slow=37
PFO Pinyon Flats O 99.91 331 LR LR 05 11 39.7
comp=Z,40nm,18.1s,baz=33,slow=37

JMA ***07*** *04:19:42.4±0.1,40.2°N±0.3°×142.5°E±0.6,h32km±1km, MV3.9/40,NE OFF IWATE PREF*
JMA Felt I J1 at NE OFF IWATE PREF .
NIED ***07*** *04:19:42.4,40.15N×142.49E,h32km,MW3.8,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr2.93; Mθθ0.04; Mϕϕ-2.98; Mrθ2.99; Mθϕ0.08; Mϕr2.73; Fault plane solution: Mo4.91000×10¹⁴ NP1: ϕs162.00000°,δ25.00000°,λ42.00000°. NP2:ϕs33.00000°, δ73.00000°,λ110.00000°.*
IDC ***07*** *04:19:45.4±3.0,40.08N×142.49E,h66km±25km,mb3.4/8, mbtmp3.7/11,MS3.0/2 Error ellipse: s-maj=40.5km s-min=23.0km az=146.0*
ISC 07 04:19:42.4±1.4,40.15N±0.04×142.47E±0.07,h32km±10km, n29,σ1ᵖ32/34,mb3.7/8,18D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.51**	**245**	⇓*i*P		P	**Pb**	**04 19 53.2**	**+0.2**
JTH				⇓S			**Sb**	**04 20 01.1**	**+0.8**
JKEN	**Kujiedanarisaw**	**0.58**	**275**	⇓*i*P		P	**Pb**	**04 19 54.0**	**-0.2**
JKEN				⇓S			**Sb**	**04 20 02.2**	**-0.1**
JANG	**Nango**	**0.76**	**287**	⇓P		P	**Pn**	**04 19 56.8**	**-0.2**
JANG				⇓S			**Sn**	**04 20 06.6**	**-0.7**
MIYJ	**Miyakonagasawa**	**0.76**	**221**	⇓*i*P		P	**Pn**	**04 19 56.5**	**-0.4**
MIYJ				⇓S			**Sb**	**04 20 06.5**	**-0.7**
JKZ	**Kuzumaki**	**0.89**	**259**	⇓*i*P		P	**Pn**	**04 19 59.0**	**+0.3**
JKZ				⇓S			**Sn**	**04 20 11.0**	**+0.5**
JOM	**Ohasama**	**1.13**	**233**	⇓*i*P		P	**Pn**	**04 20 02.8**	**+0.8**
JOM				⇓S			**Sb**	**04 20 17.7**	**0.0**
JARK	**Aomorirokkasho**	**1.20**	**316**	⇓*i*P		P	**Pn**	**04 20 03.2**	**+0.3**
JARK				⇓S			**Sn**	**04 20 18.6**	**+0.5**
OFUJ	**Ofunato**	**1.23**	**210**	⇓*i*P		P	**Pn**	**04 20 03.9**	**+0.5**
OFUJ				⇓*e*S			**Sn**	**04 20 19.5**	**+0.5**
JTM	**Tenmabayashi**	**1.24**	**301**	⇓*i*P		P	**Pn**	**04 20 04.2**	**+0.7**
JTM				⇓S			**Sb**	**04 20 20.7**	**-0.2**
JAH	**Hinai**	**1.40**	**272**	*i* P		P	**Pn**	**04 20 06.9**	**+1.2**
JAH				S			**Sb**	**04 20 25.1**	**-0.4**
JMK	**Ichinoseki**	**1.54**	**219**	*i* P		P	**Pn**	**04 20 08.8**	**+1.2**
JMK				S			**Sb**	**04 20 28.4**	**-0.9**
ASAJ	**Asahikawa**	**3.96**	**1**	P		P	**Pn**	**04 20 43.8**	**+2.9**
ASAJ	9.6nm,0.3s,baz=219,slow=9.0,SNR=3.5			S			**Sb**	**04 21 35.5**	**-3.4**
	23nm,0.5s,baz=9.1,slow=29,SNR=7.3								
MJAR	**Matsushiro Arr**	**4.92**	**224**	P		P	**Pn**	**04 20 55.9**	**+1.8**
	3.0nm,0.3s,baz=40,slow=12,SNR=14								
USRK	**Ussuriysk Ar.**	**8.77**	**301**	P		P	**Pn**	**04 21 51.3**	**+4.4**
	4.6nm,0.7s,baz=94,slow=15,SNR=5.0								
KSRS	**Korea Array**	**11.66**	**261**	LR		LR		04 26 52.4	
	comp=Z,43nm,18.8s,baz=335,slow=36								
SEY	**Seymchan**	**23.58**	**11**	P		P		**04 24 50.3**	**+0.4**
	1.0nm,0.2s,baz=202,slow=6.1,SNR=5.1								
SEY				LR		LR		04 34 54.2	
	comp=Z,72nm,20.1s,baz=29,slow=38								
	1.0nm,0.2s								
SONM	**Songino Array**	**26.87**	**299**	P		P		**04 25 20.4**	**+0.2**
	0.5nm,0.5s,baz=93,slow=7.5,SNR=4.0								
	0.5nm,0.5s								
H11N2	**WAKE ISLAND Hy 29.20**	**127**		T		T		04 56 20.7	
	baz=319,slow=75,SNR=84								
H11N1	**WAKE ISLAND Hy 29.21**	**127**		T		T		04 56 23.1	
	baz=319,slow=75,SNR=81								
H11N3	**WAKE ISLAND Hy 29.22**	**127**		T		T		04 56 22.7	
	baz=319,slow=75,SNR=64								
H11S1	**WAKE ISLAND Hy 30.02**	**129**		T		T		04 57 38.9	
	baz=321,slow=76,SNR=22								
H11S3	**WAKE ISLAND Hy 30.02**	**129**		T		T		04 57 39.8	
	baz=321,slow=76,SNR=16								
H11S2	**WAKE ISLAND Hy 30.03**	**129**		T		T		04 57 40.3	
	baz=321,slow=76,SNR=17								
ZALV	**Zalesovo Beam**	**40.49**	**310**	P		P		**04 27 17.8**	**-0.2**
	0.9nm,0.4s,baz=99,slow=7.7,SNR=2.8								
	0.9nm,0.4s								
MKAR	**Makanchi Array**	**43.23**	**300**	P		P		**04 27 40.0**	**-0.5**
	0.5nm,0.4s,baz=78,slow=9.2,SNR=6.0								
	0.5nm,0.4s								
ILAR	**Eielson Array**	**46.44**	**34**	P		P		**04 28 05.4**	**-0.4**
	0.2nm,0.6s,baz=280,slow=6.3,SNR=2.0								
	0.2nm,0.6s								
INK	**Inuvik**	**51.24**	**28**	P		P		**04 28 42.8**	**+0.3**
	0.9nm,0.5s,baz=278,slow=6.7,SNR=1.4								
	0.9nm,0.5s								
FINES	**FINESS Array B**	**66.45**	**332**	P		P		**04 30 27.4**	**-0.7**
	1.2nm,0.7s,baz=75,slow=7.4,SNR=4.1								
	1.2nm,0.7s								
NOA	**NORSAR Array B**	**71.63**	**337**	P		P		**04 30 59.9**	**-0.5**
	0.3nm,0.6s,baz=41,slow=5.9,SNR=2.1								
	0.3nm,0.6s								

NIED ***07*** *04:35:23.5,37.32N×141.98E,h40km,MW3.4,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr-1.41; Mθθ0.85; Mϕϕ0.57; Mrθ0.81; Mθϕ0.40; Mϕr0.70; Fault plane solution: Mo1.66000×10¹⁴ NP1:ϕs56.00000°, δ25.00000°,λ-85.00000°. NP2:ϕs231.00000°,δ65.00000°, λ-92.00000°.*
JMA ***07*** *04:35:23.5±0.2,37.3N±0.5×14.2E±,h40km±3km, MV3.6/38,E OFF FUKUSHIMA PREF*
IDC ***07*** *04:35:31.1±6.3,36.98N×141.72E,h74km±47km,mb3.1/2, mbtmp3.5/4,ML2.8/2,MS2.8/2,Error ellipse: s-maj=53.6km s-min=17.8km az=59.0*
ISC 07 04:35:20.6±1.9,37.30N±0.04×142.05E±0.07,h9km±10km, n24,σ1ᵖ49/32,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.94**	**274**	P		P	**Pg**	**04 35 39.6**	**+0.9**
JFK				S			**Sg**	**04 35 50.6**	**-0.2**
JMST	**Minamisoumatoc**	**1.02**	**295**	*i* P		P	**Pg**	**04 35 40.6**	**+0.5**
JMST				S			**Sg**	**04 35 52.6**	**-0.7**
ONAJ	**Iwakimizuishiy**	**1.02**	**259**	P		P	**Pg**	**04 35 40.7**	**+0.6**
ONAJ				*e*S			**Sg**	**04 35 52.5**	**-0.9**
JIKH	**Ishinomakikobu**	**1.11**	**335**	P		P	**Pg**	**04 35 42.0**	**+0.2**
JIKH				S			**Sg**	**04 35 54.9**	**-1.3**
JMM	**Marumori**	**1.15**	**300**	*i* P		P	**Pg**	**04 35 42.7**	**+0.1**
JMM				*e*S			**Sg**	**04 35 56.3**	**-1.2**
JIO	**Ouri**	**1.28**	**334**	P		P	**Pn**	**04 35 44.5**	**-0.2**
JIO				S			**Sb**	**04 35 59.3**	**-2.1**
JHO	**Hitachi**	**1.37**	**240**	*e*P		P	**Pn**	**04 35 46.0**	**0.0**
JHO				*e*S			**Sb**	**04 36 01.3**	**-2.8**
JFT	**Otama**	**1.38**	**279**	*i* P		P	**Pn**	**04 35 47.0**	**+0.8**
JFT				S			**Sb**	**04 36 03.4**	**-1.0**
JOU	**Okura**	**1.53**	**314**	P		P	**Pn**	**04 35 48.9**	**+0.8**
JOU				*e*S			**Sn**	**04 36 07.0**	**-1.1**
JMK	**Ichinoseki**	**1.77**	**339**	P		P	**Pn**	**04 35 52.7**	**+1.2**
JMK				*e*S			**Sn**	**04 36 13.6**	**-0.6**
JYS	**Shirataka**	**1.82**	**301**	P		P	**Pn**	**04 35 52.9**	**+0.8**
JYS				*e*S			**Sn**	**04 36 14.8**	**-0.6**
JFY	**Yanaizu**	**1.87**	**274**	P		P	**Pn**	**04 35 54.1**	**+1.2**
JFY				*e*S			**Sn**	**04 36 16.2**	**-0.4**
JYK	**Kaneyama**	**2.09**	**321**	P		P	**Pn**	**04 35 57.2**	**+1.3**
JYK				*e*S			**Sn**	**04 36 22.0**	**-0.1**
MJAR	**Matsushiro Arr**	**3.17**	**257**	P		P	**Pn**	**04 36 15.1**	**+4.4**
MJAR	0.3nm,0.3s,baz=93,slow=15,SNR=5.6			S			**Sn**	**04 36 47.7**	**-1.0**
	2.1nm,0.3s,baz=65,slow=15,SNR=5.3								
MJAR				LR		LR		04 37 45.8	
	comp=Z,59nm,19.4s,baz=14,slow=47								
	1.5nm,0.3s								
JHJ	**Hachijo jima 2**	**4.57**	**205**	P		P	**Pn**	**04 36 30.7**	**+0.8**
	9.5nm,0.3s,baz=86,slow=23,SNR=1.4								
JHJ				S			**Sn**	**04 37 19.9**	**-3.2**
	128nm,0.8s,baz=66,slow=20,SNR=2.6								
	100nm,0.9s								
H11N2	**WAKE ISLAND Hy 27.85**	**122**		T		T		05 10 42.2	
	baz=314,slow=75,SNR=37								
H11N1	**WAKE ISLAND Hy 27.86**	**122**		T		T		05 10 42.3	

baz=314,slow=75,SNR=29
H11N3 WAKE ISLAND Hy 27.87 122 T T 05 10 48.7
baz=314,slow=75,SNR=26
H11S1 WAKE ISLAND Hy 28.58 124 T T 05 11 35.8
baz=316,slow=76,SNR=18
H11S3 WAKE ISLAND Hy 28.59 124 T T 05 11 35.7
baz=316,slow=76,SNR=18
H11S2 WAKE ISLAND Hy 28.60 124 T T 05 11 22.7
baz=316,slow=76,SNR=16
DAV Davao City (W) 33.62 211 LR LR 04 54 26.1
comp=Z,47nm,20.2s,baz=346,slow=34
MKAR Makanchi Array 44.41 302 P **P** **04 43 33.2 +1.6**
0.4nm,0.6s,baz=90,slow=9.2,SNR=5.3
0.4nm,0.6s
WRA Warramunga Arr 57.40 189 P **P** **04 45 09.7 +0.1**
0.2nm,0.4s,baz=3.5,slow=7.3,SNR=11
0.2nm,0.4s

*IDC **07** 04:51:18.2±1.1,38˚.20'N×20˚.32'E,h0km,mb3.9/10, mbtmp3.8/17,ML3.4/7,Error ellipse: s-maj=19.5km s-min=16.7km az=33.0*
*ATH **07** 04:51:20.3,38˚.14'N×20˚.36'E,h19km±1km,ML3.6/6,Error ellipse: s-maj=2.6km s-min=1.2km az=46.0*
*PDG **07** 04:51:20.5±0.6,38˚.19'N×20˚.32'E,h12km±1km,ML3.7/11, Error ellipse: s-maj=1.2km s-min=1.3km az=0.0*
*THE **07** 04:51:21.4,38˚.15'N×20˚.38'E,h13km,ML3.8/9,Error ellipse: s-maj=1.4km s-min=0.8km az=246.0*

ISC 07 04:51:20.6±0.7,38˚.17'N±0'.03×20˚.33'E±0'.03,h19km±2km, n155,σ1§65/207,mb3.9/10,22C-22D,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	**Kipouria, Keph**	**0.03**	**26**	P	**Pg**	**04 51 23.9**	**-0.1**
KEF3				S	**Sg**	**04 51 26.0**	**-0.2**
KEF3	**Kipouria, Keph**	**0.03**	**26**	P	**Pg**	**04 51 23.8**	**-0.1**
KEF3				S	**Sg**	**04 51 25.9**	**-0.3**
	164μm,0.4s						
DMLN	**Damoulianata-K**	**0.07**	**28**	P	**Pg**	**04 51 24.0**	**-0.2**
DMLN				S	**Sg**	**04 51 26.4**	**-0.2**
DMLN	**Damoulianata-K**	**0.07**	**28**	P	**Pg**	**04 51 24.0**	**-0.2**
DMLN				S	**Sg**	**04 51 26.3**	**-0.4**
	49μm,0.4s						
KEF4	**Livadi, Kephal**	**0.11**	**42**	P	**Pg**	**04 51 24.4**	**-0.2**
KEF4				S	**Sg**	**04 51 27.1**	**0.0**
KEF4	**Livadi, Kephal**	**0.11**	**42**	P	**Pg**	**04 51 24.3**	**-0.2**
KEF4				S	**Sg**	**04 51 27.1**	**0.0**
	217μm,0.2s						
ARGA	**Argostoli. Kep**	**0.12**	**89**	P	**Pg**	**04 51 24.9**	**+0.3**
ARGA				S	**Sg**	**04 51 27.1**	**-0.2**
VLS	**Valsamata**	**0.20**	**89**	P	**Pg**	**04 51 25.1**	**-0.6**
VLS				S	**Sb**	**04 51 28.3**	**+0.2**
VLS				AML	AML	04 51 28.5	
VLS				AML	AML	04 51 29.4	
VLS	**Valsamata**	**0.20**	**89**	P	**Pg**	**04 51 25.1**	**-0.6**
VLS				S	**Sg**	**04 51 28.2**	**-1.0**
	82μm,0.3s						
PSDA	**Pessada-Kefalo**	**0.21**	**107**	P	**Pg**	**04 51 25.3**	**-0.5**
PSDA				S	**Sg**	**04 51 28.5**	**-0.8**
PSDA	**Pessada-Kefalo**	**0.21**	**107**	P	**Pg**	**04 51 25.2**	**-0.5**
PSDA				S	**Sg**	**04 51 28.4**	**-0.8**
FSK	**Fiskardo**	**0.34**	**33**	P	**Pb**	**04 51 28.4**	**+0.2**
FSK				S	**Sb**	**04 51 33.8**	**+0.6**
FSK				AML	AML	04 51 35.0	
	comp=E,16794μm,0.2s						
FSK				AML	AML	04 51 37.3	
	comp=N,12817μm,0.7s						
FSK	**Fiskardo**	**0.34**	**33**	P	**Pb**	**04 51 28.2**	**0.0**
FSK				S	**Sb**	**04 51 33.5**	**+0.3**
	comp=N,7μm,0.3s						
EVGI	**Lefkada island**	**0.51**	**30**	P	**Pb**	**04 51 30.9**	**-0.2**
EVGI	**Lefkada island**	**0.51**	**30**	P	**Pb**	**04 51 30.7**	**-0.4**
DRAG	**Dragano-Lefkad**	**0.54**	**21**	P	**Pb**	**04 51 31.4**	**-0.1**
DRAG	**Dragano-Lefkad**	**0.54**	**21**	P	**Pb**	**04 51 31.4**	**-0.1**
DRAG				S	**Sn**	**04 51 40.9**	**-1.2**
	comp=N,54μm,0.4s						
NYDR	**Nydri-Lefkada**	**0.61**	**28**	P	**Pb**	**04 51 32.5**	**-0.2**
NYDR	**Nydri-Lefkada**	**0.61**	**28**	P	**Pb**	**04 51 32.3**	**-0.4**
LKD2	**Lefkada island**	**0.67**	**23**	P	**Pb**	**04 51 33.6**	**-0.1**
LKD2	**Lefkada island**	**0.67**	**23**	P	**Pb**	**04 51 33.7**	**+0.1**
LKD2				S	**Sn**	**04 51 44.8**	**-0.3**
	comp=N,3μm,0.6s						
TSLK	**Tsoukalades, L**	**0.70**	**21**	P	**Pb**	**04 51 34.4**	**+0.2**
TSLK				AML	AML	04 51 50.5	
	comp=E,7379μm,0.6s						
TSLK				AML	AML	04 51 54.8	
	comp=N,6646μm,0.7s						
TSLK	**Tsoukalades, L**	**0.70**	**21**	P	**Pb**	**04 51 34.4**	**+0.2**
TSLK				S	**Sn**	**04 51 45.7**	**-0.1**
	comp=N,4μm,0.6s						
RLS	**Riolos of Patr**	**0.90**	**97**	P	**Pg**	**04 51 36.9**	**-1.4**
RLS	**Riolos of Patr**	**0.90**	**97**	P	**Pg**	**04 51 36.9**	**-1.4**
PVO	**Paravola**	**1.04**	**64**	P	**Pg**	**04 51 40.1**	**-0.8**
PVO	**Paravola**	**1.04**	**64**	P	**Pg**	**04 51 40.0**	**-0.8**
PVO				S	**Sn**	**04 51 55.0**	**+0.8**
	comp=N,9μm,0.4s						
EFP	**Efpalio**	**1.27**	**78**	P	**Pn**	**04 51 43.2**	**-0.2**
EFP				AML	AML	04 52 07.8	
	comp=E,8749μm,0.4s						
EFP				AML	AML	04 52 09.0	
	comp=N,5620μm,0.4s						
LAKA	**Lakka**	**1.30**	**87**	P	**Pn**	**04 51 43.9**	**+0.1**
LAKA	**Lakka**	**1.30**	**87**	P	**Pn**	**04 51 43.6**	**-0.2**
IGT	**Igoumenitsa**	**1.36**	**0**	P	**Pb**	**04 51 45.3**	**-0.2**
EVR	**Evrytania**	**1.38**	**57**	P	**Pg**	**04 51 47.2**	**-0.1**
EVR				AML	AML	04 52 12.1	
	comp=E,2113μm,0.6s						
EVR				AML	AML	04 52 15.3	
	comp=N,3106μm,0.7s						
SERG	**Sergoula**	**1.38**	**80**	P	**Pn**	**04 51 45.1**	**+0.2**
SERG				AML	AML	04 52 12.4	
	comp=N,6443μm,0.4s						
SERG				AML	AML	04 52 16.8	
	comp=E,4730μm,0.7s						
KLV	**Kalavryta, Ach**	**1.44**	**95**	P	**Pn**	**04 51 46.1**	**+0.3**
KEK	**Kerkira**	**1.59**	**345**	P	**Pb**	**04 51 49.7**	**+0.2**
KEK	**Kerkira**	**1.59**	**345**	P	**Pb**	**04 51 49.4**	**-0.1**
KASA	**Kassiopi**	**1.60**	**349**	P	**Pg**	**04 51 50.4**	**-1.1**
ITM	**Ithomi**	**1.61**	**128**	P	**Pb**	**04 51 49.5**	**-0.3**
ITM	**Ithomi**	**1.61**	**128**	P	**Pb**	**04 51 49.5**	**-0.3**
PYL	**PYLOS**	**1.70**	**138**	P	**Pn**	**04 51 50.4**	**+1.1**
VIL2	**Platees**	**2.31**	**88**	P	**Pb**	**04 52 00.4**	**-1.4**
SCTE	**Santa Cesarea**	**2.39**	**323**	⇑P	**Pn**	**04 52 00.2**	**+1.5**
SCTE				S	**Sn**	**04 52 29.6**	**+2.2**
TIP	**Timpagrande**	**2.97**	**291**	⇑P	**Pn**	**04 52 08.8**	**+1.9**
TIP	**Timpagrande**	**2.97**	**291**	⇑P	**Pn**	**04 52 08.8**	**+1.9**
TIP				S	**Sn**	**04 52 43.0**	**+1.0**
TIP				AML	AML		
	comp=E,176μm,0.7s						
TIP				AML	AML		
	comp=E,144μm,0.7s						
TIP				AML	AML		
	comp=N,190μm,0.6s						
TIP				AML	AML		
	comp=N,156μm,0.5s						
SERS	**Sersale**	**2.98**	**288**	⇓P	**Pn**	**04 52 08.7**	**+1.7**
SERS				S	**Sn**	**04 52 42.5**	**+0.1**
SERS				AML	AML		
	comp=E,2745μm,1.6s						
SERS				AML	AML		
	comp=N,231μm,1.4s						
SERS				AML	AML		
	comp=E,472μm,0.7s						
SERS				AML	AML		
	comp=N,1420μm,1.2s						
PLAC	**Placanica**	**3.07**	**276**	⇓P	**Pn**	**04 52 09.6**	**+1.4**
PLAC				S	**Sn**	**04 52 46.1**	**+1.5**
PLAC				AML	AML		
	comp=E,211μm,0.6s						
PLAC				AML	AML		
	comp=N,329μm,0.7s						
PLAC				AML	AML		
	comp=E,334μm,0.7s						
PLAC				AML	AML		
	comp=N,207μm,0.5s						
GRI	**Girifalco**	**3.13**	**283**	⇓P	**Pn**	**04 52 11.2**	**+2.1**
GRI				S	**Sn**	**04 52 47.8**	**+1.8**
GRI				AML	AML		
	comp=E,376μm,0.8s						
GRI				AML	AML		
	comp=N,335μm,0.4s						
TIR	**Tirane**	**3.19**	**354**	⇑P	**Pn**	**04 52 10.8**	**+1.0**
TIR	**Tirane**	**3.19**	**354**	⇓P	**Pn**	**04 52 12.3**	**+2.5**
TIR				AML	AML		
	comp=E,402μm,0.3s						
TIR				AML	AML		
	comp=N,363μm,1.2s						
CELI	**Celico**	**3.23**	**294**	⇓P	**Pn**	**04 52 12.3**	**+1.9**
CELI				S	**Sn**	**04 52 50.5**	**+2.1**
CELI				AML	AML		
	comp=E,135μm,0.6s						
CELI				AML	AML		
	comp=N,143μm,1.0s						
CELI				AML	AML		
	comp=E,344μm,1.4s						
CELI				AML	AML		
	comp=N,358μm,1.5s						
CAR1	**CAROLEI**	**3.40**	**290**	⇑P	**Pn**	**04 52 15.4**	**+2.7**
CAR1				S	**Sn**	**04 52 54.4**	**+1.9**
CAR1				AML	AML		
	comp=N,679μm,0.5s						
CAR1				AML	AML		
	comp=E,508μm,1.0s						
CAR1				AML	AML		
	comp=N,694μm,0.5s						
CAR1				AML	AML		
	comp=E,578μm,0.7s						
JOPP	**Joppolo**	**3.52**	**278**	⇓P	**Pn**	**04 52 15.7**	**+1.3**
JOPP				S	**Sn**	**04 52 55.5**	**0.0**
NOCI	**Noci**	**3.63**	**317**	⇑P	**Pn**	**04 52 17.6**	**+1.7**
NOCI				S	**Sn**	**04 52 58.3**	**0.0**
NOCI				AML	AML		
	comp=E,398μm,0.6s						
NOCI				AML	AML		
	comp=N,446μm,0.6s						
LTRZ	**Laterza**	**3.65**	**313**	⇓P	**Pn**	**04 52 17.6**	**+1.6**
CET2	**Cetraro**	**3.67**	**293**	⇓P	**Pn**	**04 52 19.4**	**+2.9**
CET2				S	**Sn**	**04 53 00.7**	**+1.4**
CET2				AML	AML		
	comp=E,968μm,0.8s						
CET2				AML	AML		
	comp=N,820μm,0.5s						
MATE	**Matera**	**3.74**	**312**	⇓P	**Pn**	**04 52 19.5**	**+2.1**
ULC	**Ulcinj**	**3.88**	**348**	*e*Pn	**Pn**	**04 52 19.9**	**+0.6**
AMUR	**Altamura**	**3.97**	**315**	P	**Pn**	**04 52 22.1**	**+1.6**
AMUR				S	**Sn**	**04 53 05.7**	**-0.8**
AMUR				AML	AML		
	comp=E,273μm,0.7s						
AMUR				AML	AML		
	comp=N,241μm,0.6s						
IST3	**Stromboli F**	**4.05**	**280**	P	**Pn**	**04 52 22.4**	**+0.7**
IST3				AML	AML		
	comp=E,1285μm,1.5s						
IST3				AML	AML		
	comp=N,2215μm,0.2s						
DRME	**Dracevica, Mon**	**4.10**	**348**	*e*Pn	**Pn**	**04 52 23.3**	**+0.9**
DRME	**Dracevica, Mon**	**4.10**	**348**	⇓*i*Pn	**Pn**	**04 52 23.5**	**+1.1**
DRME				*e*Sn	**Sn**	**04 53 11.8**	**+2.0**
MCEL	**Monticello**	**4.12**	**303**	P	**Pn**	**04 52 25.7**	**+3.0**
MCEL				AML	AML		
	comp=E,278μm,0.4s						
MCEL				AML	AML		
	comp=N,219μm,0.8s						
BUM	**Brajici-Budva**	**4.27**	**346**	⇓*i*Pn	**Pn**	**04 52 25.3**	**+0.6**
BUM				*i* Sn	**Sn**	**04 53 15.2**	**+1.2**
APE	**Apeiranthos**	**4.27**	**103**	⇑P	**Pb**	**04 52 30.5**	**-4.7**
ACER	**Acerenza**	**4.28**	**309**	⇓P	**Pn**	**04 52 27.6**	**+2.7**
ACER				AML	AML		
	comp=E,324μm,1.3s						
ACER				AML	AML		
	comp=N,321μm,0.6s						
ACER				AML	AML		
	comp=E,367μm,1.3s						
ACER				AML	AML		
	comp=N,356μm,0.7s						
MMB	**Musomiste**	**4.30**	**36**	P	**Pn**	**04 52 28.7**	**+3.6**
PDG	**Podgorica**	**4.33**	**349**	⇓P	**Pn**	**04 52 26.6**	**+1.2**
PDG	**Podgorica**	**4.33**	**349**	*e*Pn	**Pn**	**04 52 26.1**	**+0.7**
TTG	**Podgorica**	**4.33**	**349**	*e*Pn	**Pn**	**04 52 26.6**	**+1.2**
TTG				*i* Sn	**Sn**	**04 53 16.7**	**+1.3**
HLNI	**Lentini**	**4.40**	**261**	P	**Pn**	**04 52 25.2**	**-1.2**
HLNI				S	**Sn**	**04 53 14.1**	**-3.1**
PVY	**Plav**	**4.42**	**356**	⇑*i*Pn	**Pn**	**04 52 28.8**	**+1.9**
PVY				*i* Sn	**Sn**	**04 53 19.5**	**+1.6**
HCY	**Herceg Novi**	**4.49**	**342**	*e*Pn	**Pn**	**04 52 27.0**	**-0.7**
HCY	**Herceg Novi**	**4.49**	**342**	⇓*i*Pn	**Pn**	**04 52 27.9**	**+0.2**
HCY				*e*Sn	**Sn**	**04 53 20.9**	**+1.4**
CEME	**Cevo**	**4.50**	**347**	⇓*i*Pn	**Pn**	**04 52 28.5**	**+0.6**
CEME				*i* Sn	**Sn**	**04 53 20.9**	**+1.2**
IDI	**Anoyia**	**4.66**	**127**	⇑P	Pn	04 52 35.2	+5.2
IDI	**Anoyia**	**4.66**	**127**	Pn	**Pn**	**04 52 31.3**	**+1.3**
	comp=N,0.3nm,0.3s,baz=53,slow=16,SNR=1.9						
IDI				Sn	**Sn**	**04 53 24.4**	**+0.7**
	comp=N,4.3nm,0.3s,baz=307,slow=23,SNR=11						
	comp=N,1.4nm,0.4s						
IVA	**Berane**	**4.70**	**356**	*e*Pn	**Pn**	**04 52 32.5**	**+1.8**
IVA				*e*Sn	**Sn**	**04 53 26.8**	**+2.0**
KOME	**Kolasin**	**4.71**	**353**	⇓*i*Pn	**Pn**	**04 52 32.6**	**+1.8**
KOME				*i* Sn	**Sn**	**04 53 26.4**	**+1.4**
TREB	**Trebinje**	**4.78**	**342**	*e*Pn	**Pn**	**04 52 31.6**	**-0.1**
RZN	**Rozhen**	**4.87**	**42**	P	**Pn**	**04 52 36.1**	**+3.1**
MSAG	**Monte S. Angel**	**4.90**	**318**	S	**Sn**	**04 53 29.0**	**-0.6**
BRY	**Bratogost**	**4.92**	**344**	*e*Pn	**Pn**	**04 52 33.7**	**+0.1**
BRY	**Bratogost**	**4.92**	**344**	⇓*i*Pn	**Pn**	**04 52 33.9**	**+0.3**
BRY				*i* Sn	**Sn**	**04 53 30.1**	**0.0**
VTS	**Vitosha**	**4.96**	**26**	⇑P	**Pn**	**04 52 36.2**	**+1.9**
VTS	**Vitosha**	**4.96**	**26**	P	**Pn**	**04 52 36.4**	**+2.1**
GIB	**Gibilmanna**	**4.98**	**270**	P	**Pn**	**04 52 36.9**	**+2.5**
GIB				AML	AML		
	comp=E,80μm,0.6s						
GIB				AML	AML		
	comp=N,98μm,1.4s						
SGRT	**San Giovanni R**	**5.02**	**317**	P	**Pn**	**04 52 36.4**	**+1.4**
SGRT				AML	AML		
	comp=E,182μm,0.6s						
SGRT				AML	AML		
	comp=N,167μm,0.7s						
SJES	**Sjenica**	**5.09**	**357**	*e*Pn	**Pn**	**04 52 37.2**	**+1.2**
STON	**Ston**	**5.10**	**338**	*e*Pn	**Pn**	**04 52 36.1**	**+0.1**
STON	**Ston**	**5.10**	**338**	⇓P	**Pn**	**04 52 36.7**	**+0.6**
STON				AML	AML		
	comp=N,108μm,0.8s						
STON				AML	AML		
	comp=E,97μm,1.0s						
APRC	**Apricena**	**5.13**	**316**	⇑P	**Pn**	**04 52 38.4**	**+1.8**
APRC				AML	AML		
	comp=E,266μm,0.6s						
APRC				AML	AML		
	comp=N,372μm,0.6s						
UPM	**Unac-Piva**	**5.14**	**348**	*e*Pn	**Pn**	**04 52 37.5**	**+0.7**
UPM	**Unac-Piva**	**5.14**	**348**	⇓*i*Pn	**Pn**	**04 52 38.1**	**+1.3**
UPM				*i* Sn	**Sn**	**04 53 36.4**	**+0.8**
CLTA	**Licata**	**5.15**	**261**	⇓P	**Pn**	**04 52 37.5**	**+0.7**
CLTA				AML	AML		
	comp=E,430μm,0.5s						
CLTA				AML	AML		
	comp=N,426μm,0.5s						
KDZ	**Kurdzhali**	**5.23**	**47**	P	**Pn**	**04 52 38.6**	**+0.8**
RUDO	**Rudo**	**5.49**	**353**	*e*Pn	**Pn**	**04 52 40.0**	**-1.4**
BOVS	**Bovan**	**5.55**	**10**	⇑P	**Pn**	**04 52 42.9**	**+0.7**
BLKB	**Belogradchik**	**5.72**	**17**	⇑P	**Pn**	**04 52 46.7**	**+2.0**
BBLS	**Lazići**	**5.73**	**353**	*e*Pn	**Pn**	**04 52 44.6**	**-0.2**
MPEP	**Malo Peshtene**	**5.79**	**25**	P	**Pn**	**04 52 48.0**	**+2.5**
DIVS	**Divibare**	**5.92**	**358**	*e*Pn	**Pn**	**04 52 46.2**	**-1.2**
LIK	**San Giovanni I**	**6.18**	**305**	⇑P	**Pn**	**04 52 47.4**	**-3.5**
SRKY	**Kupres RS**	**6.35**	**339**	*e*Pn	**Pn**	**04 52 54.9**	**+1.5**
MDVR	**Moldovita**	**6.68**	**8**	⇑P	**Pn**	**04 52 57.4**	**-0.4**
MGRS	**Mrkonjic Grad**	**6.70**	**340**	*e*Pn	**Pn**	**04 52 59.5**	**+1.5**
BLY	**Banja Luka**	**6.98**	**341**	*e*Pn	**Pn**	**04 53 00.3**	**-1.6**
FRGS	**Fruska Gora**	**6.99**	**357**	⇑P	**Pn**	**04 53 02.2**	**+0.2**
FRGS	**Fruska Gora**	**6.99**	**357**	*e*Pn	**Pn**	**04 53 01.3**	**-0.7**
SRES	**S.Oreste - Sor**	**7.23**	**307**	⇑P	**Pb**	**04 53 22.1**	**-3.4**
PP3	**Marolino**	**7.28**	**318**	P	Pn	04 53 16.4	+10
FDMO	**Fiordimonte**	**7.34**	**314**	⇓P	**Pn**	**04 53 10.2**	**+3.4**
CING	**Cingoli**	**7.50**	**316**	P	Pb	04 53 25.5	-4.7
ARVD	**Arcevia**	**7.72**	**316**	⇓P	**Pn**	**04 53 10.0**	**-2.1**
VOIR		**8.07**	**24**	⇑P	**Pn**	**04 53 14.5**	**-2.3**
KOVH	**Kovagototos**	**8.08**	**349**	S	**Sn**	**04 54 42.5**	**-5.3**
MORH	**Mrgy, Hungar**	**8.13**	**352**	⇑P	**Pn**	**04 53 18.2**	**+0.5**
MORH	**Mrgy, Hungar**	**8.13**	**352**	P	**Pn**	**04 53 17.5**	**-0.2**
MORH				S	**Sn**	**04 54 44.4**	**-4.6**
BOJS	**Bojanci**	**8.24**	**334**	⇑P	**Pn**	**04 53 20.1**	**+0.9**
GBRS	**Gornja Briga**	**8.42**	**333**	*i* Pn	**Pn**	**04 53 22.9**	**+1.3**
GBRS				*e*Sn	**Sn**	**04 54 52.2**	**-4.0**
MLR	**Muntele Rosu**	**8.43**	**28**	⇑P	**Pn**	**04 53 23.9**	**+2.1**
MLR	**Muntele Rosu**	**8.43**	**28**	Pn	**Pn**	**04 53 24.1**	**+2.3**
	comp=N,0.3nm,0.3s,baz=24,slow=1.9,SNR=5.4						
	comp=N,5.9nm,0.8s						
CRES	**Cresnjev**	**8.46**	**336**	*e*Pn	**Pn**	**04 53 22.0**	**-0.2**
SKDS	**Skadanscina**	**8.74**	**329**	*e*Pn	**Pn**	**04 53 26.0**	**0.0**
CEY	**Cerknica**	**8.74**	**332**	*e*Pn	**Pn**	**04 53 26.9**	**+0.8**
LJU	**Ljubljana**	**8.96**	**333**	*e*Pn	**Pn**	**04 53 29.7**	**+0.6**
VRI	**Vrincioaia**	**9.04**	**30**	⇑P	**Pn**	**04 53 32.6**	**+2.5**
PERS	**Pernice**	**9.29**	**337**	*i* Pn	**Pn**	**04 53 33.5**	**-0.1**
SOKA	**Soboth**	**9.35**	**337**	Pn	**Pn**	**04 53 34.8**	**+0.3**
	comp=N,74nm,0.0s,SNR=9.3						
SOKA				*e*Sn	**Sn**	**04 55 13.8**	**-5.4**
	comp=N,4.1nm,0.6s						
OBKA	**Obir**	**9.36**	**335**	Pn	**Pn**	**04 53 36.1**	**+1.6**
	comp=N,4.7nm,0.5s,SNR=7.5						
OBKA				*e*Sn	**Sn**	**04 55 18.3**	**-1.1**
	comp=N,4.9nm,0.5s						
ARSA	**Arzberg**	**9.73**	**340**	*e*Pn	**Pn**	**04 53 40.0**	**+0.3**
	comp=N,0.3nm,0.2s						
ARSA				*e*Sn	**Sn**	**04 55 27.1**	**-1.3**
	comp=N,3.7nm,0.7s						
MYKA	**Terra Mystica**	**9.79**	**332**	*e*Pn	**Pn**	**04 53 42.9**	**+2.5**
	comp=N,2.1nm,0.3s						
MYKA				*e*Sn	**Sn**	**04 55 28.9**	**-0.9**
	comp=N,2.2nm,0.5s						
KBA	**Koelnbreinsper**	**10.28**	**332**	*e*Pn	**Pn**	**04 53 47.9**	**+0.8**
	comp=N,2.1nm,0.4s						
KBA				*e*Sn	**Sn**	**04 55 38.7**	**-3.2**
	comp=N,5.4nm,0.9s						
ABTA	**Abfaltersbach**	**10.33**	**329**	*e*Pn	**Pn**	**04 53 46.4**	**-1.4**
	comp=N,2.6nm,0.4s						
ABTA				*e*Sn	**Sn**	**04 55 40.1**	**-3.0**
	comp=N,25nm,1.2s						
MOA	**Molln**	**10.64**	**337**	*e*Pn	**Pn**	**04 53 53.1**	**+1.1**
	comp=N,4.5nm,0.6s						
MOA				*e*Sn	**Sn**	**04 55 47.7**	**-2.9**
	comp=N,3.3nm,0.8s						
BIOA	**Bad Ischl, Aus**	**10.70**	**335**	*e*Pn	**Pn**	**04 53 53.9**	**+1.1**
	comp=N,5.4nm,0.5s						
BIOA				*e*Sn	**Sn**	**04 55 51.8**	**-0.2**
	comp=N,4.7nm,0.5s						
WTTA	**Wattenberg**	**11.10**	**328**	*e*Pn	**Pn**	**04 54 01.1**	**+2.6**
	comp=N,2.9nm,0.5s						
WTTA				*e*Sn	**Sn**	**04 55 59.4**	**-2.8**
	comp=N,9.9nm,0.8s						
WATA	**Walderalm**	**11.18**	**328**	*e*Pn	**Pn**	**04 54 01.8**	**+2.2**
	comp=N,3.7nm,0.5s						
WATA				*e*Sn	**Sn**	**04 56 01.5**	**-2.6**
	comp=N,20nm,1.1s						
FETA	**Feichten**	**11.31**	**324**	*e*Pn	**Pn**	**04 54 00.7**	**-0.7**
	comp=N,1.6nm,0.6s						
FETA				*e*Sn	**Sn**	**04 56 09.9**	**+2.6**
	comp=N,1.9nm,0.6s						
DAVOX	**Davos/Dischmat**	**11.54**	**321**	Pn	**Pn**	**04 54 07.3**	**+2.7**
	comp=N,0.3nm,0.3s,baz=310,slow=22,SNR=1.9						
DAVOX				Sn	**Sn**	**04 56 08.8**	**-4.2**
	comp=N,0.3nm,0.3s,baz=120,slow=20,SNR=1.7						
GERES	**GERESS Array B**	**11.70**	**338**	Pn	**Pn**	**04 54 05.8**	**-0.7**
	comp=N,0.3nm,0.3s,baz=163,slow=17,SNR=8.4						
GERES				Sn	**Sn**	**04 56 11.9**	**-4.7**
	comp=N,0.3nm,0.3s,baz=158,slow=29,SNR=3.3						
	comp=N,0.7nm,0.4s						
AKASG	**Malin Array Be**	**14.03**	**24**	Pn	**Pn**	**04 54 38.2**	**-0.1**
	comp=N,0.3nm,0.3s,baz=214,slow=10,SNR=5.5						
	comp=N,0.3nm,0.4s						
KBZ	**Khabaz**	**17.91**	**65**	P	**P**	**04 55 30.5**	**+1.5**
	baz=250,slow=14,SNR=1.5						
	comp=N,0.5nm,0.5s						
ESDC	**Sonseca Array**	**18.95**	**282**	P	Pn	**04 55 42.1**	**+0.7**
	baz=83,slow=12,SNR=3.2						
	comp=N,0.5nm,0.8s						
GNI	**Garni**	**19.02**	**76**	P	**Pn**	**04 55 42.8**	**+0.5**
	comp=N,1.2nm,0.3s,baz=218,slow=19,SNR=1.3						
	comp=N,4.2nm,0.3s						
HFS	**Hagfors**	**22.38**	**351**	P	**P**	**04 56 19.3**	**+1.7**
	comp=N,8.5nm,0.7s,baz=147,slow=12,SNR=17						
	comp=N,8.5nm,0.7s						
EKA	**Eskdalemuir Ar**	**23.34**	**325**	P	**P**	**04 56 26.8**	**-0.8**
	comp=N,0.6nm,0.7s,baz=125,slow=11,SNR=6.8						
	comp=N,0.6nm,0.7s						
FINES	**FINESS Array B**	**23.57**	**7**	P	**P**	**04 56 29.1**	**-0.6**
	comp=N,3.3nm,0.7s,baz=165,slow=7.9,SNR=10						
	comp=N,3.3nm,0.7s						
NB2	**NORSAR Subarra**	**23.59**	**349**	P	**P**	**04 56 29.8**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=157,slow=9.3						
NOA	**NORSAR Array B**	**23.59**	**349**	P	**P**	**04 56 31.0**	**+0.9**
	comp=Z,1.6nm,0.9s,baz=158,slow=9.0,SNR=9.6						
	comp=Z,1.6nm,0.9s						
BELG	**Belogornoye**	**23.71**	**44**	P	**P**	**04 56 29.9**	**-1.3**
	comp=Z,12nm,0.5s,baz=66,slow=1.1,SNR=2.9						
	comp=Z,12nm,0.5s						
TORD	**Torodi Ar. Bea**	**29.93**	**219**	P	**P**	**04 57 28.4**	**+0.8**
	comp=Z,0.3nm,0.7s,baz=32,slow=10,SNR=2.7						
	comp=Z,0.3nm,0.7s						
ARCES	**ARCESS Array B**	**31.55**	**3**	P	**P**	**04 57 41.2**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=184,slow=11,SNR=4.5						
	comp=Z,0.7nm,0.6s						
MKAR	**Makanchi Array**	**45.43**	**58**	P	**P**	**04 59 37.7**	**-0.5**
	comp=Z,1.0nm,0.4s,baz=267,slow=8.6,SNR=16						
	comp=Z,1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**45.80**	**48**	P	**P**	**04 59 40.9**	**-0.1**
	comp=Z,2.9nm,0.5s,baz=276,slow=8.3,SNR=10						
	comp=Z,2.9nm,0.5s						
SONM	**

DRAG S Sb 04 57 18.7 +0.5
DRAG Dragano-Lefkad 0.54 19 P Pg 04 57 10.1 -0.5
DRAG S Sb 04 57 18.4 +0.2
ZAK2 Zakynthos 0.58 131 P Pg 04 57 10.8 -0.4
ZAK2 S Sb 04 57 19.8 +0.5
comp=N,32μm,0.7s
LTHK Lithakia 0.60 140 P Pg 04 57 10.8 -0.8
LTHK S Sg 04 57 19.8 +0.1
NYDR Nydri-Lefkada 0.61 27 P Pg 04 57 11.1 -0.7
NYDR Nydri-Lefkada 0.61 27 P Pg 04 57 10.9 -0.8
NYDR S Sb 04 57 20.2 +0.2
comp=N,8μm,0.3s
LKD2 Lefkada island 0.66 22 P Pg 04 57 11.9 -0.8
LKD2 S Sb 04 57 22.2 +0.5
LKD2 AML AML 04 57 28.7
comp=E,14171μm,0.5s
LKD2 AML AML 04 57 30.4
comp=N,17113μm,0.4s
LKD2 Lefkada island 0.66 22 P Pg 04 57 11.8 -1.0
LKD2 S Sb 04 57 22.9 +1.2
comp=N,8μm,0.4s
TSLK Tsoukalades, L 0.70 20 P Pb 04 57 12.8 -0.5
TSLK S Sg 04 57 22.9 +0.3
TSLK AML AML 04 57 29.2
comp=E,24734μm,0.4s
TSLK AML AML 04 57 30.4
comp=N,22354μm,0.5s
TSLK Tsoukalades, L 0.70 20 P Pb 04 57 12.6 -0.7
TSLK S Sg 04 57 23.6 +1.0
comp=N,12μm,0.5s
RLS Riolos of Patr 0.89 97 P Pb 04 57 15.8 -0.8
RLS S Sb 04 57 28.4 +0.2
RLS AML AML 04 57 35.5
comp=E,5733μm,0.6s
RLS AML AML 04 57 38.3
comp=N,6793μm,0.4s
RLS Riolos of Patr 0.89 97 P Pb 04 57 15.7 -0.9
PVO Paravola 1.03 64 P Pb 04 57 18.8 -0.1
PVO S Sb 04 57 32.5 +0.3
PVO Paravola 1.03 64 P Pb 04 57 18.9 -0.1
EFP Efpalio 1.26 78 P Pn 04 57 22.1 -0.3
EFP S Sn 04 57 38.9 +0.1
EFP AML AML 04 57 47.1
comp=E,10221μm,0.7s
EFP AML AML 04 57 54.5
comp=N,8420μm,0.8s
EFP Efpalio 1.26 78 P Pn 04 57 21.8 -0.5
LAKA Lakka 1.29 86 P Pn 04 57 22.7 -0.2
LAKA S Sn 04 57 40.1 +0.4
LAKA AML AML 04 57 47.6
comp=E,13751μm,0.6s
LAKA AML AML 04 57 50.1
comp=N,16653μm,0.7s
LAKA Lakka 1.29 86 P Pn 04 57 22.6 -0.2
IGT Igoumenitsa 1.36 360 P Pb 04 57 24.6 0.0
IGT S Sb 04 57 42.0 +0.3
IGT AML AML 04 57 49.1
comp=E,3858μm,0.4s
IGT AML AML 04 57 50.5
comp=N,3384μm,0.4s
IGT Igoumenitsa 1.36 360 P Pb 04 57 24.6 0.0
IGT Igoumenitsa 1.36 360 P Pg 04 57 25.2 -0.6
baz=8.0
IGT S Sg 04 57 46.3 +2.6
baz=8.0
EVR Evrytania 1.37 57 P Pn 04 57 24.3 +0.3
EVR S Sb 04 57 42.0 -0.1
EVR AML AML 04 57 50.8
comp=E,3269μm,0.7s
EVR AML AML 04 57 53.4
comp=N,5563μm,0.8s
SERG Sergoula 1.37 79 P Pn 04 57 23.9 0.0
SERG S Sn 04 57 41.8 +0.1
SERG AML AML 04 57 50.3
comp=E,6631μm,0.6s
SERG AML AML 04 57 51.2
comp=N,6488μm,0.5s
KLV Kalavryta, Ach 1.43 95 P Pn 04 57 25.0 +0.2
JAN Janina 1.54 15 P Pb 04 57 27.7 +0.1
JAN S Sb 04 57 47.5 +0.7
JAN AML AML 04 57 54.5
comp=E,4029μm,0.5s
JAN AML AML 04 57 57.8
comp=N,3218μm,0.5s
JAN Janina 1.54 15 P Pb 04 57 28.3 +0.7
KEK Kerkira 1.60 345 P Pb 04 57 28.3 -0.4
KEK S Sb 04 57 49.0 +0.4
KEK AML AML 04 58 01.6
comp=N,2384μm,0.4s
KEK AML AML 04 58 03.3
comp=E,3509μm,0.8s
KEK Kerkira 1.60 345 P Pb 04 57 28.0 -0.7
ITM Ithomi 1.60 128 P Pb 04 57 28.4 -0.3
ITM S Sb 04 57 48.5 -0.1
ITM AML AML 04 58 04.6
comp=N,1629μm,0.8s
ITM AML AML 04 58 05.8
comp=E,1631μm,0.6s
KASA Kassiopi 1.60 349 P Pb 04 57 28.6 -0.1
KASA S Sb 04 57 49.4 +0.7
KASA AML AML 04 58 00.2
comp=E,5066μm,0.4s
KASA AML AML 04 58 02.1
comp=N,3535μm,0.3s
MAKR Makrakomi, Fth 1.63 58 P Pb 04 57 29.3 0.0
MAKR S Sb 04 57 50.3 +0.7
MAKR AML AML 04 57 56.1
comp=E,4900μm,0.6s
MAKR AML AML 04 57 58.1
comp=N,2940μm,0.7s
PYL PYLOS 1.69 138 P Pb 04 57 29.8 -0.4
PYL S Sb 04 57 51.6 +0.4
PYL AML AML 04 58 07.1
comp=E,1639μm,0.8s
PYL AML AML 04 58 09.7
comp=N,1142μm,0.5s
PYL PYLOS 1.69 138 P Pb 04 57 29.6 -0.6
SRN Sarande 1.73 351 P Pn 04 57 29.8 +1.0
baz=0.0
SRN S Sg 04 57 56.5 +1.1
baz=0.0
SRN AMP
comp=N,2.3nm,1.0s,baz=0.0
THL Klokotos Trika 1.91 43 P Pb 04 57 34.1 +0.1
LSK Leskovik 1.99 6 P Pb 04 57 34.7 -0.7
baz=11
LSK S Sg 04 58 06.2 +2.6
baz=11
LSK AMP
comp=N,6.2nm,1.0s,baz=11
LKR Lokris 2.14 76 P Pn 04 57 35.6 +1.1
SCTE Santa Cesarea 2.39 323 P Pn 04 57 38.9 +0.9
baz=331
SCTE S Sb 04 58 10.0 -1.5
baz=331
KBN Korca 2.47 8 P Pb 04 57 42.5 -1.1
baz=12
KBN S Sg 04 58 16.9 -2.3
baz=12
TIP Timpagrande 2.98 291 ⇑P Pn 04 57 47.1 +0.9
TIR Tirane 3.19 354 ⇑P Pn 04 57 50.5 +1.5
TIR Tirane 3.19 354 P Pn 04 57 50.3 +1.3
baz=358
TIR AMP
comp=E,0.8nm,1.0s,baz=358
PHP Peshkopia 3.51 1 P Pn 04 57 55.2 +1.8
baz=4.0
PHP S Sb 04 58 43.8 +0.2
baz=4.0
MATE Matera 3.75 312 ⇑P Pn 04 57 57.5 +0.8
ULC Ulcinj 3.88 348 ⇑/Pn Pn 04 57 58.5 0.0
ULC /Sn Sn 04 58 43.2 -0.4
DRME Dracevica, Mon 4.11 348 ePn Pn 04 58 01.8 +0.2
DRME Dracevica, Mon 4.11 348 ⇑/Pn Pn 04 58 01.6 0.0
DRME /Sn Sn 04 58 48.2 -1.0
BCI Bajram Curri 4.20 357 P Pn 04 58 04.5 +1.7
baz=0.0
BCI S Sb 04 59 08.7 +5.4
baz=0.0
APE Apeiranthos 4.26 103 ⇑P Pb 04 58 09.2 -5.0
BUM Brajici-Budva 4.27 345 ⇓/Pn Pn 04 58 03.9 0.0
BUM /Sn Sn 04 58 52.2 -1.1
MMB Musomiste 4.29 36 P Pn 04 58 05.8 +1.7
PDG Podgorica 4.33 349 ⇑P Pn 04 58 05.1 +0.5
PDG Podgorica 4.33 349 ePn Pn 04 58 04.9 +0.2
TTG Podgorica 4.33 349 ⇓/Pn Pn 04 58 04.7 0.0
TTG /Sn Sn 04 58 53.8 -0.9
PVY Plav 4.43 356 ePn Pn 04 58 06.3 +0.2
HCY Herceg Novi 4.50 342 ePn Pn 04 58 06.3 -0.6
HCY Herceg Novi 4.50 342 ⇑/Pn Pn 04 58 06.4 -0.5
HCY /Sn Sn 04 58 57.2 -1.6
CEME Cevo 4.50 346 ⇑/Pn Pn 04 58 06.8 -0.3
CEME /Sn Sn 04 58 57.8 -1.2
IDI Anoyia 4.65 127 ⇑P Pb 04 58 15.7 -5.0
IDI Anoyia 4.65 127 Pn Pn 04 58 11.2 +2.2
comp=E,0.8nm,0.3s,baz=317,slow=20,SNR=2.8
IDI Sn Sn 04 59 06.9 +4.2
comp=E,2.7nm,0.3s,baz=103,slow=9.9,SNR=3.3
IDI LR LR 05 00 29.2
comp=E,161nm,20.6s,baz=298,slow=45
comp=E,2.0nm,0.4s
IVA Berane 4.71 356 ePn Pn 04 58 10.5 +0.6
IVA eSn Sn 04 59 03.1 -1.0
KOME Kolasin 4.72 353 ⇓/Pn Pn 04 58 10.7 +0.7
KOME /Sn Sn 04 59 03.2 -1.1
VAE Valguarnera 4.75 263 Pn Pn 04 58 11.3 +0.9
comp=E,2.2nm,0.3s,baz=352,slow=17,SNR=1.4
VAE Sn Sn 04 59 06.9 +1.9
comp=E,5.9nm,0.3s,baz=322,slow=12,SNR=7.9
comp=E,6.3nm,0.3s
NKY Niksic 4.75 348 ePn Pn 04 58 10.8 +0.3
TREB Trebinje 4.79 342 ePn Pn 04 58 10.3 -0.6
RZN Rozhen 4.86 42 P Pn 04 58 14.7 +2.6
BRY Bratogost 4.92 344 ePn Pn 04 58 12.5 -0.4
BRY Bratogost 4.92 344 ⇓/Pn Pn 04 58 12.5 -0.4
BRY eSn Sn 04 59 06.7 -2.7
SJES Sjenica 5.09 357 ePn Pn 04 58 16.1 +0.9
STON Ston 5.11 338 ePn Pn 04 58 14.7 -0.6
UPM Unac-Piva 5.14 348 ePn Pn 04 58 16.4 +0.4
UPM Unac-Piva 5.14 348 ePn Pn 04 58 16.3 +0.3
UPM /Sn Sn 04 59 13.4 -1.6
PLE Pljevlja 5.20 352 ePn Pn 04 58 17.3 +0.6
RUDO Rudo 5.49 353 ePn Pn 04 58 20.0 -0.6
BOVS Bovan 5.55 10 ⇑P Pn 04 58 21.7 +0.3
BLKB Belogradchik 5.72 17 ⇑P Pn 04 58 25.2 +1.4
BBLS Lazići 5.73 353 ePn Pn 04 58 23.8 -0.2
MPEP Malo Peshtene 5.79 25 P Pn 04 58 27.1 +2.5
DIVS Divibare 5.93 358 ePn Pn 04 58 26.2 -0.4
SRKY Kupres RS 6.36 339 ePn Pn 04 58 33.3 +0.7
MDVR Moldovita 6.68 8 ⇑P Pn 04 58 37.2 +0.2
MGRS Mrkonjic Grad 6.70 340 ePn Pn 04 58 38.3 +1.1
BLY Banja Luka 6.99 341 ePn Pn 04 58 40.8 -0.3
GZR Gura Zlata 7.44 13 ⇓P Pn 04 58 48.1 +0.7
BZS Buzias 7.50 7 ⇑P Pn 04 58 48.8 +0.6
ARR Arges 7.87 23 ⇑P Pn 04 58 55.3 +2.0
VOIR 8.06 24 ⇑P Pn 04 57 6 +1.6
KOVH Kovagotottos 8.09 349 P Pn 04 58 54.8 -1.4
KOVH S Sn 05 00 20.3 -6.8
MORH Mrgy, Hungar 8.14 352 ⇑P Pn 04 58 56.1 -0.7
MORH Mrgy, Hungar 8.14 352 ePn Pn 04 58 55.9 -0.9
MORH Mrgy, Hungar 8.14 352 P Pn 04 58 55.3 -1.5
MORH S Sn 05 00 21.5 -6.8
MLR Muntele Rosu 8.42 28 ⇑P Pn 04 59 01.6 +0.7
MLR Muntele Rosu 8.42 28 Pn Pn 04 59 02.2 +1.3
comp=E,0.6nm,0.3s,baz=202,slow=9.8,SNR=9.6
comp=E,9.6nm,0.9s
CRES Cresnjev 8.47 336 ePn Pn 04 59 00.8 -0.6
BEHE Becsehely 8.70 343 ePn Pn 04 59 03.7 -0.9
BEHE Becsehely 8.70 343 P Pn 04 59 04.6 0.0
SKDS Skadanscina 8.75 329 ePn Pn 04 59 04.7 -0.6
CEY Cerknica 8.75 332 ePn Pn 04 59 05.4 +0.1
LJU Ljubljana 8.97 333 ePn Pn 04 59 07.9 -0.4
PLOR Plostina 8.99 29 ⇑P Pn 04 59 10.6 +2.0
VRI Vrincioaia 9.04 30 ⇑P Pn 04 59 10.7 +1.5
KEST Kesra 9.13 258 Pn Pn 04 59 11.9 +1.2
comp=E,0.3nm,0.3s,baz=214,slow=23,SNR=2.5
KEST Sn Sn 05 00 50.7 -2.3
comp=E,0.2nm,0.3s,baz=30,slow=21,SNR=1.9
comp=E,1.2nm,0.4s
MPLH Magyarpolny 9.23 348 P Pn 04 59 12.4 +0.6
MPLH S Sn 05 00 50.5 -4.6
SOKA Soboth 9.36 337 Pn Pn 04 59 13.1 -0.6
comp=E,20nm,0.4s,SNR=28
SOKA eSn Sn 05 00 52.0 -6.6
comp=E,8.2nm,0.6s
OBKA Obir 9.37 335 Pn Pn 04 59 14.4 +0.5
comp=E,15nm,0.6s,SNR=11
OBKA eSn Sn 05 00 55.7 -3.1
comp=E,13nm,0.5s
ARSA Arzberg 9.74 340 Pn Pn 04 59 18.2 -0.7
comp=E,6.2nm,0.4s,SNR=9.6
ARSA eSn Sn 05 01 03.6 -4.1
comp=E,6.1nm,0.8s
PSZ Piszkesteto 9.75 358 S Sn 05 01 02.0 -6.0
MYKA Terra Mystica 9.79 332 ePn Pn 04 59 20.2 +0.5
comp=E,2.5nm,0.3s
MYKA eSn Sn 05 01 07.1 -2.1
comp=E,2.9nm,0.4s
RONA Rosalia, Austr 9.97 344 ePn Pn 04 59 21.1 -0.9
comp=E,2.7nm,0.4s
KBA Koelnbreinsper 10.28 332 i Pn Pn 04 59 26.9 +0.5
comp=E,6.7nm,0.4s,SNR=8.9
KBA eSn Sn 05 01 18.7 -2.6
comp=E,2.1nm,0.3s
CONA Conrad Observa 10.29 343 ePn Pn 04 59 25.9 -0.5
comp=E,1.2nm,0.4s
ABTA Abfaltersbach 10.33 329 Pn Pn 04 59 27.3 +0.3
comp=E,4.4nm,0.4s,SNR=5.2
ABTA eSn Sn 05 01 18.3 -4.1
comp=E,27nm,1.0s
BRTR Keskin Array B 10.47 77 Pn Pn 04 59 32.8 +3.8
comp=E,0.1nm,0.3s,baz=259,slow=16,SNR=2.4
BRTR LR LR 05 03 36.7
comp=E,42nm,20.1s,baz=274,slow=38
comp=E,1.5nm,0.5s
MOA Molln 10.64 337 i Pn Pn 04 59 31.1 -0.1
comp=E,7.2nm,0.3s,SNR=12
MOA eSn Sn 05 01 24.9 -5.0
comp=E,5.8nm,0.6s
BIOA Bad Ischl, Aus 10.70 335 Pn Pn 04 59 32.2 +0.1
comp=E,7.3nm,0.3s,SNR=6.1
BIOA eSn Sn 05 01 27.2 -4.3
comp=E,5.1nm,0.4s
WTTA Wattenberg 11.11 328 i Pn Pn 04 59 39.2 +1.4
comp=E,14nm,0.5s,SNR=6.6
WTTA eSn Sn 05 01 37.8 -3.8
comp=E,8.7nm,0.8s
WATA Walderalm 11.19 328 i Pn Pn 04 59 40.2 +1.4
comp=E,9.3nm,0.3s,SNR=7.9
WATA eSn Sn 05 01 40.3 -3.2
comp=E,13nm,0.9s
SQTA Sankt Quirin 11.26 326 Pn Pn 04 59 42.3 +2.6
comp=E,9.3nm,0.5s,SNR=4.3
SQTA eSn Sn 05 01 45.9 +0.7
comp=E,6.3nm,0.4s
FETA Feichten 11.32 324 ePn Pn 04 59 41.4 +0.7
comp=E,3.7nm,0.7s
FETA eSn Sn 05 01 48.0 +1.2
comp=E,5.4nm,0.6s
MOTA Moosalm 11.40 326 i Pn Pn 04 59 43.5 +1.8
comp=E,4.8nm,0.4s,SNR=6.2
MOTA eSn Sn 05 01 47.4 -1.2
comp=E,7.9nm,0.7s
DAVOX Davos/Dischmat 11.55 321 Pn Pn 04 59 44.7 +0.9
comp=E,0.2nm,0.3s,baz=140,slow=20,SNR=2.7
DAVOX Sn Sn 05 01 49.5 -3.0
comp=E,0.6nm,0.3s,baz=344,slow=21,SNR=2.4
comp=E,1.7nm,0.5s
RETA Reutte 11.66 326 ePn Pn 04 59 44.5 -0.6
comp=E,2.8nm,0.2s
GERES GERESS Array B 11.70 338 Pn Pn 04 59 45.0 -0.8
comp=E,1.5nm,0.3s,baz=156,slow=14,SNR=25
GERES Sn Sn 05 01 51.5 -4.4
comp=E,0.4nm,0.3s,baz=157,slow=25,SNR=2.5
comp=E,3.1nm,0.4s
KHC Kasperske Hory 11.99 338 ePN Pn 04 59 48.5 -1.2
KHC eSN Sn 05 01 55.5 -7.5
AKASG Malin Array Be 14.03 24 Pn Pn 05 00 16.7 -0.6
comp=E,0.5nm,0.3s,baz=214,slow=10,SNR=5.7
AKASG LR LR 05 06 39.2
comp=E,77nm,19.0s,baz=226,slow=42
comp=E,0.4nm,0.4s
CLL Collm 14.12 341 eP Pn 05 00 18.0 -0.7
CLL ePP PnPn 05 00 28.0 +1.4
comp=E,7.0nm,1.0s
NACGM Naroch 17.30 13 eP P 05 01 01.5 +0.1
KBZ Khabaz 17.90 65 Pn P 05 01 09.9 +1.8
baz=307,slow=12,SNR=1.7
comp=Z,0.7nm,0.5s
ESDC Sonseca Array 18.96 282 P Pn 05 01 21.0 +0.3
comp=Z,0.1nm,0.3s,baz=80,slow=13,SNR=6.7
comp=Z,1.2nm,1.1s
GNI Garni 19.01 76 P Pn 05 01 22.2 +0.8
comp=Z,1.8nm,0.3s,baz=237,slow=7.2,SNR=3.2
comp=Z,5.8nm,0.4s
MDT Midelt 20.98 263 P P 05 01 42.6 +0.5
comp=Z,1.5nm,0.9s,baz=245,slow=10,SNR=2.1
comp=Z,1.5nm,0.9s
HFS Hagfors 22.39 351 P P 05 01 56.8 +0.1
comp=Z,18nm,0.7s,baz=159,slow=13,SNR=26
comp=Z,18nm,0.7s
EKA Eskdalemuir Ar 23.35 325 P P 05 02 07.1 +0.3
comp=Z,2.1nm,0.8s,baz=129,slow=10,SNR=14
comp=Z,2.1nm,0.8s
FINES FINESS Array B 23.57 7 P P 05 02 07.9 -1.0
comp=Z,3.4nm,0.4s,baz=176,slow=9.5,SNR=18
comp=Z,3.4nm,0.4s
NB2 NORSAR Subarra 23.60 349 P P 05 02 08.5 -0.8
comp=Z,4.3nm,0.9s,baz=162,slow=11
NOA NORSAR Array B 23.60 349 P P 05 02 08.7 -0.6
comp=Z,2.7nm,0.8s,baz=157,slow=12,SNR=17
comp=Z,2.7nm,0.8s
BELG Belogorsnoye 23.71 44 P P 05 02 09.8 -0.6
comp=Z,12nm,0.7s,baz=215,slow=1.0,SNR=3.0
comp=Z,12nm,0.7s
AKTO Aktyubinsk 29.30 53 P P 05 03 00.1 -0.8
comp=Z,0.5nm,0.3s,baz=323,slow=3.9,SNR=1.9
comp=Z,0.5nm,0.3s
TORD Torodi Ar. Bea 29.94 219 P P 05 03 07.0 +0.1
comp=Z,0.6nm,0.7s,baz=30,slow=9.9,SNR=6.8
comp=Z,0.6nm,0.7s
ARCES ARCESS Array B 31.55 3 P P 05 03 19.9 -0.7
comp=Z,5.5nm,1.2s,baz=186,slow=9.8,SNR=4.6
comp=Z,5.5nm,1.2s
MKAR Makanchi Array 45.42 58 P P 05 05 16.6 -0.7
comp=Z,1.6nm,0.4s,baz=274,slow=7.1,SNR=18
comp=Z,1.6nm,0.4s
ZALV Zalesovo Beam 45.80 48 P P 05 05 19.6 -0.5
comp=Z,3.6nm,0.4s,baz=271,slow=9.0,SNR=13
comp=Z,3.6nm,0.4s
SONM Songino Array 60.57 51 P P 05 07 08.8 -0.3
comp=Z,0.7nm,0.7s,baz=276,slow=8.4,SNR=4.1
comp=Z,0.7nm,0.7s
NJ2 Nanjing 76.94 60 eP P 05 08 53.1 +1.9
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
NJ2 LR LR
comp=N,390nm,18.0s
NJ2 LR LR
comp=E,310nm,21.3s
NJ2 LR LR
comp=Z,740nm,23.7s
KSRS Korea Array 79.44 51 P P 05 09 03.9 -1.0
comp=Z,0.8nm,0.5s,baz=292,slow=4.1,SNR=2.3
comp=Z,0.8nm,0.5s
TXAR Lajitas Array 94.88 313 P P 05 10 22.7 +1.7
comp=Z,2.0nm,0.6s,baz=98,slow=6.5,SNR=2.2
comp=Z,0.2nm,0.6s

ISK ***07*** *05:10:37.8, 38.65N×37.9E, h14km, ML2.6/4*
DDA ***07*** *05:10:38.7±0.0, 38.84N×37.84E, h7km, 2km, ML2.2*
ISC 07 05:10:39.3±1.0, **38.86N**±0.03×**37.82E**±0.03, **h12**km±13km,
n13, σ=**0.69**/24, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
DARE	**Darende-Malaty**	**0.39**	**222**	PG	**Pg**		**05 10 46.4**	**-0.6**
DARE				SG	**Sg**		**05 10 52.5**	**+0.3**
CUGUR	**Gurin_SVAS**	**0.45**	**252**	P	**Pg**		**05 10 48.0**	**-0.1**
CUGUR				S	**Sb**		**05 10 55.2**	**-0.6**
CUGUR				*i* AML	AML		05 10 56.0	
	comp=Z,198nm,0.2s							
CUGUR				*i* AML	AML		05 10 56.0	
	comp=E,558nm,0.2s							
CUGUR				*i* AML	AML		05 10 57.0	
	comp=N,493nm,0.3s							
ARPR	**Arapgir-MALATY**	**0.47**	**60**	PG	**Pg**		**05 10 48.4**	**-0.1**
ARPR				SG	**Sb**		**05 10 56.3**	**-0.2**
CUKAN	**kangal_SIVAS**	**0.53**	**329**	P	**Pg**		**05 10 49.5**	**-0.2**
CUKAN				S	**Sb**		**05 10 57.9**	**-0.4**
CUKAN				*i* AML	AML		05 10 58.0	
	comp=N,202nm,0.3s							
AKCD	**Akcadag**	**0.57**	**171**	P	**Pg**		**05 10 49.5**	**-1.0**
AKCD				S	**Sg**		**05 10 58.4**	**+0.4**
AKCD				*i* AML	AML		05 11 01.0	
	comp=N,178nm,0.1s							
KEMA	**Kemaliye**	**0.67**	**52**	P	**Pg**		**05 10 51.7**	**-0.6**
KEMA				S	**Sg**		**05 11 01.2**	**+0.1**
ELBS	**KAHRAMANMARAS**	**0.76**	**225**	P	**Pg**		**05 10 53.1**	**-0.8**
ELBS				S	**Sb**		**05 11 04.4**	**-0.3**
ELBS				*i* AML	AML		05 11 05.0	
	comp=N,102nm,0.5s							
ELBS				*i* AML	AML		05 11 05.0	
	comp=E,95nm,0.7s							
ILIC	**ilic-Erzincan**	**0.83**	**44**	PG	**Pb**		**05 10 55.9**	**+0.2**
CUAYA	**Sivas-Altinyay**	**0.93**	**296**	P	**Pg**		**05 10 56.5**	**-0.7**
CUAYA				S	**Sb**		**05 11 10.2**	**+0.5**
CUZAR	**Zara_SIVAS**	**1.03**	**358**	P	**Pb**		**05 10 58.6**	**-0.4**
CUZAR				S	**Sg**		**05 11 13.0**	**+0.5**
SVSK	**Karacayir**	**1.23**	**329**	PN	**Pg**		**05 11 03.4**	**+0.5**
CUSAR	**Sarkisla-SIVAS**	**1.34**	**295**	P	**Pb**		**05 11 04.4**	**-0.1**
CUSAR				S	**Sg**		**05 11 22.9**	**+0.4**
GZT	**Gaziantep**	**1.52**	**188**	P	**Pg**		**05 11 08.6**	**+0.3**
GZT				P	**Sg**		**05 11 30.2**	**+2.2**
GZT				*i* AML	AML		05 11 31.0	
	comp=N,31nm,0.5s							

NNC ***07*** *05:15:50.7±1.6, 44.07N×84.64E, h0km, mb3.4, mpv3.1,*
Error ellipse: s-maj=14.5km s-min=6.4km az=123.0
SOME ***07*** *05:15:51.5, 44.07N×84.63E, h15km*
ISC 07 05:15:53.0±2.1, **44.13N**±0.09×**84.51E**±0.10, **h10**km, **n14**,
σ=**2.32**/26, **6C-7D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**3.08**	**259**	eP	**Pb**		**05 16 49.0**	**+1.0**
	1.5nm,0.0s							
KTMS				eS	**Sg**		**05 17 29.8**	**-2.2**
	11nm,0.4s							
MK31	**Makanchi Array**	**3.09**	**330**	⇑Pn	**Pn**		**05 16 41.5**	**-0.3**
	baz=141,slow=17,SNR=148							
MK31				⇑Pg	**Pb**		**05 16 49.6**	**+1.6**
	14nm,0.5s,baz=143,slow=16,SNR=7.2							
MK31				⇑Lg	Lg		05 17 31.4	
	20nm,0.5s,baz=147,slow=30,SNR=8.8							
MAKZ	**Makanchi**	**3.22**	**327**	⇓Pn	**Pn**		**05 16 43.9**	**+0.3**
	0.9nm,0.6s							
MAKZ				⇓Pg	**Pb**		**05 16 52.0**	**+1.8**
	7.6nm,0.5s							
MAKZ				⇑Lg	Lg		05 17 35.8	
	24nm,0.6s							
ZSN	**Zaisan**	**3.33**	**4**	eP	**Pb**		**05 16 52.4**	**+0.2**
	6.6nm,0.2s							
ZSN				eS	**Sb**		**05 17 35.7**	**+2.9**
	33nm,0.4s							
DJR	**Jarkent**	**3.40**	**275**	eP	**Pb**		**05 16 55.3**	**+2.1**
	3.0nm,0.3s							
DJR				eS	**Sg**		**05 17 40.4**	**-1.6**
	37nm,0.4s							
PDGK	**Podgornoye**	**3.72**	**259**	⇑Pn	**Pn**		**05 16 51.5**	**+0.9**
	1.8nm,0.7s							
PDGK				⇑Sn	**Sn**		**05 17 37.0**	**+2.4**
	9.1nm,0.5s							
PDGK				⇓Lg	Lg		05 17 51.2	
	17nm,0.6s							
KNOS	**Konyrlen**	**3.83**	**275**	eP	**Pb**		**05 17 03.3**	**+2.5**
KNOS				eS	**Sg**		**05 17 53.9**	**-2.2**
KAPS	**Kapalarasan**	**3.85**	**289**	eP	**Pb**		**05 17 04.0**	**+3.0**
	2.8nm,0.1s							
KAPS				eS	**Sg**		**05 17 55.4**	**-1.1**
	15nm,0.1s							
KPKS	**Kokpek**	**4.27**	**263**	eP	**Pb**		**05 17 11.0**	**+2.8**
	3.5nm,0.1s							
KPKS				eS	**Sg**		**05 18 07.0**	**-3.0**
	35nm,0.4s							
BLB	**Baldybastay**	**4.34**	**272**	eP	**Pb**		**05 17 12.8**	**+3.4**
	3.1nm,0.1s							
BLB				eS	**Sg**		**05 18 10.3**	**-2.1**
	35nm,0.4s							
SATY	**Saty**	**4.56**	**259**	eP	**Pg**		**05 17 16.9**	**-3.4**
	3.0nm,0.4s							
SATY				eS	**Sg**		**05 18 17.2**	**-2.1**
	18nm,0.3s							
ARXS	**Arharly**	**4.80**	**273**	eP	**Pb**		**05 17 21.1**	**+3.8**
	2.0nm,0.1s							

ARXS				*e*S	**Sg**	**05 18 25.3**	**-1.9**
	20nm,0.6s						
KURBB	**Kurchatov Arra**	**7.66**	**330**	⇓Pn	**Pn**	**05 17 43.3**	**-1.1**
	0.6nm,0.5s						
KURBB				⇓Lg	Lg	05 19 58.8	
	16nm,0.7s						
KURK	**Kurchatov**	**7.70**	**331**	⇓Pn	**Pn**	**05 17 44.2**	**-0.9**
	0.8nm,0.8s						
KURK				⇓Lg	Lg	05 19 58.5	
	8.4nm,0.7s						

IDC ***07*** *05:16:36.1±0.5,43.°91N×147.°89E,h0km,mb4.8/26, mbtmp4.8/33,ML4.1/8,MS3.9/71,Error ellipse: s-maj=14.9km s-min=10.3km az=138.0*

NEIC ***07*** *05:16:38.3±2.5,43.°85N±0.°07×148.°0E±0.°1,h13km±3km, mb5.1/460,Error ellipse: s-maj=12.8km s-min=8.7km az=125.0*

NIED ***07*** *05:16:40.6,43.°65N×147.°71E,h0km,MW4.7,Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}0.06; $M_{\theta\theta}$0.16; $M_{\phi\phi}$-0.22; $M_{r\theta}$1.34; $M_{\theta\phi}$0.14; $M_{\phi r}$-0.19; Fault plane solution: $M_0$1.37000×10^{16} NP1:ϕ_s12.00000°, δ8.00000°,λ-177.00000°. NP2:ϕ_s280.00000°,δ90.00000°, λ-82.00000°.*

JMA ***07*** *05:16:40.6±0.2,43.°7N±1.°0×14.°8E±.°,h0km,MD4.6/40, MV5.2/40,E OFF HOKKAIDO*

JMA Felt I J1 at E OFF HOKKAIDO .

BJI ***07*** *05:16:40.6±0.0,43.°82N×147.°93E,h42km,mb4.7/57, mB4.8/32,Ms4.1/40,Ms7 3.9/40*

MOS ***07*** *05:16:40.6±1.0,43.°86N×148.°01E,h47km,mb5.4/46, MS3.8/14,Error ellipse: s-maj=6.2km s-min=4.2km az=118.3*

MOS Felt (II-III) at Kuril'sk, (II) at Yuzhno-Kuril'sk, Malokuril'skoye.

SKHL ***07*** *05:16:41.8±0.1,43.°70N×148.°10E,h51km±1km,mb5.6/8, mbv5.3/4,ms4.4/5*

GCMT ***07*** *05:16:43.3±0.5,43.°84N±0.°03×148.°19E±0.°05,h16km±1km, MW5.0/77,Moment Tensor Solution. s8,c8; s77,c95; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.27±.08; $M_{\theta\theta}$0.36±.07; $M_{\phi\phi}$-0.08±.06; $M_{r\theta}$3.29±.60; $M_{\theta\phi}$0.67±.05; $M_{\phi r}$-0.84±.24; Best double couple: $M_0$3.47100×10^{16} NP1:ϕ_s20.00000°,δ12.00000°,λ-173.00000°. NP2: ϕ_s283.00000°,δ89.00000°,λ-78.00000°. Principal axes: T 3.3510, Plg42.0000°, Azm2.0000°; N 0.2400, Plg12.0000°, Azm103.0000°; P -3.5910, Plg45.0000°, Azm205.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 05:16:38.9±0.6, 43.°80N±0.°04×147.°99E±0.°03, h20km±2km, n1049,σ1°27/886,mb5.1/332,MS4.0/83,53C-27D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.84**	**275**	*d* *i*	Pn	**Pn**	**05 16 56.5**	**+0.9**
SHO					*e*S	**Sn**	**05 17 07.5**	**+0.1**
SHO					pmax	pmax		
	comp=Z,2μm,0.3s							
SHO					pmax	pmax		
	comp=E,839nm,0.2s							
SHO					pmax	pmax		
	comp=N,713nm,0.3s							
SHO					smax	smax		
	comp=N,43μm,0.4s							
SHO					smax	smax		
	comp=E,23μm,0.3s							
SHO	**Shikotan**	**0.84**	**275**	*i*	P	**Pn**	**05 16 56.5**	**+0.9**
SHO					AMB	AMB	05 16 57.8	
	comp=E,2μm,0.3s							
SHO					*e*S	**Sn**	**05 17 07.8**	**+0.4**
SHO					A	A	05 17 09.1	
	comp=E,38μm,0.3s							
SHO					A	A	05 17 09.1	
	comp=E,34μm,0.3s							
KUR	**Kuril'sk**	**1.44**	**357**	*c* *i*	PN	**Pb**	**05 17 05.0**	**+0.1**
KUR				*i*	S	**Sn**	**05 17 22.2**	**+0.2**
KUR					pmax	pmax		
	comp=Z,2μm,0.5s							
KUR					pmax	pmax		
	comp=N,744nm,0.3s							
KUR					pmax	pmax		
	comp=Z,12μm,1.3s							
KUR					smax	smax		
	comp=N,24μm,2.0s							
KUR					smax	smax		
	comp=E,13μm,2.3s							
KUR					smax	smax		
	comp=N,5μm,0.7s							
KUR					smax	smax		
	comp=E,9μm,0.7s							
KUR	**Kuril'sk**	**1.44**	**357**	*i*	P	**Pb**	**05 17 05.1**	**+0.1**
KUR					AMB	AMB	05 17 09.7	
	comp=E,2μm,0.3s							
KUR					AMB	AMB	05 17 18.7	
	comp=E,12μm,1.0s							
KUR				*i*	S	**Sn**	**05 17 22.3**	**+0.2**
KUR					A	A	05 17 23.6	
	comp=E,24μm,2.0s							
KUR					A	A	05 17 23.6	
	comp=E,13μm,2.0s							
KUR					A	A	05 17 25.7	
	comp=E,10μm,0.7s							
KUR					A	A	05 17 25.7	
	comp=E,10μm,0.7s							
YUK	**Yuzh-Kuril'sk**	**1.55**	**279**	*d* *i*	PN	**Pb**	**05 17 06.7**	**-0.3**
YUK				*i*	S	**Sn**	**05 17 25.2**	**+0.2**
YUK					pmax	pmax		
	comp=N,1μm,0.2s							
YUK					pmax	pmax		
	comp=Z,3μm,0.2s							
YUK					pmax	pmax		
	comp=E,2μm,0.1s							
YUK					smax	smax		
	comp=N,28μm,0.2s							
YUK					smax	smax		
	comp=E,25μm,0.2s							
YUK	**Yuzh-Kuril'sk**	**1.55**	**279**	*i*	P	**Pb**	**05 17 06.7**	**-0.3**
YUK					AMB	AMB	05 17 08.3	
	comp=E,2μm,0.2s							
YUK				*i*	S	**Sn**	**05 17 25.4**	**+0.4**
YUK					A	A	05 17 30.0	
	comp=E,25μm,0.4s							
YUK					A	A	05 17 30.0	
	comp=E,21μm,0.4s							
NEM2	**Nemuro 2**	**1.69**	**256**		P	**Pn**	**05 17 08.0**	**+0.8**
NEM2					*e*S	**Sn**	**05 17 27.7**	**-0.6**
NEM2	**Nemuro 2**	**1.69**	**256**		A	A	05 17 08.0	
	comp=E,7.0nm,0.8s,comp=E,9.0nm,1.8s							
NMR	**Nemuro--Hokkai**	**1.70**	**256**	⇓*i*	PN	**Pn**	**05 17 08.0**	**+0.6**
NMR					*e*S	**Sn**	**05 17 28.0**	**-0.6**
NMR	**Nemuro--Hokkai**	**1.70**	**256**	*i*	P	**Pn**	**05 17 08.2**	**+0.8**
NMR					*e*S	**Sn**	**05 17 28.0**	**-0.6**
GLVR	**Golovnino**	**1.79**	**269**	⇓	PN	**Pb**	**05 17 10.8**	**-0.2**
GLVR				*i*	S	**Sb**	**05 17 32.2**	**-0.8**
GLVR					pmax	pmax		
	comp=Z,4μm,0.4s							
GLVR					pmax	pmax		
	comp=N,720nm,0.3s							
GLVR					pmax	pmax		
	comp=E,720nm,0.1s							
GLVR					smax	smax		
	comp=N,27μm,0.3s							
GLVR					smax	smax		
	comp=E,16μm,0.3s							
GLVR	**Golovnino**	**1.79**	**269**	*i*	P	**Pb**	**05 17 10.8**	**-0.2**
GLVR					AMB	AMB	05 17 11.7	
	comp=E,4μm,0.4s							
GLVR				*i*	S	**Sb**	**05 17 32.2**	**-0.8**
GLVR					A	A	05 17 32.8	
	comp=E,27μm,0.3s							
GLVR					A	A	05 17 32.8	
	comp=E,17μm,0.3s							
RUSJ	**Misakicho**	**2.00**	**280**	⇓*i*	PN	**Pb**	**05 17 13.8**	**-0.8**
RUSJ					*e*S	**Sb**	**05 17 38.2**	**-0.9**
JRA	**Rausu**	**2.08**	**275**		P	**Pb**	**05 17 14.6**	**-1.3**
JRA					*e*S	**Sn**	**05 17 39.5**	**+1.6**
JRA	**Rausu**	**2.08**	**275**		A	A	05 17 14.6	
	comp=E,13nm,1.4s,comp=E,28nm,1.4s							
JNSB	**Nemuroshibetsu**	**2.16**	**270**		P	**Pb**	**05 17 15.9**	**-1.4**
JNSB					*e*S	**Sn**	**05 17 41.1**	**+1.2**
JNSB	**Nemuroshibetsu**	**2.16**	**270**		A	A	05 17 15.9	
	comp=E,11nm,2.1s,comp=E,17nm,2.7s							
JKHN	**Kushirohamanak**	**2.18**	**252**		P	**Pn**	**05 17 15.4**	**+1.3**
JKHN					*e*S	**Sn**	**05 17 40.8**	**+0.3**
JKHN	**Kushirohamanak**	**2.18**	**252**		A	A	05 17 15.4	
	comp=E,11nm,5.3s,comp=E,11nm,2.5s							
JNK	**Nakash**	**2.38**	**266**		P	**Pn**	**05 17 18.4**	**+1.6**
JNK					*e*S	**Sn**	**05 17 46.1**	**+0.7**
AKK	**Akkeshi**	**2.42**	**252**	*i*	P	**Pn**	**05 17 18.7**	**+1.3**
AKK					*e*S	**Sn**	**05 17 46.3**	**-0.1**
JAK	**Akkeshi**	**2.53**	**253**	*e*	P	**Pn**	**05 17 20.2**	**+1.3**
JAK					*e*S	**Sn**	**05 17 49.2**	**+0.1**
JAK	**Akkeshi**	**2.53**	**253**		A	A	05 17 20.2	
	comp=E,11nm,1.3s,comp=E,9.0nm,2.0s							
JTKR	**Abashiri--Toko**	**2.95**	**275**	*e*	P	**Pn**	**05 17 27.1**	**+2.4**
JTKR					*e*S	**Sn**	**05 18 02.9**	**+3.3**
JAR	**Ashorobuto**	**3.11**	**262**		P	**Pn**	**05 17 29.0**	**+2.2**
JAR					*e*S	**Sn**	**05 18 04.8**	**+1.4**
JAR	**Ashorobuto**	**3.11**	**262**		A	A	05 17 29.0	
	comp=E,4.0nm,0.7s,comp=E,5.0nm,1.7s							
JOB	**Onbets**	**3.16**	**255**	*e*	P	**Pn**	**05 17 29.3**	**+1.8**
JOB					*e*S	**Sn**	**05 18 05.1**	**+0.5**
JMP	**Maruseppu**	**3.35**	**275**	*e*	P	**Pn**	**05 17 33.0**	**+2.9**
JCH	**Churui**	**3.58**	**252**	*e*	P	**Pn**	**05 17 35.0**	**+1.6**
JKK2	**Kamakawa 2**	**3.79**	**273**	*e*	P	**Pn**	**05 17 39.6**	**+3.3**
JKA	**Kamikawa-asahi**	**3.90**	**276**			**Pn**	**05 17 41.0**	**+3.3**
JKA	**Kamikawa-asahi**	**3.90**	**276**	*e*	P	**Pn**	**05 17 41.0**	**+3.3**
ASAJ	**Asahikawa**	**3.91**	**276**		Pn	**Pn**	**05 17 40.6**	**+2.8**
	comp=E,3.9nm,0.3s,baz=88,slow=16,SNR=25							
ASAJ					Sn	**Sb**	**05 18 32.5**	**-1.4**
	comp=E,12nm,0.3s,baz=11,slow=16,SNR=4.2							
ASAJ					LR	LR	05 19 11.2	
	comp=E,297nm,18.0s,baz=23,slow=40							
ASAJ	**Asahikawa**	**3.91**	**276**		PN	**Pn**	**05 17 41.0**	**+3.2**
ERM	**Erimo**	**3.97**	**245**			**Pn**	**05 17 41.3**	**+2.6**
ERM	**Erimo**	**3.97**	**245**	*de*	PN	**Pn**	**05 17 41.7**	**+3.0**
ERM					pmax	pmax		
	comp=Z,1μm,1.3s							
JSE	**Soyaes**	**4.04**	**289**	*e*	P	**Pn**	**05 17 42.4**	**+2.8**
JNBK	**Urakawa-nobuka**	**4.13**	**250**	*e*	P	**Pn**	**05 17 42.4**	**+1.6**
JNBK					*e*S	**Sn**	**05 18 28.0**	**-0.5**
JSS	**Shosan**	**4.46**	**280**	*e*	P	**Pn**	**05 17 49.9**	**+4.5**
JHR	**Hokuryu**	**4.54**	**271**	*e*	P	**Pn**	**05 17 50.6**	**+4.2**
JWK2	**Keihoku**	**4.61**	**291**	*e*	P	**Pn**	**05 17 51.9**	**+4.5**
YSS	**Yuzh-Sakhalins**	**4.85**	**312**			**Pn**	**05 17 52.0**	**+1.2**
YSS	**Yuzh-Sakhalins**	**4.85**	**312**	*α* *i*	PN	**Pn**	**05 17 53.6**	**+2.9**
YSS					pmax	pmax		
	comp=Z,300nm,4.2s							
YSS					pmax	pmax		
	comp=E,160nm,0.6s							
YSS					MLR	MLR		
	comp=Z,2μm,17.0s							
YSS					MLR	MLR		
	comp=E,700nm,18.0s							
YSS	**Yuzh-Sakhalins**	**4.85**	**312**	*i*	P	**Pn**	**05 17 53.6**	**+2.9**
YSS					AMB	AMB	05 17 54.0	
	comp=E,300nm,4.0s							
YSS					AMB	AMB	05 17 54.4	
	comp=E,110nm,0.4s							
YSS					*e*S	**Sn**	**05 18 45.8**	**-0.5**
YSS					A	A	05 18 56.7	
	comp=E,100nm,0.6s							
YSS					A	A	05 18 56.7	
	comp=E,80nm,0.6s							
YSS					AMS	AMS	05 19 37.0	
	comp=E,2μm,17.0s							
YSS					AMS	AMS	05 19 37.0	
	comp=E,800nm,17.0s							
YSS					AMS	AMS	05 19 37.0	
	comp=E,2μm,17.0s							
JEW	**Eniwo**	**4.87**	**261**			**Pn**	**05 17 54.4**	**+3.4**
JEW	**Eniwo**	**4.87**	**261**	*e*	P	**Pn**	**05 17 54.5**	**+3.5**
JRBN	**Rebuntou**	**5.20**	**291**	*e*	P	**Pn**	**05 17 58.8**	**+3.2**
JTM	**Tenmabayashi**	**5.95**	**242**		Pn	**Pn**	**05 18 07.0**	**+1.2**
UGL	**Uglegorsk**	**6.68**	**324**	*e*	PN	**Pn**	**05 18 20.5**	**+4.7**
UGL					*e*S	Sb	05 19 42.8	-11
UGL					pmax	pmax		
	comp=Z,171nm,0.7s							
UGL					smax	smax		
	comp=N,343nm,0.9s							
UGL					smax	smax		
	comp=E,231nm,0.8s							
UGL	**Uglegorsk**	**6.68**	**324**	*e*	P	**Pn**	**05 18 20.5**	**+4.7**
UGL					AMB	AMB	05 18 21.5	
	comp=E,170nm,0.7s							
UGL					*e*S	**Sn**	**05 19 32.8**	**+1.5**
UGL					A	A	05 19 45.0	
	comp=E,340nm,0.9s							
UGL					A	A	05 19 45.0	
	comp=E,230nm,0.9s							
UGL					AMS	AMS	05 20 46.0	
	comp=E,900nm,17.0s							
UGL					AMS	AMS	05 20 46.0	
	comp=E,2μm,17.0s							
UGL					AMS	AMS	05 20 46.0	
	comp=E,2μm,17.0s							
TYV	**Tymovskoe**	**7.94**	**335**	*e*	PN	**Pn**	**05 18 37.3**	**+4.2**
TYV					*e*S	**Sn**	**05 20 06.6**	**+4.3**
TYV					pmax	pmax		
	comp=Z,300nm,4.2s							
TYV					pmax	pmax		
	comp=Z,24nm,0.8s							
TYV					smax	smax		
	comp=E,21nm,0.9s							
TYV					smax	smax		
	comp=N,200nm,4.5s							
TYV					MLR	MLR		
	comp=Z,2μm,19.0s							
TYV	**Tymovskoe**	**7.94**	**335**	*e*	P	**Pn**	**05 18 37.3**	**+4.2**
TYV					AMB	AMB	05 18 37.8	
	comp=Z,300nm,4.0s							
TYV					AMB	AMB	05 18 37.9	
	comp=Z,20nm,0.8s							
TYV					*e*S	**Sn**	**05 20 03.6**	**+1.3**
TYV					A	A	05 20 07.7	
	comp=Z,10.0nm,0.4s							
TYV					A	A	05 20 07.7	
	comp=Z,10.0nm,0.4s							
TYV					A	A	05 20 10.6	
	comp=Z,200nm,5.0s							
TYV					A	A	05 20 10.6	
	comp=Z,300nm,5.0s							
TYV					AMS	AMS	05 21 34.1	
	comp=Z,2μm,18.0s							
TYV					AMS	AMS	05 21 34.1	
	comp=Z,1μm,18.0s							
TYV					AMS	AMS	05 21 34.1	
	comp=Z,2μm,18.0s							
JMM	**Marumori**	**8.05**	**225**			**Pn**	**05 18 34.0**	**-0.8**
TEY	**Ternei**	**8.24**	**283**	⇑	ePN	Pn	05 18 47.2	+10
TEY					*e*		05 20 16.2	
TEY					pmax	pmax		
	comp=N,10.0nm,0.9s							
TEY					pmax	pmax		
	comp=E,30nm,0.9s							
TEY					pmax	pmax		
	comp=Z,20nm,0.9s							
TEY	**Ternei**	**8.24**	**283**	*e*	P	Pn	05 18 43.0	+5.7
TEY					AMB	AMB	05 18 47.9	
	comp=Z,20nm,0.5s							
SKR	**Severo-Kuril's**	**8.83**	**36**	*e*	PN	**Pn**	**05 18 47.0**	**+1.7**
SKR					pmax	pmax		
	comp=Z,54nm,0.7s							
SKR					pmax	pmax		
	comp=Z,100nm,2.7s							
SKR					MLR	MLR		
	comp=Z,900nm,16.0s							
SKR					MLR	MLR		
	comp=N,400nm,14.0s							
SKR					MLR	MLR		
	comp=E,700nm,15.0s							
SKR	**Severo-Kuril's**	**8.83**	**36**	*e*	P	**Pn**	**05 18 48.0**	**+2.7**
SKR					AMB	AMB	05 18 49.2	
	comp=E,70nm,0.4s							
SKR					AMB	AMB	05 18 54.4	
	comp=E,100nm,3.0s							
SKR					*e*S	**Sn**	**05 20 23.0**	**-1.1**
SKR					A	A	05 20 28.4	
	comp=E,10.0nm,0.8s							
SKR					A	A	05 20 28.4	
	comp=E,10.0nm,0.8s							
SKR					AMS	AMS	05 22 35.5	
	comp=E,2μm,16.0s							
SKR					AMS	AMS	05 22 35.5	
	comp=E,1μm,16.0s							
SKR					AMS	AMS	05 22 35.5	
	comp=E,1μm,16.0s							
JSD	**Sado**	**9.34**	**235**		Pn	**Pn**	**05 18 53.1**	**+0.6**
JYT	**Yasato**	**9.64**	**221**		Pn	**Pn**	**05 18 55.9**	**-0.5**
PAU	**Pauzhetka**	**9.70**	**35**	*e*	P	**Pn**	**05 18 59.8**	**+2.5**
PAU					AMB	AMB	05 19 02.4	
	comp=E,50nm,0.4s							
PAU					*e*S	**Sn**	**05 20 44.2**	**-1.4**
PAU					A	A	05 20 46.3	
	comp=E,50nm,0.3s							
PAU					A	A	05 20 46.3	
	comp=E,40nm,0.3s							
OKH	**Okha**	**10.31**	**343**	*de*	PN	Pn	05 18 58.7	-6.9
OKH					pmax	pmax		
	comp=Z,100nm,11.1s							
OKH					MLR	MLR		
	comp=E,1μm,16.0s							
OKH					MLR	MLR		
	comp=N,900nm,15.0s							
OKH					MLR	MLR		
	comp=Z,600nm,15.0s							
OKH	**Okha**	**10.31**	**343**	*e*	P	**Pn**	**05 19 10.0**	**+4.4**
OKH					AMB	AMB	05 19 11.2	
	comp=Z,700nm,2.0s							
OKH					*e*S	**Sn**	**05 21 02.8**	**+2.3**
OKH					AMS	AMS	05 23 32.7	
	comp=Z,1μm,15.0s							
OKH					AMS	AMS	05 23 32.7	
	comp=Z,1μm,15.0s							
OKH					AMS	AMS	05 23 32.7	
	comp=Z,1μm,15.0s							
MAJO	**Matsushiro**	**10.41**	**229**		Pn	**Pn**	**05 19 07.3**	**+0.2**
MAJO	**Matsushiro**	**10.41**	**229**	*d*	PN	**Pn**	**05 19 07.7**	**+0.6**
MJAR	**Matsushiro Arr**	**10.41**	**229**		Pn	**Pn**	**05 19 07.4**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=30,slow=13,SNR=63							
MJAR					Sn	**Sn**	**05 21 04.1**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=252,slow=26,SNR=1.3							
	comp=Z,37nm,1.0s							
MJAR	**Matsushiro Arr**	**10.41**	**229**		Pn	**Pn**	**05 19 07.7**	**+0.6**
MJAR	**Matsushiro Arr**	**10.41**	**229**		PN	**Pn**	**05 19 07.7**	**+0.6**
MJB9	**Matsu-Tunnel**	**10.41**	**229**			**Pn**	**05 19 07.8**	**+0.7**
GRNR	**Gornyy**	**10.49**	**316**	⇑ *i*	PN	Pn	05 19 14.9	+6.7
GRNR					*e*S	Sn	05 21 18.8	+14
GRNR					pmax	pmax		
	comp=N,8.0nm,0.9s							
GRNR					pmax	pmax		
	comp=Z,10.0nm,0.9s							
GRNR					smax	smax		
	comp=N,2.0nm,0.6s							
GRNR					MLR	MLR		
	comp=E,120nm,16.0s							
GRNR					MLR	MLR		
	comp=N,230nm,12.0s							
GRNR					MLR	MLR		
	comp=Z,370nm,18.0s							
GRNR	**Gornyy**	**10.49**	**316**	*e*	P	**Pn**	**05 19 12.1**	**+3.9**
GRNR					AMB	AMB	05 19 15.7	
	comp=Z,10.0nm,0.9s							
NKL	**Nikolayevsk**	**10.53**	**335**	*e*	PN	**Pn**	**05 19 08.9**	**+0.3**
NKL					pmax	pmax		
	comp=E,3.0nm,0.7s							
NKL					pmax	pmax		
	comp=N,2.0nm,0.5s							
NKL					pmax	pmax		
	comp=Z,89nm,1.2s							
NKL					MLR	MLR		
	comp=Z,478nm,16.0s							
NKL	**Nikolayevsk**	**10.53**	**335**	*e*	P	**Pn**	**05 19 11.8**	**+3.2**
NKL					AMB	AMB	05 19 14.5	
	comp=Z,190nm,0.7s							
NKL					AMS	AMS	05 23 17.6	
	comp=Z,4μm,16.0s							
PEA0B	**Petropavlovsk-**	**11.32**	**31**		Pn	**Pn**	**05 19 19.4**	**0.0**
PEA0B	**Petropavlovsk-**	**11.32**	**31**	⇑ *e*	PN	**Pn**	**05 19 20.5**	**+1.1**
PETK	**Petropavlovsk-**	**11.32**	**31**		Pn	**Pn**	**05 19 20.2**	**+0.8**
	comp=Z,2.0nm,0.3s,baz=202,slow=11,SNR=26							
PETK					LR	LR	05 23 36.8	
	comp=Z,705nm,21.1s,baz=226,slow=37							
	comp=Z,16nm,0.6s							
PETK	**Petropavlovsk-**	**11.32**	**31**		Pn	**Pn**	**05 19 20.0**	**+0.6**
USA0B	**Ussuriysk Arra**	**11.54**	**278**		Pn	**Pn**	**05 19 22.2**	**-0.2**
USA0B	**Ussuriysk Arra**	**11.54**	**278**	*de*	PN	**Pn**	**05 19 25.6**	**+3.2**
USRK	**Ussuriysk Ar.**	**11.54**	**278**		Pn	**Pn**	**05 19 23.5**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=147,slow=42,SNR=4.0							
USRK	**Ussuriysk Ar.**	**11.54**	**278**		Pn	**Pn**	**05 19 23.9**	**+1.5**
USRK	**Ussuriysk Ar.**	**11.54**	**278**		PN	**Pn**	**05 19 23.9**	**+1.5**
JGF	**Kuroka**	**11.57**	**229**		Pn	**Pn**	**05 19 23.8**	**+0.8**
PET	**Petropavlovsk**	**11.62**	**34**	*e*	PN	Pn	05 19 29.3	+5.8
PET					*e*S	**Sn**	**05 21 39.6**	**+7.0**
PET					MLR	MLR		
	comp=Z,1μm,16.0s							
PET					MLR	MLR		
	comp=Z,1μm,18.0s							
INU	**Inuyama**	**11.94**	**229**		Pn	**Pn**	**05 19 28.7**	**+0.6**
KLR	**Kul'dur**	**12.43**	**302**		Pn	**Pn**	**05 19 34.0**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=19,slow=20,SNR=2.7							
KLR					LR	LR	05 24 40.3	
	comp=Z,454nm,19.4s,baz=109,slow=39							
KLR	**Kul'dur**	**12.43**	**302**	*ce*	PN	**Pn**	**05 19 37.9**	**+3.3**
KLR					pmax	pmax		
	comp=Z,26nm,1.4s							
KLR					MLR	MLR		
	comp=Z,429nm,15.0s							
KLR	**Kul'dur**	**12.43**	**302**	*e*	P	**Pn**	**05 19 37.0**	**+2.4**
JHJ2	**Mitsune**	**12.44**	**214**		Pn	**Pn**	**05 19 34.8**	**0.0**
JHJ	**Hachijo jima 2**	**12.44**	**214**		Pn	**Pn**	**05 19 33.7**	**-1.2**
	comp=Z,11nm,0.3s,baz=78,slow=24,SNR=5.1							
JHJ					Sn	Sn	05 21 40.9	-12
	comp=Z,61nm,0.3s,baz=121,slow=22,SNR=9.9							
JHJ					LR	LR	05 25 12.1	
	comp=Z,51nm,19.1s,baz=74,slow=41							
	comp=Z,90nm,0.9s							
MDJ	**Mudanjiang**	**13.23**	**280**		P	**P**	**05 19 58.2**	**+2.9**
MDJ					pmax	pmax		
	comp=Z,13nm,0.7s							
MDJ					pmax	pmax		
	comp=Z,140nm,10.6s							
JHS	**Saijyo**	**14.46**	**238**		Pn	**Pn**	**05 20 03.1**	**+0.7**
SEHB	**SEOHWA**	**15.87**	**256**			**Pn**	**05 20 20.3**	**-0.8**
MA2	**Magadan**	**15.89**	**5**		LR	LR	05 26 38.3	
	comp=Z,614nm,18.0s,baz=180,slow=38							
MA2	**Magadan**	**15.89**	**5**			**Pn**	**05 20 20.9**	**-0.3**
MA2	**Magadan**	**15.89**	**5**	*ce*	P	**Pn**	**05 20 20.8**	**-0.4**
MA2	**Magadan**	**15.89**	**5**	*e*	P	**Pn**	**05 20 20.8**	**-0.4**
CN2	**Changchun**	**16.27**	**278**	*e*	P	**Pn**	**05 20 22.6**	**-3.6**
CN2				*e*	PP	**sP**	**05 20 36.7**	**+0.9**
CN2					*e*S	**Sn**	**05 23 20.5**	**-5.5**
CN2				*es*	S	S	05 23 34.5	-4.1
CN2				*es*	SS	**SnSn**	**05 23 40.7**	**+1.9**
CN2					LR	LR		
	comp=Z,510nm,16.0s							
CN2					LR	LR		
	comp=Z,70nm,16.0s							
CN2					LR	LR		
	comp=Z,300nm,18.0s							
KSRS	**Korea Array**	**16.48**	**254**		Pn	**Pn**	**05 20 28.6**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=62,slow=13,SNR=17							
	comp=Z,3.1nm,0.8s							
ZEA	**Zeya**	**16.84**	**313**	*e*	P	**Pn**	**05 20 33.3**	**-0.1**
ZEA					pmax	pmax		
	comp=Z,100nm,5.1s							
ZEA					pmax	pmax		
	comp=Z,20nm,0.7s							
ZEA					MLR	MLR		
	comp=E,200nm,18.0s							
ZEA					MLR	MLR		
	comp=N,300nm,19.0s							
ZEA					MLR	MLR		
	comp=Z,200nm,17.0s							
ZEA	**Zeya**	**16.84**

NAWB Namwon 17.91 249 P **Pn 05 20 46.3 -0.4**
JSU Suzuyama 18.48 234 **P 05 20 52.0 -1.7**
SEY Seymchan 19.34 6 P **P 05 21 01.3 -1.5**
comp=Z,1.0nm,0.3s,baz=180,slow=9.3,SNR=21
SEY LR LR 05 28 40.4
comp=Z,760nm,19.3s,baz=168,slow=38
comp=Z,26nm,1.0s
SEY Seymchan 19.34 6⇑*e*P **P 05 21 01.1 -1.6**
SEY pmax pmax
comp=Z,52nm,1.3s
SHEM Shemya Is, Ala 19.45 53 LR LR 05 29 28.6
comp=Z,93nm,18.5s,baz=290,slow=40
YAK Yakutsk 21.20 336 P **P 05 21 20.7 -2.2**
comp=Z,16nm,0.4s,baz=124,slow=1.9,SNR=3.8
YAK LR LR 05 29 57.0
comp=Z,495nm,19.6s,baz=92,slow=38
comp=Z,16nm,0.4s
YAK Yakutsk 21.20 336 P **P 05 21 20.2 -2.7**
YAK IAmb IAmb 05 21 22.2
comp=Z,73nm,0.8s
YAK Yakutsk 21.20 336 *e*P **P 05 21 20.3 -2.6**
YAK *e* 05 21 42.9
YAK *e*S **S 05 25 10.7 -6.8**
YAK *e**SS **pS 05 25 28.4 +1.1**
YAK *e*SS **SnSn 05 25 41.7 +2.1**
YAK *e* 05 32 41.1
YAK pmax pmax
comp=Z,55nm,0.8s
YAK pmax pmax
comp=N,10.0nm,0.9s
YAK pmax pmax
comp=E,16nm,1.1s
YAK pmax pmax
comp=Z,50nm,0.9s
YAK pmax pmax
comp=N,20nm,0.9s
YAK pmax pmax
comp=E,22nm,1.0s
YAK smax smax
comp=N,42nm,1.8s
YAK smax smax
comp=E,11nm,1.4s
YAK MLR MLR
comp=Z,634nm,23.0s
YAK MLR MLR
comp=E,201nm,17.0s
YAK MLR MLR
comp=N,349nm,21.0s
XLT XiLinHaoTe 22.94 281 *e*P **P 05 21 40.8 -1.0**
XLT S **S 05 25 50.3 -0.6**
XLT pmax pmax
comp=N,20nm,0.9s
XLT pmax pmax
comp=N,100nm,4.4s
XLT LR LR
comp=N,46nm,21.8s
XLT LR LR
comp=N,160nm,20.2s
XLT LR LR
comp=N,210nm,15.6s
JOW Kunigami 23.26 230 P **P 05 21 46.2 +1.1**
comp=N,24nm,0.8s,baz=25,slow=15,SNR=4.2
JOW LR LR 05 30 36.3
comp=N,131nm,21.2s,baz=100,slow=36
comp=N,24nm,0.8s
BJI Beijing 23.89 272 P **P 05 21 52.0 +0.9**
BJI S **S 05 26 04.7 -1.5**
BJI pmax pmax
comp=N,22nm,0.8s
BJI LR LR
comp=N,140nm,17.5s
BJI LR LR
comp=N,200nm,19.4s
BJI LR LR
comp=N,410nm,19.8s
BJT Baijiatuau 23.90 272 P **P 05 21 51.9 +0.6**
BJT Baijiatuau 23.90 272 P **P 05 21 51.9 +0.6**
BJT pmax pmax
comp=Z,16nm,0.8s
TIA Tai'an 24.72 263 P **P 05 21 59.2 +0.3**
TIA S **S 05 26 22.4 +2.6**
TIA pmax pmax
comp=Z,9.0nm,0.8s
TIA LR LR
comp=Z,140nm,16.2s
TIA LR LR
comp=Z,160nm,18.1s
TIA LR LR
comp=Z,280nm,20.1s
NJ2 Nanjing 25.67 253 *e*P **P 05 22 06.6 -0.8**
NJ2 pmax pmax
comp=Z,20nm,0.6s
NJ2 LR LR
comp=Z,390nm,18.5s
NJ2 LR LR
comp=Z,300nm,20.8s
NJ2 LR LR
comp=Z,530nm,21.3s
HNS HongShan 25.95 267 ⇑P **P 05 22 11.5 +1.6**
HNS S **S 05 26 44.3 +5.1**
HNS pmax pmax
comp=Z,11nm,0.8s
HNS LR LR
comp=Z,120nm,13.1s
HNS LR LR
comp=Z,190nm,13.9s
HNS LR LR
comp=Z,220nm,20.0s
BILL Bilibino 26.14 16 P **P 05 22 09.2 -2.2**
BILL Bilibino 26.14 16⇑*e*P **P 05 22 09.2 -2.2**
BILL *i* 05 22 18.4
BILL *e*S **S 05 26 33.8 -8.0**
BILL *e*SS **SnSn 05 27 44.3 +3.7**
BILL pmax pmax
comp=Z,17nm,1.4s
BILL MLR MLR
comp=Z,358nm,21.0s
HHC Hu-ho-hao-te 26.95 276 *e*P **P 05 22 19.2 +0.1**
HHC S **S 05 26 52.6 -2.7**
HHC SS **SnSn 05 28 05.2 +4.2**
HHC pmax pmax
comp=Z,18nm,1.0s
HHC pmax pmax
comp=Z,140nm,5.0s
HHC LR LR
comp=Z,220nm,10.6s
HHC LR LR
comp=Z,220nm,12.6s
HHC LR LR
comp=Z,410nm,15.9s
BTO Baotou 28.14 277 *e*P **P 05 22 27.2 -2.6**
BTO S **S 05 27 13.1 -0.9**
BTO LR LR
comp=Z,400nm,9.0s
BTO LR LR
comp=Z,880nm,15.5s
ULN Ulaanbaatar 28.57 293 P **P 05 22 32.5 -1.0**
ULN Ulaanbaatar 28.57 293*d i*P **P 05 22 34.2 +0.6**
ULN pmax pmax
comp=Z,16nm,1.0s
ULN Ulaanbaatar 28.57 293 *e*P **P 05 22 34.2 +0.6**
H11N2 WAKE ISLAND Hy 28.75 141 T T 05 53 21.4
baz=332,slow=76,SNR=247
H11N1 WAKE ISLAND Hy 28.76 141 T T 05 53 22.2
baz=332,slow=76,SNR=372
H11N3 WAKE ISLAND Hy 28.77 141 T T 05 53 22.6
baz=332,slow=76,SNR=402
SONM Songino Array 29.01 293 P **P 05 22 37.2 -0.3**
comp=Z,7.8nm,0.9s,baz=81,slow=8.9,SNR=38
comp=Z,7.8nm,0.9s
SONM Songino Array 29.01 293 P **P 05 22 37.1 -0.3**
TIXI Tiksi 29.44 348⇓*i*P **P 05 22 36.3 -4.5**
TIXI pmax pmax
comp=Z,4.0nm,1.0s
H11S1 WAKE ISLAND Hy 29.73 142 T T 05 54 32.1
baz=332,slow=76,SNR=982
H11S3 WAKE ISLAND Hy 29.73 142 T T 05 54 34.1
baz=332,slow=76,SNR=997
H11S2 WAKE ISLAND Hy 29.75 142 T T 05 54 36.8
baz=332,slow=76,SNR=884
GUMO Guam 30.23 186 LR LR 05 33 13.2
comp=Z,160nm,21.8s,baz=41,slow=33
GAMB Gambell 30.32 35 P **P 05 22 49.2 +0.6**
baz=248
ZAK Zakamensk 30.76 298 *e*P **P 05 22 51.8 -1.1**
ZAK *e* 05 25 49.8
ZAK pmax pmax
comp=Z,3.0nm,1.1s
XAN Xi'an 31.66 265 P **P 05 23 02.3 +1.4**
XAN pP pwP 05 23 14.6 +5.9
XAN pmax pmax
comp=Z,7.0nm,1.0s
XAN LR LR
comp=Z,160nm,12.4s
XAN LR LR
comp=Z,170nm,15.8s
XAN LR LR
comp=Z,230nm,18.6s
TNA Tin City 32.48 33 P **P 05 23 07.8 +0.1**
TNA Tin City 32.48 33 P **P 05 23 08.7 +1.0**
baz=250,SNR=6.1
ANM Nome 33.20 35 P **P 05 23 15.6 +1.6**
baz=254
LZH Lanzhou 34.38 272 *e*P **P 05 23 26.0 +1.2**
LZH pmax pmax
comp=Z,30nm,1.4s
LZH LR LR
comp=Z,170nm,15.3s
LZH LR LR
comp=Z,200nm,15.7s
LZH LR LR
comp=Z,240nm,16.3s
CHNA Chernabura Isl 35.11 53 P **P 05 23 31.7 +1.1**
baz=274
RDOG Red Dog Mine 35.18 30 P **P 05 23 27.9 -3.2**
RDOG IAmb IAmb 05 23 28.6
comp=Z,22nm,0.9s
N16K Nishlik Lake 35.53 43 P **P 05 23 35.8 +1.5**
baz=267,SNR=20
O16K Kokwok River B 35.83 45 P **P 05 23 37.4 +0.7**
baz=268,SNR=6.0
P16K Nushagak River 35.87 46 P **P 05 23 38.8 +1.7**
baz=269
GTA Gaotai 35.88 280⇑P **P 05 23 38.4 +0.7**
GTA PcP **PcP 05 26 05.8 +1.2**
GTA pmax pmax
comp=Z,9.0nm,1.2s
GTA pmax pmax
comp=Z,53nm,5.5s
GTA LR LR
comp=Z,120nm,17.8s
GTA LR LR
comp=Z,140nm,19.6s
GTA LR LR
comp=Z,160nm,17.8s
P17K Kvichak River 36.67 45 P **P 05 23 45.3 +1.3**
baz=270
GCSA Galena City Sc 36.81 36 P **P 05 23 45.5 +0.4**
baz=262,SNR=16
N18K Kilae Creek 36.96 43 P **P 05 23 47.7 +1.3**
N18K IAmb IAmb 05 23 49.5
comp=Z,42nm,0.9s
N18K Kilae Creek 36.96 43 P **P 05 23 48.3 +1.8**
baz=269,SNR=14
TTA Tatalina 37.01 39 IAmb IAmb 05 23 49.5
comp=Z,61nm,1.5s
TTA Tatalina 37.01 39 P **P 05 23 47.9 +1.0**
baz=266,SNR=21
CD2 Chengdu 37.01 265 P **P 05 23 47.8 +0.5**
CD2 pmax pmax
comp=Z,20nm,0.7s
SVW2 Sparrevohn 37.12 42 IAmb IAmb 05 23 50.7
comp=Z,22nm,0.8s
CHIR Chirikof Islan 37.29 51 P **P 05 23 50.5 +1.3**
baz=276
P18K Big Mountain, 37.29 45 IAmb IAmb 05 23 52.2
comp=Z,48nm,1.1s
P18K Big Mountain, 37.29 45 P **P 05 23 50.5 +1.2**
baz=271
O18K Koktuh Hills 37.30 44 IAmb IAmb 05 23 52.5
comp=Z,37nm,1.1s
O18K Koktuh Hills 37.30 44 P **P 05 23 51.0 +1.7**
baz=271
L19K White Mountain 37.50 40 P **P 05 23 52.4 +1.3**
baz=268,SNR=8.7
N19K Bonanza Creek 37.65 43 P **P 05 23 53.5 +1.1**
N19K IAmb IAmb 05 23 55.1
comp=Z,26nm,0.9s
N19K Bonanza Creek 37.65 43 P **P 05 23 53.8 +1.4**
baz=270,SNR=12
M19K Big River Lodg 37.71 41 IAmb IAmb 05 23 55.6
comp=Z,50nm,1.8s
M19K Big River Lodg 37.71 41 P **P 05 23 54.5 +1.7**
baz=269
O19K Port Alsworth 37.74 44 P **P 05 23 53.9 +0.9**
baz=271
K20K Telida 37.91 38 IAmb IAmb 05 23 57.3
comp=Z,56nm,1.6s
K20K Telida 37.91 38 P **P 05 23 55.8 +1.3**
baz=267,SNR=15
J20K Nowinta River 37.93 37 IAmb IAmb 05 23 57.3
comp=Z,66nm,1.1s
J20K Nowinta River 37.93 37 P **P 05 23 56.0 +1.4**
baz=266,SNR=44
L20K Farewell, AK 37.97 40 P **P 05 23 56.3 +1.4**
baz=268,SNR=10
Q19K Cape Douglas, 38.12 46 P **P 05 23 56.6 +0.2**
baz=273
A21K Barrow 38.24 25 P **P 05 23 56.6 -0.5**
baz=254
M20K Styx River 38.31 41 P **P 05 23 59.7 +1.7**
baz=270
OHAK Old Harbor 38.44 48 IAmb IAmb 05 24 12.8
comp=Z,42nm,1.2s
OHAK Old Harbor 38.44 48 P **P 05 23 58.8 -0.1**
baz=276
O20K Slope Mountain 38.59 44 P **P 05 24 00.3 0.0**
baz=272
H21K Melozitna Rive 38.62 35 P **P 05 24 01.6 +1.2**
baz=265,SNR=96
CHUM Lake Minchumin 38.72 38 P **P 05 24 02.8 +1.5**
baz=268,SNR=12
PPLA Purkeypile 38.76 39 P **P 05 24 03.3 +1.6**
baz=269,SNR=11
SPCR Spurr Chakacha 38.76 42 P **P 05 24 03.1 +1.4**
baz=271,SNR=6.6
KDAK Kodiak Island 38.77 47 P **P 05 24 01.6 0.0**
comp=Z,25nm,1.1s,baz=286,slow=5.8,SNR=13
comp=Z,25nm,1.1s
KDAK Kodiak Island 38.77 47 P **P 05 24 01.5 -0.2**
KDAK IAmb IAmb 05 24 15.3
comp=Z,36nm,0.9s
KDAK Kodiak Island 38.77 47 P **P 05 24 01.5 -0.2**
baz=275
Q20K Shuyak Island 38.80 46 P **P 05 24 01.7 -0.3**
baz=274
CAST Castle Rocks 38.81 38 IAmb IAmb 05 24 05.1
comp=Z,100nm,1.8s
CAST Castle Rocks 38.81 38 P **P 05 24 03.7 +1.6**
baz=269,SNR=19
SPU Mount Spurr 38.83 42 P **P 05 24 03.1 +0.8**
I21K Tanana 38.93 36 IAmb IAmb 05 24 05.7
comp=Z,54nm,1.0s
I21K Tanana 38.93 36 P **P 05 24 04.3 +1.4**
baz=267,SNR=55
SKT Skwentna 39.06 41 P **P 05 24 05.1 +0.9**
baz=271
HOM Homer 39.11 44 P **P 05 24 04.4 -0.1**
baz=274
BPAW Bear Paw Mtn. 39.31 37 P **P 05 24 07.6 +1.3**
baz=269,SNR=15
KTH Kantishna Hill 39.34 38 IAmb IAmb 05 24 09.3
comp=Z,99nm,1.4s
MLY Manley 39.45 36 IAmb IAmb 05 24 10.0
comp=Z,32nm,0.9s
MLY Manley 39.45 36 P **P 05 24 08.7 +1.4**
baz=268,SNR=47
SUA Susitna One 39.45 42 P **P 05 24 07.8 +0.2**
baz=272
NRIK Noril'sk 39.50 331 LR LR 05 41 39.3
comp=Z,177nm,18.9s,baz=80,slow=38
NRIK Noril'sk 39.50 331⇑*i*P **P 05 24 05.2 -2.5**
NRIK pmax pmax
comp=Z,7.0nm,1.4s
BRSE Bradley Lake S 39.56 44 P **P 05 24 08.6 +0.3**
baz=274
TRF Thorofare Moun 39.62 38 P **P 05 24 09.6 +0.6**
baz=270,SNR=9.6
CUT Chulitna 39.65 40 P **P 05 24 09.4 +0.4**
baz=272
COLD Coldfoot 39.78 32 IAmb IAmb 05 24 12.2
comp=Z,46nm,1.0s
COLD Coldfoot 39.78 32 P **P 05 24 11.2 +1.1**
baz=266
RC01 Rabbit Creek A 39.96 42 P **P 05 24 12.2 +0.6**
baz=274
H23K Yukon River 39.97 35 P **P 05 24 13.2 +1.5**
H23K Yukon River 39.97 35 P **P 05 24 13.2 +1.5**
baz=268,SNR=75
O22K Cooper Landing 40.01 43 IAmb IAmb 05 24 22.7
comp=Z,54nm,0.8s
I23K Minto, Yukon-K 40.03 36 IAmb IAmb 05 24 14.8
comp=Z,89nm,1.4s
I23K Minto, Yukon-K 40.03 36 P **P 05 24 13.4 +1.3**
baz=269,SNR=35
TOLK Toolik Lake Re 40.14 30 IAmb IAmb 05 24 15.0
comp=Z,118nm,1.7s
TOLK Toolik Lake Re 40.14 30 P **P 05 24 13.7 +0.7**
baz=265,SNR=27
NEA2 Nenana 40.15 37 IAmb IAmb 05 24 15.6
comp=Z,70nm,1.3s
NEA2 Nenana 40.15 37 P **P 05 24 14.4 +1.2**
baz=270,SNR=45
SEW Seward 40.17 44 P **P 05 24 13.3 -0.1**
baz=275
PMR Palmer 40.22 41 P **P 05 24 14.1 +0.3**
baz=274,SNR=6.4
MCK McKinley 40.22 38 IAmb IAmb 05 24 15.6
comp=Z,48nm,1.5s
MCK McKinley 40.22 38 P **P 05 24 14.3 +0.5**
baz=271,SNR=7.2
RND Reindeer 40.27 38 IAmb IAmb 05 24 15.8
comp=Z,78nm,1.7s
WAT1 Susitna Watana 40.42 39 P **P 05 24 15.7 +0.2**
baz=273
MDM Murphy Dome 40.51 36 IAmb IAmb 05 24 18.6
comp=Z,82nm,1.3s
KNK Knik Glacier 40.55 41 IAmb IAmb 05 24 18.9
comp=Z,42nm,1.0s
KNK Knik Glacier 40.55 41 P **P 05 24 16.9 +0.3**
baz=274,SNR=10.0
WRH Wood River Hil 40.58 37 IAmb IAmb 05 24 22.8
comp=Z,37nm,1.0s
SML Sawmill 40.59 41 IAmb IAmb 05 24 19.2
comp=Z,57nm,0.8s
SML Sawmill 40.59 41 P **P 05 24 17.5 +0.6**
baz=274,SNR=31
H24K Noodor Dome 40.66 35 P **P 05 24 18.9 +1.5**
H24K IAmb IAmb 05 24 20.3
comp=Z,77nm,1.1s
H24K Noodor Dome 40.66 35 P **P 05 24 18.9 +1.5**
baz=270,SNR=83
TCOL CIGO, UAF Yank 40.67 36 P **P 05 24 18.6 +1.2**
baz=271,SNR=11
COLA College 40.67 36 P **P 05 24 18.3 +0.9**
COLA College 40.67 36*c i*P **P 05 24 18.5 +1.1**
COLA pmax pmax
comp=Z,80nm,1.2s
COLA College 40.67 36 P **P 05 24 18.6 +1.1**
baz=271
WAT6 Susitna Watana 40.81 40 P **P 05 24 18.7 -0.2**
baz=274,SNR=8.7
GOMU GeErMu 40.83 278 P **P 05 24 19.8 +0.2**
GOMU PP **PP 05 25 54.7 +1.0**
GOMU PcP **PcP 05 26 21.0 +0.7**
GOMU S **S 05 30 29.9 -0.1**
GOMU pmax pmax
comp=Z,21nm,1.0s
GOMU pmax pmax
comp=Z,94nm,5.2s
GOMU LR LR
comp=Z,100nm,13.7s
GOMU LR LR
comp=Z,130nm,15.8s
GOMU LR LR
comp=Z,120nm,15.0s
POKR Poker Plat Res 40.85 36 P **P 05 24 20.4 +1.4**
baz=271,SNR=19
M23K Glacier View 40.87 41 P **P 05 24 19.6 +0.4**
baz=274,SNR=7.4
DHY Denali Highway 40.95 39 P **P 05 24 20.5 +0.5**
baz=273
PZH PanZhiHua 40.99 261 P P 05 24 25.7 +5.0
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH pmax pmax
comp=Z,80nm,5.0s
SCM Sheep Creek Mo 41.06 41 IAmb IAmb 05 24 22.7
comp=Z,31nm,1.0s
SCM Sheep Creek Mo 41.06 41 P **P 05 24 20.8 0.0**
baz=275,SNR=8.2
HDA Harding Lake 41.07 37 IAmb IAmb 05 24 22.2
comp=Z,23nm,0.7s
HDA Harding Lake 41.07 37 P **P 05 24 20.9 +0.1**
baz=272,SNR=28
IL31 41.09 36 IAmb IAmb 05 24 24.0
comp=Z,54nm,1.1s
ILAR Eielson Array 41.09 36 P **P 05 24 21.1 +0.1**
comp=Z,25nm,1.0s,baz=257,slow=6.8,SNR=86
comp=Z,25nm,1.0s
ILAR Eielson Array 41.09 36 P **P 05 24 20.7 -0.2**
KMI Kunming 41.12 258⇑P P 05 24 27.8 +5.9
KMI pP pwP 05 24 32.4 +2.8
KMI pmax pmax
comp=Z,11nm,0.7s
KMI LR LR
comp=N,190nm,13.7s
KMI LR LR
comp=E,200nm,16.2s
KMI LR LR
comp=Z,220nm,15.8s
P23K Montague Islan 41.21 44 P **P 05 24 22.5 +0.6**
baz=277
GLI Glacier Island 41.26 42 P **P 05 24 22.7 +0.4**
baz=276
ZALV Zalesovo Beam 41.45 307 P **P 05 24 23.7 -0.3**
comp=Z,2.8nm,0.6s,baz=77,slow=6.3,SNR=12
ZALV PcP **PcP 05 26 21.8 +0.3**
comp=Z,8.9nm,0.9s,baz=75,slow=3.0,SNR=12
ZALV LR LR 05 42 33.8
comp=Z,124nm,20.6s,baz=54,slow=38
comp=Z,2.8nm,0.6s
ZALV Zalesovo Beam 41.45 307 P **P 05 24 23.0 -1.0**
ZALV **PcP 05 26 21.5 0.0**
ZALV Zalesovo Beam 41.45 307*i* P **P 05 24 24.2 +0.2**
ZALV pmax pmax
comp=Z,3.0nm,0.6s
DAV Davao City (W) 41.52 215 LR LR 05 40 33.2
comp=Z,67nm,21.5s,baz=340,slow=35
M24K Tolsona, Glenn 41.58 40 IAmb IAmb 05 24 27.6
comp=Z,36nm,0.9s
M24K Tolsona, Glenn 41.58 40 P **P 05 24 26.2 +1.2**
baz=275,SNR=7.2
K24K Donnelly Dome 41.62 38 P **P 05 24 25.5 +0.2**
baz=274,SNR=16
J25K Salcha River, 41.75 36 P **P 05 24 26.0 -0.4**
baz=273,SNR=8.3
KLU Klutina 41.76 41 IAmb IAmb 05 24 29.2
comp=Z,37nm,1.0s
KLU Klutina 41.76 41 P **P 05 24 27.4 +0.8**
baz=276,SNR=19
PAX Paxson 41.82 39 P **P 05 24 28.4 +1.3**
baz=275,SNR=6.1
DIV Divide 41.87 42 IAmb IAmb 05 24 29.6
comp=Z,38nm,1.0s
EYAK Cordova Ski Ar 41.96 43 P **P 05 24 29.2 +1.2**
baz=278
BMAR Burnt Mountain 41.97 32 P **P 05 24 29.0 +0.9**
HARP HAARP 42.02 40 P **P 05 24 29.6 +1.0**
baz=276,SNR=6.0
RIDG Independent Ri 42.04 38 P **P 05 24 28.8 +0.1**
baz=275,SNR=11
N25K Chitina, Valde 42.37 41 P **P 05 24 32.6 +1.0**
baz=277
SCRK Sand Creek 42.40 37 P **P 05 24 31.8 0.0**
baz=275,SNR=31
BMRM Bremner River 42.46 42 IAmb IAmb 05 24 35.4
comp=Z,42nm,1.0s
BMRM Bremner River 42.46 42 P **P 05 24 33.1 +0.8**
baz=278,SNR=17
J26L Joseph Creek 42.53 37 P **P 05 24 32.3 -0.6**
baz=275,SNR=9.4
WMQ Urumqi 42.64 292 P **P 05 24 35.3 +1.4**
WMQ pmax pmax
comp=Z,36nm,0.9s
WMQ pmax pmax
comp=Z,150nm,5.1s
WMQ LR LR
comp=Z,400nm,17.9s
WMQ LR LR
comp=Z,180nm,17.1s
L26K Log Cabin Wild 42.78 39 P **P 05 24 35.8 +1.1**

M26K **Nabesna, AK** 43.02 40 IAmb IAmb 05 24 40.2
comp=Z,31nm,0.8s baz=277,SNR=15

M26K **Nabesna, AK** 43.02 40 P P **05 24 38.5 +1.8**
baz=278,SNR=41

MCARA **McCarthy VSAT** 43.15 41 P P **05 24 39.0 +1.2**
baz=279,SNR=6.8

ZSN **Zaisan** 43.22 298 *eP* P **05 24 37.9 -0.6**

ZSN **Zaisan** 43.22 298 *eP* P **05 24 37.9 -0.6**
baz=298

K27K **Chicken** 43.23 37 IAmb IAmb 05 24 41.0
comp=Z,77nm,1.2s

K27K **Chicken** 43.23 37 P P **05 24 39.7 +1.3**
baz=277

BGLC **Bering Glacier** 43.23 43 P P **05 24 39.3 +1.0**
baz=280

TGL **Tana Glacier** 43.35 42 IAmb IAmb 05 24 42.1
comp=Z,33nm,1.1s

WAX **Waxell Ridge** 43.39 42 IAmb IAmb 05 24 42.4
comp=Z,37nm,0.7s

L27K **Beaver Creek,** 43.46 39 IAmb IAmb 05 24 43.9
comp=Z,36nm,0.8s

L27K **Beaver Creek,** 43.46 39 P P **05 24 42.0 +1.7**
baz=278,SNR=62

M27K **Edge Creek, AK** 43.54 40 IAmb IAmb 05 24 45.3
comp=Z,28nm,1.0s

M27K **Edge Creek, AK** 43.54 40 P P **05 24 42.7 +1.6**
baz=279,SNR=28

ISLE **Juniper Island** 43.61 42 IAmb IAmb 05 24 57.4
comp=Z,26nm,0.9s

BARN **Barnard Glacie** 43.86 41 IAmb IAmb 05 24 46.3
comp=Z,27nm,0.9s

GRNC **Granite Creek** 43.87 42 P P **05 24 45.1 +1.3**
GRNC IAmb IAmb 05 24 46.2
comp=Z,42nm,0.8s

MESA **MESA** 43.88 43 P P **05 24 45.3 +1.5**
baz=281

YAH **Yahtse** 43.95 42 IAmb IAmb 05 24 47.0
comp=Z,42nm,0.9s

BVCY **Beaver Creek** 44.00 39 P P **05 24 46.0 +1.4**
baz=280,SNR=24

CTG **Chitna Glacier** 44.03 41 P P **05 24 46.4 +1.3**
baz=281,SNR=11

CTGM **Chitina Glacie** 44.03 41 IAmb IAmb 05 24 48.0
comp=Z,35nm,1.0s

YUK3 **Moose Creek** 44.30 40 P P **05 24 48.2 +0.9**
baz=280,SNR=11

DAWY **Dawson** 44.39 37 P P **05 24 48.5 +0.7**
baz=279,SNR=11

I29M **Ogilvie Camp,** 44.65 35 P P **05 24 50.9 +1.1**
baz=279,SNR=55

YUK8 **Steele Glacier** 44.72 41 P P **05 24 51.5 +0.8**
baz=282

PCA **Pinnacle** 44.73 43 IAmb IAmb 05 25 12.2
comp=Z,29nm,1.1s

PINM **Pinnacle** 44.73 43 P P **05 24 51.7 +1.1**
baz=282

MK31 **Makanchi Array** 45.10 298 P P **05 24 53.4 -0.1**
MK31 IAmb IAmb 05 24 54.5
comp=Z,17nm,0.8s

MK31 **Makanchi Array** 45.10 298*c iP* P **05 24 53.5 -0.1**

MKAR **Makanchi Array** 45.10 298 P P **05 24 53.6 0.0**
comp=Z,15nm,0.7s,baz=78,slow=8.5,SNR=117

MKAR PcP **PcP** **05 26 33.9 -0.1**
comp=Z,3.4nm,0.9s,baz=66,slow=4.9,SNR=2.9

MKAR LR LR 05 44 58.2
comp=Z,193nm,20.2s,baz=68,slow=38
comp=Z,15nm,0.7s

SEM **Semipalatinsk** 45.12 303 *eP* P **05 24 52.7 -1.3**

SEM **Semipalatinsk** 45.12 303 *eP* P **05 24 52.8 -1.3**
baz=303

EPYK **Eagle Plains** 45.15 33 P P **05 24 55.0 +1.3**
baz=279,SNR=56

YUK4 **Talbot Arm** 45.23 41 P P **05 24 55.2 +0.5**
baz=282,SNR=5.0

MAKZ **Makanchi** 45.29 298 P P **05 24 55.1 -0.1**
MAKZ IAmb IAmb 05 24 56.2
comp=Z,19nm,0.8s

MAKZ **Makanchi** 45.29 298 P P **05 24 55.1 -0.1**
MAKZ pmax pmax
comp=Z,19nm,0.8s

YUK6 **Outpost Mounta** 45.45 41 P P **05 24 57.9 +1.4**
baz=283

M30M **Minto, Yukon** 45.82 39 P P **05 25 00.8 +1.7**
baz=283,SNR=11

HYT **Haines Junctio** 45.89 41 P P **05 25 01.7 +1.9**
baz=284,SNR=47

N30M **Aishikik Lake** 45.94 40 P P **05 25 01.6 +1.5**
baz=283,SNR=6.5

KURK **Kurchatov** 46.00 304 P P **05 24 59.3 -1.3**
KURK IAmb IAmb 05 25 01.2
comp=Z,22nm,1.2s

KURK **Kurchatov** 46.00 304*ce*P P **05 25 00.3 -0.4**
KURK pmax pmax
comp=Z,30nm,1.7s

KURK **Kurchatov** 46.00 304 *eP* P **05 25 00.3 -0.4**

INK **Inuvik** 46.05 30 P P **05 25 01.9 +1.1**
comp=Z,39nm,0.8s,baz=293,slow=8.0,SNR=73

INK LR LR 05 47 38.5
comp=Z,158nm,18.6s,baz=268,slow=40
comp=Z,39nm,0.8s

INK **Inuvik** 46.05 30 P P **05 25 01.8 +1.0**
baz=280,SNR=30

KURBB **Kurchatov Arra** 46.09 304 LR LR 05 45 38.4
comp=Z,155nm,18.9s,baz=28,slow=38

N31M **Braeburn, Yuko** 46.54 40 IAmb IAmb 05 25 09.1
comp=Z,21nm,0.9s

N31M **Braeburn, Yuko** 46.54 40 P P **05 25 06.7 +1.9**
baz=284,SNR=9.2

O30N **Mendenhall** 46.58 41 P P **05 25 06.7 +1.6**
baz=285

PLBC **Pleasant Camp** 46.79 43 P P **05 25 08.5 +1.8**
baz=286,SNR=6.6

SIJI **Sorong** 46.92 203 LR LR 05 42 39.5
comp=Z,71nm,21.8s,baz=292,slow=33

M31M **Drury Creek, Y** 47.00 39 P P **05 25 09.8 +1.4**
baz=285,SNR=12

FARO **Faro, Yukon** 47.46 39 P P **05 25 13.4 +1.4**
baz=286

BESE **Bessie Mountai** 47.79 44 P P **05 25 13.8 -0.8**
BESE IAmb IAmb 05 25 42.9
comp=Z,14nm,0.9s

KRVT **Keravat (AS076** 48.02 175 LR LR 05 42 30.1
comp=Z,146nm,21.4s,baz=176,slow=32

SIT **Sitka** 48.03 46 P P **05 25 16.8 +0.5**
baz=289

A36M **Sachs Harbour** 48.07 25 P P **05 25 17.2 +0.7**
baz=284,SNR=6.3

CMAR **Chiang Mai Arr** 48.12 254 P P **05 25 18.6 +1.0**
comp=Z,1.6nm,0.3s,baz=41,slow=6.0,SNR=6.8
comp=Z,1.6nm,0.3s

JIS **Juneau Island** 48.12 44 IAmb IAmb 05 25 32.5
comp=Z,18nm,0.9s

MMPY **Sheldon Lake,** 48.29 38 P P **05 25 19.8 +1.4**
baz=287,SNR=5.4

P33M **Teslin, Yukon** 48.29 41 P P **05 25 19.3 +0.9**
P33M IAmb IAmb 05 25 21.3
comp=Z,23nm,1.1s

P33M **Teslin, Yukon** 48.29 41 P P **05 25 19.8 +1.3**
baz=288,SNR=11

TDK **Taldyqorghan** 48.30 297 *eP* P **05 25 18.5 -0.1**

TDK **Taldyqorghan** 48.30 297 *eP* P **05 25 18.6 -0.1**
baz=297

SHL **Shillong** 48.64 267 P P **05 25 21.8 +0.1**

SHL **Shillong** 48.64 267 P P **05 25 21.8 +0.1**
SHL pmax pmax
comp=Z,10.0nm,0.9s

KPKS **Kokpek** 48.77 295 *eP* P **05 25 21.7 -0.7**
KPKS pmax pmax
comp=Z,16nm,0.8s

KPKS **Kokpek** 48.77 295 *eP* P **05 25 21.7 -0.7**
comp=Z,16nm,0.8s,baz=295

ARXS **Arharly** 49.00 296 *eP* P **05 25 23.9 -0.3**

SATY **Saty** 49.13 295 *eP* P **05 25 24.7 -0.5**
SATY pmax pmax
comp=Z,12nm,0.8s

SATY **Saty** 49.13 295 *eP* P **05 25 24.7 -0.5**
comp=Z,12nm,0.8s,baz=295

C36M **Paulatuk** 49.15 28 P P **05 25 25.5 +0.7**
baz=287,SNR=16

CHKK **Chushkaly** 49.70 296 *eP* P **05 25 29.1 -0.3**

CHKK **Chushkaly** 49.70 296 *eP* P **05 25 29.2 -0.3**
baz=296

CRAG **Craig** 49.73 47 P P **05 25 29.8 +0.4**
baz=291

BRZS **Berezniki** 49.81 305 *eP* P **05 25 29.6 -0.6**
BRZS pmax pmax
comp=Z,14nm,0.9s

BRZS **Berezniki** 49.81 305 *eP* P **05 25 29.7 -0.6**
comp=Z,14nm,0.9s,baz=305

MDOK **Medeo** 49.97 295 *eP* P **05 25 31.4 -0.3**

MDOK **Medeo** 49.97 295 *eP* P **05 25 31.4 -0.3**
baz=296

BRVK **Borovoye** 49.98 310 P P **05 25 31.4 -0.1**
BRVK IAmb IAmb 05 25 32.7
comp=Z,15nm,0.9s

BRVK **Borovoye** 49.98 310 P P **05 25 31.4 -0.1**
BRVK pmax pmax
comp=Z,15nm,0.9s

BRVK **Borovoye** 49.98 310 *eP* P **05 25 31.4 -0.1**

AAA **Alma-Ata** 50.04 296 *eP* P **05 25 32.1 0.0**

AAA **Alma-Ata** 50.04 296 *eP* P **05 25 32.1 0.0**
baz=296

AAA **Alma-Ata** 50.04 296 *eP* P **05 25 32.1 0.0**

TNSS **Tian-Shan** 50.09 295 *eP* P **05 25 32.6 -0.3**

TNSS **Tian-Shan** 50.09 295 *eP* P **05 25 32.7 -0.3**
baz=295

KUU **Kurty** 50.11 297 *eP* P **05 25 31.6 -0.9**
KUU pmax pmax
comp=Z,19nm,0.6s

KUU **Kurty** 50.11 297 *eP* P **05 25 31.7 -0.9**
comp=Z,19nm,0.6s,baz=297

DLBC **Dease Lake** 50.23 43 LR LR 05 50 22.3
comp=Z,68nm,18.1s,baz=282,slow=40

DLBC **Dease Lake** 50.23 43 P P **05 25 35.0 +1.7**
baz=291

KDJ **Kajisay** 50.35 294 IAmb IAmb 05 25 36.1
comp=Z,34nm,1.0s

TAPN **Taplejung** 50.62 272 *eP* P **05 25 37.6 +0.7**
comp=Z,34nm,1.1s

T35M **Bob Quinn** 50.66 44 P P **05 25 39.1 +2.6**
baz=292,SNR=5.9

OTUK **Ortayu** 50.73 303 P P **05 25 37.3 +0.1**

ULHL **Ulahol** 50.92 295 P P **05 25 40.0 +1.1**
SNR=7.4

TKM2 **Tokmak 2** 51.03 296 P P **05 25 40.4 +0.6**
SNR=30

TKM2 **Tokmak 2** 51.03 296 P P **05 25 40.1 +0.3**

BTLS **Baital** 51.07 299 *eP* P **05 25 39.2 -0.5**
BTLS pmax pmax
comp=Z,7.0nm,1.1s

BTLS **Baital** 51.07 299 *eP* P **05 25 39.2 -0.5**
comp=Z,7.2nm,1.1s,baz=299

SGDS **Sogindy** 51.41 297 *eP* P **05 25 42.2 -0.2**
SGDS pmax pmax
comp=Z,8.0nm,0.5s

SGDS **Sogindy** 51.41 297 *eP* P **05 25 42.3 -0.2**
comp=Z,7.9nm,0.5s,baz=297

JIRN **Jiri** 51.54 273 *eP* P **05 25 44.6 +0.7**
comp=Z,28nm,0.7s

CHMS **Chumysh** 51.55 296 P P **05 25 43.5 +0.1**

KBK **Karagaybulak** 51.58 296 P P **05 25 44.4 +0.6**
SNR=24

USP **Ospenovka** 51.58 297 P P **05 25 44.2 +0.5**
SNR=19

GUN **Gumba** 51.62 274 *eP* P **05 25 44.8 +0.3**
comp=Z,24nm,0.6s

RAMN **Ramite** 51.65 272 *eP* P **05 25 45.0 +0.4**
comp=Z,39nm,0.5s

AAK **Ala-Archa** 51.88 296 P P **05 25 46.5 +0.4**
SNR=9.7

AAK **Ala-Archa** 51.88 296 LR LR 05 49 48.2
comp=Z,95nm,18.1s,baz=92,slow=38

AAK **Ala-Archa** 51.88 296 P P **05 25 46.0 0.0**
AAK IAmb IAmb 05 25 47.3
comp=Z,31nm,1.2s

AAK **Ala-Archa** 51.88 296*c iP* P **05 25 46.1 0.0**
AAK pmax pmax
comp=Z,29nm,1.3s

AAK **Ala-Archa** 51.88 296 *eP* P **05 25 46.1 0.0**

AAK **Ala-Archa** 51.88 296 *i* P P **05 25 46.5 +0.4**
SNR=11

UCH **Uchtor** 52.06 295 P P **05 25 48.6 +0.8**
SNR=6.0

PKI **Pulchoki** 52.15 274 *eP* P **05 25 48.9 +0.4**

PKIN **Phulchoki** 52.16 274 *eP* P **05 25 48.8 +0.4**

EKS2 **Erkin-Say** 52.34 296 P P **05 25 49.7 +0.3**
SNR=18

DMN **Daman** 52.35 274 *eP* P **05 25 50.5 +0.7**

KSH **Kashi** 52.41 292 P P **05 25 54.6 +4.6**
KSH S S **05 33 19.3 +4.4**
KSH pmax pmax
comp=Z,15nm,0.9s
KSH LR LR
comp=Z,490nm,16.5s
KSH LR LR
comp=Z,300nm,15.1s
KSH LR LR
comp=Z,200nm,13.7s

GKN **Gorkha** 52.46 275 *eP* P **05 25 51.0 +0.5**
comp=Z,12nm,0.3s

AML **Almayashu** 52.64 296 P P **05 25 52.7 +0.7**
SNR=16

AML **Almayashu** 52.64 296 *i* P P **05 25 52.7 +0.7**
SNR=16

PMG **Port Moresby** 52.96 181 LR LR 05 44 58.0
comp=Z,111nm,21.9s,baz=58,slow=32

KOLN **Koldanda** 53.34 275 *eP* P **05 25 57.6 +0.5**

SVE **Sverdlovsk** 53.52 317 *eP* P **05 25 57.9 +0.2**
SVE pmax pmax
comp=Z,38nm,0.9s

PYUN **Piuthan** 53.59 276 *eP* P **05 25 59.7 +0.7**
comp=Z,14nm,0.4s

DZA **Taraz** 53.80 298 *eP* P **05 26 00.0 -0.1**

DZA **Taraz** 53.80 298 *eP* P **05 26 00.0 -0.1**
baz=298

KK31 **Karatay Array** 54.23 298 IAmb IAmb 05 26 04.0
comp=Z,24nm,0.8s

KK31 **Karatay Array** 54.23 298 *i* P P **05 26 02.9 -0.3**

KKAR **Karatay Array** 54.23 298 IAmb IAmb 05 26 04.0
comp=Z,24nm,0.8s

ARU **Arti** 54.72 317 LR LR 05 51 54.4
comp=Z,203nm,18.5s,baz=44,slow=39

ARU **Arti** 54.72 317 P P **05 26 06.2 -0.3**
ARU IAmb IAmb 05 26 06.7
comp=Z,25nm,0.9s

ARU **Arti** 54.72 317*c iP* P **05 26 05.7 -0.8**
ARU S S **05 33 47.9 +2.3**
ARU SS SS **05 37 26.5 -1.5**
ARU pmax pmax
comp=Z,26nm,0.8s
ARU MLR MLR
comp=Z,175nm,15.0s

RES **Resolute Bay** 54.74 17 P P **05 26 05.7 -0.7**
comp=Z,17nm,0.7s,baz=318,slow=7.6,SNR=31
RES LR LR 05 52 03.8
comp=Z,90nm,20.4s,baz=282,slow=39
comp=Z,17nm,0.7s

RES **Resolute Bay** 54.74 17 IAmb IAmb 05 26 08.1
comp=Z,20nm,0.8s

SPITS **Spitsbergen Ar** 54.85 349 LR LR 05 53 01.1
comp=Z,90nm,18.1s,baz=16,slow=40

IUG **Iuzhnay** 55.01 297 *eP* P **05 26 08.4 -0.5**

IUG **Iuzhnay** 55.01 297 *eP* P **05 26 08.4 -0.5**
baz=298

DRK **Karamyk** 55.21 294 IAmb IAmb 05 26 12.0
comp=Z,29nm,1.2s

YKA **Yellowknife Ar** 55.42 34 P P **05 26 11.7 +0.2**
comp=Z,5.4nm,0.7s,baz=299,slow=6.8,SNR=10
YKA LR LR 05 52 26.3
comp=Z,56nm,21.1s,baz=298,slow=39
comp=Z,5.4nm,0.7s

YKA **Yellowknife Ar** 55.42 34 *i* P P **05 26 12.0 +0.5**
YKA pmax pmax
comp=Z,5.0nm,0.7s

AB31 **Akbulak array** 57.50 309 *i* P P **05 26 26.1 -0.4**

COEN **Coen** 57.64 186 P P **05 26 28.7 +0.9**
COEN IAmb IAmb 05 26 30.5
comp=Z,12nm,0.8s

PRGR **Permogore** 57.86 327 *eP* P **05 26 27.0 -1.8**

KIRV **Kirov** 57.93 322 LR LR 05 53 40.1
comp=Z,194nm,18.7s,baz=53,slow=38

KIRV **Kirov** 57.93 322*c iP* P **05 26 28.7 -0.6**

AKTO **Aktyubinsk** 57.96 311 LR LR 05 53 48.4
comp=Z,115nm,19.0s,baz=59,slow=39

AKTO **Aktyubinsk** 57.96 311 P P **05 26 28.9 -0.8**

MTN **Manton Dam** 58.43 199 P P **05 26 34.8 +1.5**

D03D **Eldon** 58.91 52 P P **05 26 37.7 +1.4**
baz=302

D04E **Lakebay** 59.28 53 P P **05 26 40.5 +1.6**
baz=303

ARCES **ARCESS Array B** 59.41 340 P P **05 26 37.7 -1.8**
comp=Z,3.2nm,0.7s,baz=51,slow=7.2,SNR=11
ARCES LR LR 05 56 10.1
comp=Z,150nm,20.3s,baz=39,slow=40
comp=Z,3.2nm,0.7s

PSI **Prapat** 59.51 241 LR LR 05 52 56.9
comp=Z,68nm,19.1s,baz=74,slow=37

E04D **Cinebar** 59.73 53 IAmb IAmb 05 26 44.7
comp=Z,22nm,1.1s

E04D **Cinebar** 59.73 53 P P **05 26 43.6 +1.5**
baz=303

KBL **Kabul** 59.74 290 P P **05 26 41.4 -1.2**
KBL IAmb IAmb 05 26 42.7
comp=Z,24nm,0.9s

KBL **Kabul** 59.74 290 P P **05 26 41.4 -1.2**
KBL pmax pmax
comp=Z,24nm,1.0s

KLMR **Klimovskoe** 60.72 328 *eP* P **05 26 45.4 -3.1**
KLMR pmax pmax
comp=Z,30nm,1.1s

KLMR **Klimovskoe** 60.72 328 *eP* P **05 26 45.5 -3.1**
KLMR AMP 05 26 48.9
comp=Z,30nm,1.1s

H04D **Lebanon** 60.76 55 P P **05 26 50.8 +1.7**
baz=304

J01E **Myrtle Point** 60.80 57 P P **05 26 51.3 +1.9**
baz=304

I03D **Drain, OR** 60.85 56 P P **05 26 51.4 +1.7**
baz=304

EDM **Edmonton** 60.95 43 IAmb IAmb 05 26 51.9
comp=Z,22nm,1.0s

H04A **Detroit Lake** 60.99 55 P P **05 26 50.4 -0.4**
H04A IAmb IAmb 05 26 53.0
comp=Z,18nm,1.0s

G05D **Wamic, OR** 61.19 54 P P **05 26 53.5 +1.4**
baz=304

K02D **Willamette Mer** 61.22 57 P P **05 26 53.5 +1.1**
baz=304

I04A **Tendick Farm,** 61.36 56 P P **05 26 54.4 +1.1**
baz=304

C09A **Chrisman Ranch** 61.47 50 IAmb IAmb 05 26 55.5
comp=Z,14nm,1.2s

HAWA **Hanford** 61.57 52 P P **05 26 55.5 +0.9**
HAWA IAmb IAmb 05 26 56.7
comp=Z,14nm,1.2s

L02F **Cave Junction** 61.61 58 P P **05 26 56.5 +1.5**
baz=305

I05D **Terrebonne, OR** 61.69 55 P P **05 26 56.5 +1.0**
baz=305

NEW **Newport** 61.84 49 LR LR 05 53 31.0
comp=Z,52nm,20.8s,baz=311,slow=36

NEW **Newport** 61.84 49 P P **05 26 56.7 +0.2**
baz=305,SNR=14

J04D **Umpqua Nationa** 61.85 56 P P **05 26 58.0 +1.1**
baz=305,SNR=5.4

BELG **Belogornoye** 62.27 317 LR LR 05 56 26.4
comp=Z,154nm,18.8s,baz=340,slow=38

E09A **Wood Farm, Sta** 62.28 51 IAmb IAmb 05 27 01.4
comp=Z,19nm,1.1s

L04D **Klamath Falls** 62.32 57 P P **05 27 01.0 +1.1**
baz=305

J05D **Fort Rock, OR** 62.35 56 P P **05 27 01.7 +1.5**
baz=305,SNR=7.7

YBH **Yreka Blue Hor** 62.35 58 LR LR 05 49 21.7
comp=Z,41nm,22.0s,baz=296,slow=32

G08A **Pilot Rock** 62.53 53 P P **05 27 01.8 +0.5**

HYBB **Hyderabad (bro** 63.38 269 *eP* P **05 27 07.6 +0.4**
HYBB *e*PcP **PcP** **05 27 44.9 +0.8**
HYBB *eS* **S** **05 35 41.8 +2.9**

CTA **Charters Tower** 63.59 182 LR LR 05 51 06.8
comp=Z,95nm,21.9s,baz=283,slow=32

CTAO **Charters Tower** 63.59 182 P P **05 27 08.6 +0.3**
CTAO IAmb IAmb 05 27 10.1
comp=Z,10nm,1.0s

CTAO **Charters Tower** 63.59 182 P P **05 27 08.6 +0.3**
CTAO pmax pmax
comp=Z,10.0nm,1.0s

JTMT **Jette** 63.69 48 IAmb IAmb 05 27 10.9
comp=Z,11nm,1.1s

MOD **Modoc Plateau** 63.72 56 IAmb IAmb 05 27 11.3
comp=Z,11nm,0.8s

SUMG **Summit** 63.84 2 IAmb IAmb 05 27 11.0
comp=Z,54nm,1.0s

SUMG **Summit** 63.84 2 *i* P P **05 27 08.0 -1.8**
SUMG IAmb IAmb 05 27 10.2
comp=Z,23nm,0.7s

J08A **Circle Bar Ran** 63.94 54 IAmb IAmb 05 27 13.0
comp=Z,16nm,1.2s

HRA **Herat** 64.39 294 IAmb IAmb 05 27 15.4
comp=Z,12nm,0.8s

WVOR **Wild Horse Val** 64.40 55 IAmb IAmb 05 27 15.7
comp=Z,11nm,1.1s

MSO **Missoula** 64.43 49 IAmb IAmb 05 27 15.5
comp=Z,17nm,1.1s

MSO **Missoula** 64.43 49 P P **05 27 14.1 +0.3**
baz=308,SNR=10

WB0 **Warramunga Arr** 64.47 194 IAmb IAmb 05 27 18.9
comp=Z,8.4nm,0.8s

WR0 **Warramunga Arr** 64.64 194 P P **05 27 14.6 -0.5**

WRAB **Tennant Creek** 64.64 194 P P **05 27 14.9 -0.2**
WRAB IAmb IAmb 05 27 16.4
comp=Z,33nm,1.6s

WRAB **Tennant Creek** 64.64 194*ce*P P **05 27 15.4 +0.2**
WRAB pmax pmax
comp=Z,22nm,1.5s

WB2 **Warramunga Arr** 64.65 194 IAmb IAmb 05 27 17.2
comp=Z,11nm,1.0s

WRA **Warramunga Arr** 64.65 194 P P **05 27 15.4 +0.2**
comp=Z,5.2nm,0.8s,baz=16,slow=7.0,SNR=30
WRA LR LR 05 56 18.4
comp=Z,70nm,19.1s,baz=279,slow=37
comp=Z,5.2nm,0.8s

WRA **Warramunga Arr** 64.65 194 *i* P P **05 27 15.3 +0.1**
WRA pmax pmax
comp=Z,5.0nm,0.8s

BEKR **Beckworth** 64.89 58 IAmb IAmb 05 27 18.8
comp=Z,16nm,0.9s

GEYT **Alibeck** 64.94 299 P P **05 27 17.3 +0.1**
comp=Z,7.1nm,0.6s,baz=202,slow=1.6,SNR=14
GEYT LR LR 05 58 03.6
comp=Z,103nm,21.4s,baz=44,slow=38
comp=Z,7.1nm,0.6s

GEYT **Alibeck** 64.94 299 IAmb IAmb 05 27 18.5
comp=Z,17nm,1.1s

GYA0B **ALIBECK ARRAY** 64.94 299 IAmb IAmb 05 27 18.4
comp=Z,20nm,1.1s

FINES **FINESS Array B** 65.10 333 P P **05 27 16.1 -1.6**
comp=Z,10nm,0.5s,baz=43,slow=6.9,SNR=45
FINES LR LR 05 58 48.6
comp=Z,188nm,18.4s,baz=43,slow=39
comp=Z,10nm,0.5s

MFID **Camas Ranch** 65.45 53 IAmb IAmb 05 27 22.3
comp=Z,23nm,1.9s

PAHR **Pah Rah Range** 65.59 58 IAmb IAmb 05 27 23.4
comp=Z,18nm,1.1s

EMB **Emerald Bay** 65.59 59 IAmb IAmb 05 27 23.6
comp=Z,20nm,0.9s

OBN **Obninsk** 65.63 324 *iP* P **05 27 21.3 +0.1**
OBN pmax pmax
comp=Z,37nm,1.2s
OBN MLR MLR
comp=Z,119nm,16.0s

OBN **Obninsk** 65.63 324 *eP* P **05 27 21.3 +0.1**

FCC **Fort Churchill** 65.67 30 P P **05 27 19.9 -1.5**

FCC **Fort Churchill** 65.67 30 P P **05 27 19.9 -1.5**
FCC pmax pmax
comp=Z,63nm,1.7s

VCNR **Virginia City** 65.67 58 IAmb IAmb 05 27 24.3
comp=Z,14nm,0.9s

SCO **Scoresbysund** 65.80 356 P P **05 27 20.9 -1.2**
SCO IAmb IAmb 05 27 23.0
comp=Z,12nm,0.9s

SCO **Scoresbysund** 65.80 356 P P **05 27 20.9 -1.2**
SCO pmax pmax
comp=Z,12nm,0.9s

SCO **Scoresbysund** 65.80 356 *i* P P **05 27 21.4 -0.7**

PNTR **Pine Nut** 65.83 58 IAmb IAmb 05 27 25.4
comp=Z,17nm,0.9s

VRH **Novokhopyorsk** 65.89 319 *eP* P **05 27 22.1 -0.8**
VRH pmax pmax
comp=Z,80nm,0.8s

EGMT **Eagleton** 65.92 46 IAmb IAmb 05 27 25.0
comp=Z,17nm,0.9s

EGMT **Eagleton** 65.92 46 P P **05 27 23.8 +0.4**
baz=309

CMB **Columbia Colle** 65.98 60 IAmb IAmb 05 27 25.9
comp=Z,11nm,1.0s

HLID **Hailey** 66.17 52 P P **05 27 25.9 +0.8**
baz=308,SNR=11

LPSR **Galich'ya Gora** 66.27 321 *eP* P **05 27 25.0 -0.4**

LPSR pmax pmax
comp=Z,50nm,0.8s
BOZ Bozeman (W) 66.45 49 IAmb IAmb 05 27 28.8
comp=Z,11nm,0.8s
BOZ Bozeman (W) 66.45 49 P **P 05 27 27.6 +0.7**
baz=309,SNR=22
BMN Battle Mountai 66.46 56 IAmb IAmb 05 27 29.2
comp=Z,12nm,1.0s
VORR Voronezh 66.76 320 *e*P **P 05 27 28.5 -0.1**
VORR pmax pmax
comp=Z,68nm,0.5s
RYN Ryan 66.78 58 IAmb IAmb 05 27 31.2
comp=Z,16nm,0.9s
RAF Rauma 66.79 335 *e*P **P 05 27 27.2 -1.3**
NVAR Mina Array Bea 67.04 58 P **P 05 27 31.8 +0.9**
comp=Z,9.7nm,0.8s,baz=288,slow=6.7,SNR=79
comp=Z,9.7nm,0.8s
VSR Storozhevoye 67.09 320 *e*P **P 05 27 30.2 -0.4**
VSR pmax pmax
comp=Z,70nm,0.7s
VSU Vasula 67.09 331⇓ *e*P **P 05 27 29.4 -1.1**
VSU pmax pmax
comp=Z,70nm,1.5s
NV11 Mina Array Sit 67.13 58 IAmb IAmb 05 27 33.5
comp=Z,12nm,1.0s
MSVF Nonsavu 67.14 149 LR LR 05 52 52.3
comp=Z,121nm,19.1s,baz=108,slow=32
VORD Divnogorie 67.20 319 *e*P **P 05 27 31.1 -0.2**
VORD pmax pmax
comp=Z,70nm,0.9s
MLAC Mammoth, Mammo 67.20 59 P **P 05 27 33.9 +1.9**
baz=308
ICESG Greenland Ices 67.29 3 *i* P **P 05 27 30.3 -1.7**
ICESG IAmb IAmb 05 27 32.7
comp=Z,64nm,0.8s
YMR Madison River 67.40 49 IAmb IAmb 05 27 35.2
comp=Z,9.2nm,0.8s
ELK Elko 67.45 55 LR LR 05 53 00.2
comp=Z,30nm,21.8s,baz=322,slow=32
PAGB Antelope Grade 67.49 62 IAmb IAmb 05 27 35.7
comp=Z,13nm,1.1s
H17A Grant Village 67.79 49 IAmb IAmb 05 27 39.2
comp=Z,18nm,1.1s
H17A Grant Village 67.79 49 P **P 05 27 37.8 +2.3**
baz=310,SNR=18
MTSE Matsula 67.91 332 *e*P **P 05 27 35.3 -0.3**
SMMC Simmler 67.91 62 P **P 05 27 38.2 +2.0**
baz=309
FLWY Flagg Ranch 67.92 50 IAmb IAmb 05 27 39.2
comp=Z,13nm,1.1s
AAL Aland 68.00 335 *e*P **P 05 27 35.3 -0.9**
RLMT Red Lodge 68.04 48 IAmb IAmb 05 27 40.0
comp=Z,19nm,1.4s
RLMT Red Lodge 68.04 48 P **P 05 27 38.1 +1.0**
baz=310,SNR=6.5
MOOW Moose Ponds 68.11 50 IAmb IAmb 05 27 40.1
comp=Z,18nm,1.2s
VES Vestal, Richgr 68.16 61 P **P 05 27 38.2 +0.5**
baz=309
TPAW Teton Pass 68.17 50 IAmb IAmb 05 27 40.6
comp=Z,19nm,0.9s
LOHW Long Hollow 68.28 50 IAmb IAmb 05 27 41.1
comp=Z,25nm,1.6s
PKM Mcpherson Peak 68.29 62 P **P 05 27 39.9 +1.1**
baz=309
SNOW Snow King Moun 68.29 50 IAmb IAmb 05 27 41.3
comp=Z,22nm,1.3s
REDW Red Top Meadow 68.30 50 IAmb IAmb 05 27 41.2
comp=Z,19nm,1.2s
SOEG Soedalen 68.32 360 *i* P **P 05 27 35.3 -2.8**
SOEG IAmb IAmb 05 27 38.6
comp=Z,26nm,0.7s
ASAR Alice Springs 68.37 194 P **P 05 27 40.2 +1.2**
comp=Z,2.4nm,0.7s,baz=12,slow=5.4,SNR=19
comp=Z,2.4nm,0.7s
CWC Cottonwood Cre 68.42 60 P **P 05 27 40.0 +0.5**
baz=309
DGMT Dagmar 68.45 43 P **P 05 27 38.9 -0.4**
baz=312
DGMT Dagmar 68.45 43 P **P 05 27 39.6 +0.2**
baz=312
GRAC Grapevine Rang 68.51 59 IAmb IAmb 05 27 42.2
comp=Z,23nm,1.0s
GRAC Grapevine Rang 68.51 59 P **P 05 27 41.1 +1.1**
baz=309,SNR=12
LAO LASA Array 68.61 45 IAmb IAmb 05 27 42.5
comp=Z,22nm,1.2s
LAO LASA Array 68.61 45 P **P 05 27 41.5 +1.0**
baz=312
SFJD Kangerlussuaq 68.62 8 LR LR 05 58 59.3
comp=Z,99nm,19.2s,baz=339,slow=37
SFJD Kangerlussuaq 68.62 8 P **P 05 27 38.7 -1.3**
SFJD Kangerlussuaq 68.62 8 P **P 05 27 38.7 -1.3**
SFJD pmax pmax
comp=Z,23nm,1.0s
PALK Pallekele 68.65 259 LR LR 05 59 24.2
comp=Z,94nm,20.6s,baz=184,slow=37
ISA Isabella, Lake 68.66 61 P **P 05 27 41.1 +0.2**
baz=309
R11A Troy Canyon, C 68.75 57 IAmb IAmb 05 27 43.5
comp=Z,12nm,1.0s
R11A Troy Canyon, C 68.75 57 P **P 05 27 42.3 +0.7**
baz=310,SNR=28
ARVC Arvin 68.77 61 P **P 05 27 41.8 +0.3**
baz=309
FRB Frobisher Bay 68.96 16 LR LR 06 00 37.0
comp=Z,123nm,20.3s,baz=358,slow=38
GROC Groznyy 68.98 310 *e*P **P 05 27 43.3 +0.6**
GROC *e* 05 28 07.3
GROC pmax pmax
comp=Z,24nm,0.4s
MPMC Manual Prospec 69.03 60 P **P 05 27 44.1 +0.7**
baz=310,SNR=16
HWUT Hardware Ranch 69.03 52 IAmb IAmb 05 27 45.4
comp=Z,13nm,1.1s
FURC Furnace Creek, 69.16 59 P **P 05 27 44.8 +0.9**
baz=310,SNR=28
DUG Dugway, Tooele 69.22 54 IAmb IAmb 05 27 46.5
comp=Z,15nm,1.1s
DUG Dugway, Tooele 69.22 54 P **P 05 27 45.5 +1.1**
baz=310,SNR=10.0
TPNV Topopah Spring 69.23 58 IAmb IAmb 05 27 46.6
comp=Z,18nm,0.9s
TPNV Topopah Spring 69.23 58 P **P 05 27 45.4 +0.8**
baz=310,SNR=20
GOF Gofitskoye 69.25 313⇑ *e*P **P 05 27 45.3 +0.9**
GOF pmax pmax
comp=Z,121nm,0.6s
BW06 Boulder Array 69.41 50 IAmb IAmb 05 27 47.1
comp=Z,13nm,1.1s
BW06 Boulder Array 69.41 50 P **P 05 27 45.8 +0.1**
baz=311,SNR=10
PDAR Pinedale Array 69.41 50 P **P 05 27 46.1 +0.5**
comp=Z,5.1nm,0.8s,baz=294,slow=1.5,SNR=33
PDAR LR LR 06 00 07.8
comp=Z,31nm,18.8s,baz=325,slow=38
comp=Z,5.1nm,0.8s
IDID Didziasalis 69.44 329 *e*P **P 05 27 45.4 +0.1**
EDW2 Edwards Air Fo 69.45 61 P **P 05 27 46.5 +0.6**
baz=310,SNR=5.6
GWY Greenwater Val 69.46 59 IAmb IAmb 05 27 47.8
comp=Z,17nm,1.0s
QSM Queen of Sheba 69.47 60 IAmb IAmb 05 27 47.9
comp=Z,22nm,1.0s
ISAL Salakas 69.48 329 *e*P **P 05 27 45.6 +0.1**
DY2G Dye2 69.51 6 *i* P **P 05 27 44.3 -1.6**
DY2G IAmb IAmb 05 27 45.8
comp=Z,22nm,0.8s
NC303 NORSAR Array S 69.58 339 IAmb IAmb 05 27 46.5
comp=Z,22nm,1.3s
IIGN Ignalina 69.61 329 *e*P **P 05 27 46.4 +0.1**
MNK Minsk 69.61 327 *i* P **P 05 27 46.1 -0.2**
MNK *i* 05 28 08.5
MNK *i* 05 30 20.1
MNK *i* PPP PPP 05 32 01.4
MNK *i* S **S 05 36 54.6 +1.4**
MNK *i* SS **SS 05 41 24.0 +3.9**
MNK pmax pmax
comp=N,3.0nm,0.8s
MNK pmax pmax
comp=E,4.0nm,1.0s
MNK pmax pmax
comp=Z,50nm,0.9s
MNK Minsk 69.61 327 *i* P **P 05 27 46.1 -0.2**
comp=E,4.0nm,1.0s
MNK *i* P **P 05 27 46.1 -0.2**
comp=N,3.0nm,0.8s
MNK *i* P **P 05 27 46.1 -0.2**
comp=Z,50nm,0.9s,baz=222
MNK *i* PcP **PcP 05 28 08.6 -0.7**
MNK *i* PP **PP 05 30 20.2 +0.5**
MNK *i* PPP PPP 05 32 01.4
MNK *i* S **S 05 36 54.6 +1.4**
MNK *i* SS **SS 05 41 24.1 +3.9**
MNK *i* SSS SSS 05 44 41.6
MNK *i* LQ LQ 05 53 32.7
MNK *i* LR LR 05 59 15.1
MNK *i* LRM MLR 06 00 58.4
comp=E,23nm,19.6s
MNK *i* LRM MLR 06 00 58.4
comp=N,28μm,19.5s
MNK *i* LRM MLR 06 01 44.9
comp=Z,9μm,21.7s
NACGM Naroch 69.73 328⇓ *e*P **P 05 27 46.9 -0.2**
baz=41
NB2 NORSAR Subarra 69.77 339 P **P 05 27 46.0 -1.3**
comp=Z,13nm,0.9s,baz=30,slow=6.2
NOA NORSAR Array B 69.77 339 P **P 05 27 46.7 -0.6**
comp=Z,7.0nm,0.7s,baz=32,slow=6.2,SNR=38
NOA LR LR 06 01 28.8
comp=Z,139nm,21.7s,baz=25,slow=39
comp=Z,7.0nm,0.7s
HFS Hagfors 69.88 338 LR LR 06 01 46.6
comp=Z,115nm,20.9s,baz=28,slow=39
SHOC Shoshone, Teco 69.89 59 P **P 05 27 49.1 +0.7**
baz=310
NBO00 NORSAR Array S 69.89 339 IAmb IAmb 05 27 48.6
comp=Z,26nm,1.1s
GSC Goldstone, Bar 69.94 60 P **P 05 27 49.5 +0.7**
baz=310
VSVD Vaisvydziai 69.97 330 *e*P **P 05 27 48.8 +0.3**
NAO01 NORSAR Array S 70.02 339 IAmb IAmb 05 27 49.1
comp=Z,24nm,1.0s
BFSC Mount Baldy Ra 70.08 61 P **P 05 27 50.4 +0.6**
baz=310,SNR=5.4
KIV Kislovodsk 70.18 312⇑ P **P 05 27 51.7 +1.5**
KIV Kislovodsk 70.18 312 P **P 05 27 50.9 +0.7**
KIV Kislovodsk 70.18 312 *e*P **P 05 27 50.8 +0.6**
KIV pmax pmax
comp=Z,113nm,1.1s
KIV MLR MLR
comp=Z,125nm,18.0s
KIV Kislovodsk 70.18 312 *i* P **P 05 27 51.3 +1.1**
SNR=14
SHPR Sheep Range 70.19 58 IAmb IAmb 05 27 52.7
comp=Z,15nm,1.0s
KBZ Khabaz 70.22 312 P **P 05 27 50.3 0.0**
comp=Z,50nm,0.8s,baz=47,slow=3.8,SNR=109
KBZ LR LR 06 03 12.7
comp=Z,188nm,18.7s,baz=41,slow=40
KBZ Khabaz 70.22 312*c i*P **P 05 27 50.9 +0.6**
KBZ pmax pmax
comp=Z,64nm,0.9s
KBZ Khabaz 70.22 312 *e*P **P 05 27 50.9 +0.6**
ZEI Tsey 70.30 311 *e*P **P 05 27 48.8 -2.3**
ZEI pmax pmax
comp=Z,40nm,0.9s
TUQ Turquoise Moun 70.40 60 P **P 05 27 52.4 +0.7**
baz=310
BBRC Big Bear Solar 70.53 61 P **P 05 27 53.1 +0.5**
baz=310
HEC Hector,Ludlow 70.54 60 P **P 05 27 53.4 +0.9**
baz=310
MURC Murrieta 70.78 62 P **P 05 27 54.5 +0.5**
baz=310
ANGG Ammassalik, Gr 70.83 2 IAmb IAmb 05 27 53.9
comp=Z,17nm,0.8s
P17A Butcher Ranch, 70.90 53 IAmb IAmb 05 27 56.8
comp=Z,18nm,1.0s
GMRC Granite Mounta 70.99 60 P **P 05 27 55.8 +0.4**
baz=311,SNR=7.4
LCMT Little Creek M 71.03 57 IAmb IAmb 05 27 57.9
comp=Z,15nm,1.0s
P18A Preston Nutter 71.09 53 IAmb IAmb 05 27 58.1
comp=Z,16nm,1.3s
ULM Lac du Bonnet 71.09 38 P **P 05 27 55.2 -0.3**
comp=Z,7.6nm,0.9s,baz=300,slow=7.4,SNR=5.8
comp=Z,7.6nm,0.9s
MDND Maddock 71.10 41 P **P 05 27 56.2 +0.5**
baz=315
K22A Casper 71.16 49 IAmb IAmb 05 27 57.8
comp=Z,22nm,1.2s
K22A Casper 71.16 49 P **P 05 27 56.7 +0.4**
baz=313
K22A Casper 71.16 49 P **P 05 27 56.4 +0.1**
baz=313,SNR=7.7
PFO Pinyon Flats O 71.24 61 P **P 05 27 56.7 -0.2**
PFO Pinyon Flats O 71.24 61 P **P 05 27 56.7 -0.2**
PFO pmax pmax
comp=Z,6.0nm,1.0s
PFO Pinyon Flats O 71.24 61 P **P 05 27 57.3 +0.4**
baz=311
TPFO Pinon Flats 71.25 61 P **P 05 27 57.2 +0.3**
baz=311
SRU San Rafael Swe 71.27 54 IAmb IAmb 05 27 58.7
comp=Z,18nm,0.9s
BELC Belle Mtn. Jos 71.28 61 P **P 05 27 57.3 +0.1**
baz=311
109C Camp Elliot, M 71.30 62 P **P 05 27 57.5 +0.5**
baz=311
CHVG Ch'k'valeri 71.34 312⇓ P **P 05 27 56.6 -0.5**
RWWY Rawlins 71.43 50 IAmb IAmb 05 27 59.4
comp=Z,15nm,1.0s
AKH Akhalkalaki 71.45 310⇑ P **P 05 27 59.1 +1.1**
BORG Borgarnes 71.47 355 LR LR 05 58 15.2
comp=Z,24nm,19.6s,baz=0.1,slow=35
E28A Huff 71.47 43 IAmb IAmb 05 27 58.7
comp=Z,13nm,1.1s
E28A Huff 71.47 43 P **P 05 27 58.1 +0.1**
baz=315
RSSD Black Hills 71.48 46 P **P 05 27 57.3 -1.0**
RSSD IAmb IAmb 05 28 01.7
comp=Z,25nm,1.5s
RSSD Black Hills 71.48 46 P **P 05 27 57.3 -1.0**
RSSD pmax pmax
comp=Z,25nm,1.5s
RSSD Black Hills 71.48 46 P **P 05 27 58.5 +0.2**
baz=314
RSSD Black Hills 71.48 46 P **P 05 27 58.5 +0.2**
baz=314
GNI Garni 71.59 308 LR LR 06 02 37.1
comp=Z,81nm,18.4s,baz=51,slow=39
GNI Garni 71.59 308 P **P 05 27 59.2 +0.3**
GNI Garni 71.59 308*c e*P **P 05 28 00.4 +1.5**
GNI pmax pmax
comp=Z,36nm,1.1s
IRM Iron Mountain 71.72 60 P **P 05 28 00.3 +0.6**
baz=311,SNR=8.9
MONP2 Monument Peak 71.73 62 P **P 05 28 00.3 +0.3**
baz=311
SUW Suwalki 71.77 329 *e*P **P 05 27 59.0 -0.5**
SUW Suwalki 71.77 329 *e*P **P 05 27 59.3 -0.2**
BC3 Big Chuckawall 71.85 61 P **P 05 28 01.0 +0.5**
baz=311
AKASG Malin Array Be 71.90 324 P **P 05 27 59.7 -0.7**
comp=Z,48nm,0.8s,baz=37,slow=6.3,SNR=192
AKASG LR LR 06 02 07.2
comp=Z,98nm,18.7s,baz=48,slow=38
comp=Z,48nm,0.8s
AKBB Malin Array Si 71.90 324*c i*P **P 05 27 59.4 -0.9**
AKBB pmax pmax
comp=Z,94nm,0.9s
O20A White River Ci 71.90 52 IAmb IAmb 05 28 02.2
comp=Z,18nm,1.2s
O20A White River Ci 71.90 52 P **P 05 28 00.5 -0.3**
baz=312,SNR=7.8
U15A North Rim 71.99 57 IAmb IAmb 05 28 03.9
comp=Z,15nm,1.0s
SOC Sochi 72.01 313 *e*P **P 05 27 59.3 -1.9**
SOC *e**SP **sP 05 28 08.5 0.0**
SOC *e* 05 30 38.0
SOC *e*PPP PPP 05 32 23.7
SOC *e*S **S 05 37 21.1 -0.4**
SOC *e*SS **SS 05 41 59.0 +1.4**
SOC pmax pmax
comp=Z,24nm,0.8s
SOC MLR MLR
comp=Z,161nm,19.0s
IKP In-Ko-Pah, Jac 72.09 62 P **P 05 28 02.4 +0.4**
baz=311
SWSC Sam W. Stewart 72.09 61 P **P 05 28 02.3 +0.4**
baz=311
PDMCI Parker Dam,Lak 72.25 59 P **P 05 28 03.3 +0.5**
baz=311
BATM Batumi 72.31 311⇑ P **P 05 28 03.3 +0.3**
KLNR Kaliningrad 72.37 331⇑ *e*P **P 05 28 03.2 +0.1**
KLNR pmax pmax
comp=Z,39nm,0.6s
AGMN Agassiz Nation 72.52 39 IAmb IAmb 05 28 04.9
comp=Z,17nm,1.1s
AGMN Agassiz Nation 72.52 39 P **P 05 28 03.9 -0.3**
baz=317
AGMN Agassiz Nation 72.52 39 P **P 05 28 03.6 -0.5**
baz=317,SNR=9.6
PV23 Carpenter Ridg 72.59 53 IAmb IAmb 05 28 06.8
comp=Z,14nm,1.0s
GLA Glamis 72.64 61 P **P 05 28 05.9 +0.7**
baz=311
N23A Red Feather La 72.67 50 IAmb IAmb 05 28 08.2
comp=Z,15nm,1.1s
N23A Red Feather La 72.67 50 P **P 05 28 06.3 +0.8**
baz=313,SNR=12
D32B Dogwood Acres, 72.84 40 P **P 05 28 05.9 -0.2**
baz=317
PV13 Radium Mtn., P 72.90 53 IAmb IAmb 05 28 08.6
comp=Z,18nm,0.9s
DEL Delary 72.90 335 *e*P **P 05 28 05.0 -1.2**
WUAZ Wupatki 73.15 57 P **P 05 28 09.4 +1.1**
baz=312,SNR=5.7
B35A Bob, Littlefor 73.44 38 P **P 05 28 08.8 -0.7**
baz=318,SNR=5.8
ISCO Idaho Springs 73.61 50 P **P 05 28 12.0 +0.8**
baz=314,SNR=8.1
ISCO Idaho Springs 73.61 50 P **P 05 28 12.1 +1.0**
baz=314,SNR=8.1
BANOM Banah 73.70 290 P **P 05 28 11.8 +0.2**
BSD Bornholm Skovb 73.71 334 *e*P **P 05 28 10.3 -0.7**
SHME Shamm 73.72 291 P **P 05 28 11.9 +0.3**
MVCO Mesa Verde 73.72 54 P **P 05 28 12.3 +0.5**
baz=313,SNR=7.7
SUSD Miller 73.85 43 P **P 05 28 11.8 -0.3**
baz=316
WSAR Wadi Sarin 73.85 287 LR LR 06 05 32.2
comp=Z,58nm,18.7s,baz=116,slow=40
SIM Simferopol' 73.89 317 *e*P **P 05 28 11.8 -0.5**
SIM S **S 05 37 42.0 -0.9**
SIM pmax pmax
comp=Z,33nm,0.8s
F33A 5 Mile Ranch, 74.13 41 IAmb IAmb 05 28 14.7
comp=Z,17nm,1.1s
F33A 5 Mile Ranch, 74.13 41 P **P 05 28 13.6 -0.1**
baz=317
MSFE Esma-Masafi 74.16 290 P **P 05 28 14.8 +0.5**
SORM Soroca 74.20 323⇑ P **P 05 28 13.6 -0.4**
GURO Guroymak-BITLI 74.22 308 IAmb IAmb 05 28 17.6
comp=Z,18nm,0.9s
S22A 4UR Ranch, Cre 74.33 53 P **P 05 28 16.5 +1.2**
baz=314,SNR=11
BEL Belsk 74.38 329 *e*P **P 05 28 15.5 +0.5**
UOSS Minazif 74.41 290 P **P 05 28 14.9 -0.7**
UOSS IAmb IAmb 05 28 16.5
comp=Z,15nm,0.9s
UOSS Minazif 74.41 290 *i* P **P 05 28 15.6 0.0**
SNR=7.3
W18A Petrified Fore 74.41 56 P **P 05 28 16.6 +0.9**
baz=313
Q24A Divide 74.44 51 P **P 05 28 16.3 +0.2**
baz=314
GKP Gorka Klasztor 74.48 332 *e*P **P 05 28 15.3 -0.2**
GKP Gorka Klasztor 74.48 332 *e*P **P 05 28 15.7 +0.1**
HATD Hatta, Dubai 74.53 290 *i* P **P 05 28 17.1 +0.7**
SNR=5.8
214A Organ Pipe Nat 74.64 60 P **P 05 28 17.7 +0.7**
baz=312
ASHO Ashiyiah 74.68 289 P **P 05 28 17.7 +0.5**
SOHO SOHO 74.71 289 *i* P **P 05 28 17.6 +0.2**
SNR=7.8
LVV L'vov 74.72 326 *e*P **P 05 28 16.9 -0.1**
EYMN Ely 74.73 37 P **P 05 28 16.2 -0.9**
EYMN IAmb IAmb 05 28 17.9
comp=Z,20nm,1.1s
EYMN Ely 74.73 37 P **P 05 28 16.2 -0.9**
baz=320,SNR=5.1
EYMN Ely 74.73 37 P **P 05 28 16.6 -0.5**
baz=320,SNR=5.1
OGNE Ogallala 74.76 48 P **P 05 28 18.1 +0.5**
OGNE Ogallala 74.76 48 P **P 05 28 18.3 +0.7**
baz=315
OGNE Ogallala 74.76 48 P **P 05 28 17.8 +0.3**
baz=315
FAQ Al Faqa, Dubai 74.95 290 P **P 05 28 19.1 +0.3**
SDCO Great Sand Dun 75.09 52 P **P 05 28 20.1 +0.3**
baz=314
SDCO Great Sand Dun 75.09 52 P **P 05 28 20.3 +0.5**
baz=314
ASUD Al Ashush, Dub 75.21 290 P **P 05 28 21.0 +0.7**
KWP Kalwaria Pacla 75.40 327 *e*P **P 05 28 22.1 +1.1**
ECSD EROS Data Cent 75.52 43 IAmb IAmb 05 28 22.8
comp=Z,27nm,1.2s
ECSD EROS Data Cent 75.52 43 P **P 05 28 21.2 -0.6**
baz=318
ECSD EROS Data Cent 75.52 43 P **P 05 28 21.6 -0.2**
baz=318,SNR=20
VASR Vaslui 75.58 322⇑ P **P 05 28 23.0 +0.9**
TUC Tucson 75.67 59 P **P 05 28 22.4 -0.5**
TUC Tucson 75.67 59 P **P 05 28 22.4 -0.5**
TUC pmax pmax
comp=Z,6.0nm,1.1s
TUC Tucson 75.67 59 P **P 05 28 23.7 +0.7**
baz=313
E38A The Farm, Brul 75.73 38 IAmb IAmb 05 28 23.4
comp=Z,19nm,0.8s
E38A The Farm, Brul 75.73 38 P **P 05 28 22.0 -0.9**
baz=320,SNR=5.6
KSCO Kaye Shedlock' 75.81 49 P **P 05 28 23.7 +0.1**
baz=315
BURAR Bucovina Array 75.95 324⇑ P **P 05 28 24.4 +0.1**
LINV Loch Inver, As 75.99 346 *e*P **P 05 28 22.8 -1.3**
LINV IAmb IAmb 05 28 24.1
comp=Z,30nm,1.2s
OJC Ojcow 76.05 329 *e*P **P 05 28 24.7 0.0**
BIZ Bicaz 76.10 323⇑ P **P 05 28 25.3 +0.3**
KOLS Kolonicke sedl 76.13 327 *e*P **P 05 28 25.9 +0.7**
KOLS pmax pmax
comp=Z,35nm,1.0s
KOLS Kolonicke sedl 76.13 327 *e*P **P 05 28 25.9 +0.7**
T25A Trinidad 76.13 52 P **P 05 28 26.1 +0.5**
baz=315,SNR=5.7
SPMN Marine on St. 76.22 39 P **P 05 28 25.7 0.0**
baz=320
SPMN Marine on St. 76.22 39 P **P 05 28 25.4 -0.3**
baz=320
LEWI Lewis, Hebride 76.28 347 *e*P **P 05 28 24.6 -1.3**
LEWI IAmb IAmb 05 28 26.1
comp=Z,28nm,1.2s
UZH Uzhgorod 76.36 326 *e*P **P 05 28 26.3 -0.1**
UZH *e* 05 28 32.5
UZH *e* 05 28 44.9
BGNE Belgrade 76.46 45 P **P 05 28 26.5 -0.7**
baz=317
BGNE Belgrade 76.46 45 P **P 05 28 26.8 -0.4**
baz=317
CRVS Cervenica-Dubn 76.47 327 *e*P **P 05 28 27.3 +0.2**
CRVS pmax pmax
comp=Z,34nm,1.0s
CRVS Cervenica-Dubn 76.47 327 *e*P **P 05 28 27.3 +0.2**
ANMO Albuquerque 76.48 54 LR LR 05 58 53.2
comp=Z,39nm,21.9s,baz=325,slow=33
ANMO Albuquerque 76.48 54 P **P 05 28 27.9 +0.3**
ANMO Albuquerque 76.48 54 P **P 05 28 27.9 +0.3**
ANMO pmax pmax
comp=Z,8.0nm,1.1s
ANMO Albuquerque 76.48 54 P **P 05 28 28.6 +1.0**
baz=314
ANMO Albuquerque 76.48 54 P **P 05 28 28.4 +0.8**
baz=314
NIE Niedzica 76.51 328 *e*P **P 05 28 27.9 +0.5**
CFR Carcaliu 76.55 321⇑ P **P 05 28 27.5 0.0**
KAC Achnashellach 76.62 346 *e*P **P 05 28 27.2 -0.6**
DRUM Mains of Drumt 76.64 344 *e*P **P 05 28 26.8 -1.0**
DRUM IAmb IAmb 05 28 28.2
comp=Z,28nm,1.1s
VRI Vrincioaia 76.65 322⇓ P **P 05 28 29.2 +1.1**
TPGR Topolog 76.66 321⇑ P **P 05 28 28.6 +0.3**
PLOR Plostina 76.70 322⇑ P **P 05 28 29.3 +0.8**
KSP Ksiaz 76.82 331 *e*P **P 05 28 29.3 +0.3**
KPL Plockton 76.84 346 *e*P **P 05 28 28.1 -0.9**
I37B Waseca 76.86 41 P **P 05 28 30.0 +0.6**
baz=319,SNR=14
OKC Ostrava-Krasne 76.98 329 *e*P **P 05 28 30.3 +0.4**

OKC Ostrava-Krasne 76.98 329 eP P 05 28 30.3 +0.4
LANS Liptovska Anna 77.05 328 eP P 05 28 31.9 +1.5
LANS pmax pmax
comp=Z,26nm,1.0s
LANS Liptovska Anna 77.05 328 eP P 05 28 31.9 +1.5
OSTC Ostas 77.08 331 eP P 05 28 30.8 +0.3
CHVC Chvalec 77.11 331 eP P 05 28 31.0 +0.3
UPC Upice 77.20 331 eP P 05 28 31.5 +0.3
UPC Upice 77.20 331 eP P 05 28 31.5 +0.3
DPC Dobruska-Polom 77.22 331 eP P 05 28 31.7 +0.4
DPC Dobruska-Polom 77.22 331 eP P 05 28 31.7 +0.4
MORC Moravsky Berou 77.25 330 ⇑P P 05 28 31.8 +0.2
MORC Moravsky Berou 77.25 330 eP P 05 28 31.6 +0.1
KRLC Kraliky 77.28 330 eP P 05 28 31.7 0.0
KRLC Kraliky 77.28 330 eP P 05 28 31.7 0.0
MLR Muntele Rosu 77.29 322 ⇓P P 05 28 32.4 +0.5
MLR Muntele Rosu 77.29 322 LR LR 06 05 47.3
comp=Z,140nm,18.6s,baz=66,slow=38
MLR Muntele Rosu 77.29 322 P P 05 28 31.9 0.0
MLR Muntele Rosu 77.29 322 P P 05 28 31.9 0.0
MLR pmax pmax
comp=Z,65nm,1.9s
121A Cookes Peak, D 77.36 57 IAmb IAmb 05 28 35.0
comp=Z,17nm,1.1s
121A Cookes Peak, D 77.36 57 P P 05 28 33.7 +1.1
baz=314,SNR=8.3
G40A Rib Lake 77.36 38 P P 05 28 31.8 -0.4
baz=321
SCHQ Schefferville 77.37 20 P P 05 28 32.1 0.0
comp=Z,12nm,1.0s,baz=351,slow=5.0,SNR=9.4
SCHQ LR LR 06 05 51.9
comp=Z,112nm,19.6s,baz=2.5,slow=38
comp=Z,12nm,1.0s
SCHQ Schefferville 77.37 20 IAmb IAmb 05 28 33.2
comp=Z,33nm,1.4s
INVG Invergeldie, C 77.40 345 eP P 05 28 31.3 -0.9
INVG IAmb IAmb 05 28 32.5
comp=Z,15nm,0.9s
MAUC Maruska 77.49 329 eP P 05 28 32.9 0.0
CBKS Cedar Bluff 77.52 48 P P 05 28 32.6 -0.6
baz=317
CLL Collm 77.55 333 ⇑iP P 05 28 32.7 -0.4
CLL pmax pmax
comp=Z,87nm,1.0s
CLL Collm 77.55 333 ⇑iP P 05 28 32.7 -0.4
comp=Z,87nm,1.0s
CLL eSSS SSS 05 46 48.0
CLL Lm MLR 06 06 00.0
comp=N,100nm,18.8s
CLL Lm MLR 06 06 00.0
comp=E,100nm,18.8s
CLL Lm MLR 06 06 00.0
comp=Z,100nm,21.0s
ESY Stoneypath 77.59 344 eP P 05 28 32.7 -0.5
BRG Berggiesshubel 77.60 332 iP P 05 28 33.5 +0.1
BRG Amp 05 28 34.4
comp=Z,28nm,1.1s
BRG Berggiesshubel 77.60 332 iP P 05 28 33.5 +0.1
BRG pmax pmax
comp=Z,28nm,1.1s
EAB Aberfoyle 77.68 345 eP P 05 28 33.4 -0.4
PVCC Panska Ves 77.68 332 eP P 05 28 34.3 +0.4
PVCC Panska Ves 77.68 332 eP P 05 28 34.3 +0.4
VOIR 77.73 323 ⇑P P 05 28 34.8 +0.5
PSZ Piszkesteto 77.89 327 ⇑P P 05 28 35.6 +0.4
PSZ Piszkesteto 77.89 327 IAmb IAmb 05 28 36.8
comp=Z,40nm,1.4s
PSZ Piszkesteto 77.89 327 P P 05 28 35.5 +0.4
KOLL Kolacno 77.92 328 eP P 05 28 36.2 +1.0
BR131 Keskin Array S 77.95 314 IAmb IAmb 05 28 37.1
comp=Z,46nm,1.7s
BR131 Keskin Array S 77.95 314 ceP P 05 28 35.9 +0.2
BRTR Keskin Array B 77.95 314 P P 05 28 35.6 -0.1
comp=Z,3.3nm,0.7s,baz=79,slow=3.5,SNR=10
BRTR LR LR 06 07 52.8
comp=Z,82nm,19.8s,baz=65,slow=40
comp=Z,3.3nm,0.7s
BRTR Keskin Array B 77.95 314 iP P 05 28 36.2 +0.5
BRTR pmax pmax
comp=Z,3.0nm,0.6s
ARR Arges 77.96 323 ⇑P P 05 28 36.4 +0.8
JAVC Velka Javorina 77.96 329 eP P 05 28 36.6 +1.1
VRAC Vranov 77.99 330 ⇑P P 05 28 36.0 +0.4
VRAC Vranov 77.99 330 LR LR 06 08 42.2
comp=Z,145nm,18.1s,baz=34,slow=40
VRAC Vranov 77.99 330 eP P 05 28 36.1 +0.4
PGBU Glenifferbraes 78.06 345 eP P 05 28 35.5 -0.3
PGBU IAmb IAmb 05 28 36.7
comp=Z,61nm,1.0s
N35A Tabor 78.14 44 IAmb IAmb 05 28 37.5
comp=Z,18nm,0.9s
PRU Pruhonice 78.15 331 eP P 05 28 36.6 +0.1
PRU Pruhonice 78.15 331 eP P 05 28 36.6 +0.1
I40A Norwalk 78.24 39 IAmb IAmb 05 28 38.4
comp=Z,33nm,1.5s
EKA Eskdalemuir Ar 78.25 344 LR LR 06 10 40.2
comp=Z,35nm,18.6s,baz=24,slow=42
KRUC Moravsky 78.27 330 eP P 05 28 37.3 +0.2
ESK Eskdalemuir 78.27 344 eP P 05 28 36.7 -0.4
ESK IAmb IAmb 05 28 37.6
comp=Z,22nm,0.8s
ESK Eskdalemuir 78.27 344 P P 05 28 35.7 -1.4
ESK IAmb IAmb 05 28 37.8
comp=Z,23nm,0.8s
ESK Eskdalemuir 78.27 344 P P 05 28 35.7 -1.4
ESK pmax pmax
comp=Z,23nm,0.9s
SMOL Smolenice 78.34 329 eP P 05 28 38.1 +0.5
SMOL pmax pmax
comp=Z,16nm,1.3s
SMOL Smolenice 78.34 329 eP P 05 28 38.1 +0.5
TREC Trest 78.40 330 eP P 05 28 38.9 +1.0
TREC Trest 78.40 330 eP P 05 28 38.9 +1.0
SIRR Siria 78.51 325 ⇑P P 05 28 39.4 +0.9
MODS Modra-Piesok 78.51 329 eP P 05 28 39.1 +0.6
MODS pmax pmax
comp=Z,60nm,1.4s
MODS Modra-Piesok 78.51 329 eP P 05 28 39.1 +0.6
ZST Bratislava 78.72 329 eP P 05 28 40.6 +0.9
ZST pmax pmax
comp=Z,117nm,1.8s
ZST Bratislava 78.72 329 eP P 05 28 40.6 +0.9
CSKK Cskako 78.97 328 P P 05 28 41.7 +0.7
GAL1 Galloway 79.00 344 eP P 05 28 40.5 -0.5
GAL1 IAmb IAmb 05 28 41.5
comp=Z,30nm,0.9s
BZS Buzias 79.05 325 ⇑P P 05 28 41.9 +0.4
CLGH Cloghs, Cushen 79.06 345 eP P 05 28 41.0 -0.4
CLGH IAmb IAmb 05 28 42.1
comp=Z,35nm,0.9s
JFWS Jewell Farm 79.17 39 P P 05 28 41.5 -0.7
baz=321
KHC Kasperske Hory 79.21 331 ciP P 05 28 42.6 +0.2
KHC pmax pmax
comp=Z,103nm,1.6s
KHC Kasperske Hory 79.21 331 eP P 05 28 42.2 -0.2
KHC ex x 05 28 55.5
CKRC Cesky Krumlov 79.22 331 eP P 05 28 42.4 0.0
AMTX Amarillo 79.29 52 P P 05 28 43.5 +0.4
baz=316
AMTX Amarillo 79.29 52 P P 05 28 43.4 +0.2
baz=316
MSTX Muleshoe 79.32 53 P P 05 28 43.9 +0.5
baz=316
SOP Sopron 79.36 329 P P 05 28 43.6 +0.5
N38A Joes South For 79.38 43 IAmb IAmb 05 28 44.3
comp=Z,37nm,1.3s
MNTX Comudas Mount 79.40 56 P P 05 28 44.3 +0.6
baz=315,SNR=9.2
GERES GERESS Array B 79.41 331 P P 05 28 43.2 -0.3
comp=Z,3.0nm,0.6s,baz=27,slow=4.5,SNR=32
comp=Z,3.0nm,0.6s
CONA Conrad Observa 79.41 330 iP P 05 28 44.1 +0.5
comp=Z,2.4nm,0.8s,SNR=11
MPLH Magyarpolny 79.41 328 P P 05 28 41.1 -2.3
RONA Rosalia, Austr 79.44 329 iP P 05 28 44.4 +0.7
comp=Z,10nm,0.8s,SNR=8.9
WIM Isle of Man 79.67 344 eP P 05 28 44.3 -0.5
MDVR Moldovita 79.68 324 ⇑P P 05 28 44.6 -0.5
LBWR Ladybower, Pea 79.75 342 eP P 05 28 44.9 -0.3
LBWR IAmb IAmb 05 28 46.1
comp=Z,92nm,0.9s
MORH Mrgy, Hungar 79.77 327 ⇑P P 05 28 45.2 -0.2
MORH Mrgy, Hungar 79.77 327 P P 05 28 43.1 -2.3
WACR West Acre 79.83 341 eP P 05 28 45.0 -0.6
WACR IAmb IAmb 05 28 46.5
comp=Z,54nm,0.9s
GMM Mts of Mourne 79.83 345 eP P 05 28 44.9 -0.6
MOA Molln 80.05 330 eP P 05 28 47.1 +0.2
comp=Z,7.6nm,0.8s
KOVH Kovagotottos 80.09 327 P P 05 28 45.3 -1.9
ARSA Arzberg 80.10 329 eP P 05 28 49.0 +1.7
GLMI Grayling 80.12 35 P P 05 28 47.1 -0.3
baz=324
P38A Dawn 80.13 44 IAmb IAmb 05 28 48.5
comp=Z,26nm,1.2s
P38A Dawn 80.13 44 P P 05 28 47.7 +0.2
baz=320,SNR=7.9
VLDQ Val d'Or 80.13 29 IAmb IAmb 05 28 47.0
comp=Z,22nm,1.1s
FRGS Fruska Gora 80.17 326 ⇓P P 05 28 47.9 +0.3
WME Myndd Eilian 80.30 344 eP P 05 28 47.4 -0.7
BTNL Ternell 80.30 336 dP P 05 28 47.9 -0.3
MEM Membach 80.32 337 dP P 05 28 48.0 -0.3
MEM dP P 05 28 48.0 -0.3
BIOA Bad Ischl, Aus 80.41 331 eP P 05 28 49.4 +0.4
comp=Z,3.9nm,0.4s
WLF1 Llynfaes 80.42 344 eP P 05 28 48.1 -0.6
YLL Llanberis 80.51 343 eP P 05 28 48.7 -0.6
FOEL Foel Wylfa 80.55 343 eP P 05 28 49.6 +0.1
FOEL IAmb IAmb 05 28 50.5
comp=Z,51nm,1.0s
BHOU Houvegnez 80.55 336 dP P 05 28 49.6 +0.1
N41A Harden Midland 80.60 41 P P 05 28 49.7 -0.3
baz=321,SNR=7.0
BOVS Bovan 80.61 324 ⇑P P 05 28 49.1 -0.9
T35B Sooner Cattle 80.64 47 P P 05 28 50.2 -0.1
baz=319,SNR=7.0
VTS Vitosha 80.75 322 ⇑P P 05 28 51.5 +0.5
VTS Vitosha 80.75 322 IAmb IAmb 05 28 52.5
comp=Z,14nm,0.9s
SOKA Soboth 80.77 329 iP P 05 28 50.7 -0.2
comp=Z,14nm,0.8s,SNR=12
GROS Grobnik 80.77 329 iP P 05 28 50.5 -0.5
BGES Gesves 80.78 337 dP P 05 28 50.6 -0.2
HLM1 Long Mynd 80.82 342 eP P 05 28 50.5 -0.5
HLM1 IAmb IAmb 05 28 51.8
comp=Z,30nm,1.2s
DSB Dublin 80.85 345 IAmb IAmb 05 28 52.2
comp=Z,22nm,1.1s
RDO Rodhopi 80.87 320 IAmb IAmb 05 28 52.9
comp=Z,15nm,0.9s
P40A Paris 80.94 43 IAmb IAmb 05 28 53.6
comp=Z,39nm,1.4s
P40A Paris 80.94 43 P P 05 28 52.0 +0.2
baz=321,SNR=9.2
BMRD Maredsous 80.95 337 dP P 05 28 51.5 -0.2
comp=Z,13nm,1.1s
RCHB Rochefort 80.95 337 dP P 05 28 51.3 -0.4
WMOK Wichita Mounta 81.02 50 P P 05 28 52.3 -0.2
baz=318
KBA Koelnbreinsper 81.04 331 iP P 05 28 53.1 +0.7
comp=Z,14nm,0.9s,SNR=13
OBKA Obir 81.09 329 eP P 05 28 52.5 -0.2
comp=Z,3.1nm,0.5s
GOLS Golise 81.11 329 iP P 05 28 52.4 -0.3
DOU Dourbes 81.18 337 dP P 05 28 52.6 -0.3
MYKA Terra Mystica 81.31 330 eP P 05 28 53.1 -0.7
comp=Z,5.3nm,1.0s
J47A Sunmer 81.32 36 IAmb IAmb 05 28 55.1
comp=Z,28nm,1.1s
MCH1 Michaelchurch 81.34 342 eP P 05 28 53.5 -0.3
MCH1 IAmb IAmb 05 28 54.0
comp=Z,20nm,0.9s
FNO Franklin 81.40 49 IAmb IAmb 05 28 55.9
comp=Z,23nm,1.0s
WATA Walderalm 81.44 332 eP P 05 28 54.6 0.0
comp=Z,21nm,1.3s
MONM Monmouth 81.44 342 eP P 05 28 53.0 -1.2
MONM IAmb IAmb 05 28 54.6
comp=Z,34nm,1.1s
HDIL Hopedale 81.46 40 P P 05 28 54.6 0.0
baz=322,SNR=8.1
HDIL Hopedale 81.46 40 P P 05 28 54.5 0.0
baz=322,SNR=8.1
WTTA Wattenberg 81.48 332 iP P 05 28 55.1 +0.3
comp=Z,15nm,0.7s,SNR=6.7
RETA Reutte 81.58 332 iP P 05 28 54.9 -0.3
comp=Z,14nm,1.0s,SNR=9.5
MOTA Moosalm 81.59 332 iP P 05 28 55.4 0.0
comp=Z,21nm,0.9s,SNR=10
LPIG La Paz 81.61 65 LR LR 05 57 24.5
comp=Z,32nm,20.6s,baz=247,slow=30
ABTA Abfaltersbach 81.62 331 eP P 05 28 54.5 -0.9
comp=Z,5.0nm,1.2s
BFO Black Forest 81.64 334 P P 05 28 54.2 -1.2
BFO Black Forest 81.64 334 P P 05 28 54.3 -1.2
BFO pmax pmax
comp=Z,9.0nm,0.8s
X34A Smith Ranch, M 81.65 50 IAmb IAmb 05 28 59.5
comp=Z,22nm,1.4s
SQTA Sankt Quirin 81.66 332 eP P 05 28 55.9 +0.2
comp=Z,13nm,0.8s
S39A Bolivar 81.71 45 IAmb IAmb 05 28 56.3
comp=Z,13nm,0.9s
S39A Bolivar 81.71 45 P P 05 28 55.5 -0.5
baz=320,SNR=10
TUL1 Leonard 81.78 47 IAmb IAmb 05 28 57.4
comp=Z,53nm,1.9s
TUL1 Leonard 81.78 47 P P 05 28 56.6 +0.3
baz=319
R40A Maddies Statio 81.78 44 IAmb IAmb 05 28 57.1
comp=Z,29nm,1.3s
R40A Maddies Statio 81.78 44 P P 05 28 56.0 -0.3
baz=321,SNR=11
MMAI Mont Meron Ar 81.93 308 LR LR 06 09 56.9
comp=Z,81nm,19.1s,baz=222,slow=39
FETA Feichten 82.00 332 iP P 05 28 57.7 +0.1
comp=Z,12nm,1.1s,SNR=5.0
DAVA Damuels 82.05 333 eP P 05 28 57.9 +0.1
comp=Z,15nm,1.1s
ABTX Abilene, Hawle 82.09 52 P P 05 28 58.2 +0.1
baz=318
TX31 Lajitas Ar. Si 82.11 57 P P 05 28 59.0 +0.7
baz=316,SNR=26
TXAR Lajitas Array 82.11 57 P P 05 28 59.0 +0.6
comp=Z,7.9nm,0.8s,baz=298,slow=4.0,SNR=91
TXAR LR LR 06 00 39.6
comp=Z,26nm,21.4s,baz=327,slow=32
comp=Z,7.9nm,0.8s
O44A Mansfield 82.16 40 IAmb IAmb 05 28 59.2
comp=Z,18nm,1.2s
SADO Sadowa 82.34 32 LR LR 06 07 37.3
comp=Z,68nm,19.3s,baz=339,slow=37
HHAR Hobbs 82.47 46 IAmb IAmb 05 29 00.7
comp=Z,16nm,1.2s
HHAR Hobbs 82.47 46 P P 05 28 59.7 -0.4
baz=320
CCM Cathedral Cave 82.47 43 P P 05 28 59.3 -0.7
CCM IAmb IAmb 05 29 00.9
comp=Z,24nm,1.1s
CCM Cathedral Cave 82.47 43 P P 05 28 59.3 -0.7
CCM pmax pmax
comp=Z,24nm,1.1s
CCM Cathedral Cave 82.47 43 P P 05 29 00.0 +0.1
baz=321,SNR=9.0
CCM Cathedral Cave 82.47 43 P P 05 28 59.5 -0.5
baz=321
DAVOX Davos/Dischmat 82.49 332 LR LR 06 10 51.2
comp=Z,79nm,18.7s,baz=61,slow=40
RAYN Ar Rayn 82.53 295 P P 05 28 59.8 -0.8
RAYN IAmb IAmb 05 29 02.1
comp=Z,27nm,1.6s
RAYN Ar Rayn 82.53 295 P P 05 28 59.8 -0.8
RAYN pmax pmax
comp=Z,27nm,1.6s
RAYN Ar Rayn 82.53 295 iP P 05 29 01.0 +0.5
SNR=7.3
AAM Ann Arbor 82.58 36 P P 05 29 00.4 0.0
baz=325
SFIN Lafayette 82.62 39 P P 05 29 00.3 -0.4
baz=323
PDG Podgorica 82.63 324 ⇓P P 05 29 00.2 -0.4
TRQ Mont Tremblant 82.76 28 IAmb IAmb 05 29 02.0
comp=Z,21nm,1.0s
Q44A Meyer Farm, Va 82.89 41 IAmb IAmb 05 29 03.2
comp=Z,28nm,1.1s
FVM French Village 82.93 43 IAmb IAmb 05 29 04.2
comp=Z,19nm,1.3s
FVM French Village 82.93 43 P P 05 29 02.5 +0.1
baz=322
TUE Stuetta 82.94 333 IAmb IAmb 05 29 06.1
comp=Z,16nm,1.0s
LMQ La Malbaie 82.96 25 IAmb IAmb 05 29 02.6
comp=Z,13nm,0.9s
U40A Yellville 82.97 45 IAmb IAmb 05 29 03.4
comp=Z,27nm,1.1s
U40A Yellville 82.97 45 P P 05 29 02.5 -0.2
baz=321,SNR=16
U40A P P 05 29 02.5 -0.2
baz=321,SNR=16
U40A Yellville 82.97 45 P P 05 29 02.4 -0.2
baz=321,SNR=16
DYA Yadsworthy 83.01 342 eP P 05 29 01.9 -0.6
W39A Magazine 83.38 47 IAmb IAmb 05 29 05.7
comp=Z,14nm,1.1s
W39A Magazine 83.38 47 P P 05 29 05.1 +0.4
baz=320,SNR=5.2
W39A Magazine 83.38 47 P P 05 29 04.6 -0.1
baz=320,SNR=5.2
KBN Korca 83.45 322 IAmb IAmb 05 29 05.5
comp=Z,21nm,1.2s
N49A Columbus Grove 83.48 37 IAmb IAmb 05 29 06.1
comp=Z,22nm,1.1s
N49A Columbus Grove 83.48 37 P P 05 29 05.2 +0.1
baz=325
N49A P P 05 29 05.2 +0.1
baz=325
PPT Papeete 83.53 122 LR LR 05 56 54.9
comp=Z,73nm,21.4s,baz=138,slow=29
JCT Junction City 83.58 54 IAmb IAmb 05 29 07.2
comp=Z,21nm,1.1s
JCT Junction City 83.58 54 P P 05 29 06.3 +0.4
baz=318,SNR=7.3
JCT Junction City 83.58 54 P P 05 29 06.0 +0.1
baz=318,SNR=7.3
O48B Farmland 83.59 38 P P 05 29 05.4 -0.3
baz=324
FCAR Ozark Folk Cen 83.71 45 IAmb IAmb 05 29 07.0
comp=Z,17nm,1.2s
MNTQ Montreal, Queb 83.71 28 IAmb IAmb 05 29 06.8
comp=Z,15nm,0.9s
D62A Allapoint, All 83.77 24 IAmb IAmb 05 29 07.3
comp=Z,11nm,0.8s
D62A Allapoint, All 83.77 24 P P 05 29 06.3 -0.2
baz=334
D62A P P 05 29 06.3 -0.2
baz=334
JSA Saint Aubin 83.77 341 eP P 05 29 05.7 -0.7
JSA IAmb IAmb 05 29 07.2
comp=Z,31nm,0.9s
WHTX Lake Whitney, 83.80 51 IAmb IAmb 05 29 08.6
comp=Z,31nm,1.7s
WHTX Lake Whitney, 83.80 51 P P 05 29 07.2 +0.3
baz=319
BMNY Brushton-Moira 83.98 29 P P 05 29 07.0 -0.6
baz=331
MIAR Mount Ida 83.99 47 IAmb IAmb 05 29 09.2
comp=Z,13nm,0.9s
MIAR Mount Ida 83.99 47 P P 05 29 08.5 +0.7
baz=320,SNR=9.6
MIAR Mount Ida 83.99 47 P P 05 29 08.1 +0.3
baz=320,SNR=9.6
O49A Covington 84.01 38 IAmb IAmb 05 29 08.8
comp=Z,14nm,1.1s
LCAR Lake Charles 84.06 44 IAmb IAmb 05 29 09.9
comp=Z,19nm,1.6s
P48A Milroy 84.12 39 IAmb IAmb 05 29 09.3
comp=Z,22nm,1.2s
P48A Milroy 84.12 39 P P 05 29 08.3 -0.1
baz=324
P48A P P 05 29 08.3 -0.1
baz=324
LONY Lake Ozonia 84.14 29 P P 05 29 08.3 -0.1
baz=331
W41B Gary Mavity, V 84.20 46 IAmb IAmb 05 29 09.9
comp=Z,20nm,1.1s
W41B Gary Mavity, V 84.20 46 P P 05 29 09.2 +0.3
baz=321,SNR=7.9
W41B Gary Mavity, V 84.20 46 P P 05 29 08.5 -0.4
baz=321,SNR=7.9
ERPA Erie 84.25 34 P P 05 29 09.1 +0.1
baz=327
P49A Miami Univ. Ec 84.38 38 P P 05 29 09.5 -0.3
baz=325,SNR=7.7
P49A Miami Univ. Ec 84.38 38 P P 05 29 09.4 -0.3
baz=325,SNR=7.7
X40A Basin Creek Fa 84.42 46 IAmb IAmb 05 29 11.4
comp=Z,9.9nm,1.0s
X40A Basin Creek Fa 84.42 46 P P 05 29 10.3 +0.3
baz=321
M53A WI Miller and 84.54 35 P P 05 29 10.4 -0.1
baz=327
ACSO Alum Creek Sta 84.57 37 IAmb IAmb 05 29 11.8
comp=Z,17nm,0.9s
ACSO Alum Creek Sta 84.57 37 P P 05 29 10.3 -0.3
baz=326
ACSO Alum Creek Sta 84.57 37 P P 05 29 10.6 -0.1
baz=326
VLC Villacollemand 84.61 331 IAmb IAmb 05 29 12.2
comp=Z,19nm,1.1s
EIL Elat 84.66 306 LR LR 06 11 48.3
comp=Z,87nm,20.3s,baz=91,slow=39
OSSC Osservatorio P 84.85 330 IAmb IAmb 05 29 12.2
comp=Z,12nm,0.8s
WLAR White Oak Lake 84.89 47 IAmb IAmb 05 29 14.0
comp=Z,17nm,0.9s
G62A West of Eustis 84.98 26 IAmb IAmb 05 29 14.0
comp=Z,16nm,0.9s
N53A Lisbon 85.00 35 P P 05 29 12.7 -0.1
baz=327,SNR=5.4
N53A P P 05 29 12.7 -0.1
baz=327,SNR=5.4
P51A Williamsport 85.15 37 P P 05 29 13.6 0.0
baz=326
P51A P P 05 29 13.6 0.0
baz=326
O52A Adamsville 85.16 36 IAmb IAmb 05 29 14.6
comp=Z,20nm,1.0s
J59A Piesco 85.18 30 IAmb IAmb 05 29 14.2
comp=Z,17nm,1.0s
L56A Greenwood 85.19 32 IAmb IAmb 05 29 14.6
comp=Z,19nm,1.0s
M55A Ridgway 85.28 33 P P 05 29 14.4 +0.1
baz=328,SNR=6.6
M55A P P 05 29 14.4 +0.1
baz=328,SNR=6.6
O53A New Philadelph 85.31 36 P P 05 29 14.3 -0.1
baz=327
PKME Peaks-Kenny Pk 85.33 25 P P 05 29 14.8 +0.4
baz=334
PKME Peaks-Kenny Pk 85.33 25 P P 05 29 14.4 +0.1
baz=334
T47A Sharon Grove 85.33 41 IAmb IAmb 05 29 16.0
comp=Z,20nm,1.0s
T47A Sharon Grove 85.33 41 P P 05 29 15.1 +0.5
baz=324,SNR=5.7
H62A Milan 85.35 27 P P 05 29 15.0 +0.4
baz=333,SNR=6.0
H62A P P 05 29 15.0 +0.4
baz=333,SNR=6.0
LBNH Lisbon 85.39 28 P P 05 29 14.8 +0.1
baz=332
Q51A Peebles 85.40 38 P P 05 29 15.2 +0.3
baz=326,SNR=7.7
Q51A P P 05 29 15.2 +0.3
baz=326,SNR=7.7
833A Chaparral WMA, 85.41 55 P P 05 29 15.4 +0.3
baz=318
P52A Corning 85.43 36 P P 05 29 14.4 -0.6
baz=326
SSB Saint Sauveur 85.54 335 IAmb IAmb 05 29 16.9
comp=Z,11nm,0.9s
R50A Paris 85.57 39 IAmb IAmb 05 29 17.0
comp=Z,10nm,1.0s
WVT Waverly 85.67 42 P P 05 29 16.3 0.0
baz=323
O54A Avella 85.71 35 IAmb IAmb 05 29 17.8
comp=Z,22nm,1.0s
O54A Avella 85.71 35 P P 05 29 16.9 +0.5
baz=327,SNR=5.9
O54A P P 05 29 16.9 +0.5
baz=327,SNR=5.9
BINY Binghamton 85.73 31 P P 05 29 16.1 -0.4
baz=330
IDI Anoyia 85.80 317 ⇑P P 05 29 17.1 +0.1
IDI Anoyia 85.80 317 LR LR 06 13 41.4
comp=Z,40nm,18.5s,baz=70,slow=40
IDI Anoyia 85.80 317 IAmb IAmb 05 29 20.7
comp=Z,8.8nm,0.8s

M57A	**Sunshine Farm,** baz=329,SNR=7.9	**86.04**	**32**	P	**P**	**05 29 18.1**	**+0.1**
M57A	baz=329,SNR=7.9			P	**P**	**05 29 18.1**	**+0.1**
L59A	**Walton** baz=330,SNR=5.3	**86.09**	**31**	P	**P**	**05 29 18.3**	**0.0**
L59A	baz=330,SNR=5.3			P	**P**	**05 29 18.3**	**0.0**
OXF	**Oxford** baz=322,SNR=5.9	**86.17**	**44**	P	**P**	**05 29 18.4**	**-0.3**
U49A	**Red Boiling Sp** baz=324,SNR=6.8	**86.34**	**41**	P	**P**	**05 29 19.9**	**+0.3**
SSPA	**Standing Stone**	**86.34**	**33**	P	**P**	**05 29 19.1**	**-0.4**
SSPA	comp=Z,15nm,0.9s			IAmb	IAmb	05 29 20.8	
SSPA	**Standing Stone** baz=329,SNR=5.7	**86.34**	**33**	P	**P**	**05 29 19.9**	**+0.4**
SSPA	**Standing Stone** baz=329	**86.34**	**33**	P	**P**	**05 29 19.7**	**+0.1**
T50A	**Nancy** baz=325	**86.37**	**40**	P	**P**	**05 29 19.9**	**+0.2**
T50A	baz=325			P	**P**	**05 29 19.9**	**+0.2**
MCWV	**Mont Chateau** baz=328,SNR=7.4	**86.38**	**35**	P	**P**	**05 29 20.5**	**+0.8**
MCWV	**Mont Chateau** baz=328,SNR=7.4	**86.38**	**35**	P	**P**	**05 29 20.0**	**+0.3**
CLTN	**Cedars of Leba** comp=Z,22nm,1.3s	**86.42**	**41**	IAmb	IAmb	05 29 21.3	
V48A	**Smith Brothers** comp=Z,16nm,1.3s	**86.47**	**42**	IAmb	IAmb	05 29 21.5	
Q54A	**Coxs Mills** comp=Z,18nm,0.9s	**86.53**	**36**	IAmb	IAmb	05 29 21.9	
Q54A	**Coxs Mills** baz=327,SNR=6.0	**86.53**	**36**	P	**P**	**05 29 21.0**	**+0.6**
Q54A	baz=327,SNR=6.0			P	**P**	**05 29 21.0**	**+0.6**
N58A	**Sunbury** comp=Z,20nm,1.1s	**86.63**	**32**	IAmb	IAmb	05 29 22.0	
N58A	**Sunbury** baz=329,SNR=5.2	**86.63**	**32**	P	**P**	**05 29 21.1**	**+0.2**
N58A	baz=329,SNR=5.2			P	**P**	**05 29 21.1**	**+0.2**
HRV	**Adam Dziewonsk** baz=333	**87.05**	**28**	P	**P**	**05 29 23.1**	**+0.1**
P57A	**Homestead Farm** comp=Z,9.6nm,0.9s	**87.27**	**34**	IAmb	IAmb	05 29 25.3	
TZTN	**Tazewell** baz=326	**87.35**	**39**	P	**P**	**05 29 24.7**	**+0.1**
R55A	**Marlinton** comp=Z,20nm,1.1s	**87.42**	**36**	IAmb	IAmb	05 29 26.4	
R55A	**Marlinton** baz=328,SNR=5.4	**87.42**	**36**	P	**P**	**05 29 25.1**	**+0.2**
R55A	baz=328,SNR=5.4			P	**P**	**05 29 25.1**	**+0.2**
MVL	**Millersville** comp=Z,9.5nm,0.9s	**87.49**	**33**	IAmb	IAmb	05 29 26.1	
PAL	**Palisades** baz=331	**87.54**	**30**	P	**P**	**05 29 25.4**	**+0.1**
PANJ	**Princeton** baz=331,SNR=6.0	**87.79**	**31**	P	**P**	**05 29 26.8**	**+0.2**
TUPA	**Temple Univers** baz=330,SNR=5.9	**87.79**	**32**	P	**P**	**05 29 26.7**	**+0.2**
CPCT	**Cooper Cave** comp=Z,16nm,1.3s	**87.80**	**40**	IAmb	IAmb	05 29 27.8	
146A	**Union** baz=323	**87.83**	**45**	P	**P**	**05 29 28.0**	**+1.2**
V52A	**Sevierville** comp=Z,13nm,0.9s	**87.91**	**40**	IAmb	IAmb	05 29 28.0	
V52A	**Sevierville** baz=326	**87.91**	**40**	P	**P**	**05 29 27.7**	**+0.5**
TKL	**Tuckaleechee C** comp=Z,56nm,21.8s,baz=339,slow=36	**87.97**	**40**	LR	LR	06 10 07.4	
TKL	**Tuckaleechee C** comp=Z,12nm,0.9s	**87.97**	**40**	IAmb	IAmb	05 29 28.2	
TKL	**Tuckaleechee C** baz=325	**87.97**	**40**	P	**P**	**05 29 27.5**	**0.0**
BLA	**Blacksburg** baz=327	**88.19**	**37**	P	**P**	**05 29 28.5**	**-0.1**
LRAL	**Lakeview Retre** baz=324	**88.55**	**43**	P	**P**	**05 29 30.4**	**+0.1**
VAE	**Valguarnera** comp=Z,64nm,18.2s,baz=94,slow=39	**88.81**	**325**	LR	LR	06 13 42.0	
CASEE	**Lake Jocassee** baz=326	**88.91**	**40**	P	**P**	**05 29 32.8**	**+0.8**
Z51A	**Franklin** baz=325	**89.22**	**42**	P	**P**	**05 29 33.3**	**-0.2**
KMSC	**Kings Mountain** baz=327	**89.52**	**38**	P	**P**	**05 29 35.1**	**+0.3**
RPZ	**Rata Peaks** comp=Z,96nm,18.0s,baz=298,slow=36	**89.54**	**163**	LR	LR	06 10 14.5	
HODGE	**Hodges** comp=Z,17nm,1.2s	**89.85**	**40**	IAmb	IAmb	05 29 37.8	
GOGA	**Godfrey** baz=326	**89.96**	**41**	P	**P**	**05 29 36.8**	**-0.1**
BIRD	**Birdtown, Kers** comp=Z,13nm,1.1s	**90.32**	**38**	IAmb	IAmb	05 29 39.8	
TIGA	**Tifton** baz=326	**91.53**	**42**	P	**P**	**05 29 43.7**	**-0.5**
KEST	**Kesra** comp=Z,160nm,21.2s,baz=232,slow=38	**92.36**	**327**	LR	LR	06 14 54.6	
ESDC	**Sonseca Array** comp=Z,1.8nm,0.9s,baz=16,slow=4.0,SNR=13	**93.13**	**339**	P	**P**	**05 29 50.8**	**-0.8**
ESDC	comp=Z,97nm,21.7s,baz=16,slow=38			LR	LR	06 16 03.6	
CMIG	**Matias Romero** comp=Z,1.8nm,0.9s	**96.56**	**59**	LR	LR	06 08 12.2	
MDT	**Midelt** comp=Z,31nm,21.4s,baz=314,slow=32	**99.75**	**337**	LR	LR	06 21 24.5	
TORD	**Torodi Ar. Bea** comp=Z,0.4nm,0.6s,baz=65,slow=1.4,SNR=4.0	**115.52**	**323**	PKP	**PKiKP**	**05 35 18.5**	**-1.3**
OTAV	**Otavalo**	**119.75**	**57**		**PKiKP**	**05 35 28.9**	**+0.3**
OTAV	**Otavalo**	**119.75**	**57**	PKIKP	**PKiKP**	**05 35 29.0**	**+0.3**
TULM	**Tulcn-Chalpat**	**119.76**	**56**		**PKPdf**	**05 35 28.3**	**-0.4**
H03N2	**Juan Fernandez** baz=304,slow=77,SNR=73	**142.36**	**90**	T	T	08 15 06.8	
H03N3	**Juan Fernandez** baz=304,slow=77,SNR=77	**142.37**	**90**	T	T	08 15 22.2	
H03N1	**Juan Fernandez** baz=304,slow=77,SNR=87	**142.37**	**90**	T	T	08 15 20.7	
NVL	**N'lazarevskaya**	**145.47**	**204**	*e*PKIKP	PKiKP	05 36 31.7	+14
NVL	comp=Z,29nm,0.9s			pmax	pmax		
BELA	**Belgrano 2**	**145.80**	**179**		**PKPbc**	**05 36 15.2**	**0.0**
GO04	**Tololo Observa**	**146.48**	**79**		**PKPbc**	**05 36 19.4**	**+0.5**
TROLL	**Troll, Antarti**	**147.24**	**199**	PKPdf	**PKPbc**	**05 36 19.5**	**-0.2**
SNAA	**Sanae**	**148.69**	**197**	PKPdf	**PKPbc**	**05 36 24.1**	**+0.7**
SNAA	**Sanae**	**148.69**	**197**		**PKiKP**	**05 36 24.5**	**-0.4**
SNAA	**Sanae**	**148.69**	**197**	PKP2	**PKiKP**	**05 36 24.5**	**-0.4**
BDFB	**Brasilia** comp=Z,1.1nm,0.9s,baz=275,slow=2.5,SNR=6.0	**148.80**	**31**	PKPbc	**PKPbc**	**05 36 24.9**	**-0.5**
BDFB	**Brasilia**	**148.80**	**31**		**PKPbc**	**05 36 25.2**	**-0.2**
BDFB	**Brasilia**	**148.80**	**31**	PKP2	**PKPbc**	**05 36 25.2**	**-0.2**
VNA2	**Neumayer--Watz** baz=134,slow=1.0	**150.20**	**196**	PKPdf	**PKiKP**	**05 36 27.8**	**-0.2**
VNA3	**Neumayer Olymp**	**150.38**	**194**	PKPdf	**PKPdf**	**05 36 24.7**	**+2.4**
VNA1	**Neumayer--Stat**	**150.60**	**196**	PKPdf	**PKPab**	**05 36 34.7**	**-0.2**

*IDC **07** 05:50:14.9±1.6,5°.38S×152°.75E,h0km,mb3.8/4, mbtmp3.9/5,ML2.2/1,MS3.3/2,Error ellipse: s-maj=35.3km s-min=19.3km az=96.0*

ISC 07 05:50:20.6±2.5,5°.5S±0°.1×152°.6E±0°.3,h35km,n8,σ1s04/6, mb3.8/4,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076** 336nm,0.3s,baz=255,slow=2.0,SNR=154	**1.25**	**335**	Pn	**Pn**	**05 50 41.1**	**-0.4**
KRVT	507nm,0.3s,baz=274,slow=19,SNR=23			Sn	**Sn**	**05 50 58.0**	**+0.8**
KRVT	comp=Z,567nm,19.8s,baz=185,slow=42			LR	LR	05 51 08.8	
PMG	**Port Moresby** 2.6nm,0.3s,baz=21,slow=5.1,SNR=3.7	**6.64**	**233**	Pn	Pn	05 51 57.7	+1.9
PMG	4.7nm,0.3s,baz=346,slow=20,SNR=6.8 12nm,0.4s			Sn	**Sn**	**05 53 10.1**	**-0.2**
WRA	**Warramunga Arr** 2.1nm,0.7s,baz=55,slow=10.0,SNR=20 2.1nm,0.7s	**22.84**	**229**	P	**P**	**05 55 20.8**	**-0.1**
ASAR	**Alice Springs** 1.4nm,0.6s,baz=58,slow=8.7,SNR=19 1.4nm,0.6s	**25.51**	**223**	P	**P**	**05 55 47.5**	**+1.5**
DAV	**Davao City (W)** comp=Z,36nm,18.2s,baz=179,slow=36	**29.65**	**294**	LR	LR	06 07 57.3	
SONM	**Songino Array** 0.4nm,0.4s,baz=148,slow=6.3,SNR=3.9 0.4nm,0.4s	**66.74**	**328**	P	**P**	**06 01 07.9**	**-0.5**
KDAK	**Kodiak Island** comp=Z,19nm,18.2s,baz=232,slow=39	**76.86**	**27**	LR	LR	06 40 01.7	
ILAR	**Eielson Array** 0.9nm,1.0s,baz=256,slow=5.6,SNR=6.4 0.9nm,1.0s	**82.85**	**22**	P	P	06 02 40.6	-0.5

*IDC **07** 06:17:04.0±4.8,30°.36N×137°.43E,h302km±89km,mb3.0/4, mbtmp3.8/6,Error ellipse: s-maj=140.6km s-min=11.8km az=68.0*

*JMA **07** 06:17:05.2±0.3,31°.N±2°×13°9E±°,h434km,MV3.8/18, NEAR TORISHIMA IS*

ISC 07 06:17:03.6±1.0,30°.44N±0°.06×137°.5E±0°.1,h300km,n16, σ2s67/17,mb3.0/4,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHCJ	**Hachijojimakas**	**3.25**	**36**	*e*P	**Pn**	**06 18 05.8**	**+4.0**
JHJ	**Hachijo jima 2** 46nm,0.3s,baz=294,slow=17,SNR=16	**3.29**	**35**	P	**Pn**	**06 18 05.9**	**+3.8**
JHJ	43nm,0.3s,baz=254,slow=23,SNR=6.7			S	**S**	**06 18 52.6**	**+3.7**
JHJ2	**Mitsune**	**3.30**	**36**	*e*P	**Pn**	**06 18 06.0**	**+3.8**
JIE	**Ise**	**4.00**	**350**	*e*P	Pn	06 18 19.3	+10
JOD2	**Odawara 2**	**4.98**	**15**	*e*S	**S**	**06 19 23.2**	**+0.3**
BSO3	**Boso 3**	**5.02**	**29**	S	**S**	**06 19 18.0**	**-5.2**
BSO1	**Boso 1**	**5.11**	**34**	P	**Pn**	**06 18 20.1**	**-1.5**
BSO1				*e*S	S	06 19 18.0	-6.6
CBIJ	**Chichi jima**	**5.27**	**128**	P	**Pn**	**06 18 25.7**	**+1.3**
CBIJ				S	**S**	**06 19 27.9**	**-1.4**
JCJ	**Chichijima** 10nm,0.4s,baz=53,slow=24,SNR=10.0	**5.27**	**128**	P	**Pn**	**06 18 25.6**	**+1.3**
JCJ	37nm,0.3s,baz=2.4,slow=23,SNR=12			S	**S**	**06 19 27.7**	**-1.6**
JHH2	**Haha-jima-NKT2**	**5.58**	**132**	*e*S	**S**	**06 19 35.1**	**-0.7**
JAG	**Ashikaga**	**6.18**	**15**	*e*P	**Pn**	**06 18 33.5**	**-1.5**
JAG				*e*S	S	06 19 39.0	-10
JYT	**Yasato**	**6.18**	**20**	*e*S	S	06 19 38.3	-10
MKAR	**Makanchi Array** 0.3nm,0.3s,baz=93,slow=9.6,SNR=7.5 0.3nm,0.3s	**45.20**	**307**	P	**P**	**06 24 51.1**	**-0.2**
KURBB	**Kurchatov Arra** 0.5nm,0.5s,baz=91,slow=7.0,SNR=9.0 0.5nm,0.5s	**47.78**	**313**	P	**P**	**06 25 09.8**	**-1.3**
WRA	**Warramunga Arr** 0.7nm,0.4s,baz=0.8,slow=7.7,SNR=23 0.7nm,0.4s	**50.19**	**184**	P	**P**	**06 25 29.0**	**-0.5**
ASAR	**Alice Springs** 0.3nm,0.6s,baz=360,slow=5.7,SNR=9.6 0.3nm,0.6s	**53.91**	**184**	P	**P**	**06 25 57.3**	**+0.5**

IDC 07 06:21:50.4±3.3,33°.97S×179°.51W,h0km,mb3.5/2, mbtmp3.6/3,ML3.8/1,MS3.7/1,Error ellipse: s-maj=73.0km s-min=47.3km az=113.0,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera** 3.7nm,0.3s,baz=126,slow=23,SNR=20	**5.08**	**212**	Pn	Pn	06 23 07.5	-0.3
URZ	0.6nm,0.3s,baz=218,slow=19,SNR=1.1 6.4nm,0.3s			Sn	Sn	06 23 57.9	-9.3
MSVF	**Nonsavu** comp=Z,265nm,20.0s,baz=358,slow=31	**16.31**	**352**	LR	LR	06 30 11.7	
ASAR	**Alice Springs** 0.4nm,0.5s,baz=114,slow=8.2,SNR=8.0 0.4nm,0.5s	**41.78**	**272**	P	P	06 29 41.9	0.0
WRA	**Warramunga Arr** 0.3nm,0.5s,baz=117,slow=7.7,SNR=6.8 0.3nm,0.5s	**43.10**	**277**	P	P	06 29 52.3	-0.3
FINES	**FINESS Array B** 0.7nm,0.5s,baz=72,slow=4.8,SNR=2.2	**147.99**	**337**	PKPbc	PKPbc	06 41 36.3	-0.7

*IDC **07** 06:36:12.8±2.2,7°.86S×126°.67E,h0km,mb3.3/1, mbtmp3.4/3,ML3.5/2,Error ellipse: s-maj=242.6km s-min=33.2km az=62.0*

*DJA **07** 06:36:28.8±0.6,8°.5S±5°×12°.9E±°,h116km±57km,M4.2/7, mb3.9/5,mb4.8/1,MLv4.3/7,Mw(mB)4.1/1*

ISC 07 06:36:28.0±1.2,7°.8S±0°.1×128°.8E±0°.1,h100km,n6, σ0s78/7,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**4.88**	**246**	P	**Pn**	**06 37 39.6**	**+0.4**
SOEI				S	**Sn**	**06 38 34.4**	**-0.2**
BATI	**Baumata** 0.2nm18nm,0.5s	**5.61**	**244**	P	**Pn**	**06 37 48.7**	**-0.3**
FAKI	**Fak Fak** 0.1nm7.7nm,1.5s	**5.92**	**36**	P	**Pn**	**06 37 53.1**	**-0.2**
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=325,slow=14,SNR=14	**13.26**	**157**	Pn	**Pn**	**06 39 32.6**	**+0.1**
WRA	0.7nm,0.3s,baz=332,slow=22,SNR=9.0 0.3nm,0.4s			Sn	Sn	06 41 53.8	-4.6
ASAR	**Alice Springs** 0.2nm,0.3s,baz=333,slow=11,SNR=13	**16.57**	**163**	P	**Pn**	**06 40 15.6**	**+1.2**
ASAR	0.2nm,0.4s,baz=339,slow=25,SNR=2.4 0.7nm,0.5s			S	**Sn**	**06 43 17.6**	**-0.8**
MKAR	**Makanchi Array** 0.2nm,0.5s,baz=112,slow=6.4,SNR=2.5 0.2nm,0.5s	**68.20**	**328**	P	P	06 47 08.7	-9.0

*NOU **07** 06:41:09.9,40°.37S×173°.31E,h178km,MLv3.8/9,Cook Strait, New Zealand*

*WEL **07** 06:41:14.3±1.0,40°.S±4°×17°.3E±°,h132km±9km,M3.0/13, MLv3.0/13,Error ellipse: s-maj=0.0km s-min=0.0km az=99.5*

ISC 07 06:41:09.1±1.6,40°.43S±0°.05×173°.35E±0°.05,h176km±9km, n110,σ1s45/117,Cook Strait

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DUWZ	**D'Urville Isla**	**0.57**	**131**	P	**Pn**	**06 41 34.8**	**+1.0**
DUWZ				S	**Sn**	**06 41 50.5**	**-2.2**
QRZ	**Quartz Range**	**0.74**	**238**	P	**Pn**	**06 41 35.8**	**+1.2**
QRZ				S	**Sn**	**06 41 51.7**	**-2.6**
QRZ	**Quartz Range**	**0.74**	**238**	P	**Pn**	**06 41 35.8**	**+1.2**
NNZ	**Nelson**	**0.79**	**178**	P	**Pn**	**06 41 35.9**	**+1.1**
NNZ				S	**Sn**	**06 41 53.1**	**-1.8**
TCW	**Tory Channel**	**1.05**	**138**	P	**Pn**	**06 41 38.3**	**+1.6**
TCW				S	**Sn**	**06 41 56.6**	**-1.5**
MRNZ	**Matariki Terra**	**1.07**	**205**	P	**Pn**	**06 41 38.2**	**+1.3**
MRNZ				S	**Sn**	**06 41 56.5**	**-1.9**
TUWZ	**Tuamarina**	**1.09**	**156**	P	**Pn**	**06 41 38.5**	**+1.4**
TUWZ				S	**Sn**	**06 41 56.9**	**-1.9**
NMEZ	**Namu Road**	**1.09**	**22**	P	**Pn**	**06 41 38.8**	**+1.7**
NMEZ				S	**Sn**	**06 41 58.6**	**-0.1**
NBEZ	**Newall Road No**	**1.23**	**19**	P	**Pn**	**06 41 40.1**	**+1.8**
KHEZ	**Kahui Hut**	**1.25**	**24**	P	**Pn**	**06 41 40.2**	**+1.7**
PREZ	**Palmer Road**	**1.25**	**30**	P	**Pn**	**06 41 40.2**	**+1.7**
KIW	**Kapiti Island**	**1.26**	**110**	P	**Pn**	**06 41 39.9**	**+1.4**
LREZ	**Lake Rotokare**	**1.26**	**40**	P	**Pn**	**06 41 40.4**	**+1.8**
NEZ	**North Egmont**	**1.29**	**27**	P	**Pn**	**06 41 40.3**	**+1.4**
PKE	**Pukeiti**	**1.33**	**22**	P	**Pn**	**06 41 41.0**	**+1.8**
BSWZ	**Blackbirch Sta**	**1.34**	**163**	P	**Pn**	**06 41 41.0**	**+1.8**
SNZO	**South Karori**	**1.35**	**131**	P	**Pn**	**06 41 40.9**	**+1.7**
THZ	**Tophouse**	**1.37**	**194**	P	**Pn**	**06 41 41.1**	**+1.6**
WEL	**Wellington**	**1.37**	**129**	P	**Pn**	**06 41 41.1**	**+1.7**
DREZ	**Durham Road**	**1.40**	**28**	P	**Pn**	**06 41 41.6**	**+1.8**
WAZ	**Wanganui**	**1.43**	**62**	P	**Pn**	**06 41 41.9**	**+1.9**
OGWZ	**Otaki Gorge**	**1.44**	**106**	P	**Pn**	**06 41 41.7**	**+1.7**
CAW	**Cannon Point**	**1.47**	**118**	P	**Pn**	**06 41 41.9**	**+1.6**
CMWZ	**Cape Campbell**	**1.47**	**154**	P	**Pn**	**06 41 42.8**	**+2.4**
OHWZ	**Ohakea**	**1.52**	**82**	P	**Pn**	**06 41 43.0**	**+2.2**
VRZ	**Vera Road**	**1.70**	**40**	P	**Pn**	**06 41 44.1**	**+1.4**
HOWZ	**Holdsworth Sta**	**1.71**	**106**	P	**Pn**	**06 41 44.3**	**+1.5**
MRZ	**Mangatainoka R**	**1.71**	**98**	P	**Pn**	**06 41 44.3**	**+1.5**
MSWZ	**Moikau Station**	**1.74**	**125**	P	**Pn**	**06 41 44.7**	**+1.6**
DSZ	**Dennistn Nort**	**1.76**	**221**	P	**Pn**	**06 41 45.2**	**+1.9**
MTW	**Mount Morrison**	**1.79**	**115**	P	**Pn**	**06 41 45.2**	**+1.6**
PLWZ	**Palliser**	**1.83**	**129**	P	**Pn**	**06 41 45.7**	**+1.6**
PAWZ	**Paruwai Farm**	**1.84**	**122**	P	**Pn**	**06 41 45.7**	**+1.6**
POWZ	**Post Office Ro**	**1.85**	**90**	P	**Pn**	**06 41 45.7**	**+1.5**
PKVZ	**Pokaka**	**1.91**	**54**	P	**Pn**	**06 41 46.5**	**+1.5**
MTVZ	**Mangateitei**	**1.94**	**58**	P	**Pn**	**06 41 46.7**	**+1.5**
TIWZ	**Tintock**	**1.96**	**101**	P	**Pn**	**06 41 47.1**	**+1.6**
KHZ	**Kahutara**	**1.99**	**176**	P	**Pn**	**06 41 47.5**	**+1.9**
KHZ	**Kahutara**	**1.99**	**176**	P	**Pn**	**06 41 47.6**	**+1.9**
TRWZ	**Traveller**	**2.02**	**119**	P	**Pn**	**06 41 47.8**	**+1.8**
TSZ	**Takapari Road**	**2.03**	**80**	P	**Pn**	**06 41 47.7**	**+1.5**
TMWZ	**Te Maipa**	**2.04**	**110**	P	**Pn**	**06 41 48.0**	**+1.7**
WNVZ	**Wahianoa**	**2.05**	**58**	P	**Pn**	**06 41 48.0**	**+1.3**
FWVZ	**Far West T-bar**	**2.06**	**56**	P	**Pn**	**06 41 48.5**	**+1.7**
MOVZ	**Moawhango**	**2.11**	**62**	P	**Pn**	**06 41 48.1**	**+0.9**
TUVZ	**Tukino**	**2.12**	**57**	P	**Pn**	**06 41 48.9**	**+1.5**
NGZ	**Ngauruhoe**	**2.14**	**55**	P	**Pn**	**06 41 48.7**	**+1.1**
DVHZ	**Dannevirke**	**2.16**	**87**	P	**Pn**	**06 41 48.9**	**+1.3**
SNVZ	**South Ngauruho**	**2.16**	**56**	P	**Pn**	**06 41 49.1**	**+1.3**
WTVZ	**West Tongariro**	**2.17**	**53**	P	**Pn**	**06 41 49.2**	**+1.3**
NNVZ	**North Ngauruho**	**2.17**	**54**	P	**Pn**	**06 41 49.9**	**+1.9**
OTVZ	**Oturere**	**2.19**	**55**	P	**Pn**	**06 41 49.4**	**+1.3**
BFZ	**Birch Farm**	**2.22**	**97**	P	**Pn**	**06 41 50.0**	**+1.6**
BFZ	**Birch Farm**	**2.22**	**97**	P	**Pn**	**06 41 49.9**	**+1.6**
ETVZ	**East Tongariro**	**2.23**	**55**	P	**Pn**	**06 41 50.0**	**+1.4**
NTVZ	**North Tongarir**	**2.23**	**54**	P	**Pn**	**06 41 50.1**	**+1.5**
TMVZ	**Te Maari**	**2.24**	**55**	P	**Pn**	**06 41 50.1**	**+1.4**
HIZ	**Hauiti**	**2.24**	**32**	P	**Pn**	**06 41 50.1**	**+1.5**
HIZ	**Hauiti**	**2.24**	**32**	P	**Pn**	**06 41 50.1**	**+1.5**
PNHZ	**Pukenui**	**2.24**	**78**	P	**Pn**	**06 41 49.9**	**+1.3**
BHHZ	**Black Hill Sta**	**2.29**	**67**	P	**Pn**	**06 41 50.0**	**+0.9**
ANWZ	**Angora Road**	**2.38**	**92**	P	**Pn**	**06 41 51.9**	**+1.7**
WPHZ	**Waipukurau**	**2.39**	**82**	P	**Pn**	**06 41 51.9**	**+1.6**
LTZ	**Lake Taylor**	**2.48**	**199**	P	**Pn**	**06 41 53.0**	**+1.6**
PRHZ	**Porangahau**	**2.52**	**87**	P	**Pn**	**06 41 53.4**	**+1.7**
GVZ	**Greta Valley S**	**2.54**	**185**	P	**Pn**	**06 41 53.8**	**+1.8**
TLZ	**Tolley Road**	**2.70**	**40**	P	**Pn**	**06 41 55.2**	**+1.3**
INZ	**Inchbonnie**	**2.70**	**211**	P	**Pn**	**06 41 55.5**	**+1.6**
PXZ	**Pawanui**	**2.72**	**83**	P	**Pn**	**06 41 55.5**	**+1.4**
BKZ	**Black Stump Fm**	**2.73**	**63**	P	**Pn**	**06 41 55.1**	**+0.8**
BKZ	**Black Stump Fm**	**2.73**	**63**	P	**Pn**	**06 41 55.1**	**+0.8**
KAHZ	**Kahuranaki**	**2.78**	**78**	P	**Pn**	**06 41 56.4**	**+1.5**
MRHZ	**Matea Rd**	**2.86**	**57**	P	**Pn**	**06 41 56.4**	**+0.5**
NMHZ	**Naumai**	**2.98**	**65**	P	**Pn**	**06 41 58.9**	**+1.6**
ARHZ	**Aropaoanui**	**3.04**	**69**	P	**Pn**	**06 41 59.1**	**+1.1**
OXZ	**Oxford**	**3.05**	**198**	P	**Pn**	**06 41 59.0**	**+0.9**
MTHZ	**Maungataniwha**	**3.12**	**61**	P	**Pn**	**06 41 59.8**	**+0.7**
TOZ	**Tahuroa Road**	**3.17**	**33**	P	**Pn**	**06 42 01.1**	**+1.4**
WVZ	**Waitaha Valley**	**3.29**	**216**	P	**Pn**	**06 42 02.4**	**+1.4**
MUGZ	**Murupara**	**3.29**	**55**	P	**Pn**	**06 42 01.6**	**+0.5**
OKCZ	**Okains Bay**	**3.30**	**184**	P	**Pn**	**06 42 02.3**	**+1.1**
MQZ	**McQueen's Vall**	**3.31**	**189**	P	**Pn**	**06 42 01.9**	**+0.6**
RTZ	**Ruatahuna**	**3.34**	**58**	P	**Pn**	**06 42 02.3**	**+0.5**
RACZ	**Rakaia**	**3.41**	**195**	P	**Pn**	**06 42 03.6**	**+1.0**
AKCZ	**Akaroa Harbour**	**3.45**	**185**	P	**Pn**	**06 42 04.7**	**+1.6**
SNGZ	**Shannon Statio**	**3.49**	**63**	P	**Pn**	**06 42 04.6**	**+0.9**
URZ	**Urewera**	**3.63**	**55**	P	**Pn**	**06 42 05.4**	**0.0**
URZ	**Urewera**	**3.63**	**55**	P	**Pn**	**06 42 05.3**	**-0.1**
GCSZ	**Gaunt Creek Bo**	**3.66**	**217**	P	**Pn**	**06 42 07.2**	**+1.5**
WACZ	**Wakanui South**	**3.68**	**197**	P	**Pn**	**06 42 07.2**	**+1.2**
RAGZ	**Rawiri**	**3.69**	**60**	P	**Pn**	**06 42 06.8**	**+0.6**
RPZ	**Rata Peaks**	**3.70**	**207**	P	**Pn**	**06 42 07.7**	**+1.5**
RPZ	**Rata Peaks**	**3.70**	**207**	P	**Pn**	**06 42 07.9**	**+1.7**
MHGZ	**Mahia Peninsul**	**3.73**	**71**	P	**Pn**	**06 42 07.8**	**+1.1**
PRGZ	**Paritu Road**	**3.81**	**68**	P	**Pn**	**06 42 08.2**	**+0.6**
RIGZ	**Rimuhau**	**3.82**	**65**	P	**Pn**	**06 42 08.3**	**+0.5**
MWZ	**Matawai**	**3.85**	**58**	P	**Pn**	**06 42 08.4**	**+0.2**
ARCZ	**Arundel**	**3.87**	**204**	P	**Pn**	**06 42 09.2**	**+0.9**
TKGZ	**Te Karaka**	**4.01**	**62**	P	**Pn**	**06 42 10.9**	**+0.7**
FOZ	**Fox Glacier**	**4.07**	**219**	P	**Pn**	**06 42 12.3**	**+1.5**
RUGZ	**Raukumara Rang**	**4.17**	**55**	P	**Pn**	**06 42 11.9**	**-0.4**
TWGZ	**Tauwhareparae**	**4.24**	**59**	P	**Pn**	**06 42 13.8**	**+0.6**
TMZ	**Timaru**	**4.31**	**203**	P	**Pn**	**06 42 15.3**	**+1.3**
HAZ	**Te Kaha**	**4.36**	**54**	P	**Pn**	**06 42 13.9**	**-0.8**
PKGZ	**Pakihiroa**	**4.47**	**57**	P	**Pn**	**06 42 16.3**	**+0.2**
PUZ	**Puketiti**	**4.48**	**60**	P	**Pn**	**06 42 16.2**	**0.0**
JCZ	**Jackson Bay**	**4.97**	**221**	P	**Pn**	**06 42 23.7**	**+1.1**
ODZ	**Otahua Downs**	**5.02**	**202**	P	**Pn**	**06 42 24.3**	**+1.1**
ODZ	**Otahua Downs**	**5.02**	**202**	P	**Pn**	**06 42 24.4**	**+1.2**
WKZ	**Wanaka**	**5.43**	**215**	P	**Pn**	**06 42 28.9**	**+0.3**

*IDC **07** 06:41:13.4±0.8,14°.04N×145°.20E,h117km±7km,mb3.2/6, mbtmp3.6/6,Error ellipse: s-maj=50.5km s-min=20.4km az=108.0*

*NEIC **07** 06:41:14.8±1.1,13°.94N±0°.08×145°.1E±0°.1,h127km±7km, mb4.3/14,Error ellipse: s-maj=20.8km s-min=8.7km az=111.0*

ISC 07 06:41:14.2±0.6,13°.95N±0°.10×145°.2E±0°.1,h125km,n25, σ0s58/27,mb4.2/13,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam** comp=Z,35nm,18.7s,baz=292,slow=17	**0.46**	**219**	LR	LR	06 41 22.7	
GUMO	1μm,0.3s,baz=44,slow=1.0,SNR=155			P	**Pn**	**06 41 33.1**	**+0.6**
GUMO	2μm,0.3s,baz=339,slow=24,SNR=15			S	**Sn**	**06 41 46.2**	**-0.1**
GUMO	**Guam**	**0.46**	**219**	Pn	**Pn**	**06 41 33.1**	**+0.6**
GUMO				Sn	**Sn**	**06 41 46.5**	**+0.2**
PATS	**Pohnpei**	**14.73**	**117**	Pn	**Pn**	**06 44 37.1**	**+0.5**

Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**5.79**	**162**	P	**P**	**06 51 16.8**	**+0.2**
GLKZ				S	**S**	**06 52 33.7**	**-1.3**
MSVF	**Nonsavu**	**6.26**	**342**	P	**P**	**06 51 20.3**	**-1.0**
	18nm,0.5s,baz=188,slow=4.5,SNR=16						
MSVF	**Nonsavu**	**6.26**	**342**	P	**P**	**06 51 20.8**	**-0.5**
DGTI	**Dogotuki**	**7.40**	**358**	P	**P**	**06 51 32.3**	**0.0**
MARNC	**Mare, Loyalty**	**11.34**	**279**	P	**P**	**06 52 13.1**	**+0.5**
OUENC	**Ouen Island, N**	**12.24**	**274**	P	**P**	**06 52 22.5**	**+0.6**
AFI	**Afiamalu**	**12.45**	**40**	P	**P**	**06 52 22.8**	**-1.5**
	42nm,0.8s,baz=47,slow=14,SNR=3.7						
DZM	**Mont Dzumac**	**12.66**	**275**	P	**P**	**06 52 26.6**	**+0.2**
	16nm,1.0s,baz=248,slow=15,SNR=8.2						
DZM	**Mont Dzumac**	**12.66**	**275**	P	**P**	**06 52 30.1**	**+3.7**
WCZ	**Waipu Caves**	**13.13**	**201**	P	**P**	**06 52 34.7**	**+3.7**
MXZ	**Matakaoa Point**	**13.87**	**186**	P	**P**	**06 52 40.5**	**+1.9**
HAZ	**Te Kaha**	**14.11**	**187**	P	**P**	**06 52 42.3**	**+1.2**
HAZ				S	**S**	**06 55 07.1**	**-2.8**
PKGZ	**Pakihiroa**	**14.21**	**186**	P	**P**	**06 52 43.3**	**+1.0**
PKGZ				S	**S**	**06 55 10.1**	**-1.8**
RUGZ	**Raukumara Rang**	**14.33**	**188**	P	**P**	**06 52 43.8**	**+0.2**
RUGZ				S	**S**	**06 55 19.1**	**+4.8**
TWGZ	**Tauwhareparae**	**14.51**	**187**	P	**P**	**06 52 45.3**	**0.0**
TWGZ				S	**S**	**06 55 18.2**	**+0.7**
KARZ	**Kaharoa**	**14.61**	**192**	P	**P**	**06 52 50.1**	**+3.7**
URZ	**Urewera**	**14.70**	**189**	P	**P**	**06 52 46.1**	**-1.2**
	26nm,0.5s,baz=27,slow=2.4,SNR=35						
URZ				S	**S**	**06 55 18.7**	**-2.4**
	27nm,0.7s,baz=226,slow=20,SNR=9.0						
URZ	**Urewera**	**14.70**	**189**	P	**P**	**06 52 45.8**	**-1.5**
URZ				S	**S**	**06 55 18.6**	**-2.4**
URZ	**Urewera**	**14.70**	**189**	P	**P**	**06 52 46.1**	**-1.2**
URZ				S	**S**	**06 55 17.8**	**-3.2**
MWZ	**Matawai**	**14.71**	**188**	P	**P**	**06 52 47.2**	**-0.3**
MWZ				S	**S**	**06 55 18.9**	**-2.6**
TKGZ	**Te Karaka**	**14.78**	**187**	P	**P**	**06 52 49.3**	**+1.1**
TKGZ				S	**S**	**06 55 20.9**	**-1.7**
CNGZ	**Carnagh Statio**	**14.79**	**186**	P	**P**	**06 52 45.9**	**-2.4**
KOUNC	**Koumac, New Ca**	**14.96**	**279**	P	**P**	06 52 45.9	-4.3
RIGZ	**Rimuhau**	**15.05**	**187**	P	**P**	**06 52 50.8**	**-0.3**
RIGZ				S	**S**	**06 55 26.5**	**-1.3**
HIZ	**Hauiti**	**15.39**	**196**	P	**P**	**06 52 59.0**	**+4.5**
BKZ	**Black Stump Fm**	**15.68**	**190**	P	**P**	**06 52 55.8**	**-1.8**
BKZ				IAmb	IAmb	06 53 01.4	
	comp=Z,15nm,0.6s						
BKZ					**S**	**06 55 36.3**	**-2.7**
BFZ	**Birch Farm**	**17.20**	**190**	P	**P**	**06 53 11.3**	**-0.9**
QRZ	**Quartz Range**	**18.18**	**199**	P	**P**	**06 53 22.7**	**+1.6**
PLWZ	**Palliser**	**18.23**	**192**	P	**P**	**06 53 21.6**	**-0.1**
TUWZ	**Tuamarina**	**18.38**	**195**	P	**P**	**06 53 23.0**	**+0.2**
KHZ	**Kahutara**	**19.41**	**195**	P	**P**	**06 53 34.4**	**+2.2**
LTZ	**Lake Taylor**	**20.07**	**197**	P	**P**	**06 53 38.9**	**+0.7**
OXZ	**Oxford**	**20.64**	**197**	P	**P**	**06 53 43.3**	**0.0**
RPZ	**Rata Peaks**	**21.27**	**198**	P	**P**	**06 53 51.0**	**+1.9**
	comp=Z,11nm,0.6s,baz=316,slow=1.7,SNR=9.3						
	comp=Z,11nm,0.6s						
RPZ	**Rata Peaks**	**21.27**	**198**	P	**P**	**06 53 51.0**	**+1.9**
RPZ	**Rata Peaks**	**21.27**	**198**	IAmb	IAmb	06 53 56.8	
	comp=Z,42nm,1.3s						
HNR	**Honiara**	**23.91**	**303**	P	**P**	**06 54 12.0**	**-1.0**
	comp=Z,70nm,0.5s,baz=169,slow=21,SNR=1.5						
	comp=Z,70nm,0.5s						
HNR	**Honiara**	**23.91**	**303**	IAmb	IAmb	06 54 17.8	
	comp=Z,94nm,0.9s						
EIDS	**Eidsvold**	**26.39**	**260**	P	**P**	**06 54 35.3**	**+0.4**
EIDS	**Eidsvold**	**26.39**	**260**	P	**P**	**06 54 35.8**	**+0.9**
RK1H	**Rockhampton Ha**	**27.09**	**265**	P	**P**	**06 54 41.6**	**+0.5**
RMQ	**Roma**	**28.44**	**258**	P	**P**	**06 54 54.2**	**+1.3**
CMSA	**Cobar Meteorol**	**31.33**	**248**	P	**P**	**06 55 18.9**	**+1.1**
CTA	**Charters Tower**	**31.53**	**270**	P	**P**	**06 55 20.3**	**+0.6**
	comp=Z,109nm,0.4s,baz=94,slow=10,SNR=309						
CTA				ScP	**ScP**	**07 00 52.2**	**+3.1**
	comp=Z,2.9nm,0.8s,baz=146,slow=5.1,SNR=5.8						
CTA	**Charters Tower**	**31.53**	**270**	P	**P**	**06 55 20.3**	**+0.6**
CTAO	**Charters Tower**	**31.53**	**270**	P	**P**	**06 55 20.0**	**+0.3**
CTAO	**Charters Tower**	**31.53**	**270**	P	**P**	**06 55 20.3**	**+0.6**
QLP	**Quilpie**	**32.49**	**257**	P	**P**	**06 55 28.4**	**+0.7**
MTSU	**Mount Surprise**	**33.79**	**273**	P	**P**	**06 55 39.5**	**+0.7**
PMG	**Port Moresby**	**34.49**	**289**	P	**P**	**06 55 44.7**	**-0.1**
	comp=Z,71nm,0.7s,baz=106,slow=5.4,SNR=24						
	comp=Z,71nm,0.7s						
PMG	**Port Moresby**	**34.49**	**289**	P	**P**	**06 55 44.5**	**-0.3**
PMG	**Port Moresby**	**34.49**	**289**	P	**P**	**06 55 44.7**	**-0.1**
STKA	**Stephens Creek**	**34.84**	**248**	P	**P**	**06 55 48.0**	**+0.6**
	comp=Z,7.5nm,0.5s,baz=96,slow=11,SNR=18						
	comp=Z,7.5nm,0.5s						
STKA	**Stephens Creek**	**34.84**	**248**	P	**P**	**06 55 47.9**	**+0.5**
INKA	**Innaminka**	**35.54**	**255**	P	**P**	**06 55 54.4**	**+1.1**
COEN	**Coen**	**36.15**	**279**	P	**P**	**06 55 58.8**	**+0.3**
COEN				IAmb	IAmb	06 55 59.9	
	comp=Z,14nm,0.8s						
COEN	**Coen**	**36.15**	**279**	P	**P**	**06 55 59.0**	**+0.5**
HTT	**Hallett**	**37.19**	**246**	P	**P**	**06 56 07.4**	**+0.4**
QIS	**Mount Isa**	**37.52**	**267**	P	**P**	**06 56 09.7**	**-0.1**
LCRK	**Leigh Creek**	**37.69**	**250**	P	**P**	**06 56 11.4**	**+0.4**
NAPP	**Napperby**	**37.83**	**246**	P	**P**	**06 56 12.6**	**+0.5**
WHYH	**Whyalla**	**38.30**	**246**	P	**P**	**06 56 16.3**	**+0.4**
BBOO	**Buckleboo**	**39.56**	**247**	P	**P**	**06 56 25.8**	**-0.3**
BBOO				IAmb	IAmb	06 56 26.9	
	comp=Z,17nm,0.9s						
OOD	**Oodnadatta**	**40.01**	**255**	P	**P**	**06 56 30.9**	**+1.1**
MULG	**Mulgathing**	**41.29**	**251**	P	**P**	**06 56 40.0**	**+0.1**
AS31	**Alice Springs**	**42.12**	**260**	P	**P**	**06 56 46.8**	**+0.1**
AS31				IAmb	IAmb	06 56 47.7	
	comp=Z,12nm,0.5s						
ASAR	**Alice Springs**	**42.12**	**260**	P	**P**	**06 56 46.6**	**-0.1**
	comp=Z,34nm,0.8s,baz=101,slow=7.2,SNR=210						
ASAR				ScP	**ScP**	**07 01 32.0**	**+3.1**
	comp=Z,8.2nm,0.7s,baz=107,slow=4.0,SNR=32						
ASAR				S	**S**	**07 02 26.7**	**-1.3**
	comp=Z,0.5nm,0.7s,baz=90,slow=16,SNR=4.2						
	comp=Z,34nm,0.8s						
ASAR	**Alice Springs**	**42.12**	**260**	P	**P**	**06 56 46.7**	**0.0**
ASAR				ScP	**ScP**	**07 01 30.9**	**+2.1**
WR0	**Warramunga Arr**	**42.29**	**266**	P	**P**	**06 56 47.4**	**-0.6**
WB2	**Warramunga Arr**	**42.46**	**266**	P	**P**	**06 56 49.0**	**-0.4**
WB0	**Warramunga Arr**	**42.47**	**266**	P	**P**	**06 56 48.9**	**-0.5**
WRAB	**Tennant Creek**	**42.47**	**266**	P	**P**	**06 56 48.9**	**-0.5**
WRAB	**Tennant Creek**	**42.47**	**266**	P	**P**	**06 56 48.8**	**-0.6**
WRA	**Warramunga Arr**	**42.48**	**266**	P	**P**	**06 56 49.0**	**-0.5**
	comp=Z,40nm,0.5s,baz=103,slow=8.4,SNR=165						
WRA				ScP	**ScP**	**07 01 31.9**	**+1.6**
	comp=Z,4.6nm,0.9s,baz=98,slow=4.3,SNR=19						
WRA				S	**S**	**07 02 30.3**	**-2.9**
	comp=Z,1.4nm,0.8s,baz=99,slow=14,SNR=6.0						
	comp=Z,40nm,0.5s						
WRA	**Warramunga Arr**	**42.48**	**266**	IAmb	IAmb	06 56 49.5	
	comp=Z,3.6nm,0.7s						
GENI	**Genyem**	**43.91**	**293**	P	**P**	**06 57 00.2**	**-0.5**
	comp=Z,76nm,0.9s						
SMPI	**Sarmi**	**45.47**	**292**	P	**P**	**06 57 11.6**	**-1.1**
	comp=Z,17nm,1.2s						
KDU	**Kakadu**	**46.33**	**275**	P	**P**	**06 57 18.5**	**-0.7**
FORT	**Forrest**	**46.42**	**249**	P	**P**	**06 57 19.4**	**-0.3**
FORT	**Forrest**	**46.42**	**249**	P	**P**	**06 57 19.3**	**-0.5**
WRKA	**Warakurna**	**46.93**	**257**	P	**P**	**06 57 23.6**	**-0.1**
MTN	**Manton Dam**	**47.50**	**274**	P	**P**	**06 57 27.1**	**-1.0**
MTN	**Manton Dam**	**47.50**	**274**	P	**P**	**06 57 27.3**	**-0.8**
KNRA	**Kununurra**	**48.74**	**270**	P	**P**	**06 57 37.4**	**+0.1**
KNRA	**Kununurra**	**48.74**	**270**	P	**P**	**06 57 37.6**	**+0.2**
KHLU	**Kahalu`u**	**49.03**	**31**	P	**P**	**06 57 38.9**	**-0.6**
HPAH	**Hawaii Prepara**	**49.50**	**31**	P	**P**	**06 57 42.5**	**-0.3**
MHA	**Mahukona**	**49.54**	**30**	P	**P**	**06 57 43.0**	**-0.1**
FAKI	**Fak Fak**	**50.59**	**287**	P	**P**	**06 57 50.3**	**-0.6**
FAKI	**Fak Fak**	**50.59**	**287**	P	**P**	**06 57 49.2**	**-1.8**
	comp=Z,36nm,1.1s						
FAKI	**Fak Fak**	**50.59**	**287**	P	**P**	**06 57 51.1**	**+0.1**
SWI	**Sorong**	**52.45**	**288**	P	**P**	**06 58 03.0**	**-1.4**
	comp=Z,142nm,0.7s						
SOEI	**Soe**	**54.89**	**275**	P	**P**	**06 58 21.3**	**-0.5**
SOEI	**Soe**	**54.89**	**275**	P	**P**	**06 58 21.8**	**0.0**
	comp=Z,68nm,1.0s						
SOEI	**Soe**	**54.89**	**275**	P	**P**	**06 58 22.9**	**+1.1**
PSA00	**Pilbara Seismi**	**55.25**	**259**	P	**P**	**06 58 22.7**	**-1.4**
BATI	**Baumata**	**55.27**	**274**	P	**P**	**06 58 23.3**	**-1.1**
	comp=Z,42nm,0.6s						
NWAO	**Narrogin (SRO)**	**55.36**	**245**	P	**P**	**06 58 22.7**	**-2.0**
MBWA	**Marble Bar**	**55.46**	**260**	P	**P**	**06 58 24.6**	**-1.0**
MBWA				IAmb	IAmb	06 58 44.8	
	comp=Z,64nm,1.4s						
SANI	**Sanana**	**56.52**	**284**	P	**P**	**06 58 31.4**	**-1.6**
	comp=Z,22nm,0.7s						
SANI	**Sanana**	**56.52**	**284**	P	**P**	**06 58 34.0**	**+1.0**
MORW	**Morawa**	**56.99**	**250**	P	**P**	**06 58 35.7**	**-0.3**
EDFI	**Ende, Flores**	**57.62**	**275**	P	**P**	**06 58 39.6**	**-1.1**
	comp=Z,29nm,0.8s						
CASY	**Casey**	**60.29**	**206**	P	**P**	**06 58 58.0**	**+0.4**
BKSI	**Bulukumba**	**60.40**	**278**	P	**P**	**06 58 57.7**	**-1.5**
	comp=Z,29nm,0.8s						
BNSI	**Bone**	**60.79**	**279**	P	**P**	**06 59 00.8**	**-1.0**
	comp=Z,24nm,0.7s						
PLAI	**Plampang**	**61.17**	**273**	P	**P**	**06 59 04.8**	**+0.5**
TOLI2	**Tolitoli**	**62.59**	**284**	P	**P**	**06 59 12.6**	**-0.9**
TOLI2	**Tolitoli**	**62.59**	**284**	P	**P**	**06 59 12.8**	**-0.7**
MPSI	**Mapaga**	**63.03**	**283**	P	**P**	**06 59 15.1**	**-1.2**
QSPA	**South Pole Qui**	**66.35**	**180**	P	**P**	**06 59 38.2**	**+1.6**
QSPA				IAmb	IAmb	06 59 40.1	
	comp=Z,8.2nm,0.9s						
JOW	**Kunigami**	**70.92**	**312**	P	**P**	**07 00 05.3**	**+0.6**
MJAR	**Matsushiro Arr**	**71.79**	**326**	P	**P**	**07 00 09.1**	**-0.5**
	comp=Z,1.0nm,0.3s,baz=111,slow=9.9,SNR=7.5						
	comp=Z,1.0nm,0.3s						
KSM	**Kuching**	**72.13**	**280**	P	**P**	**07 00 11.8**	**-0.2**
SMAI	**San Martin Ant**	**76.24**	**159**	P	**P**	**07 00 34.5**	**+0.2**
SMAI				IAmb	IAmb	07 00 36.7	
	comp=Z,11nm,0.9s						
BELA	**Belgrano 2**	**76.59**	**173**	P	**P**	**07 00 36.0**	**-0.1**
KSCHJ	**Chungju**	**77.73**	**320**	P	**P**	**07 00 42.0**	**-0.9**
KSCHJ				IAmb	IAmb	07 00 43.0	
	comp=Z,12nm,0.8s						
KSRS	**Korea Array**	**78.16**	**320**	P	**P**	**07 00 46.0**	**+1.0**
	comp=Z,1.5nm,0.7s,baz=131,slow=5.1,SNR=6.9						
	comp=Z,1.5nm,0.7s						
NJ2	**Nanjing**	**80.59**	**311**	*e*P	**P**	**07 00 56.8**	**-1.3**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
PMPB	**Monarch Peak**	**81.68**	**45**	IAmb	IAmb	07 01 05.9	
	comp=Z,18nm,1.2s						
BCW	**Bitter Crk WRg**	**81.82**	**46**	IAmb	IAmb	07 01 06.7	
	comp=Z,9.8nm,0.7s						
ISA	**Isabella, Lake**	**82.86**	**46**	IAmb	IAmb	07 01 11.6	
	comp=Z,10nm,0.8s						
CMB	**Columbia Colle**	**83.04**	**43**	P	**P**	**07 01 10.8**	**+0.2**
CMB				IAmb	IAmb	07 01 12.1	
	comp=Z,8.9nm,0.8s						
PFO	**Pinyon Flats O**	**83.05**	**49**	P	**P**	**07 01 11.7**	**+0.9**
	comp=Z,1.6nm,0.6s,baz=209,slow=5.5,SNR=2.4						
	comp=Z,1.6nm,0.6s						
PFO	**Pinyon Flats O**	**83.05**	**49**	IAmb	IAmb	07 01 13.5	
	comp=Z,3.9nm,1.1s						
MDPB	**Devils Postpil**	**83.63**	**44**	IAmb	IAmb	07 01 15.5	
	comp=Z,7.4nm,1.0s						
OMMB	**Old Mammoth Mi**	**83.67**	**44**	P	**P**	**07 01 15.1**	**+1.1**
GSC	**Goldstone, Bar**	**83.77**	**47**	IAmb	IAmb	07 01 16.0	
	comp=Z,6.3nm,0.9s						
EMB	**Emerald Bay**	**83.78**	**43**	IAmb	IAmb	07 01 16.1	
	comp=Z,7.4nm,0.9s						
GLA	**Glamis**	**83.88**	**50**	IAmb	IAmb	07 01 17.4	
	comp=Z,14nm,0.8s						
YBH	**Yreka Blue Hor**	**83.92**	**39**	P	**P**	**07 01 16.1**	**+1.2**
	comp=Z,3.9nm,0.9s,baz=174,slow=3.3,SNR=7.1						
	comp=Z,3.9nm,0.9s						
YBH	**Yreka Blue Hor**	**83.92**	**39**	IAmb	IAmb	07 01 16.7	
	comp=Z,6.2nm,0.9s						
MPK	**Martis Peak**	**84.02**	**42**	IAmb	IAmb	07 01 17.6	
	comp=Z,13nm,1.1s						
PNTR	**Pine Nut**	**84.17**	**43**	P	**P**	**07 01 16.9**	**+0.6**
PNTR				IAmb	IAmb	07 01 18.7	
	comp=Z,13nm,0.9s						
VCNR	**Virginia City**	**84.26**	**43**	P	**P**	**07 01 16.0**	**-0.8**
113A	**Mohawk Valley,**	**84.47**	**51**	IAmb	IAmb	07 01 19.9	
	comp=Z,7.8nm,1.1s						
HSIG		**84.57**	**55**	IAmb	IAmb	07 01 20.2	
	comp=Z,11nm,0.8s						
NVAR	**Mina Array Bea**	**84.59**	**44**	P	**P**	**07 01 19.2**	**+0.8**
	comp=Z,1.9nm,0.7s,baz=223,slow=7.8,SNR=17						
	comp=Z,1.9nm,0.7s						
PRN	**Pahroc Range**	**86.12**	**46**	IAmb	IAmb	07 01 27.9	
	comp=Z,6.7nm,0.9s						
PINE	**Pine Mountain**	**86.22**	**38**	IAmb	IAmb	07 01 27.9	
	comp=Z,6.7nm,0.8s						
TUC	**Tucson**	**86.37**	**52**	P	**P**	**07 01 27.7**	**+0.8**
TUC				IAmb	IAmb	07 01 29.7	
	comp=Z,9.2nm,0.8s						
BMN	**Battle Mountai**	**86.44**	**43**	IAmb	IAmb	07 01 28.7	
	comp=Z,5.0nm,0.8s						
WVOR	**Wild Horse Val**	**86.75**	**41**	IAmb	IAmb	07 01 30.4	
	comp=Z,8.4nm,1.1s						
X16A	**Lo Ilia Camp, P**	**86.99**	**50**	IAmb	IAmb	07 01 32.3	
	comp=Z,4.8nm,0.9s						
LCMT	**Little Creek M**	**87.11**	**47**	IAmb	IAmb	07 01 32.3	
	comp=Z,4.5nm,0.9s						
I07A	**Izee**	**87.22**	**39**	P	**P**	**07 01 29.1**	**-1.6**
I07A				IAmb	IAmb	07 01 32.8	
	comp=Z,10nm,1.0s						
J08A	**Circle Bar Ran**	**87.39**	**40**	IAmb	IAmb	07 01 33.4	
	comp=Z,15nm,1.2s						
U15A	**North Rim**	**87.45**	**48**	IAmb	IAmb	07 01 34.5	
	comp=Z,9.4nm,0.8s						
WUAZ	**Wupatki**	**87.61**	**49**	IAmb	IAmb	07 01 34.9	
	comp=Z,5.4nm,1.1s						
HPIG		**87.62**	**59**	IAmb	IAmb	07 01 34.9	
	comp=Z,6.1nm,0.7s						
L19K	**White Mountain**	**87.94**	**11**	IAmb	IAmb	07 01 34.5	
	comp=Z,5.5nm,0.9s						
PKCU	**Pink Cliffs**	**87.97**	**47**	IAmb	IAmb	07 01 37.5	
	comp=Z,9.1nm,0.8s						
X18A	**Snowflake**	**88.10**	**51**	IAmb	IAmb	07 01 37.2	
	comp=Z,3.5nm,0.7s						
G08A	**Pilot Rock**	**88.26**	**38**	P	**P**	**07 01 35.5**	**-0.1**
G08A				IAmb	IAmb	07 01 37.4	
	comp=Z,8.6nm,0.9s						
MTPU	**Mount Pierson**	**88.38**	**47**	IAmb	IAmb	07 01 39.2	
	comp=Z,5.4nm,0.8s						
LTY	**Liberty**	**88.51**	**36**	IAmb	IAmb	07 01 37.9	
	comp=Z,5.4nm,0.8s						
MVU	**Marysvale**	**88.60**	**47**	IAmb	IAmb	07 01 39.3	
	comp=Z,10nm,0.8s						
HAWA	**Hanford**	**88.60**	**37**	P	**P**	**07 01 36.7**	**-0.3**
HAWA				IAmb	IAmb	07 01 38.9	
	comp=Z,6.8nm,0.8s						
MFID	**Camas Ranch**	**89.00**	**41**	IAmb	IAmb	07 01 40.8	
	comp=Z,9.2nm,0.9s						
Q16A	**Castle Valley**	**89.51**	**47**	IAmb	IAmb	07 01 44.7	
	comp=Z,5.6nm,0.9s						
CMAR	**Chiang Mai Arr**	**89.52**	**290**	P	**P**	**07 01 43.1**	**+1.2**
	comp=Z,1.5nm,0.3s,baz=137,slow=3.4,SNR=9.4						
	comp=Z,1.5nm,0.3s						
CAST	**Castle Rocks**	**89.59**	**12**	IAmb	IAmb	07 01 40.6	
	comp=Z,3.2nm,0.8s						
F10A	**Beach Ranch, E**	**89.64**	**38**	IAmb	IAmb	07 01 43.0	
	comp=Z,5.2nm,0.9s						
HLID	**Hailey**	**89.93**	**41**	IAmb	IAmb	07 01 45.4	
	comp=Z,3.8nm,0.8s						
HVU	**Hansel Valley**	**89.98**	**44**	IAmb	IAmb	07 01 45.3	
	comp=Z,7.1nm,0.7s						
TRF	**Thorofare Moun**	**89.98**	**13**	IAmb	IAmb	07 01 43.9	
	comp=Z,5.0nm,0.9s						
MNTX	**Cornudas Mount**	**90.07**	**55**	IAmb	IAmb	07 01 46.2	
	comp=Z,5.3nm,1.0s						
JLU	**Jordanelle**	**90.20**	**45**	IAmb	IAmb	07 01 46.5	
	comp=Z,3.7nm,0.8s						
TX32	**Lajitas Array**	**90.29**	**58**	IAmb	IAmb	07 01 47.6	
	comp=Z,5.2nm,0.8s						
TXAR	**Lajitas Array, P**	**90.29**	**58**	P	**P**	**07 01 46.8**	**+1.4**
	comp=Z,4.1nm,0.7s,baz=214,slow=6.4,SNR=57						
	comp=Z,4.1nm,0.7s						
P18A	**Preston Nutter**	**90.49**	**46**	IAmb	IAmb	07 01 47.8	
	comp=Z,4.4nm,0.8s						
HWUT	**Hardware Ranch**	**90.66**	**44**	IAmb	IAmb	07 01 48.0	
	comp=Z,4.7nm,0.7s						
ANMO	**Albuquerque**	**90.81**	**52**	P	**P**	**07 01 47.5**	**-0.2**
ANMO				IAmb	IAmb	07 01 49.3	
	comp=Z,4.5nm,1.2s						
RDMU	**Red Mountain**	**91.42**	**46**	IAmb	IAmb	07 01 51.3	
	comp=Z,3.7nm,0.8s						
ILAR	**Eielson Array**	**91.86**	**14**	P	**P**	**07 01 50.3**	**-1.2**
	comp=Z,0.3nm,0.6s,baz=231,slow=5.3,SNR=4.8						
	comp=Z,0.3nm,0.6s						
S22A	**4UR Ranch, Cre**	**91.88**	**49**	IAmb	IAmb	07 01 54.5	
	comp=Z,5.8nm,1.0s						
REDW	**Red Top Meadow**	**92.02**	**43**	IAmb	IAmb	07 01 54.8	
	comp=Z,6.6nm,1.2s						
SMCO	**Snowmass**	**92.47**	**48**	IAmb	IAmb	07 01 56.8	
	comp=Z,3.1nm,0.9s						
PDAR	**Pinedale Array**	**92.53**	**44**	P	**P**	**07 01 55.6**	**+0.1**
	comp=Z,1.5nm,0.7s,baz=213,slow=4.5,SNR=12						
	comp=Z,1.5nm,0.7s						
GOMU	**GeErMu**	**100.02**	**305**	Pdif	**Pdif**	**07 02 29.1**	**-0.4**
GOMU				AMB	AMB		
	comp=Z,47nm,5.1s						
MKAR	**Makanchi Array**	**112.08**	**313**	SKP		07 10 01.2	
	comp=Z,0.4nm,0.7s,baz=72,slow=1.9,SNR=4.8						
ARCES	**ARCESS Array B**	**131.74**	**348**	PKP	**PKPdf**	**07 07 53.1**	**+0.5**
	comp=Z,1.9nm,0.8s,baz=48,slow=1.8,SNR=5.2						
ARCES				SKPbc	**SKPab**	**07 10 31.9**	**+1.8**
	comp=Z,2.0nm,0.7s,baz=339,slow=1.7,SNR=5.3						
FINES	**FINESS Array B**	**138.31**	**342**	SKPbc	**SKPbc**	**07 10 50.0**	**+0.6**
	comp=Z,3.7nm,0.8s,baz=17,slow=1.9,SNR=9.2						
NOA	**NORSAR Array B**	**141.93**	**351**	SKPbc	**SKPbc**	**07 10 59.5**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=13,slow=4.1,SNR=4.5						
AKASG	**Malin Array Be**	**144.86**	**327**	PKP	**PKPdf**	**07 08 17.2**	**+0.2**
AKASG				SKPbc	**SKPbc**	**07 11 07.3**	**+1.1**
	comp=Z,1.3nm,0.5s,baz=38,slow=4.9,SNR=9.4						
	comp=Z,1.8nm,0.7s,baz=39,slow=3.0,SNR=10						
BRTR	**Keskin Array B**	**147.52**	**307**	PKPbc	**PKiKP**	**07 08 28.2**	**+1.1**
	comp=Z,2.1nm,0.6s,baz=76,slow=4.7,SNR=6.1						
CLL	**Collm**	**150.71**	**343**	*i* PKPbc	**PKPbc**	**07 08 32.8**	**+0.1**
	comp=Z,4.0nm,0.8s						
TORD	**Torodi Ar. Bea**	**169.36**	**189**	PKP	**PKPdf**	**07 08 46.8**	**-1.1**
	comp=Z,0.6nm,0.8s,baz=212,slow=1.6,SNR=3.6						
TORD				PKPab	**PKPab**	**07 10 04.0**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=189,slow=3.8,SNR=4.7						

IPEC ***07*** *06:52:46.3±0.2, 50.26°N×18.87°E, h1km, ML1.9/3, Error ellipse: s-maj=2.3km s-min=1.1km az=168.0*

VIE ***07*** *06:52:46.1±0.5, 50.29°N×18.89°E, h0km, mb2.0/3, ml2.1/2, Error ellipse: s-maj=5.2km s-min=3.1km az=172.0 7 km WNW of Katowice Suspected Mining induced.*

PRU 07 06:52:46.6±0.0, 50.27°N×18.88°E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.59**	**95**	*e*Pg	Pg	06 52 57.8	-0.2
OJC				*e*Sg	Sg	06 53 05.5	0.0
OKC	**Ostrava-Krasne**	**0.64**	**228**	*e*PG	Pg	06 52 59.0	+0.1
OKC				*e*SG	Sg	06 53 08.2	+1.1
	comp=Z,22nm,0.3s						
MORC	**Moravsky Berou**	**0.99**	**241**	*e*Pg	Pg	06 53 05.3	-0.3
	baz=60						
MORC				*e*Sg	Sg	06 53 17.4	-1.1
	19nm,0.3s,baz=60						
MORC	**Moravsky Berou**	**0.99**	**241**	*e*PG	Pg	06 53 05.3	-0.3
MORC				*e*SG	Sg	06 53 17.5	-1.0
MAUC	**Maruska**	**1.13**	**217**	*e*PG	Pg	06 53 07.8	-0.5
MAUC				*e*SG	Sg	06 53 23.1	+0.1
	comp=Z,102nm,1.1s						
LANS	**Liptovska Anna**	**1.18**	**161**	*e*PG	Pg	06 53 08.9	-0.4
LANS				*e*SG	Sg	06 53 24.6	0.0
LANS				*e*LG	Lg	06 53 26.8	
NIE	**Niedzica**	**1.25**	**132**	*e*Pg	Pg	06 53 09.6	-1.0
NIE				*e*Sg	Sg	06 53 27.0	+0.1
KRLC	**Kraliky**	**1.36**	**263**	*e*PG	Pg	06 53 11.6	-1.1
KRLC				*e*SG	Sg	06 53 29.5	-0.9
	comp=Z,21nm,0.5s						
DPC	**Dobruska-Polom**	**1.64**	**274**	*e*PG	Pn	06 53 16.2	-0.6
DPC				*e*SG	Sb	06 53 39.1	+0.1
	comp=Z,15nm,0.5s

δ62.46174°,λ165.45209°. **NP2:**φ≈162.69026°,δ77.13055°, λ28.31080°. **Principal axes:** T Plg28.9744°, Azm27.3255°; N Plg59.1232°, Azm185.1538°; P Plg9.7547°, Azm291.8630°; **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**5.53**	**11**	P	**P**	**07 04 26.6**	**-0.1**
RIZ	**Raoul Island**	**5.80**	**163**	P	**P**	**07 04 30.2**	**+1.3**
RIZ				S	S	07 05 38.0	-9.4
RAO	**Raoul Island**	**5.81**	**163**	P	**P**	**07 04 28.3**	**-0.6**
	4μm,0.3s,baz=68,slow=11,SNR=33						
RAO				S	**S**	**07 05 44.1**	**-3.4**
	3μm,0.4s,baz=77,slow=19,SNR=8.4						
RAO	**Raoul Island**	**5.81**	**163**	P	**P**	**07 04 28.0**	**-1.0**
RAO	**Raoul Island**	**5.81**	**163**	P	**P**	**07 04 29.9**	**+0.9**
RAO	**Raoul Island**	**5.81**	**163**	P	**P**	**07 04 29.8**	**+0.9**
GLKZ	**Green Lake**	**5.82**	**163**	P	**P**	**07 04 29.4**	**+0.4**
MSVF	**Nonsavu**	**6.24**	**342**	P	**P**	**07 04 32.9**	**-0.4**
	377nm,0.5s,baz=194,slow=4.5,SNR=290						
MSVF				S	**S**	**07 05 54.0**	**-1.1**
	117nm,0.9s,baz=217,slow=20,SNR=5.5						
MSVF	**Nonsavu**	**6.24**	**342**	P	**P**	**07 04 32.5**	**-0.8**
MSVF	**Nonsavu**	**6.24**	**342** *d*	*i*P	**P**	**07 04 32.7**	**-0.6**
MSVF	**Nonsavu**	**6.24**	**342**	P	**P**	**07 04 32.5**	**-0.8**
	724nm,0.7s						
TAVE	**Taveuni**	**6.96**	**360**	P	**P**	**07 04 40.5**	**+0.4**
NIUE	**Niue**	**10.37**	**66**	P	**P**	**07 05 13.7**	**-0.8**
	baz=10,SNR=12						
NIUE	**Niue**	**10.37**	**66**	P	**P**	**07 05 13.0**	**-1.6**
NIUE	**Niue**	**10.37**	**66**	P	**P**	**07 05 14.0**	**-0.6**
NIUE				S	**S**	**07 07 12.5**	**+1.5**
NIUE	**Niue**	**10.37**	**66**	P	**P**	**07 05 15.4**	**+0.8**
MARNC	**Mare, Loyalty**	**11.37**	**279**	P	**P**	**07 05 24.5**	**-0.4**
MARNC	**Mare, Loyalty**	**11.37**	**279**	P	**P**	**07 05 25.5**	**+0.6**
PINNC	**Pines Island,**	**11.69**	**273**	P	**P**	**07 05 29.5**	**+1.2**
PINNC	**Pines Island,**	**11.69**	**273**	P	**P**	**07 05 30.3**	**+2.0**
OUENC	**Ouen Island, N**	**12.27**	**273**	P	**P**	**07 05 34.4**	**+0.1**
OUENC	**Ouen Island, N**	**12.27**	**273**	P	**P**	**07 05 35.7**	**+1.3**
RTV	**Rentapao**	**12.40**	**296**	P	**P**	**07 05 36.7**	**+1.0**
AFI	**Afiamalu**	**12.40**	**40**	P	**P**	**07 05 31.7**	**-4.2**
	74nm,0.4s,baz=297,slow=2.3,SNR=14						
AFI				S	S	07 07 39.2	-11
	189nm,0.7s,baz=48,slow=21,SNR=8.9						
AFI	**Afiamalu**	**12.40**	**40**	P	**P**	**07 05 31.9**	**-4.1**
AFI	**Afiamalu**	**12.40**	**40**	P	**P**	**07 05 31.9**	**-4.1**
AFI	**Afiamalu**	**12.40**	**40**	P	**P**	**07 05 31.3**	**-4.6**
AFI				S	S	07 07 37.8	-12
AFI	**Afiamalu**	**12.40**	**40**	P	**P**	**07 05 33.1**	**-2.8**
ONTNC	**Ouen Toro**	**12.64**	**274**	P	**P**	**07 05 38.7**	**+0.5**
ONTNC	**Ouen Toro**	**12.64**	**274**	P	**P**	**07 05 39.8**	**+1.6**
DZM	**Mont Dzumac**	**12.69**	**275**	P	**P**	**07 05 38.7**	**-0.2**
	205nm,0.6s,baz=85,slow=15,SNR=75						
DZM	**Mont Dzumac**	**12.69**	**275**	P	**P**	**07 05 39.0**	**+0.1**
DZM	**Mont Dzumac**	**12.69**	**275**	P	**P**	**07 05 38.7**	**-0.2**
OUZ	**Omahuta**	**12.80**	**205**	P	**P**	**07 05 41.2**	**+1.6**
NOUC	**Port Laguerre**	**12.81**	**274**	P	**P**	**07 05 40.2**	**+0.2**
MXZ	**Matakaoa Point**	**13.90**	**186**	P	**P**	**07 05 51.3**	**+0.2**
WHRZ	**Whale Island**	**14.36**	**190**	P	**P**	**07 05 58.9**	**+3.0**
TGRZ	**Tauranga**	**14.37**	**192**	P	**P**	**07 05 57.9**	**+2.0**
LIRZ	**Lichensteins R**	**14.61**	**192**	P	**P**	**07 06 00.8**	**+2.4**
EDRZ	**Edgecumbe**	**14.65**	**191**	P	**P**	**07 06 00.1**	**+1.2**
KARZ	**Kaharoa**	**14.65**	**192**	P	**P**	**07 06 00.4**	**+1.5**
OMRZ	**Omania**	**14.71**	**192**	P	**P**	**07 06 01.1**	**+1.5**
MKRZ	**Makatiti**	**14.72**	**191**	P	**P**	**07 06 02.7**	**+3.0**
URZ	**Urewera**	**14.74**	**189**	P	**P**	**07 05 57.9**	**-1.8**
	593nm,0.5s,baz=25,slow=1.3,SNR=302						
URZ				S	**S**	**07 08 30.4**	**-3.5**
	219nm,0.7s,baz=45,slow=19,SNR=19						
URZ	**Urewera**	**14.74**	**189**	P	**P**	**07 05 58.2**	**-1.5**
NGRZ	**Ngongotaha**	**14.74**	**192**	P	**P**	**07 06 01.7**	**+1.8**
MWZ	**Matawai**	**14.75**	**188**	P	**P**	**07 05 58.8**	**-1.2**
MWZ				S	**S**	**07 08 31.3**	**-2.9**
UTU	**Utuhina**	**14.81**	**192**	P	**P**	**07 06 03.1**	**+2.5**
TKGZ	**Te Karaka**	**14.82**	**187**	P	**P**	**07 05 59.3**	**-1.3**
TKGZ				S	**S**	**07 08 32.2**	**-3.2**
CNGZ	**Carnagh Statio**	**14.83**	**186**	P	**P**	**07 06 00.4**	**-0.4**
RRRZ	**Republican Roa**	**14.91**	**191**	P	**P**	**07 06 01.9**	**+0.2**
HSRZ	**Hossack Road**	**14.93**	**192**	P	**P**	**07 06 03.6**	**+1.7**
KOUNC	**Koumac, New Ca**	**14.98**	**279**	P	**P**	**07 06 02.0**	**-0.6**
KOUNC	**Koumac, New Ca**	**14.98**	**279**	P	**P**	**07 06 02.2**	**-0.4**
GRRZ	**Galatos Road**	**15.00**	**192**	P	**P**	**07 06 04.3**	**+1.7**
HRRZ	**Handcock Road**	**15.00**	**192**	P	**P**	**07 06 02.5**	**-0.1**
MUGZ	**Murupara**	**15.00**	**190**	P	**P**	**07 06 01.3**	**-1.3**
MUGZ				S	**S**	**07 08 32.2**	**-6.6**
RIGZ	**Rimuhau**	**15.09**	**187**	P	**P**	**07 06 02.0**	**-1.6**
RIGZ				S	**S**	**07 08 35.7**	**-4.8**
TLZ	**Tolley Road**	**15.10**	**194**	P	**P**	**07 06 03.7**	**+0.1**
RTZ	**Ruatahuna**	**15.11**	**189**	P	**P**	**07 06 01.4**	**-2.4**
RTZ				S	**S**	**07 08 33.1**	**-7.8**
FUNA	**Funafuti**	**15.11**	**357**	P	**P**	**07 06 03.6**	**-0.4**
WPRZ	**Whakapapataris**	**15.15**	**192**	P	**P**	**07 06 05.4**	**+1.2**
ALRZ	**Allen Road**	**15.16**	**191**	P	**P**	**07 06 04.3**	**+0.1**
KUTZ	**Kaahu Road**	**15.19**	**193**	P	**P**	**07 06 06.1**	**+1.6**
PRGZ	**Paritu Road**	**15.29**	**187**	P	**P**	**07 06 05.6**	**0.0**
WHTZ	**Whakaora**	**15.33**	**192**	P	**P**	**07 06 08.0**	**+1.9**
MTHZ	**Maungataniwha**	**15.36**	**190**	P	**P**	**07 06 05.5**	**-0.8**
MTHZ				S	**S**	**07 08 41.9**	**-3.5**
RAHZ	**Arahi**	**15.39**	**189**	P	**P**	**07 06 04.8**	**-1.8**
RAHZ				S	**S**	**07 08 41.9**	**-3.9**
MRHZ	**Matea Rd**	**15.41**	**191**	P	**P**	**07 06 04.8**	**-2.1**
MRHZ				S	**S**	**07 08 41.9**	**-4.4**
KNZ	**Kokohu**	**15.41**	**187**	P	**P**	**07 06 05.0**	**-1.8**
WATZ	**Wairara**	**15.42**	**193**	P	**P**	**07 06 08.2**	**+1.3**
HIZ	**Hauiti**	**15.43**	**196**	P	**P**	**07 06 08.7**	**+1.7**
HIZ	**Hauiti**	**15.43**	**196**	P	**P**	**07 06 07.3**	**+0.3**
HIZ	**Hauiti**	**15.43**	**196**	P	**P**	**07 06 08.3**	**+1.3**
MHGZ	**Mahia Peninsul**	**15.52**	**189**	P	**P**	**07 06 06.9**	**-1.1**
HATZ	**Hinemaiaia**	**15.52**	**192**	P	**P**	**07 06 07.6**	**-0.4**
RATZ	**Rangitukua**	**15.56**	**193**	P	**P**	**07 06 08.8**	**+0.4**
NMHZ	**Naumai**	**15.60**	**190**	P	**P**	**07 06 07.0**	**-1.9**
NMHZ				S	**S**	**07 08 44.5**	**-5.2**
RITZ	**Rihia Road**	**15.65**	**192**	P	**P**	**07 06 09.3**	**0.0**
KATZ	**Kakaramea**	**15.68**	**193**	P	**P**	**07 06 10.8**	**+1.1**
BKZ	**Black Stump Fm**	**15.72**	**190**	P	**P**	**07 06 07.8**	**-2.3**
BKZ	**Black Stump Fm**	**15.72**	**190**	P	**P**	**07 06 08.7**	**-1.3**
BKZ	**Black Stump Fm**	**15.72**	**190**	P	**P**	**07 06 08.6**	**-1.4**
ARHZ	**Aropaoanui**	**15.74**	**189**	P	**P**	**07 06 08.1**	**-2.1**
NTVZ	**North Tongarir**	**15.81**	**193**	P	**P**	**07 06 10.5**	**-0.4**
TMVZ	**Te Maari**	**15.82**	**193**	P	**P**	**07 06 10.3**	**-0.7**
TWVZ	**Taurewa**	**15.83**	**193**	P	**P**	**07 06 11.3**	**+0.1**
ETVZ	**East Tongariro**	**15.84**	**193**	P	**P**	**07 06 10.4**	**-0.8**
WTVZ	**West Tongariro**	**15.84**	**193**	P	**P**	**07 06 10.5**	**-0.8**
NNVZ	**North Ngauruho**	**15.85**	**193**	P	**P**	**07 06 11.1**	**-0.3**
OTVZ	**Oturere**	**15.87**	**193**	P	**P**	**07 06 09.6**	**-2.1**
NGVZ	**Ngauruhoe**	**15.89**	**193**	P	**P**	**07 06 11.3**	**-0.6**
SNVZ	**South Ngauruho**	**15.90**	**193**	P	**P**	**07 06 10.5**	**-1.4**
TUVZ	**Tukino**	**15.97**	**193**	P	**P**	**07 06 11.7**	**-0.9**
WHVZ	**Whangaehu Hut**	**16.00**	**193**	P	**P**	**07 06 12.4**	**-0.6**
TRVZ	**Turoa**	**16.02**	**193**	P	**P**	**07 06 12.8**	**-0.5**
VRZ	**Vera Road**	**16.03**	**195**	P	**P**	**07 06 14.2**	**+1.1**
WNVZ	**Wahianoa**	**16.04**	**193**	P	**P**	**07 06 12.5**	**-0.9**
MOVZ	**Moawhango**	**16.09**	**192**	P	**P**	**07 06 11.9**	**-1.8**
BHHZ	**Black Hill Sta**	**16.11**	**191**	P	**P**	**07 06 11.0**	**-2.9**
CKHZ	**Cape Kidnapper**	**16.12**	**188**	P	**P**	**07 06 13.2**	**-0.7**
MTVZ	**Mangateitei**	**16.12**	**193**	P	**P**	**07 06 13.5**	**-0.6**
DREZ	**Durham Road**	**16.23**	**197**	P	**P**	**07 06 18.4**	**+3.3**
KAHZ	**Kahuranaki**	**16.28**	**189**	P	**P**	**07 06 13.9**	**-1.6**
NEZ	**North Egmont**	**16.34**	**197**	P	**P**	**07 06 18.2**	**+2.0**
KHEZ	**Kahui Hut**	**16.38**	**197**	P	**P**	**07 06 20.2**	**+3.6**
PREZ	**Palmer Road**	**16.39**	**197**	P	**P**	**07 06 21.1**	**+4.5**
NBEZ	**Newall Road No**	**16.40**	**197**	P	**P**	**07 06 19.4**	**+2.8**
LREZ	**Lake Rotokare**	**16.44**	**196**	P	**P**	**07 06 17.9**	**+0.9**
PNHZ	**Pukenui**	**16.50**	**191**	P	**P**	**07 06 15.5**	**-2.2**
NMEZ	**Namu Road**	**16.53**	**197**	P	**P**	**07 06 19.8**	**+1.9**
WAZ	**Wanganui**	**16.58**	**194**	P	**P**	**07 06 18.1**	**-0.3**
WPHZ	**Waipukurau**	**16.61**	**190**	P	**P**	**07 06 17.1**	**-1.5**
TSZ	**Takapari Road**	**16.68**	**191**	P	**P**	**07 06 16.9**	**-2.4**
PRHZ	**Porangahau**	**16.77**	**189**	P	**P**	**07 06 19.0**	**-1.2**
DVHZ	**Dannevirke**	**16.88**	**190**	P	**P**	**07 06 19.0**	**-2.2**
OHWZ	**Ohakea**	**16.95**	**193**	P	**P**	**07 06 21.3**	**-0.4**
ANWZ	**Angora Road**	**16.99**	**189**	P	**P**	**07 06 21.1**	**-1.1**
POWZ	**Post Office Ro**	**17.04**	**191**	P	**P**	**07 06 21.2**	**-1.5**
PRWZ	**Pori Road**	**17.16**	**191**	P	**P**	**07 06 23.8**	**0.0**
BFZ	**Birch Farm**	**17.24**	**190**	P	**P**	**07 06 22.8**	**-1.7**
BFZ	**Birch Farm**	**17.24**	**190**	P	**P**	**07 06 21.8**	**-2.7**
BFZ	**Birch Farm**	**17.24**	**190**	P	**P**	**07 06 23.3**	**-1.2**
MRZ	**Mangatainoka R**	**17.34**	**192**	P	**P**	**07 06 22.1**	**-3.2**
TIWZ	**Tintock**	**17.39**	**191**	P	**P**	**07 06 25.4**	**-0.6**
CPWZ	**Castlepoint**	**17.47**	**190**	P	**P**	**07 06 28.7**	**+2.1**
OGWZ	**Otaki Gorge**	**17.56**	**192**	P	**P**	**07 06 25.3**	**-2.2**
HOWZ	**Holdsworth Sta**	**17.58**	**192**	P	**P**	**07 06 26.3**	**-1.3**
TMWZ	**Te Maipa**	**17.71**	**190**	P	**P**	**07 06 27.7**	**-1.2**
DUWZ	**D'Urville Isla**	**17.83**	**195**	P	**P**	**07 06 28.5**	**-1.4**
MTW	**Mount Morrison**	**17.83**	**191**	P	**P**	**07 06 27.8**	**-2.1**
TRWZ	**Traveller**	**18.03**	**191**	P	**P**	**07 06 30.2**	**-1.5**
WEL	**Wellington**	**18.09**	**193**	P	**P**	**07 06 32.9**	**+0.7**
MSWZ	**Moikau Station**	**18.13**	**192**	P	**P**	**07 06 32.2**	**-0.4**
TCW	**Tory Channel**	**18.13**	**194**	P	**P**	**07 06 31.7**	**-0.9**
SNZO	**South Karori**	**18.13**	**193**	P	**P**	**07 06 32.0**	**-0.6**
SNZO	**South Karori**	**18.13**	**193**	P	**P**	**07 06 33.7**	**+1.1**
BHW	**Baring Head**	**18.19**	**193**	P	**P**	**07 06 32.3**	**-0.9**
QRZ	**Quartz Range**	**18.22**	**199**	P	**P**	**07 06 33.6**	**+0.1**
NNZ	**Nelson**	**18.35**	**196**	P	**P**	**07 06 33.8**	**-0.8**
TUWZ	**Tuamarina**	**18.42**	**195**	P	**P**	**07 06 33.9**	**-1.3**
CMWZ	**Cape Campbell**	**18.66**	**194**	P	**P**	**07 06 39.6**	**+2.1**
BSWZ	**Blackbirch Sta**	**18.70**	**195**	P	**P**	**07 06 37.8**	**0.0**
KHZ	**Kahutara**	**19.45**	**195**	P	**P**	**07 06 45.0**	**+0.4**
CTZ	**Chatham Island**	**20.17**	**173**	P	P	07 07 02.5	+11
LHI	**Lord Howe Isla**	**20.18**	**243**	P	**P**	**07 06 52.6**	**+1.1**
	baz=20,SNR=3.6						
LHI	**Lord Howe Isla**	**20.18**	**243**	P	**P**	**07 06 53.4**	**+1.9**
RPZ	**Rata Peaks**	**21.31**	**198**	P	**P**	**07 07 02.4**	**+1.0**
	104nm,0.6s,baz=344,slow=2.1,SNR=44						
RPZ				S	**S**	**07 10 22.4**	**0.0**
	15nm,0.8s,baz=295,slow=14,SNR=2.3						
RPZ				ScP	**ScP**	**07 13 30.7**	**+0.9**
	25nm,0.7s,baz=334,slow=1.7,SNR=5.5						
	104nm,0.6s						
ODZ	**Otahua Downs**	**22.65**	**198**	P	**P**	**07 07 16.3**	**+2.9**
HNR	**Honiara**	**23.92**	**303**	P	**P**	**07 07 23.6**	**-1.5**
	373nm,0.7s,baz=197,slow=2.4,SNR=19						
	373nm,0.7s						
HNR	**Honiara**	**23.92**	**303**	P	**P**	**07 07 23.2**	**-1.9**
HNR	**Honiara**	**23.92**	**303**	P	**P**	**07 07 25.3**	**+0.1**
WHZ	**Wether Hill Ro**	**24.23**	**201**	P	**P**	**07 07 27.6**	**+0.1**
TARA	**Tarawa**	**25.86**	**343**	P	**P**	**07 07 41.9**	**-0.4**
TARA	**Tarawa**	**25.86**	**343**	P	**P**	**07 07 42.0**	**-0.4**
	283nm,0.9s						
ARMA	**Armidale**	**26.18**	**249**	P	**P**	**07 07 46.5**	**+1.4**
	baz=26,SNR=96						
ARMA	**Armidale**	**26.18**	**249**	P	**P**	**07 07 45.9**	**+0.8**
ARMA	**Armidale**	**26.18**	**249**	P	**P**	**07 07 46.6**	**+1.5**
EIDS	**Eidsvold**	**26.43**	**260**	P	**P**	**07 07 47.7**	**+0.5**
	baz=26,SNR=145						
EIDS	**Eidsvold**	**26.43**	**260**	P	**P**	**07 07 47.7**	**+0.5**
EIDS	**Eidsvold**	**26.43**	**260**	P	**P**	**07 07 47.9**	**+0.6**
NTLH	**Newcastle Hard**	**26.56**	**243**	P	**P**	**07 07 49.4**	**+1.1**
MGCD	**Mangrove Creek**	**27.12**	**243**	P	**P**	**07 07 54.7**	**+1.5**
	baz=27,SNR=41						
MGCD	**Mangrove Creek**	**27.12**	**243**	P	**P**	**07 07 54.5**	**+1.3**
RK1H	**Rockhampton Ha**	**27.12**	**265**	P	**P**	**07 07 53.7**	**+0.3**
SYDH	**Sydney Hard Ro**	**27.54**	**242**	P	**P**	**07 07 58.0**	**+1.1**
RMQ	**Roma**	**28.48**	**258**	P	**P**	**07 08 06.7**	**+1.4**
	baz=28,SNR=42						
RMQ	**Roma**	**28.48**	**258**	P	**P**	**07 08 06.5**	**+1.2**
PPT	**Papeete**	**28.99**	**84**	P	**P**	**07 08 10.6**	**+0.8**
	76nm,0.8s,baz=232,slow=19,SNR=4.4						
	76nm,0.8s						
PPTF	**Pamatai, Papee**	**29.00**	**84**	P	**P**	**07 08 10.5**	**+0.6**
PPTF				pP	**pP**	**07 09 33.7**	**-2.8**
CNB	**Canberra Magne**	**29.03**	**239**	P	**P**	**07 08 11.2**	**+1.3**
	baz=29,SNR=32						
CNB	**Canberra Magne**	**29.03**	**239**	P	**P**	**07 08 10.5**	**+0.5**
CAN	**Canberra**	**29.32**	**240**	P	**P**	**07 08 12.8**	**+0.3**
CAN	**Canberra**	**29.32**	**240**	P	**P**	**07 08 12.8**	**+0.3**
CAN	**Canberra**	**29.32**	**240**	P	**P**	**07 08 13.2**	**+0.7**
CAN	**Canberra**	**29.32**	**240**	P	**P**	**07 08 13.5**	**+1.0**
CAN				ScP	**ScP**	**07 13 55.2**	**+1.9**
CMSA	**Cobar Meteorol**	**31.37**	**248**	P	**P**	**07 08 30.6**	**+0.5**
	baz=31,SNR=186						
CMSA	**Cobar Meteorol**	**31.37**	**248**	P	**P**	**07 08 30.3**	**+0.1**
CTA	**Charters Tower**	**31.37**	**270**	P	**P**	**07 08 31.9**	**-0.1**
	830nm,0.4s,baz=95,slow=10,SNR=2610						
CTA				PcP	**PcP**	**07 11 05.8**	**-2.5**
	27nm,0.6s,baz=96,slow=8.0,SNR=8.1						
CTA				S	**S**	**07 13 02.7**	**-0.4**
	19nm,1.1s,baz=63,slow=2.3,SNR=13						
CTA				ScP	**ScP**	**07 14 03.6**	**+2.7**
	19nm,0.8s,baz=121,slow=4.0,SNR=6.0						
CTA	**Charters Tower**	**31.57**	**270**	P	**P**	**07 08 32.4**	**+0.4**
CTAO	**Charters Tower**	**31.57**	**270**	P	**P**	**07 08 32.2**	**+0.3**
CTAO	**Charters Tower**	**31.57**	**270**	P	**P**	**07 08 32.2**	**+0.3**
CTAO				pmax	pmax		
	comp=Z,751nm,0.6s						
CTAO	**Charters Tower**	**31.57**	**270**	P	**P**	**07 08 32.4**	**+0.4**
CTAO	**Charters Tower**	**31.57**	**270**	P	**P**	**07 08 32.6**	**+0.6**
CTAO				ScP	**ScP**	**07 14 04.6**	**+3.6**
QLP	**Quilpie**	**32.53**	**257**	P	**P**	**07 08 40.3**	**+0.3**
	baz=32,SNR=55						
QLP	**Quilpie**	**32.53**	**257**	P	**P**	**07 08 40.5**	**+0.4**
TOO	**Toolangi**	**32.63**	**237**	P	**P**	**07 08 41.5**	**+0.7**
	baz=33,SNR=80						
TOO	**Toolangi**	**32.63**	**237**	P	**P**	**07 08 41.7**	**+0.8**
TOO				IAmb	IAmb	07 08 42.4	
	comp=Z,97nm,1.0s						
TOO	**Toolangi**	**32.63**	**237**	P	**P**	**07 08 41.7**	**+0.8**
TOO				pmax	pmax		
	comp=Z,97nm,1.0s						
TOO	**Toolangi**	**32.63**	**237**	P	**P**	**07 08 41.3**	**+0.5**
CORO	**Coronation Par**	**32.67**	**229**	P	**P**	**07 08 42.4**	**+1.4**
MOO	**Moorlands**	**33.03**	**228**	P	**P**	**07 08 45.2**	**+1.2**
	baz=33,SNR=3.2						
TAU	**Tasmania Unive**	**33.14**	**227**	P	**P**	**07 08 45.4**	**+0.5**
TAU				IAmb	IAmb	07 08 46.5	
	comp=Z,63nm,0.7s						
TAU	**Tasmania Unive**	**33.14**	**227**	P	**P**	**07 08 45.4**	**+0.5**
TAU				pmax	pmax		
	comp=Z,63nm,0.7s						
TAU	**Tasmania Unive**	**33.14**	**227**	P	**P**	**07 08 45.6**	**+0.7**
TAU				sP	**PcP**	**07 11 13.1**	**+0.9**
TAU				ScP	**ScP**	**07 14 08.6**	**+2.6**
KRVT	**Keravat (AS076**	**33.24**	**301**	P	**P**	**07 08 45.1**	**-1.1**
	comp=Z,457nm,0.7s,baz=161,slow=1.3,SNR=23						
	comp=Z,457nm,0.7s						
XMAS	**Kiritimati**	**33.65**	**44**	P	**P**	**07 08 49.3**	**-0.3**
XMAS	**Kiritimati**	**33.65**	**44**	P	**P**	**07 08 49.6**	**0.0**
XMAS	**Kiritimati**	**33.65**	**44**	P	**P**	**07 08 50.1**	**+0.5**
XMAS				PP	**PP**	**07 10 33.7**	**+1.2**
GEXS	**Deakin Univers**	**33.71**	**236**	P	**P**	**07 08 50.9**	**+1.0**
MTSU	**Mount Surprise**	**33.82**	**273**	P	**P**	**07 08 51.6**	**+0.5**
	baz=34,SNR=734						
MTSU	**Mount Surprise**	**33.82**	**273**	P	**P**	**07 08 51.5**	**+0.5**
BRAT	**Ballarat**	**33.83**	**237**	P	**P**	**07 08 52.0**	**+1.2**
PMG	**Port Moresby**	**34.51**	**289**	P	**P**	**07 08 56.6**	**-0.3**
	comp=Z,596nm,0.7s,baz=91,slow=5.2,SNR=165						
PMG				S	**S**	**07 13 47.1**	**-0.9**
	comp=Z,6.3nm,0.4s,baz=149,slow=18,SNR=7.7						
PMG				ScP	**ScP**	**07 14 13.8**	**+2.4**
	comp=Z,26nm,0.8s,baz=69,slow=6.0,SNR=6.4						
	comp=Z,596nm,0.7s						
PMG	**Port Moresby**	**34.51**	**289**	P	**P**	**07 08 56.7**	**-0.3**
PMG	**Port Moresby**	**34.51**	**289**	*ce*P	**P**	**07 08 56.6**	**-0.3**
PMG				pmax	pmax		
	comp=Z,734nm,0.8s						
PMG	**Port Moresby**	**34.51**	**289**	P	**P**	**07 08 56.9**	**0.0**
PMG	**Port Moresby**	**34.51**	**289**	P	**P**	**07 08 56.9**	**0.0**
PMG				ScP	**ScP**	**07 14 15.0**	**+3.6**
STKA	**Stephens Creek**	**34.88**	**248**	P	**P**	**07 08 59.4**	**-0.4**
	comp=Z,53nm,0.5s,baz=96,slow=11,SNR=107						
STKA				S	**S**	**07 13 51.4**	**-1.8**
	comp=Z,10nm,1.0s,baz=13,slow=18,SNR=2.2						
STKA				ScP	**ScP**	**07 14 14.3**	**+1.9**
	comp=Z,14nm,1.0s,baz=14,slow=4.3,SNR=4.4						
STKA				P3KPbc		07 39 36.7	
	comp=Z,2.7nm,0.9s,baz=76,slow=4.2,SNR=3.2						
	comp=Z,53nm,0.5s						
STKA	**Stephens Creek**	**34.88**	**248**	P	**P**	**07 09 00.3**	**+0.6**
	baz=35,SNR=80						
STKA	**Stephens Creek**	**34.88**	**248**	P	**P**	**07 09 00.1**	**+0.3**
STKA	**Stephens Creek**	**34.88**	**248**	P	**P**	**07 09 00.1**	**+0.3**
ARPS	**Mount Arapiles**	**35.30**	**239**	P	**P**	**07 09 03.4**	**+0.2**
	baz=35,SNR=32						
ARPS	**Mount Arapiles**	**35.30**	**239**	P	**P**	**07 09 03.8**	**+0.6**
INKA	**Innaminka**	**35.58**	**255**	P	**P**	**07 09 06.8**	**+1.2**
COEN	**Coen**	**36.17**	**279**	P	**P**	**07 09 11.0**	**+0.2**
	baz=36,SNR=87						
COEN	**Coen**	**36.17**	**279**	P	**P**	**07 09 11.0**	**+0.2**
COEN				IAmb	IAmb	07 09 12.3	
	comp=Z,132nm,0.9s						
COEN	**Coen**	**36.17**	**279**	P	**P**	**07 09 10.9**	**+0.2**
PATS	**Pohnpei**	**37.06**	**322**	P	**P**	**07 09 17.8**	**-0.2**
PATS				IAmb	IAmb	07 09 18.6	
	comp=Z,86nm,0.8s						
HTT	**Hallett**	**37.24**	**245**	P	**P**	**07 09 19.4**	**+0.1**
	baz=37,SNR=64						
HTT	**Hallett**	**37.24**	**245**	P	**P**	**07 09 19.5**	**+0.1**
QIS	**Mount Isa**	**37.55**	**267**	P	**P**	**07 09 21.5**	**-0.6**
	baz=38,SNR=59						
QIS	**Mount Isa**	**37.55**	**267**	P	**P**	**07 09 21.6**	**-0.5**
TWOA	**Tennyson Woods**	**37.66**	**243**	P	**P**	**07 09 22.9**	**+0.2**
LCRK	**Leigh Creek**	**37.73**	**250**	P	**P**	**07 09 23.5**	**+0.2**
NAPP	**Napperby**	**37.87**	**246**	P	**P**	**07 09 24.8**	**+0.4**
MANU	**Manus Island**	**38.30**	**299**	P	**P**	**07 09 27.8**	**-0.4**
WHYH	**Whyalla**	**38.34**	**246**	P	**P**	**07 09 28.2**	**0.0**
BBOO	**Buckleboo**	**39.60**	**247**	P	**P**	**07 09 38.0**	**-0.5**
	baz=40,SNR=90						
BBOO	**Buckleboo**	**39.60**	**247**	P	**P**	**07 09 38.2**	**-0.3**
BBOO				IAmb	IAmb	07 09 38.9	
	comp=Z,138nm,0.8s						
BBOO	**Buckleboo**	**39.60**	**247**	P	**P**	**07 09 38.0**	**-0.5**
OOD	**Oodnadatta**	**40.05**	**254**	P	**P**	**07 09 42.9**	**+0.8**
TAOE	**Nuku Hiva Isla**	**40.75**	**75**	P	**P**	**07 09 47.7**	**-0.3**
TAOE	**Nuku Hiva Isla**	**40.75**	**75**	P	**P**	**07 09 48.1**	**+0.1**
TAOE	**Nuku Hiva Isla**	**40.75**	**75**	P	**P**	**07 09 48.7**	**+0.8**
MULG	**Mulgathing**	**41.33**	**251**	P	**P**	**07 09 51.4**	**-0.9**
JOHN	**Johnston Islan**	**41.44**	**15**	P	**P**	**07 09 53.3**	**+0.1**
AS31	**Alice Springs**	**42.16**	**260**	P	**P**	**07 09 58.9**	**-0.1**
AS31				IAmb	IAmb	07 10 00.1	
	comp=Z,77nm,0.5s						
ASAR	**Alice Springs**	**42.16**	**260**	P	**P**	**07 09 58.9**	**-0.1**
	comp=Z,271nm,0.8s,baz=102,slow=7.1,SNR=1341						
ASAR				PcP	**PcP**	**07 11 40.6**	**-0.4**
	comp=Z,26nm,0.8s,baz=96,slow=6.9,SNR=4.5						
ASAR				ScP	**ScP**	**07 14 41.9**	**+1.1**
	comp=Z,75nm,0.8s,baz=109,slow=4.0,SNR=34						
ASAR				S	**S**	**07 15 38.6**	**-1.8**
	comp=Z,13nm,0.8s,baz=96,slow=16,SNR=7.7						
ASAR				P3KPbc		07 39 08.3	
	comp=Z,1.0nm,0.8s,baz=278,slow=3.9,SNR=7.3						
	comp=

SBA ScP **ScP** **07 15 34.2 +1.7**
VNDA Vanda 54.59 185 P **P** **07 11 32.1 +1.6**
comp=Z,6,4nm,0.7s,baz=356,slow=7.8,SNR=35
VNDA PcP **PcP** **07 12 26.5 +1.2**
comp=Z,15nm,0.8s,baz=324,slow=5.8,SNR=11
VNDA ScP **ScP** **07 15 33.1 +0.6**
comp=Z,7.2nm,0.9s,baz=341,slow=3.7,SNR=6.9
VNDA Vanda 54.59 185 P **P** **07 11 31.8 +1.3**
VNDA Vanda 54.59 185 P **P** **07 11 32.5 +1.9**
VNDA x x 07 12 26.5
VNDA ScP **ScP** **07 15 33.8 +1.2**
SOEI Soe 54.92 275 P **P** **07 11 34.2 +0.2**
SOEI Soe 54.92 275 P **P** **07 11 34.7 +0.7**
comp=Z,5µmcomp=Z,471nm,0.9s
SOEI Soe 54.92 275 P **P** **07 11 35.7 +1.7**
NLAI Namlea 55.02 283 P **P** **07 11 34.1 -0.5**
comp=Z,2µmcomp=Z,164nm,1.0s
KLBR Kellerberrin 55.15 247 P **P** **07 11 34.9 -0.3**
baz=55,SNR=34
KLBR Kellerberrin 55.15 247 P **P** **07 11 34.8 -0.4**
PSA00 Pilbara Seismi 55.29 259 P **P** **07 11 35.1 -1.2**
PSA00 Pilbara Seismi 55.29 259 P **P** **07 11 35.4 -1.0**
PSA00 IAmb IAmb 07 11 36.8
comp=Z,131nm,1.4s
PSA00 Pilbara Seismi 55.29 259 P **P** **07 11 36.8 +0.4**
BATI Baumata 55.30 274 P **P** **07 11 37.4 +0.9**
comp=Z,268nm,0.5s,baz=194,slow=1.7,SNR=34
comp=Z,268nm,0.5s
BATI Baumata 55.30 274 P **P** **07 11 36.9 +0.3**
comp=Z,2µmcomp=Z,196nm,0.8s
MBWA Marble Bar 55.49 260 P **P** **07 11 37.4 -0.4**
MBWA IAmb IAmb 07 11 38.1
comp=Z,140nm,0.9s
MBWA Marble Bar 55.49 260 P **P** **07 11 37.3 -0.5**
MBWA Marble Bar 55.49 260 P **P** **07 11 37.2 -0.5**
MBWA pP **pP** **07 13 17.6 -2.3**
MBWA sP **sP** **07 14 14.6 -2.6**
LBMI Labuha 55.86 286 P **P** **07 11 39.9 -0.5**
comp=Z,2µmcomp=Z,186nm,0.9s
BLDU Ballidu 56.19 248 P **P** **07 11 42.0 -0.5**
baz=56,SNR=53
BLDU Ballidu 56.19 248 P **P** **07 11 42.3 -0.2**
MUN Mundaring 56.39 246 P **P** **07 11 43.9 0.0**
baz=56,SNR=8.2
MUN Mundaring 56.39 246 P **P** **07 11 44.1 +0.2**
SANI Sanana 56.55 284 P **P** **07 11 44.4 -0.8**
comp=Z,2µmcomp=Z,108nm,0.7s
SANI Sanana 56.55 284 P **P** **07 11 44.6 -0.6**
TNTI Ternate 56.65 288 P **P** **07 11 45.5 -0.4**
TNTI IAmb IAmb 07 11 46.5
comp=Z,137nm,0.9s
TNTI Ternate 56.65 288 P **P** **07 11 45.3 -0.6**
comp=Z,2µmcomp=Z,173nm,0.9s
TNTI Ternate 56.65 288 P **P** **07 11 45.8 -0.1**
MORW Morawa 57.03 250 P **P** **07 11 48.0 -0.2**
baz=57,SNR=28
MORW Morawa 57.03 250 P **P** **07 11 48.1 -0.2**
MORW Morawa 57.03 250 P **P** **07 11 48.2 -0.1**
MMRI Maumere 57.19 275 P **P** **07 11 48.5 -1.1**
MMRI IAmb IAmb 07 11 50.1
comp=Z,232nm,1.0s
MMRI Maumere 57.19 275 P **P** **07 11 49.3 -0.3**
comp=Z,238nm,0.7s
MMRI Maumere 57.19 275 P **P** **07 11 50.0 +0.4**
EDFI Ende, Flores 57.65 275 P **P** **07 11 52.2 -0.6**
comp=Z,2µmcomp=Z,188nm,0.8s
BASI Baing, Sumba 58.12 273 P **P** **07 11 56.2 +0.3**
comp=Z,2µmcomp=Z,273nm,1.0s
WBSI Waikabubak, Su 59.42 273 P **P** **07 12 04.3 -0.4**
comp=Z,171nm,0.7s
KMSI Cibinong 59.53 286 P **P** **07 12 04.3 -1.1**
comp=Z,136nm,0.6s
SGSI Sangihe 59.68 290 P **P** **07 12 05.5 -0.9**
comp=Z,31µmcomp=Z,135nm,0.6s
BSSI Bau Bau, Buton 59.76 277 P **P** **07 12 06.2 -0.7**
comp=Z,619nmcomp=Z,48nm,1.2s
LUWI Luwuk 59.87 283 P **P** **07 12 07.3 -0.3**
LUWI IAmb IAmb 07 12 08.6
comp=Z,267nm,1.1s
LUWI Luwuk 59.87 283 P **P** **07 12 07.5 -0.1**
comp=Z,5µmcomp=Z,234nm,1.0s
LUWI Luwuk 59.87 283 P **P** **07 12 08.3 +0.7**
GIRL Giralia 60.05 257 P **P** **07 12 09.8 +1.1**
baz=60,SNR=5.3
CASY Casey 60.33 206 P **P** **07 12 09.9 +0.1**
CASY Casey 60.33 206 P **P** **07 12 09.7 -0.1**
CASY pP **pP** **07 13 54.9 +0.4**
CASY pwP **pwP** **07 14 00.8 +0.7**
CASY ScP **ScP** **07 15 58.6 +0.5**
BKSI Bulukumba 60.43 278 P **P** **07 12 10.6 -0.7**
comp=Z,1µmcomp=Z,152nm,0.8s
BNSI Bone 60.82 279 P **P** **07 12 13.6 -0.3**
comp=Z,1µmcomp=Z,111nm,0.8s
KAPI Kappang 60.89 278 S **S** **07 19 51.8 +0.4**
comp=Z,5.0nm,0.8s,baz=66,slow=21,SNR=6.1
KAPI Kappang 60.89 278 P **P** **07 12 13.8 -0.5**
KAPI IAmb IAmb 07 12 15.6
comp=Z,196nm,1.9s
KAPI Kappang 60.89 278 P **P** **07 12 13.9 -0.5**
KAPI pmax pmax
comp=Z,196nm,2.0s
KAPI Kappang 60.89 278 P **P** **07 12 14.4 0.0**
KAPI Kappang 60.89 278 P **P** **07 12 14.2 -0.2**
KAPI PP **PP** **07 14 31.3 -6.0**
APSI Ampana 60.93 283 P **P** **07 12 14.7 +0.1**
comp=Z,93nm,0.8s
PLAI Plampang 61.20 273 P **P** **07 12 15.8 -0.6**
comp=Z,3µmcomp=Z,389nm,1.0s
PLAI Plampang 61.20 273 P **P** **07 12 16.3 -0.1**
MRSI Marisa 61.30 284 P **P** **07 12 15.9 -1.1**
comp=Z,693nmcomp=Z,70nm,0.9s
SPSI Sidrap Palu 61.30 279 P **P** **07 12 15.7 -1.4**
comp=Z,66nm,0.8s
TTSI Tana Toraja 61.65 280 P **P** **07 12 18.5 -0.8**
comp=Z,34nm,0.5s
PCI Palu 62.55 282 P **P** **07 12 23.3 -1.9**
comp=Z,1µm,1.2s
TOLI2 Tolitoli 62.61 284 P **P** **07 12 24.6 -1.0**
TOLI2 IAmb IAmb 07 12 27.2
comp=Z,114nm,0.7s
TOLI2 Tolitoli 62.61 284 P **P** **07 12 24.9 -0.7**
MPSI Mapaga 63.05 283 P **P** **07 12 27.7 -0.7**
comp=Z,2µmcomp=Z,164nm,0.8s
IGBI Denpasar 63.61 272 P **P** **07 12 32.1 +0.1**
comp=Z,2µmcomp=Z,199nm,0.8s
SRBI Singaraja 63.83 273 P **P** **07 12 32.9 -0.5**
comp=Z,93nm,0.9s
JAGI Jajag, Banyuwa 64.65 272 P **P** **07 12 37.4 -1.3**
JAGI IAmb IAmb 07 12 38.3
comp=Z,139nm,1.3s
JAGI Jajag, Banyuwa 64.65 272 P **P** **07 12 37.3 -1.4**
comp=Z,91nm,0.9s
JAGI Jajag, Banyuwa 64.65 272 P **P** **07 12 38.2 -0.5**
ABJI Asem Bagus 64.83 272 P **P** **07 12 39.4 -0.4**
comp=Z,60nm,1.0s
KMMI Kalianget 65.36 273 P **P** **07 12 42.5 -0.6**
comp=Z,128nm,1.0s
GMJI Gumukmas 65.38 272 P **P** **07 12 42.7 -0.5**
comp=Z,66nm,0.9s
BLJI Banyuglugur 65.44 272 P **P** **07 12 43.1 -0.5**
comp=Z,1µmcomp=Z,59nm,0.8s
BBKI Banjar Baru 65.99 277 P **P** **07 12 47.1 +0.1**
comp=Z,39nm,0.5s
QSPA South Pole Qui 66.38 180 P **P** **07 12 50.3 +1.6**
comp=Z,89nm,0.7s,baz=18,slow=0.9,SNR=494
QSPA pP **pwP** **07 14 39.1 -1.3**
comp=Z,73nm,1.0s,baz=29,slow=3.2,SNR=12
QSPA S **S** **07 20 58.9 +2.4**
comp=Z,2.6nm,1.1s,baz=66,slow=22,SNR=6.0
comp=Z,89nm,0.7s
QSPA South Pole Qui 66.38 180 P **P** **07 12 49.5 +0.7**
QSPA IAmb IAmb 07 12 51.3
comp=Z,107nm,0.8s
QSPA South Pole Qui 66.38 180 P **P** **07 12 50.4 +1.6**
QSPA pP **pwP** **07 14 38.6 -1.7**
QSPA PP **PP** **07 15 22.5 -1.2**
MYLDM Lahad Datu 66.52 287 P **P** **07 12 51.3 +1.0**
GRJI Gresik 66.78 273 P **P** **07 12 51.9 0.0**
comp=Z,3µmcomp=Z,298nm,0.8s
PWJI Pagerwojo 66.97 271 P **P** **07 12 52.7 -0.4**
comp=Z,80nm,0.7s
MTKI Muara Teweh, K 66.99 280 P **P** **07 12 53.0 -0.2**
PCJI Pacitan 67.48 271 P **P** **07 12 56.5 +0.2**
comp=Z,3µmcomp=Z,305nm,0.7s
WOJI Wonogiri, Jawa 67.85 271 P **P** **07 12 58.5 0.0**
comp=Z,89nm,1.1s

UGM Wanagama 68.19 271 P **P** **07 13 00.2 -0.4**
comp=Z,137nm,0.7s
SMRI Semarang 68.59 272 P **P** **07 13 03.0 0.0**
comp=Z,64nm,0.9s
STKI Sintang 70.51 279 P **P** **07 13 14.6 +0.1**
JYT Yasato 70.52 327 P **P** **07 13 14.2 +0.2**
JCJI Jatiwangi 70.80 271 P **P** **07 13 15.5 -0.7**
comp=Z,159nm,0.5s
SBUM Sibu 70.86 282 P **P** **07 13 16.4 -0.1**
JOW Kunigami 70.92 312 P **P** **07 13 16.8 +0.2**
LEM Lembang 71.26 271 P **P** **07 13 19.2 +0.1**
comp=Z,1µmcomp=Z,75nm,0.8s
INU Inuyama 71.51 324 P **P** **07 13 20.3 +0.5**
INU Inuyama 71.51 324 P **P** **07 13 20.1 +0.3**
JGF Kuroka 71.52 324 P **P** **07 13 19.6 -0.3**
MJAR Matsushiro Arr 71.78 326 P **P** **07 13 20.8 -0.7**
comp=Z,23nm,0.8s,baz=159,slow=5.7,SNR=55
MJAR PKPPKP **P'P'df** **07 41 02.2 -1.7**
comp=Z,3.0nm,0.9s,baz=355,slow=1.7,SNR=7.8
comp=Z,23nm,0.8s
MJAR Matsushiro Arr 71.78 326 P **P** **07 13 20.8 -0.7**
MAJO Matsushiro 71.78 326 P **P** **07 13 21.5 +0.1**
MAJO Matsushiro 71.78 326 *c iP* **P** **07 13 21.0 -0.5**
MAJO pmax pmax
comp=Z,50nm,1.0s
MAJO Matsushiro 71.78 326 P **P** **07 13 22.2 +0.7**
MAJO Matsushiro 71.78 326 P **P** **07 13 21.6 +0.1**
MJB9 Matsu-Tunnel 71.79 326 P **P** **07 13 21.2 -0.2**
KSM Kuching 72.16 280 P **P** **07 13 23.9 -0.3**
KSM Kuching 72.16 280 P **P** **07 13 24.6 +0.5**
DBJI Dramaga 72.16 271 P **P** **07 13 24.2 0.0**
JSU Suzuyama 72.59 317 P **P** **07 13 26.6 +0.4**
JSU IAmb IAmb 07 13 27.5
comp=Z,56nm,0.6s
JSD Sado 72.90 327 P **P** **07 13 28.1 +0.3**
JHS Saijyo 73.43 321 P **P** **07 13 31.9 +1.0**
ERM Erimo 73.77 332 P **P** **07 13 34.6 +1.9**
ERM Erimo 73.77 332 *c iP* **P** **07 13 34.1 +1.4**
ERM pmax pmax
comp=Z,40nm,0.9s
ERM Erimo 73.77 332 P **P** **07 13 34.8 +2.1**
BLSI Bandar Lampung 74.00 271 P **P** **07 13 34.6 -0.1**
TPUB Ta-pu 74.28 305 P **P** **07 13 35.0 -1.1**
SSLB Suanglung 74.31 305 P **P** **07 13 35.7 -0.6**
YUK Yuzh-Kuril'sk 74.35 335 *i* P **P** **07 13 36.2 +0.3**
PPBI Pangkal Pinang 74.45 275 P **P** **07 13 36.9 -0.3**
YHNB Yeheng 74.51 306 P **P** **07 13 37.7 +0.3**
KASI Kota Agung 74.63 271 P **P** **07 13 37.4 -0.8**
KUR Kuril'sk 74.63 337 *i* P **P** **07 13 36.3 -1.1**
KUR pmax pmax
comp=Z,81nm,0.9s
JEW Eniwo 75.18 332 P **P** **07 13 40.9 +0.3**
JEW IAmb IAmb 07 13 42.9
comp=Z,137nm,1.0s
ADK Adak 75.31 2 P **P** **07 13 41.0 -0.1**
ADK Adak 75.31 2 P **P** **07 13 41.0 -0.1**
ADK pmax pmax
comp=Z,312nm,0.7s
ADK Adak 75.31 2 P **P** **07 13 41.1 0.0**
JKA Kamikawa-asahi 75.72 333 P **P** **07 13 45.2 +1.5**
JKA IAmb IAmb 07 13 46.8
comp=Z,74nm,0.8s
ASAJ Asahikawa 75.73 333 P **P** **07 13 45.2 +1.6**
ASAJ pmax pmax
comp=Z,74nm,0.8s
SMAI San Martin Ant 76.26 159 P **P** **07 13 47.3 +1.0**
SMAI IAmb IAmb 07 13 49.1
comp=Z,112nm,0.9s
SHEM Shemya Is, Ala 76.28 356 P **P** **07 13 46.1 -0.3**
comp=Z,121nm,0.7s,baz=294,slow=19,SNR=13
comp=Z,121nm,0.7s
BELA Belgrano 2 76.62 173 P **P** **07 13 48.3 +0.1**
NIKH Nikolski High 76.95 7 P **P** **07 13 49.8 -0.4**
NIKH Nikolski High 76.95 7 P **P** **07 13 50.0 -0.1**
baz=190,SNR=30
SKR Severo-Kuril's 77.03 345 *ce* P **P** **07 13 49.4 -1.2**
KSCHJ Chungju 77.73 320 P **P** **07 13 54.7 0.0**
TJN Taejon 77.76 319 P **P** **07 13 55.1 +0.2**
TJN IAmb IAmb 07 13 56.6
comp=Z,132nm,0.9s
TJN Taejon 77.76 319 *ce* P **P** **07 13 55.0 0.0**
TJN Taejon 77.76 319 P **P** **07 13 55.6 +0.6**
MAW Mawson 77.97 200 P **P** **07 13 56.4 +0.8**
comp=Z,35nm,0.7s,baz=131,slow=6.1,SNR=77
MAW S **S** **07 23 05.3 +0.2**
comp=Z,2.2nm,0.9s,baz=263,slow=19,SNR=2.1
comp=Z,35nm,0.7s
MAW Mawson 77.97 200 P **P** **07 13 56.6 +1.1**
baz=78,SNR=35
MAW Mawson 77.97 200 P **P** **07 13 56.8 +1.2**
MAW Mawson 77.97 200 P **P** **07 13 56.8 +1.2**
MAW pmax pmax
comp=Z,12nm,1.0s
YSS Yuzh-Sakhalins 77.99 335 P **P** **07 13 56.7 +0.8**
YSS IAmb IAmb 07 13 58.5
comp=Z,86nm,0.8s
YSS Yuzh-Sakhalins 77.99 335 *c iP* **P** **07 13 57.4 +1.5**
YSS *e**PP **pP** **07 15 48.9 +0.4**
YSS *e**SP **sP** **07 16 41.0 -1.8**
YSS *e* 07 17 01.7
YSS *eS* **S** **07 23 10.4 +4.6**
YSS pmax pmax
comp=Z,300nm,3.1s
YSS pmax pmax
comp=Z,70nm,1.0s
YSS smax smax
comp=N,600nm,6.7s
YSS Yuzh-Sakhalins 77.99 335 P **P** **07 13 56.8 +0.9**
UNV Unalaska Valle 78.09 8 P **P** **07 13 55.8 -0.5**
baz=192,SNR=42
UNV Unalaska Valle 78.09 8 P **P** **07 13 56.1 -0.1**
KSRS Korea Array 78.15 320 P **P** **07 13 58.1 +1.1**
comp=N,12nm,0.7s,baz=136,slow=5.6,SNR=59
comp=N,12nm,0.7s
KSAR Wonju Array Be 78.17 320 P **P** **07 13 57.7 +0.6**
KSAR Wonju Array Be 78.17 320 P **P** **07 13 57.7 +0.6**
KS19 Wonju Array Si 78.22 320 P **P** **07 13 57.6 +0.2**
SEHB SEOHWA 78.51 321 P **P** **07 13 59.9 +0.9**
PET Petropavlovsk 78.65 347 *eP* **P** **07 13 59.1 -0.2**
PET *e**PP **pwP** **07 15 54.6 -2.3**
PET *e**SP **sP** **07 16 47.5 +1.1**
PET *eS* **S** **07 23 15.1 +2.8**
PET pmax pmax
comp=Z,80nm,0.6s
PET pmax pmax
comp=Z,300nm,6.2s
PET pmax pmax
comp=Z,100nm,7.9s
PET MLR MLR
comp=Z,100nm,17.0s
PEA0B Petropavlovsk- 78.93 346 P **P** **07 14 01.3 +0.5**
PEA0B IAmb IAmb 07 14 02.2
comp=Z,307nm,1.5s
PEA0B Petropavlovsk- 78.93 346 *ce* P **P** **07 14 01.1 +0.3**
PETK Petropavlovsk- 78.93 346 P **P** **07 14 00.5 -0.4**
comp=Z,81nm,0.8s,baz=140,slow=7.2,SNR=72
comp=Z,81nm,0.8s
PETK Petropavlovsk- 78.93 346 P **P** **07 14 00.2 -0.6**
PMSA Palmer Station 79.06 157 P **P** **07 14 02.3 +0.9**
comp=Z,34nm,0.7s,baz=269,slow=5.5,SNR=5.3
comp=Z,34nm,0.7s
FALS False Pass 79.50 10 P **P** **07 14 03.4 -0.4**
baz=195
FALS False Pass 79.50 10 P **P** **07 14 05.0 +1.2**
VLA Vladivostok 79.92 326 *i* P **P** **07 14 05.9 -0.3**
VLA pmax pmax
comp=Z,31nm,0.8s
CNBA Chernabura Isl 80.12 12 P **P** **07 14 06.6 -0.4**
CNBA IAmb IAmb 07 14 08.2
comp=Z,194nm,1.3s
CHNA Chernabura Isl 80.13 12 P **P** **07 14 07.1 0.0**
baz=199,SNR=15
SDPT Sand Point 80.46 11 P **P** **07 14 08.7 -0.1**
SDPT IAmb IAmb 07 14 09.5
comp=Z,130nm,0.6s
SDPT Sand Point 80.46 11 P **P** **07 14 08.6 -0.2**
baz=198,SNR=8.0
NJ2 Nanjing 80.59 311 *eP* **P** **07 14 10.9 +0.8**
NJ2 pmax pmax
comp=Z,24nm,0.9s
USA0B Ussuriysk Arra 80.64 327 P **P** **07 14 10.8 +0.8**
USA0B Ussuriysk Arra 80.64 327 *c iP* **P** **07 14 10.8 +0.8**
USRK Ussuriysk Ar. 80.64 327 P **P** **07 14 11.1 +1.1**
comp=Z,21nm,0.6s,baz=128,slow=3.6,SNR=62
comp=Z,21nm,0.6s

USRK Ussuriysk Ar. 80.64 327 P **P** **07 14 10.6 +0.6**
SNCC San Nicolas Is 80.70 48 P **P** **07 14 12.2 +1.6**
baz=234
SPIA Saint Paul Isl 80.97 5 P **P** **07 14 12.0 +0.6**
SPIA Saint Paul Isl 80.97 5 P **P** **07 14 11.9 +0.6**
baz=189
SPIA Saint Paul Isl 80.97 5 P **P** **07 14 12.5 +1.1**
SCZ2 Santa Cruz Isl 81.07 47 P **P** **07 14 14.0 +1.5**
baz=234,SNR=14
SCI2 San Clemente I 81.21 48 P **P** **07 14 14.4 +1.1**
baz=234,SNR=6.8
TYV Tymovskoe 81.25 337 *eP* **P** **07 14 14.1 +1.1**
TYV *eS* **S** **07 23 34.4 -4.8**
TYV pmax pmax
comp=Z,59nm,0.8s
TYV pmax pmax
comp=Z,100nm,6.7s
TYV smax smax
comp=N,400nm,5.8s
TYV smax smax
comp=E,300nm,5.8s
SBC Santa Barbara 81.28 47 P **P** **07 14 15.0 +1.5**
baz=234
PKM Mcpherson Peak 81.48 46 P **P** **07 14 16.3 +1.4**
baz=233
CIS Catalina Islan 81.54 48 P **P** **07 14 15.8 +0.8**
baz=234,SNR=11
SMMC Simmler 81.61 46 P **P** **07 14 17.1 +1.8**
baz=233
PMPB Monarch Peak 81.63 45 P **P** **07 14 16.5 +1.1**
PMPB IAmb IAmb 07 14 18.2
comp=Z,159nm,1.1s
FMP Fort Macarthur 81.81 48 P **P** **07 14 17.4 +1.2**
baz=234,SNR=6.6
IPM Ipoh 81.82 279 P **P** **07 14 17.4 +0.6**
CHIR Chirikof Islan 81.86 14 P **P** **07 14 16.5 +0.5**
baz=202
HOPS Hopland Field 81.93 41 P **P** **07 14 17.6 +0.8**
HOPS IAmb IAmb 07 14 19.6
comp=Z,164nm,1.0s
OSI Osito Audit: C 82.04 47 P **P** **07 14 19.0 +1.5**
baz=234
DECC Green Verdugo 82.09 47 P **P** **07 14 18.6 +0.8**
baz=234,SNR=9.0
PASC Pasadena Art C 82.14 47 P **P** **07 14 18.4 +0.4**
PASC IAmb IAmb 07 14 20.1
comp=Z,93nm,0.9s
MDJ Mudanjiang 82.15 326 P **P** **07 14 18.3 +0.6**
MDJ Mudanjiang 82.15 326 P **P** **07 14 18.9 +1.2**
MDJ S **S** **07 23 50.0 +1.6**
MDJ pmax pmax
comp=Z,67nm,0.8s
MDJ pmax pmax
comp=Z,160nm,6.1s
MDJ Mudanjiang 82.15 326 P **P** **07 14 18.1 +0.4**
109C Camp Elliot, M 82.15 49 P **P** **07 14 18.9 +0.8**
109C IAmb IAmb 07 14 20.5
comp=Z,88nm,0.9s
109C Camp Elliot, M 82.15 49 P **P** **07 14 19.3 +1.2**
baz=235,SNR=12
ARVC Arvin 82.27 46 P **P** **07 14 19.9 +1.3**
baz=234,SNR=15
BAR Barrett 82.33 49 P **P** **07 14 19.7 +0.7**
BAR IAmb IAmb 07 14 21.5
comp=Z,250nm,1.9s
ELS Elsinore Mount 82.36 48 P **P** **07 14 20.0 +0.8**
USHA Ushuaia 82.42 147 P **P** **07 14 20.7 +1.6**
comp=Z,27nm,1.1s,baz=261,slow=3.8,SNR=3.9
comp=Z,27nm,1.1s
MURC Murrieta 82.49 48 P **P** **07 14 21.1 +1.3**
baz=235,SNR=30
VES Vestal, Richgr 82.52 46 P **P** **07 14 20.7 +0.9**
baz=234,SNR=75
BFSC Mount Baldy Ra 82.54 48 P **P** **07 14 21.1 +1.0**
baz=235,SNR=54
LPIG La Paz 82.54 60 P **P** **07 14 21.3 +1.1**
comp=Z,90nm,1.0s,baz=240,slow=20,SNR=10
comp=Z,90nm,1.0s
VOG Valley Oaks Go 82.61 45 P **P** **07 14 21.1 +0.8**
baz=234
MONP2 Monument Peak 82.63 49 P **P** **07 14 22.4 +1.7**
baz=236,SNR=77
SLBS Sierra La Lagu 82.63 60 P **P** **07 14 22.3 +1.5**
SLBS IAmb IAmb 07 14 23.6
comp=Z,127nm,0.8s
SRIG Santa Rosalia 82.67 56 P **P** **07 14 21.5 +0.7**
SRIG IAmb IAmb 07 14 23.5
comp=Z,170nm,1.0s
EDW2 Edwards Air Fo 82.68 47 P **P** **07 14 22.2 +1.4**
baz=234,SNR=55
IKP In-Ko-Pah, Jac 82.71 50 P **P** **07 14 22.7 +1.8**
baz=236,SNR=34
ISA Isabella, Lake 82.82 46 P **P** **07 14 22.8 +1.3**
ISA IAmb IAmb 07 14 24.0
comp=Z,159nm,0.8s
ISA Isabella, Lake 82.82 46 P **P** **07 14 22.8 +1.3**
ISA pmax pmax
comp=Z,159nm,0.9s
ISA Isabella, Lake 82.82 46 P **P** **07 14 22.9 +1.5**
baz=234,SNR=124
CCAC Calif City Air 82.83 47 P **P** **07 14 22.3 +0.8**
SII Sitkinak Islan 82.85 14 P **P** **07 14 21.7 +0.6**
baz=204,SNR=14
SII Sitkinak Islan 82.85 14 P **P** **07 14 21.9 +0.9**
WHN Wuhan 82.95 308 ⇑P **P** **07 14 23.3 +1.2**
WHN pmax pmax
comp=Z,84nm,1.2s
CMB Columbia Colle 82.99 43 P **P** **07 14 23.0 +0.7**
CMB IAmb IAmb 07 14 24.5
comp=Z,148nm,0.9s
CMB Columbia Colle 82.99 43 P **P** **07 14 23.0 +0.7**
CMB pmax pmax
comp=Z,148nm,0.9s
PFO Pinyon Flats O 83.00 49 P **P** **07 14 23.4 +0.9**
PFO IAmb IAmb 07 14 25.2
comp=Z,177nm,1.6s
PFO Pinyon Flats O 83.00 49 P **P** **07 14 23.4 +0.9**
PFO pmax pmax
comp=Z,177nm,1.6s
PFO Pinyon Flats O 83.00 49 P **P** **07 14 23.8 +1.3**
baz=236,SNR=26
TPFO Pinon Flats 83.00 49 P **P** **07 14 23.8 +1.3**
baz=236,SNR=20
BBRC Big Bear Solar 83.06 48 P **P** **07 14 24.1 +1.2**
baz=235,SNR=6.4
SWSC Sam W. Stewart 83.09 50 P **P** **07 14 24.3 +1.5**
baz=236,SNR=47
LRMC Laurel Mtn Rad 83.24 47 P **P** **07 14 24.6 +1.0**
baz=235,SNR=61
RRX Edison Barstow 83.35 47 P **P** **07 14 25.3 +1.2**
baz=235,SNR=6.1
CWC Cottonwood Cre 83.53 46 P **P** **07 14 25.9 +0.8**
baz=234
BELC Belle Mtn. Jos 83.54 49 P **P** **07 14 26.7 +1.5**
baz=236,SNR=112
GRNR Gornyy 83.56 334 ⇑*iP* **P** **07 14 26.3 +1.6**
GRNR pmax pmax
comp=Z,50nm,1.0s
GRNR MLR MLR
comp=N,300nm,19.0s
GRNR MLR MLR
comp=E,300nm,19.0s
GRNR MLR MLR
comp=Z,60nm,18.0s
MDPB Devils Postpil 83.58 44 P **P** **07 14 26.3 +0.8**
MDPB IAmb IAmb 07 14 27.9
comp=Z,123nm,1.1s
OMMB Old Mammoth Mi 83.62 44 P **P** **07 14 26.3 +0.5**
OMMB IAmb IAmb 07 14 28.2
comp=Z,106nm,1.3s
L02F Cave Junction 83.63 39 P **P** **07 14 27.2 +1.9**
baz=230,SNR=6.7
OHAK Old Harbor 83.66 14 P **P** **07 14 25.4 +0.5**
baz=204,SNR=21
MPMC Manual Prospec 83.70 46 P **P** **07 14 27.2 +1.2**
baz=235,SNR=105
GSC Goldstone, Bar 83.72 47 P **P** **07 14 27.0 +1.0**
baz=235,SNR=88
BC3 Big Chuckawall 83.72 49 P **P** **07 14 27.7 +1.6**
baz=236,SNR=65
MLAC Mammoth, Mammo 83.74 44 P **P** **07 14 27.7 +1.5**
baz=234
EMB Emerald Bay 83.74 43 P **P** **07 14 26.9 +0.7**
EMB IAmb IAmb 07 14 28.5
comp=Z,246nm,1.5s
HEC Hector,Ludlow 83.77 48 P **P** **07 14 27.4 +1.1**
baz=236,SNR=110

CN2 **Changchun** 83.78 324 *e*P **P** 07 14 25.7 -0.2
CN2 *e*pP pwP 07 16 24.2 -1.7
CN2 *e*PP **PP** 07 17 51.5 +2.2
CN2 SKS **SKSac** 07 23 55.8 -1.9
CN2 *es*S sS 07 27 32.6 +3.5
CN2 *e*SS **SS** 07 29 52.0 +3.7
CN2 pmax pmax
comp=Z,60nm,1.2s
TIN **Tinemaha, Big** 83.79 45 P **P** 07 14 27.5 +1.2
baz=234,SNR=11
GLA **Glamis** 83.83 50 P **P** 07 14 27.9 +1.5
GLA **Glamis** 83.83 50 P **P** 07 14 28.0 +1.5
GLA pmax pmax
comp=Z,219nm,0.9s
GLA **Glamis** 83.83 50 P **P** 07 14 28.5 +2.0
baz=237
YBH **Yreka Blue Hor** 83.87 39 P **P** 07 14 28.1 +1.5
comp=Z,57nm,0.8s,baz=200,slow=3.5
comp=Z,57nm,0.8s
K02D **Willamette Mer** 83.94 38 P **P** 07 14 28.2 +1.3
baz=230,SNR=12
QSM **Queen of Sheba** 84.06 47 P **P** 07 14 28.2 +0.7
QSM IAmb IAmb 07 15 48.7
comp=Z,74nm,0.5s
J01E **Myrtle Point** 84.09 38 P **P** 07 14 28.6 +1.1
J01E **Myrtle Point** 84.09 38 P **P** 07 14 29.3 +1.8
baz=230,SNR=10
BEKR **Beckworth** 84.12 42 P **P** 07 14 28.7 +0.8
BEKR IAmb IAmb 07 14 29.7
comp=Z,58nm,0.8s
TIA **Tai'an** 84.16 314 ⇑P **P** 07 14 28.9 +0.9
TIA S **S** 07 24 07.3 -1.4
TIA pmax pmax
comp=Z,67nm,1.1s
GMRC **Granite Mounta** 84.21 48 P **P** 07 14 29.9 +1.4
baz=236,SNR=45
IRM **Iron Mountain** 84.22 49 P **P** 07 14 30.1 +1.7
baz=236,SNR=61
GRAC **Grapevine Rang** 84.32 46 P **P** 07 14 30.2 +1.4
baz=235,SNR=49
KDAK **Kodiak Island** 84.33 14 P **P** 07 14 28.7 +0.5
comp=Z,46nm,0.8s,baz=224,slow=2.4,SNR=33
comp=Z,46nm,0.8s
KDAK **Kodiak Island** 84.33 14 P **P** 07 14 28.8 +0.5
KDAK IAmb IAmb 07 14 29.9
comp=Z,267nm,1.7s
KDAK **Kodiak Island** 84.33 14 P **P** 07 14 28.8 +0.5
KDAK pmax pmax
comp=Z,267nm,1.7s
KDAK **Kodiak Island** 84.33 14 P **P** 07 14 28.7 +0.5
baz=205
FURC **Furnace Creek,** 84.35 46 P **P** 07 14 29.8 +0.9
baz=235,SNR=32
TUQ **Turquoise Moun** 84.39 48 P **P** 07 14 30.6 +1.2
baz=236,SNR=13
P16K **Nushagak River** 84.39 11 P **P** 07 14 28.6 +0.1
baz=200
KLR **Kul'dur** 84.40 331 PKKP 07 32 31.6
comp=Z,1.2nm,0.8s,baz=255,slow=9.7,SNR=3.0
KLR **Kul'dur** 84.40 331 *ce*P **P** 07 14 29.8 +0.9
KLR pmax pmax
comp=Z,45nm,1.5s
L04D **Klamath Falls** 84.42 39 P **P** 07 14 30.2 +0.9
L04D **Klamath Falls** 84.42 39 P **P** 07 14 30.6 +1.3
baz=231,SNR=20
SHOC **Shoshone, Teco** 84.42 47 P **P** 07 14 30.3 +1.0
baz=236,SNR=9.4
113A **Mohawk Valley,** 84.42 51 P **P** 07 14 30.7 +1.3
113A IAmb IAmb 07 14 32.3
comp=Z,116nm,1.1s
TROLL **Troll, Antarti** 84.53 181 P **P** 07 14 29.7 +0.2
TROLL **Troll, Antarti** 84.53 181 pP pP 07 16 24.2 -0.4
NVAR **Mina Array Bea** 84.55 44 P **P** 07 14 31.1 +1.0
comp=Z,30nm,0.7s,baz=222,slow=7.8,SNR=261
NVAR PP **PP** 07 17 54.9 -0.9
comp=Z,7.5nm,1.2s,baz=223,slow=8.1,SNR=3.6
NVAR PKKPbc **PKKPbc** 07 32 38.5 +0.5
comp=Z,0.7nm,0.7s,baz=72,slow=3.1,SNR=6.0
NVAR PKPPKP **P'P'df** 07 40 43.6 +1.6
comp=Z,0.8nm,0.8s,baz=53,slow=3.1,SNR=5.3
comp=Z,30nm,0.7s
NVAR **Mina Array Bea** 84.55 44 P **P** 07 14 31.3 +1.1
NV11 **Mina Array Sit** 84.64 44 P **P** 07 14 31.1 +0.6
NV11 IAmb IAmb 07 14 32.8
comp=Z,80nm,1.1s
214A **Organ Pipe Nat** 84.67 52 P **P** 07 14 32.5 +1.8
baz=238
I03D **Drain, OR** 84.76 37 P **P** 07 14 32.3 +1.6
baz=230,SNR=14
P17K **Kvichak River** 84.83 12 P **P** 07 14 30.7 0.0
baz=202,SNR=44
SNAA **Sanae** 84.86 179 P **P** 07 14 30.7 -0.3
SNAA **Sanae** 84.86 179 pP pP 07 16 25.5 -0.7
SNAA **Sanae** 84.86 179 P **P** 07 14 30.7 -0.3
comp=Z,14nm,0.5s,baz=206,slow=8.1,SNR=217
SNAA pP **pP** 07 16 26.5 +0.2
comp=Z,13nm,0.9s,baz=191,slow=4.2,SNR=4.1
comp=Z,14nm,0.5s
SNAA **Sanae** 84.86 179 P **P** 07 14 30.8 -0.3
SNAA **Sanae** 84.86 179 *ce*P **P** 07 14 30.7 -0.3
SNAA pmax pmax
comp=Z,28nm,1.0s
O16K **Kokwok River B** 84.91 11 P **P** 07 14 30.2 -0.9
baz=200,SNR=16
NEE2 **Needles Airpor** 84.91 49 P **P** 07 14 33.3 +1.5
baz=237,SNR=11
K04D **Chiloquin, OR** 84.99 39 P **P** 07 14 33.4 +1.3
baz=231,SNR=10
PDMCI **Parker Dam,Lak** 84.99 49 P **P** 07 14 33.9 +1.8
baz=237
TPNV **Topopah Spring** 85.03 46 P **P** 07 14 33.3 +0.9
baz=236,SNR=116
TPH **Tonopah** 85.03 45 P **P** 07 14 33.2 +0.7
TPH **Tonopah** 85.03 45 P **P** 07 14 33.2 +0.7
TPH pmax pmax
comp=Z,450nm,1.0s
VNA3 **Neumayer Olymp** 85.07 177 P **P** 07 14 31.6 -0.3
VNA3 **Neumayer Olymp** 85.07 177 pP pP 07 16 27.1 -0.1
Q20K **Shuyak Island** 85.12 14 P **P** 07 14 32.3 +0.2
baz=205,SNR=12
Q19K **Cape Douglas,** 85.14 13 P **P** 07 14 32.3 0.0
baz=204,SNR=13
J04D **Umpqua Nationa** 85.17 38 P **P** 07 14 34.4 +1.3
baz=231,SNR=48
P18K **Big Mountain,** 85.25 12 P **P** 07 14 31.9 -0.9
P18K IAmb IAmb 07 14 33.5
comp=Z,92nm,0.8s
P18K **Big Mountain,** 85.25 12 P **P** 07 14 32.7 -0.1
baz=202
O17K **Koliganek Bris** 85.25 11 P **P** 07 14 32.4 -0.3
baz=201
I04A **Tendick Farm,** 85.35 38 P **P** 07 14 34.7 +1.0
baz=231,SNR=22
NVL **N'lazarevskaya** 85.43 184 ⇓*i*P **P** 07 14 33.1 -0.5
NVL *e**PP **pP** 07 16 28.8 -0.3
NVL *e*S **S** 07 24 19.7 -0.2
NVL pmax pmax
comp=Z,26nm,0.9s
VNA2 **Neumayer--Watz** 85.49 178 P **P** 07 14 34.0 0.0
baz=182,slow=4.0
VNA2 **Neumayer--Watz** 85.49 178 pP pP 07 16 26.4 -3.0
baz=164,slow=5.0
N16K **Nishlik Lake** 85.62 10 P **P** 07 14 35.5 +1.0
baz=199,SNR=40
H04D **Lebanon** 85.63 37 P **P** 07 14 36.6 +1.6
baz=230,SNR=14
O18K **Koktuh Hills** 85.68 12 P **P** 07 14 34.6 -0.2
O18K **Koktuh Hills** 85.68 12 P **P** 07 14 34.9 0.0
baz=202
J05D **Fort Rock, OR** 85.70 39 P **P** 07 14 37.1 +1.6
baz=232,SNR=67
VNA1 **Neumayer--Stat** 85.73 177 P **P** 07 14 35.2 +0.1
VNA1 **Neumayer--Stat** 85.73 177 pP pP 07 16 30.9 +0.3
G03D **McMinnville, O** 85.78 36 P **P** 07 14 36.7 +1.1
baz=230,SNR=6.4
O19K **Port Alsworth** 86.17 12 P **P** 07 14 36.3 -0.8
O19K **Port Alsworth** 86.17 12 P **P** 07 14 37.0 -0.1
baz=203
HOM **Homer** 86.24 14 P **P** 07 14 37.8 +0.4
baz=206,SNR=5.5
R11A **Troy Canyon, C** 86.25 45 P **P** 07 14 38.6 +0.3
R11A **Troy Canyon, C** 86.25 45 P **P** 07 14 39.0 +0.7
baz=236,SNR=48
LL02 **Futaleuf** 86.28 136 P **P** 07 14 40.0 +1.7
LL02 IAmb IAmb 07 14 41.1
comp=Z,82nm,0.8s

I05D **Terrebonne, OR** 86.29 38 P **P** 07 14 39.5 +1.3
baz=232,SNR=35
N18K **Kilae Creek** 86.32 12 P **P** 07 14 37.6 -0.3
baz=202,SNR=17
TUC **Tucson** 86.33 52 P **P** 07 14 40.8 +2.1
TUC **Tucson** 86.33 52 P **P** 07 14 40.8 +2.1
TUC pmax pmax
comp=Z,147nm,0.9s
TUC **Tucson** 86.33 52 P **P** 07 14 41.0 +2.3
baz=239
BMN **Battle Mountai** 86.39 43 P **P** 07 14 39.7 +0.8
BMN IAmb IAmb 07 14 41.1
comp=Z,84nm,0.9s
BMN **Battle Mountai** 86.39 43 P **P** 07 14 39.7 +0.8
BMN pmax pmax
comp=Z,84nm,0.9s
ENH **Enshi** 86.40 305 P **P** 07 14 40.0 +0.9
MA2 **Magadan** 86.41 346 P **P** 07 14 38.3 0.0
comp=Z,74nm,0.8s,baz=156,slow=4.3,SNR=29
comp=Z,74nm,0.8s
MA2 **Magadan** 86.41 346 P **P** 07 14 37.4 -0.9
MA2 IAmb IAmb 07 14 39.4
comp=Z,102nm,0.8s
MA2 **Magadan** 86.41 346 *ce*P **P** 07 14 38.2 0.0
MA2 pmax pmax
comp=Z,175nm,1.3s
MA2 **Magadan** 86.41 346 P **P** 07 14 38.2 0.0
comp=Z,170nm,1.1s
O20K **Slope Mountain** 86.41 13 P **P** 07 14 38.2 -0.2
baz=205,SNR=10.0
LYN **LuoYang** 86.43 310 ⇑*i*P **P** 07 14 40.2 +1.2
HNS **HongShan** 86.43 313 ⇑P **P** 07 14 40.2 +1.3
HNS pP **pwP** 07 16 38.2 -1.6
HNS SKS **SKSac** 07 24 13.9 -0.4
HNS S **ScS** 07 24 35.3 -0.6
HNS sS **sS** 07 28 02.8 +5.9
HNS pmax pmax
comp=Z,26nm,1.1s
F04D **Rainier, OR** 86.47 36 P **P** 07 14 40.8 +1.9
baz=230,SNR=6.0
E03A **Lebam** 86.48 35 P **P** 07 14 40.0 +1.1
BRSE **Bradley Lake S** 86.52 14 P **P** 07 14 39.1 +0.3
baz=206,SNR=22
N19K **Bonanza Creek** 86.71 12 P **P** 07 14 39.1 -0.7
baz=203,SNR=28
GYA **Guiyang** 86.72 301 ⇑P **P** 07 14 41.1 +0.4
GYA SKS **SKSac** 07 24 17.7 +0.8
GYA S **S** 07 24 35.5 +1.7
GYA pmax pmax
comp=Z,12nm,0.8s
HG4B **Hotspring** 86.78 28 P **P** 07 14 41.6 +1.3
HG4B IAmb IAmb 07 14 42.8
comp=Z,109nm,1.0s
G05D **Wamic, OR** 86.86 37 P **P** 07 14 42.0 +1.1
baz=232,SNR=16
DIB **Dawson Inlet,** 86.92 26 P **P** 07 14 41.8 +1.0
DIB IAmb IAmb 07 14 43.8
comp=Z,118nm,1.1s
BJT **Baijiatuan** 86.94 316 P **P** 07 14 41.2 0.0
BJT **Baijiatuan** 86.94 316 P **P** 07 14 41.3 0.0
BJT pmax pmax
comp=Z,15nm,0.7s
BJI **Beijing** 86.95 316 P **P** 07 14 42.1 +0.8
BJI SKS **SKSac** 07 24 16.4 -0.9
BJI S **ScS** 07 24 39.8 -0.3
BJI sS **sS** 07 28 06.4 +4.3
BJI pmax pmax
comp=Z,21nm,0.7s
E04D **Cinebar** 87.01 36 P **P** 07 14 43.2 +1.8
baz=230,SNR=29
OZB **Mount Ozzard** 87.07 32 P **P** 07 14 42.9 +1.2
OZB IAmb IAmb 07 14 44.2
comp=Z,198nm,1.6s
SEW **Seward** 87.14 15 P **P** 07 14 41.6 -0.1
baz=208,SNR=17
D04E **Lakebay** 87.30 35 P **P** 07 14 44.6 +1.9
baz=230,SNR=15
CAPN **Captain Cook N** 87.35 14 P **P** 07 14 43.9 +1.3
baz=206
D03D **Eldon** 87.36 35 P **P** 07 14 44.4 +1.4
baz=230,SNR=25
U15A **North Rim** 87.40 48 P **P** 07 14 45.3 +1.4
O22K **Cooper Landing** 87.41 14 P **P** 07 14 42.9 -0.1
baz=207,SNR=10
GAMB **Gambell** 87.42 4 P **P** 07 14 43.5 +0.7
baz=188
SPCR **Spurr Chakacha** 87.52 13 P **P** 07 14 42.8 -0.8
baz=205,SNR=18
P23K **Montague Islan** 87.54 16 P **P** 07 14 43.7 +0.1
baz=210
WUAZ **Wupatki** 87.56 49 P **P** 07 14 46.0 +1.5
baz=239
CLRS **Cowichan Lake** 87.66 33 P **P** 07 14 45.7 +1.3
M19K **Big River Lodg** 87.73 12 P **P** 07 14 44.1 -0.4
M19K IAmb IAmb 07 14 45.0
comp=Z,38nm,0.7s
M19K **Big River Lodg** 87.73 12 P **P** 07 14 44.4 -0.1
baz=203
PGC **Sidney** 87.89 34 P **P** 07 14 46.5 +1.1
L19K **White Mountain** 87.90 11 P **P** 07 14 45.6 +0.3
baz=203,SNR=110
RC01 **Rabbit Creek A** 87.95 14 P **P** 07 14 45.5 0.0
baz=207,SNR=22
M20K **Styx River** 87.95 12 P **P** 07 14 45.1 -0.5
M20K **Styx River** 87.95 12 P **P** 07 14 44.7 -0.9
baz=204
BBB **Bella Bella** 88.04 29 P **P** 07 14 46.8 +0.7
comp=Z,96nm,0.8s,baz=251,slow=5.2,SNR=29
comp=Z,96nm,0.8s
BBB **Bella Bella** 88.04 29 P **P** 07 14 46.8 +0.7
SUA **Susitna One** 88.06 14 P **P** 07 14 46.0 -0.2
baz=206,SNR=27
TIY **Taiyuan** 88.12 313 ⇓P **P** 07 14 48.7 +1.7
TIY pmax pmax
comp=Z,64nm,0.8s
TIY pmax pmax
comp=Z,330nm,5.5s
ZAIG **Zacatecas** 88.18 64 P **P** 07 14 49.0 +1.1
ZAIG IAmb IAmb 07 14 50.9
comp=Z,69nm,1.0s
PLCA **Paso Flores** 88.34 134 P **P** 07 14 48.9 +0.7
comp=Z,13nm,1.0s,baz=234,slow=6.0,SNR=8.6
PLCA PKKPbc **PKKPbc** 07 32 27.9 -0.5
comp=Z,2.7nm,0.9s,baz=92,slow=3.2,SNR=4.3
comp=Z,13nm,1.0s
PLCA **Paso Flores** 88.34 134 P **P** 07 14 49.5 +1.4
PLCA **Paso Flores** 88.34 134 P **P** 07 14 49.5 +1.4
PLCA pmax pmax
comp=Z,42nm,1.3s
CRAG **Craig** 88.34 25 P **P** 07 14 49.0 +1.6
baz=222,SNR=11
ORCD **Orcadas** 88.35 160 P **P** 07 14 48.8 +1.3
ORCD IAmb IAmb 07 14 49.7
comp=Z,67nm,0.8s
L20K **Farewell, AK** 88.36 12 P **P** 07 14 47.2 -0.2
baz=204,SNR=44
SKT **Skwentna** 88.36 13 P **P** 07 14 46.0 -1.4
baz=206,SNR=29
GLI **Glacier Island** 88.38 15 P **P** 07 14 47.7 +0.2
baz=210,SNR=19
TTA **Tatalina** 88.39 11 P **P** 07 14 47.9 +0.3
baz=202,SNR=56
EYAK **Cordova Ski Ar** 88.43 16 P **P** 07 14 47.9 +0.2
baz=211,SNR=11
M22K **Willow** 88.45 14 P **P** 07 14 47.5 -0.3
baz=207,SNR=9.7
W18A **Petrified Fore** 88.51 50 P **P** 07 14 50.1 +1.1
baz=240,SNR=6.3
KNK **Knik Glacier** 88.53 15 P **P** 07 14 48.4 +0.2
baz=208,SNR=31
PMR **Palmer** 88.53 14 P **P** 07 14 48.2 0.0
baz=206,SNR=32
121A **Cookes Peak, D** 88.63 54 P **P** 07 14 51.6 +1.9
baz=241
121A **Cookes Peak, D** 88.63 54 P **P** 07 14 51.4 +1.8
baz=241,SNR=40
RUBB **Prince Rupert** 88.64 27 P **P** 07 14 50.3 +1.4
RUBB IAmb IAmb 07 14 51.5
comp=Z,60nm,1.2s
XAN **Xi'an** 88.69 308 ⇑P **P** 07 14 50.8 +1.1
XAN pP pwP 07 16 52.2 +1.1
XAN SKS **SKSac** 07 24 27.7 -0.4
XAN S **ScS** 07 24 54.1 -0.9
XAN pmax pmax
comp=Z,49nm,0.8s
ANM **Nome** 88.70 6 P **P** 07 14 49.3 +0.4
baz=193
SIT **Sitka** 88.74 23 P **P** 07 14 50.3 +1.1
baz=220,SNR=5.9
SML **Sawmill** 88.90 14 P **P** 07 14 49.9 -0.1
baz=209,SNR=14
CUT **Chulitna** 89.01 13 P **P** 07 14 49.9 -0.4
baz=207,SNR=30
M23K **Glacier View** 89.03 15 P **P** 07 14 50.4 -0.2
baz=209,SNR=21
DUG **Dugway, Tooele** 89.06 45 P **P** 07 14 52.2 +0.8
baz=238,SNR=33
PPLA **Purkeypile** 89.06 12 P **P** 07 14 49.3 -1.5
baz=205,SNR=14
BMRM **Bremner River** 89.08 16 P **P** 07 14 50.8 0.0
baz=212,SNR=37
SEY **Seymchan** 89.09 348 P **P** 07 14 51.0 +0.3
comp=Z,62nm,0.8s,baz=149,slow=5.2,SNR=138
comp=Z,62nm,0.8s
SEY **Seymchan** 89.09 348 *ce*P **P** 07 14 50.7 0.0
SEY pmax pmax
comp=Z,106nm,1.1s
K20K **Telida** 89.13 11 P **P** 07 14 50.7 -0.2
baz=204,SNR=78
MESA **MESA** 89.13 18 P **P** 07 14 51.8 +0.6
baz=214,SNR=16
SCM **Sheep Creek Mo** 89.16 15 P **P** 07 14 51.4 +0.2
baz=210,SNR=41
XLT **XiLinHaoTe** 89.19 319 *e*P **P** 07 14 50.3 -1.5
XLT S **S** 07 24 58.2 +2.4
XLT pmax pmax
comp=Z,28nm,1.2s
XLT pmax pmax
comp=Z,110nm,7.4s
KLU **Klutina** 89.20 16 P **P** 07 14 51.5 +0.1
baz=211,SNR=28
KIDD **KIDD Seismic O** 89.22 55 P **P** 07 14 54.1 +1.9
baz=241
KMI **Kunming** 89.25 298 ⇑P **P** 07 14 54.1 +1.4
KMI SKS **SKSac** 07 24 33.2 +1.1
KMI S **S** 07 24 57.5 0.0
KMI pmax pmax
comp=Z,14nm,1.3s
KMI pmax pmax
comp=Z,53nm,4.0s
WRAK **Wrangell Islan** 89.34 24 P **P** 07 14 53.3 +1.3
baz=222,SNR=26
YAH **Yahtse** 89.34 18 P **P** 07 14 52.9 +0.6
TNA **Tin City** 89.45 5 P **P** 07 14 52.8 +0.5
TNA IAmb IAmb 07 14 54.0
comp=Z,70nm,1.0s
TNA **Tin City** 89.45 5 P **P** 07 14 52.8 +0.5
baz=191
PNL **Peninsula** 89.46 19 P **P** 07 14 53.2 +0.6
baz=216,SNR=14
CMAR **Chiang Mai Arr** 89.54 290 P **P** 07 14 54.7 +0.8
comp=Z,5.8nm,0.6s,baz=131,slow=3.3,SNR=32
CMAR pP **pP** 07 16 49.2 -1.1
comp=Z,2.3nm,0.3s,baz=148,slow=6.0,SNR=2.5
CMAR PP **PP** 07 18 35.2 -0.2
comp=Z,2.0nm,0.3s,baz=122,slow=5.8,SNR=7.0
CMAR PKKPbc **PKKPbc** 07 32 26.0 +1.2
comp=Z,4.4nm,0.4s,baz=287,slow=4.3,SNR=13
CMAR PKPPKP **P'P'df** 07 40 35.2 +1.0
comp=Z,2.0nm,0.4s,baz=310,slow=3.4,SNR=4.3
comp=Z,5.8nm,0.6s
CMAR **Chiang Mai Arr** 89.54 290 P **P** 07 14 55.4 +1.4
CAST **Castle Rocks** 89.55 12 P **P** 07 14 51.8 -1.2
baz=205,SNR=128
PINM **Pinnacle** 89.56 19 P **P** 07 14 53.7 +0.6
baz=216,SNR=11
ZEA **Zeya** 89.58 332 *e*P **P** 07 14 54.1 +0.9
ZEA pmax pmax
comp=E,10.0nm,1.0s
ZEA pmax pmax
comp=N,20nm,0.9s
ZEA pmax pmax
comp=Z,40nm,0.9s
N25K **Chitina, Valde** 89.62 16 P **P** 07 14 53.7 +0.3
baz=212,SNR=36
M24K **Tolsona, Glenn** 89.67 15 P **P** 07 14 54.1 +0.5
baz=211,SNR=14
CHTO **Chiang Mai** 89.69 291 P **P** 07 14 55.0 +0.4
CHTO **Chiang Mai** 89.69 291 P **P** 07 14 55.0 +0.4
CHTO pmax pmax
comp=Z,15nm,1.0s
CHTO **Chiang Mai** 89.69 291 P **P** 07 14 56.5 +1.9
WAT6 **Susitna Watana** 89.72 14 P **P** 07 14 53.5 -0.4
baz=209,SNR=55
WAT1 **Susitna Watana** 89.75 14 P **P** 07 14 53.6 -0.3
baz=208
MCARA **McCarthy VSAT** 89.84 17 P **P** 07 14 55.0 +0.7
MCARA **McCarthy VSAT** 89.84 17 P **P** 07 14 54.8 +0.5
baz=213,SNR=27
J20K **Nowinta River** 89.87 11 P **P** 07 14 54.5 +0.1
baz=203,SNR=50
HLID **Hailey** 89.89 41 P **P** 07 14 56.5 +1.3
baz=236,SNR=111
Y22A **Socorro** 89.91 53 P **P** 07 14 57.0 +1.5
baz=241
CHUM **Lake Minchumin** 89.93 12 P **P** 07 14 54.0 -0.7
baz=205,SNR=32
HVU **Hansel Valley** 89.93 44 P **P** 07 14 56.3 +0.9
HVU **Hansel Valley** 89.93 44 P **P** 07 14 56.3 +0.9
HVU pmax pmax
comp=Z,109nm,0.8s
TRF **Thorofare Moun** 89.94 13 P **P** 07 14 54.0 -0.9
baz=207,SNR=96
BARN **Barnard Glacie** 89.94 18 P **P** 07 14 55.3 +0.2
GCSA **Galena City Sc** 89.95 10 P **P** 07 14 54.7 +0.1
baz=201,SNR=32
CTG **Chitna Glacier** 89.95 18 P **P** 07 14 55.4 +0.4
baz=215,SNR=36
Y22D **IRIS PASSCAL I** 90.01 53 P **P** 07 14 57.8 +1.9
baz=241
Y22D **IRIS PASSCAL I** 90.01 53 P **P** 07 14 57.6 +1.6
baz=241
MNTX **Cornudas Mount** 90.03 55 P **P** 07 14 57.5 +1.6
baz=242
MNTX **Cornudas Mount** 90.03 55 P **P** 07 14 57.5 +1.6
baz=242,SNR=102
CRNM **Carthage** 90.09 53 P **P** 07 14 57.2 +0.9
HARP **HAARP** 90.16 15 P **P** 07 14 56.0 +0.2
baz=212,SNR=8.0
DHY **Denali Highway** 90.23 14 P **P** 07 14 55.7 -0.5
DHY IAmb IAmb 07 14 57.4
comp=Z,82nm,1.6s
DHY **Denali Highway** 90.23 14 P **P** 07 14 56.1 -0.1
baz=210
PLBC **Pleasant Camp** 90.24 21 P **P** 07 14 56.9 +0.7
baz=219,SNR=12
TX31 **Lajitas Ar. Si** 90.25 58 P **P** 07 14 58.2 +1.1
TX31 **Lajitas Ar. Si** 90.25 58 P **P** 07 14 58.8 +1.8
baz=243
TX32 **Lajitas Array** 90.25 58 P **P** 07 14 58.2 +1.1
TXAR **Lajitas Array** 90.25 58 P **P** 07 14 58.7 +1.6
comp=Z,52nm,0.7s,baz=214,slow=6.4,SNR=581
TXAR pP **pP** 07 16 55.4 +1.5
comp=Z,1.2nm,0.7s,baz=213,slow=6.1,SNR=2.5
TXAR PKKPbc **PKKPbc** 07 32 24.8 +1.2
comp=Z,1.7nm,0.7s,baz=85,slow=3.6,SNR=18
TXAR PKPPKP **P'P'df** 07 40 34.2 +2.0
comp=Z,0.2nm,0.7s,baz=113,slow=2.9,SNR=3.8
comp=Z,52nm,0.7s
TXAR **Lajitas Array** 90.25 58 P **P** 07 14 58.0 +0.9
HHC **Hu-ho-hao-te** 90.34 315 *e*P **P** 07 14 58.7 +1.5
HHC SKS **SKSac** 07 24 38.0 +0.6
HHC S **ScS** 07 25 11.1 +2.5
HHC pmax pmax
comp=Z,54nm,1.0s
HHC pmax pmax
comp=Z,120nm,5.2s
BPAW **Bear Paw Mtn.** 90.38 12 P **P** 07 14 55.3 -1.4
baz=206,SNR=13
MVCO **Mesa Verde** 90.42 49 P **P** 07 14 58.5 +0.6
baz=240,SNR=13
MCK **McKinley** 90.47 13 P **P** 07 14 56.5 -0.6
baz=208,SNR=21
T35M **Bob Quinn** 90.55 25 P **P** 07 14 59.2 +1.5
baz=224,SNR=11
PAX **Paxson** 90.58 15 P **P** 07 14 57.2 -0.5
baz=211,SNR=17
SKAG **Skagway** 90.58 21 P **P** 07 14 58.9 +1.2
baz=220
YUK8 **Steele Glacier** 90.66 18 P **P** 07 14 59.0 +0.5
baz=216,SNR=38
PZH **PanZhiHua** 90.66 299 P **P** 07 15 00.2 +1.1
PZH SKS **SKSac** 07 24 38.6 -1.3

PZH S **S** 07 25 09.3 -0.6
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,100nm,5.7s
PV11 David Mesa, Pa 90.70 48 P **P** 07 14 59.2 +0.1
PV11 IAmb IAmb 07 15 01.1
comp=Z,54nm,1.2s
M26K Nabesna, AK 90.70 16 P **P** 07 14 58.7 +0.4
baz=213,SNR=25
ANMO Albuquerque 90.76 52 P **P** 07 14 59.4 0.0
ANMO IAmb IAmb 07 15 01.7
comp=Z,68nm,1.1s
ANMO Albuquerque 90.76 52 *ce*P **P** 07 15 00.4 +0.9
ANMO pmax pmax
comp=Z,70nm,1.1s
ANMO Albuquerque 90.76 52 P **P** 07 15 00.6 +1.1
baz=241
ANMO Albuquerque 90.76 52 P **P** 07 15 00.6 +1.1
baz=241
YUK6 Outpost Mounta 90.79 19 P **P** 07 14 59.2 +0.2
baz=217,SNR=5.2
YUK3 Moose Creek 90.86 18 P **P** 07 14 59.9 +0.6
baz=216,SNR=79
HYT Haines Junctio 90.96 19 P **P** 07 15 00.2 +0.6
HYT IAmb IAmb 07 15 01.6
comp=Z,39nm,1.3s
HYT Haines Junctio 90.96 19 P **P** 07 15 00.2 +0.6
baz=218,SNR=14
M27K Edge Creek, AK 90.96 17 P **P** 07 15 00.2 +0.6
baz=214,SNR=43
NEW Newport 90.98 36 P **P** 07 15 00.2 +0.3
comp=Z,15nm,0.8s,baz=231,slow=3.2,SNR=41
comp=Z,15nm,0.8s
NEW Newport 90.98 36 P **P** 07 15 00.2 +0.3
baz=235,SNR=22
YUK4 Talbot Arm 91.03 19 P **P** 07 15 01.1 +1.1
baz=217,SNR=5.6
CD2 Chengdu 91.04 303 P **P** 07 15 02.4 +1.7
CD2 SKS **SKSac** 07 24 40.8 -0.9
CD2 S **ScS** 07 25 14.9 +0.1
CD2 pmax pmax
comp=Z,40nm,0.9s
L26K Log Cabin Wild 91.14 16 P **P** 07 15 00.6 +0.3
baz=213,SNR=31
I21K Tanana 91.17 11 P **P** 07 14 60.0 -0.3
baz=205,SNR=38
NEA2 Nenana 91.20 13 P **P** 07 14 59.3 -1.2
baz=208,SNR=14
BTO Baotou 91.22 314 *e*P **P** 07 15 03.0 +1.7
BTO S **S** 07 25 09.0 -5.2
K24K Donnelly Dome 91.22 14 P **P** 07 15 00.9 +0.2
baz=211,SNR=42
MLY Manley 91.27 12 P **P** 07 14 59.7 -1.1
baz=206,SNR=32
BVCY Beaver Creek 91.28 17 P **P** 07 15 01.6 +0.6
baz=215,SNR=38
O30N Mendenhall 91.35 20 P **P** 07 15 02.1 +0.8
baz=219,SNR=10
RIDG Independent Ri 91.38 15 P **P** 07 15 01.2 -0.3
baz=212,SNR=28
H21K Melozitna Rive 91.46 11 P **P** 07 15 01.6 0.0
baz=205,SNR=26
ECR Eagle Creek 91.49 43 P **P** 07 15 03.0 +0.4
HDA Harding Lake 91.49 14 P **P** 07 15 01.3 -0.5
baz=210,SNR=48
DOT Dot Lake 91.49 15 P **P** 07 15 01.8 -0.1
DOT IAmb IAmb 07 15 03.0
comp=Z,39nm,0.9s
L27K Beaver Creek, 91.56 16 P **P** 07 15 02.5 +0.3
baz=214,SNR=36
BCAR Beaver Creek A 91.57 16 P **P** 07 15 01.9 -0.4
N30M Aishikik Lake 91.58 19 P **P** 07 15 02.8 +0.4
baz=218,SNR=6.0
IMAR Indian Mountai 91.60 10 P **P** 07 15 02.5 +0.2
I23K Minto, Yukon-K 91.64 12 P **P** 07 15 01.3 -1.1
baz=208,SNR=14
DLBC Dease Lake 91.67 24 P **P** 07 15 03.9 +0.9
comp=Z,21nm,0.9s,baz=221,slow=5.3,SNR=37
DLBC PP **PP** 07 18 50.4 -0.9
comp=Z,10nm,1.1s,baz=221,slow=6.6,SNR=7.3
comp=Z,21nm,0.9s
DLBC Dease Lake 91.67 24 P **P** 07 15 02.6 -0.3
DLBC IAmb IAmb 07 15 05.1
comp=Z,32nm,1.0s
DLBC Dease Lake 91.67 24 P **P** 07 15 03.8 +0.9
baz=224,SNR=20
TCOL CIGO, UAF Yank 91.70 13 P **P** 07 15 02.0 -0.7
baz=209,SNR=12
COLA College 91.70 13 P **P** 07 15 01.2 -1.6
COLA IAmb IAmb 07 15 03.2
comp=Z,50nm,0.9s
COLA College 91.70 13 *c i*P **P** 07 15 01.7 -1.0
COLA pmax pmax
comp=Z,51nm,1.0s
COLA College 91.70 13 P **P** 07 15 01.9 -0.8
baz=209
SCRK Sand Creek 91.79 15 P **P** 07 15 03.7 +0.3
baz=212,SNR=37
IL31 91.81 14 P **P** 07 15 02.2 -1.0
ILAR Eielson Array 91.81 14 P **P** 07 15 02.6 -0.7
comp=Z,11nm,0.8s,baz=225,slow=5.6,SNR=128
ILAR pP **pP** 07 16 59.2 -1.4
comp=Z,1.8nm,0.9s,baz=215,slow=5.8,SNR=3.1
ILAR PP **PP** 07 18 50.3 -1.9
comp=Z,5.0nm,1.0s,baz=222,slow=7.3,SNR=5.0
PKiKP **PKiKP** 07 19 49.5 -0.7
comp=Z,0.9nm,0.6s,baz=278,slow=2.3,SNR=6.1
ILAR PKKP **PKKPdf** 07 32 17.9 -0.4
comp=Z,0.9nm,0.9s,baz=341,slow=2.2,SNR=7.2
comp=Z,11nm,0.8s
ILAR Eielson Array 91.81 14 P **P** 07 15 01.8 -1.5
S22A 4UR Ranch, Cre 91.84 49 P **P** 07 15 05.5 +1.1
baz=241,SNR=94
MSO Missoula 91.96 39 P **P** 07 15 04.2 -0.4
baz=237,SNR=17
P33M Teslin, Yukon 91.98 21 P **P** 07 15 04.9 +0.5
baz=222,SNR=19
N31M Braeburn, Yuko 92.00 20 P **P** 07 15 04.6 +0.3
baz=220,SNR=10
POKR Poker Plat Res 92.00 13 P **P** 07 15 03.3 -0.9
baz=210,SNR=7.1
J25K Salcha River, 92.01 14 P **P** 07 15 03.9 -0.4
baz=211,SNR=38
O20A White River Ci 92.03 47 P **P** 07 15 05.9 +0.7
baz=240,SNR=34
BILL Bilibino 92.03 355 P **P** 07 15 04.7 +0.5
BILL IAmb IAmb 07 15 05.7
comp=Z,55nm,0.9s
BILL Bilibino 92.03 355 ⇓*i*P **P** 07 15 04.5 +0.2
BILL *e* 07 18 55.2
BILL *e*S **SKSac** 07 24 47.6 +2.2
BILL pmax pmax
comp=Z,75nm,1.1s
H23K Yukon River 92.20 12 P **P** 07 15 04.4 -0.8
baz=208,SNR=6.8
LRM Limekiln Ridge 92.29 40 P **P** 07 15 06.4 +0.1
K27K Chicken 92.30 16 P **P** 07 15 05.7 +0.1
K27K IAmb IAmb 07 15 07.3
comp=Z,39nm,0.8s
K27K Chicken 92.30 16 P **P** 07 15 06.3 +0.8
baz=214
J26L Joseph Creek 92.33 15 P **P** 07 15 06.1 +0.2
J26L Joseph Creek 92.33 15 P **P** 07 15 06.6 +0.8
baz=213
RDOG Red Dog Mine 92.34 6 P **P** 07 15 02.0 -3.6
baz=196
BW06 Boulder Array 92.48 44 P **P** 07 15 06.9 -0.4
BW06 IAmb IAmb 07 15 09.4
comp=Z,33nm,0.8s
BW06 Boulder Array 92.48 44 P **P** 07 15 07.5 +0.3
baz=240,SNR=42
PD31 Pinedale Array 92.48 44 P **P** 07 15 07.5 +0.3
PD31 IAmb IAmb 07 15 09.4
comp=Z,29nm,0.8s
PDAR Pinedale Array 92.48 44 P **P** 07 15 07.5 +0.3
comp=Z,28nm,0.8s,baz=213,slow=4.3,SNR=123
PDAR PP **PP** 07 18 54.9 -3.4
comp=Z,6.2nm,1.1s,baz=243,slow=6.5,SNR=10.0
PDAR PKKP **PKKPdf** 07 32 15.9 -0.6
comp=Z,0.9nm,0.8s,baz=85,slow=3.3,SNR=4.8
PDAR PKPPKP **P'P'df** 07 40 29.3 +2.1
comp=Z,0.2nm,0.4s,baz=130,slow=2.3,SNR=3.7
comp=Z,28nm,0.8s
PDAR Pinedale Array 92.48 44 P **P** 07 15 06.9 -0.4
M30M Minto, Yukon 92.55 18 P **P** 07 15 07.0 +0.2
baz=219,SNR=52

BOZ Bozeman (W) 92.66 41 P **P** 07 15 08.5 +0.6
baz=238,SNR=61
H17A Grant Village 92.67 42 P **P** 07 15 09.6 +1.5
baz=239,SNR=26
SDCO Great Sand Dun 92.77 50 P **P** 07 15 08.6 -0.1
SDCO IAmb IAmb 07 15 10.5
comp=Z,37nm,0.8s
SDCO Great Sand Dun 92.77 50 P **P** 07 15 09.6 +0.9
baz=242
SDCO Great Sand Dun 92.77 50 P **P** 07 15 09.4 +0.7
baz=242,SNR=67
M31M Drury Creek, Y 92.97 20 P **P** 07 15 08.2 -0.5
baz=221,SNR=14
DAWY Dawson 93.01 17 P **P** 07 15 09.0 +0.1
DAWY IAmb IAmb 07 15 10.3
comp=Z,43nm,0.8s
DAWY Dawson 93.01 17 P **P** 07 15 09.0 +0.1
baz=217,SNR=70
MSTX Muleshoe 93.02 54 P **P** 07 15 10.4 +0.7
baz=243
MSTX Muleshoe 93.02 54 P **P** 07 15 10.1 +0.4
baz=243,SNR=20
HRY Holter Researc 93.12 40 P **P** 07 15 10.2 +0.3
833A Chaparral WMA, 93.17 61 P **P** 07 15 11.4 +0.9
baz=245
833A Chaparral WMA, 93.17 61 P **P** 07 15 11.2 +0.8
baz=245
CO03 El Pedregal 93.19 126 P **P** 07 15 11.0 +0.3
CO03 IAmb IAmb 07 15 12.2
comp=Z,40nm,0.8s
T25A Trinidad 93.25 51 P **P** 07 15 11.2 +0.3
baz=243,SNR=20
FARO Faro, Yukon 93.32 20 P **P** 07 15 10.2 -0.1
baz=222,SNR=7.0
LZH Lanzhou 93.32 308 ⇓P **P** 07 15 12.9 +1.7
LZH pP pwP 07 17 11.2 -1.9
LZH sP sP 07 18 03.4 +2.3
LZH SKS **SKSac** 07 24 53.2 -1.0
LZH S **ScS** 07 25 37.4 +3.6
LZH sS sS 07 29 09.1 +5.6
LZH SS **SS** 07 32 09.1 +3.2
LZH pmax pmax
comp=Z,28nm,1.5s
LZH pmax pmax
comp=Z,130nm,6.0s
COLD Coldfoot 93.33 11 P **P** 07 15 10.1 -0.2
COLD Coldfoot 93.33 11 P **P** 07 15 10.4 +0.1
baz=207
Q24A Divide 93.58 49 P **P** 07 15 13.1 +0.7
baz=242,SNR=26
J29M Klondike Camp 93.63 17 P **P** 07 15 12.1 +0.4
baz=218
ISCO Idaho Springs 93.65 48 P **P** 07 15 13.5 +0.8
baz=242
ISCO Idaho Springs 93.65 48 P **P** 07 15 13.6 +0.8
baz=242,SNR=18
JCT Junction City 93.77 58 P **P** 07 15 13.0 -0.2
JCT IAmb IAmb 07 15 14.6
comp=Z,31nm,0.8s
JCT Junction City 93.77 58 P **P** 07 15 13.0 -0.2
JCT pmax pmax
comp=Z,31nm,0.8s
JCT Junction City 93.77 58 P **P** 07 15 13.2 +0.1
baz=245
JCT Junction City 93.77 58 P **P** 07 15 13.1 0.0
baz=245
RLMT Red Lodge 93.85 42 P **P** 07 15 14.2 +0.8
baz=240,SNR=16
N23A Red Feather La 93.94 47 P **P** 07 15 14.8 +0.8
baz=242,SNR=16
LCO Las Campanas 94.08 124 P **P** 07 15 15.0 -0.1
LCO IAmb IAmb 07 15 17.3
comp=Z,44nm,0.9s
LCO Las Campanas 94.08 124 P **P** 07 15 15.0 -0.1
LCO pmax pmax
comp=Z,44nm,1.0s
AMTX Amarillo 94.23 54 P **P** 07 15 15.5 +0.2
baz=244
AMTX Amarillo 94.23 54 P **P** 07 15 15.3 +0.1
baz=244
MMPY Sheldon Lake, 94.26 20 P **P** 07 15 15.1 +0.4
baz=224,SNR=22
I29M Ogilvie Camp, 94.33 16 P **P** 07 15 14.6 -0.3
baz=218,SNR=32
K22A Casper 94.38 45 P **P** 07 15 16.3 +0.5
baz=242
K22A Casper 94.38 45 P **P** 07 15 16.3 +0.5
baz=242,SNR=12
YAK Yakutsk 94.42 339 P **P** 07 15 15.6 +0.4
comp=Z,10nm,0.4s,baz=190,slow=0.4,SNR=5.9
comp=Z,10nm,0.4s
YAK Yakutsk 94.42 339 *e*P **P** 07 15 15.0 -0.3
YAK *e* 07 19 17.2
YAK *e*S **SKSac** 07 24 54.7 -3.8
YAK *e* 07 25 42.0
YAK *e*SS **SS** 07 32 16.4 -3.5
YAK pmax pmax
comp=Z,38nm,0.9s
YAK pmax pmax
comp=N,4.0nm,1.0s
YAK pmax pmax
comp=E,5.0nm,1.0s
YAK pmax pmax
comp=Z,33nm,1.7s
YAK pmax pmax
comp=N,22nm,2.5s
YAK pmax pmax
comp=E,18nm,1.8s
YAK smax smax
comp=N,96nm,2.3s
YAK smax smax
comp=E,56nm,2.3s
TGTN Hyland Airport 94.48 22 P **P** 07 15 16.2 +0.6
baz=226,SNR=5.8
BMAR Burnt Mountain 94.59 13 P **P** 07 15 15.3 -0.7
735A Kenedy 94.66 61 P **P** 07 15 18.5 +1.3
baz=246
TOLK Toolik Lake Re 94.71 11 P **P** 07 15 17.2 +0.7
baz=208
ABTX Abilene, Hawle 94.79 57 P **P** 07 15 18.4 +0.6
baz=245
ABTX Abilene, Hawle 94.79 57 P **P** 07 15 18.3 +0.5
baz=245
KSCO Kaye Shedlock' 95.35 50 P **P** 07 15 21.1 +0.8
baz=244
KSCO Kaye Shedlock' 95.35 50 P **P** 07 15 20.7 +0.5
baz=244,SNR=22
EPYK Eagle Plains 95.53 16 P **P** 07 15 20.4 +0.1
baz=219
435B Jarrell 95.63 59 P **P** 07 15 22.3 +0.7
baz=246
435B Jarrell 95.63 59 P **P** 07 15 21.9 +0.4
baz=246
EDM Edmonton 95.74 34 P **P** 07 15 20.8 -0.7
EDM IAmb IAmb 07 15 22.6
comp=Z,49nm,1.4s
EDM Edmonton 95.74 34 P **P** 07 15 20.8 -0.7
EDM pmax pmax
comp=Z,49nm,1.4s
WHTX Lake Whitney, 96.22 58 P **P** 07 15 24.7 +0.5
baz=246
WHTX Lake Whitney, 96.22 58 P **P** 07 15 24.5 +0.3
baz=246
WMOK Wichita Mounta 96.33 55 P **P** 07 15 24.4 -0.2
baz=246
LAO LASA Array 96.46 42 P **P** 07 15 26.1 +1.1
baz=242
LAO LASA Array 96.46 42 Pdiff **P** 07 15 26.0 +1.1
baz=242
OGNE Ogallala 96.60 48 P **P** 07 15 26.6 +0.8
baz=244
OGNE Ogallala 96.60 48 Pdiff **P** 07 15 26.2 +0.4
baz=244
ULN Ulaanbaatar 96.63 320 *ce*P **P** 07 15 25.3 -0.5
ULN pmax pmax
comp=Z,15nm,1.7s
RSSD Black Hills 96.67 45 P **P** 07 15 26.0 -0.1
RSSD IAmb IAmb 07 15 27.4
comp=Z,20nm,0.9s
RSSD Black Hills 96.67 45 P **P** 07 15 26.0 -0.1
RSSD pmax pmax
comp=Z,20nm,1.0s
RSSD Black Hills 96.67 45 P **P** 07 15 26.2 0.0
baz=243
RSSD Black Hills 96.67 45 Pdiff **P** 07 15 26.1 -0.1
baz=243
HKT Hockley 96.68 60 P **P** 07 15 26.8 +0.6

HKT IAmb IAmb 07 15 28.5
comp=Z,34nm,1.8s
HKT Hockley 96.68 60 *c i*P **P** 07 15 26.4 +0.2
HKT pmax pmax
comp=Z,19nm,1.7s
HKT Hockley 96.68 60 P **P** 07 15 26.9 +0.7
baz=247
U32A Winter Ranch, 96.84 53 P **P** 07 15 27.4 +0.6
baz=246
Z35A Perchaven, San 96.92 57 P **P** 07 15 27.7 +0.4
baz=246
SONM Songino Array 97.01 319 P **P** 07 15 27.4 -0.1
comp=Z,1.5nm,0.6s,baz=131,slow=4.6,SNR=13
SONM PP **PP** 07 19 28.2 -4.4
comp=Z,2.1nm,0.9s,baz=124,slow=6.7,SNR=3.7
SONM S **SKSac** 07 25 13.1 +0.2
comp=Z,0.3nm,0.4s,baz=132,slow=2.1,SNR=1.6
SONM PKKPbc **PKKPbc** 07 32 06.1 -0.7
comp=Z,3.6nm,0.7s,baz=275,slow=3.1,SNR=16
comp=Z,1.5nm,0.6s
CBKS Cedar Bluff 97.31 51 P **P** 07 15 29.9 +0.9
baz=246
CBKS Cedar Bluff 97.31 51 Pdiff **P** 07 15 29.5 +0.6
baz=246
237A Washetta, Mont 97.51 58 P **P** 07 15 30.7 +0.8
baz=247
GTA Gaotai 97.64 310 *e*P **P** 07 15 31.5 +1.0
GTA pP pwP 07 17 34.2 +1.3
GTA PP **PP** 07 19 40.5 +3.0
GTA SKS **SKSac** 07 25 16.9 +0.4
GTA S **S** 07 26 13.0 +3.4
GTA pmax pmax
comp=Z,5.0nm,1.2s
GTA pmax pmax
comp=Z,54nm,4.4s
INK Inuvik 97.81 16 P Pdif 07 15 29.7 -0.7
comp=Z,13nm,0.8s,baz=223,slow=5.1,SNR=22
comp=Z,13nm,0.8s
INK Inuvik 97.81 16 Pdiff Pdif 07 15 30.0 -0.3
baz=222
R32A Long Quarter, 97.88 52 P **P** 07 15 32.0 +0.5
baz=246
DGMT Dagmar 98.49 41 P **P** 07 15 34.9 +0.9
baz=244
DGMT Dagmar 98.49 41 Pdiff **P** 07 15 34.8 +0.8
baz=244
JTS Las Juntas de 98.56 83 P Pdif 07 15 34.5 -0.5
comp=Z,8.0nm,0.9s,baz=295,slow=6.9,SNR=5.2
comp=Z,8.0nm,0.9s
TUL1 Leonard 99.03 55 Pdiff **Pdif** 07 15 37.5 +0.8
baz=247
BGNE Belgrade 99.46 49 Pdiff **Pdif** 07 15 39.2 +0.8
baz=247
K31A O'Neill 99.53 48 P **Pdif** 07 15 39.9 +1.2
baz=247
GOMU GeErMu 100.02 305 P **Pdif** 07 15 46.0 +4.5
GOMU pmax pmax
comp=Z,47nm,4.0s
YKA Yellowknife Ar 100.14 25 Pdiff **Pdif** 07 15 39.5 -1.3
comp=Z,2.2nm,0.6s,baz=239,slow=4.4,SNR=9.7
YKA PP **PP** 07 19 52.6 -3.0
comp=Z,4.0nm,0.9s,baz=244,slow=7.6,SNR=8.1
YKA PKKPbc **PKKPbc** 07 31 55.6 -2.8
comp=Z,1.4nm,0.9s,baz=36,slow=2.8,SNR=4.1
MIAR Mount Ida 100.20 57 Pdiff **Pdif** 07 15 42.2 +0.3
baz=248
TIXI Tiksi 101.38 345 Pdiff **Pdif** 07 15 45.5 -0.7
comp=Z,1.5nm,0.3s,baz=56,slow=3.6,SNR=6.3
TIXI PKiKP **PP** 07 20 05.6 +1.1
comp=Z,3.5nm,0.7s,baz=94,slow=5.9,SNR=6.0
TIXI S **SKSac** 07 25 33.1 +0.1
comp=Z,0.3nm,0.3s,baz=94,slow=7.0,SNR=5.7
ECSD EROS Data Cent 101.40 47 P **Pdif** 07 15 47.0 0.0
baz=248
ECSD EROS Data Cent 101.40 47 Pdiff **Pdif** 07 15 47.1 +0.1
baz=248
U40A Yellville 101.41 55 Pdiff **Pdif** 07 15 47.6 +0.4
baz=249
LPAZ La Paz 102.42 114 Pdiff **Pdif** 07 15 52.7 -0.3
comp=Z,1.4nm,0.8s,baz=200,slow=4.8,SNR=5.8
LPAZ PKiKP **PKiKP** 07 20 11.1 -0.1
comp=Z,0.6nm,0.7s,baz=219,slow=13,SNR=2.0
LPAZ PKKPbc **PKKPbc** 07 31 51.0 -0.4
comp=Z,1.0nm,0.8s,baz=353,slow=2.2,SNR=2.9
ULM Lac du Bonnet 104.19 41 PKiKP **PKiKP** 07 20 11.7 -1.0
comp=Z,4.1nm,0.8s,baz=198,slow=1.2,SNR=4.9
HYBB Hyderabad (bro 107.10 282 *e*PKiKP **PKiKP** 07 20 19.1 0.0
HYBB *ep*PKiKP **pPKiKP** 07 22 22.9 -0.7
SIV San Ignacio 108.40 117 PKiKP **PKiKP** 07 20 21.2 -0.4
comp=Z,0.7nm,0.5s,baz=232,slow=4.4,SNR=4.1
SIV PKKPbc **PKKPbc** 07 31 31.2 -1.6
comp=Z,0.8nm,0.9s,baz=62,slow=4.8,SNR=7.0
SIV PKKPab **PKKPab** 07 31 48.3 -1.1
comp=Z,0.9nm,0.6s,baz=81,slow=5.9,SNR=3.9
ZSN Zaisan 110.50 314 *i* PKiKP **PKiKP** 07 20 23.0 -1.5
ZSN Zaisan 110.50 314 *e*PKiKP **PKiKP** 07 20 23.1 -1.5
baz=314
SDV Santo Domingo 111.12 89 PKiKP **PKiKP** 07 20 26.1 -0.8
comp=Z,4.9nm,0.3s,baz=303,slow=7.3,SNR=1.8
RES Resolute Bay 111.35 17 PKiKP **PKiKP** 07 20 24.6 -0.7
comp=Z,6.0nm,0.7s,baz=235,slow=3.1,SNR=12
ZALV Zalesovo Beam 111.85 321 PKiKP **PKiKP** 07 20 25.8 -1.1
comp=Z,7.3nm,0.6s,baz=140,slow=1.3,SNR=19
ZALV SKP 07 23 12.6
comp=Z,1.7nm,0.7s,baz=44,slow=1.9,SNR=3.7
ZALV PKKPbc **PKKPbc** 07 31 21.4 -1.0
comp=Z,1.6nm,0.6s,baz=260,slow=2.7,SNR=5.6
ZALV PKKPab **PKKPab** 07 31 32.4 +1.4
comp=Z,0.9nm,0.5s,baz=39,slow=52,SNR=3.3
MK31 Makanchi Array 112.08 313 *c i*PKiKP **PKiKP** 07 20 26.5 -1.1
MKAR Makanchi Array 112.08 313 Pdiff **Pdif** 07 16 34.9 +0.4
comp=Z,0.5nm,0.4s,baz=83,slow=6.3,SNR=7.8
MKAR PKiKP **PKiKP** 07 20 26.8 -0.8
comp=Z,8.4nm,0.6s,baz=178,slow=0.4,SNR=54
MKAR SKP 07 23 12.8
comp=Z,2.1nm,0.8s,baz=46,slow=5.2,SNR=4.0
MKAR PKKPbc **PKKPbc** 07 31 20.9 -0.6
comp=Z,4.2nm,0.9s,baz=282,slow=4.0,SNR=16
MKAR PKKPab **PKKPab** 07 31 31.6 +1.4
comp=Z,4.3nm,0.7s,baz=289,slow=3.7,SNR=15
MAKZ Makanchi 112.30 313 ⇑PKiKP **PKiKP** 07 20 27.3 -0.7
NRIK Noril'sk 112.83 337 PKiKP **PKiKP** 07 20 27.9 -0.4
comp=Z,3.5nm,0.5s,baz=107,slow=3.3,SNR=9.0
NRIK Noril'sk 112.83 337 *c i*PKiKP **PKiKP** 07 20 27.4 -0.9
KPKS Kokpek 113.96 309 *i* PKiKP **PKiKP** 07 20 29.9 -1.5
KPKS Kokpek 113.96 309 *e*PKiKP **PKiKP** 07 20 29.9 -1.5
baz=309
SEM Semipalatinsk 114.05 316 *i* PKiKP PKPdf 07 20 29.6 -1.9
SEM Semipalatinsk 114.05 316 *e*PKiKP PKPdf 07 20 29.7 -1.8
baz=316
SATY Saty 114.08 308 *i* PKiKP PKPdf 07 20 30.7 -1.0
SATY Saty 114.08 308 *e*PKiKP PKPdf 07 20 30.7 -1.0
baz=308
TDK Taldyqorghan 114.42 310 *i* PKiKP PKPdf 07 20 30.0 -2.1
TDK Taldyqorghan 114.42 310 *e*PKiKP PKPdf 07 20 30.1 -2.1
baz=310
N58A Sunbury 114.77 54 PKPdf 07 20 31.1 -1.8
MVL Millersville 114.89 55 PKPdf 07 20 32.1 -1.1
MDOK Medeo 115.08 308 *i* PKiKP **PKPdf** 07 20 32.8 -0.8
MDOK Medeo 115.08 308 *e*PKiKP **PKPdf** 07 20 32.9 -0.8
baz=308
KURK Kurchatov 115.12 317 **PKPdf** 07 20 31.9 -1.3
KURK Kurchatov 115.12 317 *c i*PKiKP **PKPdf** 07 20 32.2 -1.0
KURK pmax pmax
comp=Z,33nm,1.0s
TNSS Tian-Shan 115.13 308 *i* PKiKP **PKPdf** 07 20 33.5 -0.6
TNSS Tian-Shan 115.13 308 *e*PKiKP **PKPdf** 07 20 33.5 -0.6
baz=308
KURBB Kurchatov Arra 115.16 316 PKKPbc PKKPbc 07 31 11.5 +0.2
comp=Z,3.9nm,1.0s,baz=278,slow=4.1,SNR=12
KURBB PKKPab **PKKPab** 07 31 17.9 +1.5
comp=Z,1.7nm,0.8s,baz=271,slow=5.2,SNR=6.7
KURBB Kurchatov Arra 115.16 316 PKiKP **PKPdf** 07 20 32.2 -1.1
AAA Alma-Ata 115.18 308 *i* PKiKP **PKPdf** 07 20 32.0 -1.7
AAA Alma-Ata 115.18 308 *e*PKiKP **PKPdf** 07 20 32.1 -1.7
baz=308
KSH Kashi 115.23 304 PKP **PKiKP** 07 20 35.0 +1.0
CHKK Chushkaly 115.23 309 *i* PKiKP **PKPdf** 07 20 32.3 -1.4
CHKK Chushkaly 115.23 309 *e*PKiKP **PKPdf** 07 20 32.4 -1.4
baz=309
ULHL Ulahol 115.51 307 P **PKiKP** 07 20 34.7 +0.1
SNR=14
KUU Kurty 115.70 309 *i* PKiKP **PKPdf** 07 20 33.0 -1.6
KUU Kurty 115.70 309 *e*PKiKP **PKPdf** 07 20 33.1 -1.6
baz=309
BOOM Boomskoye usch 115.77 307 **PKPdf** 07 20 34.5 -0.6
BOOM Boomskoye usch 115.77 307 PKiKP **PKPdf** 07 20 34.5 -0.6

TKM2 **Tokmak 2** 116.09 308 P **PKPdf** 07 20 35.1 -0.5
SNR=19
TKM2 **Tokmak 2** 116.09 308 PKIKP **PKPdf** 07 20 34.7 -1.0
ODNJ **Ogdensburg** 116.39 54 **PKPdf** 07 20 34.7 -1.3
CHMS **Chumysh** 116.72 308 P **PKPdf** 07 20 36.3 -0.4
SNR=9.6
CHMS **Chumysh** 116.72 308 PKIKP **PKPdf** 07 20 36.0 -0.7
UCH **Uchtor** 116.78 307 P **PKiKP** 07 20 37.5 +0.2
SNR=24
AAK **Ala-Archa** 116.85 307 PKKPbc PKKPbc 07 31 06.1 +0.7
comp=Z,12nm,0.8s,baz=240,slow=4.1,SNR=14
AAK **Ala-Archa** 116.85 307 **PKPdf** 07 20 36.5 -0.6
AAK **Ala-Archa** 116.85 307*c* *i*PKIKP **PKPdf** 07 20 36.8 -0.3
AAK pmax pmax
comp=Z,19nm,1.7s
SGDS **Sogindy** 116.87 308 *i* PKIKP **PKPdf** 07 20 35.4 -1.6
SGDS **Sogindy** 116.87 308 *e*PKiKP **PKPdf** 07 20 35.4 -1.6
baz=308
USP **Ospenovka** 116.94 308 P **PKPdf** 07 20 36.7 -0.4
SNR=12
AML **Almayashu** 117.37 307 P **PKiKP** 07 20 38.5 0.0
SNR=20
EKS2 **Erkin-Say** 117.38 307 P **PKiKP** 07 20 38.1 0.0
SNR=10.0
BTLS **Baital** 117.49 310 *i* PKIKP **PKPdf** 07 20 36.9 -1.1
BTLS **Baital** 117.49 310 *e*PKiKP **PKPdf** 07 20 36.9 -1.1
baz=310
OPO **Ambohidratompo** 117.74 232 PKP **PKiKP** 07 20 40.1 +0.5
comp=Z,10nm,0.7s,baz=9,3,slow=0.8,SNR=10
TULEG **Thule** 117.76 14 *i* P **PKPdf** 07 20 36.0 -1.6
HUMP **Col San Antoni** 118.62 82 **PKPdf** 07 20 39.7 -1.2
BRZS **Berezniki** 118.84 315 *i* PKIKP **PKPdf** 07 20 39.1 -1.4
BRZS **Berezniki** 118.84 315 *e*PKiKP **PKPdf** 07 20 39.1 -1.4
baz=315
BDFB **Brasilia** 118.85 125 PKP **PKPdf** 07 20 41.5 -0.2
comp=Z,14nm,0.7s,baz=191,slow=2.2,SNR=19
BDFB PKKPbc **PKKPbc** 07 30 58.4 0.0
comp=Z,2.4nm,0.6s,baz=80,slow=9.6,SNR=4.0
BDFB **Brasilia** 118.85 125 PKPdf **PKPdf** 07 20 41.1 -0.6
OTUK **Ortayu** 118.96 313 PKIKP **PKPdf** 07 20 39.9 -0.9
DZA **Taraz** 119.19 307 *i* PKIKP **PKPdf** 07 20 40.5 -0.9
DZA **Taraz** 119.19 307 *e*PKiKP **PKPdf** 07 20 40.6 -0.9
baz=307
BTK **Batken** 119.24 304 **PKPdf** 07 20 41.5 -0.2
BTK **Batken** 119.24 304 PKIKP **PKPdf** 07 20 41.5 -0.2
GAR **Garm** 119.49 303 **PKPdf** 07 20 41.6 -0.6
KK31 **Karatay Array** 119.81 307 **PKPdf** 07 20 42.0 -0.6
KK31 **Karatay Array** 119.81 307 PKIKP **PKPdf** 07 20 42.0 -0.6
KKAR **Karatay Array** 119.81 307 **PKPdf** 07 20 42.2 -0.3
KKAR **Karatay Array** 119.81 307 **PKPdf** 07 20 42.0 -0.6
KKAR **Karatay Array** 119.81 307 PKIKP **PKPdf** 07 20 42.0 -0.6
KBL **Kabul** 119.83 297 **PKPdf** 07 20 42.9 -0.2
KBL **Kabul** 119.83 297 PKIKP **PKPdf** 07 20 42.9 -0.2
IUG **Iuzhnay** 120.07 306 *i* PKIKP **PKPdf** 07 20 42.2 -1.0
IUG **Iuzhnay** 120.07 306 *e*PKiKP **PKPdf** 07 20 42.3 -1.0
baz=306
CHGR **Chuyangaron** 120.34 302 **PKPdf** 07 20 43.9 +0.1
CHGR **Chuyangaron** 120.34 302 PKIKP **PKPdf** 07 20 43.9 +0.1
BRVK **Borovoye** 120.41 319 **PKPdf** 07 20 42.9 -0.4
BRVK **Borovoye** 120.41 319*c* *i*PKIKP **PKPdf** 07 20 42.7 -0.7
BRVK pmax pmax
comp=Z,36nm,1.0s
SUR **Sutherland** 120.83 200 PKKPbc PKKPbc 07 30 52.7 +0.6
comp=Z,10nm,0.8s,baz=349,slow=5.4,SNR=13
F63A **Nahmakanta, Br** 120.88 50 **PKPdf** 07 20 44.0 -0.6
NOR **Nord** 121.63 3 *i* P **PKPdf** 07 20 43.2 -1.8
UPNV **Upernavik** 122.23 17 *i* P **PKPdf** 07 20 45.1 -1.2
SCHQ **Schefferville** 122.26 39 PKP **PKPdf** 07 20 46.1 -0.8
comp=Z,16nm,0.8s,baz=283,slow=3.1,SNR=15
SCHQ PKKPbc **PKKPab** 07 30 45.2 0.0
comp=Z,2.9nm,0.7s,baz=94,slow=1.2,SNR=3.9
SCHQ **Schefferville** 122.26 39 **PKPdf** 07 20 46.6 -0.3
BOSA **Boshof** 122.62 206 PKP **PKPdf** 07 20 48.5 -0.2
comp=Z,18nm,0.8s,baz=154,slow=1.7,SNR=39
BOSA PKKPbc **PKKPbc** 07 30 44.1 -1.1
comp=Z,7.2nm,0.7s,baz=336,slow=4.0,SNR=15
BOSA **Boshof** 122.62 206 **PKiKP** 07 20 49.1 +0.2
BOSA **Boshof** 122.62 206 PKIKP **PKiKP** 07 20 49.1 +0.2
BATG **Bathurst New B** 123.03 48 **PKPdf** 07 20 47.7 -0.9
NUUG **Nuugaatsiaq** 123.60 18 *i* P **PKPdf** 07 20 47.6 -1.4
LMN **Caledonia Moun** 123.89 50 **PKPdf** 07 20 50.0 -0.3
KBS **Kingsbay** 124.44 357 *i* PKIKP **PKPdf** 07 20 50.2 -0.2
KBS **Kingsbay** 124.44 357 *i* P **PKPdf** 07 20 49.8 -0.7
SPITS **Spitsbergen Ar** 124.93 356 PKP **PKPdf** 07 20 51.0 -0.4
comp=Z,56nm,0.7s,baz=90,slow=2.9,SNR=47
ILULI **Ilulissat** 125.34 20 *i* P **PKPdf** 07 20 50.5 -1.8
HRA **Herat** 125.37 296 **PKPdf** 07 20 53.6 -0.2
SVE **Sverdlovsk** 125.57 324 *e*PKIKP **PKPdf** 07 20 53.0 -0.1
SVE pmax pmax
comp=Z,74nm,1.2s
LBTB **Lobatse** 125.63 209 PKP **PKiKP** 07 20 55.1 +0.1
comp=Z,7.9nm,0.5s,baz=163,slow=4.0,SNR=13
LBTB PKKPbc **PKKPbc** 07 30 31.7 -1.7
comp=Z,8.1nm,0.9s,baz=328,slow=4.4,SNR=9.2
LBTB **Lobatse** 125.63 209 **PKPdf** 07 20 54.6 +0.1
MDP **Montagnes des** 126.02 101 PKP **PKPdf** 07 20 55.4 +0.1
comp=Z,13nm,0.5s,baz=268,slow=3.2,SNR=22
DAG **Danmarks Havn** 126.07 5 *i* P **PKPdf** 07 20 51.9 -1.7
HSPB **Hornsund (broa** 126.11 356 *e*PKP **PKPdf** 07 20 53.6 0.0
SFJD **Kangerlussuaq** 126.56 22 PKP **PKPdf** 07 20 53.8 -0.9
comp=Z,20nm,0.5s,baz=240,slow=1.9,SNR=35
SFJD **Kangerlussuaq** 126.56 22 *i* P **PKPdf** 07 20 53.2 -1.5
SUMG **Summit** 126.66 14 **PKPdf** 07 20 55.5 +0.2
SUMG **Summit** 126.66 14 PKIKP **PKPdf** 07 20 55.5 +0.2
SUMG **Summit** 126.66 14 *i* P **PKPdf** 07 20 54.0 -1.3
ARU **Arti** 126.78 324 *i* PKIKP **PKPdf** 07 20 55.1 -0.4
ARU 07 22 57.6
ARU 07 27 15.1
ARU SP SP 07 32 09.8 -2.3
AB31 **Akbulak array** 127.13 315 *i* PKIKP **PKPdf** 07 20 55.8 -0.6
ABKAR **Akbulak array** 127.13 315 **PKPdf** 07 20 56.2 -0.1
NUUK **Nuuk** 127.40 26 *i* P **PKPdf** 07 20 55.9 -0.5
MATP **Matopo** 128.14 215 PKP **PKPdf** 07 20 59.4 0.0
comp=Z,17nm,0.7s,baz=180,slow=1.2,SNR=32
MATP SKPbc SKPbc 07 23 27.8
comp=Z,19nm,0.9s,baz=148,slow=4.5,SNR=12
DBG **Daneborg** 128.21 7 *i* P **PKPdf** 07 20 56.5 -1.3
AKTO **Aktyubinsk** 128.21 316 PKIKP **PKPdf** 07 20 58.0 -0.4
DY2G **Dye2** 128.31 22 *i* P **PKPdf** 07 20 57.8 -0.7
SOHO **SOHO** 128.72 283 *i* PKPdf **PKPdf** 07 20 59.7 -0.5
SNR=26
ICESG **Greenland Ices** 128.76 17 *i* P **PKPdf** 07 20 57.6 -1.7
GEYT **Alibeck** 128.94 300 PKP **PKiKP** 07 21 01.1 +0.1
comp=Z,16nm,0.7s,baz=70,slow=4.9,SNR=20
GEYT SKPbc SKPbc 07 23 33.2
comp=Z,15nm,0.8s,baz=53,slow=10,SNR=13
GEYT **Alibeck** 128.94 300 **PKPdf** 07 21 00.4 +0.1
GYA0 **ALIBECK ARRAY** 128.94 300 PKIKP **PKPdf** 07 21 00.6 +0.3
GYA0B **ALIBECK ARRAY** 128.94 300 **PKiKP** 07 21 00.8 -0.2
UOSS **Minazif** 129.17 284 *i* PKPdf **PKPdf** 07 21 00.2 -0.8
SNR=8.9
HATD **Hatta, Dubai** 129.22 283 *i* PKPdf **PKPdf** 07 21 01.1 -0.1
SNR=13
ASHO **Ashiyiah** 129.25 283 *i* PKPdf **PKPdf** 07 21 01.0 -0.2
SNR=12
MSFE **Esma-Masafi** 129.29 284 *i* PKPdf **PKPdf** 07 21 01.1 -0.2
SNR=6.6
ALNE **Al Ain** 129.40 282 PKiKP **PKiKP** 07 21 01.9 -0.4
SHME **Shamm** 129.43 285 PKPdf **PKPdf** 07 21 01.2 -0.2
FAQ **Al Faqa, Dubai** 129.68 283 PKPdf **PKPdf** 07 21 01.7 -0.3
ASUD **Al Ashush, Dub** 129.89 283 *i* PKiKP **PKiKP** 07 21 03.0 -0.3
SNR=11
IVI **Ivigtut** 130.17 28 PKPdf **PKPdf** 07 21 01.6 -0.2
IVI **Ivigtut** 130.17 28 *i* P **PKPdf** 07 21 00.1 -1.6
KIRV **Kirov** 130.80 328*c* *i*PKIKP **PKPdf** 07 21 03.3 +0.3
LVZ **Lovozero** 130.97 343 ⇓PKIKP **PKPdf** 07 21 03.0 -0.2
PRGR **Permogore** 131.13 333 *e*PKiKP **PKPdf** 07 21 02.1 -1.5
PRGR *e* 07 23 37.4
PRGR pmax pmax
comp=Z,32nm,0.9s
MZR **Muzera** 131.23 280 *i* PKiKP **PKiKP** 07 21 05.7 -0.3
SNR=19
NRS **Narsarsuaq** 131.37 27 *i* P **PKPdf** 07 21 01.9 -2.2
SCO **Scoresbysund** 131.45 10 *i* P **PKPdf** 07 21 03.6 -0.3
ANGG **Ammassalik, Gr** 131.65 20 *i* P **PKPdf** 07 21 03.6 -0.8
ARCES **ARCESS Array B** 131.71 348 PKP **PKPdf** 07 21 04.0 -0.5
comp=Z,34nm,0.7s,baz=27,slow=1.1,SNR=37
ARCES SKPbc **SKPab** 07 23 41.9 +0.2
comp=Z,21nm,1.0s,baz=25,slow=4.0,SNR=8.4
ARCES **ARCESS Array B** 131.71 348 PKPdf **PKPdf** 07 21 04.6 +0.1
ARCES **ARCESS Array B** 131.71 348 PKIKP **PKPdf** 07 21 04.6 +0.1
LSZ **Lusaka** 132.52 218 PKP **PKPdf** 07 21 08.1 +0.3
comp=Z,13nm,0.6s,baz=184,slow=2.3,SNR=20
LSZ SKPbc **SKPab** 07 23 46.0 -1.0
comp=Z,12nm,0.7s,baz=114,slow=1.7,SNR=12
LSZ **Lusaka** 132.52 218 **PKiKP** 07 21 08.5 -0.5
LSZ **Lusaka** 132.52 218 PKIKP **PKiKP** 07 21 08.5 -0.5
BELG **Belogornoye** 134.04 321*c* *i*PKIKP **PKPdf** 07 21 07.9 -1.4
KLMR **Klimovskoe** 134.04 334 *e*PKIKP **PKPdf** 07 21 08.4 -0.7
KLMR *e* 07 23 47.7
KLMR pmax pmax
comp=Z,17nm,0.7s
KLMR **Klimovskoe** 134.04 334 *e*PKPdf **PKPdf** 07 21 08.4 -0.7
KLMR AMP 07 21 10.4
comp=Z,17nm,0.7s
KLMR *ep*PKPdf **pPKPdf** 07 23 17.0 +3.4
KLMR *e*PP **PP** 07 23 47.7 +0.3
TSUM **Tsumeb** 134.07 203 PKP **PKPdf** 07 21 11.2 +0.5
comp=Z,5.5nm,0.5s,baz=96,slow=7.6,SNR=8.3
TSUM SKPbc **SKPbc** 07 23 51.1 +1.0
comp=Z,2.2nm,0.6s,baz=98,slow=10,SNR=4.0
RCBR **Riachuelo** 134.23 125 PKP **PKPdf** 07 21 10.5 -0.5
comp=Z,16nm,0.8s,baz=319,slow=2.7,SNR=6.4
RCBR SKPbc **SKPbc** 07 23 50.6 0.0
comp=Z,16nm,0.8s,baz=270,slow=5.6,SNR=6.9
KMBO **Kilima Mbogo** 136.27 241 PKP **PKiKP** 07 21 16.2 -0.6
comp=Z,11nm,1.0s,baz=45,slow=4.3,SNR=12
KMBO SKP 07 23 59.9
comp=Z,11nm,0.9s,baz=60,slow=4.7,SNR=12
KMBO **Kilima Mbogo** 136.27 241 *i* PKiKP **PKiKP** 07 21 16.3 -0.6
SNR=6.8
MOS **Moscow** 137.79 329 *e*PKIKP **PKPdf** 07 21 13.7 -2.5
MOS *e* 07 24 07.7
MOS pmax pmax
comp=Z,51nm,0.8s
GROC **Groznyy** 137.80 309 *e*PKIKP **PKPdf** 07 21 15.7 -0.9
GROC *e* 07 24 09.9
GROC pmax pmax
comp=Z,15nm,0.4s
VRH **Novokhopyorsk** 137.88 321 *e*PKIKP **PKPdf** 07 21 16.1 -0.4
VRH pmax pmax
comp=Z,60nm,0.6s
FINES **FINESS Array B** 138.28 342 PKhKP PKPpre 07 21 05.8
comp=Z,7.0nm,0.5s,baz=61,slow=3.0,SNR=17
FINES PKP **PKPdf** 07 21 17.6 +0.7
comp=Z,15nm,0.6s,baz=82,slow=3.4,SNR=14
FINES SKPbc **SKPbc** 07 24 02.2 +1.1
comp=Z,20nm,0.7s,baz=50,slow=3.0,SNR=16
OBN **Obninsk** 138.65 329⇓*e*PKIKP **PKPdf** 07 21 15.7 -2.0
OBN pmax pmax
comp=Z,41nm,1.4s
LPSR **Galich'ya Gora** 138.79 325 *e*PKIKP **PKPdf** 07 21 17.8 -0.3
LPSR pmax pmax
comp=Z,30nm,1.0s
VORR **Voronezh** 139.08 323 *e*PKHKP PKPpre 07 21 11.3
VORR pmax pmax
comp=Z,70nm,0.5s
GNI **Garni** 139.16 305 *i* PKIKP **PKPdf** 07 21 18.0 -1.4
ZEI **Tsey** 139.25 309 *i* PKHKP PKPpre 07 21 11.1
ZEI pmax pmax
comp=Z,22nm,1.0s
VSR **Storozhevoye** 139.32 323 *e*PKIKP **PKPdf** 07 21 18.2 -0.9
VSR pmax pmax
comp=Z,20nm,0.9s
VORD **Divnogorie** 139.36 322 *e*PKIKP **PKPdf** 07 21 17.9 -1.3
VORD pmax pmax
comp=Z,20nm,0.9s
KBZ **Khabaz** 139.72 310 PKhKP PKPpre 07 21 12.9
comp=Z,2.9nm,0.7s,baz=152,slow=2.1,SNR=6.1
KBZ **Khabaz** 139.72 310 *i* PKIKP **PKPdf** 07 21 19.5 -0.6
MEF **Metsahovi** 139.76 341 *e*P **PKPdf** 07 21 14.1 -5.6
KIV **Kislovodsk** 139.80 311 *e*PKIKP **PKPdf** 07 21 19.0 -1.4
KIV pmax pmax
comp=Z,14nm,1.1s
RAF **Rauma** 139.81 344 *e*P **PKPdf** 07 21 13.0 -6.7
AKH **Akhalkalaki** 139.85 307 ⇑P **PKPdf** 07 21 14.7 -6.0
SHA1 **Shidzhatmaz** 139.88 310 *i* PKIKP **PKPdf** 07 21 17.9 -2.8
VSU **Vasula** 140.41 338 *e*P **PKPdf** 07 21 15.1 -5.7
AAL **Aland** 140.99 344 *e*P **PKPdf** 07 21 15.2 -6.6
MTSE **Matsula** 141.16 340 *e*P **PKPdf** 07 21 16.7 -5.5
MBAR **Mbarara** 141.67 235 PKhKP PKPpre 07 21 18.1
comp=Z,6.1nm,0.2s,baz=143,slow=10,SNR=2.4
MBAR SKP 07 24 10.4
comp=Z,5.8nm,0.6s,baz=180,slow=2.0,SNR=1.2
NB2 **NORSAR Subarra** 141.90 351 PKP **PKPdf** 07 21 18.7 -4.8
comp=Z,47nm,1.2s,baz=16,slow=3.2
NOA **NORSAR Array B** 141.90 351 PKhKP PKPpre 07 21 19.4
comp=Z,37nm,0.8s,baz=16,slow=4.7,SNR=146
NOA SKPbc **SKiKP** 07 24 12.0 -0.1
comp=Z,4.6nm,0.6s,baz=15,slow=4.2,SNR=7.7
SOC **Sochi** 141.97 311 *e*PKIKP **PKPdf** 07 21 21.6 -2.5
SOC *e* 07 24 32.8
SOC *e*PPP PPP 07 27 45.3
SOC *e*SSS SSS 07 47 54.7
SOC pmax pmax
comp=Z,28nm,1.2s
SOC pmax pmax
comp=Z,19nm,1.0s
KOPT **Kop Dagi** 142.38 305 **PKPdf** 07 21 24.3 -1.1
MARD **Mardin** 142.70 301 **PKPdf** 07 21 24.0 -1.8
IDID **Didziasalis** 142.78 335 *e*P **PKPdf** 07 21 22.9 -2.3
ISAL **Salakas** 142.82 336 *e*P **PKPdf** 07 21 23.1 -2.1
MNK **Minsk** 142.91 333 *i* PKIKP **PKPdf** 07 21 23.7 -1.7
MNK *i* 07 24 40.1
MNK *i*PPP PPP 07 27 55.1
MNK *i*SS SS 07 42 41.6 +4.9
MNK pmax pmax
comp=Z,196nm,0.9s
MNK pmax pmax
comp=E,8.0nm,1.1s
MNK MLR MLR
comp=Z,5μm,23.0s
MNK MLR MLR
comp=N,48μm,17.0s
MNK MLR MLR
comp=E,29nm,20.0s
MNK **Minsk** 142.91 333 *i* PKP **PKPdf** 07 21 23.8 -1.7
comp=E,8.0nm,1.1s
MNK *i* PKP **PKPdf** 07 21 23.8 -1.7
MNK *i* PKP **PKPdf** 07 21 23.8 -1.7
comp=Z,196nm,0.8s,baz=226
MNK *i* pPKP **pPKPdf** 07 23 28.6 -1.5
MNK *i* PP **PP** 07 24 40.1 -1.4
MNK *i*PP PPP 07 27 55.2
MNK *i* SS SS 07 42 41.6 +5.0
MNK *i* SSS SSS 07 48 00.4
MNK *i* LRM MLR 08 25 24.2
comp=Z,5μm,23.2s
MNK *i* LRM MLR 08 25 37.1
comp=N,48μm,16.6s
MNK *i* LRM MLR 08 25 43.7
comp=E,29nm,20.2s
IIGN **Ignalina** 142.95 335 *e*P **PKPdf** 07 21 23.7 -1.8
NACGM **Naroch** 143.06 334 *i* PKP PKPbc 07 21 23.5 -0.2
comp=Z,23nm,11.8s,baz=43
ANN **Anapa** 143.09 314*c* *i*PKIKP PKPab 07 21 23.8 +0.1
ANN pmax pmax
comp=Z,192nm,0.8s
ANN pmax pmax
comp=Z,206nm,0.8s
VSVD **Vaisvydziai** 143.31 338 *e*P PKPbc 07 21 24.5 +0.1
KONO **Kongsberg** 143.46 352 PKPdf PKPab 07 21 24.6 0.0
KONO **Kongsberg** 143.46 352 ⇑PKIKP PKPab 07 21 24.6 0.0
LRW **Lerwick** 143.58 1 *e*P PKPab 07 21 24.7 -0.3
PABE **Paberze** 143.67 337 PKPab 07 21 25.2 -0.3
PABE **Paberze** 143.67 337 *e*P PKPab 07 21 24.7 -0.9
PBUR **Paburge** 143.95 339 *e*P PKPbc 07 21 24.9 -1.5
AKASG **Malin Array Be** 144.85 327 PKP **PKPdf** 07 21 28.4 -0.5
comp=Z,91nm,0.7s,baz=37,slow=4.3,SNR=317
AKASG SKPbc **SKiKP** 07 24 19.4 +0.9
comp=Z,16nm,0.7s,baz=34,slow=2.8,SNR=9.2
AKASG **Malin Array Be** 144.85 327 **PKPdf** 07 21 28.6 -0.3
AKASG **Malin Array Be** 144.85 327 PKIKP **PKPdf** 07 21 28.6 -0.3
AKBB **Malin Array Si** 144.85 327 PKPdf **PKPdf** 07 21 28.6 -0.3
AKBB **Malin Array Si** 144.85 327 PKIKP **PKPdf** 07 21 28.6 -0.3
BIGH **Upper Bighouse** 145.12 4 *e*P **PKPbc** 07 21 29.8 -0.2
SUW **Suwalki** 145.12 336 *e*PKP **PKPbc** 07 21 30.0 -0.1
SUW **Suwalki** 145.12 336 **PKPbc** 07 21 29.9 -0.2
SUW **Suwalki** 145.12 336 PKIKP **PKPbc** 07 21 29.9 -0.2
SUW **Suwalki** 145.12 336 *e*P **PKPdf** 07 21 29.6 +0.4
SIM **Simferopol'** 145.18 316 *e*PKIKP **PKPbc** 07 21 30.2 -0.4
SIM pmax pmax
comp=Z,237nm,1.0s
LEWI **Lewis, Hebride** 145.22 6 *e*P **PKPdf** 07 21 29.4 0.0
MLA1 **Latheron** 145.34 3 *e*P **PKPdf** 07 21 29.3 -0.2
LINV **Loch Inver, As** 145.37 5 *e*P **PKPdf** 07 21 29.6 +0.1
OVD **Ostervraa, Den** 145.62 350 *i* P **PKPbc** 07 21 31.2 -0.3
MQOL **MQOL** 145.71 272 *i* P **PKPbc** 07 21 33.5 +0.6
MQOL AMP 07 21 34.4
comp=E,288nm,0.6s
MQOL *i* 07 21 43.3
baz=244,slow=18
MQOL *i* S SKPbc 07 23 38.5 -42
DIKM **Dikmen** 145.72 310 ⇑P **PKPbc** 07 21 31.6 -0.7
DEL **Delary** 145.75 346 *e*P **PKPdf** 07 21 30.4 +0.2
KAC **Achnashellach** 146.01 5 *e*P **PKPdf** 07 21 30.4 -0.3
GOET **G??ttrup** 146.04 351 *i* P **PKPbc** 07 21 32.8 +0.1
MCD **Coleburn Disti** 146.06 3 *e*P **PKPbc** 07 21 32.1 -0.6
KPL **Plockton** 146.13 6 *e*P **PKPdf** 07 21 30.4 -0.4
MDO **Dochfour** 146.14 4 *e*P **PKPbc** 07 21 32.5 -0.5
BNN **Bunyan** 146.16 305 **PKPdf** 07 21 32.8 +1.0
BZK **Bozkurt** 146.48 311 ⇑P **PKPbc** 07 21 34.1 -0.3
MUD **Monsted U'grnd** 146.61 351 *i* P **PKPbc** 07 21 33.8 -0.5
BSD **Bornholm Skovb** 146.75 344 *e*P **PKPbc** 07 21 34.3 -0.3
BSD **Bornholm Skovb** 146.75 344 *i* P **PKPbc** 07 21 33.8 -0.9
DRUM **Mains of Drumt** 146.77 3 *e*P **PKPdf** 07 21 31.7 -0.3
COP **Copenhagen** 146.78 347 *i* P **PKPbc** 07 21 33.8 -0.9
SORM **Soroca** 146.89 325 ⇑P **PKPbc** 07 21 35.1 -0.2
SORM **Soroca** 146.89 325 ⇑PKP2 **PKPbc** 07 21 35.1 -0.2
ILGA **Ilgaz** 147.01 310 **PKPdf** 07 21 33.7 +0.5
EDU **Dundee** 147.11 3 *e*P **PKPbc** 07 21 35.6 0.0
LLD **Lille Linde** 147.15 347 *i* P **PKPbc** 07 21 35.7 0.0
INVG **Invergeldie, C** 147.17 4 *e*P **PKPdf** 07 21 32.6 -0.1
KIS **Kishinev** 147.31 322⇑*i*PKP **PKPbc** 07 21 36.0 -0.5
comp=E,110nm,0.7s
KIS *i* pPKP **pPKPab** 07 23 43.0 +3.6
KIS **Kishinev** 147.31 322*c* *i*PKP2 **PKPbc** 07 21 36.0 -0.5
KIS pmax pmax
comp=Z,110nm,0.7s
MILM **Milestii Mici** 147.36 322 *e*PKP **PKPdf** 07 21 33.0 -0.3
comp=Z,260nm,1.0s
MILM *i* pPKP **pPKPab** 07 23 43.0 +3.4
MILM **Milestii Mici** 147.36 322 ⇑P **PKPbc** 07 21 36.2 -0.3
MILM **Milestii Mici** 147.36 322*ce*PKIKP **PKPdf** 07 21 33.0 -0.3
MILM pmax pmax
comp=Z,260nm,1.0s
EAB **Aberfoyle** 147.38 5 *e*P **PKPdf** 07 21 32.8 -0.2
BR131 **Keskin Array S** 147.53 307 PKPdf **PKPdf** 07 21 33.5 -0.5
BR131 PKPbc **PKPbc** 07 21 37.6 +0.1
BR131 PKPab **PKPab** 07 21 41.9 +0.4
BR131 **Keskin Array S** 147.53 307 PKIKP **PKPdf** 07 21 33.5 -0.5
BR131 07 21 41.9
BRTR **Keskin Array B** 147.53 307 PKP **PKPdf** 07 21 33.2 -0.8
comp=Z,19nm,0.7s,baz=111,slow=2.8,SNR=18
BRTR PKPbc **PKPbc** 07 21 37.4 -0.1
comp=Z,20nm,0.7s,baz=144,slow=4.7,SNR=33
BRTR pPKP **pPKPdf** 07 23 39.1 +0.3
comp=Z,2.6nm,1.0s,baz=134,slow=5.1,SNR=1.9
BRTR **Keskin Array B** 147.53 307 PKPdf **PKPdf** 07 21 32.6 -1.3
BRTR PKPbc **PKPbc** 07 21 37.8 +0.3
BRTR PKPab **PKPab** 07 21 42.1 +0.6
BRTR **Keskin Array B** 147.53 307 PKHKP PKPpre 07 21 32.7
BRTR 07 21 42.1
EDI **Edinburgh** 147.72 3 *e*P **PKPdf** 07 21 33.7 +0.2
BEL **Belsk** 147.73 336 *e*PKP **PKPbc** 07 21 38.1 +0.7
GKP **Gorka Klasztor** 147.74 341 *e*PKP **PKPbc** 07 21 37.7 +0.3
GKP **Gorka Klasztor** 147.74 341 *e*P **PKPbc** 07 21 37.0 -0.3
PGBU **Glenifferbraes** 147.75 5 *e*P **PKPdf** 07 21 32.9 -0.7
ESY **Stoneypath** 147.76 3 *e*P **PKPdf** 07 21 33.4 -0.2
EBL **Broad Law** 147.88 3 *e*P **PKPdf** 07 21 32.7 -1.2
LVV **L'vov** 147.91 330 *i* PKP2 **PKPbc** 07 21 37.6 -0.3
LVV *e* 07 25 19.5
LVV pmax pmax
comp=Z,400nm,1.4s
ANTO **Ankara** 148.09 308 **PKPdf** 07 21 34.2 -0.6
ANTO PKPbc **PKPbc** 07 21 39.2 +0.3
ANTO PKPab **PKPab** 07 21 44.9 +1.3
ANTO **Ankara** 148.09 308 PKHKP PKPpre 07 21 34.2
ANTO 07 21 44.9
VASR **Vaslui** 148.09 323 ⇑P **PKPbc** 07 21 38.9 +0.4
BR231 **Keskin MP Arra** 148.11 308 PKPdf **PKPdf** 07 21 34.2 -0.7
BR231 **PKPbc** 07 21 39.5 +0.6
IDGL **Inch Island, C** 148.16 8 *e*P **PKPdf** 07 21 34.2 -0.1
CLGH **Cloghs, Cushen** 148.32 7 *e*P **PKPdf** 07 21 34.5 -0.1
ESK **Eskdalemuir** 148.33 4 *e*P **PKPdf** 07 21 34.1 -0.4
ESK **Eskdalemuir** 148.33 4 PKPdf **PKPdf** 07 21 33.5 -1.1
ESK PKPbc **PKPbc** 07 21 38.6 -0.1
ESK PKPab **PKPab** 07 21 43.8 -0.2
ESK **Eskdalemuir** 148.33 4 PKIKP **PKPdf** 07 21 33.5 -1.1
ESK 07 21 43.8
TLCR 148.33 320 ⇓P **PKPbc** 07 21 39.6 +0.5
TLCR 148.33 320 ⇓PKP2 **PKPbc** 07 21 39.6 +0.5
JAWL **J.Aulia** 148.38 261 *i* P **PKiKP** 07 21 40.8 -0.5
JAWL *i* 07 21 43.3
baz=312,slow=7.9
JAWL *i* S SKPbc 07 23 43.0 -44
VLDR **Vladesti** 148.39 321 ⇑P **PKiKP** 07 21 39.8 -0.6
NEWG **New Galloway** 148.46 5 *e*P **PKPdf** 07 21 33.8 -1.0
VARL **Varlezi** 148.49 322 ⇓P **PKPbc** 07 21 39.5 0.0
JURR **Jurilovca** 148.52 319 ⇑P **PKiKP** 07 21 40.5 -0.2
SCTR **Scanteiesti** 148.54 321 ⇑P **PKiKP** 07 21 40.4 -0.3
GHRR 148.65 322 ⇑P **PKiKP** 07 21 40.8 -0.1
GAL1 **Galloway** 148.67 5 *e*P **PKPdf** 07 21 34.3 -0.8
SLCR **Slobozia Conac** 148.72 321 ⇓P **PKiKP** 07 21 40.9 -0.1
SCHL **Schela** 148.73 321 ⇑P **PKiKP** 07 21 40.7 -0.4
CFR **Carcaliu** 148.74 320 ⇑P **PKPbc** 07 21 40.5 +0.4
CFR **Carcaliu** 148.74 320 ⇑PKP2 **PKPbc** 07 21 40.5 +0.4
IZVR **Izvoarele** 148.74 321 ⇑P **PKiKP** 07 21 41.3 +0.2
TPGR **Topolog** 148.75 319 ⇓P **PKPbc** 07 21 40.6 +0.5
BIZ **Bicaz** 148.83 325 ⇓P **PKPdf** 07 21 36.4 +0.7
BUR08 **Bucovina Ar. S** 148.84 326 **PKPdf** 07 21 36.1 +0.2
BUR08 PKPbc **PKiKP** 07 21 41.6 +0.2
BURAR **Bucovina Array** 148.85 326 ⇑P **PKPbc** 07 21 38.2 -2.3
BURAR **Bucovina Array** 148.85 326 PKPdf **PKPdf** 07 21 35.8 0.0
BURAR PKPbc **PKiKP** 07 21 41.6 +0.2
BURAR **Bucovina Array** 148.85 326 ⇑PKHKP PKPpre 07 21 38.2
EDMD **Edmundbyers** 148.87 2 *e*P **PKPdf** 07 21 35.1 -0.4
PANC **Panciu** 148.91 322 ⇓P **PKiKP** 07 21 41.2 -0.2
TIRR **Tirgusor** 148.97 319 ⇑P **PKPbc** 07 21 41.1 +0.4
TIRR **Tirgusor** 148.97 319 ⇑PKP2 **PKPbc** 07 21 41.1 +0.4
MDUB **Mudurnu** 149.00 310 **PKPdf** 07 21 36.1 -0.2
MDUB PKPbc **PKPbc** 07 21 41.3 +0.2
CSS **Mathiatis** 149.06 299 **PKPbc** 07 21 41.4 +0.2
MFTR **Murfatlar** 149.11 318 ⇑P **PKiKP** 07 21 42.1 +0.2
HARR **Harsova** 149.13 320 ⇑P **PKiKP** 07 21 41.7 -0.3
HARR **Harsova** 149.13 320 ⇑PKP2 **PKiKP** 07 21 41.7 -0.3
TLBR **Topalu** 149.14 319 ⇓P **PKiKP** 07 21 42.0 +0.1
VRI **Vrincioaia** 149.15 322 ⇑P **PKPbc** 07 21 41.2 +0.1
VRI **Vrincioaia** 149.15 322 ⇑PKHKP PKPpre 07 21 41.2
MANR **Mangalia** 149.20 318 ⇓P **PKiKP** 07 21 42.0 -0.1
PLOR **Plostina** 149.20 322 ⇑P **PKPbc** 07 21 41.1 -0.2
PLOR **Plostina** 149.20 322 ⇑PKHKP PKPpre 07 21 41.1
IOMK **Kirk Michael** 149.28 5 *e*P **PKPdf** 07 21 35.6 -0.5
GDLE **Glaisdale, N Y** 149.31 1 *e*P **PKPdf** 07 21 36.2 0.0
ILTH **Belurgan, Co L** 149.33 7 *e*P **PKPdf** 07 21 36.0 -0.2
KOLS **Kolonicke sedl** 149.34 331 *e*PKP2 **PKiKP** 07 21 42.5 +0.2
KOLS **Kolonicke sedl** 149.34 331 *e*PKP **PKiKP** 07 21 42.5 +0.2
KOLS *e* 07 21 50.4
WIM **Isle of Man** 149.38 6 *e*P **PKPdf** 07 21 35.7 -0.7
OJC **Ojcow** 149.39 335 *e*PKP **PKPbc** 07 21 41.9 +0.3
OJC **Ojcow** 149.39 335 PKPdf **PKPdf** 07 21 36.6 +0.1
OJC PKPbc **PKPbc** 07 21 41.4 -0.1
OJC **Ojcow** 149.39 335 PKHKP PKPpre 07 21 36.6
COVR **Voineasa-Covas** 149.45 323 ⇑P **PKPbc** 07 21 41.5 -0.4
UZH **Uzhgorod** 149.55 330 *e*PKHKP PKPpre 07 21 41.9
UZH *e* 07 21 48.7
ARCR **ARCALIA** 149.64 326 ⇑P **PKiKP** 07 21 43.1 +0.1
NEHR **Nehoiu** 149.65 322 ⇑P **PKPbc** 07 21 42.6 +0.3
BMR **Baia Mare** 149.67 328 ⇑P **PKiKP** 07 21 43.3 +0.3
BMR **Baia Mare** 149.67 328 ⇑PKHKP PKPpre 07 21 43.3
ISR **Istrita** 149.69 321 ⇑P **PKiKP** 07 21 43.0

DSB PKPbc **PKPbc 07 21 42.9 -0.2**
DSB PKPab **PKPab 07 21 51.1 -0.3**
SULR 150.12 321 ⇑*P* **PKPbc 07 21 43.5 +0.1**
KSP Ksiaz 150.13 339 *e*PKP **PKiKP 07 21 44.0 +0.2**
WPS Cemaes, Angles 150.14 6 *eP* **PKPdf 07 21 36.7 -0.8**
WME Myndd Eilian 150.16 5 *eP* **PKPdf 07 21 36.7 -0.8**
ISK Istanbul-Kandi 150.23 312 P **PKPbc 07 21 43.5 -0.3**
MDB Medias 150.25 325 ⇓*P* **PKiKP 07 21 45.1 +0.8**
MDB Medias 150.25 325 ⇓PKIKP **PKiKP 07 21 45.1 +0.8**
WLF1 Llynfaes 150.26 5 *eP* **PKPdf 07 21 37.0 -0.7**
CBBR Cluj-Babes-Bol 150.26 327 ⇑*P* **PKPbc 07 21 43.4 -0.3**
CJR Cluj-Napoca 150.28 326 ⇑*P* **PKiKP 07 21 44.1 -0.2**
CJR Cluj-Napoca 150.28 326 ⇑PKIKP **PKiKP 07 21 44.1 -0.2**
YRC Rhoscolyn 150.28 6 *eP* **PKPdf 07 21 36.5 -1.1**
MESR Messeseni 150.30 328 ⇑*P* **PKiKP 07 21 45.1 +0.8**
LBWR Ladybower, Pea 150.31 2 *eP* **PKPdf 07 21 37.3 -0.5**
OKC Ostrava-Krasne 150.33 336 *e*PKIKP **PKPbc 07 21 44.0 +0.2**
OKC *e* 07 21 53.2
OKC Ostrava-Krasne 150.33 336⇑*e*PKP **PKPbc 07 21 44.0 +0.2**
OKC *e*PKPAB **PKPab 07 21 53.2 +0.7**
VOIR 150.34 323 ⇑*P* **PKPbc 07 21 44.2 +0.1**
VOIR 150.34 323 ⇑PKIKP **PKPbc 07 21 44.2 +0.1**
LANS Liptovska Anna 150.37 334 *e*PKIKP **PKPdf 07 21 39.3 +1.2**
LANS Liptovska Anna 150.37 334 *e*PKP **PKPdf 07 21 39.3 +1.2**
LANS *e* 07 21 45.4
LANS *e* 07 23 52.0
OSTC Ostas 150.40 339 *e*PKPDF **PKPdf 07 21 40.4 +2.3**
OSTC ⇑*e*PKP **PKiKP 07 21 44.4 -0.1**
OSTC *e*pPKP **pPKPab 07 23 52.5 +1.1**
YLL Llanberis 150.42 5 *eP* **PKPdf 07 21 37.0 -1.0**
CHVC Chvalec 150.43 339 *e*PKPDF **PKPdf 07 21 40.1 +2.0**
CHVC ⇑*e*PKP **PKiKP 07 21 44.4 -0.1**
CHVC *e*pPKP **pPKPab 07 23 55.0 +3.5**
KECS Kecovo 150.46 332 *e*PKIKP **PKiKP 07 21 46.1 +1.5**
KECS Kecovo 150.46 332 *e*PKP **PKiKP 07 21 46.1 +1.5**
UPC Upice 150.51 339 *e*PKIKP **PKPdf 07 21 40.4 +2.2**
UPC Upice 150.51 339 *e*PKPDF **PKPdf 07 21 40.4 +2.2**
UPC ⇑*e*PKP **PKiKP 07 21 44.7 0.0**
UPC *e*pPKP **pPKPab 07 23 52.4 +0.6**
DPC Dobruska-Polom 150.54 339 *e*PKIKP **PKPdf 07 21 39.7 +1.4**
DPC Dobruska-Polom 150.54 339 *e*PKPDF **PKPdf 07 21 39.7 +1.4**
DPC ⇑*e*PKP **PKiKP 07 21 45.1 +0.3**
DPC *e*pPKP **pPKPab 07 23 51.9 -0.1**
MORC Moravsky Berou 150.60 337 ⇓*P* **PKiKP 07 21 44.9 0.0**
MORC Moravsky Berou 150.60 337 PKPdf **PKPdf 07 21 38.8 +0.4**
MORC PKPbc **PKPbc 07 21 44.4 -0.1**
MORC PKPab **PKPab 07 21 54.2 +0.6**
MORC Moravsky Berou 150.60 337 PKIKP **PKPdf 07 21 38.8 +0.4**
MORC *e* 07 21 54.2
MORC Moravsky Berou 150.60 337 *e*PKP **PKPdf 07 21 38.5 +0.1**
MORC *e* 07 21 44.9
RAZG Razgrad 150.60 319 ⇑*P* **PKiKP 07 21 44.9 -0.1**
ARR Arges 150.61 323 ⇑*P* **PKPdf 07 21 39.7 +1.1**
KRLC Kraliky 150.62 338 *e*PKIKP **PKPdf 07 21 39.2 +0.8**
KRLC *e* 07 21 54.5
KRLC Kraliky 150.62 338 *e*PKPDF **PKPdf 07 21 39.2 +0.8**
KRLC ⇑*e*PKP **PKPbc 07 21 44.7 +0.2**
KRLC *e*PKPAB **PKPab 07 21 54.5 +0.8**
KRLC *e*pPKP **pPKPab 07 23 53.0 +0.6**
LTVH Ltavrtes, Hu 150.64 329 ⇑*P* **PKiKP 07 21 45.3 +0.3**
DRGR 150.67 327 ⇑*P* **PKPbc 07 21 44.3 -0.4**
DRGR 150.67 327 ⇑PKIKP **PKPbc 07 21 44.3 -0.4**
CLL Collm 150.69 343 PKPdf **PKPdf 07 21 38.1 -0.4**
CLL PKPbc **PKPbc 07 21 44.7 +0.2**
CLL PKPab **PKPab 07 21 54.6 +0.7**
CLL Collm 150.69 343 PKIKP **PKPdf 07 21 38.1 -0.4**
CLL *e* 07 21 54.6
CLL Collm 150.69 343 *e*PKPdf **PKPdf 07 21 38.0 -0.4**
CLL ⇑*i*PKPbc **PKiKP 07 21 45.0 0.0**
comp=Z,255nm,0.9s
CLL *e*PKPab **PKPab 07 21 54.0 +0.1**
CLL *ex* x 07 21 59.0
CLL *ex* x 07 22 08.0
CLL *e*pPKPbc **pPKPbc 07 23 48.0 -0.3**
CLL *i* pPKPab **pPKPab 07 23 52.1 -0.4**
CLL *e*SKPdf **SKPdf 07 24 18.0 -3.4**
CLL *e*sPKPab **sPKPab 07 24 47.0 +1.8**
CLL *e*PP **PP 07 25 24.0 -2.3**
CLL *e*SKSdf **SKSdf 07 27 54.0 -1.4**
CLL *e*PPPP 07 31 18.0
CLL *ex* x 07 35 06.0
CLL *e*PSKS 07 35 54.0
CLL *e*PPS PPS 07 38 18.0
CLL *ex* x 07 42 18.0
CLL *e*SS **SS 07 44 07.0 +4.0**
CLL *ex* x 07 45 00.0
CLL *e*SSS SSS 07 49 42.0
CLL *e*(SSSS) 07 53 18.0
SBD1 Bryn Du 150.72 4 *eP* **PKPdf 07 21 41.5 +3.0**
STFAR Stefanesti-Arg 150.74 322 ⇑*P* **PKPbc 07 21 45.0 +0.1**
FOEL Foel Wylfa 150.75 4 *eP* **PKPdf 07 21 38.0 -0.5**
BRG Berggiesshubel 150.82 342 *i* PKIKP **PKiKP 07 21 45.4 +0.2**
BRG *e* 07 21 55.0
BRG 07 23 48.8
BRG pmax pmax
comp=Z,137nm,0.7s
BRG pmax pmax
comp=Z,10.0nm,0.9s
BRG Berggiesshubel 150.82 342⇓*e*PKPf 07 21 39.2
BRG Berggiesshubel 150.82 342 Amp 07 21 40.0
comp=Z,20nm,1.1s
BRG Berggiesshubel 150.82 342⇑*i*PKP **PKiKP 07 21 45.5 +0.2**
BRG Berggiesshubel 150.82 342 Amp 07 21 46.4
comp=Z,137nm,0.7s
BRG Berggiesshubel 150.82 342 *ex* x 07 21 55.1
BRG Berggiesshubel 150.82 342 Amp 07 21 56.5
comp=Z,59nm,1.1s
BRG Berggiesshubel 150.82 342 *ex* x 07 22 05.6
BRG Berggiesshubel 150.82 342 Amp 07 22 07.9
comp=Z,40nm,0.9s
BRG Berggiesshubel 150.82 342 pPKP pPKPdf 07 23 48.8 +5.2
BRG Berggiesshubel 150.82 342 Amp 07 23 49.7
comp=Z,9.5nm,0.9s
BRG Berggiesshubel 150.82 342 *i* x x 07 23 53.2
BRG Berggiesshubel 150.82 342 Amp 07 23 54.1
comp=Z,61nm,1.2s
MAUC Maruska 150.84 336 *e*PKPDF **PKPdf 07 21 39.2 +0.4**
MAUC ⇑*e*PKP **PKiKP 07 21 45.8 +0.4**
MAUC *e*pPKP **pPKPab 07 23 52.2 -1.0**
IWEX Carrickbyrne, 150.89 9 *eP* **PKPdf 07 21 38.8 +0.1**
HUMR Humele 150.94 322 ⇑*P* **PKPbc 07 21 45.6 -0.4**
PVCC Panska Ves 150.95 341 *e*PKIKP **PKiKP 07 21 45.5 0.0**
PVCC Panska Ves 150.95 341⇑*e*PKP **PKiKP 07 21 45.5 0.0**
PVCC *e*pPKP **pPKPab 07 23 53.6 0.0**
WACR West Acre 151.01 359 *eP* **PKPbc 07 21 44.0 -1.2**
LOT Lotru 151.03 324 ⇑*P* **PKPbc 07 21 45.2 -0.5**
COPA Copaceanca 151.04 321 ⇑*P* **PKPbc 07 21 45.1 -0.4**
HLM1 Long Mynd 151.13 4 *eP* **PKPdf 07 21 38.4 -0.6**
PSZ Piszkesteto 151.15 332 ⇑*P* **PKPbc 07 21 45.5 -0.3**
PSZ Piszkesteto 151.15 332 **PKPdf 07 21 38.1 -1.2**
PSZ **PKPbc 07 21 45.8 0.0**
PSZ PKPab **PKPab 07 21 57.4 +1.3**
PSZ Piszkesteto 151.15 332 PKIKP **PKPdf 07 21 38.1 -1.2**
PSZ Piszkesteto 151.15 332 PKP **PKPdf 07 21 38.5 -0.9**
DEV Deva 151.19 326 ⇑*P* **PKiKP 07 21 46.1 -0.1**
DEV Deva 151.19 326 ⇑PKIKP **PKiKP 07 21 46.1 -0.1**
KOLL Kolacno 151.25 334 *e*PKP **PKiKP 07 21 46.6 +0.4**
KOLL *e* 07 21 57.5
JAVC Velka Javorina 151.31 335 *e*PKP **PKPdf 07 21 40.3 +0.8**
JAVC *e* 07 21 47.5
VRAC Vranov 151.33 337 ⇑*P* **PKiKP 07 21 46.5 +0.1**
VRAC Vranov 151.33 337 ⇑PKIKP **PKiKP 07 21 46.5 +0.1**
VRAC Vranov 151.33 337 *e*PKP **PKPdf 07 21 38.9 -0.6**
VRAC *e* 07 21 46.2
VRAC *e* 07 21 57.5
PRU Pruhonice 151.43 340 *e*PKIKP **PKPbc 07 21 46.3 0.0**
PRU *e* 07 21 57.5
PRU *e* 07 23 50.1
PRU Pruhonice 151.43 340⇑*e*PKP **PKPbc 07 21 46.3 0.0**
PRU *e*PKPAB **PKPab 07 21 57.5 +0.4**
PRU *e*pPKP **pPKPbc 07 23 50.1 0.0**
RSBS Rosebush, Pemb 151.55 6 *eP* **PKPdf 07 21 38.8 -0.9**
SIRR Siria 151.55 328 ⇑*P* **PKiKP 07 21 47.2 +0.2**
KULA Kula-Manisa 151.57 308 P **PKPbc 07 21 47.2 +0.1**
GZR Gura Zlata 151.59 325 ⇓*P* **PKPdf 07 21 39.8 -0.3**
GZR Gura Zlata 151.59 325 ⇓PKIKP **PKPdf 07 21 39.8 -0.3**
KRUC Moravsky 151.61 337 *e*PKP **PKPdf 07 21 39.4 -0.5**
KRUC *e* 07 21 46.8
KRUC *e* 07 21 58.1
MCH1 Michaelchurch 151.65 4 *eP* **PKPdf 07 21 38.8 -1.0**

BALB Balikesir 151.66 311 PKPdf **PKPdf 07 21 40.0 -0.3**
BALB **PKiKP 07 21 47.3 -0.1**
AKAS Kas 151.67 303 **PKPbc 07 21 47.4 0.0**
SMOL Smolenice 151.69 335 *e*PKIKP **PKiKP 07 21 47.5 +0.3**
SMOL *e* 07 21 58.8
SMOL Smolenice 151.69 335 *e*PKP **PKiKP 07 21 47.5 +0.3**
SMOL *e* 07 21 58.8
TREC Trest 151.73 338 *e*PKIKP **PKPbc 07 21 46.5 -0.5**
TREC Trest 151.73 338⇑*e*PKP **PKPbc 07 21 46.5 -0.5**
TREC *e*pPKP **pPKPab 07 23 55.3 -1.5**
NKC Novy Kostel 151.81 343 *e*PKIKP **PKPdf 07 21 40.9 +0.7**
NKC *e* 07 21 59.2
NKC Novy Kostel 151.81 343 *e*PKPDF **PKPdf 07 21 40.9 +0.7**
NKC ⇑*e*PKP **PKiKP 07 21 47.5 +0.1**
NKC *e*PKPAB **PKPab 07 21 59.2 +0.5**
MONM Monmouth 151.82 4 *eP* **PKPdf 07 21 39.9 -0.2**
SRE Strehaia 151.84 324 ⇑*P* **PKPbc 07 21 46.2 -1.2**
SRE Strehaia 151.84 324 ⇑PKIKP **PKPbc 07 21 46.2 -1.2**
MODS Modra-Piesok 151.86 335 *e*PKIKP **PKPdf 07 21 41.1 +0.8**
MODS *e* 07 21 59.6
MODS Modra-Piesok 151.86 335 *e*PKP **PKPdf 07 21 41.1 +0.8**
MODS *e* 07 21 47.9
MODS *e* 07 21 59.6
MODS *e* 07 23 55.6
BZS Buzias 152.03 327 ⇑*P* **PKPdf 07 21 41.1 +0.5**
BZS Buzias 152.03 327 ⇑PKIKP **PKPdf 07 21 41.1 +0.5**
ZST Bratislava 152.07 335 *e*PKIKP **PKiKP 07 21 48.6 +0.7**
ZST *e* 07 22 00.8
ZST Bratislava 152.07 335 *e*PKP **PKiKP 07 21 48.6 +0.7**
ZST *e* 07 22 00.8
HERR Herculane 152.12 325 ⇑*P* **PKPbc 07 21 47.9 -0.1**
DJES Djerdap 152.21 324 ⇑*P* **PKPbc 07 21 46.4 -1.8**
ALN Alexandroupoli 152.31 314 P **PKPbc 07 21 47.7 -0.8**
KHC Kasperske Hory 152.48 341 PKPdf **PKPdf 07 21 40.7 -0.5**
KHC PKPbc **PKiKP 07 21 49.3 +0.5**
KHC PKPab **PKPab 07 22 02.6 +1.0**
KHC Kasperske Hory 152.48 341 *e*PKIKP **PKPdf 07 21 41.5 +0.3**
KHC *e* 07 22 02.0
KHC Kasperske Hory 152.48 341 *e*PKPDF **PKPdf 07 21 41.5 +0.3**
KHC ⇑*e*PKP **PKPbc 07 21 48.7 0.0**
KHC *e*PKPAB **PKPab 07 22 02.0 +0.4**
KHC *e*pPKP **pPKPbc 07 23 52.3 -0.4**
RDO Rodhopi 152.51 315 P **PKPbc 07 21 48.4 -0.5**
RDO Rodhopi 152.51 315 **PKPdf 07 21 40.6 -0.8**
RDO PKPbc **PKPbc 07 21 48.5 -0.4**
RDO PKPab **PKPab 07 22 01.8 -0.2**
CKRC Cesky Krumlov 152.53 339 *e*PKPDF **PKPdf 07 21 41.1 -0.2**
CKRC ⇑*e*PKP **PKPbc 07 21 48.7 -0.1**
CKRC *e*PKPAB **PKPab 07 22 02.2 +0.4**
CKRC *e*pPKP **pPKPbc 07 23 52.4 -0.3**
MDVR Moldovita 152.56 325 ⇑*P* **PKPdf 07 21 41.6 +0.1**
BEBN Eben Emael 152.60 352 *d*PKIKP **PKiKP 07 21 48.9 0.0**
BEBN *d*PKPab **PKPab 07 22 02.0 +0.1**
GRA1 Grafenberg Arr 152.63 344 PKPdf **PKPdf 07 21 40.3 -1.1**
GRA1 **PKiKP 07 21 49.2 +0.1**
GRA1 PKPab **PKPab 07 22 02.6 +0.4**
GRF Grafenberg Arr 152.63 344 PKIKP **PKPdf 07 21 40.3 -1.1**
GRF 07 22 02.6
GRFO Grafenberg 152.63 344 PKPdf **PKPdf 07 21 40.5 -0.9**
GRFO **PKPab 07 22 03.1 +1.0**
GRFO Grafenberg 152.63 344 PKIKP **PKPdf 07 21 40.5 -0.9**
GRFO 07 22 03.1
EZN Ezine 152.65 312 P **PKPbc 07 21 48.9 -0.4**
GEC2 GERESS Array S 152.70 340 **PKPdf 07 21 40.8 -0.8**
GEC2 PKPbc **PKiKP 07 21 49.6 +0.3**
GEC2 PKPab **PKPab 07 22 03.1 +0.5**
GERES GERESS Array B 152.70 340 PKP **PKPdf 07 21 41.0 -0.6**
comp=Z,2.6nm,0.8s,baz=134,slow=4.2,SNR=26
GERES PKPbc **PKPbc 07 21 49.3 0.0**
comp=Z,19nm,0.8s,baz=90,slow=0.1,SNR=59
GERES PKPab **PKPab 07 22 02.5 -0.1**
comp=Z,2.1nm,0.7s,baz=20,slow=3.1,SNR=6.1
GERES GERESS Array B 152.70 340 PKIKP **PKPdf 07 21 41.3 -0.3**
GERES 07 22 02.7
MPLH Magyarpolny 152.73 333 PKP **PKPdf 07 21 42.0 +0.4**
MEM Membach 152.75 352 *d*PKIKP **PKPbc 07 21 49.0 -0.1**
MEM *d*PKPab **PKPab 07 22 02.6 +0.1**
BTNL Ternell 152.75 352 *d*PKPdf **PKPdf 07 21 41.5 -0.1**
BTNL *d*PKIKP **PKPbc 07 21 49.3 +0.1**
BTNL *d*PKPab **PKPab 07 22 02.3 +0.3**
CONA Conrad Observa 152.76 336 *i* P **PKPdf 07 21 41.6 -0.1**
comp=Z,9.6nm,0.9s,SNR=9.0
CONA *e*P **PKiKP 07 21 49.7 +0.2**
comp=Z,46nm,1.0s
CONA *e*P **PKPab 07 22 04.1 +1.2**
comp=Z,61nm,0.8s
CONA *e*P **pPKPbc 07 23 54.1 +0.7**
comp=Z,20nm,1.4s
RONA Rosalia, Austr 152.79 336 *i* P **PKPdf 07 21 41.1 -0.6**
comp=Z,17nm,1.2s,SNR=7.2
RONA *e*P **PKiKP 07 21 49.6 +0.1**
comp=Z,52nm,0.7s
RONA *e*P **PKPab 07 22 03.8 +0.9**
comp=Z,65nm,0.9s
RONA *e*P **pPKPbc 07 23 53.1 -0.3**
comp=Z,9.8nm,0.9s
BLKB Belogradchik 152.80 322 ⇑*P* **PKPdf 07 21 41.9 0.0**
ARG Arkhangelos 152.80 304 **PKPbc 07 21 49.4 -0.3**
ARG Arkhangelos 152.80 304 PKIKP **PKPbc 07 21 49.4 -0.3**
BSTI Sart Tilman 152.83 352 *d*PKIKP **PKiKP 07 21 49.5 +0.1**
BSTI *d*PKPab **PKPab 07 22 02.8 -0.2**
SMTH Samothraki Isl 152.87 314 P **PKPbc 07 21 48.9 -0.9**
PRK Paraskevi 152.95 311 P **PKiKP 07 21 50.7 +0.7**
BHOU Houvegnez 153.00 352 *d*PKPdf **PKPdf 07 21 42.1 +0.2**
BHOU *d*PKIKP **PKiKP 07 21 50.2 +0.4**
BHOU *d*PKPab **PKPab 07 22 03.3 -0.4**
MORH Mrgy, Hungar 153.01 331 ⇑*P* **PKPdf 07 21 41.5 -0.5**
MORH Mrgy, Hungar 153.01 331 PKP **PKPdf 07 21 41.5 -0.5**
BCLA Clavier 153.02 353 *d*PKIKP **PKiKP 07 21 49.8 0.0**
BCLA *d*PKPab **PKPab 07 22 03.2 -0.5**
SNF Seneffe 153.04 354 *d*PKPab **PKPab 07 22 03.7 -0.1**
BGES Gesves 153.08 353 *d*PKIKP **PKPbc 07 21 49.7 -0.2**
BGES *d*PKPab **PKPab 07 22 03.3 -0.7**
VTS Vitosha 153.10 320 ⇓*P* **PKPbc 07 21 50.3 -0.1**
VTS Vitosha 153.10 320 ⇓PKIKP **PKPbc 07 21 50.3 -0.1**
DYA Yadsworthy 153.13 6 *eP* **PKPdf 07 21 40.9 -1.2**
BMRD Maredsous 153.19 353 *d*PKPdf **PKPdf 07 21 41.8 -0.4**
BMRD *d*PKIKP **PKPbc 07 21 50.1 0.0**
BMRD *d*PKPab **PKPab 07 22 04.2 -0.3**
SMG Samos 153.21 308 P **PKPbc 07 21 50.0 -0.6**
CCA1 Carnmenellis 153.24 8 *eP* **PKPbc 07 21 49.8 -0.4**
KAVA Kavala 153.25 316 P **PKPbc 07 21 50.1 -0.4**
FRGS Fruska Gora 153.25 328 ⇑*P* **PKPbc 07 21 50.4 -0.1**
RCHB Rochefort 153.29 353 *d*PKIKP **PKPbc 07 21 50.3 0.0**
RCHB *d*PKP **PKPab 07 22 04.3 -0.6**
KOVH Kovagototos 153.34 331 PKP **PKPdf 07 21 42.4 -0.1**
MOA Molln 153.39 338 *i* P **PKPdf 07 21 42.4 -0.1**
comp=Z,5.1nm,0.7s,SNR=6.3
MOA *e*P **PKPbc 07 21 50.4 -0.2**
comp=Z,6.9nm,0.7s
MOA *e*P **PKPab 07 22 05.9 +0.5**
comp=Z,24nm,1.1s
MOA *e*P **pPKPbc 07 23 59.0 +4.3**
comp=Z,9.8nm,1.2s
DOU Dourbes 153.42 354 *d*PKPdf **PKPdf 07 21 42.9 +0.4**
DOU *d*PKIKP **PKiKP 07 21 50.8 +0.2**
DOU *d*PKPab **PKPab 07 22 05.0 -0.5**
ARSA Arzberg 153.45 336 *eP* **PKPdf 07 21 42.1 -0.6**
comp=Z,8.4nm,1.1s
ARSA *e*P **PKPbc 07 21 50.8 -0.1**
comp=Z,3.3nm,0.7s
ARSA *e*P **PKPab 07 22 06.7 +0.9**
comp=Z,37nm,1.1s
ARSA *e*P **pPKPbc 07 23 58.7 +3.9**
comp=Z,9.2nm,1.3s
NVR Nevrokopi 153.47 317 P **PKPbc 07 21 50.5 -0.6**
CHOS Chios island 153.49 310 P **PKPbc 07 21 51.1 -0.2**
WLF Walferdange 153.65 351 **PKPdf 07 21 43.0 +0.3**
WLF **PKiKP 07 21 51.6 +0.5**
WLF PKPab **PKPab 07 22 06.6 +0.1**
WLF Walferdange 153.65 351 PKIKP **PKPdf 07 21 43.1 +0.3**
WLF 07 22 06.6
WLF Walferdange 153.65 351 *d*PKPdf **PKPdf 07 21 43.7 +0.9**
WLF *d*PKIKP **PKiKP 07 21 51.9 +0.7**
WLF *d*PKPab **PKPab 07 22 06.9 +0.4**
BIOA Bad Ischl, Aus 153.73 339 *eP* **PKPdf 07 21 42.4 -0.7**
comp=Z,13nm,1.3s
BIOA *e*P **PKPbc 07 21 50.7 -0.7**
comp=Z,15nm,0.9s
BIOA *i* P **PKPab 07 22 08.0 +1.0**
comp=Z,76nm,1.3s,SNR=5.2
BIOA *e*P **pPKPbc 07 23 58.8 +3.4**
comp=Z,3.1nm,0.5s
SRS Serrai 153.76 317 P **PKPbc 07 21 50.4 -1.3**
KARP Karpathos 153.76 303 P **PKPbc 07 21 51.6 -0.3**
DIVS Divibare 153.92 326 **PKPdf 07 21 43.0 -0.5**
DIVS PKPbc **PKiKP 07 21 52.5 +0.4**
DIVS PKPab **PKPab 07 22 08.1 +0.1**
STU Stuttgart 153.96 346 PKPdf **PKPdf 07 21 42.6 -0.7**
STU PKPbc **PKiKP 07 21 52.1 +0.2**
STU PKPab **PKPab 07 22 07.7 -0.2**
STU Stuttgart 153.96 346 PKIKP **PKPdf 07 21 42.6 -0.7**
STU 07 22 07.7
SOKA Soboth 154.12 336 *i* P **PKPdf 07 21 42.3 -1.4**
comp=Z,14nm,1.0s,SNR=11
SOKA *e*P **PKPbc 07 21 52.0 -0.4**
comp=Z,14nm,0.9s
SOKA *e*P **PKPab 07 22 08.9 +0.2**
comp=Z,33nm,0.8s
SOKA *e*P **pPKPdf 07 23 51.3 +2.4**
comp=Z,6.0nm,0.8s
PERS Pernice 154.12 336 *i* PKPdf **PKPdf 07 21 42.7 -1.0**
PERS *i* PKPdif **PKPbc 07 21 51.6 -0.7**
PERS *i* PKPab **PKPab 07 22 08.7 0.0**
KBA Koelnbreinsper 154.37 339 *i* P **PKPdf 07 21 43.2 -0.9**
comp=Z,23nm,1.4s,SNR=14
KBA *e*P **PKiKP 07 21 52.2 -0.8**
comp=Z,13nm,0.8s
KBA *e*P **PKPab 07 22 10.7 +0.8**
comp=Z,10.0nm,0.5s
KBA *e*P **pPKPbc 07 23 54.2 -2.9**
comp=Z,7.7nm,1.0s
OBKA Obir 154.44 336 *eP* **PKPdf 07 21 43.7 -0.5**
comp=Z,5.9nm,0.9s
OBKA *e*P **PKiKP 07 21 52.4 -0.6**
comp=Z,8.6nm,0.8s
OBKA *e*P **PKPab 07 22 09.8 -0.3**
comp=Z,18nm,0.8s
OBKA *e*P **pPKPab 07 24 02.7 -5.5**
comp=Z,7.2nm,1.0s
BFO Black Forest 154.56 347 PKPdf **PKPdf 07 21 43.7 -0.5**
BFO PKPbc **PKiKP 07 21 53.1 0.0**
BFO PKPab **PKPab 07 22 09.8 -0.7**
BFO Black Forest 154.56 347 PKIKP **PKPdf 07 21 43.7 -0.5**
BFO 07 22 09.8
MYKA Terra Mystica 154.66 338 *eP* **PKPdf 07 21 43.7 -0.7**
comp=Z,9.9nm,1.0s
MYKA *e*P **PKiKP 07 21 52.6 -0.8**
comp=Z,11nm,0.7s
MYKA *e*P **PKPab 07 22 10.8 -0.3**
comp=Z,23nm,0.6s
WATA Walderalm 154.69 342 *i* P **PKPdf 07 21 43.7 -0.8**
comp=Z,24nm,1.4s,SNR=5.9
WATA *e*P **PKiKP 07 21 53.0 -0.6**
comp=Z,12nm,0.6s
WATA *e*P **PKPab 07 22 11.8 +0.6**
comp=Z,20nm,0.5s
WATA *e*P **pPKPbc 07 23 57.9 +0.1**
comp=Z,5.2nm,0.6s
WTTA Wattenberg 154.74 341 *i* P **PKPdf 07 21 44.0 -0.7**
comp=Z,27nm,1.1s,SNR=10
WTTA *e*P **PKPab 07 22 11.9 +0.4**
comp=Z,46nm,0.5s
WTTA *e*P **pPKPbc 07 24 01.8 +3.9**
comp=Z,15nm,1.1s
SANT Santorini 154.76 306 PKPdf **PKPdf 07 21 43.8 -1.1**
SANT **PKPab 07 22 10.9 -0.9**
RETA Reutte 154.78 343 *eP* **PKPdf 07 21 43.9 -0.6**
comp=Z,10nm,1.0s
RETA *i* P **PKPab 07 22 12.1 +0.6**
comp=Z,34nm,0.6s,SNR=6.6
RETA *e*P **pPKPbc 07 24 01.2 +3.4**
comp=Z,8.0nm,1.1s
MOTA Moosalm 154.81 342 *i* P **PKPdf 07 21 44.0 -0.7**
comp=Z,20nm,0.9s,SNR=8.9
MOTA *e*P **PKPab 07 22 12.2 +0.4**
comp=Z,78nm,1.1s
MOTA *e*P **pPKPdf 07 23 53.3 +3.4**
comp=Z,12nm,1.2s
LJU Ljubljana 154.84 336 *i* PKPdf **PKPdf 07 21 44.2 -0.3**
LJU *i* PKPdif **PKiKP 07 21 53.5 -0.2**
LJU *i* PKPab **PKPab 07 22 11.5 -0.2**
ECH Echery 154.90 349 **PKPdf 07 21 44.1 -0.5**
ECH **PKPab 07 22 11.7 -0.2**
ECH Echery 154.90 349 PKIKP **PKPdf 07 21 44.1 -0.5**
ECH 07 22 11.7
SQTA Sankt Quirin 154.90 342 *i* P **PKPdf 07 21 44.2 -0.6**
comp=Z,27nm,1.3s,SNR=7.9
SQTA *e*P **PKPab 07 22 12.9 +0.8**
comp=Z,51nm,1.0s
SQTA *e*P **pPKPbc 07 23 56.9 -1.3**
comp=Z,12nm,1.2s
ABTA Abfaltersbach 154.93 340 *i* P **PKPdf 07 21 43.5 -1.3**
comp=Z,41nm,1.3s,SNR=20
ABTA *e*P **PKPab 07 22 12.0 -0.2**
comp=Z,19nm,0.7s
ABTA *e*P **pPKPdf 07 23 52.7 +2.7**
comp=Z,18nm,1.3s
BOJS Bojanci 155.01 334 *i* PKPdf **PKPdf 07 21 44.5 -0.3**
BOJS *i* PKPdif PKPab 07 21 54.3 -18
BOJS *i* PKPab PKPab 07 22 12.5 0.0
PTL Penteli 155.18 311 P PKPdf 07 21 53.7 +8.4
DAVA Damuels 155.19 344 *i* P **PKPdf 07 21 44.8 -0.4**
comp=Z,11nm,0.7s,SNR=5.8
DAVA *i* P **PKPab 07 22 13.7 +0.3**
comp=Z,43nm,0.6s,SNR=7.1
DAVA *e*P **pPKPdf 07 23 54.2 +3.7**
comp=Z,9.7nm,0.9s
FETA Feichten 155.21 342 *i* P **PKPdf 07 21 44.7 -0.6**
comp=Z,29nm,0.9s,SNR=15
FETA *e*P **PKPab 07 22 13.9 +0.3**
comp=Z,33nm,1.2s
FETA *e*P **pPKPdf 07 23 54.2 +3.7**
comp=Z,11nm,1.3s
STAL STALIGIAL 155.29 339 **PKPdf 07 21 44.6 -0.7**
STAL PKPab **PKPab 07 22 13.4 -0.3**
FNA Florina 155.32 319 **PKPdf 07 21 44.5 -1.0**
FNA PKPab **PKPab 07 22 13.4 -0.7**
FNA Florina 155.32 319 PKIKP **PKPdf 07 21 44.5 -1.0**
FNA 07 22 13.4
TRI Trieste 155.40 337 PKPdf **PKPdf 07 21 44.6 -0.7**
TRI PKPab **PKPab 07 22 13.8 -0.4**
TRI Trieste 155.40 337 PKIKP **PKPdf 07 21 44.6 -0.7**
TRI 07 22 13.8
PDG Podgorica 155.47 324 ⇑*P* PKPdf 07 21 54.6 +9.1
PDG Podgorica 155.47 324 PKPdf **PKPdf 07 21 45.3 -0.2**
PDG PKPab **PKPab 07 22 14.9 +0.3**
IDI Anoyia 155.59 304 ⇑*P* **PKPdf 07 21 46.2 +0.2**
IDI Anoyia 155.59 304 **PKPdf 07 21 46.0 0.0**
CLF Chambon-Foret 155.66 356 **PKPdf 07 21 46.2 +0.6**
CLF **PKPab 07 22 15.2 0.0**
CTI Castel Tesino 155.82 340 PKPdf **PKPdf 07 21 45.7 -0.4**
CTI PKPab **PKPab 07 22 15.6 -0.5**
CTI Castel Tesino 155.82 340 PKIKP **PKPdf 07 21 45.7 -0.4**
CTI 07 22 15.6
TEOL Teolo 156.43 339 PKPdf **PKPdf 07 21 46.8 +0.1**
TEOL **PKPab 07 22 19.5 +0.9**
VLI Veliai 156.45 309 P PKPdf 07 21 55.1 +8.1
SENIN Lac Senin/Sane 156.65 347 PKPdf **PKPdf 07 21 46.9 -0.4**
SENIN PKPab **PKPab 07 22 20.1 +0.3**
NRCA Norcia 158.08 334 PKPdf **PKPdf 07 21 48.6 -0.3**
NRCA **PKPab 07 22 26.8 +0.8**
TIP Timpagrande 159.07 321 ⇑*P* **PKPdf 07 21 49.4 -0.8**
PGAV Gavieira, Arco 160.49 19 *e*PKPdf **PKPdf 07 21 52.4 +0.7**
PCAB Cabril 160.80 19 *e*PKPdf **PKPdf 07 21 52.6 +0.6**
PCAB Cabril 160.80 19 *e*PKPab **PKPab 07 22 38.6 +0.8**
PBRG Braganca 161.06 16 *e*PKPdf **PKPdf 07 21 52.5 +0.2**
PBRG Braganca 161.06 16 *e*PKPab **PKPab 07 22 39.2 +0.3**
POLO Lamas de Olo 161.18 19 *e*PKPdf **PKPdf 07 21 52.8 +0.3**
POLO Lamas de Olo 161.18 19 *e*PKPab **PKPab 07 22 39.8 +0.3**
PVRL Vila Real 161.29 19 *e*PKPdf **PKPdf 07 21 53.3 +0.8**
PVRL Vila Real 161.29 19 *e*PKPab **PKPab 07 22 40.5 +0.5**
MVO Moncorvo 161.59 17 *e*PKPdf **PKPdf 07 21 53.7 +0.8**
MVO Moncorvo 161.59 17 *e*PKPab **PKPab 07 22 41.8 +0.5**
PVIS Viseu 161.75 20 *e*PKPdf **PKPdf 07 21 53.6 +0.6**
PVIS Viseu 161.75 20 *e*PKPab **PKPab 07 22 42.2 +0.2**
LIC Lamto 161.94 163 *eP* **PKPdf 07 21 54.1 +0.2**
comp=Z,65nm,1.0s
KIC Kosan Boka 162.14 164 *e*PKIKP **PKPdf 07 21 53.6 -0.6**
comp=Z,52nm,0.7s
MTE Manteigas 162.15 19 *e*PKPdf **PKPdf 07 21 54.2 +0.7**
MTE Manteigas 162.15 19 *e*PKPab **PKPab 07 22 43.9 +0.1**
PCAS Casmilo, Conde 162.15 22 *e*PKPab **PKPab 07 22 43.8 +0.1**
TIC Toumodi 162.34 163 *e*PKIKP **PKPdf 07 21 54.0 -0.4**
comp=Z,106nm,1.0s
DBIC Dimbokro 162.41 164 PKP **PKPdf 07 21 54.1 -0.2**

comp=Z,24nm,0.8s,baz=182,slow=1.3,SNR=23
DBIC PKPab **PKPab** **07 22 45.8 +0.4**
comp=Z,25nm,1.0s,baz=193,slow=4.0,SNR=6.6
DBIC Dimbokro 162.41 164 PKPdf **PKPdf** **07 21 54.5 +0.1**
DBIC PKPab **PKPab** **07 22 46.5 +1.1**
PSBE So Bento 162.52 23 *e*PKPab **PKPab** **07 22 45.8 +0.4**
PMAR Madeira 162.54 55 *e*PKPdf **PKPdf** **07 21 55.8 +1.6**
PCBR Castelo Branco 162.68 20 *e*PKPdf **PKPdf** **07 21 54.6 +0.7**
PCBR Castelo Branco 162.68 20 *e*PKPab **PKPab** **07 22 46.3 +0.3**
PMPST Porto Santo, M 162.80 53 *e*PKPdf **PKPdf** **07 21 55.5 +1.3**
PMPST Porto Santo, M 162.80 53 *e*PKPab **PKPab** **07 22 47.4 +0.4**
PMAFR Mafra 162.83 25 *e*PKPdf **PKPdf** **07 21 55.4 +1.3**
PMAFR Mafra 162.83 25 *e*PKPab **PKPab** **07 22 47.3 +0.6**
PMRV Marv??o 163.08 20 *e*PKPdf **PKPdf** **07 21 54.9 +0.6**
PMRV Marv??o 163.08 20 *e*PKPab **PKPab** **07 22 48.1 +0.3**
LIS Lisbon 163.09 26 *e*PKPdf **PKPdf** **07 21 54.7 +0.4**
PMTG Montargil 163.12 23 *e*PKPdf **PKPdf** **07 21 54.9 +0.6**
PMTG Montargil 163.12 23 *e*PKPab **PKPab** **07 22 47.7 -0.3**
PACT Alcochete 163.16 25 *e*PKPdf **PKPdf** **07 21 55.8 +1.4**
PACT Alcochete 163.16 25 *e*PKPab **PKPab** **07 22 48.4 +0.2**
PESTR Estremoz 163.52 22 *e*PKPdf **PKPdf** **07 21 55.5 +0.7**
PESTR Estremoz 163.52 22 PKPdf **PKPdf** **07 21 54.8 +0.1**
PESTR PKPab **PKPab** **07 22 49.8 0.0**
PESTR Estremoz 163.52 22 P **PKPdf** **07 21 55.7 +1.0**
PESTR Estremoz 163.52 22 P **PKPab** **07 22 49.8 0.0**
EVO Evora 163.68 23 *e*PKPdf **PKPdf** **07 21 55.3 +0.4**
EVO Evora 163.68 23 *e*PKPab **PKPab** **07 22 50.1 -0.4**
ESBB Sonseca Array 163.70 11 PKPdf **PKPdf** **07 21 55.6 +0.7**
ESBB **PKPab** **07 22 50.7 +0.1**
ESDC Sonseca Array 163.71 11 PKP **PKPdf** **07 21 54.9 0.0**
comp=Z,3.0nm,1.0s,baz=345,slow=3.1,SNR=17
ESDC PKPab **PKPab** **07 22 50.9 +0.2**
comp=Z,27nm,0.9s,baz=342,slow=4.3,SNR=59
ESDC PP **PP** **07 26 36.6 -0.3**
comp=Z,3.1nm,1.0s,baz=350,slow=6.1,SNR=5.1
PAB San Pablo 163.76 12 P **PKPdf** **07 21 56.2 +1.1**
PAB San Pablo 163.76 12 P **PKPab** **07 22 51.1 +0.2**
PNCL Nicolau / Gran 163.85 25 *e*PKPdf **PKPdf** **07 21 56.1 +1.1**
PNCL Nicolau / Gran 163.85 25 *e*PKPab **PKPab** **07 22 51.4 +0.2**
PBEJ Beja 164.18 24 *e*PKPdf **PKPdf** **07 21 56.4 +1.1**
PBEJ Beja 164.18 24 *e*PKPab **PKPab** **07 22 52.8 +0.1**
MESJ Messejana 164.21 25 *e*PKPdf **PKPdf** **07 21 55.7 +0.4**
MESJ Messejana 164.21 25 *e*PKPdf **PKPdf** **07 21 56.4 +1.0**
MESJ Messejana 164.21 25 *e*PKPab **PKPab** **07 22 52.9 +0.1**
PTEO Sao Teotonio 164.26 27 *e*PKPdf **PKPdf** **07 21 56.5 +1.1**
PTEO Sao Teotonio 164.26 27 *e*PKPab **PKPab** **07 22 53.4 +0.3**
PCVE Castro Verde 164.46 25 *e*PKPdf **PKPdf** **07 21 56.9 +1.3**
PCVE Castro Verde 164.46 25 *e*PKPab **PKPab** **07 22 54.1 +0.1**
MORF Marmelete 164.50 27 *e*PKPdf **PKPdf** **07 21 55.9 +0.2**
MORF Marmelete 164.50 27 *e*PKPdf **PKPdf** **07 21 56.5 +0.8**
MORF Marmelete 164.50 27 *e*PKPab **PKPab** **07 22 54.2 0.0**
PFVI Vila Bisbo 164.57 28 *e*PKPdf **PKPdf** **07 21 57.0 +1.3**
PVAQ Vaqueiros 164.78 24 *e*PKPdf **PKPdf** **07 21 57.0 +1.1**
PVAQ Vaqueiros 164.78 24 *e*PKPab **PKPab** **07 22 55.6 +0.2**
PVAQ Vaqueiros 164.78 24 P **PKPab** **07 22 55.8 +0.4**
PBDV Barranco-do-Ve 164.84 25 *e*PKPdf **PKPdf** **07 21 57.5 +1.5**
PBDV Barranco-do-Ve 164.84 25 *e*PKPab **PKPab** **07 22 56.0 +0.3**
CHEFC Chefchaouen 167.69 21 P **PKPab** **07 23 10.0 +1.6**
PALE Palemas 168.00 16 P **PKPdf** **07 21 59.0 +0.5**
AKLM AKL 168.69 17 P **PKPdf** **07 21 60.0 +1.0**
TAF Taforalt 168.71 11 P **PKPdf** **07 22 00.3 +1.3**
SRHM Skhour des Reh 168.77 37 P **PKPdf** **07 21 60.0 +0.9**
LCRM LCR 169.14 22 P **PKPdf** **07 22 01.0 +1.6**
LCRM LCR 169.14 22 P **PKPab** **07 23 16.0 +1.0**
JBK JBK 169.15 12 P **PKPdf** **07 22 01.0 +1.5**
JBK JBK 169.15 12 P **PKPab** **07 23 16.0 +1.0**
TOA0 Torodi Ar. Sit 169.40 188 **PKPdf** **07 21 59.2 -0.6**
TOA0 PKPab **PKPab** **07 23 16.5 +0.4**
TORD Torodi Ar. Bea 169.40 188 PKP **PKPdf** **07 21 58.8 -1.1**
comp=Z,29nm,1.1s,baz=119,slow=0.1,SNR=70
TORD PKPab **PKPab** **07 23 16.4 +0.3**
comp=Z,21nm,0.9s,baz=181,slow=3.9,SNR=25
TORD pPKP **pPKPdf** **07 24 07.4 +1.6**
comp=Z,9.3nm,1.1s,baz=269,slow=0.3,SNR=3.7
TORD pPKPab **pPKPab** **07 25 12.5 -1.5**
comp=Z,2.8nm,0.7s,baz=140,slow=2.3,SNR=3.6
TORD PP **PP** **07 27 06.2 +0.7**
comp=Z,2.6nm,0.9s,baz=196,slow=4.7,SNR=5.3
TORD Torodi Ar. Bea 169.40 188 PKPdf **PKPdf** **07 21 59.1 -0.7**
TORD **PKPab** **07 23 16.5 +0.3**
OUK Oukaimeden 169.71 42 P **PKPdf** **07 22 00.2 +1.9**
MDT Midelt 170.02 23 PKP **PKPdf** **07 22 01.1 +1.3**
comp=Z,25nm,1.0s,baz=248,slow=0.8,SNR=36
MDT PKPab **PKPab** **07 23 19.9 +1.2**
comp=Z,10nm,0.9s,baz=254,slow=2.8,SNR=9.8
MDT Midelt 170.02 23 P **PKPdf** **07 22 00.9 +1.0**
MDT Midelt 170.02 23 P **PKPab** **07 23 20.1 +1.2**
TDRA Tendrara 170.51 11 P **PKPdf** **07 22 02.0 +1.7**
OUZM OUZ 170.58 39 P **PKPdf** **07 22 02.0 +1.7**
GOLM Goulmima 170.86 28 P **PKPdf** **07 22 03.0 +2.6**
TZRR Tazzarine 171.33 34 P **PKPdf** **07 22 02.0 +1.4**
TZRR Tazzarine 171.33 34 P **PKPab** **07 23 27.0 +2.2**
FIGM Figuig 171.51 8 P **PKPdf** **07 22 02.0 +1.3**
FIGM Figuig 171.51 8 P **PKPab** **07 23 26.3 +0.9**
ZGR Zagora 171.82 37 P **PKPdf** **07 22 02.0 +1.1**

*SJA **07** 07:06:40.2±0.7,31°.01S×72°.31W,h8km±5km,ML4.1, MW3.8*
*GUC **07** 07:06:46.8±0.7,31°.01S×71°.90W,h33km±2km,ML4.2*
*NEIC **07** 07:06:46.4,31°.04S×71°.93W,h23km,Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}8.31; $M_{\theta\theta}$0.35; $M_{\phi\phi}$-8.66; $M_{r\theta}$1.84; $M_{\theta\phi}$0.33; $M_{\phi r}$-3.61; Fault plane solution: $M_0$9.41000×10^{14} NP1:$\phi_8$167.37000°, δ57.61000°, λ78.30000°. NP2:$\phi_8$8.51000°, δ34.22000°, λ107.72000°. Principal axes: T 9.3772, Plg74.0000°, Azm45.0000°; N 0.0643, Plg10.0000°, Azm174.0000°; P -9.4415, Plg12.0000°, Azm266.0000°;*
*NEIC **07** 07:06:46.4±1.7,31°.05S±0°.04×71°.91W±0°.07,h20km±4km, mb4.1/12,Mwr3.9/44,ML4.2(GUC) Error ellipse: s-maj=9.3km s-min=4.3km az=109.0*
*IDC **07** 07:06:49.3±3.3,30°.97S×71°.71W,h42km±27km,mb4.1/4, mbtmp4.0/9,ML3.7/5,MS3.3/4,Error ellipse: s-maj=49.6km s-min=23.7km az=106.0*

ISC 07 07:06:44.4±1.3,30°.94S±0°.02×71°.95W±0°.04,h14km±8km, n88,σ1ᵗ35/112,mb4.3/4,5C-4D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CO06	**Fray Jorge**	**0.38**	**46**	Pg		**Pn**	**07 06 55.5**	**0.0**
CO06				Sg		**Sn**	**07 07 06.6**	**-1.1**
CO06	**Fray Jorge**	**0.38**	**46**	↓*i*P		**Pg**	**07 06 55.5**	**0.0**
CO06				*i* S		**Sn**	**07 07 01.8**	**-0.9**
CO06				IAML			07 07 03.2	
comp=E,10μm,0.4s								
CO02	**Combarbal**	**0.86**	**108**			**Pb**	**07 07 01.4**	**+0.2**
CO02				Sg		**Sb**	**07 07 12.0**	**-0.5**
CO02	**Combarbal**	**0.86**	**108**	↓*i*P		**Pg**	**07 07 01.6**	**+0.5**
CO02				*i* S		**Sg**	**07 07 12.4**	**+0.1**
CO02				IAML			07 07 13.8	
comp=N,23μm,0.2s								
CO02	**Combarbal**	**0.86**	**108**	*e*P		Pn	07 07 12.5	+10
CO03	**El Pedregal**	**1.09**	**85**			**Pg**	**07 07 05.6**	**+0.1**
CO05	**La Serena**	**1.19**	**31**	↓*i*P		**Pg**	**07 07 08.7**	**+1.3**
CO05				*i* S		**Sg**	**07 07 24.6**	**+1.7**
CO05				IAML			07 07 32.8	
comp=E,6μm,0.4s								
GO04	**Tololo Observa**	**1.26**	**53**			**Pg**	**07 07 09.2**	**+0.6**
GO04	**Tololo Observa**	**1.26**	**53**	↓*i*P		**Pg**	**07 07 09.3**	**+0.6**
GO04				*i* S		**Sg**	**07 07 26.1**	**+1.1**
GO04	**Tololo Observa**	**1.26**	**53**	*e*P		**Pg**	**07 07 09.3**	**+0.6**
GO04				*e*S		**Sg**	**07 07 27.1**	**+2.1**
VA06	**Catapilco**	**1.71**	**161**			**Pn**	**07 07 13.3**	**-0.4**
VA06	**Catapilco**	**1.71**	**161**	↑*i*P		**Pn**	**07 07 13.4**	**-0.4**
VA06				*i* S		**Sn**	**07 07 33.2**	**-2.2**
VA06				IAML			07 07 38.2	
comp=E,4μm,0.6s								
CO01	**Juntas del Tor**	**1.87**	**60**	*e*P		**Pb**	**07 07 18.7**	**+0.1**
CO01				*i* S		**Sg**	**07 07 43.0**	**-1.7**
CO01				IAML			07 07 45.9	
comp=E,2μm,0.5s								
CO01	**Juntas del Tor**	**1.87**	**60**	*e*P		**Pb**	**07 07 19.0**	**+0.5**
VA01	**Torpederas**	**2.09**	**173**	IAML			07 07 52.9	
comp=E,744nm,0.4s								
VA03	**San Esteban**	**2.17**	**147**	↑*i*P		**Pn**	**07 07 21.1**	**+0.8**
VA03				*i* S		**Sn**	**07 07 48.0**	**+1.0**
VA03				IAML			07 07 52.6	
comp=E,3μm,0.5s								
VA03	**San Esteban**	**2.17**	**147**	*e*P		**Pn**	**07 07 21.0**	**+0.8**
VA03				IAML			07 07 54.3	
comp=Z,2μm,0.6s								
ROCH	**El Roble**	**2.17**	**159**	↑*i*P		**Pn**	**07 07 20.3**	**-0.1**
ROCH				*e*P		**Pn**	**07 07 20.2**	**-0.1**
ROCH				*i* S		**Sn**	**07 07 48.7**	**+1.4**
ROCH				*i* S		**Sb**	**07 07 48.9**	**-1.7**
ROCH				IAML			07 07 56.5	
comp=N,3μm,0.5s								
ROCH				IAML			07 07 57.0	
comp=N,3μm,0.3s								
ROC1	**El Roble**	**2.18**	**159**			**Pn**	**07 07 20.6**	**+0.1**
ROC1	**El Roble**	**2.18**	**159**	*e*P		Pn	07 07 15.2	-5.3
ROC1				*e*P		**Pb**	**07 07 20.4**	**-3.3**
ROC1				*e*S		**Sb**	**07 07 49.7**	**-1.0**
LCO	**Las Campanas**	**2.21**	**30**	Pn		**Pb**	**07 07 22.9**	**-1.4**
LCO	**Las Campanas**	**2.21**	**30**	*e*P		**Pn**	**07 07 22.3**	**+1.4**
LCO				*i* S		**Sb**	**07 07 52.2**	**+0.5**
LCO	**Las Campanas**	**2.21**	**30**	*e*P		**Pn**	**07 07 22.0**	**+1.1**
AROD	**Rodeo**	**2.27**	**71**	*e*P		**Pb**	**07 07 26.0**	**+0.6**
AROD				*e*S		**Sg**	**07 07 56.7**	**-0.8**
MT02	**Curacav**	**2.41**	**164**			**Pn**	**07 07 22.9**	**-0.5**
MT02	**Curacav**	**2.41**	**164**	*e*P		**Pn**	**07 07 22.8**	**-0.6**
MT02				IAML			07 08 00.7	
comp=E,887nm,0.5s								
MT02	**Curacav**	**2.41**	**164**	*e*P		**Pn**	**07 07 23.0**	**-0.5**
MT02				IAML			07 08 02.9	
comp=Z,615nm,0.6s								
RTLS	**Leoncito**	**2.43**	**111**	*e*P		**Pb**	**07 07 27.0**	**-1.0**
RTLS				*e*S		**Sg**	**07 08 01.5**	**-0.9**
RTLS				IAML			07 08 05.9	
comp=Z,1μm,0.8s								
PEL	**Peldehue**	**2.44**	**154**			**Pn**	**07 07 23.5**	**-0.4**
PEL	**Peldehue**	**2.44**	**154**	*e*P		**Pn**	**07 07 23.9**	**0.0**
PEL				*i* S		**Sn**	**07 07 55.8**	**+2.2**
PEL				IAML			07 08 01.1	
comp=E,2μm,0.6s								
PEL	**Peldehue**	**2.44**	**154**	*e*P		**Pn**	**07 07 24.5**	**+0.6**
PEL				*e*S		**Sb**	**07 08 00.1**	**+1.9**
ACCO	**Cerro Coronel**	**2.51**	**83**	*e*P		**Pb**	**07 07 29.0**	**-0.5**
ACCO				*e*S		**Sg**	**07 08 05.2**	**+0.1**
AUSP	**Uspallata**	**2.53**	**121**	*e*P		**Pb**	**07 07 29.0**	**-0.8**
AUSP				*e*S		**Sg**	**07 08 05.1**	**-0.8**
ACDV	**Cuesta del Vie**	**2.56**	**73**	*e*P		**Pb**	**07 07 30.0**	**-0.2**
ACDV				*e*S		**Sg**	**07 08 05.9**	**-0.9**
ACDV				IAML			07 08 14.4	
comp=Z,451nm,0.8s								
MT05	**Renca**	**2.65**	**157**	*e*P		**Pn**	**07 07 27.0**	**+0.2**
MT05				*i* S		**Sn**	**07 08 01.6**	**+2.8**
MT05				IAML			07 08 07.8	
comp=E,3μm,0.6s								
MT05	**Renca**	**2.65**	**157**	*e*P		**Pn**	**07 07 27.2**	**+0.4**
MT05				IAML			07 08 09.2	
comp=Z,874nm,0.7s								
VA05	**Santo Domingo**	**2.72**	**174**	*e*P		**Pn**	**07 07 26.6**	**-1.0**
VA05				IAML			07 08 14.8	
comp=E,1μm,0.5s								
MT03	**Universidad Ad**	**2.82**	**155**	*e*P		**Pn**	**07 07 29.9**	**+0.7**
MT03				*i* S		**Sn**	**07 08 04.2**	**+1.2**
MT03				IAML			07 08 19.8	
comp=N,2μm,0.4s								
AC04	**Llanos de Chal**	**2.83**	**16**	Pn		**Pn**	**07 07 30.8**	**+1.6**
AC04	**Llanos de Chal**	**2.83**	**16**	*e*P		**Pn**	**07 07 30.0**	**+0.7**
AC04				*e*P		**Pb**	**07 07 30.6**	**-4.2**
AC04				*e*S		**Sb**	**07 08 09.7**	**+0.4**
AC04				IAML			07 08 24.5	
comp=Z,410nm,0.8s								
ZON	**Zonda**	**2.87**	**103**	*e*P		**Pb**	**07 07 35.0**	**-0.4**
ZON				*e*S		**Sg**	**07 08 15.2**	**-1.4**
ZON				IAML			07 08 18.2	
comp=Z,599nm,0.5s								
MT09	**Talagante**	**2.94**	**164**	↑*i*P		**Pn**	**07 07 31.2**	**+0.4**
MT09				IAML			07 08 15.2	
comp=E,736nm,0.3s								
MT01	**Popeta**	**2.97**	**169**	↑*i*P		**Pn**	**07 07 30.7**	**-0.4**
MT01				*i* S		**Sn**	**07 08 07.4**	**+0.8**
MT01				IAML			07 08 23.2	
comp=E,506nm,0.7s								
MT01	**Popeta**	**2.97**	**169**	*e*P		**Pn**	**07 07 30.9**	**-0.2**
MT01				*e*S		**Sn**	**07 08 10.2**	**+3.6**
MT01				IAML			07 08 23.5	
comp=Z,394nm,0.8s								
RTLL	**Cerro Villicun**	**3.01**	**98**	*e*P		**Pb**	**07 07 35.4**	**-2.4**
RTLL				*e*S		**Sb**	**07 08 11.2**	**-3.2**
BO04	**La Punta**	**3.24**	**160**			**Pn**	**07 07 35.1**	**+0.1**
BO04	**La Punta**	**3.24**	**160**	*e*P		**Pn**	**07 07 35.3**	**+0.4**
BO04				IAML			07 08 27.2	
comp=N,581nm,0.5s								
LMEL	**Las Melosas**	**3.25**	**153**			**Pn**	**07 07 35.8**	**+0.7**
LMEL	**Las Melosas**	**3.25**	**153**	*i* P		**Pn**	**07 07 36.3**	**+1.2**
LMEL				*i* S		**Sn**	**07 08 14.0**	**+0.3**
LMEL				IAML			07 08 26.8	
comp=N,804nm,0.3s								
BO01	**Tunca**	**3.52**	**168**	*e*P		**Pn**	**07 07 38.2**	**-0.4**
BO01				*e*S		**Sn**	**07 08 20.7**	**+0.7**
BO01				IAML			07 08 37.1	
comp=Z,215nm,0.7s								
AVFE	**Valle Fertil**	**3.88**	**87**	*e*P		**Pn**	**07 07 47.1**	**+3.4**
AVFE				*e*S		**Sb**	**07 08 35.2**	**-4.3**
AVFE				IAML			07 08 47.9	
comp=Z,656nm,0.5s								
GO05	**Huala**	**4.06**	**180**	*e*P		**Pn**	**07 07 45.1**	**-1.0**
GO05				*e*S		**Sb**	**07 08 45.2**	**+0.7**
ACHE	**Chepes**	**4.54**	**94**	*e*P		**Pn**	**07 07 50.7**	**-2.2**
ML02	**Panimavida**	**4.83**	**175**			**Pn**	**07 07 58.3**	**+1.6**
H03N1	**Juan Fernandez**	**6.40**	**245**	P		**Pn**	**07 08 18.4**	**+0.4**
baz=118,slow=18,SNR=16								
H03N1				T		T	07 15 07.3	
baz=74,slow=72,SNR=2692								
H03N3	**Juan Fernandez**	**6.42**	**245**	P		**Pn**	**07 08 18.1**	**-0.2**
baz=118,slow=18,SNR=13								
H03N3				T		T	07 15 07.6	
baz=74,slow=72,SNR=2813								
H03N2	**Juan Fernandez**	**6.42**	**245**	P		**Pn**	**07 08 18.5**	**+0.3**
baz=118,slow=18,SNR=8.9								
H03N2				T		T	07 15 08.5	
baz=74,slow=72,SNR=2161								
H03S1	**Juan Fernandez**	**6.55**	**242**	T		T	07 15 22.4	
LVC	**Limon Verde**	**8.73**	**19**	P		**Pn**	**07 08 52.1**	**+1.5**
comp=Z,0.2nm,0.3s,baz=117,slow=3.5,SNR=1.9								
LVC				LR		LR	07 12 24.4	
comp=Z,90nm,20.6s,baz=206,slow=39								
comp=Z,2.4nm,0.8s								
LVC	**Limon Verde**	**8.73**	**19**			**Pn**	**07 08 50.0**	**-0.6**
PLCA	**Paso Flores**	**9.84**	**174**	P		**Pn**	**07 09 07.2**	**+1.8**
comp=Z,0.2nm,0.3s,baz=331,slow=17,SNR=2.0								
comp=Z,1.0nm,0.4s								
ITQB	**Itaqui**	**13.31**	**88**	Pn		**Pn**	**07 09 52.5**	**-0.4**
CPUP	**Villa Florida**	**13.64**	**74**	P		**Pn**	**07 09 58.4**	**+1.0**
comp=Z,0.1nm,0.3s,baz=267,slow=17,SNR=3.3								
CPUP				LR		LR	07 15 30.5	
comp=Z,77nm,18.8s,baz=225,slow=39								
comp=Z,2.2nm,1.0s								
CPUP	**Villa Florida**	**13.64**	**74**	Pn		**Pn**	**07 09 59.2**	**+1.8**
LPAZ	**La Paz**	**15.00**	**14**	P		**P**	**07 10 19.6**	**-2.6**
comp=Z,0.2nm,0.3s,baz=189,slow=8.9,SNR=12								
comp=Z,2.2nm,0.7s								
LPAZ	**La Paz**	**15.00**	**14**			**P**	**07 10 20.0**	**-2.2**
PLTB	**Pedras Altas**	**15.70**	**98**	Pn		**Pn**	**07 10 26.9**	**+1.7**
PLTB				IAmb		IAmb	07 10 46.8	
comp=Z,9.0nm,1.0s								
SIV	**San Ignacio**	**17.90**	**36**	P		**P**	**07 10 54.2**	**+0.6**
baz=187,slow=10,SNR=8.0								
SIV				LR		LR	07 19 13.6	
comp=Z,110nm,19.1s,baz=118,slow=42								
comp=Z,1.4nm,0.6s								
SAML	**Samuel**	**23.36**	**22**	P		**P**	**07 11 52.8**	**+0.2**
BDFB	**Brasilia**	**26.66**	**61**	P		**P**	**07 12 21.7**	**-1.4**
comp=Z,4.5nm,0.8s,baz=254,slow=6.7,SNR=5.2								
comp=Z,4.5nm,0.8s								
BDFB	**Brasilia**	**26.66**	**61**	P		**P**	**07 12 22.6**	**-0.5**
BDFB				IAmb		IAmb	07 12 24.0	
comp=Z,5.9nm,1.0s								
SNAA	**Sanae**	**54.39**	**159**	P		**P**	**07 16 10.9**	**+0.4**
QSPA	**South Pole Qui**	**59.28**	**180**	P		**P**	**07 16 46.2**	**+0.8**
VNDA	**Vanda**	**67.11**	**191**	P		**P**	**07 17 36.6**	**-0.4**
MAW	**Mawson**	**76.08**	**164**	P		**P**	**07 18 31.7**	**+0.6**
comp=Z,3.1nm,0.8s,baz=265,slow=11,SNR=3.0								
comp=Z,3.1nm,0.8s								
BOSA	**Boshof**	**81.43**	**118**	P		**P**	**07 19 01.4**	**-0.1**
comp=Z,3.8nm,1.1s,baz=282,slow=2.1,SNR=4.1								
comp=Z,3.8nm,1.1s								
TORD	**Torodi Ar. Bea**	**83.11**	**70**	P		**P**	**07 19 10.3**	**+0.2**
comp=Z,1.5nm,0.9s,baz=282,slow=5.5,SNR=7.7								
comp=Z,1.5nm,0.9s								
TORD	**Torodi Ar. Bea**	**83.11**	**70**	P		**P**	**07 19 10.6**	**+0.4**
TORD				IAmb		IAmb	07 19 11.9	
comp=Z,2.0nm,0.9s								
FRB	**Frobisher Bay**	**94.41**	**2**	LR		LR	08 04 48.6	
comp=Z,32nm,20.0s,baz=359,slow=37								
WRA	**Warramunga Arr**	**123.45**	**210**	PKP		**PKPdf**	**07 25 41.7**	**-0.1**
comp=Z,0.7nm,1.1s,baz=178,slow=1.5,SNR=6.2								
H11S2	**WAKE ISLAND Hyl**	**125.83**	**271**	T		T	09 44 33.2	
baz=116,slow=75,SNR=109								
H11S1	**WAKE ISLAND Hyl**	**125.84**	**271**	T		T	09 44 30.6	
baz=116,slow=70,SNR=70								
H11S3	**WAKE ISLAND Hyl**	**125.85**	**271**	T		T	09 44 30.9	
baz=116,slow=75,SNR=95								
H11N3	**WAKE ISLAND Hyl**	**126.17**	**273**	T		T	09 44 57.3	
baz=117,slow=74								
H11N1	**WAKE ISLAND Hyl**	**126.18**	**273**	T		T	09 45 00.4	
baz=117								
H11N2	**WAKE ISLAND Hyl**	**126.18**	**273**	T		T	09 45 03.4	
baz=117,slow=74								
KURBB	**Kurchatov Arra**	**150.54**	**40**	PKPbc		**PKiKP**	**07 26 36.1**	**0.0**
comp=Z,0.8nm,0.9s,baz=311,slow=2.7,SNR=2.9								
KURK	**Kurchatov**	**150.54**	**39**			**PKiKP**	**07 26 36.1**	**0.0**

IDC 07 07:12:40.3±4.1,23°.51S×168°.12E,h0km,mb4.3/3, mbtmp4.3/3,ML2.4/1,MS3.9/1,Error ellipse: s-maj=72.6km s-min=54.2km az=103.0,New Caledonia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DZM	**Mont Dzumac**	**2.11**	**313**	Pn		Pn	07 13 17.0	0.0
1.3nm,0.3s,baz=184,slow=14,SNR=12								
RAR	**Rarotonga**	**29.75**	**92**	LR		LR	07 28 25.3	
comp=Z,198nm,19.3s,baz=106,slow=32								
ASAR	**Alice Springs**	**31.31**	**263**	P		P	07 19 02.4	-0.1
7.7nm,0.9s,baz=95,slow=6.6,SNR=9.7								
7.7nm,0.9s								
WRA	**Warramunga Arr**	**31.54**	**270**	P		P	07 19 04.6	+0.1
5.3nm,1.1s,baz=95,slow=10,SNR=6.1								
5.3nm,1.1s								
SONM	**Songino Array**	**90.01**	**324**	P		P	07 25 41.8	0.0
0.6nm,0.6s,baz=131,slow=4.0,SNR=3.3								
0.6nm,0.6s								

KRSC 07 07:47:44.4±0.9,54°.99N×162°.16E,h48km±15km,ML4.1, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MKZ	**Mys Kozlova**	**0.50**	**210**	*e*P		Pn	07 47 56.7	+1.2
MKZ				*e*S		Sn	07 48 04.8	+1.3
TUMR	**Tumrok**	**1.19**	**285**	*e*P		Pn	07 48 06.5	+1.7
TUMR				*e*S		Sn	07 48 21.7	+1.8
BZGR	**Bezymyannyi-Gr**	**1.26**	**319**	*e*P		Pn	07 48 07.2	+1.4
BZGR				*e*S		Sn	07 48 23.2	+1.5
KBTR	**Krutoberegovo**	**1.28**	**17**	*e*P		Pn	07 48 06.5	+0.6
KBTR				*e*S		Sn	07 48 23.5	+1.7
ZLN	**Zelenaya**	**1.28**	**324**	*e*P		Pn	07 48 07.9	+1.8
ZLN				*e*S		Sn	07 48 24.2	+2.0
KBG	**Krutoberegovo**	**1.31**	**14**	*e*P		Pn	07 48 08.8	+2.6
KMNR	**Kamenistaya**	**1.34**	**306**	*e*P		Pn	07 48 08.4	+1.6
KMNR				*e*S		Sn	07 48 25.6	+2.2
BZWR	**Bezymyannyi-We**	**1.36**	**317**	*e*P		Pn	07 48 08.8	+1.7
BZWR				*e*S		Sn	07 48 24.9	+0.8
LGNR	**Loginova**	**1.38**	**323**	*e*P		Pn	07 48 09.6	+2.1
LGNR				*e*S		Sn	07 48 24.6	-0.1
CIRR	**Tsirk**	**1.38**	**325**	*e*P		Pn	07 48 09.6	+2.2
CIRR				*e*S		Sn	07 48 25.4	+0.8
KIRR	**Kirishev**	**1.41**	**314**	*e*P		Pn	07 48 09.9	+2.1
KIRR				*e*S		Sn	07 48 27.4	+2.0
KPT	**Kopyto**	**1.47**	**312**	*e*P		Pn	07 48 11.1	+2.5
KPT				*e*S		Sn	07 48 26.6	-0.1
KRSR	**Krestovskiy**	**1.52**	**324**	*e*P		Pn	07 48 10.4	+1.1
KRSR				*e*S		Sn	07 48 29.2	+1.2
KLY	**Klyuchi**	**1.58**	**328**	*e*P		Pn	07 48 10.5	+0.6
KLY				*e*S		Sn	07 48 28.8	-0.3
SMKR	**Semkarok**	**1.64**	**347**	*e*P		Pn	07 48 12.4	+1.5
SMKR				*e*S		Sn	07 48 32.9	+2.0
BDR	**Baidarnaya**	**1.67**	**342**	*e*P		Pn	07 48 13.2	+1.9
BDR				*e*S		Sn

NNA	**Nana**	**35.69**	**74**	LR	LR	08 16 01.2		
	comp=Z,88nm,21.3s,baz=251,slow=30							
PPT	**Papeete**	**35.98**	**276**	LR	LR	08 16 05.6		
	comp=Z,124nm,20.7s,baz=128,slow=30							
ATAH	**Atahualpa**	**36.87**	**66**	LR	LR	08 15 04.9		
	comp=Z,45nm,19.8s,baz=250,slow=28							
PLCA	**Paso Flores**	**37.14**	**124**	P	P	08 05 25.2	+4.3	
	9.5nm,1.1s,baz=289,slow=10,SNR=5.2							
PLCA				LR	LR	08 16 43.2		
	comp=Z,342nm,20.3s,baz=257,slow=30							
	9.5nm,1.1s							
PLCA	**Paso Flores**	**37.14**	**124**	P	**P**	**08 05 20.8**	**-0.1**	
PLCA				IAmb	IAmb	08 05 26.0		
	comp=Z,12nm,1.1s							
LVC	**Limon Verde**	**39.09**	**95**	LR	LR	08 17 58.3		
	comp=Z,185nm,18.5s,baz=258,slow=30							
LPAZ	**La Paz**	**41.66**	**86**	P	**P**	**08 06 02.8**	**+3.3**	
	comp=Z,5.0nm,1.1s,baz=267,slow=7.6,SNR=3.7							
LPAZ				LR	LR	08 20 17.6		
	comp=Z,74nm,19.6s,baz=249,slow=32							
	comp=Z,5.0nm,1.1s							
LPAZ	**La Paz**	**41.66**	**86**	P	**P**	**08 05 59.3**	**-0.3**	
USHA	**Ushuaia**	**42.84**	**144**	LR	LR	08 19 45.9		
	comp=Z,304nm,19.8s,baz=254,slow=30							
JTS	**Las Juntas de**	**44.44**	**39**	LR	LR	08 20 55.0		
	comp=Z,94nm,18.1s,baz=291,slow=31							
CMIG	**Matias Romero**	**45.78**	**23**	LR	LR	08 21 57.1		
	comp=Z,70nm,18.6s,baz=180,slow=31							
ROSC	**El Rosal**	**47.46**	**55**	LR	LR	08 24 09.4		
	comp=Z,170nm,18.0s,baz=217,slow=33							
SIV	**San Ignacio**	**48.12**	**89**	P	**P**	**08 06 51.6**	**+1.3**	
	comp=Z,1.1nm,0.5s,baz=246,slow=8.3,SNR=6.7							
SIV				LR	LR	08 23 46.7		
	comp=Z,96nm,21.5s,baz=294,slow=32							
	comp=Z,1.1nm,0.5s							
CPUP	**Villa Florida**	**48.57**	**103**	LR	LR	08 23 57.1		
	comp=Z,206nm,21.2s,baz=260,slow=32							
PMSA	**Palmer Station**	**49.30**	**155**	LR	LR	08 22 20.4		
	comp=Z,116nm,20.6s,baz=284,slow=29							
LPIG	**La Paz**	**49.72**	**2**	LR	LR	08 23 13.8		
	comp=Z,90nm,21.1s,baz=196,slow=30							
TXAR	**Lajitas Array**	**55.46**	**9**	LR	LR	08 27 01.6		
	comp=Z,39nm,20.2s,baz=170,slow=32							
BDFB	**Brasilia**	**59.99**	**94**	P	P	08 08 21.9	+4.6	
	comp=Z,3.9nm,0.9s,baz=261,slow=8.3,SNR=4.0							
BDFB				LR	LR	08 32 03.5		
	comp=Z,86nm,19.4s,baz=276,slow=34							
	comp=Z,3.9nm,0.9s							
BDFB	**Brasilia**	**59.99**	**94**	P	**P**	**08 08 17.4**	**+0.2**	
ANMO	**Albuquerque**	**60.72**	**5**	LR	LR	08 30 38.5		
	comp=Z,60nm,18.4s,baz=190,slow=32							
SHPR	**Sheep Range**	**62.15**	**357**	P	**P**	**08 08 31.9**	**+0.5**	
SHPR				IAmb	IAmb	08 08 44.2		
	comp=Z,5.8nm,1.3s							
PDPR	**Patillas Dam,**	**62.32**	**50**	P	**P**	**08 08 32.4**	**-0.2**	
VNDA	**Vanda**	**64.13**	**194**	LR	LR	08 28 56.0		
	comp=Z,81nm,20.0s,baz=47,slow=29							
NV11	**Mina Array Sit**	**64.27**	**354**	P	**P**	**08 08 44.8**	**-0.6**	
NV11				IAmb	IAmb	08 08 51.3		
	comp=Z,3.5nm,0.9s							
QSPA	**South Pole Qui**	**64.28**	**180**	LR	LR	08 32 08.3		
	comp=Z,120nm,18.5s,baz=80,slow=32							
QSPA	**South Pole Qui**	**64.28**	**180**	P	**P**	**08 08 45.9**	**+0.7**	
QSPA				IAmb	IAmb	08 08 48.1		
	comp=Z,4.8nm,1.1s							
NVAR	**Mina Array Bea**	**64.28**	**354**	P	**P**	**08 08 45.5**	**0.0**	
	comp=Z,1.0nm,0.7s,baz=184,slow=8.7,SNR=11							
	comp=Z,1.0nm,0.7s							
NVAR	**Mina Array Bea**	**64.28**	**354**	P	**P**	**08 08 45.0**	**-0.5**	
MDP	**Montagnes des**	**65.04**	**71**	LR	LR	08 34 02.5		
	comp=Z,51nm,20.8s,baz=136,slow=33							
TKL	**Tuckaleechee C**	**66.69**	**25**	LR	LR	08 34 35.5		
	comp=Z,76nm,19.3s,baz=184,slow=33							
YBH	**Yreka Blue Hor**	**68.04**	**351**	LR	LR	08 32 36.5		
	comp=Z,58nm,18.3s,baz=188,slow=31							
PDAR	**Pinedale Array**	**68.35**	**2**	P	**P**	**08 09 09.2**	**-2.4**	
	comp=Z,0.6nm,0.6s,baz=154,slow=8.8,SNR=5.6							
	comp=Z,0.6nm,0.6s							
HLID	**Hailey**	**69.16**	**358**	P	**P**	**08 09 16.2**	**-0.3**	
HLID				IAmb	IAmb	08 09 32.4		
	comp=Z,4.8nm,1.1s							
SNAA	**Sanae**	**71.36**	**162**	LR	LR	08 37 31.0		
	comp=Z,46nm,18.6s,baz=194,slow=33							
SNAA	**Sanae**	**71.36**	**162**	P	**P**	**08 09 29.3**	**-0.4**	
SNAA				IAmb	IAmb	08 09 30.4		
	comp=Z,6.5nm,1.2s							
RCBR	**Riachuelo**	**74.78**	**89**	LR	LR	08 42 13.2		
	comp=Z,43nm,18.1s,baz=7.5,slow=35							
SADO	**Sadowa**	**76.38**	**23**	LR	LR	08 39 34.3		
	comp=Z,55nm,21.8s,baz=194,slow=33							
ULM	**Lac du Bonnet**	**77.11**	**10**	LR	LR	08 41 57.3		
	comp=Z,53nm,18.1s,baz=49,slow=34							
MAW	**Mawson**	**86.70**	**178**	LR	LR	08 45 32.9		
	comp=Z,129nm,19.8s,baz=158,slow=33							
SCHQ	**Schefferville**	**89.16**	**24**	LR	LR	08 50 30.9		
	comp=Z,28nm,19.7s,baz=124,slow=35							
KDAK	**Kodiak Island**	**90.09**	**340**	LR	LR	08 41 28.2		
	comp=Z,67nm,21.6s,baz=193,slow=29							
H11S2	**WAKE ISLAND Hy**	**90.62**	**290**	T	T	09 50 37.8		
	baz=118,slow=75,SNR=36							
H11S1	**WAKE ISLAND Hy**	**90.64**	**290**	T	T	09 50 36.6		
	baz=118,slow=75,SNR=33							
H11S3	**WAKE ISLAND Hy**	**90.64**	**290**	T	T	09 50 38.3		
	baz=118,slow=75,SNR=30							
H11N3	**WAKE ISLAND Hy**	**91.01**	**291**	T	T	09 51 13.8		
	baz=115							
H11N1	**WAKE ISLAND Hy**	**91.02**	**291**	T	T	09 51 10.3		
	baz=115,slow=74							
H11N2	**WAKE ISLAND Hy**	**91.02**	**291**	T	T	09 51 25.1		
	baz=115,slow=74							
INK	**Inuvik**	**95.29**	**352**	LR	LR	08 48 51.8		
	comp=Z,31nm,18.6s,baz=174,slow=32							
FRB	**Frobisher Bay**	**95.57**	**18**	LR	LR	08 52 09.4		
	comp=Z,78nm,19.0s,baz=204,slow=34							

*IASPEI **07** 08:02:14.9±0.8, 40.28N±0.02×29.14E±0.02, h16km±5km, Error ellipse: s-maj=3.2km s-min=2.9km az=62.3, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*

*ISK **07** 08:02:14.9, 40.28N×29.15E, h14km, ML3.5/45*

*DDA **07** 08:02:14.9±0.0, 40.27N×29.15E, h14km, MW3.4*

*THE **07** 08:02:15.7, 40.34N×29.19E, h0km±3km, ML3.0/3, Error ellipse: s-maj=4.6km s-min=1.9km az=96.0*

ISC 07 08:02:15.0±0.8, 40.28N±0.02×29.14E±0.02, h16km±5km, n76, σ0.86/103, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGD	**Bursa**	**0.05**	**107**	P	**Pg**	**08 02 17.9**	**-0.1**
IGD				S	**Sg**	**08 02 19.5**	**-0.3**
IGD				*i* AML	AML	08 02 20.0	
	comp=N,6μm,0.2s						
IGD				*i* AML	AML	08 02 20.0	
	comp=E,4μm,0.1s						
ULDT	**Uludag**	**0.14**	**182**	P	**Pb**	**08 02 19.1**	**-0.3**
ULDT				S	**Sg**	**08 02 21.5**	**-0.1**
ULDT				*i* AML	AML	08 02 22.0	
	comp=N,5μm,0.4s						
ULDT				*i* AML	AML	08 02 22.0	
	comp=E,7μm,0.4s						
GEMT	**Gemlik**	**0.16**	**13**	PG	**Pb**	**08 02 19.6**	**-0.1**
GEMT				SG	**Sg**	**08 02 21.8**	**-0.1**
MDNY	**Mudanya-Bursa**	**0.22**	**295**	PG	**Pb**	**08 02 20.5**	**-0.1**
MDNY				SG	**Sg**	**08 02 23.7**	**+0.3**
ORLT	**Orhaneli**	**0.30**	**219**	PG	**Pb**	**08 02 21.7**	**-0.4**
ORLT				SG	**Sb**	**08 02 26.4**	**-0.4**
TRML	**Termal-Yalova**	**0.33**	**4**	PG	**Pb**	**08 02 22.6**	**0.0**
TRML				SG	**Sb**	**08 02 27.3**	**-0.4**
YLV	**Yalova**	**0.34**	**31**	PG	**Pb**	**08 02 22.7**	**-0.1**
YLV				SG	**Sb**	**08 02 27.5**	**-0.5**
ARMT	**Armutlu**	**0.36**	**323**	PG	**Pb**	**08 02 23.0**	**-0.1**
ARMT				SG	**Sb**	**08 02 28.1**	**-0.4**
ADVT	**Abdulvahap**	**0.48**	**71**	PG	**Pb**	**08 02 24.9**	**-0.2**
ADVT				SG	**Sb**	**08 02 31.9**	**-0.1**
BILE	**Bilecik/Merkez**	**0.57**	**101**	P	**Pg**	**08 02 26.0**	**-0.4**
BILE				S	**Sb**	**08 02 34.2**	**-0.5**
BILE				*i* AML	AML	08 02 36.0	
	comp=E,434nm,0.3s						
BILE				*i* AML	AML	08 02 37.0	
	comp=N,657nm,0.7s						
AUBOZ	**BOZOYUK**	**0.78**	**118**	PG	**Pb**	**08 02 30.1**	**-0.1**
DST	**Dursunbey**	**0.78**	**211**	PG	**Pg**	**08 02 30.2**	**-0.1**
AVCI	**Avcilar-stanb**	**0.79**	**336**	PG	**Pb**	**08 02 30.8**	**+0.5**
KAVV	**Kandilli-Istan**	**0.79**	**355**	PG	**Pb**	**08 02 30.8**	**+0.4**
ISK	**Istanbul-Kandi**	**0.79**	**355**	P	**Pb**	**08 02 30.5**	**+0.1**
ISK				S	**Sb**	**08 02 41.5**	**+0.6**
	2μm,0.2s						
ISK	**Istanbul-Kandi**	**0.79**	**355**	PG	**Pb**	**08 02 30.7**	**+0.3**
TVSB	**Tavsanli**	**0.86**	**163**	PG	**Pb**	**08 02 31.9**	**+0.2**
BGKT	**Bogazkoy**	**0.94**	**343**	PG	**Pn**	**08 02 33.7**	**0.0**
SILT	**Sile**	**0.95**	**23**	PG	**Pn**	**08 02 33.7**	**-0.1**
ANDZ	**Kutahya, Merke**	**0.96**	**143**	P	**Pg**	**08 02 33.4**	**-0.3**
ANDZ				S	**Sb**	**08 02 46.6**	**+0.7**
ANDZ				*i* AML	AML	08 02 49.0	
	comp=N,439nm,0.4s						
ANDZ				*i* AML	AML	08 02 49.0	
	comp=E,331nm,0.5s						
KLYT	**Kilyos**	**0.98**	**356**	PG	**Pn**	**08 02 34.2**	**+0.1**
EDC	**Edincik**	**0.98**	**274**	PG	**Pb**	**08 02 33.7**	**0.0**
SAUV	**Serdivan-Sakar**	**1.01**	**63**	PG	**Pg**	**08 02 34.5**	**-0.2**
GULT	**Gulveren**	**1.06**	**81**	PG	**Pb**	**08 02 35.1**	**0.0**
CTKS	**Kestanelik-??a**	**1.07**	**333**	PG	**Pn**	**08 02 35.6**	**+0.2**
BORA	**Eskisehir**	**1.08**	**111**	PG	**Pb**	**08 02 35.0**	**-0.4**
GONE	**Gonen-Balikesi**	**1.14**	**259**	PN	**Pg**	**08 02 36.9**	**-0.1**
KAYN	**Sakarya, Kayna**	**1.14**	**53**	P	**Pn**	**08 02 36.5**	**+0.1**
KAYN				S	**Sg**	**08 02 51.6**	**-0.3**
KAYN				*i* AML	AML	08 02 53.0	
	comp=N,267nm,0.4s						
KAYN				*i* AML	AML	08 02 54.0	
	comp=E,228nm,0.3s						
BALB	**Balikesir**	**1.16**	**237**	PN	**Pg**	**08 02 37.7**	**+0.3**
SRCK	**Saricakaya, Es**	**1.16**	**101**	PN	**Pn**	**08 02 36.9**	**+0.2**
SMAA	**Simav-Kutahya**	**1.18**	**186**	PN	**Pn**	**08 02 36.9**	**-0.1**
SLVT	**Silivri**	**1.19**	**324**	PN	**Pg**	**08 02 37.8**	**-0.1**
SIMA	**Simav-Kutahya**	**1.20**	**186**	PN	**Pg**	**08 02 38.2**	**0.0**
GDZ	**Gediz**	**1.22**	**167**	P	**Pg**	**08 02 38.4**	**-0.1**
GDZ				S	**Sg**	**08 02 54.6**	**+0.3**
GDZ				*i* AML	AML	08 02 57.0	
	comp=N,505nm,0.6s						
GDZ				*i* AML	AML	08 02 58.0	
	comp=E,552nm,0.5s						
MRMT	**Marmara Adasi**	**1.23**	**286**	PN	**Pb**	**08 02 38.1**	**+0.2**
KNL	**Balıkesir**	**1.24**	**270**	P	**Pn**	**08 02 36.1**	**-1.6**
KNL				*i* AML	AML	08 02 59.0	
	comp=N,474nm,0.3s						
KNL				*i* AML	AML	08 02 59.0	
	comp=E,667nm,0.4s						
GEDZ	**Gediz**	**1.25**	**170**	PN	**Pg**	**08 02 39.3**	**+0.2**
CTYL	**Yalikoy Yolu**	**1.36**	**332**	PN	**Pn**	**08 02 39.9**	**+0.5**
KRBG	**Karabiga-Canak**	**1.42**	**275**	PN	**Pb**	**08 02 40.9**	**-0.2**
STEP	**BALIKESIR_Sava**	**1.42**	**231**	P	**Pb**	**08 02 40.9**	**-0.2**
STEP				S	**Sn**	**08 02 58.6**	**0.0**
STEP				*i* AML	AML	08 03 05.0	
	comp=E,1μm,0.4s						
STEP				*i* AML	AML	08 03 07.0	
	comp=N,1μm,0.6s						
GZKV	**Gazikoy-Tekird**	**1.46**	**289**	PN	**Pb**	**08 02 41.7**	**-0.1**
MAR3	**Marsite Statio**	**1.48**	**289**	PN	**Pb**	**08 02 41.9**	**-0.3**
MAR6	**Marsite Statio**	**1.49**	**287**	PN	**Pn**	**08 02 41.9**	**+0.7**
SGAZ	**Eskisehir, Sey**	**1.50**	**119**	P	**Pb**	**08 02 42.2**	**-0.4**
SGAZ				S	**Sg**	**08 03 02.8**	**-0.7**
SGAZ				*i* AML	AML	08 03 06.0	
	comp=E,144nm,0.5s						
SGAZ				*i* AML	AML	08 03 08.0	
	comp=N,151nm,0.3s						
USAK	**Uak-Merkez**	**1.56**	**184**	P	**Pg**	**08 02 45.2**	**+0.1**
USAK				S	**Sg**	**08 03 05.9**	**+0.5**
USAK				*i* AML	AML	08 03 08.0	
	comp=N,252nm,0.3s						
USAK				*i* AML	AML	08 03 08.0	
	comp=E,260nm,0.7s						
MDUB	**Mudurnu**	**1.58**	**82**	PN	**Pb**	**08 02 43.4**	**-0.6**
AFYO	**Afyonkarahisar**	**1.74**	**149**	P	**Pg**	**08 02 47.4**	**-1.0**
AFYO				S	**Sg**	**08 03 11.9**	**+0.9**
AFYO				*i* AML	AML	08 03 14.0	
	comp=N,490nm,0.7s						
AFYO				*i* AML	AML	08 03 15.0	
	comp=E,339nm,0.4s						
CIFT	**Cifteler, Eski**	**1.74**	**121**	PN	**Pn**	**08 02 45.6**	**+0.9**
BUHA	**Balikesir, Bur**	**1.77**	**245**	P	**Pg**	**08 02 48.6**	**-0.4**
BUHA				S	**Sg**	**08 03 11.2**	**-0.8**
BUHA				*i* AML	AML	08 03 17.0	
	comp=E,418nm,0.5s						
BUHA				*i* AML	AML	08 03 20.0	
	comp=N,370nm,0.4s						
KULA	**Kula-Manisa**	**1.80**	**192**	P	**Pg**	**08 02 49.0**	**-0.6**
KULA				S	**Sg**	**08 03 12.0**	**-1.0**
KULA	**Kula-Manisa**	**1.80**	**192**	PN	**Pb**	**08 02 46.7**	**-1.0**
AUMIH	**MIHALICIK**	**1.84**	**102**	PN	**Pn**	**08 02 46.9**	**+0.7**
YIGI	**Dzce**	**1.88**	**68**	P	**Pb**	**08 02 49.6**	**+0.6**
YIGI				S	**Sg**	**08 03 14.4**	**-1.2**
YIGI				*i* AML	AML	08 03 20.0	
	comp=N,98nm,0.7s						
YIGI				*i* AML	AML	08 03 22.0	
	comp=E,86nm,0.9s						
YUVA	**Yuva-Kibriscik**	**1.95**	**86**	PN	**Pn**	**08 02 48.6**	**+1.0**
SVRH	**Sivrihisar-ESK**	**2.01**	**114**	PN	**Pn**	**08 02 49.4**	**+1.0**
AUSIV	**SIVRIHISAR**	**2.03**	**114**	PN	**Pn**	**08 02 49.3**	**+0.7**
SHUT	**Suhut-Afyon**	**2.04**	**147**	PN	**Pn**	**08 02 49.4**	**+0.6**
ERIK	**Erikli-Kesan**	**2.04**	**282**	PN	**Pn**	**08 02 49.9**	**+1.1**
ZEDA	**zmir-Bergama**	**2.06**	**231**	P	**Pb**	**08 02 52.3**	**+0.2**
ZEDA				S	**Sg**	**08 03 20.3**	**-1.1**
ZEDA				*i* AML	AML	08 03 23.0	
	comp=N,114nm,0.6s						
ZEDA				*i* AML	AML	08 03 28.0	
	comp=E,129nm,0.9s						
BAYC	**CANAKKALE_Bayr**	**2.06**	**256**	P	**Pg**	**08 02 53.6**	**-1.0**
BAYC				S	**Sg**	**08 03 19.9**	**-1.6**
BAYC				*i* AML	AML	08 03 23.0	
	comp=E,130nm,0.4s						
BAYC				*i* AML	AML	08 03 24.0	
	comp=N,183nm,0.6s						
KIBS	**BOLU**	**2.08**	**85**	P	**Pg**	**08 02 54.1**	**-0.7**
KIBS				S	**Sg**	**08 03 23.3**	**+1.5**
KIBS				*i* AML	AML	08 03 34.0	
	comp=E,90nm,1.2s						
KIBS				*i* AML	AML	08 03 38.0	
	comp=N,81nm,1.0s						
UKOP	**Uzunkopru-Edir**	**2.09**	**295**	PN	**Pn**	**08 02 50.9**	**+1.5**
DKL	**Dikili**	**2.11**	**236**	PN	**Pn**	**08 02 51.2**	**+1.6**
KZIL	**AFYON_Kizioren**	**2.16**	**159**	P	**Pg**	**08 02 56.8**	**+0.3**
KZIL				S	**Sg**	**08 03 22.9**	**-1.7**
KZIL				*i* AML	AML	08 03 29.0	
	comp=N,83nm,0.8s						
KZIL				*i* AML	AML	08 03 29.0	
	comp=E,85nm,0.4s						
EZN	**Ezine**	**2.21**	**259**	P	**Pn**	**08 02 52.4**	**+1.4**
EZN				S	**Sb**	**08 03 23.3**	**+1.6**
	188nm,0.4s						
EZN	**Ezine**	**2.21**	**259**	PN	**Pn**	**08 02 52.4**	**+1.4**
ENEZ	**Enez**	**2.33**	**282**	PN	**Pn**	**08 02 53.3**	**+0.7**
EDRB	**Edirne**	**2.40**	**312**	PN	**Pn**	**08 02 53.5**	**-0.1**
BOZC	**Bozcaada**	**2.41**	**261**	PN	**Pn**	**08 02 55.7**	**+1.9**
ALN	**Alexandroupoli**	**2.44**	**286**	P	**Pn**	**08 02 54.4**	**+0.2**
ALN				S	**Sb**	**08 03 27.3**	**-1.0**
	105nm,0.4s						
ALN	**Alexandroupoli**	**2.44**	**286**	PN	**Pn**	**08 02 55.5**	**+1.3**
PRK	**Paraskevi**	**2.44**	**246**	P	**Pb**	**08 02 56.6**	**-1.9**
GADA	**Gvkgeada**	**2.48**	**269**	PN	**Pn**	**08 02 56.6**	**+1.8**
SIGR	**SIGRI**	**2.75**	**248**	P	**Pn**	**08 03 01.2**	**+2.7**
SMTH	**Samothraki Isl**	**2.77**	**275**	P	**Pn**	**08 02 59.5**	**+0.8**
LIA	**Limnos Island**	**3.06**	**264**	P	**Pn**	**08 03 05.7**	**+2.9**

IDC 07 08:25:44.5±2.3, 53.62N×86.96E, h0km, mbtmp3.0/2, ML2.6/2, Error ellipse: s-maj=22.1km s-min=12.7km az=74.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.31**	**286**	*i*		08 34 10.0	
	baz=104,slow=315,SNR=7.0						
ZALV	**Zalesovo Beam**	**1.31**	**286**	Pg	Pg	08 26 08.1	-1.6
	1.4nm,0.3s,baz=99,slow=17,SNR=22						
ZALV				Lg	Lg	08 26 26.2	
	2.4nm,0.3s,baz=107,slow=28,SNR=24						
KURBB	**Kurchatov Arra**	**6.00**	**243**	Pn	Pn	08 27 15.8	+1.4
	0.1nm,0.3s,baz=60,slow=14,SNR=5.8						
KURBB				Lg	Lg	08 28 56.4	
	baz=59,slow=32						
	0.9nm,0.7s						
MKAR	**Makanchi Array**	**7.46**	**206**	Pn	Pn	08 27 36.0	+1.4
	0.2nm,0.3s,baz=28,slow=14,SNR=16						
MKAR				Sn	Sn	08 28 59.3	-0.5
	0.1nm,0.3s,baz=26,slow=26,SNR=3.3						
MKAR				Lg	Lg	08 29 37.6	
	0.2nm,0.3s,baz=29,slow=28,SNR=7.5						
	0.4nm,0.4s						

*IDC **07** 08:36:04.2±1.1, 9.30S×159.93E, h59km±18km, mb3.6/3, mbtmp4.0/4, MS3.1/1, Error ellipse: s-maj=55.0km s-min=34.2km az=126.0*

*NEIC **07** 08:36:04.7±2.0, 9.25S±0.1×159.9E±0.2, h66km±4km, mb4.1/11, Error ellipse: s-maj=27.7km s-min=15.8km az=78.0*

ISC 07 08:36:04.1±1.0, 9.25S±0.1×159.8E±0.1, h64km±8km, n35, σ0.95/23, mb4.1/10, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**0.23**	**145**	P	**Pn**	**08 36 14.3**	**+0.1**
	3μm,0.3s,baz=243,slow=2.3,SNR=175						
HNR				S	**Sn**	**08 36 21.5**	**0.0**
	8μm,0.3s,baz=30,slow=23,SNR=39						
KOUNC	**Koumac, New Ca**	**12.04**	**159**	Pn	**Pn**	**08 38 52.4**	**-0.5**
DZM	**Mont Dzumac**	**14.26**	**154**	P	**Pn**	**08 39 22.4**	**-0.5**
	6.5nm,1.0s,baz=313,slow=19,SNR=1.9						
DZM	**Mont Dzumac**	**14.26**	**154**	Pn	**Pn**	**08 39 22.8**	**-0.1**
COEN	**Coen**	**16.95**	**252**	P	**Pn**	**08 39 57.2**	**0.0**
ARMA	**Armidale**	**22.41**	**199**	P	**P**	**08 40 58.0**	**+0.4**
ARMA				IAmb	IAmb	08 41 19.8	
	comp=Z,17nm,1.5s						
WR0	**Warramunga Arr**	**26.63**	**244**	P	**P**	**08 41 37.3**	**+0.4**
WB0	**Warramunga Arr**	**26.70**	**244**	P	**P**	**08 41 37.1**	**-0.5**
WB0				IAmb	IAmb	08 41 44.4	
	comp=Z,11nm,1.4s						
WRAB	**Tennant Creek**	**26.79**	**244**	P	**P**	**08 41 39.5**	**+1.2**
WRAB				IAmb	IAmb	08 41 58.4	
	comp=Z,6.9nm,1.4s						
WB2	**Warramunga Arr**	**26.80**	**244**	P	**P**	**08 41 39.4**	**+1.0**
WRA	**Warramunga Arr**	**26.81**	**244**	P	**P**	**08 41 39.7**	**+1.2**
	comp=Z,0.3nm,0.7s,baz=71,slow=9.3,SNR=1.7						
	comp=Z,0.3nm,0.7s						
H11S2	**WAKE ISLAND Hy**	**28.38**	**14**	T	T	09 10 33.8	
	baz=195,slow=76,SNR=36						
H11S3	**WAKE ISLAND Hy**	**28.38**	**14**	T	T	09 10 31.0	
	baz=195,slow=76,SNR=26						
H11S1	**WAKE ISLAND Hy**	**28.40**	**14**	T	T	09 10 35.0	
	baz=195,slow=76,SNR=16						
OUZ	**Omahuta**	**28.77**	**156**	P	**P**	**08 41 55.8**	**0.0**
H11N1	**WAKE ISLAND Hy**	**29.61**	**14**	T	T	09 12 08.6	
	baz=194,slow=76,SNR=20						
H11N3	**WAKE ISLAND Hy**	**29.61**	**14**	T	T	09 12 09.7	
	baz=194,slow=76,SNR=22						
H11N2	**WAKE ISLAND Hy**	**29.62**	**14**	T	T	09 12 10.1	
	baz=194,slow=76,SNR=20						
BKZ	**Black Stump Fm**	**33.33**	**156**	P	**P**	**08 42 35.7**	**-0.3**
DAV	**Davao City (W)**	**37.76**	**294**	LR	LR	08 58 18.3	
	comp=Z,29nm,21.1s,baz=164,slow=35						
PETK	**Petropavlovsk-**	**62.13**	**359**	P	**P**	**08 46 19.4**	**+1.1**
	comp=Z,4.2nm,1.0s,baz=164,slow=21,SNR=3.3						
	comp=Z,4.2nm,1.0s						
PETK	**Petropavlovsk-**	**62.13**	**359**	P	**P**	**08 46 18.8**	**+0.5**
VNDA	**Vanda**	**68.26**	**180**	P	**P**	**08 46 58.0**	**+0.4**
VNDA				IAmb	IAmb	08 47 03.1	
	comp=Z,2.9nm,1.4s						
SONM	**Songino Array**	**73.83**	**326**	P	**P**	**08 47 29.2**	**-2.8**
SONM				IAmb	IAmb	08 47 36.9	
	comp=Z,2.1nm,1.5s						
QSPA	**South Pole Qui**	**80.75**	**180**	P	**P**	**08 48 10.2**	**-0.2**
QSPA				IAmb	IAmb	08 48 13.1	
	comp=Z,5.2nm,1.4s						
IMAR	**Indian Mountai**	**82.36**	**17**	P	**P**	**08 48 20.1**	**+1.4**
ILAR	**Eielson Array**	**83.76**	**20**	P	**P**	**08 48 26.4**	**+0.5**
	comp=Z,0.6nm,0.4s,baz=247,slow=5.1,SNR=20						
	comp=Z,0.6nm,0.4s						
ILAR	**Eielson Array**	**83.76**	**20**	P	**P**	**08 48 25.9**	**0.0**
J25K	**Salcha River,**	**84.19**	**21**	P	**P**	**08 48 29.0**	**+0.8**
J25K				IAmb	IAmb	08 48 55.5	
	comp=Z,3.9nm,1.4s						
H03S2	**Juan Fernandez**	**109.75**	**131**	T	T	10 54 31.0	
	baz=247						
H03S1	**Juan Fernandez**	**109.77**	**131**	T	T	10 54 15.3	
	baz=247						
H03S3	**Juan Fernandez**	**109.77**	**131**	T	T	10 54 20.9	
	baz=247						
H03N3	**Juan Fernandez**	**109.92**	**131**	T	T	10 54 23.4	
	baz=237,slow=74						
H03N2	**Juan Fernandez**	**109.92**	**131**	T	T	10 54 19.4	
	baz=237,slow=74						
H03N1	**Juan Fernandez**	**109.94**	**131**	T	T	10 54 48.2	
	baz=237,slow=74						

*TAP **07** 08:51:08.1, 24.90N×122.53E, h27km±1km

baz=248
YHNB Yeheng 1.04 260 *e*P **Pb 08 51 27.5 -0.3**
baz=246
YHNB *e*S **Sb 08 51 41.1 +0.1**
baz=246
NSK Sanguang 1.05 260 *e*P **Pn 08 51 27.9 0.0**
baz=246
NSK *e*S **Sn 08 51 42.1 +0.2**
baz=246
NACB Ninganchiao 1.07 230 *e*P **Pn 08 51 27.7 -0.4**
baz=236
NACB *e*S **Sb 08 51 41.5 -0.4**
baz=236
NNSB Datong 1.10 247 *e*P **Pn 08 51 28.7 0.0**
baz=246
NNSB *e*S **Sb 08 51 42.8 -0.1**
baz=246
NNS Nan Shan 1.10 248 *e*P **Pb 08 51 29.0 0.0**
baz=246
ETLH Xiulin Townshi 1.13 235 *e*P **Pn 08 51 29.1 0.0**
baz=234
IRIF Iriomote-Funau 1.24 115 P **Pb 08 51 31.4 +0.1**
IRIF S **Sb 08 51 47.6 +0.8**
FUSS Fushou 1.29 242 *e*P **Pb 08 51 32.4 +0.1**
baz=251
FUSS *e*S **Sb 08 51 48.5 -0.1**
baz=251
WHF Hehuan Shan 1.33 238 P **Pb 08 51 32.9 -0.1**
baz=246
WHF *e*S **Sb 08 51 50.3 +0.5**
baz=246
HATJ Hateruma jima 1.44 124 S **Sb 08 51 53.4 +1.0**
OWD Renai 1.50 233 *e*P **Pb 08 51 35.2 -0.6**
baz=217
OWD *e*S **Sb 08 51 55.6 +1.0**
baz=217
JKRS Kuro-shima 1.51 114 P **Pb 08 51 35.6 -0.2**
JKRS S **Sb 08 51 55.0 +0.5**
WUSB Renai 1.52 236 *e*P **Pb 08 51 36.4 +0.2**
baz=219
WUSB *e*S **Sb 08 51 57.1 +2.0**
baz=219
JIJ Ishigaki jima 1.58 108 S **Sb 08 51 56.6 +0.1**
VWDT VWDT 1.66 229 *e*P **Pn 08 51 37.1 +1.0**
baz=217

BJI ***07*** *09:08:47.8±0.0,20°.25S×177°.04W,h537km,mb5.1/55, mB5.0/30*
NOU ***07*** *09:08:49.4,20°.41S×177°.52W,h530km,ML5.0/110,Fiji Islands Region*
NEIC ***07*** *09:08:49.3±2.1,20°.39S±0°.09×177°.62W±0°.10, h520km±5km,mb4.9/351,Error ellipse: s-maj=13.6km s-min=12.5km az=123.0*
MOS ***07*** *09:08:50.0±0.9,20°.31S×177°.74W,h539km,mb5.0/38, Error ellipse: s-maj=8.3km s-min=7.3km az=100.8*
IDC ***07*** *09:08:50.2±0.5,20°.35S×177°.72W,h535km±4km,mb4.5/33, mbtmp5.3/35,Error ellipse: s-maj=9.9km s-min=7.5km az=151.0*
GCMT ***07*** *09:08:53.3±0.4,20°.09S±0°.03×177°.94W±0°.04, h541km±2km,MW5.2/76,Moment Tensor Solution. s76,c94; Duration: 1s0 Moment tensor: Scale 10¹⁷Nm; Mrr=0.66±.03; Mθθ0.57±.05; Mϕϕ=0.09±.04; Mrθ=-0.30±.05; Mθϕ0.04±.04; Mϕr=-0.43±.05; Best double couple: M=0.79000×10¹⁷ NP1:ϕ=279.00000°,δ32.00000°, λ=-55.00000°. NP2:ϕ=59.00000°,δ=64.00000°, λ=-110.00000°. Principal axes: T 0.6780, Plg17.0000°, Azm164.0000°; N 0.2250, Plg18.0000°, Azm68.0000°; P -0.9020, Plg65.0000°, Azm295.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 07 09:08:49.7±0.3,20°.39S±0°.04×177°.68W±0°.04, h532km±3km,h533km;pP-P,n1246,σ1s07/1313,mb4.9/278, 143C-269D,Fault plane solution: NP1:ϕ=268.71506°, δ28.58359°,λ-63.90118°. **NP2:**ϕ=59.55959°,δ64.55421°, λ-103.47889°. **Principal axes:** T Plg18.4883°, Azm159.5677°; N Plg12.1502°, Azm65.4394°; P Plg67.6289°, Azm303.8988°; **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**2.40**	**333**	P		**P**	**P**	**09 10 01.0**	**+1.2**
TAVE	**Taveuni**	**4.23**	**330**	P		**P**	**P**	**09 10 13.7**	**+1.5**
MSVF	**Nonsavu**	**4.83**	**303**	P		**P**	**P**	**09 10 18.4**	**+1.2**
	717nm,0.6s,baz=270,slow=23,SNR=384								
MSVF	**Nonsavu**	**4.83**	**303**	P		**P**	**P**	**09 10 18.7**	**+1.5**
NIUE	**Niue**	**7.42**	**81**	P		**P**	**P**	**09 10 41.0**	**-0.1**
	baz=7.4								
NIUE				S		**S**	**S**	**09 12 17.3**	**+4.9**
	baz=7.4								
NIUE	**Niue**	**7.42**	**81**	P		**P**	**P**	**09 10 41.0**	**-0.1**
NIUE	**Niue**	**7.42**	**81**	P		**P**	**P**	**09 10 40.6**	**-0.5**
AFI	**Afiamalu**	**8.56**	**42**	P		**P**	**P**	**09 10 50.1**	**-2.7**
	169nm,0.4s,baz=187,slow=1.8,SNR=20								
AFI				S		S	S	09 12 24.0	-10
	412nm,0.4s,baz=197,slow=23,SNR=11								
AFI	**Afiamalu**	**8.56**	**42**	P		**P**	**P**	**09 10 50.3**	**-2.5**
AFI	**Afiamalu**	**8.56**	**42**	P		**P**	**P**	**09 10 50.3**	**-2.5**
AFI	**Afiamalu**	**8.56**	**42**	P		**P**	**P**	**09 10 50.1**	**-2.7**
AFI	**Afiamalu**	**8.56**	**42**	P		**P**	**P**	**09 10 50.4**	**-2.5**
RIZ	**Raoul Island**	**8.82**	**181**	S		**S**	**S**	**09 12 37.7**	**-0.4**
RAO	**Raoul Island**	**8.82**	**181**	S		**S**	**S**	**09 12 32.6**	**-5.5**
	327nm,0.4s,baz=73,slow=19,SNR=1.9								
GLKZ	**Green Lake**	**8.83**	**181**	P		**P**	**P**	**09 10 53.7**	**-1.6**
GLKZ				S		**S**	**S**	**09 12 36.4**	**-1.9**
FUNA	**Funafuti**	**12.18**	**345**	P		**P**	**P**	**09 11 28.9**	**-1.2**
FUNA	**Funafuti**	**12.18**	**345**	P		**P**	**P**	**09 11 30.7**	**+0.5**
	467nm,1.0s								
MARNC	**Mare, Loyalty**	**13.40**	**263**			**P**	**P**	**09 11 42.3**	**-0.5**
MARNC	**Mare, Loyalty**	**13.40**	**263**	P		**P**	**P**	**09 11 43.8**	**+1.0**
PINNC	**Pines Island,**	**14.02**	**258**	P		**P**	**P**	**09 11 49.9**	**+0.6**
PINNC	**Pines Island,**	**14.02**	**258**	P		**P**	**P**	**09 11 50.6**	**+1.3**
OUENC	**Ouen Island, N**	**14.56**	**259**	P		**P**	**P**	**09 11 55.6**	**+0.8**
OUENC	**Ouen Island, N**	**14.56**	**259**	P		**P**	**P**	**09 11 54.8**	**-0.1**
DZM	**Mont Dzumac**	**14.90**	**261**	P		**P**	**P**	**09 11 58.2**	**-0.4**
	47nm,0.6s,baz=118,slow=22,SNR=39								
DZM	**Mont Dzumac**	**14.90**	**261**	*e*P		**P**	**P**	**09 11 57.9**	**-0.7**
	132nm,0.8s								
DZM				*e*S		**S**	**S**	**09 14 32.3**	**-2.0**
	160nm,1.4s								
DZM	**Mont Dzumac**	**14.90**	**261**	P		**P**	**P**	**09 11 58.7**	**+0.2**
DZM	**Mont Dzumac**	**14.90**	**261**	P		**P**	**P**	**09 11 59.4**	**+0.8**
NOUC	**Port Laguerre**	**15.03**	**261**	P		**P**	**P**	**09 11 59.9**	**+0.1**
RAR	**Rarotonga**	**16.76**	**96**	P		**P**	**P**	**09 12 15.7**	**-1.4**
RAR	**Rarotonga**	**16.76**	**96**	P		**P**	**P**	**09 12 15.7**	**-1.4**
KOUNC	**Koumac, New Ca**	**16.90**	**266**	P		**P**	**P**	**09 12 16.9**	**+0.4**
KOUNC	**Koumac, New Ca**	**16.90**	**266**	P		**P**	**P**	**09 12 21.1**	**+2.7**
WCZ	**Waipu Caves**	**17.00**	**203**	P		**P**	**P**	**09 12 21.0**	**+1.9**
KUZ	**Kuaotunu**	**17.28**	**198**	P		**P**	**P**	**09 12 24.8**	**+3.1**
MXZ	**Matakaoa Point**	**17.46**	**191**	P		**P**	**P**	**09 12 22.6**	**-0.8**
MXZ	**Matakaoa Point**	**17.46**	**191**	P		**P**	**P**	**09 12 23.9**	**+0.6**
MXZ				S		S	S	09 15 33.5	+16
WMGZ	**Waiomatatini S**	**17.69**	**190**	P		**P**	**P**	**09 12 27.0**	**+1.5**
HAZ	**Te Kaha**	**17.75**	**192**	P		**P**	**P**	**09 12 24.9**	**-1.0**
HAZ				S		S	S	09 15 45.1	+23
PKGZ	**Pakihiroa**	**17.82**	**191**	P		**P**	**P**	**09 12 28.9**	**+2.2**
PKGZ				S		S	S	09 15 45.8	+22
PUZ	**Puketiti**	**17.97**	**190**	P		**P**	**P**	**09 12 29.5**	**+1.5**
RUGZ	**Raukumara Rang**	**17.97**	**192**	P		**P**	**P**	**09 12 27.8**	**-0.3**
TGRZ	**Tauranga**	**18.06**	**196**	P		**P**	**P**	**09 12 31.0**	**+2.2**
TWGZ	**Tauwhareparae**	**18.12**	**191**	P		**P**	**P**	**09 12 30.7**	**+1.3**
TWGZ				S		S	S	09 15 55.8	+27
TOZ	**Tahuroa Road**	**18.27**	**197**	P		**P**	**P**	**09 12 32.7**	**+2.0**
URZ	**Urewera**	**18.37**	**193**	P		**P**	**P**	**09 12 27.4**	**-4.2**
	41nm,0.6s,baz=360,slow=3.2,SNR=27								
URZ	**Urewera**	**18.37**	**193**	P		**P**	**P**	**09 12 29.8**	**-1.8**
URZ	**Urewera**	**18.37**	**193**	P		**P**	**P**	**09 12 29.9**	**-1.8**
URZ	**Urewera**	**18.37**	**193**	P		**P**	**P**	**09 12 31.3**	**-0.3**
CNGZ	**Carnagh Statio**	**18.38**	**190**	P		**P**	**P**	**09 12 33.1**	**+1.4**
OMRZ	**Omania**	**18.39**	**195**	P		**P**	**P**	**09 12 32.7**	**+0.8**
KNTN	**Kanton**	**18.45**	**19**	P		**P**	**P**	**09 12 31.5**	**-1.2**
PRRZ	**Plateau Road**	**18.76**	**195**	P		**P**	**P**	**09 12 35.2**	**0.0**
HIZ	**Hauiti**	**19.18**	**198**	P		**P**	**P**	**09 12 39.1**	**+0.1**
BKZ	**Black Stump Fm**	**19.37**	**194**	P		**P**	**P**	**09 12 39.0**	**-1.9**
BFZ	**Birch Farm**	**20.88**	**193**	P		**P**	**P**	**09 12 53.1**	**-1.3**
MSWZ	**Moikau Station**	**21.80**	**194**	P		**P**	**P**	**09 13 00.8**	**-2.0**
SNZO	**South Karori**	**21.83**	**196**	P		**P**	**P**	**09 13 02.2**	**-0.8**
PLWZ	**Palliser**	**21.95**	**194**	P		**P**	**P**	**09 13 02.7**	**-1.4**
QRZ	**Quartz Range**	**22.01**	**200**	P		**P**	**P**	**09 13 04.5**	**-0.1**
QRZ	**Quartz Range**	**22.01**	**200**	P		**P**	**P**	**09 13 04.6**	**-0.1**
NNZ	**Nelson**	**22.11**	**198**	P		**P**	**P**	**09 13 04.8**	**-0.7**
TUWZ	**Tuamarina**	**22.14**	**197**	P		**P**	**P**	**09 13 04.0**	**-1.8**
BSWZ	**Blackbirch Sta**	**22.43**	**197**	P		**P**	**P**	**09 13 08.1**	**-0.3**
THZ	**Tophouse**	**22.75**	**198**	P		**P**	**P**	**09 13 10.9**	**-0.3**
KHZ	**Kahutara**	**23.17**	**197**	P		**P**	**P**	**09 13 14.3**	**-0.6**
KHZ	**Kahutara**	**23.17**	**197**	P		**P**	**P**	**09 13 15.3**	**+0.3**
LHI	**Lord Howe Isla**	**23.62**	**237**	P		**P**	**P**	**09 13 20.2**	**+1.1**
	baz=24								
LTZ	**Lake Taylor**	**23.87**	**199**	P		**P**	**P**	**09 13 20.0**	**-1.2**
OXZ	**Oxford**	**24.44**	**198**	P		**P**	**P**	**09 13 25.5**	**-0.7**
MQZ	**McQueen's Vall**	**24.61**	**197**	P		**P**	**P**	**09 13 27.1**	**-0.6**
RPZ	**Rata Peaks**	**25.09**	**200**	P		**P**	**P**	**09 13 31.0**	**-1.0**
	8.6nm,0.5s,baz=335,slow=1.4,SNR=8.9								
	8.6nm,0.5s								
RPZ	**Rata Peaks**	**25.09**	**200**	P		**P**	**P**	**09 13 31.1**	**-0.9**
TBI	**Tubuai**	**26.34**	**102**	*e*P		**P**	**P**	**09 13 43.8**	**+0.5**
	933nm,1.5s								
PAE	**Paea**	**26.69**	**89**	*e*P		**P**	**P**	**09 13 47.3**	**+0.9**
	30nm,1.1s								
PPT2	**Papeete2**	**26.71**	**89**	*e*P		**P**	**P**	**09 13 47.9**	**+1.2**
	71nm,0.8s								
PPT2				*e*LR		LR	LR	09 19 48.2	
	comp=Z,450nm,26.5s								
PPT	**Papeete**	**26.71**	**89**	P		**P**	**P**	**09 13 47.2**	**+0.5**
	113nm,0.8s,baz=75,slow=5.3,SNR=6.8								
	113nm,0.8s								
PPTF	**Pamatai, Papee**	**26.72**	**89**	P		**P**	**P**	**09 13 47.4**	**+0.6**
TIAR	**Tiarei**	**26.93**	**89**	*e*P		**P**	**P**	**09 13 48.5**	**-0.1**
	26nm,1.0s								
EIDS	**Eidsvold**	**29.16**	**254**	P		**P**	**P**	**09 14 08.2**	**+0.2**
	baz=29,SNR=46								
EIDS	**Eidsvold**	**29.16**	**254**	P		**P**	**P**	**09 14 08.0**	**-0.1**
EIDS	**Eidsvold**	**29.16**	**254**	P		**P**	**P**	**09 14 08.7**	**+0.7**
ARMA	**Armidale**	**29.38**	**244**	P		**P**	**P**	**09 14 11.2**	**+1.2**
	baz=30,SNR=44								
ARMA	**Armidale**	**29.38**	**244**	P		**P**	**P**	**09 14 10.8**	**+0.8**
ARMA	**Armidale**	**29.38**	**244**	P		**P**	**P**	**09 14 11.4**	**+1.4**
RK1H	**Rockhampton Ha**	**29.65**	**258**	P		**P**	**P**	**09 14 12.2**	**-0.1**
	90nm,0.8s								
MGCD	**Mangrove Creek**	**30.52**	**239**	P		**P**	**P**	**09 14 20.7**	**+1.1**
	baz=31,SNR=6.9								
MGCD	**Mangrove Creek**	**30.52**	**239**	P		**P**	**P**	**09 14 20.1**	**+0.5**
SYDH	**Sydney Hard Ro**	**30.98**	**238**	P		**P**	**P**	**09 14 24.6**	**+1.1**
	86nm,0.9s								
RMQ	**Roma**	**31.32**	**252**	P		**P**	**P**	**09 14 27.8**	**+1.1**
	baz=31,SNR=63								
RMQ	**Roma**	**31.32**	**252**	P		**P**	**P**	**09 14 27.7**	**+1.1**
KWAJ	**Kwajalein Atol**	**32.42**	**332**	P		**P**	**P**	**09 14 36.3**	**+0.2**
KWAJ	**Kwajalein Atol**	**32.42**	**332**	P		**P**	**P**	**09 14 36.3**	**+0.2**
KWAJ				pmax		pmax	pmax		
	comp=Z,102nm,0.9s								
CNB	**Canberra Magne**	**32.53**	**236**	P		**P**	**P**	**09 14 37.8**	**+0.9**
	baz=33,SNR=20								
CNB	**Canberra Magne**	**32.53**	**236**	P		**P**	**P**	**09 14 37.8**	**+0.9**
CAN	**Canberra**	**32.82**	**236**	P		**P**	**P**	**09 14 39.9**	**+0.6**
CAN				IAmb		IAmb	IAmb	09 14 41.1	
	comp=Z,35nm,0.9s								
CAN	**Canberra**	**32.82**	**236**	P		**P**	**P**	**09 14 39.9**	**+0.6**
CAN				pmax		pmax	pmax		
	comp=Z,35nm,0.9s								
CAN	**Canberra**	**32.82**	**236**	P		**P**	**P**	**09 14 40.5**	**+1.2**
	comp=Z,72nm,1.0s								
CAN	**Canberra**	**32.82**	**236**	P		**P**	**P**	**09 14 39.9**	**+0.6**
CAN				pP		**pP**	**pP**	**09 16 09.5**	**+1.4**
CAN				PP		**PP**	**PP**	**09 16 20.6**	**-0.5**
CAN				sP		**sP**	**sP**	**09 17 09.3**	**-0.2**
KRVT	**Keravat (AS076**	**33.53**	**294**	P		**P**	**P**	**09 14 44.7**	**-0.8**
	comp=Z,36nm,0.5s,baz=114,slow=1.7,SNR=6.8								
	comp=Z,36nm,0.5s								
CTA	**Charters Tower**	**33.80**	**264**	ScP		**ScP**	**ScP**	**09 20 06.6**	**+0.6**
	comp=Z,10nm,1.1s,baz=172,slow=2.7,SNR=3.9								
CTA	**Charters Tower**	**33.80**	**264**	P		**P**	**P**	**09 14 48.6**	**+0.9**
CTAO	**Charters Tower**	**33.80**	**264**	P		**P**	**P**	**09 14 48.4**	**+0.7**
CTAO	**Charters Tower**	**33.80**	**264**	P		**P**	**P**	**09 14 48.4**	**+0.7**
CTAO				pmax		pmax	pmax		
	comp=Z,258nm,0.8s								
CTAO	**Charters Tower**	**33.80**	**264**	P		**P**	**P**	**09 14 48.7**	**+1.0**
CTAO	**Charters Tower**	**33.80**	**264**	P		**P**	**P**	**09 14 48.4**	**+0.7**
CTAO				sP		**PcP**	**PcP**	**09 17 11.8**	**+0.3**
CTAO				ScP		**ScP**	**ScP**	**09 20 09.0**	**+3.0**
CMSA	**Cobar Meteorol**	**34.60**	**244**	P		**P**	**P**	**09 14 54.6**	**+0.3**
	baz=35,SNR=18								
CMSA	**Cobar Meteorol**	**34.60**	**244**	P		**P**	**P**	**09 14 55.4**	**+1.1**
QLP	**Quilpie**	**35.38**	**253**	P		**P**	**P**	**09 15 01.1**	**+0.3**
	baz=35,SNR=96								
QLP	**Quilpie**	**35.38**	**253**	P		**P**	**P**	**09 15 01.4**	**+0.6**
PMG	**Port Moresby**	**35.61**	**283**	P		**P**	**P**	**09 15 03.3**	**+0.3**
PMG	**Port Moresby**	**35.61**	**283**	*e*P		**P**	**P**	**09 15 03.0**	**+0.1**
PMG				pmax		pmax	pmax		
	comp=Z,204nm,1.3s								
PMG	**Port Moresby**	**35.61**	**283**	P		**P**	**P**	**09 15 03.1**	**+0.1**
	comp=Z,173nm,1.0s								
PMG	**Port Moresby**	**35.61**	**283**	P		**P**	**P**	**09 15 03.2**	**+0.3**
PMG				PP		**PP**	**PP**	**09 16 40.7**	**-3.6**
MTSU	**Mount Surprise**	**35.90**	**267**	P		**P**	**P**	**09 15 05.7**	**+0.4**
	baz=36,SNR=531								
MTSU	**Mount Surprise**	**35.90**	**267**	P		**P**	**P**	**09 15 06.0**	**+0.7**
PATS	**Pohnpei**	**35.91**	**316**	P		**P**	**P**	**09 15 05.8**	**+0.4**
	baz=36,SNR=4.9								
PATS	**Pohnpei**	**35.91**	**316**	P		**P**	**P**	**09 15 06.1**	**+0.8**
TOO	**Toolangi**	**36.20**	**234**	P		**P**	**P**	**09 15 08.2**	**+0.6**
	baz=36,SNR=14								
TOO	**Toolangi**	**36.20**	**234**	P		**P**	**P**	**09 15 07.9**	**+0.3**
TOO				IAmb		IAmb	IAmb	09 15 09.1	
	comp=Z,43nm,1.0s								
TOO	**Toolangi**	**36.20**	**234**	P		**P**	**P**	**09 15 07.9**	**+0.3**
TOO				pmax		pmax	pmax		
	comp=Z,43nm,1.0s								
TOO	**Toolangi**	**36.20**	**234**	P		**P**	**P**	**09 15 08.3**	**+0.7**
	comp=Z,55nm,1.0s								
BRAT	**Ballarat**	**37.38**	**234**	P		**P**	**P**	**09 15 18.5**	**+1.3**
	comp=Z,34nm,0.9s								
COEN	**Coen**	**37.88**	**273**	P		**P**	**P**	**09 15 22.1**	**+0.6**
	baz=38,SNR=133								
COEN	**Coen**	**37.88**	**273**	P		**P**	**P**	**09 15 22.2**	**+0.6**
COEN	**Coen**	**37.88**	**273**	P		**P**	**P**	**09 15 22.5**	**+0.9**
STKA	**Stephens Creek**	**38.11**	**244**	P		**P**	**P**	**09 15 23.7**	**+0.5**
	comp=Z,57nm,0.8s,baz=92,slow=10,SNR=121								
STKA				ScP		**ScP**	**ScP**	**09 20 22.4**	**+0.6**
	comp=Z,6.8nm,1.0s,baz=27,slow=3.7,SNR=3.7								
	comp=Z,57nm,0.8s								
STKA	**Stephens Creek**	**38.11**	**244**	P		**P**	**P**	**09 15 23.9**	**+0.7**
	baz=38,SNR=76								
STKA	**Stephens Creek**	**38.11**	**244**	P		**P**	**P**	**09 15 23.9**	**+0.7**
STKA	**Stephens Creek**	**38.11**	**244**	P		**P**	**P**	**09 15 24.2**	**+1.0**
INKA	**Innaminka**	**38.52**	**251**	P		**P**	**P**	**09 15 28.1**	**+1.5**
MANU	**Manus Island**	**38.68**	**294**	P		**P**	**P**	**09 15 28.9**	**+0.8**
ARPS	**Mount Arapiles**	**38.80**	**236**	P		**P**	**P**	**09 15 29.1**	**+0.3**
	baz=39,SNR=7.1								
ARPS	**Mount Arapiles**	**38.80**	**236**	P		**P**	**P**	**09 15 29.5**	**+0.8**
	comp=Z,79nm,0.9s								
QIS	**Mount Isa**	**39.93**	**262**	P		**P**	**P**	**09 15 37.8**	**-0.4**
	baz=40,SNR=39								
QIS	**Mount Isa**	**39.93**	**262**	P		**P**	**P**	**09 15 38.1**	**-0.1**
HTT	**Hallett**	**40.54**	**242**	P		**P**	**P**	**09 15 43.2**	**+0.3**
	baz=41,SNR=26								
HTT	**Hallett**	**40.54**	**242**	P		**P**	**P**	**09 15 43.7**	**+0.8**
LCRK	**Leigh Creek**	**40.85**	**247**	P		**P**	**P**	**09 15 46.2**	**+0.8**
TWOA	**Tennyson Woods**	**41.05**	**240**	P		**P**	**P**	**09 15 47.2**	**+0.3**
	comp=Z,47nm,0.8s								
NAPP	**Napperby**	**41.16**	**243**	P		**P**	**P**	**09 15 48.4**	**+0.7**
	comp=Z,86nm,0.8s								
PTPS	**Port Pirie**	**41.28**	**243**	P		**P**	**P**	**09 15 50.4**	**+1.7**
	comp=Z,122nm,0.7s								
WHYH	**Whyalla**	**41.62**	**243**	P		**P**	**P**	**09 15 51.6**	**+0.3**
	comp=Z,118nm,0.8s								
WAKE	**Wake Island**	**42.31**	**338**	P		**P**	**P**	**09 15 56.6**	**-0.3**
WAKE	**Wake Island**	**42.31**	**338**	P		**P**	**P**	**09 15 57.2**	**+0.3**
WAKE	**Wake Island**	**42.31**	**338**	P		**P**	**P**	**09 15 56.4**	**-0.5**
WAKE				pP		**pP**	**pP**	**09 17 29.9**	**-2.3**
BBOO	**Buckleboo**	**42.86**	**243**	P		**P**	**P**	**09 16 01.3**	**+0.1**
	baz=43,SNR=106								
BBOO	**Buckleboo**	**42.86**	**243**	P		**P**	**P**	**09 16 01.3**	**+0.1**
BBOO	**Buckleboo**	**42.86**	**243**	P		**P**	**P**	**09 16 01.4**	**+0.2**
OOD	**Oodnadatta**	**43.00**	**251**	P		**P**	**P**	**09 16 03.6**	**+1.3**
MULG	**Mulgathing**	**44.44**	**247**	P		**P**	**P**	**09 16 13.8**	**+0.4**
WR0	**Warramunga Arr**	**44.72**	**262**	P		**P**	**P**	**09 16 15.6**	**-0.2**
GENI	**Genyem**	**44.74**	**288**	P		**P**	**P**	**09 16 16.6**	**+0.6**
	comp=Z,5μmcomp=Z,497nm,0.7s								
GENI	**Genyem**	**44.74**	**288**	P		**P**	**P**	**09 16 18.0**	**+2.0**
AS31	**Alice Springs**	**44.84**	**257**	P		**P**	**P**	**09 16 16.8**	**+0.1**
ASAR	**Alice Springs**	**44.84**	**257**	P		**P**	**P**	**09 16 16.9**	**+0.2**
	comp=Z,260nm,0.9s,baz=100,slow=7.8,SNR=1670								
ASAR				PcP		**PcP**	**PcP**	**09 17 47.4**	**+0.2**
	comp=Z,13nm,0.8s,baz=101,slow=3.5,SNR=5.9								
ASAR				ScP		**ScP**	**ScP**	**09 20 51.1**	**+2.2**
	comp=Z,1.8nm,0.6s,baz=100,slow=4.8,SNR=3.2								
ASAR				S		**S**	**S**	**09 22 14.1**	**-1.5**
	comp=Z,19nm,0.9s,baz=94,slow=16,SNR=35								
	comp=Z,260nm,0.9s								
ASAR	**Alice Springs**	**44.84**	**257**	P		**P**	**P**	**09 16 17.0**	**+0.3**
WB0	**Warramunga Arr**	**44.89**	**262**	P		**P**	**P**	**09 16 16.8**	**-0.3**
WB2	**Warramunga Arr**	**44.90**	**262**	P		**P**	**P**	**09 16 16.5**	**-0.7**
	baz=45								
WB2	**Warramunga Arr**	**44.90**	**262**	P		**P**	**P**	**09 16 16.8**	**-0.4**
WRAB	**Tennant Creek**	**44.91**	**262**	P		**P**	**P**	**09 16 16.8**	**-0.4**
WRAB	**Tennant Creek**	**44.91**	**262**	*ce*P		**P**	**P**	**09 16 16.6**	**-0.6**
WRAB				pmax		pmax	pmax		
	comp=Z,228nm,0.8s								
WRAB	**Tennant Creek**	**44.91**	**262**	P		**P**	**P**	**09 16 17.3**	**+0.1**
WRAB	**Tennant Creek**	**44.91**	**262**	P		**P**	**P**	**09 16 16.8**	**-0.4**
WRA	**Warramunga Arr**	**44.91**	**262**	P		**P**	**P**	**09 16 16.8**	**-0.5**
	comp=Z,155nm,0.8s,baz=97,slow=8.5,SNR=1339								
WRA				PcP		**PcP**	**PcP**	**09 17 47.6**	**+0.1**
	comp=Z,6.7nm,0.9s,baz=100,slow=3.6,SNR=2.9								
WRA				S		S	**S**	**09 22 15.0**	**-1.7**
	comp=Z,6.1nm,1.1s,baz=94,slow=13,SNR=6.8								
	comp=Z,155nm,0.8s								
WRA	**Warramunga Arr**	**44.91**	**262**	P		**P**	**P**	**09 16 15.9**	**-1.4**
WRA				IAmb		IAmb	IAmb	09 16 17.7	
	comp=Z,19nm,0.9s								
WRA	**Warramunga Arr**	**44.91**	**262**	P		P	P	09 17 47.6	+90
HPAH	**Hawaii Prepara**	**45.58**	**30**	P		**P**	**P**	**09 16 22.7**	**+0.4**
MHA	**Mahukona**	**45.62**	**29**	P		**P**	**P**	**09 16 22.5**	**0.0**
MHA	**Mahukona**	**45.62**	**29**	P		**P**	**P**	**09 16 22.5**	**0.0**
KEKH	**Kekaha**	**45.63**	**24**	P		**P**	**P**	**09 16 22.9**	**+0.3**
SMPI	**Sarmi**	**46.31**	**288**	P		**P**	**P**	**09 16 28.0**	**0.0**
	comp=Z,2μmcomp=Z,140nm,1.0s								
KDU	**Kakadu**	**48.25**	**271**	P		**P**	**P**	**09 16 42.3**	**-0.2**
	baz=48,SNR=148								
KDU	**Kakadu**	**48.25**	**271**	P		**P**	**P**	**09 16 42.7**	**+0.2**
SRPI	**Serui, Papua**	**48.58**	**286**	P		**P**	**P**	**09 16 45.5**	**+0.5**
BAKI	**Biak**	**48.99**	**287**	P		**P**	**P**	**09 16 48.5**	**+0.4**
	comp=Z,3μmcomp=Z,344nm,0.9s								
MTN	**Manton Dam**	**49.46**	**270**	P		**P**	**P**	**09 16 51.0**	**-0.5**
	baz=50,SNR=106								
MTN	**Manton Dam**	**49.46**	**270**	P		**P**	**P**	**09 16 51.2**	**-0.3**
MTN	**Manton Dam**	**49.46**	**270**	P		**P**	**P**	**09 16 51.8**	**+0.3**
FORT	**Forrest**	**49.61**	**247**	P		**P**	**P**	**09 16 52.1**	**-0.3**
	baz=50,SNR=40								
FORT	**Forrest**	**49.61**	**247**	P		**P**	**P**	**09 16 52.2**	**-0.3**
FORT	**Forrest**	**49.61**	**247**	P		**P**	**P**	**09 16 53.4**	**+1.0**
WRKA	**Warakurna**	**49.78**	**254**	P		**P**	**P**	**09 16 53.8**	**-0.1**
	baz=50,SNR=112								
WRKA	**Warakurna**	**49.78**	**254**	P		**P**	**P**	**09 16 54.1**	**+0.2**
GUMO	**Guam**	**49.97**	**309**	P		**P**	**P**	**09 16 55.7**	**+0.5**
GUMO	**Guam**	**49.97**	**309**	P		**P**	**P**	**09 16 55.7**	**+0.5**
GUMO				pmax		pmax	pmax		
	comp=Z,220nm,0.9s								
GUMO	**Guam**	**49.97**	**309**	P		**P**	**P**	**09 16 56.3**	**+1.1**
	comp=Z,344nm,1.1s								
GUMO	**Guam**	**49.97**	**309**	P		**P**	**P**	**09 16 55.4**	**+0.2**
SAUI	**Saumlaki**	**50.78**	**

QSPA pP **pP** **09 20 49.9 -5.1**
QSPA pwP **pwP** **09 20 58.9 +1.2**
JMM Marumori 69.87 326 P **P** **09 19 07.5 +0.4**
JGF Kuroka 70.11 322 P **P** **09 19 08.8 +0.1**
JGF IAmb IAmb 09 19 09.4
comp=Z,38nm,0.7s
INU Inuyama 70.13 322 P **P** **09 19 09.0 +0.3**
INU IAmb IAmb 09 19 09.8
comp=Z,37nm,0.9s
INU Inuyama 70.13 322 P **P** **09 19 09.1 +0.4**
comp=Z,45nm,1.1s
INU Inuyama 70.13 322 P **P** **09 19 08.8 +0.1**
UGM Wanagama 70.27 269 P **P** **09 19 09.9 -0.1**
UGM Wanagama 70.27 269 P **P** **09 19 10.2 +0.2**
MJAR Matsushiro Arr 70.30 323 P **P** **09 19 08.6 -1.1**
comp=Z,53nm,0.6s,baz=153,slow=6.2,SNR=144
comp=Z,53nm,0.6s
MJAR Matsushiro Arr 70.30 323 P **P** **09 19 08.8 -0.9**
MJAR IAmb IAmb 09 19 10.5
comp=Z,49nm,0.7s
MJAR Matsushiro Arr 70.30 323 P **P** **09 19 08.8 -0.9**
MJAR pmax pmax
comp=Z,49nm,0.7s
MAJO Matsushiro 70.30 323 P **P** **09 19 09.7 0.0**
MAJO Matsushiro 70.30 323*c i* P **P** **09 19 08.1 -1.6**
MAJO pmax pmax
comp=Z,84nm,0.7s
MAJO Matsushiro 70.30 323 P **P** **09 19 10.1 +0.4**
MAJO Matsushiro 70.30 323 P **P** **09 19 09.8 0.0**
MJB9 Matsu-Tunnel 70.31 323 P **P** **09 19 09.7 0.0**
JOW Kunigami 70.33 310 P **P** **09 19 10.3 +0.3**
comp=Z,72nm,0.7s,baz=140,slow=6.7,SNR=21
comp=Z,72nm,0.7s
JOW Kunigami 70.33 310 P **P** **09 19 10.7 +0.6**
JOW Kunigami 70.33 310 P **P** **09 19 10.9 +0.9**
SMRI Semarang 70.62 270 P **P** **09 19 12.8 +0.7**
SMRI Semarang 70.62 270 P **P** **09 19 13.2 +1.1**
comp=Z,152nm,1.2s
JSD Sado 71.35 325 P **P** **09 19 16.1 +0.3**
JSU Suzuyama 71.66 315 P **P** **09 19 18.0 +0.2**
ERM Erimo 71.88 330 P **P** **09 19 19.1 +0.4**
ERM IAmb IAmb 09 19 23.0
comp=Z,22nm,1.0s
ERM Erimo 71.88 330 *i* P **P** **09 19 18.8 +0.1**
ERM pmax pmax
comp=Z,18nm,0.8s
ERM Erimo 71.88 330 P **P** **09 19 20.4 +1.6**
ERM Erimo 71.88 330 P **P** **09 19 21.2 +2.5**
KIWB Kanaga Island 71.93 0 P **P** **09 19 18.2 -0.7**
JTM Tenmabayashi 71.94 328 P **P** **09 19 19.7 +0.6**
ADK Adak 71.97 1 P **P** **09 19 18.7 -0.4**
ADK Adak 71.97 1 P **P** **09 19 18.7 -0.4**
ADK pmax pmax
comp=Z,53nm,0.7s
ADK Adak 71.97 1 P **P** **09 19 18.4 -0.6**
JHS Saijyo 72.22 319 P **P** **09 19 21.6 +0.7**
SBUM Sibu 72.28 280 P **P** **09 19 22.2 +0.4**
SBUM IAmb IAmb 09 19 23.4
comp=Z,29nm,0.9s
YUK Yuzh-Kuril'sk 72.29 333 *i* P **P** **09 19 21.3 +0.2**
JNU Nakatsue 72.41 316 P **P** **09 19 20.9 -1.2**
comp=Z,53nm,0.9s,baz=90,slow=4.4,SNR=8.6
comp=Z,53nm,0.9s
JNU Nakatsue 72.41 316 P **P** **09 19 22.1 0.0**
JNU Nakatsue 72.41 316 P **P** **09 19 22.8 +0.7**
comp=Z,84nm,1.1s
KUR Kuril'sk 72.45 335*d i* P **P** **09 19 22.1 +0.1**
KUR pmax pmax
comp=Z,144nm,0.9s
YOJ Yonaguni jima 72.92 305 P **P** **09 19 25.3 +0.1**
YOJ Yonaguni jima 72.92 305 P **P** **09 19 25.3 +0.1**
YOJ pmax pmax
comp=Z,231nm,0.7s
YOJ Yonaguni jima 72.92 305 P **P** **09 19 25.4 +0.2**
comp=Z,331nm,0.9s
SHEM Shemya Is, Ala 73.16 355 P **P** **09 19 25.1 -0.8**
comp=Z,76nm,0.8s,baz=277,slow=4.0,SNR=4.3
comp=Z,76nm,0.8s
JEW Emiwo 73.32 330 P **P** **09 19 28.1 +1.0**
NIKH Nikolski High 73.46 6 P **P** **09 19 27.2 -0.3**
NIKH Nikolski High 73.46 6 P **P** **09 19 26.8 -0.8**
baz=189,SNR=5.4
TWG Pinlang 73.58 303 P **P** **09 19 27.3 -1.7**
YULB Yu-li 73.69 303 P **P** **09 19 28.2 -1.5**
YULB IAmb IAmb 09 19 29.6
comp=Z,43nm,0.6s
KSM Kuching 73.69 278 P **P** **09 19 30.0 +0.1**
KSM Kuching 73.69 278 P **P** **09 19 30.5 +0.6**
comp=Z,188nm,1.0s
JKA Kamikawa-asahi 73.78 331 P **P** **09 19 30.8 +1.2**
ASAJ Asahikawa 73.78 331 P **P** **09 19 30.9 +1.2**
comp=Z,115nm,0.8s,baz=210,slow=6.7,SNR=164
comp=Z,115nm,0.8s
NACB Ninganchiao 73.87 304 P **P** **09 19 30.1 -0.5**
SSLB Suanglung 74.17 303 P **P** **09 19 30.7 -1.6**
SSLB Suanglung 74.17 303 P **P** **09 19 32.2 -0.2**
TPUB Ta-pu 74.17 303 P **P** **09 19 31.6 -0.8**
TPUB Ta-pu 74.17 303 P **P** **09 19 31.6 -0.8**
YHNB Yeheng 74.29 304 P **P** **09 19 32.5 -0.6**
YHNB Yeheng 74.29 304 P **P** **09 19 33.8 +0.7**
TATO Taipei 74.37 305 P **P** **09 19 33.4 0.0**
UNV Unalaska Valle 74.56 7 P **P** **09 19 33.2 -0.6**
UNV IAmb IAmb 09 19 33.7
comp=Z,28nm,0.7s
UNV Unalaska Valle 74.56 7 P **P** **09 19 32.8 -1.0**
baz=191,SNR=7.3
UNV Unalaska Valle 74.56 7 P **P** **09 19 33.8 0.0**
FALS False Pass 75.93 8 P **P** **09 19 40.2 -1.2**
baz=194
YSS Yuzh-Sakhalins 75.93 333 P **P** **09 19 41.9 +0.3**
YSS Yuzh-Sakhalins 75.93 333*k i* P **P** **09 19 42.8 +1.2**
YSS *e*S **S** **09 28 42.8 +1.7**
YSS pmax pmax
comp=Z,200nm,3.0s
YSS pmax pmax
comp=Z,130nm,0.9s
YSS Yuzh-Sakhalins 75.93 333 P **P** **09 19 42.6 +1.0**
comp=Z,144nm,0.9s
PET Petropavlovsk 75.94 346 *e*P **P** **09 19 41.6 +0.1**
PET pmax pmax
comp=Z,26nm,0.6s
NAWB Namwon 76.09 316 P **P** **09 19 43.0 +0.3**
NAWB IAmb IAmb 09 19 44.5
comp=Z,30nm,0.9s
PEA0B Petropavlovsk- 76.25 345 P **P** **09 19 43.4 +0.2**
PEA0B IAmb IAmb 09 19 44.3
comp=Z,67nm,0.9s
PEA0B Petropavlovsk- 76.25 345*ce* P **P** **09 19 43.2 0.0**
PETK Petropavlovsk- 76.25 345 P **P** **09 19 42.9 -0.3**
comp=Z,39nm,0.8s,baz=147,slow=8.7,SNR=49
comp=Z,39nm,0.8s
CHNA Chernabura Isl 76.50 11 P **P** **09 19 43.3 -1.3**
baz=197
QZH Quanzhou 76.61 303 ⇓*i* P **P** **09 19 46.6 +0.8**
QZH pmax pmax
comp=Z,71nm,0.8s
KSCHJ Chungju 76.61 318 P **P** **09 19 46.1 +0.5**
KSCHJ IAmb IAmb 09 19 47.6
comp=Z,23nm,0.8s
TJN Taejon 76.69 317 P **P** **09 19 46.5 +0.4**
TJN Taejon 76.69 317*ce* P **P** **09 19 46.4 +0.3**
TJN Taejon 76.69 317 P **P** **09 19 47.3 +1.2**
comp=Z,110nm,1.0s
SDPT Sand Point 76.85 10 P **P** **09 19 45.9 -0.6**
baz=196
KSRS Korea Array 77.01 318 P **P** **09 19 48.5 +0.7**
comp=Z,20nm,1.0s,baz=141,slow=6.3,SNR=61
comp=Z,20nm,1.0s
KSAR Wonju Array Be 77.02 318 P **P** **09 19 48.5 +0.7**
KSAR Wonju Array Be 77.02 318 P **P** **09 19 48.5 +0.7**
KS19 Wonju Array Si 77.07 318 P **P** **09 19 48.7 +0.5**
KS19 IAmb IAmb 09 19 49.9
comp=Z,32nm,1.1s
SCZ2 Santa Cruz Isl 77.31 46 P **P** **09 19 50.9 +1.3**
baz=234
SEHB SEOHWA 77.31 319 P **P** **09 19 50.4 +1.0**
SEHB IAmb IAmb 09 19 51.8
comp=Z,38nm,0.9s
PKM Mcpherson Peak 77.70 45 P **P** **09 19 53.5 +1.6**
baz=234
SAO San Andreas Ge 77.74 43 P **P** **09 19 53.4 +1.6**
SAO IAmb IAmb 09 19 54.4
comp=Z,21nm,0.8s
SAO San Andreas Ge 77.74 43 P **P** **09 19 53.4 +1.6**
SAO pmax pmax
comp=Z,21nm,0.9s
CIS Catalina Islan 77.80 47 P **P** **09 19 53.3 +1.1**
baz=235
SMMC Simmler 77.83 45 P **P** **09 19 54.1 +1.7**
baz=234
INCN Inchon 77.83 318 P **P** **09 19 53.3 +1.0**
INCN IAmb IAmb 09 19 54.2
comp=Z,56nm,1.1s
INCN Inchon 77.83 318 P **P** **09 19 53.3 +1.0**
INCN pmax pmax
comp=Z,56nm,1.1s
INCN Inchon 77.83 318 P **P** **09 19 53.9 +1.6**
comp=Z,54nm,1.1s
PMPB Monarch Peak 77.83 44 P **P** **09 19 54.0 +1.6**
UGL Uglegorsk 77.89 334 *e*P **P** **09 19 52.8 +0.5**
UGL pmax pmax
comp=Z,100nm,0.8s
BBGB Big Mountain B 77.89 43 P **P** **09 19 52.8 0.0**
PAGB Antelope Grade 77.91 45 P **P** **09 19 53.1 +0.4**
BCW Bitter Crk WRg 78.00 46 P **P** **09 19 53.9 +0.5**
BCW IAmb IAmb 09 19 56.2
comp=Z,24nm,0.8s
FMP Fort Macarthur 78.06 47 P **P** **09 19 55.2 +1.6**
baz=235
HOPS Hopland Field 78.09 40 P **P** **09 19 55.5 +1.9**
GDXM Geysers 78.15 41 P **P** **09 19 56.1 +2.0**
CHIR Chirikof Islan 78.19 13 P **P** **09 19 53.8 +0.1**
baz=201
DECC Green Verdugo 78.34 47 P **P** **09 19 56.1 +1.0**
baz=235
VLA Vladivostok 78.37 325 *i* P **P** **09 19 54.8 -0.2**
VLA pmax pmax
comp=Z,50nm,0.9s
PASC Pasadena Art C 78.39 47 P **P** **09 19 56.6 +1.2**
109C Camp Elliot, M 78.43 48 P **P** **09 19 56.6 +1.0**
baz=236
KMRM Mail Ridge 78.48 39 P **P** **09 19 57.4 +1.6**
KMRM IAmb IAmb 09 19 58.7
comp=Z,64nm,0.8s
ARVC Arvin 78.50 46 P **P** **09 19 57.4 +1.5**
baz=235
SMAI San Martin Ant 78.60 159 P **P** **09 19 57.4 +1.5**
ELS Elsinore Mount 78.62 48 P **P** **09 19 57.8 +1.1**
VES Vestal, Richgr 78.74 45 P **P** **09 19 58.3 +1.1**
baz=235,SNR=8.2
MURC Murrieta 78.76 48 P **P** **09 19 58.7 +1.3**
baz=236,SNR=5.4
BFSC Mount Baldy Ra 78.79 47 P **P** **09 19 58.6 +1.0**
baz=236,SNR=6.4
HKPS Hong Kong Po S 78.91 299 P **P** **09 19 59.3 +1.0**
MONP2 Monument Peak 78.91 49 P **P** **09 20 00.1 +1.7**
baz=237,SNR=13
EDW2 Edwards Air Fo 78.93 46 P **P** **09 19 59.8 +1.5**
baz=235,SNR=13
IKP In-Ko-Pah, Jac 79.00 49 P **P** **09 20 00.5 +1.7**
baz=237,SNR=5.2
ISA Isabella, Lake 79.05 45 P **P** **09 19 59.0 +0.1**
ISA Isabella, Lake 79.05 45 P **P** **09 19 59.0 +0.1**
ISA pmax pmax
comp=Z,13nm,0.9s
ISA Isabella, Lake 79.05 45 P **P** **09 20 00.4 +1.5**
baz=235,SNR=12
USA0B Ussuriysk Arra 79.05 326 P **P** **09 19 59.4 +0.9**
USA0B IAmb IAmb 09 20 00.9
comp=Z,85nm,1.1s
USA0B Ussuriysk Arra 79.05 326*d i* P **P** **09 19 59.5 +0.9**
USRK Ussuriysk Ar. 79.05 326 P **P** **09 19 59.5 +0.9**
comp=Z,53nm,0.8s,baz=135,slow=3.5,SNR=110
comp=Z,53nm,0.8s
TYV Tymovskoe 79.07 336 *e*P **P** **09 19 59.2 +0.7**
TYV *e*S **S** **09 29 08.3 -5.7**
TYV pmax pmax
comp=Z,200nm,2.2s
TYV pmax pmax
comp=Z,54nm,1.2s
TYV smax smax
comp=N,200nm,7.3s
TYV smax smax
comp=E,400nm,7.3s
YUH Yuha Desert 79.13 49 P **P** **09 20 00.2 +0.9**
SII Sitkinak Islan 79.17 13 P **P** **09 19 59.3 +0.3**
baz=202
CMB Columbia Colle 79.18 43 P **P** **09 20 00.6 +1.1**
CMB Columbia Colle 79.18 43 P **P** **09 20 00.6 +1.1**
CMB pmax pmax
comp=Z,14nm,0.9s
PFO Pinyon Flats O 79.28 48 P **P** **09 20 00.2 -0.1**
PFO Pinyon Flats O 79.28 48 P **P** **09 20 00.2 -0.1**
PFO pmax pmax
comp=Z,10.0nm,1.1s
PFO Pinyon Flats O 79.28 48 P **P** **09 20 01.6 +1.3**
baz=237,SNR=6.6
TPFO Pinon Flats 79.28 48 P **P** **09 20 01.6 +1.3**
baz=237,SNR=6.7
BBRC Big Bear Solar 79.31 47 P **P** **09 20 01.8 +1.2**
baz=236
SWSC Sam W. Stewart 79.38 49 P **P** **09 20 02.1 +1.5**
baz=237
ORV Oroville 79.40 41 P **P** **09 20 01.0 +0.4**
ORV Oroville 79.40 41 P **P** **09 20 01.0 +0.4**
ORV pmax pmax
comp=Z,13nm,0.9s
BELA Belgrano 2 79.63 173 P **P** **09 20 01.3 +0.1**
CWC Cottonwood Cre 79.75 45 P **P** **09 20 03.9 +1.2**
baz=235
L02F Cave Junction 79.77 38 P **P** **09 20 02.8 +0.3**
baz=230
BELC Belle Mtn. Jos 79.81 48 P **P** **09 20 04.7 +1.6**
baz=237,SNR=15
OMMB Old Mammoth Mi 79.82 44 P **P** **09 20 03.9 +0.6**
EMB Emerald Bay 79.92 42 P **P** **09 20 02.9 -0.7**
MPMC Manual Prospec 79.93 46 P **P** **09 20 05.0 +1.3**
baz=236,SNR=12
MLAC Mammoth, Mammo 79.94 44 P **P** **09 20 05.0 +1.3**
baz=234
GSC Goldstone, Bar 79.97 47 P **P** **09 20 05.3 +1.5**
baz=236,SNR=7.2
OHAK Old Harbor 79.98 13 IAmb IAmb 09 20 04.5
comp=Z,32nm,1.1s
OHAK Old Harbor 79.98 13 P **P** **09 20 03.4 +0.3**
baz=203
TIN Tinemaha, Big 80.00 44 P **P** **09 20 05.4 +1.4**
baz=235
BC3 Big Chuckawall 80.01 49 P **P** **09 20 05.7 +1.7**
baz=237,SNR=7.9
YBH Yreka Blue Hor 80.02 38 IAmb IAmb 09 20 06.6
comp=Z,22nm,0.8s
HEC Hector,Ludlow 80.03 47 P **P** **09 20 05.3 +1.1**
baz=237
NJ2 Nanjing 80.04 310 *e*P **P** **09 20 04.9 +0.8**
NJ2 pmax pmax
comp=Z,38nm,1.2s
K02D Willamette Mer 80.08 37 P **P** **09 20 04.8 +0.6**
baz=230
GLA Glamis 80.13 49 P **P** **09 20 06.7 +2.1**
baz=238
MPK Martis Peak 80.15 42 IAmb IAmb 09 20 07.3
comp=Z,44nm,1.2s
J01E Myrtle Point 80.22 37 P **P** **09 20 05.8 +1.0**
baz=230
QSM Queen of Sheba 80.29 46 P **P** **09 20 06.3 +1.0**
PNTR Pine Nut 80.30 42 IAmb IAmb 09 20 08.1
comp=Z,38nm,0.8s
VCNR Virginia City 80.39 42 P **P** **09 20 06.9 +0.8**
YERR Yerington 80.47 42 P **P** **09 20 06.6 +0.1**
YERR IAmb IAmb 09 20 08.8
comp=Z,20nm,0.9s
GMRC Granite Mounta 80.47 47 P **P** **09 20 07.8 +1.3**
baz=237
LCH Last Change Ra 80.49 45 P **P** **09 20 06.8 +0.3**
IRM Iron Mountain 80.49 48 P **P** **09 20 08.2 +1.7**
baz=237,SNR=6.8
LHV Little Huntoon 80.51 43 IAmb IAmb 09 20 09.3
comp=Z,23nm,1.1s
GRAC Grapevine Rang 80.54 45 IAmb IAmb 09 20 09.6
comp=Z,40nm,1.4s
GRAC Grapevine Rang 80.54 45 P **P** **09 20 08.3 +1.6**
baz=236,SNR=14
GWY Greenwater Val 80.55 46 P **P** **09 20 06.9 0.0**
L04D Klamath Falls 80.56 38 IAmb IAmb 09 20 09.2
comp=Z,28nm,0.8s
L04D Klamath Falls 80.56 38 P **P** **09 20 08.2 +1.4**
baz=231,SNR=5.6
FURC Furnace Creek, 80.58 46 P **P** **09 20 08.0 +1.2**
baz=236
MDJ Mudanjiang 80.60 325 P **P** **09 20 08.1 +1.3**
MDJ S **S** **09 29 36.2 +6.1**
MDJ pmax pmax
comp=Z,95nm,0.9s
MDJ pmax pmax
comp=Z,270nm,3.6s
MDJ Mudanjiang 80.60 325 P **P** **09 20 07.9 +1.1**
comp=Z,88nm,1.0s
KDAK Kodiak Island 80.64 13 P **P** **09 20 06.8 +0.2**
comp=Z,24nm,0.9s,baz=240,slow=4.2,SNR=9.3
comp=Z,24nm,0.9s
KDAK Kodiak Island 80.64 13 P **P** **09 20 07.0 +0.4**
KDAK IAmb IAmb 09 20 08.8
comp=Z,40nm,1.0s
KDAK Kodiak Island 80.64 13 P **P** **09 20 07.1 +0.4**
KDAK pmax pmax
comp=Z,40nm,1.0s
KDAK Kodiak Island 80.64 13 P **P** **09 20 07.0 +0.4**
baz=204
TUQ Turquoise Moun 80.64 47 P **P** **09 20 08.5 +1.2**
baz=237
SHOC Shoshone, Teco 80.66 46 P **P** **09 20 08.5 +1.2**
baz=236,SNR=5.2
113A Mohawk Valley, 80.74 50 P **P** **09 20 08.7 +0.9**
NVAR Mina Array Bea 80.74 43 P **P** **09 20 09.2 +1.2**
comp=Z,11nm,0.8s,baz=225,slow=9.4,SNR=90
NVAR pP **pP** **09 22 03.0 +1.5**
comp=Z,2.2nm,1.1s,baz=222,slow=8.0,SNR=3.6
NVAR PKKPbc **PKKPbc** **09 38 44.5 +0.7**
comp=Z,0.5nm,0.7s,baz=90,slow=3.6,SNR=5.6
NVAR PKPPKP **P'P'df** **09 46 43.9 -2.1**
comp=Z,0.3nm,0.7s,baz=141,slow=9.2,SNR=2.1
comp=Z,11nm,0.8s
NVAR Mina Array Bea 80.74 43 P **P** **09 20 09.0 +1.1**
P16K Nushagak River 80.78 10 P **P** **09 20 06.7 -0.6**
baz=199
PAHR Pah Rah Range 80.80 42 P **P** **09 20 09.4 +1.3**
NV11 Mina Array Sit 80.84 43 P **P** **09 20 09.5 +1.1**
NV11 IAmb IAmb 09 20 10.7
comp=Z,19nm,0.9s
I02E Swisshome, OR 80.88 36 P **P** **09 20 09.7 +1.5**
baz=230
I03D Drain, OR 80.89 37 P **P** **09 20 09.9 +1.6**
baz=230
214A Organ Pipe Nat 81.01 51 P **P** **09 20 11.5 +2.3**
214A Organ Pipe Nat 81.01 51 P **P** **09 20 11.1 +1.8**
baz=239
NEE2 Needles Airpor 81.19 48 P **P** **09 20 11.6 +1.6**
baz=238
P17K Kvichak River 81.20 11 P **P** **09 20 09.4 -0.1**
baz=200,SNR=13
KVN Kaiserville 81.23 43 P **P** **09 20 11.4 +1.0**
KVN IAmb IAmb 09 20 12.6
comp=Z,19nm,0.9s
KVN Kaiserville 81.23 43 P **P** **09 20 11.4 +1.0**
KVN pmax pmax
comp=Z,19nm,0.9s
TPNV Topopah Spring 81.25 45 P **P** **09 20 11.3 +0.8**
TPNV Topopah Spring 81.25 45 P **P** **09 20 11.3 +0.8**
TPNV pmax pmax
comp=Z,10.0nm,1.0s
TPNV Topopah Spring 81.25 45 P **P** **09 20 11.9 +1.4**
baz=236,SNR=13
PDMCI Parker Dam,Lak 81.27 49 P **P** **09 20 12.0 +1.5**
baz=238,SNR=6.2
O16K Kokwok River B 81.30 10 P **P** **09 20 09.3 -0.7**
baz=198,SNR=11
J04D Umpqua Nationa 81.31 38 IAmb IAmb 09 20 13.3
comp=Z,54nm,0.8s
J04D Umpqua Nationa 81.31 38 P **P** **09 20 12.4 +1.7**
baz=231,SNR=12
BUCK Buck Mountain 81.41 36 P **P** **09 20 12.5 +1.5**
BUCK IAmb IAmb 09 20 13.8
comp=Z,51nm,1.1s
MOD Modoc Plateau 81.54 39 P **P** **09 20 12.4 +0.5**
MOD IAmb IAmb 09 20 14.2
comp=Z,25nm,0.9s
GRNR Gornyy 81.55 333 ⇓*i* P **P** **09 20 12.4 +0.9**
GRNR pmax pmax
comp=Z,30nm,1.2s
P18K Big Mountain, 81.60 11 P **P** **09 20 11.3 -0.3**
P18K IAmb IAmb 09 20 11.7
comp=Z,23nm,0.7s
P18K Big Mountain, 81.60 11 P **P** **09 20 11.2 -0.4**
baz=201
K05A Summer Lake 81.69 39 IAmb IAmb 09 20 15.4
comp=Z,47nm,0.9s
SHPR Sheep Range 81.74 46 P **P** **09 20 13.8 +0.8**
H04D Lebanon 81.76 36 P **P** **09 20 13.6 +0.8**
H04D IAmb IAmb 09 20 15.3
comp=Z,42nm,1.1s
H04D Lebanon 81.76 36 P **P** **09 20 14.1 +1.4**
baz=231
MAW Mawson 81.77 200 P **P** **09 20 13.0 +0.6**
comp=Z,10nm,1.0s,baz=130,slow=7.6,SNR=13
MAW pP **pwP** **09 22 07.7 -1.0**
comp=Z,3.1nm,0.8s,baz=114,slow=10.0,SNR=3.5
comp=Z,10nm,1.0s
MAW Mawson 81.77 200 P **P** **09 20 13.3 +0.9**
baz=82,SNR=8.1
J05D Fort Rock, OR 81.84 38 P **P** **09 20 15.2 +1.8**
baz=232,SNR=40
G03D McMinnville, O 81.90 35 P **P** **09 20 15.4 +2.0**
baz=230
BKNI Bangkinang 81.94 273 P **P** **09 20 14.8 +0.4**
S11A Rachel 81.97 45 IAmb IAmb 09 20 16.4
comp=Z,21nm,0.8s
N16K Nishlik Lake 82.03 9 P **P** **09 20 14.5 +0.8**
baz=198,SNR=14
O18K Koktuh Hills 82.04 11 P **P** **09 20 14.1 +0.3**
O18K Koktuh Hills 82.04 11 P **P** **09 20 13.8 0.0**
baz=201
H04A Detroit Lake 82.16 36 IAmb IAmb 09 20 16.3
comp=Z,20nm,0.8s
PRN Pahroc Range 82.30 46 IAmb IAmb 09 20 18.6
comp=Z,23nm,0.9s
PINE Pine Mountain 82.32 38 IAmb IAmb 09 20 18.6
comp=Z,52nm,0.9s
CN2 Changchun 82.40 322 *e*P **P** **09 20 15.9 -0.1**
CN2 *ep*P pP 09 22 13.5 +3.0
CN2 *e*PP **PP** **09 23 37.2 +2.2**
CN2 SKS **S** **09 29 43.0 -5.1**
CN2 *es*S sS 09 33 14.6 +2.6
CN2 *e*SS **SS** **09 35 29.0 +3.9**
CN2 pmax pmax
comp=Z,50nm,1.1s
I05D Terrebonne, OR 82.42 37 P **P** **09 20 17.4 +1.2**
baz=232,SNR=11
R11A Troy Canyon, C 82.46 44 P **P** **09 20 17.5 +0.8**
baz=237,SNR=14
O19K Port Alsworth 82.52 12 P **P** **09 20 16.0 -0.2**
O19K Port Alsworth 82.52 12 P **P** **09 20 15.7 -0.5**
baz=202,SNR=15
CNPM China Poot 82.53 13 IAmb IAmb 09 20 17.4
comp=Z,30nm,0.9s
HOM Homer 82.56 13 P **P** **09 20 16.6 +0.2**
baz=204
BMN Battle Mountai 82.57 42 IAmb IAmb 09 20 19.4
comp=Z,25nm,0.9s
KLR Kul'dur 82.59 329 P **P** **09 20 17.4 +0.5**
comp=Z,17nm,0.9s,baz=107,slow=3.2,SNR=26
comp=Z,17nm,0.9s
KLR Kul'dur 82.59 329*ce* P **P** **09 20 17.7 +0.9**
KLR pmax pmax
comp=Z,31nm,1.3s
F04D Rainier, OR 82.59 35 P **P** **09 20 18.4 +1.5**
baz=230
E03A Lebam 82.60 34 P **P** **09 20 18.4 +1.5**
E03A IAmb IAmb 09 20 19.4
comp=Z,33nm,0.8s
WHN Wuhan 82.62 306 ⇓P **P** **09 20 18.3 +0.9**
WHN pmax pmax
comp=Z,110nm,1.1s
TUC Tucson 82.68 52 P **P** **09 20 19.6 +1.8**
TUC Tucson 82.68 52 P **P** **09 20 19.6 +1.8**
TUC pmax pmax
comp=Z,16nm,1.0s
TUC Tucson 82.68 52 P **P** **09 20 20.0 +2.2**
baz=240
N18K Kilae Creek 82.69 11 P **P** **09 20 16.8 -0.2**
baz=200
O20K Slope Mountain 82.75 12 P **P** **09 20 17.0 -0.4**
baz=204
BRLK Bradley Lake 82.82 13 P **P** **09 20 17.4 -0.3**
BRLK IAmb IAmb 09 20 18.7
comp=Z,43nm,0.9s
F04A Amboy 82.82 35 IAmb IAmb 09 20 19.6
comp=Z,24nm,0.7s

BRSE	**Bradley Lake S**	82.83	13	P		P	09 20 17.9	+0.1
	baz=205,SNR=6.9							
WVOR	**Wild Horse Val**	82.86	40	P		P	09 20 19.1	+0.6
WVOR				IAmb		IAmb	09 20 20.9	
	comp=Z,27nm,1.1s							
WVOR	**Wild Horse Val**	82.86	40	P		P	09 20 19.1	+0.6
WVOR				pmax		pmax		
	comp=Z,27nm,1.1s							
HOOD	**Mount Hood Mea**	82.86	36	P		P	09 20 19.0	+0.5
HOOD				IAmb		IAmb	09 20 20.6	
	comp=Z,28nm,1.1s							
NLWA	**Neilton Lookou**	82.98	34	IAmb		IAmb	09 20 21.4	
	comp=Z,27nm,1.1s							
G05D	**Wamic, OR**	82.99	36	P		P	09 20 20.3	+1.3
	baz=232							
N19K	**Bonanza Creek**	83.07	11	P		P	09 20 18.8	-0.3
N19K				IAmb		IAmb	09 20 19.5	
	comp=Z,25nm,0.8s							
N19K	**Bonanza Creek**	83.07	11	P		P	09 20 18.4	-0.7
	baz=202,SNR=11							
RSO	**Redoubt South**	83.07	12	P		P	09 20 18.9	-0.3
E04D	**Cinebar**	83.13	35	IAmb		IAmb	09 20 22.3	
	comp=Z,38nm,1.2s							
E04D	**Cinebar**	83.13	35	P		P	09 20 21.1	+1.5
	baz=231							
LCMT	**Little Creek M**	83.31	47	P		P	09 20 22.4	+1.4
I07A	**Izee**	83.32	38	P		P	09 20 22.1	+1.3
I07A				IAmb		IAmb	09 20 23.3	
	comp=Z,26nm,0.9s							
IPM	**Ipoh**	83.42	277	P		P	09 20 22.6	+0.8
IPM	**Ipoh**	83.42	277	P		P	09 20 22.4	+0.6
	comp=Z,110nm,1.0s							
D04E	**Lakebay**	83.42	34	P		P	09 20 22.7	+1.7
	baz=230							
SEW	**Seward**	83.44	14	P		P	09 20 20.8	+0.1
SEW				IAmb		IAmb	09 20 21.5	
	comp=Z,21nm,0.8s							
SEW	**Seward**	83.44	14	P		P	09 20 20.5	-0.2
	baz=206,SNR=5.3							
D03D	**Eldon**	83.48	34	P		P	09 20 22.9	+1.6
	baz=230							
J08A	**Circle Bar Ran**	83.49	39	IAmb		IAmb	09 20 24.0	
	comp=Z,27nm,1.2s							
U15A	**North Rim**	83.67	48	IAmb		IAmb	09 20 25.7	
	comp=Z,22nm,0.8s							
O22K	**Cooper Landing**	83.72	14	IAmb		IAmb	09 20 22.5	
	comp=Z,39nm,0.7s							
SZCU	**Shurtz Canyon**	83.73	46	P		P	09 20 24.9	+1.9
MA2	**Magadan**	83.76	344	P		P	09 20 21.8	-0.6
	comp=Z,18nm,0.7s,baz=150,slow=7.6,SNR=12							
	comp=Z,18nm,0.7s							
MA2	**Magadan**	83.76	344	P		P	09 20 22.2	-0.2
MA2				IAmb		IAmb	09 20 23.0	
	comp=Z,24nm,0.8s							
MA2	**Magadan**	83.76	344	*ce*P		P	09 20 21.8	-0.6
MA2				pmax		pmax		
	comp=Z,52nm,1.7s							
MA2	**Magadan**	83.76	344	P		P	09 20 22.2	-0.2
	comp=Z,44nm,1.2s							
D05A	**Emumclaw**	83.84	35	IAmb		IAmb	09 20 25.9	
	comp=Z,62nm,1.4s							
WUAZ	**Wupatki**	83.85	49	P		P	09 20 24.5	+0.8
	baz=240							
SPCR	**Spurr Chakacha**	83.86	12	P		P	09 20 22.1	-0.9
	baz=204,SNR=5.5							
SPU	**Mount Spurr**	83.87	12	P		P	09 20 22.3	-0.7
CBB	**Campbell River**	83.97	31	IAmb		IAmb	09 20 25.9	
	comp=Z,25nm,1.1s							
ELK	**Elko**	84.00	43	P		P	09 20 23.8	-0.6
ELK	**Elko**	84.00	43	P		P	09 20 23.8	-0.6
ELK				pmax		pmax		
	comp=Z,5.0nm,0.8s							
GAMB	**Gambell**	84.02	3	P		P	09 20 24.2	+0.7
	baz=186							
KULM	**Kulim**	84.05	278	P		P	09 20 23.9	-1.0
KULM				IAmb		IAmb	09 20 26.9	
	comp=Z,42nm,0.9s							
M19K	**Big River Lodg**	84.10	11	P		P	09 20 23.8	-0.4
M19K				IAmb		IAmb	09 20 24.8	
	comp=Z,16nm,0.8s							
M19K	**Big River Lodg**	84.10	11	P		P	09 20 23.7	-0.4
	baz=202							
BBB	**Bella Bella**	84.17	28	P		P	09 20 24.1	-0.4
	comp=Z,8.7nm,0.8s,baz=257,slow=17							
	comp=Z,8.7nm,0.8s							
PKCU	**Pink Cliffs**	84.18	47	IAmb		IAmb	09 20 28.8	
	comp=Z,20nm,1.0s							
RC01	**Rabbit Creek A**	84.26	13	P		P	09 20 24.3	-0.6
	baz=206							
L19K	**White Mountain**	84.28	11	P		P	09 20 25.0	+0.1
L19K				IAmb		IAmb	09 20 26.5	
	comp=Z,24nm,0.9s							
L19K	**White Mountain**	84.28	11	P		P	09 20 25.1	+0.2
	baz=201,SNR=16							
M20K	**Styx River**	84.31	11	P		P	09 20 24.3	-0.8
M20K	**Styx River**	84.31	11	P		P	09 20 24.5	-0.7
	baz=203							
G08A	**Pilot Rock**	84.35	37	P		P	09 20 26.1	+0.3
G08A				IAmb		IAmb	09 20 28.1	
	comp=Z,24nm,1.0s							
SUA	**Susitna One**	84.39	13	P		P	09 20 25.6	0.0
SUA				IAmb		IAmb	09 20 26.2	
	comp=Z,41nm,0.8s							
SUA	**Susitna One**	84.39	13	P		P	09 20 25.2	-0.5
	baz=205,SNR=9.2							
LTY	**Liberty**	84.59	35	P		P	09 20 27.0	+0.1
E07A	**Sunnyside**	84.61	36	P		P	09 20 27.1	+0.2
E07A				IAmb		IAmb	09 20 29.3	
	comp=Z,22nm,1.1s							
GLI	**Glacier Island**	84.67	14	P		P	09 20 27.0	+0.1
GLI	**Glacier Island**	84.67	14	P		P	09 20 26.8	-0.1
	baz=209							
HAWA	**Hanford**	84.68	36	P		P	09 20 26.8	-0.5
HAWA				IAmb		IAmb	09 20 29.7	
	comp=Z,29nm,1.1s							
SKT	**Skwentna**	84.70	12	P		P	09 20 25.6	-1.4
SKT				IAmb		IAmb	09 20 26.9	
	comp=Z,23nm,1.3s							
SKT	**Skwentna**	84.70	12	P		P	09 20 25.7	-1.3
	baz=204,SNR=6.8							
EYAK	**Cordova Ski Ar**	84.70	15	P		P	09 20 27.0	0.0
	baz=210							
L20K	**Farewell, AK**	84.72	11	P		P	09 20 26.8	-0.4
	baz=202,SNR=10							
M22K	**Willow**	84.78	13	P		P	09 20 27.1	-0.3
M22K	**Willow**	84.78	13	P		P	09 20 27.0	-0.3
	baz=206,SNR=10							
MVU	**Marysvale**	84.79	46	IAmb		IAmb	09 20 30.5	
	comp=Z,28nm,1.1s							
TTA	**Tatalina**	84.79	10	IAmb		IAmb	09 20 29.0	
	comp=Z,28nm,1.1s							
TTA	**Tatalina**	84.79	10	P		P	09 20 27.9	+0.4
	baz=200,SNR=22							
W18A	**Petrified Fore**	84.81	50	P		P	09 20 29.6	+1.2
	baz=241							
MSU	**Marysvale**	84.82	46	P		P	09 20 28.6	+0.2
MSU	**Marysvale**	84.82	46	P		P	09 20 28.6	+0.2
KNK	**Knik Glacier**	84.83	14	P		P	09 20 27.6	-0.1
	baz=207,SNR=9.3							
E08A	**Dider Farm, El**	85.00	36	IAmb		IAmb	09 20 31.1	
	comp=Z,17nm,0.9s							
121A	**Cookes Peak, D**	85.01	53	P		P	09 20 31.5	+2.1
	baz=242							
BMO	**Blue Mountains**	85.05	38	P		P	09 20 29.2	0.0
BMO	**Blue Mountains**	85.05	38	P		P	09 20 29.2	0.0
BMO				pmax		pmax		
	comp=Z,8.0nm,0.8s							
DIV	**Divide**	85.20	15	P		P	09 20 29.9	+0.4
DIV				IAmb		IAmb	09 20 30.5	
	comp=Z,33nm,0.8s							
SML	**Sawmill**	85.21	14	IAmb		IAmb	09 20 31.4	
	comp=Z,74nm,1.8s							
SML	**Sawmill**	85.21	14	P		P	09 20 29.3	-0.2
	baz=207							
DUG	**Dugway, Tooele**	85.27	44	P		P	09 20 31.2	+0.8
	baz=238							
M23K	**Glacier View**	85.33	14	P		P	09 20 29.4	-0.7
	baz=208,SNR=6.1							
CUT	**Chulitna**	85.34	12	P		P	09 20 29.9	-0.2
CUT	**Chulitna**	85.34	12	P		P	09 20 29.7	-0.3
	baz=206,SNR=6.8							
BMRM	**Bremner River**	85.35	15	IAmb		IAmb	09 20 31.4	
	comp=Z,26nm,0.8s							
BMRM	**Bremner River**	85.35	15	P		P	09 20 30.4	+0.1
	baz=211,SNR=10							
WAX	**Waxell Ridge**	85.36	16	IAmb		IAmb	09 20 32.0	
	comp=Z,44nm,1.1s							
MESA	**MESA**	85.38	17	P		P	09 20 31.3	+0.7
	baz=213							
PPLA	**Purkeypile**	85.42	11	P		P	09 20 28.9	-1.7
	baz=204							
D08A	**Wollman Farm,**	85.42	36	P		P	09 20 32.2	+1.4
D08A				IAmb		IAmb	09 20 33.2	
	comp=Z,18nm,0.9s							
SCM	**Sheep Creek Mo**	85.46	14	P		P	09 20 30.9	+0.1
	baz=208,SNR=16							
KLU	**Klutina**	85.48	15	P		P	09 20 31.3	+0.3
KLU				IAmb		IAmb	09 20 32.0	
	comp=Z,20nm,1.1s							
KLU	**Klutina**	85.48	15	P		P	09 20 30.9	0.0
	baz=210,SNR=7.8							
WRAK	**Wrangell Islan**	85.50	23	IAmb		IAmb	09 20 33.0	
	comp=Z,18nm,0.9s							
WRAK	**Wrangell Islan**	85.50	23	P		P	09 20 31.8	+0.8
	baz=222							
K20K	**Telida**	85.51	10	P		P	09 20 30.9	0.0
K20K				IAmb		IAmb	09 20 32.1	
	comp=Z,33nm,1.1s							
K20K	**Telida**	85.51	10	P		P	09 20 30.9	0.0
	baz=202,SNR=23							
GSI	**Gunungsitoli**	85.52	273	P		P	09 20 31.0	-1.2
GSI	**Gunungsitoli**	85.52	273	P		P	09 20 33.5	+1.4
	comp=Z,156nm,1.1s							
E09A	**Wood Farm, Sta**	85.53	37	P		P	09 20 32.7	+1.3
E09A				IAmb		IAmb	09 20 33.4	
	comp=Z,22nm,1.0s							
YAH	**Yahtse**	85.59	17	IAmb		IAmb	09 20 33.3	
	comp=Z,36nm,1.0s							
TGL	**Tana Glacier**	85.63	16	P		P	09 20 31.4	-0.2
TGL				IAmb		IAmb	09 20 33.0	
	comp=Z,21nm,1.0s							
ISLE	**Juniper Island**	85.63	17	P		P	09 20 31.4	-0.3
ISLE				IAmb		IAmb	09 20 33.0	
	comp=Z,30nm,1.0s							
PNL	**Peninsula**	85.68	18	P		P	09 20 32.3	+0.5
	baz=216							
HNS	**HongShan**	85.70	312	⇓P		P	09 20 33.3	+0.9
HNS				pmax		pmax		
	comp=Z,31nm,1.3s							
PINM	**Pinnacle**	85.78	18	P		P	09 20 32.7	+0.3
	baz=215							
TABL	**Table Mountain**	85.82	17	P		P	09 20 33.3	+0.6
TABL				IAmb		IAmb	09 20 34.1	
	comp=Z,24nm,0.8s							
VRDI	**Verde Repeater**	85.86	16	P		P	09 20 33.3	+0.5
VRDI				IAmb		IAmb	09 20 34.2	
	comp=Z,55nm,1.5s							
TMUT	**Trail Mountain**	85.87	46	IAmb		IAmb	09 20 36.2	
	comp=Z,22nm,1.2s							
GRNC	**Granite Creek**	85.89	17	IAmb		IAmb	09 20 34.5	
	comp=Z,19nm,0.8s							
N25K	**Chitina, Valde**	85.90	15	P		P	09 20 33.3	+0.4
N25K				IAmb		IAmb	09 20 34.2	
	comp=Z,23nm,0.9s							
N25K	**Chitina, Valde**	85.90	15	P		P	09 20 33.2	+0.3
	baz=211,SNR=12							
CAST	**Castle Rocks**	85.91	11	P		P	09 20 31.5	-1.4
CAST				IAmb		IAmb	09 20 32.6	
	comp=Z,33nm,0.8s							
CAST	**Castle Rocks**	85.91	11	P		P	09 20 31.6	-1.2
	baz=204,SNR=22							
LYN	**LuoYang**	85.92	309	⇓*i*P		P	09 20 34.2	+0.7
LYN				pmax		pmax		
	comp=Z,50nm,1.1s							
PLID	**Pearl Lake**	85.94	39	IAmb		IAmb	09 20 35.6	
	comp=Z,56nm,1.7s							
GLB	**Gilina Butte**	85.96	16	IAmb		IAmb	09 20 34.3	
	comp=Z,20nm,1.0s							
M24K	**Tolsona, Glenn**	85.96	14	P		P	09 20 34.0	+0.9
M24K				IAmb		IAmb	09 20 34.9	
	comp=Z,52nm,1.2s							
M24K	**Tolsona, Glenn**	85.96	14	P		P	09 20 33.7	+0.5
	baz=209,SNR=5.0							
B08A	**Colville Reser**	85.97	35	P		P	09 20 33.7	+0.2
B08A				IAmb		IAmb	09 20 35.0	
	comp=Z,18nm,0.9s							
TNA	**Tin City**	86.01	4	P		P	09 20 33.4	+0.2
	baz=189							
BJT	**Baijiatuan**	86.02	315	P		P	09 20 34.4	+0.5
BJT				IAmb		IAmb	09 20 35.1	
	comp=Z,17nm,0.8s							
BJT	**Baijiatuan**	86.02	315	P		P	09 20 34.4	+0.5
BJT				pmax		pmax		
	comp=Z,17nm,0.8s							
BJI	**Beijing**	86.03	315	P		P	09 20 34.4	+0.5
BJI				pmax		pmax		
	comp=Z,22nm,0.9s							
WAT6	**Susitna Watana**	86.03	13	P		P	09 20 33.5	-0.1
	baz=208,SNR=22							
LLLB	**Lillooet**	86.04	32	IAmb		IAmb	09 20 35.1	
	comp=Z,11nm,0.7s							
HLID	**Hailey**	86.05	41	P		P	09 20 35.5	+1.3
HLID	**Hailey**	86.05	41	P		P	09 20 35.6	+1.4
	baz=237,SNR=15							
WAT1	**Susitna Watana**	86.08	13	P		P	09 20 33.3	-0.3
	baz=207							
MCARA	**McCarthy VSAT**	86.11	16	P		P	09 20 34.5	+0.7
MCARA				IAmb		IAmb	09 20 35.3	
	comp=Z,39nm,1.3s							
MCARA	**McCarthy VSAT**	86.11	16	P		P	09 20 34.2	+0.4
	baz=212,SNR=5.9							
HVU	**Hansel Valley**	86.12	43	P		P	09 20 34.5	0.0
HVU	**Hansel Valley**	86.12	43	P		P	09 20 34.5	0.0
HVU				pmax		pmax		
	comp=Z,18nm,1.5s							
LOGN	**Logan Glacier**	86.18	17	IAmb		IAmb	09 20 35.8	
	comp=Z,33nm,1.3s							
BARN	**Barnard Glacie**	86.19	17	P		P	09 20 35.0	+0.5
BARN				IAmb		IAmb	09 20 36.0	
	comp=Z,26nm,0.8s							
CTG	**Chitna Glacier**	86.20	17	P		P	09 20 34.9	+0.5
	baz=214,SNR=10							
CTGM	**Chitina Glacie**	86.20	17	IAmb		IAmb	09 20 35.9	
	comp=Z,21nm,0.9s							
C09A	**Chrisman Ranch**	86.21	36	IAmb		IAmb	09 20 36.5	
	comp=Z,18nm,0.9s							
ENH	**Enshi**	86.23	304	P		P	09 20 35.7	+0.5
SRU	**San Rafael Swe**	86.23	46	P		P	09 20 36.4	+1.2
SRU				IAmb		IAmb	09 20 37.2	
	comp=Z,15nm,1.0s							
SRU	**San Rafael Swe**	86.23	46	P		P	09 20 36.4	+1.2
SRU				pmax		pmax		
	comp=Z,15nm,1.0s							
KTH	**Kantishna Hill**	86.25	12	IAmb		IAmb	09 20 34.5	
	comp=Z,28nm,0.9s							
J20K	**Nowinta River**	86.26	10	P		P	09 20 34.5	+0.1
J20K				IAmb		IAmb	09 20 35.8	
	comp=Z,25nm,1.1s							
J20K	**Nowinta River**	86.26	10	P		P	09 20 34.5	+0.1
	baz=202,SNR=13							
TRF	**Thorofare Moun**	86.28	12	P		P	09 20 34.1	-0.7
	baz=206,SNR=60							
CHUM	**Lake Minchumin**	86.30	11	P		P	09 20 33.8	-0.8
	baz=204,SNR=9.2							
SEY	**Seymchan**	86.34	347	P		P	09 20 34.6	-0.2
	comp=Z,44nm,0.9s,baz=147,slow=6.7,SNR=67							
	comp=Z,44nm,0.9s							
SEY	**Seymchan**	86.34	347	*ce*P		P	09 20 34.7	-0.2
SEY				pmax		pmax		
	comp=Z,64nm,1.0s							
GCSA	**Galena City Sc**	86.37	9	P		P	09 20 35.3	+0.4
	baz=199,SNR=7.6							
PLBC	**Pleasant Camp**	86.44	20	P		P	09 20 36.3	+0.9
	baz=218							
MNTX	**Cornudas Mount**	86.44	54	P		P	09 20 36.7	+0.6
MNTX				IAmb		IAmb	09 20 38.8	
	comp=Z,14nm,1.1s							
MNTX	**Cornudas Mount**	86.44	54	P		P	09 20 37.7	+1.6
	baz=243							
HARP	**HAARP**	86.45	15	P		P	09 20 35.2	-0.2
	baz=210							
RND	**Reindeer**	86.53	13	P		P	09 20 35.6	-0.2
RND	**Reindeer**	86.53	13	P		P	09 20 35.6	-0.2
RND				pmax		pmax		
	comp=Z,66nm,0.8s							
DHY	**Denali Highway**	86.54	13	IAmb		IAmb	09 20 37.0	
	comp=Z,33nm,1.4s							
DHY	**Denali Highway**	86.54	13	P		P	09 20 35.8	-0.2
	baz=208							
T35M	**Bob Quinn**	86.70	24	P		P	09 20 37.6	+0.9
	baz=224							
BPAW	**Bear Paw Mtn.**	86.74	11	P		P	09 20 35.7	-1.1
BPAW				IAmb		IAmb	09 20 36.8	
	comp=Z,36nm,1.8s							
BPAW	**Bear Paw Mtn.**	86.74	11	P		P	09 20 35.4	-1.3
	baz=205,SNR=6.4							
TX31	**Lajitas Ar. Si**	86.74	57	P		P	09 20 38.7	+1.0
TX31				IAmb		IAmb	09 20 40.6	
	comp=Z,24nm,0.9s							
TX32	**Lajitas Array**	86.74	57	P		P	09 20 38.7	+1.0
TXAR	**Lajitas Array**	86.75	57	P		P	09 20 39.3	+1.6
	comp=Z,5.0nm,0.8s,baz=219,slow=6.8,SNR=49							
TXAR				pP		pP	09 22 34.8	+1.5
	comp=Z,5.5nm,1.0s,baz=212,slow=5.0,SNR=12							
TXAR				PKKPbc		PKKPbc	09 38 30.1	+0.8
	comp=Z,0.7nm,0.8s,baz=129,slow=3.2,SNR=6.6							
	comp=Z,5.0nm,0.8s							
TXAR	**Lajitas Array**	86.75	57	P		P	09 20 38.8	+1.1
MCK	**McKinley**	86.80	12	IAmb		IAmb	09 20 38.3	
	comp=Z,37nm,0.8s							
MCK	**McKinley**	86.80	12	P		P	09 20 36.7	-0.3
	baz=207,SNR=20							
HWUT	**Hardware Ranch**	86.81	43	P		P	09 20 38.0	+0.2
GYA	**Guiyang**	86.86	300	⇓*i*P		P	09 20 39.0	+0.7
GYA				pmax		pmax		
	comp=Z,24nm,0.8s							
GYA				pmax		pmax		
	comp=Z,220nm,5.7s							
PAX	**Paxson**	86.88	14	P		P	09 20 37.0	-0.5
PAX				IAmb		IAmb	09 20 38.2	
	comp=Z,44nm,1.9s							
PAX	**Paxson**	86.88	14	P		P	09 20 37.0	-0.5
PAX				pmax		pmax		
	comp=Z,44nm,1.9s							
PAX	**Paxson**	86.88	14	P		P	09 20 37.0	-0.5
	baz=210,SNR=8.8							
YUK8	**Steele Glacier**	86.90	17	P		P	09 20 38.5	+0.7
	baz=215,SNR=18							
PV13	**Radium Mtn., P**	86.93	47	P		P	09 20 39.0	+0.5
PV23	**Carpenter Ridg**	86.94	47	P		P	09 20 39.9	+1.3
PV23				IAmb		IAmb	09 20 40.6	
	comp=Z,9.7nm,0.8s							
M26K	**Nabesna, AK**	86.98	15	P		P	09 20 38.2	+0.3
M26K				IAmb		IAmb	09 20 39.5	
	comp=Z,19nm,0.9s							
M26K	**Nabesna, AK**	86.98	15	P		P	09 20 38.3	+0.3
	baz=212,SNR=16							
YUK6	**Outpost Mounta**	87.02	18	P		P	09 20 38.9	+0.5
	baz=216							
BCYI	**Bear Canyon**	87.07	40	P		P	09 20 38.6	-0.5
BWN	**Browne**	87.09	12	P		P	09 20 38.5	+0.2
ANMO	**Albuquerque**	87.10	51	P		P	09 20 40.4	+1.0
ANMO	**Albuquerque**	87.10	51	*ce*P		P	09 20 40.3	+0.9
ANMO				pmax		pmax		
	comp=Z,11nm,1.3s							
ANMO	**Albuquerque**	87.10	51	P		P	09 20 40.4	+1.0
	baz=243							
NEW	**Newport**	87.11	36	P		P	09 20 39.5	+0.6
NEW	**Newport**	87.11	36	P		P	09 20 39.5	+0.6
NEW				pmax		pmax		
	comp=Z,6.0nm,0.9s							
NEW	**Newport**	87.11	36	P		P	09 20 39.5	+0.6
	baz=235,SNR=8.1							
YUK3	**Moose Creek**	87.11	17	P		P	09 20 39.3	+0.5
	baz=215,SNR=29							
HYT	**Haines Junctio**	87.18	18	P		P	09 20 39.5	+0.4
HYT				IAmb		IAmb	09 20 40.3	
	comp=Z,10nm,0.9s							
HYT	**Haines Junctio**	87.18	18	P		P	09 20 39.8	+0.8
	baz=217,SNR=8.4							
M27K	**Edge Creek, AK**	87.22	16	P		P	09 20 39.8	+0.6
	baz=213,SNR=21							
MENT	**Mentasta**	87.26	15	P		P	09 20 40.0	+0.8
MENT				IAmb		IAmb	09 21 57.6	
	comp=Z,15nm,0.8s							
YUK4	**Talbot Arm**	87.26	18	P		P	09 20 40.4	+0.9
	baz=216							
L26K	**Log Cabin Wild**	87.42	15	IAmb		IAmb	09 20 41.5	
	comp=Z,15nm,1.0s							
L26K	**Log Cabin Wild**	87.42	15	P		P	09 20 40.3	+0.3
	baz=212,SNR=17							
TIY	**Taiyuan**	87.43	312	⇑P		P	09 20 42.5	+1.8
TIY				pmax		pmax		
	comp=Z,32nm,0.5s							
TIY				pmax		pmax		
	comp=Z,120nm,4.1s							
K24K	**Donnelly Dome**	87.53	14	P		P	09 20 40.8	+0.3
	baz=210,SNR=17							
BVCY	**Beaver Creek**	87.53	16	P		P	09 20 41.3	+0.7
	baz=214,SNR=24							
I21K	**Tanana**	87.55	11	P		P	09 20 40.1	-0.3
I21K				IAmb		IAmb	09 20 41.3	
	comp=Z,32nm,0.8s							
I21K	**Tanana**	87.55	11	P		P	09 20 40.4	-0.1
	baz=204,SNR=46							
NEA2	**Nenana**	87.55	12	P		P	09 20 39.5	-1.0
	baz=207,SNR=7.7							
O30N	**Mendenhall**	87.56	19	P		P	09 20 41.5	+0.8
	baz=218,SNR=13							
MLY	**Manley**	87.63	11	P		P	09 20 40.1	-0.8
MLY				IAmb		IAmb	09 20 41.0	
	comp=Z,17nm,0.6s							
MLY	**Manley**	87.63	11	P		P	09 20 40.1	-0.8
	baz=205,SNR=39							
ZEA	**Zeya**	87.68	331	*e*P		P	09 20 42.2	+0.8
ZEA				pmax		pmax		
	comp=N,10.0nm,1.1s							
ZEA				pmax		pmax		
	comp=Z,20nm,0.7s							
RIDG	**Independent Ri**	87.68	14	IAmb		IAmb	09 20 42.4	
	comp=Z,34nm,1.3s							
RIDG	**Independent Ri**	87.68	14	P		P	09 20 41.3	0.0
	baz=210,SNR=14							
AHID	**Auburn Hatcher**	87.69	43	P		P	09 20 43.1	+1.2
AHID				IAmb		IAmb	09 20 44.2	
	comp=Z,24nm,1.5s							
DOT	**Dot Lake**	87.79	14	P		P	09 20 41.9	+0.2
DOT				IAmb		IAmb	09 20 42.9	
	comp=Z,21nm,1.0s							
N30M	**Aishikik Lake**	87.81	18	P		P	09 20 42.3	+0.5
	baz=218							
HDA	**Harding Lake**	87.81	13	P		P	09 20 41.5	-0.3
HDA	**Harding Lake**	87.81	13	P		P	09 20 41.5	-0.3
	baz=209,SNR=47							
L27K	**Beaver Creek,**	87.83	15	IAmb		IAmb	09 20 43.3	
	comp=Z,13nm,1.0s							
L27K	**Beaver Creek,**	87.83	15	P		P	09 20 42.3	+0.4
	baz=213,SNR=13							
DLBC	**Dease Lake**	87.83	23	P		P	09 20 42.4	+0.3

SNAA Sanae 88.11 178 PcP **P** 09 20 43.5 +0.2
SNAA Sanae 88.11 178 P **P** 09 20 42.7 -0.6
SNAA Sanae 88.11 178 *ce*P **P** 09 20 42.1 -1.2
SNAA pmax pmax
comp=Z,9.0nm,1.7s
S22A 4UR Ranch, Cre 88.12 49 P **P** 09 20 45.3 +1.0
baz=242,SNR=11
ILAR Eielson Array 88.14 13 P **P** 09 20 42.7 -0.6
comp=Z,16nm,1.0s,baz=228,slow=5.6,SNR=7.4
ILAR pP **pP** 09 22 40.9 +1.3
comp=Z,1.8nm,0.9s,baz=212,slow=5.0,SNR=5.0
comp=Z,16nm,1.0s
REDW Red Top Meadow 88.15 42 P **P** 09 20 44.6 +0.5
REDW IAmb IAmb 09 20 46.4
comp=Z,28nm,1.2s
TPAW Teton Pass 88.16 42 P **P** 09 20 45.8 +1.6
TPAW IAmb IAmb 09 20 46.5
comp=Z,10nm,1.0s
P33M Teslin, Yukon 88.17 21 P **P** 09 20 44.6 +1.0
P33M IAmb IAmb 09 20 45.3
comp=Z,8.3nm,0.8s
P33M Teslin, Yukon 88.17 21 P **P** 09 20 44.2 +0.6
baz=221,SNR=6.3
N31M Braeburn, Yuko 88.22 19 P **P** 09 20 44.4 +0.6
N31M IAmb IAmb 09 20 45.5
comp=Z,24nm,0.9s
N31M Braeburn, Yuko 88.22 19 P **P** 09 20 44.5 +0.8
baz=219,SNR=8.2
VNA3 Neumayer Olymp 88.23 176 PcP **P** 09 20 44.3 +0.5
VNA3 Neumayer Olymp 88.23 176 pP pP 09 22 39.5 -0.5
SNOW Snow King Moun 88.26 42 P **P** 09 20 46.0 +1.3
SNOW IAmb IAmb 09 20 47.0
comp=Z,21nm,1.0s
O20A White River Ci 88.27 46 IAmb IAmb 09 20 46.8
comp=Z,35nm,1.8s
O20A White River Ci 88.27 46 P **P** 09 20 45.4 +0.6
baz=241
XAN Xi'an 88.31 307 ⇓P **P** 09 20 45.9 +1.1
XAN pmax pmax
comp=Z,87nm,0.9s
J25K Salcha River, 88.33 13 P **P** 09 20 44.2 0.0
J25K IAmb IAmb 09 20 45.1
comp=Z,16nm,0.8s
J25K Salcha River, 88.33 13 P **P** 09 20 44.1 -0.2
baz=210,SNR=24
POKR Poker Plat Res 88.34 12 P **P** 09 20 43.5 -0.7
baz=208
MOOW Moose Ponds 88.42 42 IAmb IAmb 09 20 47.5
comp=Z,23nm,1.8s
LOHW Long Hollow 88.44 42 IAmb IAmb 09 20 47.5
comp=Z,26nm,1.5s
LRM Limekiln Ridge 88.44 39 P **P** 09 20 46.4 +1.0
H23K Yukon River 88.57 11 P **P** 09 20 44.4 -0.8
baz=206,SNR=12
K27K Chicken 88.58 15 P **P** 09 20 46.0 +0.7
K27K IAmb IAmb 09 20 47.2
comp=Z,23nm,0.9s
K27K Chicken 88.58 15 P **P** 09 20 46.2 +0.8
baz=213
FLWY Flagg Ranch 88.61 42 P **P** 09 20 47.5 +1.3
FLWY IAmb IAmb 09 20 48.9
comp=Z,22nm,0.9s
J26L Joseph Creek 88.63 14 P **P** 09 20 45.7 0.0
J26L Joseph Creek 88.63 14 P **P** 09 20 46.4 +0.8
baz=212,SNR=52
YPP Pitchstone Pla 88.64 41 IAmb IAmb 09 20 49.4
comp=Z,16nm,1.7s
VNA2 Neumayer--Watz 88.67 177 PcP **PcP** 09 20 46.6 -0.4
baz=186,slow=4.0
BW06 Boulder Array 88.68 43 P **P** 09 20 46.9 +0.2
BW06 IAmb IAmb 09 20 48.2
comp=Z,9.5nm,0.8s
BW06 Boulder Array 88.68 43 P **P** 09 20 47.1 +0.5
baz=240
PD31 Pinedale Array 88.68 43 P **P** 09 20 47.4 +0.7
PD31 IAmb IAmb 09 20 48.2
comp=Z,9.0nm,0.8s
PDAR Pinedale Array 88.68 43 P **P** 09 20 47.1 +0.5
comp=Z,6.8nm,0.7s,baz=217,slow=2.8,SNR=50
PDAR pP **pP** 09 22 44.4 +1.4
comp=Z,0.2nm,0.4s,baz=243,slow=4.0,SNR=2.0
PDAR PKKPbc **PKKPbc** 09 38 24.6 -0.8
comp=Z,0.4nm,0.7s,baz=104,slow=4.7,SNR=4.4
comp=Z,6.8nm,0.7s
PDAR Pinedale Array 88.68 43 P **P** 09 20 46.8 +0.2
SMCO Snowmass 88.68 47 P **P** 09 20 48.1 +1.1
SMCO IAmb IAmb 09 20 49.0
comp=Z,14nm,1.4s
YHL Hebgen Lake 88.70 41 P **P** 09 20 48.4 +1.7
YHL IAmb IAmb 09 20 49.7
comp=Z,27nm,0.9s
YMR Madison River 88.74 41 IAmb IAmb 09 20 49.8
comp=Z,17nm,0.8s
M30M Minto, Yukon 88.78 18 P **P** 09 20 46.8 +0.5
M30M Minto, Yukon 88.78 18 P **P** 09 20 46.8 +0.5
baz=218,SNR=45
BOZ Bozeman (W) 88.81 40 P **P** 09 20 48.2 +1.1
BOZ IAmb IAmb 09 20 49.4
comp=Z,18nm,0.9s
BOZ Bozeman (W) 88.81 40 P **P** 09 20 48.2 +1.1
BOZ pmax pmax
comp=Z,18nm,0.9s
BOZ Bozeman (W) 88.81 40 P **P** 09 20 48.2 +1.1
baz=239,SNR=37
NVL N'lazarevskaya 88.84 183 ⇑*i*P **P** 09 20 46.2 -0.4
NVL pmax pmax
comp=Z,21nm,0.9s
H17A Grant Village 88.85 41 IAmb IAmb 09 20 50.8
comp=Z,15nm,0.9s
H17A Grant Village 88.85 41 P **P** 09 20 49.8 +2.4
baz=240,SNR=15
H24K Noodor Dome 88.89 12 P **P** 09 20 46.5 -0.3
H24K Noodor Dome 88.89 12 P **P** 09 20 45.3 -1.5
baz=208
VNA1 Neumayer--Stat 88.90 176 PcP **PcP** 09 20 47.6 -0.3
BILL Bilibino 88.96 354 P **P** 09 20 46.8 -0.2
BILL IAmb IAmb 09 20 49.3
comp=Z,11nm,0.8s
BILL Bilibino 88.96 354 *ce*P **P** 09 20 46.5 -0.5
BILL *e* 09 24 21.9
BILL pmax pmax
comp=Z,13nm,0.8s
LKWY Lake 89.04 41 IAmb IAmb 09 20 51.9
comp=Z,15nm,0.9s
SDCO Great Sand Dun 89.06 49 P **P** 09 20 49.3 +0.8
baz=243,SNR=5.7
PLCA Paso Flores 89.13 133 P **P** 09 20 49.1 +0.4
comp=Z,2.7nm,1.0s,baz=243,slow=1.8,SNR=3.3
comp=Z,2.7nm,1.0s
M31M Drury Creek, Y 89.19 19 P **P** 09 20 48.6 +0.4
M31M IAmb IAmb 09 20 49.3
comp=Z,10nm,0.8s
M31M Drury Creek, Y 89.19 19 P **P** 09 20 48.3 0.0
baz=220,SNR=12
DAWY Dawson 89.27 16 P **P** 09 20 48.8 +0.2
DAWY Dawson 89.27 16 P **P** 09 20 49.2 +0.5
baz=216,SNR=37
WALA Waterton Lakes 89.32 36 P **P** 09 20 49.5 +0.2
WALA IAmb IAmb 09 20 51.1
comp=Z,12nm,0.8s
MSTX Muleshoe 89.41 53 P **P** 09 20 50.8 +0.8
MSTX IAmb IAmb 09 20 51.8
comp=Z,10nm,0.8s
MSTX Muleshoe 89.41 53 P **P** 09 20 50.8 +0.8
baz=245
HHC Hu-ho-hao-te 89.49 314 *e*P **P** 09 20 51.7 +1.4
HHC pmax pmax
comp=Z,39nm,1.0s
HHC pmax pmax
comp=Z,220nm,6.1s
FARO Faro, Yukon 89.53 19 P **P** 09 20 50.0 +0.2
baz=221,SNR=5.5
T25A Trinidad 89.57 50 P **P** 09 20 51.6 +0.7
baz=244
KMI Kunming 89.57 297 ⇓P **P** 09 20 52.8 +1.7
KMI pmax pmax
comp=Z,46nm,1.0s
RWWY Rawlins 89.69 45 P **P** 09 20 52.3 +0.9
RWWY IAmb IAmb 09 20 53.1
comp=Z,16nm,1.0s
COLD Coldfoot 89.72 10 P **P** 09 20 51.3 +0.7
COLD IAmb IAmb 09 20 52.2
comp=Z,21nm,1.0s
COLD Coldfoot 89.72 10 P **P** 09 20 51.0 +0.5
baz=206
833A Chaparral WMA, 89.75 60 P **P** 09 20 52.1 +0.5
833A IAmb IAmb 09 20 53.7
comp=Z,8.1nm,0.9s
833A Chaparral WMA, 89.75 60 P **P** 09 20 52.4 +0.8
baz=247
RLMT Red Lodge 90.02 41 P **P** 09 20 53.7 +0.9
RLMT IAmb IAmb 09 20 55.2
comp=Z,11nm,0.9s
RLMT Red Lodge 90.02 41 P **P** 09 20 54.0 +1.3
baz=241,SNR=9.1
GCMT Greycliff 90.10 40 P **P** 09 20 54.8 +1.7
N23A Red Feather La 90.17 46 IAmb IAmb 09 20 56.5
comp=Z,9.2nm,1.0s
N23A Red Feather La 90.17 46 P **P** 09 20 54.8 +1.2
baz=243
JCT Junction City 90.27 58 P **P** 09 20 54.3 +0.2
JCT Junction City 90.27 58 P **P** 09 20 54.3 +0.2
JCT pmax pmax
comp=Z,5.0nm,0.9s
JCT Junction City 90.27 58 P **P** 09 20 54.2 +0.2
baz=246
CM31 Chiang Mai Arr 90.36 289 P **P** 09 20 56.1 +1.5
CMAR Chiang Mai Arr 90.36 289 P **P** 09 20 55.0 +0.3
comp=Z,20nm,0.8s,baz=114,slow=3.0,SNR=84
CMAR PP **PP** 09 24 39.0 +0.3
comp=Z,1.2nm,0.3s,baz=120,slow=5.3,SNR=4.1
comp=Z,20nm,0.8s
CMAR Chiang Mai Arr 90.36 289 P **P** 09 20 56.0 +1.3
CMAR Chiang Mai Arr 90.36 289 P **P** 09 20 56.0 +1.3
BTO Baotou 90.43 314 *e*P **P** 09 20 55.4 +0.8
MMPY Shonkan Lake, 90.47 20 P **P** 09 20 55.0 +0.9
baz=223,SNR=14
CHTO Chiang Mai 90.49 290 P **P** 09 20 56.6 +1.4
CHTO Chiang Mai 90.49 290 P **P** 09 20 56.6 +1.4
CHTO pmax pmax
comp=Z,34nm,0.8s
CHTO Chiang Mai 90.49 290 P **P** 09 20 56.4 +1.1
comp=Z,36nm,1.0s
K22A Casper 90.59 44 P **P** 09 20 55.4 0.0
K22A IAmb IAmb 09 20 57.2
comp=Z,10nm,0.8s
K22A Casper 90.59 44 P **P** 09 20 56.2 +0.8
baz=242
I29M Ogilvie Camp, 90.60 15 P **P** 09 20 54.7 0.0
I29M IAmb IAmb 09 20 55.6
comp=Z,18nm,1.1s
I29M Ogilvie Camp, 90.60 15 P **P** 09 20 54.6 -0.2
baz=216,SNR=18
AMTX Amarillo 90.61 53 P **P** 09 20 55.8 +0.3
AMTX Amarillo 90.61 53 P **P** 09 20 56.1 +0.5
baz=245
PHWY Pilot Hill 90.69 46 P **P** 09 20 56.2 +0.2
PZH PanZhiHua 90.92 298 P **P** 09 20 58.1 +0.8
PZH pmax pmax
comp=Z,20nm,1.2s
PZH pmax pmax
comp=Z,80nm,4.9s
BMAR Burnt Mountain 90.93 12 P **P** 09 20 57.1 +0.9
CD2 Chengdu 90.98 303 P **P** 09 20 58.6 +1.3
CD2 pmax pmax
comp=Z,10.0nm,0.9s
TOLK Toolik Lake Re 91.10 10 P **P** 09 20 57.7 +0.8
TOLK IAmb IAmb 09 20 58.3
comp=Z,18nm,1.2s
TOLK Toolik Lake Re 91.10 10 P **P** 09 20 56.8 -0.1
baz=206
EGMT Eagleton 91.15 38 P **P** 09 20 58.5 +0.8
EGMT IAmb IAmb 09 20 59.6
comp=Z,7.2nm,1.0s
EGMT Eagleton 91.15 38 P **P** 09 20 58.3 +0.6
baz=240
ABTX Abilene, Hawle 91.25 56 P **P** 09 20 56.2 -2.3
ABTX IAmb IAmb 09 23 00.9
comp=Z,29nm,1.4s
ABTX Abilene, Hawle 91.25 56 P **P** 09 20 59.3 +0.8
baz=246
KSCO Kaye Shedlock' 91.64 49 P **P** 09 20 59.5 -0.8
KSCO IAmb IAmb 09 21 03.0
comp=Z,30nm,1.4s
KSCO Kaye Shedlock' 91.64 49 P **P** 09 21 01.3 +1.0
baz=245
EPYK Eagle Plains 91.80 15 IAmb IAmb 09 21 01.3
comp=Z,17nm,0.8s
EPYK Eagle Plains 91.80 15 P **P** 09 21 00.3 0.0
baz=218,SNR=18
EDM Edmonton 91.86 33 P **P** 09 21 00.8 0.0
EDM IAmb IAmb 09 21 01.9
comp=Z,23nm,1.2s
EDM Edmonton 91.86 33 P **P** 09 21 00.8 0.0
EDM pmax pmax
comp=Z,23nm,1.2s
YAK Yakutsk 92.13 338 *ce*P **P** 09 21 00.7 -1.0
YAK pmax pmax
comp=Z,34nm,0.8s
LAO LASA Array 92.63 41 P **P** 09 21 05.0 +0.5
LAO IAmb IAmb 09 21 07.1
comp=Z,8.9nm,0.8s
LAO LASA Array 92.63 41 P **P** 09 21 05.8 +1.3
baz=243
RSSD Black Hills 92.87 44 P **P** 09 21 05.9 0.0
RSSD IAmb IAmb 09 21 07.4
comp=Z,14nm,1.1s
RSSD Black Hills 92.87 44 P **P** 09 21 05.9 0.0
RSSD pmax pmax
comp=Z,14nm,1.1s
RSSD Black Hills 92.87 44 P **P** 09 21 06.3 +0.3
baz=244
LZH Lanzhou 92.94 307 ⇑P **P** 09 21 07.8 +1.4
LZH pP pwP 09 23 07.0 +0.6
LZH S **S** **09 31 25.1 -1.7**
LZH pmax pmax
comp=Z,32nm,1.5s
LZH pmax pmax
comp=Z,94nm,5.4s
HKT Hockley 93.24 59 *i*P **P** 09 21 07.0 -0.6
HKT pmax pmax
comp=Z,7.0nm,1.8s
GO04 Tololo Observa 93.59 124 P **P** 09 21 07.7 -2.0
CBKS Cedar Bluff 93.62 50 P **P** 09 21 09.9 +0.6
baz=247
INK Inuvik 94.09 15 P **P** 09 21 09.2 -1.3
comp=Z,7.9nm,0.9s,baz=226,slow=6.0,SNR=13
comp=Z,7.9nm,0.9s
INK Inuvik 94.09 15 IAmb IAmb 09 21 11.2
comp=Z,11nm,1.0s
INK Inuvik 94.09 15 P **P** 09 21 10.4 -0.2
baz=221
R32A Long Quarter, 94.21 51 P **P** 09 21 11.8 -0.1
R32A IAmb IAmb 09 21 14.4
comp=Z,15nm,0.9s
DGMT Dagmar 94.65 40 IAmb IAmb 09 21 15.7
comp=Z,13nm,0.8s
DGMT Dagmar 94.65 40 P **P** 09 21 14.5 +0.9
baz=244
ULN Ulaanbaatar 95.48 319 P **P** 09 21 17.2 -0.4
ULN IAmb IAmb 09 21 18.4
comp=Z,21nm,1.8s
ULN Ulaanbaatar 95.48 319 *ce*P **P** 09 21 16.2 -1.4
ULN pmax pmax
comp=Z,11nm,1.7s
BGNE Belgrade 95.74 48 P **P** 09 21 19.2 +0.4
baz=248
SONM Songino Array 95.87 319 P **P** 09 21 18.3 -1.0
comp=Z,1.3nm,0.6s,baz=148,slow=5.0,SNR=5.0
SONM PP **PP** 09 25 17.0 -3.7
comp=Z,2.0nm,1.0s,baz=116,slow=6.6,SNR=5.7
comp=Z,1.3nm,0.6s
SONM Songino Array 95.87 319 IAmb IAmb 09 21 20.1
comp=Z,10nm,1.6s
YKA Yellowknife Ar 96.29 25 P **P** 09 21 18.7 -2.0
comp=Z,1.7nm,0.8s,baz=239,slow=4.5,SNR=5.7
comp=Z,1.7nm,0.8s
GTA Gaotai 97.14 309 *e*P Pdif 09 21 25.9 +0.7
GTA pmax pmax
comp=Z,5.0nm,1.2s
C36M Paulatuk 97.26 17 P Pdif 09 21 24.8 0.0
baz=230
ECSD EROS Data Cent 97.64 46 P **P** 09 21 27.7 +0.4
baz=249
TIXI Tiksi 98.72 345 *ce*P Pdif 09 21 30.2 -1.1
TIXI pmax pmax
comp=Z,5.0nm,1.1s
GOMU GeErMu 99.83 305 Pdif **Pdif** 09 21 39.3 +1.7
GOMU AMB AMB
comp=Z,78nm,5.6s
ZALV Zalesovo Beam 110.60 321 PKiKP **PKiKP** 09 26 20.5 -1.0
comp=Z,4.3nm,0.6s,baz=157,slow=0.9,SNR=16

MK31 Makanchi Array 111.34 313 *i* PKiKP **PKiKP** 09 26 21.9 -1.3
MKAR Makanchi Array 111.34 313 PKiKP **PKiKP** 09 26 22.1 -1.1
comp=Z,4.4nm,0.6s,baz=80,slow=0.2,SNR=37
MAKZ Makanchi 111.56 313 ⇑PKiKP **PKiKP** 09 26 22.8 -0.8
KURK Kurchatov 114.12 317 PKiKP PKPdf 09 26 27.2 -1.1
KURK Kurchatov 114.12 317 *i* PKiKP PKPdf 09 26 27.4 -0.9
KURBB Kurchatov Arra 114.17 317 PKiKP PKPdf 09 26 27.4 -1.0
comp=Z,5.8nm,0.7s,baz=95,slow=1.9,SNR=54
KURBB SKiKP **SKiKP** **09 29 14.2 +0.6**
comp=Z,1.4nm,0.8s,baz=100,slow=2.0,SNR=5.0
BOOM Boomskoye usch 115.39 308 **PKPdf** 09 26 31.1 -0.2
BOOM Boomskoye usch 115.39 308 PKiKP **PKPdf** 09 26 31.1 -0.2
TKM2 Tokmak 2 115.68 309 PKiKP **PKPdf** 09 26 30.0 -1.9
AAK Ala-Archa 116.47 308 *c* PKiKP **PKPdf** 09 26 32.4 -0.9
AAK pmax pmax
comp=Z,9.0nm,2.5s
OTUK Ortayu 118.16 315 PKiKP **PKPdf** 09 26 34.6 -1.6
BTK Batken 119.08 305 PKPdf **PKPdf** 09 26 38.0 -0.3
BTK Batken 119.08 305 PKiKP **PKPdf** 09 26 38.0 -0.3
BRVK Borovoye 119.25 320 PKPdf **PKPdf** 09 26 37.5 -0.6
BRVK Borovoye 119.25 320 *c* PKiKP **PKPdf** 09 26 37.1 -1.0
BRVK pmax pmax
comp=Z,17nm,1.0s
GAR Garm 119.41 304 **PKPdf** 09 26 39.0 0.0
KK31 Karatay Array 119.41 309 **PKPdf** 09 26 37.9 -0.9
KK31 Karatay Array 119.41 309 PKiKP **PKPdf** 09 26 37.9 -0.9
KKAR Karatay Array 119.41 309 PKPdf **PKPdf** 09 26 38.0 -0.8
KKAR Karatay Array 119.41 309 **PKPdf** 09 26 37.9 -0.8
KKAR Karatay Array 119.41 309 PKiKP **PKPdf** 09 26 38.0 -0.8
KBL Kabul 120.10 299 PKPdf **PKPdf** 09 26 39.7 -1.0
KBL Kabul 120.10 299 PKiKP **PKPdf** 09 26 39.7 -1.0
SPITS Spitsbergen Ar 121.78 357 PKP **PKPdf** 09 26 40.8 -1.6
comp=Z,9.5nm,0.8s,baz=86,slow=5.9,SNR=6.0
SUMG Summit 122.98 14 **PKPdf** 09 26 45.2 -0.1
SUMG Summit 122.98 14 PKiKP **PKPdf** 09 26 45.2 -0.1
SUMG Summit 122.98 14 *i* P **PKPdf** 09 26 45.0 -0.3
NUUK Nuuk 123.55 25 *i* P **PKPdf** 09 26 45.2 -0.8
SVE Sverdlovsk 124.07 326 *e*PKiKP **PKPdf** 09 26 47.3 0.0
SVE pmax pmax
comp=Z,20nm,1.0s
DY2G Dye2 124.50 21 *i* P **PKPdf** 09 26 46.6 -1.6
DBG Daneborg 124.69 7 *i* P **PKPdf** 09 26 46.4 -1.6
ICESG Greenland Ices 125.01 17 *i* P **PKPdf** 09 26 47.1 -2.0
ARU Arti 125.28 326 **PKPdf** 09 26 49.5 -0.1
ARU Arti 125.28 326 *i* PKiKP **PKPdf** 09 26 49.2 -0.4
ARU 09 28 49.9
ARU 09 33 08.9
ARU SS SS 09 45 05.8 +1.0
HRA Herat 125.70 298 **PKPdf** 09 26 49.9 -1.5
AB31 Akbulak array 126.22 317 *i* PKiKP **PKPdf** 09 26 50.9 -0.7
ABKAR Akbulak array 126.22 317 **PKPdf** 09 26 50.6 -1.0
IVI Ivigtut 126.30 28 *i* P **PKPdf** 09 26 48.7 -2.6
BOSA Boshof 126.48 205 PKP **PKPdf** 09 26 52.7 -0.3
comp=Z,5.9nm,0.9s,baz=167,slow=5.6,SNR=8.0
AKTO Aktyubinsk 127.19 318 PKP **PKPdf** 09 26 52.8 -0.7
comp=Z,7.9nm,0.8s,baz=85,slow=1.5,SNR=21
SOEG Soedalen 127.79 15 *i* P **PKPdf** 09 26 51.5 -2.6
SCO Scoresbysund 127.85 10 **PKPdf** 09 26 53.8 -0.3
SCO Scoresbysund 127.85 10 PKiKP **PKPdf** 09 26 53.8 -0.3
SCO Scoresbysund 127.85 10 *i* P **PKPdf** 09 26 52.5 -1.6
ARCES ARCESS Array B 128.87 350 PKP **PKPdf** 09 26 54.4 -1.7
comp=Z,6.7nm,0.7s,baz=29,slow=2.1,SNR=19
ARCES ARCESS Array B 128.87 350 **PKPdf** 09 26 55.4 -0.7
ARCES ARCESS Array B 128.87 350 PKiKP **PKPdf** 09 26 55.4 -0.7
GEYT Alibeck 128.98 303 PKhKP PKPpre 09 26 44.6
comp=Z,2.2nm,0.6s,baz=140,slow=1.2,SNR=2.2
GEYT PKP **PKPdf** 09 26 57.0 -0.3
comp=Z,5.5nm,0.7s,baz=117,slow=0.3,SNR=6.8
KIRV Kirov 129.02 330 *i* PKiKP **PKPdf** 09 26 56.0 -0.6
PRGR Permogore 129.07 335 *e*PKiKP **PKPdf** 09 26 55.0 -1.6
PRGR pmax pmax
comp=Z,12nm,0.6s
UOSS Minazif 130.33 286 **PKPdf** 09 26 59.7 -0.5
KLMR Klimovskoe 131.90 337 *e*PKiKP **PKPdf** 09 27 01.5 -0.5
KLMR *e* 09 29 29.6
KLMR Klimovskoe 131.90 337 *e*PKPdf **PKPdf** 09 27 01.5 -0.5
KLMR *e*PP **PP** 09 29 29.7 -1.1
BELG Belogornoye 132.69 324 *i* PKiKP **PKPdf** 09 27 02.5 -1.3
FINES FINESS Array B 135.75 344 PKhKP PKPpre 09 26 56.8
comp=Z,0.9nm,0.5s,baz=93,slow=4.2,SNR=1.9
FINES PKP sPdif 09 27 07.1 -0.1
comp=Z,5.3nm,0.7s,baz=42,slow=4.3,SNR=5.9
FINES SKiKP **SKPbc** **09 29 51.5 +0.5**
comp=Z,0.9nm,0.6s,baz=8.5,slow=2.8,SNR=1.7
FINES FINESS Array B 135.75 344 **PKPdf** 09 27 07.7 -1.5
FINES FINESS Array B 135.75 344 PKiKP **PKPdf** 09 27 07.7 -1.5
VORR Voronezh 137.58 326 *e*PKHKP PKPpre 09 27 03.9
VORR pmax pmax
comp=Z,40nm,0.3s
ZEI Tsey 138.68 312 *i* PKiKP **PKiKP** 09 27 16.7 -1.1
ZEI pmax pmax
comp=Z,6.0nm,1.0s
GNI Garni 138.88 308 PKiKP **PKPdf** 09 27 16.1 +0.2
NB2 NORSAR Subarra 138.91 353 PKP PKPdf 09 27 05.4 -10
comp=Z,0.9nm,0.6s,baz=10,slow=3.2
NOA NORSAR Array B 138.91 353 PKhKP PKPpre 09 27 04.3
comp=Z,2.0nm,0.7s,baz=9.2,slow=2.3,SNR=11
NOA PKP **PKPdf** 09 27 13.5 -1.6
comp=Z,0.8nm,0.7s,baz=24,slow=4.3,SNR=6.7
NOA SKiKP **SKPbc** **09 30 01.4 +1.3**
comp=Z,0.9nm,0.8s,baz=6.3,slow=4.0,SNR=4.0
KBZ Khabaz 139.04 314 PKP **PKPdf** 09 27 14.0 -1.8
comp=Z,2.3nm,0.7s,baz=67,slow=6.6,SNR=2.7
KBZ SKiKP **SKiKP** **09 30 03.4 -0.5**
comp=Z,0.5nm,0.3s,baz=120,slow=7.3,SNR=3.6
KIV Kislovodsk 139.09 314 *e*PKiKP **PKPdf** 09 27 15.7 -0.4
KIV pmax pmax
comp=Z,7.0nm,1.0s
SHA1 Shidzhatmaz 139.19 314 *i* PKiKP **PKPdf** 09 27 15.4 -1.1
RAYN Ar Rayn 139.94 283 ⇑PKHKP PKPpre 09 27 09.9
KONO Kongsberg 140.44 354 ⇑PKHKP PKPpre 09 27 10.8
NACGM Naroch 140.89 338 ⇑*e*PKP **PKPdf** 09 27 13.8 -5.0
ANN Anapa 142.15 318 *i* PKiKP **PKPdf** 09 27 22.4 +1.0
ANN pmax pmax
comp=Z,18nm,0.7s
BNGB Bingl 142.22 308 P **PKPdf** 09 27 19.3 -2.6
SUW Suwalki 142.84 340 **PKPdf** 09 27 20.1 -2.2
SUW Suwalki 142.84 340 PKiKP **PKPdf** 09 27 20.1 -2.2
SUW Suwalki 142.84 340 *e*P **PKPdf** 09 27 20.0 -2.2
MAZI Mazidag 142.85 306 P **PKPdf** 09 27 20.7 -2.3
DYBB Diyarbakir 142.94 306 P **PKPdf** 09 27 21.1 -2.0
DEL Delary 142.96 349 *e*P **PKPdf** 09 27 19.1 -3.3
AKASG Malin Array Be 143.06 331 PKhKP PKPpre 09 27 19.8
comp=Z,47nm,0.7s,baz=35,slow=4.5,SNR=235
SVRC Sivrice-ELAZID 143.43 307 P PKPbc 09 27 23.2 +0.5
ILIC ilic-Erzincan 143.61 310 P **PKPdf** 09 27 24.9 +0.6
MUD Monsted U'grnd 143.63 354 *i* P PKPab 09 27 21.4 -0.9
LODK Lodwar 143.66 247 PKPbc PKPbc 09 27 24.5 +0.6
ARPR Arapgir-MALATY 143.90 309 P **PKPdf** 09 27 25.5 +0.6
COP Copenhagen 143.95 350 *i* P PKPbc 09 27 21.3 -2.1
BSD Bornholm Skovb 144.05 348 *e*P PKPbc 09 27 23.5 -0.3
BSD Bornholm Skovb 144.05 348 *i* P PKPbc 09 27 22.3 -1.5
SIM Simferopol' 144.10 320 *d* PKiKP PKPbc 09 27 23.7 -0.6
SIM pmax pmax
comp=Z,164nm,1.0s
RSDY Resadiye-TOKAT 144.14 312 P **PKPdf** 09 27 25.7 +0.6
LLD Lille Linde 144.32 350 *i* P PKPbc 09 27 23.3 -1.3
SVSK Karacayir 144.56 311 P **PKPab** 09 27 27.1 +0.7
DARE Darende-Malaty 144.71 309 P **PKPab** 09 27 27.9 +0.7
EKA Eskdalemuir Ar 144.87 5 PKP **PKPdf** 09 27 25.7 -0.1
comp=Z,18nm,0.7s,baz=349,slow=3.2,SNR=77
EKA pPKP **pPKPdf** **09 29 32.9 +2.7**
comp=Z,1.5nm,0.7s,baz=352,slow=3.6,SNR=3.9
ESK Eskdalemuir 144.88 5 PKPbc 09 27 26.1 -0.2
ESK Eskdalemuir 144.88 5 PKiKP PKPbc 09 27 26.1 -0.3
DIKM Dikmen 145.02 315 ⇑P **PKPdf** 09 27 26.6 +0.1
DIKM Dikmen 145.02 315 P **PKPab** 09 27 28.3 +0.1
MBAR Mbarara 145.22 237 *i* PKP2 **PKPbc** 09 27 29.1 +0.2
GKP Gorka Klasztor 145.23 344 *e*P **PKPbc** 09 27 27.6 +0.2
SORM Soroca 145.27 329 ⇑P **PKPbc** 09 27 27.7 0.0
SORM Soroca 145.27 329 ⇑PKP2 **PKPbc** 09 27 27.7 0.0
SARI SarD1z-Kayseri 145.55 309 P **PKPbc** 09 27 29.8 +0.6
BZK Bozkurt 145.70 316 ⇑P **PKPbc** 09 27 29.4 +0.2
BZK Bozkurt 145.70 316 P **PKPbc** 09 27 28.8 -0.4
BZK Bozkurt 145.70 316 **PKPbc** 09 27 28.9 -0.4
BNN Bunyan 145.80 310 P **PKPbc** 09 27 30.0 +0.2
BNN Bunyan 145.80 310 **PKPbc** 09 27 30.2 +0.4
KIS Kishinev 145.81 327 *e*PKiKP **PKPbc** 09 27 29.0 -0.4
KIS pmax pmax
comp=Z,90nm,0.7s
YOZ Yozgat 145.85 311 P **PKPbc** 09 27 30.2 +0.3
MILM Milestii Mici 145.87 327 ⇓*i* PKP **PKPbc** 09 27 28.9 -0.6
comp=Z,150nm,1.6s

MILM Milestii Mici 145.87 327 ⇑P **PKPbc 09 27 29.1 -0.4**
MILM Milestii Mici 145.87 327 ⇑PKIKP **PKPbc 09 27 29.1 -0.4**
LVV L'vov 145.94 335 *e*PKP2 **PKPbc 09 27 29.5 -0.1**
CORM Corum 146.10 313 P **PKPbc 09 27 31.2 +0.6**
DSB Dublin 146.53 9 **PKPbc 09 27 30.7 -0.4**
VASR Vaslui 146.57 327 ⇑P **PKPbc 09 27 31.8 +0.3**
YAYL Yayladag 146.60 305 P **PKPbc 09 27 32.7 +0.6**
CANT Cankiri 146.60 314 P **PKPbc 09 27 32.1 +0.2**
CMRD Camardi-Nigde 146.87 308 P **PKPbc 09 27 33.1 +0.3**
VLDR Vladesti 146.96 326 ⇑P **PKiKP 09 27 33.5 -0.9**
BRTR Keskin Array B 146.99 313 PKPbc **PKPbc 09 27 33.0 0.0**
comp=Z,16nm,0.7s,baz=64,slow=2.9,SNR=49
BRTR pPKPbc pPKPab 09 29 36.7 +0.8
comp=Z,2.6nm,0.8s,baz=118,slow=2.1,SNR=3.6
BRTR Keskin Array B 146.99 313 P **PKPbc 09 27 32.5 -0.6**
BRTR Keskin Array B 146.99 313 PKPbc **PKPbc 09 27 32.9 -0.2**
BUR08 Bucovina Ar. S 147.10 331 PKPbc **PKPbc 09 27 33.9 +0.9**
BURAR Bucovina Array 147.12 331 ⇑P **PKPbc 09 27 34.0 +0.9**
BURAR Bucovina Array 147.12 331 PKPbc **PKPbc 09 27 33.9 +0.9**
BURAR Bucovina Array 147.12 331 ⇑PKP2 **PKPbc 09 27 34.0 +0.9**
GHRR 147.16 327 ⇑P **PKiKP 09 27 34.4 -0.5**
OJC Ojcow 147.17 339 **PKPbc 09 27 33.1 +0.1**
OJC Ojcow 147.17 339 PKP2 **PKPbc 09 27 33.1 +0.1**
BIZ Bicaz 147.19 329 ⇑P **PKiKP 09 27 34.2 -0.7**
JURR Jurilovca 147.23 324 ⇑P **PKPbc 09 27 33.2 -0.1**
TESR Tescani 147.23 328 ⇓P **PKPbc 09 27 33.4 +0.1**
KOLS Kolonicke sedl 147.34 335 *e*PKP2 **PKPbc 09 27 34.2 +0.7**
KOLS Kolonicke sedl 147.34 335 *e*PKP **PKPbc 09 27 34.1 +0.6**
KOLS *e* 09 27 37.7
CFR Carcaliu 147.37 325 ⇑P **PKPbc 09 27 34.0 +0.4**
CFR Carcaliu 147.37 325 ⇑PKP2 **PKPbc 09 27 34.0 +0.4**
SERE Sereflikochisa 147.38 311 P **PKPbc 09 27 33.9 -0.2**
PANC Panciu 147.42 327 ⇑P **PKPbc 09 27 34.4 +0.6**
TPGR Topolog 147.42 324 ⇓P **PKPbc 09 27 34.4 +0.5**
ANTO Ankara 147.50 313 **PKPbc 09 27 34.5 +0.3**
ANTO Ankara 147.50 313 PKP2 **PKPbc 09 27 34.6 +0.3**
AFSR Afar-Bala (An 147.51 313 P **PKPbc 09 27 34.7 +0.4**
MERS Mersin 147.51 307 P **PKPbc 09 27 33.5 -0.9**
LOD Lodumlu 147.51 313 P **PKPbc 09 27 34.5 +0.2**
BR231 Keskin MP Arra 147.53 313 **PKPbc 09 27 34.5 +0.1**
UZH Uzhgorod 147.57 335 *e*PKP2 **PKPbc 09 27 34.7 +0.6**
VRI Vrincioaia 147.64 327 ⇓P **PKPbc 09 27 34.0 -0.4**
VRI Vrincioaia 147.64 327 P **PKPbc 09 27 33.7 -0.7**
VRI Vrincioaia 147.64 327 ⇓PKP2 **PKPbc 09 27 34.0 -0.4**
CRVS Cervenica-Dubn 147.68 336 *e*PKP2 **PKPbc 09 27 34.8 +0.4**
CRVS Cervenica-Dubn 147.68 336 *e*PKP **PKPbc 09 27 34.8 +0.4**
CRVS *e* 09 27 39.3
TIRR Tirgusor 147.68 324 ⇑P **PKPbc 09 27 35.0 +0.6**
TIRR Tirgusor 147.68 324 ⇑PKP2 **PKPbc 09 27 35.0 +0.6**
PLOR Plostina 147.69 327 ⇑P **PKPbc 09 27 33.6 -0.9**
PLOR Plostina 147.69 327 ⇑PKIKP **PKPbc 09 27 33.6 -0.9**
BMR Baia Mare 147.83 333 ⇑P **PKPbc 09 27 35.4 +0.6**
BMR Baia Mare 147.83 333 ⇑PKP2 **PKPbc 09 27 35.4 +0.6**
ARCR ARCALIA 147.90 331 ⇑P **PKPab 09 27 40.7 +1.3**
COVR Voineasa-Covas 147.92 328 ⇑P **PKPbc 09 27 34.4 -0.7**
KIZK Mersin 147.94 307 P **PKPbc 09 27 35.1 -0.3**
OSTC Ostas 147.96 343 *e*PKPDF **PKPdf 09 27 31.5 +0.3**
OSTC *e*PKP **PKPbc 09 27 35.7 +0.7**
OSTC *ep*PKP **pPKPab 09 29 41.2 +1.8**
CHVC Chvalec 147.97 343 ⇑*e*PKP **PKPbc 09 27 35.1 0.0**
MANR Mangalia 147.99 323 ⇑P **PKPbc 09 27 34.0 -1.3**
CHBY Cihanbeyli 148.01 311 P **PKPbc 09 27 35.4 -0.3**
CLL Collm 148.03 347 *e*PKHKP PKPpre 09 27 31.0
CLL *i* 09 27 39.6
CLL pmax pmax
comp=Z,100nm,0.9s
CLL pmax pmax
comp=Z,24nm,1.0s
CLL Collm 148.03 347 *e*PKPdf **PKPdf 09 27 31.0 -0.2**
CLL ⇓*i*PKPbc **PKPbc 09 27 35.4 +0.3**
comp=Z,100nm,0.9s
CLL ⇑*i*PKPab **PKPab 09 27 39.6 -0.2**
comp=Z,24nm,1.0s
CLL *ep*PKPab **pPKPab 09 29 40.0 +0.9**
CLL *ex* x 09 29 47.0
CLL *e*SKPdf **SKPdf 09 30 18.0 +3.3**
OKC Ostrava-Krasne 148.03 341 *e*PKP2 **PKPbc 09 27 35.6 +0.4**
OKC Ostrava-Krasne 148.03 341 ⇑*e*PKP **PKPbc 09 27 35.6 +0.4**
OKC *e*PKPAB **PKPab 09 27 40.6 +0.7**
UPC Upice 148.06 343 *e*PKP2 **PKPbc 09 27 35.6 +0.3**
UPC Upice 148.06 343 ⇑*e*PKP **PKPbc 09 27 35.6 +0.3**
DPC Dobruska-Polom 148.11 343 *e*PKP2 **PKPbc 09 27 35.7 +0.2**
DPC Dobruska-Polom 148.11 343 ⇑*e*PKP **PKPbc 09 27 35.7 +0.2**
DPC *e*PKPAB **PKPab 09 27 40.8 +0.5**
DPC *ep*PKP **pPKPab 09 29 41.0 +1.0**
MMLI Mount Malkishu 148.15 299 P **PKiKP 09 27 37.1 -0.3**
NEHR Nehoiu 148.16 327 ⇑P **PKPbc 09 27 35.9 +0.1**
LANS Liptovska Anna 148.19 338 *e*PKP2 **PKiKP 09 27 37.2 +0.2**
LANS Liptovska Anna 148.19 338 *e*PKP **PKiKP 09 27 37.2 +0.2**
UJAP Al Uja 148.23 298 P **PKPbc 09 27 36.6 +0.4**
BRG Berggiesshubel 148.23 346 ⇓*e*PKPf 09 27 32.1
BRG Amp 09 27 33.0
comp=Z,10nm,1.1s
BRG ⇑*i*PKP **PKPbc 09 27 36.2 +0.6**
BRG Amp 09 27 36.8
comp=Z,45nm,0.8s
BRG *e*PKPab **PKPab 09 27 40.9 +0.3**
BRG Amp 09 27 41.6
comp=Z,36nm,0.9s
BRG *ex* x 09 28 22.0
BRG Amp 09 28 23.4
comp=Z,5.3nm,0.8s
BRG *ex* x 09 29 42.4
BRG Amp 09 29 44.9
comp=Z,7.3nm,0.9s
BRG Berggiesshubel 148.23 346 *e*PKHKP PKPpre 09 27 32.0
BRG pmax pmax
comp=Z,10.0nm,1.1s
KRLC Kraliky 148.23 342 *e*PKHKP PKPpre 09 27 32.7
KRLC *e* 09 27 41.2
KRLC Kraliky 148.23 342 *e*PKPDF **PKPdf 09 27 32.7 +1.0**
KRLC ⇑*e*PKP **PKPbc 09 27 35.8 0.0**
KRLC *e*PKPAB **PKPab 09 27 41.2 +0.4**
KRLC *ep*PKP **pPKPab 09 29 43.0 +2.6**
DOPR Dopca 148.23 329 ⇑P **PKiKP 09 27 36.9 -0.2**
ISR Istrita 148.25 326 ⇑P **PKPbc 09 27 36.4 +0.4**
ISR Istrita 148.25 326 ⇑PKP2 **PKPbc 09 27 36.4 +0.4**
MORC Moravsky Berou 148.27 341 ⇑P **PKPdf 09 27 31.6 -0.2**
MORC Moravsky Berou 148.27 341 PKPbc **PKPbc 09 27 36.1 +0.2**
MORC Moravsky Berou 148.27 341 ⇑PKHKP PKPpre 09 27 31.6
MORC Moravsky Berou 148.27 341 *e*PKP **PKPbc 09 27 36.1 +0.2**
MDUB Mudurnu 148.28 316 P **PKPbc 09 27 35.8 -0.5**
MLR Muntele Rosu 148.30 328 ⇑P **PKPbc 09 27 35.4 -0.8**
MLR Muntele Rosu 148.30 328 PKPbc **PKPbc 09 27 35.9 -0.3**
comp=Z,26nm,0.9s,baz=61,slow=2.7,SNR=22
MLR Muntele Rosu 148.30 328 ⇑PKHKP PKPpre 09 27 35.4
AUMIH MIHALICIK 148.39 314 P **PKPbc 09 27 35.8 -0.8**
KECS Kecovo 148.39 337 *e*PKP2 **PKiKP 09 27 37.5 +0.2**
KECS Kecovo 148.39 337 *e*PKP **PKiKP 09 27 37.5 +0.2**
PVCC Panska Ves 148.40 345 *e*PKP2 **PKPbc 09 27 36.2 +0.1**
PVCC Panska Ves 148.40 345 ⇑*e*PKP **PKPbc 09 27 36.2 +0.1**
TEVE Tevekalti-Mers 148.48 307 P **PKPbc 09 27 36.4 -0.5**
CJR Cluj-Napoca 148.52 331 ⇑P **PKiKP 09 27 37.3 -0.4**
CJR Cluj-Napoca 148.52 331 ⇑PKP2 **PKiKP 09 27 37.3 -0.4**
MAUC Maruska 148.55 340 ⇑*e*PKP **PKPbc 09 27 37.1 +0.5**
LADK Ladik-KONYA 148.55 311 P **PKPbc 09 27 36.6 -0.4**
KIZT Kizilcal 148.59 312 P **PKPbc 09 27 36.9 -0.2**
KONT Konya--Tatoy 148.66 310 P **PKPbc 09 27 36.4 -0.8**
BERE Bereket-Mersin 148.68 307 P **PKPbc 09 27 37.4 -0.1**
SAUV Serdivan-Sakar 148.71 317 P **PKPbc 09 27 36.8 -0.4**
GULT Gulveren 148.75 316 P **PKPbc 09 27 36.9 -0.5**
VOIR 148.78 328 ⇑P **PKPbc 09 27 37.7 +0.4**
VOIR 148.78 328 ⇑PKP2 **PKPbc 09 27 37.7 +0.4**
LFK Lefkose 148.83 305 P **PKPbc 09 27 37.4 -0.3**
TEKE Tekeli-Mersin 148.84 307 P **PKPbc 09 27 37.4 -0.2**
DRGR 148.85 332 ⇑P **PKPbc 09 27 36.7 -0.7**
DRGR 148.85 332 ⇑PKHKP PKPpre 09 27 36.7
SRCK Saricakaya, Es 148.88 315 P **PKPbc 09 27 37.4 -0.2**
PRU Pruhonice 148.91 345 *e*PKHKP PKPpre 09 27 37.1
PRU *e* 09 27 43.8
PRU Pruhonice 148.91 345 ⇑*e*PKP **PKPbc 09 27 37.1 -0.3**
PRU *ep*PKPAB **PKPab 09 27 43.8 +0.3**
SILT Sile 148.92 318 P **PKPbc 09 27 37.9 +0.2**
CIFT Ciftceler, Eski 148.92 314 P **PKPbc 09 27 37.8 -0.1**
VRAC Vranov 148.97 342 ⇓P **PKPbc 09 27 38.0 +0.4**
VRAC Vranov 148.97 342 PKPbc **PKPbc 09 27 38.0 +0.4**
comp=Z,23nm,1.0s,baz=50,slow=1.6,SNR=29
VRAC Vranov 148.97 342 ⇓PKP2 **PKPbc 09 27 38.0 +0.4**
VRAC Vranov 148.97 342 *e*PKP **PKPbc 09 27 38.0 +0.4**
VRAC *e* 09 27 44.4
HDMB Hadim 148.98 309 P **PKPbc 09 27 37.8 -0.5**

ARR Arges 149.03 329 ⇑P **PKiKP 09 27 39.2 +0.4**
JAVC Velka Javorina 149.04 340 *e*PKP **PKiKP 09 27 39.1 +0.4**
KOLL Kolacno 149.05 339 *e*PKP **PKiKP 09 27 38.6 -0.1**
BORA Eskisehir 149.07 315 P **PKPbc 09 27 37.9 -0.3**
BORA Eskisehir 149.07 315 **PKPbc 09 27 37.5 -0.7**
PSZ Piszkesteto 149.08 337 ⇑P **PKPdf 09 27 33.6 +0.4**
PSZ Piszkesteto 149.08 337 **PKPbc 09 27 37.7 -0.3**
PSZ Piszkesteto 149.08 337 ⇑PKHKP PKPpre 09 27 33.6
PSZ Piszkesteto 149.08 337 PKP **PKiKP 09 27 38.4 -0.4**
CSS Mathiatis 149.09 305 P **PKPbc 09 27 38.4 +0.1**
CSS Mathiatis 149.09 305 **PKPbc 09 27 38.1 -0.2**
EIL Elat 149.11 294 P **PKiKP 09 27 39.1 -0.3**
NKC Novy Kostel 149.16 347 *e*PKHKP PKPpre 09 27 33.3
NKC Novy Kostel 149.16 347 *e*PKPDF **PKPdf 09 27 33.3 +0.2**
NKC ⇑*e*PKP **PKiKP 09 27 38.5 -0.4**
ADVT Abdulvahap 149.25 317 P **PKPbc 09 27 38.2 -0.3**
KRUC Moravsky 149.25 342 *e*PKP **PKPbc 09 27 38.5 +0.3**
KRUC *e* 09 27 45.4
SEYD Seydisehir-KON 149.27 310 P **PKPbc 09 27 38.7 -0.1**
TREC Trest 149.30 343 *e*PKHKP PKPpre 09 27 38.9
TREC *e* 09 27 45.5
TREC Trest 149.30 343 ⇑*e*PKP **PKiKP 09 27 38.9 -0.3**
TREC *e*PKPAB **PKPab 09 27 45.5 +0.3**
AUBOZ BOZOYUK 149.33 315 P **PKPbc 09 27 38.5 -0.3**
LOT Lotru 149.39 330 ⇓P **PKPbc 09 27 38.3 -0.6**
GAZI Gazipasa 149.40 307 P **PKPbc 09 27 38.8 -0.2**
SMOL Smolenice 149.42 340 *e*PKP2 **PKiKP 09 27 39.6 +0.1**
SMOL Smolenice 149.42 340 *e*PKP **PKiKP 09 27 39.6 +0.1**
SMOL *e* 09 27 46.8
HUMR Humele 149.46 327 ⇑P **PKPbc 09 27 38.6 -0.3**
DEV Deva 149.47 331 ⇑P **PKPbc 09 27 39.1 +0.3**
DEV Deva 149.47 331 ⇑PKHKP PKPpre 09 27 39.1
TRML Termal-Yalova 149.52 317 P **PKPbc 09 27 38.7 -0.4**
MODS Modra-Piesok 149.59 340 *e*PKP2 **PKiKP 09 27 40.1 +0.3**
MODS Modra-Piesok 149.59 340 *e*PKP **PKiKP 09 27 40.1 +0.3**
GEMT Gemlik 149.60 317 P **PKPbc 09 27 38.9 -0.4**
SHUT Suhut-Afyon 149.66 313 P **PKPbc 09 27 39.9 +0.2**
MEM Membach 149.71 355 *d*PKiKP **PKPbc 09 27 39.4 +0.2**
MEM *d*PKPab **PKPab 09 27 46.7 0.0**
SIRR Siria 149.72 333 ⇑P **PKiKP 09 27 40.1 -0.1**
BTNL Ternell 149.72 355 *d*PKPdf **PKPdf 09 27 34.5 +0.5**
BTNL *d*PKiKP **PKPbc 09 27 39.6 +0.2**
BTNL *d*PKPab **PKPab 09 27 45.8 -1.0**
ARMT Armutlu 149.74 318 P **PKPbc 09 27 39.5 -0.2**
ZST Bratislava 149.81 340 *e*PKHKP PKPpre 09 27 40.7
ZST Bratislava 149.81 340 *e*PKP **PKiKP 09 27 40.7 +0.5**
SUTC Sutluce-Ispart 149.84 311 P **PKPbc 09 27 39.2 -1.0**
GZR Gura Zlata 149.90 331 ⇑P **PKPbc 09 27 39.7 -0.3**
GZR Gura Zlata 149.90 331 ⇑PKIKP **PKPbc 09 27 39.7 -0.3**
SNF Seneffe 149.91 358 *d*PKiKP **PKPbc 09 27 39.9 +0.2**
SNF *d*PKPab **PKPab 09 27 47.6 0.0**
KHC Kasperske Hory 149.94 345 PKPdf **PKPdf 09 27 33.9 -0.5**
KHC PKPbc **PKiKP 09 27 40.4 -0.1**
KHC PKPab **PKPab 09 27 48.6 +0.7**
KHC Kasperske Hory 149.94 345 *e*PKHKP PKPpre 09 27 34.6
KHC *e* 09 27 48.0
KHC Kasperske Hory 149.94 345 *e*PKPDF **PKPdf 09 27 34.6 +0.2**
KHC ⇑*e*PKP **PKPbc 09 27 39.9 0.0**
KHC *e*PKPAB **PKPab 09 27 48.0 +0.1**
KHC *ep*PKP **pPKPab 09 29 49.7 +2.8**
BCLA Clavier 149.94 356 *d*PKP **PKPbc 09 27 39.8 0.0**
BCLA *d*PKPab **PKPab 09 27 46.6 -1.1**
TVSB Tavsanli 149.95 315 P **PKPbc 09 27 40.6 +0.3**
BHOU Houvegnez 149.96 355 *d*PKPdf **PKPdf 09 27 34.9 +0.5**
BHOU *d*PKiKP **PKiKP 09 27 40.4 -0.1**
BHOU *d*PKPab **PKPab 09 27 47.8 -0.1**
ISP Isparta 150.02 312 P **PKPbc 09 27 39.5 -1.1**
ISP Isparta 150.02 312 PKPdf **PKPdf 09 27 33.1 -1.9**
ISP **PKPbc 09 27 39.5 -1.1**
ISP PKPab **PKPab 09 27 47.9 -0.8**
ISP Isparta 150.02 312 PKP2 **PKPab 09 27 47.9 -0.8**
CKRC Cesky Krumlov 150.05 344 *e*PKPDF **PKPdf 09 27 34.7 +0.1**
CKRC ⇑*e*PKP **PKPbc 09 27 40.2 0.0**
CKRC *ep*PKP **pPKPab 09 29 49.3 +1.6**
BMRD Maredsous 150.09 357 *d*PKiKP **PKPbc 09 27 40.3 +0.2**
BMRD *d*PKPab **PKPab 09 27 48.0 -0.3**
CSKK Cskako 150.14 338 PKP **PKPbc 09 27 40.6 +0.2**
GEC2 GERESS Array S 150.18 345 **PKPdf 09 27 34.7 -0.2**
GEC2 **PKPbc 09 27 40.8 +0.3**
GEC2 PKPab **PKPab 09 27 47.1 -1.8**
GERES GERESS Array B 150.18 345 PKP **PKPdf 09 27 34.1 -0.7**
comp=Z,1.6nm,0.8s,baz=211,slow=1.7,SNR=14
GERES PKPbc **PKPbc 09 27 40.1 -0.5**
comp=Z,17nm,0.8s,baz=315,slow=0.4,SNR=86
GERES pPKPbc **pPKPbc 09 29 44.1 +0.1**
comp=Z,4.5nm,1.0s,baz=51,slow=6.4,SNR=7.8
GERES GERESS Array B 150.18 345 **PKPdf 09 27 34.1 -0.7**
GERES **PKPbc 09 27 39.9 -0.7**
GERES PKPab **PKPab 09 27 47.5 -1.4**
GEDZ Gediz 150.19 314 P **PKPbc 09 27 41.1 +0.2**
RCHB Rochefort 150.21 356 *d*PKiKP **PKPbc 09 27 40.3 -0.1**
BZS Buzias 150.25 332 ⇑P **PKPdf 09 27 34.9 0.0**
BZS Buzias 150.25 332 ⇑PKIKP **PKPdf 09 27 34.9 0.0**
DOU Dourbes 150.31 357 *d*PKiKP **PKiKP 09 27 40.9 -0.3**
DOU *d*PKPab **PKPab 09 27 48.9 -0.4**
EGYH Egyhazaskeszo 150.41 339 PKP **PKiKP 09 27 41.9 +0.4**
CONA Conrad Observa 150.43 341 *i* P **PKiKP 09 27 41.5 -0.1**
comp=Z,27nm,0.7s,SNR=14
CONA *eP* **PKPab 09 27 50.6 +0.6**
comp=Z,22nm,0.8s
CONA *eP* **pPKPab 09 29 47.4 -2.0**
comp=Z,8.5nm,0.9s
SOP Sopron 150.43 340 PKP **PKiKP 09 27 41.5 0.0**
HERR Herculane 150.45 330 ⇑P **PKPbc 09 27 41.3 +0.1**
RONA Rosalia, Austr 150.50 341 *i* P **PKiKP 09 27 41.7 -0.1**
comp=Z,37nm,0.6s,SNR=17
RONA *eP* **PKPab 09 27 51.4 +1.2**
comp=Z,22nm,1.2s
RONA *eP* **pPKPab 09 29 48.6 -1.0**
comp=Z,7.7nm,0.9s
MRMT Marmara Adasi 150.51 319 P **PKPbc 09 27 40.9 -0.7**
KORT Korkueli 150.52 310 P **PKPbc 09 27 41.5 -0.3**
MPLH Magyarpolny 150.56 339 PKP **PKPbc 09 27 41.5 +0.1**
DJES Djerdap 150.56 330 ⇑P **PKPbc 09 27 40.9 -0.6**
WLF Walferdange 150.63 355 *d*PKPdf **PKPdf 09 27 36.5 +1.1**
WLF *d*PKiKP **PKiKP 09 27 42.4 +0.5**
WLF *d*PKPab **PKPab 09 27 50.8 +0.2**
MDVR Moldovita 150.85 331 ⇑P **PKPbc 09 27 42.4 +0.2**
BALB Balikesir 150.88 317 P **PKPbc 09 27 41.6 -0.7**
MPEP Malo Peshtene 150.92 327 *i* P **PKPbc 09 27 42.0 -0.3**
MOA Molln 150.95 343 *i* P **PKPbc 09 27 42.2 -0.1**
comp=Z,11nm,0.8s,SNR=5.6
MOA *eP* **PKPab 09 27 52.5 +0.4**
comp=Z,23nm,1.2s
MORH Mrgy, Hungar 150.97 336 ⇑P **PKPdf 09 27 36.2 +0.2**
ERIK Erikli-Kesan 151.13 320 P **PKPbc 09 27 41.8 -1.1**
ARSA Arzberg 151.13 341 *e*P **PKiKP 09 27 43.6 +0.5**
comp=Z,10.0nm,1.3s
ARSA *eP* **PKPab 09 27 49.9 -3.0**
comp=Z,6.1nm,0.7s
ARSA *eP* **pPKPab 09 29 50.4 -1.8**
comp=Z,3.1nm,0.7s
PGB Panagyurishte 151.26 325 P **PKPbc 09 27 42.8 -0.4**
BIOA Bad Ischl, Aus 151.26 344 *e*P **PKPbc 09 27 42.7 -0.3**
comp=Z,11nm,0.8s
BIOA *eP* **PKPab 09 27 54.2 +0.8**
comp=Z,32nm,1.0s
BIOA *eP* **pPKPab 09 29 52.3 -0.3**
comp=Z,1.7nm,0.5s
BLKB Belogradchik 151.26 328 ⇑P **PKPdf 09 27 36.2 -0.4**
CAME Cameli-Denizli 151.29 311 P **PKPbc 09 27 43.2 -0.4**
FRGS Fruska Gora 151.38 334 ⇓P **PKPbc 09 27 43.4 0.0**
AKAS Kas 151.39 309 P **PKPbc 09 27 43.3 -0.5**
AKAS Kas 151.39 309 **PKPbc 09 27 43.1 -0.7**
AKAS PKPab **PKPab 09 27 52.6 -2.0**
RDO Rodhopi 151.42 322 PKPdf **PKPdf 09 27 35.4 -1.5**
RDO **PKPbc 09 27 43.2 -0.3**
RDO PKPab **PKPab 09 27 54.9 +0.6**
FETY Fethiye 151.59 310 P **PKPbc 09 27 43.6 -0.5**
VTS Vitosha 151.71 326 ⇑P **PKPbc 09 27 44.3 0.0**
VTS Vitosha 151.71 326 PKPdf **PKPdf 09 27 36.5 -1.0**
VTS **PKPbc 09 27 44.4 +0.1**
VTS PKPab **PKPab 09 27 56.2 +0.5**
VTS Vitosha 151.71 326 ⇑PKIKP **PKPbc 09 27 44.3 0.0**
VTS Vitosha 151.71 326 *i* P **PKiKP 09 27 44.6 0.0**
BFO Black Forest 151.71 352 PKPdf **PKPdf 09 27 36.7 -0.4**
BFO PKPbc **PKiKP 09 27 44.1 -0.1**
BFO PKPab **PKPab 09 27 54.8 -0.5**
BOVS Bovan 151.73 329 ⇑P **PKPbc 09 27 43.2 -0.9**
EZN Ezine 151.75 319 P **PKiKP 09 27 45.1 +0.6**
AYDB Zeytinkoy-Aydi 151.78 314 P **PKiKP 09 27 44.8 0.0**

SOKA Soboth 151.80 341 *i* P **PKPbc 09 27 43.7 -0.6**
comp=Z,14nm,0.9s,SNR=8.5
SOKA *eP* **PKPab 09 27 56.0 +0.2**
comp=Z,17nm,1.1s
SOKA *eP* **pPKPab 09 29 52.3 -2.7**
comp=Z,3.9nm,0.9s
KBA Koelnbreinsper 151.91 344 *eP* **PKPbc 09 27 44.1 -0.5**
comp=Z,15nm,0.8s
KBA *eP* **PKPab 09 27 57.4 +1.0**
comp=Z,17nm,0.7s
KBA *eP* **pPKPab 09 29 53.5 -1.8**
comp=Z,5.5nm,0.7s
ECH Echery 151.97 353 PKPdf **PKPdf 09 27 36.1 -1.3**
ECH **PKPbc 09 27 44.0 -0.5**
ECH PKPab **PKPab 09 27 56.1 -0.3**
WATA Walderalm 152.09 346 *eP* **PKPbc 09 27 44.6 -0.4**
comp=Z,21nm,1.1s
WATA *eP* **PKPab 09 27 57.4 +0.3**
comp=Z,47nm,1.8s
WATA *eP* **pPKPbc 09 29 51.6 +3.0**
comp=Z,3.0nm,0.4s
OBKA Obir 152.09 342 *eP* **PKPbc 09 27 44.6 -0.4**
comp=Z,8.7nm,0.7s
OBKA *eP* **PKPab 09 27 57.1 0.0**
comp=Z,10nm,0.8s
RETA Reutte 152.12 348 *eP* **PKPbc 09 27 44.7 -0.3**
comp=Z,6.2nm,0.8s
RETA *eP* **PKPab 09 27 57.1 +0.1**
comp=Z,15nm,1.0s
RETA *eP* **pPKPab 09 29 53.9 -1.8**
comp=Z,3.7nm,1.1s
TURN Turunc 152.12 311 P **PKPbc 09 27 45.1 -0.1**
WTTA Wattenberg 152.14 346 *i* P **PKPbc 09 27 45.1 -0.1**
comp=Z,28nm,1.0s,SNR=5.2
WTTA *eP* **PKPab 09 27 57.7 +0.3**
comp=Z,25nm,1.1s
WTTA *eP* **pPKPbc 09 29 51.1 +2.2**
comp=Z,9.6nm,0.8s
DIVS Divibare 152.15 332 **PKPdf 09 27 36.4 -1.5**
DIVS PKPbc **PKPbc 09 27 44.9 -0.3**
DIVS PKPab **PKPab 09 27 57.0 -0.5**
MOTA Moosalm 152.18 347 *eP* **PKPdf 09 27 37.8 -0.2**
comp=Z,7.1nm,0.8s
MOTA *eP* **PKPbc 09 27 44.7 -0.6**
comp=Z,15nm,0.8s
MOTA *eP* **PKPab 09 27 57.2 -0.3**
comp=Z,27nm,1.0s
MOTA *eP* **pPKPab 09 29 54.5 -1.9**
comp=Z,4.4nm,0.6s
MLSB Milas 152.19 313 P **PKiKP 09 27 45.8 +0.2**
MYKA Terra Mystica 152.24 343 *eP* **PKPbc 09 27 44.1 -1.2**
comp=Z,6.0nm,0.6s
MYKA *eP* **PKPab 09 27 57.5 -0.2**
comp=Z,20nm,0.9s
MYKA *eP* **pPKPab 09 29 53.7 -2.8**
comp=Z,9.1nm,1.0s
SQTA Sankt Quirin 152.28 347 *eP* **PKPdf 09 27 37.9 -0.2**
comp=Z,8.9nm,0.9s
SQTA *eP* **PKPbc 09 27 45.1 -0.3**
comp=Z,20nm,0.9s
SQTA *eP* **PKPab 09 27 57.7 -0.2**
comp=Z,12nm,1.1s
SQTA *eP* **pPKPab 09 29 53.0 -3.6**
comp=Z,3.6nm,0.5s
KKB Krupnik 152.31 325 *i* P **PKPbc 09 27 45.2 -0.3**
GCAM G?zelcaml? 152.35 314 P **PKPbc 09 27 45.3 -0.4**
URLA Izmir 152.42 316 P **PKPbc 09 27 45.5 -0.4**
ABTA Abfaltersbach 152.42 345 *eP* **PKPdf 09 27 37.7 -0.6**
comp=Z,12nm,0.9s
ABTA *eP* **PKPbc 09 27 44.9 -0.8**
comp=Z,24nm,0.6s
ABTA *eP* **PKPab 09 27 58.3 -0.1**
comp=Z,24nm,0.9s
ABTA *eP* **pPKPab 09 29 54.6 -2.9**
comp=Z,10nm,0.9s
CRES Cresnjev 152.43 340 *i* PKPdf **PKPdf 09 27 37.8 -0.5**
CRES *i* PKPbc **PKPbc 09 27 45.3 -0.3**
CRES *i* PKPab **PKPab 09 27 58.0 -0.4**
CLF Chambon-Foret 152.43 0 PKPdf **PKPdf 09 27 37.2 -0.9**
CLF PKPbc **PKiKP 09 27 46.4 +0.7**
CLF **PKPab 09 27 58.3 0.0**
DAVA Damuels 152.48 349 *i* P **PKiKP 09 27 46.5 +0.5**
comp=Z,19nm,1.1s,SNR=5.1
DAVA *eP* **PKPab 09 27 59.1 +0.3**
comp=Z,16nm,0.9s
DAVA *eP* **pPKPab 09 29 55.1 -2.2**
comp=Z,9.3nm,1.2s
LJU Ljubljana 152.52 341 *i* PKPdf **PKPdf 09 27 38.2 -0.1**
LJU *i* PKPbc **PKPbc 09 27 45.5 -0.3**
LJU *i* PKPab **PKPab 09 27 58.2 -0.6**
FETA Feichten 152.57 347 *eP* **PKPdf 09 27 38.6 0.0**
comp=Z,11nm,0.9s
FETA *eP* **PKPbc 09 27 45.8 -0.3**
comp=Z,17nm,1.0s
FETA *eP* **PKPab 09 27 59.4 +0.2**
comp=Z,13nm,1.0s
FETA *eP* **pPKPab 09 29 55.2 -2.8**
comp=Z,6.6nm,0.9s
DAT Datca 152.61 312 P **PKPbc 09 27 45.1 -1.3**
DAVOX Davos/Dischmat 152.96 349 PKP **PKPdf 09 27 39.0 -0.2**
comp=Z,3.4nm,0.7s,baz=60,slow=1.2,SNR=9.2
DAVOX PKPbc **PKPbc 09 27 46.5 -0.5**
comp=Z,12nm,0.7s,baz=289,slow=0.5,SNR=19
DAVOX PKPab **PKPab 09 27 60.0 -0.9**
comp=Z,9.6nm,0.9s,baz=344,slow=4.6,SNR=6.9
TUE Stuetta 153.36 349 PKPdf **PKPdf 09 27 39.1 -0.7**
TUE PKPbc **PKPbc 09 27 47.9 0.0**
TUE PKPab **PKPab 09 28 02.1 -0.5**
SENIN Lac Senin/Sane 153.78 352 PKPdf **PKPdf 09 27 39.2 -1.2**
SENIN PKPbc **PKPbc 09 27 48.2 -0.6**
SENIN PKPab **PKPab 09 28 04.5 +0.1**
PDG Podgorica 153.80 331 ⇑P **PKPab 09 28 04.0 -0.3**
FNA Florina 153.99 326 PKPdf **PKPbc 09 27 39.3 -1.3**
FNA **PKPdf 09 27 48.5 -0.7**
FNA PKPab **PKPab 09 28 02.0 -3.3**
FNA Florina 153.99 326 PKP2 **PKPab 09 28 02.0 -3.3**
FNA 10 27 39.3
IDI Anoyia 155.21 312 ⇑P **PKPdf 09 27 42.1 -0.4**
IDI Anoyia 155.21 312 PKP **PKPdf 09 27 42.0 -0.5**
comp=Z,7.5nm,1.1s,baz=120,slow=7.8,SNR=3.6
IDI PKPbc PKPbc 09 27 52.3
comp=Z,6.8nm,0.8s,baz=127,slow=4.9,SNR=6.1
IDI PKPab **PKPab 09 28 09.7 -1.1**
comp=Z,7.9nm,0.8s,baz=78,slow=14,SNR=5.7
MURB Monte Urbino 155.64 342 PKPdf **PKPdf 09 27 40.7 -2.1**
MURB **PKPab 09 28 12.5 +0.2**
OSSC Osservatorio P 155.76 344 PKPdf **PKPdf 09 27 41.9 -1.1**
OSSC **PKPab 09 28 12.1 -0.6**
ITM Ithomi 156.10 319 PKPdf **PKPdf 09 27 41.3 -2.3**
ITM PKPab **PKPab 09 28 12.8 -1.7**
PBRG Braganca 157.31 18 *e*PKPab **PKPab 09 28 20.1 +0.6**
POLO Lamas de Olo 157.39 20 *e*PKPab **PKPab 09 28 20.4 +0.5**
TIP Timpagrande 157.53 330 **PKPdf 09 27 44.0 -1.4**
TIP **PKPab 09 28 19.8 -0.8**
MVO Moncorvo 157.82 19 *e*PKPdf **PKPdf 09 27 46.5 +0.8**
MVO Moncorvo 157.82 19 *e*PKPab **PKPab 09 28 22.5 +0.7**
PVIS Viseu 157.95 21 *e*PKPab **PKPab 09 28 22.9 +0.6**
MTE Manteigas 158.35 21 *e*PKPdf **PKPdf 09 27 47.2 +0.9**
MTE Manteigas 158.35 21 *e*PKPab **PKPab 09 28 24.3 +0.2**
PCBR Castelo Branco 158.87 21 *e*PKPdf **PKPdf 09 27 48.0 +1.2**
PCBR Castelo Branco 158.87 21 *e*PKPab **PKPab 09 28 26.7 +0.4**
PMRV Marv??o 159.27 22 *e*PKPdf **PKPdf 09 27 48.0 +0.6**
PMRV Marv??o 159.27 22 *e*PKPab **PKPab 09 28 28.4 +0.3**
**PM

KEST	**Kesra**	**163.52**	**339**	PKPab	**PKPab**	**09**	**28**	**46.5 -0.4**
	comp=Z,4.9nm,0.8s,baz=290,slow=7.3,SNR=5.7							
LIC	**Lamto**	**164.21**	**152**	⇑*i*PKIKP	**PKPdf**	**09**	**27**	**53.3 +0.2**
	comp=Z,24nm,1.2s							
KIC	**Kosan Boka**	**164.46**	**153**	⇑*i*PKIKP	**PKPdf**	**09**	**27**	**53.0 -0.3**
	comp=Z,12nm,0.8s							
TIC	**Toumodi**	**164.59**	**151**	⇑*i*PKIKP	**PKPdf**	**09**	**27**	**53.2 -0.2**
DBIC	**Dimbokro**	**164.69**	**152**	PKP	**PKPdf**	**09**	**27**	**53.0 -0.5**
	comp=Z,2.6nm,0.7s,baz=158,slow=3.2,SNR=3.7							
DBIC	**Dimbokro**	**164.69**	**152**	PKIKP	**PKPdf**	**09**	**27**	**53.0 -0.5**
MDT	**Mideit**	**166.17**	**25**	PKP	**PKPdf**	**09**	**27**	**54.4 +0.1**
	comp=Z,3.7nm,0.9s,baz=360,slow=2.2,SNR=6.4							
MDT				PKPab	**PKPab**	**09**	**28**	**59.1 +0.4**
	comp=Z,2.2nm,0.7s,baz=296,slow=3.3,SNR=4.4							
KOWA	**Kowa**	**171.58**	**133**		**PKPdf**	**09**	**27**	**54.0 -4.0**
TOA0	**Torodi Ar. Sit**	**172.77**	**175**		**PKPdf**	**09**	**27**	**58.0 -0.5**
TORD	**Torodi Ar. Bea**	**172.77**	**175**	PKP	**PKPdf**	**09**	**27**	**57.2 -1.4**
	comp=Z,8.0nm,0.9s,baz=325,slow=0.7,SNR=29							
TORD				PKPab	**PKPab**	**09**	**29**	**28.3 +0.2**
	comp=Z,2.0nm,0.9s,baz=173,slow=4.0,SNR=5.0							
TORD				pPKP	**pPKPdf**	**09**	**30**	**05.4 +1.4**
	comp=Z,1.3nm,0.9s,baz=79,slow=0.3,SNR=3.2							
TORD	**Torodi Ar. Bea**	**172.77**	**175**		**PKPdf**	**09**	**27**	**57.5 -1.1**
TORD				PKPab	**PKPab**	**09**	**29**	**27.9 -0.1**

*IDC **07** 09:11:15.9±3.6,6°.03S×103°.56E,h0km,mb4.2/6, mbtmp4.3/7,ML3.6/1,MS3.2/4 Error ellipse: s-maj=106.4km s-min=21.7km az=35.0*
*DJA **07** 09:11:19.1±1.3,6°.S±8°×10°.4E±1°.0,h10km,M4.2/7, MLv4.2/7*
*NEIC **07** 09:11:23.1±1.1,5°.57S±0°.04×104°.09E±0°.09,h35km±2km, mb4.4/9,Error ellipse: s-maj=15.4km s-min=5.1km az=69.0*

ISC 07 09:11:14.4±1.0,6°.4S±0°.1×103°.46E±0°.08,h10km,n46, σ2s01/37,mb4.3/9,Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**1.37**	**49**	P		**Pn**		**09 11 40.6**	**+1.0**
LWLI	**Liwa**	**1.53**	**23**	P		**Pb**		**09 11 43.6**	**+0.7**
MDSI	**Maura Dua**	**2.06**	**20**	P		**Pn**		**09 11 51.1**	**+2.0**
BLSI	**Bandar Lampung**	**2.07**	**59**	P		**Pn**		**09 11 51.6**	**+2.3**
KLI	**Kotabumi**	**2.09**	**42**	P		**Pb**		**09 11 53.0**	**+0.6**
MNAI	**Manna**	**2.12**	**346**			**Pn**		**09 11 51.0**	**+1.1**
MNAI	**Manna**	**2.12**	**346**	P		**Pb**		**09 11 52.9**	**0.0**
SKJI	**Sukabumi**	**3.13**	**101**	P		**Pn**		**09 12 07.4**	**+3.5**
DBJI	**Dramaga**	**3.28**	**92**	P		**Pn**		**09 12 09.4**	**+3.5**
CBJI	**Citeko**	**3.37**	**90**	P		**Pb**		**09 12 12.4**	**-1.9**
LEM	**Lembang**	**4.15**	**96**	Pn		**Pn**		**09 12 20.5**	**+2.4**
	3.8nm,0.3s,baz=171,slow=22,SNR=5.7								
LEM				Sn		**Sn**		**09 13 09.3**	**+2.5**
	11nm,0.3s,baz=323,slow=20,SNR=1.8								
LEM				LR		LR		09 14 20.1	
	comp=Z,250nm,21.5s,baz=336,slow=45 30nm,0.5s								
BKNI	**Bangkinang**	**7.13**	**340**	Pn		**Pn**		**09 12 56.9**	**-2.0**
UGM	**Wanagama**	**7.17**	**102**			**Pn**		**09 12 59.8**	**+0.4**
GSI	**Gunungsitoli**	**9.67**	**322**	Pn		**Pn**		**09 13 36.6**	**+2.9**
JAGI	**Jajag, Banyuwa**	**10.80**	**101**	Pn		**Pn**		**09 13 49.8**	**+0.6**
KULM	**Kulim**	**11.97**	**346**	Pn		**Pn**		**09 14 01.9**	**-3.4**
SBUM	**Sibu**	**12.43**	**45**	Pn		Pn		09 14 02.9	-8.6
LHMI	**Lhok Sumawe**	**13.28**	**331**	Pn		**Pn**		**09 14 21.0**	**-2.1**
KAPI	**Kappang**	**16.28**	**86**	LR		LR		09 21 51.9	
	comp=Z,100nm,21.8s,baz=227,slow=39								
TOLI2	**Tolitoli**	**18.85**	**67**	P		**P**		**09 15 29.4**	**-5.4**
BATI	**Baumata**	**20.34**	**102**	P		**P**		**09 15 53.4**	**+2.2**
	68nm,0.8s,baz=72,slow=1.8,SNR=8.4 68nm,0.8s								
CMAR	**Chiang Mai Arr**	**25.13**	**350**	P		**P**		**09 16 39.4**	**-0.4**
	0.9nm,0.3s,baz=182,slow=8.7,SNR=5.6								
CMAR				LR		LR		09 25 40.1	
	comp=Z,53nm,21.6s,baz=200,slow=35 0.9nm,0.3s								
CMAR	**Chiang Mai Arr**	**25.13**	**350**	P		**P**		**09 16 37.8**	**-2.0**
H01W3	**Cape Leeuwin H**	**29.98**	**162**	T		T		09 49 09.1	
	baz=339,slow=76								
H01W2	**Cape Leeuwin H**	**29.99**	**162**	T		T		09 49 04.0	
	baz=339,slow=76								
H01W1	**Cape Leeuwin H**	**30.00**	**162**	T		T		09 49 00.7	
	baz=339,slow=76								
H08S2	**Diego Garcia H**	**30.75**	**266**	T		T		09 49 44.5	
	baz=89,slow=75								
H08S3	**Diego Garcia H**	**30.76**	**266**	T		T		09 49 48.7	
	baz=89,slow=75								
H08S1	**Diego Garcia H**	**30.77**	**266**	T		T		09 49 46.5	
	baz=89,slow=75								
WB0	**Warramunga Arr**	**32.84**	**117**	P		**P**		**09 17 48.0**	**-0.6**
WB2	**Warramunga Arr**	**32.86**	**117**	P		**P**		**09 17 47.9**	**-0.9**
JOW	**Kunigami**	**40.88**	**35**	LR		LR		09 36 29.4	
	comp=Z,68nm,21.5s,baz=270,slow=37								
KDJ	**Kajisay**	**53.95**	**336**	P		**P**		**09 20 39.0**	**+0.4**
KDJ				IAmb		IAmb		09 20 55.6	
	comp=Z,5.9nm,0.9s								
SONM	**Songino Array**	**54.09**	**2**	P		**P**		**09 20 40.2**	**+0.7**
	comp=Z,2.6nm,0.9s,baz=183,slow=9.2,SNR=14 comp=Z,2.6nm,0.9s								
SONM	**Songino Array**	**54.09**	**2**	P		**P**		**09 20 36.8**	**-2.7**
SONM				IAmb		IAmb		09 20 41.5	
	comp=Z,3.6nm,1.1s								
MK31	**Makanchi Array**	**56.23**	**343**	P		**P**		**09 20 55.6**	**+0.8**
MK31				IAmb		IAmb		09 20 57.5	
	comp=Z,1.6nm,0.8s								
MKAR	**Makanchi Array**	**56.23**	**343**	P		**P**		**09 20 55.2**	**+0.4**
	comp=Z,1.7nm,0.7s,baz=145,slow=7.8,SNR=17 comp=Z,1.7nm,0.7s								
MKAR	**Makanchi Array**	**56.23**	**343**	P		**P**		**09 20 54.9**	**+0.1**
KURBB	**Kurchatov Arra**	**60.77**	**342**	P		**P**		**09 21 27.1**	**+0.8**
	comp=Z,1.2nm,0.8s,baz=157,slow=6.3,SNR=8.5 comp=Z,1.2nm,0.8s								
KURK	**Kurchatov**	**60.83**	**342**	P		**P**		**09 21 27.1**	**+0.4**
KURK	**Kurchatov**	**60.83**	**342**	IAmb		IAmb		09 21 42.8	
	comp=Z,2.9nm,0.8s								
ZAA0	**Zalesovo Array**	**62.17**	**348**	P		**P**		**09 21 35.8**	**0.0**
ZAA0				IAmb		IAmb		09 21 50.9	
	comp=Z,5.3nm,1.1s								
ZALV	**Zalesovo Beam**	**62.17**	**348**	P		**P**		**09 21 35.7**	**-0.1**
	comp=Z,2.7nm,0.8s,baz=163,slow=5.6,SNR=6.3 comp=Z,2.7nm,0.8s								
ABKAR	**Akbulak array**	**67.16**	**331**	P		**P**		**09 22 10.0**	**+1.6**
TXAR	**Lajitas Array**	**145.75**	**45**	PKPbc		**PKPab**		**09 30 56.4**	**+1.5**
	comp=Z,0.9nm,0.7s,baz=302,slow=1.7,SNR=13								
TXAR	**Lajitas Array**	**145.75**	**45**			**PKPdf**		**09 30 55.2**	**+1.1**

IDC 07 09:13:35.0±2.4,53°.51N×86°.93E,h0km,mbtmp2.6/2, ML2.2/2,Error ellipse: s-maj=20.8km s-min=13.0km az=80.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.33**	**290**	*i*				09 21 50.0	
	baz=104,slow=317,SNR=3.9								
ZALV	**Zalesovo Beam**	**1.33**	**290**	Pg		Pg		09 13 58.7	-1.7
	0.7nm,0.3s,baz=106,slow=20,SNR=5.5								
ZALV				Lg		Lg		09 14 18.4	
	1.5nm,0.3s,baz=112,slow=30,SNR=9.6								
KURBB	**Kurchatov Arra**	**5.93**	**244**	Pn		Pn		09 15 05.5	+1.5
	baz=60,slow=14,SNR=4.1								
KURBB				Sn		Sn		09 16 09.4	-3.2
	baz=64,slow=19,SNR=2.4								
KURBB				Lg		Lg		09 16 44.9	
	0.2nm,0.3s,baz=62,slow=32,SNR=5.0 0.3nm,0.5s								
MKAR	**Makanchi Array**	**7.35**	**206**	Pn		Pn		09 15 25.4	+1.8
	0.1nm,0.3s,baz=26,slow=12,SNR=5.5								
MKAR				Sn		Sn		09 16 46.7	-1.0
	0.1nm,0.3s,baz=27,slow=26,SNR=1.3								
MKAR				Lg		Lg		09 17 29.6	
	0.1nm,0.3s,baz=25,slow=29,SNR=3.5 0.2nm,0.4s								

*EAF **07** 09:28:33.8±2.2,10°.47N×39°.95E,h0km±12km*
AAE 07 09:28:34.5±0.5,10°.49N×39°.93E,h0km±2km,2D,Ethiopia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DESE	**Dese**			**0.69**	**335**	*e*P	Pg	09 28 46.1	-1.6
DESE						*e*P	Pn	09 28 55.9	+4.1
DESE	**Dese**			**0.69**	**335**	*e*P	Pg	09 28 46.7	-1.0
DESE						*e*S	Sg	09 28 56.0	-0.6
DESE	**Dese**			**0.69**	**335**	*e*P	Pg	09 28 46.6	-1.0
DESE						*e*S	Sg	09 28 55.9	-0.6
DESE						IAML		09 28 57.8	
	comp=E,260nm,0.4s								
DESE						IAML		09 29 03.9	
	comp=N,343nm,0.6s								
DESE	**Dese**			**0.69**	**335**	*e*P	Pg	09 28 46.6	-1.1
DESE						*i* Sg	Sg	09 28 56.3	-0.3
DESE	**Dese**			**0.69**	**335**	*e*P	Pg	09 28 46.9	-0.8
DESE						*e*S	Sg	09 28 56.2	-0.4
DESE	**Dese**			**0.69**	**335**	*e*P	Pg	09 28 46.7	-1.0
DESE						*e*S	Sg	09 28 56.0	-0.6
DESE	**Dese**			**0.69**	**335**	*e*P	Pg	09 28 46.5	-1.2
DESE						*e*S	Sg	09 28 55.9	-0.6
DESE						IAML		09 28 57.8	
	comp=E,260nm,0.4s								
DESE						IAML		09 29 03.9	
	comp=N,343nm,0.6s								
DESE	**Dese**			**0.69**	**335**	*e*P	Pg	09 28 46.9	-0.7
DESE						*e*S	Sg	09 28 56.2	-0.4
DESE	**Dese**			**0.69**	**335**	*e*P	Pg	09 28 46.1	-1.6
DESE						*e*P	Pn	09 28 55.9	+4.1
DESE	**Dese**			**0.69**	**335**	*e*P	Pg	09 28 46.4	-1.3
DESE						*i* Sg	Sg	09 28 56.3	-0.3
ANKE	**Ethiopia-Afar**			**0.91**	**192**	*e*P	Pg	09 28 49.5	-2.6
ANKE						⇓*e*S	Sg	09 29 02.2	-1.7
ANKE	**Ethiopia-Afar**			**0.91**	**192**	⇓*e*P	Pg	09 28 49.5	-2.6
ANKE						*e*S	Sg	09 29 02.5	-1.4
ANKE	**Ethiopia-Afar**			**0.91**	**192**	*e*P	Pg	09 28 50.8	-1.2
ANKE						*e*S	Sg	09 29 03.5	-0.4
ANKE	**Ethiopia-Afar**			**0.91**	**192**	*e*P	Pg	09 28 51.0	-1.1
ANKE						*e*S	Sg	09 29 03.1	-0.8
TEND	**Ethiopian Broa**			**1.67**	**39**	*e*P	Pn	09 29 01.9	-3.2
TEND						*e*S	Sn	09 29 26.6	-0.7
TEND	**Ethiopian Broa**			**1.67**	**39**	*e*P	Pn	09 29 02.1	-3.0
TEND						*e*S	Sn	09 29 25.6	-1.6
AAE	**Adis Abeba**			**1.85**	**218**	*e*P	Pn	09 29 04.9	-2.8
AAE						*e*S	Sn	09 29 29.4	-2.6
AAE	**Adis Abeba**			**1.85**	**218**	*e*P	Pn	09 29 05.6	-2.2
AAE						*e*S	Sn	09 29 29.8	-2.3
AAE						IAML		09 29 30.6	
	comp=E,442nm,0.5s								
AAE	**Adis Abeba**			**1.85**	**218**	*e*P	Pn	09 29 04.7	-3.1
AAE						*e*S	Sn	09 29 29.3	-2.7
AAE	**Adis Abeba**			**1.85**	**218**	*e*P	Pn	09 29 04.0	-3.8
AAE						*e*S	Sn	09 29 29.7	-2.3
AAE	**Adis Abeba**			**1.85**	**218**	*e*P	Pn	09 29 06.1	-1.6
AAE						*e*S	Sn	09 29 29.8	-2.3
AAE						IAML		09 29 30.6	
	comp=E,442nm,0.5s								
AAE	**Adis Abeba**			**1.85**	**218**	*e*P	Pn	09 29 05.8	-1.9
AAE						*e*S	Sn	09 29 28.9	-3.1
AAE	**Adis Abeba**			**1.85**	**218**	*e*P	Pn	09 29 06.0	-1.8
AAE						*e*S	Sn	09 29 29.4	-2.6
AAE	**Adis Abeba**			**1.85**	**218**	*e*P	Pn	09 29 05.7	-2.1
AAE						*e*S	Sn	09 29 29.3	-2.7
AAE						IAML		09 29 31.9	
	comp=N,4μm,0.3s								
FURI	**Furi**			**2.01**	**218**	*e*P	Pn	09 29 08.2	-1.8
FURI						*e*S	Sn	09 29 34.5	-1.4
FURI	**Furi**			**2.01**	**218**	*e*P	Pn	09 29 08.4	-1.5
FURI						*e*S	Sn	09 29 35.3	-0.6
FURI	**Furi**			**2.01**	**218**	*e*P	Pn	09 29 08.3	-1.6
FURI						*e*S	Sn	09 29 34.4	-1.5
FURI						IAML		09 29 36.1	
	comp=N,1μm,0.3s								
FURI						IAML		09 29 39.5	
	comp=N,1μm,0.5s								
FURI	**Furi**			**2.01**	**218**	*e*P	Pn	09 29 08.5	-1.4
FURI						*e*S	Sn	09 29 35.1	-0.8
FURI	**Furi**			**2.01**	**218**	*e*P	Pn	09 29 08.6	-1.3
FURI						*e*S	Sn	09 29 35.2	-0.7
FURI	**Furi**			**2.01**	**218**	*e*P	Pn	09 29 07.9	-2.0
FURI						*e*S	Sn	09 29 32.6	-3.3
FURI	**Furi**			**2.01**	**218**	*e*P	Pn	09 29 08.0	-1.9
FURI						*e*S	Sn	09 29 34.4	-1.5
FURI						IAML		09 29 36.1	
	comp=N,1μm,0.3s								
FURI						IAML		09 29 39.5	
	comp=N,1μm,0.5s								
FURI	**Furi**			**2.01**	**218**	*e*P	Pn	09 29 07.8	-2.1
FURI						*e*S	Sn	09 29 32.7	-3.2
FURI	**Furi**			**2.01**	**218**	*e*P	Pn	09 29 07.7	-2.3
FURI						*e*S	Sn	09 29 33.4	-2.6
FURI	**Furi**			**2.01**	**218**	*e*P	Pn	09 29 07.7	-2.3
FURI						*e*S	Sn	09 29 33.6	-2.3
FURI	**Furi**			**2.01**	**218**	*e*P	Pn	09 29 08.3	-1.6
FURI						*e*S	Sn	09 29 34.9	-1.0

TAP 07 09:40:26.6,23°.88N×121°.47E,h15km,ML1.4,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ESL	**Shilin**			**0.08**	**207**	P	Pg	09 40 29.7	0.0
	baz=201								
ESL					*i* S		Sg	09 40 31.8	+0.1
	baz=201								
ETM	**Tongmen**			**0.09**	**13**	*i* P	Pg	09 40 30.0	+0.2
	baz=14								
TEYL	**Yanliau Villag**			**0.12**	**97**	P	Pb	09 40 30.8	+0.3
	baz=71								
HWA	**Hwalien**			**0.15**	**52**	*e*P	Pb	09 40 31.4	+0.2
	baz=47								
EGFH	**Guangfu**			**0.22**	**191**	P	Pg	09 40 31.5	0.0
	baz=190								
EGFH						S	Sg	09 40 34.8	0.0
	baz=190								
TWD	**Chiawan**			**0.23**	**30**	*i* P	Pg	09 40 32.0	+0.3
	baz=31								
OWD	**Renai**			**0.28**	**285**	*i* P	Pg	09 40 32.8	+0.1
	baz=290								
OWD						S	Sg	09 40 37.0	+0.2
	baz=290								
NACB	**Ninganchiao**			**0.31**	**21**	*e*P	Pb	09 40 33.6	-0.3
	baz=21								
NACB						*i* S	Sg	09 40 37.4	-0.2
	baz=21								
ETLH	**Xiulin Townshi**			**0.32**	**2**	*e*P	Pg	09 40 33.5	0.0
	baz=2.0								
ETLH						*e*S	Sg	09 40 37.8	-0.3
	baz=2.0								
WHF	**Hehuan Shan**			**0.32**	**324**	P	Pg	09 40 33.6	0.0
	baz=317								
WHF						*e*S	Sb	09 40 38.9	-0.6
	baz=317								
VWDT	**VWDT**			**0.33**	**247**	*e*P	Pb	09 40 33.8	-0.3
	baz=247								
VWDT						*e*S	Sb	09 40 38.9	-0.3
	baz=247								
WUSB	**Renai**			**0.34**	**289**	*i* P	Pg	09 40 34.0	+0.3
	baz=293								
EHY	**Hungye**			**0.40**	**200**	*e*P	Pg	09 40 34.5	-0.2
	baz=189								
FUSS	**Fushou**			**0.42**	**330**	*i* P	Pb	09 40 35.6	-0.3
	baz=330								
FUSS						*e*S	Sg	09 40 41.2	+0.2
	baz=330								
SSLB	**Suanglung**			**0.48**	**259**	*e*P	Pg	09 40 36.0	-0.2
	baz=260								
YULB	**Yu-li**			**0.51**	**198**	*e*P	Pg	09 40 36.4	-0.4
	baz=190								
EYUL	**Yuli**			**0.55**	**195**	*e*P	Pg	09 40 37.3	-0.2
	baz=199								
EYUL						*e*S	Sb	09 40 45.3	-0.3
	baz=199								
NNSB	**Datong**			**0.55**	**352**	*e*P	Pb	09 40 37.8	-0.2
	baz=352								
NNSB						*e*S	Sg	09 40 44.8	-0.1
	baz=352								
TWF1	**Yuli**			**0.55**	**197**	*i* P	Pg	09 40 37.5	0.0
	baz=195								
TWF1						*e*S	Sg	09 40 45.1	+0.2
	baz=195								
YUS	**Yu-Shan**			**0.62**	**231**	*e*P	Pb	09 40 39.1	-0.2
	baz=240								
LATG	**Datong**			**0.65**	**4**	*e*P	Pb	09 40 39.9	+0.2
	baz=5.0								

TAP 07 09:40:29.7,22°.96N×120°.96E,h7km,ML1.5,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LONT	**Longtian**			**0.17**	**110**	P	Pg	09 40 33.9	+0.7
	baz=110								
LONT						*i* S	Sg	09 40 36.5	+1.0
	baz=110								
TWG	**Pinlang**			**0.18**	**144**	*i* P	Pg	09 40 34.4	+1.0
	baz=143								
TWG						*i* S	Sg	09 40 37.1	+1.3
	baz=143								
TWGBT	**Beinan**			**0.18**	**142**	*e*P	Pg	09 40 34.4	+0.9
	baz=143								
TWGBT						*i* S	Sg	09 40 37.1	+1.2
	baz=143								
ELDTW	**Lidau**			**0.23**	**13**	*e*P	Pg	09 40 34.4	0.0
	baz=14								
ELDTW						*e*S	Sg	09 40 37.1	-0.4
	baz=14								
STYH	**Taoyuan**			**0.27**	**321**	P	Pg	09 40 35.6	+0.6
	baz=319								
STYH						*i* S	Sg	09 40 39.4	+0.8
	baz=319								
STYT	**Tauyuan**			**0.27**	**317**	*i* P	Pg	09 40 35.6	+0.5
	baz=317								
STYT						*i* S	Sg	09 40 39.5	+0.7
	baz=317								
ECS	**Chishang**			**0.27**	**61**	*e*P	Pg	09 40 35.8	+0.7
	baz=60								
EDH	**Donghe**			**0.32**	**88**	*e*P	Pb	09 40 37.1	-0.7
	baz=83								
EDH						*e*S	Sb	09 40 42.2	-0.9
	baz=83								
ECL	**Taimali**			**0.36**	**181**	P	Pg	09 40 37.6	+0.7
	baz=180								
ECL						*i* S	Sg	09 40 42.3	+0.7
	baz=180								
SGST	**Jiashian**			**0.37**	**289**	*e*P	Pg	09 40 37.5	+0.6
	baz=290								
SSD	**Sandimen**			**0.37**	**234**	*i* P	Pg	09 40 37.1	+0.1
	baz=231								
SSD						*i* S	Sg	09 40 42.1	+0.3
	baz=231								
FULB	**Fuli**			**0.39**	**53**	*e*P	Pg	09 40 38.0	+0.7
	baz=204								
FULB	**Fuli**			**0.39**	**53**	P	Pg	09 40 38.0	+0.7
	baz=42								
FULB						*i* S	Sg	09 40 43.7	+1.3
	baz=42								
TSMG	**Majia**			**0.39**	**229**	*i* P	Pg	09 40 37.6	+0.3
	baz=229								
WTP	**Ta-pu**			**0.42**	**312**	*i* P	Pb	09 40 39.2	-0.4
	baz=311								
WTP						*i* S	Sb	09 40 45.5	-0.8
	baz=311								
SCST	**Cishan**			**0.44**	**260**	*e*P	Pb	09 40 39.0	-0.7
	baz=254								
TPUB	**Ta-pu**			**0.45**	**318**	*e*P	Pb	09 40 39.6	-0.5
	baz=317								
TPUB						S	Sb	09 40 46.6	-0.4
	baz=317								
CHN1	**Nanshi**			**0.45**	**299**	*e*P	Pb	09 40 39.8	-0.3
	baz=300								
MASBT	**Mashibuluo**			**0.46**	**221**	*e*P	Pg	09 40 39.2	+0.5
	baz=230								
TWF1	**Yuli**			**0.50**	**39**	*e*P	Pg	09 40 39.4	0.0
	baz=50								
EYUL	**Yuli**			**0.51**	**41**	*e*P	Pg	09 40 39.5	0.0
	baz=41								
YUS	**Yu-Shan**			**0.52**	**359**	*e*P	Pg	09 40 39.9	0.0
	baz=1.0								
EAST	**Anshuo**			**0.59**	**190**	*e*P	Pb	09 40 42.0	-0.4
	baz=189								
TAWH	**Dawu Township**			**0.62**	**186**	*e*P	Pb	09 40 42.7	-0.3
	baz=186								

*IDC **07** 09:40:36.8±14.0,14°.70S×166°.05E,h0km,mb3.6/3, mbtmp3.7/4,ML3.7/1,Error ellipse: s-maj=243.5km s-min=38.7km az=58.0*
*NOU **07** 09:40:41.7,14°.74S×167°.31E,h89km,MLv4.9/9,Vanuatu Islands*

ISC 07 09:40:38.4±3.1,14°.5S±0°.2×167°.3E±0°.3,h100km,n9, σ1s16/10,mb3.2/3,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KOUNC	**Koumac, New Ca**	**6.64**	**205**	P		**Pn**		**09 42 13.9**	**+0.5**
MARNC	**Mare, Loyalty**	**6.97**	**174**	P		**Pn**		**09 42 17.6**	**-0.4**
DZM	**Mont Dzumac**	**7.56**	**186**	Pn		**Pn**		**09 42 25.3**	**-0.8**
	1.2nm,0.3s,baz=351,slow=7.3,SNR=23								
DZM				Sn		**Sn**		**09 43 49.9**	**-0.3**
	2.4nm,0.3s,baz=122,slow=22,SNR=8.2 5.4nm,0.6s								
DZM	**Mont Dzumac**	**7.56**	**186**	P		**Pn**		**09 42 25.1**	**-0.9**
OUENC	**Ouen Island, N**	**7.88**	**183**	P		**Pn**		**09 42 32.0**	**+1.8**
PINNC	**Pines Island,**	**8.06**	**179**	P		**Pn**		**09 42 33.4**	**+0.6**
STKA	**Stephens Creek**	**29.12**	**229**	P		**P**		**09 46 30.9**	**+0.9**
	1.5nm,0.5s,baz=64,slow=8.2,SNR=4.7 1.5nm,0.5s								
WRA	**Warramunga Arr**	**31.86**	**256**	P		**P**		**09 46 54.6**	**+0.3**
	0.4nm,1.0s,baz=81,slow=6.4,SNR=1.7 0.4nm,1.0s								
ASAR	**Alice Springs**	**32.73**	**249**	P		**P**		**09 47 00.2**	**-1.8**
	0.3nm,0.7s,baz=65,slow=9.3,SNR=2.8 0.3nm,0.7s								

*IDC **07** 09:46:45.9±2.2,54°.24N×86°.07E,h0km,mbtmp3.5/2, ML3.1/2,Error ellipse: s-maj=16.7km s-min=10.0km az=57.0*

NNC 07 09:46:41.7±1.6,54°.34N×86°.35E,h0km,mb3.8,mpv3.0, 5C-2D,Error ellipse: s-maj=8.8km s-min=7.0km az=58.0, Suspected Mining explosion.,Southwestern Siberia

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

USAK	**Uak-Merkez**	**1.54**	**184**	S	Sg	09 53 55.0	+0.1		

*ISK **07** 09:53:32.3,37˚23N×28˚20E,h0km,ML2.1/11,Suspected Mining explosion.*

DDA 07 09:53:32.5±0.0,37˚23N×28˚17E,h7km±4km,ML1.8, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MULA	**Mugla, Merkez-**	**0.12**	**78**	P		Pg	09 53 34.8	-0.4
YER	**Yerkesik**	**0.13**	**137**	PG		Pg	09 53 35.2	-0.1
YER				SG		Sg	09 53 37.6	+0.4
MLSB	**Milas**	**0.32**	**282**	PG		Pb	09 53 39.7	-0.9
MLSB				SG		Sb	09 53 45.7	-0.3
TURN	**Turunc**	**0.46**	**173**	PG		Pg	09 53 41.6	+0.2
TURN	**Turunc**	**0.46**	**173**	P		Pg	09 53 41.2	-0.1
TURN				S		Sb	09 53 49.2	-0.7
TURN				*i* AML		AML	09 53 52.0	
	comp=N,70nm,0.5s							
AYDN	**Tasoluk**	**0.49**	**332**	P		Pg	09 53 42.3	+0.3
DALY	**Dalyan (Mula)**	**0.56**	**137**	PG		Pg	09 53 43.7	+0.3
BDRM	**Kayabasi**	**0.60**	**254**	P		Pg	09 53 44.2	0.0
BDRM				S		Sb	09 53 54.3	+0.2
BDRM				*i* AML		AML	09 53 57.0	
	comp=N,58nm,0.4s							
TAVA	**DENIZLI_Tavas**	**0.64**	**68**	P		Pg	09 53 45.0	+0.1
TAVA				S		Sb	09 53 54.8	-0.4
DAT	**Datca**	**0.69**	**224**	PG		Pb	09 53 46.9	0.0
DAT	**Datca**	**0.69**	**224**	P		Pb	09 53 46.4	-0.5
DAT				S		Sn	09 53 59.8	+0.1
DAT				*i* AML		AML	09 54 03.0	
	comp=N,36nm,0.4s							
BODT	**Bodrum**	**0.71**	**257**	PG		Pb	09 53 47.2	0.0
AYDB	**Zeytinkoy-Aydi**	**0.75**	**343**	PG		Pb	09 53 47.8	-0.2
APMY	**Acipayam-Deniz**	**0.93**	**75**	PG		Pg	09 53 49.7	-0.7
FETY	**Fethiye**	**0.94**	**129**	PG		Pg	09 53 50.8	+0.2
CAME	**Cameli-Denizli**	**0.95**	**107**	PG		Pg	09 53 50.8	+0.1
AKAS	**Kas**	**1.52**	**130**	PN		Pb	09 54 01.3	+0.2

*HEL **07** 09:57:55.6±0.2,64˚70N×30˚82E,h0km,ML1.9,Explosion*
*IDC **07** 09:57:59.2±1.7,64˚61N×30˚40E,h0km,mbtmp2.7/4, ML2.0/4,Error ellipse: s-maj=23.5km s-min=8.0km az=108.0*

ISC 07 09:57:55.8±1.0,64˚69N±0˚02×30˚43E±0˚05,h0km,n31, σ1§61/47,Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RMF	**Romuvaara**	**0.52**	**205**	PG		**Pg**	**09 58 06.7**	**+1.0**
MSF	**Maaselka**	**1.36**	**335**	PN		**Pg**	**09 58 22.0**	**+0.2**
	baz=150							
MSF				SN		**Sn**	**09 58 41.3**	**+0.6**
KU6	**Riekki**	**1.36**	**351**	PN		**Pg**	**09 58 21.6**	**-0.3**
	baz=165							
KU6				MSG			09 58 37.3	
	comp=Z,5.2nm,0.2s							
KU6				SN		**Sb**	**09 58 41.2**	**+1.1**
OLKF	**Oulanka, Finla**	**1.69**	**346**	PG		**Pn**	**09 58 27.5**	**+0.9**
JOF	**Joensuu**	**1.82**	**167**	PG		**Pn**	**09 58 27.8**	**-0.5**
JOF				SG		**Sn**	**09 58 51.9**	**-0.2**
OUL	**Oulu**	**1.98**	**284**	PG		**Pg**	**09 58 33.8**	**+0.2**
OUL				SG		**Sg**	**09 59 00.4**	**+1.2**
OBF4	**Vikkela, Lumij**	**2.29**	**276**	PG		**Pb**	**09 58 38.0**	**+0.1**
OBF4				SG		**Sg**	**09 59 12.7**	**+3.5**
OUF	**Merijarvi**	**2.48**	**265**	PB		**Pb**	**09 58 40.1**	**-1.1**
OUF				MSG			09 59 13.8	
	comp=Z,12nm,0.2s							
OUF				SB		**Sg**	**09 59 15.3**	**-0.2**
RNF	**Rovaniemi**	**2.66**	**318**	PG		**Pb**	**09 58 44.7**	**+0.5**
RNF				SG		**Sg**	**09 59 19.9**	**-1.2**
OBF0	**Syolatti, Pyha**	**2.68**	**269**	PB		**Pb**	**09 58 44.7**	**+0.2**
OBF0				SG		**Sg**	**09 59 22.6**	**+0.9**
SUF	**Sumiainen**	**2.75**	**226**	PB		**Pb**	**09 58 45.0**	**-0.7**
	baz=41							
SUF				MSG			09 59 20.1	
	comp=Z,4.6nm,0.2s							
SUF				SB		**Sg**	**09 59 22.0**	**-1.9**
TOF	**Tornio**	**2.91**	**301**	PB		**Pb**	**09 58 46.7**	**-1.8**
TOF				MSG			09 59 25.2	
	comp=Z,3.6nm,0.2s							
TOF				SG		**Sg**	**09 59 28.5**	**-0.7**
OBF8	**Ulkokalla**	**3.04**	**266**	PG		**Pg**	**09 58 53.1**	**-0.9**
VRF	**Varrio**	**3.09**	**354**	PB		**Pn**	**09 58 48.5**	**+2.7**
VRF				MSG			09 59 26.8	
	comp=Z,1.8nm,0.2s							
KAF	**Kangasniemi**	**3.18**	**218**	SG		**Sg**	**09 59 36.1**	**-1.8**
SGF	**Sodankyl**	**3.19**	**332**	SG		**Sb**	**09 59 33.0**	**+0.4**
KALU	**Kalix**	**3.20**	**295**	SG		**Sg**	**09 59 38.1**	**-0.2**
KEF	**Keuruu**	**3.56**	**227**	PB		**Pb**	**09 58 56.9**	**-2.6**
KLF	**Kolari**	**3.68**	**317**	SG		**Sg**	**09 59 53.6**	**-0.2**
VAF	**Ylistaro**	**3.81**	**248**	PN		**Pn**	**09 58 58.9**	**+3.2**
	baz=61							
FIA0	**FINESS Array S**	**3.81**	**213**	PN		**Pn**	**09 58 57.6**	**+1.9**
	baz=33							
FINES	**FINESS Array B**	**3.81**	**213**	Pn		**Pn**	**09 58 57.2**	**+1.5**
	comp=Z,0.2nm,0.3s,baz=35,slow=13,SNR=1.4							
FINES				Pg		**Pb**	**09 59 03.9**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=35,slow=16,SNR=7.2							
FINES				Sn		**Sn**	**09 59 43.4**	**+2.2**
	comp=Z,0.2nm,0.3s,baz=32,slow=20,SNR=2.4							
FINES				Lg		Lg	09 59 55.2	
	comp=Z,0.8nm,0.3s,baz=30,slow=26,SNR=5.8							
	comp=Z,0.3nm,0.3s							
PAJU	**Pajala**	**3.81**	**311**	PG		**Pg**	**09 59 06.6**	**-2.2**
PAJU				SG		**Sg**	**09 59 56.8**	**-1.3**
ERTU	**Ertsjaerv**	**3.90**	**302**	PB		**Pb**	**09 59 02.4**	**-2.9**
UMAU	**Umeaa**	**4.33**	**264**	PN		**Pn**	**09 59 04.7**	**+1.9**
UMAU				SG		**Sg**	**10 00 14.5**	**-0.1**
HEF	**Hetta**	**4.61**	**327**	SG		**Sg**	**10 00 20.7**	**-3.0**
PVF	**Pernaja**	**4.66**	**209**	SG		**Sg**	**10 00 23.0**	**-2.4**
ARCES	**ARCESS Array B**	**5.23**	**341**	Pn		**Pn**	**09 59 15.8**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=153,slow=13,SNR=18							
ARCES				Sn		**Sn**	**10 00 17.6**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=162,slow=23,SNR=2.4							
	comp=Z,1.0nm,0.7s							
I37NO	**I37NO**	**6.40**	**319**	*i*			10 37 40.0	
	baz=130,slow=323,SNR=6.8							
HFS	**Hagfors**	**8.99**	**247**	Pn		**Pn**	**10 00 07.6**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=42,slow=15,SNR=1.8							
HFS				Sn		**Sn**	**10 01 46.0**	**-2.7**
	baz=55,slow=25							
HFS				Lg		Lg	10 02 38.3	
	comp=Z,0.2nm,0.3s,baz=54,slow=20,SNR=2.3							
	comp=Z,0.5nm,0.4s							
NOA	**NORSAR Array B**	**9.49**	**256**	Pn		**Pn**	**10 00 13.9**	**+0.3**
	baz=54,slow=12,SNR=2.0							
NOA				Sn		**Sn**	**10 02 00.3**	**-0.7**
	baz=63,slow=18,SNR=1.6							
	comp=Z,0.1nm,0.5s							

IDC 07 10:02:55.5±2.5,20˚73N×120˚99E,h0km,mb3.5/5, mbtmp3.5/5,MS2.8/1,Error ellipse: s-maj=241.7km s-min=21.6km az=63.0,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**20.89**	**268**	LR		LR	10 16 10.5	
	comp=Z,25nm,19.3s,baz=215,slow=38							
MKAR	**Makanchi Array**	**40.75**	**319**	P		P	10 10 38.3	0.0
	0.3nm,0.6s,baz=121,slow=7.5,SNR=3.7							
	0.3nm,0.6s							
WRA	**Warramunga Arr**	**42.48**	**161**	P		P	10 10 52.5	-0.1
	0.7nm,1.0s,baz=342,slow=8.9,SNR=3.6							
	0.7nm,1.0s							
ZALV	**Zalesovo Beam**	**43.08**	**329**	P		P	10 10 57.2	+0.1
	0.7nm,0.5s,baz=108,slow=9.3,SNR=3.8							
	0.7nm,0.5s							
KURBB	**Kurchatov Arra**	**44.68**	**322**	P		P	10 11 09.4	-0.6
	0.8nm,0.8s,baz=119,slow=7.6,SNR=3.1							
	0.8nm,0.8s							
ASAR	**Alice Springs**	**45.88**	**163**	P		P	10 11 19.8	-0.1
	0.3nm,0.7s,baz=345,slow=7.3,SNR=6.2							
	0.3nm,0.7s							

*ANF **07** 10:13:07.0±0.3,55˚41N×158˚52W,h36km±4km,ML4.1/17, Error ellipse: s-maj=3.6km s-min=2.3km az=147.0*
*NEIC **07** 10:13:07.1±2.1,55˚40N±0˚05×158˚52W±0˚06,h36km±9km, Error ellipse: s-maj=7.1km s-min=4.7km az=156.0*
*AEIC **07** 10:13:07±1.9,55˚36N±0˚06×158˚43W±0˚06,h25km±5km, ML3.6/88,mb4.3/12(NEIC),ML3.9/22(NEIC),Error ellipse: s-maj=8.9km s-min=4.4km az=160.0*
*IDC **07** 10:13:08.3±3.6,55˚73N×158˚67W,h49km±31km,mb3.5/13, mbtmp3.8/16,ML3.9/3,MS2.9/4,Error ellipse: s-maj=28.9km s-min=17.1km az=24.0*

ISC 07 10:13:06.3±0.5,55˚46N±0˚05×158˚47W±0˚04,h33km, n277,σ1§30/285,mb3.9/19,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VNSG	**Veniaminof 6**	**0.76**	**333**			**Pn**	**10 13 21.3**	**+0.6**
VNHG	**Veniaminof 1**	**0.86**	**333**			**Pn**	**10 13 23.2**	**+0.9**
CHNA	**Chernabura Isl**	**0.90**	**226**	P		**Pn**	**10 13 21.6**	**-1.0**
	baz=51,SNR=65							
CHNA				S		**Sn**	**10 13 33.5**	**-0.9**
	baz=51							
CNBA	**Chernabura Isl**	**0.90**	**226**			**Pn**	**10 13 21.6**	**-1.1**
CNBA						**Sn**	**10 13 33.2**	**-1.3**
CNBA				IAML			10 13 38.2	
	comp=E,3μm,0.4s							
CNBA				IAML			10 13 38.4	
	comp=N,2μm,0.3s							
VNFG	**Fog Glacier, M**	**1.03**	**324**			**Pb**	**10 13 26.0**	**+0.2**
SDPT	**Sand Point**	**1.15**	**266**			**Pn**	**10 13 25.9**	**-0.2**
SDPT				IAML			10 13 44.4	
	comp=E,3μm,0.6s							
SDPT				IAML			10 13 45.4	
	comp=N,2μm,0.7s							
SDPT	**Sand Point**	**1.15**	**266**			**Sn**	**10 13 40.1**	**-0.5**
SDPT	**Sand Point**	**1.15**	**266**	P		**Pn**	**10 13 25.8**	**-0.2**
	baz=89,SNR=41							
SDPT				S		**Sn**	**10 13 40.2**	**-0.5**
	baz=89							
ANPB	**Aniakchak Plen**	**1.35**	**4**			**Pn**	**10 13 30.3**	**+1.3**
ANNW	**Aniakchak Nort**	**1.52**	**5**			**Pn**	**10 13 33.7**	**+2.5**
CHIR	**Chirikof Islan**	**1.66**	**76**			**Pn**	**10 13 34.0**	**+1.0**
CHIR	**Chirikof Islan**	**1.66**	**76**			**Sn**	**10 13 53.6**	**+0.4**
CHIR	**Chirikof Islan**	**1.66**	**76**	IAML			10 14 03.6	
	comp=E,2μm,1.0s							
CHIR	**Chirikof Islan**	**1.66**	**76**	P		**Pn**	**10 13 34.1**	**+1.1**
	baz=255,SNR=6.6							
CHIR				S		**Sn**	**10 13 54.3**	**+1.2**
	baz=255							
PS1A	**Pavlof South-1**	**1.86**	**270**			**Pn**	**10 13 36.6**	**+0.7**
PVV	**Pavlof Volcano**	**1.89**	**269**			**Pn**	**10 13 37.1**	**+0.8**
PS4A	**Pavlof South-4**	**1.93**	**268**			**Pn**	**10 13 37.0**	**+0.1**
HAG	**Hague Volcano**	**1.96**	**267**			**Pn**	**10 13 38.2**	**+0.9**
PN7A	**Pavlof North-7**	**2.01**	**271**			**Pn**	**10 13 39.2**	**+1.2**
PN7A						**Sn**	**10 14 02.6**	**+0.6**
BLHA	**Black Hill**	**2.06**	**278**			**Pn**	**10 13 39.7**	**+1.1**
PLK3	**Peulik 3**	**2.55**	**28**			**Pn**	**10 13 48.2**	**+2.8**
PLK1	**Peulik 1**	**2.57**	**23**			**Pn**	**10 13 47.9**	**+2.3**
SII	**Sitkinak Islan**	**2.65**	**64**			**Pn**	**10 13 47.8**	**+1.0**
SII				IAML			10 14 42.5	
	comp=E,727nm,0.8s							
SII	**Sitkinak Islan**	**2.65**	**64**	P		**Pn**	**10 13 47.7**	**+1.0**
	baz=245,SNR=8.1							
FALS	**False Pass**	**2.90**	**260**	Pn		**Pn**	**10 13 50.9**	**+0.8**
FALS	**False Pass**	**2.90**	**260**			**Sn**	**10 14 25.5**	**+1.7**
FALS	**False Pass**	**2.90**	**260**	P		**Pn**	**10 13 51.0**	**+0.8**
	baz=78,SNR=9.0							
ISNN	**Isanotski Nort**	**3.11**	**261**			**Pn**	**10 13 54.6**	**+1.6**
BRPK	**Brown Peak**	**3.14**	**257**			**Pn**	**10 13 54.5**	**+1.1**
SSLN	**Shishaldin Nor**	**3.24**	**261**			**Pn**	**10 13 56.6**	**+1.8**
SSLW	**Shishaldin Wes**	**3.32**	**260**			**Pn**	**10 13 57.5**	**+1.6**
KELA	**Mount Kelaz**	**3.35**	**25**			**Pn**	**10 13 58.1**	**+1.8**
OHAK	**Old Harbor**	**3.39**	**56**	Pn		**Pn**	**10 13 57.3**	**+0.6**
OHAK				IAML			10 14 58.0	
	comp=N,197nm,0.8s							
OHAK	**Old Harbor**	**3.39**	**56**	P		**Pn**	**10 13 57.3**	**+0.6**
	baz=239,SNR=11							
P16K	**Nushagak River**	**3.60**	**4**			**Pn**	**10 14 01.4**	**+1.8**
P16K	**Nushagak River**	**3.60**	**4**	P		**Pn**	**10 14 01.5**	**+1.8**
	baz=184							
P16K				S		**Sn**	**10 14 42.4**	**+1.4**
	baz=184							
WESE	**West Dahl East**	**3.66**	**257**			**Pn**	**10 14 02.0**	**+1.4**
KAHC	**Katmai Hardscr**	**3.72**	**29**			**Pn**	**10 14 03.2**	**+1.7**
WECS	**Westdahl Cape**	**3.75**	**258**			**Pn**	**10 14 03.1**	**+1.3**
P17K	**Kvichak River**	**3.91**	**16**			**Pn**	**10 14 05.9**	**+2.0**
P17K	**Kvichak River**	**3.91**	**16**	P		**Pn**	**10 14 05.9**	**+2.0**
	baz=196,SNR=5.7							
KDAK	**Kodiak Island**	**4.00**	**52**	P		**Pn**	**10 14 05.6**	**+0.4**
	comp=N,4.2nm,0.3s,baz=244,slow=8.4,SNR=158							
KDAK				S		**Sn**	**10 14 52.8**	**+1.9**
	comp=N,31nm,0.6s,baz=306,slow=14,SNR=1.8							
KDAK				LR		LR	10 15 55.6	
	comp=N,129nm,19.1s,baz=232,slow=43							
	comp=N,12nm,0.3s							
KDAK	**Kodiak Island**	**4.00**	**52**	Pn		**Pn**	**10 14 05.7**	**+0.4**
KDAK				IAML			10 15 16.6	
	comp=N,97nm,1.0s							
KDAK				IAML			10 15 17.8	
	comp=N,77nm,1.2s							
KDAK	**Kodiak Island**	**4.00**	**52**	P		**Pn**	**10 14 05.7**	**+0.4**
	baz=236							
O16K	**Kokwok River B**	**4.16**	**3**			**Pn**	**10 14 08.7**	**+1.4**
O16K	**Kokwok River B**	**4.16**	**3**	P		**Pn**	**10 14 08.8**	**+1.4**
	baz=183							
O16K				S		**Sn**	**10 14 55.8**	**+1.1**
	baz=183							
P18K	**Big Mountain,**	**4.32**	**23**			**Pn**	**10 14 11.5**	**+1.9**
P18K	**Big Mountain,**	**4.32**	**23**	P		**Pn**	**10 14 11.6**	**+1.9**
	baz=204							
Q19K	**Cape Douglas,**	**4.36**	**35**			**Pn**	**10 14 12.2**	**+1.9**
Q19K	**Cape Douglas,**	**4.36**	**35**	P		**Pn**	**10 14 12.1**	**+1.9**
	baz=218							
AKSA	**Akutan Strait**	**4.39**	**255**			**Pn**	**10 14 11.7**	**+1.1**
O17K	**Koliganek Bris**	**4.39**	**9**			**Pn**	**10 14 12.2**	**+1.6**
AKUT	**Akutan**	**4.43**	**256**	Pn		**Pn**	**10 14 11.7**	**+0.6**
AKUT				IAML			10 15 24.4	
	comp=N,162nm,1.0s							
AKLV	**Akutan Long Va**	**4.52**	**256**			**Pn**	**10 14 13.0**	**+0.6**
Q20K	**Shuyak Island**	**4.58**	**44**	P		**Pn**	**10 14 14.5**	**+1.2**
	baz=228							
SYI	**Shuyak Island**	**4.59**	**44**			**Pn**	**10 14 14.5**	**+1.2**
O18K	**Koktuh Hills**	**4.75**	**20**			**Pn**	**10 14 17.5**	**+2.0**
O18K	**Koktuh Hills**	**4.75**	**20**	P		**Pn**	**10 14 17.6**	**+2.1**
	baz=202,SNR=8.0							
UNV	**Unalaska Valle**	**4.94**	**254**	Pn		**Pn**	**10 14 18.2**	**+0.1**
UNV	**Unalaska Valle**	**4.94**	**254**	P		**Pn**	**10 14 18.2**	**+0.1**
	baz=69							
MTBL	**Makushin Table**	**4.99**	**256**			**Pn**	**10 14 19.6**	**+0.7**
N16K	**Nishlik Lake**	**5.04**	**358**			**Pn**	**10 14 21.1**	**+1.6**
N16K	**Nishlik Lake**	**5.04**	**358**	P		**Pn**	**10 14 21.4**	**+1.9**
	baz=178,SNR=24							
N16K				S		**Sn**	**10 15 18.0**	**+1.5**
	baz=178							
MSW	**Makushin Switc**	**5.06**	**256**			**Pn**	**10 14 20.0**	**+0.1**
O19K	**Port Alsworth**	**5.25**	**23**			**Pn**	**10 14 24.1**	**+1.8**
O19K				IAML			10 15 29.8	
	comp=N,69nm,0.5s							
O19K				IAML			10 16 07.5	
	comp=E,86nm,0.5s							
O19K	**Port Alsworth**	**5.25**	**23**	P		**Pn**	**10 14 24.4**	**+2.1**
	baz=206,SNR=8.1							
N18K	**Kilae Creek**	**5.42**	**14**			**Pn**	**10 14 26.8**	**+2.1**
N18K	**Kilae Creek**	**5.42**	**14**	P		**Pn**	**10 14 26.3**	**+1.6**
	baz=195							
IVE	**Iliamna Volcan**	**5.43**	**30**			**Pn**	**10 14 26.9**	**+1.9**
HOM	**Homer**	**5.59**	**38**	Pn		**Pn**	**10 14 28.4**	**+1.3**
HOM	**Homer**	**5.59**	**38**	P		**Pn**	**10 14 27.3**	**+0.3**
	baz=223							
O20K	**Slope Mountain**	**5.59**	**32**			**Pn**	**10 14 29.0**	**+1.8**
CNPM	**China Poot**	**5.64**	**41**			**Pn**	**10 14 28.7**	**+0.8**
N19K	**Bonanza Creek**	**5.77**	**20**			**Pn**	**10 14 31.0**	**+1.3**
N19K	**Bonanza Creek**	**5.77**	**20**	P		**Pn**	**10 14 31.6**	**+2.0**
	baz=203,SNR=9.7							
RED	**Redoubt Volcan**	**5.83**	**29**			**Pn**	**10 14 32.4**	**+2.0**
SVW2	**Sparrevohn**	**5.86**	**14**	Pn		**Pn**	**10 14 32.7**	**+1.9**
RDWB	**Redoubt West**	**5.87**	**28**			**Pn**	**10 14 33.2**	**+2.2**
RSO	**Redoubt South**	**5.87**	**29**	Pn		**Pn**	**10 14 32.9**	**+1.8**
NCT	**North Crescent**	**5.91**	**28**			**Pn**	**10 14 33.3**	**+1.8**
BRLK	**Bradley Lake**	**5.94**	**40**	Pn		**Pn**	**10 14 32.1**	**+0.2**
BRSE	**Bradley Lake S**	**5.98**	**41**			**Pn**	**10 14 32.5**	**0.0**
BRSE	**Bradley Lake S**	**5.98**	**41**	P		**Pn**	**10 14 32.4**	**0.0**
	baz=227							
NIKH	**Nikolski High**	**6.58**	**252**	Pn		**Pn**	**10 14 41.6**	**+1.0**
SLKM	**Skilak Lake**	**6.70**	**37**			**Pn**	**10 14 42.3**	**0.0**
SEW	**Seward**	**6.70**	**42**			**Pn**	**10 14 41.8**	**-0.6**
SEW	**Seward**	**6.70**	**42**	P		**Pn**	**10 14 43.8**	**+1.5**
	baz=229							
SPIA	**Saint Paul Isl**	**6.78**	**290**			**Pn**	**10 14 44.4**	**+1.1**
SPIA	**Saint Paul Isl**	**6.78**	**290**	P		**Pn**	**10 14 43.3**	**-0.1**
	baz=100							
M19K	**Big River Lodg**	**6.81**	**17**			**Pn**	**10 14 46.3**	**+2.5**
M19K	**Big River Lodg**	**6.81**	**17**	P		**Pn**	**10 14 45.7**	**+2.0**
	baz=200							
STLK	**Strandline Lak**	**6.99**	**27**			**Pn**	**10 14 48.0**	**+1.7**
L19K	**White Mountain**	**7.00**	**14**			**Pn**	**10 14 48.1**	**+1.6**
L19K	**White Mountain**	**7.00**	**14**	P		**Pn**	**10 14 48.1**	**+1.6**
	baz=197,SNR=14							
M20K	**Styx River**	**7.02**	**21**			**Pn**	**10 14 48.9**	**+2.2**
M20K	**Styx River**	**7.02**	**21**	P		**Pn**	**10 14 48.3**	**+1.5**
	baz=205							
SUA	**Susitna One**	**7.26**	**31**	Pn		**Pn**	**10 14 51.6**	**+1.6**
SUA	**Susitna One**	**7.26**	**31**	P		**Pn**	**10 14 51.2**	**+1.1**
	baz=217							
RC01	**Rabbit Creek A**	**7.28**	**36**			**Pn**	**10 14 51.0**	**+0.6**
RC01	**Rabbit Creek A**	**7.28**	**36**	P		**Pn**	**10 14 51.2**	**+0.9**
	baz=222							
L20K	**Farewell, AK**	**7.43**	**17**			**Pn**	**10 14 54.5**	**+2.2**
L20K	**Farewell, AK**	**7.43**	**17**	P		**Pn**	**10 14 54.6**	**+2.2**
	baz=200,SNR=9.4							
P23K	**Montague Islan**	**7.47**	**48**	P		**Pn**	**10 14 53.9**	**+1.1**
	baz=237							
SKT	**Skwentna**	**7.47**	**26**			**Pn**	**10 14 53.7**	**+0.8**
SKT	**Skwentna**	**7.47**	**26**	P		**Pn**	**10 14 54.2**	**+1.3**
	baz=211							
TT01	**Tatalina**	**7.58**	**9**			**Pn**	**10 14 55.5**	**+1.2**
TTA	**Tatalina**	**7.60**	**9**			**Pn**	**10 14 55.7**	**+1.0**
TTA	**Tatalina**	**7.60**	**9**	P		**Pn**	**10 14 55.5**	**+0.7**
	baz=190,SNR=6.8							
M22K	**Willow**	**7.67**	**31**	P		**Pn**	**10 14 55.9**	**+0.3**
	baz=218							
PMR	**Palmer**	**7.85**	**35**	Pn		**Pn**	**10 14 59.3**	**+1.3**
KNK	**Knik Glacier**	**7.95**	**37**	Pn		**Pn**	**10 15 00.8**	**+1.4**
KNK	**Knik Glacier**	**7.95**	**37**	P		**Pn**	**10 15 00.9**	**+1.5**
	baz=225							
GHO	**Glory Hole Cre**	**8.05**	**34**	Pn		**Pn**	**10 15 03.1**	**+2.2**
HIN	**Hinchinbrook I**	**8.06**	**47**			**Pn**	**10 15 01.0**	**0.0**
GLI	**Glacier Island**	**8.10**	**43**	Pn		**Pn**	**10 15 01.9**	**+0.4**
PPLA	**Purkeypile**	**8.13**	**21**	Pn		**Pn**	**10 15 05.6**	**+3.6**
PPLA	**Purkeypile**	**8.13**	**21**	P		**Pn**	**10 15 05.2**	**+3.2**
	baz=206							
K20K	**Telida**	**8.24**	**14**			**Pn**	**10 15 04.8**	**+1.5**
K20K	**Telida**	**8.24**	**14**	P		**Pn**	**10 15 04.5**	**+1.2**
	baz=197,SNR=5.6							
FID	**Port Fidalgo**	**8.27**	**45**			**Pn**	**10 15 03.6**	**-0.2**
SML	**Sawmill**	**8.27**	**36**			**Pn**	**10 15 04.4**	**+0.5**
SML	**Sawmill**	**8.27**	**36**	P		**Pn**	**10 15 05.0**	**+1.1**
	baz=224							
EYAK	**Cordova Ski Ar**	**8.46**	**48**	Pn		**Pn**	**10 15 06.5**	**+0.1**
EYAK	**Cordova Ski Ar**	**8.46**	**48**	P		**Pn**	**10 15 06.6**	**+0.1**
	baz=238							
M23K	**Glacier View**	**8.46**	**37**	P		**Pn**	**10 15 07.6**	**+1.1**
	baz=226							
CAST	**Castle Rocks**	**8.62**	**20**	Pn		**Pn**	**10 15 09.6**	**+1.0**
CAST	**Castle Rocks**	**8.62**	**20**	P		**Pn**	**10 15 09.4**	**+0.7**
	baz=205							
SCM	**Sheep Creek Mo**	**8.63**	**38**			**Pn**	**10 15 09.6**	**+0.8**
SCM	**Sheep Creek Mo**	**8.63**	**38**	P		**Pn**	**10 15 09.7**	**+0.8**
	baz=227							
DIV	**Divide**	**8.77**	**44**	Pn		**Pn**	**10 15 12.2**	**+1.5**
KLU	**Klutina**	**8.93**	**42**			**Pn**	**10 15 12.8**	**0.0**
KLU	**Klutina**	**8.93**	**42**	P		**Pn**	**10 15 13.5**	**+0.6**
	baz=232,SNR=8.7							
KTH	**Kantishna Hill**	**8.98**	**22**			**Pn**	**10 15 15.6**	**+2.1**
HMT	**Hamilton**	**9.00**	**51**	Pn		**Pn**	**10 15 14.9**	**+1.0**
CHUM	**Lake Minchumin**	**9.00**	**18**			**Pn**	**10 15 15.9**	**+2.1**
CHUM	**Lake Minchumin**	**9.00**	**18**	P		**Pn**	**10 15 16.0**	**+2.1**
	baz=203,SNR=7.3							
J20K	**Nowinta River**	**9.01**	**12**	Pn		**Pn**	**10 15 15.9**	**+1.9**
J20K	**Nowinta River**	**9.01**	**12**	P		**Pn**	**10 15 15.3**	**+1.3**
	baz=196							
WAT6	**Susitna Watana**	**9.03**	**33**			**Pn**	**10 15 13.0**	**-1.3**
WAT6	**Susitna Watana**	**9.03**	**33**	P		**Pn**	**10 15 14.6**	**+0.3**
	baz=222							
TRF	**Thorofare Moun**	**9.03**	**24**

comp=E,45nm,19.4s,baz=220,slow=36
comp=E,1.8nm,0.7s

ILAR	**Eielson Array**	**10.96**	**27**	Pn		**Pn**	**10 15 39.4**	**-1.3**
DOT	**Dot Lake**	**10.97**	**36**	Pn		**Pn**	**10 15 40.8**	**0.0**
M27K	**Edge Creek, AK**	**11.00**	**44**	Pn		**Pn**	**10 15 42.5**	**+1.3**
PNL	**Peninsula**	**11.06**	**60**	P		**Pn**	**10 15 42.7**	**+0.6**
	baz=255							
TNA	**Tin City**	**11.14**	**339**	Pn		**Pn**	**10 15 45.0**	**+2.0**
SCRK	**Sand Creek**	**11.22**	**35**			**Pn**	**10 15 44.3**	**+0.1**
SCRK	**Sand Creek**	**11.22**	**35**	P		**Pn**	**10 15 43.5**	**-0.8**
	baz=227							
J25K	**Salcha River,**	**11.25**	**30**			**Pn**	**10 15 43.8**	**-0.9**
J25K	**Salcha River,**	**11.25**	**30**	P		**Pn**	**10 15 43.4**	**-1.2**
	baz=221							
H23K	**Yukon River**	**11.27**	**19**			**Pn**	**10 15 44.5**	**-0.4**
H23K	**Yukon River**	**11.27**	**19**	P		**Pn**	**10 15 44.4**	**-0.4**
	baz=207							
YUK3	**Moose Creek**	**11.30**	**49**	P		**Pn**	**10 15 46.6**	**+1.1**
	baz=244							
ADK	**Adak**	**11.37**	**259**	Pn		**Pn**	**10 15 48.1**	**+1.8**
L27K	**Beaver Creek,**	**11.40**	**41**			**Pn**	**10 15 47.1**	**+0.5**
L27K	**Beaver Creek,**	**11.40**	**41**	P		**Pn**	**10 15 47.8**	**+1.1**
	baz=235							
YUK8	**Steele Glacier**	**11.40**	**52**	P		**Pn**	**10 15 48.3**	**+1.4**
	baz=247							
BCAR	**Beaver Creek A**	**11.42**	**41**	Pn		**Pn**	**10 15 47.0**	**+0.1**
H24K	**Noodor Dome**	**11.62**	**22**	Pn		**Pn**	**10 15 49.2**	**-0.4**
H24K	**Noodor Dome**	**11.62**	**22**	P		**Pn**	**10 15 50.4**	**+0.7**
	baz=211							
J26L	**Joseph Creek**	**11.71**	**33**	Pn		**Pn**	**10 15 50.6**	**-0.4**
J26L	**Joseph Creek**	**11.71**	**33**	P		**Pn**	**10 15 51.2**	**+0.2**
	baz=226							
K27K	**Chicken**	**11.89**	**37**	Pn		**Pn**	**10 15 55.6**	**+2.3**
YUK4	**Talbot Arm**	**11.93**	**52**	P		**Pn**	**10 15 56.0**	**+2.0**
	baz=248							
HYT	**Haines Junctio**	**12.28**	**55**	Pn		**Pn**	**10 16 01.1**	**+2.3**
DAWY	**Dawson**	**12.87**	**40**			**Pn**	**10 16 07.2**	**+0.6**
DAWY	**Dawson**	**12.87**	**40**	P		**Pn**	**10 16 07.3**	**+0.6**
	baz=236							
M30M	**Minto, Yukon**	**13.20**	**49**			**Pn**	**10 16 12.1**	**+0.9**
JIS	**Juneau Island**	**13.45**	**68**	Pn		**Pn**	**10 16 14.0**	**-0.6**
BMAR	**Burnt Mountain**	**13.68**	**23**	Pn		**Pn**	**10 16 17.3**	**-0.4**
TOLK	**Toolik Lake Re**	**13.85**	**14**	Pn		**Pn**	**10 16 21.4**	**+1.3**
P33M	**Teslin, Yukon**	**14.42**	**60**	Pn		**Pn**	**10 16 30.1**	**+2.2**
MMPY	**Sheldon Lake,**	**15.63**	**52**	P		**Pn**	**10 16 45.6**	**+1.7**
	baz=255							
INK	**Inuvik**	**17.25**	**32**	P		**Pn**	**10 17 03.0**	**-1.3**
	comp=E,1.2nm,0.3s,baz=233,slow=11,SNR=26							
INK				LR		LR	10 24 46.0	
	comp=E,38nm,19.6s,baz=236,slow=41							
	comp=E,4.5nm,0.5s							
INK	**Inuvik**	**17.25**	**32**			**Pn**	**10 17 03.8**	**-0.5**
INK	**Inuvik**	**17.25**	**32**	P		**Pn**	**10 17 04.5**	**+0.2**
	baz=234,SNR=5.9							
BBB	**Bella Bella**	**18.14**	**88**	LR		LR	10 22 35.4	
	comp=E,48nm,20.9s,baz=272,slow=31							
C36M	**Paulatuk**	**20.74**	**34**	P		**P**	**10 17 43.5**	**-0.3**
C36M	**Paulatuk**	**20.74**	**34**	P		**P**	**10 17 43.5**	**-0.3**
	baz=245,SNR=6.5							
A36M	**Sachs Harbour**	**21.66**	**27**	P		**P**	**10 17 52.6**	**-1.0**
YKA	**Yellowknife Ar**	**23.27**	**55**	P		**P**	**10 18 10.4**	**-0.2**
	comp=E,0.3nm,0.5s,baz=273,slow=7.6,SNR=7.1							
	comp=E,0.3nm,0.5s							
PETK	**Petropavlovsk-**	**25.38**	**283**	P		**P**	**10 18 29.1**	**-1.1**
	comp=E,0.8nm,0.5s,baz=85,slow=12,SNR=1.9							
	comp=E,0.8nm,0.5s							
EDM	**Edmonton**	**26.05**	**76**	P		**P**	**10 18 37.7**	**+1.3**
EDM				IAmb		IAmb	10 18 38.5	
	comp=Z,7.5nm,1.1s							
NEW	**Newport**	**26.20**	**89**	P		**P**	**10 18 39.5**	**+1.7**
	comp=Z,0.9nm,0.4s,baz=270,slow=4.0,SNR=4.5							
	comp=Z,0.9nm,0.4s							
HLID	**Hailey**	**30.46**	**94**	P		**P**	**10 19 15.5**	**-0.4**
	baz=308							
YHL	**Hebgen Lake**	**31.51**	**90**	P		**P**	**10 19 27.4**	**+2.1**
NVAR	**Mina Array Bea**	**31.72**	**106**	P		**P**	**10 19 29.0**	**+1.9**
	comp=Z,0.3nm,0.6s,baz=302,slow=6.8,SNR=4.3							
	comp=Z,0.3nm,0.6s							
PDAR	**Pinedale Array**	**33.72**	**91**	P		**P**	**10 19 46.0**	**+1.4**
	comp=Z,0.7nm,0.5s,baz=297,slow=5.9,SNR=5.5							
	comp=Z,0.7nm,0.5s							
PDAR	**Pinedale Array**	**33.72**	**91**	P		**P**	**10 19 45.9**	**+1.3**
FCC	**Fort Churchill**	**33.92**	**57**	P		**P**	**10 19 46.5**	**+0.7**
FCC				IAmb		IAmb	10 19 53.9	
	comp=Z,7.8nm,1.5s							
LCMT	**Little Creek M**	**35.53**	**102**	P		**P**	**10 19 59.7**	**-0.5**
SRU	**San Rafael Swe**	**35.59**	**97**	P		**P**	**10 20 01.7**	**+1.0**
SRU				IAmb		IAmb	10 20 03.5	
	comp=Z,3.7nm,0.8s							
O20A	**White River Ci**	**36.19**	**94**	P		**P**	**10 20 07.0**	**+1.2**
O20A	**White River Ci**	**36.19**	**94**	P		**P**	**10 20 05.0**	**-0.8**
	baz=312							
PV13	**Radium Mtn., P**	**37.21**	**97**	P		**P**	**10 20 15.7**	**+1.1**
PV13				IAmb		IAmb	10 20 16.5	
	comp=Z,4.4nm,0.9s							
MVCO	**Mesa Verde**	**38.05**	**97**	P		**P**	**10 20 22.0**	**+0.2**
	baz=315							
AGMN	**Agassiz Nation**	**38.11**	**74**	P		**P**	**10 20 22.2**	**+0.4**
	baz=305							
TUC	**Tucson**	**40.37**	**105**	P		**P**	**10 20 40.6**	**-0.3**
	baz=319							
ECSD	**EROS Data Cent**	**40.45**	**80**	P		**P**	**10 20 41.3**	**-0.1**
	baz=309							
EYMN	**Ely**	**40.69**	**72**	P		**P**	**10 20 43.4**	**0.0**
EYMN				IAmb		IAmb	10 20 44.3	
	comp=Z,4.8nm,0.8s							
EYMN	**Ely**	**40.69**	**72**	P		**P**	**10 20 42.7**	**-0.6**
	baz=306							
TXAR	**Lajitas Array**	**46.59**	**101**	P		**P**	**10 21 31.6**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=306,slow=4.3,SNR=7.1							
	comp=Z,0.5nm,0.6s							
TXAR	**Lajitas Array**	**46.59**	**101**	P		**P**	**10 21 32.1**	**+1.1**
JCT	**Junction City**	**47.89**	**96**	P		**P**	**10 21 40.6**	**-0.6**
	baz=319							
MIAR	**Mount Ida**	**48.44**	**87**	P		**P**	**10 21 44.3**	**-1.0**
	baz=316							
SCHQ	**Schefferville**	**48.63**	**50**	P		**P**	**10 21 45.7**	**-0.8**
	comp=Z,3.0nm,0.9s,baz=278,slow=7.1,SNR=2.1							
	comp=Z,3.0nm,0.9s							
FINES	**FINESS Array B**	**63.39**	**358**	P		**P**	**10 23 29.9**	**-1.9**
	comp=Z,0.5nm,0.5s,baz=16,slow=8.3,SNR=5.8							
	comp=Z,0.5nm,0.5s							
FINES	**FINESS Array B**	**63.39**	**358**	P		**P**	**10 23 32.7**	**+0.9**
NOA	**NORSAR Array B**	**63.56**	**6**	P		**P**	**10 23 32.0**	**-1.1**
	comp=Z,0.7nm,0.8s,baz=353,slow=6.6,SNR=3.5							
	comp=Z,0.7nm,0.8s							
MKAR	**Makanchi Array**	**66.05**	**319**	P		**P**	**10 23 48.0**	**-1.5**
	comp=Z,0.3nm,0.4s,baz=21,slow=4.0,SNR=4.7							
	comp=Z,0.3nm,0.4s							
MKAR	**Makanchi Array**	**66.05**	**319**	P		**P**	**10 23 49.5**	**0.0**
ABKAR	**Akbulak array**	**70.83**	**334**	IAmb		IAmb	10 24 18.9	
	comp=Z,2.6nm,1.3s							
ABKAR				P		**P**	**10 24 19.8**	**+0.6**
AKASG	**Malin Array Be**	**74.02**	**355**	P		**P**	**10 24 35.6**	**-2.6**
	comp=Z,0.7nm,0.3s,baz=4.7,slow=5.5,SNR=5.1							
	comp=Z,0.7nm,0.3s							
CMAR	**Chiang Mai Arr**	**81.91**	**291**	P		**P**	**10 25 22.5**	**0.0**
	comp=Z,1.2nm,0.3s,baz=19,slow=5.9,SNR=1.3							
	comp=Z,1.2nm,0.3s							
ESDC	**Sonseca Array**	**82.77**	**20**	P		**P**	**10 25 26.7**	**-0.1**
	comp=Z,0.9nm,1.0s,baz=350,slow=5.1,SNR=4.5							
	comp=Z,0.9nm,1.0s							

IDC 07 10:29:18.3±2.7, 42°29N×129°25E, h0km, mbtmp2.5/2, ML1.9/2, Error ellipse: s-maj=45.7km s-min=14.5km az=119.0, North Korea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I45RU	**USSURIYSK INFR**	**2.76**	**45**	*i*		10 49 40.0	
	baz=227,slow=316,SNR=1.3						
USRK	**Ussuriysk Ar.**	**2.76**	**45**	Pn	Pn	10 30 03.9	+0.1
	0.2nm,0.3s,baz=236,slow=16,SNR=5.9						
USRK				Pg	Pb	10 30 09.2	+0.7
	1.2nm,0.3s,baz=227,slow=14,SNR=20						
USRK				Lg	Lg	10 30 45.2	
	1.8nm,0.3s,baz=230,slow=26,SNR=8.6						
	0.5nm,0.3s						
KSRS	**Korea Array**	**4.94**	**192**	Pn	Pn	10 30 34.1	+0.4
	0.4nm,0.3s,baz=12,slow=13,SNR=5.0						
KSRS				Sn	Sn	10 31 32.0	+0.5
	0.2nm,0.3s,baz=15,slow=24,SNR=2.6						
KSRS				Lg	Lg	10 31 55.9	
	0.3nm,0.3s,baz=9.5,slow=30,SNR=4.6						
	0.8nm,0.4s						

*IDC **07** 10:31:58.3±7.8, 17°.58N×104°.94W, h0km, mb3.4/2, mbtmp3.6/5, ML3.4/3, MS3.4/7, Error ellipse: s-maj=142.2km s-min=81.5km az=125.0*
*MEX **07** 10:32:05.8±1.3, 18°.28N×105°.12W, h10km±126km, MD4.2*
*NEIC **07** 10:32:13.5±2.3, 19°.0N±0°.1×104°.9W±0°.1, h10km±2km, mb4.1/89, Md4.2/12(MEX), Error ellipse: s-maj=20.7km s-min=14.4km az=226.0*

ISC 07 10:32:12.0±1.4, 18°.9N±0°.1×104°.93W±0°.07, h10km, n95, σ1°26/83, mb4.2/15, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CJM	**Chamela**	**0.65**	**350**	*eP*	**Pg**	**10 32 25.0**	**+0.4**
CJM				*eS*	**Sn**	**10 32 39.6**	**+1.9**
R15V		**0.94**	**71**		**Pg**	**10 32 29.6**	**-0.6**
R15V		**0.94**	**71**	*eP*	**Pg**	**10 32 29.6**	**-0.6**
R15V				*i S*	**Sn**	**10 32 48.6**	**+3.5**
COIG	**Colima**	**1.21**	**74**	*eP*	Pn	10 32 26.1	-9.1
COIG				*eS*	**Sb**	**10 32 50.3**	**-0.7**
MOIG	**Morelia**	**3.62**	**76**	Pn	**Pn**	**10 33 08.4**	**-0.1**
ZAIG	**Zacatecas**	**4.47**	**29**		**Pn**	**10 33 19.5**	**-0.7**
UNM	**Universidad Na**	**5.46**	**84**	Pn	**Pn**	**10 33 33.6**	**0.0**
H06E1	**SOCORRO T-PHAS**	**5.68**	**270**	T	T	10 38 45.4	
	SNR=291						
TLIG	**Tlapa**	**6.18**	**101**		**Pn**	**10 33 43.9**	**+0.3**
LPIG	**La Paz**	**7.23**	**317**	LR	LR	10 36 06.8	
	comp=Z,642nm,19.6s,baz=179,slow=30						
CMIG	**Matias Romero**	**9.72**	**99**	LR	LR	10 38 10.9	
	comp=Z,13nm,18.8s,baz=284,slow=39						
TXAR	**Lajitas Array**	**10.49**	**6**	Pn	Pn	10 34 48.4	+5.7
	baz=188,slow=12,SNR=11						
TXAR				LR	LR	10 38 51.1	
	comp=Z,122nm,18.3s,baz=185,slow=35						
	2.0nm,1.0s						
TXAR	**Lajitas Array**	**10.49**	**6**	Pn	**Pn**	**10 34 41.7**	**-1.0**
TX31	**Lajitas Ar. Si**	**10.49**	**6**		**Pn**	**10 34 40.9**	**-1.8**
TX32	**Lajitas Array**	**10.49**	**6**		**Pn**	**10 34 40.7**	**-2.0**
833A	**Chaparral WMA,**	**10.70**	**27**	Pn	**Pn**	**10 34 43.0**	**-2.4**
JCT	**Junction City**	**12.47**	**21**	Pn	**Pn**	**10 35 07.9**	**-1.7**
121A	**Cookes Peak, D**	**13.86**	**350**	Pn	**Pn**	**10 35 27.7**	**-1.1**
TUC	**Tucson**	**14.39**	**340**	Pn	**Pn**	**10 35 34.6**	**-1.4**
ABTX	**Abilene, Hawle**	**14.51**	**18**	Pn	**Pn**	**10 35 35.1**	**-2.4**
214A	**Organ Pipe Nat**	**14.85**	**333**	Pn	**Pn**	**10 35 40.9**	**-1.3**
MSTX	**Muleshoe**	**15.17**	**7**	Pn	**Pn**	**10 35 45.6**	**-1.0**
BNM	**Barren Site**	**15.31**	**355**	Pn	**Pn**	**10 35 47.2**	**-1.3**
LENM	**Lemitar**	**15.36**	**354**		**Pn**	**10 35 48.6**	**-0.5**
237A	**Washetta, Mont**	**15.45**	**30**	Pn	**Pn**	**10 35 50.3**	**+0.1**
NATX	**Nacogdoches**	**15.83**	**34**	Pn	**Pn**	**10 35 54.6**	**-0.5**
113A	**Mohawk Valley,**	**15.96**	**332**	Pn	**Pn**	**10 35 55.2**	**-1.6**
113A				IAmb	IAmb	10 36 12.4	
	comp=Z,23nm,1.4s						
ANMO	**Albuquerque**	**16.08**	**355**	P	**P**	**10 36 02.8**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=180,slow=11,SNR=9.4						
ANMO				LR	LR	10 42 27.5	
	comp=Z,182nm,19.4s,baz=179,slow=36						
	comp=Z,7.6nm,1.2s						
ANMO	**Albuquerque**	**16.08**	**355**	Pn	**Pn**	**10 35 57.2**	**-1.3**
ANMO				IAmb	IAmb	10 36 12.7	
	comp=Z,15nm,1.4s						
AMTX	**Amarillo**	**16.22**	**10**	Pn	**Pn**	**10 35 59.5**	**-0.6**
AMTX				IAmb	IAmb	10 36 12.1	
	comp=Z,22nm,1.0s						
X18A	**Snowflake**	**16.24**	**345**	Pn	**Pn**	**10 36 00.1**	**-0.3**
X16A	**Lo Mia Camp, P**	**16.55**	**341**	P	**Pn**	**10 36 05.5**	**+1.0**
Y14A	**Wickenburg**	**16.66**	**336**	Pn	**Pn**	**10 36 05.7**	**0.0**
W18A	**Petrified Fore**	**16.75**	**346**		**Pn**	**10 36 07.8**	**+0.8**
W18A				IAmb	IAmb	10 36 24.5	
	comp=Z,17nm,1.2s						
X34A	**Smith Ranch, M**	**16.90**	**21**	Pn	**Pn**	**10 36 07.3**	**-1.4**
TKX	**Tecate**	**17.22**	**325**		**Pn**	**10 36 13.3**	**+0.6**
BAR	**Barrett**	**17.34**	**325**	Pn	**Pn**	**10 36 13.5**	**-0.8**
BAR				IAmb	IAmb	10 36 26.1	
	comp=Z,16nm,1.4s						
WUAZ	**Wupatki**	**17.55**	**342**	Pn	**Pn**	**10 36 15.7**	**-1.3**
WUAZ				IAmb	IAmb	10 36 33.0	
	comp=Z,14nm,1.2s						
PFO	**Pinyon Flats O**	**17.95**	**327**	P	**Pn**	**10 36 22.0**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=138,slow=6.4,SNR=2.9						
PFO				LR	LR	10 42 05.7	
	comp=Z,87nm,18.4s,baz=169,slow=32						
	comp=Z,1.6nm,0.9s						
T25A	**Trinidad**	**18.22**	**1**		**Pn**	**10 36 26.1**	**+0.8**
T25A				IAmb	IAmb	10 36 38.8	
	comp=Z,27nm,1.4s						
U32A	**Winter Ranch,**	**18.22**	**15**		**Pn**	**10 36 26.1**	**+1.0**
U32A				IAmb	IAmb	10 36 34.2	
	comp=Z,16nm,0.9s						
MVCO	**Mesa Verde**	**18.55**	**351**	P	**P**	**10 36 26.6**	**-2.6**
MVCO				IAmb	IAmb	10 36 43.5	
	comp=Z,21nm,1.4s						
U15A	**North Rim**	**18.67**	**341**		**P**	**10 36 30.7**	**+0.1**
TUL1	**Leonard**	**18.80**	**24**		**P**	**10 36 31.8**	**0.0**
TUL1				IAmb	IAmb	10 36 39.0	
	comp=Z,16nm,1.2s						
SDCO	**Great Sand Dun**	**18.83**	**359**	P	**P**	**10 36 32.1**	**-0.2**
S22A	**4UR Ranch, Cre**	**18.89**	**355**		**P**	**10 36 31.7**	**-1.3**
S22A				IAmb	IAmb	10 36 49.4	
	comp=Z,16nm,1.4s						
X40A	**Basin Creek Ra**	**18.92**	**32**	P	**P**	**10 36 33.0**	**-0.1**
T35A	**Sooner Cattle**	**19.45**	**21**		**P**	**10 36 39.6**	**+0.8**
LCMT	**Little Creek M**	**19.50**	**340**	P	**P**	**10 36 40.3**	**+0.7**
PV13	**Radium Mtn., P**	**19.53**	**351**	P	**P**	**10 36 40.4**	**+0.5**
PV13				IAmb	IAmb	10 36 51.7	
	comp=Z,14nm,1.1s						
PKCU	**Pink Cliffs**	**19.61**	**342**	P	**P**	**10 36 40.2**	**-0.7**
PV11	**David Mesa, Pa**	**19.67**	**351**	P	**P**	**10 36 42.7**	**+1.2**
SHPR	**Sheep Range**	**19.75**	**335**	P	**P**	**10 36 42.5**	**+0.2**
PV07	**Paradox Valley**	**19.78**	**351**	P	**P**	**10 36 44.2**	**+1.5**
HHAR	**Hobbs**	**19.88**	**27**	P	**P**	**10 36 42.2**	**-1.3**
GWY	**Greenwater Val**	**20.13**	**331**	IAmb	IAmb	10 36 55.7	
	comp=Z,14nm,1.5s						
R32A	**Long Quarter,**	**20.23**	**14**		**P**	**10 36 46.3**	**-1.1**
SMCO	**Snowmass**	**20.33**	**355**		**P**	**10 36 46.2**	**-2.6**
CBKS	**Cedar Bluff**	**20.39**	**12**	P	**P**	**10 36 49.1**	**0.0**
MSU	**Marysvale**	**20.58**	**344**	P	**P**	**10 36 53.3**	**+1.9**
MVU	**Marysvale**	**20.58**	**344**	P	**P**	**10 36 52.6**	**+1.2**
ISA	**Isabella, Lake**	**20.58**	**327**	P	**P**	**10 36 52.5**	**+1.3**
TPNV	**Topopah Spring**	**20.58**	**333**	P	**P**	**10 36 50.6**	**-0.7**
TPNV				IAmb	IAmb	10 36 58.5	
	comp=Z,15nm,1.4s						
Q16A	**Castle Valley**	**20.71**	**346**	IAmb	IAmb	10 37 05.4	
	comp=Z,17nm,1.1s						
SRU	**San Rafael Swe**	**20.76**	**348**	IAmb	IAmb	10 37 05.8	
	comp=Z,8.0nm,1.1s						
ISCO	**Idaho Springs**	**20.88**	**359**		**P**	**10 36 53.1**	**-1.6**
ISCO				IAmb	IAmb	10 37 04.1	
	comp=Z,12nm,1.4s						
LCAR	**Lake Charles**	**21.01**	**33**	P	**P**	**10 36 55.9**	**0.0**
LCAR				IAmb	IAmb	10 37 06.4	
	comp=Z,8.3nm,1.0s						
TMUT	**Trail Mountain**	**21.08**	**346**	P	**P**	**10 36 56.8**	**-0.1**
TMUT				IAmb	IAmb	10 37 13.6	
	comp=Z,16nm,1.3s						
JTS	**Las Juntas de**	**21.11**	**111**	LR	LR	10 42 05.6	
	comp=Z,23nm,20.4s,baz=358,slow=29						
GRAC	**Grapevine Rang**	**21.11**	**331**	IAmb	IAmb	10 37 08.1	
	comp=Z,14nm,1.4s						
S39A	**Bolivar**	**21.33**	**26**	P	**P**	**10 36 59.2**	**0.0**
O20A	**White River Ci**	**21.40**	**353**	P	**P**	**10 36 59.1**	**-1.1**
O20A				IAmb	IAmb	10 37 20.3	
	comp=Z,6.2nm,1.0s						
RDMU	**Red Mountain**	**22.00**	**351**	P	**P**	**10 37 05.1**	**-1.6**
DUG	**Dugway, Tooele**	**22.32**	**344**	IAmb	IAmb	10 37 31.2	
	comp=Z,8.9nm,1.2s						
OMMB	**Old Mammoth Mi**	**22.38**	**330**	P	**P**	**10 37 09.5**	**-1.3**
NV11	**Mina Array Sit**	**22.65**	**332**	IAmb	IAmb	10 37 25.2	
	comp=Z,6.7nm,1.2s						
LHV	**Little Huntoon**	**22.66**	**331**	IAmb	IAmb	10 37 21.2	
	comp=Z,15nm,1.5s						
NVAR	**Mina Array Bea**	**22.71**	**332**	LR	LR	10 45 58.7	
	comp=Z,104nm,18.4s,baz=172,slow=35						
RYN	**Ryan**	**22.97**	**332**	P	**P**	**10 37 15.2**	**-1.7**
RYN				IAmb	IAmb	10 37 28.2	
	comp=Z,8.2nm,1.3s						
PDAR	**Pinedale Array**	**24.16**	**352**	P	**P**	**10 37 28.8**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=146,slow=9.8,SNR=2.3						
	comp=Z,0.3nm,0.4s						
REDW	**Red Top Meadow**	**24.94**	**350**	P	**P**	**10 37 36.9**	**+1.2**
SNOW	**Snow King Moun**	**25.02**	**350**	P	**P**	**10 37 33.4**	**-3.0**
TPAW	**Teton Pass**	**25.08**	**350**	P	**P**	**10 37 34.5**	**-2.6**
LOHW	**Long Hollow**	**25.14**	**350**	P	**P**	**10 37 37.4**	**-0.1**
MOOW	**Moose Ponds**	**25.30**	**350**	P	**P**	**10 37 38.3**	**-0.7**
MOOW				IAmb	IAmb	10 37 52.0	
	comp=Z,5.9nm,1.1s						
BOZ	**Bozeman (W)**	**27.24**	**350**	P	**P**	**10 37 56.2**	**-0.3**
MSO	**Missoula**	**28.86**	**347**	P	**P**	**10 38 11.8**	**+0.9**
MSO				IAmb	IAmb	10 38 20.5	
	comp=Z,6.4nm,1.3s						
DLBC	**Dease Lake**	**43.59**	**341**	P	**P**	**10 40 15.6**	**-0.7**
DLBC				IAmb	IAmb	10 40 26.5	
	comp=Z,7.7nm,1.1s						
J26L	**Joseph Creek**	**52.42**	**340**	P	**P**	**10 41 25.5**	**+0.9**
J26L				IAmb	IAmb	10 41 34.5	
	comp=Z,4.1nm,1.0s						
SPU	**Mount Spurr**	**53.61**	**334**	P	**P**	**10 41 33.1**	**-0.3**
ILAR	**Eielson Array**	**53.70**	**339**	P	P	10 41 29.7	-4.1
	comp=Z,0.5nm,0.8s,baz=138,slow=5.6,SNR=4.3						
	comp=Z,0.5nm,0.8s						
ILAR	**Eielson Array**	**53.70**	**339**	P	**P**	**10 41 34.1**	**+0.3**
SKT	**Skwentna**	**53.81**	**335**	P	**P**	**10 41 34.1**	**-0.7**
TRF	**Thorofare Moun**	**54.13**	**337**	P	**P**	**10 41 38.5**	**+1.3**
MDM	**Murphy Dome**	**54.27**	**339**	P	**P**	**10 41 38.2**	**+0.2**
MDM				IAmb	IAmb	10 41 59.3	
	comp=Z,3.1nm,1.2s						

*IDC **07** 10:38:50.9±3.2, 53°.70N×90°.97E, h0km, mbtmp3.4/3, ML2.9/3, Error ellipse: s-maj=27.3km s-min=23.3km az=47.0*
*NNC **07** 10:38:51.2±2.1, 53°.81N×90°.61E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=15.5km s-min=10.3km az=80.0, Suspected Mining explosion.*

ISC 07 10:38:52.7±4.0, 53°.7N±0°.1×90°.7E±0°.2, h0km, n12, σ1°42/14, 5C-8D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.48**	**277**	*i*		11 00 17.8	
	0.1nm,1.1s,baz=91,slow=322,SNR=17						
ZAA0	**Zalesovo Array**	**3.48**	**277**	⇑Pg	**Pb**	**10 39 53.8**	**-1.3**
	1.9nm,0.6s,baz=89,slow=15						
ZAA0				⇑Lg	Lg	10 40 42.5	
	9.1nm,0.8s,baz=88,slow=26						
ZALV	**Zalesovo Beam**	**3.48**	**277**	Pn	**Pn**	**10 39 50.1**	**+2.1**
	1.8nm,0.3s,baz=95,slow=13,SNR=12						
ZALV				Lg	Lg	10 40 44.2	
	2.9nm,0.3s,baz=88,slow=26,SNR=9.5						
	2.7nm,0.3s						
KURK	**Kurchatov**	**7.97**	**253**	⇓Pn	**Pn**	**10 40 49.0**	**-0.8**
	3.0nm,1.0s						
KURK				⇓Sn	**Sn**	**10 42 19.5**	**-1.1**
	8.4nm,1.1s						
KURK				⇓Lg	Lg	10 43 05.1	
	22nm,1.2s						
KURBB	**Kurchatov Arra**	**8.07**	**253**	Pn	**Pn**	**10 40 51.0**	**0.0**
	0.2nm,0.3s,baz=65,slow=15,SNR=8.2						
KURBB				Sn	**Sn**	**10 42 25.4**	**+2.5**
	0.1nm,0.3s,baz=69,slow=27,SNR=8.7						
KURBB				Lg	Lg	10 43 08.6	
	0.1nm,0.3s,baz=66,slow=36,SNR=4.3						
	1.6nm,0.5s						
KURBB	**Kurchatov Arra**	**8.07**	**253**	⇓Pn	**Pn**	**10 40 51.1**	**0.0**
	2.0nm,0.5s						
KURBB				⇑Sn	**Sn**	**10 42 21.9**	**-1.0**
	13nm,0.6s						
KURBB				⇑Lg	Lg	10 43 08.4	
	64nm,1.1s						
MK31	**Makanchi Array**	**8.73**	**221**	⇓Pn	**Pn**	**10 40 59.9**	**-0.4**
	1.1nm,0.8s,baz=41,slow=14,SNR=6.0						
MK31				⇑Sn	**Sn**	**10 42 41.4**	**+2.1**
	1.8nm,0.7s,baz=43,slow=22,SNR=4.6						
MK31				Lg	Lg	10 43 29.5	
	9.4nm,0.8s,baz=35,slow=29,SNR=3.9						
MKAR	**Makanchi Array**	**8.73**	**221**	Pn	**Pn**	**10 41 00.6**	**+0.4**
	0.4nm,0.3s,baz=42,slow=14,SNR=11						
MKAR				Sn	**Sn**	**10 42 40.9**	**+1.6**
	0.2nm,0.3s,baz=42,slow=18,SNR=2.4						
MKAR				Lg

BRRC				*e*S		Sn	10 41 43.4	-0.8
BRRC				*i*			10 41 47.9	
	comp=Z,21nm,0.2s							
NORC	**Norcasia**	**4.02**	**140**	*e*P		Pn	10 40 59.0	+0.5
NORC				*e*S		Sn	10 41 43.1	-1.3
NORC				*i*			10 41 50.3	
	comp=Z,9.6nm,0.2s							
OCAC	**Ocana**	**4.11**	**96**	*e*P		Pn	10 40 59.6	-0.1
OCAC				*e*S		Sn	10 41 45.4	-1.2
LL6C	**La Loma 6 Bece**	**4.25**	**75**	*e*P		Pn	10 41 02.4	+0.8
LL6C				*e*S		Sn	10 41 50.0	0.0
LL6C				*i*			10 41 53.3	
	comp=Z,16nm,0.3s							
SPBC	**San Pablo de B**	**4.50**	**132**	*e*P		Pn	10 41 03.7	-1.5
SPBC				*e*S		Sn	10 41 54.0	-2.3
YOTC	**Yotoco, Valle**	**4.80**	**167**	*e*P		Pn	10 41 09.1	-0.1
YOTC				*e*S		Sn	10 42 01.0	-2.6
PAMC	**Pamplona, Colo**	**4.89**	**106**⇓	*e*P		Pn	10 41 12.1	+1.4
PAMC				*e*S		Sn	10 42 05.9	-0.4
PAMC				*i*			10 42 08.7	
	comp=Z,17nm,0.5s							
CRJC	**Cerrejon, Guaj**	**5.06**	**62**	*e*P		Pn	10 41 13.0	+0.2
CRJC				*e*S		Sn	10 42 07.2	-2.9
CRJC				*i*			10 42 11.6	
	comp=Z,24nm,0.2s							
RUSC	**La Rusia**	**5.14**	**122**	*e*P		Pn	10 41 14.8	+0.6
RUSC				*e*S		Sn	10 42 12.4	-0.1
RUSC				*i*			10 42 17.4	
	comp=Z,15nm,0.8s							
CHIC	**Chingaza**	**5.46**	**137**	*e*P		Pn	10 41 20.3	+1.7
CHIC				*e*S		Sn	10 42 22.5	+2.1
CHIC				*i*			10 42 29.5	
	comp=Z,5.0nm,0.5s							

UCR ***07*** *10:51:25.7±1.8, 19°.98N×105°.91W, h0km±999km, mb6.3(NEIC)*

IDC ***07*** *10:51:35.0±0.4, 18°.42N×105°.06W, h0km, mb5.2/52, mbtmp5.2/53, ML4.6/1, MS6.1/70, Error ellipse: s-maj=12.8km s-min=6.8km az=56.0*

MOS ***07*** *10:51:36.7±1.0, 18°.39N×105°.16W, h19km, mb6.1/51, MS6.2/56, Error ellipse: s-maj=7.0km s-min=4.1km az=85.0*

MEX ***07*** *10:51:36.4±1.4, 18°.28N×105°.31W, h9km±30km, MD6.1*

BJI ***07*** *10:51:37.7±0.0, 18°.40N×105°.15W, h10km, mb5.4/7, mB6.1/45, Ms6.5/55, Ms7 6.2/54*

NEIC ***07*** *10:51:37.7±2.0, 18°.36N±0°.05×105°.17W±0°.05, h10km±1km, mb6.1/838, Ms_20 6.1/423, Mww6.3, Md6.1/181(MEX), Error ellipse: s-maj=10.2km s-min=6.9km az=215.0*

GCMT ***07*** *10:51:39.7±0.0, 18°.43N×105°.33W, h12km, MW6.3/164, Moment Tensor Solution. s164,c390; s162,c645; Duration: 83 Moment tensor: Scale 10^18 Nm; Mrr=0.16±.01; Mθθ=0.19±.01; Mϕϕ=0.34±.01; Mrθ=0.35±.03; Mθϕ=-3.16±.01; Mϕr=-0.23±.03; Best double couple: M0=3.19600×10^18 NP1=ϕs=183.00000°, δ=84.00000°, λ=3.00000°. NP2=ϕs=92.00000°, δ=87.00000°, λ=174.00000°. Principal axes: T 3.2980, Plg7.0000°, Azm47.0000°; N -0.2020, Plg83.0000°, Azm244.0000°; P -3.0950, Plg2.0000°, Azm138.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ECX ***07*** *10:51:42.7±1.9, 18°.47N×105°.82W, h0km±57km, MD6.5*

GCG ***07*** *10:51:42.2±3.5, 18°.45N×105°.31W, h33km, mb6.1*

NEIC ***07*** *10:51:45, 18°.40N×105°.24W, h20km, Moment Tensor Solution. Duration: 66 Moment tensor: Scale 10^18 Nm; Mrr=0.20; Mθθ=-0.45; Mϕϕ=0.25; Mrθ=-0.37; Mθϕ=-2.78; Mϕr=-1.21; Fault plane solution: M0=3.08000×10^18 NP1=ϕs=94.00000°, δ=66.00000°, λ=-178.00000°. NP2=ϕs=4.00000°, δ=88.00000°, λ=-23.00000°. Principal axes: T 2.8800, Plg15.0000°, Azm51.0000°; N 0.3635, Plg66.0000°, Azm179.0000°; P -3.2435, Plg18.0000°, Azm317.0000°;*

ISC 07 10:51:35.7±0.5, 18°.31N±0°.02×105°.17W±0°.03, h4km±2km, h5km: pP-P, n2315, σ2=15/2773, mb6.1/494, MS6.2/357, 141C-100D, Off coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CJM	**Chamela**	**1.19**	**6**	*e*P			**Pg**	10 51 55.8	-2.8
CJM				*e*S			**Sg**	10 52 11.1	-3.0
CDAR	**Ciudad de Arme**	**1.27**	**60**	*e*P			**Pg**	10 51 58.0	-2.1
CDAR				*e*S			**Sg**	10 52 15.1	-1.5
R15V		**1.42**	**52**				**Pn**	10 52 00.3	-1.9
R15V		**1.42**	**52**	*e*P			**Pn**	10 52 00.3	-1.9
R15V				*e*S			**Sb**	10 52 19.9	-1.3
COIG	**Colima**	**1.65**	**58**	*e*P			**Pn**	10 52 04.0	-1.5
COIG				*e*S			**Sn**	10 52 24.6	-2.7
MMIG	**Aquila**	**1.74**	**90**				**Pn**	10 52 04.8	-1.8
MMIG							**Sn**	10 52 26.1	-3.1
MMIG	**Aquila**	**1.74**	**90**	*e*P			**Pn**	10 52 04.8	-1.8
MMIG				*e*S			**Sn**	10 52 26.1	-3.1
MNGA	**Volcan de Coli**	**1.87**	**52**⇑	*i*P			**Pn**	10 52 08.1	-0.6
MNGA				*i* S			**Sn**	10 52 31.2	-1.6
EZ5V		**1.89**	**52**				**Pn**	10 52 08.5	-0.5
EZ5V		**1.89**	**52**	*e*P			**Pn**	10 52 08.5	-0.5
EZ5V				*e*S			**Sn**	10 52 30.4	-3.0
INCO	**Volcan de Coli**	**1.92**	**51**⇑	*i*P			**Pn**	10 52 08.8	-0.7
INCO				*e*S			**Sn**	10 52 32.7	-1.5
JUBC	**Volcan de Coli**	**1.94**	**51**⇑	*i*P			**Pn**	10 52 09.2	-0.5
JUBC				*e*S			**Sn**	10 52 33.0	-1.6
PUVA	**Puert Vallarta**	**2.31**	**359**				**Pn**	10 52 13.2	-1.3
PUVA							**Sn**	10 52 40.8	-2.5
PUVA	**Puert Vallarta**	**2.31**	**359**	*e*P			**Pn**	10 52 13.2	-1.3
PUVA				*i* S			**Sn**	10 52 40.8	-2.5
ANIG	**Ahuacatlan**	**2.80**	**13**				**Pn**	10 52 20.4	-1.0
ANIG							**Sn**	10 52 53.3	-2.4
ANIG	**Ahuacatlan**	**2.80**	**13**⇑	*e*P			**Pn**	10 52 20.4	-1.0
ANIG				*e*S			**Sn**	10 52 53.3	-2.4
GDLP	**Chapalita**	**2.87**	**34**	*e*P			**Pn**	10 52 22.7	+0.3
URUA	**Uruapan**	**3.14**	**69**				**Pn**	10 52 27.0	+1.0
URUA							**Sn**	10 53 03.3	-0.8
URUA	**Uruapan**	**3.14**	**69**	*e*P			**Pn**	10 52 27.0	+1.0
URUA				*i* S			**Sn**	10 53 03.3	-0.8
TPIX	**Tepic**	**3.18**	**5**	*e*P			**Pn**	10 52 25.2	-1.3
TPICX				*e*S			**Sn**	10 53 03.0	-2.0
TEPI	**Tepic**	**3.21**	**4**	*e*P			**Pn**	10 52 26.9	-0.1
TEPI				*e*S			**Sn**	10 53 03.1	-2.6
UON	**La Union**	**3.21**	**95**	*e*P			**Pn**	10 52 27.8	+1.0
UON				*i* S			**Sn**	10 53 05.1	-0.5
ZIIG	**Zihuatanejo**	**3.60**	**101**				**Pn**	10 52 31.9	-0.4
ZIIG	**Zihuatanejo**	**3.60**	**101**⇓	*e*P			**Pn**	10 52 31.9	-0.4
MOIG	**Morelia**	**4.01**	**69**	Pn			**Pn**	10 52 39.1	+1.0
MOIG	**Morelia**	**4.01**	**69**				**Sn**	10 53 23.1	-2.5
MOIG	**Morelia**	**4.01**	**69**⇑	*i*P			**Pn**	10 52 39.4	+1.3
MOIG				*e*S			**Sn**	10 53 23.1	-2.5
AAIG	**Aguscalientes**	**4.49**	**35**⇑	*e*P			**Pn**	10 52 45.4	+0.6
AAIG				*e*S			**Sn**	10 53 35.4	-2.2
ARIG	**Puente Sto Nin**	**4.58**	**90**				**Pn**	10 52 46.3	+0.5
ARIG	**Puente Sto Nin**	**4.58**	**90**	*i* P			**Pn**	10 52 46.3	+0.5
TEJU	**Tejupilco**	**4.79**	**82**	*e*P			**Pn**	10 52 52.0	+3.2
CAIG	**El Cayaco**	**4.84**	**104**				**Pn**	10 52 49.1	-0.3
CAIG	**El Cayaco**	**4.84**	**104**⇓	*e*P			**Pn**	10 52 49.1	-0.3
MAIG	**Mazatlaan**	**5.00**	**347**				**Pn**	10 52 49.4	-2.1
MAIG							**Sn**	10 53 44.8	-4.9
MAIG	**Mazatlaan**	**5.00**	**347**	*e*P			**Pn**	10 52 49.4	-2.1
MAIG				*e*S			**Sn**	10 53 44.8	-4.9
MAIG	**Mazatlaan**	**5.00**	**347**	*i* P			**Pn**	10 52 49.6	-1.9
MAIG				*e*S			**Sn**	10 53 43.5	-6.2
JRQG	**Juriquilla Cam**	**5.05**	**61**				**Pn**	10 52 54.6	+2.1
JRQG							**Sn**	10 53 50.1	-1.4
JRQG	**Juriquilla Cam**	**5.05**	**61**	*i* P			**Pn**	10 52 54.6	+2.1
JRQG				*e*S			**Sn**	10 53 50.1	-1.4
ZAIG	**Zacatecas**	**5.07**	**28**	Pn			**Pn**	10 52 53.2	+0.5
ZAIG	**Zacatecas**	**5.07**	**28**⇑	*e*P			**Pn**	10 52 53.4	+0.7
ZAIG	**Zacatecas**	**5.07**	**28**	⇑P			**Pn**	10 52 53.0	+0.3
ACP2	**Acapulco**	**5.24**	**105**				**Pn**	10 52 55.7	+0.9
ACP2	**Acapulco**	**5.24**	**105**	*e*P			**Pn**	10 52 55.7	+0.9
ACIG	**Acambay**	**5.27**	**71**	*e*P			**Pn**	10 52 58.0	+2.5
ACIG				*e*S			**Sn**	10 53 59.4	+2.6
MEIG	**Mezcala**	**5.29**	**93**				**Pn**	10 52 57.0	+1.3
MEIG							**Sn**	10 53 55.6	-1.6
MEIG	**Mezcala**	**5.29**	**93**⇑	*e*P			**Pn**	10 52 57.0	+1.3
MEIG				*e*S			**Sn**	10 53 55.6	-1.6
TOVM	**TOLUCA**	**5.29**	**79**				**Pn**	10 52 58.0	+2.1
TOVM							**Sn**	10 53 57.8	+0.3
TOVM	**TOLUCA**	**5.29**	**79**	*i* P			**Pn**	10 52 58.0	+2.1
TOVM				*e*S			**Sn**	10 53 57.8	+0.3
PLIG	**Platanillo**	**5.39**	**88**				**Pn**	10 52 58.3	+1.4
PLIG	**Platanillo**	**5.39**	**88**⇑	*e*P			**Pn**	10 52 58.3	+1.4
DAIG	**Los Arroyos**	**5.42**	**103**				**Pn**	10 52 57.0	-0.3
DAIG							**Sn**	10 53 58.6	-1.5
DAIG	**Los Arroyos**	**5.42**	**103**	*e*P			**Pn**	10 52 57.0	-0.3
DAIG				*e*S			**Sn**	10 53 58.6	-1.5
MAVM	**Malinalco, Edo**	**5.42**	**82**				**Pn**	10 52 59.5	+2.0
MAVM	**Malinalco, Edo**	**5.42**	**82**	*i* P			**Pn**	10 52 59.5	+2.0
MAVM				*e*S			**Sn**	10 53 56.6	-3.9
H06E		**5.47**	**276**	*e*P			Pn	10 52 51.7	-6.3
H06E				*e*S			Sn	10 53 51.3	-10
H06E1	**SOCORRO T-PHAS**	**5.48**	**276**	T			T	10 58 26.8	
H06S		**5.51**	**275**	*e*P			Pn	10 52 52.5	-6.0
H06S				*e*S			**Sn**	10 53 54.5	-7.8
H06N	**Isla Socorro**	**5.54**	**277**	*i* P			Pn	10 52 51.3	-7.7
H06N				*e*S			Sn	10 53 52.7	-11
AOVM	**Tlapan**	**5.62**	**79**	*e*P			**Pn**	10 53 02.7	+2.2
AOVM				*e*S			**Sn**	10 54 04.6	-1.2
CJVM	**Cuajimalpa**	**5.67**	**78**	*e*P			**Pn**	10 53 03.6	+2.6
CJVM				*e*S			**Sn**	10 54 05.7	-1.1
MCRU	**Las Cruces**	**5.70**	**79**	*e*P			**Pn**	10 53 03.9	+2.5
MCRU				*e*S			**Sn**	10 54 05.5	-1.9
AZVM	**Cuida Lopez Ma**	**5.72**	**76**				**Pn**	10 53 04.0	+2.4
AZVM							**Sn**	10 54 11.2	+3.3
AZVM	**Cuida Lopez Ma**	**5.72**	**76**	*i* P			**Pn**	10 53 04.0	+2.4
AZVM				*e*S			**Sn**	10 54 11.2	+3.3
MHVM	**Bosque de Chap**	**5.75**	**78**	*e*P			**Pn**	10 53 04.6	+2.4
MHVM				*e*S			**Sn**	10 54 08.5	-0.2
APVM	**Azcapotzalco**	**5.77**	**77**	*e*P			**Pn**	10 53 04.8	+2.4
APVM				*e*S			**Sn**	10 54 12.6	+3.5
UNM	**Universidad Na**	**5.77**	**79**				**Pn**	10 53 05.0	+2.6
UNM	**Universidad Na**	**5.77**	**79**	P			**Pn**	10 53 05.0	+2.6
UNM	**Universidad Na**	**5.77**	**79**	⇑P			**Pn**	10 53 05.0	+2.6
TLVM	**San Miguel Top**	**5.77**	**80**	*e*P			**Pn**	10 53 04.6	+2.1
TLVM				*e*S			**Sn**	10 54 08.4	-0.9
BJVM	**Benito Juarez**	**5.78**	**78**	*e*P			**Pn**	10 53 05.1	+2.6
BJVM				*e*S			**Sn**	10 54 07.2	-2.3
XCVM	**Xochimilco**	**5.81**	**80**	*e*P			**Pn**	10 53 05.2	+2.2
XCVM				*e*S			**Sn**	10 54 10.7	+0.5
YAIG	**Yautepec**	**5.82**	**84**				**Pn**	10 53 04.8	+1.9
YAIG							**Sn**	10 54 07.8	-2.3
YAIG	**Yautepec**	**5.82**	**84**⇑	*e*P			**Pn**	10 53 04.8	+1.9
YAIG				*e*S			**Sn**	10 54 07.8	-2.3
GMVM	**Gustavo A Made**	**5.86**	**77**	*i* P			**Pn**	10 53 05.9	+2.3
PBVM	**Pinon**	**5.87**	**78**	*i* P			Pn	10 52 58.3	-5.2
PBVM				*e*S			**Sn**	10 54 10.1	-1.3
PTVM	**Pico Tres Padr**	**5.88**	**76**				**Pn**	10 53 06.4	+2.6
PTVM							**Sn**	10 54 10.5	-1.3
PTVM	**Pico Tres Padr**	**5.88**	**76**	*i* P			**Pn**	10 53 06.4	+2.6
PTVM				*e*S			**Sn**	10 54 10.5	-1.3
THVM	**De Xico**	**5.96**	**79**	*i* P			**Pn**	10 53 07.3	+2.4
THVM				*e*S			**Sn**	10 54 13.3	-0.4
ZUVM	**ZUMPANGO**	**5.96**	**74**				**Pn**	10 53 07.3	+2.4
ZUVM							**Sn**	10 54 17.4	+3.5
ZUVM	**ZUMPANGO**	**5.96**	**74**	*i* P			**Pn**	10 53 07.3	+2.4
ZUVM				*e*S			**Sn**	10 54 17.4	+3.5
CRIG	**Cruz Grande**	**5.97**	**104**				**Pn**	10 53 05.7	+0.8
CRIG	**Cruz Grande**	**5.97**	**104**	*e*P			**Pn**	10 53 05.7	+0.8
CRIG				*e*S			**Sn**	10 54 09.7	-4.1
RPIG	**Rio Verde**	**6.04**	**53**⇑	*i*P			**Pn**	10 53 07.8	+2.0
AMVM	**AMECAMECA**	**6.11**	**81**				**Pn**	10 53 08.8	+1.8
AMVM							**Sn**	10 54 21.2	+3.7
AMVM	**AMECAMECA**	**6.11**	**81**	*e*P			**Pn**	10 53 08.8	+1.8
AMVM				*e*S			**Sn**	10 54 21.2	+3.7
DEIG	**Demacu**	**6.13**	**70**	*i* P			**Pn**	10 53 09.3	+2.0
VTVM	**Tizayuca**	**6.22**	**75**				**Pn**	10 53 10.7	+2.1
VTVM							**Sn**	10 54 21.2	+0.8
VTVM	**Tizayuca**	**6.22**	**75**	*i* P			**Pn**	10 53 10.7	+2.1
VTVM				*e*S			**Sn**	10 54 21.2	+0.8
PPM	**Popocatepetl**	**6.25**	**82**⇑	*e*P			**Pn**	10 53 11.8	+2.6
PPM				*e*S			**Sn**	10 54 21.9	+0.5
MGIG	**Malinaltepec**	**6.32**	**99**⇑	*e*P			**Pn**	10 53 12.2	+2.3
MGIG				*e*S			**Sn**	10 54 18.8	-3.8
TLIG	**Tlapa**	**6.33**	**96**				**Pn**	10 53 11.9	+2.0
TLIG	**Tlapa**	**6.33**	**96**⇑	*e*P			**Pn**	10 53 12.1	+2.1
TLIG				*e*S			**Sn**	10 54 18.5	-4.4
TLIG	**Tlapa**	**6.33**	**96**	⇑P			**Pn**	10 53 11.8	+1.9
PDIG	**Papasquiaro**	**6.70**	**358**	*e*P			**Pn**	10 53 16.8	+1.6
PDIG				*e*S			**Sn**	10 54 26.4	-5.7
FTIG	**Fresnillo de T**	**6.71**	**92**⇑	*e*P			**Pn**	10 53 16.9	+1.8
FTIG				*e*S			**Sn**	10 54 30.2	-1.8
SSIG	**Sanalona**	**6.74**	**345**⇓	*e*P			**Pn**	10 53 14.3	-1.0
SLBS	**Sierra La Lagu**	**6.96**	**321**	Pn			**Pn**	10 53 18.5	-0.1
SLBS	**Sierra La Lagu**	**6.96**	**321**	*e*P			**Pn**	10 53 16.0	-2.6
SLBS	**Sierra La Lagu**	**6.96**	**321**	⇓P			**Pn**	10 53 17.2	-1.1
SLBS				*e*S			**Sn**	10 54 35.0	-3.3
SLBS	**Sierra La Lagu**	**6.96**	**321**	⇓P			**Pn**	10 53 17.0	-1.6
PNIG	**Pinotepa**	**6.99**	**105**				**Pn**	10 53 20.4	+1.5
PNIG	**Pinotepa**	**6.99**	**105**⇓	*e*P			**Pn**	10 53 20.4	+1.5
HLIG	**Huajuapan de L**	**7.03**	**93**	*e*P			**Pn**	10 53 21.8	+2.2
HLIG				*e*S			**Sn**	10 54 36.0	-4.0
TXIG	**Tlaxiaco**	**7.13**	**97**	*e*P			**Pn**	10 53 23.9	+2.8
GTIG	**Gomez Farias**	**7.35**	**49**⇑	*e*P			**Pn**	10 53 25.8	+2.0
CXUV	**Coxquihui**	**7.40**	**74**	*i* P			**Pn**	10 53 26.5	+1.9
CXUV				*e*S			**Sn**	10 54 45.9	-3.1
YOIG	**Yosondua**	**7.42**	**100**	*e*P			**Pn**	10 53 28.1	+3.1
TPIG	**Tehuac#an**	**7.42**	**88**				**Pn**	10 53 27.3	+2.4
TPIG							**Sn**	10 54 46.9	-2.8
TPIG	**Tehuac#an**	**7.42**	**88**⇑	*e*P			**Pn**	10 53 27.3	+2.4
TPIG				*e*S			**Sn**	10 54 46.9	-2.8
LPIG	**La Paz**	**7.50**	**321**	Pn			**Pn**	10 53 27.1	+1.3
	9.0nm,0.3s,baz=345,slow=4.1,SNR=44								
LPIG						LR	LR	10 55 39.8	
	comp=Z,365μm,20.2s,baz=142,slow=33 572nm,1.2s								
LPIG	**La Paz**	**7.50**	**321**				**Pn**	10 53 25.1	-0.7
LPIG							**Sn**	10 54 50.3	-0.9
LPIG	**La Paz**	**7.50**	**321**⇓	*e*P			**Pn**	10 53 25.1	-0.7
LPIG				*e*S			**Sn**	10 54 50.3	-0.9
LPIG	**La Paz**	**7.50**	**321**⇓	*i*P			**Pn**	10 53 24.9	-0.9
OZST	**Orizaba**	**7.68**	**85**	*e*P			Pn	10 53 33.5	+5.0
TOIG	**Toxpalan**	**7.71**	**90**⇑	*e*P			**Pn**	10 53 30.9	+2.0
JAUV	**Jalcomulco**	**8.00**	**81**	*i* P			**Pn**	10 53 35.3	+2.5
JAUV				*e*S			**Sn**	10 55 05.2	+1.5
PEIG	**Puerto Escondi**	**8.01**	**105**	*e*P			**Pn**	10 53 35.7	+2.8
TSIG	**Topolobambo**	**8.10**	**334**	*e*P			**Pn**	10 53 33.1	+1.0
TSIG	**Topolobambo**	**8.10**	**334**	*e*P			**Pn**	10 53 33.6	-0.4
VHO	**Vista Hermosa**	**8.14**	**97**	*e*P			**Pn**	10 53 38.3	+3.5
OXBJ	**Oaxaca**	**8.15**	**97**				**Pn**	10 53 38.6	+3.6
OXBJ	**Oaxaca**	**8.15**	**97**	*e*P			**Pn**	10 53 38.6	+3.6
OXLC	**Oaxaca**	**8.17**	**97**	*e*P			**Pn**	10 53 39.1	+3.9
LVIG	**Laguna Verde**	**8.40**	**79**				**Pn**	10 53 40.2	+1.9
LVIG							**Sn**	10 55 12.3	-1.3
LVIG	**Laguna Verde**	**8.40**	**79**⇑	*e*P			**Pn**	10 53 40.2	+1.9
LVIG				*e*S			**Sn**	10 55 12.3	-1.3
LNIG	**Linares**	**8.44**	**38**				**Pn**	10 53 41.2	+2.4
LNIG							**Sn**	10 55 15.7	+1.2
LNIG	**Linares**	**8.44**	**38**⇑	*e*P			**Pn**	10 53 41.2	+2.4
LNIG				*e*S			**Sn**	10 55 15.7	+1.2
HPIG		**8.60**	**357**				**Pn**	10 53 42.6	+1.5
HPIG		**8.60**	**357**⇓	*e*P			**Pn**	10 53 44.3	+3.1
HPIG		**8.60**	**357**	⇓P			**Pn**	10 53 43.7	+2.6
NEUV	**Arroyo Zacate**	**8.94**	**92**	*e*P			**Pn**	10 53 48.3	+2.7
NEUV				*e*S			**Sn**	10 55 26.3	-0.4
CSIG	**Choix**	**8.98**	**341**⇓	*e*P			**Pn**	10 53 47.2	+1.0
CMIG	**Matias Romero**	**9.88**	**95**	Pn			**Pn**	10 54 01.0	+2.5
	12nm,0.3s,baz=280,slow=9.2,SNR=78								
CMIG						Sn	**Sn**	10 55 48.9	-1.1
	2.1nm,0.3s,baz=328,slow=23,SNR=1.1								
CMIG						LR	LR	10 57 53.0	
	comp=Z,64μm,19.4s,baz=288,slow=39								
CMIG	**Matias Romero**	**9.88**	**95**				**Pn**	10 54 00.8	+2.3
CMIG							**Sn**	10 55 51.6	+1.6
CMIG	**Matias Romero**	**9.88**	**95**⇑	*e*P			**Pn**	10 54 00.8	+2.3
CMIG				*e*S			**Sn**	10 55 51.6	+1.6
UXUV	**UXUV**	**10.55**	**94**	*e*P			**Pn**	10 54 09.4	+1.7
GUYB	**Guaymas**	**10.89**	**332**	*e*P			**Pn**	10 54 14.1	+1.8
GUYB	**Guaymas**	**10.89**	**332**	⇓P			**Pn**	10 54 13.9	+1.6
TX31	**Lajitas Ar. Si**	**11.06**	**7**				**Pn**	10 54 16.5	+1.6
TX31	**Lajitas Ar. Si**	**11.06**	**7**	P			**Pn**	10 54 18.5	+3.7
	baz=188,SNR=250								
TX31						S	Sn	10 56 28.2	+9.1
	baz=188								
TX32	**Lajitas Array**	**11.06**	**7**				**Pn**	10 54 16.3	+1.5
TXAR	**Lajitas Array**	**11.06**	**7**	Pn			**Pn**	10 54 18.3	+3.5
	1.8nm,0.3s,baz=190,slow=12,SNR=437								
TXAR						LR	LR	10 58 24.4	
	comp=Z,86μm,18.7s,baz=186,slow=37								
TXAR	**Lajitas Array**	**11.06**	**7**	Pn			**Pn**	10 54 16.4	+1.6
TXAR	**Lajitas Array**	**11.06**	**7**	P			**Pn**	10 54 16.4	+1.6
SRIG	**Santa Rosalia**	**11.09**	**325**	Pn			**Pn**	10 54 15.2	+0.2
SRIG	**Santa Rosalia**	**11.09**	**325**⇓	*i*P			**Pn**	10 54 16.6	+1.5
SRIG	**Santa Rosalia**	**11.09**	**325**⇓	*i*P			**Pn**	10 54 16.6	+1.5
SRIG	**Santa Rosalia**	**11.09**	**325**	⇓P			**Pn**	10 54 16.5	+1.5
833A	**Chaparral WMA,**	**11.29**	**27**	Pn			**Pn**	10 54 19.2	+1.3
833A	**Chaparral WMA,**	**11.29**	**27**	P			**Pn**	10 54 20.5	+2.6
	baz=209,SNR=99								
833A						S	Sn	10 56 37.3	+13
	baz=209								
833A	**Chaparral WMA,**	**11.29**	**27**	P			**Pn**	10 54 20.6	+2.7
	baz=209,SNR=99								
833A						S	**Sn**	10 56 26.6	+2.0
	baz=209								
KVTX	**Kingsville**	**11.38**	**35**	P			**Pn**	10 54 22.1	+3.1
	baz=218,SNR=11								
KVTX						S	Sn	10 56 44.8	+18
	baz=218								
KVTX	**Kingsville**	**11.38**	**35**⇑	P			**Pn**	10 54 20.1	+1.1
TGIG		**11.60**	**96**				**Pn**	10 54 23.9	+1.8
TGIG							**Sn**	10 56 31.3	-0.8
TGIG		**11.60**	**96**	*e*P			**Pn**	10 54 23.9	+1.8
TGIG				*e*S			**Sn**	10 56 31.3	-0.8
PCIG		**11.72**	**101**				**Pn**	10 54 27.9	+4.1
PCIG		**11.72**	**101**	*e*P			**Pn**	10 54 27.9	+4.1
HSIG		**11.90**	**335**	Pn			**Pn**	10 54 28.8	+2.5
HSIG		**11.90**	**335**⇓	*i*P			**Pn**	10 54 28.7	+2.5
HSIG		**11.90**	**335**⇓	*i*P			**Pn**	10 54 28.8	+2.5
HSIG		**11.90**	**335**	⇓P			**Pn**	10 54 28.0	+1.8
CGIG		**12.27**	**349**				**Pn**	10 54 35.0	+3.6
CGIG		**12.27**	**349**⇓	*i*P			**Pn**	10 54 35.0	+3.6
735A	**Kenedy**	**12.48**	**31**				**Pn**	10 54 37.7	+3.6
735A	**Kenedy**	**12.48**	**31**	P			**Pn**	10 54 38.0	+3.9
	baz=214,SNR=22								
735A						S	**Sn**	10 56 50.2	-3.4
	baz=214								
CCIG	**Comitan**	**12.61**	**97**				**Pn**	10 54 39.1	+2.9
CCIG	**Comitan**	**12.61**	**97**⇑	*e*P			**Pn**	10 54 39.0

Y22D IRIS PASSCAL I 15.78 355 P P 10 55 21.9 -1.0
baz=174,SNR=30
BNM Barren Site 15.83 356 P 10 55 22.8 -0.9
ECBX El Chinero 15.87 328 ⇓*i*P Pn 10 55 20.9 +1.0
LENM Lemitar 15.88 355 Pn 10 55 21.6 +1.3
237A Washetta, Mont 16.04 30 Pn
237A IAmb IAmb 10 55 28.9
comp=Z,2μm,1.2s
237A Washetta, Mont 16.04 30 P Pn 10 55 22.5 +0.3
baz=214,SNR=191
237A S S 10 58 31.3 -3.2
baz=214
113A Mohawk Valley, 16.34 333 Pn Pn 10 55 27.1 +1.1
RITX Riito Sonora 16.38 329 ⇓*e*P P 10 55 28.5 -1.0
NATX Nacogdoches 16.42 33 Pn Pn 10 55 27.1 0.0
NATX IAmb IAmb 10 55 33.2
comp=Z,2μm,1.1s
NATX Nacogdoches 16.42 33 P Pn 10 55 27.0 0.0
baz=218,SNR=186
NATX S Sn 10 58 35.7 +6.0
baz=218
NATX Nacogdoches 16.42 33 P Pn 10 55 27.2 +0.2
baz=218,SNR=186
NATX S S 10 58 37.1 -5.1
baz=218
441A DeRidder 16.49 39 IAmb IAmb 10 55 33.5
comp=Z,2μm,1.2s
441A DeRidder 16.49 39 P Pn 10 55 28.1 +0.2
baz=224,SNR=62
441A S Sn 10 58 31.9 +0.6
baz=224
SLRCX San Luis Rio C 16.50 330 ⇓*i*P P 10 55 30.1 -0.7
YMD Yuma Desert 16.51 331 *i*P P 10 55 29.8 -1.1
Z35A Perchaven, San 16.56 24 IAmb IAmb 10 55 33.5
comp=Z,2μm,1.3s
Z35A Perchaven, San 16.56 24 P Pn 10 55 28.7 -0.1
baz=207,SNR=161
Z35A S Sn 10 58 35.9 +2.7
baz=207
ANMO Albuquerque 16.61 356 Pn P 10 55 32.5 +0.2
comp=Z,1.4nm,0.3s,baz=174,slow=13,SNR=320
ANMO Sn Sn 10 58 36.8 +2.2
comp=Z,0.1nm,0.3s,baz=178,slow=14,SNR=1.9
ANMO LR LR 11 01 59.8
comp=Z,93μm,19.2s,baz=179,slow=38
ANMO Albuquerque 16.61 356 P P 10 55 32.3 +0.1
ANMO IAmb IAmb 10 55 37.2
comp=Z,4μm,2.5s
ANMO Albuquerque 16.61 356 *ce*P Pn 10 55 28.5 -1.2
ANMO pmax pmax
comp=Z,1μm,2.5s
ANMO Albuquerque 16.61 356 P P 10 55 31.6 -0.7
baz=176,SNR=556
ANMO S S 10 58 44.1 -2.4
baz=176
ANMO Albuquerque 16.61 356 P P 10 55 32.6 +0.4
baz=176
ANMO S S 10 58 44.5 -2.0
baz=176
ANMO Albuquerque 16.61 356 ⇑P P 10 55 32.2 -0.1
ALAMX Rancho Alamar 16.63 327 ⇓*i*P Pn 10 55 30.9 +1.2
MBIG Mexicali 16.70 329 P P 10 55 32.2 -0.7
MBIG Mexicali 16.70 329 *e*P P 10 55 32.2 -0.7
MBIG *e*P pP 10 55 33.2 -0.1
CPBX Cerro Prieto 16.76 329 IAmb IAmb 10 55 38.5
comp=Z,4μm,2.9s
CPBX Cerro Prieto 16.76 329 ⇓*i*P P 10 55 33.0 -0.7
AMTX Amarillo 16.80 10 Pn Pn 10 55 32.5 +0.5
AMTX IAmb IAmb 10 55 37.2
comp=Z,2μm,1.1s
AMTX Amarillo 16.80 10 P Pn 10 55 32.5 +0.5
baz=192,SNR=458
AMTX S Sn 10 58 41.9 +2.8
baz=192
AMTX Amarillo 16.80 10 P Pn 10 55 32.9 +0.9
baz=192
AMTX S Sn 10 58 42.4 +3.4
baz=192
CCX Cicese 17.03 325 P P 10 55 35.9 -0.8
CCX Cicese 17.03 325 ⇓*i*P P 10 55 35.9 -0.8
GLA Glamis 17.05 331 P P 10 55 37.1 +0.2
baz=147
GLA S Sn 10 58 47.9 +2.8
baz=147
GLA Glamis 17.05 331 ⇓*i*P P 10 55 36.5 -0.4
Y14A Wickenburg 17.07 337 P P 10 55 37.1 -0.1
DREC Desert Rsrch C 17.14 329 ⇓*i*P P 10 55 38.3 +0.4
W18A Petrified Fore 17.23 347 P P 10 55 40.5 +1.4
baz=165,SNR=257
W18A S S 10 59 00.1 +1.1
baz=165
WESC Westside Schoo 17.24 329 ⇓*i*P P 10 55 39.2 +0.3
YUH Yuha Desert 17.25 328 IAmb IAmb 10 55 43.2
comp=Z,2μm,1.8s
YUH2 Yuha Desert 17.25 328 ⇓*i*P P 10 55 39.1 +0.1
RMX La Rumorosa 17.29 328 IAmb IAmb 10 55 43.0
comp=Z,3μm,1.8s
RMX La Rumorosa 17.29 328 ⇓*e*P P 10 55 39.2 -0.5
WMOK Wichita Mounta 17.33 18 Pn 10 55 37.9 -0.6
WMOK IAmb IAmb 10 55 42.8
comp=Z,3μm,1.5s
WMOK Wichita Mounta 17.33 18 P Pn 10 55 37.9 -0.6
WMOK pmax pmax
comp=Z,3μm,1.5s
WMOK Wichita Mounta 17.33 18 P Pn 10 55 38.5 0.0
baz=201,SNR=627
WMOK S Sn 10 58 54.4 +2.6
baz=201
WMOK Wichita Mounta 17.33 18 P Pn 10 55 38.0 -0.5
baz=201,SNR=627
WMOK Wichita Mounta 17.33 18 ⇑P Pn 10 55 37.5 -1.0
IKP In-Ko-Pah, Jac 17.34 328 P P 10 55 40.6 +0.4
baz=143,SNR=195
IKP S S 10 59 00.4 -0.8
baz=143
IKP In-Ko-Pah, Jac 17.34 328 ⇓*i*P P 10 55 40.5 +0.4
CBX Cerro Bola 17.37 326 P P 10 55 40.2 -0.4
CBX Cerro Bola 17.37 326 IAmb IAmb 10 55 45.3
comp=Z,232nm,1.3s
CBX Cerro Bola 17.37 326 *e*P P 10 55 40.2 -0.4
CBX Cerro Bola 17.37 326 ⇓*i*P P 10 55 40.5 0.0
SWSC Sam W. Stewart 17.43 329 P P 10 55 41.4 +0.4
baz=144,SNR=211
SWSC S S 10 59 03.4 +0.7
baz=144
SWSC Sam W. Stewart 17.43 329 ⇓*i*P P 10 55 41.2 +0.2
342A Flagon Creek P 17.45 39 Pn 10 55 39.5 -0.5
342B Flagon Creek P 17.45 39 P Pn 10 55 39.6 -0.4
baz=225,SNR=258
TJIG Tijuana 17.47 326 P P 10 55 42.2 +0.6
TJIG Tijuana 17.47 326 ⇓*i*P P 10 55 42.2 +0.6
TJIG Tijuana 17.47 326 ⇓*i*P P 10 55 42.1 +0.6
Z38A Mt. Pleasant 17.47 30 IAmb IAmb 10 55 44.9
comp=Z,2μm,1.7s
Z38A Mt. Pleasant 17.47 30 P P 10 55 41.0 -0.6
baz=214,SNR=55
TKX Tecate 17.54 326 ⇓*i*P P 10 55 43.2 +0.9
BAR Barrett 17.66 326 P P 10 55 44.4 +0.8
BAR Barrett 17.66 326 ⇓*i*P P 10 55 44.5 +0.8
MONP2 Monument Peak 17.70 327 P P 10 55 45.3 +1.1
baz=142,SNR=164
MONP2 S S 10 59 09.2 +0.6
baz=142
MONP2 Monument Peak 17.70 327 ⇓*i*P P 10 55 45.0 +0.8
TGUH Tegucigalpa,Un 17.70 101 P P 10 55 45.8 +1.5
TGUH Tegucigalpa,Un 17.70 101 ⇑P P 10 55 46.5 +2.2
OLP Otay Lakes Par 17.74 326 ⇓*e*P P 10 55 45.6 +1.1
545B Wilberts Farm, 17.75 46 P Pn 10 55 43.5 -0.3
baz=232,SNR=10.0
PDMCI Parker Dam,Lak 17.83 335 P P 10 55 46.8 +1.4
baz=151,SNR=71
PDMCI S S 10 59 11.9 +1.0
baz=151
BC3 Big Chuckawall 17.84 331 P P 10 55 46.9 +1.1
baz=146,SNR=198
BC3 S S 10 59 14.0 +2.6
baz=146
SDRC San Diego Road 17.85 326 ⇓*i*P P 10 55 46.8 +1.1
EML El Monte Cty P 17.91 326 ⇓*i*P P 10 55 47.5 +1.0
WUAZ Wupatki 18.00 343 IAmb IAmb 10 55 55.3
comp=Z,3μm,2.3s
WUAZ Wupatki 18.00 343 P P 10 55 50.0 +2.4
baz=161,SNR=262
WUAZ S S 10 59 16.1 +1.4
baz=161
WUAZ Wupatki 18.00 343 ⇓P P 10 55 49.5 +1.9

109C Camp Elliot, M 18.05 326 P P 10 55 48.5 +0.6
109C Camp Elliot, M 18.05 326 P P 10 55 49.2 +1.2
baz=141,SNR=62
109C S S 10 59 18.1 +2.6
baz=141
IRM Iron Mountain 18.13 333 P P 10 55 49.9 +1.1
baz=148,SNR=262
IRM S S 10 59 19.0 +2.0
baz=148
TPFO Pinon Flats 18.28 329 P P 10 55 52.5 +1.8
baz=144,SNR=164
TPFO S S 10 59 23.9 +3.5
baz=144
PFO Pinyon Flats O 18.29 329 P P 10 55 52.3 +1.7
comp=Z,120nm,1.2s,baz=144,slow=11,SNR=122
PFO S S 10 59 19.8 -0.7
comp=Z,7.4nm,1.2s,baz=281,slow=12,SNR=1.5
PFO LR LR 11 01 39.6
comp=Z,38μm,18.9s,baz=149,slow=33
PFO Pinyon Flats O 18.29 329 P P 10 55 52.2 +1.5
PFO IAmb IAmb 10 55 58.1
comp=Z,4μm,2.9s
PFO Pinyon Flats O 18.29 329 P P 10 55 52.2 +1.5
PFO pmax pmax
comp=Z,4μm,2.9s
PFO Pinyon Flats O 18.29 329 P P 10 55 52.4 +1.7
baz=144,SNR=143
PFO S S 10 59 24.4 +4.0
baz=144
OKCFA Oklahoma City 18.37 20 Pn 10 55 51.1 -0.3
OKCFA IAmb IAmb 10 55 53.2
comp=Z,2μm,1.6s
OKCFA Oklahoma City 18.37 20 P P 10 55 51.6 +0.2
baz=204,SNR=19
OKCFA S Sn 10 59 19.0 +2.1
baz=204
BELC Belle Mtn. Jos 18.38 330 P P 10 55 53.6 +1.9
baz=146,SNR=256
BELC S S 10 59 25.1 +2.7
baz=146
X37A Clayton 18.42 26 IAmb IAmb 10 55 54.4
comp=Z,2μm,1.5s
X37A Clayton 18.42 26 P P 10 55 52.3 +0.3
baz=211,SNR=233
X37A S Sn 10 59 19.2 +1.0
baz=211
NEE2 Needles Airpor 18.43 335 P P 10 55 54.2 +2.1
baz=150
NEE2 S S 10 59 25.2 +2.2
baz=150
344A Westbrook Farm 18.49 42 P P 10 55 52.7 -0.1
344A IAmb IAmb 10 56 02.0
comp=Z,2μm,1.2s
344A Westbrook Farm 18.49 42 P Pn 10 55 52.9 0.0
baz=228,SNR=129
344A S S 10 59 29.6 +5.2
baz=228
Z41A Richland Creek 18.57 34 P Pn 10 55 53.9 +0.1
baz=220,SNR=100
Z41A P Pn 10 55 53.9 +0.1
baz=220,SNR=100
Z41A S S 10 59 26.7 +0.8
baz=220
Z41A S S 10 59 26.7 +0.8
baz=220
Z41A Richland Creek 18.57 34 P Pn 10 55 54.0 +0.3
baz=220,SNR=100
Z41A S S 10 59 26.9 +1.0
baz=220
MURC Murrieta 18.65 327 P Pn 10 55 56.4 +1.5
baz=142,SNR=88
MURC S S 10 59 31.6 +3.9
baz=142
T25A Trinidad 18.77 2 P Pn 10 55 58.5 +2.0
baz=182,SNR=431
T25A S S 10 59 33.6 +3.2
baz=182
U32A Winter Ranch, 18.81 16 Pn 10 55 56.6 -0.2
U32A IAmb IAmb 10 55 58.8
comp=Z,2μm,1.2s
U32A Winter Ranch, 18.81 16 P Pn 10 55 56.8 +0.1
baz=196,SNR=181
U32A S Sn 10 59 28.6 +0.9
baz=198
GMRC Granite Mounta 18.88 332 P Pn 10 55 59.2 +1.4
baz=148,SNR=209
GMRC S S 10 59 34.7 +2.2
baz=148
SCI2 San Clemente I 18.92 323 P Pn 10 55 59.4 +1.4
baz=137,SNR=15
SCI2 S S 10 59 38.4 +5.5
baz=137
143A Socs Landing, 18.94 38 IAmb IAmb 10 56 00.8
comp=Z,1μm,1.2s
143A Socs Landing, 18.94 38 P P 10 55 57.6 -0.1
baz=224,SNR=77
143A S S 10 59 34.6 +1.1
baz=224
BBRC Big Bear Solar 19.04 329 P Pn 10 56 01.2 +1.5
baz=144,SNR=181
BBRC S S 10 59 40.8 +5.0
baz=144
MVCO Mesa Verde 19.06 352 P Pn 10 55 59.9 -0.1
MVCO IAmb IAmb 10 56 10.3
comp=Z,1μm,1.6s
MVCO Mesa Verde 19.06 352 P Pn 10 56 01.0 +1.1
baz=170,SNR=142
MVCO S S 10 59 41.0 +4.9
baz=170
U15A North Rim 19.11 342 Pn 10 56 02.2 +1.6
U15A IAmb IAmb 10 56 10.8
comp=Z,2μm,2.0s
VBMS Vicksburg 19.14 41 P P 10 56 00.3 +0.4
VBMS IAmb IAmb 10 56 04.1
comp=Z,2μm,1.3s
VBMS Vicksburg 19.14 41 P P 10 56 00.4 +0.4
baz=227,SNR=50
VBMS S S 10 59 38.9 +1.4
baz=227
VBMS Vicksburg 19.14 41 P P 10 56 00.2 +0.4
baz=227,SNR=50
VBMS S S 10 59 38.1 +0.6
baz=227
CIS Catalina Islan 19.15 324 P Pn 10 56 01.3 +0.4
baz=138,SNR=32
CIS S S 10 59 42.0 +4.2
baz=138
MIAR Mount Ida 19.19 30 P P 10 55 59.8 -0.7
MIAR Mount Ida 19.19 30 P P 10 55 59.8 -0.7
MIAR pmax pmax
comp=Z,2μm,2.8s
MIAR Mount Ida 19.19 30 P P 10 55 59.8 -0.7
baz=216,SNR=52
MIAR S Sn 10 59 37.4 +0.5
baz=216
MIAR Mount Ida 19.19 30 P P 10 56 00.1 -0.4
baz=216,SNR=52
MIAR S Sn 10 59 36.7 -0.1
baz=216
MIAR Mount Ida 19.19 30 ⇑P P 10 55 59.7 -0.7
HEC Hector,Ludlow 19.22 331 P Pn 10 56 02.7 +0.9
baz=146,SNR=151
346A Big Creek Wild 19.28 45 P P 10 56 01.9 +0.5
346A Big Creek Wild 19.28 45 P P 10 56 01.1 -0.3
baz=231,SNR=13
346A S S 10 59 41.6 +1.4
baz=231
FMP Fort Macarthur 19.32 325 P Pn 10 56 02.8 -0.1
baz=139,SNR=5.4
FMP S S 10 59 46.3 +5.3
baz=139
SDCO Great Sand Dun 19.37 359 P Pn 10 56 04.7 +0.9
SDCO IAmb IAmb 10 56 14.8
comp=Z,1μm,1.3s
SDCO Great Sand Dun 19.37 359 P Pn 10 56 04.8 +1.1
baz=179,SNR=764
SDCO S S 10 59 46.5 +3.9
baz=179
SDCO Great Sand Dun 19.37 359 P Pn 10 56 04.9 +1.2
baz=179,SNR=764
SDCO S S 10 59 48.1 +5.5
baz=179
BFSC Mount Baldy Ra 19.39 327 P Pn 10 56 04.4 +0.5
baz=142,SNR=331
BFSC S S 10 59 49.1 +6.3
baz=142
TUL1 Leonard 19.40 23 P P 10 56 02.6 -0.1
baz=208,SNR=350
TUL1 S Sn 10 59 42.2 +0.3
baz=208
TUL1 Leonard 19.40 23 P P 10 56 03.0 +0.2
baz=208,SNR=350
TUL1 S Sn 10 59 41.5 -0.4
baz=208
S22A 4UR Ranch, Cre 19.42 356 Pn 10 56 05.5 +1.1
S22A IAmb IAmb 10 56 15.3
comp=Z,2μm,1.7s
S22A 4UR Ranch, Cre 19.42 356 P Pn 10 56 05.8 +1.4
baz=175,SNR=401
S22A S S 10 59 47.2 +3.5
baz=175
X40A Basin Creek Fa 19.51 32 IAmb IAmb 10 56 07.7
comp=Z,2μm,2.2s
X40A Basin Creek Fa 19.51 32 P P 10 56 03.4 -0.6
baz=218,SNR=116
X40A P P 10 56 03.4 -0.6
baz=218,SNR=116
X40A S Sn 10 59 43.4 -1.2
baz=218
X40A S Sn 10 59 43.4 -1.2
baz=218
X40A Basin Creek Fa 19.51 32 P P 10 56 03.5 -0.5
baz=218,SNR=116
X40A S Sn 10 59 43.2 -1.3
baz=218
TUQ Turquoise Moun 19.55 333 P Pn 10 56 06.7 +1.0
baz=148,SNR=131
TUQ S S 10 59 51.3 +5.5
baz=148
RRX Edison Barstow 19.57 330 P Pn 10 56 06.0 +0.1
baz=144,SNR=16
RRX S S 10 59 52.1 +5.9
baz=144
PASC Pasadena Art C 19.61 326 P Pn 10 56 06.3 -0.1
PASC IAmb IAmb 10 56 11.1
comp=Z,1μm,1.6s
CCAR Cane Creek 19.63 35 P P 10 56 05.9 +0.6
CCAR Cane Creek 19.63 35 P P 10 56 05.5 +0.2
baz=221,SNR=75
CCAR S Sn 10 59 48.8 +1.5
baz=221
W39A Magazine 19.63 29 IAmb IAmb 10 56 09.1
comp=Z,2μm,1.8s
W39A Magazine 19.63 29 P P 10 56 05.6 +0.3
baz=214,SNR=135
W39A S S 10 59 46.8 -0.5
baz=214
W39A Magazine 19.63 29 P P 10 56 05.3 0.0
baz=214,SNR=135
W39A S S 10 59 47.0 -0.3
baz=214
SNCC San Nicolas Is 19.67 322 P Pn 10 56 06.7 -0.5
baz=136,SNR=25
SNCC S Sn 10 59 55.1 +6.6
baz=136
DECC Green Verdugo 19.75 326 P Pn 10 56 07.9 -0.2
baz=140,SNR=30
DECC S Sn 10 59 56.0 +5.6
baz=140
GSC Goldstone, Bar 19.83 331 P Pn 10 56 08.7 -0.4
GSC IAmb IAmb 10 56 17.8
comp=Z,1μm,1.7s
GSC Goldstone, Bar 19.83 331 P Pn 10 56 08.7 -0.4
GSC pmax pmax
comp=Z,1μm,1.7s
GSC Goldstone, Bar 19.83 331 P Pn 10 56 09.2 +0.1
baz=146,SNR=289
GSC S Sn 10 59 57.4 +5.0
baz=146
LCMT Little Creek M 19.94 341 P Pn 10 56 10.7 +0.2
LCMT IAmb IAmb 10 56 23.8
comp=Z,2μm,2.1s
PV13 Radium Mtn., P 20.04 352 IAmb IAmb 10 56 22.4
comp=Z,930nm,1.2s
T35A Sooner Cattle 20.05 21 P 10 56 09.6 -0.2
T35B Sooner Cattle 20.05 21 P P 10 56 09.6 -0.2
baz=205,SNR=389
T35B S S 10 59 54.7 -0.9
baz=205
EDW2 Edwards Air Fo 20.07 328 P Pn 10 56 11.1 -0.8
baz=142,SNR=71
EDW2 S Sn 11 00 00.9 +2.9
baz=142
PKCU Pink Cliffs 20.07 343 P Pn 10 56 13.3 +1.1
SHOC Shoshone, Teco 20.09 333 P Pn 10 56 11.9 -0.2
baz=148,SNR=84
SHOC S Sn 11 00 03.2 +4.7
baz=148
SHPR Sheep Range 20.16 336 IAmb IAmb 10 56 25.8
comp=Z,2μm,1.9s
PV15 Paradox Valley 20.17 352 IAmb IAmb 10 56 27.1
comp=Z,2μm,1.2s
PV11 David Mesa, Pa 20.18 352 IAmb IAmb 10 56 23.2
comp=Z,2μm,1.4s
OSI Osito Audit: C 20.24 326 P Pn 10 56 13.3 -0.6
baz=140
OSI S Sn 11 00 06.2 +4.1
baz=140
SCZ2 Santa Cruz Isl 20.28 323 P P 10 56 12.4 +0.1
baz=137,SNR=6.4
SCZ2 S Sn 11 00 08.1 +5.1
baz=137
PV10 Paradox Valley 20.28 351 IAmb IAmb 10 56 24.3
comp=Z,2μm,1.3s
CCAC Calif City Air 20.29 328 IAmb IAmb 10 56 26.1
comp=Z,1μm,1.6s
ACON Acoyapa 20.30 105 P Pn 10 56 14.4 -0.2
ACON IAmb IAmb 10 56 29.2
comp=Z,1μm,1.6s
146A Union 20.34 42 P P 10 56 13.6 +0.5
146A Union 20.34 42 P P 10 56 12.8 -0.2
baz=229,SNR=43
146A S S 11 00 02.9 +1.4
baz=229
W41B Gary Mavity, V 20.35 32 P P 10 56 12.9 -0.1
baz=218,SNR=110
W41B S S 11 00 03.0 +1.4
baz=218
W41B Gary Mavity, V 20.35 32 P P 10 56 13.1 0.0
baz=218,SNR=110
W41B S Sn 11 00 04.2 -0.5
baz=218
PV23 Carpenter Ridg 20.35 351 P Pn 10 56 14.9 -0.5
PV23 IAmb IAmb 10 56 23.0
comp=Z,1μm,1.3s
LRMC Laurel Mtn Rad 20.39 330 P P 10 56 14.6 +0.9
baz=144,SNR=50
LRMC S Sn 11 00 10.4 +4.5
baz=144
QSM Queen of Sheba 20.41 332 P Pn 10 56 14.9 -0.9
WHAR Wooly Hollow 20.42 32 P P 10 56 13.8 -0.1
WHAR IAmb IAmb 10 56 16.7
comp=Z,1μm,1.5s
HHAR Hobbs 20.47 27 P P 10 56 13.9 -0.5
HHAR Hobbs 20.47 27 P P 10 56 13.9 -0.5
baz=212
HHAR S S 11 00 02.2 -1.8
baz=212
CCUT Cedar City 20.47 341 P Pn 10 56 16.8 -0.1
CCUT IAmb IAmb 10 56 28.8
comp=Z,3μm,2.8s
GBS3 Finca Las Img 20.49 109 *e*P Pn 10 56 18.4 +1.5
GWY Greenwater Val 20.50 333 P Pn 10 56 16.1 -0.9
GWY IAmb IAmb 10 56 29.3
comp=Z,1μm,1.5s
LAPC Finca la Perla 20.51 109 *e*P Pn 10 56 18.4 +1.2
BUEV Buena Vista 20.52 109 *e*P Pn 10 56 19.0 +1.6
BUAI Buenos Aires 20.56 108 *e*P Pn 10 56 19.7 +1.9
Q24A Divide 20.58 0 IAmb IAmb 10 56 25.8
comp=Z,2μm,1.8s
Q24A Divide 20.58 0 P Pn 10 56 17.7 -0.4
baz=180,SNR=108
Q24A S Sn 11 00 13.2 +2.4
baz=180
GPS2 Hotel Rincn d 20.59 109 *e*P Pn 10 56 20.1 +2.0
MTPU Mount Pierson 20.60 344 P Pn 10 56 18.7 +0.3
GUAI GUAI 20.65 110 *e*P Pn 10 56 20.4 +1.6
SBC Santa Barbara 20.65 324 P P 10 56 17.3 +0.9
baz=137,SNR=13
SBC S Sn 11 00 15.6 +3.7
baz=137
ARVC Arvin 20.69 327 P P 10 56 17.7 +0.9
baz=141,SNR=83
ARVC S Sn 11 00 15.6 +2.7
baz=141

LIM1	**Limonal**	**20.70**	**109**	*e*P		Pn		10 56 20.6	+1.1
GUAB	**Guayabo de Bag**	**20.72**	**109**	*e*P		Pn		10 56 21.2	+1.6
DUNO	**Dulce Nombre,**	**20.74**	**111**	P		Pn		10 56 18.9	-1.0
KSCO	**Kaye Shedlock'**	**20.75**	**6**	IAmb		IAmb		10 56 29.6	
	comp=Z,1µm,1.2s								
KSCO	**Kaye Shedlock'**	**20.75**	**6**	P		Pn		10 56 18.8	-1.2
	baz=187,SNR=113								
KSCO				S		**S**		**11 00 10.4**	**+0.5**
	baz=187								
KSCO	**Kaye Shedlock'**	**20.75**	**6**	P		**P**		**10 56 18.6**	**+1.1**
	baz=187,SNR=113								
COLC	**Colonia**	**20.76**	**109**	*e*P		Pn		10 56 21.5	+1.4
HORNC	**Hornillas**	**20.76**	**109**	*e*P		Pn		10 56 21.9	+1.7
MPMC	**Manual Prospec**	**20.77**	**331**	P		Pn		10 56 19.3	-0.9
	baz=145,SNR=206								
MPMC				S		Sn		11 00 17.0	+1.9
	baz=145								
CUI	**Cuipilapa**	**20.80**	**109**	*e*P		Pn		10 56 21.7	+1.1
BRAL	**Brewton**	**20.82**	**49**	P		**P**		**10 56 18.3**	**+0.2**
BRAL	**Brewton**	**20.82**	**49**	P		**P**		**10 56 18.4**	**+0.2**
	baz=236,SNR=47								
BRAL				S		Sn		11 00 15.6	-0.4
	baz=236								
BRAL	**Brewton**	**20.82**	**49**	P		**P**		**10 56 18.0**	**-0.2**
	baz=236,SNR=47								
BRAL				S		Sn		11 00 14.6	-1.4
	baz=236								
BRAL	**Brewton**	**20.82**	**49**	⇑P		**P**		**10 56 18.5**	**+0.3**
R32A	**Long Quarter,**	**20.82**	**14**	P		**P**		**10 56 18.3**	**+0.1**
R32A	**Long Quarter,**	**20.82**	**14**	P		**P**		**10 56 18.5**	**+0.3**
	baz=198,SNR=329								
R32A				S		**S**		**11 00 10.3**	**-0.8**
	baz=198								
FURC	**Furnace Creek,**	**20.82**	**333**	P		**P**		**10 56 19.1**	**+0.9**
	baz=147,SNR=173								
FURC				S		Sn		11 00 17.6	+1.5
	baz=147								
BCW	**Bitter Crk WRg**	**20.85**	**325**	P		**P**		**10 56 19.7**	**+1.0**
SMCO	**Snowmass**	**20.86**	**356**	P		Pn		10 56 20.8	-0.6
SMCO				IAMs_20		IAMs_20		11 04 00.0	
	comp=Z,70µm,19.0s								
SMCO	**Snowmass**	**20.86**	**356**	⇑P		Pn		10 56 20.9	-0.5
Y45A	**Yeager Farm, C**	**20.86**	**39**	P		**P**		**10 56 18.8**	**+0.1**
Y45A	**Yeager Farm, C**	**20.86**	**39**	P		**P**		**10 56 19.0**	**+0.3**
	baz=226,SNR=104								
Y45A				S		**S**		**11 00 12.4**	**+0.4**
	baz=226								
PRN	**Pahroc Range**	**20.91**	**337**	⇓P		Pn		10 56 20.8	-1.1
ISA	**Isabella, Lake**	**20.92**	**328**	P		**P**		**10 56 20.3**	**+0.9**
ISA				IAmb		IAmb		10 56 33.5	
	comp=Z,2µm,1.8s								
ISA	**Isabella, Lake**	**20.92**	**328**	P		**P**		**10 56 20.3**	**+0.9**
ISA				pmax		pmax			
	comp=Z,2µm,1.8s								
ISA	**Isabella, Lake**	**20.92**	**328**	P		**P**		**10 56 20.6**	**+1.2**
	baz=142,SNR=114								
ISA				S		Sn		11 00 18.1	-0.5
	baz=142								
ACAL	**Aguas Claras**	**20.92**	**109**	*e*P		Pn		10 56 23.0	+0.9
PTEN	**Parque Tenorio**	**20.93**	**108**	*e*P		Pn		10 56 23.4	+1.3
TPNV	**Topopah Spring**	**20.97**	**335**	P		Pn		10 56 22.0	-0.6
	baz=149,SNR=182								
TPNV				S		Sn		11 00 23.2	+3.2
	baz=149								
CBKS	**Cedar Bluff**	**20.98**	**12**	P		**P**		**10 56 20.3**	**+0.4**
CBKS	**Cedar Bluff**	**20.98**	**12**	P		**P**		**10 56 20.3**	**+0.4**
CBKS				pmax		pmax			
	comp=Z,2µm,1.2s								
CBKS				MLR		MLR			
	comp=Z,168µm,19.0s								
CBKS	**Cedar Bluff**	**20.98**	**12**	P		**P**		**10 56 20.2**	**+0.3**
	baz=195,SNR=243								
CBKS				S		**S**		**11 00 13.6**	**-0.5**
	baz=195								
CBKS	**Cedar Bluff**	**20.98**	**12**	P		**P**		**10 56 20.4**	**+0.4**
	baz=195,SNR=243								
CBKS				S		**S**		**11 00 15.5**	**+1.3**
	baz=195								
CBKS	**Cedar Bluff**	**20.98**	**12**	⇑P		**P**		**10 56 20.0**	**+0.1**
FCAR	**Ozark Folk Cen**	**20.98**	**31**	P		**P**		**10 56 19.5**	**-0.4**
U40A	**Yellville**	**21.01**	**29**	P		**P**		**10 56 19.7**	**-0.7**
	baz=214,SNR=110								
U40A				P		**P**		**10 56 19.7**	**-0.7**
	baz=214,SNR=110								
U40A				S		Sn		11 00 17.8	-2.9
	baz=214								
U40A				S		Sn		11 00 17.8	-2.9
	baz=214								
U40A	**Yellville**	**21.01**	**29**	P		**P**		**10 56 19.6**	**-0.7**
	baz=214,SNR=110								
U40A				S		**S**		**11 00 16.8**	**+1.9**
	baz=214								
PKM	**Mcpherson Peak**	**21.03**	**325**	P		**P**		**10 56 21.2**	**+0.5**
	baz=138,SNR=41								
PKM				S		Sn		11 00 23.7	+2.3
	baz=138								
MVU	**Marysvale**	**21.04**	**344**	P		**P**		**10 56 22.5**	**+1.6**
JTS	**Las Juntas de**	**21.14**	**109**	P		**P**		**10 56 23.8**	**+2.0**
	comp=Z,85nm,1.1s,baz=14,slow=11,SNR=22								
JTS				S		**S**		**11 00 20.3**	**+2.7**
	comp=Z,2.4nm,0.7s,baz=49,slow=23,SNR=1.2								
JTS				LR		LR		11 03 38.3	
	comp=Z,18µm,21.1s,baz=353,slow=34								
JTS	**Las Juntas de**	**21.14**	**109**	P		**P**		**10 56 23.4**	**+1.6**
JTS				IAmb		IAmb		10 56 33.6	
	comp=Z,1µm,1.8s								
JTS	**Las Juntas de**	**21.14**	**109**	*d i*P		**P**		**10 56 25.1**	**+3.3**
JTS				pmax		pmax			
	comp=Z,656nm,1.8s								
JTS	**Las Juntas de**	**21.14**	**109**	⇓P		**P**		**10 56 25.0**	**+3.2**
Q16A	**Castle Valley**	**21.19**	**347**	IAmb		IAmb		10 56 33.1	
	comp=Z,1µm,1.2s								
TCRU	**Three Creeks R**	**21.20**	**344**	P		**P**		**10 56 24.6**	**+2.0**
CASO	**Castillo**	**21.27**	**109**	*e*P		**P**		**10 56 27.4**	**+4.1**
CEDE	**Laguna Cedeo**	**21.28**	**109**	*e*P		**P**		**10 56 27.4**	**+4.0**
FORC	**Fortuna**	**21.32**	**109**	*e*P		**P**		**10 56 27.6**	**+3.8**
Z47A	**Carrollton**	**21.34**	**43**	P		**P**		**10 56 23.6**	**-0.1**
Z47A				IAmb		IAmb		10 56 28.8	
	comp=Z,2µm,1.4s								
Z47A	**Carrollton**	**21.34**	**43**	P		**P**		**10 56 23.7**	**-0.1**
	baz=230,SNR=67								
Z47A				S		**S**		**11 00 20.4**	**-0.9**
	baz=230								
CWC	**Cottonwood Cre**	**21.35**	**330**	P		**P**		**10 56 25.5**	**+1.4**
	baz=144								
CWC				S		Sn		11 00 27.7	-1.4
	baz=144								
VES	**Vestal, Richgr**	**21.37**	**328**	P		**P**		**10 56 25.3**	**+1.2**
	baz=141,SNR=127								
VES				S		Sn		11 00 27.9	-1.4
	baz=141								
OXF	**Oxford**	**21.40**	**38**	P		**P**		**10 56 24.0**	**-0.4**
OXF				IAmb		IAmb		10 56 26.2	
	comp=Z,1µm,1.2s								
OXF	**Oxford**	**21.40**	**38**	P		**P**		**10 56 24.0**	**-0.4**
OXF				pmax		pmax			
	comp=Z,1µm,1.3s								
OXF				MLR		MLR			
	comp=Z,49µm,18.0s								
OXF	**Oxford**	**21.40**	**38**	P		**P**		**10 56 23.8**	**-0.6**
	baz=225,SNR=63								
OXF				S		Sn		11 00 27.3	-2.6
	baz=225								
OXF	**Oxford**	**21.40**	**38**	P		**P**		**10 56 23.6**	**-0.8**
	baz=225,SNR=63								
OXF				S		Sn		11 00 27.3	-2.6
	baz=225								
ISCO	**Idaho Springs**	**21.42**	**359**	IAmb		IAmb		10 56 34.7	
	comp=Z,1µm,1.4s								
ISCO				IAMs_20		IAMs_20		11 04 53.2	
	comp=Z,80µm,20.0s								
ISCO	**Idaho Springs**	**21.42**	**359**	P		**P**		**10 56 26.6**	**+1.6**
	baz=179,SNR=251								
ISCO				S		**S**		**11 00 25.6**	**+2.2**
	baz=179								
ISCO	**Idaho Springs**	**21.42**	**359**	P		**P**		**10 56 26.8**	**+1.8**
	baz=179,SNR=251								
ISCO				S		Sn		11 00 29.2	-1.8
	baz=179								
SMMC	**Simmler**	**21.45**	**325**	P		**P**		**10 56 25.7**	**+0.7**
	baz=138,SNR=24								
SMMC				S		Sn		11 00 31.2	-0.1
	baz=138								
HBAR	**Harrisburg**	**21.46**	**34**	P		**P**		**10 56 25.4**	**+0.3**
HBAR	**Harrisburg**	**21.46**	**34**	P		**P**		**10 56 25.0**	**-0.1**
	baz=221,SNR=22								
HBAR				S		Sn		11 00 30.2	-1.3
	baz=221								
451A	**Vernon**	**21.47**	**52**	IAmb		IAmb		10 56 36.7	
	comp=Z,837nm,1.1s								
451A	**Vernon**	**21.47**	**52**	P		**P**		**10 56 24.8**	**-0.4**
	baz=240								
451A				S		**S**		**11 00 25.6**	**+1.6**
	baz=240								
GRAC	**Grapevine Rang**	**21.49**	**333**	P		**P**		**10 56 26.9**	**+1.5**
GRAC	**Grapevine Rang**	**21.49**	**333**	P		**P**		**10 56 27.0**	**+1.5**
	baz=147,SNR=157								
GRAC				S		Sn		11 00 31.7	-0.5
	baz=147								
PSUT	**Pine Spring**	**21.53**	**341**	IAmb		IAmb		10 56 42.1	
	comp=Z,980nm,1.5s								
LCAR	**Lake Charles**	**21.60**	**32**	P		**P**		**10 56 26.3**	**-0.3**
LCAR				IAmb		IAmb		10 56 32.0	
	comp=Z,898nm,1.3s								
LCAR	**Lake Charles**	**21.60**	**32**	P		**P**		**10 56 26.2**	**-0.4**
	baz=219,SNR=336								
LCAR				S		**S**		**11 00 27.9**	**+1.5**
	baz=219								
P17A	**Butcher Ranch,**	**21.64**	**348**	IAmb		IAmb		10 56 36.8	
	comp=Z,1µm,1.3s								
JACO	**JACO, Garabito**	**21.66**	**111**	IAmb		IAmb		10 56 40.0	
	comp=Z,2µm,2.2s								
JACO	**JACO, Garabito**	**21.66**	**111**	⇓*i*P		**P**		**10 56 31.6**	**+4.1**
P18A	**Preston Nutter**	**21.70**	**349**	IAmb		IAmb		10 56 44.5	
	comp=Z,820nm,1.2s								
LCH	**Last Change Ra**	**21.81**	**332**	IAmb		IAmb		10 56 48.9	
	comp=Z,2µm,2.1s								
250A	**Grady**	**21.82**	**48**	P		**P**		**10 56 28.4**	**-0.6**
	baz=236,SNR=175								
250A				S		Sn		11 00 42.0	+1.8
	baz=236								
VOG	**Valley Oaks Go**	**21.89**	**328**	P		**P**		**10 56 31.0**	**+1.2**
	baz=141								
VOG				S		Sn		11 00 37.5	-4.3
	baz=141								
O20A	**White River Ci**	**21.91**	**354**	IAmb		IAmb		10 56 42.3	
	comp=Z,1µm,1.6s								
O20A	**White River Ci**	**21.91**	**354**	P		**P**		**10 56 32.1**	**+1.9**
	baz=172,SNR=178								
O20A				S		Sn		11 00 39.4	-3.2
	baz=172								
TIN	**Tinemaha, Big**	**21.92**	**331**	P		**P**		**10 56 31.9**	**+1.7**
	baz=145,SNR=36								
TIN				S		Sn		11 00 41.3	-1.4
	baz=145								
S39A	**Bolivar**	**21.93**	**26**	IAmb		IAmb		10 56 35.6	
	comp=Z,793nm,1.2s								
S39A	**Bolivar**	**21.93**	**26**	P		**P**		**10 56 29.3**	**-0.8**
	baz=212,SNR=312								
S39A				S		**S**		**11 00 31.0**	**-1.8**
	baz=212								
LRAL	**Lakeview Retre**	**21.94**	**45**	P		**P**		**10 56 30.0**	**-0.2**
LRAL				IAmb		IAmb		10 56 36.7	
	comp=Z,1µm,1.6s								
LRAL	**Lakeview Retre**	**21.94**	**45**	P		**P**		**10 56 29.9**	**-0.4**
	baz=233,SNR=77								
LRAL				S		**S**		**11 00 36.9**	**+3.9**
	baz=233								
LRAL	**Lakeview Retre**	**21.94**	**45**	P		**P**		**10 56 29.9**	**-0.4**
	baz=233,SNR=77								
LRAL				S		Sn		11 00 40.5	-2.4
	baz=233								
R11A	**Troy Canyon, C**	**21.94**	**338**	P		**P**		**10 56 30.4**	**-0.1**
R11A				IAmb		IAmb		10 56 49.6	
	comp=Z,1µm,1.8s								
R11A	**Troy Canyon, C**	**21.94**	**338**	P		**P**		**10 56 31.9**	**+1.4**
	baz=153,SNR=136								
R11A				S		Sn		11 00 43.0	-0.2
	baz=153								
W45A	**Hickory Valley**	**21.98**	**37**	IAmb		IAmb		10 56 47.7	
	comp=Z,765nm,1.1s								
W45A	**Hickory Valley**	**21.98**	**37**	P		**P**		**10 56 30.5**	**-0.3**
	baz=224,SNR=23								
W45A				S		**S**		**11 00 38.7**	**+4.8**
	baz=224								
HDC	**Heredia**	**22.01**	**109**	P		**P**		**10 56 35.5**	**+4.2**
HDC	**Heredia**	**22.01**	**109**	⇓*i*P		**P**		**10 56 35.0**	**+3.7**
KSU1	**Kansas State U**	**22.02**	**18**	P		**P**		**10 56 31.2**	**+0.2**
KSU1				IAmb		IAmb		10 56 32.9	
	comp=Z,1µm,1.3s								
KSU1	**Kansas State U**	**22.02**	**18**	IAMs_20		IAMs_20		11 05 24.2	
	comp=Z,105µm,20.0s								
KSU1	**Kansas State U**	**22.02**	**18**	P		**P**		**10 56 31.1**	**+0.1**
	baz=202,SNR=21								
KSU1				S		**S**		**11 00 32.8**	**-1.7**
	baz=202								
KSU1	**Kansas State U**	**22.02**	**18**	P		**P**		**10 56 31.0**	**0.0**
	baz=202,SNR=21								
KSU1				S		**S**		**11 00 38.0**	**+3.5**
	baz=202								
KSU1	**Kansas State U**	**22.02**	**18**	⇑P		**P**		**10 56 30.7**	**-0.3**
GNAR	**Gosnell**	**22.11**	**34**	P		**P**		**10 56 32.1**	**0.0**
GNAR				IAmb		IAmb		10 56 41.5	
	comp=Z,1µm,1.1s								
553A	**Crawfordville**	**22.26**	**54**	P		**P**		**10 56 32.4**	**-1.4**
	baz=243								
553A				S		**S**		**11 00 39.5**	**+0.2**
	baz=243								
PEBM	**Pemiscott Bayo**	**22.31**	**34**	P		**P**		**10 56 33.6**	**-0.6**
PEBM				IAmb		IAmb		10 56 40.6	
	comp=Z,1µm,1.2s								
RIMA	**Rio Macho**	**22.33**	**109**	⇓*i*P		**P**		**10 56 38.9**	**+4.0**
MPU	**Maple Canyon**	**22.34**	**347**	IAmb		IAmb		10 56 45.4	
	comp=Z,1µm,1.5s								
NLU	**North Lily Min**	**22.38**	**346**	P		**P**		**10 56 36.5**	**+1.3**
HALT	**Halls**	**22.44**	**35**	P		**P**		**10 56 35.4**	**-0.3**
HALT				IAmb		IAmb		10 56 44.0	
	comp=Z,1µm,1.4s								
LNXT	**Lenox**	**22.50**	**35**	P		**P**		**10 56 36.0**	**-0.2**
LNXT	**Lenox**	**22.50**	**35**	P		**P**		**10 56 36.1**	**-0.2**
	baz=222,SNR=33								
LNXT				S		Sn		11 00 50.9	-5.4
	baz=222								
CDM	**Cerro de Muert**	**22.51**	**110**	⇓*i*P		**P**		**10 56 40.2**	**+3.2**
RDMU	**Red Mountain**	**22.51**	**351**	P		**P**		**10 56 37.5**	**+0.9**
RDMU				IAmb		IAmb		10 56 47.1	
	comp=Z,1µm,1.4s								
PLAL	**Pickwick Lake**	**22.51**	**39**	P		**P**		**10 56 35.3**	**-1.1**
PLAL				IAmb		IAmb		10 56 38.2	
	comp=Z,1µm,2.0s								
352A	**Blakely**	**22.52**	**51**	IAmb		IAmb		10 56 47.1	
	comp=Z,864nm,1.2s								
352A	**Blakely**	**22.52**	**51**	P		**P**		**10 56 35.5**	**-1.0**
	baz=239,SNR=17								
352A				S		**S**		**11 00 41.4**	**-2.7**
	baz=239								
PBMO	**Poplar Bluff**	**22.52**	**32**	P		**P**		**10 56 35.7**	**-0.7**
PBMO	**Poplar Bluff**	**22.52**	**32**	P		**P**		**10 56 35.5**	**-0.9**
	baz=219,SNR=76								
PBMO				S		**S**		**11 00 45.3**	**+1.2**
	baz=219								
N23A	**Red Feather La**	**22.52**	**358**	P		**P**		**10 56 37.8**	**+1.0**
N23A	**Red Feather La**	**22.52**	**358**	P		**P**		**10 56 38.0**	**+1.2**
	baz=178,SNR=61								
N23A				S		**S**		**11 00 48.8**	**+4.3**
	baz=178								
PMPB	**Monarch Peak**	**22.56**	**325**	IAmb		IAmb		10 56 52.1	
	comp=Z,2µm,2.1s								
PVMO	**Portageville**	**22.62**	**34**	IAmb		IAmb		10 56 46.5	
	comp=Z,707nm,0.9s								
MLAC	**Mammoth, Mammo**	**22.67**	**331**	P		**P**		**10 56 39.7**	**+1.4**
	baz=144,SNR=37								
OGNE	**Ogallala**	**22.72**	**6**	P		**P**		**10 56 38.9**	**+0.2**
OGNE	**Ogallala**	**22.72**	**6**	P		**P**		**10 56 39.0**	**+0.3**
	baz=188,SNR=285								
OGNE				S		**S**		**11 00 51.3**	**+3.4**
	baz=188								
OGNE	**Ogallala**	**22.72**	**6**	P		**P**		**10 56 38.9**	**+0.2**
	baz=188,SNR=285								
OGNE				S		**S**		**11 00 53.0**	**+5.0**
	baz=188								
PARMO	**Parma**	**22.78**	**34**	IAmb		IAmb		10 56 54.9	
	comp=Z,588nm,0.9s								
MDPB	**Devils Postpil**	**22.79**	**330**	IAmb		IAmb		10 56 56.6	
	comp=Z,2µm,1.7s								
DUG	**Dugway, Tooele**	**22.79**	**345**	IAMs_20		IAMs_20		11 05 01.2	
	comp=Z,53µm,20.0s								
DUG	**Dugway, Tooele**	**22.79**	**345**	P		**P**		**10 56 41.3**	**+1.9**
	baz=161,SNR=92								
DUG				S		**S**		**11 00 53.1**	**+3.8**
	baz=161								
X48A	**Hartselle**	**22.79**	**42**	P		**P**		**10 56 38.5**	**-0.9**
	baz=230,SNR=194								
X48A				S		**S**		**11 00 52.8**	**+3.6**
	baz=230								
Y49A	**Blount Mountai**	**22.83**	**44**	IAmb		IAmb		10 56 47.5	
	comp=Z,697nm,1.4s								
Y49A	**Blount Mountai**	**22.83**	**44**	P		**P**		**10 56 39.2**	**-0.6**
	baz=232,SNR=59								
Y49A				S		**S**		**11 00 46.4**	**-3.4**
	baz=232								
R40A	**Maddies Statio**	**22.88**	**27**	P		**P**		**10 56 39.2**	**-1.0**
R40A				IAmb		IAmb		10 56 49.0	
	comp=Z,842nm,1.8s								
R40A	**Maddies Statio**	**22.88**	**27**	P		**P**		**10 56 39.2**	**-1.0**
	baz=213,SNR=98								
R40A				S		**S**		**11 00 47.4**	**-3.1**
	baz=213								
PHWY	**Pilot Hill**	**22.92**	**359**	IAmb		IAmb		10 56 49.9	
	comp=Z,1µm,1.9s								
BBGB	**Big Mountain B**	**22.95**	**326**	IAmb		IAmb		10 56 57.9	
	comp=Z,994nm,1.6s								
SRBA	**San Rafael, Bu**	**23.00**	**110**	IAmb		IAmb		10 56 58.5	
	comp=Z,834nm,1.8s								
SRBA	**San Rafael, Bu**	**23.00**	**110**	⇓*e*P		**P**		**10 56 44.9**	**+3.1**
NVAR	**Mina Array Bea**	**23.09**	**333**	P		**P**		**10 56 43.2**	**+0.5**
	comp=Z,25nm,0.9s,baz=153,slow=10,SNR=95								
NVAR				PcP		**PcP**		**11 00 33.0**	**+1.1**
	comp=Z,4.7nm,1.1s,baz=137,slow=3.2,SNR=3.8								
NVAR				LR		LR		11 05 21.5	
	comp=Z,59µm,19.4s,baz=152,slow=36								
NVAR				P3KPbc				11 30 13.0	
	comp=Z,0.1nm,0.4s,baz=302,slow=5.2,SNR=1.8								
	comp=Z,25nm,0.9s								
NVAR	**Mina Array Bea**	**23.09**	**333**	P		**P**		**10 56 43.4**	**+0.6**
DRK0	**Durika**	**23.09**	**110**	IAmb		IAmb		10 57 00.3	
	comp=Z,1µm,1.5s								
CCM	**Cathedral Cave**	**23.14**	**29**	P		**P**		**10 56 41.9**	**-1.1**
CCM				IAmb		IAmb		10 56 45.9	
	comp=Z,577nm,1.4s								
CCM	**Cathedral Cave**	**23.14**	**29**	P		**P**		**10 56 41.9**	**-1.1**
CCM				pmax		pmax			
	comp=Z,577nm,1.4s								
CCM				MLR		MLR			
	comp=Z,142µm,18.0s								
CCM	**Cathedral Cave**	**23.14**	**29**	P		**P**		**10 56 41.8**	**-1.1**
	baz=216,SNR=108								
CCM				S		**S**		**11 00 53.9**	**-1.1**
	baz=216								
CCM	**Cathedral Cave**	**23.14**	**29**	P		**P**		**10 56 42.2**	**-0.7**
	baz=216								
CCM				S		**S**		**11 00 57.3**	**+2.2**
	baz=216								
CCM	**Cathedral Cave**	**23.14**	**29**	⇑P		**P**		**10 56 41.7**	**-1.3**
152A	**Waverly Hall**	**23.29**	**48**	IAmb		IAmb		10 56 52.9	
	comp=Z,582nm,1.2s								
152A	**Waverly Hall**	**23.29**	**48**	P		**P**		**10 56 43.5**	**-1.1**
	baz=237,SNR=55								
152A				S		**S**		**11 01 02.2**	**+4.5**
	baz=237								
SAO	**San Andreas Ge**	**23.31**	**325**	IAMs_20		IAMs_20		11 04 25.2	
	comp=Z,80µm,20.0s								
SAO	**San Andreas Ge**	**23.31**	**325**	⇑P		**P**		**10 56 44.2**	**-0.5**
N33B	**J Bar K, Exete**	**23.32**	**15**	P		**P**		**10 56 44.6**	**-0.2**
	baz=199,SNR=17								
N33B				S		**S**		**11 00 58.9**	**+0.8**
	baz=199								
Z51A	**Franklin**	**23.34**	**46**	P		**P**		**10 56 44.2**	**-0.8**
Z51A				IAmb		IAmb		10 56 54.4	
	comp=Z,660nm,1.1s								
Z51A	**Franklin**	**23.34**	**46**	P		**P**		**10 56 44.2**	**-0.8**
	baz=235,SNR=55								
Z51A				S		**S**		**11 01 00.6**	**+2.1**
	baz=235								
656A	**Willston**	**23.41**	**58**	IAmb		IAmb		10 56 49.1	
	comp=Z,1µm,1.2s								
656A	**Willston**	**23.41**	**58**	P		**P**		**10 56 47.7**	**+1.9**
	baz=247,SNR=7.5								
656A				S		**S**		**11 01 03.4**	**+3.8**
	baz=247								
WVT	**Waverly**	**23.45**	**37**	P		**P**		**10 56 44.9**	**-1.3**
WVT				IAmb		IAmb		10 56 55.0	
	comp=Z,921nm,1.4s								
WVT	**Waverly**	**23.45**	**37**	P		**P**		**10 56 44.9**	**-1.3**
WVT				pmax		pmax			
	comp=Z,921nm,1.5s								
WVT				MLR		MLR			
	comp=Z,46µm,21.0s								
WVT	**Waverly**	**23.45**	**37**	P		**P**		**10 56 44.8**	**-1.3**
	baz=225,SNR=52								
WVT				S		**S**		**11 01 01.0**	**+0.7**
	baz=225								
WVT	**Waverly**	**23.45**	**37**	P		**P**		**10 56 44.5**	**-1.6**
	baz=225								
WVT				S		**S**		**11 01 00.0**	**-0.2**
	baz=225								
WVT	**Waverly**	**23.45**	**37**	⇑P		**P**		**10 56 44.4**	**-1.7**
FVM	**French Village**	**23.47**	**30**	P		**P**		**10 56 45.2**	**-1.1**
	baz=217,SNR=53								
FVM				S		**S**		**11 01 00.3**	**-0.2**
	baz=217								
TIGA	**Tifton**	**23.49**	**52**	IAmb		IAmb		10 56 49.4	
	comp=Z,1µm,1.2s								
TIGA	**Tifton**	**23.49**	**52**	P		**P**		**10 56 45.3**	**-1.3**
	baz=241,SNR=22								
TIGA				S		**S**		**11 01 02.6**	**+1.7**
	baz=241								
TIGA	**Tifton**	**23.49**	**52**	P		**P**		**10 56 44.8**	**-1.8**
	baz=241,SNR=22								
TIGA				S		**S**		**11 01 02.9**	**+2.0**
	baz=241								
P38A	**Dawn**	**23.52**	**23**	P		**P**		**10 56 45.5**	**-1.2**
P38A	**Dawn**	**23.52**	**23**	P		**P**		**10 56 45.5**	**-1.2**
	baz=209,SNR=56								
P38A				S		**S**		**11 00 57.5**	**-3.7**
	baz=209								

N35A Tabor 23.93 18 P P 10 56 50.9 +0.1
baz=203,SNR=21
N35A S S 11 01 08.1 +0.3
baz=203
ELK Elko 23.98 341 P P 10 56 52.5 +1.0
comp=Z,38nm,0.9s,baz=170,slow=6.9,SNR=57
ELK LR LR 11 05 29.2
comp=Z,43µm,20.9s,baz=169,slow=35
comp=Z,38nm,0.9s
P40A Paris 24.01 26 IAmb IAmb 10 56 53.3
comp=Z,849nm,1.7s
P40A Paris 24.01 26 P P 10 56 50.7 -0.8
baz=212,SNR=98
P40A S S 11 01 08.4 -0.7
baz=212
SLM Saint Louis 24.07 30 P P 10 56 52.1 -0.1
SLM Saint Louis 24.07 30 P P 10 56 52.1 -0.1
SLM pmax pmax
comp=Z,1µm,1.6s
SLM Saint Louis 24.07 30 P P 10 56 51.6 -0.6
baz=217,SNR=20
SLM S S 11 01 09.8 -0.3
baz=217
X51A Calhoun 24.28 44 P P 10 56 53.2 -0.9
baz=233,SNR=24
X51A P P 10 56 53.2 -0.9
baz=233,SNR=24
X51A S S 11 01 16.7 +3.1
baz=233
X51A S S 11 01 16.7 +3.1
baz=233
K22A Casper 24.29 358 P P 10 56 54.6 +0.2
K22A IAmb IAmb 10 57 04.8
comp=Z,727nm,1.2s
K22A Casper 24.29 358 P P 10 56 54.1 -0.3
baz=177,SNR=80
K22A S S 11 01 14.4 +0.5
baz=177
K22A Casper 24.29 358 P P 10 56 54.3 0.0
baz=177,SNR=80
K22A S S 11 01 15.4 +1.5
baz=177
CLTN Cedars of Leba 24.31 39 IAmb IAmb 10 56 55.7
comp=Z,837nm,1.2s
EMB Emerald Bay 24.34 331 IAmb IAmb 10 57 10.6
comp=Z,469nm,1.3s
456A Hilliard 24.37 55 P P 10 56 53.1 -1.8
baz=245,SNR=11
456A S S 11 01 19.1 +4.2
baz=245
W50A Signal Mountai 24.37 42 IAmb IAmb 10 56 56.2
comp=Z,837nm,1.3s
W50A Signal Mountai 24.37 42 P P 10 56 54.5 -0.5
baz=232,SNR=103
W50A S S 11 01 19.2 +4.1
baz=232
BMN Battle Mountai 24.37 337 P P 10 56 56.1 +1.0
BMN Battle Mountai 24.37 337 P P 10 56 56.1 +1.0
BMN pmax pmax
comp=Z,5µm,2.5s
Y52A Lilburn 24.41 46 P P 10 56 54.1 -1.3
Y52A IAmb IAmb 10 57 10.3
comp=Z,517nm,1.2s
Y52A Lilburn 24.41 46 P P 10 56 54.4 -0.9
baz=236,SNR=45
Y52A P P 10 56 54.4 -0.9
baz=236,SNR=45
Y52A S S 11 01 18.3 +2.6
baz=236
Y52A S S 11 01 18.3 +2.6
baz=236
154A Montrose 24.42 50 P P 10 56 54.0 -1.4
baz=240,SNR=60
154A S S 11 01 18.0 +2.1
baz=240
060A Indiantown 24.45 65 P P 10 56 55.5 -0.3
baz=255
T47A Sharon Grove 24.47 37 IAmb IAmb 10 56 57.3
comp=Z,904nm,1.2s
T47A Sharon Grove 24.47 37 P P 10 56 55.5 -0.3
baz=225,SNR=148
T47A S S 11 01 18.8 +2.3
baz=225
255A Hazlehurst 24.55 52 IAmb IAmb 10 56 58.9
comp=Z,839nm,1.2s
255A Hazlehurst 24.55 52 P P 10 56 55.4 -1.3
baz=242,SNR=12
255A S S 11 01 21.3 +3.3
baz=242
MPK Martis Peak 24.57 331 IAmb IAmb 10 57 08.2
comp=Z,378nm,1.2s
GOGA Godfrey 24.58 48 P P 10 56 56.8 0.0
GOGA Godfrey 24.58 48 P P 10 56 56.8 0.0
GOGA pmax pmax
comp=Z,981nm,1.4s
GOGA MLR MLR
comp=Z,33µm,20.0s
GOGA Godfrey 24.58 48 P P 10 56 55.8 -1.0
baz=238,SNR=90
GOGA S S 11 01 20.7 +2.3
baz=238
GOGA Godfrey 24.58 48 P P 10 56 55.9 -1.0
baz=238,SNR=90
GOGA S S 11 01 21.4 +3.0
baz=238
N38A Joes South For 24.65 22 IAmb IAmb 10 56 59.2
comp=Z,760nm,1.4s
N38A Joes South For 24.65 22 P P 10 56 57.5 0.0
baz=208,SNR=34
N38A S S 11 01 19.3 -0.1
baz=208
BW06 Boulder Array 24.67 352 IAMs_20 IAMs_20 11 06 42.9
comp=Z,52µm,19.0s
BW06 Boulder Array 24.67 352 P P 10 56 58.0 +0.2
baz=170,SNR=66
BW06 S S 11 01 23.2 +3.2
baz=170
PD31 Pinedale Array 24.67 352 ⇑P P 10 56 58.0 +0.2
PDAR Pinedale Array 24.67 352 P P 10 56 58.0 +0.2
comp=Z,40nm,1.0s,baz=167,slow=10.0,SNR=34
PDAR LR LR 11 06 54.8
comp=Z,41µm,18.4s,baz=182,slow=37
comp=Z,40nm,1.0s
L34A Svendsen Farm, 24.75 16 P P 10 56 57.9 -0.4
baz=200,SNR=23
L34A S S 11 01 18.1 -2.9
baz=200
K31A O'Neill 24.85 11 P P 10 56 59.6 +0.5
baz=195,SNR=27
K31A S S 11 01 30.8 +8.2
baz=195
Q44A Meyer Farm, Va 24.87 31 P P 10 56 59.3 -0.1
baz=219,SNR=112
Q44A S S 11 01 23.8 +0.8
baz=219
AHID Auburn Hatcher 24.90 350 IAmb IAmb 10 57 15.9
comp=Z,2µm,2.6s
U49A Red Boiling Sp 24.92 39 P P 10 56 59.2 -0.7
U49A IAmb IAmb 10 57 01.6
comp=Z,1µm,2.0s
U49A Red Boiling Sp 24.92 39 P P 10 56 59.3 -0.7
baz=228,SNR=57
U49A S S 11 01 25.1 +1.2
baz=228
CPCT Cooper Cave 25.03 43 P P 10 57 00.2 -0.7
CPCT IAmb IAmb 10 57 13.8
comp=Z,432nm,1.3s
MCCM Marconi Confer 25.10 326 IAMs_20 IAMs_20 11 05 17.5
comp=Z,74µm,20.0s
MCCM Marconi Confer 25.10 326 ⇓P P 10 57 01.6 +0.2
BEKR Beckworth 25.18 332 IAmb IAmb 10 57 22.8
comp=Z,562nm,1.7s
W52A Murphy 25.21 44 P P 10 57 02.4 -0.1
W52A IAmb IAmb 10 57 06.5
comp=Z,253nm,0.8s
W52A Murphy 25.21 44 P P 10 57 02.1 -0.5
baz=234,SNR=62
W52A S S 11 01 33.5 +5.0
baz=234
P43A Skaggs, Pawnee 25.21 29 P P 10 57 02.5 0.0
P43A IAmb IAmb 10 57 10.4
comp=Z,554nm,1.1s
P43A Skaggs, Pawnee 25.21 29 P P 10 57 02.3 -0.2
baz=217,SNR=50
P43A S S 11 01 28.6 +0.2
baz=217
ECR Eagle Creek 25.22 349 P P 10 57 03.9 +1.1
V51A Loudon 25.36 42 P P 10 57 03.6 -0.3
V51A IAmb IAmb 10 57 06.5
comp=Z,705nm,1.2s
V51A Loudon 25.36 42 P P 10 57 03.6 -0.3
baz=232,SNR=89
V51A S S 11 01 31.9 +1.1
baz=232
ORV Oroville 25.46 330 IAmb IAmb 10 57 25.3
comp=Z,717nm,1.7s
ORV IAMs_20 IAMs_20 11 06 21.9
comp=Z,46µm,18.0s
N41A Harden Midland 25.50 26 P P 10 57 04.2 -0.8
N41A IAmb IAmb 10 57 07.5
comp=Z,553nm,1.2s
N41A Harden Midland 25.50 26 P P 10 57 04.7 -0.3
baz=213,SNR=78
N41A S S 11 01 32.5 -0.5
baz=213
GMAL Guarumal, Vera 25.53 111 eP P 10 57 10.6 +5.0
LOHW Long Hollow 25.64 351 P P 10 57 07.4 +0.8
LOHW IAMs_20 IAMs_20 11 06 44.7
comp=Z,59µm,19.0s
SCIA State Center 25.64 21 S S 11 01 34.6 -0.6
baz=207
SCIA State Center 25.64 21 P P 10 57 06.3 -0.1
baz=207
SCIA S S 11 01 36.1 +0.8
baz=207
TKL Tuckaleechee C 25.64 43 P P 10 57 05.4 -1.0
comp=Z,161nm,1.0s,baz=232,slow=8.4,SNR=57
TKL S S 11 01 35.4 0.0
comp=Z,13nm,1.0s,baz=197,slow=5.3,SNR=1.5
TKL LR LR 11 09 53.4
comp=Z,35µm,18.8s,baz=238,slow=43
comp=Z,161nm,1.0s
TKL Tuckaleechee C 25.64 43 IAmb IAmb 10 57 08.4
comp=Z,570nm,1.4s
TKL Tuckaleechee C 25.64 43 P P 10 57 06.4 -0.1
baz=233,SNR=53
TKL S S 11 01 35.8 +0.4
baz=233
257A Skidaway Islan 25.67 53 IAmb IAmb 10 57 10.7
comp=Z,668nm,1.1s
257A Skidaway Islan 25.67 53 P P 10 57 06.0 -0.7
baz=244
257A S S 11 01 40.3 +4.4
baz=244
FXWY Fox Creek 25.73 350 P P 10 57 07.7 +0.2
RSSD Black Hills 25.75 2 P P 10 57 07.9 +0.2
RSSD Black Hills 25.75 2 P P 10 57 07.9 +0.2
RSSD pmax pmax
comp=Z,166nm,1.1s
RSSD MLR MLR
comp=Z,32µm,18.0s
RSSD Black Hills 25.75 2 P P 10 57 07.9 +0.2
baz=182,SNR=65
RSSD S S 11 01 38.6 +1.2
baz=182
RSSD Black Hills 25.75 2 P P 10 57 08.2 +0.6
baz=182
RSSD S S 11 01 40.1 +2.7
baz=182
RSSD Black Hills 25.75 2 ⇑P P 10 57 07.8 +0.2
MOOW Moose Ponds 25.80 351 IAmb IAmb 10 57 19.7
comp=Z,592nm,1.4s
MOOW IAMs_20 IAMs_20 11 06 49.8
comp=Z,51µm,19.0s
CASEE Lake Jocassee 25.82 46 P P 10 57 09.0 +0.9
baz=236,SNR=142
CASEE S S 11 01 41.1 +3.0
baz=236
HOPS Hopland Field 25.82 327 IAmb IAmb 10 57 24.3
comp=Z,1µm,2.0s
T50A Nancy 25.82 40 P P 10 57 07.7 -0.4
T50A IAmb IAmb 10 57 10.3
comp=Z,339nm,1.0s
T50A Nancy 25.82 40 P P 10 57 07.9 -0.2
baz=229
T50A P P 10 57 07.9 -0.2
baz=229
T50A S S 11 01 41.2 +3.0
baz=229
T50A S S 11 01 41.2 +3.0
baz=229
HODGE Hodges 25.87 48 IAmb IAmb 10 57 11.8
comp=Z,702nm,1.3s
HODGE Hodges 25.87 48 P P 10 57 08.0 -0.5
baz=238,SNR=89
HODGE S S 11 01 42.0 +3.1
baz=238
V52A Sevierville 25.87 43 IAmb IAmb 10 57 10.7
comp=Z,632nm,1.4s
V52A Sevierville 25.87 43 P P 10 57 08.2 -0.3
baz=233,SNR=48
V52A S S 11 01 41.2 +2.2
baz=233
HAW Hawthorne Fire 25.89 50 P P 10 57 08.3 -0.3
baz=240,SNR=11
HAW S S 11 01 44.3 +5.0
baz=240
HDIL Hopedale 26.05 28 P P 10 57 09.7 -0.3
baz=216,SNR=40
HDIL S S 11 01 44.2 +2.5
baz=216
HDIL Hopedale 26.05 28 P P 10 57 09.8 -0.3
baz=216,SNR=40
HDIL S S 11 01 43.2 +1.5
baz=216
CACAO El Cacao, Vera 26.05 112 eP P 10 57 19.7 +9.4
O44A Mansfield 26.11 30 IAmb IAmb 10 57 12.3
comp=Z,659nm,1.6s
O44A Mansfield 26.11 30 P P 10 57 10.3 -0.3
baz=218,SNR=20
O44A S S 11 01 42.2 -0.5
baz=218
FLWY Flagg Ranch 26.12 351 IAmb IAmb 10 57 32.5
comp=Z,783nm,1.6s
FLWY IAMs_20 IAMs_20 11 06 59.3
comp=Z,46µm,22.0s
MCJ Malvern 26.12 86 *i* P P 10 57 17.2 +6.2
BCIP Isla Barro Col 26.20 107 eP P 10 57 09.5 -2.2
BCIP Isla Barro Col 26.20 107 ⇑P P 10 57 14.3 +2.6
CVJ Coleyville 26.24 86 *i* P P 10 57 13.4 +1.3
MTDJ Mount Denham 26.24 86 P P 10 57 14.2 +2.1
MTDJ Mount Denham 26.24 86 ⇑P P 10 57 13.9 +1.8
V53A Saluda 26.28 44 P P 10 57 12.2 -0.1
baz=235,SNR=33
V53A P P 10 57 12.2 -0.1
baz=235,SNR=33
V53A S S 11 01 43.7 -1.9
baz=235
V53A S S 11 01 43.7 -1.9
baz=235
YPP Pitchstone Pla 26.32 351 IAmb IAmb 10 57 36.5
comp=Z,510nm,1.6s
P46A Rosedale 26.32 32 IAmb IAmb 10 57 36.3
comp=Z,554nm,1.4s
P46A Rosedale 26.32 32 P P 10 57 13.0 +0.4
baz=221,SNR=28
P46A S S 11 01 46.6 +0.6
baz=221
TZTN Tazewell 26.32 42 IAmb IAmb 10 57 22.6
comp=Z,443nm,1.2s
TZTN Tazewell 26.32 42 P P 10 57 12.3 -0.3
baz=232,SNR=53
TZTN S S 11 01 48.7 +2.5
baz=232
TZTN Tazewell 26.32 42 P P 10 57 12.7 0.0
baz=232,SNR=53
TZTN S S 11 01 48.1 +1.9
baz=232
ECSD EROS Data Cent 26.36 14 P P 10 57 12.4 -0.5
ECSD EROS Data Cent 26.36 14 P P 10 57 12.6 -0.2
baz=199,SNR=65
ECSD S S 11 01 43.2 -3.3
baz=199
ECSD EROS Data Cent 26.36 14 P P 10 57 12.6 -0.2
baz=199,SNR=65
ECSD S S 11 01 45.5 -1.0
baz=199
HLID Hailey 26.36 345 P P 10 57 14.4 +1.3
HLID IAmb IAmb 10 57 33.8
comp=Z,1µm,2.5s
HLID IAMs_20 IAMs_20 11 07 11.7
comp=Z,44µm,19.0s
HLID Hailey 26.36 345 P P 10 57 14.7 +1.7
baz=160,SNR=91
HLID S S 11 01 49.9 +3.0
baz=160
AZU Azuero 26.37 110 eP P 10 57 15.2 +1.9
H17A Grant Village 26.40 351 P P 10 57 13.6 0.0
H17A IAmb IAmb 10 57 33.4
comp=Z,633nm,1.9s
H17A Grant Village 26.40 351 P P 10 57 15.0 +1.4
baz=168,SNR=27
H17A S S 11 01 46.9 -0.8
baz=168
K38A Parkersburg 26.45 21 P P 10 57 13.2 -0.5
baz=207,SNR=24
K38A S S 11 01 45.3 -2.7
baz=207
R49A Shelbyville 26.48 37 P P 10 57 13.7 -0.3
baz=227,SNR=24
R49A P P 10 57 13.7 -0.3
baz=227,SNR=24
R49A S S 11 01 48.8 +0.3
baz=227
R49A S S 11 01 48.8 +0.3
baz=227
PAULI Pauline 26.49 47 IAmb IAmb 10 57 16.9
comp=Z,417nm,1.1s
PAULI Pauline 26.49 47 P P 10 57 15.3 +1.1
baz=238,SNR=65
PAULI S S 11 01 49.3 +0.5
baz=238
L40A Anamosa 26.50 24 IAmb IAmb 10 57 17.5
comp=Z,465nm,1.3s
L40A Anamosa 26.50 24 P P 10 57 13.8 -0.4
baz=211,SNR=59
L40A S S 11 01 43.6 -5.1
baz=211
LKWY Lake 26.55 352 P P 10 57 16.3 +1.5
LKWY IAmb IAmb 10 57 44.2
comp=Z,1µm,2.1s
LKWY IAMs_20 IAMs_20 11 06 58.7
comp=Z,62µm,21.0s
LKWY Lake 26.55 352 P P 10 57 16.3 +1.5
LKWY pmax pmax
comp=Z,1µm,2.2s
LKWY MLR MLR
comp=Z,62µm,21.0s
UPA Univ. de Panam 26.55 107 eP P 10 57 15.2 +0.3
SUSD Miller 26.58 10 IAmb IAmb 10 57 25.4
comp=Z,675nm,1.2s
SUSD Miller 26.58 10 P P 10 57 14.8 0.0
baz=193,SNR=18
SUSD S S 11 01 50.7 +0.7
baz=193
SUSD Miller 26.58 10 P P 10 57 14.6 -0.2
baz=193,SNR=18
SUSD S S 11 01 50.0 0.0
baz=193
JSC Jenkinsville 26.60 49 IAmb IAmb 10 57 17.9
comp=Z,407nm,1.3s
JSC Jenkinsville 26.60 49 P P 10 57 15.1 0.0
baz=239,SNR=35
JSC S S 11 01 54.5 +4.0
baz=239
MFID Camas Ranch 26.60 342 P P 10 57 15.5 +0.3
WVOR Wild Horse Val 26.64 337 P P 10 57 16.1 +0.6
WVOR IAmb IAmb 10 57 30.6
comp=Z,622nm,1.9s
WVOR IAMs_20 IAMs_20 11 07 16.7
comp=Z,50µm,20.0s
WVOR Wild Horse Val 26.64 337 P P 10 57 16.1 +0.6
WVOR pmax pmax
comp=Z,622nm,1.9s
WVOR MLR MLR
comp=Z,50µm,20.0s
WVOR Wild Horse Val 26.64 337 ⇓P P 10 57 15.8 +0.3
YMR Madison River 26.73 351 P P 10 57 17.9 +1.5
YNR Norris Junctio 26.73 351 IAmb IAmb 10 57 48.9
comp=Z,685nm,1.7s
NHSC New Hope 26.82 52 P P 10 57 17.9 +0.8
baz=243,SNR=23
NHSC S S 11 01 57.3 +3.3
baz=243
NHSC New Hope 26.82 52 P P 10 57 17.1 0.0
baz=243,SNR=23
NHSC S S 11 01 54.0 0.0
baz=243
MOD Modoc Plateau 26.83 334 IAmb IAmb 10 57 35.2
comp=Z,671nm,1.6s
MOD IAMs_20 IAMs_20 11 07 33.0
comp=Z,45µm,20.0s
BCYI Bear Canyon 26.83 347 P P 10 57 18.6 +1.1
STH Stony Hill 26.94 86 *i* P P 10 57 24.7 +6.3
YHL Hebgen Lake 26.94 351 IAmb IAmb 10 57 35.8
comp=Z,597nm,1.6s
SFIN Lafayette 26.95 32 P P 10 57 18.4 +0.2
SFIN IAmb IAmb 10 57 20.3
comp=Z,703nm,1.4s
SFIN Lafayette 26.95 32 P P 10 57 18.6 +0.3
baz=221,SNR=57
SFIN S S 11 01 55.2 -0.7
baz=221
SFIN Lafayette 26.95 32 P P 10 57 18.5 +0.3
baz=221,SNR=57
SFIN S S 11 01 55.3 -0.7
baz=221
RLMT Red Lodge 26.96 354 P P 10 57 18.8 +0.3
RLMT IAMs_20 IAMs_20 11 09 10.5
comp=Z,46µm,18.0s
RLMT Red Lodge 26.96 354 P P 10 57 18.5 0.0
baz=171,SNR=23
RLMT S S 11 01 57.8 +1.5
baz=171
R50A Paris 26.96 38 P P 10 57 17.9 -0.4
baz=228,SNR=39
R50A P P 10 57 17.9 -0.4
baz=228,SNR=39
R50A S S 11 01 59.0 +2.9
baz=228
R50A S S 11 01 59.0 +2.9
baz=228
S51A Beattyville 26.98 40 P P 10 57 18.6 0.0
baz=230,SNR=49
S51A P P 10 57 18.6 0.0
baz=230,SNR=49
S51A S S 11 02 00.1 +3.6
baz=230
S51A S S 11 02 00.1 +3.6
baz=230
KMSC Kings Mountain 27.00 47 IAmb IAmb 10 57 21.9
comp=Z,439nm,1.1s
KMSC Kings Mountain 27.00 47 P P 10 57 18.3 -0.4
baz=238,SNR=95
KMSC S S 11 01 56.4 -0.4
baz=238
KMSC Kings Mountain 27.00 47 P P 10 57 18.6 -0.1
baz=238,SNR=95
KMSC S S 11 01 58.5 +1.8
baz=238
HOJ Hope 27.00 86 *i* P P 10 57 24.1 +5.2
KMRM Mail Ridge 27.07 328 IAmb IAmb 10 57 34.6
comp=Z,609nm,1.9s
L42A Oliver, Polo 27.07 26 P P 10 57 18.6 -0.6
L42A Oliver, Polo 27.07 26 P P 10 57 18.7 -0.6
baz=214,SNR=31
L42A S S 11 01 55.9 -1.9
baz=214
Y57A Sumter 27.09 50 IAmb IAmb 10 57 22.3
comp=Z,586nm,1.4s
Y57A Sumter 27.09 50 P P 10 57 20.9 +1.4
baz=241,SNR=5.6
Y57A P P 10 57 20.9 +1.4
baz=241,SNR=5.6
Y57A S S 11 02 03.1 +4.9
baz=241
Y57A S S 11 02 03.1 +4.9
baz=241
P48A Milroy 27.15 35 P P 10 57 19.4 -0.6
baz=225,SNR=21
P48A P P 10 57 19.4 -0.6
baz=225,SNR=21
P48A S S 11 01 57.0 -2.1
baz=225
P48A S S 11 01 57.0 -2.1
baz=225
M44A Midewin, Midew 27.28 29 P P 10 57 22.1 +0.9
M44A Midewin, Midew 27.28 29 P P 10 57 20.4 -0.8
baz=218,SNR=6.1
M44A S S 11 02 00.7 -0.4
baz=218
BIRD Birdtown, Kers 27.35 49 P P 10 57 22.8 +0.9
baz=240,SNR=16

BIRD S **S** **11 02 06.7 +4.4**
baz=240
J08A **Circle Bar Ran** **27.39 339** IAmb IAmb 10 57 37.3
comp=Z,1µm,2.2s
U54A **Nelsons Funny** **27.43 44** P **P** **10 57 22.6 -0.1**
U54A IAmb IAmb 10 57 25.5
comp=Z,288nm,1.1s
U54A **Nelsons Funny** **27.43 44** P **P** **10 57 22.4 -0.3**
baz=235,SNR=31
U54A P **P** **10 57 22.4 -0.3**
baz=235,SNR=31
U54A S **S** **11 02 05.3 +1.6**
baz=235
U54A S **S** **11 02 05.3 +1.6**
baz=235
V55A **Taylorsville** **27.46 46** P **P** **10 57 22.9 0.0**
V55A IAmb IAmb 10 57 25.5
comp=Z,376nm,1.4s
V55A **Taylorsville** **27.46 46** P **P** **10 57 22.6 -0.2**
baz=237,SNR=38
V55A P **P** **10 57 22.6 -0.2**
baz=237,SNR=38
V55A S **S** **11 02 05.2 +1.1**
baz=237
V55A S **S** **11 02 05.2 +1.1**
baz=237
I37A **Lemond, Waseca** **27.48 19** IAmb IAmb 10 57 24.3
comp=Z,784nm,1.6s
I37B **Waseca** **27.48 19** P **P** **10 57 22.5 -0.5**
baz=205,SNR=54
I37B S **S** **11 02 02.1 -2.1**
baz=205
KHMM **Horse Mountain** **27.57 329** IAmb IAmb 10 57 39.0
comp=Z,600nm,1.7s
Y58A **Scranton** **27.57 51** P **P** **10 57 24.7 +0.9**
baz=242,SNR=8.6
Y58A P **P** **10 57 24.7 +0.9**
baz=242,SNR=8.6
Y58A S **S** **11 02 10.4 +4.6**
baz=242
Y58A S **S** **11 02 10.4 +4.6**
baz=242
P49A **Miami Univ. Ec** **27.59 36** IAmb IAmb 10 57 25.6
comp=Z,615nm,1.5s
P49A IAMs_20 IAMs_20 11 09 58.2
comp=Z,62µm,19.0s
P49A **Miami Univ. Ec** **27.59 36** P **P** **10 57 23.8 -0.2**
baz=226,SNR=44
P49A S **S** **11 02 02.6 -3.4**
baz=226
P49A **Miami Univ. Ec** **27.59 36** P **P** **10 57 23.7 -0.2**
baz=226,SNR=44
P49A S **S** **11 02 04.4 -1.6**
baz=226
JFWS **Jewell Farm** **27.60 24** P **P** **10 57 23.7 -0.3**
JFWS **Jewell Farm** **27.60 24** IAMs_20 IAMs_20 11 08 53.2
comp=Z,51µm,18.0s
JFWS **Jewell Farm** **27.60 24** P **P** **10 57 23.7 -0.3**
JFWS pmax pmax
comp=Z,202nm,1.2s
JFWS MLR MLR
comp=Z,51µm,18.0s
JFWS **Jewell Farm** **27.60 24** P **P** **10 57 23.8 -0.3**
baz=212,SNR=39
JFWS S **S** **11 02 04.5 -1.7**
baz=212
JFWS **Jewell Farm** **27.60 24** P **P** **10 57 23.7 -0.3**
baz=212,SNR=39
JFWS S **S** **11 02 06.6 +0.4**
baz=212
GCMT **Greycliff** **27.66 353** P **P** **10 57 25.1 +0.3**
BOZ **Bozeman (W)** **27.74 350** IAMs_20 IAMs_20 11 08 02.2
comp=Z,52µm,20.0s
BOZ **Bozeman (W)** **27.74 350** P **P** **10 57 26.4 +0.9**
baz=167,SNR=198
BOZ S **S** **11 02 11.2 +2.7**
baz=167
YBH **Yreka Blue Hor** **27.74 331** P **P** **10 57 24.7 -0.7**
comp=Z,10nm,1.1s,baz=149,slow=10,SNR=7.1
YBH S **S** **11 02 04.6 -4.0**
comp=Z,2.3nm,1.1s,baz=78,slow=8.1,SNR=1.4
YBH LR LR 11 08 06.7
comp=Z,49µm,20.1s,baz=160,slow=36
comp=Z,10nm,1.1s
YBH **Yreka Blue Hor** **27.74 331** IAMs_20 IAMs_20 11 07 45.2
comp=Z,50µm,20.0s
K05A **Summer Lake** **27.76 335** IAmb IAmb 10 57 59.4
comp=Z,675nm,1.7s
O48B **Farmland** **27.86 34** P **P** **10 57 25.8 -0.6**
baz=224,SNR=36
O48B S **S** **11 02 09.3 -1.1**
baz=224
O48B **Farmland** **27.86 34** P **P** **10 57 26.2 -0.2**
baz=224,SNR=36
O48B S **S** **11 02 11.3 +1.0**
baz=224
W57A **Gilead** **27.94 48** P **P** **10 57 27.6 +0.5**
W57A IAmb IAmb 10 57 29.4
comp=Z,430nm,1.2s
W57A **Gilead** **27.94 48** P **P** **10 57 26.5 -0.6**
baz=240,SNR=36
W57A P **P** **10 57 26.5 -0.6**
baz=240,SNR=36
W57A S **S** **11 02 09.1 -2.6**
baz=240
W57A S **S** **11 02 09.1 -2.6**
baz=240
L04D **Klamath Falls** **27.95 332** P **P** **10 57 26.6 -0.7**
L04D IAmb IAmb 10 57 41.4
comp=Z,556nm,1.6s
L04D **Klamath Falls** **27.95 332** P **P** **10 57 26.8 -0.5**
baz=143,SNR=16
L04D S **S** **11 02 12.0 +0.1**
baz=143
L44A **Lake County Fo** **27.97 28** IAmb IAmb 10 57 59.2
comp=Z,482nm,2.0s
L44A **Lake County Fo** **27.97 28** P **P** **10 57 26.7 -0.7**
baz=217
L44A S **S** **11 02 12.8 +0.8**
baz=217
L44A **Lake County Fo** **27.97 28** P **P** **10 57 26.8 -0.5**
baz=217
L44A S **S** **11 02 11.8 -0.1**
baz=217
Q51A **Peebles** **28.03 38** IAmb IAmb 10 57 35.0
comp=Z,226nm,0.9s
Q51A **Peebles** **28.03 38** P **P** **10 57 27.4 -0.6**
baz=229,SNR=52
Q51A P **P** **10 57 27.4 -0.6**
baz=229,SNR=52
Q51A S **S** **11 02 15.3 +2.4**
baz=229
Q51A S **S** **11 02 15.3 +2.4**
baz=229
K04D **Chiloquin, OR** **28.03 333** P **P** **10 57 28.4 +0.4**
baz=145,SNR=15
K04D S **S** **11 02 16.7 +3.5**
baz=145
N47A **Urbana** **28.03 33** IAmb IAmb 10 57 29.3
comp=Z,439nm,1.4s
N47A **Urbana** **28.03 33** P **P** **10 57 27.5 -0.5**
baz=222,SNR=29
N47A P **P** **10 57 27.5 -0.5**
baz=222,SNR=29
N47A S **S** **11 02 13.8 +0.7**
baz=222
N47A S **S** **11 02 13.8 +0.7**
baz=222
X58A **Rowland** **28.11 50** IAmb IAmb 10 57 31.5
comp=Z,341nm,1.3s
X58A **Rowland** **28.11 50** P **P** **10 57 29.0 +0.3**
baz=242,SNR=15
X58A P **P** **10 57 29.0 +0.3**
baz=242,SNR=15
X58A S **S** **11 02 19.4 +5.1**
baz=242
X58A S **S** **11 02 19.4 +5.1**
baz=242
Y59A **Loris** **28.19 51** P **P** **10 57 30.1 +0.7**
Y59A IAmb IAmb 10 57 32.3
comp=Z,504nm,1.4s
Y59A **Loris** **28.19 51** P **P** **10 57 30.4 +1.0**
baz=243,SNR=6.2
Y59A P **P** **10 57 30.4 +1.0**
baz=243,SNR=6.2
Y59A S **S** **11 02 21.4 +5.8**
baz=243
Y59A S **S** **11 02 21.4 +5.8**
baz=243
PLID **Pearl Lake** **28.19 344** P **P** **10 57 30.0 +0.4**
PLID IAmb IAmb 10 57 42.9
comp=Z,492nm,1.8s
PLID IAMs_20 IAMs_20 11 08 51.2
comp=Z,33µm,18.0s
K43A **Burlington** **28.21 27** P **P** **10 57 28.9 -0.6**
K43A **Burlington** **28.21 27** P **P** **10 57 28.7 -0.8**
baz=216
K43A S **S** **11 02 14.9 -0.8**
baz=216
O49A **Covington** **28.26 35** P **P** **10 57 29.6 -0.3**
O49A IAmb IAmb 10 57 31.8
comp=Z,695nm,1.6s
O49A **Covington** **28.26 35** P **P** **10 57 29.8 -0.1**
baz=226,SNR=35
O49A P **P** **10 57 29.8 -0.1**
baz=226,SNR=35
O49A S **S** **11 02 14.0 -2.5**
baz=226
O49A S **S** **11 02 14.0 -2.5**
baz=226
U56A **King** **28.29 46** IAmb IAmb 10 57 33.0
comp=Z,548nm,1.4s
U56A **King** **28.29 46** P **P** **10 57 30.7 +0.4**
baz=237,SNR=32
U56A P **P** **10 57 30.7 +0.4**
baz=237,SNR=32
U56A S **S** **11 02 16.0 -1.2**
baz=237
U56A S **S** **11 02 16.0 -1.2**
baz=237
I40A **Norwalk** **28.30 23** P **P** **10 57 29.4 -0.9**
I40A **Norwalk** **28.30 23** P **P** **10 57 30.1 -0.2**
baz=210,SNR=26
I40A S **S** **11 02 17.8 +0.7**
baz=210
LAO **LASA Array** **28.32 358** IAmb IAmb 10 57 52.2
comp=Z,808nm,1.9s
LAO IAMs_20 IAMs_20 11 09 05.6
comp=Z,85µm,22.0s
LAO **LASA Array** **28.32 358** P **P** **10 57 30.2 -0.3**
baz=178,SNR=20
LAO S **S** **11 02 17.2 -0.3**
baz=178
LAO **LASA Array** **28.32 358** P **P** **10 57 30.2 -0.3**
baz=178,SNR=20
LAO S **S** **11 02 16.0 -1.5**
baz=178
BMO **Blue Mountains** **28.35 342** IAmb IAmb 10 57 43.8
comp=Z,509nm,1.9s
BMO IAMs_20 IAMs_20 11 08 09.2
comp=Z,33µm,18.0s
J05D **Fort Rock, OR** **28.36 335** P **P** **10 57 31.4 +0.3**
baz=146,SNR=22
J05D S **S** **11 02 18.7 +0.2**
baz=146
R53A **Hurricane** **28.42 41** IAmb IAmb 10 57 33.6
comp=Z,591nm,1.2s
R53A **Hurricane** **28.42 41** P **P** **10 57 32.0 +0.5**
baz=232,SNR=46
R53A P **P** **10 57 32.0 +0.5**
baz=232,SNR=46
R53A S **S** **11 02 22.6 +3.4**
baz=232
R53A S **S** **11 02 22.6 +3.4**
baz=232
F33A **5 Mile Ranch,** **28.43 13** P **P** **10 57 30.5 -0.9**
baz=198,SNR=32
F33A S **S** **11 02 16.5 -2.6**
baz=198
E28A **Huff** **28.43 6** IAmb IAmb 10 57 38.3
comp=Z,594nm,1.4s
E28A **Huff** **28.43 6** P **P** **10 57 31.5 +0.1**
baz=189,SNR=30
E28A S **S** **11 02 18.2 -1.0**
baz=189
GTBY **Guantanamo Bay** **28.43 82** P **P** **10 57 33.8 +2.1**
GTBY **Guantanamo Bay** **28.43 82** ⇑P **P** **10 57 33.1 +1.4**
L02F **Cave Junction** **28.45 330** P **P** **10 57 32.3 +0.7**
baz=141
L02F S **S** **11 02 19.9 +0.4**
baz=141
P51A **Williamsport** **28.49 38** IAmb IAmb 10 57 33.8
comp=Z,534nm,1.6s
P51A **Williamsport** **28.49 38** P **P** **10 57 32.0 0.0**
baz=229,SNR=24
P51A P **P** **10 57 32.0 0.0**
baz=229,SNR=24
P51A S **S** **11 02 23.3 +3.0**
baz=229
P51A S **S** **11 02 23.3 +3.0**
baz=229
S54A **Dingess, Beckl** **28.50 42** IAmb IAmb 10 57 56.9
comp=Z,447nm,1.6s
S54A **Dingess, Beckl** **28.50 42** P **P** **10 57 31.9 -0.4**
baz=234,SNR=14
S54A P **P** **10 57 31.9 -0.4**
baz=234,SNR=14
S54A S **S** **11 02 22.5 +1.9**
baz=234
S54A S **S** **11 02 22.5 +1.9**
baz=234
HUMO **Hull Mountain** **28.55 332** IAMs_20 IAMs_20 11 08 34.5
comp=Z,84µm,20.0s
L46A **Eue Claire** **28.59 30** IAmb IAmb 10 57 34.5
comp=Z,375nm,1.4s
L46A **Eue Claire** **28.59 30** P **P** **10 57 32.7 -0.2**
baz=220,SNR=5.8
L46A P **P** **10 57 32.7 -0.2**
baz=220,SNR=5.8
L46A S **S** **11 02 23.7 +2.0**
baz=220
L46A S **S** **11 02 23.7 +2.0**
baz=220
Q52A **Bidwell** **28.63 39** P **P** **10 57 32.8 -0.5**
Q52A **Bidwell** **28.63 39** P **P** **10 57 32.6 -0.7**
baz=231,SNR=43
Q52A P **P** **10 57 32.6 -0.7**
baz=231,SNR=43
Q52A S **S** **11 02 16.5 -5.9**
baz=231
Q52A S **S** **11 02 16.5 -5.9**
baz=231
PINE **Pine Mountain** **28.67 336** IAmb IAmb 10 57 51.3
comp=Z,461nm,1.9s
CAPC **Capurgana** **28.67 106** *e*P **P** **10 57 32.2 -1.7**
Y60A **Bolivia** **28.69 52** P **P** **10 57 33.6 -0.2**
baz=244
Y60A P **P** **10 57 33.6 -0.2**
baz=244
Y60A S **S** **11 02 28.7 +5.3**
baz=244
Y60A S **S** **11 02 28.7 +5.3**
baz=244
J04D **Umpqua Nationa** **28.69 334** IAmb IAmb 10 57 47.2
comp=Z,472nm,1.2s
J04D IAMs_20 IAMs_20 11 08 35.1
comp=Z,42µm,19.0s
J04D **Umpqua Nationa** **28.69 334** P **P** **10 57 33.8 -0.2**
baz=145,SNR=38
J04D S **S** **11 02 24.5 +0.9**
baz=145
BLA **Blacksburg** **28.74 44** IAmb IAmb 10 57 37.5
comp=Z,257nm,1.1s
BLA **Blacksburg** **28.74 44** P **P** **10 57 34.7 +0.3**
baz=236,SNR=28
BLA S **S** **11 02 26.3 +1.9**
baz=236
BLA **Blacksburg** **28.74 44** P **P** **10 57 34.2 -0.2**
baz=236,SNR=28
BLA S **S** **11 02 26.0 +1.7**
baz=236
SPMN **Marine on St.** **28.75 18** IAmb IAmb 10 57 40.9
comp=Z,540nm,1.9s
SPMN **Marine on St.** **28.75 18** P **P** **10 57 33.5 -0.8**
baz=205,SNR=17
SPMN S **S** **11 02 20.7 -3.6**
baz=205
SPMN **Marine on St.** **28.75 18** P **P** **10 57 33.5 -0.8**
baz=205,SNR=17
SPMN S **S** **11 02 23.3 -1.0**
baz=205
N49A **Columbus Grove** **28.86 34** IAmb IAmb 10 57 37.3
comp=Z,710nm,1.5s
N49A **Columbus Grove** **28.86 34** P **P** **10 57 35.3 0.0**
baz=225,SNR=37
N49A P **P** **10 57 35.3 0.0**
baz=225,SNR=37
N49A S **S** **11 02 29.5 +3.5**
baz=225
N49A S **S** **11 02 29.5 +3.5**
baz=225
PTAC **Punta Ardita,** **28.86 109** *e*P **P** **10 57 37.9 +2.4**
V58A **Windy Hill, Pi** **28.88 48** IAmb IAmb 10 57 38.1
comp=Z,453nm,1.4s
V58A **Windy Hill, Pi** **28.88 48** P **P** **10 57 35.3 -0.2**
baz=240,SNR=41
V58A P **P** **10 57 35.3 -0.2**
baz=240,SNR=41
V58A S **S** **11 02 27.5 +1.1**
baz=240
V58A S **S** **11 02 27.5 +1.1**
baz=240
K02D **Willamette Mer** **28.94 331** P **P** **10 57 36.2 +0.2**
baz=142,SNR=16
K02D S **S** **11 02 26.2 -1.1**
baz=142
I42A **Draeger Farm,** **28.95 25** P **P** **10 57 35.6 -0.4**
baz=213,SNR=20
I42A S **S** **11 02 26.1 -1.2**
baz=213
ACSO **Alum Creek Sta** **29.04 37** P **P** **10 57 36.8 -0.1**
ACSO IAMs_20 IAMs_20 11 10 52.6
comp=Z,69µm,18.0s
ACSO **Alum Creek Sta** **29.04 37** P **P** **10 57 36.6 -0.3**
baz=228,SNR=17
ACSO S **S** **11 02 32.3 +3.5**
baz=228
ACSO **Alum Creek Sta** **29.04 37** P **P** **10 57 36.5 -0.4**
baz=228,SNR=17
ACSO S **S** **11 02 30.7 +1.8**
baz=228
F36A **Milaca** **29.13 17** P **P** **10 57 37.2 -0.5**
F36A **Milaca** **29.13 17** P **P** **10 57 36.8 -0.8**
baz=203,SNR=49
F36A S **S** **11 02 27.8 -2.4**
baz=203
P52A **Corning** **29.14 38** P **P** **10 57 36.7 -1.1**
P52A IAmb IAmb 10 57 39.3
comp=Z,640nm,1.6s
P52A IAMs_20 IAMs_20 11 10 38.2
comp=Z,54µm,18.0s
P52A **Corning** **29.14 38** P **P** **10 57 37.0 -0.7**
baz=230,SNR=18
P52A S **S** **11 02 33.5 +3.1**
baz=230
I04A **Tendick Farm,** **29.27 334** P **P** **10 57 38.7 -0.2**
baz=145
I04A S **S** **11 02 33.6 +1.2**
baz=145
I05D **Terrebonne, OR** **29.29 336** P **P** **10 57 40.1 +0.9**
baz=147,SNR=27
F10A **Beach Ranch, E** **29.35 343** IAmb IAmb 10 57 51.7
comp=Z,432nm,1.6s
F10A **Beach Ranch, E** **29.35 343** ⇓P **P** **10 57 40.3 +0.6**
MSO **Missoula** **29.35 348** IAmb IAmb 10 57 57.2
comp=Z,541nm,1.4s
MSO IAMs_20 IAMs_20 11 09 15.8
comp=Z,47µm,20.0s
MSO **Missoula** **29.35 348** P **P** **10 57 40.5 +0.8**
baz=163,SNR=174
MSO S **S** **11 02 34.0 +0.2**
baz=163
T57A **Hurt** **29.41 45** P **P** **10 57 41.2 +1.0**
T57A IAmb IAmb 10 57 43.0
comp=Z,644nm,1.5s
T57A **Hurt** **29.41 45** P **P** **10 57 40.6 +0.4**
baz=238,SNR=45
T57A P **P** **10 57 40.6 +0.4**
baz=238,SNR=45
T57A S **S** **11 02 37.7 +2.9**
baz=238
T57A S **S** **11 02 37.7 +2.9**
baz=238
J01E **Myrtle Point** **29.42 331** IAMs_20 IAMs_20 11 08 36.7
comp=Z,44µm,22.0s
J01E **Myrtle Point** **29.42 331** P **P** **10 57 40.0 -0.3**
baz=142,SNR=14
J01E S **S** **11 02 37.0 +2.2**
baz=142
L48A **N Adams** **29.46 32** P **P** **10 57 40.5 -0.2**
L48A IAmb IAmb 10 57 42.4
comp=Z,525nm,1.4s
L48A **N Adams** **29.46 32** P **P** **10 57 40.3 -0.4**
baz=223,SNR=24
L48A P **P** **10 57 40.3 -0.4**
baz=223,SNR=24
L48A S **S** **11 02 39.4 +4.0**
baz=223
L48A S **S** **11 02 39.4 +4.0**
baz=223
P53A **Whipple** **29.48 39** IAmb IAmb 10 57 43.5
comp=Z,286nm,1.1s
P53A **Whipple** **29.48 39** P **P** **10 57 40.7 -0.2**
baz=231,SNR=49
P53A P **P** **10 57 40.7 -0.2**
baz=231,SNR=49
P53A S **S** **11 02 38.0 +2.1**
baz=231
P53A S **S** **11 02 38.0 +2.1**
baz=231
CNNC **Cliffs of the** **29.49 50** IAmb IAmb 10 57 43.6
comp=Z,423nm,1.4s
CNNC IAMs_20 IAMs_20 11 11 29.7
comp=Z,47µm,22.0s
CNNC **Cliffs of the** **29.49 50** P **P** **10 57 41.3 +0.4**
baz=242,SNR=5.4
CNNC **Cliffs of the** **29.49 50** P **P** **10 57 40.3 -0.6**
baz=242,SNR=5.4
CNNC S **S** **11 02 35.1 -0.9**
baz=242
Q54A **Coxs Mills** **29.52 41** IAmb IAmb 10 57 43.9
comp=Z,328nm,1.2s
Q54A **Coxs Mills** **29.52 41** P **P** **10 57 40.5 -0.7**
baz=233,SNR=44
Q54A P **P** **10 57 40.5 -0.7**
baz=233,SNR=44
Q54A S **S** **11 02 39.5 +3.1**
baz=233
Q54A S **S** **11 02 39.5 +3.1**
baz=233
D32B **Dogwood Acres,** **29.52 11** S **S** **11 02 33.8 -2.5**
baz=196
R55A **Marlinton** **29.55 43** P **P** **10 57 41.8 +0.2**
baz=235,SNR=18
R55A P **P** **10 57 41.8 +0.2**
baz=235,SNR=18
R55A S **S** **11 02 41.5 +4.4**
baz=235
R55A S **S** **11 02 41.5 +4.4**
baz=235
I03D **Drain, OR** **29.59 333** P **P** **10 57 41.7 0.0**
baz=143
I03D S **S** **11 02 37.4 +0.1**
baz=143
O52A **Adamsville** **29.62 38** IAmb IAmb 10 57 43.2
comp=Z,452nm,1.8s
O52A **Adamsville** **29.62 38** P **P** **10 57 40.9 -1.2**
baz=230,SNR=19
O52A P **P** **10 57 40.9 -1.2**
baz=230,SNR=19
O52A S **S** **11 02 40.4 +2.4**
baz=230
O52A S **S** **11 02 40.4 +2.4**
baz=230
G40A **Rib Lake** **29.64 22** P **P** **10 57 41.5 -0.7**
baz=210,SNR=23
G40A S **S** **11 02 38.2 -0.1**
baz=210
M50A **Fremont** **29.81 35** P **P** **10 57 44.0 +0.4**
M50A IAmb IAmb 10 57 45.7
comp=Z,682nm,1.4s
M50A **Fremont** **29.81 35** P **P** **10 57 43.7 0.0**
baz=226,SNR=18
M50A P **P** **10 57 43.7 0.0**
baz=226,SNR=18
M50A S **S** **11 02 40.0 -0.9**
baz=226
M50A S **S** **11 02 40.0 -0.9**
baz=226
MDND **Maddock** **29.82 8** IAmb IAmb 10 57 51.1
comp=Z,512nm,1.4s
MDND **Maddock** **29.82 8** P **P** **10 57 43.3 -0.5**
baz=191,SNR=17
MDND S **S** **11 02 40.2 -0.7**

baz=191
MDND Maddock 29.82 8 P **P** **10 57 43.2 -0.5**
baz=191,SNR=17
MDND S **S** **11 02 40.6 -0.3**
baz=191
BUCK Buck Mountain 29.84 334 IAmb IAmb 10 57 59.3
comp=Z,439nm,1.4s
N51A Ashland 29.84 36 P **P** **10 57 43.5 -0.6**
N51A Ashland 29.84 36 P **P** **10 57 43.0 -1.0**
baz=228,SNR=16
N51A P **P** **10 57 43.0 -1.0**
baz=228,SNR=16
N51A S **S** **11 02 44.1 +2.6**
baz=228
N51A S **S** **11 02 44.1 +2.6**
baz=228
EGMT Eagleton 29.88 354 P **P** **10 57 44.6 +0.3**
EGMT IAmb IAmb 10 58 12.9
comp=Z,658nm,1.8s
EGMT Eagleton 29.88 354 P **P** **10 57 44.9 +0.6**
baz=171
EGMT S **S** **11 02 43.1 +1.1**
baz=171
H43A Windswept, Lux 29.89 25 P **P** **10 57 43.3 -1.0**
baz=215,SNR=9.4
H43A S **S** **11 02 39.5 -2.6**
baz=215
H04D Lebanon 30.00 334 IAMs_20 IAMs_20 11 09 34.8
comp=Z,60µm,19.0s
H04D Lebanon 30.00 334 P **P** **10 57 45.3 0.0**
baz=145,SNR=9.4
H04D S **S** **11 02 44.5 +0.7**
baz=145
S57A Dark Hollow, R 30.02 44 IAmb IAmb 10 57 48.1
comp=Z,300nm,1.4s
S57A Dark Hollow, R 30.02 44 P **P** **10 57 45.6 0.0**
baz=237,SNR=30
S57A P **P** **10 57 45.6 0.0**
baz=237,SNR=30
S57A S **S** **11 02 47.7 +3.4**
baz=237
S57A S **S** **11 02 47.7 +3.4**
baz=237
G05D Wamic, OR 30.04 337 P **P** **10 57 46.6 +0.9**
baz=148,SNR=11
G05D S **S** **11 02 47.4 +2.9**
baz=148
O53A New Philadelph 30.07 38 IAmb IAmb 10 57 47.4
comp=Z,344nm,1.4s
O53A IAMs_20 IAMs_20 11 11 38.0
comp=Z,59µm,18.0s
O53A New Philadelph 30.07 38 P **P** **10 57 45.4 -0.6**
baz=230,SNR=24
O53A S **S** **11 02 46.7 +1.6**
baz=230
U59A Littleton 30.09 48 P **P** **10 57 47.0 +0.7**
U59A IAmb IAmb 10 57 48.8
comp=Z,279nm,1.4s
U59A Littleton 30.09 48 P **P** **10 57 46.7 +0.5**
baz=241,SNR=25
U59A P **P** **10 57 46.7 +0.5**
baz=241,SNR=25
U59A S **S** **11 02 44.1 -1.3**
baz=241
U59A S **S** **11 02 44.1 -1.3**
baz=241
DGMT Dagmar 30.10 1 P **P** **10 57 46.5 +0.3**
DGMT IAmb IAmb 10 57 53.5
comp=Z,237nm,1.1s
DGMT Dagmar 30.10 1 P **P** **10 57 46.2 0.0**
baz=182,SNR=21
DGMT S **S** **11 02 46.9 +1.5**
baz=182
DGMT Dagmar 30.10 1 P **P** **10 57 46.1 -0.1**
baz=182,SNR=21
DGMT S **S** **11 02 47.6 +2.2**
baz=182
AAM Ann Arbor 30.11 33 IAmb IAmb 10 57 48.4
comp=Z,513nm,1.2s
AAM IAMs_20 IAMs_20 11 10 31.9
comp=Z,48µm,19.0s
AAM Ann Arbor 30.11 33 P **P** **10 57 46.2 -0.2**
baz=224,SNR=9.6
AAM S **S** **11 02 44.0 -1.7**
baz=224
AAM Ann Arbor 30.11 33 P **P** **10 57 46.8 +0.4**
baz=224,SNR=9.6
AAM S **S** **11 02 45.2 -0.5**
baz=224
I02E Swisshome, OR 30.13 333 P **P** **10 57 46.5 0.0**
I02E IAmb IAmb 10 58 01.6
comp=Z,396nm,1.2s
I02E IAMs_20 IAMs_20 11 09 09.4
comp=Z,36µm,21.0s
I02E Swisshome, OR 30.13 333 P **P** **10 57 47.5 +1.0**
baz=143
I02E S **S** **11 02 49.2 +3.3**
baz=143
I45A Fountain 30.19 28 IAmb IAmb 10 57 54.7
comp=Z,316nm,1.1s
I45A Fountain 30.19 28 P **P** **10 57 46.9 -0.2**
baz=218
I45A P **P** **10 57 46.9 -0.2**
baz=218
I45A S **S** **11 02 47.6 +0.8**
baz=218
I45A S **S** **11 02 47.6 +0.8**
baz=218
J47A Sunmer 30.23 30 IAmb IAmb 10 57 49.1
comp=Z,408nm,1.5s
J47A Sunmer 30.23 30 P **P** **10 57 47.2 -0.2**
baz=221,SNR=5.4
J47A P **P** **10 57 47.2 -0.2**
baz=221,SNR=5.4
J47A S **S** **11 02 46.2 -1.2**
baz=221
J47A S **S** **11 02 46.2 -1.2**
baz=221
SJCC San Jacinto, C 30.23 102 IAmb IAmb 10 57 59.8
comp=Z,259nm,1.2s
SJCC San Jacinto, C 30.23 102 *e*P **P** **10 57 49.3 +1.5**
HOOD Mount Hood Mea 30.23 337 IAmb IAmb 10 58 02.5
comp=Z,432nm,1.4s
COR Corvallis 30.28 334 P **P** **10 57 49.5 +1.7**
COR IAmb IAmb 10 58 05.7
comp=Z,739nm,1.8s
COR Corvallis 30.28 334 P **P** **10 57 49.6 +1.7**
COR pmax pmax
comp=Z,739nm,1.8s
COR MLR MLR
comp=Z,79µm,20.0s
COR Corvallis 30.28 334 ⇓P **P** **10 57 49.2 +1.4**
DBBC Dabeiba 30.35 108 *e*P **P** **10 57 51.6 +2.7**
E08A Dider Farm, El 30.36 341 P **P** **10 57 48.7 +0.2**
E38A The Farm, Brul 30.38 19 P **P** **10 57 48.0 -0.7**
baz=206,SNR=43
E38A S **S** **11 02 45.1 -4.6**
baz=206
HAWA Hanford 30.42 340 IAMs_20 IAMs_20 11 09 34.1
comp=Z,41µm,21.0s
HAWA Hanford 30.42 340 ⇓P **P** **10 57 49.5 +0.5**
GR1C Gorgona, Isla 30.51 117 *e*P P 10 57 56.1 +5.9
O54A Avella 30.53 39 P **P** **10 57 49.8 -0.3**
O54A IAmb IAmb 10 57 51.6
comp=Z,748nm,1.8s
O54A Avella 30.53 39 P **P** **10 57 49.8 -0.3**
baz=232,SNR=28
O54A P **P** **10 57 49.8 -0.3**
baz=232,SNR=28
O54A S **S** **11 02 46.3 -5.9**
baz=232
O54A S **S** **11 02 46.3 -5.9**
baz=232
MCWV Mont Chateau 30.53 41 IAMs_20 IAMs_20 11 11 04.2
comp=Z,34µm,21.0s
MCWV Mont Chateau 30.53 41 P **P** **10 57 49.9 -0.2**
baz=233,SNR=15
MCWV S **S** **11 02 51.4 -0.9**
baz=233
MCWV Mont Chateau 30.53 41 P **P** **10 57 49.9 -0.2**
baz=233,SNR=15
MCWV S **S** **11 02 49.3 -3.0**
baz=233
T59A Double "B" Far 30.56 47 P **P** **10 57 50.7 +0.3**
T59A IAmb IAmb 10 57 53.0
comp=Z,352nm,1.2s
T59A Double "B" Far 30.56 47 P **P** **10 57 50.3 -0.1**
baz=240,SNR=41
T59A P **P** **10 57 50.3 -0.1**
baz=240,SNR=41
T59A S **S** **11 02 53.7 +0.9**
baz=240
T59A S **S** **11 02 53.7 +0.9**
baz=240
Q56A Snyder Ridge, 30.58 42 P **P** **10 57 50.6 0.0**
baz=235
Q56A P **P** **10 57 50.6 0.0**
baz=235
N53A Lisbon 30.65 38 IAmb IAmb 10 57 52.5
comp=Z,447nm,1.7s
N53A Lisbon 30.65 38 P **P** **10 57 50.2 -0.9**
baz=230,SNR=19
N53A P **P** **10 57 50.2 -0.9**
baz=230,SNR=19
N53A S **S** **11 02 55.0 +0.8**
baz=230
N53A S **S** **11 02 55.0 +0.8**
baz=230
UREC San Jos de Ur 30.67 106 *e*P **P** **10 57 53.9 +2.2**
TUMC Tumaco 30.68 119 *e*P **P** **10 57 52.7 +1.0**
V61A Roper 30.69 50 P **P** **10 57 52.8 +1.2**
baz=243,SNR=10.0
V61A P **P** **10 57 52.8 +1.2**
baz=243,SNR=10.0
V61A S **S** **11 02 56.5 +1.7**
baz=243
V61A S **S** **11 02 56.5 +1.7**
baz=243
SMRC Santa Marta, M 30.73 99 *e*P **P** **10 57 52.7 +0.6**
COWI Conover 30.73 22 IAMs_20 IAMs_20 11 10 33.1
comp=Z,41µm,21.0s
COWI Conover 30.73 22 P **P** **10 57 51.3 -0.5**
baz=211
COWI S **S** **11 02 49.9 -5.5**
baz=211
G03D McMinnville, O 30.78 335 P **P** **10 57 53.3 +1.1**
baz=145,SNR=7.5
G03D S **S** **11 02 57.3 +1.4**
baz=145
F42A Maple Grove Fa 30.82 24 P **P** **10 57 52.2 -0.3**
M52A Chesterland 30.83 36 P **P** **10 57 51.9 -0.9**
M52A Chesterland 30.83 36 P **P** **10 57 51.8 -0.9**
baz=228,SNR=13
M52A P **P** **10 57 51.8 -0.9**
baz=228,SNR=13
M52A S **S** **11 02 57.8 +0.9**
baz=228
M52A S **S** **11 02 57.8 +0.9**
baz=228
R58B Mineral 30.85 45 IAmb IAmb 10 57 55.5
comp=Z,533nm,1.9s
R58B Mineral 30.85 45 P **P** **10 57 53.2 +0.3**
baz=238,SNR=19
R58B P **P** **10 57 53.2 +0.3**
baz=238,SNR=19
R58B S **S** **11 02 56.3 -1.0**
baz=238
R58B S **S** **11 02 56.3 -1.0**
baz=238
AGMN Agassiz Nation 30.86 12 P **P** **10 57 52.6 -0.3**
AGMN IAmb IAmb 10 57 59.9
comp=Z,346nm,1.2s
AGMN Agassiz Nation 30.86 12 P **P** **10 57 52.6 -0.3**
baz=198,SNR=58
AGMN S **S** **11 02 56.1 -1.1**
baz=198
AGMN Agassiz Nation 30.86 12 P **P** **10 57 53.0 0.0**
baz=198,SNR=58
AGMN S **S** **11 02 56.3 -1.0**
baz=198
K50A Casco 30.99 33 IAmb IAmb 10 57 55.4
comp=Z,373nm,1.1s
K50A Casco 30.99 33 P **P** **10 57 53.6 -0.5**
baz=225,SNR=10
K50A P **P** **10 57 53.6 -0.5**
baz=225,SNR=10
K50A S **S** **11 03 02.6 +3.2**
baz=225
K50A S **S** **11 03 02.6 +3.2**
baz=225
CBOC Ciudad Bolivar 31.02 110 *e*P **P** **10 57 58.4 +3.5**
ARGC Ariguani, Magd 31.11 101 *e*P **P** **10 57 58.4 +2.9**
M53A WI Miller and 31.15 37 IAmb IAmb 10 57 56.9
comp=Z,511nm,1.6s
M53A IAMs_20 IAMs_20 11 12 01.4
comp=Z,62µm,18.0s
M53A WI Miller and 31.15 37 P **P** **10 57 54.9 -0.6**
baz=230,SNR=18
M53A S **S** **11 02 57.2 -4.8**
baz=230
PLMC San Jos del P 31.21 112 *e*P **P** **10 57 57.3 +0.8**
T60A Surry 31.21 47 IAmb IAmb 10 57 58.9
comp=Z,458nm,1.3s
T60A Surry 31.21 47 P **P** **10 57 56.8 +0.6**
baz=241,SNR=5.8
T60A P **P** **10 57 56.8 +0.6**
baz=241,SNR=5.8
T60A S **S** **11 03 07.9 +4.9**
baz=241
T60A S **S** **11 03 07.9 +4.9**
baz=241
G45A Suttons Bay 31.24 27 P **P** **10 57 55.4 -0.9**
G45A IAmb IAmb 10 58 03.8
comp=Z,251nm,1.1s
G45A Suttons Bay 31.24 27 P **P** **10 57 55.7 -0.6**
baz=218
G45A P **P** **10 57 55.7 -0.6**
baz=218
G45A S **S** **11 03 06.1 +2.9**
baz=218
G45A S **S** **11 03 06.1 +2.9**
baz=218
C09A Chrisman Ranch 31.31 343 P **P** **10 57 57.1 +0.2**
C09A IAmb IAmb 10 58 34.6
comp=Z,392nm,2.0s
HELC Santa Helena 31.31 109 *e*P **P** **10 57 58.4 +0.7**
CBN Corbin Frederi 31.31 45 P **P** **10 57 57.3 +0.3**
baz=239
CBN S **S** **11 03 05.0 +0.4**
baz=239
CBN Corbin Frederi 31.31 45 P **P** **10 57 57.1 +0.1**
baz=239
CBN S **S** **11 03 04.5 0.0**
baz=239
B35A Bob, Littlefor 31.39 15 P **P** **10 57 57.2 -0.4**
baz=201,SNR=80
B35A S **S** **11 03 01.6 -4.0**
baz=201
F04D Rainier, OR 31.39 336 P **P** **10 57 58.6 +1.0**
baz=146
F04D S **S** **11 03 07.7 +2.1**
baz=146
NEW Newport 31.43 345 P **P** **10 57 57.7 -0.3**
comp=Z,35nm,1.1s,baz=160,slow=9.0,SNR=32
NEW LR LR 11 10 21.3
comp=Z,38µm,19.8s,baz=161,slow=36
comp=Z,35nm,1.1s
NEW Newport 31.43 345 IAmb IAmb 10 58 14.1
comp=Z,753nm,2.0s
NEW Newport 31.43 345 IAMs_20 IAMs_20 11 10 10.8
comp=Z,40µm,19.0s
NEW Newport 31.43 345 P **P** **10 57 59.0 +1.0**
baz=158,SNR=62
NEW S **S** **11 03 10.6 +4.3**
baz=158
WALA Waterton Lakes 31.48 349 IAmb IAmb 10 58 16.2
comp=Z,512nm,1.9s
WALA Waterton Lakes 31.48 349 ⇑P **P** **10 57 59.4 +0.9**
GLMI Grayling 31.53 29 P **P** **10 57 58.5 -0.4**
baz=220,SNR=12
GLMI Grayling 31.53 29 P **P** **10 57 58.3 -0.6**
baz=220,SNR=12
GLMI S **S** **11 03 08.0 +0.2**
baz=220
LTY Liberty 31.55 340 P **P** **10 57 59.9 +0.7**
LTY IAmb IAmb 10 58 16.8
comp=Z,546nm,1.4s
P57A Homestead Farm 31.59 42 IAmb IAmb 10 58 03.0
comp=Z,430nm,1.6s
P57A Homestead Farm 31.59 42 P **P** **10 57 59.8 +0.4**
baz=236,SNR=22
P57A P **P** **10 57 59.8 +0.4**
baz=236,SNR=22
P57A S **S** **11 03 13.3 +4.5**
baz=236
P57A S **S** **11 03 13.3 +4.5**
baz=236
YOTC Yotoco, Valle 31.59 113 *e*P **P** **10 58 00.7 +0.8**
ALLY Alegheny Colle 31.59 37 P **P** **10 57 58.6 -0.8**
baz=230,SNR=16
ALLY S **S** **11 03 10.0 +1.1**
baz=230
EYMN Ely 31.60 18 P **P** **10 57 58.7 -0.8**
EYMN Ely 31.60 18 IAMs_20 IAMs_20 11 10 26.9
comp=Z,69µm,22.0s
EYMN Ely 31.60 18 P **P** **10 57 59.0 -0.4**
baz=205,SNR=124
EYMN S **S** **11 03 00.5 -8.4**
baz=205
EYMN Ely 31.60 18 P **P** **10 57 59.1 -0.4**
baz=205,SNR=124
EYMN S **S** **11 03 06.2 -2.7**
baz=205
E04D Cinebar 31.62 337 IAMs_20 IAMs_20 11 10 51.6
comp=Z,52µm,20.0s
E04D Cinebar 31.62 337 P **P** **10 57 59.5 -0.1**
baz=147,SNR=14
E04D S **S** **11 03 12.7 +3.5**
baz=147
I49A Point Hope 31.72 31 IAmb IAmb 10 58 03.5
comp=Z,216nm,1.0s
I49A Point Hope 31.72 31 P **P** **10 58 00.2 -0.4**
baz=223,SNR=9.5
I49A P **P** **10 58 00.2 -0.4**
baz=223,SNR=9.5
I49A S **S** **11 03 09.9 -0.9**
baz=223
I49A S **S** **11 03 09.9 -0.9**
baz=223
D41A Chassel 31.76 22 P **P** **10 58 01.0 +0.1**
baz=211,SNR=20
D41A S **S** **11 03 11.6 +0.2**
baz=211
E43A Lone Tree Farm 31.77 24 P **P** **10 57 59.9 -1.0**
baz=214,SNR=7.6
E43A S **S** **11 03 10.8 -0.7**
baz=214
OTAV Otavalo 31.81 121 P **P** **10 58 04.0 +1.9**
OTAV Otavalo 31.81 121 IAMs_20 IAMs_20 11 07 38.6
comp=Z,44µm,20.0s
OTAV Otavalo 31.81 121 P **P** **10 58 04.0 +1.9**
OTAV pmax pmax
comp=Z,694nm,1.6s
OTAV Otavalo 31.81 121 *e*P **P** **10 58 05.2 +3.1**
OTAV Otavalo 31.81 121 *e*P **P** **10 58 04.3 +2.2**
OTAV *e*S **S** **11 03 13.1 -0.5**
OTAV Otavalo 31.81 121 ⇓P **P** **10 58 04.3 +2.2**
CUSE Cuicocha Este 31.81 121 *e*P **P** **10 58 06.4 +4.2**
CMBC Cumbal 31.92 120 *e*P P 10 58 12.1 +9.0
D05A Enumclaw 31.94 338 IAmb IAmb 10 58 18.9
comp=Z,620nm,1.9s
ERPA Erie 31.98 37 P **P** **10 58 01.9 -0.9**
baz=230,SNR=8.6
ERPA S **S** **11 03 16.7 +1.8**
baz=230
ERPA Erie 31.98 37 P **P** **10 58 02.0 -0.9**
baz=230,SNR=8.6
ERPA S **S** **11 03 13.9 -1.0**
baz=230
E03A Lebam 31.99 336 IAmb IAmb 10 58 18.2
comp=Z,362nm,1.3s
POPC Popayan, Colom 32.02 116 *e*P **P** **10 58 05.2 +1.4**
LL6C La Loma 6 Bece 32.06 101 *e*P **P** **10 58 06.4 +2.5**
TULM Tulcn-Chalpat 32.07 120 *e*P P 10 58 09.8 +5.2
SDDR Presa de Saban 32.09 83 P **P** **10 58 05.4 +1.3**
SDDR IAmb IAmb 10 58 13.7
comp=Z,191nm,1.1s
SDDR Presa de Saban 32.09 83 ⇑P **P** **10 58 06.0 +1.9**
PTBC PUERTO BERRIO, 32.13 107 *e*P **P** **10 58 06.4 +1.8**
GCUF Volcan Galeras 32.16 119 *e*P **P** **10 58 07.5 +2.2**
NORC Norcasia 32.17 109 *e*P **P** **10 58 08.6 +3.7**
S61A Accomac 32.21 47 P **P** **10 58 05.9 +1.0**
baz=241
S61A P **P** **10 58 05.9 +1.0**
baz=241
D04E Lakebay 32.22 337 P **P** **10 58 06.2 +1.4**
baz=147,SNR=13
D04E S **S** **11 03 22.4 +3.9**
baz=147
M55A Ridgway 32.28 39 P **P** **10 58 04.7 -0.9**
baz=232,SNR=41
M55A P **P** **10 58 04.7 -0.9**
baz=232,SNR=41
M55A S **S** **11 03 16.5 -3.3**
baz=232
M55A S **S** **11 03 16.5 -3.3**
baz=232
SOTA Rioblanco 32.29 117 *e*P **P** **10 58 10.9 +4.5**
CRUC La Cruz 32.30 118 *e*P **P** **10 58 08.6 +2.3**
SSPA Standing Stone 32.32 41 P **P** **10 58 05.8 -0.1**
SSPA Standing Stone 32.32 41 IAMs_20 IAMs_20 11 12 00.5
comp=Z,28µm,18.0s
SSPA Standing Stone 32.32 41 P **P** **10 58 05.4 -0.5**
baz=235,SNR=40
SSPA S **S** **11 03 14.2 -6.0**
baz=235
SSPA Standing Stone 32.32 41 P **P** **10 58 05.8 -0.1**
baz=235
SSPA S **S** **11 03 20.8 +0.5**
baz=235
SSPA Standing Stone 32.32 41 ⇑P **P** **10 58 05.6 -0.3**
SLOR San Lorenzo - 32.34 123 P **P** **10 58 10.3 +3.4**
PCON Cinco Dias 32.37 116 *e*P **P** **10 58 10.9 +3.7**
MARP Paez Belalcaza 32.49 115 *e*P P 10 58 13.2 +5.3
OCAC Ocana 32.52 104 *e*P **P** **10 58 09.8 +1.7**
WISH Wishkah 32.54 336 IAmb IAmb 10 58 31.4
comp=Z,451nm,1.4s
ORTC Ortega, Tolima 32.58 112 *e*P **P** **10 58 10.9 +2.4**
BRRC Barranca, Sant 32.59 106 *e*P P 10 58 16.6 +8.1
D03D Eldon 32.63 337 P **P** **10 58 09.3 +0.8**
baz=147,SNR=19
D03D S **S** **11 03 28.5 +3.5**
baz=147
URIC Uribia, Colomb 32.68 97 *e*P **P** **10 58 05.2 -4.1**
ULM Lac du Bonnet 32.73 11 P **P** **10 58 07.2 -2.2**
comp=Z,55nm,1.0s,baz=200,slow=8.8,SNR=49
ULM LR LR 11 11 55.9
comp=Z,69µm,21.2s,baz=198,slow=38
comp=Z,55nm,1.0s
ULM Lac du Bonnet 32.73 11 P **P** **10 58 08.4 -1.0**
ULM IAmb IAmb 10 58 15.5
comp=Z,218nm,1.2s
ULM Lac du Bonnet 32.73 11 P **P** **10 58 08.4 -1.0**
ULM pmax pmax
comp=Z,218nm,1.3s
ULM Lac du Bonnet 32.73 11 ⇑P **P** **10 58 08.3 -1.0**
R61A Willards 32.76 46 P **P** **10 58 09.2 -0.5**
baz=241
R61A P **P** **10 58 09.2 -0.5**
baz=241
NLWA Neilton Lookou 32.81 336 P **P** **10 58 10.2 +0.1**
NLWA IAmb IAmb 10 58 25.4
comp=Z,459nm,1.8s
NLWA IAMs_20 IAMs_20 11 11 48.0
comp=Z,49µm,20.0s
NLWA Neilton Lookou 32.81 336 ⇓P **P** **10 58 10.7 +0.6**
SPBC San Pablo de B 32.85 109 *e*P **P** **10 58 14.3 +3.4**
E46A Sault Ste Mari 32.87 27 P **P** **10 58 10.2 -0.4**
baz=219,SNR=10.0
E46A S **S** **11 03 30.0 +1.4**
baz=219
ARNL Arenillas 32.92 129 IAmb IAmb 10 58 21.1
comp=Z,361nm,1.1s
B06A Marblemount 32.92 340 IAmb IAmb 10 58 25.4
comp=Z,260nm,1.3s
MVL Millersville 32.94 43 IAmb IAmb 10 58 13.7
comp=Z,422nm,1.6s
WVNY West Valley, N 32.96 38 P **P** **10 58 10.5 -1.0**
WVNY IAmb IAmb 10 58 12.8
comp=Z,393nm,1.4s
WVNY West Valley, N 32.96 38 P **P** **10 58 10.3 -1.1**
baz=231,SNR=27
WVNY S **S** **11 03 28.2 -2.0**
baz=231
ROSC El Rosal 32.98 110 P **P** **10 58 15.8 +3.5**
comp=Z,18nm,0.8s,baz=348,slow=6.4,SNR=12
ROSC S **S** **11 03 25.6 -6.1**
comp=Z,4.2nm,0.3s,baz=79,slow=23,SNR=1.2
ROSC LR LR 11 11 34.2
comp=Z,17µm,18.9s,baz=328,slow=36
ROSC El Rosal 32.98 110 IAmb IAmb 10 58 31.5
comp=Z,410nm,1.7s

ROSC El Rosal 32.98 110 *e*P P **10 58 15.5 +3.1**
PRAC Prado 32.99 112 *e*P P **10 58 13.2 +1.1**
MIDE Milford 33.04 45 P P **10 58 12.9 +0.7**
baz=240
MIDE S S **11 03 36.4 +5.0**
baz=240
PNT Penticton 33.06 343 ⇓P P **10 58 13.2 +0.9**
N58A Sunbury 33.17 41 P P **10 58 13.2 -0.1**
baz=236,SNR=44
N58A P P **10 58 13.2 -0.1**
baz=236,SNR=44
N58A S S **11 03 32.1 -1.3**
baz=236
N58A S S **11 03 32.1 -1.3**
baz=236
M57A Sunshine Farm, 33.20 40 P P **10 58 13.8 +0.3**
M57A IAmb IAmb 10 58 15.4
comp=Z,614nm,1.7s
M57A Sunshine Farm, 33.20 40 P P **10 58 13.5 0.0**
baz=235,SNR=30
M57A P P **10 58 13.5 0.0**
baz=235,SNR=30
M57A S S **11 03 32.0 -1.9**
baz=235
M57A S S **11 03 32.0 -1.9**
baz=235
GARC Garzon, Huila 33.22 115 *e*P P **10 58 15.5 +1.2**
BARC Barichara 33.27 106 *e*P P **10 58 15.5 +0.7**
GEDE Greenville 33.30 44 P P **10 58 14.6 +0.1**
baz=239,SNR=20
GEDE S S **11 03 35.0 -0.6**
baz=239
WUPA West Chester U 33.39 44 P P **10 58 15.1 -0.1**
FLOC Florencia 33.39 116 *e*P P **10 58 17.7 +2.2**
L56A Greenwood 33.41 39 P P **10 58 14.8 -0.6**
L56A IAmb IAmb 10 58 17.0
comp=Z,313nm,1.4s
L56A Greenwood 33.41 39 P P **10 58 15.3 -0.1**
baz=233,SNR=32
L56A P P **10 58 15.3 -0.1**
baz=233,SNR=32
L56A S S **11 03 35.1 -2.2**
baz=233
L56A S S **11 03 35.1 -2.2**
baz=233
PAMC Pamplona, Colo 33.42 105 *e*P P **10 58 18.9 +2.5**
J54A Appleton 33.48 36 IAmb IAmb 10 58 17.1
comp=Z,336nm,1.3s
J54A Appleton 33.48 36 P P **10 58 14.9 -1.1**
baz=230,SNR=18
J54A P P **10 58 14.9 -1.1**
baz=230,SNR=18
J54A S S **11 03 36.2 -2.1**
baz=230
J54A S S **11 03 36.2 -2.1**
baz=230
MEDO Medina 33.52 37 IAmb IAmb 10 58 17.5
comp=Z,450nm,1.4s
CHIC Chingaza 33.60 110 *e*P P **10 58 20.0 +2.2**
RUSC La Rusia 33.64 107 *e*P P **10 58 18.9 +0.6**
PGC Sidney 33.71 338 IAmb IAmb 10 58 34.1
comp=Z,521nm,1.9s
TUPA Temple Univers 33.78 44 P P **10 58 18.5 -0.2**
baz=239,SNR=15
TUPA S S **11 03 44.6 +1.6**
baz=239
P61A Hammonton 33.79 45 P P **10 58 19.3 +0.6**
baz=240,SNR=5.8
P61A P P **10 58 19.3 +0.6**
baz=240,SNR=5.8
BOSC San Juan Bosco 33.84 126 P P **10 58 23.0 +3.4**
J55A Hilton 33.95 37 IAmb IAmb 10 58 21.2
comp=Z,428nm,1.4s
J55A Hilton 33.95 37 P P **10 58 19.7 -0.3**
baz=232,SNR=26
J55A P P **10 58 19.7 -0.3**
baz=232,SNR=26
J55A S S **11 03 44.4 -1.0**
baz=232
J55A S S **11 03 44.4 -1.0**
baz=232
KSPA Keystone Colle 34.16 41 P P **10 58 21.9 0.0**
KSPA IAmb IAmb 10 58 23.8
comp=Z,504nm,1.7s
KSPA Keystone Colle 34.16 41 P P **10 58 21.8 -0.2**
baz=236,SNR=27
KSPA S S **11 03 48.7 -0.1**
baz=236
SADO Sadowa 34.19 34 P P **10 58 20.8 -1.4**
comp=Z,138nm,1.1s,baz=248,slow=9.5,SNR=63
SADO S S 11 03 37.9 -11
comp=Z,18nm,1.1s,baz=120,slow=23,SNR=2.7
SADO LR LR 11 13 09.3
comp=Z,40µm,21.6s,baz=242,slow=38
comp=Z,138nm,1.1s
SADO Sadowa 34.19 34 P P **10 58 21.9 -0.2**
SADO Sadowa 34.19 34 ⇑P P **10 58 21.6 -0.6**
PANJ Princeton 34.21 44 P P **10 58 22.8 +0.4**
baz=239,SNR=40
PANJ S S **11 03 49.6 0.0**
baz=239
K57A Scipio Center 34.38 39 IAmb IAmb 10 58 25.3
comp=Z,312nm,1.2s
K57A Scipio Center 34.38 39 P P **10 58 23.9 0.0**
baz=234,SNR=30
K57A S S **11 03 51.9 -0.3**
baz=234
BINY Binghamton 34.39 40 P P **10 58 24.0 +0.1**
BINY Binghamton 34.39 40 P P **10 58 24.1 +0.1**
baz=235,SNR=78
BINY S S **11 03 53.7 +1.3**
baz=235
BINY Binghamton 34.39 40 P P **10 58 23.7 -0.2**
baz=235,SNR=78
BINY S S **11 03 52.6 +0.2**
baz=235
BRNJ Basking Ridge 34.46 43 P P **10 58 25.2 +0.7**
baz=239,SNR=25
BRNJ S S **11 03 56.3 +3.0**
baz=239
J56A Wolcott 34.50 38 IAmb IAmb 10 58 26.3
comp=Z,497nm,1.4s
J56A Wolcott 34.50 38 P P **10 58 24.8 0.0**
baz=233,SNR=20
J56A P P **10 58 24.8 0.0**
baz=233,SNR=20
J56A S S **11 03 53.8 -0.2**
baz=233
J56A S S **11 03 53.8 -0.2**
baz=233
TAMC Tame, Arauca 34.60 106 *e*P P **10 58 28.0 +1.9**
ODNJ Ogdensburg 34.64 43 IAmb IAmb 10 58 28.2
comp=Z,598nm,1.5s
ODNJ Ogdensburg 34.64 43 P P **10 58 25.9 -0.2**
baz=238,SNR=57
ODNJ S S **11 04 00.0 +3.8**
baz=238
MACC Macarena, Meta 34.66 114 *e*P P **10 58 28.0 +1.4**
OZB Mount Ozzard 34.72 336 IAmb IAmb 10 58 44.2
comp=Z,604nm,1.9s
SDV Santo Domingo 34.79 101 P P **10 58 28.2 +0.3**
comp=Z,30nm,0.8s,baz=298,slow=5.4,SNR=27
SDV S S **11 03 57.2 -2.3**
comp=Z,4.9nm,0.3s,baz=354,slow=6.1,SNR=1.5
SDV LR LR 11 13 41.4
comp=Z,17µm,19.4s,baz=301,slow=38
comp=Z,30nm,0.8s
SDV Santo Domingo 34.79 101 P P **10 58 29.9 +1.9**
SDV IAmb IAmb 10 58 47.0
comp=Z,204nm,1.0s
SDV Santo Domingo 34.79 101 *e*P P **10 58 30.3 +2.3**
SDV Santo Domingo 34.79 101 *e*P P **10 58 29.6 +1.7**
SDV *e*S S **11 03 59.2 -0.3**
DELO Deloro Mine 34.85 35 P P **10 58 27.7 -0.1**
DELO IAmb IAmb 10 58 29.3
comp=Z,454nm,1.4s
PTLC Puerto Leguiza 34.86 118 *e*P P **10 58 31.4 +3.1**
CPNY Central Park 34.91 43 IAmb IAmb 10 58 30.7
comp=Z,562nm,1.6s
L59A Walton 34.96 41 P P **10 58 28.8 -0.1**
baz=236,SNR=111
L59A P P **10 58 28.8 -0.1**
baz=236,SNR=111
L59A S S **11 04 02.4 +1.1**
baz=236
L59A S S **11 04 02.4 +1.1**
baz=236

FOR Fordham 34.99 43 P P **10 58 28.8 -0.3**
baz=239,SNR=14
FOR S S **11 04 01.4 -0.3**
baz=239
PAL Palisades 35.05 43 IAMs_20 IAMs_20 11 15 30.9
comp=Z,29µm,19.0s
PAL Palisades 35.05 43 P P **10 58 29.9 +0.3**
baz=239,SNR=34
PAL S S **11 04 02.3 -0.3**
baz=239
PAL Palisades 35.05 43 P P **10 58 29.8 +0.1**
baz=239,SNR=34
PAL S S **11 04 02.2 -0.3**
baz=239
J57A Williamstown 35.09 38 IAmb IAmb 10 58 30.2
comp=Z,547nm,1.3s
J57A Williamstown 35.09 38 P P **10 58 28.2 -1.8**
baz=234,SNR=43
J57A P P **10 58 28.2 -1.8**
baz=234,SNR=43
BRNY Black Rk. Fore 35.20 42 P P **10 58 31.2 +0.3**
baz=239,SNR=30
BRNY S S **11 03 57.6 -7.2**
baz=239
PTGC Puerto Gaitan, 35.21 109 *e*P P **10 58 31.4 0.0**
NPNY Mohonk Preserv 35.29 42 P P **10 58 32.1 +0.4**
baz=238,SNR=20
NPNY S S **11 04 07.3 +1.1**
baz=238
N62A Caumsett State 35.30 44 IAmb IAmb 10 58 33.9
comp=Z,400nm,1.2s
N62A Caumsett State 35.30 44 S S **11 04 07.8 +1.4**
baz=240
N62A S S **11 04 07.8 +1.4**
baz=240
EDM Edmonton 35.42 352 P P **10 58 32.4 -0.4**
EDM IAmb IAmb 10 58 41.9
comp=Z,504nm,1.6s
EDM Edmonton 35.42 352 P P **10 58 32.4 -0.4**
EDM pmax pmax
comp=Z,504nm,1.6s
J58A Remsen 35.48 39 P P **10 58 33.1 -0.2**
baz=235,SNR=22
J58A P P **10 58 33.1 -0.2**
baz=235,SNR=22
J58A S S **11 04 06.4 -2.7**
baz=235
J58A S S **11 04 06.4 -2.7**
baz=235
WSPT Westport, CT 35.51 43 P P **10 58 33.5 -0.1**
WSPT IAMs_20 IAMs_20 11 13 43.1
comp=Z,28µm,22.0s
CBB Campbell River 35.55 337 IAmb IAmb 10 58 49.2
comp=Z,414nm,1.6s
WCNY West Carthage 35.63 38 P P **10 58 34.3 -0.3**
baz=234,SNR=18
WCNY S S **11 04 04.7 -6.6**
baz=234
HCNY Howe Caverns 35.64 40 P P **10 58 34.8 0.0**
baz=237,SNR=26
HCNY S S **11 04 12.8 +1.2**
baz=237
J59A Piesco 36.01 39 IAmb IAmb 10 58 39.5
comp=Z,433nm,1.4s
J59A Piesco 36.01 39 P P **10 58 37.8 -0.1**
baz=236,SNR=48
J59A P P **10 58 37.8 -0.1**
baz=236,SNR=48
J59A S S **11 04 19.7 +2.5**
baz=236
J59A S S **11 04 19.7 +2.5**
baz=236
AGPR Aguadilla, PR 36.08 84 IAmb IAmb 10 58 46.6
comp=Z,343nm,1.2s
TRY Troy 36.11 41 P P **10 58 38.8 +0.1**
TRY IAmb IAmb 10 58 41.0
comp=Z,471nm,1.4s
TRY IAMs_20 IAMs_20 11 14 14.9
comp=Z,29µm,18.0s
TRY Troy 36.11 41 P P **10 58 39.0 +0.3**
baz=237,SNR=23
TRY S S **11 04 23.1 +4.4**
baz=237
AOPR Arecibo Observ 36.42 84 P P **10 58 41.2 -0.6**
NCB Newcomb 36.46 39 IAmb IAmb 10 58 43.4
comp=Z,283nm,1.2s
NCB Newcomb 36.46 39 P P **10 58 41.5 -0.2**
baz=235,SNR=48
NCB S S **11 04 27.4 +3.2**
baz=235
ACCN Adirondack Com 36.47 40 IAmb IAmb 10 58 43.6
comp=Z,440nm,1.3s
ACCN Adirondack Com 36.47 40 P P **10 58 41.6 -0.2**
baz=237,SNR=57
ACCN S S **11 04 24.9 +0.7**
baz=237
M63A Gales Ferry 36.47 44 P P **10 58 42.5 +0.8**
baz=241,SNR=55
M63A P P **10 58 42.5 +0.8**
baz=241,SNR=55
M63A S S **11 04 27.4 +3.2**
baz=241
M63A S S **11 04 27.4 +3.2**
baz=241
ATAH Atahualpa 36.57 131 P P **10 58 44.1 +0.7**
comp=Z,53nm,1.0s,baz=315,slow=6.4,SNR=12
ATAH S S **11 04 26.4 -0.7**
comp=Z,2.5nm,0.7s,baz=42,slow=7.6,SNR=1.5
ATAH LR LR 11 10 30.6
comp=Z,64µm,21.2s,baz=313,slow=31
comp=Z,53nm,1.0s
L61B Northampton 36.58 42 IAMs_20 IAMs_20 11 16 17.4
comp=Z,29µm,19.0s
L61B Northampton 36.58 42 P P **10 58 43.4 +0.6**
baz=239
L61B S S **11 04 29.2 +3.2**
baz=239
LONY Lake Ozonia 36.62 38 IAMs_20 IAMs_20 11 15 09.3
comp=Z,49µm,18.0s
LONY Lake Ozonia 36.62 38 P P **10 58 42.8 -0.3**
baz=234,SNR=43
LONY S S **11 04 27.6 +0.9**
baz=234
QUA2 Belchertown 36.70 42 IAmb IAmb 10 58 46.0
comp=Z,609nm,1.5s
QUA2 Belchertown 36.70 42 P P **10 58 43.4 -0.4**
baz=240,SNR=29
GAC Glen Almond 36.77 35 ⇑P P **10 58 44.1 -0.2**
BMNY Brushton-Moira 36.80 37 P P **10 58 44.5 0.0**
baz=234,SNR=40
BMNY S S **11 04 30.7 +1.5**
baz=234
K62A Royalston 36.98 42 IAmb IAmb 10 58 48.6
comp=Z,580nm,1.4s
K62A Royalston 36.98 42 P P **10 58 46.6 +0.5**
baz=239,SNR=27
K62A P P **10 58 46.6 +0.5**
baz=239,SNR=27
K62A S S **11 04 34.3 +2.2**
baz=239
K62A S S **11 04 34.3 +2.2**
baz=239
SJG San Juan 37.02 84 P P **10 58 46.1 -0.6**
comp=Z,62nm,0.9s,baz=280,slow=6.5,SNR=19
SJG LR LR 11 15 48.2
comp=Z,14µm,18.6s,baz=268,slow=39
comp=Z,62nm,0.9s
SJG San Juan 37.02 84 P P **10 58 47.6 +0.8**
SJG San Juan 37.02 84 *e*P P **10 58 46.2 -0.6**
SJG San Juan 37.02 84 *e*P P 10 58 41.6 -5.2
BRYW Bryant College 37.05 43 IAmb IAmb 10 58 49.1
comp=Z,594nm,1.4s
GCPR Guaynabo City 37.06 84 IAmb IAmb 10 58 50.3
comp=Z,664nm,1.9s
J61A Chester 37.13 41 P P **10 58 47.8 +0.4**
J61A Chester 37.13 41 P P **10 58 48.5 +1.1**
baz=238,SNR=76
J61A P P **10 58 48.5 +1.1**
baz=238,SNR=76
J61A S S **11 04 38.1 +3.8**
baz=238
J61A S S **11 04 38.1 +3.8**
baz=238
MCVT Middlebury Col 37.19 40 P P **10 58 48.0 0.0**
baz=237,SNR=68
MCVT S S **11 04 35.7 +0.4**
baz=237
BAUV El Baul 37.20 99 IAmb IAmb 10 58 57.8
comp=Z,562nm,1.1s
BAUV El Baul 37.20 99 *e*P P **10 58 43.7 -4.7**
CBYP Canovanas 37.28 84 P P **10 58 49.5 +0.4**
HRV Adam Dziewonsk 37.33 42 P P **10 58 49.3 +0.2**
HRV IAmb IAmb 10 58 51.6
comp=Z,676nm,1.4s
HRV Adam Dziewonsk 37.33 42 P P **10 58 49.3 +0.2**
HRV pmax pmax
comp=Z,676nm,1.5s
HRV Adam Dziewonsk 37.33 42 P P **10 58 50.0 +0.9**
baz=240,SNR=33
HRV S S **11 04 40.6 +3.3**
baz=240
HRV Adam Dziewonsk 37.33 42 P P **10 58 49.9 +0.8**
baz=240
HRV S S **11 04 40.4 +3.1**
baz=240
HRV Adam Dziewonsk 37.33 42 ⇑P P **10 58 49.7 +0.6**
FRNY Flat Rock 37.33 38 IAmb IAmb 10 58 51.0
comp=Z,588nm,1.5s
FRNY Flat Rock 37.33 38 P P **10 58 49.2 +0.2**
baz=235,SNR=61
FRNY S S **11 04 37.3 0.0**
baz=235
WES Weston 37.42 43 IAmb IAmb 10 58 51.4
comp=Z,531nm,1.4s
WES IAMs_20 IAMs_20 11 15 43.5
comp=Z,23µm,18.0s
WES Weston 37.42 43 P P **10 58 49.6 -0.2**
baz=241,SNR=35
WES S S **11 04 42.6 +3.9**
baz=241
M65A Busby, Falmout 37.47 44 P P **10 58 51.3 +1.0**
baz=242
HNH Hanover 37.48 40 IAmb IAmb 10 58 53.0
comp=Z,496nm,1.4s
HNH Hanover 37.48 40 P P **10 58 51.6 +1.1**
baz=238,SNR=40
HNH S S **11 04 41.9 +2.2**
baz=238
BCX Boston College 37.49 43 P P **10 58 51.2 +0.8**
BCX IAmb IAmb 10 58 53.0
comp=Z,666nm,1.6s
L64A Middleborough 37.52 44 P P **10 58 51.3 +0.6**
baz=242,SNR=43
L64A P P **10 58 51.3 +0.6**
baz=242,SNR=43
L64A S S **11 04 46.4 +6.2**
baz=242
L64A S S **11 04 46.4 +6.2**
baz=242
VT1 Waterbury 37.54 39 IAmb IAmb 10 58 52.9
comp=Z,533nm,1.4s
VT1 IAMs_20 IAMs_20 11 15 51.4
comp=Z,46µm,18.0s
VT1 Waterbury 37.54 39 P P **10 58 51.0 +0.1**
baz=237,SNR=23
MTP Monte Pirata 37.59 84 IAmb IAmb 10 59 00.8
comp=Z,367nm,1.1s
TRQ Mont Tremblant 37.60 35 P P **10 58 51.6 +0.1**
TRQ IAmb IAmb 10 58 53.5
comp=Z,676nm,1.3s
MNTQ Montreal, Queb 37.69 37 IAmb IAmb 10 58 54.1
comp=Z,553nm,1.4s
MNTQ Montreal, Queb 37.69 37 ⇑P P **10 58 52.2 +0.1**
FFD Franklin Falls 37.75 41 IAmb IAmb 10 58 55.5
comp=Z,383nm,1.3s
FFD Franklin Falls 37.75 41 P P **10 58 54.5 +1.8**
baz=239,SNR=14
CUPR Culebra, Puert 37.82 84 P P **10 58 53.6 0.0**
LBNH Lisbon 37.99 40 P P **10 58 55.4 +0.7**
LBNH IAmb IAmb 10 58 57.5
comp=Z,738nm,1.4s
LBNH Lisbon 37.99 40 P P **10 58 55.4 +0.7**
LBNH pmax pmax
comp=Z,738nm,1.4s
LBNH MLR MLR
comp=Z,64µm,19.0s
LBNH Lisbon 37.99 40 P P **10 58 55.6 +0.9**
baz=238,SNR=76
LBNH S S **11 04 52.5 +5.1**
baz=238
LBNH Lisbon 37.99 40 P P **10 58 55.8 +1.1**
baz=238,SNR=76
LBNH S S **11 04 53.4 +6.0**
baz=238
UNH University of 38.06 42 P P **10 58 56.5 +1.2**
baz=240,SNR=66
UNH S S **11 04 50.6 +2.1**
baz=240
I62A Tamworth 38.16 41 P P **10 58 57.2 +1.1**
baz=239,SNR=110
I62A P P **10 58 57.2 +1.1**
baz=239,SNR=110
I62A S S **11 04 54.4 +4.4**
baz=239
I62A S S **11 04 54.4 +4.4**
baz=239
BBB Bella Bella 38.31 337 P P **10 58 57.3 0.0**
comp=Z,26nm,0.9s,baz=155,slow=9.1,SNR=4.4
BBB S S **11 04 56.0 +4.0**
comp=Z,9.2nm,0.9s,baz=175,slow=6.8,SNR=1.5
BBB LR LR 11 14 53.4
comp=Z,14µm,18.4s,baz=165,slow=37
comp=Z,26nm,0.9s
BBB Bella Bella 38.31 337 ⇓P P **10 58 58.4 +1.2**
CDVI St. Croix 38.37 84 P P **10 58 58.8 +0.6**
BIRV Birongo 38.41 96 IAmb IAmb 10 59 08.1
comp=Z,491nm,1.4s
H62A Milan 38.63 40 P P **10 59 01.1 +1.0**
baz=238,SNR=70
H62A P P **10 59 01.1 +1.0**
baz=238,SNR=70
H62A S S **11 05 00.0 +2.9**
baz=238
H62A S S **11 05 00.0 +2.9**
baz=238
I63A Otisfield 38.72 41 IAmb IAmb 10 59 03.6
comp=Z,569nm,1.3s
I63A Otisfield 38.72 41 P P **10 59 01.3 +0.5**
baz=240,SNR=58
I63A P P **10 59 01.3 +0.5**
baz=240,SNR=58
I63A S S **11 04 59.9 +1.5**
baz=240
I63A S S **11 04 59.9 +1.5**
baz=240
BBSR BB Station 38.93 61 P P **10 59 04.2 +1.5**
BBSR IAmb IAmb 10 59 05.8
comp=Z,414nm,1.4s
BBSR BB Station 38.93 61 P P **10 59 03.5 +0.7**
baz=259,SNR=21
BBSR S S **11 05 06.3 +4.4**
baz=259
BBSR BB Station 38.93 61 ⇑P P **10 59 03.4 +0.6**
LATQ La Tuque 39.27 35 P P **10 59 05.9 +0.6**
LATQ IAmb IAmb 10 59 07.5
comp=Z,498nm,1.5s
G62A West of Eustis 39.35 39 IAmb IAmb 10 59 08.8
comp=Z,816nm,1.4s
G62A West of Eustis 39.35 39 P P **10 59 07.1 +1.0**
baz=238,SNR=82
G62A P P **10 59 07.1 +1.0**
baz=238,SNR=82
WVL Waterville 39.55 41 IAmb IAmb 10 59 10.6
comp=Z,639nm,1.3s
WVL Waterville 39.55 41 P P **10 59 08.6 +0.8**
baz=240,SNR=44
SMRT St. Maarten 39.93 84 P P **10 59 11.6 +0.3**
SMRT St. Maarten 39.93 84 *e*P P 10 59 01.2 -10
SEUS St. Eustatius 40.09 84 IAmb IAmb 10 59 27.5
comp=Z,969nm,1.6s
SEUS St. Eustatius 40.09 84 *e*P P 10 59 01.9 -11
PKME Peaks-Kenny Pk 40.12 40 P P **10 59 13.2 +0.6**
PKME IAmb IAmb 10 59 15.1
comp=Z,533nm,1.3s
PKME Peaks-Kenny Pk 40.12 40 P P **10 59 13.2 +0.6**
baz=240,SNR=48
PKME S S **11 05 18.7 -0.8**
baz=240
PKME Peaks-Kenny Pk 40.12 40 P P **10 59 13.0 +0.4**
baz=240,SNR=48
PKME S S **11 05 18.7 -0.8**
baz=240
F63A Nahmakanta, Br 40.46 39 IAmb IAmb 10 59 17.9
comp=Z,535nm,1.2s
F63A Nahmakanta, Br 40.46 39 P P **10 59 16.4 +1.1**

F63A P P 10 59 16.4 +1.1
baz=240,SNR=61
F63A S S 11 05 26.1 +1.6
baz=240
F63A S S 11 05 26.1 +1.6
baz=240
LMQ La Malbaie 40.73 36 IAmb IAmb 10 59 19.6
comp=Z,586nm,1.4s
RUBB Prince Rupert 40.80 338 P P 10 59 18.5 +0.6
MBFL Flemmings, Mon 40.93 85 *e*P P 10 59 24.2 +4.6
MLYT Lee's Yard 40.95 85 *e*P P 10 59 27.0 +7.2
EMMW East Machias 40.99 42 P P 10 59 20.4 +0.6
EMMW East Machias 40.99 42 P P 10 59 21.1 +1.4
baz=242,SNR=29
EMMW S S 11 05 30.5 -1.9
baz=242
F64A Sherman 41.00 40 IAmb IAmb 10 59 22.5
comp=Z,668nm,1.4s
F64A Sherman 41.00 40 P P 10 59 20.6 +0.8
baz=240,SNR=45
F64A P P 10 59 20.6 +0.8
baz=240,SNR=45
F64A S S 11 05 35.6 +3.1
baz=240
F64A S S 11 05 35.6 +3.1
baz=240
NNA Nana 41.08 135 P P 10 59 21.4 +0.6
comp=Z,28nm,1.1s,baz=272,slow=8.8,SNR=3.7
NNA S S 11 05 35.9 +1.5
comp=Z,3.2nm,0.3s,baz=194,slow=16,SNR=1.3
NNA LR LR 11 12 48.3
comp=Z,33µm,20.2s,baz=320,slow=31
comp=Z,28nm,1.1s
NNA Nana 41.08 135 P P 10 59 21.9 +1.0
NNA IAmb IAmb 10 59 29.4
comp=Z,404nm,1.5s
NNA Nana 41.08 135 IAMs_20 IAMs_20 11 12 35.0
comp=Z,31µm,19.0s
G65A Princeton 41.16 41 IAmb IAmb 10 59 23.8
comp=Z,640nm,1.4s
G65A Princeton 41.16 41 P P 10 59 21.8 +0.7
baz=242,SNR=24
G65A P P 10 59 21.8 +0.7
baz=242,SNR=24
G65A S S 11 05 38.6 +3.7
baz=242
G65A S S 11 05 38.6 +3.7
baz=242
CZSB Cruzeiro do Su 41.18 126 *e*P P 10 59 23.3 +1.7
CZSB *e*S S 11 05 37.2 +1.3
ANWB Willy Bob 41.20 84 P P 10 59 20.8 -1.0
ANWB Willy Bob 41.20 84 *e*P P 10 59 15.4 -6.4
D62A Allapoint, All 41.21 38 P P 10 59 22.1 +0.8
D62A IAmb IAmb 10 59 24.0
comp=Z,656nm,1.3s
D62A Allapoint, All 41.21 38 P P 10 59 22.2 +0.8
baz=238,SNR=93
D62A P P 10 59 22.2 +0.8
baz=238,SNR=93
D62A S S 11 05 36.5 +0.9
baz=238
D62A S S 11 05 36.5 +0.9
baz=238
FCC Fort Churchill 41.21 9 P P 10 59 20.4 -0.8
FCC Fort Churchill 41.21 9 P P 10 59 20.4 -0.8
FCC pmax pmax
comp=Z,221nm,1.1s
BPA Boggy Peak 41.22 85 *e*P P 10 59 22.1 +0.1
E63A Oxbow 41.23 39 P P 10 59 22.3 +0.6
baz=240,SNR=78
E63A P P 10 59 22.3 +0.6
baz=240,SNR=78
E63A S S 11 05 35.7 -0.4
baz=240
E63A S S 11 05 35.7 -0.4
baz=240
ANBD Bethesda, Anti 41.31 85 *e*P P 10 59 19.1 -3.5
TBTG Tabatinga, AM 41.32 119 *e*P P 10 59 23.9 +1.1
GDHS Morne Mazeau, 41.43 86 IAMs_20 IAMs_20 11 17 11.0
comp=Z,33µm,22.0s
GGN Saint George 41.57 41 P P 10 59 25.1 +0.7
GGN IAmb IAmb 10 59 27.1
comp=Z,633nm,1.4s
PQI Presque Isle 41.60 39 P P 10 59 24.8 +0.1
PQI IAmb IAmb 10 59 27.2
comp=Z,606nm,1.5s
TDBA Terre de Bas, 41.62 87 *e*P P 10 59 25.2 -0.1
ABD La Joyeuse, An 41.66 86 IAMs_20 IAMs_20 11 17 28.1
comp=Z,25µm,21.0s
ABD La Joyeuse, An 41.66 86 *e*P P 10 59 23.2 -2.4
MDVC Dominica, Viel 41.88 87 *e*P P 10 59 13.8 -14
DSLB Salisbury 41.89 87 *e*P P 10 59 29.8 +2.2
MAGL Barre de l'ile 41.94 86 IAMs_20 IAMs_20 11 17 15.6
comp=Z,28µm,22.0s
MAGL Barre de l'ile 41.94 86 *e*P P 10 59 29.8 +1.9
MDN Morne-Daniel 41.94 87 *e*P P 10 59 22.7 -5.2
DLPL La Plaine 42.08 87 *e*P P 10 59 25.1 -3.9
GDSD La Dsirade Is 42.08 86 IAMs_20 IAMs_20 11 17 39.4
comp=Z,21µm,21.0s
FDF Fort de France 42.28 88 IAMs_20 IAMs_20 11 16 21.9
comp=Z,19µm,20.0s
GRFF Grenada Fort F 42.30 92 *e*P P 10 59 36.6 +5.7
GRGR Grenville 42.36 92 *e*P P 10 59 34.3 +2.9
BIM Bigot 42.40 88 IAMs_20 IAMs_20 11 16 36.0
comp=Z,19µm,21.0s
BIM Bigot 42.40 88 *e*P P 10 59 36.3 +4.6
GCMP Grenada, Carri 42.49 91 *e*P P 10 59 30.2 -2.3
ILAM Ilet Lapin Mar 42.54 88 IAMs_20 IAMs_20 11 16 51.5
comp=Z,21µm,21.0s
ILAM Ilet Lapin Mar 42.54 88 *e*P P 10 59 35.5 +2.7
SLBI Saint Lucia, B 42.59 89 *e*P P 10 59 29.1 -4.1
MPOM Morne Pois Mar 42.61 88 IAMs_20 IAMs_20 11 16 53.6
comp=Z,23µm,20.0s
MPOM Morne Pois Mar 42.61 88 *e*P P 10 59 27.1 -6.3
MCLT Moule a Chique 42.69 89 *e*P P 10 59 43.0 +9.1
SLAC Saint Lucia, A 42.69 89 *e*P P 10 59 43.1 +9.1
CRAG Craig 42.73 337 P P 10 59 35.5 +1.8
baz=139,SNR=11
CRAG S S 11 06 06.2 +8.3
baz=139
T35M Bob Quinn 42.92 340 P P 10 59 36.9 +1.6
baz=144,SNR=37
BATG Bathurst New B 43.07 39 IAmb IAmb 10 59 39.0
comp=Z,643nm,1.3s
WRAK Wrangell Islan 43.18 338 P P 10 59 37.6 +0.2
WRAK Wrangell Islan 43.18 338 P P 10 59 38.8 +1.4
baz=141,SNR=14
WRAK S S 11 06 11.8 +7.3
baz=141
LMN Caledonia Moun 43.18 41 P P 10 59 37.3 -0.3
ICQ Pointe Anglais 43.50 36 ⇑P P 10 59 40.5 +0.4
TOSP Speyside 43.63 93 *e*P P 10 59 45.7 +4.1
TAOE Nuku Hiva Isla 43.82 235 *e*LR LR 11 11 11.3
comp=Z,80µm,26.1s
TAOE Nuku Hiva Isla 43.82 235 *e*P P 10 59 41.7 -1.5
comp=Z,476nm,1.4s
TAOE Nuku Hiva Isla 43.82 235 P P 10 59 42.7 -0.5
TAOE IAmb IAmb 10 59 59.4
comp=Z,582nm,1.6s
DLBC Dease Lake 44.03 341 P P 10 59 45.4 +1.0
comp=Z,130nm,1.1s,baz=163,slow=5.9,SNR=80
DLBC LR LR 11 17 54.4
comp=Z,37µm,19.2s,baz=136,slow=36
comp=Z,130nm,1.1s
DLBC Dease Lake 44.03 341 P P 10 59 45.8 +1.4
DLBC IAmb IAmb 10 59 54.0
comp=Z,447nm,1.4s
DLBC Dease Lake 44.03 341 P P 10 59 46.5 +2.1
baz=145,SNR=107
DLBC S S 11 06 19.6 +2.5
baz=145
BBGH Gun Hill 44.12 90 IAMs_20 IAMs_20 11 18 16.5
comp=Z,26µm,21.0s
BBGH Gun Hill 44.12 90 *e*P P 10 59 43.7 -1.9
YKA Yellowknife Ar 44.63 354 P P 10 59 47.9 -1.0
comp=Z,34nm,1.0s,baz=163,slow=7.7,SNR=38
YKA PcP PP 11 01 35.0 +1.9
comp=Z,10nm,1.0s,baz=163,slow=3.7,SNR=4.0
YKA LR LR 11 18 05.8
comp=Z,43µm,19.7s,baz=167,slow=36
comp=Z,34nm,1.0s
YKA Yellowknife Ar 44.63 354 P P 10 59 48.0 -1.0
YKA Yellowknife Ar 44.63 354 P P 10 59 48.0 -1.0
SIT Sitka 44.74 337 P P 10 59 50.8 +0.9
baz=137
SIT S S 11 06 34.6 +7.5
baz=137
GBN Guysborough 45.11 43 P P 10 59 52.9 -0.2
JIS Juneau Island 45.32 339 P P 10 59 55.5 +1.0
JIS IAmb IAmb 11 00 12.5
comp=Z,645nm,2.3s
JIS IAMs_20 IAMs_20 11 18 16.7
comp=Z,19µm,20.0s
RPN Rapa Nui 45.34 185 IAMs_20 IAMs_20 11 13 54.9
comp=Z,24µm,22.0s
BESE Bessie Mountai 45.71 339 P P 10 59 58.0 +0.3
TGTN Hyland Airport 46.15 345 P P 11 00 02.6 +1.5
baz=149,SNR=15
TGTN S S 11 06 53.2 +5.6
baz=149
P33M Teslin, Yukon 46.31 341 P P 11 00 03.3 +0.8
P33M IAMs_20 IAMs_20 11 19 15.5
comp=Z,24µm,20.0s
P33M Teslin, Yukon 46.31 341 P P 11 00 03.5 +1.0
baz=142,SNR=38
P33M S S 11 06 55.0 +4.9
baz=142
BOAV Boa Vista 46.51 105 *e*P P 11 00 05.0 +0.4
BOAV *e*S S 11 06 53.8 -0.1
SKAG Skagway 46.53 339 P P 11 00 04.3 +0.3
SKAG Skagway 46.53 339 P P 11 00 05.1 +1.0
baz=139,SNR=8.3
SKAG S S 11 06 58.2 +5.2
baz=139
SKAG Skagway 46.53 339 ⇓P P 11 00 05.5 +1.4
WRGLY Wrigley 46.62 349 P P 11 00 05.8 +1.2
baz=156
WRGLY S S 11 06 57.4 +3.3
baz=156
SCHQ Schefferville 46.70 30 P P 11 00 05.0 -0.6
comp=Z,118nm,1.0s,baz=241,slow=6.3,SNR=61
SCHQ S S 11 06 51.5 -4.2
comp=Z,4.3nm,0.8s,baz=275,slow=14,SNR=1.2
SCHQ LR LR 11 20 54.3
comp=Z,38µm,19.4s,baz=238,slow=38
comp=Z,118nm,1.0s
SCHQ Schefferville 46.70 30 P P 11 00 05.9 +0.3
SCHQ IAmb IAmb 11 00 12.8
comp=Z,240nm,1.1s
SCHQ Schefferville 46.70 30 ⇑P P 11 00 05.5 -0.1
PLBC Pleasant Camp 46.88 339 P P 11 00 08.2 +1.3
baz=138,SNR=28
PLBC S S 11 07 03.4 +5.3
baz=138
HMH Humu'ula Sheep 47.46 280 P P 11 00 12.3 0.0
POHA Pohakuloa 47.49 280 IAMs_20 IAMs_20 11 14 12.8
comp=Z,25µm,20.0s
ETMB Extrema 47.53 123 *e*P P 11 00 12.0 -0.5
ETMB *e*S S 11 07 08.4 +0.1
MLOA Mauna Loa Obse 47.56 280 P P 11 00 12.3 -0.9
MLOA IAmb IAmb 11 00 16.9
comp=Z,213nm,1.1s
O30N Mendenhall 47.78 340 P P 11 00 15.5 +1.6
baz=139,SNR=49
O30N S S 11 07 16.2 +5.4
baz=139
MMPY Sheldon Lake, 47.83 344 P P 11 00 16.4 +2.1
baz=146,SNR=110
MMPY S S 11 07 16.7 +5.1
baz=146
FARO Faro, Yukon 48.08 343 P P 11 00 17.4 +1.2
baz=143,SNR=19
FARO S S 11 07 18.1 +3.0
baz=143
PNL Peninsula 48.11 337 P P 11 00 17.2 +0.7
baz=134
PNL S S 11 07 21.8 +6.2
baz=134
N31M Braeburn, Yuko 48.22 341 IAmb IAmb 11 00 26.2
comp=Z,300nm,1.4s
N31M IAMs_20 IAMs_20 11 20 43.5
comp=Z,24µm,19.0s
N31M Braeburn, Yuko 48.22 341 P P 11 00 18.2 +0.9
baz=140,SNR=33
N31M S S 11 07 20.7 +3.5
baz=140
HYT Haines Junctio 48.28 339 IAmb IAmb 11 00 36.1
comp=Z,367nm,1.7s
HYT Haines Junctio 48.28 339 P P 11 00 19.7 +1.8
baz=137,SNR=28
HYT S S 11 07 23.1 +4.9
baz=137
M31M Drury Creek, Y 48.36 342 IAmb IAmb 11 00 34.8
comp=Z,387nm,1.9s
M31M Drury Creek, Y 48.36 342 P P 11 00 19.8 +1.4
baz=142,SNR=56
M31M S S 11 07 22.7 +3.7
baz=142
BCPM Bancas Point 48.40 338 IAmb IAmb 11 00 34.1
comp=Z,260nm,1.6s
N30M Aishikik Lake 48.62 340 P P 11 00 22.2 +1.8
baz=138,SNR=29
N30M S S 11 07 27.1 +4.4
baz=138
YUK6 Outpost Mounta 48.66 339 P P 11 00 22.5 +1.6
baz=136,SNR=25
YUK6 S S 11 07 27.9 +4.3
baz=136
PINM Pinnacle 48.72 337 P P 11 00 22.2 +1.0
baz=133,SNR=7.5
PINM S S 11 07 29.9 +5.6
baz=133
PCA Pinnacle 48.72 337 IAmb IAmb 11 00 36.5
comp=Z,413nm,1.6s
MACA Manacapuru-AM 48.73 111 *e*P P 11 00 22.6 +0.8
MACA *e*S S 11 07 24.2 -1.2
YUK4 Talbot Arm 49.04 339 P P 11 00 25.7 +1.9
baz=136,SNR=31
TABL Table Mountain 49.28 337 P P 11 00 26.8 +1.2
TABL IAmb IAmb 11 00 39.5
comp=Z,207nm,1.3s
TABL IAMs_20 IAMs_20 11 18 38.6
comp=Z,16µm,21.0s
M30M Minto, Yukon 49.36 341 P P 11 00 26.8 +0.7
M30M IAMs_20 IAMs_20 11 21 10.0
comp=Z,20µm,20.0s
M30M Minto, Yukon 49.36 341 P P 11 00 27.2 +1.2
baz=139,SNR=52
M30M S S 11 07 37.8 +4.6
baz=139
YUK8 Steele Glacier 49.38 339 P P 11 00 28.3 +1.9
baz=135,SNR=50
YUK8 S S 11 07 36.9 +3.0
baz=135
MESA MESA 49.40 337 IAmb IAmb 11 00 42.1
comp=Z,491nm,1.6s
MESA IAMs_20 IAMs_20 11 21 38.9
comp=Z,24µm,18.0s
MESA MESA 49.40 337 P P 11 00 27.7 +1.1
baz=132
MESA S S 11 07 41.5 +7.4
baz=132
YAH Yahtse 49.45 337 IAmb IAmb 11 00 42.6
comp=Z,398nm,1.6s
YAH IAMs_20 IAMs_20 11 21 03.1
comp=Z,19µm,18.0s
LOGN Logan Glacier 49.49 338 IAmb IAmb 11 00 45.2
comp=Z,315nm,1.6s
LOGN IAMs_20 IAMs_20 11 19 09.2
comp=Z,16µm,21.0s
KIP Kipapa 49.61 283 IAMs_20 IAMs_20 11 15 03.8
comp=Z,18µm,19.0s
KIP Kipapa 49.61 283 *i*P P 11 00 28.2 -0.3
GRNC Granite Creek 49.70 337 P P 11 00 30.0 +1.2
GRNC IAmb IAmb 11 00 48.3
comp=Z,269nm,1.4s
GRNC IAMs_20 IAMs_20 11 18 50.7
comp=Z,17µm,20.0s
CTGM Chitina Glacie 49.71 338 P P 11 00 29.6 +0.7
CTGM IAmb IAmb 11 00 48.4
comp=Z,242nm,1.5s
CTGM IAMs_20 IAMs_20 11 21 32.9
comp=Z,16µm,18.0s
CTG Chitna Glacier 49.71 338 P P 11 00 30.3 +1.4
baz=133,SNR=13
CTG S S 11 07 42.9 +4.6
baz=133
SNH Sunshine Point 49.74 336 P P 11 00 29.8 +0.8
ISLE Juniper Island 49.83 337 P P 11 00 30.4 +0.6
ISLE IAmb IAmb 11 00 45.0
comp=Z,331nm,1.4s
ISLE IAMs_20 IAMs_20 11 22 04.2
comp=Z,18µm,19.0s
BGLC Bering Glacier 49.87 336 P P 11 00 32.1 +2.2
baz=130
BGLC S S 11 07 46.1 +5.9
baz=130
WAX Waxell Ridge 49.92 337 IAmb IAmb 11 00 46.7
comp=Z,336nm,1.3s
WAX IAMs_20 IAMs_20 11 22 03.6
comp=Z,18µm,18.0s
YUK3 Moose Creek 49.96 339 P P 11 00 31.7 +0.9
baz=134,SNR=20
YUK3 S S 11 07 47.3 +5.3
baz=134
TGL Tana Glacier 50.11 337 IAmb IAmb 11 00 54.2
comp=Z,197nm,1.2s
TGL IAMs_20 IAMs_20 11 22 11.6
comp=Z,16µm,19.0s
LPAZ La Paz 50.12 131 P P 11 00 33.1 +0.1
comp=Z,15nm,1.0s,baz=335,slow=9.1,SNR=29
LPAZ S S 11 07 33.8 -12
comp=Z,6.7nm,1.2s,baz=172,slow=12,SNR=1.8
LPAZ LR LR 11 19 21.9
comp=Z,27µm,20.8s,baz=311,slow=33
comp=Z,15nm,1.0s
LPAZ La Paz 50.12 131 P P 11 00 33.1 +0.1
LPAZ IAmb IAmb 11 00 47.3
comp=Z,210nm,1.2s
LPAZ La Paz 50.12 131 *e*P P 11 00 33.4 +0.3
LPAZ La Paz 50.12 131 ⇓P P 11 00 33.0 -0.1
PB12 IPOC Station P 50.18 135 IAmb IAmb 11 00 40.8
comp=Z,381nm,1.5s
BVCY Beaver Creek 50.54 339 P P 11 00 36.4 +1.4
baz=134,SNR=15
BVCY S S 11 07 55.6 +6.0
baz=134
PB16 IPOC Station P 50.54 134 IAmb IAmb 11 00 45.0
comp=Z,371nm,1.3s
MCARA McCarthy VSAT 50.60 338 P P 11 00 36.0 +0.7
MCARA IAmb IAmb 11 00 57.6
comp=Z,264nm,1.3s
MCARA IAMs_20 IAMs_20 11 22 01.4
comp=Z,16µm,19.0s
MCARA McCarthy VSAT 50.60 338 P P 11 00 36.8 +1.4
baz=131,SNR=15
MCARA S S 11 07 57.0 +6.6
baz=131
VRDI Verde Repeater 50.65 337 P P 11 00 36.7 +0.7
VRDI IAmb IAmb 11 00 51.2
comp=Z,292nm,1.4s
Q23K Middleton Isla 50.67 334 P P 11 00 36.8 +0.9
baz=126
Q23K S S 11 07 56.5 +5.2
baz=126
M27K Edge Creek, AK 50.85 339 P P 11 00 38.8 +1.3
baz=133,SNR=50
M27K S S 11 07 59.4 +5.3
baz=133
BMRM Bremner River 50.92 336 IAmb IAmb 11 00 57.0
comp=Z,234nm,1.4s
BMRM Bremner River 50.92 336 P P 11 00 39.2 +1.3
baz=129,SNR=19
BMRM S S 11 07 58.4 +3.5
baz=129
GLB Gilahina Butte 50.92 337 IAmb IAmb 11 00 50.8
comp=Z,290nm,1.6s
GLB IAMs_20 IAMs_20 11 22 11.0
comp=Z,14µm,20.0s
EYAK Cordova Ski Ar 51.10 336 IAmb IAmb 11 00 54.5
comp=Z,263nm,1.4s
EYAK Cordova Ski Ar 51.10 336 P P 11 00 40.7 +1.6
baz=127,SNR=14
EYAK S S 11 08 02.7 +5.5
baz=127
J29M Klondike Camp 51.20 342 P P 11 00 40.6 +0.7
baz=138
J29M S S 11 08 01.5 +2.8
baz=138
DAWY Dawson 51.26 342 P P 11 00 41.3 +0.9
baz=137,SNR=52
DAWY S S 11 08 04.4 +4.9
baz=137
DAWY Dawson 51.26 342 ⇑P P 11 00 40.8 +0.4
M26K Nabesna, AK 51.26 339 IAMs_20 IAMs_20 11 19 59.9
comp=Z,20µm,21.0s
M26K Nabesna, AK 51.26 339 P P 11 00 41.4 +1.0
baz=132,SNR=31
M26K S S 11 08 05.5 +5.8
baz=132
BCAR Beaver Creek A 51.30 340 P P 11 00 39.4 -1.3
HIN Hinchinbrook I 51.30 335 P P 11 00 42.0 +1.2
HIN IAmb IAmb 11 00 54.2
comp=Z,295nm,1.1s
HIN IAMs_20 IAMs_20 11 18 45.2
comp=Z,19µm,21.0s
L27K Beaver Creek, 51.31 340 P P 11 00 41.2 +0.3
L27K IAMs_20 IAMs_20 11 19 49.2
comp=Z,18µm,21.0s
L27K Beaver Creek, 51.31 340 P P 11 00 42.0 +1.2
baz=133,SNR=30
L27K S S 11 08 05.8 +5.5
baz=133
N25K Chitina, Valde 51.32 337 IAmb IAmb 11 01 00.4
comp=Z,389nm,1.8s
N25K Chitina, Valde 51.32 337 P P 11 00 42.2 +1.2
baz=129,SNR=26
N25K S S 11 08 05.9 +5.4
baz=129
P23K Montague Islan 51.43 334 P P 11 00 42.7 +1.0
baz=125,SNR=9.3
P23K S S 11 08 06.7 +4.8
baz=125
TA02 Huaiquique 51.49 136 IAmb IAmb 11 00 50.8
comp=Z,563nm,1.6s
FID Port Fidalgo 51.51 336 IAmb IAmb 11 00 55.8
comp=Z,322nm,1.2s
FID IAMs_20 IAMs_20 11 19 04.4
comp=Z,15µm,21.0s
TA01 Diego Aracena 51.66 137 P P 11 00 44.0 +0.1
TA01 IAmb IAmb 11 00 52.2
comp=Z,417nm,1.4s
KLU Klutina 51.74 336 P P 11 00 45.1 +1.0
baz=128,SNR=26
KLU S S 11 08 10.5 +4.2
baz=128
FRB Frobisher Bay 51.78 20 P P 11 00 42.4 -1.7
comp=Z,11nm,1.1s,baz=224,slow=10.0,SNR=7.6
FRB LR LR 11 25 31.1
comp=Z,16µm,18.9s,baz=228,slow=39
comp=Z,11nm,1.1s
FRB Frobisher Bay 51.78 20 ⇑P P 11 00 43.9 -0.2
L26K Log Cabin Wild 51.80 339 P P 11 00 45.1 +0.7
L26K IAMs_20 IAMs_20 11 20 41.1
comp=Z,16µm,22.0s
L26K Log Cabin Wild 51.80 339 P P 11 00 45.5 +1.1
baz=132,SNR=26
L26K S S 11 08 12.4 +5.4
baz=132
GLI Glacier Island 51.83 335 IAmb IAmb 11 00 57.6
comp=Z,259nm,1.1s
GLI Glacier Island 51.83 335 P P 11 00 45.2 +0.5
baz=126,SNR=12
GLI S S 11 08 12.6 +5.2
baz=126
PATCX Punta Patache 51.87 137 P P 11 00 45.7 +0.2
PATCX IAmb IAmb 11 00 53.8
comp=Z,482nm,1.6s
I29M Ogilvie Camp, 51.91 343 IAMs_20 IAMs_20 11 23 01.3
comp=Z,20µm,22.0s
I29M Ogilvie Camp, 51.91 343 P P 11 00 45.8 +0.6
baz=139,SNR=28
I29M S S 11 08 10.8 +2.4
baz=139
HARP HAARP 52.03 338 P P 11 00 46.9 +0.8
baz=129,SNR=14
HARP S S 11 08 14.6 +4.5
baz=129
PB08 IPOC Station P 52.04 136 P P 11 00 47.7 +0.5
PB08 IAmb IAmb 11 00 56.5
comp=Z,341nm,1.4s
K27K Chicken 52.06 340 IAMs_20 IAMs_20 11 24 45.4
comp=Z,24µm,18.0s
K27K Chicken 52.06 340 P P 11 00 48.1 +1.7
baz=134
K27K S S 11 08 16.9 +6.3
baz=134
M24K Tolsona, Glenn 52.22 337 P P 11 00 46.9 -0.7
M24K Tolsona, Glenn 52.22 337 P P 11 00 48.9 +1.3
baz=128,SNR=22

M24K S **S** **11 08 19.0 +6.2**
baz=128
EPYK **Eagle Plains** **52.26 345** P **P** **11 00 48.1 +0.2**
EPYK IAMs_20 IAMs_20 11 23 21.6
comp=Z,22µm,20.0s
EPYK **Eagle Plains** **52.26 345** P **P** **11 00 48.2 +0.4**
baz=141,SNR=37
EPYK S **S** **11 08 14.9 +1.6**
baz=141
SEW **Seward** **52.34 334** IAmb IAmb 11 01 06.6
comp=Z,296nm,1.8s
SEW **Seward** **52.34 334** P **P** **11 00 48.4 0.0**
baz=123,SNR=8.6
SEW S **S** **11 08 16.9 +2.5**
baz=123
C36M **Paulatuk** **52.35 352** P **P** **11 00 47.9 -0.5**
C36M **Paulatuk** **52.35 352** P **P** **11 00 48.2 -0.1**
baz=157,SNR=11
C36M S **S** **11 08 15.6 +1.3**
baz=157
PB02 **IPOC Station P** **52.39 137** P **P** **11 00 50.8 +1.3**
PB02 IAmb IAmb 11 00 58.0
comp=Z,420nm,1.3s
PB01 **IPOC Station P** **52.46 137** IAmb IAmb 11 00 58.4
comp=Z,332nm,1.4s
SCM **Sheep Creek Mo** **52.48 336** IAmb IAmb 11 01 05.3
comp=Z,449nm,1.9s
SCM **Sheep Creek Mo** **52.48 336** P **P** **11 00 49.5 -0.1**
baz=126
SCM S **S** **11 08 19.5 +3.0**
baz=126
PAX **Paxson** **52.50 338** IAmb IAmb 11 01 04.2
comp=Z,353nm,1.8s
PAX **Paxson** **52.50 338** P **P** **11 00 49.8 +0.1**
baz=129,SNR=48
PAX S **S** **11 08 20.6 +3.8**
baz=129
KDAK **Kodiak Island** **52.55 330** P **P** **11 00 48.8 -1.2**
comp=Z,24nm,0.7s,baz=323,slow=4.8,SNR=11
KDAK S S 11 08 04.5 -13
comp=Z,4.3nm,0.9s,baz=190,slow=8.0,SNR=1.3
KDAK LR LR 11 20 13.8
comp=Z,10µm,19.7s,baz=136,slow=33
comp=Z,24nm,0.7s
KDAK **Kodiak Island** **52.55 330** P **P** **11 00 51.2 +1.2**
KDAK **Kodiak Island** **52.55 330** P **P** **11 00 51.2 +1.2**
KDAK pmax pmax
comp=Z,189nm,1.3s
KDAK **Kodiak Island** **52.55 330** P **P** **11 00 49.7 -0.3**
baz=118
KDAK S **S** **11 08 20.4 +3.1**
baz=118
KDAK **Kodiak Island** **52.55 330** ⇓P **P** **11 00 50.6 +0.5**
M23K **Glacier View** **52.61 336** P **P** **11 00 50.5 0.0**
baz=126,SNR=9.7
M23K S **S** **11 08 21.9 +3.7**
baz=126
OHAK **Old Harbor** **52.63 329** P **P** **11 00 51.4 +0.8**
OHAK IAmb IAmb 11 01 03.6
comp=Z,212nm,1.0s
OHAK **Old Harbor** **52.63 329** P **P** **11 00 51.2 +0.6**
baz=117,SNR=14
OHAK S **S** **11 08 22.0 +3.6**
baz=117
SCRK **Sand Creek** **52.65 340** IAMs_20 IAMs_20 11 24 57.5
comp=Z,26µm,18.0s
SCRK **Sand Creek** **52.65 340** P **P** **11 00 51.8 +1.0**
baz=132,SNR=41
SCRK S **S** **11 08 23.2 +4.4**
baz=132
O22K **Cooper Landing** **52.66 334** P **P** **11 00 50.3 -0.5**
O22K IAmb IAmb 11 01 28.9
comp=Z,307nm,1.2s
O22K **Cooper Landing** **52.66 334** P **P** **11 00 50.6 -0.3**
baz=123
O22K S **S** **11 08 22.3 +3.5**
baz=123
KNK **Knik Glacier** **52.67 336** P **P** **11 00 51.2 +0.3**
baz=125,SNR=11
KNK S **S** **11 08 22.4 +3.3**
baz=125
PB07 **IPOC Station P** **52.69 138** IAmb IAmb 11 01 00.2
comp=Z,379nm,1.4s
BRSE **Bradley Lake S** **52.70 333** P **P** **11 00 51.5 +0.3**
baz=122,SNR=8.2
BRSE S **S** **11 08 21.0 +1.6**
baz=122
BRLK **Bradley Lake** **52.77 333** P **P** **11 00 52.5 +0.8**
SII **Sitkinak Islan** **52.77 328** IAMs_20 IAMs_20 11 18 32.5
comp=Z,17µm,22.0s
SII **Sitkinak Islan** **52.77 328** P **P** **11 00 51.6 -0.2**
baz=116
SII S **S** **11 08 24.0 +3.5**
baz=116
RIDG **Independent Ri** **52.78 339** P **P** **11 00 51.9 +0.2**
RIDG IAmb IAmb 11 01 02.6
comp=Z,205nm,1.0s
RIDG IAMs_20 IAMs_20 11 20 59.0
comp=Z,20µm,22.0s
RIDG **Independent Ri** **52.78 339** P **P** **11 00 52.1 +0.4**
baz=130,SNR=164
RIDG S **S** **11 08 25.1 +4.7**
baz=130
CNPM **China Poot** **52.80 333** P **P** **11 00 52.2 +0.3**
CNPM IAMs_20 IAMs_20 11 19 25.0
comp=Z,14µm,22.0s
SML **Sawmill** **52.85 336** P **P** **11 00 52.3 0.0**
baz=125,SNR=22
SML S **S** **11 08 25.2 +3.6**
baz=125
J26L **Joseph Creek** **52.86 340** IAmb IAmb 11 01 07.7
comp=Z,413nm,1.6s
J26L IAMs_20 IAMs_20 11 22 23.5
comp=Z,19µm,19.0s
J26L **Joseph Creek** **52.86 340** P **P** **11 00 54.0 +1.6**
baz=132,SNR=94
J26L S **S** **11 08 26.2 +4.6**
baz=132
Q20K **Shuyak Island** **52.86 331** P **P** **11 00 53.0 +0.7**
baz=119
Q20K S **S** **11 08 23.2 +1.7**
baz=119
MDP **Montagnes des** **52.90 98** P **P** **11 00 53.0 -0.3**
comp=Z,18nm,1.0s,baz=283,slow=6.7,SNR=4.9
MDP S S 11 08 13.1 -10
comp=Z,4.6nm,0.8s,baz=218,slow=23,SNR=1.4
MDP LR LR 11 24 23.2
comp=Z,8µm,21.8s,baz=290,slow=37
comp=Z,18nm,1.0s
RC01 **Rabbit Creek A** **53.00 335** IAmb IAmb 11 01 07.8
comp=Z,272nm,1.6s
RC01 **Rabbit Creek A** **53.00 335** P **P** **11 00 53.4 +0.1**
baz=123,SNR=6.9
RC01 S **S** **11 08 24.8 +1.3**
baz=123
PMR **Palmer** **53.04 335** P **P** **11 00 53.6 0.0**
baz=124
HOM **Homer** **53.05 333** P **P** **11 00 53.9 +0.2**
baz=120
HOM S **S** **11 08 26.6 +2.5**
baz=120
GHO **Glory Hole Cre** **53.06 336** IAMs_20 IAMs_20 11 26 23.0
comp=Z,12µm,18.0s
INK **Inuvik** **53.08 347** P **P** **11 00 54.0 +0.2**
comp=Z,81nm,1.1s,baz=136,slow=8.1,SNR=81
INK S **S** **11 08 20.0 -4.3**
comp=Z,2.2nm,0.7s,baz=102,slow=27,SNR=0.6
INK LR LR 11 25 00.6
comp=Z,24µm,18.7s,baz=140,slow=38
comp=Z,81nm,1.1s
INK **Inuvik** **53.08 347** IAmb IAmb 11 01 01.9
comp=Z,306nm,1.2s
INK **Inuvik** **53.08 347** P **P** **11 00 53.9 +0.2**
baz=146,SNR=102
INK S **S** **11 08 27.4 +3.1**
baz=146
INK **Inuvik** **53.08 347** ⇑P **P** **11 00 53.8 0.0**
WAT6 **Susitna Watana** **53.09 337** P **P** **11 00 54.6 +0.4**
baz=126,SNR=34
WAT6 S **S** **11 08 28.3 +3.5**
baz=126
K24K **Donnelly Dome** **53.14 339** P **P** **11 00 55.0 +0.6**
baz=129,SNR=48
K24K S **S** **11 08 27.8 +2.4**
baz=129
CHIR **Chirikof Islan** **53.19 327** P **P** **11 00 55.5 +0.6**
baz=114
CHIR S **S** **11 08 29.1 +2.9**
baz=114
DHY **Denali Highway** **53.25 338** P **P** **11 00 55.5 +0.1**
baz=127
DHY S **S** **11 08 30.0 +3.0**
baz=127
CAPN **Captain Cook N** **53.41 334** P **P** **11 00 57.0 +0.7**
baz=122
CAPN S **S** **11 08 34.2 +5.2**
baz=122
VAH **Vaihoa** **53.48 234** *e*P **P** **11 00 57.8 +0.3**
comp=Z,436nm,1.3s
J25K **Salcha River,** **53.52 340** P **P** **11 00 55.1 -2.1**
J25K IAMs_20 IAMs_20 11 21 45.6
comp=Z,17µm,21.0s
J25K **Salcha River,** **53.52 340** P **P** **11 00 57.8 +0.6**
baz=130,SNR=40
J25K S **S** **11 08 35.0 +4.4**
baz=130
M22K **Willow** **53.52 335** P **P** **11 00 57.6 +0.4**
baz=123,SNR=23
M22K S **S** **11 08 31.6 +1.1**
baz=123
WAT1 **Susitna Watana** **53.53 337** P **P** **11 00 57.7 +0.4**
baz=126
WAT1 S **S** **11 08 33.1 +2.4**
baz=126
PMOR **Pomariorio Ree** **53.55 235** *e*P **P** **11 00 58.2 +0.3**
comp=Z,260nm,1.1s
Q19K **Cape Douglas,** **53.59 331** P **P** **11 00 57.3 -0.4**
baz=118
Q19K S **S** **11 08 32.0 +0.5**
baz=118
SUA **Susitna One** **53.62 335** P **P** **11 00 58.5 +0.5**
SUA IAmb IAmb 11 01 12.5
comp=Z,436nm,1.6s
SUA **Susitna One** **53.62 335** P **P** **11 00 58.1 +0.1**
baz=123,SNR=18
SUA S **S** **11 08 35.2 +3.2**
baz=123
ITTB **Itaituba** **53.67 110** *e*P **P** **11 00 59.8 +0.8**
O20K **Slope Mountain** **53.69 333** P **P** **11 00 58.8 +0.3**
baz=120
O20K S **S** **11 08 36.2 +3.3**
baz=120
XMAS **Kiritimati** **53.70 259** P **P** **11 00 59.8 +0.6**
XMAS **Kiritimati** **53.70 259** IAMs_20 IAMs_20 11 23 55.0
comp=Z,23µm,18.0s
HDA **Harding Lake** **53.92 339** IAMs_20 IAMs_20 11 25 34.2
comp=Z,15µm,21.0s
HDA **Harding Lake** **53.92 339** P **P** **11 01 00.3 +0.2**
baz=128,SNR=41
HDA S **S** **11 08 38.9 +3.1**
baz=128
HDA S **S** **11 08 38.9 +3.1**
baz=128
MALB **Monte Alegre** **53.93 106** *e*P **P** **11 01 01.1 +0.2**
RSO **Redoubt South** **53.93 333** P **P** **11 01 00.5 0.0**
CUT **Chulitna** **53.94 336** IAMs_20 IAMs_20 11 24 01.9
comp=Z,12µm,18.0s
CUT **Chulitna** **53.94 336** P **P** **11 01 00.9 +0.6**
baz=124,SNR=20
CUT S **S** **11 08 39.6 +3.4**
baz=124
LVC **Limon Verde** **53.95 137** P **P** **11 01 02.1 +0.9**
comp=Z,36nm,1.1s,baz=294,slow=3.3,SNR=11
LVC S S 11 08 27.9 -10
comp=Z,2.5nm,0.8s,baz=69,slow=20,SNR=1.2
LVC LR LR 11 19 07.1
comp=Z,24µm,20.9s,baz=301,slow=31
comp=Z,36nm,1.1s
LVC **Limon Verde** **53.95 137** P **P** **11 01 03.0 +1.8**
LVC **Limon Verde** **53.95 137** IAMs_20 IAMs_20 11 18 45.0
comp=Z,24µm,21.0s
LVC **Limon Verde** **53.95 137** *e*P **P** **11 01 01.7 +0.4**
RND **Reindeer** **53.98 337** IAMs_20 IAMs_20 11 21 16.0
comp=Z,14µm,20.0s
SPCR **Spurr Chakacha** **54.08 334** P **P** **11 01 01.2 -0.2**
baz=121,SNR=11
SPCR S **S** **11 08 39.6 +1.3**
baz=121
IL31 **54.13 339** P **P** **11 01 01.4 -0.1**
ILAR **Eielson Array** **54.13 339** P **P** **11 01 01.4 -0.2**
comp=Z,31nm,0.9s,baz=152,slow=5.5,SNR=143
ILAR LR LR 11 25 53.3
comp=Z,14µm,19.1s,baz=117,slow=38
ILAR PKPPKP **P'P'df** **11 31 19.5 -3.0**
comp=Z,1.1nm,1.2s,baz=289,slow=2.8,SNR=4.7
comp=Z,31nm,0.9s
ILAR **Eielson Array** **54.13 339** P **P** **11 01 01.0 -0.6**
VILB **Vilhena** **54.15 122** *e*P **P** **11 01 02.9 +0.4**
MCK **McKinley** **54.20 338** P **P** **11 01 02.3 +0.1**
MCK IAMs_20 IAMs_20 11 21 33.8
comp=Z,13µm,20.0s
MCK **McKinley** **54.20 338** P **P** **11 01 02.3 +0.1**
MCK pmax pmax
comp=Z,702nm,2.0s
MCK **McKinley** **54.20 338** P **P** **11 01 02.6 +0.4**
baz=126,SNR=26
MCK S **S** **11 08 42.0 +2.2**
baz=126
SKT **Skwentna** **54.21 335** IAmb IAmb 11 01 14.9
comp=Z,236nm,1.4s
SKT **Skwentna** **54.21 335** P **P** **11 01 02.7 +0.5**
baz=122,SNR=40
SKT S **S** **11 08 41.5 +1.6**
baz=122
WRH **Wood River Hil** **54.35 339** P **P** **11 01 03.1 0.0**
WRH IAMs_20 IAMs_20 11 27 51.5
comp=Z,12µm,18.0s
CCB **Clear Creek Bu** **54.36 339** IAmb IAmb 11 01 20.8
comp=Z,622nm,2.6s
O19K **Port Alsworth** **54.49 332** P **P** **11 01 03.4 -0.8**
baz=118,SNR=7.0
O19K S **S** **11 08 44.5 +1.0**
baz=118
COLA **College** **54.51 339** P **P** **11 01 04.1 -0.3**
COLA **College** **54.51 339** IAMs_20 IAMs_20 11 26 01.9
comp=Z,14µm,19.0s
COLA **College** **54.51 339** *d i*P **P** **11 01 03.9 -0.4**
COLA pmax pmax
comp=Z,79nm,1.6s
COLA MLR MLR
comp=Z,13µm,15.0s
COLA **College** **54.51 339** P **P** **11 01 04.0 -0.3**
baz=128
COLA S **S** **11 08 45.7 +2.0**
baz=128
COLA **College** **54.51 339** ⇓P **P** **11 01 04.2 -0.1**
TCOL **CIGO, UAF Yank** **54.52 339** IAMs_20 IAMs_20 11 26 01.9
comp=Z,15µm,19.0s
TCOL **CIGO, UAF Yank** **54.52 339** P **P** **11 01 03.9 -0.4**
baz=128,SNR=6.9
TCOL S **S** **11 08 45.7 +1.9**
baz=128
POKR **Poker Plat Res** **54.52 340** P **P** **11 01 04.5 0.0**
POKR IAMs_20 IAMs_20 11 26 05.1
comp=Z,19µm,19.0s
POKR **Poker Plat Res** **54.52 340** P **P** **11 01 04.8 +0.3**
baz=128,SNR=13
POKR S **S** **11 08 46.3 +2.3**
baz=128
P18K **Big Mountain,** **54.53 331** IAmb IAmb 11 01 16.3
comp=Z,166nm,1.2s
P18K **Big Mountain,** **54.53 331** P **P** **11 01 03.5 -1.1**
baz=117,SNR=8.2
P18K S **S** **11 08 42.8 -1.4**
baz=117
TRF **Thorofare Moun** **54.54 337** P **P** **11 01 04.8 0.0**
TRF **Thorofare Moun** **54.54 337** P **P** **11 01 05.0 +0.2**
baz=124,SNR=64
TRF S **S** **11 08 45.9 +1.3**
baz=124
BWN **Browne** **54.65 338** IAMs_20 IAMs_20 11 24 47.1
comp=Z,14µm,18.0s
AF01 **San Pedro de A** **54.66 137** P **P** **11 01 06.3 -0.1**
MDM **Murphy Dome** **54.69 339** IAmb IAmb 11 01 24.9
comp=Z,285nm,1.8s
MDM IAMs_20 IAMs_20 11 26 18.7
comp=Z,14µm,20.0s
O18K **Koktuh Hills** **54.73 332** P **P** **11 01 05.4 -0.6**
baz=117,SNR=14
O18K S **S** **11 08 48.7 +1.8**
baz=117
NEA2 **Nenana** **54.76 339** IAMs_20 IAMs_20 11 25 24.4
comp=Z,13µm,18.0s
NEA2 **Nenana** **54.76 339** P **P** **11 01 06.0 -0.2**
baz=126,SNR=30
NEA2 S **S** **11 08 49.0 +1.8**
baz=126
M20K **Styx River** **54.81 334** P **P** **11 01 06.2 -0.5**
M20K **Styx River** **54.81 334** P **P** **11 01 06.6 -0.1**
baz=120
M20K S **S** **11 08 48.3 +0.2**
baz=120
N19K **Bonanza Creek** **54.85 333** P **P** **11 01 05.9 -1.1**
N19K IAmb IAmb 11 01 18.9
comp=Z,200nm,1.1s
N19K **Bonanza Creek** **54.85 333** P **P** **11 01 06.1 -0.9**
baz=118,SNR=33
N19K S **S** **11 08 49.6 +0.9**
baz=118
CNBA **Chernabura Isl** **54.93 325** IAmb IAmb 11 01 19.4
comp=Z,145nm,1.0s
CHNA **Chernabura Isl** **54.94 325** P **P** **11 01 07.0 -0.5**
baz=109,SNR=6.4
CHNA S **S** **11 08 50.7 +0.9**
baz=109
A36M **Sachs Harbour** **54.95 353** P **P** **11 01 06.8 -0.6**
A36M IAmb IAmb 11 01 14.3
comp=Z,220nm,1.1s
A36M **Sachs Harbour** **54.95 353** P **P** **11 01 07.0 -0.4**
baz=156,SNR=14
A36M S **S** **11 08 48.4 -1.0**
baz=156
PPLA **Purkeypile** **54.96 336** P **P** **11 01 08.0 +0.2**
baz=122,SNR=30
PPLA S **S** **11 08 50.4 +0.2**
baz=122
P17K **Kvichak River** **55.00 331** P **P** **11 01 07.1 -0.8**
baz=115,SNR=13
P17K S **S** **11 08 51.1 +0.7**
baz=115
H24K **Noodor Dome** **55.12 340** IAmb IAmb 11 01 24.3
comp=Z,203nm,1.4s
H24K IAMs_20 IAMs_20 11 26 33.2
comp=Z,22µm,19.0s
H24K **Noodor Dome** **55.12 340** P **P** **11 01 09.5 +0.7**
baz=128,SNR=87
H24K S **S** **11 08 54.5 +2.5**
baz=128
BMAR **Burnt Mountain** **55.16 343** P **P** **11 01 08.8 -0.2**
BPAW **Bear Paw Mtn.** **55.16 337** P **P** **11 01 09.0 -0.1**
BPAW IAMs_20 IAMs_20 11 21 50.0
comp=Z,13µm,21.0s
BPAW **Bear Paw Mtn.** **55.16 337** P **P** **11 01 08.8 -0.3**
baz=124,SNR=38
BPAW S **S** **11 08 54.3 +1.7**
baz=124
VBST **Vila Bela da S** **55.19 123** *e*P **P** **11 01 10.7 +0.7**
I23K **Minto, Yukon-K** **55.19 339** IAMs_20 IAMs_20 11 26 23.8
comp=Z,13µm,20.0s
I23K **Minto, Yukon-K** **55.19 339** P **P** **11 01 09.8 +0.6**
baz=126,SNR=88
I23K S **S** **11 08 54.5 +1.7**
baz=126
CAST **Castle Rocks** **55.20 336** P **P** **11 01 08.8 -0.6**
CAST IAmb IAmb 11 01 23.0
comp=Z,443nm,1.8s
CAST **Castle Rocks** **55.20 336** P **P** **11 01 09.0 -0.3**
baz=122,SNR=52
SIV **San Ignacio** **55.20 125** P **P** **11 01 09.7 -0.3**
comp=Z,23nm,1.0s,baz=304,slow=8.4,SNR=45
SIV LR LR 11 22 26.2
comp=Z,40µm,20.4s,baz=325,slow=34
comp=Z,23nm,1.0s
NPGB **Novo Progresso** **55.22 113** *e*P **P** **11 01 10.2 -0.1**
M19K **Big River Lodg** **55.34 334** P **P** **11 01 10.2 -0.2**
M19K IAmb IAmb 11 01 29.3
comp=Z,235nm,1.3s
M19K **Big River Lodg** **55.34 334** P **P** **11 01 10.1 -0.2**
baz=119
M19K S **S** **11 08 56.1 +1.1**
baz=119
MCPB **Macapa, AP** **55.37 104** *e*P **P** **11 01 11.2 -0.2**
GO02 **Mina Guanaco** **55.38 140** IAmb IAmb 11 01 21.0
comp=Z,402nm,1.4s
N18K **Kilae Creek** **55.40 332** P **P** **11 01 10.1 -0.8**
N18K IAmb IAmb 11 01 22.9
comp=Z,202nm,1.1s
N18K **Kilae Creek** **55.40 332** P **P** **11 01 10.3 -0.6**
baz=117,SNR=32
N18K S **S** **11 08 56.0 +0.1**
baz=117
L20K **Farewell, AK** **55.41 335** P **P** **11 01 10.7 -0.3**
baz=120,SNR=43
L20K S **S** **11 08 56.6 +0.6**
baz=120
CHUM **Lake Minchumin** **55.53 337** P **P** **11 01 11.2 -0.5**
baz=122,SNR=18
CHUM S **S** **11 08 57.0 -0.5**
baz=122
SDPT **Sand Point** **55.59 325** IAmb IAmb 11 01 26.7
comp=Z,304nm,1.3s
SDPT **Sand Point** **55.59 325** P **P** **11 01 11.4 -0.9**
baz=109
SDPT S **S** **11 08 59.8 +1.4**
baz=109
MLY **Manley** **55.60 338** IAmb IAmb 11 01 30.3
comp=Z,449nm,1.9s
MLY IAMs_20 IAMs_20 11 25 47.6
comp=Z,13µm,19.0s
MLY **Manley** **55.60 338** P **P** **11 01 12.6 +0.3**
baz=125,SNR=60
MLY S **S** **11 09 01.4 +2.9**
baz=125
H23K **Yukon River** **55.66 340** IAMs_20 IAMs_20 11 25 52.0
comp=Z,17µm,18.0s
H23K **Yukon River** **55.66 340** P **P** **11 01 13.0 +0.4**
baz=126,SNR=61
H23K S **S** **11 09 00.8 +1.7**
baz=126
P16K **Nushagak River** **55.66 330** P **P** **11 01 11.9 -0.8**
baz=114
P16K S **S** **11 08 58.9 -0.4**
baz=114
L19K **White Mountain** **55.66 334** IAmb IAmb 11 01 24.9
comp=Z,141nm,1.1s
L19K **White Mountain** **55.66 334** P **P** **11 01 12.4 -0.4**
baz=119,SNR=39
L19K S **S** **11 09 00.4 +1.0**
baz=119
K20K **Telida** **55.93 336** P **P** **11 01 14.0 -0.6**
K20K IAmb IAmb 11 01 33.0
comp=Z,249nm,1.2s
K20K **Telida** **55.93 336** P **P** **11 01 13.8 -0.8**
baz=120,SNR=60
K20K S **S** **11 09 03.3 +0.4**
baz=120
O16K **Kokwok River B** **55.93 331** P **P** **11 01 14.2 -0.5**
baz=114,SNR=16
O16K S **S** **11 09 04.3 +1.3**
baz=114
I21K **Tanana** **56.12 338** IAmb IAmb 11 01 23.8
comp=Z,191nm,1.2s
I21K IAMs_20 IAMs_20 11 25 57.3
comp=Z,13µm,20.0s
I21K **Tanana** **56.12 338** P **P** **11 01 16.1 +0.2**
baz=124,SNR=92
I21K S **S** **11 09 06.1 +0.8**
baz=124
TIAR **Tiarei** **56.19 233** *e*P **P** **11 01 18.5 +1.4**
comp=Z,56nm,1.3s
TVO **Taravao** **56.26 233** *e*P **P** **11 01 18.8 +1.2**
comp=Z,143nm,1.3s
PDRB **Porto dos Gac** **56.29 118** *e*P **P** **11 01 17.9 0.0**
PPT **Papeete** **56.37 233** LR LR 11 18 25.5
comp=Z,27µm,21.4s,baz=54,slow=28
J20K **Nowinta River** **56.37 337** P **P** **11 01 16.9 -0.9**
J20K **Nowinta River** **56.37 337** P **P** **11 01 17.6 -0.2**
baz=121,SNR=102
J20K S **S** **11 09 09.4 +0.7**
baz=121
PPTF **Pamatai, Papee** **56.38 233** IAMs_20 IAMs_20 11 18 24.4
comp=Z,25µm,20.0s
PPT2 **Papeete2** **56.38 233** *e*LR LR 11 17 01.7
comp=Z,82µm,25.8s
PPT2 **Papeete2** **56.38 233** *e*LR LR 11 16 58.3
comp=Z,82µm,25.8s
PTLB **Pontes e Lacer** **56.40 124** *e*P **P** **11 01 18.9 +0.3**
PAE **Paea** **56.43 233** *e*P **P** **11 01 19.8 +1.0**
comp=Z,62nm,1.3s
TTA **Tatalina** **56.49 335** P **P** **11 01 17.8 -0.9**
baz=118,SNR=43
TTA S **S** **11 09 08.8 -1.7**
baz=118

TTA Tatalina 56.49 335 ⇑P P **11 01 17.3 -1.4**
AC06 Mina Casimiro 56.57 143 IAmb IAmb 11 01 28.1
comp=Z,408nm,1.6s
N16K Nishlik Lake 56.60 331 P P **11 01 18.9 -0.5**
baz=114,SNR=15
N16K S S **11 09 11.5 -0.4**
baz=114
H21K Melozitna Rive 56.67 338 IAmb IAmb 11 01 27.5
comp=Z,214nm,1.2s
H21K IAMs_20 IAMs_20 11 26 21.9
comp=Z,13µm,18.0s
H21K Melozitna Rive 56.67 338 P P **11 01 19.9 0.0**
baz=123,SNR=124
H21K S S **11 09 14.5 +1.8**
baz=123
RES Resolute Bay 56.67 3 P P **11 01 18.4 -1.3**
comp=Z,32nm,1.1s,baz=191,slow=8.7,SNR=13
RES LR LR 11 26 52.2
comp=Z,69µm,18.2s,baz=184,slow=37
comp=Z,32nm,1.1s
RES Resolute Bay 56.67 3 ⇑P P **11 01 18.6 -1.1**
CLDB Colider 56.70 117 *e*P P **11 01 20.9 +0.1**
COLD Coldfoot 56.70 341 P P **11 01 20.6 +0.6**
COLD IAmb IAmb 11 01 37.7
comp=Z,290nm,1.6s
COLD Coldfoot 56.70 341 P P **11 01 21.0 +0.9**
baz=126,SNR=14
COLD S S **11 09 16.2 +3.2**
baz=126
GO03 Copiap 56.81 143 P P **11 01 19.6 -1.9**
GO03 IAmb IAmb 11 01 29.8
comp=Z,193nm,1.4s
GO03 Copiap 56.81 143 *i*P P **11 01 22.1 +0.6**
AC02 Maricunga 56.90 141 P P **11 01 21.2 -1.3**
AC02 IAmb IAmb 11 01 31.6
comp=Z,277nm,1.4s
FALS False Pass 57.06 324 P P **11 01 21.6 -1.1**
baz=106
FALS S S **11 09 17.7 -0.3**
baz=106
H03N2 Juan Fernandez 57.23 154 T T 12 04 53.9
baz=333,slow=77,SNR=214
H03N1 Juan Fernandez 57.24 154 T T 12 04 51.8
baz=333,slow=77,SNR=292
H03N3 Juan Fernandez 57.25 154 T T 12 04 48.3
baz=333,slow=77,SNR=291
TOLK Toolik Lake Re 57.37 342 IAMs_20 IAMs_20 11 26 57.8
comp=Z,21µm,20.0s
TOLK Toolik Lake Re 57.37 342 P P **11 01 25.0 +0.1**
baz=128,SNR=53
TOLK S S **11 09 25.4 +3.5**
baz=128
LCO Las Campanas 57.63 144 IAMs_20 IAMs_20 11 20 10.9
comp=Z,14µm,22.0s
LCO Las Campanas 57.63 144 ⇓P P **11 01 28.1 +0.7**
SLA San Lorenzo 57.64 137 *i*P P **11 01 29.0 +1.5**
GCSA Galena City Sc 57.69 337 P P **11 01 26.4 -0.6**
baz=118,SNR=22
GCSA S S **11 09 25.6 -0.3**
baz=118
PTET Porto Estrela 57.94 122 *e*P P **11 01 28.8 -0.7**
NUUK Nuuk 58.10 24 *i*P P **11 01 29.7 -0.2**
NUUK IAmb IAmb 11 01 34.6
comp=Z,12nm,0.9s
NUUK Nuuk 58.10 24 ⇑P P **11 01 31.1 +1.1**
AKUT Akutan 58.21 323 IAmb IAmb 11 01 42.0
comp=Z,243nm,1.1s
AKUT Akutan 58.21 323 ⇓P P **11 01 29.3 -1.5**
FSA Cafayete 58.31 138 *i*P P **11 01 34.1 +1.9**
IVI Ivigtut 58.42 28 *i*P P **11 01 31.5 -0.7**
IVI IAmb IAmb 11 01 37.1
comp=Z,37nm,0.8s
NBRS Nobres 58.49 120 *e*P P **11 01 34.7 +1.2**
UNV Unalaska Valle 58.56 322 P P **11 01 32.9 -0.4**
UNV Unalaska Valle 58.56 322 P P **11 01 32.2 -1.2**
baz=102,SNR=13
UNV S S **11 09 37.6 -0.1**
baz=102
CO01 Juntas del Tor 58.71 144 P P **11 01 34.8 -0.2**
CO01 IAmb IAmb 11 02 00.3
comp=Z,219nm,1.6s
POCN Pocone 58.97 123 *e*P P **11 01 37.2 +0.5**
CO02 Combarbal 59.17 146 P P **11 01 37.4 -0.5**
AROD Rodeo 59.20 144 *i*P P **11 01 40.0 +1.5**
ACDV Cuesta del Vie 59.40 144 *i*P P **11 01 40.9 +1.2**
SALV Santo Antonio 59.41 122 *e*P P **11 01 40.3 +0.5**
NRS Narsarsuaq 59.66 29 P P **11 01 40.4 -0.5**
NRS IAmb IAmb 11 01 49.3
comp=Z,245nm,1.5s
NRS Narsarsuaq 59.66 29 P P **11 01 40.4 -0.5**
NRS pmax pmax
comp=Z,245nm,1.5s
NRS MLR MLR
comp=Z,32µm,18.0s
NRS Narsarsuaq 59.66 29 *i*P P **11 01 39.8 -1.0**
ACCO Cerro Coronel 59.75 144 *i*P P **11 01 43.3 +1.1**
SFJD Kangerlussuaq 59.76 22 P P **11 01 40.6 -0.8**
comp=Z,54nm,1.1s,baz=236,slow=7.6,SNR=24
SFJD LR LR 11 28 13.2
comp=Z,24µm,18.5s,baz=240,slow=37
comp=Z,54nm,1.1s
SFJD Kangerlussuaq 59.76 22 P P **11 01 41.1 -0.3**
SFJD IAmb IAmb 11 01 48.8
comp=Z,304nm,1.6s
SFJD Kangerlussuaq 59.76 22 IAMs_20 IAMs_20 11 29 39.5
comp=Z,26µm,21.0s
SFJD Kangerlussuaq 59.76 22 P P **11 01 41.1 -0.3**
SFJD pmax pmax
comp=Z,304nm,1.6s
SFJD MLR MLR
comp=Z,26µm,21.0s
SFJD Kangerlussuaq 59.76 22 *i*P P **11 01 40.9 -0.5**
SFJD IAmb IAmb 11 01 43.2
comp=Z,16nm,0.8s
SFJD Kangerlussuaq 59.76 22 ⇑P P **11 01 41.5 +0.1**
PRPB Parauapebas 59.76 109 *e*P P **11 01 43.4 +1.1**
NIKH Nikolski High 59.78 321 P P **11 01 41.3 -0.5**
NIKH IAmb IAmb 11 01 52.9
comp=Z,189nm,1.1s
NIKH Nikolski High 59.78 321 P P **11 01 40.7 -1.1**
baz=100
NIKH S S **11 09 52.9 -0.6**
baz=100
TMAB Tom-Au,PA,Br 59.80 104 *e*P P **11 01 43.0 +0.4**
TBI Tubuai 59.87 228 *e*LR LR 11 18 35.3
comp=Z,86µm,27.2s
TBI Tubuai 59.87 228 *e*LR LR 11 18 44.3
comp=Z,86µm,27.2s
ACLC CERRO LA CRUZ 60.10 141 *i*P P **11 01 45.1 +0.6**
RTLS Leoncito 60.54 145 *i*P P **11 01 49.1 +1.4**
ILULI Ilulissat 60.62 19 P P **11 01 47.2 0.0**
ILULI Ilulissat 60.62 19 P P **11 01 47.3 0.0**
ILULI pmax pmax
comp=Z,112nm,1.1s
ILULI MLR MLR
comp=Z,42µm,19.0s
ILULI Ilulissat 60.62 19 *i*P P **11 01 44.6 -2.6**
ILULI IAmb IAmb 11 01 48.7
comp=Z,27nm,1.0s
RTLL Cerro Villicun 60.64 144 *i*P P **11 01 45.0 -3.0**
ZON Zonda 60.69 144 *i*P P **11 01 44.2 -4.1**
AVFE Valle Fertil 60.71 143 *i*P P **11 01 49.0 +0.4**
AUSP Uspallata 60.82 145 *i*P P **11 01 50.6 +1.1**
PEL Peldehue 60.85 147 IAMs_20 IAMs_20 11 24 01.3
comp=Z,15µm,18.0s
PEL Peldehue 60.85 147 *i*P P **11 01 49.6 +0.2**
PEL Peldehue 60.85 147 ⇑P P **11 01 50.0 +0.5**
A21K Barrow 60.90 343 IAMs_20 IAMs_20 11 28 52.0
comp=Z,17µm,20.0s
A21K Barrow 60.90 343 P P **11 01 48.1 -1.0**
baz=122
A21K S S **11 10 06.6 -0.8**
baz=122
ANM Nome 60.96 335 P P **11 01 50.7 +1.0**
ANM IAmb IAmb 11 02 10.5
comp=Z,166nm,1.4s
ANM Nome 60.96 335 P P **11 01 50.7 +1.0**
ANM pmax pmax
comp=Z,166nm,1.4s
ANM MLR MLR
comp=Z,9µm,20.0s
ANM Nome 60.96 335 P P **11 01 49.7 +0.1**
baz=109,SNR=7.1
ANM S S **11 10 09.4 +1.1**
baz=109
PP1B Ponte de Pedra 60.98 123 *e*P P **11 01 50.4 -0.2**

MT05 Renca 61.02 147 P P **11 01 50.7 +0.1**
APLL PUNTA DE LOS L 61.06 142 *i*P P **11 01 50.1 -0.8**
SNDB Serra Nova Dou 61.08 115 *e*P P **11 01 52.4 +1.1**
UPNV Upernavik 61.09 15 *i*P P **11 01 47.6 -2.8**
JOHN Johnston Islan 61.10 279 IAMs_20 IAMs_20 11 20 36.5
comp=Z,19µm,20.0s
DY2G Dye2 61.13 23 *i*P P **11 01 49.6 -1.5**
DY2G IAmb IAmb 11 01 56.0
comp=Z,45nm,0.8s
MT01 Popeta 61.13 148 IAmb IAmb 11 01 58.7
comp=Z,204nm,1.2s
TULEG Thule 61.13 9 IAmb IAmb 11 02 37.7
comp=Z,201nm,1.6s
TULEG Thule 61.13 9 *i*P P **11 01 48.6 -2.0**
NUUG Nuugaatsiaq 61.16 17 ⇑*i*P P **11 01 50.6 -0.3**
MT03 Universidad Ad 61.22 147 P P **11 01 51.2 -0.8**
RDOG Red Dog Mine 61.32 339 IAMs_20 IAMs_20 11 30 16.7
comp=Z,14µm,18.0s
RDOG Red Dog Mine 61.32 339 P P **11 01 47.8 -4.3**
baz=114,SNR=12
RDOG S S **11 10 09.9 -3.0**
baz=114
SPIA Saint Paul Isl 61.32 326 P P **11 01 50.4 -1.8**
baz=101
SPIA S S **11 10 11.9 -1.3**
baz=101
ASAL Salagasta 61.40 145 *i*P P **11 01 54.4 +1.2**
ARCO CERRO ARCO 61.54 146 *i*P P **11 01 55.4 +1.1**
BO04 La Punta 61.56 148 IAmb IAmb 11 02 01.9
comp=Z,281nm,1.4s
GO05 Huala 61.71 149 IAmb IAmb 11 02 02.6
comp=Z,229nm,1.2s
GO05 Huala 61.71 149 *i*P P **11 01 56.0 +0.8**
AAGR Agrelo 61.78 146 *i*P P **11 01 57.1 +1.3**
AQDB Aquidauana 61.95 126 *e*P P **11 01 57.4 +0.3**
TNA Tin City 62.30 335 IAmb IAmb 11 02 06.4
comp=Z,110nm,1.2s
TNA Tin City 62.30 335 P P **11 01 58.8 +0.1**
baz=107,SNR=8.8
TNA S S **11 10 28.3 +3.1**
baz=107
TNA Tin City 62.30 335 ⇓P P **11 01 58.9 +0.2**
ARAG Araguaiana, MT 62.48 119 *e*P P **11 01 60.9 +0.9**
BI05 Punta Hualpn 62.53 151 P P **11 02 00.1 -0.5**
BI05 IAmb IAmb 11 02 08.3
comp=Z,216nm,1.2s
ML02 Panimavida 62.56 149 P P **11 02 01.3 +0.4**
ANTJ Antonio Joao (62.60 128 *e*P P **11 02 01.6 +0.1**
DVLD Doverlandia 62.67 120 *e*P P **11 02 02.7 +0.7**
SMTB Santa Maria do 62.90 110 *e*P P **11 02 03.8 +0.2**
MRA San Martin 63.01 143 *i*P P **11 02 03.7 -0.3**
C2SB Chapadao do Su 63.24 123 *e*P P **11 02 06.0 +0.3**
RFA San Rafael 63.27 147 *i*P P **11 02 07.2 +1.5**
GAMB Gambell 63.40 333 P P **11 02 06.0 -0.1**
baz=103
GAMB S S **11 10 41.0 +2.0**
baz=103
EDS3 Malargue 63.57 148 *i*P P **11 02 12.5 +4.8**
ROSB Rosrio 63.66 103 *e*P P **11 02 09.5 +0.8**
PEXB Peixe 63.72 114 *e*P P **11 02 10.2 +1.2**
AMBA Amambai (Brazi 63.90 128 *e*P P **11 02 11.1 +1.0**
ANGG Ammassalik, Gr 64.23 25 *i*P P **11 02 10.6 -0.9**
ANGG IAmb IAmb 11 02 15.7
comp=Z,34nm,0.8s
ANGG Ammassalik, Gr 64.23 25 ⇑P P **11 02 10.7 -0.9**
CPUP Villa Florida 64.25 132 P P **11 02 12.0 -0.2**
comp=Z,44nm,1.1s,baz=322,slow=7.4,SNR=17
CPUP S S **11 10 43.9 -6.8**
comp=Z,1.7nm,0.8s,baz=149,slow=9.9,SNR=1.5
CPUP LR LR 11 28 07.1
comp=Z,18µm,21.9s,baz=326,slow=34
comp=Z,44nm,1.1s
CPUP Villa Florida 64.25 132 IAmb IAmb 11 02 19.8
comp=Z,250nm,1.2s
CPUP Villa Florida 64.25 132 *e*P P **11 02 12.7 +0.5**
CPUP Villa Florida 64.25 132 ⇑P P **11 02 12.4 +0.3**
ICESG Greenland Ices 64.36 21 *i*P P **11 02 11.6 -1.2**
ICESG IAmb IAmb 11 02 14.8
comp=Z,98nm,1.0s
ADK Adak 64.42 319 IAMs_20 IAMs_20 11 23 52.3
comp=Z,10µm,21.0s
LR03 Panguipulli 65.28 153 IAmb IAmb 11 02 33.2
comp=Z,148nm,1.4s
MCR1 Marechal Candi 65.50 129 *e*P P **11 02 21.4 +1.0**
TRCB Terra Rica 65.61 126 *e*P P **11 02 21.5 +0.3**
BDFB Brasilia 65.62 117 P P **11 02 22.3 +0.8**
comp=Z,9.1nm,0.8s,baz=293,slow=7.7,SNR=8.6
BDFB S S **11 11 04.3 -3.9**
comp=Z,2.4nm,0.7s,baz=358,slow=24,SNR=1.7
comp=Z,9.1nm,0.8s
BDFB Brasilia 65.62 117 P P **11 02 22.3 +0.8**
BDFB IAmb IAmb 11 02 35.1
comp=Z,121nm,1.3s
BDFB Brasilia 65.62 117 *e*P P **11 02 22.9 +1.4**
ITRB Iturama 65.72 122 *e*P P **11 02 23.0 +1.0**
SUMG Summit 65.74 18 P P **11 02 21.9 +0.1**
SUMG Summit 65.74 18 P P **11 02 21.9 +0.1**
SUMG pmax pmax
comp=Z,262nm,1.2s
SUMG MLR MLR
comp=Z,55µm,18.0s
SUMG Summit 65.74 18 *i*P P **11 02 20.5 -1.2**
SUMG IAmb IAmb 11 02 23.6
comp=Z,50nm,1.0s
SUMG Summit 65.74 18 ⇑P P **11 02 21.8 +0.1**
PCMB Pacaembu 66.02 125 *e*P P **11 02 26.1 +2.3**
MIDW Midway 66.22 293 IAMs_20 IAMs_20 11 24 17.6
comp=Z,10µm,18.0s
LL05 Los Muermos 66.28 154 P P **11 02 25.4 +0.3**
RAR Rarotonga 66.35 236 LR LR 11 24 14.7
comp=Z,18µm,18.2s,baz=56,slow=30
RAR Rarotonga 66.35 236 IAMs_20 IAMs_20 11 23 07.6
comp=Z,21µm,20.0s
LL03 Petrohue 66.50 154 IAmb IAmb 11 02 43.2
comp=Z,185nm,1.1s
IPMB Ipameri, GO 66.60 120 *e*P P **11 02 29.4 +1.7**
SDBA SÃO DESIDERIO 66.82 113 *e*P P **11 02 29.8 +0.6**
ITQB Itaqui 66.82 135 P P **11 02 29.3 +0.5**
ITQB Itaqui 66.82 135 *e*P P **11 02 29.3 +0.5**
PLCA Paso Flores 66.97 152 P P **11 02 30.4 +0.8**
comp=Z,33nm,1.0s,baz=328,slow=8.5,SNR=33
PLCA S S **11 11 21.5 -2.2**
comp=Z,0.6nm,0.5s,baz=311,slow=8.3,SNR=1.2
PLCA LR LR 11 25 32.1
comp=Z,23µm,18.6s,baz=340,slow=30
comp=Z,33nm,1.0s
PLCA Paso Flores 66.97 152 P P **11 02 30.4 +0.8**
PLCA Paso Flores 66.97 152 *e*P P **11 02 30.6 +1.0**
PLCA Paso Flores 66.97 152 ⇓P P **11 02 30.0 +0.4**
PTGB Pitanga 67.12 128 *e*P P **11 02 31.6 +0.7**
SOEG Soedalen 67.13 23 *i*P P **11 02 29.5 -0.7**
SOEG IAmb IAmb 11 02 36.8
comp=Z,33nm,0.8s
CRSM Crissiumal (Br 67.28 131 *e*P P **11 02 32.5 +0.8**
LL07 Hotel Espejo d 67.47 155 P P **11 02 34.0 +1.4**
UNIS Unistalda (Bra 67.51 133 *e*P P **11 02 34.0 +0.8**
NBMO Morrinhos-CE 67.61 102 *e*P P **11 02 34.5 +0.4**
GO07 Milladeo Hill, 67.64 156 P P **11 02 34.7 +1.0**
BB19B Bebedouro 67.90 123 *e*P P **11 02 37.0 +1.2**
FRTB Fartura 68.27 125 *e*P P **11 02 40.2 +2.0**
LL02 Futaleuf 68.43 154 P P **11 02 39.1 +0.5**
ITAB Concordia 68.50 130 *e*P P **11 02 40.8 +1.4**
JANB Januaria 68.51 115 *e*P P **11 02 41.0 +1.1**
ALGR Alto Alegre (B 68.77 132 *e*P P **11 02 42.6 +1.4**
NBPB Pedra_Branca-C 68.85 104 *e*P P **11 02 43.2 +1.2**
LPA La Plata 69.38 140 *e*P P **11 02 44.5 -0.2**
LPA sP **pwP** **11 02 50.3 +1.2**
LPA PCP **PcP** **11 03 08.3 +0.1**
LPA PP **PP** **11 05 12.9 -5.4**
LPA pPP 11 05 50.0
LPA PKIKP **PKiKP** **11 08 55.4 -5.7**
LPA S **S** **11 11 53.8 +1.4**
LPA sS sS 11 12 05.3 +12
LPA PS **PnS** **11 12 13.6 -3.3**
LPA SKIKP 11 12 26.4
LPA PKIKS 11 12 33.5
LPA SKS **SKiKP** **11 12 40.4 +5.1**
LPA SCS **ScS** **11 12 52.5 +5.7**
LPA SKIKS 11 15 59.5
LPA SS **SS** **11 16 22.0 +2.1**
LPA SSS SSS 11 20 24.5
RCLB Rio Claro- Sao 69.38 123 *e*P P **11 02 46.8 +1.7**
CPSB Cacapava Do Su 69.44 134 *e*P P **11 02 46.0 +0.8**
TIJ01 Guaruva-PR 69.76 127 *e*P P **11 02 49.1 +1.6**

SHEM Shemya Is, Ala 70.07 320 LR LR 11 27 15.9
comp=Z,5µm,21.9s,baz=91,slow=31
VAO Valinhos 70.13 124 *e*P P **11 02 48.8 -1.0**
PLTB Pedras Altas 70.16 135 *e*P P **11 02 51.2 +1.5**
NBMA Muriti-CE 70.28 105 *e*P P **11 02 52.5 +1.7**
COYC Coyhaique 70.31 156 P P **11 02 51.3 +1.1**
COYC Coyhaique 70.31 156 IAMs_20 IAMs_20 11 26 24.4
comp=Z,14µm,21.0s
COYC Coyhaique 70.31 156 ⇑P P **11 02 51.4 +1.1**
NBPN Ponto Novo - B 70.34 109 *e*P P **11 02 52.9 +1.7**
PET01 Itanhaem-SP 70.55 125 *e*P P **11 02 52.1 0.0**
CNLB Canela 70.62 131 *e*P P **11 02 54.3 +1.7**
SCO Scoresbysund 70.63 21 P P **11 02 51.7 -0.2**
SCO IAMs_20 IAMs_20 11 33 20.8
comp=Z,19µm,20.0s
SCO Scoresbysund 70.63 21 P P **11 02 51.7 -0.2**
SCO pmax pmax
comp=Z,101nm,1.4s
SCO Scoresbysund 70.63 21 *i*P P **11 02 51.6 -0.3**
SCO IAmb IAmb 11 03 04.3
comp=Z,7.8nm,1.0s
SCO Scoresbysund 70.63 21 ⇑P P **11 02 51.6 -0.2**
BSCB Bom Sucesso 70.90 121 *e*P P **11 02 55.5 +1.0**
BORG Borgarnes 70.99 27 P P **11 02 55.2 +1.0**
comp=Z,40nm,1.2s,baz=293,slow=3.8,SNR=4.5
BORG LR LR 11 34 05.2
comp=Z,16µm,18.9s,baz=279,slow=36
comp=Z,40nm,1.2s
BORG Borgarnes 70.99 27 IAMs_20 IAMs_20 11 33 44.6
comp=Z,17µm,20.0s
CMLA Cha da Macela 70.99 56 IAMs_20 IAMs_20 11 33 34.8
comp=Z,9µm,19.0s
DBG Daneborg 71.15 17 *i*P P **11 02 54.3 -0.8**
DBG IAmb IAmb 11 03 03.4
comp=Z,11nm,0.9s
PARB Paraibuna 71.36 123 *e*P P **11 02 59.0 +1.7**
TER01 Tubaro-SC 71.42 130 *e*P P **11 02 58.9 +1.5**
DAG Danmarks Havn 71.51 14 *i*P P **11 02 56.0 -1.2**
DAG IAmb IAmb 11 03 03.3
comp=Z,26nm,0.9s
DAG Danmarks Havn 71.51 14 ⇑P P **11 02 56.5 -0.7**
SLP01 Ubatuba-SP 71.73 123 *e*P P **11 03 00.2 +0.7**
NOR Nord 71.79 9 *i*P P **11 02 58.4 -0.4**
NOR IAmb IAmb 11 03 06.1
comp=Z,21nm,0.9s
GDU01 Guandu, BA 72.07 112 *e*P P **11 03 03.1 +1.6**
ESAR Angra dos Reis 72.15 122 *e*P P **11 03 03.0 +1.2**
RCBR Riachuelo 72.36 102 P P **11 03 04.8 +1.4**
comp=Z,18nm,1.1s,baz=5.1,slow=12,SNR=3.3
RCBR LR LR 11 35 30.5
comp=Z,13µm,21.4s,baz=85,slow=36
comp=Z,18nm,1.1s
RCBR Riachuelo 72.36 102 P P **11 03 04.1 +0.7**
RCBR Riachuelo 72.36 102 IAMs_20 IAMs_20 11 34 56.7
comp=Z,15µm,21.0s
RCBR Riachuelo 72.36 102 P P **11 03 04.1 +0.7**
RCBR pmax pmax
comp=Z,115nm,1.3s
RCBR MLR MLR
comp=Z,15µm,21.0s
RCBR Riachuelo 72.36 102 *e*P P **11 03 05.8 +2.4**
RCBR Riachuelo 72.36 102 ⇑P P **11 03 08.4 +5.0**
NBLA Lagarto - SE 72.57 108 *e*P P **11 03 04.9 +0.3**
BILL Bilibino 72.65 337 P P **11 03 03.4 -0.7**
BILL Bilibino 72.65 337 *d*P P **11 03 03.7 -0.4**
BILL *e* 11 05 49.4
BILL *e*S **SKiKP** **11 12 36.5 -2.9**
BILL *e*SS **SS** **11 17 11.9 +3.7**
BILL pmax pmax
comp=Z,88nm,1.7s
BILL MLR MLR
comp=Z,8µm,16.0s
CMC01 Camacan, BA 72.80 113 *e*P P **11 03 07.4 +1.5**
AFI Afiamalu 73.04 249 LR LR 11 28 12.6
comp=Z,15µm,18.4s,baz=69,slow=30
GUA01 Guaratinga, BA 73.07 114 *e*P P **11 03 08.2 +0.7**
NBCA Caruaru-PE 73.13 105 *e*P P **11 03 09.5 +1.5**
BSFB Barra de Sao F 73.16 117 *e*P P **11 03 10.0 +2.0**
NAN01 Guarapari, ES 73.34 116 *e*P P **11 03 11.1 +2.0**
NBAN Anadia - AL 73.43 106 *e*P P **11 03 11.1 +1.4**
RIB01 Linhares ES 73.76 117 *e*P P **11 03 13.3 +1.8**
CAM01 Campos-RJ 73.84 120 *e*P P **11 03 13.6 +1.6**
ALF01 Guarapari-ES 74.06 118 *e*P P **11 03 14.2 +1.0**
NBRF Rio Formoso - 74.11 105 *e*P P **11 03 14.4 +0.7**
ABR01 Abrolhos, BA 74.62 115 *e*P P **11 03 19.0 +2.4**
JMIC Jan Mayen 75.00 20 LR LR 11 37 24.7
comp=Z,21µm,18.1s,baz=284,slow=37
GO09 Cerro Castillo 75.02 159 P P **11 03 19.9 +1.8**
GO09 IAmb IAmb 11 03 26.9
comp=Z,234nm,1.4s
KBS Kingsbay 77.14 10 P P **11 03 31.2 +1.3**
KBS IAmb IAmb 11 03 49.9
comp=Z,575nm,2.4s
KBS Kingsbay 77.14 10 *i*P P **11 03 30.4 +0.4**
KBS Kingsbay 77.14 10 *i*P P **11 03 30.9 +0.9**
KBS Kingsbay 77.14 10 ⇑P P **11 03 31.5 +1.6**
SACV Santiago Islan 77.59 78 IAMs_20 IAMs_20 11 31 56.1
comp=Z,11µm,22.0s
SPITS Spitsbergen Ar 78.29 10 P P **11 03 36.6 +0.2**
comp=Z,25nm,1.0s,baz=284,slow=5.8,SNR=11
comp=Z,25nm,1.0s
SPB2 Spitsbergen Ar 78.29 10 P P **11 03 37.1 +0.7**
SPB2 IAmb IAmb 11 03 50.0
comp=Z,333nm,1.8s
PMOZ Porto Moniz, M 78.66 59 *e*P P **11 03 40.8 +1.4**
comp=Z,167nm,1.3s
PMOZ Porto Moniz, M 78.66 59 *e*S S 11 13 51.2 +14
HSPB Hornsund (broa 78.80 11 *e*P P **11 03 40.9 +1.7**
HSPB *e*S **S** **11 13 38.7 +1.4**
HSPB *e*L L 11 39 52.0
comp=Z,20µm,21.6s
PMAR Madeira 78.91 59 *e*P P **11 03 42.3 +1.4**
comp=Z,218nm,1.2s
PET Petropavlovsk 79.22 322 *d*P P **11 03 41.7 -0.2**
PET *e* 11 06 42.5
PET *e*S S **11 13 37.2 -5.3**
PET *e*PS **PnS** **11 14 17.7 -6.5**
PET *e*PPS PPS 11 14 35.8
PET pmax pmax
comp=Z,1µm,12.7s
PET pmax pmax
comp=Z,1µm,13.0s
PET pmax pmax
comp=Z,96nm,1.4s
PET MLR MLR
comp=Z,3µm,17.0s
PET MLR MLR
comp=Z,3µm,21.0s
USHA Ushuaia 79.29 159 P P **11 03 42.9 +0.8**
comp=Z,20nm,1.0s,baz=304,slow=7.9,SNR=3.9
USHA LR LR 11 32 36.4
comp=Z,15µm,18.3s,baz=322,slow=31
comp=Z,20nm,1.0s
PMPST Porto Santo, M 79.30 59 *e*P P **11 03 43.8 +1.0**
comp=Z,381nm,1.5s
SEY Seymchan 79.40 333 P P **11 03 42.6 -0.2**
comp=Z,26nm,0.9s,baz=89,slow=7.7,SNR=28
comp=Z,26nm,0.9s
SEY Seymchan 79.40 333 *ce*P P **11 03 42.5 -0.2**
SEY pmax pmax
comp=Z,104nm,1.3s
SEY MLR MLR
comp=Z,6µm,20.0s
IDGL Inch Island, C 79.48 35 ⇑*e*P P **11 03 43.6 +0.3**
IDGL IAMs_20 IAMs_20 11 38 05.1
comp=Z,21µm,18.6s
PETK Petropavlovsk- 79.75 323 P P **11 03 45.2 +0.4**
comp=Z,8.8nm,1.0s,baz=83,slow=12,SNR=7.6
PETK LR LR 11 32 26.3
comp=Z,3µm,22.0s,baz=54,slow=31
comp=Z,8.8nm,1.0s
PETK Petropavlovsk- 79.75 323 P P **11 03 43.1 -1.7**
LINV Loch Inver, As 79.78 32 ⇑*e*P P **11 03 45.4 +0.5**
LINV IAmb IAmb 11 03 46.8
comp=Z,204nm,1.3s
LINV IAMs_20 IAMs_20 11 39 28.8
comp=Z,10µm,17.7s
KPL Plockton 79.80 33 ⇑*e*P P **11 03 45.1 +0.1**
KPL IAmb IAmb 11 03 46.8
comp=Z,274nm,1.4s
KPL IAMs_20 IAMs_20 11 40 42.4
comp=Z,15µm,16.4s
KAC Achnashellach 79.93 33 ⇑*e*P P **11 03 46.1 +0.4**
BIGH Upper Bighouse 80.31 31 *e*P P **11 03 48.1 +0.4**
BIGH IAMs_20 IAMs_20 11 39 38.0

comp=Z,20µm,18.2s
MDO Dochfour 80.43 33 *e*P **P 11 03 48.9 +0.5**
ILTH Belurgan, Co L 80.45 36⇑ *e*P **P 11 03 48.9 +0.3**
IWEX Carrickbyrne, 80.70 38 *e*P **P 11 03 50.7 +0.7**
IWEX IAmb IAmb 11 03 52.3
comp=Z,244nm,1.4s
IWEX IAMs_20 IAMs_20 11 39 12.3
comp=Z,33µm,18.3s
EAB Aberfoyle 80.85 34⇑ *e*P **P 11 03 51.3 +0.6**
PGBU Glenifferbraes 80.90 34⇑ *e*P **P 11 03 51.7 +0.8**
PGBU IAmb IAmb 11 03 53.0
comp=Z,409nm,1.2s
PGBU IAMs_20 IAMs_20 11 35 33.0
comp=Z,25µm,24.2s
INVG Invergeldie, C 80.92 34⇑ *e*P **P 11 03 51.2 +0.1**
INVG IAmb IAmb 11 03 53.1
comp=Z,150nm,1.4s
INVG IAMs_20 IAMs_20 11 35 35.7
comp=Z,25µm,23.9s
MCD Coleburn Disti 80.95 32⇑ *e*P **P 11 03 52.0 +0.8**
LRW Lerwick 81.06 29⇑ *e*P **P 11 03 52.5 +0.7**
LRW IAMs_20 IAMs_20 11 42 07.9
comp=Z,12µm,16.1s
GAL1 Galloway 81.08 35⇑ *e*P **P 11 03 52.5 +0.5**
GAL1 IAmb IAmb 11 03 53.9
comp=Z,224nm,1.2s
GAL1 IAMs_20 IAMs_20 11 40 52.0
comp=Z,18µm,18.0s
MA2 Magadan 81.30 330 P **P 11 03 53.1 +0.1**
comp=Z,22nm,1.0s,baz=60,slow=4.6,SNR=13
MA2 LR LR 11 35 05.1
comp=Z,3µm,21.0s,baz=54,slow=32
comp=Z,22nm,1.0s
MA2 Magadan 81.30 330 P **P 11 03 53.8 +0.7**
MA2 IAmb IAmb 11 04 05.3
comp=Z,187nm,1.3s
MA2 IAMs_20 IAMs_20 11 45 27.5
comp=Z,6µm,18.0s
MA2 Magadan 81.30 330 *ce*P **P 11 03 52.6 -0.4**
MA2 pmax pmax
comp=Z,88nm,1.7s
WIM Isle of Man 81.34 36⇑ *e*P **P 11 03 54.1 +0.8**
IOMK Kirk Michael 81.36 36⇑ *e*P **P 11 03 53.8 +0.4**
IOMK IAmb IAmb 11 03 56.2
comp=Z,470nm,1.2s
IOMK IAMs_20 IAMs_20 11 39 05.8
comp=Z,55µm,19.5s
SKR Severo-Kuril's 81.41 321 *c i*P **P 11 03 51.2 -2.6**
SKR *i* S **S 11 14 07.5 +1.9**
SKR pmax pmax
comp=Z,500nm,8.0s
SKR MLR MLR
comp=Z,2µm,18.0s
EDU Dundee 81.42 33⇑ *e*P **P 11 03 54.2 +0.5**
EDI Edinburgh 81.55 34⇑ *e*P **P 11 03 54.9 +0.5**
EDI IAmb IAmb 11 03 56.5
comp=Z,326nm,1.1s
EDI IAMs_20 IAMs_20 11 35 52.9
comp=Z,25µm,24.6s
EBL Broad Law 81.67 34⇑ *e*P **P 11 03 55.6 +0.5**
WPS Cemaes, Angles 81.68 36⇑ *e*P **P 11 03 55.2 +0.1**
WPS IAmb IAmb 11 03 56.9
comp=Z,123nm,1.3s
WPS IAMs_20 IAMs_20 11 39 05.3
comp=Z,24µm,21.2s
ESK Eskdalemuir 81.75 34 P **P 11 03 55.9 +0.4**
ESK IAmb IAmb 11 03 57.7
comp=Z,177nm,1.2s
ESK Eskdalemuir 81.75 34 P **P 11 03 55.9 +0.4**
ESK pmax pmax
comp=Z,177nm,1.2s
EKA Eskdalemuir Ar 81.77 34 LR LR 11 39 49.3
comp=Z,11µm,19.6s,baz=284,slow=36
WLF1 Llynfaes 81.78 37⇑ *e*P **P 11 03 55.8 +0.1**
WLF1 IAmb IAmb 11 03 56.7
comp=Z,165nm,1.3s
WLF1 IAMs_20 IAMs_20 11 39 38.7
comp=Z,47µm,18.3s
WME Myndd Eilian 81.79 36⇑ *e*P **P 11 03 56.4 +0.7**
ESY Stoneypath 81.85 34⇑ *e*P **P 11 03 56.7 +0.6**
TARA Tarawa 81.89 269 IAMs_20 IAMs_20 11 30 57.9
comp=Z,6µm,19.0s
YLL Llanberis 81.95 37⇑ *e*P **P 11 03 56.8 +0.2**
WAKE Wake Island 82.47 288 P **P 11 03 59.3 -0.7**
WAKE Wake Island 82.47 288 IAMs_20 IAMs_20 11 30 25.2
comp=Z,15µm,22.0s
HTL Hartland 82.50 39⇑ *e*P **P 11 04 00.3 +0.8**
HTL IAmb IAmb 11 04 01.6
comp=Z,240nm,1.4s
HTL IAMs_20 IAMs_20 11 38 54.8
comp=Z,23µm,22.1s
SBD1 Bryn Du 82.55 37⇑ *e*P **P 11 04 00.3 +0.5**
FOEL Foel Wylfa 82.59 37⇑ *e*P **P 11 04 00.3 +0.3**
FOEL IAmb IAmb 11 04 01.8
comp=Z,237nm,1.5s
FOEL IAMs_20 IAMs_20 11 40 31.0
comp=Z,27µm,17.2s
H11S1 WAKE ISLAND Hy 82.65 287 T T 12 36 10.2
baz=253,slow=74,SNR=60
H11S2 WAKE ISLAND Hy 82.65 287 T T 12 36 18.5
baz=77,slow=74,SNR=59
H11S3 WAKE ISLAND Hy 82.66 287 T T 12 36 53.5
SNR=35
HLM1 Long Mynd 82.90 37⇑ *e*P **P 11 04 02.2 +0.5**
HLM1 IAMs_20 IAMs_20 11 40 32.2
comp=Z,34µm,17.5s
PGAV Gavieira, Arco 82.94 48 *e*P **P 11 04 02.4 +0.2**
comp=Z,151nm,1.7s
PGAV Gavieira, Arco 82.94 48 *e*PP **PP 11 07 13.9 +1.5**
PGAV *e*S **S 11 14 25.3 +3.3**
MCH1 Michaelchurch 83.02 38⇑ *e*P **P 11 04 02.7 +0.5**
MCH1 IAmb IAmb 11 04 04.8
comp=Z,215nm,1.4s
MCH1 IAMs_20 IAMs_20 11 40 37.7
comp=Z,40µm,17.9s
STNC Stoke 83.08 36⇑ *e*P **P 11 04 03.6 +1.1**
STNC IAmb IAmb 11 04 05.1
comp=Z,388nm,1.3s
STNC IAMs_20 IAMs_20 11 39 57.2
comp=Z,26µm,20.8s
HPK Haverah Park 83.09 35⇑ *e*P **P 11 04 03.5 +0.9**
HPK IAmb IAmb 11 04 05.0
comp=Z,442nm,1.4s
HPK IAMs_20 IAMs_20 11 40 52.0
comp=Z,24µm,18.5s
PMAFR Mafra 83.14 51 *e*P **P 11 04 03.6 +0.5**
comp=Z,256nm,1.6s
PMAFR Mafra 83.14 51 *e*PP **PP 11 07 18.3 +4.4**
PMAFR *e*S **S 11 14 28.8 +4.9**
TIXI Tiksi 83.14 345 LR LR 11 44 10.6
comp=Z,11µm,19.7s,baz=0.0,slow=38
TIXI Tiksi 83.14 345 P **P 11 04 01.3 -1.1**
TIXI IAMs_20 IAMs_20 11 43 20.5
comp=Z,12µm,19.0s
TIXI Tiksi 83.14 345 *ce*P **P 11 04 01.6 -0.8**
TIXI pmax pmax
comp=Z,148nm,1.7s
TIXI MLR MLR
comp=Z,12µm,19.0s
MONM Monmouth 83.19 38⇑ *e*P **P 11 04 03.2 +0.1**
MONM IAmb IAmb 11 04 05.1
comp=Z,423nm,1.4s
MONM IAMs_20 IAMs_20 11 40 43.2
comp=Z,39µm,17.8s
PCAB Cabril 83.20 48 *e*P **P 11 04 03.8 +0.4**
comp=Z,171nm,1.7s
PCAB Cabril 83.20 48 *e*PP **PP 11 07 16.7 +2.3**
LBWR Ladybower, Pea 83.24 36⇑ *e*P **P 11 04 04.2 +0.8**
LBWR IAmb IAmb 11 04 05.8
comp=Z,338nm,1.3s
LBWR IAMs_20 IAMs_20 11 40 12.8
comp=Z,21µm,19.5s
PMST Lisbon--Monsan 83.28 52 *e*P **P 11 04 04.6 +0.8**
comp=Z,281nm,1.3s
PMST Lisbon--Monsan 83.28 52 *e*PP **PP 11 07 19.4 +4.3**
LIS Lisbon 83.31 52 *e*P **P 11 04 04.6 +0.6**
LIS IAmb IAmb 11 04 18.6
comp=Z,781nm,2.1s
LIS *e*S **S 11 14 26.0 +0.4**
LIS Lisbon 83.31 52 *e*P **P 11 04 04.6 +0.6**
LIS *e*S **S 11 14 26.0 +0.4**
PSBE So Bento 83.33 51 *e*P **P 11 04 04.3 +0.2**
comp=Z,209nm,1.6s
PSBE So Bento 83.33 51 *e*PP **PP 11 07 20.1 +4.6**
PSBE *e*S **S 11 14 31.4 +5.6**
PCAS Casmilo, Conde 83.38 50 *e*P **P 11 04 05.0 +0.7**
comp=Z,288nm,1.7s
PCAS Casmilo, Conde 83.38 50 *e*PP **PP 11 07 20.1 +4.3**
PCAS *e*S **S 11 14 31.3 +5.0**
COI Coimbra 83.39 50 *e*P **P 11 04 05.5 +1.1**
comp=Z,187nm,1.6s
COI Coimbra 83.39 50 *e*PP **PP 11 07 20.6 +4.7**
COI *e*S **S 11 14 31.2 +4.8**
COI Coimbra 83.39 50 P **P 11 04 04.5 +0.1**
COI IAmb IAmb 11 04 33.7
comp=Z,166nm,1.4s
COI IAMs_20 IAMs_20 11 42 08.3
comp=Z,13µm,19.0s
COI Coimbra 83.39 50 P **P 11 04 04.5 +0.1**
COI pmax pmax
comp=Z,166nm,1.4s
COI MLR MLR
comp=Z,13µm,19.0s
POLO Lamas de Olo 83.47 49 *e*P **P 11 04 05.5 +0.6**
comp=Z,72nm,1.8s
POLO Lamas de Olo 83.47 49 *e*PP **PP 11 07 18.4 +1.7**
POLO *e*S **S 11 14 30.9 +3.5**
PACT Alcochete 83.53 51 *e*P **P 11 04 06.2 +1.1**
comp=Z,638nm,1.7s
PACT Alcochete 83.53 51 *e*PP **PP 11 07 22.3 +5.2**
MSVF Nonsavu 83.53 249 LR LR 11 32 30.0
comp=Z,14µm,20.0s,baz=62,slow=29
MSVF Nonsavu 83.53 249 P **P 11 04 04.7 -0.9**
MSVF Nonsavu 83.53 249 *i* P **P 11 04 04.2 -1.3**
MSVF pmax pmax
comp=Z,230nm,1.4s
MSVF MLR MLR
comp=Z,6µm,15.0s
PVRL Vila Real 83.56 49 *e*P **P 11 04 05.6 +0.3**
comp=Z,122nm,1.8s
STRD Stroud 83.58 38⇑ *e*P **P 11 04 05.9 +0.7**
STRD IAmb IAmb 11 04 07.2
comp=Z,628nm,1.5s
STRD IAMs_20 IAMs_20 11 41 04.2
comp=Z,39µm,17.4s
PVIS Viseu 83.61 49 *e*P **P 11 04 05.7 +0.1**
comp=Z,106nm,1.7s
PVIS Viseu 83.61 49 *e*PP **PP 11 07 23.7 +5.9**
PMTG Montargil 83.89 51 *e*P **P 11 04 07.2 +0.3**
comp=Z,273nm,1.4s
PMTG Montargil 83.89 51 *e*PP **PP 11 07 21.8 +1.8**
SWN1 Swindon 83.89 38⇑ *e*P **P 11 04 07.3 +0.6**
SWN1 IAmb IAmb 11 04 08.9
comp=Z,453nm,1.4s
SWN1 IAMs_20 IAMs_20 11 41 14.5
comp=Z,36µm,17.6s
MBO M'Bour 83.93 77 IAMs_20 IAMs_20 11 36 59.9
comp=Z,14µm,22.0s
MTE Manteigas 83.96 50 *e*P **P 11 04 07.8 +0.4**
comp=Z,148nm,1.9s
MTE Manteigas 83.96 50 *e*PP **PP 11 07 25.4 +4.7**
MTE *e*S **S 11 14 35.9 +3.6**
MTE Manteigas 83.96 50 P **P 11 04 06.1 -1.3**
MTE IAmb IAmb 11 04 25.2
comp=Z,108nm,1.1s
PNCL Nicolau / Gran 83.96 52 *e*P **P 11 04 07.8 +0.5**
comp=Z,123nm,1.7s
PNCL Nicolau / Gran 83.96 52 *e*PP **PP 11 07 23.0 +2.3**
PNCL *e*S **S 11 14 33.9 +1.7**
PTEO Sao Teotonio 83.99 53 *e*P **P 11 04 08.5 +1.0**
comp=Z,349nm,1.7s
PFVI Vila Bisbo 84.05 53 *e*P **P 11 04 08.8 +1.0**
comp=Z,264nm,1.5s
PFVI Vila Bisbo 84.05 53 *e*S **S 11 14 37.9 +4.8**
PFVI Vila Bisbo 84.05 53 IAmb IAmb 11 04 10.3
comp=Z,230nm,1.3s
PBRG Braganca 84.08 48 *e*P **P 11 04 08.4 +0.5**
comp=Z,110nm,1.6s
PBRG Braganca 84.08 48 *e*PP PP 11 07 30.9 +9.3
MVO Moncorvo 84.08 49 *e*P **P 11 04 08.7 +0.7**
comp=Z,213nm,1.9s
MVO Moncorvo 84.08 49 *e*PP **PP 11 07 24.6 +2.9**
MVO *e*S **S 11 14 41.7 +8.2**
MORF Marmelete 84.12 53 *e*P **P 11 04 08.8 +0.5**
MORF IAmb IAmb 11 04 10.3
comp=Z,401nm,2.1s
MORF *e*PP **PP 11 07 22.3 +0.2**
MORF *e*SKSac **SKSac 11 14 31.1 -1.7**
MORF Marmelete 84.12 53 *e*P **P 11 04 09.1 +0.8**
comp=Z,206nm,1.8s
MORF Marmelete 84.12 53 *e*S **S 11 14 36.1 +2.1**
MORF Marmelete 84.12 53 *e*P **P 11 04 08.8 +0.5**
MORF *e* 11 07 22.3
MORF *e* 11 14 31.0
ROSF Rostrenen 84.16 41⇑ *e*P **P 11 04 08.4 +0.3**
ROSF IAmb IAmb 11 04 10.0
comp=Z,153nm,1.4s
PCBR Castelo Branco 84.19 50 *e*P **P 11 04 08.8 +0.3**
comp=Z,189nm,1.7s
PCBR Castelo Branco 84.19 50 *e*PP **PP 11 07 26.5 +4.0**
EVO Evora 84.21 51 P **P 11 04 09.9 +1.2**
EVO S **S 11 14 37.3 +2.6**
EVO Evora 84.21 51 *e*P **P 11 04 09.1 +0.5**
comp=Z,297nm,1.7s
EVO Evora 84.21 51 *e*PP **PP 11 07 28.1 +5.4**
MESJ Messejana 84.28 52 *e*P **P 11 04 09.7 +0.7**
MESJ IAmb IAmb 11 04 11.4
comp=Z,65nm,0.6s
MESJ *e*SKSac **SKSac 11 14 32.0 -1.6**
MESJ Messejana 84.28 52 *e*P **P 11 04 09.7 +0.7**
comp=Z,182nm,1.8s
MESJ Messejana 84.28 52 *e*P **P 11 04 09.6 +0.7**
MESJ *e* 11 14 32.0
WOL Wolverton 84.30 38⇑ *e*P **P 11 04 09.0 +0.2**
PMRV Marv??o 84.38 50 *e*P **P 11 04 09.8 +0.3**
comp=Z,261nm,1.7s
PMRV Marv??o 84.38 50 *e*PP **PP 11 07 26.9 +2.8**
PMRV *e*S **S 11 14 33.3 -3.2**
PESTR Estremoz 84.42 51 *e*P **P 11 04 09.7 0.0**
comp=Z,196nm,1.7s
PESTR Estremoz 84.42 51 *e*PP **PP 11 07 28.5 +4.1**
PESTR *e*S **S 11 14 40.6 +3.8**
PESTR Estremoz 84.42 51 P **P 11 04 08.8 -1.0**
PCVE Castro Verde 84.48 52 *e*P **P 11 04 10.6 +0.6**
comp=Z,191nm,1.5s
PCVE Castro Verde 84.48 52 *e*S **S 11 14 41.1 +3.6**
PBEJ Beja 84.48 52 *e*P **P 11 04 10.8 +0.8**
comp=Z,160nm,1.5s
PBEJ Beja 84.48 52 *e*PP **PP 11 07 29.5 +4.5**
RAO Raoul Island 84.58 237 LR LR 11 32 08.4
comp=Z,11µm,21.9s,baz=65,slow=29
RAO Raoul Island 84.58 237 IAMs_20 IAMs_20 11 31 33.7
comp=Z,12µm,22.0s
KWAJ Kwajalein Atol 84.66 277 IAMs_20 IAMs_20 11 34 29.9
comp=Z,10µm,20.0s
PBDV Barranco-do-Ve 84.69 53 *e*P **P 11 04 12.2 +1.1**
comp=Z,316nm,1.7s
PBDV Barranco-do-Ve 84.69 53 *e*PP **PP 11 07 30.2 +3.5**
PBDV *e*S **S 11 14 43.4 +3.8**
PVAQ Vaqueiros 84.80 52 *e*P **P 11 04 12.6 +1.0**
comp=Z,275nm,1.6s
PVAQ Vaqueiros 84.80 52 *e*S **S 11 14 49.1 +8.5**
PVAQ Vaqueiros 84.80 52 IAmb IAmb 11 04 29.1
comp=Z,210nm,1.6s
PBAR Barrancos 85.05 52 *e*S **S 11 14 44.7 +1.6**
ELMS Elmsett, Ipswi 85.26 36⇑ *e*P **P 11 04 13.2 -0.4**
ELMS IAmb IAmb 11 04 16.3
comp=Z,162nm,1.2s
ELMS IAMs_20 IAMs_20 11 41 55.3
comp=Z,27µm,18.1s
ARCES ARCESS Array B 85.73 16 P **P 11 04 15.4 -0.3**
comp=Z,7.5nm,1.0s,baz=330,slow=5.2,SNR=6.4
ARCES PP **PP 11 07 32.0 -2.1**
comp=Z,12nm,1.1s,baz=328,slow=12,SNR=5.7
ARCES LR LR 11 42 16.5
comp=Z,26µm,21.7s,baz=308,slow=36
comp=Z,7.5nm,1.0s
ARCES ARCESS Array B 85.73 16 P **P 11 04 15.4 -0.3**
ELSH Elham, Standar 85.73 37 *e*P **P 11 04 16.1 +0.2**
ELSH IAmb IAmb 11 04 25.7
comp=Z,199nm,1.2s
ELSH IAMs_20 IAMs_20 11 42 13.1
comp=Z,30µm,18.1s
NC204 NORSAR Array S 85.83 26 P **P 11 04 15.8 -0.6**
NBO00 NORSAR Array S 85.97 26 P **P 11 04 16.9 -0.1**
NAO01 NORSAR Array S 86.11 26 IAmb IAmb 11 04 39.3
comp=Z,243nm,1.9s
NB2 NORSAR Subarra 86.14 26 P **P 11 04 17.4 -0.5**
baz=301,slow=4.8
NB2 NORSAR Subarra 86.14 26 P **P 11 04 17.4 -0.5**
comp=Z,56nm,1.2s,baz=301,slow=4.8
NOA NORSAR Array B 86.14 26 P **P 11 04 17.3 -0.6**
comp=Z,19nm,1.1s,baz=303,slow=4.7,SNR=23
NOA PP **PP 11 07 35.6 -2.2**
comp=Z,9.3nm,1.2s,baz=301,slow=7.7,SNR=7.3
NOA LR LR 11 43 51.9
comp=Z,10µm,19.4s,baz=305,slow=36
comp=Z,19nm,1.1s
KONO Kongsberg 86.17 28 P **P 11 04 18.0 +0.1**
KONO IAmb IAmb 11 04 19.9
comp=Z,131nm,1.3s
KONO Kongsberg 86.17 28 *ce*P **P 11 04 17.5 -0.5**
KONO pmax pmax
comp=Z,114nm,1.3s
KONO MLR MLR
comp=Z,15µm,19.0s
NB201 NORSAR Array S 86.17 26 IAmb IAmb 11 04 19.1
comp=Z,136nm,1.2s
SFS San Fernando 86.25 53 P **P 11 04 19.0 +0.2**
SFS S **S 11 14 53.9 -1.1**
AVE Averroes 86.38 56 P **P 11 04 19.2 -0.4**
AVE S S 11 14 46.5 -10
NC602 NORSAR Array S 86.44 26 IAmb IAmb 11 04 20.6
comp=Z,138nm,1.3s
PAB San Pablo 86.56 50 P **P 11 04 19.1 -1.3**
PAB IAmb IAmb 11 04 38.5
comp=Z,125nm,1.3s
PAB San Pablo 86.56 50 ⇓P **P 11 04 19.8 -0.7**
ESDC Sonseca Array 86.79 49 P **P 11 04 21.5 0.0**
comp=Z,20nm,1.2s,baz=304,slow=5.4,SNR=61
ESDC PP **PP 11 07 42.7 -0.9**
comp=Z,2.7nm,1.0s,baz=300,slow=7.0,SNR=4.5
comp=Z,20nm,1.2s
UCM Universidad Co 87.08 49 P **P 11 04 25.1 +2.2**
UCM S S 11 14 52.4 -11
CEU Ceuta 87.08 53 P **P 11 04 24.0 +1.1**
CEU S **S 11 14 54.5 -8.5**
GOET G??ttrup 87.31 30 *i* P P 11 04 35.1 +12
MUD Monsted U'grnd 87.58 30 *i* P P 11 04 32.1 +7.2
OVD Ostervraa, Den 87.63 29 *i* P P 11 04 33.1 +8.0
HFS Hagfors 87.67 26 P **P 11 04 24.2 -1.1**
comp=Z,13nm,1.0s,baz=182,slow=7.3,SNR=7.9
HFS LR LR 11 44 01.7
comp=Z,11µm,18.1s,baz=299,slow=36
comp=Z,13nm,1.0s
CLF Chambon-Foret 87.69 40 P **P 11 04 25.5 -0.1**
IFR Ifrane 88.10 55 P **P 11 04 28.6 +0.4**
IFR S **SKSac 11 14 50.9 -7.1**
PVLZ Peæn de 88.15 54 P **P 11 04 28.0 -0.1**
PVLZ S S 11 15 03.1 -10
DOU Dourbes 88.17 37 *d*P **P 11 04 27.9 0.0**
DOU *d*x x 11 04 43.7
BMRD Maredsous 88.18 37 *d*P **P 11 04 28.1 +0.2**
comp=Z,27nm,1.1s
BGES Gesves 88.32 37 *d*P **P 11 04 28.9 +0.2**
comp=Z,24nm,1.3s
BSTI Sart Tilman 88.51 37 *d*P **P 11 04 29.7 +0.3**
RCHB Rochefort 88.51 37 *d*P **P 11 04 29.5 0.0**
comp=Z,23nm,1.2s
KUR Kuril'sk 88.56 317 *e*P **P 11 04 28.4 -1.4**
KUR *i* 11 04 31.3
KUR *e* 11 07 57.9
KUR *e*PPP PPP 11 09 51.6
KUR *i* S **SKSac 11 14 58.5 -1.4**
KUR *e*PS **PnS 11 16 17.9 -0.9**
KUR *e*SS **SS 11 21 08.3 +1.7**
KUR pmax pmax
comp=Z,130nm,1.5s
KUR pmax pmax
comp=N,88nm,1.4s
KUR pmax pmax
comp=E,87nm,1.5s
KUR pmax pmax
comp=Z,2µm,6.8s
PMSA Palmer Station 88.59 164 LR LR 11 35 20.2
comp=Z,11µm,20.5s,baz=318,slow=30
PMSA Palmer Station 88.59 164 IAMs_20 IAMs_20 11 34 58.5
comp=Z,11µm,21.0s
PMSA Palmer Station 88.59 164 *e*P **P 11 04 31.0 +1.8**
MEM Membach 88.74 36 *d*P **P 11 04 30.8 +0.2**
MDT Midelt 88.76 56 P **P 11 04 31.5 +0.4**
comp=Z,20nm,1.0s,baz=310,slow=4.3,SNR=17
MDT LR LR 11 42 12.3
comp=Z,4µm,19.9s,baz=310,slow=34
comp=Z,20nm,1.0s
BTNL Ternell 88.82 36 *d*P **P 11 04 31.0 0.0**
BHOU Houvegnez 88.86 37 *d*P **P 11 04 31.4 +0.2**
YAK Yakutsk 89.00 337 P **P 11 04 31.1 -0.5**
comp=Z,9.2nm,0.5s,baz=25,slow=1.7,SNR=8.1
YAK LR LR 11 48 55.1
comp=Z,5µm,18.5s,baz=26,slow=39
comp=Z,9.2nm,0.5s
YAK Yakutsk 89.00 337 P **P 11 04 31.7 +0.2**
YAK IAmb IAmb 11 04 38.6
comp=Z,132nm,0.9s
YAK IAMs_20 IAMs_20 11 50 21.7
comp=Z,8µm,19.0s
YAK Yakutsk 89.00 337 *e*P **P 11 04 31.0 -0.5**
YAK *e* 11 04 36.6
YAK *e*S **SKSac 11 14 54.6 -7.2**
YAK *e* 11 15 20.1
YAK *e**SS ScS 11 16 24.2 +59
YAK pmax pmax
comp=Z,46nm,1.1s
YAK pmax pmax
comp=N,13nm,1.2s
YAK pmax pmax
comp=E,20nm,1.1s
YAK pmax pmax
comp=Z,280nm,3.3s
YAK pmax pmax
comp=N,131nm,2.8s
YAK pmax pmax
comp=E,147nm,3.0s
YAK smax smax
comp=E,356nm,5.9s
YAK smax smax
comp=N,322nm,5.8s
YAK MLR MLR
comp=Z,6µm,20.0s
YAK MLR MLR
comp=N,2µm,18.0s
YAK MLR MLR
comp=E,2µm,20.0s
WMELI Melilla 89.13 53 P P 11 04 25.2 -7.5
WMELI S **SKSac 11 15 03.0 -0.7**
NKL Nikolayevsk 89.13 327 *e*P **P 11 04 29.8 -2.5**
NKL *e*S **SKSac 11 14 58.7 -4.2**
NKL pmax pmax
comp=E,3.0nm,0.8s
NKL pmax pmax
comp=N,2.0nm,1.3s
NKL pmax pmax
comp=Z,34nm,1.4s
NKL smax smax
comp=E,2.0nm,1.7s
NKL smax smax
comp=N,1.0nm,1.2s
TYV Tymovskoe 89.18 324 *e*P **P 11 04 34.4 +1.8**
TYV *e*S **S 11 15 24.6 +2.2**
TYV pmax pmax
comp=Z,31nm,1.9s
TYV pmax pmax
comp=Z,400nm,4.2s
TYV smax smax
comp=N,600nm,7.5s
TYV smax smax
comp=E,1µm,7.5s
LVZ Lovozero 89.18 14 *i* P **P 11 04 30.8 -1.6**
LVZ pmax pmax
comp=Z,74nm,1.7s
LVZ MLR MLR
comp=Z,20µm,19.0s
WLF Walferdange 89.27 37 *d*P **P 11 04 33.5 +0.4**
COP Copenhagen 89.54 30 *i* P P 11 04 41.1 +6.9
CHAS Isla Isabel II 89.57 53 P **P 11 04 33.6 -1.2**
CART Cartagena 89.72 50 P **P 11 04 32.6 -2.9**
CART S **SKSac 11 15 10.8 +3.7**
DEL Delary 89.78 29 *e*P **P 11 04 35.1 -0.2**
AAL Aland 90.18 24 *e*P **P 11 04 36.3 -0.8**
SSB Saint Sauveur 90.30 42 P **P 11 04 37.1 -0.9**
SSB Saint Sauveur 90.30 42 P **P 11 04 37.1 -0.9**
SSB pmax pmax
comp=Z,22nm,1.4s
SSB MLR MLR
comp=Z,17µm,20.0s

RAF Rauma 90.30 23 *e*P **P** **11 04 37.0 -0.7**
YUK Yuzh-Kuril'sk 90.37 317 *i* P **P** **11 04 38.1 -0.2**
UGL Uglegorsk 90.37 323 *e*P P 11 04 22.1 -16
UGL *e*S **SKSac** **11 15 09.3 -1.1**
UGL *e* 11 16 43.7
UGL smax smax
comp=E,2µm,15.0s
UGL smax smax
comp=N,600nm,9.7s
SMAI San Martin Ant 90.53 167 P **P** **11 04 40.3 +2.0**
SMAI IAmb IAmb 11 04 48.9
comp=Z,216nm,1.6s
ECH Echery 90.53 38 P **P** **11 04 38.2 -0.9**
ECH Echery 90.53 38 P **P** **11 04 38.2 -0.9**
ECH pmax pmax
comp=Z,43nm,1.5s
ECH MLR MLR
comp=Z,37µm,18.0s
YSS Yuzh-Sakhalins 90.98 321 P **P** **11 04 39.9 -1.2**
YSS IAmb IAmb 11 05 05.1
comp=Z,160nm,1.8s
YSS Yuzh-Sakhalins 90.98 321ĸ *i*P **P** **11 04 40.1 -1.0**
YSS *e* 11 15 11.5
YSS *e*S **S** **11 15 33.1 -6.1**
YSS *e*PS **PnS** **11 16 49.9 +2.6**
YSS *e*SS **SS** **11 21 51.1 +10**
YSS pmax pmax
comp=Z,30nm,1.0s
YSS pmax pmax
comp=Z,800nm,3.3s
YSS MLR MLR
comp=Z,2µm,17.0s
BSD Bornholm Skovb 91.04 30 *e*P **P** **11 04 41.6 +0.4**
BSD Bornholm Skovb 91.04 30 *i* P **P** **11 04 44.1 +2.9**
BFO Black Forest 91.16 38 P **P** **11 04 40.9 -1.1**
BFO Black Forest 91.16 38 P **P** **11 04 40.9 -1.1**
BFO pmax pmax
comp=Z,17nm,1.1s
BFO MLR MLR
comp=Z,21µm,19.0s
STU Stuttgart 91.44 37 IAMs_20 IAMs_20 11 45 36.2
comp=Z,12µm,21.0s
SENIN Lac Senin/Sane 91.50 40 P **P** **11 04 42.3 -1.6**
FIA1 FINESS Array S 91.56 21 P **P** **11 04 42.5 -1.0**
FINES FINESS Array B 91.56 21 P **P** **11 04 41.9 -1.6**
comp=Z,21nm,1.3s,baz=7.6,slow=5.8,SNR=15
FINES PP **PP** **11 08 17.4 -3.4**
comp=Z,7.2nm,0.9s,baz=292,slow=5.1,SNR=6.9
FINES LR LR 11 47 32.5
comp=Z,18µm,18.6s,baz=315,slow=37
comp=Z,21nm,1.3s
FINES FINESS Array B 91.56 21 P **P** **11 04 42.2 -1.2**
FINES FINESS Array B 91.56 21*ce*P **P** **11 04 42.9 -0.6**
FINES pmax pmax
comp=Z,17nm,1.2s
BNI Bardonecchia 91.74 41 P **P** **11 04 45.2 +0.3**
BNI Bardonecchia 91.74 41 P **P** **11 04 45.2 +0.3**
BNI pmax pmax
comp=Z,34nm,1.3s
BNI MLR MLR
comp=Z,24µm,20.0s
MEF Metsahovi 91.81 23 *e*P **P** **11 04 44.6 0.0**
URZ Urewera 91.92 230 LR LR 11 36 19.5
comp=Z,19µm,21.9s,baz=45,slow=29
GRFO Grafenberg 92.11 36 P **P** **11 04 47.1 +0.8**
GRFO IAmb IAmb 11 04 48.2
comp=Z,110nm,1.4s
GRFO Grafenberg 92.11 36 P **P** **11 04 47.1 +0.8**
GRFO pmax pmax
comp=Z,110nm,1.4s
GRFO MLR MLR
comp=Z,16µm,20.0s
GRA1 Grafenberg Arr 92.11 36 P **P** **11 04 47.1 +0.8**
GRA1 IAmb IAmb 11 04 48.2
comp=Z,90nm,1.3s
GRF Grafenberg Arr 92.11 36 P **P** **11 04 47.2 +0.8**
GRF pmax pmax
comp=Z,90nm,1.3s
GRF MLR MLR
comp=Z,15µm,20.0s
NRIK Noril'sk 92.12 356 P **P** **11 04 45.0 -0.9**
comp=Z,31nm,1.2s,baz=35,slow=3.3,SNR=33
NRIK PP **PP** **11 08 23.1 -1.9**
comp=Z,2.1nm,0.3s,baz=96,slow=4.7,SNR=2.8
NRIK LR LR 11 49 30.4
comp=Z,14µm,18.0s,baz=20,slow=38
comp=Z,31nm,1.2s
NRIK Noril'sk 92.12 356 P **P** **11 04 46.0 0.0**
NRIK Noril'sk 92.12 356*ce*P **P** **11 04 44.9 -1.0**
NRIK pmax pmax
comp=Z,85nm,1.4s
NRIK MLR MLR
comp=Z,16nm,17.0s
CLL Collm 92.21 34 IAMs_20 IAMs_20 11 47 21.1
comp=Z,11µm,22.0s
CLL Collm 92.21 34⇑ *i*P **P** **11 04 45.8 -0.9**
CLL *e* 11 08 26.0
CLL *e* 11 15 19.0
CLL pmax pmax
comp=Z,19nm,1.3s
CLL pmax pmax
comp=Z,90nm,1.9s
CLL MLR MLR
comp=Z,11µm,21.8s
CLL Collm 92.21 34⇑ *i*P **P** **11 04 45.8 -0.9**
comp=Z,19nm,1.3s
CLL *i* pP **pwP** **11 04 51.6 +0.4**
CLL *i* x x 11 04 59.5
comp=Z,32nm,1.4s
CLL *ex* x 11 08 18.0
CLL *e*PP **PP** **11 08 26.0 -0.3**
comp=Z,90nm,1.9s
CLL *e*SKSac **SKSac** **11 15 19.0 -1.8**
CLL *e*Sx Sx 11 16 00.0
CLL *e*PS PnS 11 17 03.0 +1.6
CLL *ex* x 11 18 54.0
CLL *e*SS **SS** **11 21 54.0 -4.9**
CLL *e*SSS SSS 11 25 42.0
CLL LmV 11 47 00.0
comp=Z,11µm,21.8s
ORCD Orcadas 92.39 155 IAmb IAmb 11 04 54.1
comp=Z,100nm,1.5s
JKA Kamikawa-asahi 92.42 318 IAmb IAmb 11 05 00.3
comp=Z,82nm,1.3s
ASAJ Asahikawa 92.42 318 P **P** **11 04 47.8 -0.1**
comp=Z,6.9nm,0.9s,baz=57,slow=5.2,SNR=9.6
ASAJ LR LR 11 39 16.1
comp=Z,4µm,21.6s,baz=46,slow=31
comp=Z,6.9nm,0.9s
NKC Novy Kostel 92.50 35 *e*P **P** **11 04 45.9 -2.2**
NKC *e* 11 15 24.7
NKC MLR MLR
comp=Z,17µm,18.1s
NKC Novy Kostel 92.50 35 *e*P **P** **11 04 45.9 -2.2**
NKC *e*SKS **SKSac** **11 15 24.7 +2.2**
NKC AMS AMS 11 46 50.0
comp=Z,17µm,18.1s
MAHO Mahon 92.51 47 P **P** **11 04 45.2 -3.1**
MAHO S **SKSac** **11 15 27.7 +4.8**
DAVA Damuels 92.59 38 *i* P **P** **11 04 49.2 +0.4**
comp=Z,24nm,1.2s,SNR=6.2
DAVA *e*P **PP** **11 08 27.7 -1.9**
comp=Z,21nm,1.2s
MTSE Matsula 92.61 24 *e*P **P** **11 04 47.8 -0.6**
GRNR Gornyy 92.62 326⇓ *i*P **P** **11 04 48.0 -0.7**
GRNR pmax pmax
comp=Z,3.0nm,1.0s
GRNR MLR MLR
comp=E,1µm,20.0s
GRNR MLR MLR
comp=N,390nm,12.0s
GRNR MLR MLR
comp=Z,1µm,20.0s
BKZ Black Stump Fm 92.70 230 P **P** **11 04 51.2 +2.0**
BKZ IAmb IAmb 11 05 04.5
comp=Z,112nm,1.3s
DAVOX Davos/Dischmat 92.85 39 LR LR 11 47 25.4
comp=Z,36µm,18.2s,baz=302,slow=36
HOPE Hope Point 92.89 147 IAMs_20 IAMs_20 11 41 38.9
comp=Z,12µm,20.0s
BRG Berggiesshubel 92.94 34 *e*P **P** **11 04 50.0 -0.1**
BRG Amp 11 04 51.0
comp=Z,25nm,1.4s
BRG *ex* x 11 05 01.7
BRG Amp 11 05 06.4
comp=Z,52nm,1.6s
BRG PP **PP** **11 08 32.2 +0.1**
BRG Amp 11 08 36.6
comp=Z,64nm,1.6s
BRG Berggiesshubel 92.94 34 PS PS 11 17 16.0 +7.4
BRG Berggiesshubel 92.94 34 SS SS 11 22 15.0 +5.6
BRG Amp 11 41 25.0
comp=Z,14nm,26.7s
BRG Amp 11 41 31.0
comp=N,5.9nm,25.0s
BRG Amp 11 41 34.0
comp=E,7.8nm,22.2s
BRG Berggiesshubel 92.94 34 *e*P **P** **11 04 50.0 -0.1**
BRG *e* 11 05 01.7
BRG 11 08 32.2
BRG pmax pmax
comp=Z,25nm,1.4s
BRG pmax pmax
comp=Z,64nm,1.6s
RETA Reutte 93.00 38 *i* P **P** **11 04 51.2 +0.6**
comp=Z,13nm,1.2s,SNR=5.6
RETA *e*P **PP** **11 08 33.1 +0.3**
comp=Z,12nm,1.2s
ERM Erimo 93.05 316 P **P** **11 04 50.9 +0.1**
ERM Erimo 93.05 316*ce*P **P** **11 04 50.6 -0.2**
ERM pmax pmax
comp=Z,100nm,1.2s
FETA Feichten 93.22 38 *i* P **P** **11 04 52.3 +0.5**
comp=Z,14nm,1.1s,SNR=8.0
FETA *e*P **PP** **11 08 34.9 +0.3**
comp=Z,21nm,1.2s
MOTA Moosalm 93.27 38 *i* P **P** **11 04 51.9 -0.1**
comp=Z,28nm,1.6s,SNR=11
MOTA *e*P **PP** **11 08 35.0 0.0**
comp=Z,22nm,1.2s
SQTA Sankt Quirin 93.40 38 *i* P **P** **11 04 52.8 +0.4**
comp=Z,24nm,1.3s,SNR=8.9
SQTA *e*P **PP** **11 08 35.0 -0.9**
comp=Z,31nm,1.4s
PVCC Panska Ves 93.47 34 *e*P **P** **11 04 50.4 -2.1**
PVCC *e* 11 08 31.7
PVCC *e* 11 15 24.5
PVCC MLR MLR
comp=Z,14µm,30.1s
PVCC Panska Ves 93.47 34 *e*P **P** **11 04 50.4 -2.1**
PVCC *e*PP **PP** **11 08 31.7 -4.5**
PVCC *e*SKS **SKSac** **11 15 24.5 -3.3**
PVCC AMS AMS 11 41 20.0
comp=Z,14µm,30.1s
WATA Walderalm 93.55 37 *i* P **P** **11 04 53.4 +0.2**
comp=Z,22nm,1.4s,SNR=6.5
WATA *e*P **PP** **11 08 36.5 -0.7**
comp=Z,41nm,1.7s
WTTA Wattenberg 93.62 38 *i* P **P** **11 04 54.0 +0.4**
comp=Z,37nm,1.8s,SNR=9.1
WTTA *e*P **PP** **11 08 38.0 +0.2**
comp=Z,34nm,1.7s
HIZ Hauiti 93.66 231 IAMs_20 IAMs_20 11 37 09.8
comp=Z,13µm,22.0s
KHC Kasperske Hory 93.71 35 *e*P **P** **11 04 53.2 -0.6**
KHC *e* 11 05 04.2
KHC *e* 11 08 35.6
KHC *e* 11 15 28.4
KHC MLR MLR
comp=Z,22µm,18.8s
KHC Kasperske Hory 93.71 35 *e*P **P** **11 04 53.2 -0.6**
KHC *ex* x 11 05 04.2
KHC *e*PP **PP** **11 08 35.6 -2.6**
KHC *e*SKS **SKSac** **11 15 28.4 -0.9**
KHC AMS AMS 11 47 30.0
comp=Z,22µm,18.8s
PRU Pruhonice 93.76 34 *e*P **P** **11 04 53.5 -0.4**
PRU *e* 11 15 31.2
PRU MLR MLR
comp=Z,18µm,19.4s
PRU Pruhonice 93.76 34 *e*P **P** **11 04 53.5 -0.4**
PRU *e*PP **PP** **11 08 31.9 -6.6**
PRU *e*SKS **SKSac** **11 15 31.2 +1.8**
PRU AMS AMS 11 47 40.0
comp=Z,18µm,19.4s
MSSA Maissana 93.87 41 P **P** **11 04 53.4 -1.3**
VSU Vasula 93.89 23 *e*P **P** **11 04 53.2 -1.1**
GEC2 GERESS Array S 93.94 35 P **P** **11 04 54.5 -0.4**
GERES GERESS Array B 93.94 35 P **P** **11 04 54.5 -0.4**
comp=Z,5.6nm,1.0s,baz=270,slow=4.0,SNR=39
GERES PP **PP** **11 08 39.7 -0.4**
comp=Z,2.9nm,0.9s,baz=297,slow=6.5,SNR=5.2
GERES LR LR 11 48 08.6
comp=Z,16µm,19.1s,baz=306,slow=36
comp=Z,5.6nm,1.0s
PATS Pohnpei 94.02 279 IAMs_20 IAMs_20 11 43 03.9
comp=Z,9µm,18.0s
KSP Ksiaz 94.18 33 *e*P **P** **11 04 55.5 -0.4**
KSP *e*PP **PP** **11 08 42.2 +0.4**
KSP *e*S **SKSac** **11 15 34.0 +2.3**
KSP *e*L L 11 42 06.3
comp=Z,18µm,27.2s
CHVC Chvalec 94.21 33 *e*P **P** **11 04 55.5 -0.5**
CHVC *e*PP **PP** **11 08 39.5 -2.5**
CHVC AMS AMS 11 41 50.0
comp=Z,18µm,26.3s
UPC Upice 94.23 33 *e*P **P** **11 04 56.2 +0.1**
UPC *e* 11 08 39.3
UPC *e* 11 15 32.5
UPC MLR MLR
comp=Z,18µm,26.3s
UPC Upice 94.23 33 *e*P **P** **11 04 56.2 +0.1**
UPC *e*PP **PP** **11 08 39.3 -2.9**
UPC *e*SKS **SKSac** **11 15 32.5 +0.5**
UPC AMS AMS 11 41 40.0
comp=Z,18µm,26.3s
CTI Castel Tesino 94.27 39 P **P** **11 04 55.4 -1.1**
CTI Castel Tesino 94.27 39 P **P** **11 04 55.4 -1.1**
CTI pmax pmax
comp=Z,27nm,1.3s
CKRC Cesky Krumlov 94.29 35 *e*P **P** **11 04 55.6 -0.8**
CKRC *e*PP PP 11 08 34.8 -7.9
CKRC *e*SKS **SKSac** **11 15 37.9 +5.5**
OSTC Ostas 94.31 33 *e*P **P** **11 04 56.6 +0.1**
OSTC *ex* x 11 05 09.4
OSTC *e*PP **PP** **11 08 37.1 -5.7**
OSTC *e*SKS **SKSac** **11 15 34.0 +1.5**
OSTC AMS AMS 11 41 50.0
comp=Z,18µm,25.6s
ABTA Abfaltersbach 94.41 38 *i* P **P** **11 04 57.1 0.0**
comp=Z,34nm,1.5s,SNR=13
ABTA *e*P **PP** **11 08 41.9 -1.9**
comp=Z,23nm,1.4s
DPC Dobruska-Polom 94.49 33 *e*P **P** **11 04 56.6 -0.7**
DPC *e* 11 05 03.1
DPC *e* 11 08 40.7
DPC *e* 11 15 29.4
DPC MLR MLR
comp=Z,16µm,26.7s
DPC Dobruska-Polom 94.49 33 *e*P **P** **11 04 56.6 -0.7**
DPC *e*pP **pwP** **11 05 03.1 +1.3**
DPC *e*PP **PP** **11 08 40.7 -3.5**
DPC *e*SKS **SKSac** **11 15 29.4 -4.1**
DPC AMS AMS 11 41 50.0
comp=Z,16µm,26.7s
BIOA Bad Ischl, Aus 94.54 36 *i* P **P** **11 04 57.9 +0.3**
comp=Z,73nm,1.3s,SNR=22
BIOA *e*P **PP** **11 08 45.3 +0.6**
comp=Z,51nm,1.5s
TREC Trest 94.66 34 *e*P P 11 04 52.0 -6.1
TREC *e* 11 08 41.5
TREC MLR MLR
comp=Z,24µm,18.9s
TREC Trest 94.66 34 *e*P P 11 04 52.0 -6.1
TREC *e*PP **PP** **11 08 41.5 -4.0**
TREC AMS AMS 11 48 10.0
comp=Z,24µm,18.9s
KBA Koelnbreinsper 94.71 37 *i* P **P** **11 04 58.5 -0.1**
comp=Z,36nm,1.2s,SNR=22
KBA *e*P **PP** **11 08 46.2 -0.1**
comp=Z,30nm,1.4s
ZCCA Zocca 94.75 40 P **P** **11 04 57.6 -1.1**
STAL STALIGIAL 94.78 38 P **P** **11 04 57.7 -1.0**
MOA Molln 94.80 36 *i* P **P** **11 04 58.7 -0.1**
comp=Z,62nm,1.3s,SNR=30
MOA *i* P **PP** **11 08 46.8 0.0**
comp=Z,30nm,1.5s,SNR=5.7
PABE Paberze 94.84 26 IAMs_20 IAMs_20 11 47 36.1
comp=Z,11µm,21.0s
PABE Paberze 94.84 26 *e*P **P** **11 04 57.7 -1.0**
KRLC Kraliky 94.89 33 *e*P **P** **11 04 56.2 -3.0**
KRLC *e* 11 15 37.3
KRLC MLR MLR
comp=Z,12µm,27.7s
KRLC Kraliky 94.89 33 *e*P **P** **11 04 56.2 -3.0**
KRLC *e*PP **PP** **11 08 42.0 -5.3**
KRLC *e*SKS **SKSac** **11 15 37.3 +1.6**
KRLC AMS AMS 11 42 10.0
comp=Z,12µm,27.7s
CKHR Kef el Ahmar 95.12 50 P 11 08 54.4
MYKA Terra Mystica 95.12 37 *i* P **P** **11 05 00.5 +0.1**
comp=Z,29nm,1.6s,SNR=7.6
MYKA *e*P **PP** **11 08 49.7 +0.3**
comp=Z,26nm,1.6s
DFRA Djebel Bou Aff 95.15 49 P 11 08 55.7
VRAC Vranov 95.24 34 LR LR 11 48 06.8
comp=Z,13µm,20.3s,baz=308,slow=36
VRAC Vranov 95.24 34 *e*P **P** **11 04 59.8 -0.9**
VRAC *e*PP **PP** **11 08 48.8 -1.3**
DZM Mont Dzumac 95.27 249 LR LR 11 38 42.8
comp=Z,20µm,20.2s,baz=95,slow=30
DZM Mont Dzumac 95.27 249 *e*LR LR 11 35 11.7
comp=Z,47µm,26.8s
DZM Mont Dzumac 95.27 249 *e*LR LR 11 34 43.9
comp=Z,47µm,26.8s
KRUC Moravsky 95.28 34 *e*P **P** **11 04 59.6 -1.3**
KRUC *e*PP **PP** **11 08 48.5 -1.8**
ZEA Zeya 95.34 332 *e*P **P** **11 05 01.3 +0.2**
ZEA *e*S **S** **11 16 21.2 +3.6**
ZEA *e*PS **PS** **11 17 42.0 +7.2**
ZEA *e*SS SS 11 22 55.3 +12
ZEA pmax pmax
comp=Z,10.0nm,1.5s
ZEA pmax pmax
comp=Z,300nm,6.5s
ZEA pmax pmax
comp=E,300nm,8.7s
ZEA pmax pmax
comp=N,200nm,7.3s
ZEA pmax pmax
comp=Z,500nm,7.9s
ZEA smax smax
comp=E,1µm,19.6s
ZEA MLR MLR
comp=N,2µm,15.0s
ZEA MLR MLR
comp=Z,4µm,17.0s
CADS Cadrg 95.40 38 *i* P **P** **11 05 01.0 -0.6**
CADS *e*PP **PP** **11 08 51.3 -0.1**
CADS *i* SKSac **SKSac** **11 15 40.1 +1.5**
CADS *e*SP **SP** **11 17 39.8 +4.7**
CADS *e*SS **SS** **11 22 42.5 -2.3**
CADS IAMs_20 IAMs_20 11 48 29.4
comp=Z,13µm,19.8s
MORC Moravsky Berou 95.46 33⇓ P **P** **11 05 01.9 +0.1**
MORC Moravsky Berou 95.46 33⇓ P **P** **11 05 01.9 +0.1**
MORC Moravsky Berou 95.46 33 *e*P **P** **11 05 01.0 -0.8**
MORC *e*PP **PP** **11 08 49.0 -2.8**
SUW Suwalki 95.50 28 *e*P **P** **11 05 00.4 -1.4**
SUW *e*PP **PP** **11 08 50.9 -0.9**
SUW *e*L L 11 44 46.2
comp=Z,18µm,25.1s
SUW Suwalki 95.50 28 IAmb IAmb 11 05 08.5
comp=Z,49nm,0.8s
SUW Suwalki 95.50 28 *e*P **P** **11 05 01.2 -0.6**
CONA Conrad Observa 95.64 35 *i* P **P** **11 05 02.8 +0.1**
comp=Z,29nm,1.1s,SNR=22
CONA *e*P **PP** **11 08 54.0 +0.7**
comp=Z,16nm,1.5s
TEY Ternei 95.65 321 *e*P **P** **11 05 04.1 +1.5**
TEY *e* 11 15 34.0
TEY *e* 11 17 40.9
ISAL Salakas 95.69 25 *e*P **P** **11 05 02.5 -0.1**
OBKA Obir 95.71 37 *i* P **P** **11 05 02.9 -0.2**
comp=Z,49nm,1.2s,SNR=18
OBKA *e*P **PP** **11 08 53.0 -0.9**
comp=Z,27nm,1.4s
OKC Ostrava-Krasne 95.74 33 *e*P **P** **11 05 02.6 -0.4**
OKC *e* 11 08 53.0
OKC MLR MLR
comp=Z,11µm,26.5s
OKC Ostrava-Krasne 95.74 33 *e*P **P** **11 05 02.6 -0.4**
OKC *e*PP **PP** **11 08 53.0 -0.9**
OKC *e*SKS **SKSac** **11 15 44.1 +4.0**
OKC AMS AMS 11 42 50.0
comp=Z,11µm,26.5s
KOWA Kowa 95.76 73 IAMs_20 IAMs_20 11 46 00.3
comp=Z,9µm,22.0s
ARSA Arzberg 95.84 36 *i* P **P** **11 05 02.8 -0.8**
comp=Z,22nm,1.2s,SNR=7.8
ARSA *i* P **PP** **11 08 55.0 +0.2**
comp=Z,58nm,1.6s,SNR=9.8
MAUC Maruska 95.86 33 *e*P P 11 05 11.0 +7.4
MAUC *e*PP **PP** **11 08 51.5 -3.4**
MAUC *e*SKS **SKSac** **11 15 42.5 +1.7**
MAUC AMS AMS 11 42 50.0
comp=Z,20µm,28.0s
IIGN Ignalina 95.88 26 *e*P **P** **11 05 03.2 -0.3**
SOKA Soboth 95.89 37 *i* P **P** **11 05 03.4 -0.5**
comp=Z,60nm,1.2s,SNR=32
SOKA *i* P **PP** **11 08 53.8 -1.5**
comp=Z,46nm,1.5s,SNR=11
LJU Ljubljana 95.96 37 *e*P **P** **11 05 03.7 -0.4**
LJU *e*PP **PP** **11 08 55.9 +0.1**
LJU *i* SKSac **SKSac** **11 15 43.1 +1.7**
LJU *e*S **ScS** **11 16 25.5 +1.4**
KLR Kul'dur 95.98 326 P **P** **11 05 04.2 +0.1**
comp=Z,1.3nm,0.9s,baz=40,slow=5.6,SNR=8.1
KLR PP **PP** **11 08 53.0 -2.7**
comp=Z,2.0nm,0.9s,baz=77,slow=11,SNR=3.2
comp=Z,1.3nm,0.9s
KLR Kul'dur 95.98 326*ce*P **P** **11 05 04.6 +0.5**
KLR pmax pmax
comp=Z,17nm,1.8s
KLR MLR MLR
comp=Z,3µm,20.0s
RONA Rosalia, Austr 96.02 35 *i* P **P** **11 05 04.6 +0.3**
comp=Z,39nm,1.1s,SNR=24
RONA *i* P **PP** **11 08 54.2 -2.0**
comp=Z,42nm,1.7s,SNR=6.5
JAVC Velka Javorina 96.08 34 *e*P **P** **11 05 04.8 +0.2**
MODS Modra-Piesok 96.15 34 *e*P **P** **11 05 05.4 +0.5**
MODS *e* 11 08 57.5
MODS Modra-Piesok 96.15 34 *e*PDIFF **P** **11 05 05.4 +0.5**
MODS *e*PP **PP** **11 08 57.5 +0.3**
KLMR Klimovskoe 96.16 17 *e*P **P** **11 05 02.4 -2.2**
KLMR *e* 11 08 54.6
KLMR *e*S **SKSac** **11 15 38.6 -3.2**
KLMR *e*PS **PS** **11 17 39.0 -4.5**
KLMR *e*SS **SS** **11 22 52.4 -2.0**
KLMR pmax pmax
comp=Z,53nm,1.4s
KLMR MLR MLR
comp=Z,14µm,18.0s
KLMR Klimovskoe 96.16 17 *e*P **P** **11 05 02.4 -2.2**
KLMR AMP 11 05 19.4
comp=Z,53nm,1.4s
KLMR *e*PP **PP** **11 08 54.6 -2.1**
KLMR *e*S **SKSac** **11 15 38.6 -3.2**
KLMR *e*S **SKSac** **11 15 38.6 -3.2**
KLMR *e*PS **PS** **11 17 39.0 -4.5**
KLMR *e*PS **PS** **11 17 39.0 -4.5**
KLMR *e*SS **SS** **11 22 52.5 -2.0**
KLMR *e*SS **SS** **11 22 52.5 -2.0**
KLMR LQ LQ 11 39 05.3
KLMR LQ LQ 11 39 05.3
KLMR LR LR 11 43 53.1
KLMR AMP 11 48 04.6
comp=Z,14µm,18.2s
ZST Bratislava 96.17 35 *e*P **P** **11 05 05.7 +0.8**
ZST *e* 11 08 56.7
ZST Bratislava 96.17 35 *e*PDIFF **P** **11 05 05.7 +0.8**
ZST *e*PP **PP** **11 08 56.7 -0.5**
VSL Villasalto 96.18 45 IAMs_20 IAMs_20 11 49 16.4
comp=Z,9µm,19.0s
CMAH Djebel Manchou 96.21 48 P 11 08 55.9
MURB Monte Urbino 96.28 41 P **P** **11 05 03.8 -1.9**
MURB IAmb IAmb 11 08 57.9
comp=Z,94nm,1.5s
OJC Ojcow 96.34 32 *e*PP **PP** **11 08 53.2 -5.3**
OJC *e*S **SKSac** **11 15 47.0 +3.7**
OJC *e*L L 11 43 38.0
comp=Z,12µm,27.7s
NACGM Naroch 96.43 26⇓ *e*P **P** **11 05 04.6 -1.4**
baz=314

CRES Cresnjev 96.62 37 *i* P **P 11 05 06.9 -0.2**
CRES *i* PP **PP 11 09 00.6 -0.2**
KOUNC Koumac, New Ca 96.74 251 IAMs_20 IAMs_20 11 39 37.7
comp=Z,7μm,22.0s
PRGR Permogore 96.99 14 *e*P **P 11 05 06.9 -1.5**
PRGR pmax pmax
comp=Z,19nm,0.4s
BEHE Becsehely 97.00 36 P **P 11 05 09.9 +1.2**
MPLH Magyarpolny 97.01 35 P **P 11 05 08.4 -0.4**
NIE Niedzica 97.10 32 *e*P **P 11 05 09.1 -0.1**
NIE *e*PP PP 11 08 51.4 -13
NIE *e*S **SKSac 11 15 54.5 +7.2**
NIE *e*L L 11 43 40.1
comp=Z,8μm,28.3s
MNK Minsk 97.16 25 *i* P **P 11 05 08.1 -1.2**
MNK *i* 11 09 03.7
MNK *i* PPP PPP 11 11 12.3
MNK *i* S **SKSac 11 15 45.1 -2.2**
MNK *i* PS **PS 11 17 54.3 -0.4**
MNK *i* SS **SS 11 23 09.1 +0.1**
MNK *i* SSS SSS 11 26 54.5
MNK pmax pmax
comp=E,2.0nm,0.9s
MNK pmax pmax
comp=N,8.0nm,0.9s
MNK pmax pmax
comp=Z,65nm,1.1s
MNK MLR MLR
comp=Z,16μm,18.0s
MNK MLR MLR
comp=E,1μm,18.0s
MNK MLR MLR
comp=N,24nm,17.0s
MNK Minsk 97.16 25 *i* P **P 11 05 08.1 -1.2**
comp=E,2.0nm,0.9s
MNK *i* P **P 11 05 08.1 -1.2**
comp=N,8.0nm,0.8s
MNK *i* P **P 11 05 08.1 -1.2**
comp=Z,65nm,1.1s,baz=136
MNK *i* PP **PP 11 09 03.8 -0.9**
MNK *i* PPP PPP 11 11 12.4
MNK *i* S **SKSac 11 15 45.1 -2.2**
MNK *i* PS **PS 11 17 54.3 -0.4**
MNK *i* SS **SS 11 23 09.2 +0.1**
MNK *i* SSS SSS 11 26 54.6
MNK *i* LR LR 11 46 56.6
MNK *i* LRM MLR 11 50 27.2
comp=Z,16μm,18.1s
MNK *i* LRM MLR 11 50 30.8
comp=E,1μm,18.1s
MNK *i* LRM MLR 11 50 41.7
comp=N,24nm,17.4s
CSKK Cskako 97.29 35 P Pdif 11 05 10.6 +0.4
TIC Toumodi 97.50 80 *e*P **P 11 05 10.8 -0.9**
HNR Honiara 97.50 263 LR LR 11 41 10.6
comp=N,4μm,19.5s,baz=62,slow=30
HNR Honiara 97.50 263 IAMs_20 IAMs_20 11 40 58.9
comp=Z,5μm,21.0s
BUD Budapest 97.63 34 P Pdif 11 05 11.9 +0.3
LIC Lamto 97.63 81 *e*P **P 11 05 12.0 -0.2**
comp=Z,26nm,1.0s
DBIC Dimbokro 97.64 80 P **P 11 05 11.9 -0.4**
comp=Z,11nm,0.9s,baz=304,slow=3.6,SNR=8.0
DBIC LR LR 11 44 45.7
comp=Z,9μm,21.8s,baz=297,slow=33
comp=Z,11nm,0.9s
DBIC Dimbokro 97.64 80 P **P 11 05 11.4 -0.9**
DBIC Dimbokro 97.64 80 ⇑P **P 11 05 08.4 -3.9**
PSZ Piszkesteto 97.83 34 ⇑P Pdif 11 05 12.8 +0.2
PSZ Piszkesteto 97.83 34 P **P 11 05 11.9 -0.7**
PSZ Piszkesteto 97.83 34 ⇑P Pdif 11 05 12.9 +0.3
PSZ Piszkesteto 97.83 34 P Pdif 11 05 13.0 +0.4
KIC Kosan Boka 97.85 81 *e*P **P 11 05 12.6 -0.7**
comp=Z,26nm,1.0s
KOVH Kovagotottos 97.96 36 P **P 11 05 13.1 0.0**
KEST Kesra 98.00 48 P **P 11 05 12.9 -0.8**
comp=Z,9.7nm,1.0s,baz=359,slow=0.2,SNR=5.2
KEST PP PP 11 09 02.5 -9.5
comp=Z,5.9nm,1.2s,baz=242,slow=21,SNR=1.6
KEST LR LR 11 47 25.9
comp=Z,4μm,21.2s,baz=274,slow=34
comp=Z,9.7nm,1.0s
KEST Kesra 98.00 48 P **P 11 05 13.2 -0.5**
CRVS Cervenica-Dubn 98.02 32 *e*P Pdif 11 05 13.6 +0.2
CRVS *e* 11 09 11.8
CRVS Cervenica-Dubn 98.02 32 *e*PDIFF Pdif 11 05 13.6 +0.2
CRVS *e*PP **PP 11 09 11.8 +0.3**
RPZ Rata Peaks 98.06 227 LR LR 11 40 07.1
comp=Z,12μm,21.1s,baz=48,slow=30
MORH Mrgy, Hungar 98.19 36 ⇑P **P 11 05 14.0 -0.1**
MORH Mrgy, Hungar 98.19 36 P **P 11 05 13.8 -0.3**
UZH Uzhgorod 98.61 32 *e*P Pdif 11 05 16.7 +0.7
UZH *e* 11 05 22.3
UZH *e* 11 05 27.9
UZH *e* 11 09 17.1
UZH *e* 11 15 45.7
UZH *e*S **S 11 16 41.7 -4.2**
LVV L'vov 98.69 31 *e*P **P 11 05 14.9 -1.4**
LVV *e* 11 09 14.9
LVV *e* 11 15 44.7
LVV *e*S S 11 16 37.4 -9.2
LVV *e*PS **PS 11 18 08.4 -3.1**
LVV *e*SS **SS 11 23 31.1 +0.3**
LVV *e*SSS SSS 11 27 11.7
LVV MLR MLR
comp=N,6μm,20.0s
LVV MLR MLR
comp=E,2μm,20.0s
LVV MLR MLR
comp=Z,7μm,20.0s
USA0B Ussuriysk Arra 98.84 322 *i* P **P 11 05 16.4 -0.7**
USRK Ussuriysk Ar. 98.84 322 P Pdif 11 05 17.7 +0.6
comp=Z,3.4nm,0.8s,baz=60,slow=6.8,SNR=1.9
comp=Z,3.4nm,0.8s
MJAR Matsushiro Arr 99.07 313 P **Pdif 11 05 17.7 -0.6**
comp=Z,1.5nm,0.8s,baz=73,slow=3.2,SNR=5.3
MJAR LR LR 11 41 00.6
comp=Z,5μm,21.3s,baz=77,slow=30
comp=Z,1.5nm,0.8s
MAJO Matsushiro 99.08 313 IAMs_20 IAMs_20 11 39 41.9
comp=Z,8μm,22.0s
MAJO Matsushiro 99.08 313 *i* P **Pdif 11 05 18.7 +0.3**
MAJO pmax pmax
comp=Z,24nm,1.7s
MAJO MLR MLR
comp=Z,4μm,18.0s
FRGS Fruska Gora 99.48 36 ⇑P **Pdif 11 05 21.1 +1.1**
JHJ Hachijo jima 2 99.66 310 LR LR 11 44 32.9
comp=Z,12μm,19.5s,baz=78,slow=32
MOS Moscow 99.82 20 *e*P **Pdif 11 05 18.7 -2.5**
MOS *e* 11 09 21.5
MOS *e* 11 15 58.1
MOS *e*PS **PS 11 18 15.2 -8.0**
MOS MLR MLR
comp=Z,18μm,21.0s
MOS MLR MLR
comp=N,14μm,20.0s
MOS MLR MLR
comp=E,10μm,20.0s
MDJ Mudanjiang 99.96 324 IAMs_20 IAMs_20 11 58 37.5
comp=Z,5μm,20.0s
OBN Obninsk 99.97 21 P **Pdif 11 05 20.8 -1.0**
comp=Z,3.8nm,0.4s,baz=0.8,slow=5.6,SNR=8.3
OBN LR LR 11 50 48.5
comp=Z,3μm,18.9s,baz=324,slow=36
comp=Z,3.8nm,0.4s
OBN Obninsk 99.97 21 **Pdif 11 05 21.1 -0.7**
OBN IAmb IAmb 11 05 38.5
comp=Z,85nm,1.5s
OBN Obninsk 99.97 21⇓ *e*P **Pdif 11 05 20.6 -1.2**
OBN *e* 11 09 23.6
OBN *e*S **SKSac 11 16 00.0 -1.3**
OBN *e*PS **PS 11 18 25.4 +0.5**
OBN pmax pmax
comp=Z,52nm,1.4s
OBN MLR MLR
comp=Z,12μm,18.0s
BZS Buzias 100.19 35 ⇑P **Pdif 11 05 23.9 +0.8**
BZS Buzias 100.19 35 ⇑P **Pdif 11 05 23.9 +0.8**
DIVS Divibare 100.24 37 IAMs_20 IAMs_20 11 50 42.8
comp=Z,9μm,22.0s
BNX BinXian 100.45 326 Pdif **Pdif 11 05 28.3 +4.0**
BNX pmax pmax
comp=Z,1μm,5.2s
BNX LR LR
comp=Z,9μm,25.3s
BNX LR LR
comp=Z,4μm,16.5s
BNX LR LR
comp=Z,11μm,22.0s
AKASG Malin Array Be 100.47 28 P **Pdif 11 05 21.9 -2.3**
comp=Z,8.1nm,1.0s,baz=313,slow=3.3,SNR=39
AKASG PP PP 11 09 20.5 -9.4
comp=Z,0.7nm,0.4s,baz=307,slow=6.0,SNR=4.3
AKASG PKKPab PKKPdf 11 22 03.2 +18
comp=Z,0.2nm,0.3s,baz=151,slow=3.2,SNR=6.3
AKASG Malin Array Be 100.47 28 **Pdif 11 05 22.9 -1.3**
AKASG Malin Array Be 100.47 28 P **Pdif 11 05 22.9 -1.3**
KIRV Kirov 100.57 13 P **Pdif 11 05 22.9 -1.5**
comp=Z,7.8nm,0.4s,baz=344,slow=9.6,SNR=4.0
KIRV PP **PP 11 09 25.8 -4.6**
comp=Z,5.5nm,0.5s,baz=345,slow=5.7,SNR=4.7
MDVR Moldovita 100.77 35 ⇑P **Pdif 11 05 26.6 +0.8**
GZR Gura Zlata 100.96 34 ⇑P **Pdif 11 05 27.3 +0.7**
GZR Gura Zlata 100.96 34 ⇑P **Pdif 11 05 27.3 +0.7**
HERR Herculane 101.09 35 ⇑P **Pdif 11 05 26.1 -1.1**
CEL Celeste 101.15 43 IAMs_20 IAMs_20 11 53 27.8
comp=Z,8μm,19.0s
DCZ Deep Cove 101.22 226 IAMs_20 IAMs_20 11 42 19.9
comp=Z,10μm,19.0s
TORD Torodi Ar. Bea 101.42 72 P **Pdif 11 05 27.3 -1.9**
comp=Z,1.6nm,1.1s,baz=296,slow=5.1,SNR=4.7
TORD PP **PP 11 09 35.9 -2.7**
comp=Z,7.4nm,1.3s,baz=289,slow=5.5,SNR=6.3
TORD PKKPbc **PKKPbc 11 21 35.2 -2.0**
comp=Z,1.5nm,1.1s,baz=190,slow=0.7,SNR=3.0
TORD PKPPKP **P'P'df 11 30 01.6 +3.1**
comp=Z,1.0nm,0.9s,baz=20,slow=1.2,SNR=3.8
BOVS Bovan 101.49 36 ⇑P **Pdif 11 05 29.5 +0.6**
HIA Hailar 101.82 332 IAMs_20 IAMs_20 11 55 06.0
comp=Z,7μm,22.0s
MLR Muntele Rosu 102.56 33 ⇑P **Pdif 11 05 34.1 +0.3**
MLR Muntele Rosu 102.56 33 P **Pdif 11 05 33.0 -0.8**
comp=Z,3.9nm,0.5s,baz=342,slow=3.2,SNR=5.1
MLR Muntele Rosu 102.56 33 Pdif **Pdif 11 05 33.4 -0.4**
MLR Muntele Rosu 102.56 33 ⇑P **Pdif 11 05 34.1 +0.3**
CN2 Changchun 102.77 325 *e*P **Pdif 11 05 30.5 -4.1**
CN2 *e*PP **PP 11 09 45.6 -2.0**
CN2 Changchun 102.77 325 *e*sS sS 11 17 18.3 -3.9
CN2 Changchun 102.77 325 *e*SS SS 11 24 20.7 -7.2
CN2 pmax pmax
comp=Z,160nm,6.0s
CN2 LR LR
comp=N,2μm,16.0s
CN2 LR LR
comp=E,2μm,26.0s
CN2 LR LR
comp=Z,3μm,28.0s
MPEP Malo Peshtene 102.81 36 P **Pdif 11 05 47.3 +12**
KIS Kishinev 102.95 30 *e*PP PP 11 09 37.0 -12
comp=Z,470nm,13.1s
MILM Milestii Mici 103.00 30 *e*PP PP 11 09 38.0 -11
MILM *e*SKS 11 16 13.0
VTS Vitosha 103.00 36 P **Pdif 11 05 34.4 -1.5**
SHEL Horse Pasture 103.59 103 IAMs_20 IAMs_20 11 55 39.0
comp=Z,5μm,19.0s
VORR Voronezh 103.69 22 *e*P **Pdif 11 05 32.6 -5.9**
VORR pmax pmax
comp=Z,110nm,0.4s
GUMO Guam 104.03 290 IAMs_20 IAMs_20 11 41 44.4
comp=Z,5μm,22.0s
ARU Arti 104.30 9 P **Pdif 11 05 53.3 +12**
ARU 11 10 07.1
ARU PPP PPP 11 12 11.5
ARU SP SP 11 19 06.6 -3.0
ARU MLR MLR
comp=Z,11μm,17.0s
PRD Provadia 104.89 34 P **Pdif 11 05 51.2 +7.2**
JMB Yambol 104.96 35 P **Pdif 11 05 35.2 -9.2**
KSRS Korea Array 105.36 319 Pdiff **Pdif 11 05 46.4 +0.2**
comp=Z,0.3nm,0.3s,baz=60,slow=5.8,SNR=1.7
BELG Belogornoye 105.73 17 Pdiff **Pdif 11 05 45.3 -2.2**
comp=Z,9.9nm,1.2s,baz=41,slow=1.7,SNR=4.1
BELG PP **PKiKP 11 09 53.4 -7.0**
comp=Z,10nm,1.0s,baz=345,slow=7.8,SNR=2.6
INCN Inchon 106.15 319 IAMs_20 IAMs_20 12 04 15.1
comp=Z,8μm,18.0s
ZAK Zakamensk 107.15 341 *e*P **Pdif 11 05 43.2 -11**
ZAK pmax pmax
comp=Z,5.0nm,1.6s
SBA Scott Base 107.36 193 IAMs_20 IAMs_20 11 46 16.9
comp=Z,4μm,18.0s
ZALV Zalesovo Beam 107.53 354 Pdiff **Pdif 11 05 55.2 -0.3**
comp=Z,0.4nm,0.3s,baz=350,slow=3.5,SNR=1.2
ZALV PP **PP 11 10 17.9 -4.2**
comp=Z,2.8nm,0.9s,baz=357,slow=5.8,SNR=4.4
ZALV Zalesovo Beam 107.53 354 Pdif **Pdif 11 05 55.0 -0.5**
ZALV Zalesovo Beam 107.53 354 P **Pdif 11 05 55.0 -0.5**
ULN Ulaanbaatar 108.08 338 IAMs_20 IAMs_20 12 02 26.0
comp=Z,7μm,18.0s
QSPA South Pole Qui 108.22 180 IAMs_20 IAMs_20 11 51 04.6
comp=Z,5μm,18.0s
SONM Songino Array 108.34 338 Pdiff **Pdif 11 06 03.6 +4.1**
comp=Z,0.3nm,0.4s,baz=29,slow=3.3,SNR=1.5
SONM PP **PP 11 10 28.3 -0.3**
comp=Z,1.4nm,0.7s,baz=38,slow=7.3,SNR=4.6
SONM PKKPab **PKKPab 11 21 35.3 +3.2**
comp=Z,0.4nm,0.4s,baz=193,slow=5.9,SNR=3.7
SANT Santorini 108.36 40 IAMs_20 IAMs_20 11 59 05.3
comp=Z,7μm,18.0s
VNA3 Neumayer Olymp 108.96 160 PP **PP 11 10 37.1 +3.8**
VNA1 Neumayer--Stat 109.42 159 PP **PP 11 10 41.8 +5.1**
VNA2 Neumayer--Watz 109.70 160 PP **PP 11 10 42.7 +4.0**
baz=311,slow=10.0
KARP Karpathos 109.94 40 IAMs_20 IAMs_20 11 59 50.1
comp=Z,8μm,22.0s
ANTO Ankara 110.10 33 IAMs_20 IAMs_20 11 59 39.6
comp=Z,6μm,20.0s
BJT Baijiatuan 110.35 327 IAMs_20 IAMs_20 12 01 24.3
comp=Z,5μm,19.0s
SOC Sochi 110.50 27 *i* PKIKP **PKiKP 11 10 08.8 -0.8**
SOC *e* 11 10 44.5
SOC *e*PPP PPP 11 13 02.9
SOC *e*PS **PS 11 20 14.3 -0.3**
SOC *e*SS SS 11 26 12.2 -0.3
SOC *e*SSS SSS 11 30 17.2
SOC MLR MLR
comp=Z,15μm,22.0s
BRTR Keskin Array B 110.65 33 PKKPab PKKPab 11 21 19.4 -2.3
comp=Z,0.9nm,0.6s,baz=197,slow=3.9,SNR=5.6
BRTR Keskin Array B 110.65 33 *c* PKIKP **PKiKP 11 10 10.5 +0.3**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
SNAA Sanae 111.12 161 PP **PP 11 10 52.5 +3.5**
SNAA Sanae 111.12 161 IAMs_20 IAMs_20 11 50 23.1
comp=Z,4μm,19.0s
KIV Kislovodsk 111.41 24 IAMs_20 IAMs_20 12 00 31.3
comp=Z,8μm,19.0s
KIV Kislovodsk 111.41 24 *i* P **Pdif 11 06 10.5 -2.7**
KIV *i* 11 10 09.0
KIV *e* 11 10 48.4
KIV *e* 11 16 49.4
KIV *e*PS **PS 11 20 20.7 -2.4**
KIV *e*SS SS 11 26 21.1 -3.6
KIV pmax pmax
comp=Z,5.0nm,1.0s
KIV MLR MLR
comp=Z,5μm,21.0s
KBZ Khabaz 111.68 24 PP **PP 11 10 47.5 -5.1**
comp=Z,2.1nm,0.8s,baz=319,slow=7.4,SNR=6.5
HHC Hu-ho-hao-te 111.97 331 *e*PKP **PKiKP 11 10 08.9 -3.7**
HHC PP **PP 11 10 55.8 +0.8**
HHC SKKS 11 17 57.5
HHC SS **SS 11 26 36.1 +3.6**
HHC AMB AMB
comp=Z,1μm,8.9s
HHC LR LR
comp=Z,11μm,16.8s
HHC LR LR
comp=Z,9μm,16.6s
HHC LR LR
comp=Z,13μm,16.5s
TROLL Troll, Antarti 112.74 161 PP **PP 11 10 58.2 -2.5**
CTA Charters Tower 113.02 255 PKKPab PKKPab 11 21 08.4 -0.4
comp=Z,3.6nm,0.8s,baz=234,slow=6.1,SNR=6.5
CTAO Charters Tower 113.02 255 IAMs_20 IAMs_20 11 51 05.0
comp=Z,5μm,21.0s
HNS HongShan 113.06 326 *e*Pdif **Pdif 11 06 22.0 +1.5**
HNS PP PP 11 11 10.7 +7.9
HNS SKKS 11 18 05.8
HNS LR LR
comp=Z,4μm,18.6s
HNS LR LR
comp=Z,4μm,16.9s
HNS LR LR
comp=Z,6μm,19.4s
SSE Sheshan 113.70 317 PKP **PKiKP 11 10 17.1 +1.1**
SSE SS SS 11 26 57.7 +1.6
SSE AMB AMB
comp=Z,190nm,8.5s
SSE LR LR
comp=Z,910nm,18.7s
SSE LR LR
comp=Z,2μm,18.8s
CSS Mathiatis 113.97 37 IAMs_20 IAMs_20 11 59 22.5
comp=Z,6μm,22.0s
MAK Makhachkala 114.05 22 *e*P **Pdif 11 06 18.1 -6.7**
MAK *e* 11 16 54.6
MAK *e*PS **PS 11 20 46.7 -0.5**
MAK *e*SS SS 11 26 56.6 -2.8
MAK *e*SSS SSS 11 31 19.6
MAK pmax pmax
comp=Z,188nm,1.2s
MK31 Makanchi Array 114.86 354 *i* PKIKP PKPdf 11 10 18.5 +0.6
MKAR Makanchi Array 114.86 354 PKP **PKiKP 11 10 17.1 -0.8**
comp=Z,3.5nm,1.0s,baz=36,slow=3.3,SNR=11
MKAR PP **PP 11 11 09.2 -5.7**
comp=Z,1.8nm,0.9s,baz=30,slow=3.8,SNR=1.9
MKAR PKKPab **PKKPab 11 21 03.1 +0.1**
comp=Z,2.0nm,1.0s,baz=174,slow=4.6,SNR=6.2
MKAR Makanchi Array 114.86 354 *c* PKIKP PKPdf 11 10 18.7 +0.8
MKAR pmax pmax
comp=Z,4.0nm,1.0s
NVL N'lazarevskaya 115.94 161 *e*PKIKP PKPdf 11 10 27.6 +8.5
NVL *e*SP SP 11 21 00.6 -2.1
NVL *e*PS **PS 11 21 09.2 +4.8**
NVL *e*SS **SS 11 27 29.8 +4.8**
NVL *e*SSS SSS 11 31 46.8
NVL pmax pmax
comp=Z,5.0nm,0.8s
NVL MLR MLR
comp=Z,5μm,23.0s
LYN LuoYang 116.40 326 PKP **PKiKP 11 10 28.4 +7.2**
LYN PP PP 11 12 26.2 +60
WMQ Urumqi 117.06 350 *e*PKP **PKiKP 11 10 23.5 +1.2**
WMQ PP **PP 11 11 33.3 +2.8**
WMQ AMB AMB
comp=Z,640nm,4.1s
WMQ LR LR
comp=Z,10μm,22.3s
WMQ LR LR
comp=Z,13μm,19.5s
WMQ LR LR
comp=Z,12μm,19.1s
TATO Taipei 117.43 312 IAMs_20 IAMs_20 11 50 52.0
comp=Z,6μm,22.0s
NACB Ninganchiao 117.85 311 IAMs_20 IAMs_20 11 50 38.4
comp=Z,6μm,22.0s
GHAJ Ghor Haditha 117.92 38 IAMs_20 IAMs_20 12 04 02.1
comp=Z,5μm,22.0s
GTA Gaotai 118.01 338 *e*PKPbc PKiKP 11 10 32.4 +8.1
GTA sPKP 11 10 48.9
GTA PP **PP 11 11 35.5 -1.9**
GTA Gaotai 118.01 338 SS SS 11 27 52.2 +0.6
GTA AMB AMB
comp=Z,330nm,8.4s
GTA LR LR
comp=N,8μm,17.8s
GTA LR LR
comp=E,6μm,20.0s
GTA LR LR
comp=Z,11μm,18.9s
WHN Wuhan 118.32 321 *e*PKPbc **PKiKP 11 10 31.9 +6.9**
WHN PP **PP 11 11 42.5 +2.6**
WHN AMB AMB
comp=Z,580nm,3.0s
WHN LR LR
comp=N,12μm,17.3s
WHN LR LR
comp=E,3μm,14.6s
WHN LR LR
comp=Z,10μm,17.7s
YULB Yu-li 118.55 311 IAMs_20 IAMs_20 11 51 01.0
comp=Z,6μm,22.0s
SSLB Suanglung 118.55 311 IAMs_20 IAMs_20 11 51 32.9
comp=Z,8μm,22.0s
XAN Xi'an 118.64 328 PKP **PKiKP 11 10 28.7 +3.1**
XAN PP **PP 11 11 44.8 +2.8**
XAN SS SS 11 28 06.4 +6.2
XAN AMB AMB
comp=Z,920nm,8.4s
XAN LR LR
comp=Z,9μm,19.2s
XAN LR LR
comp=Z,3μm,22.0s
XAN LR LR
comp=Z,11μm,20.0s
STKA Stephens Creek 118.88 243 PKP **PKPdf 11 10 24.1 -1.8**
comp=Z,5.1nm,1.0s,baz=76,slow=4.2,SNR=3.5
STKA Stephens Creek 118.88 243 **PKPdf 11 10 24.7 -1.2**
STKA Stephens Creek 118.88 243 PKIKP **PKPdf 11 10 24.7 -1.2**
TWG Pinlang 119.06 310 IAMs_20 IAMs_20 12 10 43.6
comp=Z,4μm,20.0s
LZH Lanzhou 119.33 333 *e*PKP **PKiKP 11 10 32.0 +5.0**
LZH sPKP 11 10 47.6
LZH PP **PP 11 11 46.0 -0.7**
LZH Lanzhou 119.33 333 SS SS 11 28 01.7 -7.3
LZH AMB AMB
comp=Z,500nm,5.0s
LZH LR LR
comp=N,8μm,19.5s
LZH LR LR
comp=E,7μm,20.1s
LZH LR LR
comp=Z,13μm,18.4s
KDJ Kajisay 119.83 358 **PKPdf 11 10 26.6 -1.2**
KDJ Kajisay 119.83 358 PKIKP **PKPdf 11 10 26.6 -1.2**
CNSH ChangSha 120.88 321 ⇑PKP **PKiKP 11 10 33.3 +3.3**
CNSH LR LR
comp=Z,3μm,17.2s
CNSH LR LR
comp=Z,3μm,17.0s
CNSH LR LR
comp=Z,4μm,17.9s
ENH Enshi 121.29 325 IAMs_20 IAMs_20 12 09 05.1
comp=Z,6μm,20.0s
GEYT Alibeck 121.90 16 PKP **PKPdf 11 10 31.1 -0.6**
comp=Z,6.8nm,0.8s,baz=333,slow=1.9,SNR=6.3
GEYT PP **PP 11 11 58.8 -5.0**
comp=Z,3.4nm,0.2s,baz=331,slow=8.5,SNR=8.2
GEYT Alibeck 121.90 16 PKPdf **PKPdf 11 10 30.3 -1.4**
GYA0 ALIBECK ARRAY 121.90 16 PKIKP **PKPdf 11 10 31.2 -0.5**
GYA0B ALIBECK ARRAY 121.90 16 **PKPdf 11 10 31.2 -0.5**
SIJI Sorong 122.00 281 PKP **PKiKP 11 10 33.5 +0.9**
comp=Z,17nm,1.0s,baz=114,slow=5.6,SNR=4.1
KSH Kashi 122.47 359 PKP **PKiKP 11 10 38.1 +5.0**
KSH PP PP 11 12 16.8 +9.1
KSH Kashi 122.47 359 SS SS 11 28 57.4 +9.0
KSH AMB AMB
comp=Z,620nm,7.6s
KSH LR LR
comp=N,17μm,23.4s
KSH LR LR
comp=E,6μm,15.5s
KSH LR LR
comp=Z,26μm,22.3s
GAR Garm 122.84 4 **PKPdf 11 10 33.1 -0.5**
CHGR Chuyangaron 123.09 5 PKPdf **PKPdf 11 10 33.9 -0.1**
CHGR Chuyangaron 123.09 5 PKIKP **PKPdf 11 10 33.9 -0.1**
CD2 Chengdu 123.71 330 PKP **PKiKP 11 10 38.6 +2.9**
CD2 PP **PP 11 12 17.8 +1.2**
CD2 SKS **SKSdf 11 17 49.1 +0.6**
CD2 SKKS **SKKSac 11 19 14.5 -3.2**
CD2 SS **SS 11 29 04.7 -0.3**
CD2 AMB AMB
comp=Z,310nm,5.8s
CD2 LR LR
comp=Z,10μm,19.8s
CD2 LR LR
comp=Z,7μm,17.5s
WR0 Warramunga Arr 123.82 258 **PKPdf 11 10 35.0 -0.7**
WB0 Warramunga Arr 123.93 258 PKPdf **PKPdf 11 10 34.8 -1.2**
DAV Davao City (W) 123.94 292 PKP **PKPdf 11 10 35.0 -1.2**
comp=Z,242nm,0.4s,baz=288,slow=8.3,SNR=1.8
DAV Davao City (W) 123.94 292 IAMs_20 IAMs_20 11 51 48.9

comp=Z,8µm,22.0s
WRAB Tennant Creek 124.00 258 PKPdf 11 10 35.2 -0.9
WRAB Tennant Creek 124.00 258 *i* PKIKP **PKPdf 11 10 34.9 -1.2**
WB2 Warramunga Arr 124.00 258 PKPdf **PKPdf 11 10 34.8 -1.3**
WRA Warramunga Arr 124.01 258 PKP **PKPdf 11 10 34.4 -1.7**
comp=Z,6.0nm,0.8s,baz=77,slow=2.3,SNR=32
WRA PKKPbc **PKKPab 11 20 21.1 0.0**
comp=Z,0.9nm,0.9s,baz=263,slow=1.7,SNR=4.6
WRA Warramunga Arr 124.01 258 PKPdf **PKPdf 11 10 34.1 -2.0**
SAUI Saumlaki 124.25 273 IAMs_20 IAMs_20 11 51 47.4
comp=Z,5µm,19.0s
HKPS Hong Kong Po S 124.27 315 IAMs_20 IAMs_20 12 16 15.9
comp=Z,5µm,20.0s
AS31 Alice Springs 124.91 254 PKPdf **PKPdf 11 10 36.4 -1.4**
ASAR Alice Springs 124.91 254 PKhKP PKPpre 11 10 23.2
comp=Z,0.2nm,0.6s,baz=90,slow=4.3,SNR=1.6
ASAR PKP **PKPdf 11 10 36.5 -1.3**
comp=Z,6.9nm,0.9s,baz=76,slow=2.3,SNR=15
ASAR PKKPbc **PKKPab 11 20 16.9 -0.2**
comp=Z,0.6nm,0.9s,baz=294,slow=4.5,SNR=4.5
ASAR Alice Springs 124.91 254 PKPdf **PKPdf 11 10 35.7 -2.0**
MTN Manton Dam 125.66 267 PKPdf **PKPdf 11 10 38.5 -0.8**
GYA Guiyang 125.81 324 ⇑PKP **PKiKP 11 10 40.3 +0.3**
GYA sPKP 11 10 46.1
GYA SKKS 11 19 28.6
GYA SS **SS 11 29 38.3 +6.3**
GYA AMB AMB
comp=Z,300nm,12.1s
GYA LR LR
comp=Z,2µm,18.8s
GYA LR LR
comp=Z,4µm,21.9s
GYA LR LR
comp=Z,5µm,21.2s
TSUM Tsumeb 126.00 101 PKPdf **PKPdf 11 10 40.0 -0.1**
TSUM Tsumeb 126.00 101 IAMs_20 IAMs_20 12 04 13.8
comp=Z,4µm,19.0s
HRA Herat 126.25 13 PKPdf 11 10 38.6 -1.8
CASY Casey 126.70 197 IAMs_20 IAMs_20 11 56 25.0
comp=Z,5µm,20.0s
KBL Kabul 127.16 6 P **PKPdf 11 10 40.0 -2.1**
SNR=5.5
PZH PanZhiHua 128.35 329 PKP **PKPdf 11 10 43.3 -1.2**
PZH sPKP 11 10 51.5
PZH PP **PP 11 12 49.1 +1.5**
PZH PKS **PKSdf 11 14 22.4 +1.1**
PZH SKKS 11 19 43.4
PZH SS **SS 11 30 03.6 +0.2**
PZH AMB AMB
comp=Z,290nm,5.5s
PZH LR LR
comp=Z,3µm,17.1s
PZH LR LR
comp=Z,3µm,18.0s
PZH LR LR
comp=Z,5µm,17.7s
KMI Kunming 128.99 327 PKP **PKiKP 11 10 49.0 +2.5**
KMI PP **PP 11 12 55.5 +3.6**
KMI SKS **SKSdf 11 17 52.0 -6.9**
KMI AMB AMB
comp=Z,410nm,7.1s
KMI LR LR
comp=Z,4µm,18.2s
KMI LR LR
comp=Z,4µm,18.0s
KMI LR LR
comp=Z,5µm,19.3s
QIZ Qiongzhong 129.41 315 IAMs_20 IAMs_20 12 04 40.9
comp=Z,3µm,20.0s
QIZ Qiongzhong 129.41 315 PKP **PKPdf 11 10 46.5 0.0**
QIZ SS SS 11 30 16.6 -0.6
QIZ LR LR
comp=Z,3µm,17.6s
QIZ LR LR
comp=Z,4µm,17.6s
QIZ LR LR
comp=Z,4µm,15.7s
RAYN Ar Rayn 129.52 36 PKPdf **PKPdf 11 10 45.2 -1.5**
RAYN Ar Rayn 129.52 36 IAMs_20 IAMs_20 12 14 37.0
comp=Z,5µm,20.0s
RAYN Ar Rayn 129.52 36 PKIKP **PKPdf 11 10 45.2 -1.5**
SUR Sutherland 129.69 117 IAMs_20 IAMs_20 11 59 25.6
comp=Z,7µm,22.0s
LSA Lhasa 129.74 341 IAMs_20 IAMs_20 12 12 00.2
comp=Z,6µm,22.0s
LSA Lhasa 129.74 341 PKP **PKiKP 11 10 48.9 +0.6**
LSA PP PP 11 13 07.2 +10
LSA LR LR
comp=Z,850nm,16.4s
LSA LR LR
comp=Z,2µm,17.1s
LSA LR LR
comp=Z,450nm,7.1s
MAW Mawson 130.13 174 PKP **PKPdf 11 10 46.1 -0.2**
comp=Z,2.5nm,0.9s,baz=251,slow=3.2,SNR=2.1
MAW Mawson 130.13 174 PKPdf **PKiKP 11 10 46.8 -0.3**
SHMA Al-Shehemyia 130.35 29 P **PKPdf 11 10 45.6 -2.5**
KHOR Al-Khor Airpor 130.79 28 P **PKPdf 11 10 46.4 -2.5**
SOEI Soe 131.41 273 IAMs_20 IAMs_20 12 04 56.1
comp=Z,5µm,20.0s
SHME Shamm 132.31 23 P **PKPdf 11 10 49.8 -2.1**
GHWR Ruwais 132.84 28 P **PKPdf 11 10 51.2 -1.6**
MMRI Maumere 133.02 275 IAMs_20 IAMs_20 12 16 18.8
comp=Z,3µm,18.0s
NAZ Nazwa, Dubai 133.09 24 P **PKPdf 11 10 51.3 -2.0**
SNR=16
MBAR Mbarara 133.28 73 IAMs_20 IAMs_20 12 08 00.5
comp=Z,6µm,21.0s
MBAR Mbarara 133.28 73*c* *i*PKIKP **PKiKP 11 10 55.7 +0.3**
MBAR pmax pmax
comp=Z,32nm,2.5s
UOSS Minazif 133.34 23 IAMs_20 IAMs_20 12 13 17.8
comp=Z,6µm,22.0s
UOSS Minazif 133.34 23 P **PKPdf 11 10 51.7 -2.1**
SHL Shillong 133.34 339 P **PKiKP 11 10 54.8 -0.4**
SNR=7.6
HATD Hatta, Dubai 133.42 24 P **PKPdf 11 10 52.3 -1.7**
SNR=6.7
MZWR Madinat Zayed 133.46 27 P **PKPdf 11 10 52.8 -1.2**
BOSA Boshof 133.66 112 PKP **PKPdf 11 10 53.6 -0.8**
comp=Z,6.2nm,0.9s,baz=283,slow=2.9,SNR=7.1
BOSA Boshof 133.66 112 PKPdf 11 10 52.4 -2.0
MZR Muzera 133.95 28 P **PKPdf 11 10 53.6 -1.4**
SNR=13
LBTB Lobatse 133.96 107 PKPdf **PKPdf 11 10 54.7 -0.3**
LBTB Lobatse 133.96 107 PKIKP **PKPdf 11 10 54.7 -0.3**
ALNE Al Ain 133.97 25 P **PKPdf 11 10 53.0 -2.0**
SNR=12
UMZA Um Al Zommool 134.93 26 P **PKPdf 11 10 55.6 -1.3**
HOQ Hoqain 134.99 23 P **PKPdf 11 10 54.5 -2.5**
FURI Furi 135.24 56 IAMs_20 IAMs_20 12 18 59.4
comp=Z,5µm,18.0s
LSZ Lusaka 135.34 93 IAMs_20 IAMs_20 12 21 01.5
comp=Z,5µm,19.0s
BIDO Bidbid 135.34 22 P **PKPdf 11 10 55.2 -2.4**
LODK Lodwar 135.53 65 IAMs_20 IAMs_20 12 08 04.3
comp=Z,4µm,21.0s
LODK Lodwar 135.53 65 P **PKiKP 11 10 59.4 -0.4**
SNR=5.3
CHTO Chiang Mai 136.16 326 PKPdf **PKPdf 11 10 58.0 -1.2**
CHTO Chiang Mai 136.16 326 IAMs_20 IAMs_20 12 17 44.6
comp=Z,5µm,20.0s
CHTO Chiang Mai 136.16 326 PKIKP **PKPdf 11 10 58.0 -1.2**
CHTO Chiang Mai 136.16 326 P **PKiKP 11 11 01.8 +0.9**
JMDO Jabal Madar 136.39 23 P **PKPdf 11 10 57.2 -2.4**
CMAR Chiang Mai Arr 136.45 326 PKP **PKPdf 11 10 57.2 -2.5**
comp=Z,1.3nm,0.3s,baz=346,slow=2.1,SNR=5.5
CMAR PP **PP 11 13 39.9 +0.3**
comp=Z,0.8nm,0.3s,baz=18,slow=5.1,SNR=5.4
CMAR Chiang Mai Arr 136.45 326 PKPdf 11 10 58.3 -1.5
CMAR Chiang Mai Arr 136.45 326 PKIKP **PKPdf 11 10 58.3 -1.5**
ATD Arta Tunnel 136.70 49 IAMs_20 IAMs_20 12 10 27.2
comp=Z,4µm,21.0s
SBUM Sibu 137.80 295 IAMs_20 IAMs_20 12 01 40.0
comp=Z,4µm,21.0s
KMBO Kilima Mbogo 139.37 69 *i* PKIKP **PKPdf 11 11 03.2 -2.4**
KMBO Kilima Mbogo 139.37 69 P **PKiKP 11 11 08.3 +0.4**
JAGI Jajag, Banyuwa 140.59 279 IAMs_20 IAMs_20 12 14 07.3
comp=Z,3µm,21.0s
KIBK Kibwezi 140.62 71 IAMs_20 IAMs_20 12 20 16.0
comp=Z,4µm,20.0s
KIBK Kibwezi 140.62 71 P **PKiKP 11 11 09.3 -0.9**
POO Poona 143.38 2 *e*P PKPab 11 11 06.0 -2.3
SOCY Socotra 143.38 36 IAMs_20 IAMs_20 12 20 23.0
comp=Z,5µm,21.0s

HYBB Hyderabad (bro 144.31 354 *es*PKPdf **PKiKP 11 11 16.4 -1.2**
HYBB *e*PKiKP **PKiKP 11 11 16.5 -1.2**
HYBB *es*PKiKP **sPKiKP 11 11 20.7 +2.4**
HYBB *e*PP **PP 11 14 28.3 +1.2**
HYBB *e*SKPbc **SKPbc 11 14 51.8 -2.2**
HYBB *e*SKSdf **SKSdf 11 18 22.1 -2.6**
HYBB *e*SKKSac **SKKSac 11 21 21.4 -1.3**
HYBB *e*SKKPbc **SKKPbc 11 22 54.5 -1.9**
HYBB IVMs_BB IVMs_BB 12 11 11.3
comp=Z,776nm,25.4s
MYKOM **Kota Tinggi 145.15 302** **PKPbc 11 11 13.9 -1.1**
MYKOM IAMs_20 IAMs_20 12 29 10.3
comp=Z,5µm,20.0s
KULM Kulim 145.38 310 **PKPbc 11 11 13.1 -2.7**
IPM Ipoh 145.65 309 PKPdf **PKPdf 11 11 15.6 -0.8**
IPM IAMs_20 IAMs_20 12 28 32.5
comp=Z,6µm,21.0s
CRZF Crozet Islands 146.15 151 IAMs_20 IAMs_20 12 09 53.9
comp=Z,5µm,20.0s
PMBI Palembang 146.93 294 IAMs_20 IAMs_20 12 19 58.2
comp=Z,3µm,22.0s
LHMI Lhok Sumawe 148.02 315 IAMs_20 IAMs_20 12 21 48.1
comp=Z,3µm,21.0s
BKNI Bangkinang 148.27 303 IAMs_20 IAMs_20 12 30 16.9
comp=Z,5µm,21.0s
XMIS Christmas Isla 149.18 280 PKPbc **PKiKP 11 11 27.1 -0.6**
XMIS PKPab **sPKPab 11 11 34.9 +3.4**
MNAI Manna 149.21 293 IAMs_20 IAMs_20 12 20 41.3
comp=Z,4µm,20.0s
GSI Gunungsitoli 150.32 309 **PKPbc 11 11 27.6 -1.6**
PCHI Peechi 151.31 357 *e*P **PKPbc 11 11 30.4 -1.1**
PCHI *ex* x 11 34 18.0

*IDC **07** 10:57:57.3±0.6, 18°.26N×105°.25W, h0km, mb4.7/35, mbtmp4.7/40, ML4.3/5, Error ellipse: s-maj=18.5km s-min=10.1km az=54.0*
*MOS **07** 10:57:58.5±1.2, 18°.49N×105°.12W, h15km, mb5.5/44, Error ellipse: s-maj=9.8km s-min=5.4km az=89.9*
*MEX **07** 10:57:59.7±1.5, 18°.41N×105°.35W, h12km±45km, MD5.5*
*NEIC **07** 10:58:00.1±1.9, 18°.50N±0°.06×105°.20W±0°.07, h10km±1km, mb5.5/436, Md5.5/69(MEX), Mwc5.5(GCMT), Error ellipse: s-maj=12.3km s-min=7.9km az=229.0*
*NEIC **07** 10:58:03, 18°.48N×105°.36W, h12km, Moment Tensor Solution. Duration: 28s8 Moment tensor: Scale 10^17^Nm; Mrr-0.44; Mθθ0.61; Mφφ-0.18; Mrθ-0.23; Mθφ-2.22; Mφr0.42; Fault plane solution: M₀2.34000×10^17^ NP1: φs265.00000°, δ79.00000°, λ178.00000°. NP2: φs355.00000°, δ88.00000°, λ11.00000°. Principal axes: T 2.5405, Plg9.0000°, Azm220.0000°; N -0.4849, Plg79.0000°, Azm3.0000°; P -2.0556, Plg6.0000°, Azm129.0000°;*
*GCMT **07** 10:58:04.1±0.5, 18°.51N±0°.02×105°.34W±0°.02, h12km±2km, MW5.5/95, Moment Tensor Solution. s8,c8; s95,c161; Duration: 1s4 Moment tensor: Scale 10^17^Nm; Mrr-0.38±.10; Mθθ0.52±.08; Mφφ-0.13±.09; Mrθ0.12±.24; Mθφ-2.09±.09; Mφr0.52±.27; Best double couple: M₀2.19400×10^17^ NP1:φs266.00000°, δ75.00000°, λ-172.00000°. NP2:φs174.00000°, δ83.00000°, λ-15.00000°. Principal axes: T 2.3290, Plg5.0000°, Azm221.0000°; N -0.2710, Plg73.0000°, Azm329.0000°; P -2.0580, Plg16.0000°, Azm130.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 07 10:57:58.0±1.6, 18°.40N±0°.04×105°.22W±0°.04, h3km±9km, n967,σ1$47/915, mb5.4/261, MS6.0/3, 3C-1D, Off coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CJM	**Chamela**	**1.11**	**9**	⇓*e*P		**Pg**	**10 58 17.5**	**-1.8**
CJM				*e*S		**Sg**	**10 58 31.3**	**-2.3**
CDAR	**Ciudad de Arme**	**1.27**	**65**	*e*P		**Pn**	**10 58 20.0**	**-2.6**
CDAR				*e*S		**Sb**	**10 58 37.1**	**-2.1**
R15V		**1.40**	**57**			**Pn**	**10 58 22.9**	**-1.6**
R15V		**1.40**	**57**	*e*P		**Pn**	**10 58 22.9**	**-1.6**
R15V				*i* S		**Sb**	**10 58 41.4**	**-1.8**
COIG	**Colima**	**1.64**	**62**	*e*P		**Pn**	**10 58 26.0**	**-1.9**
COIG				*i* S		**Sn**	**10 58 47.7**	**-1.9**
MMIG	**Aquila**	**1.79**	**93**			**Pn**	**10 58 27.4**	**-2.3**
MMIG	**Aquila**	**1.79**	**93**	*e*P		**Pn**	**10 58 27.4**	**-2.3**
MMIG				*e*S		Sn	10 58 43.3	-10
MNGA	**Volcan de Coli**	**1.85**	**55**	*e*P		**Pn**	**10 58 30.6**	**-0.3**
MNGA				*e*S		**Sg**	**10 58 56.9**	**-0.6**
EZ5V		**1.87**	**55**			**Pn**	**10 58 30.8**	**-0.4**
EZ5V		**1.87**	**55**	*e*P		**Pn**	**10 58 30.8**	**-0.4**
EZ5V				*e*S		**Sn**	**10 58 54.0**	**-1.4**
INCO	**Volcan de Coli**	**1.90**	**54**	⇓*e*P		**Pn**	**10 58 31.0**	**-0.6**
INCO				*e*S		**Sn**	**10 58 55.5**	**-0.7**
JUBC	**Volcan de Coli**	**1.92**	**54**	*e*P		**Pn**	**10 58 31.8**	**-0.1**
JUBC				*i* S		**Sb**	**10 58 56.5**	**-1.8**
PUVA	**Puert Vallarta**	**2.21**	**0**			**Pn**	**10 58 34.6**	**-1.1**
PUVA						**Sn**	**10 59 00.5**	**-3.1**
PUVA	**Puert Vallarta**	**2.21**	**0**	*e*P		**Pn**	**10 58 34.6**	**-1.1**
PUVA				*e*S		**Sn**	**10 59 00.5**	**-3.1**
ANIG	**Ahuacatlan**	**2.72**	**14**			**Pn**	**10 58 42.3**	**-0.5**
ANIG						**Sn**	**10 59 16.0**	**-0.3**
ANIG	**Ahuacatlan**	**2.72**	**14**	*e*P		**Pn**	**10 58 42.3**	**-0.5**
ANIG				*e*S		**Sn**	**10 59 16.0**	**-0.3**
GDLP	**Chapalita**	**2.82**	**36**	*e*P		**Pn**	**10 58 44.4**	**+0.1**
GDLP				*e*S		**Sb**	**10 59 22.5**	**-1.8**
TEPI	**Tepic**	**3.12**	**5**	*e*P		**Pn**	**10 58 46.7**	**-1.5**
TEPI				*e*S		**Sn**	**10 59 22.7**	**-3.4**
URUA	**Uruapan**	**3.15**	**71**			**Pn**	**10 58 50.0**	**+1.3**
URUA						**Sn**	**10 59 28.4**	**+1.5**
URUA	**Uruapan**	**3.15**	**71**	*e*P		**Pn**	**10 58 50.0**	**+1.3**
URUA				*e*S		**Sn**	**10 59 28.4**	**+1.5**
UON	**La Union**	**3.27**	**97**	*e*P		**Pn**	**10 58 50.0**	**-0.2**
UON				*e*S		**Sn**	**10 59 27.1**	**-2.4**
ZIIG	**Zihuatanejo**	**3.66**	**102**			**Pn**	**10 58 54.1**	**-1.5**
ZIIG						Sn	10 59 30.9	-8.4
ZIIG	**Zihuatanejo**	**3.66**	**102**	*e*P		**Pn**	**10 58 54.1**	**-1.5**
ZIIG				*e*S		Sn	10 59 30.9	-8.4
MOIG	**Morelia**	**4.02**	**71**	Pn		**Pn**	**10 59 00.7**	**0.0**
MOIG	**Morelia**	**4.02**	**71**	*e*P		**Pn**	**10 59 01.1**	**+0.3**
MOIG				*i* S		**Sn**	**10 59 43.9**	**-4.6**
AAIG	**Aguscalientes**	**4.44**	**36**	*e*P		**Pn**	**10 59 07.8**	**+1.2**
AAIG				*e*S		**Sn**	**11 00 01.6**	**+2.7**
ARIG	**Puente Sto Nin**	**4.63**	**91**			**Pn**	**10 59 10.6**	**+1.7**
ARIG						**Sn**	**11 00 00.9**	**-2.4**
ARIG	**Puente Sto Nin**	**4.63**	**91**	*e*P		**Pn**	**10 59 10.6**	**+1.7**
ARIG				*e*S		**Sn**	**11 00 00.9**	**-2.4**
MAIG	**Mazatlaan**	**4.89**	**347**			**Pn**	**10 59 09.6**	**-3.0**
MAIG	**Mazatlaan**	**4.89**	**347**	*e*P		**Pn**	**10 59 09.6**	**-3.0**
MAIG				*e*S		**Sn**	**11 00 02.7**	**-7.0**
CAIG	**El Cayaco**	**4.91**	**105**			**Pn**	**10 59 13.3**	**+0.5**
CAIG	**El Cayaco**	**4.91**	**105**	*e*P		**Pn**	**10 59 13.3**	**+0.5**
CAIG				*e*S		**Sn**	**11 00 03.8**	**-6.4**
ZAIG	**Zacatecas**	**5.01**	**29**	Pn		**Pn**	**10 59 13.8**	**-0.6**
ACIG	**Acambay**	**5.29**	**72**	*e*		**Pn**	**10 59 20.4**	**+2.3**
MEIG	**Mezcala**	**5.35**	**94**			**Pn**	**10 59 20.0**	**+1.2**
MEIG	**Mezcala**	**5.35**	**94**	*e*		**Pn**	**10 59 20.0**	**+1.2**
MEIG				*e*			11 00 14.5	
H06E1	**SOCORRO T-PHAS**	**5.42**	**275**	T		T	11 04 40.2	
	SNR=108							
PLIG	**Platanillo**	**5.43**	**89**			**Pn**	**10 59 21.3**	**+1.3**
PLIG						**Sn**	**11 00 19.7**	**-3.4**
PLIG	**Platanillo**	**5.43**	**89**	*e*		**Pn**	**10 59 21.3**	**+1.3**
PLIG				*e*			11 00 19.7	
H06S		**5.45**	**274**	*e*			10 57 52.5	
H06S				*i*			10 58 10.2	
MAVM	**Malinalco, Edo**	**5.46**	**83**	*e*		Pn	10 59 27.6	+7.1
DAIG	**Los Arroyos**	**5.48**	**104**			**Pn**	**10 59 20.2**	**-0.5**
DAIG	**Los Arroyos**	**5.48**	**104**	*e*		**Pn**	**10 59 20.2**	**-0.5**
DAIG				*e*			11 00 16.9	
AOVM	**Tlapan**	**5.65**	**80**	*e*		Pn	10 59 28.4	+4.9
CJVM	**Cuajimalpa**	**5.70**	**79**	*e*		**Pn**	**10 59 28.6**	**+4.7**
AZVM	**Cuida Lopez Ma**	**5.74**	**77**	*e*		**Pn**	**10 59 26.4**	**+1.9**
BJVM	**Benito Juarez**	**5.81**	**79**	*e*		**Pn**	**10 59 26.4**	**+1.0**
XCVM	**Xochimilco**	**5.84**	**81**	*e*		**Pn**	**10 59 26.0**	**+0.1**
YAIG	**Yautepec**	**5.85**	**85**			**Pn**	**10 59 28.4**	**+2.5**
YAIG						**Sn**	**11 00 26.0**	**-7.6**
YAIG	**Yautepec**	**5.85**	**85**	*e*		**Pn**	**10 59 28.4**	**+2.5**
YAIG				*e*			11 00 26.0	
ZUVM	**ZUMPANGO**	**5.98**	**75**	*e*		Pb	10 59 37.0	-6.1
CRIG	**Cruz Grande**	**6.04**	**105**			**Pn**	**10 59 28.8**	**+0.5**
CRIG	**Cruz Grande**	**6.04**	**105**	*e*		**Pn**	**10 59 28.8**	**+0.5**
CRIG				*e*			11 00 31.5	
VTVM	**Tizayuca**	**6.25**	**76**	*e*		**Pn**	**10 59 35.0**	**+3.6**
TLIG	**Tlapa**	**6.39**	**96**	Pn		**Pn**	**10 59 34.7**	**+1.5**
TLIG	**Tlapa**	**6.39**	**96**	*e*		**Pn**	**10 59 34.8**	**+1.5**
FTIG	**Fresnillo de T**	**6.76**	**93**	*e*		**Pn**	**10 59 39.6**	**+1.4**
FTIG				*e*			11 00 50.3	
PNIG	**Pinotepa**	**7.06**	**105**			**Pn**	**10 59 43.3**	**+0.9**
PNIG	**Pinotepa**	**7.06**	**105**	*e*		**Pn**	**10 59 43.3**	**+0.9**
PNIG				*e*			11 00 54.0	
TXIG	**Tlaxiaco**	**7.19**	**98**	*e*		**Pn**	**10 59 46.1**	**+1.7**
TXIG				*e*			11 00 58.3	
LPIG	**La Paz**	**7.39**	**321**	Pn		**Pn**	**10 59 48.1**	**+1.2**
	7.8nm,0.3s,baz=122,slow=13,SNR=8.2							
	334nm,1.3s							
TPIG	**Tehuac#an**	**7.46**	**89**			**Pn**	**10 59 48.8**	**+0.8**
TPIG	**Tehuac#an**	**7.46**	**89**	*e*		**Pn**	**10 59 48.8**	**+0.8**
YOIG	**Yosondua**	**7.48**	**101**	*e*		**Pn**	**10 59 50.4**	**+2.0**
TOIG	**Toxpalan**	**7.76**	**91**	*e*		**Pn**	**10 59 54.3**	**+2.3**
TOIG				*e*			11 01 12.0	
CMIG	**Matias Romero**	**9.94**	**96**	Pn		**Pn**	**11 00 23.1**	**+1.3**
	6.1nm,0.3s,baz=277,slow=14,SNR=45							
	14nm,0.4s							
TX31	**Lajitas Ar. Si**	**10.98**	**7**	Pn		**Pn**	**11 00 35.2**	**-0.9**
TX31	**Lajitas Ar. Si**	**10.98**	**7**	P		**Pn**	**11 00 39.1**	**+3.0**
	baz=187							
TX32	**Lajitas Array**	**10.98**	**7**	Pn		**Pn**	**11 00 35.2**	**-0.9**
TXAR	**Lajitas Array**	**10.98**	**7**	Pn		**Pn**	**11 00 39.2**	**+3.1**
	1.0nm,0.3s,baz=194,slow=5.5,SNR=17							
	40nm,1.0s							
TXAR	**Lajitas Array**	**10.98**	**7**			**Pn**	**11 00 35.5**	**-0.6**
TXAR	**Lajitas Array**	**10.98**	**7**	P		**Pn**	**11 00 35.5**	**-0.6**
SRIG	**Santa Rosalia**	**10.98**	**325**	Pn		**Pn**	**11 00 34.4**	**-1.7**
833A	**Chaparral WMA,**	**11.23**	**27**	Pn		**Pn**	**11 00 38.4**	**-1.1**
833A	**Chaparral WMA,**	**11.23**	**27**	P		**Pn**	**11 00 42.2**	**+2.7**
	baz=209							
HSIG		**11.80**	**335**			**Pn**	**11 00 48.4**	**+1.1**
JCT	**Junction City**	**12.99**	**21**	P		**Pn**	**11 01 06.8**	**+3.2**
	baz=203							
HUEH	**Huehuetenango**	**13.48**	**101**			**Pn**	**11 01 10.3**	**-0.2**
RTAL	**Retalhuleu**	**13.53**	**105**	Pn		**Pn**	**11 01 10.7**	**-0.4**
435B	**Jarrell**	**14.14**	**28**	Pn		**Pn**	**11 01 19.7**	**+0.4**
435B	**Jarrell**	**14.14**	**28**	P		**Pn**	**11 01 21.8**	**+2.5**
	baz=211							
435B	**Jarrell**	**14.14**	**28**	P		**Pn**	**11 01 21.9**	**+2.6**
	baz=211							
121A	**Cookes Peak, D**	**14.26**	**351**	P		**Pn**	**11 01 24.6**	**+3.5**
	baz=170							
HKT	**Hockley**	**14.33**	**35**	*i* P		**Pn**	**11 01 21.0**	**-0.8**
HKT				pmax		pmax		
	comp=Z,93nm,1.2s							
PETF	**Flores**	**14.71**	**93**	Pn		**Pn**	**11 01 27.8**	**+0.7**
TUC	**Tucson**	**14.73**	**341**	P		**P**	**11 01 30.8**	**-2.9**
	baz=158							
ABTX	**Abilene, Hawle**	**15.03**	**18**	P		**Pn**	**11 01 34.0**	**+2.6**
	baz=200,SNR=17							
ABTX	**Abilene, Hawle**	**15.03**	**18**	P		**Pn**	**11 01 32.9**	**+1.5**
	baz=201,SNR=17							
214A	**Organ Pipe Nat**	**15.14**	**335**	P		**P**	**11 01 35.7**	**-2.5**
	baz=151							
WHTX	**Lake Whitney,**	**15.24**	**26**	P		**Pn**	**11 01 35.5**	**+1.3**
	baz=209							
WHTX	**Lake Whitney,**	**15.24**	**26**	P		**Pn**	**11 01 35.9**	**+1.7**
	baz=209							
SFX	**San Felipe**	**15.31**	**327**	Pn		**Pn**	**11 01 34.3**	**-0.9**
SFX				lAmb		lAmb	11 01 43.4	
	comp=Z,217nm,1.4s							
CRNM	**Carthage**	**15.55**	**355**	Pn		**Pn**	**11 01 34.8**	**-3.6**
Y22A	**Socorro**	**15.55**	**355**	P		**P**	**11 01 41.8**	**-1.1**
	baz=173,SNR=8.2							
MSTX	**Muleshoe**	**15.66**	**8**	P		**P**	**11 01 41.9**	**-2.2**
	baz=188,SNR=9.0							
MSTX	**Muleshoe**	**15.66**	**8**	P		**Pn**	**11 01 41.2**	**+1.4**
	baz=188,SNR=9.0							
Y22D	**IRIS PASSCAL I**	**15.68**	**355**	P		**P**	**11 01 42.8**	**-1.6**
	baz=174							
LENM	**Lemitar**	**15.78**	**355**	Pn		**Pn**	**11 01 41.5**	**+0.1**
237A	**Washetta, Mont**	**15.98**	**30**	Pn		**Pn**	**11 01 45.0**	**+1.1**
237A	**Washetta, Mont**	**15.98**	**30**	P		**Pn**	**11 01 44.7**	**+0.7**
	baz=214,SNR=13							
NATX	**Nacogdoches**	**16.37**	**34**	Pn		**Pn**	**11 01 49.3**	**+0.5**
NATX	**Nacogdoches**	**16.37**	**34**	P		**P**	**11 01 50.8**	**-1.1**
	baz=218,SNR=29							
NATX	**Nacogdoches**	**16.37**	**34**	P		**P**	**11 01 50.5**	**-1.3**
	baz=218,SNR=29							
441A	**DeRidder**	**16.44**	**39**	P		**Pn**	**11 01 49.8**	**0.0**
441A				lAmb		lAmb	11 01 54.8	
	comp=Z,528nm,1.2s							
441A	**DeRidder**	**16.44**	**39**	P		**Pn**	**11 01 50.1**	**+0.3**
	baz=224,SNR=8.7							
Z35A	**Perchaven, San**	**16.50**	**24**	P		**P**	**11 01 52.5**	**-0.7**
Z35A	**Perchaven, San**	**16.50**	**24**	P		**P**	**11 01 52.2**	**-1.0**
	baz=207,SNR=15							
ANMO	**Albuquerque**	**16.52**	**356**	Pn		**P**	**11 01 53.9**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=174,slow=12,SNR=13							
	comp=Z,112nm,1.2s							
ANMO	**Albuquerque**	**16.52**	**356**	*i* P		**Pn**	**11 01 50.9**	**0.0**
ANMO				pmax		pmax		
	comp=Z,144nm,1.2s							
ANMO	**Albuquerque**	**16.52**	**356**	P		**P**	**11 01 55.0**	**+1.4**
	baz=175							
ANMO	**Albuquerque**	**16.52**	**356**	P		**P**	**11 01 53.8**	**+0.2**
	baz=176							
CPBX	**Cerro Prieto**	**16.65**	**329**	Pn		**Pn**	**11 01 51.2**	**-1.3**
CPBX				lAmb		lAmb	11 02 01.0	
	comp=Z,525nm,1.9s							
AMTX	**Amarillo**	**16.72**	**10**			**P**	**11 01 55.2**	**-0.6**
AMTX	**Amarillo**	**16.72**	**10**	P		**Pn**	**11 01 53.8**	**+0.4**
	baz=191,SNR=9.0							
AMTX	**Amarillo**	**16.72**	**10**	P		**P**	**11 01 55.8**	**0.0**
	baz=192							
CCX	**Cicese**	**16.93**	**325**			**Pn**	**11 01 54.5**	**-1.5**
GLA	**Glamis**	**16.95**	**331**	P		**P**	**11 01 59.2**	**+0.9**
	baz=147							
W18A	**Petrified Fore**	**17.13**	**347**	P		**P**	**11 01 59.8**	**-0.7**
W18A				lAmb		lAmb	11 02 06.6	
	comp=Z,356nm,1.4s							
W18A	**Petrified Fore**	**17.13**	**347**	P		**P**	**11 02 01.6**	**+1.1**
	baz=165,SNR=11							
YUH	**Yuha Desert**	**17.14**	**328**			**Pn**	**11 01 56.9**	**-1.8**
YUH				lAmb		lAmb	11 02 05.3	
	comp=Z,406nm,1.6s							
IKP	**In-Ko-Pah, Jac**	**17.24**	**327**	P		**P**	**11 02 02.6**	**+1.0**
	baz=142,SNR=27							
WMOK	**Wichita Mounta**	**17.25**	**18**	P		**Pn**	**11 01 59.9**	**-0.2**
WMOK	**Wichita Mounta**	**17.25**	**18**	P		**Pn**	**11 01 59.9**	**-0.2**
WMOK				pmax		pmax		
	comp=Z,1µm,1.7s							
WMOK	**Wichita Mounta**	**17.25**	**18**	P		**P**	**11 02 02.0**	**+0.3**
	baz=201,SNR=15		

baz=143,SNR=15
PFO Pinyon Flats O 18.18 329 P **P** **11 02 13.6 +1.6**
comp=Z,0.1nm,0.3s,baz=147,slow=8.9,SNR=12
comp=Z,47nm,1.2s
PFO Pinyon Flats O 18.18 329 P **Pn** **11 02 11.4 -0.3**
PFO Pinyon Flats O 18.18 329 P **Pn** **11 02 11.4 -0.3**
PFO pmax pmax
comp=Z,217nm,1.6s
PFO Pinyon Flats O 18.18 329 P **P** **11 02 14.2 +2.1**
baz=143,SNR=14
BELC Belle Mtn. Jos 18.28 330 P **P** **11 02 15.9 +2.8**
baz=145,SNR=12
NEE2 Needles Airpor 18.32 335 P **P** **11 02 15.9 +2.5**
baz=150
X37A Clayton 18.36 27 P **P** **11 02 14.0 +0.2**
344A Westbrook Farm 18.45 42 P **P** **11 02 15.1 +0.2**
344A Westbrook Farm 18.45 42 P **P** **11 02 15.1 +0.2**
baz=228,SNR=14
Z41A Richland Creek 18.52 35 P **Pn** **11 02 15.6 0.0**
Z41A IAmb IAmb 11 02 17.8
comp=Z,441nm,1.1s
Z41A Richland Creek 18.52 35 P **Pn** **11 02 16.1 +0.5**
baz=220,SNR=21
Z41A P **Pn** **11 02 16.1 +0.5**
baz=220,SNR=21
Z41A Richland Creek 18.52 35 P **Pn** **11 02 16.4 +0.7**
baz=220,SNR=21
MURC Murrieta 18.55 327 P **Pn** **11 02 18.4 +2.3**
baz=142,SNR=12
T25A Trinidad 18.68 2 P **Pn** **11 02 19.5 +1.6**
baz=182
WLAR White Oak Lake 18.69 33 P **Pn** **11 02 18.4 +0.7**
WLAR IAmb IAmb 11 02 26.5
comp=Z,775nm,1.5s
ELS Elsinore Mount 18.70 327 P **Pn** **11 02 19.8 +1.8**
U32A Winter Ranch, 18.73 16 P **Pn** **11 02 19.5 +1.2**
baz=198,SNR=5.4
GMRC Granite Mounta 18.78 332 P **Pn** **11 02 20.8 +1.8**
baz=148,SNR=8.0
SCI2 San Clemente I 18.81 323 P **Pn** **11 02 21.3 +2.1**
baz=137
143A Socs Landing, 18.90 38 P **Pn** **11 02 20.1 -0.1**
143A IAmb IAmb 11 02 22.0
comp=Z,261nm,1.1s
143A Socs Landing, 18.90 38 P **Pn** **11 02 20.3 0.0**
baz=224,SNR=12
BBRC Big Bear Solar 18.93 329 P **Pn** **11 02 23.6 +2.6**
baz=143,SNR=20
MVCO Mesa Verde 18.96 352 P **Pn** **11 02 23.2 +1.9**
baz=170,SNR=8.1
CIS Catalina Islan 19.05 324 P **Pn** **11 02 23.7 +1.5**
baz=138,SNR=9.7
VBMS Vicksburg 19.10 41 P **Pn** **11 02 23.1 +0.4**
VBMS IAmb IAmb 11 02 25.4
comp=Z,326nm,1.1s
VBMS Vicksburg 19.10 41 P **Pn** **11 02 23.2 +0.5**
baz=227,SNR=10.0
VBMS Vicksburg 19.10 41 P **Pn** **11 02 23.7 +1.0**
baz=227,SNR=10.0
HEC Hector,Ludlow 19.12 331 P **Pn** **11 02 25.0 +2.0**
baz=146,SNR=16
MIAR Mount Ida 19.14 31 P **P** **11 02 22.3 0.0**
baz=216
MIAR Mount Ida 19.14 31 P **Pn** **11 02 23.7 +0.5**
baz=216
FMP Fort Macarthur 19.22 325 P **Pn** **11 02 26.1 +2.0**
baz=139
SDCO Great Sand Dun 19.27 359 P **Pn** **11 02 27.1 +1.9**
baz=179,SNR=30
SDCO Great Sand Dun 19.27 359 P **Pn** **11 02 25.8 +0.7**
baz=179,SNR=30
BFSC Mount Baldy Ra 19.29 327 P **Pn** **11 02 26.3 +1.2**
baz=142,SNR=42
S22A 4UR Ranch, Cre 19.33 356 P **Pn** **11 02 26.7 +1.0**
baz=175,SNR=27
TUL1 Leonard 19.33 24 P **Pn** **11 02 25.1 -0.4**
baz=208,SNR=14
TUL1 Leonard 19.33 24 P **Pn** **11 02 25.0 -0.6**
baz=208,SNR=14
MATN Matagalpa 19.35 104 P **P** **11 02 25.9 +1.0**
TUQ Turquoise Moun 19.44 333 P **Pn** **11 02 27.5 +0.5**
baz=148,SNR=16
X40A Basin Creek Fa 19.46 32 P **P** **11 02 25.4 -0.4**
baz=217,SNR=6.6
X40A P **P** **11 02 25.4 -0.4**
baz=217,SNR=6.6
X40A Basin Creek Fa 19.46 32 P **Pn** **11 02 26.6 -0.4**
baz=218,SNR=6.6
RRX Edison Barstow 19.47 330 P **Pn** **11 02 27.8 +0.6**
baz=144,SNR=5.3
PASC Pasadena Art C 19.51 326 IAmb IAmb 11 02 32.4
comp=Z,358nm,1.6s
W39A Magazine 19.57 29 P **Pn** **11 02 28.0 -0.4**
baz=214,SNR=6.1
W39A Magazine 19.57 29 P **Pn** **11 02 28.3 -0.1**
baz=214,SNR=6.1
SNCC San Nicolas Is 19.57 322 P **P** **11 02 24.4 -2.8**
SNCC San Nicolas Is 19.57 322 P **Pn** **11 02 29.2 +0.8**
baz=135,SNR=6.7
CCAR Cane Creek 19.58 35 **Pn** **11 02 27.9 -0.6**
CCAR Cane Creek 19.58 35 P **P** **11 02 27.7 +0.5**
baz=221,SNR=19
DECC Green Verdugo 19.65 326 P **Pn** **11 02 30.7 +1.3**
baz=140,SNR=12
GSC Goldstone, Bar 19.73 331 IAmb IAmb 11 02 35.5
comp=Z,400nm,1.7s
GSC Goldstone, Bar 19.73 331 P **Pn** **11 02 31.8 +1.4**
baz=145,SNR=24
EDW2 Edwards Air Fo 19.96 328 P **Pn** **11 02 33.8 +0.7**
baz=142
T35B Sooner Cattle 19.97 21 P **P** **11 02 32.0 +0.5**
baz=204,SNR=17
SHOC Shoshone, Teco 19.99 333 P **Pn** **11 02 33.6 +0.2**
baz=148,SNR=7.7
OSI Osito Audit: C 20.13 326 P Pn 11 02 36.0 +0.9
baz=140
PV10 Paradox Valley 20.18 351 IAmb IAmb 11 02 39.9
comp=Z,313nm,1.3s
CCAC Calif City Air 20.19 328 P Pn 11 02 36.1 +0.3
CCAC IAmb IAmb 11 02 40.3
comp=Z,213nm,1.4s
LRMC Laurel Mtn Rad 20.28 329 P Pn 11 02 38.0 +1.0
baz=144,SNR=20
W41B Gary Mavity, V 20.29 32 P **P** **11 02 35.2 +0.3**
baz=218,SNR=8.6
W41B Gary Mavity, V 20.29 32 P **P** **11 02 35.8 +0.8**
baz=218,SNR=8.6
146A Union 20.30 43 P Pn 11 02 36.3 -0.8
146A Union 20.30 43 P **P** **11 02 36.2 +1.0**
baz=230,SNR=10.0
ACON Acoyapa 20.37 105 P **P** **11 02 36.9 +0.9**
ACON IAmb IAmb 11 02 43.4
comp=Z,377nm,1.7s
GWY Greenwater Val 20.40 333 P Pn 11 02 38.6 +0.2
GWY IAmb IAmb 11 02 44.2
comp=Z,250nm,1.5s
HHAR Hobbs 20.41 27 P **P** **11 02 35.7 -0.6**
baz=212
Q24A Divide 20.49 0 IAmb IAmb 11 02 41.2
comp=Z,375nm,1.6s
Q24A Divide 20.49 0 P Pn 11 02 40.2 +0.6
baz=180,SNR=14
ARVC Arvin 20.58 327 P Pn 11 02 40.8 +0.4
baz=140,SNR=21
KSCO Kaye Shedlock' 20.66 6 **Pn** 11 02 40.2 -1.2
KSCO Kaye Shedlock' 20.66 6 P Pn 11 02 41.0 -0.4
baz=187,SNR=13
KSCO Kaye Shedlock' 20.66 6 P Pn 11 02 41.2 -0.2
baz=187,SNR=13
MPMC Manual Prospec 20.66 331 P Pn 11 02 42.3 +0.8
baz=145,SNR=26
FURC Furnace Creek, 20.72 333 P Pn 11 02 42.7 +0.8
baz=147,SNR=19
ORTG Ortega, Santa 20.73 110 P **P** **11 02 42.3 +2.3**
ORTG IAmb IAmb 11 02 53.5
comp=Z,437nm,1.9s
R32A Long Quarter, 20.74 15 P **P** **11 02 40.5 +0.6**
baz=197,SNR=35
BCW Bitter Crk WRg 20.75 325 P Pn 11 02 42.8 +0.4
BCW IAmb IAmb 11 02 47.5
comp=Z,355nm,1.4s
SMCO Snowmass 20.76 356 **Pn** 11 02 42.4 -0.4
BRAL Brewton 20.79 49 P **P** **11 02 40.9 +0.5**
BRAL Brewton 20.79 49 P **P** **11 02 40.9 +0.5**
baz=236
BRAL Brewton 20.79 49 P **P** **11 02 41.2 +0.8**
baz=236

DUNO Dulce Nombre, 20.82 111 IAmb IAmb 11 02 47.2
comp=Z,250nm,1.7s
ISA Isabella, Lake 20.82 328 P Pn 11 02 43.1 -0.1
ISA Isabella, Lake 20.82 328 P Pn 11 02 43.1 -0.1
ISA pmax pmax
comp=Z,177nm,1.6s
ISA Isabella, Lake 20.82 328 P Pn 11 02 43.4 +0.2
baz=142,SNR=18
Y45A Yeager Farm, C 20.82 39 **P** **11 02 41.1 +0.3**
Y45A Yeager Farm, C 20.82 39 P **P** **11 02 41.4 +0.7**
baz=226,SNR=20
TPNV Topopah Spring 20.87 335 P Pn 11 02 44.4 +0.5
baz=149,SNR=14
CBKS Cedar Bluff 20.89 12 **P** **11 02 41.9 +0.4**
CBKS Cedar Bluff 20.89 12 P **P** **11 02 41.9 +0.4**
CBKS pmax pmax
comp=Z,489nm,0.9s
CBKS Cedar Bluff 20.89 12 P **P** **11 02 42.6 +1.1**
baz=194,SNR=40
CBKS Cedar Bluff 20.89 12 P Pn 11 02 42.8 -1.2
baz=194,SNR=40
PKM Mcpherson Peak 20.93 325 P Pn 11 02 43.7 -0.9
baz=138,SNR=12
U40A Yellville 20.95 29 P **P** **11 02 42.1 -0.1**
baz=214,SNR=7.9
U40A P **P** **11 02 42.1 -0.1**
baz=214,SNR=7.9
U40A Yellville 20.95 29 P **P** **11 02 42.5 +0.4**
baz=214,SNR=7.9
Q16A Castle Valley 21.09 347 IAmb IAmb 11 02 57.0
comp=Z,420nm,1.3s
JTS Las Juntas de 21.21 110 P **P** **11 02 45.2 0.0**
comp=Z,11nm,1.1s,baz=17,slow=10,SNR=5.9
comp=Z,11nm,1.1s
JTS Las Juntas de 21.21 110 P **P** **11 02 44.8 -0.3**
JTS Las Juntas de 21.21 110 / P **P** **11 02 46.0 +0.9**
JTS pmax pmax
comp=Z,46nm,1.7s
SOR Soroa 21.24 74 P **P** **11 02 42.5 -2.9**
SOR IAmb IAmb 11 02 46.7
comp=Z,200nm,1.3s
SOR Soroa 21.24 74 P **P** **11 02 42.5 -2.9**
SOR pmax pmax
comp=Z,200nm,1.3s
CWC Cottonwood Cre 21.25 330 P **P** **11 02 47.4 +1.9**
baz=144
VES Vestal, Richgr 21.27 328 P **P** **11 02 47.6 +2.1**
baz=141,SNR=37
S11A Rachel 21.27 336 P **P** **11 02 47.2 +1.4**
Z47A Carrollton 21.30 43 P **P** **11 02 43.4 -2.5**
Z47A Carrollton 21.30 43 P **P** **11 02 46.0 +0.2**
baz=230,SNR=11
ISCO Idaho Springs 21.33 359 P **P** **11 02 44.2 -2.3**
ISCO IAmb IAmb 11 02 50.3
comp=Z,406nm,1.6s
ISCO Idaho Springs 21.33 359 P **P** **11 02 44.2 -2.3**
ISCO pmax pmax
comp=Z,407nm,1.6s
ISCO Idaho Springs 21.33 359 P **P** **11 02 48.7 +2.2**
baz=179,SNR=31
ISCO Idaho Springs 21.33 359 P **P** **11 02 48.2 +1.7**
baz=179,SNR=31
SMMC Simmler 21.34 325 P **P** **11 02 48.3 +1.9**
baz=138
OXF Oxford 21.35 38 P **P** **11 02 45.9 -0.5**
OXF Oxford 21.35 38 P **P** **11 02 45.9 -0.5**
OXF pmax pmax
comp=Z,425nm,1.3s
OXF Oxford 21.35 38 P **P** **11 02 46.7 +0.3**
baz=225,SNR=11
OXF Oxford 21.35 38 P **P** **11 02 46.3 -0.1**
baz=225,SNR=11
GRAC Grapevine Rang 21.38 332 IAmb IAmb 11 02 52.4
comp=Z,281nm,1.7s
GRAC Grapevine Rang 21.38 332 P **P** **11 02 49.6 +2.8**
baz=147,SNR=8.9
HBAR Harrisburg 21.41 34 P **P** **11 02 47.5 +0.4**
HBAR Harrisburg 21.41 34 P **P** **11 02 47.4 +0.4**
baz=221,SNR=12
P17A Butcher Ranch, 21.54 348 IAmb IAmb 11 02 53.5
comp=Z,234nm,1.1s
LCAR Lake Charles 21.55 32 P **P** **11 02 48.7 +0.2**
baz=219,SNR=26
250A Grady 21.79 48 P **P** **11 02 51.8 +0.6**
baz=236,SNR=35
PAGB Antelope Grade 21.79 325 P **P** **11 02 53.8 +2.5**
PAGB IAmb IAmb 11 02 55.8
comp=Z,431nm,1.8s
O20A White River Cl 21.82 354 P **P** **11 02 53.6 +1.9**
baz=172,SNR=7.3
TIN Tinemaha, Big 21.82 331 P **P** **11 02 53.9 +2.3**
baz=145
R11A Troy Canyon, C 21.84 338 P **P** **11 02 54.0 +2.2**
baz=152,SNR=15
S39A Bolivar 21.86 26 P **P** **11 02 52.5 +0.6**
baz=211,SNR=22
LRAL Lakeview Retre 21.90 45 P **P** **11 02 52.2 -0.2**
LRAL IAmb IAmb 11 02 57.2
comp=Z,185nm,1.2s
LRAL Lakeview Retre 21.90 45 P **P** **11 02 52.3 -0.1**
baz=233,SNR=16
LRAL Lakeview Retre 21.90 45 P **P** **11 02 52.5 +0.1**
baz=233,SNR=16
W45A Hickory Valley 21.94 37 P **P** **11 02 52.6 -0.1**
W45A Hickory Valley 21.94 37 P **P** **11 02 52.8 0.0**
baz=224,SNR=8.4
KSU1 Kansas State U 21.94 18 P **P** **11 02 53.4 +0.7**
KSU1 Kansas State U 21.94 18 P **P** **11 02 53.5 +0.7**
baz=202,SNR=11
KSU1 Kansas State U 21.94 18 P **P** **11 02 53.7 +1.0**
baz=202,SNR=11
TPH Tonopah 22.23 334 IAmb IAmb 11 03 06.5
comp=Z,373nm,1.3s
MPU Maple Canyon 22.24 347 P **P** **11 02 56.5 +0.3**
PEBM Pemiscott Bayo 22.26 34 P **P** **11 02 54.8 -1.4**
RIMA Rio Macho 22.40 110 IAmb IAmb 11 03 09.6
comp=Z,315nm,1.8s
N23A Red Feather La 22.43 359 P **P** **11 02 59.7 +1.4**
baz=178
LNXT Lenox 22.45 35 P **P** **11 02 59.0 +0.8**
baz=222,SNR=7.4
PMPB Monarch Peak 22.45 325 IAmb IAmb 11 03 04.3
comp=Z,186nm,1.7s
PBMO Poplar Bluff 22.46 32 P **P** **11 02 57.8 -0.6**
PBMO Poplar Bluff 22.46 32 P **P** **11 02 57.6 -0.8**
baz=219,SNR=11
PLAL Pickwick Lake 22.47 39 P **P** **11 02 57.7 -0.7**
PLAL IAmb IAmb 11 03 00.3
comp=Z,380nm,1.6s
352A Blakely 22.49 51 P **P** **11 02 57.9 -0.8**
352A IAmb IAmb 11 03 05.1
comp=Z,184nm,1.1s
OMMB Old Mammoth Mi 22.63 331 IAmb IAmb 11 03 15.5
comp=Z,176nm,1.7s
OGNE Ogallala 22.64 6 P **P** **11 03 01.2 +1.0**
baz=188,SNR=17
OGNE Ogallala 22.64 6 P **P** **11 03 01.7 +1.4**
baz=188,SNR=17
DUG Dugway, Tooele 22.69 345 P **P** **11 03 02.1 +1.2**
DUG IAmb IAmb 11 03 07.5
comp=Z,211nm,1.5s
DUG Dugway, Tooele 22.69 345 P **P** **11 03 02.1 +1.2**
DUG pmax pmax
comp=Z,211nm,1.5s
DUG Dugway, Tooele 22.69 345 P **P** **11 03 02.7 +1.8**
baz=161,SNR=21
PARMO Parma 22.73 34 P **P** **11 03 00.6 -0.6**
X48A Hartselle 22.75 42 P **P** **11 03 00.6 -0.9**
baz=230,SNR=17
JLU Jonesville 22.77 348 IAmb IAmb 11 03 06.7
comp=Z,170nm,1.5s
Y49A Blount Mountai 22.79 44 IAmb IAmb 11 03 08.7
comp=Z,234nm,1.4s
Y49A Blount Mountai 22.79 44 P **P** **11 03 00.9 -1.0**
baz=232
R40A Maddies Statio 22.82 27 IAmb IAmb 11 03 03.9
comp=Z,132nm,1.3s
R40A Maddies Statio 22.82 27 P **P** **11 03 02.2 +0.1**
baz=213,SNR=11
PHWY Pilot Hill 22.83 360 IAmb IAmb 11 03 11.6
comp=Z,278nm,1.6s
BBGB Big Mountain B 22.85 326 P **P** **11 03 00.0 -2.6**
Q09A Carvers 22.86 335 IAmb IAmb 11 03 22.7
comp=Z,263nm,1.5s
NVAR Mina Array Bea 22.99 333 P **P** **11 03 06.5 +2.3**
comp=Z,8.8nm,0.9s,baz=146,slow=9.8,SNR=17
comp=Z,8.8nm,0.9s

CCM Cathedral Cave 23.08 29 P **P** **11 03 04.2 -0.6**
baz=216,SNR=8.1
CCM Cathedral Cave 23.08 29 P **P** **11 03 04.4 -0.5**
baz=216
N33B J Bar K, Exete 23.24 15 P **P** **11 03 07.5 +1.0**
baz=199,SNR=5.7
N33A J Bar K, Exete 23.24 15 IAmb IAmb 11 03 09.2
comp=Z,138nm,1.1s
RYN Ryan 23.25 333 P **P** **11 03 07.6 +0.8**
RYN IAmb IAmb 11 03 15.8
comp=Z,154nm,1.7s
152A Waverly Hall 23.27 48 P **P** **11 03 05.7 -1.1**
baz=237,SNR=9.4
Z51A Franklin 23.30 47 IAmb IAmb 11 03 15.2
comp=Z,258nm,1.5s
Z51A Franklin 23.30 47 P **P** **11 03 05.5 -1.8**
baz=235
WVT Waverly 23.40 38 P **P** **11 03 07.5 -0.6**
WVT IAmb IAmb 11 03 16.2
comp=Z,325nm,1.6s
WVT Waverly 23.40 38 P **P** **11 03 07.6 -0.6**
WVT pmax pmax
comp=Z,325nm,1.6s
WVT Waverly 23.40 38 P **P** **11 03 07.0 -1.2**
baz=225,SNR=7.0
WVT Waverly 23.40 38 P **P** **11 03 06.8 -1.4**
baz=226
FVM French Village 23.41 31 P **P** **11 03 08.3 +0.1**
FVM French Village 23.41 31 P **P** **11 03 08.3 +0.1**
FVM pmax pmax
comp=Z,58nm,1.0s
FVM French Village 23.41 31 P **P** **11 03 08.5 +0.3**
baz=217,SNR=11
KVN Kaiserville 23.42 334 IAmb IAmb 11 03 16.7
comp=Z,428nm,1.9s
P38A Dawn 23.45 23 IAmb IAmb 11 03 16.2
comp=Z,92nm,0.8s
P38A Dawn 23.45 23 P **P** **11 03 08.5 -0.1**
baz=209,SNR=6.9
TIGA Tifton 23.47 52 P **P** **11 03 08.7 -0.2**
baz=242
TIGA Tifton 23.47 52 P **P** **11 03 08.6 -0.3**
baz=242
T45B Paducah 23.58 35 P **P** **11 03 09.8 -0.2**
baz=222,SNR=11
BGNE Belgrade 23.72 13 P **P** **11 03 12.3 +1.0**
baz=197,SNR=12
BGNE Belgrade 23.72 13 P **P** **11 03 12.8 +1.5**
baz=197,SNR=12
FPAL Fort Paine 23.73 44 P **P** **11 03 10.1 -1.4**
FPAL IAmb IAmb 11 03 11.2
comp=Z,59nm,0.7s
V48A Smith Brothers 23.73 40 P **P** **11 03 10.4 -1.0**
V48A IAmb IAmb 11 03 20.0
comp=Z,186nm,1.5s
V48A Smith Brothers 23.73 40 P **P** **11 03 10.5 -1.0**
baz=228,SNR=6.8
HWUT Hardware Ranch 23.76 348 P **P** **11 03 13.3 +1.5**
S44A Carbondale 23.77 33 P **P** **11 03 11.6 -0.1**
baz=220
SIUC Southern Illin 23.80 33 P **P** **11 03 09.8 -2.3**
N35A Tabor 23.85 18 P **P** **11 03 12.6 +0.1**
N35A Tabor 23.85 18 P **P** **11 03 13.2 +0.7**
baz=203,SNR=6.4
YERR Yerington 23.86 332 IAmb IAmb 11 03 33.9
comp=Z,258nm,2.0s
DWPF Disney Wildern 23.86 62 P **P** **11 03 12.1 -0.7**
DWPF IAmb IAmb 11 03 28.0
comp=Z,242nm,1.2s
ELK Elko 23.88 341 P **P** **11 03 15.4 +2.3**
comp=Z,8.9nm,0.8s,baz=166,slow=8.0,SNR=16
comp=Z,8.9nm,0.8s
SWET Sewanee 23.95 42 IAmb IAmb 11 03 14.5
comp=Z,212nm,1.5s
P40A Paris 23.95 26 P **P** **11 03 14.3 +0.9**
baz=212,SNR=7.6
PAYG Puerto Ayora 23.98 141 P **P** **11 03 14.1 +0.1**
PAYG IAmb IAmb 11 03 19.3
comp=Z,255nm,1.9s
SLM Saint Louis 24.02 30 P **P** **11 03 13.3 -0.8**
SLM Saint Louis 24.02 30 P **P** **11 03 13.3 -0.8**
SLM pmax pmax
comp=Z,271nm,1.1s
SLM Saint Louis 24.02 30 P **P** **11 03 14.5 +0.4**
baz=217,SNR=8.6
PNTR Pine Nut 24.10 332 IAmb IAmb 11 03 31.6
comp=Z,253nm,1.9s
HVU Hansel Valley 24.18 346 P **P** **11 03 15.1 -0.7**
HVU Hansel Valley 24.18 346 P **P** **11 03 15.1 -0.7**
HVU pmax pmax
comp=Z,77nm,1.1s
K22A Casper 24.20 358 P **P** **11 03 18.4 +2.4**
baz=177,SNR=14
K22A Casper 24.20 358 P **P** **11 03 17.3 +1.3**
baz=177,SNR=14
EMB Emerald Bay 24.24 331 P **P** **11 03 17.6 +1.1**
EMB IAmb IAmb 11 03 25.7
comp=Z,125nm,1.5s
X51A Calhoun 24.24 44 IAmb IAmb 11 03 16.9
comp=Z,76nm,0.7s
X51A Calhoun 24.24 44 P **P** **11 03 15.8 -0.6**
baz=233,SNR=8.9
X51A P **P** **11 03 15.8 -0.6**
baz=233,SNR=8.9
BMN Battle Mountai 24.27 337 P **P** **11 03 18.9 +2.3**
BMN IAmb IAmb 11 03 24.1
comp=Z,136nm,1.4s
BMN Battle Mountai 24.27 337 P **P** **11 03 18.9 +2.3**
BMN pmax pmax
comp=Z,136nm,1.4s
VCNR Virginia City 24.29 332 P **P** **11 03 18.6 +1.6**
VCNR IAmb IAmb 11 03 29.4
comp=Z,201nm,2.0s
W50A Signal Mountai 24.33 43 IAmb IAmb 11 03 17.5
comp=Z,138nm,0.8s
W50A Signal Mountai 24.33 43 P **P** **11 03 16.8 -0.4**
baz=232,SNR=22
Y52A Lilburn 24.38 47 IAmb IAmb 11 03 17.8
comp=Z,67nm,0.8s
Y52A Lilburn 24.38 47 P **P** **11 03 17.0 -0.5**
baz=236,SNR=7.4
Y52A P **P** **11 03 17.0 -0.5**
baz=236,SNR=7.4
154A Montrose 24.40 50 P **P** **11 03 18.4 +0.6**
154A Montrose 24.40 50 P **P** **11 03 16.8 -0.9**
baz=240,SNR=5.9
T47A Sharon Grove 24.42 37 P **P** **11 03 17.0 -0.8**
T47A Sharon Grove 24.42 37 P **P** **11 03 17.6 -0.3**
baz=225,SNR=25
MPK Martis Peak 24.46 331 IAmb IAmb 11 03 27.8
comp=Z,135nm,1.3s
GOGA Godfrey 24.55 48 P **P** **11 03 19.0 0.0**
baz=238,SNR=25
GOGA Godfrey 24.55 48 P **P** **11 03 19.1 0.0**
baz=238,SNR=25
BW06 Boulder Array 24.57 352 P **P** **11 03 20.6 +1.1**
baz=170
PDAR Pinedale Array 24.57 352 P **P** **11 03 21.1 +1.6**
comp=Z,6.0nm,0.6s,baz=155,slow=7.4,SNR=21
comp=Z,6.0nm,0.6s
N38A Joes South For 24.58 22 P **P** **11 03 19.6 +0.3**
baz=208,SNR=9.3
L34A Svendsen Farm, 24.67 16 IAmb IAmb 11 03 47.8
comp=Z,84nm,0.9s
L34A Svendsen Farm, 24.67 16 P **P** **11 03 19.2 -0.9**
baz=200
K31A O'Neill 24.76 11 P **P** **11 03 22.7 +1.7**
baz=194,SNR=9.3
Q44A Meyer Farm, Va 24.81 31 P **P** **11 03 21.0 -0.4**
Q44A Meyer Farm, Va 24.81 31 P **P** **11 03 22.0 +0.6**
baz=219,SNR=24
U49A Red Boiling Sp 24.88 40 P **P** **11 03 21.5 -0.6**
U49A IAmb IAmb 11 03 22.9
comp=Z,110nm,1.3s
U49A Red Boiling Sp 24.88 40 P **P** **11 03 21.9 -0.1**
baz=228,SNR=7.0
CPCT Cooper Cave 24.99 43 P **P** **11 03 22.7 -0.4**
CPCT IAmb IAmb 11 03 35.0
comp=Z,265nm,1.7s
MCCM Marconi Confer 24.99 326 IAmb IAmb 11 03 28.0
comp=Z,122nm,1.6s
BEKR Beckworth 25.08 332 P **P** **11 03 23.3 -0.7**
BEKR IAmb IAmb 11 03 41.4
comp=Z,113nm,1.6s
P43A Skaggs, Pawnee 25.15 29 P **P** **11 03 24.5 0.0**
P43A Skaggs, Pawnee 25.15 29 P **P** **11 03 25.1 +0.7**
baz=217,SNR=13

W52A Murphy 25.17 44 IAmb IAmb 11 03 25.8
comp=Z,127nm,0.8s
W52A Murphy 25.17 44 P **P** **11 03 25.3 +0.6**
baz=234,SNR=14
V51A Loudon 25.32 43 P **P** **11 03 25.4 -0.6**
V51A Loudon 25.32 43 P **P** **11 03 26.9 +0.9**
baz=232,SNR=11
N41A Harden Midland 25.43 26 P **P** **11 03 25.2 -1.8**
N41A Harden Midland 25.43 26 P **P** **11 03 26.9 -0.1**
baz=213,SNR=13
TPAW Teton Pass 25.48 350 IAmb IAmb 11 03 37.1
comp=Z,138nm,1.1s
SCIA State Center 25.57 21 P **P** **11 03 28.9 +0.6**
baz=207
TKL Tuckaleechee C 25.61 44 P **P** **11 03 28.7 +0.1**
comp=Z,34nm,0.7s,baz=203,slow=11,SNR=28
comp=Z,34nm,0.7s
TKL Tuckaleechee C 25.61 44 P **P** **11 03 29.3 +0.6**
baz=233,SNR=7.1
FXWY Fox Creek 25.63 350 P **P** **11 03 27.3 -1.8**
RSSD Black Hills 25.66 2 P **P** **11 03 27.5 -1.8**
RSSD IAmb IAmb 11 03 38.3
comp=Z,192nm,1.8s
RSSD Black Hills 25.66 2 P **P** **11 03 27.5 -1.8**
RSSD pmax pmax
comp=Z,192nm,1.8s
RSSD Black Hills 25.66 2 P **P** **11 03 31.9 +2.6**
baz=182,SNR=9.9
RSSD Black Hills 25.66 2 P **P** **11 03 31.2 +1.9**
baz=182
MOOW Moose Ponds 25.70 351 P **P** **11 03 32.0 +2.4**
T50A Nancy 25.78 40 P **P** **11 03 29.4 -0.8**
T50A IAmb IAmb 11 03 30.8
comp=Z,68nm,0.8s
T50A Nancy 25.78 40 P **P** **11 03 29.9 -0.3**
baz=229
T50A P **P** **11 03 29.9 -0.3**
baz=229
BG3 Lake Jocassee 25.78 46 P **P** **11 03 29.9 -0.4**
CASEE Lake Jocassee 25.78 46 P **P** **11 03 31.1 +0.8**
baz=236,SNR=16
V52A Sevierville 25.83 43 P **P** **11 03 31.1 +0.4**
V52A IAmb IAmb 11 03 33.0
comp=Z,101nm,1.4s
HODGE Hodges 25.84 48 P **P** **11 03 31.7 +0.9**
HODGE IAmb IAmb 11 03 32.6
comp=Z,97nm,0.8s
HODGE Hodges 25.84 48 P **P** **11 03 31.6 +0.8**
baz=238,SNR=16
HDIL Hopedale 25.99 28 P **P** **11 03 32.7 +0.7**
baz=216
FLWY Flagg Ranch 26.02 351 IAmb IAmb 11 03 40.6
comp=Z,122nm,1.4s
V53A Saluda 26.25 45 P **P** **11 03 34.8 +0.3**
baz=235,SNR=6.6
V53A P **P** **11 03 34.8 +0.3**
baz=235,SNR=6.6
HLID Hailey 26.26 345 P **P** **11 03 36.2 +1.5**
baz=160
MTDJ Mount Denham 26.28 86 P **P** **11 03 38.4 +3.4**
ECSD EROS Data Cent 26.28 14 P **P** **11 03 35.5 +0.8**
baz=199
TZTN Tazewell 26.28 42 P **P** **11 03 35.6 +0.7**
baz=232,SNR=11
TZTN Tazewell 26.28 42 P **P** **11 03 35.5 +0.7**
baz=232,SNR=11
BLO Bloomington 26.30 34 IAmb IAmb 11 03 37.8
comp=Z,78nm,0.7s
H17A Grant Village 26.30 351 P **P** **11 03 37.3 +2.1**
baz=168,SNR=5.8
R49A Shelbyville 26.43 37 P **P** **11 03 35.5 -0.6**
R49A IAmb IAmb 11 03 37.0
comp=Z,156nm,1.8s
L40A Anamosa 26.43 24 P **P** **11 03 36.4 +0.3**
L40A IAmb IAmb 11 03 39.6
comp=Z,86nm,0.8s
L40A Anamosa 26.43 24 P **P** **11 03 36.0 -0.1**
baz=211,SNR=7.2
PAULI Pauline 26.46 47 P **P** **11 03 37.1 +0.8**
PAULI IAmb IAmb 11 03 39.4
comp=Z,99nm,0.7s
PAULI Pauline 26.46 47 P **P** **11 03 37.2 +0.8**
baz=238,SNR=14
SUSD Miller 26.49 10 P **P** **11 03 38.6 +2.0**
baz=193,SNR=6.6
SUSD Miller 26.49 10 P **P** **11 03 38.6 +2.0**
baz=193,SNR=6.6
KCPM Cahto Peak 26.50 327 IAmb IAmb 11 03 59.2
comp=Z,115nm,1.5s
WVOR Wild Horse Val 26.53 337 P **P** **11 03 36.6 -0.6**
WVOR Wild Horse Val 26.53 337 P **P** **11 03 36.6 -0.6**
WVOR pmax pmax
comp=Z,59nm,1.4s
JSC Jenkinsville 26.57 49 IAmb IAmb 11 03 39.4
comp=Z,140nm,1.5s
JSC Jenkinsville 26.57 49 P **P** **11 03 37.9 +0.5**
baz=240,SNR=7.5
YMR Madison River 26.63 351 IAmb IAmb 11 03 51.2
comp=Z,108nm,1.2s
MOD Modoc Plateau 26.73 334 IAmb IAmb 11 03 47.4
comp=Z,131nm,1.4s
NHSC New Hope 26.80 52 P **P** **11 03 40.1 +0.7**
baz=243
QLMT Earthquake Lak 26.86 350 P **P** **11 03 38.5 -1.6**
SFIN Lafayette 26.90 32 P **P** **11 03 38.0 -2.2**
SFIN IAmb IAmb 11 03 45.8
comp=Z,76nm,0.8s
SFIN Lafayette 26.90 32 P **P** **11 03 40.7 +0.4**
baz=220,SNR=15
SFIN Lafayette 26.90 32 P **P** **11 03 41.1 +0.8**
baz=221,SNR=15
R50A Paris 26.91 38 P **P** **11 03 40.5 0.0**
baz=228,SNR=5.8
R50A P **P** **11 03 40.5 0.0**
baz=228,SNR=5.8
S51A Beattyville 26.94 40 P **P** **11 03 38.8 -1.9**
S51A IAmb IAmb 11 03 41.5
comp=Z,93nm,0.9s
S51A Beattyville 26.94 40 P **P** **11 03 40.9 +0.2**
baz=230,SNR=10
S51A P **P** **11 03 40.9 +0.2**
baz=230,SNR=10
KMSC Kings Mountain 26.96 47 IAmb IAmb 11 03 42.7
comp=Z,72nm,1.1s
KMSC Kings Mountain 26.96 47 P **P** **11 03 41.1 +0.2**
baz=238,SNR=8.4
KMSC Kings Mountain 26.96 47 P **P** **11 03 41.6 +0.6**
baz=238,SNR=8.4
P48A Milroy 27.10 35 IAmb IAmb 11 04 06.7
comp=Z,147nm,1.6s
I37A Lemond, Waseca 27.40 19 IAmb IAmb 11 03 45.6
comp=Z,89nm,1.1s
I37B Waseca 27.40 19 P **P** **11 03 44.9 +0.1**
baz=205,SNR=5.7
JFWS Jewell Farm 27.53 24 P **P** **11 03 43.5 -2.5**
JFWS IAmb IAmb 11 03 51.0
comp=Z,65nm,0.7s
JFWS Jewell Farm 27.53 24 P **P** **11 03 43.5 -2.5**
JFWS pmax pmax
comp=Z,65nm,0.7s
JFWS Jewell Farm 27.53 24 P **P** **11 03 45.7 -0.3**
baz=212,SNR=6.8
JFWS Jewell Farm 27.53 24 P **P** **11 03 46.5 +0.5**
baz=212,SNR=6.8
P49A Miami Univ. Ec 27.54 36 P **P** **11 03 45.7 -0.4**
P49A IAmb IAmb 11 03 46.8
comp=Z,81nm,0.8s
P49A Miami Univ. Ec 27.54 36 P **P** **11 03 46.0 0.0**
baz=226,SNR=8.0
P49A Miami Univ. Ec 27.54 36 P **P** **11 03 46.4 +0.3**
baz=226,SNR=8.0
Y58A Scranton 27.55 51 P **P** **11 03 44.1 -2.1**
Y58A IAmb IAmb 11 03 48.9
comp=Z,99nm,1.0s
YBH Yreka Blue Hor 27.64 331 P **P** **11 03 48.0 +1.0**
comp=Z,3.7nm,0.9s,baz=129,slow=6.5,SNR=3.6
comp=Z,3.7nm,0.9s
YBH Yreka Blue Hor 27.64 331 P **P** **11 03 48.1 +1.0**
YBH pmax pmax
comp=Z,63nm,2.0s
BOZ Bozeman (W) 27.64 350 P **P** **11 03 48.4 +1.3**
baz=167,SNR=11
K05A Summer Lake 27.66 335 IAmb IAmb 11 04 06.2
comp=Z,140nm,1.6s
O48B Farmland 27.81 34 P **P** **11 03 48.0 -0.5**
baz=224,SNR=5.9
O48B Farmland 27.81 34 P **P** **11 03 48.9 +0.4**
baz=224,SNR=5.9
L04D Klamath Falls 27.84 332 P **P** **11 03 49.9 +1.0**
baz=143
W57A Gilead 27.91 48 IAmb IAmb 11 03 51.6
comp=Z,104nm,1.4s
K04D Chiloquin, OR 27.93 333 P **P** **11 03 50.7 +1.0**
baz=145
Q51A Peebles 27.98 38 IAmb IAmb 11 03 50.8
comp=Z,78nm,0.9s
Q51A Peebles 27.98 38 P **P** **11 03 50.1 +0.1**
baz=229,SNR=8.5
Q51A P **P** **11 03 50.1 +0.1**
baz=229,SNR=8.5
O49A Covington 28.20 35 IAmb IAmb 11 03 53.8
comp=Z,51nm,0.8s
O49A Covington 28.20 35 P **P** **11 03 52.2 +0.2**
baz=226,SNR=5.3
O49A P **P** **11 03 52.2 +0.2**
baz=226,SNR=5.3
LAO LASA Array 28.22 359 IAmb IAmb 11 04 03.8
comp=Z,189nm,1.6s
LAO LASA Array 28.22 359 P **P** **11 03 53.2 +1.0**
baz=178
I40A Norwalk 28.23 23 P **P** **11 03 51.5 -0.7**
I40A Norwalk 28.23 23 P **P** **11 03 51.8 -0.4**
baz=210
BMO Blue Mountains 28.24 342 P **P** **11 03 50.5 -1.9**
BMO IAmb IAmb 11 04 11.9
comp=Z,103nm,1.9s
BMO Blue Mountains 28.24 342 P **P** **11 03 50.5 -1.9**
BMO pmax pmax
comp=Z,103nm,2.0s
J05D Fort Rock, OR 28.26 335 P **P** **11 03 53.5 +0.9**
baz=146,SNR=5.6
U56A King 28.26 46 P **P** **11 03 50.3 -2.3**
U56A IAmb IAmb 11 03 59.5
comp=Z,233nm,1.9s
U56A King 28.26 46 P **P** **11 03 52.8 +0.2**
baz=237
U56A P **P** **11 03 52.8 +0.2**
baz=237
E28A Huff 28.34 7 P **P** **11 03 54.1 +0.9**
baz=189
F33A 5 Mile Ranch, 28.35 13 IAmb IAmb 11 04 03.2
comp=Z,148nm,1.8s
R53A Hurricane 28.38 41 P **P** **11 03 54.3 +0.7**
baz=232,SNR=8.9
R53A P **P** **11 03 54.3 +0.7**
baz=232,SNR=8.9
P51A Williamsport 28.45 38 IAmb IAmb 11 03 55.1
comp=Z,46nm,0.9s
P51A Williamsport 28.45 38 P **P** **11 03 54.2 0.0**
baz=229
P51A P **P** **11 03 54.2 0.0**
baz=229
Q52A Bidwell 28.58 39 P **P** **11 03 54.8 -0.6**
Q52A IAmb IAmb 11 03 56.9
comp=Z,137nm,1.1s
Q52A Bidwell 28.58 39 P **P** **11 03 55.5 +0.1**
baz=231,SNR=7.6
Q52A P **P** **11 03 55.5 +0.1**
baz=231,SNR=7.6
J04D Umpqua Nationa 28.58 334 P **P** **11 03 54.8 -0.8**
J04D IAmb IAmb 11 04 06.4
comp=Z,60nm,0.9s
J04D Umpqua Nationa 28.58 334 P **P** **11 03 56.5 +0.9**
baz=145,SNR=7.5
SPMN Marine on St. 28.68 18 P **P** **11 03 56.6 +0.4**
baz=205
BLA Blacksburg 28.71 44 P **P** **11 03 57.0 +0.4**
baz=236
N49A Columbus Grove 28.80 34 P **P** **11 03 57.3 -0.1**
baz=225
N49A P **P** **11 03 57.3 -0.1**
baz=225
K02D Willamette Mer 28.83 331 P **P** **11 03 58.6 +1.0**
baz=141
V58A Windy Hill, Pi 28.85 48 P **P** **11 03 58.1 +0.3**
baz=240,SNR=5.2
V58A P **P** **11 03 58.1 +0.3**
baz=240,SNR=5.2
I42A Draeger Farm, 28.88 25 IAmb IAmb 11 03 58.8
comp=Z,145nm,1.6s
I42A Draeger Farm, 28.88 25 P **P** **11 03 57.6 -0.4**
baz=213
ACSO Alum Creek Sta 28.99 37 P **P** **11 03 58.8 -0.2**
baz=228
P52A Corning 29.09 39 IAmb IAmb 11 04 01.3
comp=Z,115nm,1.4s
P52A Corning 29.09 39 P **P** **11 04 00.2 +0.3**
baz=230
I04A Tendick Farm, 29.16 334 P **P** **11 04 01.8 +1.2**
baz=145
I05D Terrebonne, OR 29.18 336 P **P** **11 04 02.4 +1.7**
baz=147
F10A Beach Ranch, E 29.24 343 IAmb IAmb 11 04 11.0
comp=Z,144nm,1.9s
MSO Missoula 29.25 348 P **P** **11 04 00.4 -1.0**
MSO IAmb IAmb 11 04 08.6
comp=Z,79nm,1.1s
MSO Missoula 29.25 348 P **P** **11 04 03.2 +1.8**
baz=163,SNR=19
J01E Myrtle Point 29.32 331 P **P** **11 04 04.1 +2.2**
baz=141
T57A Hurt 29.38 46 P **P** **11 04 00.8 -1.7**
P53A Whipple 29.44 40 IAmb IAmb 11 04 03.7
comp=Z,56nm,0.8s
I03D Drain, OR 29.48 333 P **P** **11 04 04.7 +1.4**
baz=143
MDND Maddock 29.73 8 IAmb IAmb 11 04 16.4
comp=Z,156nm,1.3s
MDND Maddock 29.73 8 P **P** **11 04 06.1 +0.6**
baz=190
MDND Maddock 29.73 8 P **P** **11 04 06.3 +0.8**
baz=191
BUCK Buck Mountain 29.73 334 IAmb IAmb 11 04 16.5
comp=Z,90nm,1.3s
M50A Fremont 29.75 35 IAmb IAmb 11 04 06.8
comp=Z,66nm,0.9s
EGMT Eagleton 29.78 354 P **P** **11 04 07.3 +1.3**
baz=171
N51A Ashland 29.79 36 P **P** **11 04 04.2 -2.0**
N51A IAmb IAmb 11 04 06.4
comp=Z,70nm,0.9s
N51A Ashland 29.79 36 P **P** **11 04 05.6 -0.5**
baz=228
N51A P **P** **11 04 05.6 -0.5**
baz=228
H04A Detroit Lake 29.80 335 P **P** **11 04 05.2 -1.1**
H04D Lebanon 29.89 334 P **P** **11 04 08.5 +1.5**
baz=145
S57A Dark Hollow, R 29.98 45 P **P** **11 04 08.1 +0.2**
baz=237
S57A P **P** **11 04 08.1 +0.2**
baz=237
DGMT Dagmar 30.00 1 IAmb IAmb 11 04 14.5
comp=Z,75nm,1.1s
DGMT Dagmar 30.00 1 P **P** **11 04 08.7 +0.8**
baz=182
O53A New Philadelph 30.03 38 P **P** **11 04 07.9 -0.4**
baz=230
AAM Ann Arbor 30.06 33 IAmb IAmb 11 04 09.7
comp=Z,109nm,1.1s
AAM Ann Arbor 30.06 33 P **P** **11 04 09.2 +0.7**
baz=224
AAM Ann Arbor 30.06 33 P **P** **11 04 08.7 +0.2**
baz=224
HOOD Mount Hood Mea 30.13 337 IAmb IAmb 11 04 16.2
comp=Z,61nm,1.2s
MCWV Mont Chateau 30.49 41 P **P** **11 04 12.4 +0.1**
baz=233
COWI Conover 30.66 22 P **P** **11 04 13.9 +0.1**
baz=211
AGMN Agassiz Nation 30.78 12 P **P** **11 04 13.7 -1.1**
AGMN Agassiz Nation 30.78 12 P **P** **11 04 15.2 +0.5**
baz=197,SNR=10
AGMN Agassiz Nation 30.78 12 P **P** **11 04 15.6 +0.9**
baz=197,SNR=10
M53A Wi Miller and 31.10 37 P **P** **11 04 17.8 +0.1**
baz=230
CBN Corbin Frederi 31.28 45 P **P** **11 04 19.7 +0.4**
baz=239
B35A Bob, Littlefor 31.31 15 P **P** **11 04 19.0 -0.5**
baz=201
NEW Newport 31.32 345 P **P** **11 04 21.4 +1.8**
comp=Z,9.3nm,1.0s,baz=166,slow=7.7,SNR=8.1
comp=Z,9.3nm,1.0s
NEW Newport 31.32 345 IAmb IAmb 11 04 39.5
comp=Z,87nm,1.7s
NEW Newport 31.32 345 P **P** **11 04 21.6 +2.0**
baz=158
LTY Liberty 31.45 340 IAmb IAmb 11 04 31.8
comp=Z,53nm,1.1s
E04D Cinebar 31.52 337 P **P** **11 04 21.9 +0.6**
E04D IAmb IAmb 11 04 28.1
comp=Z,120nm,1.7s
E04D Cinebar 31.52 337 P **P** **11 04 22.4 +1.2**
baz=147
EYMN Ely 31.53 18 P **P** **11 04 19.9 -1.4**
EYMN Ely 31.53 18 P **P** **11 04 20.8 -0.5**
baz=205
EYMN Ely 31.53 18 P **P** **11 04 21.8 +0.4**
baz=205,SNR=12
I49A Point Hope 31.66 32 P **P** **11 04 23.4 +0.8**
baz=223
I49A P **P** **11 04 23.4 +0.8**
baz=223
D05A Enumclaw 31.84 338 IAmb IAmb 11 04 37.6
comp=Z,92nm,1.6s
OTAV Otavalo 31.89 122 P **P** **11 04 26.9 +1.4**
OTAV IAmb IAmb 11 04 28.6
comp=Z,64nm,1.6s
OTAV Otavalo 31.89 122 ⇑P **P** **11 04 26.9 +1.4**
ERPA Erie 31.93 37 P **P** **11 04 25.3 +0.3**
baz=230
B08A Colville Reser 32.01 342 P **P** **11 04 26.1 +0.4**
D04E Lakebay 32.12 337 P **P** **11 04 28.0 +1.5**
baz=147
SDDR Presa de Saban 32.12 83 P **P** **11 04 25.7 -1.3**
SDDR IAmb IAmb 11 04 37.7
comp=Z,73nm,1.6s
TULM Tulcn-Chalpat 32.16 120 P **P** **11 04 27.0 -0.9**
M55A Ridgway 32.24 39 P **P** **11 04 26.8 -0.9**
SSPA Standing Stone 32.28 41 P **P** **11 04 27.8 -0.2**
SSPA IAmb IAmb 11 04 28.8
comp=Z,43nm,0.7s
SSPA Standing Stone 32.28 41 P **P** **11 04 28.2 +0.1**
baz=235
D03D Eldon 32.53 337 P **P** **11 04 31.2 +1.0**
baz=147
ULM Lac du Bonnet 32.64 11 P **P** **11 04 30.4 -0.7**
comp=Z,14nm,0.8s,baz=194,slow=8.9,SNR=6.6
comp=Z,14nm,0.8s
ULM Lac du Bonnet 32.64 11 P **P** **11 04 30.2 -0.9**
ULM IAmb IAmb 11 04 34.1
comp=Z,124nm,1.6s
ULM Lac du Bonnet 32.64 11 P **P** **11 04 30.2 -0.9**
ULM pmax pmax
comp=Z,124nm,1.7s
NLWA Neilton Lookou 32.70 336 IAmb IAmb 11 04 39.4
comp=Z,58nm,1.4s
LUPA Lehigh Univers 33.85 43 IAmb IAmb 11 04 44.3
comp=Z,45nm,0.9s
J55A Hilton 33.90 37 P **P** **11 04 41.4 -0.8**
baz=231
J55A P **P** **11 04 41.4 -0.8**
baz=231
BOSC San Juan Bosco 33.94 126 P **P** **11 04 44.8 +1.8**
BOSC IAmb IAmb 11 04 46.7
comp=Z,46nm,1.1s
SADO Sadowa 34.14 34 P **P** **11 04 43.5 -0.7**
comp=Z,29nm,0.6s,baz=246,slow=9.5,SNR=27
comp=Z,29nm,0.6s
BINY Binghamton 34.35 40 P **P** **11 04 46.5 +0.3**
BINY Binghamton 34.35 40 P **P** **11 04 46.2 +0.1**
baz=235
BINY Binghamton 34.35 40 P **P** **11 04 46.1 -0.1**
baz=235,SNR=8.4
ODNJ Ogdensburg 34.60 43 P **P** **11 04 48.9 +0.6**
baz=238
DELO Deloro Mine 34.80 36 IAmb IAmb 11 04 50.6
comp=Z,150nm,1.6s
SDV Santo Domingo 34.86 101 P **P** **11 04 51.5 +0.5**
comp=Z,12nm,0.7s,baz=252,slow=14,SNR=3.7
comp=Z,12nm,0.7s
SDV Santo Domingo 34.86 101 P **P** **11 04 52.7 +1.7**
SDV IAmb IAmb 11 05 00.6
comp=Z,53nm,0.8s
TRNY Table Rock, Ra 34.88 43 IAmb IAmb 11 04 52.8
comp=Z,161nm,1.6s
L59A Walton 34.92 41 P **P** **11 04 51.0 -0.1**
L59A Walton 34.92 41 P **P** **11 04 51.7 +0.6**
baz=236
L59A P **P** **11 04 51.7 +0.6**
baz=236
PAL Palisades 35.01 43 P **P** **11 04 52.4 +0.5**
baz=239
PAL Palisades 35.01 43 P **P** **11 04 51.4 -0.4**
baz=239
J57A Williamstown 35.04 38 P **P** **11 04 51.7 -0.3**
baz=234
J57A P **P** **11 04 51.7 -0.3**
baz=234
EDM Edmonton 35.32 352 P **P** **11 04 56.1 +1.7**
EDM IAmb IAmb 11 05 00.7
comp=Z,141nm,1.7s
EDM Edmonton 35.32 352 P **P** **11 04 56.1 +1.7**
EDM pmax pmax
comp=Z,141nm,1.7s
WSPT Westport, CT 35.47 43 P **P** **11 04 56.8 +1.0**
HCNY Howe Caverns 35.60 40 P **P** **11 04 57.2 +0.3**
baz=237
KSCT Kent School, K 35.66 42 P **P** **11 04 57.1 -0.2**
KSCT IAmb IAmb 11 04 58.8
comp=Z,95nm,1.1s
YLE Yale 35.80 43 P **P** **11 04 58.2 -0.4**
YLE IAmb IAmb 11 05 00.3
comp=Z,170nm,1.6s
J59A Piesco 35.96 39 P **P** **11 04 59.6 -0.5**
J59A IAmb IAmb 11 05 00.9
comp=Z,131nm,1.6s
TRY Troy 36.07 41 P **P** **11 05 00.8 -0.1**
NCB Newcomb 36.41 39 IAmb IAmb 11 05 04.8
comp=Z,192nm,1.8s
NCB Newcomb 36.41 39 P **P** **11 05 03.7 -0.2**
baz=235
ACCN Adirondack Com 36.42 40 P **P** **11 05 03.9 0.0**
ACCN IAmb IAmb 11 05 04.8
comp=Z,114nm,1.4s
M63A Gales Ferry 36.43 44 P **P** **11 05 03.2 -0.8**
M63A IAmb IAmb 11 05 05.9
comp=Z,83nm,0.8s
UCCT U. Connecticut 36.50 43 P **P** **11 05 04.2 -0.4**
LONY Lake Ozonia 36.58 38 P **P** **11 05 05.0 -0.3**
baz=234
ATAH Atahualpa 36.67 131 P **P** **11 05 06.7 -0.1**
comp=Z,12nm,1.0s,baz=318,slow=2.3,SNR=3.6
comp=Z,12nm,1.0s
K62A Royalston 36.94 42 IAmb IAmb 11 05 10.0
comp=Z,188nm,1.6s
SJG San Juan 37.06 84 P **P** **11 05 11.6 +1.9**
comp=Z,6.0nm,0.3s,baz=300,slow=19,SNR=2.2
comp=Z,6.0nm,0.3s
SJG San Juan 37.06 84 P **P** **11 05 09.0 -0.6**
SJG IAmb IAmb 11 05 16.5
comp=Z,98nm,1.6s
SJG San Juan 37.06 84 P **P** **11 05 09.0 -0.6**
SJG pmax pmax
comp=Z,98nm,1.6s
SJG San Juan 37.06 84 *e* **P** **11 05 13.6 +4.0**
J61A Chester 37.09 41 P **P** **11 05 10.7 +1.1**
baz=238
J61A P **P** **11 05 10.7 +1.1**
baz=238
MCVT Middlebury Col 37.15 40 P **P** **11 05 09.8 -0.3**
baz=237
VLDQ Val d'Or 37.26 31 P **P** **11 05 09.0 -2.0**
VLDQ IAmb IAmb 11 05 11.3
comp=Z,72nm,1.2s
FRNY Flat Rock 37.28 38 P **P** **11 05 09.9 -1.4**
FRNY IAmb IAmb 11 05 13.2
comp=Z,249nm,1.9s
HRV Adam Dziewonsk 37.29 43 ⇑P **P** **11 05 12.8 +1.5**
HRV Adam Dziewonsk 37.29 43 P **P** **11 05 10.9 -0.4**
baz=240
HRV Adam Dziewonsk 37.29 43 P **P** **11 05 11.3 0.0**
baz=240
WES Weston 37.38 43 P **P** **11 05 11.0 -1.1**
WES Weston 37.38 43 P **P** **11 05 11.0 -1.1**
WES pmax pmax
comp=Z,52nm,1.1s
HNH Hanover 37.44 40 P **P** **11 05 12.2 -0.4**
HNH IAmb IAmb 11 05 14.3
comp=Z,195nm,1.6s
BCX Boston College 37.45 43 P **P** **11 05 12.0 -0.7**

BCX IAmb IAmb 11 05 14.4
comp=Z,194nm,1.8s
L64A Middleborough 37.48 44 IAmb IAmb 11 05 14.9
comp=Z,206nm,1.6s
L64A Middleborough 37.48 44 P **P** **11 05 13.8 +0.9**
baz=242
L64A P **P** **11 05 13.8 +0.9**
baz=242
VT1 Waterbury 37.49 39 IAmb IAmb 11 05 14.2
comp=Z,100nm,1.2s
TRQ Mont Tremblant 37.55 36 IAmb IAmb 11 05 14.8
comp=Z,160nm,1.3s
MTP Monte Pirata 37.62 84 IAmb IAmb 11 05 22.4
comp=Z,99nm,1.3s
MNTQ Montreal, Queb 37.64 37 IAmb IAmb 11 05 15.5
comp=Z,166nm,1.5s
LBNH Lisbon 37.95 40 P **P** **11 05 16.3 -0.6**
LBNH IAmb IAmb 11 05 18.8
comp=Z,184nm,1.4s
LBNH Lisbon 37.95 40 P **P** **11 05 16.3 -0.6**
LBNH pmax pmax
comp=Z,185nm,1.5s
LBNH Lisbon 37.95 40 P **P** **11 05 17.6 +0.7**
baz=238
LBNH Lisbon 37.95 40 P **P** **11 05 17.5 +0.6**
baz=238,SNR=8.7
UNH University of 38.02 42 P **P** **11 05 18.2 +0.8**
baz=240
I62A Tamworth 38.12 41 P **P** **11 05 18.6 +0.3**
I62A Tamworth 38.12 41 P **P** **11 05 19.3 +1.0**
baz=239
I62A P **P** **11 05 19.3 +1.0**
baz=239
H62A Milan 38.59 40 P **P** **11 05 23.4 +1.1**
baz=238
H62A P **P** **11 05 23.4 +1.1**
baz=238
I63A Otisfield 38.68 41 IAmb IAmb 11 05 25.0
comp=Z,126nm,1.2s
I63A Otisfield 38.68 41 P **P** **11 05 24.0 +1.0**
baz=240
I63A P **P** **11 05 24.0 +1.0**
baz=240
LATQ La Tuque 39.22 35 P **P** **11 05 25.0 -2.5**
G62A West of Eustis 39.31 39 P **P** **11 05 28.0 -0.3**
G62A IAmb IAmb 11 05 30.1
comp=Z,90nm,0.9s
G62A West of Eustis 39.31 39 P **P** **11 05 29.0 +0.7**
baz=238
G62A P **P** **11 05 29.0 +0.7**
baz=238
WVL Waterville 39.51 41 P **P** **11 05 29.4 -0.5**
WVL IAmb IAmb 11 05 32.0
comp=Z,132nm,1.3s
WVL Waterville 39.51 41 P **P** **11 05 30.7 +0.7**
baz=240
SMRT St. Maarten 39.97 84 *e* **P** **11 05 35.2 +1.0**
PKME Peaks-Kenny Pk 40.08 40 IAmb IAmb 11 05 36.5
comp=Z,116nm,1.2s
PKME Peaks-Kenny Pk 40.08 40 P **P** **11 05 35.5 +0.8**
baz=240
PKME Peaks-Kenny Pk 40.08 40 P **P** **11 05 35.3 +0.6**
baz=240,SNR=12
F63A Nahmakanta, Br 40.42 40 IAmb IAmb 11 05 39.3
comp=Z,108nm,1.1s
F63A Nahmakanta, Br 40.42 40 P **P** **11 05 37.9 +0.4**
baz=240
F63A P **P** **11 05 37.9 +0.4**
baz=240
LMQ La Malbaie 40.68 36 P **P** **11 05 38.5 -1.2**
LMQ IAmb IAmb 11 05 41.1
comp=Z,76nm,0.9s
EMMW East Machias 40.95 42 P **P** **11 05 41.7 -0.2**
F64A Sherman 40.95 40 P **P** **11 05 40.9 -1.0**
F64A Sherman 40.95 40 P **P** **11 05 42.0 +0.1**
baz=240
F64A P **P** **11 05 42.0 +0.1**
baz=240
MLYT Lee's Yard 40.99 85 *e* **P** **11 05 43.8 +1.1**
G65A Princeton 41.12 41 P **P** **11 05 44.4 +1.1**
G65A IAmb IAmb 11 05 46.0
comp=Z,233nm,1.6s
FCC Fort Churchill 41.12 9 P **P** **11 05 43.0 -0.1**
FCC IAmb IAmb 11 05 48.8
comp=Z,61nm,0.9s
FCC Fort Churchill 41.12 9 P **P** **11 05 43.0 -0.1**
FCC pmax pmax
comp=Z,61nm,1.0s
D62A Allapoint, All 41.16 38 P **P** **11 05 43.7 +0.1**
D62A IAmb IAmb 11 05 45.4
comp=Z,107nm,0.9s
D62A Allapoint, All 41.16 38 P **P** **11 05 44.8 +1.1**
baz=238
D62A P **P** **11 05 44.8 +1.1**
baz=238
E63A Oxbow 41.19 39 P **P** **11 05 44.2 +0.3**
baz=240
E63A P **P** **11 05 44.2 +0.3**
baz=240
ANWB Willy Bob 41.23 84 *e* P 11 05 32.0 -13
BPA Boggy Peak 41.26 85 *e* P 11 05 35.3 -10
ANBD Bethesda, Anti 41.34 85 *e* P 11 05 33.9 -12
GGN Saint George 41.53 42 P **P** **11 05 45.2 -1.4**
PQI Presque Isle 41.56 39 P **P** **11 05 45.6 -1.3**
PQI IAmb IAmb 11 05 48.6
comp=Z,210nm,1.7s
TDBA Terre de Bas, 41.66 87 *e* **P** **11 05 44.2 -3.9**
ABD La Joyeuse, An 41.69 86 *e* **P** **11 05 45.2 -3.2**
DSLB Salisbury 41.94 87 *e* **P** **11 05 52.7 +2.3**
MAGL Barre de l'ile 41.98 86 *e* P 11 05 43.4 -7.3
MDN Morne-Daniel 41.98 87 *e* **P** **11 05 47.2 -3.5**
DLPL La Plaine 42.12 87 *e* P 11 05 46.5 -5.4
FDF Fort de France 42.32 88 *e* P 11 05 46.5 -7.1
GRFF Grenada Fort F 42.35 92 *e* P 11 06 05.1 +11
GRGR Grenville 42.41 92 *e* P 11 05 46.5 -7.8
BIM Bigot 42.44 88 *e* **P** **11 05 56.4 +1.8**
GCMP Grenada, Carri 42.54 91 *e* **P** **11 05 55.8 +0.5**
ILAM Ilet Lapin Mar 42.58 88 *e* **P** **11 05 59.4 +3.7**
CRAG Craig 42.63 337 P **P** **11 05 57.5 +2.0**
baz=139
SLBI Saint Lucia, B 42.63 89 *e* **P** **11 05 54.2 -1.8**
MPOM Morne Pois Mar 42.66 88 *e* **P** **11 05 55.2 -1.0**
MCLT Moule a Chique 42.73 90 *e* **P** **11 06 01.3 +4.4**
SLAC Saint Lucia, A 42.73 89 *e* **P** **11 05 58.9 +2.0**
T35M Bob Quinn 42.81 340 P **P** **11 05 58.9 +1.9**
baz=144
BATG Bathurst New B 43.02 39 P **P** **11 05 59.1 +0.3**
BATG IAmb IAmb 11 06 00.5
comp=Z,94nm,0.9s
WRAK Wrangell Islan 43.08 338 P **P** **11 06 01.2 +2.1**
baz=141
LMN Caledonia Moun 43.14 42 P **P** **11 06 00.7 +0.9**
LMN IAmb IAmb 11 06 01.5
comp=Z,127nm,1.1s
TOSP Speyside 43.68 93 *e* **P** **11 06 08.3 +3.8**
DLBC Dease Lake 43.93 341 P **P** **11 06 07.5 +1.4**
comp=Z,23nm,1.0s,baz=164,slow=6.5,SNR=20
comp=Z,23nm,1.0s
DLBC Dease Lake 43.93 341 P **P** **11 06 08.4 +2.3**
DLBC Dease Lake 43.93 341 P **P** **11 06 08.6 +2.5**
baz=145,SNR=12
BBGH Gun Hill 44.16 90 *e* P 11 06 24.0 +16
YKA Yellowknife Ar 44.53 354 P **P** **11 06 10.9 +0.2**
comp=Z,13nm,0.9s,baz=164,slow=7.7,SNR=18
comp=Z,13nm,0.9s
GBN Guysborough 45.07 43 P **P** **11 06 16.6 +1.2**
TGTN Hyland Airport 46.05 345 P **P** **11 06 25.5 +2.6**
baz=149
P33M Teslin, Yukon 46.21 341 P **P** **11 06 25.1 +0.9**
P33M Teslin, Yukon 46.21 341 P **P** **11 06 26.3 +2.1**
baz=142,SNR=5.6
SKAG Skagway 46.43 339 P **P** **11 06 28.3 +2.5**
baz=139
SCHQ Schefferville 46.65 30 P **P** **11 06 27.5 -0.1**
comp=Z,25nm,1.0s,baz=246,slow=7.2,SNR=8.2
SCHQ PP **PP** **11 08 15.9 -1.2**
comp=Z,10nm,0.9s,baz=233,slow=7.5,SNR=3.6
comp=Z,25nm,1.0s
SCHQ Schefferville 46.65 30 P **P** **11 06 27.8 +0.2**
SCHQ IAmb IAmb 11 06 29.1
comp=Z,99nm,1.4s
PLBC Pleasant Camp 46.78 339 P **P** **11 06 31.0 +2.5**
baz=138
O30N Mendenhall 47.67 340 P **P** **11 06 38.4 +2.8**
baz=139
MMPY Sheldon Lake, 47.73 344 P **P** **11 06 38.8 +2.8**
baz=146,SNR=7.8
FARO Faro, Yukon 47.98 343 P **P** **11 06 40.8 +2.8**
baz=143
PNL Peninsula 48.01 337 P **P** **11 06 40.9 +2.7**
baz=134
N31M Braeburn, Yuko 48.12 341 P **P** **11 06 38.6 -0.4**
N31M IAmb IAmb 11 06 51.8
comp=Z,36nm,1.1s
N31M Braeburn, Yuko 48.12 341 P **P** **11 06 41.9 +2.8**
baz=140,SNR=5.5
HYT Haines Junctio 48.18 339 P **P** **11 06 42.2 +2.6**
baz=137
M31M Drury Creek, Y 48.26 342 P **P** **11 06 42.2 +2.2**
baz=142
N30M Aishikik Lake 48.51 340 P **P** **11 06 44.9 +2.8**
baz=138
YUK6 Outpost Mounta 48.55 339 P **P** **11 06 45.1 +2.5**
baz=136
YUK4 Talbot Arm 48.94 339 P **P** **11 06 47.8 +2.3**
baz=136
M30M Minto, Yukon 49.26 341 P **P** **11 06 50.1 +2.4**
baz=139
YUK8 Steele Glacier 49.27 339 P **P** **11 06 50.8 +2.6**
baz=135,SNR=8.5
MESA MESA 49.30 337 P **P** **11 06 50.6 +2.3**
baz=131
YAH Yahtse 49.35 337 P **P** **11 06 49.5 +0.8**
YAH IAmb IAmb 11 07 03.6
comp=Z,130nm,2.0s
SAML Samuel 49.59 120 P **P** **11 06 49.9 -1.0**
SAML Samuel 49.59 120 P **P** **11 06 49.9 -1.0**
SAML pmax pmax
comp=Z,13nm,1.3s
GRNC Granite Creek 49.60 337 P **P** **11 06 49.2 -1.5**
CTG Chitna Glacier 49.60 338 P **P** **11 06 53.4 +2.8**
baz=133
ISLE Juniper Island 49.73 337 IAmb IAmb 11 06 59.5
comp=Z,46nm,1.4s
BARN Barnard Glacie 49.78 338 IAmb IAmb 11 07 10.2
comp=Z,76nm,1.7s
YUK3 Moose Creek 49.86 339 P **P** **11 06 55.4 +2.8**
baz=134
TGL Tana Glacier 50.01 337 IAmb IAmb 11 07 09.6
comp=Z,54nm,1.2s
LPAZ La Paz 50.21 131 P **P** **11 06 55.1 -1.2**
comp=Z,4.1nm,1.0s,baz=331,slow=7.7,SNR=4.1
comp=Z,4.1nm,1.0s
LPAZ La Paz 50.21 131 P **P** **11 06 56.5 +0.2**
LPAZ La Paz 50.21 131 P **P** **11 06 56.5 +0.2**
LPAZ pmax pmax
comp=Z,18nm,1.4s
BVCY Beaver Creek 50.44 339 P **P** **11 06 59.8 +3.0**
baz=134
MCARA McCarthy VSAT 50.49 338 P **P** **11 07 01.4 +4.3**
MCARA IAmb IAmb 11 07 15.6
comp=Z,69nm,1.5s
MCARA McCarthy VSAT 50.49 338 P **P** **11 06 59.3 +2.1**
baz=131
PB16 IPOC Station P 50.64 134 IAmb IAmb 11 07 03.3
comp=Z,64nm,1.7s
M27K Edge Creek, AK 50.74 339 P **P** **11 07 00.1 +0.9**
baz=133,SNR=11
BMRM Bremner River 50.81 336 P **P** **11 07 01.2 +1.6**
baz=129
EYAK Cordova Ski Ar 50.99 336 P **P** **11 07 02.5 +1.6**
baz=127
DAWY Dawson 51.15 342 P **P** **11 07 01.6 -0.5**
DAWY Dawson 51.15 342 P **P** **11 07 04.1 +2.0**
baz=137
M26K Nabesna, AK 51.16 339 P **P** **11 07 03.7 +1.5**
baz=132
BCAR Beaver Creek A 51.20 340 P **P** **11 07 02.4 -0.2**
L27K Beaver Creek, 51.21 340 P **P** **11 07 03.9 +1.3**
baz=133
N25K Chitina, Valde 51.21 337 P **P** **11 07 04.2 +1.6**
baz=129
DIV Divide 51.36 336 P **P** **11 07 03.3 -0.4**
DIV IAmb IAmb 11 07 18.2
comp=Z,83nm,1.8s
FID Port Fidalgo 51.40 336 P **P** **11 07 03.8 -0.2**
FID IAmb IAmb 11 07 32.1
comp=Z,62nm,1.2s
KLU Klutina 51.64 336 P **P** **11 07 06.7 +0.9**
baz=128
L26K Log Cabin Wild 51.70 339 P **P** **11 07 06.4 +0.2**
L26K Log Cabin Wild 51.70 339 P **P** **11 07 07.7 +1.5**
baz=132
FRB Frobisher Bay 51.70 20 P **P** **11 07 06.9 +0.8**
comp=Z,13nm,1.1s,baz=219,slow=9.3,SNR=4.1
comp=Z,13nm,1.1s
GLI Glacier Island 51.72 335 P **P** **11 07 07.5 +1.1**
baz=126
I29M Ogilvie Camp, 51.80 343 P **P** **11 07 08.4 +1.4**
baz=139
HARP HAARP 51.92 338 P **P** **11 07 09.6 +1.8**
baz=129
K27K Chicken 51.96 340 P **P** **11 07 09.3 +1.2**
baz=134
M24K Tolsona, Glenn 52.11 337 IAmb IAmb 11 07 29.8
comp=Z,78nm,1.3s
M24K Tolsona, Glenn 52.11 337 P **P** **11 07 10.5 +1.1**
baz=128
EPYK Eagle Plains 52.16 345 P **P** **11 07 10.8 +1.2**
baz=141
SEW Seward 52.24 334 P **P** **11 07 11.6 +1.3**
baz=123
C36M Paulatuk 52.26 352 P **P** **11 07 11.3 +1.2**
baz=157
DOT Dot Lake 52.35 339 IAmb IAmb 11 07 28.6
comp=Z,81nm,1.8s
SCM Sheep Creek Mo 52.38 336 P **P** **11 07 12.6 +1.2**
baz=126
PAX Paxson 52.40 338 P **P** **11 07 12.5 +1.0**
baz=129
KDAK Kodiak Island 52.45 330 P **P** **11 07 12.5 +0.7**
comp=Z,5.3nm,0.7s,baz=112,slow=5.4,SNR=5.1
comp=Z,5.3nm,0.7s
KDAK Kodiak Island 52.45 330 P **P** **11 07 13.5 +1.6**
baz=118
M23K Glacier View 52.51 336 P **P** **11 07 14.2 +2.0**
baz=126
OHAK Old Harbor 52.52 329 P **P** **11 07 11.6 -0.7**
OHAK Old Harbor 52.52 329 P **P** **11 07 14.6 +2.2**
baz=117
SCRK Sand Creek 52.54 340 P **P** **11 07 13.4 +0.8**
SCRK Sand Creek 52.54 340 P **P** **11 07 14.5 +1.9**
baz=131
KNK Knik Glacier 52.57 335 P **P** **11 07 14.6 +1.8**
baz=125
RIDG Independent Ri 52.67 339 IAmb IAmb 11 07 20.5
comp=Z,47nm,1.0s
RIDG Independent Ri 52.67 339 P **P** **11 07 15.2 +1.7**
baz=130,SNR=18
SML Sawmill 52.75 336 IAmb IAmb 11 07 28.5
comp=Z,62nm,1.4s
SML Sawmill 52.75 336 P **P** **11 07 16.8 +2.7**
baz=125
J26L Joseph Creek 52.76 340 IAmb IAmb 11 07 32.1
comp=Z,57nm,1.4s
J26L Joseph Creek 52.76 340 P **P** **11 07 16.5 +2.3**
baz=132,SNR=9.8
PMR Palmer 52.94 335 P **P** **11 07 18.0 +2.6**
baz=124
GHO Glory Hole Cre 52.96 336 IAmb IAmb 11 07 30.0
comp=Z,52nm,1.4s
WAT6 Susitna Watana 52.98 337 P **P** **11 07 17.6 +1.7**
baz=126,SNR=8.2
INK Inuvik 52.98 347 P **P** **11 07 15.3 -0.3**
comp=Z,34nm,1.1s,baz=133,slow=8.2,SNR=11
comp=Z,34nm,1.1s
INK Inuvik 52.98 347 P **P** **11 07 16.3 +0.7**
INK IAmb IAmb 11 07 22.1
comp=Z,42nm,1.1s
INK Inuvik 52.98 347 P **P** **11 07 16.3 +0.7**
INK pmax pmax
comp=Z,42nm,1.1s
INK Inuvik 52.98 347 P **P** **11 07 17.4 +1.8**
baz=146,SNR=13
K24K Donnelly Dome 53.03 339 P **P** **11 07 18.4 +2.3**
baz=129,SNR=5.5
DHY Denali Highway 53.14 338 P **P** **11 07 19.7 +2.6**
baz=127
PB09 IPOC Station P 53.25 137 P **P** **11 07 19.3 +0.8**
PB09 IAmb IAmb 11 07 29.1
comp=Z,61nm,1.3s
J25K Salcha River, 53.42 340 P **P** **11 07 19.0 0.0**
J25K IAmb IAmb 11 07 36.4
comp=Z,72nm,1.9s
J25K Salcha River, 53.42 340 P **P** **11 07 21.0 +2.0**
baz=130
M22K Willow 53.42 335 P **P** **11 07 19.3 +0.4**
M22K IAmb IAmb 11 07 33.1
comp=Z,82nm,1.1s
M22K Willow 53.42 335 P **P** **11 07 21.3 +2.4**
baz=123
WAT1 Susitna Watana 53.43 337 P **P** **11 07 20.9 +1.8**
baz=126
SUA Susitna One 53.51 335 P **P** **11 07 19.9 +0.1**
SUA IAmb IAmb 11 07 34.4
comp=Z,77nm,1.4s
SUA Susitna One 53.51 335 P **P** **11 07 21.4 +1.6**
baz=122
O20K Slope Mountain 53.58 333 P **P** **11 07 21.8 +1.5**
baz=120
HDA Harding Lake 53.82 339 P **P** **11 07 22.9 +1.0**
HDA Harding Lake 53.82 339 P **P** **11 07 23.2 +1.4**
baz=128
RSO Redoubt South 53.83 333 P **P** **11 07 21.6 -0.7**
CUT Chulitna 53.84 336 P **P** **11 07 22.0 0.0**
CUT Chulitna 53.84 336 P **P** **11 07 23.5 +1.5**
baz=124
RND Reindeer 53.88 337 IAmb IAmb 11 07 37.1
comp=Z,128nm,1.9s
SPCR Spurr Chakacha 53.97 334 P **P** **11 07 24.3 +1.2**
baz=121
IL31 54.02 339 P **P** **11 07 23.1 -0.1**
IL31 IAmb IAmb 11 07 40.1
comp=Z,57nm,1.5s
ILAR Eielson Array 54.02 339 P **P** **11 07 23.4 0.0**
comp=Z,9.8nm,1.1s,baz=153,slow=5.9,SNR=22
comp=Z,9.8nm,1.1s
LVC Limon Verde 54.05 137 P **P** **11 07 23.0 -1.5**
comp=Z,5.3nm,0.9s,baz=309,slow=7.1,SNR=3.7
comp=Z,5.3nm,0.9s
LVC Limon Verde 54.05 137 P **P** **11 07 24.3 -0.2**
LVC IAmb IAmb 11 07 40.4
comp=Z,82nm,1.9s
LVC Limon Verde 54.05 137 P **P** **11 07 24.3 -0.2**
LVC pmax pmax
comp=Z,83nm,1.9s
MCK McKinley 54.10 338 P **P** **11 07 24.6 +0.6**
MCK IAmb IAmb 11 07 41.2
comp=Z,46nm,1.5s
MCK McKinley 54.10 338 P **P** **11 07 24.6 +0.6**
MCK pmax pmax
comp=Z,46nm,1.5s
MCK McKinley 54.10 338 P **P** **11 07 25.2 +1.3**
baz=126
SKT Skwentna 54.11 335 P **P** **11 07 24.6 +0.6**
SKT Skwentna 54.11 335 P **P** **11 07 25.8 +1.8**
baz=122,SNR=6.0
WRH Wood River Hil 54.24 339 P **P** **11 07 24.5 -0.4**
CCB Clear Creek Bu 54.26 339 P **P** **11 07 24.8 -0.2**
O19K Port Alsworth 54.38 332 P **P** **11 07 25.7 -0.3**
O19K IAmb IAmb 11 07 39.0
comp=Z,81nm,1.8s
COLA College 54.41 339 P **P** **11 07 26.0 -0.1**
COLA College 54.41 339 *i* P **P** **11 07 26.9 +0.8**
COLA pmax pmax
comp=Z,13nm,1.1s
COLA College 54.41 339 P **P** **11 07 27.2 +1.1**
baz=128
TCOL CIGO, UAF Yank 54.41 339 P **P** **11 07 27.2 +1.1**
baz=128
POKR Poker Plat Res 54.42 340 P **P** **11 07 27.3 +1.0**
baz=128
P18K Big Mountain, 54.42 331 P **P** **11 07 26.3 -0.1**
baz=116
TRF Thorofare Moun 54.43 337 P **P** **11 07 26.8 +0.3**
TRF Thorofare Moun 54.43 337 P **P** **11 07 26.6 0.0**
baz=124,SNR=9.3
BWN Browne 54.55 338 P **P** **11 07 26.6 -0.6**
BWN IAmb IAmb 11 07 44.0
comp=Z,92nm,1.2s
MDM Murphy Dome 54.59 339 P **P** **11 07 26.8 -0.7**
O18K Koktuh Hills 54.62 332 P **P** **11 07 27.3 -0.5**
O18K IAmb IAmb 11 07 48.0
comp=Z,104nm,2.0s
O18K Koktuh Hills 54.62 332 P **P** **11 07 27.9 +0.1**
baz=117
NEA2 Nenana 54.66 339 P **P** **11 07 27.9 0.0**
NEA2 IAmb IAmb 11 07 44.8
comp=Z,67nm,1.6s
NEA2 Nenana 54.66 339 P **P** **11 07 29.3 +1.4**
baz=126,SNR=6.1
M20K Styx River 54.70 334 P **P** **11 07 28.6 +0.2**
M20K IAmb IAmb 11 07 42.0
comp=Z,94nm,1.6s
M20K Styx River 54.70 334 P **P** **11 07 28.7 +0.2**
baz=120
KTH Kantishna Hill 54.73 337 P **P** **11 07 29.0 +0.4**
KTH IAmb IAmb 11 07 42.6
comp=Z,118nm,1.8s
N19K Bonanza Creek 54.75 333 IAmb IAmb 11 07 42.7
comp=Z,135nm,1.9s
N19K Bonanza Creek 54.75 333 P **P** **11 07 29.0 +0.2**
baz=118
CHNA Chernabura Isl 54.83 325 P **P** **11 07 30.0 +0.7**
baz=109
A36M Sachs Harbour 54.85 353 P **P** **11 07 29.6 +0.4**
baz=156
PPLA Purkeypile 54.85 336 P **P** **11 07 30.6 +1.0**
PPLA Purkeypile 54.85 336 P **P** **11 07 31.1 +1.5**
baz=122,SNR=6.6
P17K Kvichak River 54.89 331 P **P** **11 07 30.2 +0.5**
baz=115
H24K Noodor Dome 55.01 340 P **P** **11 07 31.2 +0.6**
H24K IAmb IAmb 11 07 47.8
comp=Z,90nm,1.8s
H24K Noodor Dome 55.01 340 P **P** **11 07 31.8 +1.2**
baz=128,SNR=8.5
BMAR Burnt Mountain 55.05 343 P **P** **11 07 30.3 -0.5**
BPAW Bear Paw Mtn. 55.06 337 P **P** **11 07 30.4 -0.5**
BPAW IAmb IAmb 11 07 44.9
comp=Z,48nm,1.6s
BPAW Bear Paw Mtn. 55.06 337 P **P** **11 07 31.1 +0.2**
baz=124
I23K Minto, Yukon-K 55.09 339 P **P** **11 07 31.3 +0.3**
I23K IAmb IAmb 11 07 44.7
comp=Z,63nm,1.4s
I23K Minto, Yukon-K 55.09 339 P **P** **11 07 32.3 +1.3**
baz=126,SNR=7.3
CAST Castle Rocks 55.09 336 P **P** **11 07 30.9 -0.2**
CAST IAmb IAmb 11 07 44.9
comp=Z,53nm,1.4s
CAST Castle Rocks 55.09 336 P **P** **11 07 31.5 +0.3**
baz=122
M19K Big River Lodg 55.23 334 P **P** **11 07 31.9 -0.3**
M19K IAmb IAmb 11 07 47.7
comp=Z,116nm,1.9s
M19K Big River Lodg 55.23 334 P **P** **11 07 32.4 +0.2**
baz=119
SIV San Ignacio 55.29 125 P **P** **11 07 32.2 -1.0**
comp=Z,3.3nm,0.9s,baz=281,slow=11,SNR=3.1
comp=Z,3.3nm,0.9s
N18K Kilae Creek 55.30 332 P **P** **11 07 32.5 -0.2**
N18K IAmb IAmb 11 07 46.7
comp=Z,74nm,1.6s
N18K Kilae Creek 55.30 332 P **P** **11 07 33.0 +0.3**
baz=117
L20K Farewell, AK 55.31 335 P **P** **11 07 33.7 +1.0**
baz=120,SNR=7.0
SVW2 Sparrevohn 55.35 333 P **P** **11 07 32.8 -0.3**
CHUM Lake Minchumin 55.43 337 P **P** **11 07 34.6 +1.1**
baz=122
MLY Manley 55.49 338 P **P** **11 07 33.6 -0.5**
MLY Manley 55.49 338 P **P** **11 07 34.9 +0.9**
baz=125
H23K Yukon River 55.55 340 P **P** **11 07 34.5 +0.1**
H23K Yukon River 55.55 340 P **P** **11 07 35.0 +0.5**
baz=126
L19K White Mountain 55.56 334 P **P** **11 07 34.5 0.0**
L19K IAmb IAmb 11 07 48.6
comp=Z,88nm,1.6s
L19K White Mountain 55.56 334 P **P** **11 07 35.4 +0.9**
baz=119,SNR=7.4
K20K Telida 55.82 336 P **P** **11 07 36.0 -0.5**
K20K IAmb IAmb 11 07 50.3
comp=Z,126nm,1.7s
K20K Telida 55.82 336 P **P** **11 07 37.5 +1.1**
baz=120,SNR=9.6
O16K Kokwok River B 55.83 331 P **P** **11 07 36.5 0.0**
baz=114
I21K Tanana 56.01 338 P **P** **11 07 38.4 +0.7**

I21K IAmb IAmb 11 07 52.0
comp=Z,118nm,1.9s
I21K Tanana 56.01 338 P **P** **11 07 38.3 +0.6**
baz=123,SNR=7.0
J20K Nowinta River 56.27 337 P **P** **11 07 39.3 -0.2**
J20K IAmb IAmb 11 07 53.5
comp=Z,106nm,1.5s
J20K Nowinta River 56.27 337 P **P** **11 07 40.8 +1.3**
baz=120,SNR=10
TTA Tatalina 56.38 335 P **P** **11 07 39.9 -0.6**
TTA Tatalina 56.38 335 P **P** **11 07 39.9 -0.6**
TTA Tatalina 56.38 335 P **P** **11 07 41.1 +0.6**
baz=118,SNR=6.8
N16K Nishlik Lake 56.50 331 P **P** **11 07 42.1 +0.8**
baz=114
H21K Melozitna Rive 56.56 338 P **P** **11 07 41.5 -0.1**
H21K IAmb IAmb 11 07 55.6
comp=Z,80nm,1.6s
H21K Melozitna Rive 56.56 338 P **P** **11 07 42.7 +1.0**
baz=123,SNR=8.3
RES Resolute Bay 56.58 3 P **P** **11 07 42.6 +1.0**
comp=Z,9.3nm,0.9s,baz=194,slow=12,SNR=5.7
comp=Z,9.3nm,0.9s
RES Resolute Bay 56.58 3 P **P** **11 07 41.9 +0.3**
RES Resolute Bay 56.58 3 P **P** **11 07 41.9 +0.3**
RES pmax pmax
comp=Z,22nm,1.1s
COLD Coldfoot 56.60 341 P **P** **11 07 42.5 +0.6**
baz=126
IMAR Indian Mountai 57.07 339 P **P** **11 07 44.4 -0.9**
TOLK Toolik Lake Re 57.27 342 P **P** **11 07 47.0 +0.3**
TOLK IAmb IAmb 11 07 56.8
comp=Z,63nm,1.7s
TOLK Toolik Lake Re 57.27 342 P **P** **11 07 47.4 +0.7**
baz=128
H03N2 Juan Fernandez 57.33 154 T T 12 09 47.5
baz=328
H03N1 Juan Fernandez 57.34 154 T T 12 09 47.4
baz=328
H03N3 Juan Fernandez 57.35 154 T T 12 09 57.9
baz=328
GCSA Galena City Sc 57.58 337 P **P** **11 07 50.2 +1.4**
baz=118
IVI Ivigtut 58.36 29 P **P** **11 07 54.3 0.0**
UNV Unalaska Valle 58.46 322 P **P** **11 07 54.7 -0.5**
UNV IAmb IAmb 11 08 05.2
comp=Z,78nm,1.5s
UNV Unalaska Valle 58.46 322 P **P** **11 07 55.8 +0.6**
baz=102
SFJD Kangerlussuaq 59.69 22 P **P** **11 08 03.7 +0.2**
comp=Z,36nm,1.2s,baz=221,slow=5.8,SNR=6.8
comp=Z,36nm,1.2s
SFJD Kangerlussuaq 59.69 22 P **P** **11 08 03.1 -0.4**
SFJD IAmb IAmb 11 08 10.7
comp=Z,68nm,1.4s
SFJD Kangerlussuaq 59.69 22 P **P** **11 08 03.1 -0.4**
SFJD pmax pmax
comp=Z,68nm,1.4s
ANM Nome 60.85 335 P **P** **11 08 11.0 -0.5**
ANM IAmb IAmb 11 08 30.9
comp=Z,32nm,1.2s
ANM Nome 60.85 335 P **P** **11 08 11.0 -0.5**
ANM pmax pmax
comp=Z,33nm,1.2s
RDOG Red Dog Mine 61.22 339 P **P** **11 08 12.9 -1.1**
BO01 Tunca 61.74 148 P **P** **11 08 17.9 0.0**
BO01 IAmb IAmb 11 08 36.6
comp=Z,66nm,1.7s
LMEL Las Melosas 61.76 147 P **P** **11 08 18.7 +0.5**
ANGG Ammassalik, Gr 64.17 25 P **P** **11 08 33.6 0.0**
ANGG IAmb IAmb 11 08 37.5
comp=Z,36nm,1.1s
CPUP Villa Florida 64.34 132 P **P** **11 08 33.7 -1.7**
comp=Z,6.3nm,0.9s,baz=321,slow=7.1,SNR=3.7
comp=Z,6.3nm,0.9s
SUMG Summit 65.67 18 P **P** **11 08 43.6 -0.2**
SUMG Summit 65.67 18 P **P** **11 08 43.6 -0.2**
SUMG pmax pmax
comp=Z,75nm,1.3s
PLCA Paso Flores 67.08 152 P **P** **11 08 52.9 0.0**
comp=Z,6.0nm,1.0s,baz=316,slow=7.1,SNR=5.4
comp=Z,6.0nm,1.0s
LL02 Futaleuf 68.53 154 P **P** **11 09 02.8 +0.9**
LL02 IAmb IAmb 11 09 31.8
comp=Z,50nm,1.6s
BORG Borgarnes 70.93 27 P **P** **11 09 18.5 +2.2**
comp=Z,16nm,1.0s,baz=264,slow=9.8,SNR=4.6
comp=Z,16nm,1.0s
BILL Bilibino 72.54 337 P **P** **11 09 25.9 -0.2**
BILL IAmb IAmb 11 09 40.4
comp=Z,35nm,1.3s
BILL Bilibino 72.54 337 *eP* **P** **11 09 26.2 +0.1**
BILL pmax pmax
comp=Z,36nm,1.5s
KBS Kingsbay 77.05 10 *i* P **P** **11 09 53.4 +1.4**
KBS pmax pmax
comp=Z,26nm,1.1s
PMPST Porto Santo, M 79.28 59 *eP* **P** **11 10 09.8 +4.5**
comp=Z,168nm,1.9s
SEY Seymchan 79.30 333 P **P** **11 10 05.0 +0.3**
comp=Z,4.5nm,0.7s,baz=107,slow=4.1,SNR=6.9
comp=Z,4.5nm,0.7s
SEY Seymchan 79.30 333 *i* P **P** **11 10 04.2 -0.5**
SEY pmax pmax
comp=Z,42nm,1.6s
PEA0B Petropavlovsk- 79.64 323 *i* P **P** **11 10 07.7 +0.9**
PETK Petropavlovsk- 79.64 323 P **P** **11 10 06.8 -0.1**
comp=Z,6.7nm,1.1s,baz=93,slow=8.8,SNR=3.2
comp=Z,6.7nm,1.1s
MA2 Magadan 81.19 330 P **P** **11 10 13.5 -1.5**
comp=Z,5.3nm,0.9s,baz=45,slow=11,SNR=2.4
comp=Z,5.3nm,0.9s
MA2 Magadan 81.19 330 P **P** **11 10 14.5 -0.5**
MA2 Magadan 81.19 330 *i* P **P** **11 10 13.5 -1.5**
MA2 pmax pmax
comp=Z,43nm,1.4s
ESK Eskdalemuir 81.69 34 P **P** **11 10 17.5 -0.3**
ESK Eskdalemuir 81.69 34 P **P** **11 10 17.5 -0.3**
ESK pmax pmax
comp=Z,28nm,1.1s
TIXI Tiksi 83.04 345 P **P** **11 10 23.8 -0.7**
TIXI IAmb IAmb 11 10 34.3
comp=Z,40nm,1.4s
TIXI Tiksi 83.04 345 *i* P **P** **11 10 23.5 -1.0**
TIXI pmax pmax
comp=Z,38nm,1.5s
MSVF Nonsavu 83.53 249 *i* P **P** **11 10 26.1 -1.9**
MSVF pmax pmax
comp=Z,89nm,2.0s
PMTG Montargil 83.86 51 *eP* **P** **11 10 29.9 +0.5**
comp=Z,76nm,1.9s
MTE Manteigas 83.93 50 *eP* **P** **11 10 33.3 +3.5**
comp=Z,61nm,1.9s
PNCL Nicolau / Gran 83.94 52 *eP* P 11 10 35.5 +5.7
comp=Z,48nm,2.0s
MVO Moncorvo 84.05 49 *eP* **P** **11 10 33.8 +3.4**
comp=Z,64nm,1.8s
PCBR Castelo Branco 84.16 50 *eP* **P** **11 10 32.3 +1.4**
comp=Z,71nm,1.8s
MESJ Messejana 84.26 52 *eP* **P** **11 10 32.3 +0.9**
MESJ IAmb IAmb 11 10 39.5
comp=Z,61nm,1.6s
MESJ Messejana 84.26 52 *eP* **P** **11 10 32.7 +1.3**
comp=Z,57nm,1.8s
MESJ Messejana 84.26 52 *eP* **P** **11 10 32.3 +0.9**
PMRV Marv??o 84.36 50 *eP* **P** **11 10 32.6 +0.7**
comp=Z,100nm,1.8s
PCVE Castro Verde 84.46 52 *eP* P 11 10 37.8 +5.3
comp=Z,70nm,1.8s
PBEJ Beja 84.46 52 *eP* P 11 10 37.3 +4.8
comp=Z,72nm,1.6s
PBDV Barranco-do-Ve 84.67 53 *eP* P 11 10 39.0 +5.4
comp=Z,108nm,1.6s
PVAQ Vaqueiros 84.78 52 *eP* **P** **11 10 38.4 +4.3**
comp=Z,72nm,1.7s
ARCES ARCESS Array B 85.65 16 P **P** **11 10 39.3 +1.5**
comp=Z,2.1nm,0.9s,baz=332,slow=5.1,SNR=2.0
comp=Z,2.1nm,0.9s
NB2 NORSAR Subarra 86.08 26 P **P** **11 10 39.6 -0.6**
comp=Z,9.5nm,1.1s,baz=304,slow=4.8
NOA NORSAR Array B 86.08 26 P **P** **11 10 39.5 -0.6**
comp=Z,1.7nm,0.8s,baz=301,slow=4.5,SNR=5.5
comp=Z,1.7nm,0.8s
KONO Kongsberg 86.11 28 *i* P **P** **11 10 39.4 -0.8**
KONO pmax pmax
comp=Z,18nm,1.2s
PAB San Pablo 86.53 50 P **P** **11 10 42.2 -0.7**
PAB IAmb IAmb 11 10 50.4
comp=Z,36nm,1.4s
PAB San Pablo 86.53 50 P **P** **11 10 42.2 -0.7**
PAB pmax pmax
comp=Z,36nm,1.4s
ESDC Sonseca Array 86.76 49 P **P** **11 10 44.0 0.0**
comp=Z,2.5nm,0.9s,baz=304,slow=4.4,SNR=6.4
ESDC PP **PP** **11 14 06.8 +0.8**
comp=Z,0.4nm,0.6s,baz=290,slow=6.1,SNR=4.3
comp=Z,2.5nm,0.9s
ESDC Sonseca Array 86.76 49 P **P** **11 10 42.9 -1.1**
YAK Yakutsk 88.89 337 *i* P **P** **11 10 53.1 -0.5**
YAK pmax pmax
comp=Z,56nm,1.3s
UGL Uglegorsk 90.27 323 *eP* **P** **11 10 58.7 -1.6**
YSS Yuzh-Sakhalins 90.88 321 *i* P **P** **11 11 05.6 +2.4**
YSS pmax pmax
comp=Z,18nm,1.0s
NRIK Noril'sk 92.02 355 *i* P **P** **11 11 07.6 -0.4**
NRIK pmax pmax
comp=Z,12nm,1.2s
CLL Collm 92.16 34 *eP* P 11 11 14.0 +5.0
CLL Collm 92.16 34 *ePP* PP 11 14 48.0 -0.4
comp=Z,37nm,2.0s
ASAJ Asahikawa 92.32 318 P **P** **11 11 11.2 +1.2**
comp=Z,4.9nm,0.9s,baz=67,slow=11,SNR=3.4
comp=Z,4.9nm,0.9s
DAVA Damuels 92.55 38 *eP* **P** **11 11 15.0 +3.9**
comp=Z,0.5nm,0.3s
DAVA *eP* **PP** **11 14 55.1 +3.2**
comp=Z,1.3nm,0.4s
ERM Erimo 92.95 316 P **P** **11 11 13.2 +0.3**
ERM Erimo 92.95 316 *i* P **P** **11 11 13.4 +0.5**
ERM pmax pmax
comp=Z,39nm,1.2s
RETA Reutte 92.95 38 *eP* **P** **11 11 17.2 +4.3**
comp=Z,6.1nm,1.0s
RETA *eP* **PP** **11 14 53.9 -1.1**
comp=Z,0.6nm,0.3s
FETA Feichten 93.18 38 *eP* **P** **11 11 13.7 -0.4**
comp=Z,6.4nm,1.2s
FETA *eP* **PP** **11 14 57.5 +0.7**
comp=Z,7.2nm,1.0s
MOTA Moosalm 93.23 38 *eP* **P** **11 11 17.7 +3.4**
comp=Z,3.7nm,0.7s
MOTA *eP* **PP** **11 14 54.6 -2.6**
comp=Z,4.1nm,1.0s
SQTA Sankt Quirin 93.35 38 *eP* **PP** **11 14 57.7 -0.4**
comp=Z,2.9nm,0.5s
WATA Walderalm 93.51 37 *eP* **P** **11 11 15.6 +0.1**
comp=Z,4.2nm,0.6s
WTTA Wattenberg 93.58 38 *eP* **P** **11 11 19.1 +3.1**
comp=Z,7.3nm,0.9s
WTTA *eP* **PP** **11 14 59.6 -0.4**
comp=Z,5.1nm,1.0s
GERES GERESS Array B 93.89 35 P **P** **11 11 19.4 +2.2**
comp=Z,0.3nm,0.2s,baz=278,slow=6.6,SNR=1.7
GERES PP **PP** **11 15 01.6 -0.7**
comp=Z,0.3nm,0.2s,baz=286,slow=11,SNR=3.7
comp=Z,0.3nm,0.2s
ABTA Abfaltersbach 94.36 38 *eP* **P** **11 11 17.8 -1.7**
comp=Z,3.1nm,0.6s
ABTA *eP* **PP** **11 15 05.9 -0.1**
BIOA Bad Ischl, Aus 94.49 36 *eP* **P** **11 11 20.0 +0.1**
comp=Z,16nm,1.2s
BIOA *eP* **PP** **11 15 07.6 +0.7**
comp=Z,7.3nm,0.9s
KBA Koelnbreinsper 94.66 37 *eP* **P** **11 11 18.6 -2.3**
comp=Z,15nm,1.6s
KBA *eP* **PP** **11 15 07.3 -1.1**
comp=Z,8.4nm,1.7s
MOA Molln 94.75 36 *eP* **P** **11 11 21.4 +0.2**
comp=Z,16nm,1.5s
MOA *eP* **PP** **11 15 08.6 -0.3**
comp=Z,18nm,1.5s
MYKA Tena Mystica 95.08 37 *eP* **P** **11 11 25.0 +2.3**
comp=Z,6.3nm,1.0s
MYKA *eP* **PP** **11 15 10.5 -1.0**
comp=Z,4.9nm,1.2s
VRAC Vranov 95.19 34 *ePP* **PP** **11 15 11.6 -0.6**
KRUC Moravsky 95.22 34 *ePP* **PP** **11 15 11.3 -1.2**
ZEA Zeya 95.23 332 *eP* P 11 11 33.1 +10
ZEA pmax pmax
comp=Z,10.0nm,1.7s
MORC Moravsky Berou 95.41 33 *ePP* **PP** **11 15 12.2 -1.7**
CONA Conrad Observa 95.59 35 *eP* **P** **11 11 25.5 +0.4**
comp=Z,11nm,1.2s
CONA *eP* **PP** **11 15 16.2 +0.7**
comp=Z,4.1nm,1.2s
OBKA Obir 95.67 37 *eP* **P** **11 11 26.1 +0.7**
comp=Z,18nm,1.5s
OBKA *eP* **PP** **11 15 14.7 -1.4**
comp=Z,13nm,1.3s
ARSA Arzberg 95.80 36 *eP* **P** **11 11 25.1 -0.8**
comp=Z,1.0nm,0.5s
ARSA *eP* **PP** **11 15 17.8 +0.8**
comp=Z,11nm,1.2s
SOKA Soboth 95.84 37 *eP* **P** **11 11 26.0 -0.2**
comp=Z,14nm,1.4s
SOKA *eP* **PP** **11 15 16.2 -1.3**
comp=Z,18nm,1.4s
RONA Rosalia, Austr 95.97 35 *eP* **P** **11 11 26.7 0.0**
comp=Z,3.9nm,0.7s
RONA *eP* **PP** **11 15 17.4 -0.9**
comp=Z,8.6nm,1.3s
KLMR Klimovskoe 96.08 17 *eP* **P** **11 11 28.0 +1.2**
KLMR *e* 11 15 20.9
KLMR pmax pmax
comp=Z,21nm,1.3s
KLMR Klimovskoe 96.08 17 *eP* **P** **11 11 28.1 +1.2**
KLMR AMP 11 11 35.1
comp=Z,21nm,1.3s
KLMR *eP* **PP** **11 15 20.9 +2.3**
KEST Kesra 97.98 48 PP **PP** **11 15 34.5 +0.2**
comp=Z,1.6nm,0.6s,baz=227,slow=6.2,SNR=4.6
AKASG Malin Array Be 100.41 27 PP **PP** **11 15 50.5 -1.5**
comp=Z,5.5nm,0.4s,baz=311,slow=5.9,SNR=6.9
CN2 Changchun 102.67 325 *eP* **Pdif** **11 11 52.6 -4.1**
CN2 *ePP* **PP** **11 16 07.9 -1.4**
CN2 Changchun 102.67 325 *es*S sS 11 23 40.5 -2.9
CN2 LR LR
comp=N,4μm,18.0s
CN2 LR LR
comp=E,3μm,18.0s
CN2 LR LR
comp=Z,5μm,20.0s
KIV Kislovodsk 111.34 24 *e*PKIKP **PKiKP** **11 16 31.3 -2.6**
KIV pmax pmax
comp=Z,4.0nm,1.0s
HHC Hu-ho-hao-te 111.87 331 *e*PKP **PKiKP** **11 16 32.3 -2.7**
NJ2 Nanjing 114.43 320 *e*PKP PKPdf 11 16 44.4 +4.4
WMQ Urumqi 116.96 350 *e*PKP **PKiKP** **11 16 46.1 +1.5**
WMQ LR LR
comp=Z,10μm,20.1s
WMQ LR LR
comp=Z,6μm,14.7s
WMQ LR LR
comp=Z,9μm,20.1s
XAN Xi'an 118.54 328 *e*PKP **PKPdf** **11 16 41.2 -6.7**
XAN sPKP 11 16 55.9
XAN LR LR
comp=N,2μm,16.3s
XAN LR LR
comp=E,1μm,17.9s
XAN LR LR
comp=Z,2μm,15.9s
LZH Lanzhou 119.23 333 *e*PKP **PKiKP** **11 16 51.3 +1.9**
WRA Warramunga Arr 123.98 258 PKP **PKPdf** **11 16 56.8 -1.8**
comp=Z,1.7nm,0.8s,baz=77,slow=2.1,SNR=19
ASAR Alice Springs 124.89 254 PKP **PKPdf** **11 16 58.4 -1.9**
comp=Z,1.4nm,0.8s,baz=89,slow=1.9,SNR=9.1
PZH PanZhiHua 128.25 329 PKP **PKPdf** **11 17 06.7 -0.1**
CMAR Chiang Mai Arr 136.35 326 PKP **PKPdf** **11 17 22.6 +0.5**
comp=Z,0.6nm,0.3s,baz=336,slow=2.0,SNR=1.1
HYBB Hyderabad (bro 144.21 354 *e*PKiKP **PKiKP** **11 17 39.1 -0.8**
HYBB *e*PP **PP** **11 20 49.9 +0.8**
HYBB *e*SKPbc **SKPbc** **11 21 14.0 -2.5**
HYBB *e*SKSdf **SKSdf** **11 24 43.7 -3.6**
LEM Lembang 146.02 286 PKPbc **PKPab** **11 17 41.6 +0.6**
comp=Z,11nm,0.5s,baz=275,slow=21,SNR=5.7
PSI Prapat 148.23 309 PKPbc **PKPdf** **11 17 45.0 +1.6**
comp=Z,14nm,1.0s,baz=270,slow=1.6,SNR=7.0

*NEIC **07** 11:07:06.6±2.0, 18.1°N±0.1°×105.36°W±0.10, h10km±2km, mb4.6/113, Error ellipse: s-maj=19.6km s-min=13.0km*

az=214.0
*IDC **07** 11:07:07.6±3.3, 18.38°N×105.40°W, h0km, mb3.8/5, mbtmp3.9/9, ML3.5/4, Error ellipse: s-maj=74.1km s-min=30.7km az=36.0*
*MEX **07** 11:07:07.4±0.7, 18.36°N×105.46°W, h7km±34km, MD4.0*
ISC 07 11:07:11.0±0.9, 18.3°N±0.1°×105.26°W±0.0°09, h36km±3km, n135,σ1°39/134, mb4.5/32, 2C-2D, Off coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	IsC	Time h m s	Res ISC
CJM	**Chamela**	**1.23**	**10**	↑*iP*	Pn	11 07 26.5	-5.1
CJM				*eS*	**Sn**	**11 07 42.2**	**-4.7**
CDAR	**Ciudad de Arme**	**1.35**	**61**	↑*iP*	**Pn**	**11 07 30.4**	**-2.9**
CDAR				*i* S	**Sn**	**11 07 48.9**	**-1.2**
R15V		**1.50**	**54**	*eP*	**Pn**	**11 07 32.6**	**-2.8**
R15V				*eS*	**Sn**	**11 07 52.4**	**-1.3**
COIG	**Colima**	**1.73**	**59**	*eP*	**Pn**	**11 07 36.1**	**-2.6**
COIG				*eS*	**Sn**	**11 07 59.2**	**-0.4**
MMIG	**Aquila**	**1.82**	**90**	*eP*	Pn	11 07 36.3	-3.5
MMIG				*eS*	**Sn**	**11 08 00.2**	**-1.3**
MNGA	**Volcan de Coli**	**1.95**	**53**	*eP*	**Pn**	**11 07 40.1**	**-1.7**
MNGA				*eS*	**Sn**	**11 08 03.8**	**-1.3**
EZ5V		**1.97**	**53**	↓*eP*	**Pn**	**11 07 39.9**	**-2.1**
EZ5V				*eS*	**Sn**	**11 08 05.0**	**-0.6**
INCO	**Volcan de Coli**	**2.00**	**52**	↓*eP*	**Pn**	**11 07 41.2**	**-1.3**
INCO				*eS*	**Sn**	**11 08 05.9**	**-0.6**
JUBC	**Volcan de Coli**	**2.01**	**52**	*eP*	**Pn**	**11 07 41.9**	**-0.8**
JUBC				*eS*	**Sn**	**11 08 05.8**	**-1.0**
MOIG	**Morelia**	**4.09**	**70**		**Pn**	**11 08 10.7**	**-0.5**
ZAIG	**Zacatecas**	**5.12**	**29**	Pn	**Pn**	**11 08 27.3**	**+1.8**
H06E1	**SOCORRO T-PHAS**	**5.40**	**276**	T	T	11 13 35.8	
	SNR=225						
H06S1	**SOCORRO T**	**5.42**	**276**	T	T	11 13 34.4	
	SNR=67						
H06N1	**SOCORRO T-PHAS**	**5.46**	**277**	T	T	11 13 42.5	
	SNR=32						
TLIG	**Tlapa**	**6.41**	**95**	Pn	**Pn**	**11 08 42.1**	**-0.9**
SLBS	**Sierra La Lagu**	**6.93**	**322**	Pn	**Pn**	**11 08 49.7**	**-0.4**
HPIG		**8.62**	**358**	Pn	**Pn**	**11 09 15.4**	**+2.0**
CMIG	**Matias Romero**	**9.96**	**95**	Pn	**Pn**	**11 09 33.4**	**+1.8**
	0.4nm,0.3s,baz=170,slow=20,SNR=1.5						
	1.6nm,0.4s						
TX31	**Lajitas Ar. Si**	**11.10**	**7**	Pn	**Pn**	**11 09 50.7**	**+3.5**
TX32	**Lajitas Array**	**11.10**	**7**	Pn	**Pn**	**11 09 49.5**	**+2.3**
TXAR	**Lajitas Array**	**11.10**	**7**	Pn	**Pn**	**11 09 47.4**	**+0.2**
	0.1nm,0.3s,baz=186,slow=13,SNR=11						
	2.0nm,0.8s						
TXAR	**Lajitas Array**	**11.10**	**7**	Pn	**Pn**	**11 09 49.0**	**+1.7**
833A	**Chaparral WMA,**	**11.35**	**27**	Pn	**Pn**	**11 09 51.8**	**+1.2**
CCIG	**Comitan**	**12.69**	**97**	Pn	**Pn**	**11 10 07.9**	**-1.3**
JCT	**Junction City**	**13.12**	**21**	Pn	**Pn**	**11 10 16.5**	**+1.7**
MNTX	**Cornudas Mount**	**13.36**	**360**	Pn	**Pn**	**11 10 20.1**	**+2.1**
121A	**Cookes Peak, D**	**14.37**	**351**	Pn	**Pn**	**11 10 34.1**	**+2.1**
HKT	**Hockley**	**14.44**	**35**	Pn	**Pn**	**11 10 34.6**	**+1.8**
TUC	**Tucson**	**14.83**	**341**	Pn	**Pn**	**11 10 39.9**	**+1.8**
ABTX	**Abilene, Hawle**	**15.15**	**18**	Pn	**Pn**	**11 10 44.1**	**+1.8**
ABTX				IAmb	IAmb	11 10 54.1	
	comp=Z,16nm,0.7s						
214A	**Organ Pipe Nat**	**15.22**	**335**	Pn	**Pn**	**11 10 43.0**	**-0.3**
WHTX	**Lake Whitney,**	**15.36**	**26**		**Pn**	**11 10 45.9**	**+0.9**
CRNM	**Carthage**	**15.66**	**355**	Pn	**Pn**	**11 10 48.8**	**-0.3**
MSTX	**Muleshoe**	**15.78**	**8**	Pn	**Pn**	**11 10 51.0**	**+0.4**
BNM	**Barren Site**	**15.85**	**356**	Pn	**Pn**	**11 10 51.7**	**+0.1**
LENM	**Lemitar**	**15.89**	**355**		**Pn**	**11 10 52.7**	**+0.6**
113A	**Mohawk Valley,**	**16.33**	**334**	P	**P**	**11 11 00.8**	**+0.8**
NATX	**Nacogdoches**	**16.48**	**34**	Pn	**Pn**	**11 11 00.6**	**+1.1**
NATX				IAmb	IAmb	11 11 03.9	
	comp=Z,42nm,0.9s						
Z35A	**Perchaven, San**	**16.61**	**24**	Pn	**Pn**	**11 11 02.1**	**+1.0**
Z35A				IAmb	IAmb	11 11 05.0	
	comp=Z,62nm,0.9s						
ANMO	**Albuquerque**	**16.63**	**357**	Pn	**Pn**	**11 11 03.1**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=175,slow=11,SNR=7.4						
	comp=Z,10nm,1.0s						
ANMO	**Albuquerque**	**16.63**	**357**	Pn	**Pn**	**11 11 02.1**	**+0.6**
X18A	**Snowflake**	**16.71**	**346**	Pn	**Pn**	**11 11 03.5**	**+1.0**
AMTX	**Amarillo**	**16.84**	**10**	Pn	**Pn**	**11 11 03.8**	**-0.2**
X16A	**Lo Mia Camp, P**	**16.99**	**342**		**Pn**	**11 11 07.0**	**+1.0**
Y14A	**Wickenburg**	**17.06**	**338**		**Pn**	**11 11 07.9**	**+1.1**
CBX	**Cerro Bola**	**17.34**	**326**	Pn	**Pn**	**11 11 09.0**	**-1.3**
WMOK	**Wichita Mounta**	**17.37**	**18**		**Pn**	**11 11 10.3**	**-0.4**
WMOK				IAmb	IAmb	11 11 16.6	
	comp=Z,34nm,1.2s						
342A	**Flagon Creek P**	**17.52**	**39**		**Pn**	**11 11 13.3**	**+0.9**
342A				IAmb	IAmb	11 11 21.2	
	comp=Z,63nm,1.1s						
Z38A	**Mt. Pleasant**	**17.53**	**30**		**P**	**11 11 14.5**	**+1.1**
X34A	**Smith Ranch, M**	**17.55**	**21**	Pn	**Pn**	**11 11 13.0**	**+0.2**
BAR	**Barrett**	**17.63**	**327**		**Pn**	**11 11 13.6**	**-0.2**
WUAZ	**Wupatki**	**18.00**	**344**	P	**Pn**	**11 11 19.0**	**+0.5**
PFO	**Pinyon Flats O**	**18.26**	**329**	P	**Pn**	**11 11 22.7**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=161,slow=9.1,SNR=3.9						
	comp=Z,6.7nm,1.1s						
PFO	**Pinyon Flats O**	**18.26**	**329**	P	**P**	**11 11 21.9**	**+0.2**
W13A	**Hualapai Mount**	**18.42**	**337**	P	**P**	**11 11 23.4**	**0.0**
X37A	**Clayton**	**18.48**	**27**	P	**P**	**11 11 24.6**	**+0.8**
Z41A	**Richland Creek**	**18.63**	**34**	P	**P**	**11 11 25.9**	**+0.4**
Z41A				IAmb	IAmb	11 11 27.7	
	comp=Z,24nm,0.8s						
U32A	**Winter Ranch,**	**18.85**	**16**		**P**	**11 11 29.2**	**+1.2**
U32A				IAmb	IAmb	11 11 31.5	
	comp=Z,52nm,1.0s						
MVCO	**Mesa Verde**	**19.07**	**352**	P	**P**	**11 11 31.3**	**+0.7**
MVCO				IAmb	IAmb	11 11 51.8	
	comp=Z,29nm,1.2s						
S22A	**4UR Ranch, Cre**	**19.44**	**356**	P	**P**	**11 11 33.0**	**-1.6**
TUL1	**Leonard**	**19.45**	**24**		**P**	**11 11 34.3**	**-0.2**
TUL1				IAmb	IAmb	11 11 37.9	
	comp=Z,41nm,1.1s						
GSC	**Goldstone, Bar**	**19.81**	**331**	P	**P**	**11 11 39.5**	**+1.0**
LCMT	**Little Creek M**	**19.93**	**341**	P	**Pn**	**11 11 42.6**	**+0.8**
PV13	**Radium Mtn., P**	**20.04**	**352**	P	Pn	11 11 43.8	+0.7
T35A	**Sooner Cattle**	**20.09**	**21**	P	**P**	**11 11 41.9**	**+0.4**
PV15	**Paradox Valley**	**20.18**	**353**	P	**P**	**11 11 42.4**	**-0.4**
PV15				IAmb	IAmb	11 11 57.6	
	comp=Z,16nm,0.9s						
PV11	**David Mesa, Pa**	**20.19**	**352**	P	Pn	11 11 45.0	+0.2
CCAC	**Calif City Air**	**20.27**	**329**	P	**P**	**11 11 44.7**	**+1.2**
PV07	**Paradox Valley**	**20.30**	**352**	P	**P**	**11 11 42.5**	**-1.4**
PV07				IAmb	IAmb	11 11 49.4	
	comp=Z,18nm,0.9s						
QSM	**Queen of Sheba**	**20.39**	**332**	P	**P**	**11 11 44.5**	**-0.2**
GWY	**Greenwater Val**	**20.48**	**333**	P	**P**	**11 11 45.8**	**-0.2**
HHAR	**Hobbs**	**20.53**	**27**	P	**P**	**11 11 47.9**	**+1.6**
MTPU	**Mount Pierson**	**20.59**	**344**	P	**P**	**11 11 45.8**	**-1.5**
MTPU				IAmb	IAmb	11 12 02.5	
	comp=Z,35nm,1.5s						
R32A	**Long Quarter,**	**20.86**	**15**	P	**P**	**11 11 47.9**	**-1.9**
ISA	**Isabella, Lake**	**20.90**	**329**	P	**P**	**11 11 47.2**	**-3.1**
PRN	**Pahroc Range**	**20.90**	**338**	P	**P**	**11 11 48.1**	**-2.3**
TPNV	**Topopah Spring**	**20.96**	**335**	P	**P**	**11 11 50.1**	**-0.9**
CBKS	**Cedar Bluff**	**21.01**	**12**	P	**P**	**11 11 51.2**	**-0.3**
FCAR	**Ozark Folk Cen**	**21.04**	**31**	P	**P**	**11 11 53.3**	**+1.5**
MSU	**Marysvale**	**21.04**	**345**	P	**P**	**11 11 52.0**	**0.0**
Q16A	**Castle Valley**	**21.19**	**347**	P	**P**	**11 11 55.1**	**+1.5**
Q16A				IAmb	IAmb	11 12 04.8	
	comp=Z,30nm,1.2s						
TCRU	**Three Creeks R**	**21.20**	**344**	P	**P**	**11 11 54.9**	**+1.1**
SRU	**San Rafael Swe**	**21.25**	**349**	P	**P**	**11 11 56.3**	**+2.1**
SRU				IAmb	IAmb	11 12 00.0	
	comp=Z,22nm,1.3s						
Z47A	**Carrollton**	**21.41**	**43**	P	**P**	**11 11 55.7**	**0.0**
Z47A				IAmb	IAmb	11 12 04.0	
	comp=Z,27nm,0.9s						
ISCO	**Idaho Springs**	**21.44**	**359**	P	**P**	**11 11 58.2**	**+1.8**
ISCO				IAmb	IAmb	11 12 05.1	
	comp=Z,24nm,1.4s						
PSUT	**Pine Spring**	**21.52**	**341**	P	**P**	**11 11 60.0**	**+2.8**
TMUT	**Trail Mountain**	**21.57**	**347**	P	**P**	**11 11 58.4**	**+0.7**
TMUT				IAmb	IAmb	11 12 07.0	
	comp=Z,20nm,1.1s						
P17A	**Butcher Ranch,**	**21.64**	**348**	P	**P**	**11 11 57.7**	**-0.7**
P17A				IAmb	IAmb	11 12 10.5	
	comp=Z,40nm,1.2s						
LCAR	**Lake Charles**	**21.66**	**32**	P	**P**	**11 11 58.3**	**-0.1**
LCAR				IAmb	IAmb	11 12 03.7	
	comp=Z,18nm,1.0s						
P18A	**Preston Nutter**	**21.70**	**350**	P	**P**	**11 11 58.9**	**-0.3**
P18A				IAmb	IAmb	11 12 11.3	
	comp=Z,25nm,1.5s						
O20A	**White River Ci**	**21.93**	**354**	P	**P**	**11 12 03.4**	**+2.0**
PMPB	**Monarch Peak**	**22.53**	**326**	P	**P**	**11 12 09.7**	**+1.9**
PMPB				IAmb	IAmb	11 12 39.8	

comp=Z,24nm,1.3s
OMMB Old Mammoth Mi 22.71 331 P **P** **11 12 09.6 -0.4**
OMMB IAmb IAmb 11 12 19.9
comp=Z,26nm,1.4s
MDPB Devils Postpil 22.76 331 P **P** **11 12 09.3 -1.2**
MDPB IAmb IAmb 11 12 37.8
comp=Z,15nm,1.4s
NVAR Mina Array Bea 23.07 333 P **P** **11 12 14.3 +0.6**
comp=Z,2.1nm,1.1s,baz=60,slow=42,SNR=6.5
comp=Z,2.1nm,1.1s
KVN Kaiserville 23.51 334 P **P** **11 12 17.4 -0.5**
FPAL Fort Paine 23.84 43 P **P** **11 12 20.1 -0.9**
FPAL IAmb IAmb 11 12 34.7
comp=Z,19nm,1.1s
EMB Emerald Bay 24.32 331 P **P** **11 12 24.9 -0.6**
W50A Signal Mountai 24.44 42 P **P** **11 12 27.7 +1.2**
W50A IAmb IAmb 11 12 28.3
comp=Z,22nm,1.1s
T47A Sharon Grove 24.53 37 P **P** **11 12 27.7 +0.5**
T47A IAmb IAmb 11 12 34.4
comp=Z,18nm,1.1s
MPK Martis Peak 24.55 332 P **P** **11 12 28.2 +0.6**
PAHR Pah Rah Range 24.60 333 P **P** **11 12 29.0 +1.0**
GOGA Godfrey 24.65 48 P **P** **11 12 28.0 -0.3**
GOGA IAmb IAmb 11 12 31.6
comp=Z,19nm,1.1s
PDAR Pinedale Array 24.68 352 P **P** **11 12 30.6 +1.8**
comp=Z,1.7nm,0.8s,baz=156,slow=9.1,SNR=7.1
comp=Z,1.7nm,0.8s
REDW Red Top Meadow 25.44 350 P **P** **11 12 36.4 +0.7**
REDW IAmb IAmb 11 13 04.1
comp=Z,7.8nm,1.1s
SNOW Snow King Moun 25.52 351 P **P** **11 12 36.2 -0.2**
SNOW IAmb IAmb 11 12 55.4
comp=Z,19nm,1.3s
TPAW Teton Pass 25.58 350 P **P** **11 12 37.9 +0.9**
LOHW Long Hollow 25.65 351 P **P** **11 12 38.4 +0.8**
PDPR Patillas Dam, 37.24 84 P **P** **11 14 18.2 -1.2**
CUPR Culebra, Puert 37.90 83 *eS* **P** **11 14 23.5 -1.5**
CUPR Culebra, Puert 37.90 83 P **P** **11 14 23.4 -1.7**
DLBC Dease Lake 44.03 342 P **P** **11 15 14.4 -0.6**
DLBC IAmb IAmb 11 15 21.9
comp=Z,11nm,1.2s
YKA Yellowknife Ar 44.64 354 P **P** **11 15 18.8 -0.9**
comp=Z,1.7nm,1.0s,baz=166,slow=7.0,SNR=3.0
comp=Z,1.7nm,1.0s
RIDG Independent Ri 52.77 339 P **P** **11 16 22.7 +0.5**
RIDG IAmb IAmb 11 16 27.7
comp=Z,7.6nm,0.8s
J26L Joseph Creek 52.85 340 P **P** **11 16 23.9 +1.0**
J26L IAmb IAmb 11 16 28.8
comp=Z,7.5nm,1.1s
IL31 54.12 339 P **P** **11 16 32.3 +0.3**
IL31 IAmb IAmb 11 16 36.8
comp=Z,4.0nm,1.1s
ILAR Eielson Array 54.12 339 P **P** **11 16 31.7 -0.3**
comp=Z,2.3nm,1.0s,baz=152,slow=6.0,SNR=8.2
comp=Z,2.3nm,1.0s
ILAR Eielson Array 54.12 339 P **P** **11 16 32.2 +0.1**
NEA2 Nenana 54.75 339 P **P** **11 16 36.7 0.0**
N19K Bonanza Creek 54.83 333 P **P** **11 16 37.4 0.0**
H24K Noodor Dome 55.11 340 P **P** **11 16 39.7 +0.4**
H24K IAmb IAmb 11 16 47.2
comp=Z,6.1nm,1.2s
BMAR Burnt Mountain 55.15 343 P **P** **11 16 40.2 +0.6**
I23K Minto, Yukon-K 55.18 339 P **P** **11 16 41.8 +2.1**
I23K IAmb IAmb 11 16 48.0
comp=Z,8.0nm,1.4s
SVW2 Sparrevohn 55.44 333 P **P** **11 16 42.3 +0.6**
J20K Nowinta River 56.36 337 P **P** **11 16 47.1 -1.2**
J20K IAmb IAmb 11 16 52.5
comp=Z,6.7nm,1.1s
TTA Tatalina 56.47 335 P **P** **11 16 47.6 -1.6**
TTA IAmb IAmb 11 16 55.6
comp=Z,6.2nm,1.1s
H21K Melozitna Rive 56.66 339 P **P** **11 16 49.5 -0.8**
H21K IAmb IAmb 11 16 54.4
comp=Z,6.6nm,1.1s
H03N2 Juan Fernandez 57.25 154 T T 12 18 46.7
baz=331,slow=77,SNR=5.5
H03N1 Juan Fernandez 57.26 154 T T 12 18 51.3
baz=331,slow=77,SNR=5.2
H03N3 Juan Fernandez 57.27 154 T T 12 18 55.5
baz=331,slow=77,SNR=5.5
SFJD Kangerlussuaq 59.81 22 P **P** **11 17 11.8 -0.5**
TIXI Tiksi 83.14 345 P **P** **11 19 32.5 -0.3**
TIXI IAmb IAmb 11 19 37.8
comp=Z,4.3nm,1.1s
ESDC Sonseca Array 86.87 49 P **P** **11 19 56.1 +3.8**
comp=Z,0.4nm,0.6s,baz=307,slow=4.8,SNR=4.0
comp=Z,0.4nm,0.6s
ESDC Sonseca Array 86.87 49 P **P** **11 19 52.6 +0.3**
PZH PanZhiHua 128.33 329 PKP **PKPdf** **11 26 12.8 -1.8**

*NEIC **07** 11:13:44.1±0.6, 19°.06N±0°.07×66°.47W±0°.02, h30km±15km, Error ellipse: s-maj=11.0km s-min=3.1km az=178.0*
*RSPR **07** 11:13:44.8, 19°.13N×66°.47W, h35km±5km, MD2.8/12*
ISC 07 11:13:43.5±1.6, 19°.07N±0°.08×66°.46W±0°.03, h28km, n47, σ0$26/50, 12C, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EMPR	**Esperanza - Ma**	**0.60**	**186**	*ep*	**Pn**	**11 13 56.3**	**+0.1**
EMPR	**Esperanza - Ma**	**0.60**	**186**	*eS*	**Sn**	**11 14 05.3**	**+0.4**
EMPR	**Esperanza - Ma**	**0.60**	**186**		**Pn**	**11 13 56.3**	**+0.1**
EMPR				IAML		11 14 05.7	
	comp=N,158nm,1.2s						
EMPR	**Esperanza - Ma**	**0.60**	**186**		**Sn**	**11 14 05.3**	**+0.4**
AOPR	**Arecibo Observ**	**0.77**	**201**	↑*eP*	**Pb**	**11 13 58.4**	**-0.1**
AOPR	**Arecibo Observ**	**0.77**	**201**	*eS*	**Sb**	**11 14 08.7**	**0.0**
AOPR	**Arecibo Observ**	**0.77**	**201**		**Pb**	**11 13 58.4**	**-0.1**
AOPR					**Sb**	**11 14 08.7**	**0.0**
GCPR	**Guaynabo City**	**0.84**	**155**	Pn	**Pn**	**11 13 59.5**	**0.0**
GCPR				IAML		11 14 15.6	
	comp=E,67nm,0.3s						
AGPR	**Aguadilla, PR**	**0.86**	**226**	Pn	**Pn**	**11 13 59.5**	**-0.4**
AGPR				IAML		11 14 14.9	
	comp=N,101nm,1.9s						
AGPR				IAML		11 14 19.7	
	comp=E,96nm,0.3s						
CBYP	**Canovanas**	**0.98**	**144**	↑*eP*	**Pn**	**11 14 01.6**	**0.0**
CBYP	**Canovanas**	**0.98**	**144**	*eS*	**Sn**	**11 14 14.2**	**-0.4**
CBYP	**Canovanas**	**0.98**	**144**		**Pn**	**11 14 01.6**	**0.0**
CBYP					**Sn**	**11 14 14.2**	**-0.4**
CELP	**Cerrillos**	**1.00**	**186**	↑*eP*	**Pn**	**11 14 01.9**	**+0.2**
CELP	**Cerrillos**	**1.00**	**186**	*eS*	**Sn**	**11 14 14.4**	**-0.5**
CELP	**Cerrillos**	**1.00**	**186**		**Pn**	**11 14 01.9**	**+0.2**
CELP					**Sn**	**11 14 14.4**	**-0.5**
CELP	**Cerrillos**	**1.00**	**186**	IAML		11 14 22.3	
	comp=E,48nm,0.6s						
SJG	**San Juan**	**1.00**	**163**	Pn	**Pb**	**11 14 02.8**	**+0.5**
SJG				IAML		11 14 18.9	
	comp=E,64nm,0.3s						
SJG				IAML		11 14 22.1	
	comp=E,61nm,0.2s						
OBIP	**Obispado Ponce**	**1.03**	**188**	Pn	**Pb**	**11 14 03.2**	**+0.3**
OBIP				IAML		11 14 23.2	
	comp=N,46nm,0.4s						
LSP	**Las Mesas**	**1.07**	**214**	↑*eP*	**Pn**	**11 14 02.7**	**-0.1**
LSP	**Las Mesas**	**1.07**	**214**	*eS*	**Sn**	**11 14 16.6**	**-0.1**
HUMP	**Col San Antoni**	**1.09**	**148**	↑*eP*	**Pn**	**11 14 03.2**	**+0.2**
HUMP	**Col San Antoni**	**1.09**	**148**	*eS*	**Sn**	**11 14 17.1**	**-0.1**
HUMP	**Col San Antoni**	**1.09**	**148**		**Pn**	**11 14 03.2**	**+0.2**
HUMP					**Sn**	**11 14 17.1**	**-0.1**
PDPR	**Patillas Dam,**	**1.13**	**158**	Pn	**Pb**	**11 14 04.1**	**-0.3**
IGPR	**InterUniversit**	**1.15**	**163**	↑*eP*	**Pn**	**11 14 03.9**	**+0.1**
IGPR	**InterUniversit**	**1.15**	**163**	*eS*	**Sb**	**11 14 19.2**	**-0.2**
IDE	**Isla Desecheo**	**1.18**	**235**	↑*eP*	**Pn**	**11 14 04.0**	**-0.2**
IDE	**Isla Desecheo**	**1.18**	**235**	*eS*	**Sn**	**11 14 18.8**	**-0.5**
CRPR	**Cabo Rojo, PR**	**1.23**	**210**	↑*eP*	**Pn**	**11 14 04.8**	**0.0**
CRPR	**Cabo Rojo, PR**	**1.23**	**210**	*eS*	**Sn**	**11 14 20.2**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.23**	**210**		**Pn**	**11 14 05.2**	**+0.4**
CRPR	**Cabo Rojo, PR**	**1.23**	**210**		**Sn**	**11 14 20.2**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.23**	**210**	IAML		11 14 26.9	
	comp=N,54nm,0.9s						
CRPR				IAML		11 14 36.9	
	comp=E,29nm,1.8s						
MLPR	**Magueyes Islan**	**1.23**	**207**	Pn	**Pn**	**11 14 05.1**	**+0.2**
MLPR				IAML		11 14 29.6	
	comp=E,42nm,3.4s						
MTP	**Monte Pirata**	**1.30**	**138**	↑*eP*	**Pn**	**11 14 05.8**	**0.0**
MTP	**Monte Pirata**	**1.30**	**138**	*eS*	**Sn**	**11 14 22.6**	**+0.3**
MTP	**Monte Pirata**	**1.30**	**138**		**Pn**	**11 14 05.8**	**0.0**
MTP					**Sn**	**11 14 22.6**	**+0.3**
MTP	**Monte Pirata**	**1.30**	**138**	IAML		11 14 27.1	
	comp=E,50nm,0.1s						
MTP				IAML		11 14 30.9	
	comp=N,35nm,0.3s						
CUPR	**Culebra, Puert**	**1.35**	**124**	↑*eP*	**Pn**	**11 14 06.3**	**-0.3**
CUPR	**Culebra, Puert**	**1.35**	**124**		**Pn**	**11 14 06.5**	**0.0**
STVI	**Saint Thomas**	**1.60**	**116**	*eS*	**Sn**	**11 14 29.5**	**-0.2**
STVI	**Saint Thomas**	**1.60**	**116**		**Sn**	**11 14 29.5**	**-0.2**
STVI	**Saint Thomas**	**1.60**	**116**	Pn	**Pn**	**11 14 09.8**	**-0.1**
STVI				IAML		11 14 30.7	
	comp=N,40nm,0.1s						
SJVI	**Gifft Hill Sch**	**1.77**	**114**	↑*eP*	**Pn**	**11 14 12.3**	**+0.1**
SJVI	**Gifft Hill Sch**	**1.77**	**114**	*eS*	**Sn**	**11 14 33.8**	**0.0**
SJVI	**Gifft Hill Sch**	**1.77**	**114**		**Pn**	**11 14 12.3**	**+0.1**
SJVI					**Sn**	**11 14 33.8**	**0.0**
DR12	**Loma Pena Alta**	**2.78**	**265**	Pn	**Pn**	**11 14 26.8**	**+0.5**

*NEIC **07** 11:23:34.1±0.8, 25°.05S±0°.1×180°.0E±0°.1, h535km±17km, mb4.0/9, Error ellipse: s-maj=21.5km s-min=12.0km az=134.0*
*IDC **07** 11:23:34.3±2.2, 25°.16S×179°.64E, h510km±28km, mb3.2/4, mbtmp4.2/8, Error ellipse: s-maj=26.9km s-min=25.1km az=87.0*
ISC 07 11:23:33.8±1.0, 25°.1S×179°.8E±0°.1, h501km, n45, σ1$63/45, mb3.9/9, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**7.52**	**347**	P	**P**	**11 25 25.8**	**+0.3**
	6.3nm,0.6s,baz=269,slow=22,SNR=7.2						
MSVF	**Nonsavu**	**7.52**	**347**	P	**P**	**11 25 26.1**	**+0.6**
MARNC	**Mare, Loyalty**	**11.37**	**286**	P	**P**	**11 26 07.3**	**+1.6**
OUZ	**Omahuta**	**11.39**	**206**	P	**P**	**11 26 09.1**	**+3.3**
PINNC	**Pines Island,**	**11.54**	**280**	P	**P**	**11 26 09.8**	**+2.3**
DZM	**Mont Dzumac**	**12.58**	**281**	P	**P**	**11 26 20.0**	**+1.3**
	4.2nm,0.7s,baz=94,slow=19,SNR=2.5						
DZM	**Mont Dzumac**	**12.58**	**281**	P	**P**	**11 26 20.1**	**+1.3**
HAZ	**Te Kaha**	**12.71**	**187**	P	**P**	**11 26 21.1**	**+1.4**
PKGZ	**Pakihiroa**	**12.81**	**186**	P	**P**	**11 26 23.2**	**+2.3**
RUGZ	**Raukumara Rang**	**12.93**	**187**	P	**P**	**11 26 25.3**	**+3.1**
PUZ	**Puketiti**	**12.98**	**185**	P	**P**	**11 26 24.9**	**+2.3**
MARZ	**Manawahe**	**13.10**	**191**	P	**P**	**11 26 24.7**	**+0.8**
TWGZ	**Tauwhareparae**	**13.11**	**186**	P	**P**	**11 26 25.3**	**+1.3**
URZ	**Urewera**	**13.30**	**189**	P	**P**	**11 26 26.3**	**+0.4**
	14nm,0.5s,baz=335,slow=1.9,SNR=24						
URZ	**Urewera**	**13.30**	**189**	P	**P**	**11 26 26.9**	**+1.0**
URZ	**Urewera**	**13.30**	**189**	P	**P**	**11 26 26.0**	**+0.1**
MWZ	**Matawai**	**13.31**	**188**	P	**P**	**11 26 25.9**	**-0.3**
RAHZ	**Arahi**	**13.95**	**189**	P	**P**	**11 26 29.9**	**-2.9**
NMHZ	**Naumai**	**14.16**	**189**	P	**P**	**11 26 35.8**	**+0.7**
BKZ	**Black Stump Fm**	**14.28**	**190**	P	**P**	**11 26 35.9**	**-0.4**
BKZ	**Black Stump Fm**	**14.28**	**190**	P	**P**	**11 26 35.9**	**-0.4**
TMVZ	**Te Maari**	**14.37**	**193**	P	**P**	**11 26 38.1**	**+0.8**
OTVZ	**Oturere**	**14.43**	**193**	P	**P**	**11 26 36.3**	**-1.6**
VRZ	**Vera Road**	**14.59**	**196**	P	**P**	**11 26 44.1**	**+4.5**
BHHZ	**Black Hill Sta**	**14.67**	**191**	P	**P**	**11 26 39.7**	**-0.7**
MTVZ	**Mangateitei**	**14.68**	**193**	P	**P**	**11 26 40.8**	**+0.2**
TSZ	**Takapari Road**	**15.24**	**191**	P	**P**	**11 26 45.8**	**-0.6**
BFZ	**Birch Farm**	**15.80**	**190**	P	**P**	**11 26 51.2**	**-1.0**
OGWZ	**Otaki Gorge**	**16.12**	**193**	P	**P**	**11 26 54.5**	**-1.0**
RPZ	**Rata Peaks**	**19.87**	**199**	P	**P**	**11 27 29.5**	**-1.6**
	8.2nm,0.6s,baz=18,slow=16,SNR=2.3						
CTA	**Charters Tower**	**31.28**	**272**	P	**P**	**11 29 11.9**	**-0.4**
	2.6nm,0.3s,baz=100,slow=9.2,SNR=14						
	2.6nm,0.3s						
CTAO	**Charters Tower**	**31.28**	**272**	P	**P**	**11 29 12.5**	**+0.1**
STKA	**Stephens Creek**	**34.08**	**250**	P	**P**	**11 29 35.7**	**-0.3**
AS31	**Alice Springs**	**41.63**	**262**	P	**P**	**11 30 37.0**	**-1.0**
ASAR	**Alice Springs**	**41.63**	**262**	P	**P**	**11 30 36.8**	**-1.1**
	0.6nm,0.3s,baz=93,slow=7.2,SNR=34						
	0.6nm,0.3s						
WR0	**Warramunga Arr**	**41.93**	**268**	P	**P**	**11 30 39.0**	**-1.3**
WR0				IAmb	IAmb	11 30 50.8	
	comp=Z,4.6nm,1.2s						
WB2	**Warramunga Arr**	**42.11**	**268**	P	**P**	**11 30 40.5**	**-1.1**
WB2				IAmb	IAmb	11 30 54.8	
	comp=Z,9.6nm,1.4s						
WRAB	**Tennant Creek**	**42.11**	**268**	P	**P**	**11 30 40.3**	**-1.4**
WRAB				IAmb	IAmb	11 30 48.5	
	comp=Z,3.5nm,1.2s						
WB0	**Warramunga Arr**	**42.12**	**268**	P	**P**	**11 30 40.4**	**-1.4**
WB0				IAmb	IAmb	11 30 41.1	
	comp=Z,3.8nm,0.8s						
WRA	**Warramunga Arr**	**42.12**	**268**	P	**P**	**11 30 40.1**	**-1.7**
	comp=Z,1.3nm,0.3s,baz=100,slow=6.9,SNR=82						
	comp=Z,1.3nm,0.3s						
WRA	**Warramunga Arr**	**42.12**	**268**	P	**P**	**11 30 40.2**	**-1.5**
KNRA	**Kununurra**	**48.47**	**271**	P	**P**	**11 31 29.9**	**-0.7**
KNRA				IAmb	IAmb	11 31 52.0	
	comp=Z,12nm,1.2s						
SOEI	**Soe**	**54.74**	**276**	P	**P**	**11 32 13.0**	**-3.1**
QSPA	**South Pole Qui**	**64.97**	**180**	P	**P**	**11 33 23.2**	**-0.3**
TXAR	**Lajitas Array**	**91.26**	**58**	P	**P**	**11 35 46.6**	**+0.9**
	comp=Z,0.3nm,0.8s,baz=240,slow=7.1,SNR=3.0						
	comp=Z,0.3nm,0.8s						

*NNC **07** 11:47:36.7±0.6, 50°.39N×73°.32E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=6.6km s-min=5.3km az=122.0, Suspected Mining explosion.*
*IDC **07** 11:47:39.1±2.8, 50°.14N×73°.46E, h0km, mbtmp3.3/4, ML3.1/4, Error ellipse: s-maj=31.7km s-min=11.5km az=124.0*
ISC 07 11:47:36.5±0.9, 50°.29N±0°.05×73°.24E±0°.05, h0km, n14, σ0$93/21, 15C-5D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OTUK	**Ortayu**	**2.13**	**197**	↑Pn	**Pb**	**11 48 15.7**	**-0.3**
	11nm,0.4s						
OTUK				↓Sn	**Sg**	**11 48 44.9**	**0.0**
	7.4nm,0.2s						
BVA1	**Borovoye Array**	**3.27**	**328**	↓Pg	**Pb**	**11 48 33.6**	**-1.8**
	3.2nm,0.3s						
BVA1				↑Lg	Lg	11 49 20.4	
	6.9nm,0.5s						
BRVK	**Borovoye**	**3.33**	**328**	↓Pg	**Pb**	**11 48 37.1**	**+0.6**
	2.2nm,0.3s						
BRVK				↓Lg	Lg	11 49 21.4	
	10.0nm,0.5s						
KURBB	**Kurchatov Arra**	**3.40**	**82**	Pn	**Pn**	**11 48 31.3**	**+0.5**
	0.5nm,0.3s,baz=271,slow=13,SNR=20						
KURBB				Pg	**Pb**	**11 48 37.1**	**-0.5**
	0.7nm,0.3s,baz=272,slow=17,SNR=14						
KURBB				Lg	Lg	11 49 22.1	
	0.8nm,0.3s,baz=306,slow=49,SNR=4.2						
	0.8nm,0.3s						
KURBB	**Kurchatov Arra**	**3.40**	**82**	↑Pn	**Pn**	**11 48 31.1**	**+0.4**
	1.1nm,0.2s						
KURBB				↑Pg	**Pb**	**11 48 37.3**	**-0.2**
	7.7nm,0.6s						
KURBB				↑Lg	Lg	11 49 23.0	
	25nm,0.6s						
KURK	**Kurchatov**	**3.46**	**81**	↑Pn	**Pn**	**11 48 31.7**	**+0.1**
	0.3nm,0.5s						
KURK				↑Pg	**Pb**	**11 48 38.0**	**-0.6**
	2.2nm,0.5s						
KURK				↓Lg	Lg	11 49 23.5	
	14nm,0.7s						
MAKZ	**Makanchi**	**6.76**	**118**	↑Pn	**Pn**	**11 49 16.7**	**-0.3**
	0.4nm,0.3s						
MAKZ				↑Lg	Lg	11 51 08.6	
	9.0nm,0.8s						
MK31	**Makanchi Array**	**6.95**	**117**	Pn	**Pn**	**11 49 19.4**	**-0.2**
	0.2nm,0.4s,baz=300,slow=11,SNR=12						
MK31				↑Pg	**Pb**	**11 49 39.9**	**+1.8**
	0.5nm,0.3s,baz=294,slow=13,SNR=12						
MK31				↑Lg	Lg	11 51 14.8	
	3.2nm,0.6s,baz=312,slow=26,SNR=5.9						
MKAR	**Makanchi Array**	**6.95**	**117**	Pn	**Pn**	**11 49 19.2**	**-0.4**
	0.2nm,0.3s,baz=301,slow=15,SNR=11						
MKAR				Lg	Lg	11 51 12.1	
	0.6nm,0.3s,baz=308,slow=29,SNR=12						
	0.2nm,0.3s						
KK31	**Karatay Array**	**7.43**	**196**	↑Pn	**Pn**	**11 49 26.4**	**+0.2**
	0.6nm,0.3s,baz=11,slow=14,SNR=7.2						
KK31				↑Sn	**Sn**	**11 50 49.9**	**-1.2**
	0.6nm,0.3s,baz=12,slow=24,SNR=5.9						
AAK	**Ala-Archa**	**7.70**	**173**	Pn	**Pn**	**11 49 30.7**	**+0.6**
	2.2nm,0.3s,baz=14,slow=5.1,SNR=5.7						
AAK				Sn	**Sn**	**11 50 56.0**	**-2.0**
	0.3nm,0.3s,baz=25,slow=17,SNR=1.2						
AAK				Lg	Lg	11 51 37.8	
	0.6nm,0.3s,baz=212,slow=20,SNR=2.3						
	3.4nm,0.3s						
ZALV	**Zalesovo Beam**	**8.01**	**58**	Pn	**Pn**	**11 49 34.5**	**+0.4**
	0.7nm,0.3s,baz=249,slow=12,SNR=6.9						
	1.2nm,0.3s						
AB31	**Akbulak array**	**8.67**	**268**	↑Pn	**Pn**	**11 49 43.9**	**+0.7**
	0.2nm,0.3s,baz=84,slow=10,SNR=19						
AB31				↑Sn	**Sn**	**11 51 22.4**	**+0.8**
	0.6nm,0.7s						
I31KZ	**AKTYUBINSK INF**	**9.73**	**277**	*i*		12 42 40.0	
	baz=83,slow=319,SNR=4.4						

*IDC **07** 12:01:07.7±1.0, 27°.46N×92°.70E, h0km, mb3.6/9, mbtmp3.7/9, Error ellipse: s-maj=47.8km s-min=17.4km az=58.0*
*NDI **07** 12:01:11.8±2.8, 27°.40N×92°.63E, h5km, ML4.0*
ISC 07 12:01:10.0±1.6, 27°.48N±0°.05×92°.65E±0°.03, h11km±11km, n21, σ1$29/30, mb3.8/8, Eastern Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TEZP	**TEZPUR**	**0.87**	**171**	*eP*	**Pb**	**12 01 26.9**	**-0.2**
TEZP				*eS*	**Sb**	**12 01 38.2**	**-0.5**
TEZP				IAML		12 01 39.7	
	comp=N,4μm,0.2s						
ITAN	**ITANAGAR**	**1.01**	**109**	*eP*	**Pn**	**12 01 30.6**	**+0.6**
ITAN				*eS*	**Sn**	**12 01 45.0**	**+0.7**
ZIRO	**ZIRO**	**1.06**	**87**	*eP*	**Pb**	**12 01 31.2**	**+0.7**
ZIRO				*eS*	**Sn**	**12 01 47.1**	**+1.1**
GUWA	**GUWAHATI**	**1.54**	**214**	*eP*	**Pb**	**12 01 38.6**	**0.0**
GUWA				*eS*	**Sn**	**12 01 57.8**	**+0.4**
GUWA				IAML		12 02 00.1	
	comp=E,17μm,0.3s						
GUWA				IAML		12 02 02.5	
	comp=N,25μm,0.2s						
JORH	**JORHAT**	**1.60**	**117**	*eP*	**Pg**	**12 01 40.7**	**0.0**
JORH				*eS*	**Sg**	**12 02 02.8**	**+1.3**
JORH				IAML		12 02 04.2	
	comp=N,5μm,0.2s						
JORH				IAML		12 02 05.0	
	comp=E,5μm,0.4s						
DIBR	**DIBRUGARH**	**2.01**	**90**	*eS*	**Sg**	**12 02 15.6**	**+1.1**
MOKO	**MOKOCHONG**	**2.02**	**124**	*eP*	**Pb**	**12 01 46.5**	**-0.4**
MOKO				*eS*	**Sg**	**12 02 13.0**	**-2.1**
KOHI	**KOHIMA**	**2.18**	**143**	*eP*	**Pn**	**12 01 47.8**	**+1.4**
KOHI				*eS*	**Sb**	**12 02 16.9**	**+0.1**
KOHI				IAML		12 02 23.7	
	comp=E,609nm,0.3s						
KOHI				IAML		12 02 24.1	
	comp=N,475nm,0.2s						
DHUB	**DHUBRI**	**2.79**	**239**	*eP*	**Pn**	**12 01 55.4**	**+0.9**
DHUB				*eS*	**Sn**	**12 02 31.6**	**+3.5**
DHUB				IAML		12 02 36.2	
	comp=N,654nm,0.4s						
TURI	**Tura**	**2.83**	**228**	*eP*	**Pb**	**12 01 59.1**	**-1.5**
IMP	**Imphal**	**2.88**	**156**	*eP*	**Pn**	**12 01 57.9**	**+1.9**
GTK	**Tadong**	**3.61**	**268**	*eP*	**Pn**	**12 02 07.8**	**+1.8**
GTK				*eS*	**Sn**	**12 02 50.5**	**+1.8**
GTK				IAML		12 02 51.9	
	comp=N,130nm,0.2s						
GTK				IAML		12 02 52.6	
	comp=E,171nm,0.2s						
MKAR	**Makanchi Array**	**20.94**	**340**	P	**P**	**12 05 52.5**	**-0.2**
	comp=E,1.4nm,0.6s,baz=147,slow=13,SNR=19						
	comp=E,1.4nm,0.6s						
SONM	**Songino Array**	**22.98**	**24**	P	**P**	**12 06 13.4**	**-1.3**
	comp=E,0.7nm,0.5s,baz=206,slow=9.5,SNR=2.9						
	comp=E,0.7nm,0.5s						
KURBB	**Kurchatov Arra**	**25.49**	**339**	P	**P**	**12 06 38.1**	**0.0**
	comp=E,0.7nm,0.6s,baz=162,slow=8.9,SNR=8.6						
	comp=E,0.7nm,0.6s						
ZALV	**Zalesovo Beam**	**27.07**	**350**	P	**P**	**12 06 52.5**	**+0.1**
	comp=E,1.4nm,0.5s,baz=175,slow=8.6,SNR=6.2						
	comp=E,1.4nm,0.5s						
AKASG	**Malin Array Be**	**52.63**	**314**	P	**P**	**12 10 23.1**	**-0.9**
	comp=E,0.4nm,0.3s,baz=76,slow=5.9,SNR=4.7						
	comp=E,0.4nm,0.3s						
WRA	**Warramunga Arr**	**62.06**	**135**	P	**P**	**12 11 29.4**	**-1.4**
	comp=E,0.7nm,0.7s,baz=322,slow=7.3,SNR=18						
	comp=E,0.7nm,0.7s						
NOA	**NORSAR Array B**	**62.27**	**327**	P	**P**	**12 11 31.1**	**-0.8**
	comp=E,0.4nm,0.6s,baz=87,slow=4.7,SNR=1.7						
	comp=E,0.4nm,0.6s						
GERES	**GERESS Array B**	**62.80**	**313**	P	**P**	**12 11 35.5**	**-0.2**
	comp=E,0.4nm,0.3s,baz=66,slow=5.5,SNR=2.0						
	comp=E,0.4nm,0.3s						
ASAR	**Alice Springs**	**64.58**	**138**	P	**P**	**12 11 47.7**	**+0.1**
	comp=E,0.2nm,0.4s,baz=318,slow=6.7,SNR=6.5						
	comp=E,0.2nm,0.4s						

*CNRM **07** 12:02:47.5, 35°.57N×3°.81W, h5km, ml2.5*
*SFS **07** 12:02:47.0, 35°.51N×3°.75W, ML2.4, ALBORAN SUR*
*MDD **07** 12:02:47.9±0.4, 35°.51N×3°.76W, h0km, mb_Lg2.4/12, Error ellipse: s-maj=3.6km s-min=2.8km az=168.0*
*INMG **07** 12:02:48.5±1.3, 35°.53N×3°.75W, h3km±5km, ML1.9, Error ellipse: s-maj=3.7km s-min=2.6km az=62.0*
*IGIL **07** 12:03:03.6, 36°.26N×4°.59W, h24km*
ISC 07 12:02:47.7±1.0, 35°.47N±0°.02×3°.76W±0°.02, h19km±2km, n47, σ1$36/79, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALE	**Palemas**	**0.29**	**210**	P	**Pg**	**12 02 54.2**	**+0.1**
PALE	**Palemas**	**0.29**	**210**	P	**Pg**	**12 02 54.0**	**-0.2**
PALE				S	**Sb**	**12 02 59.8**	**+1.1**
PVLZ	**Peæn de**	**0.53**	**236**	P	**Pb**	**12 02 58.6**	**+0.3**
PVLZ				S	**Sg**	**12 03 05.9**	**+0.3**
GOG	**Mont Gurugu**	**0.67**	**111**	P	**Pb**	**12 03 02.0**	**-0.3**
GOG				S	**Sb**	**12

EADA				Sn	**Sn**	**12 04 03.6**	**-0.5**
EADA				*i* Vmb_Lg		12 04 12.1	
ECAB	**El Cabril**	**2.92**	**333**	Pn	**Pn**	**12 03 33.7**	**+0.6**
ECAB				*i* Vmb_Lg		12 04 02.3	
ECAB				Sn	**Sn**	**12 04 09.2**	**+1.4**
EMIN	**Mina Concepcio**	**3.28**	**315**	Pn	**Pn**	**12 03 37.6**	**-0.4**
EMIN				*i* Vmb_Lg		12 04 14.1	
EMIN				Sn	**Sn**	**12 04 16.3**	**-0.2**
ETOB	**Tobarra**	**3.63**	**29**	Pn	**Pn**	**12 03 44.3**	**+1.3**
ETOB				*i* Vmb_Lg		12 04 56.1	
EGRO	**El Granado**	**3.64**	**306**	Pn	**Pn**	**12 03 43.3**	**+0.3**
EGRO				Sn	**Sn**	**12 04 25.5**	**+0.1**
PVAQ	**Vaqueiros**	**3.73**	**302**	*e*Pn	**Pn**	**12 03 45.1**	**+0.9**
PVAQ				*e*Sn	**Sn**	**12 04 27.6**	**0.0**
PVAQ				A	A	12 04 27.6	
	2.0nm,0.6s						
PVAQ	**Vaqueiros**	**3.73**	**302**	P	**Pn**	**12 03 44.6**	**+0.3**
PBAR	**Barrancos**	**3.77**	**317**	*e*Sn	**Sn**	**12 04 27.9**	**-0.7**
PBDV	**Barranco-do-Ve**	**3.80**	**299**	*e*Pn	**Pn**	**12 03 45.9**	**+0.6**
PBDV				*e*Sn	**Sn**	**12 04 29.6**	**+0.1**
PCVE	**Castro Verde**	**4.07**	**303**	*e*Pn	**Pn**	**12 03 50.3**	**+1.4**
PCVE				A	A	12 04 41.4	
	1.6nm,0.7s						
EBAD	**Badajoz**	**4.18**	**323**	Pn	**Pn**	**12 03 50.1**	**-0.4**
EBAD				Sn	**Sn**	**12 04 39.5**	**+0.6**
EBAD				*i* Vmb_Lg		12 04 42.8	
MESJ	**Messejana**	**4.30**	**305**	*e*P	**Pn**	**12 03 52.5**	**+0.6**
MESJ	**Messejana**	**4.30**	**305**	*e*Pn	**Pn**	**12 03 52.6**	**+0.6**
MESJ				*e*Sn	**Sn**	**12 04 42.0**	**+0.4**
MESJ				A	A	12 04 52.0	
	1.6nm,0.4s						
MORF	**Marmelete**	**4.35**	**296**	*e*P	**Pn**	**12 03 54.0**	**+1.2**
MORF	**Marmelete**	**4.35**	**296**	*e*Pn	**Pn**	**12 03 54.4**	**+1.6**
MORF				*e*Sn	**Sn**	**12 04 40.9**	**-2.2**
PFVI	**Vila Bisbo**	**4.42**	**294**	*e*Pn	**Pn**	**12 03 55.5**	**+1.8**
PTEO	**Sao Teotonio**	**4.50**	**299**	*e*Pn	**Pn**	**12 03 57.2**	**+2.3**
PTEO				*e*Sn	**Sn**	**12 04 47.1**	**+0.4**
PNCL	**Nicolau / Gran**	**4.65**	**306**	*e*Pn	**Pn**	**12 03 57.4**	**+0.6**
PNCL				*e*Sn	**Sn**	**12 04 50.9**	**+0.6**
PMRV	**Marv??o**	**4.89**	**325**	*e*Pn	**Pn**	**12 04 02.1**	**+1.8**
PMTG	**Montargil**	**5.06**	**317**	*e*Pn	**Pn**	**12 04 04.0**	**+1.5**

*SOME **07** 12:07:45.7,44˚.08N×82˚.93E,h20km*
*NNC **07** 12:07:48.2±2.4,44˚.33N×83˚.01E,h0km,mb2.7,mpv2.3,*
Error ellipse: s-maj=25.1km s-min=6.2km az=116.0
ISC 07 12:07:43.1±3.1,44˚.25N±0˚.09×83˚.2E±0˚.1,h10km,n9,
σ0§93/18,3C-2D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**2.23**	**250**	*e*P	**Pb**	**12 08 24.4**	**+0.8**
	1.8nm,0.1s						
KTMS				*e*S	**Sb**	**12 08 52.4**	**+1.1**
	6.2nm,0.2s						
DJR	**Jarkent**	**2.47**	**273**	*e*P	**Pb**	**12 08 27.0**	**-0.6**
	6.3nm,0.1s						
DJR				*e*S	**Sb**	**12 08 57.1**	**-0.9**
	4.6nm,0.3s						
MK31	**Makanchi Array**	**2.62**	**346**	⇓Pn	**Pb**	**12 08 29.9**	**-0.4**
	0.3nm,0.3s,baz=177,slow=16,SNR=4.9						
MK31				Sn	**Sb**	**12 09 03.0**	**+0.5**
	1.4nm,0.3s,baz=168,slow=28,SNR=15						
MAKZ	**Makanchi**	**2.70**	**342**	⇑Pn	**Pb**	**12 08 32.2**	**+0.6**
	1.0nm,0.3s						
MAKZ				⇓Sn	**Sb**	**12 09 03.9**	**-0.8**
	0.6nm,0.3s						
PDGK	**Podgornoye**	**2.86**	**252**	⇑Pn	**Pb**	**12 08 32.9**	**-1.4**
	0.7nm,0.3s						
PDGK				⇑Sn	**Sb**	**12 09 08.7**	**-0.5**
	4.6nm,0.6s						
KAPS	**Kapalarasan**	**2.94**	**292**	*e*P	**Pb**	**12 08 35.3**	**-0.3**
	1.2nm,0.1s						
KAPS				*e*S	**Sb**	**12 09 11.2**	**-0.4**
	3.8nm,0.1s						
KPKS	**Kokpek**	**3.38**	**258**	*e*P	**Pb**	**12 08 42.4**	**-0.6**
	3.0nm,0.1s						
KPKS				*e*S	**Sb**	**12 09 23.4**	**-0.8**
	8.1nm,0.1s						
BLB	**Baldybastay**	**3.42**	**269**	*e*P	**Pb**	**12 08 44.0**	**+0.2**
	3.5nm,0.1s						
BLB				*e*S	**Sb**	**12 09 26.1**	**+0.7**
	3.2nm,0.4s						
ARXS	**Arharly**	**3.88**	**271**	*e*P	**Pb**	**12 08 52.3**	**+0.7**
	0.8nm,0.1s						
ARXS				*e*S	**Sb**	**12 09 40.6**	**+2.0**
	3.5nm,0.2s						

NOU 07 12:09:35.6,16˚.03S×167˚.45E,h21km,MLv4.6/10,
Vanuatu Islands,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOUNC	**Koumac, New Ca**	**5.41**	**213**	P	Pn	12 10 54.7	-0.4
DZM	**Mont Dzumac**	**6.08**	**189**	P	Pn	12 11 03.7	-0.7
NOUC	**Port Laguerre**	**6.14**	**190**	P	Pn	12 11 04.8	-0.3
OUENC	**Ouen Island, N**	**6.38**	**185**	P	Pn	12 11 08.9	+0.5

*GUC **07** 12:13:11.9±0.7,24˚.23S×67˚.51W,h198km±6km,ML4.1*
*VAO **07** 12:13:11.0±1.3,24˚.27S×67˚.55W,h218km±15km,mb4.2*
*NEIC **07** 12:13:12.1±1.8,24˚.26S±0˚.06×67˚.6W±0˚.1,h190km±10km,*
mb4.1/5,Md3.7(SJA),Error ellipse: s-maj=16.6km
s-min=8.7km az=98.0
*IDC **07** 12:13:14.5±1.2,23˚.71S×67˚.19W,h189km±15km,mb3.8/1,*
mbtmp4.3/4,Error ellipse: s-maj=27.7km s-min=21.1km
az=6.0
ISC 07 12:13:11.2±0.7,24˚.22S±0˚.04×67˚.53W±0˚.08,h204km±9km,
n75,σ1§12/90,7C,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AF01	**San Pedro de A**	**1.40**	**335**	Pn	**Pn**	**12 13 44.6**	**-0.2**
AF01	**San Pedro de A**	**1.40**	**335**	*e*P	**Pn**	**12 13 44.4**	**-0.3**
AF01				*i* S	**S**	**12 14 09.5**	**-0.9**
LVC	**Limon Verde**	**2.05**	**321**	P	**Pn**	**12 13 51.3**	**+0.4**
	33nm,0.5s,baz=143,slow=6.4,SNR=58						
LVC				S	**S**	**12 14 20.9**	**-0.3**
	250nm,0.5s,baz=20,slow=21,SNR=82						
LVC	**Limon Verde**	**2.05**	**321**	⇑*i*P	**Pn**	**12 13 51.2**	**+0.4**
LVC				*i* S	**S**	**12 14 20.7**	**-0.5**
LVC	**Limon Verde**	**2.05**	**321**	*e*P	**Pn**	**12 13 51.2**	**+0.4**
PB15	**IPOC Station P**	**2.05**	**299**		**Pn**	**12 13 51.2**	**+0.5**
PB15	**IPOC Station P**	**2.05**	**299**	⇑*i*P	**Pn**	**12 13 51.6**	**+0.9**
PB15				*i* S	**S**	**12 14 21.3**	**+0.5**
GO02	**Mina Guanaco**	**2.09**	**243**	Pn	**Pn**	**12 13 51.6**	**+0.4**
GO02	**Mina Guanaco**	**2.09**	**243**	⇑*i*P	**Pn**	**12 13 51.6**	**+0.4**
GO02				*i* S	**S**	**12 14 22.4**	**+0.5**
GO02				IAML		12 14 24.0	
	comp=N,919nm,0.4s						
PB06	**IPOC Station P**	**2.41**	**308**		**Pn**	**12 13 55.1**	**+0.6**
PB06	**IPOC Station P**	**2.41**	**308**	⇑*i*P	**Pn**	**12 13 55.4**	**+0.9**
PB06				*i* S	**S**	**12 14 27.7**	**+0.1**
PB06				IAML		12 14 30.8	
	comp=N,862nm,0.5s						
PB14	**IPOC Station P**	**2.65**	**261**	Pn	**Pn**	**12 13 57.6**	**+0.3**
PB10	**IPOC Station P**	**2.86**	**284**	Pn	**Pn**	**12 14 00.6**	**+1.3**
PB10	**IPOC Station P**	**2.86**	**284**	*e*P	**Pn**	**12 14 00.7**	**+1.3**
PB10				*i* S	**S**	**12 14 36.6**	**+0.2**
PB10				IAML		12 14 43.5	
	comp=E,176nm,0.3s						
PB09	**IPOC Station P**	**2.88**	**327**		**Pn**	**12 14 01.3**	**+1.4**
PB09	**IPOC Station P**	**2.88**	**327**	⇑*e*P	**Pn**	**12 14 01.2**	**+1.3**
PB09				*i* S	**S**	**12 14 37.8**	**+0.5**
PB09				IAML		12 14 40.2	
	comp=E,386nm,0.5s						
AC02	**Maricunga**	**2.98**	**209**	Pn	**Pn**	**12 14 01.1**	**-0.1**
AC02	**Maricunga**	**2.98**	**209**	*i* P	**Pn**	**12 14 01.1**	**-0.1**
PB04	**IPOC Station P**	**3.06**	**307**		**Pn**	**12 14 02.9**	**+1.0**
PB04	**IPOC Station P**	**3.06**	**307**	⇑*i*P	**Pn**	**12 14 02.6**	**+0.7**
PB04				*i* S	**S**	**12 14 40.3**	**-0.5**
PB07	**IPOC Station P**	**3.30**	**318**		**Pn**	**12 14 05.4**	**+0.6**
PB07	**IPOC Station P**	**3.30**	**318**	*e*P	**Pn**	**12 14 05.4**	**+0.6**
PB07				*i* S	**S**	**12 14 45.1**	**-1.0**
AC01	**Pan de Azucar**	**3.38**	**235**	Pn	**Pn**	**12 14 05.1**	**-0.3**
AC01	**Pan de Azucar**	**3.38**	**235**	⇑*i*P	**Pn**	**12 14 05.1**	**-0.3**
AC01				*i* S	**S**	**12 14 46.0**	**-1.5**
PB02	**IPOC Station P**	**3.62**	**322**		**Pn**	**12 14 09.2**	**+0.6**
PB02	**IPOC Station P**	**3.62**	**322**	*e*P	**Pn**	**12 14 08.9**	**+0.3**
PB02				*i* S	**S**	**12 14 51.5**	**-1.5**
PB01	**IPOC Station P**	**3.65**	**330**		**Pn**	**12 14 09.5**	**+0.6**
PB01	**IPOC Station P**	**3.65**	**330**	*e*P	**Pn**	**12 14 09.5**	**+0.6**
PB01				*i* S	**S**	**12 14 52.3**	**-1.2**
AC06	**Mina Casimiro**	**4.03**	**219**		**Pn**	**12 14 12.5**	**-0.9**
AC06	**Mina Casimiro**	**4.03**	**219**	*e*P	**Pn**	**12 14 12.4**	**-0.9**
AC06				*i* S	**S**	**12 15 00.3**	**-1.6**
GO03	**Copiap**	**4.15**	**215**		**Pn**	**12 14 14.1**	**-0.8**
GO03	**Copiap**	**4.15**	**215**	*e*P	**Pn**	**12 14 13.7**	**-1.2**
PATCX	**Punta Patache**	**4.17**	**324**		**Pn**	**12 14 16.0**	**+0.7**
PATCX	**Punta Patache**	**4.17**	**324**	*e*P	**Pn**	**12 14 15.8**	**+0.6**
PB08	**IPOC Station P**	**4.33**	**339**		**Pn**	**12 14 18.4**	**+0.7**
PB08	**IPOC Station P**	**4.33**	**339**	*e*P	**Pn**	**12 14 18.3**	**+0.6**
PB08				*i* S	**S**	**12 15 08.5**	**-0.9**
TA01	**Diego Aracena**	**4.39**	**326**	Pn	**Pn**	**12 14 18.9**	**+0.9**
PB11	**IPOC Station P**	**4.86**	**336**		**Pn**	**12 14 23.9**	**-0.2**
PB11	**IPOC Station P**	**4.86**	**336**	*e*P	**Pn**	**12 14 23.4**	**-0.7**
PB11				*i* S	**S**	**12 15 18.3**	**-2.8**
AC04	**Llanos de Chal**	**5.08**	**218**	Pn	**Pn**	**12 14 25.3**	**-1.4**
AC04	**Llanos de Chal**	**5.08**	**218**	*e*P	**Pn**	**12 14 25.3**	**-1.4**
LCO	**Las Campanas**	**5.55**	**210**	Pn	**Pn**	**12 14 31.1**	**-1.7**
PB16	**IPOC Station P**	**6.14**	**342**		**Pn**	**12 14 41.7**	**+0.8**
PB12	**IPOC Station P**	**6.16**	**334**		**Pn**	**12 14 41.0**	**+0.3**
CO01	**Juntas del Tor**	**6.17**	**201**	Pn	**Pn**	**12 14 41.5**	**+0.7**
AP01	**Chacalluta**	**6.39**	**335**	Pn	**Pn**	**12 14 43.9**	**+0.4**
GO04	**Tololo Observa**	**6.60**	**205**	Pn	**Pn**	**12 14 44.9**	**-1.6**
PB18	**Visviri**	**6.85**	**344**	Pn	**Pn**	**12 14 50.5**	**+0.5**
CO03	**El Pedregal**	**7.16**	**202**	Pn	**Pn**	**12 14 52.6**	**-0.9**
ZON	**Zonda**	**7.37**	**188**	Pn	**Pn**	**12 14 56.5**	**+0.3**
CO06	**Fray Jorge**	**7.39**	**209**	Pn	**Pn**	**12 14 55.1**	**-1.3**
CO02	**Combarbal**	**7.60**	**203**	Pn	**Pn**	**12 14 57.4**	**-1.9**
LPAZ	**La Paz**	**7.92**	**356**	P	**Pn**	**12 15 03.8**	**-0.2**
	comp=E,2.9nm,0.4s,baz=135,slow=6.2,SNR=15						
LPAZ				S	S	12 16 24.4	-9.4
	comp=E,0.7nm,0.5s,baz=187,slow=14,SNR=1.0						
LPAZ	**La Paz**	**7.92**	**356**		**Pn**	**12 15 04.6**	**+0.6**
LPAZ	**La Paz**	**7.92**	**356**	*e*P	**Pn**	**12 15 04.5**	**+0.6**
CPUP	**Villa Florida**	**9.47**	**105**	P	**Pn**	**12 15 26.4**	**+3.0**
	comp=E,3.3nm,0.7s,baz=268,slow=12,SNR=4.6						
SIV	**San Ignacio**	**10.19**	**38**	P	**Pn**	**12 15 28.9**	**-4.0**
	comp=E,1.7nm,0.3s,baz=233,slow=10,SNR=4.7						
SAML	**Samuel**	**15.75**	**16**	Pn	**P**	**12 16 41.4**	**-0.8**
PLCA	**Paso Flores**	**16.66**	**188**	P	Pn	12 17 02.2	+9.1
	comp=E,3.6nm,0.6s,baz=357,slow=12,SNR=9.7						
PLCA	**Paso Flores**	**16.66**	**188**	P	**Pn**	**12 16 53.0**	**-0.1**
PLCA				IAmb	IAmb	12 17 01.6	
	comp=Z,7.1nm,1.1s						
CLDB	**Colider**	**17.34**	**42**	*e*P	**P**	**12 16 59.0**	**-0.7**
VAO	**Valinhos**	**18.89**	**90**	*e*P	**P**	**12 17 16.4**	**-0.1**
IPMB	**Ipameri, GO**	**19.05**	**75**	*e*P	**P**	**12 17 17.8**	**-0.5**
SNDB	**Serra Nova Dou**	**19.64**	**55**	*e*P	**P**	**12 17 23.2**	**-1.3**
BDFB	**Brasilia**	**20.22**	**69**	P	**P**	**12 17 29.9**	**-1.0**
	comp=Z,18nm,0.7s,baz=249,slow=11,SNR=18						
BDFB	**Brasilia**	**20.22**	**69**	P	**P**	**12 17 30.4**	**-0.4**
BDFB	**Brasilia**	**20.22**	**69**	*e*P	**P**	**12 17 30.0**	**-0.8**
PEXB	**Peixe**	**21.85**	**60**	*e*P	**P**	**12 17 45.5**	**-2.3**
ITTB	**Itaituba**	**22.78**	**32**	*e*P	**P**	**12 17 56.0**	**-0.3**
JANB	**Januaria**	**23.66**	**72**	*e*P	**P**	**12 18 02.8**	**-1.6**
SDBA	**SAO DESIDERIO**	**24.44**	**65**	*e*P	**P**	**12 18 10.4**	**-1.1**
GDU01	**Guandu, BA**	**28.37**	**73**	*e*P	**P**	**12 18 45.4**	**-1.2**
TORD	**Torodi Ar. Bea**	**77.10**	**69**	P	**P**	**12 24 43.9**	**+1.5**
	comp=Z,1.9nm,0.7s,baz=260,slow=6.0,SNR=13						
	comp=Z,1.9nm,0.7s						
TORD	**Torodi Ar. Bea**	**77.10**	**69**	P	**P**	**12 24 44.2**	**+1.8**
TORD				IAmb	IAmb	12 24 44.8	
	comp=Z,1.7nm,0.8s						
MKAR	**Makanchi Array**	**147.00**	**39**	PKPbc	**PKiKP**	**12 32 33.9**	**+1.9**
	comp=Z,0.9nm,0.6s,baz=295,slow=3.1,SNR=9.6						

*SOME **07** 12:14:12.8,44˚.65N×82˚.20E,h30km*
*NNC **07** 12:14:14.9±0.7,44˚.72N×81˚.98E,h0km,mb3.3,mpv2.8,*
Error ellipse: s-maj=10.8km s-min=1.5km az=117.0
ISC 07 12:14:12.5±1.9,44˚.64N±0˚.08×82˚.2E±0˚.1,h13km±22km,
n10,σ0§75/20,4C-2D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DJR	**Jarkent**	**1.75**	**261**	*e*P	**Pb**	**12 14 44.5**	**0.0**
	6.3nm,0.1s						
DJR				*e*S	**Sb**	**12 15 08.0**	**+1.5**
	20nm,0.3s						
KTMS	**Ketmen**	**1.79**	**229**	*e*P	**Pg**	**12 14 46.7**	**-0.2**
	1.3nm,0.1s						
KTMS				*e*S	**Sg**	**12 15 10.9**	**+0.9**
	10nm,0.5s						
KAPS	**Kapalarasan**	**2.11**	**289**	*e*P	**Pb**	**12 14 49.8**	**-1.0**
	3.5nm,0.1s						
KAPS				*e*S	**Sb**	**12 15 16.7**	**-0.2**
	13nm,0.1s						
MK31	**Makanchi Array**	**2.15**	**2**	⇑Pn	**Pb**	**12 14 51.3**	**-0.1**
	3.3nm,0.4s,baz=186,slow=14,SNR=134						
MK31				⇑Sn	**Sb**	**12 15 18.9**	**+0.9**
	6.4nm,0.5s,baz=182,slow=26,SNR=15						
MAKZ	**Makanchi**	**2.17**	**356**	⇑Pn	**Pb**	**12 14 51.1**	**-0.6**
	2.0nm,0.3s						
MAKZ				⇑Sn	**Sb**	**12 15 18.7**	**+0.2**
	2.8nm,0.3s						
KNOS	**Konyrlen**	**2.18**	**264**	*e*P	**Pb**	**12 14 51.4**	**-0.5**
KNOS				*e*S	**Sb**	**12 15 19.0**	**+0.2**
PDGK	**Podgornoye**	**2.35**	**237**	⇓Pn	**Pb**	**12 14 53.9**	**-1.0**
	3.0nm,0.4s						
PDGK				⇓Sn	**Sb**	**12 15 23.8**	**-0.1**
	9.7nm,1.0s						
BLB	**Baldybastay**	**2.72**	**260**	*e*P	**Pb**	**12 15 00.8**	**-0.3**
	6.3nm,0.2s						
BLB				*e*S	**Sb**	**12 15 35.2**	**+0.8**
	14nm,0.0s						
KPKS	**Kokpek**	**2.79**	**246**	*e*P	**Pb**	**12 15 01.9**	**-0.4**
	5.6nm,0.1s						
KPKS				*e*S	**Sb**	**12 15 37.0**	**+0.6**
	23nm,0.2s						
ARXS	**Arharly**	**3.16**	**264**	*e*P	**Pb**	**12 15 07.5**	**-1.0**
	3.9nm,0.2s						
ARXS				*e*S	**Sb**	**12 15 46.8**	**-0.2**
	8.2nm,0.3s						

GUC 07 12:22:39.4±0.7,29˚.97S×71˚.91W,h31km±4km,ML3.6,
1C-5D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO05	**La Serena**	**0.58**	**85**	*e*P	Pb	12 22 50.6	-0.7
CO05				*i* S	Sb	12 22 59.0	-0.4
CO05				IAML		12 23 00.6	
	comp=E,7µm,0.3s						
CO06	**Fray Jorge**	**0.74**	**161**	⇓*i*P	Pn	12 22 52.9	-0.9
CO06				*i* S	Sb	12 23 03.6	-0.1
CO06				IAML		12 23 08.1	
	comp=E,3µm,0.3s						
GO04	**Tololo Observa**	**0.98**	**102**	⇓*i*P	Pn	12 22 57.1	-0.2
GO04				*i* S	Sn	12 23 10.4	+0.1
LCO	**Las Campanas**	**1.42**	**48**	*e*P	Pn	12 23 03.1	-0.2
LCO				*i* S	Sb	12 23 22.8	-0.5
CO02	**Combarbal**	**1.46**	**148**	⇓*i*P	Pb	12 23 04.9	-1.1
CO02				*i* S	Sb	12 23 23.3	-0.9
CO02				IAML		12 23 26.8	
	comp=E,2µm,0.3s						
CO01	**Juntas del Tor**	**1.57**	**91**	⇓*i*P	Pb	12 23 07.0	-1.1
CO01				*i* S	Sb	12 23 27.5	-0.2
CO01				IAML		12 23 29.4	
	comp=N,984nm,0.5s						
AC04	**Llanos de Chal**	**1.91**	**23**	⇑*i*P	Pn	12 23 09.3	-0.4
AC04				IAML		12 23 42.5	
	comp=E,296nm,0.2s						
VA06	**Catapilco**	**2.63**	**169**	*e*P	Pn	12 23 20.7	+0.9
GO03	**Copiap**	**2.79**	**32**	*e*P	Pn	12 23 22.3	+0.3
GO03				IAML		12 24 08.2	
	comp=N,144nm,0.3s						
AC06	**Mina Casimiro**	**2.94**	**28**	*e*P	Pn	12 23 24.6	+0.5
AC06				IAML		12 24 19.3	
	comp=E,114nm,0.2s						
VA03	**San Esteban**	**3.02**	**158**	*e*P	Pn	12 23 27.5	+2.4
VA03				IAML		12 24 21.9	
	comp=E,358nm,0.3s						
ROCH	**El Roble**	**3.09**	**166**	*e*P	Pb	12 23 28.1	-5.7
ROCH				*e*P	Pn	12 23 27.9	+1.6
ROCH				*i* S	Sn	12 24 05.8	+3.6
ROCH				*i* S	Sb	12 24 06.0	-5.1
ROCH				IAML		12 24 29.0	
	comp=N,198nm,0.3s						
ROCH				IAML		12 24 29.9	
	comp=N,165nm,0.3s						
PEL	**Peldehue**	**3.33**	**162**	*e*P	Pn	12 23 30.9	+1.4
PEL				*i* S	Sn	12 24 10.9	+2.9
PEL				IAML		12 24 28.9	
	comp=E,150nm,0.7s						
MT05	**Renca**	**3.55**	**164**	IAML		12 24 40.5	
	comp=E,291nm,0.1s						
FCH	**Farellones**	**3.62**	**158**	*e*P	Pn	12 23 35.2	+1.5
MT09	**Talagante**	**3.88**	**169**	⇓*e*P	Pn	12 23 38.5	+1.5
MT09				*i* S	Sn	12 24 23.5	+1.9
BO04	**La Punta**	**4.16**	**165**	*e*P	Pn	12 23 42.3	+1.5
BO01	**Tunca**	**4.46**	**171**	*e*P	Pn	12 23 46.9	+2.0
BO03	**Pichilemu**	**4.51**	**181**	*e*P	Pn	12 23 45.0	-0.6

*MAN **07** 12:23:11.1,6˚.06N×126˚.26E,h51km,mb4.9,ML3.8,MS3.8*
*DJA **07** 12:23:11.8±1.2,6˚N±3˚×12˚6E±˚,h19km±11km,M4.6/15,*
mB5.1/5,mb4.5/15,MLv4.6/9,Mw(mB)4.5/5
*NEIC **07** 12:23:12.5±1.7,6˚.08N±0˚.07×126˚.10E±0˚.08,h79km±6km,*
mb4.3/20,Error ellipse: s-maj=13.8km s-min=7.1km
az=49.0
*IDC **07** 12:23:12.5±1.0,6˚.10N×126˚.23E,h88km±8km,mb3.7/14,*
mbtmp4.2/17,Error ellipse: s-maj=31.0km s-min=10.1km
az=72.0
ISC 07 12:23:12.3±0.8,6˚.13N±0˚.04×126˚.18E±0˚.06,h85km±7km,
n91,σ1§47/100,mb4.2/22,2C-10D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.47**	**268**	⇓*e*P		**Pn**	**12 23 24.6**	**-1.7**
MATI	**Mati**	**0.82**	**5**	⇓*e*P		**Pn**	**12 23 28.0**	**-1.7**
DAV	**Davao City (W)**	**1.11**	**327**	P		**Pn**	**12 23 33.2**	**+0.1**
	372nm,0.3s,baz=176,slow=2.7,SNR=11							
DAV				S		**Sn**	**12 23 50.4**	**+1.7**
	632nm,0.3s,baz=265,slow=23,SNR=8.9							
DAV	**Davao City (W)**	**1.11**	**327**	Pn		**Pn**	**12 23 33.4**	**+0.2**
DAV	**Davao City (W)**	**1.11**	**327**	P		**Pn**	**12 23 33.6**	**+0.5**
GSPH	**General Santos**	**1.23**	**268**	⇓*e*P		**Pn**	**12 23 32.4**	**-2.2**
GSPH				*i* S		**Sn**	**12 23 49.0**	**-2.3**
KCP	**Kidapawan**	**1.40**	**309**	⇓*i*P		**Pn**	**12 23 36.2**	**-0.4**
KCP				*i* S		**Sn**	**12 23 54.9**	**-0.1**
BIPH	**Bislig**	**2.05**	**5**	⇓*e*P		**Pn**	**12 23 44.9**	**-0.3**
BIPH				*e*S		**Sn**	**12 24 09.9**	**-0.2**
BUKP	**Musuan**	**2.07**	**327**	⇓*e*P		**Pn**	**12 23 46.0**	**+0.7**
BUKP				*e*S		Sn	12 24 27.9	+17
CTBH	**Cotabato--PC H**	**2.21**	**300**	⇑*i*P		**Pn**	**12 23 47.6**	**+0.4**
SGSI	**Sangihe**	**2.51**	**195**	P		**Pn**	**12 23 51.1**	**-0.1**
SGSI				S		**Sn**	**12 24 21.8**	**+0.8**
BUTP	**Butuan**	**2.88**	**349**	⇓*e*P		**Pn**	**12 23 57.0**	**+0.8**
BUTP				*e*S		**Sn**	**12 24 34.9**	**+5.0**
GLSP	**General Luna,**	**3.64**	**359**	⇓*e*P		**Pn**	**12 24 07.9**	**+1.5**
GLSP				*e*S		**Sn**	**12 24 41.0**	**-7.3**
MSLP	**Maasin**	**4.19**	**342**	⇓*e*P		**Pn**	**12 24 14.6**	**+0.6**
MSLP				*e*S		Sn	12 24 41.0	-21
CNOP	**Candoni, Negro**	**5.08**	**317**	⇓*e*P		**Pn**	**12 24 27.1**	**+0.9**
CNOP				*e*S		**Sn**	**12 25 20.1**	**-3.5**
TNTI	**Ternate**	**5.45**	**167**	Pn		**Pn**	**12 24 31.1**	**0.0**
TNTI	**Ternate**	**5.45**	**167**	P		**Pn**	**12 24 31.7**	**+0.6**
	0.3nm1µm46nm,0.5s							
TNTI	**Ternate**	**5.45**	**167**	P		**Pn**	**12 24 31.4**	**+0.3**
KMSI	**Cibinong**	**5.94**	**202**	P		**Pn**	**12 24 39.1**	**+1.4**
	0.5nm2µm112nm,0.5s							
RCP	**Roxas**	**6.38**	**328**	⇑*e*P		**Pn**	**12 24 46.0**	**+2.2**
LBMI	**Labuha**	**6.84**	**169**	P		**Pn**	**12 24 50.1**	**-0.1**
	0.2nm582nm32nm,0.8s							
MRSI	**Marisa**	**7.03**	**217**	P		**Pn**	**12 24 53.3**	**+0.6**
	0.5nm934nm77nm,0.7s							
TOLI2	**Tolitoli**	**7.34**	**227**	Pn		**Pn**	**12 24 54.8**	**-2.1**
TOLI2	**Tolitoli**	**7.34**	**227**	P		**Pn**	**12 24 54.8**	**-2.1**
MYLDM	**Lahad Datu**	**7.71**	**263**	Pn		**Pn**	**12 25 01.3**	**-0.5**
SANI	**Sanana**	**8.12**	**181**	P		**Pn**	**12 25 04.4**	**-3.2**
SANI	**Sanana**	**8.12**	**181**	P		**Pn**	**12 25 05.6**	**-2.0**
APSI	**Ampana**	**8.33**	**213**	P		**Pn**	**12 25 12.3**	**+1

baz=265,slow=75,SNR=5.9
KLR Kul'dur 43.21 5 P P 12 31 05.0 +0.1
comp=Z,0.9nm,0.6s,baz=213,slow=5.8,SNR=2.2
comp=Z,0.9nm,0.6s
SONM Songino Array 44.87 341 P P 12 31 19.5 +1.2
comp=Z,0.4nm,0.3s,baz=132,slow=6.0,SNR=2.1
SONM PcP **PcP 12 32 59.2 +0.5**
comp=Z,0.3nm,0.3s,baz=222,slow=4.0,SNR=4.4
comp=Z,0.4nm,0.3s
MKAR Makanchi Array 55.30 325 P P 12 32 37.0 -0.2
comp=Z,0.8nm,0.7s,baz=129,slow=7.0,SNR=6.7
MKAR PcP **PcP 12 33 36.5 -0.4**
comp=Z,1.8nm,0.7s,baz=112,slow=4.0,SNR=7.5
comp=Z,0.8nm,0.7s
MKAR Makanchi Array 55.30 325 P P 12 32 34.4 -2.7
MKAR PcP **PcP 12 33 36.9 0.0**
KBL Kabul 59.66 307 P P 12 33 07.7 -0.6
KBL IAmb IAmb 12 33 15.6
comp=Z,3.0nm,0.9s
BKZ Black Stump Fm 64.72 139 P P 12 33 42.6 +0.8
MSWZ Moikau Station 65.16 141 P P 12 33 44.6 +0.2
TIXI Tiksi 65.47 1 P P 12 33 46.8 +0.9
TIXI IAmb IAmb 12 33 47.1
comp=Z,5.0nm,1.4s
NRIK Noril'sk 67.99 346 P P 12 34 02.1 +0.1
comp=Z,1.8nm,0.5s,baz=170,slow=1.5,SNR=3.7
comp=Z,1.8nm,0.5s
ABKAR Akbulak array 69.97 320 P P 12 34 14.2 -0.5
ILAR Eielson Array 83.19 26 P P 12 35 28.4 -0.5
comp=Z,0.4nm,0.6s,baz=249,slow=5.3,SNR=6.1
comp=Z,0.4nm,0.6s
VNDA Vanda 85.86 173 P P 12 35 41.3 -0.8
comp=Z,1.4nm,0.7s,baz=295,slow=5.0,SNR=4.4
comp=Z,1.4nm,0.7s
ARCES ARCESS Array B 88.03 340 P P 12 35 51.6 -1.2
comp=Z,2.1nm,0.6s,baz=62,slow=5.8,SNR=8.1
comp=Z,2.1nm,0.6s
FINES FINESS Array B 89.48 332 P P 12 35 58.7 -1.1
comp=Z,0.8nm,0.5s,baz=59,slow=7.4,SNR=5.2
comp=Z,0.8nm,0.5s
NOA NORSAR Array B 96.41 334 P P 12 36 30.1 -1.8
comp=Z,0.5nm,0.7s,baz=66,slow=6.6,SNR=2.6
comp=Z,0.5nm,0.7s
H06E1 SOCORRO T-PHASE 118.53 65 T T 14 50 52.3
SNR=18
TORD Torodi Ar. Bea 121.64 289 PKP PKPdf 12 41 56.6 -0.8
comp=Z,2.0nm,0.7s,baz=56,slow=2.1,SNR=11
TORD Torodi Ar. Bea 121.64 289 PKPdf 12 41 57.0 -0.3

*TUL **07** 12:49:58.7±0.8,36.50**2**N±0.010×97.15**6**W±0.01,h5km±7km, ML2.5,mb_Lg2.4/13(NEIC),Error ellipse: s-maj=1.7km s-min=1.3km az=74.0*

NEIC 07 12:49:58.8±0.7,36.502**N±0.010×97.16**3**W±0.01,h5km±7km, Error ellipse: s-maj=1.6km s-min=1.4km az=79.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T35A	**Sooner Cattle**	**0.66**	**51**		Pg	12 50 11.5	0.0
T35A				Sg	Sg	12 50 19.5	-0.6
OKCFA	**Oklahoma City**	**1.11**	**193**	Pg	Pg	12 50 19.8	-0.3
TUL1	**Leonard**	**1.25**	**118**		Pg	12 50 22.0	-0.7
FNO	**Franklin**	**1.26**	**189**	Pg	Pg	12 50 22.3	-0.6
U32A	**Winter Ranch,**	**1.49**	**266**	Pn	Pn	12 50 26.2	-0.1
X34A	**Smith Ranch, M**	**1.98**	**196**	Pn	Pn	12 50 32.4	-0.5
WMOK	**Wichita Mounta**	**2.20**	**217**		Pn	12 50 35.3	-0.7
WMOK	**Wichita Mounta**	**2.20**	**217**	IAmb_Lg		12 51 11.3
comp=Z,11nm,0.8s							
X37A	**Clayton**	**2.40**	**142**	Pn	Pn	12 50 39.2	+0.5
W39A	**Magazine**	**3.03**	**114**	IAmb_Lg		12 51 43.3
comp=Z,14nm,0.7s							
CBKS	**Cedar Bluff**	**3.09**	**319**	Pn	Pn	12 50 49.1	+0.8
MGMO	**Mountain Grove**	**3.97**	**79**	IAmb_Lg		12 52 09.6
comp=Z,10nm,0.7s							
FCAR	**Ozark Folk Cen**	**4.12**	**97**	IAmb_Lg		12 52 15.1
comp=Z,6.4nm,0.8s							
R40A	**Maddies Statio**	**4.28**	**64**	Pn	Pn	12 51 04.6	0.0
CCM	**Cathedral Cave**	**4.96**	**70**	IAmb_Lg		12 52 34.5
comp=Z,8.0nm,1.0s							
PBMO	**Poplar Bluff**	**5.42**	**85**	IAmb_Lg		12 53 01.9
comp=Z,6.4nm,0.7s							

*IDC **07** 13:24:15.9±0.5,7.14S×120.47E,h589km±5km,mb3.3/19, mbtmp4.3/20,Error ellipse: s-maj=15.8km s-min=6.5km az=60.0*

*NEIC **07** 13:24:16.1±1.4,7.10S±0.08×120.37E±0.09,h586km±7km, mb4.3/58,Error ellipse: s-maj=13.0km s-min=11.7km az=53.0*

*DJA **07** 13:24:16.3±0.2,7.3S±3.12.0E±.,h588km±3km,M4.5/24, mB5.1/9,mb4.5/20,MLv4.6/24,Mw(mB)4.4/9*

ISC 07 13:24:15.7±0.5,7.15S±0.05×120.40E±0.06,h588km±6km, n140,σ099/145,mb4.2/45,Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSSI	**Bau Bau, Buton**	**1.00**	**5**	P	**P**	**13 25 27.3**	**+1.5**
BKSI	**Bulukumba**	**1.83**	**351**	P	**P**	**13 25 29.6**	**+1.3**
EDFI	**Ende, Flores**	**2.05**	**141**	P	**P**	**13 25 28.4**	**-0.8**
EDFI				S	**S**	**13 26 25.8**	**-3.2**
KAPI	**Kappang**	**2.21**	**343**	P	**P**	**13 25 31.9**	**+2.0**
507nm,0.5s,baz=179,slow=2.7,SNR=349							
KAPI				S	**S**	**13 26 31.5**	**+1.5**
14nm,0.2s,baz=350,slow=23,SNR=6.1							
KAPI	**Kappang**	**2.21**	**343**	P	**P**	**13 25 31.3**	**+1.5**
MMRI	**Maumere**	**2.35**	**129**	P	**P**	**13 25 29.7**	**-0.7**
MMRI	**Maumere**	**2.35**	**129**	P	**P**	**13 25 30.0**	**-0.4**
WBSI	**Waikabubak, Su**	**2.67**	**202**	P	**P**	**13 25 31.9**	**-0.2**
BBSI	**Bau Bau**	**2.72**	**53**	P	**P**	**13 25 34.5**	**+2.2**
BNSI	**Bone**	**2.74**	**354**	P	**P**	**13 25 34.5**	**+2.0**
BASI	**Baing, Sumba**	**3.06**	**177**	P	**P**	**13 25 35.1**	**+0.9**
PLAI	**Plampang**	**3.08**	**237**	P	**P**	**13 25 34.3**	**0.0**
SPSI	**Sidrap Palu**	**3.22**	**349**	P	**P**	**13 25 36.9**	**+1.7**
TTSI	**Tana Toraja**	**4.11**	**352**	P	**P**	**13 25 42.2**	**+1.1**
BATI	**Baumata**	**4.44**	**133**	P	**P**	**13 25 44.2**	**+0.7**
217nm,0.3s,baz=314,slow=5.6,SNR=62							
BATI				S	**S**	**13 26 51.5**	**-3.6**
226nm,0.5s,baz=243,slow=3.6,SNR=9.5							
BATI	**Baumata**	**4.44**	**133**	P	**P**	**13 25 44.2**	**+0.7**
SOEI	**Soe**	**4.63**	**124**	P	**P**	**13 25 45.3**	**+0.3**
SOEI	**Soe**	**4.63**	**124**	P	**P**	**13 25 45.4**	**+0.4**
DNP	**Denpasar**	**5.36**	**253**	P	**P**	**13 25 51.2**	**+0.5**
IGBI	**Denpasar**	**5.46**	**252**	P	**P**	**13 25 51.2**	**-0.4**
ABJI	**Asem Bagus**	**6.14**	**264**	P	**P**	**13 25 57.5**	**0.0**
0.2nm48nm,1.1s							
JAGI	**Jajag, Banyuwa**	**6.32**	**258**	P	**P**	**13 25 57.0**	**-2.1**
KMMI	**Kalianget**	**6.38**	**270**	P	**P**	**13 25 59.9**	**+0.3**
0.1nm23nm,0.8s							
LUWI	**Luwuk**	**6.51**	**21**	P	**P**	**13 26 00.1**	**-0.7**
BBKI	**Banjar Baru**	**6.63**	**303**	P	**P**	**13 26 03.9**	**+2.0**
0.4nm51nm,0.7s							
BKB	**Balikpapan**	**6.81**	**329**	P	**P**	**13 26 03.9**	**+0.4**
MPSI	**Mapaga**	**7.45**	**356**	P	**P**	**13 26 10.7**	**+1.3**
0.8nm2µm187nm,0.9s							
SANI	**Sanana**	**7.53**	**48**	P	**P**	**13 26 11.4**	**+1.2**
0.1nm40nm,0.6s							
NLAI	**Namlea**	**7.72**	**60**	P	**P**	**13 26 14.1**	**+2.1**
0.5nm2µm86nm,0.6s							
MRSI	**Marisa**	**7.73**	**12**	P	**P**	**13 26 12.9**	**+0.8**
0.7nm2µm233nm,0.8s							
TOLI2	**Tolitoli**	**8.21**	**3**	P	**P**	**13 26 16.6**	**-0.1**
MTKI	**Muara Teweh, K**	**8.25**	**318**	P	**P**	**13 26 18.0**	**+0.9**
0.4nm67nm,0.7s							
KMSI	**Cibinong**	**8.46**	**25**	P	**P**	13 26 26.2	+7.1
SAUI	**Saumlaki**	**10.84**	**95**	P	**P**	**13 26 42.2**	**-0.6**
STKI	**Sintang**	**11.42**	**308**	P	**P**	**13 26 49.6**	**+1.0**
17nm,0.4s							
KNRA	**Kununurra**	**11.79**	**137**	P	**P**	**13 26 52.4**	**+0.1**
MTN	**Manton Dam**	**11.99**	**119**	P	**P**	**13 26 54.5**	**+0.1**
MYLDM	**Lahad Datu**	**12.39**	**351**		**P**	**13 26 59.9**	**+1.5**
FAKI	**Fak Fak**	**12.53**	**71**		**P**	**13 26 58.7**	**-1.2**
FAKI	**Fak Fak**	**12.53**	**71**	P	**P**	**13 27 03.2**	**+3.3**
43nm,0.7s							
SBUM	**Sibu**	**12.55**	**319**	P	**P**	**13 27 00.6**	**+0.5**
KSM	**Kuching**	**13.21**	**310**	P	**P**	**13 27 07.0**	**+0.1**
MBWA	**Marble Bar**	**13.95**	**183**	P	**P**	**13 27 13.8**	**-0.4**
PSA00	**Pilbara Seismi**	**14.35**	**182**	P	**P**	**13 27 17.8**	**-0.3**
GIRL	**Giralia**	**16.51**	**200**	P	**P**	**13 27 39.9**	**+1.7**
WB0	**Warramunga Arr**	**18.49**	**134**	P	**P**	**13 27 56.7**	**+0.3**
WRA	**Warramunga Arr**	**18.57**	**135**	P	**P**	**13 27 56.9**	**-0.2**
9.4nm,0.6s,baz=315,slow=11,SNR=268							
WRA				S	**S**	**13 30 55.2**	**-1.6**
5.8nm,0.9s,baz=307,slow=16,SNR=6.7							
WRA	**Warramunga Arr**	**18.57**	**135**	P	**P**	**13 27 57.0**	**-0.1**
WRAB	**Tennant Creek**	**18.57**	**135**	P	**P**	**13 27 57.8**	**+0.7**
WB2	**Warramunga Arr**	**18.58**	**135**	P	**P**	**13 27 57.7**	**+0.5**
WR0	**Warramunga Arr**	**18.72**	**134**	P	**P**	**13 27 59.1**	**+0.6**
KRJI	**Kerinci**	**19.52**	**284**	P	**P**	**13 28 05.9**	**-0.1**
5µm104nm,0.5s							
AS31	**Alice Springs**	**20.93**	**143**	P	**P**	**13 28 18.7**	**+0.3**
AS31				IAmb	IAmb	13 28 24.3	
comp=Z,2.2nm,0.7s							
ASAR	**Alice Springs**	**20.93**	**143**	P	**P**	**13 28 19.1**	**+0.7**
comp=Z,4.3nm,0.3s,baz=321,slow=8.4,SNR=276							
ASAR				S	**S**	**13 31 32.4**	**-1.9**
comp=Z,1.8nm,0.7s,baz=339,slow=26,SNR=4.8							
ASAR				PcP	**PcP**	**13 32 00.3**	**0.0**
comp=Z,1.7nm,0.4s,baz=324,slow=1.5,SNR=8.9							
comp=Z,4.3nm,0.3s							
ASAR	**Alice Springs**	**20.93**	**143**	P	**P**	**13 28 18.8**	**+0.4**
MORW	**Morawa**	**22.19**	**190**	P	**P**	**13 28 30.0**	**+0.4**
KULM	**Kulim**	**23.26**	**302**	P	**P**	**13 28 38.6**	**-0.7**
KULM				IAmb	IAmb	13 28 45.8	
comp=Z,12nm,1.2s							
COEN	**Coen**	**23.38**	**109**	P	**P**	**13 28 40.4**	**0.0**
COEN				IAmb	IAmb	13 28 51.5	
comp=Z,9.1nm,1.4s							
RPSI	**Rantau Prapat**	**23.55**	**294**	P	**P**	**13 28 42.0**	**+0.1**
PSI	**Prapat**	**23.60**	**294**	P	**P**	**13 28 42.0**	**-0.4**
comp=Z,5.0nm,0.4s,baz=127,slow=8.5,SNR=14							
comp=Z,5.0nm,0.4s							
GSI	**Gunungsitoli**	**24.27**	**289**	P	**P**	**13 28 47.3**	**-1.0**
GSI				IAmb	IAmb	13 28 51.2	
comp=Z,11nm,0.9s							
NWAO	**Narrogin (SRO)**	**25.82**	**186**	P	**P**	**13 29 02.4**	**+0.7**
SRIT	**Nakonsritamara**	**25.96**	**307**	P	**P**	**13 29 03.3**	**+0.1**
SRIT				IAmb	IAmb	13 29 03.8	
comp=Z,7.7nm,0.6s							
PMG	**Port Moresby**	**26.58**	**97**	P	**P**	**13 29 09.4**	**+0.8**
PMG				IAmb	IAmb	13 29 28.9	
comp=Z,22nm,1.4s							
QIZ	**Qiongzhong**	**28.01**	**338**	P	**P**	**13 29 20.9**	**-0.1**
QIZ				IAmb	IAmb	13 29 22.0	
comp=Z,16nm,1.0s							
CTA	**Charters Tower**	**28.18**	**120**	P	**P**	**13 29 23.2**	**+0.8**
comp=Z,0.8nm,0.6s,baz=297,slow=2.3,SNR=1.7							
CTA				PcP	**PcP**	**13 32 17.1**	**+0.3**
comp=Z,3.2nm,0.6s,baz=313,slow=3.1,SNR=12							
comp=Z,0.8nm,0.6s							
CTAO	**Charters Tower**	**28.18**	**120**	P	**P**	**13 29 22.6**	**+0.1**
BBOO	**Buckleboo**	**29.39**	**152**	P	**P**	**13 29 33.3**	**+0.5**
HKPS	**Hong Kong Po S**	**29.88**	**348**	P	**P**	**13 29 37.5**	**+0.5**
YULB	**Yu-li**	**30.36**	**2**	P	**P**	**13 29 39.2**	**-2.1**
YULB				IAmb	IAmb	13 30 04.4	
comp=Z,10nm,1.2s							
STKA	**Stephens Creek**	**31.56**	**144**	P	**P**	**13 29 52.4**	**+1.0**
comp=Z,4.8nm,0.3s,baz=325,slow=8.4,SNR=26							
STKA				PcP	**PcP**	**13 32 24.9**	**-0.7**
comp=Z,3.3nm,0.5s,baz=340,slow=2.6,SNR=5.8							
comp=Z,4.8nm,0.3s							
STKA	**Stephens Creek**	**31.56**	**144**	IAmb	IAmb	13 29 53.0	
comp=Z,1.4nm,0.3s							
YHNB	**Yeheng**	**31.64**	**2**	P	**P**	**13 29 50.8**	**-1.4**
YHNB				IAmb	IAmb	13 29 52.4	
comp=Z,8.2nm,0.7s							
GUMO	**Guam**	**31.86**	**50**	P	**P**	**13 29 54.0**	**-0.2**
SLVN	**Son La**	**32.60**	**331**	P	**P**	**13 30 01.0**	**+0.5**
SLVN				IAmb	IAmb	13 30 02.4	
comp=Z,4.1nm,0.9s							
CM31	**Chiang Mai Arr**	**33.09**	**321**	P	**P**	**13 30 04.5**	**-0.1**
CM31				IAmb	IAmb	13 30 06.0	
comp=Z,4.4nm,0.7s							
CMAR	**Chiang Mai Arr**	**33.09**	**321**	P	**P**	**13 30 05.2**	**+0.7**
comp=Z,2.6nm,0.8s,baz=146,slow=6.7,SNR=18							
CMAR				PcP	**PcP**	**13 32 31.1**	**+1.0**
comp=Z,0.5nm,0.3s,baz=190,slow=2.3,SNR=4.7							
comp=Z,2.6nm,0.8s							
CMAR	**Chiang Mai Arr**	**33.09**	**321**	P	**P**	**13 30 04.7**	**+0.2**
CHTO	**Chiang Mai**	**33.36**	**321**	P	**P**	**13 30 06.8**	**+0.1**
CHTO				IAmb	IAmb	13 30 08.0	
comp=Z,6.2nm,0.8s							
ENH	**Enshi**	**38.65**	**345**	P	**P**	**13 30 49.9**	**-0.3**
ENH				IAmb	IAmb	13 30 50.8	
comp=Z,8.0nm,0.9s							
JCJ	**Chichijima**	**40.05**	**31**	P	**P**	**13 31 00.8**	**-0.6**
JTU	**Tsushima**	**42.31**	**11**	P	**P**	**13 31 18.9**	**-0.2**
XAN	**Xi'an**	**42.38**	**346**	P	**P**	**13 31 19.2**	**-0.5**
XAN				pP	PcP	13 32 57.3	-1.8
XAN				pmax	pmax		
comp=Z,15nm,0.7s							
KOUNC	**Koumac, New Ca**	**44.50**	**112**	P	**P**	**13 31 37.5**	**+1.2**
KOUNC				IAmb	IAmb	13 31 58.3	
comp=Z,22nm,1.1s							
KSRS	**Korea Array**	**44.92**	**8**	P	**P**	**13 31 38.6**	**-0.5**
comp=Z,0.9nm,0.8s,baz=189,slow=8.4,SNR=6.7							
KSRS				PcP	**PcP**	**13 33 07.8**	**+0.1**
comp=Z,1.0nm,0.7s,baz=193,slow=3.1,SNR=7.5							
comp=Z,0.9nm,0.8s							
JGF	**Kuroka**	**45.42**	**19**	P	**P**	**13 31 42.4**	**-0.7**
JGF				IAmb	IAmb	13 31 55.5	
comp=Z,5.4nm,0.9s							
BJT	**Baijiatuan**	**47.09**	**356**	P	**P**	**13 31 54.9**	**-0.7**
BJT				IAmb	IAmb	13 31 55.6	
comp=Z,5.9nm,0.6s							
JSD	**Sado**	**47.94**	**19**	P	**P**	**13 32 01.2**	**-0.7**
JSD				IAmb	IAmb	13 32 30.1	
comp=Z,5.8nm,0.9s							
USA0B	**Ussuriysk Arra**	**52.17**	**11**	P	**P**	**13 32 32.0**	**-0.7**
USA0B				IAmb	IAmb	13 32 32.9	
comp=Z,4.1nm,0.7s							
USRK	**Ussuriysk Ar.**	**52.17**	**11**	P	**P**	**13 32 32.3**	**-0.4**
comp=Z,2.5nm,0.4s,baz=201,slow=6.4,SNR=12							
comp=Z,2.5nm,0.4s							
ASAJ	**Asahikawa**	**54.83**	**19**	P	**P**	**13 32 51.5**	**0.0**
comp=Z,1.0nm,0.4s,baz=267,slow=10,SNR=4.6							
comp=Z,1.0nm,0.4s							
JKA	**Kamikawa-asahi**	**54.83**	**19**	P	**P**	**13 32 51.5**	**0.0**
JKA	**Kamikawa-asahi**	**54.83**	**19**	IAmb	IAmb	13 33 17.9	
comp=Z,11nm,1.5s							
PYZ	**Puysegur Point**	**55.57**	**142**	P	**P**	**13 32 57.2**	**+0.6**
SONM	**Songino Array**	**56.12**	**349**	P	**P**	**13 33 00.3**	**-0.2**
comp=Z,2.0nm,0.6s,baz=172,slow=8.1,SNR=7.2							
comp=Z,2.0nm,0.6s							
SONM	**Songino Array**	**56.12**	**349**	P	**P**	**13 33 00.8**	**+0.2**
WHZ	**Wether Hill Ro**	**56.21**	**142**	P	**P**	**13 33 01.8**	**+0.7**
WHZ				IAmb	IAmb	13 33 29.6	
comp=Z,27nm,1.3s							
RPZ	**Rata Peaks**	**57.23**	**138**	P	**P**	**13 33 08.8**	**+0.7**
RPZ				IAmb	IAmb	13 33 09.9	
comp=Z,55nm,1.5s							
MQZ	**McQueen's Vall**	**58.29**	**138**	P	**P**	**13 33 16.1**	**+0.9**
MQZ				IAmb	IAmb	13 33 17.4	
comp=Z,50nm,1.3s							
CASY	**Casey**	**59.43**	**185**	P	**P**	**13 33 22.6**	**+0.2**
CASY				IAmb	IAmb	13 33 40.6	
comp=Z,9.7nm,1.1s							
KDJ	**Kajisay**	**62.91**	**325**	P	**P**	**13 33 46.7**	**+0.9**
MK31	**Makanchi Array**	**63.47**	**332**	P	**P**	**13 33 49.1**	**0.0**
MKAR	**Makanchi Array**	**63.47**	**332**	P	**P**	**13 33 49.3**	**+0.3**
comp=Z,1.4nm,0.5s,baz=142,slow=7.2,SNR=21							
comp=Z,1.4nm,0.5s							
MKAR	**Makanchi Array**	**63.47**	**332**	P	**P**	**13 33 49.0**	**-0.1**
MAKZ	**Makanchi**	**63.62**	**332**	P	**P**	**13 33 50.1**	**0.0**
KBL	**Kabul**	**63.78**	**314**	P	**P**	**13 33 51.0**	**-0.5**
KBL				IAmb	IAmb	13 33 51.6	
comp=Z,4.5nm,0.5s							
GAR	**Garm**	**65.24**	**319**	P	**P**	**13 34 00.2**	**-0.3**
GAR				IAmb	IAmb	13 34 01.0	
comp=Z,5.5nm,0.4s							
CHGR	**Chuyangaron**	**65.82**	**318**	P	**P**	**13 34 03.7**	**-0.4**
CHGR				IAmb	IAmb	13 34 04.2	
comp=Z,6.2nm,0.6s							
KKAR	**Karatay Array**	**67.41**	**323**	P	**P**	**13 34 12.9**	**-0.8**
ZAA0	**Zalesovo Array**	**67.83**	**338**	P	**P**	**13 34 14.3**	**-1.6**
ZALV	**Zalesovo Beam**	**67.83**	**338**	P	**P**	**13 34 15.2**	**-0.7**
comp=Z,0.9nm,0.3s,baz=145,slow=5.5,SNR=5.0							
comp=Z,0.9nm,0.3s							
ZALV	**Zalesovo Beam**	**67.83**	**338**	P	**P**	**13 34 14.3**	**-1.6**
PEA0B	**Petropavlovsk-**	**67.83**	**23**	P	**P**	**13 34 16.7**	**+0.6**
PEA0B				IAmb	IAmb	13 34 29.1	
comp=Z,14nm,1.1s							
PETK	**Petropavlovsk-**	**67.83**	**23**	P	**P**	**13 34 16.2**	**+0.2**
comp=Z,1.6nm,0.7s,baz=90,slow=3.0,SNR=4.3							
comp=Z,1.6nm,0.7s							
PETK	**Petropavlovsk-**	**67.83**	**23**	P	**P**	**13 34 16.8**	**+0.8**
KURBB	**Kurchatov Arra**	**67.95**	**333**	P	**P**	**13 34 16.8**	**0.0**
comp=Z,0.4nm,0.5s,baz=146,slow=5.3,SNR=4.1							
comp=Z,0.4nm,0.5s							
KURK	**Kurchatov**	**67.97**	**333**	P	**P**	**13 34 16.8**	**-0.1**
KURK	**Kurchatov**	**67.97**	**333**	IAmb	IAmb	13 34 17.3	
comp=Z,1.8nm,0.8s							
MAW	**Mawson**	**71.44**	**200**	P	**P**	**13 34 38.1**	**+0.9**
VOI	**Vohitsoka**	**72.18**	**249**	P	**P**	**13 34 42.7**	**+0.1**
VNDA	**Vanda**	**73.60**	**171**	P	**P**	**13 34 50.3**	**+0.8**
comp=Z,2.2nm,0.4s,baz=318,slow=6.6,SNR=14							
comp=Z,2.2nm,0.4s							
VNDA	**Vanda**	**73.60**	**171**	P	**P**	**13 34 50.0**	**+0.5**
VNDA				IAmb	IAmb	13 34 50.6	
comp=Z,3.0nm,0.5s							
SBA	**Scott Base**	**74.58**	**171**	P	**P**	**13 34 56.3**	**+1.3**
ABKAR	**Akbulak array**	**76.86**	**324**	P	**P**	**13 35 07.3**	**-0.8**
AKTO	**Aktyubinsk**	**78.51**	**325**	P	**P**	**13 35 16.6**	**-0.4**
comp=Z,1.6nm,0.7s,baz=124,slow=4.2,SNR=5.5							
comp=Z,1.6nm,0.7s							
TIXI	**Tiksi**	**78.83**	**3**	P	**P**	**13 35 17.4**	**-0.8**
comp=Z,0.7nm,0.3s,baz=273,slow=22,SNR=6.7							
comp=Z,0.7nm,0.3s							
TIXI	**Tiksi**	**78.83**	**3**	P	**P**	**13 35 17.6**	**-0.5**
RAYN	**Ar Rayn**	**79.14**	**296**	P	**P**	**13 35 20.0**	**-1.0**
BILL	**Bilibino**	**81.64**	**16**	P	**P**	**13 35 31.8**	**-1.0**
QSPA	**South Pole Qui**	**82.84**	**180**	P	**P**	**13 35 38.3**	**-0.9**
comp=Z,1.8nm,0.5s,baz=299,slow=0.3,SNR=38							
comp=Z,1.8nm,0.5s							
QSPA	**South Pole Qui**	**82.84**	**180**	P	**P**	**13 35 39.0**	**-0.1**
MATP	**Matopo**	**89.31**	**250**	P	**P**	**13 36 10.9**	**-0.1**
comp=Z,2.3nm,0.5s,baz=137,slow=5.6,SNR=6.5							
comp=Z,2.3nm,0.5s							
SNAA	**Sanae**	**93.14**	**195**	P	**P**	**13 36 27.5**	**0.0**
comp=Z,1.4nm,0.5s,baz=191,slow=3.0,SNR=25							
comp=Z,1.4nm,0.5s							
SNAA	**Sanae**	**93.14**	**195**	IAmb	IAmb	13 36 42.5	
comp=Z,7.3nm,1.5s							
NVAR	**Mina Array Bea**	**118.78**	**50**	PKP	**PKiKP**	**13 41 59.1**	**+0.4**
comp=Z,0.4nm,0.6s,baz=260,slow=1.9,SNR=4.9							
TORD	**Torodi Ar. Bea**	**119.48**	**281**	PKP	**PKPdf**	**13 41 59.6**	**-0.7**
comp=Z,1.3nm,0.5s,baz=82,slow=3.3,SNR=11							
PDAR	**Pinedale Array**	**123.63**	**43**	PKP	**PKPdf**	**13 42 07.6**	**-0.3**
comp=Z,0.4nm,0.6s,baz=132,slow=2.2,SNR=2.7							
TXAR	**Lajitas Array**	**133.07**	**56**	PKP	**PKPdf**	**13 42 26.8**	**+0.8**
comp=Z,0.2nm,0.6s,baz=138,slow=1.4,SNR=3.9							
CPUP	**Villa Florida**	**146.65**	**184**	PKPbc	**PKPbc**	**13 42 52.5**	**-0.5**
comp=Z,4.2nm,0.7s,baz=188,slow=3.3,SNR=6.5							
LPAZ	**La Paz**	**155.24**	**160**	PKPab	**PKPab**	**13 43 33.9**	**+1.1**
comp=Z,3.0nm,0.6s,baz=185,slow=5.3,SNR=11							

*IDC **07** 13:28:11.9±2.1,14.17S×72.92W,h70km±19km,mb3.5/5, mbtmp4.0/9,Error ellipse: s-maj=31.8km s-min=14.0km az=39.0*

*NEIC **07** 13:28:13.3±1.3,14.26S±0.09×73.07W±0.09,h75km±7km, mb4.3/38,Error ellipse: s-maj=15.6km s-min=9.0km az=48.0*

*VAO **07** 13:28:23.2±2.1,13.97S×72.11W,h96km±11km,mb4.4*

ISC 07 13:28:12.5±0.5,14.27S±0.07×72.99W±0.07,h83km,n91, σ1§74/88,mb4.3/22,Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**4.38**	**301**	P	**Pn**	**13 29 17.0**	**+0.3**
46nm,0.3s,baz=136,slow=12,SNR=20							
NNA				S	**Sn**	**13 30 06.2**	**-0.5**
282nm,0.5s,baz=54,slow=21,SNR=13							
NNA	**Nana**	**4.38**	**301**	Pn	**Pn**	**13 29 14.4**	**-2.3**
PB12	**IPOC Station P**	**5.02**	**150**	Pn	**Pn**	**13 29 24.9**	**-0.6**
LPAZ	**La Paz**	**5.10**	**114**	P	**Pn**	**13 29 30.2**	**+3.1**
34nm,0.4s,baz=294,slow=9.3,SNR=172							
LPAZ				S	**Sn**	**13 30 23.7**	**-1.4**
22nm,0.7s,baz=349,slow=6.3,SNR=3.7							
LPAZ	**La Paz**	**5.10**	**114**	Pn	**Pn**	**13 29 29.9**	**+2.9**
LPAZ	**La Paz**	**5.10**	**114**	*eP*	**Pn**	**13 29 30.4**	**+3.3**
PB16	**IPOC Station P**	**5.25**	**141**		**Pn**	**13 29 30.6**	**+1.6**
PB11	**IPOC Station P**	**6.33**	**150**		**Pn**	**13 29 42.0**	**-1.3**
TA02	**Huaiquique**	**6.57**	**156**		**Pn**	**13 29 44.3**	**-2.2**
TA01	**Diego Aracena**	**6.81**	**157**	Pn	**Pn**	**13 29 47.8**	**-2.0**
PB08	**IPOC Station P**	**6.90**	**148**	Pn	**Pn**	**13 29 51.0**	**-0.3**
PATCX	**Punta Patache**	**7.06**	**158**	Pn	**Pn**	**13 29 50.9**	**-2.4**
PB01	**IPOC Station P**	**7.52**	**154**	Pn	**Pn**	**13 29 58.5**	**-1.1**
PB02	**IPOC Station P**	**7.61**	**158**	Pn	**Pn**	13 29 54.1

NVAR	**Mina Array Bea**	**67.42**	**323**	P	**P**	**13 39 00.0**	**+0.4**	
	comp=Z,0.5nm,0.9s,baz=138,slow=7.3,SNR=2.6							
	comp=Z,0.5nm,0.9s							
FLWY	**Flagg Ranch**	**67.48**	**331**	P	**P**	**13 39 01.1**	**+1.3**	
FLWY				IAmb	IAmb	13 39 02.1		
	comp=Z,5.6nm,0.8s							
PMPB	**Monarch Peak**	**67.51**	**320**	P	**P**	**13 39 00.8**	**+0.7**	
RLMT	**Red Lodge**	**67.64**	**333**	P	**P**	**13 39 01.5**	**+0.7**	
RLMT				IAmb	IAmb	13 39 02.5		
	comp=Z,4.3nm,1.2s							
YHL	**Hebgen Lake**	**68.29**	**332**	P	**P**	**13 39 06.8**	**+1.8**	
YHL				IAmb	IAmb	13 39 07.9		
	comp=Z,6.2nm,1.0s							
HLID	**Hailey**	**68.88**	**329**	P	**P**	**13 39 09.4**	**+0.8**	
PAHR	**Pah Rah Range**	**68.90**	**323**	P	**P**	**13 39 10.4**	**+1.6**	
PAHR				IAmb	IAmb	13 39 11.5		
	comp=Z,3.9nm,1.0s							
BCYI	**Bear Canyon**	**68.93**	**330**	P	**P**	**13 39 10.4**	**+1.5**	
BOZ	**Bozeman (W)**	**69.06**	**332**	P	**P**	**13 39 10.5**	**+0.9**	
BOZ				IAmb	IAmb	13 39 11.4		
	comp=Z,3.1nm,1.0s							
MFID	**Camas Ranch**	**69.49**	**328**	P	**P**	**13 39 13.4**	**+1.1**	
SNAA	**Sanae**	**70.34**	**162**	P	**P**	**13 39 18.6**	**+1.6**	
SNAA				IAmb	IAmb	13 39 25.1		
	comp=Z,5.2nm,1.2s							
JTMT	**Jette**	**71.89**	**332**	P	**P**	**13 39 28.1**	**+1.4**	
QSPA	**South Pole Qui**	**75.88**	**180**	P	**P**	**13 39 51.4**	**+1.5**	
	comp=Z,1.3nm,0.9s,baz=243,slow=0.3,SNR=8.9							
	comp=Z,1.3nm,0.9s							
QSPA	**South Pole Qui**	**75.88**	**180**	IAmb	IAmb	13 40 08.4		
	comp=Z,4.8nm,1.4s							
TORD	**Torodi Ar. Bea**	**78.81**	**73**	P	**P**	**13 40 06.5**	**-0.5**	
	comp=Z,0.7nm,0.9s,baz=253,slow=5.1,SNR=1.9							
	comp=Z,0.7nm,0.9s							
ASAR	**Alice Springs**	**134.03**	**215**	PKP	**PKPdf**	**13 47 21.9**	**+0.8**	
	comp=Z,0.3nm,0.7s,baz=110,slow=2.2,SNR=5.8							
WRA	**Warramunga Arr**	**136.66**	**219**	PKP	**PKPdf**	**13 47 26.6**	**+0.4**	
	comp=Z,0.5nm,0.7s,baz=135,slow=2.0,SNR=6.2							
ZALV	**Zalesovo Beam**	**136.73**	**19**	PKP	**PKPdf**	**13 47 26.4**	**+1.3**	
	comp=Z,0.5nm,0.7s,baz=292,slow=2.3,SNR=14							
ZALV	**Zalesovo Beam**	**136.73**	**19**		**PKPdf**	**13 47 26.2**	**+1.0**	
MKAR	**Makanchi Array**	**141.54**	**28**	PKhKP	PKPpre	13 47 29.9		
	comp=Z,0.4nm,0.7s,baz=306,slow=4.2,SNR=4.9							
MJAR	**Matsushiro Arr**	**144.40**	**314**	PKP	PKPbc	13 47 38.4	+0.2	
	comp=Z,0.6nm,0.9s,baz=155,slow=8.0,SNR=4.4							
SONM	**Songino Array**	**146.53**	**1**	PKPbc	**PKPab**	**13 47 45.6**	**0.0**	
	comp=Z,3.0nm,0.7s,baz=340,slow=1.9,SNR=14							
KSRS	**Korea Array**	**150.35**	**325**	PKPbc	**PKiKP**	**13 47 55.6**	**+0.2**	
	comp=Z,2.6nm,0.8s,baz=3.8,slow=1.2,SNR=19							
PZH	**PanZhiHua**	**166.87**	**21**	PKP	**PKPdf**	**13 48 08.6**	**-0.8**	

*NOU **07** 14:19:16.0,21˚.81S×170˚.32E,h0km,MLv5.1/12, Southeast of Loyalty Islands*
*NEIC **07** 14:19:16.6±1.2,21˚.6S±0˚.1×170˚.5E±0˚.1,h72km±16km, mb4.2/7, Error ellipse: s-maj=20.7km s-min=15.6km az=60.0*
*IDC **07** 14:19:21.9±8.2,21˚.46S×170˚.06E,h95km±49km,mb3.4/3, mbtmp3.8/4, Error ellipse: s-maj=116.7km s-min=62.3km az=170.0*

ISC 07 14:19:20.1±1.4,21˚.8S±0˚.1×170˚.3E±0˚.1,h100km,n21, σ1§12/21,mb3.9/6,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**2.10**	**278**	Pn	**Pn**	**14 19 52.0**	**-2.0**
MARNC	**Mare, Loyalty**	**2.10**	**278**	P	**Pn**	**14 19 52.2**	**-1.9**
PINNC	**Pines Island,**	**2.73**	**252**		**Pn**	**14 20 01.1**	**-1.2**
PINNC	**Pines Island,**	**2.73**	**252**	P	**Pn**	**14 20 01.4**	**-0.9**
DZM	**Mont Dzumac**	**3.56**	**265**	P	**Pn**	**14 20 13.2**	**-0.2**
	27nm,0.3s,baz=128,slow=14,SNR=49						
DZM				S	**Sn**	**14 20 53.2**	**-1.5**
	506nm,0.6s,baz=235,slow=23,SNR=54						
DZM	**Mont Dzumac**	**3.56**	**265**	Pn	**Pn**	**14 20 13.0**	**-0.5**
DZM	**Mont Dzumac**	**3.56**	**265**	P	**Pn**	**14 20 13.1**	**-0.4**
NOUC	**Port Laguerre**	**3.69**	**265**	P	**Pn**	**14 20 14.7**	**-0.4**
RTV	**Rentapao**	**4.35**	**336**	P	**Pn**	**14 20 24.5**	**+0.4**
KOUNC	**Koumac, New Ca**	**5.72**	**282**	Pn	**Pn**	**14 20 43.2**	**+0.6**
KOUNC	**Koumac, New Ca**	**5.72**	**282**	P	**Pn**	**14 20 43.7**	**+1.1**
NFK	**Norfolk Island**	**7.50**	**196**	P	**Pn**	**14 21 06.8**	**-0.1**
KHZ	**Kahutara**	**20.73**	**173**	P	**P**	**14 23 52.5**	**0.0**
KHZ				IAmb	IAmb	14 24 08.6	
	comp=Z,50nm,1.4s						
OXZ	**Oxford**	**21.51**	**176**	P	**P**	**14 24 01.2**	**+0.3**
STKA	**Stephens Creek**	**27.40**	**242**	P	**P**	**14 24 58.5**	**+2.1**
	comp=Z,1.4nm,0.7s,baz=101,slow=10,SNR=3.3						
	comp=Z,1.4nm,0.7s						
STKA	**Stephens Creek**	**27.40**	**242**	IAmb	IAmb	14 25 26.8	
	comp=Z,1.4nm,1.2s						
ASAR	**Alice Springs**	**33.53**	**260**	P	**P**	**14 25 51.9**	**+1.3**
	comp=Z,0.7nm,0.7s,baz=93,slow=8.7,SNR=7.3						
	comp=Z,0.7nm,0.7s						
WB2	**Warramunga Arr**	**33.56**	**267**	P	**P**	**14 25 51.3**	**+0.5**
WB2				IAmb	IAmb	14 25 52.2	
	comp=Z,4.4nm,1.2s						
WRAB	**Tennant Creek**	**33.57**	**267**	P	**P**	**14 25 51.5**	**+0.7**
WRAB				IAmb	IAmb	14 26 02.4	
	comp=Z,6.7nm,1.2s						
WRA	**Warramunga Arr**	**33.57**	**267**	P	**P**	**14 25 51.3**	**+0.4**
	comp=Z,0.7nm,0.8s,baz=98,slow=8.4,SNR=5.4						
	comp=Z,0.7nm,0.8s						
QSPA	**South Pole Qui**	**68.26**	**180**	P	**P**	**14 30 09.2**	**-0.9**
QSPA				IAmb	IAmb	14 30 32.3	
	comp=Z,3.9nm,1.4s						

DJA 07 14:19:37.0±0.4,6˚S±3˚×10˚5E±˚,h10km,M3.7/9,MLv3.7/9, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SBJI	**Serang**	**0.76**	**87**	P	Pg	14 19 50.9	-0.7
SBJI				S	Sb	14 20 02.7	0.0
BLSI	**Bandar Lampung**	**0.80**	**351**	P	Pg	14 19 51.0	-1.4
BLSI				S	Sb	14 20 04.4	+0.6
KASI	**Kota Agung**	**1.07**	**306**	P	Pg	14 19 56.4	-1.3
KASI				S	Sn	14 20 12.8	-0.3
TNG	**Tangerang**	**1.27**	**91**	P	Pn	14 20 00.3	-0.5
TNG				S	Sn	14 20 19.3	+1.4
KLI	**Kotabumi**	**1.39**	**338**	P	Pn	14 20 02.1	-0.3
KLI				S	Sg	14 20 21.6	-0.1
DBJI	**Dramaga**	**1.43**	**106**	P	Pn	14 20 01.5	-1.5
SKJI	**Sukabumi**	**1.45**	**126**	P	Pn	14 20 03.0	-0.3
CBJI	**Citeko**	**1.49**	**100**	P	Pg	14 20 06.5	+0.8
LWLI	**Liwa**	**1.73**	**311**	P	Pn	14 20 07.8	+0.5
CNJI	**Cibinong**	**2.09**	**123**	P	Pn	14 20 11.7	-0.4
LEM	**Lembang**	**2.33**	**107**	P	Pn	14 20 16.4	+0.8
PPBI	**Pangkal Pinang**	**4.04**	**11**	P	Pn	14 20 39.0	0.0
SMKI	**Samarinda**	**13.11**	**65**	P	P	14 22 53.7	0.0
KMSI	**Cibinong**	**19.75**	**71**	P	Pn	14 24 12.6	+3.9
NLAI	**Namlea**	**21.85**	**83**	P	P	14 24 29.9	-0.1

*MAN **07** 14:20:55.6,5˚.48N×126˚.33E,h63km,mb5.2,ML4.1,MS4.2*
*GCMT **07** 14:20:56.9±0.4,5˚.63N±0˚.03×126˚.45E±0˚.03,h112km±6km, MW5.0/72,Moment Tensor Solution. s11,c11; s72,c97; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr=2.13±.16; Mθθ=1.00±.15; Mφφ=-3.13±.17; Mrθ=-0.68±.10; Mθφ=-0.25±.17; Mφr=1.81±.14; Best double couple: M0=3.32700×10^16^ NP1:φs=208.00000°,δ33.00000°,λ128.00000°. NP2: φs=345.00000°,δ65.00000°,λ68.00000°. Principal axes: T 2.9610, Plg64.0000°, Azm219.0000°; N 0.7290, Plg19.0000°, Azm354.0000°; P -3.6930, Plg17.0000°, Azm90.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **07** 14:20:57.9±1.8,5˚.68N±0˚.06×126˚.30E±0˚.09,h93km±5km, mb4.8/153 Error ellipse: s-maj=12.8km s-min=8.3km az=71.0*
*DJA **07** 14:20:57.8±0.2,6˚N±2˚×12˚6E±˚,h93km±2km,M4.9/72, mb5.0/72,mB5.3/31,MLv5.4/12,Mw(mB)4.8/31, MwMwp6.2/1,Mwp6.2/1*
*IDC **07** 14:20:58.3±0.8,5˚.71N×126˚.29E,h107km±6km,mb4.4/36, mbtmp4.7/38,MS3.5/18,Error ellipse: s-maj=13.4km s-min=7.2km az=71.0*

ISC 07 14:20:58.0±0.4,5˚.68N±0˚.03×126˚.33E±0˚.04,h102km±3km, h102km:pP-P,n520,σ1§29/551,mb4.7/123,9C-15D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**		**0.74**	**305**	*e*P	**Pn**	**14 21 13.9**	**-2.1**
MATI	**Mati**		**1.26**	**357**	*e*P	**Pn**	**14 21 19.9**	**-1.7**
GSPH	**General Santos**		**1.43**	**287**	*e*P	**Pn**	**14 21 21.0**	**-2.6**
GSPH					*e*S	**Sn**	**14 21 40.3**	**-2.7**
DAV	**Davao City (W)**		**1.57**	**332**	P	**Pn**	**14 21 25.9**	**+0.6**
	535nm,0.5s,baz=85,slow=2.3,SNR=13							
DAV					S	**Sn**	**14 21 45.7**	**-0.2**
	2µm,0.4s,baz=80,slow=24,SNR=7.1							
DAV					LR	LR	14 22 06.2	
	comp=Z,922nm,21.9s,baz=261,slow=45							
DAV	**Davao City (W)**		**1.57**	**332**		**Pn**	**14 21 25.0**	**-0.3**
DAV	**Davao City (W)**		**1.57**	**332**	P	**Pn**	**14 21 27.5**	**+2.2**
KCP	**Kidapawan**		**1.81**	**317**	*e*P	**Pn**	**14 21 27.1**	**-1.2**
KCP					*i* S	**Sn**	**14 21 51.1**	**-0.2**
SGSI	**Sangihe**		**2.13**	**202**	P	**Pn**	**14 21 32.6**	**+0.2**
SGSI					S	**Sn**	**14 22 02.0**	**+3.3**
BIPH	**Bislig**		**2.49**	**1**	⇑*e*P	**Pn**	**14 21 35.7**	**-1.5**
BIPH					*i* S	**Sn**	**14 22 07.2**	**+0.1**
CTBH	**Cotabato--PC H**		**2.57**	**307**	⇑*i*P	**Pn**	**14 21 37.5**	**-0.8**
CTBH					*i* S	**Sn**	**14 22 13.9**	**+4.9**
BUTP	**Butuan**		**3.34**	**348**	*e*P	**Pn**	**14 21 50.4**	**+1.9**
PAGZ	**Pagadian**		**3.63**	**307**	*e*P	**Pn**	**14 21 52.5**	**+0.2**
PAGZ					*i* S	**Sn**	**14 22 28.0**	**-6.4**
GLSP	**General Luna,**		**4.09**	**357**	*e*P	**Pn**	**14 21 59.8**	**+1.4**
GLSP					*e*S	**Sn**	**14 22 39.5**	**-5.8**
DCPH	**Dipolog City**		**4.13**	**315**	*e*P	**Pn**	**14 22 02.9**	**+3.9**
ZCP	**Zamboanga City**		**4.41**	**287**	*i*P	**Pn**	**14 22 02.8**	**+0.1**
ZCP					*i* S	**Sn**	**14 22 53.5**	**+0.5**
MSLP	**Maasin**		**4.66**	**342**	*e*P	**Pn**	**14 22 07.6**	**+1.4**
MSLP					*e*S	**Sn**	**14 23 02.0**	**+2.8**
TBP	**Tagbilaran**		**4.68**	**329**	*e*P	**Pn**	**14 22 06.5**	**0.0**
TBP					*i* S	**Sn**	**14 23 03.2**	**+3.6**
SNPH	**Sibulan**		**4.76**	**320**	*e*P	**Pn**	**14 22 09.4**	**+1.8**
SNPH					*e*S	**Sn**	**14 22 56.2**	**-5.5**
TNTI	**Ternate**		**4.98**	**168**	Pn	**Pn**	**14 22 09.4**	**-1.2**
TNTI	**Ternate**		**4.98**	**168**	P	**Pn**	**14 22 10.0**	**-0.6**
	3.2nm6µm266nm,0.7s							
TNTI	**Ternate**		**4.98**	**168**	P	**Pn**	**14 22 10.5**	**-0.1**
LLP	**Lapu-Lapu**		**5.17**	**333**	⇑*e*P	**Pn**	**14 22 14.2**	**+1.1**
LLP					*e*S	**Sn**	**14 23 15.8**	**+4.3**
CNOP	**Candoni, Negro**		**5.51**	**319**	⇑*i*P	**Pn**	**14 22 19.8**	**+2.1**
CNOP					*i* S	Sn	14 23 08.3	-12
KMSI	**Cibinong**		**5.58**	**205**	P	**Pn**	**14 22 21.3**	**+2.6**
	2.9nm5µm512nm,0.7s							
OCLP	**Ormoc**		**5.60**	**342**	*e*P	**Pn**	**14 22 22.0**	**+3.0**
OCLP					*e*S	Sn	14 22 46.3	-36
LBMI	**Labuha**		**6.38**	**169**	P	**Pn**	**14 22 29.1**	**-0.5**
JAP	**San Jose, Anti**		**6.65**	**320**	*e*P	**Pn**	**14 22 36.6**	**+3.5**
MRSI	**Marisa**		**6.77**	**220**	P	**Pn**	**14 22 36.0**	**+1.1**
	1.9nm5µm494nm,0.7s							
RCP	**Roxas**		**6.83**	**329**	*e*P	**Pn**	**14 22 37.8**	**+2.1**
TOLI2	**Tolitoli**		**7.15**	**231**	Pn	**Pn**	**14 22 38.9**	**-1.2**
TOLI2	**Tolitoli**		**7.15**	**231**	P	**Pn**	**14 22 40.0**	**-0.1**
LUWI	**Luwuk**		**7.56**	**208**	P	**Pn**	**14 22 49.5**	**+3.9**
	1.9nm5µm421nm,0.9s							
SANI	**Sanana**		**7.68**	**183**	P	**Pn**	**14 22 45.8**	**-1.5**
SANI	**Sanana**		**7.68**	**183**	P	**Pn**	**14 22 45.6**	**-1.7**
MYLDM	**Lahad Datu**		**7.81**	**267**	Pn	**Pn**	**14 22 48.7**	**-0.3**
APSI	**Ampana**		**8.04**	**216**	P	**Pn**	**14 22 55.8**	**+3.7**
	2µm265nm,0.9s							
SWI	**Sorong**		**8.15**	**143**	P	**Pn**	**14 22 53.9**	**+0.2**
	1µm59nm,0.5s							
PVCP	**Virac**		**8.16**	**345**	*e*P	**Pn**	**14 22 56.3**	**+2.6**
SIJI	**Sorong**		**8.16**	**143**	P	**Pn**	**14 22 53.6**	**-0.2**
	35nm,0.4s,baz=327,slow=18,SNR=33							
SIJI					S	**Sn**	**14 24 20.6**	**-3.9**
	18nm,0.4s,baz=175,slow=19,SNR=5.6							
MPSI	**Mapaga**		**8.32**	**231**	P	**Pn**	**14 22 58.6**	**+2.6**
	0.3nm1µm51nm,0.7s							
NLAI	**Namlea**		**8.89**	**175**	P	**Pn**	**14 23 02.6**	**-1.1**
MSAI	**Masohi**		**9.33**	**164**	P	**Pn**	**14 23 11.0**	**+1.3**
	231nm15nm,0.6s							
AAI	**Ambon**		**9.49**	**169**	P	**Pn**	**14 23 13.5**	**+1.7**
	2µm82nm,0.6s							
FAKI	**Fak Fak**		**10.39**	**145**	Pn	**Pn**	**14 23 23.8**	**-0.3**
FAKI	**Fak Fak**		**10.39**	**145**	P	**Pn**	**14 23 24.2**	**+0.1**
	36nm,0.7s							
FAKI	**Fak Fak**		**10.39**	**145**	P	**Pn**	**14 23 24.6**	**+0.5**
TTSI	**Tana Toraja**		**10.83**	**217**	P	**Pn**	**14 23 33.2**	**+3.1**
	2µm198nm,0.9s							
SPSI	**Sidrap Palu**		**11.60**	**215**	P	**Pn**	**14 23 42.0**	**+1.5**
	1µm75nm,0.7s							
BKB	**Balikpapan**		**11.67**	**234**		**Pn**	**14 23 40.5**	**-0.9**
BKB	**Balikpapan**		**11.67**	**234**	P	**Pn**	**14 23 41.7**	**+0.3**
	170nm,0.7s							
BBSI	**Bau Bau**		**11.71**	**199**	P	**Pn**	**14 23 44.7**	**+2.8**
	98nm7.1nm,0.9s							
BNSI	**Bone**		**11.78**	**212**	P	**Pn**	**14 23 46.0**	**+3.1**
	56nm,0.7s							
BAKI	**Biak**		**11.91**	**125**	P	**Pn**	**14 23 43.6**	**-1.1**
	101nm,1.2s							
SRPI	**Serui, Papua**		**12.42**	**127**	P	**Pn**	**14 23 51.8**	**+0.4**
	79nm,0.7s							
KAPI	**Kappang**		**12.48**	**212**	P	**Pn**	**14 23 52.6**	**+0.4**
	118nm,0.8s,baz=12,slow=7.8,SNR=65							
KAPI	**Kappang**		**12.48**	**212**	Pn	**Pn**	**14 23 52.4**	**+0.2**
BKSI	**Bukukumba**		**12.56**	**210**	P	**Pn**	**14 23 54.2**	**+1.0**
	23nm,0.7s							
BSSI	**Bau Bau, Buton**		**13.11**	**206**	P	**Pn**	**14 24 03.4**	**+3.0**
	33nm,1.0s							
MTKI	**Muara Teweh, K**		**13.17**	**240**	P	**P**	**14 24 04.5**	**-3.0**
	3µm56nm,0.7s							
SBUM	**Sibu**		**14.43**	**258**		**P**	**14 24 22.5**	**+1.1**
SAUI	**Saumlaki**		**14.45**	**160**	P	**Pn**	**14 24 18.4**	**+0.6**
	67nm,0.7s							
SMPI	**Sarmi**		**14.53**	**121**	P	**Pn**	**14 24 19.0**	**+0.2**
	22nm,1.1s							
BBKI	**Banjar Baru**		**14.63**	**232**	P	**P**	**14 24 23.4**	**-0.3**
	84nm,1.4s							
MMRI	**Maumere**		**14.79**	**196**	P	**P**	**14 24 26.1**	**+0.7**
MMRI	**Maumere**		**14.79**	**196**	P	**P**	**14 24 25.3**	**-0.1**
	133nm,1.1s							
EDFI	**Ende, Flores**		**15.06**	**198**	P	**Pn**	**14 24 25.6**	**0.0**
	490nm34nm,0.8s							
SOEI	**Soe**		**15.47**	**188**	P	**P**	**14 24 33.1**	**+0.1**
SOEI	**Soe**		**15.47**	**188**	P	**P**	**14 24 32.4**	**-0.7**
	2µm160nm,0.9s							
SOEI	**Soe**		**15.47**	**188**	P	**P**	**14 24 33.4**	**+0.3**
STKI	**Sintang**		**15.84**	**250**	P	**P**	**14 24 38.3**	**+1.2**
BATI	**Baumata**		**16.00**	**190**	P	**P**	**14 24 38.9**	**0.0**
	330nm,0.6s,baz=326,slow=0.7,SNR=66							
BATI					S	**S**	**14 27 42.0**	**+0.3**
	42nm,0.7s,baz=15,slow=22,SNR=2.2							
BATI	**Baumata**		**16.00**	**190**	P	**P**	**14 24 39.3**	**+0.4**
	2µm258nm,0.6s							
KSM	**Kuching**		**16.52**	**256**		**P**	**14 24 46.4**	**+1.7**
KSM					IAmb	IAmb	14 24 50.4	
	comp=Z,78nm,1.1s							
KSM	**Kuching**		**16.52**	**256**	P	**P**	**14 24 47.9**	**+3.3**
WBSI	**Waikabubak, Su**		**16.71**	**204**	P	**P**	**14 24 48.9**	**+2.1**
	comp=Z,68nm,1.3s							
PLAI	**Plampang**		**16.74**	**211**	P	**P**	**14 24 47.9**	**+0.9**
	comp=Z,1µmcomp=Z,81nm,0.8s							
PLAI	**Plampang**		**16.74**	**211**	P	**P**	**14 24 48.0**	**+0.9**
PBKI	**Pangkalan Bun**		**16.84**	**241**	P	**P**	**14 24 50.4**	**+2.2**
	comp=Z,114nm,1.0s							
SRBI	**Singaraja**		**17.60**	**219**	P	**Pn**	**14 24 58.9**	**+1.9**
	comp=Z,38nm,0.9s							
KMMI	**Kalianget**		**17.66**	**224**	P	**Pn**	**14 25 01.0**	**+3.3**
	comp=Z,68nm,0.9s							
BWJI	**Bawean**		**17.81**	**230**	P	**Pn**	**14 25 01.7**	**+2.1**
	comp=Z,177nm,1.3s							
ABJI	**Asem Bagus**		**18.02**	**222**	P	**Pn**	**14 25 04.6**	**+2.6**
	comp=Z,46nm,1.4s							
DNP	**Denpasar**		**18.06**	**218**	P	**Pn**	**14 25 04.6**	**+2.1**
	comp=Z,30µmcomp=Z,300nm,0.8s							
IGBI	**Denpasar**		**18.21**	**218**	P	**Pn**	**14 25 05.8**	**+1.5**
	comp=Z,96nm,1.0s							
YULB	**Yu-li**		**18.27**	**345**	P	**P**	**14 25 02.4**	**-1.5**
TPUB	**Ta-pu**		**18.36**	**343**	P	**P**	**14 25 03.4**	**-1.4**
TPUB	**Ta-pu**		**18.36**	**343**	P	**Pn**	**14 25 06.2**	**+0.1**
BLJI	**Banyuglugur**		**18.41**	**224**	P	**Pn**	**14 25 07.7**	**+1.0**
	comp=Z,38nm,0.6s							
JAGI	**Jajag, Banyuwa**		**18.57**	**221**	P	**P**	**14 25 06.9**	**-0.3**
JAGI	**Jajag, Banyuwa**		**18.57**	**221**	P	**Pn**	**14 25 09.8**	**+1.2**
	comp=Z,68nm,0.8s							
JAGI	**Jajag, Banyuwa**		**18.57**	**221**	P	**Pn**	**14 25 08.2**	**-0.4**
GRJI	**Gresik**		**18.64**	**228**	P	**Pn**	**14 25 09.1**	**-0.3**
	comp=Z,910nmcomp=Z,71nm,0.8s							
SSLB	**Suanglung**		**18.73**	**345**	P	**P**	**14 25 09.3**	**+0.4**
GMJI	**Gumukmas**		**18.90**	**223**	P	**Pn**	**14 25 13.5**	**+1.0**
	comp=Z,66nm,0.8s							
MTN	**Manton Dam**		**19.01**	**165**	P	**P**	**14 25 12.2**	**+0.3**
	baz=19,SNR=59							
MTN	**Manton Dam**		**19.01**	**165**	P	**P**	**14 25 11.9**	**-0.1**
MTN					IAmb	IAmb	14 25 23.1	
	comp=Z,37nm,0.5s							
MTN	**Manton Dam**		**19.01**	**165**	P	**P**	**14 25 12.2**	**+0.3**
KDU	**Kakadu**		**19.24**	**162**	P	**P**	**14 25 14.7**	**+0.3**
	baz=19,SNR=17							
YHNB	**Yeheng**		**19.48**	**346**	P	**Pn**	**14 25 19.8**	**+0.5**
UWJI	**Ujung Watu**		**19.49**	**232**	P	**Pn**	**14 25 20.4**	**+0.9**
	comp=Z,2µmcomp=Z,121nm,1.0s							
PWJI	**Pagerwojo**		**19.87**	**227**	P	**Pn**	**14 25 22.9**	**-1.0**
	comp=Z,62nm,1.1s							
UGM	**Wanagama**		**20.75**	**230**	P	Pn	14 25 33.7	-0.5
QIZ	**Qiongzhong**		**20.84**	**311**	P	**P**	**14 25 32.8**	**+1.1**
QIZ					IAmb	IAmb	14 25 35.1	
	comp=Z,41nm,1.2s							
JOW	**Kunigami**		**21.12**	**5**	P	**P**	**14 25 34.5**	**-0.2**
	comp=Z,11nm,0.7s,baz=182,slow=6.7,SNR=6.6							
JOW					LR	LR	14 34 28.0	
	comp=Z,46nm,19.4s,baz=152,slow=38							
JOW	**Kunigami**		**21.12**	**5**	P	**P**	**14 25 34.8**	**+0.1**
JOW					IAmb	IAmb	14 26 02.8	
	comp=Z,40nm,1.4s							
JOW	**Kunigami**		**21.12**	**5**	P	**P**	**14 25 35.2**	**+0.5**
KNRA	**Kununurra**		**21.35**	**174**	P	**P**	**14 25 37.6**	**+0.4**
	baz=21,SNR=61							
KNRA	**Kununurra**		**21.35**	**174**	P	**P**	**14 25 37.1**	**-0.1**
KNRA	**Kununurra**		**21.35**	**174**	P	**P**	**14 25 37.5**	**+0.3**
PPBI	**Pangkal Pinang**		**21.61**	**249**	P	**P**	**14 25 41.4**	**+1.3**
LEM	**Lembang**		**22.42**	**237**	P	**P**	**14 25 49.0**	**+0.2**
	comp=Z,48nm,0.8s,baz=98,slow=4.8,SNR=6.9							
LEM					LR	LR	14 36 27.5	
	comp=Z,126nm,19.1s,baz=332,slow=42							
	comp=Z,48nm,0.8s							
LEM	**Lembang**		**22.42**	**237**	P	**P**	**14 25 50.3**	**+1.5**
	comp=Z,31nm,0.8s							
DSRI	**Dabo**		**22.56**	**255**	P	**P**	**14 25 52.6**	**+2.6**
	comp=Z,34nm,1.1s							
MYKOM	**Kota Tinggi**		**22.75**	**261**	P	**P**	**14 25 52.4**	**+0.4**
MYKOM					IAmb	IAmb	14 25 55.1	
	comp=Z,62nm,1.4s							
CBJI	**Citeko**		**22.85**	**239**	P	**P**	**14 25 56.0**	**+3.0**
	comp=Z,91nm,0.7s							
PMBI	**Palembang**		**23.16**	**249**	P	**P**	**14 25 57.6**	**+1.7**
KASI	**Kota Agung**		**24.47**	**243**	P	**P**	**14 26 08.9**	**+1.1**
	comp=Z,53nm,1.0s							
LWLI	**Liwa**		**24.64**	**245**	P	**P**	**14 26 10.8**	**+1.3**
	comp=Z,3µmcomp=Z,39nm,0.7s							
IPM	**Ipoh**		**25.23**	**268**	P	**P**	**14 26 14.8**	**0.0**
IPM					IAmb	IAmb	14 26 17.8	
	comp=Z,16nm,0.7s							
IPM	**Ipoh**		**25.23**	**268**	P	**P**	**14 26 17.2**	**+2.4**
KULM	**Kulim**		**25.56**	**270**	P	**P**	**14 26 18.0**	**+0.3**
KULM					IAmb	IAmb	14 26 20.0	
	comp=Z,30nm,1.4s							
COEN	**Coen**		**25.69**	**140**	P	**P**	**14 26 18.7**	**-0.1**
	baz=26,SNR=47							
COEN	**Coen**		**25.69**	**140**	P	**P**	**14 26 18.1**	**-0.8**
COEN	**Coen**		**25.69**	**140**	P	**P**	**14 26 18.8**	**-0.1**
JSU	**Suzuyama**		**25.99**	**8**	P	**P**	**14 26 18.7**	**-2.7**
JCJ	**Chichijima**		**26.11**	**34**	P	**P**	**14 26 21.8**	**-0.8**
	comp=Z,23nm,0.5s,baz=117,slow=17,SNR=6.1							
JCJ					LR	LR	14 34 45.3	
	comp=Z,47nm,21.9s,baz=258,slow=32							
	comp=Z,23nm,0.5s

KSRS Korea Array 31.66 2 P **P** **14 27 10.7 -1.0**
comp=Z,1.8nm,0.8s,baz=183,slow=9.0,SNR=14
KSRS PcP **PcP** **14 29 60.0 -1.4**
comp=Z,2.3nm,0.7s,baz=183,slow=2.8,SNR=12
KSRS ScP **ScP** **14 33 33.6 -2.0**
comp=Z,0.3nm,0.4s,baz=212,slow=4.2,SNR=1.4
KSRS LR LR 14 39 04.3
comp=Z,22nm,21.1s,baz=175,slow=34
comp=Z,1.8nm,0.8s
CTA Charters Tower 32.24 143 P **P** **14 27 17.8 +0.8**
comp=Z,5.0nm,0.7s,baz=325,slow=11,SNR=3.2
comp=Z,5.0nm,0.7s
CTA Charters Tower 32.24 143 P **P** **14 27 18.2 +1.2**
CTAO Charters Tower 32.24 143 P **P** **14 27 17.8 +0.8**
CTAO Charters Tower 32.24 143 P **P** **14 27 18.2 +1.2**
CTAO Charters Tower 32.24 143 P **P** **14 27 18.4 +1.3**
XAN Xi'an 32.51 332 P **P** **14 27 18.8 -0.5**
XAN pP pP 14 27 41.1 -0.4
XAN pmax pmax
comp=Z,16nm,1.4s
MJAR Matsushiro Arr 32.59 18 P **P** **14 27 18.2 -1.7**
comp=Z,1.8nm,0.9s,baz=189,slow=9.7,SNR=6.9
MJAR PcP **PcP** **14 30 03.6 -0.5**
comp=Z,0.6nm,0.6s,baz=163,slow=4.7,SNR=4.2
MJAR ScP **ScP** **14 33 36.6 -2.3**
comp=Z,1.1nm,0.7s,baz=209,slow=3.5,SNR=1.7
comp=Z,1.8nm,0.9s
MJAR Matsushiro Arr 32.59 18 IAmb IAmb 14 27 20.2
comp=Z,2.0nm,1.2s
CD2 Chengdu 32.85 323 P **P** **14 27 22.2 -0.1**
CD2 pmax pmax
comp=Z,20nm,0.5s
HNS HongShan 33.31 343 ⇑P **P** **14 27 27.5 +1.4**
HNS pmax pmax
comp=Z,11nm,1.1s
OOD Oodnadatta 34.48 165 P **P** **14 27 36.8 +0.5**
JMM Marumori 34.65 20 P **P** **14 27 36.4 -1.2**
JMM IAmb IAmb 14 28 04.6
comp=Z,19nm,0.9s
BJT Baijiatuau 35.39 346 P **P** **14 27 44.2 +0.1**
BJT IAmb IAmb 14 27 45.6
comp=Z,12nm,0.9s
BJT Baijiatuau 35.39 346 P **P** **14 27 44.5 +0.4**
BJI Beijing 35.41 346 P **P** **14 27 44.5 +0.3**
BJI pP **pP** **14 28 06.7 -0.4**
BJI PcP **PcP** **14 30 13.7 +1.7**
BJI pmax pmax
comp=Z,15nm,1.0s
MORW Morawa 35.93 195 P **P** **14 27 49.1 +0.3**
baz=36,SNR=7.6
MORW Morawa 35.93 195 P **P** **14 27 48.6 -0.2**
MORW Morawa 35.93 195 P **P** **14 27 49.1 +0.3**
comp=Z,33nm,0.9s
INKA Innaminka 36.02 158 P **P** **14 27 50.3 +0.7**
QLP Quilpie 36.46 152 P **P** **14 27 53.0 -0.4**
baz=36,SNR=11
QLP Quilpie 36.46 152 P **P** **14 27 53.3 -0.1**
MULG Mulgathing 36.51 169 P **P** **14 27 54.4 +0.7**
LZH Lanzhou 36.64 329 ⇓P **P** **14 27 55.8 +0.8**
LZH pP pP 14 28 17.5 +0.1
LZH sP sP 14 28 30.9 +2.1
LZH PcP **PcP** **14 30 18.4 +2.4**
LZH pmax pmax
comp=Z,20nm,1.5s
LZH pmax pmax
comp=Z,200nm,6.3s
LZH LR LR
comp=Z,220nm,12.0s
LZH LR LR
comp=Z,200nm,17.9s
LZH LR LR
comp=Z,230nm,18.5s
HNR Honiara 36.71 114 LR LR 14 43 13.2
comp=Z,106nm,19.4s,baz=300,slow=36
BLDU Ballidu 37.24 194 P **P** **14 28 00.1 +0.2**
baz=37,SNR=14
BLDU Ballidu 37.24 194 P **P** **14 28 00.4 +0.5**
RK1H Rockhampton Ha 37.30 142 P **P** **14 28 01.2 +0.7**
JTM Tenmabayashi 37.37 19 P **P** **14 28 01.3 +0.4**
JTM IAmb IAmb 14 28 23.1
comp=Z,29nm,1.5s
HHC Hu-ho-hao-te 37.44 341 *e*P **P** **14 28 04.4 +2.8**
HHC pmax pmax
comp=Z,62nm,1.2s
HHC pmax pmax
comp=Z,200nm,4.9s
LCRK Leigh Creek 37.68 163 P **P** **14 28 05.2 +1.6**
KLBR Kellerberrin 37.95 192 P **P** **14 28 06.4 +0.5**
baz=38,SNR=14
KLBR Kellerberrin 37.95 192 P **P** **14 28 06.3 +0.4**
SHL Shillong 38.42 305 P **P** **14 28 08.9 -1.3**
RMQ Roma 38.66 147 P **P** **14 28 12.6 +0.7**
baz=39,SNR=8.9
RMQ Roma 38.66 147 P **P** **14 28 12.5 +0.5**
MUN Mundaring 38.67 194 P **P** **14 28 12.3 +0.5**
baz=39,SNR=7.8
MUN Mundaring 38.67 194 P **P** **14 28 12.4 +0.5**
USRK Ussuriysk Ar. 38.69 7 P **P** **14 28 11.9 0.0**
comp=Z,5.7nm,0.7s,baz=182,slow=8.8,SNR=12
comp=Z,5.7nm,0.7s
USRK Ussuriysk Ar. 38.69 7 P **P** **14 28 12.1 +0.1**
MDJ Mudanjiang 38.89 4 P **P** **14 28 14.2 +0.6**
MDJ Mudanjiang 38.89 4 P **P** **14 28 15.5 +1.9**
MDJ pmax pmax
comp=Z,20nm,1.2s
MDJ pmax pmax
comp=Z,32nm,3.6s
EIDS Eidsvold 39.13 143 P **P** **14 28 16.0 +0.2**
baz=39,SNR=3.2
EIDS Eidsvold 39.13 143 P **P** **14 28 15.4 -0.4**
EIDS IAmb IAmb 14 28 17.6
comp=Z,11nm,1.2s
ERM Erimo 39.16 20 P **P** **14 28 15.6 -0.2**
ERM IAmb IAmb 14 28 28.6
comp=Z,25nm,1.2s
NWAO Narrogin (SRO) 39.35 192 P **P** **14 28 18.1 +0.6**
NWAO Narrogin (SRO) 39.35 192 P **P** **14 28 18.6 +1.0**
BBOO Buckleboo 39.38 167 P **P** **14 28 18.2 +0.5**
baz=40,SNR=58
BBOO Buckleboo 39.38 167 P **P** **14 28 18.0 +0.2**
BBOO Buckleboo 39.38 167 P **P** **14 28 18.3 +0.5**
STKA Stephens Creek 40.08 160 P **P** **14 28 23.8 +0.1**
comp=Z,26nm,0.7s,baz=336,slow=8.4,SNR=39
comp=Z,26nm,0.7s
STKA Stephens Creek 40.08 160 P **P** **14 28 24.2 +0.5**
baz=40,SNR=30
STKA Stephens Creek 40.08 160 P **P** **14 28 24.0 +0.4**
STKA Stephens Creek 40.08 160 P **P** **14 28 24.3 +0.7**
NAPP Napperby 40.24 165 P **P** **14 28 25.6 +0.7**
HTT Hallett 40.69 164 P **P** **14 28 29.7 +1.0**
baz=41,SNR=15
HTT Hallett 40.69 164 P **P** **14 28 30.6 +1.9**
ASAJ Asahikawa 40.87 18 LR LR 14 44 52.8
comp=Z,69nm,21.8s,baz=162,slow=35
JKA Kamikawa-asahi 40.87 18 P **P** **14 28 30.8 +0.8**
JKA IAmb IAmb 14 28 34.2
comp=Z,7.9nm,0.6s
GTA Gaotai 41.23 328 *e*P **P** **14 28 33.6 +0.4**
GTA pP pP 14 28 57.0 +0.9
GTA PcP **PcP** **14 30 32.2 +1.8**
GTA pmax pmax
comp=Z,7.0nm,0.9s
GTA pmax pmax
comp=Z,85nm,6.2s
GTA LR LR
comp=Z,110nm,20.0s
GTA LR LR
comp=Z,110nm,19.3s
GTA LR LR
comp=Z,130nm,18.5s
CMSA Cobar Meteorol 41.37 155 P **P** **14 28 34.6 +0.4**
baz=41,SNR=11
CMSA Cobar Meteorol 41.37 155 P **P** **14 28 34.9 +0.7**
GOMU GeErMu 41.92 321 P **P** **14 28 40.2 +1.0**
GOMU PcP **PcP** **14 30 34.7 +1.7**
GOMU pmax pmax
comp=Z,9.0nm,1.2s
GOMU pmax pmax
comp=Z,54nm,7.6s
GOMU LR LR
comp=Z,110nm,9.1s
GOMU LR LR
comp=Z,94nm,8.8s
GOMU LR LR
comp=Z,83nm,8.9s
TWOA Tennyson Woods 42.10 165 P **P** **14 28 41.7 +1.5**

TAPN Taplejung 42.56 305 *e*P **P** **14 28 44.4 0.0**
comp=Z,29nm,0.7s
ODAN Odare 42.64 304 *e*P **P** **14 28 44.5 -0.5**
comp=Z,18nm,1.0s
ARMA Armidale 43.31 147 P **P** **14 28 51.2 +1.1**
baz=43,SNR=14
ARMA Armidale 43.31 147 P **P** **14 28 48.5 -1.7**
ARMA IAmb IAmb 14 28 55.8
comp=Z,26nm,1.2s
ARMA Armidale 43.31 147 P **P** **14 28 51.1 +1.0**
RAMN Ramite 43.32 304 *e*P **P** **14 28 50.8 +0.3**
comp=Z,108nm,1.2s
YSS Yuzh-Sakhalins 43.49 16 P **P** **14 28 51.1 -0.2**
YSS IAmb IAmb 14 28 54.6
comp=Z,9.4nm,0.9s
YSS Yuzh-Sakhalins 43.49 16 P **P** **14 28 51.0 -0.2**
YSS pP **pP** **14 29 15.6 +0.9**
KLR Kul'dur 43.64 5 LR LR 14 47 26.6
comp=Z,60nm,19.4s,baz=60,slow=36
GUN Gumba 44.28 305 *e*P **P** **14 28 58.1 -0.2**
comp=Z,73nm,0.9s
PKI Pulchoki 44.54 304 *e*P **P** **14 28 59.6 -0.7**
comp=Z,60nm,1.1s
PKIN Phulchoki 44.55 304 *e*P **P** **14 29 00.2 -0.2**
comp=Z,29nm,0.9s
ARPS Mount Arapiles 44.65 162 P **P** **14 29 01.8 +1.2**
baz=45,SNR=28
ARPS Mount Arapiles 44.65 162 P **P** **14 29 02.1 +1.5**
KKN Kakani 44.72 304 *e*P **P** **14 29 01.0 -0.7**
DMN Daman 44.80 304 *e*P **P** **14 29 02.0 -0.3**
comp=Z,66nm,1.1s
ULN Ulaanbaatar 45.16 342 P **P** **14 29 03.7 -1.0**
ULN IAmb IAmb 14 29 11.4
comp=Z,18nm,1.3s
ULN Ulaanbaatar 45.16 342 P **P** **14 29 05.4 +0.7**
GKN Gorkha 45.33 304 *e*P **P** **14 29 05.7 -0.7**
comp=Z,28nm,0.8s
SONM Songino Array 45.34 341 P **P** **14 29 05.3 -0.8**
comp=Z,5.5nm,1.1s,baz=162,slow=8.3,SNR=19
SONM PcP **PcP** **14 30 43.9 -0.1**
comp=Z,3.6nm,0.7s,baz=161,slow=3.9,SNR=9.3
comp=Z,5.5nm,1.1s
SONM Songino Array 45.34 341 P **P** **14 29 04.9 -1.2**
CAN Canberra 46.02 154 P **P** **14 29 12.8 +1.2**
CAN IAmb IAmb 14 29 14.6
comp=Z,20nm,0.8s
CAN Canberra 46.02 154 P **P** **14 29 13.9 +2.3**
CAN Canberra 46.02 154 P **P** **14 29 13.5 +2.0**
CAN pP **pwP** **14 29 36.8 -2.4**
KOLN Koldanda 46.10 303 *e*P **P** **14 29 12.2 -0.4**
CNB Canberra Magne 46.18 154 P **P** **14 29 14.4 +1.6**
TOO Toolangi 46.59 159 P **P** **14 29 16.2 +0.3**
baz=47,SNR=7.1
TOO Toolangi 46.59 159 P **P** **14 29 16.7 +0.7**
TOO IAmb IAmb 14 29 41.3
comp=Z,37nm,1.5s
TOO Toolangi 46.59 159 P **P** **14 29 16.5 +0.6**
PYUN Piuthan 46.73 304 *e*P **P** **14 29 17.3 -0.1**
comp=Z,79nm,0.8s
DZM Mont Dzumac 47.99 126 P **P** **14 29 27.2 0.0**
comp=Z,9.9nm,0.6s,baz=279,slow=18,SNR=14
comp=Z,9.9nm,0.6s
DZM Mont Dzumac 47.99 126 P **P** **14 29 27.5 +0.3**
DZM IAmb IAmb 14 29 46.0
comp=Z,6.8nm,0.7s
DZM Mont Dzumac 47.99 126 P **P** **14 29 28.0 +0.8**
GLAD Gladstone 50.51 159 P **P** **14 29 47.9 +2.0**
WMQ Urumqi 50.91 324 *e*P **P** **14 29 48.7 -0.3**
WMQ pmax pmax
comp=Z,10.0nm,0.7s
PETK Petropavlovsk- 53.80 23 P **P** **14 30 11.2 +1.1**
comp=Z,2.7nm,0.4s,baz=188,slow=4.3,SNR=5.0
comp=Z,2.7nm,0.4s
MK31 Makanchi Array 55.74 325 P **P** **14 30 23.1 -1.1**
MK31 IAmb IAmb 14 30 24.8
comp=Z,7.2nm,0.7s
MKAR Makanchi Array 55.74 325 P **P** **14 30 23.6 -0.6**
comp=Z,10nm,0.5s,baz=120,slow=8.0,SNR=160
MKAR ScP **ScP** **14 35 10.1 -2.1**
comp=Z,1.0nm,0.8s,baz=120,slow=4.3,SNR=3.7
comp=Z,10nm,0.5s
MKAR Makanchi Array 55.74 325 P **P** **14 30 23.4 -0.9**
MAKZ Makanchi 55.93 325 P **P** **14 30 24.6 -1.0**
MAKZ Makanchi 55.93 325 P **P** **14 30 24.9 -0.7**
MAKZ pP **pP** **14 30 49.5 -0.1**
YAK Yakutsk 56.29 2 P **P** **14 30 28.4 +0.6**
YAK Yakutsk 56.29 2 P **P** **14 30 28.6 +0.8**
KSH Kashi 56.40 314 P **P** **14 30 31.0 +1.8**
KSH pmax pmax
comp=Z,16nm,1.1s
KDJ Kajisay 56.64 318 P **P** **14 30 30.4 -0.5**
KDJ IAmb IAmb 14 30 32.0
comp=Z,14nm,1.1s
MA2 Magadan 56.93 15 P **P** **14 30 33.4 +1.0**
MA2 IAmb IAmb 14 30 59.1
comp=Z,9.1nm,1.2s
ULHL Ulahol 57.32 317 P **P** **14 30 35.5 -0.3**
SNR=7.3
BOOM Boomskoye usch 57.62 318 P **P** **14 30 37.7 -0.2**
BOOM IAmb IAmb 14 30 38.7
comp=Z,6.1nm,1.0s
TKM2 Tokmak 2 58.04 318 P **P** **14 30 41.0 +0.2**
SNR=9.2
KBK Karagaybulak 58.36 317 P **P** **14 30 43.5 +0.5**
SNR=5.7
UCH Uchtor 58.48 317 P **P** **14 30 44.5 +0.2**
SNR=18
ZAA0 Zalesovo Array 58.68 333 P **P** **14 30 43.5 -1.3**
ZAA0 IAmb IAmb 14 30 51.6
comp=Z,14nm,1.2s
ZALV Zalesovo Beam 58.68 333 P **P** **14 30 43.1 -1.6**
comp=Z,2.7nm,0.5s,baz=128,slow=6.3,SNR=14
comp=Z,2.7nm,0.5s
ZALV Zalesovo Beam 58.68 333 P **P** **14 30 43.3 -1.5**
AML Almayashu 59.01 316 P **P** **14 30 48.3 +0.5**
SNR=10
EKS2 Erkin-Say 59.16 317 P **P** **14 30 48.8 +0.3**
SNR=6.6
DRK Karamyk 59.39 313 P **P** **14 30 50.6 +0.3**
KURK Kurchatov 59.90 327 P **P** **14 30 52.2 -1.0**
KURK Kurchatov 59.90 327 P **P** **14 30 52.4 -0.8**
KURK pP **pP** **14 31 15.7 -1.7**
KURK sP **sP** **14 31 29.3 +1.0**
KBL Kabul 60.03 307 P **P** **14 30 53.9 -0.9**
SEY Seymchan 60.24 13 LR LR 14 55 36.6
comp=Z,45nm,21.6s,baz=6.5,slow=34
BTK Batken 60.30 313 P **P** **14 30 55.4 -0.9**
GAR Garm 60.32 312 P **P** **14 30 55.9 -0.6**
SHEM Shemya Is, Ala 61.01 31 LR LR 14 53 22.4
comp=Z,54nm,21.0s,baz=316,slow=32
CHGR Chuyangaron 61.08 311 P **P** **14 31 00.3 -1.4**
KK31 Karatay Array 61.55 316 P **P** **14 31 03.6 -1.0**
KKAR Karatay Array 61.55 316 P **P** **14 31 03.4 -1.2**
KKAR Karatay Array 61.55 316 P **P** **14 31 04.0 -0.6**
KKAR IAmb IAmb 14 31 05.6
comp=Z,21nm,1.2s
DCZ Deep Cove 62.60 149 P **P** **14 31 10.9 -0.6**
MLZ Mavora Lakes 63.04 148 P **P** **14 31 15.3 +0.8**
WHZ Wether Hill Ro 63.30 149 P **P** **14 31 16.7 +0.6**
WHZ IAmb IAmb 14 31 25.7
comp=Z,17nm,1.1s
THZ Tophouse 63.48 143 P **P** **14 31 17.4 -0.1**
KHZ Kahutara 64.24 143 P **P** **14 31 22.0 -0.4**
BKZ Black Stump Fm 64.29 139 P **P** **14 31 22.5 -0.4**
BKZ IAmb IAmb 14 31 30.1
comp=Z,17nm,1.1s
BRVK Borovoye 65.55 327 P **P** **14 31 30.1 -0.6**
BRVK IAmb IAmb 14 31 36.6
comp=Z,11nm,0.7s
BRVK Borovoye 65.55 327 P **P** **14 31 29.9 -0.9**
BRVK sP **sP** **14 32 05.6 -0.4**
TIXI Tiksi 65.92 1 P **P** **14 31 32.5 -0.2**
TIXI IAmb IAmb 14 31 34.7
comp=Z,13nm,1.1s
TIXI Tiksi 65.92 1 P **P** **14 31 32.8 +0.2**
NRIK Noril'sk 68.46 346 P **P** **14 31 49.5 +0.7**
comp=Z,11nm,0.5s,baz=138,slow=6.0,SNR=17
comp=Z,11nm,0.5s
NRIK Noril'sk 68.46 346 P **P** **14 31 48.8 0.0**
NRIK IAmb IAmb 14 31 50.5
comp=Z,17nm,0.8s
GEYT Alibeck 69.37 308 P **P** **14 31 54.5 -0.7**
comp=Z,7.7nm,1.1s,baz=183,slow=10.0,SNR=9.3
comp=Z,7.7nm,1.1s
GEYT Alibeck 69.37 308 P **P** **14 31 55.0 -0.2**
GEYT IAmb IAmb 14 31 56.4
comp=Z,11nm,1.1s
GYA0B ALIBECK ARRAY 69.37 308 P **P** **14 31 55.2 0.0**
GYA0B IAmb IAmb 14 31 56.3
comp=Z,14nm,1.1s
ABKAR Akbulak array 70.40 320 P **P** **14 31 59.8 -1.4**
AKTO Aktyubinsk 71.90 321 P **P** **14 32 09.0 -1.2**
comp=Z,5.9nm,0.5s,baz=101,slow=10,SNR=20
AKTO LR LR 15 07 38.1
comp=Z,64nm,18.9s,baz=14,slow=39
comp=Z,5.9nm,0.5s
UNV Unalaska Valle 72.06 35 P **P** **14 32 10.7 -0.4**
UNV IAmb IAmb 14 32 39.1
comp=Z,8.4nm,0.9s
UNV Unalaska Valle 72.06 35 P **P** **14 32 11.6 +0.5**
baz=255
AKUT Akutan 72.56 35 P **P** **14 32 13.8 -0.2**
CASY Casey 72.69 187 P **P** **14 32 15.2 +0.8**
CASY IAmb IAmb 14 32 16.8
comp=Z,16nm,0.9s
ARU Arti 73.09 327 P **P** **14 32 16.2 -1.0**
comp=Z,8.6nm,0.5s,baz=88,slow=6.4,SNR=6.9
comp=Z,8.6nm,0.5s
ARU Arti 73.09 327 P **P** **14 32 16.1 -1.0**
ARU IAmb IAmb 14 32 17.6
comp=Z,9.5nm,0.6s
TNA Tin City 74.97 23 P **P** **14 32 29.8 +2.0**
baz=250
N16K Nishlik Lake 77.66 29 P **P** **14 32 45.4 +2.2**
baz=260
KIRV Kirov 78.36 329 P **P** **14 32 46.3 -0.7**
comp=Z,17nm,0.6s,baz=94,slow=2.6,SNR=6.1
comp=Z,17nm,0.6s
CHIR Chirikof Islan 78.62 34 P **P** **14 32 49.3 +0.7**
BELG Belogornoye 78.63 322 P **P** **14 32 47.6 -1.1**
comp=Z,17nm,0.7s,baz=108,slow=3.7,SNR=4.7
BELG LR LR 15 11 21.3
comp=Z,70nm,19.9s,baz=314,slow=38
comp=Z,17nm,0.7s
N18K Kilae Creek 79.10 29 P **P** **14 32 52.8 +1.7**
GCSA Galena City Sc 79.27 25 P **P** **14 32 53.3 +1.4**
baz=260
SVW2 Sparrevohn 79.30 29 P **P** **14 32 53.7 +1.4**
O18K Koktuh Hills 79.33 30 P **P** **14 32 53.2 +0.8**
O18K IAmb IAmb 14 33 09.5
comp=Z,24nm,1.4s
O18K Koktuh Hills 79.33 30 P **P** **14 32 54.4 +2.0**
baz=263
RAYN Ar Rayn 79.36 293 P **P** **14 32 51.9 -1.5**
RAYN IAmb IAmb 14 32 53.9
comp=Z,18nm,1.5s
TTA Tatalina 79.36 27 P **P** **14 32 53.3 +0.7**
TTA Tatalina 79.36 27 P **P** **14 32 54.5 +1.8**
baz=262
SII Sitkinak Islan 79.50 34 P **P** **14 32 54.2 +0.8**
L19K White Mountain 79.79 28 P **P** **14 32 55.9 +1.0**
L19K White Mountain 79.79 28 P **P** **14 32 56.3 +1.4**
baz=263
N19K Bonanza Creek 79.80 29 P **P** **14 32 56.2 +1.1**
N19K IAmb IAmb 14 33 02.9
comp=Z,11nm,1.4s
N19K Bonanza Creek 79.80 29 P **P** **14 32 56.7 +1.7**
baz=263
Q19K Cape Douglas, 80.02 31 P **P** **14 32 56.7 +0.6**
baz=264
OHAK Old Harbor 80.05 33 P **P** **14 32 57.0 +0.7**
OHAK IAmb IAmb 14 33 00.2
comp=Z,24nm,1.4s
OHAK Old Harbor 80.05 33 P **P** **14 32 57.5 +1.2**
baz=265
K20K Telida 80.29 27 P **P** **14 32 59.3 +1.7**
K20K Telida 80.29 27 P **P** **14 32 59.6 +2.0**
baz=263
J20K Nowinta River 80.36 26 P **P** **14 32 59.8 +2.0**
J20K Nowinta River 80.36 26 P **P** **14 32 59.9 +2.0**
baz=263
KDAK Kodiak Island 80.47 32 LR LR 15 03 53.7
comp=Z,58nm,21.7s,baz=233,slow=32
KDAK Kodiak Island 80.47 32 P **P** **14 32 59.4 +0.8**
KDAK Kodiak Island 80.47 32 P **P** **14 32 59.7 +1.2**
baz=266
M20K Styx River 80.56 28 P **P** **14 32 59.8 +0.6**
M20K Styx River 80.56 28 P **P** **14 33 00.4 +1.3**
baz=264
IMAR Indian Mountai 80.74 24 P **P** **14 33 00.6 +0.7**
H21K Melozitna Rive 81.09 24 P **P** **14 33 02.9 +1.1**
H21K Melozitna Rive 81.09 24 P **P** **14 33 03.0 +1.2**
baz=264,SNR=5.4
PPLA Purkeypile 81.09 27 P **P** **14 33 02.8 +0.8**
PPLA Purkeypile 81.09 27 P **P** **14 33 03.0 +1.0**
baz=265
CAST Castle Rocks 81.19 27 P **P** **14 33 02.7 +0.4**
baz=265
CNPM China Poot 81.30 31 P **P** **14 33 03.0 0.0**
CNPM IAmb IAmb 14 33 10.5
comp=Z,24nm,1.2s
SKT Skwentna 81.32 28 P **P** **14 33 03.3 +0.2**
SKT Skwentna 81.32 28 P **P** **14 33 03.1 0.0**
baz=266
KBZ Khabaz 81.36 313 P **P** **14 33 02.5 -1.1**
comp=Z,3.5nm,0.7s,baz=176,slow=3.3,SNR=8.7
comp=Z,3.5nm,0.7s
I21K Tanana 81.39 25 P **P** **14 33 05.1 +1.8**
I21K Tanana 81.39 25 P **P** **14 33 04.6 +1.2**
baz=265,SNR=8.4
CAPN Captain Cook N 81.42 29 P **P** **14 33 04.7 +1.2**
baz=266
BRLK Bradley Lake 81.49 31 P **P** **14 33 04.8 +0.8**
KVAR Kislovodsk Arr 81.51 313 P **P** **14 33 03.9 -0.7**
comp=Z,2.7nm,0.5s,baz=88,slow=23,SNR=2.5
comp=Z,2.7nm,0.5s
SUA Susitna One 81.66 29 P **P** **14 33 05.7 +0.6**
SUA IAmb IAmb 14 33 06.8
comp=Z,7.8nm,0.8s
SUA Susitna One 81.66 29 P **P** **14 33 05.9 +0.9**
baz=266
KTH Kantishna Hill 81.72 27 P **P** **14 33 06.1 +0.9**
KTH IAmb IAmb 14 33 11.2
comp=Z,14nm,1.4s
BPAW Bear Paw Mtn. 81.73 26 P **P** **14 33 04.7 -0.5**
BPAW Bear Paw Mtn. 81.73 26 P **P** **14 33 06.0 +0.8**
baz=266,SNR=6.9
MLY Manley 81.90 25 P **P** **14 33 06.5 +0.4**
MLY IAmb IAmb 14 33 08.7
comp=Z,6.0nm,0.7s
MLY Manley 81.90 25 P **P** **14 33 06.5 +0.4**
baz=266,SNR=13
CUT Chulitna 81.94 28 P **P** **14 33 07.5 +1.2**
baz=267
M22K Willow 81.98 29 P **P** **14 33 07.4 +1.0**
baz=267
TRF Thorofare Moun 81.99 27 P **P** **14 33 07.3 +0.6**
TRF Thorofare Moun 81.99 27 P **P** **14 33 07.6 +0.8**
baz=267
O22K Cooper Landing 82.11 30 P **P** **14 33 08.2 +1.0**
baz=268
RC01 Rabbit Creek A 82.13 29 P **P** **14 33 07.8 +0.5**
RC01 IAmb IAmb 14 33 13.7
comp=Z,17nm,1.1s
RC01 Rabbit Creek A 82.13 29 P **P** **14 33 08.2 +0.9**
baz=267
SEW Seward 82.23 30 P **P** **14 33 08.2 +0.4**
SEW IAmb IAmb 14 33 14.9
comp=Z,18nm,1.3s
SEW Seward 82.23 30 P **P** **14 33 08.4 +0.6**
baz=268
PMR Palmer 82.44 29 P **P** **14 33 09.9 +1.1**
baz=268
VOI Vohitsoka 82.45 247 P **P** **14 33 09.3 -0.6**
H23K Yukon River 82.45 24 P **P** **14 33 09.6 +0.7**
H23K IAmb IAmb 14 33 13.9
comp=Z,5.9nm,0.7s
H23K Yukon River 82.45 24 P **P** **14 33 10.2 +1.3**
baz=267,SNR=7.1
I23K Minto, Yukon-K 82.49 25 P **P** **14 33 09.8 +0.8**
I23K IAmb IAmb 14 33 12.6
comp=Z,5.9nm,0.7s
I23K Minto, Yukon-K 82.49 25 P **P** **14 33 10.2 +1.1**
baz=267,SNR=8.8
NEA2 Nenana 82.59 26 P **P** **14 33 10.9 +1.3**
baz=268
TOLK Toolik Lake Re 82.59 22 P **P** **14 33 11.0 +1.4**
TOLK IAmb IAmb 14 33 14.7
comp=Z,7.7nm,0.8s
TOLK Toolik Lake Re 82.59 22 P **P** **14 33 11.1 +1.4**
baz=267
MCK McKinley 82.61 27 P **P** **14 33 10.2 +0.4**

MCK IAmb IAmb 14 33 11.6
comp=Z,11nm,0.8s
MCK McKinley 82.61 27 P **P** **14 33 10.5 +0.7**
baz=268,SNR=7.0
RND Reindeer 82.64 27 P **P** **14 33 10.4 +0.4**
WAT1 Susitna Watana 82.75 27 P **P** **14 33 11.8 +1.2**
baz=268
KNK Knik Glacier 82.76 29 P **P** **14 33 11.8 +1.2**
baz=268
SML Sawmill 82.83 28 P **P** **14 33 11.9 +0.9**
SML IAmb IAmb 14 33 40.5
comp=Z,7.3nm,0.8s
SML Sawmill 82.83 28 P **P** **14 33 12.4 +1.4**
baz=269
MDM Murphy Dome 82.96 25 P **P** **14 33 11.1 -0.5**
WRH Wood River Hil 83.01 26 P **P** **14 33 11.3 -0.5**
M23K Glacier View 83.12 29 P **P** **14 33 13.9 +1.4**
baz=269
WAT6 Susitna Watana 83.12 28 P **P** **14 33 14.1 +1.5**
baz=269
H24K Noodor Dome 83.13 24 P **P** **14 33 13.9 +1.4**
H24K IAmb IAmb 14 33 18.0
comp=Z,7.5nm,0.8s
H24K Noodor Dome 83.13 24 P **P** **14 33 13.3 +0.8**
baz=268,SNR=11
CCB Clear Creek Bu 83.14 26 P **P** **14 33 12.9 +0.5**
DHY Denali Highway 83.30 27 P **P** **14 33 14.4 +0.9**
baz=269
SCM Sheep Creek Mo 83.31 28 P **P** **14 33 14.4 +0.9**
SCM IAmb IAmb 14 33 17.0
comp=Z,15nm,1.0s
SCM Sheep Creek Mo 83.31 28 P **P** **14 33 14.7 +1.2**
baz=270
GLI Glacier Island 83.41 29 P **P** **14 33 15.3 +1.3**
HDA Harding Lake 83.50 26 P **P** **14 33 14.1 -0.2**
HDA IAmb IAmb 14 33 15.4
comp=Z,5.5nm,0.7s
HDA Harding Lake 83.50 26 P **P** **14 33 14.3 0.0**
baz=270,SNR=6.6
KLMR Klimovskoe 83.52 331 *e*P **P** **14 33 12.8 -1.7**
KLMR AMP 14 33 17.8
comp=Z,25nm,1.1s
IL31 83.53 26 P **P** **14 33 14.1 -0.3**
ILAR Eielson Array 83.53 26 P **P** **14 33 14.2 -0.3**
comp=Z,2.3nm,0.8s,baz=239,slow=5.0,SNR=18
comp=Z,2.3nm,0.8s
ILAR Eielson Array 83.53 26 P **P** **14 33 14.3 -0.2**
FID Port Fidalgo 83.71 30 P **P** **14 33 15.3 -0.2**
Q23K Middleton Isla 83.79 31 P **P** **14 33 16.3 +0.4**
baz=271
M24K Tolsona, Glenn 83.85 28 P **P** **14 33 16.8 +0.5**
baz=270
KLU Klutina 83.98 29 P **P** **14 33 18.0 +1.0**
KLU IAmb IAmb 14 33 20.5
comp=Z,5.7nm,0.6s
KLU Klutina 83.98 29 P **P** **14 33 17.9 +1.0**
baz=271
K24K Donnelly Dome 84.02 26 P **P** **14 33 18.0 +0.9**
baz=271
DIV Divide 84.06 29 P **P** **14 33 18.1 +0.7**
DIV IAmb IAmb 14 33 20.7
comp=Z,12nm,0.7s
PAX Paxson 84.17 27 P **P** **14 33 18.9 +1.0**
PAX IAmb IAmb 14 33 20.3
comp=Z,10nm,1.4s
PAX Paxson 84.17 27 P **P** **14 33 18.6 +0.7**
baz=271
J25K Salcha River, 84.18 26 P **P** **14 33 17.6 -0.4**
J25K IAmb IAmb 14 33 21.2
comp=Z,4.6nm,0.7s
J25K Salcha River, 84.18 26 P **P** **14 33 17.7 -0.2**
baz=271,SNR=10
RIDG Independent Ri 84.43 27 P **P** **14 33 19.7 +0.6**
RIDG IAmb IAmb 14 33 23.1
comp=Z,6.7nm,0.8s
RIDG Independent Ri 84.43 27 P **P** **14 33 20.6 +1.4**
baz=272,SNR=6.4
BMAR Burnt Mountain 84.45 23 P **P** **14 33 20.4 +1.2**
N25K Chitina, Valde 84.61 29 P **P** **14 33 21.4 +1.3**
N25K IAmb IAmb 14 33 49.4
comp=Z,11nm,1.1s
N25K Chitina, Valde 84.61 29 P **P** **14 33 21.3 +1.2**
baz=272
BMRM Bremner River 84.63 29 P **P** **14 33 21.7 +1.5**
BMRM IAmb IAmb 14 33 24.9
comp=Z,10nm,0.9s
BMRM Bremner River 84.63 29 P **P** **14 33 21.0 +0.8**
baz=272
SCRK Sand Creek 84.80 26 P **P** **14 33 22.3 +1.2**
SCRK Sand Creek 84.80 26 P **P** **14 33 22.1 +1.0**
baz=272
J26L Joseph Creek 84.97 26 P **P** **14 33 22.7 +0.8**
J26L Joseph Creek 84.97 26 P **P** **14 33 21.9 0.0**
baz=272,SNR=9.0
GLB Gilahina Butte 84.99 29 P **P** **14 33 23.3 +1.3**
GLB IAmb IAmb 14 33 25.7
comp=Z,5.9nm,0.7s
VRDI Verde Repeater 85.17 29 P **P** **14 33 24.8 +1.7**
VRDI IAmb IAmb 14 33 25.5
comp=Z,6.3nm,0.8s
M26K Nabesna, AK 85.33 28 P **P** **14 33 25.3 +1.6**
baz=273
MCARA McCarthy VSAT 85.37 29 P **P** **14 33 25.3 +1.5**
baz=273
VNDA Vanda 85.39 173 P **P** **14 33 23.1 -0.5**
comp=Z,2.8nm,0.6s,baz=320,slow=5.7,SNR=16
comp=Z,2.8nm,0.6s
VNDA Vanda 85.39 173 P **P** **14 33 24.4 +0.8**
MAW Mawson 85.43 200 P **P** **14 33 24.4 +0.5**
comp=Z,2.9nm,0.7s,baz=17,slow=21,SNR=3.8
comp=Z,2.9nm,0.7s
MAW Mawson 85.43 200 P **P** **14 33 25.0 +1.2**
TGL Tana Glacier 85.50 30 P **P** **14 33 26.2 +1.5**
TGL IAmb IAmb 14 33 29.1
comp=Z,7.7nm,0.8s
WAX Waxell Ridge 85.51 30 P **P** **14 33 26.4 +1.8**
WAX IAmb IAmb 14 33 28.4
comp=Z,8.6nm,0.7s
K27K Chicken 85.64 26 P **P** **14 33 26.9 +1.7**
baz=274
L27K Beaver Creek, 85.82 27 P **P** **14 33 27.4 +1.4**
L27K Beaver Creek, 85.82 27 P **P** **14 33 27.5 +1.4**
baz=274
BCAR Beaver Creek A 85.84 27 P **P** **14 33 27.5 +1.3**
PPT Papeete 86.09 108 LR LR 15 07 42.1
comp=Z,71nm,18.7s,baz=154,slow=32
CTG Chitna Glacier 86.22 29 P **P** **14 33 29.7 +1.5**
baz=275
SBA Scott Base 86.31 172 P **P** **14 33 29.4 +1.4**
BVCY Beaver Creek 86.32 28 P **P** **14 33 30.5 +2.0**
baz=275
ASF Jabal al Asfar 86.53 302 P **P** **14 33 29.3 -1.0**
comp=Z,5.3nm,0.9s,baz=328,slow=3.7,SNR=6.0
comp=Z,5.3nm,0.9s
DAWY Dawson 86.81 26 P **P** **14 33 32.1 +1.2**
baz=276
I29M Ogilvie Camp, 87.12 25 P **P** **14 33 34.2 +1.8**
baz=277
EPYK Eagle Plains 87.63 24 P **P** **14 33 35.4 +0.6**
baz=279
KEV Kevo 87.94 340 P **P** **14 33 36.4 +0.3**
KEV IAmb IAmb 14 33 57.8
comp=Z,15nm,1.3s
M30M Minto, Yukon 88.17 27 P **P** **14 33 39.4 +1.9**
baz=279
N30M Aishikik Lake 88.20 29 P **P** **14 33 38.6 +0.9**
baz=278
BRTR Keskin Array B 88.48 310 P **P** **14 33 37.7 -1.8**
comp=Z,4.3nm,1.0s,baz=98,slow=5.1,SNR=9.0
comp=Z,4.3nm,1.0s
BRTR Keskin Array B 88.48 310 P **P** **14 33 38.0 -1.6**
ARCES ARCESS Array B 88.50 340 P **P** **14 33 38.5 -0.3**
comp=Z,7.1nm,0.7s,baz=80,slow=6.5,SNR=17
comp=Z,7.1nm,0.7s
ARCES ARCESS Array B 88.50 340 P **P** **14 33 38.2 -0.6**
SPB2 Spitsbergen Ar 88.50 349 P **P** **14 33 38.4 -0.3**
SPITS Spitsbergen Ar 88.50 349 P **P** **14 33 38.5 -0.2**
comp=Z,6.7nm,0.7s,baz=85,slow=10,SNR=9.5
comp=Z,6.7nm,0.7s
INK Inuvik 88.51 21 P **P** **14 33 38.8 0.0**
INK IAmb IAmb 14 34 06.9
comp=Z,6.5nm,1.2s
FARO Faro, Yukon 89.81 27 P **P** **14 33 46.4 +1.3**
baz=282
FIA1 FINESS Array S 89.94 332 P **P** **14 33 44.9 -0.8**
FIA1 IAmb IAmb 14 34 10.9
comp=Z,8.2nm,1.1s
FINES FINESS Array B 89.94 332 P **P** **14 33 44.7 -1.0**
comp=Z,3.9nm,0.5s,baz=59,slow=5.1,SNR=54
comp=Z,3.9nm,0.5s
AKASG Malin Array Be 90.14 321 P **P** **14 33 45.5 -1.4**
comp=Z,0.4nm,0.3s,baz=61,slow=4.6,SNR=8.5
comp=Z,0.4nm,0.3s
DLBC Dease Lake 92.29 31 LR LR 15 13 44.1
comp=Z,36nm,19.5s,baz=298,slow=34
MLR Muntele Rosu 93.23 316 P **P** **14 34 01.2 -0.3**
comp=Z,2.5nm,0.6s,baz=139,slow=5.3,SNR=3.7
comp=Z,2.5nm,0.6s
BUR08 Bucovina Ar. S 93.29 318 P **P** **14 34 01.6 -0.1**
BUR08 IAmb IAmb 14 34 04.5
comp=Z,4.0nm,1.1s
CRVS Cervenica-Dubn 95.43 320 *e*PDIFF **P** **14 34 11.8 +0.5**
HFS Hagfors 96.12 332 P **P** **14 34 12.3 -1.9**
comp=Z,1.4nm,0.5s,baz=108,slow=4.8,SNR=9.2
comp=Z,1.4nm,0.5s
NB2 NORSAR Subarra 96.88 334 P **P** **14 34 16.4 -1.3**
comp=Z,1.0nm,0.8s,baz=66,slow=4.8
NOA NORSAR Array B 96.88 334 P **P** **14 34 15.7 -1.9**
comp=Z,1.2nm,0.7s,baz=65,slow=4.6,SNR=7.4
NOA LR LR 15 23 57.2
comp=Z,23nm,18.1s,baz=280,slow=39
comp=Z,1.2nm,0.7s
GERES GERESS Array B 100.32 322 P **Pdif** **14 34 32.5 -0.9**
comp=Z,0.2nm,0.2s,baz=58,slow=3.7,SNR=4.1
J04D Umpqua Nationa 101.55 44 P **Pdif** **14 34 40.3 +1.1**
baz=289
NVAR Mina Array Bea 105.91 48 PKKPbc PKKPbc 14 50 34.3 -0.5
comp=Z,0.4nm,0.6s,baz=138,slow=4.5,SNR=5.3
ANMO Albuquerque 116.00 47 P **PKPdf** **14 39 29.7 -0.2**
baz=298
MNTX Cornudas Mount 118.31 49 P **PKiKP** **14 39 34.9 +0.7**
baz=298
SCHQ Schefferville 118.72 9 PKP **PKPdf** **14 39 33.8 -0.5**
comp=Z,2.1nm,0.5s,baz=283,slow=4.6,SNR=4.7
TXAR Lajitas Array 120.71 51 PKP **PKiKP** **14 39 39.7 +0.6**
comp=Z,0.5nm,0.7s,baz=215,slow=1.3,SNR=6.3
TORD Torodi Ar. Bea 121.92 289 PKP **PKPdf** **14 39 41.4 -0.2**
comp=Z,5.1nm,0.7s,baz=52,slow=1.9,SNR=29
TORD Torodi Ar. Bea 121.92 289 **PKPdf** **14 39 41.0 -0.6**
U40A Yellville 124.38 38 P **PKPdf** **14 39 45.8 +0.1**
baz=310
W39A Magazine 124.54 40 P **PKiKP** **14 39 46.3 -0.1**
baz=309
MIAR Mount Ida 125.08 40 P **PKiKP** **14 39 48.2 +0.7**
baz=309
WVT Waverly 127.52 35 P **PKiKP** **14 39 52.2 0.0**
baz=315
LBNH Lisbon 127.66 17 P **PKPdf** **14 39 51.9 +0.1**
baz=337
OXF Oxford 127.71 38 P **PKPdf** **14 39 52.3 +0.1**
baz=313
O53A New Philadelph 127.75 27 P **PKPdf** **14 39 52.1 +0.1**
baz=324
SSPA Standing Stone 128.83 24 P **PKPdf** **14 39 54.0 0.0**
baz=328
L61B Northampton 129.07 18 P **PKiKP** **14 39 55.1 -0.1**
baz=335
KIC Kosan Boka 129.72 283 ⇑ *i*PKP1 **PKiKP** **14 39 57.2 -0.1**
comp=Z,11nm,0.6s
DBIC Dimbokro 129.76 283 PKP **PKPdf** **14 39 55.9 -0.6**
comp=Z,2.8nm,0.5s,baz=40,slow=1.6,SNR=6.4
TIC Toumodi 129.92 283 ⇑ *e*PKP1 **PKiKP** **14 39 57.6 -0.1**
LIC Lamto 130.02 283 ⇑ *e*PKP1 **PKiKP** **14 39 58.4 +0.5**
comp=Z,4.8nm,0.5s
PLCA Paso Flores 141.96 159 PKP **PKPdf** **14 40 17.8 -0.8**
comp=Z,4.9nm,0.8s,baz=254,slow=2.3,SNR=6.2
AAGR Agrelo 149.29 155 *i* P **PKiKP** **14 40 37.4 +0.5**
ASAL Salagasta 149.71 154 *i* P **PKiKP** **14 40 37.9 +0.2**
AUSP Uspallata 149.78 153 *i* P **PKiKP** **14 40 38.8 +0.7**
RTLS Leoncito 150.18 153 *i* P **PKiKP** **14 40 39.5 +0.5**
MRA San Martin 151.11 159 *i* P **PKiKP** **14 40 40.9 +0.2**
ACCO Cerro Coronel 151.30 152 *i* P **PKiKP** **14 40 42.0 +0.6**
AROD Rodeo 151.45 150 *i* P **PKiKP** **14 40 42.5 +0.9**
ACDV Cuesta del Vie 151.62 151 *i* P **PKiKP** **14 40 42.7 +0.9**
ACHE Chepes 151.87 156 *i* P **PKiKP** **14 40 42.7 +0.4**
AVFE Valle Fertil 151.97 154 *i* P **PKiKP** **14 40 43.1 +0.7**
ACLC CERRO LA CRUZ 153.25 154 *i* P **PKiKP** **14 40 45.8 +0.5**
CPUP Villa Florida 159.17 171 PKP **PKPdf** **14 40 44.0 -1.2**
comp=Z,2.3nm,0.7s,baz=126,slow=5.8,SNR=2.9
CPUP PKPab **sPKPdf** **14 41 21.6 -0.9**
comp=Z,2.8nm,0.9s,baz=233,slow=4.2,SNR=5.8
LPAZ La Paz 162.34 128 PKP **PKPdf** **14 40 48.0 -1.6**
comp=Z,1.7nm,0.7s,baz=307,slow=2.8,SNR=7.3
LPAZ PKPab **PKPab** **14 41 36.9 -0.4**
comp=Z,1.7nm,0.7s,baz=166,slow=6.8,SNR=4.6

*NEIC **07** 14:28:56.0±1.1, 17.6S±0.2×178.1W±0.0, h601km±6km, mb4.2/147, Error ellipse: s-maj=24.4km s-min=11.1km az=183.0*
*IDC **07** 14:28:57.1±1.3, 18.1S×178.0W, h637km±10km, mb3.4/12, mbtmp4.4/14, Error ellipse: s-maj=35.1km s-min=11.2km az=155.0*
ISC 07 14:28:53.9±0.6, 18.2S±0.1×177.8W±0.0, h600km, n268, σ1 903/263, mb4.2/89, 12C-10D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.94**	**276**	P	**P**	**14 30 22.5**	**+3.4**
	70nm,0.5s,baz=157,slow=4.7,SNR=86						
MSVF				S	**S**	**14 31 35.4**	**+6.9**
	72nm,1.1s,baz=140,slow=22,SNR=15						
MSVF	**Nonsavu**	**3.94**	**276**	P	**P**	**14 30 22.2**	**+3.1**
MSVF	**Nonsavu**	**3.94**	**276**	P	**P**	**14 30 22.5**	**+3.4**
MARNC	**Mare, Loyalty**	**13.70**	**254**	P	**P**	**14 31 47.0**	**-2.9**
DZM	**Mont Dzumac**	**15.27**	**253**	P	**P**	**14 32 05.3**	**+0.6**
	3.4nm,0.5s,baz=116,slow=19,SNR=8.6						
DZM	**Mont Dzumac**	**15.27**	**253**	P	**P**	**14 32 02.2**	**-2.5**
WHZ	**Wether Hill Ro**	**30.06**	**200**	P	P	14 34 16.5	+0.6
ARMA	**Armidale**	**30.29**	**240**	P	P	14 34 15.2	-3.0
ARMA	**Armidale**	**30.29**	**240**	P	P	14 34 15.4	-2.9
CTA	**Charters Tower**	**33.94**	**261**	P	**P**	**14 34 49.1**	**-0.1**
	4.1nm,0.7s,baz=87,slow=12,SNR=3.4						
	4.1nm,0.7s						
CTAO	**Charters Tower**	**33.94**	**261**	P	**P**	**14 34 49.3**	**+0.1**
CTAO				IAmb	IAmb	14 34 50.2	
	comp=Z,4.9nm,0.8s						
TOO	**Toolangi**	**37.43**	**231**	P	**P**	**14 35 19.6**	**+1.9**
TOO				IAmb	IAmb	14 35 40.4	
	comp=Z,9.3nm,1.1s						
COEN	**Coen**	**37.65**	**271**	P	**P**	**14 35 20.6**	**+0.8**
WR0	**Warramunga Arr**	**44.93**	**260**	P	**P**	**14 36 17.1**	**+0.1**
WR0				IAmb	IAmb	14 36 24.4	
	comp=Z,11nm,1.3s						
WB0	**Warramunga Arr**	**45.09**	**260**	P	**P**	**14 36 18.1**	**-0.2**
WB2	**Warramunga Arr**	**45.11**	**260**	P	**P**	**14 36 18.3**	**-0.1**
WB2				IAmb	IAmb	14 36 23.8	
	comp=Z,12nm,1.2s						
WRAB	**Tennant Creek**	**45.11**	**260**	P	**P**	**14 36 18.2**	**-0.2**
WRAB				IAmb	IAmb	14 36 30.3	
	comp=Z,10nm,1.2s						
WRA	**Warramunga Arr**	**45.12**	**260**	P	**P**	**14 36 18.2**	**-0.3**
	comp=Z,1.9nm,0.5s,baz=96,slow=6.8,SNR=4.3						
WRA				S	**S**	**14 42 12.0**	**-3.5**
	comp=Z,1.5nm,1.1s,baz=93,slow=14,SNR=3.6						
	comp=Z,1.9nm,0.5s						
WRA	**Warramunga Arr**	**45.12**	**260**	P	**P**	**14 36 18.1**	**-0.4**
AS31	**Alice Springs**	**45.24**	**254**	P	**P**	**14 36 19.1**	**-0.4**
ASAR	**Alice Springs**	**45.25**	**254**	P	**P**	**14 36 19.2**	**-0.3**
	comp=Z,2.7nm,0.5s,baz=95,slow=7.3,SNR=6.4						
ASAR				PcP	**PcP**	**14 37 45.0**	**-1.4**
	comp=Z,2.3nm,0.8s,baz=99,slow=4.6,SNR=5.5						
ASAR				S	**S**	**14 42 14.6**	**-2.6**
	comp=Z,1.6nm,0.8s,baz=91,slow=15,SNR=9.4						
	comp=Z,2.7nm,0.5s						
ASAR	**Alice Springs**	**45.25**	**254**	P	**P**	**14 36 18.8**	**-0.6**
SIJI	**Sorong**	**52.83**	**283**	P	**P**	**14 37 15.4**	**+0.1**
	comp=Z,7.7nm,0.5s,baz=180,slow=22,SNR=5.0						
	comp=Z,7.7nm,0.5s						
SOEI	**Soe**	**56.62**	**270**	P	**P**	**14 37 42.8**	**+1.0**
SOEI				IAmb	IAmb	14 37 46.2	
	comp=Z,28nm,1.5s						
PSA00	**Pilbara Seismi**	**58.37**	**255**	P	**P**	**14 37 52.7**	**-0.8**
MBWA	**Marble Bar**	**58.54**	**256**	P	**P**	**14 37 53.8**	**-0.8**
JHJ2	**Mitsune**	**65.09**	**321**	P	**P**	**14 38 37.0**	**+0.3**
MJAR	**Matsushiro Arr**	**68.44**	**323**	P	**P**	**14 38 56.8**	**-0.4**
	comp=Z,2.8nm,0.7s,baz=162,slow=5.8,SNR=9.0						
	comp=Z,2.8nm,0.7s						
MJAR	**Matsushiro Arr**	**68.44**	**323**	P	**P**	**14 38 56.5**	**-0.7**
MAJO	**Matsushiro**	**68.44**	**323**	P	**P**	**14 38 56.8**	**-0.5**
MAJO				IAmb	IAmb	14 38 57.9	
	comp=Z,3.8nm,0.7s						
MJB9	**Matsu-Tunnel**	**68.45**	**323**	P	**P**	**14 38 56.6**	**-0.6**
MJB9				IAmb	IAmb	14 38 57.8	
	comp=Z,3.7nm,0.7s						
JSD	**Sado**	**69.47**	**324**	P	**P**	**14 39 03.6**	**+0.3**
JSD				IAmb	IAmb	14 39 04.5	
	comp=Z,6.9nm,0.7s						
ADK	**Adak**	**69.76**	**1**	P	**P**	**14 39 04.4**	**-0.3**
JTM	**Tenmabayashi**	**69.98**	**328**	P	**P**	**14 39 06.3**	**+0.1**
SMY	**Shemya**	**70.95**	**355**	P	**P**	**14 39 10.1**	**-1.5**
UNV	**Unalaska Valle**	**72.38**	**7**	P	**P**	**14 39 18.7**	**-1.2**
UNV				IAmb	IAmb	14 39 19.6	
	comp=Z,10nm,0.9s						
AKUT	**Akutan**	**72.75**	**7**	P	**P**	**14 39 20.7**	**-1.3**
SSLB	**Suanglung**	**72.83**	**303**	P	**P**	**14 39 22.1**	**-1.2**
SSLB				IAmb	IAmb	14 39 47.2	
	comp=Z,4.4nm,0.7s						
TPUB	**Ta-pu**	**72.86**	**302**	P	**P**	**14 39 21.9**	**-1.5**
KSM	**Kuching**	**73.26**	**277**	P	**P**	**14 39 24.8**	**-1.1**
KSM				IAmb	IAmb	14 39 27.2	
	comp=Z,5.6nm,0.8s						
YSS	**Yuzh-Sakhalins**	**73.89**	**333**	P	**P**	**14 39 29.1**	**+0.4**
YSS				IAmb	IAmb	14 39 31.2	
	comp=Z,7.6nm,0.9s						
PETK	**Petropavlovsk-**	**74.07**	**345**	P	**P**	**14 39 28.5**	**-1.1**
	comp=Z,5.8nm,0.7s,baz=128,slow=6.2,SNR=4.4						
	comp=Z,5.8nm,0.7s						
PETK	**Petropavlovsk-**	**74.07**	**345**	P	**P**	**14 39 28.9**	**-0.7**
KSRS	**Korea Array**	**75.26**	**318**	P	**P**	**14 39 36.2**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=140,slow=6.1,SNR=1.7						
	comp=Z,0.4nm,0.5s						
CMB	**Columbia Colle**	**77.66**	**43**	P	**P**	**14 39 50.5**	**+0.7**
YUH	**Yuha Desert**	**77.80**	**50**	P	**P**	**14 39 51.7**	**+1.1**
OHAK	**Old Harbor**	**77.86**	**13**	P	**P**	**14 39 50.1**	**-0.1**
SLBS	**Sierra La Lagu**	**78.22**	**60**	P	**P**	**14 39 54.2**	**+1.1**
SLBS				IAmb	IAmb	14 39 59.6	
	comp=Z,22nm,1.4s						
MDPB	**Devils Postpil**	**78.28**	**44**	P	**P**	**14 39 53.4**	**0.0**
MDPB				IAmb	IAmb	14 39 55.3	
	comp=Z,5.9nm,0.9s						
OMMB	**Old Mammoth Mi**	**78.32**	**44**	P	**P**	**14 39 54.3**	**+0.6**
YBH	**Yreka Blue Hor**	**78.38**	**39**	P	**P**	**14 39 55.1**	**+1.5**
KDAK	**Kodiak Island**	**78.53**	**13**	P	**P**	**14 39 54.1**	**+0.3**
PNTR	**Pine Nut**	**78.76**	**42**	P	**P**	**14 39 56.8**	**+0.9**
PNTR				IAmb	IAmb	14 39 57.9	
	comp=Z,9.5nm,0.9s						
L04D	**Klamath Falls**	**78.92**	**39**	P	**P**	**14 39 56.5**	**0.0**
L04D				IAmb	IAmb	14 40 12.6	
	comp=Z,18nm,1.4s						
YERR	**Yerington**	**78.93**	**43**	P	**P**	**14 39 57.2**	**+0.5**
YERR				IAmb	IAmb	14 39 58.5	
	comp=Z,7.3nm,0.7s						
LHV	**Little Huntoon**	**79.00**	**44**	P	**P**	**14 39 58.3**	**+1.4**
LCH	**Last Change Ra**	**79.02**	**45**	P	**P**	**14 39 57.9**	**+0.7**
GRAC	**Grapevine Rang**	**79.08**	**45**	P	**P**	**14 39 58.4**	**+1.1**
GWY	**Greenwater Val**	**79.12**	**46**	P	**P**	**14 39 58.1**	**+0.4**
RYN	**Ryan**	**79.20**	**43**	P	**P**	**14 39 58.9**	**+0.8**
NVAR	**Mina Array Bea**	**79.23**	**44**	P	**P**	**14 39 59.3**	**+0.9**
	comp=Z,2.9nm,0.7s,baz=224,slow=9.2,SNR=28						
	comp=Z,2.9nm,0.7s						
NVAR	**Mina Array Bea**	**79.23**	**44**	P	**P**	**14 39 58.9**	**+0.5**
PAHR	**Pah Rah Range**	**79.25**	**42**	P	**P**	**14 39 58.9**	**+0.6**
NV11	**Mina Array Sit**	**79.33**	**44**	P	**P**	**14 39 59.2**	**+0.4**
P18K	**Big Mountain,**	**79.47**	**12**	P	**P**	**14 39 58.3**	**-0.5**
P18K				IAmb	IAmb	14 40 15.5	
	comp=Z,8.8nm,0.9s						
J04D	**Umpqua Nationa**	**79.65**	**38**	P	**P**	**14 40 01.7**	**+1.3**
KVN	**Kaiserville**	**79.71**	**43**	P	**P**	**14 40 01.0**	**+0.2**
TPNV	**Topopah Spring**	**79.81**	**46**	P	**P**	**14 40 02.6**	**+1.3**
O18K	**Koktuh Hills**	**79.90**	**11**	P	**P**	**14 40 00.8**	**-0.3**
MOD	**Modoc Plateau**	**79.93**	**40**	P	**P**	**14 40 02.7**	**+0.8**
MOD				IAmb	IAmb	14 40 03.6	
	comp=Z,5.1nm,0.7s						
CNPM	**China Poot**	**80.41**	**13**	P	**P**	**14 40 04.1**	**+0.3**
H04A	**Detroit Lake**	**80.47**	**37**	P	**P**	**14 40 04.9**	**+0.4**
H04A				IAmb	IAmb	14 40 30.3	
	comp=Z,10nm,1.2s						
PINE	**Pine Mountain**	**80.66**	**38**	P	**P**	**14 40 06.4**	**+0.7**
PINE				IAmb	IAmb	14 40 08.0	
	comp=Z,11nm,0.9s						
PRN	**Pahroc Range**	**80.86**	**46**	P	**P**	**14 40 07.9**	**+1.1**
PRN				IAmb	IAmb	14 40 09.1	
	comp=Z,6.0nm,0.9s						
N19K	**Bonanza Creek**	**80.93**	**11**	P	**P**	**14 40 05.7**	**-0.8**
N19K				IAmb	IAmb	14 40 06.7	
	comp=Z,4.6nm,0.8s						
RSO	**Redoubt South**	**80.94**	**12**	P	**P**	**14 40 06.0**	**-0.7**
SVW2	**Sparrevohn**	**80.99**	**11**	P	**P**	**14 40 06.0**	**-0.7**
SVW2				IAmb	IAmb	14 40 18.6	
	comp=Z,11nm,1.5s						
R11A	**Troy Canyon, C**	**80.99**	**45**	P	**P**	**14 40 07.8**	**+0.3**
HG4B	**Hotspring**	**81.00**	**27**	P	**P**	**14 40 07.1**	**+0.1**
BMN	**Battle Mountai**	**81.03**	**42**	P	**P**	**14 40 08.2**	**+0.6**
BMN				IAmb	IAmb	14 40 09.5	
	comp=Z,4.9nm,0.9s						
WVOR	**Wild Horse Val**	**81.25**	**40**	P	**P**	**14 40 09.6**	**+1.0**
WVOR				IAmb	IAmb	14 40 10.7	
	comp=Z,6.0nm,1.0s						
OZB	**Mount Ozzard**	**81.39**	**32**	P	**P**	**14 40 09.8**	**+0.7**
TUC	**Tucson**	**81.43**	**52**	P	**P**	**14 40 11.4**	**+1.7**
TUC				IAmb	IAmb	14 40 12.4	
	comp=Z,5.4nm,1.0s						
MA2	**Magadan**	**81.59**	**344**	P	**P**	**14 40 09.2**	**-0.6**
I07A	**Izee**	**81.67**	**38**	P	**P**	**14 40 11.1**	**+0.4**
I07A				IAmb	IAmb	14 40 12.7	
	comp=Z,4.5nm,0.8s						
SPU	**Mount Spurr**	**81.74**	**12**	P	**P**	**14 40 10.2**	**-0.3**
J08A	**Circle Bar Ran**	**81.87**	**39**	P	**P**	**14 40 12.2**	**+0.4**
J08A				IAmb	IAmb	14 40 13.7	
	comp=Z,9.1nm,1.2s						
LCMT	**Little Creek M**	**81.91**	**47**	P	**P**	**14 40 13.2**	**+1.0**
X16A	**Lo Mia Camp, P**	**81.93**	**50**	P	**P**	**14 40 13.8**	**+1.5**
M19K	**Big River Lodg**	**81.95**	**11**	P	**P**	**14 40 11.1**	**-0.5**
M19K				IAmb	IAmb	14 40 13.2	
	comp=Z,9.2nm,1.4s						
CCUT	**Cedar City**	**82.09**	**46**	P	**P**	**14 40 14.4**	**+1.3**
L19K	**White Mountain**	**82.13**	**11**	P	**P**	**14 40 12.7**	**+0.2**
PSUT	**Pine Spring**	**82.25**	**45**	P	**P**	**14 40 14.7**	**+0.7**
SUA	**Susitna One**	**82.26**	**13**	P	**P**	**14 40 12.9**	**-0.4**
SUA				IAmb	IAmb	14 40 13.9	
	comp=Z,11nm,1.0s						
U15A	**North Rim**	**82.29**	**48**	P	**P**	**14 40 15.5**	**+1.3**
U15A				IAmb	IAmb	14 40 16.6	
	comp=Z,7.5nm,0.8s						
SZCU	**Shurtz Canyon**	**82.31**	**46**	P	**P**	**14 40 15.3**	**+1.1**
ELK	**Elko**	**82.47**	**43**	P	**P**	**14 40 15.5**	**+0.5**
WUAZ	**Wupatki**	**82.50**	**49**	P	**P**	**14 40 16.3**	**+1.1**
WUAZ				IAmb	IAmb	14 40 18.1	
	comp=Z,6.9nm,1.1s						
GLI	**Glacier Island**	**82.56**	**15**	P	**P**	**14 40 14.1**	**-0.6**
SKT	**Skwentna**	**82.57**	**12**	P	**P**	**14 40 13.7**	**-1.0**
SKT				IAmb	IAmb	14 40 14.2	
	comp=Z,5.0nm,1.0s						
TTA	**Tatalina**	**82.63**	**10**	P	**P**	**14 40 15.4**	**+0.3**
TTA				IAmb	IAmb	14 40 16.3	
	comp=Z,7.8nm,1.1s						
G08A	**Pilot Rock**	**82.68**	**38**	P	**P**	**14 40 16.6**	**+0.8**
G08A				IAmb	IAmb	14 40 17.5	
	comp=Z,11nm,1.4s						
PMR	**Palmer**	**82.73**	**13**	P	**P**	**14 40 15.0**	**-0.4**
PMR				IAmb	IAmb	14 40 15.9	
	comp=Z,7.9nm,1.2s						
HAWA	**Hanford**	**82.99**	**36**	P	**P**	**14 40 17.9**	**+0.8**
HAWA				IAmb	IAmb	14 40 18.5	
	comp=Z,4.9nm,0.7s						
DIV	**Divide**	**83.11**	**15**	P	**P**	**14 40 17.2**	**-0.2**
MTPU	**Mount Pierson**	**83.15**	**46**	P	**P**	**14 40 20.2**	**+1.6**
MTPU				IAm

VRDI IAmb IAmb 14 40 21.7
comp=Z,7.2nm,0.8s
N25K Chitina, Valde 83.81 15 P **P** **14 40 20.8 -0.2**
GRNC Granite Creek 83.82 17 P **P** **14 40 20.8 -0.4**
GRNC IAmb IAmb 14 40 22.1
comp=Z,8.5nm,0.9s
M24K Tolsona, Glenn 83.85 14 P **P** **14 40 21.4 +0.3**
GLB Gilahina Butte 83.87 16 P **P** **14 40 20.9 -0.3**
GLB IAmb IAmb 14 40 21.9
comp=Z,6.9nm,0.6s
F10A Beach Ranch, E 84.07 38 P **P** **14 40 22.8 +0.2**
F10A IAmb IAmb 14 40 23.8
comp=Z,7.6nm,1.0s
J20K Nowinta River 84.11 10 P **P** **14 40 22.4 +0.1**
J20K IAmb IAmb 14 40 23.1
comp=Z,3.4nm,0.7s
LOGN Logan Glacier 84.11 17 P **P** **14 40 22.5 -0.1**
LOGN IAmb IAmb 14 40 23.1
comp=Z,4.7nm,0.6s
BARN Barnard Glacie 84.12 17 P **P** **14 40 22.7 0.0**
BARN IAmb IAmb 14 40 23.6
comp=Z,7.4nm,0.8s
KTH Kantishna Hill 84.12 12 P **P** **14 40 21.2 -1.2**
KTH IAmb IAmb 14 40 22.0
comp=Z,6.9nm,0.9s
CTGM Chitina Glacie 84.13 17 P **P** **14 40 22.6 0.0**
CTGM IAmb IAmb 14 40 23.2
comp=Z,6.0nm,0.7s
TRF Thorofare Moun 84.15 12 P **P** **14 40 21.4 -1.3**
B08A Colville Reser 84.24 35 P **P** **14 40 23.2 -0.1**
B08A IAmb IAmb 14 40 24.3
comp=Z,5.5nm,1.1s
PLID Pearl Lake 84.31 39 P **P** **14 40 24.3 +0.3**
RND Reindeer 84.40 13 P **P** **14 40 23.2 -0.6**
DHY Denali Highway 84.43 13 P **P** **14 40 23.5 -0.6**
DHY IAmb IAmb 14 40 24.0
comp=Z,2.6nm,0.6s
HLID Hailey 84.47 41 P **P** **14 40 25.2 +0.5**
MCK McKinley 84.67 12 P **P** **14 40 24.4 -0.7**
MCK IAmb IAmb 14 40 25.9
comp=Z,7.9nm,0.8s
SRU San Rafael Swe 84.80 46 P **P** **14 40 26.5 0.0**
M26K Nabesna, AK 84.89 15 P **P** **14 40 26.2 +0.1**
M26K IAmb IAmb 14 40 27.2
comp=Z,6.7nm,1.0s
HYT Haines Junctio 85.13 19 P **P** **14 40 27.8 +0.4**
M27K Edge Creek, AK 85.14 16 P **P** **14 40 27.7 +0.2**
M27K IAmb IAmb 14 40 28.9
comp=Z,7.0nm,1.0s
I21K Tanana 85.40 11 P **P** **14 40 28.1 -0.4**
I21K IAmb IAmb 14 40 29.6
comp=Z,4.1nm,0.9s
BCYI Bear Canyon 85.48 41 P **P** **14 40 30.6 +0.9**
MLY Manley 85.49 11 P **P** **14 40 29.0 0.0**
MLY IAmb IAmb 14 40 30.6
comp=Z,5.0nm,1.2s
WRH Wood River Hil 85.50 12 P **P** **14 40 28.1 -0.8**
TX31 Lajitas Ar. Si 85.67 57 P **P** **14 40 32.3 +1.5**
TX32 Lajitas Array 85.67 57 P **P** **14 40 32.2 +1.4**
TX32 IAmb IAmb 14 40 33.6
comp=Z,5.6nm,0.9s
TXAR Lajitas Array 85.67 57 P **P** **14 40 32.0 +1.2**
comp=Z,4.0nm,0.7s,baz=218,slow=6.0,SNR=35
comp=Z,4.0nm,0.7s
HDA Harding Lake 85.69 13 P **P** **14 40 29.2 -0.6**
HDA IAmb IAmb 14 40 29.7
comp=Z,4.1nm,0.6s
CCB Clear Creek Bu 85.72 12 P **P** **14 40 29.0 -1.0**
L27K Beaver Creek, 85.73 16 P **P** **14 40 30.9 +0.7**
BCAR Beaver Creek A 85.75 16 P **P** **14 40 30.4 +0.1**
IMAR Indian Mountai 85.84 10 P **P** **14 40 30.4 -0.1**
I23K Minto, Yukon-K 85.85 12 P **P** **14 40 29.7 -1.0**
I23K IAmb IAmb 14 40 30.7
comp=Z,5.1nm,1.4s
DLBC Dease Lake 85.86 23 P **P** **14 40 31.5 +0.6**
DLBC IAmb IAmb 14 40 31.9
comp=Z,3.9nm,0.9s
MDM Murphy Dome 85.91 12 P **P** **14 40 29.8 -1.1**
MDM IAmb IAmb 14 40 30.9
comp=Z,6.7nm,0.9s
SCRK Sand Creek 85.98 14 P **P** **14 40 31.5 +0.1**
IL31 86.02 13 P **P** **14 40 30.4 -1.0**
IL31 IAmb IAmb 14 40 31.6
comp=Z,3.0nm,0.6s
ILAR Eielson Array 86.02 13 P **P** **14 40 30.6 -0.9**
comp=Z,1.8nm,0.4s,baz=216,slow=4.9,SNR=24
comp=Z,1.8nm,0.4s
ILAR Eielson Array 86.02 13 P **P** **14 40 30.1 -1.3**
MCMT McKenzie Canyo 86.08 40 P **P** **14 40 33.5 +0.9**
N31M Braeburn, Yuko 86.17 19 P **P** **14 40 32.6 +0.4**
J25K Salcha River, 86.21 13 P **P** **14 40 31.8 -0.6**
J25K IAmb IAmb 14 40 32.5
comp=Z,2.7nm,0.6s
POKR Poker Plat Res 86.21 12 P **P** **14 40 31.2 -1.1**
POKR IAmb IAmb 14 40 32.2
comp=Z,6.2nm,0.8s
DLMT Dillon 86.51 40 P **P** **14 40 35.2 +0.8**
DLMT IAmb IAmb 14 40 35.8
comp=Z,3.6nm,0.8s
J26L Joseph Creek 86.52 14 P **P** **14 40 34.1 +0.2**
J26L IAmb IAmb 14 40 35.9
comp=Z,4.7nm,0.7s
TPAW Teton Pass 86.61 42 P **P** **14 40 36.0 +0.9**
TPAW IAmb IAmb 14 40 37.0
comp=Z,3.2nm,0.9s
M30M Minto, Yukon 86.71 18 P **P** **14 40 34.8 0.0**
M30M IAmb IAmb 14 40 35.9
comp=Z,5.1nm,0.9s
S22A 4UR Ranch, Cre 86.77 49 P **P** **14 40 36.8 +0.8**
LRM Limekiln Ridge 86.83 40 P **P** **14 40 36.5 +0.5**
XAN Xi'an 86.85 307 P **P** **14 40 37.7 +1.5**
XAN pP pP 14 42 44.2 -0.7
XAN pmax pmax
comp=Z,8.0nm,0.8s
QLMT Earthquake Lak 86.96 41 P **P** **14 40 38.1 +1.4**
YHL Hebgen Lake 87.12 41 P **P** **14 40 39.0 +1.4**
YHL IAmb IAmb 14 40 40.0
comp=Z,7.0nm,0.9s
BW06 Boulder Array 87.17 43 P **P** **14 40 38.0 +0.3**
PD31 Pinedale Array 87.17 43 P **P** **14 40 37.8 +0.1**
PDAR Pinedale Array 87.17 43 P **P** **14 40 37.3 -0.3**
comp=Z,1.7nm,0.7s,baz=222,slow=4.4,SNR=12
comp=Z,1.7nm,0.7s
PDAR Pinedale Array 87.17 43 P **P** **14 40 37.7 0.0**
BOZ Bozeman (W) 87.21 40 P **P** **14 40 38.5 +0.8**
BOZ IAmb IAmb 14 40 39.6
comp=Z,6.8nm,1.2s
COLD Coldfoot 87.57 10 P **P** **14 40 38.9 +0.3**
COLD IAmb IAmb 14 40 39.8
comp=Z,5.1nm,0.8s
HHC Hu-ho-hao-te 87.84 314 *e*P **P** **14 40 38.3 -2.4**
HHC pmax pmax
comp=Z,31nm,0.9s
HHC pmax pmax
comp=Z,190nm,7.0s
GCMT Greycliff 88.51 41 P **P** **14 40 44.2 +0.5**
BMAR Burnt Mountain 88.80 12 P **P** **14 40 44.5 0.0**
CMAR Chiang Mai Arr 89.49 290 P **P** **14 40 48.4 -0.3**
comp=Z,1.1nm,0.7s,baz=105,slow=2.4,SNR=5.6
comp=Z,1.1nm,0.7s
CMAR Chiang Mai Arr 89.49 290 P **P** **14 40 49.4 +0.7**
EPYK Eagle Plains 89.71 15 P **P** **14 40 48.5 -0.2**
EPYK IAmb IAmb 14 40 49.4
comp=Z,3.7nm,0.8s
PZH PanZhiHua 89.76 298 P **P** **14 40 52.8 +2.8**
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,60nm,5.6s
TROLL Troll, Antarti 90.05 180 P P 14 40 49.6 -0.9
VNA3 Neumayer Olymp 90.44 176 P P 14 40 51.8 -0.3
VNA2 Neumayer--Watz 90.89 177 P **P** **14 40 54.2 0.0**
baz=189,slow=3.0
VNA1 Neumayer--Stat 91.11 177 P **P** **14 40 55.2 0.0**
MKAR Makanchi Array 109.71 314 PKiKP **PKiKP** **14 46 15.9 -1.7**
comp=Z,0.4nm,0.5s,baz=108,slow=0.1,SNR=4.7
KURBB Kurchatov Arra 112.44 318 PKiKP **PKiKP** **14 46 20.4 -2.2**
comp=Z,0.5nm,0.6s,baz=92,slow=1.7,SNR=6.1
ARCES ARCESS Array B 126.67 350 PKP **PKPdf** **14 46 47.8 -1.6**
comp=Z,0.9nm,0.5s,baz=348,slow=0.5,SNR=11
FINES FINESS Array B 133.59 344 PKP **PKPdf** **14 47 01.5 -1.2**
comp=Z,1.3nm,0.6s,baz=80,slow=2.1,SNR=4.9
AKASG Malin Array Be 141.04 333 PKhKP PKPpre 14 47 08.5
comp=Z,0.9nm,0.4s,baz=38,slow=4.7,SNR=8.0
AKASG PKP **PKPdf** **14 47 17.3 +0.6**
comp=Z,1.4nm,0.5s,baz=37,slow=1.5,SNR=4.6
EKA Eskdalemuir Ar 142.68 5 PKhKP PKPpre 14 47 15.5
comp=Z,0.8nm,0.4s,baz=330,slow=2.3,SNR=8.2
SORM Soroca 143.29 330 ⇑P **PKPdf** **14 47 18.7 -2.1**
OJC Ojcow 145.04 340 **PKPdf** **14 47 24.0 +0.3**
BUR08 Bucovina Ar. S 145.08 332 PKPdf **PKPdf** **14 47 25.1 +1.0**
BURAR Bucovina Array 145.10 332 ⇑P **PKPab** **14 47 26.5 +0.2**
BURAR Bucovina Array 145.10 332 PKPdf PKPbc 14 47 25.4 +0.3
BIZ Bicaz 145.20 331 ⇑P **PKPab** **14 47 26.1 -0.4**
KOLS Kolochicke sedl 145.26 337 *e*PKP **PKPab** **14 47 26.3 -0.4**
BR131 Keskin Array S 145.35 315 PKPdf **PKPdf** **14 47 25.4 +0.7**
BRTR Keskin Array B 145.35 315 PKPbc **PKPdf** **14 47 24.6 -0.2**
comp=Z,2.6nm,0.6s,baz=116,slow=4.3,SNR=7.2
BRTR Keskin Array B 145.35 315 PKPdf **PKPdf** **14 47 25.5 +0.7**
CFR Carcaliu 145.45 327 ⇑P PKPbc 14 47 26.2 +0.2
TPGR Topolog 145.52 326 ⇑P PKPbc 14 47 26.6 +0.3
VRI Vrincioaia 145.68 329 ⇑P **PKPbc** **14 47 26.8 0.0**
ASF Jabal al Asfar 145.78 301 PKPbc **PKPdf** **14 47 26.6 +0.9**
comp=Z,1.3nm,0.5s,baz=119,slow=6.0,SNR=3.5
OSTC Ostas 145.79 344 *e*PKP **PKPbc** **14 47 27.5 +0.6**
CHVC Chvalec 145.81 344 *e*PKP **PKPab** **14 47 28.2 -0.6**
CLL Collm 145.83 348 PKPdf **PKPdf** **14 47 26.2 +1.2**
CLL Collm 145.83 348 ⇓*i*PKPbc **PKPdf** **14 47 26.7 +1.7**
comp=Z,19nm,0.8s
UPC Upice 145.89 344 *e*PKP **PKPbc** **14 47 27.4 +0.3**
DPC Dobruska-Polom 145.95 344 *e*PKP **PKPbc** **14 47 27.4 0.0**
BRG Berggiesshubel 146.05 347 *e*PKP **PKPbc** **14 47 27.6 +0.1**
BRG Amp 14 47 28.4
comp=Z,7.7nm,0.8s
LANS Liptovska Anna 146.07 340 *e*PKP **PKPbc** **14 47 28.6 +0.9**
KRLC Kraliky 146.08 343 *e*PKP **PKPbc** **14 47 27.7 0.0**
MORC Moravsky Berou 146.13 342 *e*PKP **PKPbc** **14 47 28.1 +0.2**
PVCC Panska Ves 146.23 346 *e*PKP **PKPbc** **14 47 28.3 +0.3**
DOPR Dopca 146.25 330 ⇑P **PKPbc** **14 47 28.7 +0.4**
MLR Muntele Rosu 146.34 329 ⇑P **PKPbc** **14 47 29.7 +1.0**
MAUC Maruska 146.41 341 *e*PKP **PKPbc** **14 47 29.2 +0.6**
PRU Pruhonice 146.74 345 *e*PKP **PKPbc** **14 47 29.5 +0.1**
VOIR 146.81 330 ⇑P **PKPab** **14 47 33.3 +0.2**
DRGR 146.81 334 ⇓P **PKPbc** **14 47 30.3 +0.4**
VRAC Vranov 146.82 343 PKPbc **PKPdf** **14 47 28.2 +1.4**
comp=Z,1.3nm,0.3s,baz=142,slow=0.9,SNR=1.9
VRAC Vranov 146.82 343 *e*PKP **PKPbc** **14 47 29.5 -0.2**
JAVC Velka Javorina 146.91 341 *e* **PKab** **14 47 34.4 +1.0**
JAVC Velka Javorina 146.91 341 *e*PKP **PKPbc** **14 47 30.8 +0.8**
NKC Novy Kostel 146.97 348 *e*PKP **PKPbc** **14 47 30.0 -0.1**
PSZ Piszkesteto 146.98 338 ⇑P **PKPbc** **14 47 29.8 -0.5**
ARR Arges 147.05 330 ⇓P **PKPbc** **14 47 30.4 -0.1**
KRUC Moravsky 147.10 343 *e*PKP **PKPbc** **14 47 30.5 +0.1**
KRUC *e* 14 47 34.3
MODS Modra-Piesok 147.46 341 *e*PKP **PKPbc** **14 47 31.9 +0.5**
BTNL Ternell 147.50 355 *d*PKPbc **PKPbc** **14 47 31.1 -0.4**
BHOU Houvegnez 147.74 355 *d*PKPbc **PKPbc** **14 47 31.9 -0.1**
KHC Kasperske Hory 147.76 346 **PKPbc** **14 47 32.2 0.0**
KHC Kasperske Hory 147.76 346 *e*PKP **PKPbc** **14 47 32.1 -0.1**
BMRD Maredsous 147.87 357 *d*PKPbc **PKPbc** **14 47 32.5 +0.1**
CKRC Cesky Krumlov 147.88 345 *e*PKP **PKPbc** **14 47 32.4 -0.1**
GEC2 GERESS Array S 148.00 346 **PKPbc** **14 47 32.6 -0.3**
GERES GERESS Array B 148.00 346 PKPbc **PKPbc** **14 47 32.9 0.0**
comp=Z,3.0nm,0.6s,baz=2.9,slow=2.7,SNR=30
GERES GERESS Array B 148.00 346 **PKPbc** **14 47 32.6 -0.3**
DOU Dourbes 148.09 357 *d*PKPbc **PKPbc** **14 47 32.6 -0.3**
BZS Buzias 148.21 334 ⇓P **PKPbc** **14 47 33.6 +0.2**
CONA Conrad Observa 148.28 342 *i* P **PKPbc** **14 47 33.5 0.0**
comp=Z,5.1nm,0.8s
RONA Rosalia, Austr 148.36 342 *e*P **PKPbc** **14 47 33.7 -0.1**
comp=Z,6.1nm,0.7s
WLF Walferdange 148.42 355 *d*PKPbc **PKPbc** **14 47 33.7 -0.1**
MORH Mrgy, Hungar 148.88 338 ⇓P **PKPbc** **14 47 35.2 +0.2**
FRGS Fruska Gora 149.32 335 ⇑P **PKPbc** **14 47 36.3 +0.2**
BFO Black Forest 149.50 352 **PKPbc** **14 47 35.5 -0.9**
SOKA Soboth 149.65 342 *i* P **PKPbc** **14 47 35.9 -1.1**
comp=Z,2.0nm,0.6s
KBA Koelnbreinsper 149.74 345 *i* P **PKPbc** **14 47 36.5 -0.7**
comp=Z,4.5nm,0.7s
VTS Vitosha 149.76 328 ⇑P **PKPbc** **14 47 37.4 0.0**
WATA Walderalm 149.90 347 *e*P **PKPbc** **14 47 37.1 -0.5**
comp=Z,4.0nm,0.7s
WTTA Wattenberg 149.96 347 *i* P **PKPbc** **14 47 37.6 -0.2**
comp=Z,1.1nm,0.6s
MOTA Moosalm 149.99 348 *e*P **PKPbc** **14 47 37.4 -0.4**
comp=Z,5.6nm,0.6s
MYKA Terra Mystica 150.08 344 *i* P **PKPbc** **14 47 37.0 -0.9**
comp=Z,5.0nm,0.7s
SQTA Sankt Quirin 150.09 348 *e*P **PKPbc** **14 47 37.4 -0.6**
comp=Z,4.6nm,0.6s
ABTA Abfaltersbach 150.25 346 *i* P **PKPbc** **14 47 37.5 -0.9**
comp=Z,10nm,0.7s
DAVA Damuels 150.28 349 *e*P **PKPbc** **14 47 37.9 -0.5**
comp=Z,12nm,1.4s
FETA Feichten 150.37 348 *e*P **PKPbc** **14 47 38.6 -0.2**
comp=Z,4.4nm,0.7s
CRNS Crni Vrh 150.41 343 *i* PKPbc **PKPbc** **14 47 37.6 -1.0**
BOJS Bojanci 150.65 341 *i* PKPbc **PKPbc** **14 47 39.0 -0.2**
STAL STALIGIAL 150.66 345 **PKPbc** **14 47 37.8 -1.5**
DAVOX Davos/Dischmat 150.76 349 PKPbc **PKPbc** **14 47 39.1 -0.6**
comp=Z,10nm,0.7s,baz=237,slow=1.3,SNR=14
TUE Stuetta 151.16 350 **PKPbc** **14 47 40.2 -0.4**
FNA Florina 152.06 328 **PKPbc** **14 47 41.3 -1.3**
ESDC Sonseca Array 157.92 13 PKPab **PKPab** **14 48 19.3 -1.0**
comp=Z,0.4nm,0.5s,baz=347,slow=2.2,SNR=4.9

*DJA **07** 14:29:01.6±0.5, 5°S±4°×15°0E±°, h132km±7km, M5.0/12, mB5.0/4, mb4.7/12, MLv5.4/2, Mw(mB)4.3/4*
*NEIC **07** 14:29:02.2±2.0, 5.72S±0.07°×149.87E±0.08, h91km±6km, mb4.7/88, Error ellipse: s-maj=11.0km s-min=9.6km az=79.0*
*IDC **07** 14:29:04.3±1.4, 5.76S×149.83E, h119km±12km, mb4.1/16, mbtmp4.6/20, MS3.4/8, Error ellipse: s-maj=15.3km s-min=8.8km az=104.0*

ISC 07 14:29:02.5±0.4, 5.72S±0.05×149.82E±0.06, h100km, n159, σ1°33/157, mb4.7/62, 1C-1D, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**2.61**	**58**	P		**Pn**	**14 29 43.7**	**+0.7**
	1μm,0.6s,baz=88,slow=0.2,SNR=219							
KRVT				LR		LR	14 30 34.9	
	comp=Z,292nm,21.0s,baz=4.1,slow=35							
RABL	**Rabaul**	**2.79**	**57**	Pn		**Pn**	**14 29 42.2**	**-3.3**
RABL	**Rabaul**	**2.79**	**57**	P		**Pn**	**14 29 46.5**	**+1.0**
MANU	**Manus Island**	**4.40**	**326**			**Pn**	**14 30 06.7**	**-0.4**
PMG	**Port Moresby**	**4.51**	**216**	P		**Pn**	**14 30 10.6**	**+2.0**
	292nm,0.6s,baz=25,slow=4.6,SNR=145							
PMG				S		**Sn**	**14 30 59.1**	**-0.8**
	2μm,0.6s,baz=349,slow=20,SNR=26							
PMG				LR		LR	14 31 34.4	
	comp=Z,381nm,19.1s,baz=14,slow=33							
PMG	**Port Moresby**	**4.51**	**216**	Pn		**Pn**	**14 30 10.0**	**+1.4**
PMG	**Port Moresby**	**4.51**	**216**	P		**Pn**	**14 30 10.8**	**+2.2**
COEN	**Coen**	**10.47**	**218**	Pn		**Pn**	**14 31 29.5**	**-0.3**
COEN	**Coen**	**10.47**	**218**	P		**Pn**	**14 31 30.5**	**+0.8**
HNR	**Honiara**	**10.70**	**111**	P		Pn	14 31 36.9	+4.2
	152nm,0.6s							
SMPI	**Sarmi**	**11.69**	**288**	P		Pn	14 31 39.2	-6.8
	19nm,1.2s							
MTSU	**Mount Surprise**	**13.46**	**203**	P		**Pn**	**14 32 11.7**	**+2.3**
CTA	**Charters Tower**	**14.69**	**193**	P		**Pn**	**14 32 26.8**	**+1.3**
	15nm,0.8s,baz=8.3,slow=12,SNR=41							
CTA	**Charters Tower**	**14.69**	**193**	P		**P**	**14 32 28.4**	**-0.5**
CTAO	**Charters Tower**	**14.69**	**193**			**P**	**14 32 28.2**	**-0.7**
CTAO	**Charters Tower**	**14.69**	**193**	P		**P**	**14 32 27.9**	**-1.0**
RK1H	**Rockhampton Ha**	**17.57**	**178**	P		**Pn**	**14 33 02.6**	**+1.5**
QIS	**Mount Isa**	**17.77**	**213**	P		**Pn**	**14 33 04.5**	**+0.9**
SIJI	**Sorong**	**19.13**	**284**	P		**Pn**	**14 33 19.1**	**-0.7**
	10nm,0.8s,baz=120,slow=19,SNR=2.3							
EIDS	**Eidsvold**	**19.57**	**177**			**Pn**	**14 33 24.2**	**-0.6**
EIDS					IAmb	IAmb	14 33 25.3	
	comp=Z,34nm,0.8s							
EIDS	**Eidsvold**	**19.57**	**177**	P		**Pn**	**14 33 24.3**	**-0.6**
MTN	**Manton Dam**	**19.74**	**248**	P		**P**	**14 33 24.5**	**0.0**
MTN					IAmb	IAmb	14 33 47.0	
	comp=Z,17nm,0.5s							
GUMO	**Guam**	**19.80**	**346**	P		**Pn**	**14 33 26.3**	**-1.3**
WB0	**Warramunga Arr**	**20.49**	**226**	P		**P**	**14 33 33.0**	**+0.3**
WB0					IAmb	IAmb	14 33 54.3	
	comp=Z,31nm,0.7s							
WR0	**Warramunga Arr**	**20.52**	**225**	P		**P**	**14 33 33.2**	**+0.4**
WR0					IAmb	IAmb	14 33 55.0	
	comp=Z,33nm,0.9s							
WRAB	**Tennant Creek**	**20.63**	**225**	P		**P**	**14 33 34.3**	**+0.2**
WRAB					IAmb	IAmb	14 33 54.5	
	comp=Z,33nm,0.8s							
WB2	**Warramunga Arr**	**20.64**	**225**	P		**P**	**14 33 34.5**	**+0.3**
WB2					IAmb	IAmb	14 33 55.9	
	comp=Z,34nm,0.6s							
WRA	**Warramunga Arr**	**20.65**	**225**	P		**P**	**14 33 34.8**	**+0.5**
	comp=Z,20nm,0.4s,baz=50,slow=11,SNR=88							
WRA				S		**S**	**14 37 18.4**	**-1.3**
	comp=Z,4.1nm,1.0s,baz=50,slow=21,SNR=7.9							
WRA				ScP		**ScP**	**14 41 04.6**	**-4.1**
	comp=Z,1.2nm,0.8s,baz=54,slow=3.2,SNR=5.9							
	comp=Z,20nm,0.4s							
RMQ	**Roma**	**20.67**	**183**	P		Pn	14 33 36.7	-1.0
QLP	**Quilpie**	**21.42**	**194**	P		**P**	**14 33 43.7**	**+1.3**
LBMI	**Labuha**	**22.84**	**282**	P		**P**	**14 33 51.3**	**-6.2**
	comp=Z,780nmcomp=Z,7.5nm,0.5s							
DZM	**Mont Dzumac**	**22.86**	**137**	P		**P**	**14 33 57.7**	**0.0**
	comp=Z,6.2nm,0.6s,baz=327,slow=6.8,SNR=11							
	comp=Z,6.2nm,0.6s							
DZM	**Mont Dzumac**	**22.86**	**137**	P		**P**	**14 33 58.0**	**+0.4**
DZM					IAmb	IAmb	14 34 16.9	
	comp=Z,22nm,1.1s							
KNRA	**Kununurra**	**22.91**	**243**	P		**P**	**14 33 57.2**	**-0.8**
KNRA					IAmb	IAmb	14 34 21.0	
	comp=Z,35nm,0.6s							
KNRA	**Kununurra**	**22.91**	**243**	P		**P**	**14 33 57.6**	**-0.5**
TNTI	**Ternate**	**23.33**	**285**	P		**P**	**14 33 55.1**	**-7.0**
	comp=Z,9.5nm,0.5s							
AS31	**Alice Springs**	**23.52**	**219**	P		**P**	**14 34 04.2**	**+0.4**
ASAR	**Alice Springs**	**23.52**	**219**	P		**P**	**14 34 04.5**	**+0.8**
	comp=Z,15nm,0.7s,baz=52,slow=8.5,SNR=82							
ASAR				S		**S**	**14 38 09.1**	**-1.1**
	comp=Z,2.3nm,1.0s,baz=37,slow=19,SNR=5.8							
ASAR				ScP		**ScP**	**14 41 13.6**	**-2.4**
	comp=Z,1.0nm,0.7s,baz=49,slow=2.6,SNR=5.5							
ASAR				LR		LR	14 43 21.9	
	comp=Z,125nm,20.4s,baz=108,slow=36							
	comp=Z,15nm,0.7s							
ASAR	**Alice Springs**	**23.52**	**219**	P		**P**	**14 34 04.2**	**+0.5**
OOD	**Oodnadatta**	**25.73**	**210**	P		**P**	**14 34 24.4**	**+0.7**
BATI	**Baumata**	**26.27**	**259**	LR		LR	14 48 26.0	
	comp=Z,236nm,19.7s,baz=222,slow=44							
STKA	**Stephens Creek**	**27.13**	**195**	P		**P**	**14 34 36.1**	**-0.2**
	comp=Z,10.0nm,0.7s,baz=36,slow=12,SNR=7.7							
STKA				LR		LR	14 45 23.0	
	comp=Z,159nm,18.3s,baz=201,slow=36							
	comp=Z,10.0nm,0.7s							
STKA	**Stephens Creek**	**27.13**	**195**	P		**P**	**14 34 36.0**	**-0.2**
CAN	**Canberra**	**29.46**	**181**	P		**P**	**14 34 57.9**	**+0.9**
CAN					IAmb	IAmb	14 35 19.9	
	comp=Z,17nm,1.3s							
TOLI2	**Tolitoli**	**29.78**	**282**	P		**P**	**14 35 00.7**	**+0.7**
BBOO	**Buckleboo**	**29.85**	**204**	P		**P**	**14 35 00.3**	**-0.1**
BBOO					IAmb	IAmb	14 35 29.0	
	comp=Z,28nm,1.4s							
MBWA	**Marble Bar**	**32.94**	**239**	P		**P**	**14 35 27.6**	**-0.1**
PSA00	**Pilbara Seismi**	**33.01**	**239**	P		**P**	**14 35 27.8**	**-0.6**
JCJ	**Chichijima**	**33.45**	**348**	LR		LR	14 47 53.4	
	comp=Z,45nm,21.1s,baz=126,slow=34							
TAU	**Tasmania Unive**	**37.10**	**183**	P		**P**	**14 36 03.9**	**+0.8**
GIRL	**Giralia**	**38.23**	**240**	P		**P**	**14 36 13.8**	**+0.8**
JOW	**Kunigami**	**38.50**	**328**	P		**P**	**14 36 16.2**	**+1.0**
MORW	**Morawa**	**39.47**	**230**	P		**P**	**14 36 23.2**	**0.0**
YOJ	**Yonaguni jima**	**39.77**	**320**	P		**P**	**14 36 26.9**	**+1.1**
JHJ	**Hachijo jima 2**	**39.79**	**347**	LR		LR	14 52 40.6	
	comp=Z,22nm,19.8s,baz=70,slow=36							
YULB	**Yu-li**	**40.16**	**317**	P		**P**	**14 36 29.6**	**+0.6**
YULB					IAmb	IAmb	14 36 31.3	
	comp=Z,8.5nm,0.7s							
NACB	**Ninganchiao**	**40.50**	**318**	P		**P**	**14 36 32.2**	**+0.4**
TPUB	**Ta-pu**	**40.56**	**316**	P		**P**	**14 36 32.1**	**-0.2**
TPUB					IAmb	IAmb	14 36 33.6	
	comp=Z,16nm,0.7s							
SSLB	**Suanglung**	**40.66**	**317**	P		**P**	**14 36 33.5**	**+0.3**
SSLB					IAmb	IAmb	14 36 40.8	
	comp=Z,11nm,0.9s							
YHNB	**Yeheng**	**40.98**	**319**	P		**P**	**14 36 36.3**	**+0.5**
JSU	**Suzuyama**	**41.38**	**335**	P		**P**	**14 36 39.6**	**+0.6**
JSU					IAmb	IAmb	14 36 41.4	
	comp=Z,11nm,0.7s							
TUWZ	**Tuamarina**	**41.56**	**152**	P		**P**	**14 36 40.9**	**+0.6**
RPZ	**Rata Peaks**	**42.20**	**157**	P		**P**	**14 36 45.0**	**-0.5**
	comp=Z,13nm,0.9s,baz=270,slow=20,SNR=2.3							
	comp=Z,13nm,0.9s							
INU	**Inuyama**	**42.59**	**344**	P		**P**	**14 36 50.0**	**+1.3**
INU					IAmb	IAmb	14 36 53.7	
	comp=Z,10nm,0.9s							
JGF	**Kuroka**	**42.74**	**345**	P		**P**	**14 36 51.0**	**+1.0**
JGF					IAmb	IAmb	14 36 54.3	
	comp=Z,12nm,0.7s							
MJAR	**Matsushiro Arr**	**43.43**	**346**	P		**P**	**14 36 55.1**	**-0.3**
	comp=Z,5.1nm,0.7s,baz=172,slow=11,SNR=18							
	comp=Z,5.1nm,0.7s							
MJAR	**Matsushiro Arr**	**43.43**	**346**	P		**P**	**14 36 54.9**	**-0.6**
MAJO	**Matsushiro**	**43.43**	**346**	P		**P**	**14 36 54.9**	**-0.6**
MJB9	**Matsu-Tunnel**	**43.43**	**346**	P		**P**	**14 36 54.8**	**-0.7**
JHS	**Saijyo**	**43.45**	**340**	P		**P**	**14 36 56.4**	**+0.7**
JHS					IAmb	IAmb	14 37 01.3	
	comp=Z,18nm,1.4s							
JMM	**Marumori**	**44.17**	**350**	P		**P**	**14 37 02.0**	**+0.6**
JMM					IAmb	IAmb	14 37 05.0	
	comp=Z,9.8nm,0.7s							
JSD	**Sado**	**44.84**	**347**	P		**P**	**14 37 07.9**	**+1.2**
QIZ	**Qiongzhong**	**46.42**	**303**	P		**P**	**14 37 19.9**	**+0.4**
QIZ					IAmb	IAmb	14 37 41.8	
	comp=Z,21nm,1.3s							
TJN	**Taejon**	**46.87**	**335**	P		**P**	**14 37 23.3**	**+0.7**
JTM	**Tennabayashi**	**46.97**	**351**	P		**P**	**14 37 24.1**	**+0.7**
KSCHJ	**Chungju**	**47.04**	**336**	P		**P**	**14 37 24.6**	**+0.6**
KSCHJ					IAmb	IAmb	14 37 26.0	
	comp=Z,19nm,1.0s							
KSRS	**Korea Array**	**47.56**	**336**	P		**P**	**14 37 29.0**	**+1.0**
	comp=Z,10nm,0.7s,baz=155,slow=8.0,SNR=82							
	comp=Z,10nm,0.7s							
KSAR	**Wonju Array Be**	**47.57**	**336**	P		**P**	**14 37 28.9**	**+0.9**
KS19	**Wonju Array Si**	**47.62**	**336**	P		**P**	**14 37 29.0**	**+0.5**
KS19					IAmb	IAmb	14 37 30.0	
	comp=Z,12nm,0.8s							
ERM	**Erimo**	**47.90**	**353**	P		**P**	**14 37 32.2**	**+1.7**
ERM					IAmb	IAmb	14 37 52.9	
	comp=Z,14nm,0.9s							
SEHB	**SEOHWA**	**48.14**	**337**	P		**P**	**14 37 33.1**	**+0.6**
SEHB					IAmb	IAmb	14 37 34.7	
	comp=Z,12nm,0.9s							

CD2					pmax	pmax		
	comp=Z,10.0nm,0.6s							
HHC	**Hu-ho-hao-te**	**58.11**	**326**	*e*P	**P**	**14 38 46.8**	**+1.0**
HHC					pmax	pmax		
	comp=Z,43nm,0.9s							
HHC					pmax	pmax		
	comp=Z,210nm,6.9s							
PEA0B	**Petropavlovsk-**	**58.99**	**6**	P	**P**	**14 38 51.6**	**+0.2**
PETK	**Petropavlovsk-**	**58.99**	**6**	P	**P**	**14 38 51.5**	**+0.1**
	comp=Z,5.3nm,0.6s,baz=240,slow=33,SNR=4.8							
	comp=Z,5.3nm,0.6s							
PETK	**Petropavlovsk-**	**58.99**	**6**	P	**P**	**14 38 51.7**	**+0.2**
KHU	**Kahuku**	**59.16**	**64**	P	**P**	**14 38 53.0**	**-0.6**
LZH	**Lanzhou**	**59.86**	**318**	*e*P	**P**	**14 39 00.2**	**+2.2**
LZH					pP	pP	14 39 24.1	+1.5
LZH					pmax	pmax		
	comp=Z,14nm,1.5s							
GTA	**Gaotai**	**64.35**	**319**	*e*P	**P**	**14 39 29.4**	**+1.5**
GTA					pP	pP	14 39 54.2	+1.3
GTA					sP	sP	14 40 04.8	+1.0
GTA					pmax	pmax		
	comp=Z,3.0nm,0.9s							
GTA					pmax	pmax		
	comp=Z,56nm,6.2s							
GTA					LR	LR		
	comp=N,99nm,16.7s							
GTA					LR	LR		
	comp=E,130nm,19.3s							
GTA					LR	LR		
	comp=Z,85nm,17.5s							
ULN	**Ulaanbaatar**	**65.25**	**330**	P	**P**	**14 39 34.6**	**+1.0**
ULN				IAmb	IAmb	14 39 36.2		
	comp=Z,6.0nm,0.9s							
SONM	**Songino Array**	**65.56**	**329**	P	**P**	**14 39 35.9**	**+0.3**
	comp=Z,2.4nm,0.5s,baz=139,slow=6.2,SNR=18							
	comp=Z,2.4nm,0.5s							
SONM	**Songino Array**	**65.56**	**329**	P	**P**	**14 39 36.6**	**+1.0**
SONM				IAmb	IAmb	14 39 38.2		
	comp=Z,6.0nm,1.1s							
SEY	**Seymchan**	**68.49**	**1**	LR	LR	15 08 13.6		
	comp=Z,39nm,19.8s,baz=7.0,slow=34							
YAK	**Yakutsk**	**69.32**	**350**	P	**P**	**14 39 59.1**	**+0.3**
YAK				IAmb	IAmb	14 40 00.8		
	comp=Z,11nm,0.7s							
PALK	**Pallekele**	**70.16**	**280**	P	**P**	**14 40 04.9**	**-0.1**
VNDA	**Vanda**	**72.04**	**177**	P	**P**	**14 40 15.5**	**+0.3**
	comp=Z,0.9nm,0.5s,baz=330,slow=7.5,SNR=6.3							
	comp=Z,0.9nm,0.5s							
VNDA	**Vanda**	**72.04**	**177**	P	**P**	**14 40 16.3**	**+1.2**
WMQ	**Urumqi**	**74.43**	**318**	*e*P	**P**	**14 40 32.5**	**+2.6**
BILL	**Bilibino**	**74.50**	**6**	P	**P**	**14 40 30.5**	**+0.8**
MK31	**Makanchi Array**	**79.08**	**320**	P	**P**	**14 40 55.8**	**-0.2**
MKAR	**Makanchi Array**	**79.08**	**320**	P	**P**	**14 40 55.7**	**-0.3**
	comp=Z,1.1nm,0.7s,baz=97,slow=9.1,SNR=11							
	comp=Z,1.1nm,0.7s							
N19K	**Bonanza Creek**	**79.13**	**24**	P	**P**	**14 40 56.0**	**0.0**
MAKZ	**Makanchi**	**79.29**	**320**	P	**P**	**14 40 56.8**	**-0.3**
L19K	**White Mountain**	**79.74**	**23**	P	**P**	**14 40 58.7**	**-0.5**
L19K				IAmb	IAmb	14 41 02.5		
	comp=Z,7.8nm,1.4s							
ZAA0	**Zalesovo Array**	**80.29**	**327**	P	**P**	**14 41 00.7**	**-1.6**
ZALV	**Zalesovo Beam**	**80.29**	**327**	P	**P**	**14 41 00.1**	**-2.1**
	comp=Z,2.7nm,0.6s,baz=112,slow=5.9,SNR=10							
	comp=Z,2.7nm,0.6s							
ZALV	**Zalesovo Beam**	**80.29**	**327**	P	**P**	**14 41 00.5**	**-1.7**
SUA	**Susitna One**	**81.02**	**25**	P	**P**	**14 41 07.5**	**+1.3**
SUA				IAmb	IAmb	14 41 16.8		
	comp=Z,18nm,1.3s							
BOOM	**Boomskoye usch**	**82.08**	**314**	P	**P**	**14 41 11.5**	**-0.8**
TRF	**Thorofare Moun**	**82.19**	**23**	P	**P**	**14 41 11.2**	**-1.2**
TRF				IAmb	IAmb	14 41 29.3		
	comp=Z,8.2nm,1.4s							
BPAW	**Bear Paw Mtn.**	**82.25**	**22**	P	**P**	**14 41 10.9**	**-1.6**
BPAW				IAmb	IAmb	14 41 13.7		
	comp=Z,8.0nm,1.5s							
IMAR	**Indian Mountai**	**82.25**	**20**	P	**P**	**14 41 11.0**	**-1.4**
H21K	**Melozitna Rive**	**82.40**	**21**	P	**P**	**14 41 12.4**	**-0.8**
KURK	**Kurchatov**	**82.68**	**323**	P	**P**	**14 41 14.8**	**-0.1**
KURBB	**Kurchatov Arra**	**82.70**	**323**	P	**P**	**14 41 14.8**	**-0.2**
	comp=Z,1.3nm,0.6s,baz=112,slow=4.2,SNR=14							
	comp=Z,1.3nm,0.6s							
MLY	**Manley**	**82.82**	**22**	P	**P**	**14 41 13.5**	**-1.9**
M24K	**Tolsona, Glenn**	**83.24**	**25**	P	**P**	**14 41 17.4**	**-0.3**
I23K	**Minto, Yukon-K**	**83.38**	**22**	P	**P**	**14 41 17.1**	**-1.1**
BMRM	**Bremner River**	**83.44**	**27**	P	**P**	**14 41 19.4**	**+0.7**
BMRM				IAmb	IAmb	14 41 47.9		
	comp=Z,18nm,1.4s							
H23K	**Yukon River**	**83.65**	**21**	P	**P**	**14 41 19.0**	**-0.6**
H23K				IAmb	IAmb	14 41 44.7		
	comp=Z,6.8nm,1.4s							
SNH	**Sunshine Point**	**83.93**	**28**	P	**P**	**14 41 22.3**	**+1.1**
HDA	**Harding Lake**	**83.95**	**23**	P	**P**	**14 41 20.7**	**-0.5**
GLB	**Gilahina Butte**	**83.99**	**26**	P	**P**	**14 41 20.4**	**-1.1**
GLB				IAmb	IAmb	14 41 23.2		
	comp=Z,11nm,1.5s							
IL31		**84.14**	**23**	P	**P**	**14 41 19.5**	**-2.6**
ILAR	**Eielson Array**	**84.14**	**23**	P	**P**	**14 41 19.3**	**-2.8**
	comp=Z,1.8nm,0.8s,baz=259,slow=5.4,SNR=13							
QSPA	**South Pole Qui**	**84.24**	**180**	P	**P**	**14 41 23.0**	**+0.2**
QSPA				IAmb	IAmb	14 41 48.2		
	comp=Z,14nm,0.9s							
J25K	**Salcha River,**	**84.65**	**23**	P	**P**	**14 41 23.0**	**-1.8**
J25K				IAmb	IAmb	14 41 26.1		
	comp=Z,4.8nm,0.8s							
BARN	**Barnard Glacie**	**84.80**	**27**	P	**P**	**14 41 25.3**	**-0.5**
BARN				IAmb	IAmb	14 41 50.3		
	comp=Z,8.0nm,1.3s							
CTGM	**Chitina Glacie**	**84.91**	**27**	P	**P**	**14 41 26.4**	**+0.1**
CTGM				IAmb	IAmb	14 41 32.7		
	comp=Z,16nm,1.5s							
TOLK	**Toolik Lake Re**	**85.02**	**19**	P	**P**	**14 41 26.4**	**-0.2**
M27K	**Edge Creek, AK**	**85.18**	**26**	P	**P**	**14 41 27.0**	**-0.7**
M27K				IAmb	IAmb	14 41 38.1		
	comp=Z,8.1nm,1.4s							
L27K	**Beaver Creek,**	**85.47**	**25**	P	**P**	**14 41 29.3**	**+0.4**
BCAR	**Beaver Creek A**	**85.49**	**25**	P	**P**	**14 41 28.2**	**-0.8**
NRIK	**Noril'sk**	**85.89**	**342**	P	**P**	**14 41 29.8**	**-0.9**
	comp=Z,5.7nm,0.8s,baz=134,slow=3.8,SNR=5.7							
	comp=Z,5.7nm,0.8s							
KKAR	**Karatay Array**	**86.11**	**314**	P	**P**	**14 41 32.2**	**-0.3**
BMAR	**Burnt Mountain**	**86.14**	**21**	P	**P**	**14 41 32.1**	**0.0**
HYT	**Haines Junctio**	**86.63**	**28**	P	**P**	**14 41 34.5**	**-0.2**
HYT				IAmb	IAmb	14 41 37.3		
	comp=Z,3.0nm,0.7s							
M30M	**Minto, Yukon**	**87.48**	**26**	P	**P**	**14 41 38.1**	**-0.6**
I29M	**Ogilvie Camp,**	**87.72**	**23**	P	**P**	**14 41 39.0**	**-0.7**
I29M				IAmb	IAmb	14 41 40.1		
	comp=Z,4.0nm,1.0s							
BRVK	**Borovoye**	**88.27**	**324**	P	**P**	**14 41 41.3**	**-1.3**
LPAZ	**La Paz**	**136.55**	**121**	PKP	**PKPdf**	**14 48 13.4**	**-1.2**
	comp=Z,0.6nm,0.4s,baz=220,slow=1.9,SNR=4.9							
TORD	**Torodi Ar. Bea**	**147.73**	**286**	PKPbc	**PKPbc**	**14 48 35.7**	**-0.9**
	comp=Z,1.1nm,0.3s,baz=89,slow=2.6,SNR=20							
BDFB	**Brasilia**	**152.39**	**140**	PKPbc	**PKPbc**	**14 48 47.0**	**-1.0**
	comp=Z,2.8nm,0.4s,baz=182,slow=5.0,SNR=5.6							

*VIE **07** 15:07:00.6±0.5,51˚.48N×16˚.20E,h0km,mb2.5/5,ml3.1/4, Error ellipse: s-maj=4.6km s-min=3.7km az=49.0 70 km NW of Wroclaw Suspected Mining induced.*
*IDC **07** 15:07:00.7±0.9,51˚.49N×15˚.92E,h0km,mbtmp3.2/7, ML2.9/6,Error ellipse: s-maj=15.0km s-min=8.0km az=112.0*
*IPEC **07** 15:07:00.1±0.2,51˚.55N×16˚.24E,h1km,ML2.9/5,Error ellipse: s-maj=1.7km s-min=1.1km az=26.0*
*DNK **07** 15:07:00.5±0.3,51˚.47N×15˚.89E,h20km±38km*
*BGR **07** 15:07:01.9±0.5,51˚.46N×16˚.14E,h1km,ML3.0/14,Error ellipse: s-maj=5.6km s-min=3.3km az=20.0*
*PRU **07** 15:07:01.3±0.0,51˚.50N×16˚.12E,h0km*

ISC 07 15:06:58.7±0.7,51˚.60N±0˚.03×16˚.18E±0˚.02,h0km,n58, σ1§18/108**,Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.76**	**175**	*e*Pg	**Pg**	**15 07 13.9**	**+0.7**
KSP				*e*Sg	**Sg**	**15 07 22.9**	**-0.1**
KSP	**Ksiaz**	**0.76**	**175**	*e*Pg	**Pg**	**15 07 13.9**	**+0.7**
KSP				*e*Sg	**Sg**	**15 07 22.6**	**-0.3**
CHVC	**Chvalec**	**1.01**	**185**	*e*PG	**Pg**	**15 07 18.6**	**+0.5**
CHVC				*e*SG	**Sg**	**15 07 30.9**	**-0.3**
	comp=Z,114nm,0.5s						
OSTC	**Ostas**	**1.04**	**179**	*e*PG	**Pg**	**15 07 19.2**	**+0.6**
OSTC				*e*SG	**Sg**	**15 07 32.0**	**-0.1**
	comp=Z,94nm,0.3s						
UPC	**Upice**	**1.09**	**186**	*e*PG	**Pg**	**15 07 19.9**	**+0.2**
UPC				*e*SG	**Sg**	**15 07 33.5**	**-0.3**
	comp=Z,182nm,0.5s						
DPC	**Dobruska-Polom**	**1.25**	**176**	*e*PG	**Pg**	**15 07 22.6**	**-0.1**
DPC				*e*SG	**Sg**	**15 07 37.9**	**-0.9**
	comp=Z,72nm,0.3s						
DPC	**Dobruska-Polom**	**1.25**	**176**	*e*Pg	**Pg**	**15 07 22.9**	**+0.2**
DPC				*e*Sg	**Sg**	**15 07 38.6**	**-0.3**
PVCC	**Panska Ves**	**1.48**	**224**	*e*PG	**Pn**	**15 07 26.8**	**+0.2**
PVCC				*e*SG	**Sg**	**15 07 46.3**	**+0.2**
	comp=Z,233nm,0.3s						
KRLC	**Kraliky**	**1.57**	**166**	*e*PG	**Pn**	**15 07 28.1**	**+0.2**
KRLC				*e*SG	**Sn**	**15 07 47.9**	**-1.0**
	comp=Z,96nm,0.3s						
BRG	**Berggiesshubel**	**1.58**	**244**	Pn	**Pn**	**15 07 28.1**	**0.0**
BRG				Pg	**Pg**	**15 07 29.8**	**+0.7**
BRG				Sg	**Sb**	**15 07 50.2**	**+0.8**
BRG				Amp		15 07 51.8	
	comp=Z,82nm,0.4s						
BRG	**Berggiesshubel**	**1.58**	**244**	*e*Pn	**Pn**	**15 07 28.8**	**+0.8**
BRG				*e*Sg	**Sb**	**15 07 50.1**	**+0.8**
FBE	**Freiberg**	**1.90**	**250**	*e*Pn	**Pn**	**15 07 33.3**	**+0.9**
FBE				*e*Sg	**Sb**	**15 07 59.8**	**+1.3**
PRU	**Pruhonice**	**1.92**	**214**	*e*PG	**Pn**	**15 07 33.2**	**+0.6**
PRU				*e*SG	**Sb**	**15 07 59.8**	**+0.8**
	comp=Z,86nm,0.4s						
CLL	**Collm**	**2.01**	**263**	*e*Pn	**Pn**	**15 07 34.0**	**+0.1**
CLL				*e*Pg	**Pb**	**15 07 37.0**	**+0.9**
CLL				*i* x	x	15 07 40.4	
CLL				*e*Sg	**Sb**	**15 08 03.0**	**+1.3**
	comp=Z,33nm,0.8s						
CLL	**Collm**	**2.01**	**263**	*e*Pn	**Pn**	**15 07 34.2**	**+0.3**
MORC	**Moravsky Berou**	**2.02**	**154**	*e*Pn	**Pn**	**15 07 34.4**	**+0.4**
	baz=335						
MORC				*e*Sg	**Sb**	**15 08 01.3**	**-0.6**
	comp=Z,71nm,0.6s,baz=335						
MORC	**Moravsky Berou**	**2.02**	**154**	*e*PN	**Pn**	**15 07 34.4**	**+0.4**
MORC				*e*SG	**Sb**	**15 08 01.4**	**-0.5**
MORC	**Moravsky Berou**	**2.02**	**154**	*e*Pn	**Pn**	**15 07 34.5**	**+0.4**
OKC	**Ostrava-Krasne**	**2.16**	**144**	*e*PN	**Pn**	**15 07 36.4**	**+0.5**
OKC				*e*PG	**Pb**	**15 07 38.8**	**+0.2**
OKC				*e*SG	**Sb**	**15 08 06.5**	**+0.6**
	comp=Z,59nm,0.6s						
OKC	**Ostrava-Krasne**	**2.16**	**144**	*e*Pn	**Pn**	**15 07 36.4**	**+0.5**
OKC				*e*Sg	**Sb**	**15 08 06.5**	**+0.6**
VRAC	**Vranov**	**2.30**	**173**	Pn	**Pn**	**15 07 38.5**	**+0.5**
	comp=Z,1.1nm,0.3s,baz=345,slow=16,SNR=3.5						
VRAC				Lg	Lg	15 08 09.6	
	comp=Z,6.5nm,0.3s,baz=2.4,slow=8.3,SNR=15						
	comp=Z,5.5nm,0.3s						
VRAC	**Vranov**	**2.30**	**173**	*e*Pn	**Pn**	**15 07 38.5**	**+0.5**
	baz=354						
VRAC				*e*Sg	**Sb**	**15 08 10.6**	**+0.4**
	comp=Z,60nm,0.7s,baz=354						
VRAC	**Vranov**	**2.30**	**173**	*e*PN	**Pn**	**15 07 38.5**	**+0.5**
VRAC				*e*SG	**Sb**	**15 08 10.7**	**+0.5**
TREC	**Trest**	**2.34**	**191**	*e*PN	**Pn**	**15 07 38.4**	**-0.1**
TREC				*e*SG	**Sb**	**15 08 12.3**	**+0.9**
	comp=Z,47nm,0.5s						
MAUC	**Maruska**	**2.47**	**154**	*e*PN	**Pn**	**15 07 41.0**	**+0.8**
MAUC				*e*PG	**Pb**	**15 07 44.4**	**+0.5**
MAUC				*e*SG	**Sg**	**15 08 17.1**	**-0.8**
	comp=Z,58nm,0.4s						
KRUC	**Moravsky**	**2.54**	**177**	*e*Pn	**Pn**	**15 07 41.8**	**+0.6**
	baz=358						
KRUC				*e*Sg	**Sb**	**15 08 17.8**	**+0.9**
	comp=Z,51nm,0.7s,baz=358						
KRUC	**Moravsky**	**2.54**	**177**	*e*PN	**Pn**	**15 07 41.9**	**+0.7**
KRUC				*e*SG	**Sb**	**15 08 17.9**	**+1.0**
TANN	**Tannenbergstha**	**2.63**	**245**	*e*Pn	**Pn**	**15 07 43.2**	**+0.7**
TANN				*e*Sg	**Sg**	**15 08 22.8**	**-0.4**
OJC	**Ojcow**	**2.67**	**120**	*i* Pg	**Pg**	**15 07 51.0**	**+1.1**
OJC				*i* Sgc		15 08 26.1	
WERD	**Werda**	**2.70**	**246**	*e*Pn	**Pn**	**15 07 44.4**	**+0.9**
WERD				*e*Sg	**Sg**	**15 08 25.5**	**0.0**
NKC	**Novy Kostel**	**2.73**	**241**	*e*PN	**Pn**	**15 07 44.8**	**+1.0**
NKC				*e*PG	**Pb**	**15 07 49.9**	**+1.5**
NKC				*e*SG	**Sg**	**15 08 26.4**	**+0.1**
	comp=Z,44nm,0.3s						
JAVC	**Velka Javorina**	**2.90**	**160**	*e*Pn	**Pn**	**15 07 46.6**	**+0.4**
	baz=342						
JAVC	**Velka Javorina**	**2.90**	**160**	*e*PN	**Pn**	**15 07 46.7**	**+0.5**
KHC	**Kasperske Hory**	**2.98**	**215**	*e*PN	**Pn**	**15 07 47.5**	**+0.3**
KHC				*e*PG	**Pb**	**15 07 52.8**	**+0.1**
KHC				*e*SN	**Sn**	**15 08 22.6**	**-1.1**
KHC				*e*SG	**Sg**	**15 08 32.7**	**-1.6**
	comp=Z,21nm,0.4s						
CKRC	**Cesky Krumlov**	**3.03**	**204**	*e*PN	**Pn**	**15 07 49.0**	**+1.1**
CKRC				*e*PG	**Pb**	**15 07 54.8**	**+1.3**
CKRC				*e*SG	**Sb**	**15 08 33.6**	**+2.6**
MOX	**Moxa**	**3.03**	**253**	*e*Pn	**Pn**	**15 07 49.0**	**+1.0**
MOX				*e*Sg	**Sg**	**15 08 36.7**	**+0.6**
GEC2	**GERESS Array S**	**3.18**	**211**	*e*Pn	**Pn**	**15 07 51.4**	**+1.3**
GEC2				*e*Sg	**Sb**	**15 08 38.0**	**+2.6**
GERES	**GERESS Array B**	**3.18**	**211**	Pn	**Pn**	**15 07 50.4**	**+0.3**
	comp=Z,0.9nm,0.3s,baz=31,slow=14,SNR=18						
GERES				Sn	**Sn**	**15 08 25.1**	**-3.6**
	comp=Z,2.1nm,0.3s,baz=38,slow=27,SNR=5.5						
GERES				Lg	Lg	15 08 35.7	
	comp=Z,3.9nm,0.3s,baz=38,slow=29,SNR=8.3						
	comp=Z,1.7nm,0.4s						
LANS	**Liptovska Anna**	**3.23**	**138**	*e*PN	**Pn**	**15 07 53.0**	**+2.3**
LANS				*e*PG	**Pg**	**15 08 03.3**	**+2.8**
LANS				*e*SG	**Sg**	**15 08 43.6**	**+1.3**
WET	**Wettzell**	**3.24**	**222**	*e*Pn	**Pn**	**15 07 51.6**	**+0.8**
WET				*e*Sg	**Sb**	**15 08 39.3**	**+2.2**
MODS	**Modra-Piesok**	**3.30**	**167**	*e*PN	**Pn**	**15 07 53.8**	**+2.1**
MODS				*e*PG	**Pg**	**15 08 02.2**	**+0.2**
MODS				*e*SG	**Sg**	**15 08 44.6**	**-0.1**
KOLL	**Kolacno**	**3.34**	**154**	*e*SG	**Sg**	**15 08 45.9**	**-0.1**
NIE	**Niedzica**	**3.41**	**128**	*e*P	**Pg**	**15 08 04.8**	**+0.6**
NIE				*e*S	**Sg**	**15 08 49.4**	**+1.0**
ZST	**Bratislava**	**3.45**	**170**	*e*SG	**Sg**	**15 08 47.7**	**-1.9**
BSD	**Bornholm Skovb**	**3.61**	**348**	*i* P	**Pn**	**15 07 57.0**	**+1.2**
CLZ	**Clausthal**	**3.62**	**276**	*e*Pn	**Pn**	**15 07 58.3**	**+2.2**
CONA	**Conrad Observa**	**3.68**	**183**	*i* Pn	**Pn**	**15 07 57.3**	**+0.5**
	comp=Z,1.1nm,0.2s						
CONA				*e*Pg	**Pg**	**15 08 07.9**	**-1.3**
	comp=Z,2.1nm,0.2s						
GRF	**Grafenberg Arr**	**3.69**	**241**	*e*Sg	**Sg**	**15 08 56.1**	**-1.0**
RONA	**Rosalia, Austr**	**3.90**	**179**	*e*Pn	**Pn**	**15 07 59.3**	**-0.6**
	comp=Z,0.3nm,0.1s						
RONA				Sg	**Sg**	**15 09 05.2**	**+1.2**
	comp=Z,3.6nm,0.3s						
MOA	**Molln**	**3.95**	**199**	*e*Pn	**Pn**	**15 08 01.4**	**+0.8**
	comp=Z,1.1nm,0.2s						
BLEU	**Blekinge**	**4.72**	**358**	*i* P	**Pn**	**15 08 12.9**	**+1.8**
KBA	**Koelnbreinsper**	**4.89**	**203**	*e*Pn	**Pn**	**15 08 14.7**	**+1.1**
	comp=Z,2.0nm,0.3s						
DEL	**Delary**	**5.07**	**345**	*i* P	**Pn**	**15 08 17.0**	**+1.1**
DEL				*e*S	**Sn**	**15 09 12.8**	**-2.3**
DAVOX	**Davos/Dischmat**	**6.34**	**223**	Pn	**Pn**	**15 08 33.2**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=48,slow=18,SNR=1.8						
DAVOX				Lg	Lg	15 10 17.5	
	comp=Z,0.3nm,0.3s,baz=0.4,slow=21,SNR=1.9						
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**8.25**	**91**	Pn	**Pn**	**15 09 00.3**	**+0.7**
	comp=Z,0.7nm,0.3s,baz=278,slow=12,SNR=5.5						
	comp=Z,0.4nm,0.4s						
HFS	**Hagfors**	**8.67**	**352**	Pn	**Pn**	**15 09 05.3**	**-0.1**
	comp=Z,5.8nm,1.2s,baz=164,slow=14,SNR=2.0						
FINES	**FINESS Array B**	**11.27**	**25**	Pn	**Pn**	**15 09 40.8**	**0.0**
	comp=Z,0.1nm,0.3s,baz=214,slow=12,SNR=1.6						
FINES				Sn	**Sn**	**15 11 42.1**	**-5.2**
	comp=Z,0.2nm,0.3s,baz=223,slow=24,SNR=2.2						
	comp=Z,2.1nm,1.0s						
EKA	**Eskdalemuir Ar**	**12.11**	**296**	Pn	**Pn**	**15 09 51.2**	**-1.2**
	baz=96,slow=14						
	comp=Z,0.1nm,0.3s						

*IDC **07** 15:25:31.4±10.0,27˚.71N×55˚.37E,h0km,mb3.6/3, mbtmp3.6/3,MS3.1/1,Error ellipse: s-maj=443.8km s-min=30.1km az=148.0*
*DSN **07** 15:25:32.4±1.1,27˚.69N×55˚.39E,h10km,ML3.1/6,Error ellipse: s-maj=20.9km s-min=6.8km az=52.0*
*TEH **07** 15:25:35.2,27˚.53N×55˚.53E,h19km,ML3.2*

ISC 07 15:25:34.9±0.8,27˚.53N±0˚.04×55˚.48E±0˚.04,h15km,n42, σ1§60/44**,mb3.7/3,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENO	**Geno**	**0.63**	**102**	*e*Pg	**Pg**	**15 25 46.5**	**-0.7**
IBND	**Bandar-abas**	**0.94**	**95**	*e*Pg	**Pb**	**15 25 52.6**	**-0.3**
IBND				*e*		15 26 51.4	
	comp=Z,15μm,0.6s						
LAR1	**LAR**	**0.99**	**278**	*e*Pg	**Pn**	**15 25 54.8**	**+0.5**
LAR1				*e*Sg	**Sn**	**15 26 10.3**	**+2.2**
LAR1				*e*		15 26 16.3	
	comp=Z,15μm,0.4s						
SHME	**Shamm**	**1.59**	**158**	*e*Pn	**Pn**	**15 26 02.6**	**+0.1**
SHME	**Shamm**	**1.59**	**158**	P	**Pn**	**15 26 02.9**	**+0.4**
SHME				S	**Sg**	**15 26 27.1**	**+1.0**
BANOM	**Banah**	**1.76**	**155**	*e*Pn	**Pn**	**15 26 09.9**	**+1.0**
BANOM	**Banah**	**1.76**	**155**	P	**Pn**	**15 26 05.5**	**+0.6**
BANOM				S	**Sb**	**15 26 30.6**	**+1.8**
JHRM	**Jahrom**	**1.94**	**300**	*e*Pn	**Pb**	**15 26 09.7**	**-0.4**
KHNJ	**Kahnooj**	**2.01**	**78**	*e*Pn	**Pn**	**15 26 09.6**	**+1.2**
MSFE	**Esma-Masafi**	**2.25**	**164**	*e*Pn	**Pn**	**15 26 12.6**	**+1.0**
MSFE	**Esma-Masafi**	**2.25**	**164**	P	**Pn**	**15 26 12.5**	**+0.9**
QIR1	**Qir**	**2.35**	**294**	*e*Pn	**Pn**	**15 26 15.1**	**+2.1**
NGRK	**Negar Kerman**	**2.37**	**27**	*e*Pn	**Pn**	**15 26 15.3**	**+1.7**
NGRK				*e*		15 26 22.5	
	comp=Z,826nm,0.2s						
NAZ	**Nazwa, Dubai**	**2.54**	**176**	*e*Pn	**Pn**	**15 26 18.1**	**+2.6**
UOSS	**Minazif**	**2.66**	**166**	*e*Pn	**Pn**	**15 26 18.6**	**+1.4**
UOSS	**Minazif**	**2.66**	**166**	P	**Pn**	**15 26 17.5**	**+0.3**
KRBR	**Kerman**	**2.69**	**24**	*e*Pn	**Pn**	**15 26 19.6**	**+1.7**
TVBK	**TV Kerman**	**2.69**	**24**	*e*Pn	**Pn**	**15 26 19.4**	**+1.4**
TVBK				*e*		15 26 22.2	
	comp=Z,1μm,0.4s						
JASK	**Jask - Hormozg**	**2.70**	**127**	*e*Pn	**Pn**	**15 26 18.7**	**+0.9**
HATD	**Hatta, Dubai**	**2.76**	**168**	*e*Pn	**Pn**	**15 26 20.2**	**+1.6**
HATD	**Hatta, Dubai**	**2.76**	**168**	P	**Pn**	**15 26 19.9**	**+1.3**
FAQ	**Al Faqa, Dubai**	**2.78**	**178**	*e*Pn	**Pn**	**15 26 21.4**	**+2.6**
ASHO	**Ashiyiah**	**2.88**	**170**	*e*Pn	**Pn**	**15 26 22.0**	**+1.7**
ASHO	**Ashiyiah**	**2.88**	**170**	P	**Pn**	**15 26 21.6**	**+1.3**
ASUD	**Al Ashush, Dub**	**2.90**	**183**	*e*Pn	**Pn**	**15 26 22.6**	**+2.1**
CHMN	**Cheshme madani**	**2.94**	**37**	*e*Pn	**Pn**	**15 26 23.2**	**+1.8**
CHMN				*e*		15 27 09.6	
	comp=Z,547nm,0.4s						
KHGB	**Koh Gabri**	**2.96**	**17**	*e*Pn	**Pn**	**15 26 23.5**	**+1.9**
KHGB				*e*		15 26 24.9	
	comp=Z,572nm,0.2s						
KBAM	**BAM**	**3.07**	**58**	*e*Pn	**Pn**	**15 26 24.8**	**+1.9**
KBAM				*e*		15 26 27.0	
	comp=Z,466nm,0.3s						
IMEH	**Mehriz**	**3.92**	**349**	*e*Pn	**Pn**	**15 26 36.4**	**+1.6**
IBAF	**Bafgh**	**4.05**	**1**	*e*Pn	**Pn**	**15 26 37.7**	**+1.3**
IBAF				*e*		15 26 53.3	
	comp=Z,174nm,0.3s						
BIDO	**Bidbid**	**4.65**	**149**	*e*Pn	**Pn**	**15 26 44.9**	**+0.3**
UMZA	**Um Al Zommool**	**4.81**	**184**	*e*Pn	**Pn**	**15 26 47.8**	**+1.1**
YZKH	**Yazd**	**4.90**	**351**	*e*Pn	**Pn**	**15 26 49.2**	**+1.1**
IRAM	**Ramesheh**	**5.04**	**328**	*e*Pn	**Pn**	**15 26 51.6**	**+1.4**
ZHSF	**Zahedan**	**5.09**	**65**	*e*Pn	**Pn**	**15 26 53.6**	**+2.7**
BSRN	**Basiran**	**5.44**	**35**	*e*Pn	**Pn**	**15 26 57.8**	**+2.3**
NASN	**Na'in**	**5.74**	**337**	*e*Pn	**Pn**	**15 27 00.5**	**+0.7**
SRVN	**Saravan**	**6.15**	**90**	*e*Pn	**Pn**	**15 27 07.3**	**+2.0**
MKAR	**Makanchi Array**	**28.52**	**40**	P	**P**	**15 31 27.9**	**-1.9**
	comp=Z,0.2nm,0.6s,baz=224,slow=7.5,SNR=2.1						
	comp=Z,0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**28.96**	**31**	LR	LR	15 43 23.2	
	comp=Z,34nm,19.5s,baz=123,slow=37						
ZALV	**Zalesovo Beam**	**34.06**	**31**	P	**P**	**15 32 16.

SNVZ	South Ngauruho	8.88	203	P	P	15 30 47.4	+1.4
NGZ	Ngauruhoe	8.89	203	P	P	15 30 48.7	+2.7
WNVZ	Wahianoa	9.03	203	P	P	15 30 48.9	+1.4
BHHZ	Black Hill Sta	9.03	200	P	P	15 30 48.2	+0.7
BHHZ				S	S	15 32 27.1	-4.4
KAHZ	Kahuranaki	9.10	196	P	P	15 30 50.7	+2.5
KAHZ				S	S	15 32 30.9	-2.0
VRZ	Vera Road	9.15	207	P	Pn	15 30 49.9	+1.1
PXZ	Pawanui	9.33	195	P	Pn	15 30 52.6	+1.8
PXZ				S	S	15 32 35.0	-2.6
PNHZ	Pukenui	9.38	199	P	Pn	15 30 51.7	+0.2
PNHZ				S	S	15 32 34.9	-4.0
WPHZ	Waipukurau	9.46	197	P	Pn	15 30 53.8	+1.4
WPHZ				S	S	15 32 36.6	-3.8
TSZ	Takapari Road	9.58	199	P	Pn	15 30 53.8	-0.1
PRHZ	Porangahau	9.60	196	P	Pn	15 30 56.0	+1.9
BFZ	Birch Farm	10.09	197	P	Pn	15 31 01.2	+1.5
MRZ	Mangatainoka R	10.25	200	P	P	15 31 00.9	-0.1
CTA	Charters Tower	32.29	282	P	P	15 34 34.2	-0.3
	1.0nm,0.5s,baz=116,slow=11,SNR=6.6						
	1.0nm,0.5s						
STKA	Stephens Creek	32.72	258	P	P	15 34 37.9	-0.2
	0.8nm,0.4s,baz=95,slow=11,SNR=4.9						
	0.8nm,0.4s						
KRVT	Keravat (AS076	37.48	310	P	P	15 35 17.2	-1.1
	11nm,0.6s,baz=147,slow=2.2,SNR=5.1						
	11nm,0.6s						
ASAR	Alice Springs	41.43	269	P	P	15 35 49.6	-0.9
	0.5nm,0.4s,baz=104,slow=7.2,SNR=19						
ASAR				PcP	PP	15 37 38.5	+2.1
	0.3nm,0.8s,baz=106,slow=3.3,SNR=1.9						
	0.5nm,0.4s						
WRA	Warramunga Arr	42.48	274	P	P	15 35 58.1	-0.7
	0.8nm,0.4s,baz=111,slow=7.8,SNR=34						
	0.8nm,0.4s						
FINES	FINESS Array B	145.17	338	PKPbc	PKPdf	15 47 29.8	-0.8
	2.0nm,0.9s,baz=45,slow=3.0,SNR=7.7						

*TUL **07** 15:43:27.3±1.2,35°.98N±0°.01×97°.54W±0°.02,h5km±1km, ML2.5,mb_Lg2.4/38(NEIC), Error ellipse: s-maj=2.1km s-min=1.4km az=59.0*

NEIC 07 15:43:27.1±0.5,36°.00N±0°.01×97°.56W±0°.01,h5km±2km, Error ellipse: s-maj=3.0km s-min=2.4km az=179.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKCFA	Oklahoma City	0.59	172	Pg	Pg	15 43 38.4	-0.1
OKCSW	OKLAHOMA CITY	0.60	171		Pg	15 43 38.6	-0.1
FNO	Franklin	0.75	170	Pg	Pg	15 43 41.3	-0.3
U32A	Winter Ranch,	1.23	288		Pg	15 43 50.4	-0.3
T35A	Sooner Cattle	1.24	42		Pg	15 43 50.7	-0.3
X34A	Smith Ranch, M	1.42	189		Pn	15 43 53.6	0.0
TUL1	Leonard	1.44	93		Pn	15 43 53.6	-0.2
TUL1				IAmb_Lg		15 44 14.1	
	comp=Z,31nm,0.8s						
WMOK	Wichita Mounta	1.61	219		Pn	15 43 56.1	-0.1
W39A	Magazine	3.18	104	IAmb_Lg		15 45 15.7	
	comp=Z,16nm,1.1s						
CBKS	Cedar Bluff	3.30	329	IAmb_Lg		15 45 13.9	
	comp=Z,10.0nm,0.9s						
AMTX	Amarillo	3.55	253	IAmb_Lg		15 45 29.6	
	comp=Z,8.8nm,0.8s						
MIAR	Mount Ida	3.57	113	IAmb_Lg		15 45 28.0	
	comp=Z,14nm,0.7s						
ABTX	Abilene, Hawle	3.79	208	IAmb_Lg		15 45 33.5	
	comp=Z,6.4nm,0.7s						
S39A	Bolivar	3.79	62	IAmb_Lg		15 45 27.2	
	comp=Z,12nm,0.8s						
U40A	Yellville	3.82	83	IAmb_Lg		15 45 35.9	
	comp=Z,6.8nm,0.7s						
X40A	Basin Creek Fa	4.15	110	IAmb_Lg		15 45 38.6	
	comp=Z,11nm,0.7s						
MGMO	Mountain Grove	4.41	73	IAmb_Lg		15 45 45.2	
	comp=Z,10nm,0.7s						
FCAR	Ozark Folk Cen	4.41	90	IAmb_Lg		15 45 51.7	
	comp=Z,8.3nm,1.0s						
R40A	Maddies Statio	4.80	60	IAmb_Lg		15 45 56.8	
	comp=Z,9.2nm,0.9s						
P38A	Dawn	4.82	40	IAmb_Lg		15 46 08.6	
	comp=Z,8.5nm,0.8s						
KSCO	Kaye Shedlock'	5.03	308	IAmb_Lg		15 46 05.5	
	comp=Z,6.8nm,0.8s						
CCM	Cathedral Cave	5.45	66	IAmb_Lg		15 46 27.7	
	comp=Z,10nm,1.0s						
T25A	Trinidad	5.63	284	IAmb_Lg		15 46 32.2	
	comp=Z,8.7nm,0.9s						
FVM	French Village	6.04	69	IAmb_Lg		15 46 36.4	
	comp=Z,6.5nm,0.7s						
SDCO	Great Sand Dun	6.60	288	IAmb_Lg		15 47 08.3	
	comp=Z,3.3nm,0.9s						
Q24A	Divide	6.72	298	IAmb_Lg		15 47 02.8	
	comp=Z,4.7nm,0.7s						

*IDC **07** 16:00:25.9±5.3,4°.33S×125°.98E,h422km±65km,mb3.0/2, mbtmp4.0/4, Error ellipse: s-maj=103.2km s-min=22.9km az=54.0*

*NEIC **07** 16:00:27.9±1.9,4°.41S±0°.10×125°.9E±0°.1,h450km±10km, mb4.2/17, Error ellipse: s-maj=19.2km s-min=14.3km az=77.0*

*DJA **07** 16:00:29.0±0.3,5°.3S×12°.6E±°,h436km±5km,M3.8/19, mB4.5/4,mb3.9/13,MLv3.8/19,Mw(mB)3.6/4*

ISC 07 16:00:27.9±0.6,4°.54S±0°.06×125°.82E±0°.08,h450km,n49, σ1s03/51,mb3.8/4,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	Namlea	1.82	45	P	P	16 01 27.6	+0.1
NLAI				S	S	16 02 14.9	-0.8
SANI	Sanana	2.48	4	P	P	16 01 31.6	+0.2
SANI				S	S	16 02 22.5	-0.3
AAI	Ambon	2.52	70	P	P	16 01 31.2	-0.4
MSAI	Masohi	3.32	69	P	P	16 01 37.7	+0.2
BBSI	Bau Bau	3.37	254	P	P	16 01 38.1	+0.2
LBMI	Labuha	4.23	23	P	P	16 01 46.0	+0.8
LUWI	Luwuk	4.62	319	P	P	16 01 48.6	-0.2
SOEI	Soe	5.40	197	P	P	16 01 55.8	-0.6
MMRI	Maumere	5.40	221	P	P	16 01 56.5	+0.2
	0.1nm11nm,1.2s						
KMSI	Cibinong	5.41	340	P	P	16 01 57.9	+1.5
	0.3nm3µm82nm,0.6s						
TNTI	Ternate	5.50	16	P	P	16 01 58.7	+1.4
	0.1nm10nm,0.7s						
APSI	Ampana	5.51	311	P	P	16 01 58.1	+0.7
	0.1nm22nm,0.8s						
BSSI	Bau Bau, Buton	5.54	253	P	P	16 01 57.7	0.0
	0.0nm6.8nm,1.1s						
BNSI	Bone	5.70	271	P	P	16 02 00.1	+0.8
	0.1nm30nm,0.9s						
EDFI	Ende, Flores	5.86	224	P	P	16 02 01.2	+0.3
	0.0nm2.8nm,1.8s						
BATI	Baumata	6.02	201	P	P	16 02 01.3	-1.2
	4.1nm,0.4s,baz=128,slow=23,SNR=1.5						
BATI				S	S	16 03 16.5	-3.2
	12nm,0.4s,baz=117,slow=1.5,SNR=9.0						
SPSI	Sidrap Palu	6.06	275	P	P	16 02 02.7	-0.2
	0.1nm18nm,0.9s						
TTSI	Tana Toraja	6.17	284	P	P	16 02 05.5	+1.4
	0.1nm933nm17nm,0.8s						
MRSI	Marisa	6.32	322	P	P	16 02 05.8	+0.2
	0.2nm723nm63nm,0.6s						
SWI	Sorong	6.55	56	P	P	16 02 08.8	+0.8
	0.1nm37nm,0.8s						
FAKI	Fak Fak	6.61	76	P	P	16 02 09.4	+0.8
FAKI	Fak Fak	6.61	76	P	P	16 02 10.2	+1.5
	0.2nm31nm,0.5s						
TOLI2	Tolitoli	7.54	318	P	P	16 02 18.6	+0.1
MPSI	Mapaga	7.65	309	P	P	16 02 20.6	+0.9
BKB	Balikpapan	9.49	290	P	P	16 02 39.8	+0.2
MTN	Manton Dam	9.77	148	P	P	16 02 43.0	+0.4
KNRA	Kununurra	11.43	166	P	P	16 03 00.8	+0.1
WB0	Warramunga Arr	17.28	152	P	P	16 04 02.8	-0.5
WB0				IAmb	IAmb	16 04 05.8	
	comp=Z,18nm,1.1s						
WRAB	Tennant Creek	17.41	152	P	P	16 04 04.1	-0.5
WRAB				IAmb	IAmb	16 04 06.5	
	comp=Z,7.4nm,0.6s						
WRA	Warramunga Arr	17.41	152	P	P	16 04 04.9	+0.2
	comp=Z,5.8nm,0.5s,baz=333,slow=10,SNR=92						
WRA	Warramunga Arr	17.41	152	IAmb	IAmb	16 04 07.1	
	comp=Z,0.2nm,0.7s						
WB2	Warramunga Arr	17.42	152	P	P	16 04 04.1	-0.6
WB2				IAmb	IAmb	16 04 06.6	
	comp=Z,7.6nm,0.6s						
WR0	Warramunga Arr	17.52	152	P	P	16 04 05.2	-0.6
WR0				IAmb	IAmb	16 04 07.4	
	comp=Z,6.1nm,0.6s						
COEN	Coen	19.50	120	P	P	16 04 25.1	+0.2
COEN				IAmb	IAmb	16 04 31.8	
	comp=Z,13nm,1.4s						
AS31	Alice Springs	20.55	158	P	P	16 04 35.3	+0.9
AS31				IAmb	IAmb	16 04 37.8	
	comp=Z,4.5nm,1.4s						
ASAR	Alice Springs	20.55	158	P	P	16 04 35.4	+1.0
	comp=Z,1.9nm,0.5s,baz=348,slow=12,SNR=82						
	comp=Z,1.9nm,0.5s						
ASAR	Alice Springs	20.55	158	P	P	16 04 35.3	+0.9
MORW	Morawa	26.09	200	P	P	16 05 27.5	+3.4
BBOO	Buckleboo	29.70	162	P	P	16 05 56.2	+0.5
STKA	Stephens Creek	30.96	153	P	P	16 06 07.8	+1.1
JNU	Nakatsue	37.77	7	P	P	16 07 02.2	-2.0
KOUNC	Koumac, New Ca	40.63	116	P	P	16 07 27.2	-0.4
KOUNC				IAmb	IAmb	16 07 42.9	
	comp=Z,32nm,1.4s						
MK31	Makanchi Array	63.94	328	P	P	16 10 15.0	-0.6
MKAR	Makanchi Array	63.94	328	P	P	16 10 15.4	-0.2
	comp=Z,0.6nm,0.6s,baz=128,slow=8.2,SNR=7.4						
	comp=Z,0.6nm,0.6s						
TIXI	Tiksi	76.07	1	P	P	16 11 27.6	0.0
TIXI				IAmb	IAmb	16 11 33.3	
	comp=Z,2.8nm,1.4s						
SBA	Scott Base	76.32	172	P	P	16 11 29.6	+0.6
XMAS	Kiritimati	76.95	87	P	P	16 11 32.1	-1.6
ABKAR	Akbulak array	78.03	322	P	P	16 11 38.5	-0.3
QSPA	South Pole Qui	85.42	180	P	P	16 12 16.6	-0.1
QSPA				IAmb	IAmb	16 12 32.0	
	comp=Z,3.4nm,1.1s						

*REN **07** 16:11:06.2±0.7,37°.71N±0°.04×114°.57W±0°.03,h7km±7km, ML2.5/22,ML2.5/60(NEIC), Error ellipse: s-maj=5.5km s-min=2.4km az=200.0*

NEIC 07 16:11:06.4±1.2,37°.74N±0°.04×114°.56W±0°.03,h18km±6km, Error ellipse: s-maj=5.4km s-min=3.6km az=198.0, Southern Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRN	Pahroc Range	0.51	230	Pg	Pg	16 11 15.2	-1.5
PRN				IAML		16 11 22.8	
	comp=E,431nm,0.3s						
PRN				IAML		16 11 28.2	
	comp=N,345nm,0.2s						
ICU	Indian Springs	0.78	139		Pb	16 11 20.6	-0.8
ICU					Sb	16 11 31.7	+0.1
S11A	Rachel	0.95	265	Pg	Pb	16 11 23.6	-0.8
CCUT	Cedar City	0.97	101		Pb	16 11 24.2	-0.5
PSUT	Pine Spring	0.97	35		Pb	16 11 24.8	+0.1
PSUT	Pine Spring	0.97	35	IAML		16 11 41.6	
	comp=E,89nm,0.5s						
PSUT				IAML		16 11 41.7	
	comp=N,71nm,0.5s						
R11A	Troy Canyon, C	1.01	307	Pg	Pb	16 11 25.1	-0.4
R11A				IAML		16 11 40.1	
	comp=E,94nm,0.2s						
R11A				IAML		16 11 40.9	
	comp=N,143nm,0.4s						
SZCU	Shurtz Canyon	1.18	97	Pg	Pn	16 11 27.9	-0.2
LCMT	Little Creek M	1.27	124		Pn	16 11 29.6	+0.2
SHPR	Sheep Range	1.32	202		Pn	16 11 29.7	-0.3
SHPR				IAML		16 11 49.1	
	comp=E,98nm,0.2s						
SHPR				IAML		16 11 49.4	
	comp=N,65nm,0.4s						
TPNV	Topopah Spring	1.56	240		Pn	16 11 33.2	-0.2
TPNV	Topopah Spring	1.56	240	IAML		16 12 00.0	
	comp=N,68nm,0.7s						
TPNV				IAML		16 12 06.9	
	comp=N,52nm,0.7s						
PKCU	Pink Cliffs	1.81	99		Pn	16 11 36.8	0.0
PKCU				IAML		16 12 13.3	
	comp=N,43nm,0.7s						
TCRU	Three Creeks R	1.88	62		Pn	16 11 38.6	+0.8
TCRU				IAML		16 12 08.8	
	comp=N,36nm,0.3s						
TCRU				IAML		16 12 09.1	
	comp=E,26nm,0.3s						
MTPU	Mount Pierson	1.90	80		Pn	16 11 38.6	+0.4
TPH	Tonopah	2.13	280	Pn	Pn	16 11 41.6	+0.4
U15A	North Rim	2.23	125	Pn	Pn	16 11 43.0	+0.3
U15A				IAML		16 12 18.3	
	comp=N,22nm,0.5s						
GWY	Greenwater Val	2.29	228	Pn	Pn	16 11 43.3	-0.1
GWY				IAML		16 12 21.0	
	comp=E,16nm,0.5s						
GWY				IAML		16 12 24.4	
	comp=N,18nm,0.6s						
GRAC	Grapevine Rang	2.36	253	Pn	Pn	16 11 44.1	-0.1
LCH	Last Change Ra	2.51	259	Pn	Pn	16 11 46.0	-0.4
LCH				IAML		16 12 28.4	
	comp=N,22nm,0.5s						
LCH				IAML		16 12 30.3	
	comp=E,30nm,0.4s						
QSM	Queen of Sheba	2.56	227	Pn	Pn	16 11 46.8	-0.2
W13A	Hualapai Mount	2.69	168	Pn	Pn	16 11 48.8	-0.1
NV11	Mina Array Sit	2.92	285	Pn	Pn	16 11 52.0	0.0
NV11				IAML		16 12 39.8	
	comp=N,15nm,0.3s						
NV11				IAML		16 12 40.6	
	comp=E,15nm,0.5s						
NLU	North Lily Min	2.94	40	Pn	Pn	16 11 52.2	-0.2
NVAR	Mina Array Bea	3.04	284	Pn	Pn	16 11 53.9	+0.3
ELK	Elko	3.05	350	Pn	Pn	16 11 54.8	+0.9
KVN	Kaiserville	3.08	296	Pn	Pn	16 11 54.6	+0.4
KVN				IAML		16 12 46.1	
	comp=N,8.5nm,0.5s						
LHV	Little Huntoon	3.16	281	Pn	Pn	16 11 55.9	+0.8
RYN	Ryan	3.25	287	Pn	Pn	16 11 56.6	+0.1
WUAZ	Wupatki	3.39	130	Pn	Pn	16 11 59.5	+1.0
WUAZ				IAML		16 12 57.1	
	comp=N,13nm,0.5s						
BMN	Battle Mountai	3.40	323	Pn	Pn	16 11 59.6	+1.0
BMN				IAML		16 12 53.5	
	comp=E,14nm,1.1s						
BMN				IAML		16 12 53.8	
	comp=N,13nm,0.8s						

*ISK **07** 16:15:42.7,35°.54N×31°.69E,h7km,ML2.5/6*

*NIC **07** 16:15:43.3±0.0,35°.75N×31°.75E,h10km±3km,Ml2.7/4*

*DDA **07** 16:15:47.3±0.0,35°.89N×31°.58E,h10km±3km,ML2.2*

ISC 07 16:15:42.9±1.2,35°.68N±0°.03×31°.66E±0°.04,h10km±11km, n26,σ1s16/35,Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAZI	Gazipasa	0.77	44	PG	Pn	16 15 59.9	+0.1
GAZI				SG	Sn	16 16 11.8	+0.4
GAZI	Gazipasa	0.77	44	P	Pn	16 15 59.2	-0.6
GAZI				S	Sn	16 16 10.7	-0.7
GAZI				*i* AML	AML	16 16 16.0	
	comp=E,104nm,0.5s						
AKMS	Akamas	0.86	140	P	Pg	16 15 57.6	-1.9
AKMS				S	Sg	16 16 11.2	+0.4
AKMS				AML	AML	16 16 15.7	
	1.3nm,0.6s						
AKMS				AML	AML	16 16 15.7	
	1.3nm,0.6s						
AKMS				AML	AML	16 16 17.2	
	0.9nm,0.4s						
AKMS				AML	AML	16 16 17.2	
	0.9nm,0.4s						
ALFC	Alefka	0.93	124	P	Pg	16 15 59.6	-1.2
ALFC				S	Sg	16 16 14.1	+1.1
ALFC				AML	AML	16 16 19.1	
	1.0nm,0.5s						
ALFC				AML	AML	16 16 19.1	
	1.0nm,0.5s						
ALFC				AML	AML	16 16 19.2	
	0.6nm,0.4s						
ALFC				AML	AML	16 16 19.2	
	0.6nm,0.4s						
AKDN	Akdeniz- Kıbrı	1.14	109	PG	Pb	16 16 03.7	-0.9
LEF	Lefka	1.16	119	PG	Pb	16 16 03.0	-1.9
NATA	Nata	1.17	140	P	Pb	16 16 05.3	+0.1
NATA				S	Sg	16 16 22.4	+1.8
NATA				AML	AML	16 16 23.3	
	0.8nm,0.4s						
NATA				AML	AML	16 16 23.3	
	0.8nm,0.4s						
NATA				AML	AML	16 16 24.4	
	1.5nm,0.6s						
NATA				AML	AML	16 16 24.4	
	1.5nm,0.6s						
KEPZ	Antalya-Kepez	1.22	358	P	Pn	16 16 06.3	+0.3
KEPZ				S	Sn	16 16 21.7	-0.8
KEPZ				*i* AML	AML	16 16 24.0	
	comp=N,66nm,0.4s						
KEPZ				*i* AML	AML	16 16 25.0	
	comp=E,60nm,0.4s						
AKUM	Antalya-Kumluc	1.24	301	P	Pg	16 16 08.5	+1.8
TEKE	Tekeli-Mersin	1.27	68	PN	Pg	16 16 07.9	+0.6
TEKE				SN	Sn	16 16 26.3	+2.6
SZAC	Souni	1.36	132	P	Pn	16 16 08.0	+0.1
SZAC				AML	AML	16 16 29.9	
	0.4nm,0.4s						
SZAC				AML	AML	16 16 32.0	
	0.3nm,0.8s						
ERMK	Ermenek	1.40	46	P	Pg	16 16 12.3	+2.6
HDMB	Hadim	1.45	27	PN	Pg	16 16 11.5	+0.9
ASGA	Asgata	1.58	124	P	Pn	16 16 11.2	+0.3
GULN	MERSIN_Gulnar	1.61	71	P	Pg	16 16 14.0	+0.2
KORT	Korkueli	1.69	322	PN	Pg	16 16 15.1	-0.2
KORT	Korkueli	1.69	322	P	Pg	16 16 15.0	-0.2
SEYD	Seydisehir-KON	1.73	5	PN	Pg	16 16 15.7	-0.3
MVOU	Mavrovouni	1.75	112	P	Pn	16 16 12.5	-0.6
SEDI	Konya, Seydise	1.77	3	P	Pg	16 16 15.8	-1.0
SEDI				S	Sg	16 16 38.5	-1.3
SEDI				*i* AML	AML	16 16 45.0	
	comp=E,29nm,0.6s						
KKBE	Karaman, Kazim	1.85	34	P	Pg	16 16 17.6	-0.8
KKBE				S	Sg	16 16 43.3	+0.9
SUTC	Sutluce-Ispart	1.87	344	PN	Pg	16 16 17.9	-0.8
KMER	Konya-Meram	2.16	15	P	Pb	16 16 21.7	-0.4
GOLH	Golhisar	2.29	313	P	Pg	16 16 26.5	-0.3
YVAC	Isparta, Yalva	2.61	353	P	Pb	16 16 28.8	-0.9
OSC2	CSNet OBS 4	2.65	169	P	Pn	16 16 26.7	+1.2

*JMA **07** 16:17:43.8±0.2,24°.1N±0°.8×12°.2E±°,h7km±2km,MV2.3/10, TAIWAN REGION*

*TAP **07** 16:17:44.8,24°.13N×121°.67E,h12km,ML3.0,C*

ISC 07 16:17:44.8±0.8,24°.10N±0°.02×121°.72E±0°.02,h10km±5km, n66,σ0s74/121,2C-17D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	Fush Village	0.10	304	⇓*i*P	Pg	16 17 47.2	-0.3
	baz=305						
ETL				S	Sg	16 17 48.8	-0.7
	baz=305						
TWD	Chiawan	0.11	259	⇓*i*P	Pg	16 17 47.5	-0.2
	baz=230						
TWD				*i* S	Sg	16 17 49.4	-0.2
	baz=230						
NACB	Ninganchiao	0.13	303	⇓*i*P	Pg	16 17 47.6	-0.4
	baz=303						
NACB				*i* S	Sg	16 17 49.5	-0.7
	baz=303						
HWA	Hwalien	0.16	219	*e*P	Pg	16 17 49.2	+0.8
	baz=198						
ETLH	Xiulin Townshi	0.24	296	⇓*i*P	Pg	16 17 49.5	-0.3
	baz=294						
ETLH				S	Sg	16 17 52.9	-0.3
	baz=294						
ETM	Tongmen	0.24	236	*i* P	Pg	16 17 50.0	+0.2
	baz=224						
ETM				*e*S	Sg	16 17 53.6	+0.3
	baz=224						
TEYL	Yanliau Villag	0.26	205	P	Pg	16 17 51.0	+1.0
	baz=195						
TEYL				*e*S	Sg	16 17 57.1	+3.5
	baz=195						
ENA	Nanau	0.33	4	⇓*i*P	Pg	16 17 51.0	-0.4
	baz=14						
ENA				*e*S	Sg	16 17 55.4	-0.4
	baz=14						
EWUT	Wuta	0.35	9	⇓*i*P	Pg	16 17 51.3	-0.5
	baz=18						
EWUT				*e*S	Sg	16 17 55.9	-0.5
	baz=18						
ESL	Shilin	0.39	222	P	Pb	16 17 52.5	-1.2
	baz=213						
ESL				*e*S	Sb	16 17 58.5	-1.3
	baz=213						
WHF	Hehuan Shan	0.41	276	⇓*i*P	Pg	16 17 52.9	-0.3
	baz=272						
WHF				*e*S	Sg	16 17 58.4	-0.3
	baz=272						
TEGC	Jichi Village	0.42	202	*e*P	Pb	16 17 54.5	+0.1
	baz=195						
TEGC				*e*S	Sb	16 18 02.2	+1.4
	baz=195						
NNSB	Datong	0.45	317	⇓*i*P	Pg	16 17 53.5	-0.1
	baz=319						
NNSB				*e*S	Sg	16 17 59.4	-0.2
	baz=319						
FUSS	Fushou	0.46	289	⇓*e*P	Pg	16 17 53.9	0.0
	baz=287						
FUSS				*e*S	Sg	16 18 00.1	+0.2
	baz=287						
NNS	Nan Shan	0.46	317	⇓P	Pg	16 17 53.7	-0.2
	baz=320						
NNS				*e*S	Sg	16 17 59.9	-0.1
	baz=320						
LATG	Datong	0.47	338	*i* P	Pg	16 17 53.7	-0.3
	baz=342						
LATG				*e*S	Sg	16 17 59.8	-0.4
	baz=342						
CHGB	Renai	0.50	265	*e*P	Pg	16 17 54.7	+0.1
	baz=261						
CHGB				*e*S	Sb	16 18 02.0	-1.2
	baz=261						
EGFH	Guangfu	0.51	212	*e*P	Pb	16 17 55.1	-0.7
	baz=206						
EGFH				*e*S	Sb	16 18 04.2	+1.0
	baz=206						
OWD	Renai	0.52	254	P	Pb	16 17 55.1	-1.0
	baz=249						
OWD				*e*S	Sb	16 18 02.7	-0.9
	baz=249						
TWT	Tachien	0.52	287	*e*P	Pb	16 17 55.5	-0.5
	baz=284						
TWT				*e*S	Sg	16 18 02.6	+0.8
	baz=284						
TWC	Suao	0.52	13	⇑P	Pg	16 17 54.8	-0.2
	baz=20						
TWC				*e*S	Sg	16 18 02.2	+0.3
	baz=20						
NDS	Dongshan	0.53	0	⇓P	Pg	16 17 54.9	-0.3
	baz=5.0						
NDS				*e*S	Sg	16 18 01.8	-0.4
	baz=5.0						
TDCB	Techi	0.53	287	*e*P	Pg	16 17 55.4	+0.2
	baz=285						
TDCB				*e*S	Sg	16 18 02.6	+0.3
	baz=285						
NDT	Datong Townshi	0.53	340	⇓*i*P	Pg	16 17 55.2	0.0
	baz=343						
NDT				*e*S	Sg	16 18 02.3	0.0
	baz=343						
ENTT	Nioudou	0.55	346	⇓*i*P	Pg	16 17 55.5	-0.1
	baz=350						
ENTT				S	Sg	16 18 03.2	+0.2
	baz=350						
WUSB	Renai	0.56	259	*e*P	Pb	16 17 56.0	-0.8
	baz=255						
WUSB				*e*S	Sb	16 18 03.6	-1.2
	baz=255						
TWE	Neicheng	0.62	356	⇓*e*P	Pg	16 17 56.8	-0.1
	baz=1.0						
TWE				*e*S	Sg	16 18 04.8	-0.2
	baz=1.0						
VWDT	VWDT	0.63	237	⇑P	Pb	16 17 57.5	-0.4
	baz=232			

NSK					*e*S		**Sg**	**16 18 06.2**	**-0.1**
	baz=333									
HGSD	**Ruisui**	**0.66**	**204**		*e*P		**Pb**	**16 17 58.6**	**+0.2**
	baz=199									
HGSD					*e*S		**Sn**	**16 18 11.4**	**+0.7**
	baz=199									
FUSB	**Fushanzhiwuyua**	**0.67**	**350**		⇓P		**Pg**	**16 17 57.7**	**-0.1**
	baz=353									
FUSB					*e*S		**Sg**	**16 18 06.3**	**-0.2**
	baz=353									
EHY	**Hungye**	**0.69**	**211**		*e*P		**Pb**	**16 17 58.3**	**-0.7**
	baz=206									
WPL	**Puli Township**	**0.70**	**263**		*e*P		**Pb**	**16 17 58.9**	**-0.2**
	baz=260									
WPL					*e*S		**Sb**	**16 18 08.1**	**-0.7**
	baz=260									
NWLT	**Wulai**	**0.70**	**344**		⇓P		**Pg**	**16 17 58.4**	**-0.1**
	baz=347									
NWLT					*e*S		**Sg**	**16 18 07.0**	**-0.7**
	baz=347									
DPDB	**Guoxing**	**0.72**	**265**		*e*P		**Pb**	**16 17 59.3**	**-0.3**
	baz=262									
DPDB					*e*S		**Sg**	**16 18 08.7**	**+0.3**
	baz=262									
WHP	**Taichung City**	**0.72**	**284**		*e*P		**Pb**	**16 17 59.4**	**-0.2**
	baz=283									
WCS	**Beigang Elemen**	**0.74**	**267**		*e*P		**Pb**	**16 17 59.4**	**-0.4**
	baz=264									
WCS					*e*S		**Sb**	**16 18 10.3**	**+0.5**
	baz=264									
NTC	**Toucheng**	**0.76**	**8**		*e*P		**Pg**	**16 17 59.5**	**0.0**
	baz=12									
NFF	**Wufeng Townshi**	**0.76**	**314**		*e*P		**Pg**	**16 17 59.7**	**+0.2**
	baz=315									
NFF					*e*S		**Sg**	**16 18 09.3**	**-0.2**
	baz=315									
SSLB	**Suanglung**	**0.76**	**246**		*e*P		**Pb**	**16 17 59.9**	**-0.4**
	baz=242									
SSLB					*e*S		**Sb**	**16 18 10.0**	**-0.7**
	baz=242									
SMLT	**Sun Moon Lake**	**0.78**	**254**		*e*P		**Pb**	**16 18 00.1**	**-0.4**
	baz=250									
SMLT					*e*S		**Sb**	**16 18 11.2**	**+0.1**
	baz=250									
YULB	**Yu-li**	**0.80**	**209**		*e*P		**Pg**	**16 17 59.7**	**-0.7**
	baz=205									
YULB					*e*S		**Sb**	**16 18 12.5**	**+0.7**
	baz=205									
TYC	**Yuchr**	**0.81**	**256**		*e*P		**Pb**	**16 18 00.7**	**-0.3**
	baz=253									
TYC					*e*S		**Sb**	**16 18 11.4**	**-0.6**
	baz=253									
LIOB	**Emei**	**0.84**	**310**		*e*P		**Pb**	**16 18 01.5**	**0.0**
	baz=311									
LIOB					*e*S		**Sg**	**16 18 12.7**	**+0.7**
	baz=311									
NSTT	**Nanjuang**	**0.84**	**309**		*e*P		**Pb**	**16 18 01.4**	**-0.1**
	baz=310									
NSTT					*e*S		**Sg**	**16 18 12.4**	**+0.5**
	baz=310									
TWF1	**Yuli**	**0.84**	**207**		*e*P		**Pg**	**16 18 00.4**	**-0.6**
	baz=203									
TWF1					*e*S		**Sn**	**16 18 14.1**	**-0.9**
	baz=203									
TIPB	**Shuangxi**	**0.87**	**7**		*e*P		**Pg**	**16 18 01.5**	**-0.2**
	baz=10.0									
TIPB					*e*S		**Sg**	**16 18 12.5**	**-0.6**
	baz=10.0									
TWA	**Mucha**	**0.88**	**352**		*e*P		**Pg**	**16 18 02.1**	**+0.2**
	baz=355									
TWA					*e*S		**Sg**	**16 18 13.0**	**-0.4**
	baz=355									
YUS	**Yu-Shan**	**0.93**	**229**		*e*P		**Pb**	**16 18 03.3**	**0.0**
	baz=225									
FULB	**Fuli**	**0.98**	**203**		*e*P		**Pb**	**16 18 03.5**	**-0.4**
	baz=200									
SXI1	**Grass Mountain**	**1.00**	**8**		*e*P		**Pg**	**16 18 04.1**	**0.0**
	baz=11									
SXI1					*e*S		**Sb**	**16 18 18.2**	**+0.7**
	baz=11									
ALS	**Alishan**	**1.02**	**235**		*e*P		**Pn**	**16 18 05.1**	**-0.3**
	baz=232									
ALS					*e*S		**Sn**	**16 18 20.6**	**+0.6**
	baz=232									
TWS1	**Kuangyinshan**	**1.03**	**345**		*e*P		**Pb**	**16 18 05.7**	**+0.9**
	baz=347									
TWS1					*e*S		**Sb**	**16 18 19.8**	**+1.4**
	baz=347									
CHKT	**Chengkung**	**1.05**	**198**		*e*P		**Pg**	**16 18 03.9**	**-1.1**
	baz=195									
CHKT					*e*S		**Sn**	**16 18 20.5**	**+0.3**
	baz=195									
YM01	**YM01**	**1.05**	**353**		*e*P		**Pg**	**16 18 05.2**	**+0.2**
	baz=355									
YM01					*e*S		**Sg**	**16 18 19.1**	**+0.4**
	baz=355									
ELDTW	**Lidau**	**1.11**	**215**		*e*P		**Pg**	**16 18 04.8**	**-1.5**
	baz=212									
ELDTW					*e*S		**Sb**	**16 18 21.4**	**+0.6**
	baz=212									
JYNG	**Yonagunijimaku**	**1.18**	**73**		*e*P		**Pg**	**16 18 07.1**	**-0.4**
EDH	**Donghe**	**1.19**	**199**		*e*P		**Pg**	**16 18 05.9**	**-1.8**
	baz=196									
EDH					*e*S		**Sn**	**16 18 24.6**	**+1.0**
	baz=196									
YOJ	**Yonaguni jima**	**1.23**	**73**		*e*P		**Pg**	**16 18 06.3**	**-2.3**
	baz=74									
YOJ	**Yonaguni jima**	**1.23**	**73**		P		**Pg**	**16 18 07.2**	**-1.4**
IRIF	**Iriomote-Funau**	**1.85**	**82**		P		**Pn**	**16 18 16.7**	**+0.1**
IRIF					S		**Sn**	**16 18 41.1**	**+1.0**
HATJ	**Hateruma jima**	**1.91**	**91**		*e*S		**Sn**	**16 18 41.6**	**+0.1**
JKRS	**Kuro-shima**	**2.10**	**86**		P		**Pn**	**16 18 20.9**	**+0.8**
JKRS					*e*S		**Sn**	**16 18 47.7**	**+1.5**
JIJ	**Ishigaki jima**	**2.23**	**83**		P		**Pn**	**16 18 21.6**	**-0.2**
JIJ					S		**Sn**	**16 18 49.2**	**-0.2**
JTJ	**Tarama**	**2.78**	**78**		*e*S		**Sn**	**16 19 04.0**	**+1.2**

*TUL **07** 16:19:44.7±1.0,35°.86N×0°.01×97°.22W±0°.01,h5km±7km, ML2.6,mb_Lg2.3/8(NEIC),Error ellipse: s-maj=2.1km s-min=1.0km az=150.0*

NEIC 07 16:19:44.8±0.6,35°.88N±0°.01×97°.24W±0°.01,h10km±2km, Error ellipse: s-maj=2.2km s-min=1.4km az=154.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKCFA	**Oklahoma City**	**0.49**	**201**	Pg	Pg	16 19 54.3	-0.1
OKCSW	**OKLAHOMA CITY**	**0.50**	**199**	Pg	Pg	16 19 54.2	-0.3
FNO	**Franklin**	**0.63**	**192**	Pg	Pg	16 19 56.6	-0.4
TUL1	**Leonard**	**1.18**	**88**	Pn	Pb	16 20 06.6	-0.6
T35A	**Sooner Cattle**	**1.19**	**29**		Pb	16 20 06.9	-0.6
X34A	**Smith Ranch, M**	**1.36**	**201**	Pn	Pn	16 20 10.1	+0.2
U32A	**Winter Ranch,**	**1.51**	**290**	Pn	Pb	16 20 12.5	-0.5
U32A				IAmb_Lg		16 20 32.8	
	comp=Z,7.6nm,0.9s						
X37A	**Clayton**	**2.00**	**130**	Pn	Pn	16 20 19.2	+0.6
X37A				IAmb_Lg		16 20 50.9	
	comp=Z,9.4nm,0.7s						
MGMO	**Mountain Grove**	**4.20**	**71**	IAmb_Lg		16 22 02.8	
	comp=Z,6.9nm,1.0s						
Z41A	**Richland Creek**	**4.50**	**124**	IAmb_Lg		16 22 14.3	
	comp=Z,17nm,0.9s						

MAN 07 16:35:24.1,13°.84N×120°.59E,h82km,mb3.7,ML2.5, MS2.0,Mindoro

*TUL **07** 16:54:37.4±0.7,35°.66N±0°.01×97°.42W±0°.02,h6km±5km, ML3.2,mb_Lg2.8/62(NEIC),Error ellipse: s-maj=2.6km s-min=1.1km az=138.0*

NEIC 07 16:54:37.6±0.9,35°.68N±0°.02×97°.43W±0°.02,h8km±7km, Error ellipse: s-maj=2.6km s-min=1.8km az=168.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK009	**Oakdale Elemen**	**0.10**	**177**		Pg	16 54 39.4	-0.6
OK005	**Luther M Schoo**	**0.20**	**98**	Pg	Pg	16 54 41.6	0.0
OKCFA	**Oklahoma City**	**0.27**	**184**	Pg	Pg	16 54 42.6	-0.4
OKCSW	**OKLAHOMA CITY**	**0.28**	**181**		Pg	16 54 42.7	-0.4
FNO	**Franklin**	**0.43**	**177**	Pg	Pg	16 54 45.5	-0.5
X34A	**Smith Ranch, M**	**1.13**	**197**		Pg	16 54 58.6	-0.7
TUL1	**Leonard**	**1.35**	**80**	Pn	Pn	16 55 01.5	-1.3
T35A	**Sooner Cattle**	**1.44**	**31**		Pn	16 55 03.9	-0.1
WMOK	**Wichita Mounta**	**1.45**	**230**		Pn	16 55 03.5	-0.7
X37A	**Clayton**	**2.01**	**122**		Pn	16 55 12.1	+0.2
X37A				IAmb_Lg		16 55 43.2	
	comp=Z,38nm,0.9s						
Z35A	**Perchaven, San**	**2.35**	**176**	Pn	Pn	16 55 16.4	-0.1
HHAR	**Hobbs**	**2.89**	**77**	Pn	Pn	16 55 24.1	+0.1
W39A	**Magazine**	**3.02**	**98**	Pn	Pn	16 55 25.8	+0.2
W39A				IAmb_Lg		16 56 20.8	
	comp=Z,30nm,1.0s						
Z38A	**Mt. Pleasant**	**3.15**	**139**	Pn	Pn	16 55 27.5	0.0
Z38A				IAmb_Lg		16 56 21.9	
	comp=Z,23nm,0.7s						
KSU1	**Kansas State U**	**3.47**	**11**	IAmb_Lg		16 56 33.8	
	comp=Z,31nm,0.7s						
CBKS	**Cedar Bluff**	**3.63**	**330**	IAmb_Lg		16 56 37.4	
	comp=Z,14nm,0.7s						
WHTX	**Lake Whitney,**	**3.68**	**180**	Pn	Pn	16 55 34.8	0.0
U40A	**Yellville**	**3.77**	**78**		Pn	16 55 36.0	-0.1
S39A	**Bolivar**	**3.86**	**58**	Pn	Pn	16 55 37.2	-0.1
S39A				IAmb_Lg		16 56 41.1	
	comp=Z,29nm,1.0s						
237A	**Washetta, Mont**	**3.91**	**159**	IAmb_Lg		16 56 51.3	
	comp=Z,22nm,0.9s						
X40A	**Basin Creek Fa**	**3.95**	**106**	Pn	Pn	16 55 38.9	+0.3
X40A				IAmb_Lg		16 56 49.9	
	comp=Z,22nm,0.7s						
WHAR	**Wooly Hollow**	**4.21**	**94**	Pn	Pn	16 55 42.3	+0.2
WHAR				IAmb_Lg		16 57 00.5	
	comp=Z,15nm,1.0s						
UALR	**University of**	**4.26**	**101**	IAmb_Lg		16 56 56.5	
	comp=Z,28nm,1.2s						
W41B	**Gary Mavity, V**	**4.26**	**95**		Pn	16 55 42.7	0.0
W41B				IAmb_Lg		16 57 01.6	
	comp=Z,18nm,0.9s						
FCAR	**Ozark Folk Cen**	**4.32**	**86**	Pn	Pn	16 55 44.0	+0.4
FCAR				IAmb_Lg		16 57 06.2	
	comp=Z,14nm,0.7s						
MGMO	**Mountain Grove**	**4.41**	**69**	IAmb_Lg		16 56 59.8	
	comp=Z,22nm,0.7s						
R40A	**Maddies Statio**	**4.88**	**56**	Pn	Pn	16 55 51.2	-0.1
R40A				IAmb_Lg		16 57 12.8	
	comp=Z,24nm,1.0s						
435B	**Jarrell**	**4.89**	**182**	IAmb_Lg		16 57 22.9	
	comp=Z,19nm,0.8s						
P38A	**Dawn**	**5.00**	**37**	IAmb_Lg		16 57 22.9	
	comp=Z,13nm,0.8s						
N33A	**J Bar K, Exete**	**5.05**	**360**	IAmb_Lg		16 57 26.6	
	comp=Z,20nm,0.7s						
LCAR	**Lake Charles**	**5.11**	**84**	Pn	Pn	16 55 54.0	-0.5
KSCO	**Kaye Shedlock'**	**5.31**	**310**	IAmb_Lg		16 57 40.5	
	comp=Z,14nm,0.7s						
CCM	**Cathedral Cave**	**5.50**	**63**	IAmb_Lg		16 57 33.8	
	comp=Z,14nm,0.8s						
PBMO	**Poplar Bluff**	**5.76**	**77**	IAmb_Lg		16 57 46.2	
	comp=Z,15nm,0.8s						
T25A	**Trinidad**	**5.81**	**287**	IAmb_Lg		16 57 44.9	
	comp=Z,16nm,0.8s						
FVM	**French Village**	**6.07**	**66**	IAmb_Lg		16 57 58.2	
	comp=Z,14nm,0.7s						
SDCO	**Great Sand Dun**	**6.80**	**290**	IAmb_Lg		16 58 27.4	
	comp=Z,7.7nm,1.1s						
Q24A	**Divide**	**6.97**	**300**	IAmb_Lg		16 58 30.8	
	comp=Z,6.4nm,0.8s						
ISCO	**Idaho Springs**	**7.67**	**305**	IAmb_Lg		16 58 58.4	
	comp=Z,5.7nm,1.1s						
PHWY	**Pilot Hill**	**8.43**	**314**	IAmb_Lg		16 59 08.0	
	comp=Z,7.7nm,0.9s						
N23A	**Red Feather La**	**8.48**	**310**	IAmb_Lg		16 59 20.9	
	comp=Z,9.7nm,0.8s						
RWWY	**Rawlins**	**9.71**	**311**	IAmb_Lg		17 00 14.3	
	comp=Z,4.5nm,1.0s						
K22A	**Casper**	**9.91**	**317**	IAmb_Lg		17 00 07.5	
	comp=Z,8.1nm,1.0s						

*HEL **07** 17:14:22.4±0.2,67°.64N×34°.17E,h0km,ML1.9,Explosion*
*KOLA **07** 17:14:22.3,67°.62N×34°.25E,h0km,ML2.1*
*IDC **07** 17:14:27.2±2.2,67°.62N×33°.22E,h0km,mbtmp2.7/2, ML1.8/2,Error ellipse: s-maj=20.5km s-min=8.6km az=89.0*

ISC 07 17:14:21.6±1.0,67°.62N±0°.04×34°.28E±0°.04,h0km,n28, σ1s49/45,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVZ	**Lovozero**	**0.31**	**27**	P	**Pg**	**17 14 27.8**	**+0.2**
LVZ				S	**Sg**	**17 14 32.0**	**+0.4**
LVZ	**Lovozero**	**0.31**	**27**	PG	**Pg**	**17 14 28.4**	**+0.7**
LVZ				SG	**Sg**	**17 14 32.1**	**+0.4**
APA	**Apatity**	**0.34**	**262**	P	**Pg**	**17 14 28.4**	**+0.3**
APA				S	**Sg**	**17 14 32.4**	**-0.1**
APA0	**Apatity Array**	**0.49**	**269**	P	**Pg**	**17 14 30.6**	**-0.4**
APA0				S	**Sg**	**17 14 36.7**	**-0.8**
TERR	**Teriberka**	**1.62**	**11**	P	**Pn**	**17 14 51.1**	**-0.3**
TERR				S	**Sn**	**17 15 11.5**	**-1.4**
VRF	**Varrio**	**1.79**	**276**	PG	**Pn**	**17 14 53.9**	**+0.1**
VRF				MSG		17 15 14.5	
	comp=Z,8.3nm,0.2s						
VRF				SN	**Sn**	**17 15 16.4**	**-0.7**
PRVG	**Vayda Guba**	**2.27**	**341**	P	**Pn**	**17 15 01.1**	**+0.7**
PRVG				S	**Sn**	**17 15 29.1**	**+0.1**
OLKF	**Oulanka, Finla**	**2.32**	**238**	PG	**Pb**	**17 15 03.1**	**-1.2**
OLKF				SG	**Sb**	**17 15 33.6**	**+0.1**
KU6	**Riekki**	**2.36**	**229**	PG	**Pn**	**17 15 03.4**	**+1.8**
	baz=49						
KU6				MSG		17 15 31.9	
	comp=Z,4.1nm,0.2s						
KU6				SG	**Sb**	**17 15 34.6**	**0.0**
MSF	**Maaselka**	**2.69**	**233**	PB	**Pn**	**17 15 08.6**	**+2.4**
	baz=49						
MSF				SG	**Sb**	**17 15 44.4**	**+0.1**
SGF	**Sodankyl**	**2.98**	**270**	PG	**Pb**	**17 15 15.2**	**-0.4**
SGF				SB	**Sn**	**17 15 47.9**	**+1.4**
RNF	**Rovaniemi**	**3.39**	**256**	PN	**Pn**	**17 15 16.1**	**+0.4**
	baz=67						
RNF				SN	**Sn**	**17 15 57.1**	**+0.6**
KEV	**Kevo**	**3.41**	**312**	PN	**Pn**	**17 15 16.6**	**+0.5**
KEV				SN	**Sn**	**17 15 56.1**	**-1.0**
ARA0	**ARCESS Array S**	**3.75**	**305**	PN	**Pn**	**17 15 20.3**	**-0.4**
ARA0				SG	**Sb**	**17 16 14.4**	**-0.2**
ARCES	**ARCESS Array B**	**3.75**	**305**	Pn	**Pn**	**17 15 20.3**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=120,slow=14,SNR=12						
ARCES				Pg	**Pb**	**17 15 28.9**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=120,slow=16,SNR=6.2						
ARCES				Sn	**Sn**	**17 16 02.0**	**-3.4**
	comp=Z,0.3nm,0.3s,baz=117,slow=26,SNR=9.4						
ARCES				Lg	Lg	17 16 14.3	
	comp=Z,0.7nm,0.3s,baz=119,slow=35,SNR=14						
	comp=Z,0.3nm,0.3s						
ARCES	**ARCESS Array B**	**3.75**	**305**	P	**Pn**	**17 15 20.8**	**+0.1**
ARCES				S	**Sn**	**17 16 04.2**	**-1.3**
RMF	**Romuvaara**	**3.85**	**210**	PN	**Pn**	**17 15 22.7**	**+0.6**
	baz=27						
KLF	**Kolari**	**4.00**	**269**	SG	**Sb**	**17 16 25.0**	**+3.4**
HEF	**Hetta**	**4.07**	**286**	PN	**Pn**	**17 15 26.2**	**+1.1**
HEF				SN	**Sn**	**17 16 13.1**	**-0.3**
TOF	**Tornio**	**4.22**	**253**	PB	**Pb**	**17 15 33.0**	**-3.7**
TOF				SN	**Sn**	**17 16 16.9**	**-0.1**
KTK1	**Kautokeino**	**4.33**	**294**	SG	**Sb**	**17 16 32.9**	**+1.7**
PAJU	**Pajala**	**4.37**	**267**	SN	**Sn**	**17 16 19.7**	**-0.9**
KALU	**Kalix**	**4.68**	**253**	SG	**Sb**	**17 16 46.0**	**+4.9**
LANU	**Lannavaara**	**4.68**	**281**	PN	**Pn**	**17 15 33.1**	**-0.3**
I37NO	**I37NO**	**5.98**	**291**	*i*		17 49 40.0	
	baz=98,slow=327,SNR=6.2						
FINES	**FINESS Array B**	**7.13**	**214**	Pn	**Pn**	**17 16 07.8**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=33,slow=14,SNR=1.7						
FINES				Sn	**Sn**	**17 17 26.2**	**-2.4**
	comp=Z,0.1nm,0.3s,baz=3.4,slow=26,SNR=2.3						
FINES				Lg	Lg	17 18 01.9	
	comp=Z,0.2nm,0.3s,baz=33,slow=21,SNR=3.5						
	comp=Z,1.5nm,1.0s						
I43RU	**DUBNA INFRASON**	**11.02**	**172**	*i*		18 21 20.0	
	baz=353,slow=334						
I26DE	**FREYUNG INFRAS**	**21.50**	**219**	*i*		19 23 30.0	
	baz=22,slow=325,SNR=2.9						

ASRS 07 17:54:37.3±0.2,52°N±2°×9°8E±°,h5km,MLh3.0/9,Error ellipse: s-maj=3.6km s-min=2.2km az=15.2,confirmed, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNGR	**Kungurtug, Tuv**	**1.63**	**196**	Pg	Pg	17 55 10.7	+2.2
KNGR					Sg	17 55 32.9	+3.3
MOY	**Mondy**	**1.80**	**105**	Pg	Pg	17 55 14.0	+2.3
MOY					Sg	17 55 37.9	+2.9
KZLR	**Kyzyl**	**2.37**	**260**	Pg	Pg	17 55 24.2	+1.6
KZLR					Sg	17 55 54.9	+1.6
ERNS	**Erzin**	**2.71**	**226**	Pg	Pg	17 55 28.9	-0.3
ERNS					Sg	17 56 04.0	-0.2
ARDR	**Aradan**	**2.96**	**280**	Pg	Pg	17 55 37.3	+3.5
ARDR					Sg	17 56 12.3	+0.2
MINR	**Mina**	**3.63**	**320**	Pg	Pg	17 55 47.4	+0.6
MINR					Sg	17 56 39.5	+5.8
ZAK	**Zakamensk**	**3.66**	**117**	Pg	Pg	17 55 46.7	-0.6
ZAK					Sg	17 56 38.2	+3.6
CERR	**Cheremushki**	**4.20**	**282**	Pg	Pg	17 56 00.8	+3.1
CERR					Sg	17 56 54.3	+2.2
DJO	**Djoy, Khakassi**	**4.32**	**281**	Pg	Pg	17 55 59.8	-0.1
DJO					Sg	17 56 54.3	-1.5
GZLN	**Zheleznogorsk**	**4.95**	**330**	Pg	Pg	17 56 12.0	0.0
GZLN					Sg	17 57 24.5	+8.4
TRG	**Tyrgan**	**5.01**	**80**	Pg	Pg	17 56 13.5	+0.2
TRG					Sg	17 57 16.7	-1.4
ULGR	**Ulagan, Altay**	**6.60**	**260**	Sg	Sg	17 58 14.9	+6.0
ARTR	**Artybash**	**6.76**	**271**	Sg	Sg	17 58 13.5	-0.6
BRCR	**Berchikul'**	**6.79**	**305**	Sg	Sg	17 58 25.7	+11

*SKHL **07** 17:59:37.6±0.7,46°.50N×150°.40E,h176km±2km,mb5.0/4, mbv4.6/2,msha5.5/4*
*MOS **07** 17:59:37.3±1.2,46°.69N×150°.43E,h183km,mb4.1/8,Error ellipse: s-maj=8.2km s-min=5.9km az=68.8*
*JMA **07** 17:59:38.6±0.5,46°.N±3°.×15°.1E±°,h182km,MV3.8/15, KURILE ISLANDS REGION*
*NEIC **07** 17:59:39.2±2.4,46°.76N±0°.09×150°.4E±0°.1,h176km±4km, mb4.2/77,Error ellipse: s-maj=14.4km s-min=10.2km az=143.0*
*IDC **07** 17:59:40.8±1.5,46°.88N×150°.23E,h189km±14km, mb3.6/22,mbtmp4.1/27,Error ellipse: s-maj=13.6km s-min=8.4km az=139.0*

ISC 07 17:59:37.1±0.7,46°.57N±0°.05×150°.53E±0°.05,h168km±6km, n235,σ1s54/258,mb4.2/80,11C-3D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.29**	**235**	*e*PN	**Pn**	**18 00 17.7**	**+1.1**
KUR				*e*S	**Sn**	**18 00 49.3**	**+2.1**
KUR				pmax	pmax		
	comp=Z,87nm,0.4s						
KUR				pmax	pmax		
	comp=E,46nm,0.3s						
KUR				smax	smax		
	comp=N,1μm,1.2s						
KUR				smax	smax		
	comp=E,800nm,2.6s						
KUR				smax	smax		
	comp=N,291nm,0.8s						
KUR				smax	smax		
	comp=N,255nm,0.9s						
KUR	**Kuril'sk**	**2.29**	**235**	*e*P	**Pn**	**18 00 17.8**	**+1.1**
KUR				AMB	AMB	18 00 20.3	
	comp=N,80nm,0.4s						
KUR				*e*S	**Sn**	**18 00 49.4**	**+2.2**
KUR				A	A	18 00 55.5	
	comp=N,1μm,3.0s						
KUR				A	A	18 00 55.5	
	comp=N,900nm,3.0s						
KUR				A	A	18 00 57.0	
	comp=N,470nm,0.5s						
KUR				A	A	18 00 57.0	
	comp=N,260nm,0.5s						
SHO	**Shikotan**	**3.76**	**225**	*c i*PN	**Pn**	**18 00 34.1**	**-0.6**
SHO				pmax	pmax		
	comp=Z,27nm,0.3s						
SHO				pmax	pmax		
	comp=N,10.0nm,0.2s						
SHO				pmax	pmax		
	comp=E,10.0nm,0.3s						
SHO	**Shikotan**	**3.76**	**225**	*i* P	**Pn**	**18 00 34.1**	**-0.6**
SHO				AMB	AMB	18 00 35.3	
	comp=E,30nm,0.3s						
SHO				*i* S	**Sn**	**18 01 18.6**	**-1.0**
SHO				A	A	18 01 20.4	
	comp=E,120nm,0.4s						
SHO				A	A	18 01 20.4	
	comp=E,110nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**4.16**	**234**	*d i*PN	**Pn**	**18 00 41.2**	**+1.4**
YUK				*e*S	**Sn**	**18 01 29.3**	**+0.5**
YUK				pmax	pmax		
	comp=Z,132nm,1.2s						
YUK				pmax	pmax		
	comp=Z,100nm,0.4s						
YUK				pmax	pmax		
	comp=N,37nm,0.1s						
YUK				smax	smax		
	comp=N,79nm,0.3s						
YUK				smax	smax		
	comp=E,177nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**4.16**	**234**	*i* P	**Pn**	**18 00 41.1**	**+1.3**
YUK				AMB	AMB	18 00 42.6	
	comp=E,130nm,1.0s						
YUK				AMB	AMB	18 00 44.9	
	comp=E,100nm,0.4s						
YUK				*e*S	**Sn**	**18 01 29.8**	**+1.0**
YUK				A	A	18 01 32.1	
	comp=E,190nm,0.6s						
YUK				A	A	18 01 32.1	
	comp=E,130nm,0.6s						
RUSJ	**Misakicho**	**4.47**	**238**	*e*PN	Pn	18 00 49.3	+5.4
RUSJ				*e*S	**Sn**	**18 01 41.9**	**+5.9**
GLVR	**Golovnino**	**4.54**	**233**	⇓*i*PN	**Pn**	**18 00 45.5**	**+0.7**
GLVR				*i* S	**Sn**	**18 01 37.3**	**-0.3**
GLVR				pmax	pmax		
	comp=Z,84nm,0.1s						
GLVR				smax	smax		
	comp=N,207nm,0.2s						
GLVR				smax	smax		
	comp=E,81nm,0.2s						
GLVR	**Golovnino**	**4.54**	**233**	*i* P	**Pn**	**18 00 45.5**	**+0.7**
GLVR				AMB	AMB	18 00 47.1	
	comp=E,80nm,0.2s						
GLVR				*i* S	**Sn**	**18 01 37.9**	**+0.3**
GLVR				A	A	18 01 43.5	
	comp=E,210nm,0.3s						
GLVR				A	A	18 01 43.5	
	comp=E,80nm,0.3s						
JRA	**Rausu**	**4.64**	**237**	*e*P	**Pn**	**18 00 47.4**	**+1.3**
JRA				*e*S	**Sn**	**18 01 40.8**	**+0.8**
NEM2	**Nemuro 2**	**4.67**	**228**	*e*P	**Pn**	**18 00 45.4**	**-1.1**
NEM2				*e*S	**Sn**	**18 01 37.2**	**-3.5**
NMR	**Nemuro--Hokkai**	**4.67**	**228**	⇓*i*PN	**Pn**	**18 00 45.4**	**-1.2**
NMR				*e*S	**Sn**	**18 01 37.2**	**-3.6**
NMR	**Nemuro--

comp=N,36nm,0.8s
SKR smax smax
comp=E,45nm,0.9s
SKR Severo-Kuril's 5.54 40 *e*P **Pn 18 01 00.1 +2.4**
SKR AMB AMB 18 01 02.9
comp=E,20nm,0.5s
JAR Ashorobuto 5.81 238 *e*P **Pn 18 01 02.5 +1.1**
JAR *e*S **Sn 18 02 07.7 +0.1**
JOB Onbets 6.01 235 *e*P **Pn 18 01 04.3 +0.1**
JOB *e*S **Sn 18 02 09.7 -2.7**
JKA Kamikawa-asahi 6.10 249 Pn **Pn 18 01 07.6 +2.3**
JKA Kamikawa-asahi 6.10 249 **Sn 18 02 17.3 +2.8**
ASAJ Asahikawa 6.11 249 P **Pn 18 01 07.9 +2.6**
comp=E,21nm,0.6s,baz=71,slow=13,SNR=77
ASAJ S **Sn 18 02 17.3 +2.7**
comp=E,8.1nm,0.6s,baz=113,slow=18,SNR=2.0
JKK2 Kamakawa 2 6.12 247 *e*P **Pn 18 01 07.7 +2.1**
UGL Uglegorsk 6.22 297 *e*P **Pn 18 01 08.9 +2.1**
UGL AMB AMB 18 01 10.2
comp=E,20nm,0.4s
JCH Churui 6.47 235 *e*P **Pn 18 01 09.4 -0.7**
JCH *e*S **Sn 18 02 18.5 -4.7**
JAB Ashibetsu 6.63 245 *e*P **Pn 18 01 14.4 +2.0**
TYV Tymovskoe 6.75 312 *e*PN **Pn 18 01 14.8 +1.1**
TYV *e*S **Sn 18 02 28.7 -1.1**
TYV pmax pmax
comp=Z,14nm,1.1s
TYV smax smax
comp=N,4.0nm,0.9s
TYV smax smax
comp=E,4.0nm,0.9s
TYV Tymovskoe 6.75 312 *e*P **Pn 18 01 14.8 +1.1**
TYV AMB AMB 18 01 16.4
comp=E,10.0nm,0.9s
ERM Erimo 6.98 232 Pn **Pn 18 01 16.2 -0.6**
ERM Erimo 6.98 232 *i* PN **Pn 18 01 17.2 +0.3**
JNBK Urakawa-nobuka 7.03 235 *e*P **Pn 18 01 15.7 -1.9**
JNBK *e*S **Sn 18 02 31.3 -5.3**
JEW Eniwo 7.46 243 Pn **Pn 18 01 21.8 -1.5**
PEA0B Petropavlovsk- 8.02 33 Pn **Pn 18 01 31.1 +0.6**
PEA0B Petropavlovsk- 8.02 33 PN **Pn 18 01 31.1 +0.6**
PETK Petropavlovsk- 8.02 33 P **Pn 18 01 30.5 0.0**
comp=E,2.3nm,0.5s,baz=201,slow=15,SNR=24
PETK Petropavlovsk- 8.02 33 Pn **Pn 18 01 28.4 -2.1**
PET Petropavlovsk 8.32 36 Pn **Pn 18 01 33.5 -1.1**
JTM Tenmabayashi 8.96 233 Pn **Pn 18 01 40.0 -3.2**
JANG Nango 9.01 230 *e*P **Pn 18 01 40.5 -3.4**
JANG *e*S Sn 18 03 13.9 -10
JTH Tanohata 9.16 227 *e*P **Pn 18 01 43.0 -2.7**
JTH *e*S Sn 18 03 17.9 -10
JMM Marumori 11.29 223 Pn **Pn 18 02 11.3 -2.4**
JSD Sado 12.45 231 Pn **Pn 18 02 26.2 -2.3**
KLR Kul'dur 12.88 289 P **Pn 18 02 34.0 +0.1**
comp=E,2.3nm,0.8s,baz=102,slow=15,SNR=6.4
KLR Kul'dur 12.88 289 *ce*PN **Pn 18 02 35.4 +1.4**
KLR pmax pmax
comp=Z,4.0nm,1.0s
KLR Kul'dur 12.88 289 *e*P **Pn 18 02 34.7 +0.7**
MA2 Magadan 13.03 1 P **Pn 18 02 34.5 -1.2**
comp=Z,4.1nm,0.9s,baz=157,slow=17,SNR=3.0
USA0B Ussuriysk Arra 13.25 266 Pn **Pn 18 02 39.5 +0.8**
USA0B Ussuriysk Arra 13.25 266 PN **Pn 18 02 39.5 +0.8**
USRK Ussuriysk Ar. 13.25 266 P **Pn 18 02 39.7 +1.0**
comp=Z,6.4nm,0.6s,baz=73,slow=13,SNR=10
USRK Ussuriysk Ar. 13.25 266 Pn **Pn 18 02 39.0 +0.4**
MJB9 Matsu-Tunnel 13.60 227 P **Pn 18 02 44.0 +0.7**
MAJO Matsushiro 13.60 227 **Pn 18 02 44.4 +1.1**
MAJO Matsushiro 13.60 227 *i* P **Pn 18 02 43.3 0.0**
MJAR Matsushiro Arr 13.60 227 P **P 18 02 48.2 +1.6**
comp=Z,1.7nm,0.5s,baz=37,slow=11,SNR=8.2
MJAR Matsushiro Arr 13.60 227 Pn **Pn 18 02 44.1 +0.8**
MJAR Matsushiro Arr 13.60 227 P **Pn 18 02 44.1 +0.8**
JGF Kuroka 14.77 227 Pn **P 18 02 58.9 -0.6**
MDJ Mudanjiang 14.79 270 Pn **Pn 18 02 56.6 -1.4**
INU Inuyama 15.14 227 Pn **Pn 18 03 02.7 +0.4**
INU IAmb IAmb 18 03 06.7
comp=Z,7.4nm,0.7s
SEY Seymchan 16.43 3 P **P 18 03 16.9 -0.6**
comp=Z,4.3nm,0.7s,baz=175,slow=9.8,SNR=13
SEY Seymchan 16.43 3 *ce*P **P 18 03 16.0 -1.5**
SEY pmax pmax
comp=Z,4.0nm,0.7s
ZEA Zeya 16.50 304 *e*P **Pn 18 03 19.9 +1.1**
ZEA pmax pmax
comp=E,10.0nm,1.5s
ZEA pmax pmax
comp=N,10.0nm,1.3s
ZEA pmax pmax
comp=Z,10.0nm,0.8s
ZEA Zeya 16.50 304 *e*P **P 18 03 18.2 -0.2**
ZEA AMB AMB 18 03 21.1
comp=Z,40nm,0.8s
JHS Saijyo 17.49 235 **Pn 18 03 30.5 -0.3**
JHS IAmb IAmb 18 03 34.8
comp=Z,13nm,1.1s
SEHB SEOHWA 18.38 251 P **P 18 03 37.6 -1.5**
SEHB IAmb IAmb 18 03 47.4
comp=Z,14nm,1.5s
KSRS Korea Array 19.05 250 P **Pn 18 03 48.8 -0.3**
comp=Z,3.8nm,0.6s,baz=54,slow=9.0,SNR=22
KSCHJ Chungju 19.37 248 P **P 18 03 51.1 +1.3**
KSCHJ IAmb IAmb 18 03 56.5
comp=Z,9.1nm,0.6s
YAK Yakutsk 19.55 330 P **P 18 03 50.8 -0.6**
baz=126,slow=4.4
YAK Yakutsk 19.55 330 *e*P **P 18 03 51.5 0.0**
YAK pmax pmax
comp=Z,56nm,0.9s
YAK pmax pmax
comp=N,9.0nm,1.0s
YAK pmax pmax
comp=E,12nm,1.0s
YAK Yakutsk 19.55 330 *e*P **P 18 03 51.5 0.0**
INCN Inchon 19.88 251 P **P 18 03 53.5 -1.8**
INCN Inchon 19.88 251 P **P 18 03 53.5 -1.8**
INCN pmax pmax
comp=Z,11nm,0.6s
JTU Tsushima 19.99 241 P **P 18 03 56.2 -0.4**
TJN Taejon 20.06 248 *ce*P **P 18 03 54.3 -2.9**
JOW Kunigami 26.42 230 P **P 18 05 00.0 +1.9**
comp=Z,3.6nm,0.5s,baz=311,slow=9.3,SNR=2.2
comp=Z,3.6nm,0.5s
JOW Kunigami 26.42 230 P **P 18 05 00.2 +2.1**
TIXI Tiksi 27.16 345 P **P 18 05 02.2 -2.0**
TIXI Tiksi 27.16 345 *ce*P **P 18 05 01.8 -2.4**
TIXI pmax pmax
comp=Z,3.0nm,1.0s
HHC Hu-ho-hao-te 28.53 273 *e*P **P 18 05 18.2 +1.3**
HHC pmax pmax
comp=Z,45nm,1.1s
HHC pmax pmax
comp=Z,220nm,5.8s
TNA Tin City 29.18 34 P **P 18 05 21.2 -1.0**
SONM Songino Array 29.71 289 P **P 18 05 26.2 -1.1**
comp=Z,0.3nm,0.4s,baz=101,slow=4.6,SNR=2.9
comp=Z,0.3nm,0.4s
SONM Songino Array 29.71 289 P **P 18 05 22.6 -4.7**
H11N2 WAKE ISLAND Hy 29.95 148 T T 18 37 06.4
baz=337,slow=76,SNR=81
H11N1 WAKE ISLAND Hy 29.96 148 T T 18 37 07.6
baz=337,slow=76,SNR=57
H11N3 WAKE ISLAND Hy 29.96 148 T T 18 37 07.7
baz=337,slow=76,SNR=54
H11S1 WAKE ISLAND Hy 31.00 149 T T 18 38 24.6
baz=338,slow=76,SNR=56
H11S3 WAKE ISLAND Hy 31.01 149 T T 18 38 27.7
baz=338,slow=76,SNR=36
H11S2 WAKE ISLAND Hy 31.02 149 T T 18 38 23.3
baz=338,slow=76,SNR=38
WHN Wuhan 32.17 253 P **P 18 05 50.0 +1.1**
N18K Kilae Creek 33.72 46 P **P 18 06 01.9 -0.2**
N18K IAmb IAmb 18 06 37.9
comp=Z,14nm,1.6s
XAN Xi'an 33.73 263 P **P 18 06 03.5 +1.1**
XAN pP pwP 18 06 40.4 -0.8
XAN pmax pmax
comp=Z,9.0nm,0.8s
TTA Tatalina 33.73 41 P **P 18 06 03.1 +0.9**
TTA Tatalina 33.73 41 P **P 18 06 03.1 +0.9**
TTA pmax pmax
comp=Z,5.0nm,1.4s
SVW2 Sparrevohn 33.87 45 P **P 18 06 04.7 +1.3**
SVW2 IAmb IAmb 18 06 35.8
comp=Z,9.2nm,1.3s
O18K Koktuh Hills 34.07 47 P **P 18 06 05.3 +0.2**
O18K IAmb IAmb 18 06 10.7
comp=Z,10nm,1.2s
CHIR Chirikof Islan 34.18 54 P **P 18 06 07.5 +1.5**
N19K Bonanza Creek 34.41 45 P **P 18 06 07.7 -0.4**
N19K IAmb IAmb 18 06 20.5
comp=Z,4.9nm,1.1s
M19K Big River Lodg 34.45 43 P **P 18 06 09.4 +1.1**
M19K IAmb IAmb 18 06 20.0
comp=Z,8.0nm,1.4s
K20K Telida 34.64 41 P **P 18 06 11.3 +1.4**
K20K IAmb IAmb 18 06 40.2
comp=Z,6.4nm,1.5s
J20K Nowinta River 34.64 39 P **P 18 06 11.6 +1.7**
IMAR Indian Mountai 34.96 36 P **P 18 06 13.6 +0.9**
H21K Melozitna Rive 35.32 37 P **P 18 06 16.9 +1.1**
PPLA Purkeypile 35.48 42 P **P 18 06 19.7 +2.4**
CAST Castle Rocks 35.53 41 P **P 18 06 18.4 +0.8**
ENH Enshi 35.59 257 P **P 18 06 17.8 -0.6**
ENH IAmb IAmb 18 06 20.1
comp=Z,9.4nm,1.3s
KDAK Kodiak Island 35.59 50 P **P 18 06 19.1 +1.1**
KDAK Kodiak Island 35.59 50 P **P 18 06 19.2 +1.1**
KDAK pmax pmax
comp=Z,36nm,1.6s
I21K Tanana 35.63 38 P **P 18 06 19.1 +0.7**
I21K IAmb IAmb 18 06 21.6
comp=Z,7.6nm,1.3s
SKT Skwentna 35.80 43 P **P 18 06 21.7 +1.8**
SKT IAmb IAmb 18 06 51.7
comp=Z,5.2nm,1.3s
BPAW Bear Paw Mtn. 36.03 40 P **P 18 06 22.8 +1.0**
BPAW IAmb IAmb 18 06 44.5
comp=Z,7.1nm,1.6s
KTH Kantishna Hill 36.05 40 P **P 18 06 23.4 +1.4**
KTH IAmb IAmb 18 06 25.4
comp=Z,4.0nm,0.9s
CNPM China Poot 36.10 47 P **P 18 06 23.2 +0.7**
LZH Lanzhou 36.11 270 *e*P **P 18 06 24.8 +1.8**
LZH pmax pmax
comp=Z,15nm,1.3s
MLY Manley 36.15 38 P **P 18 06 23.8 +0.9**
SUA Susitna One 36.20 44 P **P 18 06 23.2 -0.1**
SUA IAmb IAmb 18 06 27.6
comp=Z,8.6nm,1.3s
TRF Thorofare Moun 36.34 41 P **P 18 06 23.5 -1.1**
COLD Coldfoot 36.48 34 P **P 18 06 26.1 +0.6**
COLD IAmb IAmb 18 06 27.9
comp=Z,5.0nm,1.0s
H23K Yukon River 36.67 37 P **P 18 06 28.5 +1.2**
H23K IAmb IAmb 18 06 30.2
comp=Z,4.0nm,0.8s
I23K Minto, Yukon-K 36.74 38 P **P 18 06 27.6 -0.1**
I23K IAmb IAmb 18 06 36.1
comp=Z,5.3nm,1.4s
TOLK Toolik Lake Re 36.84 32 P **P 18 06 29.5 +0.9**
NEA2 Nenana 36.86 39 P **P 18 06 30.0 +1.2**
NEA2 IAmb IAmb 18 06 31.2
comp=Z,3.0nm,0.7s
MDM Murphy Dome 37.22 38 P **P 18 06 33.3 +1.5**
GTA Gaotai 37.23 278 *e*P **P 18 06 33.4 +1.0**
GTA pmax pmax
comp=Z,5.0nm,0.9s
WRH Wood River Hil 37.29 39 P **P 18 06 33.7 +1.4**
WRH IAmb IAmb 18 06 41.7
comp=Z,4.2nm,1.1s
KNK Knik Glacier 37.30 44 P **P 18 06 35.0 +2.4**
KNK IAmb IAmb 18 06 46.1
comp=Z,11nm,1.2s
SML Sawmill 37.32 43 P **P 18 06 34.3 +1.5**
H24K Noodor Dome 37.36 37 P **P 18 06 34.3 +1.3**
COLA College 37.38 38 *i* P **P 18 06 33.1 0.0**
COLA pmax pmax
comp=Z,7.0nm,0.7s
CCB Clear Creek Bu 37.41 39 P **P 18 06 34.4 +1.0**
DHY Denali Highway 37.67 41 P **P 18 06 36.0 +0.2**
DHY IAmb IAmb 18 06 40.5
comp=Z,5.8nm,1.4s
IL31 37.80 38 P **P 18 06 36.0 -0.6**
IL31 IAmb IAmb 18 06 38.8
comp=Z,4.6nm,1.1s
ILAR Eielson Array 37.80 38 P **P 18 06 37.6 +0.9**
comp=Z,1.8nm,0.8s,baz=262,slow=7.9,SNR=15
ILAR PcP **PcP 18 08 49.4 0.0**
comp=Z,0.3nm,0.4s,baz=281,slow=2.8,SNR=1.7
comp=Z,1.8nm,0.8s
ILAR Eielson Array 37.80 38 P **P 18 06 37.8 +1.2**
ILAR Eielson Array 37.80 38 P **P 18 06 37.8 +1.2**
SCM Sheep Creek Mo 37.80 43 P **P 18 06 37.1 +0.3**
SCM Sheep Creek Mo 37.80 43 P **P 18 06 37.1 +0.3**
SCM pmax pmax
comp=Z,15nm,1.3s
J25K Salcha River, 38.45 39 P **P 18 06 41.0 -1.2**
BMAR Burnt Mountain 38.66 34 P **P 18 06 46.1 +2.2**
RIDG Independent Ri 38.75 40 P **P 18 06 45.4 +0.6**
RIDG IAmb IAmb 18 07 16.9
comp=Z,6.7nm,1.4s
SCRK Sand Creek 39.11 40 P **P 18 06 48.4 +0.7**
BMRM Bremner River 39.20 44 P **P 18 06 50.1 +1.6**
BMRM IAmb IAmb 18 07 16.7
comp=Z,7.5nm,1.1s
M26K Nabesna, AK 39.75 42 P **P 18 06 55.1 +2.1**
M26K IAmb IAmb 18 06 57.1
comp=Z,5.2nm,1.1s
WAX Waxell Ridge 40.14 45 P **P 18 06 55.8 -0.4**
L27K Beaver Creek, 40.18 41 P **P 18 06 58.7 +2.2**
BCAR Beaver Creek A 40.20 41 P **P 18 06 58.3 +1.6**
CTGM Chitina Glacie 40.78 44 P **P 18 07 03.2 +1.6**
CTGM IAmb IAmb 18 07 04.6
comp=Z,17nm,1.4s
ZALV Zalesovo Beam 41.27 305 P **P 18 07 04.2 -1.3**
comp=Z,0.4nm,0.3s,baz=79,slow=8.1,SNR=2.3
ZALV PcP **PcP 18 09 01.4 +0.7**
comp=Z,1.4nm,0.4s,baz=66,slow=1.9,SNR=9.4
comp=Z,0.4nm,0.3s
I29M Ogilvie Camp, 41.36 37 P **P 18 07 07.8 +1.8**
I29M IAmb IAmb 18 07 08.8
comp=Z,7.3nm,0.7s
EPYK Eagle Plains 41.84 35 P **P 18 07 11.7 +1.6**
EPYK IAmb IAmb 18 07 13.0
comp=Z,8.0nm,0.9s
GOMU GeErMu 42.27 276 P **P 18 07 15.0 +0.8**
GOMU pmax pmax
comp=Z,5.0nm,0.9s
GOMU pmax pmax
comp=Z,93nm,7.4s
HYT Haines Junctio 42.63 43 P **P 18 07 18.7 +2.1**
HYT IAmb IAmb 18 07 20.4
comp=Z,3.7nm,0.8s
INK Inuvik 42.75 32 P **P 18 07 18.6 +1.4**
comp=Z,4.0nm,0.4s,baz=274,slow=4.9,SNR=23
comp=Z,4.0nm,0.4s
INK Inuvik 42.75 32 P **P 18 07 18.3 +1.1**
INK IAmb IAmb 18 07 19.4
comp=Z,5.1nm,0.5s
PZH PanZhiHua 43.23 260 P **P 18 07 23.2 +1.4**
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,110nm,7.7s
WMQ Urumqi 43.32 290 *e*P **P 18 07 23.5 +1.2**
A36M Sachs Harbour 44.80 26 P **P 18 07 34.7 +1.2**
P33M Teslin, Yukon 45.03 43 P **P 18 07 37.8 +2.2**
MK31 Makanchi Array 45.43 296 P **P 18 07 38.0 -1.0**
MK31 Makanchi Array 45.43 296 *i* P **P 18 07 37.8 -1.1**
MKAR Makanchi Array 45.43 296 P **P 18 07 37.8 -1.1**
comp=Z,1.8nm,0.6s,baz=70,slow=7.2,SNR=24
MKAR PcP **PcP 18 09 15.3 +0.2**
comp=Z,0.8nm,0.6s,baz=60,slow=2.9,SNR=7.0
comp=Z,1.8nm,0.6s
MKAR Makanchi Array 45.43 296 P **P 18 07 37.4 -1.5**
MKAR PcP **PcP 18 09 14.9 -0.2**
MKAR Makanchi Array 45.43 296 *i* P **P 18 07 38.4 -0.5**
MKAR pmax pmax
comp=Z,2.0nm,0.6s
MKAR Makanchi Array 45.43 296 *e*P **P 18 07 38.4 -0.5**
MAKZ Makanchi 45.62 297 P **P 18 07 39.4 -1.0**
MAKZ Makanchi 45.62 297 P **P 18 07 39.4 -1.0**
MAKZ pmax pmax
comp=Z,2.0nm,0.9s
C36M Paulatuk 45.86 30 P **P 18 07 42.8 +1.0**
KURK Kurchatov 45.97 303 P **P 18 07 41.3 -1.8**
KURK Kurchatov 45.97 303 *ce*P **P 18 07 41.7 -1.3**
KURK pmax pmax
comp=Z,1.0nm,0.7s
KURK Kurchatov 45.97 303 *e*P **P 18 07 41.7 -1.3**
BRVK Borovoye 49.63 309 P **P 18 08 09.5 -1.6**
BRVK Borovoye 49.63 309 *ce*P **P 18 08 09.7 -1.4**
BRVK pmax pmax
comp=Z,2.0nm,0.6s
BRVK Borovoye 49.63 309 *e*P **P 18 08 09.7 -1.4**
CHTO Chiang Mai 50.35 255 P **P 18 08 18.5 +1.5**
CHTO IAmb IAmb 18 08 19.8
comp=Z,5.7nm,0.7s
CHTO Chiang Mai 50.35 255 P **P 18 08 18.5 +1.5**
CHTO pmax pmax
comp=Z,6.0nm,0.7s
SHL Shillong 50.58 267 P **P 18 08 18.2 -0.6**
SHL IAmb IAmb 18 08 20.4
comp=Z,10nm,0.8s
SHL Shillong 50.58 267 P **P 18 08 18.3 -0.6**
SHL pmax pmax
comp=Z,10.0nm,0.8s
CMAR Chiang Mai Arr 50.60 254 P **P 18 08 20.7 +1.8**
comp=Z,2.3nm,0.6s,baz=37,slow=7.4,SNR=19
comp=Z,2.3nm,0.6s
CMAR Chiang Mai Arr 50.60 254 P **P 18 08 19.9 +1.0**
CMAR Chiang Mai Arr 50.60 254 P **P 18 08 19.9 +1.0**
KDJ Kajisay 50.88 293 P **P 18 08 19.9 -1.0**
KDJ IAmb IAmb 18 08 21.9
comp=Z,4.0nm,0.8s
KDJ Kajisay 50.88 293 P **P 18 08 20.0 -1.0**
KDJ pmax pmax
comp=Z,4.0nm,0.8s
BOOM Boomskoye usch 51.48 294 P **P 18 08 23.8 -1.5**
BOOM IAmb IAmb 18 08 26.5
comp=Z,2.7nm,0.6s
BOOM Boomskoye usch 51.48 294 P **P 18 08 23.8 -1.5**
BOOM pmax pmax
comp=Z,3.0nm,0.6s
RES Resolute Bay 51.56 18 P **P 18 08 25.0 -0.3**
comp=Z,6.1nm,0.8s,baz=307,slow=8.1,SNR=12
comp=Z,6.1nm,0.8s
RES Resolute Bay 51.56 18 P **P 18 08 25.2 -0.1**
RES IAmb IAmb 18 08 26.4
comp=Z,7.7nm,0.8s
RES Resolute Bay 51.56 18 P **P 18 08 25.2 -0.1**
RES pmax pmax
comp=Z,8.0nm,0.8s
YKA Yellowknife Ar 52.12 36 P **P 18 08 30.8 +1.3**
comp=Z,1.4nm,0.4s,baz=301,slow=6.9,SNR=16
comp=Z,1.4nm,0.4s
YKA Yellowknife Ar 52.12 36 P **P 18 08 30.0 +0.4**
AAK Ala-Archa 52.31 295 *ce*P **P 18 08 31.2 -0.2**
AAK pmax pmax
comp=Z,2.0nm,0.6s
AAK Ala-Archa 52.31 295 *e*P **P 18 08 31.2 -0.2**
TAPN Taplejung 52.33 272 *e*P **P 18 08 33.5 +1.6**
KSH Kashi 53.06 291 P **P 18 08 41.9 +4.9**
KSH pmax pmax
comp=Z,4.0nm,0.7s
JIRN Jiri 53.18 273 *e*P **P 18 08 39.5 +1.2**
comp=Z,20nm,0.5s
GUN Gumba 53.24 273 *e*P **P 18 08 39.6 +0.9**
comp=Z,10nm,0.5s
RAMN Ramite 53.34 272 *e*P **P 18 08 40.4 +1.1**
comp=Z,21nm,0.4s
PKI Pulchoki 53.77 273 *e*P **P 18 08 43.5 +0.9**
comp=Z,2.7nm,0.3s
PKIN Phulchoki 53.78 273 *e*P **P 18 08 43.4 +0.9**
comp=Z,6.5nm,0.6s
ARU Arti 53.93 317 P **P 18 08 41.0 -1.8**
ARU IAmb IAmb 18 08 42.2
comp=Z,8.1nm,1.2s
ARU Arti 53.93 317 *c i*P **P 18 08 41.8 -1.0**
ARU *PP **pP 18 09 19.1 -1.0**
ARU 18 09 45.6
ARU S **S 18 16 05.0 +0.2**
ARU SS **SS 18 19 46.8 -0.8**
ARU pmax pmax
comp=Z,10.0nm,1.4s
ARU Arti 53.93 317 *e*P **P 18 08 41.0 -1.8**
GKN Gorkha 54.03 274 *e*P **P 18 08 45.2 +1.0**
comp=Z,8.3nm,0.4s
PYUN Piuthan 55.11 276 *e*P **P 18 08 53.4 +1.4**
comp=Z,5.5nm,0.2s
HNR Honiara 56.38 169 P **P 18 09 02.6 +1.9**
HNR Honiara 56.38 169 P **P 18 09 02.7 +1.9**
HNR pmax pmax
comp=Z,88nm,1.0s
PRGR Permogore 56.54 326 *e*P **P 18 08 59.2 -2.2**
KIRV Kirov 56.84 322 *i* P **P 18 09 02.9 -0.6**
KEV Kevo 56.90 340 P **P 18 09 02.3 -1.5**
KEV Kevo 56.90 340 P **P 18 09 02.3 -1.5**
KEV pmax pmax
comp=Z,56nm,1.6s
ABKAR Akbulak array 57.16 309 P **P 18 09 05.1 -0.9**
ABKAR Akbulak array 57.16 309 P **P 18 09 04.8 -1.2**
ABKAR IAmb IAmb 18 09 06.2
comp=Z,4.5nm,0.7s
ARCES ARCESS Array B 57.42 340 P **P 18 09 05.9 -1.7**
comp=Z,0.7nm,0.5s,baz=34,slow=9.4,SNR=7.3
ARCES PcP **PcP 18 09 59.9 +0.6**
comp=Z,1.1nm,0.6s,baz=54,slow=6.2,SNR=4.8
comp=Z,0.7nm,0.5s
ARCES ARCESS Array B 57.42 340 P **P 18 09 06.1 -1.5**
ARCES ARCESS Array B 57.42 340 P **P 18 09 06.1 -1.5**
ARCES pmax pmax
comp=Z,19nm,1.5s
KULM Kulim 59.40 242 P **P 18 09 22.9 +0.9**
FINES FINESS Array B 63.43 334 P **P 18 09 45.9 -2.4**
comp=Z,1.6nm,0.6s,baz=28,slow=7.7,SNR=14
comp=Z,1.6nm,0.6s
FINES FINESS Array B 63.43 334 *i* P **P 18 09 46.7 -1.6**
FINES pmax pmax
comp=Z,2.0nm,0.6s
NVAR Mina Array Bea 64.08 61 P **P 18 09 55.2 +1.9**
comp=Z,1.1nm,0.7s,baz=289,slow=6.9,SNR=8.6
comp=Z,1.1nm,0.7s
GEYT Alibeck 65.15 299 P **P 18 10 00.3 +0.3**
comp=Z,2.2nm,0.6s,baz=141,slow=7.3,SNR=3.9
comp=Z,2.2nm,0.6s
WRA Warramunga Arr 67.80 196 P **P 18 10 18.1 +1.3**
comp=Z,0.4nm,0.8s,baz=13,slow=6.8,SNR=4.6
comp=Z,0.4nm,0.8s
NB2 NORSAR Subarra 67.80 340 P **P 18 10 15.3 -1.1**
comp=Z,0.9nm,0.5s,baz=28,slow=6.5
NOA NORSAR Array B 67.80 340 P **P 18 10 15.1 -1.3**
comp=Z,1.9nm,0.5s,baz=29,slow=6.6,SNR=9.9
comp=Z,1.9nm,0.5s
KBZ Khabaz 69.69 313 P **P 18 10 28.4 +0.2**
comp=Z,1.0nm,0.5s,baz=84,slow=2.8,SNR=2.3
comp=Z,1.0nm,0.5s
AKASG Malin Array Be 70.69 325 P **P 18 10 32.4 -1.8**
comp=Z,2.0nm,0.4s,baz=34,slow=6.3,SNR=17
comp=Z,2.0nm,0.4s
AKASG Malin Array Be 70.69 325 *i* P **P 18 10 33.0 -1.2**
AKASG pmax pmax
comp=Z,2.0nm,0.4s
ASAR Alice Springs 71.51 196 P **P 18 10 41.7 +2.3**
comp=Z,0.6nm,0.8s,baz=11,slow=5.8,SNR=9.9
comp=Z,0.6nm,0.8s
SCHQ Schefferville 74.14 21 P **P 18 10 54.4 -0.3**
comp=Z,2.3nm,0.5s,baz=342,slow=5.8,SNR=7.8
comp=Z,2.3nm,0.5s
GERES GERESS Array B 77.81 332 P **P 18 11 14.7 -0.9**
comp=Z,0.4nm,0.4s,baz=38,slow=6.8,SNR=4.2
comp=Z,0.4nm,0.4s
TXAR Lajitas Array 79.12 59 P **P 18 11 24.4 +1.3**
comp=Z,0.9nm,0.5s,baz=300,slow=4.5,SNR=17
comp=Z,0.9nm,0.5s
ESDC Sonseca Array 91.16 341 P **P 18 12 21.8 -1.0**
comp=Z,0.2nm,0.5s,baz=15,slow=5.3,SNR=3.3
comp=Z,0.2nm,0.5s
PLCA Paso Flores 149.97 94 PKPbc **PKiKP 18 19 09.0 +1.0**
comp=Z,1.7nm,0.6s,baz=325,slow=2.7,SNR=4.4

NEIC ***07*** *18:13:36.4±2.4, 18°.90N±0°.06×69°.25W±0°.05, h84km±7km, mb4.4/27, Error ellipse: s-maj=8.4km s-min=6.3km az=190.0*
IDC ***07*** *18:13:37.6±2.4, 18°.76N×69°.29W, h94km±27km, mb3.5/11, mbtmp3.9/13, MS2.9/1, Error ellipse: s-maj=25.3km s-min=14.3km az=22.0*
OSPL ***07*** *18:13:38.5±3.4, 19°.08N×69°.14W, h67km±25km, ML4.2, Fault plane solution: NP1:φs81.60000°, δ70.50000°, λ-139.20000°.*
ISC 07 18:13:35.2±0.7, 18°.91N±0°.04×69°.26W±0°.04, h80km±8km, n132, σ2°38/150, mb4.2/18, 4C-5D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DR12	**Loma Pena Alta**	**0.16**	**224**		**Pn**	**18 13 48.6**	**+1.5**
LONA1	**Toro Cenizo, N**	**0.74**	**310**	ASPG		18 13 52.5	
	comp=Z,3μm,0.3s						
LONA1				⇓*i*P	**Pn**	**18 13 52.9**	**+1.6**
LONA1				ATPG		18 13 53.4	
	comp=Z,11μm,0.3s						
LONA1				ASSG		18 14 05.0	
	comp=Z,68μm,0.3s						
LONA1				*e*S	**Sn**	**18 14 05.5**	**+2.1**
LONA1				ATSG		18 14 06.8	
	comp=Z,207μm,0.3s						
LONA1				IAML		18 14 09.0	
	comp=Z,8μm,0.5s						
SDD	**Santo Domingo**	**0.76**	**234**	Pn	**Pn**	**18 13 53.8**	**+2.2**
SDD				Sn	**Sn**	**18 14 06.3**	**+2.6**
SDD	**Santo Domingo**	**0.76**	**234**	ASPG		18 13 53.4	
	comp=Z,7μm,0.5s						
SDD				⇑*i*P	**Pn**	**18 13 53.8**	**+2.2**
SDD				ATPG		18 13 54.8	
	comp=Z,25μm,0.4s						
SDD				ASSG		18 14 06.2	
	comp=Z,17μm,0.3s						
SDD				*e*S	**Sn**	**18 14 06.6**	**+2.9**
SDD				ATSG		18 14 07.1	
	comp=Z,43μm,0.3s						
BANI	**BANI**	**1.16**	**244**		**Pn**	**18 13 58.7**	**+2.3**
BANI	**BANI**	**1.16**	**244**	⇑*i*P	**Pn**	**18 13 58.9**	**+2.5**
SC01	**Santiago de lo**	**1.48**	**291**		**Pn**	**18 14 02.6**	**+2.3**
SC01				Sn	**Sn**	**18 14 22.0**	**+2.8**
SC01	**Santiago de lo**	**1.48**	**291**	ASPG		18 14 02.5	
	comp=Z,3μm,0.3s						
SC01				⇓*i*P	**Pn**	**18 14 02.9**	**+2.6**
SC01				ATPG		18 14 04.5	
	comp=Z,7μm,0.3s						
SC01				ASSG		18 14 21.9	
	comp=Z,16μm,0.3s						
SC01				*e*S	**Sn**	**18 14 22.3**	**+3.1**
SC01				ATSG		18 14 24.3	
	comp=Z,45μm,0.3s						
SC01				IAML		18 14 30.2	
	comp=Z,3μm,0.3s						
SDDR	**Presa de Saban**	**1.92**	**273**		**Pn**	**18 14 09.0**	**+2.9**
SDDR				Sn	**Sn**	**18 14 33.0**	**+3.4**
SDDR	**Presa de Saban**	**1.92**	**273**	*e*P	**Pn**	**18 14 09.2**	**+3.1**
SDDR	**Presa de Saban**	**1.92**	**273**	⇓*i*P	**Pn**	**18 14 09.5**	**+3.3**
SDDR				*e*S	**Sn**	**18 14 33.9**	**+4.3**
SDDR				AMP		18 14 36.4	
	comp=Z,76μm,0.5s						
SDDR				IAML		18 14 36.4	
	comp=Z,2μm,0.5s						
AGPR	**Aguadilla, PR**	**2.08**	**102**		**Pn**	**18 14 10.1**	**+1.8**
AGPR				Sn	**Sn**	**18 14 35.9**	**+2.4**
AGPR	**Aguadilla, PR**	**2.08**	**102**	⇑*i*P	**Pn**	**18 14 10.2**	**+2.0**
AGPR				IAML		18 14 43.6	
	comp=Z,2μm,0.3s						
PRSN	**Puerto Rico Se**	**2.12**	**109**		**Pn**	**18 14 10.5**	**+1.7**
LONE2	**Loma La Sidra**	**2.13**	**261**	*i* P	**Pn**	**18 14 12.2**	**+3.3**
LONE2				IAML		18 14 45.4	
	comp=Z,1μm,0.4s						
CRPR	**Cabo Rojo, PR**	**2.23**	**113**		**Pn**	**18 14 13.1**	**+2.9**
CRPR	**Cabo Rojo, PR**	**2.23**	**113**	*i* P	**Pn**	**18 14 13.2**	**+3.0**
CRPR				IAML		18 14 46.6	
	comp=Z,1000nm,0.3s						
MLPR	**Magueyes Islan**	**2.30**	**114**	Pn	**Pn**	**18 14 13.6**	**+2.4**
LODA1	**ITESIL, Dajabo**	**2.39**	**286**	ASPG		18 14 13.7	
	comp=Z,2μm,0.3s						
LODA1				⇓*i*P	**Pn**	**18 14 14.1**	**+1.7**
LODA1				ATPG		18 14 14.9	
	comp=Z,6μm,0.3s						
LODA1				ASSG		18 14 40.3	
	comp=Z,4μm,0.2s						
LODA1				*e*S	**Sn**	**18 14 40.7**	**-0.2**
LODA1				ATSG		18 14 41.9	
	comp=Z,10μm,0.4s						
LODA1				IAML		18 14 42.6	
	comp=Z,3μm,0.7s						
AOPR	**Arecibo Observ**	**2.44**	**103**		**Pn**	**18 14 13.8**	**+0.7**
LOPE2	**Hotel El Peder**	**2.51**	**250**	ASPG		18 14 17.6	
	comp=Z,766nm,0.3s						
LOPE2				⇑*i*P	**Pn**	**18 14 18.0**	**+4.0**
LOPE2				ATPG		18 14 19.4	
	comp=Z,2μm,0.3s						
LOPE2				ASSG		18 14 49.6	
	comp=Z,4μm,0.3s						
LOPE2				*e*S	**Sn**	**18 14 50.0**	**+6.2**
LOPE2				ATSG		18 14 51.5	
	comp=Z,11μm,0.3s						
LOPE2				IAML		18 14 59.9	
	comp=Z,614nm,0.6s						
EMPR	**Esperanza - Ma**	**2.62**	**99**		**Pn**	**18 14 16.5**	**+1.0**
OBIP	**Obispado Ponce**	**2.66**	**108**		**Pn**	**18 14 17.3**	**+1.3**
CELP	**Cerrillos**	**2.68**	**108**		**Pn**	**18 14 17.8**	**+1.6**
ICMP	**Isla Caja de M**	**2.79**	**111**		**Pn**	**18 14 19.4**	**+1.6**
NQUSE	**US Embassy, Po**	**2.85**	**264**	Pn	**Pn**	**18 14 20.7**	**+2.1**
SJG	**San Juan**	**3.06**	**105**	P	**Pn**	**18 14 23.8**	**+2.4**
	comp=Z,91nm,0.4s,baz=299,slow=11,SNR=23						
SJG				S	**Sn**	**18 14 56.0**	**-1.0**
	comp=Z,262nm,0.4s,baz=321,slow=19,SNR=14						
SJG	**San Juan**	**3.06**	**105**		**Pn**	**18 14 23.0**	**+1.7**
SJG	**San Juan**	**3.06**	**105**	*e*P	**Pn**	**18 14 22.7**	**+1.3**
GCPR	**Guaynabo City**	**3.07**	**101**		**Pn**	**18 14 22.2**	**+0.7**
GRTK	**Grand Turk**	**3.13**	**326**		**Pn**	**18 14 21.8**	**-0.5**
GRTK	**Grand Turk**	**3.13**	**326**	ASPG		18 14 21.6	
	comp=Z,2μm,0.3s						
GRTK				⇓*i*P	**Pn**	**18 14 22.0**	**-0.4**
GRTK				ATPG		18 14 23.1	
	comp=Z,7μm,0.3s						
GRTK				ASSG		18 14 56.4	
	comp=Z,5μm,0.3s						
GRTK				*e*S	**Sn**	**18 14 56.8**	**-2.0**
GRTK				ATSG		18 14 58.4	
	comp=Z,15μm,0.3s						
GRTK				IAML		18 14 58.6	
	comp=Z,727nm,0.2s						
JAKH	**Jacmel**	**3.16**	**258**		**Pn**	**18 14 22.5**	**-0.3**
PDPR	**Patillas Dam,**	**3.20**	**106**		**Pn**	**18 14 25.0**	**+1.7**
CBYP	**Canovanas**	**3.29**	**101**		**Pn**	**18 14 24.9**	**+0.3**
HUMP	**Col San Antoni**	**3.33**	**103**		**Pn**	**18 14 24.6**	**-0.4**
MTP	**Monte Pirata**	**3.61**	**102**		**Pn**	**18 14 29.7**	**+0.8**
CUPR	**Culebra, Puert**	**3.82**	**98**		**Pn**	**18 14 32.1**	**+0.4**
STVI	**Saint Thomas**	**4.12**	**97**		**Pn**	**18 14 36.0**	**+0.2**
CDVI	**St. Croix**	**4.42**	**104**		**Pn**	**18 14 39.4**	**-0.5**
MASC	**Masc**	**4.85**	**286**	*e*P	**Sn**	**18 14 43.9**	**-2.0**
MASC				*e*S	**Sn**	**18 15 37.6**	**-3.2**
GTBY	**Guantanamo Bay**	**5.61**	**281**	Pn	**Pn**	**18 14 55.0**	**-1.2**
GTBY	**Guantanamo Bay**	**5.61**	**281**	*e*P	**Pn**	**18 14 54.1**	**-2.0**
GTBY				*e*S	**Sn**	**18 15 54.0**	**-5.3**
MOAC	**Moa**	**5.64**	**289**	*e*P	**Pn**	**18 14 54.1**	**-2.5**
MOAC				*e*S	**Sn**	**18 15 55.1**	**-4.9**
SMRT	**St. Maarten**	**5.93**	**97**	Pn	**Pn**	**18 14 59.4**	**-1.2**
RCC	**Rio Carpintero**	**6.17**	**281**	*e*P	**Pn**	**18 15 02.9**	**-0.8**
RCC				*e*S	**Sn**	**18 16 08.2**	**-4.7**
SKI	**Saint Kitts**	**6.40**	**103**	Pn	**Pn**	**18 15 07.3**	**+0.4**
HATO	**Hato, Curacao**	**6.70**	**177**	Pn	**Pn**	**18 15 10.4**	**-0.6**
ANWB	**Willy Bob**	**7.21**	**99**	Pn	**Pn**	**18 15 16.7**	**-1.2**
ANWB	**Willy Bob**	**7.21**	**99**	*e*P	**Pn**	**18 15 18.5**	**+0.5**
ANWB	**Willy Bob**	**7.21**	**99**	*e*S	**Sn**	**18 16 32.9**	**-5.5**
ANBD	**Bethesda, Anti**	**7.37**	**103**	*e*P	**Pn**	**18 15 17.1**	**-3.1**
ANBD	**Bethesda, Anti**	**7.37**	**103**	*e*S	**Sn**	**18 16 37.1**	**-5.2**
LMGC	**Las Mercedes**	**7.39**	**280**	*e*P	**Pn**	**18 15 17.9**	**-2.7**
LMGC				*e*S	**Sn**	**18 16 36.6**	**-6.3**
GDHS	**Morne Mazeau,**	**7.61**	**109**	Pn	**Pn**	**18 15 22.9**	**-0.7**
URIC	**Uribia, Colomb**	**7.63**	**201**	Pn	**Pn**	**18 15 24.2**	**+0.4**
URIC	**Uribia, Colomb**	**7.63**	**201**	*e*P	**Pn**	**18 15 23.8**	**0.0**
ABD	**La Joyeuse, An**	**7.79**	**107**	Pn	**Pn**	**18 15 26.6**	**+0.6**
ABD	**La Joyeuse, An**	**7.79**	**107**	*e*P	**Pn**	**18 15 27.6**	**+1.6**
ABD	**La Joyeuse, An**	**7.79**	**107**	*e*S	**Sn**	**18 16 50.9**	**-1.8**
CBE	**Ff, Capester**	**7.83**	**110**	*e*P	Pn	18 15 32.1	+5.6
CBE	**Ff, Capester**	**7.83**	**110**	*e*S	**Sn**	**18 16 56.9**	**+3.3**
MTDJ	**Mount Denham**	**7.88**	**266**	Pn	**Pn**	**18 15 26.3**	**-0.9**
MAGL	**Barre de l'ile**	**8.16**	**110**	Pn	**Pn**	**18 15 31.7**	**+0.6**
GDSD	**La Dsirade Is**	**8.23**	**107**	Pn	**Pn**	**18 15 32.1**	**+0.2**
DSLB	**Salisbury**	**8.25**	**114**	*e*P	**Pn**	**18 15 32.2**	**0.0**
DSLB	**Salisbury**	**8.25**	**114**	*e*S	**Sn**	**18 17 06.0**	**+2.1**
CRJC	**Cerrejon, Guaj**	**8.59**	**205**	*e*P	**Pn**	**18 15 36.4**	**-0.6**
SVN	**Savane Anatole**	**8.74**	**116**	Pn	**Pn**	**18 15 40.2**	**+1.3**
BIRV	**Birongo**	**8.87**	**161**	Pn	**Pn**	**18 15 42.7**	**+2.1**
BIM	**Bigot**	**8.98**	**118**	Pn	**Pn**	**18 15 43.5**	**+1.3**
SMRC	**Santa Marta, M**	**9.07**	**213**	*e*P	**Pn**	**18 15 41.2**	**-2.2**
MPOM	**Morne Pois Mar**	**9.19**	**118**	Pn	**Pn**	**18 15 47.6**	**+2.6**
MCLT	**Moule a Chique**	**9.51**	**122**	Pn	**Pn**	**18 15 53.2**	**+3.7**
GCMP	**Grenada, Carri**	**9.88**	**129**	*e*S	**Sn**	**18 17 36.5**	**-7.2**
LL6C	**La Loma 6 Bece**	**9.91**	**204**	*e*P	**Pn**	**18 15 56.7**	**+1.8**
CBCY	**The Bluff, Cay**	**9.95**	**276**	Pn	**Pn**	**18 15 54.7**	**-0.6**
GRGR	**Grenville**	**9.95**	**131**	Pn	**Pn**	**18 15 55.5**	**0.0**
BAUV	**El Baul**	**9.98**	**173**	Pn	**Pn**	**18 15 57.7**	**+1.9**
SDV	**Santo Domingo**	**10.05**	**188**	P	**Pn**	**18 15 56.5**	**-0.5**
	comp=Z,3.8nm,0.2s,baz=342,slow=12,SNR=1.6						
SDV				S	**Sn**	**18 17 45.9**	**-2.3**
	comp=Z,3.5nm,0.3s,baz=344,slow=14,SNR=1.5						
SDV	**Santo Domingo**	**10.05**	**188**	Pn	**Pn**	**18 15 59.7**	**+2.7**
SJCC	**San Jacinto, C**	**10.63**	**213**	Pn	**Pn**	**18 16 04.7**	**-0.1**
SJCC	**San Jacinto, C**	**10.63**	**213**	*e*P	**Pn**	**18 16 07.0**	**+2.2**
SJCC				*e*S	Sn	18 17 53.5	-8.7
TRN	**Trinidad (W)**	**11.18**	**136**	*e*P	**Pn**	**18 16 16.5**	**+4.3**
TRN	**Trinidad (W)**	**11.18**	**136**	*e*S	**Sn**	**18 18 11.0**	**-4.5**
OCAC	**Ocana**	**11.31**	**201**		**Pn**	**18 16 12.7**	**-1.4**
OCAC	**Ocana**	**11.31**	**201**	*e*P	**Pn**	**18 16 15.1**	**+1.0**
TOSP	**Speyside**	**11.32**	**131**	Pn	**Pn**	**18 16 13.5**	**-0.6**
061Z	**Ochoppi**	**12.80**	**305**	Pn	**Pn**	**18 16 31.4**	**-2.7**
BARC	**Barichara**	**12.82**	**198**	*e*P	**Pn**	**18 16 35.2**	**+0.5**
BARC				*e*S	**Sn**	**18 18 58.2**	**+2.4**
PTBC	**PUERTO BERRIO,**	**13.29**	**203**	*e*P	**P**	**18 16 44.2**	**-3.3**
SOR	**Soroa**	**13.42**	**289**	*e*S	Sn	18 18 58.9	-11
RUSC	**La Rusia**	**13.46**	**197**	*e*P	**Pn**	**18 16 43.2**	**-0.3**
RUSC				*e*S	**Sn**	**18 19 04.0**	**-7.6**
BBSR	**BB Station**	**14.02**	**16**	Pn	**Pn**	**18 16 47.3**	**-2.9**
BCIP	**Isla Barro Col**	**14.10**	**228**	Pn	**Pn**	**18 16 50.5**	**-0.8**
CBOC	**Ciudad Bolivar**	**14.54**	**208**	*e*P	**Pn**	**18 16 58.8**	**+1.6**
CHIC	**Chingaza**	**14.85**	**198**	*e*P	**P**	**18 17 03.6**	**-1.7**
656A	**Willston**	**15.96**	**313**	Pn	**Pn**	**18 17 14.5**	**-0.5**
ORTG	**Ortega, Santa**	**17.81**	**244**	P	**P**	**18 17 37.0**	**-0.7**
ORTG				IAmb	IAmb	18 17 53.6	
	comp=Z,38nm,1.3s						
BIRD	**Birdtown, Kers**	**18.57**	**330**	P	**P**	**18 17 45.6**	**-0.2**
JSC	**Jenkinsville**	**18.67**	**327**	P	**P**	**18 17 47.1**	**+0.2**
JSC				IAmb	IAmb	18 18 15.8	
	comp=Z,30nm,1.3s						
HODGE	**Hodges**	**19.16**	**325**	P	**Pn**	**18 17 53.5**	**-0.4**
HODGE				IAmb	IAmb	18 17 57.0	
	comp=Z,33nm,1.2s						
GOGA	**Godfrey**	**19.23**	**321**	P	**P**	**18 17 51.8**	**-1.3**
T59A	**Double "B" Far**	**19.41**	**340**	P	**P**	**18 17 53.6**	**-1.4**
T59A				IAmb	IAmb	18 18 16.1	
	comp=Z,31nm,1.5s						
V53A	**Saluda**	**20.55**	**327**	P	**P**	**18 18 08.5**	**+1.1**
V53A				IAmb	IAmb	18 18 13.8	
	comp=Z,15nm,0.8s						
TKL	**Tuckaleechee C**	**21.05**	**325**	P	**P**	**18 18 15.2**	**+2.6**
	comp=Z,3.8nm,0.5s,baz=144,slow=11,SNR=4.5						
TKL				S	**S**	**18 22 04.3**	**+1.7**
	comp=Z,1.8nm,0.4s,baz=208,slow=18,SNR=1.9						
	comp=Z,3.8nm,0.5s						
TKL	**Tuckaleechee C**	**21.05**	**325**	P	**P**	**18 18 14.0**	**+1.3**
TKL				IAmb	IAmb	18 18 26.9	
	comp=Z,24nm,1.2s						
CPCT	**Cooper Cave**	**21.30**	**324**	P	**P**	**18 18 15.1**	**-0.3**
CPCT				IAmb	IAmb	18 18 18.7	
	comp=Z,9.4nm,0.7s						
Y49A	**Blount Mountai**	**21.35**	**318**	P	**P**	**18 18 16.1**	**+0.2**
V51A	**Loudon**	**21.47**	**325**	P	**P**	**18 18 17.5**	**+0.3**
V51A				IAmb	IAmb	18 18 24.6	
	comp=Z,20nm,1.2s						
W50A	**Signal Mountai**	**21.58**	**322**	P	**P**	**18 18 19.1**	**+0.7**
W50A				IAmb	IAmb	18 18 24.1	
	comp=Z,22nm,1.0s						
TZTN	**Tazewell**	**21.60**	**327**	P	**P**	**18 18 20.1**	**+1.5**
Q56A	**Snyder Ridge,**	**21.83**	**339**	P	**P**	**18 18 23.9**	**+2.9**
Q52A	**Bidwell**	**22.95**	**333**	P	**P**	**18 18 33.3**	**+0.4**
PLAL	**Pickwick Lake**	**23.12**	**318**	P	**P**	**18 18 34.1**	**-0.4**
WVT	**Waverly**	**23.71**	**320**	P	**P**	**18 18 40.4**	**+0.5**
WVT				IAmb	IAmb	18 18 42.3	
	comp=Z,8.8nm,0.6s						
SIUC	**Southern Illin**	**25.59**	**321**	P	**P**	**18 18 57.5**	**+0.6**
SIUC				IAmb	IAmb	18 19 02.4	
	comp=Z,12nm,0.8s						
CCM	**Cathedral Cave**	**27.04**	**319**	P	**P**	**18 19 10.9**	**+1.0**
CCM				IAmb	IAmb	18 19 40.0	
	comp=Z,9.7nm,0.8s						
WMOK	**Wichita Mounta**	**30.55**	**307**	P	**P**	**18 19 42.1**	**+0.8**
TXAR	**Lajitas Array**	**32.96**	**295**	P	**P**	**18 20 03.9**	**+1.3**
	comp=Z,0.7nm,0.8s,baz=98,slow=9.5,SNR=7.4						
TXAR				LR	LR	18 37 03.8	
	comp=Z,16nm,18.1s,baz=230,slow=43						
	comp=Z,0.7nm,0.8s						
MNTX	**Cornudas Mount**	**34.89**	**299**	P	**P**	**18 20 20.6**	**+1.4**
MNTX				IAmb	IAmb	18 20 22.6	
	comp=Z,3.4nm,0.8s						
ULM	**Lac du Bonnet**	**37.78**	**332**	P	**P**	**18 20 46.2**	**+2.7**
	comp=Z,1.0nm,0.3s,baz=143,slow=13,SNR=1.9						
	comp=Z,1.0nm,0.3s						
PDAR	**Pinedale Array**	**41.44**	**314**	P	**P**	**18 21 15.8**	**+1.5**
	comp=Z,0.2nm,0.3s,baz=101,slow=9.4,SNR=1.5						
	comp=Z,0.2nm,0.3s						
NVAR	**Mina Array Bea**	**46.62**	**305**	P	**P**	**18 21 58.6**	**+2.8**
	comp=Z,1.0nm,0.8s,baz=99,slow=5.6,SNR=5.0						
	comp=Z,1.0nm,0.8s						
YKA	**Yellowknife Ar**	**53.54**	**336**	P	**P**	**18 22 48.6**	**+1.1**
	comp=Z,1.3nm,0.6s,baz=108,slow=7.0,SNR=7.4						
	comp=Z,1.3nm,0.6s						
ESDC	**Sonseca Array**	**59.33**	**55**	P	**P**	**18 23 30.9**	**+1.8**
	comp=Z,1.4nm,0.7s,baz=275,slow=7.5,SNR=13						
	comp=Z,1.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**68.06**	**83**	P	**P**	**18 24 27.7**	**+0.9**
	comp=Z,1.2nm,0.8s,baz=300,slow=7.6,SNR=7.2						
	comp=Z,1.2nm,0.8s						
GERES	**GERESS Array B**	**71.43**	**44**	P	**P**	**18 24 47.3**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=288,slow=4.0,SNR=4.1						
	comp=Z,0.1nm,0.3s						
ARCES	**ARCESS Array B**	**74.11**	**21**	P	**P**	**18 25 04.4**	**+1.9**
	comp=Z,1.7nm,0.9s,baz=316,slow=3.3,SNR=5.1						
	comp=Z,1.7nm,0.9s						
ARCES	**ARCESS Array B**	**74.11**	**21**	IAmb	IAmb	18 25 32.3	
	comp=Z,8.7nm,1.3s						
FINES	**FINESS Array B**	**76.10**	**30**	P	**P**	**18 25 16.1**	**+2.0**
	comp=Z,1.4nm,0.8s,baz=268,slow=5.3,SNR=5.0						
	comp=Z,1.4nm,0.8s						
PZH	**PanZhiHua**	**134.02**	**11**	PKP	**PKPdf**	**18 32 43.4**	**-0.8**

*IDC **07** 18:32:34.7±3.6,5°.10N×127°.64E,h168km±38km, mb3.3/6, mbtmp3.8/7, Error ellipse: s-maj=71.0km s-min=15.7km az=74.0*

*NEIC **07** 18:32:34.8±1.6,5°.18N±0°.09×127°.4E±0°.1,h153km±12km, mb4.1/7, Error ellipse: s-maj=18.7km s-min=12.3km az=69.0*

ISC 07 18:32:33.4±0.7,5°.14N±0°.07×127°.43E±0°.09,h150km,n21, σ1§83/24,mb4.0/11,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**2.66**	**316**	Pn	**Pn**	**18 33 15.6**	**-0.9**
TNTI	**Ternate**	**4.34**	**181**	Pn	**Pn**	**18 33 39.9**	**+1.6**
SIJI	**Sorong**	**7.10**	**147**	P	**Pn**	**18 34 15.8**	**+0.9**
	2.2nm,0.3s,baz=268,slow=23,SNR=4.2						
SIJI				S	**Sn**	**18 35 30.8**	**-3.6**
	5.0nm,0.4s,baz=40,slow=23,SNR=12						
LUWI	**Luwuk**	**7.71**	**217**	Pn	**Pn**	**18 34 27.6**	**+4.7**
TOLI2	**Tolitoli**	**7.75**	**239**	Pn	**Pn**	**18 34 24.4**	**+0.8**
TOLI2				Sn	**Sn**	**18 35 47.0**	**-3.2**
FAKI	**Fak Fak**	**9.34**	**149**	Pn	**Pn**	**18 34 48.1**	**+3.2**
WRA	**Warramunga Arr**	**25.84**	**165**	P	**P**	**18 37 49.6**	**-1.5**
	0.2nm,0.6s,baz=344,slow=10.0,SNR=6.9						
	0.2nm,0.6s						
WRA	**Warramunga Arr**	**25.84**	**165**	P	**P**	**18 37 50.8**	**-0.3**
WR0	**Warramunga Arr**	**25.91**	**165**	P	**P**	**18 37 52.9**	**+1.2**
WR0				IAmb	IAmb	18 38 00.7	
	comp=Z,5.5nm,1.4s						
ASAR	**Alice Springs**	**29.32**	**168**	P	**P**	**18 38 21.2**	**-0.9**
	comp=Z,0.3nm,0.8s,baz=350,slow=7.1,SNR=5.1						
ASAR				PcP	**PcP**	**18 41 24.3**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=352,slow=2.3,SNR=8.4						
	comp=Z,0.3nm,0.8s						
KSRS	**Korea Array**	**32.16**	**1**	P	**P**	**18 38 47.2**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=172,slow=9.7,SNR=8.2						
	comp=Z,1.0nm,0.7s						
MK31	**Makanchi Array**	**56.81**	**324**	P	**P**	**18 42 02.6**	**+0.4**
MK31				IAmb	IAmb	18 42 03.1	
	comp=Z,1.3nm,0.5s						
MKAR	**Makanchi Array**	**56.81**	**324**	P	**P**	**18 42 02.8**	**+0.6**
	comp=Z,1.8nm,0.4s,baz=113,slow=7.7,SNR=48						
	comp=Z,1.8nm,0.4s						
MAKZ	**Makanchi**	**57.00**	**324**	P	**P**	**18 42 04.2**	**+0.7**
MAKZ				IAmb	IAmb	18 42 04.7	
	comp=Z,1.9nm,0.7s						
KDJ	**Kajisay**	**57.77**	**317**	P	**P**	**18 42 09.7**	**+0.5**
KDJ				IAmb	IAmb	18 42 10.6	
	comp=Z,1.5nm,0.6s						
ZALV	**Zalesovo Beam**	**59.66**	**332**	P	**P**	**18 42 20.9**	**-0.8**
	comp=Z,0.5nm,0.4s,baz=137,slow=10,SNR=3.0						
	comp=Z,0.5nm,0.4s						
KURK	**Kurchatov**	**60.94**	**327**	P	**P**	**18 42 30.8**	**+0.3**
BRVK	**Borovoye**	**66.60**	**326**	P	**P**	**18 43 07.4**	**-0.1**
BRVK				IAmb	IAmb	18 43 09.2	
	comp=Z,3.4nm,1.4s						
ABKAR	**Akbulak array**	**71.51**	**320**	P	**P**	**18 43 37.5**	**-0.4**
ABKAR	**Akbulak array**	**71.51**	**320**	P	**P**	**18 43 37.7**	**-0.2**
ABKAR				IAmb	IAmb	18 44 03.4	
	comp=Z,0.8nm,0.9s						
ARCES	**ARCESS Array B**	**89.37**	**340**	P	**P**	**18 45 11.1**	**-1.6**
	comp=Z,0.5nm,0.4s,baz=95,slow=5.6,SNR=6.0						
	comp=Z,0.5nm,0.4s						

*TUL **07** 18:36:04.8±1.5,36°.47N±0°.01×98°.76W±0°.02,h6km±3km, ML2.5,mb_Lg2.0/3(NEIC), Error ellipse: s-maj=1.9km s-min=1.4km az=67.0*

NEIC 07 18:36:04.4±1.4,36°.48N±0°.01×98°.78W±0°.02,h14km±2km, Error ellipse: s-maj=2.5km s-min=1.8km az=67.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
U32A	**Winter Ranch,**	**0.20**	**241**		**Pg**	18 36 09.4	+0.5
U32A				Sg	Sg	18 36 12.6	+0.5
OKCFA	**Oklahoma City**	**1.51**	**134**	Pn	Pb	18 36 31.8	-0.4
WMOK	**Wichita Mounta**	**1.74**	**180**	Pn	Pb	18 36 35.2	-0.8
T35A	**Sooner Cattle**	**1.88**	**76**	Pn	Pb	18 36 37.5	-1.0
X34A	**Smith Ranch, M**	**2.03**	**157**		Pb	18 36 40.6	-0.4
X34A				IAmb_Lg		18 37 12.8	
	comp=Z,11nm,0.7s						
AMTX	**Amarillo**	**2.85**	**237**	Pn	Pn	18 36 50.2	+0.7
AMTX				IAmb_Lg		18 37 34.6	
	comp=Z,4.6nm,0.7s						
X37A	**Clayton**	**3.36**	**123**		Pn	18 36 58.2	+1.7
MSTX	**Muleshoe**	**4.12**	**234**		Pn	18 37 08.4	+1.4
WHAR	**Wooly Hollow**	**5.40**	**101**	Pn	Pn	18 37 24.5	0.0
SDCO	**Great Sand Dun**	**5.52**	**285**	IAmb_Lg		18 39 06.0	
	comp=Z,1.2nm,1.1s						

*IDC **07** 18:50:22.6±2.8,27°.94N×56°.77E, h0km, mb3.7/5, mbtmp3.7/5, MS2.5/1, Error ellipse: s-maj=67.5km s-min=28.2km az=155.0*

*TEH **07** 18:50:25.6,27°.99N×56°.90E, h16km, ML3.6*

*DSN **07** 18:50:27.2±1.4,27°.96N×56°.44E, h10km, ML3.4/8, Error ellipse: s-maj=47.6km s-min=11.2km az=88.0*

*OMAN **07** 18:50:29.3±0.5,27°.95N×57°.00E, h39km±52km, ml3.5/14, Error ellipse: s-maj=8.6km s-min=6.1km az=22.0*

ISC 07 18:50:27.0±0.7,27°.97N±0°.03×56°.89E±0°.04,h24km,n72, σ1§68/81,mb3.8/5,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IBND	**Bandar-abas**	**0.60**	**212**	*e*Pg	**Pb**	**18 50 38.1**	**-0.8**
KHNJ	**Kahnooj**	**0.72**	**91**	*e*Pg	**Pb**	**18 50 39.7**	**-1.2**
GENO	**Geno**	**0.85**	**229**	*e*Pg	**Pb**	**18 50 42.3**	**-1.0**
NGRK	**Negar Kerman**	**1.68**	**355**	*e*Pg	**Pn**	**18 50 56.4**	**+1.1**
NGRK				*e*		18 51 22.2	
	comp=Z,11μm,0.3s						
KBAM	**BAM**	**1.80**	**49**	*e*Pn	**Pn**	**18 50 57.7**	**+1.0**
KBAM				*e*		18 51 34.1	
	comp=Z,5μm,0.3s						
CHMN	**Cheshme madani**	**1.97**	**17**	*e*Pn	**Pn**	**18 50 59.9**	**+0.6**
CHMN				*e*		18 51 30.9	
	comp=Z,12μm,0.6s					

IBRJ	Brojen	6.27	310	*e*Pn		Pn		18 51 59.0	+0.7
SHRT	Shahrakht	6.37	26	*e*Pn		Pn		18 52 02.5	+3.0
IPIR	Pirpir	7.00	314	*e*Pn		Pn		18 52 09.1	+0.7
GEYT	Alibeck	9.99	6	LR		LR		18 56 16.6	
	comp=Z,28nm,21.9s,baz=98,slow=35								
BRTR	Keskin Array B	22.53	307	P		P		18 55 23.5	-1.8
	comp=Z,0.6nm,0.5s,baz=126,slow=12,SNR=2.7								
	comp=Z,0.6nm,0.5s								
MKAR	Makanchi Array	27.38	40	P		P		18 56 10.6	+0.1
	comp=Z,0.2nm,0.5s,baz=241,slow=9.2,SNR=2.9								
	comp=Z,0.2nm,0.5s								
ZALV	Zalesovo Beam	33.05	31	P		P		18 56 60.0	-0.4
	comp=Z,0.7nm,0.3s,baz=232,slow=8.2,SNR=4.8								
	comp=Z,0.7nm,0.3s								
FINES	FINESS Array B	39.28	337	P		P		18 57 52.4	-1.2
	comp=Z,1.9nm,0.9s,baz=144,slow=7.8,SNR=3.8								
	comp=Z,1.9nm,0.9s								
TORD	Torodi Ar. Bea	53.33	266	P		P		18 59 43.0	-1.7
	comp=Z,0.8nm,0.5s,baz=59,slow=7.6,SNR=7.0								
	comp=Z,0.8nm,0.5s								

NEIC ***07*** *19:01:44.5±2.1,25.86S±0.04×69.61W±0.07,h101km±3km, Error ellipse: s-maj=9.7km s-min=5.2km az=95.0*

GUC ***07*** *19:01:45.3±0.9,25.87S×69.49W,h84km±6km,ML4.1*

IDC ***07*** *19:01:50.2±25.0,25.24S×69.00W,h110km±166km, mb3.5/3,mbtmp3.7/4,ML3.7/1,Error ellipse: s-maj=256.1km s-min=40.9km az=20.0*

ISC 07 19:01:43.5±0.7,25.88S±0.04×69.53W±0.06,h102km±7km, n69,σ1↓68/79,mb3.9/3,1C-3D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GO02	Mina Guanaco	0.72	355			Pn	19 02 02.4	+0.7
GO02				Sn		Sn	19 02 15.2	0.0
GO02	Mina Guanaco	0.72	355	↓*i*P		Pn	19 02 02.3	+0.6
GO02				*e*S		Sn	19 02 15.4	+0.2
GO02				IAML			19 02 16.6	
	comp=E,16μm,0.1s							
AC01	Pan de Azucar	1.00	254			Pn	19 02 05.7	+1.6
AC01				Sn		Sn	19 02 20.1	+0.4
AC01	Pan de Azucar	1.00	254	↑*i*P		Pn	19 02 05.8	+1.6
AC01				*e*S		Sn	19 02 21.3	+1.6
AC01				IAML			19 02 26.1	
	comp=E,6μm,0.2s							
AC02	Maricunga	1.02	160			Pn	19 02 06.4	+1.6
AC02				Sn		Sn	19 02 22.2	+1.4
AC02	Maricunga	1.02	160	↓*i*P		Pn	19 02 06.7	+1.8
AC02				*e*S		Sn	19 02 22.1	+1.3
AC02				IAML			19 02 23.3	
	comp=E,9μm,0.3s							
PB14	IPOC Station P	1.48	327			Pn	19 02 11.8	+1.8
PB14				Sn		Sn	19 02 30.5	+0.5
PB14	IPOC Station P	1.48	327	*e*P		Pn	19 02 11.9	+1.9
PB14				*i* S		Sn	19 02 31.6	+1.6
PB14				IAML			19 02 36.2	
	comp=N,2μm,0.4s							
AC06	Mina Casimiro	1.65	207			Pn	19 02 13.2	+1.4
AC06				Sn		Sn	19 02 33.5	+0.3
AC06	Mina Casimiro	1.65	207	*e*P		Pn	19 02 13.4	+1.6
AC06				*e*S		Sn	19 02 34.6	+1.4
AC06				IAML			19 02 37.1	
	comp=N,1μm,0.3s							
GO03	Copiap	1.82	200			Pn	19 02 15.6	+1.6
GO03	Copiap	1.82	200	*i* P		Pn	19 02 15.8	+1.8
GO03				*e*S		Sn	19 02 38.9	+1.7
GO03				IAML			19 02 41.4	
	comp=E,2μm,0.2s							
PB10	IPOC Station P	2.54	338	Pn		Pn	19 02 24.1	+0.9
PB10	IPOC Station P	2.54	338	*e*P		Pn	19 02 24.2	+1.0
PB10				IAML			19 03 05.2	
	comp=E,535nm,0.3s							
PB15	IPOC Station P	2.66	1			Pn	19 02 26.9	+1.9
PB15	IPOC Station P	2.66	1	*e*P		Pn	19 02 27.0	+1.9
AC04	Llanos de Chal	2.70	210	Pn		Pn	19 02 25.8	+0.5
AC04	Llanos de Chal	2.70	210	*e*P		Pn	19 02 26.2	+0.9
AC04				IAML			19 03 13.2	
	comp=E,1μm,0.6s							
PB06	IPOC Station P	3.16	359			Pn	19 02 32.2	+0.6
PB06	IPOC Station P	3.16	359	*e*P		Pn	19 02 32.7	+1.1
PB06				IAML			19 03 19.0	
	comp=E,836nm,0.2s							
AF01	San Pedro de A	3.16	23			Pn	19 02 31.0	-0.8
AF01	San Pedro de A	3.16	23	*e*P		Pn	19 02 34.4	+2.6
LCO	Las Campanas	3.29	198	Pn		Pn	19 02 34.4	+0.9
LCO	Las Campanas	3.29	198	*e*P		Pn	19 02 34.6	+1.1
LVC	Limon Verde	3.30	10	Pn		Pn	19 02 34.9	+1.2
LVC	Limon Verde	3.30	10	*e*P		Pn	19 02 35.2	+1.4
PB04	IPOC Station P	3.58	351			Pn	19 02 37.2	0.0
PB04	IPOC Station P	3.58	351	↓*i*P		Pn	19 02 37.4	+0.2
PB09	IPOC Station P	4.07	4			Pn	19 02 44.8	+0.9
PB09	IPOC Station P	4.07	4	*e*P		Pn	19 02 45.5	+1.5
CO01	Juntas del Tor	4.11	187			Pn	19 02 46.3	+1.8
PB07	IPOC Station P	4.15	355			Pn	19 02 44.7	-0.3
PB07	IPOC Station P	4.15	355	*e*P		Pn	19 02 44.8	-0.1
CO05	La Serena	4.30	200	Pn		Pn	19 02 48.0	+1.2
GO04	Tololo Observa	4.42	194			Pn	19 02 48.8	+0.1
GO04	Tololo Observa	4.42	194	*e*P		Pn	19 02 48.7	+0.1
PB02	IPOC Station P	4.55	356			Pn	19 02 50.1	-0.3
PB02	IPOC Station P	4.55	356	*e*P		Pn	19 02 50.0	-0.3
PB01	IPOC Station P	4.81	0			Pn	19 02 53.9	0.0
PB01	IPOC Station P	4.81	0	*e*P		Pn	19 02 53.9	0.0
CO03	El Pedregal	5.05	191			Pn	19 02 57.3	+0.3
PATCX	Punta Patache	5.07	353			Pn	19 02 55.8	-1.5
CO06	Fray Jorge	5.13	201	Pn		Pn	19 02 56.8	-1.1
TA01	Diego Aracena	5.32	353	Pn		Pn	19 02 58.8	-1.9
CO02	Combarbal	5.46	193			Pn	19 03 01.9	-0.7
TA02	Huaiquique	5.61	354			Pn	19 03 02.8	-1.7
ZON	Zonda	5.70	173	Pn		Pn	19 03 05.2	-0.5
PB08	IPOC Station P	5.72	4			Pn	19 03 06.0	-0.4
PB11	IPOC Station P	6.09	359	Pn		Pn	19 03 09.7	-1.5
VA06	Catapilco	6.83	193	Pn		Pn	19 03 19.2	-1.9
VA03	San Esteban	6.92	187	Pn		Pn	19 03 19.8	-2.5
ROC1	El Roble	7.19	190	Pn		Pn	19 03 23.6	-2.6
PB12	IPOC Station P	7.27	354	Pn		Pn	19 03 24.4	-2.7
PEL	Peldehue	7.31	188	Pn		Pn	19 03 24.2	-3.5
MT02	Curacav	7.49	190	Pn		Pn	19 03 24.2	-5.8
PB16	IPOC Station P	7.51	0	Pn		Pn	19 03 29.1	-1.8
MT09	Talagante	7.97	189	Pn		Pn	19 03 32.0	-4.7
MT01	Popeta	8.10	190	Pn		Pn	19 03 31.1	-7.2
BO04	La Punta	8.14	186	Pn		Pn	19 03 34.6	-4.2
BO01	Tunca	8.59	189	Pn		Pn	19 03 42.5	-2.4
LPAZ	La Paz	9.63	8	P		Pn	19 03 57.0	-2.8
	comp=E,0.4nm,0.3s,baz=212,slow=5.8,SNR=3.8							
	comp=E,0.6nm,0.3s							
LPAZ	La Paz	9.63	8	Pn		Pn	19 03 57.3	-2.5
SAML	Samuel	17.89	21	P		Pn	19 05 47.1	+1.3
NVAR	Mina Array Bea	78.61	323	P		P	19 13 39.1	+4.9
	comp=E,0.1nm,0.3s,baz=147,slow=5.1,SNR=1.9							
	comp=E,0.1nm,0.3s							
ULM	Lac du Bonnet	79.31	343	P		P	19 13 40.7	+3.2
	comp=E,1.8nm,0.6s,baz=181,slow=4.2,SNR=3.4							
	comp=E,1.8nm,0.6s							
TORD	Torodi Ar. Bea	79.37	70	P		P	19 13 41.0	+2.3
	comp=E,0.6nm,0.5s,baz=259,slow=5.1,SNR=9.7							
TORD				pP		pP	19 14 05.9	-0.5
	comp=E,1.2nm,0.6s,baz=262,slow=5.5,SNR=11							
	comp=E,0.6nm,0.5s							
KURBB	Kurchatov Arra	145.24	36	PKP		PKiKP	19 21 12.1	-0.7
	comp=E,0.5nm,0.6s,baz=306,slow=3.4,SNR=8.4							
ZALV	Zalesovo Beam	146.11	27	PKPbc		PKiKP	19 21 13.9	-0.6
	comp=E,0.9nm,0.4s,baz=321,slow=6.1,SNR=5.0							
MKAR	Makanchi Array	149.43	40	PKPbc		PKPab	19 21 23.8	-1.9
	comp=E,1.2nm,0.7s,baz=321,slow=2.5,SNR=13							
MKAR				pPKPbc		pPKPbc	19 21 49.9	+0.3
	comp=E,0.5nm,0.7s,baz=324,slow=2.0,SNR=4.9							

IDC ***07*** *19:13:19.0±5.0,35.93N×70.94E,h70km±34km,mb3.4/5, mbtmp3.6/9,ML3.2/4,MS4.4/1,Error ellipse: s-maj=52.6km s-min=20.2km az=148.0*

NNC ***07*** *19:13:26.2±9.7,36.49N×70.42E,h92km±176km,mb3.4, mpv3.9,Error ellipse: s-maj=72.3km s-min=57.9km az=16.0*

ISC 07 19:13:20.2±0.9,35.96N±0.08×70.99E±0.07,h102km,n25, σ1↓90/28,mb3.8/4,2C-4D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KK31	Karatay Array	7.14	357	↓P		Pn	19 15 01.8	-0.1
	5.3nm,0.3s,baz=174,slow=12,SNR=128							
KK31				S		Sn	19 16 17.1	-4.4
	11nm,0.6s,baz=188,slow=21,SNR=11							

AAK	Ala-Archa	7.20	21	P		Pn		19 15 03.4	+0.6
	2.0nm,0.3s,baz=206,slow=3.9,SNR=5.2								
AAK				S		Sn		19 16 21.6	-1.5
	3.2nm,0.4s,baz=139,slow=19,SNR=5.7								
	4.0nm,0.3s								
TKM2	Tokmak 2	7.81	26	⇓P		Pn		19 15 11.8	+0.7
	2.2nm,0.5s								
TKM2				⇓S		Sn		19 16 37.1	-0.9
	2.0nm,1.0s								
GEYT	Alibeck	10.49	285	P		Pn		19 15 46.6	-1.0
	0.3nm,0.3s,baz=115,slow=10,SNR=2.1								
GEYT				S		Sn		19 17 40.9	-2.2
	1.4nm,0.3s,baz=125,slow=20,SNR=2.3								
	1.2nm,0.5s								
PYUN	Piuthan	12.84	124	*e*P		Pn		19 16 16.8	-2.3
	20nm,0.3s								
KOLN	Koldanda	13.46	124	*e*P		Pn		19 16 25.6	-1.6
MKAR	Makanchi Array	13.73	35	P		Pn		19 16 32.1	+1.6
	0.1nm,0.3s,baz=209,slow=12,SNR=2.9								
	0.2nm,0.6s								
GKN	Gorkha	14.03	121	*e*P		Pn		19 16 32.6	-1.9
	12nm,0.2s								
DMN	Daman	14.60	121	*e*P		Pn		19 16 39.6	-2.3
KKN	Kakani	14.61	120	*e*P		Pn		19 16 39.5	-2.5
PKIN	Phulchoki	14.82	120	*e*P		Pn		19 16 43.0	-1.8
	7.1nm,0.2s								
PKI	Pulchoki	14.83	120	*e*P		Pn		19 16 43.2	-1.8
	8.1nm,0.3s								
GUN	Gumba	14.96	118	*e*P		Pn		19 16 44.8	-1.8
	7.8nm,0.3s								
JIRN	Jiri	15.33	118	*e*P		Pn		19 16 50.0	-1.3
	13nm,0.3s								
AB31	Akbulak array	15.55	332	P		Pn		19 16 52.5	-1.1
	0.4nm,0.3s,baz=145,slow=11,SNR=37								
AB31				⇑S		Sn		19 19 33.2	-12
	1.2nm,0.6s,baz=160,slow=23,SNR=5.5								
KURBB	Kurchatov Arra	15.63	18	P		P		19 16 57.2	+0.6
	baz=212,slow=10,SNR=4.3								
	0.1nm,0.4s								
RAMN	Ramite	16.05	120	*e*P		Pn		19 16 58.9	-1.3
	9.2nm,0.4s								
TAPN	Taplejung	16.61	116	*e*P		Pn		19 17 07.2	+0.1
	20nm,0.5s								
AKTO	Aktyubinsk	17.25	331	⇑P		P		19 17 15.0	+0.6
	3.1nm,0.9s								
AKTO				⇓S		Sn		19 20 13.1	-13
	1.5nm,0.9s								
ZALV	Zalesovo Beam	20.41	24	P		P		19 17 49.4	+0.6
	0.7nm,0.4s,baz=207,slow=11,SNR=4.2								
	0.7nm,0.4s								
ARU	Arti	22.14	341	LR		LR		19 27 20.0	
	comp=Z,915nm,19.6s,baz=206,slow=38								
FINES	FINESS Array B	37.93	326	P		P		19 20 29.9	+2.6
	2.1nm,0.8s,baz=150,slow=9.6,SNR=2.8								
	2.1nm,0.8s								
ARCES	ARCESS Array B	41.64	338	P		P		19 21 00.4	+2.5
	1.1nm,0.6s,baz=104,slow=5.1,SNR=10								
	1.1nm,0.6s								
NOA	NORSAR Array B	44.81	323	P		P		19 21 25.9	+2.3
	0.3nm,0.5s,baz=104,slow=7.4,SNR=1.4								
	0.3nm,0.5s								
TORD	Torodi Ar. Bea	65.70	269	P		P		19 23 55.6	+1.5
	0.4nm,0.4s,baz=50,slow=6.2,SNR=8.9								
	0.4nm,0.4s								

MOS ***07*** *19:15:14.4±1.1,1.34N×126.25E,h40km,mb6.7/61, MS5.9/61,Error ellipse: s-maj=6.3km s-min=3.8km az=111.8*

NEIC ***07*** *19:15:15.3±2.2,1.28N±0.05×126.37E±0.05,h31km±1km, mb6.4/358,Ms_20 6.0/328,Mwb6.2/52,Mwc6.4/93,Mww6.3, Error ellipse: s-maj=8.9km s-min=7.3km az=208.0*

IDC ***07*** *19:15:15.4±1.4,1.32N×126.31E,h33km±10km,mb6.0/55, mbtmp6.2/58,ML5.4/3,MS5.8/47,Error ellipse: s-maj=8.5km s-min=7.2km az=61.0*

NEIC ***07*** *19:15:15.6,1.31N×126.34E,h38km,Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr2.63; Mθθ0.10; Mϕϕ-2.73; Mrθ-0.26; Mθϕ-0.75; Mϕr0.33; Fault plane solution: M₀2.82000×10¹⁸ NP1:φs6.14000°, δ48.14000°,λ79.35000°. NP2:φs201.88000°,δ42.95000°, λ101.66000°. Principal axes: T 2.6870, Plg82.0000°, Azm212.0000°; N 0.2426, Plg8.0000°, Azm13.0000°; P -2.9296, Plg3.0000°, Azm104.0000°;*

KLM ***07*** *19:15:15,1.50N×126.38E,h32km,mb6.5*

BJI ***07*** *19:15:16.0±0.0,1.34N×126.34E,h50km,mb6.0/91, mB6.1/69,Ms6.1/99,Ms7 6.0/94*

DJA ***07*** *19:15:17.2±0.2,1.1N±1×12.6E±°,h52km±2km,M6.3/139, mB6.6/126,mb6.3/139,MLv6.5/22,Mw6.3/51, Mw(mB)6.4/126,MwMwp6.2/111,Mwp6.2/111*

GCMT ***07*** *19:15:19.3±0.0,1.41N×126.35E,h31km,MW6.4/171, Moment Tensor Solution. s171,c415; s165,c708; Duration: 3ₜ7 Moment tensor: Scale 10¹⁸Nm; Mrr4.02±.02; Mθθ-0.33±.01; Mϕϕ-3.69±.02; Mrθ-1.08±.03; Mθϕ-1.75±.01; Mϕr-0.02±.03; Best double couple: M₀4.37600×10¹⁸ NP1:φs9.00000°,δ44.00000°, λ69.00000°. NP2:φs217.00000°,δ50.00000°,λ109.00000°. Principal axes: T 4.2930, Plg75.0000°, Azm192.0000°; N 0.1690, Plg14.0000°, Azm24.0000°; P -4.4590, Plg3.0000°, Azm294.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=125s. Triangular moment-rate function*

NEIC ***07*** *19:15:21,1.40N×126.35E,h40km,Moment Tensor Solution. Duration: 10s0 Moment tensor: Scale 10¹⁸Nm; Mrr3.53; Mθθ-0.64; Mϕϕ-2.89; Mrθ0.27; Mθϕ-1.02; Mϕr1.71; Fault plane solution: M₀3.83000×10¹⁸ NP1: φs206.00000°,δ32.00000°,λ98.00000°. NP2:φs16.00000°, δ58.00000°,λ85.00000°. Principal axes: T 3.9590, Plg76.0000°, Azm271.0000°; N -0.2764, Plg4.0000°, Azm19.0000°; P -3.6826, Plg13.0000°, Azm110.0000°;*

NEIC ***07*** *19:15:29.9,1.30N×126.37E,h32km,Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr4.51; Mθθ-0.68; Mϕϕ-3.84; Mrθ0.38; Mθϕ-1.78; Mϕr-1.32; Fault plane solution: M₀4.78000×10¹⁸ NP1:φs193.62000°, δ52.42000°,λ76.74000°. NP2:φs34.75000°,δ39.53000°, λ106.60000°. Principal axes: T 4.7975, Plg78.0000°, Azm55.0000°; N -0.0395, Plg10.0000°, Azm202.0000°; P -4.7580, Plg7.0000°, Azm293.0000°;*

ISC 07 19:15:16.1±0.2,1.31N±0.02×126.33E±0.02,h43km±1km, h44km:pP-P,n2726,σ1↓72/3164,mb6.4/362,MS6.0/275, 499C-219D,Fault plane solution: NP1:φs177.82486°, δ43.62047°,λ99.92379°. NP2:φs344.23834°,δ47.19103°, λ80.67341°. Principal axes: T Plg82.9369°, Azm185.4970°; N Plg6.8282°, Azm350.6065°; P Plg1.7979°, Azm80.8219°; Fault plane solution: NP1: φs228.07347°,δ51.11237°,λ106.69614°. NP2: φs22.53646°,δ41.79246°,λ70.39375°. Principal axes: T Plg76.1945°, Azm196.4294°; N Plg12.9220°, Azm37.4095°; P Plg4.7768°, Azm306.3109°; Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TNTI	Ternate	1.17	117			Pn	19 15 34.5	-1.4
TNTI				Sn		Sn	19 15 49.1	-1.6
TNTI	Ternate	1.17	117	P		Pn	19 15 35.8	-0.2
TNTI				S		Sn	19 15 52.4	+1.6
TNTI	Ternate	1.17	117	P		Pn	19 15 35.3	-0.7
TNTI	Ternate	1.17	117	⇑P		Pn	19 15 33.5	-2.5
LBMI	Labuha	2.27	149	P		Pn	19 15 50.7	-0.4
LBMI				S		Sn	19 16 20.2	+2.4
KMSI	Cibinong	2.46	253	P		Pn	19 15 55.7	+2.0
KMSI				S		Sn	19 16 25.5	+3.0
SGSI	Sangihe	2.49	341	P		Pn	19 15 55.0	+0.9
SGSI				S		Sn	19 16 24.3	+1.0
SANI	Sanana	3.36	186	P		Pn	19 16 06.1	0.0
SANI	Sanana	3.36	186	P		Pn	19 16 07.2	+1.1
SANI	Sanana	3.36	186	⇑P		Pn	19 16 06.4	+0.3
LUWI	Luwuk	4.26	237	Pn		Pn	19 16 19.5	+1.1
LUWI	Luwuk	4.26	237	P		Pn	19 16 20.6	+2.2
LUWI	Luwuk	4.26	237	P		Pn	19 16 21.9	+3.5
LUWI	Luwuk	4.26	237	⇓P		Pn	19 16 20.0	+1.6
MRSI	Marisa	4.46	259	P		Pn	19 16 23.1	+1.8
NLAI	Namlea	4.59	170	P		Pn	19 16 23.5	+0.5
DDMP	Don Marcelino,	4.80	353	↓*e*P		Pn	19 16 25.9	0.0
GSPH	General Santos	4.94	344	↑*e*P		Pn	19 16 27.8	-0.1
APSI	Ampana	5.17	245	P		Pn	19 16 34.1	+3.1
	168nm185μm274μm34μm,1.2s							

AAI	Ambon	5.31	159	P		Pn		19 16 34.1	+1.3
	20nm301μm80μm5μm,1.2s								
MSAI	Masohi	5.31	151	P		Pn		19 16 35.4	+2.5
	5.0nm2μm14μm930nm,1.2s								
SWI	Sorong	5.38	114	P		Pn		19 16 34.3	+0.4
	11nm542μm63μm3μm,1.0s								
SIJI	Sorong	5.39	114	Pn		Pn		19 16 34.1	+0.1
	77nm,0.3s,baz=308,slow=8.0,SNR=293								
SIJI				LR		LR		19 19 05.2	
	comp=Z,263μm,18.6s,baz=291,slow=42								
	1μm,0.7s								
TOLI2	Tolitoli	5.55	268	Pn		Pn		19 16 36.4	+0.2
TOLI2	Tolitoli	5.55	268	P		Pn		19 16 37.6	+1.4
MATI	Mati	5.59	359	↓*e*P		Pn		19 16 36.7	-0.1
DAV	Davao City (W)	5.77	353	Pn		Pn		19 16 40.2	+1.0
	56nm,0.3s,baz=124,slow=1.7,SNR=33								
DAV				Sn		Sn		19 17 49.4	+5.3
	107nm,0.3s,baz=227,slow=22,SNR=4.3								
DAV				LR		LR		19 19 14.9	
	comp=Z,129μm,20.0s,baz=143,slow=42								
	2μm,0.8s								
DAV	Davao City (W)	5.77	353			Pn		19 16 39.7	+0.5
DAV	Davao City (W)	5.77	353	P		Pn		19 16 40.0	+0.8
DAV				P		Pn		19 16 40.0	+0.8
DAV	Davao City (W)	5.77	353	P		Pn		19 16 41.0	+1.8
KCP	Kidapawan	5.79	348	↑*e*P		Pn		19 16 40.9	+1.4
CTBH	Cotabato--PC H	6.22	341	↓*e*P		Pn		19 16 46.8	+1.4
MPSI	Mapaga	6.50	261	P		Pn		19 16 51.9	+2.6
	32nm672μm68μm5μm,1.1s								
BNDI	Bandanaira	6.81	148	P		Pn		19 16 56.0	+2.5
BNDI	Bandanaira	6.81	148	⇓P		Pn		19 16 54.0	+0.5
BIPH	Bislig	6.83	0	↓*i*P		Pn		19 16 54.7	+1.0
ZCP	Zamboanga City	7.01	323	↓*i*P		Pn		19 16 56.6	+0.3
ZCP				*i* S		Sn		19 18 11.1	-3.6
PAGZ	Pagadian	7.12	336	↓*e*P		Pn		19 16 58.1	+0.3
FAKI	Fak Fak	7.26	125	Pn		Pn		19 16 59.0	-0.6
FAKI	Fak Fak	7.26	125	P		Pn		19 17 00.5	+0.8
	17nm370μm61μm4μm,1.5s								
FAKI	Fak Fak	7.26	125	P		Pn		19 17 01.0	+1.3
FAKI	Fak Fak	7.26	125	⇓P		Pn		19 16 59.9	+0.2
BUTP	Butuan	7.64	355	↓*e*P		Pn		19 17 06.9	+2.0
BBSI	Bau Bau	7.73	209	P		Pn		19 17 09.4	+3.3
	3.0nm8μm912nm,1.0s								
TTSI	Tana Toraja	7.82	236	P		Pn		19 17 09.6	+2.3
	29nm197μm65μm7μm,1.1s								
SPSI	Sidrap Palu	8.39	231	P		Pn		19 17 17.6	+2.4
	175μm44μm4μm,1.0s								
GLSP	General Luna,	8.42	359	↓*e*P		Pn		19 17 17.2	+1.6
BNSI	Bone	8.42	228	P		Pn		19 17 17.6	+2.0
	135μm48μm5μm,0.9s								
SNPH	Sibulan	8.55	339	*e*P		Pn		19 17 20.0	+2.5
TBP	Tagbilaran	8.68	344	↓*i*P		Pn		19 17 19.9	+0.8
MYLDM	Lahad Datu	8.71	296	Pn		Pn		19 17 21.3	+1.8
MYLDM	Lahad Datu	8.71	296	⇓P		Pn		19 17 21.7	+2.2
MSLP	Maasin	8.88	351	↓*e*P		Pn		19 17 23.1	+1.2
SGKI	Sangatta, Kali	8.91	258	P		Pn		19 17 22.2	-0.2
	325μm60μm2μm,1.4s								
BKSI	Bulukumba	9.05	223	P		Pn		19 17 26.3	+2.1
	117μm34μm3μm,1.0s								
KAPI	Kappang	9.09	226	Pn		Pn		19 17 26.1	+1.2
	101nm,0.3s,baz=44,slow=11,SNR=398								
KAPI				Sn		Sn		19 19 09.0	+3.0
	28nm,0.3s,baz=152,slow=23,SNR=1.2								
	3μm,1.1s								
KAPI	Kappang	9.09	226	Pn		Pn		19 17 22.9	-1.9
KAPI	Kappang	9.09	226	P		Pn		19 17 27.5	+2.6
KAPI				P		Pn		19 17 27.5	+2.6
KAPI				P		Pn		19 17 27.5	+2.6
KAPI	Kappang	9.09	226	P		Pn		19 17 28.5	+3.7
KAPI	Kappang	9.09	226	⇑P		Pn		19 17 25.8	+0.9
CNOP	Candoni, Negro	9.22	337	↓*e*P		Pn		19 17 27.7	+1.1
SMKI	Samarinda	9.29	259	P		Pn		19 17 28.9	+1.4
	353μm32μm3μm,0.9s								
BSSI	Bau Bau, Buton	9.43	218	P		Pn		19 17 31.3	+1.9
	49μm22μm1μm,1.1s								
BKB	Balikpapan	9.77	255			Pn		19 17 35.5	+1.3
BKB	Balikpapan	9.77	255	P		Pn		19 17 36.5	+2.4
	292μm36μm3μm,1.6s								
BKB	Balikpapan	9.77	255	P		Pn		19 17 37.0	+2.9
BKB	Balikpapan	9.77	255	⇑P		Pn		19 17 35.6	+1.5
GUIM	Jordan	9.97	338	↓*e*P		Pn		19 17 39.6	+2.8
I39PW	PALAU INFRASON	10.26	53	Pn		Pn		19 17 44.2	+3.3
	baz=210,slow=14								
JAP	San Jose, Anti	10.33	335	↓*e*P		Pn		19 17 43.8	+1.9

78µm40µm3µm,1.2s
BALP Baler 15.08 342 ⇓*e*P **P** 19 18 49.0 -1.9
KDU Kakadu 15.19 157 P **Pn** 19 18 44.4 -3.3
baz=15,SNR=47
KDU Kakadu 15.19 157 P **Pn** 19 18 46.1 -1.7
KDU Kakadu 15.19 157 ⇓P **Pn** 19 18 44.0 -3.8
PBKI Pangkalan Bun 15.19 255 P **Pn** 19 18 49.7 +1.9
23µm2µm,1.1s
BWJI Bawean 15.39 242 P **P** 19 18 52.8 -1.7
54µm20µm2µm,1.8s
JAGI Jajag, Banyuwa 15.55 231 P **P** 19 18 54.5 -1.7
JAGI Jajag, Banyuwa 15.55 231 P **P** 19 18 55.2 -1.0
66µm57µm7µm,1.3s
JAGI Jajag, Banyuwa 15.55 231 P **P** 19 18 55.7 -0.5
JAGI Jajag, Banyuwa 15.55 231 ⇑P **P** 19 18 54.5 -1.7
BLJI Banyuglugur 15.56 234 P **Pn** 19 18 54.4 +1.7
50µm26µm3µm,1.1s
GMJI Gumukmas 15.99 233 P **P** 19 19 00.0 -1.1
65µm39µm4µm,1.1s
KSM Kuching 16.02 271 **Pn** 19 18 59.2 +0.8
KSM Kuching 16.02 271 P **P** 19 19 01.0 -0.4
KSM Kuching 16.02 271 P **P** 19 19 01.5 +0.1
KSM Kuching 16.02 271 ⇑P **Pn** 19 18 58.8 +0.3
GRJI Gresik 16.06 239 P **P** 19 19 01.1 -0.7
1µm10µm1µm,1.2s
SAMP Sagada Mountai 16.55 341 ⇓*e*P **P** 19 19 06.6 -0.7
TBJI Tambak Boyo 16.56 241 P **P** 19 19 07.1 -0.3
44µm19µm1µm,1.1s
KNRA Kununurra 17.05 172 P **Pn** 19 19 11.2 -0.4
baz=17,SNR=348
KNRA Kununurra 17.05 172 **Pn** 19 19 11.1 -0.4
KNRA IAmb IAmb 19 19 13.4
comp=Z,6µm,1.6s
KNRA Kununurra 17.05 172 P **Pn** 19 19 11.6 +0.1
UWJI Ujung Watu 17.17 243 P **P** 19 19 13.6 -0.6
comp=Z,21µmcomp=Z,2µm,1.0s
PWJI Pagerwojo 17.20 237 P **P** 19 19 14.9 +0.4
comp=Z,35µmcomp=Z,3µm,1.2s
SGCP Gonzaga 17.34 346 ⇓*e*P **Pn** 19 19 14.7 -0.4
PCJI Pacitan 17.82 238 P **P** 19 19 22.6 +1.3
comp=Z,60µmcomp=Z,54µmcomp=Z,4µm,1.1s
WOJI Wonogiri, Jawa 17.85 239 P **P** 19 19 22.7 +1.0
comp=Z,39µmcomp=Z,17µmcomp=Z,1µm,1.2s
SMRI Semarang 17.90 242 P **Pn** 19 19 22.1 +0.1
SMRI Semarang 17.90 242 P **P** 19 19 23.0 +0.8
comp=Z,80µmcomp=Z,30µmcomp=Z,2µm,1.0s
SMRI Semarang 17.90 242 P **P** 19 19 23.4 +1.2
SMRI Semarang 17.90 242 ⇑P **P** 19 19 22.9 +0.6
UGM Wanagama 18.23 240 P **P** 19 19 25.8 -0.2
UGM Wanagama 18.23 240 P **Pn** 19 19 28.3 +2.2
comp=Z,76µmcomp=Z,40µmcomp=Z,3µm,1.5s
UGM Wanagama 18.23 240 P **Pn** 19 19 27.6 +1.5
YOGI Yogyakarta 18.38 240 P **Pn** 19 19 30.7 +2.8
comp=Z,32µmcomp=Z,20µmcomp=Z,2µm,0.9s
JCJI Jatiwangi 19.62 247 P **Pn** 19 19 42.3 -0.5
comp=Z,60µmcomp=Z,30µmcomp=Z,2µm,1.1s
CMJI Cimerak 19.99 243 P **P** 19 19 44.6 -0.6
comp=Z,34µmcomp=Z,9µmcomp=Z,1µm,0.9s
LEM Lembang 20.35 246 P **P** 19 19 48.8 -0.4
comp=Z,648nm,0.9s,baz=62,slow=8.8,SNR=64
LEM S **S** 19 23 37.0 +1.8
comp=Z,105nm,1.0s,baz=294,slow=13,SNR=1.9
comp=Z,648nm,0.9s
LEM Lembang 20.35 246 P **P** 19 19 48.8 -0.4
comp=Z,32µmcomp=Z,11µmcomp=Z,632nm,1.1s
PPBI Pangkal Pinang 20.48 260 P **P** 19 19 50.1 -0.4
comp=Z,70µmcomp=Z,18µmcomp=Z,658nm,1.0s
CBJI Citeko 20.91 248 P **P** 19 19 54.3 -0.8
comp=Z,67µmcomp=Z,21µmcomp=Z,2µm,1.2s
CNJI Cibinong 20.98 246 P **P** 19 19 55.3 -0.6
comp=Z,54µmcomp=Z,21µmcomp=Z,2µm,1.2s
DBJI Dramaga 21.05 248 P **P** 19 19 55.7 -0.9
comp=Z,60µmcomp=Z,18µmcomp=Z,913nm,1.1s
MANU Manus Island 21.30 99 P **P** 19 19 58.6 -0.7
MANU Manus Island 21.30 99 ⇓P **P** 19 19 59.4 0.0
SKJI Sukabumi 21.39 247 P **P** 19 20 00.1 -0.2
comp=Z,9µmcomp=Z,799nm,1.3s
SBJI Serang 21.48 250 P **P** 19 20 02.3 +1.1
comp=Z,14µmcomp=Z,1µm,1.3s
TPRI Tanjung Pinang 21.80 269 P **P** 19 20 05.6 +0.9
comp=Z,69µmcomp=Z,18µmcomp=Z,836nm,1.6s
DSRI Dabo 21.82 265 P **P** 19 20 06.0 +1.1
comp=Z,41µmcomp=Z,11µmcomp=Z,690nm,1.2s
PMBI Palembang 21.96 259 P **P** 19 20 06.5 +0.1
PMBI IAmb IAmb 19 20 14.0
comp=Z,2µm,1.1s
PMBI IAMs_20 IAMs_20 19 29 07.4
comp=Z,76µm,22.0s
PMBI Palembang 21.96 259 P **P** 19 20 07.2 +0.8
comp=Z,65µmcomp=Z,32µmcomp=Z,2µm,1.2s
PMBI Palembang 21.96 259 ⇑P **P** 19 20 06.9 +0.5
TWG Pinlang 21.98 347 P **P** 19 20 02.6 -3.9
TWG IAmb IAmb 19 20 10.7
comp=Z,978nm,0.8s
TWG IAMs_20 IAMs_20 19 28 48.0
comp=Z,62nm,22.0s
GUMO Guam 22.03 56 P **P** 19 20 05.6 -1.6
comp=Z,804nm,1.0s,baz=166,slow=5.9,SNR=18
comp=Z,804nm,1.0s
GUMO Guam 22.03 56 P **P** 19 20 05.1 -2.1
GUMO Guam 22.03 56 P **P** 19 20 07.1 -0.1
GUMO Guam 22.03 56 ⇓P **P** 19 20 05.0 -2.1
BLSI Bandar Lampung 22.08 252 P **P** 19 20 07.1 -0.6
comp=Z,47µmcomp=Z,8µmcomp=Z,589nm,0.8s
KLI Kotabumi 22.31 254 P **P** 19 20 09.8 -0.4
comp=Z,56µmcomp=Z,14µmcomp=Z,998nm,1.0s
WB0 Warramunga Arr 22.39 160 P **P** 19 20 09.9 -1.2
MYKOM Kota Tinggi 22.48 271 P **P** 19 20 11.0 -1.0
MYKOM Kota Tinggi 22.48 271 P **P** 19 20 13.0 +1.0
MYKOM Kota Tinggi 22.48 271 ⇑P **P** 19 20 11.5 -0.4
YULB Yu-li 22.48 348 P **P** 19 20 06.9 -5.1
YULB IAMs_20 IAMs_20 19 29 50.5
comp=Z,48µm,20.0s
I07AU WARRAMUNGA INZ 22.53 160 P **P** 19 20 12.8 +0.3
baz=326,slow=12,SNR=7.1
WRAB Tennant Creek 22.53 160 P **P** 19 20 11.7 -0.9
WRAB Tennant Creek 22.53 160 *ce*P **P** 19 20 11.6 -0.9
WRAB pmax pmax
comp=Z,5µm,1.0s
WRAB MLR MLR
comp=Z,26µm,21.0s
WRAB Tennant Creek 22.53 160 P **P** 19 20 12.4 -0.1
WRAB Tennant Creek 22.53 160 ⇑P **P** 19 20 11.4 -1.1
WRA Warramunga Arr 22.54 160 P **P** 19 20 11.4 -1.2
comp=Z,3µm,0.8s,baz=338,slow=11,SNR=610
WRA PcP **PcP** 19 24 05.5 +0.2
comp=Z,62nm,0.9s,baz=330,slow=2.0,SNR=4.7
WRA S **S** 19 24 13.3 -3.8
comp=Z,292nm,1.1s,baz=331,slow=15,SNR=9.7
WRA ScP **ScP** 19 27 38.8 -0.9
comp=Z,22nm,1.2s,baz=338,slow=13,SNR=4.6
WRA PKiKP **PKiKP** 19 31 51.1 +0.3
comp=Z,6.2nm,1.1s,baz=306,slow=1.5,SNR=5.0
WRA P3KPbc 19 53 51.8
comp=Z,8.8nm,1.0s,baz=157,slow=4.2,SNR=25
WRA Warramunga Arr 22.54 160 P **P** 19 20 11.2 -1.3
WB2 Warramunga Arr 22.54 160 P **P** 19 20 11.8 -0.8
TPUB Ta-pu 22.55 346 P **P** 19 20 09.1 -3.6
TPUB IAMs_20 IAMs_20 19 29 54.1
comp=Z,66µm,21.0s
TPUB Ta-pu 22.55 346 P **P** 19 20 10.4 -2.2
COEN Coen 22.56 133 P **P** 19 20 10.3 -2.5
baz=23,SNR=236
COEN Coen 22.56 133 P **P** 19 20 10.2 -2.6
COEN IAmb IAmb 19 20 25.3
comp=Z,1µm,1.2s
COEN Coen 22.56 133 P **P** 19 20 10.9 -1.9
COEN Coen 22.56 133 ⇑P **P** 19 20 09.2 -3.6
WR0 Warramunga Arr 22.62 160 P **P** 19 20 12.4 -1.1
KASI Kota Agung 22.84 253 P **P** 19 20 15.3 -0.5
comp=Z,46µmcomp=Z,11µmcomp=Z,704nm,0.9s
SSLB Suanglung 22.94 347 P **P** 19 20 12.8 -3.9
SSLB IAmb IAmb 19 20 21.2
comp=Z,907nm,0.9s
SSLB IAMs_20 IAMs_20 19 30 22.6
comp=Z,72µm,20.0s
SSLB Suanglung 22.94 347 P **P** 19 20 14.7 -2.1
LWLI Liwa 23.12 254 P **P** 19 20 17.4 -1.4
comp=Z,29µmcomp=Z,11µmcomp=Z,1µm,0.9s
NACB Ninganchiao 23.18 349 P **P** 19 20 16.0 -3.1
YOJ Yonaguni jima 23.23 352 P **P** 19 20 18.2 -1.4
YOJ IAmb IAmb 19 20 22.8
comp=Z,2µm,1.0s
YOJ Yonaguni jima 23.23 352 P **P** 19 20 18.2 -1.4
YOJ pmax pmax
comp=Z,2µm,1.0s
YOJ Yonaguni jima 23.23 352 P **P** 19 20 20.8 +1.2
YOJ Yonaguni jima 23.23 352 ⇓P **P** 19 20 18.4 -1.2
YOJ Yonaguni jima 23.23 352 P **P** 19 20 19.6 0.0
MBWA Marble Bar 23.25 196 P **P** 19 20 18.7 -1.1
MBWA Marble Bar 23.25 196 P **P** 19 20 19.2 -0.6
MBWA P **P** 19 20 19.2 -0.6
MBWA P **P** 19 20 19.2 -0.6
MBWA Marble Bar 23.25 196 P **P** 19 20 19.2 -0.6
MBWA Marble Bar 23.25 196 ⇑P **P** 19 20 19.0 -0.8
PMG Port Moresby 23.32 118 P **P** 19 20 19.8 -0.8
comp=Z,343nm,0.9s,baz=284,slow=8.9,SNR=61
PMG S **S** 19 24 27.3 -3.1
comp=Z,18nm,0.8s,baz=288,slow=3.2,SNR=1.1
comp=Z,343nm,0.9s
PMG Port Moresby 23.32 118 P **P** 19 20 18.5 -2.1
PMG IAmb IAmb 19 20 27.0
comp=Z,1µm,1.6s
PMG Port Moresby 23.32 118 *ce*P **P** 19 20 19.1 -1.5
PMG pmax pmax
comp=Z,339nm,0.8s
PMG MLR MLR
comp=Z,54µm,19.0s
PMG Port Moresby 23.32 118 P **P** 19 20 21.1 +0.5
PMG Port Moresby 23.32 118 P **P** 19 20 20.9 +0.3
PMG Port Moresby 23.32 118 ⇓P **P** 19 20 18.5 -2.1
JMJ Miyako jima 2 23.39 358 P **P** 19 20 21.8 +0.7
PSA00 Pilbara Seismi 23.61 195 P **P** 19 20 22.1 -1.3
PSA00 Pilbara Seismi 23.61 195 P **P** 19 20 22.3 -1.0
PSA00 IAmb IAmb 19 20 29.0
comp=Z,537nm,0.8s
PSA00 Pilbara Seismi 23.61 195 P **P** 19 20 22.8 -0.5
XMI Christmas Isla 23.63 240 P **P** 19 20 23.2 -0.4
XMI Christmas Isla 23.63 240 ⇓P **P** 19 20 22.1 -1.5
XMIS Christmas Isla 23.68 240 P **P** 19 20 21.3 -2.7
XMIS IAmb IAmb 19 20 26.6
comp=Z,1µm,0.8s
XMIS Christmas Isla 23.68 240 P **P** 19 20 23.4 -0.6
YHNB Yeheng 23.71 349 IAmb IAmb 19 20 31.0
comp=Z,1µm,1.1s
YHNB IAMs_20 IAMs_20 19 30 40.8
comp=Z,65µm,21.0s
YHNB Yeheng 23.71 349 P **P** 19 20 24.8 +0.5
QIZ Qiongzhong 23.90 318 P **P** 19 20 24.2 -1.8
QIZ IAmb IAmb 19 20 30.7
comp=Z,1µm,1.5s
QIZ Qiongzhong 23.90 318 IAMs_20 IAMs_20 19 28 54.0
comp=Z,54µm,21.0s
QIZ Qiongzhong 23.90 318 ⇑*i*P **P** 19 20 25.4 -0.6
QIZ S **S** 19 24 44.1 +4.5
QIZ pmax pmax
comp=Z,420nm,1.8s
QIZ LR LR
comp=Z,32µm,20.2s
QIZ LR LR
comp=Z,18µm,16.9s
QIZ LR LR
comp=Z,47µm,20.3s
QIZ Qiongzhong 23.90 318 P **P** 19 20 25.9 -0.1
JRMM Jerantut 23.96 277 P **P** 19 20 27.0 +0.3
HKPS Hong Kong Po S 23.98 331 P **P** 19 20 24.9 -1.8
HKPS IAmb IAmb 19 20 28.9
comp=Z,2µm,1.6s
TATO Taipei 23.98 349 P **P** 19 20 23.5 -3.2
TATO Taipei 23.98 349 IAMs_20 IAMs_20 19 31 02.0
comp=Z,46µm,21.0s
TATO Taipei 23.98 349 P **P** 19 20 26.0 -0.8
TATO P **P** 19 20 26.0 -0.8
TATO P **P** 19 20 26.0 -0.8
MNAI Manna 24.02 256 P **P** 19 20 25.1 -2.2
MNAI IAmb IAmb 19 20 53.5
comp=Z,2µm,1.2s
MNAI IAMs_20 IAMs_20 19 31 05.3
comp=Z,73µm,22.0s
MNAI Manna 24.02 256 P **P** 19 20 27.0 -0.3
comp=Z,48µmcomp=Z,24µmcomp=Z,2µm,1.4s
MNAI Manna 24.02 256 P **P** 19 20 27.7 +0.4
MNAI Manna 24.02 256 ⇑P **P** 19 20 25.7 -1.6
MCO Taipa Grande 24.13 330 P **P** 19 20 28.0 -0.1
KNMB Chin-men Tao 24.26 342 P **P** 19 20 26.7 -2.6
KNMB IAmb IAmb 19 20 35.2
comp=Z,949nm,1.1s
QZH Quanzhou 24.65 343 ⇓*i*P **P** 19 20 31.8 -1.0
QZH sP **sP** 19 20 53.4 +4.4
QZH S **S** 19 24 46.9 -4.6
QZH pmax pmax
comp=Z,410nm,1.1s
QZH LR LR
comp=Z,18µm,18.8s
QZH LR LR
comp=Z,13µm,17.1s
QZH LR LR
comp=Z,28µm,20.4s
JMZ Minamidaito 2 24.82 11 *e*P **P** 19 20 35.1 +0.8
GZH Guangzhou 25.05 331 P **P** 19 20 39.0 +2.5
GZH S **S** 19 25 00.7 +2.8
GZH LR LR
comp=Z,20µm,17.5s
GZH LR LR
comp=Z,26µm,17.7s
KRJI Kerinci 25.09 262 P **P** 19 20 37.0 -0.1
comp=Z,56µmcomp=Z,72µmcomp=Z,4µm,1.1s
BKNI Bangkinang 25.30 268 P **P** 19 20 38.8 -0.1
BKNI Bangkinang 25.30 268 P **P** 19 20 39.6 +0.7
comp=Z,52µmcomp=Z,38µmcomp=Z,3µm,1.3s
BKNI Bangkinang 25.30 268 P **P** 19 20 40.0 +1.1
BKNI Bangkinang 25.30 268 ⇑P **P** 19 20 38.6 -0.3
QIS Mount Isa 25.33 150 P **P** 19 20 39.0 -0.1
baz=25,SNR=468
QIS Mount Isa 25.33 150 P **P** 19 20 39.3 +0.2
JOW Kunigami 25.44 4 P **P** 19 20 41.8 +1.7
comp=Z,897nm,0.9s,baz=193,slow=8.1,SNR=322
JOW PcP **PcP** 19 24 12.3 +0.9
comp=Z,61nm,0.9s,baz=210,slow=6.2,SNR=3.4
JOW S **S** 19 25 03.0 -1.1
comp=Z,31nm,1.2s,baz=140,slow=10.0,SNR=1.0
comp=Z,897nm,0.9s
JOW Kunigami 25.44 4 P **P** 19 20 41.5 +1.5
JOW IAmb IAmb 19 20 43.5
comp=Z,1µm,0.9s
JOW Kunigami 25.44 4 P **P** 19 20 42.2 +2.2
JOW Kunigami 25.44 4 ⇓P **P** 19 20 41.7 +1.7
JOW Kunigami 25.44 4 P **P** 19 20 42.0 +2.0
IPM Ipoh 25.46 278 IAmb IAmb 19 20 43.9
comp=Z,1µm,1.1s
IPM Ipoh 25.46 278 P **P** 19 20 41.0 +0.7
IPM Ipoh 25.46 278 P **P** 19 20 41.1 +0.7
AS31 Alice Springs 25.90 164 P **P** 19 20 44.0 -0.3
ASAR Alice Springs 25.90 164 P **P** 19 20 43.9 -0.4
comp=Z,488nm,0.8s,baz=345,slow=7.3,SNR=2260
ASAR PcP **PcP** 19 24 12.4 -0.2
comp=Z,67nm,0.8s,baz=352,slow=2.0,SNR=5.6
ASAR S **S** 19 25 09.1 -2.5
comp=Z,7.7nm,0.6s,baz=7.3,slow=30,SNR=0.7
ASAR ScP **ScP** 19 27 48.4 -0.5
comp=Z,16nm,0.9s,baz=309,slow=1.8,SNR=4.2
ASAR PKiKP **PKiKP** 19 31 52.4 -0.2
comp=Z,7.1nm,0.9s,baz=0.1,slow=0.8,SNR=5.5
ASAR P3KPbc 19 53 36.9
comp=Z,3.6nm,0.9s,baz=154,slow=4.8,SNR=14
comp=Z,488nm,0.8s
ASAR Alice Springs 25.90 164 P **P** 19 20 43.5 -0.7
KULM Kulim 25.93 279 P **P** 19 20 44.3 -0.4
KULM IAmb IAmb 19 20 49.6
comp=Z,1µm,1.4s
KULM Kulim 25.93 279 P **P** 19 20 45.0 +0.4
KULM Kulim 25.93 279 ⇑P **P** 19 20 44.2 -0.4
MTSU Mount Surprise 26.21 138 P **P** 19 20 47.2 +0.1
baz=26,SNR=245
MTSU Mount Surprise 26.21 138 P **P** 19 20 47.6 +0.5
WRKA Warakurna 26.26 176 P **P** 19 20 47.7 +0.2
baz=26,SNR=1000
WRKA Warakurna 26.26 176 P **P** 19 20 47.9 +0.4
WRKA Warakurna 26.26 176 ⇑P **P** 19 20 47.8 +0.2
KRVT Keravat (AS076 26.28 102 P **P** 19 20 46.9 -0.9
comp=Z,331nm,0.9s,baz=249,slow=4.0,SNR=50
KRVT PcP **PcP** 19 24 13.8 +0.2
comp=Z,187nm,1.0s,baz=310,slow=7.9,SNR=2.7
KRVT S **S** 19 25 16.1 -1.7
comp=Z,98nm,1.0s,baz=241,slow=19,SNR=2.1
KRVT LR LR 19 29 58.1
comp=Z,47µm,18.7s,baz=34,slow=34
comp=Z,331nm,0.9s
RABL Rabaul 26.39 102 P **P** 19 20 48.0 -0.8
RABL IAmb IAmb 19 20 58.6
comp=Z,1µm,1.4s
RABL Rabaul 26.39 102 ⇓P **P** 19 20 48.3 -0.5
GIRL Giralia 26.57 206 P **P** 19 20 51.7 +1.4
baz=27,SNR=15
GIRL Giralia 26.57 206 P **P** 19 20 49.3 -1.0
GIRL Giralia 26.57 206 P **P** 19 20 51.8 +1.5
GIRL Giralia 26.57 206 ⇑P **P** 19 20 51.6 +1.3
PPSI Pulau Pagai 26.62 261 P **P** 19 20 50.5 -0.4
comp=Z,33µmcomp=Z,19µmcomp=Z,1µm,1.1s
JAM Amami Oshima 27.13 6 P **P** 19 20 56.7 +1.5
SISI Saibi 27.36 265 P **P** 19 20 56.7 -0.8
comp=Z,19µmcomp=Z,6µmcomp=Z,631nm,1.1s
RPSI Rantau Prapat 27.42 273 P **P** 19 20 57.4 -0.7
RPSI **ScP** 19 27 53.2 -0.4
PSI Prapat 27.43 274 P **P** 19 20 57.4 -0.9
comp=Z,923nm,1.1s,baz=88,slow=7.9,SNR=308
PSI PcP **PcP** 19 24 17.6 +1.1
comp=Z,135nm,1.0s,baz=92,slow=10,SNR=4.8
PSI S **S** 19 25 34.6 -1.5
comp=Z,6.5nm,0.5s,baz=150,slow=20,SNR=0.8
PSI ScP **ScP** 19 27 53.2 -0.6
comp=Z,51nm,1.2s,baz=74,slow=7.4,SNR=4.3
comp=Z,923nm,1.1s
SRIT Nakonsritamara 27.57 286 P **P** 19 20 58.8 -0.6
TSI Tuntungan 27.82 275 P **P** 19 21 02.6 +0.9
comp=Z,36µmcomp=Z,16µmcomp=Z,1µm,1.3s
KCSI Kotacane, Aceh 28.61 275 P **P** 19 21 07.4 -1.3
comp=Z,29µmcomp=Z,9µmcomp=Z,479nm,1.5s
GSI Gunungsitoli 28.75 270 P **P** 19 21 07.9 -2.0
GSI IAmb IAmb 19 21 13.1
comp=Z,1µm,1.0s
GSI IAMs_20 IAMs_20 19 34 17.5
comp=Z,45µm,20.0s
GSI Gunungsitoli 28.75 270 P **P** 19 21 09.1 -0.8
comp=Z,35µmcomp=Z,17µmcomp=Z,899nm,0.9s
GSI Gunungsitoli 28.75 270 P **P** 19 21 08.5 -1.4
GSI Gunungsitoli 28.75 270 ⇑P **P** 19 21 07.8 -2.1
CTA Charters Tower 28.88 138 P **P** 19 21 11.3 +0.3
comp=Z,209nm,1.0s,baz=313,slow=9.2,SNR=198
CTA PcP **PcP** 19 24 20.0 +0.2
comp=Z,67nm,0.8s,baz=242,slow=4.9,SNR=3.9
CTA S **S** 19 25 55.9 -2.7
comp=Z,32nm,1.1s,baz=37,slow=20,SNR=1.1
CTA P3KPbc 19 53 23.8
comp=Z,5.2nm,1.0s,baz=202,slow=4.7,SNR=5.9
comp=Z,209nm,1.0s
CTA Charters Tower 28.88 138 P **P** 19 21 12.0 +1.0
CTAO Charters Tower 28.88 138 P **P** 19 21 10.6 -0.4
CTAO IAmb IAmb 19 21 54.9
comp=Z,1µm,1.6s
CTAO Charters Tower 28.88 138 P **P** 19 21 10.6 -0.4
CTAO pmax pmax
comp=Z,1µm,1.7s
CTAO Charters Tower 28.88 138 P **P** 19 21 12.0 +1.0
CTAO Charters Tower 28.88 138 ⇓P **P** 19 21 11.4 +0.3
CTAO Charters Tower 28.88 138 P **P** 19 21 11.7 +0.7
CTAO sP **pwP** 19 21 24.3 -0.7
CTAO x **PcP** 19 24 22.6 +2.8
SLVN Son La 29.56 314 P **P** 19 21 17.0 -0.1
LHMI Lhok Sumawe 29.58 278 P **P** 19 21 16.9 -0.4
LHMI Lhok Sumawe 29.58 278 P **P** 19 21 17.8 +0.4
comp=Z,31µmcomp=Z,7µmcomp=Z,561nm,1.1s
LHMI Lhok Sumawe 29.58 278 P **P** 19 21 17.7 +0.4
LHMI Lhok Sumawe 29.58 278 ⇑P **P** 19 21 17.3 0.0
CNSH ChangSha 29.63 336 ⇓P **P** 19 21 12.9 -4.6
CNSH S **S** 19 26 03.1 -7.1
CNSH SS SS 19 28 48.4 +31
CNSH LR LR
comp=N,17µm,18.3s
CNSH LR LR
comp=E,14µm,19.2s
CNSH LR LR
comp=Z,18µm,18.9s
JCJ Chichijima 29.81 29 P **P** 19 21 18.4 -0.8
comp=Z,212nm,0.6s,baz=236,slow=5.0,SNR=21
comp=Z,212nm,0.6s
JCJ Chichijima 29.81 29 P **P** 19 21 18.1 -1.1
JCJ IAmb IAmb 19 21 45.3
comp=Z,851nm,0.9s
JCJ Chichijima 29.81 29 P **P** 19 21 19.3 +0.1
JCJ Chichijima 29.81 29 ⇑P **P** 19 21 18.6 -0.6
CBIJ Chichi jima 29.81 29 P **P** 19 21 18.9 -0.3
SSE Sheshan 30.02 351 P **P** 19 21 22.4 +1.5
SSE S **S** 19 26 16.0 -0.2
SSE pmax pmax
comp=Z,140nm,1.7s
SSE pmax pmax
comp=Z,1µm,4.9s
SSE LR LR
comp=Z,7µm,17.9s
SSE LR LR
comp=Z,6µm,18.0s
JSU Suzuyama 30.28 7 P **P** 19 21 23.3 0.0
JSU Suzuyama 30.28 7 ⇓P **P** 19 21 23.8 +0.5
JSU Suzuyama 30.28 7 P **P** 19 21 24.0 +0.7
OOD Oodnadatta 30.31 163 P **P** 19 21 23.2 -0.3
WHN Wuhan 31.21 340 ⇑*i*P **P** 19 21 32.3 +0.8
WHN sP **sP** 19 21 50.1 +2.7
WHN S **S** 19 26 37.1 +2.2
WHN pmax pmax
comp=Z,600nm,1.0s
WHN LR LR
comp=Z,32µm,16.8s
WHN LR LR
comp=Z,12µm,14.3s
WHN LR LR
comp=Z,66µm,20.8s
JFU Fukue jima 2 31.26 4 P **P** 19 21 33.0 +1.1
GYA Guiyang 31.35 325 ⇑*i*P **P** 19 21 33.3 +0.4
GYA pP pP 19 21 44.8 +0.8
GYA PP **PnPn** 19 22 39.0 +2.5
GYA PcP **PcP** 19 24 27.3 +1.1
GYA S **S** 19 26 39.9 +2.5
GYA ScS **ScS** 19 32 04.4 +0.6
GYA pmax pmax
comp=Z,260nm,1.4s
GYA LR LR
comp=Z,18µm,16.4s
GYA LR LR
comp=Z,19µm,18.5s
GYA LR LR
comp=Z,30µm,17.0s
NJ2 Nanjing 31.38 348 ⇑*i*P **P** 19 21 33.7 +0.8
NJ2 pP **pP** 19 21 42.8 -1.3
NJ2 sP **sP** 19 21 49.7 +0.6
NJ2 S **S** 19 26 36.2 -1.2
NJ2 sS **sS** 19 26 57.6 +1.8
NJ2 pmax pmax
comp=Z,270nm,1.5s
NJ2 pmax pmax
comp=Z,4µm,7.9s
NJ2 LR LR
comp=Z,9µm,16.1s
NJ2 LR LR
comp=Z,12µm,19.4s
NJ2 LR LR
comp=Z,12µm,21.8s
MORW Morawa 31.77 197 P **P** 19 21 36.6 +0.2
baz=32,SNR=127
MORW Morawa 31.77 197 P **P** 19 21 36.2 -0.3
MORW IAmb IAmb 19 21 41.2
comp=Z,582nm,0.8s
MORW Morawa 31.77 197 P **P** 19 21 37.0 +0.5
MORW Morawa 31.77 197 ⇑P **P** 19 21 36.5 0.0
CM31 Chiang Mai Arr 31.81 304 P **P** 19 21 36.7 -0.3
CM31 Chiang Mai Arr 31.81 304 P **P** 19 21 38.0 +1.0
SNR=89
CM31 P **P** 19 21 38.0 +1.0
SNR=89
CM31 P **P** 19 21 38.0 +1.0
SNR=89
CMAR Chiang Mai Arr 31.81 304 P **P** 19 21 37.0 +0.1
comp=Z,137nm,0.9s,baz=128,slow=7.1,SNR=198
CMAR PcP **PcP** 19 24 29.2 +1.8
comp=Z,94nm,0.9s,baz=172,slow=1.6,SNR=15
CMAR PKiKP **PKiKP** 19 31 56.8 +0.4
comp=Z,2.9nm,0.9s,baz=267,slow=1.4,SNR=5.2
CMAR LR LR 19 35 35.5
comp=Z,22µm,20.6s,baz=120,slow=38
CMAR P3KPbc 19 53 16.2
comp=Z,0.8nm,0.9s,baz=312,slow=4.8,SNR=4.4
comp=Z,137nm,0.9s
CMAR Chiang Mai Arr 31.81 304 P **P** 19 21 36.4 -0.6
CMAR Chiang Mai Arr 31.81 304 *ce*P **P** 19 21 37.0 +0.1
CMAR pmax pmax

comp=Z,144nm,1.0s
JNU Nakatsue 31.93 7 P **P** **19 21 37.9 +0.1**
comp=Z,355nm,1.0s,baz=181,slow=5.8,SNR=80
JNU S **S** **19 26 43.9 -2.2**
comp=Z,11nm,0.6s,baz=197,slow=8.1,SNR=1.3
JNU LR LR 19 36 53.3
comp=Z,6µm,19.1s,baz=183,slow=41
comp=Z,355nm,1.0s
JNU Nakatsue 31.93 7 P **P** **19 21 37.9 +0.1**
JNU IAmb IAmb 19 21 40.1
comp=Z,623nm,1.1s
JNU Nakatsue 31.93 7 ⇑P **P** **19 21 38.5 +0.7**
JNU Nakatsue 31.93 7 P **P** **19 21 38.1 +0.3**
CHTO Chiang Mai 31.99 305 P **P** **19 21 38.1 -0.4**
CHTO IAmb IAmb 19 21 41.9
comp=Z,455nm,1.2s
CHTO Chiang Mai 31.99 305 P **P** **19 21 38.1 -0.4**
CHTO pmax pmax
comp=Z,455nm,1.3s
CHTO MLR MLR
comp=Z,23µm,20.0s
CHTO Chiang Mai 31.99 305 P **P** **19 21 38.4 -0.1**
CHTO P **P** **19 21 38.4 -0.1**
CHTO P **P** **19 21 38.4 -0.1**
CHTO Chiang Mai 31.99 305 P **P** **19 21 39.1 +0.6**
CHTO Chiang Mai 31.99 305 ⇓P **P** **19 21 38.1 -0.4**
CHTO Chiang Mai 31.99 305 P **P** **19 21 38.1 -0.4**
CHTO x **PcP** **19 24 29.8 +1.9**
INKA Innaminka 32.04 155 P **P** **19 21 39.4 +0.6**
COCO West Island 32.22 245 P **P** **19 21 39.6 -0.9**
COCO IAMs_20 IAMs_20 19 36 38.1
comp=Z,36µm,20.0s
COCO West Island 32.22 245 P **P** **19 21 39.6 -0.9**
COCO pmax pmax
comp=Z,1µm,1.2s
COCO MLR MLR
comp=Z,36µm,20.0s
MULG Mulgathing 32.27 167 P **P** **19 21 41.0 +0.2**
PATS Pohnpei 32.36 79 P **P** **19 21 40.5 -1.3**
baz=32,SNR=4.4
PATS Pohnpei 32.36 79 P **P** **19 21 40.2 -1.6**
PATS IAmb IAmb 19 22 43.5
comp=Z,527nm,1.5s
PATS IAMs_20 IAMs_20 19 33 12.1
comp=Z,26µm,20.0s
QLP Quilpie 32.67 149 P **P** **19 21 43.8 -0.6**
baz=33,SNR=36
QLP Quilpie 32.67 149 P **P** **19 21 44.2 -0.2**
QLP Quilpie 32.67 149 ⇑P **P** **19 21 43.0 -1.4**
KMI Kunming 32.84 318 ⇓P **P** **19 21 47.1 +0.9**
KMI pP pwP 19 21 58.5 -0.9
KMI sP sP 19 22 04.4 +2.2
KMI PP **PP** **19 23 00.7 -0.3**
KMI PcP **PcP** **19 24 30.8 +0.3**
KMI S **S** **19 26 52.1 -8.9**
KMI pmax pmax
comp=Z,490nm,1.3s
KMI pmax pmax
comp=Z,2µm,4.3s
KMI LR LR
comp=Z,29µm,20.4s
KMI LR LR
comp=Z,23µm,21.3s
KMI LR LR
comp=Z,50µm,22.1s
KMI Kunming 32.84 318 P **P** **19 21 47.2 +1.1**
KMI x **PcP** **19 24 32.9 +2.4**
KMI ScP **ScP** **19 28 17.6 +6.3**
ENH Enshi 32.94 333 P **P** **19 21 45.7 -1.0**
ENH IAmb IAmb 19 21 50.0
comp=Z,736nm,1.1s
ENH IAMs_20 IAMs_20 19 36 03.5
comp=Z,29µm,21.0s
ENH Enshi 32.94 333 P **P** **19 21 46.4 -0.4**
ENH x **PcP** **19 24 32.1 +1.7**
JMN Monobe 33.01 12 P **P** **19 21 48.4 +1.1**
JMN Monobe 33.01 12 P **P** **19 21 48.8 +1.4**
BLDU Ballidu 33.05 195 P **P** **19 21 47.6 0.0**
baz=33,SNR=87
BLDU Ballidu 33.05 195 P **P** **19 21 47.8 +0.2**
JTU Tsushima 33.16 5 ⇑P **P** **19 21 49.6 +1.1**
JTU Tsushima 33.16 5 P **P** **19 21 49.7 +1.1**
LCRK Leigh Creek 33.55 161 P **P** **19 21 52.5 +0.5**
KLBR Kellerberrin 33.72 193 P **P** **19 21 53.8 +0.3**
baz=34,SNR=185
KLBR Kellerberrin 33.72 193 P **P** **19 21 54.0 +0.5**
NAWB Namwon 33.95 2 IAmb IAmb 19 21 58.5
comp=Z,421nm,1.2s
RK1H Rockhampton Ha 33.99 138 P **P** **19 21 56.7 +0.8**
JHJ Hachijo jima 2 34.07 20 P **P** **19 21 56.7 +0.2**
comp=Z,124nm,0.7s,baz=224,slow=18,SNR=5.9
JHJ LR LR 19 35 22.3
comp=Z,9µm,21.3s,baz=197,slow=35
comp=Z,124nm,0.7s
JHJ2 Mitsune 34.08 20 P **P** **19 21 57.7 +1.2**
JHS Saijyo 34.11 10 IAmb IAmb 19 21 60.0
comp=Z,780nm,1.3s
JHS Saijyo 34.11 10 ⇑P **P** **19 21 58.1 +1.3**
JHS Saijyo 34.11 10 P **P** **19 21 57.7 +1.0**
JAD Aida 34.24 11 P **P** **19 21 58.5 +0.6**
JIE Ise 34.31 15 P **P** **19 21 59.6 +1.1**
PZH PanZhiHua 34.44 319 P **P** **19 21 59.6 -0.3**
PZH pP **pwP** **19 22 12.3 -0.9**
PZH PP **PP** **19 23 20.7 +2.2**
PZH PcP **PcP** **19 24 36.2 +1.4**
PZH S **S** **19 27 23.5 -1.9**
PZH sS **sS** **19 27 48.0 +4.0**
PZH PcS **PcS** **19 28 21.1 -0.4**
PZH SS **SnSn** **19 29 36.2 -2.6**
PZH ScS **ScS** **19 32 19.6 -0.1**
PZH pmax pmax
comp=Z,540nm,1.0s
PZH pmax pmax
comp=Z,1µm,8.0s
PZH LR LR
comp=Z,27µm,22.4s
PZH LR LR
comp=Z,24µm,22.6s
PZH LR LR
comp=Z,41µm,20.8s
MUN Mundaring 34.47 195 P **P** **19 22 00.4 +0.4**
baz=35,SNR=48
MUN Mundaring 34.47 195 P **P** **19 22 00.4 +0.4**
JWT Wachi 34.84 13 P **P** **19 22 04.0 +0.9**
PBA Port Blair 34.87 289 P **P** **19 22 01.9 -1.7**
PBA Port Blair 34.87 289 ⇑P **P** **19 22 02.4 -1.3**
TJN Taejon 34.90 1 *ce*P **P** **19 22 04.7 +1.1**
TJN Taejon 34.90 1 P **P** **19 22 05.6 +2.0**
JSG Sagara 34.99 17 P **P** **19 22 06.5 +2.2**
RMQ Roma 35.10 144 P **P** **19 22 05.4 -0.1**
baz=35,SNR=70
RMQ Roma 35.10 144 P **P** **19 22 05.7 +0.2**
NWAO Narrogin (SRO) 35.12 193 P **P** **19 22 05.4 -0.2**
NWAO IAmb IAmb 19 22 07.5
comp=Z,970nm,1.2s
NWAO Narrogin (SRO) 35.12 193 P **P** **19 22 05.4 -0.2**
NWAO pmax pmax
comp=Z,970nm,1.3s
NWAO MLR MLR
comp=Z,14µm,20.0s
NWAO Narrogin (SRO) 35.12 193 P **P** **19 22 06.4 +0.8**
NWAO P **P** **19 22 06.4 +0.8**
NWAO Narrogin (SRO) 35.12 193 P **P** **19 22 06.4 +0.8**
NWAO Narrogin (SRO) 35.12 193 P **P** **19 22 06.3 +0.8**
NWAO x **PcP** **19 24 37.5 +1.0**
HNR Honiara 35.14 108 P **P** **19 22 05.5 -0.5**
comp=Z,621nm,0.7s,baz=193,slow=3.9,SNR=43
HNR S **S** **19 27 30.3 -6.1**
comp=Z,55nm,0.8s,baz=207,slow=9.0,SNR=1.0
comp=Z,621nm,0.7s
HNR Honiara 35.14 108 P **P** **19 22 04.2 -1.8**
HNR Honiara 35.14 108 P **P** **19 22 06.5 +0.5**
comp=Z,1µm,1.1s
HNR Honiara 35.14 108 ⇑P **P** **19 22 04.7 -1.3**
HNR Honiara 35.14 108 P **P** **19 22 04.7 -1.3**
HNR pP **pP** **19 22 14.6 -2.5**
BBOO Buckleboo 35.16 166 P **P** **19 22 05.7 -0.3**
baz=35,SNR=297
BBOO Buckleboo 35.16 166 P **P** **19 22 05.8 -0.1**
BBOO Buckleboo 35.16 166 P **P** **19 22 06.1 +0.2**
INU Inuyama 35.29 15 IAmb IAmb 19 22 09.6
comp=Z,585nm,1.0s
INU Inuyama 35.29 15 P **P** **19 22 08.1 +1.1**
INU Inuyama 35.29 15 ⇓P **P** **19 22 07.7 +0.7**
INU Inuyama 35.29 15 P **P** **19 22 08.0 +1.1**
INU ScP **ScP** **19 28 22.1 +2.6**
KSCHJ Chungju 35.42 2 P **P** **19 22 09.2 +1.2**
KSCHJ IAmb IAmb 19 22 29.2
comp=Z,773nm,1.4s
LYN LuoYang 35.51 340 ⇑*i*P **P** **19 22 08.8 -0.1**
LYN pP pP 19 22 21.0 +0.8
LYN S **S** **19 27 35.2 -6.3**
LYN sS sS 19 28 01.6 +1.6
LYN pmax pmax
comp=Z,140nm,2.0s
LYN LR LR
comp=Z,11µm,22.0s
LYN LR LR
comp=Z,23µm,20.1s
LYN LR LR
comp=Z,24µm,23.5s
JGF Kuroka 35.62 16 ⇑P **P** **19 22 10.4 +0.6**
JGF Kuroka 35.62 16 P **P** **19 22 10.2 +0.3**
EIDS Eidsvold 35.74 140 P **P** **19 22 10.6 -0.4**
baz=36,SNR=97
EIDS Eidsvold 35.74 140 P **P** **19 22 10.3 -0.7**
EIDS IAmb IAmb 19 22 12.4
comp=Z,446nm,1.1s
EIDS Eidsvold 35.74 140 P **P** **19 22 11.2 +0.2**
EIDS Eidsvold 35.74 140 ⇑P **P** **19 22 10.6 -0.4**
TIA Tai'an 35.76 347 ⇑P **P** **19 22 10.9 -0.1**
TIA S **S** **19 27 43.8 -1.4**
TIA pmax pmax
comp=Z,170nm,1.1s
TIA LR LR
comp=Z,9µm,18.4s
TIA LR LR
comp=Z,8µm,22.9s
TIA LR LR
comp=Z,18µm,25.0s
WHYH Whyalla 35.77 164 P **P** **19 22 11.3 +0.2**
JOD2 Odawara 2 35.81 18 P **P** **19 22 10.4 -1.0**
INCN Inchon 35.99 0 P **P** **19 22 13.5 +0.5**
INCN Inchon 35.99 0 P **P** **19 22 13.5 +0.5**
INCN pmax pmax
comp=Z,157nm,1.0s
INCN MLR MLR
comp=Z,16µm,21.0s
INCN Inchon 35.99 0 P **P** **19 22 14.0 +1.0**
INCN P **P** **19 22 14.0 +1.0**
INCN P **P** **19 22 14.0 +1.0**
INCN Inchon 35.99 0 ⇑P **P** **19 22 14.4 +1.4**
INCN Inchon 35.99 0 P **P** **19 22 14.4 +1.4**
INCN pP **pP** **19 22 22.2 -2.1**
INCN sP **sP** **19 22 26.0 -3.3**
INCN x **PcP** **19 24 40.6 +1.6**
KSRS Korea Array 35.99 2 P **P** **19 22 14.6 +1.6**
comp=Z,49nm,0.7s,baz=181,slow=9.9,SNR=276
KSRS PcP **PcP** **19 24 40.4 +1.5**
comp=Z,47nm,1.0s,baz=194,slow=2.5,SNR=6.3
KSRS S **S** **19 27 47.0 -1.8**
comp=Z,3.7nm,1.0s,baz=202,slow=2.0,SNR=0.7
KSRS ScP **ScP** **19 28 22.0 +0.1**
comp=Z,13nm,0.9s,baz=175,slow=2.1,SNR=5.6
KSRS P3KPbc 19 52 51.8
comp=Z,1.1nm,0.8s,baz=344,slow=4.6,SNR=5.3
comp=Z,49nm,0.7s
KS19 Wonju Array Si 36.04 2 P **P** **19 22 14.0 +0.6**
KS19 IAmb IAmb 19 23 19.4
comp=Z,548nm,1.6s
STKA Stephens Creek 36.04 158 P **P** **19 22 13.7 +0.1**
comp=Z,532nm,0.8s,baz=330,slow=9.1,SNR=482
STKA S **S** **19 27 49.8 +0.1**
comp=Z,130nm,1.2s,baz=94,slow=19,SNR=4.3
comp=Z,532nm,0.8s
STKA Stephens Creek 36.04 158 P **P** **19 22 13.6 +0.1**
baz=36,SNR=386
STKA Stephens Creek 36.04 158 P **P** **19 22 13.6 +0.1**
STKA Stephens Creek 36.04 158 P **P** **19 22 13.9 +0.4**
NAPP Napperby 36.08 163 P **P** **19 22 14.4 +0.6**
JGN Niukaw 36.20 15 P **P** **19 22 15.0 +0.1**
CD2 Chengdu 36.38 326 ⇓*i*P **P** **19 22 15.7 -0.8**
CD2 sP sP 19 22 33.0 +0.5
CD2 PP **PP** **19 23 43.7 +3.8**
CD2 S **S** **19 27 57.0 +2.0**
CD2 pmax pmax
comp=Z,470nm,1.5s
CD2 pmax pmax
comp=Z,2µm,8.3s
CD2 LR LR
comp=Z,26µm,21.3s
CD2 LR LR
comp=Z,23µm,16.9s
XAN Xi'an 36.41 335 ⇑P **P** **19 22 16.0 -0.6**
XAN pP pP 19 22 27.9 +0.1
XAN PP **PP** **19 23 41.2 +1.1**
XAN S **S** **19 27 52.1 -3.2**
XAN ScP **ScP** **19 28 23.6 0.0**
XAN pmax pmax
comp=Z,570nm,1.3s
XAN pmax pmax
comp=Z,2µm,4.3s
XAN LR LR
comp=Z,13µm,17.6s
XAN LR LR
comp=Z,13µm,17.5s
XAN LR LR
comp=Z,27µm,22.6s
XAN Xi'an 36.41 335 P **P** **19 22 16.3 -0.3**
XAN pP **pP** **19 22 25.8 -2.0**
XAN sP **pwP** **19 22 28.9 -1.3**
XAN x **PcP** **19 24 41.4 +1.0**
JRY Ryogami san 36.45 17 P **P** **19 22 16.4 -0.5**
HTT Hallett 36.54 162 P **P** **19 22 18.1 +0.3**
baz=37,SNR=107
HTT Hallett 36.54 162 P **P** **19 22 18.2 +0.3**
HTT Hallett 36.54 162 ⇑P **P** **19 22 18.1 +0.3**
HJU Haeju 36.56 359 P **P** **19 22 19.4 +1.7**
HJU pP **pP** **19 22 29.3 +0.3**
HJU S **S** **19 28 00.2 +2.9**
HJU AmB
comp=Z,1µm,2.1s
HJU AMS AMS
comp=N,1µm,6.3s
HJU AMS AMS
comp=E,562nm,3.0s
HJU AMS AMS
comp=Z,887nm,4.7s
MJAR Matsushiro Arr 36.74 16 P **P** **19 22 18.1 -1.3**
comp=Z,140nm,0.9s,baz=186,slow=8.5,SNR=184
MJAR PcP **PcP** **19 24 42.5 +1.3**
comp=Z,71nm,1.1s,baz=199,slow=2.9,SNR=4.9
MJAR ScP **ScP** **19 28 25.0 +0.2**
comp=Z,2.3nm,0.9s,baz=186,slow=6.1,SNR=4.2
MJAR P3KPbc 19 52 49.7
comp=Z,3.6nm,1.1s,baz=13,slow=4.9,SNR=7.3
comp=Z,140nm,0.9s
MAJO Matsushiro 36.74 16 P **P** **19 22 18.9 -0.5**
MAJO IAmb IAmb 19 22 22.1
comp=Z,442nm,1.1s
MAJO Matsushiro 36.74 16 *c i*P **P** **19 22 18.3 -1.1**
MAJO pmax pmax
comp=Z,776nm,2.0s
MAJO Matsushiro 36.74 16 P **P** **19 22 19.2 -0.2**
MAJO Matsushiro 36.74 16 ⇓P **P** **19 22 19.1 -0.3**
MAJO Matsushiro 36.74 16 P **P** **19 22 19.1 -0.3**
MAJO x **PcP** **19 24 42.9 +1.7**
MAJO ScP **ScP** **19 28 27.6 +2.8**
MAT Matsushiro 36.74 16 P **P** **19 22 19.1 -0.3**
MJB9 Matsu-Tunnel 36.74 16 P **P** **19 22 18.9 -0.5**
MJB9 IAmb IAmb 19 22 22.0
comp=Z,436nm,1.1s
RKGY Rocky Gully 36.80 193 P **P** **19 22 21.8 +2.0**
baz=37,SNR=57
RKGY Rocky Gully 36.80 193 P **P** **19 22 22.0 +2.1**
HNS HongShan 37.47 345 ⇓P **P** **19 22 25.4 -0.2**
HNS S **S** **19 28 08.3 -3.0**
HNS SS **SnSn** **19 30 50.0 -1.8**
HNS pmax pmax
comp=Z,170nm,1.3s
HNS pmax pmax
comp=Z,2µm,4.9s
HNS LR LR
comp=Z,7µm,18.0s
HNS LR LR
comp=Z,10µm,20.6s
HNS LR LR
comp=Z,15µm,20.2s
CMSA Cobar Meteorol 37.49 152 P **P** **19 22 26.0 +0.2**
baz=38,SNR=129
CMSA Cobar Meteorol 37.49 152 P **P** **19 22 26.0 +0.2**
PYAG Pyongyang 37.56 359 P **P** **19 22 28.7 +2.4**
PYAG pP **pP** **19 22 38.5 +1.0**
PYAG S **S** **19 28 17.4 +4.8**
PYAG AmB
comp=Z,1µm,1.8s
PYAG AMS AMS
comp=N,2µm,7.9s
PYAG AMS AMS
comp=E,3µm,10.4s
PYAG AMS AMS
comp=Z,969nm,3.7s
DL2 Dalian 37.66 354 P **P** **19 22 28.0 +0.9**
DL2 S **S** **19 28 16.5 +2.4**
DL2 pmax pmax
comp=Z,1µm,1.8s
DL2 pmax pmax
comp=Z,4µm,8.7s
DL2 LR LR
comp=Z,15µm,15.5s
DL2 LR LR
comp=Z,9µm,14.7s
DL2 LR LR
comp=Z,18µm,16.3s
H01W3 Cape Leeuwin H 37.78 196 P **P** **19 22 30.5 +2.6**
baz=29,slow=7.6,SNR=24
H01W1 Cape Leeuwin H 37.78 196 P **P** **19 22 30.5 +2.5**
baz=29,slow=7.6,SNR=32
H01W2 Cape Leeuwin H 37.79 196 P **P** **19 22 30.6 +2.6**
baz=29,slow=7.6,SNR=24
TWOA Tennyson Woods 37.93 164 P **P** **19 22 30.8 +1.3**
JSD Sado 38.16 15 IAmb IAmb 19 22 33.4
comp=Z,690nm,1.0s
JSD Sado 38.16 15 ⇓P **P** **19 22 31.2 -0.1**
JSD Sado 38.16 15 P **P** **19 22 31.2 -0.1**
TIY Taiyuan 38.41 342 ⇑P **P** **19 22 34.0 +0.4**
TIY S **S** **19 28 20.3 -5.5**
TIY pmax pmax
comp=Z,93nm,1.0s
TIY pmax pmax
comp=Z,2µm,6.5s
TIY LR LR
comp=Z,10µm,23.4s
TIY LR LR
comp=Z,4µm,17.9s
TIY LR LR
comp=Z,17µm,22.7s
HHU Hamhung 38.45 1 P **P** **19 22 36.1 +2.3**
HHU pP **pP** **19 22 45.2 +0.1**
HHU S **S** **19 28 31.6 +5.6**
HHU AmB
comp=Z,966nm,1.5s
HHU AMS AMS
comp=N,6µm,6.4s
HHU AMS AMS
comp=E,5µm,5.6s
HHU AMS AMS
comp=Z,7µm,7.3s
SUJ Sinuiju 38.65 358 P **P** **19 22 37.3 +1.9**
SUJ pP **pP** **19 22 46.0 -0.7**
SUJ S **S** **19 28 31.6 +2.6**
SUJ AmB
comp=Z,1µm,1.3s
SUJ AMS AMS
comp=N,8µm,7.1s
SUJ AMS AMS
comp=E,6µm,5.3s
SUJ AMS AMS
comp=Z,11µm,9.2s
JMM Marumori 38.73 18 IAmb IAmb 19 22 39.9
comp=Z,862nm,0.8s
JMM Marumori 38.73 18 ⇑P **P** **19 22 36.4 +0.2**
JMM Marumori 38.73 18 P **P** **19 22 37.0 +0.9**
LKP Lekhapani 39.03 314 *eP* **P** **19 22 37.9 -0.9**
LKP IAmb IAmb 19 22 42.1
comp=Z,2µm,1.2s
JYA Atsumi 39.08 17 P **P** **19 22 40.5 +1.4**
KOHI KOHIMA 39.40 311 *eP* **P** **19 22 41.0 -1.1**
KOHI IAmb IAmb 19 22 44.7
comp=Z,240nm,0.6s
MOKO MOKOCHONG 39.42 312 *eP* **P** **19 22 41.7 -0.6**
MOKO IAmb IAmb 19 22 47.8
comp=Z,447nm,0.7s
AZL Aizawl 39.48 307 *eP* **P** **19 22 42.5 -0.3**
AZL IAmb IAmb 19 22 50.5
comp=Z,1µm,1.4s
BJT Baijiatuau 39.62 348 P **P** **19 22 43.0 -0.6**
BJT Baijiatuau 39.62 348 P **P** **19 22 43.0 -0.6**
BJT pmax pmax
comp=Z,359nm,1.2s
BJT MLR MLR
comp=Z,8µm,20.0s
BJT Baijiatuau 39.62 348 P **P** **19 22 44.2 +0.6**
BJT ScP **ScP** **19 28 36.9 +1.3**
BJI Beijing 39.64 348 P **P** **19 22 43.2 -0.5**
BJI PcS **PcS** **19 28 38.7 -1.3**
BJI S **S** **19 28 41.5 -2.4**
BJI pmax pmax
comp=Z,160nm,0.9s
BJI pmax pmax
comp=Z,2µm,4.0s
BJI LR LR
comp=Z,5µm,17.9s
BJI LR LR
comp=Z,4µm,21.2s
BJI LR LR
comp=Z,7µm,19.1s
ARMA Armidale 39.71 145 P **P** **19 22 45.4 +0.8**
baz=40,SNR=200
ARMA Armidale 39.71 145 P **P** **19 22 45.3 +0.7**
ARMA IAmb IAmb 19 22 47.2
comp=Z,1µm,1.2s
ARMA Armidale 39.71 145 P **P** **19 22 45.7 +1.1**
ARMA Armidale 39.71 145 ⇑P **P** **19 22 45.4 +0.8**
JORH JORHAT 39.85 312 *eP* **P** **19 22 45.0 -0.7**
JORH IAmb IAmb 19 22 52.8
comp=Z,2µm,1.2s
SILR SILCHAR 39.91 309 *eP* **P** **19 22 46.5 +0.3**
JOM Ohasama 40.36 18 P **P** **19 22 50.6 +0.9**
LZH Lanzhou 40.40 331 ⇓P **P** **19 22 50.6 +0.3**
LZH pP pwP 19 23 04.6 +0.6
LZH sP sP 19 23 09.5 +3.1
LZH PcP **PcP** **19 24 55.5 +2.6**
LZH ScP **ScP** **19 28 41.4 +2.4**
LZH PcS **PcS** **19 28 45.3 +1.7**
LZH S **S** **19 28 55.6 -0.2**
LZH ScS **ScS** **19 32 54.4 +1.2**
LZH pmax pmax
comp=Z,440nm,1.5s
LZH pmax pmax
comp=Z,4µm,4.6s
LZH LR LR
comp=Z,20µm,19.0s
LZH LR LR
comp=Z,20µm,19.0s
LZH LR LR
comp=Z,32µm,17.3s
SNY Shenyang 40.41 357 ⇑P **P** **19 22 51.6 +1.6**
SNY S **S** **19 28 58.8 +3.4**
SNY pmax pmax
comp=Z,880nm,1.0s
SNY pmax pmax
comp=Z,5µm,3.5s
SNY LR LR
comp=Z,13µm,20.2s
SNY LR LR
comp=Z,15µm,20.8s
SNY LR LR
comp=Z,21µm,17.3s
ITAN ITANAGAR 40.47 312 *eP* **P** **19 22 51.1 +0.3**
ITAN IAmb IAmb 19 23 00.0
comp=Z,626nm,1.1s
ARPS Mount Arapiles 40.54 161 P **P** **19 22 52.0 +0.8**
baz=41,SNR=242
ARPS Mount Arapiles 40.54 161 P **P** **19 22 52.0 +0.8**
ZIRO ZIRO 40.59 313 IAmb IAmb 19 22 59.5
comp=Z,582nm,1.0s
AGT Agartala 40.70 306 *eP* **P** **19 22 53.9 +1.1**
AGT IAmb IAmb 19 22 56.7
comp=Z,306nm,0.9s
TEZP TEZPUR 40.87 311 *eP* **P** **19 22 53.8 -0.4**
TEZP IAmb IAmb 19 22 56.8
comp=Z,1µm,1.5s
SHL Shillong 41.02 309 P **P** **19 22 54.8 -0.9**

SHL IAmb IAmb 19 23 03.8
comp=Z,366nm,0.7s
SHL Shillong 41.02 309 P **P** **19 22 54.8 -0.9**
SHL pmax pmax
comp=Z,366nm,0.7s
SHL Shillong 41.02 309 P **P** **19 22 55.3 -0.3**
SNR=186
SHL Shillong 41.02 309 *e*P **P** **19 22 55.0 -0.6**
SHL IAmb IAmb 19 23 03.8
comp=Z,303nm,0.5s
GUWA GUWAHATI 41.49 310 *e*P **P** **19 22 58.3 -1.0**
JTM Tenmabayashi 41.50 17 IAmb IAmb 19 23 02.1
comp=Z,1μm,0.9s
JTM Tenmabayashi 41.50 17 ⇑P **P** **19 23 00.2 +1.2**
JTM Tenmabayashi 41.50 17 P **P** **19 23 00.3 +1.2**
HHC Hu-ho-hao-te 41.56 343 ⇑*i*P **P** **19 23 00.3 +0.5**
HHC S **S** **19 29 10.4 -2.5**
HHC sS sS 19 29 31.0 -0.7
HHC pmax pmax
comp=Z,190nm,1.1s
HHC pmax pmax
comp=Z,6μm,6.6s
HHC LR LR
comp=Z,23μm,21.2s
HHC LR LR
comp=Z,9μm,18.6s
HHC LR LR
comp=Z,38μm,20.9s
KWAJ Kwajalein Atol 41.76 78 P **P** **19 23 01.0 -0.6**
KWAJ IAmb IAmb 19 23 04.1
comp=Z,1μm,1.4s
KWAJ Kwajalein Atol 41.76 78 IAMs_20 IAMs_20 19 40 43.8
comp=Z,18μm,19.0s
KWAJ Kwajalein Atol 41.76 78 P **P** **19 23 01.0 -0.6**
KWAJ pmax pmax
comp=Z,1μm,1.4s
KWAJ MLR MLR
comp=Z,18μm,19.0s
SYDH Sydney Hard Ro 41.77 149 P **P** **19 23 03.3 +1.9**
BTO Baotou 41.81 341 *e*P **P** **19 23 03.0 +1.2**
BTO PP **PnPn** **19 24 48.2 +3.8**
BTO S **S** **19 29 20.0 +3.4**
BTO LR LR
comp=Z,57μm,20.6s
BTO LR LR
comp=Z,62μm,22.2s
VLA Vladivostok 41.92 6*c i*P **P** **19 23 03.1 +0.7**
VLA pmax pmax
comp=Z,1μm,1.3s
VLA MLR MLR
comp=Z,8μm,21.0s
BRAT Ballarat 41.96 159 P **P** **19 23 04.8 +1.9**
JOT Ohata 42.04 17 *e*P **P** **19 23 05.0 +1.5**
CAN Canberra 42.16 152 P **P** **19 23 05.9 +1.2**
CAN Canberra 42.16 152 ⇑P **P** **19 23 05.8 +1.2**
CAN Canberra 42.16 152 P **P** **19 23 05.9 +1.2**
CAN PP **PP** **19 24 45.3 +2.4**
TURI Tura 42.23 308 *e*P **P** **19 23 02.8 -2.6**
TURI IAmb IAmb 19 23 06.5
comp=Z,232nm,1.0s
CN2 Changchun 42.31 359 *e*P **P** **19 23 05.3 -0.4**
CN2 *e*PP **PP** **19 24 46.5 +2.2**
CN2 *e*S **S** **19 29 22.7 -0.9**
CN2 *e*SS **SS** **19 32 26.8 -6.7**
CN2 pmax pmax
comp=Z,120nm,1.0s
CN2 pmax pmax
comp=Z,2μm,5.0s
CN2 LR LR
comp=Z,9μm,22.0s
CN2 LR LR
comp=Z,12μm,22.0s
CN2 LR LR
comp=Z,14μm,22.0s
CNB Canberra Magne 42.33 152 P **P** **19 23 07.1 +1.1**
baz=42,SNR=28
CNB Canberra Magne 42.33 152 P **P** **19 23 07.2 +1.1**
TOO Toolangi 42.56 157 P **P** **19 23 09.4 +1.5**
baz=43,SNR=55
TOO Toolangi 42.56 157 P **P** **19 23 08.4 +0.5**
TOO IAmb IAmb 19 23 14.6
comp=Z,815nm,1.4s
TOO Toolangi 42.56 157 P **P** **19 23 08.4 +0.5**
TOO pmax pmax
comp=Z,815nm,1.4s
TOO Toolangi 42.56 157 P **P** **19 23 09.4 +1.5**
TOO Toolangi 42.56 157 ⇑P **P** **19 23 09.3 +1.4**
JSH Shimam 42.95 15 P **P** **19 23 12.6 +1.8**
USA0B Ussuriysk Arra 43.00 6 IAmb IAmb 19 23 14.3
comp=Z,802nm,1.2s
USA0B Ussuriysk Arra 43.00 6*c i*P **P** **19 23 12.2 +1.0**
USRK Ussuriysk Ar. 43.00 6 P **P** **19 23 12.6 +1.3**
comp=Z,265nm,0.8s,baz=191,slow=7.5,SNR=431
USRK S **S** **19 29 31.0 -2.7**
comp=Z,1.5nm,0.5s,baz=198,slow=9.1,SNR=1.2
USRK LR LR 19 40 45.1
comp=Z,5μm,21.4s,baz=179,slow=36
USRK PKP2ab 19 56 21.7
comp=Z,2.2nm,0.8s,baz=29,slow=4.4,SNR=5.4
comp=Z,265nm,0.8s
KOUNC Koumac, New Ca 43.05 122 P **P** **19 23 11.8 -0.2**
KOUNC IAmb IAmb 19 23 17.8
comp=Z,1μm,1.9s
KOUNC Koumac, New Ca 43.05 122 ⇑P **P** **19 23 13.1 +1.1**
KOUNC Koumac, New Ca 43.05 122 ⇑P **P** **19 23 12.6 +0.6**
H11S3 WAKE ISLAND Hy 43.10 64 P **P** **19 23 13.0 +0.7**
baz=241,slow=6.4,SNR=21
H11S3 T T 20 10 02.2
baz=253,slow=75,SNR=548
H11S2 WAKE ISLAND Hy 43.12 64 P **P** **19 23 12.8 +0.4**
baz=241,slow=6.4,SNR=27
H11S2 T T 20 10 18.6
baz=253,slow=75,SNR=200
H11S1 WAKE ISLAND Hy 43.12 64 P **P** **19 23 12.9 +0.5**
baz=241,slow=6.4,SNR=24
H11S1 T T 20 10 17.7
baz=253,slow=75,SNR=116
MDJ Mudanjiang 43.22 3 P **P** **19 23 13.6 +0.6**
MDJ IAmb IAmb 19 23 16.1
comp=Z,632nm,0.9s
MDJ Mudanjiang 43.22 3 P **P** **19 23 15.0 +2.0**
MDJ S **S** **19 29 40.7 +3.8**
MDJ pmax pmax
comp=Z,840nm,0.9s
MDJ pmax pmax
comp=Z,5μm,4.6s
MDJ LR LR
comp=Z,11μm,18.5s
MDJ LR LR
comp=Z,6μm,18.5s
MDJ LR LR
comp=Z,22μm,18.5s
MDJ Mudanjiang 43.22 3 P **P** **19 23 14.8 +1.8**
MDJ pP **pP** **19 23 22.8 -1.7**
MDJ sP **sP** **19 23 26.2 -3.2**
ERM Erimo 43.26 18 P **P** **19 23 14.2 +0.9**
ERM Erimo 43.26 18*ce*P **P** **19 23 15.3 +2.0**
ERM pmax pmax
comp=Z,574nm,1.7s
ERM MLR MLR
comp=Z,10μm,21.0s
ERM Erimo 43.26 18 P **P** **19 23 15.6 +2.3**
ERM Erimo 43.26 18 ⇑P **P** **19 23 15.4 +2.0**
ERM Erimo 43.26 18 ⇑P **P** **19 23 15.4 +2.0**
JEM Erimo 43.26 18 P **P** **19 23 15.3 +2.0**
WAKE Wake Island 43.33 63 P **P** **19 23 14.3 0.0**
WAKE IAmb IAmb 19 23 15.8
comp=Z,685nm,1.1s
WAKE Wake Island 43.33 63 P **P** **19 23 16.2 +1.9**
WAKE Wake Island 43.33 63 ⇑P **P** **19 23 14.2 -0.1**
WAKE Wake Island 43.33 63 P **P** **19 23 14.2 -0.1**
WAKE ScP **ScP** **19 28 55.4 +4.7**
XLT XiLinHaoTe 43.37 349 ⇑*i*P **P** **19 23 15.2 +0.8**
XLT pP pP 19 23 24.2 -1.7
XLT sP sP 19 23 28.5 -2.3
XLT S **S** **19 29 37.6 -1.8**
XLT sS sS 19 30 03.7 +5.4
XLT SS **SS** **19 32 51.3 -3.2**
XLT pmax pmax
comp=Z,360nm,1.6s
XLT pmax pmax
comp=Z,4μm,4.5s
XLT LR LR
comp=Z,7μm,21.4s
XLT LR LR

comp=Z,10μm,21.8s
JEW Eniwo 43.51 16 P **P** **19 23 16.3 +1.0**
JEW Eniwo 43.51 16 ⇑P **P** **19 23 17.2 +1.9**
JEW Eniwo 43.51 16 P **P** **19 23 17.2 +1.9**
H11N1 WAKE ISLAND Hy 43.68 62 P **P** **19 23 17.5 +0.6**
baz=244,slow=11,SNR=23
H11N1 T T 20 11 28.9
baz=259
H11N2 WAKE ISLAND Hy 43.70 62 P **P** **19 23 17.6 +0.6**
baz=244,slow=11,SNR=25
H11N2 T T 20 11 30.2
baz=259,slow=74
H11N3 WAKE ISLAND Hy 43.70 63 P **P** **19 23 17.8 +0.7**
baz=244,slow=11,SNR=43
H11N3 T T 20 11 27.9
baz=259,slow=74
LSA Lhasa 43.76 314 IAmb IAmb 19 23 22.6
comp=Z,600nm,1.2s
LSA Lhasa 43.76 314 P **P** **19 23 18.9 +0.7**
LSA pmax pmax
comp=Z,220nm,1.1s
LSA LR LR
comp=Z,13μm,20.3s
LSA LR LR
comp=Z,8μm,21.0s
LSA LR LR
comp=Z,4μm,19.2s
LSA Lhasa 43.76 314 P **P** **19 23 19.1 +0.8**
LSA P **P** **19 23 19.1 +0.8**
LSA P **P** **19 23 19.1 +0.8**
LSA Lhasa 43.76 314 P **P** **19 23 19.0 +0.7**
LSA Lhasa 43.76 314 P **P** **19 23 19.0 +0.8**
LSA PP **PcP** **19 25 05.3 +0.7**
LSA ScP **ScP** **19 28 56.0 +3.0**
BNX BinXian 44.25 1 ⇓P **P** **19 23 21.7 +0.4**
BNX pP **pP** **19 23 34.0 +1.2**
BNX PP **PcP** **19 25 07.7 +2.5**
BNX S **S** **19 29 51.3 -0.7**
BNX sS **sS** **19 30 09.7 -1.2**
BNX pmax pmax
comp=Z,510nm,1.2s
BNX pmax pmax
comp=Z,6μm,6.5s
BNX LR LR
comp=Z,21μm,20.9s
BNX LR LR
comp=Z,8μm,16.3s
BNX LR LR
comp=Z,30μm,20.6s
GTK Tadong 44.45 309 *e*P **P** **19 23 23.1 -0.2**
GTK IAmb IAmb 19 23 28.2
comp=Z,430nm,1.3s
TEY Ternei 44.48 10*i*P **P** **19 23 25.0 +1.9**
TEY *e* 19 25 07.0
TEY *e*S **S** **19 29 56.1 +0.9**
TEY *e* 19 33 19.0
TEY pmax pmax
comp=E,30nm,0.8s
TEY pmax pmax
comp=N,260nm,0.9s
TEY pmax pmax
comp=Z,420nm,0.9s
TEY smax smax
comp=N,3μm,8.7s
TEY smax smax
comp=E,4μm,8.3s
GTA Gaotai 44.97 331 ⇓P **P** **19 23 27.0 -0.3**
GTA pP pP 19 23 38.7 0.0
GTA sP sP 19 23 46.0 +2.5
GTA PcP **PcP** **19 25 09.4 +1.3**
GTA PP **PP** **19 25 16.2 +3.1**
GTA ScP **ScP** **19 28 59.1 +1.8**
GTA PcS **PcS** **19 29 00.8 -1.1**
GTA S **S** **19 29 58.0 -4.9**
GTA ScS **ScS** **19 33 19.8 -1.5**
GTA pmax pmax
comp=E,61nm,1.5s
GTA pmax pmax
comp=E,1μm,6.5s
GTA LR LR
comp=E,12μm,18.9s
GTA LR LR
comp=E,17μm,18.9s
GTA LR LR
comp=E,24μm,20.0s
ASAJ Asahikawa 45.01 17 P **P** **19 23 29.0 +1.7**
comp=E,517nm,0.9s,baz=228,slow=11,SNR=418
ASAJ PcP **PcP** **19 25 10.2 +2.4**
comp=E,106nm,1.0s,baz=198,slow=6.4,SNR=1.7
ASAJ ScP **ScP** **19 28 56.4 -0.7**
comp=E,9.2nm,0.9s,baz=236,slow=6.4,SNR=2.8
ASAJ S **S** **19 30 02.6 -0.3**
comp=E,3.0nm,0.9s,baz=150,slow=20,SNR=0.8
ASAJ LR LR 19 41 33.0
comp=E,8μm,21.3s,baz=232,slow=35
comp=E,517nm,0.9s
ASAJ Asahikawa 45.01 17 P **P** **19 23 29.2 +1.9**
JKA Kamikawa-asahi 45.01 17 IAmb IAmb 19 23 30.6
comp=Z,760nm,1.0s
BOK Bokaro 45.08 303 *e*P **P** **19 23 28.3 0.0**
BOK IAmb IAmb 19 23 31.4
comp=Z,1μm,2.0s
JMP Maruseppu 45.13 17 P **P** **19 23 30.2 +1.9**
TAPN Taplejung 45.16 308 *e*P **P** **19 23 28.6 -0.6**
ODAN Odare 45.18 308 *e*P **P** **19 23 27.9 -1.4**
GOMU GeErMu 45.35 324 P **P** **19 23 31.6 +0.9**
GOMU pP pP 19 23 41.4 -0.7
GOMU PcP **PcP** **19 25 11.2 +1.5**
GOMU PP **PP** **19 25 19.2 +1.8**
GOMU S **S** **19 30 14.5 +5.5**
GOMU pmax pmax
comp=Z,250nm,1.6s
GOMU pmax pmax
comp=Z,1μm,6.0s
GOMU LR LR
comp=Z,10μm,21.2s
GOMU LR LR
comp=Z,6μm,19.6s
GOMU LR LR
comp=Z,6μm,21.6s
NOUC Port Laguerre 45.41 123 P **P** **19 23 31.6 +0.7**
NOUC Port Laguerre 45.41 123 P **P** **19 23 31.2 +0.2**
DZM Mont Dzumac 45.52 123 P **P** **19 23 32.2 +0.2**
comp=Z,212nm,0.9s,baz=294,slow=7.1,SNR=67
DZM PcP **PcP** **19 25 12.2 +1.9**
comp=Z,112nm,1.0s,baz=325,slow=2.3,SNR=3.6
comp=Z,212nm,0.9s
DZM Mont Dzumac 45.52 123 *e*P **P** **19 23 32.1 +0.2**
comp=Z,970nm,1.1s
DZM Mont Dzumac 45.52 123 P **P** **19 23 32.1 +0.2**
DZM IAmb IAmb 19 23 38.5
comp=Z,414nm,1.1s
DZM Mont Dzumac 45.52 123 P **P** **19 23 32.5 +0.6**
DZM Mont Dzumac 45.52 123 ⇑P **P** **19 23 32.6 +0.6**
DZM Mont Dzumac 45.52 123 P **P** **19 23 32.5 +0.6**
DZM sP **pP** **19 23 44.2 +1.0**
DZM x x 19 25 12.4
RTV Rentapao 45.58 117 P **P** **19 23 34.2 +1.9**
HALK Hakmana 45.78 277 ⇑P **P** **19 23 32.3 -1.7**
RAMN Ramite 45.85 307 *e*P **P** **19 23 34.2 -0.4**
comp=Z,2μm,1.3s
PALK Pallekele 45.86 279 P **P** **19 23 33.2 -1.4**
comp=Z,115nm,1.1s,baz=197,slow=8.5,SNR=21
PALK PcP **PcP** **19 25 11.4 -0.2**
comp=Z,149nm,0.9s,baz=184,slow=3.9,SNR=8.1
PALK S **S** **19 30 09.7 -6.5**
comp=Z,7.3nm,0.9s,baz=170,slow=23,SNR=1.0
PALK LR LR 19 44 43.0
comp=Z,27μm,20.3s,baz=206,slow=39
comp=Z,115nm,1.1s
PALK Pallekele 45.86 279 P **P** **19 23 33.4 -1.2**
PALK IAmb IAmb 19 23 36.7
comp=Z,581nm,1.4s
PALK Pallekele 45.86 279 P **P** **19 23 33.4 -1.2**
PALK pmax pmax
comp=Z,581nm,1.5s
PALK MLR MLR
comp=Z,27μm,20.0s
PALK Pallekele 45.86 279 P **P** **19 23 34.1 -0.5**
PALK P **P** **19 23 34.1 -0.5**
PALK Pallekele 45.86 279 ⇑P **P** **19 23 33.3 -1.4**
PALK Pallekele 45.86 279 P **P** **19 23 33.6 -1.0**
PALK sP **pP** **19 23 46.3 +0.3**
PALK x **PcP** **19 25 13.4 +1.9**
JWK2 Keihoku 45.92 15 P **P** **19 23 37.1 +2.5**

YUK Yuzh-Kuril'sk 45.95 20*d i*P **P** **19 23 35.5 +0.8**
YUK *i* 19 25 19.3
YUK *i* PPP PPP 19 26 02.2
YUK *e*S **S** **19 30 12.6 -3.9**
YUK *i* SS **SS** **19 33 40.7 -1.2**
YUK *i* SSS SSS 19 34 33.4
YUK pmax pmax
comp=Z,2μm,1.1s
YUK pmax pmax
comp=N,280nm,1.0s
MALK Mahakanadarawa 46.12 280 ⇑P **P** **19 23 35.7 -1.0**
GLAD Gladstone 46.49 157 P **P** **19 23 40.7 +1.6**
JIRN Jiri 46.49 308 *e*P **P** **19 23 39.3 -0.5**
comp=N,1μm,1.1s
TARA Tarawa 46.58 89 P **P** **19 23 40.0 -0.3**
TARA IAmb IAmb 19 23 46.7
comp=Z,357nm,1.0s
TARA Tarawa 46.58 89 P **P** **19 23 42.0 +1.7**
PINNC Pines Island, 46.59 123 P **P** **19 23 40.8 +0.6**
PINNC IAmb IAmb 19 23 45.1
comp=Z,376nm,1.0s
MARNC Mare, Loyalty 46.62 122 P **P** **19 23 42.9 +2.5**
MARNC Mare, Loyalty 46.62 122 ⇑P **P** **19 23 41.3 +1.0**
GUN Gumba 46.85 308 *e*P **P** **19 23 42.0 -0.6**
comp=Z,1μm,0.8s
PKI Pulchoki 47.07 307 *e*P **P** **19 23 43.2 -1.1**
comp=Z,619nm,1.1s
PKIN Phulchoki 47.08 307 *e*P **P** **19 23 43.2 -1.1**
comp=Z,497nm,0.9s
MDRS Chennai 47.09 287 *e*P **P** **19 23 43.9 -0.3**
MDRS IAmb IAmb 19 23 45.7
comp=Z,492nm,1.1s
KKN Kakani 47.27 308 *e*P **P** **19 23 44.2 -1.5**
KKN Kakani 47.27 308 *e*P **P** **19 23 44.4 -1.3**
DMN Daman 47.33 307 *e*P **P** **19 23 45.4 -0.8**
comp=Z,2μm,1.5s
MOO Moorlands 47.45 159 P **P** **19 23 48.3 +1.7**
baz=48,SNR=28
MOO Moorlands 47.45 159 P **P** **19 23 47.9 +1.3**
YSS Yuzh-Sakhalins 47.66 15 P **P** **19 23 48.5 +0.4**
YSS IAmb IAmb 19 23 50.7
comp=Z,675nm,1.1s
YSS Yuzh-Sakhalins 47.66 15*ce*P **P** **19 23 49.0 +0.9**
YSS pmax pmax
comp=Z,807nm,1.3s
YSS MLR MLR
comp=Z,10μm,21.0s
YSS Yuzh-Sakhalins 47.66 15 P **P** **19 23 49.9 +1.8**
YSS Yuzh-Sakhalins 47.66 15 ⇑P **P** **19 23 48.6 +0.4**
YSS Yuzh-Sakhalins 47.66 15 P **P** **19 23 49.0 +0.9**
YSS x **PcP** **19 25 19.3 +2.2**
KUR Kuril'sk 47.69 21*c i*P **P** **19 23 49.6 +1.3**
KUR *e* 19 25 18.3
KUR *e* 19 25 41.3
KUR *e*S **S** **19 30 42.0 +0.7**
KUR *e*SSS SSS 19 35 22.6
KUR pmax pmax
comp=Z,1μm,1.2s
KUR pmax pmax
comp=N,260nm,1.1s
KUR pmax pmax
comp=E,155nm,1.0s
KUR pmax pmax
comp=Z,7μm,9.9s
KUR pmax pmax
comp=N,4μm,8.4s
KUR pmax pmax
comp=E,3μm,6.7s
KUR MLR MLR
comp=Z,6μm,19.0s
KUR MLR MLR
comp=E,5μm,21.0s
KUR MLR MLR
comp=N,2μm,16.0s
GKN Gorkha 47.88 308 *e*P **P** **19 23 49.3 -1.0**
comp=N,550nm,0.9s
TAU Tasmania Unive 47.91 159 P **P** **19 23 50.8 +0.7**
TAU IAmb IAmb 19 23 55.5
comp=Z,539nm,1.2s
TAU Tasmania Unive 47.91 159 P **P** **19 23 50.8 +0.7**
TAU pmax pmax
comp=Z,539nm,1.3s
TAU Tasmania Unive 47.91 159 P **P** **19 23 51.4 +1.3**
TAU Tasmania Unive 47.91 159 ⇓P **P** **19 23 50.2 +0.1**
TAU Tasmania Unive 47.91 159 P **P** **19 23 51.1 +1.0**
TAU pP **pP** **19 23 58.2 -3.3**
TAU sP **pwP** **19 24 02.4 -1.8**
KLR Kul'dur 47.96 5 P **P** **19 23 50.9 +0.5**
baz=207,slow=7.7
KLR Kul'dur 47.96 5*ce*P **P** **19 23 49.3 -1.1**
KLR pmax pmax
comp=Z,614nm,1.2s
KLR MLR MLR
comp=Z,13μm,21.0s
HIA Hailar 48.10 354 P **P** **19 23 52.3 +0.7**
HIA IAmb IAmb 19 23 54.9
comp=Z,739nm,1.3s
HIA Hailar 48.10 354 IAMs_20 IAMs_20 19 48 05.8
comp=Z,13μm,18.0s
HIA Hailar 48.10 354*c i*P **P** **19 23 52.4 +0.8**
HIA pmax pmax
comp=Z,1μm,2.0s
HIA Hailar 48.10 354 P **P** **19 23 53.4 +1.8**
HIA x **PcP** **19 25 20.8 +2.1**
HIA PP **PP** **19 25 40.4 -3.8**
HIA ScP **ScP** **19 29 14.4 +4.4**
KOLN Koldanda 48.60 307 *e*P **P** **19 23 54.6 -1.4**
PYUN Piuthan 49.23 307 *e*P **P** **19 24 00.4 -0.4**
comp=Z,2μm,0.8s
ULN Ulaanbaatar 49.29 343 P **P** **19 24 01.1 +0.3**
ULN IAmb IAmb 19 24 33.4
comp=Z,400nm,1.3s
ULN Ulaanbaatar 49.29 343*ce*P **P** **19 24 01.3 +0.4**
ULN pmax pmax
comp=Z,411nm,1.7s
ULN Ulaanbaatar 49.29 343 P **P** **19 24 01.6 +0.7**
ULN P **P** **19 24 01.6 +0.7**
ULN Ulaanbaatar 49.29 343 ⇑P **P** **19 24 01.1 +0.3**
ULN Ulaanbaatar 49.29 343 P **P** **19 24 01.8 +0.9**
ULN pP **pP** **19 24 10.2 -2.3**
SONM Songino Array 49.45 342 P **P** **19 24 02.2 +0.1**
comp=Z,84nm,0.7s,baz=162,slow=7.5,SNR=175
SONM PcP **PcP** **19 25 23.2 -0.6**
comp=Z,72nm,0.9s,baz=167,slow=3.9,SNR=5.0
SONM ScP **ScP** **19 29 16.8 +0.9**
comp=Z,7.6nm,0.9s,baz=157,slow=1.5,SNR=2.7
SONM LR LR 19 48 45.0
comp=Z,6μm,18.5s,baz=157,slow=41
SONM P4KPbc 20 01 37.6
comp=Z,1.1nm,0.9s,baz=157,slow=5.1,SNR=4.4
comp=Z,84nm,0.7s
SONM Songino Array 49.45 342 P **P** **19 24 01.8 -0.3**
UGL Uglegorsk 49.47 14 ⇑*i*P **P** **19 24 03.9 +1.9**
UGL *e*S **S** **19 31 06.7 +0.4**
UGL pmax pmax
comp=Z,1μm,1.0s
UGL pmax pmax
comp=Z,7μm,7.7s
UGL smax smax
comp=E,6μm,11.0s
UGL smax smax
comp=N,6μm,7.3s
HYB Hyderabad 49.59 292 *e*P **P** **19 24 02.4 -1.1**
HYB IAmb IAmb 19 24 06.3
comp=Z,626nm,0.9s
HYBB Hyderabad (bro 49.59 292 *e*P **P** **19 24 02.6 -1.0**
HYBB IVmB_BB 19 24 04.3
comp=Z,4μm,1.8s
HYBB *e*pP **pP** **19 24 13.2 -1.8**
HYBB *e*PcP **PcP** **19 25 24.7 -0.1**
HYBB *e*PP **PP** **19 25 59.0 +0.7**
HYBB *e*ScP **ScP** **19 29 17.9 +0.8**
HYBB *e*PcS **PcS** **19 29 20.5 -1.3**
HYBB *e*S **S** **19 31 09.9 +0.7**
HYBB *e*sS **sS** **19 31 27.2 -1.1**
HYBB IVMs_BB IVMs_BB 19 44 00.8
comp=Z,2μm,23.2s
HYBB *e*SKKPdf **SKKPdf** **19 50 05.7 -0.8**
HYBB *e*SKKSdf **SKKSdf** **19 53 38.5 -1.8**
TRD Trivandrum 49.66 280 *e*P **P** **19 24 02.7 -1.4**
JBP Jabalpur 49.91 299 *e*P **P** **19 24 04.5 -1.3**
JBP *ex* **P** **19 24 04.5 -1.3**
baz=88,slow=10
JBP *e*S **S** **19 31 12.6 -0.7**
NFK Norfolk Island 49.95 131 P **P** **19 24 07.5 +1.5**

baz=50,SNR=5.1
NFK Norfolk Island 49.95 131 ⇓P **P 19 24 07.6 +1.6**
GRNR Gornyy 50.01 8⇑*i*P **P 19 24 08.2 +2.0**
GRNR *e*S **S 19 31 18.5 +4.5**
GRNR pmax pmax
comp=E,20nm,1.0s
GRNR pmax pmax
comp=N,190nm,1.1s
GRNR pmax pmax
comp=Z,370nm,1.1s
GRNR smax smax
comp=N,3.0nm,1.1s
GRNR MLR MLR
comp=E,3μm,16.0s
GRNR MLR MLR
comp=N,4μm,18.0s
GRNR MLR MLR
comp=Z,5μm,19.0s
PCHI Peechi 50.48 283 *e*P **P 19 24 08.7 -1.6**
PCHI *e*S **S 19 31 16.6 -5.0**
TYV Tymovskoe 51.27 13 *e*P **P 19 24 17.6 +2.0**
TYV *e*S **S 19 31 34.4 +3.1**
TYV pmax pmax
comp=Z,198nm,1.0s
TYV pmax pmax
comp=Z,3μm,5.6s
TYV smax smax
comp=N,5μm,9.1s
TYV smax smax
comp=E,2μm,9.1s
CIT Chita 51.66 350 *e*P **P 19 24 20.9 +2.4**
CIT *e* 19 24 27.6
CIT *e* 19 24 40.4
CIT *e* 19 25 34.8
CIT pmax pmax
comp=Z,3μm,1.7s
BHPL Bhopal 52.16 299 *e*P **P 19 24 21.8 -1.1**
BHPL IAmb IAmb 19 24 25.3
comp=Z,312nm,0.7s
ZEA Zeya 52.26 1*c e*P **P 19 24 23.8 +0.9**
ZEA *e*S **S 19 31 48.1 +3.3**
ZEA *e* 19 34 12.5
ZEA pmax pmax
comp=N,90nm,1.2s
ZEA pmax pmax
comp=Z,160nm,1.2s
ZEA pmax pmax
comp=N,1μm,8.4s
ZEA pmax pmax
comp=Z,2μm,8.2s
ZEA smax smax
comp=N,2μm,13.9s
ZEA MLR MLR
comp=E,4μm,19.0s
ZEA MLR MLR
comp=N,7μm,21.0s
ZEA MLR MLR
comp=Z,8μm,21.0s
ZAK Zakamensk 52.67 342 *e*P **P 19 24 26.0 -0.1**
ZAK pmax pmax
comp=Z,100nm,1.7s
NKL Nikolayevsk 53.02 11 *e*P **P 19 24 27.2 -1.3**
NKL *e*S **S 19 31 55.0 -0.2**
NKL pmax pmax
comp=E,3.0nm,1.1s
NKL pmax pmax
comp=N,2.0nm,1.2s
NKL pmax pmax
comp=Z,868nm,1.2s
NKL smax smax
comp=E,3.0nm,1.0s
NKL smax smax
comp=N,1.0nm,1.2s
NKL MLR MLR
comp=Z,4μm,17.0s
KAAM Kaadhehdhoo 53.33 270 P **P 19 24 30.7 -0.9**
KAAM IAmb IAmb 19 24 36.2
comp=Z,804nm,1.3s
KAAM Kaadhehdhoo 53.33 270 P **P 19 24 30.9 -0.6**
KAAM Kaadhehdhoo 53.33 270 ⇑P **P 19 24 31.1 -0.5**
MNCI Minicoy 53.49 279 P **P 19 24 31.9 -0.7**
MNCI Minicoy 53.49 279 ⇓P **P 19 24 33.4 +0.7**
MNCY Minicoy 53.51 279 *e*P **P 19 24 32.7 -0.2**
FUNA Funafuti 53.59 102 P **P 19 24 33.3 -0.1**
FUNA Funafuti 53.59 102 ⇑P **P 19 24 34.6 +1.2**
FUNA Funafuti 53.59 102 P **P 19 24 34.3 +0.9**
GOA Goa 53.65 288 *e*P **P 19 24 32.3 -1.5**
GOA IAmb IAmb 19 24 37.3
comp=Z,567nm,1.0s
IRK Irkutsk 54.01 343 *e*P **P 19 24 36.7 +0.9**
IRK *e*S **S 19 32 15.5 +6.8**
IRK pmax pmax
comp=Z,823nm,2.7s
DDI Dehra Dun 54.07 307 *e*P **P 19 24 36.0 -0.8**
DDI IAmb IAmb 19 24 47.8
comp=Z,550nm,0.7s
NDI New Delhi 54.13 305 *e*P **P 19 24 36.5 -0.7**
NDI *e*S **S 19 32 05.5 -5.7**
POO Poona 54.20 292 ⇓*i*P **P 19 24 34.0 -3.9**
comp=Z,220nm,1.2s
POO *e*P **P 19 24 36.1 -1.8**
POO IAmb IAmb 19 24 40.9
comp=Z,602nm,1.3s
POO *i* S **S 19 32 10.0 -2.5**
MSVF Nonsavu 54.31 113 LR LR 19 47 32.9
comp=Z,10μm,20.0s,baz=316,slow=36
MSVF Nonsavu 54.31 113 P **P 19 24 38.9 +0.2**
MSVF IAmb IAmb 19 24 43.5
comp=Z,501nm,0.9s
MSVF Nonsavu 54.31 113*c i*P **P 19 24 40.1 +1.4**
MSVF pmax pmax
comp=Z,471nm,0.9s
MSVF Nonsavu 54.31 113 P **P 19 24 41.0 +2.3**
MSVF Nonsavu 54.31 113 P **P 19 24 40.4 +1.7**
MSVF sP **sP 19 24 54.3 -0.6**
H08S2 Diego Garcia H 54.42 260 P **P 19 24 38.7 -0.5**
baz=31,slow=8.2,SNR=29
H08S3 Diego Garcia H 54.43 260 P **P 19 24 38.1 -1.2**
baz=31,slow=8.2,SNR=34
DGAR Diego Garcia 54.44 260 P **P 19 24 38.0 -1.6**
DGAR Diego Garcia 54.44 260*ce*P **P 19 24 38.5 -1.1**
DGAR pmax pmax
comp=Z,1μm,1.7s
DGAR Diego Garcia 54.44 260 P **P 19 24 38.9 -0.7**
DGAR P **P 19 24 38.9 -0.7**
DGAR Diego Garcia 54.44 260 ⇓P **P 19 24 39.0 -0.7**
DGAR ⇓P **P 19 24 41.1 +1.5**
DGAR Diego Garcia 54.44 260 P **P 19 24 38.4 -1.2**
DGAR x x 19 24 44.6
DGAR pP **pP 19 24 48.3 -2.9**
H08S1 Diego Carcia H 54.44 260 P **P 19 24 38.6 -0.8**
baz=31,slow=8.2,SNR=33
WMQ Urumqi 54.48 326 P **P 19 24 39.8 +0.3**
WMQ pP pwP 19 24 54.5 +0.9
WMQ PcP **PcP 19 25 44.2 +1.6**
WMQ S **S 19 32 10.5 -5.0**
WMQ ScS **ScS 19 34 24.5 -1.0**
WMQ pmax pmax
comp=Z,600nm,1.1s
WMQ pmax pmax
comp=Z,590nm,4.3s
WMQ LR LR
comp=Z,18μm,16.1s
WMQ LR LR
comp=Z,17μm,16.9s
WMQ LR LR
comp=Z,18μm,18.9s
WMQ Urumqi 54.48 326 P **P 19 24 40.2 +0.7**
MOY Mondy 54.51 341 *e*P **P 19 24 40.5 +0.9**
MOY pmax pmax
comp=Z,729nm,1.8s
KNGR Kungurtug, Tuv 54.85 338*c i*P **P 19 24 42.3 +0.2**
KNGR pmax pmax
comp=Z,384nm,1.3s
SMLA Simla 55.09 308 *e*P **P 19 24 43.9 -0.1**
SMLA IAmb IAmb 19 24 49.0
comp=Z,2μm,1.3s
SKR Severo-Kuril's 55.28 23*c i*P **P 19 24 45.7 +0.6**
SKR *e* 19 25 45.6
SKR *e* 19 26 49.2
SKR *e*S **S 19 32 24.6 -1.2**
SKR *e* 19 34 30.6
SKR pmax pmax
comp=Z,182nm,1.0s
SKR pmax pmax
comp=Z,2μm,8.7s
SKR MLR MLR
comp=Z,3μm,19.0s
OUZ Omahuta 57.16 134 IAMs_20 IAMs_20 19 51 11.1
comp=Z,15μm,19.0s
OUZ Omahuta 57.16 134 P **P 19 25 00.8 +2.1**
OUZ Omahuta 57.16 134 ⇑P **P 19 25 00.7 +1.9**
BOD Bodaibo 57.19 352 *e*P **P 19 24 59.9 +1.4**
BOD pmax pmax
comp=Z,802nm,1.7s
PEA0B Petropavlovsk- 57.81 22 IAmb IAmb 19 25 06.1
comp=Z,365nm,0.9s
PEA0B Petropavlovsk- 57.81 22*ce*P **P 19 25 05.0 +2.0**
PETK Petropavlovsk- 57.81 22 P **P 19 25 03.8 +0.8**
comp=Z,248nm,0.9s,baz=210,slow=8.6,SNR=189
PETK PcP **PcP 19 25 57.0 +1.8**
comp=Z,99nm,1.0s,baz=175,slow=4.5,SNR=1.7
PETK PKPPKP **P'P'df 19 54 45.0 -2.0**
comp=Z,10nm,1.1s,baz=67,slow=11,SNR=5.2
PETK PKP2bc 19 54 59.7
comp=Z,15nm,1.1s,baz=56,slow=9.5,SNR=5.0
comp=Z,248nm,0.9s
PET Petropavlovsk 58.10 22 P **P 19 25 05.8 +0.8**
PET IAmb IAmb 19 25 08.1
comp=Z,490nm,1.2s
PET Petropavlovsk 58.10 22*c i*P **P 19 25 06.4 +1.4**
PET *e* 19 25 57.3
PET *i* S **S 19 33 04.3 +1.3**
PET pmax pmax
comp=Z,490nm,1.3s
PET pmax pmax
comp=Z,2μm,8.8s
PET pmax pmax
comp=Z,2μm,7.7s
PET MLR MLR
comp=Z,4μm,17.0s
PET MLR MLR
comp=Z,4μm,19.0s
PET Petropavlovsk 58.10 22 P **P 19 25 06.3 +1.3**
PET Petropavlovsk 58.10 22 ⇑P **P 19 25 05.2 +0.1**
PET Petropavlovsk 58.10 22 P **P 19 25 06.8 +1.8**
PET pP **pP 19 25 14.6 -2.4**
ZSN Zaisan 58.32 328 *e*P **P 19 25 06.0 -0.7**
ZSN *e*S **S 19 33 06.6 +0.5**
ZSN pmax pmax
comp=Z,120nm,1.3s
ZSN Zaisan 58.32 328 *e*P **P 19 25 06.1 -0.7**
comp=Z,120nm,1.3s,baz=328
ZSN *e*S **S 19 33 06.7 +0.5**
baz=328
MSZ Milford Sound 58.84 146 P **P 19 25 11.6 +1.2**
DCZ Deep Cove 58.92 148 P **P 19 25 11.0 +0.1**
DCZ IAmb IAmb 19 25 16.4
comp=Z,345nm,1.2s
DCZ IAMs_20 IAMs_20 19 51 15.9
comp=Z,13μm,21.0s
PYZ Puysegur Point 59.13 148 IAmb IAmb 19 26 04.1
comp=Z,240nm,1.1s
MKAZ Moumakai 59.17 136 P **P 19 25 14.1 +1.3**
FOZ Fox Glacier 59.21 144 P **P 19 25 12.1 -0.9**
FOZ IAmb IAmb 19 26 04.3
comp=Z,273nm,1.1s
MK31 Makanchi Array 59.31 326 P **P 19 25 13.2 -0.5**
MK31 IAmb IAmb 19 25 22.1
comp=Z,280nm,0.9s
MK31 Makanchi Array 59.31 326 *i* P **P 19 25 13.2 -0.5**
MK31 pmax pmax
comp=Z,232nm,0.7s
MKAR Makanchi Array 59.31 326 P **P 19 25 13.3 -0.4**
comp=Z,184nm,0.6s,baz=122,slow=7.6,SNR=492
MKAR PcP **PcP 19 26 02.5 +1.1**
comp=Z,184nm,0.9s,baz=122,slow=4.6,SNR=5.2
MKAR ScP **ScP 19 30 00.0 +1.1**
comp=Z,7.3nm,1.0s,baz=150,slow=6.7,SNR=2.8
MKAR S **S 19 33 16.8 -2.4**
comp=Z,4.6nm,0.9s,baz=141,slow=4.8,SNR=3.0
MKAR LR LR 19 51 32.8
comp=Z,25μm,20.3s,baz=116,slow=37
MKAR PKPPKP P'P'df 19 54 31.9 -13
comp=Z,12nm,1.1s,baz=272,slow=3.1,SNR=17
MKAR PKP2bc 19 54 54.8
comp=Z,20nm,1.0s,baz=272,slow=2.3,SNR=11
MKAR P4KPbc 20 02 19.4
comp=Z,3.8nm,0.9s,baz=116,slow=5.5,SNR=28
comp=Z,184nm,0.6s
MKAR Makanchi Array 59.31 326*ce*P **P 19 25 13.3 -0.4**
MKAR pmax pmax
comp=Z,187nm,0.6s
QRZ Quartz Range 59.32 140 IAmb IAmb 19 25 19.0
comp=Z,575nm,1.3s
QRZ Quartz Range 59.32 140 P **P 19 25 14.9 +1.1**
AIS Amsterdam Isla 59.46 224 P **P 19 25 17.5 +2.7**
KSH Kashi 59.48 316 P **P 19 25 16.5 +1.4**
KSH S **S 19 33 19.5 -2.2**
KSH ScS **ScS 19 34 59.9 -2.3**
KSH pmax pmax
comp=Z,550nm,1.3s
KSH pmax pmax
comp=Z,2μm,6.0s
KSH LR LR
comp=Z,9μm,16.5s
KSH LR LR
comp=Z,9μm,16.1s
KSH LR LR
comp=Z,15μm,17.9s
MAKZ Makanchi 59.50 326 P **P 19 25 14.6 -0.4**
MAKZ Makanchi 59.50 326 P **P 19 25 14.6 -0.4**
MAKZ pmax pmax
comp=Z,2μm,1.8s
MAKZ MLR MLR
comp=Z,29μm,20.0s
MAKZ Makanchi 59.50 326 ⇑P **P 19 25 14.6 -0.4**
MAKZ ⇓P **P 19 25 14.7 -0.3**
MAKZ Makanchi 59.50 326 P **P 19 25 14.8 -0.1**
NEZ North Egmont 59.52 138 P **P 19 25 16.1 +0.8**
WKZ Wanaka 59.54 146 IAmb IAmb 19 26 02.4
comp=Z,255nm,1.1s
SATY Saty 59.57 321 *e*P **P 19 25 15.2 -0.4**
SATY *e*S **S 19 33 20.0 -2.7**
SATY pmax pmax
comp=Z,349nm,1.1s
SATY Saty 59.57 321 *e*P **P 19 25 15.3 -0.4**
comp=Z,349nm,1.1s,baz=321
SATY *e*S **S 19 33 20.1 -2.7**
baz=321
KPKS Kokpek 59.60 321 *e*P **P 19 25 15.3 -0.5**
KPKS *e*S **S 19 33 22.3 -0.8**
KPKS pmax pmax
comp=Z,345nm,1.3s
KPKS Kokpek 59.60 321 *e*P **P 19 25 15.3 -0.5**
comp=Z,345nm,1.3s,baz=321
KPKS *e*S **S 19 33 22.4 -0.8**
baz=321
WHZ Wether Hill Ro 59.62 147 IAMs_20 IAMs_20 19 51 37.2
comp=Z,16μm,22.0s
HIZ Hauiti 59.65 137 P **P 19 25 17.7 +1.6**
HIZ Hauiti 59.65 137 P **P 19 25 17.8 +1.7**
LREZ Lake Rotokare 59.82 138 P **P 19 25 20.1 +2.9**
VRZ Vera Road 59.89 138 P **P 19 25 17.4 -0.3**
KDJ Kajisay 59.89 319 P **P 19 25 17.6 -0.3**
KDJ IAmb IAmb 19 25 23.3
comp=Z,361nm,0.8s
KDJ Kajisay 59.89 319 P **P 19 25 17.6 -0.3**
KDJ pmax pmax
comp=Z,361nm,0.8s
LBZ Lake Benmore 59.93 145 IAmb IAmb 19 25 19.3
comp=Z,360nm,0.8s
EAZ Earnscleugh 59.95 146 P **P 19 25 19.1 +1.0**
MIDW Midway 59.99 58 P **P 19 25 18.4 -0.2**
MIDW IAmb IAmb 19 25 22.9
comp=Z,365nm,1.2s
TLZ Tolley Road 60.03 137 P **P 19 25 20.1 +1.3**
RPZ Rata Peaks 60.04 144 LR LR 19 51 59.8
comp=Z,13μm,21.9s,baz=306,slow=37
RPZ Rata Peaks 60.04 144 P **P 19 25 18.4 -0.3**
RPZ IAmb IAmb 19 25 23.9
comp=Z,391nm,1.0s
RPZ IAMs_20 IAMs_20 19 53 47.4
comp=Z,14μm,21.0s
RPZ Rata Peaks 60.04 144 P **P 19 25 19.4 +0.7**
THZ Tophouse 60.07 141 IAmb IAmb 19 25 20.2
comp=Z,191nm,0.8s
NNZ Nelson 60.07 140 IAmb IAmb 19 25 21.3
comp=Z,238nm,0.9s
LTZ Lake Taylor 60.24 142 IAmb IAmb 19 25 25.3
comp=Z,584nm,1.4s
LTZ Lake Taylor 60.24 142 P **P 19 25 21.5 +1.4**
WATZ Wairara 60.34 137 P **P 19 25 22.7 +1.8**
WAZ Wanganui 60.36 138 P **P 19 25 22.4 +1.5**
PKVZ Pokaka 60.37 138 P **P 19 25 22.2 +1.1**
OXZ Oxford 60.40 143 IAMs_20 IAMs_20 19 51 48.0
comp=Z,15μm,22.0s
MDOK Medeo 60.48 320 *e*P **P 19 25 21.0 -0.9**
MDOK *e*S **S 19 33 33.5 -1.0**
MDOK Medeo 60.48 320 *e*P **P 19 25 21.1 -0.9**
baz=320
MDOK *e*S **S 19 33 33.5 -1.0**
baz=320
TNSS Tian-Shan 60.48 320 *e*P **P 19 25 22.3 +0.1**
TNSS Tian-Shan 60.48 320 *e*P **P 19 25 22.4 +0.1**
baz=320
NGZ Ngauruhoe 60.48 137 P **P 19 25 23.3 +1.3**
OMRZ Omania 60.49 136 P **P 19 25 24.4 +2.5**
HSRZ Hossack Road 60.51 136 P **P 19 25 24.0 +2.0**
SNVZ South Ngauruho 60.51 137 P **P 19 25 21.5 -0.7**
ARXS Arharly 60.52 322 P **P 19 25 21.1 -1.0**
OTVZ Oturere 60.52 137 P **P 19 25 23.7 +1.4**
TMVZ Te Maari 60.52 137 P **P 19 25 24.2 +2.0**
ULHL Ulahol 60.56 319 P **P 19 25 22.4 -0.1**
SNR=113
TDK Taldyqorghan 60.57 323 *e*P **P 19 25 21.7 -0.6**
TDK *e*S **S 19 33 33.7 -1.6**
TDK pmax pmax
comp=Z,1μm,1.6s
TDK Taldyqorghan 60.57 323 *e*P **P 19 25 21.8 -0.6**
comp=Z,1μm,1.6s,baz=323
TDK *e*S **S 19 33 33.7 -1.6**
baz=323
AAA Alma-Ata 60.59 320 *e*P **P 19 25 22.7 +0.2**
AAA *e*S **S 19 33 34.6 -1.1**
AAA pmax pmax
comp=Z,858nm,1.4s
AAA Alma-Ata 60.59 320 *e*P **P 19 25 22.7 +0.2**
comp=Z,858nm,1.4s,baz=320
AAA *e*S **S 19 33 34.6 -1.1**
baz=320
ODZ Otahua Downs 60.59 145 P **P 19 25 22.9 +0.5**
ODZ Otahua Downs 60.59 145 ⇓P **P 19 25 22.8 +0.5**
YAK Yakutsk 60.62 2 P **P 19 25 22.7 +0.4**
comp=Z,295nm,0.8s,baz=178,slow=3.0,SNR=462
YAK S **S 19 33 32.4 -2.9**
comp=Z,1.3nm,0.5s,baz=233,slow=20,SNR=0.9
YAK LR LR 19 53 28.0
comp=Z,5μm,21.2s,baz=181,slow=38
comp=Z,295nm,0.8s
YAK Yakutsk 60.62 2 P **P 19 25 22.4 +0.2**
YAK Yakutsk 60.62 2*c i*P **P 19 25 22.9 +0.7**
YAK *e* 19 26 04.3
YAK *e* 19 27 36.2
YAK *e*S **S 19 33 34.1 -1.1**
YAK *e**SS **sS 19 33 59.2 +4.0**
YAK *e* 19 35 06.1
YAK pmax pmax
comp=Z,841nm,0.9s
YAK pmax pmax
comp=N,298nm,1.0s
YAK pmax pmax
comp=E,82nm,1.1s
YAK pmax pmax
comp=Z,484nm,1.6s
YAK pmax pmax
comp=N,464nm,1.7s
YAK pmax pmax
comp=E,127nm,1.5s
YAK smax smax
comp=N,3μm,4.0s
YAK smax smax
comp=E,3μm,4.2s
YAK MLR MLR
comp=Z,9μm,20.0s
YAK MLR MLR
comp=N,5μm,18.0s
YAK MLR MLR
comp=E,4μm,21.0s
YAK Yakutsk 60.62 2 ⇑P **P 19 25 22.2 -0.1**
YAK ⇑P **P 19 25 22.9 +0.7**
YAK Yakutsk 60.62 2 P **P 19 25 23.4 +1.2**
BSWZ Blackbirch Sta 60.65 141 P **P 19 25 21.9 -1.0**
MOVZ Moawhango 60.70 138 P **P 19 25 22.4 -1.0**
KHZ Kahutara 60.82 142 P **P 19 25 23.0 -0.9**
KHZ IAmb IAmb 19 25 25.0
comp=Z,288nm,0.9s
KHZ Kahutara 60.82 142 P **P 19 25 23.8 -0.2**
CHKK Chushkaly 60.86 321 *e*P **P 19 25 23.1 -1.2**
CHKK Chushkaly 60.86 321 *e*P **P 19 25 23.1 -1.2**
baz=321
MRHZ Matea Rd 60.87 137 P **P 19 25 25.3 +0.8**
SNZO South Karori 60.97 140 P **P 19 25 23.3 -1.7**
SNZO South Karori 60.97 140 P **P 19 25 24.5 -0.5**
SNZO South Karori 60.97 140 ⇓P **P 19 25 24.3 -0.7**
SNZO South Karori 60.97 140 P **P 19 25 24.1 -0.9**
SNZO pP **pP 19 25 35.9 -0.8**
SNZO sP **pwP 19 25 40.2 +0.4**
MQZ McQueen's Vall 60.99 143 P **P 19 25 25.7 +0.6**
URZ Urewera 61.08 136 LR LR 19 54 42.3
comp=Z,6μm,18.4s,baz=358,slow=39
URZ Urewera 61.08 136 IAmb IAmb 19 25 27.3
comp=Z,280nm,0.9s
URZ Urewera 61.08 136 P **P 19 25 24.9 -1.0**
URZ Urewera 61.08 136 P **P 19 25 25.9 0.0**
URZ Urewera 61.08 136 ⇑P **P 19 25 25.2 -0.7**
URZ ⇓P **P 19 25 25.4 -0.5**
BKZ Black Stump Fm 61.08 137 IAmb IAmb 19 25 28.7
comp=Z,454nm,0.9s
BKZ Black Stump Fm 61.08 137 P **P 19 25 25.7 -0.3**
BKZ Black Stump Fm 61.08 137 P **P 19 25 25.9 -0.1**
MA2 Magadan 61.13 14 S **S 19 33 41.1 -0.8**
comp=Z,2.3nm,0.7s,baz=156,slow=19,SNR=1.3
MA2 Magadan 61.13 14 P **P 19 25 26.9 +1.1**
MA2 Magadan 61.13 14*ce*P **P 19 25 26.9 +1.1**
MA2 pmax pmax
comp=Z,1μm,1.3s
MA2 MLR MLR
comp=Z,8μm,23.0s
MA2 Magadan 61.13 14 P **P 19 25 27.8 +2.0**
MA2 Magadan 61.13 14 ⇑P **P 19 25 27.4 +1.6**
MA2 ⇑P **P 19 25 27.5 +1.6**
MA2 Magadan 61.13 14 P **P 19 25 27.6 +1.8**
MA2 pP **pP 19 25 38.2 +0.3**
MA2 sP **sP 19 25 42.3 -0.4**
MRZ Mangatainoka R 61.21 139 P **P 19 25 25.7 -1.0**
NMHZ Naumai 61.27 137 P **P 19 25 28.2 +1.0**
KUU Kurty 61.29 321 *e*P **P 19 25 26.9 -0.3**
KUU *e*S **S 19 33 42.4 -2.1**
KUU pmax pmax
comp=Z,1μm,1.4s
KUU Kurty 61.29 321 *e*P **P 19 25 26.9 -0.3**
comp=Z,1μm,1.4s,baz=321
KUU *e*S **S 19 33 42.5 -2.1**
baz=321
TKM2 Tokmak 2 61.30 320 P **P 19 25 27.4 -0.1**
SNR=208
TKM2 Tokmak 2 61.30 320 *i* P **P 19 25 27.4 -0.1**
TKM2 pmax pmax
comp=Z,673nm,1.2s
RUGZ Raukumara Rang 61.34 135 P **P 19 25 28.2 +0.4**
KBK Karagaybulak 61.60 319 P **P 19 25 29.8 +0.3**
SNR=177
MXZ Matakaoa Point 61.61 135 P **P 19 25 28.2 -1.3**
MXZ Matakaoa Point 61.61 135 P **P 19 25 29.9 +0.4**
BFZ Birch Farm 61.66 139 P **P 19 25 28.7 -1.0**
BFZ IAmb IAmb 19 25 32.6
comp=Z,206nm,0.9s
BFZ IAMs_20 IAMs_20 19 53 40.4
comp=Z,13μm,19.0s
BFZ Birch Farm 61.66 139 P **P 19 25 29.0 -0.7**
BFZ Birch Farm 61.66 139 P **P 19 25 29.5 -0.2**
UCH Uchtor 61.69 318 P **P 19 25 31.0 +0.5**
SNR=307
PXZ Pawanui 61.75 138 P **P 19 25 29.9 -0.5**
MCQ Macquarie Isla 61.80 159 P **P 19 25 32.4 +2.1**
baz=62,SNR=14
CHMS Chumysh 61.88 319 P **P 19 25 31.2 -0.1**
SNR=80
CHMS Chumysh 61.88 319 *i* P **P 19 25 29.7 -1.6**
CHMS pmax pmax
comp=Z,262nm,1.2s
AAK Ala-Archa 61.88 319 P **P 19 25 31.9 +0.5**
SNR=65
AAK Ala-Archa 61.88 319 P **P 19 25 31.7 +0.3**

AAK PcP **PcP** **19 26 13.5 +1.4**
comp=Z,129nm,1.0s,baz=118,slow=3.9,SNR=4.0
AAK S **S** **19 33 50.1 -2.4**
comp=Z,2.3nm,0.5s,baz=215,slow=16,SNR=1.1
AAK PKPPKP **P'P'df** **19 54 34.1 -7.7**
comp=Z,2.9nm,0.3s,baz=314,slow=2.7,SNR=9.7
AAK P4KPbc 20 02 33.7
comp=Z,2.0nm,0.3s,baz=110,slow=4.5,SNR=3.7
comp=Z,124nm,1.0s
AAK Ala-Archa 61.88 319 P **P** **19 25 31.5 0.0**
AAK IAmb IAmb 19 25 36.4
comp=Z,900nm,1.7s
AAK Ala-Archa 61.88 319 IAMs_20 IAMs_20 19 55 14.9
comp=Z,13µm,21.0s
AAK Ala-Archa 61.88 319 P **P** **19 25 31.8 +0.3**
AAK P **P** **19 25 31.8 +0.3**
AAK P **P** **19 25 31.8 +0.3**
AAK Ala-Archa 61.88 319 *i* P **P** **19 25 31.7 +0.3**
SNR=82
AAK Ala-Archa 61.88 319 P **P** **19 25 32.1 +0.6**
AAK x x 19 26 13.6
KNTN Kanton 62.07 94 P **P** **19 25 34.6 +1.6**
KNTN pP **pP** **19 25 43.5 -1.4**
SGDS Sogindy 62.17 320 *e*P **P** **19 25 32.0 -1.2**
SGDS *e*S **S** **19 33 54.2 -1.6**
SGDS pmax pmax
comp=Z,196nm,1.5s
SGDS Sogindy 62.17 320 *e*P **P** **19 25 32.0 -1.2**
comp=Z,196nm,1.5s,baz=320
SGDS *e*S **S** **19 33 54.3 -1.6**
baz=320
AML Almayashu 62.19 318 P **P** **19 25 34.1 +0.3**
SNR=120
AML Almayashu 62.19 318 P **P** **19 25 34.6 +0.7**
AML Almayashu 62.19 318 *i* P **P** **19 25 34.0 +0.2**
SNR=254
EKS2 Erkin-Say 62.37 319 P **P** **19 25 35.0 +0.3**
SNR=144
SEM Semipalatinsk 62.53 329 *e*P **P** **19 25 33.9 -1.8**
SEM *e*S **S** **19 33 56.7 -3.7**
SEM pmax pmax
comp=Z,207nm,1.8s
SEM Semipalatinsk 62.53 329 *e*P **P** **19 25 33.9 -1.8**
comp=Z,207nm,1.8s,baz=329
SEM *e*S **S** **19 33 56.8 -3.7**
baz=329
ZAA0 Zalesovo Array 62.55 334 P **P** **19 25 34.5 -0.9**
ZAA0 IAmb IAmb 19 25 40.5
comp=Z,257nm,0.9s
ZALV Zalesovo Beam 62.55 334 P **P** **19 25 34.8 -0.7**
comp=Z,52nm,0.5s,baz=127,slow=5.7,SNR=138
ZALV PKKP **PKKPdf** **19 46 22.5 -0.7**
comp=Z,1.2nm,0.8s,baz=270,slow=1.2,SNR=4.0
ZALV LR LR 19 54 15.2
comp=Z,7µm,20.5s,baz=134,slow=37
ZALV PKPPKP **P'P'df** **19 54 33.3 -6.3**
comp=Z,9.9nm,1.0s,baz=299,slow=3.1,SNR=11
ZALV PKP2bc 19 54 47.9
comp=Z,33nm,1.0s,baz=293,slow=4.2,SNR=16
ZALV P4KPbc 20 02 34.4
comp=Z,0.3nm,0.2s,baz=194,slow=2.4,SNR=3.8
comp=Z,52nm,0.5s
KBL Kabul 62.69 309 P **P** **19 25 36.1 -0.9**
KBL Kabul 62.69 309 P **P** **19 25 36.1 -0.9**
KBL pmax pmax
comp=Z,1µm,1.5s
KBL Kabul 62.69 309 P **P** **19 25 36.6 -0.4**
SNR=318
KBL P **P** **19 25 36.6 -0.4**
SNR=318
KBL P **P** **19 25 36.6 -0.4**
SNR=318
AFI Afiamalu 63.13 106 P **P** **19 25 39.3 -0.8**
comp=Z,93nm,0.8s,baz=178,slow=13,SNR=6.7
comp=Z,93nm,0.8s
AFI Afiamalu 63.13 106 ⇓P **P** **19 25 43.4 +3.2**
AFI Afiamalu 63.13 106 P **P** **19 25 41.7 +1.6**
AFI pP **pP** **19 25 48.2 -4.0**
BTLS Baital 63.28 321 *e*P **P** **19 25 39.8 -0.7**
BTLS *e*S **S** **19 34 07.5 -1.9**
BTLS pmax pmax
comp=Z,181nm,1.3s
BTLS Baital 63.28 321 *e*P **P** **19 25 39.8 -0.7**
comp=Z,181nm,1.3s,baz=321
BTLS *e*S **S** **19 34 07.6 -1.9**
baz=321
KURBB Kurchatov Arra 63.56 328 P **P** **19 25 41.9 -0.3**
comp=Z,304nm,0.6s,baz=129,slow=6.3,SNR=1009
KURBB S **S** **19 34 08.0 -4.7**
comp=Z,0.4nm,0.7s,baz=126,slow=10,SNR=1.4
comp=Z,304nm,0.6s
KURK Kurchatov 63.56 328 P **P** **19 25 41.9 -0.3**
KURK Kurchatov 63.56 328 *ce*P **P** **19 25 41.9 -0.3**
KURK pmax pmax
comp=Z,2µm,1.7s
KURK MLR MLR
comp=Z,5µm,17.0s
KURK Kurchatov 63.56 328 P **P** **19 25 42.2 0.0**
KURK P **P** **19 25 42.2 0.0**
KURK Kurchatov 63.56 328 P **P** **19 25 42.2 0.0**
DZA Taraz 64.09 318 *e*P **P** **19 25 44.4 -1.5**
DZA *e*S **S** **19 34 18.8 -1.0**
DZA Taraz 64.09 318 *e*P **P** **19 25 44.5 -1.5**
baz=318
DZA *e*S **S** **19 34 18.9 -1.0**
baz=318
SEY Seymchan 64.46 13 S **S** **19 34 24.7 +1.2**
comp=Z,4.4nm,1.1s,baz=180,slow=20,SNR=2.0
SEY LR LR 19 56 19.7
comp=Z,2µm,19.1s,baz=201,slow=38
SEY Seymchan 64.46 13 *ce*P **P** **19 25 49.3 +1.4**
SEY pmax pmax
comp=Z,708nm,1.2s
IUG Iuzhnay 64.67 317 *e*P **P** **19 25 49.1 -0.8**
IUG *e*S **S** **19 34 26.3 -0.9**
IUG Iuzhnay 64.67 317 *e*P **P** **19 25 49.1 -0.8**
baz=317
IUG *e*S **S** **19 34 26.3 -0.9**
baz=317
KK31 Karatay Array 64.73 318 P **P** **19 25 49.4 -0.7**
KK31 IAmb IAmb 19 25 55.0
comp=Z,341nm,0.9s
KK31 Karatay Array 64.73 318 P **P** **19 25 49.4 -0.7**
KK31 pmax pmax
comp=Z,341nm,1.0s
KKAR Karatay Array 64.73 318 IAmb IAmb 19 25 55.0
comp=Z,341nm,0.9s
SHEM Shemya Is, Ala 64.74 30 P **P** **19 25 51.6 +1.7**
comp=Z,530nm,1.0s,baz=318,slow=1.9,SNR=13
SHEM LR LR 19 50 35.8
comp=Z,5µm,22.0s,baz=224,slow=33
comp=Z,530nm,1.0s
SMY Shemya 64.74 30 P **P** **19 25 50.2 +0.3**
SMY Shemya 64.74 30 P **P** **19 25 50.2 +0.3**
SMY pmax pmax
comp=Z,818nm,1.1s
JOHN Johnston Islan 64.89 72 P **P** **19 25 50.7 -0.8**
JOHN IAmb IAmb 19 25 54.7
comp=Z,440nm,0.8s
JOHN Johnston Islan 64.89 72 P **P** **19 25 53.8 +2.2**
JOHN Johnston Islan 64.89 72 P **P** **19 25 53.1 +1.6**
ROCAM Rodrigues Isla 65.14 248 P **P** **19 25 55.1 +1.9**
BRLS Borolday 65.15 318 *e*P **P** **19 25 52.4 -0.4**
BRLS *e*S **S** **19 34 31.6 -1.2**
BRLS Borolday 65.15 318 *e*P **P** **19 25 52.5 -0.4**
baz=317
BRLS *e*S **S** **19 34 31.7 -1.2**
baz=317
NIUE Niue 65.74 112 P **P** **19 25 56.1 -1.0**
baz=66,SNR=4.0
BRZS Berezniki 66.43 325 *e*P **P** **19 26 00.3 -0.6**
BRZS *e*S **S** **19 34 46.4 -1.7**
BRZS pmax pmax
comp=Z,299nm,1.5s
BRZS Berezniki 66.43 325 *e*P **P** **19 26 00.4 -0.6**
comp=Z,299nm,1.5s,baz=325
BRZS *e*S **S** **19 34 46.5 -1.7**
baz=325
NGCH Negor - Chabah 67.09 297 P **P** **19 26 06.4 +0.8**
SNR=5.4
CASY Casey 68.39 187 P **P** **19 26 13.3 +0.4**
CASY Casey 68.39 187 ⇑P **P** **19 26 13.8 +0.9**
DRV Dumont d'Urvil 68.53 174 P **P** **19 26 14.2 +0.4**
DRV PP **PP** **19 28 41.0 -4.4**
WBK Wadi Bani Khal 68.63 294 P **P** **19 26 14.8 -0.7**
SNR=22
WBK P **P** **19 26 14.8 -0.7**
SNR=22
WBK P **P** **19 26 14.8 -0.7**
SNR=22
WSAR Wadi Sarin 69.03 294 P **P** **19 26 16.3 -1.5**
comp=Z,157nm,1.0s,baz=128,slow=6.5,SNR=38
WSAR PKPPKP **P'P'df** **19 54 26.5 -4.7**
comp=Z,16nm,1.0s,baz=7.9,slow=3.5,SNR=3.8
WSAR LR LR 19 57 46.9
comp=Z,9µm,20.9s,baz=111,slow=37
comp=Z,157nm,1.0s
WSAR Wadi Sarin 69.03 294 P **P** **19 26 16.8 -1.1**
SNR=32
ADK Adak 69.18 34 P **P** **19 26 19.2 +1.0**
ADK IAmb IAmb 19 26 20.7
comp=Z,374nm,1.2s
ADK Adak 69.18 34 P **P** **19 26 19.2 +1.0**
ADK pmax pmax
comp=Z,374nm,1.2s
ADK Adak 69.18 34 P **P** **19 26 18.9 +0.8**
ADK Adak 69.18 34 P **P** **19 26 19.5 +1.3**
BRVK Borovoye 69.19 328 P **P** **19 26 18.1 -0.1**
BRVK IAmb IAmb 19 26 23.9
comp=Z,334nm,0.9s
BRVK Borovoye 69.19 328 IAMs_20 IAMs_20 19 57 15.1
comp=Z,12µm,21.0s
BRVK Borovoye 69.19 328 P **P** **19 26 18.2 -0.1**
BRVK pmax pmax
comp=Z,334nm,0.9s
BRVK MLR MLR
comp=Z,12µm,21.0s
BRVK Borovoye 69.19 328 P **P** **19 26 18.5 +0.2**
BRVK P **P** **19 26 18.5 +0.2**
BRVK P **P** **19 26 18.5 +0.2**
BRVK Borovoye 69.19 328 P **P** **19 26 18.4 +0.2**
MHTO MHTO 69.35 292 P **P** **19 26 19.0 -0.8**
SNR=56
MHTO P **P** **19 26 19.0 -0.8**
SNR=56
MHTO P **P** **19 26 19.0 -0.8**
SNR=56
JMDO Jabal Madar 69.40 293 P **P** **19 26 19.6 -0.5**
SNR=40
JMDO P **P** **19 26 19.6 -0.5**
SNR=40
JMDO P **P** **19 26 19.6 -0.5**
SNR=40
BIDO Bidbid 69.53 295 P **P** **19 26 20.4 -0.5**
SNR=50
BIDO P **P** **19 26 20.4 -0.5**
SNR=50
SMDO Samad 69.53 294 P **P** **19 26 20.2 -0.9**
SNR=26
SMDO P **P** **19 26 20.2 -0.9**
SNR=26
SMDO P **P** **19 26 20.2 -0.9**
SNR=26
DQM DQM 69.63 291 P **P** **19 26 21.4 -0.2**
SNR=52
DQM P **P** **19 26 21.4 -0.2**
SNR=52
PAF Port-aux-Franc 69.68 215 P **P** **19 26 22.3 +1.1**
PAF Port-aux-Franc 69.68 215 P **P** **19 26 22.3 +1.1**
PAF pmax pmax
comp=Z,877nm,1.3s
PAF Port-aux-Franc 69.68 215 P **P** **19 26 23.6 +2.3**
PAF sP **pwP** **19 26 36.3 +0.7**
JASK Jask - Hormozg 70.09 297 P **P** **19 26 24.9 +0.6**
SNR=23
TIXI Tiksi 70.25 1 S **S** **19 35 29.8 -2.9**
comp=Z,24nm,1.3s,baz=87,slow=23,SNR=3.6
TIXI LR LR 19 55 54.2
comp=Z,5µm,21.9s,baz=180,slow=35
TIXI Tiksi 70.25 1 P **P** **19 26 23.8 -0.6**
TIXI IAmb IAmb 19 26 26.1
comp=Z,561nm,1.3s
TIXI IAMs_20 IAMs_20 20 03 16.5
comp=Z,8µm,19.0s
TIXI Tiksi 70.25 1 *ce*P **P** **19 26 23.8 -0.6**
TIXI pmax pmax
comp=Z,513nm,1.3s
TIXI MLR MLR
comp=Z,8µm,18.0s
TIXI Tiksi 70.25 1 P **P** **19 26 24.4 +0.1**
TIXI PP **PP** **19 28 58.0 -2.3**
HOQ Hoqain 70.28 294 P **P** **19 26 25.4 -0.2**
SNR=45
HOQ P **P** **19 26 25.4 -0.2**
SNR=45
MSEY Mahe Island 71.03 265 P **P** **19 26 29.1 -1.2**
MSEY Mahe Island 71.03 265 P **P** **19 26 29.1 -1.2**
MSEY pmax pmax
comp=Z,221nm,1.0s
MSEY MLR MLR
comp=Z,16µm,22.0s
MSEY Mahe Island 71.03 265 P **P** **19 26 30.5 +0.2**
MSEY P **P** **19 26 30.5 +0.2**
MSEY Mahe Island 71.03 265 *i* P **P** **19 26 28.9 -1.5**
SNR=6.5
MSEY Mahe Island 71.03 265 P **P** **19 26 30.9 +0.5**
SHAO Shalim 71.25 288 P **P** **19 26 31.3 -0.2**
SNR=8.2
SHAO P **P** **19 26 31.3 -0.2**
SNR=8.2
SHAO Shalim 71.25 288 *i* P **P** **19 26 30.4 -1.2**
SNR=13
UOSS Minazif 71.45 296 P **P** **19 26 31.6 -1.1**
UOSS Minazif 71.45 296 *i* P **P** **19 26 31.0 -1.6**
SNR=21
UOSS Minazif 71.45 296 P **P** **19 26 31.5 -1.1**
UOSS PP **PP** **19 29 10.7 -0.9**
BANOM Banah 71.49 297 P **P** **19 26 32.7 -0.2**
SNR=16
BANOM Banah 71.49 297 *i* P **P** **19 26 32.0 -0.9**
SNR=32
HATD Hatta, Dubai 71.50 296 P **P** **19 26 32.6 -0.3**
SNR=35
HATD Hatta, Dubai 71.50 296 *i* P **P** **19 26 32.1 -0.8**
SNR=52
MSFE Esma-Masafi 71.55 296 *i* P **P** **19 26 32.4 -0.9**
SNR=24
MASF Masafi 71.55 296 P **P** **19 26 33.7 +0.5**
SNR=30
MASF P **P** **19 26 33.7 +0.5**
SNR=30
ASHO Ashiyiah 71.55 295 P **P** **19 26 33.0 -0.2**
SNR=43
ASHO Ashiyiah 71.55 295 *i* P **P** **19 26 32.3 -1.0**
SNR=63
SHME Shamm 71.65 297 P **P** **19 26 34.2 +0.4**
SNR=13
SHME Shamm 71.65 297 *i* P **P** **19 26 33.0 -0.8**
SNR=39
ALNE Al Ain 71.75 295 P **P** **19 26 34.1 -0.3**
SNR=153
ALNE P **P** **19 26 34.1 -0.3**
SNR=153
ALNE Al Ain 71.75 295 *i* P **P** **19 26 33.8 -0.7**
SNR=51
DMTO DMTO 71.87 288 P **P** **19 26 34.9 -0.3**
DMTO P **P** **19 26 34.9 -0.3**
NAZ Nazwa, Dubai 71.94 296 P **P** **19 26 35.2 -0.4**
SNR=22
NAZ Nazwa, Dubai 71.94 296 *i* P **P** **19 26 34.5 -1.1**
SNR=13
BILL Bilibino 71.98 15 P **P** **19 26 35.1 +0.2**
BILL Bilibino 71.98 15 *di* P **P** **19 26 35.3 +0.4**
BILL *i* 19 29 19.7
BILL *i* S **S** **19 35 52.5 -0.4**
BILL pmax pmax
comp=Z,429nm,2.5s
BILL MLR MLR
comp=Z,3µm,20.0s
FAQ Al Faqa, Dubai 71.98 295 P **P** **19 26 35.5 -0.3**
SNR=33
FAQ P **P** **19 26 35.5 -0.3**
SNR=33
FAQ Al Faqa, Dubai 71.98 295 *i* P **P** **19 26 34.5 -1.3**
SNR=50
UMQ Umm Al-Quwin 72.01 296 P **P** **19 26 36.5 +0.6**
SNR=7.4
UMQ P **P** **19 26 36.5 +0.6**
SNR=7.4
UMQ Umm Al-Quwin 72.01 296 *i* P **P** **19 26 35.9 0.0**
SNR=7.4
GEYT Alibeck 72.10 310 P **P** **19 26 36.6 +0.3**
comp=Z,187nm,0.8s,baz=164,slow=6.0,SNR=115
GEYT PKPPKP **P'P'df** **19 54 21.7 -3.4**
comp=Z,1.2nm,0.8s,baz=192,slow=8.3,SNR=2.2
comp=Z,187nm,0.8s
GEYT Alibeck 72.10 310 IAmb IAmb 19 26 42.0
comp=Z,304nm,1.1s
GYA0B ALIBECK ARRAY 72.10 310 IAmb IAmb 19 26 42.0
comp=Z,390nm,1.0s
UMZA Um Al Zommool 72.14 293 P **P** **19 26 35.7 -1.1**
UMZA P **P** **19 26 35.7 -1.1**
ASUD Al Ashush, Dub 72.20 295 P **P** **19 26 37.4 +0.3**
SNR=78
ASUD P **P** **19 26 37.4 +0.3**
SNR=78
ASUD Al Ashush, Dub 72.20 295 *i* P **P** **19 26 36.8 -0.3**
SNR=123
RER Riviere de l'E 72.42 247 P **P** **19 26 39.4 +0.8**
RER IAmb IAmb 19 26 45.1
comp=Z,314nm,0.9s
RER Riviere de l'E 72.42 247 P **P** **19 26 39.9 +1.3**
SOCY Socotra 72.46 282 P **P** **19 26 37.7 -1.2**
SOCY IAmb IAmb 19 26 41.2
comp=Z,486nm,0.9s
SOCY IAMs_20 IAMs_20 19 59 17.6
comp=Z,11µm,20.0s
SOCY Socotra 72.46 282 P **P** **19 26 38.2 -0.8**
SNR=13
AJN Ajban 72.50 295 P **P** **19 26 38.6 -0.3**
SNR=93
AJN P **P** **19 26 38.6 -0.3**
SNR=93
AJN Ajban 72.50 295 *i* P **P** **19 26 38.1 -0.8**
SNR=55
RBK Rabkut 72.56 288 P **P** **19 26 39.1 -0.4**
SNR=13
RBK P **P** **19 26 39.1 -0.4**
SNR=13
NRIK Noril'sk 72.67 347 P **P** **19 26 39.5 +0.6**
comp=Z,337nm,0.8s,baz=129,slow=6.2,SNR=376
NRIK S **S** **19 35 58.5 -2.3**
comp=Z,16nm,1.0s,baz=192,slow=23,SNR=16
NRIK PKPPKP **P'P'df** **19 54 14.6 -7.5**
comp=Z,1.7nm,0.4s,baz=20,slow=2.7,SNR=7.1
comp=Z,337nm,0.8s
NRIK Noril'sk 72.67 347 IAmb IAmb 19 26 41.5
comp=Z,485nm,0.8s
NRIK Noril'sk 72.67 347 *ce*P **P** **19 26 39.7 +0.7**
NRIK pmax pmax
comp=Z,484nm,0.9s
DOK Doka 72.72 289 P **P** **19 26 39.8 -0.5**
SNR=54
DOK P **P** **19 26 39.8 -0.5**
SNR=54
WHFO Wadi Hawf 73.01 288 P **P** **19 26 41.2 -0.9**
SNR=24
WHFO P **P** **19 26 41.2 -0.9**
SNR=24
ABTO Aybut 73.42 288 P **P** **19 26 43.8 -0.7**
SNR=14
ABTO P **P** **19 26 43.8 -0.7**
SNR=14
MZWR Madinat Zayed 73.42 294 P **P** **19 26 43.6 -0.7**
MZWR P **P** **19 26 43.6 -0.7**
MZR Muzera 73.71 293 P **P** **19 26 46.4 +0.2**
SNR=119
MZR P **P** **19 26 46.4 +0.2**
SNR=119
MZR Muzera 73.71 293 *i* P **P** **19 26 45.5 -0.6**
SNR=42
ABKAR Akbulak array 73.76 321 P **P** **19 26 45.5 -0.3**
ABKAR IAmb IAmb 19 26 51.4
comp=Z,296nm,0.8s
NIKH Nikolski High 74.01 35 IAmb IAmb 19 26 49.6
comp=Z,260nm,0.9s
NIKH Nikolski High 74.01 35 P **P** **19 26 48.0 +0.7**
baz=250,SNR=9.4
NIKH S **S** **19 36 16.6 +0.1**
baz=250
GHWR Ruwais 74.36 294 P **P** **19 26 49.7 -0.1**
JRN Qarnain Island 74.48 295 P **P** **19 26 50.2 -0.3**
SNR=136
JRN P **P** **19 26 50.2 -0.3**
SNR=136
SPIA Saint Paul Isl 74.77 30 IAmb IAmb 19 26 55.6
comp=Z,828nm,1.2s
SPIA Saint Paul Isl 74.77 30 P **P** **19 26 53.4 +1.9**
baz=248
SPIA S **S** **19 36 26.5 +1.7**
baz=248
AKTO Aktyubinsk 75.30 322 P **P** **19 26 55.2 +0.5**
comp=Z,510nm,0.9s,baz=104,slow=6.8,SNR=337
AKTO S **S** **19 36 25.4 -5.7**
comp=Z,2.3nm,0.8s,baz=188,slow=14,SNR=1.3
AKTO LR LR 20 01 35.1
comp=Z,13µm,21.5s,baz=109,slow=37
comp=Z,510nm,0.9s
UNV Unalaska Valle 75.63 34 IAmb IAmb 19 27 06.3
comp=Z,663nm,1.2s
UNV Unalaska Valle 75.63 34 P **P** **19 26 57.8 +1.3**
baz=252,SNR=41
UNV S **S** **19 36 33.0 -1.5**
baz=252
SVE Sverdlovsk 75.80 329 *d* P **P** **19 26 58.2 +0.7**
SVE *e*S **S** **19 36 31.9 -4.5**
SVE pmax pmax
comp=Z,2µm,1.4s
SVE MLR MLR
comp=Z,5µm,19.0s
KIP Kipapa 76.17 68 IAMs_20 IAMs_20 19 59 11.0
comp=Z,7µm,20.0s
KIP Kipapa 76.17 68 *ce*P **P** **19 26 59.7 -0.6**
KIP pmax pmax
comp=Z,246nm,1.3s
XMAS Kiritimati 76.19 88 IAMs_20 IAMs_20 19 57 29.7
comp=Z,9µm,20.0s
XMAS Kiritimati 76.19 88 P **P** **19 27 02.5 +1.9**
SHMA Al-Shehemyia 76.26 296 P **P** **19 27 00.4 -0.4**
SMRA Abu-Samra 76.29 295 P **P** **19 27 00.3 -0.6**
SAKB Bahrain 76.66 296 P **P** **19 27 02.7 -0.3**
GAMB Gambell 76.75 24 IAmb IAmb 19 27 06.2
comp=Z,501nm,1.1s
GAMB Gambell 76.75 24 P **P** **19 27 04.5 +1.8**
baz=245,SNR=23
GAMB S **S** **19 36 47.6 +1.1**
baz=245
ARU Arti 76.76 328 P **P** **19 27 03.1 +0.1**
comp=Z,442nm,0.6s,baz=110,slow=3.6,SNR=430
ARU S **S** **19 36 39.4 -7.4**
comp=Z,2.6nm,0.7s,baz=81,slow=19,SNR=1.1
ARU LR LR 20 02 07.2
comp=Z,8µm,21.1s,baz=108,slow=37
comp=Z,442nm,0.6s
ARU Arti 76.76 328 P **P** **19 27 02.5 -0.4**
ARU IAMs_20 IAMs_20 20 01 54.1
comp=Z,10µm,21.0s
ARU Arti 76.76 328 *c* i P **P** **19 27 02.9 0.0**
ARU **19 27 13.3**
ARU PPP PPP 19 31 39.2
ARU S **S** **19 36 49.0 +2.1**
ARU **19 37 19.1**
ARU SSS SSS 19 45 04.9
ARU pmax pmax
comp=Z,827nm,0.9s
ARU MLR MLR
comp=Z,7µm,18.0s
SBV Sambava 77.10 256 P **P** **19 27 06.7 +1.0**
SNR=18
SBV Sambava 77.10 256 P **P** **19 27 06.8 +1.2**
FALS False Pass 77.65 34 P **P** **19 27 08.5 +0.5**
FALS False Pass 77.65 34 P **P** **19 27 09.0 +1.1**
baz=254,SNR=39
FALS S **S** **19 36 55.4 -1.2**
baz=254
FALS False Pass 77.65 34 P **P** **19 27 09.5 +1.6**
POHA Pohakuloa 78.39 70 IAMs_20 IAMs_20 20 01 36.0
comp=Z,8µm,19.0s
POHA Pohakuloa 78.39 70 P **P** **19 27 15.4 +2.3**
TNA Tin City 78.96 23 P **P** **19 27 16.7 +1.8**
baz=248,SNR=9.8
TNA S **S** **19 37 11.0 +0.8**
baz=248
SDPT Sand Point 79.41 34 P **P** **19 27 18.7 +1.1**
baz=257,SNR=48
SDPT S **S** **19 37 14.1 -1.3**
baz=257
ANM Nome 79.62 24 P **P** **19 27 21.0 +2.4**
baz=251,SNR=32

ANM S **S** **19 37 19.5 +2.1**
baz=251
CHNA Chernabura Isl 79.79 34 P **P** **19 27 21.0 +1.3**
baz=258,SNR=16
CHNA S **S** **19 37 20.0 +0.5**
baz=258
ABPO Ambohimpanom 80.13 251 P **P** **19 27 22.7 +0.2**
ABPO Ambohimpanom 80.13 251 IAMs_20 IAMs_20 19 58 42.1
comp=Z,7µm,20.0s
ABPO Ambohimpanom 80.13 251 P **P** **19 27 22.7 +0.2**
ABPO pmax pmax
comp=Z,211nm,1.2s
ABPO MLR MLR
comp=Z,7µm,20.0s
OPO Ambohidratompo 80.13 251 S **S** **19 37 23.8 -0.9**
CRZF Crozet Islands 80.29 223 P **P** **19 27 24.1 +1.5**
CRZF IAmb IAmb 19 27 25.8
comp=Z,564nm,1.3s
CRZF IAMs_20 IAMs_20 19 57 15.8
comp=Z,8µm,21.0s
VOI Vohitsoka 80.78 248 P **P** **19 27 26.4 +0.5**
SNR=22
VOI Vohitsoka 80.78 248 P **P** **19 27 26.5 +0.6**
MAK Makhachkala 80.92 313*d iP* **P** **19 27 27.1 +1.0**
MAK *e*PPP PPP 19 32 21.6
MAK *e*S **S** **19 37 33.2 +1.4**
MAK *e*SS **SS** **19 42 49.1 +2.5**
MAK *e*SSS SSS 19 46 13.7
MAK pmax pmax
comp=Z,883nm,1.2s
MAK MLR MLR
comp=Z,5µm,20.0s
RAYN Ar Rayn 81.06 293 P **P** **19 27 27.1 -0.2**
RAYN IAmb IAmb 19 27 29.9
comp=Z,482nm,0.9s
RAYN Ar Rayn 81.06 293 P **P** **19 27 27.1 -0.2**
RAYN pmax pmax
comp=Z,482nm,1.0s
RAYN Ar Rayn 81.06 293 P **P** **19 27 27.4 +0.1**
RAYN Ar Rayn 81.06 293 *i* P **P** **19 27 27.3 0.0**
SNR=554
VNDA Vanda 81.10 173 P **P** **19 27 26.7 +0.4**
comp=Z,267nm,0.9s,baz=319,slow=6.0,SNR=296
VNDA S **S** **19 37 31.1 -1.3**
comp=Z,1.9nm,1.1s,baz=40,slow=21,SNR=10
VNDA ScS **ScS** **19 37 59.0 +8.6**
comp=Z,3.7nm,1.2s,baz=337,slow=6.1,SNR=3.4
VNDA PKKPbc **PKKPbc** **19 46 04.7 -1.7**
comp=Z,6.3nm,1.1s,baz=255,slow=2.7,SNR=8.9
VNDA PKPPKP **P'P'df** **19 54 02.5 -3.9**
comp=Z,3.1nm,1.0s,baz=277,slow=1.1,SNR=6.2
VNDA LR LR 20 04 06.1
comp=Z,4µm,20.0s,baz=342,slow=36
comp=Z,267nm,0.9s
VNDA Vanda 81.10 173 P **P** **19 27 26.7 +0.4**
VNDA IAmb IAmb 19 27 29.9
comp=Z,334nm,1.1s
MAW Mawson 81.36 200 P **P** **19 27 29.2 +1.3**
comp=Z,194nm,1.2s,baz=62,slow=6.4,SNR=86
MAW PKKPbc **PKKPbc** **19 46 03.3 -2.2**
comp=Z,5.6nm,1.1s,baz=90,slow=4.8,SNR=5.3
MAW LR LR 20 02 01.0
comp=Z,3µm,20.7s,baz=59,slow=34
comp=Z,194nm,1.2s
MAW Mawson 81.36 200 P **P** **19 27 29.0 +1.2**
baz=81,SNR=62
MAW Mawson 81.36 200 P **P** **19 27 28.5 +0.6**
N16K Nishlik Lake 81.44 29 P **P** **19 27 30.9 +2.4**
baz=257,SNR=122
N16K S **S** **19 37 38.5 +1.9**
baz=257
P16K Nushagak River 81.53 30 P **P** **19 27 31.0 +2.1**
baz=258,SNR=45
P16K S **S** **19 37 38.9 +1.5**
baz=258
O16K Kokwok River B 81.59 30 P **P** **19 27 31.0 +1.7**
baz=258,SNR=135
O16K S **S** **19 37 39.3 +1.2**
baz=258
RDOG Red Dog Mine 81.67 21 IAmb IAmb 19 27 29.2
comp=Z,887nm,1.4s
RDOG Red Dog Mine 81.67 21 P **P** **19 27 27.8 -1.8**
baz=252,SNR=62
RDOG S **S** **19 37 36.2 -2.5**
baz=252
SBA Scott Base 82.01 172 P **P** **19 27 32.1 +1.0**
SBA IAmb IAmb 19 27 34.5
comp=Z,459nm,1.1s
SBA Scott Base 82.01 172 P **P** **19 27 32.1 +1.0**
SBA pmax pmax
comp=Z,459nm,1.2s
SBA MLR MLR
comp=Z,5µm,22.0s
BELG Belogornoye 82.07 323 S **S** **19 37 37.7 -5.6**
comp=Z,21nm,1.1s,baz=2.5,slow=24,SNR=10
BELG PKKPbc PKKPbc 19 46 01.8 -1.4
comp=Z,25nm,1.0s,baz=142,slow=0.7,SNR=4.7
BELG LR LR 20 07 03.4
comp=Z,5µm,19.6s,baz=88,slow=38
BELG Belogornoye 82.07 323*c iP* **P** **19 27 30.7 -1.2**
BELG pmax pmax
comp=Z,329nm,0.9s
BELG MLR MLR
comp=Z,1µm,20.0s
KIRV Kirov 82.07 329 P **P** **19 27 32.0 +0.3**
comp=Z,244nm,0.5s,baz=101,slow=4.1,SNR=261
KIRV S **S** **19 37 37.9 -5.1**
comp=Z,24nm,1.0s,baz=342,slow=20,SNR=12
comp=Z,244nm,0.5s
R17K Ugashik Creek 82.09 32 P **P** **19 27 32.9 +0.9**
baz=260
O17K Koliganek Bris 82.12 30 P **P** **19 27 34.2 +2.2**
baz=259
O17K S **S** **19 37 44.9 +1.4**
baz=259
GROC Groznyy 82.20 313 *eP* **P** **19 27 33.2 +0.4**
GROC *e**PP **pP** **19 27 45.6 +0.6**
GROC *e**SP **sP** **19 27 49.5 -0.1**
GROC *e*S **S** **19 37 42.4 -2.6**
GROC pmax pmax
comp=Z,632nm,1.0s
CHIR Chirikof Islan 82.20 34 IAmb IAmb 19 27 35.8
comp=Z,521nm,0.9s
CHIR Chirikof Islan 82.20 34 P **P** **19 27 34.2 +1.6**
baz=261,SNR=5.9
CHIR S **S** **19 37 46.0 +1.4**
baz=261
P17K Kvichak River 82.34 30 P **P** **19 27 34.7 +1.5**
baz=260,SNR=14
P17K S **S** **19 37 45.5 -0.4**
baz=260
GNI Garni 82.72 310 P **P** **19 27 37.2 +1.4**
comp=Z,214nm,0.9s,baz=181,slow=1.5,SNR=108
GNI S **S** **19 37 49.3 -1.6**
comp=Z,2.9nm,0.7s,baz=125,slow=22,SNR=1.4
GNI PKPPKP P'P'df 19 53 57.5 -8.7
comp=Z,4.9nm,0.9s,baz=160,slow=12,SNR=3.7
comp=Z,214nm,0.9s
GNI Garni 82.72 310 P **P** **19 27 37.2 +1.4**
GNI Garni 82.72 310 P **P** **19 27 36.9 +1.0**
GNI Garni 82.72 310*ce*P **P** **19 27 37.1 +1.3**
GNI pmax pmax
comp=Z,910nm,1.7s
GNI Garni 82.72 310 P **P** **19 27 37.7 +1.8**
GNI P **P** **19 27 37.7 +1.8**
GNI Garni 82.72 310 P **P** **19 27 37.2 +1.4**
N18K Kilae Creek 82.88 29 IAmb IAmb 19 27 40.0
comp=Z,642nm,1.4s
N18K Kilae Creek 82.88 29 P **P** **19 27 38.4 +2.3**
baz=260,SNR=130
N18K S **S** **19 37 52.1 +0.7**
baz=260
HARA HARA 82.93 279⇑ *e*P P 19 27 45.2 +7.7
HARA ⇓*e*S **S** **19 38 02.6 +8.5**
HARA HARA 82.93 279 *e*P P 19 27 45.0 +7.4
HARA *e*S **S** **19 38 02.6 +8.5**
HARA HARA 82.93 279 *e*P P 19 27 44.8 +7.3
HARA ⇓*e*S **S** **19 38 01.8 +7.7**
HARA HARA 82.93 279 *e*P **P** 19 27 41.4 +3.9
HARA *e*SKSac **SKSac** **19 37 58.5 +1.7**
P18K Big Mountain, 82.99 30 IAmb IAmb 19 27 39.2
comp=Z,384nm,1.4s
P18K Big Mountain, 82.99 30 P **P** **19 27 37.4 +0.8**
baz=261,SNR=34
P18K S **S** **19 37 51.7 -0.9**
baz=261
O18K Koktuh Hills 83.08 30 IAMs_20 IAMs_20 20 00 19.5
comp=Z,6µm,21.0s
O18K Koktuh Hills 83.08 30 P **P** **19 27 38.8 +1.7**
baz=261,SNR=126
O18K S **S** **19 37 53.7 +0.4**
baz=261
TASB TASBURUN-IGDIR 83.09 310 P **P** **19 27 38.9 +1.2**
SVW2 Sparrevohn 83.10 29 P **P** **19 27 38.2 +1.0**
SVW2 IAmb IAmb 19 27 41.0
comp=Z,561nm,1.1s
SII Sitkinak Islan 83.11 33 P **P** **19 27 38.4 +1.1**
SII IAMs_20 IAMs_20 20 00 13.3
comp=Z,9µm,22.0s
SII Sitkinak Islan 83.11 33 P **P** **19 27 39.1 +1.7**
baz=262,SNR=10
SII S **S** **19 37 55.2 +1.3**
baz=262
SII Sitkinak Islan 83.11 33 P **P** **19 27 39.7 +2.4**
GCSA Galena City Sc 83.19 25 P **P** **19 27 39.5 +2.0**
baz=259,SNR=185
GCSA S **S** **19 37 55.7 +1.4**
baz=259
TTA Tatalina 83.22 27 P **P** **19 27 39.7 +1.8**
baz=260,SNR=415
TTA S **S** **19 37 55.5 +0.6**
baz=260
CLDR Calidran 83.28 309 P **P** **19 27 40.2 +1.3**
ATD Arta Tunnel 83.35 281 P **P** **19 27 41.5 +2.0**
comp=Z,640nm,0.9s,baz=62,slow=1.8,SNR=167
ATD S **S** **19 37 54.5 -3.5**
comp=Z,1.9nm,0.3s,baz=249,slow=19,SNR=1.5
ATD LR LR 20 07 17.5
comp=Z,1µm,18.1s,baz=90,slow=38
comp=Z,640nm,0.9s
ATD Arta Tunnel 83.35 281 P **P** **19 27 41.9 +2.5**
SNR=93
ATD Arta Tunnel 83.35 281 *eP* **P** **19 27 41.2 +1.7**
ATD ⇓*e*S **S** **19 37 56.1 -1.8**
ATD Arta Tunnel 83.35 281⇓ *e*P **P** **19 27 41.0 +1.5**
ATD ⇓*e*S **S** **19 37 56.7 -1.2**
ATD Arta Tunnel 83.35 281⇓ *e*P **P** **19 27 40.0 +0.5**
ATD *e*S **S** **19 37 58.4 +0.4**
ATD Arta Tunnel 83.35 281⇓ *e*P **P** **19 27 41.0 +1.5**
ATD ⇓*e*S **S** **19 37 56.7 -1.2**
ATD Arta Tunnel 83.35 281 *e*P **P** **19 27 40.5 +1.0**
ATD *e*S **S** **19 37 56.8 -1.2**
ATD Arta Tunnel 83.35 281⇓ *e*P **P** **19 27 40.0 +0.5**
ATD *e*S **S** **19 37 58.4 +0.4**
ATD Arta Tunnel 83.35 281 *e*P **P** **19 27 41.2 +1.7**
ATD *e*SKSac **SKSac** **19 37 58.9 -0.2**
CUKT Cukurca 83.41 307 P **P** **19 27 39.9 +0.5**
ZEI Tsey 83.55 313 *eP* **P** **19 27 36.7 -3.4**
ZEI pmax pmax
comp=Z,1µm,0.9s
O19K Port Alsworth 83.57 30 P **P** **19 27 41.0 +1.4**
baz=261,SNR=7.2
O19K S **S** **19 37 58.5 +0.3**
baz=261
N19K Bonanza Creek 83.58 29 P **P** **19 27 42.1 +2.3**
baz=261,SNR=579
N19K S **S** **19 38 00.5 +1.9**
baz=261
L19K White Mountain 83.62 28 P **P** **19 27 41.8 +2.0**
baz=261,SNR=404
L19K S **S** **19 38 01.4 +2.5**
baz=261
VANB Van 83.66 309 P **P** **19 27 41.5 +0.8**
OHAK Old Harbor 83.69 33 P **P** **19 27 41.6 +1.4**
baz=263,SNR=46
OHAK S **S** **19 37 59.8 +0.2**
baz=263
Q19K Cape Douglas, 83.73 31 IAMs_20 IAMs_20 20 02 04.7
comp=Z,7µm,22.0s
Q19K Cape Douglas, 83.73 31 P **P** **19 27 40.9 +0.4**
baz=262,SNR=24
Q19K S **S** **19 37 57.1 -3.0**
baz=262
AKH Akhalkalaki 83.75 311⇑ P **P** **19 27 43.3 +2.1**
M19K Big River Lodg 83.79 28 P **P** **19 27 42.9 +2.2**
baz=261,SNR=302
M19K S **S** **19 38 02.9 +2.4**
baz=261
ONI Oni 83.86 313 IAmb IAmb 19 27 53.7
comp=Z,188nm,1.0s
AKDM Akdamar-Van 83.97 308 P **P** **19 27 43.8 +1.5**
AGRB Hanur-Agry 84.02 309 P **P** **19 27 44.3 +1.7**
L20K Farewell, AK 84.12 27 P **P** **19 27 44.2 +1.8**
baz=262,SNR=250
L20K S **S** **19 38 04.2 +0.4**
baz=262
KDAK Kodiak Island 84.13 32 P **P** **19 27 44.3 +1.9**
comp=Z,383nm,1.0s,baz=277,slow=3.3,SNR=154
KDAK LR LR 19 59 14.2
comp=Z,3µm,21.2s,baz=268,slow=31
comp=Z,383nm,1.0s
KDAK Kodiak Island 84.13 32 P **P** **19 27 43.4 +0.9**
KDAK Kodiak Island 84.13 32 IAMs_20 IAMs_20 20 03 36.6
comp=Z,6µm,22.0s
KDAK Kodiak Island 84.13 32 P **P** **19 27 44.4 +1.9**
baz=263
KDAK S **S** **19 38 04.0 -0.1**
baz=263
K20K Telida 84.16 26 P **P** **19 27 44.6 +2.0**
baz=261,SNR=161
K20K S **S** **19 38 05.4 +1.2**
baz=261
J20K Nowinta River 84.26 26 P **P** **19 27 45.2 +2.2**
baz=261,SNR=282
J20K S **S** **19 38 06.2 +1.2**
baz=261
GOF Gofitskoye 84.32 315⇓ *iP* **P** **19 27 44.5 +0.7**
GOF *e*S **S** **19 38 04.3 -2.2**
GOF pmax pmax
comp=Z,778nm,1.0s
GOF smax smax
comp=E,193nm,2.3s
GOF smax smax
comp=N,219nm,1.8s
Q20K Shuyak Island 84.33 31 P **P** **19 27 44.5 +1.0**
baz=263,SNR=32
Q20K S **S** **19 38 05.0 -1.0**
baz=263
KBZ Khabaz 84.34 314 P **P** **19 27 44.7 +0.8**
comp=N,310nm,0.9s,baz=103,slow=3.6,SNR=221
KBZ S **S** **19 38 01.9 -4.8**
comp=N,2.3nm,0.9s,baz=15,slow=7.2,SNR=1.5
KBZ PKKPbc **PKKPbc** **19 45 56.8 -0.7**
comp=N,3.9nm,1.0s,baz=194,slow=4.0,SNR=4.8
KBZ PKPPKP **P'P'df** **19 54 01.8 -0.9**
comp=N,5.5nm,1.0s,baz=208,slow=1.7,SNR=5.5
comp=N,310nm,0.9s
KBZ Khabaz 84.34 314*ce*P **P** **19 27 44.5 +0.7**
KBZ pmax pmax
comp=Z,442nm,0.9s
MLAZ Malazgirt-MUS 84.34 309 P **P** **19 27 45.8 +1.6**
M20K Styx River 84.38 28 IAMs_20 IAMs_20 20 04 17.6
comp=Z,5µm,21.0s
M20K Styx River 84.38 28 P **P** **19 27 45.7 +1.9**
baz=262
M20K S **S** **19 38 08.9 +2.2**
baz=262
O20K Slope Mountain 84.39 30 P **P** **19 27 44.5 +0.6**
baz=263,SNR=30
O20K S **S** **19 38 03.4 -3.4**
baz=263
PRGR Permogore 84.42 332⇑ *iP* **P** **19 27 44.0 +0.1**
PRGR *i* S **S** **19 38 01.6 -5.2**
KIV Kislovodsk 84.51 314 P **P** **19 27 45.2 +0.3**
KIV Kislovodsk 84.51 314 P **P** **19 27 45.1 +0.3**
KIV IAmb IAmb 19 27 50.5
comp=Z,363nm,0.8s
KIV Kislovodsk 84.51 314 *eP* **P** **19 27 45.4 +0.6**
KIV *e* 19 31 01.2
KIV *e* 19 38 05.7
KIV *e*SS SS 19 43 40.5 +0.6
KIV pmax pmax
comp=Z,598nm,3.5s
KIV pmax pmax
comp=Z,507nm,1.1s
KIV MLR MLR
comp=Z,3µm,20.0s
KIV Kislovodsk 84.51 314 P **P** **19 27 45.7 +0.9**
KIV P **P** **19 27 45.7 +0.9**
KIV Kislovodsk 84.51 314 *i* P **P** **19 27 45.5 +0.6**
SNR=133
SHA1 Shidzhatmaz 84.52 314*c iP* **P** **19 27 44.9 -0.2**
A21K Barrow 84.62 18 P **P** **19 27 46.8 +2.1**
baz=258,SNR=42
A21K S **S** **19 38 08.7 +0.3**
baz=258
IMAR Indian Mountai 84.70 24 P **P** **19 27 46.0 +0.7**
GURO Guroymak-BITLI 84.72 308 P **P** **19 27 47.7 +1.6**
SPCR Spurr Chakacha 84.73 29 P **P** **19 27 46.6 +1.0**
baz=263,SNR=80
SPCR S **S** **19 38 07.6 -2.5**
baz=263
PPT Papeete 84.76 108 LR LR 20 02 52.2
comp=Z,2µm,20.4s,baz=270,slow=34
PPT2 Papeete2 84.76 108 *eP* **P** **19 27 50.2 +3.6**
comp=Z,180nm,1.3s
PPT2 Papeete2 84.76 108 *e*LR LR 19 55 00.4
comp=Z,7µm,25.5s
HOM Homer 84.84 30 P **P** **19 27 46.9 +0.9**
baz=264,SNR=13
HOM S **S** **19 38 08.8 -2.2**
baz=264
CHVG Ch'k'valeri 84.88 313⇑ P **P** **19 27 48.3 +1.6**
KOPR Koprukoy-ERZUR 84.92 310 P **P** **19 27 48.5 +1.4**
PPLA Purkeypile 84.95 27 IAmb IAmb 19 28 16.0
comp=Z,776nm,1.7s
PPLA Purkeypile 84.95 27 P **P** **19 27 48.2 +1.4**
baz=263,SNR=58
PPLA S **S** **19 38 11.9 -0.4**
baz=263
TIAR Tiarei 84.98 108 *eP* **P** **19 27 51.0 +3.4**
comp=Z,1.9nm,0.8s
CHUM Lake Minchumin 85.01 26 P **P** **19 27 48.6 +1.8**
baz=263,SNR=62
CHUM S **S** **19 38 12.0 -0.6**
baz=263
CNPM China Poot 85.03 30 P **P** **19 27 47.0 0.0**
CNPM IAMs_20 IAMs_20 20 01 21.9
comp=Z,6µm,22.0s
H21K Melozitna Rive 85.04 24 IAmb IAmb 19 27 51.4
comp=Z,388nm,1.5s
H21K Melozitna Rive 85.04 24 P **P** **19 27 48.6 +1.7**
baz=262,SNR=142
H21K S **S** **19 38 12.4 -0.4**
baz=262
CAST Castle Rocks 85.06 27 IAmb IAmb 19 27 51.1
comp=Z,339nm,1.6s
CAST Castle Rocks 85.06 27 P **P** **19 27 48.3 +1.2**
baz=263,SNR=23
TVO Taravao 85.08 108 *eP* **P** **19 27 50.3 +2.1**
comp=Z,58nm,1.0s
BATM Batumi 85.11 311⇓ P **P** **19 27 49.0 +1.1**
BATM Batumi 85.11 311 P **P** **19 27 48.9 +1.1**
SKT Skwentna 85.14 28 IAmb IAmb 19 27 50.1
comp=Z,552nm,1.4s
SKT Skwentna 85.14 28 P **P** **19 27 47.8 +0.2**
baz=264,SNR=140
SKT S **S** **19 38 12.0 -2.1**
baz=264
TEND Ethiopian Broa 85.16 282 *eP* **P** **19 27 51.1 +2.5**
TEND *e*S **S** **19 38 18.7 +2.8**
TEND Ethiopian Broa 85.16 282 *eP* **P** **19 27 51.1 +2.5**
TEND *e*S **S** **19 38 17.4 +1.4**
VRTB Varto-Mus 85.19 309 P **P** **19 27 50.6 +2.1**
CAPN Captain Cook N 85.20 29 P **P** **19 27 49.7 +2.0**
baz=264
CAPN S **S** **19 38 13.2 -1.3**
baz=264
TBI Tubuai 85.20 113 *e*LR LR 19 54 59.4
comp=Z,4µm,33.2s
ERZM Erzurum 85.29 310 P **P** **19 27 50.6 +1.5**
BRSE Bradley Lake S 85.30 30 P **P** **19 27 49.3 +0.9**
baz=264,SNR=148
BRSE S **S** **19 38 12.7 -2.9**
baz=264
I21K Tanana 85.32 25 IAmb IAmb 19 28 19.4
comp=Z,381nm,1.7s
I21K Tanana 85.32 25 P **P** **19 27 50.0 +1.7**
baz=263,SNR=70
I21K S **S** **19 38 14.8 -0.8**
baz=263
SVAN Silvan-Diyarba 85.36 308 P **P** **19 27 50.3 +1.1**
SUA Susitna One 85.46 29 P **P** **19 27 49.6 +0.3**
baz=264,SNR=139
SUA S **S** **19 38 16.4 -1.0**
baz=264
KTH Kantishna Hill 85.59 26 P **P** **19 27 49.1 -0.7**
VRH Novokhopyorsk 85.59 321 *eP* **P** **19 27 49.9 -0.1**
VRH *e*S **S** **19 38 13.1 -5.7**
VRH pmax pmax
comp=Z,2µm,1.0s
VRH pmax pmax
comp=Z,3µm,1.0s
VRH smax smax
comp=N,1µm,8.0s
VRH MLR MLR
comp=Z,6µm,21.0s
BPAW Bear Paw Mtn. 85.62 26 P **P** **19 27 50.7 +0.8**
baz=264,SNR=76
BPAW S **S** **19 38 20.1 +1.5**
baz=264
CUT Chulitna 85.78 28 IAmb IAmb 19 27 54.2
comp=Z,591nm,1.4s
CUT Chulitna 85.78 28 P **P** **19 27 50.7 +0.1**
baz=265,SNR=21
CUT S **S** **19 38 19.9 -0.2**
baz=265
M22K Willow 85.79 28 P **P** **19 27 51.1 +0.4**
baz=265,SNR=30
M22K S **S** **19 38 19.3 -0.9**
baz=265
BNGB Bingl 85.79 309 P **P** **19 27 53.1 +1.7**
CHOM Cayeli-Rize 85.80 311 P **P** **19 27 52.5 +1.2**
MLY Manley 85.82 25 P **P** **19 27 52.1 +1.2**
baz=264,SNR=154
MLY S **S** **19 38 22.1 +1.4**
baz=264
TRF Thorofare Moun 85.86 27 P **P** **19 27 50.9 -0.4**
TRF Thorofare Moun 85.86 27 P **P** **19 27 51.7 +0.4**
baz=265,SNR=41
TRF S **S** **19 38 21.0 -0.4**
baz=265
O22K Cooper Landing 85.87 30 IAMs_20 IAMs_20 20 01 38.4
comp=Z,6µm,22.0s
O22K Cooper Landing 85.87 30 P **P** **19 27 51.9 +0.8**
baz=265,SNR=21
O22K S **S** **19 38 21.4 +0.2**
baz=265
RC01 Rabbit Creek A 85.92 29 P **P** **19 27 51.9 +0.5**
baz=265,SNR=64
RC01 S **S** **19 38 21.9 +0.3**
baz=265
MAZI Mazidag 85.93 307 P **P** **19 27 53.1 +0.9**
SEW Seward 85.98 30 P **P** **19 27 52.5 +0.9**
baz=266,SNR=141
SEW S **S** **19 38 22.5 +0.3**
baz=266
MEH Mehetia 86.22 108 *eP* **P** **19 27 57.0 +3.2**
comp=Z,41nm,0.6s
PMR Palmer 86.25 28 P **P** **19 27 53.3 +0.4**
baz=266,SNR=53
PMR S **S** **19 38 23.8 -0.9**
baz=266
COLD Coldfoot 86.26 23 IAmb IAmb 19 27 56.1
comp=Z,190nm,0.9s
COLD Coldfoot 86.26 23 P **P** **19 27 54.5 +1.6**
baz=264,SNR=82
COLD S **S** **19 38 27.5 +2.7**
baz=264
BWN Browne 86.29 26 P **P** **19 27 53.6 +0.5**
BWN IAmb IAmb 19 28 14.5
comp=Z,190nm,1.1s
H23K Yukon River 86.39 24 P **P** **19 27 55.1 +1.4**
baz=265,SNR=126
H23K S **S** **19 38 28.1 +1.9**
baz=265
I23K Minto, Yukon-K 86.42 25 IAmb IAmb 19 27 56.4
comp=Z,200nm,0.9s
I23K Minto, Yukon-K 86.42 25 P **P** **19 27 54.8 +1.1**

baz=265,SNR=225
I23K S **S** **19 38 27.3 +1.0**
baz=265
ANKE Ethiopia-Afar 86.43 279⇓ *e*P **P** **19 27 57.9 +2.6**
ANKE ⇓ *e*S **S** **19 38 26.4 -2.7**
ANKE Ethiopia-Afar 86.43 279⇓ *e*P **P** **19 27 58.1 +2.8**
ANKE *e*S **S** **19 38 25.5 -3.7**
ANKE Ethiopia-Afar 86.43 279⇓ *e*P **P** **19 27 57.9 +2.6**
ANKE ⇓ *e*S **S** **19 38 26.4 -2.7**
ANKE Ethiopia-Afar 86.43 279 *e*P **P** **19 27 54.4 -0.9**
ANKE *e*S **S** **19 38 34.0 +4.8**
ANKE Ethiopia-Afar 86.43 279⇓ *e*P **P** **19 27 58.1 +2.8**
ANKE *e*S **S** **19 38 25.5 -3.7**
MCK McKinley 86.49 26 P **P** **19 27 54.4 +0.2**
baz=266,SNR=43
MCK S **S** **19 38 25.7 -1.5**
baz=266
NEA2 Nenana 86.50 25 P **P** **19 27 54.2 0.0**
baz=266,SNR=62
NEA2 S **S** **19 38 26.4 -0.8**
baz=266
RND Reindeer 86.50 27 IAMs_20 IAMs_20 20 02 05.7
comp=Z,5µm,22.0s
DESE Dese 86.50 281⇓ *e*P **P** **19 27 58.6 +2.9**
DESE Dese 86.50 281 *e*P **P** **19 27 57.8 +2.1**
DESE *e*S **S** **19 38 27.5 -2.3**
DESE Dese 86.50 281 *e*P **P** **19 27 56.7 +1.1**
DESE *e*S **S** **19 38 31.9 +2.1**
DESE Dese 86.50 281 *e*P **P** **19 27 56.7 +1.1**
DESE *e*S **S** **19 38 31.9 +2.1**
DESE Dese 86.50 281 *e*P **P** **19 27 57.8 +2.1**
DESE *e*S **S** **19 38 27.5 -2.3**
DESE Dese 86.50 281⇓ *e*P **P** **19 27 58.6 +2.9**
KTUT Trabzon 86.55 311 ⇑P **P** **19 27 57.1 +2.2**
KTUT Trabzon 86.55 311 P **P** **19 27 55.7 +0.8**
ERZN Erzincan 86.55 309 P **P** **19 27 56.8 +1.6**
KNK Knik Glacier 86.56 29 P **P** **19 27 55.4 +0.8**
baz=266,SNR=128
KNK S **S** **19 38 27.3 -0.6**
baz=266
WAT1 Susitna Watana 86.60 27 P **P** **19 27 54.7 -0.1**
baz=266
TOLK Toolik Lake Re 86.63 21 IAmb IAmb 19 27 57.9
comp=Z,154nm,0.9s
TOLK Toolik Lake Re 86.63 21 P **P** **19 27 56.2 +1.4**
baz=265,SNR=124
TOLK S **S** **19 38 30.2 +1.8**
baz=265
SML Sawmill 86.64 28 P **P** **19 27 55.7 +0.7**
baz=266,SNR=96
SML S **S** **19 38 29.6 +0.9**
baz=266
SOC Sochi 86.64 313 *e*P **P** **19 27 52.8 -2.5**
SOC *e* 19 31 15.8
SOC *e*PPP PPP 19 33 09.8
SOC *i* S **SKSac** **19 38 15.8 -3.0**
SOC *e*SSS SSS 19 47 41.4
SOC pmax pmax
comp=Z,674nm,0.9s
SVRC Sivrice-ELAZID 86.85 308 P **P** **19 27 58.0 +1.3**
M23K Glacier View 86.93 28 P **P** **19 27 57.1 +0.7**
baz=267,SNR=51
M23K S **S** **19 38 33.0 +1.5**
baz=267
WAT6 Susitna Watana 86.96 28 P **P** **19 27 57.4 +0.7**
baz=267,SNR=82
WAT6 S **S** **19 38 31.2 -0.9**
baz=267
P23K Montague Islan 87.00 30 P **P** **19 27 57.3 +0.6**
baz=267
P23K S **S** **19 38 32.5 +0.4**
baz=267
TCOL CIGO, UAF Yank 87.03 25 P **P** **19 27 56.3 -0.4**
baz=267
TCOL S **S** **19 38 30.2 -2.0**
baz=267
COLA College 87.04 25 P **P** **19 27 56.2 -0.5**
COLA College 87.04 25*c* *i*P **P** **19 27 56.0 -0.8**
COLA pmax pmax
comp=Z,43nm,0.9s
COLA College 87.04 25 P **P** **19 27 56.5 -0.3**
baz=267
COLA S **S** **19 38 30.6 -1.7**
baz=267
H24K Noodor Dome 87.08 24 P **P** **19 27 58.5 +1.4**
baz=267,SNR=163
H24K S **S** **19 38 32.7 -0.1**
baz=267
VORD Divnogorie 87.11 321 *e*P **P** **19 27 57.4 0.0**
VORD *e*S **SKSac** **19 38 22.6 +1.2**
VORD pmax pmax
comp=Z,290nm,0.7s
VORD pmax pmax
comp=Z,730nm,1.3s
VORD smax smax
comp=E,250nm,4.3s
SCM Sheep Creek Mo 87.12 28 IAmb IAmb 19 28 01.9
comp=Z,323nm,1.2s
SCM Sheep Creek Mo 87.12 28 P **P** **19 27 58.1 +0.7**
baz=267,SNR=85
SCM S **S** **19 38 34.2 +0.8**
baz=267
DHY Denali Highway 87.15 27 P **P** **19 27 58.5 +0.9**
baz=267
DHY S **S** **19 38 34.4 +0.5**
baz=267
VORR Voronezh 87.19 321 *e*P **P** **19 27 57.2 -0.6**
VORR *e*S **S** **19 38 26.8 -7.5**
VORR pmax pmax
comp=Z,1µm,1.2s
VORR pmax pmax
comp=Z,910nm,1.0s
VORR smax smax
comp=E,820nm,1.6s
GLI Glacier Island 87.19 29 IAmb IAmb 19 28 02.1
comp=Z,584nm,1.6s
GLI Glacier Island 87.19 29 P **P** **19 27 58.2 +0.6**
baz=268,SNR=33
GLI S **S** **19 38 34.9 +0.9**
baz=268
VSR Storozhevoye 87.20 321 *e*P **P** **19 27 57.6 -0.3**
VSR *e*S **SKSac** **19 38 23.6 +1.7**
VSR pmax pmax
comp=Z,470nm,1.0s
VSR pmax pmax
comp=Z,3µm,2.3s
VSR smax smax
comp=N,840nm,6.8s
VSR MLR MLR
comp=Z,6µm,19.0s
POKR Poker Plat Res 87.23 25 P **P** **19 27 57.7 0.0**
baz=267
POKR S **S** **19 38 32.5 -1.8**
baz=267
KLMR Klimovskoe 87.30 331 *e*P **P** **19 27 55.5 -2.6**
KLMR *e*S **SKSac** **19 38 19.1 -3.0**
KLMR *e*SSS SSS 19 47 51.9
KLMR pmax pmax
comp=Z,709nm,0.8s
KLMR MLR MLR
comp=Z,9µm,21.0s
KLMR Klimovskoe 87.30 331 *e*P **P** **19 27 55.5 -2.6**
KLMR AMP 19 28 05.9
comp=Z,709nm,0.8s
KLMR *e*PP PP 19 31 12.4 -10
KLMR *e*S **SKSac** **19 38 19.2 -2.9**
KLMR *e*S **SKSac** **19 38 19.2 -2.9**
KLMR *e*PKKP **PKKPdf** **19 45 45.8 +1.1**
KLMR *e*SSS SSS 19 47 51.9
KLMR *e*SSS SSS 19 47 51.9
KLMR LQ LQ 19 59 28.3
KLMR LQ LQ 19 59 28.3
KLMR LR LR 20 06 51.5
KLMR AMP 20 08 41.3
comp=Z,9µm,20.5s
ESPY Espiye-Giresun 87.33 311 P **P** **19 27 58.8 0.0**
LPSR Galich'ya Gora 87.38 322 *e*P **P** **19 27 58.8 +0.1**
LPSR *e*S **SKSac** **19 38 22.6 -0.3**
LPSR pmax pmax
comp=Z,440nm,1.0s
LPSR pmax pmax
comp=Z,890nm,0.9s
LPSR smax smax
comp=N,1µm,8.2s
LPSR MLR MLR
comp=Z,5µm,20.0s
AAE Adis Abeba 87.39 279⇓ *e*P **P** **19 28 02.2 +2.3**
AAE ⇓ *e*S **S** **19 38 31.4 -7.0**
AAE Adis Abeba 87.39 279⇓ *e*P **S** **19 28 01.4 +1.5**
AAE *e*S **S** **19 38 31.6 -6.8**
AAE Adis Abeba 87.39 279 *e*P **S** **19 28 00.9 +0.9**
AAE *e*S **S** **19 38 37.1 -1.3**
AAE Adis Abeba 87.39 279⇓ *e*P **P** **19 28 01.4 +1.5**
AAE *e*S **S** **19 38 31.6 -6.8**
AAE Adis Abeba 87.39 279 *e*P P 19 27 52.1 -7.8
AAE *e*S **S** **19 38 38.6 +0.3**
AAE Adis Abeba 87.39 279 *e*P **P** **19 28 00.9 +0.9**
AAE *e*S **S** **19 38 37.1 -1.3**
AAE Adis Abeba 87.39 279⇓ *e*P **P** **19 28 02.2 +2.3**
AAE *e*SKSac **SKSac** **19 38 23.2 -2.0**
HDA Harding Lake 87.40 26 P **P** **19 27 58.1 -0.5**
baz=268,SNR=122
HDA S **S** **19 38 36.2 +0.3**
baz=268
HDA S **S** **19 38 36.2 +0.3**
baz=268
ILIC Ilic-Erzincan 87.44 309 P **P** **19 28 00.8 +1.3**
ILAR Eielson Array 87.44 25 P **P** **19 27 58.0 -0.7**
comp=Z,35nm,0.8s,baz=262,slow=4.2,SNR=168
ILAR S **SKSac** **19 38 20.0 -2.9**
comp=Z,0.6nm,0.9s,baz=274,slow=3.0,SNR=1.4
ILAR PKKPbc **PKKPdf** **19 45 46.9 +2.4**
comp=Z,7.8nm,1.0s,baz=69,slow=1.5,SNR=13
ILAR PKPPKP **P'P'df** **19 53 49.6 -6.2**
comp=Z,5.6nm,1.2s,baz=70,slow=0.9,SNR=6.7
comp=Z,35nm,0.8s
HIN Hinchinbrook I 87.46 30 IAmb IAmb 19 28 03.0
comp=Z,199nm,1.2s
FURI Furi 87.48 279⇓ *e*P **P** **19 28 03.2 +2.7**
FURI ⇑ *e*S **S** **19 38 31.0 -8.2**
FURI Furi 87.48 279⇓ *e*P **P** **19 28 02.5 +2.1**
FURI *e*S **S** **19 38 33.8 -5.5**
FURI Furi 87.48 279 *e*P **P** **19 28 03.1 +2.7**
FURI *e*S **S** **19 38 30.9 -8.3**
FURI Furi 87.48 279 *e*P **P** **19 28 03.0 +2.6**
FURI *e*S **S** **19 38 38.1 -1.1**
FURI Furi 87.48 279⇓ *e*P **P** **19 28 02.5 +2.1**
FURI *e*S **S** **19 38 33.8 -5.5**
FURI Furi 87.48 279 *e*P **P** **19 27 59.1 -1.3**
FURI *e*S **S** **19 38 38.6 -0.6**
FURI Furi 87.48 279 *e*P **P** **19 28 03.0 +2.6**
FURI *e*S **S** **19 38 38.1 -1.1**
FURI Furi 87.48 279 *e*P **P** **19 28 03.1 +2.7**
FURI *e*S **S** **19 38 30.9 -8.3**
FURI Furi 87.48 279⇓ *e*P **P** **19 28 03.2 +2.7**
FURI *e*SKSac **SKSac** **19 38 23.8 -2.0**
FID Port Fidalgo 87.48 29 IAmb IAmb 19 28 03.6
comp=Z,316nm,1.4s
Q23K Middleton Isla 87.51 31 P **P** **19 27 60.0 +0.9**
baz=268
Q23K S **S** **19 38 40.3 +3.3**
baz=268
ARPR Arapgir-MALATY 87.62 309 P **P** **19 28 02.1 +1.7**
M24K Tolsona, Glenn 87.67 28 P **P** **19 28 01.2 +1.2**
baz=268,SNR=105
M24K S **S** **19 38 41.7 +3.0**
baz=268
KLU Klutina 87.78 29 P **P** **19 28 01.5 +0.9**
baz=269,SNR=64
KLU S **S** **19 38 41.2 +1.4**
baz=269
EYAK Cordova Ski Ar 87.84 30 P **P** **19 28 01.9 +1.2**
baz=269,SNR=13
EYAK S **S** **19 38 41.5 +1.3**
baz=269
K24K Donnelly Dome 87.90 26 P **P** **19 28 01.5 +0.5**
baz=269,SNR=76
K24K S **S** **19 38 41.1 +0.4**
baz=269
DILA Dilla 87.91 276 *e*P **P** **19 28 03.9 +1.6**
DILA *e*S **SKSac** **19 38 26.9 -1.2**
DILA Dilla 87.91 276 *e*P **P** **19 27 59.1 -3.2**
DILA *e*S **S** **19 38 36.3 -6.8**
DILA Dilla 87.91 276 *e*P **P** **19 28 03.9 +1.6**
DILA *e*S **SKSac** **19 38 26.9 -1.2**
PAX Paxson 88.02 27 IAmb IAmb 19 28 04.0
comp=Z,218nm,1.2s
PAX Paxson 88.02 27 P **P** **19 28 02.6 +0.9**
baz=269,SNR=179
PAX S **S** **19 38 42.4 +0.3**
baz=269
J25K Salcha River, 88.09 26 P **P** **19 28 01.7 -0.3**
baz=269,SNR=67
J25K S **S** **19 38 41.4 -1.2**
baz=269
HARP HAARP 88.15 28 P **P** **19 28 03.1 +0.9**
baz=269,SNR=55
HARP S **S** **19 38 44.9 +1.7**
baz=269
MOS Moscow 88.19 326 *e*P **P** **19 28 00.7 -1.8**
MOS *e* 19 31 29.1
MOS *e* 19 38 25.9
MOS *e*S **S** **19 38 39.9 -3.8**
MOS *e*PS **PS** **19 39 53.4 +1.4**
MOS pmax pmax
comp=Z,2µm,1.8s
MOS pmax pmax
comp=Z,753nm,1.0s
MOS smax smax
comp=N,7µm,4.0s
MOS smax smax
comp=E,4µm,3.8s
MOS MLR MLR
comp=E,5µm,20.0s
MOS MLR MLR
comp=Z,10µm,20.0s
DARE Darende-Malaty 88.28 308 P **P** **19 28 04.8 +1.3**
ANN Anapa 88.30 315*c* *i*P **P** **19 28 02.7 -0.5**
ANN *i* *PP **pP** **19 28 11.4 -4.1**
ANN *e* 19 31 33.0
ANN *e*S **SKSac** **19 38 27.1 -1.7**
ANN pmax pmax
comp=Z,947nm,0.8s
ANN pmax pmax
comp=N,313nm,0.8s
ANN smax smax
comp=Z,392nm,2.2s
ANN smax smax
comp=N,4µm,3.4s
ANN smax smax
comp=E,2µm,3.8s
ANN MLR MLR
comp=Z,8µm,21.0s
ANN MLR MLR
comp=E,5µm,21.0s
ANN MLR MLR
comp=N,4µm,18.0s
RIDG Independent Ri 88.31 26 IAmb IAmb 19 28 07.8
comp=Z,232nm,1.0s
RIDG Independent Ri 88.31 26 P **P** **19 28 03.5 +0.5**
baz=270,SNR=169
RIDG S **S** **19 38 45.3 +0.6**
baz=270
KIBK Kibwezi 88.34 268 IAmb IAmb 19 28 07.4
comp=Z,374nm,1.1s
KIBK Kibwezi 88.34 268 P **P** **19 28 05.9 +1.6**
SNR=48
RSDY Resadiye-TOKAT 88.39 310 P **P** **19 28 04.9 +1.0**
BMRM Bremner River 88.41 29 IAmb IAmb 19 28 06.6
comp=Z,146nm,1.1s
BMRM Bremner River 88.41 29 P **P** **19 28 04.3 +0.8**
baz=270,SNR=36
BMRM S **S** **19 38 46.1 +0.4**
baz=270
N25K Chitina, Valde 88.41 29 IAmb IAmb 19 28 07.5
comp=Z,155nm,1.1s
N25K Chitina, Valde 88.41 29 P **P** **19 28 04.8 +1.2**
baz=270,SNR=65
N25K S **S** **19 38 46.5 +0.6**
baz=270
BMAR Burnt Mountain 88.44 23 P **P** **19 28 04.3 +0.7**
SVSK Karacayir 88.65 310 P **P** **19 28 06.3 +1.3**
SCRK Sand Creek 88.69 26 P **P** **19 28 05.4 +0.5**
baz=270,SNR=79
SCRK S **S** **19 38 48.4 0.0**
baz=270
GLB Gilahina Butte 88.79 29 IAmb IAmb 19 28 08.4
comp=Z,195nm,1.2s
OBN Obninsk 88.79 325 P **P** **19 28 04.6 -0.8**
comp=Z,76nm,1.0s,baz=22,slow=1.4,SNR=138
OBN S **SKSac** **19 38 30.1 -1.2**
comp=Z,1.4nm,0.3s,baz=143,slow=20,SNR=1.0
OBN LR LR 20 11 37.8
comp=Z,1µm,18.1s,baz=85,slow=38
comp=Z,76nm,1.0s
OBN Obninsk 88.79 325 P **P** **19 28 04.5 -0.8**
OBN Obninsk 88.79 325⇑ *i*P **P** **19 28 05.0 -0.3**
OBN *e* 19 31 34.2
OBN *e*S **SKSac** **19 38 30.3 -1.0**
OBN *e*PS **PnS** **19 39 56.5 -1.2**
OBN pmax pmax
comp=Z,679nm,1.3s
OBN MLR MLR
comp=Z,10µm,21.0s
SUCK Suckling Hills 88.82 30 IAmb IAmb 19 28 08.7
comp=Z,184nm,1.3s
ASF Jabal al Asfar 88.83 302 P **P** **19 28 07.7 +1.5**
comp=Z,600nm,1.0s,baz=92,slow=1.9,SNR=494
ASF LR LR 20 12 34.7
comp=Z,8µm,21.2s,baz=108,slow=39
comp=Z,600nm,1.0s
MQOL MQOL 88.87 291 *i*P **P** **19 28 05.7 -0.7**
MQOL *i* 19 28 14.3
baz=253,slow=18
J26L Joseph Creek 88.87 26 IAmb IAmb 19 28 07.6
comp=Z,111nm,0.8s
J26L Joseph Creek 88.87 26 P **P** **19 28 06.5 +0.8**
baz=271,SNR=158
J26L S **S** **19 38 50.2 +0.2**
baz=271
L26K Log Cabin Wild 88.99 27 IAMs_20 IAMs_20 20 03 45.6
comp=Z,5µm,22.0s
L26K Log Cabin Wild 88.99 27 P **P** **19 28 07.3 +1.1**
baz=271,SNR=62
L26K S **S** **19 38 51.7 +0.7**
baz=271
TOKA Tokat 89.04 310 IAmb IAmb 19 28 14.3
comp=Z,240nm,0.9s
BGLC Bering Glacier 89.06 30 P **P** **19 28 06.1 -0.3**
baz=271
KMBO Kilima Mbogo 89.10 269 P **P** **19 28 09.6 +1.5**
comp=Z,185nm,1.0s,baz=61,slow=5.5,SNR=118
KMBO S **SKSac** **19 38 37.2 +1.8**
comp=Z,0.9nm,0.5s,baz=352,slow=17,SNR=1.8
KMBO LR LR 20 05 03.1
comp=Z,11µm,21.1s,baz=84,slow=34
comp=Z,185nm,1.0s
KMBO Kilima Mbogo 89.10 269 P **P** **19 28 08.6 +0.6**
KMBO IAmb IAmb 19 28 12.8
comp=Z,316nm,1.1s
KMBO Kilima Mbogo 89.10 269 P **P** **19 28 09.4 +1.4**
KMBO P **P** **19 28 09.4 +1.4**
KMBO Kilima Mbogo 89.10 269⇓ *e*P **P** **19 28 09.6 +1.5**
KMBO *e*S **SKSac** **19 38 37.2 +1.8**
KMBO Kilima Mbogo 89.10 269⇓ *e*P **P** **19 28 08.7 +0.6**
KMBO *e*S **SKSac** **19 38 37.4 +2.0**
KMBO Kilima Mbogo 89.10 269 *e*P **P** **19 28 08.2 +0.2**
KMBO *e*S **SKSac** **19 38 37.1 +1.7**
KMBO Kilima Mbogo 89.10 269⇓ *e*P **P** **19 28 08.7 +0.6**
KMBO *e*S **SKSac** **19 38 37.4 +2.0**
KMBO Kilima Mbogo 89.10 269 *e*P **P** **19 28 06.1 -2.0**
KMBO *e*S **SKSac** **19 38 34.0 -1.4**
KMBO Kilima Mbogo 89.10 269 *e*P **P** **19 28 08.2 +0.2**
KMBO *e*S **SKSac** **19 38 37.1 +1.7**
KMBO Kilima Mbogo 89.10 269⇓ *e*P **P** **19 28 09.6 +1.5**
KMBO *e*SKSac **SKSac** **19 38 28.2 -7.2**
KMBO Kilima Mbogo 89.10 269 *i*P **P** **19 28 09.4 +1.4**
SNR=162
SARI SarD1z-Kayseri 89.12 308 P **P** **19 28 08.2 +0.7**
M26K Nabesna, AK 89.16 28 P **P** **19 28 08.1 +1.0**
baz=271,SNR=62
M26K S **S** **19 38 55.8 +3.0**
baz=271
MCARA McCarthy VSAT 89.17 29 IAmb IAmb 19 28 15.3
comp=Z,204nm,1.1s
MCARA McCarthy VSAT 89.17 29 P **P** **19 28 08.2 +1.2**
baz=271,SNR=34
MCARA S **S** **19 38 53.2 +0.4**
baz=271
WAX Waxell Ridge 89.27 30 IAmb IAmb 19 28 13.7
comp=Z,264nm,1.3s
TGL Tana Glacier 89.28 29 IAmb IAmb 19 28 10.3
comp=Z,263nm,1.5s
SNH Sunshine Point 89.29 30 IAmb IAmb 19 28 14.4
comp=Z,236nm,1.1s
TAHT Tahtakopru-Hat 89.34 306 P **P** **19 28 09.3 +0.9**
YAYL Yayladag 89.42 306 P **P** **19 28 09.5 +0.6**
LVZ Lovozero 89.43 338 P **P** **19 28 07.0 -1.2**
LVZ IAmb IAmb 19 28 08.7
comp=Z,165nm,1.0s
LVZ IAMs_20 IAMs_20 20 11 33.5
comp=Z,7µm,20.0s
LVZ Lovozero 89.43 338*c* *e*P **P** **19 28 07.3 -0.8**
LVZ pmax pmax
comp=Z,158nm,0.8s
ISLE Juniper Island 89.52 30 IAmb IAmb 19 28 16.5
comp=Z,259nm,1.3s
K27K Chicken 89.53 26 IAmb IAmb 19 28 12.1
comp=Z,339nm,1.1s
K27K Chicken 89.53 26 P **P** **19 28 10.3 +1.6**
baz=272
K27K S **S** **19 38 57.3 +1.2**
baz=272
BNN Bunyan 89.56 309 P **P** **19 28 09.9 +0.4**
HWQ Hawqa 89.58 304 *e*P **P** **19 28 09.1 -0.6**
KOZT Kozan 89.61 307 P **P** **19 28 10.1 +0.5**
L27K Beaver Creek, 89.68 27 IAmb IAmb 19 28 12.3
comp=Z,151nm,0.9s
L27K IAMs_20 IAMs_20 20 04 05.9
comp=Z,6µm,22.0s
L27K Beaver Creek, 89.68 27 P **P** **19 28 10.8 +1.4**
baz=272,SNR=174
L27K S **S** **19 39 00.1 +2.6**
baz=272
M27K Edge Creek, AK 89.68 28 P **P** **19 28 10.8 +1.3**
baz=272,SNR=55
M27K S **S** **19 39 00.5 +2.6**
baz=272
MESA MESA 89.73 30 P **P** **19 28 11.5 +1.6**
baz=272,SNR=7.8
MESA S **S** **19 39 00.7 +2.2**
baz=272
SHBL Chebaa 89.78 303 *e*P **P** **19 28 11.0 +0.3**
GRNC Granite Creek 89.81 29 IAmb IAmb 19 28 13.3
comp=Z,411nm,1.6s
YAH Yahtse 89.83 30 IAmb IAmb 19 28 16.7
comp=Z,315nm,1.3s
YAH IAMs_20 IAMs_20 20 05 27.8
comp=Z,6µm,21.0s
BHL Bhannes 89.84 304 *e*P **P** **19 28 10.1 -0.7**
BARN Barnard Glacie 89.84 29 IAmb IAmb 19 28 13.5
comp=Z,207nm,1.0s
YOZ Yozgat 89.95 309 P **P** **19 28 11.4 +0.1**
GHAJ Ghor Haditha 89.98 301 IAMs_20 IAMs_20 20 13 23.6
comp=Z,7µm,20.0s
CTG Chitna Glacier 90.00 29 P **P** **19 28 12.6 +1.6**
baz=273,SNR=59
CTGM Chitina Glacie 90.00 29 IAmb IAmb 19 28 14.3
comp=Z,260nm,1.1s
UJAP Al Uja 90.05 302 P **P** **19 28 12.7 +1.0**
MMAI Mount Meron Ar 90.07 303 P **P** **19 28 10.1 -1.9**
comp=Z,57nm,0.9s,baz=121,slow=10,SNR=28
MMAI LR LR 20 14 15.1
comp=Z,7µm,21.1s,baz=262,slow=39
MMLI Mount Malkishu 90.07 302 P **P** **19 28 13.3 +1.4**
TABL Table Mountain 90.12 30 IAmb IAmb 19 28 23.7
comp=Z,224nm,1.1s
TABL IAMs_20 IAMs_20 20 05 37.7
comp=Z,5µm,22.0s
BVCY Beaver Creek 90.15 28 P **P** **19 28 12.9 +1.3**
baz=273,SNR=39
BVCY S **S** **19 39 03.6 +1.6**
baz=273
LOGN Logan Glacier 90.17 29 IAmb IAmb 19 28 22.2
comp=Z,167nm,1.1s
KARA Karaisali 90.23 307 P **P** **19 28 12.8 +0.3**
CMRD Camardi-Nigde 90.27 307 P **P** **19 28 13.4 +0.6**
KOZK Kozakli-Nevseh 90.31 309 P **P** **19 28 13.1 +0.1**
YUK3 Moose Creek 90.38 28 P **P** **19 28 14.3 +1.4**
baz=273,SNR=62
YUK3 S **S** **19 39 05.6 +1.2**
baz=273
CORM Corum 90.46 310 P **P** **19 28 14.0 +0.3**
EIL Elat 90.56 300 P **P** **19 28 14.8 +0.7**
comp=Z,157nm,1.0s,baz=81,slow=2.5,SNR=144
EIL S **SKSac** **19 38 45.5 +2.7**

comp=Z,2.2nm,0.8s,baz=114,slow=18,SNR=1.4
EIL LR LR 20 13 22.3
comp=Z,9µm,20.6s,baz=95,slow=38
comp=Z,157nm,1.0s
EIL Elat 90.56 300 P **P 19 28 15.1 +0.9**
PCA Pinnacle 90.58 30 IAmb IAmb 19 28 18.1
comp=Z,249nm,1.3s
PINM Pinnacle 90.58 30 P **P 19 28 15.1 +1.4**
baz=274,SNR=20
PINM S **S 19 39 07.5 +1.4**
baz=274
SIM Simferopol' 90.65 315*c iP* **P 19 28 13.3 -1.0**
SIM *eS* **S 19 39 03.8 -3.4**
SIM pmax pmax
comp=Z,329nm,0.8s
MERS Mersin 90.67 307 P **P 19 28 13.8 -0.9**
DAWY Dawson 90.71 26 P **P 19 28 15.4 +1.2**
baz=274
YUK8 Steele Glacier 90.74 29 P **P 19 28 16.1 +1.4**
baz=274,SNR=50
YUK8 S **S 19 39 09.6 +1.7**
baz=274
GULA Gulagac 90.84 308 P **P 19 28 15.7 +0.2**
BZK Bozkurt 90.86 312 P **P 19 28 14.8 -0.5**
LODK Lodwar 90.89 273 IAMs_20 IAMs_20 20 09 58.8
comp=Z,5µm,20.0s
LODK Lodwar 90.89 273 P **P 19 28 17.4 +1.3**
SNR=52
LODK Lodwar 90.89 273⇓*eP* **P 19 28 16.9 +0.7**
LODK *eS* **SKSac 19 38 39.2 -6.2**
LODK Lodwar 90.89 273⇑*eP* **P 19 28 16.8 +0.7**
LODK *eS* **SKSac 19 38 40.0 -5.4**
LODK Lodwar 90.89 273 *eP* **P 19 28 14.5 -1.7**
LODK *eS* **SKSac 19 38 52.8 +7.4**
LODK Lodwar 90.89 273⇑*eP* **P 19 28 16.8 +0.7**
LODK *eS* **SKSac 19 38 40.0 -5.4**
LODK Lodwar 90.89 273 *eP* **P 19 28 15.4 -0.8**
LODK *eS* SKSac 19 38 57.2 +12
LODK Lodwar 90.89 273 *eP* **P 19 28 14.5 -1.7**
LODK *eS* **SKSac 19 38 52.8 +7.4**
LODK Lodwar 90.89 273⇓*eP* **P 19 28 16.9 +0.7**
LODK *eS*SKSac **SKSac 19 38 36.8 -8.6**
BCPM Bancas Point 90.90 30 IAmb IAmb 19 28 19.2
comp=Z,346nm,1.5s
KIZK Mersin 90.99 306 P **P 19 28 15.8 -0.2**
EREN Erenkoy 91.00 305 P **P 19 28 16.6 +0.5**
PNL Peninsula 91.04 30 P **P 19 28 17.2 +1.4**
baz=274,SNR=20
PNL S **S 19 39 11.6 +1.4**
baz=274
I29M Ogilvie Camp, 91.06 25 IAmb IAmb 19 28 18.2
comp=Z,187nm,1.1s
I29M Ogilvie Camp, 91.06 25 P **P 19 28 16.9 +1.1**
baz=275,SNR=137
I29M S **S 19 39 13.3 +3.1**
baz=275
YAYX Yaylak 91.14 309 P **P 19 28 16.6 -0.3**
SILI Silifke-Mersin 91.17 306 P **P 19 28 17.1 +0.2**
J29M Klondike Camp 91.19 26 IAmb IAmb 19 28 19.6
comp=Z,237nm,1.4s
J29M Klondike Camp 91.19 26 P **P 19 28 18.3 +1.8**
baz=276
J29M S **S 19 39 15.8 +4.4**
baz=276
CANT Cankiri 91.22 310 P **P 19 28 17.4 +0.3**
QSPA South Pole Qui 91.24 180 PKPPKP 19 53 45.5
comp=Z,3.6nm,1.1s,baz=0.3,slow=3.5,SNR=3.6
QSPA South Pole Qui 91.24 180 P **P 19 28 17.2 +0.6**
QSPA IAmb IAmb 19 28 18.4
comp=Z,362nm,1.6s
BR131 Keskin Array S 91.24 310 IAmb IAmb 19 28 18.3
comp=Z,130nm,0.9s
BR131 Keskin Array S 91.24 310*c iP* **P 19 28 16.2 -1.2**
BR131 Keskin Array S 91.24 310 P **P 19 28 17.2 -0.2**
SNR=34
BR131 P **P 19 28 17.2 -0.2**
SNR=34
BRTR Keskin Array B 91.24 310 P **P 19 28 16.9 -0.4**
comp=Z,62nm,0.9s,baz=120,slow=5.0,SNR=142
BRTR PKKPbc **PKKPbc 19 45 41.4 +0.6**
comp=Z,6.8nm,1.0s,baz=199,slow=2.6,SNR=10
BRTR PKPPKP **P'P'df 19 53 46.4 -4.1**
comp=Z,2.6nm,0.9s,baz=184,slow=3.7,SNR=4.8
BRTR LR LR 20 13 59.4
comp=Z,3µm,21.3s,baz=88,slow=39
comp=Z,62nm,0.9s
BRTR Keskin Array B 91.24 310 P **P 19 28 16.7 -0.7**
BRTR Keskin Array B 91.24 310 P **P 19 28 17.0 -0.4**
YUK4 Talbot Arm 91.28 29 P **P 19 28 18.5 +1.4**
baz=275,SNR=58
SERE Sereflikochisa 91.34 309 P **P 19 28 17.4 -0.4**
HOPEN Hopen 91.37 347⇑*iP* **P 19 28 17.3 +0.3**
SULT Sultanhani-AKS 91.41 308 P **P 19 28 17.9 -0.2**
YUK6 Outpost Mounta 91.45 29 P **P 19 28 19.1 +1.2**
baz=275,SNR=15
YUK6 S **S 19 39 16.0 +1.8**
baz=275
AKKU Akkuyu-Mersin 91.48 306 P **P 19 28 18.3 0.0**
LFK Lefkose 91.54 305 P **P 19 28 18.8 +0.1**
TEVE Tevekalti-Mers 91.55 306 P **P 19 28 19.2 +0.4**
EPYK Eagle Plains 91.60 24 P **P 19 28 18.5 +0.2**
EPYK Eagle Plains 91.60 24 P **P 19 28 18.9 +0.6**
baz=277,SNR=96
EPYK S **S 19 39 16.8 +1.7**
baz=277
AFSR Afar-Bala (An 91.69 309 P **P 19 28 19.6 +0.2**
CSS Mathiatis 91.72 305 P **P 19 28 19.8 +0.3**
CSS Mathiatis 91.72 305 P **P 19 28 18.9 -0.6**
BERE Bereket-Mersin 91.73 306 P **P 19 28 20.0 +0.3**
KULU Kulu 91.77 309 P **P 19 28 19.3 -0.5**
KURC Kurucasile-Bar 91.81 312 P **P 19 28 16.1 -3.6**
TEKE Tekeli-Mersin 91.83 306 P **P 19 28 19.8 -0.2**
HYT Haines Junctio 91.88 29 IAmb IAmb 19 28 22.8
comp=Z,168nm,1.2s
HYT Haines Junctio 91.88 29 P **P 19 28 21.2 +1.4**
baz=276,SNR=88
HYT S **S 19 39 20.3 +2.3**
baz=276
CHBY Cihanbeyli 91.88 308 P **P 19 28 19.6 -0.7**
ANTO Ankara 91.89 310 P **P 19 28 19.8 -0.5**
ANTO Ankara 91.89 310 P **P 19 28 19.3 -1.0**
ANTO IAmb IAmb 19 28 26.7
comp=Z,128nm,1.1s
ANTO Ankara 91.89 310 P **P 19 28 19.3 -1.0**
ANTO pmax pmax
comp=Z,128nm,1.1s
LOD Lodumlu 91.91 310 P **P 19 28 19.9 -0.5**
PUL Pulkovo 91.91 330*ceP* **P 19 28 19.2 -0.5**
PUL pmax pmax
comp=Z,351nm,0.7s
KEV Kevo 92.01 340 P **P 19 28 19.2 -0.8**
KEV IAmb IAmb 19 28 20.9
comp=Z,104nm,1.0s
KEV IAMs_20 IAMs_20 20 16 25.4
comp=Z,4µm,20.0s
KEV Kevo 92.01 340 P **P 19 28 19.2 -0.8**
KEV pmax pmax
comp=Z,105nm,1.0s
KEV MLR MLR
comp=Z,4µm,20.0s
N30M Aishikik Lake 92.01 29 P **P 19 28 21.8 +1.5**
baz=276,SNR=108
N30M S **S 19 39 22.8 +3.8**
baz=276
M30M Minto, Yukon 92.02 27 P **P 19 28 21.9 +1.5**
baz=277,SNR=195
M30M S **S 19 39 20.6 +1.6**
baz=277
LEF Lefka 92.07 305 P **P 19 28 20.8 -0.3**
HDMB Hadim 92.29 307 P **P 19 28 22.3 -0.1**
LADK Ladik-KONYA 92.32 308 P **P 19 28 21.3 -1.0**
GAZI Gazipasa 92.47 306 P **P 19 28 22.1 -0.9**
INK Inuvik 92.54 21 P **P 19 28 22.9 +0.4**
comp=Z,234nm,1.2s,baz=280,slow=5.9,SNR=125
INK PKPPKP **P'P'df 19 53 40.5 -5.6**
comp=Z,9.3nm,1.1s,baz=341,slow=1.0,SNR=6.5
comp=Z,234nm,1.2s
INK Inuvik 92.54 21 IAmb IAmb 19 28 25.2
comp=Z,317nm,1.2s
INK Inuvik 92.54 21 P **P 19 28 22.9 +0.4**
baz=280,SNR=167
INK S **S 19 39 24.3 +1.1**
baz=280
ARA0 ARCESS Array S 92.56 340⇑*iP* **P 19 28 22.5 -0.1**
ARCES ARCESS Array B 92.56 340 P **P 19 28 22.2 -0.4**
comp=Z,153nm,0.9s,baz=78,slow=6.3,SNR=146
ARCES PKKPbc **PKKPdf 19 45 36.4 +0.8**
comp=Z,2.0nm,0.5s,baz=258,slow=2.5,SNR=15
comp=Z,153nm,0.9s
ARCES ARCESS Array B 92.56 340 IAmb IAmb 19 28 23.7
comp=Z,256nm,1.1s
O30N Mendenhall 92.57 29 P **P 19 28 24.4 +1.5**
baz=277,SNR=84
O30N S **S 19 39 26.4 +2.4**
baz=277
PLBC Pleasant Camp 92.60 30 P **P 19 28 24.2 +1.2**
baz=277,SNR=56
PLBC S **S 19 39 26.2 +2.0**
baz=277
N31M Braeburn, Yuko 92.63 28 P **P 19 28 24.8 +1.6**
baz=278,SNR=144
N31M S **S 19 39 27.0 +2.5**
baz=278
KIZT Kizilcal 92.65 309 P **P 19 28 23.5 -0.4**
YUVA Yuva-Kibriscik 92.70 310 P **P 19 28 24.2 +0.2**
SPB2 Spitsbergen Ar 92.75 349 IAmb IAmb 19 28 32.0
comp=Z,157nm,1.0s
SPA0 Spitsbergen Ar 92.76 349⇑*iP* **P 19 28 23.3 -0.1**
SPITS Spitsbergen Ar 92.76 349 P **P 19 28 22.0 -1.4**
comp=Z,95nm,0.9s,baz=109,slow=8.9,SNR=31
SPITS LR LR 20 16 51.1
comp=Z,3µm,18.4s,baz=40,slow=40
comp=Z,95nm,0.9s
SPITS Spitsbergen Ar 92.76 349 P **P 19 28 22.0 -1.4**
SEYD Seydisehir-KON 92.78 307 P **P 19 28 24.3 -0.2**
AUSIV SIVRIHISAR 92.88 309 P **P 19 28 24.6 -0.3**
SVRH Sivrihisar-ESK 92.89 309 P **P 19 28 24.4 -0.5**
AUMIH MIHALICIK 92.89 310 P **P 19 28 24.5 -0.5**
HAMF Hammerfest 92.95 341⇑*iP* **P 19 28 24.1 -0.3**
HAMF *e*SKSac **SKSac 19 38 55.0 +0.5**
HAMF *e*SP SPn 19 40 40.5 +0.7
TETE Tete 93.00 254⇑*iP* **P 19 28 26.3 +0.5**
TETE IAmb IAmb 19 28 27.7
comp=Z,151nm,1.2s
MDUB Mudurnu 93.07 310 P **P 19 28 24.8 -0.9**
SKAG Skagway 93.12 30 IAmb IAmb 19 28 28.6
comp=Z,267nm,1.1s
SKAG Skagway 93.12 30 P **P 19 28 26.8 +1.4**
baz=278,SNR=21
SKAG S **S 19 39 31.1 +2.4**
baz=278
M31M Drury Creek, Y 93.18 28 IAmb IAmb 19 28 29.1
comp=Z,274nm,1.4s
M31M Drury Creek, Y 93.18 28 P **P 19 28 26.6 +0.9**
baz=279,SNR=153
M31M S **S 19 39 29.8 +0.5**
baz=279
CIFT Cifteler, Eski 93.25 309 P **P 19 28 26.0 -0.6**
KBS Kingsbay 93.29 350 P **P 19 28 25.6 -0.3**
KBS Kingsbay 93.29 350*ceP* **P 19 28 25.4 -0.4**
KBS pmax pmax
comp=Z,42nm,1.3s
KBS Kingsbay 93.29 350⇑*iP* **P 19 28 25.6 -0.3**
KBS *e*SKSac **SKSac 19 38 57.3 +1.0**
KBS *e*SP SP 19 40 43.3 +1.5
BJO1 Bjornoya 93.33 345⇑*iP* **P 19 28 25.2 -0.8**
HSPB Hornsund (broa 93.33 348 *eP* **P 19 28 25.9 -0.2**
HSPB Hornsund (broa 93.33 348⇑*iP* **P 19 28 26.0 -0.1**
JAWL J.Aulia 93.36 285 *iP* **P 19 28 27.7 +0.3**
JAWL *i* 19 28 31.9
baz=240,slow=12
JAWL AMP 19 28 35.5
comp=E,489nm,0.1s
SUTC Sutluce-Ispart 93.44 307 P **P 19 28 26.5 -1.1**
SIT Sitka 93.45 33 P **P 19 28 28.8 +1.8**
baz=278,SNR=30
SIT S **S 19 39 33.3 +1.6**
baz=278
KTK1 Kautokeino 93.46 339⇑*iP* **P 19 28 26.0 -0.8**
KTK1 *e*PP **PP 19 32 10.4 -0.8**
KTK1 ⇑*e*SKS **SKSac 19 38 57.0 -0.5**
KTK1 *e*PS **PS 19 40 51.4 +1.4**
KTK1 IVMs_BB IVMs_BB 20 16 09.1
comp=Z,2µm,18.6s
AKASG Malin Array Be 93.50 321 P **P 19 28 26.2 -1.1**
comp=Z,65nm,0.9s,baz=59,slow=4.1,SNR=188
AKASG S **SKSac 19 38 57.7 -0.7**
comp=Z,0.1nm,0.3s,baz=70,slow=11,SNR=1.7
AKASG PKKPbc **PKKPdf 19 45 32.3 -1.3**
comp=Z,3.9nm,0.8s,baz=277,slow=2.8,SNR=9.2
AKASG PKPPKP **P'P'df 19 53 37.5 -7.8**
comp=Z,0.2nm,0.3s,baz=279,slow=2.0,SNR=6.8
AKASG LR LR 20 14 10.0
comp=Z,6µm,21.1s,baz=87,slow=38
comp=Z,65nm,0.9s
AKASG Malin Array Be 93.50 321 IAmb IAmb 19 28 34.0
comp=Z,131nm,0.8s
AKASG Malin Array Be 93.50 321*ceP* **P 19 28 26.3 -1.1**
AKASG pmax pmax
comp=Z,70nm,0.9s
AKBB Malin Array Si 93.50 321 IAmb IAmb 19 28 34.0
comp=Z,126nm,0.9s
AKBB Malin Array Si 93.50 321*ceP* **P 19 28 26.4 -0.9**
PURM Purcari 93.50 317 ⇓*eP* **P 19 28 28.0 +0.6**
SRCK Saricakaya, Es 93.53 310 P **P 19 28 27.2 -0.6**
GULT Gulveren 93.59 310 P **P 19 28 27.5 -0.6**
FARO Faro, Yukon 93.66 27 P **P 19 28 29.5 +1.6**
baz=280,SNR=418
FARO S **S 19 39 33.6 +0.1**
baz=280
BORA Eskisehir 93.68 310 P **P 19 28 28.0 -0.6**
BORA Eskisehir 93.68 310 IAmb IAmb 19 28 29.4
comp=Z,162nm,1.1s
SAUV Serdivan-Sakar 93.70 311 P **P 19 28 27.8 -0.7**
SHUT Suhut-Afyon 93.71 309 P **P 19 28 28.3 -0.5**
FIA1 FINESS Array S 93.75 332 IAmb IAmb 19 28 36.3
comp=Z,133nm,0.7s
FINES FINESS Array B 93.76 332 P **P 19 28 27.3 -0.9**
comp=Z,38nm,0.9s,baz=98,slow=7.9,SNR=63
FINES S **SKSac 19 38 57.7 -1.6**
comp=Z,1.2nm,0.8s,baz=121,slow=13,SNR=1.4
FINES PKKPbc **PKKPbc 19 45 34.4 -0.5**
comp=Z,2.4nm,0.8s,baz=294,slow=6.2,SNR=5.9
FINES LR LR 20 12 36.6
comp=Z,7µm,22.0s,baz=80,slow=37
comp=Z,38nm,0.9s
FINES FINESS Array B 93.76 332 *i* P **P 19 28 27.8 -0.5**
FINES pmax pmax
comp=Z,38nm,0.9s
JIS Juneau Island 93.78 32 IAMs_20 IAMs_20 20 05 38.6
comp=Z,7µm,22.0s
ISP Isparta 93.80 308 P **P 19 28 27.7 -1.4**
ISP IAmb IAmb 19 28 40.1
comp=Z,95nm,0.9s
ISP Isparta 93.80 308 P **P 19 28 27.7 -1.4**
ISP pmax pmax
comp=Z,95nm,0.9s
MNK Minsk 93.85 325 *i* P **P 19 28 29.5 +0.7**
MNK *i* 19 32 14.8
MNK *i* PPP PPP 19 34 15.6
MNK *i* S **SKSac 19 39 01.0 +0.9**
MNK *i* PS **PS 19 40 55.3 +0.5**
MNK *i* SS **SS 19 45 56.7 +2.1**
MNK *i* SSS SSS 19 49 38.0
MNK pmax pmax
comp=N,10.0nm,1.0s
MNK pmax pmax
comp=E,53nm,1.0s
MNK pmax pmax
comp=Z,646nm,1.0s
MNK MLR MLR
comp=E,1µm,24.0s
MNK MLR MLR
comp=Z,11µm,22.0s
MNK Minsk 93.85 325 *i* P **P 19 28 29.5 +0.7**
comp=E,53nm,1.0s
MNK *i* P **P 19 28 29.5 +0.7**
comp=N,10.0nm,1.1s
MNK *i* P **P 19 28 29.5 +0.7**
comp=Z,646nm,1.1s,baz=263
MNK *i* PP **PP 19 32 14.9 +0.2**
MNK *i* PPP PPP 19 34 15.7
MNK *i* S **SKSac 19 39 01.0 +0.9**
MNK *i* PS PS 19 40 55.3 +0.5
MNK *i* SS **SS 19 45 56.8 +2.1**
MNK *i* SSS SSS 19 49 38.1
MNK *i* LR LR 20 08 31.8
MNK *i* LRM MLR 20 11 26.9
comp=N,34nm,17.1s
MNK *i* LRM MLR 20 12 04.9
comp=E,1µm,24.2s
MNK *i* LRM MLR 20 12 18.7
comp=Z,11µm,21.6s
VSU Vasula 93.91 329*c iP* **P 19 28 27.5 -1.5**
VSU pmax pmax
comp=Z,275nm,0.7s
VSU Vasula 93.91 329 *eP* **P 19 28 28.4 -0.6**
P32M Atlin 93.92 30 P **P 19 28 30.5 +1.4**
baz=279
KORT Korkueli 94.00 307 P **P 19 28 29.1 -1.0**
AUBOZ BOZOYUK 94.00 310 P **P 19 28 29.5 -0.5**
KIS Kishinev 94.18 317⇑*iP* **P 19 28 29.0 -1.5**
comp=Z,360nm,2.3s
KIS *e*SKS **SKSac 19 39 00.0 -2.2**
KIS *e*S **S 19 39 34.0 -4.5**
comp=Z,900nm,2.7s
KIS Kishinev 94.18 317*c iP* **P 19 28 29.0 -1.5**
KIS *e* 19 28 42.0
KIS *e* 19 39 00.0
KIS *e*S **S 19 39 34.0 -4.5**
KIS pmax pmax
comp=Z,360nm,2.3s
KIS smax smax
comp=E,900nm,2.7s
ADVT Abdulvahap 94.18 311 P **P 19 28 30.3 -0.4**
MILM Milestii Mici 94.19 317⇑*iP* **P 19 28 29.0 -1.6**
comp=E,900nm,2.6s
MILM Milestii Mici 94.19 317 *ePP* **PP 19 32 19.0 +1.5**
MILM *e*SKS **SKSac 19 38 56.0 -6.3**
MILM *i* S **S 19 39 34.0 -4.6**
comp=E,2µm,3.3s
MILM Milestii Mici 94.19 317 *i* PS PS 19 40 48.0 -11
MILM *e*L L 20 08 18.0
MILM LRM MLR 20 15 41.0
comp=E,3µm,21.0s
MILM Milestii Mici 94.19 317 ⇓*iP* **P 19 28 30.6 0.0**
MILM Milestii Mici 94.19 317*c iP* **P 19 28 29.0 -1.6**
MILM *e* 19 28 40.0
MILM *e* 19 32 19.0
MILM *e* 19 38 56.0
MILM *i* S **S 19 39 34.0 -4.6**
MILM *i* PS **PS 19 40 48.0 -11**
MILM pmax pmax
comp=Z,900nm,2.6s
MILM pmax pmax
comp=N,380nm,2.2s
MILM smax smax
comp=N,2µm,3.3s
MILM MLR MLR
comp=Z,3µm,20.0s
MILM MLR MLR
comp=E,3µm,21.0s
P33M Teslin, Yukon 94.26 29 IAmb IAmb 19 28 33.5
comp=Z,165nm,1.1s
P33M Teslin, Yukon 94.26 29 P **P 19 28 32.1 +1.3**
baz=280,SNR=98
P33M S **S 19 39 37.9 -1.0**
baz=280
CNG Changalane 94.29 244⇑*iP* **P 19 28 31.8 +0.3**
CNG IAmb IAmb 19 28 33.2
comp=Z,42nm,1.1s
JETT Jettan, Norway 94.30 340⇑*iP* **P 19 28 30.3 -0.4**
SORM Soroca 94.36 318 ⇑*iP* **P 19 28 30.8 -0.5**
ELL Elmali 94.37 307 P **P 19 28 31.3 -0.5**
TLCR 94.38 315 ⇑*iP* **P 19 28 33.1 +1.6**
JURR Jurilovca 94.38 315 ⇓*iP* **P 19 28 32.5 +1.1**
IDID Didziasalis 94.39 326 *eP* **P 19 28 30.4 -0.9**
A36M Sachs Harbour 94.40 17 P **P 19 28 31.3 +0.4**
baz=288,SNR=11
A36M S **S 19 39 43.1 +3.6**
baz=288
NACGM Naroch 94.42 325⇑*eP* **P 19 28 31.4 0.0**
baz=81
YLV Yalova 94.44 311 P **P 19 28 31.5 -0.5**
TVSB Tavsanli 94.48 310 P **P 19 28 31.8 -0.5**
MMPY Sheldon Lake, 94.54 27 P **P 19 28 33.6 +1.6**
baz=282,SNR=325
MMPY S **S 19 39 40.8 -0.4**
baz=282
GEDZ Gediz 94.56 309 P **P 19 28 32.1 -0.5**
GEMT Gemlik 94.60 311 P **P 19 28 31.8 -0.8**
LEOM Leova 94.63 317 ⇑*iP* **P 19 28 33.4 +0.8**
ISK Istanbul-Kandi 94.63 311 P **P 19 28 31.9 -0.9**
ISK Istanbul-Kandi 94.63 311 P **P 19 28 31.4 -1.4**
KAVV Kandilli-Istan 94.63 311 P **P 19 28 32.1 -0.7**
AKAS Kas 94.66 306 IAmb IAmb 19 28 38.5
comp=Z,96nm,0.9s
IIGN Ignalina 94.67 326 *eP* **P 19 28 32.3 -0.3**
MANR Mangalia 94.69 314 ⇑*iP* **P 19 28 33.1 +0.2**
ISAL Salakas 94.69 326 *eP* **P 19 28 32.7 0.0**
TPGR Topolog 94.69 315 ⇓*iP* **P 19 28 33.4 +0.4**
TPGR Topolog 94.69 315 ⇑*iP* **PKKPdf 19 45 32.4 +1.1**
POGA Pongola 94.71 243⇑*iP* **P 19 28 33.9 +0.4**
POGA IAmb IAmb 19 28 35.4
comp=Z,198nm,1.2s
TIRR Tirgusor 94.74 315 ⇓*iP* **P 19 28 33.7 +0.5**
TIRR Tirgusor 94.74 315 ⇑*iP* **PKKPdf 19 45 31.6 +0.4**
TIRR Tirgusor 94.74 315 ⇑*iP* **PKKPdf 19 45 31.6 +0.4**
TIRR Tirgusor 94.74 315 IAmb IAmb 19 28 40.3
comp=Z,234nm,1.0s
TRO Tromso 94.78 340⇑*iP* **P 19 28 32.0 -0.7**
MEF Metsahovi 94.79 331 *eP* **P 19 28 32.1 -0.9**
APMY Acipayam-Deniz 94.79 308 P **P 19 28 32.4 -1.3**
VLDR Vladesti 94.82 316 ⇓*iP* **P 19 28 34.5 +1.0**
ARMT Armutlu 94.83 311 P **P 19 28 32.8 -0.9**
BGKT Bogazkoy 94.83 311 P **P 19 28 33.1 -0.6**
CFR Carcaliu 94.86 315 ⇓*iP* **P 19 28 33.1 -0.6**
CFR Carcaliu 94.86 315 ⇓*iP* **PKKPdf 19 45 31.2 +0.2**
TATR Tatarca 94.87 316 ⇓*iP* **P 19 28 34.2 +0.5**
SIMA Simav-Kutahya 94.89 309 P **P 19 28 33.5 -0.6**
SCTR Scanteiesti 94.90 316 ⇑*iP* **P 19 28 35.1 +1.2**
CRAG Craig 94.91 34 IAmb IAmb 19 28 37.4
comp=Z,234nm,1.4s
CRAG Craig 94.91 34 P **P 19 28 34.9 +1.3**
baz=280,SNR=22
VASR Vaslui 94.92 317 ⇓*iP* **P 19 28 34.2 +0.3**
VARL Varlezi 94.97 316 ⇓*iP* **P 19 28 35.1 +0.9**
TLBR Topalu 94.99 315 ⇓*iP* **P 19 28 34.8 +0.5**
TLBR Topalu 94.99 315 ⇑*iP* **PKKPdf 19 45 31.6 +0.8**
IAS Iasi 95.01 317 ⇑*iP* **P 19 28 34.6 +0.3**
CTKS Kestanelik-??a 95.03 311 P **P 19 28 33.8 -0.8**
FETY Fethiye 95.04 307 P **P 19 28 33.5 -1.3**
MOPA Mopani 95.04 247⇑*iP* **P 19 28 34.6 -0.4**
MOPA IAmb IAmb 19 28 36.5
comp=Z,175nm,1.3s
MOPA Mopani 95.04 247 *iP* **P 19 28 35.5 +0.5**
MOPA Mopani 95.04 247 *iP* **P 19 28 35.5 +0.5**
HARR Harsova 95.06 315 ⇑*iP* **P 19 28 35.4 +0.8**
HARR Harsova 95.06 315 ⇑*iP* **PKKPdf 19 45 31.0 +0.3**
SLCR Slobozia Conac 95.06 316 ⇑*iP* **P 19 28 36.2 +1.6**
TUDR 95.13 316 ⇑*iP* **P 19 28 36.5 +1.6**
CTYL Yalikoy Yolu 95.17 312 P **P 19 28 34.5 -0.7**
WRAK Wrangell Islan 95.17 33 IAmb IAmb 19 28 37.7
comp=Z,233nm,1.0s
WRAK Wrangell Islan 95.17 33 P **P 19 28 36.2 +1.4**
baz=280,SNR=37
WRAK S **S 19 39 46.6 -0.2**
baz=280
KULA Kula-Manisa 95.19 309 P **P 19 28 34.5 -1.0**
KULA Kula-Manisa 95.19 309 P **P 19 28 35.1 -0.4**
SLVT Silivri 95.25 311 P **P 19 28 34.8 -0.8**
GHRR 95.25 316 ⇓*iP* **P 19 28 36.5 +1.0**
DALY Dalyan (Mula) 95.37 307 P **P 19 28 35.4 -0.8**
MTSE Matsula 95.37 329 *eP* **P 19 28 34.8 -0.9**
NOR Nord 95.44 355 *iP* **P 19 28 34.5 -1.2**
NOR IAmb IAmb 19 28 37.0
comp=Z,20nm,0.9s
PANC Panciu 95.46 316 ⇓*iP* **P 19 28 37.6 +1.2**
DRBR Darabani 95.51 319 ⇑*iP* **P 19 28 36.5 -0.1**
ODBI Odobesti 95.54 316 ⇑*iP* **P 19 28 38.2 +1.4**
ODBI Odobesti 95.54 316 ⇑*iP* **PKKPdf 19 45 30.2 +0.3**
MBAR Mbarara 95.60 270 LR LR 20 09 24.8
comp=Z,7µm,20.8s,baz=61,slow=34
MBAR Mbarara 95.60 270 P **P 19 28 39.0 +1.0**
MBAR Mbarara 95.60 270 IAMs_20 IAMs_20 20 07 36.8
comp=Z,7µm,22.0s
MBAR Mbarara 95.60 270*c iP* **P 19 28 38.3 +0.3**
MBAR pmax pmax
comp=Z,44nm,1.0s
MBAR Mbarara 95.60 270 P **P 19 28 39.1 +1.1**
MBAR P **P 19 28 39.1 +1.1**
MBAR Mbarara 95.60 270 *eP* **P 19 28 36.9 -1.1**
MBAR ⇓*eS* SKSac 19 38 40.3 -31
MBAR Mbarara 95.60 270⇓*eP* **P 19 28 37.2 -0.8**

MBAR eS SKSac 19 39 10.4 -1.2
MBAR Mbarara 95.60 270 eP P 19 28 36.5 -1.5
MBAR eS SKSac 19 39 14.8 +3.1
MBAR Mbarara 95.60 270⇓ eP P 19 28 37.2 -0.8
MBAR eS SKSac 19 39 10.4 -1.2
MBAR Mbarara 95.60 270 eP P 19 28 29.3 -8.7
MBAR eS SKSac 19 39 08.9 -2.7
MBAR Mbarara 95.60 270 eP P 19 28 36.5 -1.5
MBAR eS SKSac 19 39 14.8 +3.1
MBAR Mbarara 95.60 270 eP P 19 28 36.9 -1.1
MBAR eSKSac SKSac 19 38 55.9 -16
C36M Paulatuk 95.61 20 IAmb IAmb 19 28 38.4
comp=Z,248nm,1.1s
C36M Paulatuk 95.61 20 P P 19 28 37.3 +0.7
baz=289,SNR=46
C36M S S 19 39 47.6 -2.5
baz=289
EDC Edincik 95.61 311 P P 19 28 36.8 -0.5
CRLT Corlu 95.62 311 P P 19 28 37.5 +0.2
PRD Provadia 95.62 313 *i* P P 19 28 36.9 -0.3
YER Yerkesik 95.63 307 P P 19 28 37.1 -0.4
YER Yerkesik 95.63 307 P P 19 28 37.4 -0.1
GRER 95.64 316⇓ P P 19 28 39.7 +2.4
H02S1 DAWSON INLET T 95.66 36 P P 19 28 37.6 +0.5
SNR=14
H02S1 T T 21 15 54.5
SNR=62
BALB Balikesir 95.68 310 P P 19 28 37.3 -0.3
TURN Turunc 95.70 307 P P 19 28 37.6 -0.1
TESR Tescani 95.72 317⇓ P P 19 28 39.3 +1.7
VRI Vrincioaia 95.75 316⇓ P P 19 28 37.6 -0.2
VRI Vrincioaia 95.75 316⇑ P **PKKPdf** 19 45 25.8 -3.7
VRI Vrincioaia 95.75 316 P P 19 28 38.0 +0.2
BISRR Bisoca 95.81 316⇑ P P 19 28 39.3 +1.2
BISRR Bisoca 95.81 316⇑ P **PKKPbc** 19 45 28.7 -0.3
PLOR Plostina 95.81 316⇑ P P 19 28 38.5 +0.4
PLOR Plostina 95.81 316⇓ P **PKKPbc** 19 45 29.1 +0.1
VSVD Vaisvydziai 95.84 327 *e*P P 19 28 38.1 +0.1
ARG Arkhangelos 95.85 306 P P 19 28 38.3 -0.1
ARG Arkhangelos 95.85 306 P P 19 28 38.3 -0.1
ARG Arkhangelos 95.85 306 IAmb IAmb 19 29 13.5
comp=Z,175nm,1.2s
AYDB Zeytinkoy-Aydi 95.86 308 P P 19 28 38.2 -0.4
LEHL Lehliu 95.87 315⇓ P P 19 28 39.3 +1.0
RAF Rauma 95.89 332 *e*P P 19 28 36.1 -1.8
PABE Paberze 95.91 326 IAMs_20 IAMs_20 20 13 14.7
comp=Z,7µm,22.0s
PABE Paberze 95.91 326 *e*P P 19 28 37.5 -0.8
ISR Istrita 95.98 315⇑ P **PKKPbc** 19 45 24.4 -4.1
DLBC Dease Lake 96.01 31 LR LR 20 08 07.7
comp=Z,4µm,21.9s,baz=286,slow=33
DLBC Dease Lake 96.01 31 IAmb IAmb 19 28 41.9
comp=Z,200nm,1.4s
DLBC Dease Lake 96.01 31 P P 19 28 40.2 +1.5
baz=282,SNR=72
DLBC S S 19 39 54.6 +0.4
baz=282
MLSB Milas 96.02 308 P P 19 28 38.8 -0.4
BIZ Bicaz 96.03 317⇑ P P 19 28 39.3 +0.3
BIZ Bicaz 96.03 317⇓ P **PKKPbc** 19 45 27.7 -0.7
KRBG Karabiga-Canak 96.04 311 P P 19 28 38.6 -0.6
NEHR Nehoiu 96.11 316⇑ P P 19 28 40.2 +0.7
COVR Voineasa-Covas 96.12 316⇑ P P 19 28 39.2 -0.3
ALE Alert 96.16 1 IAMs_20 IAMs_20 20 14 02.8
comp=Z,7µm,22.0s
TGTN Hyland Airport 96.16 28 P P 19 28 40.9 +1.5
baz=284
TGTN S S 19 39 54.6 -0.7
baz=284
T35M Bob Quinn 96.20 32 P P 19 28 41.1 +1.5
baz=282,SNR=48
T35M S S 19 39 55.1 -0.7
baz=282
RAZG Razgrad 96.22 314⇓ P P 19 28 40.5 +0.5
RAZG Razgrad 96.22 314⇑ P **PKKPbc** 19 45 28.1 +0.4
DAT Datca 96.24 307 P P 19 28 39.2 -1.1
DAT Datca 96.24 307 P P 19 28 38.0 -2.3
CRLN Carolina, Mapu 96.24 244 *e*P P 19 28 41.7 +1.0
CRLN IAmb IAmb 19 28 42.3
comp=Z,50nm,1.2s
SULR 96.25 315⇓ P P 19 28 40.8 +0.7
EDRB Edirne 96.27 312 P P 19 28 39.5 -0.8
EDRB Edirne 96.27 312 P P 19 28 39.4 -0.8
JMB Yambol 96.31 313 *i* P P 19 28 40.4 0.0
MLR Muntele Rosu 96.35 316⇓ P P 19 28 40.8 0.0
MLR Muntele Rosu 96.35 316 P P 19 28 40.7 0.0
comp=Z,71nm,0.9s,baz=15,slow=2.5,SNR=86
MLR LR LR 20 17 35.0
comp=Z,10µm,21.2s,baz=80,slow=39
comp=Z,71nm,0.9s
MLR Muntele Rosu 96.35 316 IAmb IAmb 19 28 42.3
comp=Z,176nm,1.1s
GCAM G?zelcaml? 96.40 308 P P 19 28 40.9 0.0
BODT Bodrum 96.41 307 P P 19 28 40.4 -0.6
BODT Bodrum 96.41 307 P P 19 28 40.2 -0.8
BLCB Balcova 96.47 309 P P 19 28 40.8 -0.4
BLCB Balcova 96.47 309 P P 19 28 40.6 -0.6
DKL Dikili 96.50 309 P P 19 28 40.4 -0.9
BURAR Bucovina Array 96.52 318⇑ P P 19 28 41.7 +0.3
BURAR Bucovina Array 96.52 318⇑ P **PKKPbc** 19 45 27.5 +0.3
BUR08 Bucovina Ar. S 96.53 318 P P 19 28 41.1 -0.3
NIS1 Nisyros Isl. 96.57 307 P P 19 28 40.7 -1.0
HG4B Hotspring 96.58 37 IAmb IAmb 19 28 44.6
comp=Z,205nm,1.6s
STEI Steigen 96.59 339⇑ *i*P P 19 28 40.2 -0.9
STEI IVMs_BB IVMs_BB 20 17 03.4
comp=Z,3µm,17.7s
ERIK Erikli-Kesan 96.59 311 P P 19 28 41.3 -0.4
SUW Suwalki 96.65 325 *e*P P 19 28 41.1 -0.5
SUW Suwalki 96.65 325 *e*P P 19 28 40.5 -1.1
DOPR Dopca 96.66 316⇓ P P 19 28 42.1 +0.1
SZH Strazhica 96.67 314 *i* P P 19 28 41.4 -0.6
KARP Karpathos 96.70 306 P P 19 28 42.0 -0.3
KARP Karpathos 96.70 306 P P 19 28 42.1 -0.3
KARP Karpathos 96.70 306 IAMs_20 IAMs_20 20 19 39.3
comp=Z,6µm,22.0s
KSTD Kokstad 96.71 239⇑ *i*P P 19 28 43.2 +0.5
KSTD IAmb IAmb 19 28 44.9
comp=Z,128nm,1.2s
SMG Samos 96.71 308 P P 19 28 42.0 -0.3
FAUS Fauske 96.77 339⇑ *i*P P 19 28 41.0 -0.8
FAUS ⇑ *e*SKS **SKSac** 19 39 15.6 +0.4
FAUS *e*ScS **ScS** 19 40 01.1 +0.6
URLA Izmir 96.82 309 P P 19 28 42.3 -0.6
EZN Ezine 96.85 310 P P 19 28 42.1 -0.8
EZN Ezine 96.85 310 P P 19 28 42.2 -0.7
ENEZ Enez 96.86 311 P P 19 28 42.1 -0.8
ENEZ Enez 96.86 311 P P 19 28 41.8 -1.1
ALN Alexandroupoli 96.92 311 P P 19 28 42.1 -1.1
ALN Alexandroupoli 96.92 311 P P 19 28 41.7 -1.5
ALN Alexandroupoli 96.92 311 IAmb IAmb 19 28 43.9
comp=Z,208nm,1.5s
LVV L'vov 96.92 320 *i* P P 19 28 43.1 +0.1
LVV *e* 19 32 37.7
LVV *e*PPP PPP 19 34 49.1
LVV *e* 19 39 10.6
LVV *e*S S 19 39 59.5 -2.8
LVV *e*PS PS 19 41 20.6 -8.1
LVV *e*SS SS 19 46 35.7 -2.8
LVV pmax pmax
comp=Z,300nm,1.6s
LVV MLR MLR
comp=E,3µm,20.0s
LVV MLR MLR
comp=N,3µm,21.0s
LVV MLR MLR
comp=Z,4µm,21.0s
PBUR Paburge 96.93 327 *e*P P 19 28 40.5 -2.4
AAL Aland 96.94 331 *e*P P 19 28 41.1 -1.7
PRK Paraskevi 96.96 310 P P 19 28 43.7 +0.3
VOIR 96.98 316⇑ P **PKKPbc** 19 45 26.2 +0.4
MTUR Matau 97.00 316⇑ P **PKKPbc** 19 45 27.7 +1.9
BOZC Bozcaada 97.05 310 P P 19 28 43.2 -0.6
COPA Copaceanca 97.06 315⇑ P P 19 28 43.3 -0.4
COPA Copaceanca 97.06 315⇑ P **PKKPbc** 19 45 26.2 +0.8
EUNU Eureka 97.11 5 IAmb IAmb 19 28 45.4
comp=Z,133nm,1.6s
LOF Lofoten 97.12 340 *e*P Pdif 19 28 43.7 +0.2
LOF *e*SKSac **SKSac** 19 39 17.4 +0.5
GADA Gvkgeada 97.12 311 P P 19 28 43.5 -0.6
HUMR Humele 97.17 315⇑ P Pdif 19 28 44.7 +0.4
HUMR Humele 97.17 315⇑ P **PKKPbc** 19 45 25.8 +0.7
ARCR ARCALIA 97.19 318⇓ P Pdif 19 28 45.2 +0.8
ARCR ARCALIA 97.19 318⇑ P **PKKPbc** 19 45 26.0 +0.8
CHOS Chios island 97.24 309 P P 19 28 44.5 -0.3
CHOS Chios island 97.24 309 P P 19 28 44.5 -0.3
RDO Rodhopi 97.26 312 P P 19 28 43.8 -0.9
RDO Rodhopi 97.26 312 P P 19 28 43.5 -1.3
RDO Rodhopi 97.26 312 P P 19 28 43.4 -1.3
RDO IAmb IAmb 19 28 45.3
comp=Z,106nm,1.2s
ARR Arges 97.28 316⇓ P P 19 28 44.7 -0.1
ARR Arges 97.28 316⇓ P **PKKPbc** 19 45 25.6 +0.6
KDZ Kurdzhali 97.28 312 *i* P P 19 28 44.0 -0.8
SIGR SIGRI 97.29 310 P P 19 28 43.2 -1.7
MDB Medias 97.33 317⇑ P Pdif 19 28 47.0 +2.0
SMTH Samothraki Isl 97.36 311 P P 19 28 43.4 -1.8
MOR8 Moi Rana 97.50 338⇑ *i*P P 19 28 43.7 -1.6
MOR8 *e*SKSac **SKSac** 19 39 18.6 -0.4
MOR8 *e*ScS **S** 19 40 06.0 -0.6
MOR8 *e*SS **SS** 19 46 46.1 +0.3
MOR8 IVMs_BB IVMs_BB 20 16 49.7
comp=Z,2µm,20.8s
ZKR Zakros 97.52 306 P P 19 28 45.9 -0.1
ZKR Zakros 97.52 306 P P 19 28 45.6 -0.4
BMR Baia Mare 97.66 318⇑ P Pdif 19 28 46.9 +0.5
VLAD Vladila 97.66 315⇑ P Pdif 19 28 47.6 +1.1
VLAD Vladila 97.66 315⇓ P **PKKPbc** 19 45 24.0 +0.2
BLWY Bulawayo 97.70 250⇑ *i*P P 19 28 47.3 0.0
BLWY IAmb IAmb 19 28 48.6
comp=Z,579nm,1.2s
BLWY Bulawayo 97.70 250 *i* P Pdif 19 28 49.0 +1.6
BLWY Bulawayo 97.70 250 *i* P Pdif 19 28 49.0 +1.6
PLD Plovdiv 97.74 313 P P 19 28 46.2 -0.7
CJR Cluj-Napoca 97.76 317⇑ P Pdif 19 28 47.9 +0.9
CBBR Cluj-Babes-Bol 97.78 317⇑ P Pdif 19 28 48.0 +1.0
MATP Matopo 97.80 250 *e*P P 19 28 46.1 -1.7
MATP IAmb IAmb 19 28 49.0
comp=Z,5µm,1.2s
MATP Matopo 97.80 250 LR LR 20 10 08.0
comp=Z,10µm,20.8s,baz=84,slow=34
MATP Matopo 97.80 250 *i* P Pdif 19 28 50.1 +2.3
MATP Matopo 97.80 250 *i* P Pdif 19 28 50.1 +2.3
PZN Rozhen 97.80 312 *i* P P 19 28 46.5 -0.9
SLR Silverton 97.82 244⇑ *i*P P 19 28 47.7 0.0
SLR IAmb IAmb 19 28 49.3
comp=Z,78nm,1.2s
APE Apeiranthos 97.82 308⇑ P P 19 28 45.3 -2.1
WRGLY Wrigley 97.82 25 P Pdif 19 28 47.8 +1.0
baz=289
LOT Lotru 97.87 316⇓ P Pdif 19 28 48.4 +0.8
LOT Lotru 97.87 316 P P 19 28 47.5 0.0
KONS Konsvik 97.88 338⇑ *i*P P 19 28 46.8 -0.1
FRMA Ierapetra Chan 97.92 305 P P 19 28 47.4 -0.4
THAS Thassos island 97.95 311 P P 19 28 47.0 -0.8
NPS Neapolis 97.99 306 P P 19 28 47.7 -0.5
KAVA Kavala 98.05 312 P P 19 28 47.2 -1.1
SNKL Senekal, Frees 98.16 242⇑ *i*P P 19 28 49.2 -0.1
SNKL IAmb IAmb 19 28 50.8
comp=Z,104nm,1.2s
LSZ Lusaka 98.20 255 S **SKSac** 19 39 24.6 -0.2
comp=Z,1.8nm,0.2s,baz=72,slow=20,SNR=8.4
LSZ PKKP 19 45 24.6
comp=Z,1.7nm,0.2s,baz=302,slow=3.0,SNR=4.9
LSZ LR LR 20 08 56.3
comp=Z,8µm,22.0s,baz=100,slow=33
KOLS Kolonicke sedl 98.22 320 *e*P Pdif 19 28 50.0 +1.1
KOLS Kolonicke sedl 98.22 320 *e*PDIFF Pdif 19 28 50.0 +1.1
UZH Uzhgorod 98.27 319 *e*P Pdif 19 28 49.5 +0.4
UZH *e* 19 29 00.9
UZH *e* 19 32 52.9
UZH *e* 19 39 23.9
UZH *e*S **S** 19 40 11.5 -2.2
UZH *e*SS SS 19 47 08.7 +11
UZH MLR MLR
comp=Z,500nm,17.0s
DRGR 98.35 318⇓ P Pdif 19 28 49.8 +0.2
HRAO HartRAO 98.35 244⇑ *i*P Pdif 19 28 50.3 +0.1
HRAO IAmb IAmb 19 28 51.8
comp=Z,83nm,1.2s
DEV Deva 98.39 317⇓ P Pdif 19 28 50.1 +0.4
BBB Bella Bella 98.46 37 LR LR 20 06 34.9
comp=Z,3µm,21.7s,baz=284,slow=31
NVR Nevrokopi 98.48 312 P P 19 28 48.7 -1.6
BEL Belsk 98.53 323 *e*P Pdif 19 28 51.2 +1.0
MMB Musomiste 98.54 312 *i* P P 19 28 49.6 -0.9
KARY Karystos 98.55 309 P P 19 28 48.5 -2.1
OUR Ouranopolis 98.55 311 P P 19 28 49.7 -0.8
OUR Ouranopolis 98.55 311 P P 19 28 49.4 -1.1
GZR Gura Zlata 98.56 316⇓ P Pdif 19 28 51.5 +0.9
GZR Gura Zlata 98.56 316⇑ P **PKKPbc** 19 45 22.3 +0.9
IDI Anoyia 98.58 306⇓ P P 19 28 50.7 -0.2
IDI Anoyia 98.58 306⇑ P **PKKPbc** 19 45 23.4 +2.3
IDI Anoyia 98.58 306 P P 19 28 50.2 -0.7
comp=Z,32nm,0.8s,baz=89,slow=5.9,SNR=18
IDI PP **PP** 19 32 50.6 -1.2
comp=Z,19nm,0.9s,baz=76,slow=8.7,SNR=5.0
IDI S **SKSac** 19 39 25.3 -0.6
comp=Z,4.8nm,0.8s,baz=181,slow=6.9,SNR=2.1
IDI PKKPbc **PKKPbc** 19 45 18.6 -2.5
comp=Z,33nm,1.0s,baz=298,slow=4.5,SNR=4.5
IDI PKKP **PKKPdf** 19 45 23.1 -1.1
comp=Z,34nm,1.0s,baz=260,slow=4.3,SNR=10
IDI LR LR 20 21 20.9
comp=Z,2µm,21.1s,baz=68,slow=40
comp=Z,32nm,0.8s
IDI Anoyia 98.58 306 P P 19 28 50.1 -0.7
IDI Anoyia 98.58 306 P P 19 28 49.8 -1.1
SRS Serrai 98.72 312 P P 19 28 49.6 -1.7
CRVS Cervenica-Dubn 98.75 320 *e*P Pdif 19 28 52.0 +0.7
CRVS *e* 19 39 25.5
CRVS *e*S **S** 19 40 15.1 -2.8
CRVS Cervenica-Dubn 98.75 320 *e*PDIFF Pdif 19 28 52.0 +0.7
CRVS *e*PP PP 19 33 05.2 +13
LTVH Ltavrtes, Hu 98.78 318⇑ P Pdif 19 28 53.5 +2.1
LTVH Ltavrtes, Hu 98.78 318 P Pdif 19 28 52.1 +0.7
PAIG Paliouri 98.85 311 P P 19 28 50.8 -1.1
DJES Djerdap 98.88 315⇓ P Pdif 19 28 52.7 +0.7
HERR Herculane 98.91 316⇑ P Pdif 19 28 52.4 +0.3
HERR Herculane 98.91 316⇑ P **PKKPbc** 19 45 20.5 +0.1
BORR Bors 98.91 318⇑ P Pdif 19 28 53.0 +1.0
SOH Sokhos 98.95 312 P P 19 28 50.9 -1.5
PLG Polygyros 98.95 311 P P 19 28 50.8 -1.6
BLKB Belogradchik 98.96 314⇓ P Pdif 19 28 52.4 +0.1
BLKB Belogradchik 98.96 314⇓ P **PKKPbc** 19 45 19.6 -0.6
KKB Krupnik 98.97 313 *i* P P 19 28 51.6 -0.8
NSS Namsos 99.08 336⇑ *e*PP **Pdif** 19 28 51.1 -1.2
VLY Voula,Athens 99.08 309 P **Pdif** 19 28 50.8 -2.2
ATH Athens Observa 99.12 309 P **Pdif** 19 28 51.4 -1.8
NVL N'lazarevskaya 99.14 198⇑ *i*P **Pdif** 19 28 52.9 +0.4
NVL *e* 19 32 55.5
NVL *e*PPP PPP 19 35 06.8
NVL *e*S **SKSac** 19 39 28.3 +1.2
NVL *e*SP **SP** 19 41 50.6 +4.8
NVL *e*PS **PS** 19 41 51.3 -0.6
NVL *e*SS **SS** 19 47 13.7 +5.2
NVL pmax pmax
comp=Z,67nm,1.3s
NVL MLR MLR
comp=Z,6µm,20.0s
SIRR Siria 99.16 317⇓ P **Pdif** 19 28 54.1 +0.9
SIRR Siria 99.16 317⇑ P **PKKPbc** 19 45 19.4 -0.3
HORT Hortiatis 99.17 311 P **Pdif** 19 28 51.9 -1.6
HORT Hortiatis 99.17 311 P **Pdif** 19 28 51.9 -1.6
KNT Kendrikon 99.23 312 P **Pdif** 19 28 52.4 -1.2
KNT Kendrikon 99.23 312 P **Pdif** 19 28 52.3 -1.3
IMMV Iera Moni Meta 99.29 306 P **Pdif** 19 28 53.7 -0.3
IMMV Iera Moni Meta 99.29 306 P **Pdif** 19 28 53.5 -0.5
GVD Gavdhos 99.29 305 P **Pdif** 19 28 53.4 -0.6
GVD Gavdhos 99.29 305 P **Pdif** 19 28 53.3 -0.7
NEO Neokhori 99.29 310 P **Pdif** 19 28 51.9 -2.0
XOR Xorichti 99.31 310 P **Pdif** 19 28 52.6 -1.4
BZS Buzias 99.32 317⇑ P **Pdif** 19 28 53.5 -0.3
BZS Buzias 99.32 317⇓ P **PKKPbc** 19 45 20.1 +0.8
NIE Niedzica 99.38 320 *e*P **Pdif** 19 28 55.1 +1.0
VILL Villia 99.41 309 P **Pdif** 19 28 52.6 -1.9
MDVR Moldovita 99.42 316⇑ P **Pdif** 19 28 54.9 +0.5
MDVR Moldovita 99.42 316⇑ P **PKKPbc** 19 45 19.9 +0.9
KECS Kecovo 99.47 320 *e*P **Pdif** 19 28 56.0 +1.5
KECS Kecovo 99.47 320 *e*PDIFF **Pdif** 19 28 56.0 +1.5
OJC Ojcow 99.51 321 *e*P **Pdif** 19 28 54.8 +0.2
OJC Ojcow 99.51 321 IAmb IAmb 19 29 02.9
comp=Z,108nm,0.9s
ATAL Atalanti 99.55 309 P **Pdif** 19 28 53.0 -2.1
LKR Lokris 99.57 309 P **Pdif** 19 28 51.6 -3.6
DAG Danmarks Havn 99.58 352 *i* P **Pdif** 19 28 53.0 -1.3
DAG IAmb IAmb 19 28 59.1
comp=Z,22nm,0.7s
GRG Griva 99.64 312 P **Pdif** 19 28 53.9 -1.5
GRG Griva 99.64 312 P **Pdif** 19 28 54.1 -1.3
EPID Epidavros 99.65 308 P **Pdif** 19 28 53.3 -2.2
KRND KRANIDI 99.66 308 P **Pdif** 19 28 53.6 -2.0
BANR Banloc 99.70 316⇑ P **Pdif** 19 28 56.1 +0.5
LIT Litokhoron 99.72 311 P **Pdif** 19 28 54.4 -1.4
SOE Somerset East 99.77 237 *e*P **Pdif** 19 28 57.4 +1.2
SOE IAmb IAmb 19 28 58.7
comp=Z,170nm,1.2s
ANKY Antikythira Is 99.77 307 P **Pdif** 19 28 55.2 -0.9
BSZH Besenyszg 99.88 318⇓ P **Pdif** 19 28 56.9 +0.6
BSZH Besenyszg 99.88 318 P **Pdif** 19 28 57.2 +0.9
KTHA Kythira Island 99.91 307 P **Pdif** 19 28 52.8 -3.9
VLI Veliai 99.93 307 P **Pdif** 19 28 55.0 -1.8
KTHR Kythira 99.95 307 P **Pdif** 19 28 56.6 -0.3
HFS Hagfors 99.95 332 P **Pdif** 19 28 55.0 -1.3
comp=Z,33nm,1.0s,baz=85,slow=4.8,SNR=26
HFS PKKPbc **PKKPbc** 19 45 14.9 -3.0
comp=Z,3.4nm,0.7s,baz=151,slow=3.3,SNR=8.5
HFS LR LR 20 17 32.4
comp=Z,7µm,21.9s,baz=68,slow=37
comp=Z,33nm,1.0s
LANS Liptovska Anna 99.97 320 *e*P **Pdif** 19 28 58.5 +1.7
LANS Liptovska Anna 99.97 320 *e*PDIFF **Pdif** 19 28 58.5 +1.7
PSZ Piszkesteto 99.99 319⇑ P **Pdif** 19 28 58.0 +1.2
PSZ Piszkesteto 99.99 319 P **Pdif** 19 28 57.2 +0.3
THL Klokotos Trika 100.17 310 P **Pdif** 19 28 55.1 -2.7
MAKR Makrakomi, Fth 100.18 310 P **Pdif** 19 28 56.2 -1.7
KZN Kozani 100.22 311 P **Pdif** 19 28 56.2 -1.9
GKP Gorka Klasztor 100.27 325 *e*P **Pdif** 19 28 58.0 +0.2
GKP Gorka Klasztor 100.27 325 *e*P **Pdif** 19 28 57.3 -0.5
LBTB Lobatse 100.28 245⇓ *e*P **Pdif** 19 28 58.6 -0.2
LBTB Lobatse 100.28 245 PKKPbc PKKPbc 19 45 13.9 -2.0
comp=Z,7.4nm,1.0s,baz=209,slow=12,SNR=4.3
LBTB Lobatse 100.28 245 *i* P **Pdif** 19 29 01.8 +3.1
LBTB Lobatse 100.28 245 *i* P **Pdif** 19 29 01.8 +3.1
TBLU Trondheim 100.28 336⇑ *e*PdifP **Pdif** 19 28 56.6 -1.1
KLV Kalavryta, Ach 100.33 309 P **Pdif** 19 28 56.9 -1.7
SERG Sergoula 100.34 309 P **Pdif** 19 28 56.9 -1.7
BOSA Boshof 100.35 241⇑ *i*P **Pdif** 19 28 59.1 +0.1
BOSA Boshof 100.35 241 P **Pdif** 19 28 58.9 -0.1
comp=Z,44nm,1.1s,baz=104,slow=5.2,SNR=36
BOSA PP **PP** 19 33 04.1 -1.6
comp=Z,42nm,1.2s,baz=96,slow=7.9,SNR=7.6
BOSA Boshof 100.35 241 *i* P **Pdif** 19 29 01.8 +2.8
BOSA Boshof 100.35 241 *i* P **Pdif** 19 29 01.8 +2.8
KROM Kromhout 100.43 236 *e*P **Pdif** 19 28 60.0 +0.9
FNA Florina 100.43 312 P **Pdif** 19 28 57.2 -1.8
FNA Florina 100.43 312 P **Pdif** 19 28 56.9 -2.1
EVR Evrytania 100.44 310 P **Pdif** 19 28 57.7 -1.5
EFP Efpalio 100.46 309 P **Pdif** 19 28 57.4 -1.7
OKC Ostrava-Krasne 100.64 321 *e*P **Pdif** 19 29 00.8 +1.2
OKC *e* 19 33 04.1
OKC MLR MLR
comp=Z,4µm,20.5s
OKC Ostrava-Krasne 100.64 321 *e*PDIFF **Pdif** 19 29 00.8 +1.2
OKC *e*PP **PP** 19 33 04.1 -2.8
OKC AMS AMS 20 19 20.0
comp=Z,4µm,20.5s
ITM Ithomi 100.66 308 P **Pdif** 19 28 58.8 -1.2
ITM Ithomi 100.66 308 P **Pdif** 19 28 58.6 -1.4
BUD Budapest 100.66 319 P **Pdif** 19 29 00.2 +0.4
FRGS Fruska Gora 100.66 316⇓ P **Pdif** 19 29 00.0 +0.1
FRGS Fruska Gora 100.66 316⇑ P **PKKPbc** 19 45 16.1 +0.7
FRGS Fruska Gora 100.66 316⇑ *i*P **Pdif** 19 28 59.7 -0.2
PVO Paravola 100.72 310 P **Pdif** 19 28 59.0 -1.2
NC602 NORSAR Array S 100.73 333⇑ *e*Pdif P **Pdif** 19 28 58.6 -1.1
NC602 *e*SKSac **SKSac** 19 39 36.4 +1.1
NC602 *e*SS **SS** 19 47 36.0 +5.0
NC602 IVMs_BB IVMs_BB 20 17 02.5
comp=Z,4µm,21.7s
NB2 NORSAR Subarra 100.75 333 P **Pdif** 19 28 58.6 -1.4
baz=70,slow=4.4
NB2 NORSAR Subarra 100.75 333 P **Pdif** 19 28 58.6 -1.4
comp=Z,72nm,1.1s,baz=70,slow=4.4
NOA NORSAR Array B 100.75 333 P **Pdif** 19 28 58.8 -1.1
comp=Z,19nm,0.9s,baz=69,slow=4.5,SNR=40
NOA PKKPbc **PKKPbc** 19 45 14.2 -1.6
comp=Z,10.0nm,1.0s,baz=67,slow=2.7,SNR=16
DIVS Divibare 100.77 315 IAMs_20 IAMs_20 20 23 03.1
comp=Z,5µm,21.0s
DIVS Divibare 100.77 315⇑ *i*P **Pdif** 19 29 00.4 -0.1
KOLL Kolacno 100.80 320 *e*PDIFF **Pdif** 19 29 01.4 +1.0
KOLL *e*PP **PP** 19 33 09.4 +1.2
PYL PYLOS 100.85 308 P **Pdif** 19 28 59.1 -1.8
RLS Riolos of Patr 100.86 309 P **Pdif** 19 28 59.0 -0.4
PHP Peshkopia 100.95 313 P **Pdif** 19 29 00.1 -1.2
SJES Sjenica 100.96 314⇑ *i*P **Pdif** 19 29 01.7 +0.3
MAUC Maruska 100.96 321 *e*PDIFF **Pdif** 19 29 01.8 +0.7
MAUC *ex* x 19 29 05.7
MAUC *e*PP **PP** 19 33 11.0 +1.6
MAUC *e*SKS 19 39 27.1
MAUC AMS AMS 20 18 30.0
comp=Z,7µm,17.3s
BSD Bornholm Skovb 101.02 327 *e*P **Pdif** 19 29 00.3 -0.8
BSD Bornholm Skovb 101.02 327 *i* P **Pdif** 19 29 00.4 -0.8
BSD IAmb IAmb 19 29 08.7
comp=Z,33nm,0.9s
MORC Moravsky Berou 101.03 321⇑ P **Pdif** 19 29 02.0 +0.5
MORC Moravsky Berou 101.03 321 *e*PDIFF **Pdif** 19 29 01.8 +0.3
MORC *e*SKS 19 39 36.6
MORC *e*PKKP **PKKPbc** 19 45 13.7 -0.9
MORC *e*PKPPKP 19 53 26.6
IVA Berane 101.10 314 *e*P **Pdif** 19 29 01.6 -0.4
PVY Plav 101.11 314 *e*P **Pdif** 19 29 01.8 -0.3
DEL Delary 101.13 328 *e*P **Pdif** 19 29 00.2 -1.4
LSK Leskovik 101.13 311 P **Pdif** 19 29 01.1 -1.1
CSKK Cskako 101.19 319 P **Pdif** 19 29 02.1 0.0
JAVC Velka Javorina 101.19 320 *e*PDIFF **Pdif** 19 29 03.5 +1.3
JAVC *e*PKKP **PKKPbc** 19 45 14.2 +0.1
JAVC *e*PKPPKP 19 53 26.1
TROLL Troll, Antarti 101.21 195 PKKPdf PKKPdf 19 45 11.5 -8.8
TROLL Troll, Antarti 101.21 195 PKiKP **PKiKP** 19 33 28.5 +2.1
MORH Mrgy, Hungar 101.22 318⇓ P **Pdif** 19 29 02.0 -0.3
MORH Mrgy, Hungar 101.22 318⇑ P **PKKPbc** 19 45 13.9 +0.1
MORH Mrgy, Hungar 101.22 318⇑ *i*P **Pdif** 19 29 02.2 -0.1
MORH Mrgy, Hungar 101.22 318 P **Pdif** 19 29 02.1 -0.1
BBLS Lazići 101.23 315⇑ *i*P **Pdif** 19 29 02.7 +0.2
DOMB Dombas 101.29 335⇑ *e*PdifP **Pdif** 19 29 02.0 -0.3
DOMB *e*SKSac **SKSac** 19 39 38.9 +0.8
DOMB *e*SS **SS** 19 47 41.4 +2.5
DOMB IVMs_BB IVMs_BB 20 16 52.2
comp=Z,2µm,23.7s
RUDO Rudo 101.31 315 *e*P **Pdif** 19 29 02.3 -0.5
NYDR Nydri-Lefkada 101.33 310 P **Pdif** 19 29 02.1 -0.9
LKD2 Lefkada island 101.35 310 P **Pdif** 19 29 02.3 -0.8
PLE Pljevlja 101.36 315 *e*P **Pdif** 19 29 03.3 +0.1
KOME Kolasin 101.38 314⇑ *i*P **Pdif** 19 29 02.9 -0.3
EVGI Lefkada island 101.39 310 P **Pdif** 19 29 02.1 -1.1
OSL Oslo 101.41 332⇑ *e*Pdif **Pdif** 19 29 02.3 -0.5
KRLC Kraliky 101.43 322 *e*P **Pdif** 19 29 03.7 +0.5
KRLC *e* 19 33 13.9
KRLC *e* 19 39 39.6
KRLC MLR MLR
comp=Z,5µm,18.9s
KRLC Kraliky 101.43 322 *e*PDIFF **Pdif** 19 29 03.7 +0.5
KRLC *ex* x 19 29 07.1
KRLC *e*PP **PP** 19 33 13.9 +1.0
KRLC *e*SKS 19 39 39.6
KRLC AMS AMS 20 18 50.0
comp=Z,5µm,18.9s
SMOL Smolenice 101.44 320⇑ *e*P **Pdif** 19 29 04.8 +1.6
SMOL *e* 19 33 17.5
SMOL Smolenice 101.44 320 *e*PDIFF **Pdif** 19 29 04.8 +1.6
SMOL *e*PP **PP** 19 33 17.5 +4.5
SMOL Smolenice 101.44 320⇑ *e*SKSp 19 39 45.5
TIR Tirane 101.44 313⇓ P **PKKPbc** 19 45 14.1 +1.1
TIR Tirane 101.44 313 IAMs_20 IAMs_20 20 22 46.2
comp=Z,6µm,21.0s
IGT Igoumenitsa 101.46 311 P **Pdif** 19 29 02.5 -1.0
KSP Ksiaz 101.51 323 *e*P **Pdif** 19 29 04.9 +0.9
VLS Valsamata 101.52 309 P **Pdif** 19 29 03.2 -0.7
TIH Tihany 101.55 318 P **Pdif** 19 29 03.6 -0.1
MODS Modra-Piesok 101.57 320⇑ *e*P **Pdif** 19 29 04.1 +0.2
MODS *e* 19 33 16.1
MODS *e* 19 39 38.4
MODS Modra-Piesok 101.57 320 *e*PDIFF **Pdif** 19 29 04.1 +0.2
MODS *e*PP **PP** 19 33 16.1 +2.0
MODS Modra-Piesok 101.57 320 *e*L L 20 19 23.3

MODS	**Modra-Piesok**	**101.57**	**320**	⇑	*e*SKSp			19 39 38.4	
MODS	**Modra-Piesok**	**101.57**	**320**		*e*SS	SS		19 48 18.6	+35
KOVH	**Kovagotottos**	**101.61**	**318**		P	**Pdif**		**19 29 03.2**	**-0.8**
DPC	**Dobruska-Polom**	**101.63**	**322**		*e*P	**Pdif**		**19 29 04.2**	**+0.1**
DPC					*e*			19 33 17.4	
DPC					*e*			19 39 36.9	
DPC					MLR	MLR			
	comp=Z,6µm,23.2s								
DPC	**Dobruska-Polom**	**101.63**	**322**		*e*PDIFF	**Pdif**		**19 29 04.2**	**+0.1**
DPC					*ex*	x		19 29 07.8	
DPC					*e*PP	**PP**		**19 33 17.4**	**+2.9**
DPC					*e*SKS			19 39 36.9	
DPC					AMS	AMS		20 16 00.0	
	comp=Z,6µm,23.2s								
OSTC	**Ostas**	**101.64**	**322**		*e*PDIFF	**Pdif**		**19 29 04.6**	**+0.5**
OSTC					*ex*	x		19 29 08.7	
OSTC					*e*PP	**PP**		**19 33 17.4**	**+2.9**
OSTC					*e*SKS			19 39 36.1	
OSTC					AMS	AMS		20 16 50.0	
	comp=Z,7µm,21.2s								
PDG	**Podgorica**	**101.65**	**314**	⇓	*i*P	**Pdif**		**19 29 04.3**	**0.0**
PDG	**Podgorica**	**101.65**	**314**	⇑	*i*P	**PKKPbc**		**19 45 13.1**	**+0.6**
PDG	**Podgorica**	**101.65**	**314**	⇑	*i*P	**Pdif**		**19 29 03.7**	**-0.5**
TTG	**Podgorica**	**101.65**	**314**	⇑	*i*P	**Pdif**		**19 29 03.8**	**-0.5**
MOL	**Molde**	**101.70**	**336**	⇑	*e*Pdif	**Pdif**		**19 29 04.0**	**0.0**
MOL					*e*SKSac	**SKSac**		**19 39 40.1**	**+0.3**
MOL					*e*SP	SP		19 42 15.3	+2.0
MOL					IVMs_BB	IVMs_BB		20 16 52.5	
	comp=Z,3µm,22.8s								
MPLH	**Magyarpolny**	**101.72**	**319**		P	**Pdif**		**19 29 04.7**	**+0.2**
CHVC	**Chvalec**	**101.73**	**322**		*e*PDIFF	**Pdif**		**19 29 04.7**	**+0.2**
CHVC					*ex*	x		19 29 08.3	
CHVC					AMS	AMS		20 17 00.0	
	comp=Z,8µm,21.6s								
ZST	**Bratislava**	**101.73**	**320**	⇑	*e*P	**Pdif**		**19 29 05.2**	**+0.7**
ZST					*e*			19 39 40.7	
ZST	**Bratislava**	**101.73**	**320**		*e*PDIFF	**Pdif**		**19 29 05.2**	**+0.7**
ZST	**Bratislava**	**101.73**	**320**	⇑	*e*SKSp			19 39 40.7	
UPM	**Unac-Piva**	**101.73**	**315**		*e*P	**Pdif**		**19 29 03.9**	**-1.0**
UPM	**Unac-Piva**	**101.73**	**315**		*e*P	**Pdif**		**19 29 04.3**	**-0.6**
VRAC	**Vranov**	**101.75**	**321**	⇓	P	**Pdif**		**19 29 05.7**	**+1.0**
VRAC	**Vranov**	**101.75**	**321**		P	**Pdif**		**19 29 05.2**	**+0.6**
	comp=Z,25nm,0.9s,baz=75,slow=4.4,SNR=44								
VRAC	**Vranov**	**101.75**	**321**		*e*PDIFF	**Pdif**		**19 29 05.4**	**+0.8**
VRAC					*e*PP	**PP**		**19 33 15.9**	**+0.5**
VRAC					*e*SKS	**SKSac**		**19 39 38.2**	**-2.6**
VRAC					*e*SDIFF	**Sdif**		**19 40 43.2**	**+0.2**
VRAC					*e*PKKP	**PKKPbc**		**19 45 12.0**	**-0.4**
VRAC					*e*PKPPKP	**P'P'df**		**19 53 26.7**	**-3.1**
DRME	**Dracevica, Mon**	**101.76**	**313**	⇑	*i*P	**Pdif**		**19 29 04.4**	**-0.4**
DRME	**Dracevica, Mon**	**101.76**	**313**	⇑	*i*P	**Pdif**		**19 29 04.5**	**-0.4**
NKY	**Niksic**	**101.76**	**314**		*e*P	**Pdif**		**19 29 04.4**	**-0.5**
UPC	**Upice**	**101.78**	**322**		*e*P	**Pdif**		**19 29 05.5**	**+0.8**
UPC					*e*			19 33 18.7	
UPC					MLR	MLR			
	comp=Z,8µm,21.3s								
UPC	**Upice**	**101.78**	**322**		*e*PDIFF	**Pdif**		**19 29 05.5**	**+0.8**
UPC					*ex*	x		19 29 08.8	
UPC					*e*PP	**PP**		**19 33 18.7**	**+3.2**
UPC					*e*SKS			19 39 28.8	
UPC					AMS	AMS		20 17 00.0	
	comp=Z,8µm,21.3s								
EGYH	**Egyhazaskeszo**	**101.79**	**319**		P	**Pdif**		**19 29 04.9**	**+0.1**
NKME	**Niksic**	**101.80**	**314**		*e*P	**Pdif**		**19 29 04.3**	**-0.7**
DBG	**Daneborg**	**101.84**	**351**		*i*P	**Pdif**		**19 29 03.3**	**-1.1**
DBG					IAmb	IAmb		19 29 11.5	
	comp=Z,10nm,0.9s								
YKA	**Yellowknife Ar**	**101.85**	**24**		P	**Pdif**		**19 29 05.5**	**+0.8**
	comp=Z,13nm,0.7s,baz=295,slow=4.7,SNR=29								
YKA					PKKPbc	**PKKPbc**		**19 45 09.6**	**-2.9**
	comp=Z,13nm,0.9s,baz=112,slow=3.0,SNR=5.2								
YKA					PKPPKP	**P'P'df**		**19 53 26.0**	**-2.8**
	comp=Z,1.2nm,0.8s,baz=106,slow=2.2,SNR=4.3								
CEME	**Cevo**	**101.87**	**314**	⇑	*i*P	**Pdif**		**19 29 04.7**	**-0.7**
BUM	**Brajici-Budva**	**101.94**	**314**	⇑	*i*P	**Pdif**		**19 29 04.9**	**-0.8**
KRUC	**Moravsky**	**101.95**	**321**		*e*PDIFF	**Pdif**		**19 29 05.8**	**+0.3**
KRUC					*e*SKS			19 39 42.6	
KRUC					*e*SDIFF	SKKSac		19 40 44.7	+25
KRUC					*e*PKKP	**PKKPbc**		**19 45 11.2**	**-0.6**
KRUC					*e*PKPPKP			19 53 25.1	
KONO	**Kongsberg**	**102.05**	**332**		IAms_20	IAms_20		20 22 10.5	
	comp=Z,6µm,20.0s								
KONO	**Kongsberg**	**102.05**	**332**	⇑	*e*Pdif	**Pdif**		**19 29 04.9**	**-0.8**
KONO					*e*SKSac	**SKSac**		**19 39 41.6**	**-0.1**
KONO					*e*SS	**SS**		**19 47 51.2**	**+1.9**
BRY	**Bratogost**	**102.06**	**314**		*e*P	**Pdif**		**19 29 06.3**	**0.0**
BRY	**Bratogost**	**102.06**	**314**		*e*P	**Pdif**		**19 29 05.7**	**-0.6**
JMIC	**Jan Mayen**	**102.09**	**346**		Pdiff	**Pdif**		**19 29 06.1**	**+0.4**
	comp=Z,25nm,0.7s,baz=111,slow=8.9,SNR=3.2								
JMIC	**Jan Mayen**	**102.09**	**346**	⇑	*e*SKS			19 29 05.2	
AKN	**Aaknes**	**102.10**	**335**	⇑	*e*Pdif	**Pdif**		**19 29 05.7**	**-0.2**
AKN					IVmB_BB			19 29 06.5	
	comp=Z,1µm,6.4s								
AKN					*e*SKSac	**SKSac**		**19 39 42.2**	**+0.3**
AKN					*e*SP	**SP**		**19 42 19.7**	**+2.0**
AKN					IVMs_BB	IVMs_BB		20 17 16.0	
	comp=Z,3µm,23.2s								
COP	**Copenhagen**	**102.16**	**328**		*i*P	**Pdif**		**19 29 01.4**	**-4.8**
HCY	**Herceg Novi**	**102.20**	**314**		*e*P	**Pdif**		**19 29 06.4**	**-0.4**
HCY	**Herceg Novi**	**102.20**	**314**	⇑	*i*P	**Pdif**		**19 29 06.0**	**-0.8**
SKAR	**Skarslia**	**102.20**	**334**	⇑	*e*Pdif	**Pdif**		**19 29 06.6**	**+0.2**
SKAR					*e*SKSac	**SKSac**		**19 39 43.6**	**+1.1**
SKAR					*e*SP	**SP**		**19 42 21.0**	**+2.1**
SKAR					IVMs_BB	IVMs_BB		20 17 47.6	
	comp=Z,3µm,21.1s								
SOP	**Sopron**	**102.22**	**319**		P	**Pdif**		**19 29 07.3**	**+0.6**
NLWA	**Neilton Lookou**	**102.32**	**41**		IAms_20	IAms_20		20 07 27.1	
	comp=Z,4µm,22.0s								
RONA	**Rosalia, Austr**	**102.39**	**319**		*e*P	**Pdif**		**19 29 07.5**	**0.0**
	comp=Z,28nm,1.2s,SNR=20								
RONA					*e*P	**PKKPbc**		**19 45 10.1**	**-0.4**
	comp=Z,8.0nm,1.4s								
LLD	**Lille Linde**	**102.40**	**328**		*i*P	**Pdif**		**19 29 05.4**	**-1.9**
BEHE	**Becsehely**	**102.40**	**318**	⇑	*i*P	**Pdif**		**19 29 08.0**	**+0.4**
BEHE	**Becsehely**	**102.40**	**318**		P	**Pdif**		**19 29 07.7**	**+0.1**
TREC	**Trest**	**102.45**	**321**		*e*P	**Pdif**		**19 29 08.1**	**+0.3**
TREC					*e*			19 33 27.7	
TREC					*e*			19 39 39.8	
TREC					MLR	MLR			
	comp=Z,5µm,19.2s								
TREC	**Trest**	**102.45**	**321**		*e*PDIFF	**Pdif**		**19 29 08.1**	**+0.3**
TREC					*e*PP	**PKiKP**		**19 33 27.7**	**-1.4**
TREC					*e*SKS			19 39 39.8	
TREC					AMS	AMS		20 19 20.0	
	comp=Z,5µm,19.2s								
BLY	**Banja Luka**	**102.57**	**316**	⇑	*i*P	**Pdif**		**19 29 08.6**	**+0.3**
CONA	**Conrad Observa**	**102.61**	**320**		*i*P	**Pdif**		**19 29 08.7**	**+0.1**
	comp=Z,36nm,1.5s,SNR=25								
CONA					*e*P	**PKKPbc**		**19 45 10.2**	**+0.2**
	comp=Z,7.0nm,1.0s								
CONA					*e*P	**P'P'df**		**19 53 26.3**	**-2.0**
	comp=Z,7.1nm,1.4s								
PVCC	**Panska Ves**	**102.65**	**323**		*e*P	**Pdif**		**19 29 09.6**	**+1.0**
PVCC					*e*			19 33 29.6	
PVCC					*e*			19 39 39.1	
PVCC					MLR	MLR			
	comp=Z,8µm,20.6s								
PVCC	**Panska Ves**	**102.65**	**323**		*e*PDIFF	**Pdif**		**19 29 09.6**	**+1.0**
PVCC					*ex*	x		19 29 13.5	
PVCC					*e*PP	**PKiKP**		**19 33 29.6**	**+0.2**
PVCC					*e*SKS			19 39 39.1	
PVCC					AMS	AMS		20 17 30.0	
	comp=Z,8µm,20.6s								
GRAN	**Grantham**	**102.66**	**237**		*e*P	**Pdif**		**19 29 09.4**	**+0.2**
STON	**Ston**	**102.67**	**314**	⇑	*i*P	**Pdif**		**19 29 07.5**	**-1.3**
MGRS	**Mrkonjic Grad**	**102.72**	**316**		*e*P	**Pdif**		**19 29 09.4**	**+0.3**
KOGS	**Kog**	**102.76**	**318**		*i* Pdiff	**Pdif**		**19 29 09.5**	**+0.3**
KOGS					*i* SKSac	**SKSac**		**19 39 46.1**	**+0.5**
KOGS					*e*Sdiff	SKKSac		19 40 49.8	+24
KOGS					*e*			19 48 37.6	
SNAA	**Sanae**	**102.79**	**195**		PKKPdf	PKKPdf		19 45 08.2	-9.1
SNAA	**Sanae**	**102.79**	**195**		PKiKP	**PKiKP**		**19 33 30.8**	**+1.7**
SNAA	**Sanae**	**102.79**	**195**	⇑	*i*P	**Pdif**		**19 29 09.2**	**+0.4**
SNAA	**Sanae**	**102.79**	**195**		PKKPbc	PKKPbc		19 45 07.7	-2.4
	comp=Z,18nm,1.1s,baz=281,slow=3.3,SNR=12								
SNAA	**Sanae**	**102.79**	**195**		IAms_20	IAms_20		20 17 52.9	
	comp=Z,5µm,19.0s								
D03D	**Eldon**	**102.79**	**41**		Pdiff	**Pdif**		**19 29 11.1**	**+1.9**
	baz=286								
PRU	**Pruhonice**	**102.83**	**322**		*e*P	**Pdif**		**19 29 10.0**	**+0.6**
PRU					*e*			19 33 26.4	
PRU					*e*			19 39 45.6	
PRU					MLR	MLR			
	comp=Z,8µm,19.3s								
PRU	**Pruhonice**	**102.83**	**322**		*e*PDIFF	**Pdif**		**19 29 10.0**	**+0.6**
PRU					*ex*	x		19 29 13.0	
PRU					*e*PP	**PP**		**19 33 26.4**	**+3.0**
PRU					*e*SKS			19 39 45.6	
PRU					AMS	AMS		20 20 00.0	
	comp=Z,8µm,19.3s								
HYA	**Hoyanger**	**102.91**	**335**	⇑	*i*P	**Pdif**		**19 29 09.4**	**0.0**
HYA					*e*SKSac	**SKSac**		**19 39 47.0**	**+1.4**
HYA					*e*SP	SP		19 42 28.9	+2.6
HYA					*e*SS	**SS**		**19 48 03.7**	**+2.6**
BRG	**Berggiesshubel**	**102.92**	**323**		Amp			19 29 11.8	
	comp=Z,52nm,1.2s								
BRG				⇓	*i*Piff	**Pdif**		**19 29 10.2**	**+0.5**
BRG					*ex*	x		19 29 15.6	
BRG					Amp			19 29 16.0	
	comp=Z,85nm,1.1s								
BRG					*ex*	x		19 29 18.0	
BRG					Amp			19 29 18.3	
	comp=Z,91nm,0.9s								
BRG					*ex*	x		19 32 28.2	
BRG					Amp			19 32 40.6	
	comp=Z,44nm,1.4s								
BRG					PP	**PKiKP**		**19 33 29.8**	**-0.1**
BRG					Amp			19 33 30.9	
	comp=Z,121nm,1.6s								
BRG	**Berggiesshubel**	**102.92**	**323**		SP	SP		19 42 26.0	-1.0
BRG					PKKP			19 45 30.0	
BRG					Amp			19 45 32.6	
	comp=Z,25nm,1.7s								
BRG	**Berggiesshubel**	**102.92**	**323**		SS	SS		19 48 03.0	+1.0
BRG					PKPPKP			19 53 25.2	
BRG					Amp			19 53 27.0	
	comp=Z,8.6nm,1.3s								
BRG					Amp			20 20 11.0	
	comp=E,6.0nm,20.0s								
BRG					Amp			20 20 12.0	
	comp=N,2.7nm,21.5s								
BRG					Amp			20 20 23.0	
	comp=Z,8.1nm,22.7s								
BRG	**Berggiesshubel**	**102.92**	**323**		*i*P	**Pdif**		**19 29 10.2**	**+0.5**
BRG								19 33 29.7	
BRG								19 39 48.0	
BRG					S	**Sdif**		**19 40 58.0**	**+5.4**
BRG					SP	**SP**		**19 42 26.0**	**-1.0**
BRG					SS	**SS**		**19 48 03.0**	**+1.0**
BRG					pmax	pmax			
	comp=Z,52nm,1.2s								
BRG					pmax	pmax			
	comp=Z,121nm,1.6s								
BRG					MLR	MLR			
	comp=E,6µm,20.0s								
BRG					MLR	MLR			
	comp=N,3µm,21.5s								
BRG					MLR	MLR			
	comp=Z,8µm,22.7s								
ARSA	**Arzberg**	**103.02**	**319**		*e*P	**Pdif**		**19 29 10.4**	**0.0**
	comp=Z,19nm,1.3s,SNR=11								
ARSA					*e*P	**PKKPbc**		**19 45 08.5**	**-0.2**
	comp=Z,4.0nm,1.0s								
ARSA					*e*P	**P'P'df**		**19 53 26.2**	**-1.3**
	comp=Z,7.3nm,1.2s								
D04E	**Lakebay**	**103.10**	**41**		Pdiff	**Pdif**		**19 29 12.0**	**+1.4**
	baz=286								
HOMB	**Homborsund**	**103.14**	**331**	⇑	*e*Pdif	**Pdif**		**19 29 09.7**	**-0.8**
HOMB					*e*PP	**PP**		**19 33 25.9**	**+0.6**
HOMB					*e*SKSac	**SKSac**		**19 39 47.8**	**+1.1**
HOMB				⇑	*e*SP	**SP**		**19 42 30.4**	**+1.6**
FOO	**Floro**	**103.19**	**335**	⇑	*e*Pdif	**Pdif**		**19 29 10.7**	**0.0**
FOO					*e*SKSac	**SKSac**		**19 39 47.8**	**+0.9**
FOO					*e*SP	**SP**		**19 42 31.3**	**+2.1**
I02E	**Swisshome, OR**	**103.21**	**44**		Pdiff	**Pdif**		**19 29 12.2**	**+1.0**
	baz=285								
F04D	**Rainier, OR**	**103.25**	**42**		Pdiff	**Pdif**		**19 29 12.5**	**+1.1**
	baz=286								
ODD1	**Odda**	**103.29**	**333**		*e*Pdif	**Pdif**		**19 29 11.4**	**+0.2**
ODD1					*e*SKSac	**SKSac**		**19 39 48.1**	**+0.4**
ODD1					*e*PS	PS		19 42 37.4	+0.9
ODD1					IVMs_BB	IVMs_BB		20 18 31.7	
	comp=Z,4µm,21.9s								
G03D	**McMinnville, O**	**103.31**	**43**		IAms_20	IAms_20		20 07 49.6	
	comp=Z,6µm,22.0s								
G03D	**McMinnville, O**	**103.31**	**43**		Pdiff	**Pdif**		**19 29 12.0**	**+0.3**
	baz=286								
CKRC	**Cesky Krumlov**	**103.33**	**321**		*e*PDIFF	**Pdif**		**19 29 12.0**	**+0.3**
CKRC					*e*PP	**PKiKP**		**19 33 35.1**	**+4.4**
CKRC					*e*SKS			19 39 36.0	
CLL	**Collm**	**103.34**	**324**		*i*P	**Pdif**		**19 29 11.6**	**0.0**
CLL					*e*			19 33 26.0	
CLL					*e*			19 39 48.0	
CLL					*e*S	**Sdif**		**19 40 59.0**	**+2.9**
CLL					pmax	pmax			
	comp=Z,55nm,1.3s								
CLL					pmax	pmax			
	comp=Z,55nm,1.2s								
CLL					MLR	MLR			
	comp=Z,9µm,21.4s								
CLL	**Collm**	**103.34**	**324**	⇑	*i*Pdif	**Pdif**		**19 29 11.6**	**0.0**
	comp=Z,55nm,1.3s								
CLL					*ex*	x		19 32 00.0	
CLL					*ex*	x		19 32 27.0	
CLL					*ex*	x		19 33 11.0	
CLL					*e*PP	**PP**		**19 33 26.0**	**-1.1**
	comp=Z,55nm,1.2s								
CLL					*e*PPP	PPP		19 35 42.0	
CLL					*e*SKSac	**SKSac**		**19 39 48.0**	**-0.1**
CLL					*e*Sdif	**Sdif**		**19 40 59.0**	**+2.9**
CLL					*e*(SP)			19 42 27.0	
CLL					*e*PPS	PPS		19 43 24.0	
CLL					*e*PKKPdf	**PKKPdf**		**19 45 14.0**	**-1.7**
CLL					*i* sPKKPdf			19 45 27.8	
	comp=Z,28nm,1.7s								
CLL					*ex*	x		19 46 30.0	
CLL					*e*SS	**SS**		**19 48 10.0**	**+2.3**
CLL					*e*SSS			19 48 45.0	
CLL					*i* PKPPKPdf			19 53 26.7	
	comp=Z,82nm,2.8s								
CLL					*ex*	x		19 56 06.0	
CLL					Lm	MLR		20 21 00.0	
	comp=N,3µm,21.4s								
CLL					Lm	MLR		20 21 00.0	
	comp=E,5µm,21.9s								
CLL					Lm	MLR		20 21 00.0	
	comp=Z,9µm,21.4s								
J01E	**Myrtle Point**	**103.39**	**45**		Pdiff	**Pdif**		**19 29 13.1**	**+1.1**
	baz=285								
COR	**Corvallis**	**103.46**	**44**		IAms_20	IAms_20		20 07 52.3	
	comp=Z,5µm,21.0s								
CRES	**Cresnjev**	**103.46**	**318**	⇑	*i*P	**Pdif**		**19 29 12.6**	**+0.3**
SOKA	**Soboth**	**103.50**	**319**		*e*P	**Pdif**		**19 29 12.5**	**-0.1**
	comp=Z,18nm,1.1s,SNR=18								
SOKA					*e*P	**PKKPbc**		**19 45 07.5**	**+0.2**
	comp=Z,3.0nm,0.7s								
MUD	**Monsted U'grnd**	**103.56**	**329**		*i*P	**Pdif**		**19 29 10.6**	**-1.8**
SUE	**Sulen**	**103.57**	**335**	⇑	*e*Pdif	**Pdif**		**19 29 12.7**	**+0.3**
SUE					*e*SKSac	**SKSac**		**19 39 51.1**	**+2.4**
SUE					*e*SP	SP		19 42 35.7	+2.5
SUE					IVMs_BB	IVMs_BB		20 20 00.0	
	comp=Z,3µm,19.8s								
BLS5	**Blasjo**	**103.59**	**333**	⇑	*e*Pdif	**Pdif**		**19 29 12.0**	**-0.6**
BLS5					*e*SKSac	**SKSac**		**19 39 49.1**	**+0.1**
BLS5					*e*SP	SP		19 42 34.6	+1.0
BLS5					*e*SS	**SS**		**19 48 14.3**	**+3.7**
BLS5					IVMs_BB	IVMs_BB		20 18 40.5	
	comp=Z,4µm,22.2s								
BER	**Bergen**	**103.65**	**334**	⇑	*e*Pdif	**Pdif**		**19 29 12.8**	**0.0**
BER					*e*SKSac	**SKSac**		**19 39 50.0**	**+0.9**
BER					*e*SP	SP		19 42 34.9	+0.9
BER					*e*SS	**SS**		**19 48 13.9**	**+2.7**
BER					IVMs_BB	IVMs_BB		20 20 11.7	
	comp=Z,2µm,17.6s								
MOA	**Molln**	**103.66**	**320**		*e*P	**Pdif**		**19 29 13.4**	**+0.3**
	comp=Z,101nm,2.2s,SNR=18								
MOA					*e*P	**PKKPbc**		**19 45 06.1**	**-0.7**
	comp=Z,11nm,1.3s								
MOA					*e*P	**P'P'df**		**19 53 25.0**	**-1.3**
	comp=Z,7.3nm,1.6s								
I03D	**Drain, OR**	**103.66**	**44**		Pdiff	**Pdif**		**19 29 14.5**	**+1.3**
	baz=285								
ASK	**Askoy**	**103.66**	**334**		*e*Pdif	**Pdif**		**19 29 11.7**	**-1.1**
ASK					IVMs_BB	IVMs_BB		20 20 12.9	
	comp=Z,5µm,18.3s								
K02D	**Willamette Mer**	**103.70**	**45**		Pdiff	**Pdif**		**19 29 13.9**	**+0.4**
	baz=285								
KHC	**Kasperske Hory**	**103.70**	**321**		*e*P	**Pdif**		**19 29 13.8**	**+0.5**
KHC					*e*			19 33 31.9	
KHC					*e*			19 39 48.3	
KHC					MLR	MLR			
	comp=Z,5µm,18.4s								
KHC	**Kasperske Hory**	**103.70**	**321**		*e*PDIFF	**Pdif**		**19 29 13.8**	**+0.5**
KHC					*ex*	x		19 29 43.0	
KHC					*ex*	x		19 33 23.5	
KHC					*e*PP	**PKiKP**		**19 33 31.9**	**+0.5**
KHC					*ex*	x		19 33 47.5	
KHC					*e*SKS			19 39 48.3	
KHC					AMS	AMS		20 20 10.0	
	comp=Z,5µm,18.4s								
GERES	**GERESS Array B**	**103.71**	**321**		Pdiff	**Pdif**		**19 29 13.5**	**+0.1**
	comp=Z,14nm,0.9s,baz=103,slow=2.9,SNR=55								
GERES					PKiKP	**PKiKP**		**19 33 31.9**	**+0.4**
	comp=Z,10.0nm,1.0s,baz=108,slow=0.4,SNR=5.5								
GERES					PKKPbc	**PKKPbc**		**19 45 00.2**	**-6.6**
	comp=Z,2.5nm,0.9s,baz=224,slow=3.7,SNR=6.7								
GERES					PKPPKP			19 53 22.1	
	comp=Z,0.3nm,0.4s,baz=225,slow=1.7,SNR=6.0								
SNART	**Snartemo**	**103.72**	**332**		*e*Pdif	**Pdif**		**19 29 12.6**	**-0.6**
SNART					*e*SS	SS		19 48 15.0	+2.5
SNART					IVMs_BB	IVMs_BB		20 19 22.9	
	comp=Z,8µm,23.4s								
SUR	**Sutherland**	**103.79**	**237**		PKKPbc	PKKPbc		19 45 07.8	+1.8
	comp=Z,14nm,1.0s,baz=285,slow=1.8,SNR=7.2								
H04D	**Lebanon**	**103.86**	**43**		IAms_20	IAms_20		20 08 05.1	
	comp=Z,5µm,22.0s								
H04D	**Lebanon**	**103.86**	**43**		Pdiff	**Pdif**		**19 29 15.1**	**+1.0**
	baz=286								
OBKA	**Obir**	**103.87**	**319**		*i* P	**Pdif**		**19 29 14.1**	**-0.1**
	comp=Z,16nm,1.1s,SNR=15								
OBKA					*e*P	**PKKPbc**		**19 45 05.9**	**-0.3**
	comp=Z,4.1nm,0.7s								
MATJ	**Matjiesfontein**	**103.87**	**236**	⇑	*i*P	**Pdif**		**19 29 16.2**	**+1.7**
JCC	**Jacoby Creek,**	**103.90**	**47**		IAms_20	IAms_20		20 12 13.4	
	comp=Z,6µm,22.0s								
L02F	**Cave Junction**	**103.91**	**46**		Pdiff	**Pdif**		**19 29 15.0**	**+0.6**
	baz=285								
MATE	**Matera**	**103.93**	**312**	⇑	P	**Pdif**		**19 29 14.2**	**-0.2**
LJU	**Ljubljana**	**104.02**	**318**	⇑	*i*P	**Pdif**		**19 29 15.2**	**+0.5**
LJU	**Ljubljana**	**104.02**	**318**		*i* Pdiff	**Pdif**		**19 29 15.3**	**+0.5**
LJU					*e*PP	**PP**		**19 33 38.2**	**+5.8**
LJU					*i* SKSac	**SKSac**		**19 39 52.4**	**+0.8**
LJU					*e*Sdiff	**Sdif**		**19 41 00.1**	**-1.9**
LJU					*e*SP	**SP**		**19 42 36.0**	**-2.8**
LJU					*e*			19 48 56.1	
NKC	**Novy Kostel**	**104.03**	**323**		*e*P	**Pdif**		**19 29 15.1**	**+0.3**
NKC					*e*			19 33 33.7	
NKC					*e*			19 39 50.8	
NKC					MLR	MLR			
	comp=Z,9µm,22.1s								
NKC	**Novy Kostel**	**104.03**	**323**		*e*PDIFF	**Pdif**		**19 29 15.1**	**+0.3**
NKC					*e*PP	**PP**		**19 33 33.7**	**+1.3**
NKC					*e*SKS			19 39 50.8	
NKC					AMS	AMS		20 18 20.0	
	comp=Z,9µm,22.1s								
KEIM	**Keimoes**	**104.09**	**241**		*e*P	**Pdif**		**19 29 14.7**	**-0.8**
BIOA	**Bad Ischl, Aus**	**104.11**	**320**		*i*P	**Pdif**		**19 29 15.2**	**0.0**
	comp=Z,16nm,1.2s,SNR=11								
BIOA					*e*P	**PKKPbc**		**19 45 04.9**	**-0.5**
	comp=Z,12nm,1.0s								
BIOA					*e*P	**P'P'df**		**19 53 24.4**	**-1.0**
	comp=Z,3.2nm,0.8s								
CEY	**Cerknica**	**104.18**	**318**	⇑	*i*P	**Pdif**		**19 29 15.7**	**+0.2**
HUMO	**Hull Mountain**	**104.22**	**45**		IAms_20	IAms_20		20 18 59.8	
	comp=Z,4µm,19.0s								
TIP	**Timpagrande**	**104.24**	**311**	⇑	P	**Pdif**		**19 29 17.3**	**+1.3**
TIP	**Timpagrande**	**104.24**	**311**	⇑	P	PK

VAE PKKPbc **PKKPbc** 19 44 56.9 -1.1
comp=Z,5.3nm,0.5s,baz=114,slow=2.3,SNR=3.2
DAVA **Damuels** 106.65 320 *e*P **Pdif** 19 29 26.8 +0.2
comp=Z,18nm,1.1s
DAVA *e*P **PKKPab** 19 45 13.6 +0.9
comp=Z,22nm,1.1s
DAVA *e*P **P'P'df** 19 53 26.3 +5.6
comp=Z,2.8nm,0.9s
DAVOX **Davos/Dischmat** 106.83 320 Pdiff **Pdif** 19 29 27.8 +0.3
comp=Z,17nm,0.8s,baz=77,slow=3.0,SNR=25
DAVOX PKKPbc **PKKPbc** 19 44 54.8 -2.5
comp=Z,2.2nm,0.5s,baz=345,slow=7.7,SNR=3.6
DAVOX PKKP **PKKPdf** 19 45 07.6 -1.8
comp=Z,13nm,1.0s,baz=263,slow=6.2,SNR=7.4
SAO **San Andreas Ge** 106.86 51 IAMs_20 IAMs_20 20 18 03.1
comp=Z,5µm,19.0s
WVOR **Wild Horse Val** 107.33 45 IAMs_20 IAMs_20 20 20 53.8
comp=Z,4µm,20.0s
VLC **Villacollemand** 107.39 317 IAMs_20 IAMs_20 20 22 00.3
comp=Z,6µm,22.0s
BMO **Blue Mountains** 107.44 42 IAMs_20 IAMs_20 20 10 24.8
comp=Z,4µm,22.0s
BTNL **Ternell** 107.64 325 *d*Pdif **Pdif** 19 29 30.9 +0.2
BEBN **Eben Emael** 107.81 325 *d*Pdif **Pdif** 19 29 32.0 +0.5
BHOU **Houvegnez** 107.81 324 *d*Pdif **Pdif** 19 29 32.4 +0.8
BSTI **Sart Tilman** 107.96 325 *d*Pdif **Pdif** 19 29 33.5 +1.3
WLF **Walferdange** 108.01 324 *d*Pdif **Pdif** 19 29 33.6 +1.2
WLF *d*PKiKP **PKiKP** 19 33 38.6 -0.6
BGES **Gesves** 108.33 325 *d*Pdif **Pdif** 19 29 34.1 +0.3
RCHB **Rochefort** 108.34 325 *d*Pdif **Pdif** 19 29 34.3 +0.4
SMMC **Simmler** 108.37 52 Pdiff **Pdif** 19 29 37.7 +3.3
baz=285
BMRD **Maredsous** 108.55 325 *d*Pdif **Pdif** 19 29 35.1 +0.3
PKM **Mcpherson Peak** 108.63 53 Pdiff **Pdif** 19 29 36.5 +0.7
baz=285
SENIN **Lac Senin/Sane** 108.63 320 IAMs_20 IAMs_20 20 24 02.9
comp=Z,5µm,21.0s
MLAC **Mammoth, Mammo** 108.64 49 Pdiff **Pdif** 19 29 36.8 +1.0
baz=287
DOU **Dourbes** 108.74 325 *d*Pdif **Pdif** 19 29 36.7 +1.1
DOU *dx* x 19 29 42.6
NVAR **Mina Array Bea** 108.80 49 Pdiff **Pdif** 19 29 37.8 +1.3
comp=Z,5.1nm,1.0s,baz=266,slow=5.5,SNR=24
NVAR PKiKP **PKiKP** 19 33 42.4 +1.0
comp=Z,6.7nm,0.9s,baz=268,slow=2.5,SNR=11
NVAR PKKPbc **PKKPbc** 19 44 50.5 -0.4
comp=Z,1.9nm,0.8s,baz=125,slow=3.7,SNR=5.0
NVAR PKKP **PKKPab** 19 45 04.0 +0.8
comp=Z,28nm,1.0s,baz=122,slow=4.4,SNR=12
SBC **Santa Barbara** 108.83 53 Pdiff **Pdif** 19 29 36.6 +0.2
baz=285
MSO **Missoula** 108.90 39 Pdiff **Pdif** 19 29 37.2 +0.6
baz=294
MFID **Camas Ranch** 108.94 43 IAMs_20 IAMs_20 20 11 07.5
comp=Z,6µm,22.0s
VES **Vestal, Richgr** 108.95 51 Pdiff **Pdif** 19 29 36.8 -0.1
baz=286
SCZ2 **Santa Cruz Isl** 109.00 53 Pdiff **Pdif** 19 29 37.5 +0.2
baz=285
TIN **Tinemaha, Big** 109.26 50 Pdiff **Pdif** 19 29 36.8 -1.6
baz=287
SNCC **San Nicolas Is** 109.29 54 Pdiff **Pdif** 19 29 38.6 +0.1
baz=285
ARVC **Arvin** 109.34 52 Pdiff **Pdif** 19 29 39.8 +1.1
baz=286
ISA **Isabella, Lake** 109.47 51 Pdiff **Pdif** 19 29 42.3 +2.9
baz=286
CWC **Cottonwood Cre** 109.56 51 Pdiff **Pdif** 19 29 39.7 -0.2
baz=287
OSI **Osito Audit: C** 109.57 53 Pdiff **Pdif** 19 29 40.5 +0.7
baz=286
HLID **Hailey** 109.85 42 IAMs_20 IAMs_20 20 23 52.4
comp=Z,4µm,19.0s
HLID **Hailey** 109.85 42 Pdiff **Pdif** 19 29 43.0 +2.0
baz=292
GRAC **Grapevine Rang** 109.94 50 Pdiff **Pdif** 19 29 43.6 +2.2
baz=288
DECC **Green Verdugo** 109.98 53 Pdiff **Pdif** 19 29 42.9 +1.3
baz=286
EDW2 **Edwards Air Fo** 110.07 52 Pdiff **Pdif** 19 29 41.9 -0.2
baz=286
KPL **Plockton** 110.09 335 *e*P **PKiKP** 19 33 42.8 -0.1
MPMC **Manual Prospec** 110.13 51 Pdiff **Pdif** 19 29 42.7 +0.3
baz=287
CIS **Catalina Islan** 110.14 54 Pdiff **Pdif** 19 29 42.0 -0.3
baz=286
LRMC **Laurel Mtn Rad** 110.14 51 Pdiff **Pdif** 19 29 44.4 +1.9
baz=287
SCI2 **San Clemente I** 110.15 54 Pdiff **Pdif** 19 29 42.8 +0.5
baz=285
EKA **Eskdalemuir Ar** 110.16 332 Pdiff **Pdif** 19 29 42.2 +0.4
comp=Z,3.0nm,1.0s,baz=77,slow=4.4,SNR=11
EKA PKKPbc **PKKPbc** 19 44 43.6 -3.2
comp=Z,7.0nm,0.6s,baz=245,slow=3.0,SNR=5.8
EKA PKKP **PKKPab** 19 44 57.3 +0.5
comp=Z,15nm,0.9s,baz=238,slow=4.4,SNR=16
FMP **Fort Macarthur** 110.16 53 Pdiff **Pdif** 19 29 43.2 +0.9
baz=286
ESK **Eskdalemuir** 110.19 332 *e*P **PKiKP** 19 33 42.8 -0.4
ESK **Eskdalemuir** 110.19 332 IAMs_20 IAMs_20 20 23 52.6
comp=Z,6µm,21.0s
FURC **Furnace Creek,** 110.49 50 Pdiff **Pdif** 19 29 44.2 +0.5
baz=288
PGBU **Glenifferbraes** 110.49 333 *e*P **PKiKP** 19 33 43.6 -0.1
BFSC **Mount Baldy Ra** 110.52 53 Pdiff **Pdif** 19 29 44.7 +0.6
baz=286
NEWG **New Galloway** 110.78 332 *e*P **PKiKP** 19 33 42.3 -2.0
TPNV **Topopah Spring** 110.81 50 IAMs_20 IAMs_20 20 22 23.4
comp=Z,4µm,19.0s
TPNV **Topopah Spring** 110.81 50 Pdiff **Pdif** 19 29 45.2 -0.2
baz=288
KEST **Kesra** 110.84 309 Pdiff **Pdif** 19 29 45.2 -0.3
comp=Z,7.4nm,1.0s,baz=10,slow=11,SNR=7.6
KEST PP **PP** 19 34 22.6 -0.2
comp=Z,63nm,1.0s,baz=46,slow=7.1,SNR=9.7
KEST PKKPbc **PKKPbc** 19 44 44.5 +0.4
comp=Z,18nm,0.9s,baz=214,slow=1.8,SNR=16
R11A **Troy Canyon, C** 110.86 48 Pdiff **Pdif** 19 29 46.1 +0.5
baz=289
BOZ **Bozeman (W)** 110.87 40 IAMs_20 IAMs_20 20 12 03.9
comp=Z,4µm,22.0s
BOZ **Bozeman (W)** 110.87 40 Pdiff **Pdif** 19 29 46.1 +0.6
baz=295
GSC **Goldstone, Bar** 110.88 51 Pdiff **Pdif** 19 29 46.2 +0.5
baz=287
EGMT **Eagleton** 110.95 37 Pdiff **Pdif** 19 29 45.1 -0.6
baz=297
CLF **Chambon-Foret** 111.04 323 IAMs_20 IAMs_20 20 22 29.2
comp=Z,5µm,22.0s
MURC **Murrieta** 111.07 53 Pdiff **Pdif** 19 29 46.5 +0.1
baz=286
BBRC **Big Bear Solar** 111.10 52 Pdiff **Pdif** 19 29 45.0 -1.8
baz=287
SHOC **Shoshone, Teco** 111.11 51 Pdiff **Pdif** 19 29 47.4 +0.8
baz=288
GAL1 **Galloway** 111.15 332 *e*P **PKiKP** 19 33 45.2 +0.2
109C **Camp Elliot, M** 111.34 54 Pdiff **Pdif** 19 29 49.8 +2.2
baz=286
HEC **Hector,Ludlow** 111.39 52 Pdiff **Pdif** 19 29 49.5 +1.6
baz=288
IOMK **Kirk Michael** 111.44 332 *e*P **PKiKP** 19 33 44.2 -1.4
TUQ **Turquoise Moun** 111.53 51 Pdiff **Pdif** 19 29 50.5 +2.0
baz=288
FOEL **Foel Wylfa** 111.56 330 *e*P **PKiKP** 19 33 45.7 -0.2
HLM1 **Long Mynd** 111.60 329 *e*P **PKiKP** 19 33 45.3 -0.7
PFO **Pinyon Flats O** 111.65 53 Pdiff **Pdif** 19 29 50.8 +1.6
baz=287
TPFO **Pinon Flats** 111.66 53 Pdiff **Pdif** 19 29 51.6 +2.4
baz=287
CLGH **Cloghs, Cushen** 111.67 333 *e*P **PKiKP** 19 33 39.3 -6.7
MONP2 **Monument Peak** 111.89 54 Pdiff **Pdif** 19 29 50.5 +0.1
baz=287
BELC **Belle Mtn. Jos** 111.90 52 Pdiff **Pdif** 19 29 49.7 -0.6
baz=288
WLF1 **Llynfaes** 111.92 331 *e*P **PKiKP** 19 33 47.2 +0.7
GMRC **Granite Mounta** 111.93 52 Pdiff **Pdif** 19 29 51.3 +0.9
baz=288
CMAH **Djebel Manchou** 112.04 311 P 19 29 51.2
FLWY **Flagg Ranch** 112.11 41 IAMs_20 IAMs_20 20 13 18.8
comp=Z,5µm,22.0s
ABSA **Djebel Ababsia** 112.11 310 P 19 29 57.5
TPAW **Teton Pass** 112.19 41 IAMs_20 IAMs_20 20 13 22.1
comp=Z,5µm,22.0s
IKP **In-Ko-Pah, Jac** 112.21 54 Pdiff **Pdif** 19 29 51.1 -0.6
baz=287
DUG **Dugway, Tooele** 112.22 45 Pdiff **Pdif** 19 29 52.6 +1.1
baz=292
ANGG **Ammassalik, Gr** 112.22 353 IAMs_20 IAMs_20 20 27 41.0
comp=Z,4µm,21.0s
SWSC **Sam W. Stewart** 112.38 53 Pdiff **Pdif** 19 29 54.1 +1.9
baz=287
BC3 **Big Chuckawall** 112.44 53 Pdiff **Pdif** 19 29 54.3 +1.6
baz=288
IRM **Iron Mountain** 112.53 52 Pdiff **Pdif** 19 29 53.6 +0.7
baz=288
HWUT **Hardware Ranch** 112.55 43 IAMs_20 IAMs_20 20 13 23.9
comp=Z,5µm,22.0s
RLMT **Red Lodge** 112.57 39 Pdiff **Pdif** 19 29 53.7 +0.5
baz=297
NEE2 **Needles Airpor** 112.75 51 Pdiff **Pdif** 19 29 54.1 +0.2
baz=289
GLA **Glamis** 113.12 53 Pdiff **Pdif** 19 29 55.8 +0.1
baz=288
MAHO **Mahon** 113.19 315 PP **PP** 19 34 42.1 +2.9
PDMCI **Parker Dam,Lak** 113.28 52 Pdiff **Pdif** 19 29 57.0 +0.9
baz=289
BW06 **Boulder Array** 113.42 42 Pdiff **Pdif** 19 29 55.7 -1.3
baz=296
PDAR **Pinedale Array** 113.42 42 Pdiff **Pdif** 19 29 57.5 +0.5
comp=Z,0.4nm,0.3s,baz=259,slow=5.4,SNR=5.5
PDAR PKiKP **PKiKP** 19 33 49.8 -0.3
comp=Z,5.7nm,0.7s,baz=190,slow=0.9,SNR=20
PDAR PKKPbc **PKKPbc** 19 44 34.4 -1.5
comp=Z,16nm,1.1s,baz=108,slow=4.8,SNR=16
LAO **LASA Array** 113.70 37 IAMs_20 IAMs_20 20 14 13.6
comp=Z,4µm,22.0s
LAO **LASA Array** 113.70 37 P **PKiKP** 19 33 50.9 +0.7
baz=300
LAO **LASA Array** 113.70 37 PKiKP **PKiKP** 19 33 51.2 +1.0
baz=300
DGMT **Dagmar** 113.95 34 PKiKP **PKiKP** 19 33 50.3 -0.3
baz=302
WUAZ **Wupatki** 115.00 50 IAMs_20 IAMs_20 20 24 17.2
comp=Z,4µm,19.0s
WUAZ **Wupatki** 115.00 50 PKiKP PKPdf 19 33 53.8 +0.6
baz=291
214A **Organ Pipe Nat** 115.08 54 PKiKP **PKPdf** 19 33 53.9 +0.7
baz=289
O20A **White River Ci** 115.45 44 PKiKP **PKPdf** 19 33 55.0 +1.0
baz=296
K22A **Casper** 115.47 41 P **PKPdf** 19 33 54.3 +0.4
baz=298,SNR=11
K22A **Casper** 115.47 41 PKiKP **PKPdf** 19 33 54.3 +0.4
baz=298
PMSA **Palmer Station** 116.23 175 IAMs_20 IAMs_20 20 20 31.9
comp=Z,4µm,20.0s
RSSD **Black Hills** 116.33 38 **PKPdf** 19 33 55.5 -0.1
RSSD **Black Hills** 116.33 38 IAMs_20 IAMs_20 20 27 50.3
comp=Z,3µm,18.0s
RSSD **Black Hills** 116.33 38 PKIKP **PKPdf** 19 33 55.5 -0.1
RSSD MLR MLR
comp=Z,3µm,18.0s
RSSD **Black Hills** 116.33 38 P **PKPdf** 19 33 55.2 -0.4
baz=301
RSSD **Black Hills** 116.33 38 PKiKP **PKiKP** 19 33 55.8 +0.2
baz=301
W18A **Petrified Fore** 116.39 49 PKiKP **PKiKP** 19 33 57.3 +1.3
baz=292
MVCO **Mesa Verde** 116.49 47 IAMs_20 IAMs_20 20 24 52.7
comp=Z,4µm,19.0s
MVCO **Mesa Verde** 116.49 47 PKiKP **PKiKP** 19 33 57.0 +0.8
baz=294
TUC **Tucson** 116.59 53 IAMs_20 IAMs_20 20 24 11.5
comp=Z,4µm,19.0s
TUC **Tucson** 116.59 53 PKiKP **PKiKP** 19 33 57.3 +1.1
baz=290
N23A **Red Feather La** 116.67 42 PKiKP **PKiKP** 19 33 57.7 +1.3
baz=298
MDND **Maddock** 116.84 33 PKiKP **PKiKP** 19 33 56.8 +0.6
baz=306
E28A **Huff** 116.98 34 **PKiKP** 19 33 56.5 0.0
E28A **Huff** 116.98 34 P **PKiKP** 19 33 57.3 +0.8
baz=305
ULM **Lac du Bonnet** 117.26 29 PKP **PKPdf** 19 33 56.7 -0.2
comp=Z,35nm,0.9s,baz=309,slow=3.1,SNR=28
ULM PKKPbc **PKKPbc** 19 44 21.0 -1.6
comp=Z,7.9nm,0.8s,baz=130,slow=5.0,SNR=6.5
ULM **Lac du Bonnet** 117.26 29 **PKPdf** 19 33 56.2 -0.7
NRS **Narsarsuaq** 117.37 356 IAMs_20 IAMs_20 20 27 12.1
comp=Z,4µm,21.0s
ISCO **Idaho Springs** 117.41 43 IAMs_20 IAMs_20 20 16 31.2
comp=Z,4µm,22.0s
ISCO **Idaho Springs** 117.41 43 P **PKiKP** 19 33 59.3 +1.3
baz=298
ISCO **Idaho Springs** 117.41 43 PKiKP **PKiKP** 19 33 58.9 +0.9
baz=298
S22A **4UR Ranch, Cre** 117.47 46 PKiKP **PKiKP** 19 33 59.2 +1.1
baz=296
IVI **Ivigtut** 117.51 357 **PKPdf** 19 33 56.2 -0.8
CART **Cartagena** 117.89 314 PKP PKiKP 19 34 12.3 +14
CART **Cartagena** 117.89 314 PP PP 19 35 14.0 +1.7
Q24A **Divide** 118.11 44 PKiKP **PKiKP** 19 33 59.9 +0.6
baz=298
UCM **Universidad Co** 118.19 318 PKP PKiKP 19 34 07.8 +8.7
UCM **Universidad Co** 118.19 318 PP PP 19 35 21.1 +6.8
SDCO **Great Sand Dun** 118.42 45 IAMs_20 IAMs_20 20 17 53.3
comp=Z,4µm,22.0s
SDCO **Great Sand Dun** 118.42 45 P **PKiKP** 19 34 00.8 +0.9
baz=297
SDCO **Great Sand Dun** 118.42 45 PKiKP **PKiKP** 19 34 01.0 +1.1
baz=297
AGMN **Agassiz Nation** 118.53 31 IAMs_20 IAMs_20 20 28 13.4
comp=Z,3µm,22.0s
AGMN **Agassiz Nation** 118.53 31 P **PKPdf** 19 33 58.8 -0.6
baz=310
AGMN **Agassiz Nation** 118.53 31 PKiKP **PKPdf** 19 33 58.9 -0.5
baz=310
121A **Cookes Peak, D** 118.87 51 P **PKiKP** 19 34 02.3 +1.5
baz=292
121A **Cookes Peak, D** 118.87 51 PKiKP **PKiKP** 19 34 02.8 +2.0
baz=292
ANMO **Albuquerque** 118.93 48 IAMs_20 IAMs_20 20 26 01.1
comp=Z,3µm,19.0s
ANMO **Albuquerque** 118.93 48 P PKiKP **PKiKP** 19 34 01.9 +1.0
ANMO **Albuquerque** 118.93 48 P **PKiKP** 19 34 02.3 +1.4
baz=295
ANMO **Albuquerque** 118.93 48 PKiKP **PKiKP** 19 34 02.2 +1.4
baz=295
Y22D **IRIS PASSCAL I** 118.94 49 PKiKP **PKiKP** 19 34 02.6 +1.7
baz=294
Y22A **Socorro** 118.96 50 P **PKiKP** 19 34 02.9 +2.0
baz=294
ESDC **Sonseca Array** 118.98 318 Pdiff **Pdif** 19 30 21.6 +0.1
comp=Z,0.7nm,1.0s,baz=62,slow=3.5,SNR=4.9
ESDC PKP **PKPdf** 19 34 00.3 -0.3
comp=Z,5.7nm,0.9s,baz=13,slow=1.6,SNR=22
ESDC PP **PP** 19 35 17.2 -2.6
comp=Z,19nm,1.0s,baz=57,slow=6.7,SNR=5.6
ESDC PKKPbc **PKKPbc** 19 44 14.8 -1.3
comp=Z,16nm,1.0s,baz=245,slow=3.6,SNR=21
ESDC PKPPKP **P'P'df** 19 52 57.0 -0.2
comp=Z,2.0nm,1.2s,baz=267,slow=1.9,SNR=4.6
SUSD **Miller** 119.21 36 PKiKP **PKiKP** 19 34 00.9 0.0
baz=306
OGNE **Ogallala** 119.23 40 IAMs_20 IAMs_20 20 17 39.3
comp=Z,4µm,22.0s
OGNE **Ogallala** 119.23 40 PKiKP **PKiKP** 19 34 01.4 +0.2
baz=301
PAB **San Pablo** 119.30 318 IAMs_20 IAMs_20 20 34 23.3
comp=Z,3µm,19.0s
PAB **San Pablo** 119.30 318 P **PKiKP** 19 34 02.8 +1.5
T25A **Trinidad** 119.47 45 PKiKP **PKiKP** 19 34 03.2 +1.3
baz=297
B35A **Bob, Littlefor** 119.56 30 P **PKPdf** 19 34 01.3 -0.1
baz=312
PBRG **Braganca** 119.69 321 *e*PKPdf **PKiKP** 19 34 03.3 +1.3
PBRG **Braganca** 119.69 321 *e*PP **PP** 19 35 26.9 +2.3
PBRG **Braganca** 119.69 321 *e*PKKPdf PKKPdf 19 45 00.6 +16
KSCO **Kaye Shedlock'** 119.81 43 PKiKP **PKiKP** 19 34 02.5 +0.1
baz=300
F33A **5 Mile Ranch,** 119.87 33 P **PKPdf** 19 34 02.0 0.0
baz=309
CHAS **Isla Isabel II** 119.97 312 PP PP 19 35 19.1 -7.7
TAF **Taforalt** 120.12 312 P **PKiKP** 19 34 05.1 +2.1
EPT **El Paso** 120.16 52 IAMs_20 IAMs_20 20 19 28.9
comp=Z,5µm,22.0s
KIDD **KIDD Seismic O** 120.16 52 P **PKiKP** 19 34 04.7 +1.4
baz=293
MVO **Moncorvo** 120.22 321 *e*PKPdf **PKiKP** 19 34 04.1 +1.1
MVO **Moncorvo** 120.22 321 *e*PP **PP** 19 35 31.9 +3.7
MVO **Moncorvo** 120.22 321 *e*PKKPdf PKKPdf 19 45 09.6 +26
WMELI **Melilla** 120.30 313 PKP **PKiKP** 19 34 09.4 +6.2
WMELI **Melilla** 120.30 313 PP PP 19 35 33.5 +4.5
ORCD **Orcadas** 120.33 185 **PKPdf** 19 34 01.9 -0.6
FIGM **Figuig** 120.36 309 P **PKiKP** 19 34 05.2 +1.5
K31A **O'Neill** 120.38 37 P **PKiKP** 19 34 04.1 +0.8
baz=305
JBK **JBK** 120.44 312 P **PKiKP** 19 34 05.6 +1.7
PCAB **Cabril** 120.55 322 *e*PKPdf **PKiKP** 19 34 04.7 +1.1
PCAB **Cabril** 120.55 322 *e*PP **PP** 19 35 33.3 +2.9
PGAV **Gavieira, Arco** 120.55 322 *e*PKPdf **PKiKP** 19 34 04.3 +0.6
PGAV **Gavieira, Arco** 120.55 322 *e*PKKPdf PKKPdf 19 45 10.2 +27
PGAV **Gavieira, Arco** 120.55 322 *e*LR LR 20 22 22.0
comp=Z,2µm,22.0s
TDRA **Tendrara** 120.58 310 P **PKiKP** 19 34 06.0 +1.8
POLO **Lamas de Olo** 120.59 321 *e*PKPdf **PKiKP** 19 34 05.0 +1.2
POLO **Lamas de Olo** 120.59 321 *e*PP **PP** 19 35 34.1 +3.3
POLO **Lamas de Olo** 120.59 321 *e*PKKPdf PKKPdf 19 45 07.6 +24
PVRL **Vila Real** 120.59 321 *e*PKPdf **PKiKP** 19 34 04.7 +1.0
PVRL **Vila Real** 120.59 321 *e*PP **PP** 19 35 35.9 +5.2
EYMN **Ely** 120.94 29 IAMs_20 IAMs_20 20 31 34.3
comp=Z,4µm,21.0s
EYMN **Ely** 120.94 29 P **PKPdf** 19 34 03.9 -0.2
baz=314
EYMN **Ely** 120.94 29 PKiKP **PKiKP** 19 34 04.5 +0.3
baz=314
MTE **Manteigas** 120.96 320 *e*PKPdf **PKiKP** 19 34 05.9 +1.4
MTE **Manteigas** 120.96 320 *e*PP **PP** 19 35 39.2 +5.9
MTE **Manteigas** 120.96 320 *e*PKKPdf PKKPdf 19 45 09.6 +27
MTE **Manteigas** 120.96 320 *e*LR LR 20 22 22.8
comp=Z,4µm,22.0s
MTE **Manteigas** 120.96 320 IAMs_20 IAMs_20 20 29 25.9
comp=Z,5µm,22.0s
ECSD **EROS Data Cent** 120.98 35 IAMs_20 IAMs_20 20 32 01.7
comp=Z,4µm,20.0s
ECSD **EROS Data Cent** 120.98 35 P **PKiKP** 19 34 04.9 +0.5
baz=308
ECSD **EROS Data Cent** 120.98 35 PKiKP **PKiKP** 19 34 04.5 +0.1
baz=308
PVIS **Viseu** 121.01 321 *e*PKPdf **PKiKP** 19 34 06.2 +1.6
PALE **Palemas** 121.07 313 P **PKiKP** 19 34 07.0 +2.2
MNTX **Cornudas Mount** 121.07 51 IAMs_20 IAMs_20 20 19 38.2
comp=Z,4µm,21.0s
MNTX **Cornudas Mount** 121.07 51 P **PKiKP** 19 34 06.4 +1.4
baz=294
MNTX **Cornudas Mount** 121.07 51 PKiKP **PKiKP** 19 34 06.2 +1.3
baz=294
PCBR **Castelo Branco** 121.22 319 *e*PKPdf **PKiKP** 19 34 06.1 +1.2
AKLM **AKL** 121.33 312 P **PKiKP** 19 34 08.0 +2.5
F36A **Milaca** 121.33 32 P **PKPdf** 19 34 04.8 -0.1
baz=312
PVLZ **Peæn de** 121.35 313 PKP PKiKP 19 34 16.6 +11
PVLZ **Peæn de** 121.35 313 PP PP 19 35 34.3 -1.8
PMRV **Marv??o** 121.38 319 *e*PKPdf **PKiKP** 19 34 06.1 +0.8
PMRV **Marv??o** 121.38 319 *e*PKKPdf PKKPdf 19 45 03.4 +22
PMRV **Marv??o** 121.38 319 *e*LR LR 20 22 04.4
comp=Z,3µm,18.0s
BGNE **Belgrade** 121.44 38 P **PKiKP** 19 34 05.5 +0.1
baz=305,SNR=9.1
BGNE **Belgrade** 121.44 38 PKiKP **PKiKP** 19 34 05.4 0.0
baz=305
PCAS **Casmilo, Conde** 121.76 320 *e*PKPdf **PKiKP** 19 34 06.8 +0.8
PCAS **Casmilo, Conde** 121.76 320 *e*PP PP 19 35 46.6 +7.9
PCAS **Casmilo, Conde** 121.76 320 *e*PKKPdf PKKPdf 19 45 11.2 +30
CEU **Ceuta** 121.78 315 PP PP 19 35 36.4 -2.6
PESTR **Estremoz** 121.81 319 *e*PKPdf **PKiKP** 19 34 07.6 +1.4
PESTR **Estremoz** 121.81 319 *e*PP **PP** 19 35 42.9 +3.8
PESTR **Estremoz** 121.81 319 *e*PKKPdf PKKPdf 19 45 17.3 +36
PESTR **Estremoz** 121.81 319 P **PKiKP** 19 34 07.6 +1.4
E38A **The Farm, Brul** 121.84 30 P **PKiKP** 19 34 06.3 +0.3
baz=314
CBKS **Cedar Bluff** 121.85 41 PKiKP **PKiKP** 19 34 06.8 +0.5
baz=302
SMIR **Smir Dam** 121.89 314 P **PKiKP** 19 34 08.0 +1.6
MSTX **Muleshoe** 122.09 48 P **PKiKP** 19 34 07.8 +0.8
baz=297
MSTX **Muleshoe** 122.09 48 PKiKP **PKiKP** 19 34 07.6 +0.6
baz=297
SFS **San Fernando** 122.10 315 PP PP 19 35 38.0 -3.2
PMTG **Montargil** 122.12 319 *e*PKPdf **PKiKP** 19 34 07.1 +0.4
CHEFC **Chefchaouen** 122.13 314 P **PKiKP** 19 34 09.0 +2.0
SPMN **Marine on St.** 122.14 32 P **PKiKP** 19 34 06.9 +0.3
baz=312
SPMN **Marine on St.** 122.14 32 PKiKP **PKiKP** 19 34 06.7 +0.1
baz=312
ARNO **Arenosillo** 122.15 316 PKP **PKiKP** 19 34 13.5 +6.7
ARNO **Arenosillo** 122.15 316 PP PP 19 35 48.1 +6.7
L34A **Svendsen Farm,** 122.19 37 P **PKiKP** 19 34 06.9 +0.1
baz=307
PSBE **So Bento** 122.25 320 *e*PKPdf **PKiKP** 19 34 07.8 +0.8
PSBE **So Bento** 122.25 320 *e*PP **PP** 19 35 43.4 +1.3
PSBE **So Bento** 122.25 320 *e*PKKPdf PKKPdf 19 45 21.6 +42
N33B **J Bar K, Exete** 122.25 38 P **PKPdf** 19 34 06.7 -0.2
baz=305,SNR=5.6
EVO **Evora** 122.27 318 PKP **PKPdf** 19 34 04.4 -2.5
EVO **Evora** 122.27 318 PP PP 19 35 48.1 +5.9
EVO **Evora** 122.27 318 *e*PKPdf **PKiKP** 19 34 07.4 +0.3
LCRM **LCR** 122.44 312 P **PKiKP** 19 34 10.0 +2.2
PBEJ **Beja** 122.44 318 *e*PKPdf **PKiKP** 19 34 08.6 +1.2
PBEJ **Beja** 122.44 318 *e*PP **PP** 19 35 46.2 +2.8
AMTX **Amarillo** 122.47 46 IAMs_20 IAMs_20 20 31 38.7
comp=Z,3µm,20.0s
AMTX **Amarillo** 122.47 46 P **PKiKP** 19 34 08.5 +0.8
baz=298
AMTX **Amarillo** 122.47 46 PKiKP **PKiKP** 19 34 08.3 +0.6
baz=298
SICH **Sidi Chahed** 122.58 313 P **PKiKP** 19 34 10.0 +2.1
I37B **Waseca** 122.61 33 P **PKiKP** 19 34 08.3 +0.7
baz=311
MDT **Midelt** 122.64 311 PKP **PKiKP** 19 34 08.4 +0.4
comp=Z,23nm,1.1s,baz=103,slow=3.0,SNR=27
MDT PKKPbc **PKKPab** 19 43 58.1 -4.1
comp=Z,9.6nm,1.0s,baz=242,slow=3.3,SNR=8.1
MDT **Midelt** 122.64 311 P **PKiKP** 19 34 09.8 +1.7
PVAQ **Vaqueiros** 122.67 317 *e*PKPdf **PKiKP** 19 34 08.6 +0.7
PVAQ **Vaqueiros** 122.67 317 *e*PP **PP** 19 35 45.8 +0.9
PVAQ **Vaqueiros** 122.67 317 *e*PKKPdf PKKPdf 19 45 01.7 +23
PVAQ **Vaqueiros** 122.67 317 *e*LR LR 20 23 25.1
comp=Z,3µm,22.0s
PVAQ **Vaqueiros** 122.67 317 P **PKiKP** 19 34 09.5 +1.6
PACT **Alcochete** 122.68 319 *e*PKPdf **PKiKP** 19 34 08.6 +0.8
IFR **Ifrane** 122.71 312 PKP **PKPdf** 19 34 05.1 -3.0
IFR **Ifrane** 122.71 312 PP PP 19 35 47.1 +1.4
R32A **Long Quarter,** 122.74 41 P **PKiKP** 19 34 09.0 +1.0
baz=303
PCVE **Castro Verde** 122.76 318 *e*PKPdf **PKiKP** 19 34 09.4 +1.3
PCVE **Castro Verde** 122.76 318 *e*PP **PP** 19 35 49.9 +4.3
PCVE **Castro Verde** 122.76 318 *e*PKKPdf PKKPdf 19 45 22.1 +43
MESJ **Messejana** 122.78 318 *e*PKPdf **PKPdf** 19 34 07.8 -0.1
MESJ *e*PP **PP** 19 35 46.3 +0.7
MESJ IAMs_20 IAMs_20 20 33 28.2
comp=E,4µm,11.4s
MESJ **Messejana** 122.78 318 *e*PKPdf **PKiKP** 19 34 09.2 +1.1
MESJ **Messejana** 122.78 318 *e*PP **PP** 19 35 48.6 +3.0
MESJ **Messejana** 122.78 318 *e*PKIKP **PKPdf** 19 34 07.7 -0.1
MESJ *e* 19 35 46.3
PNCL **Nicolau / Gran** 122.84 318 *e*PKPdf **PKiKP** 19 34 09.0 +0.8
PNCL **Nicolau / Gran** 122.84 318 *e*PP **PP** 19 35 50.0 +4.0
PNCL **Nicolau / Gran** 122.84 318 *e*PKKPdf PKKPdf 19 45 23.4 +45
PMAFR **Mafra** 122.87 320 *e*PKPdf **PKiKP** 19 34 09.0 +0.8
PMAFR **Mafra** 122.87 320 *e*PKKPdf PKKPdf 19 45 27.0 +48
PBDV **Barranco-do-Ve** 122.89 317 *e*PKPdf **PKiKP** 19 34 09.4 +1.0
PBDV **Barranco-do-Ve** 122.89 317 *e*PP **PP** 19 35 47.9 +1.4
PBDV **Barranco-do-Ve** 122.89 317 *e*PKKPdf PKKPdf 19 45 25.3 +47
LIS **Lisbon** 122.92 319 *e*PKPdf **PKPdf** 19 34 08.0 -0.1
LIS *e*PP **PP** 19 35 47.3 +0.7
LIS IAMs_20 IAMs_20 20 27 07.3
comp=E,6µm,29.5s
LIS **Lisbon** 122.92 319 *e*PKIKP **PKPdf** 19 34 08.0 -0.1
LIS *e* 19 35 47.2
PMST **Lisbon--Monsan** 122.93 319 *e*PKPdf **PKiKP** 19 34 09.3 +1.0
D41A **Chassel** 122.96 28 P **PKiKP** 19 34 08.7 +0.5
baz=317,SNR=13
SCHQ **Schefferville** 123.00 9 PKP **PKiKP** 19 34 08.4 +0.3
comp=E,58nm,0.8s,baz=329,slow=1.8,SNR=47
SCHQ PKKPbc **PKKPab** 19 43 59.6 -0.7
comp=E,17nm,1.1s,baz=184,slow=4.7,SNR=7.0
TORD **Torodi Ar. Bea** 123.25 287 Pdiff **Pdif** 19 30 40.7 -0.2
comp=E,0.2nm,0.8s,baz=136,slow=12,SNR=1.9
TORD PKP **PKiKP** 19 34 09.8 +0.2
comp=E,92nm,1.0s,baz=51,slow=1.5,SNR=101
TORD PP **PP** 19 35 51.9 +1.9
comp=E,32nm,0.9s,baz=75,slow=2.4,SNR=3.3
TORD PKKPbc **PKKPab** 19 44 00.7 +1.1
comp=E,26nm,0.8s,baz=274,slow=3.1,SNR=33
PTEO **Sao Teotonio** 123.27 318 *e*PKPdf **PKiKP** 19 34 10.2 +1.2
N35A **Tabor** 123.29 37 P **PKPdf** 19 34 08.9 +0.1
baz=307,SNR=7.1

MORF	Marmelete	123.35	318	*e*PKPdf	PKPdf	19 34 08.8	-0.2
MORF				*e*PP	PP	19 35 50.2	+0.6
MORF				IAMs_20	IAMs_20	20 33 52.1	
	comp=E,4μm,18.5s						
MORF	Marmelete	123.35	318	*e*PKPdf	PKiKP	19 34 10.2	+0.9
MORF	Marmelete	123.35	318	*e*PKKPdf	PKKPdf	19 45 35.6	+58
MORF	Marmelete	123.35	318	*e*PKiKP	PKPdf	19 34 08.8	-0.2
MORF				*e*		19 35 50.1	
TX31	Lajitas Ar. Si	123.37	53	P	PKiKP	19 34 10.6	+1.0
	baz=294						
TXAR	Lajitas Array	123.37	53	Pdiff	Pdif	19 30 42.4	+1.1
	comp=E,0.1nm,0.5s,baz=213,slow=4.3,SNR=1.8						
TXAR				PKP	PKiKP	19 34 10.3	+0.7
	comp=E,14nm,0.7s,baz=270,slow=1.6,SNR=69						
TXAR				PP	PP	19 35 50.5	+0.2
	comp=E,13nm,1.0s,baz=296,slow=4.0,SNR=4.8						
TXAR				PKKPbc	PKKPab	19 43 59.0	-0.2
	comp=E,15nm,1.0s,baz=124,slow=4.7,SNR=24						
COWI	Conover	123.38	29	P	PKiKP	19 34 09.0	0.0
	baz=316						
GOLM	Goulmima	123.39	310	P	PKiKP	19 34 12.0	+2.3
G40A	Rib Lake	123.45	30	P	PKiKP	19 34 09.4	+0.2
	baz=315,SNR=51						
PFVI	Vila Bisbo	123.56	317	*e*PKPdf	PKiKP	19 34 10.5	+0.9
PFVI	Vila Bisbo	123.56	317	*e*PKKPdf	PKKPdf	19 45 35.0	+58
KSU1	Kansas State U	123.72	40	IAMs_20	IAMs_20	20 24 17.2	
	comp=Z,4μm,21.0s						
KSU1	Kansas State U	123.72	40	PKiKP	PKiKP	19 34 10.3	+0.3
	baz=305						
K38A	Parkersburg	123.85	34	P	PKiKP	19 34 10.1	0.0
	baz=311						
ZHG	ZHG	123.87	313	P	PKiKP	19 34 12.0	+1.5
SCIA	State Center	124.08	35	P	PKiKP	19 34 10.6	+0.1
	baz=310						
SCIA	State Center	124.08	35	PKiKP	PKiKP	19 34 10.8	+0.3
	baz=310						
F42A	Maple Grove Fa	124.11	29	P	PKiKP	19 34 10.9	+0.4
	baz=317,SNR=9.1						
I40A	Norwalk	124.19	32	P	PKPdf	19 34 10.3	-0.2
	baz=314,SNR=15						
TZRR	Tazzarine	124.26	309	P	PKiKP	19 34 13.0	+1.6
AVE	Averroes	124.50	313	PKP	PKiKP	19 34 21.6	+10
AVE	Averroes	124.50	313	PP	PP	19 36 03.8	+6.3
AVE	Averroes	124.50	313	P	PKiKP	19 34 12.9	+1.3
ZGR	Zagora	124.59	308	P	PKiKP	19 34 14.0	+1.9
WMOK	Wichita Mounta	124.62	45		PKPdf	19 34 10.6	-1.0
WMOK	Wichita Mounta	124.62	45	IAMs_20	IAMs_20	20 29 43.5	
	comp=Z,3μm,20.0s						
WMOK	Wichita Mounta	124.62	45	PKiKP	PKPdf	19 34 10.6	-1.0
WMOK				MLR	MLR		
	comp=Z,3μm,20.0s						
WMOK	Wichita Mounta	124.62	45	P	PKPdf	19 34 11.2	-0.4
	baz=301						
WMOK	Wichita Mounta	124.62	45	PKiKP	PKiKP	19 34 12.0	+0.1
	baz=301						
N38A	Joes South For	124.77	36	P	PKiKP	19 34 12.0	0.0
	baz=309,SNR=9.2						
ABTX	Abilene, Hawle	125.04	48	P	PKiKP	19 34 13.0	+0.2
	baz=299						
ABTX	Abilene, Hawle	125.04	48	PKiKP	PKiKP	19 34 13.3	+0.6
	baz=299						
JFWS	Jewell Farm	125.06	32	P	PKPdf	19 34 12.3	+0.2
	baz=313						
JFWS	Jewell Farm	125.06	32	PKiKP	PKPdf	19 34 12.0	-0.1
	baz=313						
I42A	Draeger Farm,	125.07	31	P	PKPdf	19 34 12.2	+0.1
	baz=315,SNR=25						
L40A	Anamosa	125.10	34	P	PKPdf	19 34 12.0	-0.2
	baz=312,SNR=50						
OUZM	OUZ	125.12	310	P	PKiKP	19 34 15.0	+1.9
H43A	Windswept, Lux	125.23	29	P	PKPdf	19 34 12.2	-0.2
	baz=317,SNR=10						
SRHM	Skhour des Reh	125.26	312	P	PKiKP	19 34 15.0	+1.7
P38A	Dawn	125.33	37	P	PKiKP	19 34 13.0	-0.1
	baz=308,SNR=31						
HOPE	Hope Point	125.34	192	IAMs_20	IAMs_20	20 33 19.9	
	comp=Z,4μm,21.0s						
E46A	Sault Ste Mari	125.40	26	P	PKiKP	19 34 13.4	+0.4
	baz=321						
OUK	Oukaimeden	125.83	311	P	PKiKP	19 34 17.0	+2.2
JCT	Junction City	125.92	50	P	PKiKP	19 34 15.2	+0.6
	baz=297						
JCT	Junction City	125.92	50	PKiKP	PKiKP	19 34 14.9	+0.3
	baz=297						
L42A	Oliver, Polo	125.99	33	P	PKPdf	19 34 13.7	-0.2
	baz=314,SNR=26						
TUL1	Leonard	126.06	42	IAMs_20	IAMs_20	20 30 09.4	
	comp=Z,4μm,20.0s						
TUL1	Leonard	126.06	42	P	PKiKP	19 34 15.4	+0.8
	baz=304						
TUL1	Leonard	126.06	42	PKiKP	PKiKP	19 34 15.0	+0.4
	baz=304						
N41A	Harden Midland	126.21	35	P	PKPdf	19 34 14.3	0.0
	baz=312,SNR=16						
K43A	Burlington	126.21	31	P	PKPdf	19 34 14.2	-0.1
	baz=315,SNR=17						
P40A	Paris	126.28	37	P	PKiKP	19 34 15.0	0.0
	baz=310,SNR=29						
Z35A	Perchaven, San	126.43	46	P	PKiKP	19 34 15.7	+0.2
	baz=301,SNR=14						
GLMI	Grayling	126.45	27	IAMs_20	IAMs_20	20 33 15.8	
	comp=Z,3μm,22.0s						
GLMI	Grayling	126.45	27	P	PKiKP	19 34 15.7	+0.6
	baz=320						
GLMI	Grayling	126.45	27	PKiKP	PKiKP	19 34 15.4	+0.2
	baz=320						
TTIG	Tnine Tigouga,	126.58	310	P	PKiKP	19 34 17.0	+1.0
S39A	Bolivar	126.64	39	P	PKPdf	19 34 15.3	0.0
	baz=307,SNR=77						
L44A	Lake County Fo	126.80	31	IAMs_20	IAMs_20	20 35 35.9	
	comp=Z,4μm,21.0s						
L44A	Lake County Fo	126.80	31	P	PKPdf	19 34 15.5	0.0
	baz=316,SNR=5.4						
L44A	Lake County Fo	126.80	31	PKiKP	PKPdf	19 34 15.4	0.0
	baz=316						
R40A	Maddies Statio	126.93	38		PKPdf	19 34 14.6	-1.2
R40A	Maddies Statio	126.93	38	P	PKPdf	19 34 16.0	+0.2
	baz=309,SNR=46						
WHTX	Lake Whitney,	126.96	47	P	PKiKP	19 34 17.0	+0.5
	baz=300,SNR=17						
WHTX	Lake Whitney,	126.96	47	PKiKP	PKiKP	19 34 17.1	+0.5
	baz=300						
HHAR	Hobbs	127.08	41	P	PKPdf	19 34 16.4	+0.2
	baz=306						
X37A	Clayton	127.08	43	P	PKiKP	19 34 17.7	+0.9
	baz=304						
HDIL	Hopedale	127.19	34	P	PKPdf	19 34 16.3	0.0
	baz=313,SNR=12						
HDIL	Hopedale	127.19	34	PKiKP	PKPdf	19 34 16.5	+0.2
	baz=313						
833A	Chaparral WMA,	127.20	52	P	PKiKP	19 34 18.0	+0.9
	baz=296,SNR=46						
833A	Chaparral WMA,	127.20	52	PKiKP	PKiKP	19 34 18.2	+1.1
	baz=296						
M44A	Midewin, Midew	127.29	32	P	PKPdf	19 34 16.5	+0.1
	baz=315,SNR=15						
435B	Jarrell	127.46	49	P	PKiKP	19 34 18.0	+0.4
	baz=299,SNR=6.4						
435B	Jarrell	127.46	49	PKiKP	PKiKP	19 34 17.9	+0.4
	baz=299						
J47A	Sunmer	127.57	28	P	PKiKP	19 34 17.3	-0.1
	baz=319,SNR=17						
J47A				P	PKiKP	19 34 17.3	-0.1
	baz=319,SNR=17						
P43A	Skaggs, Pawnee	127.68	35	P	PKiKP	19 34 17.6	-0.1
	baz=312,SNR=18						
CCM	Cathedral Cave	127.70	37	P	PKiKP	19 34 17.9	0.0
	baz=310						
CCM	Cathedral Cave	127.70	37	PKiKP	PKiKP	19 34 17.9	0.0
	baz=310						
U40A	Yellville	127.74	40	IAMs_20	IAMs_20	20 23 59.0	
	comp=Z,4μm,22.0s						
U40A	Yellville	127.74	40	P	PKPdf	19 34 17.5	0.0
	baz=307,SNR=31						
U40A				P	PKPdf	19 34 17.5	0.0
	baz=307,SNR=31						
U40A	Yellville	127.74	40	PKiKP	PKiKP	19 34 17.8	-0.2
	baz=307						
L46A	Eue Claire	127.76	31	P	PKPdf	19 34 16.7	-0.5
	baz=317,SNR=5.3						
L46A				P	PKPdf	19 34 16.7	-0.5
	baz=317,SNR=5.3						
W39A	Magazine	127.82	42	IAMs_20	IAMs_20	20 35 15.7	
	comp=Z,3μm,20.0s						
W39A	Magazine	127.82	42	P	PKiKP	19 34 18.0	-0.1
	baz=306,SNR=16						
W39A	Magazine	127.82	42	PKiKP	PKiKP	19 34 18.1	0.0
	baz=306						
I49A	Point Hope	127.95	27	P	PKiKP	19 34 18.1	0.0
	baz=322,SNR=6.4						
I49A				P	PKiKP	19 34 18.1	0.0
	baz=322,SNR=6.4						
Z38A	Mt. Pleasant	128.08	45	P	PKiKP	19 34 19.0	+0.3
	baz=303,SNR=5.2						
237A	Washetta, Mont	128.16	46	P	PKiKP	19 34 19.4	+0.4
	baz=302,SNR=8.8						
735A	Kenedy	128.20	51	P	PKiKP	19 34 21.0	+1.9
	baz=298						
FVM	French Village	128.24	37	P	PKiKP	19 34 18.9	-0.1
	baz=310						
MIAR	Mount Ida	128.33	42	IAMs_20	IAMs_20	20 26 03.7	
	comp=Z,4μm,22.0s						
MIAR	Mount Ida	128.33	42	P	PKiKP	19 34 20.5	+1.3
	baz=305						
MIAR	Mount Ida	128.33	42	PKiKP	PKiKP	19 34 19.6	+0.3
	baz=305						
Q44A	Meyer Farm, Va	128.47	35	P	PKiKP	19 34 19.3	0.0
	baz=312,SNR=17						
SFIN	Lafayette	128.51	33	P	PKiKP	19 34 19.2	-0.3
	baz=315,SNR=15						
SFIN	Lafayette	128.51	33	PKiKP	PKiKP	19 34 19.4	0.0
	baz=315						
KVTX	Kingsville	128.73	53	IAMs_20	IAMs_20	20 21 21.1	
	comp=Z,3μm,21.0s						
L48A	N Adams	128.74	29	P	PKiKP	19 34 19.7	-0.1
	baz=319						
L48A				P	PKiKP	19 34 19.7	-0.1
	baz=319						
AAM	Ann Arbor	128.84	28	IAMs_20	IAMs_20	20 26 41.0	
	comp=Z,3μm,22.0s						
AAM	Ann Arbor	128.84	28	P	PKiKP	19 34 20.6	+0.6
	baz=320						
AAM	Ann Arbor	128.84	28	PKiKP	PKPdf	19 34 19.3	-0.1
	baz=320						
W41B	Gary Mavity, V	128.85	41	PKiKP	PKPdf	19 34 19.7	+0.1
	baz=307						
X40A	Basin Creek Fa	128.86	42	IAMs_20	IAMs_20	20 29 22.8	
	comp=Z,4μm,20.0s						
X40A	Basin Creek Fa	128.86	42	P	PKiKP	19 34 20.8	+0.5
	baz=306,SNR=12						
X40A				P	PKiKP	19 34 20.8	+0.5
	baz=306,SNR=12						
X40A	Basin Creek Fa	128.86	42	PKiKP	PKiKP	19 34 20.1	-0.2
	baz=306						
N47A	Urbana	128.89	31	P	PKiKP	19 34 20.8	+0.6
	baz=317,SNR=19						
N47A				P	PKiKP	19 34 20.8	+0.6
	baz=317,SNR=19						
P46A	Rosedale	128.99	33	P	PKiKP	19 34 20.9	+0.5
	baz=315,SNR=16						
NATX	Nacogdoches	129.12	46	P	PKiKP	19 34 22.3	+1.4
	baz=302						
NATX	Nacogdoches	129.12	46	PKiKP	PKiKP	19 34 20.9	+0.1
	baz=302						
HKT	Hockley	129.19	49	*i* PKiKP	PKiKP	19 34 21.1	+0.1
HKT	Hockley	129.19	49	P	PKiKP	19 34 22.0	+1.1
	baz=300						
Z41A	Richland Creek	129.59	43	PKiKP	PKiKP	19 34 21.9	+0.2
	baz=305						
O48B	Farmland	129.63	31	P	PKiKP	19 34 22.1	+0.5
	baz=317,SNR=13						
O48B	Farmland	129.63	31	PKiKP	PKPdf	19 34 21.1	+0.2
	baz=317						
N49A	Columbus Grove	129.63	30	P	PKiKP	19 34 21.7	0.0
	baz=319,SNR=16						
N49A				P	PKiKP	19 34 21.7	0.0
	baz=319,SNR=16						
EFI	East Falkland	129.68	176	IAMs_20	IAMs_20	20 29 36.6	
	comp=Z,4μm,22.0s						
EFI	East Falkland	129.68	176	*i* PKiKP	PKPdf	19 34 19.7	-0.9
M50A	Fremont	129.82	29	P	PKiKP	19 34 22.1	+0.1
	baz=320,SNR=8.8						
M50A				P	PKiKP	19 34 22.1	+0.1
	baz=320,SNR=8.8						
D62A	Allapoint, All	129.95	14	P	PKiKP	19 34 22.1	0.0
	baz=340,SNR=14						
D62A				P	PKiKP	19 34 22.1	0.0
	baz=340,SNR=14						
P48A	Milroy	130.07	32	P	PKPdf	19 34 22.1	+0.4
	baz=317,SNR=16						
P48A				P	PKPdf	19 34 22.1	+0.4
	baz=317,SNR=16						
O49A	Covington	130.10	31	P	PKiKP	19 34 22.4	-0.2
	baz=318,SNR=21						
O49A				P	PKiKP	19 34 22.4	-0.2
	baz=318,SNR=21						
P49A	Miami Univ. Ec	130.39	32	IAMs_20	IAMs_20	20 38 42.7	
	comp=Z,4μm,22.0s						
P49A	Miami Univ. Ec	130.39	32	P	PKiKP	19 34 23.1	-0.1
	baz=318,SNR=16						
P49A	Miami Univ. Ec	130.39	32	PKiKP	PKiKP	19 34 22.8	-0.4
	baz=318						
BMNY	Brushton-Moira	130.45	19	P	PKiKP	19 34 22.9	-0.3
	baz=332						
M52A	Chesterland	130.51	27	P	PKiKP	19 34 23.6	+0.2
	baz=322,SNR=5.4						
M52A				P	PKiKP	19 34 23.6	+0.2
	baz=322,SNR=5.4						
N51A	Ashland	130.52	29	P	PKiKP	19 34 23.2	-0.3
	baz=321,SNR=12						
N51A				P	PKiKP	19 34 23.2	-0.3
	baz=321,SNR=12						
KIC	Kosan Boka	130.56	279↑	*e*PKP1	PKiKP	19 34 24.6	+0.3
	comp=Z,25nm,0.6s						
PQI	Presque Isle	130.58	13	IAMs_20	IAMs_20	20 40 04.1	
	comp=Z,3μm,21.0s						
J55A	Hilton	130.60	23	P	PKiKP	19 34 23.6	+0.1
	baz=328,SNR=12						
J55A				P	PKiKP	19 34 23.6	+0.1
	baz=328,SNR=12						
LONY	Lake Ozonia	130.62	20	PKiKP	PKiKP	19 34 23.3	-0.2
	baz=332						
DBIC	Dimbokro	130.64	280	*e*P	PKPdf	19 34 23.3	-0.2
DBIC	Dimbokro	130.64	280	PKP	PKiKP	19 34 25.0	+0.6
	comp=Z,184nm,1.2s,baz=98,slow=2.3,SNR=31						
ERPA	Erie	130.66	26	P	PKiKP	19 34 23.9	+0.2
	baz=324,SNR=6.4						
ERPA	Erie	130.66	26	PKiKP	PKPdf	19 34 22.9	+0.1
	baz=324						
E63A	Oxbow	130.72	13	P	PKPdf	19 34 23.2	+0.4
	baz=340,SNR=14						
E63A				P	PKPdf	19 34 23.2	+0.4
	baz=340,SNR=14						
ACSO	Alum Creek Sta	130.75	30	IAMs_20	IAMs_20	20 37 11.8	
	comp=Z,3μm,20.0s						
ACSO	Alum Creek Sta	130.75	30	P	PKPdf	19 34 23.5	+0.4
	baz=320,SNR=20						
ACSO	Alum Creek Sta	130.75	30	PKiKP	PKPdf	19 34 23.3	+0.3
	baz=320						
FRNY	Flat Rock	130.75	19	P	PKPdf	19 34 23.1	+0.2
	baz=333,SNR=12						
TIC	Toumodi	130.80	280↓	*i*PKP1	PKiKP	19 34 25.4	+0.6
	comp=Z,523nm,1.4s						
WCNY	West Carthage	130.80	21	P	PKiKP	19 34 23.7	-0.2
	baz=330,SNR=16						
LIC	Lamto	130.86	279↑	*e*PKP1	PKiKP	19 34 25.2	+0.3
	comp=Z,306nm,1.4s						
M53A	WI Miller and	130.90	27	IAMs_20	IAMs_20	20 27 51.3	
	comp=Z,4μm,22.0s						
M53A	WI Miller and	130.90	27	PKiKP	PKPdf	19 34 23.7	+0.4
	baz=323						
PMPST	Porto Santo, M	130.92	318	*e*PKPdf	PKiKP	19 34 25.1	+0.6
PMPST	Porto Santo, M	130.92	318	*e*PP	PP	19 36 40.7	+1.1
PMPS	Porto Santo	130.93	318	*e*PKPdf	PKiKP	19 34 24.5	0.0
PMPS	Porto Santo	130.93	318	*e*PP	PP	19 36 40.8	+1.2
J56A	Wolcott	130.97	22	P	PKPdf	19 34 23.6	+0.2
	baz=329,SNR=10						
J56A				P	PKPdf	19 34 23.6	+0.2
	baz=329,SNR=10						
WVNY	West Valley, N	131.01	24	PKPpre	PKPpre	19 34 12.3	
WVNY					PKPdf	19 34 23.1	-0.4
WVNY	West Valley, N	131.01	24	P	PKPdf	19 34 23.3	-0.2
	baz=326,SNR=12						
WVT	Waverly	131.02	37	IAMs_20	IAMs_20	20 41 26.1	
	comp=Z,4μm,20.0s						
WVT	Waverly	131.02	37	P	PKiKP	19 34 24.3	-0.2
	baz=312,SNR=13						
WVT	Waverly	131.02	37	PKiKP	PKiKP	19 34 24.2	-0.4
	baz=312						
R49A	Shelbyville	131.05	33	P	PKiKP	19 34 24.3	-0.3
	baz=316,SNR=16						
R49A				P	PKiKP	19 34 24.3	-0.3
	baz=316,SNR=16						
OXF	Oxford	131.09	40	IAMs_20	IAMs_20	20 33 41.6	
	comp=Z,4μm,20.0s						
OXF	Oxford	131.09	40	PKiKP	PKiKP	19 34 24.6	-0.1
	baz=309						
J57A	Williamstown	131.18	22	P	PKiKP	19 34 24.6	-0.1
	baz=330,SNR=12						
J57A				P	PKiKP	19 34 24.6	-0.1
	baz=330,SNR=12						
F63A	Nahmakanta, Br	131.23	14	P	PKiKP	19 34 24.4	-0.3
	baz=339,SNR=13						
F63A				P	PKiKP	19 34 24.4	-0.3
	baz=339,SNR=13						
F64A	Sherman	131.26	14	P	PKPdf	19 34 23.6	-0.2
	baz=340,SNR=10.0						
F64A				P	PKPdf	19 34 23.6	-0.2
	baz=340,SNR=10.0						
P51A	Williamsport	131.28	30	P	PKiKP	19 34 24.9	-0.1
	baz=319,SNR=11						
P51A				P	PKiKP	19 34 24.9	-0.1
	baz=319,SNR=11						
G62A	West of Eustis	131.31	16	P	PKPdf	19 34 24.3	+0.4
	baz=337,SNR=6.8						
G62A				P	PKPdf	19 34 24.3	+0.4
	baz=337,SNR=6.8						
NCB	Newcomb	131.31	20	P	PKiKP	19 34 24.6	-0.4
	baz=332,SNR=15						
N53A	Lisbon	131.33	27	P	PKiKP	19 34 24.8	-0.3
	baz=323,SNR=10						
N53A				P	PKiKP	19 34 24.8	-0.3
	baz=323,SNR=10						
O52A	Adamsville	131.40	29	P	PKiKP	19 34 24.8	-0.5
	baz=321,SNR=15						
O52A				P	PKiKP	19 34 24.8	-0.5
	baz=321,SNR=15						
VT1	Waterbury	131.47	18	IAMs_20	IAMs_20	20 30 43.2	
	comp=Z,3μm,22.0s						
J58A	Remsen	131.48	21	P	PKiKP	19 34 25.3	0.0
	baz=331,SNR=16						
J58A				P	PKiKP	19 34 25.3	0.0
	baz=331,SNR=16						
Q51A	Peebles	131.48	31	P	PKPdf	19 34 24.8	+0.3
	baz=319,SNR=8.9						
Q51A				P	PKPdf	19 34 24.8	+0.3
	baz=319,SNR=8.9						
R50A	Paris	131.51	32	P	PKPdf	19 34 24.9	+0.3
	baz=317,SNR=13						
R50A				P	PKPdf	19 34 24.9	+0.3
	baz=317,SNR=13						
PMAR	Madeira	131.52	318	*e*PKPdf	PKiKP	19 34 26.6	+0.7
PMAR	Madeira	131.52	318	*e*PP	PP	19 36 46.7	+3.0
FUL	Funchal	131.55	318	*e*PKPdf	PKiKP	19 34 31.0	+5.3
K57A	Scipio Center	131.56	22	P	PKPdf	19 34 24.9	+0.4
	baz=329,SNR=13						
O53A	New Philadelph	131.59	28	IAMs_20	IAMs_20	20 38 46.3	
	comp=Z,4μm,20.0s						
O53A	New Philadelph	131.59	28	PKiKP	PKiKP	19 34 25.3	-0.3
	baz=322						
PKME	Peaks-Kenny Pk	131.59	15	IAMs_20	IAMs_20	20 37 29.4	
	comp=Z,3μm,21.0s						
PKME	Peaks-Kenny Pk	131.59	15	P	PKPdf	19 34 24.7	+0.3
	baz=339,SNR=5.7						
PKME	Peaks-Kenny Pk	131.59	15	PKiKP	PKiKP	19 34 25.6	+0.1
	baz=339						
P52A	Corning	131.63	29	IAMs_20	IAMs_20	20 37 55.0	
	comp=Z,4μm,20.0s						
P52A	Corning	131.63	29	PKiKP	PKPdf	19 34 24.7	0.0
	baz=320						
PLAL	Pickwick Lake	131.63	38	IAMs_20	IAMs_20	20 24 54.7	
	comp=Z,4μm,22.0s						
PMOZ	Porto Moniz, M	131.65	318	*e*PKPdf	PKiKP	19 34 28.6	+2.5
PMOZ	Porto Moniz, M	131.65	318	*e*PP	PP	19 36 46.0	+1.6
PMOZ	Porto Moniz, M	131.65	318	*e*LR	LR	20 27 11.8	
	comp=Z,2μm,18.0s						
PMOZ	Porto Moniz, M	131.65	318	P	PKiKP	19 34 27.6	+1.5
L56A	Greenwood	131.66	24	P	PKPdf	19 34 23.8	-0.9
	baz=327,SNR=10						
L56A				P	PKPdf	19 34 23.8	-0.9
	baz=327,SNR=10						
J59A	Piesco	131.66	20	P	PKiKP	19 34 25.9	+0.2
	baz=332,SNR=12						
J59A				P	PKiKP	19 34 25.9	+0.2
	baz=332,SNR=12						
M55A	Ridgway	131.71	25	P	PKPdf	19 34 25.3	+0.4
	baz=326,SNR=7.1						
M55A				P	PKPdf	19 34 25.3	+0.4
	baz=326,SNR=7.1						
H62A	Milan	131.73	17	P	PKiKP	19 34 25.5	-0.3
	baz=336,SNR=6.1						
H62A				P	PKiKP	19 34 25.5	-0.3
	baz=336,SNR=6.1						
MCVT	Middlebury Col	131.73	19	P	PKiKP	19 34 25.8	0.0
	baz=334,SNR=6.3						
VBMS	Vicksburg	131.76	43	IAMs_20	IAMs_20	20 29 37.7	
	comp=Z,4μm,22.0s						
VBMS	Vicksburg	131.76	43	PKiKP	PKiKP	19 34 25.9	-0.3
	baz=307						
LBNH	Lisbon	131.80	18	IAMs_20	IAMs_20	20 40 24.8	
	comp=Z,2μm,20.0s						
LBNH	Lisbon	131.80	18	P	PKiKP	19 34 25.9	0.0
	baz=335,SNR=7.8						
LBNH	Lisbon	131.80	18	PKiKP	PKiKP	19 34 26.1	+0.2
	baz=335						
V48A	Smith Brothers	131.89	37	P	PKiKP	19 34 25.9	-0.5
	baz=315,SNR=7.3						
U49A	Red Boiling Sp	131.97	35	P	PKiKP	19 34 26.1	-0.4
	baz=314,SNR=12						
O54A	Avella	132.03	28		PKPpre	19 34 10.9	
O54A				PKPdf	PKPdf	19 34 23.4	-2.1
O54A	Avella	132.03	28	P	PKPdf	19 34 26.0	+0.5
	baz=323,SNR=13						
O54A				P	PKPdf	19 34 26.0	+0.5
	baz=323,SNR=13						
Q52A	Bidwell	132.07	30	P	PKiKP	19 34 26.2	-0.4
	baz=320,SNR=14						
Q52A				P	PKiKP	19 34 26.2	-0.4
	baz=320,SNR=14						
P53A	Whipple	132.10	29	P	PKPdf	19 34 25.1	-0.5
	baz=321,SNR=18						
P53A				P	PKPdf	19 34 25.1	-0.5
	baz=321,SNR=18						
T50A	Nancy	132.15	34	P	PKiKP	19 34 26.4	-0.5
	baz=316						
T50A				P	PKiKP	19 34 26.4	-0.5
	baz=316						
WVL	Waterville	132.15	15	P	PKPdf	19 34 25.8	+0.3
	baz=338,SNR=6.6						
HNH	Hanover	132.18	18	IAMs_20	IAMs_20	20 30 53.8	
	comp=Z,3μm,22.0s						
BINY	Binghamton	132.22	22	IAMs_20	IAMs_20	20

SSPA **Standing Stone** 132.77 25 PKPpre PKPpre 19 34 10.6
SSPA **PKPdf** **19 34 25.6 -1.3**
SSPA Standing Stone 132.77 25 IAMs_20 IAMs_20 20 34 36.3
comp=Z,3μm,21.0s
SSPA Standing Stone 132.77 25 P **PKPdf** **19 34 26.7 -0.2**
baz=326,SNR=11
SSPA Standing Stone 132.77 25 PKiKP **PKiKP** **19 34 27.5 -0.5**
baz=326
COYC Coyhaique 133.04 162 IAMs_20 IAMs_20 20 29 19.9
comp=Z,3μm,20.0s
N58A Sunbury 133.09 24 P **PKiKP** **19 34 28.2 -0.4**
baz=328,SNR=7.8
N58A P **PKiKP** **19 34 28.2 -0.4**
baz=328,SNR=7.8
UNH University of 133.17 17 P **PKiKP** **19 34 28.3 -0.4**
baz=336,SNR=7.0
L61B Northampton 133.18 19 IAMs_20 IAMs_20 20 42 43.3
comp=Z,3μm,20.0s
L61B Northampton 133.18 19 P **PKPdf** **19 34 28.1 +0.5**
baz=334,SNR=7.0
L61B Northampton 133.18 19 PKiKP **PKiKP** **19 34 28.4 -0.3**
baz=334
TZTN Tazewell 133.20 33 PKiKP **PKiKP** **19 34 28.8 -0.2**
baz=317
CMLA Cha da Macela 133.22 329 IAMs_20 IAMs_20 20 36 36.0
comp=Z,3μm,20.0s
NPNY Mohonk Preserv 133.29 21 P **PKiKP** **19 34 28.6 -0.4**
baz=331,SNR=8.1
S54A Dingess, Beckl 133.45 30 P **PKPdf** **19 34 28.4 +0.2**
baz=320,SNR=7.9
S54A P **PKPdf** **19 34 28.4 +0.2**
baz=320,SNR=7.9
HRV Adam Dziewonsk 133.49 18 IAMs_20 IAMs_20 20 30 03.6
comp=Z,3μm,22.0s
HRV Adam Dziewonsk 133.49 18 PKiKP **PKiKP** **19 34 29.2 -0.1**
baz=335
LRAL Lakeview Retre 133.58 40 PKiKP **PKiKP** **19 34 29.3 -0.6**
baz=311
R55A Marlinton 133.66 29 PKPpre 19 34 12.7
R55A PKPdf **PKPdf** **19 34 28.9 +0.3**
WES Weston 133.67 18 IAMs_20 IAMs_20 20 41 29.3
comp=Z,3μm,20.0s
BCX Boston College 133.76 18 IAMs_20 IAMs_20 20 39 07.7
comp=Z,3μm,20.0s
PAL Palisades 134.03 21 PKiKP **PKPdf** **19 34 29.8 +0.7**
baz=331
WSPT Westport, CT 134.09 21 IAMs_20 IAMs_20 20 44 21.6
comp=Z,4μm,19.0s
BLA Blacksburg 134.35 30 PKiKP **PKiKP** **19 34 30.9 -0.5**
baz=321
BRAL Brewton 134.74 42 IAMs_20 IAMs_20 20 34 01.3
comp=Z,4μm,21.0s
BRAL Brewton 134.74 42 PKiKP **PKiKP** **19 34 32.2 0.0**
baz=309
CBN Corbin Frederi 135.00 27 PKiKP **PKiKP** **19 34 32.0 -0.6**
baz=326
LL02 Futaleuf 135.25 161 PKPpre 19 34 17.9
LL02 PKPdf **PKPdf** **19 34 30.4 -1.1**
KMSC Kings Mountain 135.45 33 PKiKP **PKPdf** **19 34 32.5 +0.5**
baz=319
GOGA Godfrey 135.50 36 PKiKP **PKiKP** **19 34 33.3 -0.5**
baz=315
TIGA Tifton 136.79 39 PKiKP **PKiKP** **19 34 35.9 -0.5**
baz=313
CNNC Cliffs of the 137.16 30 IAMs_20 IAMs_20 20 42 37.5
comp=Z,4μm,20.0s
CNNC Cliffs of the 137.16 30 PKiKP **PKiKP** **19 34 36.4 -0.6**
baz=323
NHSC New Hope 137.61 34 PKiKP **PKiKP** **19 34 38.4 +0.4**
baz=319
LR04 Corral 137.61 157 **PKPdf** **19 34 35.2 -0.6**
PLCA Paso Flores 137.88 161 PKP **PKiKP** **19 34 37.8 -0.7**
comp=Z,158nm,1.2s,baz=224,slow=3.4,SNR=32
PLCA Paso Flores 137.88 161 PKPpre 19 34 25.1
PLCA PKPdf **PKiKP** **19 34 38.1 -0.4**
PLCA Paso Flores 137.88 161 eP **PKiKP** **19 34 37.6 -0.9**
DWPF Disney Wildern 140.43 40 PKiKP **PKPdf** **19 34 42.5 +1.1**
baz=313
SNET Serv Nac Est T 141.73 66 IAMs_20 IAMs_20 20 26 25.0
comp=Z,3μm,22.0s
GO05 Huala 142.41 155 **PKPdf** **19 34 40.8 -4.0**
TGUH Tegucigalpa,Un 143.38 64 IAMs_20 IAMs_20 20 33 53.4
comp=Z,2μm,20.0s
PAYG Puerto Ayora 143.39 89 PKPbc 19 34 44.9 +0.6
MT05 Renca 144.30 155 PKPbc 19 34 46.6 +0.1
PEL Peldehue 144.53 155 IAMs_20 IAMs_20 20 40 39.8
comp=Z,3μm,21.0s
BBSR BB Station 144.91 16 IAMs_20 IAMs_20 20 46 09.7
comp=Z,2μm,20.0s
LPA La Plata 146.34 174 PKiKP **PKPdf** **19 34 47.6 -4.0**
LPA PKiKP **PKiKP** **19 34 59.2 +3.4**
LPA PP **PP** **19 38 11.1 -2.8**
LPA SKIKP 19 38 17.2
LPA pPP 19 38 24.6
LPA SKIKP 19 38 30.6
LPA PKIKS 19 38 35.0
LPA PPP PPP 19 41 26.3
LPA SKIKS 19 41 54.9
LPA SDIFF 19 46 55.3
LPA PSP PSP 19 50 57.7
LPA SS **SS** **19 57 03.9 -3.0**
LPA SSS SSS 20 02 25.8
JTS Las Juntas de 146.80 69 PKPbc **PKPdf** **19 34 53.4 +0.5**
comp=Z,390nm,1.1s,baz=39,slow=3.0,SNR=9.5
BATAN Batan 148.33 68 **PKPdf** **19 34 56.5 +1.1**
PRVC Isla de Provid 148.90 61 eP **PKPdf** **19 34 57.9 +1.5**
BRU2 Volcan 149.39 70 **PKPdf** **19 34 58.4 +1.0**
MTDJ Mount Denham 149.53 49 **PKPdf** **19 34 58.1 +0.7**
MTDJ IAMs_20 IAMs_20 20 52 45.4
comp=Z,3μm,21.0s
PLTB Pedras Altas 149.71 180 eP **PKPdf** **19 34 58.6 +1.4**
CPSB Cacapava Do Su 151.07 180 eP **PKPdf** **19 35 00.8 +1.4**
GMAL Guarumal, Vera 151.07 71 eP **PKPdf** **19 35 00.4 +0.6**
CACAO El Cacao, Vera 151.54 72 eP **PKPdf** **19 35 00.9 +0.4**
GRTK Grand Turk 151.61 36 **PKPdf** **19 35 01.0 +0.6**
GRTK **PKiKP** **19 35 07.3 +0.2**
GRTK PKPab **PKPab** **19 35 15.3 +0.1**
GRTK IAMs_20 IAMs_20 20 41 16.9
comp=Z,3μm,22.0s
ITQB Itaqui 151.66 175 **PKPdf** **19 35 01.4 +1.1**
ITQB **PKiKP** **19 35 07.5 +0.6**
ITQB Itaqui 151.66 175 eP **PKPdf** **19 35 01.9 +1.6**
BCIP Isla Barro Col 151.93 68 eP **PKPdf** **19 35 01.9 +0.8**
AZU Azuero 151.97 71 eP **PKPdf** **19 35 01.4 +0.2**
CNLB Canela 152.03 185 eP **PKPdf** **19 35 02.3 +1.3**
UPA Univ. de Panam 152.28 68 eP **PKPdf** **19 35 00.2 -1.4**
UNIS Unistalda (Bra 152.37 177 eP **PKPdf** **19 35 03.1 +1.7**
TER01 Tubaro-SC 152.59 189 eP **PKPdf** **19 35 03.1 +1.3**
ALGR Alto Alegre (B 152.66 181 eP **PKPdf** **19 35 03.0 +1.1**
SDDR Presa de Saban 153.42 40 IAMs_20 IAMs_20 20 51 27.3
comp=Z,3μm,20.0s
CRSM Crissiumal (Br 153.97 179 eP **PKPdf** **19 35 05.0 +1.2**
LVC Limon Verde 154.16 146 PKP **PKPdf** **19 35 07.0 +2.4**
comp=Z,54nm,1.1s,baz=188,slow=0.4,SNR=24
LVC PKPbc **PKiKP** **19 35 14.3 +1.5**
comp=Z,156nm,1.1s,baz=281,slow=0.7,SNR=21
LVC Limon Verde 154.16 146 IAMs_20 IAMs_20 20 36 08.6
comp=Z,3μm,22.0s
LVC Limon Verde 154.16 146 eP **PKPdf** **19 35 06.6 +2.0**
ITAB Concordia 154.18 183 eP **PKPdf** **19 35 05.3 +1.3**
AF01 San Pedro de A 154.29 148 **PKPdf** **19 35 06.9 +2.2**
AF01 **PKiKP** **19 35 15.3 +2.3**
AF01 PKPab **PKPab** **19 35 27.7 +0.9**
PTAC Punta Ardita, 154.49 70 eP **PKPdf** **19 35 04.4 -0.4**
PB09 IPOC Station P 154.61 144 **PKPdf** **19 35 02.1 -2.9**
ATAH Atahualpa 154.69 104 PKP **PKPdf** **19 35 07.2 +1.6**
comp=Z,76nm,1.1s,baz=270,slow=1.6,SNR=49
ATAH PKPbc **pPKPdf** **19 35 17.1 -1.4**
comp=Z,210nm,1.0s,baz=306,slow=2.8,SNR=35
NNA Nana 154.69 116 PKP **PKPdf** **19 35 06.2 +1.1**
comp=Z,125nm,1.2s,baz=282,slow=2.6,SNR=14
NNA PKPbc **PKiKP** **19 35 14.8 +1.1**
comp=Z,224nm,1.1s,baz=276,slow=5.5,SNR=18
NNA Nana 154.69 116 **PKPdf** **19 35 06.6 +1.4**
TUMC Tumaco 154.75 83 eP **PKPdf** **19 35 06.4 +1.2**
CPUP Villa Florida 154.88 172 PKP **PKPdf** **19 35 06.3 +1.3**
comp=Z,83nm,1.1s,baz=135,slow=0.5,SNR=39
CPUP PKPbc **PKiKP** **19 35 15.2 +1.5**
comp=Z,146nm,1.1s,baz=207,slow=0.8,SNR=24
CPUP Villa Florida 154.88 172 eP **PKPdf** **19 35 06.4 +1.4**
SLOR San Lorenzo - 155.17 89 **PKPdf** **19 35 07.7 +1.3**
OTAV Otavalo 155.18 87 eP **PKPdf** **19 35 07.4 +1.1**
OTAV Otavalo 155.18 87 eP **PKPdf** **19 35 07.4 +1.1**
CUSE Cuicocha Este 155.22 86 eP **PKPdf** **19 35 07.4 +1.0**
LCBC Los crdobas, 155.23 66 eP **PKPdf** **19 35 07.4 +1.6**

PIZC Pizarro, Choco 155.53 75 eP **PKPdf** **19 35 07.9 +1.7**
TIJ01 Guaruva-PR 155.71 190 eP **PKPdf** **19 35 06.7 +0.4**
SJCC San Jacinto, C 155.86 62 eP **PKPdf** **19 35 07.9 +1.2**
DBBC Dabeiba 156.03 70 eP **PKPdf** **19 35 07.9 +0.9**
SMRC Santa Marta, M 156.10 58 eP **PKPdf** **19 35 07.9 +1.0**
GCUF Volcan Galeras 156.19 84 eP **PKPdf** **19 35 08.4 +0.6**
PET01 Itanhaem-SP 156.34 195 eP **PKPdf** **19 35 07.7 +0.6**
UREC San Jos de Ur 156.41 67 eP **PKPdf** **19 35 08.0 +0.5**
CAM01 Campos-RJ 156.49 209 eP **PKPdf** **19 35 08.8 +1.5**
CBOC Ciudad Bolivar 156.58 72 eP **PKPdf** **19 35 07.9 +0.1**
PLMC San Jos del P 156.58 75 eP **PKPdf** **19 35 07.9 +0.2**
MAN01 Angra dos Reis 156.59 203 eP **PKPdf** **19 35 07.7 +0.3**
AOPR Arecibo Observ 156.60 33 eP **PKPdf** **19 35 09.8 +2.3**
DUB01 Friburgo-RJ 156.61 207 eP **PKPdf** **19 35 09.2 +1.7**
SLP01 Ubatuba-SP 156.61 200 eP **PKPdf** **19 35 07.5 -0.1**
ESAR Angra dos Reis 156.63 202 eP **PKPdf** **19 35 08.5 +1.0**
PTGB Pitanga 156.68 184 eP **PKPdf** **19 35 08.4 +0.8**
POPC Popayan, Colom 156.69 81 eP **PKPdf** **19 35 07.9 -0.2**
ARGC Ariguani, Magd 156.70 61 eP **PKPdf** **19 35 08.9 +1.2**
YOTC Yotoco, Valle 156.74 77 eP **PKPdf** **19 35 06.0 -2.0**
PARB Paraibuna 156.75 199 eP **PKPdf** **19 35 06.9 -0.8**
SOTA Rioblanco 156.81 82 eP **PKPdf** **19 35 09.4 +0.8**
VAS01 Vassouras-RJ 156.91 205 eP **PKPdf** **19 35 08.6 +0.8**
HELC Santa Helena 156.94 71 eP **PKPdf** **19 35 08.9 +0.4**
MCR1 Marechal Candi 156.99 179 eP **PKPdf** **19 35 07.3 -0.6**
PCON Cinco Dias 156.99 81 eP **PKPdf** **19 35 10.4 +1.5**
ALF01 Guarapari-ES 157.02 213 eP **PKPdf** **19 35 09.0 +1.1**
SJG San Juan 157.12 32 PKP **PKPdf** **19 35 08.2 +0.1**
comp=Z,36nm,0.9s,baz=0.4,slow=2.3,SNR=14
SJG PKPab **PKPab** **19 35 40.1 +1.5**
comp=Z,70nm,1.0s,baz=266,slow=4.1,SNR=6.6
SJG San Juan 157.12 32 **PKPdf** **19 35 08.8 +0.6**
SJG San Juan 157.12 32 PKIKP **PKPdf** **19 35 08.8 +0.6**
SJG MLR MLR
comp=Z,4μm,22.0s
SJG San Juan 157.12 32 eP **PKPdf** **19 35 07.4 -0.7**
SJG San Juan 157.12 32 ePKPdf 19 34 55.4 -13
CRJC Cerrejon, Guaj 157.30 57 eP **PKPdf** **19 35 07.9 -0.7**
MARP Paez Belalcaza 157.34 79 eP **PKPdf** **19 35 09.9 +0.9**
LL1C La Loma 1 Cana 157.45 61 eP **PKPdf** **19 35 09.9 +1.2**
VAO Valinhos 157.48 196 eP **PKPdf** **19 35 10.1 +1.5**
ANIL Santa Ana 157.53 75 eP **PKPdf** **19 35 09.4 +0.2**
URIC Uribia, Colomb 157.67 54 eP **PKPdf** **19 35 09.9 +0.9**
FRTB Fartura 157.74 190 eP **PKPdf** **19 35 09.8 +0.9**
NORC Norcasia 157.75 72 eP **PKPdf** **19 35 09.4 +0.2**
ORTC Ortega, Tolima 157.82 76 eP **PKPdf** **19 35 09.4 +0.1**
FLOC Florencia 157.83 83 eP **PKPdf** **19 35 09.4 +0.1**
PTBC PUERTO BERRIO 157.84 69 eP **PKPdf** **19 35 08.4 -0.8**
ABR01 Abrolhos, BA 157.86 221 eP **PKPdf** **19 35 09.6 +0.5**
RIB01 Linhares ES 157.88 215 eP **PKPdf** **19 35 10.1 +1.0**
GARC Garzon, Huila 157.91 81 eP **PKPdf** **19 35 10.4 +0.8**
CDVI St. Croix 158.13 29 eP **PKPdf** **19 35 07.7 -1.7**
RCLB Rio Claro- Sao 158.19 195 eP **PKPdf** **19 35 09.8 +0.3**
PRAC Prado 158.22 77 eP **PKPdf** **19 35 09.4 -0.3**
OCAC Ocana 158.23 64 eP **PKPdf** **19 35 10.4 +0.5**
BRRC Barranca, Sant 158.32 67 eP **PKPdf** **19 35 09.9 +0.1**
SPBC San Pablo de B 158.48 71 eP **PKPdf** **19 35 10.9 +0.8**
ROSC El Rosal 158.49 73 PKP **PKPdf** **19 35 11.1 +0.6**
comp=Z,90nm,0.9s,baz=140,slow=1.6,SNR=47
ROSC El Rosal 158.49 73 eP **PKPdf** **19 35 10.9 +0.4**
BSFB Barra de Sao F 158.52 215 eP **PKPdf** **19 35 10.8 +0.9**
BSCB Bom Sucesso 158.59 203 eP **PKPdf** **19 35 09.9 -0.2**
TRCB Terra Rica 158.62 183 eP **PKPdf** **19 35 11.2 +1.2**
SMRT St. Maarten 158.65 25 eP **PKPdf** **19 35 04.7 -5.4**
SJMB Sao Joao De Ma 158.82 215 eP **PKPdf** **19 35 11.3 +1.1**
PTLC Puerto Leguiza 158.82 86 eP **PKPdf** **19 35 10.4 0.0**
NAN01 Guarapari, ES 158.86 218 eP **PKPdf** **19 35 10.5 +0.2**
BARC Barichara 159.00 68 eP **PKPdf** **19 35 10.9 0.0**
CHIC Chingaza 159.11 73 eP **PKPdf** **19 35 11.4 +0.2**
PAMC Pamplona, Colo 159.16 65 eP **PKPdf** **19 35 11.4 0.0**
SEUS St. Eustatius 159.18 26 IAMs_20 IAMs_20 20 41 36.1
comp=Z,3μm,22.0s
SEUS St. Eustatius 159.18 26 eP PKPdf 19 35 00.0 -11
VILC Villavicencio, 159.28 75 eP **PKPdf** **19 35 11.8 +0.7**
ANTJ Antonio Joao (159.31 174 eP **PKPdf** **19 35 10.6 -0.2**
RUSC La Rusia 159.34 70 eP **PKPdf** **19 35 11.9 +0.3**
LPAZ La Paz 159.40 137 PKP **PKPdf** **19 35 13.3 +1.5**
comp=Z,63nm,1.1s,baz=25,slow=1.5,SNR=118
LPAZ La Paz 159.40 137 eP **PKPdf** **19 35 13.6 +1.8**
ANWB Willy Bob 159.51 23 IAMs_20 IAMs_20 20 57 40.6
comp=Z,3μm,21.0s
ANWB Willy Bob 159.51 23 eP **PKPdf** **19 35 08.5 -2.5**
MACC Macarena, Meta 159.54 80 eP **PKPdf** **19 35 10.9 -0.4**
GUA01 Guaratinga, BA 159.59 221 eP **PKPdf** **19 35 12.5 +1.3**
PCMB Pacaembu 159.69 186 eP **PKPdf** **19 35 12.7 +1.4**
BB19B Bebedouro 159.74 194 eP **PKPdf** **19 35 11.2 -0.1**
CZSB Cruzeiro do Su 159.99 109 eP **PKPdf** **19 35 12.1 +0.3**
ANDO Antigua, Diasa 160.00 23 eP **PKPdf** **19 35 08.5 -3.1**
BPA Boggy Peak 160.05 24 eP **PKPdf** **19 35 09.2 -2.6**
BPA Boggy Peak 160.05 24 e PKPab 19 36 00.3 +9.0
ANBD Bebedouro, Anti 160.09 23 eP **PKPdf** **19 35 09.8 -1.9**
NBRF Rio Formoso - 160.14 248 eP **PKPdf** **19 35 12.4 +0.5**
MBFL Flemmings, Mon 160.17 25 eP **PKPdf** **19 35 06.9 -4.9**
MLYT Lee's Yard 160.21 25 eP **PKPdf** **19 35 08.5 -3.5**
CMC01 Camacan, BA 160.25 224 eP **PKPdf** **19 35 11.5 -0.5**
SDV Santo Domingo 160.29 59 PKP **PKPdf** **19 35 12.9 +0.5**
comp=Z,115nm,1.0s,baz=280,slow=0.3,SNR=111
SDV Santo Domingo 160.29 59 eP **PKPdf** **19 35 13.5 +1.1**
SDV Santo Domingo 160.29 59 eP **PKPdf** **19 35 12.7 +0.4**
TAMC Tame, Arauca 160.34 67 eP **PKPdf** **19 35 11.9 -0.3**
DIAM Diamantina, MG 160.48 210 eP **PKPdf** **19 35 11.9 -0.4**
ABD La Joyeuse, An 160.71 23 eP **PKPdf** **19 35 11.3 -1.1**
ABD La Joyeuse, An 160.71 23 e PKPab **19 35 54.7 +0.5**
PTGC Puerto Gaitan, 160.75 73 eP **PKPdf** **19 35 10.9 -1.7**
NBAN Anadia - AL 160.81 244 eP **PKPdf** **19 35 12.9 +0.3**
AQDB Aquidauana 160.85 174 eP **PKPdf** **19 35 12.9 +0.4**
CBE Ff, Capester 161.03 24 eP **PKPdf** **19 35 06.8 -6.0**
CBE Ff, Capester 161.03 24 e **PKPab** **19 35 55.7 +0.1**
NBCA Caruaru-PE 161.12 248 eP **PKPdf** **19 35 13.0 -0.1**
TDBA Terre de Bas, 161.22 24 eP **PKPdf** **19 35 06.0 -7.1**
MAGL Barre de l'ile 161.27 23 ePKPdf 19 35 04.4 -8.7
MAGL Barre de l'ile 161.27 23 e PKPab 19 36 07.6 +11
GDU01 Guandu, BA 161.39 228 eP **PKPdf** **19 35 13.0 -0.2**
ITRB Iturama 161.44 190 eP **PKPdf** **19 35 13.5 +0.3**
MDVC Dominica, Viel 161.52 24 eP **PKPdf** **19 35 20.6 +7.3**
NBLA Lagarto - SE 161.53 238 eP **PKPdf** **19 35 13.2 -0.2**
DSLB Salisbury 161.68 24 eP **PKPdf** **19 35 13.9 +0.4**
RCBR Riachuelo 161.71 255 PKP **PKPdf** **19 35 13.5 -0.2**
comp=Z,66nm,1.1s,baz=22,slow=2.3,SNR=18
RCBR PKPab **PKPab** **19 35 59.6 +0.5**
comp=Z,128nm,1.1s,baz=248,slow=4.7,SNR=10.0
RCBR Riachuelo 161.71 255 eP **PKPdf** **19 35 14.6 +1.0**
MDN Morne-Daniel 161.80 25 eP **PKPdf** **19 35 20.6 +7.0**
FDF Fort de France 162.42 25 eP **PKPdf** **19 35 12.8 -1.5**
FDF Fort de France 162.42 25 e PKPab 19 36 14.9 +13
BAUV El Baul 162.43 54 eP **PKPdf** **19 35 07.2 -7.1**
ILAM Ilet Lapin Mar 162.50 24 eP **PKPdf** **19 35 09.3 -5.0**
IPMB Ipameri, GO 162.59 198 eP **PKPdf** **19 35 15.1 +0.6**
C2SB Chapadao do Su 162.63 183 eP **PKPdf** **19 35 14.4 +0.1**
BIM Bigot 162.65 25 eP **PKPdf** **19 35 13.5 -1.0**
BIM Bigot 162.65 25 e **PKPab** **19 36 09.8 +7.1**
MPOM Morne Pois Mar 162.80 24 eP **PKPdf** **19 35 12.4 -2.2**
SLBI Saint Lucia, B 163.13 25 eP **PKPdf** **19 35 18.6 +3.7**
MCLT Moule a Chique 163.43 26 ePKPdf 19 35 23.7 +8.4
JANB Januaria 163.51 214 eP **PKPdf** **19 35 16.1 +0.7**
TBTG Tabatinga, AM 163.53 100 eP **PKPdf** **19 35 15.8 +0.3**
NBPN Ponto Novo - B 163.61 234 eP **PKPdf** **19 35 16.3 +0.8**
SIV San Ignacio 163.69 154 PKP **PKPdf** **19 35 16.0 +0.4**
comp=Z,56nm,1.0s,baz=206,slow=1.4,SNR=98
SIV PKPab **PKPab** **19 36 08.1 +0.8**
comp=Z,185nm,1.0s,baz=209,slow=4.7,SNR=28
PP1B Ponte de Pedra 163.77 176 eP **PKPdf** **19 35 15.3 -0.2**
NBMA Muriti-CE 163.97 248 eP **PKPdf** **19 35 16.9 +1.0**
GCMP Grenada, Carri 164.28 29 eP **PKPdf** **19 35 19.4 +3.4**
GRGR Grenville 164.47 30 eP **PKPdf** **19 35 19.4 +3.2**
POCN Pocone 164.49 169 eP **PKPdf** **19 35 16.4 +0.2**
BBGH Gun Hill 164.50 22 eP **PKPdf** **19 35 17.6 +1.4**
DVLD Doverlandia 164.70 185 eP **PKPdf** **19 35 17.0 +0.6**
BDFB Brasilia 164.71 201 PKP **PKPdf** **19 35 17.1 +0.6**
comp=Z,69nm,1.1s,baz=70,slow=0.6,SNR=40
BDFB PKPab **PKPab** **19 36 12.3 +0.5**
comp=Z,81nm,1.1s,baz=82,slow=1.3,SNR=9.4
BDFB Brasilia 164.71 201 **PKPdf** **19 35 17.5 +1.0**
BDFB Brasilia 164.71 201 eP **PKPdf** **19 35 17.3 +0.7**
ETMB Extrema 164.94 125 eP **PKPdf** **19 35 17.2 +0.5**
PTLB Pontes e Lacer 164.96 159 eP **PKPdf** **19 35 17.3 +0.8**
NBPB Pedra_Branca-C 165.33 253 eP **PKPdf** **19 35 17.6 +0.5**
SALV Santo Antonio 165.37 172 eP **PKPdf** **19 35 17.1 +0.2**
VBST Vila Bela da S 165.45 155 eP **PKPdf** **19 35 17.6 +0.5**
ARAG Araguaiana, MT 165.58 187 eP **PKPdf** **19 35 17.1 -0.1**
PTET Porto Estrela 165.61 166 eP **PKPdf** **19 35 17.3 +0.2**

TOSP Speyside 165.73 28 eP **PKPdf** **19 35 23.3 +6.0**
SDBA SAO DESIDERIO 165.96 218 eP **PKPdf** **19 35 18.3 +0.8**
NBMO Morrinhos-CE 166.24 261 eP **PKPdf** **19 35 17.7 0.0**
VILB Vilhena 166.75 151 eP **PKPdf** **19 35 19.7 +1.6**
NBRS Nobres 166.91 171 eP **PKPdf** **19 35 18.4 +0.1**
PEXB Peixe 168.03 206 eP **PKPdf** **19 35 19.3 +0.3**
SNDB Serra Nova Dou 169.15 192 eP **PKPdf** **19 35 20.1 +0.3**
PDRB Porto dos Gac 169.33 164 eP **PKPdf** **19 35 20.2 +0.3**
CLDB Colider 170.27 168 eP **PKPdf** **19 35 20.8 +0.3**
ROSB Rosrio 170.33 260 eP **PKPdf** **19 35 20.6 0.0**
SMTB Santa Maria do 170.36 219 eP **PKPdf** **19 35 20.8 +0.3**
BOAV Boa Vista 172.22 62 eP **PKPdf** **19 35 21.8 +0.3**
MACA Manacapuru-AM 172.76 105 eP **PKPdf** **19 35 21.9 +0.2**
MDP Montagnes des 173.54 351 PKP **PKPdf** **19 35 21.8 -0.2**
comp=Z,108nm,1.1s,baz=338,slow=1.3,SNR=20
MDP PKPab **PKPab** **19 36 51.1 +0.3**
comp=Z,105nm,1.0s,baz=28,slow=2.8,SNR=13
MDP PP **PP** **19 40 41.3 +0.4**
comp=Z,60nm,1.1s,baz=36,slow=3.5,SNR=6.6
PRPB Parauapebas 173.83 218 eP **PKPdf** **19 35 22.3 +0.2**
NPGB Novo Progresso 174.06 164 eP **PKPdf** **19 35 22.4 +0.2**
TMAB Tom-Au,PA,Br 174.33 259 eP **PKPdf** **19 35 22.7 +0.4**
ITTB Itaituba 176.33 146 eP **PKPdf** **19 35 22.8 0.0**
MCPB Macapa, AP 178.13 300 eP **PKPdf** **19 35 22.9 -0.2**
MALB Monte Alegre 179.20 132 eP **PKPdf** **19 35 23.2 0.0**

*IDC **07** 19:29:52.7±0.8, 1°.19N×128°.20E, h0km, mb4.1/8, mbtmp4.1/10, ML3.8/2 Error ellipse: s-maj=36.1km s-min=15.6km az=71.0*
*NEIC **07** 19:29:54.8±2.2, 1°.20N±0°.07×128°.24E±0°.04, h10km±1km, mb4.5/14, Error ellipse: s-maj=13.3km s-min=3.2km az=332.0*
*DJA **07** 19:29:54.6±0.7, 1°N±3°×12°8E±°, h15km±6km, M4.2/9, MLv4.2/9*

ISC 07 19:29:56.0±0.6, 1°21N±0°.05×128°22E±0°.05, h23km, n36, σ1°38/38, mb4.3/12, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.95**	**243**				**Pb**	**19 30 12.8**	**-1.1**
TNTI						Sg	**Sn**	**19 30 26.8**	**0.0**
TNTI	**Ternate**	**0.95**	**243**			P	**Pb**	**19 30 13.1**	**-0.7**
TNTI						S	**Sn**	**19 30 27.8**	**+0.9**
LBMI	**Labuha**	**1.97**	**201**			P	**Pn**	**19 30 28.9**	**+0.9**
LBMI						S	**Sb**	**19 30 54.8**	**-0.5**
SGSI	**Sangihe**	**3.64**	**313**			P	**Pn**	**19 30 49.6**	**-1.4**
SWI	**Sorong**	**3.67**	**124**			P	**Pn**	**19 30 50.7**	**-0.7**
SIJI	**Sorong**	**3.68**	**124**			Pn	**Pn**	**19 30 51.0**	**-0.6**
	6.8nm,0.3s,baz=111,slow=24,SNR=29								
SIJI						Sn	**Sn**	**19 31 33.2**	**-1.1**
	1.7nm,0.3s,baz=353,slow=23,SNR=6.1								
	14nm,0.3s								
SANI	**Sanana**	**3.93**	**215**			P	**Pn**	**19 30 55.0**	**+0.1**
KMSI	**Cibinong**	**4.28**	**262**			P	**Pn**	**19 31 00.1**	**+0.3**
FAKI	**Fak Fak**	**5.75**	**135**			Pn	**Pn**	**19 31 19.6**	**-0.4**
FAKI						Sn	**Sn**	**19 32 24.1**	**-1.2**
LUWI	**Luwuk**	**5.88**	**248**			Pn	**Pn**	**19 31 25.6**	**+3.7**
SAUI	**Saumlaki**	**9.63**	**161**			Pn	**Pn**	**19 32 16.7**	**+3.4**
KAPI	**Kappang**	**10.47**	**234**			Pn	**Pn**	**19 32 25.9**	**+1.0**
	1.0nm,0.3s,baz=45,slow=14,SNR=1.8								
	3.2nm,0.3s								
MTN	**Manton Dam**	**14.26**	**168**			Pn	**Pn**	**19 33 14.7**	**-1.9**
KNRA	**Kununurra**	**16.79**	**178**			Pn	**Pn**	**19 33 46.5**	**-3.2**
KNRA						IAmb	IAmb	19 34 15.9	
	comp=Z,66nm,1.5s								
WB0	**Warramunga Arr**	**21.71**	**164**			P	**P**	**19 34 45.6**	**0.0**
WB0						IAmb	IAmb	19 35 17.8	
	comp=Z,24nm,1.2s								
WRA	**Warramunga Arr**	**21.86**	**164**			P	**P**	**19 34 46.6**	**-0.7**
	comp=Z,5.4nm,0.8s,baz=343,slow=11,SNR=11								
	comp=Z,5.4nm,0.8s								
WRA	**Warramunga Arr**	**21.86**	**164**			IAmb	IAmb	19 34 54.3	
	comp=Z,0.6nm,1.0s								
WR0	**Warramunga Arr**	**21.93**	**164**			P	**P**	**19 34 45.9**	**-2.2**
WR0						IAmb	IAmb	19 35 06.2	
	comp=Z,54nm,1.6s								
YHNB	**Yeheng**	**24.24**	**345**			P	**P**	**19 35 11.0**	**-0.4**
YHNB						IAmb	IAmb	19 35 27.4	
	comp=Z,16nm,1.1s								
ASAR	**Alice Springs**	**25.34**	**168**			P	**P**	**19 35 21.1**	**-0.3**
	comp=Z,2.0nm,0.9s,baz=348,slow=12,SNR=11								
	comp=Z,2.0nm,0.9s								
JOW	**Kunigami**	**25.48**	**0**			P	**P**	**19 35 20.7**	**-1.9**
STKA	**Stephens Creek**	**35.27**	**160**			P	**P**	**19 36 49.7**	**+0.6**
	comp=Z,1.6nm,0.4s,baz=344,slow=6.3,SNR=3.3								
	comp=Z,1.6nm,0.4s								
MJAR	**Matsushiro Arr**	**36.35**	**14**			P	**P**	**19 37 00.3**	**+1.9**
	comp=Z,2.1nm,0.9s,baz=185,slow=11,SNR=3.2								
	comp=Z,2.1nm,0.9s								
MJAR	**Matsushiro Arr**	**36.35**	**14**			IAmb	IAmb	19 37 39.0	
	comp=Z,5.6nm,1.6s								
SONM	**Songino Array**	**50.15**	**341**			P	**P**	**19 38 50.1**	**+0.4**
	comp=Z,1.8nm,0.9s,baz=149,slow=8.2,SNR=5.0								
	comp=Z,1.8nm,0.9s								
SONM	**Songino Array**	**50.15**	**341**			IAmb	IAmb	19 38 53.4	
	comp=Z,3.0nm,1.1s								
PETK	**Petropavlovsk-**	**57.22**	**21**			P	**P**	**19 39 41.0**	**-0.3**
LBZ	**Lake Benmore**	**58.78**	**146**			P	**P**	**19 39 53.1**	**+0.6**
MK31	**Makanchi Array**	**60.46**	**325**			P	**P**	**19 40 04.6**	**+0.6**
MK31						IAmb	IAmb	19 40 21.7	
	comp=Z,3.6nm,1.2s								
MKAR	**Makanchi Array**	**60.46**	**325**			P	**P**	**19 40 04.6**	**+0.6**
	comp=Z,1.2nm,0.6s,

mb4.6/40,Error ellipse: s-maj=9.0km s-min=3.8km az=186.0
*IDC **07** 19:41:20.9±3.1,1°.34N×126°.48E,h51km±30km,mb3.8/10, mbtmp4.0/12,ML3.7/2,Error ellipse: s-maj=32.0km s-min=15.2km az=68.0*
*DJA **07** 19:41:21.2±0.6,1°.N±2°×12°.6E±°,h36km±10km,M4.3/18, mb4.4/11,mB5.1/1,MLv4.2/18,Mw(mB)4.4/1*
ISC 07 19:41:20.0±0.4,1°.35N±0°.05×126°.48E±0°.05,h47km,n83,
σ1§34/93,mb4.4/27,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.06**	**123**	P	**Pn**	**19 41 38.8**	**+0.3**
TNTI				Sn	**Sn**	**19 41 50.4**	**-1.6**
TNTI	**Ternate**	**1.06**	**123**	P	**Pn**	**19 41 39.2**	**+0.8**
TNTI				S	**Sn**	**19 41 52.0**	**-0.1**
TNTI	**Ternate**	**1.06**	**123**	P	**Pn**	**19 41 39.2**	**+0.8**
LBMI	**Labuha**	**2.22**	**153**	P	**Pn**	**19 41 55.5**	**+1.1**
LBMI				S	**Sn**	**19 42 20.4**	**-0.3**
SGSI	**Sangihe**	**2.51**	**338**	P	**Pn**	**19 41 59.9**	**+1.6**
SGSI				S	**Sn**	**19 42 31.6**	**+3.9**
KMSI	**Cibinong**	**2.61**	**253**	P	**Pn**	**19 41 59.4**	**-0.3**
SANI	**Sanana**	**3.41**	**188**	P	**Pn**	**19 42 10.4**	**-0.3**
SANI	**Sanana**	**3.41**	**188**	P	**Pn**	**19 42 10.3**	**-0.4**
LUWI	**Luwuk**	**4.40**	**237**		**Pn**	**19 42 24.5**	**+0.3**
LUWI				Sn	**Sn**	**19 43 16.1**	**+1.8**
LUWI	**Luwuk**	**4.40**	**237**	P	**Pn**	**19 42 25.5**	**+1.2**
LUWI	**Luwuk**	**4.40**	**237**	P	**Pn**	**19 42 25.7**	**+1.4**
NLAI	**Namlea**	**4.60**	**172**	P	**Pn**	**19 42 28.3**	**+1.3**
MRSI	**Marisa**	**4.62**	**259**	P	**Pn**	**19 42 28.7**	**+1.5**
SWI	**Sorong** 0.1nm24nm,0.8s	**5.26**	**115**	P	**Pn**	**19 42 37.1**	**+1.0**
SIJI	**Sorong** 1.8nm,0.3s,baz=337,slow=18,SNR=7.1 6.0nm,0.4s	**5.27**	**115**	P	**Pn**	**19 42 38.7**	**+2.4**
AAI	**Ambon**	**5.29**	**161**	P	**Pn**	**19 42 36.1**	**-0.4**
APSI	**Ampana** 0.5nm119nm,0.7s	**5.32**	**245**	P	**Pn**	**19 42 39.4**	**+2.4**
TOLI2	**Tolitoli**	**5.70**	**268**		**Pn**	**19 42 40.7**	**-1.4**
TOLI2				Sn	**Sn**	**19 43 43.0**	**-3.3**
DAV	**Davao City (W)**	**5.75**	**351**	Pn	**Pn**	**19 42 42.0**	**-0.8**
MPSI	**Mapaga** 0.1nm14nm,0.6s	**6.65**	**261**	P	**Pn**	**19 42 58.3**	**+3.1**
FAKI	**Fak Fak**	**7.16**	**126**	Pn	**Pn**	**19 43 03.6**	**+1.4**
FAKI				Sn	**Sn**	**19 44 22.9**	**+0.6**
FAKI	**Fak Fak**	**7.16**	**126**	P	**Pn**	**19 43 05.0**	**+2.8**
TTSI	**Tana Toraja** 0.2nm38nm,0.6s	**7.96**	**237**	P	**Pn**	**19 43 14.0**	**+0.9**
SPSI	**Sidrap Palu** 23nm,0.8s	**8.53**	**232**	P	**Pn**	**19 43 22.4**	**+1.4**
BNSI	**Bone** 14nm,0.8s	**8.55**	**228**	P	**Pn**	**19 43 21.8**	**+0.5**
MYLDM	**Lahad Datu**	**8.82**	**296**		**Pn**	**19 43 24.1**	**-0.9**
KAPI	**Kappang** 1.3nm,0.3s,baz=26,slow=5.8,SNR=5.9 3.5nm,0.4s	**9.22**	**227**	P	**Pn**	**19 43 31.1**	**+0.6**
KAPI	**Kappang**	**9.22**	**227**		**Pn**	**19 43 31.8**	**+1.3**
KAPI				Sn	**Sn**	**19 45 13.4**	**+0.4**
BKB	**Balikpapan**	**9.92**	**255**	Pn	**Pn**	**19 43 41.2**	**+1.2**
SOEI	**Soe**	**11.25**	**191**		**Pn**	**19 44 00.1**	**+1.8**
SOEI	**Soe** 28nm,0.9s	**11.25**	**191**	P	**Pn**	**19 43 59.4**	**+1.1**
MTN	**Manton Dam**	**14.84**	**162**	Pn	**Pn**	**19 44 46.9**	**0.0**
MTN	**Manton Dam**	**14.84**	**162**	P	**Pn**	**19 44 48.2**	**+1.3**
JAGI	**Jajag, Banyuwa**	**15.69**	**231**	Pn	**Pn**	**19 44 56.7**	**-1.3**
JAGI	comp=Z,87nm,1.4s			IAmb	IAmb	19 44 57.4	
KSM	**Kuching**	**16.16**	**271**	Pn	**Pn**	**19 45 01.9**	**-2.1**
KNRA	**Kununurra**	**17.07**	**172**	P	**Pn**	**19 45 15.6**	**+0.2**
KNRA	comp=Z,50nm,1.5s			IAmb	IAmb	19 45 27.0	
WB0	**Warramunga Arr**	**22.38**	**160**	P	**P**	**19 46 14.3**	**-0.2**
WB0	comp=Z,18nm,0.5s			IAmb	IAmb	19 46 16.4	
COEN	**Coen**	**22.47**	**133**	P	**P**	**19 46 14.7**	**-0.8**
YULB	**Yu-li**	**22.48**	**347**	P	**P**	**19 46 16.4**	**+0.9**
WRAB	**Tennant Creek**	**22.52**	**160**	P	**P**	**19 46 13.4**	**-2.5**
WRAB	comp=Z,12nm,0.7s			IAmb	IAmb	19 46 18.3	
WRA	**Warramunga Arr** comp=Z,6.1nm,0.4s,baz=338,slow=11,SNR=45	**22.52**	**160**	P	**P**	**19 46 15.7**	**-0.3**
WRA	comp=Z,0.4nm,0.8s,baz=341,slow=1.9,SNR=1.3 comp=Z,6.1nm,0.4s			PcP	**PcP**	**19 50 09.6**	**+0.9**
WRA	**Warramunga Arr**	**22.52**	**160**	P	**P**	**19 46 14.2**	**-1.7**
WB2	**Warramunga Arr**	**22.52**	**160**	P	**P**	**19 46 15.9**	**-0.1**
WB2	comp=Z,23nm,1.0s			IAmb	IAmb	19 46 18.3	
TPUB	**Ta-pu**	**22.55**	**346**	P	**P**	**19 46 15.6**	**-0.6**
TPUB	comp=Z,14nm,1.0s			IAmb	IAmb	19 46 20.5	
WR0	**Warramunga Arr**	**22.61**	**160**	P	**P**	**19 46 16.1**	**-0.7**
WR0	comp=Z,13nm,1.0s			IAmb	IAmb	19 46 19.1	
MBWA	**Marble Bar**	**23.32**	**196**	P	**P**	**19 46 23.2**	**-0.9**
MBWA	comp=Z,76nm,1.6s			IAmb	IAmb	19 46 29.6	
AS31	**Alice Springs**	**25.89**	**164**	P	**P**	**19 46 48.0**	**+0.3**
ASAR	**Alice Springs** comp=Z,1.7nm,0.4s,baz=342,slow=7.8,SNR=32	**25.89**	**164**	P	**P**	**19 46 47.9**	**+0.2**
ASAR	comp=Z,0.3nm,0.4s,baz=352,slow=2.0,SNR=2.7 comp=Z,1.7nm,0.4s			PcP	**PcP**	**19 50 17.3**	**+1.3**
GSI	**Gunungsitoli**	**28.89**	**270**	P	**P**	**19 47 13.6**	**-1.1**
GSI	comp=Z,8.2nm,1.0s			IAmb	IAmb	19 47 30.2	
MORW	**Morawa**	**31.85**	**197**	P	**P**	**19 47 41.2**	**+0.5**
CHTO	**Chiang Mai**	**32.09**	**304**	P	**P**	**19 47 42.9**	**0.0**
CHTO	comp=Z,11nm,1.7s			IAmb	IAmb	19 48 16.2	
BBOO	**Buckleboo**	**35.16**	**166**	P	**P**	**19 48 08.8**	**-0.6**
STKA	**Stephens Creek** comp=Z,1.7nm,0.5s,baz=331,slow=8.1,SNR=7.6 comp=Z,1.7nm,0.5s	**36.02**	**158**	P	**P**	**19 48 17.4**	**+0.6**
STKA	**Stephens Creek**	**36.02**	**158**	P	**P**	**19 48 17.3**	**+0.5**
MAJO	**Matsushiro**	**36.66**	**16**	P	**P**	**19 48 20.7**	**-1.6**
MAJO	comp=Z,10nm,1.5s			IAmb	IAmb	19 48 51.6	
MJB9	**Matsu-Tunnel**	**36.67**	**16**	P	**P**	**19 48 20.4**	**-1.9**
MJB9	comp=Z,9.0nm,1.4s			IAmb	IAmb	19 48 51.6	
SONM	**Songino Array** comp=Z,0.3nm,0.7s,baz=170,slow=8.8,SNR=1.7 comp=Z,0.3nm,0.7s	**49.47**	**342**	P	**P**	**19 50 05.5**	**-0.2**
PETK	**Petropavlovsk-** comp=Z,2.3nm,0.9s,baz=188,slow=5.2,SNR=4.5 comp=Z,2.3nm,0.9s	**57.72**	**22**	P	**P**	**19 51 05.2**	**-0.6**
MK31	**Makanchi Array**	**59.37**	**326**	P	**P**	**19 51 17.4**	**-0.1**
MKAR	**Makanchi Array** comp=Z,0.7nm,0.4s,baz=118,slow=7.9,SNR=19 comp=Z,0.7nm,0.4s	**59.37**	**326**	P	**P**	**19 51 18.1**	**+0.6**
KDJ	**Kajisay**	**59.96**	**319**	P	**P**	**19 51 22.3**	**+0.5**
RAO	**Raoul Island**	**61.17**	**125**	P	**P**	**19 51 30.4**	**+0.3**
KURBB	**Kurchatov Arra** comp=Z,1.2nm,0.5s,baz=126,slow=6.4,SNR=23 comp=Z,1.2nm,0.5s	**63.60**	**328**	P	**P**	**19 51 46.1**	**+0.1**
KURK	**Kurchatov**	**63.61**	**328**	P	**P**	**19 51 46.3**	**+0.3**
KURK	comp=Z,3.0nm,0.6s			IAmb	IAmb	19 51 49.8	
TIXI	**Tiksi**	**70.21**	**1**	P	**P**	**19 52 27.7**	**+0.2**
TIXI	comp=Z,8.4nm,1.8s			IAmb	IAmb	19 52 36.0	
ABKAR	**Akbulak array**	**73.83**	**321**	P	**P**	**19 52 50.5**	**+0.8**
ABKAR	**Akbulak array**	**73.83**	**321**	P	**P**	**19 52 50.7**	**+1.0**
ABKAR	comp=Z,5.8nm,1.8s			IAmb	IAmb	19 52 55.3	
AKTO	**Aktyubinsk** comp=Z,1.3nm,0.6s,baz=112,slow=5.5,SNR=2.9 comp=Z,1.3nm,0.6s	**75.36**	**322**	P	**P**	**19 53 00.3**	**+1.7**
VNDA	**Vanda** comp=Z,0.7nm,0.8s,baz=336,slow=5.5,SNR=3.2 comp=Z,0.7nm,0.8s	**81.11**	**173**	P	**P**	**19 53 29.0**	**-0.8**
VNDA	**Vanda**	**81.11**	**173**	P	**P**	**19 53 29.1**	**-0.7**
VNDA	comp=Z,10nm,1.2s			IAmb	IAmb	19 54 05.9	
KIV	**Kislovodsk**	**84.59**	**314**	P	**P**	**19 53 49.2**	**+0.6**
KIV	comp=Z,15nm,1.4s			IAmb	IAmb	19 54 03.5	
IMAR	**Indian Mountai**	**84.61**	**24**	P	**P**	**19 53 50.0**	**+1.9**
H21K	**Melozitna Rive**	**84.94**	**24**	P	**P**	**19 53 48.0**	**-1.9**
H21K	comp=Z,9.7nm,1.3s			IAmb	IAmb	19 54 10.0	
CAST	**Castle Rocks**	**84.96**	**27**	P	**P**	**19 53 51.1**	**+1.1**
CAST	comp=Z,7.3nm,0.9s			IAmb	IAmb	19 54 17.5	
SKT	**Skwentna**	**85.05**	**28**	P	**P**	**19 53 51.5**	**+1.1**
COLD	**Coldfoot**	**86.17**	**23**	P	**P**	**19 53 56.2**	**+0.3**
H23K	**Yukon River**	**86.30**	**24**	P	**P**	**19 53 56.0**	**-0.7**
H23K	comp=Z,16nm,1.4s			IAmb	IAmb	19 54 14.3	
I23K	**Minto, Yukon-K**	**86.32**	**25**	P	**P**	**19 53 55.0**	**-1.6**
MCK	**McKinley**	**86.39**	**26**	P	**P**	**19 53 56.2**	**-1.0**
RND	**Reindeer**	**86.41**	**27**	P	**P**	**19 53 55.4**	**-1.8**
TOLK	**Toolik Lake Re**	**86.54**	**21**	P	**P**	**19 53 55.4**	**-2.4**
CCB	**Clear Creek Bu**	**86.95**	**25**	P	**P**	**19 53 57.3**	**-2.5**
CCB	comp=Z,11nm,1.3s			IAmb	IAmb	19 53 57.9	
FINES	**FINESS Array B** comp=Z,0.8nm,0.8s,baz=68,slow=7.7,SNR=0.9 comp=Z,0.8nm,0.8s	**93.80**	**332**	P	**P**	**19 54 33.2**	**+1.3**

IDC 07 19:48:39.5±6.5,8°.85S×117°.82E,h149km±61km,mb2.7/2, mbtmp3.4/5,Error ellipse: s-maj=75.2km s-min=14.7km az=62.0,Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang** 3.2nm,0.3s,baz=205,slow=12,SNR=9.1	**4.26**	**27**	P	Pn	19 49 43.8	+0.6
KAPI	5.1nm,0.3s,baz=218,slow=19,SNR=7.2			S	Sn	19 50 33.2	+0.4
BATI	**Baumata** 4.9nm,0.3s,baz=269,slow=3.4,SNR=6.6	**5.92**	**104**	P	Pn	19 50 05.0	-0.2
BATI	19nm,0.4s,baz=265,slow=4.5,SNR=11			S	Sn	19 51 12.0	-0.1
WRA	**Warramunga Arr** 0.9nm,0.9s,baz=300,slow=12,SNR=5.6	**19.41**	**126**	P	Pn	19 52 56.2	-0.9
ASAR	**Alice Springs** 0.3nm,0.8s,baz=310,slow=9.3,SNR=1.4 0.3nm,0.8s	**21.31**	**136**	P	P	19 53 13.5	-1.2
MKAR	**Makanchi Array** 0.3nm,0.5s,baz=154,slow=7.1,SNR=5.7 0.3nm,0.5s	**63.80**	**334**	P	P	19 58 55.5	-0.2

*IDC **07** 19:54:49.8±1.6,6°.48S×128°.00E,h350km±18km,mb2.8/2, mbtmp4.0/6,Error ellipse: s-maj=23.9km s-min=13.2km az=78.0*
*NEIC **07** 19:54:50.5±1.1,6°.34S±0°.09×127°.90E±0°.07,h360km±14km, mb4.4/5,Error ellipse: s-maj=13.2km s-min=10.0km az=192.0*
ISC 07 19:54:49.9±0.8,6°.41S±0°.07×127°.94E±0°.08,h353km,n26,
σ1§14/27,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**3.68**	**115**	Pn	**Pn**	**19 55 57.3**	**+1.4**
SOEI	**Soe**	**4.93**	**227**	Pn	**Pn**	**19 56 10.3**	**+1.3**
FAKI	**Fak Fak**	**5.52**	**51**	Pn	**Pn**	**19 56 15.1**	**-0.4**
BATI	**Baumata** 30nm,0.3s,baz=14,slow=19,SNR=20	**5.67**	**228**	P	**Pn**	**19 56 18.6**	**+1.4**
BATI	46nm,0.7s,baz=94,slow=19,SNR=6.1			S	**S**	**19 57 26.0**	**-1.8**
SIJI	**Sorong** 2.2nm,0.3s,baz=239,slow=19,SNR=4.4	**6.43**	**31**	P	**Pn**	**19 56 24.4**	**-1.4**
MTN	**Manton Dam**	**7.12**	**154**		**P**	**19 56 34.6**	**-0.6**
TNTI	**Ternate**	**7.16**	**355**	Pn	Pn	19 56 28.8	-5.5
KAPI	**Kappang**	**8.27**	**279**	Pn	Pn	19 56 39.3	-8.0
KNRA	**Kununurra**	**9.24**	**175**		**P**	**19 57 00.2**	**-0.6**
TOLI2	**Tolitoli**	**10.34**	**316**	P	**Pn**	**19 57 12.8**	**+0.8**
WB0	**Warramunga Arr**	**14.68**	**155**	P	**P**	**19 58 01.8**	**+0.8**
WRAB	**Tennant Creek**	**14.81**	**156**	P	**P**	**19 58 03.2**	**+0.8**
WRA	**Warramunga Arr** 7.4nm,0.4s,baz=334,slow=12,SNR=35	**14.82**	**156**	P	**P**	**19 58 03.5**	**+1.0**
WRA	1.1nm,0.7s,baz=336,slow=20,SNR=4.8			S	**S**	**20 00 39.8**	**-2.3**
WRA	**Warramunga Arr**	**14.82**	**156**	P	**P**	**19 58 01.9**	**-0.5**
WB2	**Warramunga Arr**	**14.82**	**156**	P	**P**	**19 58 03.4**	**+0.8**
WR0	**Warramunga Arr**	**14.91**	**155**	P	**P**	**19 58 04.5**	**+1.0**
MBWA	**Marble Bar**	**16.68**	**208**	P	**P**	**19 58 23.1**	**+0.5**
COEN	**Coen**	**16.75**	**118**	P	**P**	**19 58 23.8**	**+0.2**
PSA00	**Pilbara Seismi**	**16.98**	**207**	P	**P**	**19 58 26.3**	**+0.3**
PSA00	comp=Z,49nm,1.5s			IAmb	IAmb	19 58 39.7	
PSA00	**Pilbara Seismi**	**16.98**	**207**	P	**P**	**19 58 26.4**	**+0.5**
PSA00	comp=Z,14nm,1.4s			IAmb	IAmb	19 58 35.8	
AS31	**Alice Springs**	**18.09**	**162**	P	**P**	**19 58 38.7**	**+1.0**
AS31	comp=Z,4.4nm,0.2s			IAmb	IAmb	19 58 47.2	
ASAR	**Alice Springs** comp=Z,1.7nm,0.4s,baz=345,slow=12,SNR=38	**18.09**	**162**	P	**P**	**19 58 38.7**	**+0.9**
ASAR	comp=Z,1.5nm,0.9s,baz=341,slow=20,SNR=5.1			S	**S**	**20 01 44.5**	**-2.2**
ASAR	**Alice Springs**	**18.09**	**162**	P	**P**	**19 58 38.6**	**+0.8**
MKAR	**Makanchi Array** comp=Z,0.1nm,0.4s,baz=115,slow=6.5,SNR=2.2 comp=Z,0.1nm,0.4s	**66.63**	**328**	P	**P**	**20 05 04.2**	**+0.7**
MKAR	**Makanchi Array**	**66.63**	**328**	P	**P**	**20 05 02.7**	**-0.7**
KURBB	**Kurchatov Arra** comp=Z,0.3nm,0.5s,baz=124,slow=5.2,SNR=3.3 comp=Z,0.3nm,0.5s	**70.95**	**329**	P	**P**	**20 05 30.3**	**+0.6**

*IDC **07** 20:10:33.9±0.9,29°.85N×80°.02E,h0km,mb3.5/12, mbtmp3.5/13,ML3.2/1,Error ellipse: s-maj=26.7km s-min=17.5km az=43.0*
*NDI **07** 20:10:36.0±3.4,30°.07N×80°.46E,h10km,ML3.8*
ISC 07 20:10:36.9±0.6,29°.94N±0°.05×80°.16E±0°.05,h16km,n22,
σ1§85/28,mb3.5/10,Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LGTI	**Lohaghat**	**0.50**	**171**	*e*PG	**Pn**	**20 10 51.3**	**+2.0**
LGTI				*e*SG	**Sn**	**20 11 02.3**	**+4.7**
LGTI	**Lohaghat**	**0.50**	**171**	*e*P	**Pn**	**20 10 48.8**	**-0.6**
DDI	**Dehra Dun**	**1.86**	**282**	*e*P	**Pg**	**20 11 12.2**	**-0.5**
DDI				*e*S	**Sb**	**20 11 36.1**	**+2.4**
DDI	comp=N,2μm,0.3s			IAML		20 11 40.0	
DDI	comp=E,1μm,0.3s			IAML		20 11 40.1	
SMLA	**Simla**	**2.84**	**295**	*e*P	**Pb**	**20 11 26.7**	**-0.5**
SMLA				*e*S	**Sn**	**20 11 58.1**	**+2.6**
SMLA	comp=E,378nm,0.5s			IAML		20 12 13.6	
NDI	**New Delhi**	**2.86**	**245**	*e*P	**Pb**	**20 11 27.5**	**-0.1**
NDI				*e*S	**Sb**	**20 12 03.0**	**+0.6**
THN	**Thein Dam**	**4.55**	**304**	*e*P	**Pn**	**20 11 48.7**	**+3.7**
JHNI	**Jhansi**	**4.68**	**198**	*e*P	**Pn**	**20 11 47.0**	**0.0**
JBP	**Jabalpur**	**6.75**	**181**	*e*P	**Pn**	**20 12 17.3**	**+2.0**
JBP				*e*S	**Sn**	**20 13 31.3**	**-0.6**
BHPL	**Bhopal**	**7.11**	**201**	*e*P	**Pn**	**20 12 20.4**	**+0.1**
BHPL				*e*S	**Sn**	**20 13 38.1**	**-2.7**
BHPL	comp=N,62nm,0.3s			IAML		20 13 39.5	
BHPL	comp=E,61nm,0.2s			IAML		20 13 40.3	
MKAR	**Makanchi Array** comp=E,0.1nm,0.3s,baz=185,slow=13,SNR=6.7 comp=E,0.9nm,0.6s	**16.91**	**5**	P	**Pn**	**20 14 31.2**	**-1.6**
CMAR	**Chiang Mai Arr** comp=E,0.6nm,0.7s,baz=299,slow=10,SNR=2.5 comp=E,0.6nm,0.7s	**20.56**	**120**	P	**P**	**20 15 14.7**	**-0.4**
KURBB	**Kurchatov Arra** comp=E,0.4nm,0.7s,baz=183,slow=10,SNR=6.5 comp=E,0.4nm,0.7s	**20.69**	**357**	P	**P**	**20 15 15.3**	**-0.9**
ZALV	**Zalesovo Beam** comp=E,1.5nm,0.7s,baz=196,slow=9.5,SNR=7.3 comp=E,1.5nm,0.7s	**24.23**	**7**	P	**P**	**20 15 52.7**	**-0.1**
SONM	**Songino Array** comp=E,0.6nm,0.5s,baz=227,slow=12,SNR=5.9 comp=E,0.6nm,0.5s	**26.93**	**41**	P	**P**	**20 16 20.0**	**+2.5**
BRTR	**Keskin Array B** comp=E,0.6nm,0.5s,baz=64,slow=6.7,SNR=2.3 comp=E,0.6nm,0.5s	**39.04**	**297**	P	**P**	**20 18 00.0**	**-3.1**
KSRS	**Korea Array** comp=E,0.6nm,0.5s,baz=270,slow=8.5,SNR=4.6 comp=E,0.6nm,0.5s	**40.09**	**66**	P	**P**	**20 18 11.3**	**-0.4**
AKASG	**Malin Array Be** comp=E,0.2nm,0.2s,baz=75,slow=6.6,SNR=2.1 comp=E,0.2nm,0.2s	**43.02**	**314**	P	**P**	**20 18 35.7**	**+0.2**
FINES	**FINESS Array B** comp=E,1.1nm,0.8s,baz=127,slow=6.0,SNR=4.0 comp=E,1.1nm,0.8s	**47.14**	**328**	P	**P**	**20 19 08.4**	**+0.3**
ARCES	**ARCESS Array B** comp=E,1.0nm,0.6s,baz=98,slow=8.7,SNR=5.2 comp=E,1.0nm,0.6s	**50.10**	**338**	P	**P**	**20 19 31.2**	**+0.4**
WRA	**Warramunga Arr**	**71.97**	**127**	P	**P**	**20 22 00.0**	**0.0**
TORD	**Torodi Ar. Bea** comp=E,0.3nm,0.8s,baz=57,slow=5.3,SNR=1.8 comp=E,0.3nm,0.8s	**73.66**	**276**	P	**P**	**20 22 09.8**	**-0.4**
ASAR	**Alice Springs** comp=E,0.3nm,0.8s,baz=309,slow=5.9,SNR=4.3 comp=E,0.3nm,0.8s	**74.19**	**130**	P	**P**	**20 22 12.5**	**-0.6**

*IDC **07** 20:20:30.5±2.1,1°.20N×125°.96E,h0km,mb3.5/3, mbtmp3.6/3,MS3.9/2,Error ellipse: s-maj=178.1km s-min=26.3km az=65.0*
*NEIC **07** 20:20:35.5±2.3,1°.3N±0°.1×126°.29E±0°.07,h34km±8km, mb4.1/4,Error ellipse: s-maj=18.6km s-min=7.7km az=198.0*
ISC 07 20:20:35.8±1.0,1°.2N±0°.1×126°.23E±0°.07,h44km,n16,
σ1§21/15,mb3.7/5,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.22**	**110**		**Pn**	**20 20 55.3**	**-1.1**
TNTI				Sn	**Sn**	**20 21 10.1**	**-1.5**
LUWI	**Luwuk**	**4.11**	**237**	Pn	**Pn**	**20 21 36.4**	**+0.4**
TOLI2	**Tolitoli**	**5.44**	**269**	Pn	**Pn**	**20 21 52.4**	**-2.0**
DAV	**Davao City (W)** comp=Z,891nm,20.1s,baz=140,slow=41	**5.87**	**354**	LR	LR	20 24 28.0	
MYLDM	**Lahad Datu**	**8.67**	**297**	Pn	**Pn**	**20 22 39.8**	**+1.1**
WB0	**Warramunga Arr**	**22.32**	**159**	P	**P**	**20 25 30.6**	**+0.7**
WRAB	**Tennant Creek**	**22.46**	**160**	P	**P**	**20 25 32.8**	**+1.5**
WRA	**Warramunga Arr** 1.6nm,0.6s,baz=338,slow=11,SNR=17 1.6nm,0.6s	**22.46**	**160**	P	**P**	**20 25 32.2**	**+0.8**
WB2	**Warramunga Arr**	**22.47**	**160**	P	**P**	**20 25 31.4**	**0.0**
WR0	**Warramunga Arr**	**22.55**	**159**	P	**P**	**20 25 32.9**	**+0.6**
WR0	comp=Z,11nm,1.5s			IAmb	IAmb	20 25 35.6	
ASAR	**Alice Springs** comp=Z,0.6nm,0.4s,baz=343,slow=10,SNR=14 comp=Z,0.6nm,0.4s	**25.82**	**164**	P	**P**	**20 26 04.7**	**+1.6**
ASAR	**Alice Springs**	**25.82**	**164**	P	**P**	**20 26 04.1**	**+1.0**
JCJ	**Chichijima** comp=Z,344nm,21.7s,baz=152,slow=33	**29.97**	**29**	LR	LR	20 37 15.0	
MKAR	**Makanchi Array** comp=Z,0.1nm,0.4s,baz=117,slow=8.0,SNR=4.1 comp=Z,0.1nm,0.4s	**59.35**	**326**	P	**P**	**20 30 33.4**	**-0.1**
MKAR	**Makanchi Array**	**59.35**	**326**	P	**P**	**20 30 32.5**	**-1.0**
KURK	**Kurchatov**	**63.61**	**328**	P	**P**	**20 31 02.2**	**+0.1**
KURK	comp=Z,1.3nm,0.9s			IAmb	IAmb	20 31 04.9	

*BJI **07** 20:45:08.9±0.0,0°.43N×126°.64E,h50km,mb4.5/31, mB4.9/10*
*NEIC **07** 20:45:16.5±1.6,1°.28N±0°.07×126°.41E±0°.05,h42km±7km, mb4.7/92,Error ellipse: s-maj=10.7km s-min=7.5km az=197.0*
*DJA **07** 20:45:17.1±0.2,1°.N±2°×12°.6E±°,h57km±3km,M4.4/33, mB4.9/10,mb4.7/33,MLv4.5/18,Mw(mB)4.2/10*
*IDC **07** 20:45:18.5±1.8,1°.23N×126°.32E,h61km±16km,mb4.3/29, mbtmp4.5/32,MS4.5/2,Error ellipse: s-maj=15.5km s-min=7.9km az=72.0*
ISC 07 20:45:17.1±1.0,1°.33N±0°.04×126°.44E±0°.05,h51km±9km,
n210,σ1§16/218,mb4.6/73,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.07**	**121**		**Pn**	**20 45 35.0**	**-1.0**
TNTI	**Ternate**	**1.07**	**121**	P	**Pn**	**20 45 34.9**	**-1.0**
TNTI	**Ternate**	**1.07**	**121**	P	**Pn**	**20 45 35.3**	**-0.6**
LBMI	**Labuha**	**2.22**	**152**	P	**Pn**	**20 45 51.2**	**-0.3**
SGSI	**Sangihe**	**2.52**	**339**	P	**Pn**	**20 45 55.1**	**-0.5**
SGSI				S	**Sn**	**20 46 24.6**	**-0.5**
KMSI	**Cibinong**	**2.57**	**253**	P	**Pn**	**20 45 55.8**	**-0.6**
KMSI				S	**Sn**	**20 46 25.8**	**-0.7**
SANI	**Sanana**	**3.38**	**188**	P	**Pn**	**20 46 06.7**	**-0.8**
SANI	**Sanana**	**3.38**	**188**	P	**Pn**	**20 46 06.9**	**-0.6**
LUWI	**Luwuk**	**4.36**	**237**		**Pn**	**20 46 20.7**	**-0.2**
LUWI	**Luwuk**	**4.36**	**237**	P	**Pn**	**20 46 22.2**	**+1.3**
LUWI				S	**Sn**	**20 47 14.5**	**+4.0**
LUWI	**Luwuk**	**4.36**	**237**	P	**Pn**	**20 46 22.7**	**+1.8**
MRSI	**Marisa**	**4.58**	**259**	P	**Pn**	**20 46 25.8**	**+1.9**
NLAI	**Namlea**	**4.58**	**172**	P	**Pn**	**20 46 24.4**	**+0.5**
NLAI				S	**Sn**	**20 47 16.5**	**+0.6**
MSAI	**Masohi** 0.2nm639nm14nm,0.8s	**5.26**	**152**	P	**Pn**	**20 46 35.8**	**+2.5**
AAI	**Ambon**	**5.28**	**161**	P	**Pn**	**20 46 34.9**	**+1.4**
SWI	**Sorong** 0.1nm45nm,0.7s	**5.28**	**114**	P	**Pn**	**20 46 33.9**	**+0.3**
APSI	**Ampana** 1.2nm3μm324nm,0.5s	**5.29**	**245**	P	**Pn**	**20 46 34.4**	**+0.8**
SIJI	**Sorong** 10nm,0.3s,baz=340,slow=23,SNR=14	**5.29**	**114**	P	**Pn**	**20 46 34.4**	**+0.7**
TOLI2	**Tolitoli**	**5.67**	**268**	Pn	**Pn**	**20 46 37.1**	**-1.7**
MPSI	**Mapaga** 0.2nm819nm78nm,0.6s	**6.62**	**262**	P	**Pn**	**20 46 53.7**	**+1.8**
FAKI	**Fak Fak**	**7.17**	**126**	Pn	**Pn**	**20 46 58.9**	**-0.6**
FAKI	**Fak Fak**	**7.17**	**126**	P	Pn	20 46 55.1	-4.4
FAKI	**Fak Fak**	**7.17**	**126**	P	**Pn**	**20 47 01.2**	**+1.7**
BBSI	**Bau Bau** 0.0nm128nm13nm,0.7s	**7.80**	**210**	P	**Pn**	**20 47 08.5**	**+0.4**
TTSI	**Tana Toraja** 0.4nm1μm82nm,0.6s	**7.92**	**237**	P	**Pn**	**20 47 09.4**	**-0.3**
SPSI	**Sidrap Palu** 900nm49nm,0.5s	**8.49**	**232**	P	**Pn**	**20 47 17.7**	**+0.1**
BNSI	**Bone** 53nm,0.7s	**8.51**	**228**	P	**Pn**	**20 47 18.6**	**+0.7**
MYLDM	**Lahad Datu**	**8.81**	**296**	Pn	**Pn**	**20 47 22.5**	**+0.6**
BKSI	**Bulukumba** 38nm,0.8s	**9.14**	**224**	P	**Pn**	**20 47 25.4**	**-1.0**
KAPI	**Kappang** 12nm,0.4s,baz=34,slow=11,SNR=5.7	**9.19**	**227**	P	**Pn**	**20 47 26.9**	**-0.2**
KAPI	5.6nm,0.5s,baz=50,slow=22,SNR=1.9			S	**Sn**	**20

comp=Z,42nm,0.9s
WRAB Tennant Creek 22.51 160 P **P** **20 50 12.4 -0.3**
WRA Warramunga Arr 22.51 160 P **P** **20 50 11.6 -1.2**
comp=Z,18nm,0.3s,baz=336,slow=11,SNR=207
WRA PcP **PcP** **20 54 06.2 +0.8**
comp=Z,0.8nm,0.9s,baz=309,slow=2.8,SNR=2.0
WRA S **S** **20 54 14.6 -1.9**
comp=Z,1.4nm,0.9s,baz=339,slow=18,SNR=3.7
comp=Z,18nm,0.3s
WRA Warramunga Arr 22.51 160 P **P** **20 50 11.1 -1.7**
WB2 Warramunga Arr 22.52 160 P **P** **20 50 11.4 -1.4**
TPUB Ta-pu 22.56 346 P **P** **20 50 11.8 -1.4**
MYKOM Kota Tinggi 22.59 271 P **P** **20 50 12.9 -0.8**
WR0 Warramunga Arr 22.60 160 P **P** **20 50 12.8 -0.8**
WR0 IAmb IAmb 20 50 15.2
comp=Z,27nm,0.8s
SSLB Suanglung 22.95 347 P **P** **20 50 15.6 -1.7**
PMG Port Moresby 23.23 118 P **P** **20 50 22.1 +2.0**
comp=Z,13nm,1.0s,baz=297,slow=8.7,SNR=4.1
comp=Z,13nm,1.0s
PMG Port Moresby 23.23 118 P **P** **20 50 19.8 -0.3**
MBWA Marble Bar 23.29 196 P **P** **20 50 19.6 -1.1**
PSA00 Pilbara Seismi 23.66 195 P **P** **20 50 22.6 -1.5**
PSA00 IAmb IAmb 20 51 04.8
comp=Z,51nm,1.3s
PSA00 Pilbara Seismi 23.66 195 P **P** **20 50 22.7 -1.4**
PSA00 IAmb IAmb 20 50 24.4
comp=Z,14nm,1.1s
PSA00 Pilbara Seismi 23.66 195 P **P** **20 50 23.1 -1.0**
YHNB Yeheng 23.72 348 P **P** **20 50 24.9 +0.2**
XMIS Christmas Isla 23.78 240 P **P** **20 50 23.8 -1.6**
QIZ Qiongzhong 23.96 318 P **P** **20 50 27.2 +0.2**
QIZ IAmb IAmb 20 50 32.4
comp=Z,39nm,1.5s
QIS Mount Isa 25.28 150 P **P** **20 50 39.5 +0.5**
JOW Kunigami 25.42 4 P **P** **20 50 42.3 +2.1**
comp=Z,19nm,0.6s,baz=186,slow=14,SNR=3.7
comp=Z,19nm,0.6s
JOW Kunigami 25.42 4 IAmb IAmb 20 50 43.6
comp=Z,20nm,0.7s
IPM Ipoh 25.57 278 P **P** **20 50 40.5 -1.3**
AS31 Alice Springs 25.88 164 P **P** **20 50 42.7 -1.7**
AS31 IAmb IAmb 20 50 47.9
comp=Z,7.4nm,0.6s
ASAR Alice Springs 25.88 164 P **P** **20 50 44.3 -0.1**
comp=Z,12nm,0.6s,baz=344,slow=7.0,SNR=160
ASAR PcP **PcP** **20 54 13.7 +1.1**
comp=Z,0.8nm,0.5s,baz=338,slow=2.0,SNR=3.7
ASAR S **S** **20 55 11.4 +0.4**
comp=Z,1.3nm,0.8s,baz=350,slow=22,SNR=4.5
comp=Z,12nm,0.6s
ASAR Alice Springs 25.88 164 P **P** **20 50 44.0 -0.4**
ASAR **PcP** **20 54 12.6 -0.1**
KULM Kulim 26.05 279 P **P** **20 50 44.6 -1.4**
WRKA Warakurna 26.27 176 P **P** **20 50 49.0 +1.1**
PSI Prapat 27.54 273 P **P** **20 50 58.9 -0.8**
comp=Z,7.3nm,0.7s,baz=192,slow=9.3,SNR=5.1
comp=Z,7.3nm,0.7s
CTA Charters Tower 28.81 139 P **P** **20 51 10.7 -0.1**
comp=Z,1.1nm,0.3s,baz=324,slow=9.7,SNR=6.0
comp=Z,1.1nm,0.3s
CTAO Charters Tower 28.81 139 P **P** **20 51 09.2 -1.5**
GSI Gunungsitoli 28.86 270 P **P** **20 51 08.8 -2.5**
GSI IAmb IAmb 20 51 13.2
comp=Z,10.0nm,0.7s
GSI Gunungsitoli 28.86 270 P **P** **20 51 11.4 +0.1**
SLVN Son La 29.64 314 P **P** **20 51 17.1 -1.0**
OOD Oodnadatta 30.29 164 P **P** **20 51 23.6 -0.1**
NJ2 Nanjing 31.39 348 *e*P **P** **20 51 36.0 +2.7**
NJ2 pmax pmax
comp=Z,6.0nm,0.7s
MORW Morawa 31.82 197 P **P** **20 51 36.1 -1.1**
MORW Morawa 31.82 197 P **P** **20 51 37.3 +0.1**
CMAR Chiang Mai Arr 31.90 304 P **P** **20 51 38.3 +0.2**
comp=Z,1.2nm,0.9s,baz=138,slow=8.9,SNR=6.5
comp=Z,1.2nm,0.9s
MULG Mulgathing 32.26 168 P **P** **20 51 41.1 +0.1**
ENH Enshi 32.98 332 P **P** **20 51 46.8 -0.7**
BLDU Ballidu 33.09 195 P **P** **20 51 48.4 +0.1**
LCRK Leigh Creek 33.53 161 P **P** **20 51 52.8 +0.7**
KLBR Kellerberrin 33.76 193 P **P** **20 51 54.4 +0.3**
JHJ Hachijo jima 2 34.02 20 LR LR 21 05 14.2
comp=Z,231nm,19.0s,baz=78,slow=35
JHS Saijyo 34.07 10 P **P** **20 51 58.6 +1.8**
JHS IAmb IAmb 20 52 18.8
comp=Z,16nm,1.2s
MUN Mundaring 34.52 195 P **P** **20 52 01.0 +0.4**
BBOO Buckleboo 35.15 166 P **P** **20 52 04.7 -1.4**
BBOO Buckleboo 35.15 166 P **P** **20 52 06.0 -0.1**
NWAO Narrogin (SRO) 35.16 194 P **P** **20 52 04.2 -2.0**
NWAO Narrogin (SRO) 35.16 194 P **P** **20 52 06.6 +0.4**
INU Inuyama 35.25 15 P **P** **20 52 08.4 +1.5**
INU IAmb IAmb 20 52 09.3
comp=Z,10nm,0.8s
JGF Kuroka 35.58 15 P **P** **20 52 11.2 +1.4**
JGF IAmb IAmb 20 52 12.5
comp=Z,4.7nm,0.7s
EIDS Eidsvold 35.68 140 P **P** **20 52 11.4 +0.6**
EIDS IAmb IAmb 20 52 12.8
comp=Z,12nm,1.1s
KSRS Korea Array 35.98 2 P **P** **20 52 14.9 +1.8**
comp=Z,2.1nm,0.6s,baz=179,slow=9.9,SNR=17
comp=Z,2.1nm,0.6s
STKA Stephens Creek 36.01 158 P **P** **20 52 13.9 +0.3**
comp=Z,15nm,0.7s,baz=326,slow=9.4,SNR=30
comp=Z,15nm,0.7s
STKA Stephens Creek 36.01 158 P **P** **20 52 13.2 -0.3**
STKA Stephens Creek 36.01 158 P **P** **20 52 14.2 +0.7**
XAN Xi'an 36.44 335 P **P** **20 52 18.2 +1.0**
XAN pP pP 20 52 33.5 +3.5
XAN pmax pmax
comp=Z,6.0nm,1.1s
HTT Hallett 36.52 162 P **P** **20 52 19.7 +1.8**
MJAR Matsushiro Arr 36.69 16 P **P** **20 52 20.0 +0.7**
comp=Z,3.2nm,0.5s,baz=181,slow=9.6,SNR=15
comp=Z,3.2nm,0.5s
MJAR Matsushiro Arr 36.69 16 P **P** **20 52 18.9 -0.4**
MAJO Matsushiro 36.70 16 P **P** **20 52 18.6 -0.7**
MAJO IAmb IAmb 20 52 20.5
comp=Z,5.0nm,0.7s
MJB9 Matsu-Tunnel 36.70 16 P **P** **20 52 18.6 -0.7**
MJB9 IAmb IAmb 20 52 20.5
comp=Z,4.9nm,0.7s
SEHB SEOHWA 36.80 2 P **P** **20 52 21.3 +1.1**
SEHB IAmb IAmb 20 52 47.8
comp=Z,7.5nm,1.2s
JSD Sado 38.11 15 P **P** **20 52 31.4 +0.1**
JSD IAmb IAmb 20 52 33.0
comp=Z,10nm,0.6s
JMM Marumori 38.68 18 P **P** **20 52 36.2 +0.1**
ARMA Armidale 39.65 145 P **P** **20 52 45.6 +1.2**
ARMA IAmb IAmb 20 52 47.9
comp=Z,13nm,0.9s
ARMA Armidale 39.65 145 P **P** **20 52 46.1 +1.7**
ARPS Mount Arapiles 40.51 161 P **P** **20 52 52.9 +1.6**
JTM Tenmabayashi 41.45 17 P **P** **20 53 00.9 +1.9**
CAN Canberra 42.12 152 P **P** **20 53 06.0 +1.4**
CAN IAmb IAmb 20 53 10.4
comp=Z,33nm,1.2s
USRK Ussuriysk Ar. 42.97 6 P **P** **20 53 13.3 +2.1**
comp=Z,2.7nm,0.6s,baz=185,slow=8.3,SNR=6.9
comp=Z,2.7nm,0.6s
USRK Ussuriysk Ar. 42.97 6 P **P** **20 53 11.8 +0.5**
MDJ Mudanjiang 43.20 3 P **P** **20 53 12.7 -0.4**
MDJ IAmb IAmb 20 53 16.7
comp=Z,7.8nm,0.6s
ASAJ Asahikawa 44.96 16 P **P** **20 53 29.1 +1.9**
comp=Z,6.4nm,0.6s,baz=224,slow=9.0,SNR=12
comp=Z,6.4nm,0.6s
JKA Kamikawa-asahi 44.96 16 IAmb IAmb 20 53 30.4
comp=Z,7.5nm,0.7s
GTA Gaotai 45.02 331 *e*P **P** **20 53 28.8 +0.8**
GTA sP sP 20 53 49.8 +2.9
GTA pmax pmax
comp=Z,1.0nm,0.8s
GOMU GeErMu 45.41 323 P **P** **20 53 34.7 +3.3**
GOMU pmax pmax
comp=Z,2.0nm,0.6s
GOMU pmax pmax
comp=Z,83nm,4.9s
ULN Ulaanbaatar 49.31 343 P **P** **20 54 00.1 -1.2**
ULN IAmb IAmb 20 54 04.5
comp=Z,2.4nm,0.5s
SONM Songino Array 49.48 342 P **P** **20 54 03.3 +0.7**
comp=Z,0.9nm,0.5s,baz=161,slow=8.0,SNR=9.4
SONM PcP **PcP** **20 55 25.1 +1.1**
comp=Z,0.2nm,0.4s,baz=147,slow=2.9,SNR=2.4
comp=Z,0.9nm,0.5s
SONM Songino Array 49.48 342 P **P** **20 54 02.6 +0.1**
PEA0B Petropavlovsk- 57.75 22 P **P** **20 55 01.9 -0.9**
PETK Petropavlovsk- 57.75 22 P **P** **20 55 04.9 +2.0**
comp=Z,4.3nm,0.7s,baz=193,slow=5.9,SNR=6.6
comp=Z,4.3nm,0.7s
PETK Petropavlovsk- 57.75 22 P **P** **20 55 02.3 -0.5**
MK31 Makanchi Array 59.37 326 P **P** **20 55 13.6 -0.7**
MK31 PcP **PcP** **20 56 02.1 +0.3**
MKAR Makanchi Array 59.37 326 P **P** **20 55 14.3 0.0**
comp=Z,2.9nm,0.4s,baz=120,slow=7.7,SNR=53
MKAR PcP **PcP** **20 56 02.2 +0.4**
comp=Z,1.9nm,0.6s,baz=121,slow=5.0,SNR=4.9
comp=Z,2.9nm,0.4s
MKAR Makanchi Array 59.37 326 P **P** **20 55 13.3 -1.0**
MKAR PcP **PcP** **20 56 02.5 +0.7**
KSH Kashi 59.55 316 P **P** **20 55 17.8 +2.0**
KSH pmax pmax
comp=Z,3.0nm,0.6s
MAKZ Makanchi 59.55 326 P **P** **20 55 14.4 -1.1**
LBZ Lake Benmore 59.88 145 P **P** **20 55 16.6 -1.2**
KDJ Kajisay 59.96 319 P **P** **20 55 18.4 -0.3**
KDJ IAmb IAmb 20 55 22.2
comp=Z,5.3nm,0.8s
THZ Tophouse 60.00 141 P **P** **20 55 18.5 -0.3**
TUWZ Tuamarina 60.48 140 P **P** **20 55 21.9 0.0**
YAK Yakutsk 60.60 2 P **P** **20 55 23.1 +0.7**
KHZ Kahutara 60.76 142 P **P** **20 55 23.6 -0.1**
BKZ Black Stump Fm 61.01 137 P **P** **20 55 25.6 -0.1**
MA2 Magadan 61.09 14 P **P** **20 55 25.9 +0.1**
MA2 IAmb IAmb 20 55 29.2
comp=Z,7.6nm,0.7s
MSWZ Moikau Station 61.31 140 P **P** **20 55 25.7 -1.9**
ZAA0 Zalesovo Array 62.59 334 P **P** **20 55 36.0 +0.1**
ZAA0 IAmb IAmb 20 55 39.5
comp=Z,2.2nm,0.6s
ZALV Zalesovo Beam 62.59 334 P **P** **20 55 35.6 -0.3**
comp=Z,2.1nm,0.5s,baz=144,slow=6.5,SNR=7.4
comp=Z,2.1nm,0.5s
ZALV Zalesovo Beam 62.59 334 P **P** **20 55 35.4 -0.6**
KBL Kabul 62.77 309 P **P** **20 55 36.3 -1.5**
KBL IAmb IAmb 20 55 40.7
comp=Z,3.2nm,0.7s
AFI Afiamalu 63.03 106 P **P** **20 55 38.9 -0.7**
GAR Garm 63.35 314 P **P** **20 55 40.4 -1.1**
BTK Batken 63.39 315 P **P** **20 55 41.5 -0.1**
BTK IAmb IAmb 20 55 46.0
comp=Z,3.2nm,0.7s
KURK Kurchatov 63.61 328 P **P** **20 55 42.1 -0.7**
CHGR Chuyangaron 64.07 313 P **P** **20 55 44.7 -1.5**
CHGR IAmb IAmb 20 55 49.9
comp=Z,10nm,1.0s
KK31 Karatay Array 64.80 318 P **P** **20 55 50.0 -0.8**
KK31 IAmb IAmb 20 55 54.1
comp=Z,9.9nm,1.6s
KKAR Karatay Array 64.80 318 P **P** **20 55 50.0 -0.8**
KKAR IAmb IAmb 20 55 54.1
comp=Z,9.9nm,1.6s
KKAR Karatay Array 64.80 318 P **P** **20 55 49.8 -1.0**
BRVK Borovoye 69.25 328 P **P** **20 56 18.4 -0.4**
TIXI Tiksi 70.23 1 P **P** **20 56 24.1 -0.3**
TIXI IAmb IAmb 20 56 25.8
comp=Z,4.3nm,0.5s
GEYT Alibeck 72.18 309 P **P** **20 56 37.8 +0.8**
comp=Z,4.4nm,0.6s,baz=66,slow=8.8,SNR=5.1
comp=Z,2.4nm,0.6s
NRIK Noril'sk 72.68 347 P **P** **20 56 39.8 +0.5**
comp=Z,7.9nm,0.5s,baz=126,slow=5.9,SNR=10
comp=Z,7.9nm,0.5s
NRIK Noril'sk 72.68 347 P **P** **20 56 39.8 +0.5**
NRIK IAmb IAmb 20 56 41.2
comp=Z,8.6nm,0.6s
ABKAR Akbulak array 73.83 321 P **P** **20 56 45.8 -0.6**
ABKAR Akbulak array 73.83 321 P **P** **20 56 45.7 -0.7**
ABKAR IAmb IAmb 20 56 48.6
comp=Z,2.6nm,0.8s
ARU Arti 76.81 328 P **P** **20 57 03.0 -0.4**
comp=Z,6.6nm,0.6s,baz=139,slow=5.3
comp=Z,6.6nm,0.6s
ARU Arti 76.81 328 P **P** **20 57 02.7 -0.7**
ARU IAmb IAmb 20 57 04.2
comp=Z,7.6nm,0.7s
SDPT Sand Point 79.33 34 P **P** **20 57 19.3 +1.9**
VNDA Vanda 81.09 173 P **P** **20 57 26.9 +0.5**
comp=Z,3.6nm,0.7s,baz=321,slow=5.6,SNR=22
comp=Z,3.6nm,0.7s
VNDA Vanda 81.09 173 P **P** **20 57 26.6 +0.2**
RAYN Ar Rayn 81.16 293 P **P** **20 57 27.1 -0.9**
KIRV Kirov 82.12 329 P **P** **20 57 32.6 +0.4**
comp=Z,12nm,0.6s,baz=79,slow=5.2,SNR=5.4
comp=Z,12nm,0.6s
BELG Belogornoye 82.13 323 P **P** **20 57 32.3 -0.1**
comp=Z,15nm,0.8s,baz=113,slow=4.0,SNR=12
comp=Z,15nm,0.8s
O18K Koktuh Hills 83.01 30 P **P** **20 57 37.2 +0.3**
O18K IAmb IAmb 20 57 43.0
comp=Z,4.4nm,0.8s
SVW2 Sparrevohn 83.03 29 P **P** **20 57 38.2 +1.2**
SVW2 IAmb IAmb 20 57 41.1
comp=Z,3.4nm,0.8s
TTA Tatalina 83.16 27 P **P** **20 57 39.5 +1.8**
TTA IAmb IAmb 20 57 41.1
comp=Z,5.3nm,0.7s
N19K Bonanza Creek 83.52 29 P **P** **20 57 40.2 +0.6**
N19K IAmb IAmb 20 57 43.8
comp=Z,8.9nm,0.8s
L19K White Mountain 83.56 28 P **P** **20 57 41.7 +2.0**
L19K IAmb IAmb 20 57 43.3
comp=Z,4.9nm,0.9s
M19K Big River Lodg 83.73 28 P **P** **20 57 41.3 +0.7**
M19K IAmb IAmb 20 57 44.3
comp=Z,5.1nm,0.8s
KDAK Kodiak Island 84.06 32 P **P** **20 57 42.5 +0.2**
RSO Redoubt South 84.31 29 P **P** **20 57 43.8 0.0**
KBZ Khabaz 84.42 314 P **P** **20 57 43.8 -0.6**
comp=Z,2.9nm,0.8s,baz=176,slow=4.3,SNR=6.3
comp=Z,2.9nm,0.8s
GURO Guroymak-BITLI 84.80 308 P **P** **20 57 47.1 +0.4**
H23K Yukon River 86.34 24 P **P** **20 57 54.6 +1.1**
H23K IAmb IAmb 20 57 56.3
comp=Z,2.7nm,0.8s
ILAR Eielson Array 87.38 25 P **P** **20 57 58.3 -0.4**
comp=Z,0.5nm,0.5s,baz=242,slow=5.3,SNR=6.5
comp=Z,0.5nm,0.5s
J26L Joseph Creek 88.81 26 P **P** **20 58 05.9 +0.4**
J26L IAmb IAmb 20 58 07.4
comp=Z,1.9nm,0.7s
KMBO Kilima Mbogo 89.22 269 LR LR 21 36 29.9
comp=Z,848nm,21.6s,baz=270,slow=34
K27K Chicken 89.47 26 P **P** **20 58 09.3 +0.8**
K27K IAmb IAmb 20 58 12.2
comp=Z,2.9nm,0.9s
BRTR Keskin Array B 91.32 310 P **P** **20 58 16.8 -1.1**
comp=Z,1.0nm,0.8s,baz=116,slow=6.6,SNR=2.4
comp=Z,1.0nm,0.8s
BRTR Keskin Array B 91.32 310 P **P** **20 58 17.1 -0.8**
ARCES ARCESS Array B 92.59 340 P **P** **20 58 21.2 -1.7**
comp=Z,1.5nm,0.6s,baz=50,slow=5.9,SNR=7.7
comp=Z,1.5nm,0.6s
AKASG Malin Array Be 93.56 321 P **P** **20 58 27.3 -0.5**
comp=Z,0.2nm,0.3s,baz=48,slow=1.2,SNR=1.4
comp=Z,0.2nm,0.3s
FINES FINESS Array B 93.80 332 P **P** **20 58 28.3 -0.3**
comp=Z,3.7nm,1.0s,baz=38,slow=7.0,SNR=1.4
comp=Z,3.7nm,1.0s
BURAR Bucovina Array 96.59 318 P **P** **20 58 41.5 -0.4**
BURAR IAmb IAmb 20 58 47.4
comp=Z,2.5nm,0.8s
BUR08 Bucovina Ar. S 96.60 318 P **P** **20 58 41.9 0.0**
BUR08 IAmb IAmb 20 58 47.1
comp=Z,2.3nm,0.8s
SCHQ Scheffervill 122.97 9 PKP **PKiKP** **21 04 08.7 +0.6**
comp=Z,1.8nm,0.5s,baz=31,slow=7.3,SNR=4.0
TXAR Lajitas Array 123.27 53 PKP **PKiKP** **21 04 10.1 +0.5**
comp=Z,0.3nm,0.7s,baz=222,slow=1.2,SNR=2.6
TORD Torodi Ar. Bea 123.36 287 PKP **PKiKP** **21 04 09.5 -0.4**
comp=Z,0.5nm,0.7s,baz=25,slow=1.6,SNR=3.1

*JMA **07** 20:48:03.8±0.2, 30.0°N±0.6°×131.3°E±0.7, h25km±1km, MV3.4/24, NEAR AMAMI-OSHIMA ISLAND*
*NEIC **07** 20:48:04.9±2.6, 29.96°N±0.07°×131.14°E±0.10, h46km±8km, mb4.7/8, Error ellipse: s-maj=13.7km s-min=7.8km az=122.0*
*IDC **07** 20:48:05.5±3.0, 29.97°N×131.26°E, h52km±40km, mb3.2/1, mbtmp3.5/6, ML2.9/5, MS4.1/1, Error ellipse: s-maj=60.7km s-min=26.0km az=116.0*

ISC 07 20:48:03.5±1.5, 29.94°N±0.05°×131.22°E±0.07, h30km±11km, n36, σ1s27/43, mb4.5/5, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMTN	**Minamitane**	**0.54**	**329**	*i* P	**Pb**	**20 48 14.2**	**-0.3**
JMTN				S	**Sb**	**20 48 21.3**	**-0.8**
JYAK	**Yakushimahirau**	**0.69**	**296**	*i* P	**Pn**	**20 48 17.2**	**+0.1**
JYAK				S	**Sn**	**20 48 26.8**	**+0.1**
JTN	**Tanegashima 3**	**0.75**	**344**	*i* P	**Pn**	**20 48 17.8**	**-0.2**
JTN				*e*S	**Sn**	**20 48 27.8**	**-0.5**
JKC	**Kuchinoerabu**	**1.03**	**301**	*i* P	**Pb**	**20 48 23.1**	**+0.3**
JNN	**Nakanoshima**	**1.17**	**266**	*i* P	**Pb**	**20 48 25.4**	**+0.3**
JTSR	**Tashiro 2**	**1.25**	**348**	*i* P	**Pn**	**20 48 25.5**	**+0.5**
JTSR				*e*S	**Sn**	**20 48 41.8**	**+1.0**
JNAR	**Kushima--Naru**	**1.59**	**2**	P	**Pn**	**20 48 30.4**	**+0.9**
JSU	**Suzuyama**	**1.70**	**337**		**Pn**	**20 48 31.7**	**+0.6**
JSU	**Suzuyama**	**1.70**	**337**	P	**Pn**	**20 48 31.6**	**+0.5**
JNKG	**Nichinankitago**	**1.73**	**4**	P	**Pn**	**20 48 32.4**	**+1.0**
JNKG				*e*S	**Sn**	**20 48 53.5**	**+1.1**
JNU	**Nakatsue**	**3.19**	**355**	P	**Pn**	**20 48 52.4**	**+0.8**
	4.2nm,0.3s,baz=143,slow=5.1,SNR=9.9						
JNU				S	**Sn**	**20 49 27.5**	**-1.1**
	10.0nm,0.3s,baz=84,slow=21,SNR=1.8						
	9.7nm,0.3s						
JOW	**Kunigami**	**4.04**	**221**	P	**Pn**	**20 49 05.3**	**+2.2**
	2.4nm,0.3s,baz=92,slow=22,SNR=10						
JOW				S	**Sn**	**20 49 49.5**	**0.0**
	20nm,0.3s,baz=44,slow=29,SNR=11						
	6.0nm,0.2s						
JOW	**Kunigami**	**4.04**	**221**		**Pn**	**20 49 03.5**	**+0.3**
JOW				Sn	**Sn**	**20 49 49.3**	**-0.1**
JMN	**Monobe**	**4.41**	**30**	Pn	**Pn**	**20 49 08.3**	**0.0**
JTU	**Tsushima**	**4.83**	**342**	Pn	**Pn**	**20 49 14.5**	**+0.5**
JHS	**Saijyo**	**5.30**	**17**	Pn	**Pn**	**20 49 21.5**	**+1.0**
INU	**Inuyama**	**7.28**	**41**	Pn	**Pn**	**20 49 51.3**	**+3.6**
JGF	**Kuroka**	**7.66**	**41**	Pn	**Pn**	**20 49 55.9**	**+3.0**
KSRS	**Korea Array**	**7.99**	**341**	P	**Pn**	**20 50 00.1**	**+2.7**
	0.1nm,0.3s,baz=156,slow=14,SNR=5.8						
	0.9nm,0.6s						
MAJO	**Matsushiro**	**8.81**	**40**	Pn	**Pn**	**20 50 08.4**	**-0.3**
MJAR	**Matsushiro Arr**	**8.81**	**40**	P	**Pn**	**20 50 09.7**	**+0.9**
	baz=231,slow=14,SNR=1.9						
	0.4nm,0.3s						
YOJ	**Yonaguni jima**	**9.12**	**235**	Pn	**Pn**	**20 50 12.8**	**-0.2**
USA0B	**Ussuriysk Arra**	**14.25**	**2**		**Pn**	**20 51 23.5**	**+0.4**
USRK	**Ussuriysk Ar.**	**14.25**	**2**	P	**Pn**	**20 51 22.9**	**-0.2**
	0.2nm,0.3s,baz=188,slow=29,SNR=4.7						
	2.3nm,0.7s						
SONM	**Songino Array**	**26.14**	**320**	P	**P**	**20 53 35.0**	**-0.1**
	0.3nm,0.4s,baz=126,slow=7.9,SNR=3.2						
	0.3nm,0.4s						
PEA0B	**Petropavlovsk-**	**30.17**	**32**	P	**P**	**20 54 08.7**	**-2.0**
PETK	**Petropavlovsk-**	**30.17**	**32**	P	**P**	**20 54 09.8**	**-0.9**
PSI	**Prapat**	**40.80**	**235**	LR	LR	21 11 31.0	
	comp=Z,235nm,20.9s,baz=252,slow=34						
AKUT	**Akutan**	**50.71**	**43**	P	**P**	**20 56 59.0**	**-1.1**
N18K	**Kilae Creek**	**56.09**	**35**	P	**P**	**20 57 38.9**	**-0.6**
N18K				IAmb	IAmb	20 57 55.5	
	comp=Z,7.8nm,1.3s						
ABKAR	**Akbulak array**	**56.11**	**312**	P	**P**	**20 57 40.8**	**+1.0**
ABKAR	**Akbulak array**	**56.11**	**312**	P	**P**	**20 57 40.9**	**+1.1**
ABKAR				IAmb	IAmb	20 57 44.9	
	comp=Z,2.6nm,1.2s						
IMAR	**Indian Mountai**	**56.99**	**28**	P	**P**	**20 57 46.3**	**+0.5**
H21K	**Melozitna Rive**	**57.38**	**29**	P	**P**	**20 57 49.2**	**+0.6**
H21K				IAmb	IAmb	20 57 55.5	
	comp=Z,4.1nm,1.4s						
I21K	**Tanana**	**57.74**	**29**	P	**P**	**20 57 49.8**	**-1.3**
I21K				IAmb	IAmb	20 57 57.7	
	comp=Z,8.4nm,1.6s						
PPLA	**Purkeypile**	**57.75**	**32**	P	**P**	**20 57 48.6**	**-2.8**
PPLA				IAmb	IAmb	20 58 26.8	
	comp=Z,16nm,1.6s						

*DJA **07** 20:55:19.3±0.2, 6°S±2°×12°9E±°, h284km±3km, M4.3/24, mB4.9/6, mb4.2/24, MLv4.4/18, Mw(mB)4.2/6*
*NEIC **07** 20:55:19.2±1.5, 5.74°S±0.05°×128.70°E±0.09, h304km±4km, mb4.2/24, Error ellipse: s-maj=12.2km s-min=7.7km az=82.0*
*IDC **07** 20:55:19.9±1.4, 5.73°S×128.66°E, h307km±15km, mb3.3/8, mbtmp4.2/13, Error ellipse: s-maj=20.4km s-min=12.4km az=66.0*

ISC 07 20:55:18.6±0.4, 5.77°S±0.04°×128.78°E±0.05, h300km, n82, σ1s80/95, mb3.9/12, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**1.67**	**42**	P	**Pn**	**20 56 05.4**	**+2.5**
AAI	**Ambon**	**2.15**	**344**	P	**Pn**	**20 56 07.1**	**+0.5**
AAI				S	**S**	**20 56 43.5**	**-1.4**
MSAI	**Masohi**	**2.41**	**3**	P	**Pn**	**20 56 07.7**	**-1.2**
MSAI				S	**S**	**20 56 46.9**	**-2.1**
NLAI	**Namlea**	**3.02**	**326**	P	**Pn**	**20 56 16.8**	**+2.2**
NLAI				S	**S**	**20 56 59.7**	**+0.3**
SAUI	**Saumlaki**	**3.33**	**132**		**Pn**	**20 56 19.6**	**+1.9**
SAUI	**Saumlaki**	**3.33**	**132**	P	**Pn**	**20 56 16.6**	**-1.1**
SAUI				S	**S**	**20 57 02.1**	**-2.8**
SAUI	**Saumlaki**	**3.33**	**132**	P	**Pn**	**20 56 21.2**	**+3.5**
FAKI	**Fak Fak**	**4.47**	**51**		**Pn**	**20 56 31.0**	**+0.9**
FAKI				Sn	**S**	**20 57 22.8**	**-4.6**
FAKI	**Fak Fak**	**4.47**	**51**	P	**Pn**	**20 56 30.1**	**0.0**
FAKI				S	**S**	**20 57 23.2**	**-4.2**
SANI	**Sanana**	**4.63**	**323**	P	**Pn**	**20 56 31.8**	**-0.1**
SANI				S	**S**	**20 57 25.9**	**-4.9**
SANI	**Sanana**	**4.63**	**323**	P	**Pn**	**20 56 32.8**	**+0.9**
LBMI	**Labuha**	**5.25**	**346**	P	**Pn**	**20 56 40.5**	**+1.3**
	0.2nm34nm,0.8s						
LBMI				S	**S**	**20 57 40.2**	**-3.8**
	0.2nm34nm,0.8s						
SIJI	**Sorong**	**5.46**	**27**	P	**Pn**	**20 56 41.8**	**+0.2**
	9.7nm,0.3s,baz=228,slow=21,SNR=12						
SIJI				S	**S**	**20 57 45.5**	**-2.8**
	69nm,0.2s,baz=211,slow=19,SNR=25						
SWI	**Sorong**	**5.46**	**27**	P	**Pn**	**20 56 41.9**	**+0.3**
	0.6nm1μm20nm,0.7s						
SOEI	**Soe**	**5.98**	**228**		**Pn**	**20 56 48.9**	**+1.1**
SOEI				Sn	**S**	**20 57 56.0**	**-3.6**
SOEI	**Soe**	**5.98**	**228**	P	**Pn**	**20 56 49.1**	**+1.3**
	0.3nm70nm,0.6s						
SOEI	**Soe**	**5.98**	**228**	P	**Pn**	**20 56 49.5**	**+1.7**
BBSI	**Bau Bau**	**6.19**	**272**	P	**Pn**	**20 56 52.7**	**+2.5**
	0.0nm67nm8.1nm,0.9s						
TNTI	**Ternate**	**6.65**	**348**	P	**Pn**	**20 56 58.2**	**+2.4**
	0.1nm9.8nm,0.6s						
BATI	**Baumata**	**6.72**	**229**	P	**Pn**	**20 56 57.6**	**+1.0**
	82nm,0.4s,baz=102,slow=2.3,SNR=47						
BATI				S	**S**	**20 58 13.4**	**-2.4**
	55nm,0.6s,baz=36,slow=19,SNR=8.5						
BATI	**Baumata**	**6.72**	**229**	P	**Pn**	**20 56 57.8**	**+1.2**
	0.3nm57nm,0.5s						
MMRI	**Maumere**	**7.09**	**246**	Pn	**Pn**	**20 57 00.5**	**-0.6**
MMRI	**Maumere**	**7.09**	**246**	P	**Pn**	**20 57 02.6**	**+1.5**
	0.1nm32nm,0.8s						
MTN	**Manton Dam**	**7.40**	**162**		**Pn**	**20 57 05.3**	**+0.4**
MTN				Sn	**S**	**20 58 28.8**	**-2.2**
MTN	**Manton Dam**	**7.40**	**162**	P	**Pn**	**20 57 05.5**	**+0.6**
EDFI	**Ende, Flores**	**7.63**	**247**	P	**Pn**	**20 57 09.2**	**+1.3**
	0.0nm6.5nm,0.7s						
KDU	**Kakadu**	**7.78**	**152**	P	**Pn**	**20 57 10.1**	**+0.6**
BSSI	**Bau Bau, Buton**	**8.26**	**267**	P	**Pn**	**20 57 16.5**	**+1.1**
	31nm,0.9s						
BKSI	**Bulukumba**	**8.63**	**273**	P	**Pn**	**20 57 20.6**	**+0.6**
	23nm,0.9s						
BNSI	**Bone**	**8.75**	**279**	P	**Pn**	**20 57 22.9**	**+1.4**
	11nm,0.7s						
SPSI	**Sidrap Palu**	**9.16**	**281**	P	**Pn**	**20 57 28.4**	**+1.9**
	28nm,0.8s						
TTSI	**Tana Toraja**	**9.34**	**286**	P	**Pn**	**20 57 30.5**	**+1.8**
	15nm,0.8s						
KNRA	**Kununurra**	**9.85**	**180**		**Pn**	**20 57 35.4**	**+0.5**
KNRA				Sn	**S**	**20 59 22.4**	**-3.7**
KNRA	**Kununurra**	**9.85**	**180**	P	**Pn**	**20 57 35.2**	**+0.3**
SGSI	**Sangihe**	**9.94**	**341**	P	Pn	20 57 31.4	-4.7
WBSI	**Waikabubak, Su**	**10.07**	**247**	P	**Pn**	**20 57 35.9**	**-1.8**
TOLI2	**Tolitoli**	**10.52**	**310**	P	**Pn**	**20

GENI	**Genyem**	**11.78**	**75**	P		**Pn**	**20 57 57.6**	**-1.0**
	46nm,0.8s							
BBKI	**Banjar Baru**	**14.09**	**279**	P		**P**	**20 58 26.6**	**+0.9**
	8μm23nm,0.9s							
WB0	**Warramunga Arr**	**14.95**	**159**	P		**P**	**20 58 35.9**	**+0.7**
WB0				IAmb		IAmb	20 58 37.9	
	comp=Z,12nm,0.6s							
WRAB	**Tennant Creek**	**15.08**	**159**	P		**P**	**20 58 37.5**	**+0.8**
WRAB	**Tennant Creek**	**15.08**	**159**	P		**P**	**20 58 37.7**	**+1.0**
WRA	**Warramunga Arr**	**15.09**	**160**	P		**P**	**20 58 37.5**	**+0.7**
	comp=Z,12nm,0.5s,baz=338,slow=13,SNR=98							
WRA				S		**S**	**21 01 18.0**	**-3.2**
	comp=Z,2.8nm,0.6s,baz=333,slow=21,SNR=6.2							
WRA	**Warramunga Arr**	**15.09**	**160**	P		**P**	**20 58 36.4**	**-0.4**
WB2	**Warramunga Arr**	**15.09**	**159**	P		**P**	**20 58 37.4**	**+0.6**
WB2				IAmb		IAmb	20 58 39.6	
	comp=Z,16nm,0.8s							
WR0	**Warramunga Arr**	**15.18**	**159**	P		**P**	**20 58 38.4**	**+0.7**
WR0				IAmb		IAmb	20 58 41.8	
	comp=Z,20nm,1.3s							
BLJI	**Banyuglugur**	**15.21**	**262**	P		**Pn**	**20 58 40.4**	**+0.8**
COEN	**Coen**	**16.34**	**121**	P		**P**	**20 58 52.1**	**+1.7**
COEN	**Coen**	**16.34**	**121**	P		**P**	**20 58 52.2**	**+1.8**
PWJI	**Pagerwojo**	**17.00**	**261**	P		**P**	**20 58 58.9**	**+1.2**
	comp=Z,23nm,0.7s							
MBWA	**Marble Bar**	**17.64**	**209**	P		**P**	**20 59 03.4**	**-1.1**
PSA00	**Pilbara Seismi**	**17.94**	**208**	P		**P**	**20 59 06.7**	**-1.0**
PSA00	**Pilbara Seismi**	**17.94**	**208**	P		**P**	**20 59 07.7**	**0.0**
PSA00				IAmb		IAmb	20 59 35.2	
	comp=Z,13nm,1.4s							
AS31	**Alice Springs**	**18.46**	**165**	P		**P**	**20 59 13.8**	**+0.4**
AS31				IAmb		IAmb	20 59 15.8	
	comp=Z,5.9nm,0.6s							
ASAR	**Alice Springs**	**18.46**	**165**	P		**P**	**20 59 14.7**	**+1.4**
	comp=Z,8.1nm,0.6s,baz=344,slow=11,SNR=123							
ASAR				S		**S**	**21 02 26.3**	**-1.9**
	comp=Z,9.6nm,0.9s,baz=347,slow=22,SNR=27							
ASAR				ScP		**ScP**	**21 06 34.3**	**-1.6**
	comp=Z,0.8nm,1.1s,baz=352,slow=2.7,SNR=2.4							
ASAR	**Alice Springs**	**18.46**	**165**	P		**P**	**20 59 14.3**	**+1.0**
PMG	**Port Moresby**	**18.57**	**102**	P		**P**	**20 59 18.3**	**+3.8**
	comp=Z,8.4nm,0.6s,baz=282,slow=5.4,SNR=3.8							
CTA	**Charters Tower**	**22.16**	**132**	P		**P**	**20 59 52.4**	**+2.3**
	comp=Z,4.1nm,0.8s,baz=320,slow=10,SNR=10.0							
	comp=Z,4.1nm,0.8s							
CTAO	**Charters Tower**	**22.16**	**132**	P		**P**	**20 59 50.7**	**+0.5**
CTAO				IAmb		IAmb	20 59 54.2	
	comp=Z,7.7nm,1.1s							
CTAO	**Charters Tower**	**22.16**	**132**	P		**P**	**20 59 52.6**	**+2.4**
YULB	**Yu-li**	**29.89**	**346**	P		**P**	**21 00 58.8**	**-0.4**
YULB				IAmb		IAmb	21 01 24.2	
	comp=Z,11nm,1.3s							
TPUB	**Ta-pu**	**29.97**	**345**	P		**P**	**21 00 58.1**	**-1.8**
TPUB				IAmb		IAmb	21 01 00.4	
	comp=Z,24nm,1.3s							
KULM	**Kulim**	**30.16**	**291**	P		**P**	**21 01 03.6**	**+1.8**
KULM				IAmb		IAmb	21 01 11.7	
	comp=Z,4.5nm,1.0s							
YHNB	**Yeheng**	**31.10**	**347**	P		**P**	**21 01 07.6**	**-2.3**
JOW	**Kunigami**	**32.41**	**359**	P		**P**	**21 01 22.0**	**+0.9**
	comp=Z,1.9nm,0.4s,baz=165,slow=13,SNR=1.8							
	comp=Z,1.9nm,0.4s							
JOW	**Kunigami**	**32.41**	**359**	IAmb		IAmb	21 01 40.5	
	comp=Z,26nm,1.4s							
CMAR	**Chiang Mai Arr**	**38.02**	**310**	P		**P**	**21 02 09.2**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=129,slow=7.1,SNR=4.5							
	comp=Z,0.4nm,0.3s							
KSRS	**Korea Array**	**43.01**	**359**	P		**P**	**21 02 50.0**	**+0.9**
	comp=Z,1.2nm,0.5s,baz=177,slow=9.1,SNR=6.0							
	comp=Z,1.2nm,0.5s							
SONM	**Songino Array**	**56.90**	**342**	P		**P**	**21 04 33.2**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=151,slow=6.6,SNR=2.7							
	comp=Z,0.5nm,0.8s							
MK31	**Makanchi Array**	**66.54**	**327**	P		**P**	**21 05 36.3**	**-0.5**
MKAR	**Makanchi Array**	**66.54**	**327**	P		**P**	**21 05 36.7**	**-0.1**
	comp=Z,0.8nm,0.4s,baz=114,slow=8.7,SNR=19							
	comp=Z,0.8nm,0.4s							
MKAR	**Makanchi Array**	**66.54**	**327**	P		**P**	**21 05 36.0**	**-0.8**
MAKZ	**Makanchi**	**66.72**	**327**	P		**P**	**21 05 36.1**	**-1.8**
KDJ	**Kajisay**	**66.86**	**321**	P		**P**	**21 05 38.3**	**-0.8**
SEY	**Seymchan**	**70.83**	**11**	P		**P**	**21 06 03.4**	**+0.7**
	comp=Z,1.2nm,0.6s,baz=165,slow=5.4,SNR=5.2							
	comp=Z,1.2nm,0.6s							
KURK	**Kurchatov**	**70.84**	**329**	P		**P**	**21 06 02.9**	**-0.2**
HRA	**Herat**	**74.25**	**308**	P		**P**	**21 06 22.6**	**-1.1**
HRA				IAmb		IAmb	21 06 23.4	
	comp=Z,2.8nm,0.6s							
TIXI	**Tiksi**	**77.26**	**0**	P		**P**	**21 06 39.1**	**-0.5**
	comp=Z,1.0nm,0.5s,baz=106,slow=10,SNR=9.1							
	comp=Z,1.0nm,0.5s							
TIXI	**Tiksi**	**77.26**	**0**	IAmb		IAmb	21 06 39.4	
	comp=Z,1.1nm,0.5s							
KHU	**Kahuku**	**78.40**	**69**	P		**P**	**21 06 46.9**	**-0.3**
ABKAR	**Akbulak array**	**80.80**	**322**	P		**P**	**21 06 58.1**	**-1.0**

IDC 07 21:03:07.3±2.0, 1°33N×126°21E, h0km, mb3.1/3, mbtmp3.2/3, Error ellipse: s-maj=180.3km s-min=25.9km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.60**	**160**	P	P	21 08 09.9	+0.3
	0.4nm,0.5s,baz=338,slow=11,SNR=5.8						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**25.95**	**164**	P	P	21 08 41.4	-0.3
	0.2nm,0.5s,baz=345,slow=12,SNR=2.0						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**59.23**	**326**	P	P	21 13 10.5	0.0
	0.1nm,0.5s,baz=113,slow=7.1,SNR=3.5						
	0.1nm,0.5s						

THE 07 21:26:37.0, 39.99N×23.64E, h2km±23km, ML1.8/3, Error ellipse: s-maj=23.8km s-min=0.6km az=155.0, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAIG	**Paliouri**	**0.07**	**155**	P	Pg	21 26 38.1	-0.2
PAIG				S	Sg	21 26 39.0	-0.2
	7μm,0.1s						
PLG	**Polygyros**	**0.41**	**339**	P	Pg	21 26 44.8	-0.2
PLG				S	Sg	21 26 50.5	+0.1
	120nm,0.4s						
OUR	**Ouranopolis**	**0.43**	**37**	P	Pg	21 26 45.5	+0.2
OUR				S	Sg	21 26 51.6	+0.7
	80nm,0.3s						
NEO	**Neokhori**	**0.75**	**206**	P	Pg	21 26 51.3	-0.1
SOH	**Sokhos**	**0.86**	**345**	P	Pg	21 26 53.3	-0.2
THAS	**Thassos island**	**1.03**	**53**	P	Pg	21 26 56.2	-0.5
KAVA	**Kavala**	**1.21**	**33**	P	Pg	21 26 58.8	-1.3

ATH 07 21:27:30.5, 39.14N×24.19E, h9km±5km, ML1.9/2, Error ellipse: s-maj=6.1km s-min=1.3km az=250.0, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ALNA	**Alonissos**	**0.25**	**271**	P	Pg	21 27 35.2	-0.4
ALNA				S	Sg	21 27 38.8	-0.1
ALNA				AML	AML	21 27 41.0	
	comp=E,747μm,0.6s						
ALNA				AML	AML	21 27 41.6	
	comp=N,836μm,0.6s						
KYMI	**Kymi, Euboea I**	**0.51**	**188**	P	Pg	21 27 40.0	-0.4
KYMI				S	Sg	21 27 48.0	+0.8
NEO	**Neokhori**	**0.77**	**283**	P	Pg	21 27 45.5	+0.1
NEO				S	Sg	21 27 55.7	+0.3
NEO				AML	AML	21 27 57.2	
	comp=E,185μm,0.2s						
NEO				AML	AML	21 27 57.6	
	comp=N,262μm,0.3s						
XOR	**Xorichti**	**0.81**	**286**	P	Pg	21 27 46.0	-0.1
XOR				S	Sg	21 27 56.8	+0.2
PAIG	**Paliouri**	**0.88**	**333**	P	Pg	21 27 47.1	-0.3
DION	**Dionisos Attik**	**1.08**	**191**	P	Pg	21 27 50.4	-0.8

*IDC **07** 21:35:44.0±1.0, 21°.24S×179°.63W, h0km, mb4.4/7, mbtmp4.5/8, ML4.3/1, Error ellipse: s-maj=52.8km s-min=20.0km az=151.0*
*NEIC **07** 21:36:37.4±1.9, 23°.4S±0°.1×179°.6W±0°.1, h534km±10km, mb4.4/36, Error ellipse: s-maj=19.3km s-min=16.9km az=83.0*

ISC 07 21:36:36.8±0.6, 23°.29S±0°.10×179°.67W±0°.09, h534km, n59, σ1s12/59, mb4.4/26, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**11.52**	**277**	P	**P**	**21 39 12.0**	**+1.6**
PINNC	**Pines Island,**	**11.89**	**271**	P	**P**	**21 39 16.5**	**+2.2**
DZM	**Mont Dzumac**	**12.88**	**273**	P	**P**	**21 39 27.1**	**+2.4**
URZ	**Urewera**	**15.18**	**190**	P	**P**	**21 39 45.6**	**-2.6**
	1.1nm,0.3s,baz=80,slow=18,SNR=2.2						
	7.3nm,0.5s						
URZ	**Urewera**	**15.18**	**190**	P	**P**	**21 39 46.2**	**-2.0**
URZ				IAmb	IAmb	21 40 07.5	
	comp=Z,24nm,1.1s						
BFZ	**Birch Farm**	**17.68**	**190**	P	**P**	**21 40 10.4**	**-2.0**
ARMA	**Armidale**	**26.53**	**248**	P	**P**	**21 41 33.1**	**+1.0**
ARMA				IAmb	IAmb	21 41 45.3	
	comp=Z,30nm,1.4s						
EIDS	**Eidsvold**	**26.71**	**260**	P	**P**	**21 41 34.0**	**+0.3**
EIDS				IAmb	IAmb	21 41 35.1	
	comp=Z,8.4nm,0.8s						
CAN	**Canberra**	**29.71**	**239**	P	**P**	**21 42 00.7**	**+0.9**
CAN				IAmb	IAmb	21 42 01.8	
	comp=Z,12nm,0.6s						
CTAO	**Charters Tower**	**31.78**	**269**	P	**P**	**21 42 18.2**	**+0.6**
TOO	**Toolangi**	**33.04**	**236**	P	**P**	**21 42 28.6**	**+0.5**
TOO				IAmb	IAmb	21 42 32.4	
	comp=Z,7.7nm,0.8s						
TAU	**Tasmania Unive**	**33.58**	**226**	P	**P**	**21 42 32.8**	**+0.3**
PMG	**Port Moresby**	**34.59**	**288**	P	**P**	**21 42 41.3**	**-0.1**
STKA	**Stephens Creek**	**35.24**	**247**	P	**P**	**21 42 47.2**	**+0.6**
	comp=Z,7.1nm,0.6s,baz=90,slow=9.6,SNR=20						
	comp=Z,7.1nm,0.6s						
STKA	**Stephens Creek**	**35.24**	**247**	P	**P**	**21 42 46.9**	**+0.2**
COEN	**Coen**	**36.33**	**278**	P	**P**	**21 42 55.8**	**-0.1**
COEN				IAmb	IAmb	21 42 57.8	
	comp=Z,5.1nm,0.8s						
BBOO	**Buckleboo**	**39.97**	**246**	P	**P**	**21 43 24.8**	**-0.5**
AS31	**Alice Springs**	**42.44**	**260**	P	**P**	**21 43 44.6**	**-0.4**
ASAR	**Alice Springs**	**42.44**	**260**	P	**P**	**21 43 44.8**	**-0.2**
	comp=Z,17nm,0.8s,baz=93,slow=8.2,SNR=123						
	comp=Z,17nm,0.8s						
ASAR	**Alice Springs**	**42.44**	**260**	P	**P**	**21 43 44.4**	**-0.7**
WB0	**Warramunga Arr**	**42.75**	**266**	P	**P**	**21 43 46.5**	**-0.9**
WRA	**Warramunga Arr**	**42.76**	**265**	P	**P**	**21 43 46.5**	**-1.1**
	comp=Z,13nm,0.6s,baz=92,slow=8.3,SNR=340						
	comp=Z,13nm,0.6s						
WRA	**Warramunga Arr**	**42.76**	**265**	P	**P**	**21 43 46.3**	**-1.3**
SMPI	**Sarmi**	**45.53**	**292**	P	P	21 44 02.1	-6.9
MTN	**Manton Dam**	**47.72**	**274**	P	**P**	**21 44 24.5**	**-1.1**
MTN				IAmb	IAmb	21 44 25.6	
	comp=Z,15nm,1.1s						
KNRA	**Kununurra**	**49.00**	**269**	P	**P**	**21 44 34.6**	**-0.4**
SWI	**Sorong**	**52.54**	**288**	P	**P**	**21 45 00.4**	**-0.5**
	comp=Z,61nm,0.8s						
VNDA	**Vanda**	**55.01**	**185**	P	**P**	**21 45 19.1**	**+1.8**
SOEI	**Soe**	**55.10**	**274**	P	**P**	**21 45 19.5**	**+0.3**
SOEI				IAmb	IAmb	21 45 21.0	
	comp=Z,33nm,0.9s						
SOEI	**Soe**	**55.10**	**274**	P	**P**	**21 45 20.2**	**+1.1**
	comp=Z,36nm,0.9s						
PSA00	**Pilbara Seismi**	**55.58**	**259**	P	**P**	**21 45 20.6**	**-1.7**
PSA00				IAmb	IAmb	21 45 34.2	
	comp=Z,22nm,1.5s						
PSA00	**Pilbara Seismi**	**55.58**	**259**	P	**P**	**21 45 21.0**	**-1.2**
PSA00				IAmb	IAmb	21 45 50.3	
	comp=Z,26nm,1.3s						
NWAO	**Narrogin (SRO)**	**55.77**	**245**	P	**P**	**21 45 22.4**	**-0.9**
MBWA	**Marble Bar**	**55.78**	**260**	P	**P**	**21 45 22.6**	**-1.0**
MBWA				IAmb	IAmb	21 45 32.4	
	comp=Z,30nm,1.3s						
SANI	**Sanana**	**56.66**	**284**	P	**P**	**21 45 28.4**	**-1.4**
	comp=Z,12nm,0.7s						
MORW	**Morawa**	**57.37**	**249**	P	**P**	**21 45 33.7**	**-0.8**
EDFI	**Ende, Flores**	**57.83**	**274**	P	**P**	**21 45 37.4**	**-0.5**
	comp=Z,13nm,1.2s						
MPSI	**Mapaga**	**63.17**	**283**	P	**P**	**21 46 11.9**	**-1.1**
QSPA	**South Pole Qui**	**66.79**	**180**	P	**P**	**21 46 36.5**	**+1.3**
BELA	**Belgrano 2**	**77.00**	**173**	P	**P**	**21 47 34.3**	**+0.1**
MAW	**Mawson**	**78.43**	**200**	P	**P**	**21 47 42.6**	**+0.6**
CMB	**Columbia Colle**	**82.55**	**43**	P	**P**	**21 48 04.8**	**+0.9**
GSI	**Gunungsitoli**	**83.86**	**274**	P	**P**	**21 48 10.8**	**-0.2**
GSI				IAmb	IAmb	21 48 20.7	
	comp=Z,9.5nm,1.1s						
NVAR	**Mina Array Bea**	**84.10**	**44**	P	**P**	**21 48 09.8**	**-2.0**
	comp=Z,0.5nm,0.6s,baz=230,slow=7.0,SNR=5.5						
	comp=Z,0.5nm,0.6s						
NVAR	**Mina Array Bea**	**84.10**	**44**	P	**P**	**21 48 12.3**	**+0.5**
SNAA	**Sanae**	**85.27**	**179**	P	**P**	**21 48 16.3**	**-0.6**
N19K	**Bonanza Creek**	**86.26**	**12**	P	**P**	**21 48 20.8**	**-0.8**
N19K				IAmb	IAmb	21 48 25.7	
	comp=Z,5.6nm,1.2s						
U15A	**North Rim**	**86.97**	**48**	P	**P**	**21 48 26.5**	**+0.7**
U15A				IAmb	IAmb	21 48 28.5	
	comp=Z,3.5nm,1.0s						
SUA	**Susitna One**	**87.61**	**13**	P	**P**	**21 48 27.9**	**0.0**
SUA				IAmb	IAmb	21 48 28.5	
	comp=Z,6.6nm,0.9s						
G08A	**Pilot Rock**	**87.76**	**38**	P	**P**	**21 48 30.2**	**+1.2**
G08A				IAmb	IAmb	21 48 30.9	
	comp=Z,3.9nm,1.0s						
SCM	**Sheep Creek Mo**	**88.70**	**15**	P	**P**	**21 48 32.7**	**-0.3**
SCM				IAmb	IAmb	21 48 33.7	
	comp=Z,5.9nm,0.8s						
HVU	**Hansel Valley**	**89.48**	**43**	P	**P**	**21 48 38.1**	**+0.9**
HVU				IAmb	IAmb	21 48 39.5	
	comp=Z,9.5nm,1.5s						
CMAR	**Chiang Mai Arr**	**89.60**	**290**	P	**P**	**21 48 39.0**	**+1.0**
	comp=Z,2.0nm,0.9s,baz=136,slow=3.2,SNR=8.7						
	comp=Z,2.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**89.60**	**290**	P	**P**	**21 48 38.7**	**+0.6**
TXAR	**Lajitas Array**	**89.85**	**58**	P	**P**	**21 48 39.8**	**+0.7**
	comp=Z,1.1nm,0.7s,baz=212,slow=6.1,SNR=12						
	comp=Z,1.1nm,0.7s						
TXAR	**Lajitas Array**	**89.85**	**58**	P	**P**	**21 48 40.4**	**+1.3**
PDAR	**Pinedale Array**	**92.04**	**44**	P	**P**	**21 48 48.6**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=180,slow=1.3,SNR=4.5						
	comp=Z,0.5nm,0.5s						
CLL	**Collm**	**150.36**	**344**	*i* PKPbc	**PKPbc**	**21 55 27.3**	**-0.3**
CLL				*i* PKPab	**PKPab**	**21 55 35.9**	**-0.5**
ESDC	**Sonseca Array**	**163.26**	**12**	PKPab	**PKPab**	**21 56 30.7**	**-1.8**
	comp=Z,0.2nm,0.6s,baz=337,slow=6.1,SNR=4.5						

*ROM **07** 21:40:36.1±0.2, 39°.39N±0°.01×14°.64E±0°.02, h384km±1km, ML3.5/33, Error ellipse: s-maj=2.0km s-min=0.7km az=118.0*
*LDG **07** 21:40:37.0±0.1, 39°.42N×14°.52E, h384km, Ml2.9/17, Error ellipse: s-maj=3.7km s-min=1.7km az=47.0*
*IDC **07** 21:40:40.0±0.6, 39°.64N×14°.31E, h364km±9km, mb3.1/8, mbtmp3.8/18, Error ellipse: s-maj=13.5km s-min=11.9km az=117.0*

ISC 07 21:40:39.3±0.6, 39°.44N±0°.05×14°.50E±0°.05, h365km±6km, n170, σ1s79/201, mb3.3/7, 16C-42D, Tyrrhenian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IFIL	**Filicudi I Eol**	**0.87**	**177**	⇓P	**Pn**	**21 41 26.9**	**+0.5**
IACL	**Alicudi**	**0.91**	**187**	⇓P	**Pn**	**21 41 27.0**	**+0.6**
BULG	**Bulgheria - Ca**	**0.93**	**46**	⇓P	**Pn**	**21 41 27.4**	**+1.0**
BULG				S	**S**	**21 42 04.1**	**-0.3**
BULG				AML	AML		
	comp=E,147μm,0.4s						
BULG				AML	AML		
	comp=N,248μm,0.6s						
LLI	**Lipari**	**1.05**	**160**	P	**Pn**	**21 41 28.3**	**+1.3**
MGR	**Morigerati**	**1.07**	**49**	⇓P	**Pn**	**21 41 27.7**	**+0.8**
MGR				S	**S**	**21 42 04.8**	**-0.4**
MGR				AML	AML		
	comp=E,54μm,0.5s						
MGR				AML	AML		
	comp=N,68μm,0.6s						
CMPR	**Campora**	**1.07**	**35**	⇓P	**Pn**	**21 41 27.7**	**+0.7**
VPL	**Vulcano Piano**	**1.12**	**160**	⇓P	**Pn**	**21 41 28.2**	**+0.9**
CET2	**Cetraro**	**1.13**	**85**	⇓P	**Pn**	**21 41 27.6**	**+0.4**
CET2				S	**S**	**21 42 05.1**	**-0.7**
CET2				AML	AML		
	comp=N,258μm,0.9s						
CET2				AML	AML		
	comp=E,344μm,0.8s						
CUC	**Castrocucco**	**1.16**	**61**	⇓P	**Pn**	**21 41 27.8**	**+0.5**
CUC				AML	AML		
	comp=E,52μm,0.5s						
CUC				AML	AML		
	comp=N,44μm,0.5s						
CUC				AML	AML		
	comp=E,52μm,0.5s						
CDRU	**Civita di Ruta**	**1.22**	**30**	⇓P	**Pn**	**21 41 28.2**	**+0.6**
MMN	**Mormanno**	**1.23**	**68**	P	**Pn**	**21 41 28.2**	**+0.6**
MTSN	**Montesano sull**	**1.27**	**49**	⇓P	**Pn**	**21 41 28.2**	**+0.3**
MTSN				AML	AML		
	comp=N,48μm,1.2s						
MTSN				AML	AML		
	comp=E,43μm,1.6s						
SIRI	**Monte Sirino -**	**1.29**	**54**	⇓P	**Pn**	**21 41 28.3**	**+0.3**
SIRI				AML	AML		
	comp=E,66μm,0.4s						
SIRI				AML	AML		
	comp=N,73μm,1.1s						
MILZ	**Milazzo**	**1.30**	**154**	⇓P	**Pn**	**21 41 28.0**	**0.0**
MILZ				S	**S**	**21 42 07.9**	**+0.8**
MILZ				AML	AML		
	comp=E,266μm,1.1s						
MILZ				AML	AML		
	comp=N,319μm,0.5s						
MILZ				AML	AML		
	comp=N,320μm,0.5s						
MCEL	**Monticello**	**1.34**	**48**	⇓P	**Pn**	**21 41 29.3**	**+1.1**
MCEL				AML	AML		
	comp=N,87μm,0.9s						
MCEL				AML	AML		
	comp=E,94μm,0.5s						
CAR1	**CAROLEI**	**1.34**	**97**	⇓P	**Pn**	**21 41 28.2**	**0.0**
CAR1				S	**S**	**21 42 06.2**	**-1.3**
CAR1				AML	AML		
	comp=N,190μm,0.9s						
CAR1				AML	AML		
	comp=E,169μm,0.4s						
JOPP	**Joppolo**	**1.36**	**127**	⇓P	**Pn**	**21 41 28.4**	**0.0**
JOPP				S	**S**	**21 42 06.6**	**-1.1**
JOPP				AML	AML		
	comp=E,148μm,1.1s						
JOPP				AML	AML		
	comp=N,194μm,0.4s						
MSFR	**San Fratello**	**1.40**	**177**	P	**Pn**	**21 41 29.3**	**+0.6**
MSFR				AML	AML		
	comp=E,54μm,1.1s						
MSFR				AML	AML		
	comp=N,54μm,1.3s						
MSRU	**Castanea**	**1.41**	**146**	⇓P	**Pn**	**21 41 28.5**	**-0.1**
MSRU				S	**S**	**21 42 07.4**	**-0.8**
MSRU				AML	AML		
	comp=E,311μm,0.3s						
MSRU				AML	AML		
	comp=N,417μm,0.4s						
SCHR	**S. Chirico Rap**	**1.43**	**57**	⇓P	**Pn**	**21 41 29.6**	**+0.9**
SCHR				S	**S**	**21 42 09.7**	**+1.3**
SCHR				AML	AML		
	comp=E,64μm,1.3s						
SCHR				AML	AML		
	comp=N,42μm,1.5s						
SCHR				AML	AML		
	comp=N,42μm,1.5s						
SCHR				AML	AML		
	comp=E,64μm,1.3s						
SPS2	**Spezzano della**	**1.43**	**95**	P	**Pn**	**21 41 28.7**	**+0.1**
TDS	**Terranova Siba**	**1.44**	**81**	⇓P	**Pn**	**21 41 29.5**	**+0.9**
TDS				S	**S**	**21 42 08.3**	**0.0**
TDS				AML	AML		
	comp=E,105μm,1.3s						
TDS				AML	AML		
	comp=E,105μm,1.3s						
TDS				AML	AML		
	comp=N,52μm,1.6s						
MCRV	**Calabrutti - M**	**1.44**	**21**	P	**Pn**	**21 41 29.4**	**+0.7**
MPNC	**Port Mandanici**	**1.45**	**152**	⇓P	**Pn**	**21 41 28.7**	**-0.1**
PLLN	**Pollina**	**1.47**	**191**	⇓P	**Pn**	**21 41 29.4**	**+0.4**
GIB	**Gibilmanna**	**1.49**	**195**	⇓P	**Pn**	**21 41 29.4**	**+0.2**
GIB				S	**S**	**21 42 08.6**	**-0.5**
GIB				AML	AML		
	comp=N,232μm,0.4s						
GIB				AML	AML		
	comp=E,188μm,0.6s						
NOV	**Novara**	**1.49**	**160**	⇓P	**Pn**	**21 41 29.8**	**+0.7**
NOV				AML	AML		
	comp=E,292μm,0.9s						
NOV				AML	AML		
	comp=N,324μm,1.0s						
MNO	**Monte Soro**	**1.51**	**174**	P	**Pn**	**21 41 30.8**	**+1.4**
CSLB	**Castelbuono**	**1.54**	**193**	⇓P	**Pn**	**21 41 29.5**	**+0.1**
CSLB				S	**S**	**21 42 09.3**	**-0.2**
CSLB				AML	AML		
	comp=N,47μm,0.6s						
CSLB				AML	AML		
	comp=E,62μm,0.7s						
SOLUN	**Solunto**	**1.54**	**210**	P	**Pn**	**21 41 29.7**	**+0.5**
SOLUN				S	**S**	**21 42 09.3**	**-0.1**
SOLUN				AML	AML		
	comp=N,56μm,0.6s						
SOLUN				AML	AML		
	comp=E,56μm,0.9s						
SOLUN				AML	AML		
	comp=N,56μm,0.6s						
LIO3	**Lioni**	**1.55**	**19**	P	**Pn**	**21 41 29.9**	**+0.7**
CELI	**Celico**	**1.56**	**91**	⇓P	**Pn**	**21 41 30.4**	**+1.0**
CELI				S	**S**	**21 42 09.3**	**-0.4**
CELI				AML	AML		
	comp=N,398μm,1.2s						
CELI				AML	AML		
	comp=N,398μm,1.2s						
CELI				AML	AML		
	comp=E,330μm,1.0s						
MPG	**Monte Pellegri**	**1.56**	**215**	P	**Pn**	**21 41 30.3**	**+0.9**
MPG				S	**S**	**21 42 09.8**	**+0.2**
MPG				AML	AML		
	comp=N,101μm,0.7s						
MPG				AML	AML		
	comp=E,65μm,0.5s						
MSCL	**Scilla**	**1.57**	**140**	P	**Pn**	**21 41 29.2**	**-0.3**
MSCL				AML	AML		
	comp=E,586μm,0.4s						
MSCL				AML	AML		
	comp=N,496μm,0.8s						
AIO	**Antillo**	**1.57**	**158**	P	**Pn**	**21 41 30.3**	**+0.7**
AIO				AML	AML		
	comp=E,198μm,0.2s						
AIO				AML	AML		
	comp=N,266μm,0.5s						
SNAL	**S. Angelo Dei**	**1.58**	**20**	P	**Pn**	**21 41 30.6**	**+1.1**
CEL	**Celeste**	**1.60**	**137**	⇓P	**Pn**	**21 41 29.3**	**-0.4**
CEL

MTTG AML AML
comp=E,208μm,0.7s
GALF Gagliano Caste 1.73 178 P **Pn 21 41 31.8 +1.3**
GALF AML AML
comp=E,92μm,0.7s
GALF AML AML
comp=N,96μm,0.7s
MRB1 Monte Rocchett 1.73 12 P **Pn 21 41 31.1 +0.9**
SERS Sersale 1.75 103 ⇓P **Pn 21 41 30.8 +0.2**
SERS S **S 21 42 09.8 -1.9**
CRAC Craco 1.75 57 P **Pn 21 41 30.7 +0.3**
TIP Timpagrande 1.77 98 ⇓P **Pn 21 41 31.0 +0.4**
TIP S **S 21 42 09.7 -2.2**
ALJA Alia 1.79 199 P **Pn 21 41 32.0 +1.2**
ALJA S **S 21 42 13.3 +1.2**
ALJA AML AML
comp=E,479μm,0.5s
ALJA AML AML
comp=N,491μm,0.5s
ALJA AML AML
comp=N,492μm,0.5s
PIPA Pietrapaola 1.79 88 ⇓P **Pn 21 41 31.4 +0.7**
PIPA S **S 21 42 11.0 -1.0**
PLAC Placanica 1.80 123 ⇓P **Pn 21 41 30.9 0.0**
PLAC S **S 21 42 10.4 -1.8**
PLAC AML AML
comp=E,246μm,0.3s
PLAC AML AML
comp=N,242μm,0.7s
CAGR Agira 1.81 180 P **Pn 21 41 32.4 +1.4**
CAGR AML AML
comp=N,132μm,1.5s
CAGR AML AML
comp=E,130μm,1.4s
RESU Resuttano 1.82 191 ⇓P **Pn 21 41 32.5 +1.4**
RESU AML AML
comp=E,136μm,0.6s
RESU AML AML
comp=N,152μm,0.9s
SOI Samo 1.83 138 ⇓P **Pn 21 41 30.8 -0.2**
SOI AML AML
comp=E,162μm,0.6s
SOI AML AML
comp=N,199μm,0.4s
SOI AML AML
comp=E,161μm,0.6s
SOI AML AML
comp=N,200μm,0.4s
ESML S. M. di Licod 1.84 171 P **Pn 21 41 32.0 +0.9**
LADO San Nicola del 1.93 94 ⇓P **Pn 21 41 31.8 +0.2**
LADO S **S 21 42 11.7 -1.9**
VAE Valguarnera 1.96 182 P **Pn 21 41 35.8 +3.8**
comp=N,12nm,0.4s,baz=315,slow=5.7,SNR=3.9
VAE S **S 21 42 16.8 +2.6**
comp=N,6.5nm,0.6s,baz=38,slow=21,SNR=1.1
EPOZ Pozzillo 1.97 166 P **Pn 21 41 32.0 +0.1**
VAGA Valle Agricola 1.99 354 P **Pn 21 41 33.8 +1.9**
CMDO Montedoro 2.04 195 P **Pn 21 41 34.6 +2.2**
HLNI Lentini 2.11 172 P **Pn 21 41 32.7 -0.1**
BSSO Busso 2.11 2 P **Pn 21 41 34.2 +1.4**
CLTB Caltabellotta 2.11 209 P **Pn 21 41 33.5 +0.5**
LTRZ Laterza 2.13 56 ⇓P **Pn 21 41 32.2 -0.7**
MMGO Monte Magaggia 2.14 214 P **Pn 21 41 33.7 +0.7**
AMUR Altamura 2.18 47 P **Pn 21 41 33.0 -0.3**
HAGA Augusta 2.21 166 ⇓P **Pn 21 41 33.2 -0.4**
MIDA Miranda 2.21 355 P **Pn 21 41 33.6 +0.1**
HVZN Vizzini 2.26 176 P **Pn 21 41 34.3 +0.2**
FAVR Favara 2.26 197 P **Pn 21 41 35.2 +1.2**
CLTA Licata 2.31 191 P **Pn 21 41 35.4 +1.0**
SSY Sortino 2.32 169 P **Pn 21 41 34.7 +0.2**
POFI Posta Fibreno 2.36 345 P **Pn 21 41 35.0 +0.5**
MEU Monte Lauro 2.36 172 P **Pn 21 41 34.8 0.0**
NOCI Noci 2.38 55 P **Pn 21 41 34.5 -0.3**
HMDC Modica 2.48 175 P **Pn 21 41 35.9 +0.2**
HAVL Avola 2.52 169 P **Pn 21 41 36.0 0.0**
MA9 Marino 2.72 330 AML AML
comp=N,96μm,0.6s
MA9 AML AML
comp=E,73μm,0.5s
HPAC Pachino 2.78 170 P **Pn 21 41 38.5 +0.4**
CGL Cagliari Serpe 4.03 271 ⇑P **Pn 21 41 50.0 +0.4**
PGF Pioggiola 5.20 309 *e*P **Pn 21 42 01.0 -0.8**
PGF *e*Sn **S 21 43 10.9 +2.3**
comp=E,0.4nm,0.3s
KEST Kesra 5.52 230 P **Pn 21 42 06.9 +1.5**
comp=E,5.3nm,0.5s,baz=321,slow=5.8,SNR=18
BOVS Bovan 6.84 50 ⇓P **Pn 21 42 21.5 +1.4**
SBF Sospel 6.89 312 *e*P **P 21 42 19.8 -2.2**
SBF *e*Sn **S 21 43 46.5 +3.0**
comp=E,1.5nm,0.4s
FRGS Fruska Gora 6.94 33 ⇑P **Pn 21 42 21.4 +0.2**
OBKA Obir 7.07 0 *e*Pn **Pn 21 42 22.0 -0.8**
comp=E,0.9nm,0.5s
LMR La Mourre 7.16 306 *e*P **P 21 42 22.5 -2.5**
LMR *e*Sn **S 21 43 52.1 +3.2**
comp=E,1.4nm,0.7s
SOKA Soboth 7.25 3 *e*Pn **Pn 21 42 23.7 -1.1**
comp=E,1.9nm,0.9s
MORH Mrgy, Hungar 7.42 23 ⇑P **Pn 21 42 26.9 +0.1**
ABTA Abfaltersbach 7.45 349 *e*Pn **P 21 42 26.7 -1.7**
comp=E,1.4nm,0.5s
MBDF Montbardon 7.81 315 *e*P **P 21 42 31.2 -1.3**
MBDF *e*Sn **S 21 44 06.5 +3.5**
comp=E,0.9nm,0.3s
PUNG Punghina 7.93 50 ⇑P **Pn 21 42 34.4 +1.7**
FETA Feichten 8.06 341 *e*Pn **P 21 42 33.8 -2.8**
comp=E,9.1nm,1.1s,SNR=8.2
SMRF Simiane la Rot 8.07 307 *e*P **P 21 42 33.9 -2.7**
SMRF *e*Sn **S 21 44 12.2 +3.7**
comp=E,0.2nm,0.3s
DAVOX Davos/Dischmat 8.08 337 P **P 21 42 33.7 -3.0**
comp=E,4.9nm,0.4s,baz=119,slow=21,SNR=13
WTTA Wattenberg 8.10 346 *e*Pn **Pn 21 42 33.9 -0.9**
comp=E,3.4nm,0.9s
SQTA Sankt Quirin 8.14 344 *e*Pn **Pn 21 42 34.0 -1.3**
comp=E,4.1nm,0.5s,SNR=5.1
WATA Walderalm 8.18 346 *e*Pn **Pn 21 42 34.4 -1.3**
comp=E,3.5nm,0.7s
BIOA Bad Ischl, Aus 8.28 356 *e*Pn **Pn 21 42 35.6 -1.2**
comp=E,0.7nm,0.3s
MOTA Moosalm 8.28 344 *e*Pn **Pn 21 42 35.7 -1.3**
comp=E,1.1nm,0.5s
LPG La Plagne 8.33 319 *e*P **P 21 42 37.6 -2.1**
LPG *e*Sn **S 21 44 18.3 +3.7**
comp=E,1.9nm,0.5s
LPL La Plagne 8.36 319 *e*P **P 21 42 37.5 -2.4**
MOA Molln 8.41 359 *e*Pn **P 21 42 38.8 -1.5**
comp=E,4.5nm,0.4s,SNR=14
ORIF Oris-en-Rattie 8.42 313 *e*P **P 21 42 37.5 -3.0**
RETA Reutte 8.49 343 *e*Pn **Pn 21 42 37.3 -2.0**
comp=E,1.9nm,0.6s
VIVF Saint-Julien-l 9.09 310 *e*P **P 21 42 45.3 -2.6**
VIVF *e*Sn S 21 44 34.8 +4.3
comp=E,0.7nm,0.3s
LASF Ste Croix 9.20 304 *e*P **P 21 42 46.7 -2.5**
IDI Anoyia 9.25 113 ⇑P **P 21 42 52.3 +2.5**
IDI Anoyia 9.25 113 P **P 21 42 52.0 +2.2**
comp=E,6.6nm,0.5s,baz=302,slow=18,SNR=15
GERES GERESS Array B 9.42 357 P **P 21 42 49.6 -2.0**
comp=E,0.6nm,0.5s,baz=165,slow=8.1,SNR=9.3
CABF La Chapelle 9.45 322 *e*P **P 21 42 48.9 -3.0**
CABF *e*Sn **S 21 44 42.8 +4.4**
comp=E,2.6nm,0.7s
DRGR 9.48 37 ⇓P **P 21 42 52.6 +0.3**
VOIR 9.83 49 ⇓P **P 21 42 58.1 +2.0**
MTLF Montolieu 10.02 297 *e*P **P 21 42 56.3 -1.9**
HINF Hinteralfeld 10.04 329 *e*P **P 21 42 56.5 -1.9**
HINF *e*Sn **S 21 44 56.2 +5.2**
comp=E,2.9nm,0.6s
CDF Champ du Feu 10.37 332 *e*P **P 21 43 00.5 -1.6**
CDF *e*Sn S 21 45 03.7 +5.5
comp=E,0.8nm,0.3s
MLR Muntele Rosu 10.39 51 ⇑P **P 21 43 05.2 +2.7**
MLR Muntele Rosu 10.39 51 P **P 21 43 04.0 +1.5**
comp=E,28nm,1.0s,baz=270,slow=8.1,SNR=29
HAU Haudompre 10.39 328 *e*P **P 21 43 00.5 -1.8**
NEHR Nehoiu 10.57 52 ⇑P **Pn 21 43 07.1 +3.2**
ISR Istrita 10.57 54 ⇓P **Pn 21 43 07.6 +3.6**
SMF Signal de Mont 10.61 316 *e*P **P 21 43 01.7 -3.1**
BISRR Bisoca 10.88 52 ⇓P **Pn 21 43 11.4 +3.8**
AVF Avril sur Loir 10.96 316 *e*P **Pn 21 43 06.4 -2.1**
AVF *e*Sn S 21 45 17.4 +6.4
comp=E,0.4nm,0.3s
PLOR Plostina 11.00 50 ⇑P **Pn 21 43 12.2 +3.2**
LOR Lormes 11.01 319 *e*P **Pn 21 43 06.4 -2.6**
SSF Saint Saulge 11.05 317 *e*P **Pn 21 43 07.1 -2.5**
SSF *e*Sn S 21 45 19.4 +6.5
comp=E,0.3nm,0.3s
VRI Vrincioaia 11.05 51 ⇑P **Pn 21 43 12.8 +3.2**
PAGF Fort de Pagny 11.08 328 *e*P **Pn 21 43 08.9 -1.0**
BGF Bois d'Agland 11.11 314 *e*P **Pn 21 43 08.9 -1.3**
BGF *e*Sn S 21 45 20.6 +6.6
comp=E,1.9nm,0.4s
SFTF Sexfontaines 11.11 325 *e*P **Pn 21 43 08.8 -1.4**
ODBI Odobesti 11.20 52 ⇑P **Pn 21 43 13.8 +2.5**
RJF Les Rejaudoux 11.25 306 *e*P **Pn 21 43 11.0 -0.9**
HARR Harsova 11.27 58 ⇓P **Pn 21 43 14.5 +2.3**
TCF Toulx Ste Croi 11.32 311 *e*P **Pn 21 43 11.7 -1.0**
TCF *e*Sn S 21 45 25.5 +6.8
comp=E,0.1nm,0.2s
MEZF Maizieres J'vi 11.32 326 *e*P **Pn 21 43 12.0 -0.7**
SAVF Savonnieres en 11.38 327 *e*P **Pn 21 43 12.5 -0.9**
GHRR 11.56 51 ⇑P **Pn 21 43 18.3 +2.8**
LFF La Frestale 11.59 303 *e*P **Pn 21 43 15.1 -0.8**
CFR Carcaliu 11.61 56 ⇑P **Pn 21 43 17.9 +1.8**
TPGR Topolog 11.66 58 ⇑P **Pn 21 43 19.3 +2.5**
ETSF Etsaut 11.87 292 *e*P **Pn 21 43 18.2 -1.1**
TLCR 12.05 57 ⇑P **Pn 21 43 24.6 +3.3**
SJPF Ste Jean 12.39 292 *e*P **Pn 21 43 24.1 -1.3**
MILM Milestii Mici 12.83 50 *e*P **P 21 43 30.0 +0.7**
comp=E,20nm,0.4s
MILM Milestii Mici 12.83 50 ⇑P **Pn 21 43 32.2 +1.7**
MFF Saint Martin d 12.88 309 *e*P **Pn 21 43 29.7 -1.3**
BAIF Baives 12.88 329 *e*P **Pn 21 43 28.4 -2.6**
SORM Soroca 13.24 44 ⇓P **Pn 21 43 37.5 +2.3**
LDF La Druitiere 13.93 316 *e*P **Pn 21 43 39.8 -3.4**
GRR Gorron 14.21 314 *e*P **Pn 21 43 42.4 -4.1**
FLN La Foliniere 14.22 316 *e*P **Pn 21 43 42.9 -3.6**
ESDC Sonseca Array 14.25 277 P **Pn 21 43 44.7 -2.4**
comp=E,1.8nm,0.5s,baz=74,slow=11,SNR=25
BRTR Keskin Array B 14.77 83 P **P 21 43 52.1 +1.3**
comp=E,3.0nm,0.8s,baz=255,slow=9.8,SNR=6.6
SGMF Saint Gilles 15.11 311 *e*P **Pn 21 43 52.1 -4.7**
AKASG Malin Array Be 15.30 38 P **P 21 43 55.8 -0.5**
comp=E,1.9nm,0.3s,baz=233,slow=9.1,SNR=18
QUIF Quistinic 15.31 309 *e*P **Pn 21 43 55.7 -3.4**
ROSF Rostrenen 15.57 311 *e*P **P 21 43 56.9 -2.3**
MDT Midelt 16.78 253 P **Pn 21 44 11.9 -4.6**
comp=E,1.6nm,0.8s,baz=97,slow=6.4,SNR=3.9
EKA Eskdalemuir Ar 19.80 329 P **P 21 44 41.2 -2.8**
comp=E,1.2nm,0.3s,baz=140,slow=11,SNR=28
HFS Hagfors 20.72 359 P **P 21 44 50.7 -1.8**
comp=E,2.8nm,0.4s,baz=186,slow=12,SNR=23
comp=E,2.8nm,0.4s
NB2 NORSAR Subarra 21.72 356 P **P 21 45 00.9 -0.7**
comp=Z,1.4nm,0.6s,baz=170,slow=10
NOA NORSAR Array B 21.72 356 P **P 21 45 00.3 -1.3**
comp=Z,0.4nm,0.4s,baz=167,slow=10.0,SNR=4.8
comp=Z,0.4nm,0.4s
FINES FINESS Array B 23.16 14 P **P 21 45 13.2 -1.3**
comp=Z,0.8nm,0.7s,baz=188,slow=10.0,SNR=5.2
comp=Z,0.8nm,0.7s
TORD Torodi Ar. Bea 28.53 207 P **P 21 46 04.5 +1.6**
comp=Z,0.7nm,0.4s,baz=18,slow=9.4,SNR=18
comp=Z,0.7nm,0.4s
KURBB Kurchatov Arra 45.27 54 P **P 21 48 22.4 +0.7**
comp=Z,0.4nm,0.4s,baz=287,slow=9.9,SNR=5.6
comp=Z,0.4nm,0.4s
ZALV Zalesovo Beam 48.36 48 P **P 21 48 45.8 +0.5**
comp=Z,0.4nm,0.4s,baz=289,slow=8.3,SNR=1.8
comp=Z,0.4nm,0.4s
MKAR Makanchi Array 48.64 58 P **P 21 48 48.4 +0.8**
comp=Z,0.7nm,0.4s,baz=286,slow=6.8,SNR=17
comp=Z,0.7nm,0.4s
SCHQ Schefferville 54.30 315 P **P 21 49 28.8 -0.1**
comp=Z,1.3nm,0.3s,baz=71,slow=8.0,SNR=5.8
comp=Z,1.3nm,0.3s

IDC 07 21:54:47.0±1.4, 5°87S×128°84E, h309km±21km, mb2.7/1, mbtmp4.1/5, Error ellipse: s-maj=32.0km s-min=16.3km az=102.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.53**	**26**	P	Pn	21 56 12.8	+1.8
	11nm,0.3s,baz=198,slow=20,SNR=21						
SIJI				S	S	21 57 18.3	-0.5
	12nm,0.2s,baz=212,slow=19,SNR=10						
BATI	**Baumata**	**6.69**	**230**	P	Pn	21 56 24.1	-0.8
	44nm,0.4s,baz=82,slow=3.9,SNR=11						
WRA	**Warramunga Arr**	**14.98**	**160**	P	P	21 58 03.3	-0.2
	1.9nm,0.6s,baz=342,slow=12,SNR=26						
WRA				S	S	22 00 42.1	-4.5
	0.4nm,0.7s,baz=342,slow=21,SNR=2.4						
ASAR	**Alice Springs**	**18.36**	**165**	P	P	21 58 40.3	+0.2
	3.3nm,0.6s,baz=345,slow=11,SNR=31						
ASAR				S	S	22 01 48.9	-4.7
	1.7nm,1.0s,baz=346,slow=22,SNR=6.4						
MKAR	**Makanchi Array**	**66.65**	**327**	P	P	22 05 04.9	-0.2
	0.1nm,0.4s,baz=123,slow=5.3,SNR=2.8						
	0.1nm,0.4s						

*TEH **07** 22:04:27.6, 37°.45N×57°.53E, h8km, ML4.1*
*IDC **07** 22:04:28.7±1.2, 37°.54N×57°.33E, h0km, mb3.7/11, mbtmp3.7/18, ML3.3/6, MS3.5/1, Error ellipse: s-maj=22.3km s-min=7.6km az=165.0*
*NNC **07** 22:04:29.4±2.7, 37°.82N×57°.25E, h0km, mb3.9, Error ellipse: s-maj=27.9km s-min=9.4km az=17.0*
ISC 07 22:04:29.7±0.5, 37°.46N±0°.04×57°.55E±0°.04, h14km, n102, σ1s88/103, mb3.7/11, 3C-8D, Iran-Turkmenistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BJRD	**Bojnurd**	**0.26**	**334**	*e*Pg	**Pg**	**22 04 34.6**	**-0.8**
ISFR	**Sfrayin**	**0.54**	**139**	*e*Pg	**Pg**	**22 04 38.9**	**-1.5**
ISFR				*e*Sg	**Sg**	**22 04 47.3**	**-0.4**
ISFR				*e*		22 04 49.2	
	comp=Z,89μm,0.2s						
GEYT	**Alibeck**	**0.65**	**44**	Pg	**Pg**	**22 04 42.5**	**+0.2**
	comp=Z,95nm,0.3s,baz=206,slow=18,SNR=909						
GEYT				LR		22 04 50.1	
	comp=Z,201nm,19.7s,baz=123,slow=29						
GEYT				Lg	Lg	22 04 53.3	
	comp=Z,593nm,0.3s,baz=209,slow=46,SNR=16						
GYA0	**ALIBECK ARRAY**	**0.65**	**44**	P	**Pg**	**22 04 42.4**	**+0.1**
GYA0B	**ALIBECK ARRAY**	**0.65**	**44**	S	**Sg**	**22 04 53.3**	**+2.4**
IEMG	**Emamgholi**	**0.88**	**93**	*e*Pg	**Pg**	**22 04 45.1**	**-1.6**
SBZV	**Sabzevar**	**1.07**	**177**	*e*Pg	**Pb**	**22 04 48.1**	**-2.0**
MRVT	**Maraveh tapeh**	**1.18**	**280**	*e*Pg	**Pn**	**22 04 49.7**	**-2.1**
MRVT				*e*Sg	**Sb**	**22 05 07.3**	**+0.3**
MRVT				*e*		22 05 14.5	
	comp=Z,99nm,0.2s						
IAKL	**Akhelmad**	**1.29**	**131**	*e*Pg	**Pn**	**22 04 52.2**	**-1.4**
IAKL				*e*		22 04 56.4	
	comp=Z,40μm,0.2s						
IPAY	**Payeh**	**1.54**	**131**	*e*Pn	**Pn**	**22 04 56.1**	**-0.8**
IPAY				*e*		22 05 26.3	
	comp=Z,37μm,0.2s						
IKRD	**Kardeh**	**1.71**	**113**	*e*Pn	**Pn**	**22 05 00.0**	**+0.7**
IKRD				*e*		22 05 31.7	
	comp=Z,19μm,0.2s						
IMND	**Minoodasht**	**1.72**	**264**	*e*Pn	**Pn**	**22 04 59.5**	**+0.3**
IMND				*e*		22 05 35.7	
	comp=Z,21μm,0.8s						
SHRO	**Shahrood**	**1.92**	**221**	*e*Pn	**Pn**	**22 05 02.7**	**+0.6**
IMOG	**Moghan**	**1.97**	**133**	*e*Pn	**Pn**	**22 05 03.8**	**+0.9**
IMOG				*e*		22 05 46.3	
	comp=Z,14μm,0.8s						
IMYA	**Miami**	**2.33**	**118**	*e*Pn	**Pn**	**22 05 09.3**	**+1.6**
TBHD	**Torbat heydari**	**2.45**	**146**	*e*Pn	**Pn**	**22 05 10.6**	**+1.1**
IGLO	**Ghaloghah**	**3.13**	**253**	*e*Pn	**Pn**	**22 05 19.3**	**+0.5**
IGLO				*e*		22 06 35.7	
	comp=Z,7μm,0.8s						
TBJM	**Torbat-e-JAM**	**3.13**	**134**	*e*Pn	**Pn**	**22 05 20.3**	**+1.5**
IANJ	**Anjilo**	**3.54**	**237**	*e*Pn	**Pn**	**22 05 25.2**	**+0.7**
IANJ				*e*		22 06 36.2	
	comp=Z,3μm,1.0s						
TNSJ	**Nastanj**	**3.58**	**193**	*e*Pn	**Pn**	**22 05 25.4**	**+0.6**
TNSJ				*e*		22 06 25.3	
	comp=Z,5μm,0.8s						
ISHM	**Shahmirzad**	**3.80**	**246**	*e*Pn	**Pn**	**22 05 29.5**	**+1.4**
ISHM				*e*		22 05 46.4	
	comp=Z,2μm,0.4s						
TABS	**Tabas**	**3.82**	**185**	*e*Pn	**Pn**	**22 05 29.3**	**+1.1**
TKDS	**Koohdasht(Taba**	**3.86**	**185**	*e*Pn	**Pn**	**22 05 29.6**	**+0.9**
TKDS				*e*		22 06 45.7	
	comp=Z,2μm,1.0s						
AFRZ	**Afriz**	**4.20**	**163**	*e*Pn	**Pn**	**22 05 34.9**	**+1.4**
ILAS	**Lasjerd**	**4.25**	**242**	*e*Pn	**Pn**	**22 05 35.0**	**+0.8**
IFIR	**Firoozkooh**	**4.27**	**246**	*e*Pn	**Pn**	**22 05 35.5**	**+1.0**
IPRN	**Peran**	**4.36**	**255**	*e*Pn	**Pn**	**22 05 36.2**	**+0.6**
IPRN				*e*		22 06 55.7	
	comp=Z,3μm,0.6s						
SHRT	**Shahrakht**	**4.41**	**149**	*e*Pn	**Pn**	**22 05 37.5**	**+1.2**
TPRV	**Parvadeh(Tabas**	**4.48**	**189**	*e*Pn	**Pn**	**22 05 38.0**	**+0.8**
TPRV				*e*		22 07 17.7	
	comp=Z,1μm,0.9s						
IMON	**Monand**	**4.60**	**157**	*e*Pn	**Pn**	**22 05 40.5**	**+1.5**
IMON				*e*		22 05 45.8	
	comp=Z,2μm,0.2s						
ITEG	**Tejag**	**4.66**	**168**	*e*Pn	**Pn**	**22 05 41.2**	**+1.4**
IDMV	**Damavand**	**4.83**	**249**	*e*Pn	**Pn**	**22 05 43.6**	**+1.4**
IDMV				*e*		22 07 38.8	
	comp=Z,2μm,1.4s						
IDAH	**Dahanechah**	**5.08**	**157**	*e*Pn	**Pn**	**22 05 47.1**	**+1.5**
IDAH				*e*		22 05 52.1	
	comp=Z,802nm,0.2s						
IKOO	**Kooshah**	**5.17**	**166**	*e*Pn	**Pn**	**22 05 48.0**	**+1.2**
ISFB	**Sefidab**	**5.31**	**236**	*e*Pn	**Pn**	**22 05 48.8**	**+0.1**
IVRN	**Varamin**	**5.31**	**244**	*e*Pn	**Pn**	**22 05 49.4**	**+0.7**
CHTH	**Charan**	**5.39**	**255**	*e*Pn	**Pn**	**22 05 50.9**	**+1.0**
YZKH	**Yazd**	**5.61**	**207**	*e*Pn	**Pn**	**22 05 53.2**	**+0.4**
QALM	**Alamut, Qazvin**	**5.63**	**262**	*e*Pn	**Pn**	**22 05 52.9**	**-0.2**
BSRN	**Basiran**	**5.63**	**166**	*e*Pn	**Pn**	**22 05 54.5**	**+1.3**
ICHK	**Chekchek**	**5.81**	**207**	*e*Pn	**Pn**	**22 05 56.8**	**+1.1**
IQOM	**Qom**	**5.86**	**245**	*e*Pn	**Pn**	**22 05 57.5**	**+1.2**
GHVR	**GHOM**	**5.88**	**241**	*e*Pn	**Pn**	**22 05 57.6**	**+1.1**
IGZV	**Ghazvin**	**5.97**	**262**	*e*Pn	**Pn**	**22 05 59.2**	**+1.3**
LHJ2	**Lahijan - Gila**	**5.98**	**269**	*e*Pn	**Pn**	**22 05 56.2**	**-1.5**
NASN	**Na'in**	**6.06**	**221**	*e*Pn	**Pn**	**22 05 59.1**	**-0.1**
IBAF	**Bafgh**	**6.08**	**196**	*e*Pn	**Pn**	**22 06 00.8**	**+1.5**
JIR1	**Jirandeh**	**6.24**	**265**	*e*Pn	**Pn**	**22 06 00.9**	**-0.6**
IZEF	**Zefreh**	**6.25**	**225**	*e*Pn	**Pn**	**22 06 02.0**	**+0.3**
ISAD	**Sadrabad**	**6.38**	**211**	*e*Pn	**Pn**	**22 06 03.6**	**0.0**
IKLH	**Kolahrood**	**6.39**	**231**	*e*Pn	**Pn**	**22 06 04.3**	**+0.6**
NHDN	**Nehbandan**	**6.40**	**160**	*e*Pn	**Pn**	**22 06 04.9**	**+1.3**
IRAZ	**Razeghan**	**6.48**	**254**	*e*Pn	**Pn**	**22 06 05.2**	**+0.4**
IMEH	**Mehriz**	**6.53**	**203**	*e*Pn	**Pn**	**22 06 06.4**	**+0.9**
IRAM	**Ramesheh**	**7.07**	**219**	*e*Pn	**Pn**	**22 06 13.8**	**+0.9**
KHGB	**Koh Gabri**	**7.12**	**188**	*e*Pn	**Pn**	**22 06 14.9**	**+1.2**
ZNJK	**Zanjan**	**7.13**	**266**	*e*Pn	**Pn**	**22 06 14.3**	**+0.5**
KHMZ	**Khomeyn**	**7.21**	**241**	*e*Pn	**Pn**	**22 06 16.5**	**+1.6**
IPIR	**Pirpir**	**7.25**	**231**	*e*Pn	**Pn**	**22 06 17.4**	**+2.0**
HAGD	**Aghdareh**	**7.30**	**251**	*e*Pn	**Pn**	**22 06 17.1**	**+1.0**
TVBK	**TV Kerman**	**7.49**	**185**	*e*Pn	**Pn**	**22 06 20.5**	**+1.7**
KRBR	**Kerman**	**7.49**	**185**	*e*Pn	**Pn**	**22 06 20.8**	**+2.0**
GRMI	**Germi**	**7.73**	**283**	*e*Pn	**Pn**	**22 06 19.8**	**-2.1**
ISRB	**Sarab**	**7.85**	**276**	*e*Pn	**Pn**	**22 06 23.0**	**-0.6**
ZHSF	**Zahedan**	**8.28**	**160**	*e*Pn	**Pn**	**22 06 29.7**	**+0.2**
IHRS	**Heris**	**8.36**	**279**	*e*Pn	**Pn**	**22 06 29.7**	**-0.9**
IBST	**Bostanabad**	**8.47**	**275**	*e*Pn	**Pn**	**22 06 31.4**	**-0.7**
SNGE	**Sanandaj**	**8.57**	**257**	*e*Pn	**Pn**	**22 06 36.5**	**+2.9**
AMIS	**Aoft Sefid**	**8.94**	**232**	*e*Pn	**Pn**	**22 06 39.4**	**+1.0**
IMRD	**Marand**	**9.43**	**281**	*e*Pn	**Pn**	**22 06 45.8**	**+0.6**
ISHB	**Shabestar**	**9.47**	**279**	*e*Pn	**Pn**	**22 06 45.1**	**-0.8**
MAKU	**Maku**	**10.28**	**285**	*e*Pn	**Pn**	**22 06 56.6**	**-0.2**
GNI	**Garni**	**10.35**	**289**	Pn	**Pn**	**22 06 56.8**	**-1.1**
	comp=Z,8.4nm,0.9s,baz=41,slow=6.8,SNR=5.9						
KK31	**Karatay Array**	**11.38**	**56**	⇑Pn	**Pn**	**22 07 13.9**	**+2.0**
	comp=Z,0.4nm,0.3s,baz=251,slow=10,SNR=9.3						
KK31				⇓Sn	**Sn**	**22 09 20.8**	**+1.9**
	comp=Z,1.3nm,0.5s						
AB31	**Akbulak array**	**11.91**	**8**	Pn	**Pn**	**22 07 18.2**	**-0.9**
	comp=Z,0.5nm,0.4s,baz=189,slow=12,SNR=35						
AB31				⇓Sn	**Sn**	**22 09 26.7**	**-5.0**
	comp=Z,3.7nm,0.7s,baz=194,slow=23,SNR=4.2						
KBZ	**Khabaz**	**12.77**	**304**	Pn	Pn	22 07 28.3	-2.4
	comp=Z,0.4nm,0.3s,baz=115,slow=21,SNR=6.4						
KBZ				Sn	Sn	22 09 41.5	-11
	comp=Z,0.2nm,0.3s,baz=118,slow=11,SNR=2.0						
	comp=Z,1.5nm,0.4s						
AKTO	**Aktyubinsk**	**12.97**	**1**	Pn	**Pn**	**22 07 32.3**	**-1.2**
	comp=Z,0.8nm,0.3s,baz=169,slow=12,SNR=12						
AKTO				Sn	Sn	22 09 49.1	-8.4
	comp=Z,0.2nm,0.3s,baz=93,slow=3.0,SNR=1.6						
	comp=Z,2.7nm,0.4s						
AKTO	**Aktyubinsk**	**12.97**	**1**	⇓Pn	**Pn**	**22 07 32.0**	**-1.5**
	comp=Z,3.0nm,0.6s						
AKTO				⇓Sn	Sn	22 09 49.6	-7.9
	comp=Z,12nm,1.4s						
KVAR	**Kislovodsk Arr**	**13.00**	**305**	Pn	**Pn**	**22 07 31.9**	**-2.0**
	baz=75,slow=20						
KVAR				Sn	Sn	22 09 46.8	-12
	baz=105,slow=12						
	comp=Z,2.1nm,0.6s						
AAK	**Ala-Archa**	**13.96**	**63**	LR	LR	22 12 56.8	
	comp=Z,193nm,21.0s,baz=323,slow=36						
KSH	**Kashi**	**14.57**	**76**	P	Pn	22 07 49.6	-6.0
KSH				S	Sn	22 10 26.1	-11
KSH				SS	**SnSn**	**22 10 36.0**	**-13**
KSH				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BRVK	**Borovoye**	**17.94**	**26**	⇓Pn	**Pn**	**22 08 39.1**	**+0.5**
	comp=Z,3.7nm,0.8s						
BVA1	**Borovoye Array**	**17.95**	**26**	⇓Pn	**Pn**	**22 08 37.7**	**-1.0**
	comp=Z,5.4nm,0.7s						
BRTR	**Keskin Array B**	**18.82**	**284**	P	**P**	**22 08 48.7**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=94,slow=7.5,SNR=1.0						
	comp=Z,0.2nm,0.3s						
ARU	**Arti**	**18.99**	**2**	P	**P**	**22 08 50.5**	**-0.1**
	baz=177,slow=14,SNR=3.5						
	comp=Z,1.4nm,0.4s						
KURBB	**Kurchatov Arra**	**19.92**	**42**	P	**P**	**22 09 02.8**	**+1.9**
	baz=234,slow=12,SNR=4.9						
	comp=Z,0.5nm,0.6s						
MK31	**Makanchi Array**	**20.51**	**55**	⇓Pn	Pn	22 09 11.0	+1.5
	comp=Z,1.3nm,0.6s,baz=245,slow=9.2,SNR=14						
MKAR	**Makanchi Array**	**20.51**	**55**	P	**P**	**22 09 09.9**	**+2.6**
	comp=Z,1.8nm,0.7s,baz=246,slow=10,SNR=18						
	comp=Z,1.8nm,0.7s						
CFR	**Carcaliu**	**23.31**	**299**	⇑P	**P**	**22 09 39.5**	**+2.5**
AKASG	**Malin Array Be**	**24.10**	**312**	P	**P**	**22 09 44.0**	**-0.7**
	comp=Z,1.0nm,0.5s,baz=110,slow=7.5,SNR=6.6						
	comp=Z,1.0nm,0.5s						
MLR	**Muntele Rosu**	**24.88**	**299**	P	**P**	**22 09 52.0**	**0.0**
	comp=Z,1.6nm,0.7s,baz=161,slow=13						
	comp=Z,1.6nm,0.7s						
ZALV

comp=Z,154nm,20.7s,baz=344,slow=42
MKAR Makanchi Array 59.23 326 P P 22 47 02.4 -0.1
0.2nm,0.4s,baz=129,slow=8.7,SNR=4.8
0.2nm,0.4s

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*SKHL **07** 22:55:52.4±0.3, 44°.30N×148°.30E, h37km±4km, mb4.5/4*
*JMA **07** 22:55:52.5±0.5, 44°.N±2°×14°.8E±°, h0km, MV4.1/28, SE OFF ETOROFU*
ISC 07 22:55:49.2±3.0, 44°.26N±0°.08×148°.3E±0°.2, h8km±12km, n18, σ1§63/27, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.02**	**342**	*eP*	**Pg**	**22 56 08.9**	**0.0**
KUR				AMB	AMB	22 56 09.4	
	170nm,0.3s						
KUR				*eS*	**Sg**	**22 56 20.3**	**-1.9**
KUR				A	A	22 56 21.5	
	680nm,0.3s						
KUR				A	A	22 56 21.5	
	530nm,0.3s						
SHO	**Shikotan**	**1.14**	**250**	*i* P	**Pg**	**22 56 11.7**	**+0.5**
SHO				AMB	AMB	22 56 12.2	
	80nm,0.2s						
SHO				*eS*	**Sg**	**22 56 25.2**	**-0.8**
SHO				A	A	22 56 33.6	
	340nm,0.2s						
SHO				A	A	22 56 33.6	
	480nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.78**	**264**	*eP*	**Pn**	**22 56 20.9**	**+0.6**
YUK				AMB	AMB	22 56 22.4	
	150nm,0.3s						
YUK				*i* S	**Sn**	**22 56 42.4**	**-0.7**
YUK				A	A	22 56 51.5	
	430nm,0.3s						
YUK				A	A	22 56 51.5	
	320nm,0.3s						
NEM2	**Nemuro 2**	**2.07**	**245**	*eP*	**Pn**	**22 56 24.6**	**+0.3**
NEM2				*eS*	**Sn**	**22 56 48.2**	**-1.9**
NMR	**Nemuro--Hokkai**	**2.08**	**245**	*eP*	**Pn**	**22 56 24.8**	**+0.5**
NMR				*eS*	**Sn**	**22 56 48.9**	**-1.4**
GLVR	**Golovnino**	**2.09**	**256**	*eP*	**Pn**	**22 56 25.3**	**+0.8**
GLVR				AMB	AMB	22 56 28.4	
	120nm,0.2s						
GLVR				*eS*	**Sn**	**22 56 50.2**	**-0.4**
GLVR				A	A	22 56 57.2	
	320nm,0.2s						
GLVR				A	A	22 56 57.2	
	650nm,0.2s						
JRA	**Rausu**	**2.33**	**263**	*eP*	**Pn**	**22 56 29.5**	**+1.8**
JRA				*eS*	**Sn**	**22 56 56.9**	**+0.4**
JNSB	**Nemuroshibetsu**	**2.44**	**260**	*eP*	**Pn**	**22 56 30.8**	**+1.5**
JKHN	**Kushirohamanak**	**2.58**	**244**	*eP*	**Pn**	**22 56 32.0**	**+0.8**
JNK	**Nakash**	**2.69**	**257**	*eP*	**Pn**	**22 56 34.0**	**+1.3**
JNK				*eS*	**Sn**	**22 57 04.4**	**-1.0**
AKK	**Akkeshi**	**2.81**	**245**	*eP*	**Pn**	**22 56 35.3**	**+0.8**
JAK	**Akkeshi**	**2.92**	**246**	*eP*	**Pn**	**22 56 36.7**	**+0.8**
JTKR	**Abashiri--Toko**	**3.19**	**266**	*eP*	**Pn**	**22 56 43.4**	**+3.7**
JAR	**Ashorobuto**	**3.43**	**255**	*eP*	**Pn**	**22 56 45.2**	**+2.3**
JOB	**Onbets**	**3.53**	**249**	*eP*	**Pn**	**22 56 46.0**	**+1.7**
JCH	**Churui**	**3.97**	**247**	*eP*	**Pn**	**22 56 51.1**	**+0.8**
JNBK	**Urakawa-nobuka**	**4.52**	**246**	*eP*	**Pn**	**22 57 00.1**	**+2.2**
JOT	**Ohata**	**6.07**	**244**	*eP*	**Pn**	**22 57 20.5**	**+1.3**
JOT				*eS*	**Sn**	**22 58 25.8**	**-3.1**

IDC 07 23:33:16.5±4.5, 4°.12S×150°.46E, h0km, mb2.9/2, mbtmp3.0/2, Error ellipse: s-maj=178.0km s-min=54.6km az=114.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.23**	**224**	P	P	23 38 15.0	0.0
	0.3nm,0.7s,baz=50,slow=11,SNR=6.6						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**25.16**	**218**	P	P	23 38 44.0	+0.3
	0.2nm,0.6s,baz=46,slow=6.6,SNR=1.8						
	0.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**147.88**	**288**	PKPbc	PKPbc	23 53 03.7	-1.0
	0.3nm,0.7s,baz=72,slow=3.9,SNR=2.0						

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*TUL **07** 23:42:13.1±0.7, 35°.49N±0°.01×97°.24W±0°.02, h7km±2km, ML2.4, mb_Lg1.9/7(NEIC), Error ellipse: s-maj=2.1km s-min=1.4km az=116.0*
NEIC 07 23:42:13.8±0.7, 35°.500N±0°.007×97°.25W±0°.01, h6km±2km, Error ellipse: s-maj=1.5km s-min=1.0km az=93.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OK005	**Luther M Schoo**	**0.16**	**16**	Pg	Pg	23 42 16.9	-0.1
OK005				Sg	Sg	23 42 19.7	+0.5
OKCSW	**OKLAHOMA CITY**	**0.18**	**239**	Pg	Pg	23 42 17.0	-0.4
OKCSW				Sg	Sg	23 42 19.9	0.0
OKCFA	**Oklahoma City**	**0.19**	**243**		Pg	23 42 17.2	-0.3
OKCFA				Sg	Sg	23 42 20.4	+0.3
FNO	**Franklin**	**0.27**	**208**	Pg	Pg	23 42 18.7	-0.4
FNO				Sg	Sg	23 42 23.0	+0.2
X34A	**Smith Ranch, M**	**1.02**	**208**	Pg	Pg	23 42 32.8	-0.5
X34A				Sg	Sg	23 42 46.8	+0.3
TUL1	**Leonard**	**1.25**	**71**		Pg	23 42 35.4	-2.4
WMOK	**Wichita Mounta**	**1.47**	**239**		Pn	23 42 39.6	-1.2
U32A	**Winter Ranch,**	**1.67**	**302**	Pn	Pn	23 42 43.5	-0.1
X37A	**Clayton**	**1.79**	**120**	Pn	Pn	23 42 44.9	-0.4
HHAR	**Hobbs**	**2.80**	**73**	Pn	Pn	23 42 58.9	-0.2
MIAR	**Mount Ida**	**3.16**	**106**	Pn	Pn	23 43 04.5	+0.4
MIAR				IAmb_Lg		23 43 53.7	
	comp=Z,4.4nm,0.8s						
U40A	**Yellville**	**3.67**	**75**	IAmb_Lg		23 44 11.5	
	comp=Z,5.7nm,0.8s						
X40A	**Basin Creek Fa**	**3.76**	**104**	Pn	Pn	23 43 12.3	-0.1
S39A	**Bolivar**	**3.84**	**54**	Pn	Pn	23 43 12.4	-1.0
W41B	**Gary Mavity, V**	**4.10**	**93**	Pn	Pn	23 43 15.0	-2.0
FCAR	**Ozark Folk Cen**	**4.19**	**83**	Pn	Pn	23 43 16.9	-1.3

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*TUL **07** 23:51:00.5±0.4, 36°.72N±0°.01×97°.57W±0°.01, h6km±4km, ML2.7, mb_Lg2.7/34(NEIC), Error ellipse: s-maj=1.8km s-min=1.5km az=173.0*
NEIC 07 23:51:01.2±0.5, 36°.71N±0°.01×97°.58W±0°.01, h5km±4km, Error ellipse: s-maj=1.6km s-min=1.5km az=63.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T35A	**Sooner Cattle**	**0.88**	**76**	Pg	Pg	23 51 17.1	-1.0
T35A				Sg	Sg	23 51 28.6	-0.8
U32A	**Winter Ranch,**	**1.20**	**254**	Pg	Pg	23 51 22.6	-1.5
U32A				Sg	Sg	23 51 39.0	-0.6
OKCFA	**Oklahoma City**	**1.30**	**176**		Pn	23 51 24.6	-1.5
OKCFA				Sg	Sg	23 51 42.2	-0.7
OKCSW	**OKLAHOMA CITY**	**1.31**	**175**		Pn	23 51 24.8	-1.4
OKCSW				Sg	Sg	23 51 43.2	-0.1
FNO	**Franklin**	**1.46**	**174**		Pn	23 51 27.4	-0.8
TUL1	**Leonard**	**1.65**	**119**	Pn	Pn	23 51 30.2	-0.6
R32A	**Long Quarter,**	**1.93**	**332**	Pn	Pn	23 51 35.4	+0.6
X34A	**Smith Ranch, M**	**2.12**	**186**	Pn	Pn	23 51 37.7	+0.4
X34A				IAmb_Lg		23 52 12.4	
	comp=Z,29nm,0.8s						
WMOK	**Wichita Mounta**	**2.20**	**207**	Pn	Pn	23 51 38.1	-0.4
KSU1	**Kansas State U**	**2.50**	**17**	Pn	Pn	23 51 43.1	+0.4
CBKS	**Cedar Bluff**	**2.71**	**321**	Pn	Pn	23 51 45.3	-0.2
X37A	**Clayton**	**2.78**	**139**	Pn	Pn	23 51 46.5	+0.2
X37A				IAmb_Lg		23 52 34.9	
	comp=Z,23nm,0.7s						
HHAR	**Hobbs**	**2.96**	**97**	Pn	Pn	23 51 49.0	+0.1
W39A	**Magazine**	**3.43**	**115**	IAmb_Lg		23 52 55.6	
	comp=Z,22nm,0.8s						
S39A	**Bolivar**	**3.53**	**73**	Pn	Pn	23 51 56.5	-0.3
U40A	**Yellville**	**3.82**	**94**	Pn	Pn	23 52 00.3	-0.4
U40A				IAmb_Lg		23 53 01.4	
	comp=Z,14nm,0.9s						
MIAR	**Mount Ida**	**3.91**	**122**	IAmb_Lg		23 53 05.1	
	comp=Z,16nm,0.7s						
MGMO	**Mountain Grove**	**4.27**	**82**	Pn	Pn	23 52 06.5	-0.5
X40A	**Basin Creek Fa**	**4.46**	**118**	IAmb_Lg		23 53 33.0	
	comp=Z,13nm,1.0s						
R40A	**Maddies Statio**	**4.50**	**68**	IAmb_Lg		23 53 25.6	
	comp=Z,12nm,0.8s						
W41B	**Gary Mavity, V**	**4.59**	**108**	Pn	Pn	23 52 12.0	+0.8
W41B				IAmb_Lg		23 53 27.4	

comp=Z,16nm,1.2s
BGNE Belgrade 4.71 355 IAmb_Lg 23 53 42.7
comp=Z,18nm,0.7s
P40A Paris 5.19 55 IAmb_Lg 23 53 48.9
comp=Z,9.7nm,0.7s
CCM Cathedral Cave 5.22 73 IAmb_Lg 23 53 50.0
comp=Z,11nm,0.8s
N38A Joes South For 5.30 38 Pn Pn 23 52 19.8 -1.3
L34A Svendsen Farm, 5.33 10 IAmb_Lg 23 54 01.6
comp=Z,14nm,0.9s
T25A Trinidad 5.49 276 IAmb_Lg 23 54 05.3
comp=Z,10nm,0.7s
FVM French Village 5.83 75 IAmb_Lg 23 54 04.1
comp=Z,13nm,1.1s
K31A O'Neill 5.97 352 IAmb_Lg 23 54 10.3
comp=Z,14nm,0.8s
S44A Carbondale 6.71 79 IAmb_Lg 23 54 42.3
comp=Z,11nm,0.8s
N23A Red Feather La 7.75 305 IAmb_Lg 23 55 12.2
comp=Z,8.1nm,0.9s
RSSD Black Hills 8.89 328 IAmb_Lg 23 55 55.8
comp=Z,4.5nm,1.0s

IDC 08 00:04:33.9±2.2, 0°.97N×126°.49E, h0km, mb3.5/3, mbtmp3.6/3, Error ellipse: s-maj=169.8km s-min=28.0km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.16**	**160**	P	P	00 09 31.6	0.0
	2.3nm,0.6s,baz=338,slow=11,SNR=24						
	2.3nm,0.6s						
ASAR	**Alice Springs**	**25.53**	**164**	P	P	00 10 04.5	0.0
	0.4nm,0.5s,baz=348,slow=14,SNR=7.6						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**59.69**	**326**	P	P	00 14 40.2	-0.1
	0.2nm,0.4s,baz=114,slow=6.6,SNR=2.3						
	0.2nm,0.4s						

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*IDC **08** 00:42:26.4±2.0, 1°.28N×126°.11E, h0km, mb3.7/3, mbtmp3.7/3, MS4.3/2, Error ellipse: s-maj=181.2km s-min=24.3km az=65.0*
*DJA **08** 00:42:28.7±0.2, 1°.N±2°×12°.6E±°, h10km, M4.0/12, mb4.3/6, mB4.6/2, MLv3.9/12, Mw(mB)3.8/2*
ISC 08 00:42:32.1±1.0, 1°.28N±0°.06×126°.36E±0°.06, h50km, n17, σ1§30/19, mb3.8/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.13**	**117**	P	**Pn**	**00 42 50.5**	**-1.1**
TNTI				S	**Sn**	**00 43 04.5**	**-1.5**
LBMI	**Labuha**	**2.22**	**149**	P	**Pn**	**00 43 06.7**	**+0.2**
LBMI				S	**Sn**	**00 43 33.4**	**+0.6**
KMSI	**Cibinong**	**2.48**	**254**	P	**Pn**	**00 43 07.8**	**-2.2**
KMSI				S	**Sn**	**00 43 38.8**	**-0.2**
SGSI	**Sangihe**	**2.53**	**341**	P	**Pn**	**00 43 11.3**	**+0.6**
SGSI				S	**Sn**	**00 43 40.3**	**0.0**
SANI	**Sanana**	**3.33**	**186**	P	**Pn**	**00 43 20.5**	**-1.2**
SANI				S	**Sn**	**00 43 58.6**	**-1.4**
LUWI	**Luwuk**	**4.26**	**237**	P	**Pn**	**00 43 35.0**	**+0.5**
MRSI	**Marisa**	**4.49**	**260**	P	**Pn**	**00 43 37.1**	**-0.5**
APSI	**Ampana**	**5.19**	**245**	P	**Pn**	**00 43 46.9**	**-0.3**
	0.2nm641nm31nm,0.5s						
DAV	**Davao City (W)**	**5.80**	**352**	LR	LR	00 46 19.6	
	comp=Z,136nm,22.0s,baz=177,slow=40						
FAKI	**Fak Fak**	**7.22**	**125**	P	**Pn**	**00 44 13.7**	**-1.4**
	0.1nm13nm,1.2s						
BKSI	**Bulukumba**	**9.04**	**223**	P	**Pn**	**00 44 40.2**	**+0.1**
BSSI	**Bau Bau, Buton**	**9.42**	**218**	P	**Pn**	**00 44 48.2**	**+3.0**
WRA	**Warramunga Arr**	**22.50**	**160**	P	**P**	**00 47 28.4**	**+0.8**
	2.1nm,0.5s,baz=338,slow=11,SNR=28						
	2.1nm,0.5s						
ASAR	**Alice Springs**	**25.86**	**164**	P	**P**	**00 48 00.9**	**+1.6**
	0.6nm,0.6s,baz=347,slow=11,SNR=11						
	0.6nm,0.6s						
KSRS	**Korea Array**	**36.02**	**2**	LR	LR	01 02 16.5	
	comp=Z,1μm,21.9s,baz=160,slow=33						
MKAR	**Makanchi Array**	**59.35**	**326**	P	**P**	**00 52 29.5**	**+0.3**
	0.4nm,0.4s,baz=120,slow=7.5,SNR=8.1						
	0.4nm,0.4s						
YAK	**Yakutsk**	**60.65**	**2**	LR	LR	01 18 12.5	
	comp=Z,158nm,21.4s,baz=87,slow=35						

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*IDC **08** 00:49:50.7±1.2, 19°.29S×67°.29W, h220km±10km, mb3.4/3, mbtmp4.1/8, Error ellipse: s-maj=21.5km s-min=15.0km az=64.0*
*VAO **08** 00:49:50.7±1.1, 19°.34S×67°.65W, h244km±18km, mb3.9*
*SCB **08** 00:49:55.0±4.0, 19°.42S×67°.44W, h55km±45km, ML3.1/12, MW3.4, Error ellipse: s-maj=13.3km s-min=11.3km az=0.0*
ISC 08 00:49:50.3±0.7, 19°.36S±0°.05×67°.39W±0°.06, h211km, n34, σ1§41/38, mb3.9/3, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**1.84**	**245**	P	**Pn**	**00 50 30.3**	**+1.9**
PB08				IAML		00 51 13.8	
	65nm,0.2s						
PB11	**IPOC Station P**	**2.18**	**259**	P	**Pn**	**00 50 32.6**	**+1.0**
PB11				IAML		00 51 09.8	
	172nm,0.2s						
PB16	**IPOC Station P**	**2.25**	**297**	P	**Pn**	**00 50 34.8**	**+2.0**
PB16				IAML		00 51 14.0	
	59nm,0.6s						
MOCB	**Mochara**	**2.50**	**139**	P	**Pn**	**00 50 37.4**	**+2.1**
MOCB				S	**S**	**00 51 09.4**	**-0.7**
MOCB				IAML		00 51 13.3	
	160nm,0.7s						
MOCB				IAML		00 51 13.5	
	96nm,0.4s						
PB01	**IPOC Station P**	**2.59**	**229**	P	**Pn**	**00 50 37.7**	**+1.8**
PB01				IAML		00 51 14.0	
	122nm,0.2s						
BBOE	**La Paz, Chanca**	**2.59**	**347**	P	**Pn**	**00 50 38.9**	**+2.3**
BBOE				IAML		00 51 19.6	
	64nm,0.6s						
BBOD	**La Paz, Gloria**	**2.94**	**337**	P	**Pn**	**00 50 42.5**	**+2.1**
BBOD				IAML		00 51 26.4	
	21nm,0.4s						
PB09	**IPOC Station P**	**2.98**	**215**	P	**Pn**	**00 50 42.3**	**+1.8**
PB09				IAML		00 51 28.3	
	47nm,0.6s						
PB02	**IPOC Station P**	**3.06**	**230**	P	**Pn**	**00 50 43.1**	**+1.9**
PB02				IAML		00 51 24.0	
	175nm,0.3s						
LPAZ	**La Paz**	**3.14**	**347**	P	**Pn**	**00 50 44.3**	**+1.6**
	46nm,0.3s,baz=136,slow=4.9,SNR=278			S			
LPAZ						**00 51 24.5**	**+1.1**
	31nm,0.5s,baz=302,slow=20,SNR=6.3						
LPAZ	**La Paz**	**3.14**	**347**	P	**Pn**	**00 50 44.4**	**+1.6**
LPAZ				IAML		00 51 28.1	
	25nm,0.6s						
LPAZ	**La Paz**	**3.14**	**347**	*eP*	**Pn**	**00 50 44.3**	**+1.6**
YJA	**Yavi**	**3.31**	**148**	P	**Pn**	**00 50 46.1**	**+1.6**
PB07	**IPOC Station P**	**3.32**	**224**	P	**Pn**	**00 50 46.0**	**+1.6**
PB07				S	**S**	**00 51 24.3**	**-2.2**
PB07				IAML		00 51 37.1	
	60nm,0.4s						
LVC	**Limon Verde**	**3.53**	**203**	P	**Pn**	**00 50 48.4**	**+1.2**
	3.8nm,0.3s,baz=26,slow=11,SNR=15						
LVC				S	**S**	**00 51 31.7**	**+0.2**
	16nm,0.3s,baz=251,slow=18,SNR=19						
LVC	**Limon Verde**	**3.53**	**203**	P	**Pn**	**00 50 48.5**	**+1.4**
PB06	**IPOC Station P**	**3.91**	**211**	P	**Pn**	**00 50 52.7**	**+1.3**
PB04	**IPOC Station P**	**3.93**	**221**	P	**Pn**	**00 50 52.7**	**+1.0**
PB15	**IPOC Station P**	**4.29**	**207**	P	**Pn**	**00 50 57.2**	**+0.9**
SIV	**San Ignacio**	**6.89**	**62**	P	**Pn**	**00 51 28.0**	**-1.2**
	31nm,0.4s,baz=256,slow=9.0,SNR=143						
ETMB	**Extrema**	**9.55**	**7**	*eP*	**Pn**	**00 52 02.7**	**-1.1**
CPUP	**Villa Florida**	**11.58**	**129**	P	**Pn**	**00 52 31.1**	**+1.6**
	3.4nm,0.7s,baz=300,slow=10,SNR=4.4						
NNA	**Nana**	**11.68**	**307**	P	**Pn**	**00 52 31.2**	**+0.2**
	8.4nm,0.3s,baz=134,slow=11,SNR=6.0						
PTGB	**Pitanga**	**15.17**	**113**	*eP*	**P**	**00 53 15.7**	**+1.2**
RODS	**Rosario do Sul**	**15.54**	**137**	*eP*	**P**	**00 53 18.5**	**0.0**
ITAB	**Concordia**	**16.05**	**122**	*eP*	**Pn**	**00 53 24.9**	**+0.2**
ALGR	**Alto Alegre (B**	**16.12**	**128**	*eP*	**Pn**	**00 53 26.1**	**+0.5**
SNDB	**Serra Nova Dou**	**17.14**	**67**	*eP*	**Pn**	**00 53 37.6**	**-0.2**
MACA	**Manacapuru-AM**	**17.38**	**23**	*eP*	**P**	**00 53 38.6**	**-0.2**
BB19B	**Bebedouro**	**17.78**	**99**	*eP*	**P**	**00 53 43.4**	**+0.2**
TXAR	**Lajitas Array**	**59.74**	**323**	P	**P**	**00 59 32.7**	**-0.5**
	0.2nm,0.5s,baz=131,slow=5.0,SNR=2.5						
	0.2nm,0.5s						

ULM Lac du Bonnet 73.73 341 P **P** **01 01 00.1** **-0.9**
1.4nm,0.5s,baz=189,slow=5.7,SNR=2.3
1.4nm,0.5s
TORD Torodi Ar. Bea 75.29 70 P **P** **01 01 09.0** **-1.7**
0.9nm,0.3s,baz=254,slow=5.3,SNR=30
0.9nm,0.3s
SONM Songino Array 151.15 9 PKPbc **PKiKP** **01 09 18.5** **-0.5**
0.9nm,0.5s,baz=296,slow=1.8,SNR=6.2

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*BJI **08** 00:56:35.9±0.0, 29°.76N×131°.44E, h29km, mb4.6/61, mB4.7/43, Ms4.7/69, Ms7 4.6/65*
*JMA **08** 00:56:39.0±0.2, 30°.0N±0°.6×131°.3E±0°.7, h23km±1km, MD4.6/24, MW4.8/24, NEAR AMAMI-OSHIMA ISLAND*
JMA Felt II J1 at NEAR AMAMI-OSHIMA ISLAND.
*NEIC **08** 00:56:39.6±2.2, 30°.04N±0°.05×131°.14E±0°.09, h19km±4km, mb4.8/86, Error ellipse: s-maj=10.8km s-min=7.9km az=98.0*
*NIED **08** 00:56:39.0, 29°.98N×131°.27E, h23km, MW4.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^16 Nm; Mrr 1.22; Mθθ-0.62; Mφφ-0.60; Mrθ 0.36; Mθφ-1.15; Mφr 0.53; Fault plane solution: M0 1.63000×10^16 NP1: φs 235.00000°, δ34.00000°, λ105.00000°. NP2: φs 38.00000°, δ57.00000°, λ80.00000°.*
*GCMT **08** 00:56:39.7±0.5, 29°.95N±0°.03×131°.25E±0°.04, h29km, MW4.9/62, Moment Tensor Solution. s32, c35; s62, c84; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 2.83±.20; Mθθ-1.32±.13; Mφφ-1.52±.14; Mrθ 0.81±.17; Mθφ-1.08±.06; Mφr 0.94±.16; Best double couple: M0 2.94000×10^16 NP1: φs 223.00000°, δ33.00000°, λ91.00000°. NP2: φs 42.00000°, δ57.00000°, λ89.00000°. Principal axes: T 3.1030, Plg78.0000°, Azm310.0000°; N -0.3360, Plg1.0000°, Azm42.0000°; P -2.7770, Plg12.0000°, Azm132.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*MOS **08** 00:56:41.2±0.8, 30°.19N×130°.95E, h42km, mb5.1/46, MS4.7/5 Error ellipse: s-maj=7.5km s-min=4.4km az=110.6*
*IDC **08** 00:56:44.3±1.9, 30°.23N×130°.96E, h52km±16km, mb4.3/28, mbtmp4.5/33, ML4.1/5, MS4.1/47, Error ellipse: s-maj=14.6km s-min=10.9km az=92.0*
ISC 08 00:56:40.1±0.6, 30°.08N±0°.03×131°.17E±0°.04, h26km±3km, h26km:pP-P, n412, σ1§54/387, mb4.8/125, MS4.4/74, 21C-5D, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMTN	**Minamitane**	**0.40**	**324**	P	**Pn**	**00 56 49.3**	**-0.9**
JMTN				S	**Sn**	**00 56 56.6**	**-0.3**
JMTN	**Minamitane**	**0.40**	**324**	A	A	00 56 49.3	
	comp=E,88nm,0.6s,comp=E,128nm,2.4s						
JYAK	**Yakushimahirau**	**0.59**	**286**	P	**Pn**	**00 56 52.4**	**-0.5**
JYAK				*eS*	**Sn**	**00 57 01.9**	**+0.2**
JYAK	**Yakushimahirau**	**0.59**	**286**	A	A	00 56 52.4	
	comp=E,50nm,0.9s,comp=E,73nm,0.7s						
JTN	**Tanegashima 3**	**0.60**	**344**	P	**Pn**	**00 56 52.9**	**-0.1**
JTN				S	**Sn**	**00 57 02.8**	**+0.8**
JTN	**Tanegashima 3**	**0.60**	**344**	A	A	00 56 52.9	
	comp=E,96nm,1.2s,comp=E,68nm,1.5s						
JKC	**Kuchinoerabu**	**0.92**	**295**	P	**Pn**	**00 56 58.3**	**+0.8**
JKC				*eS*	**Sn**	**00 57 10.8**	**+0.9**
JKC	**Kuchinoerabu**	**0.92**	**295**	A	A	00 56 58.3	
	comp=E,43nm,1.4s,comp=E,33nm,3.3s						
JTSR	**Tashiro 2**	**1.11**	**349**	P	**Pb**	**00 57 01.0**	**+0.3**
JTSR				*eS*	**Sn**	**00 57 17.2**	**+2.7**
JTSR	**Tashiro 2**	**1.11**	**349**	A	A	00 57 01.0	
	comp=E,20nm,2.8s,comp=E,15nm,1.2s						
JNN	**Nakanoshima**	**1.15**	**259**	P	**Pb**	**00 57 00.8**	**-0.4**
JNN	**Nakanoshima**	**1.15**	**259**	A	A	00 57 00.8	
	comp=E,77nm,1.7s,comp=E,56nm,1.1s						
JNAR	**Kushima--Naru**	**1.45**	**4**	P	**Pb**	**00 57 05.9**	**-0.5**
JNAR	**Kushima--Naru**	**1.45**	**4**	A	A	00 57 05.9	
	comp=E,15nm,2.0s,comp=E,22nm,1.3s						
JSU	**Suzuyama**	**1.55**	**337**	Pn	**Pb**	**00 57 07.2**	**-1.1**
JSU					Sn	**00 57 27.3**	**-0.2**
JSU	**Suzuyama**	**1.55**	**337**	P	**Pb**	**00 57 07.0**	**-1.2**
JSU	**Suzuyama**	**1.55**	**337**	A	A	00 57 07.0	
	comp=E,14nm,1.5s,comp=E,10.0nm,4.4s						
JNKG	**Nichinankitago**	**1.59**	**6**	P	**Pb**	**00 57 07.7**	**-1.2**
JNKG				*eS*	**Sb**	**00 57 28.9**	**+0.3**
JNKG	**Nichinankitago**	**1.59**	**6**	A	A	00 57 07.7	
	comp=E,15nm,2.5s,comp=E,14nm,4.0s						
JTZ	**Takazaki**	**1.82**	**358**	A	A	00 57 11.3	
	comp=E,16nm,2.8s,comp=E,10.0nm,4.3s						
JTAJ	**Takarajima**	**1.94**	**242**	A	A	00 57 12.0	
	comp=E,7.0nm,6.0s,comp=E,13nm,2.6s						
JZK	**Kikaishima**	**2.04**	**211**	A	A	00 57 12.4	
	comp=E,39nm,4.5s,comp=E,33nm,3.4s						
JZO	**Okuchi**	**2.12**	**347**	A	A	00 57 15.8	
	comp=E,7.0nm,4.5s,comp=E,7.0nm,2.0s						
JTSN	**Tsuno**	**2.18**	**8**	A	A	00 57 16.3	
	comp=E,7.0nm,7.3s,comp=E,6.0nm,5.5s						
JIU3	**Izumi3**	**2.48**	**353**	A	A	00 57 20.9	
	comp=E,4.0nm,4.8s,comp=E,4.0nm,4.3s						
JHD	**Hondo**	**2.54**	**340**	A	A	00 57 22.0	
	comp=E,7.0nm,3.0s,comp=E,5.0nm,4.5s						
NGSJ	**Nagasakinomoza**	**2.81**	**336**	A	A	00 57 25.7	
	comp=E,4.0nm,3.0s,comp=E,5.0nm,4.2s						
JNU	**Nakatsue**	**3.05**	**355**	P	**Pn**	**00 57 27.4**	**+0.7**
	60nm,0.3s,baz=269,slow=4.2,SNR=15						
JNU				S	**Sn**	**00 58 01.9**	**-0.5**
	375nm,0.7s,baz=138,slow=8.1,SNR=5.1						
	186nm,0.5s						
JNU	**Nakatsue**	**3.05**	**355**	Pn	**Pn**	**00 57 28.1**	**+1.4**
JOW	**Kunigami**	**4.11**	**219**	P	**Pn**	**00 57 41.3**	**0.0**
	56nm,0.3s,baz=96,slow=19,SNR=9.7						
JOW				S	**Sn**	**00 58 26.2**	**-2.5**
	198nm,0.3s,baz=39,slow=29,SNR=13						
JOW	**Kunigami**	**4.11**	**219**	Pn	**Pn**	**00 57 41.0**	**-0.4**
JMN	**Monobe**	**4.31**	**32**	Pn	**Pn**	**00 57 44.6**	**+0.5**
JTU	**Tsushima**	**4.68**	**342**	Pn	**Pn**	**00 57 50.5**	**+1.4**
JHS	**Saijyo**	**5.18**	**18**	Pn	**Pn**	**00 57 56.9**	**+0.9**
NAWB	**Namwon**	**6.20**	**330**	Pn	**Pn**	**00 58 13.6**	**+3.5**
TJN	**Ta

USRK Ussuriysk Ar. 14.11 2 P **P** **01 00 06.5 +0.8**
comp=Z,8.6nm,0.4s,baz=177,slow=9.9,SNR=27
USRK LR LR 01 05 28.3
comp=Z,652nm,20.3s,baz=170,slow=38
USRK Ussuriysk Ar. 14.11 2 P **P** **01 00 07.0 +1.3**
USRK Ussuriysk Ar. 14.11 2 P **P** **01 00 07.0 +1.3**
CN2 Changchun 14.44 343 *eP* **P** **01 00 10.9 +1.6**
CN2 *eS* S 01 02 52.4 -8.9
CN2 pmax pmax
comp=Z,40nm,0.8s
CN2 pmax pmax
comp=Z,100nm,4.3s
CN2 LR LR
comp=N,3μm,17.0s
CN2 LR LR
comp=E,1μm,17.0s
CN2 LR LR
comp=Z,3μm,15.1s
HNS HongShan 15.51 302 ⇑P **Pn** **01 00 14.3 -2.8**
HNS PP **pP** **01 00 25.8 -2.4**
HNS S **Sn** **01 03 06.8 -1.2**
HNS SS **S** **01 03 27.1 +3.8**
HNS pmax pmax
comp=Z,5.0nm,0.8s
HNS LR LR
comp=N,1μm,14.4s
HNS LR LR
comp=E,2μm,14.7s
HNS LR LR
comp=Z,2μm,14.3s
TEY Ternei 15.54 15⇓*eP* **P** **01 00 20.6 -0.9**
TEY pmax pmax
comp=Z,10.0nm,1.3s
TEY MLR MLR
comp=Z,100nm,18.0s
BJT Baijiatuau 15.77 313 P **P** **01 00 23.9 -0.2**
BJT Baijiatuau 15.77 313 P **P** **01 00 23.9 -0.2**
BJT pmax pmax
comp=Z,45nm,1.1s
BJI Beijing 15.78 313 P **P** **01 00 26.5 +2.3**
BJI pmax pmax
comp=Z,19nm,0.7s
BJI LR LR
comp=Z,1μm,13.7s
BJI LR LR
comp=Z,2μm,13.0s
BJI LR LR
comp=Z,4μm,14.3s
BNX BinXian 15.91 350 ⇑P **P** **01 00 26.8 +1.1**
BNX pmax pmax
comp=Z,39nm,0.8s
BNX pmax pmax
comp=Z,290nm,7.3s
LYN LuoYang 16.42 291 *eP* **P** **01 00 31.4 0.0**
LYN S **Sn** **01 03 35.9 +5.6**
LYN sS S 01 03 41.6 -0.4
LYN pmax pmax
comp=Z,280nm,9.2s
LYN LR LR
comp=Z,2μm,15.2s
LYN LR LR
comp=Z,3μm,16.5s
ASAJ Asahikawa 16.70 30 P **P** **01 00 35.4 +1.0**
comp=Z,2.1nm,0.3s,baz=219,slow=34,SNR=2.9
comp=Z,4.9nm,0.3s
JKA Kamikawa-asahi 16.70 30 P **P** **01 00 34.4 0.0**
TIY Taiyuan 17.30 301 *eP* **P** **01 00 44.2 +3.0**
TIY pmax pmax
comp=Z,250nm,7.9s
TIY LR LR
comp=Z,780nm,13.7s
TIY LR LR
comp=Z,2μm,12.4s
TIY LR LR
comp=Z,2μm,13.1s
XLT XiLinHaoTe 18.28 323⇓*iP* **P** **01 00 53.5 +1.5**
XLT pP pP 01 00 58.3 -0.5
XLT sP sP 01 01 03.2 +1.1
XLT PP **PnPn** **01 01 08.6 +5.1**
XLT S **S** **01 04 23.2 +3.5**
XLT sS sS 01 04 34.0 +3.6
XLT PcP **PcP** **01 05 23.0 -0.3**
XLT pmax pmax
comp=Z,8.0nm,1.1s
XLT pmax pmax
comp=Z,250nm,6.9s
XLT LR LR
comp=Z,2μm,13.8s
XLT LR LR
comp=Z,2μm,13.6s
ENH Enshi 18.75 276 P **P** **01 00 56.3 -0.9**
YSS Yuzh-Sakhalins 19.10 25 P **P** **01 01 00.3 -0.5**
YSS Yuzh-Sakhalins 19.10 25 *eP* **Pn** **01 01 01.9 +0.1**
YSS *eS* **Sn** **01 04 30.5 -4.5**
YSS pmax pmax
comp=Z,30nm,1.1s
YSS smax smax
comp=N,200nm,6.6s
YSS MLR MLR
comp=Z,600nm,17.0s
YSS MLR MLR
comp=N,500nm,15.0s
YSS MLR MLR
comp=E,500nm,16.0s
KLR Kul'dur 19.14 1 P **P** **01 01 01.5 +0.3**
comp=E,0.8nm,0.3s,baz=192,slow=8.4,SNR=16
comp=E,4.8nm,0.5s
KLR Kul'dur 19.14 1*ceP* **P** **01 01 01.3 +0.1**
KLR pmax pmax
comp=Z,24nm,2.5s
HHC Hu-ho-hao-te 19.21 309 *eP* **Pn** **01 01 04.3 +1.0**
HHC PP **PnPn** **01 01 21.4 +5.1**
HHC S **Sn** **01 04 33.5 -4.3**
HHC pmax pmax
comp=Z,30nm,0.7s
HHC pmax pmax
comp=Z,330nm,8.5s
HHC LR LR
comp=Z,3μm,13.0s
HHC LR LR
comp=Z,3μm,13.9s
HHC LR LR
comp=Z,5μm,14.6s
XAN Xi'an 19.26 288 P **P** **01 01 02.4 -0.4**
XAN S **Sn** **01 04 38.9 -0.2**
XAN pmax pmax
comp=Z,29nm,0.9s
XAN pmax pmax
comp=Z,280nm,11.8s
XAN LR LR
comp=Z,2μm,14.3s
XAN LR LR
comp=Z,1μm,15.1s
XAN LR LR
comp=Z,2μm,12.4s
KUR Kuril'sk 20.03 36 P Pn 01 01 14.2 +1.3
KUR *eS* Sn 01 05 00.5 +3.0
KUR pmax pmax
comp=Z,104nm,1.1s
KUR MLR MLR
comp=Z,415nm,13.0s
BTO Baotou 20.15 307 *eP* Pn 01 01 15.5 +1.0
BTO S Sn 01 05 04.2 +3.6
BTO LR LR
comp=Z,5μm,17.7s
BTO LR LR
comp=Z,6μm,14.5s
GUMO Guam 20.73 139 LR LR 01 07 49.8
comp=Z,209nm,20.0s,baz=323,slow=32
HIA Hailar 21.04 339 P **P** **01 01 21.4 -0.6**
HIA Hailar 21.04 339 *iP* **P** **01 01 22.4 +0.4**
HIA pmax pmax
comp=Z,22nm,1.4s
GRNR Gornyy 21.04 9⇓*iP* **P** **01 01 19.5 -2.5**
GRNR pmax pmax
comp=N,4.0nm,0.8s
GRNR pmax pmax
comp=Z,3.0nm,0.8s
GRNR MLR MLR
comp=E,350nm,15.0s
GRNR MLR MLR
comp=N,300nm,18.0s
GRNR MLR MLR
comp=Z,430nm,16.0s
GYA Guiyang 21.87 267 ⇑P **P** **01 01 31.6 +0.4**
GYA sP sP 01 01 41.3 +0.1
GYA S **S** **01 05 29.5 -2.2**
GYA pmax pmax
comp=Z,52nm,0.6s
GYA LR LR
comp=Z,800nm,14.8s
GYA LR LR
comp=Z,830nm,14.9s
GYA LR LR
comp=Z,1μm,17.2s
QIZ Qiongzhong 22.26 245 P **P** **01 01 35.5 +0.2**
QIZ S **S** **01 05 37.0 -1.9**
QIZ pmax pmax
comp=Z,21nm,1.8s
QIZ LR LR
comp=Z,700nm,27.1s
QIZ LR LR
comp=Z,440nm,24.9s
QIZ LR LR
comp=Z,870nm,20.6s
DAV Davao City (W) 23.48 194 LR LR 01 11 03.1
comp=Z,322nm,20.9s,baz=350,slow=36
CD2 Chengdu 23.61 279 P **P** **01 01 48.5 -0.7**
CD2 S **S** **01 06 02.7 +0.4**
CD2 pmax pmax
comp=Z,40nm,1.1s
CD2 LR LR
comp=Z,1μm,12.9s
CD2 LR LR
comp=Z,2μm,11.2s
LZH Lanzhou 23.62 292 *eP* P 01 01 57.9 +8.5
LZH pP sP 01 02 02.9 +3.2
LZH sP pP 01 02 06.1 +10
LZH S **S** **01 06 03.9 +1.4**
LZH pmax pmax
comp=Z,22nm,1.5s
LZH pmax pmax
comp=Z,180nm,6.5s
LZH LR LR
comp=N,950nm,15.7s
LZH LR LR
comp=E,2μm,14.6s
LZH LR LR
comp=Z,3μm,15.7s
ZEA Zeya 23.82 354 *eP* **P** **01 01 49.5 -1.3**
ZEA *eS* **S** **01 05 56.0 -8.9**
ZEA pmax pmax
comp=Z,100nm,6.1s
ZEA pmax pmax
comp=N,10.0nm,1.3s
ZEA pmax pmax
comp=Z,20nm,0.9s
ZEA smax smax
comp=N,200nm,12.3s
ZEA MLR MLR
comp=E,200nm,9.0s
ZEA MLR MLR
comp=N,400nm,12.0s
ZEA MLR MLR
comp=Z,300nm,14.0s
KMI Kunming 25.64 266 ⇑P **P** **01 02 08.7 +0.7**
KMI pmax pmax
comp=Z,23nm,0.7s
KMI LR LR
comp=Z,750nm,15.3s
KMI LR LR
comp=Z,830nm,14.3s
KMI LR LR
comp=Z,1μm,13.2s
ULN Ulaanbaatar 25.66 321 P **P** **01 02 06.4 -1.5**
ULN Ulaanbaatar 25.66 321*ceP* **P** **01 02 05.8 -2.1**
ULN pmax pmax
comp=Z,13nm,1.3s
SONM Songino Array 26.01 320 P **P** **01 02 10.2 -0.8**
comp=Z,4.5nm,0.4s,baz=131,slow=9.1,SNR=30
SONM LR LR 01 13 20.4
comp=Z,639nm,21.6s,baz=120,slow=39
comp=Z,4.5nm,0.4s
SONM Songino Array 26.01 320 P **P** **01 02 09.4 -1.6**
PZH PanZhiHua 26.12 269 P **P** **01 02 11.5 -0.8**
PZH S **S** **01 06 45.8 +3.3**
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,70nm,4.2s
PZH LR LR
comp=Z,1μm,18.0s
PZH LR LR
comp=Z,880nm,17.1s
PZH LR LR
comp=Z,1μm,16.5s
GTA Gaotai 27.28 298 *eP* **P** **01 02 28.0 +5.3**
GTA pP sP 01 02 34.9 +1.8
GTA sP pP 01 02 39.4 +9.4
GTA pmax pmax
comp=Z,5.0nm,0.9s
GTA pmax pmax
comp=Z,78nm,5.5s
GTA LR LR
comp=Z,660nm,15.3s
GTA LR LR
comp=Z,1μm,14.9s
GTA LR LR
comp=Z,1μm,15.6s
ZAK Zakamensk 29.13 322 *eP* **P** **01 02 36.7 -2.2**
ZAK pmax pmax
comp=Z,5.0nm,1.4s
PETK Petropavlovsk- 30.08 33 P **P** **01 02 48.2 +1.1**
comp=Z,4.5nm,1.0s,baz=190,slow=17,SNR=3.8
comp=Z,4.5nm,1.0s
SIJI Sorong 30.77 180 LR LR 01 13 47.4
comp=Z,177nm,20.9s,baz=306,slow=33
GOMU GeErMu 30.92 291 P **P** **01 02 55.4 +0.1**
GOMU pP pP 01 03 00.4 -2.3
GOMU S **S** **01 08 00.6 +2.2**
GOMU sS sS 01 08 16.4 +5.5
GOMU pmax pmax
comp=Z,4.0nm,0.4s
GOMU pmax pmax
comp=Z,110nm,7.5s
GOMU LR LR
comp=Z,160nm,14.7s
GOMU LR LR
comp=Z,750nm,16.2s
GOMU LR LR
comp=Z,850nm,16.4s
MOY Mondy 31.04 323 *eP* **P** **01 02 55.2 -0.7**
CHTO Chiang Mai 31.30 256 P **P** **01 02 57.2 -1.2**
CHTO IAmb IAmb 01 02 58.7
comp=Z,13nm,0.7s
CHTO Chiang Mai 31.30 256 P **P** **01 02 57.2 -1.2**
CHTO pmax pmax
comp=Z,13nm,0.7s
CMAR Chiang Mai Arr 31.46 256 P **P** **01 02 59.5 -0.3**
comp=Z,2.5nm,0.4s,baz=53,slow=6.8,SNR=10.0
CMAR PcP **PcP** **01 05 53.8 +1.0**
comp=Z,1.2nm,0.3s,baz=64,slow=2.1,SNR=5.4
CMAR LR LR 01 17 24.1
comp=Z,500nm,18.8s,baz=65,slow=40
comp=Z,2.5nm,0.4s
CMAR Chiang Mai Arr 31.46 256 P **P** **01 02 58.5 -1.3**
FAKI Fak Fak 32.83 178 P **P** **01 03 09.5 -2.2**
H11N2 WAKE ISLAND Hy 33.88 99 T T 01 39 23.1
baz=296,slow=75,SNR=242
H11N1 WAKE ISLAND Hy 33.88 99 T T 01 39 20.0
baz=296,slow=75,SNR=150
H11N3 WAKE ISLAND Hy 33.90 99 T T 01 39 24.3
baz=296,slow=75,SNR=159
H11S3 WAKE ISLAND Hy 34.23 101 T T 01 40 57.2
baz=304,slow=75,SNR=33
H11S1 WAKE ISLAND Hy 34.24 101 T T 01 40 52.2
baz=304,slow=75,SNR=41
H11S2 WAKE ISLAND Hy 34.25 101 T T 01 41 02.6
baz=304,slow=75,SNR=26
SEY Seymchan 35.60 17 LR LR 01 18 22.4
comp=Z,370nm,21.2s,baz=207,slow=37
SEY Seymchan 35.60 17*ceP* **P** **01 03 36.6 +1.3**
SEY pmax pmax
comp=Z,4.0nm,0.8s
SRIT Nakonsritamara 36.45 241 P **P** **01 03 43.1 0.0**
SRIT IAmb IAmb 01 03 45.1
comp=Z,21nm,1.0s
WMQ Urumqi 36.93 304 *eP* **P** **01 03 47.4 +0.4**
WMQ pP pP 01 03 53.7 -0.8
WMQ pmax pmax
comp=Z,15nm,0.7s
WMQ LR LR
comp=Z,360nm,14.7s
WMQ LR LR
comp=Z,920nm,16.5s
WMQ LR LR
comp=Z,540nm,15.3s
ODAN Odare 38.45 276 *eP* **P** **01 03 57.6 -2.6**
SHEM Shemya Is, Ala 38.58 42 LR LR 01 20 52.1
comp=Z,52nm,20.4s,baz=7.5,slow=38
RAMN Ramite 39.10 277 *eP* **P** **01 04 02.8 -2.9**
comp=Z,18nm,0.4s
JIRN Jiri 39.27 278 *eP* **P** **01 04 05.6 -1.7**
comp=Z,25nm,0.4s
GUN Gumba 39.48 278 *eP* **P** **01 04 08.2 -0.8**
comp=Z,169nm,0.8s
PKI Pulchoki 39.97 278 *eP* **P** **01 04 11.3 -1.7**
comp=Z,65nm,0.9s
PKIN Phulchoki 39.97 278 *eP* **P** **01 04 11.3 -1.7**
comp=Z,19nm,0.4s
DMN Daman 40.22 278 *eP* **P** **01 04 13.2 -1.8**
comp=Z,50nm,1.0s
GKN Gorkha 40.52 279 *eP* **P** **01 04 15.8 -1.6**
comp=Z,27nm,0.4s
PSI Prapat 40.84 235 P **P** **01 04 21.6 +1.5**
comp=Z,4.3nm,0.4s,baz=39,slow=8.5,SNR=4.0
comp=Z,4.3nm,0.4s
ZAA0 Zalesovo Array 40.90 319 P **P** **01 04 18.4 -1.6**
ZALV Zalesovo Beam 40.90 319 P **P** **01 04 19.4 -0.6**
comp=Z,2.4nm,0.4s,baz=114,slow=8.9,SNR=14
ZALV PcP **PcP** **01 06 19.9 -0.3**
comp=Z,2.9nm,0.7s,baz=92,slow=4.6,SNR=6.0
comp=Z,2.4nm,0.4s
ZALV Zalesovo Beam 40.90 319 P **P** **01 04 18.9 -1.1**
RPSI Rantau Prapat 40.92 234 P **P** **01 04 21.6 +1.1**
MK31 Makanchi Array 41.06 308 P **P** **01 04 20.3 -1.2**
MK31 Makanchi Array 41.06 308 *iP* **P** **01 04 20.6 -0.9**
MK31 pmax pmax
comp=Z,4.0nm,0.6s
MKAR Makanchi Array 41.06 308 P **P** **01 04 20.8 -0.7**
comp=Z,3.8nm,0.5s,baz=95,slow=10,SNR=52
MKAR PcP **PcP** **01 06 20.9 0.0**
comp=Z,2.4nm,0.7s,baz=72,slow=4.0,SNR=6.7
MKAR LR LR 01 22 09.0
comp=Z,247nm,21.7s,baz=93,slow=37
comp=Z,3.8nm,0.5s
MKAR Makanchi Array 41.06 308 P **P** **01 04 20.4 -1.1**
MKAR Makanchi Array 41.06 308*ceP* **P** **01 04 21.0 -0.5**
MKAR pmax pmax
comp=Z,4.0nm,0.5s
MAKZ Makanchi 41.28 308 P **P** **01 04 22.2 -1.1**
MAKZ Makanchi 41.28 308 P **P** **01 04 22.2 -1.1**
MAKZ pmax pmax
comp=Z,7.0nm,1.1s
KOLN Koldanda 41.47 279 *eP* **P** **01 04 23.6 -1.7**
TIXI Tiksi 41.64 359 P **P** **01 04 24.9 -0.9**
TIXI Tiksi 41.64 359*ceP* **P** **01 04 25.5 -0.4**
TIXI pmax pmax
comp=Z,7.0nm,0.8s
PYUN Piuthan 41.90 280 *eP* **P** **01 04 27.5 -1.4**
comp=Z,34nm,0.6s
PMG Port Moresby 42.16 156 LR LR 01 21 37.6
comp=Z,165nm,20.9s,baz=284,slow=35
PDGK Podgornoye 42.85 303 P **P** **01 04 34.7 -1.6**
GSI Gunungsitoli 42.85 234 P **P** **01 04 33.9 -2.5**
GSI IAmb IAmb 01 04 43.5
comp=Z,48nm,1.5s
LEM Lembang 43.10 215 P **P** **01 04 40.0 +1.5**
comp=Z,14nm,0.5s,baz=143,slow=20,SNR=2.2
comp=Z,14nm,0.5s
BILL Bilibino 43.22 18 P **P** **01 04 39.2 +0.4**
BILL Bilibino 43.22 18*ceP* **P** **01 04 39.9 +1.2**
BILL *e* 01 06 27.8
BILL pmax pmax
comp=Z,11nm,1.3s
BILL MLR MLR
comp=Z,182nm,17.0s
PRZ Przheval'sk 43.66 301 P **P** **01 04 42.5 -0.4**
PRZ IAmb IAmb 01 04 47.2
comp=Z,26nm,1.0s
PRZ Przheval'sk 43.66 301 P **P** **01 04 42.5 -0.4**
PRZ pmax pmax
comp=Z,26nm,1.0s
KURK Kurchatov 43.95 313 P **P** **01 04 43.7 -1.2**
KURK IAmb IAmb 01 04 44.8
comp=Z,12nm,1.0s
KURK Kurchatov 43.95 313*ceP* **P** **01 04 44.1 -0.7**
KURK pmax pmax
comp=Z,12nm,1.3s
KURBB Kurchatov Arra 43.99 313 LR LR 01 24 54.0
comp=Z,837nm,18.9s,baz=80,slow=39
KURBB Kurchatov Arra 43.99 313 P **P** **01 04 44.3 -0.9**
ARXS Arharly 44.05 304 P **P** **01 04 44.4 -1.5**
KDJ Kajisay 44.57 301 P **P** **01 04 49.8 -0.4**
KDJ IAmb IAmb 01 04 51.8
comp=Z,25nm,1.4s
KDJ Kajisay 44.57 301 P **P** **01 04 49.8 -0.4**
KDJ pmax pmax
comp=Z,25nm,1.4s
MDOK Medeo 44.63 302 P **P** **01 04 50.2 -0.5**
AAA Alma-Ata 44.73 303 *eP* **P** **01 04 50.3 -1.0**
ULHL Ulahol 45.26 301 P **P** **01 04 56.3 +0.6**
SNR=8.6
BOOM Boomskoye usch 45.47 302 P **P** **01 04 56.6 -0.8**
BOOM Boomskoye usch 45.47 302 P **P** **01 04 56.6 -0.8**
KSH Kashi 45.67 297 P P 01 05 03.0 +4.1
KSH pmax pmax
comp=Z,13nm,0.6s
KSH LR LR
comp=Z,470nm,17.5s
KSH LR LR
comp=Z,580nm,14.8s
KSH LR LR
comp=Z,590nm,14.8s
TKM2 Tokmak 2 45.70 302 P **P** **01 04 59.7 +0.4**
SNR=27
TKM2 Tokmak 2 45.70 302 *iP* **P** **01 04 59.0 -0.3**
TKM2 pmax pmax
comp=Z,25nm,0.8s
KBK Karagaybulak 46.20 302 P **P** **01 05 03.6 +0.5**
SNR=10
CHMS Chumysh 46.32 302 P **P** **01 05 04.0 +0.1**
SNR=8.1
CHMS Chumysh 46.32 302 *iP* **P** **01 05 03.4 -0.5**
CHMS pmax pmax
comp=Z,19nm,0.8s
NRIK Noril'sk 46.46 340 P **P** **01 05 03.2 -1.3**
comp=Z,6.7nm,0.5s,baz=119,slow=6.0,SNR=12
comp=Z,6.7nm,0.5s
NRIK Noril'sk 46.46 340 P **P** **01 05 03.2 -1.3**
NRIK IAmb IAmb 01 05 13.4
comp=Z,13nm,1.1s
NRIK Noril'sk 46.46 340*ceP* **P** **01 05 02.8 -1.7**
NRIK pmax pmax
comp=Z,11nm,1.0s
USP Ospenovka 46.49 303 P **P** **01 05 05.2 -0.1**
SNR=16
AAK Ala-Archa 46.53 302 LR LR 01 27 50.9
comp=Z,409nm,18.3s,baz=92,slow=40
AAK Ala-Archa 46.53 302 P **P** **01 05 04.1 -1.6**
AAK IAmb IAmb 01 05 06.4
comp=Z,11nm,0.9s
AAK Ala-Archa 46.53 302*ceP* **P** **01 05 05.8 +0.1**
AAK pmax pmax
comp=Z,9.0nm,0.8s
UCH Uchtor 46.55 301 P **P** **01 05 06.7 +0.6**
SNR=38
EKS2 Erkin-Say 47.06 302 P **P** **01 05 09.6 -0.1**
SNR=5.4
AML Almayashu 47.16 301 P **P** **01 05 11.5 +0.6**
SNR=8.9
BRVK Borovoye 49.30 316 P **P** **01 05 25.9 -0.8**
BRVK Borovoye 49.30 316*ceP* **P** **01 05 26.0 -0.8**
BRVK pmax pmax
comp=Z,22nm,0.6s
KK31 Karatay Array 49.41 303 P **P** **01 05 27.6 -0.3**
KK31 Karatay Array 49.41 303 *iP* **P** **01 05 27.5 -0.3**
KKAR Karatay Array 49.41 303 P **P** **01 05 27.3 -0.5**
KKAR Karatay Array 49.41 303 P **P** **01 05 27.3 -0.5**
BTK Batken 49.55 299 P **P** **01 05 28.0 -1.0**
BTK IAmb IAmb 01 05 40.5
comp=Z,15nm,1.1s
BTK Batken 49.55 299 P **P** **01 05 28.0 -1.0**
BTK pmax pmax
comp=Z,15nm,1.1s
WRA Warramunga Arr 49.82 176 P **P** **01 05 33.0 +2.0**
comp=Z,4.0nm,0.9s,baz=356,slow=8.3,SNR=5.7
WRA LR LR 01 27 51.4
comp=Z,68nm,19.4s,baz=169,slow=37

comp=Z,4.0nm,0.9s
WR0 Warramunga Arr 49.85 176 P **P** **01 05 32.3 +1.0**
GAR Garm 50.09 297 P **P** **01 05 32.5 -0.7**
TAS Tashkent 50.52 301 P **P** **01 05 36.5 +0.2**
TAS Tashkent 50.52 301 P **P** **01 05 36.5 +0.2**
TAS pmax pmax
comp=Z,50nm,0.5s
CHGR Chuyangaron 51.04 297 P **P** **01 05 39.5 -0.8**
CHGR Chuyangaron 51.04 297 P **P** **01 05 39.5 -0.8**
CHGR pmax pmax
comp=Z,85nm,1.1s
CTA Charters Tower 51.95 162 P **P** **01 05 49.7 +2.7**
comp=Z,2.3nm,0.2s,baz=345,slow=9.4,SNR=3.7
comp=Z,2.3nm,0.2s
PALK Pallekele 52.40 255 LR LR 01 29 54.1
comp=Z,248nm,20.4s,baz=156,slow=38
ASAR Alice Springs 53.50 177 P **P** **01 05 60.0 +1.5**
comp=Z,2.8nm,0.8s,baz=8.3,slow=9.5,SNR=11
comp=Z,2.8nm,0.8s
ASAR Alice Springs 53.50 177 P **P** **01 06 00.0 +1.5**
SVE Sverdlovsk 54.88 321 *eP* **P** **01 06 08.1 -0.1**
SVE pmax pmax
comp=Z,12nm,0.5s
SVE MLR MLR
comp=Z,680nm,14.0s
AB31 Akbulak array 55.98 312 *i* P **P** **01 06 15.2 -1.0**
ABKAR Akbulak array 55.98 312 P **P** **01 06 14.7 -1.5**
ARU Arti 56.04 320 LR LR 01 32 19.5
comp=Z,469nm,20.5s,baz=84,slow=38
ARU Arti 56.04 320 P **P** **01 06 15.4 -1.1**
ARU Arti 56.04 320 *c i* P **P** **01 06 15.9 -0.7**
ARU 01 08 20.2
ARU S **S** **01 14 04.0 +0.6**
ARU SS **SS** **01 17 50.1 +0.8**
ARU pmax pmax
comp=Z,26nm,1.1s
ARU MLR MLR
comp=Z,1μm,17.0s
J20K Nowinta River 56.73 30 P **P** **01 06 22.2 +0.8**
J20K IAmb IAmb 01 06 25.6
comp=Z,17nm,1.5s
IMAR Indian Mountai 56.89 28 P **P** **01 06 24.1 +1.7**
AKTO Aktyubinsk 57.04 313 LR LR 01 32 40.3
comp=Z,803nm,21.1s,baz=86,slow=38
AKTO Aktyubinsk 57.04 313 P **P** **01 06 22.2 -1.6**
H21K Melozitna Rive 57.28 29 P **P** **01 06 26.1 +0.8**
SUA Susitna One 58.45 33 P **P** **01 06 34.9 +1.3**
SUA IAmb IAmb 01 06 54.6
comp=Z,7.2nm,0.8s
TOLK Toolik Lake Re 58.46 25 P **P** **01 06 35.0 +1.5**
TOLK IAmb IAmb 01 06 45.2
comp=Z,11nm,1.1s
NEA2 Nenana 58.92 30 P **P** **01 06 37.2 +0.5**
NEA2 IAmb IAmb 01 06 39.0
comp=Z,12nm,1.1s
RND Reindeer 59.13 31 P **P** **01 06 38.7 +0.4**
RND IAmb IAmb 01 06 41.0
comp=Z,9.3nm,0.9s
RND Reindeer 59.13 31 P **P** **01 06 38.7 +0.4**
RND pmax pmax
comp=Z,9.0nm,0.9s
H24K Noodor Dome 59.30 28 P **P** **01 06 41.1 +1.7**
H24K IAmb IAmb 01 07 01.6
comp=Z,6.4nm,1.1s
COLA College 59.41 29 *i* P **P** **01 06 41.4 +1.3**
COLA pmax pmax
comp=Z,3.0nm,1.0s
POKR Poker Plat Res 59.56 29 P **P** **01 06 42.4 +1.2**
POKR IAmb IAmb 01 06 46.3
comp=Z,10nm,0.9s
GEYT Alibeck 59.66 299 P **P** **01 06 42.7 +0.3**
comp=Z,8.4nm,0.6s,baz=75,slow=6.3,SNR=14
GEYT LR LR 01 36 30.5
comp=Z,188nm,18.3s,baz=102,slow=40
comp=Z,8.4nm,0.6s
GEYT Alibeck 59.66 299 P **P** **01 06 42.6 +0.2**
GEYT IAmb IAmb 01 06 43.8
comp=Z,7.3nm,0.8s
GYA0 ALIBECK ARRAY 59.66 299 P **P** **01 06 42.0 -0.4**
GYA0B ALIBECK ARRAY 59.66 299 P **P** **01 06 42.3 -0.1**
ILAR Eielson Array 59.83 29 P **P** **01 06 43.7 +0.6**
comp=Z,0.7nm,0.9s,baz=278,slow=6.3,SNR=6.1
comp=Z,0.7nm,0.9s
ILAR Eielson Array 59.83 29 P **P** **01 06 43.2 +0.1**
HDA Harding Lake 59.85 30 P **P** **01 06 42.9 -0.3**
BMAR Burnt Mountain 60.43 26 P **P** **01 06 47.8 +0.7**
KIRV Kirov 60.67 324 LR LR 01 35 56.4
comp=Z,320nm,19.4s,baz=77,slow=39
KIRV Kirov 60.67 324 *ce* P **P** **01 06 47.8 -1.0**
SCRK Sand Creek 61.20 30 P **P** **01 06 52.2 -0.3**
SCRK IAmb IAmb 01 06 54.0
comp=Z,14nm,1.4s
J26L Joseph Creek 61.29 29 P **P** **01 06 53.1 0.0**
J26L IAmb IAmb 01 06 54.2
comp=Z,5.3nm,0.9s
L26K Log Cabin Wild 61.65 31 P **P** **01 06 55.9 +0.5**
L26K IAmb IAmb 01 07 12.2
comp=Z,5.1nm,0.9s
PRGR Permogore 61.95 327 *eP* **P** **01 06 55.7 -1.7**
L27K Beaver Creek, 62.32 31 P **P** **01 07 01.4 +1.4**
BCAR Beaver Creek A 62.34 31 P **P** **01 07 01.4 +1.3**
STKA Stephens Creek 62.40 170 P **P** **01 07 03.4 +2.6**
comp=Z,2.5nm,0.6s,baz=343,slow=9.5,SNR=3.7
comp=Z,2.5nm,0.6s
STKA Stephens Creek 62.40 170 P **P** **01 07 03.0 +2.3**
STKA IAmb IAmb 01 07 11.9
comp=Z,9.5nm,1.4s
BELG Belogornoye 63.01 317 LR LR 01 37 10.5
comp=Z,354nm,18.0s,baz=93,slow=39
BELG Belogornoye 63.01 317 *i* P **P** **01 07 02.6 -2.1**
BELG pmax pmax
comp=Z,8.0nm,0.9s
TABL Table Mountain 63.24 34 P **P** **01 07 04.7 -1.6**
I29M Ogilvie Camp, 63.30 28 P **P** **01 07 06.2 -0.2**
I29M IAmb IAmb 01 07 18.3
comp=Z,11nm,1.1s
INK Inuvik 64.34 24 P **P** **01 07 14.0 +0.9**
comp=Z,3.9nm,0.5s,baz=295,slow=7.1,SNR=19
comp=Z,3.9nm,0.5s
INK Inuvik 64.34 24 P **P** **01 07 13.5 +0.3**
INK IAmb IAmb 01 07 24.3
comp=Z,6.6nm,0.8s
KLMR Klimovskoe 65.00 327 *eP* **P** **01 07 15.8 -1.8**
KLMR pmax pmax
comp=Z,9.0nm,1.0s
KLMR Klimovskoe 65.00 327 *eP* **P** **01 07 15.9 -1.7**
KLMR AMP 01 07 19.4
comp=Z,9.0nm,1.0s
SPA0 Spitsbergen Ar 65.61 348 *eP* **P** **01 07 21.8 +0.5**
KBS Kingsbay 65.96 349 *eP* **P** **01 07 23.9 +0.3**
SKAG Skagway 66.32 34 P **P** **01 07 29.6 +3.5**
HSPB Hornsund (broa 66.37 347 *eP* **P** **01 07 26.9 +0.7**
VRH Novokhopyorsk 66.87 317 *eP* **P** **01 07 28.6 -1.2**
VRH pmax pmax
comp=Z,30nm,1.6s
BJO1 Bjornoya 66.90 344 *eP* **P** **01 07 29.9 +0.3**
P33M Teslin, Yukon 67.25 33 P **P** **01 07 33.2 +1.0**
P33M IAmb IAmb 01 07 37.3
comp=Z,6.5nm,1.1s
ARA0 ARCESS Array S 67.39 338 *eP* **P** **01 07 32.8 0.0**
ARCES ARCESS Array B 67.39 338 P **P** **01 07 32.4 -0.4**
comp=Z,4.2nm,0.7s,baz=56,slow=7.4,SNR=26
ARCES LR LR 01 42 39.7
comp=Z,473nm,18.4s,baz=66,slow=41
comp=Z,4.2nm,0.7s
HAMF Hammerfest 67.47 340 *eP* **P** **01 07 33.4 +0.1**
MOS Moscow 67.61 322 *eP* **P** **01 07 31.0 -3.4**
MOS *e* 01 07 38.7
MOS *e* 01 08 00.6
MOS pmax pmax
comp=Z,36nm,1.0s
MOS MLR MLR
comp=Z,700nm,16.0s
MOS MLR MLR
comp=E,500nm,16.0s
LPSR Galich'ya Gora 68.01 319 *eP* **P** **01 07 36.2 -0.8**
LPSR pmax pmax
comp=Z,7.0nm,0.9s
GOF Gofitskoye 68.17 310 ǁ *iP* **P** **01 07 38.1 -0.1**
GOF pmax pmax
comp=Z,29nm,0.9s
VORR Voronezh 68.18 318 *eP* **P** **01 07 38.8 +0.7**
VORR pmax pmax
comp=Z,30nm,0.4s
KTK1 Kautokeino 68.35 338 *eP* **P** **01 07 38.9 0.0**
VSR Storozhevoye 68.37 317 *eP* **P** **01 07 37.9 -1.4**
VSR pmax pmax
comp=Z,10.0nm,0.7s
OBN Obninsk 68.40 322 LR LR 01 41 37.7
comp=Z,88nm,18.1s,baz=40,slow=40
OBN Obninsk 68.40 322 P **P** **01 07 39.3 0.0**
OBN Obninsk 68.40 322 *deP* **P** **01 07 38.6 -0.7**
OBN *e* 01 10 10.7
OBN *eS* S 01 17 04.7 +26
OBN pmax pmax
comp=Z,7.0nm,0.5s
OBN MLR MLR
comp=Z,604nm,16.0s
ZEI Tsey 68.41 308 *eP* **P** **01 07 38.9 -1.1**
ZEI pmax pmax
comp=Z,12nm,0.8s
KBZ Khabaz 68.75 309 P **P** **01 07 41.9 +0.2**
comp=Z,15nm,0.9s,baz=60,slow=4.4,SNR=22
KBZ LR LR 01 41 23.0
comp=Z,184nm,19.6s,baz=87,slow=39
comp=Z,15nm,0.9s
KBZ Khabaz 68.75 309 *ce* P **P** **01 07 40.4 -1.4**
KBZ pmax pmax
comp=Z,24nm,1.0s
ONI Oni 68.79 308 P **P** **01 07 42.7 +0.5**
ONI Oni 68.79 308 P **P** **01 07 42.7 +0.5**
ONI pmax pmax
comp=Z,12nm,1.0s
GNI Garni 68.80 305 LR LR 01 42 21.4
comp=Z,135nm,18.4s,baz=60,slow=40
KVAR Kislovodsk Arr 68.80 309 LR LR 01 39 22.8
comp=Z,223nm,20.4s,baz=292,slow=37
KIV Kislovodsk 68.81 309 P **P** **01 07 41.4 -0.9**
KIV Kislovodsk 68.81 309 *eP* **P** **01 07 41.4 -0.9**
KIV pmax pmax
comp=Z,23nm,1.0s
KIV MLR MLR
comp=Z,183nm,17.0s
SHA1 Shidzhatmaz 68.91 309 *i* P **P** **01 07 41.5 -1.6**
JETT Jettan, Norway 68.97 339 *eP* **P** **01 07 42.9 +0.1**
DLBC Dease Lake 69.25 34 LR LR 01 38 25.2
comp=Z,42nm,22.0s,baz=299,slow=36
DLBC Dease Lake 69.25 34 P **P** **01 07 45.9 +1.1**
DLBC IAmb IAmb 01 07 50.4
comp=Z,7.7nm,1.4s
TRO Tromso 69.38 340 *eP* **P** **01 07 46.1 +0.9**
GEVA Gevas 70.71 304 P **P** **01 07 52.9 -1.3**
GEVA IAmb IAmb 01 08 00.6
comp=Z,10nm,0.8s
FIA1 FINESS Array S 70.80 331 P **P** **01 07 53.5 -0.5**
FINES FINESS Array B 70.80 331 P **P** **01 07 53.1 -1.0**
comp=Z,5.8nm,0.3s,baz=68,slow=5.4,SNR=74
FINES LR LR 01 42 17.2
comp=Z,467nm,18.3s,baz=62,slow=39
comp=Z,5.8nm,0.3s
FINES FINESS Array B 70.80 331 P **P** **01 07 52.9 -1.2**
FINES FINESS Array B 70.80 331 *ce* P **P** **01 07 52.5 -1.6**
FINES pmax pmax
comp=Z,6.0nm,0.3s
RES Resolute Bay 71.28 12 LR LR 01 42 26.3
comp=Z,97nm,18.9s,baz=280,slow=38
GURO Guroymak-BITLI 71.35 304 P **P** **01 07 57.0 -1.1**
GURO IAmb IAmb 01 08 03.4
comp=Z,6.5nm,0.7s
STEI Steigen 71.43 339 *eP* **P** **01 07 57.7 -0.1**
FAUS Fauske 71.73 339 *eP* **P** **01 08 00.2 +0.6**
DAG Danmarks Havn 71.78 353 *i* P **P** **01 07 58.0 -1.8**
DAG IAmb IAmb 01 07 59.7
comp=Z,2.5nm,0.7s
VSU Vasula 71.90 328 *eP* **P** **01 08 01.1 +0.4**
MOR8 Moi Rana 72.71 338 *eP* **P** **01 08 04.5 -1.0**
MARD Mardin 72.77 303 P **P** **01 08 05.6 -1.0**
KONS Konsvik 72.94 338 *eP* **P** **01 08 06.8 0.0**
MTSE Matsula 73.12 329 *eP* **P** **01 08 08.8 +0.8**
IDID Didziasalis 73.40 325 *eP* **P** **01 08 09.3 -0.4**
NACGM Naroch 73.58 324 ǁ *eP* **P** **01 08 10.9 +0.1**
baz=61
IIGN Ignalina 73.64 325 *eP* **P** **01 08 11.3 +0.1**
YKA Yellowknife Ar 73.95 26 P **P** **01 08 13.3 +0.4**
comp=Z,2.1nm,0.8s,baz=308,slow=5.6,SNR=5.9
YKA LR LR 01 44 23.9
comp=Z,34nm,19.1s,baz=296,slow=39
comp=Z,2.1nm,0.8s
YKA Yellowknife Ar 73.95 26 P **P** **01 08 12.9 +0.1**
YKA Yellowknife Ar 73.95 26 *i* P **P** **01 08 13.8 +0.9**
YKA pmax pmax
comp=Z,2.0nm,0.8s
DBG Daneborg 74.18 352 *i* P **P** **01 08 12.3 -1.7**
DBG IAmb IAmb 01 08 13.5
comp=Z,1.6nm,0.8s
AKASG Malin Array Be 74.29 320 P **P** **01 08 13.6 -1.5**
comp=Z,1.1nm,0.4s,baz=43,slow=6.3,SNR=17
comp=Z,1.1nm,0.4s
AKASG Malin Array Be 74.29 320 P **P** **01 08 14.5 -0.6**
AKASG Malin Array Be 74.29 320 *ce* P **P** **01 08 14.3 -0.8**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKBB Malin Array Si 74.29 320 P **P** **01 08 14.3 -0.7**
AKBB IAmb IAmb 01 08 15.6
comp=Z,6.3nm,0.8s
AKBB Malin Array Si 74.29 320 P **P** **01 08 14.3 -0.7**
AKBB pmax pmax
comp=Z,6.0nm,0.9s
NSS Namsos 74.53 337 *eP* **P** **01 08 16.9 +0.8**
PABE Paberze 74.68 326 *eP* **P** **01 08 16.8 -0.4**
RAYN Ar Rayn 75.05 289 P **P** **01 08 20.0 0.0**
RAYN IAmb IAmb 01 08 21.6
comp=Z,16nm,1.2s
RAYN Ar Rayn 75.05 289 P **P** **01 08 20.0 0.0**
RAYN pmax pmax
comp=Z,16nm,1.2s
JMIC Jan Mayen 75.26 347 LR LR 01 45 29.4
comp=Z,72nm,19.5s,baz=50,slow=39
MILM Milestii Mici 76.35 316 *eP* **P** **01 08 30.0 +3.0**
MILM *eS* **S** **01 18 12.0 +1.6**
MILM *eL* L 01 44 20.0
MILM LRM MLR 01 45 11.0
comp=Z,400nm,14.5s
MILM Milestii Mici 76.35 316 *eP* **P** **01 08 30.0 +3.0**
MILM *eS* **S** **01 18 12.0 +1.6**
MILM MLR MLR
comp=Z,400nm,14.5s
HFS Hagfors 76.61 333 P **P** **01 08 28.0 -0.2**
comp=Z,4.0nm,0.5s,baz=72,slow=4.8,SNR=35
comp=Z,4.0nm,0.5s
HFS Hagfors 76.61 333 P **P** **01 08 28.0 -0.2**
BR131 Keskin Array S 76.71 308 P **P** **01 08 29.7 +0.3**
BR131 IAmb IAmb 01 08 30.8
comp=Z,12nm,0.8s
BR131 Keskin Array S 76.71 308 P **P** **01 08 29.7 +0.3**
BR131 pmax pmax
comp=Z,12nm,0.9s
BRTR Keskin Array B 76.71 308 P **P** **01 08 29.2 -0.2**
comp=Z,5.6nm,0.7s,baz=101,slow=4.7,SNR=15
BRTR LR LR 01 46 47.4
comp=Z,157nm,20.3s,baz=83,slow=39
comp=Z,5.6nm,0.7s
BRTR Keskin Array B 76.71 308 P **P** **01 08 28.5 -0.9**
BRTR Keskin Array B 76.71 308 *i* P **P** **01 08 30.1 +0.7**
BRTR pmax pmax
comp=Z,6.0nm,0.7s
NB2 NORSAR Subarra 77.00 334 P **P** **01 08 28.9 -1.6**
baz=51,slow=5.9
NB2 NORSAR Subarra 77.00 334 P **P** **01 08 28.9 -1.6**
comp=Z,3.5nm,0.5s,baz=51,slow=5.9
NOA NORSAR Array B 77.00 334 P **P** **01 08 30.1 -0.3**
comp=Z,3.1nm,0.4s,baz=50,slow=5.6,SNR=21
NOA LR LR 01 45 52.8
comp=Z,118nm,18.6s,baz=35,slow=38
comp=Z,3.1nm,0.4s
NC602 NORSAR Array S 77.07 334 *eP* **P** **01 08 30.9 +0.1**
DOMB Dombas 77.13 336 *eP* **P** **01 08 31.0 -0.2**
SUMG Summit 77.37 357 P **P** **01 08 33.2 +0.4**
SUMG IAmb IAmb 01 08 36.8
comp=Z,10nm,0.7s
SUMG Summit 77.37 357 P **P** **01 08 33.2 +0.4**
SUMG pmax pmax
comp=Z,10.0nm,0.7s
SUMG Summit 77.37 357 *i* P **P** **01 08 33.0 +0.2**
SUMG IAmb IAmb 01 08 36.3
comp=Z,8.7nm,0.7s
OSL Oslo 77.90 334 *eP* **P** **01 08 35.8 +0.4**
BUR08 Bucovina Ar. S 78.11 318 P **P** **01 08 36.4 -0.6**
BURAR Bucovina Array 78.11 318 P **P** **01 08 36.0 -1.0**
SKAR Skarslia 78.31 335 *eP* **P** **01 08 37.3 -0.5**
KONO Kongsberg 78.52 334 *eP* **P** **01 08 39.0 +0.2**
CRVS Cervenica-Dubn 79.53 321 *eP* **P** **01 08 47.2 +2.6**
CRVS Cervenica-Dubn 79.53 321 *eP* **P** **01 08 47.2 +2.6**
BER Bergen 79.59 336 *eP* **P** **01 08 44.9 +0.3**
OJC Ojcow 79.67 323 P **P** **01 08 45.3 -0.1**
OJC IAmb IAmb 01 09 02.4
comp=Z,7.9nm,1.0s
OJC Ojcow 79.67 323 P **P** **01 08 45.3 -0.1**
OJC pmax pmax
comp=Z,8.0nm,1.0s
B08A Colville Reser 79.72 40 P **P** **01 08 46.7 +1.0**
B08A IAmb IAmb 01 08 57.5
comp=Z,7.5nm,1.1s
BLS5 Blasjo 79.85 335 *eP* **P** **01 08 45.8 -0.4**
HOMB Homborsund 79.86 333 *eP* **P** **01 08 46.2 +0.1**
EDM Edmonton 79.97 33 P **P** **01 08 47.4 +0.4**
EDM Edmonton 79.97 33 P **P** **01 08 47.4 +0.4**
EDM pmax pmax
comp=Z,31nm,1.5s
LANS Liptovska Anna 80.46 322 *eP* **P** **01 08 52.2 +2.5**
LANS Liptovska Anna 80.46 322 *eP* **P** **01 08 52.2 +2.5**
EIL Elat 80.57 299 LR LR 01 49 38.2
comp=Z,144nm,19.2s,baz=78,slow=40
OKC Ostrava-Krasne 80.76 323 AMS AMS 01 49 20.0
comp=Z,400nm,19.7s
NEW Newport 80.98 39 P **P** **01 08 53.0 +0.4**
NEW Newport 80.98 39 P **P** **01 08 53.0 +0.4**
NEW pmax pmax
comp=Z,5.0nm,1.0s
MAUC Maruska 81.21 323 AMS AMS 01 48 00.0
comp=Z,900nm,19.9s
OSTC Ostas 81.33 324 AMS AMS 01 48 10.0
comp=Z,500nm,11.8s
KRLC Kraliky 81.33 324 *eP* **P** **01 08 56.4 +2.0**
KRLC *e* 01 09 03.9
KRLC MLR MLR
comp=Z,500nm,15.4s
KRLC Kraliky 81.33 324 *eP* **P** **01 08 56.4 +2.0**
KRLC *ep*P **sP** **01 09 03.9 -1.3**
KRLC AMS AMS 01 49 50.0
comp=Z,500nm,15.4s
CHVC Chvalec 81.39 324 AMS AMS 01 48 10.0
comp=Z,600nm,11.0s
DPC Dobruska-Polom 81.40 324 *eP* **P** **01 08 54.9 +0.2**
DPC MLR MLR
comp=Z,600nm,8.6s
DPC Dobruska-Polom 81.40 324 *eP* **P** **01 08 54.9 +0.2**
DPC AMS AMS 01 48 20.0
comp=Z,600nm,8.6s
UPC Upice 81.46 324 AMS AMS 01 48 10.0
comp=Z,600nm,18.4s
VRAC Vranov 81.89 323 LR LR 01 48 33.8
comp=Z,170nm,18.5s,baz=64,slow=38
PVCC Panska Ves 82.17 325 AMS AMS 01 50 00.0
comp=Z,600nm,15.5s
CLL Collm 82.45 326 P **P** **01 08 58.2 -1.9**
CLL IAmb IAmb 01 09 16.4
comp=Z,6.8nm,1.0s
CLL Collm 82.45 326 *i* P **P** **01 09 00.0 -0.1**
CLL *e**PP **sP** **01 09 10.0 -1.0**
CLL pmax pmax
comp=Z,4.0nm,0.6s
CLL Collm 82.45 326 *i* P **P** **01 09 00.0 -0.1**
comp=Z,4.0nm,0.6s
CLL *ep*P **sP** **01 09 10.0 -1.0**
CLL *es*P **pP** **01 09 14.0 +5.9**
CLL *eP**PP **01 12 05.0 -3.7**
CLL *es*S **sS** **01 19 29.0 +0.5**
CLL *eP**PPS PPS 01 20 24.0
CLL *ex* x 01 21 25.0
CLL *eS**SS SS 01 24 54.0 +19
TREC Trest 82.47 323 AMS AMS 01 50 20.0
comp=Z,500nm,14.0s
PRU Pruhonice 82.53 324 AMS AMS 01 48 50.0
comp=Z,500nm,10.6s
BMO Blue Mountains 82.86 42 P **P** **01 09 02.3 -0.3**
BMO Blue Mountains 82.86 42 P **P** **01 09 02.3 -0.3**
BMO pmax pmax
comp=Z,5.0nm,1.0s
RONA Rosalia, Austr 83.03 322 *eP* **P** **01 09 04.3 +1.0**
comp=Z,6.1nm,1.7s
CONA Conrad Observa 83.12 322 *eP* **P** **01 09 04.7 +0.9**
comp=Z,1.1nm,0.6s
SFJD Kangerlussuaq 83.22 1 LR LR 01 48 29.3
comp=Z,74nm,19.7s,baz=340,slow=37
NKC Novy Kostel 83.41 325 AMS AMS 01 50 30.0
comp=Z,600nm,14.9s
KHC Kasperske Hory 83.55 324 *eP* **P** **01 09 05.1 -0.9**
KHC *e* 01 09 14.1
KHC MLR MLR
comp=Z,600nm,17.9s
KHC Kasperske Hory 83.55 324 *eP* **P** **01 09 05.1 -0.9**
KHC *ep*P **sP** **01 09 14.1 -2.7**
KHC AMS AMS 01 49 50.0
comp=Z,600nm,17.9s
GERES GERESS Array B 83.67 324 P **P** **01 09 06.5 -0.2**
comp=Z,0.4nm,0.4s,baz=39,slow=5.1,SNR=7.1
GERES LR LR 01 50 24.0
comp=Z,374nm,18.3s,baz=50,slow=39
comp=Z,0.4nm,0.4s
GERES GERESS Array B 83.67 324 P **P** **01 09 05.6 -1.1**
BEKR Beckworth 83.86 47 P **P** **01 09 08.1 +0.1**
BEKR IAmb IAmb 01 09 19.7
comp=Z,7.2nm,1.0s
MOA Molln 84.01 323 *eP* P 01 09 14.8 +6.5
comp=Z,1.6nm,0.6s
SOKA Soboth 84.33 322 *eP* **P** **01 09 10.5 +0.4**
comp=Z,4.1nm,0.8s
MFID Camas Ranch 84.57 42 P **P** **01 09 10.3 -1.1**
MFID IAmb IAmb 01 09 23.6
comp=Z,10nm,1.2s
OBKA Obir 84.70 322 *eP* **P** **01 09 13.4 +1.5**
comp=Z,1.8nm,0.6s
HRY Holter Researc 84.78 38 P **P** **01 09 13.3 +0.9**
CMB Columbia Colle 84.87 49 P **P** **01 09 12.5 -0.4**
CMB IAmb IAmb 01 09 24.7
comp=Z,6.8nm,0.9s
CMB Columbia Colle 84.87 49 P **P** **01 09 12.5 -0.4**
CMB pmax pmax
comp=Z,7.0nm,1.0s
LRM Limekiln Ridge 85.00 39 P **P** **01 09 14.4 +0.7**
YERR Yerington 85.07 47 P **P** **01 09 14.9 +0.8**
YERR IAmb IAmb 01 09 26.1
comp=Z,9.3nm,1.1s
MYKA Terra Mystica 85.11 322 *eP* **P** **01 09 16.3 +2.3**
comp=Z,0.9nm,0.3s
FRB Frobisher Bay 85.20 9 LR LR 01 50 41.3
comp=Z,127nm,18.3s,baz=1.0,slow=38
HLID Hailey 85.30 42 P **P** **01 09 15.9 +0.8**
HLID IAmb IAmb 01 09 28.2
comp=Z,5.4nm,0.9s
ABTA Abfaltersbach 85.63 323 *eP* **P** **01 09 17.3 +0.7**
comp=Z,1.7nm,0.7s
KVN Kaiserville 85.76 47 P **P** **01 09 18.1 +0.7**
KVN Kaiserville 85.76 47 P **P** **01 09 18.2 +0.7**
KVN pmax pmax
comp=Z,15nm,1.0s
MOTA Moosalm 85.97 324 *eP* **P** **01 09 18.6 +0.3**
comp=Z,1.4nm,1.1s
NVAR Mina Array Bea 85.99 48 P **P** **01 09 20.1 +1.4**
comp=Z,1.5nm,0.8s,baz=296,slow=5.4,SNR=9.5
comp=Z,1.5nm,0.8s
EKA Eskdalemuir Ar 86.38 336 P **P** **01 09 18.9 -1.1**
comp=Z,2.4nm,0.5s,baz=43,slow=4.7,SNR=29
EKA LR LR 01 50 50.9
comp=Z,99nm,18.7s,baz=43,slow=38
comp=Z,2.4nm,0.5s
ELK Elko 86.53 44 P **P** **01 09 22.2 +0.9**
ELK Elko 86.53 44 P **P** **01 09 22.2 +0.9**
ELK pmax pmax
comp=Z,4.0nm,1.0s
DAVOX Davos/Dischmat 86.97 324 LR LR 01 54 17.2
comp=Z,206nm,18.3s,baz=56,slow=40
TPAW Teton Pass 87.31 40 P **P** **01 09 25.9 +0.8**
TPAW IAmb IAmb 01 09 38.3
comp=Z,6.4nm,1.1s
PDAR Pinedale Array 88.56 40 P **P** **01 09 32.0 +1.0**
comp=Z,1.6nm,0.9s,baz=318,slow=2.0,SNR=11
comp=Z,1.6nm,0.9s
PDAR Pinedale Array 88.56 40 P **P** **01 09 30.9 -0.2**
PSUT Pine Spring 88.72 45 P **P** **01 09 31.5 -0.4**
ULM Lac du Bonnet 89.82 28 P **P** **01 09 37.0 +0.5**
comp=Z,2.9nm,0.9s,baz=36,slow=2.4,SNR=3.5
ULM LR LR 01 53 16.5
comp=Z,65nm,18.8s,baz=322,slow=38
comp=Z,2.9nm,0.9s

RDMU	**Red Mountain**	**89.99**	**42**	P	**P**	**01 09 38.5**	**+0.7**	
RDMU				IAmb	IAmb	01 09 42.3		
	comp=Z,5.9nm,1.1s							
PFO	**Pinyon Flats O**	**90.04**	**51**	LR	LR	01 44 53.8		
	comp=Z,81nm,20.8s,baz=279,slow=32							
VAE	**Valguarnera**	**90.48**	**315**	LR	LR	01 53 29.5		
	comp=Z,147nm,19.3s,baz=82,slow=38							
RSSD	**Black Hills**	**90.59**	**36**	P	**P**	**01 09 40.8**	**+0.3**	
RSSD				IAmb	IAmb	01 09 43.3		
	comp=Z,5.3nm,0.8s							
RSSD	**Black Hills**	**90.59**	**36**	P	**P**	**01 09 40.8**	**+0.3**	
RSSD				pmax	pmax			
	comp=Z,5.0nm,0.8s							
KMBO	**Kilima Mbogo**	**93.95**	**271**	LR	LR	01 56 17.0		
	comp=Z,48nm,18.1s,baz=64,slow=38							
SCHQ	**Schefferville**	**94.03**	**10**	LR	LR	01 53 02.2		
	comp=Z,97nm,22.0s,baz=28,slow=36							
KEST	**Kesra**	**94.70**	**316**	LR	LR	01 59 50.0		
	comp=Z,144nm,18.8s,baz=281,slow=40							
ESDC	**Sonseca Array**	**99.04**	**327**	PP	**PP**	**01 14 15.6**	**-4.7**	
	comp=Z,0.5nm,1.0s,baz=53,slow=7.0,SNR=3.0							
ESDC				LR	LR	02 02 09.7		
	comp=Z,118nm,19.4s,baz=21,slow=40							
TXAR	**Lajitas Array**	**101.12**	**47**	P	**Pdif**	**01 10 30.5**	**+1.9**	
	comp=Z,0.1nm,0.5s,baz=224,slow=2.5,SNR=2.2							
TORD	**Torodi Ar. Bea**	**115.09**	**304**	PKP	**PKiKP**	**01 15 19.7**	**0.0**	
	comp=Z,1.5nm,1.1s,baz=48,slow=2.3,SNR=4.3							
TORD				PP	**PP**	**01 16 15.2**	**-3.8**	
	comp=Z,0.9nm,0.9s,baz=34,slow=6.9,SNR=3.9							
TORD	**Torodi Ar. Bea**	**115.09**	**304**		**PKiKP**	**01 15 19.3**	**-0.4**	

*NEIC **08** 00:57:27.6±1.2,7.57S±0.09×119.41E±0.09,h267km±7km, mb4.1/15, Error ellipse: s-maj=14.2km s-min=10.9km az=224.0*

*DJA **08** 00:57:28.0±0.3,8.3°S±2.1×11.9E±.1°,h251km±4km, M4.4/19, mB5.5/3, mb4.5/8, MLv4.2/19, Mw(mB)5.0/3*

*IDC **08** 00:57:30.1±1.3,7.24S×120.02E,h296km±12km, mb3.4/5, mbtmp4.1/8, Error ellipse: s-maj=51.2km s-min=9.0km az=54.0*

ISC 08 00:57:26.9±0.6,7.68S±0.04×119.40E±0.05,h263km±6km, n68,σ1°32/81,mb3.9/11,Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSSI	**Bau Bau, Buton**	**1.87**	**36**	P	**Pn**	**00 58 09.6**	**+0.2**
WBSI	**Waikabubak, Su**	**1.95**	**180**	P	**Pn**	**00 58 10.4**	**+0.4**
WBSI				S	**S**	**00 58 42.7**	**-1.5**
PLAI	**Plampang**	**1.97**	**234**	P	**Pn**	**00 58 11.3**	**+1.2**
PLAI				S	**S**	**00 58 44.6**	**+0.2**
PLAI	**Plampang**	**1.97**	**234**	P	**Pn**	**00 58 11.7**	**+1.6**
BKSI	**Bulukumba**	**2.45**	**17**	P	**Pn**	**00 58 15.0**	**+0.4**
BKSI				S	**S**	**00 58 51.4**	**-1.1**
EDFI	**Ende, Flores**	**2.51**	**115**	P	**Pn**	**00 58 16.0**	**+0.8**
EDFI				S	**S**	**00 58 52.5**	**-1.1**
KAPI	**Kappang**	**2.67**	**8**	P	**Pn**	**00 58 18.2**	**+1.4**
	8.2nm,0.3s,baz=191,slow=4.0,SNR=5.5						
KAPI				S	**S**	**00 58 57.3**	**+0.9**
	5.2nm,0.3s,baz=92,slow=22,SNR=5.6						
KAPI	**Kappang**	**2.67**	**8**	P	**Pn**	**00 58 16.1**	**-0.7**
BASI	**Baing, Sumba**	**2.78**	**155**	P	**Pn**	**00 58 19.0**	**+1.1**
BASI				S	**S**	**00 58 56.9**	**-1.5**
MMRI	**Maumere**	**2.97**	**109**	Pn	**Pn**	**00 58 21.1**	**+1.3**
MMRI	**Maumere**	**2.97**	**109**	P	**Pn**	**00 58 20.9**	**+1.1**
MMRI				S	**S**	**00 59 01.8**	**-0.1**
MMRI	**Maumere**	**2.97**	**109**	P	**Pn**	**00 58 21.5**	**+1.7**
BNSI	**Bone**	**3.33**	**12**	P	**Pn**	**00 58 24.9**	**+1.1**
SPSI	**Sidrap Palu**	**3.71**	**6**	P	**Pn**	**00 58 29.3**	**+1.3**
BBSI	**Bau Bau**	**3.83**	**56**	P	**Pn**	**00 58 30.9**	**+1.5**
SRBI	**Singaraja**	**4.16**	**264**	P	**Pn**	**00 58 34.2**	**+1.0**
IGBI	**Denpasar**	**4.36**	**255**	P	**Pn**	**00 58 34.5**	**-0.9**
IGBI				S	**S**	**00 59 25.3**	**-4.8**
TTSI	**Tana Toraja**	**4.62**	**5**	P	**Pn**	**00 58 40.2**	**+1.6**
BATI	**Baumata**	**4.91**	**121**	P	**Pn**	**00 58 43.6**	**+1.6**
	74nm,0.5s,baz=280,slow=6.1,SNR=10						
BATI				S	**S**	**00 59 41.8**	**-0.2**
	288nm,0.4s,baz=220,slow=20,SNR=12						
BATI	**Baumata**	**4.91**	**121**	P	**Pn**	**00 58 43.1**	**+1.1**
BATI				S	**S**	**00 59 40.6**	**-1.4**
SOEI	**Soe**	**5.24**	**114**	Pn	**Pn**	**00 58 47.0**	**+0.9**
SOEI	**Soe**	**5.24**	**114**	P	**Pn**	**00 58 47.0**	**+0.9**
	2.0nm5μm139nm,0.8s						
SOEI				S	**S**	**00 59 47.5**	**-1.9**
	2.0nm5μm139nm,0.8s						
SOEI	**Soe**	**5.24**	**114**	P	**Pn**	**00 58 47.4**	**+1.3**
JAGI	**Jajag, Banyuwa**	**5.25**	**261**	Pn	**Pn**	**00 58 46.8**	**+0.7**
JAGI	**Jajag, Banyuwa**	**5.25**	**261**	P	**Pn**	**00 58 47.6**	**+1.4**
BLJI	**Banyuglugur**	**5.75**	**269**	P	**Pn**	**00 58 53.4**	**+1.2**
	0.3nm37nm,0.7s						
GMJI	**Gumukmas**	**5.92**	**264**	P	**Pn**	**00 58 55.5**	**+1.1**
	0.4nm66nm,0.7s						
BBKI	**Banjar Baru**	**6.17**	**312**	P	**Pn**	**00 58 58.1**	**+0.6**
PWJI	**Pagerwojo**	**7.53**	**267**	P	**Pn**	**00 59 15.3**	**+0.9**
	0.3nm42nm,0.8s						
PCJI	**Pacitan**	**8.16**	**266**	P	**Pn**	**00 59 22.0**	**-0.3**
	123nm,0.5s						
WOJI	**Wonogiri, Jawa**	**8.40**	**268**	P	**Pn**	**00 59 24.6**	**-0.7**
	38nm,0.6s						
SANI	**Sanana**	**8.62**	**50**	P	**Pn**	**00 59 28.9**	**+0.7**
UGM	**Wanagama**	**8.79**	**268**	Pn	**Pn**	**00 59 30.4**	**+0.1**
UGM	**Wanagama**	**8.79**	**268**	P	**Pn**	**00 59 30.3**	**0.0**
NLAI	**Namlea**	**8.85**	**60**	P	**Pn**	**00 59 33.2**	**+2.3**
KNRA	**Kununurra**	**12.13**	**132**	Pn	**Pn**	**01 00 11.4**	**-0.5**
KNRA	**Kununurra**	**12.13**	**132**	P	**Pn**	**01 00 12.3**	**+0.4**
MTN	**Manton Dam**	**12.63**	**115**	Pn	**Pn**	**01 00 18.5**	**+0.4**
MTN	**Manton Dam**	**12.63**	**115**	P	**Pn**	**01 00 19.0**	**+0.9**
MBWA	**Marble Bar**	**13.40**	**179**		**Pn**	**01 00 28.5**	**+1.0**
FAKI	**Fak Fak**	**13.64**	**70**		**Pn**	**01 00 28.9**	**-1.6**
FAKI	**Fak Fak**	**13.64**	**70**	P	**Pn**	**01 00 28.8**	**-1.6**
PSA00	**Pilbara Seismi**	**13.82**	**178**		**Pn**	**01 00 33.8**	**+1.3**
WB0	**Warramunga Arr**	**18.86**	**131**	P	**P**	**01 01 28.9**	**+0.8**
WB0				IAmb	IAmb	01 01 29.5	
	comp=Z,10nm,0.7s						
WRA	**Warramunga Arr**	**18.93**	**132**	P	**P**	**01 01 29.5**	**+0.7**
	comp=Z,6.6nm,0.5s,baz=304,slow=12,SNR=133						
WRA				S	**S**	**01 04 46.0**	**-3.8**
	comp=Z,0.5nm,0.6s,baz=314,slow=18,SNR=2.1						
WRA	**Warramunga Arr**	**18.93**	**132**	P	**P**	**01 01 29.0**	**+0.1**
WRAB	**Tennant Creek**	**18.93**	**132**	P	**P**	**01 01 29.9**	**+1.0**
WRAB				IAmb	IAmb	01 01 30.3	
	comp=Z,9.9nm,0.7s						
WB2	**Warramunga Arr**	**18.94**	**132**	P	**P**	**01 01 29.8**	**+0.9**
WB2				IAmb	IAmb	01 01 30.3	
	comp=Z,9.4nm,0.8s						
WR0	**Warramunga Arr**	**19.09**	**131**	P	**P**	**01 01 31.6**	**+1.0**
AS31	**Alice Springs**	**21.13**	**140**	P	**P**	**01 01 52.9**	**+1.0**
AS31				IAmb	IAmb	01 01 54.1	
	comp=Z,3.1nm,0.4s						
ASAR	**Alice Springs**	**21.13**	**140**	P	**P**	**01 01 52.6**	**+0.6**
	comp=Z,5.0nm,0.4s,baz=312,slow=8.6,SNR=90						
ASAR				S	**S**	**01 05 27.2**	**-2.3**
	comp=Z,0.8nm,0.9s,baz=310,slow=12,SNR=2.2						
	comp=Z,5.0nm,0.4s						
ASAR	**Alice Springs**	**21.13**	**140**	P	**P**	**01 01 53.0**	**+1.1**
MORW	**Morawa**	**21.51**	**188**	P	**P**	**01 01 55.6**	**+0.2**
MORW				IAmb	IAmb	01 02 20.0	
	comp=Z,4.7nm,1.1s						
COEN	**Coen**	**24.16**	**107**	P	**P**	**01 02 19.6**	**-0.2**
COEN				IAmb	IAmb	01 02 22.0	
	comp=Z,4.0nm,0.9s						
BBOO	**Buckleboo**	**29.40**	**151**	P	**P**	**01 03 06.8**	**+0.6**
STKA	**Stephens Creek**	**31.73**	**142**	P	**P**	**01 03 28.2**	**+1.5**
	comp=Z,1.1nm,0.3s,baz=331,slow=7.3,SNR=4.7						
	comp=Z,1.1nm,0.3s						
STKA	**Stephens Creek**	**31.73**	**142**	P	**P**	**01 03 28.2**	**+1.5**
MCQ	**Macquarie Isla**	**56.39**	**154**	P	**P**	**01 06 41.2**	**+0.3**
SONM	**Songino Array**	**56.46**	**350**	P	**P**	**01 06 39.4**	**-2.3**
	comp=Z,0.7nm,0.7s,baz=163,slow=5.3,SNR=2.9						
	comp=Z,0.7nm,0.7s						
CASY	**Casey**	**58.83**	**184**	P	**P**	**01 06 58.6**	**+0.9**
CASY				IAmb	IAmb	01 07 12.5	
	comp=Z,7.7nm,1.1s						
MK31	**Makanchi Array**	**63.47**	**332**	P	**P**	**01 07 28.4**	**-0.7**
MK31				IAmb	IAmb	01 07 29.3	
	comp=Z,0.9nm,0.7s						
MKAR	**Makanchi Array**	**63.47**	**332**	P	**P**	**01 07 28.7**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=153,slow=7.0,SNR=5.7						
	comp=Z,0.8nm,0.5s						
MKAR	**Makanchi Array**	**63.47**	**332**	P	**P**	**01 07 28.8**	**-0.3**
VNDA	**Vanda**	**73.22**	**171**	P	**P**	**01 08 30.3**	**+1.4**
	comp=Z,0.5nm,0.4s,baz=330,slow=6.9,SNR=7.4						
	comp=Z,0.5nm,0.4s						
VNDA	**Vanda**	**73.22**	**171**	P	**P**	**01 08 30.0**	**+1.2**
QSPA	**South Pole Qui**	**82.31**	**180**	P	**P**	**01 09 19.4**	**+0.3**
QSPA				IAmb	IAmb	01 09 28.9	
	comp=Z,0.8nm,1.0s						
TORD	**Torodi Ar. Bea**	**118.61**	**281**	PKP	**PKPdf**	**01 15 43.3**	**-1.3**
	comp=Z,0.5nm,1.1s,baz=76,slow=2.2,SNR=4.0						
TORD	**Torodi Ar. Bea**	**118.61**	**281**	PKPdf	**PKPdf**	**01 15 42.9**	**-1.7**

*IDC **08** 01:06:34.1±1.6,1.34N×126.50E,h0km,mb4.1/5, mbtmp4.2/5, Error ellipse: s-maj=157.1km s-min=19.4km az=65.0*

*DJA **08** 01:06:38.7±0.9,1.1°N±2.1×12.6E±.1°,h29km±8km,M4.1/14, mb4.3/6,mB4.9/2,MLv4.0/14,Mw(mB)4.2/2*

*NEIC **08** 01:06:41.2±1.7,1.30N±0.10×126.46E±0.08,h44km±5km, mb4.2/13, Error ellipse: s-maj=16.0km s-min=8.0km az=213.0*

ISC 08 01:06:40.9±0.7,1.28N±0.05×126.41E±0.05,h47km,n39, σ0°99/42,mb4.3/11,Northern Moluccas Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.08**	**118**		**Pn**	**01 06 57.7**	**-1.9**
TNTI	**Ternate**	**1.08**	**118**	P	Pn	01 06 54.8	-4.8
TNTI				S	**Sn**	**01 07 14.8**	**+1.3**
LBMI	**Labuha**	**2.19**	**150**	P	**Pn**	**01 07 13.8**	**-1.1**
LBMI				S	**Sn**	**01 07 39.7**	**-1.1**
KMSI	**Cibinong**	**2.52**	**254**	P	**Pn**	**01 07 18.2**	**-1.2**
KMSI				S	**Sn**	**01 07 49.1**	**+0.2**
SGSI	**Sangihe**	**2.55**	**340**	P	Pn	01 07 14.6	-5.2
SGSI				S	**Sn**	**01 07 49.0**	**-0.6**
SANI	**Sanana**	**3.33**	**187**	P	**Pn**	**01 07 29.8**	**-0.7**
SANI				S	**Sn**	**01 08 08.5**	**-0.3**
LUWI	**Luwuk**	**4.30**	**238**	Pn	**Pn**	**01 07 46.3**	**+2.5**
LUWI	**Luwuk**	**4.30**	**238**	P	**Pn**	**01 07 43.5**	**-0.3**
MRSI	**Marisa**	**4.54**	**260**	P	**Pn**	**01 07 46.6**	**-0.4**
NLAI	**Namlea**	**4.54**	**171**	P	Pn	01 07 42.6	-4.4
NLAI				S	**Sn**	**01 08 38.4**	**-0.1**
APSI	**Ampana**	**5.23**	**245**	P	**Pn**	**01 07 54.9**	**-1.7**
	0.2nm614nm42nm,0.5s						
AAI	**Ambon**	**5.24**	**160**	P	**Pn**	**01 07 56.8**	**+0.1**
	0.2nm39nm,0.6s						
TOLI2	**Tolitoli**	**5.63**	**268**	Pn	**Pn**	**01 08 02.1**	**+0.1**
MPSI	**Mapaga**	**6.58**	**262**	P	**Pn**	**01 08 15.5**	**+0.5**
	0.1nm8.9nm,1.3s						
FAKI	**Fak Fak**	**7.17**	**126**	Pn	**Pn**	**01 08 24.1**	**+0.8**
TTSI	**Tana Toraja**	**7.86**	**237**	P	**Pn**	**01 08 31.4**	**-1.3**
SPSI	**Sidrap Palu**	**8.43**	**232**	P	**Pn**	**01 08 39.2**	**-1.3**
MYLDM	**Lahad Datu**	**8.79**	**296**	Pn	**Pn**	**01 08 46.6**	**+1.1**
KNRA	**Kununurra**	**17.00**	**172**	Pn	**Pn**	**01 10 35.5**	**+0.1**
KNRA				IAmb	IAmb	01 10 51.1	
	comp=Z,19nm,1.1s						
WB0	**Warramunga Arr**	**22.33**	**160**	P	**P**	**01 11 33.9**	**-0.9**
COEN	**Coen**	**22.47**	**133**	P	**P**	**01 11 37.6**	**+1.2**
COEN				IAmb	IAmb	01 11 43.5	
	comp=Z,6.5nm,1.3s						
WRA	**Warramunga Arr**	**22.48**	**160**	P	**P**	**01 11 35.3**	**-1.0**
	comp=Z,5.4nm,0.4s,baz=339,slow=11,SNR=97						
	comp=Z,5.4nm,0.4s						
WRA	**Warramunga Arr**	**22.48**	**160**	P	**P**	**01 11 34.5**	**-1.8**
WB2	**Warramunga Arr**	**22.48**	**160**	P	**P**	**01 11 35.5**	**-1.0**
WB2				IAmb	IAmb	01 11 41.2	
	comp=Z,12nm,0.8s						
WR0	**Warramunga Arr**	**22.56**	**160**	P	**P**	**01 11 36.4**	**-0.8**
WR0				IAmb	IAmb	01 11 38.3	
	comp=Z,8.4nm,0.8s						
NACB	**Ninganchiao**	**23.24**	**349**	P	**P**	**01 11 43.5**	**-0.6**
ASAR	**Alice Springs**	**25.84**	**164**	P	**P**	**01 12 08.2**	**0.0**
	comp=Z,1.5nm,0.4s,baz=344,slow=7.7,SNR=17						
	comp=Z,1.5nm,0.4s						
ASAR	**Alice Springs**	**25.84**	**164**	P	**P**	**01 12 09.9**	**+1.8**
BBOO	**Buckleboo**	**35.11**	**166**	P	**P**	**01 13 30.2**	**+0.3**
STKA	**Stephens Creek**	**35.98**	**158**	P	**P**	**01 13 36.8**	**-0.6**
	comp=Z,2.8nm,0.8s,baz=340,slow=10,SNR=2.9						
	comp=Z,2.8nm,0.8s						
STKA	**Stephens Creek**	**35.98**	**158**	P	**P**	**01 13 37.6**	**+0.3**
MK31	**Makanchi Array**	**59.39**	**326**	P	**P**	**01 16 38.1**	**-0.5**
MKAR	**Makanchi Array**	**59.39**	**326**	P	**P**	**01 16 38.3**	**-0.2**
	comp=Z,0.7nm,0.4s,baz=121,slow=7.0,SNR=15						
	comp=Z,0.7nm,0.4s						
MKAR	**Makanchi Array**	**59.39**	**326**	P	**P**	**01 16 38.0**	**-0.5**
MAKZ	**Makanchi**	**59.57**	**326**	P	**P**	**01 16 40.1**	**+0.4**
MAKZ				IAmb	IAmb	01 16 42.6	
	comp=Z,1.5nm,0.6s						
KURK	**Kurchatov**	**63.63**	**328**	P	**P**	**01 17 06.8**	**-0.3**
KURK				IAmb	IAmb	01 17 11.5	
	comp=Z,2.1nm,0.7s						
ABKAR	**Akbulak array**	**73.84**	**321**	P	**P**	**01 18 11.1**	**+0.4**
AKTO	**Aktyubinsk**	**75.38**	**322**	P	**P**	**01 18 19.8**	**+0.2**
	comp=Z,1.4nm,0.8s,baz=100,slow=11,SNR=4.6						
	comp=Z,1.4nm,0.8s						
VNDA	**Vanda**	**81.05**	**173**	P	**P**	**01 18 51.1**	**+0.7**
VNDA				IAmb	IAmb	01 18 57.9	
	comp=Z,2.4nm,1.2s						

*ATH **08** 01:07:16.0,36.83N×21.72E,h11km±2km, ML2.6/8, Error ellipse: s-maj=2.9km s-min=1.1km az=54.0*

*THE **08** 01:07:17.3,36.84N×21.80E,h0km±1km, ML2.6/14, Error ellipse: s-maj=2.0km s-min=0.7km az=237.0*

ISC 08 01:07:17.1±1.0,36.84N±0.03×21.76E±0.04,h7km±6km, n43,σ0°78/61,Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PYL	**PYLOS**	**0.06**	**343**	P	**Pg**	**01 07 18.9**	**+0.1**
PYL				S	**Sg**	**01 07 19.9**	**-0.1**
	5μm,0.2s						
ITM	**Ithomi**	**0.36**	**21**	P	**Pg**	**01 07 23.4**	**-0.8**
ITM				S	**Sg**	**01 07 29.5**	**+0.4**
ITM				AML	AML	01 07 30.0	
	comp=N,7409μm,0.2s						
ITM				AML	AML	01 07 30.6	
	comp=E,6277μm,0.1s						
ITM	**Ithomi**	**0.36**	**21**	P	**Pg**	**01 07 23.4**	**-0.8**
ITM				S	**Sg**	**01 07 29.4**	**+0.4**
	comp=E,3μm,0.2s						
VLI	**Velíai**	**0.95**	**97**	P	**Pg**	**01 07 34.9**	**-0.5**
VLI				AML	AML	01 07 57.3	
	comp=E,444μm,0.7s						
VLI				AML	AML	01 08 03.3	
	comp=N,553μm,0.6s						
VLI	**Velíai**	**0.95**	**97**	P	**Pg**	**01 07 34.8**	**-0.5**
VLI				S	**Sb**	**01 07 49.3**	**+0.6**
	comp=N,248nm,0.6s						
MNVA	**Monemvasia**	**1.03**	**98**	P	**Pg**	**01 07 36.7**	**-0.3**
KTHR	**Kythira**	**1.16**	**120**	P	**Pg**	**01 07 38.2**	**-1.1**
KTHR				AML	AML	01 08 01.2	
	comp=E,1527μm,0.4s						
KTHR				AML	AML	01 08 01.6	
	comp=N,1378μm,0.5s						
KTHR	**Kythira**	**1.16**	**120**	P	**Pg**	**01 07 38.2**	**-1.1**
KTHR				S	**Sn**	**01 07 55.8**	**0.0**
	comp=N,252nm,0.4s						
KRND	**KRANIDI**	**1.23**	**64**	P	**Pg**	**01 07 39.9**	**-0.9**
KRND				AML	AML	01 08 03.2	
	comp=N,187μm,0.7s						
KRND				AML	AML	01 08 07.5	
	comp=E,277μm,0.4s						
KRND	**KRANIDI**	**1.23**	**64**	P	**Pg**	**01 07 40.0**	**-0.8**
KRND				S	**Sn**	**01 07 57.6**	**-0.1**
	comp=E,120nm,0.4s						
RLS	**Riolos of Patr**	**1.24**	**349**	P	**Pg**	**01 07 40.1**	**-0.7**
RLS				AML	AML	01 08 03.5	
	comp=E,495μm,0.4s						
RLS				AML	AML	01 08 04.5	
	comp=N,547μm,0.4s						
RLS	**Riolos of Patr**	**1.24**	**349**	P	**Pg**	**01 07 39.8**	**-1.1**
RLS				S	**Sn**	**01 07 59.6**	**+1.9**
	comp=N,258nm,0.5s						
KLV	**Kalavryta, Ach**	**1.24**	**14**	P	**Pg**	**01 07 39.2**	**-1.6**
KLV				S	**Sn**	**01 07 57.8**	**-0.1**
KLV				AML	AML	01 08 02.8	
	comp=E,400μm,0.5s						
KLV				AML	AML	01 08 04.5	
	comp=N,262μm,0.5s						
KLV	**Kalavryta, Ach**	**1.24**	**14**	P	**Pg**	**01 07 39.3**	**-1.6**
KLV				S	**Sn**	**01 07 58.3**	**+0.4**
	comp=N,165nm,0.5s						
EPID	**Epidavros**	**1.33**	**54**	P	**Pn**	**01 07 42.0**	**-0.1**
EPID	**Epidavros**	**1.33**	**54**	P	**Pn**	**01 07 41.8**	**-0.3**
EPID				S	**Sn**	**01 08 00.0**	**-0.1**
	comp=N,162nm,0.3s						
THAL	**Thalero**	**1.39**	**31**	P	**Pb**	**01 07 43.2**	**-0.2**
THAL	**Thalero**	**1.39**	**31**	P	**Pn**	**01 07 42.6**	**-0.3**
THAL				S	**Sg**	**01 08 03.5**	**+1.6**
	comp=N,440nm,0.5s						
LAKA	**Lakka**	**1.41**	**7**	P	**Pn**	**01 07 42.5**	**-0.7**
LAKA				AML	AML	01 08 08.2	
	comp=E,255μm,0.7s						
LAKA				AML	AML	01 08 11.0	
	comp=N,275μm,0.4s						
LAKA	**Lakka**	**1.41**	**7**	P	**Pn**	**01 07 42.6**	**-0.6**
LAKA				S	**Sg**	**01 08 03.8**	**+1.4**
	comp=N,485nm,0.6s						
ALIK	**Aliki, Aigiali**	**1.44**	**11**	P	**Pn**	**01 07 43.5**	**-0.1**
ALIK				S	**Sg**	**01 08 05.3**	**+1.8**
ANKY	**Antikythira Is**	**1.58**	**128**	P	**Pb**	**01 07 46.4**	**-0.3**
ANKY	**Antikythira Is**	**1.58**	**128**	P	**Pb**	**01 07 46.3**	**-0.3**
ANKY				S	**Sg**	**01 08 07.3**	**-0.5**
	comp=N,210nm,0.9s						
PSDA	**Pessada-Kefalo**	**1.58**	**324**	P	**Pn**	**01 07 44.8**	**-0.6**
PSDA				S	**Sg**	**01 08 07.3**	**-0.6**
EFP	**Efpalio**	**1.59**	**4**	P	**Pb**	**01 07 46.1**	**-0.7**
EFP	**Efpalio**	**1.59**	**4**	P	**Pb**	**01 07 46.0**	**-0.7**
EFP				S	**Sg**	**01 08 08.1**	**0.0**
	comp=N,140nm,0.6s						
SERG	**Sergoula**	**1.59**	**8**	P	**Pn**	**01 07 45.7**	**0.0**
SERG				AML	AML	01 08 14.5	
	comp=E,308μm,0.6s						
SERG				AML	AML	01 08 17.9	
	comp=N,240μm,0.5s						
SERG	**Sergoula**	**1.59**	**8**	P	**Pn**	**01 07 45.5**	**-0.2**
SERG				S	**Sg**	**01 08 08.7**	**+0.6**
	comp=N,105nm,0.6s						
VLS	**Valsamata**	**1.63**	**325**	P	**Pn**	**01 07 45.8**	**-0.4**
KEF3	**Kipouria, Keph**	**1.76**	**321**	P	**Pb**	**01 07 49.3**	**-0.5**
KEF4	**Livadi, Kephal**	**1.77**	**323**	P	**Pn**	**01 07 48.4**	**+0.3**
DMLN	**Damoulianata-K**	**1.78**	**322**	P	**Pb**	**01 07 50.0**	**-0.1**
PVO	**Paravola**	**1.78**	**354**	P	**Pb**	**01 07 50.1**	**+0.1**
VIL2	**Platees**	**1.82**	**41**	P	**Pn**	**01 07 49.1**	**+0.3**
FSK	**Fiskardo**	**1.88**	**330**	P	**Pn**	**01 07 49.7**	**+0.1**
VLY	**Voula,Athens**	**1.91**	**57**	P	**Pn**	**01 07 50.5**	**+0.5**
EVGI	**Lefkada island**	**1.98**	**334**	P	**Pn**	**01 07 51.8**	**+0.8**
NYDR	**Nydri-Lefkada**	**2.05**	**336**	P	**Pn**	**01 07 53.0**	**+1.0**
RODP	**Rodopos**	**2.06**	**128**	P	**Pn**	**01 07 53.0**	**+0.9**
RODP				S	**Sn**	**01 08 18.6**	**+0.6**
	comp=N,28nm,0.7s						
DION	**Dionisos Attik**	**2.12**	**54**	P	**Pn**	**01 07 53.4**	**+0.4**
LKD2	**Lefkada island**	**2.13**	**336**	P	**Pn**	**01 07 54.1**	**+1.0**
TSLK	**Tsoukalades, L**	**2.17**	**336**	P	**Pn**	**01 07 54.7**	**+1.1**
IMMV	**Iera Moni Meta**	**2.26**	**127**	P	**Pn**	**01 07 55.5**	**+0.6**

MAN 08 01:28:40.7,13.74N×120.96E,h1km,mb3.9,ML2.7,MS2.2, 4C-3D,Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PGP	**Puerto Galera**	**0.24**	**182**	↑*eP*	Pg	01 28 45.6	+0.2
PGP				*i* S		01 28 49.2	
TGY	**Tagaytay City**	**0.36**	**356**	↓*eP*	Pg	01 28 47.1	+0.6
TGY				*i* S		01 28 55.8	
MACP	**Maragondon, Ca**	**0.57**	**335**	↓*eP*	Pg	01 28 52.0	+0.3
LUBP	**Lubang**	**0.70**	**269**	↑*eP*	Pg	01 28 53.2	+0.9
LUBP				*eS*		01 29 04.2	
BOAC	**Boac**	**0.90**	**108**	↓*eP*	Pg	01 28 58.8	+0.2
BOAC				*eS*		01 29 05.8	
SJMP	**San Jose**	**1.28**	**173**	↑*eP*	Pg	01 29 05.2	+0.6
SJMP				*eS*		01 29 13.6	
PVCP	**Virac**	**3.11**	**92**	↑*eP*	Pg	01 29 47.5	+6.7
PVCP				*eS*		01 29 54.3	

*IDC **08** 01:33:48.3±3.2,36.12N×71.37E,h92km±28km,mb3.8/12, mbtmp4.2/16,Error ellipse: s-maj=20.6km s-min=19.0km az=15.0*

*NEIC **08** 01:33:51.9±1.4,36.35N±0.07×71.27E±0.09,h118km±2km, mb4.2/16, Error ellipse: s-maj=12.6km s-min=8.6km az=131.0*

*NNC **08** 01:33:51.8±3.1,36.93N×70.88E,h0km,mb4.8,mpv4.5, Error ellipse: s-maj=29.2km s-min=14.1km az=151.0*

*SOME **08** 01:34:02.8,38.42N×71.70E,h5km*

ISC 08 01:33:49.5±0.5,36.29N±0.04×71.22E±0.05,h100km,n104, σ2°33/113,mb4.2/17,8C-5D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.49**	**226**	Pn	**Pn**	**01 34 33.3**	**+4.6**
CEP	**Cherat**	**2.52**	**

comp=E,11nm,0.5s
KST Kastek 7.67 27 *e*P Pn 01 35 48.5 +10
comp=E,5.6nm,1.0s
KST *e*S **Sn** **01 37 12.7 +8.8**
comp=E,17nm,0.7s
DDI Dehra Dun 8.25 134 *e*P **Pn** **01 35 44.9 -1.6**
DDI *e*S **Sn** **01 37 14.7 -3.3**
DDI IAML 01 37 17.6
comp=N,281nm,0.4s
KHET Khetri 9.06 153 *e*P **Pn** **01 35 56.1 -1.4**
KHET *e*S Sn 01 37 30.3 -7.5
NDI New Delhi 9.12 145 *e*P **Pn** **01 35 56.5 -1.7**
NDI *e*S Sn 01 37 32.0 -7.1
SONA Sohna 9.43 147 *e*P **Pn** **01 36 01.6 -0.8**
SONA *e*S Sn 01 37 38.6 -7.9
PTH Pithoragarh 10.11 129 *e*P Pn 01 36 09.5 -2.4
PTH *e*S Sn 01 37 51.1 -12
LGTI Lohaghat 10.20 129 *e*P Pn 01 36 10.1 -2.9
LGTI *e*S Sn 01 37 56.1 -9.2
AJM Ajmer 10.21 162 *e*P **Pn** **01 36 13.0 -0.1**
AJM *e*S **Sn** **01 38 00.9 -4.7**
GEYT Alibeck 10.59 283 P **Pn** **01 36 18.3 0.0**
comp=N,7.3nm,0.3s,baz=104,slow=12,SNR=41
GEYT S **Sn** **01 38 11.6 -3.3**
comp=N,8.0nm,0.5s,baz=68,slow=35,SNR=4.7
GEYT Alibeck 10.59 283 Pn **Pn** **01 36 18.1 -0.1**
GYA0B ALIBECK ARRAY 10.59 283 Pn **Pn** **01 36 17.6 -0.7**
GYA0B ALIBECK ARRAY 10.59 283 ⇑P **Pn** **01 36 18.6 +0.4**
GYA0B ⇓S **Sn** **01 38 14.2 -0.6**
JHNI Jhansi 12.48 148 *e*P **Pn** **01 36 41.5 -2.0**
PYUN Piuthan 12.88 126 *e*P Pn 01 36 46.0 -3.0
comp=N,600nm,0.3s
MAKZ Makanchi 13.23 34 Pn **Pn** **01 36 52.4 -0.9**
MK31 Makanchi Array 13.36 35 Pn **Pn** **01 36 54.5 -0.5**
MKAR Makanchi Array 13.36 35 P **Pn** **01 36 54.5 -0.6**
comp=N,0.7nm,0.6s,baz=227,slow=15,SNR=7.8
MKAR Makanchi Array 13.36 35 Pn **Pn** **01 36 54.1 -0.9**
KOLN Koldanda 13.50 126 *e*P Pn **01 36 54.9 -2.2**
GKN Gorkha 14.04 122 *e*P Pn 01 37 00.8 -3.3
comp=N,99nm,0.6s
DMN Daman 14.61 122 *e*P Pn 01 37 09.0 -2.6
KKN Kakani 14.62 121 *e*P Pn 01 37 08.6 -3.0
WMQ Urumqi 14.68 54 *e*P **Pn** **01 37 13.7 +1.6**
PKIN Phulchoki 14.83 122 *e*P Pn 01 37 11.6 -2.8
comp=N,37nm,0.4s
PKI Pulchoki 14.84 122 *e*P Pn 01 37 11.7 -2.9
comp=N,45nm,0.6s
GUN Gumba 14.96 120 *e*P Pn 01 37 12.3 -3.8
comp=N,22nm,0.4s
KURBB Kurchatov Arra 15.27 18 P **Pn** **01 37 16.8 -2.7**
comp=N,2.6nm,0.5s,baz=207,slow=10,SNR=4.6
JIRN Jiri 15.33 120 *e*P **Pn** **01 37 17.2 -3.6**
comp=N,28nm,0.2s
AB31 Akbulak array 15.35 331 ⇓P **Pn** **01 37 19.8 -0.7**
comp=N,5.4nm,0.4s,baz=140,slow=12,SNR=319
AB31 ⇑S **Sn** **01 40 04.1 -5.9**
comp=N,3.0nm,0.5s,baz=267,slow=51,SNR=8.8
ABKAR Akbulak array 15.35 331 **Pn** **01 37 20.2 -0.3**
KURK Kurchatov 15.38 18 **Pn** **01 37 23.1 +2.3**
RAMN Ramite 16.06 121 *e*P **Pn** **01 37 26.5 -3.2**
comp=N,17nm,0.3s
AKL Akola 16.34 160 *e*S Sn 01 40 23.5 -11
TAPN Taplejung 16.59 118 *e*P **Pn** **01 37 33.5 -2.9**
comp=N,19nm,0.3s
BRVK Borovoye 16.78 358 **Pn** **01 37 38.8 +0.6**
AKTO Aktyubinsk 17.05 330 P **Pn** **01 37 43.0 +1.4**
comp=N,16nm,0.7s,baz=143,slow=12,SNR=50
AKTO Aktyubinsk 17.05 330 ⇓P **Pn** **01 37 42.3 +0.8**
comp=N,14nm,0.7s
AKTO ⇑S **Sn** **01 40 46.0 -4.9**
comp=N,5.1nm,0.6s
ZAA0 Zalesovo Array 20.04 24 P **P** **01 38 14.2 -0.1**
ZAA0 IAmb IAmb 01 38 15.3
comp=Z,7.5nm,0.8s
ZALV Zalesovo Beam 20.04 24 P **P** **01 38 14.1 -0.3**
comp=Z,7.1nm,0.3s,baz=208,slow=9.7,SNR=34
comp=Z,7.1nm,0.3s
ZALV Zalesovo Beam 20.04 24 P **P** **01 38 14.2 -0.1**
ARU Arti 21.89 341 P **P** **01 38 35.1 +1.0**
BELG Belogornoye 23.16 321 P **P** **01 38 48.8 +1.7**
comp=Z,5.6nm,0.5s,baz=182,slow=22,SNR=3.8
comp=Z,5.6nm,0.5s
KIRV Kirov 26.51 334 P **P** **01 39 20.1 +2.8**
comp=Z,5.5nm,0.6s,baz=122,slow=3.3,SNR=3.6
comp=Z,5.5nm,0.6s
PZH PanZhiHua 27.72 102 P **P** **01 39 32.3 +3.6**
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,190nm,6.0s
HHC Hu-ho-hao-te 31.67 69 *e*P **P** **01 40 04.0 +0.5**
HHC pmax pmax
comp=Z,20nm,0.8s
HHC pmax pmax
comp=Z,140nm,8.8s
AKASG Malin Array Be 33.22 309 P **P** **01 40 19.0 +2.3**
comp=Z,0.2nm,0.3s,baz=77,slow=5.6,SNR=3.5
comp=Z,0.2nm,0.3s
AKASG Malin Array Be 33.22 309 P **P** **01 40 17.9 +1.3**
FIA1 FINESS Array S 37.76 326 P **P** **01 40 56.9 +1.5**
FINES FINESS Array B 37.76 326 P **P** **01 40 56.7 +1.4**
comp=Z,1.7nm,0.6s,baz=122,slow=8.9,SNR=9.8
comp=Z,1.7nm,0.6s
FINES FINESS Array B 37.76 326 P **P** **01 40 56.3 +0.9**
ARCES ARCESS Array B 41.41 338 P **P** **01 41 27.2 +1.6**
comp=Z,1.7nm,0.6s,baz=115,slow=8.2,SNR=14
comp=Z,1.7nm,0.6s
ARCES ARCESS Array B 41.41 338 P **P** **01 41 26.9 +1.3**
NC303 NORSAR Array S 44.60 323 P **P** **01 41 52.2 +0.8**
NB2 NORSAR Subarra 44.66 323 P **P** **01 41 52.7 +0.8**
comp=Z,1.1nm,0.5s,baz=95,slow=7.9
NOA NORSAR Array B 44.66 323 P **P** **01 41 52.8 +0.8**
comp=Z,0.9nm,0.5s,baz=96,slow=7.8,SNR=6.3
comp=Z,0.9nm,0.5s
TOA0 Torodi Ar. Sit 65.89 269 P **P** **01 44 24.1 -0.8**
TORD Torodi Ar. Bea 65.89 269 P **P** **01 44 24.1 -0.9**
comp=Z,0.5nm,0.3s,baz=50,slow=6.0,SNR=30
comp=Z,0.5nm,0.3s
TORD Torodi Ar. Bea 65.89 269 P **P** **01 44 24.3 -0.6**
TORD IAmb IAmb 01 44 38.2
comp=Z,2.7nm,1.4s
TOLK Toolik Lake Re 71.08 15 P **P** **01 44 56.9 +0.5**
TOLK IAmb IAmb 01 45 08.8
comp=Z,6.4nm,1.4s
IMAR Indian Mountai 72.32 18 P **P** **01 45 02.9 -0.9**
C36M Paulatuk 74.07 6 P **P** **01 45 13.9 -0.1**
C36M IAmb IAmb 01 45 17.7
comp=Z,8.5nm,1.2s
INK Inuvik 74.08 9 P **P** **01 45 13.9 -0.2**
comp=Z,1.3nm,0.8s,baz=28,slow=2.9,SNR=3.1
comp=Z,1.3nm,0.8s
INK Inuvik 74.08 9 P **P** **01 45 14.0 -0.2**
INK IAmb IAmb 01 45 37.6
comp=Z,5.2nm,1.4s
LBTB Lobatse 74.64 222 P **P** **01 45 19.8 +1.7**
LBTB IAmb IAmb 01 45 30.0
comp=Z,5.0nm,1.4s
BOSA Boshof 77.70 220 P **P** **01 45 36.0 +0.7**
comp=Z,1.7nm,0.6s,baz=9.4,slow=5.3,SNR=9.4
comp=Z,1.7nm,0.6s
BOSA Boshof 77.70 220 P **P** **01 45 36.5 +1.1**
BOSA IAmb IAmb 01 45 39.2
comp=Z,9.4nm,1.5s
WRA Warramunga Arr 81.73 122 P **P** **01 45 56.1 -1.1**
comp=Z,0.6nm,0.7s,baz=328,slow=4.9,SNR=5.1
comp=Z,0.6nm,0.7s
WB2 Warramunga Arr 81.74 122 P **P** **01 45 56.6 -0.7**
WB2 IAmb IAmb 01 46 06.5
comp=Z,9.7nm,1.5s
ASAR Alice Springs 83.99 125 P **P** **01 46 07.2 -1.6**
comp=Z,0.4nm,0.6s,baz=309,slow=4.4,SNR=2.9
comp=Z,0.4nm,0.6s

*JMA **08** 01:54:13.1±0.1,27.˙1N±0.˙5×130.˙2E±0.˙6, h53km, MV3.0/21, NEAR MINAMI-DAITOJIMA IS*
*IDC **08** 01:54:16.3±1.9,26.˙38N×129.˙73E, h0km, mb3.6/4, mbtmp3.6/4, MS3.6/1, Error ellipse: s-maj=54.3km s-min=20.7km az=51.0*
ISC 08 01:54:11.9±1.0,27.˙14N±0.˙05×130.˙23E±0.˙06, h10km, n21, σ0°94/20, mb3.8/4, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	**1.31**	**300**	P		**Pn**	**Pn**	**01 54 35.8**	**-0.5**
JAM	**Amami Oshima**	**1.39**	**337**	P		**Pn**	**Pn**	**01 54 37.2**	**-0.1**
JAM				S		**Sn**	**Sn**	**01 54 53.3**	**-2.5**
JAMN	**Amaminishikomi**	**1.45**	**320**	*i* P		**Pn**	**Pn**	**01 54 37.7**	**-0.5**
JOKE	**Okinoerabujima**	**1.50**	**279**	P		**Pn**	**Pn**	**01 54 38.4**	**-0.4**
JKDJ	**Kitadaitoujima**	**1.52**	**141**	P		**Pn**	**Pn**	**01 54 38.2**	**-0.9**
JMZ	**Minamidaito 2**	**1.58**	**146**	P		**Pn**	**Pn**	**01 54 38.7**	**-1.3**
JYRO	**Yoronjima**	**1.59**	**266**	P		**Pn**	**Pn**	**01 54 39.4**	**-0.7**
JOW	**Kunigami**	**1.77**	**261**	Pn		**Pn**	**Pn**	**01 54 42.5**	**-0.2**
	100nm,0.3s,baz=107,slow=16,SNR=146								
JOW	**Kunigami**	**1.77**	**261**	P		**Pn**	**Pn**	**01 54 42.6**	**-0.1**
JIH	**Iheya**	**2.02**	**268**	*e*P		**Pn**	**Pn**	**01 54 45.6**	**-0.5**
JNTH	**Nagotoyohara**	**2.07**	**253**	P		**Pn**	**Pn**	**01 54 46.1**	**-0.6**
JTAJ	**Takarajima**	**2.21**	**336**	P		**Pn**	**Pn**	**01 54 48.5**	**-0.1**
JJT3	**Tamagusuku3**	**2.40**	**246**	P		**Pn**	**Pn**	**01 54 51.2**	**-0.1**
JAGN	**Aguni-jima**	**2.73**	**259**	*e*P		**Pn**	**Pn**	**01 54 54.7**	**-1.0**
JYAK	**Yakushimahirau**	**3.10**	**4**	P		**Pn**	**Pn**	**01 55 00.9**	**0.0**
JKE	**Kume jima 2**	**3.19**	**256**	P		**Pn**	**Pn**	**01 55 01.7**	**-0.4**
USRK	**Ussuriysk Ar.**	**17.09**	**4**	LR		LR	LR	02 04 50.4	
	comp=Z,181nm,20.2s,baz=178,slow=36								
MKAR	**Makanchi Array**	**42.28**	**311**	P		P	P	02 02 13.3	+7.6
	0.1nm,0.4s,baz=92,slow=10,SNR=2.1								
	0.1nm,0.4s								
WRA	**Warramunga Arr**	**46.97**	**175**	P		**P**	**P**	**02 02 43.1**	**-0.1**
	0.8nm,0.7s,baz=356,slow=8.4,SNR=8.5								
	0.8nm,0.7s								
CTA	**Charters Tower**	**49.45**	**160**	P		**P**	**P**	**02 03 04.0**	**+1.7**
	1.8nm,0.6s,baz=349,slow=8.3,SNR=5.2								
	1.8nm,0.6s								
ASAR	**Alice Springs**	**50.63**	**176**	P		**P**	**P**	**02 03 12.1**	**+0.8**
	0.3nm,0.4s,baz=6.1,slow=14,SNR=5.0								
	0.3nm,0.4s								

*BJI **08** 01:54:24.5±0.0,27.˙08N×130.˙45E, h14km, mb4.4/49, mB4.7/37, Ms4.5/54, Ms7 4.4/52*
*IDC **08** 01:54:25.7±0.5,27.˙13N×130.˙21E, h0km, mb4.2/23, mbtmp4.3/26, ML4.0/3, MS4.3/4, Error ellipse: s-maj=16.2km s-min=12.5km az=95.0*
*NEIC **08** 01:54:26.9±1.6,27.˙16N±0.˙07×130.˙18E±0.˙07, h5km±4km, mb4.9/80, Error ellipse: s-maj=13.0km s-min=2.8km az=137.0*
*MOS **08** 01:54:26.0±1.0,27.˙10N×130.˙25E, h15km, mb5.0/36, MS4.2/8, Error ellipse: s-maj=8.5km s-min=4.8km az=96.5*
*JMA **08** 01:54:27.4±0.1,27.˙1N±0.˙3×130.˙3E±0.˙4, h65km±3km, MD4.5/26, MW4.7/26, NEAR MINAMI-DAITOJIMA IS*
*GCMT **08** 01:54:27.9±0.4,27.˙11N±0.˙03×130.˙19E±0.˙03, h12km, MW4.8/85, Moment Tensor Solution. s16,c16; s85,c115; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.56±.06; $M_{\theta\theta}$0.60±.06; $M_{\phi\phi}$0.96±.06; $M_{r\theta}$0.05±.25; $M_{\theta\phi}$0.92±.05; $M_{r\phi}$0.64±.26; Best double couple: $M_0$1.76800×10^{16} NP1:ϕ_s53.00000°, δ38.00000°, λ-69.00000°. NP2: ϕ_s207.00000°, δ55.00000°, λ-106.00000°. Principal axes: T 1.8070, Plg9.0000°, Azm308.0000°; N -0.0760, Plg13.0000°, Azm216.0000°; P -1.7290, Plg74.0000°, Azm72.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NIED **08** 01:54:27.4,27.˙12N×130.˙25E, h65km, MW4.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.10; $M_{\theta\theta}$0.56; $M_{\phi\phi}$0.54; $M_{r\theta}$1.19; $M_{\theta\phi}$0.55; $M_{r\phi}$0.04; Fault plane solution: $M_0$1.60000×10^{16} NP1:ϕ_s28.00000°, δ28.00000°, λ-131.00000°. NP2:ϕ_s253.00000°, δ69.00000°, λ-71.00000°.*
ISC 08 01:54:28.5±0.8,27.˙12N±0.˙03×130.˙24E±0.˙03, h19km±2km, n428, σ1°23/457, mb4.7/103, MS4.4/25, 16C-13D, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JZK	**Kikaishima**	**1.21**	**349**	A		A	A	01 54 48.8	
	comp=E,59nm,6.5s,comp=E,58nm,5.7s								
JTK	**Tokunoshima**	**1.33**	**300**	P		**Pn**	**Pn**	**01 54 50.5**	**-1.5**
JTK				*e*S		**Sn**	**Sn**	**01 55 06.8**	**-2.3**
JTK	**Tokunoshima**	**1.33**	**300**	A		A	A	01 54 50.5	
	comp=E,11nm,4.4s,comp=E,13nm,4.2s								
JAM	**Amami Oshima**	**1.40**	**336**	P		**Pn**	**Pn**	**01 54 51.7**	**-1.4**
JAM				*e*S		**Sn**	**Sn**	**01 55 09.4**	**-1.6**
JAM	**Amami Oshima**	**1.40**	**336**	A		A	A	01 54 51.7	
	comp=E,9.0nm,1.7s,comp=E,11nm,1.7s								
JAMN	**Amaminishikomi**	**1.47**	**320**	P		**Pn**	**Pn**	**01 54 52.2**	**-1.7**
JAMN				*e*S		**Sn**	**Sn**	**01 55 10.3**	**-2.2**
JKDJ	**Kitadaitoujima**	**1.50**	**141**	P		**Pn**	**Pn**	**01 54 52.7**	**-1.6**
JKDJ				S		**Sn**	**Sn**	**01 55 11.8**	**-1.7**
JOKE	**Okinoerabujima**	**1.51**	**279**	P		**Pn**	**Pn**	**01 54 53.1**	**-1.4**
JOKE				S		**Sn**	**Sn**	**01 55 12.7**	**-1.0**
JOKE	**Okinoerabujima**	**1.51**	**279**	A		A	A	01 54 53.1	
	comp=E,15nm,5.9s,comp=E,9.0nm,5.1s								
JMZ	**Minamidaito 2**	**1.56**	**146**	P		**Pn**	**Pn**	**01 54 53.2**	**-2.1**
JMZ				S		**Sn**	**Sn**	**01 55 12.4**	**-2.6**
JMZ	**Minamidaito 2**	**1.56**	**146**	A		A	A	01 54 53.2	
	comp=E,30nm,4.1s,comp=E,31nm,3.9s								
JYRO	**Yoronjima**	**1.60**	**267**	P		**Pn**	**Pn**	**01 54 54.3**	**-1.5**
JYRO				S		**Sn**	**Sn**	**01 55 13.6**	**-2.3**
JOW	**Kunigami**	**1.78**	**261**	Pn		**Pn**	**Pn**	**01 54 57.5**	**-0.7**
	756nm,0.3s,baz=108,slow=16,SNR=85								
JOW				Sn		**Sn**	**Sn**	**01 55 16.7**	**-3.6**
	260nm,0.3s,baz=97,slow=13,SNR=5.1								
JOW	**Kunigami**	**1.78**	**261**	Pn		**Pn**	**Pn**	**01 54 56.9**	**-1.4**
JOW	**Kunigami**	**1.78**	**261**	P		**Pn**	**Pn**	**01 54 56.9**	**-1.4**
JOW				*e*S		**Sn**	**Sn**	**01 55 18.9**	**-1.5**
JOW	**Kunigami**	**1.78**	**261**	A		A	A	01 54 56.9	
	comp=E,8.0nm,5.1s,comp=E,11nm,2.3s								
JIH	**Iheya**	**2.03**	**268**	*e*S		**Sn**	**Sn**	**01 55 24.2**	**-2.3**
JIH	**Iheya**	**2.03**	**268**	A		A	A	01 55 24.2	
	comp=E,10.0nm,5.0s,comp=E,11nm,5.5s								
JNTH	**Nagotoyohara**	**2.07**	**254**	P		**Pn**	**Pn**	**01 55 00.1**	**-2.1**
JNTH				*e*S		**Sn**	**Sn**	**01 55 25.2**	**-2.4**
JNTH	**Nagotoyohara**	**2.07**	**254**	A		A	A	01 55 00.1	
	comp=E,5.0nm,5.7s,comp=E,6.0nm,5.8s								
JTAJ	**Takarajima**	**2.22**	**336**	P		**Pn**	**Pn**	**01 55 02.6**	**-1.7**
JTAJ				S		**Sn**	**Sn**	**01 55 27.8**	**-3.5**
JTAJ	**Takarajima**	**2.22**	**336**	A		A	A	01 55 02.6	
	comp=E,4.0nm,5.4s,comp=E,7.0nm,6.0s								
JJT3	**Tamagusuku3**	**2.41**	**247**	P		**Pn**	**Pn**	**01 55 05.0**	**-1.8**
JJT3				S		**Sn**	**Sn**	**01 55 33.8**	**-2.1**
JJT3	**Tamagusuku3**	**2.41**	**247**	A		A	A	01 55 05.0	
	comp=E,27nm,4.4s,comp=E,20nm,4.6s								
JNN	**Nakanoshima**	**2.73**	**353**	P		**Pn**	**Pn**	**01 55 09.9**	**-1.4**
JNN				*e*S		**Sn**	**Sn**	**01 55 41.7**	**-2.1**
JAGN	**Aguni-jima**	**2.73**	**259**	*e*P		**Pn**	**Pn**	**01 55 09.5**	**-1.8**
JAGN				*e*S		**Sn**	**Sn**	**01 55 41.7**	**-2.2**
JAGN	**Aguni-jima**	**2.73**	**259**	A		A	A	01 55 09.5	
	comp=E,7.0nm,3.6s,comp=E,9.0nm,3.4s								
JYAK	**Yakushimahirau**	**3.11**	**4**	P		**Pn**	**Pn**	**01 55 15.5**	**-1.1**
JYAK				S		**Sn**	**Sn**	**01 55 50.5**	**-2.7**
JKE	**Kume jima 2**	**3.19**	**256**	*e*P		**Pn**	**Pn**	**01 55 16.3**	**-1.3**
JKE				*e*S		**Sn**	**Sn**	**01 55 53.1**	**-2.1**
JKE	**Kume jima 2**	**3.19**	**256**	A		A	A	01 55 16.3	
	comp=E,4.0nm,3.8s,comp=E,2.0nm,7.3s								
JMTN	**Minamitane**	**3.31**	**10**	*e*P		**Pn**	**Pn**	**01 55 18.2**	**-1.1**
JMTN				*e*S		**Sn**	**Sn**	**01 55 55.6**	**-2.6**
JKC	**Kuchinoerabu**	**3.33**	**359**	P		**Pn**	**Pn**	**01 55 18.8**	**-0.8**
JTN	**Tanegashima 3**	**3.58**	**10**	*e*P		**Pn**	**Pn**	**01 55 21.5**	**-1.5**
JTN				*e*S		**Sn**	**Sn**	**01 56 02.4**	**-2.4**
JSU	**Suzuyama**	**4.37**	**2**	Pn		**Pn**	**Pn**	**01 55 32.4**	**-1.6**
JNU	**Nakatsue**	**6.01**	**5**	Pn		**Pn**	**Pn**	**01 55 55.8**	**-0.6**
	7.9nm,0.3s,baz=177,slow=5.1,SNR=31								
	124nm,0.8s								
JNU	**Nakatsue**	**6.01**	**5**	Pn		**Pn**	**Pn**	**01 55 55.6**	**-0.8**
YOJ	**Yonaguni jima**	**7.04**	**249**	Pn		**Pn**	**Pn**	**01 56 09.6**	**-0.9**
YOJ	**Yonaguni jima**	**7.04**	**249**	P		**Pn**	**Pn**	**01 56 09.6**	**-0.9**
JTU	**Tsushima**	**7.42**	**355**	Pn		**Pn**	**Pn**	**01 56 15.6**	**-0.1**
JHS	**Saijyo**	**8.23**	**17**	Pn		**Pn**	**Pn**	**01 56 25.3**	**-1.6**
YHNB	**Yeheng**	**8.35**	**255**	Pn		**Pn**	**Pn**	**01 56 27.5**	**-1.2**
SSLB	**Suanglung**	**9.03**	**250**	Pn		**Pn**	**Pn**	**01 56 36.1**	**-1.8**
TPUB	**Ta-pu**	**9.50**	**248**	Pn		**Pn**	**Pn**	**01 56 42.2**	**-2.1**
KSCHJ	**Chungju**	**9.91**	**349**	Pn		**Pn**	**Pn**	**01 56 49.2**	**-0.7**
INU	**Inuyama**	**10.04**	**34**	Pn		**Pn**	**Pn**	**01 56 51.4**	**-0.3**
JHJ	**Hachijo jima 2**	**10.19**	**52**	Pn		**Pn**	**Pn**	**01 56 54.6**	**+0.8**
	9.5nm,0.3s,baz=114,slow=10.0,SNR=2.9								
	160nm,0.9s								
JHJ2	**Mitsune**	**10.21**	**52**	Pn		**Pn**	**Pn**	**01 56 55.2**	**+1.1**
JGF	**Kuroka**	**10.41**	**34**	Pn		**Pn**	**Pn**	**01 56 56.6**	**-0.1**
KSAR	**Wonju Array Be**	**10.48**	**350**	Pn		**Pn**	**Pn**	**01 56 59.0**	**+1.3**
KSAR	**Wonju Array Be**	**10.48**	**350**	P		**Pn**	**Pn**	**01 56 59.0**	**+1.3**
KSRS	**Korea Array**	**10.49**	**350**	Pn		**Pn**	**Pn**	**01 57 00.5**	**+2.7**
	0.4nm,0.3s,baz=167,slow=14,SNR=27								
KS19	**Wonju Array Si**	**10.54**	**350**	Pn		**Pn**	**Pn**	**01 56 58.0**	**-0.6**
NJ2	**Nanjing**	**11.06**	**299**	*e*P		**Pn**	**Pn**	**01 57 06.0**	**+0.3**
NJ2				pmax		pmax	pmax		
	comp=Z,12nm,0.5s								
NJ2				LR		LR	LR		
	comp=N,1μm,15.2s								
NJ2				LR		LR			
	comp=E,2μm,16.7s								
NJ2				LR		LR			
	comp=Z,2μm,20.1s								
MAJO	**Matsushiro**	**11.57**	**34**	Pn		**Pn**	**Pn**	**01 57 13.4**	**+0.7**
MAJO	**Matsushiro**	**11.57**	**34**	P		**Pn**	**Pn**	**01 57 13.4**	**+0.7**
MJAR	**Matsushiro Arr**	**11.57**	**34**	Pn		**Pn**	**Pn**	**01 57 14.2**	**+1.5**
	0.2nm,0.3s,baz=202,slow=13,SNR=7.5								
	1.2nm,0.3s								
MJAR	**Matsushiro Arr**	**11.57**	**34**	Pn		**Pn**	**Pn**	**01 57 11.7**	**-1.0**
MJB9	**Matsu-Tunnel**	**11.57**	**34**	Pn		**Pn**	**Pn**	**01 57 13.5**	**+0.8**
TIA	**Tai'an**	**14.37**	**312**	*e*P		**Pn**	**Pn**	**01 57 53.4**	**+2.5**
TIA				pmax		pmax			
	comp=Z,10.0nm,1.2s								
TIA				LR		LR	LR		
	comp=N,2μm,15.2s								
TIA				LR		LR			
	comp=E,1μm,15.2s								
TIA				LR		LR			
	comp=Z,1μm,18.6s								
CNSH	**ChangSha**	**15.38**	**278**	⇑P		**P**	**P**	**01 58 10.3**	**+1.3**
CNSH				S		**S**	**S**	**02 01 06.7**	**-3.7**
CNSH				LR		LR			
	comp=N,950nm,12.1s								
CNSH				LR		LR			
	comp=E,2μm,12.2s								
CNSH				LR		LR			
	comp=Z,1μm,11.3s								
VLA	**Vladivostok**	**16.02**	**4**	*i* P		**Pn**	**Pn**	**01 58 13.3**	**+0.6**
HNS	**HongShan**	**16.64**	**312**	⇑P		**P**	**P**	**01 58 23.3**	**+0.3**
HNS				S		**S**	**S**	**02 01 34.5**	**-1.6**
HNS				pmax		pmax			
	comp=Z,32nm,1.3s								
HNS				LR		LR			
	comp=N,620nm,13.4s								
HNS				LR		LR			
	comp=E,2μm,15.6s								
HNS				LR		LR			
	comp=Z,1μm,12.4s								
LYN	**LuoYang**	**16.95**	**300**	⇓P		**P**	**P**	**01 58 26.6**	**+0.1**
LYN				S		**Sn**	**Sn**	**02 01 35.9**	**+3.3**
LYN				sS		S	S	02 01 40.9	-1.6
LYN				pmax		pmax			
	comp=Z,30nm,1.5s								
LYN				pmax		pmax			
	comp=Z,350nm,6.9s								
LYN				LR		LR			
	comp=E,1μm,16.7s								
LYN				LR		LR			
	comp=Z,1μm,16.4s								
CN2	**Changchun**	**17.09**	**348**	*e*P		**Pn**	**Pn**	**01 58 25.3**	**-1.0**
CN2				S		**Sn**	**Sn**	**02 01 32.8**	**-2.9**
CN2				pmax		pmax			
	comp=Z,10.0nm,0.7s								
CN2				pmax		pmax			
	comp=Z,100nm,6.0s								
CN2				LR		LR			
	comp=N,700nm,17.0s								
CN2				LR		LR			
	comp=E,900nm,17.0s								
CN2				LR		LR			
	comp=Z,700nm,16.5s								
USA0B	**Ussuriysk Arra**	**17.10**	**4**			**Pn**	**Pn**	**01 58 27.6**	**+1.2**
USA0B	**Ussuriysk Arra**	**17.10**	**4**	*i* P		**Pn**	**Pn**	**01 58 26.4**	**0.0**
USRK	**Ussuriysk Ar.**	**17.10**	**4**	P		**P**	**P**	**01 58 29.8**	**+1.8**
	7.1nm,0.7s,baz=175,slow=9.6,SNR=32								
USRK	**Ussuriysk Ar.**	**17.10**	**4**			**Pn**	**Pn**	**01 58 26.1**	**-0.3**
USRK	**Ussuriysk Ar.**	**17.10**	**4**	P		**Pn**	**Pn**	**01 58 26.1**	**-0.3**
BJI	**Beijing**	**17.39**	**321**	P		**P**	**P**	**01 58 32.6**	**+1.4**
BJI				pmax		pmax			
	comp=Z,35nm,0.9s								
BJI				LR		LR			
	comp=N,450nm,17.6s								
BJI				LR		LR			
	comp=E,430nm,19.6s								
BJI				LR		LR			
	comp=Z,570nm,19.8s								
TEY	**Ternei**	**18.59**	**14**	⇓*e*P		**Pn**	**Pn**	**01 58 46.2**	**+1.5**
TEY				pmax		pmax			
	comp=N,10.0nm,1.8s								
TEY				pmax		pmax			
	comp=Z,10.0nm,1.8s								
BNX	**BinXian**	**18.72**	**354**	⇑P		**P**	**P**	**01 58 45.5**	**-0.4**
BNX				pmax		pmax			
	comp=Z,11nm,1.1s								
BNX				pmax		pmax			
	comp=Z,180nm,6.9s								
XAN	**Xi'an**	**19.59**	**296**	P		**P**	**P**	**01 58 55.2**	**-0.4**
XAN				pP		pP	pP	01 58 59.1	-0.7
XAN				S		**Sn**	**Sn**	**02 02 37.5**	**+1.0**
XAN				pmax		pmax			
	comp=Z,39nm,1.1s								
XAN				pmax		pmax			
	comp=Z,430nm,6.7s								
XAN				LR		LR			
	comp=Z,1μm,14.3s								
XAN				LR		LR			
	comp=Z,980nm,12.4s								
XAN				LR		LR			
	comp=Z,2μm,16.5s								
ASAJ	**Asahikawa**	**19.67**	**27**	P		**P**	**P**	**01 58 53.2**	**-3.1**
	comp=Z,2.5nm,0.3s,baz=238,slow=24,SNR=6.2								
ASAJ	**Asahikawa**	**19.67**	**27**	P		**P**	**P**	**01 58 52.7**	**-3.6**
ASAJ				pmax		pmax			
	comp=Z,9.0nm,0.9s								
JKA	**Kamikawa-asahi**	**19.67**	**27**	P		**P**	**P**	**01 58

comp=Z,200nm,3.2s
YSS MLR MLR
comp=N,200nm,15.0s
YSS MLR MLR
comp=Z,300nm,15.0s
KUR Kuril'sk 22.91 33 *i* P **P 01 59 30.4 -0.8**
CD2 Chengdu 23.45 286 P **P 01 59 35.5 -1.3**
CD2 S **S 02 03 48.0 -1.4**
CD2 pmax pmax
comp=Z,20nm,1.0s
CD2 LR LR
comp=Z,1μm,12.2s
CD2 LR LR
comp=Z,1μm,13.4s
UGL Uglegorsk 23.76 20 *e*P **P 01 59 34.5 -5.0**
LZH Lanzhou 24.14 298 ⇑P **P 01 59 43.9 +0.4**
LZH sP pwP 01 59 52.9 -0.8
LZH S **S 02 04 01.4 +0.8**
LZH pmax pmax
comp=Z,15nm,1.5s
LZH pmax pmax
comp=Z,170nm,6.0s
LZH LR LR
comp=Z,810nm,15.7s
LZH LR LR
comp=Z,1μm,14.1s
LZH LR LR
comp=Z,1μm,13.6s
MYLDM Lahad Datu 24.52 209 P **P 01 59 47.8 +0.8**
MYLDM IAmb IAmb 02 00 13.7
comp=Z,49nm,1.4s
KMI Kunming 24.76 272 ⇑P **P 01 59 53.2 +3.9**
KMI pmax pmax
comp=Z,20nm,1.2s
KMI LR LR
comp=Z,560nm,14.0s
KMI LR LR
comp=Z,780nm,13.1s
KMI LR LR
comp=Z,860nm,14.1s
PZH PanZhiHua 25.42 275 P **P 01 59 57.6 +2.4**
PZH S **S 02 04 21.8 +0.4**
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH pmax pmax
comp=Z,90nm,4.8s
PZH LR LR
comp=Z,1μm,15.1s
PZH LR LR
comp=Z,940nm,16.7s
PZH LR LR
comp=Z,860nm,12.4s
TYV Tymovskoe 25.52 18 *e*P **P 01 59 56.8 +1.1**
TYV pmax pmax
comp=Z,18nm,0.9s
TYV pmax pmax
comp=Z,2μm,7.2s
ZEA Zeya 26.68 356 *e*P **P 02 00 06.3 +0.1**
ZEA pmax pmax
comp=Z,20nm,1.0s
ZEA MLR MLR
comp=Z,100nm,12.0s
NKL Nikolayevsk 27.14 14 *e*P **P 02 00 07.5 -2.7**
NKL *e*S **S 02 04 48.7 +1.1**
NKL pmax pmax
comp=E,4.0nm,0.9s
NKL pmax pmax
comp=N,1.0nm,1.5s
NKL pmax pmax
comp=Z,13nm,1.4s
NKL smax smax
comp=E,3.0nm,0.9s
NKL smax smax
comp=N,2.0nm,1.1s
NKL MLR MLR
comp=E,9.0nm,12.0s
NKL MLR MLR
comp=N,48nm,19.0s
NKL MLR MLR
comp=Z,170nm,19.0s
TOLI2 Tolitoli 27.41 201 P **P 02 00 11.9 -1.2**
TOLI2 IAmb IAmb 02 00 22.7
comp=Z,24nm,1.1s
ULN Ulaanbaatar 27.51 325 P **P 02 00 12.9 -1.0**
ULN Ulaanbaatar 27.51 325 *i* P **P 02 00 13.4 -0.5**
ULN pmax pmax
comp=Z,7.0nm,1.7s
SONM Songino Array 27.83 324 P **P 02 00 14.0 -2.8**
comp=Z,0.7nm,0.6s,baz=123,slow=7.1,SNR=4.3
SONM Songino Array 27.83 324 P **P 02 00 16.4 -0.3**
SONM Songino Array 27.83 324 P **P 02 00 16.4 -0.3**
SONM pmax pmax
comp=Z,4.0nm,1.2s
GTA Gaotai 28.10 304 *e*P **P 02 00 19.7 +0.4**
GTA pP sP 02 00 26.0 +1.0
GTA sP pwP 02 00 29.1 +0.3
GTA pmax pmax
comp=Z,5.0nm,0.7s
GTA pmax pmax
comp=Z,93nm,6.9s
GTA LR LR
comp=Z,550nm,15.6s
GTA LR LR
comp=Z,790nm,20.4s
GTA LR LR
comp=Z,1μm,17.1s
CHTO Chiang Mai 29.92 261 P **P 02 00 36.2 +0.8**
CHTO IAmb IAmb 02 00 39.2
comp=Z,32nm,1.5s
CHTO Chiang Mai 29.92 261 P **P 02 00 36.2 +0.8**
CHTO pmax pmax
comp=Z,32nm,1.5s
FAKI Fak Fak 29.93 176 P **P 02 00 34.6 -0.9**
comp=Z,28nm,1.3s
CMAR Chiang Mai Arr 30.05 260 P **P 02 00 37.5 +0.9**
comp=Z,1.3nm,0.4s,baz=64,slow=8.1,SNR=6.3
comp=Z,1.3nm,0.4s
CMAR Chiang Mai Arr 30.05 260 P **P 02 00 38.0 +1.4**
GOMU GeErMu 31.34 296 P **P 02 00 48.8 +0.5**
GOMU pP pP 02 00 52.9 +0.1
GOMU sP sP 02 00 54.7 +0.6
GOMU S **S 02 05 53.8 -1.1**
GOMU pmax pmax
comp=Z,3.0nm,0.9s
GOMU pmax pmax
comp=Z,89nm,7.1s
GOMU LR LR
comp=Z,190nm,13.4s
GOMU LR LR
comp=Z,250nm,11.5s
GOMU LR LR
comp=Z,210nm,10.7s
PETK Petropavlovsk- 33.01 31 P **P 02 01 02.1 -0.2**
comp=Z,6.4nm,1.1s,baz=220,slow=8.3,SNR=5.8
comp=Z,6.4nm,1.1s
PETK Petropavlovsk- 33.01 31 P **P 02 01 00.8 -1.4**
YAK Yakutsk 34.91 360 P **P 02 01 17.4 -1.2**
YAK Yakutsk 34.91 360 *d* iP **P 02 01 17.8 -0.8**
YAK *e**PP **pP 02 01 21.5 -1.6**
YAK *e* 02 02 32.8
YAK *e*PPP PPP 02 02 55.8
YAK *e* 02 03 50.1
YAK *e*S **S 02 06 50.2 +1.4**
YAK *e**SS **sS 02 06 55.6 -0.1**
YAK *e*SS **SnSn 02 09 06.6 +2.8**
YAK pmax pmax
comp=Z,48nm,1.0s
YAK pmax pmax
comp=N,25nm,1.3s
YAK pmax pmax
comp=E,6.0nm,1.1s
YAK pmax pmax
comp=Z,101nm,4.4s
YAK pmax pmax
comp=N,32nm,3.6s
YAK pmax pmax
comp=E,40nm,3.6s
YAK smax smax
comp=E,36nm,2.0s
YAK smax smax
comp=N,30nm,1.8s
YAK MLR MLR
comp=Z,141nm,15.0s
WMQ Urumqi 37.99 307 *e*P **P 02 01 47.1 +1.8**
WMQ pP sP 02 01 53.2 +2.2
WMQ pmax pmax
comp=Z,41nm,0.7s
WMQ LR LR
comp=Z,540nm,14.7s
WMQ LR LR
comp=Z,570nm,14.7s
WMQ LR LR
comp=Z,400nm,17.3s
SEY Seymchan 38.66 16 P **P 02 01 50.9 +0.3**
comp=Z,5.8nm,0.9s,baz=216,slow=9.2,SNR=15
comp=Z,5.8nm,0.9s
SEY Seymchan 38.66 16 *i* P **P 02 01 50.0 -0.5**
SEY pmax pmax
comp=Z,14nm,1.1s
MK31 Makanchi Array 42.30 311 P **P 02 02 20.6 -0.4**
MK31 Makanchi Array 42.30 311 *i* P **P 02 02 22.0 +1.0**
MKAR Makanchi Array 42.30 311 P **P 02 02 19.8 -1.2**
comp=Z,0.9nm,0.4s,baz=99,slow=8.4,SNR=10
MKAR PcP **PcP 02 04 13.5 -0.9**
comp=Z,0.5nm,0.6s,baz=74,slow=5.7,SNR=4.1
comp=Z,0.9nm,0.4s
MKAR Makanchi Array 42.30 311 P **P 02 02 21.7 +0.7**
MKAR Makanchi Array 42.30 311 *i* P **P 02 02 23.0 +2.0**
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MAKZ Makanchi 42.52 311 P **P 02 02 21.4 -1.3**
MAKZ Makanchi 42.52 311 P **P 02 02 21.4 -1.3**
MAKZ pmax pmax
comp=Z,9.0nm,1.3s
ZAA0 Zalesovo Array 42.65 322 P **P 02 02 23.4 -0.2**
ZALV Zalesovo Beam 42.65 322 P **P 02 02 24.2 +0.6**
comp=Z,2.1nm,0.7s,baz=100,slow=8.3,SNR=7.6
ZALV PcP **PcP 02 04 15.2 -0.2**
comp=Z,0.6nm,0.5s,baz=90,slow=4.4,SNR=3.8
comp=Z,2.1nm,0.7s
ZALV Zalesovo Beam 42.65 322 P **P 02 02 23.8 +0.2**
COEN Coen 42.72 161 P **P 02 02 24.5 0.0**
TIXI Tiksi 44.58 359 P **P 02 02 38.0 -0.9**
TIXI Tiksi 44.58 359 *i* P **P 02 02 38.8 0.0**
TIXI pmax pmax
comp=Z,7.0nm,1.7s
KURK Kurchatov 45.43 316 P **P 02 02 45.0 -0.9**
KURK Kurchatov 45.43 316 *i* P **P 02 02 44.7 -1.3**
KURK pmax pmax
comp=Z,10.0nm,1.6s
BILL Bilibino 46.27 18 P **P 02 02 52.5 +0.2**
BILL IAmb IAmb 02 02 53.7
comp=Z,17nm,1.1s
BILL Bilibino 46.27 18⇑ *e*P **P 02 02 52.3 0.0**
BILL *e* 02 04 47.1
BILL pmax pmax
comp=Z,20nm,1.2s
BILL MLR MLR
comp=Z,91nm,14.0s
HNR Honiara 46.37 138 LR LR 02 19 34.4
comp=Z,132nm,20.4s,baz=326,slow=32
WRAB Tennant Creek 46.95 175 *i* P **P 02 02 56.3 -1.9**
WRAB pmax pmax
comp=Z,83nm,3.7s
WRA Warramunga Arr 46.95 175 P **P 02 02 57.1 -1.1**
comp=Z,2.2nm,0.6s,baz=354,slow=8.5,SNR=30
comp=Z,2.2nm,0.6s
WRA Warramunga Arr 46.95 175 P **P 02 02 57.7 -0.5**
WRA Warramunga Arr 46.95 175 P **P 02 02 57.7 -0.5**
WB2 Warramunga Arr 46.95 175 P **P 02 02 58.1 -0.1**
WB2 IAmb IAmb 02 03 12.4
comp=Z,6.7nm,0.9s
WR0 Warramunga Arr 46.99 174 P **P 02 02 58.3 -0.2**
NRIK Noril'sk 48.97 341 P **P 02 03 13.0 -0.3**
comp=Z,7.4nm,1.1s,baz=126,slow=7.2,SNR=12
comp=Z,7.4nm,1.1s
NRIK Noril'sk 48.97 341 P **P 02 03 12.2 -1.1**
NRIK IAmb IAmb 02 03 14.7
comp=Z,15nm,1.1s
NRIK Noril'sk 48.97 341 *i* P **P 02 03 11.8 -1.5**
NRIK pmax pmax
comp=Z,21nm,1.4s
CTA Charters Tower 49.43 160 P **P 02 03 18.2 +0.8**
comp=Z,6.0nm,0.7s,baz=344,slow=8.4,SNR=12
comp=Z,6.0nm,0.7s
CTAO Charters Tower 49.43 160 P **P 02 03 17.6 +0.2**
CTAO Charters Tower 49.43 160 P **P 02 03 17.6 +0.2**
CTAO pmax pmax
comp=Z,35nm,1.4s
KKAR Karatay Array 50.37 305 P **P 02 03 23.7 -0.7**
KKAR Karatay Array 50.37 305 P **P 02 03 23.9 -0.5**
KKAR IAmb IAmb 02 03 30.3
comp=Z,4.2nm,1.3s
KKAR Karatay Array 50.37 305 P **P 02 03 23.7 -0.7**
KKAR pmax pmax
comp=Z,4.0nm,1.3s
ASAR Alice Springs 50.61 176 P **P 02 03 27.2 +0.9**
comp=Z,1.3nm,0.7s,baz=6.7,slow=14,SNR=24
comp=Z,1.3nm,0.7s
ASAR Alice Springs 50.61 176 P **P 02 03 26.5 +0.1**
GAR Garm 50.78 300 P **P 02 03 27.0 -0.8**
GAR IAmb IAmb 02 03 41.8
comp=Z,15nm,1.2s
BRVK Borovoye 50.89 318 P **P 02 03 28.1 0.0**
BRVK IAmb IAmb 02 03 31.1
comp=Z,17nm,1.1s
BRVK Borovoye 50.89 318 *i* P **P 02 03 27.9 -0.2**
BRVK pmax pmax
comp=Z,24nm,1.4s
NIKH Nikolski High 51.45 43 P **P 02 03 32.3 0.0**
baz=265
CHGR Chuyangaron 51.72 299 P **P 02 03 33.8 -0.9**
CHGR IAmb IAmb 02 03 36.5
comp=Z,9.8nm,0.9s
CHGR Chuyangaron 51.72 299 P **P 02 03 33.8 -0.9**
CHGR pmax pmax
comp=Z,10.0nm,0.9s
KBL Kabul 52.38 294 P **P 02 03 39.9 0.0**
KBL IAmb IAmb 02 03 57.2
comp=Z,21nm,1.3s
KBL Kabul 52.38 294 P **P 02 03 39.9 0.0**
KBL pmax pmax
comp=Z,21nm,1.3s
SVE Sverdlovsk 56.66 322 *e*P **P 02 04 11.0 +0.7**
SVE pmax pmax
comp=Z,33nm,1.5s
SVE MLR MLR
comp=Z,455nm,15.0s
ABKAR Akbulak array 57.36 313 P **P 02 04 15.0 -0.3**
N16K Nishlik Lake 57.47 34 P **P 02 04 16.7 +0.7**
baz=268
O16K Kokwok River B 57.79 35 P **P 02 04 18.8 +0.5**
baz=269
ARU Arti 57.81 321 LR LR 02 32 14.8
comp=Z,539nm,18.0s,baz=88,slow=39
ARU Arti 57.81 321 P **P 02 04 17.6 -0.9**
ARU Arti 57.81 321 *c* iP **P 02 04 18.7 +0.2**
ARU S **S 02 12 22.2 +5.5**
ARU SS **SS 02 16 07.1 +0.1**
ARU pmax pmax
comp=Z,27nm,1.5s
ARU MLR MLR
comp=Z,587nm,18.0s
HRA Herat 57.92 295 P **P 02 04 19.8 -0.1**
HRA IAmb IAmb 02 04 45.4
comp=Z,10nm,1.4s
TTA Tatalina 58.84 31 P **P 02 04 25.8 +0.1**
TTA IAmb IAmb 02 04 27.5
comp=Z,8.5nm,1.2s
TTA Tatalina 58.84 31 P **P 02 04 25.8 +0.1**
TTA pmax pmax
comp=Z,8.0nm,1.2s
TTA Tatalina 58.84 31 P **P 02 04 25.8 +0.1**
baz=269
N18K Kilae Creek 58.89 34 P **P 02 04 26.3 +0.4**
baz=271
O18K Koktuh Hills 59.25 34 P **P 02 04 28.4 -0.1**
baz=272
P18K Big Mountain, 59.25 35 P **P 02 04 28.8 +0.3**
baz=272
L19K White Mountain 59.38 32 P **P 02 04 27.8 -1.5**
L19K IAmb IAmb 02 04 31.5
comp=Z,7.9nm,1.1s
L19K White Mountain 59.38 32 P **P 02 04 29.0 -0.3**
baz=271
N19K Bonanza Creek 59.58 33 P **P 02 04 31.0 +0.2**
baz=272
M19K Big River Lodg 59.60 32 P **P 02 04 31.8 +1.0**
baz=271
STKA Stephens Creek 59.66 169 P **P 02 04 31.6 +0.1**
comp=Z,1.2nm,0.3s,baz=328,slow=9.5,SNR=1.9
comp=Z,1.2nm,0.3s
J20K Nowinta River 59.69 29 P **P 02 04 31.8 +0.4**
J20K IAmb IAmb 02 04 33.9
comp=Z,13nm,1.1s
J20K Nowinta River 59.69 29 P **P 02 04 31.9 +0.5**
baz=270,SNR=9.9
K20K Telida 59.73 30 P **P 02 04 31.9 +0.2**
K20K IAmb IAmb 02 04 34.3
comp=Z,13nm,1.0s
K20K Telida 59.73 30 P **P 02 04 32.5 +0.8**
baz=271,SNR=7.9
L20K Farewell, AK 59.83 31 P **P 02 04 33.4 +1.0**
baz=271
IMAR Indian Mountai 59.87 27 P **P 02 04 32.7 +0.1**
SII Sitkinak Islan 59.96 38 P **P 02 04 33.1 -0.3**
baz=274
Q19K Cape Douglas, 60.09 36 P **P 02 04 34.0 -0.3**
baz=274
M20K Styx River 60.20 32 P **P 02 04 34.2 -0.8**
baz=272
H21K Melozitna Rive 60.26 28 P **P 02 04 35.9 +0.6**
H21K IAmb IAmb 02 04 37.7
comp=Z,15nm,1.2s
H21K Melozitna Rive 60.26 28 P **P 02 04 35.9 +0.6**
baz=270,SNR=12
GEYT Alibeck 60.40 300 P **P 02 04 37.6 +0.9**
GYA0B ALIBECK ARRAY 60.40 300 P **P 02 04 37.6 +0.9**
GYA0B IAmb IAmb 02 04 40.8
comp=Z,10nm,1.4s
O20K Slope Mountain 60.54 34 P **P 02 04 37.5 +0.2**
baz=274
PPLA Purkeypile 60.59 31 P **P 02 04 37.8 0.0**
PPLA Purkeypile 60.59 31 P **P 02 04 38.4 +0.6**
baz=272,SNR=5.4
I21K Tanana 60.61 28 P **P 02 04 38.5 +0.8**
baz=271
CAST Castle Rocks 60.62 30 P **P 02 04 38.5 +0.7**
CAST Castle Rocks 60.62 30 P **P 02 04 38.7 +0.9**
baz=272
SPCR Spurr Chakacha 60.67 33 P **P 02 04 39.2 +0.9**
baz=274
KDAK Kodiak Island 60.73 37 P **P 02 04 38.7 +0.1**
baz=275
SPU Mount Spurr 60.75 33 P **P 02 04 39.0 +0.3**
Q20K Shuyak Island 60.76 36 P **P 02 04 39.1 +0.3**
baz=275
SKT Skwentna 60.95 32 P **P 02 04 40.2 +0.1**
baz=274
BPAW Bear Paw Mtn. 61.08 29 P **P 02 04 41.9 +1.0**
BPAW IAmb IAmb 02 04 43.1
comp=Z,8.5nm,1.0s
BPAW Bear Paw Mtn. 61.08 29 P **P 02 04 41.5 +0.5**
baz=273
MLY Manley 61.14 28 P **P 02 04 42.0 +0.7**
MLY IAmb IAmb 02 04 43.7
comp=Z,8.4nm,1.0s
MLY Manley 61.14 28 P **P 02 04 42.3 +0.9**
baz=273,SNR=8.9
COLD Coldfoot 61.28 26 P **P 02 04 41.8 -0.4**
baz=272
SUA Susitna One 61.36 32 P **P 02 04 43.2 +0.2**
baz=275
TOLK Toolik Lake Re 61.47 24 P **P 02 04 44.5 +0.9**
baz=272
CUT Chulitna 61.51 31 P **P 02 04 43.6 -0.1**
H23K Yukon River 61.60 27 P **P 02 04 45.6 +1.1**
H23K Yukon River 61.60 27 P **P 02 04 45.5 +1.1**
baz=273,SNR=8.7
I23K Minto, Yukon-K 61.72 28 P **P 02 04 46.5 +1.4**
I23K IAmb IAmb 02 04 49.0
comp=Z,16nm,1.5s
I23K Minto, Yukon-K 61.72 28 P **P 02 04 44.8 -0.3**
baz=274
RC01 Rabbit Creek A 61.88 33 P **P 02 04 46.0 -0.3**
baz=276
NEA2 Nenana 61.88 29 P **P 02 04 46.5 +0.2**
NEA2 Nenana 61.88 29 P **P 02 04 46.9 +0.6**
baz=274,SNR=8.9
MCK McKinley 62.01 30 P **P 02 04 47.1 -0.1**
MCK McKinley 62.01 30 P **P 02 04 47.1 -0.1**
MCK pmax pmax
comp=Z,23nm,1.2s
MCK McKinley 62.01 30 P **P 02 04 47.4 +0.2**
baz=275,SNR=6.7
PMR Palmer 62.12 32 P **P 02 04 48.1 +0.2**
baz=276
SEW Seward 62.12 34 P **P 02 04 48.1 +0.2**
baz=276
WAT1 Susitna Watana 62.26 31 P **P 02 04 48.3 -0.6**
baz=276
H24K Noodoo Dome 62.28 27 P **P 02 04 50.3 +1.3**
baz=275,SNR=9.2
COLA College 62.38 28 *i* P **P 02 04 49.9 +0.3**
COLA pmax pmax
comp=Z,7.0nm,1.2s
KNK Knik Glacier 62.46 32 P **P 02 04 50.4 +0.1**
baz=277
SML Sawmill 62.47 32 P **P 02 04 49.8 -0.6**
baz=276
POKR Poker Plat Res 62.53 28 P **P 02 04 51.0 +0.3**
baz=276
KIRV Kirov 62.57 324 LR LR 02 35 12.2
comp=Z,607nm,18.1s,baz=84,slow=39
KIRV Kirov 62.57 324 *i* P **P 02 04 50.3 -0.6**
WAT6 Susitna Watana 62.66 31 P **P 02 04 51.7 -0.1**
baz=277,SNR=6.0
M23K Glacier View 62.76 32 P **P 02 04 51.6 -0.6**
baz=277
DHY Denali Highway 62.77 30 P **P 02 04 51.2 -1.3**
baz=277
IL31 62.80 29 P **P 02 04 52.1 -0.3**
ILAR Eielson Array 62.80 29 P **P 02 04 52.0 -0.4**
comp=Z,1.2nm,0.8s,baz=282,slow=5.3,SNR=9.3
comp=Z,1.2nm,0.8s
ILAR Eielson Array 62.80 29 P **P 02 04 51.6 -0.9**
HDA Harding Lake 62.81 29 P **P 02 04 51.9 -0.6**
baz=276,SNR=9.6
SCM Sheep Creek Mo 62.94 32 P **P 02 04 53.5 0.0**
SCM Sheep Creek Mo 62.94 32 P **P 02 04 53.5 0.0**
SCM pmax pmax
comp=Z,22nm,1.2s
SCM Sheep Creek Mo 62.94 32 P **P 02 04 53.7 +0.1**
baz=277
P23K Montague Islan 63.15 34 P **P 02 04 54.8 -0.1**
baz=278
GLI Glacier Island 63.18 33 P **P 02 04 54.8 -0.2**
baz=278
K24K Donnelly Dome 63.40 30 P **P 02 04 56.5 +0.1**
baz=278
BMAR Burnt Mountain 63.43 25 P **P 02 04 57.1 +0.5**
M24K Tolsona, Glenn 63.45 31 P **P 02 04 56.9 0.0**
baz=278
J25K Salcha River, 63.47 29 P **P 02 04 56.3 -0.7**
baz=278
PAX Paxson 63.65 30 P **P 02 04 58.2 -0.1**
PAX IAmb IAmb 02 04 59.8
comp=Z,7.6nm,1.2s
PAX Paxson 63.65 30 P **P 02 04 58.2 -0.1**
PAX pmax pmax
comp=Z,8.0nm,1.2s
PAX Paxson 63.65 30 P **P 02 04 58.1 -0.1**
baz=278
KLU Klutina 63.65 32 P **P 02 04 58.2 -0.1**
baz=279
RIDG Independent Ri 63.81 30 P **P 02 04 59.6 +0.4**
baz=278
HARP HAARP 63.88 31 P **P 02 05 00.3 +0.6**
baz=279
EYAK Cordova Ski Ar 63.88 33 P **P 02 05 00.0 +0.4**
baz=279
SCRK Sand Creek 64.16 29 P **P 02 05 01.1 -0.5**
SCRK IAmb IAmb 02 05 02.7
comp=Z,7.9nm,1.0s
SCRK Sand Creek 64.16 29 P **P 02 05 01.5 -0.1**
baz=279,SNR=7.5
DOT Dot Lake 64.17 30 P **P 02 05 01.5 -0.1**
J26L Joseph Creek 64.25 29 P **P 02 05 01.8 -0.4**
baz=279,SNR=9.9
N25K Chitina, Valde 64.26 32 P **P 02 05 02.3 0.0**
baz=280
BMRM Bremner River 64.37 33 P **P 02 05 03.1 +0.1**
BMRM Bremner River 64.37 33 P **P 02 05 03.4 +0.5**
baz=280
L26K Log Cabin Wild 64.59 30 P **P 02 05 04.8 +0.5**
L26K IAmb IAmb 02 05 06.4
comp=Z,11nm,1.2s
L26K Log Cabin Wild 64.59 30 P **P 02 05 05.1 +0.7**
baz=280

BELG	**Belogornoye**	**64.63**	**318**	*i* P		**P**	**02 05 03.5**	**-1.1**
BELG				pmax		pmax			
	comp=Z,5.0nm,1.5s								
M26K	**Nabesna, AK**	**64.87**	**31**	P		**P**	**02 05 06.7**	**+0.6**
	baz=281,SNR=12								
K27K	**Chicken**	**64.97**	**29**	P		**P**	**02 05 07.2**	**+0.4**
	baz=281								
MCARA	**McCarthy VSAT**	**65.05**	**32**	P		**P**	**02 05 07.5**	**+0.2**
	baz=281								
L27K	**Beaver Creek,**	**65.27**	**30**	P		**P**	**02 05 09.4**	**+0.7**
	baz=281,SNR=6.3								
BCAR	**Beaver Creek A**	**65.29**	**30**	P		**P**	**02 05 09.9**	**+1.0**
M27K	**Edge Creek, AK**	**65.39**	**31**	P		**P**	**02 05 10.1**	**+0.5**
M27K				IAmb		IAmb	02 05 11.4		
	comp=Z,8.7nm,1.1s								
M27K	**Edge Creek, AK**	**65.39**	**31**	P		**P**	**02 05 10.2**	**+0.6**
	baz=282,SNR=7.1								
CTG	**Chitna Glacier**	**65.93**	**32**	P		**P**	**02 05 13.7**	**+0.5**
	baz=283								
DAWY	**Dawson**	**66.12**	**29**	P		**P**	**02 05 14.8**	**+0.6**
	baz=283								
YUK3	**Moose Creek**	**66.16**	**31**	P		**P**	**02 05 15.1**	**+0.4**
	baz=283,SNR=5.4								
I29M	**Ogilvie Camp,**	**66.28**	**27**	P		**P**	**02 05 15.8**	**+0.7**
I29M	**Ogilvie Camp,**	**66.28**	**27**	P		**P**	**02 05 15.9**	**+0.7**
	baz=283								
YUK8	**Steele Glacier**	**66.60**	**32**	P		**P**	**02 05 18.0**	**+0.4**
	baz=284								
PINM	**Pinnacle**	**66.65**	**33**	P		**P**	**02 05 17.7**	**0.0**
	baz=284								
EPYK	**Eagle Plains**	**66.67**	**26**	P		**P**	**02 05 18.2**	**+0.4**
EPYK	**Eagle Plains**	**66.67**	**26**	P		**P**	**02 05 18.1**	**+0.4**
	baz=284,SNR=5.8								
YUK4	**Talbot Arm**	**67.11**	**32**	P		**P**	**02 05 21.5**	**+0.7**
	baz=285								
PNL	**Peninsula**	**67.18**	**33**	P		**P**	**02 05 21.9**	**+0.9**
	baz=285								
YUK6	**Outpost Mounta**	**67.35**	**32**	P		**P**	**02 05 22.5**	**+0.2**
	baz=285								
INK	**Inuvik**	**67.36**	**24**	P		**P**	**02 05 22.6**	**+0.6**
	comp=Z,6.4nm,1.1s,baz=290,slow=6.0,SNR=7.8								
	comp=Z,6.4nm,1.1s								
INK	**Inuvik**	**67.36**	**24**	P		**P**	**02 05 22.4**	**+0.4**
INK				IAmb		IAmb	02 05 23.6		
	comp=Z,14nm,1.3s								
INK	**Inuvik**	**67.36**	**24**	P		**P**	**02 05 22.3**	**+0.3**
	baz=286,SNR=7.8								
M30M	**Minto, Yukon**	**67.63**	**30**	P		**P**	**02 05 23.8**	**-0.1**
HYT	**Haines Junctio**	**67.78**	**32**	P		**P**	**02 05 25.1**	**+0.1**
	baz=286								
N30M	**Aishikik Lake**	**67.80**	**31**	P		**P**	**02 05 25.5**	**+0.5**
	baz=286								
RSD	**Rainshed**	**67.96**	**79**	P		**P**	**02 05 28.5**	**+1.7**
N31M	**Braeburn, Yuko**	**68.40**	**31**	P		**P**	**02 05 28.3**	**-0.4**
N31M				IAmb		IAmb	02 05 31.0		
	comp=Z,11nm,1.1s								
N31M	**Braeburn, Yuko**	**68.40**	**31**	P		**P**	**02 05 29.1**	**+0.4**
	baz=287								
O30N	**Mendenhall**	**68.46**	**32**	P		**P**	**02 05 29.6**	**+0.4**
	baz=287								
PLBC	**Pleasant Camp**	**68.72**	**33**	P		**P**	**02 05 30.9**	**+0.2**
	baz=287								
A36M	**Sachs Harbour**	**68.81**	**19**	P		**P**	**02 05 31.5**	**+0.5**
	baz=292								
M31M	**Drury Creek, Y**	**68.81**	**30**	P		**P**	**02 05 31.3**	**0.0**
	baz=288								
FARO	**Faro, Yukon**	**69.27**	**30**	P		**P**	**02 05 35.2**	**+1.1**
	baz=289,SNR=9.6								
MOS	**Moscow**	**69.45**	**323**	*e*P		**P**	**02 05 33.9**	**-1.4**
MOS				MLR		MLR			
	comp=Z,500nm,18.0s								
GOF	**Gofitskoye**	**69.47**	**311⇑**	*e*P		**P**	**02 05 36.4**	**+0.8**
GOF				pmax		pmax			
	comp=Z,25nm,1.0s								
ZEI	**Tsey**	**69.59**	**308**	*e*P		**P**	**02 05 35.7**	**-1.0**
ZEI				pmax		pmax			
	comp=Z,15nm,1.4s								
GNI	**Garni**	**69.83**	**306**	P		**P**	**02 05 39.2**	**+1.1**
GNI	**Garni**	**69.83**	**306**	P		**P**	**02 05 39.2**	**+1.1**
GNI				pmax		pmax			
	comp=Z,24nm,1.2s								
ARCES	**ARCESS Array B**	**69.83**	**339**	P		**P**	**02 05 39.5**	**+2.1**
	comp=Z,1.1nm,0.6s,baz=64,slow=8.2,SNR=4.9								
	comp=Z,1.1nm,0.6s								
KBZ	**Khabaz**	**69.98**	**310**	P		**P**	**02 05 40.0**	**+1.2**
	comp=Z,4.0nm,0.8s,baz=59,slow=6.6,SNR=7.6								
	comp=Z,4.0nm,0.8s								
KBZ	**Khabaz**	**69.98**	**310**	*i* P		**P**	**02 05 38.0**	**-0.8**
KBZ				pmax		pmax			
	comp=Z,18nm,1.6s								
MMPY	**Sheldon Lake,**	**70.05**	**29**	P		**P**	**02 05 39.5**	**+0.6**
	baz=290								
KIV	**Kislovodsk**	**70.06**	**310**	⇑P		**P**	**02 05 40.7**	**+1.3**
KIV	**Kislovodsk**	**70.06**	**310**	P		**P**	**02 05 39.9**	**+0.5**
KIV	**Kislovodsk**	**70.06**	**310**	*e*P		**P**	**02 05 39.7**	**+0.3**
KIV				pmax		pmax			
	comp=Z,19nm,1.1s								
KIV				MLR		MLR			
	comp=Z,145nm,17.0s								
P33M	**Teslin, Yukon**	**70.18**	**32**	P		**P**	**02 05 40.1**	**+0.3**
	baz=290								
NOR	**Nord**	**70.20**	**355**	*i* P		**P**	**02 05 38.7**	**-0.9**
C36M	**Paulatuk**	**70.22**	**21**	P		**P**	**02 05 40.3**	**+0.6**
	baz=294,SNR=6.6								
OBN	**Obninsk**	**70.22**	**322⇓**	*e*P		**P**	**02 05 40.7**	**+0.7**
OBN				*e*			02 08 15.4		
OBN				*e*S		**S**	**02 14 50.1**	**-0.5**
OBN				pmax		pmax			
	comp=Z,20nm,1.6s								
OBN				MLR		MLR			
	comp=Z,304nm,17.0s								
AKH	**Akhalkalaki**	**70.32**	**307**	⇓P		**P**	**02 05 42.7**	**+1.6**
GEVA	**Gevas**	**71.68**	**304**	P		**P**	**02 05 49.5**	**+0.1**
GEVA				IAmb		IAmb	02 05 52.0		
	comp=Z,8.3nm,0.9s								
DLBC	**Dease Lake**	**72.16**	**33**	P		**P**	**02 05 52.3**	**+0.5**
	baz=293								
SOC	**Sochi**	**72.21**	**310**	*e*P		**P**	**02 05 50.4**	**-1.9**
SOC				*e*			02 08 29.1		
SOC				*e*PPP		PPP	02 10 14.8		
SOC				*e*S		**S**	**02 15 14.6**	**+0.5**
SOC				*e*			02 15 55.1		
SOC				MLR		MLR			
	comp=Z,129nm,17.0s								
GURO	**Guroymak-BITLI**	**72.35**	**305**	P		**P**	**02 05 54.2**	**+0.8**
GURO				IAmb		IAmb	02 06 08.6		
	comp=Z,7.8nm,1.2s								
FINES	**FINESS Array B**	**72.97**	**331**	P		**P**	**02 05 55.8**	**-0.7**
	comp=Z,1.9nm,0.6s,baz=61,slow=5.2,SNR=11								
	comp=Z,1.9nm,0.6s								
FINES	**FINESS Array B**	**72.97**	**331**	*i* P		**P**	**02 05 56.2**	**-0.3**
FINES				pmax		pmax			
	comp=Z,2.0nm,0.6s								
ANN	**Anapa**	**73.30**	**312**	*e*P		**P**	**02 05 58.9**	**+0.2**
ANN				pmax		pmax			
	comp=Z,83nm,1.5s								
MARD	**Mardin**	**73.72**	**304**	P		**P**	**02 06 01.9**	**+0.4**
MARD				IAmb		IAmb	02 06 16.7		
	comp=Z,7.9nm,0.9s								
DAG	**Danmarks Havn**	**74.60**	**353**	*i* P		**P**	**02 06 04.5**	**-1.3**
DAG				IAmb		IAmb	02 06 09.9		
	comp=Z,1.0nm,0.7s								
RAYN	**Ar Rayn**	**75.23**	**289**	P		**P**	**02 06 10.5**	**+0.1**
RAYN				IAmb		IAmb	02 06 12.8		
	comp=Z,9.1nm,1.2s								
RAYN	**Ar Rayn**	**75.23**	**289**	P		**P**	**02 06 10.5**	**+0.1**
RAYN				pmax		pmax			
	comp=Z,9.0nm,1.2s								
NACGM	**Naroch**	**75.50**	**325⇓**	*e*P		**P**	**02 06 10.8**	**-0.5**
	baz=63								
AKASG	**Malin Array Be**	**76.02**	**320**	P		**P**	**02 06 13.8**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=42,slow=5.7,SNR=12								
	comp=Z,0.4nm,0.4s								
AKASG	**Malin Array Be**	**76.02**	**320**	P		**P**	**02 06 13.7**	**-0.6**
AKASG	**Malin Array Be**	**76.02**	**320**	*i* P		**P**	**02 06 14.1**	**-0.3**
AKASG				pmax		pmax			
	comp=Z,1.0nm,0.5s								
YKA	**Yellowknife Ar**	**76.95**	**26**	P		**P**	**02 06 19.5**	**0.0**
	comp=Z,1.9nm,0.9s,baz=295,slow=5.2,SNR=3.9								
	comp=Z,1.9nm,0.9s								
YKA	**Yellowknife Ar**	**76.95**	**26**	P		**P**	**02 06 20.8**	**+1.4**
YKA	**Yellowknife Ar**	**76.95**	**26**	*i* P		**P**	**02 06 20.2**	**+0.7**
YKA				pmax		pmax			
	comp=Z,2.0nm,0.9s								
DBG	**Daneborg**	**76.98**	**352**	*i* P		**P**	**02 06 18.3**	**-1.1**
DBG				IAmb		IAmb	02 06 19.4		
	comp=Z,1.3nm,0.9s								
SORM	**Soroca**	**77.66**	**318**	⇑P		**P**	**02 06 24.8**	**+1.1**
BR131	**Keskin Array S**	**77.90**	**308**	P		**P**	**02 06 24.2**	**-1.2**
BR131				IAmb		IAmb	02 06 42.4		
	comp=Z,10nm,0.9s								
BR131	**Keskin Array S**	**77.90**	**308**	P		**P**	**02 06 24.2**	**-1.2**
BR131				pmax		pmax			
	comp=Z,10.0nm,0.9s								
BRTR	**Keskin Array B**	**77.90**	**308**	P		**P**	**02 06 25.6**	**+0.2**
	comp=Z,2.4nm,0.8s,baz=101,slow=4.0,SNR=8.7								
	comp=Z,2.4nm,0.8s								
BRTR	**Keskin Array B**	**77.90**	**308**	P		**P**	**02 06 24.3**	**-1.1**
BRTR	**Keskin Array B**	**77.90**	**308**	*i* P		**P**	**02 06 25.8**	**+0.4**
BRTR				pmax		pmax			
	comp=Z,3.0nm,0.8s								
NB2	**NORSAR Subarra**	**79.30**	**334**	P		**P**	**02 06 31.6**	**-1.0**
	comp=Z,19nm,1.7s,baz=51,slow=5.9								
NOA	**NORSAR Array B**	**79.30**	**334**	P		**P**	**02 06 32.0**	**-0.5**
	comp=Z,3.0nm,1.1s,baz=49,slow=5.4,SNR=3.7								
	comp=Z,3.0nm,1.1s								
TESR	**Tescani**	**79.44**	**317**	⇓P		**P**	**02 06 35.6**	**+2.0**
BIZ	**Bicaz**	**79.57**	**317**	⇑P		**P**	**02 06 36.1**	**+1.8**
VRI	**Vrincioaia**	**79.70**	**316**	⇓P		**P**	**02 06 36.6**	**+1.6**
PLOR	**Plostina**	**79.75**	**316**	⇑P		**P**	**02 06 36.8**	**+1.4**
BURAR	**Bucovina Array**	**79.77**	**318**	⇓P		**P**	**02 06 36.9**	**+1.5**
BURAR	**Bucovina Array**	**79.77**	**318**	P		**P**	**02 06 36.1**	**+0.6**
SUMG	**Summit**	**80.27**	**357**	P		**P**	**02 06 38.1**	**0.0**
SUMG	**Summit**	**80.27**	**357**	P		**P**	**02 06 38.1**	**0.0**
SUMG				pmax		pmax			
	comp=Z,34nm,1.5s								
SUMG	**Summit**	**80.27**	**357**	*i* P		**P**	**02 06 38.0**	**0.0**
SUMG				IAmb		IAmb	02 06 40.2		
	comp=Z,4.3nm,0.7s								
CRVS	**Cervenica-Dubn**	**81.29**	**321**	*e*P		**P**	**02 06 45.3**	**+1.8**
CRVS	**Cervenica-Dubn**	**81.29**	**321**	*e*P		**P**	**02 06 45.3**	**+1.8**
OJC	**Ojcow**	**81.52**	**323**	P		**P**	**02 06 44.8**	**+0.1**
OJC				IAmb		IAmb	02 06 47.0		
	comp=Z,14nm,1.3s								
OJC	**Ojcow**	**81.52**	**323**	P		**P**	**02 06 44.8**	**+0.1**
OJC				pmax		pmax			
	comp=Z,14nm,1.3s								
DRGR		**81.66**	**319**	⇓P		**P**	**02 06 46.8**	**+1.2**
B08A	**Colville Reser**	**82.51**	**39**	P		**P**	**02 06 50.0**	**0.0**
B08A				IAmb		IAmb	02 06 51.8		
	comp=Z,9.1nm,1.3s								
MORC	**Moravsky Berou**	**82.98**	**323**	⇑P		**P**	**02 06 54.4**	**+2.0**
MORC	**Moravsky Berou**	**82.98**	**323**	P		**P**	**02 06 53.7**	**+1.3**
MORC				IAmb		IAmb	02 06 55.9		
	comp=Z,9.7nm,1.4s								
MORC	**Moravsky Berou**	**82.98**	**323**	P		**P**	**02 06 53.7**	**+1.3**
MORC				pmax		pmax			
	comp=Z,10.0nm,1.4s								
MORC	**Moravsky Berou**	**82.98**	**323**	*e*P		**P**	**02 06 53.9**	**+1.5**
KRLC	**Kraliky**	**83.22**	**323**	*e*P		**P**	**02 06 54.3**	**+0.7**
KRLC	**Kraliky**	**83.22**	**323**	*e*P		**P**	**02 06 54.3**	**+0.7**
OSTC	**Ostas**	**83.24**	**324**	*e*P		**P**	**02 06 54.7**	**+1.0**
DPC	**Dobruska-Polom**	**83.30**	**324**	*e*P		**P**	**02 06 55.1**	**+1.1**
DPC	**Dobruska-Polom**	**83.30**	**324**	*e*P		**P**	**02 06 55.1**	**+1.1**
JAVC	**Velka Javorina**	**83.42**	**322**	*e*P		**P**	**02 06 56.4**	**+1.7**
VTS	**Vitosha**	**83.48**	**315**	⇑P		**P**	**02 06 57.3**	**+2.0**
VTS	**Vitosha**	**83.48**	**315**	P		**P**	**02 06 55.9**	**+0.6**
VTS				IAmb		IAmb	02 06 59.8		
	comp=Z,7.8nm,1.1s								
VTS	**Vitosha**	**83.48**	**315**	P		**P**	**02 06 55.9**	**+0.6**
VTS				pmax		pmax			
	comp=Z,8.0nm,1.1s								
SMOL	**Smolenice**	**83.75**	**322**	*e*P		**P**	**02 06 57.5**	**+1.2**
SMOL	**Smolenice**	**83.75**	**322**	*e*P		**P**	**02 06 57.5**	**+1.2**
VRAC	**Vranov**	**83.75**	**323**	⇑P		**P**	**02 06 57.6**	**+1.3**
VRAC	**Vranov**	**83.75**	**323**	*e*P		**P**	**02 06 58.4**	**+0.5**
MODS	**Modra-Piesok**	**83.91**	**322**	*e*P		**P**	**02 06 58.6**	**+1.4**
MODS	**Modra-Piesok**	**83.91**	**322**	*e*P		**P**	**02 06 58.6**	**+1.4**
KRUC	**Moravsky**	**84.00**	**323**	*e*P		**P**	**02 06 57.8**	**+0.2**
PINE	**Pine Mountain**	**84.00**	**44**	P		**P**	**02 06 58.8**	**+0.9**
J05D	**Fort Rock, OR**	**84.09**	**44**	P		**P**	**02 06 58.8**	**+0.4**
	baz=302								
BRG	**Berggiesshubel**	**84.22**	**325**	*e*P		**P**	**02 06 59.5**	**+0.8**
BRG				Amp			02 07 01.8		
	comp=Z,8.9nm,1.5s								
BRG	**Berggiesshubel**	**84.22**	**325**	*e*P		**P**	**02 06 59.4**	**+0.8**
BRG				pmax		pmax			
	comp=Z,9.0nm,1.5s								
MORH	**Mrgy, Hungar**	**84.35**	**320**	⇑P		**P**	**02 07 01.0**	**+1.6**
CLL	**Collm**	**84.44**	**326**	P		**P**	**02 06 58.9**	**-0.9**
CLL				IAmb		IAmb	02 07 01.0		
	comp=Z,6.3nm,1.0s								
CLL	**Collm**	**84.44**	**326**	*i* P		**P**	**02 07 00.0**	**+0.3**
CLL				pmax		pmax			
	comp=Z,20nm,1.7s								
CLL	**Collm**	**84.44**	**326**	*i* P		**P**	**02 07 00.0**	**+0.3**
	comp=Z,20nm,1.7s								
PRU	**Pruhonice**	**84.44**	**324**	*e*P		**P**	**02 06 59.0**	**-0.8**
PRU	**Pruhonice**	**84.44**	**324**	*e*P		**P**	**02 06 59.0**	**-0.8**
RONA	**Rosalia, Austr**	**84.84**	**322**	*e*P		**P**	**02 07 03.3**	**+1.4**
	comp=Z,5.1nm,1.5s								
CONA	**Conrad Observa**	**84.94**	**322**	*e*P		**P**	**02 07 04.1**	**+1.6**
	comp=Z,13nm,1.3s								
CKRC	**Cesky Krumlov**	**85.26**	**323**	*e*P		**P**	**02 07 04.5**	**+0.5**
KHC	**Kasperske Hory**	**85.46**	**324**	*e*P		**P**	**02 07 05.9**	**+0.9**
KHC	**Kasperske Hory**	**85.46**	**324**	*e*P		**P**	**02 07 05.9**	**+0.9**
ARSA	**Arzberg**	**85.52**	**322**	*e*P		**P**	**02 07 06.0**	**+0.7**
	comp=Z,7.7nm,1.1s								
GERES	**GERESS Array B**	**85.56**	**324**	P		**P**	**02 07 06.1**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=48,slow=4.3,SNR=7.7								
	comp=Z,0.7nm,0.7s								
GERES	**GERESS Array B**	**85.56**	**324**	P		**P**	**02 07 05.5**	**-0.1**
GERES	**GERESS Array B**	**85.56**	**324**	P		**P**	**02 07 05.5**	**-0.1**
BMO	**Blue Mountains**	**85.61**	**41**	P		**P**	**02 07 05.8**	**-0.1**
BMO	**Blue Mountains**	**85.61**	**41**	P		**P**	**02 07 05.8**	**-0.1**
BMO				pmax		pmax			
	comp=Z,2.0nm,1.1s								
J08A	**Circle Bar Ran**	**85.74**	**43**	P		**P**	**02 07 07.3**	**+0.7**
SOKA	**Soboth**	**86.13**	**321**	*e*P		**P**	**02 07 09.2**	**+0.7**
	comp=Z,9.0nm,1.6s								
BIOA	**Bad Ischl, Aus**	**86.29**	**323**	*e*P		**P**	**02 07 10.5**	**+1.4**
	comp=Z,3.1nm,0.8s								
MSO	**Missoula**	**86.38**	**38**	P		**P**	**02 07 10.0**	**+0.3**
	baz=307								
ABTA	**Abfaltersbach**	**87.48**	**322**	*e*P		**P**	**02 07 14.1**	**-1.0**
	comp=Z,1.0nm,0.5s								
WTTA	**Wattenberg**	**87.63**	**323**	*e*P		**P**	**02 07 17.3**	**+1.4**
	comp=Z,5.5nm,1.1s								
SQTA	**Sankt Quirin**	**87.88**	**323**	*e*P		**P**	**02 07 17.6**	**+0.6**
	comp=Z,1.6nm,0.6s								
EGMT	**Eagleton**	**87.88**	**36**	P		**P**	**02 07 17.3**	**+0.4**
	baz=310								
RETA	**Reutte**	**87.95**	**324**	*e*P		**P**	**02 07 16.7**	**-0.5**
	comp=Z,2.8nm,1.0s								
HLID	**Hailey**	**88.05**	**41**	P		**P**	**02 07 18.2**	**+0.3**
	baz=306								
BOZ	**Bozeman (W)**	**88.40**	**38**	P		**P**	**02 07 19.8**	**+0.3**
	baz=308								
NVAR	**Mina Array Bea**	**88.59**	**47**	P		**P**	**02 07 21.6**	**+1.0**
	comp=Z,0.6nm,0.8s,baz=264,slow=6.0,SNR=5.5								
	comp=Z,0.6nm,0.8s								
RLMT	**Red Lodge**	**90.00**	**38**	P		**P**	**02 07 27.9**	**+0.8**
	baz=310								
R11A	**Troy Canyon, C**	**90.39**	**46**	P		**P**	**02 07 29.4**	**+0.4**
	baz=306								
DUG	**Dugway, Tooele**	**91.02**	**43**	P		**P**	**02 07 32.8**	**+0.9**
	baz=308								
PDAR	**Pinedale Array**	**91.34**	**40**	P		**P**	**02 07 34.1**	**+0.7**
	comp=Z,0.8nm,0.8s,baz=281,slow=3.9,SNR=6.7								
	comp=Z,0.8nm,0.8s								
PDAR	**Pinedale Array**	**91.34**	**40**	P		**P**	**02 07 33.2**	**-0.2**
HEC	**Hector,Ludlow**	**91.93**	**49**	P		**P**	**02 07 37.9**	**+1.8**
	baz=305								
GMRC	**Granite Mounta**	**92.41**	**49**	P		**P**	**02 07 39.6**	**+1.2**
	baz=306								
PFO	**Pinyon Flats O**	**92.54**	**50**	P		**P**	**02 07 40.1**	**+1.1**
	baz=305								
TPFO	**Pinon Flats**	**92.55**	**50**	P		**P**	**02 07 40.1**	**+1.0**
	baz=305								
BELC	**Belle Mtn. Jos**	**92.63**	**50**	P		**P**	**02 07 40.5**	**+1.1**
	baz=305								
LCMT	**Little Creek M**	**92.67**	**46**	P		**P**	**02 07 39.8**	**+0.1**
LCMT				IAmb		IAmb	02 07 42.1		
	comp=Z,6.9nm,1.3s								
MONP2	**Monument Peak**	**92.98**	**51**	P		**P**	**02 07 42.4**	**+1.2**
	baz=305								
MDND	**Maddock**	**92.98**	**31**	P		**P**	**02 07 41.8**	**+1.2**
	baz=317								
IRM	**Iron Mountain**	**93.12**	**49**	P		**P**	**02 07 42.3**	**+0.8**
	baz=306								
BC3	**Big Chuckawall**	**93.20**	**50**	P		**P**	**02 07 43.1**	**+1.0**
	baz=306								
RSSD	**Black Hills**	**93.45**	**36**	P		**P**	**02 07 44.0**	**+0.8**
	baz=314								
PDMCI	**Parker Dam,Lak**	**93.70**	**48**	P		**P**	**02 07 45.2**	**+1.0**
	baz=307								
O20A	**White River Ci**	**93.79**	**41**	P		**P**	**02 07 45.7**	**+1.0**
	baz=311								
WUAZ	**Wupatki**	**94.78**	**46**	P		**P**	**02 07 49.3**	**-0.1**
WUAZ				IAmb		IAmb	02 07 51.9		
	comp=Z,7.0nm,1.2s								
WUAZ	**Wupatki**	**94.78**	**46**	P		**P**	**02 07 50.1**	**+0.7**
	baz=308								
MBAR	**Mbarara**	**98.74**	**274**	LR		LR	02 54 25.2		
	comp=Z,40nm,19.3s,baz=52,slow=36								

NOU ***08*** *02:01:08.7, 32.37S×122.48E, h0km, mb4.7/22, Western Australia*
AUST ***08*** *02:01:08.7±0.5, 32.34S×122.39E, h0km, Error ellipse: s-maj=8.0km s-min=2.9km az=173.0*
NEIC ***08*** *02:01:08.5±2.7, 32.39S±0.09×122.42E±0.07, h1km±5km, Error ellipse: s-maj=15.0km s-min=4.5km az=208.0*
CUPWA ***08*** *02:01:11.7±10.0, 32.70S×122.34E, h10km±111km, ML4.4, Region: WESTERN AUSTRALIA*
IDC ***08*** *02:01:13.4±2.4, 32.25S×122.86E, h0km, mb3.9/3, mbtmp4.1/6, ML4.3/3, Error ellipse: s-maj=52.2km s-min=27.1km az=173.0*

ISC 08 02:01:11.0±0.7, 32.40S±0.07×122.50E±0.05, h19km, n82, σ2.9 19/81, mb4.0/5, Western Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUKUL	**Kulin High Sch**	**3.68**	**265**	P		02 02 07.3	
AUKUL				SG		02 03 00.0	
KLBR	**Kellerberrin**	**4.11**	**280**	P	**Pn**	**02 02 12.3**	**-0.5**
	baz=4.0,SNR=25						
KLBR				S	**Sn**	**02 02 58.0**	**-2.4**
	baz=4.0,SNR=5.2						
KLBR	**Kellerberrin**	**4.11**	**280**	P	**Pn**	**02 02 11.6**	**-1.2**
KLBR	**Kellerberrin**	**4.11**	**280**	P		02 02 12.3	
KLBR	**Kellerberrin**	**4.11**	**280**	S		02 02 58.0	
NWAO	**Narrogin (SRO)**	**4.47**	**262**	Pn	**Pn**	**02 02 16.5**	**-1.2**
NWAO	**Narrogin (SRO)**	**4.47**	**262**	P	**Pn**	**02 02 18.4**	**+0.7**
PING	**Pingelly**	**4.66**	**267**	P		02 02 19.4	
PING				SG		02 03 30.2	
FORT	**Forest**	**5.01**	**73**	P	**Pn**	**02 02 27.5**	**+2.3**
	baz=5.1,SNR=20						
FORT				S	**Sn**	**02 03 25.5**	**+2.9**
	baz=5.1						
FORT	**Forest**	**5.01**	**73**	Pn	**Pn**	**02 02 27.3**	**+2.1**
FORT	**Forest**	**5.01**	**73**	P		02 02 27.4	
FORT	**Forest**	**5.01**	**73**	S		02 03 25.5	
RKGY	**Rocky Gully**	**5.11**	**243**	P	**Pn**	**02 02 26.1**	**-0.5**
	baz=5.1,SNR=33						
RKGY				S	**Sn**	**02 03 22.1**	**-2.9**
	baz=5.1						
RKGY	**Rocky Gully**	**5.11**	**243**	P	**Pn**	**02 02 26.4**	**-0.1**
RKGY	**Rocky Gully**	**5.11**	**243**	P		02 02 26.1	
RKGY				S		02 03 22.1	
BLDU	**Ballidu**	**5.25**	**288**	P	**Pn**	**02 02 26.8**	**-1.7**
	baz=5.1,SNR=16						
BLDU				S	**Sn**	**02 03 27.2**	**-1.4**
	baz=5.1						
BLDU	**Ballidu**	**5.25**	**288**	P	**Pn**	**02 02 27.7**	**-0.8**
BLDU	**Ballidu**	**5.25**	**288**	P		02 02 26.8	
BLDU	**Ballidu**	**5.25**	**288**	S		02 03 27.2	
MUN	**Mundaring**	**5.35**	**273**	P	**Pn**	**02 02 28.2**	**-1.6**
	baz=5.2,SNR=9.1						
MUN				S	**Sn**	**02 03 29.2**	**-1.7**
	baz=5.2						
MUN	**Mundaring**	**5.35**	**273**	P	**Pn**	**02 02 28.9**	**-0.9**
MUN	**Mundaring**	**5.35**	**273**	P		02 02 28.2	
MUN	**Mundaring**	**5.35**	**273**	S		02 03 29.2	
AUMAZ	**Mazenod Senior**	**5.49**	**272**	P	**Pn**	**02 02 30.8**	**-0.9**
	baz=5.4						
MORW	**Morawa**	**6.47**	**299**	P	**Pn**	**02 02 44.7**	**-0.6**
	baz=6.4,SNR=8.4						
MORW	**Morawa**	**6.47**	**299**	Pn	**Pn**	**02 02 43.8**	**-1.5**
MORW	**Morawa**	**6.47**	**299**	P	**Pn**	**02 02 45.1**	**-0.2**
	60nm,1.5s						
MORW	**Morawa**	**6.47**	**299**	P		02 02 44.6	
WRKA	**Warakurna**	**8.93**	**36**	P	**Pn**	**02 03 21.2**	**+2.3**

comp=Z,12nm,0.8s
KNRA Kununurra 17.59 20 P Pn 02 05 14.3 -0.9
baz=18,SNR=4.8
KNRA Kununurra 17.59 20 Pn 02 05 14.0 -1.2
KNRA IAmb IAmb 02 05 31.4
comp=Z,13nm,0.6s
KNRA Kununurra 17.59 20 P Pn 02 05 14.4 -0.8
comp=Z,17nm,1.5s
QIS Mount Isa 19.30 57 P Pn 02 05 35.4 -0.6
baz=19,SNR=7.2
QIS Mount Isa 19.30 57 P Pn 02 05 35.5 -0.5
CMSA Cobar Meteorol 19.69 94 P Pn 02 05 39.9 -0.7
MTN Manton Dam 21.01 24 P P 02 05 56.8 +3.3
baz=21
MTN Manton Dam 21.01 24 Pn P 02 05 56.1 +2.6
KDU Kakadu 21.65 27 P P 02 06 03.8 +3.5
baz=22,SNR=6.5
MTSU Mount Surprise 24.25 59 P P 02 06 29.5 +2.6
baz=24,SNR=8.1
CTA Charters Tower 24.52 66 P P 02 06 32.0 +2.6
comp=Z,2.8nm,0.6s,baz=224,slow=11,SNR=5.7
comp=Z,2.8nm,0.6s
CTAO Charters Tower 24.52 66 P 02 06 32.5 +3.2
CTAO IAmb IAmb 02 06 54.3
comp=Z,7.4nm,1.1s
EIDS Eidsvold 25.94 82 P P 02 06 44.8 +2.6
TNTI Ternate 33.31 9 P P 02 07 50.2 +2.6
comp=Z,42nm,1.1s
QSPA South Pole Qui 57.71 180 P P 02 11 00.8 +0.6
QSPA IAmb IAmb 02 11 04.3
comp=Z,0.7nm,0.5s
KSRS Korea Array 69.68 5 P P 02 12 24.8 +5.7
comp=Z,0.4nm,0.3s,baz=180,slow=7.3,SNR=4.8
comp=Z,0.4nm,0.3s
MKAR Makanchi Array 86.77 334 P P 02 13 58.1 +4.6
comp=Z,0.3nm,0.7s,baz=148,slow=7.0,SNR=2.5
comp=Z,0.3nm,0.7s

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*BJI **08** 02:02:19.9±0.0,26˚.82N×130˚.37E,h16km,mb4.4/47, mB4.8/27,Ms4.5/27,Ms7 4.3/27*
*IDC **08** 02:02:20.4±0.7,26˚.91N×130˚.30E,h0km,mb4.3/21, mbtmp4.3/27,ML3.8/6,MS3.7/14,Error ellipse: s-maj=17.2km s-min=15.4km az=138.0*
*MOS **08** 02:02:20.9±1.0,26˚.95N×130˚.30E,h13km,mb4.9/53, MS4.1/6,Error ellipse: s-maj=8.9km s-min=4.9km az=105.3*
*JMA **08** 02:02:22.0±0.1,27˚.0N±0˚.3×130˚.3E±0˚.4,h63km±4km, MD4.4/25,MW4.7/25,NEAR MINAMI-DAITOJIMA IS*
*NIED **08** 02:02:22.0,26˚.96N×130˚.30E,h63km,MW4.7, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁶Nm; Mrr=1.19; Mθθ 0.66; Mθφ 0.53; Mrθ 0.94; Mφφ 0.52; Mφr-0.18; Fault plane solution: M₀1.47000×10¹⁶ NP1:ϑs32.00000°, δ34.00000°,λ-128.00000°. NP2:ϑs255.00000°, δ64.00000°,λ-68.00000°.*
*NEIC **08** 02:02:22.9±1.6,26˚.95N±0˚.05×130˚.16E±0˚.07,h10km±1km, mb4.9/86 Error ellipse: s-maj=12.9km s-min=5.6km az=129.0*
*GCMT **08** 02:02:23.9±0.3,26˚.89N±0˚.03×130˚.15E±0˚.03,h17km±1km, MW4.9/85,Moment Tensor Solution. s25,c25; s85,c116; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-2.52±.17; Mθθ 1.28±.11; Mφφ 1.24±.11; Mrθ 0.43±.29; Mφθ 0.93±.06; Mφr 0.62±.30; Best double couple: M₀2.47000×10¹⁶ NP1:ϑs48.00000°,δ36.00000°,λ-86.00000°. NP2: φs223.00000°,δ54.00000°,λ-93.00000°. Principal axes: T 2.3010, Plg9.0000°, Azm315.0000°; N 0.3380, Plg3.0000°, Azm225.0000°; P -2.6400, Plg81.0000°, Azm118.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 02:02:23.8±1.0,26˚.94N±0˚.03×130˚.27E±0˚.03,h23km±7km, n459,σ1§52/465,mb4.8/124,MS3.9/24,37C-16D, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKDJ	**Kitadaitoujima**	**1.34**	**137**	P	**Pn**	**02 02 45.0**	**-2.2**
JKDJ				S	**Sn**	**02 03 02.4**	**-1.9**
JKDJ	**Kitadaitoujima**	**1.34**	**137**	A	A	02 02 45.0	
comp=E,30nm,4.1s,comp=E,42nm,3.4s							
JZK	**Kikaishima**	**1.40**	**349**	A	A	02 02 45.6	
comp=E,30nm,4.0s,comp=E,27nm,4.8s							
JMZ	**Minamidaito 2**	**1.40**	**142**	P	**Pn**	**02 02 45.9**	**-2.0**
JMZ				S	**Sn**	**02 03 03.0**	**-2.7**
JMZ	**Minamidaito 2**	**1.40**	**142**	A	A	02 02 45.9	
comp=E,29nm,3.6s,comp=E,36nm,3.4s							
JTK	**Tokunoshima**	**1.45**	**306**	P	**Pn**	**02 02 46.7**	**-1.9**
JTK				S	**Sn**	**02 03 04.2**	**-2.7**
JTK	**Tokunoshima**	**1.45**	**306**	A	A	02 02 46.7	
comp=E,7.0nm,5.8s,comp=E,6.0nm,3.4s							
JOKE	**Okinoerabujima**	**1.57**	**286**	P	**Pn**	**02 02 48.7**	**-1.6**
JOKE				*e*S	**Sn**	**02 03 08.2**	**-1.8**
JOKE	**Okinoerabujima**	**1.57**	**286**	A	A	02 02 48.7	
comp=E,10.0nm,2.2s,comp=E,8.0nm,4.5s							
JAM	**Amami Oshima**	**1.58**	**338**	P	**Pn**	**02 02 48.2**	**-2.3**
JAM				S	**Sn**	**02 03 08.0**	**-2.2**
JAM	**Amami Oshima**	**1.58**	**338**	A	A	02 02 48.2	
comp=E,6.0nm,4.7s,comp=E,10.0nm,2.0s							
JAMN	**Amaminishikomi**	**1.63**	**323**	P	**Pn**	**02 02 48.8**	**-2.2**
JAMN				*e*S	**Sn**	**02 03 08.7**	**-2.5**
JAMN	**Amaminishikomi**	**1.63**	**323**	A	A	02 02 48.8	
comp=E,7.0nm,1.9s,comp=E,7.0nm,6.8s							
JYRO	**Yoronjima**	**1.63**	**274**	P	**Pn**	**02 02 49.5**	**-1.6**
JYRO				S	**Sn**	**02 03 08.3**	**-3.0**
JYRO	**Yoronjima**	**1.63**	**274**	A	A	02 02 49.5	
comp=E,5.0nm,5.4s,comp=E,8.0nm,2.0s							
JOW	**Kunigami**	**1.79**	**267**	Pn	**Pn**	**02 02 52.0**	**-1.3**
395nm,0.3s,baz=119,slow=29,SNR=280							
JOW				LR	LR	02 02 59.5	
comp=Z,265nm,21.9s,baz=154,slow=22							
JOW				Sn	**Sn**	**02 03 12.2**	**-3.0**
738nm,0.3s,baz=87,slow=21,SNR=36							
JOW	**Kunigami**	**1.79**	**267**	Pn	**Pn**	**02 02 51.6**	**-1.6**
JOW	**Kunigami**	**1.79**	**267**	P	**Pn**	**02 02 51.8**	**-1.5**
JOW				S	**Sn**	**02 03 14.0**	**-1.3**
JOW	**Kunigami**	**1.79**	**267**	A	A	02 02 51.8	
comp=E,7.0nm,1.9s,comp=E,10.0nm,1.7s							
JNTH	**Nagotoyohara**	**2.06**	**259**	P	**Pn**	**02 02 55.0**	**-2.0**
JNTH				S	**Sn**	**02 03 19.1**	**-2.7**
JNTH	**Nagotoyohara**	**2.06**	**259**	A	A	02 02 55.0	
comp=E,7.0nm,7.1s,comp=E,6.0nm,1.9s							
JIH	**Iheya**	**2.06**	**273**	P	**Pn**	**02 02 56.1**	**-0.9**
JIH				S	**Sn**	**02 03 20.4**	**-1.6**
JIH	**Iheya**	**2.06**	**273**	A	A	02 02 56.1	
comp=E,5.0nm,4.2s,comp=E,7.0nm,1.7s							
JJT3	**Tamagusuku3**	**2.37**	**251**	P	**Pn**	**02 02 59.7**	**-1.5**
JJT3				*e*S	**Sn**	**02 03 27.3**	**-2.2**
JJT3	**Tamagusuku3**	**2.37**	**251**	A	A	02 02 59.7	
comp=E,19nm,5.8s,comp=E,18nm,5.4s							
JTAJ	**Takarajima**	**2.40**	**337**	P	**Pn**	**02 02 59.3**	**-2.5**
JTAJ				S	**Sn**	**02 03 27.3**	**-3.1**
JTAJ	**Takarajima**	**2.40**	**337**	A	A	02 02 59.3	
comp=E,3.0nm,9.8s,comp=E,3.0nm,6.6s							
JAGN	**Aguni-jima**	**2.73**	**263**	P	**Pn**	**02 03 04.5**	**-1.7**
JAGN				S	**Sn**	**02 03 35.9**	**-2.6**
JAGN	**Aguni-jima**	**2.73**	**263**	A	A	02 03 04.5	
comp=E,8.0nm,6.6s,comp=E,5.0nm,6.2s							
JNN	**Nakanoshima**	**2.92**	**353**	P	**Pn**	**02 03 06.8**	**-2.0**
JNN				S	**Sn**	**02 03 40.1**	**-3.0**
JKE	**Kume jima 2**	**3.18**	**260**	P	**Pn**	**02 03 10.0**	**-2.4**
JYAK	**Yakushimahirau**	**3.30**	**4**	P	**Pn**	**02 03 12.2**	**-1.9**
JYAK				S	**Sn**	**02 03 48.4**	**-4.1**
JMTN	**Minamitane**	**3.49**	**9**	*e*S	**Sn**	**02 03 54.5**	**-2.9**
JTN	**Tanegashima 3**	**3.76**	**9**	P	**Pn**	**02 03 18.4**	**-2.0**
JTN				S	**Sn**	**02 04 00.7**	**-3.2**
JSU	**Suzuyama**	**4.56**	**2**	Pn	**Pn**	**02 03 29.5**	**-1.8**
JNU	**Nakatsue**	**6.19**	**5**	Pn	**Pn**	**02 03 53.8**	**0.0**
5.6nm,0.3s,baz=329,slow=5.3,SNR=8.0							
17nm,0.4s							
JNU	**Nakatsue**	**6.19**	**5**	Pn	**Pn**	**02 03 53.4**	**-0.4**
YOJ	**Yonaguni jima**	**7.00**	**251**	Pn	**Pn**	**02 04 01.8**	**-3.1**
YOJ	**Yonaguni jima**	**7.00**	**251**	P	**Pn**	**02 04 01.8**	**-3.1**
NACB	**Ninganchiao**	**8.30**	**253**	Pn	Pn	02 04 19.2	-3.6
YHNB	**Yeheng**	**8.33**	**256**	Pn	**Pn**	**02 04 21.4**	**-1.9**
TPUB	**Ta-pu**	**9.46**	**250**	Pn	Pn	02 04 34.6	-4.0
TJN	**Taejon**	**9.73**	**346**	*i* P	**Pn**	**02 04 40.8**	**-1.6**
JHJ	**Hachijo jima 2**	**10.29**	**51**	Pn	**Pn**	**02 04 52.6**	**+2.6**
17nm,0.3s,baz=116,slow=11,SNR=5.7							
JHJ2	**Mitsune**	**10.31**	**51**	Pn	**Pn**	**02 04 52.8**	**+2.5**
JGF	**Kuroka**	**10.55**	**33**	Pn	**Pn**	**02 04 53.7**	**+0.1**
JCJ	**Chichijima**	**10.62**	**86**	Pn	**Pn**	**02 04 53.1**	**-1.6**
2.2nm,0.3s,baz=282,slow=20,SNR=1.9							
36nm,0.8s							
JCJ	**Chichijima**	**10.62**	**86**		**Pn**	**02 04 56.2**	**+1.6**
KSAR	**Wonju Array Be**	**10.67**	**350**	Pn	**Pn**	**02 04 56.5**	**+1.4**
KSAR	**Wonju Array Be**	**10.67**	**350**	P	**Pn**	**02 04 56.6**	**+1.4**
KSRS	**Korea Array**	**10.67**	**350**	Pn	**Pn**	**02 04 56.9**	**+1.7**
0.3nm,0.3s,baz=167,slow=14,SNR=37							
7.8nm,0.8s							
KS19	**Wonju Array Si**	**10.73**	**350**	Pn	**Pn**	**02 04 56.4**	**+0.4**
NJ2	**Nanjing**	**11.18**	**300**	*e*P	**Pn**	**02 05 01.1**	**-1.0**
NJ2				pmax	pmax		
comp=Z,10.0nm,0.5s							
NJ2				LR	LR		
comp=N,2μm,10.8s							
NJ2				LR	LR		
comp=E,2μm,12.3s							
NJ2				LR	LR		
comp=Z,2μm,13.2s							
SEHB	**SEOHWA**	**11.43**	**352**	Pn	**Pn**	**02 05 05.5**	**-0.1**
MAJO	**Matsushiro**	**11.71**	**33**	*i* P	**Pn**	**02 05 09.6**	**+0.1**
MJAR	**Matsushiro Arr**	**11.71**	**33**	Pn	**Pn**	**02 05 09.8**	**+0.3**
0.1nm,0.3s,baz=188,slow=12,SNR=1.6							
1.0nm,0.3s							
MJAR	**Matsushiro Arr**	**11.71**	**33**	Pn	**Pn**	**02 05 07.9**	**-1.6**
WHN	**Wuhan**	**14.42**	**288**	⇓P	**P**	**02 05 53.6**	**+0.4**
TIA	**Tai'an**	**14.52**	**313**	*e*P	**P**	**02 05 53.2**	**-1.0**
TIA				pmax	pmax		
comp=Z,12nm,1.2s							
TIA				LR	LR		
comp=N,920nm,14.7s							
TIA				LR	LR		
comp=E,780nm,20.1s							
TIA				LR	LR		
comp=Z,760nm,23.5s							
HNS	**HongShan**	**16.79**	**312**	⇑P	**Pn**	**02 06 17.8**	**+0.5**
HNS				S	**S**	**02 09 30.1**	**-3.4**
HNS				pmax	pmax		
comp=Z,33nm,1.3s							
HNS				LR	LR		
comp=N,520nm,12.3s							
HNS				LR	LR		
comp=E,1μm,15.4s							
HNS				LR	LR		
comp=Z,940nm,12.4s							
LYN	**LuoYang**	**17.07**	**301**	⇑*i*P	**P**	**02 06 23.0**	**+0.4**
LYN				pmax	pmax		
comp=Z,30nm,1.3s							
LYN				pmax	pmax		
comp=Z,700nm,8.2s							
LYN				LR	LR		
comp=E,1μm,11.2s							
LYN				LR	LR		
comp=Z,1μm,14.6s							
CN2	**Changchun**	**17.28**	**348**	*e*P	**Pn**	**02 06 22.1**	**-1.4**
CN2				*e*S	**Sn**	**02 09 33.5**	**-1.4**
CN2				pmax	pmax		
comp=Z,10.0nm,0.7s							
CN2				pmax	pmax		
comp=Z,100nm,3.0s							
CN2				LR	LR		
comp=N,500nm,16.0s							
CN2				LR	LR		
comp=E,1μm,16.0s							
CN2				LR	LR		
comp=Z,700nm,14.0s							
USA0B	**Ussuriysk Arra**	**17.28**	**4**		**P**	**02 06 25.4**	**+0.6**
USA0B	**Ussuriysk Arra**	**17.28**	**4**	P	**P**	**02 06 25.4**	**+0.6**
USA0B				pmax	pmax		
comp=Z,27nm,1.3s							
USRK	**Ussuriysk Ar.**	**17.28**	**4**	P	**P**	**02 06 25.3**	**+0.5**
comp=Z,0.6nm,0.3s,baz=194,slow=9.4,SNR=17							
USRK				LR	LR	02 13 40.8	
comp=Z,145nm,18.6s,baz=175,slow=39							
comp=Z,2.9nm,0.6s							
USRK	**Ussuriysk Ar.**	**17.28**	**4**		**P**	**02 06 24.9**	**0.0**
USRK	**Ussuriysk Ar.**	**17.28**	**4**	P	**P**	**02 06 24.9**	**0.0**
BJT	**Baijiatuan**	**17.54**	**322**		**P**	**02 06 27.8**	**+0.1**
BJT	**Baijiatuan**	**17.54**	**322**	P	**P**	**02 06 27.8**	**+0.1**
BJT				pmax	pmax		
comp=Z,54nm,1.2s							
BJI	**Beijing**	**17.55**	**322**	P	**P**	**02 06 28.8**	**+1.0**
BJI				PP	**pwP**	**02 06 39.3**	**+0.2**
BJI				pmax	pmax		
comp=Z,25nm,1.1s							
ENH	**Enshi**	**18.55**	**285**	P	**P**	**02 06 38.7**	**-0.3**
BNX	**BinXian**	**18.91**	**354**	⇑P	**Pn**	**02 06 45.7**	**+2.3**
BNX				pmax	pmax		
comp=Z,19nm,1.1s							
BNX				pmax	pmax		
comp=Z,430nm,9.6s							
XAN	**Xi'an**	**19.70**	**296**	P	**P**	**02 06 51.1**	**-0.4**
XAN				pP	Pn	02 06 54.9	+1.8
XAN				S	**Sn**	**02 10 33.4**	**-0.3**
XAN				pmax	pmax		
comp=Z,40nm,1.4s							
XAN				LR	LR		
comp=Z,880nm,16.1s							
XAN				LR	LR		
comp=Z,820nm,18.4s							
XAN				LR	LR		
comp=Z,1μm,17.3s							
ASAJ	**Asahikawa**	**19.82**	**27**	P	**P**	**02 06 53.0**	**+0.2**
comp=Z,0.7nm,0.3s,baz=238,slow=26,SNR=4.1							
ASAJ				LR	LR	02 14 29.5	
comp=Z,187nm,19.8s,baz=197,slow=37							
comp=Z,2.2nm,0.3s							
DAV	**Davao City (W)**	**20.25**	**194**	LR	LR	02 15 28.1	
comp=Z,179nm,18.2s,baz=346,slow=39							
XLT	**XiLinHaoTe**	**20.45**	**330**	⇓*i*P	Pn	02 07 02.6	+0.7
XLT				sP	sP	02 07 09.4	+2.3
XLT				S	**S**	**02 10 47.1**	**-0.5**
XLT				sS	sS	02 10 55.2	-0.4
XLT				pmax	pmax		
comp=Z,15nm,1.3s							
XLT				pmax	pmax		
comp=Z,400nm,7.5s							
XLT				LR	LR		
comp=Z,570nm,13.0s							
XLT				LR	LR		
comp=Z,510nm,12.9s							
HHC	**Hu-ho-hao-te**	**20.77**	**317**	*e*P	Pn	02 07 05.4	-0.3
HHC				PP	**PnPn**	**02 07 27.6**	**+6.0**
HHC				S	**S**	**02 10 54.5**	**+0.5**
HHC				pmax	pmax		
comp=Z,14nm,0.6s							
HHC				pmax	pmax		
comp=Z,960nm,8.9s							
HHC				LR	LR		
comp=Z,1μm,14.1s							
HHC				LR	LR		
comp=Z,1μm,14.3s							
HHC				LR	LR		
comp=Z,1μm,14.3s							
GYA	**Guiyang**	**21.09**	**274**	⇓P	**P**	**02 07 07.6**	**+0.7**
GYA				pmax	pmax		
comp=Z,13nm,2.0s							
BTO	**Baotou**	**21.60**	**314**	*e*P	**P**	**02 07 12.6**	**+0.5**
YSS	**Yuzh-Sakhalins**	**22.28**	**23**	P	**P**	**02 07 19.9**	**+0.6**
YSS				IAmb	IAmb	02 07 38.1	
comp=Z,43nm,1.3s							
YSS	**Yuzh-Sakhalins**	**22.28**	**23**	*o**e*P	**P**	**02 07 19.7**	**+0.5**
YSS				*e*S	**S**	**02 11 17.7**	**-5.4**
YSS				pmax	pmax		
comp=Z,20nm,0.9s							
YSS				pmax	pmax		
comp=Z,300nm,5.2s							
KLR	**Kul'dur**	**22.29**	**3**	P	**P**	**02 07 18.9**	**-0.4**
comp=Z,6.2nm,0.7s,baz=191,slow=8.0,SNR=22							
KLR				LR	LR	02 15 56.8	
comp=Z,113nm,19.3s,baz=179,slow=37							
comp=Z,6.2nm,0.7s							
KLR	**Kul'dur**	**22.29**	**3**	*ce*P	**P**	**02 07 18.4**	**-0.9**
KLR				pmax	pmax		
comp=Z,21nm,1.7s							
KUR	**Kuril'sk**	**23.05**	**33**	*i* P	**P**	**02 07 28.1**	**+0.7**
KUR				pmax	pmax		
comp=Z,46nm,1.1s							
CD2	**Chengdu**	**23.52**	**286**	P	**P**	**02 07 31.2**	**-1.1**
CD2				pmax	pmax		
comp=Z,20nm,1.1s							
SGSI	**Sangihe**	**23.56**	**192**	P	**P**	**02 07 31.4**	**-1.3**
comp=Z,58nm,0.5s							
HIA	**Hailar**	**23.74**	**343**	P	**P**	**02 07 35.5**	**+1.3**
HIA	**Hailar**	**23.74**	**343**	*i* P	**P**	**02 07 33.7**	**-0.5**
HIA				pmax	pmax		
comp=Z,18nm,1.3s							
LZH	**Lanzhou**	**24.25**	**299**	*e*P	**P**	**02 07 36.4**	**-2.9**
LZH				pP	pP	02 07 41.0	-3.6
LZH				sP	sP	02 07 44.2	-2.6
LZH				pmax	pmax		
comp=Z,18nm,1.5s							
MYLDM	**Lahad Datu**	**24.38**	**209**	P	**P**	**02 07 41.0**	**+0.7**
KMI	**Kunming**	**24.79**	**272**	⇑P	**P**	**02 07 45.3**	**+0.9**
KMI				sP	pP	02 07 52.1	+2.4
KMI				pmax	pmax		
comp=Z,5.0nm,0.7s							
KMI				LR	LR		
comp=Z,400nm,11.7s							
KMI				LR	LR		
comp=Z,620nm,14.9s							
KMI				LR	LR		
comp=Z,570nm,14.9s							
PZH	**PanZhiHua**	**25.47**	**276**	P	**P**	**02 07 51.9**	**+1.5**
PZH				S	**S**	**02 12 20.0**	**+3.6**
PZH				pmax	pmax		
comp=Z,10.0nm,1.4s							
PZH				pmax	pmax		
comp=Z,110nm,4.0s							
PZH				LR	LR		
comp=Z,940nm,13.7s							
PZH				LR	LR		
comp=Z,940nm,15.5s							
PZH				LR	LR		
comp=Z,1μm,14.5s							
TYV	**Tymovskoe**	**25.69**	**18**	*e*P	**P**	**02 07 57.9**	**+5.9**
TYV				pmax	pmax		
comp=Z,10.0nm,1.2s							
TYV				pmax	pmax		
comp=Z,100nm,4.4s							
ZEA	**Zeya**	**26.87**	**356**	*e*P	**P**	**02 08 03.1**	**+0.5**
ZEA				pmax	pmax		
comp=Z,20nm,1.3s							
ZEA				MLR	MLR		
comp=E,200nm,14.0s							
ZEA				MLR	MLR		
comp=N,100nm,10.0s							
ZEA				MLR	MLR		
comp=Z,200nm,13.0s							
KMSI	**Cibinong**	**26.90**	**194**	P	**P**	**02 08 00.3**	**-2.9**
comp=Z,228nm,0.4s							
TOLI2	**Tolitoli**	**27.25**	**201**	P	**P**	**02 08 05.9**	**-0.4**
MRSI	**Marisa**	**27.50**	**198**	P	**P**	**02 08 06.7**	**-1.9**
comp=Z,2μmcomp=Z,16nm,1.3s							
LBMI	**Labuha**	**27.54**	**186**	P	**P**	**02 08 06.0**	**-3.0**
comp=Z,23nm,0.8s							
SWI	**Sorong**	**27.65**	**178**	P	**P**	**02 08 07.3**	**-2.7**
comp=Z,24nm,0.5s							
SIJI	**Sorong**	**27.66**	**178**	LR	LR	02 18 02.8	
comp=Z,140nm,20.2s,baz=340,slow=34							
ULN	**Ulaanbaatar**	**27.68**	**325**	P	**P**	**02 08 10.2**	**0.0**
ULN	**Ulaanbaatar**	**27.68**	**325**	*ce*P	**P**	**02 08 10.6**	**+0.4**
ULN				pmax	pmax		
comp=Z,11nm,2.5s							
SONM	**Songino Array**	**28.00**	**324**	P	**P**	**02 08 14.6**	**+1.7**
comp=Z,2.5nm,1.0s,baz=126,slow=7.5,SNR=8.2							
SONM				LR	LR	02 19 35.5	
comp=Z,358nm,20.8s,baz=140,slow=37							
comp=Z,2.5nm,1.0s							
SONM	**Songino Array**	**28.00**	**324**	P	**P**	**02 08 13.2**	**+0.2**
GTA	**Gaotai**	**28.23**	**304**	*e*P	**P**	**02 08 14.4**	**-0.7**
GTA				pP	sP	02 08 24.0	+1.3
GTA				sP	pwP	02 08 27.2	-0.7
GTA				pmax	pmax		
comp=Z,3.0nm,1.2s							
GTA				pmax	pmax		
comp=Z,110nm,5.8s							
GTA				LR	LR		
comp=Z,730nm,14.2s							
GTA				LR	LR		
comp=Z,660nm,16.7s							
GTA				LR	LR		
comp=Z,670nm,17.8s							
MPSI	**Mapaga**	**28.27**	**202**	P	**P**	**02 08 14.4**	**-1.0**
comp=Z,759nmcomp=Z,13nm,1.8s							
SANI	**Sanana**	**29.11**	**189**	P	P	02 08 17.9	-5.0
comp=Z,18nm,1.3s							
FAKI	**Fak Fak**	**29.74**	**176**	P	**P**	**02 08 28.1**	**-0.4**
FAKI	**Fak Fak**	**29.74**	**176**	P	P	02 08 16.6	-12
CHTO	**Chiang Mai**	**29.91**	**261**	P	**P**	**02 08 31.1**	**+1.0**
CHTO	**Chiang Mai**	**29.91**	**261**	P	**P**	**02 08 31.2**	**+1.0**
CHTO				pmax	pmax		
comp=Z,11nm,1.3s							
CMAR	**Chiang Mai Arr**	**30.05**	**260**	P	**P**	**02 08 32.4**	**+1.0**
comp=Z,1.4nm,0.3s,baz=52,slow=9.3,SNR=6.4							
comp=Z,1.4nm,0.3s							
CMAR	**Chiang Mai Arr**	**30.05**	**260**	P	**P**	**02 08 30.3**	**-1.0**
CMAR	**Chiang Mai Arr**	**30.05**	**260**	*ce*P	**P**	**02 08 32.5**	**+1.2**
CMAR				pmax	pmax		
comp=Z,1.0nm,0.3s							
GOMU	**GeErMu**	**31.45**	**296**	P	**P**	**02 08 43.5**	**-0.5**
GOMU				pP	pP	02 08 47.2	-2.1
GOMU				S	**S**	**02 13 46.2**	**-4.6**
GOMU				sS	sS	02 14 01.6	+1.0
GOMU				pmax	pmax		
comp=Z,4.0nm,0.5s							
GOMU				pmax	pmax		
comp=Z,91nm,6.3s							
PETK	**Petropavlovsk-**	**33.15**	**31**	LR	LR	02 22 25.4	
comp=Z,68nm,18.4s,baz=207,slow=36							
YAK	**Yakutsk**	**35.09**	**360**	*ce*P	**P**	**02 09 14.9**	**0.0**
YAK				pmax	pmax		
comp=Z,14nm,0.6s							
BLJI	**Banyuglugur**	**38.08**	**207**	P	**P**	**02 09 39.2**	**-1.7**
comp=Z,84nm,0.5s							
ODAN	**Odare**	**38.11**	**280**	*e*P	**P**	**02 09 41.6**	**+0.2**
comp=Z,20nm,1.0s							
WMQ	**Urumqi**	**38.12**	**308**	*e*P	**P**	**02 09 43.8**	**+2.7**
WMQ				LR	LR		
comp=Z,430nm,12.5s							
WMQ				LR	LR		
comp=Z,630nm,14.9s							
WMQ				LR	LR		
comp=Z,370nm,18.5s							
SEY	**Seymchan**	**38.83**	**16**	*ce*P	**P**	**02 09 46.0**	**-0.7**
SEY				pmax	pmax		
comp=Z,5.0nm,1.0s							
JIRN	**Jiri**	**39.02**	**281**	*e*P	**P**	**02 09 50.1**	**+0.8**
comp=Z,54nm,1.4s							
GUN	**Gumba**	**39.26**	**282**	*e*P	**P**	**02 09 51.7**	**+0.5**
comp=Z,63nm,1.2s							
PMG	**Port Moresby**	**39.67**	**153**	LR	LR	02 24 20.8	
comp=Z,149nm,21.5s,baz=296,slow=33							
PKI	**Pulchoki**	**39.72**	**282**	*e*P	**P**	**02 09 55.3**	**+0.3**
comp=Z,39nm,1.2s							
PKIN	**Phulchoki**	**39.73**	**282**	*e*P	**P**	**02 09 55.5**	**+0.5**
comp=Z,20nm,0.6s							
GSI	**Gunungsitoli**	**40.42**	**236**	P	**P**	**02 10 00.3**	**-0.3**
GSI				IAmb	IAmb	02 10 02.7	
comp=Z,34nm,1.3s							
PYUN	**Piuthan**	**41.74**	**283**	*e*P	**P**	**02 10 12.1**	**+0.5**
comp=Z,19nm,0.8s							
MK31	**Makanchi Array**	**42.44**	**311**	P	**P**	**02 10 16.0**	**-0.8**
MK31	**Makanchi Array**	**42.44**	**311**	*i* P	**P**	**02 10 17.0**	**+0.2**
MKAR	**Makanchi Array**	**42.44**	**311**	P	**P**	**02 10 17.8**	**+0.9**
comp=Z,2.0nm,0.8s,baz=103,slow=9.4,SNR=12							
comp=Z,2.0nm,0.8s							
MKAR	**Makanchi Array**	**42.44**	**311**	P	**P**	**02 10 16.9**	**0.0**
MKAR	**Makanchi Array**	**42.44**	**311**	*ce*P	**P**	**02 10 18.0**	**+1.2**
MKAR				pmax	pmax		
comp=Z,2.0nm,0.8s							
COEN	**Coen**	**42.54

KDJ pmax pmax
comp=Z,8.0nm,1.3s
KURK Kurchatov 45.58 316 P **P** **02 10 41.4 -0.4**
KURK lAmb lAmb 02 10 46.1
comp=Z,13nm,1.3s
KURK Kurchatov 45.58 316 *ce*P **P** **02 10 40.9 -1.0**
KURK pmax pmax
comp=Z,16nm,1.7s
BILL Bilibino 46.44 18 *de*P **P** **02 10 46.6 -1.8**
BILL *e* 02 12 29.3
BILL pmax pmax
comp=Z,16nm,1.7s
BILL MLR MLR
comp=Z,86nm,16.0s
WRA Warramunga Arr 46.77 175 P **P** **02 10 51.1 -0.4**
comp=Z,10nm,0.8s,baz=350,slow=7.9,SNR=4.7
comp=Z,10nm,0.8s
AAK Ala-Archa 47.58 304 *ce*P **P** **02 10 57.2 -0.7**
AAK pmax pmax
comp=Z,1.0nm,0.7s
NRIK Noril'sk 49.15 341 P **P** **02 11 08.6 -0.9**
comp=Z,3.9nm,0.7s,baz=115,slow=5.8,SNR=4.4
comp=Z,3.9nm,0.7s
NRIK Noril'sk 49.15 341 *i* P **P** **02 11 09.2 -0.2**
NRIK pmax pmax
comp=Z,13nm,1.3s
CTA Charters Tower 49.25 160 LR LR 02 32 57.6
comp=Z,56nm,18.5s,baz=292,slow=37
CTAO Charters Tower 49.25 160 P **P** **02 11 10.8 +0.1**
CTAO Charters Tower 49.25 160 P **P** **02 11 10.8 +0.1**
CTAO pmax pmax
comp=Z,32nm,0.9s
ASAR Alice Springs 50.43 176 P **P** **02 11 20.1 +0.4**
comp=Z,6.5nm,0.8s,baz=4.5,slow=8.1,SNR=4.2
comp=Z,6.5nm,0.8s
ASAR Alice Springs 50.43 176 P **P** **02 11 19.9 +0.3**
KK31 Karatay Array 50.50 305 P **P** **02 11 20.9 +0.8**
KK31 Karatay Array 50.50 305 P **P** **02 11 20.9 +0.8**
KK31 pmax pmax
comp=Z,8.0nm,1.5s
KKAR Karatay Array 50.50 305 P **P** **02 11 20.8 +0.7**
KKAR Karatay Array 50.50 305 P **P** **02 11 20.8 +0.7**
GAR Garm 50.90 300 P **P** **02 11 23.0 -0.3**
GAR lAmb lAmb 02 11 25.0
comp=Z,22nm,1.2s
BRVK Borovoye 51.04 318 P **P** **02 11 23.8 -0.2**
BRVK lAmb lAmb 02 11 26.3
comp=Z,21nm,1.2s
BRVK Borovoye 51.04 318 *ce*P **P** **02 11 23.6 -0.4**
BRVK pmax pmax
comp=Z,20nm,1.3s
CHGR Chuyangaron 51.83 299 P **P** **02 11 30.7 +0.4**
CHGR lAmb lAmb 02 11 32.5
comp=Z,14nm,1.0s
CHGR Chuyangaron 51.83 299 P **P** **02 11 30.7 +0.4**
CHGR pmax pmax
comp=Z,14nm,1.0s
KBL Kabul 52.48 294 P **P** **02 11 35.6 +0.3**
KBL lAmb lAmb 02 11 37.8
comp=Z,21nm,1.2s
KBL Kabul 52.48 294 P **P** **02 11 35.6 +0.3**
KBL pmax pmax
comp=Z,21nm,1.2s
SVE Sverdlovsk 56.83 322 *e*P **P** **02 12 08.2 +2.0**
SVE pmax pmax
comp=Z,28nm,1.4s
CHNA Chernabura Isl 57.11 40 P **P** **02 12 08.8 +0.6**
baz=271
ABKAR Akbulak array 57.50 313 P **P** **02 12 11.1 0.0**
ABKAR lAmb lAmb 02 12 16.2
comp=Z,15nm,1.1s
N16K Nishlik Lake 57.61 34 P **P** **02 12 12.5 +0.8**
baz=268
ARU Arti 57.98 322 P **P** **02 12 15.1 +0.8**
ARU Arti 57.98 322 *d i*P **P** **02 12 15.6 +1.3**
ARU 02 13 05.2
ARU S **S** **02 20 19.5 +6.4**
ARU SS **SS** **02 24 07.7 +3.8**
ARU pmax pmax
comp=Z,25nm,1.4s
ARU MLR MLR
comp=Z,308nm,17.0s
HRA Herat 58.03 295 P **P** **02 12 15.9 +0.6**
HRA lAmb lAmb 02 12 20.4
comp=Z,11nm,1.4s
TTA Tatalina 58.99 31 P **P** **02 12 22.1 +0.7**
TTA lAmb lAmb 02 12 23.1
comp=Z,12nm,1.4s
TTA Tatalina 58.99 31 P **P** **02 12 22.1 +0.7**
TTA pmax pmax
comp=Z,12nm,1.4s
O18K Koktuh Hills 59.39 34 P **P** **02 12 25.7 +1.6**
baz=272
J20K Nowinta River 59.84 29 P **P** **02 12 28.5 +1.3**
J20K lAmb lAmb 02 12 30.3
comp=Z,18nm,1.4s
J20K Nowinta River 59.84 29 P **P** **02 12 28.4 +1.3**
baz=270
K20K Telida 59.88 30 P **P** **02 12 28.3 +0.9**
K20K lAmb lAmb 02 12 29.9
comp=Z,11nm,1.1s
K20K Telida 59.88 30 P **P** **02 12 29.1 +1.7**
baz=270
L20K Farewell, AK 59.97 31 P **P** **02 12 29.6 +1.5**
baz=271
IMAR Indian Mountai 60.02 27 P **P** **02 12 27.0 -1.4**
H21K Melozitna Rive 60.41 28 P **P** **02 12 32.5 +1.5**
H21K Melozitna Rive 60.41 28 P **P** **02 12 32.1 +1.0**
baz=270,SNR=9.3
GEYT Alibeck 60.52 300 P **P** **02 12 33.5 +1.2**
comp=Z,9.1nm,1.1s,baz=140,slow=7.2,SNR=7.6
comp=Z,9.1nm,1.1s
GEYT Alibeck 60.52 300 P **P** **02 12 33.1 +0.8**
GEYT lAmb lAmb 02 12 38.2
comp=Z,9.4nm,1.1s
GYA0B ALIBECK ARRAY 60.52 300 P **P** **02 12 33.2 +1.0**
GYA0B lAmb lAmb 02 12 38.2
comp=Z,12nm,1.1s
PPLA Purkeypile 60.74 31 P **P** **02 12 34.8 +1.3**
baz=272
CAST Castle Rocks 60.77 30 P **P** **02 12 34.2 +0.6**
CAST lAmb lAmb 02 12 52.0
comp=Z,6.6nm,0.6s
KDAK Kodiak Island 60.86 37 P **P** **02 12 34.9 +0.7**
baz=275
SPU Mount Spurr 60.89 33 P **P** **02 12 36.0 +1.5**
Q20K Shuyak Island 60.90 36 P **P** **02 12 34.2 -0.2**
baz=275
SKT Skwentna 61.09 32 P **P** **02 12 36.0 +0.3**
baz=274
BPAW Bear Paw Mtn. 61.23 29 P **P** **02 12 37.0 +0.4**
BPAW lAmb lAmb 02 12 38.8
comp=Z,11nm,1.4s
BPAW Bear Paw Mtn. 61.23 29 P **P** **02 12 37.9 +1.2**
baz=273
KTH Kantishna Hill 61.28 30 P **P** **02 12 37.8 +0.7**
KTH lAmb lAmb 02 13 03.1
comp=Z,7.1nm,1.0s
MLY Manley 61.29 28 P **P** **02 12 38.0 +0.9**
MLY lAmb lAmb 02 12 39.9
comp=Z,7.9nm,1.2s
MLY Manley 61.29 28 P **P** **02 12 37.8 +0.7**
baz=272,SNR=6.8
TRF Thorofare Moun 61.57 30 P **P** **02 12 39.9 +0.7**
baz=274
H23K Yukon River 61.75 27 P **P** **02 12 40.6 +0.4**
baz=273,SNR=7.6
I23K Minto, Yukon-K 61.87 28 P **P** **02 12 42.3 +1.4**
baz=274
NEA2 Nenana 62.03 29 P **P** **02 12 42.7 +0.7**
NEA2 lAmb lAmb 02 12 44.4
comp=Z,14nm,1.2s
NEA2 Nenana 62.03 29 P **P** **02 12 42.5 +0.5**
baz=274,SNR=10
MCK McKinley 62.16 30 P **P** **02 12 43.5 +0.6**
MCK lAmb lAmb 02 12 44.8
comp=Z,10nm,0.9s
MCK McKinley 62.16 30 P **P** **02 12 43.5 +0.6**
MCK pmax pmax
comp=Z,10.0nm,0.9s
MCK McKinley 62.16 30 P **P** **02 12 43.8 +0.9**
baz=275
PMR Palmer 62.26 32 P **P** **02 12 44.0 +0.5**
baz=276
MDM Murphy Dome 62.36 28 P **P** **02 12 44.5 +0.2**
H24K Noodor Dome 62.44 27 P **P** **02 12 45.2 +0.4**
baz=275,SNR=8.3
TCOL CIGO, UAF Yank 62.52 28 P **P** **02 12 46.9 +1.7**
TCOL lAmb lAmb 02 12 49.0
comp=Z,6.9nm,0.9s
COLA College 62.53 28 P **P** **02 12 46.9 +1.6**
COLA lAmb lAmb 02 12 48.6
comp=Z,6.0nm,0.6s
COLA College 62.53 28 *i* P **P** **02 12 46.2 +0.9**
COLA pmax pmax
comp=Z,10.0nm,1.8s
SML Sawmill 62.62 32 P **P** **02 12 46.9 +0.8**
baz=276
POKR Poker Plat Res 62.68 28 P **P** **02 12 48.0 +1.6**
KIRV Kirov 62.73 324 *ce*P **P** **02 12 46.8 +0.1**
WAT6 Susitna Watana 62.81 31 P **P** **02 12 48.2 +0.8**
baz=276
DHY Denali Highway 62.92 30 P **P** **02 12 48.4 +0.2**
baz=276
ILAR Eielson Array 62.95 29 P **P** **02 12 48.4 +0.3**
comp=Z,0.6nm,0.7s,baz=277,slow=4.4,SNR=8.1
comp=Z,0.6nm,0.7s
ILAR Eielson Array 62.95 29 P **P** **02 12 47.9 -0.2**
HDA Harding Lake 62.96 29 P **P** **02 12 47.1 -1.1**
baz=276,SNR=6.5
SCM Sheep Creek Mo 63.09 32 P **P** **02 12 49.9 +0.7**
baz=277
K24K Donnelly Dome 63.54 30 P **P** **02 12 52.7 +0.6**
baz=278
BMAR Burnt Mountain 63.59 25 P **P** **02 12 54.0 +1.6**
M24K Tolsona, Glenn 63.59 31 P **P** **02 12 52.8 +0.3**
baz=278
J25K Salcha River, 63.62 29 P **P** **02 12 52.7 0.0**
baz=278
PAX Paxson 63.79 30 P **P** **02 12 54.3 +0.4**
PAX lAmb lAmb 02 12 55.4
comp=Z,12nm,1.4s
PAX Paxson 63.79 30 P **P** **02 12 54.3 +0.4**
PAX pmax pmax
comp=Z,12nm,1.4s
PAX Paxson 63.79 30 P **P** **02 12 54.5 +0.6**
baz=278
KLU Klutina 63.80 32 P **P** **02 12 54.8 +0.9**
baz=279
Q23K Middleton Isla 63.90 34 P **P** **02 12 55.2 +0.7**
baz=279
RIDG Independent Ri 63.96 30 P **P** **02 12 55.6 +0.7**
baz=278
SCRK Sand Creek 64.30 29 P **P** **02 12 57.0 -0.2**
SCRK Sand Creek 64.30 29 P **P** **02 12 56.8 -0.4**
baz=279,SNR=7.0
DOT Dot Lake 64.32 30 P **P** **02 12 57.3 0.0**
DOT lAmb lAmb 02 12 58.8
comp=Z,14nm,1.3s
J26L Joseph Creek 64.40 29 P **P** **02 12 57.4 -0.4**
J26L lAmb lAmb 02 12 58.6
comp=Z,6.6nm,0.9s
J26L Joseph Creek 64.40 29 P **P** **02 12 57.1 -0.7**
baz=279,SNR=9.3
N25K Chitina, Valde 64.41 32 P **P** **02 12 58.5 +0.6**
baz=280
BMRM Bremner River 64.51 33 P **P** **02 12 59.5 +0.9**
baz=280
L26K Log Cabin Wild 64.74 30 P **P** **02 13 01.4 +1.4**
L26K lAmb lAmb 02 13 02.6
comp=Z,9.1nm,1.2s
L26K Log Cabin Wild 64.74 30 P **P** **02 13 01.3 +1.3**
baz=280
BELG Belogornoye 64.78 318 *i* P **P** **02 12 59.4 -1.0**
BELG pmax pmax
comp=Z,2.0nm,1.0s
M26K Nabesna, AK 65.01 31 P **P** **02 13 02.5 +0.7**
M26K Nabesna, AK 65.01 31 P **P** **02 13 02.4 +0.5**
baz=281,SNR=9.0
K27K Chicken 65.12 29 P **P** **02 13 03.4 +1.0**
baz=281
L27K Beaver Creek, 65.42 30 P **P** **02 13 04.4 0.0**
baz=281,SNR=5.3
BCAR Beaver Creek A 65.43 30 P **P** **02 13 05.1 +0.6**
M27K Edge Creek, AK 65.53 31 P **P** **02 13 04.8 -0.5**
baz=282,SNR=5.4
CTG Chitna Glacier 66.07 32 P **P** **02 13 09.6 +0.8**
baz=283
DAWY Dawson 66.27 29 P **P** **02 13 10.7 +0.8**
baz=283
YUK3 Moose Creek 66.31 31 P **P** **02 13 10.9 +0.6**
baz=283
I29M Ogilvie Camp, 66.44 27 P **P** **02 13 12.0 +1.1**
baz=283
YUK8 Steele Glacier 66.75 32 P **P** **02 13 14.0 +0.7**
baz=284
PINM Pinnacle 66.80 33 P **P** **02 13 14.3 +0.9**
baz=284
EPYK Eagle Plains 66.83 26 P **P** **02 13 14.5 +1.0**
baz=284
KLMR Klimovskoe 67.22 328 *e*P **P** **02 13 15.3 -0.6**
KLMR pmax pmax
comp=Z,15nm,1.5s
KLMR Klimovskoe 67.22 328 *e*P **P** **02 13 15.3 -0.6**
KLMR AMP 02 13 17.8
comp=Z,15nm,1.5s
YUK4 Talbot Arm 67.25 32 P **P** **02 13 17.3 +0.9**
baz=285
PNL Peninsula 67.32 33 P **P** **02 13 17.4 +0.8**
baz=285
YUK6 Outpost Mounta 67.49 32 P **P** **02 13 18.7 +0.7**
baz=285
INK Inuvik 67.52 24 P **P** **02 13 17.9 +0.3**
comp=Z,2.1nm,0.8s,baz=315,slow=9.3,SNR=6.3
comp=Z,2.1nm,0.8s
INK Inuvik 67.52 24 P **P** **02 13 18.1 +0.5**
INK Inuvik 67.52 24 P **P** **02 13 18.1 +0.5**
INK pmax pmax
comp=Z,3.0nm,1.0s
INK Inuvik 67.52 24 P **P** **02 13 18.6 +0.9**
baz=286
M30M Minto, Yukon 67.78 30 P **P** **02 13 20.8 +1.2**
M30M Minto, Yukon 67.78 30 P **P** **02 13 20.7 +1.2**
baz=286
HYT Haines Junctio 67.93 32 P **P** **02 13 21.4 +0.9**
baz=286
N30M Aishikik Lake 67.95 31 P **P** **02 13 21.7 +1.1**
baz=286
N31M Braeburn, Yuko 68.54 31 P **P** **02 13 25.8 +1.5**
N31M lAmb lAmb 02 13 47.6
comp=Z,17nm,1.4s
N31M Braeburn, Yuko 68.54 31 P **P** **02 13 25.5 +1.2**
baz=287
O30N Mendenhall 68.61 32 P **P** **02 13 26.0 +1.3**
baz=287
PLBC Pleasant Camp 68.86 33 P **P** **02 13 27.0 +0.8**
baz=287
M31M Drury Creek, Y 68.96 30 P **P** **02 13 27.6 +0.8**
baz=288
SKAG Skagway 69.36 33 P **P** **02 13 31.0 +1.6**
SKAG lAmb lAmb 02 13 32.2
comp=Z,11nm,1.0s
SKAG Skagway 69.36 33 P **P** **02 13 30.7 +1.4**
baz=288
FARO Faro, Yukon 69.41 30 P **P** **02 13 31.5 +1.8**
baz=289
GOF Gofitskoye 69.61 311⇑ *e*P **P** **02 13 32.8 +1.6**
GOF pmax pmax
comp=Z,14nm,0.9s
MOS Moscow 69.62 323 *e*P **P** **02 13 34.7 +3.7**
ZEI Tsey 69.72 308 *e*P **P** **02 13 32.1 -0.1**
ZEI pmax pmax
comp=Z,11nm,1.3s
VORR Voronezh 69.99 318 *e*P **P** **02 13 34.2 +0.9**
VORR pmax pmax
comp=Z,14nm,1.2s
ARCES ARCESS Array B 70.02 339 P **P** **02 13 34.0 +0.8**
comp=Z,2.7nm,0.8s,baz=54,slow=6.2,SNR=3.9
comp=Z,2.7nm,0.8s
KBZ Khabaz 70.12 310 P **P** **02 13 35.5 +1.1**
comp=Z,11nm,1.1s,baz=44,slow=4.1,SNR=11
comp=Z,11nm,1.1s
KBZ Khabaz 70.12 310 *ce*P **P** **02 13 34.5 +0.2**
KBZ pmax pmax
comp=Z,18nm,1.1s
KIV Kislovodsk 70.20 310 P **P** **02 13 36.0 +1.0**
KIV Kislovodsk 70.20 310 *e*P **P** **02 13 35.8 +0.9**
KIV pmax pmax
comp=Z,20nm,1.1s
KIV MLR MLR
comp=Z,116nm,17.0s
MMPY Sheldon Lake, 70.20 29 P **P** **02 13 35.8 +1.3**
baz=290
SHA1 Shidzhatmaz 70.28 310 *i* P **P** **02 13 35.7 +0.1**
P33M Teslin, Yukon 70.32 32 P **P** **02 13 36.6 +1.2**
baz=290
C36M Paulatuk 70.38 21 P **P** **02 13 36.1 +0.7**
baz=294
OBN Obninsk 70.39 323 *e*P **P** **02 13 34.6 -1.1**
OBN *e* 02 16 19.3
OBN *e*S **S** **02 22 37.8 -9.0**
OBN pmax pmax
comp=Z,15μm,1.7s
OBN MLR MLR
comp=Z,217nm,21.0s
NOR Nord 70.39 355 *i* P **P** **02 13 34.8 -0.6**
NOR lAmb lAmb 02 13 38.4
comp=Z,1.7nm,0.9s
AKH Akhalkalaki 70.45 307 ⇓P **P** **02 13 39.3 +2.7**
BATM Batumi 71.66 308 ⇑P **P** **02 13 47.2 +3.5**
CRAG Craig 71.83 37 P **P** **02 13 44.6 +0.2**
baz=291
DLBC Dease Lake 72.30 33 P **P** **02 13 48.4 +1.1**
baz=293
SOC Sochi 72.35 310 *e*P **P** **02 13 46.7 -1.1**
SOC *e* 02 16 25.7
SOC *e*PPP PPP 02 18 10.0
SOC *e*S **S** **02 23 11.4 +1.5**
SOC *e* 02 23 52.5
SOC *e*SS **SS** **02 27 43.9 -3.8**
SOC *e*SSS SSS 02 31 06.1
SOC pmax pmax
comp=Z,33nm,1.0s
SOC MLR MLR
comp=Z,102nm,16.0s
GURO Guroymak-BITLI 72.47 305 P **P** **02 13 49.8 +1.0**
FINES FINESS Array B 73.14 331 P **P** **02 13 52.0 -0.2**
comp=Z,4.0nm,0.9s,baz=75,slow=3.9,SNR=9.2
comp=Z,4.0nm,0.9s
FINES FINESS Array B 73.14 331 *i* P **P** **02 13 51.2 -1.0**
FINES pmax pmax
comp=Z,7.0nm,1.0s
MARD Mardin 73.84 304 P **P** **02 13 57.9 +1.0**
MARD lAmb lAmb 02 13 58.8
comp=Z,10nm,1.0s
DAG Danmarks Havn 74.79 353 *i* P **P** **02 14 01.3 -0.3**
DAG lAmb lAmb 02 14 04.5
comp=Z,1.6nm,0.8s
RAYN Ar Rayn 75.31 289 P **P** **02 14 06.1 +0.5**
RAYN lAmb lAmb 02 14 08.1
comp=Z,17nm,1.2s
RAYN Ar Rayn 75.31 289 P **P** **02 14 06.1 +0.5**
RAYN pmax pmax
comp=Z,17nm,1.2s
NACGM Naroch 75.67 325 ⇓ *e*P **P** **02 14 08.5 +1.5**
baz=63
TOKA Tokat 75.80 308 P **P** **02 14 09.0 +0.9**
TOKA lAmb lAmb 02 14 10.1
comp=Z,14nm,1.1s
AKASG Malin Array Be 76.18 320 P **P** **02 14 10.1 +0.1**
comp=Z,0.4nm,0.3s,baz=44,slow=5.7,SNR=21
AKASG LR LR 02 50 36.1
comp=Z,361nm,18.5s,baz=65,slow=38
comp=Z,0.4nm,0.3s
AKASG Malin Array Be 76.18 320 P **P** **02 14 09.9 -0.1**
AKBB Malin Array Si 76.18 320 P **P** **02 14 09.4 -0.6**
AKBB Malin Array Si 76.18 320 *ce*P **P** **02 14 10.2 +0.2**
PABE Paberze 76.82 326 P **P** **02 14 13.9 +0.4**
BNN Bunyan 76.84 307 P **P** **02 14 14.1 -0.1**
YKA Yellowknife Ar 77.11 26 P **P** **02 14 14.7 -0.3**
comp=Z,1.2nm,0.8s,baz=311,slow=4.9,SNR=3.5
comp=Z,1.2nm,0.8s
YKA Yellowknife Ar 77.11 26 P **P** **02 14 15.6 +0.6**
YKA Yellowknife Ar 77.11 26 P **P** **02 14 15.6 +0.6**
DBG Daneborg 77.17 352 *i* P **P** **02 14 12.5 -2.7**
SORM Soroca 77.82 318 ⇑P **P** **02 14 20.0 +0.7**
SUW Suwalki 77.94 325 *e*P **P** **02 14 20.7 +0.8**
SUW Suwalki 77.94 325 P **P** **02 14 20.4 +0.5**
SUW Suwalki 77.94 325 P **P** **02 14 20.4 +0.5**
SUW pmax pmax
comp=Z,40nm,1.2s
BR131 Keskin Array S 78.04 308 P **P** **02 14 20.4 -0.5**
BR131 Keskin Array S 78.04 308 P **P** **02 14 20.4 -0.5**
BR131 pmax pmax
comp=Z,33nm,1.5s
BRTR Keskin Array B 78.04 308 P **P** **02 14 21.4 +0.5**
comp=Z,5.8nm,0.9s,baz=90,slow=3.7,SNR=14
comp=Z,5.8nm,0.9s
BRTR Keskin Array B 78.04 308 P **P** **02 14 20.7 -0.2**
BRTR Keskin Array B 78.04 308 *ce*P **P** **02 14 21.6 +0.7**
BRTR pmax pmax
comp=Z,6.0nm,0.9s
JMIC Jan Mayen 78.14 347 LR LR 02 51 34.5
comp=Z,29nm,18.4s,baz=74,slow=38
TPGR Topolog 79.26 315 ⇓P **P** **02 14 28.9 +1.5**
CFR Carcaliu 79.29 315 ⇓P **P** **02 14 28.5 +1.0**
NB2 NORSAR Subarra 79.48 334 P **P** **02 14 27.4 -0.8**
comp=Z,7.8nm,1.0s,baz=53,slow=5.9
NOA NORSAR Array B 79.48 334 P **P** **02 14 28.0 -0.2**
comp=Z,2.8nm,0.8s,baz=50,slow=5.5,SNR=7.9
comp=Z,2.8nm,0.8s
TESR Tescani 79.59 317 ⇑P **P** **02 14 29.9 +0.8**
HARR Harsova 79.65 315 ⇑P **P** **02 14 30.4 +1.0**
BIZ Bicaz 79.72 318 ⇓P **P** **02 14 31.0 +1.2**
VRI Vrincioaia 79.85 316 ⇑P **P** **02 14 32.7 +2.2**
PLOR Plostina 79.91 316 ⇑P **P** **02 14 33.1 +2.2**
BUR08 Bucovina Ar. S 79.92 318 P **P** **02 14 31.4 +0.4**
BURAR Bucovina Array 79.93 318 ⇑P **P** **02 14 32.6 +1.6**
BURAR Bucovina Array 79.93 318 P **P** **02 14 31.1 +0.1**
SUMG Summit 80.45 357 P **P** **02 14 34.1 +0.4**
SUMG lAmb lAmb 02 14 35.6
comp=Z,9.0nm,0.9s
SUMG Summit 80.45 357 P **P** **02 14 34.1 +0.4**
SUMG pmax pmax
comp=Z,9.0nm,0.9s
SUMG Summit 80.45 357 *i* P **P** **02 14 34.0 +0.3**
SUMG lAmb lAmb 02 14 35.2
comp=Z,3.7nm,0.7s
DOPR Dopca 80.62 317 ⇓P **P** **02 14 36.5 +1.8**
D03D Eldon 80.90 41 P **P** **02 14 37.5 +1.4**
baz=300
ARR Arges 81.38 317 ⇓P **P** **02 14 40.4 +1.6**
CRVS Cervenica-Dubn 81.45 321 *e*P **P** **02 14 40.5 +1.4**
CRVS pmax pmax
comp=Z,27nm,1.4s
CRVS Cervenica-Dubn 81.45 321 *e*P **P** **02 14 40.4 +1.4**
OJC Ojcow 81.68 323 *e*P **P** **02 14 41.3 +1.1**
OJC Ojcow 81.68 323 P **P** **02 14 41.0 +0.8**
OJC lAmb lAmb 02 14 45.1
comp=Z,14nm,1.1s
OJC Ojcow 81.68 323 P **P** **02 14 41.0 +0.8**
OJC pmax pmax
comp=Z,14nm,1.1s
DRGR 81.82 319 ⇑P **P** **02 14 42.8 +1.7**
NIE Niedzica 81.83 322 *e*P **P** **02 14 42.7 +1.6**
LOT Lotru 81.86 317 ⇑P **P** **02 14 43.1 +1.7**
LANS Liptovska Anna 82.44 322 *e*P **P** **02 14 46.7 +2.5**
LANS pmax pmax
comp=Z,4.0nm,1.1s
LANS Liptovska Anna 82.44 322 *e*P **P** **02 14 46.7 +2.5**
B08A Colville Reser 82.63 39 P **P** **02 14 45.3 0.0**
B08A lAmb lAmb 02 14 47.8
comp=Z,9.8nm,1.2s
HOOD Mount Hood Mea 82.88 43 P **P** **02 14 48.2 +1.4**
H04A Detroit Lake 82.89 43 P **P** **02 14 47.6 +1.0**
H04A lAmb lAmb 02 15 10.7
comp=Z,14nm,1.5s
HERR Herculane 82.98 317 ⇑P **P** **02 14 47.6 +0.5**
MORC Moravsky Berou 83.14 323 ⇓P **P** **02 14 49.5 +1.6**
MORC Moravsky Berou 83.14 323 P **P** **02 14 48.3 +0.4**
MORC lAmb lAmb 02 14 49.9
comp=Z,13nm,1.5s
MORC Moravsky Berou 83.14 323 P **P** **02 14 48.3 +0.4**
MORC pmax pmax
comp=Z,13nm,1.5s
MORC Moravsky Berou 83.14 323 *e*P **P** **02 14 48.4 +0.4**
KSP Ksiaz 83.20 324 *e*P **P** **02 14 49.5 +1.4**
I04A Tendick Farm, 83.20 44 P **P** **02 14 49.0 +0.7**
baz=301
MAUC Maruska 83.22 323 *e*P **P** **02 14 49.4 +1.1**
KRLC Kraliky 83.38 323 *e*P **P** **02 14 49.9 +0.8**
KRLC Kraliky 83.38 323 *e*P **P** **02 14 49.9 +0.8**
MDVR Moldovita 83.46 317 ⇑P **P** **02 14 50.1 +0.4**
DPC Dobruska-Polom 83.47 324 *e*P **P** **02 14 50.4 +0.8**
DPC Dobruska-Polom 83.47 324 *e*P **P** **02 14 50.4 +0.8**
BLKB Belogradchik 83.47 316 ⇓P **P** **02 14 51.1 +1.4**
C09A Chrisman Ranch 83.53 39 P **P** **02 14 51.2 +1.3**

C09A					IAmb	IAmb	02 14 52.6	
	comp=Z,13nm,1.4s							
UPC	**Upice**	**83.54**	**324**	*eP*	**P**	**P**	**02 14 51.1**	**+1.2**
UPC	**Upice**	**83.54**	**324**	*eP*	**P**	**P**	**02 14 51.1**	**+1.2**
JAVC	**Velka Javorina**	**83.58**	**322**	*eP*	**P**	**P**	**02 14 52.5**	**+2.3**
VTS	**Vitosha**	**83.63**	**315**	⇑*P*	**P**	**P**	**02 14 51.2**	**+0.5**
VTS	**Vitosha**	**83.63**	**315**	P	**P**	**P**	**02 14 50.4**	**-0.3**
VTS					IAmb	IAmb	02 14 56.5	
	comp=Z,8.8nm,1.0s							
VTS	**Vitosha**	**83.63**	**315**	P	**P**	**P**	**02 14 50.4**	**-0.3**
VTS					pmax	pmax		
	comp=Z,9.0nm,1.0s							
SMOL	**Smolenice**	**83.91**	**322**	*eP*	**P**	**P**	**02 14 53.8**	**+2.0**
SMOL					pmax	pmax		
	comp=Z,10.0nm,1.3s							
SMOL	**Smolenice**	**83.91**	**322**	*eP*	**P**	**P**	**02 14 53.8**	**+2.0**
VRAC	**Vranov**	**83.92**	**323**	⇑P	**P**	**P**	**02 14 53.4**	**+1.5**
VRAC	**Vranov**	**83.92**	**323**	*eP*	**P**	**P**	**02 14 53.2**	**+1.3**
NEW	**Newport** baz=304	**83.92**	**38**	P	**P**	**P**	**02 14 52.9**	**+1.0**
MODS	**Modra-Piesok**	**84.07**	**322**	*eP*	**P**	**P**	**02 14 54.2**	**+1.5**
MODS					pmax	pmax		
	comp=Z,52nm,1.4s							
MODS	**Modra-Piesok**	**84.07**	**322**	*eP*	**P**	**P**	**02 14 54.2**	**+1.5**
L04D	**Klamath Falls** baz=301	**84.08**	**45**	P	**P**	**P**	**02 14 51.7**	**-1.3**
PINE	**Pine Mountain**	**84.12**	**44**	P	**P**	**P**	**02 14 53.4**	**+0.2**
KRUC	**Moravsky**	**84.16**	**323**	*eP*	**P**	**P**	**02 14 54.1**	**+1.0**
J05D	**Fort Rock, OR** baz=302	**84.20**	**44**	P	**P**	**P**	**02 14 54.6**	**+1.0**
ZST	**Bratislava**	**84.27**	**322**	*eP*	**P**	**P**	**02 14 55.3**	**+1.7**
ZST	**Bratislava**	**84.27**	**322**	*eP*	**P**	**P**	**02 14 55.3**	**+1.7**
PVCC	**Panska Ves**	**84.28**	**325**	*eP*	**P**	**P**	**02 14 54.9**	**+1.3**
PVCC	**Panska Ves**	**84.28**	**325**	*eP*	**P**	**P**	**02 14 54.9**	**+1.3**
BRG	**Berggiesshubel**	**84.39**	**325**	*eP*	**P**	**P**	**02 14 55.2**	**+1.0**
BRG					Amp		02 14 56.8	
	comp=Z,5.7nm,1.1s							
BRG					Amp		02 49 11.0	
	comp=E,0.2nm,17.9s							
BRG					Amp		02 49 14.0	
	comp=N,0.3nm,13.9s							
BRG					Amp		02 49 17.0	
	comp=Z,0.4nm,21.7s							
BRG	**Berggiesshubel**	**84.39**	**325**	*eP*	**P**	**P**	**02 14 55.2**	**+1.0**
BRG					pmax	pmax		
	comp=Z,6.0nm,1.1s							
FRGS	**Fruska Gora**	**84.40**	**318**	⇓P	**P**	**P**	**02 14 55.5**	**+1.1**
MORH	**Mrgy, Hungar**	**84.51**	**320**	⇓P	**P**	**P**	**02 14 56.0**	**+1.1**
TREC	**Trest**	**84.52**	**323**	*eP*	**P**	**P**	**02 14 56.2**	**+1.3**
TREC	**Trest**	**84.52**	**323**	*eP*	**P**	**P**	**02 14 56.2**	**+1.3**
CLL	**Collm**	**84.61**	**326**	P	**P**	**P**	**02 14 54.9**	**-0.4**
CLL					IAmb	IAmb	02 14 56.8	
	comp=Z,9.7nm,1.0s							
CLL	**Collm**	**84.61**	**326**	⇑*iP*	**P**	**P**	**02 14 55.9**	**+0.6**
CLL					pmax	pmax		
	comp=Z,13nm,1.1s							
CLL	**Collm**	**84.61**	**326**	⇑*iP*	**P**	**P**	**02 14 55.9**	**+0.6**
	comp=Z,13nm,1.1s							
CLL				*e*PP	**PP**	**PP**	**02 18 06.0**	**-4.4**
CLL				*e*S	**S**	**S**	**02 25 24.0**	**+3.0**
CLL				*e*SS	**SS**	**SS**	**02 30 54.0**	**+2.8**
PRU	**Pruhonice**	**84.61**	**324**	*eP*	**P**	**P**	**02 14 56.8**	**+1.5**
PRU	**Pruhonice**	**84.61**	**324**	*eP*	**P**	**P**	**02 14 56.8**	**+1.5**
RONA	**Rosalia, Austr** comp=Z,7.3nm,1.4s	**85.00**	**322**	*eP*	**P**	**P**	**02 14 58.0**	**+0.6**
CONA	**Conrad Observa** comp=Z,15nm,1.2s	**85.11**	**322**	*eP*	**P**	**P**	**02 14 59.9**	**+1.9**
CKRC	**Cesky Krumlov**	**85.42**	**323**	*eP*	**P**	**P**	**02 14 59.9**	**+0.4**
KHC	**Kasperske Hory**	**85.62**	**324**	*eP*	**P**	**P**	**02 14 57.3**	**-3.2**
KHC				*e*			02 15 00.3	
KHC	**Kasperske Hory**	**85.62**	**324**	*eP*	**P**	**P**	**02 14 57.3**	**-3.2**
KHC				*ex*			02 15 00.3	
GERES	**GERESS Array B** comp=Z,1.8nm,0.9s,baz=48,slow=2.0,SNR=10	**85.73**	**324**	P	**P**	**P**	**02 15 01.0**	**-0.1**
	comp=Z,1.8nm,0.9s							
GERES	**GERESS Array B**	**85.73**	**324**	P	**P**	**P**	**02 15 00.7**	**-0.5**
MOA	**Molln** comp=Z,3.4nm,1.0s	**86.02**	**323**	*eP*	**P**	**P**	**02 15 04.1**	**+1.6**
SOKA	**Soboth** comp=Z,10nm,1.6s	**86.29**	**321**	*eP*	**P**	**P**	**02 15 05.1**	**+1.2**
MSO	**Missoula** baz=306	**86.51**	**38**	P	**P**	**P**	**02 15 05.5**	**+0.5**
ABTA	**Abfaltersbach** comp=Z,4.9nm,1.2s	**87.64**	**322**	*eP*	**P**	**P**	**02 15 10.4**	**-0.1**
HRY	**Holter Researc**	**87.73**	**37**	P	**P**	**P**	**02 15 11.1**	**+0.1**
WATA	**Walderalm** comp=Z,3.2nm,1.0s	**87.78**	**323**	*eP*	**P**	**P**	**02 15 11.6**	**+0.4**
WTTA	**Wattenberg** comp=Z,4.0nm,1.0s	**87.79**	**323**	*eP*	**P**	**P**	**02 15 11.9**	**+0.6**
EGMT	**Eagleton**	**88.02**	**36**	P	**P**	**P**	**02 15 13.1**	**+0.9**
EGMT	**Eagleton** baz=310	**88.02**	**36**	P	**P**	**P**	**02 15 13.0**	**+0.8**
HLID	**Hailey** baz=306	**88.17**	**41**	P	**P**	**P**	**02 15 14.0**	**+0.8**
FETA	**Feichten** comp=Z,5.0nm,1.5s	**88.43**	**323**	*eP*	**P**	**P**	**02 15 15.1**	**+0.8**
BOZ	**Bozeman (W)** baz=308	**88.53**	**38**	P	**P**	**P**	**02 15 15.5**	**+0.7**
NVAR	**Mina Array Bea** comp=Z,1.3nm,0.8s,baz=282,slow=7.1,SNR=8.4	**88.69**	**47**	P	**P**	**P**	**02 15 17.8**	**+1.9**
	comp=Z,1.3nm,0.8s							
ELK	**Elko**	**89.32**	**44**	LR	LR	LR	02 55 58.6	
	comp=Z,32nm,18.2s,baz=268,slow=36							
ELK	**Elko**	**89.32**	**44**	P	**P**	**P**	**02 15 19.5**	**+0.7**
ELK					IAmb	IAmb	02 15 21.5	
	comp=Z,8.8nm,1.5s							
ELK	**Elko**	**89.32**	**44**	P	**P**	**P**	**02 15 19.5**	**+0.7**
ELK					pmax	pmax		
	comp=Z,9.0nm,1.5s							
CWC	**Cottonwood Cre** baz=304	**89.95**	**49**	P	**P**	**P**	**02 15 23.0**	**+1.3**
RLMT	**Red Lodge** baz=310	**90.13**	**38**	P	**P**	**P**	**02 15 23.6**	**+1.2**
R11A	**Troy Canyon, C** baz=306	**90.50**	**46**	P	**P**	**P**	**02 15 25.5**	**+1.3**
LAO	**LASA Array** baz=312	**90.71**	**35**	P	**P**	**P**	**02 15 25.9**	**+1.0**
DUG	**Dugway, Tooele**	**91.14**	**43**	P	**P**	**P**	**02 15 28.5**	**+1.4**
DUG					IAmb	IAmb	02 15 29.9	
	comp=Z,8.5nm,1.1s							
DUG	**Dugway, Tooele**	**91.14**	**43**	P	**P**	**P**	**02 15 28.5**	**+1.4**
DUG					pmax	pmax		
	comp=Z,8.0nm,1.2s							
DUG	**Dugway, Tooele** baz=307	**91.14**	**43**	P	**P**	**P**	**02 15 28.8**	**+1.7**
GSC	**Goldstone, Bar** baz=305	**91.44**	**49**	P	**P**	**P**	**02 15 29.7**	**+1.2**
BW06	**Boulder Array** baz=310	**91.46**	**40**	P	**P**	**P**	**02 15 29.8**	**+1.1**
PDAR	**Pinedale Array** comp=Z,1.1nm,0.7s,baz=318,slow=2.0,SNR=9.8	**91.46**	**40**	P	**P**	**P**	**02 15 29.4**	**+0.7**
	comp=Z,1.1nm,0.7s							
PDAR	**Pinedale Array**	**91.46**	**40**	P	**P**	**P**	**02 15 29.5**	**+0.8**
TUQ	**Turquoise Moun** baz=305	**91.96**	**48**	P	**P**	**P**	**02 15 31.9**	**+0.9**
PFO	**Pinyon Flats O**	**92.64**	**50**	P	**P**	**P**	**02 15 35.0**	**+0.9**
PFO	**Pinyon Flats O**	**92.64**	**50**	P	**P**	**P**	**02 15 35.0**	**+0.9**
PFO					pmax	pmax		
	comp=Z,15nm,1.5s							
PFO	**Pinyon Flats O** baz=305	**92.64**	**50**	P	**P**	**P**	**02 15 35.4**	**+1.2**
TPFO	**Pinon Flats** baz=305	**92.65**	**50**	P	**P**	**P**	**02 15 36.0**	**+1.8**
BELC	**Belle Mtn. Jos** baz=305	**92.73**	**50**	P	**P**	**P**	**02 15 36.0**	**+1.4**
MONP2	**Monument Peak** baz=305	**93.07**	**51**	P	**P**	**P**	**02 15 37.7**	**+1.5**
KMBO	**Kilima Mbogo** comp=Z,35nm,18.6s,baz=64,slow=38	**93.20**	**270**	LR	LR		03 00 39.0	
IRM	**Iron Mountain** baz=306	**93.22**	**49**	P	**P**	**P**	**02 15 38.4**	**+1.7**
BC3	**Big Chuckawall** baz=306	**93.30**	**50**	P	**P**	**P**	**02 15 38.6**	**+1.5**
IKP	**In-Ko-Pah, Jac** baz=305	**93.43**	**51**	P	**P**	**P**	**02 15 39.4**	**+1.6**
RSSD	**Black Hills** baz=314	**93.58**	**36**	P	**P**	**P**	**02 15 39.7**	**+1.2**
PDMCI	**Parker Dam,Lak** baz=306	**93.81**	**48**	P	**P**	**P**	**02 15 40.9**	**+1.6**
O20A	**White River Ci** baz=310	**93.91**	**41**	P	**P**	**P**	**02 15 41.4**	**+1.4**
GLA	**Glamis** baz=306	**94.08**	**50**	P	**P**	**P**	**02 15 42.7**	**+2.0**
N23A	**Red Feather La** baz=312	**94.73**	**39**	P	**P**	**P**	**02 15 45.7**	**+1.8**
WUAZ	**Wupatki**	**94.89**	**46**	P	**P**	**P**	**02 15 46.2**	**+1.6**
WUAZ	**Wupatki** baz=308	**94.89**	**46**	P	**P**	**P**	**02 15 46.4**	**+1.9**
MVCO	**Mesa Verde** baz=310	**95.64**	**43**	P	**P**	**P**	**02 15 49.4**	**+1.5**
214A	**Organ Pipe Nat** baz=307	**96.10**	**50**	P	**P**	**P**	**02 15 51.2**	**+1.2**
ANMO	**Albuquerque** comp=Z,22nm,19.6s,baz=307,slow=33	**98.36**	**44**	LR	LR		02 55 53.3	
SNAA	**Sanae**	**128.35**	**197**	*c*	PKIKP	**PKiKP**	**02 21 28.9**	**+0.6**
SNAA					pmax	pmax		
	comp=Z,5.0nm,1.3s							

*JMA **08** 02:12:51.5±0.7,44°N±3°×15°0E±°,h30km,MV3.9/10,FAR SE OFF KURILE ISL*

*SKHL **08** 02:12:51.8±0.2,43°.30N×149°.80E,h42km±3km,mb3.9/2*

ISC 08 02:12:53.9±4.2, 43°.4N±0°.1×149°.6E±0°.2, h50km, n12, σ0.59/20, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SHO	**Shikotan**	**2.06**	**284**	*eP*		**Pn**	**02 13 25.4**	**-0.7**
SHO					AMB	AMB	02 13 26.1	
	30nm,0.4s							
SHO					*e*S	**Sn**	**02 13 50.5**	**-0.1**
SHO					A	A	02 13 52.6	
	60nm,0.3s							
SHO					A	A	02 13 52.6	
	70nm,0.3s							
KUR	**Kuril'sk**	**2.22**	**327**	*i*	S	**Sn**	**02 13 54.2**	**-0.3**
KUR					A	A	02 13 56.0	
	70nm,0.5s							
KUR					A	A	02 13 56.0	
	80nm,0.5s							
YUK	**Yuzh-Kuril'sk**	**2.78**	**285**	*e*S		**Sn**	**02 14 07.7**	**-0.5**
YUK					A	A	02 14 09.2	
	40nm,0.3s							
YUK					A	A	02 14 09.2	
	10.0nm,0.3s							
NEM2	**Nemuro 2**	**2.81**	**271**	*eP*		**Pn**	**02 13 36.0**	**-0.2**
NEM2				*e*S		**Sn**	**02 14 08.5**	**-0.3**
NMR	**Nemuro--Hokkai**	**2.82**	**271**	*eP*		**Pn**	**02 13 36.0**	**-0.4**
NMR					AMB	AMB	02 13 38.9	
	10.0nm,0.3s							
NMR				*e*S		**Sn**	**02 14 09.2**	**+0.1**
NMR					A	A	02 14 13.7	
	20nm,0.2s							
NMR					A	A	02 14 13.7	
	10.0nm,0.2s							
JRA	**Rausu**	**3.29**	**281**	*eP*		**Pn**	**02 13 44.4**	**+1.5**
AKK	**Akkeshi**	**3.49**	**266**	*eP*		**Pn**	**02 13 45.5**	**-0.1**
AKK				*e*S		**Sn**	**02 14 25.7**	**0.0**
JNK	**Nakash**	**3.55**	**275**	*eP*		**Pn**	**02 13 46.1**	**-0.3**
JNK				*e*S		**Sn**	**02 14 28.3**	**+1.1**
JAK	**Akkeshi**	**3.60**	**265**	*eP*		**Pn**	**02 13 47.3**	**+0.2**
JAK				*e*S		**Sn**	**02 14 28.4**	**0.0**
JOB	**Onbets**	**4.24**	**265**	*eP*		**Pn**	**02 13 56.2**	**+0.3**
JOB				*e*S		**Sn**	**02 14 43.6**	**-0.5**
JAR	**Ashorobuto**	**4.25**	**271**	*eP*		**Pn**	**02 13 56.6**	**+0.6**
JCH	**Churui**	**4.63**	**263**	*eP*		**Pn**	**02 14 01.5**	**+0.2**
JCH				*e*S		**Sn**	**02 14 53.3**	**-0.5**

RSNC 08 02:20:01.2±1.2, 6°.85N×73°.11W, h158km±5km, ML3.3, Mw3.6,5C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.26**	**196**	⇑*iP*		Pn	02 20 22.4	-0.6
BARC				*i*			02 20 40.9	
	comp=Z,385nm,0.3s							
PAMC	**Pamplona, Colo**	**0.64**	**40**	⇑*iP*		Pn	02 20 25.1	+0.3
PAMC				*e*S		Sn	02 20 42.6	-0.3
PAMC				*i*			02 20 44.8	
	comp=Z,280nm,0.6s							
BRRC	**Barranca, Sant**	**0.65**	**294**	⇑*iP*		Pn	02 20 24.3	0.0
BRRC				*e*S		Sn	02 20 41.7	-0.2
BRRC				*i*			02 20 46.1	
	comp=Z,189nm,0.3s							
RUSC	**La Rusia**	**0.95**	**178**	*eP*		Pn	02 20 26.3	-0.6
RUSC				*e*S		Sn	02 20 45.4	-1.3
RUSC				*i*			02 20 47.9	
	comp=Z,228nm,0.4s							
PTBC	**PUERTO BERRIO,**	**1.37**	**257**	*eP*		Pn	02 20 28.9	-1.2
PTBC				*e*S		Sn	02 20 50.6	-1.7
PTBC				*i*			02 20 52.5	
	comp=Z,280nm,0.4s							
TAMC	**Tame, Arauca**	**1.37**	**107**	⇑*iP*		Pn	02 20 30.6	+0.4
TAMC				*e*S		Sn	02 20 52.3	-0.1
OCAC	**Ocana**	**1.40**	**352**	*eP*		Pn	02 20 30.6	0.0
OCAC				*e*S		Sn	02 20 52.8	-0.4
OCAC				*i*			02 20 58.1	
	comp=Z,438nm,0.3s							
SPBC	**San Pablo de B**	**1.52**	**219**	*eP*		Pn	02 20 31.2	-0.5
SPBC				*e*S		Sn	02 20 53.8	-1.5
SPBC				*i*			02 20 59.3	
	comp=Z,301nm,0.4s							
NORC	**Norcasia**	**2.16**	**234**	*eP*		Pn	02 20 38.0	-0.7
NORC				*e*S		Sn	02 21 07.5	-0.3
NORC				*i*			02 21 10.2	
	comp=Z,172nm,0.2s							
CHIC	**Chingaza**	**2.29**	**196**	*eP*		Pn	02 20 40.7	0.0
CHIC				*e*S		Sn	02 21 09.9	-1.1
CHIC				*i*			02 21 19.5	
	comp=Z,69nm,0.3s							
ROSC	**El Rosal**	**2.33**	**211**	*eP*		Pn	02 20 42.0	+0.9
ROSC				*e*S		Sn	02 21 13.5	+1.7
ROSC				*i*			02 21 18.3	
	comp=Z,161nm,0.4s							
HELC	**Santa Helena**	**2.49**	**255**	*eP*		Pn	02 20 44.3	+1.4
HELC				*e*S		Sn	02 21 15.4	+0.3
HELC				*i*			02 21 20.9	
	comp=Z,94nm,0.3s							
UREC	**San Jos de Ur**	**2.56**	**291**	*eP*		Pn	02 20 42.9	-0.6
UREC				*e*S		Sn	02 21 14.2	-2.1
UREC				*i*			02 21 17.4	
	comp=Z,95nm,0.1s							
LL1C	**La Loma 1 Cana**	**2.71**	**351**	*eP*		Pn	02 20 47.9	+2.5
LL1C				*e*S		Sn	02 21 21.6	+1.9
LL1C				*i*			02 21 27.4	
	comp=Z,294nm,0.4s							
VILC	**Villavicencio,**	**2.78**	**192**	*eP*		Pn	02 20 46.0	-0.3
VILC				*e*S		Sn	02 21 20.6	-0.7
PTGC	**Puerto Gaitan,**	**2.80**	**160**	*eP*		Pn	02 20 45.3	-1.2
PTGC				*e*S		Sn	02 21 18.8	-2.8
PTGC				*i*			02 21 21.1	
	comp=Z,68nm,0.2s							
CBOC	**Ciudad Bolivar**	**3.04**	**251**	*eP*		Pn	02 20 50.3	+0.7
CBOC				*e*S		Sn	02 21 27.4	+0.3
CBOC				*i*			02 21 33.6	
	comp=Z,31nm,0.7s							
DBBC	**Dabeiba**	**3.08**	**273**	*eP*		Pn	02 20 50.0	0.0
DBBC				*e*S		Sn	02 21 27.1	-0.7
DBBC				*i*			02 21 30.5	
	comp=Z,241nm,0.6s							
SDV	**Santo Domingo**	**3.19**	**50**	*eP*		Pn	02 20 51.8	+0.3
SDV				*e*S		Sn	02 21 29.3	-1.1
SDV				*i*			02 21 31.0	
	comp=Z,42nm,0.4s							
ANIL	**Santa Ana**	**3.27**	**224**	*eP*		Pn	02 20 53.7	+1.1
ANIL				*e*S		Sn	02 21 33.8	+1.4
ANIL				*i*			02 21 38.6	
	comp=Z,189nm,0.3s							
PRAC	**Prado**	**3.58**	**210**	*eP*		Pn	02 20 56.0	-0.3
PRAC				*e*S		Sn	02 21 40.3	+1.1
PRAC				*i*			02 21 46.7	
	comp=Z,62nm,0.3s							
ORTC	**Ortega, Tolima**	**3.61**	**216**	*eP*		Pn	02 20 56.8	+0.1
ORTC				*e*S		Sn	02 21 40.5	+0.7
ORTC				*i*			02 21 46.1	
	comp=Z,53nm,0.5s							
SJCC	**San Jacinto, C**	**3.66**	**326**	*eP*		Pn	02 20 56.1	-1.2
SJCC				*e*S		Sn	02 21 37.8	-3.2
SJCC				*i*			02 21 41.4	
	comp=Z,31nm,0.3s							
PLMC	**San Jos del P**	**3.70**	**239**	*eP*		Pn	02 20 58.2	+0.3
PLMC				*e*S		Sn	02 21 42.2	+0.3
PLMC				*i*			02 21 45.3	
	comp=Z,39nm,0.2s							
LCBC	**Los crdobas,**	**3.79**	**302**	*eP*		Pn	02 20 59.2	+0.1
LCBC				*e*S		Sn	02 21 45.5	+1.5
LCBC				*i*			02 21 47.5	
	comp=Z,32nm,0.2s							
CRJC	**Cerrejon, Guaj**	**4.16**	**3**	*eP*		Pn	02 21 02.5	-1.3
CRJC				*e*S		Sn	02 21 49.8	-2.8
CRJC				*i*			02 21 56.7	
	comp=Z,30nm,0.3s							
YOTC	**Yotoco, Valle**	**4.29**	**229**	*eP*		Pn	02 21 05.0	-0.6
YOTC				*e*S		Sn	02 22 01.6	+5.7
GUVC	**San Jose del G**	**4.30**	**174**	*eP*		Pn	02 21 04.6	-1.0
GUVC				*e*S		Sn	02 21 55.1	-0.8
GUVC				*i*			02 21 58.0	
	comp=Z,51nm,0.8s							
SMRC	**Santa Marta, M**	**4.43**	**346**	*eP*		Pn	02 21 07.3	0.0
SMRC				*e*S		Sn	02 21 56.3	-2.6
SMRC				*i*			02 22 03.2	
	comp=Z,19nm,0.3s							
CAPC	**Capurgana**	**4.56**	**293**	*eP*		Pn	02 21 08.3	-0.7
CAPC				*e*S		Sn	02 21 59.3	-2.6
CAPC				*i*			02 22 00.8	
	comp=Z,15nm,0.2s							
PTAC	**Punta Ardita,**	**4.67**	**274**	*eP*		Pn	02 21 10.1	-0.4
PTAC				*e*S		Sn	02 22 02.8	-1.7
PTAC				*i*			02 22 10.7	
	comp=Z,9.1nm,0.4s							
MACC	**Macarena, Meta**	**4.73**	**189**	*eP*		Pn	02 21 09.2	-2.1
MACC				*e*S		Sn	02 22 01.4	-4.5
MACC				⇑*e*P		Pn	02 22 09.4	+58
MACC				*i*			02 22 09.8	
	comp=Z,24nm,0.9s							
GARC	**Garzon, Huila**	**5.20**	**207**	*eP*		Pn	02 21 16.5	-1.2
GARC				*e*S		Sn	02 22 14.7	-2.8
GARC				*i*			02 22 19.1	
	comp=Z,18nm,0.2s							
PCON	**Cinco Dias**	**5.55**	**216**	*eP*		Pn	02 21 22.9	+0.3

IDC 08 02:31:44.1±1.9, 4°.67S×133°.72E, h0km, mb3.7/1, mbtmp3.8/4, ML3.6/3, MS2.9/2, Error ellipse: s-maj=95.0km s-min=27.3km az=68.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**14.14**	**110**	LR		LR	02 40 15.8	
	comp=Z,80nm,21.7s,baz=78,slow=36							
WRA	**Warramunga Arr**	**15.19**	**178**	Pn		Pn	02 35 18.6	-1.5
	0.2nm,0.3s,baz=357,slow=13,SNR=9.1							
WRA					Sn	Sn	02 37 56.0	-13
	0.1nm,0.3s,baz=356,slow=23,SNR=1.8							
	0.6nm,0.4s							
ASAR	**Alice Springs**	**18.88**	**179**	P		Pn	02 36 06.8	0.0
	0.3nm,0.3s,baz=3.7,slow=10,SNR=34							
	4.0nm,0.7s							
CTA	**Charters Tower**	**19.59**	**143**	P		P	02 36 14.1	+0.1
	0.1nm,0.3s,baz=302,slow=10,SNR=2.1							
	1.2nm,0.5s							
GUMO	**Guam**	**21.25**	**31**	LR		LR	02 43 18.8	
	comp=Z,25nm,20.6s,baz=122,slow=33							
MKAR	**Makanchi Array**	**68.40**	**325**	P		P	02 42 47.8	0.0
	0.4nm,0.5s,baz=121,slow=7.1,SNR=5.9							
	0.4nm,0.5s							

MAN 08 02:32:11.8, 13°.78N×120°.85E, h18km, mb3.9, ML2.6, MS2.2, 5C-2D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.30**	**161**	⇓*eP*		Pb	02 32 16.4	+4.2
PGP				*i*	S		02 32 20.3	
TGY	**Tagaytay City**	**0.33**	**14**	⇑*eP*		Pn	02 32 19.9	+0.1
TGY				*i*	S		02 32 26.4	
MACP	**Maragondon, Ca**	**0.49**	**345**	⇑*eP*		Pn	02 32 22.8	+0.7
MACP				*e*S			02 32 56.0	
LUBP	**Lubang**	**0.59**	**265**	⇑*eP*		Pb	02 32 23.6	+0.1
LUBP				*e*S			02 32 34.9	
BOAC	**Boac**	**1.02**	**108**	⇑*eP*		Pn	02 32 29.7	+1.6
SJMP	**San Jose**	**1.34**	**169**	⇓*eP*		Pn	02 32 35.7	+0.7
JCNP	**Jose Panganiba**	**1.86**	**74**	⇑*eP*		Pn	02 32 43.1	+1.0
JCNP				*e*S			02 33 07.6	

MAN 08 02:46:03.3, 13°.60N×121°.09E, h1km, mb4.5, ML3.3, MS3.1, 3C, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.17**	**234**	⇑*eP*		Pg	02 46 06.5	+0.2
PGP				*i*	S		02 46 08.7	
TGY	**Tagaytay City**	**0.52**	**343**	⇑*eP*		Pb	02 46 15.7	+0.7
LUBP	**Lubang**	**0.83**	**279**	⇑*eP*		Pg	02 46 17.5	+2.0
LUBP				*e*S			02 46 29.9	

IDC 08 02:57:12.6±4.4, 1°.99S×139°.41E, h0km, mb3.5/2, mbtmp3.6/3, ML4.0/1, MS3.5/4, Error ellipse: s-maj=172.8km s-min=29.0km az=87.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**10.66**	**134**	LR		LR	03 05 11.4	
	comp=Z,165nm,18.7s,baz=178,slow=45							
WRA	**Warramunga Arr**	**18.52**	**195**	P		Pn	03 01 31.0	+0.2
	0.5nm,0.3s,baz=16,slow=13,SNR=23							
	0.5nm,0.3s							
ASAR	**Alice Springs**	**22.20**	**193**	P		P	03 02 11.1	+0.4
	1.5nm,0.8s,baz=27,slow=10,SNR=17							
ASAR					LR	LR	03 11 46.5	
	comp=Z,172nm,20.6s,baz=343,slow=39							
	1.5nm,0.8s							
H11S3	**WAKE ISLAND Hy**	**33.69**	**52**	T		T	03 39 29.4	
	baz=236,slow=75,SNR=15							
H11S2	**WAKE ISLAND Hy**	**33.70**	**52**	T		T	03 39 29.7	
	baz=236,slow=75,SNR=17							
H11S1	**WAKE ISLAND Hy**	**33.70**	**52**	T		T	03 39 31.6	
	baz=236,slow=75,SNR=13							
ASAJ	**Asahikawa**	**45.99**	**3**	LR		LR	03 24 35.7	
	comp=Z,42nm,20.2s,baz=202,slow=36							
MA2	**Magadan**	**62.03**	**7**	LR		LR	03 31 52.7	
	comp=Z,38nm,21.4s,baz=200,slow=34							
MKAR	**Makanchi Array**	**69.66**	**322**	P		P	03 08 23.8	-0.4
	0.5nm,0.

MESJ					A	A	02 58 55.8		
	comp=N,6.5nm,0.7s								
EMIN	**Mina Concepcio**	**1.50**	**30**		Pn	**Pb**	**02 58 26.0**	**-1.4**	
EMIN					Sn	**Sn**	**02 58 43.3**	**0.0**	
EMIN					*i* Vmb_Lg		02 58 46.7		
PBEJ	**Beja**	**1.56**	**353**		*e*P	**Pb**	**02 58 28.2**	**-0.3**	
EJIF	**Jimena Fronter**	**1.74**	**90**		Pn	**Pb**	**02 58 30.5**	**-0.9**	
EJIF					Sn	**Sn**	**02 58 49.9**	**+0.7**	
PNCL	**Nicolau / Gran**	**1.79**	**337**		*e*Pn	**Pn**	**02 58 29.6**	**+0.9**	
PNCL					*e*Sn	**Sn**	**02 58 51.3**	**+1.0**	
PNCL					A	A	02 59 01.8		
	comp=N,3.9nm,0.3s								
SMIR	**Smir Dam**	**1.98**	**113**		P	**Pb**	**02 58 34.0**	**-1.5**	
EVO	**Evora**	**2.08**	**352**		P	**Pn**	**02 58 33.7**	**+1.0**	
EVO					S	**Sn**	**02 58 56.7**	**-0.9**	
EVO	**Evora**	**2.08**	**352**		*e*Sn	**Sn**	**02 58 57.6**	**+0.1**	
EMIJ	**Mijas**	**2.30**	**87**		Pn	**Sn**	**02 58 38.0**	**+2.2**	
EMIJ					Sn	**Sn**	**02 59 04.4**	**+1.4**	
EMIJ					*i* Vmb_Lg		02 59 41.8		
EBAD	**Badajoz**	**2.33**	**12**		Pn	**Pn**	**02 58 37.3**	**+1.1**	
EBAD					Sn	**Sn**	**02 59 04.0**	**+0.3**	
EBAD					*i* Vmb_Lg		02 59 06.0		
ECAB	**El Cabril**	**2.38**	**47**		Pn	**Pn**	**02 58 38.4**	**+1.5**	
ECAB					Sn	**Sn**	**02 59 04.1**	**-0.9**	
ECAB					*i* Vmb_Lg		02 59 16.7		
PESTR	**Estremoz**	**2.39**	**1**		*e*Sn	**Sn**	**02 59 05.5**	**+0.3**	
PACT	**Alcochete**	**2.48**	**338**		*e*Sn	**Sn**	**02 59 08.5**	**+1.0**	
PMTG	**Montargil**	**2.64**	**350**		*e*Pn	**Pn**	**02 58 42.0**	**+1.6**	
PMTG					*e*Sn	**Sn**	**02 59 11.1**	**-0.1**	
PMTG					A	A	02 59 11.8		
	comp=N,3.0nm,0.2s								
PMAFR	**Mafra**	**2.81**	**333**		*e*Pn	**Pn**	**02 58 43.9**	**+1.1**	
PMAFR					*e*Sn	**Sn**	**02 59 15.2**	**-0.3**	
PMAFR					A	A	02 59 16.0		
	comp=N,14nm,0.2s								
EGOR	**Sierra Gorda,**	**2.89**	**76**		Pn	**Pn**	**02 58 45.3**	**+1.2**	
EGOR					Sn	**Sn**	**02 59 18.3**	**+0.5**	
EGOR					*i* Vmb_Lg		02 59 22.3		
PMRV	**Marv??o**	**2.96**	**4**		*e*Pn	**Pn**	**02 58 45.9**	**+1.1**	
PMRV					*e*Sn	**Sn**	**02 59 18.6**	**-0.6**	
EADA	**Adamuz**	**2.96**	**54**		Pn	**Pn**	**02 58 46.5**	**+1.6**	
EADA					Sn	**Sn**	**02 59 18.3**	**-1.1**	
EADA					*i* Vmb_Lg		02 59 21.1		
ZHG	**ZHG**	**3.12**	**165**		P	**Pn**	**02 58 48.0**	**+0.8**	
ZHG					S	**Sn**	**02 59 23.0**	**-0.5**	
PSBE	**So Bento**	**3.17**	**343**		*e*Pn	**Pn**	**02 58 49.3**	**+1.5**	
PSBE					*e*Sn	**Sn**	**02 59 24.4**	**-0.2**	
ELGU	**Los Guajares,**	**3.24**	**82**		Pn	**Pn**	**02 58 50.7**	**+1.9**	
ELGU					Sn	**Sn**	**02 59 26.8**	**+0.5**	
ELGU					*i* Vmb_Lg		02 59 30.6		
PALE	**Palemas**	**3.25**	**112**		P	**Pn**	**02 58 50.5**	**+1.6**	
LCRM	**LCR**	**3.59**	**140**		P	**Pn**	**02 58 53.3**	**-0.4**	
LCRM					S	**Sn**	**02 59 34.6**	**-0.4**	
AKLM	**AKL**	**3.64**	**121**		P	**Pn**	**02 58 56.5**	**+2.1**	
AKLM					S	**Sn**	**02 59 35.7**	**-0.5**	
EPLA	**Plasencia**	**3.79**	**18**		Pn	**Pn**	**02 58 57.7**	**+1.4**	
EPLA					Sn	**Sn**	**02 59 38.0**	**-1.7**	
EPLA					*i* Vmb_Lg		02 59 42.4		
MTE	**Manteigas**	**3.92**	**1**		*e*Sn	**Sn**	**02 59 41.7**	**-1.4**	
PAB	**San Pablo**	**4.01**	**39**		Pn	**Pn**	**02 59 00.2**	**+1.1**	
PAB					Sn	**Sn**	**02 59 42.3**	**-3.0**	
PAB					*i* Vmb_Lg		02 59 42.6		
MD31	**MD31**	**4.30**	**146**		P	**Pn**	**02 59 05.1**	**+1.7**	
MD31					S	**Sn**	**02 59 51.6**	**-0.9**	
ESDC	**Sonseca Array**	**4.31**	**41**		Pn	**Pn**	**02 59 04.8**	**+1.4**	
ESDC					*i* Vmb_Lg		02 59 50.8		
ESDC					Sn	**Sn**	**02 59 51.4**	**-1.2**	
MDT	**Midelt**	**4.42**	**145**		P	**Pn**	**02 59 06.6**	**+1.7**	
MVO	**Moncorvo**	**4.71**	**5**		*e*Sn	**Sn**	**03 00 00.0**	**-2.5**	
MVO					A	A	03 00 05.0		
	comp=N,1.6nm,0.8s								
PVRL	**Vila Real**	**4.80**	**359**		*e*Sn	**Sn**	**03 00 03.1**	**-1.5**	
PVRL					A	A	03 00 04.3		
	comp=N,1.9nm,0.2s								
POLO	**Lamas de Olo**	**4.90**	**359**		*e*Sn	**Sn**	**03 00 05.8**	**-1.3**	
POLO					A	A	03 00 06.6		
	comp=N,1.3nm,0.3s								
EZAR	**Zarzadilla de**	**4.94**	**72**		Pn	**Pn**	**02 59 13.6**	**+1.5**	
EZAR					Sn	**Sn**	**03 00 07.9**	**-0.3**	
OUK	**Oukaimeden**	**5.26**	**182**		P	**Pn**	**02 59 17.7**	**+1.0**	
OUK					S	**Sn**	**03 00 12.5**	**-3.9**	
ETOB	**Tobarra**	**5.29**	**64**		Pn	**Pn**	**02 59 18.3**	**+1.3**	
ETOB					Sn	**Sn**	**03 00 15.5**	**-1.3**	
PBRG	**Braganca**	**5.37**	**7**		*e*Sn	**Sn**	**03 00 16.3**	**-2.4**	
ELOB	**Lobios**	**5.40**	**357**		Pn	**Pn**	**02 59 19.6**	**+1.1**	
ELOB					Sn	**Sn**	**03 00 16.3**	**-3.2**	
OUZM	**OUZ**	**5.59**	**172**		P	**Pn**	**02 59 22.1**	**+0.9**	
TTIG	**Tnine Tigouga,**	**5.95**	**187**		P	**Pn**	**02 59 24.6**	**-1.5**	

*IDC **08** 03:02:00.3±1.0,0.″16S×126.″05E, h0km, mb4.0/5, mbtmp4.0/6, ML3.6/1, MS3.1/2, Error ellipse: s-maj=45.8km s-min=19.2km az=76.0*
*DJA **08** 03:02:04.7±0.4,0.″5S±4.″×12.″6E±.″, h10km, M3.9/7, mb4.3/3, MLv3.7/7*
*NEIC **08** 03:02:06.4±1.3,0.″3S±0.″1×125.″88E±0.″03, h48km±12km, mb4.3/11, Error ellipse: s-maj=15.2km s-min=2.3km az=166.0*
ISC 08 03:02:06.0±0.7,**0.″21S**±0.″07×**125.″91E**±0.″06,**h50**km,**n32,**
σ1§**37**/32,**mb4.3**/11,**Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
LBMI	**Labuha**	**1.65**	**105**	P		**Pn**	**03 02 32.6**	**+0.1**
TNTI	**Ternate**	**1.75**	**56**			**Pn**	**03 02 34.3**	**+0.3**
TNTI	**Ternate**	**1.75**	**56**	P		**Pn**	**03 02 33.5**	**-0.5**
SANI	**Sanana**	**1.83**	**178**	P		**Pn**	**03 02 33.5**	**-1.5**
NLAI	**Namlea**	**3.23**	**158**	P		**Pn**	**03 02 53.4**	**-0.9**
LUWI	**Luwuk**	**3.25**	**255**	Pn		**Pn**	**03 02 52.9**	**-1.6**
LUWI				Sn		**Sn**	**03 03 30.8**	**-1.1**
MSAI	**Masohi**	**4.33**	**136**	P		**Pn**	**03 03 11.3**	**+1.9**
TOLI2	**Tolitoli**	**5.29**	**284**	Pn		**Pn**	**03 03 23.0**	**+0.4**
MPSI	**Mapaga**	**6.04**	**275**	P		**Pn**	**03 03 36.7**	**+3.9**
	0.1nm17nm,0.8s							
BKSI	**Bulukumba**	**7.69**	**229**	P		**Pn**	**03 03 57.9**	**+2.4**
	16nm,0.9s							
KAPI	**Kappang**	**7.78**	**232**	Pn		**Pn**	**03 03 59.0**	**+2.3**
	0.8nm,0.3s,baz=18,slow=4.6,SNR=4.2							
	4.4nm,0.3s							
KAPI	**Kappang**	**7.78**	**232**			**Pn**	**03 03 56.7**	**-0.1**
EDFI	**Ende, Flores**	**9.47**	**206**	P		**Pn**	**03 04 21.4**	**+1.5**
WB0	**Warramunga Arr**	**21.14**	**157**	P		**P**	**03 06 46.3**	**-0.7**
WB0				IAmb		IAmb	03 06 47.2	
	comp=Z,16nm,0.9s							
WRA	**Warramunga Arr**	**21.28**	**158**	P		**P**	**03 06 48.0**	**-0.5**
	comp=Z,12nm,0.8s,baz=336,slow=11,SNR=41							
	comp=Z,12nm,0.8s							
WRA	**Warramunga Arr**	**21.28**	**158**	P		**P**	**03 06 47.6**	**-0.8**
WB2	**Warramunga Arr**	**21.28**	**158**	P		**P**	**03 06 48.0**	**-0.5**
WB2				IAmb		IAmb	03 06 49.0	
	comp=Z,21nm,0.9s							
WR0	**Warramunga Arr**	**21.37**	**157**	P		**P**	**03 06 48.8**	**-0.6**
WR0				IAmb		IAmb	03 06 49.8	
	comp=Z,14nm,0.9s							
COEN	**Coen**	**21.88**	**129**	P		**P**	**03 06 54.3**	**-0.6**
COEN				IAmb		IAmb	03 06 58.0	
	comp=Z,7.4nm,0.9s							
AS31	**Alice Springs**	**24.57**	**162**	P		**P**	**03 07 21.9**	**+0.4**
ASAR	**Alice Springs**	**24.57**	**162**	P		**P**	**03 07 22.4**	**+0.9**
	comp=Z,6.4nm,0.8s,baz=343,slow=11,SNR=35							
	comp=Z,6.4nm,0.8s							
ASAR	**Alice Springs**	**24.57**	**162**	P		**P**	**03 07 19.7**	**-1.8**
GSI	**Gunungsitoli**	**28.37**	**273**	P		**P**	**03 07 56.0**	**+0.1**
GSI				IAmb		IAmb	03 08 11.9	
	comp=Z,17nm,1.2s							
CMAR	**Chiang Mai Arr**	**32.35**	**306**	P		**P**	**03 08 29.5**	**-1.4**
JMN	**Monobe**	**34.58**	**12**	P		**P**	**03 08 50.6**	**+0.5**
JHJ	**Hachijo jima 2**	**35.64**	**20**	LR		LR	03 20 59.6	
	comp=Z,26nm,21.7s,baz=206,slow=32							
KSRS	**Korea Array**	**37.52**	**3**	P		**P**	**03 09 16.8**	**+1.5**
	comp=Z,0.6nm,0.5s,baz=180,slow=8.8,SNR=4.4							
	comp=Z,0.6nm,0.5s							
LSA	**Lhasa**	**44.52**	**315**	P		**P**	**03 10 12.1**	**-1.5**
LSA				IAmb		IAmb	03 10 35.3	
	comp=Z,4.3nm,0.7s							
KLR	**Kul'dur**	**49.51**	**5**	LR		LR	03 30 49.3	
	comp=Z,28nm,21.7s,baz=224,slow=35							
SONM	**Songino Array**	**50.78**	**343**	P		**P**	**03 11 02.5**	**+1.1**
	comp=Z,0.7nm,0.6s,baz=155,slow=9.7,SNR=5.3							
	comp=Z,0.7nm,0.6s							
SONM	**Songino Array**	**50.78**	**343**	P		**P**	**03 11 02.0**	**+0.7**
SONM				IAmb		IAmb	03 11 03.7	
	comp=Z,0.7nm,0.7s							
MKAR	**Makanchi Array**	**60.35**	**327**	P		**P**	**03 12 10.6**	**+0.7**
	comp=Z,0.8nm,0.6s,baz=123,slow=8.8,SNR=9.6							
MKAR				PcP		**PcP**	**03 12 55.2**	**+0.5**
	comp=Z,0.8nm,0.7s,baz=124,slow=5.4,SNR=5.0							
	comp=Z,0.8nm,0.6s							

*IDC **08** 03:23:47.6±0.9,26.″95N×130.″22E, h0km, mb3.9/7, mbtmp3.9/8, MS2.8/2, Error ellipse: s-maj=27.9km s-min=17.8km az=81.0*
*JMA **08** 03:23:49.2±0.1,26.″9N±0.″5×130.″3E±0.″6, h60km, MV3.8/24, NEAR MINAMI-DAITOJIMA IS*
*NIED **08** 03:23:49.2,26.″94N×130.″27E, h60km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^15^Nm; Mrr=0.95; Mθθ=0.47; Mφφ=0.48; Mrθ=0.90; Mφθ=0.34; Mφr=0.05; Fault plane solution: M0=1.24000×10^15^ NP1:φs=33.00000°, δ=27.00000°, λ=-125.00000°. NP2:φs=251.00000°, δ=68.00000°, λ=-74.00000°.*
*NEIC **08** 03:23:51.6±1.0,27.″04N±0.″09×130.″14E±0.″08, h33km±7km, mb4.4/10 Error ellipse: s-maj=16.0km s-min=3.8km az=142.0*
ISC 08 03:23:46.4±1.9,**26.″96N**±0.″03×**130.″27E**±0.″03,**h1**km±13km,
n42,σ1§**81**/62,**mb4.2**/12,**Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
JKDJ	**Kitadaitoujima**	**1.36**	**137**	P		**Pn**	**03 24 12.2**	**-0.3**
JKDJ					*e*S	**Sg**	**03 24 29.2**	**-0.9**
JZK	**Kikaishima**	**1.38**	**349**	P		**Pn**	**03 24 13.6**	**+0.8**
JZK					*e*S	**Sg**	**03 24 31.9**	**+1.2**
JMZ	**Minamidaito 2**	**1.42**	**143**	P		**Pn**	**03 24 12.8**	**-0.5**
JMZ					*e*S	**Sg**	**03 24 29.8**	**-2.1**
JTK	**Tokunoshima**	**1.44**	**305**	P		**Pn**	**03 24 13.7**	**+0.1**
JTK					*e*S	**Sg**	**03 24 31.3**	**-1.3**
JAM	**Amami Oshima**	**1.57**	**338**	P		**Pn**	**03 24 15.2**	**-0.1**
JAM					*e*S	**Sn**	**03 24 33.9**	**-2.4**
JOKE	**Okinoerabujima**	**1.57**	**285**	P		**Pn**	**03 24 15.6**	**+0.1**
JOKE					*e*S	**Sn**	**03 24 34.5**	**-2.0**
JAMN	**Amaminishikomi**	**1.61**	**323**	P		**Pn**	**03 24 15.8**	**-0.2**
JAMN					*e*S	**Sn**	**03 24 34.6**	**-2.8**
JYRO	**Yoronjima**	**1.63**	**273**	P		**Pn**	**03 24 16.3**	**+0.1**
JYRO					*e*S	**Sn**	**03 24 35.2**	**-2.7**
JOW	**Kunigami**	**1.79**	**267**	Pn		**Pn**	**03 24 18.7**	**+0.3**
	83nm,0.3s,baz=115,slow=24,SNR=136							
JOW					Sn	**Sn**	**03 24 39.6**	**-2.3**
	134nm,0.3s,baz=50,slow=30,SNR=29							
JOW	**Kunigami**	**1.79**	**267**	Pn		**Pn**	**03 24 18.5**	**+0.1**
JOW					Sn	**Sn**	**03 24 38.9**	**-2.9**
JOW	**Kunigami**	**1.79**	**267**	P		**Pn**	**03 24 18.8**	**+0.3**
JOW					*e*S	**Sn**	**03 24 39.6**	**-2.3**
JIH	**Iheya**	**2.06**	**273**	*e*P		**Pn**	**03 24 22.8**	**+0.7**
JIH					*e*S	**Sn**	**03 24 47.5**	**-1.0**
JNTH	**Nagotoyohara**	**2.06**	**258**	*e*P		**Pn**	**03 24 21.9**	**-0.2**
JNTH					*e*S	**Sn**	**03 24 45.2**	**-2.8**
JJT3	**Tamagusuku3**	**2.37**	**251**	*e*P		**Pn**	**03 24 26.7**	**+0.3**
JJT3					*e*S	**Sn**	**03 24 53.7**	**-2.5**
JTAJ	**Takarajima**	**2.38**	**337**	P		**Pn**	**03 24 26.2**	**-0.5**
JTAJ					*e*S	**Sn**	**03 24 53.2**	**-3.3**
JAGN	**Aguni-jima**	**2.73**	**263**	*e*P		**Pn**	**03 24 31.5**	**0.0**
JAGN					*e*S	**Sn**	**03 25 02.4**	**-2.7**
JNN	**Nakanoshima**	**2.90**	**353**	*e*P		**Pn**	**03 24 33.4**	**-0.3**
JNN					*e*S	**Sn**	**03 25 05.7**	**-3.5**
JKE	**Kume jima 2**	**3.18**	**259**	*e*P		**Pn**	**03 24 37.2**	**-0.4**
JKE					*e*S	**Sn**	**03 25 13.3**	**-2.9**
JYAK	**Yakushimahirau**	**3.28**	**4**	*e*P		**Pn**	**03 24 38.8**	**-0.1**
JYAK					*e*S	**Sn**	**03 25 14.6**	**-4.0**
JMTN	**Minamitane**	**3.47**	**9**	*e*P		**Pn**	**03 24 42.1**	**+0.5**
JMTN					*e*S	**Sn**	**03 25 19.6**	**-3.8**
JTN	**Tanegashima 3**	**3.74**	**9**	*e*P		**Pn**	**03 24 44.8**	**-0.4**
JTN					*e*S	**Sn**	**03 25 26.3**	**-3.6**
JSU	**Suzuyama**	**4.54**	**2**	Pn		**Pn**	**03 24 56.8**	**+0.6**
KSRS	**Korea Array**	**10.65**	**350**	Pn		**Pn**	**03 26 23.3**	**+3.1**
	2.1nm,0.8s,baz=165,slow=13,SNR=7.5							
KSRS				LR		LR	03 30 47.6	
	comp=Z,16nm,20.0s,baz=205,slow=39							
DAV	**Davao City (W)**	**20.27**	**194**	LR		LR	03 37 27.5	
	comp=Z,64nm,18.1s,baz=330,slow=40							
KLR	**Kul'dur**	**22.27**	**3**	P		**P**	**03 28 45.1**	**+0.3**
	1.4nm,0.6s,baz=185,slow=7.2,SNR=6.5							
	1.4nm,0.6s							
KNRA	**Kununurra**	**42.40**	**182**	P		**P**	**03 31 43.3**	**+0.6**
KNRA				IAmb		IAmb	03 31 43.5	
	comp=Z,8.4nm,0.8s							
MK31	**Makanchi Array**	**42.43**	**311**	P		**P**	**03 31 40.5**	**-2.2**
MKAR	**Makanchi Array**	**42.43**	**311**	P		**P**	**03 31 44.2**	**+1.5**
	comp=Z,0.3nm,0.6s,baz=96,slow=10,SNR=3.7							
	comp=Z,0.3nm,0.6s							
MKAR	**Makanchi Array**	**42.43**	**311**	P		**P**	**03 31 41.9**	**-0.9**
COEN	**Coen**	**42.56**	**161**	P		**P**	**03 31 45.1**	**+1.2**
COEN				IAmb		IAmb	03 32 01.5	
	comp=Z,10nm,1.5s							
MAKZ	**Makanchi**	**42.65**	**311**	P		**P**	**03 31 43.5**	**-1.0**
MAKZ				IAmb		IAmb	03 31 50.7	
	comp=Z,5.9nm,1.4s							
WB0	**Warramunga Arr**	**46.62**	**175**	P		**P**	**03 32 16.5**	**+0.1**
WB0				IAmb		IAmb	03 32 17.5	
	comp=Z,3.5nm,0.8s							
WRA	**Warramunga Arr**	**46.79**	**175**	P		**P**	**03 32 18.4**	**+0.7**
	comp=Z,2.5nm,0.6s,baz=355,slow=8.5,SNR=34							
	comp=Z,2.5nm,0.6s							
WRA	**Warramunga Arr**	**46.79**	**175**	P		**P**	**03 32 18.1**	**+0.4**
WB2	**Warramunga Arr**	**46.79**	**175**	P		**P**	**03 32 17.6**	**-0.1**
WB2				IAmb		IAmb	03 32 42.8	
	comp=Z,6.7nm,1.3s							
WR0	**Warramunga Arr**	**46.82**	**174**	P		**P**	**03 32 17.8**	**-0.1**
CTA	**Charters Tower**	**49.26**	**160**	P		**P**	**03 32 38.6**	**+1.8**
	comp=Z,6.3nm,0.8s,baz=349,slow=10,SNR=4.7							
	comp=Z,6.3nm,0.8s							
CTAO	**Charters Tower**	**49.26**	**160**	P		**P**	**03 32 38.8**	**+1.9**
ASAR	**Alice Springs**	**50.45**	**176**	P		**P**	**03 32 47.4**	**+1.5**
	comp=Z,1.7nm,0.8s,baz=6.5,slow=13,SNR=24							
	comp=Z,1.7nm,0.8s							
INK	**Inuvik**	**67.50**	**24**	P		**P**	**03 34 44.9**	**+1.2**
	comp=Z,0.4nm,0.5s,baz=284,slow=8.3,SNR=1.4							
	comp=Z,0.4nm,0.5s							
INK	**Inuvik**	**67.50**	**24**	P		**P**	**03 34 43.6**	**-0.1**
INK				IAmb		IAmb	03 34 57.0	
	comp=Z,2.8nm,1.2s							
NVAR	**Mina Array Bea**	**88.68**	**47**	P		**P**	**03 36 44.1**	**+2.1**
	comp=Z,0.4nm,0.6s,baz=289,slow=2.8,SNR=3.8							
	comp=Z,0.4nm,0.6s							

*IDC **08** 03:31:39.6±1.2,2.″56N×127.″96E, h0km, mb3.7/5, mbtmp3.7/6, ML3.8/1, MS3.2/1, Error ellipse: s-maj=63.6km s-min=20.4km az=68.0*
*DJA **08** 03:31:47.3±0.9,3.″N±4.″×12.″8E±.″, h10km, M4.0/7, mb4.2/3, MLv3.9/7*
ISC 08 03:31:47.3±0.9,**2.″62N**±0.″07×**128.″5E**±0.″1,**h50**km,**n19,**
σ1§**89**/14,**mb3.7**/5,**1C-1D,Halmahera**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
TNTI	**Ternate**	**2.16**	**212**	P		**Pn**	**03 32 21.1**	**+0.2**
LBMI	**Labuha**	**3.39**	**197**	P		**Pn**	**03 32 40.3**	**+2.5**
SIJI	**Sorong**	**4.43**	**141**	Pn		**Pn**	**03 32 52.2**	**+0.1**
	4.6nm,0.3s,baz=226,slow=22,SNR=17							
SIJI					Sn	**Sn**	**03 33 41.8**	**-0.7**
	2.0nm,0.3s,baz=245,slow=23,SNR=1.9							
	12nm,0.2s							
DDMP	**Don Marcelino,**	**4.44**	**321**	*e*P		**Pn**	**03 32 52.7**	**+0.6**
SANI	**Sanana**	**5.28**	**208**	P		**Pn**	**03 33 03.7**	**0.0**
	0.1nm8.3nm,0.9s							
KCP	**Kidapawan**	**5.53**	**322**	*e*P		**Pn**	**03 33 10.4**	**+3.3**
MRSI	**Marisa**	**6.90**	**252**	P		**Pn**	**03 33 26.5**	**+0.6**
WRA	**Warramunga Arr**	**23.15**	**166**	P		**P**	**03 36 48.5**	**-1.0**
	1.6nm,0.6s,baz=346,slow=10,SNR=11							
	1.6nm,0.6s							
ASAR	**Alice Springs**	**26.66**	**169**	P		**P**	**03 37 20.0**	**-1.6**
	0.6nm,0.7s,baz=351,slow=8.3,SNR=5.0							
ASAR				PcP		**PcP**	**03 40 42.8**	**-1.9**
	0.2nm,0.4s,baz=358,slow=2.2,SNR=5.3							
	0.6nm,0.7s							
CTA	**Charters Tower**	**28.51**	**143**	P		**P**	**03 37 41.3**	**+3.1**
	1.3nm,0.7s,baz=320,slow=7.9,SNR=1.2							
	1.3nm,0.7s							
HNR	**Honiara**	**33.54**	**111**	LR		LR	03 53 04.8	
	comp=Z,39nm,18.5s,baz=181,slow=38							
KSRS	**Korea Array**	**34.67**	**359**	P		**P**	**03 38 32.0**	**-0.1**
	0.7nm,0.6s,baz=180,slow=10,SNR=2.3							
	0.7nm,0.6s							
H11S3	**WAKE ISLAND Hy**	**40.58**	**64**	T		T	04 22 42.3	
	baz=252,slow=75,SNR=22							
H11S2	**WAKE ISLAND Hy**	**40.59**	**64**	T		T	04 22 36.9	
	baz=252,slow=75,SNR=8.8							
H11S1	**WAKE ISLAND Hy**	**40.60**	**64**	T		T	04 22 35.0	
	baz=252,slow=75,SNR=7.5							
H11N1	**WAKE ISLAND Hy**	**41.16**	**63**	T		T	04 23 15.0	
	baz=250,slow=75,SNR=20							
H11N2	**WAKE ISLAND Hy**	**41.17**	**63**	T		T	04 23 15.8	
	baz=250,slow=75,SNR=13							
H11N3	**WAKE ISLAND Hy**	**41.17**	**63**	T		T	04 23 16.4	
	baz=250,slow=75,SNR=18							
MKAR	**Makanchi Array**	**59.47**	**325**	P		**P**	**03 41 43.2**	**-2.0**
	0.2nm,0.5s,baz=136,slow=9.4,SNR=2.3							
	0.2nm,0.5s							

*RSNC **08** 03:49:30.6±1.1,4.″54N×76.″20W, h64km±4km, ML3.7, Mw3.8*
*IDC **08** 03:49:31.9±2.2,4.″45N×76.″03W, h105km±19km, mb3.4/11, mbtmp3.8/12, MS2.8/1, Error ellipse: s-maj=23.6km s-min=15.5km az=46.0*
ISC 08 03:49:28.9±0.7,**4.″54N**±0.″02×**76.″21W**±0.″02,**h70**km±6km,
n74,σ1§**79**/121,**mb3.7**/11,**5C-7D,Colombia**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
PLMC	**San Jos del P**	**0.38**	**348**	⇓	*i*P	**Pn**	**03 49 41.0**	**+0.2**
PLMC					*e*S	**Sn**	**03 49 50.5**	**+1.1**
PLMC					*i*		03 49 52.4	
	comp=Z,16μm,0.2s							
YOTC	**Yotoco, Valle**	**0.56**	**194**	⇑	*i*P	**Pn**	**03 49 42.4**	**-0.2**
YOTC					*e*S	**Sn**	**03 49 54.1**	**+1.6**
YOTC					*i*		03 49 56.0	
	comp=Z,3μm,0.2s							
ANIL	**Santa Ana**	**0.80**	**93**	⇓	*i*P	**Pn**	**03 49 45.2**	**-0.1**
ANIL					*e*S	**Sn**	**03 49 58.4**	**+0.9**
ANIL					*i*		03 49 59.7	
	comp=Z,8μm,0.3s							
CMAN1	**Manizales, Cal**	**0.86**	**52**		*e*P	**Pn**	**03 49 46.0**	**0.0**
CMAN1					*e*S	**Sn**	**03 49 59.8**	**+1.1**
ORTC	**Ortega, Tolima**	**1.14**	**123**		*e*P	**Pn**	**03 49 49.4**	**+0.1**
ORTC					*i*		03 50 10.5	
	comp=Z,1μm,0.3s							
RAC02	**Cali,SGC**	**1.20**	**196**		*e*P	**Pn**	**03 49 50.4**	**+0.3**
RAC02					*e*S	**Sn**	**03 50 07.0**	**+1.1**
PIZC	**Pizarro, Choco**	**1.23**	**290**		*e*P	**Pn**	**03 49 51.8**	**+1.5**
PIZC					*e*S	**Sn**	**03 50 10.7**	**+4.4**
PIZC					*i*		03 50 22.7	
	comp=Z,530nm,0.5s							
MALC	**Bahia Malaga**	**1.24**	**245**	⇑	*i*P	**Pn**	**03 49 51.7**	**+1.2**
MALC					*e*S	**Sn**	**03 50 07.8**	**+1.1**
MALC					*i*		03 50 14.0	
	comp=Z,988nm,0.5s							
CBOC	**Ciudad Bolivar**	**1.33**	**8**	⇓	*e*P	**Pn**	**03 49 52.2**	**+0.3**
CBOC					*e*S	**Sn**	**03 50 10.6**	**+1.4**
CBOC					*i*		03 50 15.4	
	comp=Z,1μm,0.4s							
PRAC	**Prado**	**1.55**	**122**	⇓	*i*P	**Pn**	**03 49 55.1**	**+0.5**
PRAC					*e*S	**Sn**	**03 50 15.3**	**+1.3**
PRAC					*i*		03 50 21.4	
	comp=Z,721nm,0.3s							
NORC	**Norcasia**	**1.68**	**52**		*e*P	**Pn**	**03 49 57.3**	**+0.9**
NORC					*e*S	**Sn**	**03 50 19.4**	**+2.4**
NORC					*i*		03 50 20.9	
	comp=Z,436nm,0.6s							
MARP	**Paez Belalcaza**	**1.70**	**172**		*e*P	**Pn**	**03 49 57.7**	**+0.9**
MARP					*e*S	**Sn**	**03 50 20.2**	**+2.3**
MARP					*i*		03 50 24.8	

TUMC				*i*				03 51 20.1	
	comp=Z,164nm,0.5s								
CMBC	**Cumbal**	**3.92**	**204**	*e*P		**Pn**	**03 50 29.1**	**+2.0**	
CMBC				*i*			03 51 31.7		
	comp=Z,9μm,0.7s								
PTGC	**Puerto Gaitan,**	**4.07**	**95**	*e*P		**Pn**	**03 50 29.6**	**+0.8**	
PTGC				*e*S		**Sn**	**03 51 15.8**	**+0.5**	
PTGC				*i*			03 51 58.8		
	comp=Z,42nm,0.5s								
GUVC	**San Jose del G**	**4.08**	**119**	*e*P		**Pn**	**03 50 27.7**	**-1.3**	
GUVC				*e*S		**Sn**	**03 51 16.1**	**+0.6**	
GUVC				*i*			03 51 17.3		
	comp=Z,85nm,0.2s								
TULM	**Tulcn-Chalpat**	**4.11**	**203⇑**	*e*P		**Pn**	**03 50 31.9**	**+2.2**	
TULM				*e*S		Sn	03 51 08.5	-8.3	
TULM				*i*			03 51 27.3		
	comp=Z,37nm,0.6s								
CAPC	**Capurgana**	**4.23**	**344**	*e*P		**Pn**	**03 50 33.0**	**+2.0**	
CAPC				*e*S		**Sn**	**03 51 20.2**	**+1.1**	
CAPC				*i*			03 51 26.8		
	comp=Z,39nm,0.6s								
LCBC	**Los crdobas,**	**4.30**	**358**	*e*P		**Pn**	**03 50 34.1**	**+2.3**	
LCBC				*e*S		**Sn**	**03 51 20.4**	**-0.3**	
LCBC				*i*			03 51 35.0		
	comp=Z,37nm,0.5s								
PAMC	**Pamplona, Colo**	**4.46**	**51**	*e*P		**Pn**	**03 50 36.3**	**+1.8**	
PAMC				*e*S		**Sn**	**03 51 27.2**	**+1.7**	
PAMC				*i*			03 51 35.7		
	comp=Z,57nm,0.4s								
PTLC	**Puerto Leguiza**	**4.56**	**162**	*e*P		Pn	03 50 40.8	+5.3	
PTLC				*e*S		Sn	03 51 36.6	+9.4	
PTLC				*i*			03 52 17.3		
	comp=Z,61nm,0.5s								
OCAC	**Ocana**	**4.67**	**38⇑**	*e*P		**Pn**	**03 50 38.0**	**+1.0**	
OCAC				*e*S		**Sn**	**03 51 32.1**	**+2.1**	
OCAC				*i*			03 51 35.0		
	comp=Z,167nm,0.7s								
CUSE	**Cuicocha Este**	**4.74**	**208**	*e*P		**Pn**	**03 50 39.8**	**+1.5**	
CUSE				*e*S		**Sn**	**03 51 32.4**	**+0.2**	
CUSE				*i*			03 51 43.2		
	comp=Z,244nm,0.3s								
TAMC	**Tame, Arauca**	**4.78**	**67**	*e*P		**Pn**	**03 50 40.4**	**+1.9**	
TAMC				*e*S		**Sn**	**03 51 35.6**	**+2.9**	
TAMC				*i*			03 51 58.7		
	comp=Z,28nm,0.8s								
OTAV	**Otavalo**	**4.82**	**208**	*e*P		**Pn**	**03 50 40.3**	**+0.9**	
OTAV				*e*S		**Sn**	**03 51 32.6**	**-1.7**	
AZU	**Azuero**	**5.18**	**309**	*e*P		**Pn**	**03 50 43.8**	**-0.1**	
AZU				*e*S		**Sn**	**03 51 43.3**	**+0.9**	
AZU				*i*			03 51 47.9		
	comp=Z,36nm,0.5s								
SJCC	**San Jacinto, C**	**5.42**	**11**	*e*P		**Pn**	**03 50 50.1**	**+2.8**	
SJCC				*i*			03 52 35.3		
	comp=Z,11nm,0.6s								
UPA	**Univ. de Panam**	**5.52**	**323**	*e*P		**Pn**	**03 50 49.0**	**+0.4**	
UPA				*e*S		**Sn**	**03 51 50.8**	**+0.2**	
BCIP	**Isla Barro Col**	**5.84**	**322**	*e*P		**Pn**	**03 50 53.7**	**+0.6**	
BCIP				*e*S		**Sn**	**03 52 00.9**	**+2.2**	
BCIP				*i*			03 52 03.5		
	comp=Z,12nm,0.3s								
LL6C	**La Loma 6 Bece**	**5.93**	**29**	*e*P		**Pn**	**03 50 55.9**	**+1.7**	
LL6C				*e*S		**Sn**	**03 52 05.4**	**+4.6**	
LL6C				*i*			03 52 14.7		
	comp=Z,23nm,0.6s								
SDV	**Santo Domingo**	**7.02**	**52**	P		**Pn**	**03 51 10.3**	**+1.0**	
	comp=Z,6.5nm,0.3s,baz=227,slow=2.8,SNR=8.8								
SDV				S		**Sn**	**03 52 26.1**	**-1.8**	
	comp=Z,21nm,0.7s,baz=242,slow=21,SNR=9.5								
SDV	**Santo Domingo**	**7.02**	**52**	*e*P		**Pn**	**03 51 11.4**	**+2.1**	
SDV				*e*S		**Sn**	**03 52 25.6**	**-2.3**	
SDV				*i*			03 52 28.8		
	comp=Z,15nm,0.6s								
CRJC	**Cerrejon, Guaj**	**7.24**	**27**	*e*P		**Pn**	**03 51 12.3**	**+0.1**	
CRJC				*e*S		**Sn**	**03 52 30.5**	**-2.4**	
CRJC				*i*			03 52 47.0		
	comp=Z,22nm,0.5s								
URIC	**Uribia, Colomb**	**8.25**	**30**	*e*S		**Sn**	**03 52 53.1**	**-4.6**	
NNA	**Nana**	**16.43**	**182**	LR		LR	04 00 30.8		
	comp=Z,38nm,21.4s,baz=341,slow=40								
LPAZ	**La Paz**	**22.18**	**159**	P		**P**	**03 54 17.5**	**-2.5**	
	comp=Z,0.4nm,0.5s,baz=353,slow=13,SNR=1.7								
	comp=Z,0.4nm,0.5s								
MDP	**Montagnes des**	**23.49**	**88**	P		**P**	**03 54 31.0**	**-1.7**	
	comp=Z,3.0nm,0.7s,baz=195,slow=7.4,SNR=9.9								
	comp=Z,3.0nm,0.7s								
SIV	**San Ignacio**	**25.30**	**144**	P		**P**	**03 54 47.8**	**-1.4**	
	comp=Z,0.8nm,0.2s,baz=258,slow=12,SNR=4.9								
	comp=Z,0.8nm,0.2s								
TXAR	**Lajitas Array**	**35.84**	**317**	P		**P**	**03 56 23.1**	**+0.9**	
	comp=Z,0.2nm,0.4s,baz=130,slow=8.7,SNR=12								
	comp=Z,0.2nm,0.4s								
PDAR	**Pinedale Array**	**48.21**	**327**	P		**P**	**03 58 03.2**	**+0.4**	
	comp=Z,0.4nm,0.6s,baz=123,slow=9.4,SNR=3.9								
	comp=Z,0.4nm,0.6s								
SCHQ	**Schefferville**	**50.72**	**7**	P		**P**	**03 58 21.4**	**-0.1**	
	comp=Z,2.9nm,0.8s,baz=222,slow=12,SNR=4.0								
	comp=Z,2.9nm,0.8s								
NVAR	**Mina Array Bea**	**50.98**	**317**	P		**P**	**03 58 25.5**	**+1.5**	
	comp=Z,0.8nm,0.7s,baz=126,slow=8.1,SNR=6.2								
	comp=Z,0.8nm,0.7s								
YKA	**Yellowknife Ar**	**64.39**	**341**	P		**P**	**03 59 56.0**	**-1.3**	
	comp=Z,0.5nm,0.5s,baz=135,slow=6.2,SNR=4.2								
	comp=Z,0.5nm,0.5s								
ESDC	**Sonseca Array**	**73.47**	**50**	P		**P**	**04 00 53.3**	**-0.9**	
	comp=Z,0.4nm,0.8s,baz=270,slow=6.4,SNR=3.4								
	comp=Z,0.4nm,0.8s								
EKA	**Eskdalemuir Ar**	**76.67**	**34**	P		**P**	**04 01 11.3**	**-0.9**	
	comp=Z,0.5nm,0.5s,baz=247,slow=5.3,SNR=5.2								
	comp=Z,0.5nm,0.5s								
TORD	**Torodi Ar. Bea**	**77.22**	**78**	P		**P**	**04 01 13.9**	**-2.2**	
	comp=Z,0.4nm,0.5s,baz=281,slow=5.6,SNR=15								
	comp=Z,0.4nm,0.5s								
ASAR	**Alice Springs**	**145.29**	**234**	PKPbc		**PKPbc**	**04 08 56.9**	**-2.6**	
	comp=Z,0.5nm,1.0s,baz=126,slow=3.3,SNR=2.3								
WRA	**Warramunga Arr**	**146.55**	**240**	PKPbc		**PKPdf**	**04 09 03.0**	**+1.2**	
	comp=Z,1.2nm,1.1s,baz=109,slow=2.9,SNR=2.4								

*DNK **08** 03:53:19.7±6.2, 79°.69N×2°.79E, h18km±78km, ML3.1*
*NAO **08** 03:53:19.2±2.0, 79°.66N×3°.32E, ML4.8*
*IDC **08** 03:53:20.9±0.6, 79°.48N×2°.71E, h0km, mb4.0/14, mbtmp4.1/20, ML3.2/3, MS3.4/42, Error ellipse: s-maj=16.7km s-min=12.4km az=27.0*
*BER **08** 03:53:21.7±2.8, 79°.64N×3°.51E, h10km, ML2.9, mb4.4(USGS), Confirmed Earthquake*
*NEIC **08** 03:53:22.2±1.9, 79°.35N±0°.09×3°.4E±0°.2, h10km±1km, mb4.4/22, Error ellipse: s-maj=15.4km s-min=6.2km az=350.0*
*IEPN **08** 03:53:24.0, 79°.51N×4°.69E, h10km*

ISC 08 03:53:22.3±3.5, 79°.38N±0°.05×2°.99E±0°.04, h15km±22km, n150, σ2°50/139, mb4.3/27, MS3.4/37, 6C-1D, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KBS	**Kingsbay**	**1.75**	**101**	Pn		**Pn**	**03 53 49.8**	**-2.3**
KBS				Sn		**Sn**	**03 54 08.7**	**-5.3**
KBS	**Kingsbay**	**1.75**	**101**			**Pn**	**03 53 49.9**	**-2.3**
KBS				Sn		**Sn**	**03 54 08.9**	**-5.1**
KBS	**Kingsbay**	**1.75**	**101**	*i* P		**Pn**	**03 53 49.8**	**-2.3**
KBS	**Kingsbay**	**1.75**	**101⇑**	*i* P		**Pn**	**03 53 49.8**	**-2.3**
KBS				*e*S		**Sn**	**03 54 09.2**	**-4.9**
KBS				IAML			03 54 19.3	
	comp=Z,384nm,0.3s							
KBS	**Kingsbay**	**1.75**	**101⇑**	*i* P		**Pn**	**03 53 49.8**	**-2.3**
KBS				*e*S		**Sn**	**03 54 08.8**	**-5.3**
BRBA	**Barentsburg A**	**2.57**	**115**	Pn		**Pn**	**03 54 02.4**	**-0.9**
BRBA				Sn		**Sn**	**03 54 32.0**	**-2.2**
BRBA	**Barentsburg A**	**2.57**	**115**	*e*P		**Pn**	**03 54 02.4**	**-0.9**
BRBA				*e*S		**Sn**	**03 54 31.8**	**-2.5**
BRBA				IAML			03 54 37.7	
	comp=Z,119nm,0.2s							
SPA0	**Spitsbergen Ar**	**2.88**	**108**	Pn		**Pn**	**03 54 06.3**	**-1.2**
	baz=315,slow=11							
SPA0				Sn		**Sn**	**03 54 38.6**	**-3.2**
	baz=326,slow=14							
SPA0	**Spitsbergen Ar**	**2.88**	**108**	Pn		**Pn**	**03 54 06.3**	**-1.2**
	baz=315,slow=11							
SPA0				Sn		**Sn**	**03 54 38.6**	**-3.2**
	baz=326,slow=14							
SPA0	**Spitsbergen Ar**	**2.88**	**108⇑**	*i* P		**Pn**	**03 54 06.5**	**-1.0**
SPA0				*i* S		**Sn**	**03 54 38.3**	**-3.5**
SPITS	**Spitsbergen Ar**	**2.88**	**108**	Pn		**Pn**	**03 54 06.5**	**-1.0**
	comp=Z,113nm,0.3s,baz=307,slow=7.0,SNR=3753							
SPITS				Sn		**Sn**	**03 54 38.5**	**-3.3**
	baz=319,slow=8.8							
SPB2	**Spitsbergen Ar**	**2.88**	**108**			**Pn**	**03 54 06.6**	**-1.0**
HSPB	**Hornsund (broa**	**3.51**	**127**	Pn		**Pn**	**03 54 14.9**	**-1.2**
HSPB				Sn		**Sn**	**03 54 54.4**	**-2.8**
HSPB	**Hornsund (broa**	**3.51**	**127**	*i* P		**Pn**	**03 54 15.0**	**-1.2**
HSPB				*e*S		**Sn**	**03 54 55.0**	**-2.3**
HSPB				IAML			03 54 58.0	
	comp=Z,53nm,0.3s							
NOR	**Nord**	**3.93**	**314**	Pn		**Pn**	**03 54 19.6**	**-2.3**
NOR	**Nord**	**3.93**	**314**	*i* P		**Pn**	**03 54 19.1**	**-2.8**
NOR	**Nord**	**3.93**	**314⇑**	*i* P		**Pn**	**03 54 19.8**	**-2.1**
DAG	**Danmarks Havn**	**5.17**	**251**	*i* P		**Pn**	**03 54 37.5**	**-1.4**
DAG				*i* S		**Sn**	**03 55 32.3**	**-5.8**
DAG				IAML			03 55 33.1	
	comp=Z,77nm,0.4s							
DAG	**Danmarks Havn**	**5.17**	**251⇑**	*i* P		**Pn**	**03 54 38.0**	**-0.9**
DAG				*e*S		**Sn**	**03 55 32.2**	**-5.8**
HOPEN	**Hopen**	**5.41**	**111**	Pn		**Pn**	**03 54 40.5**	**-1.7**
HOPEN				Sn		**Sn**	**03 55 39.0**	**-5.0**
HOPEN	**Hopen**	**5.41**	**111**	*e*P		**Pn**	**03 54 41.1**	**-1.0**
HOPEN				*e*S		**Sn**	**03 55 38.2**	**-5.8**
HOPEN				IAML			03 55 42.7	
	comp=Z,53nm,0.3s							
HOPEN	**Hopen**	**5.41**	**111**	*e*P		**Pn**	**03 54 40.5**	**-1.7**
HOPEN				*e*S		**Sn**	**03 55 37.1**	**-6.8**
BJO1	**Bjornoya**	**6.07**	**135**	Pn		**Pn**	**03 54 52.0**	**+0.7**
BJO1	**Bjornoya**	**6.07**	**135**	*e*P		**Pn**	**03 54 52.3**	**+1.0**
BJO1				*e*S		**Sn**	**03 55 56.6**	**-3.6**
BJO1				IAML			03 56 09.2	
	comp=Z,13nm,0.8s							
BJO1	**Bjornoya**	**6.07**	**135**	*e*P		**Pn**	**03 54 51.7**	**+0.5**
BJO1				*e*S		**Sn**	**03 55 58.0**	**-2.3**
DBG	**Daneborg**	**7.28**	**238**	Pn		**Pn**	**03 55 07.2**	**-0.6**
DBG				Sn		**Sn**	**03 56 23.4**	**-6.6**
DBG	**Daneborg**	**7.28**	**238**	*i* P		**Pn**	**03 55 06.7**	**-1.1**
DBG				*i* S		**Sn**	**03 56 23.6**	**-6.3**
DBG				IAML			03 56 25.0	
	comp=Z,47nm,0.5s							
DBG	**Daneborg**	**7.28**	**238**	*e*P		**Pn**	**03 55 06.7**	**-1.1**
DBG				*e*S		**Sn**	**03 56 23.6**	**-6.3**
ZFI2	**Zemlya Franca-**	**7.66**	**58**	*e*P		**Pn**	**03 55 10.3**	**-2.8**
ZFI2				*e*S		Sn	03 56 28.7	-11
ZFI	**Zemlya Franca-**	**7.66**	**58**	*e*P		**Pn**	**03 55 10.3**	**-2.8**
ZFI				*e*S		Sn	03 56 28.8	-11
	comp=Z,28nm,1.4s							
JNW	**Jan Mayen West**	**8.86**	**205**	*e*P		**Pn**	**03 55 30.2**	**+0.7**
JNE	**Jan Mayen East**	**8.89**	**205**	*e*P		**Pn**	**03 55 30.7**	**+0.8**
JMIC	**Jan Mayen**	**8.91**	**205**	Pn		**Pn**	**03 55 30.0**	**-0.2**
	comp=Z,27nm,0.3s,baz=162,slow=0.8,SNR=34							
JMIC				Sn		**Sn**	**03 57 03.0**	**-7.0**
	comp=Z,3.0nm,0.3s,baz=40,slow=17,SNR=1.9							
JMIC				LR		LR	03 58 14.1	
	comp=Z,82nm,18.6s,baz=6.5,slow=33							
JMIC	**Jan Mayen**	**8.91**	**205**	*e*P		**Pn**	**03 55 30.4**	**+0.2**
JMI	**Jan Mayen**	**8.98**	**205**	*e*P		**Pn**	**03 55 31.1**	**-0.1**
HAMF	**Hammerfest**	**10.18**	**138**	Pn		**Pn**	**03 55 47.8**	**+0.3**
HAMF	**Hammerfest**	**10.18**	**138**	Pn		**Pn**	**03 55 47.8**	**+0.3**
SCO	**Scoresbysund**	**10.88**	**229**	*i* P		**Pn**	**03 55 57.1**	**0.0**
KIF	**Kilpisjarvi**	**11.40**	**146**	Pn		**Pn**	**03 56 05.1**	**+0.8**
KIF	**Kilpisjarvi**	**11.40**	**146**	Pn		**Pn**	**03 56 05.1**	**+0.8**
ARA0	**ARCESS Array S**	**11.44**	**137**	Pn		**Pn**	**03 56 04.5**	**-0.3**
	baz=351,slow=11							
ARA0	**ARCESS Array S**	**11.44**	**137**	Pn		**Pn**	**03 56 04.5**	**-0.3**
	baz=351,slow=11							
ARCES	**ARCESS Array B**	**11.44**	**137**	Pn		**Pn**	**03 56 04.8**	**0.0**
	comp=Z,0.9nm,0.3s,baz=351,slow=12,SNR=41							
ARCES				LR		LR	04 01 09.4	
	comp=Z,83nm,19.6s,baz=358,slow=41							
	comp=Z,5.9nm,0.5s							
ARCES	**ARCESS Array B**	**11.44**	**137**			**Pn**	**03 56 04.1**	**-0.7**
SUMG	**Summit**	**11.80**	**257**	Pn		**Pn**	**03 56 07.9**	**-2.1**
SUMG	**Summit**	**11.80**	**257**	*i* P		**Pn**	**03 56 08.0**	**-2.1**
APA0	**Apatity Array**	**14.26**	**129**	Pn		**Pn**	**03 56 41.5**	**-1.7**
	baz=349,slow=12							
APA0	**Apatity Array**	**14.26**	**129**	Pn		**Pn**	**03 56 41.5**	**-1.7**
	baz=349,slow=12							
TULEG	**Thule**	**14.34**	**296**	*i* P		Pn	03 56 37.5	-6.7
UPNV	**Upernavik**	**14.89**	**276**	*i* P		Pn	03 56 45.6	-6.2
ICESG	**Greenland Ices**	**14.96**	**250**	*i* P		**Pn**	**03 56 50.4**	**-2.7**
NUUG	**Nuugaatsiaq**	**15.35**	**270**	*e*P		Pn	03 56 51.7	-6.2
ILULI	**Ilulissat**	**16.92**	**264**	*i* P		**Pn**	**03 57 13.7**	**-4.2**
DY2G	**Dye2**	**18.45**	**254**	*i* P		**P**	**03 57 34.1**	**-3.0**
NOA	**NORSAR Array B**	**18.60**	**167**	P		**Pn**	**03 57 39.6**	**+0.7**
	baz=350,slow=12,SNR=5.5							
NOA				LR		LR	04 03 48.8	
	comp=Z,63nm,21.1s,baz=10.0,slow=34							
	comp=Z,1.9nm,1.0s							
SFJD	**Kangerlussuaq**	**18.77**	**260**	P		**P**	**03 57 37.1**	**-3.2**
	comp=Z,8.0nm,0.6s,baz=12,slow=13,SNR=7.1							
SFJD				S		Sn	04 00 51.9	-18
	comp=Z,4.8nm,0.5s,baz=295,slow=19,SNR=3.0							
SFJD				LR		LR	04 05 23.1	
	comp=Z,180nm,19.4s,baz=23,slow=38							
SFJD	**Kangerlussuaq**	**18.77**	**260**	P		**P**	**03 57 37.7**	**-2.6**
SFJD				IAmb		IAmb	03 58 00.3	
	comp=Z,25nm,1.2s							
SFJD	**Kangerlussuaq**	**18.77**	**260**	*i* P		**P**	**03 57 36.8**	**-3.5**
LSH	**Leshukonskoye**	**18.78**	**116**	*e*P		**P**	**03 57 37.0**	**-3.5**
	comp=Z,43nm,0.9s							
FIA0	**FINESS Array S**	**19.31**	**145**	P		**Pn**	**03 57 47.9**	**+0.6**
	baz=348,slow=14							
FIA0	**FINESS Array S**	**19.31**	**145**	P		**Pn**	**03 57 47.9**	**+0.6**
	baz=348,slow=14							
FINES	**FINESS Array B**	**19.31**	**145**	P		**Pn**	**03 57 48.5**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=347,slow=13,SNR=10							
FINES				LR		LR	04 05 11.4	
	comp=Z,68nm,20.3s,baz=6.5,slow=37							
	comp=Z,5.6nm,0.8s							
HFS	**Hagfors**	**19.62**	**164**	LR		LR	04 04 31.3	
	comp=Z,68nm,18.8s,baz=356,slow=34							
HFS	**Hagfors**	**19.62**	**164**	P		**Pn**	**03 57 52.4**	**+1.3**
	baz=11,slow=10							
HFS	**Hagfors**	**19.62**	**164**	P		**Pn**	**03 57 52.4**	**+1.3**
	baz=11,slow=10							
RES	**Resolute Bay**	**19.86**	**309**	P		**P**	**03 57 50.8**	**-1.3**
	comp=Z,8.0nm,0.6s,baz=21,slow=14,SNR=25							
RES	**Resolute Bay**	**19.86**	**309**	P		**P**	**03 57 50.3**	**-1.9**
NUUK	**Nuuk**	**21.51**	**257**	*i* P		**P**	**03 58 10.8**	**+0.7**
KLMR	**Klimovskoe**	**21.59**	**128**	*e*P		**P**	**03 58 11.2**	**+0.2**
	comp=Z,20nm,1.4s							
KLMR	**Klimovskoe**	**21.59**	**128**	*e*P		**P**	**03 58 11.2**	**+0.2**
KLMR				AMP			03 58 26.4	
	comp=Z,22nm,1.2s							
PRGR	**Permogore**	**21.79**	**119**	*e*P		**P**	**03 58 11.7**	**-1.4**
NRIK	**Noril'sk**	**22.34**	**68**	P		**P**	**03 58 20.3**	**+1.3**
	comp=Z,7.7nm,0.9s,baz=342,slow=8.0,SNR=10							
NRIK				LR		LR	04 08 48.6	
	comp=Z,60nm,18.1s,baz=343,slow=42							
	comp=Z,7.7nm,0.9s							
NRIK	**Noril'sk**	**22.34**	**68**	P		**P**	**03 58 19.0**	**0.0**
NRIK				IAmb		IAmb	03 58 26.0	
	comp=Z,12nm,1.0s							
EKA	**Eskdalemuir Ar**	**24.24**	**189**	P		**P**	**03 58 40.5**	**+2.4**
	comp=Z,0.6nm,0.5s,baz=359,slow=8.5,SNR=9.3							
	comp=Z,0.6nm,0.5s							
FRB	**Frobisher Bay**	**25.01**	**274**	P		**P**	**03 58 47.8**	**+2.9**
	comp=Z,3.2nm,0.7s,baz=28,slow=12,SNR=2.6							
FRB				LR		LR	04 08 21.1	
	comp=Z,122nm,21.1s,baz=32,slow=36							
KIRV	**Kirov**	**25.31**	**117**	LR		LR	04 09 59.6	
	comp=Z,96nm,19.6s,baz=330,slow=39							
NACGM	**Naroch**	**25.81**	**148⇑**	*e*P		**P**	**03 58 52.1**	**-0.2**
	baz=350							
CLL	**Collm**	**28.41**	**167**	*e*P		**P**	**03 59 17.0**	**+1.4**
CLL				Lm		MLR	04 10 00.0	
	comp=Z,100nm,21.9s							
ARU	**Arti**	**28.92**	**109**	LR		LR	04 12 07.8	
	comp=Z,94nm,21.9s,baz=314,slow=39							
AKASG	**Malin Array Be**	**30.21**	**146**	P		**P**	**03 59 33.2**	**+1.6**
	comp=Z,0.9nm,0.6s,baz=352,slow=8.8,SNR=7.1							
	comp=Z,0.9nm,0.6s							
AKASG	**Malin Array Be**	**30.21**	**146**	P		**P**	**03 59 32.5**	**+0.9**
INK	**Inuvik**	**30.44**	**330**	LR		LR	04 14 53.0	
	comp=Z,54nm,18.2s,baz=326,slow=43							
VRAC	**Vranov**	**30.58**	**162**	LR		LR	04 10 50.5	
	comp=Z,68nm,22.0s,baz=359,slow=34							
LANS	**Liptovska Anna**	**30.91**	**159**	*e*P		P	03 59 44.8	+6.9
BELG	**Belogornoye**	**30.97**	**123**	LR		LR	04 12 18.4	
	comp=Z,80nm,20.1s,baz=311,slow=37							
KOLS	**Kolonicke sedl**	**31.33**	**155**	*e*P		P	03 59 47.9	+6.3
DAVOX	**Davos/Dischmat**	**32.82**	**171**	LR		LR	04 13 03.0	
	comp=Z,37nm,18.2s,baz=82,slow=36							
SCHQ	**Schefferville**	**33.02**	**265**	LR		LR	04 14 06.3	
	comp=Z,57nm,18.9s,baz=52,slow=38							
YKA	**Yellowknife Ar**	**33.86**	**312**	LR		LR	04 13 26.8	
	comp=Z,59nm,22.0s,baz=26,slow=36							
H21K	**Melozitna Rive**	**34.50**	**343**	P		**P**	**04 00 12.4**	**+3.3**
ILAR	**Eielson Array**	**35.01**	**338**	P		**P**	**04 00 15.9**	**+2.5**
	comp=Z,1.0nm,1.0s,baz=8.5,slow=5.7,SNR=6.3							
ILAR	**Eielson Array**	**35.01**	**338**	P		**P**	**04 00 14.5**	**+1.1**
MLR	**Muntele Rosu**	**35.06**	**151**	LR		LR	04 14 48.6	
	comp=Z,58nm,21.2s,baz=5.0,slow=37							
ZALV	**Zalesovo Beam**	**36.08**	**83**	LR		LR	04 19 48.5	
	comp=Z,51nm,18.4s,baz=324,slow=44							
KURK	**Kurchatov**	**38.02**	**91**	P		**P**	**04 00 39.4**	**+0.2**
KURK				IAmb		IAmb	04 00 51.0	
	comp=Z,6.0nm,1.0s							
KURBB	**Kurchatov Arra**	**38.09**	**91**	LR		LR	04 21 12.0	
	comp=Z,52nm,18.4s,baz=11,slow=44							
KBZ	**Khabaz**	**38.74**	**132**	LR		LR	04 17 37.7	
	comp=Z,33nm,18.7s,baz=24,slow=38							
DLBC	**Dease Lake**	**39.72**	**323**	LR		LR	04 17 25.5	
	comp=Z,41nm,21.3s,baz=21,slow=36							
ESDC	**Sonseca Array**	**39.92**	**188**	P		**P**	**04 00 58.0**	**+2.6**
	comp=Z,0.9nm,0.7s,baz=1.4,slow=8.2,SNR=10							
	comp=Z,0.9nm,0.7s							
BRTR	**Keskin Array B**	**41.53**	**144**	P		**P**	**04 01 11.0**	**+2.3**
	comp=Z,1.9nm,0.9s,baz=327,slow=6.9,SNR=4.8							
BRTR				LR		LR	04 21 02.7	
	comp=Z,36nm,19.1s,baz=54,slow=40							
	comp=Z,1.9nm,0.9s							
BRTR	**Keskin Array B**	**41.53**	**144**	P		**P**	**04 01 08.6**	**-0.1**
KDAK	**Kodiak Island**	**42.33**	**341**	LR		LR	04 17 45.4	
	comp=Z,47nm,19.7s,baz=354,slow=35							
MAKZ	**Makanchi**	**42.40**	**89**	P		**P**	**04 01 16.7**	**+1.1**
MK31	**Makanchi Array**	**42.47**	**89**	P		**P**	**04 01 16.4**	**+0.2**
MKAR	**Makanchi Array**	**42.47**	**89**	P		**P**	**04 01 18.1**	**+2.0**
	comp=Z,1.6nm,0.7s,baz=339,slow=7.2,SNR=17							
MKAR				LR		LR	04 21 60.0	
	comp=Z,43nm,20.1s,baz=200,slow=40							
	comp=Z,1.6nm,0.7s							
MKAR	**Makanchi Array**	**42.47**	**89**	P		**P**	**04 01 17.4**	**+1.3**
GNI	**Garni**	**42.51**	**131**	LR		LR	04 19 11.6	
	comp=Z,35nm,21.5s,baz=360,slow=36							
ULM	**Lac du Bonnet**	**42.69**	**291**	P		**P**	**04 01 16.0**	**-1.8**
	comp=Z,0.9nm,0.4s,baz=11,slow=10,SNR=2.0							
	comp=Z,0.9nm,0.4s							
SADO	**Sadowa**	**44.95**	**273**	LR		LR	04 20 14.0	
	comp=Z,99nm,18.2s,baz=0.0,slow=36							
AAK	**Ala-Archa**	**45.04**	**99**	LR		LR	04 22 40.6	
	comp=Z,78nm,21.8s,baz=346,slow=39							
IDI	**Anoyia**	**45.10**	**154**	LR		LR	04 19 44.6	
	comp=Z,54nm,20.1s,baz=68,slow=35							
SONM	**Songino Array**	**45.80**	**66**	P		**P**	**04 01 42.9**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=349,slow=5.9,SNR=2.5							
	comp=Z,0.5nm,0.8s							
NEW	**Newport**	**48.02**	**309**	LR		LR	04 21 08.2	
	comp=Z,86nm,21.6s,baz=10.0,slow=35							
MSO	**Missoula**	**48.95**	**306**	P		**P**	**04 02 09.1**	**+1.7**
MSO				IAmb		IAmb	04 02 19.2	
	comp=Z,3.3nm,0.9s							
**EC

SGF				SG	Sb	04 19 01.7	+0.6	
KTK1	**Kautokeino**	**2.62**	**265**	PG	Pb	04 18 32.3	-0.8	
HEF	**Hetta**	**2.67**	**251**	PG	Pb	04 18 33.7	-0.3	
HEF				MSG		04 19 03.9		
	comp=Z,1.9nm,0.2s							
OLKF	**Oulanka, Finla**	**3.13**	**188**	PG	Pb	04 18 40.4	-1.4	
OLKF				SG	Sb	04 19 20.3	-0.1	
KU6	**Riekki**	**3.41**	**184**	SG	Sb	04 19 28.9	+0.5	
KIF	**Kilpisjarvi**	**3.48**	**268**	SN	Sn	04 19 22.1	-0.4	
MSF	**Maaselka**	**3.56**	**190**	SG	Sb	04 19 33.9	+1.1	
TRO	**Tromso**	**4.07**	**279**	PB	Pb	04 18 55.9	-1.9	

HEL 08 04:18:38.8±0.5, 67°82'N×20°37'E, h0km, ML1.5, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LANU	**Lannavaara**	**0.66**	**68**	PB	Pg	04 18 51.5	+0.1
LANU				SG	Sg	04 19 00.5	+0.7
KIF	**Kilpisjarvi**	**1.21**	**7**	PG	Pg	04 19 01.9	0.0
KIF				SG	Sg	04 19 14.2	-3.3
KIF				MSG		04 19 16.4	
	comp=Z,7.4nm,0.2s						
PAJU	**Pajala**	**1.32**	**126**	PG	Pg	04 19 02.9	-1.2
	baz=306						
PAJU				SN	Sg	04 19 21.6	+0.3
HEF	**Hetta**	**1.37**	**63**	PN	Pg	04 19 04.6	-0.4
HEF				MSG		04 19 20.0	
	comp=Z,3.1nm,0.2s						
ERTU	**Ertsjaerv**	**1.45**	**150**	PG	Pn	04 19 05.2	-1.0
ERTU				SN	Sb	04 19 25.5	-0.1
KLF	**Kolari**	**1.50**	**111**	SG	Sn	04 19 27.9	+0.8
KLF	**Kolari**	**1.50**	**111**	PN	Pn	04 19 06.6	-0.3
KLF				SN	Sn	04 19 27.9	+0.8
KTK1	**Kautokeino**	**1.60**	**40**	PG	Pn	04 19 06.7	-1.7
KTK1				SN	Sg	04 19 32.4	+2.1
TRO	**Tromso**	**1.90**	**345**	SG	Sb	04 19 38.0	-0.5
TRO	**Tromso**	**1.90**	**345**	SN	Sb	04 19 38.0	-0.5
KALU	**Kalix**	**2.29**	**148**	PG	Pn	04 19 19.3	+1.5
KALU				SG	Sb	04 19 49.9	+0.2
TOF	**Tornio**	**2.34**	**136**	SG	Sb	04 19 50.8	-0.2
TOF	**Tornio**	**2.34**	**136**	PG	Pn	04 19 20.0	+1.7
TOF				MSG		04 19 48.0	
	comp=Z,1.7nm,0.2s						
TOF				SG	Sb	04 19 50.8	-0.2
RNF	**Rovaniemi**	**2.51**	**116**	PG	Pb	04 19 23.2	-1.5
RNF				SG	Sb	04 19 57.1	+1.1
ARA0	**ARCESS Array S**	**2.55**	**45**	PB	Pn	04 19 22.3	+0.9
	baz=226						
KEV	**Kevo**	**3.10**	**48**	MSG		04 20 10.0	
	comp=Z,1.2nm,0.2s						
KEV				SG	Sb	04 20 13.0	-0.1
OBF0	**Syolatti, Pyha**	**3.68**	**153**	PN	Pn	04 19 35.2	-1.6

*UCR **08** 04:33:16.7±0.6, 12°69N×90°73W, h70km±60km, ML3.8, mb4.3(NEIC)*
*SNET **08** 04:33:16.7±0.6, 12°69N×90°73W, h70km±61km, ML4.0*
*NEIC **08** 04:33:21.6±1.7, 12°87N±0°09×90°51W±0°08, h51km±4km, mb4.3/28, Md4.0(SNET), Error ellipse: s-maj=14.8km s-min=8.0km az=216.0*
*IDC **08** 04:33:24.5±3.9, 13°03N×90°16W, h69km±38km, mb3.7/7, mbtmp4.0/8, ML3.3/1, MS3.2/8, Error ellipse: s-maj=43.3km s-min=18.2km az=52.0*
*GCG **08** 04:33:38.9±0.3, 14°70N×90°84W, h35km±7km, MD3.6*

ISC 08 04:33:17.9±0.8, 12°76N±0°06×90°56W±0°06, h24km, n83, σ1§51/82, mb4.3/14, MS3.2/7, 8C, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NUBE	**Las Nubes**	**1.36**	**34**	*e*P	**Pn**	**04 33 42.1**	**+0.5**
NUBE	**Las Nubes**	**1.36**	**34**	*e*P	**Pn**	**04 33 42.1**	**+0.5**
CEVE	**Cerro Verde**	**1.40**	**41⇑**	*e*P	**Pn**	**04 33 43.2**	**+1.1**
CEVE				*e*S	**Sb**	**04 34 04.1**	**+3.2**
CEVE				IAML		04 34 07.6	
	comp=Z,2μm,0.3s						
CEVE	**Cerro Verde**	**1.40**	**41⇑**	*e*P	**Pn**	**04 33 43.2**	**+1.1**
CEVE				*e*S	**Sb**	**04 34 04.1**	**+3.2**
CEVE				IAML		04 34 07.6	
	comp=Z,2μm,0.3s						
JAYA	**Jayaque - finc**	**1.40**	**51⇑**	*e*P	**Pn**	**04 33 43.0**	**+0.9**
JAYA				IAML		04 33 43.7	
	comp=Z,1μm,0.2s						
JAYA				*e*S	**Sb**	**04 34 03.0**	**+2.1**
JAYA	**Jayaque - finc**	**1.40**	**51⇑**	*e*P	**Pn**	**04 33 43.0**	**+0.9**
JAYA				IAML		04 33 43.7	
	comp=Z,1μm,0.2s						
JAYA				*e*S	**Sb**	**04 34 03.0**	**+2.1**
LALI	**Alcalda de L**	**1.41**	**59**	*e*P	**Pn**	**04 33 42.7**	**+0.7**
LALI				*e*S	**Sb**	**04 34 03.3**	**+2.3**
LALI	**Alcalda de L**	**1.41**	**59**	*e*P	**Pn**	**04 33 42.7**	**+0.7**
LALI				*e*S	**Sb**	**04 34 03.3**	**+2.3**
SLOZ	**Alcaldia de Sa**	**1.47**	**31**	*e*P	**Pn**	**04 33 43.4**	**+0.6**
CEDA	**San Andres**	**1.54**	**48⇑**	*i*P	**Pn**	**04 33 45.0**	**+1.2**
CEDA				IAML		04 34 13.3	
	comp=Z,848nm,0.7s						
CEDA	**San Andres**	**1.54**	**48⇑**	*i*P	**Pn**	**04 33 45.0**	**+1.2**
CEDA				IAML		04 34 13.3	
	comp=Z,848nm,0.7s						
SNET	**Serv Nac Est T**	**1.59**	**54**		**Pn**	**04 33 45.0**	**+0.4**
UEES	**Universidad Ev**	**1.60**	**53**	*e*P	**Pn**	**04 33 45.5**	**+0.8**
UEES	**Universidad Ev**	**1.60**	**53**	*e*P	**Pn**	**04 33 45.5**	**+0.8**
FUG	**Fuego 3**	**1.70**	**351**	*e*P	**Pb**	**04 33 46.8**	**-1.8**
SJTE	**Alcalda de S**	**1.73**	**61**	*e*P	**Pn**	**04 33 47.3**	**+0.7**
SJTE	**Alcalda de S**	**1.73**	**61**	*e*P	**Pn**	**04 33 47.3**	**+0.7**
NBG	**Las Nubes**	**1.82**	**6**	*e*P	**Pb**	**04 33 50.2**	**-0.6**
PAVA	**Las Pavas**	**1.84**	**59**	*e*P	**Pn**	**04 33 49.7**	**+1.6**
PAVA	**Las Pavas**	**1.84**	**59**	*e*P	**Pn**	**04 33 49.7**	**+1.6**
COEG	**Centro de Oper**	**1.84**	**62⇑**	*e*P	**Pn**	**04 33 49.0**	**+0.9**
COEG				IAML		04 33 50.2	
	comp=Z,1μm,0.3s						
COEG	**Centro de Oper**	**1.84**	**62⇑**	*e*P	**Pn**	**04 33 49.0**	**+0.9**
COEG				IAML		04 33 50.2	
	comp=Z,1μm,0.3s						
SCLA	**Alcaldia de Sa**	**2.01**	**62**	*e*P	**Pn**	**04 33 51.8**	**+1.4**
SCLA	**Alcaldia de Sa**	**2.01**	**62**	*e*P	**Pn**	**04 33 51.8**	**+1.4**
RTAL	**Retalhuleu**	**2.07**	**328**		**Pn**	**04 33 50.5**	**-0.6**
ESQI	**Esquipulas**	**2.14**	**33**		**Pn**	**04 33 53.8**	**+1.6**
STG3	**Santiaguito 3,**	**2.17**	**333**	*e*P	**Pn**	**04 33 53.0**	**+0.2**
MRL	**Marmol**	**2.46**	**20**	*e*P	**Pb**	**04 33 59.6**	**-1.9**
MRL				*e*S	Sn	04 34 15.8	-10
LCND	**La Caada**	**2.66**	**78**	*e*P	**Pn**	**04 33 60.0**	**+0.7**
LCND	**La Caada**	**2.66**	**78**	*e*P	**Pn**	**04 33 60.0**	**+0.7**
HUEH	**Huehuetenango**	**2.70**	**340**		**Pn**	**04 34 01.0**	**+1.0**
CRIN	**San Cristobal**	**3.42**	**91**		**Pn**	**04 34 10.6**	**+0.7**
CRIN				Sn	**Sn**	**04 34 47.6**	**-2.2**
TGUH	**Tegucigalpa,Un**	**3.45**	**68**	Pn	**Pn**	**04 34 11.3**	**+1.1**
CNGN	**Cerro Negro**	**3.78**	**94**		**Pn**	**04 34 14.8**	**0.0**
CCIG	**Comitan**	**3.82**	**337**	Pn	**Pn**	**04 34 17.3**	**+1.9**
MATN	**Matagalpa**	**4.52**	**87**	Pn	**Pn**	**04 34 24.3**	**-0.7**
BOAB	**BOACO BROADBAN**	**4.79**	**93**		**Pn**	**04 34 28.7**	**+0.1**
ORTG	**Ortega, Santa**	**5.54**	**115**	Pn	**Pn**	**04 34 40.8**	**+1.8**
JTS	**Las Juntas de**	**6.02**	**114**	P	**Pn**	**04 34 47.9**	**+2.4**
	comp=Z,0.8nm,0.3s,baz=182,slow=21,SNR=7.8						
JTS				S	**Sn**	**04 35 50.2**	**-3.6**
	comp=Z,1.8nm,0.4s,baz=356,slow=19,SNR=0.9						
JTS				LR	LR	04 37 02.9	
	comp=Z,75nm,19.6s,baz=20,slow=38						
	comp=Z,4.4nm,0.3s						
JTS	**Las Juntas de**	**6.02**	**114**		**Pn**	**04 34 47.7**	**+2.2**
RIMA	**Rio Macho**	**7.21**	**114**		**Pn**	**04 35 04.6**	**+2.5**
SRBA	**San Rafael, Bu**	**7.89**	**116**		**Pn**	**04 35 13.8**	**+2.5**
DRK0	**Durika**	**7.98**	**115**		**Pn**	**04 35 14.8**	**+2.2**
BRU2	**Volcan**	**8.68**	**116**		**Pn**	**04 35 23.9**	**+1.8**
TLIG	**Tlapa**	**9.08**	**303**	Pn	**Pn**	**04 35 29.3**	**+1.6**
LRAL	**Lakeview Retre**	**20.44**	**9**		**P**	**04 37 53.1**	**-0.5**
LRAL				IAmb	IAmb	04 37 59.2	
	comp=Z,10nm,0.7s						
Z47A	**Carrollton**	**20.47**	**6**	P	**P**	**04 37 54.3**	**+0.4**
TX32	**Lajitas Array**	**20.50**	**326**	P	Pn	04 37 56.4	-0.3
TXAR	**Lajitas Array**	**20.50**	**326**	P	Pn	04 37 57.0	+0.3
	comp=Z,1.7nm,0.6s,baz=152,slow=12,SNR=27						
	comp=Z,1.7nm,0.6s						
TXAR	**Lajitas Array**	**20.50**	**326**	P	Pn	04 37 56.1	-0.5
TX31	**Lajitas Ar. Si**	**20.50**	**326**	P	Pn	04 37 56.2	-0.5
Z51A	**Franklin**	**21.04**	**13**	P	**P**	**04 37 55.7**	**-4.4**
X48A	**Hartselle**	**21.83**	**8**	P	**P**	**04 38 08.7**	**+0.2**
X48A				IAmb	IAmb	04 38 11.3	
	comp=Z,8.7nm,0.7s						
SWET	**Sewanee**	**22.74**	**10**	P	**P**	**04 38 17.8**	**-0.6**
SWET				IAmb	IAmb	04 38 20.2	
	comp=Z,13nm,0.9s						
FNO	**Franklin**	**23.23**	**346**		**P**	**04 38 22.4**	**-1.0**
MNTX	**Cornudas Mount**	**23.26**	**326**	P	**P**	**04 38 24.6**	**+0.8**
CLTN	**Cedars of Leba**	**23.54**	**9**	P	**P**	**04 38 26.0**	**-0.3**
CLTN				IAmb	IAmb	04 38 27.8	
	comp=Z,11nm,0.7s						
U40A	**Yellville**	**23.58**	**355**	P	**P**	**04 38 27.0**	**+0.2**
TKL	**Tuckaleechee C**	**23.61**	**14**	P	**P**	**04 38 27.0**	**0.0**
	comp=Z,6.4nm,0.8s,baz=176,slow=10,SNR=6.5						
TKL				LR	LR	04 47 26.3	
	comp=Z,56nm,21.8s,baz=184,slow=36						
	comp=Z,6.4nm,0.8s						
TKL	**Tuckaleechee C**	**23.61**	**14**	P	**P**	**04 38 27.1**	**0.0**
TKL				IAmb	IAmb	04 38 28.6	
	comp=Z,7.7nm,0.8s						
HHAR	**Hobbs**	**23.61**	**353**	P	**P**	**04 38 26.1**	**-1.0**
U49A	**Red Boiling Sp**	**24.04**	**9**	P	**P**	**04 38 30.5**	**-0.6**
T47A	**Sharon Grove**	**24.32**	**7**	P	**P**	**04 38 33.4**	**-0.3**
T35A	**Sooner Cattle**	**24.64**	**348**		**P**	**04 38 36.1**	**-0.6**
T35A				IAmb	IAmb	04 38 38.9	
	comp=Z,6.2nm,0.7s						
T50A	**Nancy**	**24.69**	**11**	P	**P**	**04 38 37.7**	**+0.5**
T50A				IAmb	IAmb	04 38 39.0	
	comp=Z,8.4nm,0.9s						
S44A	**Carbondale**	**24.86**	**2**	P	**P**	**04 38 38.8**	**+0.2**
S44A				IAmb	IAmb	04 38 39.2	
	comp=Z,8.9nm,0.8s						
S39A	**Bolivar**	**24.95**	**355**	P	**P**	**04 38 39.4**	**0.0**
S39A				IAmb	IAmb	04 38 41.1	
	comp=Z,8.6nm,0.7s						
CCM	**Cathedral Cave**	**25.20**	**359**	P	**P**	**04 38 40.5**	**-1.1**
CCM				IAmb	IAmb	04 38 51.3	
	comp=Z,6.3nm,0.6s						
P40A	**Paris**	**26.69**	**357**	P	**P**	**04 38 53.9**	**-1.3**
SPMN	**Marine on St.**	**32.41**	**357**	P	**P**	**04 39 44.3**	**-1.5**
SADO	**Sadowa**	**33.36**	**15**	LR	LR	04 53 07.7	
	comp=Z,46nm,20.8s,baz=163,slow=36						
NVAR	**Mina Array Bea**	**35.51**	**321**	P	**P**	**04 40 15.8**	**+2.6**
	comp=Z,1.5nm,0.8s,baz=136,slow=8.3,SNR=10						
	comp=Z,1.5nm,0.8s						
NVAR	**Mina Array Bea**	**35.51**	**321**	P	**P**	**04 40 12.8**	**-0.3**
ULM	**Lac du Bonnet**	**37.63**	**354**	P	**P**	**04 40 29.5**	**-1.3**
	comp=Z,2.4nm,0.6s,baz=170,slow=9.4,SNR=5.9						
	comp=Z,2.4nm,0.6s						
YBH	**Yreka Blue Hor**	**40.20**	**322**	LR	LR	05 00 37.3	
	comp=Z,35nm,19.9s,baz=215,slow=41						
SIV	**San Ignacio**	**40.83**	**134**	P	**P**	**04 40 58.4**	**+0.5**
	comp=Z,0.5nm,0.3s,baz=304,slow=12,SNR=7.6						
	comp=Z,0.5nm,0.3s						
NEW	**Newport**	**41.72**	**333**	LR	LR	04 59 55.8	
	comp=Z,26nm,19.9s,baz=193,slow=38						
SCHQ	**Schefferville**	**45.91**	**19**	P	**P**	**04 41 36.8**	**-1.7**
	comp=Z,4.1nm,0.5s,baz=226,slow=7.9,SNR=14						
	comp=Z,4.1nm,0.5s						
SCHQ	**Schefferville**	**45.91**	**19**	P	**P**	**04 41 36.5**	**-1.9**
SFJD	**Kangerlussuaq**	**60.27**	**17**	LR	LR	05 11 14.6	
	comp=Z,20nm,18.1s,baz=318,slow=38						
RES	**Resolute Bay**	**61.96**	**359**	LR	LR	05 13 28.7	
	comp=Z,42nm,18.0s,baz=72,slow=39						
TORD	**Torodi Ar. Bea**	**89.30**	**77**	P	**P**	**04 46 12.8**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=292,slow=6.4,SNR=2.0						
TORD				LR	LR	05 23 55.8	
	comp=Z,29nm,18.9s,baz=227,slow=34						
	comp=Z,0.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**89.30**	**77**	P	**P**	**04 46 12.1**	**-0.8**

*MOS **08** 04:38:42.5±1.1, 36°22N×71°06E, h153km, mb3.7/4, Error ellipse: s-maj=14.5km s-min=5.1km az=78.0*
*IDC **08** 04:38:45.0±3.8, 36°35N×71°12E, h155km±33km, mb3.5/10, mbtmp4.0/12, Error ellipse: s-maj=26.0km s-min=16.7km az=23.0*
*NNC **08** 04:38:46.8±4.2, 36°96N×70°85E, h0km, mb4.5, mpv4.6, Error ellipse: s-maj=33.5km s-min=26.3km az=178.0*
*SOME **08** 04:38:59.1, 38°47N×71°95E, h5km*

ISC 08 04:38:48.5±0.7, 36°57N±0°06×71°19E±0°07, h188km, n78, σ1§78/88, mb3.7/10, 9C-9D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.81**	**168**	⇓P	Pn	04 39 37.8	+2.4
CEP				S	**Sn**	**04 40 14.0**	**+2.1**
CHCP	**Chirah Chowk**	**3.37**	**149**	P	Pn	04 39 44.8	+2.8
THW	**Thamme Wali**	**3.80**	**173**	P	Pn	04 39 49.2	+1.9
KSH	**Kashi**	**4.79**	**51**	Pn	**Pn**	**04 39 57.6**	**-2.3**
KSH				Sn	Sn	04 40 47.5	-8.6
KSH				pmax	pmax		
	comp=Z,180nm,0.4s						
KSH				smax	smax		
	comp=N,140nm,0.5s						
KSH				smax	smax		
	comp=E,150nm,0.7s						
IUG	**luzhnay**	**5.64**	**351**	*d* iPN	**Pn**	**04 40 11.8**	**+0.9**
IUG	**luzhnay**	**5.64**	**351**	*e*P	**Pn**	**04 40 13.3**	**+2.4**
	comp=E,611nm,0.1s						
IUG				*e*S	**Sn**	**04 41 12.7**	**-3.2**
	comp=E,112nm,0.7s						
IUG	**luzhnay**	**5.64**	**351**	⇓*i*P	**Pn**	**04 40 11.8**	**+0.9**
	baz=352						
IUG				*e*S	**Sn**	**04 41 13.1**	**-2.8**
	baz=352						
AML	**Almayashu**	**5.88**	**19**	P	**Pn**	**04 40 15.1**	**+0.8**
	SNR=210						
UCH	**Uchtor**	**6.21**	**23**	P	**Pn**	**04 40 19.4**	**+0.8**
	SNR=59						
DZA	**Taraz**	**6.31**	**1**	*e*PN	**Pn**	**04 40 19.9**	**+0.3**
DZA	**Taraz**	**6.31**	**1**	*e*P	**Pn**	**04 40 19.9**	**+0.3**
	baz=1.2						
DZA				*e*S	**Sn**	**04 41 29.4**	**-2.2**
	baz=1.2						
MRKS	**Merke**	**6.36**	**14**	*e*P	Pn	04 40 25.1	+4.8
	comp=E,21nm,0.2s						
MRKS				*e*S	**Sn**	**04 41 33.7**	**+0.8**
	comp=E,79nm,0.8s						
EKS2	**Erkin-Say**	**6.40**	**17**	P	**Pn**	**04 40 21.7**	**+0.9**
	SNR=16						
BRLS	**Borolday**	**6.53**	**351**	*e*PN	Pn	04 40 19.2	-3.2
BRLS	**Borolday**	**6.53**	**351**	*e*P	**Pn**	**04 40 21.1**	**-1.4**
	comp=E,9.6nm,0.6s						
BRLS				*e*S	Sn	04 41 26.8	-10
	comp=E,19nm,0.3s						
BRLS	**Borolday**	**6.53**	**351**	*e*P	Pn	04 40 19.2	-3.2
	baz=351						
BRLS				*e*S	Sn	04 41 26.6	-10
	baz=351						
KK31	**Karatay Array**	**6.54**	**356**	PN	**Pn**	**04 40 22.7**	**+0.1**
KK31	**Karatay Array**	**6.54**	**356**	⇓P	**Pn**	**04 40 21.2**	**-1.4**
	comp=E,16nm,0.4s,baz=180,slow=12,SNR=228						
KK31				⇓S	**Sn**	**04 41 32.4**	**-4.6**
	comp=E,12nm,0.7s,baz=170,slow=17,SNR=7.0						
AAK	**Ala-Archa**	**6.57**	**22**	P	**Pn**	**04 40 24.2**	**+1.1**
	SNR=16						
AAK	**Ala-Archa**	**6.57**	**22**	P	**Pn**	**04 40 24.2**	**+1.1**
	comp=E,30nm,0.7s,baz=211,slow=8.2,SNR=37						
AAK				S	**Sn**	**04 41 36.7**	**-1.2**
	comp=E,8.9nm,0.4s,baz=143,slow=21,SNR=16						
AAK	**Ala-Archa**	**6.57**	**22**	*ce*PN	**Pn**	**04 40 23.9**	**+0.8**
AAK				pmax	pmax		
	comp=Z,23nm,0.6s						
KBK	**Karagaybulak**	**6.73**	**24**	P	**Pn**	**04 40 26.6**	**+1.4**
	SNR=19						
ULHL	**Ulahol**	**6.88**	**33**	P	**Pn**	**04 40 27.8**	**+0.6**
	SNR=9.3						
CHMS	**Chumysh**	**6.98**	**22**	P	**Pn**	**04 40 29.0**	**+0.8**
	SNR=14						
CHMS	**Chumysh**	**6.98**	**22**	*i* PN	**Pn**	**04 40 28.8**	**+0.6**
CHMS				pmax	pmax		
	comp=Z,27nm,0.6s						
CHMS	**Chumysh**	**6.98**	**22**	⇑P	**Pn**	**04 40 28.9**	**+0.6**
	comp=Z,27nm,0.6s						
CHMS				⇓S	**Sn**	**04 41 45.3**	**-2.0**
	comp=Z,21nm,0.7s						
USP	**Ospenovka**	**7.15**	**20**	P	**Pn**	**04 40 30.4**	**-0.1**
	SNR=11						
TKM2	**Tokmak 2**	**7.19**	**27**	P	**Pn**	**04 40 32.6**	**+1.3**
	SNR=57						
TKM2	**Tokmak 2**	**7.19**	**27**	*i* PN	**Pn**	**04 40 32.0**	**+0.8**
TKM2				pmax	pmax		
	comp=Z,36nm,0.5s						
TKM2	**Tokmak 2**	**7.19**	**27**	⇓P	**Pn**	**04 40 32.1**	**+0.8**
	comp=Z,36nm,0.6s						
TKM2				⇓S	**Sn**	**04 41 50.5**	**-2.1**
	comp=Z,18nm,0.7s						
SGDS	**Sogindy**	**7.36**	**20**	*e*PN	**Pn**	**04 40 33.1**	**-0.2**
SGDS	**Sogindy**	**7.36**	**20**	*e*P	**Pn**	**04 40 37.0**	**+3.6**
	comp=Z,3.3nm,0.3s						
SGDS				*e*S	**Sn**	**04 41 55.3**	**-1.2**
	comp=Z,13nm,0.5s						
SGDS	**Sogindy**	**7.36**	**20**	*e*P	**Pn**	**04 40 33.2**	**-0.2**
	baz=20						
SGDS				*e*S	**Sn**	**04 41 55.3**	**-1.2**
	baz=20						
KST	**Kastek**	**7.43**	**28**	*e*P	**Pn**	**04 40 38.6**	**+4.3**
	comp=Z,6.0nm,0.5s						
KST				*e*S	**Sn**	**04 41 58.2**	**-0.1**
	comp=Z,18nm,0.8s						
TNSS	**Tian-Shan**	**7.83**	**33**	*e*PN	**Pn**	**04 40 39.6**	**-0.1**
TNSS	**Tian-Shan**	**7.83**	**33**	*e*P	**Pn**	**04 40 39.7**	**-0.1**
AAA	**Alma-Ata**	**7.96**	**32**	*e*PN	**Pn**	**04 40 39.9**	**-1.2**
AAA	**Alma-Ata**	**7.96**	**32**	*e*P	**Pn**	**04 40 39.9**	**-1.2**
MDOK	**Medeo**	**7.97**	**33**	*e*PN	**Pn**	**04 40 41.4**	**0.0**
MDOK	**Medeo**	**7.97**	**33**	*e*P	**Pn**	**04 40 41.5**	**0.0**
	baz=32						
KUU	**Kurty**	**8.30**	**27**	*e*PN	**Pn**	**04 40 44.3**	**-1.3**
KUU	**Kurty**	**8.30**	**27**	*e*P	**Pn**	**04 40 44.3**	**-1.3**
	baz=26						
CHKK	**Chushkaly**	**8.52**	**30**	*e*PN	**Pn**	**04 40 47.6**	**-0.8**
CHKK	**Chushkaly**	**8.52**	**30**	*e*P	**Pn**	**04 40 47.7**	**-0.8**
	baz=29						
KPKS	**Kokpek**	**8.97**	**38**	*e*P	**Pn**	**04 40 53.9**	**-0.4**
KPKS	**Kokpek**	**8.97**	**38**	*e*P	**Pn**	**04 40 54.0**	**-0.4**
	baz=37						
SHLS	**Shalkode**	**9.15**	**41**	*e*P	**Pn**	**04 40 59.0**	**+2.3**
SHLS	**Shalkode**	**9.15**	**41**	*e*P	**Pn**	**04 40 59.0**	**+2.3**
	baz=42						
PDGK	**Podgornoye**	**9.28**	**41**	P	**Pn**	**04 40 58.2**	**-0.3**
PDGK	**Podgornoye**	**9.28**	**41**	⇑P	**Pn**	**04 40 58.2**	**-0.3**
	comp=Z,5.6nm,0.8s						
OTUK	**Ortayu**	**11.70**	**4**	P	**Pn**	**04 41 26.8**	**-2.8**
OTUK	**Ortayu**	**11.70**	**4**	⇑P	**Pn**	**04 41 26.8**	**-2.8**
	comp=Z,3.3nm,0.8s						
MK31	**Makanchi Array**	**13.14**	**36**	*i* P	**Pn**	**04 41 47.2**	**-0.8**
MK31				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	**13.14**	**36**	P	**Pn**	**04 41 48.6**	**+0.6**
	comp=Z,1.5nm,0.8s,baz=220,slow=11,SNR=14						
MKAR	**Makanchi Array**	**13.14**	**36**	*ce*P	**Pn**	**04 41 49.4**	**+1.4**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KURBB	**Kurchatov Arra**	**15.01**	**18**	P	**Pn**	**04 42 09.1**	**-2.0**
	comp=Z,0.5nm,0.4s,baz=209,slow=11,SNR=4.3						
AB31	**Akbulak array**	**15.10**	**331**	*e*P	**Pn**	**04 42 13.8**	**+1.7**
AB31				*e*S	S	04 44 49.8	-11
AB31	**Akbulak array**	**15.10**	**331**	P	**Pn**	**04 42 13.8**	**+1.7**
	comp=Z,1.5nm,0.5s,baz=145,slow=12,SNR=43						
AB31				S	**S**	**04 44 57.1**	**-3.6**
	comp=Z,1.9nm,0.7s,baz=141,slow=24,SNR=5.8						
BRVK	**Borovoye**	**16.50**	**358**	*ce*P	**P**	**04 42 28.0**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKTO	**Aktyubinsk**	**16.79**	**330**	P	**P**	**04 42 33.0**	**+1.3**
	comp=Z,3.3nm,0.7s,baz=146,slow=10,SNR=13						
AKTO	**Aktyubinsk**	**16.79**	**330**	P	**P**	**04 42 33.0**	**+1.3**
AKTO	**Aktyubinsk**	**16.79**	**330**	⇓P	**Pn**	**04 42 35.6**	**+2.9**
	comp=Z,4.5nm,0.8s						
AKTO				⇑S	**S**	**04 45 36.7**	**-0.4**
	comp=Z,2.4nm,0.9s						
GOMU	**GeErMu**	**19.02**	**84**	P	**P**	**04 42 51.6**	**-4.9**
GOMU				pP	Pn	04 42 56.5	-2.9
GOMU				sP	pP	04 42 56.9	-32
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.4s						
GOMU				pmax	pmax		
	comp=Z,110nm,8.8s						
ZALV	**Zalesovo Beam**	**19.79**	**24**	P	**P**	**04 43 05.2**	**+1.1**
	comp=Z,0.7nm,0.3s,baz=224,slow=7.2,SNR=5.0						
	comp=Z,0.7nm,0.3s						
ZALV	**Zalesovo Beam**	**19.79**	**24**	*i* P	**P**	**04 43 04.9**	**+0.8**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ARU	**Arti**	**21.61**	**341**	*c i*P	**P**	**04 43 24.3**	**+0.9**
ARU				*PP	**pP**	**04 43 56.3**	**-0.1**
ARU						04 44 09.2	
ARU				S	**S**	**04 47 14.5**	**+4.4**
ARU				pmax	pmax		
	comp=Z,7.0nm,1.5s						
AKASG	**Malin Array Be**	**33.02**	**309**	P	**P**	**04 45 06.4**	**+0.8**
	comp=Z,1.4nm,0.6s,baz=75,slow=6.3,SNR=10.0						
	comp=Z,1.4nm,0.6s						
FINES	**FINESS Array B**	**37.51**	**326**	P	**P**	**04 45 44.7**	**+0.9**
	comp=Z

KRVT	**Keravat (AS076**	**1.26**	**24**	Pg		**Pn**	**05 33 27.9**	**+0.1**
	872nm,0.3s,baz=218,slow=4.3,SNR=145							
KRVT				Lg		Lg	05 33 45.7	
	1μm,0.3s,baz=252,slow=20,SNR=13							
RABL	**Rabaul**	**1.43**	**27**	Pn		**Pn**	**05 33 30.6**	**+0.6**
PMG	**Port Moresby**	**5.83**	**228**	Pn		**Pn**	**05 34 30.0**	**-0.2**
	16nm,0.3s,baz=32,slow=12,SNR=25							
PMG				Sn		**Sn**	**05 35 35.4**	**-0.3**
	6.0nm,0.3s,baz=115,slow=14,SNR=2.8							
PMG				LR		LR	05 36 40.7	
	comp=Z,152nm,20.3s,baz=44,slow=37							
	52nm,0.4s							
PMG	**Port Moresby**	**5.83**	**228**			**Pn**	**05 34 30.4**	**+0.2**
COEN	**Coen**	**11.77**	**224**	Pn		**Pn**	**05 35 49.5**	**-2.1**
CTA	**Charters Tower**	**15.40**	**199**	LR		LR	05 43 05.2	
	comp=Z,94nm,18.0s,baz=274,slow=39							
GUMO	**Guam**	**20.05**	**341**	LR		LR	05 44 03.4	
	comp=Z,47nm,21.3s,baz=110,slow=33							
WB0	**Warramunga Arr**	**21.90**	**228**	P		**P**	**05 37 54.3**	**-0.6**
WR0	**Warramunga Arr**	**21.91**	**227**	P		**P**	**05 37 54.5**	**-0.5**
WR0				IAmb		IAmb	05 37 57.7	
	comp=Z,7.6nm,0.7s							
DZM	**Mont Dzumac**	**21.93**	**140**	P		**P**	**05 37 54.8**	**-0.5**
	comp=Z,4.6nm,0.7s,baz=287,slow=11,SNR=2.4							
DZM				LR		LR	05 45 08.2	
	comp=Z,152nm,20.3s,baz=320,slow=33							
	comp=Z,4.6nm,0.7s							
DZM	**Mont Dzumac**	**21.93**	**140**	P		**P**	**05 37 54.8**	**-0.5**
DZM				IAmb		IAmb	05 38 23.7	
	comp=Z,31nm,1.4s							
WRAB	**Tennant Creek**	**22.03**	**228**	P		**P**	**05 37 57.2**	**+0.9**
WRAB				IAmb		IAmb	05 37 59.1	
	comp=Z,13nm,0.6s							
WB2	**Warramunga Arr**	**22.04**	**228**	P		**P**	**05 37 55.5**	**-0.9**
WB2				IAmb		IAmb	05 37 58.9	
	comp=Z,10.0nm,0.8s							
WRA	**Warramunga Arr**	**22.05**	**228**	P		**P**	**05 37 55.5**	**-1.0**
	comp=Z,7.1nm,0.6s,baz=53,slow=9.8,SNR=60							
WRA				PcP		**PcP**	**05 41 55.1**	**+2.2**
	comp=Z,0.7nm,0.5s,baz=43,slow=1.9,SNR=5.6							
	comp=Z,7.1nm,0.6s							
WRA	**Warramunga Arr**	**22.05**	**228**	IAmb		IAmb	05 38 04.3	
	comp=Z,0.2nm,1.0s							
KNRA	**Kununurra**	**24.53**	**244**	P		**P**	**05 38 20.5**	**-0.3**
AS31	**Alice Springs**	**24.80**	**221**	P		**P**	**05 38 23.6**	**+0.3**
ASAR	**Alice Springs**	**24.80**	**221**	P		**P**	**05 38 23.2**	**0.0**
	comp=Z,9.9nm,0.8s,baz=56,slow=9.2,SNR=65							
	comp=Z,9.9nm,0.8s							
BATI	**Baumata**	**27.98**	**259**	LR		LR	05 52 51.3	
	comp=Z,314nm,18.2s,baz=251,slow=42							
DAV	**Davao City (W)**	**28.72**	**295**	LR		LR	05 48 04.1	
	comp=Z,93nm,21.9s,baz=185,slow=31							
JCJ	**Chichijima**	**33.61**	**345**	LR		LR	05 52 10.3	
	comp=Z,39nm,20.9s,baz=198,slow=34							
MBWA	**Marble Bar**	**34.53**	**240**	P		**P**	**05 39 49.2**	**-0.3**
PSA00	**Pilbara Seismi**	**34.59**	**239**	P		**P**	**05 39 49.9**	**-0.1**
GIRL	**Giralia**	**39.82**	**241**	P		**P**	**05 40 34.2**	**-0.2**
MORW	**Morawa**	**40.93**	**231**	P		**P**	**05 40 46.0**	**+2.6**
MORW				IAmb		IAmb	05 41 14.0	
	comp=Z,13nm,1.1s							
MJAR	**Matsushiro Arr**	**43.61**	**344**	LR		LR	05 56 28.1	
	comp=Z,46nm,21.0s,baz=194,slow=32							
KLR	**Kul'dur**	**57.14**	**345**	LR		LR	06 04 19.8	
	comp=Z,51nm,22.0s,baz=228,slow=33							
PETK	**Petropavlovsk-**	**58.59**	**4**	P		**P**	**05 42 58.4**	**+1.2**
	comp=Z,1.6nm,0.6s,baz=134,slow=6.2,SNR=3.0							
	comp=Z,1.6nm,0.6s							
MA2	**Magadan**	**64.84**	**360**	LR		LR	06 07 37.9	
	comp=Z,20nm,21.9s,baz=284,slow=32							
SONM	**Songino Array**	**66.22**	**329**	P		**P**	**05 43 48.5**	**+0.1**
	comp=Z,1.8nm,0.6s,baz=152,slow=4.7,SNR=5.1							
	comp=Z,1.8nm,0.6s							
SONM	**Songino Array**	**66.22**	**329**	IAmb		IAmb	05 43 50.4	
	comp=Z,2.1nm,0.6s							
YAK	**Yakutsk**	**69.38**	**349**	LR		LR	06 14 59.2	
	comp=Z,23nm,20.4s,baz=267,slow=36							
VNDA	**Vanda**	**72.21**	**178**	P		**P**	**05 44 24.9**	**0.0**
	comp=Z,1.2nm,0.5s,baz=331,slow=3.5,SNR=12							
	comp=Z,1.2nm,0.5s							
MKAR	**Makanchi Array**	**79.99**	**319**	P		**P**	**05 45 09.4**	**-0.2**
	comp=Z,0.7nm,0.4s,baz=98,slow=8.3,SNR=8.9							
	comp=Z,0.7nm,0.4s							
ZALV	**Zalesovo Beam**	**81.00**	**327**	P		**P**	**05 45 13.9**	**-0.9**
	comp=Z,1.1nm,0.4s,baz=102,slow=6.2,SNR=4.5							
	comp=Z,1.1nm,0.4s							
ILAR	**Eielson Array**	**83.26**	**22**	P		**P**	**05 45 24.7**	**-1.8**
	comp=Z,0.9nm,0.7s,baz=251,slow=5.0,SNR=12							
	comp=Z,0.9nm,0.7s							
J25K	**Salcha River,**	**83.76**	**23**	P		**P**	**05 45 28.1**	**-1.1**
J25K				IAmb		IAmb	05 45 31.8	
	comp=Z,2.6nm,0.5s							
NVAR	**Mina Array Bea**	**93.50**	**52**	P		**P**	**05 46 17.2**	**+0.8**
	comp=Z,1.4nm,0.6s,baz=262,slow=6.2,SNR=16							
	comp=Z,1.4nm,0.6s							
NEW	**Newport**	**94.95**	**42**	LR		LR	06 24 50.6	
	comp=Z,23nm,18.2s,baz=252,slow=33							
PDAR	**Pinedale Array**	**100.24**	**48**	P		**Pdif**	**05 46 45.1**	**-1.8**
	comp=Z,0.6nm,0.6s,baz=270,slow=4.2,SNR=3.8							
TORD	**Torodi Ar. Bea**	**149.28**	**287**	PKPbc		**PKPbc**	**05 52 49.0**	**-0.8**
	comp=Z,3.8nm,0.4s,baz=102,slow=2.7,SNR=57							
TORD	**Torodi Ar. Bea**	**149.28**	**287**			**PKPdf**	**05 52 48.5**	**+3.1**
BDFB	**Brasilia**	**151.47**	**138**	PKPbc		**PKPbc**	**05 52 54.6**	**-0.5**
	comp=Z,1.9nm,0.5s,baz=218,slow=5.3,SNR=6.9							

*JMA **08** 05:33:27.8±0.2,24°N±2°×122°.0E±0°.4,h56km,MV2.2/8,*
TAIWAN REGION
*TAP **08** 05:33:29.0,23.98N×122°.10E,h29km±1km,ML2.8,C*
ISC 08 05:33:28.9±1.0,23°.96N±0°.04×122°.09E±0°.02,h29km±10km,
n39,σ0s49/62,1C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.44**	**272**	*e*P	**Pb**	**05 33 39.0**	**+0.6**
HWA	baz=261			*e*S	**Sn**	**05 33 46.1**	**-0.1**
TWD	**Chiawan**	**0.46**	**285**	*i* P	**Pb**	**05 33 38.7**	**-0.1**
TWD	baz=282			S	**Sb**	**05 33 45.9**	**+0.5**
ETL	**Fush Village**	**0.47**	**295**	P	**Pb**	**05 33 39.0**	**+0.2**
ETL	baz=292			*e*S	**Sb**	**05 33 46.0**	**+0.4**
NACB	**Ninganchiao**	**0.50**	**295**	P	**Pb**	**05 33 39.0**	**-0.2**
NACB	baz=292			*e*S	**Sb**	**05 33 45.0**	**-1.3**
EWUT	**Wuta**	**0.56**	**330**	*e*P	**Pb**	**05 33 40.2**	**-0.1**
ENA	baz=333 **Nanau**	**0.56**	**326**	*e*P	**Pb**	**05 33 40.5**	**+0.1**
ENA	baz=309			*e*S	**Sn**	**05 33 49.1**	**-0.1**
ETLH	baz=309 **Xiulin Townshi**	**0.60**	**294**	P	**Pb**	**05 33 40.9**	**-0.2**
ETLH	baz=292			S	**Sb**	**05 33 49.3**	**-0.1**
ESL	baz=292 **Shilin**	**0.62**	**256**	*e*P	**Pb**	**05 33 40.1**	**-1.1**
ESL	baz=249			S	**Sb**	**05 33 49.6**	**0.0**
EGFH	baz=249 **Guangfu**	**0.67**	**244**	*e*P	**Pb**	**05 33 42.0**	**-0.1**
EGFH	baz=233			*e*S	**Sb**	**05 33 51.5**	**+0.4**
TWC	baz=233 **Suao**	**0.68**	**341**	*e*P	**Pb**	**05 33 41.8**	**-0.5**
TWC	baz=351			*e*S	**Sb**	**05 33 51.1**	**-0.3**
NDS	baz=351 **Dongshan**	**0.75**	**333**	*e*P	**Pn**	**05 33 43.5**	**0.0**
NDS	baz=331			S	**Sn**	**05 33 54.1**	**+0.2**
HGSD	baz=331 **Ruisui**	**0.77**	**233**	*e*P	**Pn**	**05 33 43.5**	**-0.2**
LATG	baz=232 **Datong**	**0.77**	**318**	*e*P	**Pb**	**05 33 43.6**	**-0.2**
LATG	baz=306			S	**Sb**	**05 33 54.2**	**+0.2**
WHF	baz=306 **Hehuan Shan**	**0.77**	**284**	*i* P	**Pb**	**05 33 43.7**	**-0.4**
WHF	baz=271			S	**Sb**	**05 33 54.4**	**-0.1**
NNSB	baz=271 **Datong**	**0.79**	**306**	P	**Pn**	**05 33 43.9**	**-0.4**
NNSB	baz=304			S	**Sb**	**05 33 54.8**	**+0.1**
NNS	**Nan Shan**	**0.81**	**306**	*e*P	**Pn**	**05 33 44.4**	**0.0**
NNS	baz=305			S	**Sb**	**05 33 55.1**	**0.0**
FUSS	baz=305 **Fushou**	**0.82**	**290**	*e*P	**Pn**	**05 33 44.7**	**0.0**
ENTT	baz=289 **Nioudou**	**0.83**	**325**	*e*P	**Pb**	**05 33 44.7**	**0.0**
OWD	baz=323 **Renai**	**0.83**	**270**	*e*P	**Pn**	**05 33 44.8**	**+0.1**
OWD	baz=268			*e*S	**Sb**	**05 33 55.4**	**-0.4**
EHY	baz=268 **Hungye**	**0.83**	**237**	*e*P	**Pn**	**05 33 44.6**	**-0.1**
CHGB	baz=250 **Renai**	**0.84**	**277**	*e*P	**Pn**	**05 33 44.9**	**0.0**
CHGB	baz=265			*e*S	**Sb**	**05 33 56.1**	**-0.1**
WUSB	baz=265 **Renai**	**0.89**	**272**	*e*P	**Pn**	**05 33 45.8**	**+0.3**
VWDT	baz=271 **VWDT**	**0.89**	**257**	*e*P	**Pn**	**05 33 45.6**	**+0.2**
FUSB	baz=250 **Fushanzhiwuyua**	**0.92**	**330**	*e*P	**Pb**	**05 33 46.2**	**-0.1**
JYNG	baz=318 **Yonagunijimaku**	**0.92**	**58**	P	**Pb**	**05 33 46.0**	**-0.4**
JYNG				*e*S	**Sn**	**05 33 57.8**	**-0.4**
YHNB	**Yeheng**	**0.96**	**318**	*e*P	**Pn**	**05 33 46.4**	**-0.1**
NWLT	baz=316 **Wulai**	**0.97**	**327**	*e*P	**Pb**	**05 33 48.6**	**+1.4**
YOJ	baz=325 **Yonaguni jima**	**0.98**	**59**	*e*P	**Pb**	**05 33 47.1**	**-0.2**
YOJ	baz=60			*e*S	**Sn**	**05 33 59.1**	**-0.5**
YOJ	**Yonaguni jima**	**0.98**	**59**	P	**Pn**	**05 33 46.8**	**+0.1**
YOJ				*e*S	**Sb**	**05 34 00.2**	**+0.3**
FULB	**Fuli**	**1.05**	**224**	*e*P	**Pn**	**05 33 47.8**	**+0.1**
WCS	baz=211 **Beigang Elemen**	**1.08**	**275**	*e*P	**Pb**	**05 33 48.8**	**-0.1**
TYC	baz=274 **Yuchr**	**1.13**	**267**	*e*P	**Pn**	**05 33 49.5**	**+0.8**
TYC	baz=266			*e*S	**Sb**	**05 34 04.5**	**+0.4**
YUS	baz=266 **Yu-Shan**	**1.14**	**246**	*e*P	**Pn**	**05 33 50.0**	**+0.7**
YUS	baz=244			S	**Sn**	**05 34 04.3**	**+0.1**
SXI1	**Grass Mountain**	**1.14**	**350**	*e*P	**Pb**	**05 33 49.5**	**-0.7**
EDH	baz=5.0 **Donghe**	**1.22**	**216**	*e*P	**Pn**	**05 33 49.4**	**-0.5**
IRIF	baz=216 **Iriomote-Funau**	**1.55**	**76**	P	**Pn**	**05 33 55.1**	**+0.7**
HATJ	**Hateruma jima**	**1.57**	**86**	*e*P	**Pn**	**05 33 55.0**	**+0.2**
JIJ	**Ishigaki jima**	**1.92**	**78**	P	**Pn**	**05 33 59.7**	**+0.1**
JIJ				*e*S	**Sn**	**05 34 24.4**	**+1.6**
JISG	**Ishigakijimahi**	**2.12**	**72**	P	**Sn**	**05 34 02.2**	**-0.2**
JISG				*e*S	**Sn**	**05 34 27.1**	**-0.7**

KRSC 08 06:00:23.0±1.6,52°.34N×154°.87E,h506km±25km,ML4.0,
Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAK	**Asacha**	**1.86**	**87**	*e*P	P	06 01 28.7	+0.7
GRL	**Gorelyy**	**1.97**	**82**	*e*P	P	06 01 29.9	+1.4
MTVR	**Mutnovka**	**2.03**	**85**	*e*P	P	06 01 29.3	+0.4
RUS	**Russkaya**	**2.23**	**86**	*e*P	P	06 01 30.4	+0.7
RUS				*e*S	S	06 02 23.1	-1.0
GNL	**Ganaly**	**2.30**	**53**	*e*P	P	06 01 30.4	+0.2
KOK	**Koryaka**	**2.48**	**66**	*e*P	P	06 01 33.3	+2.2
KRX	**Arik**	**2.51**	**64**	*e*P	P	06 01 32.4	+1.0
AVH	**Avacha**	**2.52**	**67**	*e*P	P	06 01 33.4	+2.0
UGLR	**Uglovaya**	**2.56**	**68**	*e*P	P	06 01 33.7	+2.1
SMAR	**Somma**	**2.56**	**67**	*e*P	P	06 01 34.1	+2.3
SDLR	**Sedlovina**	**2.61**	**67**	*e*P	P	06 01 33.7	+1.7
SPN	**Mys Shipunski**	**3.23**	**74**	*e*P	P	06 01 36.6	+0.8
SPN				*e*S	S	06 02 34.4	-0.9
MKZ	**Mys Kozlova**	**4.66**	**59**	*e*P	P	06 01 49.7	+2.6
MKZ				*e*S	S	06 02 56.1	+0.1
KBTR	**Krutoberegovo**	**6.06**	**47**	*e*P	P	06 02 00.6	+0.7
KBTR				*e*S	S	06 03 18.6	-0.7

*TEH **08** 06:01:51.9,29°.19N×51°.33E,h8km,ML3.5*
*DSN **08** 06:01:55.9±1.7,28°.73N×51°.41E,h10km,ML3.6/8,Error*
ellipse: s-maj=25.3km s-min=8.2km az=8.0
ISC 08 06:01:52.3±1.2,29°.15N±0°.04×51°.36E±0°.05,h12km±10km,
n62,σ1s81/66,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AHBU	**AHRAM**	**0.29**	**191**	*e*Pg	**Pg**	**06 01 58.6**	**+0.4**
AHBU				*e*Sg	**Sb**	**06 02 03.3**	**-0.9**
AHBU				*e*		06 02 04.5	
	comp=Z,99nm,0.4s						
KAZ1	**Kazerun**	**0.53**	**27**	*e*Pg	**Pg**	**06 02 01.6**	**-1.1**
KAZ1				*e*Sg	**Sg**	**06 02 08.7**	**-1.1**
KAZ1				*e*		06 02 10.6	
	comp=Z,84μm,0.4s						
SHI	**Shiraz**	**1.12**	**64**	*e*Pg	**Pn**	**06 02 14.7**	**+0.7**
SHI				*e*		06 02 19.9	
	comp=Z,7μm,0.3s						
QIR1	**Qir**	**1.62**	**114**	*e*Pg	**Pg**	**06 02 23.9**	**+0.5**
ABEH	**Behbahan**	**1.74**	**327**	*e*Pg	**Pn**	**06 02 24.4**	**+2.1**
KLNJ	**Kolanjah**	**1.86**	**6**	*e*Pn	**Pn**	**06 02 26.4**	**+2.0**
KLNJ				*e*		06 03 02.4	
	comp=Z,7μm,0.5s						
JHRM	**Jahrom**	**2.05**	**108**	*e*Pn	**Pb**	**06 02 29.4**	**-0.1**
JHRM				*e*		06 03 16.5	
	comp=Z,12μm,0.5s						
LMD1	**Lamerd**	**2.41**	**138**	*e*Pn	**Pb**	**06 02 34.9**	**-0.7**
IBRJ	**Brojen**	**2.75**	**358**	*e*Pn	**Pn**	**06 02 38.3**	**+1.8**
IBRJ				*e*		06 03 24.8	
	comp=Z,2μm,1.1s						
IRAM	**Ramesheh**	**2.79**	**18**	*e*Pn	**Pn**	**06 02 39.1**	**+2.0**
IRAM				*e*		06 03 27.1	
	comp=Z,2μm,0.4s						
LAR1	**LAR**	**3.04**	**118**	*e*Pn	**Pn**	**06 02 43.5**	**+3.2**
AMIS	**Naft Sefid**	**3.08**	**325**	*e*Pn	**Pn**	**06 02 41.9**	**+1.1**
SHK1	**Shahrekord**	**3.19**	**353**	*e*Pn	**Pn**	**06 02 44.2**	**+1.6**
SHK1				*e*		06 03 48.7	
	comp=Z,842nm,0.9s						
ISAD	**Sadrabad**	**3.41**	**35**	*e*Pn	**Pn**	**06 02 48.0**	**+2.4**
IPIR	**Pirpir**	**3.55**	**354**	*e*Pn	**Pn**	**06 02 49.4**	**+1.9**
IMEH	**Mehriz**	**3.59**	**51**	*e*Pn	**Pn**	**06 02 51.4**	**+3.3**
IMEH				*e*		06 03 01.7	
	comp=Z,881nm,0.6s						
IZEF	**Zefreh**	**3.83**	**12**	*e*Pn	**Pn**	**06 02 53.3**	**+2.0**
NASN	**Na'in**	**3.84**	**19**	*e*Pn	**Pn**	**06 02 53.3**	**+1.7**
ICHK	**Chekchek**	**4.05**	**40**	*e*Pn	**Pn**	**06 02 56.3**	**+2.0**
IKLH	**Kolahrood**	**4.16**	**3**	*e*Pn	**Pn**	**06 02 57.7**	**+1.8**
YZKH	**Yazd**	**4.26**	**40**	*e*Pn	**Pn**	**06 02 59.2**	**+2.1**
IBAF	**Bafgh**	**4.37**	**55**	*e*Pn	**Pn**	**06 03 01.1**	**+2.4**
IBAF				*e*		06 03 18.3	
	comp=Z,298nm,0.6s						
JRN	**Qarnain Island**	**4.40**	**162**	*e*Pn	**Pn**	**06 03 01.2**	**+2.3**
ANAR	**Anarak**	**4.51**	**26**	*e*Pn	**Pn**	**06 03 02.8**	**+2.2**
QAMS	**Qamsar**	**4.57**	**0**	*e*Pn	**Pn**	**06 03 04.3**	**+2.8**
KHGB	**Koh Gabri**	**4.61**	**73**	*e*Pn	**Pn**	**06 03 03.9**	**+1.8**
NGRK	**Negar Kerman**	**4.71**	**83**	*e*Pn	**Pn**	**06 03 06.9**	**+3.3**
NGRK				*e*		06 04 17.0	
	comp=Z,424nm,0.4s						
KHMZ	**Khomeyn**	**4.73**	**346**	*e*Pn	**Pn**	**06 03 05.9**	**+2.2**
KRBR	**Kerman**	**4.78**	**79**	*e*Pn	**Pn**	**06 03 06.6**	**+2.2**
TVBK	**TV Kerman**	**4.78**	**79**	*e*		06 03 52.1	
	comp=Z,542nm,0.5s						
TVBK				*e*Pn	**Pn**	**06 03 06.3**	**+1.8**
KRSH	**Karshahi**	**4.85**	**8**	*e*Pn	**Pn**	**06 03 06.3**	**+1.0**
ISFB	**Sefidab**	**5.24**	**8**	*e*Pn	**Pn**	**06 03 12.1**	**+1.5**
SHME	**Shamm**	**5.25**	**125**	*e*Pn	**Pn**	**06 03 10.3**	**-0.3**
IKFM	**Kafar-mosalman**	**5.30**	**326**	*e*Pn	**Pn**	**06 03 12.4**	**+1.2**
GHVR	**GHOM**	**5.31**	**359**	*e*Pn	**Pn**	**06 03 13.7**	**+2.1**
IDOB	**Doab**	**5.36**	**330**	*e*Pn	**Pn**	**06 03 12.8**	**+0.4**
BANOM	**Banah**	**5.44**	**125**	*e*Pn	**Pn**	**06 03 14.3**	**+1.1**
BANOM	**Banah**	**5.44**	**125**	P	**Pn**	**06 03 12.9**	**-0.3**
BANOM				S	**Sn**	**06 04 14.9**	**-0.9**
ASAO	**Ashtian**	**5.50**	**348**	*e*Pn	**Pn**	**06 03 16.5**	**+2.2**
MSFE	**Esma-Masafi**	**5.70**	**130**	*e*Pn	**Pn**	**06 03 17.3**	**+0.4**
MSFE	**Esma-Masafi**	**5.70**	**130**	P	**Pn**	**06 03 16.7**	**-0.2**
ASUD	**Al Ashush, Dub**	**5.73**	**141**	*e*Pn	**Pn**	**06 03 19.1**	**+1.8**
ASUD	**Al Ashush, Dub**	**5.73**	**141**	P	**Pn**	**06 03 16.8**	**-0.4**
FAQ	**Al Faqa, Dubai**	**5.79**	**138**	*e*Pn	**Pn**	**06 03 19.5**	**+1.5**
FAQ	**Al Faqa, Dubai**	**5.79**	**138**	P	**Pn**	**06 03 15.5**	**-2.6**
IKOM	**Komasi**	**5.99**	**328**	*e*Pn	**Pn**	**06 03 22.0**	**+1.1**
UOSS	**Minazif**	**6.01**	**133**	*e*Pn	**Pn**	**06 03 22.4**	**+1.2**
UOSS	**Minazif**	**6.01**	**133**	P	**Pn**	**06 03 21.0**	**-0.1**
HATD	**Hatta, Dubai**	**6.05**	**134**	*e*Pn	**Pn**	**06 03 23.6**	**+1.9**
HATD	**Hatta, Dubai**	**6.05**	**134**	P	**Pn**	**06 03 22.1**	**+0.4**
IBZA	**Bozab**	**6.08**	**332**	*e*Pn	**Pn**	**06 03 23.1**	**+0.8**
ASHO	**Ashiyiah**	**6.11**	**136**	*e*Pn	**Pn**	**06 03 23.8**	**+1.3**
ASHO	**Ashiyiah**	**6.11**	**136**	P	**Pn**	**06 03 22.5**	**0.0**
ASHO				S	**Sn**	**06 04 28.6**	**-3.9**
MZR	**Muzera**	**6.41**	**162**	*e*Pn	**Pn**	**06 03 28.4**	**+1.8**
MZR	**Muzera**	**6.41**	**162**	P	**Pn**	**06 03 26.9**	**+0.3**
TNSJ	**Nastanj**	**6.56**	**42**	*e*Pn	**Pn**	**06 03 31.1**	**+2.3**
TKDS	**Koohdasht(Taba**	**6.64**	**46**	*e*Pn	**Pn**	**06 03 32.0**	**+2.2**
TABS	**Tabas**	**6.66**	**46**	*e*Pn	**Pn**	**06 03 32.1**	**+2.0**
SOHO	**SOHO**	**6.81**	**136**	P	**Pn**	**06 03 31.9**	**-0.2**
RAYN	**Ar Rayn**	**7.68**	**224**	P	**Pn**	**06 03 43.8**	**-0.3**
SHRO	**Shahrood**	**7.87**	**29**	*e*Pn	**Pn**	**06 03 49.0**	**+2.3**
SRVN	**Saravan**	**9.89**	**97**	*e*Pn	**Pn**	**06 04 16.2**	**+1.8**

*IDC **08** 06:13:34.3±4.4,4°.64S×103°.05E,h0km,mb3.7/5,*
mbtmp3.7/5,Error ellipse: s-maj=242.2km s-min=21.9km
az=53.0
ISC 08 06:13:43.0±3.5,4°.5S±0°.8×10°3E±°,h64km,n6,σ0s32/6,
mb3.8/5,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**33.94**	**119**	P	**P**	**06 20 20.2**	**-0.2**
	0.7nm,0.9s,baz=289,slow=9.3,SNR=4.3						
	0.7nm,0.9s						
ASAR	**Alice Springs**	**35.16**	**126**	P	**P**	**06 20 31.2**	**+0.2**
	0.3nm,0.5s,baz=292,slow=7.3,SNR=4.4						
	0.3nm,0.5s						
STKA	**Stephens Creek**	**45.06**	**132**	P	**P**	**06 21 52.8**	**0.0**
	0.7nm,0.3s,baz=310,slow=16,SNR=1.3						
	0.7nm,0.3s						
MKAR	**Makanchi Array**	**54.36**	**342**	P	**P**	**06 23 03.0**	**-0.2**
	0.4nm,0.5s,baz=142,slow=7.8,SNR=8.3						
	0.4nm,0.5s						
ZALV	**Zalesovo Beam**	**60.28**	**348**	P	**P**	**06 23 45.0**	**+0.4**
	1.0nm,0.5s,baz=126,slow=7.4,SNR=4.6						
	1.0nm,0.5s						
TXAR	**Lajitas Array**	**144.54**	**43**	PKP	**PKPdf**	**06 33 12.9**	**-0.2**
	0.4nm,0.6s,baz=308,slow=1.4,SNR=5.9						

*IDC **08** 06:18:32.9±1.2,2°.12S×127°.86E,h0km,mb3.7/3,*
mbtmp3.9/5,ML4.2/2,Error ellipse: s-maj=40.8km
s-min=22.7km az=66.0
*DJA **08** 06:18:38.8±0.7,2°.5±3°×12°.8E±°,h33km±12km,M4.2/8,*
mb4.9/1,mB4.8/1,MLv3.8/8,Mw(mB)4.1/1
ISC 08 06:18:37.6±0.8,2°.08S±0°.06×128°.04E±0°.05,h33km,n12,
σ2s48/17,mb3.8/3,Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**1.52**	**339**	P	**Pn**	**06 19 01.9**	**-0.7**
LBMI				S	**Sn**	**06 19 19.4**	**-1.9**
MSJI	**Masohi**	**1.54**	**145**	P	**Pb**	**06 19 07.2**	**+1.5**
MSAI				S	**Sb**	**06 19 26.3**	**+1.4**
AAI	**Ambon**	**1.61**	**174**	P	**Pb**	**06 19 08.0**	**+1.2**
SANI	**Sanana**	**2.05**	**271**	P	**Pn**	**06 19 10.6**	**+0.9**
SANI				S	**Sn**	**06 19 33.9**	**-0.3**
SWI	**Sorong**	**3.44**	**70**	P	**Pn**	**06 19 29.2**	**+0.3**
SIJI	**Sorong**	**3.44**	**70**	Pn	**Pn**	**06 19 29.7**	**+0.7**
	48nm,0.3s,baz=251,slow=13,SNR=34						
SIJI				Sn	**Sn**	**06 20 07.3**	**-1.4**
	21nm,0.3s,baz=92,slow=22,SNR=9.5						
	93nm,0.3s						
APSI	**Ampana**	**6.49**	**280**	P	**Pn**	**06 20 13.4**	**+2.5**
WRA	**Warramunga Arr**	**18.80**	**161**	P	**P**	**06 22 53.9**	**-0.5**
	0.6nm,0.3s,baz=338,slow=12,SNR=28						
WRA				S	**Sn**	**06 26 18.0**	**-6.7**
	0.4nm,0.7s,baz=343,slow=21,SNR=1.6						
	0.6nm,0.3s						
CBJI	**Citeko**	**21.56**	**258**	P	P	06 23 04.6	-20
ASAR	**Alice Springs**	**22.20**	**166**	P	**P**	**06 23 32.1**	**+0.8**
	3.8nm,0.4s,baz=348,slow=12,SNR=53						
ASAR				S	**S**	**06 27 29.6**	**-4.6**
	0.6nm,0.6s,baz=347,slow=16,SNR=5.2						
	3.8nm,0.4s						
MKAR	**Makanchi Array**	**63.06**	**326**	P	**P**	**06 29 02.1**	**+0.3**
	0.3nm,0.4s,baz=120,slow=8.0,SNR=4.7						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**67.32**	**328**	P	**P**	**06 29 28.6**	**-0.6**
	0.3nm,0.5s,baz=124,slow=6.3,SNR=4.8						
	0.3nm,0.5s						

*IDC **08** 06:21:21.4±8.7,57°.92S×24°.94W,h75km±80km,mb3.6/4,*
mbtmp4.0/5,ML4.3/1,MS3.5/4,Error ellipse: s-maj=39.7km
s-min=27.4km az=103.0
ISC 08 06:21:17.5±1.0,57°.9S±0°.1×24°.9W±0°.2,h40km,n19,
σ0s97/10,mb4.0/4,MS3.5/3,South Sandwich Islands
region

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

WRA	**Warramunga Arr**	**22.49**	**160**	P	**P**	**06 30 45.7**	**-0.5**
	comp=Z,6.3nm,0.5s,baz=340,slow=11,SNR=75						
	comp=Z,6.3nm,0.5s						
WRA	**Warramunga Arr**	**22.49**	**160**	P	**P**	**06 30 45.2**	**-1.1**
WB2	**Warramunga Arr**	**22.49**	**160**	P	**P**	**06 30 45.9**	**-0.4**
WR0	**Warramunga Arr**	**22.57**	**160**	P	**P**	**06 30 46.8**	**-0.3**
WR0				IAmb	IAmb	06 30 48.5	
	comp=Z,8.9nm,1.0s						
AS31	**Alice Springs**	**25.86**	**164**	P	**P**	**06 31 18.8**	**+0.8**
ASAR	**Alice Springs**	**25.86**	**164**	P	**P**	**06 31 19.4**	**+1.4**
	comp=Z,1.6nm,0.6s,baz=348,slow=14,SNR=19						
ASAR				LR	LR	06 41 59.2	
	comp=Z,197nm,19.6s,baz=339,slow=38						
	comp=Z,1.6nm,0.6s						
ASAR	**Alice Springs**	**25.86**	**164**	P	**P**	**06 31 17.4**	**-0.6**
BBOO	**Buckleboo**	**35.12**	**166**	P	**P**	**06 32 40.0**	**+0.3**
STKA	**Stephens Creek**	**35.99**	**158**	P	**P**	**06 32 47.6**	**+0.5**
	comp=Z,3.9nm,1.0s,baz=324,slow=13,SNR=1.8						
	comp=Z,3.9nm,1.0s						
STKA	**Stephens Creek**	**35.99**	**158**	IAmb	IAmb	06 33 25.3	
	comp=Z,2.9nm,1.3s						
PETK	**Petropavlovsk-**	**57.77**	**22**	LR	LR	06 59 49.7	
	comp=Z,31nm,20.8s,baz=148,slow=36						
MK31	**Makanchi Array**	**59.39**	**326**	P	**P**	**06 35 47.0**	**-1.3**
MKAR	**Makanchi Array**	**59.39**	**326**	P	**P**	**06 35 48.5**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=120,slow=8.1,SNR=13						
	comp=Z,0.5nm,0.3s						
KURBB	**Kurchatov Arra**	**63.63**	**328**	P	**P**	**06 36 16.7**	**-0.1**
	comp=Z,1.2nm,0.6s,baz=125,slow=6.3,SNR=15						
	comp=Z,1.2nm,0.6s						
KURK	**Kurchatov**	**63.64**	**328**	P	**P**	**06 36 16.6**	**-0.2**
KURK				IAmb	IAmb	06 36 18.9	
	comp=Z,2.8nm,0.8s						
ABKAR	**Akbulak array**	**73.85**	**321**	P	**P**	**06 37 20.0**	**-0.5**
VNDA	**Vanda**	**81.07**	**173**	P	**P**	**06 38 01.8**	**+1.6**
	comp=Z,0.9nm,0.8s,baz=319,slow=4.3,SNR=5.5						
	comp=Z,0.9nm,0.8s						
VNDA	**Vanda**	**81.07**	**173**	IAmb	IAmb	06 38 04.7	
	comp=Z,1.5nm,0.8s						

*NNC **08** 06:41:33.7±0.6,42.°95N×70.°99E,h0km,mpv2.1,Error ellipse: s-maj=5.5km s-min=2.8km az=24.0,Suspected Mining explosion.*

*KRNET **08** 06:41:33.5±0.1,43.°08N×70.°61E,mb2.9*

ISC 08 06:41:32.5±1.0,43.°06N±0.°08×71.°12E±0.°03,h0km,n16, σ0s62/32,19C-13D,Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK06	**Karatay Array**	**0.44**	**275**	⇓P	**Pg**	**06 41 41.1**	**+0.2**
KK06				⇑S	**Sg**	**06 41 46.9**	**+0.4**
KK05	**Karatay Array**	**0.44**	**278**	⇓P	**Pg**	**06 41 41.3**	**+0.3**
KK05				⇑S	**Sg**	**06 41 47.3**	**+0.7**
KK02	**Karatay Array**	**0.45**	**276**	⇑P	**Pg**	**06 41 41.3**	**+0.3**
KK02				⇑S	**Sg**	**06 41 47.3**	**+0.4**
KK31	**Karatay Array**	**0.45**	**276**	⇑P	**Pg**	**06 41 41.3**	**+0.2**
	2.9nm,0.3s,baz=184,slow=37,SNR=290						
KK31				⇑S	**Sg**	**06 41 46.5**	**-0.4**
	2.9nm,0.2s,baz=114,slow=32,SNR=14						
KKAR	**Karatay Array**	**0.45**	**276**	⇑*i*P	**Pg**	**06 41 41.4**	**+0.3**
	baz=89						
KKAR				⇑*i*S	**Sg**	**06 41 47.3**	**+0.4**
	baz=89						
KK01	**Karatay Array**	**0.45**	**276**	⇓P	**Pg**	**06 41 41.3**	**+0.1**
KK01				⇓S	**Sg**	**06 41 47.4**	**+0.4**
KK04	**Karatay Array**	**0.45**	**276**	⇓P	**Pg**	**06 41 41.3**	**+0.2**
KK04				⇑S	**Sg**	**06 41 47.3**	**+0.3**
KK03	**Karatay Array**	**0.46**	**276**	⇓P	**Pg**	**06 41 41.3**	**+0.1**
KK03				⇓S	**Sg**	**06 41 47.2**	**+0.1**
KK07	**Karatay Array**	**0.46**	**274**	⇓P	**Pg**	**06 41 41.4**	**+0.2**
KK07				⇑S	**Sg**	**06 41 47.4**	**+0.3**
KK09	**Karatay Array**	**0.46**	**278**	⇓P	**Pg**	**06 41 41.6**	**+0.3**
KK09				⇑S	**Sg**	**06 41 47.8**	**+0.5**
KK08	**Karatay Array**	**0.47**	**276**	⇑P	**Pg**	**06 41 41.7**	**+0.3**
KK08				⇑S	**Sg**	**06 41 47.9**	**+0.5**
TRKS	**Terek-Say**	**1.53**	**179**	⇑*i*P	**Pb**	**06 42 01.5**	**-0.3**
	baz=65						
TRKS				⇑*i*S	**Sn**	**06 42 21.9**	**0.0**
	baz=65						
EKS2	**Erkin-Say**	**1.99**	**101**	⇑*i*P	**Pg**	**06 42 11.3**	**+0.6**
	baz=99						
EKS2				⇑*i*S	**Sg**	**06 42 38.7**	**+2.1**
	baz=99						
USP	**Ospenovka**	**2.48**	**84**	⇓*i*P	**Pb**	**06 42 18.0**	**0.0**
	baz=85						
USP				⇓*i*S	**Sg**	**06 42 51.2**	**-1.0**
	baz=85						
UCH	**Uchtor**	**2.64**	**107**	⇑*i*P	**Pb**	**06 42 19.9**	**-1.0**
	baz=5.0						
UCH				⇑*i*S	**Sb**	**06 42 53.6**	**-0.4**
	baz=5.0						
ARLS	**Aral**	**2.66**	**116**	⇓*i*P	**Pb**	**06 42 20.0**	**-1.0**
	baz=13						
ARLS				⇓*i*S	**Sb**	**06 42 54.1**	**-0.1**
	baz=13						

IDC 08 06:42:31.5±3.2,54.°21N×87.°35E,h0km,mbtmp3.0/2, ML2.7/2,Error ellipse: s-maj=28.2km s-min=16.9km az=58.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.51**	**261**	*i*		06 51 50.0	
	baz=82,slow=316,SNR=7.4						
ZALV	**Zalesovo Beam**	**1.51**	**261**	Pg	Pn	06 42 58.3	-1.5
	3.6nm,0.3s,baz=77,slow=16,SNR=33						
ZALV				Lg	Lg	06 43 19.4	
	2.0nm,0.3s,baz=78,slow=27,SNR=9.3						
KURBB	**Kurchatov Arra**	**6.48**	**240**	Pn	Pn	06 44 08.8	+0.8
	0.1nm,0.3s,baz=54,slow=13,SNR=5.3						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**8.09**	**205**	Pn	Pn	06 44 31.2	+1.1
	0.2nm,0.3s,baz=27,slow=14,SNR=7.1						
MKAR				Sn	Sn	06 46 01.9	-0.3
	0.1nm,0.3s,baz=24,slow=27,SNR=3.3						
	0.2nm,0.2s						

*IDC **08** 07:25:53.2±4.0,4.°97S×145.°63E,h97km±39km,mb3.8/3, mbtmp4.4/6,MS3.7/2,Error ellipse: s-maj=30.5km s-min=28.4km az=100.0*

ISC 08 07:25:50.3±1.4,4.°8S±0.°1×145.°5E±0.°2,h64km,n8,σ1s69/8, mb4.0/3,Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.85**	**160**	P	**Pn**	**07 27 03.3**	**+2.5**
	48nm,0.3s,baz=280,slow=12,SNR=46						
PMG				S	**Sn**	**07 27 53.4**	**-2.2**
	202nm,0.5s,baz=135,slow=22,SNR=26						
PMG				LR	LR	07 29 32.0	
	comp=Z,106nm,21.1s,baz=152,slow=47						
SIJI	**Sorong**	**14.73**	**285**	P	**P**	**07 29 20.4**	**+0.6**
	18nm,0.4s,baz=76,slow=17,SNR=5.8						
CTA	**Charters Tower**	**15.20**	**177**	P	**P**	**07 29 25.6**	**+0.7**
	2.5nm,0.4s,baz=352,slow=13,SNR=12						
WRA	**Warramunga Arr**	**18.55**	**215**	P	**Pn**	**07 30 02.1**	**-0.7**
	7.5nm,0.8s,baz=31,slow=11,SNR=88						
ASAR	**Alice Springs**	**21.82**	**210**	P	**P**	**07 30 36.8**	**-0.6**
	3.5nm,0.7s,baz=42,slow=8.2,SNR=39						
	3.5nm,0.7s						
STKA	**Stephens Creek**	**27.17**	**187**	P	**P**	**07 31 27.1**	**-0.6**
	1.5nm,0.3s,baz=354,slow=11,SNR=4.1						
	1.5nm,0.3s						
JNU	**Nakatsue**	**40.20**	**341**	LR	LR	07 50 14.7	
	comp=Z,685nm,18.7s,baz=184,slow=36						
ILAR	**Eielson Array**	**85.00**	**23**	P	**P**	**07 38 17.4**	**-1.0**
	1.4nm,0.8s,baz=259,slow=5.3,SNR=11						
	1.4nm,0.8s						

JMA 08 07:43:52.7±0.3,25.°N±3.°×12.°2E±.°,h169km,MV2.9/10, TAIWAN REGION,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.85**	**133**	P	Pn	07 44 18.5	+0.2
HATJ	**Hateruma jima**	**1.67**	**126**	*e*S	Sn	07 44 51.1	+0.3
JKRS	**Kuro-shima**	**1.73**	**118**	P	Pn	07 44 26.7	+0.6
JKRS				S	Sn	07 44 52.5	+0.6
JIJ	**Ishigaki jima**	**1.79**	**112**	P	Pn	07 44 26.7	0.0
JIJ				S	Sn	07 44 51.9	-1.1
JTJ	**Tarama**	**2.19**	**100**	P	Pn	07 44 31.7	+0.5
JTJ				S	Sn	07 45 00.8	-0.2
JMJ2	**Miyako jima3**	**2.74**	**96**	P	Pn	07 44 38.4	+0.7
JOGS	**Gusukube**	**2.81**	**95**	P	Pn	07 44 39.4	+0.8

TAP 08 07:44:21.0,24.°97N×122.°05E,h10km±1km,ML1.6,D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.06**	**304**	*i* P	Pg	07 44 23.3	+0.1
	baz=307						
TWB1				S	Sg	07 44 25.8	+0.9
	baz=307						
EGS		**0.16**	**220**	*e*P	Pg	07 44 25.3	+0.7
	baz=216						
EGS				*e*S	Sg	07 44 28.7	+1.6
	baz=216						
SXI1	**Grass Mountain**	**0.20**	**308**	P	Pb	07 44 26.2	-0.6
	baz=308						
SXI1				S	Sg	07 44 29.8	+1.6
	baz=308						
TIPB	**Shuangxi**	**0.20**	**270**	P	Pb	07 44 26.2	-0.6
	baz=270						
TIPB				S	Sg	07 44 29.7	+1.5
	baz=270						
FUSB	**Fushanzhiwuyua**	**0.47**	**243**	*e*P	Pb	07 44 31.5	+0.1
	baz=243						
FUSB				*e*S	Sb	07 44 38.4	0.0
	baz=243						

*KRNET **08** 07:56:44.9±0.1,41.°10N×69.°63E,h7km,mb2.9*

ISC 08 07:56:45.1±1.3,41.°05N±0.°04×69.°61E±0.°06,h2km±14km, n7,σ1s60/14,10C-4D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAS	**Tashkent**	**0.36**	**320**	⇓*i*P	**Pg**	**07 56 51.5**	**-0.7**
	baz=13						
TAS				⇓*i*S	**Sg**	**07 56 56.6**	**-0.3**
	baz=13						
TRKS	**Terek-Say**	**1.25**	**67**	⇑*i*P	**Pg**	**07 57 07.8**	**-1.3**
	baz=72						
TRKS				⇑*i*S	**Sn**	**07 57 25.4**	**-1.9**
	baz=72						
BTK	**Batken**	**1.35**	**137**	⇑*i*P	**Pb**	**07 57 11.2**	**0.0**
	baz=39						
BTK				⇑*i*S	**Sg**	**07 57 30.9**	**+2.4**
	baz=39						
GAR	**Garm**	**2.12**	**165**	⇑*i*P	**Pb**	**07 57 24.0**	**-0.2**
	baz=66						
GAR				⇑*i*S	**Sg**	**07 57 53.2**	**+0.1**
	baz=66						
KK31	**Karatay Array**	**2.16**	**18**	⇓Pn	**Pg**	**07 57 26.9**	**+0.3**
	1.3nm,0.4s,baz=198,slow=16,SNR=26						
KK31				⇓Sn	**Sg**	**07 57 56.9**	**+2.3**
	3.1nm,0.4s,baz=196,slow=25,SNR=12						
OHH	**Osh**	**2.47**	**101**	⇑*i*P	**Pb**	**07 57 28.4**	**-1.8**
	baz=3.0						
OHH				⇑*i*S	**Sb**	**07 57 59.9**	**-1.2**
	baz=3.0						
UCH	**Uchtor**	**3.86**	**71**	⇑*i*P	**Pn**	**07 57 47.3**	**+1.4**
	baz=71						
UCH				⇑*i*S	**Sn**	**07 58 33.4**	**+1.4**
	baz=71						

SCB 08 08:04:22.5±1.8,17.°46S×68.°96W,h168km±20km,ML1.3/3, Error ellipse: s-maj=40.5km s-min=12.2km az=2.0, Central Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBOD	**La Paz, Gloria**	**0.89**	**23**	P	Pn	08 04 49.0	+0.2
BBOD	**La Paz, Gloria**	**0.89**	**23**	P	Pn	08 04 49.1	+0.3
PB16	**IPOC Station P**	**1.01**	**211**	P	Pn	08 04 50.0	+0.2
PB16	**IPOC Station P**	**1.01**	**211**	P	Pn	08 04 50.4	+0.6
PB16				S	Sn	08 05 11.7	+1.0
PB16				IAML		08 05 16.1	
	1.4nm,0.2s						
BBOE	**La Paz, Chanca**	**1.14**	**56**	P	Pn	08 04 51.9	+1.2
BBOE	**La Paz, Chanca**	**1.14**	**56**	P	Pn	08 04 52.7	+2.0
LPAZ	**La Paz**	**1.41**	**34**	P	Pn	08 04 53.7	+0.4
LPAZ	**La Paz**	**1.41**	**34**	P	Pn	08 04 53.7	+0.4
LPAZ				S	Sn	08 05 14.7	-2.2
LPAZ				IAML		08 05 18.2	
	1.0nm,0.5s						
LPAZ	**La Paz**	**1.41**	**34**	P	Pn	08 04 53.8	+0.5
LPAZ				S	Sn	08 05 16.4	-0.5
LPAZ				IAML		08 05 18.2	
	1.0nm,0.5s						
PB11	**IPOC Station P**	**2.38**	**196**	P	Pn	08 05 02.9	-0.4
PB11	**IPOC Station P**	**2.38**	**196**	P	Pn	08 05 03.7	+0.4
PB11				S	Sn	08 05 34.3	-0.6
PB11				IAML		08 05 39.0	
	4.4nm,0.4s						
PB08	**IPOC Station P**	**2.67**	**184**	P	Pn	08 05 06.8	-0.2
PB08				S	Sn	08 05 38.9	-2.6
PB08				IAML		08 05 49.3	
	3.7nm,0.2s						
PB08	**IPOC Station P**	**2.67**	**184**	P	Pn	08 05 07.7	+0.7

IDC 08 08:23:07.9±2.0,54.°42N×83.°71E,h0km,mbtmp2.4/2, ML2.1/2,Error ellipse: s-maj=15.9km s-min=9.8km az=155.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.80**	**125**	*i*		08 28 30.0	
	baz=307,slow=317,SNR=3.8						
ZALV	**Zalesovo Beam**	**0.80**	**126**	Pg	Pg	08 23 22.9	-0.3
	1.7nm,0.3s,baz=308,slow=17,SNR=6.6						
ZALV				Lg	Lg	08 23 35.4	
	2.5nm,0.3s,baz=307,slow=30,SNR=8.7						
ZALV				Rg	Rg	08 23 42.9	
	5.3nm,0.4s,baz=309,slow=27,SNR=11						
KURBB	**Kurchatov Arra**	**4.95**	**222**	Pn	Pn	08 24 25.2	+1.8
	baz=40,slow=14,SNR=2.1						
KURBB				Lg	Lg	08 25 43.3	
	baz=38,slow=30,SNR=4.9						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**7.69**	**187**	Pn	Pn	08 24 59.8	-1.3
	0.1nm,0.3s,baz=9.9,slow=12,SNR=2.9						
MKAR				Lg	Lg	08 27 11.2	
	baz=6.1,slow=28,SNR=5.5						
	0.2nm,0.6s						

*IDC **08** 08:31:37.6±0.8,4.°03S×104.°57W,h0km,mb4.4/13, mbtmp4.4/13,MS5.4/52,Error ellipse: s-maj=30.6km s-min=14.3km az=54.0*

*BJI **08** 08:31:37.6±0.0,3.°99S×104.°03W,h10km,mB5.5/8, Ms5.8/15,Ms7 5.6/14*

*NEIC **08** 08:31:39.8,4.°06S×104.°55W,h12km,Moment Tensor Solution. Moment tensor: Scale 10^17^Nm; Mrr0.19; Mθθ0.67; Mθφ-0.87; Mrθ-0.52; Mθφ4.15; Mφr0.51; Fault plane solution: Mo4.29000×10^17^ NP1:φs185.62000°, δ82.98000°,λ-174.40000°. NP2:φs94.93000°,δ84.44000°, λ-7.06000°. Principal axes: T 4.1252, Plg1.0000°, Azm140.0000°; N 0.3070, Plg81.0000°, Azm237.0000°; P -4.4321, Plg9.0000°, Azm50.0000°;*

*NEIC **08** 08:31:39.8±1.6,4.°1S±0.°1×104.°6W±0.°1,h10km±1km, mb5.0/368,Ms_20 5.5/390,Mwb5.7/54,Mww5.9 Error ellipse: s-maj=22.0km s-min=17.4km az=251.0*

*GCMT **08** 08:31:43.8±0.1,3.°87S×104.°39W,h15km,MW5.8/161, Moment Tensor Solution. s150,c306; s161,c514; Duration: 2s0 Moment tensor: Scale 10^17^Nm; Mrr-0.43±.04; Mθθ0.56±.04; Mφφ-0.13±.05; Mrθ0.12±.14; Mθφ6.94±.04; Mφr0.20±.15; Best double couple: Mo6.95200×10^17^ NP1:φs91.00000°,δ88.00000°, λ1.00000°. NP2:φs1.00000°,δ89.00000°,λ178.00000°. Principal axes: T 7.1690, Plg2.0000°, Azm316.0000°; N -0.4330, Plg88.0000°, Azm154.0000°; P -6.7360, Plg1.0000°, Azm46.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **08** 08:31:45,4.°73S×103.°65W,h16km,Moment Tensor Solution. Duration: 12s0 Moment tensor: Scale 10^17^Nm; Mrr-0.99; Mθθ-0.97; Mφφ1.96; Mrθ2.58; Mθφ7.79; Mφr-2.23; Fault plane solution: Mo8.67000×10^17^ NP1: φs262.00000°,δ73.00000°,λ-16.00000°. NP2: φs357.00000°,δ74.00000°,λ-162.00000°. Principal axes: T 8.4265, Plg0.0000°, Azm130.0000°; N 0.4759, Plg67.0000°, Azm39.0000°; P -8.9024, Plg23.0000°, Azm220.0000°;*

ISC 08 08:31:39.7±0.4,4.°07S±0.°05×104.°45W±0.°07,h10km,n876, σ1s81/599,mb5.0/183,MS5.5/253,1C-1D,Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAYG	**Puerto Ayora**	**14.55**	**77**	P	**Pn**	**08 35 06.5**	**+0.7**
TLIG	**Tlapa**	**22.26**	**15**	P	**P**	**08 36 38.2**	**+1.0**
HUEH	**Huehuetenango**	**23.14**	**33**	P	**P**	**08 36 47.3**	**+0.7**
SNET	**Serv Nac Est T**	**23.22**	**40**	IAMs_20	IAMs_20	08 43 28.0	
	comp=Z,22μm,19.0s						
H06S1	**SOCORRO T**	**23.55**	**344**	T	T	09 01 20.4	
	SNR=53						
H06E1	**SOCORRO T-PHAS**	**23.58**	**345**	T	T	09 01 11.8	
	SNR=193						
CCIG	**Comitan**	**23.60**	**31**	P	**P**	**08 36 51.2**	**0.0**
ORTG	**Ortega, Santa**	**23.73**	**53**	P	**P**	**08 36 52.0**	**-0.4**
ESQI	**Esquipulas**	**23.81**	**39**	P	**P**	**08 36 53.1**	**0.0**
MOIG	**Morelia**	**23.81**	**8**	P	**P**	**08 36 53.2**	**0.0**
JTS	**Las Juntas de**	**24.10**	**54**	P	**P**	**08 36 57.0**	**+1.2**
	comp=Z,8.5nm,1.0s,baz=291,slow=9.4,SNR=4.4						
	comp=Z,8.5nm,1.0s						
JTS	**Las Juntas de**	**24.10**	**54**	P	**P**	**08 36 54.9**	**-0.9**
ARNL	**Arenillas**	**24.34**	**90**	P	**P**	**08 36 54.7**	**-3.3**
PEZE	**Perez Zeledon,**	**24.64**	**57**	P	**P**	**08 37 00.8**	**-0.1**
PEZE				IAmb	IAmb	08 37 07.9	
	comp=Z,49nm,1.1s						
RIMA	**Rio Macho**	**24.69**	**56**	P	**P**	**08 37 01.4**	**-0.1**
TGUH	**Tegucigalpa,Un**	**24.79**	**43**	P	**P**	**08 37 03.1**	**+0.8**
TGUH				IAMs_20	IAMs_20	08 44 14.6	
	comp=Z,12μm,21.0s						
SRBA	**San Rafael, Bu**	**24.83**	**58**	P	**P**	**08 37 01.9**	**-0.7**
BOAB	**BOACO BROADBA**	**24.86**	**48**	P	**P**	**08 37 03.6**	**+0.9**
CDITO	**Canoas**	**24.92**	**60**	P	**P**	**08 37 03.9**	**+0.6**
CVTR	**Volcan Turrial**	**24.92**	**56**	P	**P**	**08 37 04.2**	**+0.5**
ACON	**Acoyapa**	**24.93**	**50**	P	**P**	**08 37 03.4**	**+0.1**
DRK0	**Durika**	**24.94**	**58**	P	**P**	**08 37 05.0**	**+1.3**
MATN	**Matagalpa**	**24.98**	**47**	P	**P**	**08 37 04.7**	**+0.8**
PETF	**Flores**	**25.35**	**34**	IAmb	IAmb	08 37 13.3	
	comp=Z,74nm,1.4s						
PORT	**Chimborazo Vol**	**25.78**	**85**	IAmb	IAmb	08 37 45.6	
	comp=Z,67nm,1.2s						
BOSC	**San Juan Bosco**	**25.92**	**89**	IAmb	IAmb	08 37 38.4	
	comp=Z,52nm,1.3s						
ATAH	**Atahualpa**	**26.11**	**98**	P	**P**	**08 37 15.7**	**+1.1**
	comp=Z,25nm,1.3s,baz=269,slow=9.2,SNR=7.3						
ATAH				LR	LR	08 45 01.1	
	comp=Z,9μm,20.5s,baz=271,slow=31						
	comp=Z,25nm,1.3s						
SLOR	**San Lorenzo -**	**26.14**	**83**	P	**P**	**08 37 14.7**	**-0.3**
OTAV	**Otavalo**	**26.33**	**81**	P	**P**	**08 37 16.7**	**+0.1**
OTAV				IAmb	IAmb	08 37 25.2	
	comp=Z,45nm,1.3s						
OTAV	**Otavalo**	**26.33**	**81**	*e*P	**P**	**08 37 14.6**	**-2.0**
BCIP	**Isla Barro Col**	**27.84**	**62**	P	**P**	**08 37 28.6**	**-1.0**
BCIP				IAmb	IAmb	08 37 35.1	
	comp=Z,63nm,1.6s						
SLBS	**Sierra La Lagu**	**28.10**	**349**	P	**P**	**08 37 31.6**	**-0.4**
SLBS	**Sierra La Lagu**	**28.10**	**349**	IAMs_20	IAMs_20	08 45 27.8	
	comp=Z,14μm,21.0s						
NNA	**Nana**	**28.43**	**108**	LR	LR	08 45 48.5	
	comp=Z,16μm,21.4s,baz=284,slow=30						
NNA	**Nana**	**28.43**	**108**	IAMs_20	IAMs_20	08 45 23.8	
	comp=Z,18μm,22.0s						
LPIG	**La Paz**	**28.57**	**349**	P	**P**	**08 37 38.4**	**+2.4**
	comp=Z,23nm,0.9s,baz=47,slow=4.3,SNR=3.6						
LPIG				LR	LR	08 46 02.7	
	comp=Z,10μm,20.8s,baz=170,slow=30						
HPIG		**30.84**	**358**	P	**P**	**08 37 56.0**	**-0.4**
ROSC	**El Rosal**	**31.38**	**74**	LR	LR	08 47 13.4	
	comp=Z,7μm,21.3s,baz=246,slow=30						
CZSB	**Cruzeiro do Su**	**31.78**	**98**	*e*P	**P**	**08 38 03.6**	**-1.1**
KVTX	**Kingsville**	**32.06**	**11**	S	**S**	**08 43 21.3**	**+2.3**
	baz=192						
SJCC	**San Jacinto, C**	**32.29**	**64**	IAmb	IAmb	08 38 32.2	
	comp=Z,31nm,1.4s						
833A	**Chaparral WMA,**	**32.57**	**8**	IAmb	IAmb	08 38 37.5	
	comp=Z,29nm,1.4s						
833A	**Chaparral WMA,**	**32.57**	**8**	S	**S**	**08 43 23.4**	**-3.5**
	baz=190						
833A	**Chaparral WMA,**	**32.57**	**8**	P	**P**	**08 38 11.0**	**-0.3**
	baz=190						
TX31	**Lajitas Ar. Si**	**33.22**	**1**	P	**P**	**08 38 18.1**	**+1.0**
	baz=182						
TX31				S	**S**	**08 43 37.0**	**-0.2**
	baz=182						
TX32	**Lajitas Array**	**33.22**	**1**	IAmb	IAmb	08 38 39.5	
	comp=Z,24nm,1.6s						
TXAR	**Lajitas Array**	**33.22**	**1**	P	**P**	**08 38 17.5**	**+0.4**
	comp=Z,2.0nm,0.9s,baz=181,slow=12,SNR=18						
TXAR				PcP	**PcP**	**08 41 00.7**	**+0.9**
	comp=Z,1.1nm,1.1s,baz=153,slow=2.7,SNR=3.7						
TXAR				LR	LR	08 49 41.8	
	comp=Z,5μm,21.3s,baz=179,slow=33						
	comp=Z,2.0nm,0.9s						
735A	**Kenedy**	**33.35**	**11**	S	**S**	**08 43 42.9**	**+3.8**
	baz=192						
OCAC	**Ocana**	**33.37**	**68**	P	**P**	**08 38 16.9**	**-1.9**
HSIG		**33.48**	**350**	P	**P**	**08 38 18.3**	**-1.0**
HSIG				IAmb	IAmb	08 38 34.1	
	comp=Z,24nm,1.1s						
MTDJ	**Mount Denham**	**34.57**	**49**	IAMs_20	IAMs_20	08 50 44.9	
	comp=Z,8μm,18.0s						
JCT	**Junction City**	**34.64**	**7**	IAmb	IAmb	08 38 43.8	
	comp=Z,18nm,0.9s						
JCT	**Junction City**	**34.64**	**7**	P	**P**	**08 38 30.6**	**+1.2**
	baz=188						
JCT				S	**S**	**08 44 02.3**	**+3.2**
	baz=188						
JCT	**Junction City**	**34.64**	**7**	P	**P**	**08 38 28.7**	**-0.7**
	baz=188						
HKT	**Hockley**	**34.82**	**13**	P	**P**	**08 38 31.2**	**+0.4**
HKT				IAmb	IAmb	08 39 07.3	
	comp=Z,67nm,1.9s						
HKT	**Hockley**	**34.82**	**13**	S	**S**	**08 44 04.6**	**+3.0**
	baz=195						
435B	**Jarrell**	**35.27**	**10**	S	**S**	**08 44 11.4**	**+2.7**
	baz=192						
435B	**Jarrell**	**35.27**	**10**	P	**P**	**08 38 35.1**	**+0.3**
	baz=192						
MNTX	**Cornudas Mount**	**35.58**	**359**	P	**P**	**08 38 37.0**	**-0.5**
	baz=179,SNR=15						
MNTX				S	**S**	**08 44 15.9**	**+2.5**
	baz=179						
MNTX	**Cornudas Mount**	**35.58**	**359**	P	**P**	**08 38 37.0**	**-0.5**
	baz=179,SNR=15						
SDV	**Santo Domingo**	**36.09**	**69**	LR	LR	08 52 27

ABTX S S 08 44 31.6 -0.2
baz=188
ABTX Abilene, Hawle 36.77 7 P P 08 38 46.4 -1.3
baz=188
237A Washetta, Mont 36.80 12 IAmb IAmb 08 39 06.3
comp=Z,29nm,1.1s
237A Washetta, Mont 36.80 12 S S 08 44 35.1 +3.1
baz=195
NATX Nacogdoches 36.83 14 S S 08 44 35.4 +2.8
baz=196
NATX Nacogdoches 36.83 14 P P 08 38 47.8 -0.3
baz=196
PB16 IPOC Station P 37.00 115 IAmb IAmb 08 39 00.8
comp=Z,27nm,1.2s
342B Flagon Creek P 37.09 17 S S 08 44 39.9 +3.4
baz=200
344A Westbrook Farm 37.66 19 S S 08 44 50.8 +5.5
baz=203
LPAZ La Paz 37.68 111 P P 08 38 55.9 -0.4
comp=Z,2.0nm,0.9s,baz=274,slow=6.2,SNR=7.8
LPAZ LR LR 08 51 39.4
comp=Z,7µm,20.1s,baz=284,slow=32
comp=Z,2.0nm,0.9s
LPAZ La Paz 37.68 111 *e*P P 08 38 56.6 +0.3
H03N2 Juan Fernandez 37.69 144 T T 09 18 56.1
baz=317,slow=77,SNR=218
H03N1 Juan Fernandez 37.70 144 T T 09 18 56.9
baz=317,slow=77,SNR=376
H03N3 Juan Fernandez 37.71 144 T T 09 18 56.6
baz=317,slow=77,SNR=204
Z35A Perchaven, San 37.81 10 IAmb IAmb 08 39 10.6
comp=Z,37nm,0.9s
Z35A Perchaven, San 37.81 10 P P 08 38 57.3 +0.8
baz=192,SNR=6.9
Z35A S S 08 44 48.7 +1.2
baz=192
MSTX Muleshoe 37.86 2 IAmb IAmb 08 39 05.3
comp=Z,40nm,1.3s
MSTX Muleshoe 37.86 2 P P 08 38 56.9 -0.2
baz=183,SNR=8.5
MSTX S S 08 44 48.1 -0.4
baz=183
MSTX Muleshoe 37.86 2 P P 08 38 55.7 -1.3
baz=183,SNR=8.5
Y22A Socorro 37.87 357 P P 08 38 58.0 +0.8
baz=176,SNR=9.6
Y22A S S 08 44 44.1 -4.7
baz=176
PB01 IPOC Station P 37.93 119 IAmb IAmb 08 39 09.0
comp=Z,31nm,1.1s
346A Big Creek Wild 38.04 21 S S 08 44 56.2 +5.2
baz=205
IKP In-Ko-Pah, Jac 38.15 344 P P 08 38 57.3 -2.2
baz=161
Z38A Mt. Pleasant 38.19 13 S S 08 44 54.2 +1.0
baz=196
GLA Glamis 38.20 346 P P 08 38 57.8 -2.0
baz=163
SWSC Sam W. Stewart 38.35 345 P P 08 38 59.3 -1.7
baz=162
VBMS Vicksburg 38.44 19 S S 08 45 00.3 +3.3
baz=203
VBMS Vicksburg 38.44 19 P P 08 39 00.5 -1.3
baz=203
MONP2 Monument Peak 38.47 344 P P 08 38 59.9 -2.3
baz=161
143A Socs Landing, 38.61 18 S S 08 45 02.4 +2.8
baz=201
109C Camp Elliot, M 38.66 343 IAMs_20 IAMs_20 08 50 41.3
comp=Z,6µm,19.0s
109C Camp Elliot, M 38.66 343 P P 08 39 03.1 -0.5
baz=160
Z41A Richland Creek 38.73 16 IAmb IAmb 08 39 56.1
comp=Z,60nm,1.7s
Z41A Richland Creek 38.73 16 P P 08 39 04.2 0.0
baz=199
BRAL Brewton 38.77 24 P P 08 39 03.9 -0.7
baz=208
AMTX Amarillo 38.83 4 IAmb IAmb 08 39 17.1
comp=Z,44nm,1.4s
AMTX IAMs_20 IAMs_20 08 53 25.7
comp=Z,9µm,20.0s
AMTX Amarillo 38.83 4 S S 08 45 04.5 +1.5
baz=185
AMTX Amarillo 38.83 4 P P 08 39 04.0 -1.1
baz=185
451A Vernon 38.85 26 S S 08 45 08.6 +5.4
baz=211
ANMO Albuquerque 38.85 357 LR LR 08 52 16.1
comp=Z,2µm,21.5s,baz=182,slow=32
ANMO Albuquerque 38.85 357 P P 08 39 05.1 -0.4
ANMO Albuquerque 38.85 357 P P 08 39 04.9 -0.6
baz=177,SNR=7.9
ANMO S S 08 45 03.3 -0.3
baz=177
ANMO Albuquerque 38.85 357 P P 08 39 04.4 -1.0
baz=177
DWPF Disney Wildern 38.92 33 IAMs_20 IAMs_20 08 52 44.7
comp=Z,9µm,22.0s
DWPF Disney Wildern 38.92 33 P P 08 39 05.3 -0.6
baz=218
BC3 Big Chuckawall 38.93 345 P P 08 39 04.5 -1.5
baz=163
WMOK Wichita Mounta 38.97 7 S S 08 45 03.7 -1.3
baz=189
WMOK Wichita Mounta 38.97 7 P P 08 39 05.2 -1.0
baz=189
LVC Limon Verde 39.02 121 P P 08 39 08.0 +0.8
comp=Z,4.2nm,0.9s,baz=281,slow=5.1,SNR=6.1
LVC LR LR 08 50 59.6
comp=Z,10µm,19.7s,baz=292,slow=30
comp=Z,4.2nm,0.9s
LVC Limon Verde 39.02 121 P P 08 39 06.9 -0.3
LVC IAmb IAmb 08 39 42.3
comp=Z,79nm,1.7s
LVC Limon Verde 39.02 121 IAMs_20 IAMs_20 08 50 58.1
comp=Z,9µm,19.0s
LVC Limon Verde 39.02 121 *e*P P 08 39 08.6 +1.3
WLAR White Oak Lake 39.05 15 IAmb IAmb 08 39 16.1
comp=Z,66nm,1.4s
553A Crawfordville 39.08 28 S S 08 45 11.2 +4.4
baz=213
TPFO Pinon Flats 39.15 344 P P 08 39 06.3 -1.6
baz=161
PFO Pinyon Flats O 39.16 344 LR LR 08 51 23.9
comp=Z,10µm,20.9s,baz=156,slow=30
PFO Pinyon Flats O 39.16 344 IAMs_20 IAMs_20 08 51 30.4
comp=Z,9µm,20.0s
PFO Pinyon Flats O 39.16 344 P P 08 39 06.7 -1.3
baz=161
SCI2 San Clemente I 39.19 341 P P 08 39 07.2 -0.9
baz=158
PDMCI Parker Dam,Lak 39.24 347 P P 08 39 06.5 -1.9
baz=165
W18A Petrified Fore 39.29 353 P P 08 39 06.8 -2.3
baz=172
146A Union 39.32 21 S S 08 45 12.9 +2.7
baz=205
IRM Iron Mountain 39.34 346 P P 08 39 07.6 -1.7
baz=163
656A Willston 39.34 31 S S 08 45 14.3 +3.6
baz=216
MURC Murrieta 39.35 343 P P 08 39 06.4 -3.1
baz=160
X37A Clayton 39.39 12 P P 08 39 09.4 -0.3
baz=194,SNR=7.8
X37A S S 08 45 07.6 -3.7
baz=194
BELC Belle Mtn. Jos 39.40 345 P P 08 39 08.4 -1.6
baz=162
GO02 Mina Guanaco 39.51 125 P P 08 39 11.2 -0.1
GO02 IAmb IAmb 08 39 19.7
comp=Z,50nm,1.3s
CIS Catalina Islan 39.54 342 P P 08 39 07.2 -3.8
baz=158
FNO Franklin 39.67 9 IAmb IAmb 08 39 24.6
comp=Z,42nm,1.3s
MIAR Mount Ida 39.75 14 P P 08 39 12.2 -0.5
baz=197,SNR=11
MIAR S S 08 45 15.2 -1.5
baz=197
MIAR Mount Ida 39.75 14 P P 08 39 11.4 -1.3
baz=197,SNR=11
250A Grady 39.80 24 S S 08 45 15.9 -1.6
baz=209
X40A Basin Creek Fa 39.88 15 S S 08 45 18.6 0.0
baz=198
X40A S S 08 45 18.6 0.0
baz=198
X40A Basin Creek Fa 39.88 15 P P 08 39 14.1 +0.3
baz=198
BBRC Big Bear Solar 39.90 344 P P 08 39 11.6 -2.7
baz=161
WUAZ Wupatki 39.91 351 P P 08 39 14.7 +0.5
baz=169
352A Blakely 39.95 26 S S 08 45 23.7 +4.0
baz=211
GMRC Granite Mounta 40.06 346 P P 08 39 14.0 -1.5
baz=163,SNR=16
BFSC Mount Baldy Ra 40.09 343 P P 08 39 15.9 +0.3
baz=160
PASC Pasadena Art C 40.18 342 IAMs_20 IAMs_20 08 51 49.5
comp=Z,6µm,19.0s
Z47A Carrollton 40.18 22 S S 08 45 24.7 +1.6
baz=206
Y45A Yeager Farm, C 40.27 19 S S 08 45 26.8 +2.3
baz=203
W39A Magazine 40.32 14 IAmb IAmb 08 39 42.6
comp=Z,62nm,1.6s
W39A Magazine 40.32 14 P P 08 39 17.6 +0.2
baz=197,SNR=6.0
W39A S S 08 45 24.9 -0.3
baz=197
W39A Magazine 40.32 14 P P 08 39 17.2 -0.3
baz=197,SNR=6.0
LRAL Lakeview Retre 40.44 23 S S 08 45 26.5 -0.5
baz=208
LRAL Lakeview Retre 40.44 23 P P 08 39 18.7 +0.3
baz=208
TIGA Tifton 40.52 28 S S 08 45 31.1 +2.8
baz=213
U32A Winter Ranch, 40.56 7 S S 08 45 30.5 +1.7
baz=188
TUL1 Leonard 40.59 11 IAmb IAmb 08 39 28.0
comp=Z,52nm,1.4s
TUL1 Leonard 40.59 11 P P 08 39 19.6 0.0
baz=193
TUL1 S S 08 45 28.5 -0.7
baz=193
TUL1 Leonard 40.59 11 P P 08 39 18.7 -0.9
baz=193
AC02 Maricunga 40.64 128 P P 08 39 20.4 -0.5
AC02 IAmb IAmb 08 39 40.9
comp=Z,37nm,1.4s
BIRV Birongo 40.67 69 P P 08 39 19.0 -1.7
BIRV IAmb IAmb 08 39 31.3
comp=Z,22nm,0.8s
W41B Gary Mavity, V 40.68 15 IAmb IAmb 08 39 28.6
comp=Z,56nm,1.8s
W41B Gary Mavity, V 40.68 15 S S 08 45 31.9 +1.3
baz=199
W41B Gary Mavity, V 40.68 15 P P 08 39 19.5 -0.9
baz=199
TUQ Turquoise Moun 40.74 346 P P 08 39 20.5 -0.6
baz=163
EDW2 Edwards Air Fo 40.78 343 P P 08 39 20.4 -0.9
baz=159
WHAR Wooly Hollow 40.78 15 IAmb IAmb 08 39 31.8
comp=Z,51nm,1.3s
GSC Goldstone, Bar 40.84 344 P P 08 39 21.0 -0.9
baz=161
OXF Oxford 40.91 19 P P 08 39 21.3 -1.0
baz=203
U15A North Rim 40.95 350 P P 08 39 21.7 -1.2
T25A Trinidad 40.99 0 P P 08 39 23.8 +0.6
T25A Trinidad 40.99 0 P P 08 39 22.6 -0.6
baz=180
152A Waverly Hall 41.05 26 IAmb IAmb 08 39 43.7
comp=Z,71nm,1.9s
152A Waverly Hall 41.05 26 P P 08 39 22.5 -1.0
baz=211
152A S S 08 45 35.2 -1.0
baz=211
MVCO Mesa Verde 41.24 355 IAmb IAmb 08 39 31.6
comp=Z,31nm,1.1s
MVCO Mesa Verde 41.24 355 P P 08 39 25.2 0.0
baz=174,SNR=18
LRMC Laurel Mtn Rad 41.25 344 P P 08 39 24.0 -1.3
baz=160
ARVC Arvin 41.26 342 P P 08 39 24.4 -0.8
baz=158
SAML Samuel 41.27 99 P P 08 39 23.8 -1.8
SAML IAmb IAmb 08 39 30.9
comp=Z,36nm,1.1s
SAML IAMs_20 IAMs_20 08 54 14.2
comp=Z,6µm,19.0s
SHOC Shoshone, Teco 41.27 345 P P 08 39 25.2 -0.1
baz=162
HHAR Hobbs 41.33 13 S S 08 45 40.8 +0.6
baz=196
PKM Mcpherson Peak 41.36 341 P P 08 39 25.4 -0.8
baz=157
Y49A Blount Mountai 41.39 23 S S 08 45 43.3 +2.0
baz=208
T35B Sooner Cattle 41.44 10 P P 08 39 25.8 -0.8
baz=192
T35B S S 08 45 39.4 -2.4
baz=192
HBAR Harrisburg 41.48 17 S S 08 45 43.5 +0.9
baz=201
SHPR Sheep Range 41.58 347 P P 08 39 27.4 -0.6
SDCO Great Sand Dun 41.61 359 P P 08 39 29.3 +0.9
baz=179,SNR=10
SDCO S S 08 45 49.0 +4.1
baz=179
SDCO Great Sand Dun 41.61 359 P P 08 39 28.7 +0.3
baz=179,SNR=10
ISA Isabella, Lake 41.65 343 P P 08 39 27.9 -0.6
baz=159
U40A Yellville 41.65 14 P P 08 39 27.2 -1.2
baz=198,SNR=6.1
U40A P P 08 39 27.2 -1.2
baz=198,SNR=6.1
U40A S S 08 45 44.5 -0.5
baz=198
U40A S S 08 45 44.5 -0.5
baz=198
U40A Yellville 41.65 14 P P 08 39 28.1 -0.3
baz=198,SNR=6.1
S22A 4UR Ranch, Cre 41.66 357 P P 08 39 28.8 0.0
baz=177,SNR=9.8
X48A Hartselle 41.68 22 S S 08 45 45.3 -0.1
baz=207
MPMC Manual Prospec 41.74 344 P P 08 39 27.2 -2.2
baz=160,SNR=13
PLAL Pickwick Lake 41.78 20 IAmb IAmb 08 39 56.5
comp=Z,32nm,1.2s
SMMC Simler 41.80 341 P P 08 39 27.8 -1.9
baz=157
LCAR Lake Charles 41.82 16 S S 08 45 49.2 +1.7
baz=200
FURC Furnace Creek, 41.96 345 P P 08 39 31.4 +0.6
baz=162
VES Vestal, Richgr 42.00 342 P P 08 39 31.7 +0.4
baz=158
PV13 Radium Mtn., P 42.21 355 IAmb IAmb 08 39 46.8
comp=Z,45nm,1.6s
GOGA Godfrey 42.23 26 IAMs_20 IAMs_20 08 56 33.0
comp=Z,6µm,18.0s
GOGA Godfrey 42.23 26 S S 08 45 55.1 +1.4
baz=212
CWC Cottonwood Cre 42.26 344 P P 08 39 33.9 +0.3
baz=160
TPNV Topopah Spring 42.26 346 IAMs_20 IAMs_20 08 53 17.8
comp=Z,6µm,20.0s
TPNV Topopah Spring 42.26 346 P P 08 39 32.3 -1.3
baz=183,SNR=11
PV15 Paradox Valley 42.36 355 IAmb IAmb 08 40 09.7
comp=Z,62nm,1.7s
Y52A Lilburn 42.36 25 S S 08 45 54.2 -1.4
baz=211
Y52A S S 08 45 54.2 -1.4
baz=211
PRN Pahroc Range 42.42 347 IAmb IAmb 08 39 48.1
comp=Z,26nm,1.1s
PV23 Carpenter Ridg 42.51 355 IAmb IAmb 08 40 11.0
comp=Z,79nm,1.9s
GRAC Grapevine Rang 42.59 345 IAmb IAmb 08 39 49.5
comp=Z,43nm,1.1s
GRAC Grapevine Rang 42.59 345 P P 08 39 34.9 -1.2
baz=161,SNR=18
R32A Long Quarter, 42.61 7 P P 08 39 37.0 +0.8
baz=189
R32A S S 08 46 00.2 +1.1
baz=189
X51A Calhoun 42.63 24 S S 08 46 01.4 +1.8
baz=210
X51A S S 08 46 01.4 +1.8
baz=210
PBMO Poplar Bluff 42.69 17 IAmb IAmb 08 39 45.6
comp=Z,54nm,1.3s
PBMO Poplar Bluff 42.69 17 P P 08 39 37.3 +0.5
baz=201,SNR=5.9
PBMO S S 08 46 01.6 +1.3
baz=201
S39A Bolivar 42.81 13 P P 08 39 37.1 -0.8
baz=196,SNR=14
S39A S S 08 46 02.6 +0.4
baz=196
Q24A Divide 42.82 359 IAmb IAmb 08 39 47.3
comp=Z,48nm,1.8s
Q24A Divide 42.82 359 P P 08 39 38.8 +0.5
baz=179
CBKS Cedar Bluff 42.89 5 IAmb IAmb 08 39 46.2
comp=Z,39nm,1.1s
CBKS Cedar Bluff 42.89 5 P P 08 39 38.9 +0.4
baz=187
CBKS S S 08 46 03.5 +0.2
baz=187
CBKS Cedar Bluff 42.89 5 P P 08 39 37.2 -1.3
baz=187
KSCO Kaye Shedlock' 42.90 2 IAmb IAmb 08 39 45.0
comp=Z,26nm,1.0s
KSCO Kaye Shedlock' 42.90 2 P P 08 39 38.8 +0.1
baz=183
KSCO S S 08 46 04.9 +1.3
baz=183
KSCO Kaye Shedlock' 42.90 2 P P 08 39 36.6 -2.1
baz=183
WVT Waverly 42.91 20 P P 08 39 38.3 -0.3
WVT IAmb IAmb 08 39 47.6
comp=Z,55nm,1.5s
WVT Waverly 42.91 20 P P 08 39 37.5 -1.1
baz=205,SNR=8.1
WVT S S 08 46 03.3 -0.2
baz=205
WVT Waverly 42.91 20 P P 08 39 37.3 -1.3
baz=205
V48A Smith Brothers 42.91 21 S S 08 46 04.0 +0.4
baz=206
MVU Marysvale 42.96 351 IAmb IAmb 08 39 55.9
comp=Z,42nm,1.1s
W50A Signal Mountai 43.00 23 S S 08 46 06.4 +1.3
baz=209
HAW Hawthorne Fire 43.05 28 S S 08 46 07.7 +2.0
baz=214
Q16A Castle Valley 43.22 352 IAmb IAmb 08 39 51.1
comp=Z,34nm,1.4s
SRU San Rafael Swe 43.33 353 IAmb IAmb 08 39 51.6
comp=Z,28nm,1.1s
R11A Troy Canyon, C 43.45 347 P P 08 39 42.1 -1.1
baz=164,SNR=23
T45B Paducah 43.45 18 S S 08 46 12.3 +0.9
baz=203
HODGE Hodges 43.47 27 S S 08 46 14.7 +2.9
baz=213
W52A Murphy 43.47 25 S S 08 46 14.1 +2.2
baz=210
CPCT Cooper Cave 43.53 24 IAmb IAmb 08 39 52.4
comp=Z,45nm,1.5s
KSU1 Kansas State U 43.56 9 S S 08 46 13.9 +0.9
baz=192
KSU1 Kansas State U 43.56 9 P P 08 39 43.9 0.0
baz=192
MLAC Mammoth, Mammo 43.59 343 P P 08 39 43.3 -1.1
baz=159
R40A Maddies Statio 43.63 14 P P 08 39 43.0 -1.4
baz=198,SNR=6.6
R40A S S 08 46 15.5 +1.4
baz=198
ISCO Idaho Springs 43.66 359 P P 08 39 43.7 -1.4
baz=178,SNR=7.0
ISCO S S 08 46 16.6 +1.5
baz=178
ISCO Idaho Springs 43.66 359 P P 08 39 44.9 -0.1
baz=178,SNR=7.0
CCM Cathedral Cave 43.67 15 P P 08 39 42.8 -2.0
CCM Cathedral Cave 43.67 15 P P 08 39 43.7 -1.0
baz=199
CCM S S 08 46 14.4 -0.2
baz=199
CCM Cathedral Cave 43.67 15 P P 08 39 44.4 -0.3
baz=199
P17A Butcher Ranch, 43.71 353 IAmb IAmb 08 39 58.0
comp=Z,30nm,1.2s
SJG San Juan 43.72 59 LR LR 08 54 47.8
comp=Z,3µm,19.5s,baz=238,slow=32
PDPR Patillas Dam, 43.79 59 P P 08 39 45.8 -0.3
PDPR IAmb IAmb 08 39 50.0
comp=Z,42nm,1.3s
P18A Preston Nutter 43.80 354 IAmb IAmb 08 39 57.0
comp=Z,25nm,1.0s
CASEE Lake Jocassee 43.81 26 S S 08 46 17.1 +0.3
baz=212
FVM French Village 43.82 16 IAmb IAmb 08 40 08.0
comp=Z,28nm,1.4s
FVM French Village 43.82 16 P P 08 39 45.2 -0.8
baz=200
FVM S S 08 46 14.3 -2.6
baz=200
GCPR Guaynabo City 43.87 58 P P 08 39 44.6 -2.0
S44A Carbondale 43.88 17 IAmb IAmb 08 39 54.9
comp=Z,46nm,1.6s
S44A Carbondale 43.88 17 S S 08 46 18.8 +1.0
baz=202
V51A Loudon 43.91 24 IAmb IAmb 08 39 54.8
comp=Z,28nm,1.1s
V51A Loudon 43.91 24 P P 08 39 46.1 -0.6
baz=210
V51A S S 08 46 21.0 +2.7
baz=210
SIUC Southern Illin 43.92 17 IAmb IAmb 08 39 55.0
comp=Z,46nm,1.6s
T47A Sharon Grove 43.93 20 IAmb IAmb 08 40 13.8
comp=Z,73nm,1.9s
T47A Sharon Grove 43.93 20 S S 08 46 16.9 -1.7
baz=205
U49A Red Boiling Sp 43.98 22 S S 08 46 19.6 +0.3
baz=207
TKL Tuckaleechee C 44.02 24 LR LR 08 58 24.7
comp=Z,4µm,18.1s,baz=219,slow=36
TKL Tuckaleechee C 44.02 24 S S 08 46 19.9 0.0
baz=210
LHV Little Huntoon 44.07 344 IAmb IAmb 08 40 01.3
comp=Z,39nm,1.2s
O20A White River Ci 44.12 356 IAmb IAmb 08 39 57.3
comp=Z,42nm,1.1s
O20A White River Ci 44.12 356 P P 08 39 47.5 -1.1
baz=175,SNR=16
PAULI Pauline 44.16 27 IAmb IAmb 08 40 14.8
comp=Z,30nm,1.2s
PAULI Pauline 44.16 27 P P 08 39 47.7 -1.1
baz=213
PAULI S S 08 46 23.3 +1.3
baz=213
Y57A Sumter 44.17 29 S S 08 46 23.3 +1.3
baz=216
Y57A S S 08 46 23.3 +1.3
baz=216
NVAR Mina Array Bea 44.19 344 P P 08 39 49.0 -0.2
comp=Z,4.0nm,0.9s,baz=172,slow=7.4,SNR=18
NVAR LR LR 08 54 13.0
comp=Z,6µm,21.8s,baz=164,slow=31
comp=Z,4.0nm,0.9s
V52A Sevierville 44.25 24 S S 08 46 23.0 -0.2
baz=211
MPU Maple Canyon 44.36 352 IAmb IAmb 08 39 57.3
comp=Z,25nm,1.0s
BOAV Boa Vista 44.37 82 *e*P P 08 39 50.1 -0.7
RYN Ryan 44.43 344 IAmb IAmb 08 40 04.1
comp=Z,30nm,1.3s
V53A Saluda 44.43 25 IAmb IAmb 08 40 19.5
comp=Z,22nm,1.1s
V53A Saluda 44.43 25 P P 08 39 49.6 -1.4
baz=212
V53A P P 08 39 49.6 -1.4
baz=212
V53A S S 08 46 27.1 +1.1
baz=212
V53A S S 08 46 27.1 +1.1
baz=212
Y58A Scranton 44.43 30 S S 08 46 28.4 +2.5
baz=217
Y58A S S 08 46 28.4 +2.5

baz=217
SLM Saint Louis 44.48 16 S S 08 46 28.6 +2.1
baz=200
VILB Vilhena 44.58 104 eP P 08 39 51.0 -1.6
P38A Dawn 44.62 12 IAmb IAmb 08 40 00.5
comp=Z,27nm,1.2s
P38A Dawn 44.62 12 P P 08 39 51.5 -0.9
baz=196
P38A S S 08 46 28.8 +0.2
baz=196
BIRD Birdtown, Kers 44.64 28 S S 08 46 30.4 +1.5
baz=215
KMSC Kings Mountain 44.65 27 S S 08 46 30.1 +1.1
baz=214
KMSC Kings Mountain 44.65 27 P P 08 39 52.5 -0.2
baz=214
RDMU Red Mountain 44.67 354 IAmb IAmb 08 40 01.5
comp=Z,33nm,1.4s
DUG Dugway, Tooele 44.71 351 IAmb IAmb 08 40 03.0
comp=Z,21nm,1.0s
DUG Dugway, Tooele 44.71 351 P P 08 39 53.3 +0.1
baz=168,SNR=9.9
N23A Red Feather La 44.76 358 P P 08 39 54.1 +0.2
baz=178
T50A Nancy 44.78 22 IAmb IAmb 08 40 19.5
comp=Z,42nm,1.8s
T50A Nancy 44.78 22 S S 08 46 30.6 -0.3
baz=208
T50A S S 08 46 30.6 -0.3
baz=208
OGNE Ogallala 44.85 3 IAMs_20 IAMs_20 08 57 17.0
comp=Z,6µm,18.0s
OGNE Ogallala 44.85 3 P P 08 39 53.8 -0.5
baz=184
P40A Paris 44.86 14 P P 08 39 53.7 -0.6
baz=198,SNR=9.4
P40A S S 08 46 31.0 -1.0
baz=198
TZTN Tazewell 44.87 24 S S 08 46 32.0 -0.3
baz=210
TZTN Tazewell 44.87 24 P P 08 39 54.0 -0.5
baz=210
JLU Jordanelle 44.91 352 IAmb IAmb 08 40 03.6
comp=Z,26nm,1.3s
YERR Yerington 44.96 344 IAmb IAmb 08 40 08.6
comp=Z,25nm,1.2s
Q44A Meyer Farm, Va 45.07 17 S S 08 46 36.6 +1.5
baz=202
X58A Rowland 45.11 30 S S 08 46 36.1 +0.4
baz=217
X58A S S 08 46 36.1 +0.4
baz=217
PHWY Pilot Hill 45.16 359 IAmb IAmb 08 40 06.9
comp=Z,35nm,1.4s
EMB Emerald Bay 45.20 343 IAmb IAmb 08 40 10.6
comp=Z,38nm,1.2s
W57A Gilead 45.28 29 S S 08 46 39.8 +1.6
baz=216
W57A S S 08 46 39.8 +1.6
baz=216
V55A Taylorsville 45.29 27 S S 08 46 41.9 +3.6
baz=214
V55A S S 08 46 41.9 +3.6
baz=214
VCNR Virginia City 45.37 343 IAmb IAmb 08 40 05.8
comp=Z,24nm,1.0s
BGU Big Grassy Mou 45.46 351 IAmb IAmb 08 40 07.9
comp=Z,21nm,1.2s
MPK Martis Peak 45.48 343 IAmb IAmb 08 40 12.8
comp=Z,37nm,1.3s
U54A Nelsons Funny 45.58 26 S S 08 46 42.5 -0.1
baz=212
U54A S S 08 46 42.5 -0.1
baz=212
P43A Skaggs, Pawnee 45.62 16 S S 08 46 44.6 +1.7
baz=201
BGNE Belgrade 45.62 7 S S 08 46 43.9 +0.9
baz=189
BGNE Belgrade 45.62 7 P P 08 39 59.7 -0.7
baz=189
ELK Elko 45.68 349 LR LR 08 56 23.2
comp=Z,6µm,18.0s,baz=168,slow=33
ELK Elko 45.68 349 P P 08 40 00.7 -0.3
ELK IAMs_20 IAMs_20 08 56 12.2
comp=Z,6µm,18.0s
PAHR Pah Rah Range 45.68 344 IAmb IAmb 08 40 07.4
comp=Z,26nm,1.1s
R49A Shelbyville 45.78 21 P P 08 40 01.9 +0.3
baz=207
R49A P P 08 40 01.9 +0.3
baz=207
R49A S S 08 46 43.2 -2.1
baz=207
R49A S S 08 46 43.2 -2.1
baz=207
S51A Beattyville 45.80 23 S S 08 46 45.3 -0.4
baz=210
S51A S S 08 46 45.3 -0.4
baz=210
BMN Battle Mountai 45.80 346 IAmb IAmb 08 40 08.3
comp=Z,14nm,1.0s
N38A Joes South For 45.81 12 S S 08 46 44.8 -0.9
baz=196
GDXM Geysers 45.91 340 IAmb IAmb 08 40 29.0
comp=Z,18nm,1.3s
HWUT Hardware Ranch 45.92 353 IAmb IAmb 08 40 20.0
comp=Z,18nm,1.0s
HWUT IAMs_20 IAMs_20 08 56 11.8
comp=Z,5µm,20.0s
U56A King 46.07 27 S S 08 46 54.4 +4.7
baz=214
U56A S S 08 46 54.4 +4.7
baz=214
R50A Paris 46.08 22 S S 08 46 48.5 -1.1
baz=208
R50A S S 08 46 48.5 -1.1
baz=208
ORV Oroville 46.16 342 IAmb IAmb 08 40 11.7
comp=Z,22nm,1.0s
PPT Papeete 46.17 250 LR LR 08 54 54.9
comp=Z,3µm,18.7s,baz=78,slow=30
P46A Rosedale 46.28 18 S S 08 46 53.8 +1.3
baz=204
CNNC Cliffs of the 46.38 30 S S 08 46 59.0 +5.0
baz=218
CNNC Cliffs of the 46.38 30 P P 08 40 05.8 -0.5
baz=218
O44A Mansfield 46.39 17 S S 08 46 52.7 -1.4
baz=202
L34A Svendsen Farm, 46.40 8 S S 08 46 54.1 -0.1
baz=191
HDIL Hopedale 46.53 16 S S 08 46 54.8 -1.3
baz=201
HDIL Hopedale 46.53 16 P P 08 40 06.5 -0.9
baz=201
K22A Casper 46.54 358 IAmb IAmb 08 40 15.6
comp=Z,27nm,1.1s
K22A Casper 46.54 358 P P 08 40 07.5 -0.2
baz=177,SNR=6.8
K22A S S 08 46 58.3 +1.9
baz=177
K22A Casper 46.54 358 P P 08 40 07.3 -0.4
baz=177,SNR=6.8
P48A Milroy 46.73 20 S S 08 46 57.6 -1.3
baz=206
P48A S S 08 46 57.6 -1.3
baz=206
BLA Blacksburg 46.77 27 IAMs_20 IAMs_20 08 58 53.1
comp=Z,6µm,19.0s
BLA Blacksburg 46.77 27 S S 08 46 59.2 -0.5
baz=214
BLA Blacksburg 46.77 27 P P 08 40 08.9 -0.5
baz=214
GDHS Morne Mazeau, 46.80 63 IAMs_20 IAMs_20 08 56 25.3
comp=Z,4µm,20.0s
BW06 Boulder Array 46.84 355 IAmb IAmb 08 40 19.4
comp=Z,19nm,1.2s
BW06 Boulder Array 46.84 355 P P 08 40 08.8 -1.4
baz=173
PD31 Pinedale Array 46.84 355 IAmb IAmb 08 40 19.4
comp=Z,17nm,1.2s
PDAR Pinedale Array 46.84 355 P P 08 40 09.0 -1.2
comp=Z,5.0nm,0.9s,baz=168,slow=7.6,SNR=19
PDAR LR LR 08 57 27.9
comp=Z,3µm,18.6s,baz=180,slow=33
comp=Z,5.0nm,0.9s
S54A Dingess, Beckl 46.87 25 S S 08 47 00.3 -0.8
baz=212
S54A S S 08 47 00.3 -0.8
baz=212
SCIA State Center 46.89 11 S S 08 46 56.5 -4.5
baz=196
AHID Auburn Hatcher 47.00 353 IAmb IAmb 08 40 47.1
comp=Z,13nm,1.1s
AHID IAMs_20 IAMs_20 08 56 58.5
comp=Z,4µm,19.0s
SFIN Lafayette 47.01 18 S S 08 47 02.8 -0.1
baz=204
P49A Miami Univ. Ec 47.04 21 S S 08 47 01.7 -1.7
baz=207
P49A Miami Univ. Ec 47.04 21 P P 08 40 10.5 -1.0
baz=207
R53A Hurricane 47.06 24 S S 08 47 05.1 +1.4
baz=211
R53A S S 08 47 05.1 +1.4
baz=211
Q51A Peebles 47.10 23 S S 08 47 03.8 -0.5
baz=209
Q51A S S 08 47 03.8 -0.5
baz=209
ABD La Joyeuse, An 47.12 63 IAMs_20 IAMs_20 08 56 44.9
comp=Z,4µm,20.0s
T57A Hurt 47.13 28 S S 08 47 05.3 +0.6
baz=215
T57A S S 08 47 05.3 +0.6
baz=215
U59A Littleton 47.31 30 S S 08 47 07.3 +0.1
baz=218
U59A S S 08 47 07.3 +0.1
baz=218
L40A Anamosa 47.46 13 IAmb IAmb 08 40 22.3
comp=Z,20nm,1.1s
L40A Anamosa 47.46 13 S S 08 47 09.0 -0.3
baz=198
Q52A Bidwell 47.47 24 S S 08 47 11.6 +2.1
baz=211
Q52A S S 08 47 11.6 +2.1
baz=211
O48B Farmland 47.53 20 S S 08 47 09.2 -1.2
baz=207
O48B Farmland 47.53 20 P P 08 40 13.7 -1.6
baz=207
PLCA Paso Flores 47.55 145 P P 08 40 14.9 -0.7
comp=Z,8.7nm,1.1s,baz=300,slow=11,SNR=6.0
PLCA LR LR 08 55 23.2
comp=Z,11µm,19.3s,baz=320,slow=30
comp=Z,8.7nm,1.1s
PLCA Paso Flores 47.55 145 IAmb IAmb 08 40 21.8
comp=Z,27nm,1.2s
P51A Williamsport 47.61 22 S S 08 47 09.1 -2.4
baz=210
P51A S S 08 47 09.1 -2.4
baz=210
SNOW Snow King Moun 47.65 354 IAmb IAmb 08 41 01.7
comp=Z,18nm,1.3s
M44A Midewin, Midew 47.65 17 S S 08 47 11.1 -0.9
baz=202
TPAW Teton Pass 47.70 354 IAmb IAmb 08 40 23.7
comp=Z,12nm,1.0s
TPAW IAMs_20 IAMs_20 08 57 23.0
comp=Z,4µm,19.0s
BBGH Gun Hill 47.74 68 IAMs_20 IAMs_20 08 59 06.6
comp=Z,5µm,22.0s
O49A Covington 47.76 21 S S 08 47 11.9 -1.7
baz=208
O49A S S 08 47 11.9 -1.7
baz=208
L42A Oliver, Polo 47.79 15 S S 08 47 11.5 -2.4
baz=200
R55A Marlton 47.79 26 S S 08 47 15.4 +1.2
baz=214
R55A S S 08 47 15.4 +1.2
baz=214
S57A Dark Hollow, R 47.88 27 S S 08 47 17.5 +2.0
baz=215
S57A S S 08 47 17.5 +2.0
baz=215
T59A Double "B" Far 47.91 29 S S 08 47 17.0 +1.1
baz=217
T59A S S 08 47 17.0 +1.1
baz=217
MOOW Moose Ponds 47.93 354 IAmb IAmb 08 40 29.7
comp=Z,15nm,1.1s
MOOW IAMs_20 IAMs_20 08 57 30.2
comp=Z,4µm,20.0s
RSSD Black Hills 47.97 0 P P 08 40 18.0 -0.9
RSSD Black Hills 47.97 0 P P 08 40 18.9 0.0
baz=181,SNR=11
RSSD S S 08 47 16.2 -0.8
baz=181
RSSD Black Hills 47.97 0 P P 08 40 17.0 -1.9
baz=181
MOD Modoc Plateau 47.97 344 IAmb IAmb 08 40 25.7
comp=Z,25nm,1.2s
WVOR Wild Horse Val 48.04 346 IAmb IAmb 08 40 32.0
comp=Z,21nm,1.2s
WVOR IAMs_20 IAMs_20 08 56 29.7
comp=Z,5µm,22.0s
Q54A Coxs Mills 48.07 25 S S 08 47 18.9 +0.9
baz=212
Q54A S S 08 47 18.9 +0.9
baz=212
P52A Corning 48.10 23 P P 08 40 18.0 -1.7
baz=211
ECSD EROS Data Cent 48.10 8 IAmb IAmb 08 40 29.1
comp=Z,20nm,1.2s
ECSD EROS Data Cent 48.10 8 IAMs_20 IAMs_20 08 59 07.3
comp=Z,5µm,19.0s
ECSD EROS Data Cent 48.10 8 P P 08 40 17.8 -2.0
baz=191,SNR=9.1
ECSD S S 08 47 12.3 -6.1
baz=191
ECSD EROS Data Cent 48.10 8 P P 08 40 17.2 -2.5
baz=191,SNR=9.1
JCC Jacoby Creek, 48.13 340 IAMs_20 IAMs_20 08 55 55.8
comp=Z,6µm,20.0s
HLID Hailey 48.25 350 IAmb IAmb 08 40 27.5
comp=Z,22nm,1.0s
HLID IAMs_20 IAMs_20 08 58 07.6
comp=Z,4µm,18.0s
HLID Hailey 48.25 350 P P 08 40 18.5 -2.6
baz=167,SNR=38
P53A Whipple 48.27 24 S S 08 47 19.8 -1.1
baz=212
P53A S S 08 47 19.8 -1.1
baz=212
ACSO Alum Creek Sta 48.29 22 S S 08 47 20.7 -0.5
baz=209
MFID Camas Ranch 48.37 349 IAMs_20 IAMs_20 08 57 42.5
comp=Z,6µm,19.0s
L44A Lake County Fo 48.42 16 S S 08 47 22.4 -0.5
baz=202
L44A Lake County Fo 48.42 16 P P 08 40 22.5 +0.3
baz=202
YPP Pitchstone Pla 48.45 354 IAmb IAmb 08 40 32.7
comp=Z,16nm,1.1s
N49A Columbus Grove 48.46 21 S S 08 47 21.0 -2.5
baz=208
N49A S S 08 47 21.0 -2.5
baz=208
JFWS Jewell Farm 48.50 14 IAmb IAmb 08 40 31.8
comp=Z,13nm,0.9s
JFWS Jewell Farm 48.50 14 S S 08 47 23.3 -0.7
baz=199
JFWS Jewell Farm 48.50 14 P P 08 40 22.4 -0.3
baz=199
LL02 Futaleuf 48.50 148 P P 08 40 22.6 -0.2
LL02 IAmb IAmb 08 40 29.1
comp=Z,23nm,1.0s
YBH Yreka Blue Hor 48.52 342 LR LR 08 56 24.8
comp=Z,5µm,21.4s,baz=169,slow=31
YBH Yreka Blue Hor 48.52 342 IAmb IAmb 08 40 28.0
comp=Z,16nm,1.1s
YBH IAMs_20 IAMs_20 08 56 03.3
comp=Z,5µm,21.0s
SUSD Miller 48.54 5 S S 08 47 24.6 0.0
baz=187
R58B Mineral 48.55 28 S S 08 47 29.9 +5.0
baz=216
R58B S S 08 47 29.9 +5.0
baz=216
O52A Adamsville 48.63 23 S S 08 47 28.6 +2.6
baz=211
O52A S S 08 47 28.6 +2.6
baz=211
LKWY Lake 48.70 354 IAmb IAmb 08 40 51.1
comp=Z,29nm,1.3s
LKWY IAMs_20 IAMs_20 08 58 18.7
comp=Z,3µm,19.0s
L46A Eue Claire 48.75 18 S S 08 47 26.2 -1.3
baz=204
L46A S S 08 47 26.2 -1.3
baz=204
K43A Burlington 48.79 16 S S 08 47 27.2 -0.9
baz=202
Q56A Snyder Ridge, 48.83 26 S S 08 47 28.7 -0.1
baz=214
Q56A S S 08 47 28.7 -0.1
baz=214
L04D Klamath Falls 48.84 342 P P 08 40 25.2 -0.4
baz=156
J08A Circle Bar Ran 48.88 346 IAmb IAmb 08 40 34.2
comp=Z,23nm,1.2s
I37B Waseca 48.88 11 P P 08 40 24.7 -1.1
baz=195,SNR=8.9
I37B S S 08 47 26.9 -2.5
baz=195
CBN Corbin Frederi 48.98 28 S S 08 47 33.5 +2.6
baz=217
O53A New Philadelph 48.99 24 IAMs_20 IAMs_20 09 00 51.7
comp=Z,4µm,18.0s
O53A New Philadelph 48.99 24 P P 08 40 26.8 +0.2
baz=211
K04D Chiloquin, OR 49.05 343 P P 08 40 26.2 -1.0
baz=157
MCWV Mont Chateau 49.05 25 IAMs_20 IAMs_20 09 00 28.5
comp=Z,5µm,19.0s
MCWV Mont Chateau 49.05 25 S S 08 47 33.1 +1.2
baz=213
MCWV Mont Chateau 49.05 25 P P 08 40 27.3 +0.2
baz=213
N51A Ashland 49.12 22 S S 08 47 31.3 -1.5
baz=210
N51A S S 08 47 31.3 -1.5
baz=210
L02F Cave Junction 49.15 341 P P 08 40 28.5 +0.7
baz=155
RLMT Red Lodge 49.16 355 IAmb IAmb 08 40 35.5
comp=Z,13nm,0.9s
RLMT Red Lodge 49.16 355 P P 08 40 26.7 -1.3
baz=174,SNR=6.6
O54A Avella 49.27 24 S S 08 47 38.8 +3.8
baz=212
O54A S S 08 47 38.8 +3.8
baz=212
L48A N Adams 49.28 20 S S 08 47 32.9 -2.2
baz=207
L48A S S 08 47 32.9 -2.2
baz=207
I40A Norwalk 49.34 13 S S 08 47 34.4 -1.4
baz=198
J05D Fort Rock, OR 49.51 344 P P 08 40 28.6 -2.2
baz=158,SNR=11
K02D Willamette Mer 49.70 341 P P 08 40 31.1 -1.0
baz=155
P57A Homestead Farm 49.71 27 S S 08 47 42.8 +1.6
baz=216
P57A S S 08 47 42.8 +1.6
baz=216
J04D Umpqua Nationa 49.72 343 IAMs_20 IAMs_20 08 57 22.0
comp=Z,7µm,20.0s
J04D Umpqua Nationa 49.72 343 P P 08 40 31.9 -0.4
baz=157
I42A Draeger Farm, 49.75 15 S S 08 47 39.5 -2.0
baz=200
BOZ Bozeman (W) 49.86 353 P P 08 40 33.6 +0.3
baz=171
PINE Pine Mountain 49.90 344 IAmb IAmb 08 40 47.2
comp=Z,36nm,1.3s
PLID Pearl Lake 50.01 349 IAMs_20 IAMs_20 08 58 53.0
comp=Z,6µm,19.0s
BMO Blue Mountains 50.04 348 IAMs_20 IAMs_20 08 58 22.7
comp=Z,6µm,20.0s
COYC Coyhaique 50.07 151 IAmb IAmb 08 40 41.3
comp=Z,27nm,1.1s
SPMN Marine on St. 50.16 11 S S 08 47 45.3 -2.0
baz=195
CPUP Villa Florida 50.20 121 P P 08 40 35.6 -0.4
comp=Z,8.4nm,0.9s,baz=194,slow=7.4,SNR=4.0
CPUP LR LR 08 58 29.5
comp=Z,5µm,20.6s,baz=291,slow=32
comp=Z,8.4nm,0.9s
CPUP Villa Florida 50.20 121 IAmb IAmb 08 40 43.2
comp=Z,31nm,1.2s
J01E Myrtle Point 50.20 341 IAMs_20 IAMs_20 08 57 13.7
comp=Z,6µm,21.0s
J01E Myrtle Point 50.20 341 P P 08 40 35.5 -0.2
baz=155
F33A 5 Mile Ranch, 50.22 7 S S 08 47 45.3 -2.6
baz=191
I04A Tendick Farm, 50.31 343 P P 08 40 36.8 +0.1
baz=157
J47A Sunmer 50.32 19 S S 08 47 45.4 -4.0
baz=206
J47A S S 08 47 45.4 -4.0
baz=206
I03D Drain, OR 50.50 342 P P 08 40 38.2 +0.2
baz=156
I05D Terrebonne, OR 50.52 344 P P 08 40 38.7 +0.4
baz=158
LAO LASA Array 50.56 358 P P 08 40 39.3 +0.8
baz=178
H43A Windswept, Lux 50.58 15 S S 08 47 51.1 -2.0
baz=202
F36A Milaca 50.65 10 IAmb IAmb 08 40 47.0
comp=Z,46nm,1.6s
F36A Milaca 50.65 10 S S 08 47 51.6 -2.4
baz=194
SSPA Standing Stone 50.71 26 IAMs_20 IAMs_20 09 00 45.2
comp=Z,7µm,20.0s
G40A Rib Lake 50.74 13 IAmb IAmb 08 40 48.3
comp=Z,24nm,1.2s
G40A Rib Lake 50.74 13 S S 08 47 52.6 -2.7
baz=199
M55A Ridgway 51.02 25 S S 08 48 01.2 +1.9
baz=214
M55A S S 08 48 01.2 +1.9
baz=214
I02E Swisshome, OR 51.03 342 IAMs_20 IAMs_20 08 57 43.6
comp=Z,7µm,22.0s
ERPA Erie 51.06 23 S S 08 47 59.3 -0.6
baz=212
H04A Detroit Lake 51.07 344 IAmb IAmb 08 40 54.0
comp=Z,21nm,1.1s
H04D Lebanon 51.08 343 IAMs_20 IAMs_20 08 58 52.9
comp=Z,5µm,18.0s
H04D Lebanon 51.08 343 P P 08 40 41.9 -0.5
baz=156
GEDE Greenville 51.08 29 S S 08 48 02.3 +2.2
baz=218
F10A Beach Ranch, E 51.10 349 IAmb IAmb 08 41 16.0
comp=Z,46nm,1.6s
G05D Wamic, OR 51.35 345 P P 08 40 44.3 -0.1
baz=158
MSO Missoula 51.37 352 IAMs_20 IAMs_20 09 00 11.0
comp=Z,3µm,19.0s
MSO Missoula 51.37 352 P P 08 40 45.9 +1.2
baz=168
N58A Sunbury 51.39 27 S S 08 48 07.7 +3.2
baz=216
N58A S S 08 48 07.7 +3.2
baz=216
HOOD Mount Hood Mea 51.51 345 IAmb IAmb 08 40 57.1
comp=Z,28nm,0.9s
F07A Phinny Hill Vi 51.61 346 IAmb IAmb 08 40 54.9
comp=Z,23nm,1.0s
M57A Sunshine Farm, 51.61 26 S S 08 48 08.0 +0.5
baz=216
M57A S S 08 48 08.0 +0.5
baz=216
E38A The Farm, Brul 51.73 11 IAmb IAmb 08 40 52.9
comp=Z,46nm,1.7s
E38A The Farm, Brul 51.73 11 S S 08 48 07.3 -1.6
baz=196
COWI Conover 51.77 14 S S 08 48 08.6 -0.9
baz=200
GLMI Grayling 51.81 18 IAMs_20 IAMs_20 09 02 44.0
comp=Z,4µm,19.0s
GLMI Grayling 51.81 18 P P 08 40 47.2 -0.7
baz=206
WVNY West Valley, N 51.86 24 S S 08 48 14.5 +3.6
baz=214
PANJ Princeton 51.97 29 S S 08 48 12.6 +0.2
baz=219
HAWA Hanford 51.99 347 IAmb IAmb 08 40 57.5

comp=Z,31nm,1.4s
L56A Greenwood 52.08 25 S S 08 48 13.8 -0.2
baz=215
L56A S S 08 48 13.8 -0.2
baz=215
EGMT Eagleton 52.08 355 P P 08 40 50.0 +0.1
baz=173
DGMT Dagmar 52.32 0 IAms_20 IAms_20 09 01 38.5
comp=Z,3µm,18.0s
DGMT Dagmar 52.32 0 S S 08 48 16.6 -0.4
baz=180
DGMT Dagmar 52.32 0 P P 08 40 51.8 +0.2
baz=180
KSPA Keystone Colle 52.40 27 S S 08 48 19.1 +0.9
baz=217
D08A Wollman Farm, 52.48 348 IAmb IAmb 08 41 00.6
comp=Z,33nm,1.7s
MDP Montagnes des 52.55 80 LR LR 09 01 24.2
comp=Z,4µm,19.5s,baz=266,slow=34
E43A Lone Tree Farm 52.56 15 S S 08 48 18.1 -2.2
baz=202
F04D Rainier, OR 52.58 344 P P 08 40 52.5 -1.1
baz=157
AGMN Agassiz Nation 52.69 7 IAms_20 IAms_20 09 01 44.6
comp=Z,5µm,20.0s
AGMN Agassiz Nation 52.69 7 P P 08 40 53.1 -1.2
baz=191,SNR=19
AGMN S S 08 48 19.7 -2.3
baz=191
AGMN Agassiz Nation 52.69 7 P P 08 40 53.6 -0.7
baz=191,SNR=19
BINY Binghamton 52.81 26 P P 08 40 53.2 -2.1
baz=217
LPA La Plata 52.83 132 eP P 08 40 47.8 -7.8
LPA pP sP 08 40 59.5 +0.8
LPA sP pwP 08 41 05.1 +3.3
LPA PCP PcP 08 42 07.1 +2.2
LPA PP PP 08 43 02.3 +7.2
LPA PPP PPP 08 44 10.8
LPA S S 08 48 27.2 +2.8
LPA PS PKiKP 08 48 33.2 -10
LPA PKIKP 08 48 44.6
LPA SCS ScS 08 50 40.1 -5.8
LPA SKIKP 08 52 03.9
LPA PKIKS 08 52 09.7
LPA SS SKiKP 08 52 24.5 +8.1
LPA SSS SSS 08 54 11.9
LPA SSS SSS 08 54 16.3
LPA SSS SSS 08 55 02.2
PAL Palisades 52.83 29 P P 08 40 53.4 -2.1
baz=220
J55A Hilton 52.90 24 S S 08 48 22.5 -2.5
baz=214
J55A S S 08 48 22.5 -2.5
baz=214
K57A Scipio Center 53.01 26 S S 08 48 24.7 -2.0
baz=216
EYMN Ely 53.03 11 P P 08 40 56.5 -0.4
baz=196,SNR=12
EYMN S S 08 48 20.2 -6.5
baz=196
EYMN Ely 53.03 11 P P 08 40 56.1 -0.7
baz=196,SNR=12
B35A Bob, Littlefor 53.05 9 IAmb IAmb 08 41 01.9
comp=Z,27nm,1.1s
B35A Bob, Littlefor 53.05 9 P P 08 40 55.4 -1.6
baz=194,SNR=18
B35A S S 08 48 23.0 -3.9
baz=194
LTY Liberty 53.07 346 IAmb IAmb 08 41 05.0
comp=Z,26nm,1.6s
NEW Newport 53.28 349 LR LR 09 00 57.0
comp=Z,6µm,18.6s,baz=176,slow=33
NEW Newport 53.28 349 IAmb IAmb 08 41 06.0
comp=Z,19nm,1.1s
NEW Newport 53.28 349 P P 08 40 57.1 -1.7
baz=164,SNR=18
XMAS Kiritimati 53.30 276 IAms_20 IAms_20 08 57 11.9
comp=Z,5µm,18.0s
D05A Enumclaw 53.33 345 IAmb IAmb 08 41 04.9
comp=Z,24nm,0.9s
WALA Waterton Lakes 53.55 352 IAmb IAmb 08 41 35.5
comp=Z,36nm,1.6s
SADO Sadowa 53.64 22 LR LR 09 04 07.7
comp=Z,4µm,18.0s,baz=211,slow=36
D03D Eldon 53.94 344 P P 08 41 01.5 -2.0
baz=157
NLWA Neilton Lookou 54.02 344 IAms_20 IAms_20 08 59 58.8
comp=Z,5µm,20.0s
ULM Lac du Bonnet 54.60 7 P P 08 41 06.1 -2.2
comp=Z,17nm,0.9s,baz=201,slow=7.8,SNR=21
ULM LR LR 09 03 10.9
comp=Z,5µm,18.9s,baz=190,slow=35
comp=Z,17nm,0.9s
POHA Pohakuloa 55.49 297 IAms_20 IAms_20 08 58 52.9
comp=Z,6µm,21.0s
FFD Franklin Falls 55.80 28 IAms_20 IAms_20 09 04 32.0
comp=Z,5µm,18.0s
RAR Rarotonga 56.29 247 LR LR 09 00 01.6
comp=Z,1µm,20.0s,baz=90,slow=30
BDFB Brasilia 56.62 106 P P 08 41 24.0 +0.4
comp=Z,2.9nm,0.7s,baz=316,slow=12,SNR=6.7
BDFB LR LR 09 03 57.0
comp=Z,5µm,18.8s,baz=282,slow=34
comp=Z,2.9nm,0.7s
BDFB Brasilia 56.62 106 IAmb IAmb 08 41 45.3
comp=Z,29nm,1.3s
CBB Campbell River 56.83 344 IAmb IAmb 08 41 29.7
comp=Z,12nm,1.0s
KIP Kipapa 58.23 298 IAms_20 IAms_20 09 00 05.5
comp=Z,3µm,19.0s
USHA Ushuaia 58.38 156 LR LR 09 00 57.1
comp=Z,8µm,20.7s,baz=304,slow=30
BBB Bella Bella 59.53 343 LR LR 09 04 29.1
comp=Z,2µm,18.5s,baz=160,slow=33
D62A Allapoint, All 59.72 27 IAmb IAmb 08 41 55.5
comp=Z,16nm,1.1s
FCC Fort Churchill 63.18 6 P P 08 42 07.1 -0.6
T35M Bob Quinn 64.36 345 P P 08 42 17.3 +1.6
baz=151
DLBC Dease Lake 65.58 346 LR LR 09 08 01.1
comp=Z,3µm,19.7s,baz=150,slow=33
DLBC Dease Lake 65.58 346 P P 08 42 23.3 -0.3
baz=152
SIT Sitka 65.87 342 P P 08 42 25.4 +0.1
baz=146
SCHQ Schefferville 66.44 23 LR LR 09 10 47.6
comp=Z,6µm,19.5s,baz=216,slow=35
JIS Juneau Island 66.61 343 IAmb IAmb 08 42 45.8
comp=Z,15nm,1.2s
JIS IAms_20 IAms_20 09 06 24.9
comp=Z,2µm,20.0s
YKA Yellowknife Ar 66.83 355 P P 08 42 29.1 -2.3
comp=Z,1.9nm,0.9s,baz=160,slow=6.8,SNR=5.9
YKA LR LR 09 09 30.1
comp=Z,3µm,19.0s,baz=175,slow=34
comp=Z,1.9nm,0.9s
AFI Afiamalu 67.03 257 LR LR 09 03 34.2
comp=Z,1µm,21.2s,baz=88,slow=29
PMSA Palmer Station 67.10 162 LR LR 09 04 29.0
comp=Z,5µm,19.5s,baz=312,slow=29
JOHN Johnston Islan 67.50 290 IAms_20 IAms_20 09 05 39.2
comp=Z,4µm,20.0s
P33M Teslin, Yukon 67.84 345 IAmb IAmb 08 43 14.8
comp=Z,28nm,1.8s
P33M Teslin, Yukon 67.84 345 P P 08 42 38.3 +0.3
baz=149
SKAG Skagway 67.87 344 P P 08 42 38.5 +0.4
baz=147
TGTN Hyland Airport 67.94 348 P P 08 42 38.7 +0.1
baz=154
PLBC Pleasant Camp 68.17 343 P P 08 42 38.7 -1.3
baz=146
RCBR Riachuelo 68.28 95 LR LR 09 11 14.9
comp=Z,7µm,19.5s,baz=56,slow=35
WRGLY Wrigley 68.64 351 P P 08 42 42.7 -0.1
baz=160
SMAI San Martin Ant 68.75 166 P P 08 42 42.2 -1.2
SMAI IAmb IAmb 08 42 56.6
comp=Z,22nm,1.3s
O30N Mendenhall 69.18 344 P P 08 42 45.9 -0.4
baz=146
PNL Peninsula 69.25 342 P P 08 42 46.0 -0.7
baz=142
MMPY Sheldon Lake, 69.56 347 P P 08 42 49.2 +0.5
baz=152,SNR=8.1
HYT Haines Junctio 69.62 343 P P 08 42 49.6 +0.4
baz=145
N31M Braeburn, Yuko 69.69 345 IAmb IAmb 08 43 05.2
comp=Z,16nm,1.1s
N31M IAms_20 IAms_20 09 10 10.3
comp=Z,3µm,20.0s
N31M Braeburn, Yuko 69.69 345 P P 08 42 49.7 +0.3
baz=147
FARO Faro, Yukon 69.71 346 P P 08 42 50.8 +1.3
PINM Pinnacle 69.85 342 P P 08 42 49.1 -1.4
baz=142
M31M Drury Creek, Y 69.94 346 IAmb IAmb 08 43 06.8
comp=Z,16nm,1.4s
M31M IAms_20 IAms_20 09 09 42.9
comp=Z,2µm,20.0s
M31M Drury Creek, Y 69.94 346 P P 08 42 49.7 -1.3
baz=148
YUK6 Outpost Mounta 69.96 343 P P 08 42 50.4 -1.0
N30M Aishikik Lake 70.02 344 P P 08 42 50.8 -0.7
baz=145
YUK4 Talbot Arm 70.37 343 P P 08 42 52.2 -1.6
baz=144
TABL Table Mountain 70.40 342 IAms_20 IAms_20 09 08 45.0
comp=Z,3µm,18.0s
MESA MESA 70.45 341 IAms_20 IAms_20 09 05 51.4
comp=Z,2µm,21.0s
YAH Yahtse 70.53 341 IAms_20 IAms_20 09 06 25.4
comp=Z,3µm,21.0s
YUK8 Steele Glacier 70.64 343 P P 08 42 54.2 -1.4
baz=142
LOGN Logan Glacier 70.66 342 IAms_20 IAms_20 09 07 44.8
comp=Z,2µm,19.0s
SNH Sunshine Point 70.74 341 IAms_20 IAms_20 09 06 52.1
comp=Z,2µm,19.0s
GRNC Granite Creek 70.82 342 IAmb IAmb 08 43 08.6
comp=Z,21nm,1.2s
GRNC IAms_20 IAms_20 09 06 36.0
comp=Z,3µm,22.0s
M30M Minto, Yukon 70.87 345 IAmb IAmb 08 43 33.4
comp=Z,37nm,2.0s
M30M IAms_20 IAms_20 09 10 55.4
comp=Z,2µm,20.0s
M30M Minto, Yukon 70.87 345 P P 08 42 57.2 +0.6
baz=146
CTGM Chitina Glacie 70.87 342 IAms_20 IAms_20 09 07 51.4
comp=Z,2µm,19.0s
CTG Chitna Glacier 70.87 342 P P 08 42 56.5 -0.3
baz=141
ISLE Juniper Island 70.90 341 IAms_20 IAms_20 09 06 05.3
comp=Z,3µm,22.0s
WAX Waxell Ridge 70.95 341 IAms_20 IAms_20 09 06 31.6
comp=Z,2µm,20.0s
SUCK Suckling Hills 70.97 340 IAms_20 IAms_20 09 06 26.2
comp=Z,2µm,20.0s
BARN Barnard Glacie 71.04 342 IAms_20 IAms_20 09 07 57.0
comp=Z,2µm,19.0s
TGL Tana Glacier 71.18 341 IAms_20 IAms_20 09 06 12.5
comp=Z,2µm,22.0s
YUK3 Moose Creek 71.24 343 P P 08 42 58.5 -0.7
baz=142
HMT Hamilton 71.33 340 IAmb IAmb 08 43 02.2
comp=Z,18nm,1.0s
HMT IAms_20 IAms_20 09 06 55.6
comp=Z,3µm,20.0s
Q23K Middleton Isla 71.40 339 IAms_20 IAms_20 09 06 45.3
comp=Z,3µm,21.0s
MCARA McCarthy VSAT 71.72 342 P P 08 43 01.3 -0.5
baz=139
BVCY Beaver Creek 71.86 343 P P 08 43 01.5 -1.1
baz=142
BMRM Bremner River 71.92 341 IAms_20 IAms_20 09 07 27.0
comp=Z,3µm,20.0s
BMRM Bremner River 71.92 341 P P 08 43 01.7 -1.4
baz=138,SNR=12
EYAK Cordova Ski Ar 71.99 340 IAmb IAmb 08 43 18.8
comp=Z,22nm,1.1s
EYAK Cordova Ski Ar 71.99 340 P P 08 43 02.3 -1.1
baz=136
GLB Gilahina Butte 72.01 341 IAmb IAmb 08 43 19.2
comp=Z,12nm,1.1s
GLB IAms_20 IAms_20 09 09 32.6
comp=Z,2µm,18.0s
M27K Edge Creek, AK 72.11 343 IAmb IAmb 08 43 16.3
comp=Z,16nm,1.1s
M27K IAms_20 IAms_20 09 07 08.3
comp=Z,3µm,22.0s
M27K Edge Creek, AK 72.11 343 P P 08 43 03.1 -1.2
baz=141
N25K Chitina, Valde 72.39 341 IAmb IAmb 08 43 42.8
comp=Z,36nm,1.8s
N25K IAms_20 IAms_20 09 09 01.5
comp=Z,2µm,18.0s
N25K Chitina, Valde 72.39 341 P P 08 43 04.0 -1.9
baz=138
FID Port Fidalgo 72.39 340 IAmb IAmb 08 43 20.7
comp=Z,17nm,1.2s
FID IAms_20 IAms_20 09 07 23.2
comp=Z,3µm,20.0s
M26K Nabesna, AK 72.48 342 IAmb IAmb 08 43 35.5
comp=Z,32nm,1.6s
M26K IAms_20 IAms_20 09 08 30.0
comp=Z,2µm,20.0s
M26K Nabesna, AK 72.48 342 P P 08 43 04.0 -2.4
baz=140
L27K Beaver Creek, 72.64 343 IAmb IAmb 08 43 19.2
comp=Z,21nm,1.5s
L27K IAms_20 IAms_20 09 07 59.3
comp=Z,2µm,21.0s
L27K Beaver Creek, 72.64 343 P P 08 43 07.8 +0.5
baz=141
GLI Glacier Island 72.69 340 IAmb IAmb 08 43 14.6
comp=Z,14nm,1.0s
GLI IAms_20 IAms_20 09 07 41.6
comp=Z,3µm,21.0s
GLI Glacier Island 72.69 340 P P 08 43 08.0 +0.4
baz=135
KDAK Kodiak Island 72.71 335 LR LR 09 07 09.1
comp=Z,6µm,21.1s,baz=147,slow=29
KLU Klutina 72.73 341 IAms_20 IAms_20 09 07 51.7
comp=Z,3µm,21.0s
KLU Klutina 72.73 341 P P 08 43 10.2 +2.2
baz=136
DAWY Dawson 72.76 345 P P 08 43 10.8 +2.7
baz=143
FRB Frobisher Bay 72.77 16 LR LR 09 16 21.7
comp=Z,2µm,18.1s,baz=207,slow=37
J29M Kondike Camp 72.78 345 IAms_20 IAms_20 09 09 53.9
comp=Z,3µm,21.0s
L26K Log Cabin Wild 73.06 343 IAms_20 IAms_20 09 08 51.4
comp=Z,2µm,20.0s
L26K Log Cabin Wild 73.06 343 P P 08 43 11.5 +1.7
baz=139
HARP HAARP 73.15 341 P P 08 43 11.7 +1.4
baz=137
BRSE Bradley Lake S 73.24 338 P P 08 43 12.8 +1.9
baz=131
M24K Osona, Glenn 73.26 341 IAms_20 IAms_20 09 08 11.7
comp=Z,2µm,21.0s
CNPM China Poot 73.29 337 IAms_20 IAms_20 09 07 31.3
comp=Z,3µm,20.0s
BRLK Bradley Lake 73.31 337 IAms_20 IAms_20 09 08 59.8
comp=Z,2µm,20.0s
O22K Cooper Landing 73.35 338 IAms_20 IAms_20 09 09 23.0
comp=Z,2µm,18.0s
SCM Sheep Creek Mo 73.45 340 IAms_20 IAms_20 09 08 11.6
comp=Z,3µm,21.0s
SCM Sheep Creek Mo 73.45 340 P P 08 43 11.9 -0.3
baz=135
K27K Chicken 73.46 344 IAmb IAmb 08 43 27.9
comp=Z,22nm,1.1s
K27K IAms_20 IAms_20 09 12 20.0
comp=Z,3µm,19.0s
K27K Chicken 73.46 344 P P 08 43 13.6 +1.5
baz=141
HOM Homer 73.53 337 IAms_20 IAms_20 09 07 38.8
comp=Z,3µm,21.0s
KNK Knik Glacier 73.54 340 IAmb IAmb 08 43 17.9
comp=Z,22nm,1.0s
KNK IAms_20 IAms_20 09 08 35.0
comp=Z,2µm,19.0s
KNK Knik Glacier 73.54 340 P P 08 43 14.0 +1.3
baz=134
I29M Ogilvie Camp, 73.54 346 IAms_20 IAms_20 09 10 32.1
comp=Z,2µm,22.0s
RAO Raoul Island 73.60 241 LR LR 09 07 11.0
comp=Z,1µm,20.6s,baz=89,slow=29
PAX Paxson 73.67 342 IAmb IAmb 08 43 28.2
comp=Z,18nm,1.4s
PAX Paxson 73.67 342 P P 08 43 14.7 +1.3
baz=137
DOT Dot Lake 73.74 343 IAmb IAmb 08 44 04.9
comp=Z,29nm,1.8s
RC01 Rabbit Creek A 73.77 339 IAms_20 IAms_20 09 09 38.0
comp=Z,2µm,19.0s
RC01 Rabbit Creek A 73.77 339 P P 08 43 14.0 0.0
baz=133
SML Sawmill 73.77 340 IAmb IAmb 08 43 28.9
comp=Z,22nm,1.2s
SML IAms_20 IAms_20 09 08 55.1
comp=Z,2µm,19.0s
SML Sawmill 73.77 340 P P 08 43 14.0 0.0
baz=134
Q19K Cape Douglas, 73.86 336 P P 08 43 15.5 +0.8
baz=128
PMR Palmer 73.90 340 P P 08 43 16.0 +1.4
baz=133
GHO Glory Hole Cre 73.95 340 IAms_20 IAms_20 09 08 58.8
comp=Z,2µm,20.0s
SCRK Sand Creek 73.97 343 IAms_20 IAms_20 09 08 37.4
comp=Z,3µm,21.0s
SCRK Sand Creek 73.97 343 P P 08 43 17.2 +1.9
baz=139
FIS Fire Island 73.98 339 IAms_20 IAms_20 09 09 44.5
comp=Z,2µm,18.0s
EPYK Eagle Plains 74.01 347 IAmb IAmb 08 43 32.7
comp=Z,34nm,1.4s
EPYK Eagle Plains 74.01 347 P P 08 43 15.9 +0.6
baz=146
RIDG Independent Ri 74.05 343 IAmb IAmb 08 43 27.0
comp=Z,27nm,1.1s
RIDG IAms_20 IAms_20 09 08 35.4
comp=Z,3µm,22.0s
RIDG Independent Ri 74.05 343 P P 08 43 13.8 -1.8
baz=138,SNR=13
WAT6 Susitna Watana 74.11 341 P P 08 43 14.2 -2.0
baz=135,SNR=7.7
CHNA Chernabura Isl 74.19 330 P P 08 43 17.2 +0.7
baz=122
J26L Joseph Creek 74.24 344 IAms_20 IAms_20 09 13 23.7
comp=Z,2µm,20.0s
J26L Joseph Creek 74.24 344 P P 08 43 15.0 -1.8
baz=139,SNR=7.0
DHY Denali Highway 74.35 341 IAmb IAmb 08 43 31.6
comp=Z,26nm,1.4s
DHY IAms_20 IAms_20 09 08 58.3
comp=Z,2µm,20.0s
DHY Denali Highway 74.35 341 P P 08 43 17.1 -0.4
baz=135
M22K Willow 74.36 339 IAms_20 IAms_20 09 08 49.5
comp=Z,2µm,20.0s
K24K Donnelly Dome 74.37 342 P P 08 43 18.5 +1.0
baz=137
SUA Susitna One 74.38 339 IAms_20 IAms_20 09 10 07.3
comp=Z,2µm,18.0s
SUA Susitna One 74.38 339 P P 08 43 19.8 +2.1
baz=132
C36M Paulatuk 74.48 353 P P 08 43 17.8 -0.2
baz=160
WAT1 Susitna Watana 74.56 341 P P 08 43 18.9 +0.3
baz=134
P18K Big Mountain, 74.80 336 IAms_20 IAms_20 09 08 16.1
comp=Z,3µm,20.0s
P18K Big Mountain, 74.80 336 P P 08 43 21.2 +1.1
baz=127
CUT Chulitna 74.85 340 IAms_20 IAms_20 09 09 27.4
comp=Z,2µm,19.0s
J25K Salcha River, 74.85 343 IAms_20 IAms_20 09 09 00.6
comp=Z,2µm,21.0s
J25K Salcha River, 74.85 343 P P 08 43 20.0 -0.3
baz=138
O19K Port Alsworth 74.92 337 IAms_20 IAms_20 09 08 12.4
comp=Z,4µm,21.0s
INK Inuvik 75.00 349 LR LR 09 14 25.8
comp=Z,5µm,18.2s,baz=144,slow=34
INK Inuvik 75.00 349 P P 08 43 21.7 +0.7
baz=150
SKT Skwentna 75.01 339 IAmb IAmb 08 43 25.8
comp=Z,14nm,1.1s
SKT IAms_20 IAms_20 09 10 35.7
comp=Z,2µm,18.0s
SKT Skwentna 75.01 339 P P 08 43 20.9 -0.3
baz=131
RND Reindeer 75.06 341 IAms_20 IAms_20 09 09 05.1
comp=Z,4µm,21.0s
O18K Koktuh Hills 75.07 336 IAmb IAmb 08 43 35.5
comp=Z,19nm,1.1s
O18K IAms_20 IAms_20 09 08 25.3
comp=Z,3µm,20.0s
O18K Koktuh Hills 75.07 336 P P 08 43 21.5 -0.1
baz=127
HDA Harding Lake 75.17 342 IAmb IAmb 08 43 34.0
comp=Z,19nm,1.5s
HDA Harding Lake 75.17 342 P P 08 43 21.8 -0.2
baz=136
P17K Kvichak River 75.18 335 P P 08 43 22.1 -0.1
baz=126
MCK McKinley 75.31 341 IAmb IAmb 08 43 37.8
comp=Z,18nm,1.2s
MCK IAms_20 IAms_20 09 09 25.8
comp=Z,3µm,21.0s
MCK McKinley 75.31 341 P P 08 43 21.4 -1.5
baz=134
N19K Bonanza Creek 75.36 337 P P 08 43 21.8 -1.6
N19K IAmb IAmb 08 43 27.9
comp=Z,12nm,1.0s
N19K IAms_20 IAms_20 09 08 47.1
comp=Z,3µm,21.0s
N19K Bonanza Creek 75.36 337 P P 08 43 21.9 -1.4
baz=128
ILAR Eielson Array 75.41 343 P P 08 43 21.7 -1.7
comp=Z,5.5nm,0.9s,baz=156,slow=5.1,SNR=28
comp=Z,5.5nm,0.9s
M20K Styx River 75.52 338 IAms_20 IAms_20 09 10 35.4
comp=Z,2µm,19.0s
M20K Styx River 75.52 338 P P 08 43 23.8 -0.4
baz=130
TRF Thorofare Moun 75.56 341 IAmb IAmb 08 43 32.3
comp=Z,12nm,1.0s
TRF IAms_20 IAms_20 09 09 30.3
comp=Z,2µm,20.0s
TRF Thorofare Moun 75.56 341 P P 08 43 24.4 -0.2
baz=132
WRH Wood River Hil 75.56 342 IAmb IAmb 08 43 29.5
comp=Z,21nm,1.0s
WRH IAms_20 IAms_20 09 09 43.4
comp=Z,2µm,20.0s
P16K Nushagak River 75.74 335 P P 08 43 24.0 -1.4
baz=124
COLA College 75.77 342 P P 08 43 25.3 -0.1
baz=135
TCOL CIGO, UAF Yank 75.78 342 P P 08 43 26.0 +0.5
baz=135
BWN Browne 75.78 341 IAms_20 IAms_20 09 09 40.9
comp=Z,2µm,20.0s
POKR Poker Plat Res 75.82 343 IAms_20 IAms_20 09 13 46.3
comp=Z,2µm,21.0s
POKR Poker Plat Res 75.82 343 P P 08 43 26.2 +0.4
baz=136
N18K Kilae Creek 75.83 337 P P 08 43 25.0 -1.0
N18K IAmb IAmb 08 43 40.8
comp=Z,32nm,1.4s
N18K IAms_20 IAms_20 09 08 48.5
comp=Z,3µm,20.0s
N18K Kilae Creek 75.83 337 P P 08 43 25.2 -0.7
baz=127
KTH Kantishna Hill 75.84 340 IAms_20 IAms_20 09 09 36.7
comp=Z,2µm,19.0s
PPLA Purkeypile 75.84 340 P P 08 43 25.6 -0.5
baz=131
MDM Murphy Dome 75.95 342 IAmb IAmb 08 43 41.4
comp=Z,19nm,1.3s
MDM IAms_20 IAms_20 09 10 16.7
comp=Z,2µm,21.0s
NEA2 Nenana 75.95 342 IAmb IAmb 08 43 40.7
comp=Z,28nm,1.4s
NEA2 IAms_20 IAms_20 09 09 50.7
comp=Z,2µm,21.0s
NEA2 Nenana 75.95 342 P P 08 43 26.3 -0.2
baz=134
SVW2 Sparrevohn 75.96 337 IAmb IAmb 08 43 54.9
comp=Z,18nm,1.4s
M19K Big River Lodg 76.00 338 IAmb IAmb 08 43 43.1
comp=Z,29nm,1.5s
M19K Big River Lodg 76.00 338 P P 08 43 25.9 -1.0
baz=128
O16K Kokwok River B 76.10 335 P P 08 43 26.7 -0.8

baz=124,SNR=7.6
CAST Castle Rocks 76.14 340 IAMs_20 IAMs_20 09 10 19.8
comp=Z,2µm,19.0s
L20K Farewell, AK 76.17 339 P **P** **08 43 28.1 +0.2**
baz=129
BPAW Bear Paw Mtn. 76.23 341 IAMs_20 IAMs_20 09 09 51.0
comp=Z,3µm,21.0s
BPAW Bear Paw Mtn. 76.23 341 P **P** **08 43 28.2 0.0**
baz=132
L19K White Mountain 76.34 338 P **P** **08 43 27.1 -1.7**
L19K IAmb IAmb 08 43 43.4
comp=Z,21nm,1.2s
L19K IAMs_20 IAMs_20 09 11 09.1
comp=Z,2µm,19.0s
L19K White Mountain 76.34 338 P **P** **08 43 28.8 -0.1**
baz=128
I23K Minto, Yukon-K 76.42 342 IAMs_20 IAMs_20 09 10 18.2
comp=Z,2µm,20.0s
I23K Minto, Yukon-K 76.42 342 P **P** **08 43 27.6 -1.5**
baz=134,SNR=8.7
H24K Noodor Dome 76.47 343 IAmb IAmb 08 43 34.9
comp=Z,16nm,0.9s
H24K IAMs_20 IAMs_20 09 14 44.4
comp=Z,3µm,19.0s
H24K Noodor Dome 76.47 343 P **P** **08 43 28.3 -1.2**
baz=135,SNR=31
CHUM Lake Minchumin 76.52 340 P **P** **08 43 28.9 -0.9**
baz=131
MLY Manley 76.77 342 IAmb IAmb 08 43 46.1
comp=Z,29nm,1.3s
MLY IAMs_20 IAMs_20 09 10 24.5
comp=Z,2µm,20.0s
MLY Manley 76.77 342 P **P** **08 43 28.8 -2.5**
baz=132,SNR=19
K20K Telida 76.79 339 IAMs_20 IAMs_20 09 11 44.9
comp=Z,2µm,18.0s
K20K Telida 76.79 339 P **P** **08 43 31.9 +0.6**
baz=129
MSVF Nonsavu 76.87 253 LR LR 09 09 19.4
comp=Z,1µm,21.9s,baz=84,slow=30
N16K Nishlik Lake 76.88 336 P **P** **08 43 32.7 +0.8**
baz=124
H23K Yukon River 76.95 343 IAmb IAmb 08 44 01.1
comp=Z,21nm,1.6s
H23K IAMs_20 IAMs_20 09 14 31.1
comp=Z,2µm,20.0s
H23K Yukon River 76.95 343 P **P** **08 43 33.5 +1.3**
baz=134
MIDW Midway 76.97 300 IAMs_20 IAMs_20 09 09 19.9
comp=Z,3µm,20.0s
A36M Sachs Harbour 77.10 353 P **P** **08 43 33.6 +0.7**
baz=159
I21K Tanana 77.27 341 IAMs_20 IAMs_20 09 11 14.5
comp=Z,2µm,19.0s
I21K Tanana 77.27 341 P **P** **08 43 32.7 -1.2**
baz=131,SNR=6.9
J20K Nowinta River 77.33 340 IAmb IAmb 08 43 49.0
comp=Z,24nm,1.3s
J20K IAMs_20 IAMs_20 09 10 57.2
comp=Z,2µm,19.0s
J20K Nowinta River 77.33 340 P **P** **08 43 34.0 -0.3**
baz=129
H21K Melozitna Rive 77.84 342 IAmb IAmb 08 43 48.5
comp=Z,34nm,1.6s
H21K IAMs_20 IAMs_20 09 11 31.6
comp=Z,2µm,19.0s
H21K Melozitna Rive 77.84 342 P **P** **08 43 36.5 -0.6**
baz=130
IVI Ivigtut 78.09 24 *i* P **P** **08 43 43.1 +4.6**
COLD Coldfoot 78.11 343 P **P** **08 43 39.3 +0.7**
baz=133
NUUK Nuuk 78.39 21 *i* P **P** **08 43 39.1 -1.1**
NUUK IAmb IAmb 08 43 50.3
comp=Z,25nm,1.2s
URZ Urewera 78.41 232 LR LR 09 10 16.8
comp=Z,3µm,21.7s,baz=27,slow=30
GCSA Galena City Sc 78.62 340 P **P** **08 43 42.1 +0.6**
baz=126
RES Resolute Bay 78.84 3 LR LR 09 17 48.5
comp=Z,3µm,18.7s,baz=184,slow=35
RES Resolute Bay 78.84 3 P **P** **08 43 41.2 -1.3**
TOLK Toolik Lake Re 78.91 345 IAmb IAmb 08 44 40.9
comp=Z,31nm,1.9s
TOLK IAMs_20 IAMs_20 09 13 39.0
comp=Z,2µm,21.0s
TOLK Toolik Lake Re 78.91 345 P **P** **08 43 44.4 +1.3**
baz=134
SFJD Kangerlussuaq 80.41 19 LR LR 09 18 19.6
comp=Z,4µm,21.5s,baz=236,slow=35
SFJD Kangerlussuaq 80.41 19 IAMs_20 IAMs_20 09 18 29.3
comp=Z,3µm,20.0s
ILULI Ilulissat 81.56 17 IAMs_20 IAMs_20 09 21 12.5
comp=Z,2µm,18.0s
ILULI Ilulissat 81.56 17 *i* P **P** **08 43 57.2 -0.1**
ILULI IAmb IAmb 08 44 05.8
comp=Z,39nm,1.3s
DY2G Dye2 81.57 20 *i* P **P** **08 43 57.2 -0.5**
DY2G IAmb IAmb 08 44 06.2
comp=Z,92nm,1.7s
ANM Nome 81.61 338 IAMs_20 IAMs_20 09 12 36.4
comp=Z,2µm,21.0s
BELA Belgrano 2 81.86 168 P **P** **08 43 57.1 -1.7**
BELA IAmb IAmb 08 46 26.1
comp=Z,11nm,0.9s
RDOG Red Dog Mine 82.48 341 IAMs_20 IAMs_20 09 14 14.2
comp=Z,2µm,20.0s
A21K Barrow 82.50 345 IAMs_20 IAMs_20 09 14 30.0
comp=Z,2µm,22.0s
TULEG Thule 83.02 8 IAMs_20 IAMs_20 09 21 28.6
comp=Z,1µm,18.0s
RPZ Rata Peaks 83.23 227 LR LR 09 14 34.1
comp=Z,4µm,19.1s,baz=75,slow=31
GAMB Gambell 83.78 336 IAMs_20 IAMs_20 09 13 36.7
comp=Z,3µm,21.0s
ANGG Ammassalik, Gr 84.32 23 IAMs_20 IAMs_20 09 19 31.0
comp=Z,3µm,22.0s
ICESG Greenland Ices 85.03 19 *i* P **P** **08 44 15.0 -0.6**
ICESG IAmb IAmb 08 44 21.6
comp=Z,38nm,1.0s
QSPA South Pole Qui 85.99 180 LR LR 09 16 05.9
comp=Z,2µm,20.2s,baz=120,slow=31
QSPA South Pole Qui 85.99 180 P **P** **08 44 19.3 -0.9**
SUMG Summit 86.84 16 P **P** **08 44 23.8 -0.8**
SUMG Summit 86.84 16 *i* P **P** **08 44 24.0 -0.6**
SUMG IAmb IAmb 08 44 30.1
comp=Z,7.3nm,0.9s
VNDA Vanda 86.86 193 P **P** **08 44 27.3 +3.1**
comp=Z,0.6nm,1.0s,baz=342,slow=4.9,SNR=1.7
VNDA LR LR 09 14 58.9
comp=Z,712nm,18.2s,baz=96,slow=30
VNDA Vanda 86.86 193 P **P** **08 44 24.2 0.0**
SOEG Soedalen 87.53 21 *i* P **P** **08 44 30.8 +3.3**
SOEG IAmb IAmb 08 44 35.9
comp=Z,10nm,0.9s
DZM Mont Dzumac 87.66 248 LR LR 09 15 03.5
comp=Z,576nm,20.8s,baz=101,slow=30
VNA3 Neumayer Olymp 87.72 161 P **P** **08 44 27.9 -0.6**
SHEM Shemya Is, Ala 88.03 323 LR LR 09 15 08.8
comp=Z,5µm,21.5s,baz=119,slow=30
VNA2 Neumayer--Watz 88.50 161 P **P** **08 44 30.6 -1.6**
baz=275,slow=5.0
KWAJ Kwajalein Atol 88.58 279 IAMs_20 IAMs_20 09 15 51.7
comp=Z,2µm,19.0s
SNAA Sanae 89.81 162 P **P** **08 44 39.0 +0.6**
SNAA Sanae 89.81 162 LR LR 09 16 39.3
comp=Z,2µm,21.2s,baz=286,slow=30
SNAA Sanae 89.81 162 IAMs_20 IAMs_20 09 17 27.2
comp=Z,2µm,20.0s
PMOZ Porto Moniz, M 89.87 57 *e*SS SS 09 01 33.2 +3.1
PMOZ Porto Moniz, M 89.87 57 *e*LR LR 09 13 45.2
comp=Z,825nm,24.0s
H11N3 WAKE ISLAND Hy 90.07 290 T T 10 24 27.8
baz=95,slow=75,SNR=183
H11N2 WAKE ISLAND Hy 90.08 290 T T 10 24 32.9
baz=95,slow=75,SNR=192
H11N1 WAKE ISLAND Hy 90.09 290 T T 10 24 33.1
baz=95,slow=75,SNR=90
H11S2 WAKE ISLAND Hy 90.17 288 T T 10 24 30.1
baz=94,slow=75,SNR=396
H11S1 WAKE ISLAND Hy 90.18 288 T T 10 24 30.3
baz=94,slow=75,SNR=423
H11S3 WAKE ISLAND Hy 90.19 288 T T 10 24 32.6
baz=94,slow=75,SNR=371
BORG Borgarnes 90.71 25 IAMs_20 IAMs_20 09 23 46.1
comp=Z,2µm,19.0s
DAG Danmarks Havn 92.97 13 *i* P **P** **08 44 55.2 +2.5**
DAG IAmb IAmb 08 45 00.3
comp=Z,3.4nm,1.1s

BILL Bilibino 93.47 338 IAMs_20 IAMs_20 09 20 27.9
comp=Z,2µm,20.0s
HNR Honiara 94.85 260 LR LR 09 17 38.6
comp=Z,732nm,21.2s,baz=64,slow=29
JMIC Jan Mayen 95.76 19 LR LR 09 26 52.6
comp=Z,3µm,21.5s,baz=261,slow=35
PMAFR Mafra 96.56 51 *e*SS SS 09 03 09.9 +4.6
PFVI Vila Bisbo 96.92 53 *e*SS SS 09 03 16.7 +6.2
PSBE So Bento 96.93 51 *e*SS SS 09 03 14.2 +3.6
MORF Marmelete 97.06 53 *e*SS SS 09 03 16.9 +4.3
PNCL Nicolau / Gran 97.15 52 *e*SS SS 09 03 18.1 +4.4
COI Coimbra 97.22 50 *e*SS SS 09 03 20.1 +5.6
COI Coimbra 97.22 50 IAMs_20 IAMs_20 09 20 39.9
comp=Z,2µm,22.0s
PGAV Gavieira, Arco 97.30 48 *e*SS SS 09 03 26.5 +11
PGAV Gavieira, Arco 97.30 48 *e*LR LR 09 17 28.7
comp=Z,1µm,20.0s
PCVE Castro Verde 97.55 53 *e*SS SS 09 03 25.6 +6.3
PBDV Barranco-do-Ve 97.64 53 *e*SS SS 09 03 26.4 +5.8
POLO Lamas de Olo 97.67 49 *e*SS SS 09 03 26.6 +5.6
PVAQ Vaqueiros 97.80 53 *e*SS SS 09 03 29.3 +6.4
PVAQ Vaqueiros 97.80 53 *e*LR LR 09 17 37.0
comp=Z,1µm,22.0s
PESTR Estremoz 97.88 51 *e*SS SS 09 03 28.5 +4.5
MTE Manteigas 97.88 50 *e*SS SS 09 03 27.6 +3.6
MTE *e*LQ LQ 09 12 58.0
MTE *e*LR LR 09 17 37.9
comp=Z,1µm,22.0s
MTE Manteigas 97.88 50 IAMs_20 IAMs_20 09 21 09.3
comp=Z,1µm,22.0s
PETK Petropavlovsk- 97.95 323 LR LR 09 21 03.9
comp=Z,3µm,21.0s,baz=84,slow=30
PMRV Marv??o 98.02 51 *e*SS SS 09 03 33.7 +7.8
PMRV Marv??o 98.02 51 *e*LR LR 09 17 54.9
comp=Z,2µm,22.0s
MVO Moncorvo 98.25 49 *e*SS SS 09 03 31.8 +2.6
MVO *e*LQ LQ 09 13 10.2
MVO *e*LR LR 09 17 53.5
comp=Z,969nm,20.0s
PBAR Barrancos 98.33 52 *e*SS SS 09 03 35.0 +4.8
SEY Seymchan 99.59 333 LR LR 09 25 21.4
comp=Z,2µm,18.7s,baz=76,slow=32
ESK Eskdalemuir 99.73 35 IAMs_20 IAMs_20 09 28 49.6
comp=Z,1µm,19.0s
EKA Eskdalemuir Ar 99.75 35 LR LR 09 29 21.2
comp=Z,1µm,19.0s,baz=314,slow=35
PAB San Pablo 100.37 51 IAMs_20 IAMs_20 09 22 44.3
comp=Z,2µm,21.0s
MA2 Magadan 100.96 330 IAMs_20 IAMs_20 09 26 56.8
comp=Z,1µm,19.0s
CLF Chambon-Foret 104.17 42 IAMs_20 IAMs_20 09 26 22.8
comp=Z,1µm,22.0s
TIXI Tiksi 104.81 345 IAMs_20 IAMs_20 09 31 38.5
comp=Z,1µm,19.0s
KONO Kongsberg 105.49 29 IAMs_20 IAMs_20 09 31 12.3
comp=Z,1µm,20.0s
SSB Saint Sauveur 106.21 44 IAMs_20 IAMs_20 09 29 34.0
comp=Z,1µm,21.0s
WLF Walferdange 106.36 39 IAMs_20 IAMs_20 09 27 55.4
comp=Z,2µm,22.0s
ECH Echery 107.34 41 IAMs_20 IAMs_20 09 32 14.6
comp=Z,1µm,20.0s
BNI Bardonecchia 107.73 44 IAMs_20 IAMs_20 09 30 44.4
comp=Z,2µm,22.0s
SENIN Lac Senin/Sane 107.87 43 IAMs_20 IAMs_20 09 30 24.7
comp=Z,1µm,20.0s
BFO Black Forest 108.07 40 IAMs_20 IAMs_20 09 33 25.9
comp=Z,1µm,20.0s
YSS Yuzh-Sakhalins 108.42 318 IAMs_20 IAMs_20 09 25 14.6
comp=Z,2µm,22.0s
STU Stuttgart 108.51 40 IAMs_20 IAMs_20 09 31 09.5
comp=Z,1µm,22.0s
RGN Rugen 109.15 33 IAMs_20 IAMs_20 09 33 56.5
comp=Z,1µm,20.0s
GRFO Grafenberg 109.53 38 IAMs_20 IAMs_20 09 31 20.1
comp=Z,1µm,21.0s
GRA1 Grafenberg Arr 109.53 38 IAMs_20 IAMs_20 09 31 20.1
comp=Z,1µm,22.0s
CLL Collm 110.09 36 IAMs_20 IAMs_20 09 30 54.8
comp=Z,1µm,22.0s
CLL Collm 110.09 36 *e*Pdif **Pdif** **08 46 11.0 +0.9**
CLL *e*PP **PP** **08 50 46.0 +1.0**
CLL *e*PPP PPP 08 53 06.0
CLL *ex* x 08 59 00.0
CLL *e*PS **PS** **09 00 09.0 -5.5**
CLL *e*PPS PPS 09 01 12.0
CLL *e*SS SS 09 05 58.0 -13
CLL *ex* x 09 07 24.0
CLL *e*SSS SSS 09 10 18.0
CLL *e*SSSS 09 14 00.0
NKC Novy Kostel 110.11 38 AMS AMS 09 36 20.0
comp=Z,1µm,20.8s
VLC Villacollemand 110.52 44 IAMs_20 IAMs_20 09 32 23.1
comp=Z,1µm,21.0s
VSL Villasalto 110.89 49 IAMs_20 IAMs_20 09 27 59.4
comp=Z,1µm,22.0s
GUMO Guam 111.03 283 IAMs_20 IAMs_20 09 26 57.9
comp=Z,1µm,20.0s
KHC Kasperske Hory 111.16 38 *e*SS SS 09 06 29.8 +4.5
KHC AMS AMS 09 30 40.0
comp=Z,2µm,20.7s
PVCC Panska Ves 111.29 37 AMS AMS 09 30 30.0
comp=Z,1µm,22.5s
PRU Pruhonice 111.46 37 *e*SS SS 09 06 19.5 -10
PRU AMS AMS 09 28 00.0
comp=Z,1µm,22.5s
CKRC Cesky Krumlov 111.72 39 *e*SS SS 09 06 38.5 +5.8
CHVC Chvalec 112.15 36 AMS AMS 09 31 10.0
comp=Z,1µm,24.7s
UPC Upice 112.16 36 AMS AMS 09 31 00.0
comp=Z,1µm,23.2s
OSTC Ostas 112.26 36 AMS AMS 09 31 20.0
comp=Z,1µm,21.2s
TREC Trest 112.28 38 AMS AMS 09 37 30.0
comp=Z,2µm,19.4s
DPC Dobruska-Polom 112.40 37 *e*SS SS 09 07 09.5 +28
DPC AMS AMS 09 33 30.0
comp=Z,1µm,23.8s
AQU L'Aquila 113.13 45 IAMs_20 IAMs_20 09 31 23.3
comp=Z,2µm,22.0s
MAUC Maruska 113.68 37 AMS AMS 09 31 00.0
comp=Z,2µm,27.9s
OKC Ostrava-Krasne 113.68 37 AMS AMS 09 31 10.0
comp=Z,1µm,23.2s
PABE Paberze 114.24 29 IAMs_20 IAMs_20 09 36 32.6
comp=Z,1µm,20.0s
CLTB Caltabellotta 114.25 51 IAMs_20 IAMs_20 09 30 00.8
comp=Z,1µm,19.0s
INU Inuyama 115.47 307 IAMs_20 IAMs_20 09 36 21.7
comp=Z,906nm,19.0s
PSZ Piszkesteto 115.51 38 IAMs_20 IAMs_20 09 40 14.4
comp=Z,956nm,19.0s
NACGM Naroch 115.93 29⇑ *e*PKP **PKiKP** **08 50 19.2 -3.6**
baz=304
TIP Timpagrande 116.49 48 IAMs_20 IAMs_20 09 36 35.7
comp=Z,1µm,20.0s
ASAR Alice Springs 116.85 241 PKP **PKPdf** **08 50 25.2 -0.4**
comp=Z,0.8nm,0.9s,baz=133,slow=3.9,SNR=3.6
DIVS Divibare 117.09 42 IAMs_20 IAMs_20 09 37 44.6
comp=Z,1µm,19.0s
PDG Podgorica 117.21 44 IAMs_20 IAMs_20 09 34 54.1
comp=Z,1µm,22.0s
WRA Warramunga Arr 117.54 245 PKP **PKiKP** **08 50 27.5 +0.5**
comp=Z,1.2nm,0.9s,baz=100,slow=1.8,SNR=8.8
OBN Obninsk 120.21 25 IAMs_20 IAMs_20 09 42 24.9
comp=Z,1µm,20.0s
MLR Muntele Rosu 120.32 38 IAMs_20 IAMs_20 09 44 46.6
comp=Z,1µm,19.0s
CN2 Changchun 120.92 320 *e*PKP **PKPdf** **08 50 32.7 0.0**
CN2 PP **PP** **08 52 04.2 +3.0**
CN2 SS SS 09 08 34.9 +2.0
CN2 AMB AMB
comp=Z,100nm,8.2s
CN2 LR LR
comp=Z,800nm,20.0s
CN2 LR LR
comp=Z,900nm,20.0s
CN2 LR LR
comp=Z,1µm,21.0s
ARU Arti 126.06 12 IAMs_20 IAMs_20 09 45 40.0
comp=Z,1µm,20.0s
XLT XiLinHaoTe 126.63 324 *e*PKP **PKiKP** **08 50 51.9 +7.6**
XLT PP PP 08 52 50.8 +11
ULN Ulaanbaatar 128.66 333 IAMs_20 IAMs_20 09 41 11.3
comp=Z,1µm,21.0s
BJT Baijiatuau 128.80 320 IAMs_20 IAMs_20 09 37 43.8
comp=Z,2µm,22.0s
SONM Songino Array 128.98 334 PKhKP PKPpre 08 50 45.8
comp=Z,0.6nm,0.4s,baz=0.0,slow=2.9,SNR=2.7
ZALV Zalesovo Beam 129.70 353 PKP **PKiKP** **08 50 50.2 +0.3**
comp=Z,1.1nm,0.6s,baz=45,slow=0.8,SNR=5.0
HHC Hu-ho-hao-te 131.14 324 *e*PKP **PKPdf** **08 50 47.4 -5.1**
HHC PP **PP** **08 53 08.9 -0.3**
HHC SS SS 09 10 45.5 +4.6
HHC LR LR
comp=Z,2µm,16.6s
HHC LR LR
comp=Z,2µm,17.8s
HHC LR LR
comp=Z,2µm,18.0s
HNS HongShan 131.19 318 ⇓PKP **PKiKP** **08 50 57.8 +4.3**
HNS *e*PP PP 08 53 18.8 +9.2
HNS HongShan 131.19 318 SS SS 09 10 54.5 +13
HNS LR LR
comp=N,330nm,18.8s
HNS LR LR
comp=E,1µm,19.6s
HNS LR LR
comp=Z,1µm,19.0s
NACB Ninganchiao 131.38 299 IAMs_20 IAMs_20 09 39 46.9
comp=Z,1µm,21.0s
YHNB Yeheng 131.42 300 IAMs_20 IAMs_20 09 38 40.1
comp=Z,1µm,22.0s
YULB Yu-li 131.86 298 IAMs_20 IAMs_20 09 43 52.8
comp=Z,760nm,19.0s
TWG Pinlang 132.22 297 IAMs_20 IAMs_20 09 42 48.2
comp=Z,1µm,20.0s
TPUB Ta-pu 132.47 298 IAMs_20 IAMs_20 09 40 58.0
comp=Z,1µm,20.0s
KURBB Kurchatov Arra 133.54 357 PKP **PKPdf** **08 50 56.6 0.0**
comp=Z,0.4nm,0.6s,baz=12,slow=2.2,SNR=3.1
KNMB Chin-men Tao 134.07 300 IAMs_20 IAMs_20 09 40 23.1
comp=Z,674nm,20.0s
MK31 Makanchi Array 137.04 353 PKPdf **PKPdf** **08 51 01.2 -2.1**
MKAR Makanchi Array 137.04 353 PKP **PKPdf** **08 51 02.8 -0.5**
comp=Z,2.1nm,1.0s,baz=39,slow=2.3,SNR=6.0
MKAR PP **PP** **08 53 48.4 +2.6**
comp=Z,1.0nm,0.9s,baz=1.4,slow=4.9,SNR=5.1
MKAR Makanchi Array 137.04 353 **PKPdf** **08 51 01.5 -1.8**
MAKZ Makanchi 137.06 354 IAMs_20 IAMs_20 09 55 07.0
comp=Z,1µm,21.0s
HKPS Hong Kong Po S 138.48 299 IAMs_20 IAMs_20 09 44 23.9
comp=Z,1µm,20.0s
WMQ Urumqi 138.98 347 *e*PKP **PKPdf** **08 51 07.1 +0.1**
WMQ LR LR
comp=Z,970nm,19.3s
WMQ LR LR
comp=Z,1µm,20.9s
WMQ LR LR
comp=Z,1µm,22.3s
SBUM Sibu 143.35 269 IAMs_20 IAMs_20 09 55 44.7
comp=Z,878nm,20.0s
QIZ Qiongzhong 143.36 297 IAMs_20 IAMs_20 09 51 16.6
comp=Z,1µm,20.0s
QIZ Qiongzhong 143.36 297 PKP PKPbc 08 51 13.3 +0.8
QIZ SS SS 09 13 07.9 -0.1
QIZ LR LR
comp=Z,410nm,20.4s
QIZ LR LR
comp=Z,640nm,23.9s
QIZ LR LR
comp=Z,1µm,27.6s
KSH Kashi 144.71 359 PKPbc PKPbc 08 51 16.5 +0.3
KSH LR LR
comp=Z,2µm,21.0s
KSH LR LR
comp=Z,1µm,19.6s
KSH LR LR
comp=Z,3µm,23.4s
RAYN Ar Rayn 145.14 54 **PKPbc** **08 51 16.3 -1.7**
RAYN Ar Rayn 145.14 54 IAMs_20 IAMs_20 10 06 40.1
comp=Z,972nm,19.0s
PZH PanZhiHua 146.44 314 PKPbc **PKPdf** **08 51 19.1 -1.7**
PZH sPKP 08 51 25.7
PZH PP **PP** **08 54 47.2 +2.9**
PZH AMB AMB
comp=Z,220nm,7.3s
PZH LR LR
comp=Z,460nm,22.2s
PZH LR LR
comp=Z,650nm,22.2s
PZH LR LR
comp=Z,1µm,24.9s
LSA Lhasa 150.53 332 IAMs_20 IAMs_20 09 55 52.5
comp=Z,1µm,21.0s
UOSS Minazif 152.12 40 IAMs_20 IAMs_20 10 07 51.9
comp=Z,1µm,21.0s
CMAR Chiang Mai Arr 153.02 304 PKPbc **PKPdf** **08 51 36.5 -2.0**
comp=Z,2.2nm,0.3s,baz=333,slow=1.1,SNR=4.1
CMAR Chiang Mai Arr 153.02 304 **PKPdf** **08 51 31.1 -0.2**
KULM Kulim 154.95 274 IAMs_20 IAMs_20 09 57 60.0
comp=Z,945nm,19.0s
HYBB Hyderabad (bro 166.41 348 *e*PKPdf **PKPdf** **08 51 44.5 -1.9**
HYBB *e*pPKPdf **pPKPdf** **08 51 47.6 -1.3**
HYBB *e*PP **PP** **08 56 34.7 +1.1**
HYBB *e*SKSdf **SKSdf** **08 58 49.6 -1.5**

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*IDC **08** 08:36:15.6±1.1,28°.31N×104°.84E,h0km,mb3.8/6, mbtmp3.8/7,ML3.8/1,Error ellipse: s-maj=40.2km s-min=18.6km az=62.0*
ISC 08 08:36:18.5±1.3,28°.3N±0°.2×104°.9E±0°.2,h19km,n7, σ0s44/7,mb3.7/6,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**19.51**	**3**	P		**P**	**08 40 45.1**	**+0.4**
	0.3nm,0.3s,baz=180,slow=9.4,SNR=2.4							
	1.0nm,0.7s							
KSRS	**Korea Array**	**21.35**	**59**	P		**P**	**08 41 04.6**	**0.0**
	1.8nm,0.8s,baz=248,slow=11,SNR=9.0							
	1.8nm,0.8s							
MKAR	**Makanchi Array**	**25.54**	**322**	P		**P**	**08 41 46.5**	**+0.5**
	0.9nm,0.7s,baz=131,slow=12,SNR=7.8							
	0.9nm,0.7s							
KURBB	**Kurchatov Arra**	**29.86**	**325**	P		**P**	**08 42 24.6**	**0.0**
	0.8nm,0.8s,baz=138,slow=8.2,SNR=4.9							
	0.8nm,0.8s							
NRIK	**Noril'sk**	**42.26**	**351**	P		**P**	**08 44 09.7**	**-0.6**
	1.9nm,0.5s,baz=121,slow=7.3,SNR=2.3							
	1.9nm,0.5s							
WRA	**Warramunga Arr**	**55.81**	**146**	P		**P**	**08 45 54.6**	**-0.1**
	0.8nm,0.5s,baz=317,slow=12,SNR=19							
	0.8nm,0.5s							
ASAR	**Alice Springs**	**58.79**	**149**	P		**P**	**08 46 15.8**	**+0.2**
	0.6nm,0.6s,baz=336,slow=6.5,SNR=9.7							
	0.6nm,0.6s							

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*IDC **08** 08:59:51.9±2.4,2°.26S×135°.01E,h0km,mb3.8/2, mbtmp3.9/4,ML3.7/2,Error ellipse: s-maj=69.3km s-min=26.2km az=71.0*
*DJA **08** 08:59:57.8±1.5,2°.5S±4°×13°.5E±°,h26km±14km,M4.0/7, mb4.3/1,MLv3.8/7*
ISC 08 08:59:57.1±0.9,2°.41S±0°.10×134°.63E±0°.05,h30km,n8, σ0s79/11,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SRPI	**Serui, Papua**	**1.70**	**72**	P		**Pn**	**09 00 25.6**	**+0.9**
SRPI				S		**Sb**	**09 00 48.5**	**-0.1**
BAKI	**Biak**	**1.91**	**51**	P		**Pb**	**09 00 29.7**	**-1.6**
FAKI	**Fak Fak**	**2.43**	**258**	P		**Pn**	**09 00 34.2**	**-0.6**
FAKI				S		**Sn**	**09 01 03.6**	**+0.1**
SIJI	**Sorong**	**3.69**	**294**	Pn		**Pn**	**09 00 52.5**	**+0.3**
	4.2nm,0.3s,baz=162,slow=4.3,SNR=14							
SIJI				Sn		**Sn**	**09 01 35.0**	**+0.2**
	12nm,0.3s,baz=288,slow=23,SNR=6.6							
	16nm,0.2s							
SWI	**Sorong**	**3.70**	**294**	P		**Pn**	**09 00 52.9**	**+0.6**
WRA	**Warramunga Arr**	**17.43**	**181**	P		**Pn**	**09 03 58.2**	**0.0**
	0.3nm,0.3s,baz=3.4,slow=12,SNR=22							
	1.7nm,0.6s							
ASAR	**Alice Springs**	**21.14**	**182**	P		**P**	**09 04 40.1**	**+0.3**
	4.9nm,0.6s,baz=6.7,slow=12,SNR=34							
	4.9nm,0.6s							
MKAR	**Makanchi Array**	**67.10**	**324**	P		**P**	**09 10 48.7**	**+0.8**
	0.3nm,0.4s,baz=112,slow=7.7,SNR=7.0							
	0.3nm,0.4s							

IDC 08 09:01:06.3±5.5,52°.09N×36°.18E,h0km,mbtmp3.3/2,

ML2.7/2, **Error ellipse: s-maj=67.9km s-min=24.2km az=124.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKASG	**Malin Array Be**	**4.57**	**255**	Pn	Pn	09 02 16.2	-0.5
	0.6nm,0.3s,baz=74,slow=9.5,SNR=2.0						
AKASG				Pg	Pb	09 02 29.1	+1.8
	1.1nm,0.3s,baz=77,slow=12,SNR=4.6						
AKASG				Sn	Sn	09 03 13.3	+2.9
	1.2nm,0.3s,baz=70,slow=26,SNR=4.0						
AKASG				Lg	Lg	09 03 30.4	
	1.4nm,0.3s,baz=72,slow=27,SNR=4.8						
	0.3nm,0.2s						
I43RU	**DUBNA INFRASON**	**4.68**	**7** *i*			09 33 40.0	
	baz=180,slow=324,SNR=2.8						
FINES	**FINESS Array B**	**10.88**	**333**	Pn	Pn	09 03 37.8	-5.3
	0.1nm,0.3s,baz=146,slow=13,SNR=1.5						
	3.3nm,0.9s						
I26DE	**FREYUNG INFRAS**	**14.65**	**266** *i*			10 33 20.0	
	0.1nm,0.9s,baz=73,slow=326,SNR=6.4						

*IDC **08** 09:12:49.4±1.1, 35°.75S×179°.94W, h0km, mb4.4/6, mbtmp4.5/7, ML4.5/1, Error ellipse: s-maj=31.1km s-min=25.8km az=49.0*
*WEL **08** 09:12:53.6±1.1, 36°.5S×18°.0W±1°.0, h33km, M4.4/20, ML4.6/23, MLv4.4/20, Error ellipse: s-maj=0.0km s-min=0.0km az=104.8*
*NEIC **08** 09:12:55.5±1.9, 36°.0S±0°.1×179°.9E±0°.2, h35km±7km, mb4.5/19, Error ellipse: s-maj=21.7km s-min=16.0km az=119.0*

ISC 08 09:12:50.0±0.7, 36°.05S±0°.07×179°.78W±0°.09, h10km, n102, σ1§37/105, mb4.5/15, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**2.15**	**225**		**Pn**	**09 13 27.1**	**+1.1**
MXZ	**Matakaoa Point**	**2.15**	**225**	P	**Pn**	**09 13 26.8**	**+0.8**
MXZ				S	**Sn**	**09 13 53.0**	**+0.2**
PKGZ	**Pakihiroa**	**2.51**	**222**	P	**Pn**	**09 13 32.4**	**+1.4**
PKGZ				S	**Sn**	**09 14 01.5**	**-0.2**
PUZ	**Puketiti**	**2.56**	**217**	P	**Pn**	**09 13 32.7**	**+1.1**
HAZ	**Te Kaha**	**2.59**	**228**	P	**Pn**	**09 13 33.3**	**+1.3**
TWGZ	**Tauwhareparae**	**2.78**	**219**	P	**Pn**	**09 13 35.9**	**+1.3**
RUGZ	**Raukumara Rang**	**2.79**	**226**	P	**Pn**	**09 13 36.6**	**+1.7**
CNGZ	**Carnagh Statio**	**2.91**	**213**	P	**Pn**	**09 13 38.1**	**+1.6**
TKGZ	**Te Karaka**	**3.05**	**218**	P	**Pn**	**09 13 39.7**	**+1.5**
TKGZ				S	**Sn**	**09 14 15.1**	**+0.3**
MWZ	**Matawai**	**3.13**	**222**	P	**Pn**	**09 13 40.4**	**+0.9**
RIGZ	**Rimuhau**	**3.30**	**216**	P	**Pn**	**09 13 42.0**	**+0.3**
RAGZ	**Rawiri**	**3.31**	**222**	P	**Pn**	**09 13 43.1**	**+1.1**
URZ	**Urewera**	**3.32**	**227**	Pn	**Pn**	**09 13 43.1**	**+1.0**
	43nm,0.3s,baz=248,slow=4.3,SNR=120						
URZ				Sn	**Sn**	**09 14 23.3**	**+1.7**
	32nm,0.3s,baz=183,slow=17,SNR=7.2						
	86nm,0.3s						
URZ	**Urewera**	**3.32**	**227**	P	**Pn**	**09 13 43.0**	**+1.0**
PRGZ	**Paritu Road**	**3.42**	**212**	P	**Pn**	**09 13 44.1**	**+0.7**
MARZ	**Manawahe**	**3.43**	**235**	P	**Pn**	**09 13 44.4**	**+0.8**
SNGZ	**Shannon Statio**	**3.56**	**219**	P	**Pn**	**09 13 45.9**	**+0.5**
SNGZ				S	**Sn**	**09 14 27.8**	**+0.2**
TGRZ	**Tauranga**	**3.59**	**241**	P	**Pn**	**09 13 46.7**	**+1.0**
KNZ	**Kokohu**	**3.59**	**213**	P	**Pn**	**09 13 46.2**	**+0.5**
MHGZ	**Mahia Peninsul**	**3.60**	**210**	P	**Pn**	**09 13 46.6**	**+0.7**
RTZ	**Ruatahuna**	**3.64**	**224**	P	**Pn**	**09 13 47.5**	**+1.1**
MUGZ	**Murupara**	**3.67**	**228**	P	**Pn**	**09 13 47.4**	**+0.6**
MUGZ				S	**Sn**	**09 14 29.3**	**-0.8**
TARZ	**Mount Tarawera**	**3.68**	**233**	P	**Pn**	**09 13 48.6**	**+1.5**
OMRZ	**Omania**	**3.70**	**235**	P	**Pn**	**09 13 48.4**	**+1.1**
RRRZ	**Republican Roa**	**3.74**	**231**	P	**Pn**	**09 13 48.8**	**+1.0**
KARZ	**Kaharoa**	**3.74**	**237**	P	**Pn**	**09 13 48.7**	**+0.9**
HLRZ	**Highlands Stat**	**3.79**	**233**	P	**Pn**	**09 13 50.2**	**+1.6**
RAHZ	**Arahi**	**3.80**	**220**	P	**Pn**	**09 13 49.6**	**+1.0**
GRZ	**Great Barrier**	**3.86**	**266**	P	**Pn**	**09 13 50.6**	**+1.2**
MTHZ	**Maungataniwha**	**3.88**	**223**	P	**Pn**	**09 13 50.5**	**+0.8**
HSRZ	**Hossack Road**	**3.90**	**233**	P	**Pn**	**09 13 51.7**	**+1.8**
PRRZ	**Plateau Road**	**3.91**	**230**	P	**Pn**	**09 13 51.0**	**+0.8**
HRRZ	**Handcock Road**	**3.92**	**232**	P	**Pn**	**09 13 51.9**	**+1.6**
ALRZ	**Allen Road**	**3.98**	**230**	P	**Pn**	**09 13 52.0**	**+0.9**
GRRZ	**Galatos Road**	**4.00**	**234**	P	**Pn**	**09 13 53.0**	**+1.5**
WPRZ	**Whakapapatarin**	**4.07**	**231**	P	**Pn**	**09 13 53.9**	**+1.6**
NMHZ	**Naumai**	**4.08**	**221**	P	**Pn**	**09 13 53.1**	**+0.6**
ARHZ	**Aropaoanui**	**4.11**	**218**	P	**Pn**	**09 13 53.2**	**+0.4**
MRHZ	**Matea Rd**	**4.11**	**226**	P	**Pn**	**09 13 54.0**	**+1.1**
TOZ	**Tahuroa Road**	**4.14**	**245**	P	**Pn**	**09 13 54.1**	**+0.9**
WIAZ	**Waiheke Island**	**4.17**	**258**	P	**Pn**	**09 13 55.3**	**+1.6**
MKAZ	**Moumakai**	**4.21**	**254**	P	**Pn**	**09 13 55.5**	**+1.3**
KUTZ	**Kaahu Road**	**4.27**	**234**	P	**Pn**	**09 13 56.5**	**+1.4**
BKZ	**Black Stump Fm**	**4.29**	**222**		**Pn**	**09 13 55.5**	**0.0**
BKZ	**Black Stump Fm**	**4.29**	**222**	P	**Pn**	**09 13 55.5**	**0.0**
HAZZ	**Hinemaiaia**	**4.34**	**229**	P	**Pn**	**09 13 57.0**	**+1.0**
TLZ	**Tolley Road**	**4.38**	**237**	P	**Pn**	**09 13 57.5**	**+0.9**
MCHZ	**McNeill Hill**	**4.39**	**218**	P	**Pn**	**09 13 56.4**	**-0.3**
KWHZ	**Kaweka Forest**	**4.52**	**221**	P	**Pn**	**09 13 58.4**	**-0.2**
RATZ	**Rangitukua**	**4.52**	**230**	P	**Pn**	**09 13 59.7**	**+1.1**
KAHZ	**Kahuranaki**	**4.58**	**214**	P	**Pn**	**09 13 58.4**	**-1.0**
TMVZ	**Te Maari**	**4.72**	**228**	P	**Pn**	**09 14 01.8**	**+0.5**
WCZ	**Waipu Caves**	**4.76**	**270**	P	**Pn**	**09 14 03.8**	**+1.9**
PXZ	**Pawanui**	**4.78**	**213**	P	**Pn**	**09 14 00.2**	**-1.8**
HIZ	**Hauiti**	**4.93**	**238**		**Pn**	**09 14 05.4**	**+1.2**
BFZ	**Birch Farm**	**5.58**	**213**	Pn	**Pn**	**09 14 12.5**	**-0.6**
MSWZ	**Moikau Station**	**6.62**	**214**	Pn	**Pn**	**09 14 25.0**	**-2.3**
PLWZ	**Palliser**	**6.74**	**214**	Pn	**Pn**	**09 14 26.7**	**-2.3**
BHW	**Baring Head**	**6.79**	**216**	Pn	**Pn**	**09 14 29.8**	**+0.1**
TUWZ	**Tuamarina**	**7.28**	**220**	Pn	**Pn**	**09 14 33.7**	**-2.6**
NNZ	**Nelson**	**7.43**	**224**	Pn	**Pn**	**09 14 38.8**	**+0.3**
MQZ	**McQueen's Vall**	**9.61**	**215**	Pn	Pn	09 15 03.5	-4.7
ODZ	**Otahua Downs**	**11.56**	**216**	Pn	**Pn**	**09 15 30.6**	**-4.4**
LHI	**Lord Howe Isla**	**18.15**	**278**	P	**Pn**	**09 16 57.7**	**-4.4**
STKA	**Stephens Creek**	**32.16**	**266**	P	**P**	**09 19 18.2**	**+0.3**
	1.3nm,0.3s,baz=94,slow=10,SNR=3.8						
	1.3nm,0.3s						
STKA	**Stephens Creek**	**32.16**	**266**	P	**P**	**09 19 18.4**	**+0.5**
CTA	**Charters Tower**	**33.72**	**289**	P	**P**	**09 19 32.3**	**+0.7**
	7.4nm,0.8s,baz=121,slow=9.5,SNR=17						
	7.4nm,0.8s						
CTAO	**Charters Tower**	**33.72**	**289**	P	**P**	**09 19 31.7**	**+0.1**
CTAO				IAmb	IAmb	09 19 33.0	
	comp=Z,9.5nm,0.9s						
BBOO	**Buckleboo**	**36.34**	**262**	P	**P**	**09 19 53.7**	**-0.4**
COEN	**Coen**	**39.79**	**294**	P	**P**	**09 20 22.5**	**-0.9**
COEN				IAmb	IAmb	09 20 24.1	
	comp=Z,7.1nm,0.8s						
AS31	**Alice Springs**	**41.66**	**274**	P	**P**	**09 20 38.5**	**-0.4**
ASAR	**Alice Springs**	**41.66**	**274**	P	**P**	**09 20 38.0**	**-0.9**
	comp=Z,5.1nm,0.7s,baz=118,slow=7.9,SNR=43						
	comp=Z,5.1nm,0.7s						
ASAR	**Alice Springs**	**41.66**	**274**	P	**P**	**09 20 37.9**	**-0.9**
WR0	**Warramunga Arr**	**42.99**	**279**	P	**P**	**09 20 48.6**	**-1.1**
WB2	**Warramunga Arr**	**43.15**	**279**	P	**P**	**09 20 50.0**	**-0.9**
WB2				IAmb	IAmb	09 20 50.4	
	comp=Z,8.0nm,0.5s						
WRAB	**Tennant Creek**	**43.16**	**279**	P	**P**	**09 20 49.9**	**-1.2**
WRAB				IAmb	IAmb	09 20 50.4	
	comp=Z,5.7nm,0.5s						
WRA	**Warramunga Arr**	**43.16**	**279**	P	**P**	**09 20 50.1**	**-1.0**
	comp=Z,3.6nm,0.4s,baz=119,slow=7.7,SNR=96						
	comp=Z,3.6nm,0.4s						
WRA	**Warramunga Arr**	**43.16**	**279**	P	**P**	**09 20 49.0**	**-2.1**
WB0	**Warramunga Arr**	**43.21**	**279**	P	**P**	**09 20 50.4**	**-1.1**
WB0				IAmb	IAmb	09 21 12.9	
	comp=Z,5.9nm,1.2s						
FORT	**Forrest**	**43.43**	**261**	P	**P**	**09 20 51.7**	**-1.4**
CASY	**Casey**	**49.49**	**210**	P	**P**	**09 21 41.2**	**+1.0**
CASY				IAmb	IAmb	09 21 58.3	
	comp=Z,6.6nm,1.1s						
MTN	**Manton Dam**	**49.68**	**285**	P	**P**	**09 21 41.9**	**-0.4**
MTN				IAmb	IAmb	09 22 07.5	
	comp=Z,13nm,1.5s						
KNRA	**Kununurra**	**49.93**	**280**	P	**P**	**09 21 42.9**	**-1.2**
KNRA				IAmb	IAmb	09 21 52.0	
	comp=Z,15nm,1.2s						
MORW	**Morawa**	**53.69**	**258**	P	**P**	**09 22 10.9**	**-1.3**
QSPA	**South Pole Qui**	**54.08**	**180**	P	**P**	**09 22 18.6**	**+4.0**
	comp=Z,2.4nm,0.7s,baz=39,slow=1.7,SNR=16						
	comp=Z,2.4nm,0.7s						
QSPA	**South Pole Qui**	**54.08**	**180**	P	**P**	**09 22 18.1**	**+3.5**
QSPA				IAmb	IAmb	09 22 33.8	
	comp=Z,2.8nm,0.8s						
MAW	**Mawson**	**66.52**	**202**	P	**P**	**09 23 39.7**	**+0.2**
MAW				IAmb	IAmb	09 23 40.1	
	comp=Z,1.3nm,0.6s						
SNAA	**Sanae**	**72.56**	**179**	P	**P**	**09 24 18.9**	**+2.1**
SNAA				IAmb	IAmb	09 24 33.4	
	comp=Z,7.2nm,1.5s						
VNA3	**Neumayer Olymp**	**72.78**	**177**	P	**P**	**09 24 18.1**	**-0.1**
VNA2	**Neumayer--Watz**	**73.19**	**177**	P	**P**	**09 24 21.5**	**+0.9**
	baz=183,slow=5.0						
H03N3	**Juan Fernandez**	**78.82**	**123**	T	T	10 51 46.6	
	baz=236,slow=72,SNR=5.8						
H03N2	**Juan Fernandez**	**78.83**	**123**	T	T	10 51 46.4	
	baz=236,slow=72,SNR=5.1						
H03N1	**Juan Fernandez**	**78.84**	**123**	T	T	10 51 42.2	
	baz=236,slow=72,SNR=6.3						
PETK	**Petropavlovsk-**	**90.92**	**347**	P	**P**	**09 25 53.4**	**-0.1**
	comp=Z,1.8nm,0.7s,baz=134,slow=6.2,SNR=3.4						
	comp=Z,1.8nm,0.7s						
PETK	**Petropavlovsk-**	**90.92**	**347**	P	**P**	**09 25 54.0**	**+0.5**
MKAR	**Makanchi Array**	**120.16**	**308**	PKP	**PKPdf**	**09 31 40.1**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=90,slow=1.6,SNR=5.4						
MKAR	**Makanchi Array**	**120.16**	**308**		**PKPdf**	**09 31 40.3**	**-0.5**
ARCES	**ARCESS Array B**	**143.72**	**345**	PKP	**PKPdf**	**09 32 23.2**	**-1.0**
	comp=Z,4.4nm,0.9s,baz=72,slow=5.8,SNR=4.0						
FINES	**FINESS Array B**	**149.79**	**335**	PKPbc	**PKiKP**	**09 32 39.9**	**-0.4**
	comp=Z,12nm,0.8s,baz=27,slow=3.5,SNR=25						
BRTR	**Keskin Array B**	**153.46**	**288**	PKPbc	**PKPbc**	**09 32 47.4**	**-1.3**
	comp=Z,2.3nm,0.8s,baz=136,slow=4.3,SNR=5.1						
TORD	**Torodi Ar. Bea**	**157.16**	**184**	PKPab	**PKPab**	**09 33 18.9**	**+1.8**
	comp=Z,0.5nm,0.8s,baz=176,slow=3.5,SNR=3.7						
TORD	**Torodi Ar. Bea**	**157.16**	**184**	PKPdf	**PKPdf**	**09 32 46.4**	**-0.2**
TORD				PKPab	**pPKPab**	**09 33 19.3**	**+0.1**

*NEIC **08** 09:26:55.4±1.2, 19°.07N±0°.09×145°.6E±0°.1, h209km±7km, mb4.4/17, Error ellipse: s-maj=21.0km s-min=9.7km az=62.0*
*IDC **08** 09:26:56.2±2.4, 19°.04N×145°.46E, h222km±22km, mb3.5/9, mbtmp4.1/11, Error ellipse: s-maj=27.8km s-min=12.8km az=88.0*

ISC 08 09:26:55.0±0.5, 19°.06N±0°.06×145°.5E±0°.1, h214km, n35, σ1§04/40, mb4.2/15, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.48**	**187**	P	**Pn**	**09 28 17.8**	**+1.9**
	23nm,0.5s,baz=144,slow=16,SNR=1.2						
GUMO				S	**S**	**09 29 17.6**	**-2.2**
	38nm,0.3s,baz=26,slow=22,SNR=5.7						
JCJ	**Chichijima**	**8.56**	**340**	P	**Pn**	**09 28 56.0**	**+0.5**
	8.3nm,0.4s,baz=307,slow=20,SNR=1.2						
JCJ				S	**S**	**09 30 29.3**	**-2.8**
	22nm,0.5s,baz=266,slow=23,SNR=5.8						
JCJ	**Chichijima**	**8.56**	**340**		**Pn**	**09 28 56.1**	**+0.7**
MAJO	**Matsushiro**	**18.56**	**341**	P	**P**	**09 30 56.4**	**+0.4**
MAJO				IAmb	IAmb	09 31 08.9	
	comp=Z,4.0nm,0.6s						
MANU	**Manus Island**	**21.05**	**175**	P	**P**	**09 31 22.2**	**-0.5**
MANU				IAmb	IAmb	09 31 23.9	
	comp=Z,16nm,0.7s						
PMG	**Port Moresby**	**28.34**	**177**	P	**P**	**09 32 29.4**	**+0.1**
PMG				IAmb	IAmb	09 32 41.7	
	comp=Z,9.2nm,0.8s						
LUWI	**Luwuk**	**29.96**	**231**	P	**P**	**09 32 42.3**	**-1.4**
COEN	**Coen**	**32.89**	**184**	P	**P**	**09 33 08.6**	**-0.7**
COEN				IAmb	IAmb	09 33 12.3	
	comp=Z,8.2nm,1.3s						
MTN	**Manton Dam**	**34.73**	**205**	P	**P**	**09 33 26.3**	**+1.3**
MTN				IAmb	IAmb	09 33 26.6	
	comp=Z,8.2nm,0.7s						
CTA	**Charters Tower**	**38.91**	**179**	P	**P**	**09 34 00.1**	**-0.2**
	comp=Z,1.3nm,0.6s,baz=2.8,slow=9.8,SNR=5.2						
	comp=Z,1.3nm,0.6s						
CTAO	**Charters Tower**	**38.91**	**179**	P	**P**	**09 33 59.5**	**-0.7**
CTAO				IAmb	IAmb	09 34 26.9	
	comp=Z,8.1nm,1.4s						
WB0	**Warramunga Arr**	**40.10**	**196**	P	**P**	**09 34 10.4**	**+0.3**
WB0				IAmb	IAmb	09 34 11.3	
	comp=Z,26nm,1.5s						
WR0	**Warramunga Arr**	**40.24**	**196**	P	**P**	**09 34 11.6**	**+0.3**
WB2	**Warramunga Arr**	**40.28**	**196**	P	**P**	**09 34 11.8**	**+0.3**
WB2				IAmb	IAmb	09 34 13.3	
	comp=Z,8.4nm,0.8s						
WRA	**Warramunga Arr**	**40.28**	**196**	P	**P**	**09 34 11.9**	**+0.4**
	comp=Z,5.2nm,0.6s,baz=11,slow=8.9,SNR=95						
WRA				PcP	**PcP**	**09 36 10.8**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=19,slow=3.6,SNR=5.9						
	comp=Z,5.2nm,0.6s						
WRA	**Warramunga Arr**	**40.28**	**196**	P	**P**	**09 34 11.0**	**-0.5**
AS31	**Alice Springs**	**43.95**	**195**	P	**P**	**09 34 41.2**	**0.0**
ASAR	**Alice Springs**	**43.95**	**195**	P	**P**	**09 34 41.1**	**-0.1**
	comp=Z,2.0nm,0.5s,baz=14,slow=7.5,SNR=34						
ASAR				PcP	**PcP**	**09 36 23.3**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=32,slow=3.7,SNR=3.2						
	comp=Z,2.0nm,0.5s						
ASAR	**Alice Springs**	**43.95**	**195**	P	**P**	**09 34 40.9**	**-0.3**
DZM	**Mont Dzumac**	**45.72**	**152**	P	**P**	**09 34 55.0**	**-0.1**
	comp=Z,6.3nm,0.6s,baz=320,slow=7.9,SNR=12						
	comp=Z,6.3nm,0.6s						
DZM	**Mont Dzumac**	**45.72**	**152**	P	**P**	**09 34 55.6**	**+0.4**
DZM				IAmb	IAmb	09 34 59.6	
	comp=Z,19nm,1.3s						
MBWA	**Marble Bar**	**47.27**	**214**	P	**P**	**09 35 09.0**	**+1.9**
STKA	**Stephens Creek**	**50.79**	**184**	P	**P**	**09 35 32.5**	**-1.1**
	comp=Z,2.6nm,0.8s,baz=6.2,slow=9.0,SNR=4.0						
	comp=Z,2.6nm,0.8s						
STKA	**Stephens Creek**	**50.79**	**184**	P	**P**	**09 35 32.8**	**-0.8**
FORT	**Forrest**	**52.32**	**199**	P	**P**	**09 35 45.0**	**+0.1**
MKAR	**Makanchi Array**	**58.08**	**314**	P	**P**	**09 36 27.0**	**+1.0**
	comp=Z,0.3nm,0.5s,baz=90,slow=7.6,SNR=4.8						
	comp=Z,0.3nm,0.5s						
ILAR	**Eielson Array**	**63.40**	**26**	P	**P**	**09 37 01.6**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=245,slow=5.2,SNR=4.2						
	comp=Z,0.4nm,0.6s						
BKZ	**Black Stump Fm**	**64.78**	**154**	P	**P**	**09 37 10.2**	**-0.6**
ABKAR	**Akbulak array**	**72.95**	**317**	P	**P**	**09 38 02.0**	**+0.9**
ABKAR	**Akbulak array**	**72.95**	**317**	P	**P**	**09 38 01.8**	**+0.8**
ABKAR				IAmb	IAmb	09 38 11.1	
	comp=Z,1.9nm,1.2s						
NVAR	**Mina Array Bea**	**83.06**	**52**	P	**P**	**09 38 58.5**	**+1.4**
	comp=Z,0.3nm,0.6s,baz=266,slow=5.6,SNR=5.2						
	comp=Z,0.3nm,0.6s						
FINES	**FINESS Array B**	**86.48**	**335**	P	**P**	**09 39 12.0**	**-1.4**
	comp=Z,4.9nm,1.1s,baz=69,slow=6.3,SNR=8.7						
	comp=Z,4.9nm,1.1s						
FINES	**FINESS Array B**	**86.48**	**335**	P	**P**	**09 39 13.4**	**0.0**
LPAZ	**La Paz**	**147.86**	**90**	PKPbc	**PKiKP**	**09 46 17.0**	**-1.2**
	comp=Z,1.6nm,0.9s,baz=297,slow=3.4,SNR=5.9						
LPAZ	**La Paz**	**147.86**	**90**	PKPdf	**PKPdf**	**09 46 11.3**	**-1.9**
LPAZ				PKPab	**PKiKP**	**09 46 17.6**	**-0.6**

IDC 08 09:49:05.1±3.3, 53°.57N×87°.92E, h0km, mbtmp2.9/2, **ML2.8**/2, **Error ellipse: s-maj=33.2km s-min=17.7km az=53.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.88**	**283** *i*			10 01 00.0	
	0.1nm,0.8s,baz=99,slow=314,SNR=5.1						
ZALV	**Zalesovo Beam**	**1.88**	**283**	Pn	Pn	09 49 38.1	-0.4
	2.2nm,0.3s,baz=100,slow=14,SNR=16						
ZALV				Lg	Lg	09 50 05.1	
	4.5nm,0.3s,baz=104,slow=24,SNR=23						
KURBB	**Kurchatov Arra**	**6.49**	**247**	Pn	Pn	09 50 42.0	+0.2
	0.1nm,0.3s,baz=61,slow=14,SNR=4.0						
	0.8nm,0.5s						
MKAR	**Makanchi Array**	**7.68**	**210**	Pn	Pn	09 50 59.6	+1.4
	0.2nm,0.3s,baz=28,slow=14,SNR=8.0						
	0.2nm,0.3s						

*INET **08** 09:56:43.9±0.3, 11°.99N×89°.27W, h15km±2km, MW3.7*
*GCG **08** 09:56:46.9±0.8, 12°.04N×90°.15W, h139km±175km, MD4.2*
*SNET **08** 09:56:48.0±1.0, 12°.35N×89°.38W, h16km±7km, ML4.0*
*UCR **08** 09:56:51.2±1.3, 12°.48N×89°.41W, h35km, ML3.9, MW3.6, mb4.5(NEIC)*
*NEIC **08** 09:56:54.1±1.8, 12°.7N±0°.1×89°.07W±0°.09, h35km±2km, mb4.5/100, Md3.9(SNET), Error ellipse: s-maj=20.1km s-min=9.8km az=215.0*
*IDC **08** 09:56:56.1±3.3, 12°.87N×88°.84W, h64km±32km, mb3.9/9, mbtmp4.2/10, ML3.5/1, MS4.2/2, Error ellipse: s-maj=37.4km s-min=15.8km az=55.0*

ISC 08 09:56:52.2±0.5, 12°.53N±0°.05×89°.24W±0°.06, h40km, n237, σ1§31/230, mb4.5/37, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**0.96**	**355**	*eP*	**Pn**	**09 57 08.6**	**-0.6**
LALI				*eS*	**Sn**	**09 57 23.6**	**+1.8**
LALI	**Alcalda de L**	**0.96**	**355**	*eP*	**Pn**	**09 57 08.6**	**-0.6**
LALI				*eS*	**Sn**	**09 57 23.6**	**+1.8**
LALI	**Alcalda de L**	**0.96**	**355**	*eP*	**Pn**	**09 57 08.4**	**-0.9**
LFRS	**El Faro**	**1.10**	**9**	*eP*	**Pn**	**09 57 11.2**	**-0.2**
LFRS	**El Faro**	**1.10**	**9**	*eP*	**Pn**	**09 57 11.2**	**-0.2**
SJTE	**Alcalda de S**	**1.11**	**12**	*eP*	**Pn**	**09 57 11.1**	**-0.3**
SJTE	**Alcalda de S**	**1.11**	**12**	*eP*	**Pn**	**09 57 11.1**	**-0.3**
COEG	**Centro de Oper**	**1.14**	**18**	*eP*	**Pn**	**09 57 11.3**	**-0.5**
COEG				IAML		09 57 42.5	
	comp=Z,2μm,0.4s						
COEG	**Centro de Oper**	**1.14**	**18**	*eP*	**Pn**	**09 57 11.3**	**-0.5**
COEG				IAML		09 57 42.5	
	comp=Z,2μm,0.4s						
SNET	**Serv Nac Est T**	**1.15**	**1**		**Pn**	**09 57 11.3**	**-0.7**
SNET	**Serv Nac Est T**	**1.15**	**1**	*eP*	**Pn**	**09 57 11.6**	**-0.5**
SNET	**Serv Nac Est T**	**1.15**	**1**	*eP*	**Pn**	**09 57 11.6**	**-0.5**
SNET	**Serv Nac Est T**	**1.15**	**1**	*eP*	**Pn**	**09 57 11.7**	**-0.3**
SNET				*eS*	**Sn**	**09 57 33.4**	**+6.8**
BOQS	**Boqueron**	**1.20**	**358**	*eP*	**Pn**	**09 57 12.6**	**-0.2**
BOQS	**Boqueron**	**1.20**	**358**	*eP*	**Pn**	**09 57 12.6**	**-0.2**
PAVA	**Las Pavas**	**1.22**	**14**	*eP*	**Pn**	**09 57 12.9**	**0.0**
PAVA	**Las Pavas**	**1.22**	**14**	*eP*	**Pn**	**09 57 12.9**	**0.0**
PAVA	**Las Pavas**	**1.22**	**14**	*eP*	**Pn**	**09 57 12.7**	**-0.2**
PAVA				*eS*	Sn	09 57 34.8	+6.5
LFU	**La Fuente**	**1.22**	**6**	*eP*	**Pn**	**09 57 13.2**	**+0.2**
LFU	**La Fuente**	**1.22**	**6**	*eP*	**Pn**	**09 57 13.2**	**+0.2**
SCLA	**Alcaldia de Sa**	**1.27**	**23**	*eP*	**Pn**	**09 57 13.6**	**0.0**
SCLA	**Alcaldia de Sa**	**1.27**	**23**	*eP*	**Pn**	**09 57 13.6**	**0.0**
CEDA	**San Andres**	**1.28**	**353**	*eP*	**Pn**	**09 57 13.2**	**-0.5**
CEDA				IAML		09 57 41.8	
	comp=Z,2μm,0.3s						
CEDA	**San Andres**	**1.28**	**353**	*eP*	**Pn**	**09 57 13.2**	**-0.5**
CEDA				IAML		09 57 41.8	
	comp=Z,2μm,0.3s						
PQSS	**Presa 15 de Se**	**1.28**	**31**	*eP*	**Pn**	**09 57 14.1**	**+0.5**
PQSS	**Presa 15 de Se**	**1.28**	**31**	*eP*	**Pn**	**09 57 14.1**	**+0.5**
CEVE	**Cerro Verde**	**1.35**	**344**	*eP*	**Pn**	**09 57 13.9**	**-0.9**
CEVE				IAML		09 57 41.1	
	comp=Z,4μm,0.4s						
CEVE	**Cerro Verde**	**1.35**	**344**	*eP*	**Pn**	**09 57 13.9**	**-0.9**
CEVE				IAML		09 57 41.1	
	comp=Z,4μm,0.4s						
SBLS	**San Blas**	**1.36**	**344**	*eP*	**Pn**	**09 57 14.5**	**-0.5**
SBLS	**San Blas**	**1.36**	**344**	*eP*	**Pn**	**09 57 14.5**	**-0.5**
SNJE	**San Jose**	**1.38**	**345**	*eP*	**Pn**	**09 57 14.7**	**-0.5**
SNJE	**San Jose**	**1.38**	**345**	*eP*	**Pn**	**09 57 14.7**	**-0.5**
RTR	**El Retiro**	**1.42**	**344**	*eP*	**Pn**	**09 57 15.5**	**-0.3**
RTR	**El Retiro**	**1.42**	**344**	*eP*	**Pn**	**09 57 15.5**	**-0.3**
NUBE	**Las Nubes**	**1.47**	**339**	*eP*	**Pn**	**09 57 15.1**	**-1.3**
NUBE	**Las Nubes**	**1.47**	**339**	*eP*	**Pn**	**09 57 15.1**	**-1.3**
SLOZ	**Alcaldia de Sa**	**1.58**	**341**	*eP*	**Pn**	**09 57 17.1**	**-0.8**
CAHU	**Cacacuatique**	**1.59**	**39**	*eP*	**Pn**	**09 57 19.3**	**+1.2**
CAHU	**Cacacuatique**	**1.59**	**39**	*eP*	**Pn**	**09 57 19.3**	**+1.2

HPIG		21.05	315	P	**P**	**10 01 33.5**	**+0.4**
Y45A	**Yeager Farm, C**	21.25	359	IAmb	IAmb	10 01 37.6	
	comp=Z,33nm,1.1s						
WLAR	**White Oak Lake**	21.36	351	P	**P**	**10 01 36.1**	**-0.1**
WLAR				IAmb	IAmb	10 01 40.8	
	comp=Z,26nm,0.9s						
Y49A	**Blount Mountai**	21.39	6	P	**P**	**10 01 36.2**	**-0.3**
TX32	**Lajitas Array**	21.44	323	P	**P**	**10 01 38.4**	**+1.2**
TXAR	**Lajitas Array**	21.44	323	P	**P**	**10 01 38.5**	**+1.3**
	comp=Z,4.0nm,0.8s,baz=142,slow=10,SNR=52						
	comp=Z,4.0nm,0.8s						
TXAR	**Lajitas Array**	21.44	323	P	**P**	**10 01 38.7**	**+1.5**
TX31	**Lajitas Ar. Si**	21.44	323	P	**P**	**10 01 38.3**	**+1.1**
TX31				IAmb	IAmb	10 01 39.3	
	comp=Z,19nm,0.9s						
GOGA	**Godfrey**	21.45	13	P	**P**	**10 01 37.4**	**+0.2**
	baz=195						
Y52A	**Lilburn**	21.76	12	P	**P**	**10 01 40.3**	**-0.2**
Y52A				IAmb	IAmb	10 02 09.2	
	comp=Z,20nm,1.4s						
OXF	**Oxford**	21.89	360	P	**P**	**10 01 42.2**	**+0.4**
OXF	**Oxford**	21.89	360	P	**P**	**10 01 41.9**	**0.0**
	baz=179						
X48A	**Hartselle**	21.92	5	P	**P**	**10 01 42.0**	**-0.2**
Z35A	**Perchaven, San**	21.97	342	P	**P**	**10 01 41.4**	**-1.3**
Z35A				IAmb	IAmb	10 01 43.0	
	comp=Z,18nm,0.8s						
NHSC	**New Hope**	22.10	21	P	**P**	**10 01 45.0**	**+0.9**
	baz=204						
X40A	**Basin Creek Fa**	22.11	352	P	**P**	**10 01 43.9**	**-0.3**
X40A	**Basin Creek Fa**	22.11	352	P	**P**	**10 01 45.2**	**+1.0**
	baz=170						
ABTX	**Abilene, Hawle**	22.16	336	P	**P**	**10 01 43.6**	**-1.2**
FPAL	**Fort Paine**	22.16	8	P	**P**	**10 01 44.6**	**-0.2**
MIAR	**Mount Ida**	22.27	351	P	**P**	**10 01 46.4**	**+0.5**
MIAR				IAmb	IAmb	10 01 48.7	
	comp=Z,21nm,0.9s						
MIAR	**Mount Ida**	22.27	351	P	**P**	**10 01 46.7**	**+0.7**
	baz=168,SNR=17						
UALR	**University of**	22.33	353	P	**P**	**10 01 46.2**	**-0.3**
UALR				IAmb	IAmb	10 01 49.6	
	comp=Z,22nm,1.1s						
ICMP	**Isla Caja de M**	22.55	74	P	**P**	**10 01 47.8**	**-1.3**
X37A	**Clayton**	22.66	347	P	**P**	**10 01 51.7**	**+1.6**
X37A				IAmb	IAmb	10 01 53.2	
	comp=Z,16nm,0.9s						
W41B	**Gary Mavity, V**	22.71	354	P	**P**	**10 01 52.2**	**+1.6**
W41B	**Gary Mavity, V**	22.71	354	P	**P**	**10 01 50.4**	**-0.2**
	baz=172,SNR=5.5						
WHAR	**Wooly Hollow**	22.83	354	P	**P**	**10 01 52.8**	**+0.9**
W39A	**Magazine**	22.94	350	P	**P**	**10 01 53.6**	**+0.5**
W39A				IAmb	IAmb	10 01 55.6	
	comp=Z,14nm,0.9s						
W39A	**Magazine**	22.94	350	P	**P**	**10 01 53.0**	**-0.1**
	baz=168,SNR=6.8						
X34A	**Smith Ranch, M**	23.32	342		**P**	**10 01 56.4**	**-0.4**
X34A				IAmb	IAmb	10 01 58.5	
	comp=Z,14nm,0.8s						
GNAR	**Gosnell**	23.35	358	P	**P**	**10 01 57.4**	**+0.3**
FCAR	**Ozark Folk Cen**	23.41	354	P	**P**	**10 01 56.8**	**-0.8**
FCAR				IAmb	IAmb	10 01 59.5	
	comp=Z,22nm,1.0s						
LNXT	**Lenox**	23.48	359	P	**P**	**10 01 58.3**	**0.0**
PEBM	**Pemiscott Bayo**	23.49	359	P	**P**	**10 01 58.9**	**+0.4**
LCAR	**Lake Charles**	23.51	356	P	**P**	**10 01 58.2**	**-0.4**
LCAR				IAmb	IAmb	10 02 00.1	
	comp=Z,11nm,0.8s						
WVT	**Waverly**	23.54	3	P	**P**	**10 01 58.3**	**-0.6**
	baz=183						
TKL	**Tuckaleechee C**	23.56	11	P	**P**	**10 01 58.8**	**-0.3**
	comp=Z,8.5nm,0.8s,baz=184,slow=9.4,SNR=11						
TKL				LR	LR	10 10 48.7	
	comp=Z,192nm,18.2s,baz=193,slow=36						
	comp=Z,8.5nm,0.8s						
TKL	**Tuckaleechee C**	23.56	11	P	**P**	**10 01 58.2**	**-0.9**
TKL				IAmb	IAmb	10 02 00.7	
	comp=Z,12nm,0.9s						
CLTN	**Cedars of Leba**	23.61	6	P	**P**	**10 01 59.3**	**-0.3**
KMSC	**Kings Mountain**	23.63	16	P	**P**	**10 01 59.0**	**-0.8**
	baz=199						
WMOK	**Wichita Mounta**	23.75	340	P	**P**	**10 01 59.8**	**-1.1**
WMOK	**Wichita Mounta**	23.75	340	P	**P**	**10 01 58.8**	**-2.1**
	baz=156,SNR=9.9						
V53A	**Saluda**	23.76	13	P	**P**	**10 02 00.5**	**-0.6**
FNO	**Franklin**	23.81	343		**P**	**10 02 00.5**	**-1.0**
U40A	**Yellville**	23.95	353	P	**P**	**10 02 02.5**	**-0.3**
U40A				IAmb	IAmb	10 02 04.9	
	comp=Z,14nm,0.8s						
U40A	**Yellville**	23.95	353	P	**P**	**10 02 02.1**	**-0.7**
	baz=171,SNR=14						
PARMO	**Parma**	24.04	359	P	**P**	**10 02 03.4**	**-0.1**
MNTX	**Cornudas Mount**	24.18	325	P	**P**	**10 02 04.2**	**-0.8**
	baz=138,SNR=6.1						
T47A	**Sharon Grove**	24.43	4	IAmb	IAmb	10 02 07.9	
	comp=Z,18nm,0.8s						
MSTX	**Muleshoe**	24.65	332	IAmb	IAmb	10 02 09.8	
	comp=Z,11nm,1.0s						
MSTX	**Muleshoe**	24.65	332	P	**P**	**10 02 08.2**	**-1.1**
	baz=146,SNR=6.0						
MGMO	**Mountain Grove**	24.67	354	IAmb	IAmb	10 02 11.3	
	comp=Z,18nm,0.8s						
U54A	**Nelsons Funny**	24.81	14	IAmb	IAmb	10 02 12.9	
	comp=Z,17nm,0.9s						
AMTX	**Amarillo**	24.95	335	P	**P**	**10 02 11.7**	**-0.4**
AMTX				IAmb	IAmb	10 02 12.7	
	comp=Z,12nm,0.8s						
AMTX	**Amarillo**	24.95	335	P	**P**	**10 02 11.3**	**-0.8**
	baz=150						
S44A	**Carbondale**	25.06	360	P	**P**	**10 02 12.9**	**0.0**
S44A				IAmb	IAmb	10 02 13.9	
	comp=Z,17nm,1.0s						
SIUC	**Southern Illin**	25.08	0	IAmb	IAmb	10 02 17.0	
	comp=Z,11nm,0.8s						
CCM	**Cathedral Cave**	25.49	356	P	**P**	**10 02 16.1**	**-0.7**
CCM	**Cathedral Cave**	25.49	356	P	**P**	**10 02 16.0**	**-0.8**
	baz=176						
R40A	**Maddies Statio**	25.80	355	IAmb	IAmb	10 02 23.3	
	comp=Z,9.6nm,0.8s						
BLA	**Blacksburg**	25.82	16	P	**P**	**10 02 18.3**	**-1.5**
	baz=200						
P40A	**Paris**	27.01	355	IAmb	IAmb	10 02 30.2	
	comp=Z,8.2nm,0.8s						
ANMO	**Albuquerque**	27.24	328	P	**P**	**10 02 32.4**	**-0.4**
	baz=140						
P52A	**Corning**	27.72	12	P	**P**	**10 02 36.0**	**-0.9**
	baz=195						
CBKS	**Cedar Bluff**	27.79	342	P	**P**	**10 02 36.0**	**-1.6**
	baz=157						
TUC	**Tucson**	27.90	318	P	**P**	**10 02 39.5**	**+0.8**
HDIL	**Hopedale**	27.92	360	P	**P**	**10 02 38.1**	**-0.5**
	baz=179						
O53A	**New Philadelph**	28.51	13	P	**P**	**10 02 42.4**	**-1.5**
	baz=196						
KSCO	**Kaye Shedlock'**	28.93	338	IAmb	IAmb	10 02 48.9	
	comp=Z,14nm,1.1s						
KSCO	**Kaye Shedlock'**	28.93	338	P	**P**	**10 02 47.5**	**-0.3**
	baz=152						
S22A	**4UR Ranch, Cre**	29.63	331	P	**P**	**10 02 54.1**	**-0.1**
	baz=143						
JFWS	**Jewell Farm**	30.29	359	P	**P**	**10 02 58.4**	**-1.2**
	baz=178						
WUAZ	**Wupatki**	30.40	323	P	**P**	**10 03 01.0**	**+0.1**
	baz=133						
PDMCI	**Parker Dam,Lak**	31.34	318	P	**P**	**10 03 09.8**	**+0.8**
	baz=127						
ECSD	**EROS Data Cent**	31.74	350	P	**P**	**10 03 11.4**	**-1.1**
	baz=166						
N23A	**Red Feather La**	31.83	336	P	**P**	**10 03 12.2**	**-1.4**
	baz=147						
MONP2	**Monument Peak**	32.08	314	P	**P**	**10 03 15.6**	**-0.2**
	baz=122						
O20A	**White River Ci**	32.20	332	P	**P**	**10 03 17.0**	**+0.2**
	baz=143						
GMRC	**Granite Mounta**	32.63	317	P	**P**	**10 03 21.5**	**+1.0**
	baz=126						
SPMN	**Marine on St.**	32.73	355	IAmb	IAmb	10 03 22.6	
	comp=Z,6.7nm,0.7s						
SPMN	**Marine on St.**	32.73	355	P	**P**	**10 03 19.6**	**-1.4**
	baz=173						
SADO	**Sadowa**	33.28	13	P	**P**	**10 03 23.8**	**-2.1**
	comp=Z,16nm,1.1s,baz=285,slow=5.8,SNR=4.8						
	comp=Z,16nm,1.1s						
K22A	**Casper**	33.55	337	P	**P**	**10 03 28.2**	**-0.4**
	baz=148						
RSSD	**Black Hills**	33.96	341	P	**P**	**10 03 31.1**	**-1.0**
	baz=153						

LONY	**Lake Ozonia**	34.36	19	P	**P**	**10 03 34.0**	**-1.3**
	baz=206						
MPMC	**Manual Prospec**	34.58	317	P	**P**	**10 03 37.6**	**0.0**
	baz=125						
R11A	**Troy Canyon, C**	34.79	322	P	**P**	**10 03 39.8**	**+0.4**
	baz=130						
LBNH	**Lisbon**	34.93	22	P	**P**	**10 03 39.9**	**-0.3**
	baz=210						
EYMN	**Ely**	35.36	357	P	**P**	**10 03 42.0**	**-2.0**
	baz=176,SNR=5.4						
PKM	**Mcpherson Peak**	35.52	314	P	**P**	**10 03 45.9**	**+0.2**
	baz=121						
VES	**Vestal, Richgr**	35.53	316	P	**P**	**10 03 46.0**	**+0.5**
	baz=123						
REDW	**Red Top Meadow**	35.95	333	IAmb	IAmb	10 03 52.0	
	comp=Z,4.6nm,0.9s						
SNOW	**Snow King Moun**	35.98	333	IAmb	IAmb	10 03 51.9	
	comp=Z,6.6nm,1.1s						
AGMN	**Agassiz Nation**	36.09	352	IAmb	IAmb	10 03 49.4	
	comp=Z,6.0nm,0.7s						
AGMN	**Agassiz Nation**	36.09	352	P	**P**	**10 03 48.9**	**-1.2**
	baz=169						
NVAR	**Mina Array Bea**	36.51	320	P	**P**	**10 03 56.3**	**+2.1**
	comp=Z,2.0nm,0.9s,baz=137,slow=8.8,SNR=17						
NVAR				PcP	**PcP**	**10 06 18.7**	**+1.3**
	comp=Z,0.6nm,0.7s,baz=129,slow=4.1,SNR=4.9						
	comp=Z,2.0nm,0.9s						
NVAR	**Mina Array Bea**	36.51	320	P	**P**	**10 03 56.1**	**+2.0**
LHV	**Little Huntoon**	36.53	320	P	**P**	**10 03 55.6**	**+1.6**
LHV				IAmb	IAmb	10 03 57.2	
	comp=Z,3.9nm,0.9s						
TA02	**Huaiquique**	37.62	150	P	**P**	**10 04 02.4**	**-1.1**
BCYI	**Bear Canyon**	37.85	331	P	**P**	**10 04 06.2**	**+0.7**
DGMT	**Dagmar**	37.94	344	P	**P**	**10 04 05.3**	**-0.6**
	baz=155						
ULM	**Lac du Bonnet**	38.01	353	P	**P**	**10 04 04.5**	**-1.9**
	comp=Z,4.0nm,0.8s,baz=170,slow=8.9,SNR=6.4						
	comp=Z,4.0nm,0.8s						
EGMT	**Eagleton**	39.31	338	P	**P**	**10 04 16.2**	**-1.3**
	baz=147						
SIV	**San Ignacio**	39.74	135	P	**P**	**10 04 22.1**	**+0.7**
	comp=Z,0.5nm,0.3s,baz=313,slow=9.5,SNR=8.0						
	comp=Z,0.5nm,0.3s						
MSO	**Missoula**	40.02	334	P	**P**	**10 04 22.8**	**-0.7**
	baz=140						
F10A	**Beach Ranch, E**	40.90	330	P	**P**	**10 04 30.3**	**-0.4**
SCHQ	**Schefferville**	45.73	18	P	**P**	**10 05 06.9**	**-2.5**
	comp=Z,3.1nm,0.5s,baz=252,slow=4.1,SNR=6.8						
	comp=Z,3.1nm,0.5s						
YKA	**Yellowknife Ar**	53.09	346	P	**P**	**10 06 04.0**	**-1.4**
	comp=Z,3.4nm,0.9s,baz=142,slow=7.9,SNR=12						
	comp=Z,3.4nm,0.9s						
YKA	**Yellowknife Ar**	53.09	346	P	**P**	**10 06 04.8**	**-0.6**
T35M	**Bob Quinn**	54.28	334	P	**P**	**10 06 13.2**	**-1.1**
	baz=128						
WRAK	**Wrangell Islan**	54.88	332	P	**P**	**10 06 17.4**	**-1.1**
	baz=125						
N31M	**Braeburn, Yuko**	59.24	336	P	**P**	**10 06 48.0**	**-1.5**
	baz=124						
YUK8	**Steele Glacier**	60.76	335	P	**P**	**10 06 58.5**	**-1.6**
	baz=120						
DAWY	**Dawson**	62.05	338	P	**P**	**10 07 07.1**	**-1.4**
	baz=122						
M27K	**Edge Creek, AK**	62.16	335	P	**P**	**10 07 09.1**	**-0.3**
	baz=118						
EPYK	**Eagle Plains**	62.40	340	P	**P**	**10 07 10.5**	**-0.4**
	baz=125						
L27K	**Beaver Creek,**	62.48	336	P	**P**	**10 07 10.9**	**-0.5**
	baz=119						
INK	**Inuvik**	62.62	343	P	**P**	**10 07 11.1**	**-1.1**
	baz=130						
A36M	**Sachs Harbour**	63.22	348	P	**P**	**10 07 14.9**	**-1.2**
	baz=140						
J25K	**Salcha River,**	64.59	337	P	**P**	**10 07 23.9**	**-1.5**
	baz=116						
DHY	**Denali Highway**	64.75	335	P	**P**	**10 07 24.7**	**-1.8**
	baz=113						
ILAR	**Eielson Array**	65.25	337	P	**P**	**10 07 28.6**	**-1.0**
	comp=Z,1.0nm,1.0s,baz=115,slow=4.4,SNR=7.1						
	comp=Z,1.0nm,1.0s						
ILAR	**Eielson Array**	65.25	337	P	**P**	**10 07 28.8**	**-0.8**
TRF	**Thorofare Moun**	66.11	335	P	**P**	**10 07 34.6**	**-0.8**
	baz=111						
I23K	**Minto, Yukon-K**	66.36	336	P	**P**	**10 07 35.5**	**-1.2**
	baz=112						
MLY	**Manley**	66.86	336	P	**P**	**10 07 38.9**	**-1.1**
	baz=111						
SEY	**Seymchan**	91.19	336	LR	LR	10 55 05.6	
	comp=Z,331nm,20.1s,baz=266,slow=38						
PZH	**PanZhiHua**	139.76	345	PKP	**PKPdf**	**10 16 19.3**	**+2.4**
CMAR	**Chiang Mai Arr**	148.17	345	PKPbc	**PKPbc**	**10 16 35.2**	**+0.5**
	comp=Z,5.5nm,0.4s,baz=334,slow=3.3,SNR=11						
CMAR	**Chiang Mai Arr**	148.17	345		**PKPbc**	**10 16 35.8**	**+1.0**

MAN 08 10:07:09.2,6.07N×126.07E,h16km,mb4.6,ML3.4,MS3.3, 4C-2D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.36**	**275**	**i**	**eP**	**Pn**	10 07 17.2 +1.1
DDMP					eS		10 07 39.7
MATI	**Mati**	**0.89**	**12**	**i**	**eP**	**Pn**	10 07 25.6 +4.3
GSPH	**General Santos**	**1.11**	**271**	**i**	**iP**	**Pn**	10 07 24.9 +1.5
GSPH					eS		10 07 42.8
KCP	**Kidapawan**	**1.35**	**314**	**i**	**iP**	**Pn**	10 07 32.9 +2.7
KCP					*i* S		10 08 01.9
BUKP	**Musuan**	**2.06**	**331**	**i**	**eP**	**Pn**	10 07 43.4 +3.8
BUKP					eS		10 08 16.7
GLSP	**General Luna,**	**3.69**	**1**	**i**	**eP**	**Pn**	10 08 06.5 +6.4

*IDC **08** 10:07:31.9±1.1,56.39S×25.48W,h0km,mb4.0/3, mbtmp3.9/4,ML3.4/1,Error ellipse: s-maj=44.3km s-min=26.7km az=77.0*

*NEIC **08** 10:07:33.0±0.9,56.4S±0.1×25.6W±0.2,h10km±2km, mb4.4/14,Error ellipse: s-maj=22.7km s-min=19.7km az=52.0*

ISC 08 10:07:36.0±0.9,56.5S±0.1×25.7W±0.1,h29km,n30, σ0.82/25,mb4.4/8,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**6.51**	**285**		**Pn**	**10 09 09.6**	**0.0**
ORCD	**Orcadas**	**10.77**	**239**	Pn	**Pn**	**10 10 07.7**	**-0.3**
VNA1	**Neumayer--Stat**	**16.10**	**159**	P	**Pn**	**10 11 20.8**	**+1.0**
VNA3	**Neumayer Olymp**	**16.32**	**161**	P	**Pn**	**10 11 21.5**	**-1.2**
VNA2	**Neumayer--Watz**	**16.50**	**159**	P	**Pn**	**10 11 24.2**	**-0.7**
	baz=320,slow=14						
SNAA	**Sanae**	**18.02**	**157**	P	**P**	**10 11 44.4**	**+0.2**
SNAA	**Sanae**	**18.02**	**157**	P	**P**	**10 11 44.8**	**+0.6**
	0.1nm,0.3s,baz=315,slow=5.3,SNR=2.9						
	1.1nm,0.8s						
SNAA	**Sanae**	**18.02**	**157**	P	**P**	**10 11 44.4**	**+0.2**
BELA	**Belgrano 2**	**21.71**	**185**	P	**P**	**10 12 23.3**	**-1.0**
QSPA	**South Pole Qui**	**33.77**	**180**	P	**P**	**10 14 14.9**	**0.0**
QSPA				IAmb	IAmb	10 14 23.7	
	comp=Z,13nm,1.4s						
MT02	**Curacav**	**38.69**	**287**	P	**P**	**10 14 56.3**	**-0.6**
AC04	**Llanos de Chal**	**42.66**	**292**	P	**P**	**10 15 29.6**	**-0.2**
AC02	**Maricunga**	**42.79**	**295**	P	**P**	**10 15 30.7**	**-0.7**
AC02				IAmb	IAmb	10 15 49.8	
	comp=Z,12nm,1.4s						
GO02	**Mina Guanaco**	**44.41**	**296**	P	**P**	**10 15 44.2**	**0.0**
GO02				IAmb	IAmb	10 15 52.3	
	comp=Z,19nm,1.4s						
SBA	**Scott Base**	**45.71**	**184**	P	**P**	**10 15 55.0**	**+1.5**
VNDA	**Vanda**	**46.18**	**182**	P	**P**	**10 15 57.3**	**0.0**
	comp=Z,0.6nm,0.5s,baz=188,slow=7.5,SNR=7.8						
	comp=Z,0.6nm,0.5s						
VNDA	**Vanda**	**46.18**	**182**	P	**P**	**10 15 57.5**	**+0.2**
VNDA				IAmb	IAmb	10 16 04.5	
	comp=Z,2.0nm,1.2s						
H10S2	**ASCENSION HYDR**	**48.19**	**15**	T	T	11 09 02.0	
H10S3	**ASCENSION HYDR**	**48.20**	**15**	T	T	11 09 06.1	
	SNR=4.7						
PATCX	**Punta Patache**	**48.34**	**299**	P	**P**	**10 16 14.8**	**-0.1**
PB11	**IPOC Station P**	**49.00**	**300**	P	**P**	**10 16 20.6**	**+0.5**
PB11				IAmb	IAmb	10 16 48.5	
	comp=Z,8.4nm,1.0s						
H10N1	**ASCENSION HYDR**	**49.31**	**15**	T	T	11 10 25.9	
	baz=188,slow=75,SNR=2.3						
H10N3	**ASCENSION HYDR**	**49.31**	**15**	T	T	11 10 28.8	
	baz=188,slow=75,SNR=4.9						
H10N2	**ASCENSION HYDR**	**49.33**	**15**	T	T	11 10 29.3	
	baz=188,slow=75,SNR=4.9						

LPAZ	**La Paz**	51.28	304	P	**P**	**10 16 38.0**	**+0.1**
	comp=Z,2.3nm,0.6s,baz=135,slow=5.7,SNR=13						
	comp=Z,2.3nm,0.6s						
LPAZ	**La Paz**	51.28	304	P	**P**	**10 16 38.2**	**+0.3**
LPAZ				IAmb	IAmb	10 16 39.1	
	comp=Z,2.3nm,0.5s						
TOA0	**Torodi Ar. Sit**	73.04	28	P	**P**	**10 19 02.1**	**-0.9**
TOA0				IAmb	IAmb	10 19 02.5	
	comp=Z,2.9nm,0.9s						
TORD	**Torodi Ar. Bea**	73.04	28	P	**P**	**10 19 02.0**	**-0.9**
	comp=Z,1.1nm,0.6s,baz=198,slow=6.4,SNR=9.6						
	comp=Z,1.1nm,0.6s						
TORD	**Torodi Ar. Bea**	73.04	28	P	**P**	**10 19 02.2**	**-0.7**
TORD				IAmb	IAmb	10 19 02.6	
	comp=Z,1.2nm,0.8s						
ILAR	**Eielson Array**	151.00	311	PKPbc	**PKiKP**	**10 27 27.0**	**+2.1**
	comp=Z,0.6nm,0.8s,baz=139,slow=3.5,SNR=6.9						

MAN 08 10:23:02.1,18.10N×120.33E,h34km,mb4.5,ML3.3, MS3.1,2C-4D,Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIPP	**Brgy, Tapao**	**0.21**	**144**	**↑**	***i*P**	**Pn**	10 23 10.2 +1.1
SIPP					eS		10 23 22.0
APYP	**Conner**	**0.90**	**105**	**↓**	***i*P**	**Pn**	10 23 18.8 +0.8
APYP					*i* S		10 23 31.1
SAMP	**Sagada Mountai**	**1.15**	**151**	**↓**	***e*P**	**Pn**	10 23 22.1 +0.8
SAMP					*e*S		10 23 49.4
SGCP	**Gonzaga**	**1.64**	**85**	**↓**	***e*P**	**Pn**	10 23 29.4 +1.4
SGCP					*e*S		10 23 57.8
SMPP	**San Manuel, Pa**	**1.96**	**170**	**↓**	***e*P**	**Pn**	10 23 34.0 +1.7
PALP	**Palanan**	**2.25**	**117**	**↑**	***e*P**	**Pn**	10 23 37.8 +1.4

IDC 08 10:37:15.5±2.5,54.70N×83.74E,h0km,mbtmp2.9/2, ML2.7/2,Error ellipse: s-maj=20.6km s-min=12.0km az=172.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.98**	**139**	*i*		10 43 20.0	
	baz=318,slow=315,SNR=1.0						
ZALV	**Zalesovo Beam**	**0.98**	**139**	Pg	Pg	10 37 34.0	-0.3
	10nm,0.3s,baz=319,slow=17,SNR=44						
ZALV				Lg	Lg	10 37 48.3	
	14nm,0.3s,baz=325,slow=30,SNR=27						
KURBB	**Kurchatov Arra**	**5.17**	**220**	Pn	Pn	10 38 34.1	+0.2
	0.1nm,0.3s,baz=39,slow=13,SNR=2.6						
KURBB				Lg	Lg	10 39 57.1	
	0.2nm,0.3s,baz=41,slow=32,SNR=1.7						
	0.6nm,0.3s						
MKAR	**Makanchi Array**	**7.97**	**187**	Pn	Pn	10 39 12.8	+0.3
	0.2nm,0.3s,baz=11,slow=12,SNR=5.2						
	0.3nm,0.4s						

*IDC **08** 10:38:26.7±1.5,13.81N×90.26W,h37km±11km,mb4.3/23, mbtmp4.5/24,ML5.5/1,MS4.3/56,Error ellipse: s-maj=23.3km s-min=9.4km az=58.0*

*UCR **08** 10:38:26.2±0.9,13.48N×90.83W,h11km±9km,ML5.2, mb5.2(NEIC)*

*SNET **08** 10:38:26.2±0.9,13.47N×90.83W,h12km±9km,ML5.4*

*NEIC **08** 10:38:27.5±2.5,13.52N±0.06×90.88W±0.05,h35km±1km, mb5.1/481,Mww5.2,Md5.4(SNET),Error ellipse: s-maj=11.2km s-min=6.7km az=210.0*

*INET **08** 10:38:27.3±1.8,13.53N×90.84W,h15km±13km,MW5.2*

*UPA **08** 10:38:28.2±1.0,14.44N×90.19W,h0km±106km,MW5.4*

*GCMT **08** 10:38:28.5±0.2,13.47N±0.01×90.95W±0.01,h36km±1km, MW5.2/112,Moment Tensor Solution. s57,c77; s112,c179; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.79±.25; $M_{\theta\theta}$-6.09±.16; $M_{\phi\phi}$4.30±.17; $M_{r\theta}$-2.02±.20; $M_{\theta\phi}$-2.95±.15; $M_{\phi r}$3.55±.21; Best double couple: M_o7.37500×10^{16} NP1:ϕ_b36.00000°,δ61.00000°, λ20.00000°. NP2:ϕ_b296.00000°,δ73.00000°,λ149.00000°. Principal axes: T 7.7350, Plg34.0000°, Azm252.0000°; N -0.7200, Plg55.0000°, Azm89.0000°; P -7.0150, Plg8.0000°, Azm348.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*GCG **08** 10:38:33.2±0.7,14.01N×90.92W,h55km±13km,MD5.1*

*NEIC **08** 10:38:34,13.48N×90.80W,h36km,Moment Tensor Solution. Duration: 10s0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.13; $M_{\theta\theta}$-7.70; $M_{\phi\phi}$2.57; $M_{r\theta}$-3.38; $M_{\theta\phi}$-1.40; $M_{\phi r}$5.24; Fault plane solution: M_o9.32000×10^{16} NP1:ϕ_b52.00000°, δ44.00000°,λ34.00000°. NP2:ϕ_b296.00000°,δ67.00000°, λ129.00000°. Principal axes: T 9.9474, Plg51.0000°, Azm252.0000°; N -1.4130, Plg35.0000°, Azm99.0000°; P -8.5345, Plg14.0000°, Azm359.0000°;*

ISC 08 10:38:26.9±0.4,13.55N±0.04×90.84W±0.04,h41km±3km, h41km:pP-P,n888,σ1s39/717,mb5.0/202,MS4.4/61, 31C-10D,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCG	**Pacaya**	**0.87**	**15**	**↓**	***e*P**	**Pn**	**10 38 45.0 +2.0**
FUG	**Fuego 3**	**0.90**	**360**	**↓**	***e*P**	**Pn**	**10 38 45.0 +1.8**
NUBE	**Las Nubes**	**1.09**	**71**	**↑**	***i*P**	**Pn**	**10 38 46.3 +0.4**
NUBE					*e*S	**Sn**	**10 39 00

AEIL Aeropuerto Ilo 1.68 85 eP Pn 10 38 55.6 +1.7
AEIL Aeropuerto Ilo 1.68 85 eP Pn 10 38 55.6 +1.7
LFU La Fuente 1.69 83⇑ iP Pn 10 38 55.6 +1.5
LFU La Fuente 1.69 83⇑ iP Pn 10 38 55.6 +1.5
LFRS El Faro 1.73 87 eP Pn 10 38 55.7 +1.0
LFRS El Faro 1.73 87 eP Pn 10 38 55.7 +1.0
LBRS Las Brisas 1.76 84⇑ eP Pn 10 38 56.7 +1.7
LBRS Las Brisas 1.76 84⇑ eP Pn 10 38 56.7 +1.7
ESQI Esquipulas 1.77 55 Pn 10 38 57.3 +2.1
ESQI Sn 10 39 20.2 +3.7
ESQI Esquipulas 1.77 55⇓ iP Pn 10 38 57.2 +2.1
SJTE Alcalda de S 1.78 88 eP Pn 10 38 56.6 +1.3
SJTE Alcalda de S 1.78 88 eP Pn 10 38 56.6 +1.3
PAVA Las Pavas 1.86 85⇑ iP Pn 10 38 58.0 +1.6
PAVA Las Pavas 1.86 85⇑ iP Pn 10 38 58.0 +1.6
PAVA Las Pavas 1.86 85 eP Pn 10 38 57.8 +1.4
PAVA eS Sn 10 39 22.0 +3.3
HUEH Huehuetenango 1.87 340 Pn 10 38 59.5 +2.8
HUEH Huehuetenango 1.87 340⇓ iP Pn 10 38 59.6 +2.9
HUEH Huehuetenango 1.87 340⇓ iP Pn 10 38 59.6 +2.9
HUEH Huehuetenango 1.87 340 eP Pn 10 38 59.7 +2.9
MRL Marmol 1.89 36⇑ iP Pn 10 39 00.1 +3.1
COEG Centro de Oper 1.91 88 eP Pn 10 38 58.3 +1.3
COEG IAML 10 39 30.5
comp=Z,27µm,0.4s
COEG Centro de Oper 1.91 88 eP Pn 10 38 58.3 +1.3
COEG IAML 10 39 30.5
comp=Z,27µm,0.4s
COEG Centro de Oper 1.91 88 eP Pn 10 38 58.3 +1.3
LLGN La Laguna 1.94 71 eP Pn 10 38 58.9 +1.4
LLGN La Laguna 1.94 71 eP Pn 10 38 58.9 +1.4
UESV Universidad de 2.00 87 eP Pn 10 38 59.8 +1.6
UESV Universidad de 2.00 87 eP Pn 10 38 59.8 +1.6
SCLA Alcaldia de Sa 2.06 85⇑ eP Pn 10 39 00.7 +1.6
SCLA Alcaldia de Sa 2.06 85⇑ eP Pn 10 39 00.7 +1.6
PQSS Presa 15 de Se 2.22 88 eP Pn 10 39 02.5 +1.3
PQSS Presa 15 de Se 2.22 88 eP Pn 10 39 02.5 +1.3
PACA Pacayal 2.45 92 eP Pn 10 39 05.9 +1.4
PACA Pacayal 2.45 92 eP Pn 10 39 05.9 +1.4
PACA Pacayal 2.45 92 eP Pn 10 39 06.0 +1.4
LCY Lacayo 2.48 93 eP Pn 10 39 06.4 +1.5
LCY Lacayo 2.48 93 eP Pn 10 39 06.4 +1.5
RANC El Ranchito 2.48 92 eP Pn 10 39 06.2 +1.1
RANC El Ranchito 2.48 92 eP Pn 10 39 06.2 +1.1
CAHU Cacaocuatique 2.57 85 eP Pn 10 39 07.5 +1.3
CAHU Cacaocuatique 2.57 85 eP Pn 10 39 07.5 +1.3
LCND La Caada 2.88 94⇑ eP Pn 10 39 11.5 +1.1
LCND La Caada 2.88 94⇑ eP Pn 10 39 11.5 +1.1
CNCH Conchagua 2.94 95⇑ eP Pn 10 39 12.3 +1.1
CNCH Conchagua 2.94 95⇑ eP Pn 10 39 12.3 +1.1
CCIG Comitan 2.99 335 Pn 10 39 15.2 +3.2
PETF Flores 3.48 16 Pn 10 39 21.5 +2.9
PETF Flores 3.48 16⇓ iP Pn 10 39 21.7 +3.1
PETF Flores 3.48 16⇓ iP Pn 10 39 21.7 +3.1
PETF Flores 3.48 16 eP Pn 10 39 21.7 +3.1
TGUH Tegucigalpa,Un 3.50 81 Pn Pn 10 39 20.4 +1.3
TGUH Tegucigalpa,Un 3.50 81 eP Pn 10 39 20.0 +0.9
CRIN San Cristobal 3.79 102 Pn 10 39 23.7 +0.8
CRIN San Cristobal 3.79 102 eP Pn 10 39 23.9 +1.0
CNGN Cerro Negro 4.17 104 Pn 10 39 28.9 +0.8
CNGN Cerro Negro 4.17 104 eP Pn 10 39 28.9 +0.8
COPN Copaltepe 4.36 108 eP Pn 10 39 31.2 +0.5
RCON San Juan de Ri 4.56 90 eP Pn 10 39 37.8 +4.3
APYN Apoyeque 4.57 106 eP Pn 10 39 34.2 +0.6
TISN Laguna Tiscapa 4.67 107 eP Pn 10 39 35.8 +0.8
MGAN Managua 4.69 107 eP Pn 10 39 35.9 +0.7
MGAN eP Pn 10 39 35.9 +0.7
HUEN 4.71 104 eP Pn 10 39 36.2 +0.7
WILN Americas 2 4.74 106 eP Pn 10 39 36.8 +0.8
MATN Matagalpa 4.83 97 Pn Pn 10 39 36.8 -0.4
MATN Matagalpa 4.83 97 eP Pn 10 39 36.6 -0.5
MATN eS Sn 10 40 32.8 +0.9
BOAB BOACO BROADBAN 5.16 102 Pn 10 39 41.2 -0.5
BOAB BOACO BROADBAN 5.16 102 eP Pn 10 39 41.1 -0.5
CONN Concepcion 5.46 111 eP Pn 10 39 45.6 -0.2
ACON Acoyapa 5.75 105 Pn 10 39 49.9 +0.1
HZTE Horizontes, Gu 5.85 118 Pn 10 39 53.1 +1.9
ORTG Ortega, Santa 6.14 120 Pn Pn 10 39 57.1 +1.8
DUNO Dulce Nombre, 6.27 123 Pn 10 39 58.5 +1.6
DUNO Dulce Nombre, 6.27 123 eP Pn 10 39 58.6 +1.7
JTS Las Juntas de 6.61 119 Pn Pn 10 40 03.4 +1.8
comp=Z,21nm,0.3s,baz=4.6,slow=22,SNR=147
JTS Sn Sn 10 41 16.5 +0.8
baz=37,slow=20
JTS Las Juntas de 6.61 119 Pn 10 40 03.2 +1.6
JTS Las Juntas de 6.61 119 eP Pn 10 40 04.0 +2.4
JTS ⇑eS Sn 10 41 19.0 +3.2
JTS Las Juntas de 6.61 119 eP Pn 10 40 03.4 +1.8
LAFE Finca La Fe, P 6.89 122 eP Pn 10 40 07.0 +1.5
JACO JACO, Garabito 7.18 122 Pn Pn 10 40 11.3 +1.8
HDC Heredia 7.47 117 Pn 10 40 15.7 +2.2
HDC Heredia 7.47 117 eP Pn 10 40 16.3 +2.8
HDC eS Sn 10 41 39.0 +1.9
HDC3 Heredia 3 7.47 117 eP Pn 10 40 15.7 +2.1
RIMA Rio Macho 7.80 118 Pn 10 40 19.9 +1.8
CDM Cerro de Muert 7.99 119 eP Pn 10 40 23.8 +2.8
BATAN Batan 8.07 114 eP Pn 10 40 24.3 +2.6
BATAN eS Sn 10 41 50.6 -1.0
PEZE Perez Zeledon, 8.15 120 eP Pn 10 40 25.0 +2.2
TLIG Tlapa 8.45 299 Pn Pn 10 40 29.0 +2.0
SRBA San Rafael, Bu 8.49 120 Pn 10 40 29.7 +2.2
DRK0 Durika 8.58 119 eP Pn 10 40 32.6 +3.8
DRK0 eS Sn 10 42 05.2 +0.8
PRVC Isla de Provid 9.22 90 Pn Pn 10 40 38.4 +1.0
CDITO Canoas 9.25 121 Pn 10 40 39.2 +1.4
BRU2 Volcan 9.29 120 Pn 10 40 40.3 +1.9
BRU2 Volcan 9.29 120⇑ eP Pn 10 40 41.6 +3.2
BRU2 eS Sn 10 42 22.8 +1.0
PTPM Petroterminale 9.45 123 eP Pn 10 40 44.9 +4.3
PTPM eS Sn 10 42 28.0 +2.4
BCIP Isla Barro Col 11.63 111 Pn Pn 10 41 10.8 +0.3
BCIP Isla Barro Col 11.63 111 eP Pn 10 41 11.8 +1.4
BCIP Isla Barro Col 11.63 111 eP Pn 10 41 11.2 +0.8
MOIG Morelia 11.64 303 Pn Pn 10 41 12.8 +2.0
SOR Soroa 11.83 38 Pn Pn 10 41 15.3 +2.2
AZU Azuero 11.85 118 eP Pn 10 41 15.7 +2.2
AZU Azuero 11.85 118 eP Pn 10 41 15.2 +1.8
MTDJ Mount Denham 13.62 68 Pn Pn 10 41 37.8 +0.1
CAPC Capurgana 14.11 109 eP Pn 10 41 42.7 -1.6
PAYG Puerto Ayora 14.14 178 Pn 10 41 46.4 +1.7
ZAIG Zacatecas 14.42 311 Pn Pn 10 41 49.7 +0.9
061Z Ochoppi 15.40 36 Pn Pn 10 42 02.0 +0.6
061Z Ochoppi 15.40 36 P P 10 42 04.2 -1.2
baz=219,SNR=6.1
KVTX Kingsville 15.41 336 Pn 10 42 03.3 +1.9
KVTX IAmb IAmb 10 42 08.0
comp=Z,188nm,1.2s
KVTX Kingsville 15.41 336 P P 10 42 06.0 +0.5
baz=153
SJCC San Jacinto, C 15.76 102 P Pn 10 42 06.3 +0.2
SJCC San Jacinto, C 15.76 102 eP P 10 42 09.6 +0.1
DBBC Dabeiba 15.79 113 eP Pn 10 42 05.8 -0.7
GTBY Guantanamo Bay 16.34 65 Pn 10 42 14.3 +0.8
GTBY IAmb IAmb 10 42 32.8
comp=Z,182nm,1.9s
CBOC Ciudad Bolivar 16.48 116 eP Pn 10 42 14.5 -1.0
735A Kenedy 16.55 338 Pn 10 42 17.2 +1.2
735A IAmb IAmb 10 42 20.6
comp=Z,223nm,1.1s
735A Kenedy 16.55 338 P P 10 42 18.5 +0.3
baz=156,SNR=16
060A Indiantown 16.62 35 Pn P 10 42 18.4 -0.6
060A Indiantown 16.62 35 P P 10 42 19.7 +0.8
baz=218,SNR=8.3
833A Chaparral WMA, 16.72 333 Pn Pn 10 42 18.7 +0.4
833A IAmb IAmb 10 42 25.0
comp=Z,147nm,0.9s
833A Chaparral WMA, 16.72 333 P P 10 42 19.5 -0.6
baz=150,SNR=90
833A Chaparral WMA, 16.72 333 P Pn 10 42 18.6 +0.4
baz=150,SNR=90
PLMC San Jos del P 16.73 120 eP Pn 10 42 19.3 +0.8
DWPF Disney Wildern 16.94 30 Pn 10 42 21.4 +0.5
DWPF Disney Wildern 16.94 30 P P 10 42 23.8 +1.4
baz=213,SNR=12
DWPF Disney Wildern 16.94 30 P Pn 10 42 21.6 +0.7
baz=213
HKT Hockley 16.96 345 P 10 42 22.6 -0.1
HKT IAmb IAmb 10 42 24.6
comp=Z,287nm,1.5s
HKT Hockley 16.96 345 P P 10 42 22.6 -0.1
baz=163
YOTC Yotoco, Valle 17.18 122 eP P 10 42 27.0 +1.6
441A DeRidder 17.26 353 P P 10 42 26.8 +0.8
441A DeRidder 17.26 353 P P 10 42 28.3 +2.3
baz=172,SNR=29
656A Willston 17.53 25 P P 10 42 29.6 +0.7
baz=208,SNR=42
553A Crawfordville 17.59 19 P P 10 42 30.1 +0.4
553A Crawfordville 17.59 19 P P 10 42 32.1 +2.5
baz=201,SNR=26
451A Vernon 17.63 15 P P 10 42 30.9 +0.8
451A Vernon 17.63 15 P P 10 42 32.7 +2.6
baz=196,SNR=12
ANIL Santa Ana 17.69 119 eP P 10 42 35.7 +4.4
CRJC Cerrejon, Guaj 17.73 96 eP Pn 10 42 29.9 -1.0
POPC Popayan, Colom 17.77 127 eP P 10 42 32.8 +0.8
342A Flagon Creek P 17.80 356 P 10 42 32.6 +0.7
342B Flagon Creek P 17.80 356 P P 10 42 33.7 +1.8
baz=175,SNR=27
346A Big Creek Wild 17.80 4 P P 10 42 35.4 +3.4
baz=184,SNR=14
344A Westbrook Farm 17.82 0 P P 10 42 33.5 +1.3
344A Westbrook Farm 17.82 0 P P 10 42 34.7 +2.5
baz=180,SNR=48
BRAL Brewton 17.88 11 P P 10 42 36.1 +3.2
baz=192,SNR=18
BRAL Brewton 17.88 11 P P 10 42 33.9 +1.0
baz=192,SNR=18
OCAC Ocana 17.99 105 P Pn 10 42 32.5 -1.7
OCAC Ocana 17.99 105 eP Pn 10 42 33.7 -0.5
OTAV Otavalo 18.04 136 P 10 42 35.5 +0.2
OTAV Otavalo 18.04 136 eP P 10 42 46.2 +11
OTAV Otavalo 18.04 136 eP Pn 10 42 27.0 -8.1
SOTA Rioblanco 18.07 128 eP P 10 42 39.5 +3.8
PCON Cinco Dias 18.12 127 eP Pn 10 42 38.5 +2.4
GCUF Volcan Galeras 18.12 131 eP Pn 10 42 38.5 +2.4
ORTC Ortega, Tolima 18.13 120 eP Pn 10 42 38.5 +2.7
MARP Paez Belalcaza 18.15 125 eP Pn 10 42 38.5 +2.2
TULM Tulcn-Chalpat 18.15 134 P Pn 10 42 37.1 +0.6
TULM IAmb IAmb 10 43 08.9
comp=Z,119nm,1.2s
TULM Tulcn-Chalpat 18.15 134 eP Pn 10 42 44.3 +7.8
435B Jarrell 18.25 341 P Pn 10 42 38.3 +1.2
435B IAmb IAmb 10 42 44.9
comp=Z,171nm,1.3s
435B Jarrell 18.25 341 P Pn 10 42 37.9 +0.9
baz=159
SPBC San Pablo de B 18.29 114 eP Pn 10 42 43.4 +5.6
ROSC El Rosal 18.45 116 LR LR 10 50 37.2
comp=Z,642nm,19.4s,baz=282,slow=40
ROSC El Rosal 18.45 116 P P 10 42 39.1 -0.5
NATX Nacogdoches 18.46 350 P Pn 10 42 40.8 +1.1
NATX IAmb IAmb 10 42 44.2
comp=Z,126nm,1.1s
NATX Nacogdoches 18.46 350 P Pn 10 42 41.2 +1.5
baz=168,SNR=8.6
NATX Nacogdoches 18.46 350 P Pn 10 42 40.8 +1.1
baz=168,SNR=8.6
URIC Uribia, Colomb 18.48 94 P Pn 10 42 40.7 +0.7
PRAC Prado 18.54 120 eP Pn 10 42 43.4 +2.6
VBMS Vicksburg 18.59 1 P Pn 10 42 43.7 +2.5
baz=181,SNR=32
VBMS Vicksburg 18.59 1 P Pn 10 42 42.7 +1.5
baz=181,SNR=32
352A Blakely 18.66 16 P Pn 10 42 43.4 +1.3
baz=198,SNR=56
JCT Junction City 18.77 335 IAmb IAmb 10 42 59.8
comp=Z,70nm,1.0s
JCT Junction City 18.77 335 P Pn 10 42 45.5 +2.0
baz=152,SNR=22
JCT Junction City 18.77 335 P Pn 10 42 44.2 +0.7
baz=152,SNR=22
250A Grady 18.82 12 P Pn 10 42 44.5 +0.5
250A Grady 18.82 12 P Pn 10 42 45.5 +1.5
baz=194,SNR=24
237A Washetta, Mont 18.93 347 IAmb IAmb 10 43 01.0
comp=Z,240nm,1.3s
237A Washetta, Mont 18.93 347 P Pn 10 42 46.7 +1.4
baz=165,SNR=16
456A Hilliard 18.93 24 IAmb IAmb 10 42 49.7
comp=Z,219nm,1.2s
TIGA Tifton 19.02 19 P Pn 10 42 46.2 -0.2
TIGA Tifton 19.02 19 P Pn 10 42 47.7 +1.4
baz=202,SNR=21
TIGA Tifton 19.02 19 P Pn 10 42 46.5 +0.1
baz=202,SNR=21
CHIC Chinagaza 19.06 116 eP Pn 10 42 48.2 +0.7
RUSC La Rusia 19.07 112 eP Pn 10 42 49.1 +1.5
146A Union 19.07 5 P Pn 10 42 48.2 +1.2
baz=185,SNR=34
143A Socs Landing, 19.08 359 P P 10 42 46.4 +0.5
143A Socs Landing, 19.08 359 P Pn 10 42 47.2 +0.2
baz=178,SNR=31
PORT Chimborazo Vol 19.12 140 P Pn 10 42 49.5 +1.1
PORT IAmb IAmb 10 42 53.8
comp=Z,164nm,1.2s
FLOC Florencia 19.16 127 eP Pn 10 42 51.1 +2.8
HPIG 19.23 316 P Pn 10 42 49.4 +0.2
WHTX Lake Whitney, 19.34 343 IAmb IAmb 10 43 03.0
comp=Z,108nm,0.8s
WHTX Lake Whitney, 19.34 343 P P 10 42 49.7 +0.9
baz=160,SNR=9.2
WHTX Lake Whitney, 19.34 343 P P 10 42 49.7 +0.9
baz=160,SNR=9.2
TXAR Lajitas Array 19.70 325 P Pn 10 42 56.0 +1.3
comp=Z,3.1nm,0.3s,baz=153,slow=12,SNR=317
TXAR PcP PcP 10 47 11.6 +0.6
comp=Z,2.5nm,0.9s,baz=165,slow=3.6,SNR=3.6
TXAR ScP ScP 10 50 46.6 +2.7
comp=Z,1.8nm,0.8s,baz=160,slow=4.0,SNR=7.2
comp=Z,37nm,0.9s
TX31 Lajitas Ar. Si 19.70 325 P Pn 10 42 56.2 +1.5
baz=140,SNR=121
TX32 Lajitas Array 19.70 325 IAmb IAmb 10 42 57.9
comp=Z,62nm,1.1s
Z41A Richland Creek 19.70 355 P P 10 42 53.8 +1.0
baz=174,SNR=14
Z41A P P 10 42 53.8 +1.0
baz=174,SNR=14
Z41A Richland Creek 19.70 355 P P 10 42 53.6 +0.7
baz=174,SNR=14
LRAL Lakeview Retre 19.71 10 P Pn 10 42 54.3 -0.4
LRAL IAmb IAmb 10 42 59.2
comp=Z,178nm,1.1s
LRAL Lakeview Retre 19.71 10 P Pn 10 42 54.4 -0.3
baz=191,SNR=56
LRAL Lakeview Retre 19.71 10 P Pn 10 42 54.1 -0.6
baz=191,SNR=56
Z47A Carrollton 19.73 7 P Pn 10 42 55.0 +0.2
baz=188,SNR=40
255A Hazlehurst 19.84 21 IAmb IAmb 10 42 59.8
comp=Z,183nm,1.1s
255A Hazlehurst 19.84 21 P Pn 10 42 56.2 +0.1
baz=204,SNR=12
152A Waverly Hall 19.84 15 P Pn 10 42 55.5 -0.7
baz=198,SNR=64
Z38A Mt. Pleasant 19.98 350 IAmb IAmb 10 43 01.9
comp=Z,118nm,1.0s
Z38A Mt. Pleasant 19.98 350 P Pn 10 42 57.2 -0.6
baz=168,SNR=15
TAMC Tame, Arauca 20.04 109 eP Pn 10 42 58.8 +0.1
154A Montrose 20.25 19 P Pn 10 43 00.9 -0.2
baz=202,SNR=19
Y45A Yeager Farm, C 20.26 3 P Pn 10 43 02.8 +1.6
baz=184,SNR=49
MACC Macarena, Meta 20.27 123 eP Pn 10 43 00.7 -0.7
Z51A Franklin 20.35 14 P P 10 43 00.2 +0.4
Z51A IAmb IAmb 10 43 07.4
comp=Z,87nm,0.8s
Z51A Franklin 20.35 14 P Pn 10 43 02.7 +0.6
baz=196
SDV Santo Domingo 20.35 101 P P 10 42 58.4 -1.9
comp=Z,9.3nm,0.5s,baz=269,slow=10,SNR=7.1
SDV LR LR 10 51 24.0
comp=Z,592nm,20.9s,baz=298,slow=39
SDV Santo Domingo 20.35 101 P P 10 43 00.6 +0.3
SDV Santo Domingo 20.35 101 eP Pn 10 43 01.7 -0.9
SDV Santo Domingo 20.35 101 eP P 10 42 51.7 -8.5
Z35A Perchaven, San 20.54 345 P P 10 43 02.7 +0.7
Z35A IAmb IAmb 10 43 21.0
comp=Z,129nm,0.9s
Z35A Perchaven, San 20.54 345 P P 10 43 02.8 +0.7
baz=162,SNR=11
Y49A Blount Mountai 20.62 11 P P 10 43 04.0 +1.2
baz=192,SNR=69
BOSC San Juan Bosco 20.62 143 IAmb IAmb 10 43 25.1
comp=Z,73nm,1.2s
ABTX Abilene, Hawle 20.62 338 IAmb IAmb 10 43 18.5
comp=Z,151nm,1.1s
ABTX Abilene, Hawle 20.62 338 P P 10 43 03.7 +0.8
baz=155,SNR=41
ABTX Abilene, Hawle 20.62 338 P P 10 43 03.1 +0.2
baz=155,SNR=41
PTGC Puerto Gaitan, 20.67 115 eP P 10 43 01.7 -1.8
SLBS Sierra La Lagu 20.70 302 P P 10 43 04.8 +1.0
SLBS IAmb IAmb 10 43 15.3
comp=Z,95nm,1.3s
PTLC Puerto Leguiza 20.72 129 eP Pn 10 43 10.3 +3.7
GOGA Godfrey 20.89 18 P P 10 43 06.8 +1.1
GOGA Godfrey 20.89 18 P P 10 43 07.1 +1.4
baz=200,SNR=68
GOGA Godfrey 20.89 18 P P 10 43 07.3 +1.6
baz=200,SNR=68
OXF Oxford 20.91 3 P P 10 43 06.8 +0.9
OXF Oxford 20.91 3 P Pn 10 43 08.0 -0.7
baz=184,SNR=67
OXF Oxford 20.91 3 P P 10 43 06.7 +0.7
baz=184,SNR=67
X40A Basin Creek Fa 20.93 355 IAmb IAmb 10 43 08.7
comp=Z,217nm,1.8s
X40A Basin Creek Fa 20.93 355 P P 10 43 07.0 +0.9
baz=174,SNR=22
X40A P P 10 43 07.0 +0.9
baz=174,SNR=22
X40A Basin Creek Fa 20.93 355 P P 10 43 06.6 +0.5
baz=174,SNR=22
MIAR Mount Ida 21.05 354 IAmb IAmb 10 43 48.8
comp=Z,106nm,1.1s
MIAR Mount Ida 21.05 354 P P 10 43 07.2 -0.3
baz=172,SNR=43
MIAR Mount Ida 21.05 354 P P 10 43 06.9 -0.6
baz=172,SNR=43
X48A Hartselle 21.10 9 IAmb IAmb 10 43 11.4
comp=Z,115nm,0.9s
X48A Hartselle 21.10 9 P P 10 43 08.6 +0.6
baz=190,SNR=64
Y52A Lilburn 21.14 16 P P 10 43 10.1 +1.7
baz=198,SNR=52
Y52A P P 10 43 10.1 +1.7
baz=198,SNR=52
LPIG La Paz 21.18 303 P P 10 43 11.9 +3.0
comp=Z,51nm,0.9s,baz=185,slow=3.2,SNR=8.2
LPIG LR LR 10 52 20.7
comp=Z,553nm,18.1s,baz=109,slow=39
comp=Z,51nm,0.9s
UALR University of 21.18 357 IAmb IAmb 10 43 43.5
comp=Z,116nm,1.1s
X37A Clayton 21.35 350 P P 10 43 12.3 +1.7
baz=168,SNR=36
HAW Hawthorne Fire 21.44 22 P P 10 43 13.5 +1.8
baz=205,SNR=25
PLAL Pickwick Lake 21.49 6 IAmb IAmb 10 43 41.4
comp=Z,105nm,0.9s
W45A Hickory Valley 21.57 4 P P 10 43 15.3 +2.3
baz=184,SNR=24
W41B Gary Mavity, V 21.57 357 IAmb IAmb 10 43 22.9
comp=Z,146nm,1.1s
W41B Gary Mavity, V 21.57 357 P P 10 43 13.3 +0.3
baz=176,SNR=15
W41B Gary Mavity, V 21.57 357 P P 10 43 13.3 +0.3
baz=176,SNR=15
X51A Calhoun 21.62 14 P P 10 43 15.4 +1.9
baz=196,SNR=18
X51A P P 10 43 15.4 +1.9
baz=196,SNR=18
W39A Magazine 21.72 353 IAmb IAmb 10 43 33.3
comp=Z,59nm,0.9s
W39A Magazine 21.72 353 P P 10 43 14.6 0.0
baz=172,SNR=19
W39A Magazine 21.72 353 P P 10 43 14.6 0.0
baz=172,SNR=19
NHSC New Hope 21.77 25 P P 10 43 16.7 +1.6
baz=209,SNR=12
NHSC New Hope 21.77 25 P P 10 43 15.3 +0.2
baz=209,SNR=12
HODGE Hodges 22.02 19 IAmb IAmb 10 43 38.1
comp=Z,53nm,1.1s
HODGE Hodges 22.02 19 P P 10 43 18.4 +0.6
baz=203,SNR=7.6
SWET Sewanee 22.03 11 IAmb IAmb 10 43 29.3
comp=Z,96nm,1.0s
W50A Signal Mountai 22.13 12 IAmb IAmb 10 43 22.8
comp=Z,80nm,0.9s
W50A Signal Mountai 22.13 12 P P 10 43 19.2 +0.1
baz=194,SNR=34
FCAR Ozark Folk Cen 22.28 357 IAmb IAmb 10 43 41.6
comp=Z,83nm,1.0s
WMOK Wichita Mounta 22.29 343 IAmb IAmb 10 43 57.7
comp=Z,122nm,1.4s
WMOK Wichita Mounta 22.29 343 P P 10 43 19.7 -1.1
baz=159,SNR=8.2
WMOK Wichita Mounta 22.29 343 P P 10 43 21.1 +0.3
baz=159,SNR=8.2
W52A Murphy 22.34 15 P P 10 43 22.6 +1.3
baz=198,SNR=15
V48A Smith Brothers 22.39 9 IAmb IAmb 10 43 52.2
comp=Z,78nm,1.0s
V48A Smith Brothers 22.39 9 P P 10 43 21.9 0.0
baz=190,SNR=16
JSC Jenkinsville 22.40 21 IAmb IAmb 10 43 30.8
comp=Z,43nm,0.9s
JSC Jenkinsville 22.40 21 P P 10 43 22.5 +0.6
baz=205
LCAR Lake Charles 22.43 359 P P 10 43 22.0 -0.2
baz=179,SNR=23
MNTX Cornudas Mount 22.46 326 P P 10 43 23.4 +0.7
baz=140,SNR=211
MNTX Cornudas Mount 22.46 326 P P 10 43 23.0 +0.4
baz=140,SNR=211
Y57A Sumter 22.48 23 IAmb IAmb 10 43 26.6
comp=Z,92nm,0.9s
BG3 Lake Jocassee 22.52 17 IAmb IAmb 10 43 43.9
comp=Z,95nm,1.1s
CASEE Lake Jocassee 22.52 17 P P 10 43 23.2 0.0
baz=200,SNR=13
CPCT Cooper Cove 22.54 14 IAmb IAmb 10 43 28.1
comp=Z,79nm,0.9s
OKCFA Oklahoma City 22.58 346 P P 10 43 23.9 +0.1
baz=163
WVT Waverly 22.65 6 P P 10 43 24.0 -0.6
WVT IAmb IAmb 10 43 34.5
comp=Z,101nm,1.1s
WVT Waverly 22.65 6 P P 10 43 24.4 -0.1
baz=188,SNR=9.9
WVT Waverly 22.65 6 P P 10 43 24.7 +0.2
baz=188
PAULI Pauline 22.70 20 P P 10 43 25.6 +0.5
PAULI IAmb IAmb 10 43 34.7
comp=Z,65nm,1.0s
PAULI Pauline 22.70 20 P P 10 43 27.6 +2.4
baz=203,SNR=9.2
TUL1 Leonard 22.71 350 IAmb IAmb 10 43 57.3
comp=Z,89nm,0.9s
TUL1 Leonard 22.71 350 P P 10 43 23.8 -1.4
baz=167,SNR=16
TUL1 Leonard 22.71 350 P P 10 43 23.8 -1.4
baz=167,SNR=16
U40A Yellville 22.79 356 IAmb IAmb 10 43 28.2
comp=Z,90nm,0.9s
U40A Yellville 22.79 356 P P 10 43 24.9 -1.1
baz=175,SNR=75
U40A P P 10 43 24.9 -1.1
baz=175,SNR=75
U40A Yellville 22.79 356 P P 10 43 24.4 -1.6
baz=175,SNR=75
HHAR Hobbs 22.81 354 IAmb IAmb 10 43 28.4
comp=Z,82nm,1.0s
HHAR Hobbs 22.81 354 P P 10 43 24.9 -1.4
baz=172
CLTN Cedars of Leba 22.81 9 IAmb IAmb 10 43 29.7
comp=Z,68nm,0.9s
BAUV El Baul 22.82 99 IAmb IAmb 10 44 27.8
comp=Z,93nm,1.4s
TKL Tuckaleechee C 22.92 15 P P 10 43 27.3 -0.1
comp=Z,115nm,1.1s,baz=188,slow=9.5,SNR=24
TKL LR LR 10 52 59.3
comp=Z,2µm,21.8s,baz=194,slow=39
TKL Tuckaleechee C 22.92 15 P P 10 43 27.3 -0.1
baz=198,SNR=53
V51A Loudon 22.92 14 P P 10 43 27.3 -0.1
baz=196,SNR=14
BIRD Birdtown, Kers 23.01 22 IAmb IAmb 10 43 49.1
comp=Z,38nm,1.0s
BIRD Birdtown, Kers 23.01 22 P P 10 43 27.6 -0.8

baz=206
MSTX Muleshoe 23.04 334 IAmb IAmb 10 43 44.2
comp=Z,73nm,1.1s
MSTX Muleshoe 23.04 334 P **P** **10 43 28.7 -0.1**
baz=149,SNR=7.9
MSTX Muleshoe 23.04 334 P **P** **10 43 26.8 -2.0**
baz=149,SNR=7.9
Y59A Loris 23.07 26 IAmb IAmb 10 43 38.7
comp=Z,100nm,1.1s
PBMO Poplar Bluff 23.14 1 P **P** **10 43 29.2 -0.4**
baz=181,SNR=23
V52A Sevierville 23.14 15 P **P** **10 43 29.9 +0.3**
baz=198,SNR=23
KMSC Kings Mountain 23.15 20 IAmb IAmb 10 43 33.0
comp=Z,49nm,0.9s
KMSC Kings Mountain 23.15 20 P **P** **10 43 29.0 -0.8**
baz=204,SNR=10
KMSC Kings Mountain 23.15 20 P **P** **10 43 29.5 -0.3**
baz=204,SNR=10
V53A Saluda 23.18 17 P **P** **10 43 31.2 +1.1**
baz=200,SNR=21
V53A P **P** **10 43 31.2 +1.1**
baz=200,SNR=21
U49A Red Boiling Sp 23.32 10 P **P** **10 43 30.6 -0.7**
baz=192
X58A Rowland 23.37 25 IAmb IAmb 10 43 42.8
comp=Z,53nm,1.0s
AMTX Amarillo 23.40 337 IAmb IAmb 10 43 48.3
comp=Z,83nm,0.9s
AMTX Amarillo 23.40 337 P **P** **10 43 32.4 +0.1**
baz=153,SNR=18
AMTX Amarillo 23.40 337 P **P** **10 43 31.0 -1.3**
baz=153
T47A Sharon Grove 23.58 7 P **P** **10 43 33.1 -0.8**
baz=189,SNR=26
W57A Gilead 23.64 23 P **P** **10 43 33.4 -1.0**
baz=207
W57A P **P** **10 43 33.4 -1.0**
baz=207
TZTN Tazewell 23.82 15 IAmb IAmb 10 43 39.4
comp=Z,73nm,0.8s
TZTN Tazewell 23.82 15 P **P** **10 43 36.4 +0.2**
baz=198,SNR=20
TZTN Tazewell 23.82 15 P **P** **10 43 35.8 -0.3**
baz=198,SNR=20
T35A Sooner Cattle 23.82 349 IAmb IAmb 10 43 37.9
comp=Z,79nm,0.9s
T35B Sooner Cattle 23.82 349 P **P** **10 43 34.8 -1.4**
baz=166,SNR=34
V55A Taylorsville 23.84 20 IAmb IAmb 10 43 49.5
comp=Z,72nm,1.1s
U32A Winter Ranch, 23.89 344 IAmb IAmb 10 44 16.9
comp=Z,56nm,0.9s
U32A Winter Ranch, 23.89 344 P **P** **10 43 37.1 +0.3**
baz=160
ATAH Atahualpa 23.98 148 P **P** **10 43 39.4 +1.1**
comp=Z,10nm,0.9s,baz=351,slow=11,SNR=4.8
ATAH LR LR 10 51 55.3
comp=Z,904nm,19.5s,baz=328,slow=34
comp=Z,10nm,0.9s
T50A Nancy 23.98 12 P **P** **10 43 36.7 -1.0**
baz=194
T50A P **P** **10 43 36.7 -1.0**
baz=194
S44A Carbondale 24.09 3 P **P** **10 43 37.9 -0.7**
baz=184,SNR=8.1
S39A Bolivar 24.15 355 P **P** **10 43 38.5 -0.7**
baz=174,SNR=151
HSIG 24.19 313 P **P** **10 43 41.0 +1.3**
HSIG IAmb IAmb 10 43 45.9
comp=Z,71nm,1.2s
U54A Nelsons Funny 24.27 18 P **P** **10 43 39.8 -0.5**
baz=202,SNR=21
U54A P **P** **10 43 39.8 -0.5**
baz=202,SNR=21
CCM Cathedral Cave 24.41 359 P **P** **10 43 41.0 -0.6**
CCM IAmb IAmb 10 44 19.5
comp=Z,143nm,1.6s
CCM Cathedral Cave 24.41 359 P **P** **10 43 41.7 +0.1**
baz=179,SNR=25
CCM Cathedral Cave 24.41 359 P **P** **10 43 42.1 +0.5**
baz=179
121A Cookes Peak, D 24.44 323 P **P** **10 43 45.0 +2.9**
baz=137,SNR=112
121A Cookes Peak, D 24.44 323 P **P** **10 43 43.9 +1.8**
baz=137,SNR=112
V58A Windy Hill, Pi 24.54 23 IAmb IAmb 10 43 45.7
comp=Z,48nm,0.9s
V58A Windy Hill, Pi 24.54 23 P **P** **10 43 42.8 0.0**
baz=208,SNR=12
V58A P **P** **10 43 42.8 0.0**
baz=208,SNR=12
CNNC Cliffs of the 24.56 26 P **P** **10 43 42.3 -0.6**
baz=212
U56A King 24.57 21 IAmb IAmb 10 43 47.2
comp=Z,67nm,1.1s
U56A King 24.57 21 P **P** **10 43 43.5 +0.5**
baz=205,SNR=7.6
U56A P **P** **10 43 43.5 +0.5**
baz=205,SNR=7.6
R40A Maddies Statio 24.68 357 P **P** **10 43 44.5 +0.5**
baz=177,SNR=38
S51A Beattyville 24.85 14 IAmb IAmb 10 44 01.6
comp=Z,74nm,0.9s
S51A Beattyville 24.85 14 P **P** **10 43 44.8 -0.7**
baz=197,SNR=14
S51A P **P** **10 43 44.8 -0.7**
baz=197,SNR=14
SLM Saint Louis 25.00 1 IAmb IAmb 10 44 09.1
comp=Z,92nm,1.1s
Y22A Socorro 25.03 327 P **P** **10 43 49.9 +2.4**
baz=140,SNR=76
Y22D IRIS PASSCAL I 25.11 327 IAmb IAmb 10 43 52.7
comp=Z,58nm,0.7s
Y22D IRIS PASSCAL I 25.11 327 P **P** **10 43 48.4 +0.2**
baz=141
R49A Shelbyville 25.16 11 IAmb IAmb 10 43 50.7
comp=Z,51nm,0.8s
R49A Shelbyville 25.16 11 P **P** **10 43 47.0 -1.3**
baz=193,SNR=11
R49A P **P** **10 43 47.0 -1.3**
baz=193,SNR=11
R50A Paris 25.31 12 IAmb IAmb 10 44 12.9
comp=Z,68nm,1.1s
R50A Paris 25.31 12 P **P** **10 43 48.8 -0.9**
baz=195,SNR=14
R50A P **P** **10 43 48.8 -0.9**
baz=195,SNR=14
BLA Blacksburg 25.34 20 IAmb IAmb 10 44 33.1
comp=Z,43nm,0.9s
BLA Blacksburg 25.34 20 P **P** **10 43 50.0 -0.1**
baz=204
BLA Blacksburg 25.34 20 P **P** **10 43 49.7 -0.3**
baz=204
T57A Hurt 25.55 22 IAmb IAmb 10 44 48.8
comp=Z,87nm,1.6s
U59A Littleton 25.55 25 IAmb IAmb 10 44 22.1
comp=Z,68nm,1.7s
ANMO Albuquerque 25.56 329 P **P** **10 43 54.6 +2.4**
comp=Z,4.8nm,0.7s,baz=147,slow=12,SNR=35
comp=Z,4.8nm,0.7s
ANMO Albuquerque 25.56 329 P **P** **10 43 53.4 +1.1**
ANMO Albuquerque 25.56 329 P **P** **10 43 52.7 +0.4**
baz=143,SNR=14
ANMO Albuquerque 25.56 329 P **P** **10 43 52.5 +0.3**
baz=143
S54A Dingess, Beckl 25.60 18 IAmb IAmb 10 44 18.6
comp=Z,25nm,0.8s
S54A Dingess, Beckl 25.60 18 P **P** **10 43 53.6 +1.1**
baz=202
S54A P **P** **10 43 53.6 +1.1**
baz=202
R32A Long Quarter, 25.74 346 IAmb IAmb 10 43 57.6
comp=Z,59nm,0.9s
R32A Long Quarter, 25.74 346 P **P** **10 43 54.2 +0.5**
baz=162,SNR=9.3
P40A Paris 25.90 358 IAmb IAmb 10 44 40.5
comp=Z,71nm,1.1s
P40A Paris 25.90 358 P **P** **10 43 54.7 -0.4**
baz=177,SNR=9.5
R53A Hurricane 25.92 16 IAmb IAmb 10 44 28.7
comp=Z,36nm,0.9s
KSU1 Kansas State U 25.96 350 IAmb IAmb 10 44 12.3
comp=Z,55nm,0.8s
KSU1 Kansas State U 25.96 350 P **P** **10 43 56.3 +0.7**
baz=167
P43A Skaggs, Pawnee 26.02 2 IAmb IAmb 10 44 19.8
comp=Z,66nm,1.0s

P38A Dawn 26.09 355 IAmb IAmb 10 44 32.2
comp=Z,38nm,1.0s
P38A Dawn 26.09 355 P **P** **10 43 57.8 +1.0**
baz=174,SNR=12
TUC Tucson 26.11 319 P **P** **10 43 58.4 +1.2**
TUC IAmb IAmb 10 44 02.9
comp=Z,28nm,0.9s
TUC Tucson 26.11 319 P **P** **10 43 58.7 +1.5**
baz=131
T59A Double "B" Far 26.18 25 IAmb IAmb 10 44 21.7
comp=Z,27nm,0.9s
T59A Double "B" Far 26.18 25 P **P** **10 43 58.0 +0.4**
baz=210
T59A P **P** **10 43 58.0 +0.4**
baz=210
Q51A Peebles 26.23 13 P **P** **10 43 56.8 -1.3**
baz=197,SNR=28
Q51A P **P** **10 43 56.8 -1.3**
baz=197,SNR=28
P48A Milroy 26.25 10 IAmb IAmb 10 44 00.3
comp=Z,54nm,0.9s
P48A Milroy 26.25 10 P **P** **10 43 57.4 -0.9**
baz=192,SNR=8.8
P48A P **P** **10 43 57.4 -0.9**
baz=192,SNR=8.8
CBKS Cedar Bluff 26.37 344 IAmb IAmb 10 44 21.6
comp=Z,39nm,0.9s
CBKS Cedar Bluff 26.37 344 P **P** **10 43 59.1 -0.3**
baz=160
R55A Marlinton 26.41 19 IAmb IAmb 10 44 43.5
comp=Z,47nm,1.1s
Q52A Bidwell 26.43 15 IAmb IAmb 10 44 47.7
comp=Z,86nm,1.1s
Q52A Bidwell 26.43 15 P **P** **10 44 00.2 +0.4**
baz=199,SNR=6.7
Q52A P **P** **10 44 00.2 +0.4**
baz=199,SNR=6.7
T25A Trinidad 26.44 335 IAmb IAmb 10 44 26.4
comp=Z,78nm,1.4s
T25A Trinidad 26.44 335 P **P** **10 44 00.8 +0.5**
baz=149
P49A Miami Univ. Ec 26.44 11 IAmb IAmb 10 44 37.0
comp=Z,60nm,1.0s
P49A Miami Univ. Ec 26.44 11 P **P** **10 43 59.0 -1.0**
baz=193,SNR=6.0
P49A Miami Univ. Ec 26.44 11 P **P** **10 44 00.8 +0.8**
baz=193,SNR=6.0
P51A Williamsport 26.73 13 IAmb IAmb 10 44 38.7
comp=Z,59nm,0.9s
Q54A Coxs Mills 26.84 17 IAmb IAmb 10 44 23.1
comp=Z,50nm,1.1s
Q54A Coxs Mills 26.84 17 P **P** **10 44 02.6 -0.9**
baz=202,SNR=8.7
Q54A P **P** **10 44 02.6 -0.9**
baz=202,SNR=8.7
R58B Mineral 26.91 23 IAmb IAmb 10 44 40.0
comp=Z,64nm,1.8s
SFIN Lafayette 26.93 6 IAmb IAmb 10 44 43.9
comp=Z,66nm,0.8s
SFIN Lafayette 26.93 6 P **P** **10 44 04.9 +0.5**
baz=188
HDIL Hopedale 26.94 3 P **P** **10 44 05.1 +0.7**
baz=183
O48B Farmland 27.07 10 P **P** **10 44 04.9 -0.8**
baz=192,SNR=5.9
O48B Farmland 27.07 10 P **P** **10 44 05.1 -0.6**
baz=192,SNR=5.9
P52A Corning 27.10 15 P **P** **10 44 05.9 0.0**
baz=199
X18A Snowflake 27.12 324 IAmb IAmb 10 44 10.3
comp=Z,20nm,0.8s
O49A Covington 27.15 11 IAmb IAmb 10 44 29.1
comp=Z,50nm,1.1s
O49A Covington 27.15 11 P **P** **10 44 07.7 +1.4**
baz=194
O49A P **P** **10 44 07.7 +1.4**
baz=194
P53A Whipple 27.15 16 IAmb IAmb 10 44 30.2
comp=Z,49nm,1.0s
214A Organ Pipe Nat 27.22 316 IAmb IAmb 10 44 11.2
comp=Z,26nm,0.8s
214A Organ Pipe Nat 27.22 316 P **P** **10 44 08.3 +1.2**
baz=127,SNR=14
TBTG Tabatinga, AM 27.24 129 *eP* **P** **10 44 08.4 +1.0**
CBN Corbin Frederi 27.32 24 P **P** **10 44 07.8 -0.1**
baz=209
SDCO Great Sand Dun 27.41 334 P **P** **10 44 09.5 +0.4**
baz=148
KSCO Kaye Shedlock' 27.42 340 IAmb IAmb 10 44 56.6
comp=Z,37nm,1.0s
KSCO Kaye Shedlock' 27.42 340 P **P** **10 44 09.2 +0.2**
baz=154
W18A Petrified Fore 27.43 325 IAmb IAmb 10 44 14.6
comp=Z,26nm,1.0s
W18A Petrified Fore 27.43 325 P **P** **10 44 09.6 +0.4**
baz=137
ACSO Alum Creek Sta 27.46 13 IAmb IAmb 10 44 11.9
comp=Z,47nm,0.8s
ACSO Alum Creek Sta 27.46 13 P **P** **10 44 08.2 -0.9**
baz=197,SNR=5.0
ACSO Alum Creek Sta 27.46 13 P **P** **10 44 08.9 -0.3**
baz=197,SNR=5.0
N47A Urbana 27.60 8 IAmb IAmb 10 44 35.5
comp=Z,49nm,0.9s
O52A Adamsville 27.62 15 IAmb IAmb 10 44 39.7
comp=Z,75nm,1.1s
MCWV Mont Chateau 27.76 18 P **P** **10 44 10.7 -1.0**
baz=203
CZSB Cruzeiro do Su 27.77 139 *eP* **P** **10 44 13.7 +1.6**
N49A Columbus Grove 27.89 11 IAmb IAmb 10 45 00.5
comp=Z,47nm,1.2s
N49A Columbus Grove 27.89 11 P **P** **10 44 13.8 +0.9**
baz=194
N49A P **P** **10 44 13.8 +0.9**
baz=194
O53A New Philadelph 27.91 16 IAmb IAmb 10 45 02.1
comp=Z,44nm,1.1s
O53A New Philadelph 27.91 16 P **P** **10 44 12.7 -0.4**
baz=200
X16A Lo Mia Camp, P 27.93 322 IAmb IAmb 10 44 17.6
comp=Z,25nm,0.8s
S22A 4UR Ranch, Cre 27.99 332 P **P** **10 44 15.3 +1.0**
baz=145,SNR=8.4
O54A Avella 28.08 17 IAmb IAmb 10 45 06.0
comp=Z,57nm,1.4s
O54A Avella 28.08 17 P **P** **10 44 15.4 +0.7**
baz=202
O54A P **P** **10 44 15.4 +0.7**
baz=202
MVCO Mesa Verde 28.36 329 P **P** **10 44 18.0 +0.6**
baz=142,SNR=10
L42A Oliver, Polo 28.37 2 IAmb IAmb 10 44 55.1
comp=Z,45nm,1.1s
L40A Anamosa 28.41 359 IAmb IAmb 10 44 58.0
comp=Z,29nm,0.8s
N53A Lisbon 28.53 16 IAmb IAmb 10 45 11.2
comp=Z,57nm,1.2s
WUAZ Wupatki 28.65 323 IAmb IAmb 10 44 24.4
comp=Z,38nm,0.9s
WUAZ Wupatki 28.65 323 P **P** **10 44 21.1 +1.1**
baz=135,SNR=39
L48A N Adams 28.84 10 IAmb IAmb 10 45 15.1
comp=Z,50nm,0.8s
NNA Nana 28.92 151 LR LR 10 53 55.8
comp=Z,486nm,21.3s,baz=348,slow=32
ISCO Idaho Springs 29.21 336 P **P** **10 44 26.6 +1.6**
baz=150
GLA Glamis 29.24 316 IAmb IAmb 10 44 29.4
comp=Z,35nm,1.1s
GLA Glamis 29.24 316 P **P** **10 44 26.4 +1.2**
baz=126
JFWS Jewell Farm 29.27 1 P **P** **10 44 27.1 +1.9**
baz=181
SSPA Standing Stone 29.27 20 P **P** **10 44 25.8 +0.5**
baz=206
SSPA Standing Stone 29.27 20 P **P** **10 44 25.8 +0.5**
PDMCI Parker Dam,Lak 29.54 318 P **P** **10 44 29.2 +1.5**
baz=129,SNR=18
YUH Yuha Desert 29.77 314 IAmb IAmb 10 44 36.3
comp=Z,35nm,1.4s
U15A North Rim 29.82 324 IAmb IAmb 10 44 34.6
comp=Z,22nm,1.0s
SWSC Sam W. Stewart 29.85 315 P **P** **10 44 32.7 +2.3**
baz=124,SNR=5.3
RMX La Rumorosa 29.85 314 IAmb IAmb 10 44 36.6
comp=Z,38nm,1.4s
IKP In-Ko-Pah, Jac 29.90 314 P **P** **10 44 33.2 +2.2**
baz=124

K50A Casco 29.98 12 IAmb IAmb 10 44 34.0
comp=Z,50nm,1.0s
BC3 Big Chuckawall 30.02 316 P **P** **10 44 34.4 +2.3**
baz=126,SNR=25
IRM Iron Mountain 30.11 317 P **P** **10 44 34.6 +1.8**
baz=127,SNR=17
M57A Sunshine Farm, 30.16 21 P **P** **10 44 33.9 +0.8**
baz=207
M57A P **P** **10 44 33.9 +0.8**
baz=207
TKX Tecate 30.20 313 IAmb IAmb 10 44 40.1
comp=Z,32nm,1.4s
MONP2 Monument Peak 30.25 314 P **P** **10 44 35.6 +1.3**
baz=124
N23A Red Feather La 30.28 337 P **P** **10 44 35.0 +0.5**
baz=150
ECSD EROS Data Cent 30.49 352 IAmb IAmb 10 45 41.6
comp=Z,17nm,0.8s
ECSD EROS Data Cent 30.49 352 P **P** **10 44 35.5 -0.5**
baz=169,SNR=5.9
ECSD EROS Data Cent 30.49 352 P **P** **10 44 35.1 -0.9**
baz=169,SNR=5.9
PKCU Pink Cliffs 30.54 325 IAmb IAmb 10 44 42.1
comp=Z,38nm,1.1s
O20A White River Ci 30.58 333 P **P** **10 44 36.8 -0.3**
baz=145
BELC Belle Mtn. Jos 30.59 316 P **P** **10 44 38.8 +1.7**
baz=126,SNR=9.9
TPFO Pinon Flats 30.67 315 P **P** **10 44 39.7 +1.8**
baz=124,SNR=8.4
PFO Pinyon Flats O 30.68 315 P **P** **10 44 40.7 +2.8**
comp=Z,11nm,0.9s,baz=120,slow=8.4,SNR=13
PFO ScP **ScP** **10 51 17.6 +2.6**
comp=Z,6.7nm,0.9s,baz=76,slow=2.0,SNR=10
PFO LR LR 10 59 08.0
comp=Z,784nm,18.4s,baz=130,slow=40
comp=Z,11nm,0.9s
PFO Pinyon Flats O 30.68 315 P **P** **10 44 39.2 +1.2**
PFO Pinyon Flats O 30.68 315 P **P** **10 44 40.1 +2.1**
baz=124,SNR=7.4
PFO Pinyon Flats O 30.68 315 P **P** **10 44 40.6 +2.7**
PFO ScP **ScP** **10 51 18.8 +3.9**
109C Camp Elliot, M 30.73 313 P **P** **10 44 39.3 +1.0**
baz=123
LCMT Little Creek M 30.77 323 P **P** **10 44 40.4 +1.6**
LCMT IAmb IAmb 10 44 43.7
comp=Z,22nm,0.8s
GMRC Granite Mounta 30.82 318 P **P** **10 44 41.2 +1.9**
baz=127,SNR=24
MTPU Mount Pierson 30.90 326 IAmb IAmb 10 44 44.9
comp=Z,31nm,0.8s
SZCU Shurtz Canyon 31.09 324 IAmb IAmb 10 44 46.2
comp=Z,30nm,0.9s
PAL Palisades 31.10 25 P **P** **10 44 42.4 +1.0**
baz=213
MURC Murrieta 31.18 314 P **P** **10 44 43.2 +1.0**
baz=124
CCUT Cedar City 31.21 324 IAmb IAmb 10 44 47.8
comp=Z,34nm,1.0s
P17A Butcher Ranch, 31.22 329 IAmb IAmb 10 44 46.6
comp=Z,17nm,0.9s
HEC Hector,Ludlow 31.30 317 P **P** **10 44 44.9 +1.5**
baz=126,SNR=9.5
BINY Binghamton 31.32 21 P **P** **10 44 43.8 +0.5**
baz=208
BBRC Big Bear Solar 31.36 316 P **P** **10 44 45.2 +1.1**
baz=125,SNR=5.3
ELS Elsinore Mount 31.37 314 P **P** **10 44 45.1 +1.1**
ELS IAmb IAmb 10 45 03.6
comp=Z,42nm,1.9s
TUQ Turquoise Moun 31.39 318 P **P** **10 44 45.6 +1.4**
baz=128
TCRU Three Creeks R 31.46 326 IAmb IAmb 10 44 49.1
comp=Z,38nm,0.8s
SPMN Marine on St. 31.62 357 IAmb IAmb 10 45 45.7
comp=Z,26nm,0.9s
SPMN Marine on St. 31.62 357 P **P** **10 44 46.0 +0.1**
baz=176,SNR=7.9
SCI2 San Clemente I 31.81 312 P **P** **10 44 49.0 +1.2**
baz=121
BFSC Mount Baldy Ra 31.85 315 P **P** **10 44 48.7 +0.4**
baz=124,SNR=7.8
GSC Goldstone, Bar 31.89 317 P **P** **10 44 49.3 +0.7**
baz=126,SNR=7.4
SHOC Shoshone, Teco 31.90 319 P **P** **10 44 50.1 +1.5**
baz=128,SNR=6.8
CIS Catalina Islan 31.93 313 P **P** **10 44 50.5 +1.6**
baz=122
FMP Fort Macarthur 32.01 314 P **P** **10 44 50.0 +0.4**
baz=122
K22A Casper 32.02 338 P **P** **10 44 50.3 +0.6**
baz=150
K22A Casper 32.02 338 P **P** **10 44 50.5 +0.8**
baz=150
PSUT Pine Spring 32.17 325 IAmb IAmb 10 44 55.7
comp=Z,24nm,0.9s
PASC Pasadena Art C 32.18 314 IAmb IAmb 10 44 57.3
comp=Z,16nm,1.0s
F36A Milaca 32.29 356 IAmb IAmb 10 46 06.3
comp=Z,19nm,1.0s
QSM Queen of Sheba 32.32 318 IAmb IAmb 10 44 57.1
comp=Z,22nm,1.1s
DECC Green Verdugo 32.33 314 P **P** **10 44 52.7 +0.4**
baz=123
GWY Greenwater Val 32.33 319 IAmb IAmb 10 44 57.3
comp=Z,23nm,1.3s
EDW2 Edwards Air Fo 32.44 316 P **P** **10 44 53.7 +0.4**
baz=124
RSSD Black Hills 32.50 342 P **P** **10 44 54.2 +0.2**
baz=156
TPNV Topopah Spring 32.54 320 IAmb IAmb 10 44 59.0
comp=Z,18nm,1.1s
TPNV Topopah Spring 32.54 320 P **P** **10 44 56.3 +2.0**
baz=129,SNR=15
LRMC Laurel Mtn Rad 32.57 317 P **P** **10 44 56.3 +1.7**
baz=125,SNR=7.6
CCAC Calif City Air 32.61 316 IAmb IAmb 10 45 03.7
comp=Z,21nm,0.8s
FURC Furnace Creek, 32.62 319 P **P** **10 44 56.9 +2.0**
baz=126,SNR=12
SNCC San Nicolas Is 32.65 312 P **P** **10 44 55.4 +0.2**
baz=120
S11A Rachel 32.67 322 IAmb IAmb 10 45 00.2
comp=Z,37nm,1.0s
SADO Sadowa 32.68 16 P **P** **10 44 53.5 -1.7**
comp=Z,5.9nm,0.3s,baz=216,slow=9.5,SNR=9.4
SADO LR LR 10 59 12.2
comp=Z,1µm,19.6s,baz=200,slow=39
comp=Z,5.9nm,0.3s
SADO Sadowa 32.68 16 IAmb IAmb 10 45 33.0
comp=Z,61nm,1.6s
MPMC Manual Prospec 32.78 318 P **P** **10 44 58.7 +2.2**
baz=126,SNR=31
OSI Osito Audit: C 32.80 315 P **P** **10 44 57.2 +0.7**
baz=123
DUG Dugway, Tooele 32.81 328 P **P** **10 44 58.0 +1.4**
baz=138,SNR=8.3
DELO Deloro Mine 32.87 18 IAmb IAmb 10 45 19.8
comp=Z,26nm,1.1s
E38A The Farm, Brul 32.96 359 IAmb IAmb 10 46 06.9
comp=Z,36nm,0.8s
E38A The Farm, Brul 32.96 359 P **P** **10 44 55.4 -2.2**
baz=179,SNR=7.5
R11A Troy Canyon, C 33.04 323 IAmb IAmb 10 45 03.7
comp=Z,23nm,1.2s
R11A Troy Canyon, C 33.04 323 P **P** **10 45 01.0 +2.3**
baz=132,SNR=29
SCZ2 Santa Cruz Isl 33.11 313 P **P** **10 45 00.5 +1.4**
baz=121
ARVC Arvin 33.15 315 P **P** **10 45 01.9 +2.5**
baz=124,SNR=8.3
ISA Isabella, Lake 33.21 316 IAmb IAmb 10 45 04.6
comp=Z,19nm,1.1s
ISA Isabella, Lake 33.21 316 P **P** **10 45 01.9 +1.8**
baz=125,SNR=7.0
GRAC Grapevine Rang 33.27 319 IAmb IAmb 10 45 05.3
comp=Z,38nm,1.1s
GRAC Grapevine Rang 33.27 319 P **P** **10 45 02.8 +2.2**
baz=128,SNR=9.6
PDAR Pinedale Array 33.30 335 P **P** **10 45 02.0 +1.0**
comp=Z,1.7nm,0.7s,baz=130,slow=9.5,SNR=10
PDAR PcP **PcP** **10 47 41.9 -0.6**
comp=Z,6.1nm,1.1s,baz=116,slow=3.4,SNR=7.4
PDAR ScP **ScP** **10 51 24.3 +0.5**
comp=Z,4.2nm,0.9s,baz=143,slow=5.2,SNR=14
PDAR LR LR 11 00 55.6
comp=Z,436nm,20.5s,baz=146,slow=40
comp=Z,1.7nm,0.7s

CWC	Cottonwood Cre	33.39	318	P	P	10 45 03.2	+1.4
	baz=126						
LCH	Last Change Ra	33.59	319	IAmb	IAmb	10 45 07.6	
	comp=Z,26nm,1.4s						
PKM	Mcpherson Peak	33.70	314	P	P	10 45 05.9	+1.4
	baz=122						
VES	Vestal, Richgr	33.72	316	P	P	10 45 06.2	+1.8
	baz=124,SNR=15						
LONY	Lake Ozonia	33.93	21	IAmb	IAmb	10 45 22.1	
	comp=Z,17nm,1.1s						
LONY	Lake Ozonia	33.93	21	P	P	10 45 06.6	+0.4
	baz=209						
SMMC	Simmler	34.05	315	P	P	10 45 09.0	+1.6
	baz=122						
MACA	Manacapuru-AM	34.22	117	eP	P	10 45 07.8	-1.2
EYMN	Ely	34.30	359	IAmb	IAmb	10 46 21.5	
	comp=Z,21nm,1.2s						
EYMN	Ely	34.30	359	P	P	10 45 06.6	-2.7
	baz=179						
EYMN	Ely	34.30	359	P	P	10 45 09.1	-0.2
	baz=179						
REDW	Red Top Meadow	34.34	334	IAmb	IAmb	10 45 34.4	
	comp=Z,17nm,0.9s						
SNOW	Snow King Moun	34.38	334	IAmb	IAmb	10 45 35.2	
	comp=Z,20nm,0.8s						
PAGB	Antelope Grade	34.45	315	IAmb	IAmb	10 45 16.2	
	comp=Z,34nm,1.1s						
ELK	Elko	34.49	326	P	P	10 45 13.2	+1.9
	comp=Z,12nm,0.7s,baz=145,slow=5.9,SNR=67						
ELK				PcP	PcP	10 47 47.0	+1.0
	comp=Z,5.3nm,1.0s,baz=137,slow=3.1,SNR=4.4						
ELK				ScP	ScP	10 51 29.2	+1.2
	comp=Z,1.8nm,0.8s,baz=45,slow=1.4,SNR=5.1						
ELK				LR	LR	11 02 31.4	
	comp=Z,503nm,18.5s,baz=149,slow=42						
	comp=Z,12nm,0.7s						
ELK	Elko	34.49	326	IAmb	IAmb	10 45 15.0	
	comp=Z,13nm,0.7s						
NV11	Mina Array Sit	34.64	321	IAmb	IAmb	10 45 17.2	
	comp=Z,36nm,0.9s						
OMMB	Old Mammoth Mi	34.68	319	IAmb	IAmb	10 45 17.5	
	comp=Z,14nm,0.9s						
NVAR	Mina Array Bea	34.73	321	P	P	10 45 16.2	+2.7
	comp=Z,63nm,0.9s,baz=134,slow=8.2,SNR=257						
NVAR				PcP	PcP	10 47 47.6	+0.9
	comp=Z,15nm,1.1s,baz=133,slow=3.6,SNR=6.1						
NVAR				ScP	ScP	10 51 31.1	+2.2
	comp=Z,2.8nm,0.6s,baz=125,slow=4.3,SNR=24						
NVAR				LR	LR	11 01 06.7	
	comp=Z,781nm,20.1s,baz=132,slow=39						
MDPB	Devils Postpil	34.74	319	IAmb	IAmb	10 45 18.0	
	comp=Z,23nm,0.9s						
B35A	Bob, Littlefor	34.79	357	IAmb	IAmb	10 45 14.1	
	comp=Z,17nm,1.1s						
AGMN	Agassiz Nation	34.90	354	IAmb	IAmb	10 46 27.5	
	comp=Z,18nm,0.8s						
AGMN	Agassiz Nation	34.90	354	P	P	10 45 12.9	-1.6
	baz=171,SNR=7.9						
AGMN	Agassiz Nation	34.90	354	P	P	10 45 14.6	+0.2
	baz=171,SNR=7.9						
RYN	Ryan	34.99	321	IAmb	IAmb	10 45 19.9	
	comp=Z,22nm,1.1s						
KVN	Kaiserville	34.99	322	IAmb	IAmb	10 45 19.7	
	comp=Z,26nm,1.1s						
PMPB	Monarch Peak	35.09	315	IAmb	IAmb	10 45 20.5	
	comp=Z,28nm,0.8s						
RLMT	Red Lodge	35.15	337	P	P	10 45 17.7	+0.7
	baz=148						
BMN	Battle Mountai	35.37	324	IAmb	IAmb	10 45 22.7	
	comp=Z,18nm,0.7s						
SAML	Samuel	35.40	128	P	P	10 45 17.4	-1.8
SAML				IAmb	IAmb	10 45 34.1	
	comp=Z,12nm,0.9s						
SAML	Samuel	35.40	128	P	P	10 45 17.4	-1.8
SAML				pP	pP	10 45 28.0	-2.4
SAML				sP	sP	10 45 32.3	-2.7
SAML				ScP	ScP	10 51 36.9	+5.5
LAO	LASA Array	35.48	342	P	P	10 45 20.4	+0.8
	baz=154						
YERR	Yerington	35.65	321	IAmb	IAmb	10 45 25.6	
	comp=Z,18nm,0.7s						
CMB	Columbia Colle	35.82	318	IAmb	IAmb	10 45 26.9	
	comp=Z,14nm,0.9s						
PNTR	Pine Nut	35.94	320	IAmb	IAmb	10 45 28.2	
	comp=Z,29nm,0.8s						
HLID	Hailey	36.12	330	P	P	10 45 26.1	+0.8
	baz=139,SNR=17						
PAHR	Pah Rah Range	36.18	321	IAmb	IAmb	10 45 29.9	
	comp=Z,17nm,0.9s						
EMB	Emerald Bay	36.18	320	IAmb	IAmb	10 45 30.6	
	comp=Z,34nm,0.9s						
VLDQ	Val d'Or	36.22	15	IAmb	IAmb	10 45 49.8	
	comp=Z,28nm,1.4s						
MPK	Martis Peak	36.33	320	IAmb	IAmb	10 45 32.3	
	comp=Z,32nm,1.0s						
BOZ	Bozeman (W)	36.48	335	P	P	10 45 29.2	+0.9
	baz=144,SNR=9.4						
ULM	Lac du Bonnet	36.83	355	P	P	10 45 28.7	-2.3
	comp=Z,12nm,0.8s,baz=171,slow=9.2,SNR=12						
ULM				ScP	ScP	10 51 34.2	-1.8
	comp=Z,5.3nm,0.8s,baz=117,slow=4.5,SNR=4.6						
ULM				LR	LR	11 04 17.2	
	comp=Z,293nm,19.6s,baz=162,slow=42						
	comp=Z,12nm,0.8s						
ULM	Lac du Bonnet	36.83	355	IAmb	IAmb	10 45 31.8	
	comp=Z,17nm,0.9s						
BEKR	Beckworth	36.87	321	IAmb	IAmb	10 45 36.5	
	comp=Z,22nm,0.9s						
LPAZ	La Paz	37.18	142	P	P	10 45 34.6	-0.5
	comp=Z,1.5nm,0.8s,baz=315,slow=4.3,SNR=6.1						
LPAZ				LR	LR	11 00 53.7	
	comp=Z,781nm,21.9s,baz=323,slow=36						
	comp=Z,1.5nm,0.8s						
LPAZ	La Paz	37.18	142	eP	P	10 45 40.2	+5.1
LPAZ	La Paz	37.18	142	P	P	10 45 34.7	-0.3
ORV	Oroville	37.40	320	IAmb	IAmb	10 45 41.3	
	comp=Z,45nm,1.8s						
WVOR	Wild Horse Val	37.50	325	IAmb	IAmb	10 45 40.8	
	comp=Z,23nm,0.9s						
MCCM	Marconi Confer	37.52	317	IAmb	IAmb	10 45 43.1	
	comp=Z,37nm,0.9s						
EGMT	Eagleton	37.80	339	P	P	10 45 39.2	-0.2
	baz=149						
PB16	IPOC Station P	38.03	146	P	P	10 45 42.3	+0.2
MSO	Missoula	38.42	334	P	P	10 45 45.0	+0.4
	baz=142,SNR=6.6						
MDP	Montagnes des	38.57	99	LR	LR	11 02 39.5	
	comp=Z,454nm,20.3s,baz=284,slow=38						
KCPM	Cahto Peak	38.81	318	IAmb	IAmb	10 45 52.6	
	comp=Z,22nm,0.9s						
PB11	IPOC Station P	39.12	147	IAmb	IAmb	10 45 53.8	
	comp=Z,28nm,1.1s						
F10A	Beach Ranch, E	39.25	331	IAmb	IAmb	10 45 54.9	
	comp=Z,24nm,1.1s						
K04D	Chiloquin, OR	39.39	323	P	P	10 45 52.6	-0.2
	baz=128						
YBH	Yreka Blue Hor	39.42	322	P	P	10 45 53.5	+0.4
	comp=Z,9.6nm,0.9s,baz=104,slow=4.7,SNR=27						
YBH				LR	LR	11 04 05.4	
	comp=Z,610nm,20.9s,baz=148,slow=39						
	comp=Z,9.6nm,0.9s						
L04D	Klamath Falls	39.46	322	P	P	10 45 54.1	+0.7
	baz=127,SNR=12						
J05D	Fort Rock, OR	39.50	324	P	P	10 45 55.1	+1.3
	baz=129,SNR=7.7						
KMPM	Mount Pierce	39.55	319	IAmb	IAmb	10 45 59.5	
	comp=Z,41nm,0.8s						
KHMM	Horse Mountain	39.56	320	IAmb	IAmb	10 45 58.5	
	comp=Z,45nm,0.8s						
PINE	Pine Mountain	39.66	325	IAmb	IAmb	10 45 58.3	
	comp=Z,25nm,0.9s						
JCC	Jacoby Creek,	39.71	319	IAmb	IAmb	10 46 00.0	
	comp=Z,53nm,0.9s						
J04D	Umpqua Nationa	39.97	324	P	P	10 45 58.3	+0.5
	baz=128,SNR=10						
HUMO	Hull Mountain	40.08	322	P	P	10 45 59.4	+0.9
L02F	Cave Junction	40.16	321	P	P	10 46 00.5	+1.4
	baz=125						
WALA	Waterton Lakes	40.19	336	P	P	10 46 00.4	+0.9
I05D	Terrebonne, OR	40.23	326	P	P	10 46 00.5	+0.7
	baz=130,SNR=6.5						
I04A	Tendick Farm,	40.49	324	P	P	10 46 02.3	+0.4
	baz=128,SNR=10						
K02D	Willamette Mer	40.56	322	P	P	10 46 03.0	+0.5
	baz=126						
G05D	Wamic, OR	40.81	327	P	P	10 46 05.9	+1.4
	baz=131,SNR=11						
MCPB	Macapa, AP	40.83	107	eP	P	10 46 07.4	+2.4
NEW	Newport	40.90	333	LR	LR	11 05 44.3	
	comp=Z,532nm,22.0s,baz=140,slow=40						
NEW	Newport	40.90	333	P	P	10 46 05.7	+0.5
	baz=139						
H04A	Detroit Lake	40.92	325	P	P	10 46 05.7	+0.3
I03D	Drain, OR	40.97	324	P	P	10 46 07.0	+1.3
	baz=127,SNR=6.9						
J01E	Myrtle Point	40.99	322	P	P	10 46 07.2	+1.3
	baz=126,SNR=12						
C09A	Chrisman Ranch	41.08	332	IAmb	IAmb	10 46 09.8	
	comp=Z,16nm,0.6s						
H04D	Lebanon	41.13	325	IAmb	IAmb	10 46 09.7	
	comp=Z,46nm,0.9s						
H04D	Lebanon	41.13	325	P	P	10 46 07.2	+0.2
	baz=129,SNR=8.2						
COR	Corvallis	41.48	325	P	P	10 46 12.1	+2.2
COR				sP	sP	10 46 27.3	+1.1
I02E	Swisshome, OR	41.50	324	P	P	10 46 11.7	+1.6
	baz=127,SNR=5.5						
SIV	San Ignacio	41.56	134	P	P	10 46 10.4	-0.6
	comp=Z,7.9nm,0.8s,baz=311,slow=8.3,SNR=34						
SIV				PcP	PcP	10 48 06.7	-1.1
	comp=Z,3.0nm,0.8s,baz=314,slow=5.7,SNR=2.4						
SIV				LR	LR	11 02 43.0	
	comp=Z,672nm,20.4s,baz=300,slow=35						
	comp=Z,7.9nm,0.8s						
G03D	McMinnville, O	41.85	325	P	P	10 46 13.1	+0.2
	baz=129,SNR=5.5						
LVC	Limon Verde	41.87	149	P	P	10 46 14.1	+0.4
	comp=Z,5.8nm,0.8s,baz=302,slow=4.4,SNR=4.9						
LVC				PcP	PcP	10 48 06.0	-3.2
	comp=Z,6.2nm,0.9s,baz=273,slow=9.7,SNR=3.7						
LVC				LR	LR	11 00 51.6	
	comp=Z,318nm,21.1s,baz=303,slow=32						
	comp=Z,5.8nm,0.8s						
LVC	Limon Verde	41.87	149	P	P	10 46 14.1	+0.4
LVC	Limon Verde	41.87	149	eP	P	10 46 21.7	+8.0
LVC	Limon Verde	41.87	149	P	P	10 46 14.1	+0.4
LVC				x	x	10 46 34.4	
B08A	Colville Reser	41.97	332	P	P	10 46 13.8	-0.2
PDRB	Porto dos Gac	42.06	125	eP	P	10 46 15.5	+0.4
F04D	Rainier, OR	42.26	327	P	P	10 46 16.5	+0.2
	baz=130						
D05A	Enumclaw	42.45	328	IAmb	IAmb	10 46 57.8	
	comp=Z,29nm,1.3s						
D04E	Lakebay	42.84	328	P	P	10 46 21.2	+0.2
	baz=131						
E03A	Lebam	42.85	327	IAmb	IAmb	10 46 24.1	
	comp=Z,35nm,0.8s						
D03D	Eldon	43.24	328	P	P	10 46 24.5	+0.3
	baz=131						
EDM	Edmonton	43.43	340	IAmb	IAmb	10 46 27.9	
	comp=Z,24nm,0.8s						
FCC	Fort Churchill	45.20	358	P	P	10 46 37.9	-1.8
PRPB	Parauapebas	45.20	113	eP	P	10 46 43.8	+3.4
SCHQ	Schefferville	45.26	19	P	P	10 46 37.3	-3.0
	comp=Z,14nm,0.5s,baz=226,slow=5.8,SNR=20						
SCHQ				LR	LR	11 06 20.6	
	comp=Z,836nm,20.2s,baz=220,slow=37						
	comp=Z,14nm,0.5s						
SCHQ	Schefferville	45.26	19	IAmb	IAmb	10 46 42.0	
	comp=Z,44nm,1.1s						
AC02	Maricunga	45.35	152	IAmb	IAmb	10 46 43.2	
	comp=Z,19nm,1.1s						
LCO	Las Campanas	46.57	155	P	P	10 46 51.1	-0.1
LCO				IAmb	IAmb	10 46 54.1	
	comp=Z,26nm,1.2s						
LCO	Las Campanas	46.57	155	P	P	10 46 50.8	-0.4
LCO				pP	pP	10 47 02.2	-0.4
LCO				x	x	10 47 11.4	
SNDB	Serra Nova Dou	46.70	121	eP	P	10 46 55.3	+3.1
TLCB	Telegraph Cove	47.06	329	IAmb	IAmb	10 46 58.2	
	comp=Z,26nm,1.1s						
PP1B	Ponte de Pedra	47.09	130	eP	P	10 47 01.1	+6.0
H03N2	Juan Fernandez	48.08	167	T	T	11 39 00.2	
	baz=347,slow=77,SNR=11						
H03N1	Juan Fernandez	48.09	167	T	T	11 39 00.0	
	baz=347,slow=77,SNR=18						
H03N3	Juan Fernandez	48.10	167	T	T	11 39 00.5	
	baz=347,slow=77,SNR=18						
BBB	Bella Bella	48.71	330	LR	LR	11 09 29.5	
	comp=Z,275nm,21.8s,baz=146,slow=38						
LMEL	Las Melosas	51.07	158	IAmb	IAmb	10 47 28.7	
	comp=Z,21nm,1.2s						
BO01	Tunca	51.24	159	IAmb	IAmb	10 47 42.5	
	comp=Z,35nm,1.4s						
CPUP	Villa Florida	51.32	141	P	P	10 47 26.0	-1.3
	comp=Z,5.1nm,0.9s,baz=340,slow=13,SNR=4.4						
CPUP				LR	LR	11 10 43.8	
	comp=Z,314nm,18.5s,baz=360,slow=38						
	comp=Z,5.1nm,0.9s						
CPUP	Villa Florida	51.32	141	IAmb	IAmb	10 47 26.5	
	comp=Z,14nm,1.1s						
BDFB	Brasilia	51.33	123	LR	LR	11 09 08.9	
	comp=Z,314nm,21.4s,baz=307,slow=36						
GO05	Huala	51.52	160	P	P	10 47 28.3	-0.4
GO05				IAmb	IAmb	10 47 29.2	
	comp=Z,34nm,1.1s						
YKA	Yellowknife Ar	51.73	346	P	P	10 47 28.4	-1.5
	comp=Z,6.5nm,0.9s,baz=146,slow=7.7,SNR=23						
YKA				PcP	PcP	10 48 41.9	-0.9
	comp=Z,2.0nm,0.8s,baz=149,slow=3.9,SNR=4.6						
YKA				ScP	ScP	10 52 33.7	-2.7
	comp=Z,0.7nm,0.6s,baz=147,slow=4.5,SNR=4.8						
YKA				LR	LR	11 11 36.2	
	comp=Z,257nm,21.8s,baz=145,slow=39						
	comp=Z,6.5nm,0.9s						
YKA	Yellowknife Ar	51.73	346	P	P	10 47 30.2	+0.3
TRCB	Terra Rica	52.01	134	eP	P	10 47 39.6	+7.0
ML02	Panimavida	52.37	160	P	P	10 47 34.7	-0.4
FRB	Frobisher Bay	52.51	12	LR	LR	11 11 03.3	
	comp=Z,928nm,19.4s,baz=208,slow=38						
DLBC	Dease Lake	53.53	336	LR	LR	11 13 27.2	
	comp=Z,316nm,19.9s,baz=124,slow=39						
DLBC	Dease Lake	53.53	336	P	P	10 47 44.0	+0.7
DLBC	Dease Lake	53.53	336	P	P	10 47 43.4	0.0
	baz=130						
TAOE	Nuku Hiva Isla	53.77	248	eLR	LR	11 02 31.4	
	comp=Z,621nm,27.0s						
TAOE	Nuku Hiva Isla	53.77	248	eT	T	11 45 18.9	
	comp=Z,47nm,0.2s						
JANB	Januaria	54.10	120	eP	P	10 47 52.7	+4.5
WRGLY	Wrigley	54.66	343	P	P	10 47 51.8	+0.4
	baz=140						
SIT	Sitka	54.97	332	P	P	10 47 54.4	+0.6
	baz=124						
NBMA	Muni-CE	55.72	109	eP	P	10 48 06.3	+6.4
NBPN	Ponto Novo - B	55.78	113	eP	P	10 47 58.6	-1.7
MMPY	Sheldon Lake,	56.72	339	P	P	10 48 06.7	+0.4
	baz=131						
PLCA	Paso Flores	57.19	162	P	P	10 48 09.6	-0.4
	comp=Z,6.6nm,1.1s,baz=332,slow=8.9,SNR=8.8						
PLCA				LR	LR	11 07 09.3	
	comp=Z,340nm,21.2s,baz=8.0,slow=30						
	comp=Z,6.6nm,1.1s						
PLCA	Paso Flores	57.19	162	P	P	10 48 09.5	-0.4
PLCA				IAmb	IAmb	10 48 10.8	
	comp=Z,25nm,1.4s						
PLCA	Paso Flores	57.19	162	P	P	10 48 10.1	+0.2
PLCA				pP	pP	10 48 21.5	-0.1
FARO	Faro, Yukon	57.22	338	P	P	10 48 10.5	+0.7
	baz=129						
O30N	Mendenhall	57.40	336	P	P	10 48 11.4	+0.3
	baz=125						
GDU01	Guandu, BA	57.55	116	eP	P	10 48 18.2	+5.3
M31M	Drury Creek, Y	57.59	338	P	P	10 48 12.8	+0.4
	baz=128						
N31M	Braeburn, Yuko	57.69	336	P	P	10 48 12.6	-0.6
	baz=126						
RCBR	Riachuelo	57.84	106	LR	LR	11 15 00.8	
	comp=Z,241nm,18.8s,baz=82,slow=38						
HYT	Haines Junctio	58.00	335	P	P	10 48 15.4	0.0
	baz=124						
NBLA	Lagarto - SE	58.00	112	eP	P	10 48 22.8	+6.7
PNL	Peninsula	58.18	333	P	P	10 48 17.3	+0.6
	baz=121						
N30M	Aishikik Lake	58.19	336	P	P	10 48 16.7	0.0
	baz=124						
CMC01	Camacan, BA	58.33	118	eP	P	10 48 25.0	+6.7
YUK6	Outpost Mounta	58.42	335	P	P	10 48 18.8	+0.3
	baz=123						
M30M	Minto, Yukon	58.71	337	P	P	10 48 20.9	+0.6
	baz=125						
PINM	Pinnacle	58.77	334	P	P	10 48 20.5	-0.2
	baz=120						
NBAN	Anadia - AL	58.86	110	eP	P	10 48 34.6	+12
YUK8	Steele Glacier	59.17	335	P	P	10 48 23.5	-0.4
	baz=121						
SFJD	Kangerlussuaq	59.61	17	LR	LR	11 15 09.2	
	comp=Z,680nm,18.5s,baz=228,slow=37						
CTG	Chitna Glacier	59.67	334	P	P	10 48 27.0	-0.1
	baz=120						
YUK3	Moose Creek	59.72	335	P	P	10 48 27.4	-0.1
	baz=121						
GRNC	Granite Creek	59.73	334	IAmb	IAmb	10 49 17.5	
	comp=Z,9.3nm,1.0s						
BVCY	Beaver Creek	60.21	336	P	P	10 48 30.6	0.0
	baz=121						
DAWY	Dawson	60.52	338	P	P	10 48 32.4	-0.3
	baz=123						
M27K	Edge Creek, AK	60.59	335	P	P	10 48 32.7	-0.7
	baz=120						
MCARA	McCarthy VSAT	60.59	334	P	P	10 48 33.2	0.0
	baz=118						
I29M	Ogilvie Camp,	60.86	339	P	P	10 48 35.0	0.0
	baz=125						
L27K	Beaver Creek,	60.92	336	P	P	10 48 34.3	-1.1
	baz=120,SNR=5.5						
EPYK	Eagle Plains	60.93	341	P	P	10 48 34.5	-0.9
	baz=127						
M26K	Nabesna, AK	61.06	335	P	P	10 48 36.2	-0.2
	baz=119						
BMRM	Bremner River	61.08	333	IAmb	IAmb	10 48 43.5	
	comp=Z,4.4nm,0.7s						
BMRM	Bremner River	61.08	333	P	P	10 48 36.7	+0.1
	baz=116						
RES	Resolute Bay	61.17	359	P	P	10 48 34.0	-2.9
	comp=Z,5.4nm,0.9s,baz=175,slow=10,SNR=10						
RES				LR	LR	11 17 08.9	
	comp=Z,431nm,21.9s,baz=162,slow=38						
	comp=Z,5.4nm,0.9s						
INK	Inuvik	61.19	343	P	P	10 48 35.9	-1.2
	comp=Z,5.9nm,0.8s,baz=102,slow=4.1,SNR=9.8						
INK				LR	LR	11 18 56.0	
	comp=Z,446nm,21.1s,baz=148,slow=40						
	comp=Z,5.9nm,0.8s						
INK	Inuvik	61.19	343	P	P	10 48 36.4	-0.7
	baz=131,SNR=5.8						
N25K	Chitina, Valde	61.36	334	P	P	10 48 38.2	-0.3
	baz=117,SNR=6.0						
EYAK	Cordova Ski Ar	61.40	333	IAmb	IAmb	10 48 51.0	
	comp=Z,18nm,1.3s						
EYAK	Cordova Ski Ar	61.40	333	P	P	10 48 39.2	+0.5
	baz=115						
K27K	Chicken	61.51	337	P	P	10 48 39.5	+0.2
	baz=120						
L26K	Log Cabin Wild	61.51	336	P	P	10 48 38.9	-0.6
	baz=119						
FID	Port Fidalgo	61.81	333	IAmb	IAmb	10 49 58.1	
	comp=Z,12nm,1.2s						
KLU	Klutina	61.88	334	IAmb	IAmb	10 49 27.5	
	comp=Z,9.9nm,1.0s						
KLU	Klutina	61.88	334	P	P	10 48 42.0	-0.1
	baz=115						
A36M	Sachs Harbour	61.91	349	IAmb	IAmb	10 49 06.7	
	comp=Z,14nm,1.1s						
A36M	Sachs Harbour	61.91	349	P	P	10 48 41.0	-0.9
	baz=141						
HARP	HAARP	61.95	335	P	P	10 48 41.3	-1.1
	baz=116						
SCRK	Sand Creek	62.21	336	P	P	10 48 44.4	+0.1
	baz=118						
M24K	Tolsona, Glenn	62.25	334	P	P	10 48 44.4	-0.1
	baz=115						
J26L	Joseph Creek	62.30	337	P	P	10 48 44.6	-0.3
	baz=119						
PAX	Paxson	62.34	335	P	P	10 48 44.6	-0.5
	baz=116						
RIDG	Independent Ri	62.44	336	P	P	10 48 45.2	-0.5
	baz=117						
SCM	Sheep Creek Mo	62.63	334	IAmb	IAmb	10 49 25.2	
	comp=Z,12nm,1.2s						
SCM	Sheep Creek Mo	62.63	334	P	P	10 48 46.9	-0.2
	baz=114						
M23K	Glacier View	62.79	333	P	P	10 48 47.3	-0.7
	baz=114						
K24K	Donnelly Dome	62.84	336	P	P	10 48 48.2	-0.1
	baz=116						
KNK	Knik Glacier	62.96	333	P	P	10 48 48.7	-0.5
	baz=113						
J25K	Salcha River,	63.05	337	P	P	10 48 50.1	+0.4
	baz=117						
SML	Sawmill	63.06	333	IAmb	IAmb	10 49 17.6	
	comp=Z,12nm,1.0s						
SML	Sawmill	63.06	333	P	P	10 48 50.6	+0.7
	baz=113						
WAT6	Susitna Watana	63.12	334	P	P	10 48 49.4	-1.0
	baz=114,SNR=5.8						
DHY	Denali Highway	63.17	335	P	P	10 48 50.9	+0.2
	baz=115						
PMOR	Pomariorio Ree	63.18	245	eT	T	11 57 18.6	
	comp=Z,4.5nm,0.2s						
GHO	Glory Hole Cre	63.31	333	IAmb	IAmb	10 48 54.6	
	comp=Z,15nm,0.8s						
PMR	Palmer	63.33	333	P	P	10 48 51.9	+0.4
	baz=112						
BRSE	Bradley Lake S	63.40	331	P	P	10 48 52.3	+0.1
	baz=110						
RC01	Rabbit Creek A	63.41	332	P	P	10 48 52.9	+0.8
	baz=111						
BRLK	Bradley Lake	63.48	331	IAmb	IAmb	10 48 55.9	
	comp=Z,18nm,0.9s						
HDA	Harding Lake	63.56	336	P	P	10 48 53.1	0.0
	baz=116						
KDAK	Kodiak Island	63.69	328	LR	LR	11 18 02.4	
	comp=Z,302nm,19.6s,baz=90,slow=37						
KDAK	Kodiak Island	63.69	328	P	P	10 48 54.8	+0.7
	baz=107						
KDAK	Kodiak Island	63.69	328	P	P	10 48 54.4	+0.4
KDAK				pP	pP	10 49 04.4	-1.7
ILAR	Eielson Array	63.70	337	P	P	10 48 53.2	-0.8
	comp=Z,5.6nm,1.0s,baz=138,slow=4.6,SNR=16						
ILAR				LR	LR	11 18 52.6	
	comp=Z,371nm,21.2s,baz=98,slow=38						
	comp=Z,5.6nm,1.0s						
HOM	Homer	63.81	330	P	P	10 48 55.2	+0.4
	baz=109						
Q20K	Shuyak Island	63.84	329	P	P	10 48 55.6	+0.6
	baz=108						
OHAK	Old Harbor	63.90	328	P	P	10 48 54.9	-0.4
	baz=106						
RND	Reindeer	63.91	335	IAmb	IAmb	10 49 45.2	
	comp=Z,23nm,1.4s						
POKR	Poker Plat Res	64.06	337	P	P	10 48 54.8	-1.6
	baz=116						
MCK	McKinley	64.08	335	P	P	10 48 54.9	-1.6
	baz=113						
COLA	College	64.12	337	P	P	10 48 57.0	+0.3
	baz=115						
TCOL	CIGO, UAF Yank	64.12	337	P	P	10 48 56.4	-0.3
	baz=115						
ICESG	Greenland

N19K	**Bonanza Creek**	**65.51**	**331**	P	**P**	**10 49 05.7**	**-0.3**
N19K				IAmb	IAmb	10 49 08.2	
	comp=Z,14nm,1.0s						
N19K	**Bonanza Creek**	**65.51**	**331**	P	**P**	**10 49 05.1**	**-0.9**
	baz=107,SNR=7.4						
O18K	**Koktuh Hills**	**65.59**	**330**	IAmb	IAmb	10 49 08.6	
	comp=Z,11nm,0.8s						
O18K	**Koktuh Hills**	**65.59**	**330**	P	**P**	**10 49 05.3**	**-1.2**
	baz=106						
PPT	**Papeete**	**65.69**	**243**	LR	LR	11 09 20.9	
	comp=Z,552nm,20.8s,baz=100,slow=28						
PPT2	**Papeete2**	**65.70**	**243**	*e*LR	LR	11 08 05.5	
	comp=Z,801nm,26.0s						
L20K	**Farewell, AK**	**65.74**	**333**	P	**P**	**10 49 06.3**	**-1.0**
	baz=108,SNR=15						
M19K	**Big River Lodg**	**65.79**	**332**	P	**P**	**10 49 06.4**	**-1.2**
	baz=107						
I21K	**Tanana**	**65.85**	**336**	P	**P**	**10 49 07.0**	**-0.9**
	baz=111						
COLD	**Coldfoot**	**65.96**	**338**	P	**P**	**10 49 07.7**	**-1.0**
	baz=114						
P17K	**Kvichak River**	**66.03**	**329**	P	**P**	**10 49 08.4**	**-0.8**
	baz=104						
L19K	**White Mountain**	**66.08**	**333**	P	**P**	**10 49 10.0**	**+0.4**
L19K	**White Mountain**	**66.08**	**333**	P	**P**	**10 49 08.7**	**-0.8**
	baz=107						
K20K	**Telida**	**66.09**	**334**	P	**P**	**10 49 08.7**	**-0.9**
	baz=108						
N18K	**Kilae Creek**	**66.14**	**331**	P	**P**	**10 49 10.3**	**+0.3**
N18K	**Kilae Creek**	**66.14**	**331**	P	**P**	**10 49 09.5**	**-0.5**
	baz=105,SNR=5.0						
TOLK	**Toolik Lake Re**	**66.33**	**340**	P	**P**	**10 49 10.2**	**-0.9**
	baz=115						
H21K	**Melozitna Rive**	**66.34**	**336**	P	**P**	**10 49 09.6**	**-1.5**
	baz=110						
SUMG	**Summit**	**66.37**	**15**	*i* P	**P**	**10 49 11.5**	**-0.2**
SUMG				IAmb	IAmb	10 49 12.9	
	comp=Z,2.6nm,1.1s						
J20K	**Nowinta River**	**66.39**	**335**	P	**P**	**10 49 10.6**	**-0.9**
J20K	**Nowinta River**	**66.39**	**335**	P	**P**	**10 49 10.5**	**-0.9**
	baz=108						
EUNU	**Eureka**	**66.56**	**1**	P	**P**	**10 49 10.8**	**-1.6**
EUNU				IAmb	IAmb	10 49 42.5	
	comp=Z,21nm,1.3s						
P16K	**Nushagak River**	**66.77**	**329**	P	**P**	**10 49 12.8**	**-1.1**
	baz=103						
TTA	**Tatalina**	**66.81**	**333**	P	**P**	**10 49 13.5**	**-0.8**
	baz=106						
IMAR	**Indian Mountai**	**66.82**	**337**	P	**P**	**10 49 13.2**	**-1.0**
O16K	**Kokwok River B**	**66.94**	**329**	P	**P**	**10 49 15.1**	**+0.1**
	baz=103						
SDPT	**Sand Point**	**67.40**	**325**	P	**P**	**10 49 17.8**	**-0.2**
	baz=99						
N16K	**Nishlik Lake**	**67.47**	**330**	P	**P**	**10 49 18.3**	**-0.1**
	baz=103,SNR=7.0						
TBI	**Tubuai**	**68.06**	**238**	*e*LR	LR	11 09 10.0	
	comp=Z,538nm,27.5s						
TBI	**Tubuai**	**68.06**	**238**	*e*T	T	12 03 15.7	
	comp=Z,7.6nm,0.2s						
FALS	**False Pass**	**69.01**	**324**	P	**P**	**10 49 28.2**	**+0.1**
	baz=96						
MG03	**Isla Dawson**	**69.35**	**167**	P	**P**	**10 49 30.1**	**+0.1**
SCO	**Scoresbysund**	**70.31**	**19**	*i* P	P	10 49 41.0	+5.2
USHA	**Ushuaia**	**70.71**	**166**	LR	LR	11 16 07.5	
	comp=Z,286nm,19.3s,baz=200,slow=32						
UNV	**Unalaska Valle**	**70.72**	**323**	P	**P**	**10 49 39.2**	**+0.6**
UNV	**Unalaska Valle**	**70.72**	**323**	P	**P**	**10 49 39.0**	**+0.4**
	baz=93,SNR=9.5						
NIKH	**Nikolski High**	**72.09**	**322**	P	**P**	**10 49 46.0**	**-0.9**
	baz=91						
DAG	**Danmarks Havn**	**72.84**	**13**	*i* P	**P**	**10 49 47.9**	**-3.1**
DAG				IAmb	IAmb	10 49 51.3	
	comp=Z,2.5nm,0.5s						
DAG	**Danmarks Havn**	**72.84**	**13**	*i* P	**P**	**10 49 47.0**	**-4.0**
JMIC	**Jan Mayen**	**74.79**	**20**	LR	LR	11 24 11.2	
	comp=Z,159nm,20.2s,baz=256,slow=37						
RAR	**Rarotonga**	**75.97**	**244**	LR	LR	11 14 20.1	
	comp=Z,192nm,21.8s,baz=263,slow=28						
EKA	**Eskdalemuir Ar**	**77.67**	**36**	LR	LR	11 23 11.0	
	comp=Z,142nm,19.2s,baz=346,slow=35						
ESDC	**Sonseca Array**	**79.11**	**52**	P	**P**	**10 50 24.8**	**-2.8**
	comp=Z,0.8nm,0.9s,baz=294,slow=5.8,SNR=5.0						
ESDC				LR	LR	11 21 27.0	
	comp=Z,98nm,19.4s,baz=288,slow=33						
	comp=Z,0.8nm,0.9s						
MDT	**Midelt**	**79.67**	**59**	LR	LR	11 19 43.6	
	comp=Z,115nm,21.3s,baz=324,slow=31						
SPITS	**Spitsbergen Ar**	**80.30**	**12**	LR	LR	11 27 57.3	
	comp=Z,377nm,19.8s,baz=248,slow=37						
BILL	**Bilibino**	**82.30**	**338**	P	**P**	**10 50 43.3**	**-0.6**
BILL				IAmb	IAmb	10 50 46.2	
	comp=Z,14nm,1.1s						
SHEM	**Shemya Is, Ala**	**82.38**	**322**	LR	LR	11 25 41.3	
	comp=Z,56nm,21.0s,baz=1.5,slow=34						
SMY	**Shemya**	**82.38**	**322**	P	**P**	**10 50 43.5**	**-1.1**
SMAI	**San Martin Ant**	**83.24**	**171**	P	**P**	**10 50 48.8**	**+0.2**
SMAI				IAmb	IAmb	10 50 50.0	
	comp=Z,30nm,1.4s						
NOA	**NORSAR Array B**	**84.00**	**29**	LR	LR	11 25 49.6	
	comp=Z,143nm,21.6s,baz=290,slow=34						
AFI	**Afiamalu**	**84.65**	**254**	LR	LR	11 20 57.5	
	comp=Z,123nm,18.1s,baz=114,slow=30						
HFS	**Hagfors**	**85.45**	**29**	LR	LR	11 28 42.8	
	comp=Z,128nm,19.9s,baz=298,slow=36						
ARCES	**ARCESS Array B**	**86.21**	**18**	LR	LR	11 29 47.1	
	comp=Z,183nm,20.2s,baz=312,slow=36						
DAVOX	**Davos/Dischmat**	**87.44**	**43**	LR	LR	11 24 46.7	
	comp=Z,133nm,21.8s,baz=265,slow=32						
CLL	**Collm**	**87.99**	**38**	*e*P	**P**	**10 51 13.0**	**+0.3**
CLL				*es*P	**sP**	**10 51 29.0**	**-0.7**
CLL				LmV		11 31 00.0	
	comp=Z,100nm,21.5s						
GERES	**GERESS Array B**	**89.23**	**40**	P	**P**	**10 51 17.3**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=319,slow=3.9,SNR=1.9						
GERES				LR	LR	11 26 56.1	
	comp=Z,173nm,21.6s,baz=273,slow=33						
	comp=Z,0.2nm,0.3s						
TORD	**Torodi Ar. Bea**	**89.39**	**77**	P	**P**	**10 51 16.1**	**-4.0**
	comp=Z,0.7nm,0.8s,baz=280,slow=5.0,SNR=2.3						
	comp=Z,0.7nm,0.8s						
FINES	**FINESS Array B**	**90.43**	**25**	LR	LR	11 32 23.4	
	comp=Z,180nm,19.8s,baz=26,slow=36						
VRAC	**Vranov**	**90.84**	**39**	LR	LR	11 26 43.1	
	comp=Z,143nm,21.8s,baz=286,slow=32						
TIXI	**Tiksi**	**90.93**	**348**	LR	LR	11 37 54.0	
	comp=Z,140nm,19.1s,baz=359,slow=39						
PETK	**Petropavlovsk-**	**91.65**	**326**	P	**P**	**10 51 29.1**	**-0.8**
	comp=Z,7.5nm,1.0s,baz=56,slow=13,SNR=7.0						
	comp=Z,7.5nm,1.0s						
PETK	**Petropavlovsk-**	**91.65**	**326**	P	**P**	**10 51 30.7**	**+0.8**
VAE	**Valguarnera**	**93.58**	**50**	LR	LR	11 29 41.0	
	comp=Z,136nm,19.5s,baz=319,slow=33						
MSVF	**Nonsavu**	**95.07**	**253**	LR	LR	11 24 32.4	
	comp=Z,181nm,21.8s,baz=57,slow=29						
NRIK	**Noril'sk**	**97.32**	**1**	LR	LR	11 39 01.8	
	comp=Z,306nm,19.7s,baz=23,slow=38						
MLR	**Muntele Rosu**	**98.21**	**39**	LR	LR	11 33 15.3	
	comp=Z,66nm,18.9s,baz=318,slow=34						
YAK	**Yakutsk**	**98.24**	**342**	LR	LR	11 43 32.4	
	comp=Z,92nm,19.8s,baz=80,slow=40						
OBN	**Obninsk**	**98.57**	**27**	LR	LR	11 37 53.4	
	comp=Z,29nm,19.2s,baz=270,slow=36						
SONM	**Songino Array**	**115.99**	**347**	PKP	**PKPdf**	**10 57 07.4**	**-0.2**
	comp=Z,1.8nm,1.0s,baz=90,slow=1.5,SNR=6.1						
KSRS	**Korea Array**	**117.55**	**326**	PKP	**PKPdf**	**10 57 08.6**	**-0.3**
	comp=Z,2.1nm,0.7s,baz=14,slow=1.1,SNR=14						
KSAR	**Wonju Array Be**	**117.58**	**326**	PKPdf	**PKPdf**	**10 57 08.5**	**-0.4**
BOSA	**Boshof**	**119.14**	**115**	PKP	**PKPdf**	**10 57 11.6**	**-0.6**
	comp=Z,4.1nm,0.9s,baz=295,slow=2.7,SNR=7.2						
BOSA	**Boshof**	**119.14**	**115**		**PKPdf**	**10 57 11.4**	**-0.9**
MKAR	**Makanchi Array**	**119.62**	**5**	PKP	**PKPdf**	**10 57 10.9**	**-1.7**
	comp=Z,0.7nm,0.7s,baz=348,slow=3.0,SNR=8.3						
MKAR	**Makanchi Array**	**119.62**	**5**		**PKPdf**	**10 57 10.7**	**-1.9**
MATP	**Matopo**	**121.85**	**106**	PKP	**PKPdf**	**10 57 16.9**	**-0.8**
	comp=Z,4.2nm,0.8s,baz=257,slow=1.5,SNR=8.1						
HHC	**Hu-ho-hao-te**	**122.03**	**340**	*e*PKP	**PKiKP**	**10 57 19.8**	**+2.1**
WMQ	**Urumqi**	**122.90**	**1**	*e*PKP	**PKiKP**	**10 57 19.6**	**+0.3**
WMQ				LR	LR		
	comp=Z,380nm,20.7s						
WMQ				LR	LR		
	comp=Z,220nm,20.7s						
GTA	**Gaotai**	**126.39**	**350**	*e*PKP	**PKiKP**	**10 57 26.4**	**0.0**
GTA				LR	LR		
	comp=Z,190nm,20.7s						
GTA				LR	LR		
	comp=Z,210nm,20.7s						
GTA				LR	LR		
	comp=Z,190nm,21.1s						
COEN	**Coen**	**127.63**	**263**		**PKiKP**	**10 57 29.1**	**-0.2**
XAN	**Xi'an**	**129.07**	**339**	PKP	**PKPdf**	**10 57 31.0**	**-0.1**
XAN				LR	LR		
	comp=Z,220nm,17.2s						
XAN				LR	LR		
	comp=Z,180nm,20.6s						
XAN				LR	LR		
	comp=Z,420nm,19.8s						
WB2	**Warramunga Arr**	**136.36**	**255**		**PKPdf**	**10 57 45.1**	**0.0**
WRAB	**Tennant Creek**	**136.36**	**255**		**PKPdf**	**10 57 45.2**	**+0.1**
WRA	**Warramunga Arr**	**136.37**	**255**	PKP	**PKPdf**	**10 57 44.9**	**-0.3**
	comp=Z,3.6nm,0.9s,baz=91,slow=1.8,SNR=16						
WRA				SKPab	**SKPab**	**11 01 21.0**	**+1.0**
	comp=Z,2.1nm,0.7s,baz=89,slow=3.4,SNR=15						
WRA	**Warramunga Arr**	**136.37**	**255**		**PKPdf**	**10 57 45.1**	**0.0**
ASAR	**Alice Springs**	**136.57**	**250**	PKhKP	PKPpre	10 57 40.8	
	comp=Z,0.9nm,0.9s,baz=109,slow=3.9,SNR=2.5						
ASAR				PKP	**PKPdf**	**10 57 45.8**	**+0.3**
	comp=Z,1.2nm,0.8s,baz=90,slow=2.3,SNR=6.4						
ASAR				SKPab	**SKPab**	**11 01 22.9**	**+2.1**
	comp=Z,2.2nm,0.9s,baz=97,slow=2.6,SNR=7.0						
GYA	**Guiyang**	**136.75**	**337**	*i* PKP	**PKiKP**	**10 57 47.0**	**-0.6**
PZH	**PanZhiHua**	**138.35**	**343**	PKP	**PKPdf**	**10 57 49.0**	**+0.2**
CHTO	**Chiang Mai**	**146.43**	**343**	PKPdf	**PKPdf**	**10 58 02.7**	**-0.5**
CM31	**Chiang Mai Arr**	**146.77**	**343**		**PKPbc**	**10 58 04.5**	**-0.9**
CMAR	**Chiang Mai Arr**	**146.77**	**343**	PKPbc	**PKPbc**	**10 58 04.5**	**-0.9**
	comp=Z,14nm,0.8s,baz=335,slow=3.1,SNR=56						
CMAR				SKPbc	**SKiKP**	**11 01 42.5**	**+1.2**
	comp=Z,1.2nm,0.3s,baz=328,slow=2.9,SNR=4.8						
CMAR	**Chiang Mai Arr**	**146.77**	**343**		**PKPdf**	**10 58 03.9**	**+0.1**
HYBB	**Hyderabad (bro**	**147.50**	**19**	*e*PKPbc	**PKPbc**	**10 58 07.1**	**-0.5**
HYBB				*e*PKiKP	**PKiKP**	**10 58 10.3**	**+0.5**
HYBB				*ep*PKPbc	**pPKPdf**	**10 58 18.3**	**+0.5**
HYBB				*ep*PKiKP	**pPKPbc**	**10 58 21.2**	**+0.9**

NOU 08 10:49:59.4,21.00S×169.88E,h64km,MLv4.8/8,Vanuatu Islands,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**1.79**	**254**	P	Pn	10 50 27.1	-1.0
PINNC	**Pines Island,**	**2.77**	**234**	P	Pn	10 50 41.5	+0.1
DZM	**Mont Dzumac**	**3.37**	**251**	P	Pn	10 50 50.0	+0.3
NOUC	**Port Laguerre**	**3.50**	**251**	P	Pn	10 50 51.7	+0.2
KOUNC	**Koumac, New Ca**	**5.25**	**274**	P	Pn	10 51 15.7	+0.3
	137nm,0.5s						

*IDC **08** 10:51:14.3±0.5,29.12S×75.03E,h0km,mb4.4/21, mbtmp4.4/21,MS4.3/41,Error ellipse: s-maj=15.7km s-min=15.0km az=164.0*

*MOS **08** 10:51:14.1±0.9,29.04S×74.99E,h10km,mb5.1/44,Error ellipse: s-maj=12.5km s-min=7.6km az=92.7*

*GCMT **08** 10:51:15.2±0.2,29.06S±0.02×74.82E±0.02,h12km, MW5.1/121,Moment Tensor Solution. s47,c56; s121,c180; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr=-4.43±.21; Mθθ2.03±.14; Mϕϕ2.40±.13; Mrθ0.67±.36; Mθϕ-2.22±.08; Mϕr2.69±.36; Best double couple: M=5.17500×10^16^ NP1=ϕ=299.00000°,δ39.00000°, λ-125.00000°. NP2=ϕ=160.00000°,δ59.00000°, λ-65.00000°. Principal axes: T 4.7340, Plg11.0000°, Azm233.0000°; N 0.8820, Plg21.0000°, Azm327.0000°; P -5.6160, Plg66.0000°, Azm117.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **08** 10:51:16.2±1.4,29.16S±0.03×75.0E±0.1,h10km±1km, mb5.0/85 Error ellipse: s-maj=17.6km s-min=5.1km az=268.0*

ISC 08 10:51:15.9±0.3,29.14S±0.06×74.92E±0.07,h10km,n239, σ1§37/211,mb4.9/96,MS4.4/53,13C-4D,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S2	**Diego Garcia H**	**21.51**	**353**	T	T	11 18 22.6	
	baz=175,slow=76,SNR=358						
H08S1	**Diego Garcia H**	**21.51**	**353**	T	T	11 18 17.0	
	baz=175,slow=76,SNR=306						
H08S3	**Diego Garcia H**	**21.52**	**353**	T	T	11 18 21.9	
	baz=175,slow=76,SNR=395						
H01W2	**Cape Leeuwin H**	**33.59**	**110**	T	T	11 33 15.0	
	baz=268,slow=74,SNR=100						
H01W3	**Cape Leeuwin H**	**33.59**	**110**	T	T	11 33 15.0	
	baz=268,slow=74,SNR=111						
H01W1	**Cape Leeuwin H**	**33.61**	**110**	T	T	11 33 15.9	
	baz=268,slow=74,SNR=97						
PALK	**Pallekele**	**36.63**	**10**	LR	LR	11 09 34.2	
	comp=Z,416nm,21.3s,baz=280,slow=30						
LEM	**Lembang**	**37.98**	**61**	LR	LR	11 12 30.1	
	comp=Z,539nm,19.3s,baz=230,slow=34						
BKNI	**Bangkinang**	**38.49**	**45**	P	**P**	**10 58 40.5**	**+2.1**
MAW	**Mawson**	**39.16**	**187**	LR	LR	11 11 00.0	
	comp=Z,549nm,21.2s,baz=360,slow=30						
PSI	**Prapat**	**39.23**	**40**	LR	LR	11 11 21.1	
	comp=Z,650nm,20.4s,baz=234,slow=31						
DSRI	**Dabo**	**40.17**	**50**	P	**P**	**10 58 53.6**	**+1.1**
	11nm,0.5s						
DSRI				pP	**pwP**	**10 59 00.0**	**+0.9**
	11nm,0.5s						
MATP	**Matopo**	**42.80**	**271**	P	**P**	**10 59 13.8**	**-0.4**
	0.6nm,0.3s,baz=115,slow=7.9,SNR=5.7						
	0.6nm,0.3s						
BOSA	**Boshof**	**43.22**	**258**	P	**P**	**10 59 18.2**	**+0.7**
	2.8nm,0.8s,baz=111,slow=7.2,SNR=5.9						
BOSA				LR	LR	11 13 40.0	
	comp=Z,583nm,20.3s,baz=110,slow=31						
	2.8nm,0.8s						
BOSA	**Boshof**	**43.22**	**258**	P	**P**	**10 59 17.8**	**+0.3**
BOSA	**Boshof**	**43.22**	**258**	P	**P**	**10 59 17.8**	**+0.3**
BOSA				pmax	pmax		
	comp=Z,13nm,1.3s						
LBTB	**Lobatse**	**43.85**	**263**	LR	LR	11 14 32.7	
	comp=Z,410nm,18.8s,baz=100,slow=32						
LBTB	**Lobatse**	**43.85**	**263**	P	**P**	**10 59 21.5**	**-1.2**
LBTB	**Lobatse**	**43.85**	**263**	P	**P**	**10 59 21.5**	**-1.2**
LBTB				pmax	pmax		
	comp=Z,7.0nm,1.2s						
KIBK	**Kibwezi**	**44.03**	**300**	P	**P**	**10 59 24.0**	**-0.2**
SRIT	**Nakonsritamara**	**44.43**	**36**	P	**P**	**10 59 27.7**	**+0.6**
LSZ	**Lusaka**	**45.12**	**277**	LR	LR	11 15 53.2	
	comp=Z,422nm,19.7s,baz=150,slow=33						
LSZ	**Lusaka**	**45.12**	**277**	P	**P**	**10 59 32.7**	**-0.2**
LSZ	**Lusaka**	**45.12**	**277**	P	**P**	**10 59 32.7**	**-0.2**
LSZ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KMBO	**Kilima Mbogo**	**45.43**	**301**	P	**P**	**10 59 37.3**	**+1.9**
	comp=Z,3.5nm,0.5s,baz=119,slow=11,SNR=7.3						
KMBO				LR	LR	11 14 33.1	
	comp=Z,78nm,20.1s,baz=100,slow=31						
	comp=Z,3.5nm,0.5s						
KMBO	**Kilima Mbogo**	**45.43**	**301**	P	**P**	**10 59 35.7**	**+0.3**
KSM	**Kuching**	**45.53**	**54**	P	**P**	**10 59 34.7**	**-1.2**
KSM				IAmb	IAmb	10 59 44.2	
	comp=Z,24nm,1.4s						
SUR	**Sutherland**	**46.19**	**252**	P	**P**	**10 59 42.8**	**+1.4**
	comp=Z,5.1nm,0.7s,baz=90,slow=15,SNR=7.3						
SUR				LR	LR	11 14 39.0	
	comp=Z,764nm,21.8s,baz=115,slow=30						
	comp=Z,5.1nm,0.7s						
SUR	**Sutherland**	**46.19**	**252**	P	**P**	**10 59 41.7**	**+0.4**
SUR				IAmb	IAmb	10 59 51.4	
	comp=Z,12nm,1.0s						
HYBB	**Hyderabad (bro**	**46.42**	**5**	*e*P	**P**	**10 59 43.8**	**+0.9**
HYBB				*ep*P	**sP**	**10 59 46.4**	**+0.7**
HYBB				*e*PcP	**PcP**	**11 01 18.4**	**+0.7**
HYBB				*e*PP	**PP**	**11 01 31.7**	**-0.4**
SBUM	**Sibu**	**47.58**	**55**	P	**P**	**10 59 51.6**	**-0.4**
KAPI	**Kappang**	**48.70**	**69**	LR	LR	11 17 46.8	
	comp=Z,291nm,20.9s,baz=225,slow=33						
LODK	**Lodwar**	**49.87**	**304**	P	**P**	**11 00 10.6**	**+0.9**
MBAR	**Mbarara**	**50.77**	**296**	LR	LR	11 18 27.3	
	comp=Z,118nm,18.2s,baz=128,slow=32						
MBAR	**Mbarara**	**50.77**	**296**	P	**P**	**11 00 17.0**	**+0.3**
MBAR	**Mbarara**	**50.77**	**296**	P	**P**	**11 00 17.0**	**+0.3**
MBAR				pmax	pmax		
	comp=Z,11nm,1.3s						
ATD	**Arta Tunnel**	**50.93**	**318**	LR	LR	11 19 34.7	
	comp=Z,91nm,18.2s,baz=16,slow=33						
ASAR	**Alice Springs**	**52.65**	**99**	P	**P**	**11 00 30.2**	**-0.4**
	comp=Z,1.7nm,0.6s,baz=255,slow=6.5,SNR=4.5						
ASAR				LR	LR	11 19 53.0	
	comp=Z,362nm,21.1s,baz=286,slow=33						
	comp=Z,1.7nm,0.6s						
ASAR	**Alice Springs**	**52.65**	**99**	P	**P**	**11 00 30.1**	**-0.5**
AS31	**Alice Springs**	**52.66**	**99**	P	**P**	**11 00 29.3**	**-1.3**
CM31	**Chiang Mai Arr**	**52.70**	**29**	P	**P**	**11 00 31.1**	**+0.3**
CM31				IAmb	IAmb	11 00 38.9	
	comp=Z,33nm,1.1s						
CMAR	**Chiang Mai Arr**	**52.70**	**29**	P	**P**	**11 00 31.4**	**+0.5**
	comp=Z,1.9nm,0.3s,baz=209,slow=7.5,SNR=14						
CMAR				LR	LR	11 21 05.7	
	comp=Z,318nm,18.6s,baz=205,slow=34						
	comp=Z,1.9nm,0.3s						
CMAR	**Chiang Mai Arr**	**52.70**	**29**	*i* P	**P**	**11 00 27.1**	**-3.7**
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
TSUM	**Tsumeb**	**52.80**	**267**	LR	LR	11 20 03.0	
	comp=Z,659nm,19.7s,baz=152,slow=33						
TSUM	**Tsumeb**	**52.80**	**267**	P	**P**	**11 00 32.0**	**+0.2**
TSUM				IAmb	IAmb	11 00 39.6	
	comp=Z,17nm,1.4s						
CHTO	**Chiang Mai**	**53.02**	**29**	P	**P**	**11 00 33.4**	**+0.2**
CHTO	**Chiang Mai**	**53.02**	**29**	P	**P**	**11 00 33.4**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,47nm,1.3s						
TOLI2	**Tolitoli**	**53.15**	**64**	P	**P**	**11 00 33.9**	**-0.3**
TOLI2				IAmb	IAmb	11 00 52.4	
	comp=Z,20nm,1.0s						
NVL	**N'lazarevskaya**	**53.96**	**201**	*e*P	**P**	**11 00 42.8**	**+3.4**
NVL				*e*S	**S**	**11 08 12.9**	**-1.8**
NVL				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MYLDM	**Lahad Datu**	**54.01**	**58**	P	**P**	**11 00 40.1**	**-0.5**
MYLDM				IAmb	IAmb	11 00 48.7	
	comp=Z,20nm,1.2s						
WRA	**Warramunga Arr**	**54.34**	**95**	P	**P**	**11 00 42.6**	**-0.4**
	comp=Z,5.7nm,0.9s,baz=253,slow=7.3,SNR=19						
WRA				LR	LR	11 22 11.8	
	comp=Z,300nm,20.1s,baz=269,slow=34						
	comp=Z,5.7nm,0.9s						
WRA	**Warramunga Arr**	**54.34**	**95**	P	**P**	**11 00 43.2**	**+0.2**
WRA	**Warramunga Arr**	**54.34**	**95**	P	**P**	**11 00 43.3**	**+0.2**
WRA				pmax	pmax		
	comp=Z,1.0nm,1.3s						
WB2	**Warramunga Arr**	**54.35**	**95**	P	**P**	**11 00 43.0**	**-0.1**
WRAB	**Tennant Creek**	**54.36**	**95**	P	**P**	**11 00 43.1**	**0.0**
WRAB	**Tennant Creek**	**54.36**	**95**	*ce*P	**P**	**11 00 42.4**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,54nm,2.3s						
WSAR	**Wadi Sarin**	**54.39**	**342**	LR	LR	11 20 15.1	
	comp=Z,149nm,18.1s,baz=152,slow=32						
MTN	**Manton Dam**	**54.45**	**85**	P	**P**	**11 00 43.3**	**-0.5**
MTN				IAmb	IAmb	11 00 50.9	
	comp=Z,13nm,0.9s						
WB0	**Warramunga Arr**	**54.46**	**94**	P	**P**	**11 00 43.1**	**-0.7**
WB0				IAmb	IAmb	11 00 51.0	
	comp=Z,25nm,1.1s						
WR0	**Warramunga Arr**	**54.51**	**95**	P	**P**	**11 00 43.8**	**-0.5**
STKA	**Stephens Creek**	**56.69**	**111**	P	**P**	**11 00 59.6**	**-0.1**
	comp=Z,8.2nm,1.0s,baz=225,slow=10,SNR=5.1						
STKA				LR	LR	11 22 23.0	
	comp=Z,317nm,20.2s,baz=234,slow=33						
	comp=Z,8.2nm,1.0s						
UOSS	**Minazif**	**56.71**	**340**	P	**P**	**11 00 59.3**	**-0.4**
SHL	**Shillong**	**56.79**	**18**	P	**P**	**11 01 00.3**	**-0.2**
SHL	**Shillong**	**56.79**	**18**	P	**P**	**11 01 00.3**	**-0.2**
SHL				pmax	pmax		
	comp=Z,44nm,1.0s						
TROLL	**Troll, Antarti**	**57.13**	**201**	P	**P**	**11 01 03.4**	**+1.0**
QIZ	**Qiongzhong**	**58.57**	**39**	P	**P**	**11 01 14.4**	**+1.4**
QIZ				S	**S**	**11 09 22.2**	**+5.1**
QIZ				LR	LR		
	comp=Z,220nm,21.2s						
QIZ				LR	LR		
	comp=Z,240nm,14.1s						
QIZ				LR	LR		
	comp=Z,260nm,19.0s						
SNAA	**Sanae**	**58.78**	**201**	P	**P**	**11 01 13.7**	**-0.2**
SNAA	**Sanae**	**58.78**	**201**	P	**P**	**11 01 13.9**	**0.0**
	comp=Z,2.1nm,1.0s,baz=112,slow=5.5,SNR=7.7						
SNAA				LR	LR	11 23 59.6	
	comp=Z,182nm,18.6s,baz=114,slow=33						
	comp=Z,2.1nm,1.0s						
SNAA	**Sanae**	**58.78**	**201**	P	**P**	**11 01 14.3**	**+0.4**
SNAA				IAmb	IAmb	11 01 22.0	
	comp=Z,24nm,1.5s						
SNAA	**Sanae**	**58.78**	**201**	*ce*P	**P**	**11 01 15.4**	**+1.5**
SNAA				pmax	pmax		
	comp=Z,13nm,1.3s						
RAYN	**Ar Rayn**	**59.52**	**328**	P	**P**	**11 01 19.9**	**+0.3**
RAYN				IAmb	IAmb	11 01 23.0	
	comp=Z,12nm,1.0s						
RAYN	**Ar Rayn**	**59.52**	**328**	P	**P**	**11 01 19.9**	**+0.3**
RAYN				pmax	pmax		
	comp=Z,12nm,1.0s						
KMI	**Kunming**	**60.22**	**29**	⇓P	**P**

GOMU PP **PP** **11 04 49.0 +6.2**
GOMU S S 11 10 30.7 -40
GOMU sS pS 11 10 47.7 -26
ENH Enshi 67.66 32 P **P** **11 02 12.8 -0.4**
CHGR Chuyangaron 67.66 355 P **P** **11 02 12.6 -0.5**
CHGR IAmb IAmb 11 02 19.4
comp=Z,8.1nm,0.8s
CHGR Chuyangaron 67.66 355 P **P** **11 02 12.6 -0.5**
CHGR pmax pmax
comp=Z,8.0nm,0.8s
GAR Garm 67.93 356 P **P** **11 02 13.9 -0.9**
GAR IAmb IAmb 11 02 15.8
comp=Z,18nm,1.2s
KSH Kashi 68.31 1 P **P** **11 02 14.8 -2.4**
KSH sP pwP 11 02 21.3 -2.3
KSH pmax pmax
comp=Z,8.0nm,1.9s
GEYT Alibeck 68.55 346 LR LR 11 28 23.1
comp=Z,120nm,22.0s,baz=356,slow=32
GEYT Alibeck 68.55 346 P **P** **11 02 18.9 +0.3**
GYA0B ALIBECK ARRAY 68.55 346 P **P** **11 02 18.6 0.0**
GYA0B IAmb IAmb 11 02 21.2
comp=Z,8.9nm,0.9s
BTK Batken 68.95 357 P **P** **11 02 20.6 -0.6**
BTK IAmb IAmb 11 02 33.0
comp=Z,19nm,1.5s
BTK Batken 68.95 357 P **P** **11 02 20.6 -0.6**
BTK pmax pmax
comp=Z,19nm,1.5s
EIL Elat 69.82 323 LR LR 11 29 14.3
comp=Z,184nm,19.4s,baz=128,slow=33
PMG Port Moresby 70.01 90 LR LR 11 32 53.0
comp=Z,333nm,18.2s,baz=262,slow=36
PMG Port Moresby 70.01 90 *i* P **P** **11 02 27.1 -1.1**
PMG pmax pmax
comp=Z,25nm,1.2s
LZH Lanzhou 70.36 25 *e*P **P** **11 02 30.6 +0.5**
LZH pP pwP 11 02 36.9 +0.1
LZH sP PcP 11 02 41.8 -10
LZH pmax pmax
comp=Z,13nm,1.6s
LZH pmax pmax
comp=Z,250nm,5.4s
LZH LR LR
comp=Z,280nm,17.4s
LZH LR LR
comp=Z,270nm,16.2s
LZH LR LR
comp=Z,340nm,17.9s
XAN Xi'an 70.60 29 P **P** **11 02 31.2 -0.2**
XAN pP pwP 11 02 35.4 -2.7
XAN pmax pmax
comp=Z,19nm,1.2s
XAN LR LR
comp=Z,260nm,22.0s
XAN LR LR
comp=Z,300nm,22.0s
XAN LR LR
comp=Z,600nm,22.2s
KDJ Kajisay 70.95 2 P **P** **11 02 33.4 -0.1**
KDJ IAmb IAmb 11 02 40.2
comp=Z,12nm,1.4s
KDJ Kajisay 70.95 2 P **P** **11 02 33.4 -0.1**
KDJ pmax pmax
comp=Z,12nm,1.4s
AAK Ala-Archa 71.43 360 LR LR 11 30 53.9
comp=Z,297nm,21.7s,baz=294,slow=33
AAK Ala-Archa 71.43 360 P **P** **11 02 36.6 +0.3**
AAK IAmb IAmb 11 02 38.2
comp=Z,21nm,1.5s
AAK Ala-Archa 71.43 360*ce*P **P** **11 02 37.1 +0.7**
AAK pmax pmax
comp=Z,24nm,2.5s
TKM2 Tokmak 2 71.71 1 *i* P **P** **11 02 36.8 -1.3**
TKM2 pmax pmax
comp=Z,16nm,1.4s
MDOK Medeo 71.98 2 P **P** **11 02 39.8 +0.1**
KK31 Karatay Array 72.00 357 P **P** **11 02 40.1 +0.5**
KK31 IAmb IAmb 11 02 47.8
comp=Z,21nm,1.1s
KK31 Karatay Array 72.00 357 *i* P **P** **11 02 39.0 -0.7**
KKAR Karatay Array 72.00 357 P **P** **11 02 39.7 0.0**
KKAR Karatay Array 72.00 357 P **P** **11 02 39.9 +0.2**
KKAR IAmb IAmb 11 02 47.9
comp=Z,21nm,1.1s
KKAR Karatay Array 72.00 357 P **P** **11 02 39.7 0.0**
KKAR 11 02 39.9
KKAR pmax pmax
comp=Z,21nm,1.1s
GTA Gaotai 72.04 20 ⇑P **P** **11 02 40.5 +0.4**
GTA pP pwP 11 02 47.1 +0.3
GTA sP PcP 11 02 53.0 -5.6
GTA pmax pmax
comp=Z,9.0nm,1.7s
GTA pmax pmax
comp=Z,140nm,5.1s
GTA LR LR
comp=Z,210nm,16.7s
GTA LR LR
comp=Z,130nm,18.9s
GTA LR LR
comp=Z,190nm,20.7s
PDGK Podgornoye 72.24 4 P **P** **11 02 40.2 -1.0**
LYN LuoYang 72.61 32 *e*P **P** **11 02 43.9 +0.5**
LYN S **S** **11 12 03.0 -5.3**
LYN pmax pmax
comp=Z,20nm,1.9s
LYN pmax pmax
comp=Z,260nm,9.4s
LYN LR LR
comp=Z,390nm,22.2s
LYN LR LR
comp=Z,500nm,26.5s
GEVA Gevas 73.42 334 P **P** **11 02 49.3 +0.9**
MARD Mardin 73.45 332 P **P** **11 02 49.2 +0.6**
WMQ Urumqi 73.55 10 *e*P **P** **11 02 49.3 +0.4**
WMQ pP pwP 11 02 54.1 -1.5
WMQ pmax pmax
comp=Z,22nm,0.7s
NJ2 Nanjing 73.80 38 *e*P **P** **11 02 52.0 +1.5**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
GURO Guroymak-BITLI 74.02 334 P **P** **11 02 52.9 +1.1**
GNI Garni 74.42 336 P **P** **11 02 55.0 +0.8**
GNI IAmb IAmb 11 03 07.9
comp=Z,17nm,1.1s
GNI Garni 74.42 336 *i* P **P** **11 02 55.0 +0.8**
GNI pmax pmax
comp=Z,13nm,1.1s
RPZ Rata Peaks 74.58 132 LR LR 11 29 02.9
comp=Z,277nm,21.4s,baz=104,slow=30
CSS Mathiatis 74.87 326 P **P** **11 02 57.2 +0.4**
CSS IAmb IAmb 11 03 04.2
comp=Z,27nm,1.4s
JOW Kunigami 75.58 48 LR LR 11 32 34.8
comp=Z,177nm,21.7s,baz=186,slow=33
MAKZ Makanchi 75.86 5 P **P** **11 03 01.4 -0.8**
MAKZ Makanchi 75.86 5 P **P** **11 03 01.4 -0.8**
MAKZ pmax pmax
comp=Z,7.0nm,1.2s
MK31 Makanchi Array 75.88 5 P **P** **11 03 00.7 -1.6**
MK31 IAmb IAmb 11 03 08.6
comp=Z,8.8nm,1.0s
MK31 Makanchi Array 75.88 5 *i* P **P** **11 03 00.5 -1.7**
MK31 pmax pmax
comp=Z,11nm,0.9s
MKAR Makanchi Array 75.88 5 P **P** **11 03 01.1 -1.1**
comp=Z,6.2nm,1.1s,baz=179,slow=6.1,SNR=21
comp=Z,6.2nm,1.1s
MKAR Makanchi Array 75.88 5 *i* P **P** **11 03 00.9 -1.3**
MKAR pmax pmax
comp=Z,6.0nm,1.1s
HNS HongShan 75.98 32 ⇓P **P** **11 03 03.1 +0.1**
HNS S **S** **11 12 48.4 +2.4**
HNS pmax pmax
comp=Z,17nm,1.5s
HNS LR LR
comp=Z,140nm,18.6s
HNS LR LR
comp=Z,350nm,21.2s
HNS LR LR
comp=Z,250nm,21.0s
TIA Tai'an 76.17 34 ⇓P **P** **11 03 03.5 -0.6**
TIA pmax pmax
comp=Z,9.0nm,1.7s

GROC Groznyy 76.80 339 *e*P **P** **11 03 06.3 -1.2**
GROC *e* 11 03 16.2
GROC pmax pmax
comp=Z,15nm,0.5s
BNN Bunyan 76.84 330 P **P** **11 03 07.9 -0.2**
OTUK Ortayu 77.07 358 P **P** **11 03 08.7 -0.3**
HHC Hu-ho-hao-te 77.48 28 *e*P **P** **11 03 14.4 +2.8**
HHC pmax pmax
comp=Z,27nm,0.8s
HHC pmax pmax
comp=Z,160nm,8.5s
HHC LR LR
comp=Z,380nm,19.4s
HHC LR LR
comp=Z,490nm,15.3s
HHC LR LR
comp=Z,440nm,18.0s
KBZ Khabaz 78.23 337 P **P** **11 03 16.6 +1.1**
comp=Z,3.4nm,1.0s,baz=201,slow=6.3,SNR=5.3
comp=Z,3.4nm,1.0s
KBZ Khabaz 78.23 337*ce*P **P** **11 03 15.7 +0.2**
KBZ pmax pmax
comp=Z,9.0nm,1.4s
KIV Kislovodsk 78.50 337 *e*P **P** **11 03 17.1 -0.1**
KIV pmax pmax
comp=Z,6.0nm,1.1s
KIV MLR MLR
comp=Z,63nm,19.0s
BRTR Keskin Array B 78.54 329 P **P** **11 03 17.6 +0.1**
comp=Z,2.0nm,0.7s,baz=108,slow=7.7,SNR=5.0
BRTR LR LR 11 36 18.1
comp=Z,131nm,19.2s,baz=274,slow=34
comp=Z,2.0nm,0.7s
BRTR Keskin Array B 78.54 329 P **P** **11 03 17.1 -0.5**
BRTR Keskin Array B 78.54 329 P **P** **11 03 17.1 -0.5**
BJT Baijiatuan 78.77 31 P **P** **11 03 18.9 +0.3**
BJT Baijiatuan 78.77 31 P **P** **11 03 18.9 +0.3**
BJT pmax pmax
comp=Z,9.0nm,1.1s
BJI Beijing 78.79 31 P **P** **11 03 18.5 -0.2**
BJI pmax pmax
comp=Z,6.0nm,1.4s
SMAI San Martin Ant 79.00 194 P **P** **11 03 20.0 +0.5**
AB31 Akbulak array 79.18 350 *i* P **P** **11 03 20.2 -0.4**
ABKAR Akbulak array 79.18 350 P **P** **11 03 20.6 -0.1**
GOF Gofitskoye 79.35 338⇑*e*P **P** **11 03 21.8 +0.1**
KURK Kurchatov 79.57 2 P **P** **11 03 22.2 -0.5**
KURK Kurchatov 79.57 2 P **P** **11 03 22.2 -0.5**
KURK pmax pmax
comp=Z,15nm,1.5s
GUMO Guam 79.72 68 LR LR 11 32 30.3
comp=Z,44nm,21.7s,baz=134,slow=31
AKTO Aktyubinsk 80.63 349 P **P** **11 03 26.2 -2.3**
PMSA Palmer Station 81.08 197 LR LR 11 37 20.8
comp=Z,116nm,19.6s,baz=152,slow=34
HNR Honiara 81.16 96 LR LR 11 35 38.1
comp=Z,135nm,21.0s,baz=90,slow=33
SONM Songino Array 81.69 21 P **P** **11 03 34.5 +0.1**
comp=Z,3.4nm,1.2s,baz=213,slow=5.1,SNR=12
comp=Z,3.4nm,1.2s
SONM Songino Array 81.69 21 P **P** **11 03 34.2 -0.1**
SONM IAmb IAmb 11 03 42.1
comp=Z,11nm,1.2s
SONM Songino Array 81.69 21 P **P** **11 03 34.2 -0.1**
SONM pmax pmax
comp=Z,11nm,1.2s
TJN Taejon 81.71 40*ce*P **P** **11 03 34.9 +0.4**
XLT XiLinHaoTe 81.88 29 *e*P **P** **11 03 35.2 -0.2**
XLT sP pwP 11 03 41.3 -0.8
XLT S **S** **11 13 50.4 +1.5**
XLT sS SKKSac 11 13 59.3 +0.7
XLT pmax pmax
comp=Z,11nm,0.7s
XLT pmax pmax
comp=Z,130nm,4.2s
XLT LR LR
comp=Z,260nm,17.7s
XLT LR LR
comp=Z,390nm,20.2s
ULN Ulaanbaatar 81.92 21 P **P** **11 03 35.5 -0.1**
ULN IAmb IAmb 11 03 42.5
comp=Z,20nm,1.4s
ULN Ulaanbaatar 81.92 21*ce*P **P** **11 03 35.4 -0.1**
ULN pmax pmax
comp=Z,19nm,1.8s
BRVK Borovoye 81.95 357 P **P** **11 03 35.4 -0.1**
BRVK IAmb IAmb 11 03 43.0
comp=Z,10nm,1.0s
BRVK Borovoye 81.95 357*ce*P **P** **11 03 35.3 -0.1**
BRVK pmax pmax
comp=Z,13nm,1.4s
INCN Inchon 82.09 39 P **P** **11 03 36.2 -0.4**
INCN IAmb IAmb 11 03 43.2
comp=Z,12nm,0.7s
INCN Inchon 82.09 39 P **P** **11 03 36.2 -0.4**
INCN pmax pmax
comp=Z,12nm,0.7s
TOA0 Torodi Ar. Sit 82.16 290 P **P** **11 03 37.0 -0.4**
TORD Torodi Ar. Bea 82.16 290 P **P** **11 03 37.0 -0.3**
comp=Z,3.6nm,1.0s,baz=115,slow=5.0,SNR=9.4
comp=Z,3.6nm,1.0s
TORD Torodi Ar. Bea 82.16 290 P **P** **11 03 37.1 -0.3**
TORD IAmb IAmb 11 03 50.4
comp=Z,9.6nm,1.1s
KSAR Wonju Array Be 82.76 40 P **P** **11 03 40.1 +0.1**
KSAR Wonju Array Be 82.76 40 P **P** **11 03 40.1 +0.1**
KSRS Korea Array 82.79 40 P **P** **11 03 39.3 -0.8**
comp=Z,1.4nm,0.9s,baz=228,slow=5.6,SNR=11
KSRS LR LR 11 37 12.4
comp=Z,249nm,21.6s,baz=215,slow=33
comp=Z,1.4nm,0.9s
KS19 Wonju Array Si 82.79 40 P **P** **11 03 39.9 -0.3**
KS19 IAmb IAmb 11 03 42.3
comp=Z,17nm,1.4s
ZAK Zakamensk 83.07 18 *e*P **P** **11 03 40.6 -0.9**
ZAK pmax pmax
comp=Z,5.0nm,1.9s
ZAA0 Zalesovo Array 83.19 6 P **P** **11 03 41.1 -0.7**
ZAA0 IAmb IAmb 11 03 49.0
comp=Z,8.3nm,0.9s
ZALV Zalesovo Beam 83.19 6 P **P** **11 03 40.8 -1.1**
comp=Z,2.6nm,0.8s,baz=222,slow=2.0,SNR=9.5
comp=Z,2.6nm,0.8s
ZALV Zalesovo Beam 83.19 6 P **P** **11 03 41.1 -0.7**
ZALV Zalesovo Beam 83.19 6 *i* P **P** **11 03 41.0 -0.8**
ZALV pmax pmax
comp=Z,3.0nm,0.8s
VRH Novokhopyorsk 85.19 340 *e*P **P** **11 03 50.7 -1.3**
VRH pmax pmax
comp=Z,20nm,0.8s
JCJ Chichijima 85.31 56 LR LR 11 37 52.4
comp=Z,136nm,21.5s,baz=234,slow=33
FNA Florina 85.44 322 IAmb IAmb 11 04 01.0
comp=Z,7.5nm,0.9s
VORD Divnogorie 85.74 338 *e*P **P** **11 03 52.4 -2.4**
VORD pmax pmax
comp=Z,7.0nm,0.7s
VSR Storozhevoye 86.00 338 *e*P **P** **11 03 54.0 -2.1**
VSR pmax pmax
comp=Z,20nm,1.3s
ARU Arti 86.36 351 LR LR 11 40 40.6
comp=Z,134nm,21.8s,baz=328,slow=34
ARU Arti 86.36 351 P **P** **11 03 58.2 +0.5**
ARU IAmb IAmb 11 03 59.2
comp=Z,19nm,1.4s
ARU Arti 86.36 351*d* *i*P **P** **11 03 58.2 +0.5**
ARU 11 07 13.2
ARU S **S** **11 14 24.3 -8.8**
ARU SS **SS** **11 20 09.6 -4.1**
ARU pmax pmax
comp=Z,26nm,1.8s
VORR Voronezh 86.37 339 *e*P **P** **11 03 56.0 -1.9**
VORR pmax pmax
comp=Z,60nm,0.4s
MLR Muntele Rosu 86.58 328 P **P** **11 03 59.8 +0.5**
MLR Muntele Rosu 86.58 328 P **P** **11 03 59.8 +0.5**
MLR pmax pmax
comp=Z,55nm,1.2s
JHJ Hachijo jima 2 87.23 50 LR LR 11 38 39.1
comp=Z,95nm,19.4s,baz=150,slow=33
LPSR Galich'ya Gora 87.26 339 *e*P P 11 03 55.2 -7.0
LPSR pmax pmax
comp=Z,20nm,1.4s
HIA Hailar 87.69 28 P **P** **11 04 04.4 0.0**
HIA Hailar 87.69 28 P **P** **11 04 04.4 0.0**
HIA pmax pmax
comp=Z,9.0nm,0.4s
MAJO Matsushiro 88.31 46 P **P** **11 04 07.2 -0.6**
MAJO IAmb IAmb 11 04 35.6
comp=Z,9.4nm,1.2s
MAJO Matsushiro 88.31 46 P **P** **11 04 07.2 -0.6**
MAJO pmax pmax
comp=Z,9.0nm,1.3s
MJAR Matsushiro Arr 88.32 46 P **P** **11 04 07.0 -0.8**
comp=Z,1.1nm,0.7s,baz=180,slow=3.6,SNR=5.3
MJAR LR LR 11 40 57.5
comp=Z,103nm,21.6s,baz=220,slow=34
comp=Z,1.1nm,0.7s
MJAR Matsushiro Arr 88.32 46 P **P** **11 04 06.9 -0.8**
MJAR Matsushiro Arr 88.32 46 P **P** **11 04 06.9 -0.8**
MJAR pmax pmax
comp=Z,4.0nm,1.1s
BURAR Bucovina Array 88.51 329 P **P** **11 04 09.3 +0.9**
BUR08 Bucovina Ar. S 88.54 329 P **P** **11 04 09.7 +1.1**
BUR08 IAmb IAmb 11 04 32.3
comp=Z,6.8nm,1.2s
MDJ Mudanjiang 88.73 36 P **P** **11 04 08.4 -1.1**
MDJ IAmb IAmb 11 04 15.9
comp=Z,8.0nm,1.2s
AKASG Malin Array Be 89.16 333 P **P** **11 04 11.2 -0.1**
comp=Z,3.3nm,0.8s,baz=134,slow=3.5,SNR=20
comp=Z,3.3nm,0.8s
AKASG Malin Array Be 89.16 333 P **P** **11 04 11.2 -0.1**
AKASG IAmb IAmb 11 04 23.0
comp=Z,17nm,1.4s
AKASG Malin Array Be 89.16 333 *i* P **P** **11 04 11.3 0.0**
AKASG pmax pmax
comp=Z,4.0nm,0.7s
AKBB Malin Array Si 89.16 333 IAmb IAmb 11 04 14.4
comp=Z,10nm,0.9s
AKBB Malin Array Si 89.16 333*ce*P **P** **11 04 10.9 -0.4**
KEST Kesra 89.27 312 P **P** **11 04 14.0 +1.6**
comp=Z,5.5nm,1.1s,baz=119,slow=2.1,SNR=8.6
comp=Z,5.5nm,1.1s
KEST Kesra 89.27 312 P **P** **11 04 13.6 +1.3**
USA0B Ussuriysk Arra 89.69 37 P **P** **11 04 14.0 0.0**
USA0B IAmb IAmb 11 04 25.3
comp=Z,6.1nm,0.7s
USA0B Ussuriysk Arra 89.69 37 P **P** **11 04 14.0 0.0**
USA0B pmax pmax
comp=Z,6.0nm,0.7s
USRK Ussuriysk Ar. 89.69 37 LR LR 11 42 15.2
comp=Z,268nm,21.0s,baz=213,slow=34
OBN Obninsk 90.14 339*ce*P **P** **11 04 16.5 +0.8**
OBN *e* 11 07 54.0
OBN *e*PPP PPP 11 09 43.3
OBN *e*S **S** **11 15 14.9 +6.0**
OBN *e*SS SS 11 21 19.6 +11
OBN pmax pmax
comp=Z,15nm,1.8s
OBN MLR MLR
comp=Z,99nm,18.0s
MOS Moscow 90.34 340 *e*P **P** **11 04 16.3 -0.4**
MOS *e* 11 07 49.6
MOS pmax pmax
comp=Z,39nm,0.9s
KLR Kul'dur 92.99 33 LR LR 11 46 03.0
comp=Z,424nm,19.6s,baz=222,slow=35
KLR Kul'dur 92.99 33*ce*P **P** **11 04 27.6 -1.6**
KLR pmax pmax
comp=Z,9.0nm,1.9s
KLMR Klimovskoe 94.21 343 *e*P **P** **11 04 32.7 -1.7**
KLMR pmax pmax
comp=Z,32nm,1.4s
KLMR Klimovskoe 94.21 343 *e*P **P** **11 04 32.8 -1.7**
KLMR AMP 11 04 46.8
comp=Z,32nm,1.4s
ASAJ Asahikawa 95.56 42 LR LR 11 46 27.4
comp=Z,57nm,20.5s,baz=272,slow=35
MDT Midelt 97.32 303 LR LR 11 49 30.8
comp=Z,93nm,18.2s,baz=131,slow=36
IMAR Indian Mountai 132.73 25 **PKiKP** **11 10 31.4 0.0**
ILAR Eielson Array 135.83 24 **PKiKP** **11 10 37.1 -0.6**
ILAR Eielson Array 135.83 24 PKIKP **PKiKP** **11 10 37.1 -0.6**
YKA Yellowknife Ar 146.07 8 PKPbc **PKPdf** **11 10 53.8 -0.7**
comp=Z,1.5nm,0.8s,baz=338,slow=3.7,SNR=14
YKA Yellowknife Ar 146.07 8 **PKPdf** **11 10 54.0 -0.5**
YKA Yellowknife Ar 146.07 8 PKP2 **PKPdf** **11 10 54.0 -0.5**
NVAR Mina Array Bea 165.64 46 PKPab **PKPab** **11 12 18.1 -2.0**
comp=Z,0.3nm,1.0s,baz=275,slow=5.0,SNR=2.0
TXAR Lajitas Array 178.75 279 PKP **PKPdf** **11 11 27.6 +0.4**
comp=Z,0.9nm,1.1s,baz=166,slow=1.9,SNR=5.2
TXAR PKPab sPKPab 11 13 21.0 -0.5
comp=Z,1.0nm,1.0s,baz=56,slow=3.0,SNR=7.3

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*SJA **08** 10:53:25.6±0.7,31°.49S×72°.18W,h14km±3km,ML4.1, MW4.0*
*IDC **08** 10:53:27.4±1.0,31°.50S×71°.57W,h0km,mb4.0/6, mbtmp3.9/9,ML3.8/3,MS4.4/2,Error ellipse: s-maj=39.4km s-min=21.5km az=95.0*
*NEIC **08** 10:53:30.1±1.3,31°.55S±0°.02×71°.8W±0°.1,h14km±2km, mb4.2/9,ML4.1(GUC),Error ellipse: s-maj=14.6km s-min=3.2km az=94.0*
*GUC **08** 10:53:31.2±0.8,31°.52S×71°.73W,h24km±4km,ML4.1*
ISC 08 10:53:29.1±1.2,31°.53S±0°.02×71°.80W±0°.03,h12km±7km, n121,σ1⇟38/158,mb4.1/6,11C-6D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CO02	**Combarbal**	**0.76**	**65**			**Pg**	**10 53 44.6**	**+0.9**
CO02	**Combarbal**	**0.76**	**65**	⇓*i*	P	**Pg**	**10 53 44.7**	**+0.9**
CO02				*i*	S	**Sg**	**10 53 53.8**	**+0.2**
CO02					IAML		10 53 58.0	
comp=N,27μm,0.2s								
CO02	**Combarbal**	**0.76**	**65**	*e*	P	**Pn**	**10 53 45.9**	**+0.2**
CO02				*e*	S	**Sn**	**10 53 56.4**	**-0.7**
CO02					IAML		10 53 57.4	
comp=Z,14μm,0.3s								
CO06	**Fray Jorge**	**0.87**	**9**			**Pb**	**10 53 47.0**	**+0.8**
CO06					Sg	**Sg**	**10 53 58.4**	**+1.3**
CO06	**Fray Jorge**	**0.87**	**9**	⇑*i*	P	**Pb**	**10 53 46.9**	**+0.8**
CO06				*i*	S	**Sg**	**10 53 58.2**	**+1.1**
CO06					IAML		10 54 00.1	
comp=E,9μm,0.3s								
VA06	**Catapilco**	**1.11**	**158**		Pn	**Pb**	**10 53 50.7**	**+0.5**
VA06					Sg	**Sb**	**10 54 04.7**	**0.0**
VA06	**Catapilco**	**1.11**	**158**	*i*	P	**Pb**	**10 53 50.7**	**+0.5**
VA06				*i*	S	**Sg**	**10 54 05.2**	**+0.3**
VA06					IAML		10 54 07.8	
comp=E,11μm,0.4s								
CO03	**El Pedregal**	**1.17**	**54**			**Pn**	**10 53 51.3**	**-0.2**
CO03	**El Pedregal**	**1.17**	**54**	⇓*i*	P	**Pn**	**10 53 51.1**	**-0.3**
CO03				*i*	S	**Sb**	**10 54 05.5**	**-1.1**
CO03					IAML		10 54 10.2	
comp=N,4μm,0.2s								
CO03	**El Pedregal**	**1.17**	**54**	*e*	P	**Pn**	**10 53 51.3**	**-0.2**
CO03				*e*	S	**Sb**	**10 54 06.7**	**+0.1**
CO03					IAML		10 54 08.2	
comp=Z,3μm,0.3s								
VA01	**Torpederas**	**1.49**	**175**			**Pn**	**10 53 56.3**	**+0.6**
VA01	**Torpederas**	**1.49**	**175**	*e*	P	**Pn**	**10 53 56.0**	**+0.3**
VA01				*e*	S	**Sg**	**10 54 17.2**	**+0.1**
ROCH	**El Roble**	**1.58**	**155**	⇓*i*	P	**Pn**	**10 53 57.9**	**+0.7**
ROCH				⇓*i*	P	**Pn**	**10 53 57.9**	**+0.7**
ROCH				*i*	S	**Sb**	**10 54 19.1**	**+0.5**
ROCH				*i*	S	**Sb**	**10 54 19.1**	**+0.5**
ROCH					IAML		10 54 23.0	
comp=N,3μm,0.4s								
ROCH					IAML		10 54 23.0	
comp=N,5μm,0.4s								
ROC1	**El Roble**	**1.58**	**156**			**Pn**	**10 53 57.8**	**+0.5**
ROC1	**El Roble**	**1.58**	**156**	*e*	P	**Pn**	**10 53 58.0**	**+0.7**
ROC1				*e*	S	**Sb**	**10 54 18.4**	**-0.2**
GO04	**Tololo Observa**	**1.60**	**33**		Pn	**Pn**	**10 53 58.1**	**+0.6**
GO04	**Tololo Observa**	**1.60**	**33**	⇑*i*	P	**Pn**	**10 53 58.0**	**+0.6**
GO04				*i*	S	**Sn**	**10 54 18.0**	**-0.2**
GO04					IAML		10 54 22.0	
comp=E,10μm,0.4s								
GO04	**Tololo Observa**	**1.60**	**33**	*e*	P	**Pn**	**10 53 58.0**	**+0.6**
GO04				*e*	P	**Pn**	**10 53 58.1**	**+0.6**
GO04				*e*	S	**Sb**	**10 54 19.9**	**+0.8**
GO04				*e*	S	**Sn**	**10 54 20.1**	**+1.9**
VA03	**San Esteban**	**1.62**	**140**			**Pn**	**10 53 58.6**	**+1.0**
VA03	**San Esteban**	**1.62**	**140**	⇓*i*	P	**Pn**	**10 53 58.7**	**+1.1**
VA03				*e*	S	**Sb**	**10 54 19.9**	**+0.4**
VA03					IAML		10 54 23.0	
comp=E,7μm,0.6s								

VA03	**San Esteban**	**1.62**	**140**	*eP*		**Pb**	**10 53 59.0**	**0.0**
VA03				*eS*		**Sg**	**10 54 21.2**	**-0.1**
VA03				IAML			10 54 24.3	
	comp=Z,3μm,0.7s							
CO05	**La Serena**	**1.68**	**17**			**Pn**	**10 53 58.8**	**+0.6**
CO05	**La Serena**	**1.68**	**17**⇑	*iP*		**Pn**	**10 53 58.9**	**+0.7**
CO05				*iS*		**Sn**	**10 54 20.7**	**+1.0**
CO05				IAML			10 54 28.8	
	comp=N,2μm,0.5s							
MT02	**Curacav**	**1.81**	**162**			**Pn**	**10 54 00.7**	**+0.5**
MT02	**Curacav**	**1.81**	**162**⇑	*iP*		**Pn**	**10 54 00.6**	**+0.5**
MT02				IAML			10 54 30.0	
	comp=E,1μm,0.1s							
MT02	**Curacav**	**1.81**	**162**	*eP*		**Pn**	**10 54 00.7**	**+0.5**
MT02				*eS*		**Sg**	**10 54 27.2**	**-0.1**
MT02				IAML			10 54 32.3	
	comp=Z,724nm,0.4s							
PEL	**Peldehue**	**1.86**	**150**			**Pn**	**10 54 01.6**	**+0.7**
PEL	**Peldehue**	**1.86**	**150**⇓	*iP*		**Pn**	**10 54 01.6**	**+0.7**
PEL				*iS*		**Sb**	**10 54 26.4**	**-0.1**
PEL				IAML			10 54 29.2	
	comp=N,3μm,0.4s							
PEL	**Peldehue**	**1.86**	**150**	*eP*		**Pn**	**10 54 02.3**	**+1.4**
PEL				*eS*		**Sg**	**10 54 28.6**	**-0.4**
MT05	**Renca**	**2.06**	**155**	Pn		**Pn**	**10 54 04.8**	**+1.2**
MT05	**Renca**	**2.06**	**155**	*eP*		**Pn**	**10 54 05.0**	**+1.4**
MT05				*iS*		**Sb**	**10 54 32.0**	**-0.1**
MT05				IAML			10 54 35.0	
	comp=E,4μm,0.4s							
MT05	**Renca**	**2.06**	**155**	*eP*		**Pn**	**10 54 04.9**	**+1.4**
MT05				*eS*		**Sb**	**10 54 33.9**	**+1.8**
MT05				IAML			10 54 41.2	
	comp=Z,1μm,0.3s							
VA05	**Santo Domingo**	**2.12**	**176**			**Pn**	**10 54 04.6**	**+0.1**
VA05	**Santo Domingo**	**2.12**	**176**	*eP*		**Pn**	**10 54 04.8**	**+0.3**
VA05				IAML			10 54 40.0	
	comp=E,3μm,0.4s							
CO01	**Juntas del Tor**	**2.13**	**44**			**Pn**	**10 54 06.5**	**+1.7**
CO01	**Juntas del Tor**	**2.13**	**44**⇑	*iP*		**Pn**	**10 54 06.5**	**+1.7**
CO01				*iS*		**Sb**	**10 54 33.5**	**-0.8**
CO01				IAML			10 54 36.0	
	comp=N,1μm,0.3s							
CO01	**Juntas del Tor**	**2.13**	**44**	*eP*		**Pn**	**10 54 06.4**	**+1.7**
CO01				IAML			10 54 41.8	
	comp=Z,810nm,0.6s							
FCH	**Farellones**	**2.20**	**145**⇑	*iP*		**Pn**	**10 54 07.3**	**+1.5**
FCH				*iS*		**Sb**	**10 54 35.6**	**-0.7**
FCH				IAML			10 54 38.5	
	comp=E,1μm,0.4s							
MT03	**Universidad Ad**	**2.24**	**151**			**Pn**	**10 54 07.6**	**+1.5**
MT03	**Universidad Ad**	**2.24**	**151**	*eP*		**Pn**	**10 54 07.7**	**+1.6**
MT03				*eS*		**Sb**	**10 54 38.4**	**+1.2**
MT03				IAML			10 54 46.6	
	comp=Z,923nm,0.3s							
MT09	**Talagante**	**2.34**	**163**			**Pn**	**10 54 08.9**	**+1.3**
MT09	**Talagante**	**2.34**	**163**⇑	*iP*		**Pn**	**10 54 09.1**	**+1.6**
MT09				IAML			10 54 46.0	
	comp=E,1μm,0.4s							
MT01	**Popeta**	**2.37**	**169**			**Pn**	**10 54 08.6**	**+0.8**
MT01	**Popeta**	**2.37**	**169**⇑	*iP*		**Pn**	**10 54 08.7**	**+0.8**
MT01				IAML			10 54 48.1	
	comp=E,1μm,0.6s							
MT01	**Popeta**	**2.37**	**169**	*eP*		**Pn**	**10 54 08.0**	**+0.2**
MT01				*eS*		**Sg**	**10 54 46.2**	**+0.9**
MT01				IAML			10 54 47.4	
	comp=Z,607nm,0.5s							
AROD	**Rodeo**	**2.42**	**56**	*eP*		**Pb**	**10 54 12.0**	**-0.7**
AROD				*eS*		**Sn**	**10 54 38.4**	**0.0**
AROD				*eS*		**Sg**	**10 54 45.4**	**-1.4**
BO04	**La Punta**	**2.65**	**158**	Pn		**Pn**	**10 54 13.0**	**+1.3**
BO04	**La Punta**	**2.65**	**158**	*iP*		**Pn**	**10 54 13.2**	**+1.5**
BO04				*iS*		**Sb**	**10 54 47.1**	**-1.9**
BO04				IAML			10 54 56.5	
	comp=N,1μm,0.7s							
ZON	**Zonda**	**2.66**	**91**	*eP*		**Pb**	**10 54 16.0**	**-0.7**
ZON				*eS*		**Sg**	**10 54 53.1**	**-1.5**
ZON				IAML			10 54 58.9	
	comp=Z,420nm,0.6s							
ACDV	**Cuesta del Vie**	**2.67**	**60**	*eP*		**Pb**	**10 54 16.0**	**-1.0**
ACDV				IAML			10 54 56.3	
	comp=Z,441nm,0.7s							
ACDV				*eS*		**Sg**	**10 54 56.4**	**+1.5**
LMEL	**Las Melosas**	**2.67**	**150**			**Pn**	**10 54 13.2**	**+1.0**
LMEL	**Las Melosas**	**2.67**	**150**	*eP*		**Pn**	**10 54 14.1**	**+1.9**
LMEL				*iS*		**Sb**	**10 54 47.7**	**-2.2**
LMEL				IAML			10 54 56.6	
	comp=N,2μm,0.2s							
LCO	**Las Campanas**	**2.69**	**21**	Pn		**Pn**	**10 54 12.9**	**+0.6**
LCO	**Las Campanas**	**2.69**	**21**⇑	*iP*		**Pn**	**10 54 12.8**	**+0.4**
LCO				*iS*		**Sn**	**10 54 47.7**	**+2.7**
LCO	**Las Campanas**	**2.69**	**21**	*eP*		**Pn**	**10 54 13.0**	**+0.6**
ASAL	**Salagasta**	**2.73**	**114**	*eP*		**Pb**	**10 54 17.0**	**-0.9**
ASAL				*eS*		**Sb**	**10 54 53.9**	**+2.6**
ARCO	**CERRO ARCO**	**2.76**	**119**	*eP*		**Pb**	**10 54 18.0**	**-0.4**
ARCO				*eP*		**Pg**	**10 54 18.2**	**-3.7**
ARCO				*eS*		**Sg**	**10 55 00.1**	**+2.4**
ARCO				IAML			10 55 04.5	
	comp=Z,496nm,0.6s							
RTLL	**Cerro Villicun**	**2.85**	**87**	*eP*		**Pb**	**10 54 18.0**	**-1.9**
RTLL				*eS*		**Sb**	**10 54 54.4**	**-0.3**
BO01	**Tunca**	**2.92**	**168**	Pn		**Pn**	**10 54 16.1**	**+0.8**
BO01	**Tunca**	**2.92**	**168**	*eP*		**Pn**	**10 54 16.1**	**+0.8**
BO01				IAML			10 55 05.2	
	comp=E,321nm,0.1s							
BO01	**Tunca**	**2.92**	**168**	*eP*		**Pn**	**10 54 16.0**	**+0.8**
BO01				*eS*		**Sb**	**10 54 53.9**	**-2.7**
AAGR	**Agrelo**	**2.95**	**122**	*eP*		**Pb**	**10 54 20.7**	**-1.0**
AAGR				*eS*		**Sg**	**10 55 04.5**	**+0.6**
BO03	**Pichilemu**	**2.96**	**183**⇑	*iP*		**Pn**	**10 54 15.7**	**-0.2**
AC04	**Llanos de Chal**	**3.37**	**11**			**Pn**	**10 54 21.5**	**-0.2**
AC04	**Llanos de Chal**	**3.37**	**11**	*eP*		**Pn**	**10 54 21.3**	**-0.3**
AC04				IAML			10 55 26.1	
	comp=N,324nm,0.4s							
AC04	**Llanos de Chal**	**3.37**	**11**	*eP*		**Pn**	**10 54 21.4**	**-0.2**
AC04				*eS*		**Sn**	**10 55 04.9**	**+3.3**
AC04				IAML			10 55 22.2	
	comp=Z,277nm,0.8s							
GO05	**Huala**	**3.47**	**182**	Pn		**Pn**	**10 54 22.6**	**-0.4**
GO05	**Huala**	**3.47**	**182**⇑	*iP*		**Pn**	**10 54 22.4**	**-0.5**
GO05				IAML			10 55 34.4	
	comp=N,216nm,0.7s							
GO05	**Huala**	**3.47**	**182**	*eP*		**Pn**	**10 54 22.9**	**0.0**
GO05				*eS*		**Sb**	**10 55 16.4**	**+3.8**
GO05				*eS*		**Sg**	**10 55 18.4**	**-2.1**
AVFE	**Valle Fertil**	**3.82**	**78**	*eP*		**Pn**	**10 54 31.0**	**+3.1**
AVFE				*eS*		**Sb**	**10 55 19.9**	**-3.0**
AVFE				IAML			10 55 31.6	
	comp=Z,471nm,0.5s							
GO03	**Copiap**	**4.15**	**20**			**Pn**	**10 54 32.9**	**+0.5**
GO03	**Copiap**	**4.15**	**20**	*eP*		**Pn**	**10 54 33.3**	**+0.9**
GO03				*eS*		**Sb**	**10 55 28.4**	**-3.9**
RFA	**San Rafael**	**4.27**	**140**	*eP*		**Pn**	**10 54 37.0**	**+2.9**
RFA				*eS*		**Sb**	**10 55 40.9**	**+5.2**
RFA				IAML			10 55 47.5	
	comp=Z,92nm,0.6s							
AC06	**Mina Casimiro**	**4.35**	**17**			**Pn**	**10 54 35.2**	**+0.2**
ACHE	**Chepes**	**4.41**	**87**	*eP*		Pn	10 54 24.2	-12
ACHE				*eS*		**Sb**	**10 55 38.1**	**-1.7**
APLL	**PUNTA DE LOS L**	**4.67**	**77**	IAML			10 56 09.2	
	comp=Z,137nm,0.6s							
ACLC	**CERRO LA CRUZ**	**4.68**	**65**	*eP*		**Pn**	**10 54 42.0**	**+2.3**
ACLC				IAML			10 56 11.9	
	comp=Z,142nm,0.9s							
AC02	**Maricunga**	**5.23**	**27**	Pn		**Pn**	**10 54 48.2**	**+0.7**
AC01	**Pan de Azucar**	**5.47**	**11**			**Pn**	**10 54 48.4**	**-2.0**
H03N1	**Juan Fernandez**	**6.31**	**251**	Pn		**Pn**	**10 55 02.1**	**+0.5**
	baz=90,slow=24							
H03N1				T		T	11 01 45.8	
	baz=78,slow=72,SNR=3799							
H03N3	**Juan Fernandez**	**6.32**	**250**	Pn		**Pn**	**10 55 02.5**	**+0.7**
	baz=90,slow=24							
H03N3				T		T	11 01 40.7	
	baz=78,slow=72,SNR=3746							
H03N2	**Juan Fernandez**	**6.32**	**251**	Pn		**Pn**	**10 55 02.8**	**+0.9**
	baz=90,slow=24							
H03N2				T		T	11 01 42.6	
	baz=78,slow=72,SNR=3323							
H03S3	**Juan Fernandez**	**6.42**	**247**	T		T	11 01 56.2	
	baz=84,SNR=13							
H03S1	**Juan Fernandez**	**6.42**	**247**	T		T	11 01 57.0	
	baz=84,SNR=12							
H03S2	**Juan Fernandez**	**6.43**	**247**	T		T	11 01 56.6	
	baz=84,SNR=18							

GO02	**Mina Guanaco**	**6.64**	**18**	Pn		**Pn**	**10 55 06.1**	**-0.6**
LR04	**Corral**	**8.44**	**189**	Pn		**Pn**	**10 55 30.9**	**-0.2**
PLCA	**Paso Flores**	**9.24**	**174**	Pn		**Pn**	**10 55 43.3**	**+1.1**
	comp=Z,0.5nm,0.3s,baz=334,slow=10,SNR=13							
	comp=Z,1.3nm,0.3s							
PLCA	**Paso Flores**	**9.24**	**174**	Pn		**Pn**	**10 55 42.6**	**+0.4**
LVC	**Limon Verde**	**9.25**	**17**	Pn		Pn	10 55 48.7	+6.0
	comp=Z,0.5nm,0.3s,baz=185,slow=13,SNR=1.7							
LVC	**Limon Verde**	**9.25**	**17**	Pn		**Pn**	**10 55 44.0**	**+1.3**
ITQB	**Itaqui**	**13.20**	**86**	Pn		**Pn**	**10 56 38.2**	**+1.8**
CPUP	**Villa Florida**	**13.69**	**71**	Pn		**Pn**	**10 56 46.2**	**+3.2**
	comp=Z,0.3nm,0.3s,baz=255,slow=12,SNR=1.6							
CPUP	**Villa Florida**	**13.69**	**71**	Pn		**Pn**	**10 56 41.5**	**-1.6**
PLTB	**Pedras Altas**	**15.50**	**96**	Pn		**Pn**	**10 57 04.3**	**-3.2**
PLTB				IAmb		IAmb	10 57 07.8	
	comp=Z,18nm,1.3s							
LPAZ	**La Paz**	**15.54**	**13**	Pn		**Pn**	**10 57 09.7**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=175,slow=11,SNR=2.1							
	comp=Z,0.7nm,0.5s							
LPAZ	**La Paz**	**15.54**	**13**	Pn		**Pn**	**10 57 07.5**	**-1.2**
SIV	**San Ignacio**	**18.30**	**35**	P		**Pn**	**10 57 42.3**	**-0.6**
	baz=207,slow=5.3,SNR=4.1							
	comp=Z,0.7nm,0.4s							
TRCB	**Terra Rica**	**19.12**	**68**	P		**P**	**10 57 52.1**	**0.0**
MG05	**Puerto Natales**	**20.14**	**181**	P		**P**	**10 58 03.7**	**+0.8**
MG05				IAmb		IAmb	10 58 05.9	
	comp=Z,35nm,1.5s							
SAML	**Samuel**	**23.86**	**21**	P		**P**	**10 58 42.4**	**0.0**
BDFB	**Brasilia**	**26.84**	**59**	P		**P**	**10 59 07.8**	**-1.9**
	comp=Z,3.7nm,0.9s,baz=173,slow=8.1,SNR=3.9							
	comp=Z,3.7nm,0.9s							
BDFB	**Brasilia**	**26.84**	**59**	P		**P**	**10 59 07.7**	**-2.1**
BDFB				IAmb		IAmb	10 59 08.3	
	comp=Z,6.7nm,1.0s							
SNAA	**Sanae**	**53.80**	**159**	P		**P**	**11 02 51.0**	**-0.2**
	comp=Z,1.8nm,0.8s,baz=289,slow=11,SNR=6.0							
	comp=Z,1.8nm,0.8s							
SNAA	**Sanae**	**53.80**	**159**	P		**P**	**11 02 51.5**	**+0.3**
SNAA				IAmb		IAmb	11 02 57.8	
	comp=Z,5.5nm,1.5s							
QSPA	**South Pole Qui**	**58.70**	**180**	P		**P**	**11 03 27.0**	**+0.6**
	comp=Z,1.1nm,0.7s,baz=78,slow=9.3,SNR=1.7							
QSPA				LR		LR	11 30 56.8	
	comp=Z,444nm,19.9s,baz=180,slow=38							
	comp=Z,1.1nm,0.7s							
TXAR	**Lajitas Array**	**67.69**	**330**	P		**P**	**11 04 26.9**	**+0.5**
	comp=Z,0.1nm,0.5s,baz=162,slow=6.6,SNR=2.2							
	comp=Z,0.1nm,0.5s							
BOSA	**Boshof**	**81.04**	**118**	P		**P**	**11 05 44.0**	**-0.4**
	comp=Z,1.5nm,0.8s,baz=221,slow=2.5,SNR=3.6							
	comp=Z,1.5nm,0.8s							
TORD	**Torodi Ar. Bea**	**83.18**	**70**	P		**P**	**11 05 54.8**	**-0.8**
	comp=Z,3.3nm,0.8s,baz=258,slow=4.4,SNR=11							
	comp=Z,3.3nm,0.8s							
TORD	**Torodi Ar. Bea**	**83.18**	**70**	P		**P**	**11 05 54.9**	**-0.7**
MSVF	**Nonsavu**	**97.06**	**244**	LR		LR	11 42 33.2	
	comp=Z,146nm,21.4s,baz=15,slow=30							
H11S2	**WAKE ISLAND Hyl**	**25.98**	**271**	T		T	13 31 25.1	
	baz=116,slow=74,SNR=101							
H11S1	**WAKE ISLAND Hyl**	**25.99**	**271**	T		T	13 31 21.1	
	baz=116,slow=74,SNR=81							
H11S3	**WAKE ISLAND Hyl**	**25.99**	**271**	T		T	13 31 22.2	
	baz=116,slow=74,SNR=86							
H11N3	**WAKE ISLAND Hyl**	**26.33**	**272**	T		T	13 31 39.2	
	baz=116,slow=75,SNR=29							
H11N1	**WAKE ISLAND Hyl**	**26.34**	**272**	T		T	13 31 43.6	
	baz=116,slow=75,SNR=12							
H11N2	**WAKE ISLAND Hyl**	**26.34**	**272**	T		T	13 31 48.8	
	baz=116,slow=75,SNR=42							
SEY	**Seymchan**	**137.98**	**332**	PKP		**PKPdf**	**11 12 53.6**	**+0.7**
	comp=Z,1.0nm,1.0s,baz=148,slow=3.0,SNR=4.3							
KURBB	**Kurchatov Arra**	**150.90**	**40**	PKPbc		**PKPbc**	**11 13 20.8**	**-0.4**
	comp=Z,2.5nm,0.8s,baz=298,slow=3.1,SNR=9.7							
ZALV	**Zalesovo Beam**	**152.01**	**30**	PKPbc		**PKPbc**	**11 13 23.3**	**-0.4**
	comp=Z,8.0nm,0.4s,baz=296,slow=3.4,SNR=27							
ZALV	**Zalesovo Beam**	**152.01**	**30**			**PKPbc**	**11 13 23.5**	**-0.2**
ZALV				PKPab		**PKPab**	**11 13 32.0**	**-1.1**

TAP 08 10:53:40.4,24°.00N×121°.59E,h8km,ML1.4,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.03**	**157**	*iP*		Pg	10 53 42.3	+0.5
	baz=147							
HWA				*eS*		Sg	10 53 43.8	+1.0
	baz=147							
TWD	**Chiawan**	**0.08**	**1**	*iP*		Pg	10 53 42.8	+0.4
	baz=7.0							
TWD				S		Sg	10 53 44.4	+0.6
	baz=7.0							
ETL	**Fush Village**	**0.16**	**10**	P		Pg	10 53 44.0	+0.2
	baz=17							
NACB	**Ninganchiao**	**0.17**	**0**	*iP*		Pg	10 53 44.2	+0.2
	baz=8.0							
NACB				*eS*		Sg	10 53 46.9	+0.5
	baz=8.0							
ETLH	**Xiulin Townshi**	**0.23**	**333**	P		Pg	10 53 45.6	+0.6
	baz=333							
ETLH				*eS*		Sg	10 53 49.1	+0.9
	baz=333							
ESL	**Shilin**	**0.24**	**218**	P		Pg	10 53 45.4	+0.2
	baz=218							
ESL				*eS*		Sg	10 53 48.6	+0.3
	baz=218							
WHF	**Hehuan Shan**	**0.33**	**296**	*eP*		Pg	10 53 47.6	+0.5
	baz=296							
OWD	**Renai**	**0.39**	**263**	*eP*		Pb	10 53 49.1	-0.5
	baz=263							
CHGB	**Renai**	**0.39**	**279**	P		Pb	10 53 48.9	-0.8
	baz=279							
FUSS	**Fushou**	**0.40**	**308**	P		Pb	10 53 49.3	-0.7
	baz=317							
WUSB	**Renai**	**0.44**	**269**	*eP*		Pb	10 53 50.0	-0.4
	baz=269							
NNSB	**Datong**	**0.47**	**336**	*eP*		Pg	10 53 50.2	+0.7
	baz=336							
NNSB				*eS*		Sb	10 53 56.9	-1.2
	baz=336							
TDCB	**Techi**	**0.47**	**302**	*eP*		Pb	10 53 50.5	-0.5
	baz=302							
SSLB	**Suanglung**	**0.62**	**250**	*eP*		Pg	10 53 52.9	+0.5
	baz=251							
ENTT	**Nioudou**	**0.64**	**358**	*eP*		Pb	10 53 53.4	-0.4
	baz=358							

*GCG **08** 10:58:05.8±0.7, 13°.43N×90°.39W, h20km±3km, MD3.7*
*SNET **08** 10:58:05.6±0.8, 13°.35N×90°.12W, h26km±5km, ML4.0*
*UCR **08** 10:58:05.8±0.8, 13°.37N×90°.12W, h27km±5km, ML4.0*

ISC 08 10:58:04.3±1.9, 13°.33N±0°.08×90°.22W±0°.05, h30km±13km, n38,σ0s50/49, 15D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NUBE	**Las Nubes**	**0.71**	**37**⇓	*iP*	**Pb**	**10 58 18.0**	**-0.4**
NUBE				*eS*	**Sn**	**10 58 27.8**	**-0.7**
NUBE	**Las Nubes**	**0.71**	**37**⇓	*iP*	**Pb**	**10 58 18.0**	**-0.4**
NUBE				*eS*	**Sn**	**10 58 27.8**	**-0.7**
CEVE	**Cerro Verde**	**0.76**	**49**⇓	*iP*	**Pb**	**10 58 19.1**	**-0.2**
CEVE				IAML		10 58 32.8	
	comp=Z,11μm,0.2s						
CEVE	**Cerro Verde**	**0.76**	**49**⇓	*iP*	**Pb**	**10 58 19.1**	**-0.2**
CEVE				IAML		10 58 32.8	
	comp=Z,11μm,0.2s						
SBLS	**San Blas**	**0.77**	**49**⇓	*iP*	**Pb**	**10 58 19.1**	**-0.3**
SBLS				*eS*	**Sn**	**10 58 29.6**	**-0.4**
SBLS	**San Blas**	**0.77**	**49**⇓	*iP*	**Pb**	**10 58 19.1**	**-0.3**
SBLS				*eS*	**Sn**	**10 58 29.6**	**-0.4**
LOAL	**Lomas de Alarc**	**0.79**	**33**⇓	*eP*	**Pb**	**10 58 19.3**	**-0.3**
LOAL				*eS*	**Sn**	**10 58 30.1**	**-0.2**
LOAL	**Lomas de Alarc**	**0.79**	**33**⇓	*eP*	**Pb**	**10 58 19.3**	**-0.3**
LOAL				*eS*	**Sn**	**10 58 30.1**	**-0.2**
RTR	**El Retiro**	**0.80**	**45**⇓	*iP*	**Pb**	**10 58 19.5**	**-0.2**
RTR	**El Retiro**	**0.80**	**45**⇓	*iP*	**Pb**	**10 58 19.5**	**-0.2**
SNJE	**San Jose**	**0.80**	**48**⇓	*eP*	**Pb**	**10 58 19.6**	**-0.3**
SNJE	**San Jose**	**0.80**	**48**⇓	*eP*	**Pb**	**10 58 19.6**	**-0.3**
SLOZ	**Alcaldia de Sa**	**0.81**	**31**⇓	*iP*	**Pb**	**10 58 19.4**	**-0.5**
SLOZ				*eS*	**Sn**	**10 58 30.7**	**-0.1**
LALI	**Alcalda de L**	**0.89**	**80**	*eP*	**Pb**	**10 58 20.8**	**-0.4**
LALI	**Alcalda de L**	**0.89**	**80**	*eP*	**Pb**	**10 58 20.8**	**-0.4**
CEDA	**San Andres**	**0.93**	**59**⇓	*iP*	**Pb**	**10 58 21.4**	**-0.6**
CEDA				IAML		10 58 41.5	
	comp=Z,4μm,0.3s						
CEDA	**San Andres**	**0.93**	**59**⇓	*iP*	**Pb**	**10 58 21.4**	**-0.6**
CEDA				IAML		10 58 41.5	
	comp=Z,4μm,0.3s						

UEES	**Universidad Ev**	**1.03**	**68**	*eP*		**Pn**	**10 58 22.9**	**+0.1**
UEES				IAML			10 58 40.9	
	comp=Z,3μm,0.2s							
UEES	**Universidad Ev**	**1.03**	**68**	*eP*		**Pn**	**10 58 22.9**	**+0.1**
UEES				IAML			10 58 40.9	
	comp=Z,3μm,0.2s							
PCG	**Pacaya**	**1.12**	**340**	*eP*		**Pn**	**10 58 24.8**	**+0.6**
PCG				*eS*		**Sn**	**10 58 38.5**	**-0.2**
LFRS	**El Faro**	**1.16**	**75**	*eP*		**Pn**	**10 58 24.8**	**+0.2**
LFRS	**El Faro**	**1.16**	**75**	*eP*		**Pn**	**10 58 24.8**	**+0.2**
SJTE	**Alcalda de S**	**1.21**	**76**	*eP*		**Pn**	**10 58 25.5**	**+0.2**
SJTE	**Alcalda de S**	**1.21**	**76**	*eP*		**Pn**	**10 58 25.5**	**+0.2**
NBG	**Las Nubes**	**1.26**	**354**	*eP*		**Pn**	**10 58 26.9**	**+0.9**
NBG				*eS*		**Sb**	**10 58 44.2**	**+0.7**
FUG	**Fuego 3**	**1.27**	**332**	*eP*		**Pn**	**10 58 26.0**	**-0.1**
FUG				*eS*		**Sn**	**10 58 41.1**	**-1.1**
PAVA	**Las Pavas**	**1.30**	**73**	*eP*		**Pn**	**10 58 27.5**	**+1.0**
PAVA	**Las Pavas**	**1.30**	**73**	*eP*		**Pn**	**10 58 27.5**	**+1.0**
COEG	**Centro de Oper**	**1.33**	**77**	*eP*		**Pn**	**10 58 27.2**	**+0.3**
COEG	**Centro de Oper**	**1.33**	**77**	*eP*		**Pn**	**10 58 27.2**	**+0.3**
SCLA	**Alcaldia de Sa**	**1.50**	**75**	*eP*		**Pn**	**10 58 29.9**	**+0.7**
SCLA	**Alcaldia de Sa**	**1.50**	**75**	*eP*		**Pn**	**10 58 29.9**	**+0.7**
PQSS	**Presa 15 de Se**	**1.64**	**79**	*eP*		**Pn**	**10 58 31.5**	**+0.4**
PQSS	**Presa 15 de Se**	**1.64**	**79**	*eP*		**Pn**	**10 58 31.5**	**+0.4**
MRL	**Marmol**	**1.82**	**17**	*eS*		**Sb**	**10 58 59.7**	**+0.2**
STG3	**Santiaguito 3,**	**1.90**	**317**	*eP*		**Pn**	**10 58 35.0**	**+0.2**
STG3				*eS*		**Sn**	**10 58 58.0**	**+0.1**
LCND	**La Caada**	**2.27**	**90**	*eP*		**Pn**	**10 58 40.3**	**+0.6**
LCND	**La Caada**	**2.27**	**90**	*eP*		**Pn**	**10 58 40.3**	**+0.6**

*SSNC **08** 11:08:03.9±1.1, 18°.28N×76°.60W, h9km±10km, MD2.5, ML1.7, MW2.7*
*JSN **08** 11:08:03.2±0.3, 18°.07N×76°.64W, h7km±3km, MD2.8*

ISC 08 11:08:00.8±1.3, 18°.3N±0°.1×76°.6W±0°.1, h16km±17km, n8, σ0s81/12, 2C-1D, Jamaica region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GWJ	**Greenwich**	**0.20**	**208**⇑	*iP*	**Pg**	**11 08 05.6**	**-0.2**
STH	**Stony Hill**	**0.25**	**224**⇑	*iP*	**Pg**	**11 08 06.7**	**+0.4**
HOJ	**Hope**	**0.28**	**205**	*iP*	**Pg**	**11 08 06.0**	**-0.8**
MTDJ	**Mount Denham**	**0.86**	**268**⇓	*eP*	**Pn**	**11 08 18.4**	**0.0**
MTDJ				*eS*	**Sn**	**11 08 31.1**	**+0.4**
MTDJ				IAML		11 08 31.9	
	comp=Z,95nm,0.4s						
MTDJ				IAML		11 08 32.3	
	59nm,0.2s						
CVJ	**Coleyville**	**0.86**	**268**	*iP*	**Pn**	**11 08 18.8**	**+0.3**
MCJ	**Malvern**	**1.06**	**252**	*iP*	**Pb**	**11 08 21.1**	**+0.2**
LMGC	**Las Mercedes**	**1.83**	**349**	*eP*	**Pn**	**11 08 32.4**	**+0.7**
LMGC				*eS*	**Sn**	**11 08 53.5**	**-1.1**
LMGC				IAML		11 08 56.9	
	comp=E,14nm,0.0s						
RCC	**Rio Carpintero**	**1.94**	**27**	*eP*	**Pn**	**11 08 34.5**	**+1.3**
RCC				*eS*	**Sn**	**11 08 56.7**	**-0.6**
RCC				*eSg*	**Sb**	**11 08 59.0**	**-0.8**
RCC				IAML		11 08 59.8	
	comp=E,1.4nm,0.2s						
RCC				IAML		11 09 00.7	
	comp=N,1.2nm,0.1s						

*BJI **08** 11:15:13.0±0.0, 46°.20N×143°.06E, h364km, mb4.2/27, mB4.5/18*
*MOS **08** 11:15:13.6±0.8, 46°.20N×143°.00E, h356km, mb4.0/14, Error ellipse: s-maj=8.7km s-min=6.1km az=94.8*
*NIED **08** 11:15:14.4, 46°.07N×143°.05E, h359km, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}3.38; $M_{\theta\theta}$0.11; $M_{\phi\phi}$-3.49; $M_{r\theta}$0.15; $M_{r\phi}$-1.34; $M_{\the

YUK AMB AMB 11 16 17.3
comp=N,200nm,0.8s
YUK *e*S **S** **11 16 56.4 -3.4**
YUK A A 11 17 04.4
comp=N,400nm,0.6s
YUK A A 11 17 04.4
comp=N,450nm,0.6s
GLVR Golovnino 2.98 143 *e*PN **Pn** **11 16 13.7 +0.3**
GLVR *e*S **S** **11 17 01.8 +0.8**
GLVR smax smax
comp=N,556nm,0.4s
GLVR smax smax
comp=E,404nm,0.4s
UGL Uglegorsk 3.01 348 *e*PN **Pn** **11 16 13.5 +0.1**
UGL *e*S **S** **11 17 00.2 -1.0**
UGL pmax pmax
comp=Z,400nm,1.0s
UGL pmax pmax
comp=Z,293nm,0.8s
UGL smax smax
comp=N,1µm,1.6s
UGL smax smax
comp=E,1µm,2.4s
UGL smax smax
comp=E,145nm,0.6s
UGL smax smax
comp=N,388nm,1.2s
UGL Uglegorsk 3.01 348 *e*P **Pn** **11 16 14.4 +1.0**
UGL AMB AMB 11 16 14.8
comp=N,430nm,1.0s
UGL AMB AMB 11 16 15.0
comp=N,300nm,0.8s
UGL *e*S **S** **11 17 01.0 -0.2**
UGL A A 11 17 01.2
comp=N,1µm,2.0s
UGL A A 11 17 01.2
comp=N,1µm,2.0s
UGL A A 11 17 02.0
comp=N,1µm,2.4s
UGL A A 11 17 02.0
comp=N,1µm,2.4s
UGL A A 11 17 02.0
comp=N,200nm,0.8s
UGL A A 11 17 02.0
comp=N,230nm,0.8s
JAK Akkeshi 3.36 158 *e*P **Pn** **11 16 16.2 -0.7**
JAK *e*S **S** **11 17 05.0 -2.4**
NMR Nemuro--Hokkai 3.37 144 *e*PN **Pn** **11 16 15.7 -1.3**
NMR *e*S **S** **11 17 04.7 -2.8**
NMR Nemuro--Hokkai 3.37 144 *e*P **Pn** **11 16 15.7 -1.3**
NMR AMB AMB 11 16 18.1
comp=N,40nm,0.4s
NMR *e*S **S** **11 17 04.2 -3.3**
NMR A A 11 17 05.2
comp=N,210nm,0.4s
NMR A A 11 17 05.2
comp=N,230nm,0.4s
AKK Akkeshi 3.38 157 *e*P **Pn** **11 16 16.5 -0.6**
AKK AMB AMB 11 16 18.4
comp=N,110nm,0.4s
AKK *e*S **S** **11 17 04.3 -3.4**
AKK A A 11 17 09.3
comp=N,1µm,0.4s
AKK A A 11 17 09.3
comp=N,800nm,0.4s
NEM2 Nemuro 2 3.38 144 *e*P **Pn** **11 16 15.6 -1.4**
NEM2 *e*S **S** **11 17 03.7 -4.0**
JEW Eniwo 3.48 199 Pn **Pn** **11 16 19.7 +1.7**
JEW Eniwo 3.48 199 P **Pn** **11 16 19.6 +1.6**
JEW *e*S **S** **11 17 09.7 +0.3**
KUR Kuril'sk 3.52 103 *d i*PN **Pn** **11 16 19.7 +1.4**
KUR S **S** **11 17 11.7 +1.7**
KUR pmax pmax
comp=Z,79nm,1.0s
KUR pmax pmax
comp=E,25nm,0.7s
KUR pmax pmax
comp=N,26nm,0.5s
KUR pmax pmax
comp=Z,687nm,3.0s
KUR smax smax
comp=E,651nm,4.6s
KUR smax smax
comp=N,597nm,4.2s
KUR smax smax
comp=N,36nm,0.3s
KUR smax smax
comp=E,25nm,0.4s
SHO Shikotan 3.53 129⇓ *i*PN **Pn** **11 16 17.0 -1.4**
SHO *e*S **S** **11 17 06.9 -3.3**
SHO pmax pmax
comp=Z,69nm,0.3s
SHO pmax pmax
comp=N,34nm,0.2s
SHO pmax pmax
comp=E,27nm,0.1s
SHO smax smax
comp=N,313nm,0.4s
SHO smax smax
comp=E,392nm,0.4s
SHO Shikotan 3.53 129 *e*P **Pn** **11 16 17.0 -1.4**
SHO AMB AMB 11 16 18.9
comp=E,70nm,0.2s
SHO *e*S **S** **11 17 06.9 -3.3**
SHO A A 11 17 10.4
comp=E,500nm,0.4s
SHO A A 11 17 10.4
comp=E,400nm,0.4s
JCH Churui 3.53 176 *e*P **Pn** **11 16 17.9 -0.7**
JCH *e*S **S** **11 17 05.8 -4.5**
JNBK Urakawa-nobuka 3.86 183 *e*P **Pn** **11 16 21.4 -0.4**
ERM Erimo 4.12 179 Pn **Pn** **11 16 25.3 +0.8**
ERM Erimo 4.12 179 *ce*PN **Pn** **11 16 25.2 +0.8**
ERM pmax pmax
comp=Z,197nm,0.5s
TEY Ternei 4.63 259⇑ *e*PN **Pn** **11 16 31.0 +1.3**
TEY *e* 11 17 26.9
TEY pmax pmax
comp=N,10.0nm,0.8s
TEY pmax pmax
comp=E,30nm,0.8s
TEY pmax pmax
comp=Z,30nm,0.8s
TEY pmax pmax
comp=E,50nm,6.4s
TEY pmax pmax
comp=N,70nm,5.7s
TEY pmax pmax
comp=Z,40nm,5.0s
TEY Ternei 4.63 259 *e*P **Pn** **11 16 31.2 +1.5**
TYV Tymovskoe 4.74 357 *e*P **Pn** **11 16 30.7 0.0**
TYV AMB AMB 11 16 31.0
comp=Z,40nm,0.5s
TYV *e*S **S** **11 17 32.4 -0.2**
TYV A A 11 17 34.7
comp=Z,60nm,0.9s
TYV A A 11 17 34.7
comp=Z,50nm,0.9s
JOSM Okushiri--Mats 4.79 213 P **Pn** **11 16 31.6 +0.2**
JOSM *e*S **S** **11 17 31.3 -2.6**
JOT Ohata 4.96 197 *e*P **Pn** **11 16 32.8 -0.6**
JOT *e*S **S** **11 17 32.2 -5.2**
JOMM Oshimamatsumae 5.10 206 *e*P **Pn** **11 16 35.1 +0.3**
JOMM *e*S **S** **11 17 35.5 -4.6**
JTM Tenmabayashi 5.53 196 Pn **Pn** **11 16 39.0 -0.7**
GRNR Gornyy 6.38 319⇓ *i*PN **Pn** **11 16 49.3 +0.1**
GRNR *e*S **S** **11 18 04.9 -1.4**
GRNR pmax pmax
comp=N,40nm,0.9s
GRNR pmax pmax
comp=E,40nm,0.9s
GRNR pmax pmax
comp=Z,50nm,0.9s
GRNR smax smax
comp=N,9.0nm,0.8s
GRNR MLR MLR
comp=E,230nm,20.0s
GRNR MLR MLR
comp=N,80nm,10.0s
GRNR MLR MLR
comp=Z,100nm,20.0s
USA0B Ussuriysk Arra 8.03 260 **Pn** **11 17 09.4 +0.8**
USA0B Ussuriysk Arra 8.03 260 PN **Pn** **11 17 09.4 +0.8**
USRK Ussuriysk Ar. 8.03 260 P **Pn** **11 17 09.3 +0.7**
comp=Z,11nm,0.5s,baz=66,slow=12,SNR=25
USRK S **S** **11 18 41.2 -0.7**
comp=Z,3.4nm,0.8s,baz=40,slow=21,SNR=4.8
KLR Kul'dur 8.21 296 P **Pn** **11 17 11.4 +0.8**
comp=Z,15nm,0.8s,baz=104,slow=13,SNR=52
KLR Kul'dur 8.21 296 *ce*PN **Pn** **11 17 11.1 +0.5**
KLR pmax pmax
comp=Z,25nm,0.9s
JMM Marumori 8.43 192 **Pn** **11 17 13.4 0.0**
JSD Sado 8.83 205 Pn **Pn** **11 17 18.2 0.0**
MDJ Mudanjiang 9.57 266 P **P** **11 17 28.0 -0.7**
MDJ Mudanjiang 9.57 266 P **P** **11 17 28.1 -0.7**
MDJ pmax pmax
comp=Z,260nm,3.8s
SKR Severo-Kuril's 9.83 58 *e*PN Pn 11 17 23.2 -6.6
SKR *e*S **S** **11 19 13.2 -7.8**
SKR pmax pmax
comp=Z,51nm,0.7s
SKR smax smax
comp=N,13nm,0.5s
SKR smax smax
comp=E,47nm,0.6s
SKR MLR MLR
comp=Z,100nm,15.0s
JYT Yasato 10.12 193 **Pn** **11 17 33.3 -0.3**
MJB9 Matsu-Tunnel 10.24 202 P **Pn** **11 17 35.2 +0.2**
MAJO Matsushiro 10.24 202 P **Pn** **11 17 35.2 +0.2**
MAJO Matsushiro 10.24 202 *i* PN **Pn** **11 17 35.1 +0.1**
MAJO pmax pmax
comp=Z,27nm,0.7s
MJAR Matsushiro Arr 10.24 202 P **P** **11 17 36.8 +0.4**
comp=Z,24nm,0.8s,baz=25,slow=12,SNR=78
MJAR Matsushiro Arr 10.24 202 **Pn** **11 17 35.1 +0.1**
BNX BinXian 10.88 274⇑ P **Pn** **11 17 42.4 -0.1**
BNX pmax pmax
comp=Z,29nm,1.0s
BNX pmax pmax
comp=Z,170nm,7.9s
JGF Kuroka 11.36 204 Pn **Pn** **11 17 46.9 -1.4**
INU Inuyama 11.69 205 **Pn** **11 17 52.0 -0.3**
PEA0B Petropavlovsk- 11.79 48 P **P** **11 17 53.7 +0.5**
PEA0B Petropavlovsk- 11.79 48 *i* PN **P** **11 17 54.2 +0.9**
PETK Petropavlovsk- 11.79 48 P **P** **11 17 54.1 +0.8**
comp=Z,8.9nm,0.8s,baz=218,slow=10,SNR=22
PETK Petropavlovsk- 11.79 48 P **P** **11 17 53.6 +0.3**
ZEA Zeya 12.67 313 *e*PN **Pn** **11 18 04.6 +1.0**
ZEA pmax pmax
comp=E,50nm,1.0s
ZEA pmax pmax
comp=N,80nm,0.9s
ZEA pmax pmax
comp=Z,130nm,0.7s
JHJ Hachijo jima 2 13.23 192 P **Pn** **11 18 13.3 +2.8**
comp=Z,30nm,0.4s,baz=281,slow=10,SNR=6.6
KSRS Korea Array 14.19 238 P **Pn** **11 18 22.4 +0.8**
comp=Z,1.4nm,0.6s,baz=45,slow=11,SNR=9.6
MA2 Magadan 14.24 16 P **P** **11 18 20.6 +0.5**
comp=Z,22nm,0.6s,baz=200,slow=11,SNR=19
MA2 Magadan 14.24 16 *ce*P **P** **11 18 20.3 +0.2**
MA2 pmax pmax
comp=Z,28nm,0.7s
HIA Hailar 15.96 290 P **P** **11 18 40.2 +1.1**
HIA IAmb IAmb 11 18 41.4
comp=Z,14nm,0.7s
HIA Hailar 15.96 290 P **P** **11 18 40.2 +1.1**
HIA pmax pmax
comp=Z,14nm,0.7s
SEY Seymchan 17.65 14 P **P** **11 18 57.4 +0.4**
comp=Z,22nm,0.4s,baz=206,slow=7.8,SNR=160
SEY Seymchan 17.65 14 *ce*P **P** **11 18 57.2 +0.2**
SEY pmax pmax
comp=Z,61nm,0.9s
YAK Yakutsk 17.68 339 *e*P **P** **11 18 55.5 -1.8**
YAK *e*S **S** **11 22 00.9 -1.4**
YAK pmax pmax
comp=Z,14nm,1.0s
YAK pmax pmax
comp=N,3.0nm,1.0s
YAK pmax pmax
comp=E,2.0nm,0.9s
YAK smax smax
comp=E,122nm,2.4s
YAK smax smax
comp=N,78nm,1.5s
XLT XiLinHaoTe 19.14 273 *e*P **P** **11 19 13.5 +0.3**
XLT pmax pmax
comp=N,33nm,0.5s
XLT pmax pmax
comp=N,120nm,5.3s
TIA Tai'an 21.78 252 *e*P **P** **11 19 39.5 +1.2**
TIA pmax pmax
comp=N,10.0nm,1.1s
TIA LR LR
comp=N,250nm,21.6s
TIA LR LR
comp=N,230nm,21.1s
TIA LR LR
comp=N,420nm,22.1s
NJ2 Nanjing 23.32 241 *e*P **P** **11 19 51.6 -0.7**
NJ2 pmax pmax
comp=N,6.0nm,0.5s
HHC Hu-ho-hao-te 23.33 268 *e*P **P** **11 19 52.4 0.0**
HHC pmax pmax
comp=N,42nm,0.7s
HHC pmax pmax
comp=N,340nm,8.8s
ULN Ulaanbaatar 24.45 287 P **P** **11 20 02.3 -0.3**
ULN Ulaanbaatar 24.45 287 *ce*P **P** **11 20 02.7 +0.2**
ULN pmax pmax
comp=Z,6.0nm,0.8s
SONM Songino Array 24.89 287 P **P** **11 20 06.8 +0.3**
comp=Z,4.8nm,0.7s,baz=79,slow=8.8,SNR=13
comp=Z,4.8nm,0.7s
SONM Songino Array 24.89 287 P **P** **11 20 05.5 -0.9**
BILL Bilibino 25.02 21 *e*P **P** **11 20 09.3 +2.2**
TIXI Tiksi 26.46 350 P **P** **11 20 17.8 -2.1**
comp=Z,0.6nm,0.4s,baz=90,slow=20,SNR=4.0
comp=Z,0.6nm,0.4s
TIXI Tiksi 26.46 350 IAmb IAmb 11 20 23.4
comp=Z,2.2nm,1.2s
KIWB Kanaga Island 26.50 63 P **P** **11 20 20.5 0.0**
XAN Xi'an 28.52 257 *e*P **P** **11 20 39.1 +0.4**
XAN pP pwP 11 21 45.3 -0.4
XAN pmax pmax
comp=Z,4.0nm,0.6s
LZH Lanzhou 30.89 265 *e*P **P** **11 20 56.7 -2.9**
LZH pP pwP 11 22 07.2 +0.2
LZH pmax pmax
comp=Z,18nm,1.4s
NIKH Nikolski High 31.46 60 P **P** **11 21 03.0 -1.0**
baz=277
GTA Gaotai 32.10 274 *e*P **P** **11 21 11.5 +1.6**
GTA pmax pmax
comp=Z,11nm,0.8s
N16K Nishlik Lake 36.32 45 P **P** **11 21 45.5 +0.1**
baz=274
CHNA Chernabura Isl 36.59 55 P **P** **11 21 47.5 -0.2**
CNBA Chernabura Isl 36.59 55 P **P** **11 21 48.1 +0.5**
O16K Kokwok River B 36.73 47 P **P** **11 21 48.7 -0.1**
baz=276
GOMU GeErMu 37.11 272 P **P** **11 21 51.1 -1.7**
GOMU pmax pmax
comp=Z,6.0nm,0.5s
GOMU pmax pmax
comp=Z,130nm,7.0s
ZAA0 Zalesovo Array 37.22 304 P **P** **11 21 51.8 -1.2**
ZALV Zalesovo Beam 37.22 304 P **P** **11 21 53.3 +0.3**
comp=Z,1.3nm,0.4s,baz=80,slow=9.4,SNR=5.5
ZALV PcP **PcP** **11 24 05.0 +0.9**
comp=Z,1.4nm,0.5s,baz=64,slow=3.4,SNR=6.6
comp=Z,1.3nm,0.4s
ZALV Zalesovo Beam 37.22 304 P **P** **11 21 51.8 -1.2**
TTA Tatalina 37.50 41 P **P** **11 21 55.2 -0.1**
TTA Tatalina 37.50 41 P **P** **11 21 55.2 -0.1**
TTA pmax pmax
comp=Z,8.0nm,1.2s
TTA Tatalina 37.50 41 P **P** **11 21 54.7 -0.5**
baz=273
P17K Kvichak River 37.61 47 P **P** **11 21 56.2 +0.1**
baz=277
A21K Barrow 37.71 27 P **P** **11 21 56.1 -0.7**
A21K Barrow 37.71 27 P **P** **11 21 55.8 -1.0**
baz=261
N18K Kilae Creek 37.72 45 P **P** **11 21 57.7 +0.6**
N18K Kilae Creek 37.72 45 P **P** **11 21 57.5 +0.4**
baz=276,SNR=5.1
SVW2 Sparrevohn 37.83 44 P **P** **11 21 58.8 +0.9**
PZH PanZhiHua 38.07 253 P **P** **11 21 59.9 -0.6**
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,150nm,6.8s
L19K White Mountain 38.08 42 P **P** **11 22 00.1 +0.1**
L19K White Mountain 38.08 42 P **P** **11 21 59.7 -0.4**
baz=275
O18K Koktuh Hills 38.15 46 P **P** **11 22 01.1 +0.5**
O18K Koktuh Hills 38.15 46 P **P** **11 22 00.9 +0.2**
baz=278
P18K Big Mountain, 38.20 47 P **P** **11 22 01.1 0.0**
baz=278
J20K Nowinta River 38.27 39 P **P** **11 22 01.8 +0.3**
J20K IAmb IAmb 11 22 02.6
comp=Z,18nm,0.9s
J20K Nowinta River 38.27 39 P **P** **11 22 01.4 -0.1**
baz=273,SNR=20
M19K Big River Lodg 38.32 43 P **P** **11 22 01.9 -0.1**
baz=276
K20K Telida 38.35 40 P **P** **11 22 02.5 +0.3**
K20K Telida 38.35 40 P **P** **11 22 02.2 0.0**
baz=274,SNR=6.8
IMAR Indian Mountai 38.38 36 P **P** **11 22 02.1 -0.4**
N19K Bonanza Creek 38.39 44 P **P** **11 22 03.5 +0.8**
N19K Bonanza Creek 38.39 44 P **P** **11 22 02.9 +0.1**
baz=277
L20K Farewell, AK 38.51 42 P **P** **11 22 03.7 +0.1**
baz=275
WMQ Urumqi 38.53 287 *e*P **P** **11 22 05.1 +1.0**
CHIR Chirikof Islan 38.62 53 P **P** **11 22 05.4 +0.9**
CHIR Chirikof Islan 38.62 53 P **P** **11 22 04.6 +0.1**
baz=282
H21K Melozitna Rive 38.78 37 P **P** **11 22 05.2 -0.5**
H21K Melozitna Rive 38.78 37 P **P** **11 22 05.2 -0.5**
baz=272,SNR=9.2
M20K Styx River 38.92 43 P **P** **11 22 07.8 +0.8**
M20K Styx River 38.92 43 P **P** **11 22 07.6 +0.5**
baz=277,SNR=6.0
Q19K Cape Douglas, 39.08 47 P **P** **11 22 08.5 +0.2**
Q19K IAmb IAmb 11 22 10.5
comp=Z,18nm,1.1s
Q19K Cape Douglas, 39.08 47 P **P** **11 22 08.2 -0.1**
baz=280
CHUM Lake Minchumin 39.09 39 P **P** **11 22 08.5 +0.2**
baz=275
I21K Tanana 39.15 37 P **P** **11 22 08.5 -0.3**
I21K Tanana 39.15 37 P **P** **11 22 08.4 -0.3**
baz=274,SNR=6.5
PPLA Purkeypile 39.24 41 P **P** **11 22 11.1 +1.3**
PPLA IAmb IAmb 11 22 11.6
comp=Z,13nm,1.2s
PPLA Purkeypile 39.24 41 P **P** **11 22 10.2 +0.5**
baz=276
OHAK Old Harbor 39.59 50 P **P** **11 22 12.7 +0.3**
baz=282
SKT Skwentna 39.66 42 P **P** **11 22 11.8 -1.2**
baz=278
MLY Manley 39.68 37 P **P** **11 22 12.8 -0.3**
baz=275,SNR=7.7
COLD Coldfoot 39.77 34 P **P** **11 22 13.5 -0.2**
COLD Coldfoot 39.77 34 P **P** **11 22 12.9 -0.9**
baz=273
Q20K Shuyak Island 39.78 48 P **P** **11 22 13.2 -0.8**
baz=281
KDAK Kodiak Island 39.84 49 P **P** **11 22 14.4 -0.1**
comp=Z,6.5nm,0.5s,baz=298,slow=4.3,SNR=34
comp=Z,6.5nm,0.5s
KDAK Kodiak Island 39.84 49 P **P** **11 22 13.6 -0.9**
KDAK IAmb IAmb 11 22 15.9
comp=Z,7.6nm,0.5s
KDAK Kodiak Island 39.84 49 P **P** **11 22 13.9 -0.6**
baz=282
TOLK Toolik Lake Re 39.96 32 P **P** **11 22 14.3 -1.1**
baz=271,SNR=5.2
TRF Thorofare Moun 40.04 40 P **P** **11 22 15.6 -0.6**
baz=277
H23K Yukon River 40.12 36 IAmb IAmb 11 22 18.2
comp=Z,12nm,1.0s
H23K Yukon River 40.12 36 P **P** **11 22 16.2 -0.5**
baz=275,SNR=12
I23K Minto, Yukon-K 40.25 37 P **P** **11 22 17.3 -0.4**
baz=276,SNR=14
BRSE Bradley Lake S 40.40 46 P **P** **11 22 18.9 -0.2**
baz=281
NEA2 Nenana 40.44 38 IAmb IAmb 11 22 20.4
comp=Z,13nm,0.7s
NEA2 Nenana 40.44 38 P **P** **11 22 18.9 -0.4**
baz=277,SNR=6.7
MCK McKinley 40.60 39 P **P** **11 22 20.6 0.0**
MCK McKinley 40.60 39 P **P** **11 22 20.6 0.0**
MCK pmax pmax
comp=Z,10.0nm,1.0s
MCK McKinley 40.60 39 P **P** **11 22 20.0 -0.7**
baz=278
RND Reindeer 40.68 40 P **P** **11 22 21.0 -0.4**
RND IAmb IAmb 11 22 21.6
comp=Z,12nm,1.2s
RND Reindeer 40.68 40 P **P** **11 22 21.0 -0.4**
RND pmax pmax
comp=Z,12nm,1.2s
MDM Murphy Dome 40.75 37 IAmb IAmb 11 22 23.0
comp=Z,10nm,1.0s
H24K Noodor Dome 40.80 36 P **P** **11 22 21.9 -0.3**
baz=276,SNR=13
WRH Wood River Hil 40.87 38 IAmb IAmb 11 22 24.1
comp=Z,12nm,1.1s
MK31 Makanchi Array 40.90 294 P **P** **11 22 23.0 -0.4**
MK31 Makanchi Array 40.90 294 *i* P **P** **11 22 22.9 -0.4**
MK31 pmax pmax
comp=Z,2.0nm,0.4s
MKAR Makanchi Array 40.90 294 P **P** **11 22 23.4 +0.1**
comp=Z,2.1nm,0.6s,baz=81,slow=8.2,SNR=24
MKAR PcP **PcP** **11 24 17.1 +1.0**
comp=Z,0.3nm,0.4s,baz=58,slow=5.7,SNR=3.5
comp=Z,2.1nm,0.6s
MKAR Makanchi Array 40.90 294 P **P** **11 22 23.0 -0.3**
MKAR Makanchi Array 40.90 294 *ce*P **P** **11 22 23.2 -0.1**
MKAR pmax pmax
comp=Z,2.0nm,0.6s
WAT1 Susitna Watana 40.91 41 P **P** **11 22 22.9 -0.2**
baz=279
GHO Glory Hole Cre 40.91 42 P **P** **11 22 23.1 -0.2**
GHO IAmb IAmb 11 22 24.5
comp=Z,14nm,0.7s
TCOL CIGO, UAF Yank 40.92 38 IAmb IAmb 11 22 24.5
comp=Z,20nm,0.8s
TCOL CIGO, UAF Yank 40.92 38 P **P** **11 22 22.6 -0.5**
baz=277
COLA College 40.92 38 P **P** **11 22 23.0 -0.1**
COLA IAmb IAmb 11 22 24.5
comp=Z,20nm,0.8s
COLA College 40.92 38 *i* P **P** **11 22 22.8 -0.4**
COLA College 40.92 38 P **P** **11 22 22.7 -0.4**
baz=277
SEW Seward 40.97 45 P **P** **11 22 23.2 -0.3**
baz=282
POKR Poker Plat Res 41.07 37 IAmb IAmb 11 22 26.2
comp=Z,9.0nm,0.5s
POKR Poker Plat Res 41.07 37 P **P** **11 22 24.0 -0.4**
baz=278,SNR=8.5
MAKZ Makanchi 41.10 294 P **P** **11 22 24.8 -0.1**
MAKZ Makanchi 41.10 294 P **P** **11 22 24.8 -0.1**
MAKZ pmax pmax
comp=Z,3.0nm,0.7s
SML Sawmill 41.18 42 P **P** **11 22 24.9 -0.4**
baz=280,SNR=6.3
KNK Knik Glacier 41.19 43 IAmb IAmb 11 22 26.9
comp=Z,16nm,1.0s
KNK Knik Glacier 41.19 43 P **P** **11 22 25.0 -0.5**
baz=281,SNR=6.2
WAT6 Susitna Watana 41.32 41 P **P** **11 22 25.7 -0.8**
baz=280
IL31 41.34 38 P **P** **11 22 26.2 -0.3**
IL31 IAmb IAmb 11 22 27.8
comp=Z,7.9nm,0.7s
ILAR Eielson Array 41.34 38 P **P** **11 22 25.8 -0.8**
comp=Z,5.4nm,0.6s,baz=275,slow=6.6,SNR=84
ILAR PcP **PcP** **11 24 16.6 -0.6**
comp=Z,0.7nm,0.7s,baz=272,slow=3.4,SNR=5.7
comp=Z,5.4nm,0.6s
HDA Harding Lake 41.37 38 P **P** **11 22 25.6 -1.2**
baz=279,SNR=7.5
DHY Denali Highway 41.40 40 IAmb IAmb 11 22 27.6
comp=Z,29nm,1.4s
DHY Denali Highway 41.40 40 P **P** **11 22 26.5 -0.7**
baz=280

M23K **Glacier View** 41.47 42 P P 11 22 27.2 -0.4
baz=281
SCM **Sheep Creek Mo** 41.64 42 IAmb IAmb 11 22 30.6
comp=Z,7.6nm,0.6s
SCM **Sheep Creek Mo** 41.64 42 P P 11 22 28.2 -0.9
baz=281
KURK **Kurchatov** 41.77 301 P P 11 22 28.9 -1.3
KURK IAmb IAmb 11 22 31.9
comp=Z,5.7nm,0.5s
KURK **Kurchatov** 41.77 301 P P 11 22 30.7 +0.5
KURK 11 24 19.6
KURBB **Kurchatov Arra** 41.86 301 P P 11 22 30.6 -0.2
comp=Z,4.9nm,0.5s,baz=72,slow=8.5,SNR=34
KURBB PcP sP 11 24 19.6 +0.2
comp=Z,0.4nm,0.4s,baz=71,slow=3.2,SNR=5.8
comp=Z,4.9nm,0.5s
KURBB **Kurchatov Arra** 41.86 301 P P 11 22 30.1 -0.8
GLI **Glacier Island** 41.95 43 P P 11 22 30.9 -0.5
baz=282
K24K **Donnelly Dome** 41.98 39 P P 11 22 30.3 -1.5
baz=280,SNR=9.2
J25K **Salcha River,** 42.01 38 P P 11 22 30.2 -1.8
baz=280
M24K **Tolsona, Glenn** 42.12 41 IAmb IAmb 11 22 40.0
comp=Z,8.6nm,0.6s
M24K **Tolsona, Glenn** 42.12 41 P P 11 22 33.1 +0.2
baz=282
PAX **Paxson** 42.27 40 P P 11 22 34.0 -0.1
PAX **Paxson** 42.27 40 P P 11 22 34.1 -0.1
PAX pmax pmax
comp=Z,4.0nm,1.2s
PAX **Paxson** 42.27 40 P P 11 22 33.3 -0.8
baz=282
KLU **Klutina** 42.37 42 IAmb IAmb 11 22 36.5
comp=Z,8.3nm,0.6s
KLU **Klutina** 42.37 42 P P 11 22 34.9 -0.1
baz=283,SNR=10.0
RIDG **Independent Ri** 42.40 39 IAmb IAmb 11 22 35.6
comp=Z,24nm,1.5s
RIDG **Independent Ri** 42.40 39 P P 11 22 33.6 -1.5
baz=281,SNR=8.4
DIV **Divide** 42.52 43 P P 11 22 36.6 +0.5
DIV IAmb IAmb 11 22 37.4
comp=Z,33nm,1.5s
HARP **HAARP** 42.53 41 P P 11 22 36.5 +0.4
baz=282,SNR=6.0
Q23K **Middleton Isla** 42.65 45 P P 11 22 36.9 -0.1
baz=285
EYAK **Cordova Ski Ar** 42.67 44 P P 11 22 37.0 -0.2
baz=284
SCRK **Sand Creek** 42.72 38 IAmb IAmb 11 22 37.8
comp=Z,29nm,1.4s
SCRK **Sand Creek** 42.72 38 P P 11 22 36.7 -1.1
baz=282,SNR=24
J26L **Joseph Creek** 42.80 38 P P 11 22 38.2 -0.1
baz=281
N25K **Chitina, Valde** 42.96 42 P P 11 22 39.5 -0.1
baz=284
BMRM **Bremner River** 43.11 43 P P 11 22 41.0 +0.2
baz=284
L26K **Log Cabin Wild** 43.20 40 P P 11 22 41.2 -0.3
baz=283,SNR=8.7
M26K **Nabesna, AK** 43.51 41 P P 11 22 44.4 +0.5
baz=284,SNR=11
K27K **Chicken** 43.53 38 IAmb IAmb 11 22 45.5
comp=Z,24nm,1.2s
K27K **Chicken** 43.53 38 P P 11 22 43.5 -0.5
baz=283
MCARA **McCarthy VSAT** 43.75 42 P P 11 22 46.2 +0.4
baz=285
L27K **Beaver Creek,** 43.87 39 IAmb IAmb 11 22 48.9
comp=Z,12nm,1.1s
L27K **Beaver Creek,** 43.87 39 P P 11 22 47.0 +0.3
baz=284,SNR=21
M27K **Edge Creek, AK** 44.02 40 P P 11 22 48.5 +0.5
baz=285,SNR=11
BVCY **Beaver Creek** 44.47 40 P P 11 22 51.2 -0.2
baz=286
BARN **Barnard Glacie** 44.47 42 IAmb IAmb 11 22 53.9
comp=Z,6.3nm,0.5s
YAH **Yahtse** 44.63 43 IAmb IAmb 11 23 05.0
comp=Z,17nm,1.3s
CTG **Chitna Glacier** 44.65 42 P P 11 22 53.5 +0.5
baz=287,SNR=11
CTGM **Chitina Glacie** 44.65 42 IAmb IAmb 11 22 55.2
comp=Z,12nm,0.5s
DAWY **Dawson** 44.67 38 P P 11 22 52.9 -0.2
DAWY **Dawson** 44.67 38 P P 11 22 52.6 -0.5
baz=285
I29M **Ogilvie Camp,** 44.79 36 P P 11 22 53.7 -0.2
baz=285
YUK3 **Moose Creek** 44.82 41 P P 11 22 53.8 -0.7
baz=286
EPYK **Eagle Plains** 45.16 34 IAmb IAmb 11 22 58.2
comp=Z,17nm,0.6s
EPYK **Eagle Plains** 45.16 34 P P 11 22 56.6 -0.2
baz=285,SNR=20
YUK8 **Steele Glacier** 45.29 42 P P 11 22 58.2 +0.1
baz=288
INK **Inuvik** 45.85 31 P P 11 23 01.6 -0.4
comp=Z,8.7nm,0.5s,baz=288,slow=6.0,SNR=65
comp=Z,8.7nm,0.5s
INK **Inuvik** 45.85 31 P P 11 23 01.8 -0.2
INK IAmb IAmb 11 23 02.8
comp=Z,8.7nm,0.5s
INK **Inuvik** 45.85 31 P P 11 23 01.8 -0.2
INK pmax pmax
comp=Z,9.0nm,0.5s
INK **Inuvik** 45.85 31 P P 11 23 01.2 -0.8
baz=286,SNR=13
PNL **Peninsula** 45.97 44 P P 11 23 03.2 +0.1
baz=289
YUK6 **Outpost Mounta** 46.04 42 P P 11 23 04.6 +0.7
baz=289
M30M **Minto, Yukon** 46.23 39 P P 11 23 05.8 +0.8
baz=288,SNR=7.5
N30M **Aishikik Lake** 46.45 41 P P 11 23 07.2 +0.3
baz=289
HYT **Haines Junctio** 46.48 42 P P 11 23 08.3 +1.2
HYT IAmb IAmb 11 23 09.6
comp=Z,16nm,1.1s
HYT **Haines Junctio** 46.48 42 P P 11 23 08.1 +1.0
baz=290,SNR=15
OTUK **Ortayu** 46.50 300 P P 11 23 06.7 -0.7
N31M **Braeburn, Yuko** 47.04 40 P P 11 23 12.6 +1.3
baz=290,SNR=7.6
O30N **Mendenhall** 47.15 41 P P 11 23 12.6 +0.4
baz=291
M31M **Drury Creek, Y** 47.41 39 P P 11 23 14.6 +0.5
M31M **Drury Creek, Y** 47.41 39 P P 11 23 14.2 +0.1
baz=291
A36M **Sachs Harbour** 47.44 25 P P 11 23 14.5 +0.4
A36M IAmb IAmb 11 23 15.6
comp=Z,12nm,1.1s
A36M **Sachs Harbour** 47.44 25 P P 11 23 12.7 -1.4
baz=289
PLBC **Pleasant Camp** 47.49 43 P P 11 23 15.0 +0.3
baz=292
FARO **Faro, Yukon** 47.85 39 P P 11 23 17.6 +0.1
baz=291
SKAG **Skagway** 47.98 43 P P 11 23 19.0 +0.6
baz=292
MMPY **Sheldon Lake,** 48.61 38 P P 11 23 23.7 +0.5
baz=293
C36M **Paulatuk** 48.75 28 P P 11 23 23.8 -0.3
C36M **Paulatuk** 48.75 28 P P 11 23 23.8 -0.3
baz=293
P33M **Teslin, Yukon** 48.86 41 P P 11 23 26.4 +1.3
P33M IAmb IAmb 11 23 27.4
comp=Z,13nm,1.4s
P33M **Teslin, Yukon** 48.86 41 P P 11 23 26.2 +1.0
baz=293,SNR=6.5
KK31 **Karatay Array** 50.03 294 P P 11 23 34.2 +0.1
KK31 **Karatay Array** 50.03 294 *i* P P 11 23 34.0 -0.1
KKAR **Karatay Array** 50.03 294 P P 11 23 34.0 -0.1
KKAR **Karatay Array** 50.03 294 P P 11 23 34.4 +0.3
KKAR IAmb IAmb 11 23 36.4
comp=Z,4.1nm,0.6s
KKAR **Karatay Array** 50.03 294 P P 11 23 34.0 -0.1
KKAR pmax pmax
comp=Z,4.0nm,0.6s
TGTN **Hyland Airport** 50.34 38 P P 11 23 37.4 +1.2
baz=296
WRAK **Wrangell Islan** 50.69 46 P P 11 23 40.1 +1.4
baz=297
CRAG **Craig** 50.72 47 P P 11 23 40.0 +1.0
baz=297

DLBC **Dease Lake** 50.90 43 P P 11 23 42.6 +2.2
DLBC **Dease Lake** 50.90 43 P P 11 23 41.6 +1.1
baz=297
EUNU **Eureka** 51.02 10 P P 11 23 40.6 -0.3
WRGLY **Wrigley** 51.58 35 P P 11 23 46.1 +0.9
baz=298
DIB **Dawson Inlet,** 52.11 49 P P 11 23 51.0 +1.8
AB31 **Akbulak array** 53.28 306 *eP* P 11 23 57.7 -0.1
ABKAR **Akbulak array** 53.28 306 P P 11 23 57.7 -0.1
AKTO **Aktyubinsk** 53.75 308 P P 11 24 01.9 +0.7
comp=Z,1.0nm,0.6s,baz=80,slow=11,SNR=2.4
comp=Z,1.0nm,0.6s
YKA **Yellowknife Ar** 55.44 33 P P 11 24 12.9 0.0
comp=Z,8.5nm,0.6s,baz=308,slow=7.3,SNR=56
comp=Z,8.5nm,0.6s
YKA **Yellowknife Ar** 55.44 33 P P 11 24 12.5 -0.4
YKA **Yellowknife Ar** 55.44 33 *ceP* P 11 24 13.0 0.0
YKA pmax pmax
comp=Z,9.0nm,0.6s
KBL **Kabul** 55.66 286 P P 11 24 15.5 +0.3
KBL IAmb IAmb 11 24 15.8
comp=Z,3.5nm,0.4s
KBL **Kabul** 55.66 286 P P 11 24 15.5 +0.3
KBL pmax pmax
comp=Z,3.0nm,0.4s
DAG **Danmarks Havn** 56.82 355 *i* P P 11 24 20.1 -2.3
DAG IAmb IAmb 11 24 21.9
comp=Z,5.2nm,0.9s
D03D **Eldon** 60.23 51 P P 11 24 47.4 +1.3
baz=307
FIA1 **FINESS Array S** 61.39 331 P P 11 24 53.2 -0.4
FINES **FINESS Array B** 61.39 331 P P 11 24 53.0 -0.6
comp=Z,3.3nm,0.5s,baz=42,slow=7.7,SNR=23
comp=Z,3.3nm,0.5s
FINES **FINESS Array B** 61.39 331 *i* P P 11 24 52.7 -0.9
FINES pmax pmax
comp=Z,3.0nm,0.5s
SUMG **Summit** 61.59 1 P P 11 24 55.5 +0.2
SUMG IAmb IAmb 11 24 55.8
comp=Z,4.7nm,0.6s
SUMG **Summit** 61.59 1 P P 11 24 55.5 +0.2
SUMG pmax pmax
comp=Z,5.0nm,0.6s
SUMG **Summit** 61.59 1 *i* P P 11 24 53.8 -1.5
EDM **Edmonton** 61.60 42 P P 11 24 56.6 +1.3
EDM **Edmonton** 61.60 42 P P 11 24 56.6 +1.3
EDM pmax pmax
comp=Z,26nm,1.1s
LTY **Liberty** 61.70 50 P P 11 24 57.8 +1.7
B08A **Colville Reser** 61.73 49 P P 11 24 57.9 +1.7
I03D **Drain, OR** 62.44 55 P P 11 25 02.7 +1.8
baz=309
C09A **Chrisman Ranch** 62.63 49 P P 11 25 03.0 +0.9
C09A IAmb IAmb 11 25 04.2
comp=Z,9.2nm,1.1s
HAWA **Hanford** 62.85 50 IAmb IAmb 11 25 06.0
comp=Z,6.8nm,0.8s
K02D **Willamette Mer** 62.88 56 P P 11 25 05.1 +1.2
baz=309
I04A **Tendick Farm,** 62.91 54 P P 11 25 05.5 +1.5
baz=309
NEW **Newport** 62.93 48 IAmb IAmb 11 25 06.6
comp=Z,4.9nm,0.8s
NEW **Newport** 62.93 48 P P 11 25 05.2 +1.1
baz=310
I05D **Terrebonne, OR** 63.16 53 P P 11 25 07.1 +1.4
baz=309
SCO **Scoresbysund** 63.18 354 *eP* P 11 25 03.8 -1.5
SCO IAmb IAmb 11 25 09.5
comp=Z,3.2nm,1.0s
L02F **Cave Junction** 63.30 56 P P 11 25 08.2 +1.7
baz=309
J04D **Umpqua Nationa** 63.42 55 P P 11 25 08.5 +0.9
baz=309
E09A **Wood Farm, Sta** 63.52 50 IAmb IAmb 11 25 10.4
comp=Z,11nm,0.9s
J05D **Fort Rock, OR** 63.89 54 P P 11 25 12.6 +2.1
baz=310,SNR=5.0
L04D **Klamath Falls** 63.96 55 P P 11 25 12.6 +1.6
baz=310
WALA **Waterton Lakes** 64.03 45 P P 11 25 12.2 +0.8
WALA IAmb IAmb 11 25 13.4
comp=Z,6.2nm,0.9s
F10A **Beach Ranch, E** 64.35 50 IAmb IAmb 11 25 16.9
comp=Z,5.2nm,1.0s
JTMT **Jette** 64.72 47 IAmb IAmb 11 25 19.0
comp=Z,8.6nm,1.1s
BMO **Blue Mountains** 65.04 51 IAmb IAmb 11 25 20.4
comp=Z,8.0nm,1.4s
ICESG **Greenland Ices** 65.08 1 *i* P P 11 25 17.0 -0.9
MOD **Modoc Plateau** 65.31 55 IAmb IAmb 11 25 21.8
comp=Z,4.0nm,0.7s
J08A **Circle Bar Ran** 65.38 53 IAmb IAmb 11 25 23.1
comp=Z,6.6nm,1.1s
FCC **Fort Churchill** 65.39 29 P P 11 25 19.9 +0.3
FCC IAmb IAmb 11 25 20.4
comp=Z,8.6nm,0.9s
FCC **Fort Churchill** 65.39 29 P P 11 25 19.9 +0.3
FCC pmax pmax
comp=Z,9.0nm,0.9s
MSO **Missoula** 65.50 47 P P 11 25 21.6 +0.9
baz=312,SNR=6.2
PLID **Pearl Lake** 65.58 50 IAmb IAmb 11 25 23.5
comp=Z,4.5nm,0.9s
NACGM **Naroch** 65.85 325 *eP* P 11 25 21.9 -0.7
baz=43
WVOR **Wild Horse Val** 65.90 53 IAmb IAmb 11 25 26.0
comp=Z,5.9nm,1.1s
KBZ **Khabaz** 66.02 309 *i* P P 11 25 23.8 -0.1
KBZ pmax pmax
comp=Z,1.0nm,0.9s
WB0 **Warramunga Arr** 66.05 189 P P 11 25 25.8 +1.5
WB0 IAmb IAmb 11 25 39.7
comp=Z,4.2nm,1.1s
WR0 **Warramunga Arr** 66.23 189 P P 11 25 26.8 +1.4
WR0 IAmb IAmb 11 25 29.6
comp=Z,6.4nm,1.2s
WB2 **Warramunga Arr** 66.23 189 P P 11 25 26.9 +1.5
WB2 IAmb IAmb 11 25 27.5
comp=Z,5.6nm,1.2s
WRA **Warramunga Arr** 66.23 189 P P 11 25 26.7 +1.3
comp=Z,1.1nm,0.5s,baz=5.3,slow=6.7,SNR=28
comp=Z,1.1nm,0.5s
WRA **Warramunga Arr** 66.23 189 P P 11 25 26.8 +1.3
WRA **Warramunga Arr** 66.23 189 *i* P P 11 25 25.0 -0.4
WRA pmax pmax
comp=Z,1.0nm,0.5s
NB2 **NORSAR Subarra** 66.28 337 P P 11 25 24.7 -0.6
comp=Z,0.6nm,0.5s,baz=34,slow=6.5
NOA **NORSAR Array B** 66.28 337 P P 11 25 25.0 -0.4
comp=Z,0.9nm,0.6s,baz=36,slow=6.1,SNR=3.9
comp=Z,0.9nm,0.6s
NOA **NORSAR Array B** 66.28 337 P P 11 25 25.0 -0.4
BEKR **Beckworth** 66.60 56 IAmb IAmb 11 25 30.2
comp=Z,6.9nm,1.0s
EGMT **Eagleton** 66.77 44 P P 11 25 29.5 +0.8
baz=314
MFID **Camas Ranch** 66.79 51 IAmb IAmb 11 25 31.6
comp=Z,4.8nm,0.8s
PAHR **Pah Rah Range** 67.27 56 IAmb IAmb 11 25 34.5
comp=Z,8.4nm,0.9s
EMB **Emerald Bay** 67.34 57 IAmb IAmb 11 25 35.1
comp=Z,6.7nm,0.8s
VCNR **Virginia City** 67.39 56 IAmb IAmb 11 25 35.5
comp=Z,4.7nm,0.8s
HLID **Hailey** 67.45 50 P P 11 25 34.3 +1.1
baz=313
DY2G **Dye2** 67.50 4 *i* P P 11 25 31.0 -2.1
BOZ **Bozeman (W)** 67.51 47 IAmb IAmb 11 25 35.8
comp=Z,7.8nm,0.8s
BOZ **Bozeman (W)** 67.51 47 P P 11 25 34.6 +1.2
baz=314,SNR=14
PNTR **Pine Nut** 67.56 57 IAmb IAmb 11 25 36.7
comp=Z,7.7nm,0.9s
CMB **Columbia Colle** 67.80 58 IAmb IAmb 11 25 37.7
comp=Z,4.5nm,0.8s
AKASG **Malin Array Be** 67.90 321 P P 11 25 34.6 -0.9
comp=Z,0.5nm,0.4s,baz=40,slow=6.6,SNR=6.1
comp=Z,0.5nm,0.4s
AKBB **Malin Array Si** 67.90 321 *ceP* P 11 25 34.2 -1.3
BMN **Battle Mountai** 68.02 54 IAmb IAmb 11 25 39.0
comp=Z,4.3nm,0.6s
YHL **Hebgen Lake** 68.26 47 IAmb IAmb 11 25 40.8
comp=Z,7.3nm,1.0s
RYN **Ryan** 68.49 56 IAmb IAmb 11 25 42.3
comp=Z,6.3nm,0.9s
YMR **Madison River** 68.50 47 IAmb IAmb 11 25 42.2

comp=Z,13nm,1.3s
NVAR **Mina Array Bea** 68.75 56 P P 11 25 43.1 +1.8
comp=Z,5.5nm,0.7s,baz=295,slow=5.8,SNR=69
comp=Z,5.5nm,0.7s
NV11 **Mina Array Sit** 68.84 56 IAmb IAmb 11 25 44.3
comp=Z,5.2nm,0.9s
H17A **Grant Village** 68.89 47 IAmb IAmb 11 25 46.1
comp=Z,7.7nm,0.8s
H17A **Grant Village** 68.89 47 P P 11 25 44.8 +2.8
baz=314,SNR=10
RLMT **Red Lodge** 69.04 46 IAmb IAmb 11 25 45.0
comp=Z,4.9nm,0.7s
RLMT **Red Lodge** 69.04 46 P P 11 25 44.5 +1.6
baz=315,SNR=5.2
DGMT **Dagmar** 69.08 41 P P 11 25 43.5 +0.6
baz=317
MOOW **Moose Ponds** 69.25 48 IAmb IAmb 11 25 47.3
comp=Z,6.7nm,1.1s
LAO **LASA Array** 69.42 43 P P 11 25 45.6 +0.6
baz=316
HVU **Hansel Valley** 69.55 51 IAmb IAmb 11 25 48.7
comp=Z,4.0nm,1.0s
LCH **Last Change Ra** 69.95 57 IAmb IAmb 11 25 50.6
comp=Z,2.7nm,0.7s
ASAR **Alice Springs** 69.96 189 P P 11 25 50.6 +2.3
comp=Z,1.7nm,0.8s,baz=2.7,slow=5.2,SNR=19
comp=Z,1.7nm,0.8s
VES **Vestal, Richgr** 70.05 59 P P 11 25 49.6 +0.8
baz=313
CWC **Cottonwood Cre** 70.23 58 P P 11 25 51.2 +1.0
baz=313
GRAC **Grapevine Rang** 70.27 57 P P 11 25 52.0 +1.7
baz=313
HWUT **Hardware Ranch** 70.32 50 IAmb IAmb 11 25 53.4
comp=Z,7.6nm,1.0s
R11A **Troy Canyon, C** 70.37 55 IAmb IAmb 11 25 52.9
comp=Z,2.1nm,0.6s
R11A **Troy Canyon, C** 70.37 55 P P 11 25 51.9 +0.9
baz=314
ISA **Isabella, Lake** 70.53 59 P P 11 25 52.4 +0.5
baz=313
BW06 **Boulder Array** 70.56 48 IAmb IAmb 11 25 54.1
comp=Z,6.6nm,0.8s
BW06 **Boulder Array** 70.56 48 P P 11 25 53.1 +0.9
baz=316,SNR=8.3
PD31 **Pinedale Array** 70.56 48 IAmb IAmb 11 25 54.1
comp=Z,5.8nm,0.8s
PDAR **Pinedale Array** 70.56 48 P P 11 25 53.2 +1.0
comp=Z,6.3nm,0.9s,baz=318,slow=2.0,SNR=35
comp=Z,6.3nm,0.9s
DUG **Dugway, Tooele** 70.64 52 IAmb IAmb 11 25 55.2
comp=Z,5.2nm,0.8s
DUG **Dugway, Tooele** 70.64 52 P P 11 25 54.2 +1.6
baz=315,SNR=7.8
MPMC **Manual Prospec** 70.84 58 P P 11 25 55.3 +1.4
baz=314,SNR=8.4
FURC **Furnace Creek,** 70.93 57 P P 11 25 55.7 +1.6
baz=314,SNR=10
TPNV **Topopah Spring** 70.95 56 P P 11 25 55.9 +1.4
baz=314,SNR=14
JLU **JordanElle** 71.09 51 IAmb IAmb 11 25 58.5
comp=Z,6.2nm,1.3s
LRMC **Laurel Mtn Rad** 71.12 58 P P 11 25 56.8 +1.2
baz=314
NLU **North Lily Min** 71.21 52 IAmb IAmb 11 25 58.6
comp=Z,5.6nm,0.9s
PSUT **Pine Spring** 71.22 54 IAmb IAmb 11 25 58.6
comp=Z,3.3nm,0.9s
ULM **Lac du Bonnet** 71.32 35 P P 11 25 56.4 +0.1
comp=Z,14nm,0.6s,baz=317,slow=6.9,SNR=21
comp=Z,14nm,0.6s
ULM **Lac du Bonnet** 71.32 35 P P 11 25 56.7 +0.5
ULM **Lac du Bonnet** 71.32 35 P P 11 25 56.7 +0.5
ULM pmax pmax
comp=Z,15nm,0.7s
PRN **Pahroc Range** 71.33 55 IAmb IAmb 11 25 59.1
comp=Z,3.8nm,0.8s
EDW2 **Edwards Air Fo** 71.35 59 P P 11 25 58.0 +1.2
baz=314
MPU **Maple Canyon** 71.41 51 IAmb IAmb 11 25 59.2
comp=Z,5.2nm,0.6s
SHOC **Shoshone, Teco** 71.66 57 P P 11 25 59.7 +1.1
baz=314
GSC **Goldstone, Bar** 71.77 58 IAmb IAmb 11 26 01.2
comp=Z,4.5nm,0.6s
GSC **Goldstone, Bar** 71.77 58 P P 11 26 00.2 +1.0
baz=314,SNR=5.7
SHPR **Sheep Range** 71.89 56 IAmb IAmb 11 26 03.0
comp=Z,6.4nm,0.9s
BFSC **Mount Baldy Ra** 71.99 59 P P 11 26 01.5 +0.8
baz=314
TMUT **Trail Mountain** 72.14 52 IAmb IAmb 11 26 04.1
comp=Z,4.8nm,0.7s
MVU **Marysvale** 72.16 53 IAmb IAmb 11 26 05.7
comp=Z,9.8nm,1.1s
TUQ **Turquoise Moun** 72.19 57 P P 11 26 02.7 +0.9
baz=314
K22A **Casper** 72.19 47 P P 11 26 02.3 +0.5
baz=317
RSSD **Black Hills** 72.34 44 P P 11 26 03.0 +0.4
RSSD IAmb IAmb 11 26 04.4
comp=Z,14nm,1.2s
RSSD **Black Hills** 72.34 44 P P 11 26 03.0 +0.4
RSSD pmax pmax
comp=Z,14nm,1.3s
RSSD **Black Hills** 72.34 44 P P 11 26 03.1 +0.4
baz=318
HEC **Hector,Ludlow** 72.37 58 P P 11 26 04.1 +1.3
baz=314,SNR=5.7
BBRC **Big Bear Solar** 72.42 59 P P 11 26 04.3 +1.0
baz=314,SNR=5.1
P18A **Preston Nutter** 72.43 51 IAmb IAmb 11 26 06.0
comp=Z,7.6nm,1.0s
MTPU **Mount Pierson** 72.50 53 IAmb IAmb 11 26 06.6
comp=Z,2.7nm,0.8s
SRU **San Rafael Swe** 72.65 51 IAmb IAmb 11 26 07.3
comp=Z,8.0nm,0.9s
GMRC **Granite Mounta** 72.80 58 P P 11 26 06.8 +1.4
baz=315,SNR=6.9
AGMN **Agassiz Nation** 72.84 37 IAmb IAmb 11 26 07.6
comp=Z,3.7nm,0.7s
AGMN **Agassiz Nation** 72.84 37 P P 11 26 04.9 -0.3
baz=322
O20A **White River Ci** 73.14 49 IAmb IAmb 11 26 09.4
comp=Z,7.6nm,1.1s
O20A **White River Ci** 73.14 49 P P 11 26 08.1 +0.8
baz=317
PFO **Pinyon Flats O** 73.14 59 P P 11 26 08.1 +0.7
baz=315
BELC **Belle Mtn. Jos** 73.15 58 P P 11 26 08.0 +0.6
baz=315
TPFO **Pinon Flats** 73.15 59 P P 11 26 07.9 +0.5
baz=315
IRM **Iron Mountain** 73.54 58 P P 11 26 11.0 +1.4
baz=315,SNR=6.7
U15A **North Ibm** 73.58 54 IAmb IAmb 11 26 13.0
comp=Z,5.9nm,0.8s
MONP2 **Monument Peak** 73.67 60 P P 11 26 11.3 +0.7
baz=315
B35A **Bob, Littlefor** 73.67 36 P P 11 26 10.6 +0.5
BC3 **Big Chuckawall** 73.71 58 P P 11 26 11.6 +1.0
baz=315
BR131 **Keskin Array S** 73.77 311 P P 11 26 07.1 -3.8
BR131 **Keskin Array S** 73.77 311 P P 11 26 07.1 -3.8
BR131 pmax pmax
comp=Z,9.0nm,0.7s
N23A **Red Feather La** 73.78 47 P P 11 26 11.7 +0.5
baz=316
CLL **Collm** 73.81 330 *i* P P 11 26 11.0 +0.2
CLL **Collm** 73.81 330 *i* P P 11 26 11.0 +0.2
PV23 **Carpenter Ridg** 73.94 51 IAmb IAmb 11 26 14.4
comp=Z,7.7nm,0.7s
SWSC **Sam W. Stewart** 74.00 59 P P 11 26 12.9 +0.7
baz=315
PDMCI **Parker Dam,Lak** 74.03 57 P P 11 26 13.6 +1.3
baz=315
IKP **In-Ko-Pah, Jac** 74.03 60 P P 11 26 13.6 +1.1
baz=315
PV11 **David Mesa, Pa** 74.13 51 IAmb IAmb 11 26 15.6
comp=Z,13nm,1.2s
PV13 **Radium Mtn., P** 74.26 51 IAmb IAmb 11 26 16.4
comp=Z,7.5nm,0.8s
PV15 **Paradox Valley** 74.31 51 IAmb IAmb 11 26 16.4
comp=Z,9.5nm,1.0s
SMCO **Snowmass** 74.50 49 IAmb IAmb 11 26 17.8
comp=Z,4.1nm,0.8s
GLA **Glamis** 74.51 58 P P 11 26 16.5 +1.4
baz=315

WUAZ	**Wupatki**	**74.75**	**55**	IAmb	IAmb	11 26 19.6	
	comp=Z,3.2nm,0.8s						
WUAZ	**Wupatki**	**74.75**	**55**	P	**P**	**11 26 18.2**	**+1.5**
	baz=316						
ISCO	**Idaho Springs**	**74.75**	**48**	P	**P**	**11 26 17.6**	**+0.8**
	baz=318						
EYMN	**Ely**	**74.89**	**35**	P	**P**	**11 26 17.5**	**+0.5**
EYMN	**Ely**	**74.89**	**35**	P	**P**	**11 26 17.0**	**0.0**
	baz=324,SNR=16						
MVCO	**Mesa Verde**	**75.12**	**52**	IAmb	IAmb	11 26 21.1	
	comp=Z,5.9nm,0.8s						
MVCO	**Mesa Verde**	**75.12**	**52**	P	**P**	**11 26 20.0**	**+1.2**
	baz=317,SNR=6.2						
113A	**Mohawk Valley,**	**75.34**	**58**	IAmb	IAmb	11 26 22.1	
	comp=Z,3.3nm,0.9s						
X16A	**Lo Mia Camp, P**	**75.50**	**55**	IAmb	IAmb	11 26 23.9	
	comp=Z,5.0nm,0.8s						
GERES	**GERESS Array B**	**75.61**	**328**	P	**P**	**11 26 21.8**	**+0.6**
	comp=Z,0.4nm,0.2s,baz=5.7,slow=4.0,SNR=4.2						
	comp=Z,0.4nm,0.2s						
Q24A	**Divide**	**75.61**	**48**	P	**P**	**11 26 22.3**	**+0.6**
	baz=318						
S22A	**4UR Ranch, Cre**	**75.63**	**50**	IAmb	IAmb	11 26 24.6	
	comp=Z,4.1nm,1.0s						
S22A	**4UR Ranch, Cre**	**75.63**	**50**	P	**P**	**11 26 23.2**	**+1.5**
	baz=318						
ECSD	**EROS Data Cent**	**76.10**	**40**	P	**P**	**11 26 24.3**	**+0.3**
	baz=322,SNR=8.8						
X18A	**Snowflake**	**76.27**	**54**	IAmb	IAmb	11 26 27.6	
	comp=Z,3.0nm,0.7s						
SCHQ	**Schefferville**	**76.28**	**17**	P	**P**	**11 26 24.5**	**-0.2**
	comp=Z,4.9nm,0.7s,baz=351,slow=6.2,SNR=6.2						
	comp=Z,4.9nm,0.7s						
SDCO	**Great Sand Dun**	**76.34**	**49**	P	**P**	**11 26 26.5**	**+0.8**
	baz=318						
214A	**Organ Pipe Nat**	**76.48**	**58**	P	**P**	**11 26 27.8**	**+1.5**
	baz=316						
COWI	**Conover**	**77.33**	**34**	IAmb	IAmb	11 26 31.6	
	comp=Z,5.1nm,0.8s						
T25A	**Trinidad**	**77.37**	**49**	P	**P**	**11 26 32.0**	**+0.6**
	baz=319						
TUC	**Tucson**	**77.41**	**56**	P	**P**	**11 26 32.7**	**+1.2**
	baz=317						
ANMO	**Albuquerque**	**77.91**	**52**	P	**P**	**11 26 35.2**	**+0.9**
ANMO				IAmb	IAmb	11 26 37.0	
	comp=Z,7.0nm,1.4s						
ANMO	**Albuquerque**	**77.91**	**52**	*ce*P	**P**	**11 26 35.2**	**+0.9**
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ANMO	**Albuquerque**	**77.91**	**52**	P	**P**	**11 26 35.6**	**+1.3**
	baz=318						
N35A	**Tabor**	**78.81**	**41**	P	**P**	**11 26 39.1**	**+0.2**
121A	**Cookes Peak, D**	**78.96**	**54**	P	**P**	**11 26 41.6**	**+1.6**
	baz=318						
VLDQ	**Val d'Or**	**79.69**	**26**	P	**P**	**11 26 42.7**	**-0.7**
AMTX	**Amarillo**	**80.51**	**49**	P	**P**	**11 26 48.8**	**+0.7**
	baz=321						
NRCA	**Norcia**	**80.87**	**325**	P	**P**	**11 26 50.0**	**+0.2**
MNTX	**Cornudas Mount**	**80.94**	**53**	IAmb	IAmb	11 26 52.8	
	comp=Z,6.9nm,1.4s						
MNTX	**Cornudas Mount**	**80.94**	**53**	P	**P**	**11 26 51.2**	**+0.9**
	baz=319						
WMOK	**Wichita Mounta**	**82.13**	**47**	IAmb	IAmb	11 26 58.2	
	comp=Z,5.6nm,1.1s						
WMOK	**Wichita Mounta**	**82.13**	**47**	P	**P**	**11 26 57.2**	**+0.7**
	baz=322						
S39A	**Bolivar**	**82.43**	**42**	IAmb	IAmb	11 26 58.7	
	comp=Z,5.7nm,0.8s						
TUL1	**Leonard**	**82.69**	**44**	P	**P**	**11 26 59.9**	**+0.6**
	baz=323						
CCM	**Cathedral Cave**	**83.08**	**40**	P	**P**	**11 27 01.7**	**+0.4**
	baz=326						
BATG	**Bathurst New B**	**83.54**	**19**	P	**P**	**11 27 04.4**	**+1.1**
TX32	**Lajitas Array**	**83.69**	**54**	IAmb	IAmb	11 27 07.4	
	comp=Z,9.3nm,1.4s						
TXAR	**Lajitas Array**	**83.69**	**54**	P	**P**	**11 27 06.0**	**+1.4**
	comp=Z,2.0nm,0.6s,baz=294,slow=3.9,SNR=42						
	comp=Z,2.0nm,0.6s						
TXAR	**Lajitas Array**	**83.69**	**54**	P	**P**	**11 27 06.0**	**+1.4**
LONY	**Lake Ozonia**	**83.71**	**26**	P	**P**	**11 27 04.6**	**+0.3**
	baz=335						
U40A	**Yellville**	**83.73**	**42**	P	**P**	**11 27 05.0**	**+0.5**
	baz=325,SNR=8.4						
W39A	**Magazine**	**84.23**	**44**	P	**P**	**11 27 07.3**	**+0.3**
	baz=324						
F64A	**Sherman**	**84.31**	**21**	P	**P**	**11 27 07.6**	**+0.4**
P49A	**Miami Univ. Ec**	**84.61**	**35**	P	**P**	**11 27 09.5**	**+0.6**
	baz=329						
ACSO	**Alum Creek Sta**	**84.69**	**34**	P	**P**	**11 27 10.0**	**+0.8**
	baz=330						
MIAR	**Mount Ida**	**84.86**	**44**	P	**P**	**11 27 10.8**	**+0.6**
	baz=325						
JCT	**Junction City**	**84.92**	**50**	P	**P**	**11 27 11.3**	**+0.7**
	baz=322						
W41B	**Gary Mavity, V**	**84.98**	**43**	P	**P**	**11 27 11.2**	**+0.5**
	baz=325						
X40A	**Basin Creek Fa**	**85.26**	**43**	P	**P**	**11 27 12.7**	**+0.5**
	baz=325						
WVT	**Waverly**	**86.19**	**39**	P	**P**	**11 27 17.0**	**+0.3**
	baz=328						
SSPA	**Standing Stone**	**86.20**	**30**	P	**P**	**11 27 16.8**	**+0.2**
	baz=333						
OXF	**Oxford**	**86.84**	**41**	P	**P**	**11 27 20.6**	**+0.8**
	baz=327						
ESDC	**Sonseca Array**	**89.60**	**335**	P	**P**	**11 27 32.8**	**+0.1**
	comp=Z,1.8nm,0.7s,baz=18,slow=4.2,SNR=16						
	comp=Z,1.8nm,0.7s						
TROLL	**Troll, Antarti**	**148.19**	**202**	PKPbc	**PKiKP**	**11 34 19.0**	**-0.4**
BDFB	**Brasilia**	**148.22**	**20**	PKPbc	**PKiKP**	**11 34 20.5**	**-0.5**
	comp=Z,1.7nm,0.5s,baz=288,slow=3.2,SNR=3.5						
VNA2	**Neumayer--Watz**	**151.34**	**200**	PKPbc	**PKiKP**	**11 34 26.1**	**+0.4**
	baz=107,slow=1.0						
VNA3	**Neumayer Olymp**	**151.63**	**198**	PKPbc	**PKiKP**	**11 34 26.5**	**+0.2**

IDC 08 11:26:11.9±4.4, 10°51S×160°04E, h0km, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=106.6km s-min=18.1km az=103.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.07**	**355**	Pn	Pn	11 26 34.1	-0.1
	22nm,0.3s,baz=351,slow=2.8,SNR=10						
HNR				Sn	Sn	11 26 51.8	+2.0
	138nm,0.3s,baz=156,slow=20,SNR=8.2						
WRA	**Warramunga Arr**	**26.48**	**246**	P	P	11 31 52.1	+1.0
	1.6nm,0.9s,baz=75,slow=9.3,SNR=11						
	1.6nm,0.9s						
STKA	**Stephens Creek**	**27.27**	**216**	P	P	11 31 59.0	+1.0
	1.4nm,0.7s,baz=45,slow=8.6,SNR=3.2						
	1.4nm,0.7s						
ASAR	**Alice Springs**	**28.14**	**239**	P	P	11 32 04.4	-1.6
	0.6nm,0.9s,baz=65,slow=10,SNR=2.8						
	0.6nm,0.9s						
CMAR	**Chiang Mai Arr**	**66.79**	**295**	P	P	11 37 05.2	-0.6
	0.9nm,0.4s,baz=134,slow=5.2,SNR=6.8						
	0.9nm,0.4s						

*GUC **08** 11:37:18.8±0.7, 30°10S×71°55W, h37km±2km, ML3.6*
*NEIC **08** 11:37:19.2±2.8, 30°10S±0°03×71°56W±0°04, h27km±8km, mb3.8/2, ML3.8(GUC), Error ellipse: s-maj=5.4km s-min=3.3km az=69.0*

ISC 08 11:37:18.9±1.4, 30°07S±0°03×71°58W±0°05, h31km±11km, n46, σ1§30/65, 4C-5D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CO05	**La Serena**	**0.34**	**63**		**Pb**	**11 37 26.8**	**-0.1**
CO05	**La Serena**	**0.34**	**63**	⇓*iP*	**Pb**	**11 37 26.8**	**-0.1**
CO05				*i* S	**Sn**	**11 37 32.3**	**-1.1**
CO06	**Fray Jorge**	**0.60**	**184**		**Pn**	**11 37 30.2**	**-1.2**
CO06				Sg	**Sn**	**11 37 38.5**	**-1.7**
CO06	**Fray Jorge**	**0.60**	**184**	⇑*iP*	**Pn**	**11 37 30.2**	**-1.2**
CO06				*i* S	**Sn**	**11 37 38.5**	**-1.7**
GO04	**Tololo Observa**	**0.69**	**99**		**Pn**	**11 37 31.7**	**-1.0**
GO04				Sg	**Sn**	**11 37 41.1**	**-1.4**
GO04	**Tololo Observa**	**0.69**	**99**	⇓*iP*	**Pn**	**11 37 31.7**	**-1.0**
GO04				*e*S	**Sn**	**11 37 41.2**	**-1.4**
CO03	**El Pedregal**	**1.09**	**135**		**Pn**	**11 37 37.1**	**-1.0**
CO03	**El Pedregal**	**1.09**	**135**	⇓*iP*	**Pn**	**11 37 37.3**	**-0.9**
CO03				*i* S	**Sn**	**11 37 51.2**	**-1.0**
CO03				IAML		11 37 54.1	
	comp=E,2μm,0.2s						
CO02	**Combarbal**	**1.24**	**156**		**Pn**	**11 37 40.0**	**-0.2**
CO02	**Combarbal**	**1.24**	**156**	⇓*iP*	**Pn**	**11 37 39.9**	**-0.3**
CO02				*i* S	**Sn**	**11 37 56.3**	**+0.3**
CO02				IAML		11 37 57.7	
	comp=N,4μm,0.2s						
CO01	**Juntas del Tor**	**1.30**	**86**		**Pn**	**11 37 40.9**	**-0.3**
CO01					**Sn**	**11 37 56.4**	**-1.2**
CO01	**Juntas del Tor**	**1.30**	**86**	⇓*iP*	**Pn**	**11 37 40.8**	**-0.3**
CO01				*i* S	**Sn**	**11 37 56.0**	**-1.5**
LCO	**Las Campanas**	**1.31**	**36**		**Pn**	**11 37 40.9**	**-0.4**
LCO	**Las Campanas**	**1.31**	**36**	*e*P	**Pn**	**11 37 40.6**	**-0.6**
LCO				*i* S	**Sn**	**11 37 57.8**	**-0.1**
AC04	**Llanos de Chal**	**1.91**	**14**	Pn	**Pn**	**11 37 49.5**	**+0.1**
AC04	**Llanos de Chal**	**1.91**	**14**	⇑*iP*	**Pn**	**11 37 49.5**	**+0.1**
AC04				*e*S	**Sn**	**11 38 15.4**	**+3.0**
VA06	**Catapilco**	**2.50**	**174**	Pg	**Pb**	**11 38 02.0**	**-1.1**
VA06	**Catapilco**	**2.50**	**174**	*e*P	**Pn**	**11 37 57.6**	**+0.2**
VA06				*i* S	**Sn**	**11 38 26.9**	**+0.2**
GO03	**Copiap**	**2.74**	**26**		**Pn**	**11 38 01.3**	**+0.5**
GO03	**Copiap**	**2.74**	**26**	*e*P	**Pn**	**11 38 01.3**	**+0.5**
GO03				IAML		11 38 47.8	
	comp=N,213nm,0.3s						
VA03	**San Esteban**	**2.83**	**162**		**Pn**	**11 38 03.8**	**+1.7**
VA03	**San Esteban**	**2.83**	**162**	*e*P	**Pn**	**11 38 03.5**	**+1.4**
VA03				*i* S	**Sn**	**11 38 36.7**	**+1.5**
VA03				IAML		11 38 48.9	
	comp=E,354nm,0.2s						
VA03				IAML		11 38 49.0	
	comp=E,337nm,0.2s						
VA03				IAML		11 38 52.1	
	comp=N,317nm,0.5s						
ZON	**Zonda**	**2.90**	**121**		**Pn**	**11 38 07.2**	**+4.1**
AC06	**Mina Casimiro**	**2.91**	**22**		**Pn**	**11 38 03.4**	**+0.3**
ROCH	**El Roble**	**2.94**	**171**	⇑*iP*	**Pn**	**11 38 04.1**	**+0.5**
ROCH				*e*P	**Pn**	**11 38 04.2**	**+0.5**
ROCH				IAML		11 38 52.1	
	comp=N,206nm,0.6s						
ROCH				IAML		11 38 52.2	
	comp=N,225nm,0.5s						
ROC1	**El Roble**	**2.94**	**171**		**Pn**	**11 38 04.0**	**+0.3**
PEL	**Peldehue**	**3.16**	**166**		**Pn**	**11 38 09.7**	**+3.1**
PEL	**Peldehue**	**3.16**	**166**	*e*P	**Pn**	**11 38 07.7**	**+1.1**
PEL				*i* S	**Sn**	**11 38 44.4**	**+1.1**
PEL				IAML		11 38 58.8	
	comp=E,117nm,0.4s						
MT02	**Curacav**	**3.20**	**173**		**Pn**	**11 38 07.3**	**+0.1**
MT02	**Curacav**	**3.20**	**173**	*e*P	**Pn**	**11 38 07.5**	**+0.3**
MT02				IAML		11 39 00.6	
	comp=E,89nm,0.4s						
MT05	**Renca**	**3.39**	**168**	Pn	**Pn**	**11 38 10.9**	**+1.2**
FCH	**Farellones**	**3.43**	**162**	*e*P	**Pn**	**11 38 12.3**	**+1.7**
FCH				*i* S	**Sn**	**11 38 52.5**	**+2.2**
FCH				IAML		11 39 05.9	
	comp=E,101nm,0.2s						
MT03	**Universidad Ad**	**3.53**	**165**		**Pn**	**11 38 13.5**	**+1.7**
MT09	**Talagante**	**3.73**	**172**		**Pn**	**11 38 15.4**	**+0.9**
MT09	**Talagante**	**3.73**	**172**	*e*P	**Pn**	**11 38 15.2**	**+0.7**
MT01	**Popeta**	**3.79**	**176**	*e*P	**Pn**	**11 38 15.6**	**+0.3**
AC02	**Maricunga**	**3.88**	**34**	Pn	**Pn**	**11 38 18.2**	**+1.3**
LMEL	**Las Melosas**	**3.94**	**163**		**Pn**	**11 38 19.8**	**+2.2**
LMEL	**Las Melosas**	**3.94**	**163**	⇑*iP*	**Pn**	**11 38 19.7**	**+2.2**
LMEL				*i* S	**Sn**	**11 39 03.3**	**+0.5**
BO04	**La Punta**	**4.00**	**168**	Pn	**Pn**	**11 38 19.0**	**+0.9**
BO04	**La Punta**	**4.00**	**168**	*e*P	**Pn**	**11 38 19.1**	**+0.9**
BO04				*i* S	**Sn**	**11 39 03.7**	**-0.2**
AC01	**Pan de Azucar**	**4.00**	**13**	Pn	**Pn**	**11 38 16.7**	**-1.4**
BO01	**Tunca**	**4.33**	**175**		**Pn**	**11 38 23.1**	**+0.4**
BO01	**Tunca**	**4.33**	**175**	*e*P	**Pn**	**11 38 23.0**	**+0.4**
BO01				*i* S	**Sn**	**11 39 12.0**	**-0.1**
BO03	**Pichilemu**	**4.42**	**184**	*e*P	**Pn**	**11 38 22.7**	**-1.3**
GO02	**Mina Guanaco**	**5.20**	**20**	Pn	**Pn**	**11 38 33.9**	**-0.9**

IDC 08 11:48:14.1±1.9, 28°55S×75°39E, h0km, mb3.7/4, mbtmp3.7/4, MS3.6/2, Error ellipse: s-maj=57.2km s-min=36.3km az=73.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S2	**Diego Garcia H**	**20.98**	**352**	T	T	12 15 11.0	
	baz=175,slow=76,SNR=14						
H08S1	**Diego Carcia H**	**20.98**	**352**	T	T	12 15 13.8	
	baz=175,slow=76,SNR=14						
H08S3	**Diego Garcia H**	**21.00**	**352**	T	T	12 15 18.9	
	baz=175,slow=76,SNR=14						
H01W2	**Cape Leeuwin H**	**33.40**	**111**	T	T	12 30 11.7	
	baz=268,slow=74,SNR=5.4						
H01W3	**Cape Leeuwin H**	**33.41**	**111**	T	T	12 30 11.9	
	baz=268,slow=74,SNR=5.9						
H01W1	**Cape Leeuwin H**	**33.42**	**111**	T	T	12 30 12.1	
	baz=268,slow=74,SNR=3.7						
BOSA	**Boshof**	**43.76**	**257**	LR	LR	12 11 50.4	
	comp=Z,68nm,18.2s,baz=30,slow=32						
ASAR	**Alice Springs**	**52.33**	**99**	P	P	11 57 27.6	-0.4
	0.5nm,0.8s,baz=250,slow=5.7,SNR=4.4						
	0.5nm,0.8s						
TSUM	**Tsumeb**	**53.25**	**267**	LR	LR	12 16 59.1	
	comp=Z,57nm,18.6s,baz=158,slow=32						
WRA	**Warramunga Arr**	**53.98**	**95**	P	P	11 57 40.3	+0.2
	1.2nm,1.0s,baz=252,slow=7.5,SNR=4.7						
	1.2nm,1.0s						
VNDA	**Vanda**	**61.58**	**166**	P	P	11 58 32.7	0.0
	0.8nm,0.7s,baz=290,slow=3.5,SNR=4.3						
	0.8nm,0.7s						
MKAR	**Makanchi Array**	**75.25**	**5**	P	P	11 59 58.6	+0.1
	0.7nm,0.8s,baz=168,slow=6.2,SNR=6.1						
	0.7nm,0.8s						

*PGC **08** 11:51:45.3±4.0, 55°42N×135°04W, h10km, ML2.9/8, 182km south of Sitka, Ak Off Coast Of Southeastern Alaska*
*NEIC **08** 11:51:45.8±2.6, 55°48N±0°02×135°0W±0°1, h17km±8km, Error ellipse: s-maj=10.9km s-min=2.8km az=88.0*

ISC 08 11:51:43.9±1.4, 55°45N±0°06×135°04W±0°09, h9km, n24, σ1§24/31, Off coast of southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRAG	**Craig**	**1.09**	**88**		**Pg**	**11 52 05.0**	**+0.1**
CRAG				IAML		11 52 27.4	
	comp=N,102nm,0.3s						
SIT	**Sitka**	**1.62**	**355**		**Pn**	**11 52 11.7**	**-1.0**
LIB	**Langara Island**	**1.66**	**135**	Pn	**Pn**	**11 52 13.6**	**+0.4**
DIB	**Dawson Inlet,**	**2.70**	**145**	Pn	**Pn**	**11 52 27.9**	**+0.4**
DIB				IAML		11 53 11.8	
	comp=E,26nm,1.8s						
DIB				IAML		11 53 19.9	
	comp=N,20nm,1.9s						
DIB	**Dawson Inlet,**	**2.70**	**145**	Pn	**Pn**	**11 52 28.5**	**+1.0**
DIB				Sn	**Sn**	**11 52 59.4**	**-0.9**
RUBB	**Prince Rupert**	**2.98**	**110**	Pn	**Pn**	**11 52 32.4**	**+1.0**
RUBB				IAML		11 53 26.5	
	comp=E,15nm,1.1s						
RUBB				IAML		11 53 27.1	
	comp=N,20nm,1.3s						
RUBB	**Prince Rupert**	**2.98**	**110**	Pn	**Pn**	**11 52 32.1**	**+0.8**
RUBB				Sn	**Sn**	**11 53 06.3**	**-1.0**
GRNB	**Grenville Isla**	**3.36**	**116**	Pn	**Pn**	**11 52 36.7**	**+0.1**
GRNB	**Grenville Isla**	**3.36**	**116**	Sn	**Sn**	**11 53 15.8**	**-0.8**
BNB	**Barry Inlet**	**3.47**	**145**	Pn	**Pn**	**11 52 39.1**	**+1.0**
BNB				Sn	**Sn**	**11 53 17.3**	**-2.1**
BNKB	**Banks Island**	**3.68**	**123**	Pn	**Pn**	**11 52 41.5**	**+0.6**
BNKB				Sn	**Sn**	**11 53 23.9**	**-0.4**
KITB	**Kitimat**	**3.96**	**108**	Sn	**Sn**	**11 53 30.7**	**-0.5**
DLBC	**Dease Lake**	**4.07**	**40**	Pn	**Pn**	**11 52 46.9**	**+0.5**
DLBC				IAML		11 55 21.9	
	comp=N,5.7nm,3.6s						
DLBC	**Dease Lake**	**4.07**	**40**	Pn	**Pn**	**11 52 46.9**	**+0.5**
BUTB	**Butedale**	**4.54**	**119**	Pn	**Pn**	**11 52 54.3**	**+1.5**
BUTB				Sn	**Sn**	**11 53 44.4**	**-1.3**
P33M	**Teslin, Yukon**	**4.92**	**13**	Pn	**Pn**	**11 52 59.0**	**+0.9**
P33M				IAML		11 54 31.1	
	comp=E,3.5nm,3.9s						
P33M				IAML		11 54 47.2	
	comp=N,4.6nm,3.4s						
P33M	**Teslin, Yukon**	**4.92**	**13**	Sn	**Pn**	**11 52 59.4**	**+1.3**
P33M				Sn	**Sn**	**11 53 53.0**	**-2.2**
BBB	**Bella Bella**	**5.25**	**126**	Pn	**Pn**	**11 53 03.1**	**+0.7**
BBB	**Bella Bella**	**5.25**	**126**	Pn	**Pn**	**11 53 03.4**	**+1.0**
BBB				Sn	**Sn**	**11 54 00.8**	**-2.2**
PCA	**Pinnacle**	**5.43**	**331**	Pn	**Pn**	**11 53 06.5**	**+1.4**
CTGM	**Chitina Glacie**	**6.45**	**332**	Pn	**Pn**	**11 53 21.4**	**+2.2**
WAX	**Waxell Ridge**	**6.51**	**324**	Pn	**Pn**	**11 53 20.7**	**+0.8**
BARN	**Barnard Glacie**	**6.62**	**331**	Pn	**Pn**	**11 53 23.5**	**+2.0**
TGL	**Tana Glacier**	**6.73**	**325**	Pn	**Pn**	**11 53 24.0**	**+1.1**

*ISK **08** 11:56:08.8, 39°08N×23°41E, h20km, ML3.6/23*
*IDC **08** 11:56:09.6±1.6, 39°11N×23°23E, h0km, mb3.6/4, mbtmp3.7/6, ML3.6/2, MS2.6/1, Error ellipse: s-maj=34.7km s-min=17.1km az=109.0*
*THE **08** 11:56:09.7, 39°06N×23°32E, h10km±1km, ML3.6/18, Error ellipse: s-maj=1.4km s-min=0.6km az=287.0*
*ATH **08** 11:56:10.0, 39°07N×23°30E, h8km±2km, ML3.7/12, Error ellipse: s-maj=2.5km s-min=0.7km az=347.0*

ISC 08 11:56:09.8±0.9, 39°07N±0°01×23°31E±0°02, h11km±7km, n73, σ0§93/106, mb3.8/4, 3C, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEO	**Neokhori**	**0.25**	**344**	P	**Pg**	**11 56 15.4**	**+0.4**
NEO				S	**Sg**	**11 56 18.7**	**+0.3**
NEO				AML	AML	11 56 19.6	
NEO				AML	AML	11 56 20.9	
	comp=N,84484μm,0.4s						
NEO	**Neokhori**	**0.25**	**344**	P	**Pg**	**11 56 15.3**	**+0.4**
NEO				S	**Sg**	**11 56 18.5**	**+0.1**
	comp=N,49μm,0.4s						
XOR	**Xorichti**	**0.31**	**343**	P	**Pg**	**11 56 16.3**	**+0.2**
XOR				S	**Sg**	**11 56 20.3**	**0.0**
XOR				AML	AML	11 56 21.9	
	comp=E,29401μm,0.4s						
XOR				AML	AML	11 56 21.9	
	comp=N,44874μm,0.4s						
XOR	**Xorichti**	**0.31**	**343**	P	**Pg**	**11 56 16.4**	**+0.3**
XOR				S	**Sg**	**11 56 20.0**	**-0.3**
	comp=N,19μm,0.3s						
ALNA	**Alonissos**	**0.44**	**80**	P	**Pg**	**11 56 18.4**	**-0.1**
ALNA				S	**Sg**	**11 56 24.6**	**+0.3**
ALNA				AML	AML	11 56 26.1	
	comp=E,22388μm,0.3s						
ALNA				AML	AML	11 56 27.9	
	comp=N,21134μm,0.5s						
ATAL	**Atalanti**	**0.44**	**211**	P	**Pg**	**11 56 18.5**	**+0.1**
ATAL				S	**Sg**	**11 56 24.0**	**-0.2**
ATAL				AML	AML	11 56 24.5	
	comp=N,13670μm,0.4s						
ATAL				AML	AML	11 56 24.8	
	comp=E,17644μm,0.6s						
ATAL	**Atalanti**	**0.44**	**211**	P	**Pg**	**11 56 18.6**	**+0.2**
ATAL				S	**Sg**	**11 56 24.0**	**-0.2**
	comp=E,8μm,0.5s						
LKR	**Lokris**	**0.48**	**210**	P	**Pg**	**11 56 18.4**	**-0.9**
LKR				S	**Sg**	**11 56 24.7**	**-0.9**
LKR				AML	AML	11 56 25.0	
	comp=E,15286μm,0.3s						
LKR				AML	AML	11 56 26.2	
	comp=N,17382μm,0.3s						
LKR	**Lokris**	**0.48**	**210**	P	**Pg**	**11 56 18.4**	**-0.9**
LKR				S	**Sg**	**11 56 25.0**	**-0.6**
	comp=N,8μm,0.3s						
KYMI	**Kymi, Euboea I**	**0.75**	**125**	P	**Pg**	**11 56 24.4**	**+0.1**
KYMI				S	**Sg**	**11 56 34.4**	**+0.2**
KYMI				AML	AML	11 56 37.9	
	comp=N,9315μm,0.5s						
KYMI				AML	AML	11 56 38.6	
	comp=E,15118μm,0.5s						
KYMI	**Kymi, Euboea I**	**0.75**	**125**	P	**Pg**	**11 56 24.5**	**+0.1**
KYMI				S	**Sg**	**11 56 34.4**	**+0.2**
	comp=E,6μm,0.5s						
VIL2	**Platees**	**0.86**	**182**	P	**Pb**	**11 56 26.8**	**+0.1**
VIL2				AML	AML	11 56 42.3	
	comp=E,22263μm,0.5s						
VIL2				AML	AML	11 56 43.1	
	comp=N,12283μm,0.5s						
DLFA	**Delphi**	**0.87**	**227**	P	**Pg**	**11 56 26.1**	**-0.5**
PAIG	**Paliouri**	**0.90**	**18**	P	**Pb**	**11 56 27.3**	**-0.1**
PAIG				S	**Sb**	**11 56 39.9**	**+0.4**
PAIG				AML	AML	11 56 41.8	
	comp=N,8064μm,0.3s						
PAIG				AML	AML	11 56 41.8	
	comp=E,19349μm,0.5s						
PAIG	**Paliouri**	**0.90**	**18**	P	**Pb**	**11 56 27.4**	**-0.1**
PAIG				S	**Sb**	**11 56 40.0**	**+0.4**
	comp=E,7μm,0.4s						
VILL	**Villia**	**0.90**	**180**	P	**Pg**	**11 56 26.5**	**-0.7**
VILL				S	**Sb**	**11 56 40.5**	**+0.9**
	comp=E,10μm,0.5s						
MAKR	**Makrakomi, Fth**	**0.92**	**267**	P	**Pg**	**11 56 26.8**	**-0.7**
MAKR	**Makrakomi, Fth**	**0.92**	**267**	P	**Pg**	**11 56 26.4**	**-1.1**
MAKR				S	**Sn**	**11 56 41.8**	**-0.2**
	comp=E,7μm,0.4s						
SKY	**Skiros Island**	**0.98**	**101**	P	**Pb**	**11 56 28.8**	**0.0**
SKY				S	**Sb**	**11 56 41.9**	**0.0**
SKY				AML	AML	11 56 46.3	
	comp=E,14569μm,0.2s						
SKY				AML	AML	11 56 46.7	
	comp=N,16844μm,0.2s						
SKY	**Skiros Island**	**0.98**	**101**	P	**Pb**	**11 56 28.9**	**0.0**
SKY				S	**Sb**	**11 56 41.7**	**-0.2**
	comp=N,8μm,0.2s						
LTK	**Loutraki**	**1.08**	**195**	P	**Pn**	**11 56 30.9**	**0.0**
DION	**Dionisos Attik**	**1.10**	**154**	P	**Pn**	**11 56 31.4**	**+0.2**
DION				S	**Sg**	**11 56 45.3**	**0.0**
DION				AML	AML	11 56 47.0	
	comp=E,22590μm,0.4s						
DION				AML	AML	11 56 47.6	
	comp=N,15983μm,0.5s						
DION	**Dionisos Attik**	**1.10**	**154**	P	**Pb**	**11 56 29.7**	**-1.2**
DION				S	**Sg**	**11 56 44.9**	**-

APE	**Apeiranthos**	**2.66**	**138**	PN	**Pn**	**11 56 51.3**	**-1.3**
URLA	**Izmir**	**2.67**	**104**	PN	**Pn**	**11 56 50.9**	**-1.8**
RDO	**Rodhopi**	**2.69**	**39**	PN	**Pn**	**11 56 51.3**	**-1.7**
ENEZ	**Enez**	**2.75**	**52**	PN	**Pn**	**11 56 52.3**	**-1.5**
ALN	**Alexandroupoli**	**2.78**	**48**	PN	**Pn**	**11 56 52.5**	**-1.8**
ERIK	**Erikli-Kesan**	**2.94**	**56**	PN	**Pn**	**11 56 55.1**	**-1.3**
KRBG	**Karabiga-Canak**	**3.35**	**65**	PN	**Pn**	**11 57 00.5**	**-1.5**
GZKV	**Gazikoy-Tekird**	**3.51**	**60**	PN	**Pn**	**11 57 02.9**	**-1.5**
MRMT	**Marmara Adasi**	**3.64**	**64**	PN	**Pn**	**11 57 04.6**	**-1.5**
IMMV	**Iera Moni Meta**	**3.64**	**171**	PN	**Pn**	**11 57 05.9**	**-0.2**
BODT	**Bodrum**	**3.74**	**121**	PN	**Pn**	**11 57 06.4**	**-1.1**
EDRB	**Edirne**	**3.81**	**42**	PN	**Pn**	**11 57 07.3**	**-1.2**
MLSB	**Milas**	**3.94**	**115**	PN	**Pn**	**11 57 09.1**	**-1.2**
IDI	**Anoyia**	**3.98**	**161**	⇑P	**Pn**	**11 57 10.4**	**-0.4**
IDI	**Anoyia**	**3.98**	**161**	Pn	**Pn**	**11 57 13.4**	**+2.6**
	comp=N,4.5nm,0.3s,baz=325,slow=15,SNR=11						
IDI				LR	LR	11 59 11.6	
	comp=N,73nm,18.6s,baz=276,slow=45						
	comp=N,11nm,0.4s						
IDI	**Anoyia**	**3.98**	**161**	PN	**Pn**	**11 57 10.3**	**-0.5**
GVD	**Gavdhos**	**4.27**	**171**	PN	**Pn**	**11 57 14.7**	**0.0**
MLR	**Muntele Rosu**	**6.71**	**16**	Pn	**Pn**	**11 57 50.1**	**+1.8**
	comp=N,0.5nm,0.3s,baz=153,slow=12,SNR=3.7						
MLR				Sn	**Sn**	**11 59 06.4**	**+1.5**
	comp=N,1.2nm,0.3s,baz=197,slow=11,SNR=1.7						
	comp=N,9.8nm,0.4s						
DOPR	**Dopca**	**7.06**	**12**	⇑P	**Pn**	**11 57 53.8**	**+0.7**
ESDC	**Sonseca Array**	**21.07**	**280**	P	**P**	**12 00 56.2**	**+2.2**
	comp=N,0.9nm,0.9s,baz=65,slow=9.6,SNR=6.7						
	comp=N,0.9nm,0.9s						
FINES	**FINESS Array B**	**22.47**	**3**	P	**P**	**12 01 09.5**	**+0.7**
	comp=N,2.2nm,0.8s,baz=201,slow=9.6,SNR=3.4						
	comp=N,2.2nm,0.8s						
EKA	**Eskdalemuir Ar**	**24.03**	**321**	P	**P**	**12 01 24.6**	**0.0**
	comp=N,1.9nm,0.7s,baz=112,slow=11,SNR=8.7						
	comp=N,1.9nm,0.7s						
TORD	**Torodi Ar. Bea**	**32.13**	**222**	P	**P**	**12 02 38.0**	**+0.6**
	comp=N,0.9nm,0.7s,baz=27,slow=8.3,SNR=4.9						
	comp=N,0.9nm,0.7s						

HEL 08 12:06:33.1±0.2, 67°.64N×33°.72E, h0km, ML1.8,
Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVZ	**Lovozero**	**0.44**	**53**	PG	Pg	12 06 41.4	-0.2
LVZ				SG	Sg	12 06 46.2	-1.0
VRF	**Varrio**	**1.57**	**276**	PG	Pn	12 07 01.3	-0.9
VRF				MSG		12 07 20.3	
	comp=Z,10nm,0.2s						
VRF				SN	Sn	12 07 21.5	-1.8
OLKF	**Oulanka, Finla**	**2.15**	**234**	PG	Pb	12 07 11.8	-1.1
OLKF				SN	Sn	12 07 33.9	-3.6
KU6	**Riekki**	**2.22**	**225**	PG	Pb	12 07 12.7	-1.2
KU6				MSG		12 07 38.7	
	comp=Z,3.3nm,0.2s						
KU6				SG	Sn	12 07 39.5	+0.4
MSF	**Maaselka**	**2.54**	**229**	PG	Pb	12 07 18.3	-1.1
MSF				SG	Sg	12 07 53.4	-1.2
SGF	**Sodankyl**	**2.77**	**269**	SG	Sb	12 07 57.4	-0.3
RNF	**Rovaniemi**	**3.18**	**255**	PN	Pn	12 07 24.6	+0.3
RNF				SG	Sb	12 08 11.1	+1.4
KEV	**Kevo**	**3.24**	**314**	PN	Pn	12 07 25.4	+0.2
KEV				SN	Sn	12 08 03.2	-1.1
ARA0	**ARCESS Array S**	**3.56**	**306**	PN	Pn	12 07 28.9	-0.7
	baz=118						
ARA0				SN	Sn	12 08 10.3	-2.0
KLF	**Kolari**	**3.78**	**268**	SG	Sb	12 08 29.8	+2.9
KTK1	**Kautokeino**	**4.12**	**294**	SG	Sb	12 08 38.5	+1.7

KOLA 08 12:07:09.7, 67°.39N×30°.57E, h0km, ML2.3, Baltic
States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APA0	**Apatity Array**	**0.96**	**76**	P	Pg	12 07 26.7	-1.3
LVZ	**Lovozero**	**1.64**	**70**	P	Pn	12 07 38.5	-1.3
LVZ				S	Sn	12 08 00.1	-1.5
ARCES	**ARCESS Array B**	**2.85**	**321**	P	Pn	12 07 56.1	-0.3
ARCES				S	Sn	12 08 30.0	-1.3

*IDC **08** 12:16:42.4±1.7, 27°.72S×23°.14E, h0km, mb3.2/1,*
mbtmp3.2/5, ML2.8/4, Error ellipse: s-maj=17.8km
s-min=15.8km az=100.0
*EAF **08** 12:16:48.5±0.9, 27°.70S×23°.45E, h0km±29km, MD3.7*
*BUL **08** 12:16:48.8±1.1, 27°.69S×23°.48E, h0km±92km, MD3.9*
ISC 08 12:16:42.5±0.9, 27°.62S±0°.04×23°.35E±0°.07, h10km, n14,
σ2s27/22, South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I47ZA	**BOSHOF INFRASO**	**1.94**	**121**	*i*		12 30 07.3	
	0.1nm,0.5s,baz=292,slow=317,SNR=1.8						
BOSA	**Boshof**	**1.96**	**121**	Pn	**Pb**	**12 17 18.2**	**-0.1**
	1.9nm,0.3s,baz=292,slow=16,SNR=12						
BOSA				Lg	Lg	12 17 49.1	
	8.4nm,0.3s,baz=30,slow=19,SNR=4.0						
	4.9nm,0.4s						
BOSA	**Boshof**	**1.96**	**121**	*i* P	**Pg**	**12 17 20.6**	**+0.5**
BOSA				*i* S	**Sg**	**12 17 44.9**	**-0.5**
BOSA	**Boshof**	**1.96**	**121**	*i* P	**Pg**	**12 17 20.6**	**+0.5**
BOSA				*i* S	**Sg**	**12 17 44.9**	**-0.5**
LBTB	**Lobatse**	**3.29**	**38**	Pn	**Pn**	**12 17 37.7**	**+3.6**
	0.3nm,0.3s,baz=218,slow=14,SNR=4.5						
LBTB				Pg	**Pg**	**12 17 44.7**	**-0.8**
	2.3nm,0.3s,baz=224,slow=15,SNR=11						
LBTB				Sn	**Sb**	**12 18 18.8**	**-2.3**
	1.4nm,0.3s,baz=195,slow=12,SNR=5.6						
LBTB				Lg	Lg	12 18 32.1	
	4.7nm,0.3s,baz=130,slow=24,SNR=16						
	2.5nm,0.5s						
LBTB	**Lobatse**	**3.29**	**38**	*i* P	**Pb**	**12 17 41.4**	**+0.5**
LBTB				*i* S	**Sb**	**12 18 18.8**	**-2.3**
LBTB	**Lobatse**	**3.29**	**38**	*i* P	**Pb**	**12 17 41.4**	**+0.5**
LBTB				*i* S	**Sb**	**12 18 18.8**	**-2.3**
SUR	**Sutherland**	**5.23**	**204**	Pn	**Pn**	**12 17 59.9**	**-1.0**
	0.5nm,0.3s,baz=30,slow=14,SNR=8.4						
SUR				Sn	**Sn**	**12 18 59.2**	**-2.3**
	1.6nm,0.3s,baz=360,slow=20,SNR=5.9						
SUR				Lg	Lg	12 19 13.7	
	2.5nm,0.3s,baz=121,slow=21,SNR=12						
	4.4nm,0.6s						
MOPA	**Mopani**	**8.34**	**62**	*i* P	**Pn**	**12 18 47.5**	**+4.1**
MOPA				*i* S	**Sn**	**12 20 15.9**	**-1.8**
MOPA	**Mopani**	**8.34**	**62**	*i* P	**Pn**	**12 18 47.5**	**+4.1**
MOPA				*i* S	**Sn**	**12 20 15.9**	**-1.8**
MATP	**Matopo**	**8.57**	**34**	Pn	**Pn**	**12 18 50.6**	**+3.8**
	0.3nm,0.3s,baz=215,slow=14,SNR=2.4						
MATP				Lg	Lg	12 21 11.3	
	0.4nm,0.3s,baz=302,slow=20,SNR=5.8						
	1.1nm,0.5s						
MATP	**Matopo**	**8.57**	**34**	*i* P	Pn	12 18 52.7	+5.9
MATP				*i* S	**Sn**	**12 20 22.3**	**-1.3**
MATP	**Matopo**	**8.57**	**34**	*i* P	Pn	12 18 52.7	+5.9
MATP				*i* S	**Sn**	**12 20 22.3**	**-1.3**
TORD	**Torodi Ar. Bea**	**45.64**	**330**	P	**P**	**12 25 05.3**	**+1.9**
	0.2nm,0.6s,baz=161,slow=9.5,SNR=1.6						
	0.2nm,0.6s						

*GEN **08** 12:17:53.1, 43°.00N×5°.81E, h17km±9km, Ml2.2*
*MDD **08** 12:17:54.4±0.4, 43°.02N×5°.99E, h8km±3km, Mb3.4/4,*
M_mb2.6/4, Error ellipse: s-maj=2.2km s-min=2.9km
az=164.0
ISC 08 12:17:53.6±2.1, 43°.01N±0°.05×5°.91E±0°.06, h12km±14km,
n17, σ0s57/29, 1C, Near south coast of France

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASEAF	**Site Antares,**	**0.28**	**139**	P	**Pb**	**12 18 00.6**	**+0.2**
OGDI	**Digne**	**1.14**	**14**	P	**Pb**	**12 18 15.2**	**0.0**
OGDI				S	**Sb**	**12 18 29.1**	**-0.8**
MVIF	**Mont Vial**	**1.27**	**45**	P	**Pb**	**12 18 17.6**	**+0.1**
MVIF				S	**Sg**	**12 18 35.4**	**+1.0**
BURY	**Giardini Botan**	**1.43**	**57**	P	**Pn**	**12 18 18.7**	**-0.6**
BURY				S	**Sb**	**12 18 38.6**	**+0.4**
ISO	**Isola**	**1.44**	**35**	P	**Pn**	**12 18 19.6**	**+0.1**
ISO				S	**Sb**	**12 18 38.7**	**+0.1**
TURF	**col de Turini**	**1.45**	**48**	P	**Pn**	**12 18 19.2**	**-0.6**
TURF				S	**Sb**	**12 18 39.5**	**+0.5**
SAOF	**Saorge**	**1.54**	**50**	P	**Pn**	**12 18 21.1**	**+0.1**
SAOF				S	**Sb**	**12 18 41.7**	**0.0**
STV	**Sant Anna di V**	**1.61**	**39**	P	**Pn**	**12 18 21.8**	**-0.1**
STV				S	**Sn**	**12 18 43.2**	**+0.6**
SURF	**Saint Ours**	**1.61**	**24**	P	**Pb**	**12 18 23.2**	**-0.2**
SURF				S	**Sg**	**12 18 45.2**	**-0.2**
ENR	**Entracque**	**1.64**	**41**	P	**Pn**	**12 18 21.9**	**-0.4**
ENR				S	**Sn**	**12 18 43.9**	**+0.5**
IMI	**Imperia**	**1.70**	**57**	P	**Pn**	**12 18 22.3**	**-0.9**
PZZ	**Stroppo**	**1.73**	**30**	P	**Pb**	**12 18 24.8**	**-0.6**
PZZ				S	**Sn**	**12 18 46.1**	**+0.3**
RORO	**Rocca Rossa**	**1.92**	**54**	P	**Pn**	**12 18 25.5**	**-0.5**
CANO	**Canova, Maglio**	**2.07**	**54**	P	**Pn**	**12 18 28.0**	**-0.3**
BNI	**Bardonecchia**	**2.12**	**15**	Pg	**Pb**	**12 18 32.7**	**+0.8**
BNI				Sg	**Sg**	**12 19 01.2**	**-0.5**
EJON	**La Jonquera**	**2.30**	**257**	Pn	**Pn**	**12 18 31.3**	**0.0**
EJON				⇑*i*Vmb_V		12 18 31.6	
	233nm,SNR=5.9						
EJON				Sn	**Sn**	**12 18 59.7**	**+0.2**
CLTB	**Caltabellotta**	**7.78**	**132**	P	**Pn**	**12 19 45.4**	**-1.3**

*IDC **08** 12:24:39.3±0.5, 42°.67S×15°.96W, h0km, mb4.7/15,*
mbtmp4.7/15, MS4.4/45, Error ellipse: s-maj=16.1km
s-min=16.1km az=169.0
*MOS **08** 12:24:40.2±0.9, 42°.72S×16°.07W, h13km, mb5.2/21, Error*
ellipse: s-maj=13.2km s-min=10.4km az=79.3
*NEIC **08** 12:24:41.6±1.4, 42°.69S±0°.10×16°.1W±0°.1, h10km±1km,*
mb5.3/84, Error ellipse: s-maj=17.3km s-min=16.3km
az=140.0
*GCMT **08** 12:24:42.6±0.2, 42°.91S±0°.02×15°.88W±0°.01, h12km,*
MW5.1/111, Moment Tensor Solution. s54,c73;
s111,c177; Duration: 0 Moment tensor: Scale 10^{16}Nm;
M_{rr}=4.61±.14; $M_{\theta\theta}$=1.61±.17; $M_{\phi\phi}$6.22±.10; $M_{r\theta}$-0.99±.47;
$M_{\theta\phi}$0.54±.10; $M_{\phi r}$-0.95±.30; Best double couple:
M_o5.65600×10^{16} NP1:ϕ_s168.00000°, δ42.00000°,
λ-113.00000°. NP2:ϕ_s18.00000°, δ52.00000°,
λ-70.00000°. Principal axes: T 6.3530, Plg5.0000°,
Azm95.0000°; N -1.3950, Plg15.0000°, Azm186.0000°; P
-4.9580, Plg74.0000°, Azm346.0000°; nsta1 refers to
body waves, cutoff=40s. nsta2 refers to surface waves,
cutoff=50s. Triangular moment-rate function
ISC 08 12:24:41.0±0.3, 42°.70S±0°.06×15°.94W±0°.06, h10km, n369,
σ1s23/326, mb5.2/69, MS4.5/48, 7C-2D, Tristan da Cunha
region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**17.81**	**222**	P	**Pn**	**12 28 47.1**	**-1.7**
HOPE	**Hope Point**	**17.81**	**222**	P	**Pn**	**12 28 47.1**	**-1.7**
HOPE				pmax	pmax		
	comp=Z,151nm,1.6s						
ORCD	**Orcadas**	**25.06**	**214**	P	**P**	**12 30 04.9**	**-0.3**
ORCD				IAmb	IAmb	12 30 07.0	
	comp=Z,64nm,1.0s						
SHEL	**Horse Pasture**	**28.04**	**21**	P	**P**	**12 30 32.8**	**+0.3**
SHEL				IAmb	IAmb	12 30 34.3	
	comp=Z,85nm,1.1s						
SHEL	**Horse Pasture**	**28.04**	**21**	P	**P**	**12 30 32.8**	**+0.3**
SHEL				pmax	pmax		
	comp=Z,85nm,1.1s						
VNA1	**Neumayer--Stat**	**28.29**	**175**	P	**P**	**12 30 35.3**	**+1.1**
VNA2	**Neumayer--Watz**	**28.62**	**174**	P	**P**	**12 30 37.5**	**+0.3**
	baz=345,slow=10.0						
VNA3	**Neumayer Olymp**	**28.79**	**176**	P	**P**	**12 30 39.0**	**+0.3**
SNAA	**Sanae**	**29.76**	**172**	P	**P**	**12 30 47.1**	**-0.2**
SNAA	**Sanae**	**29.76**	**172**	P	**P**	**12 30 47.4**	**0.0**
	comp=Z,5.3nm,1.1s,baz=336,slow=6.8,SNR=6.9						
SNAA				PcP	**PcP**	**12 33 50.0**	**-0.7**
	comp=Z,3.3nm,0.8s,baz=273,slow=1.0,SNR=6.0						
SNAA				LR	LR	12 39 45.5	
	comp=Z,179nm,20.1s,baz=302,slow=30						
	comp=Z,5.3nm,1.1s						
SNAA	**Sanae**	**29.76**	**172**	P	**P**	**12 30 47.2**	**-0.1**
SNAA	**Sanae**	**29.76**	**172**	*ce*P	**P**	**12 30 47.8**	**+0.5**
SNAA				pmax	pmax		
	comp=Z,20nm,1.7s						
SUR	**Sutherland**	**30.69**	**83**	LR	LR	12 41 13.6	
	comp=Z,1μm,18.7s,baz=228,slow=32						
ESAR	**Angra dos Reis**	**30.73**	**301**	*e*P	**P**	**12 30 58.2**	**+2.0**
TROLL	**Troll, Antarti**	**30.74**	**169**	P	**P**	**12 30 56.7**	**+0.7**
NVL	**N'lazarevskaya**	**31.39**	**163**	*e*P	**P**	**12 31 02.1**	**+0.5**
NVL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
H10S2	**ASCENSION HYDR**	**33.62**	**2**	T	T	13 06 43.8	
	baz=181,slow=74,SNR=25						
H10S3	**ASCENSION HYDR**	**33.63**	**2**	T	T	13 06 44.2	
	baz=39,slow=74,SNR=109						
H10N1	**ASCENSION HYDR**	**34.73**	**3**	T	T	13 08 13.0	
	baz=180,slow=74,SNR=6.3						
H10N3	**ASCENSION HYDR**	**34.74**	**2**	T	T	13 08 14.6	
	baz=180,slow=74,SNR=67						
H10N2	**ASCENSION HYDR**	**34.75**	**3**	T	T	13 08 15.5	
	baz=180,slow=74,SNR=17						
PMSA	**Palmer Station**	**34.77**	**214**	LR	LR	12 41 41.0	
	comp=Z,195nm,22.0s,baz=86,slow=29						
PMSA	**Palmer Station**	**34.77**	**214**	*e*P	**P**	**12 31 34.2**	**+3.1**
ITQB	**Itaqui**	**34.99**	**278**	P	**P**	**12 31 33.3**	**-0.1**
ITQB	**Itaqui**	**34.99**	**278**	*e*P	**P**	**12 31 34.8**	**+1.4**
DSPA	**Despedida**	**35.78**	**233**	P	**P**	**12 31 40.2**	**+0.2**
USHA	**Ushuaia**	**35.83**	**232**	LR	LR	12 43 18.7	
	comp=Z,622nm,20.5s,baz=206,slow=31						
BOSA	**Boshof**	**35.94**	**81**	P	**P**	**12 31 41.7**	**-0.1**
	comp=Z,14nm,1.0s,baz=240,slow=8.4,SNR=16						
BOSA				PcP	**PcP**	**12 34 08.9**	**+0.3**
	comp=Z,7.5nm,1.0s,baz=205,slow=4.0,SNR=5.9						
BOSA				LR	LR	12 43 57.3	
	comp=Z,652nm,18.4s,baz=234,slow=32						
	comp=Z,14nm,1.0s						
BOSA	**Boshof**	**35.94**	**81**	P	**P**	**12 31 42.2**	**+0.4**
BOSA				IAmb	IAmb	12 31 50.1	
	comp=Z,41nm,1.3s						
BELA	**Belgrano 2**	**36.10**	**187**	P	**P**	**12 31 43.0**	**+0.5**
BELA				IAmb	IAmb	12 31 50.2	
	comp=Z,92nm,1.5s						
TRCB	**Terra Rica**	**36.31**	**291**	*e*P	**P**	**12 31 47.4**	**+2.4**
TSUM	**Tsumeb**	**36.70**	**61**	LR	LR	12 43 20.1	
	comp=Z,1μm,20.6s,baz=172,slow=30						
TSUM	**Tsumeb**	**36.70**	**61**	P	**P**	**12 31 48.5**	**+0.1**
IPMB	**Ipameri, GO**	**36.81**	**302**	*e*P	**P**	**12 31 49.4**	**+0.1**
NBLA	**Lagarto - SE**	**36.88**	**322**	*e*P	**P**	**12 31 49.1**	**-0.7**
SMAI	**San Martin Ant**	**36.91**	**209**	P	**P**	**12 31 49.4**	**0.0**
ITRB	**Iturama**	**36.92**	**298**	*e*P	**P**	**12 31 52.9**	**+2.7**
MG03	**Isla Dawson**	**37.08**	**233**	P	**P**	**12 31 50.1**	**-1.0**
CPUP	**Villa Florida**	**37.40**	**282**	P	**P**	**12 31 54.0**	**-0.1**
	comp=Z,11nm,0.9s,baz=112,slow=7.1,SNR=7.8						
CPUP				LR	LR	12 46 09.8	
	comp=Z,876nm,18.4s,baz=131,slow=34						
	comp=Z,11nm,0.9s						
CPUP	**Villa Florida**	**37.40**	**282**	P	**P**	**12 31 53.5**	**-0.7**
CPUP				IAmb	IAmb	12 32 06.0	
	comp=Z,38nm,1.1s						
CPUP	**Villa Florida**	**37.40**	**282**	P	**P**	**12 31 54.0**	**-0.1**
NBAN	**Anadia - AL**	**37.41**	**326**	*e*P	**P**	**12 31 52.6**	**-1.7**
NBPN	**Ponto Novo - B**	**38.13**	**319**	*e*P	**P**	**12 31 59.0**	**-1.4**
LBTB	**Lobatse**	**38.30**	**76**	P	**P**	**12 32 01.6**	**-0.2**
	comp=Z,8.7nm,0.9s,baz=226,slow=8.1,SNR=8.2						
LBTB				LR	LR	12 44 45.1	
	comp=Z,956nm,20.4s,baz=227,slow=32						
	comp=Z,8.7nm,0.9s						
LBTB	**Lobatse**	**38.30**	**76**	P	**P**	**12 32 01.8**	**-0.1**
BDFB	**Brasilia**	**38.48**	**305**	P	**P**	**12 32 03.2**	**-0.3**
	comp=Z,6.9nm,0.9s,baz=137,slow=3.6,SNR=7.1						
BDFB				LR	LR	12 45 00.1	
	comp=Z,722nm,18.5s,baz=136,slow=32						
	comp=Z,6.9nm,0.9s						
BDFB	**Brasilia**	**38.48**	**305**	P	**P**	**12 32 03.1**	**-0.3**
BDFB				IAmb	IAmb	12 32 09.9	
	comp=Z,34nm,1.0s						
BDFB	**Brasilia**	**38.48**	**305**	*e*P	**P**	**12 32 03.4**	**0.0**
NBCA	**Caruaru-PE**	**38.61**	**327**	*e*P	**P**	**12 32 05.6**	**+1.2**
SDBA	**SAO DESIDERIO**	**39.25**	**312**	*e*P	**P**	**12 32 09.0**	**-0.8**
COYC	**Coyhaique**	**39.70**	**246**	P	**P**	**12 32 12.6**	**-0.7**
COYC				IAmb	IAmb	12 32 26.9	
	comp=Z,74nm,1.7s						
PLCA	**Paso Flores**	**40.22**	**254**	P	**P**	**12 32 17.6**	**-0.1**
	comp=Z,5.1nm,1.0s,baz=124,slow=7.2,SNR=6.4						
PLCA				LR	LR	12 49 31.2	
	comp=Z,360nm,18.2s,baz=115,slow=37						
	comp=Z,5.1nm,1.0s						
PLCA	**Paso Flores**	**40.22**	**254**	P	**P**	**12 32 16.9**	**-0.8**
PLCA	**Paso Flores**	**40.22**	**254**	*e*P	**P**	**12 32 19.4**	**+1.7**
LL02	**Futaleuf**	**40.27**	**250**	P	**P**	**12 32 17.2**	**-0.9**
NBMA	**Muriti-CE**	**40.54**	**324**	*e*P	**P**	**12 32 20.0**	**-0.4**
RCBR	**Riachuelo**	**40.75**	**329**	LR	LR	12 44 55.4	
	comp=Z,507nm,21.0s,baz=297,slow=30						
RCBR	**Riachuelo**	**40.75**	**329**	P	**P**	**12 32 21.9**	**-0.4**
RCBR	**Riachuelo**	**40.75**	**329**	P	**P**	**12 32 21.9**	**-0.4**
RCBR				pmax	pmax		
	comp=Z,21nm,1.1s						
PEXB	**Peixe**	**41.42**	**308**	*e*P	**P**	**12 32 27.3**	**-0.5**
NBPB	**Pedra_Branca-C**	**42.52**	**324**	*e*P	**P**	**12 32 35.8**	**-0.9**
ZON	**Zonda**	**42.88**	**267**	P	**P**	**12 32 39.2**	**-0.4**
ZON	**Zonda**	**42.88**	**267**	P	**P**	**12 32 39.2**	**-0.4**
ZON				pmax	pmax		
	comp=Z,47nm,1.4s						
SALV	**Santo Antonio**	**43.17**	**296**	*e*P	**P**	**12 32 43.3**	**+1.3**
MT03	**Universidad Ad**	**43.26**	**263**	P	**P**	**12 32 42.1**	**-0.6**
MT03				IAmb	IAmb	12 32 54.1	
	comp=Z,71nm,1.4s						
MATP	**Matopo**	**43.27**	**73**	LR	LR	12 48 28.6	
	comp=Z,1μm,19.7s,baz=240,slow=33						
SNDB	**Serra Nova Dou**	**43.31**	**304**	*e*P	**P**	**12 32 43.2**	**+0.1**
MT05	**Renca**	**43.48**	**263**	P	**P**	**12 32 43.5**	**-1.0**
MT05				IAmb	IAmb	12 32 44.8	
	comp=Z,44nm,1.1s						
PEL	**Peldehue**	**43.56**	**264**	P	**P**	**12 32 44.7**	**-0.4**
PEL				IAmb	IAmb	12 32 51.7	
	comp=Z,69nm,1.2s						
PEL	**Peldehue**	**43.56**	**264**	P	**P**	**12 32 44.7**	**-0.4**
PEL				pmax	pmax		
	comp=Z,69nm,1.2s						
VA03	**San Esteban**	**43.65**	**264**	P	**P**	**12 32 45.1**	**-0.8**
VA03				IAmb	IAmb	12 33 01.8	
	comp=Z,45nm,1.1s						
NBMO	**Morrinhos-CE**	**44.72**	**325**	*e*P	**P**	**12 32 54.5**	**+0.1**
CO01	**Juntas del Tor**	**44.73**	**268**	P	**P**	**12 32 54.2**	**-0.5**
GO04	**Tololo Observa**	**45.14**	**267**	P	**P**	**12 32 57.3**	**-0.8**
GO04				IAmb	IAmb	12 33 15.6	
	comp=Z,69nm,1.3s						
LCO	**Las Campanas**	**45.69**	**269**	P	**P**	**12 33 01.3**	**-1.1**
LCO				IAmb	IAmb	12 33 08.3	
	comp=Z,29nm,1.1s						
LCO	**Las Campanas**	**45.69**	**269**	P	**P**	**12 33 01.3**	**-1.1**
LCO				pmax	pmax		
	comp=Z,29nm,1.1s						
PTLB	**Pontes e Lacer**	**45.80**	**293**	*e*P	**P**	**12 33 03.3**	**+0.2**
LSZ	**Lusaka**	**46.56**	**68**	LR	LR	12 49 23.9	
	comp=Z,1μm,21.8s,baz=210,slow=32						
LSZ	**Lusaka**	**46.56**	**68**	P	**P**	**12 33 09.5**	**+0.3**
LSZ				IAmb	IAmb	12 33 22.3	
	comp=Z,21nm,1.2s						
LSZ	**Lusaka**	**46.56**	**68**	P	**P**	**12 33 09.5**	**+0.3**
LSZ				pmax	pmax		
	comp=Z,21nm,1.3s						
SIV	**San Ignacio**	**46.75**	**291**	LR	LR	12 50 14.2	
	comp=Z,599nm,20.2s,baz=120,slow=33						
ROSB	**Rosario**	**46.93**	**320**	*e*P	**P**	**12 33 12.9**	**+1.0**
CLDB	**Colider**	**46.96**	**301**	*e*P	**P**	**12 33 12.3**	**+0.1**
PDRB	**Porto dos Gac**	**47.00**	**299**	*e*P	**P**	**12 33 13.5**	**+1.0**
GO02	**Mina Guanaco**	**47.03**	**274**	P	**P**	**12 33 10.7**	**-2.3**
PRPB	**Parauapebas**	**47.10**	**311**	*e*P	**P**	**12 33 13.2**	**-0.1**
AC01	**Pan de Azucar**	**47.20**	**272**	P	**P**	**12 33 13.1**	**-0.9**
MAW	**Mawson**	**47.24**	**149**	P	**P**	**12 33 14.3**	**+0.6**
	comp=Z,12nm,0.9s,baz=266,slow=10.0,SNR=14						
MAW				LR	LR	12 49 12.2	
	comp=Z,281nm,21.8s,baz=273,slow=31						
	comp=Z,12nm,0.9s						
MAW	**Mawson**	**47.24**	**149**	P	**P**	**12 33 14.4**	**+0.6**
QSPA	**South Pole Qui**	**47.56**	**180**	LR	LR	12 51 45.7	
	comp=Z,155nm,18.2s,baz=218,slow=34						
QSPA	**South Pole Qui**	**47.56**	**180**	P	**P**	**12 33 16.6**	**0.0**
LVC	**Limon Verde**	**48.05**	**277**	LR	LR	12 51 54.8	
	comp=Z,404nm,21.9s,baz=140,slow=34						
LVC	**Limon Verde**	**48.05**	**277**	P	**P**	**12 33 20.0**	**-1.0**
LVC	**Limon Verde**	**48.05**	**277**	P	**P**	**12 33 20.0**	**-1.0**
LVC				pmax	pmax		
	comp=Z,12nm,1.0s						
LVC	**Limon Verde**	**48.05**	**277**	*e*P	**P**	**12 33 23.1**	**+2.1**
PB15	**IPOC Station P**	**48.10**	**276**	P	**P**	**12 33 20.0**	**-1.2**
VILB	**Vilhena**	**48.30**	**294**	*e*P	**P**	**12 33 25.1**	**+2.5**
NPGB	**Novo Progresso**	**49.64**	**304**	*e*P	**P**	**12 33 32.4**	**-0.5**
LIC	**Lanzo**	**49.69**	**14**	⇑*i*P	**P**	**12 33 33.9**	**+0.7**
	comp=Z,82nm,0.8s						
KIC	**Kosan Boka**	**49.88**	**15**	⇑*i*P	**P**	**12 33

CUPR **Culebra, Puert** **75.80** **312** P **P** **12 36 26.3 -0.9**
CUPR IAmb IAmb 12 36 33.3
comp=Z,28nm,0.8s
MDT **Midelt** **75.86** **10** LR LR 13 04 39.9
comp=Z,77nm,19.7s,baz=180,slow=32
HUMP **Col San Antoni** **75.98** **311** P **P** **12 36 27.7 -0.5**
HUMP IAmb IAmb 12 36 34.5
comp=Z,36nm,1.0s
CBYP **Canovanas** **76.08** **311** IAmb IAmb 12 36 35.1
comp=Z,30nm,1.0s
ATD **Arta Tunnel** **76.10** **60** LR LR 13 08 42.7
comp=Z,430nm,18.3s,baz=185,slow=35
SJG **San Juan** **76.12** **311** LR LR 13 07 37.3
comp=Z,133nm,21.4s,baz=112,slow=34
PFVI **Vila Bisbo** **79.72** **6** *eP* **P** **12 36 50.1 +1.5**
comp=Z,85nm,1.8s
PBDV **Barranco-do-Ve** **79.90** **6** *eP* **P** **12 36 51.0 +1.4**
comp=Z,49nm,1.2s
MORF **Marmelete** **79.90** **6** *eP* **P** **12 36 50.6 +0.9**
MORF IAmb IAmb 12 36 56.8
comp=Z,279nm,2.4s
MORF **Marmelete** **79.90** **6** *eP* **P** **12 36 51.2 +1.5**
comp=Z,67nm,2.0s
MORF **Marmelete** **79.90** **6** *eP* **P** **12 36 50.6 +0.9**
PVAQ **Vaqueiros** **80.07** **7** *eP* **P** **12 36 51.9 +1.4**
comp=Z,45nm,1.4s
PVAQ **Vaqueiros** **80.07** **7** IAmb IAmb 12 36 52.8
comp=Z,26nm,1.1s
PCVE **Castro Verde** **80.27** **6** *eP* **P** **12 36 53.0 +1.4**
comp=Z,47nm,1.6s
MESJ **Messejana** **80.47** **6** *eP* **P** **12 36 53.7 +1.0**
MESJ IAmb IAmb 12 36 57.1
comp=Z,35nm,1.4s
MESJ **Messejana** **80.47** **6** *eP* **P** **12 36 53.6 +1.0**
PNCL **Nicolau / Gran** **80.71** **6** *eP* **P** **12 36 55.2 +1.3**
comp=Z,34nm,1.4s
KEST **Kesra** **81.40** **21** P **P** **12 36 59.4 +1.5**
comp=Z,38nm,1.0s,baz=185,slow=3.5,SNR=26
KEST LR LR 13 09 15.1
comp=Z,170nm,19.7s,baz=230,slow=33
comp=Z,38nm,1.0s
PESTR **Estremoz** **81.54** **7** *eP* **P** **12 36 59.6 +1.2**
comp=Z,35nm,1.4s
PMTG **Montargil** **81.69** **6** *eP* **P** **12 37 00.4 +1.3**
comp=Z,38nm,1.4s
JTS **Las Juntas de** **81.96** **292** LR LR 13 13 46.2
comp=Z,299nm,19.7s,baz=194,slow=36
JTS **Las Juntas de** **81.96** **292** *i* P **P** **12 37 00.6 -0.6**
JTS pmax pmax
comp=Z,9.0nm,1.0s
PMRV **Marv??o** **82.11** **7** *eP* **P** **12 37 02.6 +1.2**
comp=Z,51nm,1.6s
PAB **San Pablo** **82.53** **9** P **P** **12 37 03.8 +0.1**
PAB IAmb IAmb 12 37 05.5
comp=Z,19nm,1.1s
PAB **San Pablo** **82.53** **9** P **P** **12 37 03.8 +0.1**
PAB pmax pmax
comp=Z,19nm,1.2s
PCAS **Casmilo, Conde** **82.64** **6** *eP* **P** **12 37 05.4 +1.3**
comp=Z,56nm,1.6s
ESDC **Sonseca Array** **82.70** **9** P **P** **12 37 05.5 +1.0**
comp=Z,16nm,1.1s,baz=186,slow=5.3,SNR=60
ESDC LR LR 13 11 38.8
comp=Z,45nm,18.6s,baz=158,slow=34
comp=Z,16nm,1.1s
ESDC **Sonseca Array** **82.70** **9** IAmb IAmb 12 37 06.4
comp=Z,22nm,1.1s
ESBB **Sonseca Array** **82.71** **9** IAmb IAmb 12 37 06.4
comp=Z,22nm,1.1s
MTE **Manteigas** **83.06** **6** *eP* **P** **12 37 07.6 +1.2**
comp=Z,41nm,1.3s
MTE **Manteigas** **83.06** **6** IAmb IAmb 12 37 08.3
comp=Z,33nm,1.1s
MVO **Moncorvo** **83.86** **7** *eP* **P** **12 37 11.8 +1.3**
comp=Z,48nm,1.5s
POLO **Lamas de Olo** **84.01** **6** *eP* **P** **12 37 12.6 +1.3**
comp=Z,15nm,1.6s
PBRG **Braganca** **84.53** **7** *eP* **P** **12 37 15.2 +1.4**
comp=Z,40nm,1.5s
VSL **Villasalto** **84.97** **19** P **P** **12 37 16.6 +0.6**
VSL IAmb IAmb 12 37 17.8
comp=Z,17nm,1.2s
EIL **Elat** **85.87** **43** LR LR 13 11 48.2
comp=Z,362nm,22.0s,baz=242,slow=33
IDI **Anoyia** **86.11** **32** LR LR 13 16 26.7
comp=Z,20nm,18.0s,baz=80,slow=36
TIP **Timpagrande** **86.73** **25** IAmb IAmb 12 37 32.8
comp=Z,13nm,1.1s
RAYN **Ar Rayn** **86.83** **54** P **P** **12 37 26.8 +1.1**
RAYN IAmb IAmb 12 37 28.7
comp=Z,23nm,1.2s
RAYN **Ar Rayn** **86.83** **54** P **P** **12 37 26.8 +1.1**
RAYN pmax pmax
comp=Z,23nm,1.3s
MMAI **Mount Meron Ar** **88.82** **41** LR LR 13 14 37.1
comp=Z,168nm,19.6s,baz=18,slow=34
SSB **Saint Sauveur** **89.48** **14** IAmb IAmb 12 37 40.0
comp=Z,16nm,1.2s
ZCCA **Zocca** **89.95** **19** IAmb IAmb 12 37 44.6
comp=Z,32nm,1.2s
H01W2 **Cape Leeuwin H** **90.30** **141** T T 14 19 05.1
baz=215,slow=75,SNR=14
H01W3 **Cape Leeuwin H** **90.32** **141** T T 14 18 58.8
baz=215,slow=75,SNR=14
H01W1 **Cape Leeuwin H** **90.32** **141** T T 14 19 09.8
baz=215,slow=75,SNR=12
TUE **Stuetta** **91.58** **17** IAmb IAmb 12 37 48.8
comp=Z,20nm,1.5s
CTI **Castel Tesino** **91.70** **19** IAmb IAmb 12 37 49.9
comp=Z,12nm,0.9s
DAVOX **Davos/Dischmat** **91.99** **17** LR LR 13 16 30.2
comp=Z,117nm,20.0s,baz=88,slow=34
DIVS **Divibare** **92.20** **25** IAmb IAmb 12 37 55.0
comp=Z,12nm,0.9s
GBAS **Gorenja Brezov** **92.30** **21** *eP* **P** **12 37 51.9 +1.1**
PDKS **Podkum** **92.56** **21** *i* P **P** **12 37 53.3 +1.2**
BR131 **Keskin Array S** **93.52** **36** P **P** **12 37 57.6 +0.8**
BR131 IAmb IAmb 12 37 59.0
comp=Z,18nm,1.1s
BR131 **Keskin Array S** **93.52** **36** *i* P **P** **12 37 57.1 +0.3**
BRTR **Keskin Array B** **93.52** **36** P **P** **12 37 57.5 +0.7**
comp=Z,5.4nm,0.8s,baz=187,slow=6.2,SNR=20
BRTR LR LR 13 18 50.1
comp=Z,182nm,20.6s,baz=172,slow=35
comp=Z,5.4nm,0.8s
BRTR **Keskin Array B** **93.52** **36** P **P** **12 37 57.1 +0.3**
BRTR **Keskin Array B** **93.52** **36** *i* P **P** **12 37 58.2 +1.4**
BRTR pmax pmax
comp=Z,6.0nm,0.8s
GERES **GERESS Array B** **94.81** **19** P **P** **12 38 00.4 -2.1**
comp=Z,0.3nm,0.3s,baz=201,slow=7.1,SNR=4.9
GERES PP **PP** **12 41 48.0 -3.9**
comp=Z,0.7nm,0.7s,baz=201,slow=9.3,SNR=5.9
comp=Z,0.3nm,0.3s
WSAR **Wadi Sarin** **94.86** **63** LR LR 13 19 08.8
comp=Z,276nm,19.0s,baz=227,slow=34
KHC **Kasperske Hory** **95.05** **19** *i* P **P** **12 38 02.8 -0.7**
KHC pmax pmax
comp=Z,10.0nm,1.2s
MLR **Muntele Rosu** **95.40** **28** IAmb IAmb 12 38 06.5
comp=Z,12nm,0.9s
VRAC **Vranov** **95.97** **21** LR LR 13 18 32.7
comp=Z,36nm,20.0s,baz=175,slow=34
CLL **Collm** **96.95** **18** *i* P **P** **12 38 15.2 +3.2**
CLL *i* 12 38 25.0
CLL **Collm** **96.95** **18** *i* P **P** **12 38 15.2 +3.2**
CLL *i* x x 12 38 25.0
comp=Z,8.0nm,1.4s
BUR08 **Bucovina Ar. S** **97.03** **27** IAmb IAmb 12 38 14.8
comp=Z,5.0nm,1.0s
EKA **Eskdalemuir Ar** **98.26** **7** LR LR 13 19 06.7
comp=Z,49nm,21.4s,baz=170,slow=33
GNI **Garni** **99.05** **43** LR LR 13 22 51.1
comp=Z,96nm,19.2s,baz=198,slow=35
PALK **Pallekele** **99.76** **89** LR LR 13 17 56.2
comp=Z,161nm,18.3s,baz=270,slow=32
MAK **Makhachkala** **102.52** **42** *eP* **Pdif** **12 38 31.8 -5.3**
MAK *i* 12 42 52.5
MAK pmax pmax
comp=Z,126nm,0.9s
HYBB **Hyderabad (bro** **104.84** **80** *e*PKiKP **PKiKP** **12 43 03.8 +0.4**
HYBB *e*PP **PP** **12 43 09.0 +0.6**
ASAR **Alice Springs** **108.35** **151** PKiKP **PKiKP** **12 43 08.8 -1.2**
comp=Z,0.5nm,0.9s,baz=193,slow=1.7,SNR=4.7
ASAR PKKPbc **PKKPbc** **12 54 16.3 -2.8**
comp=Z,0.2nm,0.6s,baz=60,slow=2.2,SNR=4.5
WRA **Warramunga Arr** **111.92** **150** PKiKP **PKiKP** **12 43 15.7 -1.0**
comp=Z,0.4nm,0.7s,baz=217,slow=1.3,SNR=6.7
STKI **Sintang** **116.66** **117** PKP PKiKP 12 43 41.6 +16
AAK **Ala-Archa** **117.39** **56***c* *i*PKiKP **PKiKP** **12 43 27.1 +0.5**
AAK pmax pmax
comp=Z,3.0nm,0.8s
PDAR **Pinedale Array** **119.43** **302** PKP **PKPdf** **12 43 28.9 -1.7**
comp=Z,0.4nm,0.7s,baz=4.0,slow=3.9,SNR=2.6
PDAR PP **PP** **12 44 49.5 -3.3**
comp=Z,0.8nm,0.9s,baz=76,slow=5.7,SNR=4.2
SHL **Shillong** **119.59** **81** **PKPdf** **12 43 30.7 -0.6**
SHL **Shillong** **119.59** **81** PKiKP **PKPdf** **12 43 30.7 -0.6**
CMAR **Chiang Mai Arr** **120.47** **93** PKP **PKPdf** **12 43 32.5 -0.5**
comp=Z,1.9nm,0.7s,baz=250,slow=4.5,SNR=3.6
BRVK **Borovoye** **120.62** **44***c* *i*PKiKP **PKPdf** **12 43 32.4 +0.2**
BRVK pmax pmax
comp=Z,6.0nm,2.5s
ELK **Elko** **121.99** **298** PKP **PKPdf** **12 43 35.9 +0.3**
comp=Z,1.3nm,0.7s,baz=205,slow=2.6,SNR=8.4
ELK **Elko** **121.99** **298** PKPdf **PKPdf** **12 43 35.5 -0.1**
ELK **Elko** **121.99** **298** PKiKP **PKPdf** **12 43 35.5 -0.1**
NVAR **Mina Array Bea** **122.83** **294** PKP **PKPdf** **12 43 37.6 +0.4**
comp=Z,0.3nm,0.7s,baz=110,slow=5.1,SNR=2.8
HRY **Holter Researc** **122.84** **305** **PKPdf** **12 43 36.9 +0.1**
KURK **Kurchatov** **123.97** **50** **PKPdf** **12 43 38.0 -0.7**
KURK **Kurchatov** **123.97** **50** PKiKP **PKPdf** **12 43 38.0 -0.7**
MAKZ **Makanchi** **124.11** **55** **PKPdf** **12 43 38.2 -0.9**
MAKZ **Makanchi** **124.11** **55** PKiKP **PKPdf** **12 43 38.2 -0.9**
MK31 **Makanchi Array** **124.29** **55** *i* PKiKP **PKPdf** **12 43 38.5 -1.0**
MKAR **Makanchi Array** **124.29** **55** PKP **PKPdf** **12 43 38.6 -0.8**
comp=Z,2.2nm,0.8s,baz=252,slow=3.2,SNR=16
MPK **Martis Peak** **124.44** **294** **PKPdf** **12 43 40.7 +0.4**
BMO **Blue Mountains** **125.33** **301** **PKPdf** **12 43 41.2 -0.4**
BMO **Blue Mountains** **125.33** **301** PKiKP **PKPdf** **12 43 41.2 -0.4**
WMQ **Urumqi** **126.30** **61** *e*PKP **PKiKP** **12 43 45.5 +1.6**
WMQ LR LR
comp=Z,190nm,20.5s
EDM **Edmonton** **126.66** **312** PKPdf **PKPdf** **12 43 43.2 -0.6**
EDM **Edmonton** **126.66** **312** PKiKP **PKPdf** **12 43 43.2 -0.6**
KMI **Kunming** **127.30** **89** ⇑P **PKPdf** **12 43 45.9 -0.3**
KMI pmax pmax
comp=Z,13nm,1.0s
PZH **PanZhiHua** **127.36** **87** PKP **PKPdf** **12 43 45.0 -1.1**
GOMU **GeErMu** **127.49** **72** PKP **PKiKP** **12 43 47.2 +0.3**
GOMU sPKP 12 43 55.0
GOMU AMB AMB
comp=Z,51nm,4.4s
EUNU **Eureka** **128.50** **348** **PKiKP** **12 43 47.4 +0.1**
ZALV **Zalesovo Beam** **128.78** **48** PKP **PKPdf** **12 43 46.7 -1.0**
comp=Z,3.6nm,0.8s,baz=257,slow=2.9,SNR=10
SRPI **Serui, Papua** **129.03** **143** PKP PKPdf 12 43 39.6 -10
YKA **Yellowknife Ar** **130.54** **323** PKP **PKPdf** **12 43 50.0 -0.9**
comp=Z,4.2nm,1.0s,baz=105,slow=2.0,SNR=12
YKA **Yellowknife Ar** **130.54** **323** PKiKP **PKPdf** **12 43 50.0 -0.9**
GTA **Gaotai** **132.48** **71** *e*PKP **PKiKP** **12 43 56.6 0.0**
GTA LR LR
comp=Z,140nm,16.0s
GTA LR LR
comp=Z,160nm,16.0s
GTA LR LR
comp=Z,220nm,16.4s
NRIK **Noril'sk** **133.84** **29** PKP **PKPdf** **12 43 56.2 -0.7**
comp=Z,0.9nm,0.3s,baz=325,slow=0.9,SNR=3.7
LZH **Lanzhou** **133.85** **77** *e*PKP **PKiKP** **12 44 01.6 +2.1**
XAN **Xi'an** **136.58** **82** PKP **PKPdf** **12 44 01.3 -1.9**
MOY **Mondy** **137.44** **55** *e*PKiKP **PKPdf** **12 44 05.0 +0.7**
ZAK **Zakamensk** **138.54** **58** *e*PKiKP **PKPdf** **12 44 04.6 -1.8**
ZAK pmax pmax
comp=Z,7.0nm,1.2s
P33M **Teslin, Yukon** **138.75** **318** **PKPdf** **12 44 07.2 +0.8**
SONM **Songino Array** **139.90** **62** PKhKP PKPpre 12 44 01.2
comp=Z,0.5nm,0.5s,baz=214,slow=4.9,SNR=3.6
SONM PKP **PKPdf** **12 44 08.5 -0.5**
comp=Z,2.8nm,0.8s,baz=213,slow=2.9,SNR=13
ULN **Ulaanbaatar** **140.34** **62** **PKPdf** **12 44 09.4 -0.4**
ULN **Ulaanbaatar** **140.34** **62** *i* PKiKP **PKPdf** **12 44 08.6 -1.2**
HHC **Hu-ho-hao-te** **141.32** **74** *e*PKP **PKPdf** **12 44 09.0 -2.7**
HNS **HongShan** **142.28** **81** ⇓PKP **PKPdf** **12 44 07.2 -6.2**
NJ2 **Nanjing** **142.93** **91** *e*PKP **PKiKP** **12 44 17.3 -0.6**
MESA **MESA** **143.31** **317** P **PKiKP** **12 44 18.2 +0.1**
baz=86
J26L **Joseph Creek** **143.50** **325** P **PKiKP** **12 44 19.0 +0.7**
baz=79
TIA **Tai'an** **143.56** **84** *e*P PKPab 12 44 11.4 -0.8
TIA pmax pmax
comp=Z,11nm,1.4s
M26K **Nabesna, AK** **143.59** **321** P **PKiKP** **12 44 19.5 +1.1**
baz=82
L26K **Log Cabin Wild** **143.66** **322** P **PKiKP** **12 44 19.4 +0.9**
baz=81
MCARA **McCarthy VSAT** **143.73** **320** P **PKiKP** **12 44 19.6 +0.9**
baz=84
SCRK **Sand Creek** **143.78** **324** P **PKiKP** **12 44 19.7 +0.8**
baz=79
BGLC **Bering Glacier** **143.98** **317** P **PKiKP** **12 44 20.4 +1.3**
baz=85
RIDG **Independent Ri** **144.20** **324** P **PKiKP** **12 44 21.1 +1.5**
baz=79
J25K **Salcha River,** **144.24** **325** P **PKiKP** **12 44 21.0 +1.3**
baz=77
BJT **Baijiatuan** **144.33** **78** **PKPab** **12 44 15.4 +0.4**
BJT **Baijiatuan** **144.33** **78** PKiKP **PKPab** **12 44 15.4 +0.4**
N25K **Chitina, Valde** **144.45** **320** P **PKiKP** **12 44 22.0 +1.8**
baz=82
BMRM **Bremner River** **144.54** **319** **PKPab** **12 44 15.0 -0.2**
BMRM **Bremner River** **144.54** **319** P **PKiKP** **12 44 21.5 +1.2**
baz=83
HARP **HAARP** **144.59** **321** P **PKiKP** **12 44 21.5 +1.1**
baz=80
TOLK **Toolik Lake Re** **144.59** **333** P **PKiKP** **12 44 21.3 +1.1**
baz=67
K24K **Donnelly Dome** **144.59** **324** P **PKiKP** **12 44 21.6 +1.2**
baz=78,SNR=22
PAX **Paxson** **144.63** **323** P **PKiKP** **12 44 21.5 +0.9**
baz=79,SNR=11
ILAR **Eielson Array** **144.84** **326** PKP **PKPab** **12 44 15.7 -0.4**
comp=Z,29nm,0.7s,baz=102,slow=2.1,SNR=254
H24K **Noodor Dome** **144.94** **328** P **PKiKP** **12 44 22.8 +1.7**
baz=73,SNR=85
HDA **Harding Lake** **144.96** **325** P **PKiKP** **12 44 22.4 +1.3**
baz=76,SNR=58
POKR **Poker Plat Res** **144.97** **326** P **PKiKP** **12 44 22.4 +1.3**
baz=74,SNR=5.6
KLU **Klutina** **145.09** **320** P **PKiKP** **12 44 23.6 +2.1**
baz=81,SNR=35
M24K **Tolsona, Glenn** **145.11** **321** P **PKiKP** **12 44 23.7 +2.1**
baz=80,SNR=15
EYAK **Cordova Ski Ar** **145.15** **318** P **PKiKP** **12 44 23.7 +2.2**
baz=82,SNR=14
CIT **Chita** **145.18** **57** *e*PKiKP **PKPdf** **12 44 18.4 +0.3**
CIT *e* 12 44 24.6
CIT pmax pmax
comp=Z,153nm,1.5s
COLA **College** **145.21** **326** **PKPbc** **12 44 16.2 -1.1**
COLA **College** **145.21** **326** PKiKP **PKPbc** **12 44 16.2 -1.1**
COLA **College** **145.21** **326** P **PKiKP** **12 44 22.9 +1.4**
baz=74
TCOL **CIGO, UAF Yank** **145.21** **326** P **PKiKP** **12 44 22.9 +1.4**
baz=74,SNR=21
COLD **Coldfoot** **145.35** **331** P **PKiKP** **12 44 23.6 +1.8**
baz=68
A21K **Barrow** **145.42** **339** P **PKiKP** **12 44 24.0 +2.3**
baz=56
XLT **XiLinHaoTe** **145.44** **71** *i* PKPbc **PKPab** **12 44 19.5 +0.4**
XLT PKPab **PKiKP** **12 44 24.7 +1.9**
XLT AMB AMB
comp=Z,140nm,6.0s
XLT LR LR
comp=Z,190nm,8.3s
XLT LR LR
comp=Z,190nm,10.2s
DHY **Denali Highway** **145.46** **323** P **PKiKP** **12 44 24.2 +1.9**
baz=77
BOD **Bodaibo** **145.49** **46** *e*PKP2 **PKPdf** **12 44 16.8 -1.5**
BOD pmax pmax
comp=Z,91nm,1.4s
Q23K **Middleton Isla** **145.59** **316** P **PKiKP** **12 44 24.7 +2.2**
baz=84
H23K **Yukon River** **145.60** **328** P **PKiKP** **12 44 24.6 +2.2**
baz=71,SNR=40
SCM **Sheep Creek Mo** **145.69** **321** P **PKiKP** **12 44 24.8 +2.1**
baz=79,SNR=21
WAT6 **Susitna Watana** **145.73** **322** P **PKiKP** **12 44 24.8 +1.9**
baz=78
I23K **Minto, Yukon-K** **145.74** **327** P **PKiKP** **12 44 24.5 +1.9**
baz=72,SNR=31
GLI **Glacier Island** **145.75** **319** P **PKiKP** **12 44 24.7 +1.9**
baz=81,SNR=15
NEA2 **Nenana** **145.79** **326** P **PKiKP** **12 44 24.5 +1.7**
baz=73,SNR=16
M23K **Glacier View** **145.89** **321** P **PKiKP** **12 44 25.2 +2.1**
baz=79,SNR=20
MCK **McKinley** **145.97** **324** P **PKiKP** **12 44 25.2 +2.0**
baz=75
WAT1 **Susitna Watana** **146.03** **323** P **PKiKP** **12 44 25.3 +1.9**
baz=76
SML **Sawmill** **146.16** **321** P **PKPdf** **12 44 19.9 +0.4**
baz=78,SNR=16
TIXI **Tiksi** **146.27** **19** PKPdf **PKPdf** **12 44 18.9 -0.4**
TIXI **Tiksi** **146.27** **19** PKP2 **PKPdf** **12 44 18.9 -0.4**
KNK **Knik Glacier** **146.31** **320** P **PKPdf** **12 44 20.3 +0.6**
baz=78
MLY **Manley** **146.33** **327** P **PKPdf** **12 44 19.8 +0.1**
baz=71,SNR=19
PMR **Palmer** **146.58** **321** P **PKPdf** **12 44 21.0 +0.9**
baz=78
TRF **Thorofare Moun** **146.63** **324** P **PKPdf** **12 44 20.9 +0.6**
baz=74
BPAW **Bear Paw Mtn.** **146.74** **326** P **PKPdf** **12 44 20.8 +0.4**
baz=72,SNR=13
I21K **Tanana** **146.77** **328** P **PKPdf** **12 44 21.1 +0.8**
baz=69,SNR=29
H21K **Melozitna Rive** **146.92** **329** P **PKPdf** **12 44 21.8 +1.2**
baz=68,SNR=28
RC01 **Rabbit Creek A** **146.98** **320** P **PKPbc** **12 44 22.6 -0.3**
baz=78,SNR=8.0
M22K **Willow** **147.01** **321** P **PKPbc** **12 44 22.3 -0.5**
baz=76,SNR=8.0
SEW **Seward** **147.04** **318** P **PKPdf** **12 44 22.1 +1.2**
baz=79
O22K **Cooper Landing** **147.10** **319** P **PKPdf** **12 44 22.0 +1.1**
baz=79
IMAR **Indian Mountai** **147.14** **330** **PKPdf** **12 44 19.7 -1.2**
CHUM **Lake Minchumin** **147.36** **326** P **PKPdf** **12 44 22.8 +1.5**
baz=71,SNR=11
SUA **Susitna One** **147.37** **321** P **PKPbc** **12 44 23.6 -0.4**
baz=76,SNR=10
SKT **Skwentna** **147.59** **322** P **PKPbc** **12 44 23.9 -0.7**
baz=74,SNR=30
PPLA **Purkeypile** **147.62** **324** P **PKPbc** **12 44 24.0 -0.8**
baz=72,SNR=11
BRSE **Bradley Lake S** **147.75** **318** P **PKPbc** **12 44 24.6 -0.4**
baz=79,SNR=7.1
J20K **Nowinta River** **148.01** **327** P **PKPbc** **12 44 24.7 -0.8**
baz=68,SNR=15
CNPM **China Poot** **148.03** **317** **PKPbc** **12 44 25.9 +0.1**
SPCR **Spurr Chakacha** **148.12** **321** P **PKPbc** **12 44 25.2 -0.8**
baz=75
HOM **Homer** **148.21** **318** P **PKPbc** **12 44 25.5 -0.7**
baz=78
K20K **Telida** **148.28** **325** P **PKPbc** **12 44 25.2 -1.1**
baz=70,SNR=7.8
M20K **Styx River** **148.35** **322** P **PKPbc** **12 44 25.5 -1.1**
baz=73,SNR=18
L20K **Farewell, AK** **148.49** **323** P **PKPbc** **12 44 26.0 -1.0**
baz=71,SNR=11
O20K **Slope Mountain** **148.60** **319** P **PKPbc** **12 44 26.6 -0.7**
baz=76
Q20K **Shuyak Island** **148.80** **316** P **PKPbc** **12 44 27.2 -0.6**
baz=79
GCSA **Galena City Sc** **148.86** **328** P **PKPbc** **12 44 27.6 -0.1**
baz=64
HIA **Hailar** **148.87** **62** **PKPbc** **12 44 28.4 +0.1**
HIA **Hailar** **148.87** **62** PKP2 **PKPbc** **12 44 28.4 +0.1**
M19K **Big River Lodg** **148.91** **323** P **PKPbc** **12 44 27.0 -1.0**
baz=71
L19K **White Mountain** **149.02** **323** P **PKPbc** **12 44 27.1 -1.2**
baz=70,SNR=14
KDAK **Kodiak Island** **149.06** **314** **PKPbc** **12 44 28.4 +0.1**
KDAK **Kodiak Island** **149.06** **314** PKP2 **PKPbc** **12 44 28.5 +0.1**
KDAK **Kodiak Island** **149.06** **314** P **PKPbc** **12 44 27.6 -0.8**
baz=80
TTA **Tatalina** **149.25** **325** P **PKPbc** **12 44 28.8 -0.1**
baz=68,SNR=16
N19K **Bonanza Creek** **149.29** **321** P **PKPbc** **12 44 27.7 -1.4**
baz=73,SNR=7.0
Q19K **Cape Douglas,** **149.37** **317** **PKPbc** **12 44 28.7 -0.5**
Q19K **Cape Douglas,** **149.37** **317** P **PKPbc** **12 44 28.2 -1.0**
baz=77
O19K **Port Alsworth** **149.39** **319** P **PKPbc** **12 44 27.9 -1.3**
baz=74
OHAK **Old Harbor** **149.53** **313** P **PKPbc** **12 44 29.4 -0.2**
baz=80
O18K **Koktuh Hills** **149.91** **319** P **PKPbc** **12 44 29.6 -0.9**
baz=74
N18K **Kilae Creek** **149.99** **321** P **PKPbc** **12 44 29.7 -0.9**
baz=72
P18K **Big Mountain,** **150.05** **318** P **PKPbc** **12 44 29.7 -1.2**
baz=74
SII **Sitkinak Islan** **150.13** **312** P **PKPbc** **12 44 29.8 -1.3**
baz=80
P17K **Kvichak River** **150.70** **318** P **PKPbc** **12 44 31.0 -1.4**
baz=74
CHIR **Chirikof Islan** **151.05** **311** P **PKPbc** **12 44 32.0 -1.2**
baz=80
O16K **Kokwok River B** **151.38** **319** P **PKPbc** **12 44 33.1 -0.8**
baz=71
N16K **Nishlik Lake** **151.39** **321** P **PKPbc** **12 44 34.4 +0.4**
baz=69
KSCHJ **Chungju** **151.81** **90** **PKPbc** **12 44 35.5 -0.2**
KSAR **Wonju Array Be** **151.97** **89** PKPdf **PKPdf** **12 44 29.0 -0.5**
KSAR PKPbc **PKPbc** **12 44 35.8 -0.2**
KSAR PKPab **PKPab** **12 44 46.0 +0.6**
KSAR **Wonju Array Be** **151.97** **89** PKiKP **PKPdf** **12 44 29.0 -0.5**
KSAR 12 44 35.8
YAK **Yakutsk** **151.97** **35** *e*PKiKP **PKPdf** **12 44 29.5 +0.8**
YAK *e* 12 44 41.5
YAK *e* 12 48 17.8
YAK *e*SS SS 13 07 42.2 -1.4
YAK pmax pmax
comp=Z,24nm,1.1s
YAK pmax pmax
comp=N,2.0nm,0.8s
YAK pmax pmax
comp=E,3.0nm,1.1s
YAK pmax pmax
comp=Z,126nm,5.4s
YAK pmax pmax
comp=N,53nm,4.7s
YAK pmax pmax
comp=E,41nm,4.0s
KSRS **Korea Array** **152.00** **89** PKP **PKPdf** **12 44 28.9 -0.7**
comp=E,0.3nm,0.3s,baz=329,slow=1.4,SNR=4.9
KSRS PKPbc **PKPbc** **12 44 35.6 -0.4**
comp=E,3.5nm,0.8s,baz=258,slow=3.4,SNR=18
TNA **Tin City** **152.27** **335** P **PKiKP** **12 44 37.5 +1.4**
baz=48
SEHB **SEOHWA** **152.54** **87** **PKPbc** **12 44 37.5 +0.2**
ZEA **Zeya** **153.40** **53** *e*PKiKP **PKPbc** **12 44 37.9 -0.8**
ZEA pmax pmax
comp=Z,10.0nm,0.7s
SDPT **Sand Point** **153.84** **311** P **PKiKP** **12 44 41.1 +1.5**
baz=76
BILL **Bilibino** **154.57** **358** PKPdf **PKPdf** **12 44 31.3 -1.0**
BILL **Bilibino** **154.57** **358** *de*PKiKP **PKPdf** **12 44 31.5 -0.8**
BILL *e* 12 48 33.9
BILL pmax pmax
comp=Z,12nm,1.1s
MJB9 **Matsu-Tunnel** **159.20** **99** **PKPab** **12 45 16.4 0.0**
MAJO **Matsushiro** **159.20** **99** PKPab **PKPab** **12 45 16.1 -0.3**
MAJO **Matsushiro** **159.20** **99** PKP2 **PKPab** **12 45 16.1 -0.3**
MJAR **Matsushiro Arr** **159.20** **99** PKP **PKPdf** **12 44 37.9 -1.3**
comp=Z,0.9nm,0.6s,baz=181,slow=1.7,SNR=5.3
MJAR PKPab **PKPab** **12 45 15.9 -0.6**
comp=Z,4.5nm,1.1s,baz=231,slow=3.6,SNR=4.1
MJAR **Matsushiro Arr** **159.20** **99** **PKPdf** **12 44 37.4 -1.9**
MJAR PKPab **PKPab** **12 45 16.9 +0.4**
MJAR **Matsushiro Arr** **159.20** **99** PKiKP **PKPdf** **12 44 37.4 -1.9**
JSD **Sado** **159.83** **95** PKPdf **PKPdf** **12 44 39.5 -0.4**
JSD **PKPab** **12 45 19.0 -0.1**

MAN 08 12:36:27.9, 9.84N×126.12E, h32km, mb4.1, ML3.0, MS2.6, 3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GLSP	**General Luna,**	**0.05**	**167**	‖*e*P		Pn	12 36 34.0	+2.5
GLSP				*e*S			12 37 04.6	
SCPH	**Surigao**	**0.62**	**265**	‖*i*P		Pn	12 36 40.3	+0.8
SCPH				*i* S			12 36 50.7	
MSLP	**Maasin**	**1.27**	**284**	‖*e*P		Pn	12 36 49.5	+1.1
TBP	**Tagbilaran**	**2.23**	**266**	*e*P		Pn	12 37 03.3	+1.7

TBP *i* S 12 37 34.2

IDC 08 12:58:04.7±1.5, 0°.76N×124°.85E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=186.8km s-min=21.1km az=64.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.58**	**156**	P	P	13 03 06.1	-0.8
	1.0nm,0.3s,baz=334,slow=11,SNR=38 1.0nm,0.3s						
ASAR	**Alice Springs**	**25.82**	**161**	P	P	13 03 38.6	+0.6
	0.2nm,0.3s,baz=345,slow=12,SNR=10 0.2nm,0.3s						
MKAR	**Makanchi Array**	**58.96**	**327**	P	P	13 08 06.5	+0.4
	0.2nm,0.3s,baz=117,slow=7.8,SNR=4.5 0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**63.26**	**329**	P	P	13 08 34.7	-0.4
	0.5nm,0.5s,baz=132,slow=6.2,SNR=7.1 0.5nm,0.5s						

MAN 08 13:16:26.9, 13°.30N×120°.66E, h23km, mb3.8, ML2.5, MS2.0, Mindoro

*ISN **08** 13:17:25.6±0.7, 31°.54N×47°.56E, h6km±8km, ML3.3*
*TEH **08** 13:17:26.2, 31°.59N×47°.59E, h16km, ML3.3*
ISC 08 13:17:26.6±1.0, 31°.57N±0°.07×47°.58E±0°.04, h10km, n24, σ0s90/30, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AHWZ	**Ahwaz**	**0.94**	**104**	*e*Pg	**Pg**	**13 17 44.4**	**-0.3**
DHL1	**Dehloran**	**1.14**	**347**	*e*Pg	**Pb**	**13 17 47.1**	**-1.2**
DHL1				*e*Sg	**Sn**	**13 18 03.4**	**-0.8**
RAFI	**Al-Rafai**	**1.26**	**277**	*e*Pg	**Pn**	**13 17 50.0**	**-0.2**
RAFI				*e*Sg	**Sn**	**13 18 07.0**	**-0.2**
RAFI				AML	AML	13 18 29.8	
	comp=E,469nm,0.5s						
AMIS	**Naft Sefid**	**1.46**	**86**	*e*Pg	**Pg**	**13 17 53.2**	**-0.6**
AMIS				*e*Sg	**Sg**	**13 18 14.0**	**+0.5**
AMIS				*e*		13 18 18.8	
	comp=Z,10µm,0.3s						
IKFM	**Kafar-mosalman**	**1.96**	**7**	*e*Pn	**Pn**	**13 18 00.2**	**+0.3**
IKFM				*e*		13 18 36.4	
	comp=Z,3µm,0.4s						
IBDR	**Badra**	**2.08**	**318**	*e*Pn	**Pb**	**13 18 03.0**	**-1.4**
IBDR				*e*Sn	**Sb**	**13 18 30.0**	**-0.2**
IBDR				AML	AML	13 18 60.0	
	comp=E,225nm,0.7s						
IBDR				AML	AML	13 19 02.6	
	comp=N,215nm,1.0s						
IDOB	**Doab**	**2.27**	**13**	*e*Pn	**Pn**	**13 18 04.6**	**+0.3**
IKOM	**Komasi**	**2.60**	**359**	*e*Pn	**Pn**	**13 18 09.7**	**+0.9**
HSAM	**Samen**	**2.77**	**18**	*e*Pn	**Pn**	**13 18 11.6**	**+0.3**
HSAM				*e*		13 18 52.8	
	comp=N,551nm,0.3s						
IPIR	**Pirpir**	**3.02**	**68**	*e*Pn	**Pn**	**13 18 15.8**	**+1.0**
IPIR				*e*		13 19 06.9	
	comp=Z,815nm,0.4s						
IBRJ	**Brojen**	**3.15**	**83**	*e*Pn	**Pn**	**13 18 16.7**	**+0.1**
BHD	**Baghdad**	**3.19**	**303**	*e*Pn	**Pn**	**13 18 18.0**	**+1.2**
BHD				*e*Sn	**Sn**	**13 18 57.0**	**+2.0**
KLNJ	**Kolanjah**	**3.48**	**98**	*e*Pn	**Pn**	**13 18 22.1**	**+1.0**
KLNJ				*e*		13 19 13.2	
	comp=Z,614nm,0.5s						
QAMS	**Qamsar**	**3.88**	**55**	*e*Pn	**Pn**	**13 18 27.6**	**+1.1**
IGAR	**Gharneh**	**3.88**	**76**	*e*Pn	**Pn**	**13 18 26.4**	**-0.1**
IRAM	**Ramesheh**	**4.10**	**85**	*e*Pn	**Pn**	**13 18 29.5**	**0.0**
IRAM				*e*		13 18 36.0	
	comp=Z,290nm,0.3s						
IZEF	**Zefreh**	**4.24**	**71**	*e*Pn	**Pn**	**13 18 32.0**	**+0.6**
IZEF				*e*		13 18 39.8	
	comp=Z,149nm,0.2s						
IRAZ	**Razeghan**	**4.30**	**27**	*e*Pn	**Pn**	**13 18 33.5**	**+1.2**
IRAZ				*e*		13 18 33.8	
	comp=Z,604nm,0.5s						
IQOM	**Qom**	**4.38**	**41**	*e*Pn	**Pn**	**13 18 33.2**	**-0.2**
KRSH	**Karshahi**	**4.52**	**57**	*e*Pn	**Pn**	**13 18 35.3**	**0.0**
IKRK	**Kirkuk**	**4.68**	**326**	*e*Pn	**Pn**	**13 18 39.0**	**+1.7**
IKRK				*e*Sn	**Sn**	**13 19 33.0**	**+1.3**
IKRK				AML	AML	13 19 60.0	
	comp=N,77nm,0.4s						
IKRK				AML	AML	13 20 23.6	
	comp=E,61nm,0.3s						
ISFB	**Sefidab**	**4.80**	**53**	*e*Pn	**Pn**	**13 18 38.9**	**-0.1**
ANAR	**Anarak**	**5.45**	**71**	*e*Pn	**Pn**	**13 18 48.8**	**+0.8**
IMEH	**Mehriz**	**6.01**	**90**	*e*Pn	**Pn**	**13 18 56.1**	**+0.3**

MAN 08 13:22:00.9, 12°.93N×124°.31E, h98km, mb4.6, ML3.5, MS3.4, 6C-7D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVCP	**Virac**	**0.68**	**347**↓↓	*e*P	Pn	13 22 19.7	+6.9
PVCP				*e*S		13 22 38.9	
MMPH	**Masbate**	**0.88**	**230**↑	*i*P	Pb	13 22 21.0	+3.9
MMPH				*i* S		13 22 35.1	
SCSP	**San Jose Seism**	**1.05**	**313**↑	*e*P	Pb	13 22 22.7	+3.3
OCLP	**Ormoc**	**1.89**	**171**↑	*e*P	Pb	13 22 33.4	+0.2
OCLP				*e*S		13 23 53.1	
RCP	**Roxas**	**2.05**	**228**↓↓	*e*P	Pn	13 22 34.5	+1.7
RCP				*e*S		13 23 00.9	
JCNP	**Jose Panganiba**	**2.07**	**311**↓↓	*e*P	Pn	13 22 34.3	+1.7
JCNP				*e*S		13 23 17.8	
BOAC	**Boac**	**2.46**	**283**↓↓	*e*P	Pn	13 22 40.4	+2.0
BOAC				*e*S		13 23 33.3	
MSLP	**Maasin**	**2.83**	**169**↑	*e*P	Pb	13 22 46.0	+3.1
GUIM	**Jordan**	**2.84**	**216**↓↓	*e*P	Pn	13 22 45.3	+1.7
GUIM				*e*S		13 23 32.8	
TBP	**Tagbilaran**	**3.25**	**188**↓↓	*i*P	Pn	13 22 50.6	+1.9
TBP				*i* S		13 24 43.7	
GLSP	**General Luna,**	**3.60**	**150**↑	*e*P	Pn	13 22 54.5	+1.8
GLSP				*e*S		13 22 59.7	
BALP	**Baler**	**3.85**	**317**↑	*e*P	Pn	13 22 59.0	+2.0
BALP				*e*S		13 23 09.8	
PALP	**Palanan**	**4.49**	**336**↓↓	*e*P	Pn	13 23 05.6	+0.2

*IDC **08** 13:30:56.9±1.1, 3°.89S×104°.30W, h0km, mb3.9/10, mbtmp3.9/10, MS3.9/38, Error ellipse: s-maj=52.7km s-min=18.0km az=66.0*
*NEIC **08** 13:30:58.2±1.3, 4°.2S±0°.1×104°.5W±0°.1, h10km±1km, mb4.5/34, Error ellipse: s-maj=25.2km s-min=21.0km az=227.0*
*GCMT **08** 13:31:04.2±0.4, 3°.82S±0°.02×104°.24W±0°.02, h15km±1km, MW4.8/76, Moment Tensor Solution. s13,c15; s76,c102; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-0.40±.08; Mθθ 0.53±.07; Mϕϕ -0.13±.07; Mrθ 1.06±.30; Mθϕ 1.46±.06; Mϕr-0.87±.25; Best double couple: Mo2.01000×10^16 NP1: ϕs 14.00000°, δ 57.00000°, λ -160.00000°. NP2: ϕs 272.00000°, δ 73.00000°, λ -34.00000°. Principal axes: T 1.7480, Plg 10.0000°, Azm 326.0000°; N 0.5240, Plg 52.0000°, Azm 70.0000°; P -2.2730, Plg 36.0000°, Azm 228.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 08 13:30:58.1±0.9, 4°.0S±0°.1×104°.5W±0°.1, h10km, n82, σ0s94/43, mb4.4/27, MS3.9/38, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAYG	**Puerto Ayora**	**14.54**	**77**	Pn	**Pn**	**13 34 24.5**	**+0.4**
H06S1	**SOCORRO T**	**23.49**	**344**	T	T	14 00 34.5	
	SNR=7.5						
CCIG	**Comitan**	**23.56**	**31**	P	**P**	**13 36 10.8**	**+1.6**
CCIG				IAmb	IAmb	13 36 19.4	
	comp=Z,14nm,0.8s						
CRIN	**San Cristobal**	**23.97**	**46**	P	**P**	**13 36 12.8**	**-0.3**
JTS	**Las Juntas de**	**24.06**	**54**	LR	LR	13 43 03.6	
	comp=Z,416nm,21.2s,baz=308,slow=30						
JTS	**Las Juntas de**	**24.06**	**54**	P	**P**	**13 36 15.4**	**+1.5**
JTS				IAmb	IAmb	13 36 22.6	
	comp=Z,27nm,1.5s						
ACON	**Acoyapa**	**24.89**	**50**	P	**P**	**13 36 22.4**	**+1.0**
ACON				IAmb	IAmb	13 36 46.3	
	comp=Z,20nm,1.2s						
MATN	**Matagalpa**	**24.94**	**47**	P	**P**	**13 36 23.4**	**+1.5**
MATN				IAmb	IAmb	13 36 31.4	
	comp=Z,12nm,1.3s						
PETF	**Flores**	**25.30**	**34**	P	**P**	**13 36 25.8**	**+0.8**
PORT	**Chimborazo Vol**	**25.77**	**85**	P	**P**	**13 36 29.4**	**-0.8**
ATAH	**Atahualpa**	**26.12**	**98**	LR	LR	13 44 18.9	
	comp=Z,170nm,19.5s,baz=270,slow=31						
OTAV	**Otavalo**	**26.32**	**81**	P	**P**	**13 36 34.9**	**-0.1**
OTAV				IAmb	IAmb	13 36 44.4	
	comp=Z,18nm,1.4s						
TULM	**Tulcn-Chalpat**	**27.06**	**81**	P	**P**	**13 36 42.2**	**+0.6**
NNA	**Nana**	**28.44**	**108**	LR	LR	13 45 05.4	
	comp=Z,291nm,20.4s,baz=282,slow=30						
LPIG	**La Paz**	**28.52**	**349**	LR	LR	13 45 21.2	
	comp=Z,232nm,21.1s,baz=194,slow=30						
ROSC	**El Rosal**	**31.36**	**74**	LR	LR	13 46 29.4	
	comp=Z,158nm,20.0s,baz=230,slow=30						
TXAR	**Lajitas Array**	**33.16**	**1**	P	**P**	**13 37 35.6**	**+0.5**
	comp=Z,0.3nm,0.8s,baz=180,slow=11,SNR=3.6						
TXAR				LR	LR	13 49 00.6	
	comp=Z,113nm,20.0s,baz=182,slow=33 comp=Z,0.3nm,0.8s						
SDV	**Santo Domingo**	**36.07**	**69**	P	**P**	**13 38 00.1**	**-0.5**
SDV				IAmb	IAmb	13 38 07.1	
	comp=Z,9.2nm,0.8s						
PB16	**IPOC Station P**	**37.02**	**115**	P	**P**	**13 38 08.7**	**-0.4**
PB16				IAmb	IAmb	13 38 15.9	
	comp=Z,5.5nm,0.7s						
LPAZ	**La Paz**	**37.70**	**112**	P	**P**	**13 38 14.5**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=270,slow=9.1,SNR=2.7						
LPAZ				LR	LR	13 50 55.6	
	comp=Z,135nm,19.4s,baz=276,slow=32 comp=Z,0.6nm,0.4s						
H03N2	**Juan Fernandez**	**37.73**	**144**	T	T	14 18 13.5	
	baz=318,slow=77,SNR=50						
H03N1	**Juan Fernandez**	**37.75**	**144**	T	T	14 18 12.7	
	baz=318,slow=77,SNR=58						
H03N3	**Juan Fernandez**	**37.75**	**144**	T	T	14 18 11.6	
	baz=318,slow=77,SNR=55						
LENM	**Lemitar**	**38.05**	**357**	P	**P**	**13 38 17.5**	**+0.5**
BAUV	**El Baul**	**38.51**	**70**	P	**P**	**13 38 21.1**	**0.0**
ANMO	**Albuquerque**	**38.80**	**357**	LR	LR	13 51 34.0	
	comp=Z,55nm,18.6s,baz=182,slow=32						
LVC	**Limon Verde**	**39.05**	**121**	LR	LR	13 50 16.2	
	comp=Z,176nm,18.5s,baz=287,slow=30						
PFO	**Pinyon Flats O**	**39.10**	**344**	LR	LR	13 50 43.2	
	comp=Z,251nm,20.5s,baz=157,slow=30						
WUAZ	**Wupatki**	**39.85**	**351**	P	**P**	**13 38 33.7**	**+1.5**
W13A	**Hualapai Mount**	**39.90**	**348**	P	**P**	**13 38 33.8**	**+1.2**
MVCO	**Mesa Verde**	**41.18**	**355**	P	**P**	**13 38 43.3**	**+0.1**
MVCO				IAmb	IAmb	13 38 45.2	
	comp=Z,6.7nm,1.1s						
SAML	**Samuel**	**41.28**	**99**	P	**P**	**13 38 41.9**	**-2.1**
SAML				IAmb	IAmb	13 38 43.4	
	comp=Z,11nm,1.1s						
QSM	**Queen of Sheba**	**41.43**	**345**	P	**P**	**13 38 45.0**	**0.0**
SHPR	**Sheep Range**	**41.53**	**347**	P	**P**	**13 38 47.4**	**+1.4**
PV13	**Radium Mtn., P**	**42.15**	**355**	P	**P**	**13 38 51.5**	**+0.3**
PV15	**Paradox Valley**	**42.30**	**355**	P	**P**	**13 38 53.1**	**+0.7**
SRU	**San Rafael Swe**	**43.27**	**353**	P	**P**	**13 39 00.7**	**+0.5**
SRU				IAmb	IAmb	13 39 04.7	
	comp=Z,5.8nm,1.1s						
R11A	**Troy Canyon, C**	**43.39**	**347**	P	**P**	**13 39 02.1**	**+0.9**
TKL	**Tuckaleechee C**	**43.97**	**24**	LR	LR	13 57 50.1	
	comp=Z,52nm,19.0s,baz=256,slow=37						
NVAR	**Mina Array Bea**	**44.13**	**344**	P	**P**	**13 39 07.4**	**+0.2**
	comp=Z,1.5nm,0.9s,baz=172,slow=7.2,SNR=9.2						
NVAR				LR	LR	13 53 31.3	
	comp=Z,157nm,20.6s,baz=182,slow=31 comp=Z,1.5nm,0.9s						
SIV	**San Ignacio**	**44.24**	**109**	LR	LR	13 55 01.5	
	comp=Z,300nm,21.7s,baz=288,slow=33						
DUG	**Dugway, Tooele**	**44.66**	**351**	P	**P**	**13 39 11.9**	**+0.7**
DUG				IAmb	IAmb	13 39 15.6	
	comp=Z,6.8nm,1.2s						
PNTR	**Pine Nut**	**45.11**	**343**	P	**P**	**13 39 15.5**	**+0.6**
PNTR				IAmb	IAmb	13 39 26.4	
	comp=Z,8.0nm,1.1s						
EMB	**Emerald Bay**	**45.15**	**343**	P	**P**	**13 39 15.6**	**+0.3**
EMB				IAmb	IAmb	13 39 20.7	
	comp=Z,11nm,1.3s						
ELK	**Elko**	**45.62**	**349**	LR	LR	13 54 41.1	
	comp=Z,134nm,18.8s,baz=181,slow=31						
PDAR	**Pinedale Array**	**46.79**	**355**	P	**P**	**13 39 28.1**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=187,slow=6.8,SNR=4.6						
PDAR				LR	LR	13 56 47.4	
	comp=Z,64nm,18.4s,baz=190,slow=33 comp=Z,0.6nm,0.7s						
PLCA	**Paso Flores**	**47.59**	**145**	P	**P**	**13 39 35.9**	**+1.6**
	comp=Z,2.8nm,0.9s,baz=304,slow=7.3,SNR=3.1						
PLCA				LR	LR	13 54 50.1	
	comp=Z,190nm,18.7s,baz=286,slow=30 comp=Z,2.8nm,0.9s						
RSSD	**Black Hills**	**47.92**	**0**	P	**P**	**13 39 37.7**	**+0.8**
RSSD				IAmb	IAmb	13 39 38.4	
	comp=Z,7.6nm,1.2s						
HLID	**Hailey**	**48.20**	**350**	P	**P**	**13 39 39.8**	**+0.8**
HLID				IAmb	IAmb	13 39 41.2	
	comp=Z,3.3nm,1.2s						
FLWY	**Flagg Ranch**	**48.20**	**354**	P	**P**	**13 39 39.4**	**+0.2**
FLWY				IAmb	IAmb	13 39 40.9	
	comp=Z,7.4nm,1.1s						
MFID	**Camas Ranch**	**48.31**	**349**	P	**P**	**13 39 40.8**	**+1.0**
MFID				IAmb	IAmb	13 39 43.6	
	comp=Z,6.0nm,1.2s						
YBH	**Yreka Blue Hor**	**48.47**	**342**	LR	LR	13 55 55.2	
	comp=Z,115nm,20.1s,baz=170,slow=31						
CPUP	**Villa Florida**	**50.22**	**121**	P	**P**	**13 39 53.5**	**-1.2**
	comp=Z,3.2nm,0.8s,baz=296,slow=9.8,SNR=3.9						
CPUP				LR	LR	13 58 24.3	
	comp=Z,84nm,18.4s,baz=268,slow=33 comp=Z,3.2nm,0.8s						
CPUP	**Villa Florida**	**50.22**	**121**	IAmb	IAmb	13 40 00.6	
	comp=Z,6.4nm,0.7s						
NEW	**Newport**	**53.23**	**349**	LR	LR	14 00 06.2	
	comp=Z,134nm,19.2s,baz=170,slow=33						
SADO	**Sadowa**	**53.59**	**22**	LR	LR	14 03 06.1	
	comp=Z,53nm,18.4s,baz=183,slow=36						
ULM	**Lac du Bonnet**	**54.55**	**7**	P	**P**	**13 40 24.5**	**-1.8**
	comp=Z,6.6nm,0.9s,baz=208,slow=6.8,SNR=4.9						
ULM				LR	LR	14 02 38.4	
	comp=Z,148nm,18.1s,baz=48,slow=35 comp=Z,6.6nm,0.9s						
DLBC	**Dease Lake**	**65.53**	**346**	LR	LR	14 06 57.6	
	comp=Z,68nm,20.3s,baz=272,slow=33						
SCHQ	**Schefferville**	**66.39**	**23**	LR	LR	14 10 04.5	
	comp=Z,56nm,19.4s,baz=278,slow=36						
YKA	**Yellowknife Ar**	**66.77**	**355**	P	**P**	**13 41 49.0**	**-0.5**
	comp=Z,0.9nm,0.9s,baz=166,slow=5.7,SNR=4.8						
YKA				LR	LR	14 07 54.5	
	comp=Z,121nm,21.8s,baz=204,slow=33 comp=Z,0.9nm,0.9s						
YKA	**Yellowknife Ar**	**66.77**	**355**	P	**P**	**13 41 49.0**	**-0.5**
PMSA	**Palmer Station**	**67.15**	**162**	LR	LR	14 04 23.6	
	comp=Z,150nm,18.7s,baz=290,slow=30						
RCBR	**Riachuelo**	**68.29**	**95**	LR	LR	14 10 32.3	
	comp=Z,10nm,18.3s,baz=46,slow=35						
KDAK	**Kodiak Island**	**72.66**	**335**	LR	LR	14 07 25.2	
	comp=Z,154nm,18.5s,baz=187,slow=30						
FRB	**Frobisher Bay**	**72.72**	**16**	LR	LR	14 13 24.1	
	comp=Z,47nm,20.3s,baz=215,slow=35						
INK	**Inuvik**	**74.95**	**349**	LR	LR	14 14 39.3	
	comp=Z,99nm,19.1s,baz=162,slow=35						
ILAR	**Eielson Array**	**75.36**	**343**	P	**P**	**13 42 40.7**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=160,slow=5.7,SNR=6.9						
ILAR				LR	LR	14 11 41.3	
	comp=Z,56nm,18.4s,baz=270,slow=32 comp=Z,0.6nm,0.7s						
URZ	**Urewera**	**78.45**	**232**	LR	LR	14 11 27.7	
	comp=Z,56nm,18.2s,baz=212,slow=31						
RES	**Resolute Bay**	**78.79**	**3**	LR	LR	14 17 07.0	
	comp=Z,90nm,18.5s,baz=263,slow=35						
SFJD	**Kangerlussuaq**	**80.36**	**19**	LR	LR	14 17 36.2	
	comp=Z,63nm,21.9s,baz=298,slow=35						
QSPA	**South Pole Qui**	**86.04**	**180**	P	**P**	**13 43 39.9**	**+1.0**
	comp=Z,2.7nm,1.0s,baz=132,slow=2.4,SNR=8.4						
QSPA				LR	LR	14 15 22.4	
	comp=Z,99nm,18.1s,baz=1.0,slow=31 comp=Z,2.7nm,1.0s						
QSPA	**South Pole Qui**	**86.04**	**180**	P	**P**	**13 43 39.0**	**+0.1**
SNAA	**Sanae**	**89.86**	**162**	LR	LR	14 15 33.6	
	comp=Z,52nm,22.0s,baz=282,slow=30						
H11N3	**WAKE ISLAND Hy**	**90.05**	**290**	T	T	15 23 49.3	
	baz=95,slow=75,SNR=20						
H11N2	**WAKE ISLAND Hy**	**90.07**	**290**	T	T	15 23 52.7	
	baz=95,slow=75,SNR=30						
H11N1	**WAKE ISLAND Hy**	**90.07**	**290**	T	T	15 23 48.5	
	baz=95,slow=75,SNR=16						
H11S2	**WAKE ISLAND Hy**	**90.16**	**288**	T	T	15 23 54.5	
	baz=94,slow=74,SNR=62						
H11S1	**WAKE ISLAND Hy**	**90.16**	**288**	T	T	15 23 57.8	
	baz=94,slow=74,SNR=80						
H11S3	**WAKE ISLAND Hy**	**90.18**	**288**	T	T	15 23 57.2	
	baz=94,slow=74,SNR=44						
JMIC	**Jan Mayen**	**95.71**	**19**	LR	LR	14 26 09.4	
	comp=Z,38nm,21.7s,baz=260,slow=35						
DBIC	**Dimbokro**	**99.98**	**84**	LR	LR	14 28 54.3	
	comp=Z,27nm,18.6s,baz=146,slow=35						
SPITS	**Spitsbergen Ar**	**99.99**	**10**	LR	LR	14 29 39.2	
	comp=Z,70nm,19.4s,baz=184,slow=35						

*IDC **08** 13:35:04.0±2.4, 22°.89S×179°.51W, h504km±27km, mb2.7/4, mbtmp3.8/6, Error ellipse: s-maj=40.3km s-min=21.9km az=150.0*
ISC 08 13:35:04.9±1.0, 23°.05±0°.1×179°.6W±0°.2, h526km, n6, σ1s70/7, mb3.2/4, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.63**	**337**	P	**P**	**13 36 37.2**	**-2.0**
	20nm,0.4s,baz=184,slow=14,SNR=39						
URZ	**Urewera**	**15.52**	**190**	P	**P**	**13 38 19.2**	**-0.6**
	4.9nm,0.6s,baz=354,slow=10,SNR=1.1						
URZ				S	**S**	**13 40 58.7**	**-1.5**
	8.3nm,1.0s,baz=39,slow=23,SNR=1.2						
ASAR	**Alice Springs**	**42.55**	**260**	P	**P**	**13 42 16.2**	**+1.8**
	0.4nm,0.6s,baz=97,slow=8.1,SNR=9.3 0.4nm,0.6s						
WRA	**Warramunga Arr**	**42.83**	**265**	P	**P**	**13 42 17.6**	**+0.9**
	0.5nm,0.5s,baz=95,slow=8.2,SNR=42 0.5nm,0.5s						
NVAR	**Mina Array Bea**	**83.83**	**44**	P	**P**	**13 46 39.8**	**+0.5**
	0.1nm,0.3s,baz=214,slow=5.9,SNR=3.9 0.1nm,0.3s						
TXAR	**Lajitas Array**	**89.63**	**58**	P	**P**	**13 47 07.5**	**+0.7**
	0.2nm,0.6s,baz=202,slow=4.6,SNR=3.5 0.2nm,0.6s						

*NEIC **08** 13:41:08.8±1.5, 56°.05S±0°.09×27°.9W±0°.2, h97km±7km, mb4.6/15, Error ellipse: s-maj=21.0km s-min=5.4km az=53.0*
*IDC **08** 13:41:12.2±1.0, 56°.02S×27°.70W, h126km±7km, mb3.8/6, mbtmp4.2/7, Error ellipse: s-maj=29.7km s-min=16.8km az=69.0*
ISC 08 13:41:11.1±0.7, 56°.1S±0°.1×28°.1W±0°.1, h121km, n32, σ0s96/32, mb4.4/9, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.16**	**287**	Pn	**Pn**	**13 42 24.9**	**-1.1**
VNA1	**Neumayer--Stat**	**16.96**	**157**	P	**P**	**13 45 00.2**	**-0.4**
VNA3	**Neumayer Olymp**	**17.14**	**160**	P	**P**	**13 45 01.9**	**-0.6**
VNA2	**Neumayer--Watz**	**17.36**	**157**	P	**P**	**13 45 04.8**	**-0.2**
	baz=314,slow=13						
SNAA	**Sanae**	**18.93**	**155**	P	**P**	**13 45 21.4**	**-0.7**
SNAA	**Sanae**	**18.93**	**155**	P	**P**	**13 45 21.4**	**-0.7**
	21nm,0.5s,baz=291,slow=11,SNR=260						
SNAA				pP	**pwP**	**13 45 49.3**	**+2.3**
	7.3nm,0.5s,baz=287,slow=12,SNR=4.1						
SNAA	**Sanae**	**18.93**	**155**	P	**P**	**13 45 20.3**	**-1.9**
SNAA				IAmb	IAmb	13 45 22.8	
	comp=Z,22nm,0.5s						
TROLL	**Troll, Antarti**	**20.45**	**153**	P	**P**	**13 45 37.6**	**-1.0**
BELA	**Belgrano 2**	**22.03**	**184**	P	**P**	**13 45 54.7**	**-0.6**
DSPA	**Despedida**	**22.93**	**258**	P	**P**	**13 46 04.5**	**+0.1**
QSPA	**South Pole Qui**	**34.19**	**180**	P	**P**	**13 47 45.6**	**+1.1**
	comp=Z,3.2nm,0.6s,baz=185,slow=3.4,SNR=50						
QSPA				pP	**pwP**	**13 48 13.7**	**-0.6**
	comp=Z,1.1nm,0.4s,baz=186,slow=2.2,SNR=2.7 comp=Z,3.2nm,0.6s						
QSPA	**South Pole Qui**	**34.19**	**180**	P	**P**	**13 47 45.3**	**+0.8**
QSPA				IAmb	IAmb	13 47 50.4	
	comp=Z,13nm,1.5s						
MT02	**Curacav**	**37.34**	**289**	P	**P**	**13 48 11.4**	**-0.1**
CO02	**Combarbal**	**38.87**	**292**	P	**P**	**13 48 24.8**	**+0.2**
CO01	**Juntas del Tor**	**39.38**	**294**	P	**P**	**13 48 28.7**	**-0.2**
CO01				IAmb	IAmb	13 48 51.0	
	comp=Z,14nm,1.4s						
MAW	**Mawson**	**40.42**	**144**	P	**P**	**13 48 36.3**	**-0.4**
	comp=Z,2.1nm,0.7s,baz=289,slow=10,SNR=4.2 comp=Z,2.1nm,0.7s						
MAW	**Mawson**	**40.42**	**144**	P	**P**	**13 48 36.1**	**-0.7**
AC04	**Llanos de Chal**	**41.31**	**294**	P	**P**	**13 48 44.6**	**+0.1**
AC04				IAmb	IAmb	13 48 44.7	
	comp=Z,17nm,1.1s						
AC02	**Maricunga**	**41.45**	**298**	P	**P**	**13 48 47.1**	**+0.8**
AC02				IAmb	IAmb	13 48 54.5	
	comp=Z,12nm,1.5s						
VNDA	**Vanda**	**46.53**	**183**	P	**P**	**13 49 27.1**	**+1.4**
	comp=Z,1.3nm,0.7s,baz=189,slow=6.6,SNR=9.1						
VNDA				pP	**pwP**	**13 49 54.6**	**-1.8**
	comp=Z,0.7nm,0.7s,baz=165,slow=7.6,SNR=2.7 comp=Z,1.3nm,0.7s						
VNDA	**Vanda**	**46.53**	**183**	IAmb	IAmb	13 49 28.1	
	comp=Z,1.4nm,0.7s						
PB16	**IPOC Station P**	**48.84**	**303**	P	**P**	**13 49 45.7**	**+0.9**
PB16				IAmb	IAmb	13 50 01.7	
	comp=Z,5.5nm,1.2s						
H10N1	**ASCENSION HYDR**	**49.28**	**18**	T	T	14 43 13.1	
	baz=192						
H10N3	**ASCENSION HYDR**	**49.28**	**18**	T	T	14 43 12.6	
	baz=192,slow=74						
H10N2	**ASCENSION HYDR**	**49.29**	**18**	T	T	14 43 11.5	
	baz=192,slow=74						
LPAZ	**La Paz**	**49.99**	**306**	P	**P**	**13 49 54.7**	**+1.1**
	comp=Z,2.8nm,0.5s,baz=130,slow=3.2,SNR=15 comp=Z,2.8nm,0.5s						
LPAZ	**La Paz**	**49.99**	**306**	P	**P**	**13 49 54.4**	**+0.8**
LPAZ				IAmb	IAmb	13 49 55.5	

	comp=Z,1.4nm,0.3s							
WRA	**Warramunga Arr**	**39.91**	**196**	IAmb	IAmb	14 10 38.6		
	comp=Z,0.2nm,0.8s							
ASAR	**Alice Springs**	**43.58**	**195**	P	**P**	**14 11 07.0**	**+0.8**	
	comp=Z,0.6nm,0.7s,baz=12,slow=7.0,SNR=8.2							
	comp=Z,0.6nm,0.7s							
MKAR	**Makanchi Array**	**58.28**	**314**	P	**P**	**14 12 57.0**	**+1.5**	
	comp=Z,0.3nm,0.6s,baz=85,slow=6.1,SNR=2.6							
	comp=Z,0.3nm,0.6s							
KURK	**Kurchatov**	**61.10**	**318**	P	**P**	**14 13 15.3**	**+0.6**	
KURK	**Kurchatov**	**61.10**	**318**	IAmb	IAmb	14 13 29.5		
	comp=Z,1.2nm,0.8s							
KURBB	**Kurchatov Arra**	**61.15**	**318**	P	**P**	**14 13 15.3**	**+0.3**	
	comp=Z,0.3nm,0.5s,baz=94,slow=7.0,SNR=1.8							
	comp=Z,0.3nm,0.5s							
GLI	**Glacier Island**	**62.90**	**31**	P	**P**	**14 13 26.8**	**+0.3**	
MDM	**Murphy Dome**	**63.24**	**26**	P	**P**	**14 13 29.4**	**+0.7**	
MDM				IAmb	IAmb	14 13 56.7		
	comp=Z,1.5nm,1.0s							
H24K	**Noodor Dome**	**63.59**	**25**	P	**P**	**14 13 31.3**	**+0.3**	
ILAR	**Eielson Array**	**63.76**	**26**	P	**P**	**14 13 31.0**	**-1.0**	
	comp=Z,0.4nm,0.7s,baz=263,slow=5.2,SNR=5.0							
	comp=Z,0.4nm,0.7s							
PAX	**Paxson**	**64.03**	**28**	P	**P**	**14 13 34.2**	**+0.3**	
PAX				IAmb	IAmb	14 13 42.1		
	comp=Z,3.8nm,1.4s							
BMAR	**Burnt Mountain**	**65.22**	**24**	P	**P**	**14 13 42.0**	**+0.5**	
YKA	**Yellowknife Ar**	**78.11**	**28**	P	**P**	**14 14 56.6**	**-1.7**	
	comp=Z,0.4nm,0.6s,baz=286,slow=5.1,SNR=2.2							
	comp=Z,0.4nm,0.6s							
NVAR	**Mina Array Bea**	**83.34**	**52**	P	**P**	**14 15 27.2**	**+0.3**	
	comp=Z,0.6nm,0.7s,baz=269,slow=6.2,SNR=6.3							
	comp=Z,0.6nm,0.7s							

MAN 08 14:17:39.9, 12°.75N×119°.11E, h33km, mb4.4, ML3.2, MS3.0, 5C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**1.48**	**48**	*e*P	Pn	14 18 04.5	+0.8
LUBP				*e*S		14 18 41.1	
ENPP	**El Nido**	**1.57**	**169**	*e*P	Pn	14 18 05.7	+0.3
ENPP				*e*S		14 18 21.9	
PGP	**Puerto Galera**	**1.95**	**67**	*e*P	Pn	14 18 12.6	+2.5
PGP				*i* S		14 18 35.2	
SJMP	**San Jose**	**1.98**	**98**	*e*P	Pn	14 18 12.1	+1.5
MACP	**Maragondon, Ca**	**2.17**	**46**	*e*P	Pn	14 18 12.8	+0.4
MACP				*e*S		14 18 35.4	
CUYO	**Cuyo Island**	**2.66**	**135**	*e*P	Pn	14 18 21.2	+1.0
CUYO				*e*S		14 19 04.2	
PCPH	**Palayan**	**3.40**	**34**	*e*P	Pn	14 18 31.6	+1.4

*IDC **08** 14:19:30.8±1.6, 35°.51N×3°.78W, h0km, mb3.2/2, mbtmp3.1/4, ML3.0/2, Error ellipse: s-maj=46.5km s-min=17.0km az=95.0*
*MDD **08** 14:19:32.5±0.3, 35°.48N×3°.78W, h0km, mb_Lg3.0/19, Error ellipse: s-maj=2.5km s-min=2.0km az=168.0*
*SFS **08** 14:19:32.0, 35°.40N×3°.70W, ML3.0, ALBORAN SUR*
*CNRM **08** 14:19:32.6, 35°.49N×3°.77W, h6km, ml3.4*
*INMG **08** 14:19:33.3±1.7, 35°.49N×3°.81W, h3km±6km, ML2.8, Error ellipse: s-maj=5.0km s-min=3.8km az=148.0*

ISC 08 14:19:30.5±1.2, 35°.47N±0°.02×3°.79W±0°.02, h1km±10km, n84, σ1°60/124, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALE	**Palemas**	**0.28**	**206**	P	**Pb**	**14 19 39.1**	**+0.8**
PALE				S	**Sb**	**14 19 44.4**	**+0.8**
PVLZ	**Peæn de**	**0.51**	**235**	P	**Pb**	**14 19 42.9**	**+0.6**
PVLZ				S	**Sb**	**14 19 50.0**	**-0.2**
GOG	**Mont Gurugu**	**0.69**	**111**	P	**Pn**	**14 19 46.9**	**-0.6**
GOG				S	**Sb**	**14 19 55.4**	**-0.2**
EMEL	**Melilla**	**0.70**	**104**	Pg	**Pb**	**14 19 46.2**	**+0.7**
EMEL				Sg	**Sb**	**14 19 55.5**	**-0.2**
WMELI	**Melilla**	**0.70**	**102**	P	**Pb**	**14 19 46.2**	**+0.7**
WMELI				S	**Sb**	**14 19 55.8**	**+0.1**
EALB	**Alboran**	**0.77**	**52**	Pg	**Pb**	**14 19 47.6**	**+0.9**
EALB				Sg	**Sb**	**14 19 57.5**	**-0.2**
EALB				*i* Vmb_Lg		14 19 59.3	
CHAS	**Isla Isabel II**	**1.15**	**104**	P	**Pg**	**14 19 52.5**	**+0.1**
CHAS				S	**Sg**	**14 20 06.9**	**-0.4**
TAF	**Taforalt**	**1.30**	**120**	P	**Pn**	**14 19 56.5**	**+0.6**
SMIR	**Smir Dam**	**1.31**	**280**	P	**Pn**	**14 19 56.4**	**+0.4**
SMIR				S	**Sg**	**14 20 10.4**	**-2.3**
CHEFC	**Chefchaouen**	**1.32**	**254**	P	**Pn**	**14 19 57.8**	**+1.7**
EMIJ	**Mijas**	**1.35**	**324**	Pg	**Pb**	**14 19 57.1**	**+0.5**
EMIJ				Sg	**Sb**	**14 20 14.7**	**+0.2**
EMIJ				*i* Vmb_Lg		14 20 22.9	
CEU	**Ceuta**	**1.36**	**289**	P	**Pn**	**14 19 54.9**	**-1.7**
CEU				S	**Sg**	**14 20 09.3**	**-4.8**
ECEU	**Ceuta**	**1.36**	**289**	Pg	**Pb**	**14 19 57.2**	**+0.4**
ECEU				Sg	**Sg**	**14 20 11.7**	**-2.5**
ECEU				*i* Vmb_Lg		14 20 14.1	
ELGU	**Los Guajares,**	**1.40**	**5**	Pg	**Pn**	**14 19 56.5**	**-0.8**
ELGU				Sg	**Sg**	**14 20 16.1**	**+0.6**
ELGU				*i* Vmb_Lg		14 20 28.0	
JBK	**JBK**	**1.51**	**138**	P	**Pn**	**14 19 58.4**	**-0.5**
JBK	**JBK**	**1.51**	**138**	P	**Pn**	**14 19 58.4**	**-0.5**
EBER	**Berja**	**1.60**	**27**	Pg	**Pn**	**14 19 59.3**	**-0.9**
EBER				Sg	**Sn**	**14 20 20.7**	**-0.9**
EBER				*i* Vmb_Lg		14 20 23.3	
EGOR	**Sierra Gorda,**	**1.66**	**351**	Pg	**Pn**	**14 20 01.7**	**+0.8**
EGOR				Sg	**Sg**	**14 20 24.5**	**+0.8**
EGOR				*i* Vmb_Lg		14 20 33.8	
EJIF	**Jimena Fronter**	**1.68**	**306**	Pg	**Pg**	**14 20 03.3**	**+0.7**
EQUE	**Quentar**	**1.75**	**9**	Pn	**Pb**	**14 20 03.6**	**+0.1**
EQUE				Sn	**Sn**	**14 20 25.6**	**+0.4**
EQUE				*i* Vmb_Lg		14 20 36.7	
SICH	**Sidi Chahed**	**1.85**	**223**	P	**Pg**	**14 20 06.5**	**+0.5**
SICH	**Sidi Chahed**	**1.85**	**223**	P	**Pg**	**14 20 06.5**	**+0.5**
LIJA	**Lijar**	**1.94**	**318**	P	**Pb**	**14 20 07.0**	**+0.3**
LIJA				S	**Sb**	**14 20 31.0**	**-0.4**
ENIJ	**Nijar**	**1.97**	**40**	Pn	**Pn**	**14 20 04.8**	**-0.3**
ENIJ				Sn	**Sn**	**14 20 27.0**	**-3.5**
ENIJ				*i* Vmb_Lg		14 20 27.8	
LCRM	**LCR**	**1.99**	**207**	P	**Pg**	**14 20 08.9**	**+0.4**
IFR	**Ifrane**	**2.24**	**210**	P	**Pn**	**14 20 09.4**	**+0.5**
IFR				S	**Sn**	**14 20 36.3**	**-1.0**
EQES	**Quesada**	**2.40**	**14**	Pn	**Pb**	**14 20 13.5**	**-1.1**
EQES				Sn	**Sn**	**14 20 42.6**	**+1.4**
EQES				*i* Vmb_Lg		14 20 44.9	
MD31	**MD31**	**2.72**	**197**	P	**Pn**	**14 20 16.2**	**+0.8**
MDT	**Midelt**	**2.73**	**195**	Pn	**Pn**	**14 20 16.6**	**+0.9**
	1.8nm,0.3s,baz=278,slow=5.4,SNR=48						
MDT				Sn	**Sn**	**14 20 50.0**	**+0.6**
	5.8nm,0.3s,baz=30,slow=20,SNR=12						
	4.4nm,0.4s						
MDT	**Midelt**	**2.73**	**195**	P	**Pn**	**14 20 16.7**	**+1.1**
MDT	**Midelt**	**2.73**	**195**	P	**Pn**	**14 20 16.7**	**+1.1**
EADA	**Adamuz**	**2.77**	**347**	Pn	**Pn**	**14 20 18.3**	**+2.3**
EADA				Sn	**Sn**	**14 20 51.3**	**+1.2**
EADA				*i* Vmb_Lg		14 21 11.5	
TDRA	**Tendrara**	**2.83**	**148**	P	**Pb**	**14 20 20.2**	**-1.8**
TDRA	**Tendrara**	**2.83**	**148**	P	**Pn**	**14 20 19.2**	**+2.2**
ECAB	**El Cabril**	**2.91**	**334**	Pn	**Pn**	**14 20 19.8**	**+1.8**
ECAB				Sn	**Sn**	**14 20 55.1**	**+1.4**
ECAB				*i* Vmb_Lg		14 21 04.6	
EZAR	**Zarzadilla de**	**2.93**	**34**	Pn	**Pn**	**14 20 19.6**	**+1.2**
EZAR				Sn	**Sn**	**14 20 53.7**	**-0.6**
CART	**Cartagena**	**3.08**	**46**	P	**Pn**	**14 20 20.8**	**+0.5**
CART	**Cartagena**	**3.08**	**46**	P	**Pn**	**14 20 20.8**	**+0.5**
EMUR	**La Murta**	**3.13**	**40**	Sn	**Sn**	**14 20 56.2**	**-3.0**
EMUR				*i* Vmb_Lg		14 20 56.9	
EMIN	**Mina Concepcio**	**3.26**	**316**	Pn	**Pn**	**14 20 24.8**	**+2.1**
EMIN				Sn	**Sn**	**14 21 00.4**	**-1.9**
EMIN				*i* Vmb_Lg		14 21 08.9	
EGRO	**El Granado**	**3.62**	**306**	Pn	**Pn**	**14 20 28.3**	**+0.6**
EGRO				Sn	**Sn**	**14 21 08.6**	**-2.5**
EGRO				*i* Vmb_Lg		14 21 13.9	
ETOB	**Tobarra**	**3.64**	**29**	Pn	**Pn**	**14 20 30.7**	**+2.6**
ETOB				Sn	**Sn**	**14 21 11.9**	**+0.1**
ETOB				*i* Vmb_Lg		14 21 15.3	
AVE	**Averroes**	**3.70**	**235**	P	**Pn**	**14 20 30.8**	**+2.0**
AVE	**Averroes**	**3.70**	**235**	P	**Pn**	**14 20 30.8**	**+2.0**
PVAQ	**Vaqueiros**	**3.71**	**302**	*e*Pn	**Pn**	**14 20 29.8**	**+0.9**
PVAQ				*e*Sn	**Sn**	**14 21 11.4**	**-1.9**
PVAQ				A	A	14 21 12.8	
	29nm,0.4s						
PVAQ	**Vaqueiros**	**3.71**	**302**	P	**Pn**	**14 20 30.9**	**+1.9**
PVAQ	**Vaqueiros**	**3.71**	**302**	P	**Pn**	**14 20 30.9**	**+1.9**
PBAR	**Barrancos**	**3.75**	**317**	*e*Sn	**Sn**	**14 21 13.7**	**-0.7**
PBDV	**Barranco-do-Ve**	**3.78**	**299**	*e*Pn	**Pn**	**14 20 30.9**	**+0.9**
PBDV				*e*Sn	**Sn**	**14 21 12.1**	**-3.1**
PBDV				A	A	14 21 17.8	
	18nm,0.3s						
FIGM	**Figuig**	**3.94**	**147**	P	**Pn**	**14 20 34.7**	**+2.5**
FIGM	**Figuig**	**3.94**	**147**	P	**Pn**	**14 20 34.7**	**+2.5**
PCVE	**Castro Verde**	**4.04**	**303**	*e*Pn	**Pn**	**14 20 35.1**	**+1.5**
PCVE				*e*Sn	**Sn**	**14 21 20.8**	**-0.8**
PCVE				A	A	14 21 24.3	
	15nm,0.3s						
PAB	**San Pablo**	**4.09**	**354**	Pn	**Pn**	**14 20 35.7**	**+1.4**
PAB				Sn	**Sn**	**14 21 21.2**	**-1.7**
PAB				*i* Vmb_Lg		14 21 55.0	
PAB	**San Pablo**	**4.09**	**354**	P	**Pn**	**14 20 36.3**	**+2.0**
PAB	**San Pablo**	**4.09**	**354**	P	**Pn**	**14 20 36.3**	**+2.0**
PBEJ	**Beja**	**4.15**	**309**	*e*Sn	**Sn**	**14 21 23.2**	**-1.0**
PBEJ				A	A	14 21 28.4	
	11nm,0.4s						
EBAD	**Badajoz**	**4.17**	**323**	Pn	**Pn**	**14 20 37.3**	**+2.0**
EBAD				Sn	**Sn**	**14 21 24.6**	**-0.1**
ESDC	**Sonseca Array**	**4.20**	**358**	Pn	**Pn**	**14 20 36.9**	**+1.2**
	0.5nm,0.3s,baz=178,slow=13,SNR=11						
ESDC				Sn	**Sn**	**14 21 23.2**	**-2.3**
	0.4nm,0.3s,baz=179,slow=22,SNR=2.0						
ESDC				Lg	Lg	14 21 41.5	
	0.8nm,0.3s,baz=177,slow=30,SNR=6.0						
	1.1nm,0.3s						
MESJ	**Messejana**	**4.28**	**305**	*e*Pn	**Pn**	**14 20 38.2**	**+1.5**
MESJ				*e*Sn	**Sn**	**14 21 25.6**	**-1.7**
MESJ				A	A	14 21 29.7	
	23nm,0.5s						
MORF	**Marmelete**	**4.33**	**296**	*e*Pn	**Pn**	**14 20 39.8**	**+2.3**
MORF				*e*Sn	**Sn**	**14 21 27.5**	**-1.2**
MORF				A	A	14 21 29.6	
	20nm,0.2s						
PFVI	**Vila Bisbo**	**4.39**	**294**	*e*Pn	**Pn**	**14 20 40.6**	**+2.2**
PFVI				*e*Sn	**Sn**	**14 21 28.0**	**-2.2**
PFVI				A	A	14 21 33.6	
	16nm,0.6s						
PTEO	**Sao Teotonio**	**4.48**	**299**	*e*Pn	**Pn**	**14 20 41.0**	**+1.4**
PTEO				*e*Sn	**Sn**	**14 21 31.2**	**-1.2**
PTEO				A	A	14 21 33.2	
	16nm,0.4s						
SRHM	**Skhour des Reh**	**4.54**	**230**	P	**Pn**	**14 20 43.5**	**+3.0**
PESTR	**Estremoz**	**4.55**	**319**	*e*Sn	**Sn**	**14 21 32.8**	**-1.3**
PESTR				A	A	14 21 35.2	
	6.6nm,0.7s						
PESTR	**Estremoz**	**4.55**	**319**	P	**Pn**	**14 20 42.0**	**+1.4**
PESTR	**Estremoz**	**4.55**	**319**	P	**Pn**	**14 20 42.0**	**+1.4**
EVO	**Evora**	**4.56**	**313**	*e*Pn	**Pn**	**14 20 43.3**	**+2.7**
EVO				*e*Sn	**Sn**	**14 21 32.1**	**-2.1**
EVO				A	A	14 21 37.1	
	13nm,0.3s						
PNCL	**Nicolau / Gran**	**4.63**	**306**	*e*Pn	**Pn**	**14 20 43.0**	**+1.4**
PNCL				*e*Sn	**Sn**	**14 21 34.0**	**-2.0**
PNCL				A	A	14 21 37.1	
	12nm,0.5s						
PMRV	**Marv??o**	**4.88**	**325**	*e*Pn	**Pn**	**14 20 47.5**	**+2.4**
PMRV				*e*Sn	**Sn**	**14 21 41.4**	**-0.8**
TZRR	**Tazzarine**	**4.91**	**198**	P	**Pn**	**14 20 47.3**	**+1.8**
PMTG	**Montargil**	**5.04**	**317**	*e*Pn	**Pn**	**14 20 48.9**	**+1.7**
PMTG				*e*Sn	**Sn**	**14 21 44.5**	**-1.7**
PMTG				A	A	14 21 45.0	
	11nm,0.6s						
OUZM	**OUZ**	**5.19**	**210**	P	**Pn**	**14 20 51.6**	**+2.3**
OUZM	**OUZ**	**5.19**	**210**	P	**Pn**	**14 20 51.6**	**+2.3**
PCBR	**Castelo Branco**	**5.25**	**327**	*e*Sn	**Sn**	**14 21 50.4**	**-1.0**
PCBR				A	A	14 21 52.8	
	5.1nm,0.6s						
OUK	**Oukaimeden**	**5.45**	**220**	P	**Pn**	**14 20 54.1**	**+0.9**
ZGR	**Zagora**	**5.55**	**197**	P	**Pn**	**14 20 55.0**	**+0.6**
PMAFR	**Mafra**	**5.60**	**310**	*e*Sn	**Sn**	**14 21 57.9**	**-2.0**
PCAS	**Casmilo, Conde**	**5.90**	**322**	*e*Sn	**Sn**	**14 22 04.6**	**-2.8**
PCAS				A	A	14 22 07.3	
	6.1nm,0.4s						
MVO	**Moncorvo**	**6.23**	**337**	*e*Sn	**Sn**	**14 22 13.5**	**-2.0**
POLO	**Lamas de Olo**	**6.68**	**333**	*e*Sn	**Sn**	**14 22 25.2**	**-1.5**
POLO				A	A	14 22 32.5	
	2.7nm,1.1s						
PBRG	**Braganca**	**6.73**	**341**	*e*Pn	**Pn**	**14 21 12.5**	**+2.0**
PGAV	**Gavieira, Arco**	**7.37**	**333**	*e*Sn	**Sn**	**14 22 41.3**	**-2.4**
TORD	**Torodi Ar. Bea**	**22.77**	**166**	P	**P**	**14 24 35.6**	**+1.1**
	0.7nm,0.8s,baz=337,slow=11,SNR=3.5						
MKAR	**Makanchi Array**	**62.74**	**50**	P	**P**	**14 29 57.2**	**-0.1**
	0.2nm,0.5s,baz=305,slow=5.1,SNR=2.6						
	0.2nm,0.5s						

NOU 08 14:25:59.2, 15°.48S×167°.61E, h17km, mb4.4/7, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**2.30**	**166**	P	Pn	14 26 36.7	+0.3
DZM	**Mont Dzumac**	**6.65**	**189**	P	Pn	14 27 35.5	-0.8
PINNC	**Pines Island,**	**7.10**	**181**	P	Pn	14 27 42.8	+0.5
	80nm,2.6s						

*IDC **08** 14:35:22.0±2.6, 10°.45N×124°.11E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=251.9km s-min=29.9km az=64.0*
*MAN **08** 14:35:22.3, 10°.92N×124°.78E, h9km, mb4.6, ML3.5, MS3.3*

ISC 08 14:35:24.7±1.1, 10°.91N±0°.04×124°.73E±0°.04, h22km±9km, n16, σ2°38/22, mb3.3/3, 6C-7D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OCLP	**Ormoc**	**0.18**	**319**	*e*P	**Pb**	**14 35 27.6**	**-2.4**
OCLP				*e*S		14 36 57.1	
MSLP	**Maasin**	**0.78**	**171**	*e*P	**Pb**	**14 35 37.5**	**-2.2**
MSLP				*e*S	**Sn**	**14 35 51.3**	**-0.1**
LLP	**Lapu-Lapu**	**0.96**	**232**	*i*P	**Pb**	**14 35 41.6**	**-1.0**
LLP				*i* S	**Sn**	**14 35 55.5**	**-0.2**
TBP	**Tagbilaran**	**1.48**	**215**	*e*P	**Pn**	**14 35 49.5**	**-0.5**
TBP				*i* S	**Sb**	**14 36 11.5**	**+1.5**
GLSP	**General Luna,**	**1.77**	**129**	*e*P	**Pn**	**14 35 52.3**	**-1.7**
GLSP				*e*S	**Sb**	**14 36 26.1**	**+7.8**
RCP	**Roxas**	**2.05**	**289**	*e*P	**Pn**	**14 35 58.6**	**+0.7**
RCP				*e*S	**Sn**	**14 36 25.1**	**+2.2**
GUIM	**Jordan**	**2.12**	**263**	*e*P	**Pn**	**14 35 58.4**	**-0.4**
GUIM				*e*S	Sb	14 36 54.2	+26
SNPH	**Sibulan**	**2.14**	**224**	*i*P	**Pn**	**14 35 59.4**	**+0.2**
SNPH				*i* S	**Sb**	**14 36 32.1**	**+3.0**
CNOP	**Candoni, Negro**	**2.32**	**243**	*e*P	**Pn**	**14 36 01.5**	**-0.1**
CNOP				*e*S	Sn	14 36 16.6	-13
DCPH	**Dipolog City**	**2.68**	**211**	*e*P	Pn	14 36 01.1	-5.5
PVCP	**Virac**	**2.73**	**348**	*e*P	**Pn**	**14 36 07.2**	**+0.1**
JAP	**San Jose, Anti**	**2.74**	**267**	*e*P	**Pb**	**14 36 11.5**	**-1.5**
PAGZ	**Pagadian**	**3.32**	**204**	*e*P	**Pn**	**14 36 15.5**	**+0.2**
PAGZ				*e*S	Sn	14 36 43.9	-10
WRA	**Warramunga Arr**	**32.09**	**163**	P	**P**	**14 41 48.0**	**-2.2**
	0.3nm,0.8s,baz=342,slow=9.8,SNR=1.8						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**35.52**	**165**	P	**P**	**14 42 18.9**	**-1.2**
	0.4nm,0.9s,baz=343,slow=7.2,SNR=8.1						
ASAR				PcP	**PcP**	**14 44 49.0**	**-0.3**
	0.2nm,0.9s,baz=340,slow=3.0,SNR=1.4						
	0.4nm,0.9s						
MKAR	**Makanchi Array**	**50.61**	**323**	P	**P**	**14 44 22.7**	**+0.8**
	0.2nm,0.5s,baz=125,slow=9.0,SNR=2.0						
	0.2nm,0.5s						

*ANF **08** 14:40:16.3±2.4, 29°.01N×114°.13W, h0km, ML4.4/9, Error ellipse: s-maj=28.1km s-min=6.6km az=33.0*
*ECX **08** 14:40:33.4±0.3, 30°.16N×114°.35W, h13km±6km, MD3.6, ML3.7*
*MEX **08** 14:40:34.6±1.7, 30°.17N×114°.27W, h10km, MD4.2*
*IDC **08** 14:40:35.7±3.5, 30°.05N×113°.94W, h0km, mb3.1/1, mbtmp3.1/3, ML3.7/2, MS3.4/17, Error ellipse: s-maj=63.1km s-min=13.4km az=33.0*

ISC 08 14:40:32.1±1.3, 30°.18N±0°.04×114°.23W±0°.04, h12km±10km, n57, σ1°85/52, MS3.6/10, 7C-1D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SFX	**San Felipe**	**1.01**	**328**	*e*P	**Pg**	**14 40 50.4**	**-1.2**
SFX				*e*S	**Sg**	**14 41 03.6**	**-1.2**
SFX				IAML		14 41 21.8	
	comp=E,3μm,0.9s						
SFX				⇑*e*		14 41 21.8	
SFX				IAML		14 41 21.9	
	comp=N,2μm,1.3s						
SFX				⇑*e*		14 41 21.9	
BAHB	**Baha de los**	**1.36**	**155**	*e*P	**Pn**	**14 40 54.7**	**-2.1**
BAHB				*e*S	**Sb**	**14 41 14.8**	**0.0**
BAHB	**Baha de los**	**1.36**	**155**	*e*P	**Pn**	**14 40 57.1**	**+0.3**
BAHB				*e*S	**Sb**	**14 41 15.6**	**+0.9**
BAHB				IAML		14 41 29.0	
	comp=N,1μm,1.3s						
SPIG	**San Pedro Mart**	**1.37**	**309**	*i* P	**Pn**	**14 40 56.1**	**-1.3**
SPIG				*i* S	**Sb**	**14 41 13.3**	**-2.2**
SPIG	**San Pedro Mart**	**1.37**	**309**	*e*P	**Pn**	**14 40 56.2**	**-1.2**
SPIG				*e*S	**Sb**	**14 41 13.8**	**-1.8**
SPIG				IAML		14 41 27.1	
	comp=E,981nm,0.8s						
ECBX	**El Chinero**	**1.47**	**331**	⇑*e*P	**Pn**	**14 40 56.6**	**-1.8**
ECBX				*e*S	**Sn**	**14 41 15.6**	**-2.0**
ECBX				IAML		14 41 37.9	
	comp=N,1μm,0.8s						
LAPR	**La Primavera**	**1.68**	**78**	*e*P	**Pn**	**14 41 01.2**	**-0.1**
LAPR				*e*S	**Sn**	**14 41 22.1**	**-0.7**
LAPR	**La Primavera**	**1.68**	**78**	*e*P	**Pg**	**14 41 03.7**	**-0.6**
SVX	**San Vicente**	**2.08**	**304**	⇑*e*P	**Pn**	**14 41 07.3**	**+0.5**
SVX				IAML		14 41 47.5	
	comp=N,712nm,0.9s						
214A	**Organ Pipe Nat**	**2.15**	**34**	*e*P	**Pn**	**14 41 07.5**	**-0.3**
214A				*e*S	**Sn**	**14 41 32.9**	**-1.5**
214A	**Organ Pipe Nat**	**2.15**	**34**	P	**Pn**	**14 41 07.6**	**-0.1**
	baz=201,SNR=22						
214A	**Organ Pipe Nat**	**2.15**	**34**	⇓*e*P	**Pn**	**14 41 07.7**	**-0.1**
ALAMX	**Rancho Alamar**	**2.22**	**326**	⇑*e*P	**Pn**	**14 41 08.1**	**-0.6**
MBIG	**Mexicali**	**2.37**	**340**	*e*	**Pb**	**14 41 12.4**	**-2.3**
MBIG				*e*		14 41 46.6	
CPBX	**Cerro Prieto**	**2.42**	**338**	*e*P	**Pb**	**14 41 13.2**	**-2.3**
CPBX				IAML		14 42 25.7	
	comp=E,1μm,0.9s						
GLA	**Glamis**	**2.91**	**350**	Pb	**Pg**	**14 41 28.7**	**+0.8**
	baz=171						
GLA	**Glamis**	**2.91**	**350**	*e*P	**Pn**	**14 41 19.4**	**+1.1**
IKP	**In-Ko-Pah, Jac**	**2.94**	**327**	P	**Pn**	**14 41 18.6**	**-0.2**
	baz=154,SNR=30						
IKP				S	**Sg**	**14 42 05.9**	**-0.8**
	baz=154						
CBX	**Cerro Bola**	**2.98**	**316**	*e*P	**Pn**	**14 41 19.8**	**+0.5**
CBX				*e*S	**Sn**	**14 41 53.6**	**-1.5**
CBX	**Cerro Bola**	**2.98**	**316**	IAML		14 42 29.1	
	comp=E,355nm,1.2s						
SWSC	**Sam W. Stewart**	**3.07**	**334**	Pb	**Pg**	**14 41 30.9**	**0.0**
	baz=160,SNR=17						
TJIG	**Tijuana**	**3.07**	**318**	*e*P	**Pn**	**14 41 20.7**	**+0.3**
TJIG				*e*S	**Sn**	**14 41 56.5**	**-0.6**
HSIG		**3.08**	**111**	*e*P	**Pn**	**14 41 19.8**	**-0.7**
MONP2	**Monument Peak**	**3.29**	**326**	P	**Pn**	**14 41 23.9**	**+0.3**
	baz=153,SNR=45						
MONP2				S	**Sg**	**14 42 15.1**	**-2.8**
	baz=153						
SRIG	**Santa Rosalia**	**3.34**	**148**	*e*P	**Pn**	**14 41 26.2**	**+2.2**
SRIG				*e*S	**Sn**	**14 42 01.7**	**-2.0**
SRIG	**Santa Rosalia**	**3.34**	**148**	*e*P	**Pn**	**14 41 27.3**	**+3.3**
EML	**El Monte Cty P**	**3.51**	**321**	IAML		14 42 34.2	
	comp=N,208nm,0.8s						
BC3	**Big Chuckawall**	**3.62**	**344**	Pb	**Pg**	**14 41 41.0**	**-0.5**
	baz=166						
109C	**Camp Elliot, M**	**3.65**	**318**	Pb	**Pb**	**14 41 38.6**	**+2.1**
	baz=146						
109C				S	**Sb**	**14 42 23.5**	**+2.7**
	baz=146						
GUYB	**Guaymas**	**3.71**	**127**	*e*P	**Pn**	**14 41 29.6**	**+0.4**
PFO	**Pinyon Flats O**	**3.92**	**332**	LR	LR	14 43 00.6	
	comp=N,297nm,21.1s,baz=154,slow=35						
PFO	**Pinyon Flats O**	**3.92**	**332**	Pb	**Pg**	**14 41 46.1**	**-1.0**
	baz=156,SNR=20						
NZIG	**Nacozari, Sono**	**4.05**	**86**	*e*	**Pg**	**14 41 48.2**	**-1.5**
NZIG				*e*		14 42 34.5	
MURC	**Murrieta**	**4.24**	**324**	Pb	**Pg**	**14 41 49.6**	**-3.8**
	baz=150						
MURC				S	**Sb**	**14 42 39.5**	**+1.7**
	baz=150						
HEC	**Hector,Ludlow**	**4.97**	**340**	Pg	Pg	14 42 12.5	+5.2
	baz=162						
BFSC	**Mount Baldy Ra**	**4.99**	**325**	Pb	**Pb**	**14 42 01.9**	**+2.6

AMTX	**Amarillo** comp=Z,18nm,0.8s	**3.72**	**244**	IAmb_Lg		15 07 32.4
U40A	**Yellville** comp=Z,12nm,0.8s	**3.85**	**92**	IAmb_Lg		15 07 36.1
Z38A	**Mt. Pleasant** comp=Z,24nm,0.7s	**3.97**	**146**	IAmb_Lg		15 07 43.8
P38A	**Dawn** comp=Z,10.0nm,0.7s	**4.42**	**46**	IAmb_Lg		15 07 52.1
WHAR	**Wooly Hollow** comp=Z,14nm,1.2s	**4.52**	**105**	IAmb_Lg		15 07 55.5
R40A	**Maddies Statio** comp=Z,9.2nm,0.8s	**4.58**	**67**	IAmb_Lg		15 07 51.7
W41B	**Gary Mavity, V** comp=Z,11nm,0.7s	**4.59**	**107**	IAmb_Lg		15 07 55.8
P40A	**Paris** comp=Z,15nm,0.9s	**5.28**	**55**	IAmb_Lg		15 08 20.4
CCM	**Cathedral Cave** comp=Z,10.0nm,0.7s	**5.28**	**72**	IAmb_Lg		15 08 24.1
N38A	**Joes South For** comp=Z,13nm,0.8s	**5.41**	**38**	IAmb_Lg		15 08 21.5
T25A	**Trinidad** comp=Z,13nm,1.0s	**5.47**	**278**	IAmb_Lg		15 08 26.1
PBMO	**Poplar Bluff** comp=Z,14nm,0.8s	**5.78**	**86**	IAmb_Lg		15 08 36.0
FVM	**French Village** comp=Z,13nm,0.9s	**5.90**	**74**	IAmb_Lg		15 08 35.8
JCT	**Junction City** comp=Z,8.5nm,1.1s	**6.37**	**197**	IAmb_Lg		15 09 07.5

DJA 08 15:08:31.5±0.2, 8°S±2°×11°8E±°, h10km, M3.5/11, mb3.5/1, MLv3.5/11, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**0.91**	**212**	P	Pg	15 08 48.3	-0.8
PLAI				S	Sg	15 09 01.0	-0.1
WBSI	**Waikabubak, Su**	**1.93**	**145**	P	Pn	15 09 05.0	+0.5
WBSI				S	Sb	15 09 31.0	0.0
BSSI	**Bau Bau, Buton**	**2.91**	**49**	P	Pn	15 09 18.9	+1.0
BSSI				S	Sn	15 09 52.6	-0.3
SRBI	**Singaraja**	**3.03**	**269**	P	Pn	15 09 18.8	-0.7
IGBI	**Denpasar**	**3.18**	**256**	P	Pn	15 09 22.6	+0.9
BKSI	**Bulukumba**	**3.28**	**34**	P	Pn	15 09 23.3	+0.4
BKSI				S	Sn	15 10 01.7	-0.3
EDFI	**Ende, Flores**	**3.46**	**102**	P	Pn	15 09 25.3	-0.2
EDFI				S	Sn	15 10 06.3	-0.3
MMRI	**Maumere**	**3.97**	**99**	P	Pn	15 09 32.7	+0.2
BNSI	**Bone**	**4.06**	**27**	P	Pn	15 09 34.7	+1.0
BNSI				S	Sn	15 10 23.6	+2.3
TTSI	**Tana Toraja**	**5.21**	**17**	P	Pn	15 09 50.3	+0.8

*IDC **08** 15:21:22.4±5.2, 37°.27N×72°.21E, h90km±50km, mb3.2/2, mbtmp3.5/5, ML3.0/3, MS3.2/2, Error ellipse: s-maj=58.0km s-min=27.5km az=158.0*
*NNC **08** 15:21:30.8±2.4, 38°.18N×71°.96E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=18.7km s-min=12.5km az=172.0*
ISC 08 15:21:26.8±1.2, 37°.63N±0°.09×71°.96E±0°.08, h130km, n11, σ1s94/16, 6C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array** 3.1nm,0.3s,baz=163,slow=12,SNR=40	**5.57**	**349**	P	**Pn**	**15 22 48.9**	**+1.4**
KK31	11nm,0.6s,baz=169,slow=23,SNR=14			⇓S	**Sn**	**15 23 48.5**	**-2.0**
CHMS	**Chumysh** 4.0nm,0.6s	**5.77**	**21**	⇑P	**Pn**	**15 22 51.0**	**+0.9**
CHMS	7.0nm,0.8s			⇑S	**Sn**	**15 23 52.6**	**-2.6**
TKM2	**Tokmak 2** 5.7nm,1.3s	**5.97**	**27**	⇑P	**Pn**	**15 22 53.9**	**+0.9**
TKM2	2.1nm,0.7s			⇑S	**Sn**	**15 23 59.0**	**-1.3**
GEYT	**Alibeck** 0.5nm,0.3s,baz=96,slow=13,SNR=2.5	**10.96**	**276**	P	**Pn**	**15 23 59.5**	**-0.4**
GEYT	1.9nm,0.4s,baz=113,slow=28,SNR=2.5			S	**Sn**	**15 25 57.8**	**-3.0**
GEYT	comp=Z,51nm,19.1s,baz=147,slow=41 1.2nm,0.4s			LR	LR	15 29 05.3	
MKAR	**Makanchi Array** baz=220,slow=13,SNR=4.8 0.5nm,0.8s	**11.93**	**37**	P	**Pn**	**15 24 12.4**	**-0.2**
AB31	**Akbulak array** 0.5nm,0.4s,baz=132,slow=14,SNR=16	**14.51**	**327**	P	**P**	**15 24 50.0**	**+1.3**
AB31	1.1nm,0.5s,baz=139,slow=23,SNR=7.3			⇑S	**Sn**	**15 27 27.0**	**+1.0**
AKTO	**Aktyubinsk** 2.8nm,0.9s	**16.22**	**327**	⇑P	**P**	**15 25 11.9**	**+4.2**
AKTO	1.5nm,0.7s			⇓S	**S**	**15 28 08.6**	**-0.7**
ZALV	**Zalesovo Beam** 0.1nm,0.3s,baz=214,slow=10,SNR=4.7 0.9nm,0.6s	**18.57**	**24**	P	**P**	**15 25 33.4**	**0.0**
USRK	**Ussuriysk Ar.** comp=Z,61nm,21.4s,baz=211,slow=36	**44.95**	**62**	LR	LR	15 48 39.2	
TORD	**Torodi Ar. Bea** 0.3nm,0.5s,baz=40,slow=7.8,SNR=2.2 0.3nm,0.5s	**66.51**	**269**	P	**P**	**15 32 04.1**	**+1.2**
WRA	**Warramunga Arr** 0.6nm,1.1s,baz=326,slow=7.3,SNR=1.5 0.6nm,1.1s	**81.95**	**123**	P	**P**	**15 33 30.8**	**-1.3**

*JMA **08** 15:55:02.2±0.1, 36°.2N±0°.3×140°.1E±0°.4, h51km, MV3.2/39, SW IBARAKI PREF*
JMA Felt I J1 at SW IBARAKI PREF .
*IDC **08** 15:55:03.6±5.6, 36°.25N×140°.06E, h65km±44km, mb2.9/2, mbtmp3.2/2, Error ellipse: s-maj=54.5km s-min=32.3km az=66.0*
ISC 08 15:55:02.3±1.1, 36°.17N±0°.07×140°.11E±0°.06, h51km±8km, n18, σ0s38/17, 8D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYT	**Yasato**	**0.09**	**50**	P	**Pn**	**15 55 10.4**	**+0.1**
JYT				S	**Sn**	**15 55 15.9**	**0.0**
JAG	**Ashikaga**	**0.59**	**296**	⇓P	**Pn**	**15 55 14.8**	**+0.1**
JAG				⇓S	**Sn**	**15 55 23.4**	**-0.3**
JKT	**Katashina**	**0.92**	**311**	⇓P	**Pn**	**15 55 18.8**	**-0.2**
JRY	**Ryogami san**	**0.99**	**261**	⇓P	**Pn**	**15 55 20.1**	**+0.1**
JRY				⇓S	**Sn**	**15 55 32.9**	**-0.1**
JOD2	**Odawara 2**	**1.23**	**223**	S	**Sn**	**15 55 38.7**	**0.0**
JFY	**Yanaizu**	**1.28**	**345**	⇓*i*P	**Pn**	**15 55 24.0**	**+0.2**
JUON	**Uonuma**	**1.34**	**321**	P	**Pn**	**15 55 24.9**	**+0.2**
JFK	**Kawauchi**	**1.34**	**27**	S	**Sn**	**15 55 40.6**	**-0.8**
JFT	**Otama**	**1.36**	**8**	⇓*i*P	**Pn**	**15 55 25.0**	**+0.1**
JFT				⇓S	**Sn**	**15 55 42.4**	**+0.6**
MJAR	**Matsushiro Arr** 15nm,0.3s,baz=93,slow=17,SNR=46	**1.58**	**284**	P	**Pn**	**15 55 28.4**	**+0.5**
MJAR	8.8nm,0.4s,baz=88,slow=31,SNR=4.5			S	**Sn**	**15 55 46.9**	**-0.4**
H11N2	**WAKE ISLAND Hy** baz=312,slow=76	**28.64**	**118**	T	T	16 31 01.7	
H11N1	**WAKE ISLAND Hy** baz=312	**28.65**	**118**	T	T	16 31 06.2	
H11N3	**WAKE ISLAND Hy** baz=312,slow=76	**28.66**	**118**	T	T	16 31 02.9	
H11S1	**WAKE ISLAND Hy** baz=314,slow=76,SNR=5.5	**29.31**	**120**	T	T	16 31 51.4	
H11S3	**WAKE ISLAND Hy** baz=314,slow=76,SNR=5.3	**29.31**	**120**	T	T	16 31 48.6	
H11S2	**WAKE ISLAND Hy** baz=314,slow=76,SNR=5.0	**29.32**	**120**	T	T	16 31 52.5	
MKAR	**Makanchi Array** 0.2nm,0.7s,baz=91,slow=9.7,SNR=2.5 0.2nm,0.7s	**43.70**	**303**	P	**P**	**16 03 02.1**	**0.0**
WRA	**Warramunga Arr** 0.2nm,0.4s,baz=0.6,slow=7.6,SNR=5.8 0.2nm,0.4s	**56.08**	**187**	P	**P**	**16 04 36.1**	**-0.1**

*IDC **08** 16:00:36.9±1.1, 44°.21N×105°.66W, h0km, mb3.5/1, mbtmp3.2/5, ML3.3/4, MS3.3/1, Error ellipse: s-maj=24.9km s-min=8.9km az=146.0*
*NEIC **08** 16:00:36.8±1.4, 43°.96N±0°.05×105°.20W±0°.03, h0km±2km, ML3.2/32, Error ellipse: s-maj=9.3km s-min=3.1km az=348.0*
ISC 08 16:00:35.4±0.9, 43°.97N±0°.05×105°.27W±0°.06, h0km, n39, σ1s69/35, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.90**	**80**	Pg	**Pg**	**16 00 53.2**	**+0.5**
K22A	**Casper**	**1.60**	**215**		**Pn**	**16 01 04.9**	**-0.3**
K22A	comp=E,324nm,0.7s			IAML		16 01 29.0	
PHWY	**Pilot Hill**	**2.67**	**183**	Pn	**Pn**	**16 01 21.2**	**+1.3**
RWWY	**Rawlins**	**2.69**	**213**	Pn	**Pn**	**16 01 21.8**	**+1.6**
LAO	**LASA Array**	**2.80**	**346**	Pn	**Pb**	**16 01 23.6**	**-2.7**
LAO	comp=E,136nm,0.9s			IAML		16 02 07.5	
RLMT	**Red Lodge**	**3.08**	**293**	Pn	**Pn**	**16 01 26.5**	**+1.1**
RLMT	comp=E,45nm,0.6s			IAML		16 02 30.4	
N23A	**Red Feather La**	**3.11**	**189**	Pn	**Pn**	**16 01 27.4**	**+1.4**
PD31	**Pinedale Array**	**3.35**	**250**	Pn	**Pn**	**16 01 32.1**	**+3.0**
PDAR	**Pinedale Array** comp=E,3.0nm,0.3s,baz=64,slow=22,SNR=24	**3.35**	**250**	Pn	**Pn**	**16 01 32.0**	**+2.9**
PDAR	comp=E,9.2nm,0.3s,baz=66,slow=33,SNR=23 comp=E,4.0nm,0.5s			Lg	Lg	16 02 15.9	
PDAR	**Pinedale Array**	**3.35**	**250**	Pn	**Pb**	**16 01 33.2**	**-2.6**
BW06	**Boulder Array**	**3.35**	**250**	Pn	**Pn**	**16 01 30.2**	**+1.0**
BW06	comp=E,39nm,0.7s			IAML		16 02 20.1	
BW06	comp=E,43nm,0.6s			IAML		16 02 23.8	
GCMT	**Greycliff**	**3.62**	**302**	Pn	**Pn**	**16 01 33.7**	**+1.0**
OGNE	**Ogallala**	**3.86**	**140**	Pn	**Pn**	**16 01 36.7**	**+0.7**
OGNE	comp=E,70nm,0.9s			IAML		16 02 48.1	
FLWY	**Flagg Ranch**	**3.92**	**274**	Pn	**Pn**	**16 01 39.0**	**+2.1**
FLWY	comp=E,43nm,1.8s			IAML		16 02 45.6	
FLWY	comp=E,55nm,1.8s			IAML		16 02 47.2	
ISCO	**Idaho Springs**	**4.17**	**184**	Pn	**Pn**	**16 01 41.2**	**+0.7**
YHL	**Hebgen Lake**	**4.33**	**284**	Pn	**Pn**	**16 01 45.6**	**+3.0**
YHL	comp=E,22nm,0.8s			IAML		16 02 56.3	
YHL	comp=N,21nm,1.1s			IAML		16 03 02.7	
O20A	**White River Ci**	**4.42**	**211**	Pn	**Pn**	**16 01 43.0**	**-0.9**
O20A	comp=N,40nm,0.9s			IAML		16 03 01.9	
DGMT	**Dagmar**	**4.56**	**9**	Pn	**Pn**	**16 01 47.5**	**+1.9**
RDMU	**Red Mountain**	**4.66**	**225**	Pn	**Pn**	**16 01 49.8**	**+2.6**
RDMU	comp=E,25nm,0.9s			IAML		16 03 07.3	
RDMU	comp=N,16nm,1.2s			IAML		16 03 13.6	
SMCO	**Snowmass**	**4.96**	**195**	Pn	**Pn**	**16 01 52.3**	**+0.9**
SMCO	comp=N,15nm,1.0s			IAML		16 03 20.2	
SMCO	comp=N,11nm,0.9s			IAML		16 03 20.6	
KSCO	**Kaye Shedlock***	**5.34**	**157**	Pn	**Pn**	**16 01 57.6**	**+1.2**
DLMT	**Dillon**	**5.41**	**287**	Pn	**Pn**	**16 01 59.0**	**+1.6**
LRM	**Limekiln Ridge**	**5.43**	**292**	Pn	**Pn**	**16 01 58.4**	**+0.7**
P18A	**Preston Nutter**	**5.71**	**222**	Pn	**Pn**	**16 02 03.2**	**+1.5**
P17A	**Butcher Ranch,**	**6.08**	**224**	Pn	**Pn**	**16 02 08.2**	**+1.6**
PV07	**Paradox Valley**	**6.08**	**206**	Pn	Pn	16 02 03.1	-3.6
PV23	**Carpenter Ridg**	**6.19**	**208**	Pn	**Pn**	**16 02 09.1**	**+0.9**
SDCO	**Great Sand Dun**	**6.22**	**182**	Pn	**Pn**	**16 02 09.7**	**+1.0**
SRU	**San Rafael Swe**	**6.25**	**221**	Pn	**Pn**	**16 02 10.6**	**+1.6**
PV11	**David Mesa, Pa**	**6.28**	**207**	Pn	**Pn**	**16 02 11.0**	**+1.6**
S22A	**4UR Ranch, Cre**	**6.33**	**191**	Pn	**Pn**	**16 02 10.9**	**+0.7**
TMUT	**Trail Mountain**	**6.45**	**226**	Pn	**Pn**	**16 02 13.6**	**+1.8**
MSO	**Missoula**	**6.74**	**298**	Pn	**Pn**	**16 02 16.6**	**+1.0**
ULM	**Lac du Bonnet** comp=N,1.0nm,0.3s,baz=227,slow=14,SNR=5.1	**8.97**	**42**	Pn	**Pn**	**16 02 46.0**	**-0.1**
ULM	comp=N,0.3nm,0.3s,baz=324,slow=21,SNR=3.2 comp=N,2.1nm,0.4s			Lg	Lg	16 05 14.1	
I56US	**NEWPORT INFRAS** baz=116,slow=320,SNR=2.8	**9.28**	**302**	*i*		16 57 30.0	
NVAR	**Mina Array Bea** comp=N,0.1nm,0.3s,baz=69,slow=16,SNR=2.6 comp=N,0.2nm,0.6s	**11.27**	**245**	Pn	**Pn**	**16 03 19.5**	**+1.7**
TXAR	**Lajitas Array** baz=357,slow=14,SNR=2.7	**14.66**	**174**	Pn	Pn	16 04 10.1	+5.9
TXAR	baz=0.0,slow=14,SNR=2.7 comp=N,0.2nm,0.7s			Pg	P	16 05 08.2	+58
RES	**Resolute Bay** comp=N,54nm,18.8s,baz=346,slow=34	**31.16**	**5**	LR	LR	16 18 19.6	
MKAR	**Makanchi Array** comp=N,0.2nm,0.6s,baz=356,slow=5.8,SNR=2.2 comp=N,0.2nm,0.6s	**89.37**	**355**	P	**P**	**16 13 33.5**	**-0.1**

*IDC **08** 16:34:25.7±1.6, 39°.43N×74°.19E, h0km, mb3.6/3, mbtmp3.6/4, ML3.7/1, MS3.2/1, Error ellipse: s-maj=40.5km s-min=18.7km az=97.0*
*KRNET **08** 16:34:29.0±0.1, 39°.55N×74°.42E, mb3.5*
ISC 08 16:34:26.7±1.9, 39°.61N±0°.06×74°.48E±0°.05, h8km±11km, n22, σ2s20/31, mb3.6/3, 15C-4D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh** baz=8.0	**1.58**	**306**	⇑*i*P	**Pg**	**16 34 58.4**	**+1.3**
OHH	baz=8.0			⇑*i*S	**Sg**	**16 35 19.3**	**+1.6**
DRK	**Karamyk** baz=69	**2.07**	**267**	⇑*i*P	**Pb**	**16 35 04.9**	**+0.1**
DRK	baz=69			⇑*i*S	**Sb**	**16 35 31.6**	**+0.8**
ARLS	**Aral** baz=58	**2.25**	**357**	⇑*i*P	**Pg**	**16 35 09.0**	**-0.8**
ARLS	baz=58			⇑*i*S	**Sg**	**16 35 37.9**	**-1.1**
AML	**Almayashu** SNR=26	**2.58**	**347**	P	**Pg**	**16 35 15.1**	**-1.2**
UCH	**Uchtor** SNR=61	**2.61**	**1**	P	**Pb**	**16 35 14.0**	**-0.1**
UCH	**Uchtor** baz=1.0	**2.61**	**1**	⇑*i*P	**Pb**	**16 35 14.3**	**+0.2**
UCH	baz=1.0			⇑*i*S	**Sb**	**16 35 47.2**	**+0.7**
BTK	**Batken** baz=81	**2.85**	**280**	⇓*i*P	**Pb**	**16 35 15.7**	**-2.2**
BTK	baz=81			⇓*i*S	**Sb**	**16 35 50.5**	**-2.5**
ULHL	**Ulahol** SNR=7.0	**2.95**	**26**	P	**Pg**	**16 35 23.4**	**+0.2**
AAK	**Ala-Archa** SNR=14	**3.02**	**0**	P	**Pg**	**16 35 23.5**	**-1.1**
AAK	**Ala-Archa** 7.8nm,0.3s,baz=182,slow=7.1,SNR=20	**3.02**	**0**	Pn	**Pb**	**16 35 21.2**	**+0.4**
AAK	1.0nm,0.3s,baz=313,slow=23,SNR=8.2 20nm,0.3s			Sn	**Sg**	**16 36 01.4**	**-2.4**
AAK	**Ala-Archa** baz=1.0	**3.02**	**0**	⇑*i*P	**Pb**	**16 35 20.1**	**-0.8**
AAK	baz=1.0			⇑*i*S	**Sb**	**16 35 56.8**	**-1.2**
KBK	**Karagaybulak** SNR=6.0	**3.06**	**7**	P	**Pb**	**16 35 20.9**	**-0.6**
EKS2	**Erkin-Say** SNR=7.3	**3.09**	**350**	P	**Pg**	**16 35 23.9**	**-2.0**
EKS2	**Erkin-Say** baz=51	**3.09**	**350**	⇑*e*P	**Pb**	**16 35 20.5**	**-1.5**
EKS2	baz=51			⇑*i*S	**Sb**	**16 35 57.9**	**-2.0**
TRKS	**Terek-Say** baz=9.0	**3.18**	**308**	⇑*e*P	**Pb**	**16 35 20.4**	**-3.2**
TRKS	baz=9.0			⇑*i*S	**Sn**	**16 35 58.3**	**+2.9**
CHMS	**Chumysh** SNR=11	**3.39**	**3**	P	**Sg**	**16 36 23.5**	**+8.0**
TKM2	**Tokmak 2** SNR=5.8	**3.41**	**14**	P	**Pb**	**16 35 26.0**	**-1.5**
KK31	**Karatay Array** 0.3nm,0.3s,baz=144,slow=17,SNR=4.4	**4.59**	**321**	⇑Pn	Pn	16 35 41.5	+5.1
KK31	1.2nm,0.5s,baz=140,slow=17,SNR=8.7			Pg	**Pb**	**16 35 49.5**	**+2.0**
KK31	1.4nm,0.3s			⇓Sn	**Sn**	**16 36 30.2**	**+0.2**
KK31	4.8nm,0.5s,baz=134,slow=30,SNR=5.5			⇓Lg	Lg	16 36 46.3	
FINES	**FINESS Array B** 0.6nm,0.4s,baz=114,slow=12,SNR=6.8 0.6nm,0.4s	**36.55**	**323**	P	**P**	**16 41 33.0**	**+0.5**
GERES	**GERESS Array B** comp=Z,32nm,21.2s,baz=240,slow=40	**43.46**	**303**	LR	LR	17 03 36.9	
TORD	**Torodi Ar. Bea** 0.2nm,0.5s,baz=54,slow=6.7,SNR=1.8 0.2nm,0.5s	**68.51**	**269**	P	**P**	**16 45 28.7**	**-1.3**
WRA	**Warramunga Arr** 0.4nm,1.0s,baz=320,slow=3.7,SNR=1.9 0.4nm,1.0s	**81.40**	**125**	P	**P**	**16 46 45.0**	**+0.8**

*NNC **08** 16:35:23.7±0.2, 44°.65N×79°.37E, h0km, mb4.3, mpv4.2, Error ellipse: s-maj=2.1km s-min=1.7km az=94.0*
*SOME **08** 16:35:24.6, 44°.67N×79°.42E, h15km*
ISC 08 16:35:24.3±1.1, 44°.64N±0°.02×79°.39E±0°.02, h5km±10km, n55, σ1s04/106, 18C-9D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KNOS	**Konyrlen** 243nm,0.1s	**0.32**	**209**	*e*P	**Pb**	**16 35 32.0**	**-0.6**
KNOS	3µm,0.1s			*e*S	**Sb**	**16 35 36.9**	**-1.2**
DJR	**Jarkent** 214nm,0.1s	**0.42**	**137**	*e*P	**Pg**	**16 35 32.5**	**+0.1**
DJR	2µm,0.2s			*e*S	**Sg**	**16 35 38.1**	**+0.3**
DJR	**Jarkent** 214nm,0.1s	**0.42**	**137**	P	**Pg**	**16 35 32.4**	**+0.1**
DJR	2µm,0.2s			S	**Sg**	**16 35 38.1**	**+0.3**
KAPS	**Kapalarasan** 486nm,0.1s	**0.65**	**358**	*e*P	**Pg**	**16 35 36.5**	**-0.3**
KAPS	1µm,0.1s			*e*S	**Sg**	**16 35 44.8**	**-0.4**
KAPS	**Kapalarasan** 486nm,0.2s	**0.65**	**358**	P	**Pg**	**16 35 36.5**	**-0.3**
KAPS	483nm,0.2s			P	**Pg**	**16 35 36.5**	**-0.3**
KAPS	793nm,0.3s			S	**Sg**	**16 35 44.8**	**-0.4**
KAPS	789nm,0.2s			S	**Sg**	**16 35 44.9**	**-0.4**
TDK	**Taldyqorghan** 773nm,0.1s	**0.79**	**298**	*e*P	**Pg**	**16 35 39.5**	**0.0**
TDK	3µm,0.2s			*e*S	**Sb**	**16 35 50.7**	**-1.0**
TDK	**Taldyqorghan** 699nm,0.1s	**0.79**	**298**	P	**Pg**	**16 35 39.5**	**0.0**
TDK	4µm,0.3s			S	**Sg**	**16 35 50.0**	**+0.2**
BLB	**Baldybastay** 551nm,0.2s	**0.85**	**231**	P	**Pb**	**16 35 41.2**	**-0.4**
BLB	1µm,0.2s			S	**Sb**	**16 35 52.9**	**-0.5**
ARXS	**Arharly** 825nm,0.3s	**1.20**	**250**	*e*P	**Pg**	**16 35 47.1**	**-0.2**
ARXS	651nm,0.3s			*e*S	**Sg**	**16 36 03.0**	**+0.2**
ARXS	**Arharly** 825nm,0.3s	**1.20**	**250**	P	**Pg**	**16 35 47.1**	**-0.2**
ARXS	825nm,0.3s			P	**Pb**	**16 35 47.2**	**-0.4**
ARXS	651nm,0.4s			S	**Sg**	**16 36 03.0**	**+0.2**
ARXS	651nm,0.3s			S	**Sg**	**16 36 03.0**	**+0.2**
KPKS	**Kokpek** 172nm,0.1s	**1.28**	**204**	*e*P	**Pg**	**16 35 49.0**	**+0.2**
KPKS	2µm,0.5s			*e*S	**Sg**	**16 36 06.0**	**+0.7**
KPKS	**Kokpek** 169nm,0.1s	**1.28**	**204**	P	**Pg**	**16 35 49.0**	**+0.2**
KPKS	172nm,0.1s			P	**Pg**	**16 35 49.1**	**+0.2**
KPKS	2µm,0.5s			S	**Sg**	**16 36 06.0**	**+0.7**
KPKS	2µm,0.3s			S	**Sg**	**16 36 06.1**	**+0.7**
PDGK	**Podgornoye** 88nm,0.2s	**1.31**	**177**	P	**Pn**	**16 35 48.7**	**-0.7**
PDGK	349nm,0.5s			S	**Sb**	**16 36 06.0**	**-0.7**
PDGK	**Podgornoye** 123nm,0.6s	**1.31**	**177**	⇑P	**Pn**	**16 35 48.6**	**-0.8**
PDGK	417nm,0.5s			⇓S	**Sb**	**16 36 06.4**	**-0.2**
KTMS	**Ketmen** 56nm,0.3s	**1.38**	**150**	*e*P	**Pb**	**16 35 50.6**	**0.0**
KTMS	147nm,0.3s			*e*S	**Sb**	**16 36 08.7**	**+0.1**
KTMS	**Ketmen** 56nm,0.3s	**1.38**	**150**	P	**Pb**	**16 35 50.6**	**0.0**
KTMS	56nm,0.4s			P	**Pb**	**16 35 50.7**	**0.0**
KTMS	147nm,0.3s			S	**Sb**	**16 36 08.7**	**+0.1**
KTMS	148nm,0.3s			S	**Sb**	**16 36 08.8**	**+0.1**
KURS	**Kuram** 178nm,0.6s	**1.45**	**218**	*e*P	**Pb**	**16 35 51.8**	**0.0**
KURS	598nm,0.8s			*e*S	**Sg**	**16 36 11.7**	**+0.9**
KURS	**Kuram** 178nm,0.6s	**1.45**	**218**	P	**Pb**	**16 35 51.8**	**0.0**
KURS	598nm,0.8s			S	**Sg**	**16 36 11.7**	**+0.9**
SHLS	**Shalkode** 167nm,0.2s	**1.48**	**178**	*e*P	**Pb**	**16 35 52.6**	**+0.3**
SHLS	513nm,0.3s			*e*S	**Sg**	**16 36 12.7**	**+0.8**
SHLS	**Shalkode** 167nm,0.2s	**1.48**	**178**	P	**Pb**	**16 35 52.6**	**+0.3**
SHLS	513nm,0.3s			S	**Sg**	**16 36 12.7**	**+0.8**
SATY	**Saty** 91nm,0.2s	**1.73**	**205**	*e*P	**Pb**	**16 35 57.0**	**+0.3**
SATY	927nm,0.2s			*e*S	**Sg**	**16 36 19.9**	**-0.1**
SATY	**Saty** 97nm,0.1s	**1.73**	**205**	P	**Pb**	**16 35 56.4**	**-0.3**
SATY	927nm,0.2s			S	**Sg**	**16 36 19.9**	**-0.1**
CHKK	**Chushkaly** 115nm,0.4s	**1.90**	**246**	*e*P	**Pn**	**16 35 57.9**	**+0.5**
CHKK	444nm,0.2s			*e*S	**Sn**	**16 36 21.7**	**0.0**
CHKK	**Chushkaly** 115nm,0.4s	**1.90**	**246**	P	**Pn**	**16 35 57.9**	**+0.5**
CHKK	444nm,0.2s			S	**Sn**	**16 36 21.7**	**0.0**
KTBS	**Karatobe** 91nm,0.3s	**2.16**	**246**	*e*P	**Pb**	**16 36 02.8**	**-1.1**
KTBS	883nm,0.8s			*e*S	**Sb**	**16 36 30.5**	**-0.5**
KTBS	**Karatobe** 64nm,0.3s	**2.16**	**246**	Pg	**Pb**	**16 36 02.3**	**-1.6**
KTBS	751nm,0.4s			Lg	Lg	16 36 29.8	
MDOK	**Medeo** 194nm,0.4s	**2.25**	**230**	*e*P	**Pb**	**16 36 04.6**	**-0.8**
MDOK	343nm,0.3s			*e*S	**Sb**	**16 36 33.1**	**-0.5**
MDOK	**Medeo** 112nm,0.4s	**2.25**	**230**	⇓Pg	**Pb**	**16 36 04.2**	**-1.2**
MDOK	194nm,0.4s			Pg	**Pb**	**16 36 04.6**	**-0.8**
MDOK	343nm,0.3s			Lg	Lg	16 36 33.1	
MDOK	265nm,0.6s			⇓Lg	Lg	16 36 35.1	
KNDC	**Almaty** 209nm,0.3s	**2.26**	**232**	⇑Pg	**Pb**	**16 36 05.0**	**-0.6**
KNDC	777nm,0.6s			⇑Lg	Lg	16 36 36.1	
AAA	**Alma-Ata** 504nm,0.2s	**2.29**	**232**	*e*P	**Pb**	**16 36 05.8**	**-0.4**
AAA	768nm,0.6s			*e*S	**Sb**	**16 36 36.1**	**+1.3**
AAA	**Alma-Ata** 504nm,0.2s	**2.29**	**232**	Pg	**Pb**	**16 36 05.8**	**-0.4**
AAA	768nm,0.6s			Lg	Lg	16 36 36.1	
KUU	**Kurty** 28nm,0.2s	**2.32**	**252**	*e*P	**Pb**	**16 36 06.0**	**-0.5**
KUU	340nm,0.5s			*e*S	**Sb**	**16 36 36.1**	**+0.5**
KUU	**Kurty** 40nm,0.2s	**2.32**	**252**	Pg	**Pb**	**16 36 05.5**	**-1.0**
KUU	340nm,0.5s			Lg	Lg	16 36 36.1	
TNSS	**Tian-Shan** 71nm,0.1s	**2.39**	**229**	*e*P	**Pb**	**16 36 07.8**	**-0.2**
TNSS				*e*S	**Sb**	**16 36 39.2**	**+1.4**

	86nm,0.4s							
TNSS	**Tian-Shan**	**2.39**	**229**	Pg	**Pb**	**16 36 07.3**	**-0.7**
	78nm,0.3s							
TNSS				Lg	Lg	16 36 39.2		
	86nm,0.4s							
MTBS	**Maitube**	**2.62**	**236**	*e*P	**Pb**	**16 36 11.0**	**-0.8**
	57nm,0.4s							
MTBS				*e*S	**Sb**	**16 36 44.9**	**+0.6**
	923nm,0.5s							
MTBS	**Maitube**	**2.62**	**236**	Pg	**Pb**	**16 36 10.7**	**-1.0**
	57nm,0.4s							
MTBS				Lg	Lg	16 36 44.9		
	923nm,0.5s							
MAKZ	**Makanchi**	**2.83**	**39**	⇑Pn	**Pn**	**16 36 10.6**	**+0.4**
	2.3nm,0.2s							
MAKZ				⇓Pg	**Pb**	**16 36 15.6**	**+0.4**
	7.1nm,0.2s							
MAKZ				⇑Lg	Lg	16 36 50.5		
	47nm,0.2s							
KRBS	**Karabastau**	**2.84**	**252**	*e*P	**Pb**	**16 36 15.4**	**0.0**
	28nm,0.3s							
KRBS				*e*S	**Sb**	**16 36 51.9**	**+1.4**
	110nm,0.2s							
KRBS	**Karabastau**	**2.84**	**252**	Pg	**Pb**	**16 36 15.4**	**0.0**
	28nm,0.3s							
KRBS				Lg	Lg	16 36 51.9		
	110nm,0.2s							
KST	**Kastek**	**2.95**	**238**	*e*P	**Pb**	**16 36 17.4**	**-0.1**
	32nm,0.3s							
KST				*e*S	**Sb**	**16 36 55.2**	**+1.4**
	155nm,0.5s							
KST	**Kastek**	**2.95**	**238**	Pg	**Pb**	**16 36 14.7**	**-2.7**
	72nm,0.3s							
KST				Lg	Lg	16 36 55.2		
	155nm,0.5s							
MK31	**Makanchi Array**	**2.96**	**42**	Pn	**Pn**	**16 36 12.1**	**+0.1**
	0.7nm,0.2s,baz=213,slow=15,SNR=380							
MK31				⇑Pg	**Pb**	**16 36 18.1**	**+0.5**
	2.8nm,0.2s,baz=217,slow=16,SNR=18							
MK31				⇑Sn	**Sn**	**16 36 47.6**	**-0.4**
	13nm,0.3s,baz=216,slow=25,SNR=7.1							
MK31				⇑Lg	Lg	16 36 54.0		
	9.4nm,0.2s,baz=219,slow=28,SNR=10							
DGS	**Degeres**	**2.96**	**243**	*e*P	**Pb**	**16 36 17.4**	**-0.3**
	36nm,0.5s							
DGS				*e*S	**Sb**	**16 36 55.6**	**+1.4**
	195nm,0.4s							
DGS	**Degeres**	**2.96**	**243**	Pg	**Pb**	**16 36 17.4**	**-0.3**
	36nm,0.5s							
DGS				Lg	Lg	16 36 55.6		
	195nm,0.4s							
TKM2	**Tokmak 2**	**3.24**	**239**	⇑Pn	**Pn**	**16 36 17.8**	**+1.8**
	7.7nm,0.4s							
TKM2				⇑Pg	**Pg**	**16 36 24.5**	**-1.9**
	29nm,0.2s							
TKM2				⇓Lg	Lg	16 37 06.2		
	57nm,0.2s							
SGDS	**Sogindy**	**3.63**	**253**	*e*P	**Pb**	**16 36 30.3**	**+1.3**
	30nm,0.4s							
SGDS				*e*S	**Sg**	**16 37 17.2**	**-3.8**
	37nm,0.7s							
SGDS	**Sogindy**	**3.63**	**253**	Pg	**Pb**	**16 36 30.3**	**+1.3**
	30nm,0.4s							
SGDS				Lg	Lg	16 37 17.2		
	37nm,0.7s							
CHMS	**Chumysh**	**3.74**	**246**	⇓Pn	**Pn**	**16 36 23.0**	**+0.3**
	3.6nm,0.2s							
CHMS				⇑Pg	**Pb**	**16 36 32.2**	**+1.4**
	61nm,0.8s							
CHMS				⇓Lg	Lg	16 37 21.0		
	29nm,0.4s							
BTLS	**Baital**	**3.83**	**278**	*e*P	**Pb**	**16 36 34.3**	**+2.0**
	24nm,0.5s							
BTLS				*e*S	**Sg**	**16 37 24.3**	**-2.8**
	42nm,0.4s							
ZSN	**Zaisan**	**4.74**	**52**	*e*P	**Pb**	**16 36 45.0**	**-2.8**
	6.0nm,0.2s							
ZSN				*e*S	**Sb**	**16 37 44.6**	**-0.5**
KURBB	**Kurchatov Arra**	**6.02**	**355**	⇑Pn	**Pn**	**16 36 52.7**	**-1.3**
	1.9nm,0.8s							
KURBB				⇑Pg	**Pb**	**16 37 11.9**	**+2.3**
	3.8nm,0.5s							
KURBB				⇑Lg	Lg	16 38 36.1		
	59nm,0.8s							
OTUK	**Ortayu**	**6.06**	**309**	⇑Pn	**Pn**	**16 36 54.9**	**+0.2**
	1.2nm,0.3s							
OTUK				⇑Lg	Lg	16 38 35.2		
	51nm,0.7s							
KURK	**Kurchatov**	**6.10**	**355**	⇑Pn	**Pn**	**16 36 55.1**	**0.0**
	1.1nm,0.5s							
KURK				⇓Pg	**Pb**	**16 37 15.0**	**+4.0**
	7.5nm,0.7s							
KURK				⇓Lg	Lg	16 38 36.3		
	9.6nm,0.4s							
KK31	**Karatay Array**	**6.60**	**260**	⇑Lg	Lg	16 38 55.1		
	14nm,0.7s,baz=73,slow=29,SNR=5.6							

IDC 08 16:38:38.9±2.9, 5°36S×151°93E, h127^{km}±20^{km}, mb2.8/2, mbtmp3.3/3, Error ellipse: s-maj=102.9km s-min=17.6km az=125.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.05**	**5**	P	Pn	16 39 02.9	+0.7
	243nm,0.7s,baz=104,slow=12,SNR=64						
KRVT				S	Sn	16 39 19.8	0.0
	52nm,0.3s,baz=310,slow=24,SNR=7.5						
PMG	**Port Moresby**	**6.21**	**229**	P	Pn	16 40 08.5	+0.2
	11nm,0.8s,baz=79,slow=10,SNR=2.4						
PMG				S	Sn	16 41 18.8	+0.7
	9.5nm,0.5s,baz=111,slow=20,SNR=2.2						
WRA	**Warramunga Arr**	**22.43**	**228**	P	P	16 43 26.7	-0.7
	0.2nm,0.3s,baz=54,slow=9.9,SNR=8.4						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**25.16**	**222**	P	P	16 43 52.9	+0.3
	0.2nm,0.5s,baz=60,slow=9.1,SNR=11						
	0.2nm,0.5s						
TORD	**Torodi Ar. Bea**	**149.65**	**287**	PKPbc	PKPbc	16 58 14.1	-0.6
	1.6nm,1.3s,baz=74,slow=1.8,SNR=2.1						

*IDC **08** 16:39:15.3±1.5, 39°.33N×143°.88E, h0^{km}, mb3.5/6, mbtmp3.6/10, ML3.1/4, MS3.1/1, Error ellipse: s-maj=33.4km s-min=19.8km az=91.0*

*JMA **08** 16:39:17.3±0.2, 39°.5N±0°.6×143°.8E±0°.8, h36^{km}, MV3.7/31, FAR E OFF SANRIKU*

*NIED **08** 16:39:17.3, 39°.46N×143°.81E, h36^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}3.00; $M_{\theta\theta}$0.56; $M_{\phi\phi}$-3.56; $M_{r\theta}$0.27; $M_{\theta\phi}$-0.61; $M_{\phi r}$0.67; Fault plane solution: $M_0$3.41000×10^{14} NP1: ϕ_s184.00000°, δ39.00000°, λ84.00000°. NP2:ψ_s12.00000°, δ51.00000°, λ95.00000°.*

ISC 08 16:39:17.0±1.1, 39°.41N±0°.05×143°.74E±0°.10, h11^{km}, n31, σ2^{s}09/36, mb3.5/6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**1.49**	**277**	*i* P	**Pn**	**16 39 43.4**	**-0.3**
MIYJ				*e*S	**Sn**	**16 40 02.5**	**-0.8**
JTH	**Tanohata**	**1.54**	**291**	P	**Pn**	**16 39 43.8**	**-0.6**
JTH				*e*S	**Sn**	**16 40 03.1**	**-1.3**
OFUJ	**Ofunato**	**1.64**	**259**	*i* P	**Pn**	**16 39 45.5**	**-0.2**
OFUJ				*e*S	**Sn**	**16 40 06.6**	**-0.2**
JOM	**Ohasama**	**1.89**	**273**	*i* P	**Pn**	**16 39 49.5**	**+0.3**
JANG	**Nango**	**1.96**	**300**	P	**Pn**	**16 39 49.5**	**-0.7**
JMK	**Ichinoseki**	**2.01**	**258**	*i* P	**Pn**	**16 39 51.0**	**+0.2**
JYK	**Kaneyama**	**2.67**	**261**	P	**Pn**	**16 40 00.7**	**+0.7**
JYK				*e*S	**Sn**	**16 40 32.7**	**+0.4**
JOT	**Ohata**	**2.85**	**315**	P	**Pn**	**16 40 02.2**	**-0.2**
JNBK	**Urakawa-nobuka**	**2.97**	**346**	P	**Pn**	**16 40 04.2**	**+0.2**
JNBK				*e*S	**Sn**	**16 40 38.9**	**-0.6**
JCH	**Churui**	**3.22**	**355**	*e*P	**Pn**	**16 40 06.7**	**-0.7**
JCH				*e*S	**Sn**	**16 40 43.0**	**-2.8**
JFT	**Otama**	**3.27**	**236**	*e*P	**Pn**	**16 40 08.4**	**+0.3**
JFT				*e*S	**Sn**	**16 40 46.2**	**-0.8**
JAK	**Akkeshi**	**3.66**	**11**	P	**Pn**	**16 40 12.4**	**-1.1**
JAK				*e*S	**Sn**	**16 40 53.1**	**-3.5**
JEW	**Eniwo**	**3.84**	**334**	*e*S	**Sn**	**16 40 59.2**	**-1.9**
JAR	**Ashorobuto**	**3.89**	**0**	P	**Pn**	**16 40 15.2**	**-1.5**
JAR				S	**Sn**	**16 40 58.5**	**-3.8**
ASAJ	**Asahikawa**	**4.78**	**350**	Pn	**Pn**	**16 40 29.2**	**+0.3**
	1.1nm,0.3s,baz=193,slow=9.3,SNR=15						
ASAJ				Sn	**Sn**	**16 41 23.9**	**-0.5**
	1.8nm,0.3s,baz=352,slow=28,SNR=6.5						
	2.7nm,0.4s						

MJAR	**Matsushiro Arr**	**5.22**	**239**	Pn	**Pn**	**16 40 35.7**	**+0.7**
	0.3nm,0.3s,baz=58,slow=13,SNR=22							
MJAR				Sn	**Sn**	**16 41 39.4**	**+4.2**
	baz=67,slow=22							
	9.8nm,0.9s							
JHJ	**Hachijo jima 2**	**7.04**	**208**	Pn	**Pn**	**16 40 58.0**	**-2.0**
	3.6nm,0.3s,baz=72,slow=10,SNR=1.6							
JHJ				Sn	**Sn**	**16 42 12.1**	**-7.9**
	4.8nm,0.3s,baz=57,slow=21,SNR=1.3							
	56nm,0.8s							
USRK	**Ussuriysk Ar.**	**9.99**	**302**	Pn	**Pn**	**16 41 43.2**	**+2.8**
	0.3nm,0.3s,baz=100,slow=12,SNR=9.6							
	2.3nm,0.7s							
KLR	**Kul'dur**	**13.03**	**323**	LR	LR	16 47 59.0		
	comp=Z,75nm,18.1s,baz=216,slow=40							
SEY	**Seymchan**	**24.13**	**10**	P	**P**	**16 44 33.9**	**+1.3**
	0.6nm,0.6s,baz=188,slow=7.1,SNR=2.3							
	0.6nm,0.6s							
H11N2	**WAKE ISLAND Hy**	**27.97**	**128**	T	T	17 14 17.4		
	baz=320							
H11N1	**WAKE ISLAND Hy**	**27.98**	**128**	T	T	17 14 22.3		
	baz=320,slow=74							
H11N3	**WAKE ISLAND Hy**	**27.99**	**128**	T	T	17 14 17.4		
	baz=320,slow=74							
SONM	**Songino Array**	**28.09**	**300**	P	**P**	**16 45 09.8**	**+1.2**
	0.4nm,0.4s,baz=101,slow=8.2,SNR=2.4							
	0.4nm,0.4s							
H11S1	**WAKE ISLAND Hy**	**28.79**	**130**	T	T	17 15 27.8		
	baz=321							
H11S3	**WAKE ISLAND Hy**	**28.79**	**130**	T	T	17 15 27.6		
	baz=321							
H11S2	**WAKE ISLAND Hy**	**28.80**	**130**	T	T	17 15 28.2		
	baz=321							
ZALV	**Zalesovo Beam**	**41.72**	**310**	P	**P**	**16 47 06.1**	**+0.5**
	0.7nm,0.4s,baz=87,slow=8.7,SNR=3.7							
	0.7nm,0.4s							
MKAR	**Makanchi Array**	**44.45**	**300**	P	**P**	**16 47 28.2**	**+0.3**
	0.4nm,0.5s,baz=78,slow=7.8,SNR=3.8							
	0.4nm,0.5s							
WRA	**Warramunga Arr**	**59.69**	**190**	P	**P**	**16 49 20.7**	**-0.8**
	0.2nm,0.5s,baz=9.2,slow=7.1,SNR=1.5							
	0.2nm,0.5s							
ASAR	**Alice Springs**	**63.41**	**190**	P	**P**	**16 49 46.9**	**+0.4**
	0.2nm,0.8s,baz=21,slow=8.0,SNR=1.5							
	0.2nm,0.8s							

*MDD **08** 16:45:59.2±0.4, 35°.49N×3°.75W, h0^{km}, mb_Lg2.3/11, Error ellipse: s-maj=3.7km s-min=2.9km az=21.0*

*SFS **08** 16:45:59.0, 35°.49N×3°.74W, ML2.3, ALBORAN SUR*

*CNRM **08** 16:46:00.6, 35°.52N×3°.60W, h21^{km}, ml2.8*

*INMG **08** 16:46:03.6±1.4, 35°.70N×3°.89W, h12^{km}±9^{km}, ML2.0, Error ellipse: s-maj=11.3km s-min=5.0km az=154.0*

ISC 08 16:45:57.6±1.1, 35°.54N±0°.02×3°.73W±0°.03, h18^{km}±9^{km}, n26, σ1^{s}74/46, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.37**	**207**	P	**Pn**	**16 46 09.0**	**+0.9**
PVLZ	**Peæn de**	**0.59**	**232**	P	**Pg**	**16 46 09.7**	**+0.3**
PVLZ				S	**Sg**	**16 46 16.1**	**-1.2**
WMELI	**Melilla**	**0.68**	**109**	P	**Pn**	**16 46 12.5**	**+0.2**
WMELI				S	**Sb**	**16 46 21.3**	**+1.4**
EMEL	**Melilla**	**0.68**	**111**	Pg	**Pn**	**16 46 13.1**	**+0.7**
EMEL				Sg	**Sn**	**16 46 22.7**	**+0.1**
GOG	**Mont Gurugu**	**0.68**	**118**	P	**Pn**	**16 46 12.2**	**-0.3**
GOG				S	**Sb**	**16 46 22.0**	**+1.7**
EALB	**Alboran**	**0.69**	**55**	Pg	**Pn**	**16 46 14.1**	**+1.5**
EALB				Sg	**Sn**	**16 46 24.1**	**+1.2**
EALB				*i* Vmb_Lg		16 46 25.0	
CHAS	**Isla Isabel II**	**1.12**	**108**	P	**Pn**	**16 46 18.7**	**+0.2**
CHAS				S	**Sn**	**16 46 34.1**	**+0.6**
EMIJ	**Mijas**	**1.32**	**321**	Pg	**Pg**	**16 46 23.7**	**+0.6**
EMIJ				Sg	**Sg**	**16 46 41.1**	**+0.7**
EMIJ				*i* Vmb_Lg		16 46 45.8	
ELGU	**Los Guajares,**	**1.32**	**4**	Pg	**Pg**	**16 46 22.7**	**-0.6**
ELGU				Sg	**Sg**	**16 46 40.7**	**+0.1**
ELGU				*i* Vmb_Lg		16 46 46.3	
CEU	**Ceuta**	**1.38**	**285**	P	**Pn**	**16 46 21.3**	**-0.7**
CEU				S	**Sn**	**16 46 35.1**	**-4.7**
CHEFC	**Chefchaouen**	**1.38**	**252**	P	**Pg**	**16 46 26.0**	**+1.7**
EBER	**Berja**	**1.52**	**27**	Pn	**Pb**	**16 46 25.6**	**+0.3**
EBER				Sn	**Sg**	**16 46 46.8**	**+0.2**
EBER				*i* Vmb_Lg		16 46 58.3	
JBK	**JBK**	**1.54**	**141**	P	**Pn**	**16 46 25.0**	**+0.6**
EGOR	**Sierra Gorda,**	**1.59**	**349**	Pn	**Pg**	**16 46 27.7**	**-0.6**
EGOR				Sn	**Sg**	**16 46 50.2**	**+1.1**
EGOR				*i* Vmb_Lg		16 47 02.6	
ENIJ	**Nijar**	**1.89**	**40**	Pn	**Pn**	**16 46 29.1**	**+0.1**
ENIJ				Sn	**Sn**	**16 46 53.4**	**+0.9**
ENIJ				*i* Vmb_Lg		16 46 54.0	
LCRM	**LCR**	**2.07**	**207**	P	**Pg**	**16 46 37.0**	**-0.4**
EQES	**Quesada**	**2.32**	**13**	Pn	**Pb**	**16 46 40.2**	**+1.2**
EQES				Sn	**Sb**	**16 47 07.9**	**+0.5**
EQES				*i* Vmb_Lg		16 47 11.2	
IFR	**Ifrane**	**2.33**	**210**	P	**Pn**	**16 46 36.5**	**+1.2**
IFR				S	**Sn**	**16 47 01.9**	**-1.6**
EADA	**Adamuz**	**2.71**	**346**	Pn	**Pb**	**16 46 43.9**	**-1.7**
EADA				Sn	**Sb**	**16 47 18.2**	**-0.3**
EADA				*i* Vmb_Lg		16 47 28.9	
ECAB	**El Cabril**	**2.87**	**332**	Pn	**Pb**	**16 46 46.5**	**-1.8**
ECAB				Sn	**Sb**	**16 47 21.2**	**-1.9**
ECAB				*i* Vmb_Lg		16 47 40.9	
EMIN	**Mina Concepcio**	**3.24**	**314**	Pn	**Pn**	**16 46 49.8**	**+2.1**
EMIN				*i* Vmb_Lg		16 47 34.2	
ETOB	**Tobarra**	**3.56**	**29**	Pn	**Pb**	**16 46 56.8**	**-3.2**
ETOB				Sn	**Sb**	**16 47 38.1**	**-4.8**
ETOB				*i* Vmb_Lg		16 47 40.5	
PVAQ	**Vaqueiros**	**3.71**	**301**	*e*Pn	**Pn**	**16 46 56.8**	**+2.7**
PVAQ				*e*Sn	**Sn**	**16 47 37.6**	**+0.3**
PVAQ				A	A	16 47 39.4	
	2.7nm,0.4s						
PBAR	**Barrancos**	**3.73**	**316**	*e*Sn	**Sn**	**16 47 38.4**	**+0.5**
PBDV	**Barranco-do-Ve**	**3.79**	**298**	*e*Pn	**Pn**	**16 46 58.8**	**+3.6**
PBDV				*e*Sn	**Sn**	**16 47 39.3**	**0.0**
PBDV				A	A	16 47 42.1	
	2.9nm,0.7s						
PNCL	**Nicolau / Gran**	**4.62**	**305**	*e*Pn	**Pn**	**16 47 09.6**	**+3.0**
PNCL				*e*Sn	**Sn**	**16 48 01.1**	**+1.3**
PNCL				A	A	16 48 04.6	
	1.8nm,0.3s						

*TUL **08** 16:50:41.7±1.4, 36°.44N±0°.02×96°.89W±0°.03, h7^{km}±7^{km}, ML3.9, mb_Lg3.7/112(NEIC), Error ellipse: s-maj=3.2km s-min=2.2km az=65.0*

*ANF **08** 16:50:42.1±0.2, 36°.44N×96°.92W, h7^{km}, ML4.3/18, Error ellipse: s-maj=2.7km s-min=2.0km az=135.0*

*NEIC **08** 16:50:42.6±1.0, 36°.43N±0°.02×96°.91W±0°.03, h5^{km}±7^{km}, Error ellipse: s-maj=3.6km s-min=2.2km az=76.0*

*IDC **08** 16:50:42.5±1.0, 36°.55N×96°.88W, h0^{km}, mb3.3/1, mbtmp3.5/5, ML3.4/4, MS2.4/1, Error ellipse: s-maj=13.1km s-min=10.8km az=166.0*

ISC 08 16:50:42.1±1.2, 36°.45N±0°.02×96°.90W±0°.03, h5^{km}±9^{km}, n161, σ1^{s}12/158, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T35A	**Sooner Cattle**	**0.56**	**34**	Pg	**Pg**	**16 50 52.7**	**-0.2**
T35B	**Sooner Cattle**	**0.56**	**34**	P	**Pg**	**16 50 52.8**	**-0.2**
	baz=213,SNR=293						
T35B				S	**Sg**	**16 51 00.4**	**+0.1**
	baz=213						
OK005	**Luther M Schoo**	**0.82**	**197**		**Pg**	**16 50 57.1**	**-0.8**
OK009	**Oakdale Elemen**	**0.96**	**206**	Pg	**Pg**	**16 50 59.8**	**-0.7**
TUL1	**Leonard**	**1.05**	**120**	Pg	**Pg**	**16 51 01.3**	**-0.8**
TUL1	**Leonard**	**1.05**	**120**	P	**Pg**	**16 51 01.4**	**-0.8**
	baz=301,SNR=128						
TUL1	**Leonard**	**1.05**	**120**	P	**Pg**	**16 51 01.4**	**-0.8**
	baz=301,SNR=284						
TUL1				S	**Sg**	**16 51 15.5**	**-0.3**
	baz=301						
OKCFA	**Oklahoma City**	**1.12**	**204**		**Pg**	**16 51 02.3**	**-1.3**
OKCFA	**Oklahoma City**	**1.12**	**204**	P	**Pg**	**16 51 02.4**	**-1.2**
	baz=24,SNR=27						
OKCFA				S	**Sg**	**16 51 18.0**	**-0.2**
	baz=24						
OKCSW	**OKLAHOMA CITY**	**1.13**	**203**	Pg	**Pg**	**16 51 02.3**	**-1.4**
FNO	**Franklin**	**1.25**	**199**		**Pn**	**16 51 04.4**	**-1.9**
U32A	**Winter Ranch,**	**1.69**	**268**	Pn	**Pn**	**16 51 12.3**	**-0.1**
U32A	**Winter Ranch,**	**1.69**	**268**	P	**Pn**	**16 51 12.5**	**+0.1**
	baz=87,SNR=41						
U32A				Sb	**Sb**	**16 51 35.8**	**+0.4**

	baz=87							
X34A	**Smith Ranch, M**	**1.99**	**203**	Pn	**Pn**	**16 51 17.2**	**+0.7**
U38A	**Gravette**	**2.03**	**89**	IAmb_Lg		16 51 48.6	
	comp=Z,560nm,1.1s						
U38A	**Gravette**	**2.03**	**89**	P	**Pn**	**16 51 17.7**	**+0.8**
	baz=271,SNR=32						
X37A	**Clayton**	**2.23**	**146**	P	**Pn**	**16 51 19.4**	**-0.4**
	baz=327,SNR=42						
X37A				S	**Sn**	**16 51 48.4**	**+0.7**
	baz=327						
WMOK	**Wichita Mounta**	**2.29**	**222**	Pn	**Pn**	**16 51 20.5**	**0.0**
WMOK	**Wichita Mounta**	**2.29**	**222**	P	**Pn**	**16 51 20.7**	**+0.1**
	baz=42,SNR=97						
WMOK				S	**Sn**	**16 51 51.0**	**+1.8**
	baz=42						
WMOK	**Wichita Mounta**	**2.29**	**222**	P	**Pn**	**16 51 20.7**	**+0.1**
	baz=42						
WMOK				S	**Sn**	**16 51 50.7**	**+1.5**
	baz=42						
HHAR	**Hobbs**	**2.40**	**93**	Pn	**Pn**	**16 51 22.2**	**+0.2**
HHAR				IAmb_Lg		16 51 57.9	
	comp=Z,388nm,0.9s						
HHAR	**Hobbs**	**2.40**	**93**	P	**Pn**	**16 51 22.7**	**+0.7**
	baz=275						
R32A	**Long Quarter,**	**2.44**	**324**	S	**Sn**	**16 51 53.9**	**+1.0**
	baz=143						
KSU1	**Kansas State U**	**2.66**	**5**	Pn	**Pn**	**16 51 25.9**	**+0.3**
KSU1				IAmb_Lg		16 52 07.0	
	comp=Z,173nm,1.0s						
KSU1	**Kansas State U**	**2.66**	**5**	P	**Pn**	**16 51 26.2**	**+0.6**
	baz=185,SNR=28						
KSU1				Sb	**Sb**	**16 52 03.8**	**+0.6**
	baz=185						
W39A	**Magazine**	**2.83**	**115**	Pn	**Pn**	**16 51 27.7**	**-0.2**
W39A	**Magazine**	**2.83**	**115**	P	**Pn**	**16 51 27.7**	**-0.2**
	baz=297,SNR=17						
W39A	**Magazine**	**2.83**	**115**	P	**Pn**	**16 51 27.5**	**-0.4**
	baz=297,SNR=95						
W39A				S	**Sn**	**16 52 03.3**	**+1.0**
	baz=297						
S39A	**Bolivar**	**3.12**	**65**	Pn	**Pn**	**16 51 32.2**	**+0.2**
S39A				IAmb_Lg		16 52 27.2	
	comp=Z,271nm,0.8s						
S39A	**Bolivar**	**3.12**	**65**	P	**Pn**	**16 51 32.2**	**+0.2**
	baz=247,SNR=27						
Z35A	**Perchaven, San**	**3.12**	**185**	Pn	**Pn**	**16 51 32.1**	**+0.1**
Z35A	**Perchaven, San**	**3.12**	**185**	P	**Pn**	**16 51 32.1**	**+0.1**
	baz=5.4,SNR=14						
CBKS	**Cedar Bluff**	**3.26**	**317**	Pn	**Pn**	**16 51 32.2**	**-1.7**
CBKS	**Cedar Bluff**	**3.26**	**317**	P	**Pn**	**16 51 32.6**	**-1.3**
	baz=136,SNR=10						
CBKS				Sb	**Sb**	**16 52 22.5**	**+1.9**
	baz=136						
U40A	**Yellville**	**3.27**	**90**	Pn	**Pn**	**16 51 34.6**	**+0.6**
U40A				IAmb_Lg		16 52 32.5	
	comp=Z,176nm,0.8s						
U40A	**Yellville**	**3.27**	**90**	P	**Pn**	**16 51 34.2**	**+0.2**
	baz=273,SNR=49						
U40A				P	**Pn**	**16 51 34.2**	**+0.2**
	baz=273,SNR=49						
U40A	**Yellville**	**3.27**	**90**	P	**Pn**	**16 51 33.8**	**-0.2**
	baz=273,SNR=49						
U40A				S	**Sn**	**16 52 13.6**	**+0.4**
	baz=273						
MIAR	**Mount Ida**	**3.31**	**124**	Pn	**Pn**	**16 51 33.1**	**-1.5**
MIAR				IAmb_Lg		16 52 29.4	
	comp=Z,155nm,0.8s						
MIAR	**Mount Ida**	**3.31**	**124**	P	**Pn**	**16 51 34.3**	**-0.2**
	baz=306,SNR=13						
MIAR				S	**Sn**	**16 52 14.7**	**+0.5**
	baz=306						
Z38A	**Mt. Pleasant**	**3.55**	**153**	Pn	**Pn**	**16 51 38.1**	**+0.3**
Z38A				IAmb_Lg		16 52 42.6	
	comp=Z,288nm,0.7s						
MGMO	**Mountain Grove**	**3.79**	**78**		**Pn**	**16 51 41.5**	**+0.4**
X40A	**Basin Creek Fa**	**3.85**	**119**	Pn	**Pn**	**16 51 42.5**	**+0.5**
X40A				IAmb_Lg		16 52 48.2	
	comp=Z,248nm,0.7s						
X40A	**Basin Creek Fa**	**3.85**	**119**	P	**Pn**	**16 51 42.5**	**+0.5**
	baz=302,SNR=17						
X40A				P	**Pn**	**16 51 42.5**	**+0.5**
	baz=302,SNR=17						
X40A	**Basin Creek Fa**	**3.85**	**119**	P	**Pn**	**16 51 41.7**	**-0.3**
	baz=302,SNR=16						
X40A				S	**Sn**	**16 52 28.2**	**+0.6**
	baz=302						
FCAR	**Ozark Folk Cen**	**3.91**	**97**	Pn	**Pn**	**16 51 42.2**	**-0.6**
FCAR				IAmb_Lg		16 52 50.0	
	comp=Z,128nm,0.9s						
WHAR	**Wooly Hollow**	**3.92**	**106**	Pn	**Pn**	**16 51 43.2**	**+0.2**
WHAR				IAmb_Lg		16 52 48.0	
	comp=Z,247nm,1.1s						
W41B	**Gary Mavity, V**	**3.99**	**107**	Pn	**Pn**	**16 51 43.0**	**-0.8**
W41B				IAmb_Lg		16 52 49.9	
	comp=Z,234nm,0.8s						
W41B	**Gary Mavity, V**	**3.99**	**107**	P	**Pn**	**16 51 43.6**	**-0.3**
	baz=290,SNR=25						
W41B				S	**Sn**	**16 52 31.1**	**+0.1**
	baz=290						
W41B	**Gary Mavity, V**	**3.99**	**107**	P	**Pn**	**16 51 43.6**	**-0.3**
	baz=290,SNR=6.8						
W41B				S	**Sn**	**16 52 30.7**	**-0.3**
	baz=290						
UALR	**University of**	**4.07**	**113**	Pn	**Pn**	**16 51 45.5**	**+0.5**
UALR				IAmb_Lg		16 52 54.5	
	comp=Z,178nm,0.7s						
R40A	**Maddies Statio

comp=Z,182nm,0.8s
N38A Joes South For 5.20 32 Pn Pn 16 52 01.6 +1.1
KSCO Kaye Shedlock' 5.21 301 IAmb_Lg 16 53 38.0
comp=Z,88nm,0.7s
KSCO Kaye Shedlock' 5.21 301 P Pn 16 51 59.8 -1.0
baz=118
PBMO Poplar Bluff 5.22 84 Pn Pn 16 52 00.5 -0.3
PBMO IAmb_Lg 16 53 34.6
comp=Z,157nm,0.8s
FVM French Village 5.39 72 IAmb_Lg 16 53 37.0
comp=Z,132nm,0.7s
MSTX Muleshoe 5.40 244 Pn Pn 16 52 03.8 +0.4
MSTX Muleshoe 5.40 244 P Pn 16 52 02.9 -0.5
baz=61,SNR=14
L34A Svendsen Farm, 5.53 4 IAmb_Lg 16 53 42.8
comp=Z,184nm,0.7s
435B Jarrell 5.68 186 IAmb_Lg 16 53 51.5
comp=Z,114nm,0.9s
435B Jarrell 5.68 186 P Pn 16 52 06.5 -0.6
baz=5.7
PEBM Pemiscott Bayo 5.70 91 IAmb_Lg 16 53 39.3
comp=Z,113nm,0.8s
143A Socs Landing, 5.88 128 IAmb_Lg 16 53 59.0
comp=Z,119nm,0.8s
OGNE Ogallala 6.02 320 Pn Pn 16 52 11.3 -0.6
OGNE IAmb_Lg 16 53 58.2
comp=Z,125nm,0.8s
OGNE Ogallala 6.02 320 P Pn 16 52 11.0 -0.9
baz=137
OGNE S Sn 16 53 17.9 -3.3
baz=137
T25A Trinidad 6.07 279 Pn Pn 16 52 12.2 -0.5
T25A IAmb_Lg 16 54 03.9
comp=Z,122nm,0.8s
T25A Trinidad 6.07 279 P Pn 16 52 11.8 -0.8
baz=94
HALT Halls 6.14 93 IAmb_Lg 16 54 09.0
comp=Z,165nm,1.0s
GLAT Glass 6.15 89 IAmb_Lg 16 54 08.7
comp=Z,150nm,0.8s
SCIA State Center 6.16 27 IAmb_Lg 16 54 05.8
comp=Z,185nm,0.7s
SCIA State Center 6.16 27 P Pn 16 52 13.3 -0.4
baz=209
SCIA S Sn 16 53 21.8 -2.7
baz=209
S44A Carbondale 6.24 76 Pn Pn 16 52 13.7 -1.1
K31A O'Neill 6.33 348 IAmb_Lg 16 54 08.7
comp=Z,145nm,0.7s
N41A Harden Midland 6.37 46 Pn Pn 16 52 17.1 +0.6
W45A Hickory Valley 6.40 99 IAmb_Lg 16 54 16.2
comp=Z,144nm,0.7s
OXF Oxford 6.41 105 Pn Pn 16 52 15.3 -1.8
OXF IAmb_Lg 16 54 19.1
comp=Z,112nm,0.8s
OXF Oxford 6.41 105 P Pn 16 52 17.4 +0.2
baz=290,SNR=14
OXF Oxford 6.41 105 P Pn 16 52 16.2 -1.0
baz=290
JCT Junction City 6.42 203 Pn Pn 16 52 16.4 -1.0
JCT IAmb_Lg 16 54 06.4
comp=Z,128nm,0.9s
JCT Junction City 6.42 203 P Pn 16 52 16.2 -1.2
baz=21
Y45A Yeager Farm, C 6.55 111 IAmb_Lg 16 54 23.1
comp=Z,92nm,0.7s
VBMS Vicksburg 6.76 127 IAmb_Lg 16 54 24.9
comp=Z,66nm,1.0s
K38A Parkersburg 6.97 26 IAmb_Lg 16 54 35.1
comp=Z,137nm,1.0s
SDCO Great Sand Dun 6.99 283 Pn Pn 16 52 25.7 +0.3
SDCO Great Sand Dun 6.99 283 P Pn 16 52 25.2 -0.3
baz=98
Q24A Divide 7.00 293 IAmb_Lg 16 54 27.4
comp=Z,61nm,0.8s
L40A Anamosa 7.13 36 Pn Pn 16 52 26.4 -0.6
L40A IAmb_Lg 16 54 36.1
comp=Z,109nm,0.8s
HDIL Hopedale 7.24 53 P Pn 16 52 27.6 -0.9
baz=238
ECSD EROS Data Cent 7.28 2 Pn Pn 16 52 27.9 -1.2
ECSD EROS Data Cent 7.28 2 P Pn 16 52 28.6 -0.5
baz=182,SNR=15
ECSD EROS Data Cent 7.28 2 P Pn 16 52 28.2 -0.9
baz=182
PLAL Pickwick Lake 7.33 99 Pn Pn 16 52 27.9 -1.8
WVT Waverly 7.33 90 Pn Pn 16 52 28.4 -1.4
146A Union 7.50 118 IAmb_Lg 16 54 57.8
comp=Z,57nm,0.9s
735A Kenedy 7.61 186 Pn Pn 16 52 33.8 +0.2
ISCO Idaho Springs 7.64 299 Pn Pn 16 52 33.7 -0.6
T47A Sharon Grove 7.89 83 Pn Pn 16 52 36.7 -0.7
L42A Oliver, Polo 7.89 43 Pn Pn 16 52 37.7 +0.2
ANMO Albuquerque 7.92 262 Pg Pb 16 53 06.1 +6.2
comp=Z,1.3nm,0.3s,baz=83,slow=18,SNR=12
ANMO Lg Lg 16 54 45.5
comp=Z,0.8nm,0.3s,baz=37,slow=13,SNR=3.6
I37A Lemond, Waseca 8.02 18 IAmb_Lg 16 55 09.5
comp=Z,59nm,0.8s
S22A 4UR Ranch, Cre 8.04 282 Pn Pn 16 52 40.6 +0.8
SUSD Miller 8.14 350 IAmb_Lg 16 55 17.3
comp=Z,58nm,0.8s
JFWS Jewell Farm 8.25 36 Pn Pn 16 52 40.6 -1.7
JFWS IAmb_Lg 16 55 17.6
comp=Z,97nm,0.8s
JFWS Jewell Farm 8.25 36 P Pn 16 52 40.6 -1.7
baz=220
PHWY Pilot Hill 8.25 309 Pn Pn 16 52 41.0 -1.6
PHWY IAmb_Lg 16 55 13.0
comp=Z,51nm,0.8s
N23A Red Feather La 8.35 305 Pn Pn 16 52 44.3 +0.3
N23A IAmb_Lg 16 55 17.2
comp=Z,96nm,0.8s
833A Chaparral WMA, 8.37 195 Pn Pn 16 52 44.4 +0.4
833A Chaparral WMA, 8.37 195 P Pn 16 52 44.3 +0.2
baz=14
MNTX Cornudas Mount 8.48 238 Pn Pn 16 52 45.1 -0.5
MNTX Cornudas Mount 8.48 238 P Pn 16 52 46.0 +0.4
baz=54
M44A Midewin, Midew 8.48 52 IAmb_Lg 16 55 12.0
comp=Z,82nm,0.7s
I40A Norwalk 8.85 31 Pn Pn 16 52 48.9 -1.8
I40A IAmb_Lg 16 55 31.5
comp=Z,50nm,0.8s
U49A Red Boiling Sp 8.96 86 Pn Pn 16 52 51.3 -0.8
TX31 Lajitas Ar. Si 9.09 221 Pn Pn 16 52 53.3 -0.8
TX32 Lajitas Array 9.09 221 Pn Pn 16 52 54.2 +0.2
TXAR Lajitas Array 9.09 221 Pn Pn 16 52 54.9 +0.9
comp=Z,0.3nm,0.3s,baz=48,slow=12,SNR=7.1
TXAR Lg Lg 16 55 22.7
comp=Z,2.0nm,0.3s,baz=42,slow=17,SNR=10
comp=Z,0.4nm,0.4s
TXAR Lajitas Array 9.09 221 Pn Pn 16 52 53.6 -0.4
F33A 5 Mile Ranch, 9.40 3 Pn Pn 16 52 56.2 -1.9
RSSD Black Hills 9.40 327 Pn Pn 16 52 59.0 +0.6
RSSD IAmb_Lg 16 55 44.5
comp=Z,97nm,1.2s
I42A Draeger Farm, 9.62 37 Pn Pn 16 53 00.2 -1.0
I42A IAmb_Lg 16 55 47.9
comp=Z,89nm,1.2s
K22A Casper 9.67 313 IAmb_Lg 16 56 10.1
comp=Z,78nm,1.1s
T50A Nancy 9.70 83 Pn Pn 16 53 01.5 -0.9
F36A Milaca 9.74 14 Pn Pn 16 53 00.4 -2.4
CPCT Cooper Cave 10.09 92 Pn Pn 16 53 05.9 -1.7
V51A Loudon 10.18 90 Pn Pn 16 53 09.4 +0.6
TKL Tuckaleechee C 10.66 90 Pn Pn 16 53 15.5 +0.1
comp=Z,0.3nm,0.3s,baz=262,slow=15,SNR=1.7
TKL Sn Sn 16 55 14.6 -0.5
comp=Z,0.7nm,0.3s,baz=236,slow=8.6,SNR=2.0
TKL Lg Lg 16 56 11.9
comp=Z,1.3nm,0.3s,baz=354,slow=22,SNR=3.3
TKL LR LR 16 56 50.5
comp=Z,20nm,21.3s,baz=324,slow=35
comp=Z,0.9nm,0.3s
TKL Tuckaleechee C 10.66 90 Pn 16 53 14.6 -0.9
TZTN Tazewell 10.75 86 Pn Pn 16 53 15.4 -1.3
COWI Conover 11.27 29 Pn Pn 16 53 22.3 -1.4
PDAR Pinedale Array 11.62 307 Pn Pn 16 53 30.7 +1.9
comp=Z,0.1nm,0.3s,baz=118,slow=14,SNR=2.0
PDAR Lg Lg 16 56 42.9
comp=Z,0.7nm,0.3s,baz=107,slow=30,SNR=3.7
comp=Z,0.3nm,0.4s
B35A Bob, Littlefor 12.13 10 Pn Pn 16 53 32.9 -2.6
EYMN Ely 12.17 17 Pn Pn 16 53 35.5 -0.5
E43A Lone Tree Farm 12.39 34 Pn Pn 16 53 37.2 -1.8

R55A Marlinton 13.48 77 Pn Pn 16 53 55.7 +1.7
ULM Lac du Bonnet 13.82 3 Pn Pn 16 53 52.5 -6.0
comp=Z,0.4nm,0.3s,baz=181,slow=12,SNR=2.3
ULM Sn Sn 16 56 19.0 -13
comp=Z,0.3nm,0.3s,baz=119,slow=14,SNR=1.9
ULM Lg Lg 16 57 47.0
comp=Z,0.3nm,0.3s,baz=68,slow=19,SNR=2.0
comp=Z,1.6nm,0.4s
SADO Sadowa 15.82 53 Lg Lg 16 58 51.5
comp=Z,0.5nm,0.3s,baz=340,slow=12,SNR=2.7
ILAR Eielson Array 40.83 330 P P **16 58 24.9 +0.6**
comp=Z,0.3nm,0.6s,baz=106,slow=9.5,SNR=2.3
comp=Z,0.3nm,0.6s

MAN 08 16:52:49.1, 8°.31N×123°.22E, h28km, mb4.1, ML2.9, MS2.6, Mindanao

*DDA **08** 17:01:27.6±0.0, 34°.49N×37°.88E, h3km±4km, ML2.7*
*GRAL **08** 17:01:29.9±0.3, 34°.64N×38°.15E, h33km±999km, MD3.5*
ISC 08 17:01:27.8±2.4, 34°.49N±0°.08×37°.9E±0°.1, h6km±15km, n11, σ0s85/17, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HWQ	**Hawqa**	**1.61**	**263**	*e*P	**Pg**	**17 01 58.8**	**0.0**
HWQ				*e*S	**Sg**	**17 02 20.1**	**+0.4**
BHL	**Bhannes**	**1.94**	**253**	*e*P	**Pb**	**17 02 03.2**	**-0.2**
DQRL	**Deir Qamar**	**2.07**	**249**	*e*P	**Pb**	**17 02 05.5**	**-0.3**
SHBL	**Chebaa**	**2.11**	**238**	*e*P	**Pb**	**17 02 05.9**	**-0.5**
KUZU	**Kuzuini**	**2.38**	**344**	P	**Pn**	**17 02 08.2**	**+0.9**
KUZU				S	**Sn**	**17 02 37.5**	**+0.7**
KUZU				*i* AML	AML	17 02 46.0	
	comp=E,89nm,0.4s						
KUZU				*i* AML	AML	17 02 51.0	
	comp=N,74nm,0.4s						
SURC	**SANLIURFA_SURC**	**2.46**	**14**	P	**Pn**	**17 02 08.5**	**0.0**
SURC				S	**Sn**	**17 02 39.2**	**+0.3**
SURC				*i* AML	AML	17 02 50.0	
	comp=N,36nm,0.7s						
SURC				*i* AML	AML	17 02 55.0	
	comp=E,39nm,0.6s						
KAMA	**Osmaniye**	**2.87**	**340**	P	**Pn**	**17 02 14.3**	**+0.2**
KAMA				S	**Sn**	**17 02 47.2**	**-1.8**
GZT	**Gaziantep**	**2.88**	**355**	P	**Pb**	**17 02 19.5**	**0.0**
GZT				S	**Sb**	**17 02 55.7**	**+0.7**
HCB	**Kahramanmara**	**2.96**	**345**	P	**Pn**	**17 02 14.5**	**-0.8**
YURE	**YUREGIR**	**2.97**	**323**	P	**Pg**	**17 02 24.2**	**-0.4**
YURE				S	**Sb**	**17 02 56.8**	**-0.7**
KERG	**Konya-Eregli**	**4.22**	**315**	P	**Pn**	**17 02 34.2**	**+1.4**
KERG				*i* AML	AML	17 03 54.0	
	comp=N,21nm,0.8s						

MAN 08 17:06:18.6, 10°.01N×122°.94E, h26km, mb3.8, ML2.5, MS2.0, 3C, Panay

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNOP	**Candoni, Negro**	**0.34**	**238**	*e*P	Pn	17 06 26.8	+0.8
CNOP				*e*S		17 06 43.5	
GUIM	**Jordan**	**0.70**	**331**	*e*P	Pn	17 06 33.0	+0.8
SNPH	**Sibulan**	**0.73**	**156**	*i*P	Pn	17 06 32.7	+0.2
SNPH				*i* S		17 06 41.8	

*IDC **08** 17:19:49.0±0.7, 36°.81N×144°.62E, h0km, mb3.9/14, mbtmp3.9/19, ML3.8/5, MS2.9/5, Error ellipse: s-maj=20.5km s-min=14.7km az=106.0*
*JMA **08** 17:19:54.2±0.3, 37°.0N±0°.8×14°.4E, h59km, MV4.3/29, FAR E OFF CENTRAL HONSHU*
*NIED **08** 17:19:54.2, 37°.00N×144°.28E, h59km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}=6.88; $M_{\theta\theta}$=1.19; $M_{\phi\phi}$=5.69; $M_{r\theta}$=1.48; $M_{r\phi}$=1.59; $M_{\theta\phi}$=2.03; Fault plane solution: $M_0$7.00000×10^{14} NP1:ϕ_s12.00000°, δ35.00000°, λ-99.00000°. NP2:ϕ_s204.00000°, δ55.00000°, λ-84.00000°.*
*NEIC **08** 17:19:56.0±2.4, 36°.84N±0°.09×144°.3E±0°.1, h38km±6km, mb4.2/10 Error ellipse: s-maj=14.3km s-min=12.3km az=45.0*
ISC 08 17:19:54.1±0.6, 36°.90N±0°.05×144°.40E±0°.07, h26km, n74, σ1s76/69, mb4.0/22, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**2.73**	**302**	*i* P	**Pn**	**17 20 34.8**	**-1.3**
JIKH				*e*S	**Sn**	**17 21 05.3**	**-3.0**
JFK	**Kawauchi**	**2.86**	**281**	P	**Pn**	**17 20 36.9**	**-1.1**
JFK				S	**Sn**	**17 21 08.8**	**-2.8**
JIO	**Ouri**	**2.88**	**304**	*i* P	**Pn**	**17 20 37.1**	**-1.2**
JIO				S	**Sn**	**17 21 08.9**	**-3.1**
ONAJ	**Iwakimizuishiy**	**2.89**	**275**	P	**Pn**	**17 20 37.8**	**-0.7**
ONAJ				*e*S	**Sn**	**17 21 09.7**	**-2.8**
JMST	**Minamisoumatoc**	**2.92**	**288**	*i* P	**Pn**	**17 20 37.6**	**-1.2**
JMST				*e*S	**Sn**	**17 21 10.5**	**-2.6**
JKMT	**Kesennumamotoy**	**3.00**	**310**	P	**Pn**	**17 20 38.4**	**-1.6**
JKMT				*e*S	**Sn**	**17 21 11.4**	**-3.7**
JMM	**Marumori**	**3.03**	**290**		**Pn**	**17 20 39.2**	**-1.2**
JMK	**Ichinoseki**	**3.25**	**310**	*i* P	**Pn**	**17 20 42.0**	**-1.3**
JFT	**Otama**	**3.31**	**282**	P	**Pn**	**17 20 44.0**	**-0.1**
JFT				S	**Sn**	**17 21 21.3**	**-1.3**
JYT	**Yasato**	**3.45**	**260**		**Pn**	**17 20 44.5**	**-1.6**
BSO1	**Boso 1**	**3.57**	**232**	*e*P	**Pn**	**17 20 47.1**	**-0.1**
BSO1				S	**Sn**	**17 21 28.2**	**-0.2**
JRY	**Ryogami san**	**4.52**	**260**	P	**Pn**	**17 21 00.0**	**-0.8**
JRY				*e*S	**Sn**	**17 21 48.3**	**-4.3**
JOD2	**Odawara 2**	**4.60**	**251**	P	**Pn**	**17 21 01.3**	**-0.7**
JOD2				*e*S	**Sn**	**17 21 52.1**	**-2.5**
JTM	**Tenmabayashi**	**4.68**	**327**		**Pn**	**17 21 01.6**	**-1.3**
MJAR	**Matsushiro Arr**	**4.99**	**268**	Pn	**Pn**	**17 21 07.2**	**-0.1**
	1.3nm,0.3s,baz=93,slow=9.3,SNR=64						
MJAR				Sn	**Sn**	**17 22 02.1**	**-2.0**
	0.3nm,0.3s,baz=108,slow=17,SNR=2.1						
	9.1nm,0.4s						
MJAR	**Matsushiro Arr**	**4.99**	**268**		**Pn**	**17 21 06.3**	**-1.0**
MAJO	**Matsushiro**	**4.99**	**268**		**Pn**	**17 21 08.1**	**+0.8**
MJB9	**Matsu-Tunnel**	**4.99**	**268**		**Pn**	**17 21 07.8**	**+0.5**
JSD	**Sado**	**5.02**	**285**		**Pn**	**17 21 07.3**	**-0.3**
JOT	**Ohata**	**5.18**	**331**	P	**Pn**	**17 21 08.2**	**-1.2**
ERM	**Erimo**	**5.20**	**350**		**Pn**	17 21 07.4	-2.8
JHJ2	**Mitsune**	**5.33**	**226**	Pn	**Pn**	**17 21 10.5**	**-1.4**
JHJ2	**Mitsune**	**5.33**	**226**	*e*P	**Pn**	**17 21 10.6**	**-1.4**
JHJ	**Hachijo jima 2**	**5.34**	**227**	Pn	**Pn**	**17 21 10.3**	**-1.9**
	11nm,0.3s,baz=16,slow=23,SNR=26						
JHJ				Sn	**Sn**	**17 22 08.6**	**-4.3**
	31nm,0.3s,baz=45,slow=22,SNR=14						
	30nm,0.3s						
JCH	**Churui**	**5.77**	**352**	P	Pn	17 21 14.7	-3.3
JCH				S	Sn	17 22 16.1	-7.1
JGF	**Kuroka**	**5.84**	**259**		**Pn**	**17 21 20.8**	**+1.8**
INU	**Inuyama**	**6.17**	**258**		**Pn**	**17 21 24.7**	**+1.1**
JEW	**Eniwo**	**6.36**	**340**		Pn	17 21 24.1	-1.9
JOSM	**Okushiri--Mats**	**6.43**	**325**	P	**Pn**	**17 21 26.1**	**-1.0**
NEM2	**Nemuro 2**	**6.54**	**9**	P	Pn	17 21 23.2	-5.3
JTKR	**Abashiri--Toko**	**7.08**	**357**	P	Pn	17 21 32.4	-3.5
JTKR				*e*S	Sn	17 22 47.7	-7.7
JKA	**Kamikawa-asahi**	**7.34**	**350**		Pn	17 21 37.5	-2.1
ASAJ	**Asahikawa**	**7.34**	**350**	Pn	Pn	17 21 37.4	-2.2
	3.2nm,0.3s,baz=218,slow=12,SNR=30						
ASAJ				Sn	Sn	17 22 56.1	-5.9
	1.2nm,0.3s,baz=71,slow=25,SNR=6.5						
ASAJ				LR	LR	17 24 13.2	
	comp=Z,36nm,21.6s,baz=158,slow=35						
	7.0nm,0.3s						
JHS	**Saijyo**	**9.35**	**262**		**Pn**	**17 22 08.2**	**+1.1**
JCJ	**Chichijima**	**9.95**	**192**	Pn	Pn	17 22 11.6	-3.8
	2.5nm,0.3s,baz=355,slow=21,SNR=7.2						
JCJ				Sn	Sn	17 23 53.9	-12
	4.3nm,0.3s,baz=289,slow=22,SNR=6.8						
	14nm,0.6s						
JCJ	**Chichijima**	**9.95**	**192**		**Pn**	**17 22 14.8**	**-0.6**
KSRS	**Korea Array**	**13.16**	**277**	Pn	Pn	**17 23 02.1**	**+2.9**
	0.1nm,0.3s,baz=87,slow=14,SNR=6.0						
KSRS				LR	LR	17 27 51.1	
	comp=Z,23nm,19.5s,baz=70,slow=36						
	1.1nm,0.7s						
KLR	**Kul'dur**	**15.38**	**327**	Pn	**Pn**	**17 23 32.6**	**+3.4**
	0.1nm,0.3s,baz=134,slow=12,SNR=4.8						
KLR				LR	LR	17 29 44.7	
	comp=Z,50nm,18.0s,baz=215,slow=38						
HHC	**Hu-ho-hao-te**	**25.78**	**289**	*e*P	**P**	**17 25 24.1**	**+1.2**
HHC				pmax	pmax		
	comp=Z,12nm,0.6s						
HHC				pmax	pmax		
	comp=Z,230nm,8.7s						
H11N2	**WAKE ISLAND Hy 26.06 125**			T	T	17 52 11.4	
	baz=316,slow=75,SNR=1100						
H11N1	**WAKE ISLAND Hy 26.07 125**			T	T	17 52 13.9	
	baz=316,slow=75,SNR=484						
H11N3	**WAKE ISLAND Hy 26.08 125**			T	T	17 52 12.7	
	baz=316,slow=75,SNR=457						
SEY	**Seymchan 26.52 8**			P	**P**	**17 25 28.9**	**-0.4**
	comp=Z,1.3nm,0.7s,baz=192,slow=9.0,SNR=8.7						
	comp=Z,1.3nm,0.7s						
YAK	**Yakutsk 26.78 345**			LR	LR	17 36 44.5	
	comp=Z,65nm,18.9s,baz=268,slow=38						
YAK	**Yakutsk 26.78 345**			P	**P**	**17 25 31.1**	**-0.5**
H11S1	**WAKE ISLAND Hy 26.82 127**			T	T	17 53 06.0	
	baz=318,slow=76,SNR=152						
H11S3	**WAKE ISLAND Hy 26.82 127**			T	T	17 53 07.9	
	baz=318,slow=76,SNR=152						
H11S2	**WAKE ISLAND Hy 26.83 127**			T	T	17 53 09.9	
	baz=318,slow=76,SNR=142						
TIXI	**Tiksi 35.74 352**			P	**P**	**17 26 49.2**	**-1.1**
	comp=Z,1.2nm,0.3s,baz=272,slow=23,SNR=5.7						
	comp=Z,1.2nm,0.3s						
TIXI	**Tiksi 35.74 352**			IAmb	IAmb	17 27 07.4	
	comp=Z,4.3nm,1.5s						
PZH	**PanZhiHua 37.48 266**			P	**P**	**17 27 08.4**	**+2.7**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,120nm,6.3s						
WMQ	**Urumqi 43.03 298**			*e*P	**P**	**17 27 53.1**	**+1.6**
WMQ				pmax	pmax		
	comp=Z,13nm,0.6s						
ZALV	**Zalesovo Beam 43.77 313**			P	**P**	**17 27 57.6**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=99,slow=9.1,SNR=2.3						
ZALV				PcP	**PP**	**17 29 43.0**	**+3.9**
	comp=Z,1.3nm,0.4s,baz=94,slow=4.0,SNR=5.5						
	comp=Z,0.6nm,0.6s						
CMAR	**Chiang Mai Arr 43.79 258**			P	**P**	**17 27 58.4**	**+0.6**
	comp=Z,0.5nm,0.6s,baz=49,slow=7.7,SNR=6.7						
	comp=Z,0.5nm,0.6s						
KDAK	**Kodiak Island 45.60 42**			LR	LR	17 44 35.2	
	comp=Z,36nm,20.9s,baz=214,slow=33						
CAST	**Castle Rocks 45.99 34**			P	**P**	**17 28 17.1**	**+2.2**
MK31	**Makanchi Array 46.21 303**			P	**P**	**17 28 17.2**	**+0.4**
MK31				IAmb	IAmb	17 28 18.2	
	comp=Z,1.2nm,0.8s						
MKAR	**Makanchi Array 46.21 303**			P	**P**	**17 28 17.5**	**+0.7**
	comp=Z,1.4nm,0.8s,baz=87,slow=9.9,SNR=16						
MKAR				PcP	**PcP**	**17 29 51.3**	**-0.9**
	comp=Z,0.5nm,0.9s,baz=101,slow=2.5,SNR=3.6						
	comp=Z,1.4nm,0.8s						
KURK	**Kurchatov 47.90 309**			P	**P**	**17 28 30.2**	**+0.4**
KURK				IAmb	IAmb	17 28 30.8	
	comp=Z,3.6nm,0.8s						
ILAR	**Eielson Array 48.33 32**			P	**P**	**17 28 32.2**	**-0.8**
	comp=Z,0.6nm,0.8s,baz=273,slow=6.5,SNR=6.8						
	comp=Z,0.6nm,0.8s						
BRVK	**Borovoye 52.48 313**			P	**P**	**17 29 04.8**	**+0.3**
BRVK				IAmb	IAmb	17 29 06.2	
	comp=Z,1.2nm,0.8s						
HYT	**Haines Junctio 52.98 37**			P	**P**	**17 29 09.5**	**+1.3**
HYT				IAmb	IAmb	17 29 10.9	
	comp=Z,2.5nm,0.9s						
CTA	**Charters Tower 56.70 178**			P	P	17 29 30.4	-5.0
	comp=Z,0.8nm,0.5s,baz=123,slow=5.0,SNR=2.3						
WRA	**Warramunga Arr 57.32 191**			P	**P**	**17 29 38.3**	**-1.5**
	comp=Z,0.7nm,0.6s,baz=12,slow=7.4,SNR=13						
	comp=Z,0.7nm,0.6s						
WRA	**Warramunga Arr 57.32 191**			IAmb	IAmb	17 29 43.7	
	comp=Z,0.3nm,1.3s						
ARU	**Arti 58.04 319**			P	**P**	**17 29 44.5**	**0.0**
	comp=Z,0.7nm,0.2s,baz=238,slow=4.2,SNR=4.4						
	comp=Z,0.7nm,0.2s						
ARU	**Arti 58.04 319**			P	**P**	**17 29 44.5**	**0.0**
ARU				IAmb	IAmb	17 29 45.7	
	comp=Z,4.5nm,1.1s						
ABKAR	**Akbulak array 59.85 311**			P	**P**	**17 29 57.5**	**+0.3**
ASAR	**Alice Springs 61.05 191**			P	**P**	**17 30 04.2**	**-1.3**
	comp=Z,0.2nm,0.5s,baz=7.8,slow=6.9,SNR=9.8						
	comp=Z,0.2nm,0.5s						
KIRV	**Kirov 61.79 324**			P	**P**	**17 30 10.5**	**+0.3**
	comp=Z,6.9nm,0.6s,baz=358,slow=1.7,SNR=3.7						
	comp=Z,6.9nm,0.6s						
NVAR	**Mina Array Bea 73.14 54**			P	**P**	**17 31 21.4**	**-1.2**
	comp=Z,0.5nm,0.6s,baz=305,slow=7.9,SNR=4.9						
	comp=Z,0.5nm,0.6s						
NOA	**NORSAR Array B 75.22 338**			P	**P**	**17 31 34.0**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=41,slow=5.8,SNR=2.9						
	comp=Z,0.8nm,0.6s						
AKASG	**Malin Array Be 75.85 324**			P	**P**	**17 31 37.8**	**0.0**
	comp=Z,0.8nm,0.5s,baz=40,slow=6.1,SNR=8.3						
	comp=Z,0.8nm,0.5s						
TXAR	**Lajitas Array 88.28 54**			P	**P**	**17 32 42.6**	**-1.0**
	comp=Z,0.3nm,0.6s,baz=258,slow=3.7,SNR=4.4						
	comp=Z,0.3nm,0.6s						

IDC 08 17:22:49.4±6.3, 31°.63S×179°.11E, h0km, mb3.3/2, mbtmp3.3/2, Error ellipse: s-maj=244.7km s-min=63.9km az=158.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**40.59**	**270**	P	P	17 30 30.7	-0.4
	0.3nm,0.7s,baz=111,slow=8.0,SNR=5.5						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	**41.70**	**275**	P	P	17 30 40.3	+0.1
	0.4nm,0.7s,baz=115,slow=7.8,SNR=5.2						
	0.4nm,0.7s						
FINES	**FINESS Array B**	**145.38**	**337**	PKPbc	PKPbc	17 42 27.6	-0.8
	1.4nm,0.7s,baz=23,slow=4.5,SNR=3.3						

IDC 08 17:28:53.7±5.4, 13°.82S×139°.77E, h0km, mb3.1/2, mbtmp3.1/3, ML3.2/1, Error ellipse: s-maj=210.8km s-min=31.6km az=87.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.78**	**196**	P	Pn	17 33 15.5	+0.4
	0.1nm,0.3s,baz=18,slow=12,SNR=5.9						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**22.45**	**194**	P	P	17 33 54.1	-0.4
	0.2nm,0.6s,baz=21,slow=10,SNR=6.3						
	0.2nm,0.6s						
H11S3	**WAKE ISLAND Hy 33.30**		**51**	T	T	18 11 11.0	
	baz=236,slow=76,SNR=7.2						
H11S2	**WAKE ISLAND Hy 33.31**		**52**	T	T	18 11 12.0	
	baz=236,slow=76,SNR=7.6						
H11S1	**WAKE ISLAND Hy 33.31**		**51**	T	T	18 11 14.9	
	baz=236,slow=76,SNR=7.1						
MKAR	**Makanchi Array**	**69.74**	**322**	P	P	17 40 05.6	-0.1
	0.3nm,0.9s,baz=104,slow=6.1,SNR=2.7						
	0.3nm,0.9s						

*IDC **08** 17:32:33.1±1.3, 5°.04N×125°.37E, h0km, mb3.4/3, mbtmp3.5/4, ML3.3/1, MS2.8/1, Error ellipse: s-maj=65.7km s-min=19.1km az=79.0*
*MAN **08** 17:32:34.5, 5°.53N×126°.75E, h12km, mb4.5, ML3.3, MS3.1*
ISC 08 17:32:29.6±2.6, 5°.2N±0°.2×126°.9E±0°.1, h10km, n9, σ1s38/9, mb3.4/3, 2C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**1.50**	**306**	*e*P	**Pn**	**17 32 55.0**	**-1.6**
DDMP				*e*S		17 34 42.0	
MATI	**Mati**	**1.84**	**339**	*e*P	**Pn**	**17 32 59.6**	**-1.7**
DAV	**Davao City (W)**	**2.28**	**324**	Pn	**P

0.2nm,0.6s
MKAR Makanchi Array 56.46 325 P P 17 42 11.5 -0.3
0.3nm,0.4s,baz=121,slow=7.9,SNR=9.9
0.3nm,0.4s

MAN 08 17:38:46.4, 5.78N×126.58E, h69km, mb4.4, ML3.2, MS3.0, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.93**	**290**↑	*eP*	**Pb**	17 39 05.1	+0.2
DDMP				*eS*		17 40 53.5	
MATI	**Mati**	**1.20**	**344**↑	*eP*	**Pn**	17 39 08.5	+0.8

*IDC **08** 18:20:28.1±1.2, 55.39S×27.05W, h0km, mb4.1/4, mbtmp4.1/4, Error ellipse: s-maj=65.8km s-min=30.0km az=90.0*
ISC 08 18:20:31.9±1.4, 55.4S±0.2×27.1W±0.4, h25km, n10, σ0 s 43/10, mb3.9/3, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**17.40**	**159**	**P**	**P**	**18 24 33.6**	**-0.1**
VNA3	**Neumayer Olymp**	**17.60**	**161**	**P**	**P**	**18 24 36.1**	**+0.1**
VNA2	**Neumayer--Watz**	**17.79**	**159**	**P**	**P**	**18 24 38.7**	**+0.6**
	baz=321,slow=13						
SNAA	**Sanae**	**19.33**	**157**	**P**	**Pn**	**18 24 56.0**	**-0.2**
MAW	**Mawson**	**40.66**	**144**	**P**	**P**	**18 28 09.4**	**0.0**
	1.3nm,0.6s,baz=236,slow=10,SNR=2.5						
	1.3nm,0.6s						
VNDA	**Vanda**	**47.23**	**183**	**P**	**P**	**18 29 02.0**	**-0.1**
	1.3nm,0.7s,baz=185,slow=7.5,SNR=7.1						
	1.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**72.46**	**30**	**P**	**P**	**18 31 56.0**	**0.0**
	0.9nm,0.7s,baz=204,slow=6.0,SNR=6.1						
	0.9nm,0.7s						
ASAR	**Alice Springs**	**99.61**	**162**	**P**	**Pdif**	**18 34 12.3**	**-0.9**
	0.8nm,1.2s,baz=188,slow=5.3,SNR=2.0						
	0.8nm,1.2s						
ILAR	**Eielson Array**	**149.70**	**312**	PKPbc	**PKPbc**	**18 40 18.0**	**+0.2**
	0.7nm,0.6s,baz=125,slow=2.8,SNR=7.2						
SONM	**Songino Array**	**150.64**	**85**	PKPbc	**PKPbc**	**18 40 20.9**	**+0.1**
	0.5nm,0.6s,baz=333,slow=1.6,SNR=2.4						

MAN 08 18:37:54.1, 13.73N×120.55E, h86km, mb4.2, ML3.0, MS2.7, 4C-8D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.29**	**272**↑	*eP*	**Pn**	18 38 09.4	+3.2
LUBP				*eS*		18 38 22.6	
PGP	**Puerto Galera**	**0.44**	**120**↓	*eP*	**Pn**	18 38 08.9	+1.7
PGP				*i* S		18 38 21.4	
TGY	**Tagaytay City**	**0.53**	**45**↓	*eP*	**Pn**	18 38 06.8	+1.1
TGY				*i* S		18 38 23.8	
MACP	**Maragondon, Ca**	**0.56**	**17**↓	*eP*	**Pn**	18 38 10.8	+2.5
MACP				*eS*		18 38 38.1	
BOAC	**Boac**	**1.29**	**102**↑	*eP*	**Pn**	18 38 18.5	+2.1
BOAC				*eS*		18 39 12.7	
SJMP	**San Jose**	**1.38**	**156**↓	*eP*	**Pn**	18 38 19.9	+2.3
SJMP				*eS*		18 39 00.8	
GQP	**Guinayangan**	**1.85**	**84**↓	*eP*	**Pn**	18 38 26.3	+2.6
GQP				*eS*		18 38 49.2	
PCPH	**Palayan**	**1.90**	**16**↑	*eP*	**Pn**	18 38 25.1	+0.5
PCPH				*eS*		18 38 48.5	
BALP	**Baler**	**2.24**	**26**↓	*eP*	**Pn**	18 38 31.1	+2.1
BALP				*eS*		18 38 35.4	
SMPP	**San Manuel, Pa**	**2.41**	**3**↓	*eP*	**Pn**	18 38 31.9	+0.4
ENPP	**El Nido**	**2.73**	**204**↑	*eP*	**Pn**	18 38 36.7	+0.9
ENPP				*eS*		18 38 49.7	
CUYO	**Cuyo Island**	**2.90**	**171**↓	*eP*	**Pn**	18 38 38.7	+0.8
CUYO				*eS*		18 39 08.9	

*IDC **08** 18:42:45.2±1.3, 38.49S×174.79E, h0km, mb3.7/2, mbtmp3.7/3, ML3.6/1, Error ellipse: s-maj=45.6km s-min=23.5km az=1.0*
*NOU **08** 18:42:50.2, 39.19S×175.71E, h129km, MLv4.4/10, North Island, New Zealand*
*WEL **08** 18:42:52.1±0.6, 39.3S±3.1×17.6E±1.1, h110km±4km, M3.3/57, ML3.2/30, MLv3.3/57, Error ellipse: s-maj=0.0km s-min=0.0km az=123.6*
ISC 08 18:42:50.4±1.0, 39.16S±0.04×175.68E±0.04, h130km±5km, n155, σ0 s 96/167, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OTVZ	**Oturere**	**0.01**	**266**	P	**Pn**	**18 43 08.0**	**-0.2**
OTVZ				S	**Sn**	**18 43 19.9**	**-1.7**
ETVZ	**East Tongariro**	**0.04**	**43**	P	**Pn**	**18 43 08.0**	**-0.2**
ETVZ				S	**Sn**	**18 43 20.4**	**-1.1**
SNVZ	**South Ngauruho**	**0.04**	**231**	P	**Pn**	**18 43 08.1**	**-0.1**
SNVZ				S	**Sn**	**18 43 20.0**	**-1.7**
TMVZ	**Te Maari**	**0.05**	**23**	P	**Pn**	**18 43 08.0**	**-0.2**
TMVZ				S	**Sn**	**18 43 19.9**	**-1.6**
NNVZ	**North Ngauruho**	**0.06**	**302**	P	**Pn**	**18 43 08.2**	**-0.1**
NNVZ				S	**Sn**	**18 43 20.1**	**-1.5**
NGZ	**Ngauruhoe**	**0.06**	**258**	P	**Pn**	**18 43 08.1**	**-0.1**
NGZ				S	**Sn**	**18 43 20.8**	**-0.8**
NTVZ	**North Tongariro**	**0.06**	**358**	P	**Pn**	**18 43 08.0**	**-0.2**
WTVZ	**West Tongariro**	**0.08**	**304**	P	**Pn**	**18 43 08.1**	**-0.1**
WTVZ				S	**Sn**	**18 43 20.1**	**-1.5**
TUVZ	**Tukino**	**0.11**	**190**	P	**Pn**	**18 43 08.3**	**+0.1**
TUVZ				S	**Sn**	**18 43 20.2**	**-1.6**
FWVZ	**Far West T-bar**	**0.14**	**227**	P	**Pn**	**18 43 08.4**	**0.0**
FWVZ				S	**Sn**	**18 43 20.7**	**-1.3**
WHVZ	**Whangaehu Hut**	**0.14**	**210**	P	**Pn**	**18 43 08.5**	**+0.1**
TRVZ	**Turoa**	**0.17**	**217**	P	**Pn**	**18 43 08.7**	**+0.2**
WNVZ	**Wahianoa**	**0.18**	**201**	P	**Pn**	**18 43 08.4**	**0.0**
KATZ	**Kakaramea**	**0.19**	**4**	P	**Pn**	**18 43 07.9**	**-0.5**
TWVZ	**Taurewa**	**0.21**	**296**	P	**Pn**	**18 43 08.1**	**-0.2**
RITZ	**Rihia Road**	**0.23**	**37**	P	**Pn**	**18 43 08.2**	**-0.1**
RITZ				S	**Sn**	**18 43 20.9**	**-1.0**
MOVZ	**Moawhango**	**0.25**	**167**	P	**Pn**	**18 43 08.3**	**-0.1**
MTVZ	**Mangateitei**	**0.28**	**216**	P	**Pn**	**18 43 08.6**	**+0.1**
RATZ	**Rangitukua**	**0.30**	**14**	P	**Pn**	**18 43 08.1**	**-0.6**
HATZ	**Hinemaiaia**	**0.42**	**50**	P	**Pn**	**18 43 08.5**	**-0.6**
BHHZ	**Black Hill Sta**	**0.44**	**138**	P	**Pn**	**18 43 09.3**	**+0.1**
WATZ	**Wairara**	**0.46**	**5**	P	**Pn**	**18 43 08.8**	**-0.4**
WHTZ	**Whakaora**	**0.54**	**24**	P	**Pn**	**18 43 09.6**	**-0.2**
BKZ	**Black Stump Fm**	**0.63**	**91**	P	**Pn**	**18 43 10.3**	**0.0**
BKZ	**Black Stump Fm**	**0.63**	**91**	P	**Pn**	**18 43 10.3**	**0.0**
KWHZ	**Kaweka Forest**	**0.63**	**115**	P	**Pn**	**18 43 10.9**	**+0.6**
MRHZ	**Matea Rd**	**0.66**	**61**	P	**Pn**	**18 43 09.9**	**-0.6**
KUTZ	**Kaahu Road**	**0.68**	**10**	P	**Pn**	**18 43 10.4**	**-0.3**
VRZ	**Vera Road**	**0.72**	**273**	P	**Pn**	**18 43 11.2**	**+0.4**
KRHZ	**Kereru**	**0.72**	**132**	P	**Pn**	**18 43 11.6**	**+0.7**
WPRZ	**Whakapapataririn**	**0.74**	**31**	P	**Pn**	**18 43 10.6**	**-0.5**
ALRZ	**Allen Road**	**0.79**	**41**	P	**Pn**	**18 43 10.9**	**-0.6**
WAZ	**Wanganui**	**0.80**	**222**	P	**Pn**	**18 43 12.4**	**+0.9**
MCHZ	**McNeill Hill**	**0.84**	**110**	P	**Pn**	**18 43 13.1**	**+1.3**
TLZ	**Tolley Road**	**0.84**	**352**	P	**Pn**	**18 43 11.7**	**-0.3**
PNHZ	**Pukenui**	**0.85**	**152**	P	**Pn**	**18 43 12.8**	**+0.8**
PRRZ	**Plateau Road**	**0.87**	**40**	P	**Pn**	**18 43 11.4**	**-0.7**
GRRZ	**Galatos Road**	**0.88**	**23**	P	**Pn**	**18 43 12.0**	**-0.2**
NMHZ	**Naumai**	**0.88**	**86**	P	**Pn**	**18 43 13.3**	**+1.0**
HRRZ	**Handcock Road**	**0.90**	**32**	P	**Pn**	**18 43 12.2**	**-0.3**
HIZ	**Hauiti**	**0.91**	**315**	P	**Pn**	**18 43 12.5**	**0.0**
HIZ	**Hauiti**	**0.91**	**315**	P	**Pn**	**18 43 12.5**	**0.0**
TSZ	**Takapari Road**	**0.92**	**166**	P	**Pn**	**18 43 13.4**	**+0.9**
MTHZ	**Maungataniwha**	**0.96**	**71**	P	**Pn**	**18 43 12.8**	**-0.1**
HSRZ	**Hossack Road**	**0.96**	**28**	P	**Pn**	**18 43 12.6**	**-0.3**
ARHZ	**Aropaoanui**	**1.03**	**96**	P	**Pn**	**18 43 14.4**	**+0.9**
LREZ	**Lake Rotokare**	**1.03**	**253**	P	**Pn**	**18 43 14.6**	**+1.0**
RRRZ	**Republican Roa**	**1.05**	**39**	P	**Pn**	**18 43 13.3**	**-0.5**
HLRZ	**Highlands Stat**	**1.05**	**30**	P	**Pn**	**18 43 14.1**	**+0.3**
UTU	**Utuhina**	**1.06**	**22**	P	**Pn**	**18 43 13.9**	**0.0**
WPHZ	**Waipukurau**	**1.08**	**147**	P	**Pn**	**18 43 15.0**	**+1.0**
OHWZ	**Ohakea**	**1.08**	**195**	P	**Pn**	**18 43 15.4**	**+1.4**
MUGZ	**Murupara**	**1.09**	**52**	P	**Pn**	**18 43 13.6**	**-0.6**
KAHZ	**Kahuranaki**	**1.12**	**125**	P	**Pn**	**18 43 15.6**	**+1.1**
RAHZ	**Arahi**	**1.12**	**78**	P	**Pn**	**18 43 15.0**	**+0.5**
TARZ	**Mount Tarawera**	**1.13**	**35**	P	**Pn**	**18 43 14.5**	**-0.2**
DREZ	**Durham Road**	**1.15**	**268**	P	**Pn**	**18 43 15.7**	**+1.1**
RTZ	**Ruatahuna**	**1.15**	**62**	P	**Pn**	**18 43 14.6**	**-0.3**
OMRZ	**Omania**	**1.19**	**27**	P	**Pn**	**18 43 14.9**	**-0.3**
CKHZ	**Cape Kidnapper**	**1.19**	**115**	P	**Pn**	**18 43 16.3**	**+1.2**
MKRZ	**Makatiti**	**1.19**	**31**	P	**Pn**	**18 43 15.6**	**+0.3**
PREZ	**Palmer Road**	**1.19**	**261**	P	**Pn**	**18 43 16.7**	**+1.5**
DVHZ	**Dannevirke**	**1.20**	**162**	P	**Pn**	**18 43 15.8**	**+0.6**
KARZ	**Kaharoa**	**1.22**	**21**	P	**Pn**	**18 43 15.3**	**-0.2**
POWZ	**Post Office Ro**	**1.23**	**177**	P	**Pn**	**18 43 16.2**	**+0.7**
NEZ	**North Egmont**	**1.23**	**264**	P	**Pn**	**18 43 16.8**	**+1.1**
PXZ	**Pawanui**	**1.26**	**134**	P	**Pn**	**18 43 16.7**	**+0.9**
LIRZ	**Lichensteins R**	**1.28**	**26**	P	**Pn**	**18 43 15.9**	**-0.2**
KHEZ	**Kahui Hut**	**1.30**	**264**	P	**Pn**	**18 43 17.5**	**+1.2**
PKE	**Pukeiti**	**1.32**	**268**	P	**Pn**	**18 43 17.4**	**+0.9**
PRHZ	**Porangahau**	**1.33**	**147**	P	**Pn**	**18 43 17.5**	**+1.0**
EDRZ	**Edgecumbe**	**1.34**	**39**	P	**Pn**	**18 43 16.3**	**-0.5**
SNGZ	**Shannon Statio**	**1.35**	**74**	P	**Pn**	**18 43 17.1**	**+0.3**
PRWZ	**Pori Road**	**1.41**	**171**	P	**Pn**	**18 43 18.4**	**+0.9**
MARZ	**Manawahe**	**1.41**	**34**	P	**Pn**	**18 43 17.2**	**-0.3**
NBEZ	**Newall Road No**	**1.41**	**265**	P	**Pn**	**18 43 18.3**	**+0.9**
NMEZ	**Namu Road**	**1.42**	**259**	P	**Pn**	**18 43 17.9**	**+0.4**
TOZ	**Tahuroa Road**	**1.44**	**354**	P	**Pn**	**18 43 17.8**	**+0.1**
URZ	**Urewera**	**1.44**	**52**	Pn	**Pn**	**18 43 17.1**	**-0.6**
	279nm,0.3s,baz=234,slow=4.2,SNR=1746						
URZ				Sn	**Sn**	**18 43 35.0**	**-3.6**
	133nm,0.3s,baz=232,slow=3.6,SNR=18						
URZ	**Urewera**	**1.44**	**52**	P	**Pn**	**18 43 17.1**	**-0.6**
URZ	**Urewera**	**1.44**	**52**	P	**Pn**	**18 43 17.2**	**-0.6**
MRZ	**Mangatainoka R**	**1.50**	**183**	P	**Pn**	**18 43 18.9**	**+0.5**
TGRZ	**Tauranga**	**1.50**	**18**	P	**Pn**	**18 43 18.3**	**-0.2**
RAGZ	**Rawiri**	**1.51**	**64**	P	**Pn**	**18 43 18.6**	**-0.1**
KNZ	**Kokohu**	**1.56**	**85**	P	**Pn**	**18 43 19.3**	**+0.2**
BFZ	**Birch Farm**	**1.58**	**164**	P	**Pn**	**18 43 19.9**	**+0.6**
BFZ	**Birch Farm**	**1.58**	**164**	P	**Pn**	**18 43 20.0**	**+0.6**
TIWZ	**Tintock**	**1.62**	**174**	P	**Pn**	**18 43 20.4**	**+0.5**
MWZ	**Matawai**	**1.67**	**61**	P	**Pn**	**18 43 20.0**	**-0.4**
RIGZ	**Rimuhau**	**1.69**	**75**	P	**Pn**	**18 43 20.7**	**+0.1**
OGWZ	**Otaki Gorge**	**1.70**	**193**	P	**Pn**	**18 43 21.3**	**+0.6**
MHGZ	**Mahia Peninsul**	**1.73**	**90**	P	**Pn**	**18 43 21.6**	**+0.5**
PRGZ	**Paritu Road**	**1.73**	**83**	P	**Pn**	**18 43 21.4**	**+0.3**
HOWZ	**Holdsworth Sta**	**1.74**	**184**	P	**Pn**	**18 43 21.5**	**+0.3**
CPWZ	**Castlepoint**	**1.79**	**167**	P	**Pn**	**18 43 22.8**	**+1.0**
KIW	**Kapiti Island**	**1.80**	**199**	P	**Pn**	**18 43 22.1**	**+0.3**
TKGZ	**Te Karaka**	**1.84**	**68**	P	**Pn**	**18 43 22.6**	**+0.2**
TMWZ	**Te Maipa**	**1.95**	**175**	P	**Pn**	**18 43 24.0**	**+0.3**
RUGZ	**Raukumara Rang**	**1.97**	**53**	P	**Pn**	**18 43 23.0**	**-1.1**
MTW	**Mount Morrison**	**2.00**	**184**	P	**Pn**	**18 43 24.3**	**0.0**
CAW	**Cannon Point**	**2.00**	**193**	P	**Pn**	**18 43 24.5**	**+0.3**
WIZ	**White Island**	**2.02**	**36**	P	**Pn**	**18 43 23.8**	**-0.7**
TWGZ	**Tauwhareparae**	**2.05**	**62**	P	**Pn**	**18 43 25.0**	**0.0**
CNGZ	**Carnagh Statio**	**2.09**	**72**	P	**Pn**	**18 43 25.6**	**+0.2**
MKAZ	**Moumakai**	**2.10**	**349**	P	**Pn**	**18 43 25.6**	**+0.1**
DUWZ	**D'Urville Isla**	**2.12**	**219**	P	**Pn**	**18 43 25.8**	**0.0**
HAZ	**Te Kaha**	**2.17**	**50**	P	**Pn**	**18 43 25.2**	**-1.2**
PAWZ	**Paruwai Farm**	**2.23**	**185**	P	**Pn**	**18 43 26.9**	**-0.2**
TRWZ	**Traveller**	**2.23**	**180**	P	**Pn**	**18 43 27.1**	**-0.1**
AWAZ	**Awhitu Peninsu**	**2.25**	**338**	P	**Pn**	**18 43 27.7**	**+0.3**
PKGZ	**Pakihiroa**	**2.27**	**57**	P	**Pn**	**18 43 27.4**	**-0.3**
SNZO	**South Karori**	**2.27**	**199**	P	**Pn**	**18 43 28.0**	**+0.4**
MSWZ	**Moikau Station**	**2.27**	**188**	P	**Pn**	**18 43 27.5**	**-0.2**
ETAZ	**East Tamaki Re**	**2.28**	**345**	P	**Pn**	**18 43 28.0**	**+0.2**
PUZ	**Puketiti**	**2.29**	**62**	P	**Pn**	**18 43 27.4**	**-0.6**
TCW	**Tory Channel**	**2.31**	**207**	P	**Pn**	**18 43 28.1**	**-0.1**
BHW	**Baring Head**	**2.33**	**195**	P	**Pn**	**18 43 28.1**	**-0.2**
WTAZ	**Waiatarua**	**2.39**	**338**	P	**Pn**	**18 43 29.9**	**+0.7**
KUZ	**Kuaotunu**	**2.41**	**1**	P	**Pn**	**18 43 29.5**	**0.0**
PLWZ	**Palliser**	**2.43**	**188**	P	**Pn**	**18 43 29.2**	**-0.4**
WMGZ	**Waiomatatini S**	**2.53**	**59**	P	**Pn**	**18 43 30.4**	**-0.5**
RVAZ	**Riverhead Bore**	**2.54**	**340**	P	**Pn**	**18 43 31.7**	**+0.6**
MXZ	**Matakaoa Point**	**2.61**	**53**	P	**Pn**	**18 43 31.8**	**-0.2**
TUWZ	**Tuamarina**	**2.62**	**210**	P	**Pn**	**18 43 31.8**	**-0.3**
NNZ	**Nelson**	**2.70**	**220**	P	**Pn**	**18 43 32.8**	**-0.3**
BSWZ	**Blackbirch Sta**	**2.90**	**208**	P	**Pn**	**18 43 35.3**	**-0.3**
GRZ	**Great Barrier**	**2.91**	**356**	P	**Pn**	**18 43 36.3**	**+0.4**
QRZ	**Quartz Range**	**2.94**	**235**	P	**Pn**	**18 43 35.6**	**-0.5**
QRZ	**Quartz Range**	**2.94**	**235**	P	**Pn**	**18 43 35.8**	**-0.3**
MRNZ	**Matariki Terra**	**3.16**	**224**	P	**Pn**	**18 43 38.4**	**-0.6**
THZ	**Tophouse**	**3.35**	**218**	P	**Pn**	**18 43 41.2**	**-0.4**
KHZ	**Kahutara**	**3.63**	**206**	P	**Pn**	**18 43 44.5**	**-0.7**
KHZ	**Kahutara**	**3.63**	**206**	P	**Pn**	**18 43 44.7**	**-0.5**
DSZ	**Denniston Nort**	**3.92**	**228**	P	**Pn**	**18 43 48.3**	**-0.7**
OUZ	**Omahuta**	**4.27**	**336**	P	**Pn**	**18 43 54.9**	**+1.1**
OUZ	**Omahuta**	**4.27**	**336**	P	**Pn**	**18 43 54.8**	**+1.1**
GVZ	**Greta Valley S**	**4.29**	**207**	P	**Pn**	**18 43 52.8**	**-1.1**
LTZ	**Lake Taylor**	**4.44**	**214**	P	**Pn**	**18 43 54.4**	**-1.6**
AMCZ	**Amberley**	**4.62**	**209**	P	**Pn**	**18 43 57.2**	**-1.0**
INZ	**Inchbonnie**	**4.79**	**221**	P	**Pn**	**18 43 59.0**	**-0.9**
OKCZ	**Otaniua Bay**	**4.96**	**203**	P	**Pn**	**18 44 01.3**	**-1.6**
OXZ	**Oxford**	**4.98**	**212**	P	**Pn**	**18 44 01.4**	**-1.8**
AKCZ	**Akaroa Harbour**	**5.14**	**203**	P	**Pn**	**18 44 03.4**	**-1.9**
WACZ	**Wakanui South**	**5.58**	**210**	P	**Pn**	**18 44 09.1**	**-2.0**
RPZ	**Rata Peaks**	**5.72**	**216**	Pn	**Pn**	**18 44 12.9**	**-0.2**
	1.5nm,0.3s,baz=40,slow=0.5,SNR=6.4						
RPZ				Sn	**Sn**	**18 45 12.3**	**-5.3**
	6.8nm,0.3s,baz=17,slow=19,SNR=17						
	6.1nm,0.5s						
RPZ	**Rata Peaks**	**5.72**	**216**	P	**Pn**	**18 44 11.6**	**-1.5**
RPZ	**Rata Peaks**	**5.72**	**216**	P	**Pn**	**18 44 12.2**	**-0.9**
ARZ	**Arundel**	**5.85**	**214**	P	**Pn**	**18 44 14.1**	**-0.7**
TMZ	**Timaru**	**6.28**	**212**	P	**Pn**	**18 44 16.0**	**-1.0**
ODZ	**Otahua Downs**	**6.97**	**211**	P	**Pn**	**18 44 27.8**	**-2.0**
ODZ	**Otahua Downs**	**6.97**	**211**	P	**Pn**	**18 44 28.9**	**-0.9**
CTZ	**Chatham Island**	**7.37**	**131**	P	**Pn**	**18 44 35.8**	**+0.6**
ASAR	**Alice Springs**	**38.50**	**281**	P	**P**	**18 50 02.0**	**+2.0**
	0.9nm,0.8s,baz=118,slow=6.0,SNR=14						
	0.9nm,0.8s						
WRA	**Warramunga Arr**	**40.33**	**286**	P	**P**	**18 50 17.1**	**+1.9**
	0.6nm,0.5s,baz=129,slow=7.7,SNR=19						
	0.6nm,0.5s						
TORD	**Torodi Ar. Bea**	**153.55**	**193**	PKPbc	**PKPab**	**19 02 48.9**	**+2.1**
	0.3nm,0.4s,baz=157,slow=3.3,SNR=5.2						

MAN 08 18:47:10.9, 13.74N×120.62E, h85km, mb3.7, ML2.4, MS1.9, Mindoro

*VAO **08** 19:12:40.5±0.5, 30.57S×72.49W, h10km, mb4.4*
*SJA **08** 19:12:40.7±0.7, 29.98S×72.44W, h6km±4km, ML4.5, MW4.1*
*IDC **08** 19:12:45.1±0.8, 30.13S×71.93W, h0km, mb4.3/6, mbtmp4.3/9, ML4.4/3, MS3.7/13, Error ellipse: s-maj=29.7km s-min=25.4km az=63.0*
*NEIC **08** 19:12:46.2, 30.02S×72.03W, h15km, Moment Tensor Solution. Moment tensor: Scale 10^15 Nm; Mrr 2.43; Mθθ 0.19; Mϕϕ -2.61; Mrθ 0.60; Mrϕ -0.05; Mθϕ -2.10; Fault plane solution: M0 3.34000×10^15 NP1: ϕs 169.68000°, δ 65.74000°, λ 80.04000°. NP2: ϕs 12.82000°, δ 26.12000°, λ 111.00000°. Principal axes: T 3.3000, Plg68.0000°, Azm61.0000°; N 0.0847, Plg9.0000°, Azm174.0000°; P -3.3847, Plg20.0000°, Azm267.0000°;*
*GUC **08** 19:12:46.7±0.6, 30.06S×72.13W, h33km±4km, ML4.5*
*NEIC **08** 19:12:46.3±1.4, 30.02S±0.04×72.03W±0.05, h8km±4km, mb4.6/17, Mwr4.3/70, ML4.3(GUC), Error ellipse: s-maj=7.5km s-min=3.7km az=53.0*
ISC 08 19:12:45.5±1.3, 30.04S±0.02×72.07W±0.04, h8km±8km, n181, σ1 s 72/208, mb4.5/12, MS3.9/10, 19C-20D, Fault plane solution: NP1: ϕs 25.16869°, δ 18.13955°, λ 106.15099°. NP2: ϕs 188.22034°, δ 72.59976°, λ 84.79288°.
Principal axes: T Plg62.0578°, Azm90.3486°; N Plg4.9682°, Azm189.7814°; P Plg27.4199°, Azm282.3662°; **Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CO05	**La Serena**	**0.73**	**81**		**Pb**	**19 13 00.8**	**+0.2**
CO05	**La Serena**	**0.73**	**81**	↓*iP*	**Pb**	**19 13 00.9**	**+0.3**
CO05				*eS*	**Sn**	**19 13 11.9**	**-1.6**
CO05				IAML		19 13 12.7	
	comp=E,21μm,0.4s						
CO06	**Fray Jorge**	**0.74**	**149**		**Pg**	**19 13 00.6**	**+0.9**
CO06					**Sg**	**19 13 10.2**	**+0.9**
CO06	**Fray Jorge**	**0.74**	**149**	↓*iP*	**Pg**	**19 13 00.6**	**+0.9**
CO06				*eS*	**Sg**	**19 13 10.7**	**+1.3**
CO06				IAML		19 13 12.5	
	comp=E,23μm,0.8s						
GO04	**Tololo Observa**	**1.11**	**97**		**Pg**	**19 13 06.9**	**0.0**
GO04	**Tololo Observa**	**1.11**	**97**	↓*iP*	**Pg**	**19 13 06.9**	**0.0**
GO04				*i* S	**Sb**	**19 13 21.6**	**-0.2**
CO03	**El Pedregal**	**1.44**	**124**		**Pn**	**19 13 11.5**	**-0.4**
CO03				Sn	**Sn**	**19 13 31.4**	**+0.3**
CO03	**El Pedregal**	**1.44**	**124**	↓*iP*	**Pn**	**19 13 11.8**	**-0.1**
CO03				*i* S	**Sb**	**19 13 31.1**	**+0.1**
CO03				IAML		19 13 33.7	
	comp=E,10μm,0.4s						
CO03	**El Pedregal**	**1.44**	**124**	*eP*	**Pg**	**19 13 13.7**	**+0.7**
CO03				*eS*	**Sg**	**19 13 32.5**	**+0.7**
CO03				IAML		19 13 33.2	
	comp=Z,8μm,0.5s						
CO02	**Combarbal**	**1.48**	**142**		**Pn**	**19 13 12.9**	**+0.3**
CO02	**Combarbal**	**1.48**	**142**	↓*iP*	**Pn**	**19 13 13.0**	**+0.3**
CO02				*i* S	**Sn**	**19 13 32.3**	**0.0**
CO02				IAML		19 13 36.1	
	comp=N,17μm,0.6s						
CO02	**Combarbal**	**1.48**	**142**	*eP*	**Pb**	**19 13 13.8**	**+0.4**
CO02				*eS*	**Sg**	**19 13 37.6**	**+4.4**
CO02				IAML		19 13 46.5	
	comp=Z,6μm,0.8s						
LCO	**Las Campanas**	**1.57**	**50**		**Pn**	**19 13 13.9**	**0.0**
LCO	**Las Campanas**	**1.57**	**50**	*eP*	**Pn**	**19 13 14.0**	**0.0**
LCO				*i* S	**Sg**	**19 13 36.0**	**-0.1**
LCO	**Las Campanas**	**1.57**	**50**	*eP*	**Pb**	**19 13 14.9**	**-0.2**
CO01	**Juntas del Tor**	**1.72**	**88**		**Pn**	**19 13 16.7**	**+0.8**
CO01	**Juntas del Tor**	**1.72**	**88**	↑*iP*	**Pn**	**19 13 16.9**	**+0.9**
CO01				*i* S	**Sg**	**19 13 40.0**	**-0.8**
CO01				IAML		19 13 41.9	
	comp=N,3μm,0.6s						
CO01	**Juntas del Tor**	**1.72**	**88**	*eP*	**Pb**	**19 13 17.9**	**+0.4**
CO01				*eS*	**Sn**	**19 13 34.9**	**-3.3**
CO01				IAML		19 13 40.9	
	comp=Z,3μm,0.7s						
AC04	**Llanos de Chal**	**2.03**	**26**		**Pn**	**19 13 19.4**	**-0.6**
AC04	**Llanos de Chal**	**2.03**	**26**	↑*iP*	**Pn**	**19 13 19.5**	**-0.5**
AC04	**Llanos de Chal**	**2.03**	**26**	*eP*	**Pn**	**19 13 19.3**	**-0.6**
AC04				*eS*	**Sb**	**19 13 47.9**	**-0.1**
AROD	**Rodeo**	**2.26**	**94**	*eP*	**Pb**	**19 13 26.4**	**-0.3**
AROD				*eS*	**Sb**	**19 13 53.9**	**-1.0**
ACDV	**Cuesta del Vie**	**2.56**	**94**	*eP*	**Pb**	**19 13 30.1**	**-1.7**
ACDV				*eS*	**Sg**	**19 14 08.9**	**+1.1**
ACDV				IAML		19 14 09.8	
	comp=Z,1μm,1.0s						
VA06	**Catapilco**	**2.60**	**165**		**Pn**	**19 13 27.8**	**-0.1**
VA06	**Catapilco**	**2.60**	**165**	↑*iP*	**Pn**	**19 13 28.0**	**+0.2**
VA06				*i* S	**Sn**	**19 13 58.2**	**-1.4**
VA06				IAML		19 14 13.0	
	comp=N,3μm,0.7s						
ACCO	**Cerro Coronel**	**2.66**	**103**	*eP*	**Pb**	**19 13 32.1**	**-1.5**
GO03	**Copiap**	**2.92**	**34**		**Pn**	**19 13 32.2**	**-0.1**
GO03	**Copiap**	**2.92**	**34**	*eP*	**Pn**	**19 13 32.3**	**-0.1**
GO03				IAML		19 14 26.5	
GO03	**Copiap**	**2.92**	**34**	*eP*	**Pn**	**19 13 32.6**	**+0.3**
GO03				*eS*	**Sn**	**19 14 09.9**	**+2.2**
RTLS	**Leoncito**	**2.96**	**127**	*eP*	**Pn**	**19 13 36.3**	**+3.2**
RTLS				*eS*	**Sb**	**19 14 15.9**	**+0.7**
RTLS				IAML		19 14 23.5	
	comp=Z,860nm,1.0s						
**VA01

ML02	**Panimavida**	**5.73**	**175**	Pn		**Pn**	**19 14 10.4**	**-0.5**
PB10	**IPOC Station P**	**6.64**	**12**	Pn		**Pn**	**19 14 20.2**	**-3.2**
H03N1	**Juan Fernandez**	**6.74**	**238**	Pn		**Pn**	**19 14 22.4**	**-2.1**
	baz=112,slow=18							
H03N1				Sn		Sn	19 15 32.7	-8.6
	baz=305,slow=6.9							
H03N1				T		T	19 21 42.0	
	baz=69,slow=72,SNR=219							
H03N2	**Juan Fernandez**	**6.75**	**238**	Pn		**Pn**	**19 14 23.8**	**-0.8**
	baz=112,slow=18							
H03N2				Sn		Sn	19 15 33.0	-8.7
	baz=305,slow=6.9							
H03N2				T		T	19 21 38.4	
	baz=69,slow=72,SNR=216							
BI05	**Punta Hualpn**	**6.76**	**188**	Pn		**Pn**	**19 14 23.3**	**-1.6**
H03N3	**Juan Fernandez**	**6.76**	**238**	Pn		**Pn**	**19 14 23.7**	**-1.0**
	baz=112,slow=18							
H03N3				Sn		Sn	19 15 32.5	-9.3
	baz=305,slow=6.9							
H03N3				T		T	19 21 35.5	
	baz=69,slow=72,SNR=185							
H03S3	**Juan Fernandez**	**6.93**	**235**	Pn		**Pn**	**19 14 25.7**	**-1.4**
H03S3				Sn		Sn	19 15 36.6	-9.4
H03S1	**Juan Fernandez**	**6.94**	**235**	Pn		**Pn**	**19 14 25.6**	**-1.6**
H03S1				Sn		Sn	19 15 35.2	-11
H03S2	**Juan Fernandez**	**6.95**	**235**	Pn		**Pn**	**19 14 25.1**	**-2.2**
H03S2				Sn		Sn	19 15 38.9	-7.5
PB15	**IPOC Station P**	**7.19**	**19**			**Pn**	**19 14 28.3**	**-2.9**
PB06	**IPOC Station P**	**7.64**	**18**	Pn		**Pn**	**19 14 33.8**	**-3.5**
AF01	**San Pedro de A**	**7.87**	**27**	Pn		**Pn**	**19 14 37.3**	**-3.3**
LVC	**Limon Verde**	**7.92**	**22**	Pn		**Pn**	**19 14 39.5**	**-1.9**
	comp=Z,1.8nm,0.3s,baz=171,slow=9.2,SNR=6.0							
LVC				Sn		Sn	19 16 21.2	+10
	comp=Z,2.5nm,0.3s,baz=324,slow=14,SNR=2.1							
LVC	**Limon Verde**	**7.92**	**22**	*eS*		Sn	19 16 21.6	+10
PB07	**IPOC Station P**	**8.51**	**14**	Pn		**Pn**	**19 14 45.0**	**-4.2**
PB09	**IPOC Station P**	**8.59**	**18**	Pn		**Pn**	**19 14 47.9**	**-2.5**
PB02	**IPOC Station P**	**8.90**	**13**			**Pn**	**19 14 51.0**	**-3.5**
PB01	**IPOC Station P**	**9.26**	**15**	Pn		**Pn**	**19 14 55.5**	**-3.9**
LR04	**Coral**	**9.88**	**186**	Pn		**Pn**	**19 15 06.6**	**-1.2**
PLCA	**Paso Flores**	**10.74**	**174**	Pn		**Pn**	**19 15 19.9**	**+0.2**
	comp=Z,1.0nm,0.3s,baz=335,slow=12,SNR=22							
	comp=Z,2.2nm,0.3s							
PLCA	**Paso Flores**	**10.74**	**174**			**Pn**	**19 15 20.0**	**+0.3**
PLCA	**Paso Flores**	**10.74**	**174**	*eP*		Pn	19 15 07.6	-12
PLCA				*eS*		Sn	19 17 03.4	-17
ITQB	**Itaqui**	**13.42**	**92**	Pn		**Pn**	**19 15 56.2**	**0.0**
ITQB	**Itaqui**	**13.42**	**92**	*eP*		**Pn**	**19 15 56.4**	**+0.2**
CPUP	**Villa Florida**	**13.52**	**78**	Pn		**P**	**19 16 03.0**	**-3.9**
	comp=Z,0.3nm,0.3s,baz=250,slow=11,SNR=4.4							
CPUP				LR		LR	19 21 31.0	
	comp=Z,322nm,20.9s,baz=242,slow=39							
CPUP	**Villa Florida**	**13.52**	**78**			**Pn**	**19 15 58.1**	**+0.5**
CPUP	**Villa Florida**	**13.52**	**78**	*eP*		**Pn**	**19 15 58.0**	**+0.5**
LPAZ	**La Paz**	**14.16**	**16**	Pn		**Pn**	**19 16 09.2**	**+2.2**
	comp=Z,0.8nm,0.3s,baz=176,slow=8.1,SNR=17							
LPAZ				LR		LR	19 22 31.5	
	comp=Z,140nm,19.9s,baz=192,slow=41							
	comp=Z,6.1nm,0.7s							
LPAZ	**La Paz**	**14.16**	**16**			**Pn**	**19 16 10.2**	**+3.3**
LPAZ	**La Paz**	**14.16**	**16**	*eP*		**Pn**	**19 16 09.8**	**+2.8**
RODS	**Rosario do Sul**	**14.60**	**95**	*eP*		**Pn**	**19 16 11.7**	**-0.7**
UNIS	**Unistalda (Bra**	**14.83**	**90**	*eP*		**Pn**	**19 16 16.8**	**+1.2**
PLTB	**Pedras Altas**	**15.95**	**101**	Pn		**Pn**	**19 16 30.5**	**+0.2**
PLTB	**Pedras Altas**	**15.95**	**101**	*eP*		**Pn**	**19 16 27.9**	**-2.4**
SIV	**San Ignacio**	**17.25**	**38**	P		**Pn**	**19 16 47.4**	**+0.6**
	baz=216,slow=11,SNR=25							
SIV				LR		LR	19 24 11.0	
	comp=Z,190nm,18.4s,baz=272,slow=40							
	comp=Z,9.3nm,0.8s							
PTGB	**Pitanga**	**18.54**	**78**	*eP*		**Pn**	**19 17 03.3**	**+0.5**
PTLB	**Pontes e Lacer**	**18.77**	**42**	*eP*		**P**	**19 17 05.6**	**+0.5**
VBST	**Vila Bela da S**	**19.02**	**38**	*eP*		**P**	**19 17 08.4**	**+0.5**
VILB	**Vilhena**	**20.25**	**35**	*eP*		Pn	19 17 23.9	+0.6
SALV	**Santo Antonio**	**20.59**	**50**	*eP*		**P**	**19 17 25.3**	**+0.2**
ETMB	**Extrema**	**20.85**	**16**	*eP*		Pn	19 17 29.6	-0.7
NBRS	**Nobres**	**21.69**	**47**	*eP*		**P**	**19 17 39.2**	**+2.3**
ITRB	**Iturama**	**22.19**	**67**	*eP*		**P**	**19 17 41.3**	**-1.0**
CZSB	**Cruzeiro do Su**	**22.20**	**358**	*eP*		**P**	**19 17 45.0**	**+2.5**
SAML	**Samuel**	**22.57**	**23**	P		**P**	**19 17 47.4**	**+1.1**
DVLD	**Doverlandia**	**22.58**	**58**	*eP*		**P**	**19 17 48.3**	**+1.8**
PDRB	**Porto dos Gac**	**23.23**	**41**	*eP*		**P**	**19 17 52.4**	**-0.9**
ARAG	**Araguaiana, MT**	**23.44**	**57**	*eP*		**P**	**19 17 56.3**	**+0.9**
VAO	**Valinhos**	**23.50**	**79**	*eP*		**P**	**19 17 55.0**	**-1.1**
CLDB	**Colider**	**24.36**	**42**	*eP*		**P**	**19 18 03.1**	**-1.1**
IPMB	**Ipameri, GO**	**24.82**	**66**	*eP*		**P**	**19 18 07.7**	**-0.7**
BDFB	**Brasilia**	**26.32**	**62**	P		**P**	**19 18 21.9**	**-0.1**
	comp=Z,6.4nm,0.6s,baz=244,slow=8.5,SNR=6.7							
BDFB				LR		LR	19 30 43.9	
	comp=Z,25nm,20.1s,baz=301,slow=41							
	comp=Z,6.4nm,0.6s							
BDFB	**Brasilia**	**26.32**	**62**	P		**P**	**19 18 21.7**	**-0.4**
BDFB				IAmb		IAmb	19 18 57.7	
	comp=Z,13nm,1.1s							
BDFB	**Brasilia**	**26.32**	**62**	*eP*		**P**	**19 18 22.1**	**0.0**
SNDB	**Serra Nova Dou**	**26.36**	**51**	*eP*		**P**	**19 18 23.1**	**+0.7**
NPGB	**Novo Progresso**	**27.75**	**38**	*eP*		**P**	**19 18 34.1**	**-0.7**
JANB	**Januaria**	**29.55**	**66**	*eP*		**P**	**19 18 50.5**	**-0.4**
ITTB	**Itaituba**	**29.84**	**34**	*eP*		**P**	**19 18 52.8**	**-0.6**
SDBA	**SAO DESIDERIO**	**30.68**	**61**	*eP*		**P**	**19 19 00.7**	**-0.2**
NBMA	**Muriti-CE**	**38.54**	**61**	*eP*		**P**	**19 20 08.4**	**-0.4**
BAUV	**El Baul**	**38.95**	**6**	P		**P**	**19 20 11.6**	**-0.6**
BAUV				IAmb		IAmb	19 20 30.1	
	comp=Z,25nm,1.1s							
MDP	**Montagnes des**	**39.60**	**31**	LR		LR	19 38 59.9	
	comp=Z,57nm,19.6s,baz=232,slow=40							
RCBR	**Riachuelo**	**41.70**	**62**	LR		LR	19 40 04.6	
	comp=Z,100nm,19.2s,baz=352,slow=39							
BELA	**Belgrano 2**	**50.78**	**170**	P		**P**	**19 21 46.6**	**+1.0**
BELA				IAmb		IAmb	19 21 58.7	
	comp=Z,5.2nm,1.0s							
VNA3	**Neumayer Olymp**	**53.04**	**159**	P		**P**	**19 22 03.4**	**+0.8**
VNA1	**Neumayer--Stat**	**53.33**	**158**	P		**P**	**19 22 05.8**	**+1.0**
VNA2	**Neumayer--Watz**	**53.68**	**158**	P		**P**	**19 22 08.0**	**+0.7**
	baz=267,slow=6.0							
SNAA	**Sanae**	**55.27**	**159**	P		**P**	**19 22 19.5**	**+0.5**
SNAA	**Sanae**	**55.27**	**159**	P		**P**	**19 22 19.2**	**+0.3**
TROLL	**Troll, Antarti**	**56.98**	**159**	P		**P**	**19 22 31.8**	**+0.6**
TXAR	**Lajitas Array**	**66.28**	**330**	P		**P**	**19 23 36.5**	**+2.1**
	comp=Z,0.5nm,0.6s,baz=154,slow=8.3,SNR=9.9							
	comp=Z,0.5nm,0.6s							
SMCO	**Snowmass**	**76.15**	**333**	P		**P**	**19 24 35.6**	**+1.2**
SMCO				IAmb		IAmb	19 24 50.9	
	comp=Z,3.9nm,0.8s							
ECSD	**EROS Data Cent**	**76.78**	**342**	P		**P**	**19 24 37.0**	**-0.4**
ECSD				IAmb		IAmb	19 24 50.3	
	comp=Z,8.7nm,0.9s							
SUR	**Sutherland**	**76.79**	**120**	LR		LR	19 53 58.1	
	comp=Z,39nm,19.0s,baz=132,slow=32							
MAW	**Mawson**	**76.98**	**164**	LR		LR	19 59 55.5	
	comp=Z,62nm,18.1s,baz=8.0,slow=37							
EYMN	**Ely**	**79.57**	**347**	P		**P**	**19 24 52.1**	**-0.6**
EYMN				IAmb		IAmb	19 25 05.3	
	comp=Z,7.4nm,1.3s							
TSUM	**Tsumeb**	**80.34**	**107**	LR		LR	19 56 58.6	
	comp=Z,70nm,18.1s,baz=148,slow=33							
B35A	**Bob, Littlefor**	**80.42**	**346**	P		**P**	**19 24 58.0**	**+0.7**
NVAR	**Mina Array Bea**	**80.63**	**325**	P		**P**	**19 25 00.3**	**+1.4**
	comp=Z,0.5nm,0.7s,baz=157,slow=4.9,SNR=1.5							
	comp=Z,0.5nm,0.7s							
BOSA	**Boshof**	**81.95**	**118**	P		**P**	**19 25 06.4**	**+0.1**
	comp=Z,2.9nm,0.9s,baz=213,slow=2.6,SNR=4.8							
BOSA				LR		LR	19 59 36.8	
	comp=Z,76nm,18.1s,baz=156,slow=34							
	comp=Z,2.9nm,0.9s							
BOSA	**Boshof**	**81.95**	**118**	IAmb		IAmb	19 25 07.6	
	comp=Z,4.3nm,1.1s							
ULM	**Lac du Bonnet**	**82.68**	**345**	P		**P**	**19 25 10.2**	**+1.0**
	comp=Z,1.4nm,0.3s,baz=188,slow=5.6,SNR=4.5							
	comp=Z,1.4nm,0.3s							
ULM	**Lac du Bonnet**	**82.68**	**345**	IAmb		IAmb	19 25 11.1	
	comp=Z,8.6nm,1.2s							
TOA0	**Torodi Ar. Sit**	**82.90**	**70**	P		**P**	**19 25 11.8**	**+0.5**
TORD	**Torodi Ar. Bea**	**82.90**	**70**	P		**P**	**19 25 11.7**	**+0.5**
	comp=Z,7.8nm,0.8s,baz=262,slow=4.9,SNR=32							
TORD				LR		LR	20 00 54.5	
	comp=Z,71nm,18.7s,baz=222,slow=35							
	comp=Z,7.8nm,0.8s							
TORD	**Torodi Ar. Bea**	**82.90**	**70**	P		**P**	**19 25 11.3**	**+0.1**
MCMT	**McKenzie Canyo**	**83.26**	**332**	P		**P**	**19 25 14.0**	**+1.3**
LBTB	**Lobatse**	**84.00**	**115**	LR		LR	19 59 50.5	
	comp=Z,61nm,18.8s,baz=136,slow=34							
LBTB	**Lobatse**	**84.00**	**115**	P		**P**	**19 25 16.5**	**-0.5**
LBTB				IAmb		IAmb	19 25 20.1	
	comp=Z,4.2nm,0.9s							

PINE	**Pine Mountain**	**86.01**	**327**	P		**P**	**19 25 29.2**	**+2.7**
ESDC	**Sonseca Array**	**93.85**	**46**	LR		LR	20 09 46.0	
	comp=Z,34nm,18.0s,baz=206,slow=36							
WRA	**Warramunga Arr**	**124.18**	**210**	PKP		**PKPdf**	**19 31 45.2**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=153,slow=1.9,SNR=9.7							
WRA	**Warramunga Arr**	**124.18**	**210**			**PKPdf**	**19 31 44.6**	**-0.8**
H11S2	**WAKE ISLAND Hyl**	**25.70**	**272**	T		T	21 50 43.7	
	baz=115,slow=75,SNR=8.7							
H11S1	**WAKE ISLAND Hyl**	**25.71**	**272**	T		T	21 50 34.8	
	baz=115,slow=75,SNR=7.6							
H11S3	**WAKE ISLAND Hyl**	**25.72**	**272**	T		T	21 50 37.4	
	baz=115,slow=75,SNR=6.8							
YAK	**Yakutsk**	**144.98**	**342**	PKPbc		PKPbc	19 32 22.8	+1.0
	comp=Z,6.6nm,0.7s,baz=71,slow=0.4,SNR=9.7							
KURK	**Kurchatov**	**149.90**	**38**			**PKPbc**	**19 32 35.9**	**-0.1**
KURBB	**Kurchatov Arra**	**149.90**	**39**	PKPbc		**PKPbc**	**19 32 37.1**	**+1.1**
	comp=Z,2.8nm,0.8s,baz=300,slow=3.2,SNR=12							
ZALV	**Zalesovo Beam**	**150.83**	**28**	PKPbc		**PKiKP**	**19 32 39.2**	**+0.5**
	comp=Z,16nm,0.7s,baz=299,slow=3.2,SNR=36							
MKAR	**Makanchi Array**	**154.03**	**43**	PKPbc		**PKPbc**	**19 32 46.0**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=304,slow=2.2,SNR=5.0							
PZH	**PanZhiHua**	**173.51**	**121**	PKP		**PKPdf**	**19 32 56.6**	**+0.5**

MAN 08 19:18:42.4,10.67N×122.35E,h32km,mb3.7,ML2.4, MS1.9,Panay

*IDC **08** 19:19:48.9±4.1,55.83S×25.73W,h0km,mb3.8/2, mbtmp3.8/2,Error ellipse: s-maj=140.3km s-min=52.6km az=170.0*
ISC 08 19:19:51.2±1.1,55.7S±0.2×25.9W±0.3,h10km,n7,σ1s14/7, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**16.86**	**160**	P		**Pn**	**19 23 46.4**	**-0.5**
VNA3	**Neumayer Olymp**	**17.09**	**162**	P		**Pn**	**19 23 49.2**	**-0.6**
VNA2	**Neumayer--Watz**	**17.25**	**159**	P		**Pn**	**19 23 51.3**	**-0.6**
	baz=322,slow=13							
SNAA	**Sanae**	**18.78**	**157**	P		**Pn**	**19 24 12.6**	**+2.0**
LPAZ	**La Paz**	**50.79**	**304**	P		**P**	**19 28 52.5**	**+0.3**
	1.1nm,0.6s,baz=218,slow=9.3,SNR=5.0							
	1.1nm,0.6s							
TORD	**Torodi Ar. Bea**	**72.39**	**28**	P		**P**	**19 31 17.1**	**-0.1**
	0.9nm,1.0s,baz=201,slow=6.3,SNR=4.8							
	0.9nm,1.0s							
ILAR	**Eielson Array**	**150.43**	**312**	PKPbc		**PKPbc**	**19 39 40.8**	**-0.5**
	0.8nm,0.8s,baz=112,slow=1.0,SNR=5.8							

JMA 08 19:25:52.5±0.4,31.0N±0.5×12.9E±°,h0km,MV2.0/18,SW OFF KYUSHU,Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JSJ	**Shimokoshiki**	**0.86**	**40**	*eP*		Pg	19 26 09.1	+0.1
JSJ				*eS*		Sb	19 26 21.4	-1.0
JKC	**Kuchinoerabu**	**1.12**	**120**	*eP*		Pg	19 26 14.0	0.0
JSU	**Suzuyama**	**1.28**	**68**	*eP*		Pg	19 26 17.3	+0.2
JSU				*eS*		Sb	19 26 34.3	-0.3

*NNC **08** 19:27:43.3±4.2,36.87N×70.66E,h0km,mb4.4,mpv4.1, Error ellipse: s-maj=34.1km s-min=23.3km az=177.0*
*IDC **08** 19:27:44.0±3.2,36.37N×71.15E,h226km±30km,mb3.4/5, mbtmp4.0/11,MS2.7/1,Error ellipse: s-maj=27.4km s-min=17.8km az=172.0*
ISC 08 19:27:47.6±0.8,36.68N±0.07×71.04E±0.09,h250km,n33, σ1s79/36,mb3.8/5,4C-6D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CHCP	**Chirah Chowk**	**3.52**	**148**	P		**Pn**	**19 28 47.3**	**+1.4**
AML	**Almayashu**	**5.82**	**20**	P		**Pn**	**19 29 13.8**	**+0.1**
	SNR=71							
UCH	**Uchtor**	**6.16**	**25**	P		**Pn**	**19 29 18.3**	**+0.3**
	SNR=30							
EKS2	**Erkin-Say**	**6.34**	**19**	P		**Pn**	**19 29 20.7**	**+0.8**
	SNR=7.4							
KK31	**Karatay Array**	**6.43**	**357**	⇑P		**Pn**	**19 29 18.4**	**-2.6**
	16nm,0.5s,baz=183,slow=14,SNR=186							
KK31				⇓S		**S**	**19 30 31.2**	**-4.7**
	8.5nm,0.5s,baz=185,slow=26,SNR=5.0							
AAK	**Ala-Archa**	**6.52**	**23**	P		**Pn**	**19 29 22.9**	**+0.6**
	SNR=7.7							
AAK	**Ala-Archa**	**6.52**	**23**	P		**Pn**	**19 29 22.7**	**+0.4**
	11nm,0.3s,baz=206,slow=5.7,SNR=13							
AAK				S		**S**	**19 30 37.5**	**-0.7**
	21nm,0.7s,baz=332,slow=21,SNR=13							
KBK	**Karagaybulak**	**6.69**	**26**	P		**Pn**	**19 29 25.2**	**+0.8**
	SNR=6.4							
ULHL	**Ulahol**	**6.86**	**34**	P		**Pn**	**19 29 27.2**	**+0.6**
	SNR=11							
CHMS	**Chumysh**	**6.93**	**23**	P		**Pn**	**19 29 28.3**	**+1.1**
	SNR=7.5							
USP	**Ospenovka**	**7.09**	**21**	P		**Pn**	**19 29 30.2**	**+0.9**
	SNR=5.1							
TKM2	**Tokmak 2**	**7.15**	**28**	P		**Pn**	**19 29 30.7**	**+0.4**
	SNR=18							
TKM2	**Tokmak 2**	**7.15**	**28**	⇓P		**Pn**	**19 29 30.3**	**0.0**
	6.0nm,0.5s							
TKM2				⇑S		**S**	**19 30 49.8**	**-2.9**
	27nm,0.9s							
MDOK	**Medeo**	**7.95**	**34**	⇓P		**Pn**	**19 29 41.2**	**+0.9**
	4.4nm,0.6s							
MDOK				S		**S**	**19 31 12.6**	**+1.5**
	10.0nm,0.9s							
GEYT	**Alibeck**	**10.38**	**281**	P		P	19 30 09.4	-6.7
	2.9nm,0.5s,baz=183,slow=13,SNR=5.3							
OTUK	**Ortayu**	**11.60**	**4**	⇓P		**Pn**	**19 30 25.9**	**-0.2**
	8.2nm,0.8s							
MKAR	**Makanchi Array**	**13.13**	**36**	P		**P**	**19 30 45.8**	**-0.8**
	1.2nm,0.6s,baz=224,slow=14,SNR=18							
GKN	**Gorkha**	**14.37**	**123**	*eP*		P	19 31 04.0	+3.3
KURBB	**Kurchatov Arra**	**14.94**	**19**	P		**Pn**	**19 31 06.6**	**-0.3**
	2.5nm,0.6s,baz=211,slow=11,SNR=21							
AB31	**Akbulak array**	**14.95**	**331**	⇓P		Pn	19 31 09.4	+2.5
	1.2nm,0.7s,baz=141,slow=13,SNR=11							
AB31				⇑S		**S**	**19 33 54.6**	**+2.9**
	2.3nm,0.9s,baz=149,slow=22,SNR=6.7							
PKIN	**Phulchoki**	**15.16**	**123**	*eP*		**Pn**	**19 31 12.3**	**+2.3**
	12nm,0.5s							
PKI	**Pulchoki**	**15.17**	**123**	*eP*		**Pn**	**19 31 12.4**	**+2.2**
	4.7nm,0.3s							
GUN	**Gumba**	**15.28**	**121**	*eP*		**Pn**	**19 31 11.9**	**+0.4**
	22nm,0.8s							
JIRN	**Jiri**	**15.65**	**121**	*eP*		**Pn**	**19 31 16.0**	**+0.1**
	4.3nm,0.5s							
RAMN	**Ramite**	**16.38**	**122**	*eP*		**Pn**	**19 31 21.8**	**-2.7**
	7.1nm,0.5s							
AKTO	**Aktyubinsk**	**16.64**	**330**	P		**Pn**	**19 31 26.7**	**-0.4**
	5.8nm,0.6s,baz=133,slow=11,SNR=20							
AKTO				S		**S**	**19 34 25.5**	**-0.6**
	1.1nm,0.6s,baz=317,slow=19,SNR=3.0							
AKTO				LR		LR	19 38 51.6	
	comp=Z,21nm,18.0s,baz=120,slow=39							
AKTO	**Aktyubinsk**	**16.64**	**330**	⇓P		**Pn**	**19 31 31.2**	**+4.1**
	6.2nm,0.7s							
AKTO				⇑S		S	19 34 34.8	+8.7
	5.7nm,1.2s							
ZALV	**Zalesovo Beam**	**19.74**	**25**	P		**P**	**19 31 59.3**	**+0.8**
	1.6nm,0.5s,baz=219,slow=9.8,SNR=8.5							
BELG	**Belogornoye**	**22.77**	**321**	P		**P**	**19 32 30.1**	**+1.8**
	7.7nm,0.6s,baz=30,slow=2.4,SNR=4.4							
	7.7nm,0.6s							
FINES	**FINESS Array B**	**37.36**	**326**	P		**P**	**19 34 36.9**	**+0.9**
	2.4nm,0.8s,baz=119,slow=6.7,SNR=5.8							
	2.4nm,0.8s							
TORD	**Torodi Ar. Bea**	**65.76**	**269**	P		**P**	**19 38 05.3**	**-0.9**
	1.4nm,0.7s,baz=48,slow=5.4,SNR=13							
	1.4nm,0.7s							
WRA	**Warramunga Arr**	**82.06**	**122**	P		**P**	**19 39 38.0**	**-2.2**
	0.3nm,1.0s,baz=315,slow=5.5,SNR=1.7							
	0.3nm,1.0s							
ASAR	**Alice Springs**	**84.33**	**125**	P		**P**	**19 39 49.5**	**-2.2**
	0.7nm,1.1s,baz=321,slow=5.1,SNR=2.4							
	0.7nm,1.1s							

*JMA **08** 19:31:51.5±0.2,42.0N±0.7×142.6E±0.7,h63km±1km, MV3.3/40,S OFF URAKAWA*
*IDC **08** 19:31:53.3±2.9,42.11N×142.82E,h85km±21km,mb3.3/7, mbtmp3.6/9,Error ellipse: s-maj=37.4km s-min=21.7km az=102.0*
ISC 08 19:31:51.4±0.9,42.00N±0.05×142.56E±0.04,h62km±7km, n32,σ0s54/39,mb3.5/7,13D,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JNBK	**Urakawa-nobuka**	**0.32**	**26**	*i* P		**Pn**	**19 32 01.7**	**-0.2**
JNBK				*eS*		**Sn**	**19 32 09.4**	**-0.1**
JSHD	**Hidakashinhida**	**0.42**	**350**	P		**Pn**	**19 32 02.9**	**+0.2**
JSHD				*eS*		**Sn**	**19 32 11.5**	**+0.5**
JEM	**Erimo**	**0.44**	**87**	P		**Pn**	**19 32 03.3**	**+0.4**
JEM				*eS*		**Sn**	**19 32 11.6**	**+0.2**
JTHR	**Tokachihiroo**	**0.62**	**61**	P		**Pn**	**19 32 05.0**	**+0.1**
JTHR				*eS*		**Sn**	**19 32 14.9**	**+0.2**
JIAM	**Iburiatsuma**	**0.79**	**323**	⇓P		**Pn**	**19 32 07.5**	**+0.7**
JBT2	**Biratori 2**	**0.80**	**349**	*eS*		**Sn**	**19 32 18.1**	**-0.3**
JCH	**Churui**	**0.86**	**44**	P		**Pn**	**19 32 07.6**	**-0.1**
JCH				*eS*		**Sn**	**19 32 19.4**	**-0.3**
JKB	**Kayabe**	**1.15**	**265**	⇓P		**Pn**	**19 32 11.6**	**+0.2**
JKB				⇓*eS*		**Sn**	**19 32 26.4**	**+0.1**
JFR	**Furan**	**1.17**	**1**	⇓*eP*		**Pn**	**19 32 11.3**	**-0.4**
JEW	**Eniwo**	**1.18**	**316**	⇓P		**Pn**	**19 32 12.1**	**+0.3**
JEW				⇓*eS*		**Sn**	**19 32 27.3**	**+0.2**
JNB	**Noboribetsu**	**1.23**	**293**	⇓*eP*		**Pn**	**19 32 12.0**	**-0.5**
JOT	**Ohata**	**1.29**	**242**	⇓*eP*		**Pn**	**19 32 13.7**	**+0.4**
JOT				⇓*eS*		**Sn**	**19 32 30.2**	**+0.5**
JOB	**Onbets**	**1.31**	**46**	*eP*		**Pn**	**19 32 14.5**	**+1.0**
JOB				*eS*		**Sn**	**19 32 31.3**	**+1.2**
JAB	**Ashibetsu**	**1.53**	**351**	⇓*eP*		**Pn**	**19 32 16.7**	**+0.3**
JAB				⇓*eS*		**Sn**	**19 32 36.1**	**+0.7**
JISS	**Ishikarishitsu**	**1.53**	**327**	⇓*eP*		**Pn**	**19 32 16.8**	**+0.3**
JISS				⇓*eS*		**Sn**	**19 32 36.2**	**+0.8**
JAR	**Ashorobuto**	**1.58**	**34**	*eP*		**Pn**	**19 32 17.3**	**+0.2**
JAR				*eS*		**Sn**	**19 32 36.5**	**0.0**
JYM2	**Yakumo 2**	**1.64**	**275**	*eP*		**Pn**	**19 32 18.2**	**+0.2**
JYM2				*eS*		**Sn**	**19 32 38.3**	**+0.3**
ASAJ	**Asahikawa**	**2.12**	**1**	P		**Pn**	**19 32 25.4**	**+0.9**
	33nm,0.3s,baz=219,slow=9.7,SNR=164							
ASAJ				S		**Sn**	**19 32 50.5**	**+0.8**
	40nm,0.5s,baz=64,slow=32,SNR=15							
KSRS	**Korea Array**	**12.15**	**253**	P		Pn	19 34 47.2	+5.7
	1.1nm,0.7s,baz=66,slow=14,SNR=6.4							
SEY	**Seymchan**	**21.76**	**12**	P		**P**	**19 36 35.9**	**-1.6**
	1.0nm,0.8s,baz=214,slow=9.9,SNR=4.1							
	1.0nm,0.8s							
H11N2	**WAKE ISLAND Hy**	**30.29**	**130**	T		T	20 09 34.7	
	baz=324,slow=75,SNR=34							
H11N1	**WAKE ISLAND Hy**	**30.30**	**130**	T		T	20 09 32.9	
	baz=324,slow=75,SNR=37							
H11N3	**WAKE ISLAND Hy**	**30.30**	**130**	T		T	20 09 36.2	
	baz=324,slow=75,SNR=36							
H11S1	**WAKE ISLAND Hy**	**31.15**	**131**	T		T	20 10 38.9	
	baz=325,slow=76,SNR=50							
H11S3	**WAKE ISLAND Hy**	**31.15**	**131**	T		T	20 10 32.0	
	baz=325,slow=76,SNR=48							
H11S2	**WAKE ISLAND Hy**	**31.17**	**131**	T		T	20 10 40.2	
	baz=325,slow=76,SNR=39							
ZALV	**Zalesovo Beam**	**39.39**	**308**	P		**P**	**19 39 14

NACB	**Ninganchiao**	**0.39**	**285**	*i*	P		**Pn**	**20 17 55.2**	**+0.2**
	baz=272								
NACB				*i*	S		**Sn**	**20 18 01.7**	**+0.4**
	baz=272								
TEYL	**Yanliau Villag**	**0.42**	**241**		P		**Pn**	**20 17 56.4**	**+1.0**
	baz=234								
TEYL					S		**Sn**	**20 18 04.3**	**+2.2**
	baz=234								
EWUT	**Wuta**	**0.42**	**331**	*i*	P		**Pn**	**20 17 56.0**	**+0.5**
	baz=332								
EWUT				*i*	S		**Sn**	**20 18 02.5**	**+0.3**
	baz=332								
ENA	**Nanau**	**0.43**	**326**	*i*	P		**Pn**	**20 17 55.8**	**+0.3**
	baz=319								
ENA				*i*	S		**Sn**	**20 18 02.8**	**+0.5**
	baz=319								
ETM	**Tongmen**	**0.48**	**257**		P		**Pn**	**20 17 56.8**	**+0.6**
	baz=248								
ETLH	**Xiulin Townshi**	**0.49**	**286**	*i*	P		**Pn**	**20 17 56.9**	**+0.4**
	baz=279								
ETLH				*i*	S		**Sn**	**20 18 04.5**	**+0.4**
	baz=279								
TWC	**Suao**	**0.55**	**345**	*i*	P		**Pn**	**20 17 57.6**	**+0.4**
	baz=355								
TWC				*i*	S		**Sb**	**20 18 05.4**	**+0.6**
	baz=355								
TEGC	**Jichi Village**	**0.56**	**229**	*e*	P		**Pn**	**20 17 58.4**	**+1.1**
	baz=221								
TEGC				*e*	S		**Sn**	**20 18 07.6**	**+2.2**
	baz=221								
ESL	**Shilin**	**0.58**	**244**	*i*	P		**Pn**	**20 17 58.2**	**+0.6**
	baz=242								
ESL				*i*	S		**Sn**	**20 18 07.1**	**+1.1**
	baz=242								
NDS	**Dongshan**	**0.62**	**335**	*i*	P		**Pb**	**20 17 58.1**	**+0.1**
	baz=336								
NDS				*i*	S		**Sb**	**20 18 07.0**	**+0.4**
	baz=336								
LATG	**Datong**	**0.63**	**317**	*i*	P		**Pn**	**20 17 58.7**	**+0.2**
	baz=315								
LATG				*i*	S		**Sb**	**20 18 07.1**	**0.0**
	baz=315								
EGFH	**Guangfu**	**0.66**	**233**	*i*	P		**Pn**	**20 17 59.6**	**+0.8**
	baz=220								
EGFH				*i*	S		**Sn**	**20 18 09.0**	**+0.9**
	baz=220								
NNSB	**Datong**	**0.67**	**302**		P		**Pn**	**20 17 59.1**	**+0.1**
	baz=299								
NNSB					S		**Sb**	**20 18 08.3**	**+0.3**
	baz=299								
WHF	**Hehuan Shan**	**0.68**	**276**	*i*	P		**Pn**	**20 17 59.6**	**+0.2**
	baz=262								
WHF				*i*	S		**Sb**	**20 18 08.8**	**+0.2**
	baz=262								
NNS	**Nan Shan**	**0.68**	**303**	*i*	P		**Pn**	**20 17 59.3**	**+0.2**
	baz=300								
NNS				*i*	S		**Sb**	**20 18 08.7**	**+0.3**
	baz=300								
ENTT	**Nioudou**	**0.69**	**325**	*i*	P		**Pb**	**20 17 59.3**	**0.0**
	baz=325								
ENTT				*i*	S		**Sb**	**20 18 09.0**	**+0.4**
	baz=325								
FUSS	**Fushou**	**0.71**	**284**	*i*	P		**Pn**	**20 18 00.2**	**+0.5**
	baz=279								
FUSS				*i*	S		**Sb**	**20 18 09.5**	**0.0**
	baz=279								
TWE	**Neicheng**	**0.71**	**335**	*i*	P		**Pn**	**20 17 59.7**	**+0.2**
	baz=337								
TWE				*i*	S		**Sb**	**20 18 09.4**	**+0.2**
	baz=337								
ILA	**Ilan**	**0.73**	**342**	*i*	S		**Sb**	**20 18 10.1**	**+0.5**
	baz=339								
CHGB	**Renai**	**0.76**	**269**	*i*	P		**Pn**	**20 18 01.0**	**+0.7**
	baz=256								
CHGB				*i*	S		**Sn**	**20 18 11.0**	**+0.3**
	baz=256								
OWD	**Renai**	**0.76**	**261**	*i*	P		**Pn**	**20 18 01.1**	**+0.7**
	baz=255								
OWD				*i*	S		**Sb**	**20 18 10.6**	**-0.1**
	baz=255								
EGS		**0.77**	**355**	*i*	P		**Pn**	**20 18 01.1**	**+0.8**
	baz=359								
EGS				*i*	S		**Sn**	**20 18 11.5**	**+0.7**
	baz=359								
TWT	**Tachien**	**0.78**	**284**	*i*	P		**Pn**	**20 18 01.4**	**+0.9**
	baz=271								
TWT				*i*	S		**Sn**	**20 18 11.7**	**+0.5**
	baz=271								
FUSB	**Fushanzhiwuyua**	**0.78**	**331**		P		**Pn**	**20 18 00.9**	**+0.4**
	baz=331								
FUSB					S		**Sb**	**20 18 11.2**	**+0.1**
	baz=331								
HGSD	**Ruisui**	**0.78**	**223**	*i*	P		**Pn**	**20 18 01.5**	**+1.0**
	baz=213								
TDCB	**Techi**	**0.79**	**283**		P		**Pn**	**20 18 01.2**	**+0.5**
	baz=271								
TDCB					S		**Sb**	**20 18 11.6**	**+0.1**
	baz=271								
NTC	**Toucheng**	**0.79**	**349**	*i*	P		**Pn**	**20 18 01.3**	**+0.7**
	baz=3.0								
NTC				*i*	S		**Sb**	**20 18 11.2**	**-0.3**
	baz=3.0								
WUSB	**Renai**	**0.81**	**265**		P		**Pn**	**20 18 01.8**	**+0.8**
	baz=259								
WUSB					S		**Sn**	**20 18 12.3**	**+0.3**
	baz=259								
YHNB	**Yeheng**	**0.82**	**316**	*i*	P		**Pn**	**20 18 01.4**	**+0.3**
	baz=306								
YHNB				*i*	S		**Sb**	**20 18 11.4**	**-1.0**
	baz=306								
NWLT	**Wulai**	**0.84**	**327**	*i*	P		**Pn**	**20 18 01.5**	**+0.3**
	baz=327								
NWLT				*i*	S		**Sb**	**20 18 12.1**	**-0.6**
	baz=327								
EHY	**Hungye**	**0.84**	**228**	*i*	P		**Pn**	**20 18 01.7**	**+0.5**
	baz=222								
EHY				*i*	S		**Sn**	**20 18 13.0**	**+0.5**
	baz=222								
NSK	**Sanguang**	**0.84**	**316**	*i*	P		**Pn**	**20 18 01.5**	**+0.2**
	baz=306								
NSK				*i*	S		**Sb**	**20 18 11.8**	**-1.0**
	baz=306								
VWDT	**VWDT**	**0.85**	**248**		P		**Pb**	**20 18 02.4**	**+0.5**
	baz=234								
VWDT					S		**Sn**	**20 18 13.8**	**+1.1**
	baz=234								
TIPB	**Shuangxi**	**0.91**	**350**		P		**Pb**	**20 18 03.2**	**+0.3**
TIPB					S		**Sb**	**20 18 14.2**	**-0.6**
TWB1	**Santiao Chiao**	**0.93**	**359**	*i*	P		**Pb**	**20 18 03.0**	**-0.2**
	baz=2.0								
TWB1				*i*	S		**Sb**	**20 18 14.1**	**-1.3**
	baz=2.0								
YULB	**Yu-li**	**0.94**	**224**		P		**Pb**	**20 18 03.0**	**-0.3**
	baz=230								
JYNG	**Yonagunijimaku**	**0.94**	**66**		P		**Pb**	**20 18 03.7**	**+0.3**
JYNG					S		**Sn**	**20 18 16.2**	**+1.3**
EYUL	**Yuli**	**0.95**	**221**	*i*	P		**Pb**	**20 18 04.4**	**+0.7**
	baz=228								
EYUL				*i*	S		**Sn**	**20 18 16.5**	**+1.1**
	baz=228								
NFF	**Wufeng Townshi**	**0.98**	**305**	*i*	P		**Pb**	**20 18 04.2**	**+0.1**
	baz=302								
NFF					S		**Sn**	**20 18 15.8**	**-0.3**
	baz=302								
TWA	**Mucha**	**0.98**	**337**	*i*	P		**Pb**	**20 18 04.4**	**+0.3**
	baz=338								
TWA				*i*	S		**Sn**	**20 18 16.6**	**+0.6**
	baz=338								
WHP	**Taichung City**	**0.98**	**282**	*i*	P		**Pb**	**20 18 04.5**	**+0.3**
	baz=272								
WHP				*i*	S		**Sn**	**20 18 16.9**	**+0.6**
	baz=272								
NHDH	**Xindian Distri**	**0.99**	**334**	*i*	P		**Pb**	**20 18 04.2**	**0.0**
	baz=324								
NHDH				*i*	S		**Sn**	**20 18 16.2**	**+0.1**
	baz=324								
WCS	**Beigang Elemen**	**1.00**	**269**		P		**Pb**	**20 18 04.6**	**+0.2**
	baz=261								
WCS					S		**Sb**	**20 18 17.4**	**+0.3**
	baz=261								
SSLB	**Suanglung**	**1.00**	**254**		P		**Pb**	**20 18 04.6**	**+0.1**
	baz=253								
SSLB					S		**Sb**	**20 18 16.9**	**-0.4**
	baz=253								
YOJ	**Yonaguni jima**	**1.00**	**67**	*i*	P		**Pb**	**20 18 04.5**	**+0.1**
	baz=71								
YOJ				*i*	S		**Sb**	**20 18 17.5**	**+0.3**
	baz=71								
YOJ	**Yonaguni jima**	**1.00**	**67**		P		**Pb**	**20 18 04.5**	**+0.1**
YOJ					S		**Sb**	**20 18 17.5**	**+0.3**
NWF	**Wu-fen Shan**	**1.01**	**349**	*i*	P		**Pb**	**20 18 04.6**	**-0.1**
	baz=350								
NWF				*i*	S		**Sn**	**20 18 17.5**	**+0.5**
	baz=350								
SXI1	**Grass Mountain**	**1.02**	**354**		P		**Pb**	**20 18 04.6**	**-0.3**
	baz=10.0								
SXI1					S		**Sn**	**20 18 17.6**	**+0.4**
	baz=10.0								
SMLT	**Sun Moon Lake**	**1.02**	**260**	*i*	P		**Pb**	**20 18 05.2**	**+0.3**
	baz=252								
SMLT				*i*	S		**Sb**	**20 18 18.1**	**0.0**
	baz=252								
TYC	**Yuchr**	**1.06**	**261**	*i*	P		**Pb**	**20 18 05.7**	**+0.3**
	baz=249								
TYC				*i*	S		**Sb**	**20 18 18.6**	**-0.4**
	baz=249								
LIOB	**Emei**	**1.06**	**303**	*i*	P		**Pb**	**20 18 06.0**	**+0.5**
	baz=294								
LIOB				*i*	S		**Sb**	**20 18 19.5**	**+0.3**
	baz=294								
NSTT	**Nanjuang**	**1.07**	**302**	*i*	P		**Pb**	**20 18 05.8**	**+0.2**
	baz=293								
NSTT				*i*	S		**Sn**	**20 18 19.0**	**+0.9**
	baz=293								
FULB	**Fuli**	**1.08**	**217**	*i*	P		**Pb**	**20 18 05.2**	**-0.7**
	baz=202								
FULB					S		**Sb**	**20 18 19.7**	**0.0**
	baz=202								
YUS	**Yu-Shan**	**1.12**	**239**	*i*	P		**Pb**	**20 18 07.1**	**+0.3**
	baz=226								
YUS				*i*	S		**Sb**	**20 18 20.8**	**-0.4**
	baz=226								
YM01	**YM01**	**1.14**	**340**		P		**Pn**	**20 18 05.9**	**+0.5**
	baz=327								
YM01					S		**Sn**	**20 18 20.6**	**+0.7**
	baz=327								
TWS1	**Kuangyinshan**	**1.15**	**333**	*i*	P		**Pn**	**20 18 06.2**	**+0.7**
	baz=333								
TWS1				*i*	S		**Sn**	**20 18 21.4**	**+1.1**
	baz=333								
TWQ1	**Liyutan**	**1.15**	**284**	*i*	P		**Pb**	**20 18 07.6**	**+0.6**
	baz=280								
TWQ1				*i*	S		**Sb**	**20 18 22.6**	**+0.9**
	baz=280								
NCUH	**Zhongli**	**1.16**	**320**		P		**Pn**	**20 18 06.0**	**+0.3**
	baz=320								
NCUH					S		**Sn**	**20 18 20.9**	**+0.5**
	baz=320								
SBCB	**Hsinchu**	**1.17**	**308**		P		**Pb**	**20 18 07.6**	**+0.3**
	baz=306								
SBCB					S		**Sb**	**20 18 22.6**	**+0.5**
	baz=306								
WJS	**Zhushan**	**1.19**	**258**	*i*	P		**Pb**	**20 18 08.6**	**+1.0**
	baz=254								
WJS				*i*	S		**Sb**	**20 18 23.8**	**+1.1**
	baz=254								
NMLH	**Miaoli**	**1.20**	**293**	*i*	P		**Pb**	**20 18 07.8**	**+0.1**
	baz=290								
NTST	**Danshui**	**1.20**	**335**		P		**Pn**	**20 18 06.4**	**+0.3**
	baz=349								
NTST					S		**Sn**	**20 18 21.6**	**+0.3**
	baz=349								
TCU	**Taichung**	**1.21**	**274**		P		**Pb**	**20 18 08.3**	**+0.3**
	baz=270								
WNT	**Mingjian**	**1.22**	**261**		P		**Pb**	**20 18 09.1**	**+1.0**
	baz=257								
ALS	**Alishan**	**1.23**	**243**		P		**Pb**	**20 18 09.0**	**+0.5**
	baz=230								
ELDTW	**Lidau**	**1.26**	**226**		P		**Pb**	**20 18 07.9**	**-1.0**
	baz=214								
EDH	**Donghe**	**1.27**	**210**		P		**Pn**	**20 18 07.5**	**+0.4**
	baz=198								
WDJ	**Dajia District**	**1.27**	**283**	*i*	P		**Pb**	**20 18 08.8**	**-0.2**
	baz=279								
WDJ				*i*	S		**Sb**	**20 18 25.6**	**+0.5**
	baz=279								
WCHH	**Zhanghua**	**1.32**	**271**		P		**Pb**	**20 18 09.6**	**-0.1**
	baz=267								
WDLH	**Douliu**	**1.39**	**254**		P		**Pb**	**20 18 11.0**	**0.0**
	baz=250								
LONT	**Longtian**	**1.41**	**215**		P		**Pn**	**20 18 09.5**	**+0.4**
	baz=212								
LONT					S		**Sb**	**20 18 28.8**	**-0.1**
	baz=212								
STYH	**Taoyuan**	**1.44**	**232**		P		**Pb**	**20 18 11.2**	**-0.6**
	baz=223								
STYH					S		**Sb**	**20 18 29.3**	**-0.5**
	baz=223								
TPUB	**Ta-pu**	**1.47**	**239**		P		**Pb**	**20 18 12.5**	**+0.1**
	baz=235								
TPUB					S		**Sb**	**20 18 31.4**	**+0.6**
	baz=235								
LDUT	**Ludao**	**1.48**	**199**	*i*	P		**Pn**	**20 18 10.1**	**+0.1**
	baz=196								
WRL	**Guolierlin Hig**	**1.50**	**264**		P		**Pb**	**20 18 12.0**	**-0.7**
	baz=260								
CHN2	**Minshiung**	**1.50**	**249**		P		**Pb**	**20 18 13.7**	**+0.9**
	baz=245								
TWG	**Pinlang**	**1.51**	**215**		P		**Pb**	**20 18 11.5**	**-1.6**
	baz=212								
TWG					S		**Sn**	**20 18 30.0**	**+1.0**
	baz=212								
WTP	**Ta-pu**	**1.52**	**237**		P		**Pb**	**20 18 13.4**	**+0.3**
	baz=233								
WTK	**Tuku**	**1.52**	**256**	*i*	P		**Pb**	**20 18 13.1**	**-0.2**
	baz=252								
PCYT	**Pengchaiyu**	**1.55**	**2**	*e*	P		**Pn**	**20 18 11.3**	**+0.3**
	baz=6.0								
CHY	**Chiayi**	**1.55**	**249**	*i*	P		**Pb**	**20 18 13.7**	**-0.1**
	baz=244								
IRIF	**Iriomote-Funau**	**1.60**	**80**	*i*	P		**Pb**	**20 18 12.8**	**-1.7**
IRIF				*e*	S		**Sn**	**20 18 32.4**	**+1.2**
TWK	**Hsinying**	**1.60**	**240**	*i*	P		**Pb**	**20 18 14.3**	**-0.3**
	baz=236								
CHN1	**Nanshi**	**1.61**	**237**	*i*	P		**Pb**	**20 18 14.7**	**-0.1**
	baz=233								
SNST	**Tainan City**	**1.62**	**239**	*i*	P		**Pb**	**20 18 14.9**	**0.0**
	baz=235								
SNST				*i*	S		**Sb**	**20 18 35.0**	**0.0**
	baz=235								
SGST	**Jiashian**	**1.63**	**233**	*i*	P		**Pb**	**20 18 14.2**	**-0.9**
	baz=229								
SGST				*i*	S		**Sb**	**20 18 34.4**	**-0.9**
	baz=229								
HATJ	**Hateruma jima**	**1.65**	**90**		P		**Pb**	**20 18 14.2**	**-1.2**
HATJ					S		**Sb**	**20 18 34.8**	**-1.0**
WSF	**Szhu**	**1.69**	**255**	*i*	P		**Pb**	**20 18 15.2**	**-0.8**
	baz=251								
WSL	**Shuilin Townsh**	**1.71**	**252**		P		**Pb**	**20 18 15.5**	**-0.9**
	baz=247								
WSL					S		**Sb**	**20 18 37.4**	**-0.3**
	baz=247								
ICHU	**Yijhu**	**1.73**	**246**		P		**Pb**	**20 18 16.4**	**-0.3**
	baz=241								
ICHU					S		**Sb**	**20 18 37.5**	**-0.6**
	baz=241								
CHN8	**Yiju**	**1.79**	**247**		P		**Pb**	**20 18 16.6**	**-1.2**
	baz=242								
SCST	**Cishan**	**1.82**	**230**		P		**Pb**	**20 18 18.2**	**0.0**
	baz=226								
SSD	**Sandimen**	**1.82**	**224**	*i*	P		**Pb**	**20 18 17.5**	**-0.9**
	baz=211								
SSD				*i*	S		**Sb**	**20 18 40.0**	**-0.8**
	baz=211								
JKRS	**Kuro-shima**	**1.84**	**84**		P		**Pb**	**20 18 17.0**	**-1.6**
JKRS					S		**Sb**	**20 18 39.6**	**-1.7**
TSMG	**Majia**	**1.84**	**223**	*e*	P		**Pb**	**20 18 18.0**	**-0.7**
	baz=210								
TSMG				*e*	S		**Sb**	**20 18 39.4**	**-2.0**
	baz=210								
MASBT	**Mashibuluo**	**1.92**	**221**		P		**Pb**	**20 18 18.5**	**-1.5**
	baz=210								
MASBT					S		**Sb**	**20 18 43.2**	**-0.4**
	baz=210								
JIJ	**Ishigaki jima**	**1.98**	**81**		P		**Pn**	**20 18 18.1**	**+1.2**
JIJ					S		**Sn**	**20 18 41.1**	**+0.6**
TSCK	**Chigu Township**	**1.98**	**243**		P		**Pb**	**20 18 18.9**	**-2.1**
	baz=238								
TSCK					S		**Sb**	**20 18 43.4**	**-2.0**
	baz=238								
TAW	**Tawu**	**1.99**	**211**	*e*	P		**Pb**	**20 18 19.1**	**-2.0**
	baz=208								
EAST	**Anshuo**	**1.99**	**212**		P		**Pn**	**20 18 18.1**	**+1.0**
	baz=209								
LYUB	**Lan-yu**	**2.10**	**191**	*e*	P		**Pn**	**20 18 18.3**	**-0.2**
	baz=188								
SLIU	**Shizi**	**2.15**	**211**		P		**Pn**	**20 18 20.5**	**+1.2**
	baz=208								
JISG	**Ishigakijimahi**	**2.17**	**76**		P		**Pn**	**20 18 20.4**	**+0.9**
JISG					S		**Sn**	**20 18 45.5**	**+0.3**
PHUB	**P'eng-hu**	**2.29**	**256**		P		**Pn**	**20 18 21.7**	**+0.5**
	baz=251								
PHUB					S		**Sn**	**20 18 49.6**	**+1.2**
	baz=251								
WDGT	**Dungji**	**2.29**	**250**		P		**Pn**	**20 18 22.6**	**+1.4**
	baz=243								
WDGT					S		**Sn**	**20 18 49.2**	**+0.8**
	baz=243								
PNG	**Penghu**	**2.30**	**258**	*i*	P		**Pn**	**20 18 21.7**	**+0.5**
	baz=252								
PNG				*i*	S		**Sn**	**20 18 49.5**	**+1.0**
	baz=252								
HEN	**Hengchun**	**2.36**	**210**		S		**Sn**	**20 18 51.5**	**+1.4**
	baz=200								
VWUC	**VWUC**	**2.50**	**292**		P		**Pn**	**20 18 23.4**	**-0.6**
	baz=290								
VCHM	**Qimei**	**2.51**	**250**	*e*	P		**Pn**	**20 18 25.7**	**+1.5**
	baz=234								
VCHM				*e*	S		**Sn**	**20 18 55.3**	**+1.6**
	baz=234								
JTJ	**Tarama**	**2.53**	**77**		P		**Pn**	**20 18 26.3**	**+1.8**
JTJ				*e*	S		**Sn**	**20 18 55.2**	**+1.1**
MATB	**Ma-tsu**	**2.79**	**318**	*e*	P		**Pn**	**20 18 27.7**	**-0.3**
	baz=319								
PTMZ	**Houxiangcun**	**2.79**	**291**	*e*	P		**Pn**	**20 18 28.3**	**+0.2**
	baz=289								
JIRB	**Irabujima**	**2.99**	**75**		P		**Pn**	**20 18 32.2**	**+1.5**
JIRB				*e*	S		**Sn**	**20 19 06.6**	**+1.1**
JIKM	**Ikemajima**	**3.08**	**73**		S		**Sn**	**20 19 10.2**	**+2.5**
JMJ2	**Miyako jima3**	**3.10**	**77**		P		**Pn**	**20 18 34.4**	**+2.0**
JMJ2					S		**Sn**	**20 19 10.5**	**+2.1**
JOGS	**Gusukube**	**3.18**	**77**		P		**Pn**	**20 18 35.5**	**+2.1**
JOGS					S		**Sn**	**20 19 12.4**	**+2.2**
LYJJ	**Jianjiangzhen**	**3.19**	**321**	*e*	P		**Pn**	**20 18 33.1**	**-0.4**
	baz=322								
KNM	**Kinmen**	**3.27**	**277**	*e*	P		**Pn**	**20 18 36.5**	**+1.8**
	baz=274								
XPSS	**Dashiqiu**	**3.28**	**330**		P		**Pn**	**20 18 34.6**	**-0.2**
	baz=332								
KNMB	**Chin-men Tao**	**3.32**	**277**	*e*	P		**Pn**	**20 18 34.9**	**-0.4**
	baz=275								
AXDP	**Jialang**	**3.76**	**283**	*e*	P		**Pn**	**20 18 41.6**	**+0.2**
	baz=270								
ZPLA	**Ao Xicun**	**3.89**	**269**	*e*	P		**Pn**	**20 18 43.0**	**-0.2**
	baz=265								
SXFK	**Yanhouchang**	**4.58**	**301**	*e*	P		**Pn**	**20 18 51.8**	**-0.9**
	baz=300								

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*ARE **08** 20:18:26.2,2.2, 4.2°31S±0.1°06×76.2°92W±0.1°06, h132km±4km, Error ellipse: s-maj=10.2km s-min=6.1km az=48.0*

*IDC **08** 20:18:28.0±1.6, 4.2°22S×76.2°83W, h109km±16km, mb4.3/26, mbtmp4.7/32, MS3.5/9, Error ellipse: s-maj=13.5km s-min=10.0km az=50.0*

*NEIC **08** 20:18:27.6±2.2, 4.2°27S±0.1°06×76.2°88W±0.1°07, h103km±5km, mb4.9/466, ML4.9(ARE), Error ellipse: s-maj=10.8km s-min=8.2km az=59.0*

*GCMT **08** 20:18:27.6±0.4, 4.2°21S±0.1°03×76.2°88W±0.1°03, h121km±5km, MW4.8/75, Moment Tensor Solution. s17,c17; s75,c90; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.61±.07; $M_{\theta\theta}$0.07±.10; $M_{\phi\phi}$1.55±.12; $M_{r\theta}$-0.46±.06; $M_{\theta\phi}$-0.40±.11; $M_{\phi r}$0.65±.09; Best double couple: $M_0$1.81300×10^{16} NP1:ϕ_s355.00000°, δ33.00000°, λ-75.00000°. NP2: ϕ_s157.00000°, δ58.00000°, λ-100.00000°. Principal axes: T 1.8120, Plg12.0000°, Azm254.0000°; N 0.0090, Plg8.0000°, Azm162.0000°; P -1.8150, Plg75.0000°, Azm39.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*VAO **08** 20:18:29.7±0.6, 4.2°25S×76.2°55W, h106km±5km, mb4.9*

ISC 08 20:18:27.0±0.3, **4.2°25S**±0.1°04×**76.2°79W**±0.1°05, **h103**km±2km, **h103km:pP-P,n868,σ1=03/898, mb4.9**/255, **55C-88D, Fault plane solution: NP1**:ϕ_s3.03349°, δ43.96101°, λ-46.33708°. **NP2:**ϕ_s130.05772°, δ59.85624°, λ-123.65639°. **Principal axes:** T Plg8.8527°, Azm243.4242°; N Plg28.6373°, Azm148.5453°; P Plg59.7770°, Azm348.9315°; **Northern Peru**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BOSC	**San Juan Bosco**	**2.02**	**303**			Pn	**Pn**	**20 18 59.9**	**-0.4**
COHC	**Cochancay**	**3.03**	**306**				**Pn**	**20 19 14.9**	**+1.6**
ATAH	**Atahualpa**	**3.28**	**209**	P			**Pn**	**20 19 19.4**	**+2.4**
	2µm,0.5s,baz=24,slow=11,SNR=1482								
ATAH				S			**Sn**	**20 19 56.5**	**+1.1**
	3µm,0.9s,baz=150,slow=17,SNR=14								
ARNL	**Arenillas**	**3.34**	**282**				**Pn**	**20 19 16.7**	**-0.7**
PORT	**Chimborazo Vol**	**3.41**	**324**				**Pn**	**20 19 22.1**	**+3.2**
SLOR	**San Lorenzo -**	**3.89**	**334**				**Pn**	**20 19 27.8**	**+2.5**
OTAV	**Otavalo**	**4.76**	**340**			Pn	**Pn**	**20 19 38.8**	**+1.8**
OTAV	**Otavalo**	**4.76**	**340**	*e*	P		**Pn**	**20 19 40.8**	**+3.8**
OTAV	**Otavalo**	**4.76**	**340**	*e*	P		**Pn**	**20 19 40.8**	**+3.8**
CUSE	**Cuicocha Este**	**4.80**	**340**	*e*	P		**Pn**	**20 19 41.9**	**+4.3**
PTLC	**Puerto Leguiza**	**4.82**	**24**	*e*	P		**Pn**	**20 19 35.0**	**-2.4**
PAC1	**Pacto, Paraso**	**4.91**	**336**	*e*	P		**Pn**	**20 19 42.9**	**+4.1**
TULM	**Tulcn-Chalpat**	**5.04**	**349**		Pn		**Pn**	**20 19 41.6**	**+0.9**
TULM	**Tulcn-Chalpat**	**5.04**	**349**	*e*	P		**Pn**	**20 19 43.0**	**+2.2**
CMBC	**Cumbal**	**5.26**	**349**	*e*	P		Pn	20 19 53.1	+9.3
CZSB	**Cruzeiro do Su**	**5.33**	**131**	*e*	P		**Pn**	**20 19 45.9**	**+1.5**
CCUFI	**Cufio, Nario**	**5.47**	**354**	*e*	P		**Pn**	**20 19 49.7**	**+3.0**
CRUC	**La Cruz**	**5.78**	**358**	*e*	P		**Pn**	**20 19 52.6**	**+1.8**
FLOC	**Florencia**	**5.91**	**11**	*e*	P		**Pn**	**20 19 53.1**	**+0.9**
CFLOR	**Florencia**	**5.91**	**11**	*e*	P		**Pn**	**20 19 53.5**	**+1.2**
SOTA	**Rioblanco**	**6.35**	**2**	*e*	P		**Pn**	**20 20 01.0**	**+2.4**
GARC	**Garzon, Huila**	**6.53**	**11**	*e*	P		**Pn**	**20 20 01.3**	**+0.5**
PCON	**Cinco Dias**	**6.55**	**3**	*e*	P		**Pn**	**20 20 03.6**	**+2.3**
POPC	**Popayan, Colom**	**6.75**	**1**	*e*	P		**Pn**	**20 20 06.0**	**+2.2**
MACC	**Macarena, Meta**	**7.00**	**25**	*e*	P		**Pn**	**20 20 07.5**	**+0.4**
MACC	**Macarena, Meta**	**7.00**	**25**	*e*	P		**Pn**	**20 20 07.7**	**+0.7**
BETC	**Betania**	**7.02**	**11**	*e*	P		**P

LPAZ La Paz 14.68 145 Pn Pn 20 21 50.1 -0.2
LPAZ La Paz 14.68 145 eP Pn 20 21 49.4 -0.8
DRK0 Durika 14.89 334 Pn 20 21 51.1 -1.4
SRBA San Rafael, Bu 14.91 334 Pn 20 21 52.7 0.0
PEZE Perez Zeledon, 15.19 333 Pn Pn 20 21 54.1 -2.1
RIMA Rio Macho 15.61 333 P Pn 20 22 01.4 -0.2
PB12 IPOC Station P 15.61 157 Pn 20 22 00.4 -1.0
PB12 IAmb IAmb 20 22 06.7
comp=Z,47nm,0.9s
PB16 IPOC Station P 15.71 154 Pn 20 22 03.6 +0.5
BAUV El Baul 15.74 34 Pn Pn 20 21 59.7 -3.4
CVTR Volcan Turrial 15.79 334 Pn Pn 20 22 01.5 -2.6
MACA Manacapuru-AM 16.11 87 eP Pn 20 22 06.6 -1.1
URIC Uribia, Colomb 16.55 17 Pn Pn 20 22 10.5 -2.6
JTS Las Juntas de 16.58 331 LR LR 20 28 22.8
comp=Z,54nm,18.9s,baz=215,slow=36
JTS Las Juntas de 16.58 331 Pn Pn 20 22 11.4 -2.1
PB11 IPOC Station P 16.91 156 P Pn 20 22 15.6 -2.1
GO01 Chusmiza 17.02 155 P P 20 22 20.9 +1.4
TA02 Huaiquique 17.19 158 P P 20 22 20.7 -0.2
TA02 IAmb IAmb 20 22 25.0
comp=Z,76nm,1.2s
TA01 Diego Aracena 17.45 159 P P 20 22 23.0 -0.7
PB08 IPOC Station P 17.46 155 P P 20 22 22.3 -2.0
BOAV Boa Vista 17.55 68 eP P 20 22 25.2 +0.3
PATCX Punta Patache 17.69 159 P P 20 22 25.2 -1.2
BIRV Birongo 18.00 36 P 20 22 30.8 +1.0
BIRV IAmb IAmb 20 22 55.4
comp=Z,76nm,1.0s
PB01 IPOC Station P 18.14 158 P P 20 22 32.5 +1.1
ACON Acoyapa 18.14 333 P P 20 22 30.5 -0.9
PB02 IPOC Station P 18.24 159 P Pn 20 22 33.8 +0.2
VILB Vilhena 18.53 119 eP P 20 22 37.3 +1.6
PB07 IPOC Station P 18.62 160 P Pn 20 22 39.4 +1.1
PB07 IAmb IAmb 20 22 40.3
comp=Z,70nm,1.1s
BOAB BOACO BROADBAN 18.79 332 P Pn 20 22 39.2 -1.0
PB09 IPOC Station P 18.91 158 P P 20 22 41.5 +1.4
PB09 IAmb IAmb 20 22 43.8
comp=Z,66nm,0.9s
PB04 IPOC Station P 19.09 161 P P 20 22 42.0 0.0
MATN Matagalpa 19.33 332 P Pn 20 22 45.3 -1.3
SIV San Ignacio 19.36 128 P P 20 22 46.5 +1.8
comp=Z,15nm,0.9s,baz=311,slow=12,SNR=34
PB06 IPOC Station P 19.63 160 P P 20 22 49.0 +1.2
CRIN San Cristobal 19.69 329 P P 20 22 48.4 +0.1
CRIN IAmb IAmb 20 22 57.6
comp=Z,48nm,0.8s
LVC Limon Verde 19.78 158 P Pn 20 22 51.7 -0.4
comp=Z,21nm,1.0s,baz=324,slow=9.9,SNR=10
LVC Limon Verde 19.78 158 Pn 20 22 52.0 0.0
LVC Limon Verde 19.78 158 eP Pn 20 22 52.0 0.0
PB15 IPOC Station P 20.13 160 P P 20 22 54.8 +1.6
PTLB Pontes e Lacer 20.62 124 eP P 20 22 59.6 +1.3
TGUH Tegucigalpa,Un 20.95 330 P P 20 23 00.5 -1.6
ITTB Itaituba 21.00 91 eP P 20 23 02.3 -0.1
PDRB Porto dos Gac 21.16 111 eP P 20 23 04.2 0.0
PB14 IPOC Station P 21.17 164 P P 20 23 03.6 -0.9
NPGB Novo Progresso 21.51 98 eP P 20 23 06.9 -1.0
CLDB Colider 21.82 109 eP P 20 23 10.8 -0.4
GO02 Mina Guanaco 21.91 162 P P 20 23 13.6 +1.2
TOSP Speyside 22.37 46 P P 20 23 18.6 +1.7
TOSP IAmb IAmb 20 23 23.5
comp=Z,126nm,1.4s
ESQI Esquipulas 22.45 327 P P 20 23 18.9 +1.0
ESQI IAmb IAmb 20 23 20.8
comp=Z,80nm,1.3s
MALB Monte Alegre 22.62 85 eP P 20 23 19.5 0.0
AC02 Maricunga 23.62 163 P P 20 23 30.7 +1.3
SDDR Presa de Saban 23.72 13 P P 20 23 30.0 +0.2
SALV Santo Antonio 23.75 121 eP P 20 23 31.4 +1.3
AC06 Mina Casimiro 23.78 166 P P 20 23 30.6 +0.3
CRPR Cabo Rojo, PR 24.09 23 P P 20 23 33.3 +0.1
CELP Cerrillos 24.36 24 P P 20 23 36.3 +0.7
AOPR Arecibo Observ 24.54 23 P P 20 23 37.4 +0.1
AOPR IAmb IAmb 20 23 40.3
comp=Z,35nm,0.8s
PDPR Patillas Dam, 24.55 25 P P 20 23 34.5 -2.8
SJG San Juan 24.58 25 P P 20 23 37.5 0.0
comp=Z,23nm,0.7s,baz=186,slow=6.0,SNR=7.4
comp=Z,23nm,0.7s
SJG San Juan 24.58 25 P P 20 23 38.0 +0.4
SJG IAmb IAmb 20 23 40.0
comp=Z,27nm,0.8s
PETF Flores 24.68 329 P P 20 23 39.8 +1.2
GCPR Guaynabo City 24.78 25 P P 20 23 40.0 +0.5
CBYP Canovanas 24.84 25 P P 20 23 41.4 +1.3
CBYP IAmb IAmb 20 24 11.5
comp=Z,79nm,1.2s
MCPB Macapa, AP 25.01 82 eP P 20 23 42.2 +0.5
STVI Saint Thomas 25.31 27 P P 20 23 41.7 -2.5
MDP Montagnes des 25.85 69 P P 20 23 50.0 +0.8
comp=Z,26nm,1.0s,baz=237,slow=10,SNR=12
comp=Z,28nm,1.0s
SMRT St. Maarten 25.96 31 P P 20 23 49.5 -0.7
SMRT IAmb IAmb 20 23 56.4
comp=Z,86nm,1.4s
SNDB Serra Nova Dou 26.36 108 eP P 20 23 55.1 +1.2
SMTB Santa Maria do 29.36 100 eP P 20 24 21.7 +1.0
BDFB Brasilia 30.47 114 P P 20 24 31.2 +0.7
comp=Z,3.9nm,0.6s,baz=273,slow=11,SNR=4.9
comp=Z,3.9nm,0.6s
BDFB Brasilia 30.47 114 P P 20 24 31.3 +0.8
IPMB Ipameri, GO 31.12 118 eP P 20 24 36.2 +0.1
DWPF Disney Wildern 32.48 352 P P 20 24 49.4 +1.6
baz=172
SDBA SAO DESIDERIO 32.54 106 eP P 20 24 49.0 +0.3
ITAB Concordia 32.80 137 eP P 20 24 50.4 -0.3
PLCA Paso Flores 36.75 172 P P 20 25 25.4 +0.8
comp=Z,5.7nm,0.9s,baz=340,slow=9.5,SNR=8.4
PLCA PcP PcP 20 27 45.2 +0.3
comp=Z,1.5nm,0.8s,baz=356,slow=8.7,SNR=3.2
comp=Z,5.7nm,0.9s
PLCA Paso Flores 36.75 172 P P 20 25 25.5 +0.9
PLCA IAmb IAmb 20 25 26.5
comp=Z,15nm,1.1s
PLCA Paso Flores 36.75 172 eP P 20 25 25.4 +0.8
PLCA Paso Flores 36.75 172 P P 20 25 25.4 +0.8
PLCA sP sP 20 25 58.3 -1.6
250A Grady 37.14 347 P P 20 25 27.4 -0.5
250A IAmb IAmb 20 25 28.5
comp=Z,19nm,0.7s
154A Montrose 37.15 351 P P 20 25 28.9 +0.9
NHSC New Hope 37.29 355 P P 20 25 28.6 -0.5
baz=175
152A Waverly Hall 37.48 349 P P 20 25 30.3 -0.5
152A IAmb IAmb 20 25 31.8
comp=Z,14nm,0.8s
GDU01 Guandu, BA 37.89 107 eP P 20 25 34.3 -0.2
GOGA Godfrey 37.99 351 P P 20 25 35.4 +0.4
GOGA IAmb IAmb 20 25 36.2
comp=Z,20nm,1.2s
GOGA Godfrey 37.99 351 P P 20 25 35.2 +0.1
baz=169
Z51A Franklin 38.20 349 P P 20 25 36.6 -0.2
Z51A IAmb IAmb 20 25 37.4
comp=Z,14nm,0.9s
Y57A Sumter 38.22 355 P P 20 25 37.8 +0.9
CMC01 Camacan, BA 38.28 109 eP P 20 25 38.5 +0.7
LRAL Lakeview Retre 38.33 346 P P 20 25 37.9 +0.1
LRAL IAmb IAmb 20 25 38.7
comp=Z,20nm,0.8s
LRAL Lakeview Retre 38.33 346 P P 20 25 37.8 -0.1
baz=164,SNR=9.9
342A Flagon Creek P 38.40 338 P P 20 25 39.3 +0.8
JSC Jenkinsville 38.56 354 P P 20 25 39.8 0.0
JSC IAmb IAmb 20 25 40.9
comp=Z,14nm,0.8s
HODGE Hodges 38.62 353 P P 20 25 41.0 +0.7
Z47A Carrollton 38.75 345 P P 20 25 41.3 -0.1
BIRD Birdtown, Kers 38.84 355 P P 20 25 42.7 +0.6
BIRD IAmb IAmb 20 25 43.3
comp=Z,13nm,0.9s
Y49A Blount Mountai 38.98 347 P P 20 25 42.7 -0.7
Y49A IAmb IAmb 20 25 43.7
comp=Z,9.4nm,0.7s
833A Chaparral WMA, 39.02 327 P P 20 25 44.6 +0.8
baz=143
LL02 Futaleuf 39.02 174 P P 20 25 44.5 +0.9
PAULI Pauline 39.15 353 P P 20 25 45.6 +0.8
PAULI IAmb IAmb 20 25 46.4
comp=Z,25nm,0.9s
NBLA Lagarto - SE 39.20 102 eP P 20 25 45.2 -0.3

143A Socs Landing, 39.28 340 P P 20 25 45.4 -0.4
W57A Gilead 39.31 356 P P 20 25 46.6 +0.6
W57A IAmb IAmb 20 25 47.5
comp=Z,22nm,0.8s
X51A Calhoun 39.35 349 P P 20 25 46.5 +0.1
X51A IAmb IAmb 20 25 46.9
comp=Z,16nm,0.9s
KMSC Kings Mountain 39.42 354 P P 20 25 47.5 +0.5
KMSC IAmb IAmb 20 25 48.6
comp=Z,25nm,0.9s
KMSC Kings Mountain 39.42 354 P P 20 25 47.5 +0.5
baz=173,SNR=7.3
BG3 Lake Jocassee 39.46 352 P P 20 25 48.3 +0.9
BG3 IAmb IAmb 20 25 49.0
comp=Z,24nm,0.8s
FPAL Fort Paine 39.47 349 P P 20 25 47.2 -0.3
FPAL IAmb IAmb 20 25 48.0
comp=Z,31nm,0.9s
NATX Nacogdoches 39.65 336 P P 20 25 48.7 -0.2
NATX IAmb IAmb 20 25 50.4
comp=Z,15nm,0.8s
X48A Hartselle 39.69 347 P P 20 25 49.0 -0.2
X48A IAmb IAmb 20 25 49.6
comp=Z,16nm,0.8s
W52A Murphy 39.71 351 P P 20 25 49.8 +0.3
W52A IAmb IAmb 20 25 50.6
comp=Z,20nm,1.1s
Y45A Yeager Farm, C 39.78 343 P P 20 25 50.1 +0.1
V58A Windy Hill, Pi 39.90 357 P P 20 25 51.6 +0.7
V58A IAmb IAmb 20 25 52.4
comp=Z,28nm,1.1s
W50A Signal Mountai 40.05 349 P P 20 25 51.6 -0.7
435B Jarrell 40.10 332 P P 20 25 52.8 +0.1
435B IAmb IAmb 20 25 54.7
comp=Z,20nm,0.9s
435B Jarrell 40.10 332 P P 20 25 53.4 +0.6
baz=147
V55A Taylorsville 40.11 354 P P 20 25 53.4 +0.7
V55A IAmb IAmb 20 25 53.9
comp=Z,8.6nm,0.7s
V53A Saluda 40.11 352 P P 20 25 53.0 +0.2
V53A IAmb IAmb 20 25 54.0
comp=Z,16nm,0.8s
CPCT Cooper Cave 40.15 350 P P 20 25 53.1 +0.1
CPCT IAmb IAmb 20 25 54.1
comp=Z,24nm,0.9s
SWET Sewanee 40.19 348 P P 20 25 53.0 -0.4
SWET IAmb IAmb 20 25 53.8
comp=Z,20nm,0.7s
TKL Tuckaleechee C 40.24 351 P P 20 25 53.6 -0.2
comp=Z,7.5nm,0.8s,baz=154,slow=11,SNR=3.7
comp=Z,7.5nm,0.8s
TKL Tuckaleechee C 40.24 351 P P 20 25 53.1 -0.6
TKL IAmb IAmb 20 25 54.7
comp=Z,19nm,1.2s
237A Washetta, Mont 40.34 335 P P 20 25 55.5 +0.9
V52A Sevierville 40.39 351 P P 20 25 55.0 -0.1
PLAL Pickwick Lake 40.45 346 P P 20 25 54.7 -0.8
PLAL IAmb IAmb 20 25 55.5
comp=Z,20nm,1.1s
V51A Loudon 40.47 351 P P 20 25 55.5 -0.2
V51A IAmb IAmb 20 25 56.6
comp=Z,28nm,0.9s
U56A King 40.53 356 P P 20 25 57.1 +1.0
NBAN Anadia - AL 40.55 100 eP P 20 25 57.2 +0.5
RCBR Riachuelo 40.76 94 LR LR 20 42 22.2
comp=Z,92nm,20.0s,baz=16,slow=35
WLAR White Oak Lake 40.77 339 P P 20 25 58.4 +0.2
U54A Nelsons Funny 40.83 354 P P 20 25 58.9 +0.2
V48A Smith Brothers 40.88 347 P P 20 25 58.4 -0.7
V48A pP 20 26 21.2 -1.7
W45A Hickory Valley 40.90 344 P P 20 25 58.2 -1.0
JCT Junction City 40.95 329 P P 20 26 00.3 +0.6
JCT Junction City 40.95 329 P P 20 26 00.2 +0.4
baz=144
T59A Double "B" Far 41.02 359 P P 20 26 00.6 +0.5
T59A IAmb IAmb 20 26 01.9
comp=Z,26nm,0.9s
WHTX Lake Whitney, 41.06 333 P P 20 26 01.7 +1.1
WHTX Lake Whitney, 41.06 333 P P 20 26 01.4 +0.9
baz=148
TZTN Tazewell 41.07 352 P P 20 26 00.4 -0.2
TZTN Tazewell 41.07 352 P P 20 26 00.5 -0.2
baz=170,SNR=11
T57A Hurt 41.10 357 P P 20 26 01.0 +0.2
CLTN Cedars of Leba 41.12 348 P P 20 26 00.6 -0.3
CLTN IAmb IAmb 20 26 01.4
comp=Z,14nm,1.0s
BLA Blacksburg 41.39 356 P P 20 26 02.7 -0.5
BLA IAmb IAmb 20 26 05.0
comp=Z,24nm,0.8s
BLA Blacksburg 41.39 356 P P 20 26 04.1 +0.9
baz=175
X40A Basin Creek Fa 41.39 340 P P 20 26 03.6 +0.4
X40A Basin Creek Fa 41.39 340 P P 20 26 03.8 +0.5
baz=156
U49A Red Boiling Sp 41.41 349 P P 20 26 02.3 -1.1
WVT Waverly 41.48 346 P P 20 26 02.0 -2.0
WVT Waverly 41.48 346 P P 20 26 02.4 -1.5
baz=163
WVT Waverly 41.48 346 P P 20 26 02.3 -1.6
WVT pP pP 20 26 25.0 -2.8
WVT x x 20 26 30.3
UALR University of 41.49 341 P P 20 26 03.5 -0.5
UALR IAmb IAmb 20 26 04.3
comp=Z,22nm,0.8s
MIAR Mount Ida 41.71 339 P P 20 26 05.5 -0.3
MIAR Mount Ida 41.71 339 P P 20 26 04.7 -1.1
baz=155
T50A Nancy 41.74 350 P P 20 26 05.9 -0.2
JSRW J. Sargeant Re 41.74 359 P P 20 26 05.2 -0.9
W41B Gary Mavity, V 41.82 341 P P 20 26 05.8 -1.0
W41B IAmb IAmb 20 26 06.6
comp=Z,12nm,0.9s
W41B Gary Mavity, V 41.82 341 P P 20 26 05.9 -0.9
baz=157,SNR=5.7
S57A Dark Hollow, R 41.85 357 P P 20 26 07.5 +0.6
S57A IAmb IAmb 20 26 08.6
comp=Z,26nm,0.9s
WHAR Wooly Hollow 41.94 341 P P 20 26 07.2 -0.6
WHAR IAmb IAmb 20 26 08.0
comp=Z,16nm,0.9s
S54A Dingess, Beckl 42.05 355 P P 20 26 08.9 +0.3
S54A IAmb IAmb 20 26 09.5
comp=Z,20nm,0.7s
Z35A Perchaven, San 42.10 334 P P 20 26 09.7 +0.7
T47A Sharon Grove 42.14 348 P P 20 26 08.4 -0.9
T47A IAmb IAmb 20 26 09.1
comp=Z,18nm,0.8s
S51A Beattyville 42.16 352 P P 20 26 09.0 -0.4
TXAR Lajitas Array 42.20 324 P P 20 26 10.6 +0.6
comp=Z,2.5nm,0.7s,baz=146,slow=9.2,SNR=16
TXAR PcP PcP 20 28 02.4 -0.1
comp=Z,3.0nm,0.8s,baz=150,slow=5.5,SNR=10
comp=Z,2.5nm,0.7s
TXAR Lajitas Array 42.20 324 P P 20 26 10.3 +0.3
TX31 Lajitas Ar. Si 42.20 324 P P 20 26 10.6 +0.6
TX31 IAmb IAmb 20 26 11.7
comp=Z,29nm,1.4s
TX32 Lajitas Array 42.20 324 P P 20 26 10.6 +0.5
LCAR Lake Charles 42.31 343 P P 20 26 09.8 -0.9
LCAR IAmb IAmb 20 26 10.6
comp=Z,16nm,0.9s
LCAR pP pP 20 26 32.4 -2.3
W39A Magazine 42.37 339 P P 20 26 10.8 -0.4
W39A IAmb IAmb 20 26 12.2
comp=Z,18nm,1.1s
W39A pP 20 26 33.4 -1.7
W39A Magazine 42.37 339 P P 20 26 11.3 +0.1
baz=155,SNR=6.6
X37A Clayton 42.42 337 P 20 26 12.0 +0.4
X37A IAmb IAmb 20 26 12.6
comp=Z,15nm,0.7s
FCAR Ozark Folk Cen 42.44 341 P P 20 26 11.0 -0.8
ABTX Abilene, Hawle 42.61 331 P P 20 26 13.5 +0.3
ABTX pP pP 20 26 36.1 -1.1
ABTX IAmb IAmb 20 26 42.7
comp=Z,26nm,0.9s
ABTX Abilene, Hawle 42.61 331 P P 20 26 14.0 +0.8
baz=145
R53A Hurricane 42.64 354 P P 20 26 12.8 -0.6
R53A IAmb IAmb 20 26 22.8
comp=Z,20nm,0.8s
PBMO Poplar Bluff 42.76 344 P P 20 26 13.1 -1.2
PBMO IAmb IAmb 20 26 13.6
comp=Z,11nm,0.7s
R50A Paris 42.89 351 P P 20 26 14.0 -1.4
R50A pP 20 26 37.6 -1.8
R49A Shelbyville 43.04 350 P P 20 26 15.8 -0.7
R49A IAmb IAmb 20 26 16.7
comp=Z,17nm,0.7s
U40A Yellville 43.10 341 P P 20 26 16.0 -1.2
U40A IAmb IAmb 20 26 45.6
comp=Z,14nm,0.8s
U40A Yellville 43.10 341 P P 20 26 16.3 -0.8
baz=156,SNR=9.1
Q52A Bidwell 43.30 354 P P 20 26 18.5 -0.1
Q52A IAmb IAmb 20 26 19.6
comp=Z,33nm,1.0s
S44A Carbondale 43.31 346 P P 20 26 17.3 -1.5
S44A IAmb IAmb 20 26 18.4
comp=Z,17nm,0.8s
SIUC Southern Illin 43.32 346 P P 20 26 17.1 -1.8
SIUC IAmb IAmb 20 26 18.5
comp=Z,22nm,0.7s
HHAR Hobbs 43.40 340 P P 20 26 18.5 -1.0
HHAR IAmb IAmb 20 26 19.9
comp=Z,12nm,0.8s
X34A Smith Ranch, M 43.43 334 P 20 26 20.0 +0.1
Q51A Peebles 43.49 353 P P 20 26 19.6 -0.6
Q51A IAmb IAmb 20 26 22.1
comp=Z,11nm,0.8s
MGMO Mountain Grove 43.65 342 P P 20 26 20.4 -1.2
MGMO IAmb IAmb 20 26 21.6
comp=Z,36nm,1.2s
MGMO pP 20 26 42.9 -2.7
U38A Gravette 43.70 339 P P 20 26 21.1 -0.8
P53A Whipple 43.73 355 P P 20 26 22.0 -0.1
P53A IAmb IAmb 20 26 23.2
comp=Z,24nm,0.8s
TUL1 Leonard 43.74 338 P 20 26 21.1 -1.2
TUL1 IAmb IAmb 20 26 23.2
comp=Z,31nm,1.3s
TUL1 Leonard 43.74 338 P P 20 26 22.3 0.0
baz=152
MCWV Mont Chateau 43.78 357 P P 20 26 23.8 +1.2
baz=176
FNO Franklin 43.81 335 P P 20 26 21.8 -1.1
FVM French Village 43.89 344 P P 20 26 22.2 -1.2
FVM IAmb IAmb 20 26 23.2
comp=Z,15nm,0.7s
FVM pP 20 26 46.2 -1.3
P51A Williamsport 43.90 353 P P 20 26 22.9 -0.5
P51A IAmb IAmb 20 26 24.4
comp=Z,17nm,1.1s
P52A Corning 43.95 354 P P 20 26 23.8 0.0
P52A IAmb IAmb 20 26 24.4
comp=Z,26nm,0.8s
P52A Corning 43.95 354 P P 20 26 23.5 -0.3
baz=172,SNR=5.3
WMOK Wichita Mounta 43.96 334 P P 20 26 22.2 -1.8
WMOK IAmb IAmb 20 26 25.4
comp=Z,24nm,1.1s
WMOK Wichita Mounta 43.96 334 P P 20 26 24.4 +0.3
baz=148
OKCFA Oklahoma City 43.97 335 P P 20 26 24.0 -0.1
MVL Millersville 44.04 0 P P 20 26 25.6 +1.1
BLO Bloomington 44.13 349 P P 20 26 23.9 -1.4
BLO IAmb IAmb 20 26 27.0
comp=Z,17nm,0.7s
P49A Miami Univ. Ec 44.18 351 P P 20 26 23.6 -2.1
P49A IAmb IAmb 20 26 25.3
comp=Z,35nm,1.1s
P49A Miami Univ. Ec 44.18 351 P P 20 26 24.3 -1.4
baz=169,SNR=5.4
CCM Cathedral Cave 44.18 344 P P 20 26 24.4 -1.4
CCM IAmb IAmb 20 26 26.1
comp=Z,20nm,1.2s
CCM Cathedral Cave 44.18 344 P P 20 26 24.4 -1.4
baz=159
CCM Cathedral Cave 44.18 344 P P 20 26 24.5 -1.2
CCM x x 20 26 53.2
CCM sP sP 20 27 00.7 -0.8
P48A Milroy 44.22 350 P P 20 26 24.7 -1.3
P48A IAmb IAmb 20 26 25.4
comp=Z,15nm,0.8s
O52A Adamsville 44.39 354 P P 20 26 27.0 -0.4
O52A IAmb IAmb 20 26 28.1
comp=Z,19nm,0.8s
Q44A Meyer Farm, Va 44.40 346 P P 20 26 25.2 -2.3
Q44A IAmb IAmb 20 26 27.3
comp=Z,20nm,0.9s
SLM Saint Louis 44.45 345 P P 20 26 26.5 -1.3
O53A New Philadelph 44.47 355 P P 20 26 28.0 0.0
O53A New Philadelph 44.47 355 P P 20 26 28.5 +0.5
baz=174
S39A Bolivar 44.47 341 P P 20 26 27.1 -1.0
S39A IAmb IAmb 20 26 28.0
comp=Z,20nm,1.4s
ACSO Alum Creek Sta 44.63 353 P P 20 26 28.9 -0.4
ACSO IAmb IAmb 20 26 29.8
comp=Z,26nm,0.8s
ACSO Alum Creek Sta 44.63 353 P P 20 26 29.3 +0.1
baz=171
LUPA Lehigh Univers 44.65 2 P P 20 26 30.9 +1.5
LUPA IAmb IAmb 20 26 31.8
comp=Z,22nm,0.8s
SSPA Standing Stone 44.68 359 P P 20 26 30.4 +0.8
SSPA IAmb IAmb 20 26 31.2
comp=Z,18nm,0.8s
SSPA Standing Stone 44.68 359 P P 20 26 30.4 +0.8
baz=179
SSPA Standing Stone 44.68 359 P P 20 26 30.6 +0.9
P46A Rosedale 44.70 349 P P 20 26 28.1 -1.7
R40A Maddies Statio 44.70 343 P P 20 26 28.6 -1.2
R40A IAmb IAmb 20 26 29.5
comp=Z,21nm,1.4s
O49A Covington 44.76 352 P P 20 26 29.2 -1.1
O49A IAmb IAmb 20 26 30.4
comp=Z,19nm,0.8s
N58A Sunbury 44.87 0 P P 20 26 32.1 +0.9
N58A IAmb IAmb 20 26 33.3
comp=Z,22nm,0.9s
T35A Sooner Cattle 44.90 337 P P 20 26 31.3 -0.2
MNTX Cornudas Mount 44.94 325 P P 20 26 31.7 -0.2
MNTX Cornudas Mount 44.94 325 P P 20 26 32.1 +0.2
baz=138,SNR=10
O48B Farmland 44.95 351 P P 20 26 30.6 -1.2
baz=168,SNR=14
N53A Lisbon 44.99 356 P P 20 26 31.2 -0.9
N53A IAmb IAmb 20 26 33.1
comp=Z,25nm,0.9s
PAL Palisades 45.12 3 P P 20 26 33.1 0.0
PAL Palisades 45.12 3 P P 20 26 32.9 -0.1
baz=184
TRNY Table Rock, Ra 45.24 3 P P 20 26 33.6 -0.4
TRNY IAmb IAmb 20 26 35.9
comp=Z,15nm,0.8s
MSTX Muleshoe 45.24 329 P P 20 26 34.8 +0.4
MSTX pP pP 20 26 58.1 -0.5
MSTX IAmb IAmb 20 27 03.7
comp=Z,14nm,0.9s
MSTX Muleshoe 45.24 329 P P 20 26 34.9 +0.5
baz=142
M57A Sunshine Farm, 45.37 360 P P 20 26 35.6 +0.5
SFIN Lafayette 45.41 349 P P 20 26 33.8 -1.7
SFIN Lafayette 45.41 349 P P 20 26 33.4 -2.0
baz=166
AMTX Amarillo 45.43 331 P P 20 26 36.0 +0.1
AMTX IAmb IAmb 20 26 37.2
comp=Z,17nm,0.7s
AMTX Amarillo 45.43 331 P P 20 26 36.5 +0.7
baz=144
U32A Winter Ranch, 45.45 335 P P 20 26 34.9 -1.0
N49A Columbus Grove 45.46 352 P P 20 26 34.8 -1.1
N49A IAmb IAmb 20 26 35.9
comp=Z,23nm,0.8s
O44A Mansfield 45.47 347 P P 20 26 34.5 -1.4
O44A IAmb IAmb 20 26 35.4
comp=Z,35nm,1.2s
M55A Ridgway 45.54 358 P P 20 26 37.1 +0.6
M55A IAmb IAmb 20 26 37.5
comp=Z,22nm,0.8s
KSPA Keystone Colle 45.60 1 P P 20 26 38.1 +1.2
KSPA IAmb IAmb 20 26 39.0
comp=Z,18nm,0.9s
N47A Urbana 45.65 351 P P 20 26 35.4 -2.0
ALLY Alegheny Colle 45.78 356 P P 20 26 38.7 +0.3
M50A Fremont 45.80 353 P P 20 26 37.9 -0.5
HDIL Hopedale 46.04 347 P P 20 26 39.0 -1.4

HDIL Hopedale 46.04 347 P P 20 26 38.9 -1.5
baz=163
L56A Greenwood 46.17 359 P P 20 26 42.2 +0.7
BINY Binghamton 46.24 1 P P 20 26 43.3 +1.3
BINY Binghamton 46.24 1 P P 20 26 43.2 +1.2
baz=181,SNR=7.2
P38A Dawn 46.31 342 P P 20 26 40.7 -1.8
WVNY West Valley, N 46.47 358 P P 20 26 44.5 +0.8
L48A N Adams 46.50 352 P P 20 26 42.6 -1.4
N41A Harden Midland 46.56 345 P P 20 26 42.8 -1.7
N41A IAmb IAmb 20 26 44.0
comp=Z,23nm,1.1s
L61B Northampton 46.63 4 P P 20 26 45.7 +0.7
baz=186
K57A Scipio Center 46.76 0 P P 20 26 46.6 +0.5
MMNY Mt. Morris Dam 46.77 359 P P 20 26 46.5 +0.4
MMNY IAmb IAmb 20 26 47.5
comp=Z,22nm,0.8s
L46A Eue Claire 46.85 350 P P 20 26 45.0 -1.7
KSU1 Kansas State U 46.86 339 P P 20 26 46.1 -0.7
121A Cookes Peak, D 46.94 323 P P 20 26 49.0 +1.2
121A IAmb IAmb 20 26 50.4
comp=Z,19nm,1.1s
121A Cookes Peak, D 46.94 323 P P 20 26 49.4 +1.5
baz=136,SNR=9.8
R32A Long Quarter, 47.07 336 P P 20 26 49.3 +0.7
K50A Casco 47.10 354 P P 20 26 47.9 -0.8
N38A Joes South For 47.29 343 P P 20 26 49.1 -1.1
J56A Wolcott 47.31 360 P P 20 26 49.8 -0.4
CRNM Carthage 47.36 326 P P 20 26 51.7 +0.7
J58A Remsen 47.41 1 P P 20 26 51.0 0.0
J58A IAmb IAmb 20 26 52.3
comp=Z,11nm,0.8s
BNM Barren Site 47.45 326 P P 20 26 52.0 +0.2
L42A Oliver, Polo 47.51 347 P P 20 26 50.4 -1.4
J59A Piesco 47.54 2 P P 20 26 52.6 +0.5
J59A IAmb IAmb 20 26 54.0
comp=Z,20nm,0.8s
CBKS Cedar Bluff 47.82 336 P P 20 26 54.2 -0.1
CBKS Cedar Bluff 47.82 336 P P 20 26 55.0 +0.6
baz=149
J47A Sunmer 47.83 352 P P 20 26 53.5 -0.8
K43A Burlington 47.90 349 P P 20 26 53.1 -1.7
L40A Anamosa 47.93 346 P P 20 26 53.8 -1.3
L40A IAmb IAmb 20 27 22.3
comp=Z,26nm,1.2s
ANMO Albuquerque 47.94 327 P P 20 26 55.9 +0.4
ANMO IAmb IAmb 20 26 57.5
comp=Z,23nm,0.9s
ANMO pP pP 20 27 19.3 -0.7
ANMO Albuquerque 47.94 327 P P 20 26 56.5 +0.9
baz=139
ANMO Albuquerque 47.94 327 P P 20 26 56.6 +1.1
ANMO pP pP 20 27 19.4 -0.6
ANMO x x 20 27 25.0
PECO Prince Edward 47.97 360 P P 20 26 53.2 -2.1
N35A Tabor 48.10 341 P P 20 26 55.2 -1.2
SCIA State Center 48.31 344 P P 20 26 56.9 -1.2
SCIA IAmb IAmb 20 26 57.3
comp=Z,19nm,0.7s
LBNH Lisbon 48.47 5 P P 20 27 00.2 +1.0
LBNH IAmb IAmb 20 27 01.3
comp=Z,23nm,0.9s
LBNH Lisbon 48.47 5 P P 20 27 00.3 +1.0
baz=187
JFWS Jewell Farm 48.50 347 P P 20 26 58.1 -1.4
JFWS IAmb IAmb 20 27 26.7
comp=Z,10nm,0.7s
DELO Deloro Mine 48.55 359 P P 20 26 58.4 -1.4
T25A Trinidad 48.56 330 P P 20 27 01.4 +1.2
T25A IAmb IAmb 20 27 02.6
comp=Z,20nm,0.8s
T25A pP pP 20 27 25.2 +0.4
T25A Trinidad 48.56 330 P P 20 27 01.5 +1.2
baz=142,SNR=11
N33A J Bar K, Exete 48.61 339 P P 20 26 58.6 -1.7
TUC Tucson 48.62 321 P P 20 27 00.6 -0.1
TUC Tucson 48.62 321 P P 20 27 01.3 +0.6
baz=132
TUC Tucson 48.62 321 P P 20 27 01.4 +0.7
TUC pP pP 20 27 24.7 -0.5
TUC x x 20 27 29.8
TUC sP sP 20 27 36.8 0.0
LONY Lake Ozonia 48.69 2 P P 20 27 01.3 +0.4
baz=183
FRNY Flat Rock 48.95 3 P P 20 27 03.0 +0.2
FRNY IAmb IAmb 20 27 04.3
comp=Z,17nm,0.8s
I42A Draeger Farm, 49.15 348 P P 20 27 02.7 -1.7
KSCO Kaye Shedlock' 49.22 333 P P 20 27 03.7 -1.5
KSCO Kaye Shedlock' 49.22 333 P P 20 27 06.0 +0.8
baz=145
L34A Svendsen Farm, 49.34 341 P P 20 27 04.6 -1.3
BGNE Belgrade 49.45 339 P P 20 27 06.2 -0.6
BGNE Belgrade 49.45 339 P P 20 27 06.4 -0.4
baz=152
H43A Windswept, Lux 49.49 350 P P 20 27 05.6 -1.4
I40A Norwalk 49.52 347 P P 20 27 05.8 -1.4
I40A IAmb IAmb 20 27 06.7
comp=Z,19nm,1.1s
G62A West of Eustis 49.57 6 P P 20 27 08.6 +1.0
SDCO Great Sand Dun 49.57 330 P P 20 27 08.7 +0.6
SDCO IAmb IAmb 20 27 10.1
comp=Z,16nm,0.8s
SDCO Great Sand Dun 49.57 330 P P 20 27 09.1 +0.9
baz=141,SNR=22
MNTQ Montreal, Queb 49.61 3 P P 20 27 08.5 +0.6
X18A Snowflake 49.63 324 P P 20 27 07.8 -0.6
214A Organ Pipe Nat 49.70 319 P P 20 27 09.1 +0.3
214A IAmb IAmb 20 27 10.9
comp=Z,16nm,1.1s
214A Organ Pipe Nat 49.70 319 P P 20 27 09.9 +1.0
baz=130,SNR=8.4
PKME Peaks-Kenny Pk 49.75 7 P P 20 27 10.5 +1.6
baz=190
W18A Petrified Fore 49.92 324 P P 20 27 11.0 +0.4
W18A Petrified Fore 49.92 324 P P 20 27 11.7 +1.1
baz=135,SNR=17
GGN Saint George 49.95 9 P P 20 27 09.8 -0.6
S22A 4UR Ranch, Cre 50.25 329 P P 20 27 13.8 +0.6
S22A IAmb IAmb 20 27 15.3
comp=Z,15nm,1.2s
S22A 4UR Ranch, Cre 50.25 329 P P 20 27 14.1 +0.9
baz=140,SNR=7.8
Q24A Divide 50.35 331 P P 20 27 14.1 +0.1
Q24A IAmb IAmb 20 27 15.9
comp=Z,24nm,1.5s
Q24A Divide 50.35 331 P P 20 27 14.1 +0.1
baz=142
X16A Lo Mia Camp, P 50.45 322 P P 20 27 15.8 +1.2
X16A IAmb IAmb 20 27 16.9
comp=Z,14nm,1.0s
OGNE Ogallala 50.56 335 P P 20 27 15.5 +0.3
OGNE Ogallala 50.56 335 P P 20 27 16.0 +0.8
baz=147,SNR=5.1
MVCO Mesa Verde 50.73 327 P P 20 27 15.8 -1.0
MVCO IAmb IAmb 20 27 18.5
comp=Z,8.4nm,0.9s
MVCO Mesa Verde 50.73 327 P P 20 27 17.2 +0.5
baz=138
K31A O'Neill 50.73 339 P P 20 27 16.3 -0.2
G40A Rib Lake 50.74 348 P P 20 27 15.3 -1.1
F42A Maple Grove Fa 50.81 350 P P 20 27 15.4 -1.5
113A Mohawk Valley, 50.83 319 P P 20 27 17.0 -0.3
ECSD EROS Data Cent 51.00 342 P P 20 27 17.3 -1.1
ECSD IAmb IAmb 20 27 18.2
comp=Z,14nm,1.1s
ECSD EROS Data Cent 51.00 342 P P 20 27 17.3 -1.1
baz=154
LMN Caledonia Moun 51.01 11 P P 20 27 18.8 +0.4
Y14A Wickenburg 51.10 321 P P 20 27 19.0 -0.4
Y14A IAmb IAmb 20 27 21.2
comp=Z,11nm,1.2s
WUAZ Wupatki 51.16 324 P P 20 27 21.1 +1.2
WUAZ Wupatki 51.16 324 P P 20 27 20.8 +0.8
baz=134,SNR=16
E43A Lone Tree Farm 51.22 351 P P 20 27 18.5 -1.5
E43A IAmb IAmb 20 27 19.3
comp=Z,12nm,0.8s
ISCO Idaho Springs 51.23 332 P P 20 27 20.0 -0.6
ISCO Idaho Springs 51.23 332 P P 20 27 21.3 +0.7
baz=142,SNR=6.0
SPMN Marine on St. 51.29 346 P P 20 27 19.0 -1.6
SPMN IAmb IAmb 20 27 19.8
comp=Z,19nm,1.2s
LATQ La Tuque 51.54 3 P P 20 27 23.2 +0.9
PV15 Paradox Valley 51.55 328 P P 20 27 22.5 -0.5
PV13 Radium Mtn., P 51.60 328 P P 20 27 23.6 +0.4
GLA Glamis 51.71 319 P P 20 27 24.4 +0.5
baz=129
PV07 Paradox Valley 51.71 328 P P 20 27 20.7 -3.4
PV07 IAmb IAmb 20 27 21.8
comp=Z,11nm,1.0s
PV11 David Mesa, Pa 51.73 328 P P 20 27 24.9 +0.7
PV11 IAmb IAmb 20 27 54.3
comp=Z,17nm,0.9s
PV10 Paradox Valley 51.87 328 P P 20 27 25.8 +0.4
PV10 IAmb IAmb 20 27 26.5
comp=Z,22nm,1.3s
LMQ La Malbaie 51.89 6 P P 20 27 25.3 +0.3
LMQ IAmb IAmb 20 27 26.3
comp=Z,14nm,0.7s
PV23 Carpenter Ridg 51.91 328 P P 20 27 25.9 +0.2
BLYC Blythe 51.95 320 P P 20 27 25.9 +0.2
PDMCI Parker Dam,Lak 52.05 320 P P 20 27 26.8 +0.4
baz=130
F36A Milaca 52.07 345 P P 20 27 25.1 -1.3
VLDQ Val d'Or 52.15 359 P P 20 27 26.8 0.0
YUH Yuha Desert 52.19 318 P P 20 27 27.8 +0.3
N23A Red Feather La 52.25 332 P P 20 27 29.0 +0.9
baz=142
SWSC Sam W. Stewart 52.28 318 P P 20 27 28.9 +0.8
baz=128
E38A The Farm, Brul 52.30 347 P P 20 27 26.6 -1.4
E38A IAmb IAmb 20 27 27.5
comp=Z,14nm,0.8s
IKP In-Ko-Pah, Jac 52.31 318 P P 20 27 29.5 +1.0
baz=127
U15A North Rim 52.32 324 P P 20 27 29.9 +1.2
PHWY Pilot Hill 52.35 333 P P 20 27 29.5 +0.7
PHWY IAmb IAmb 20 27 30.3
comp=Z,6.6nm,0.8s
SUSD Miller 52.40 340 P P 20 27 28.3 -0.5
SUSD Miller 52.40 340 P P 20 27 28.0 -0.8
baz=152
W13A Hualapai Mount 52.40 321 P P 20 27 28.4 -0.8
W13A IAmb IAmb 20 27 31.4
comp=Z,9.5nm,0.8s
BC3 Big Chuckawall 52.49 319 P P 20 27 30.2 +0.4
baz=128
IRM Iron Mountain 52.60 320 P P 20 27 31.3 +0.8
baz=129,SNR=5.3
MONP2 Monument Peak 52.67 318 P P 20 27 31.8 +0.6
baz=127
O20A White River Ci 52.77 330 P P 20 27 32.4 +0.5
O20A IAmb IAmb 20 27 33.7
comp=Z,14nm,1.1s
O20A White River Ci 52.77 330 P P 20 27 32.8 +0.9
baz=139
F33A 5 Mile Ranch, 52.81 343 P P 20 27 30.1 -1.7
F33A IAmb IAmb 20 27 30.6
comp=Z,9.0nm,0.9s
PKCU Pink Cliffs 53.03 325 P P 20 27 35.0 +1.0
PKCU IAmb IAmb 20 27 36.2
comp=Z,20nm,1.3s
BELC Belle Mtn. Jos 53.06 319 P P 20 27 34.8 +0.7
baz=128
TPFO Pinon Flats 53.12 318 P P 20 27 35.3 +0.8
baz=128
PFO Pinyon Flats O 53.13 318 P P 20 27 35.3 +0.8
comp=Z,5.2nm,0.9s,baz=93,slow=4.7,SNR=5.6
comp=Z,5.2nm,0.9s
PFO Pinyon Flats O 53.13 318 P P 20 27 35.0 +0.5
PFO Pinyon Flats O 53.13 318 P P 20 27 35.0 +0.5
baz=128
PFO Pinyon Flats O 53.13 318 P P 20 27 35.5 +1.0
SRU San Rafael Swe 53.20 327 P P 20 27 34.8 -0.3
LCMT Little Creek M 53.28 324 P P 20 27 36.6 +1.0
LCMT IAmb IAmb 20 27 37.7
comp=Z,10nm,0.9s
GMRC Granite Mounta 53.33 320 P P 20 27 36.8 +0.8
baz=129,SNR=6.5
Q16A Castle Valley 53.42 327 P P 20 27 37.0 +0.4
P18A Preston Nutter 53.43 328 P P 20 27 37.1 +0.3
RWWY Rawlins 53.47 332 P P 20 27 37.3 +0.3
RWWY IAmb IAmb 20 27 38.7
comp=Z,19nm,1.1s
EYMN Ely 53.56 348 P P 20 27 36.2 -1.1
EYMN IAmb IAmb 20 27 36.2
comp=Z,9.5nm,0.8s
EYMN Ely 53.56 348 P P 20 27 35.7 -1.5
baz=162,SNR=6.5
SZCU Shurtz Canyon 53.58 324 P P 20 27 38.5 +0.6
P17A Butcher Ranch, 53.58 328 P P 20 27 38.4 +0.6
P17A IAmb IAmb 20 27 39.3
comp=Z,9.2nm,0.9s
MURC Murrieta 53.61 318 P P 20 27 38.8 +0.9
baz=127
MSU Marysvale 53.69 326 P P 20 27 39.7 +1.0
MVU Marysvale 53.70 326 P P 20 27 39.7 +0.9
TMUT Trail Mountain 53.71 327 P P 20 27 39.3 +0.4
CCUT Cedar City 53.71 324 P P 20 27 39.6 +0.7
RDMU Red Mountain 53.77 329 P P 20 27 39.7 +0.4
HEC Hector,Ludlow 53.79 320 P P 20 27 40.1 +0.8
baz=128
K22A Casper 53.90 333 P P 20 27 40.5 +0.4
K22A IAmb IAmb 20 27 41.6
comp=Z,17nm,1.1s
K22A Casper 53.90 333 P P 20 27 40.3 +0.2
baz=142,SNR=5.7
TCRU Three Creeks R 53.91 326 P P 20 27 41.2 +0.9
RSSD Black Hills 54.02 336 P P 20 27 41.7 +0.7
RSSD IAmb IAmb 20 27 42.8
comp=Z,11nm,0.8s
RSSD Black Hills 54.02 336 P P 20 27 41.6 +0.6
baz=146
RSSD Black Hills 54.02 336 P P 20 27 41.7 +0.7
RSSD pP pP 20 28 07.2 +1.3
RSSD x x 20 28 11.3
RSSD sP sP 20 28 17.9 +0.5
SHPR Sheep Range 54.10 322 P P 20 27 42.5 +0.9
SHPR IAmb IAmb 20 27 43.6
comp=Z,8.7nm,1.0s
GSC Goldstone, Bar 54.38 320 P P 20 27 44.4 +0.8
GSC IAmb IAmb 20 27 45.6
comp=Z,8.6nm,0.9s
GSC Goldstone, Bar 54.38 320 P P 20 27 44.6 +1.0
baz=128
SHOC Shoshone, Teco 54.41 321 P P 20 27 44.5 +0.7
baz=129
B35A Bob, Littlefor 54.45 346 P P 20 27 42.5 -1.2
B35A IAmb IAmb 20 27 43.4
comp=Z,9.3nm,0.9s
PRN Pahroc Range 54.62 323 P P 20 27 46.0 +0.7
PSUT Pine Spring 54.66 325 P P 20 27 45.9 +0.2
JLU Jordanelle 54.77 328 P P 20 27 47.7 +1.2
JLU IAmb IAmb 20 28 16.9
comp=Z,13nm,0.8s
QSM Queen of Sheba 54.83 320 P P 20 27 47.5 +0.8
GWY Greenwater Val 54.84 321 P P 20 27 47.6 +0.6
E28A Huff 54.86 340 P P 20 27 46.8 0.0
EDW2 Edwards Air Fo 54.90 319 P P 20 27 47.8 +0.5
baz=127,SNR=7.5
AGMN Agassiz Nation 54.93 345 P P 20 27 45.5 -1.7
AGMN Agassiz Nation 54.93 345 P P 20 27 46.6 -0.6
baz=157
TPNV Topopah Spring 55.06 322 P P 20 27 49.3 +0.8
TPNV IAmb IAmb 20 27 50.7
comp=Z,10nm,0.9s
TPNV Topopah Spring 55.06 322 P P 20 27 49.7 +1.1
baz=130,SNR=9.1
LRMC Laurel Mtn Rad 55.06 319 P P 20 27 48.5 0.0
baz=127
FURC Furnace Creek, 55.14 321 P P 20 27 49.7 +0.8
baz=129
S11A Rachel 55.19 323 P P 20 27 51.0 +1.5
S11A IAmb IAmb 20 27 51.9
comp=Z,10nm,0.9s
DUG Dugway, Tooele 55.22 327 P P 20 27 50.5 +0.9
DUG Dugway, Tooele 55.22 327 P P 20 27 50.4 +0.8
baz=135,SNR=7.2
MPMC Manual Prospec 55.28 320 P P 20 27 50.3 +0.1
baz=128
BW06 Boulder Array 55.41 331 P P 20 27 50.5 -0.5
BW06 IAmb IAmb 20 27 52.0
comp=Z,21nm,1.5s
BW06 Boulder Array 55.41 331 P P 20 27 51.2 +0.1
baz=139
PD31 Pinedale Array 55.41 331 P P 20 27 50.7 -0.4
PD31 IAmb IAmb 20 27 52.0
comp=Z,17nm,1.5s
PDAR Pinedale Array 55.41 331 P P 20 27 51.2 +0.2
comp=Z,3.0nm,0.7s,baz=132,slow=8.9,SNR=21
PDAR LR LR 20 53 41.2
comp=Z,24nm,18.0s,baz=180,slow=38
comp=Z,3.0nm,0.7s
PDAR Pinedale Array 55.41 331 P P 20 27 50.8 -0.2
R11A Troy Canyon, C 55.55 323 P P 20 27 52.5 +0.4
R11A Troy Canyon, C 55.55 323 P P 20 27 53.1 +1.0
baz=131,SNR=11
HWUT Hardware Ranch 55.56 329 P P 20 27 51.6 -0.5
HWUT IAmb IAmb 20 27 53.3
comp=Z,19nm,1.3s
MDND Maddock 55.62 342 P P 20 27 52.4 +0.2
MDND Maddock 55.62 342 P P 20 27 52.3 +0.2
baz=152
ISA Isabella, Lake 55.69 319 P P 20 27 53.0 0.0
baz=127
BGU Big Grassy Mou 55.84 327 P P 20 27 53.9 -0.2
CWC Cottonwood Cre 55.90 320 P P 20 27 54.9 +0.4
baz=128
LCH Last Change Ra 56.10 321 P P 20 27 56.7 +0.7
PKM Mcpherson Peak 56.12 318 P P 20 27 56.3 +0.1
baz=125
AHID Auburn Hatcher 56.17 330 P P 20 27 55.4 -1.1
HVU Hansel Valley 56.31 328 P P 20 27 57.5 +0.1
TPH Tonopah 56.37 322 P P 20 27 57.6 -0.4
REDW Red Top Meadow 56.48 331 P P 20 27 59.0 +0.3
SNOW Snow King Moun 56.51 331 P P 20 27 58.2 -0.7
SNOW IAmb IAmb 20 28 21.7
comp=Z,8.6nm,0.5s
LOHW Long Hollow 56.55 331 P P 20 27 58.8 -0.4
LOHW IAmb IAmb 20 28 00.5
comp=Z,11nm,1.4s
TPAW Teton Pass 56.63 331 P P 20 27 59.8 0.0
MOOW Moose Ponds 56.72 331 P P 20 27 59.7 -0.6
ULM Lac du Bonnet 56.73 345 P P 20 27 59.0 -0.9
comp=Z,20nm,0.7s,baz=159,slow=8.0,SNR=31
ULM LR LR 20 54 12.5
comp=Z,23nm,19.0s,baz=184,slow=38
comp=Z,20nm,0.7s
ULM Lac du Bonnet 56.73 345 P P 20 27 59.1 -0.9
ELK Elko 56.94 326 P P 20 28 02.3 +0.2
comp=Z,1.7nm,0.9s,baz=130,slow=6.8,SNR=6.3
ELK PcP PcP 20 28 55.2 -1.0
comp=Z,2.2nm,0.7s,baz=117,slow=3.8,SNR=5.7
comp=Z,1.7nm,0.9s
ELK Elko 56.94 326 P P 20 28 02.2 +0.2
FLWY Flagg Ranch 56.95 331 P P 20 28 02.6 +0.6
FLWY IAmb IAmb 20 28 03.7
comp=Z,18nm,1.1s
LAO LASA Array 57.01 336 P P 20 28 01.2 -0.9
LAO IAmb IAmb 20 28 02.5
comp=Z,6.6nm,0.8s
LAO LASA Array 57.01 336 P P 20 28 01.9 -0.2
baz=144
RLMT Red Lodge 57.07 333 P P 20 28 02.8 0.0
RLMT Red Lodge 57.07 333 P P 20 28 02.9 +0.1
baz=141
YPP Pitchstone Pla 57.14 331 P P 20 28 03.5 +0.1
NV11 Mina Array Sit 57.16 322 P P 20 28 03.5 0.0
OMMB Old Mammoth Mi 57.19 321 P P 20 28 03.9 0.0
OMMB IAmb IAmb 20 28 05.6
comp=Z,9.4nm,1.0s
NVAR Mina Array Bea 57.25 322 P P 20 28 04.8 +0.6
comp=Z,5.6nm,0.9s,baz=140,slow=6.7,SNR=30
comp=Z,5.6nm,0.9s
NVAR Mina Array Bea 57.25 322 P P 20 28 04.4 +0.2
NVAR pP 20 28 30.0 +0.6
LHV Little Huntoon 57.27 321 P P 20 28 02.7 -1.3
LHV IAmb IAmb 20 28 06.2
comp=Z,10nm,1.0s
YFT Old Faithful 57.29 332 P P 20 28 04.8 +0.5
YFT IAmb IAmb 20 28 08.8
comp=Z,15nm,1.3s
YMR Madison River 57.51 332 P P 20 28 05.6 -0.3
YMR IAmb IAmb 20 28 08.2
comp=Z,15nm,1.1s
KVN Kaiserville 57.52 322 P P 20 28 05.7 -0.3
DGMT Dagmar 57.71 339 P P 20 28 07.1 +0.1
baz=147
YHL Hebgen Lake 57.75 332 P P 20 28 08.7 +1.0
GCMT Greyclif 57.77 333 P P 20 28 07.4 -0.2
QLMT Earthquake Lak 57.85 331 P P 20 28 08.2 -0.1
BMN Battle Mountai 57.87 324 P P 20 28 08.3 -0.1
BMN IAmb IAmb 20 28 09.8
comp=Z,9.7nm,0.9s
HLID Hailey 58.42 329 P P 20 28 12.8 +0.5
HLID Hailey 58.42 329 P P 20 28 12.9 +0.6
baz=135,SNR=10
BOZ Bozeman (W) 58.52 332 P P 20 28 12.5 -0.4
BOZ IAmb IAmb 20 28 14.4
comp=Z,17nm,0.9s
BOZ Bozeman (W) 58.52 332 P P 20 28 13.3 +0.5
baz=138,SNR=18
MCMT McKenzie Canyo 58.54 331 P P 20 28 13.4 +0.3
DLMT Dillon 58.80 331 P P 20 28 14.6 -0.2
MFID Camas Ranch 59.07 328 P P 20 28 16.6 0.0
LRM Limekiln Ridge 59.07 332 P P 20 28 16.9 +0.1
BEKR Beckworth 59.40 322 P P 20 28 18.3 -0.7
BEKR IAmb IAmb 20 28 20.7
comp=Z,4.8nm,0.7s
HRY Holter Researc 59.44 333 P P 20 28 19.7 +0.5
SCHQ Schefferville 59.45 7 P P 20 28 19.1 +0.1
comp=Z,18nm,0.6s,baz=206,slow=6.0,SNR=34
comp=Z,18nm,0.6s
SCHQ Schefferville 59.45 7 P P 20 28 18.9 0.0
EGMT Eagleton 59.53 335 P P 20 28 20.0 +0.3
baz=141
ORV Oroville 59.92 321 P P 20 28 23.4 +1.0
PLID Pearl Lake 60.30 329 P P 20 28 25.0 -0.2
MSO Missoula 60.51 332 P P 20 28 26.7 +0.3
MSO Missoula 60.51 332 P P 20 28 27.1 +0.6
baz=136,SNR=14
PMSA Palmer Station 61.09 174 LR LR 20 55 03.3
comp=Z,73nm,18.4s,baz=247,slow=36
KCPM Cahto Peak 61.31 320 P P 20 28 33.0 +1.0
KCPM IAmb IAmb 20 28 34.2
comp=Z,15nm,0.9s
JTMT Jette 61.34 332 P P 20 28 32.6 +0.5
JTMT IAmb IAmb 20 28 33.8
comp=Z,18nm,0.9s
K05A Summer Lake 61.45 324 P P 20 28 33.3 +0.3
I07A Izee 61.51 326 P P 20 28 33.7 +0.4
I07A IAmb IAmb 20 28 35.0
comp=Z,16nm,1.1s
F10A Beach Ranch, E 61.54 329 P P 20 28 33.9 +0.5
F10A IAmb IAmb 20 28 35.1
comp=Z,11nm,0.9s
KMRM Mail Ridge 61.69 321 P P 20 28 34.8 +0.3
KMRM IAmb IAmb 20 28 36.5
comp=Z,12nm,0.9s
YBH Yreka Blue Hor 61.94 322 P P 20 28 35.6 -0.6
comp=Z,4.9nm,0.8s,baz=84,slow=5.4,SNR=11
comp=Z,4.9nm,0.8s
YBH Yreka Blue Hor 61.94 322 P P 20 28 35.6 -0.6
L04D Klamath Falls 61.98 323 P P 20 28 36.5 +0.1
L04D IAmb IAmb 20 28 37.3
comp=Z,19nm,1.0s
L04D Klamath Falls 61.98 323 P P 20 28 36.6 +0.1
baz=126
J05D Fort Rock, OR 61.99 325 P P 20 28 37.2 +0.7
baz=128
G08A Pilot Rock 61.99 328 P P 20 28 37.4 +0.9
G08A IAmb IAmb 20 28 38.1
comp=Z,9.6nm,1.0s
KMPM Mount Pierce 62.06 321 P P 20 28 38.2 +1.2
KMPM IAmb IAmb 20 28 39.0
comp=Z,17nm,0.8s
WALA Waterton Lakes 62.12 333 P P 20 28 37.1 -0.1
WALA IAmb IAmb 20 28 38.5
comp=Z,14nm,0.8s
PINE Pine Mountain 62.13 325 P P 20 28 38.3 +0.7
PINE IAmb IAmb 20 28 39.8
comp=Z,22nm,1.4s
L02F Cave Junction 62.69 322 P P 20 28 41.6 +0.6
baz=125
I05D Terrebonne, OR 62.70 325 P P 20 28 41.3 +0.2
baz=128
I04A Tendick Farm, 62.98 324 P P 20 28 42.5 -0.5
baz=127
NEW Newport 63.05 331 P P 20 28 43.6 +0.2
comp=Z,12nm,0.8s,baz=139,slow=7.9,SNR=14
comp=Z,12nm,0.8s
NEW Newport 63.05 331 P P 20 28 43.0 -0.3

NEW IAmb IAmb 20 28 44.5
comp=Z,13nm,0.8s
NEW Newport 63.05 331 P **P** **20 28 43.4 0.0**
baz=134,SNR=7.8
K02D Willamette Mer 63.07 323 P **P** **20 28 44.0 +0.3**
baz=126
E07A Sunnyside 63.29 328 P **P** **20 28 45.7 +0.7**
E07A IAmb IAmb 20 28 46.8
comp=Z,11nm,0.8s
J01E Myrtle Point 63.50 323 P **P** **20 28 44.9 -1.5**
baz=125
SMAI San Martin Ant 64.11 176 P **P** **20 28 50.6 +0.6**
SMAI IAmb IAmb 20 28 52.3
comp=Z,17nm,1.2s
LTY Liberty 64.17 328 P **P** **20 28 51.0 +0.2**
B08A Colville Reser 64.20 330 P **P** **20 28 50.9 -0.1**
FCC Fort Churchill 64.32 350 P **P** **20 28 50.4 -1.0**
FCC IAmb IAmb 20 28 51.3
comp=Z,13nm,0.8s
EDM Edmonton 64.99 337 P **P** **20 28 55.0 -0.9**
D03D Eldon 65.62 327 P **P** **20 29 00.2 +0.1**
baz=128
LLLB Lillooet 66.93 331 P **P** **20 29 08.6 +0.1**
CBB Campbell River 68.33 329 P **P** **20 29 17.6 +0.4**
CBB IAmb IAmb 20 29 19.4
comp=Z,12nm,0.8s
BBB Bella Bella 70.99 329 LR LR 21 04 26.2
comp=Z,40nm,18.2s,baz=214,slow=39
YKA Yellowknife Ar 72.51 343 P **P** **20 29 41.9 -0.4**
comp=Z,5.2nm,0.5s,baz=139,slow=6.2,SNR=34
comp=Z,5.2nm,0.5s
DBIC Dimbokro 72.62 82 P **P** **20 29 44.6 +0.6**
comp=Z,15nm,0.8s,baz=282,slow=6.0,SNR=10
comp=Z,15nm,0.8s
DBIC Dimbokro 72.62 82 P **P** **20 29 44.1 +0.1**
DBIC IAmb IAmb 20 29 45.4
comp=Z,21nm,0.9s
T35M Bob Quinn 74.72 333 P **P** **20 29 56.5 +1.0**
baz=124,SNR=5.1
WRAK Wrangell Islan 75.39 332 P **P** **20 30 01.3 +2.0**
baz=122
DLBC Dease Lake 75.44 334 P **P** **20 30 00.2 +0.6**
comp=Z,7.0nm,0.9s,baz=123,slow=3.9,SNR=12
comp=Z,7.0nm,0.9s
DLBC Dease Lake 75.44 334 P **P** **20 30 00.3 +0.6**
DLBC Dease Lake 75.44 334 P **P** **20 30 00.3 +0.6**
baz=124,SNR=5.8
PNCL Nicolau / Gran 75.75 49 *e*P **P** **20 30 03.1 +1.3**
PCVE Castro Verde 75.99 50 *e*P **P** **20 30 04.3 +1.2**
PMTG Montargil 76.26 48 *e*P **P** **20 30 05.3 +0.7**
comp=Z,18nm,1.2s
COI Coimbra 76.46 47 P **P** **20 30 05.9 +0.1**
COI IAmb IAmb 20 30 07.4
comp=Z,23nm,0.7s
TGTN Hyland Airport 76.53 337 P **P** **20 30 06.9 +1.2**
baz=127
BELA Belgrano 2 76.81 172 P **P** **20 30 07.1 +0.1**
BELA IAmb IAmb 20 30 08.5
comp=Z,21nm,1.2s
PVIS Viseu 76.99 47 *e*P **P** **20 30 09.1 +0.3**
comp=Z,26nm,2.3s
SIT Sitka 77.13 331 P **P** **20 30 09.7 +0.7**
baz=119
MTE Manteigas 77.15 47 *e*P **P** **20 30 10.4 +0.7**
POLO Lamas de Olo 77.26 46 *e*P **P** **20 30 10.7 +0.4**
comp=Z,8.2nm,1.7s
ICESG Greenland Ices 77.49 13 *i* P **P** **20 30 09.6 -1.7**
ICESG IAmb IAmb 20 30 12.5
comp=Z,11nm,0.9s
P33M Teslin, Yukon 77.62 335 P **P** **20 30 11.9 0.0**
P33M Teslin, Yukon 77.62 335 P **P** **20 30 12.4 +0.5**
baz=122,SNR=7.8
MVO Moncorvo 77.75 46 *e*P **P** **20 30 13.6 +0.6**
comp=Z,23nm,1.2s
PBRG Braganca 78.14 46 *e*P **P** **20 30 15.7 +0.5**
comp=Z,18nm,1.8s
MMPY Sheldon Lake, 78.31 337 P **P** **20 30 16.1 +0.4**
baz=124,SNR=7.0
WHY Whitehorse 78.72 335 P **P** **20 30 18.0 -0.1**
baz=120
VNA3 Neumayer Olymp 78.75 162 P **P** **20 30 18.4 +0.5**
PLBC Pleasant Camp 78.78 333 P **P** **20 30 18.9 +0.7**
baz=119
FARO Faro, Yukon 78.91 337 P **P** **20 30 19.6 +0.6**
baz=122
VNA1 Neumayer--Stat 78.98 162 P **P** **20 30 19.9 +0.8**
O30N Mendenhall 79.30 335 P **P** **20 30 21.8 +0.7**
baz=119
M31M Drury Creek, Y 79.31 336 P **P** **20 30 21.5 +0.4**
M31M Drury Creek, Y 79.31 336 P **P** **20 30 21.6 +0.5**
baz=121,SNR=5.9
VNA2 Neumayer--Watz 79.34 162 P **P** **20 30 21.5 +0.3**
baz=290,slow=6.0
VNA2 Neumayer--Watz 79.34 162 pP pP 20 30 49.2 +1.5
N31M Braeburn, Yuko 79.52 335 P **P** **20 30 22.8 +0.5**
N31M Braeburn, Yuko 79.52 335 P **P** **20 30 22.7 +0.5**
baz=120
ESDC Sonseca Array 79.61 49 P **P** **20 30 23.6 +0.3**
comp=Z,3.4nm,1.1s,baz=259,slow=5.6,SNR=16
comp=Z,3.4nm,1.1s
ESDC Sonseca Array 79.61 49 P **P** **20 30 23.2 0.0**
ESBB Sonseca Array 79.61 49 P **P** **20 30 23.8 +0.6**
TOA0 Torodi Ar. Sit 79.79 76 P **P** **20 30 24.4 -0.3**
TOA0 IAmb IAmb 20 30 25.6
comp=Z,25nm,1.2s
TORD Torodi Ar. Bea 79.79 76 P **P** **20 30 24.5 -0.1**
comp=Z,7.7nm,0.8s,baz=300,slow=6.1,SNR=36
comp=Z,7.7nm,0.8s
TORD Torodi Ar. Bea 79.79 76 P **P** **20 30 24.4 -0.3**
TORD IAmb IAmb 20 30 25.6
comp=Z,21nm,1.2s
N30M Aishikik Lake 80.05 335 P **P** **20 30 26.1 +0.9**
baz=118,SNR=5.5
PNL Peninsula 80.25 333 P **P** **20 30 25.7 -0.5**
baz=116
YUK6 Outpost Mounta 80.36 334 P **P** **20 30 27.8 +0.7**
baz=117
M30M Minto, Yukon 80.47 336 P **P** **20 30 27.2 -0.2**
M30M Minto, Yukon 80.47 336 P **P** **20 30 27.4 +0.1**
baz=119,SNR=8.0
SUMG Summit 80.48 11 P **P** **20 30 27.6 -0.1**
SUMG IAmb IAmb 20 30 29.0
comp=Z,22nm,0.9s
SUMG Summit 80.48 11 *i* P **P** **20 30 27.0 -0.7**
SUMG IAmb IAmb 20 30 28.5
comp=Z,11nm,0.8s
SNAA Sanae 80.96 162 P **P** **20 30 30.1 +0.2**
SNAA Sanae 80.96 162 P **P** **20 30 29.2 -0.7**
SNAA IAmb IAmb 20 30 31.3
comp=Z,22nm,1.1s
YUK8 Steele Glacier 81.12 334 P **P** **20 30 31.6 +0.4**
baz=116
TABL Table Mountain 81.37 333 P **P** **20 30 32.9 +0.5**
MESA MESA 81.63 333 P **P** **20 30 34.1 +0.3**
baz=114
YUK3 Moose Creek 81.63 334 P **P** **20 30 34.0 +0.3**
baz=116,SNR=6.8
CTGM Chitina Glacie 81.67 334 P **P** **20 30 34.5 +0.6**
CTG Chitna Glacier 81.68 334 P **P** **20 30 34.3 +0.4**
baz=115,SNR=5.4
GRNC Granite Creek 81.76 333 P **P** **20 30 35.0 +0.5**
GRNC IAmb IAmb 20 30 36.1
comp=Z,14nm,1.0s
BARN Barnard Glacie 81.86 334 P **P** **20 30 35.6 +0.7**
ISLE Juniper Island 81.98 333 P **P** **20 30 36.0 +0.5**
ISLE IAmb IAmb 20 30 36.8
comp=Z,13nm,1.0s
BVCY Beaver Creek 82.08 335 P **P** **20 30 36.3 +0.4**
baz=115,SNR=5.8
A36M Sachs Harbour 82.20 346 P **P** **20 30 35.6 -0.6**
A36M Sachs Harbour 82.20 346 P **P** **20 30 35.8 -0.4**
baz=131,SNR=12
DAWY Dawson 82.20 337 P **P** **20 30 36.5 0.0**
DAWY Dawson 82.20 337 P **P** **20 30 36.4 0.0**
baz=117,SNR=5.0
INK Inuvik 82.24 342 P **P** **20 30 36.5 +0.1**
comp=Z,22nm,1.0s,baz=105,slow=5.0,SNR=51
comp=Z,22nm,1.0s
INK Inuvik 82.24 342 P **P** **20 30 36.6 +0.1**
INK IAmb IAmb 20 30 37.8
comp=Z,23nm,0.9s
INK Inuvik 82.24 342 P **P** **20 30 36.7 +0.2**
baz=123,SNR=23
TGL Tana Glacier 82.26 333 P **P** **20 30 37.0 +0.1**
TGL IAmb IAmb 20 30 38.4
comp=Z,16nm,1.0s

EPYK Eagle Plains 82.30 339 P **P** **20 30 36.9 -0.1**
EPYK IAmb IAmb 20 30 38.1
comp=Z,17nm,0.9s
EPYK Eagle Plains 82.30 339 P **P** **20 30 37.0 +0.1**
baz=120,SNR=10
I29M Ogilvie Camp, 82.39 338 P **P** **20 30 36.9 -0.5**
I29M IAmb IAmb 20 30 38.6
comp=Z,16nm,0.9s
I29M Ogilvie Camp, 82.39 338 P **P** **20 30 37.5 +0.1**
baz=118,SNR=22
M27K Edge Creek, AK 82.49 335 P **P** **20 30 38.2 +0.1**
M27K IAmb IAmb 20 30 39.7
comp=Z,16nm,0.9s
M27K Edge Creek, AK 82.49 335 P **P** **20 30 38.7 +0.5**
baz=114,SNR=16
MCARA McCarthy VSAT 82.59 334 P **P** **20 30 39.0 +0.5**
MCARA McCarthy VSAT 82.59 334 P **P** **20 30 39.3 +0.8**
baz=113,SNR=11
TROLL Troll, Antarti 82.68 162 P **P** **20 30 39.4 +0.4**
VRDI Verde Repeater 82.72 333 P **P** **20 30 39.3 -0.1**
VRDI IAmb IAmb 20 30 40.8
comp=Z,24nm,0.9s
BCAR Beaver Creek A 82.74 335 P **P** **20 30 39.4 +0.1**
BCAR **pP** **20 31 05.5 -0.6**
HMT Hamilton 82.75 332 P **P** **20 30 40.1 +0.8**
L27K Beaver Creek, 82.75 335 P **P** **20 30 39.5 +0.1**
L27K IAmb IAmb 20 30 41.0
comp=Z,13nm,0.9s
L27K Beaver Creek, 82.75 335 P **P** **20 30 39.8 +0.4**
baz=114,SNR=18
GLB Gilahina Butte 82.96 334 P **P** **20 30 40.6 +0.1**
GLB IAmb IAmb 20 30 41.8
comp=Z,17nm,0.9s
M26K Nabesna, AK 82.98 335 P **P** **20 30 40.4 -0.2**
M26K Nabesna, AK 82.98 335 P **P** **20 30 40.5 0.0**
baz=113,SNR=9.6
BMRM Bremner River 83.14 333 P **P** **20 30 41.2 -0.3**
BMRM IAmb IAmb 20 30 42.7
comp=Z,16nm,0.9s
BMRM Bremner River 83.14 333 P **P** **20 30 41.6 +0.2**
baz=112,SNR=6.4
K27K Chicken 83.25 336 P **P** **20 30 42.7 +0.8**
baz=114
L26K Log Cabin Wild 83.38 335 P **P** **20 30 42.4 -0.1**
L26K IAmb IAmb 20 30 43.7
comp=Z,12nm,0.8s
L26K Log Cabin Wild 83.38 335 P **P** **20 30 42.7 +0.2**
baz=113,SNR=8.4
N25K Chitina, Valde 83.38 334 P **P** **20 30 42.5 -0.1**
N25K Chitina, Valde 83.38 334 P **P** **20 30 42.6 -0.1**
baz=112,SNR=5.9
MENT Mentasta 83.50 335 P **P** **20 30 42.8 -0.4**
MENT IAmb IAmb 20 30 44.1
comp=Z,8.6nm,0.5s
DIV Divide 83.73 333 P **P** **20 30 43.9 -0.5**
DIV IAmb IAmb 20 30 45.2
comp=Z,14nm,0.8s
HARP HAARP 83.91 334 P **P** **20 30 45.4 +0.1**
baz=111
DOT Dot Lake 83.91 336 P **P** **20 30 44.5 -0.8**
DOT IAmb IAmb 20 30 46.3
comp=Z,21nm,1.0s
KLU Klutina 83.93 333 P **P** **20 30 45.5 0.0**
KLU IAmb IAmb 20 30 46.4
comp=Z,22nm,0.9s
KLU Klutina 83.93 333 P **P** **20 30 45.3 -0.1**
baz=110,SNR=16
SCRK Sand Creek 84.01 336 P **P** **20 30 45.6 -0.2**
SCRK IAmb IAmb 20 30 46.9
comp=Z,11nm,0.8s
SCRK Sand Creek 84.01 336 P **P** **20 30 45.8 -0.1**
baz=112,SNR=19
J26L Joseph Creek 84.04 336 P **P** **20 30 45.5 -0.5**
J26L IAmb IAmb 20 30 47.2
comp=Z,8.4nm,0.8s
J26L Joseph Creek 84.04 336 P **P** **20 30 46.1 +0.1**
baz=113,SNR=16
GLI Glacier Island 84.25 332 P **P** **20 30 46.5 -0.5**
baz=109
PAX Paxson 84.25 335 P **P** **20 30 46.5 -0.7**
PAX IAmb IAmb 20 30 47.8
comp=Z,16nm,0.8s
PAX Paxson 84.25 335 P **P** **20 30 46.7 -0.4**
baz=111,SNR=21
M24K Tolsona, Glenn 84.25 334 P **P** **20 30 47.4 +0.3**
M24K Tolsona, Glenn 84.25 334 P **P** **20 30 47.1 0.0**
baz=110,SNR=8.3
RIDG Independent Ri 84.27 336 P **P** **20 30 47.0 -0.2**
RIDG IAmb IAmb 20 30 48.2
comp=Z,21nm,0.9s
RIDG Independent Ri 84.27 336 P **P** **20 30 47.2 0.0**
baz=112,SNR=16
SCM Sheep Creek Mo 84.67 333 P **P** **20 30 48.7 -0.5**
SCM IAmb IAmb 20 30 50.2
comp=Z,14nm,0.8s
SCM Sheep Creek Mo 84.67 333 P **P** **20 30 49.1 -0.2**
baz=109
J25K Salcha River, 84.81 336 P **P** **20 30 49.1 -0.7**
J25K IAmb IAmb 20 30 50.8
comp=Z,11nm,0.8s
J25K Salcha River, 84.81 336 P **P** **20 30 49.8 -0.1**
baz=111,SNR=17
M23K Glacier View 84.84 333 P **P** **20 30 49.9 -0.1**
baz=109
KNK Knik Glacier 85.05 333 P **P** **20 30 50.9 -0.2**
baz=108
WAT6 Susitna Watana 85.10 334 P **P** **20 30 51.2 -0.3**
baz=109,SNR=22
DHY Denali Highway 85.11 334 P **P** **20 30 50.5 -1.0**
DHY Denali Highway 85.11 334 P **P** **20 30 51.0 -0.5**
baz=109
SML Sawmill 85.12 333 P **P** **20 30 51.1 -0.4**
SML Sawmill 85.12 333 P **P** **20 30 51.1 -0.4**
baz=108,SNR=10.0
SEW Seward 85.12 331 P **P** **20 30 51.3 0.0**
baz=107
HDA Harding Lake 85.37 336 P **P** **20 30 52.2 -0.4**
HDA IAmb IAmb 20 30 53.1
comp=Z,12nm,0.8s
HDA Harding Lake 85.37 336 P **P** **20 30 51.9 -0.7**
baz=110,SNR=11
IL31 85.47 336 P **P** **20 30 52.0 -1.0**
ILAR Eielson Array 85.47 336 P **P** **20 30 52.5 -0.5**
comp=Z,5.5nm,0.8s,baz=125,slow=3.6,SNR=42
ILAR PP **PP** **20 34 15.9 +3.2**
comp=Z,1.6nm,1.3s,baz=100,slow=5.4,SNR=5.1
comp=Z,5.5nm,0.8s
ILAR Eielson Array 85.47 336 P **P** **20 30 52.1 -0.9**
DBG Daneborg 85.49 13 *i* P **P** **20 30 52.2 -0.8**
DBG IAmb IAmb 20 30 54.2
comp=Z,3.2nm,0.6s
WAT1 Susitna Watana 85.53 334 P **P** **20 30 52.5 -0.9**
baz=108
RC01 Rabbit Creek A 85.54 332 P **P** **20 30 53.2 -0.3**
baz=107
BMAR Burnt Mountain 85.55 339 P **P** **20 30 53.4 -0.1**
BRSE Bradley Lake S 85.64 331 P **P** **20 30 53.6 -0.4**
baz=106
CCB Clear Creek Bu 85.80 336 P **P** **20 30 54.2 -0.5**
POKR Poker Plat Res 85.81 336 P **P** **20 30 54.2 -0.5**
POKR IAmb IAmb 20 30 56.8
comp=Z,7.8nm,0.8s
POKR Poker Plat Res 85.81 336 P **P** **20 30 54.6 -0.1**
baz=110
QSPA South Pole Qui 85.83 180 P **P** **20 30 54.4 -0.6**
CLF Chambon-Foret 85.84 41 P **P** **20 30 55.4 +0.2**
CLF IAmb IAmb 20 30 56.8
comp=Z,21nm,1.2s
RND Reindeer 85.84 335 P **P** **20 30 54.8 -0.2**
RND IAmb IAmb 20 30 55.7
comp=Z,11nm,0.8s
RND pP **pP** **20 31 20.9 -1.1**
WRH Wood River Hil 85.86 336 P **P** **20 30 54.9 -0.1**
COLA College 85.89 336 P **P** **20 30 54.4 -0.7**
COLA IAmb IAmb 20 30 55.9
comp=Z,8.6nm,0.8s
COLA College 85.89 336 P **P** **20 30 54.8 -0.3**
baz=109
TCOL CIGO, UAF Yank 85.90 336 P **P** **20 30 54.4 -0.7**
TCOL IAmb IAmb 20 30 56.0
comp=Z,9.0nm,0.8s
TCOL CIGO, UAF Yank 85.90 336 P **P** **20 30 55.1 -0.1**
baz=109
M22K Willow 85.91 333 P **P** **20 30 55.1 -0.1**
M22K Willow 85.91 333 P **P** **20 30 55.2 -0.1**
baz=107

MCK McKinley 85.98 335 P **P** **20 30 55.5 -0.2**
MCK IAmb IAmb 20 30 56.5
comp=Z,16nm,1.2s
MCK McKinley 85.98 335 P **P** **20 30 55.5 -0.2**
baz=108,SNR=5.4
KDAK Kodiak Island 86.05 329 P **P** **20 30 55.1 -0.9**
comp=Z,1.7nm,0.3s,baz=352,slow=15,SNR=6.9
comp=Z,1.7nm,0.3s
MDM Murphy Dome 86.08 336 P **P** **20 30 55.6 -0.5**
MDM IAmb IAmb 20 30 57.0
comp=Z,19nm,1.0s
SUA Susitna One 86.12 332 P **P** **20 30 56.4 0.0**
SUA IAmb IAmb 20 30 57.5
comp=Z,15nm,1.0s
SUA Susitna One 86.12 332 P **P** **20 30 56.2 -0.2**
baz=106,SNR=5.5
H24K Noodor Dome 86.22 337 P **P** **20 30 56.4 -0.4**
H24K IAmb IAmb 20 30 58.0
comp=Z,12nm,1.0s
H24K Noodor Dome 86.22 337 P **P** **20 30 56.9 +0.1**
baz=109,SNR=11
OHAK Old Harbor 86.28 328 P **P** **20 30 57.3 +0.2**
OHAK IAmb IAmb 20 31 26.4
comp=Z,8.8nm,0.9s
OHAK Old Harbor 86.28 328 P **P** **20 30 57.0 -0.2**
baz=104
NEA2 Nenana 86.30 336 P **P** **20 30 56.2 -0.9**
NEA2 **pP** **20 31 23.4 -0.7**
NEA2 Nenana 86.30 336 P **P** **20 30 56.9 -0.2**
baz=108,SNR=10
TRF Thorofare Moun 86.47 334 P **P** **20 30 57.4 -0.9**
TRF IAmb IAmb 20 30 58.5
comp=Z,9.5nm,0.7s
TRF Thorofare Moun 86.47 334 P **P** **20 30 57.8 -0.4**
baz=107,SNR=8.6
I23K Minto, Yukon-K 86.59 336 P **P** **20 30 57.9 -0.6**
I23K pP **pP** **20 31 24.7 -0.8**
I23K Minto, Yukon-K 86.59 336 P **P** **20 30 58.6 +0.1**
baz=108,SNR=14
SKT Skwentna 86.62 333 P **P** **20 30 58.0 -0.7**
SKT Skwentna 86.62 333 P **P** **20 30 58.7 -0.1**
baz=106,SNR=38
O20K Slope Mountain 86.64 331 P **P** **20 30 58.8 -0.2**
baz=104
SPU Mount Spurr 86.65 332 P **P** **20 30 58.8 -0.2**
SPCR Spurr Chakacha 86.72 332 P **P** **20 30 58.9 -0.5**
baz=105
KTH Kantishna Hill 86.78 334 P **P** **20 30 58.3 -1.3**
KTH IAmb IAmb 20 31 00.7
comp=Z,18nm,0.9s
RSO Redoubt South 86.80 331 P **P** **20 30 59.2 -0.7**
H23K Yukon River 86.87 337 P **P** **20 31 00.0 +0.1**
H23K Yukon River 86.87 337 P **P** **20 30 59.6 -0.3**
baz=108
BPAW Bear Paw Mtn. 86.96 335 P **P** **20 30 59.4 -1.0**
BPAW Bear Paw Mtn. 86.96 335 P **P** **20 31 00.1 -0.3**
baz=106,SNR=24
MLY Manley 87.11 336 P **P** **20 31 00.6 -0.5**
MLY **pP** **20 31 27.3 -0.9**
MLY Manley 87.11 336 P **P** **20 31 00.8 -0.4**
baz=106,SNR=26
PPLA Purkeypile 87.15 334 P **P** **20 31 00.8 -0.7**
PPLA Purkeypile 87.15 334 P **P** **20 31 01.2 -0.3**
baz=105,SNR=14
DAG Danmarks Havn 87.16 11 *i* P **P** **20 30 60.0 -1.1**
DAG IAmb IAmb 20 31 01.3
comp=Z,5.8nm,0.8s
CAST Castle Rocks 87.24 334 P **P** **20 31 00.9 -0.8**
CAST Castle Rocks 87.24 334 P **P** **20 31 01.2 -0.6**
baz=105,SNR=20
M20K Styx River 87.32 333 P **P** **20 31 01.5 -0.8**
M20K IAmb IAmb 20 31 02.8
comp=Z,14nm,0.9s
M20K Styx River 87.32 333 P **P** **20 31 01.7 -0.6**
baz=104
CHUM Lake Minchumin 87.46 335 P **P** **20 31 02.1 -0.7**
baz=105,SNR=6.0
O19K Port Alsworth 87.49 331 P **P** **20 31 02.0 -1.0**
O19K IAmb IAmb 20 31 03.0
comp=Z,13nm,1.0s
O19K Port Alsworth 87.49 331 P **P** **20 31 02.3 -0.7**
baz=103
COLD Coldfoot 87.54 338 P **P** **20 31 03.5 +0.4**
COLD IAmb IAmb 20 31 05.0
comp=Z,17nm,0.9s
COLD Coldfoot 87.54 338 P **P** **20 31 03.8 +0.7**
baz=107,SNR=12
N19K Bonanza Creek 87.71 331 P **P** **20 31 03.3 -0.9**
N19K Bonanza Creek 87.71 331 P **P** **20 31 03.3 -0.9**
baz=103,SNR=6.7
TOLK Toolik Lake Re 87.73 340 P **P** **20 31 04.2 +0.1**
TOLK Toolik Lake Re 87.73 340 P **P** **20 31 04.1 +0.1**
baz=108,SNR=5.3
P18K Big Mountain, 87.77 330 P **P** **20 31 03.4 -1.0**
P18K IAmb IAmb 20 31 04.5
comp=Z,10nm,1.0s
P18K Big Mountain, 87.77 330 P **P** **20 31 03.2 -1.2**
baz=102
L20K Farewell, AK 87.81 333 P **P** **20 31 03.4 -1.1**
baz=104,SNR=16
O18K Koktuh Hills 87.85 330 P **P** **20 31 03.8 -0.9**
O18K IAmb IAmb 20 31 05.3
comp=Z,14nm,0.8s
O18K Koktuh Hills 87.85 330 P **P** **20 31 03.9 -0.8**
baz=102
M19K Big River Lodg 87.91 332 P **P** **20 31 04.0 -1.0**
M19K IAmb IAmb 20 31 05.7
comp=Z,10nm,0.8s
M19K Big River Lodg 87.91 332 P **P** **20 31 04.6 -0.4**
baz=103
R17K Ugashik Creek 88.01 328 P **P** **20 31 05.7 +0.1**
baz=101
BGES Gesves 88.07 39 *d*P **P** **20 31 06.7 +0.7**
K20K Telida 88.09 334 P **P** **20 31 05.0 -0.8**
K20K IAmb IAmb 20 31 06.4
comp=Z,23nm,1.1s
K20K Telida 88.09 334 P **P** **20 31 04.8 -1.1**
baz=103,SNR=13
H21K Melozitna Rive 88.12 336 P **P** **20 31 05.3 -0.6**
H21K IAmb IAmb 20 31 06.4
comp=Z,10nm,1.1s
H21K Melozitna Rive 88.12 336 P **P** **20 31 05.5 -0.4**
baz=105,SNR=7.1
L19K White Mountain 88.18 333 P **P** **20 31 05.3 -1.0**
L19K IAmb IAmb 20 31 06.8
comp=Z,15nm,0.9s
L19K pP **pP** **20 31 33.1 -0.3**
L19K White Mountain 88.18 333 P **P** **20 31 05.6 -0.7**
baz=103,SNR=12
SVW2 Sparrevohn 88.29 332 P **P** **20 31 05.9 -0.9**
SVW2 IAmb IAmb 20 31 07.0
comp=Z,15nm,1.0s
J20K Nowinta River 88.32 335 P **P** **20 31 06.3 -0.5**
J20K IAmb IAmb 20 31 07.4
comp=Z,12nm,1.0s
J20K Nowinta River 88.32 335 P **P** **20 31 06.2 -0.5**
baz=103,SNR=9.6
P17K Kvichak River 88.33 330 P **P** **20 31 06.8 -0.2**
baz=101,SNR=5.4
N18K Kilae Creek 88.36 331 P **P** **20 31 05.8 -1.3**
N18K Kilae Creek 88.36 331 P **P** **20 31 06.5 -0.6**
baz=102,SNR=13
IMAR Indian Mountai 88.57 336 P **P** **20 31 07.6 -0.5**
WLF Walferdange 88.65 40 P **P** **20 31 09.0 +0.3**
WLF IAmb IAmb 20 31 10.2
comp=Z,16nm,1.1s
WLF Walferdange 88.65 40 *d*P **P** **20 31 09.3 +0.6**
comp=Z,8.8nm,1.0s
BTNL Ternell 88.76 39 *d*P **P** **20 31 09.6 +0.3**
comp=Z,5.7nm,0.8s
O17K Koliganek Bris 88.77 330 P **P** **20 31 08.7 -0.3**
baz=101
TTA Tatalina 88.86 333 P **P** **20 31 08.9 -0.6**
TTA Tatalina 88.86 333 P **P** **20 31 08.8 -0.8**
baz=102
P16K Nushagak River 89.09 329 P **P** **20 31 10.3 -0.3**
baz=100
ECH Echery 89.11 42 P **P** **20 31 10.4 -0.6**
ECH IAmb IAmb 20 31 11.8
comp=Z,7.4nm,0.9s
KEST Kesra 89.32 54 P **P** **20 31 12.6 +0.3**
comp=Z,4.9nm,1.0s,baz=304,slow=23,SNR=3.6
comp=Z,4.9nm,1.0s
GCSA Galena City Sc 89.59 335 P **P** **20 31 13.3 +0.6**
baz=101
SDPT Sand Point 89.88 325 P **P** **20 31 14.4 +0.1**

baz=98
NOR Nord 89.99 7 *i* P **P** **20 31 13.3 -1.1**
TUE Stuetta 90.39 44 P **P** **20 31 16.1 -1.2**
TUE IAmb IAmb 20 31 18.4
comp=Z,9.5nm,0.8s
DAVA Damuels 90.83 43 *e*P **P** **20 31 19.6 +0.4**
comp=Z,6.4nm,0.8s
DAVA *e*P **pP** **20 31 49.1 +2.8**
comp=Z,5.2nm,1.0s
ZCCA Zocca 91.34 46 P **P** **20 31 21.1 -0.4**
FETA Feichten 91.39 43 *e*P **P** **20 31 22.3 +0.5**
comp=Z,8.2nm,1.2s
FETA *e*P **pP** **20 31 52.1 +3.1**
comp=Z,5.7nm,1.1s
RETA Reutte 91.45 43 *e*P **P** **20 31 22.3 +0.3**
comp=Z,5.1nm,1.1s
MOTA Moosalm 91.67 43 *e*P **P** **20 31 23.1 0.0**
comp=Z,8.8nm,1.0s
MOTA *e*P **pP** **20 31 51.6 +1.4**
comp=Z,1.9nm,0.7s
SQTA Sankt Quirin 91.73 43 *e*P **P** **20 31 22.8 -0.5**
comp=Z,6.2nm,0.8s
SQTA *e*P **pP** **20 31 52.8 +2.3**
comp=Z,2.7nm,0.5s
CTI Castel Tesino 91.95 44 P **P** **20 31 24.3 -0.1**
CTI IAmb IAmb 20 31 26.5
comp=Z,5.4nm,0.8s
WATA Walderalm 91.99 43 *e*P **P** **20 31 24.4 -0.1**
comp=Z,4.3nm,0.9s
WATA *e*P **pP** **20 31 54.7 +3.1**
comp=Z,4.9nm,1.2s
WTTA Wattenberg 92.02 43 *e*P **P** **20 31 24.9 +0.1**
comp=Z,6.1nm,0.9s
WTTA *e*P **pP** **20 31 56.4 +4.5**
comp=Z,5.6nm,0.9s
VNDA Vanda 92.35 191 P **P** **20 31 26.1 +0.7**
comp=Z,1.3nm,0.8s,baz=95,slow=3.4,SNR=8.1
comp=Z,1.3nm,0.8s
VNDA Vanda 92.35 191 P **P** **20 31 25.8 +0.3**
ABTA Abfaltersbach 92.59 43 *e*P **P** **20 31 26.2 -1.0**
comp=Z,5.9nm,1.1s
ABTA *e*P **pP** **20 31 59.2 +4.8**
comp=Z,5.4nm,1.2s
CLL Collm 93.16 39 *e*P **P** **20 31 30.0 +0.4**
CLL *es*P **sP** **20 32 07.0 -0.7**
BIOA Bad Ischl, Aus 93.40 43 *e*P **P** **20 31 31.4 +0.5**
comp=Z,5.5nm,1.1s
KHC Kasperske Hory 93.43 41 *e*P **P** **20 31 30.2 -0.8**
GERES GERESS Array B 93.50 41 P **P** **20 31 31.5 +0.1**
comp=Z,0.5nm,0.5s,baz=270,slow=4.0,SNR=7.1
comp=Z,0.5nm,0.5s
BRG Berggiesshubel 93.73 39 *e*P **P** **20 31 32.7 +0.4**
BRG Amp 20 31 34.2
comp=Z,5.3nm,1.1s
MOA Molln 93.83 42 *e*P **P** **20 31 33.2 +0.3**
comp=Z,6.7nm,1.6s
SUR Sutherland 94.15 123 LR LR 21 12 30.4
comp=Z,53nm,18.8s,baz=137,slow=34
ARSA Arzberg 94.67 43 *e*P **P** **20 31 36.3 -0.4**
comp=Z,4.2nm,1.0s
TREC Trest 94.68 41 *e*P **P** **20 31 37.6 +0.9**
CONA Conrad Observa 94.91 42 *e*P **P** **20 31 38.2 +0.3**
comp=Z,4.3nm,0.8s
UPC Upice 95.04 40 *e*P **P** **20 31 39.2 +0.9**
OSTC Ostas 95.17 40 *e*P **P** **20 31 40.0 +1.1**
RONA Rosalia, Austr 95.20 43 *e*P **P** **20 31 39.3 +0.2**
comp=Z,2.5nm,0.8s
DPC Dobruska-Polom 95.24 40 *e*P **P** **20 31 39.2 -0.1**
KRLC Kraliky 95.53 40 *e*P **P** **20 31 41.7 +1.1**
MODS Modra-Piesok 95.86 42 *e*PDIFF **P** **20 31 42.1 0.0**
ARCES ARCESS Array B 98.26 20 P **P** **20 31 52.1 -0.4**
comp=Z,5.1nm,0.9s,baz=243,slow=1.1,SNR=3.9
comp=Z,5.1nm,0.9s
ARCES ARCESS Array B 98.26 20 P **P** **20 31 51.9 -0.6**
CRVS Cervenica-Dubn 98.61 41 *e*PDIFF **P** **20 31 53.7 -0.8**
LBTB Lobatse 99.39 116 LR LR 21 16 14.7
comp=Z,51nm,18.7s,baz=80,slow=35
KBZ Khabaz 114.13 44 PKP **PKiKP** **20 36 54.7 +0.1**
comp=Z,2.8nm,0.9s,baz=355,slow=4.2,SNR=5.8
ZALV Zalesovo Beam 128.23 14 PKP **PKPdf** **20 37 21.3 0.0**
comp=Z,8.9nm,0.9s,baz=300,slow=2.9,SNR=30
ZALV Zalesovo Beam 128.23 14 PKPdf **PKPdf** **20 37 20.7 -0.7**
KURK Kurchatov 129.30 20 **PKiKP** **20 37 24.0 -0.2**
KURBB Kurchatov Arra 129.35 20 PKP **PKiKP** **20 37 24.0 -0.3**
comp=Z,7.5nm,0.8s,baz=319,slow=2.5,SNR=20
MKAR Makanchi Array 133.91 20 PKP **PKPdf** **20 37 32.1 -0.3**
comp=Z,2.1nm,0.6s,baz=14,slow=2.7,SNR=28
MKAR Makanchi Array 133.91 20 PKPdf **PKPdf** **20 37 31.9 -0.5**
MJAR Matsushiro Arr 134.55 320 PKP **PKPdf** **20 37 32.8 -1.1**
comp=Z,1.3nm,0.5s,baz=99,slow=2.1,SNR=4.8
SONM Songino Array 136.49 357 PKP **PKPdf** **20 37 37.1 -0.2**
comp=Z,2.0nm,0.8s,baz=248,slow=0.5,SNR=6.1
KSH Kashi 137.10 31 PKP **PKiKP** **20 37 40.8 +0.3**
KSH sPKP 20 38 14.9
KSH PKS **PKSdf** **20 41 14.9 -0.1**
WMQ Urumqi 138.28 17 *e*P **PKPdf** **20 37 41.1 +0.5**
ASAR Alice Springs 139.19 226 PKhKP PKPpre 20 37 32.2
comp=Z,1.3nm,0.9s,baz=128,slow=3.7,SNR=8.7
ASAR PKP **PKPdf** **20 37 42.1 -0.7**
comp=Z,3.1nm,0.8s,baz=116,slow=1.7,SNR=21
KSRS Korea Array 139.96 329 PKhKP PKPpre 20 37 34.7
comp=Z,1.4nm,0.7s,baz=47,slow=4.6,SNR=7.3
KSRS PKP **PKPdf** **20 37 43.4 -0.4**
comp=Z,3.0nm,0.8s,baz=2.3,slow=1.3,SNR=15
WRA Warramunga Arr 141.09 231 PKhKP PKPpre 20 37 39.5
comp=Z,1.8nm,0.8s,baz=134,slow=2.8,SNR=14
WRA PKP **PKPdf** **20 37 45.8 -0.5**
comp=Z,4.4nm,0.8s,baz=119,slow=2.1,SNR=17
HHC Hu-ho-hao-te 142.80 349 *e*P **PKPdf** **20 37 48.6 -0.4**
GTA Gaotai 144.87 5 ⇓PKP **PKPab** **20 37 51.2 -0.7**
GTA pPKP pPKPdf 20 38 12.4 -8.6
GTA sPKP 20 38 24.8
GTA LR LR
comp=N,68nm,18.9s
GTA LR LR
comp=E,130nm,17.4s
GTA LR LR
comp=Z,120nm,18.9s
TIA Tai'an 145.71 340 ⇑P **PKPdf** **20 37 53.8 -0.2**
TIA pmax pmax
comp=Z,11nm,0.9s
GOMU GeErMu 147.28 13 P **PKPbc** **20 37 59.6 0.0**
GOMU pP PKiKP 20 38 04.8 +3.0
GOMU sP PKPab 20 38 07.0 +5.5
GOMU pmax pmax
comp=Z,7.0nm,1.2s
GOMU pmax pmax
comp=Z,95nm,5.0s
LZH Lanzhou 148.31 359 ⇓PKPbc **PKPbc** **20 38 02.5 +0.4**
LZH pPKP pPKPdf 20 38 22.0 -4.9
LZH sPKP 20 38 34.8
LZH LR LR
comp=N,180nm,13.8s
LZH LR LR
comp=E,280nm,17.8s
LZH LR LR
comp=Z,180nm,18.9s
PYUN Piuthan 149.46 37 *e*P **PKPdf** **20 38 00.0 -0.7**
comp=Z,46nm,0.7s
XAN Xi'an 149.89 351 PKPbc **PKPdf** **20 38 01.3 +0.3**
XAN sPKP 20 38 38.5
KOLN Koldanda 150.06 37 *e*P **PKPdf** **20 37 59.2 -2.5**
comp=Z,51nm,1.8s
GKN Gorkha 150.49 35 *e*P **PKPdf** **20 38 02.1 -0.2**
comp=Z,154nm,0.9s
KKN Kakani 151.02 34 *e*P **PKPdf** **20 38 03.1 -0.1**
comp=Z,36nm,0.8s
PKIN Phulchoki 151.25 34 *e*P **PKPdf** **20 38 02.7 -0.9**
comp=Z,50nm,0.9s
GUN Gumba 151.26 33 *e*P **PKPdf** **20 38 04.2 +0.5**
PKI Pulchoki 151.26 34 *e*P **PKPdf** **20 38 02.6 -1.1**
comp=Z,52nm,0.9s
JIRN Jiri 151.62 33 *e*P **PKPdf** **20 38 04.4 +0.1**
comp=Z,30nm,0.8s
RAMN Ramite 152.41 33 *e*P **PKPdf** **20 38 04.3 -1.0**
comp=Z,59nm,0.6s
TAPN Taplejung 152.68 31 *e*P **PKPdf** **20 38 06.2 +0.4**
PZH PanZhiHua 157.83 3 PKP **PKPdf** **20 38 12.4 -0.2**
CMAR Chiang Mai Arr 165.28 16 PKP **PKPdf** **20 38 20.3 0.0**
CMAR PKPab **PKPab** **20 39 17.6 -0.4**
comp=Z,2.3nm,0.9s,baz=282,slow=1.6,SNR=15
comp=Z,4.0nm,0.8s,baz=327,slow=5.7,SNR=14

*IDC **08** 20:26:00.7±2.3, 13°.34N×92°.14W, h0km, mb4.0/6, mbtmp3.9/8, ML3.5/2 Error ellipse: s-maj=68.9km*

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s-min=23.9km az=37.0
*GCG **08** 20:26:01.4±1.2, 13°.39N×92°.75W, h50km±211km, MD4.4*
*NEIC **08** 20:26:03.6±2.4, 13°.47N±0°.04×92°.26W±0°.07, h10km±2km, mb4.4/55, Error ellipse: s-maj=12.1km s-min=4.1km az=117.0*
*MEX **08** 20:26:04.0±0.5, 13°.27N×92°.45W, h16km±448km, MD4.1*
*SNET **08** 20:26:06.3±1.2, 13°.36N×92°.15W, h86km±101km, ML3.8*
*UCR **08** 20:26:06.1±1.2, 13°.36N×91°.97W, h2km±238km, ML3.4, mb4.4(NEIC)*

ISC 08 20:26:03.8±1.9, **13°.41N**±0°.06×**92°.28W**±0°.05, **h18**km±10km, **n121**, σ1§15/138, **mb4.3**/29, **Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	**1.24**	**27**		**Pg**	**20 26 26.5**	**-1.3**
RTAL				Sn	**Sn**	**20 26 42.2**	**-0.5**
STG3	**Santiaguito 3,**	**1.46**	**28**	*e*P	**Pb**	**20 26 30.3**	**-0.4**
STG3				*e*S	**Sg**	**20 26 52.0**	**+0.9**
CHUJ	**Union Juarez**	**1.68**	**6**	*i*P	**Pn**	**20 26 31.7**	**-0.8**
CHUJ				*i*S	**Sn**	**20 26 52.8**	**-1.0**
PATR	**El Naranjo**	**1.69**	**1**	*i*P	**Pn**	**20 26 31.9**	**-0.9**
PATR				*i*S	**Sn**	**20 26 53.7**	**-0.5**
FUG	**Fuego 3**	**1.73**	**53**	*e*P	**Pb**	**20 26 34.5**	**-0.7**
FUG				*e*S	**Sg**	**20 27 01.3**	**+1.6**
PAVE	**Pavencul**	**1.77**	**3**	*i*P	**Pn**	**20 26 33.3**	**-0.5**
PAVE				*i*S	**Sn**	**20 26 56.2**	**+0.1**
HUEH	**Huehuetenango**	**2.04**	**22**		**Pn**	**20 26 37.2**	**-0.3**
PCIG		**2.45**	**338**	*i*P	**Pn**	**20 26 41.7**	**-1.3**
PCIG				*i*S	**Sn**	**20 27 10.9**	**-1.7**
NUBE	**Las Nubes**	**2.48**	**78**	*e*P	**Pn**	**20 26 42.8**	**-0.6**
NUBE				*e*S	**Sn**	**20 27 12.9**	**-0.4**
NUBE	**Las Nubes**	**2.48**	**78**	*e*P	**Pn**	**20 26 42.8**	**-0.6**
NUBE				*e*S	**Sn**	**20 27 12.9**	**-0.4**
SLOZ	**Alcaldia de Sa**	**2.50**	**76**	*e*P	**Pn**	**20 26 43.4**	**-0.2**
CEVE	**Cerro Verde**	**2.61**	**81**	*e*P	**Pn**	**20 26 45.5**	**0.0**
CEVE				*e*S	**Sn**	**20 27 18.0**	**+1.2**
CEVE	**Cerro Verde**	**2.61**	**81**	*e*P	**Pn**	**20 26 45.5**	**0.0**
CEVE				*e*S	**Sn**	**20 27 18.0**	**+1.2**
CCIG	**Comitan**	**2.86**	**3**		**Pn**	**20 26 51.0**	**+2.3**
CCIG	**Comitan**	**2.86**	**3**	*i*P	**Pn**	**20 26 49.8**	**+1.1**
CCIG				*i*S	**Sn**	**20 27 24.1**	**+1.3**
SNET	**Serv Nac Est T**	**2.98**	**84**		**Pn**	**20 26 49.6**	**-0.7**
MRL	**Marmol**	**3.01**	**56**	*e*P	**Pn**	**20 26 53.3**	**+2.4**
MRL				*e*S	**Sb**	**20 27 34.8**	**+1.1**
ESQI	**Esquipulas**	**3.07**	**68**		**Pn**	**20 26 52.7**	**+1.1**
ESQI	**Esquipulas**	**3.07**	**68**	*e*P	**Pn**	**20 26 52.5**	**+0.9**
LFRS	**El Faro**	**3.13**	**86**	*e*P	**Pn**	**20 26 53.0**	**+0.6**
LFRS	**El Faro**	**3.13**	**86**	*e*P	**Pn**	**20 26 53.0**	**+0.6**
SJTE	**Alcalda de S**	**3.19**	**86**	*e*P	**Pn**	**20 26 53.7**	**+0.5**
SJTE	**Alcalda de S**	**3.19**	**86**	*e*P	**Pn**	**20 26 53.7**	**+0.5**
PAVA	**Las Pavas**	**3.26**	**84**	*e*P	**Pn**	**20 26 54.5**	**+0.3**
PAVA				IAML		20 26 59.4	
	comp=Z,178nm,0.4s						
PAVA				*e*S	**Sn**	**20 27 31.4**	**-1.3**
PAVA	**Las Pavas**	**3.26**	**84**	*e*P	**Pn**	**20 26 54.5**	**+0.3**
PAVA				IAML		20 26 59.4	
	comp=Z,178nm,0.4s						
PAVA				*e*S	**Sn**	**20 27 31.4**	**-1.3**
COEG	**Centro de Oper**	**3.31**	**86**	*e*P	**Pn**	**20 26 55.7**	**+0.8**
COEG	**Centro de Oper**	**3.31**	**86**	*e*P	**Pn**	**20 26 55.7**	**+0.8**
TGIG		**3.44**	**346**	*i*P	**Pn**	**20 26 56.2**	**-0.5**
TGIG				*i*S	**Sn**	**20 27 37.0**	**-0.1**
SCLA	**Alcaldia de Sa**	**3.46**	**85**	*e*P	**Pn**	**20 26 57.7**	**+0.8**
SCLA	**Alcaldia de Sa**	**3.46**	**85**	*e*P	**Pn**	**20 26 57.7**	**+0.8**
PACA	**Pacayal**	**3.85**	**89**	*e*P	**Pn**	**20 27 02.7**	**+0.4**
PACA				*e*S	**Sn**	**20 27 46.1**	**-1.1**
PACA	**Pacayal**	**3.85**	**89**	*e*P	**Pn**	**20 27 02.7**	**+0.4**
PACA				*e*S	**Sn**	**20 27 46.1**	**-1.1**
RANC	**El Ranchito**	**3.88**	**89**	*e*P	**Pn**	**20 27 03.3**	**+0.5**
RANC	**El Ranchito**	**3.88**	**89**	*e*P	**Pn**	**20 27 03.3**	**+0.5**
PETF	**Flores**	**4.19**	**33**	Pn	**Pn**	**20 27 08.3**	**+1.4**
LCND	**La Caada**	**4.27**	**91**	*e*P	**Pn**	**20 27 08.4**	**+0.4**
LCND				IAML		20 28 03.8	
	comp=Z,158nm,0.4s						
LCND	**La Caada**	**4.27**	**91**	*e*P	**Pn**	**20 27 08.4**	**+0.4**
LCND				IAML		20 28 03.8	
	comp=Z,158nm,0.4s						
UXUV	**UXUV**	**4.28**	**335**	*i*P	**Pn**	**20 27 08.2**	**0.0**
UXUV				*i*S	**Sn**	**20 27 57.8**	**+0.2**
CNCH	**Conchagua**	**4.33**	**91**	*e*P	**Pn**	**20 27 08.8**	**-0.1**
CNCH	**Conchagua**	**4.33**	**91**	*e*P	**Pn**	**20 27 08.8**	**-0.1**
TGUH	**Tegucigalpa,Un**	**4.91**	**82**	Pn	**Pn**	**20 27 17.4**	**+0.5**
CRIN	**San Cristobal**	**5.14**	**97**		**Pn**	**20 27 20.8**	**+0.7**
CNGN	**Cerro Negro**	**5.51**	**99**	Pn	**Pn**	**20 27 25.3**	**+0.1**
MATN	**Matagalpa**	**6.21**	**94**	Pn	**Pn**	**20 27 32.5**	**-2.2**
BOAB	**BOAČ BROADBAN**	**6.52**	**98**		**Pn**	**20 27 38.1**	**-0.8**
HZTE	**Horizontes, Gu**	**7.07**	**112**	Pn	**Pn**	**20 27 48.1**	**+1.7**
ACON	**Acoyapa**	**7.08**	**101**	Pn	**Pn**	**20 27 47.0**	**+0.4**
ORTG	**Ortega, Santa**	**7.33**	**114**		**Pn**	**20 27 51.8**	**+1.7**
TLIG	**Tlapa**	**7.33**	**305**	Pn	**Pn**	**20 27 51.2**	**+1.0**
DUNO	**Dulce Nombre,**	**7.42**	**116**	Pn	**Pn**	**20 27 52.6**	**+1.3**
JTS	**Las Juntas de**	**7.81**	**113**	Pn	**Pn**	**20 27 52.8**	**-3.9**
	comp=Z,0.9nm,0.3s,baz=270,slow=20,SNR=1.7						
	comp=Z,2.1nm,0.3s						
JTS	**Las Juntas de**	**7.81**	**113**		**Pn**	**20 27 54.5**	**-2.3**
RIMA	**Rio Macho**	**9.00**	**113**		**Pn**	**20 28 15.1**	**+1.8**
SRBA	**San Rafael, Bu**	**9.68**	**114**		**Pn**	**20 28 24.9**	**+2.5**
DRKO	**Hurika**	**9.77**	**114**		**Pn**	**20 28 24.1**	**+0.4**
BCIP	**Isla Barro Col**	**12.31**	**108**	Pn	**Pn**	**20 29 07.9**	**+1.4**
833A	**Chaparral WMA,**	**16.25**	**337**	P	**P**	**20 29 54.5**	**+0.2**
SJCC	**San Jacinto, C**	**17.11**	**100**	P	**Pn**	**20 30 03.8**	**+1.6**
SJCC				IAmb	IAmb	20 30 06.7	
	comp=Z,25nm,0.8s						
JCT	**Junction City**	**18.35**	**339**	P	**P**	**20 30 18.9**	**+1.4**
TXAR	**Lajitas Array**	**19.04**	**328**	P	**P**	**20 30 25.6**	**+0.4**
	baz=146,slow=12,SNR=4.5						
	comp=Z,0.5nm,0.7s						
TXAR	**Lajitas Array**	**19.04**	**328**	P	**Pn**	**20 30 26.2**	**+0.2**
TX31	**Lajitas Ar. Si**	**19.04**	**328**		**P**	**20 30 26.0**	**+0.8**
TX32	**Lajitas Array**	**19.04**	**328**	P	**P**	**20 30 25.7**	**+0.5**
TIGA	**Tiflon**	**19.64**	**23**	P	**Pn**	**20 30 32.5**	**-0.5**
Z47A	**Carrollton**	**20.07**	**10**	P	**P**	**20 30 37.1**	**+0.9**
LRAL	**Lakeview Retre**	**20.12**	**13**	P	Pn	20 30 38.0	-0.7
ABTX	**Abilene, Hawle**	**20.27**	**342**	P	**P**	**20 30 39.6**	**+1.0**
ABTX				IAmb	IAmb	20 30 48.4	
	comp=Z,17nm,0.9s						
152A	**Waverly Hall**	**20.38**	**19**		**P**	**20 30 39.0**	**-0.6**
152A				IAmb	IAmb	20 30 44.5	
	comp=Z,11nm,0.6s						
Y45A	**Yeager Farm, C**	**20.51**	**7**	P	**P**	**20 30 41.4**	**+0.3**
Y49A	**Blount Mountai**	**21.04**	**14**	P	**P**	**20 30 47.5**	**+0.7**
Y49A				IAmb	IAmb	20 30 48.2	
	comp=Z,26nm,1.4s						
MIAR	**Mount Ida**	**21.07**	**357**	P	**P**	**20 30 46.6**	**-0.5**
MIAR				IAmb	IAmb	20 30 56.8	
	comp=Z,12nm,1.4s						
X37A	**Clayton**	**21.27**	**353**	P	**P**	**20 30 49.9**	**+0.6**
X37A				IAmb	IAmb	20 30 53.5	
	comp=Z,23nm,1.4s						
X48A	**Hartselle**	**21.48**	**12**	P	**P**	**20 30 50.8**	**-0.7**
X48A				IAmb	IAmb	20 30 53.3	
	comp=Z,11nm,0.8s						
SDV	**Santo Domingo**	**21.70**	**100**	P	**P**	**20 30 52.6**	**-1.7**
	comp=Z,18nm,0.7s,baz=288,slow=8.0,SNR=5.1						
	comp=Z,18nm,0.7s						
MNTX	**Cornudas Mount**	**21.82**	**329**	P	**P**	**20 30 56.4**	**+1.2**
FPAL	**Fort Paine**	**21.89**	**15**	P	**P**	**20 30 56.7**	**+0.7**
FPAL				IAmb	IAmb	20 30 58.2	
	comp=Z,14nm,0.8s						
WMOK	**Wichita Mounta**	**22.03**	**346**	P	**P**	**20 30 57.5**	**0.0**
FNO	**Franklin**	**22.24**	**349**	P	**P**	**20 30 59.1**	**-0.5**
SWET	**Sewanee**	**22.45**	**14**	P	**P**	**20 31 01.1**	**-0.9**
SWET				IAmb	IAmb	20 31 03.5	
	comp=Z,8.7nm,0.7s						
LCAR	**Lake Charles**	**22.58**	**2**	P	**P**	**20 31 00.9**	**-2.4**
HODGE	**Hodges**	**22.63**	**22**	P	**P**	**20 31 03.2**	**-0.7**
HODGE				IAmb	IAmb	20 31 05.0	
	comp=Z,10nm,0.9s						
V48A	**Smith Brothers**	**22.77**	**12**	P	**P**	**20 31 03.6**	**-1.7**
V48A				IAmb	IAmb	20 31 05.9	
	comp=Z,17nm,0.9s						
WVT	**Waverly**	**22.97**	**9**	P	**P**	**20 31 06.6**	**-0.9**
WVT				IAmb	IAmb	20 31 21.1	
	comp=Z,14nm,1.0s						
U38A	**Gravette**	**23.01**	**356**	P	**P**	**20 31 06.3**	**-1.6**
U38A				IAmb	IAmb	20 31 15.9	
	comp=Z,9.8nm,1.2s						
BG3	**Lake Jocassee**	**23.09**	**20**	P	**P**	**20 31 08.2**	**-0.4**
BG3				IAmb	IAmb	20 31 10.3	
	comp=Z,7.6nm,1.0s						
PBMO	**Poplar Bluff**	**23.33**	**4**	P	**P**	**20 31 10.2**	**-0.8**
PBMO				IAmb	IAmb	20 31 11.7	
	comp=Z,15nm,1.1s						
TKL	**Tuckaleechee C**	**23.44**	**18**	P	**P**	**20 31 12.2**	**0.0**
	comp=Z,3.2nm,0.7s,baz=192,slow=9.3,SNR=3.5						
	comp=Z,3.2nm,0.7s						
TKL	**Tuckaleechee C**	**23.44**	**18**	P	**P**	**20 31 11.3**	**-0.8**
TKL				IAmb	IAmb	20 31 14.9	
	comp=Z,16nm,1.4s						
U49A	**Red Boiling Sp**	**23.73**	**13**	P	**P**	**20 31 13.9**	**-1.1**
121A	**Cookes Peak, D**	**23.74**	**326**	P	**P**	**20 31 16.7**	**+1.3**
KMSC	**Kings Mountain**	**23.79**	**23**	P	**P**	**20 31 15.1**	**-0.5**
KMSC				IAmb	IAmb	20 31 16.0	
	comp=Z,12nm,1.0s						
S39A	**Bolivar**	**24.20**	**358**	P	**P**	**20 31 17.7**	**-1.7**
CRNM	**Carthage**	**24.30**	**330**	P	**P**	**20 31 22.0**	**+1.4**
S44A	**Carbondale**	**24.33**	**6**	P	**P**	**20 31 19.6**	**-1.0**
SIUC	**Southern Illin**	**24.36**	**6**	P	**P**	**20 31 19.9**	**-0.9**
BNM	**Barren Site**	**24.41**	**330**	P	**P**	**20 31 23.2**	**+1.5**
T50A	**Nancy**	**24.43**	**15**	P	**P**	**20 31 21.0**	**-0.6**
V55A	**Taylorsville**	**24.46**	**22**	P	**P**	**20 31 20.8**	**-1.0**
FVM	**French Village**	**24.53**	**4**	P	**P**	**20 31 25.9**	**+3.4**
FVM				IAmb	IAmb	20 31 29.8	
	comp=Z,7.6nm,0.8s						
CCM	**Cathedral Cave**	**24.56**	**2**	P	**P**	**20 31 22.1**	**-0.6**
CCM				IAmb	IAmb	20 31 24.7	
	comp=Z,5.2nm,0.8s						
R40A	**Maddies Statio**	**24.78**	**0**	P	**P**	**20 31 24.7**	**+0.1**
U54A	**Nelsons Funny**	**24.85**	**20**	P	**P**	**20 31 23.6**	**-1.9**
ANMO	**Albuquerque**	**24.98**	**332**	P	**P**	**20 31 26.6**	**-0.1**
T25A	**Trinidad**	**26.00**	**337**	P	**P**	**20 31 35.9**	**-0.2**
T25A				IAmb	IAmb	20 31 42.6	
	comp=Z,7.1nm,1.0s						
SDCO	**Great Sand Dun**	**26.95**	**336**	P	**P**	**20 31 44.9**	**+0.3**
PDAR	**Pinedale Array**	**32.84**	**336**	P	**P**	**20 32 37.8**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=129,slow=9.4,SNR=2.4						
	comp=Z,0.3nm,0.3s						
BGU	**Big Grassy Mou**	**32.87**	**330**	P	**P**	**20 32 36.0**	**-1.0**
BGU				IAmb	IAmb	20 32 39.1	
	comp=Z,4.1nm,0.8s						
REDW	**Red Top Meadow**	**33.86**	**335**	P	**P**	**20 32 46.3**	**+0.6**
REDW				IAmb	IAmb	20 32 56.2	
	comp=Z,6.2nm,0.9s						
NV11	**Mina Array Sit**	**33.87**	**322**	P	**P**	**20 32 44.5**	**-1.2**
NV11				IAmb	IAmb	20 32 46.6	
	comp=Z,5.1nm,1.1s						
NVAR	**Mina Array Bea**	**33.96**	**322**	P	**P**	**20 32 46.0**	**-0.6**
LHV	**Little Huntoon**	**33.97**	**321**	P	**P**	**20 32 46.4**	**0.0**
LHV				IAmb	IAmb	20 32 59.4	
	comp=Z,4.5nm,0.7s						
RYN	**Ryan**	**34.22**	**322**	P	**P**	**20 32 47.5**	**-1.3**
RYN				IAmb	IAmb	20 32 51.0	
	comp=Z,3.5nm,0.5s						
MCMT	**McKenzie Canyo**	**35.88**	**335**	P	**P**	**20 33 04.8**	**+1.7**
BOZ	**Bozeman (W)**	**36.03**	**337**	P	**P**	**20 33 02.5**	**-1.8**
BOZ				IAmb	IAmb	20 33 14.2	
	comp=Z,3.1nm,1.1s						
J08A	**Circle Bar Ran**	**37.39**	**328**	P	**P**	**20 33 16.8**	**+0.9**
J08A				IAmb	IAmb	20 33 22.3	
	comp=Z,5.2nm,0.7s						
YKA	**Yellowknife Ar**	**51.53**	**347**	P	**P**	**20 35 08.7**	**+0.3**
	comp=Z,2.4nm,0.8s,baz=151,slow=7.8,SNR=7.1						
	comp=Z,2.4nm,0.8s						
INK	**Inuvik**	**60.92**	**344**	P	**P**	**20 36 15.3**	**0.0**
	comp=Z,1.3nm,0.6s,baz=135,slow=2.9,SNR=3.8						
	comp=Z,1.3nm,0.6s						
INK	**Inuvik**	**60.92**	**344**	IAmb	IAmb	20 36 30.4	
	comp=Z,3.0nm,1.1s						
ILAR	**Eielson Array**	**63.27**	**337**	P	**P**	**20 36 31.8**	**+0.6**
	comp=Z,0.8nm,1.0s,baz=124,slow=4.3,SNR=5.0						
	comp=Z,0.8nm,1.0s						
CMAR	**Chiang Mai Arr**	**146.46**	**340**	PKPbc	**PKPdf**	**20 45 44.4**	**+0.9**
	comp=Z,1.1nm,0.6s,baz=337,slow=3.6,SNR=8.8						
CMAR	**Chiang Mai Arr**	**146.46**	**340**		**PKPdf**	**20 45 40.3**	**-3.2**

DJA 08 20:38:53.0±0.3, **0°S**±2°×**12°0E**±°, **h10**km, **M3.8**/11, **mb3.9**/2, **MLv3.7**/11, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPSI	**Mapaga**	**0.77**	**357**	Pg	Pg	20 39 06.1	-1.9
MPSI				S	Sb	20 39 19.3	+0.2
APSI	**Ampana**	**1.77**	**105**	P	Pn	20 39 22.1	-1.6
APSI				S	Sn	20 39 46.4	+0.1
MRSI	**Marisa**	**2.20**	**66**	Pn	Pn	20 39 30.0	+0.4
MRSI				S	Sn	20 39 52.0	-4.9
TTSI	**Tana Toraja**	**2.59**	**183**	P	Pn	20 39 34.7	-0.3
TTSI				S	Sn	20 40 08.4	+1.8
LUWI	**Luwuk**	**2.89**	**102**	Pn	Pn	20 39 38.4	-0.8
LUWI				S	Sn	20 40 15.3	+1.2
SPSI	**Sidrap Palu**	**3.50**	**183**	Pn	Pn	20 39 47.3	-0.3
BNSI	**Bone**	**3.94**	**178**	P	Pn	20 39 51.8	-1.7
KMSI	**Cibinong**	**4.16**	**76**	P	Pn	20 39 57.9	+1.2
BKSI	**Bulukumba**	**4.85**	**178**	P	Pn	20 40 07.2	+1.1
TNG	**Tangerang**	**14.44**	**246**	P	Pn	20 42 13.1	-4.5

*NEIC **08** 20:44:47.7±2.2, 53°.5N±0°.2×161°.2E±0°.2, h43km±11km, mb4.1/5, Error ellipse: s-maj=26.5km s-min=13.1km az=153.0*
*KRSC **08** 20:44:49.1±0.9, 53°.64N×160°.89E, h47km±16km, ML4.4*
*MOS **08** 20:44:50.5±0.5, 53°.61N×160°.86E, h55km, mb4.1/1, Error ellipse: s-maj=8.5km s-min=4.7km az=71.0*
*IDC **08** 20:44:54.4±2.2, 53°.78N×160°.49E, h73km±19km, mb3.5/15, mbtmp3.8/18, MS3.1/2, Error ellipse: s-maj=23.8km s-min=14.8km az=136.0*

ISC 08 20:44:49.5±1.0, **53°.64N**±0°.05×**160°.92E**±0°.05, **h54**km±10km, **n113**, σ1§32/83, **mb3.8**/16, **Near east coast of Kamchatka Peninsula**

| Code | Station Name | Δ° | AZ° | Phase ID

PET					pmax	pmax		
	comp=Z,191nm,0.3s							
PET					smax	smax		
	comp=N,2μm,0.5s							
PET	**Petropavlovsk**	**1.50**	**247**	*i* P	**Pn**		**20 45 15.3 +1.4**	
PET				*e*S	**Sn**		**20 45 32.5 +0.2**	
TUMR	**Tumrok**	**1.71**	**345**	PN	Pn		20 45 19.1 +2.1	
TUMR	**Tumrok**	**1.71**	**345**	*i* P	Pn		20 45 19.1 +2.1	
GNL	**Ganaly**	**1.78**	**273**	PN	Pn		20 45 19.5 +1.7	
GNL	**Ganaly**	**1.78**	**273**	*e*P	Pn		20 45 19.5 +1.7	
KRMR	**Karymshinskiy**	**1.86**	**245**	PN	Pn		20 45 20.7 +1.8	
KRMR				S	**Sn**		**20 45 42.2 +0.9**	
KRMR	**Karymshinskiy**	**1.86**	**245**	*e*P	Pn		20 45 20.7 +1.8	
KRMR				*e*S	**Sn**		**20 45 42.2 +0.9**	
RUS	**Russkaya**	**1.89**	**231**	PN	**Pn**		**20 45 20.7 +1.4**	
RUS	**Russkaya**	**1.89**	**231**	*i* P	**Pn**		**20 45 20.7 +1.4**	
PEA0B	**Petropavlovsk-**	**2.00**	**256**		Pn		20 45 22.6 +1.8	
PEA0B				Sn	**Sn**		**20 45 45.9 +1.1**	
PEA0B	**Petropavlovsk-**	**2.00**	**256**	PN	Pn		20 45 22.6 +1.7	
PEA0B							20 45 45.9	
PETK	**Petropavlovsk-**	**2.00**	**256**	P	**Pn**		**20 45 22.3 +1.4**	
	comp=N,110nm,0.3s,baz=86,slow=20,SNR=238							
PETK				S	**Sn**		**20 45 46.1 +1.3**	
	comp=N,72nm,0.5s,baz=134,slow=19,SNR=3.9							
PETK				LR	LR		20 46 17.0	
	comp=N,111nm,19.9s,baz=73,slow=46							
PETK	**Petropavlovsk-**	**2.00**	**256**		**Pn**		**20 45 21.7 +0.8**	
MTVR	**Mutnovka**	**2.02**	**236**	PN	Pn		20 45 23.0 +1.8	
MTVR	**Mutnovka**	**2.02**	**236**	*i* P	Pn		20 45 23.0 +1.8	
GRL	**Gorelyy**	**2.04**	**239**	PN	Pn		20 45 23.5 +2.1	
GRL	**Gorelyy**	**2.04**	**239**	*i* P	Pn		20 45 23.5 +2.1	
KMNR	**Kamenistaya**	**2.16**	**350**	PN	Pn		20 45 26.0 +2.9	
KMNR	**Kamenistaya**	**2.16**	**350**	*i* P	Pn		20 45 26.0 +2.9	
ASAK	**Asacha**	**2.22**	**237**	PN	**Pn**		**20 45 23.7 -0.2**	
ASAK	**Asacha**	**2.22**	**237**	*i* P	**Pn**		**20 45 23.7 -0.2**	
BZGR	**Bezymyannyi-Gr**	**2.31**	**357**	PN	Pn		20 45 28.3 +3.2	
BZGR				S	Sn		20 45 56.5 +4.1	
BZGR	**Bezymyannyi-Gr**	**2.31**	**357**	*e*P	Pn		20 45 28.3 +3.2	
BZGR				*e*S	Sn		20 45 56.5 +4.1	
BZWR	**Bezymyannyi-We**	**2.34**	**354**	PN	Pn		20 45 27.1 +1.5	
BZWR	**Bezymyannyi-We**	**2.34**	**354**	*e*P	Pn		20 45 27.1 +1.5	
KIRR	**Kirishev**	**2.34**	**352**	PN	Pn		20 45 28.5 +2.9	
KIRR	**Kirishev**	**2.34**	**352**	*e*P	Pn		20 45 28.5 +2.9	
KPT	**Kopyto**	**2.37**	**350**	PN	Pn		20 45 27.7 +1.8	
KPT	**Kopyto**	**2.37**	**350**	*e*P	Pn		20 45 27.7 +1.8	
APC	**Apacha**	**2.37**	**254**	PN	Pn		20 45 28.1 +2.2	
APC				S	**Sn**		**20 45 57.3 +3.6**	
APC	**Apacha**	**2.37**	**254**	*e*P	Pn		20 45 28.1 +2.2	
APC				*e*S	**Sn**		**20 45 57.3 +3.6**	
KOZ	**Kozyrevsk**	**2.50**	**346**	PN	Pn		20 45 29.9 +2.3	
KOZ	**Kozyrevsk**	**2.50**	**346**	*e*P	Pn		20 45 29.9 +2.3	
KDTR	**Khodutka, Kamc**	**2.52**	**225**	PN	Pn		20 45 30.2 +2.3	
KDTR				S	**Sn**		**20 45 59.6 +2.2**	
KDTR	**Khodutka, Kamc**	**2.52**	**225**	*e*P	Pn		20 45 30.2 +2.3	
KDTR				*e*S	**Sn**		**20 45 59.6 +2.2**	
ESO	**Esso**	**2.63**	**332**	PN	Pn		20 45 31.2 +1.8	
ESO	**Esso**	**2.63**	**332**	*e*P	Pn		20 45 31.2 +1.8	
KLY	**Klyuchi**	**2.69**	**357**	PN	Pn		20 45 32.6 +2.5	
KLY				S	**Sn**		**20 46 02.9 +1.5**	
KLY	**Klyuchi**	**2.69**	**357**	*e*P	Pn		20 45 32.6 +2.5	
KLY				*e*S	**Sn**		**20 46 02.9 +1.5**	
KBTR	**Krutoberegovo**	**2.80**	**22**	PN	Pn		20 45 35.1 +3.4	
KBTR				S	Sn		20 46 09.1 +4.9	
KBTR	**Krutoberegovo**	**2.80**	**22**	*i* P	Pn		20 45 35.1 +3.4	
KBTR				*e*S	Sn		20 46 09.1 +4.9	
MIPR	**Malaya Ipel'ka**	**2.87**	**243**	PN	Pn		20 45 35.6 +3.0	
MIPR	**Malaya Ipel'ka**	**2.87**	**243**	*i* P	Pn		20 45 35.6 +3.0	
BDR	**Baidarnaya**	**2.94**	**3**	PN	Pn		20 45 37.8 +4.1	
BDR	**Baidarnaya**	**2.94**	**3**	*e*P	Pn		20 45 37.8 +4.1	
SMKR	**Semkarok**	**2.97**	**6**	PN	Pn		20 45 37.0 +2.9	
SMKR	**Semkarok**	**2.97**	**6**	*e*P	Pn		20 45 37.0 +2.9	
SRKR	**Sorokina**	**3.02**	**3**	PN	Pn		20 45 37.9 +3.0	
SRKR	**Sorokina**	**3.02**	**3**	*e*P	Pn		20 45 37.9 +3.0	
BKI	**Bering**	**3.34**	**60**	PN	Pn		20 45 42.1 +3.0	
BKI				S	**Sn**		**20 46 18.0 +0.6**	
BKI	**Bering**	**3.34**	**60**	*e*P	Pn		20 45 42.1 +3.0	
BKI				*e*S	**Sn**		**20 46 18.0 +0.6**	
MA2	**Magadan**	**8.17**	**321**	LR	LR		20 49 36.1	
	comp=N,50nm,21.0s,baz=157,slow=36							
JKA	**Kamikawa-asahi**	**15.32**	**239**	P	**P**		**20 48 24.3 -1.6**	
JKA	**Kamikawa-asahi**	**15.32**	**239**	IAmb	IAmb		20 48 26.1	
	comp=Z,14nm,1.3s							
ASAJ	**Asahikawa**	**15.32**	**239**	P	**P**		**20 48 24.3 -1.6**	
	comp=Z,1.5nm,0.5s,baz=48,slow=16,SNR=2.6							
ERM	**Erimo**	**16.60**	**233**	Pn	**P**		**20 48 37.3 -2.8**	
ERM				IAmb	IAmb		20 49 00.9	
	comp=Z,20nm,1.1s							
ERM	**Erimo**	**16.60**	**233**	P	**P**		**20 48 37.3 -2.8**	
ERM				pmax	pmax			
	comp=Z,20nm,1.1s							
YAK	**Yakutsk**	**18.46**	**309**	P	**Pn**		**20 49 00.6 -0.5**	
	comp=Z,5.1nm,0.5s,baz=207,slow=1.1,SNR=4.9							
JTM	**Tenmabayashi**	**18.55**	**234**	P	**Pn**		**20 49 01.2 -1.1**	
KLR	**Kul'dur**	**18.65**	**268**	P	**Pn**		**20 49 05.0 +1.7**	
	comp=Z,1.2nm,0.8s,baz=47,slow=5.6,SNR=3.7							
TIXI	**Tiksi**	**22.80**	**334**	P	**P**		**20 49 48.0 +0.9**	
	comp=Z,0.3nm,0.3s,baz=272,slow=23,SNR=2.4							
	comp=Z,0.3nm,0.3s							
MJAR	**Matsushiro Arr**	**23.28**	**232**	P	**P**		**20 49 53.4 +1.2**	
	comp=Z,1.1nm,0.5s,baz=31,slow=12,SNR=3.2							
	comp=Z,1.1nm,0.5s							
ILAR	**Eielson Array**	**28.08**	**46**	P	P		20 50 38.9 +3.5	
	comp=Z,0.5nm,0.7s,baz=272,slow=7.2,SNR=5.9							
	comp=Z,0.5nm,0.7s							
INK	**Inuvik**	**33.13**	**38**	P	P		20 51 23.4 +3.5	
	comp=Z,1.1nm,0.7s,baz=287,slow=7.6,SNR=3.7							
	comp=Z,1.1nm,0.7s							
H11N2	**WAKE ISLAND Hy**	**34.16**	**170**	T	T		21 27 58.4	
	baz=354,slow=76,SNR=236							
H11N3	**WAKE ISLAND Hy**	**34.17**	**170**	T	T		21 27 59.5	
	baz=354,slow=76,SNR=186							
H11N1	**WAKE ISLAND Hy**	**34.17**	**170**	T	T		21 27 59.7	
	baz=354,slow=76,SNR=180							
SONM	**Songino Array**	**34.26**	**283**	P	**P**		**20 51 26.2 -3.9**	
	comp=Z,1.0nm,0.5s,baz=238,slow=11,SNR=3.9							
H11S1	**WAKE ISLAND Hy**	**35.35**	**170**	T	T		21 29 21.1	
	baz=352,slow=76,SNR=11							
H11S3	**WAKE ISLAND Hy**	**35.36**	**171**	T	T		21 29 25.3	
	baz=352,slow=76,SNR=23							
H11S2	**WAKE ISLAND Hy**	**35.37**	**170**	T	T		21 29 33.5	
	baz=352,slow=76,SNR=9.5							
JOW	**Kunigami**	**36.03**	**235**	P	P		20 51 47.9 +2.5	
	comp=Z,3.6nm,0.5s,baz=53,slow=11,SNR=6.6							
	comp=Z,3.6nm,0.5s							
RES	**Resolute Bay**	**42.63**	**22**	P	P		20 52 42.8 +3.0	
	comp=Z,2.5nm,0.9s,baz=338,slow=3.3,SNR=2.0							
	comp=Z,2.5nm,0.9s							
MKAR	**Makanchi Array**	**48.37**	**296**	P	**P**		**20 53 24.2 -1.3**	
	comp=Z,0.3nm,0.5s,baz=56,slow=7.3,SNR=7.9							
	comp=Z,0.3nm,0.5s							
CMAR	**Chiang Mai Arr**	**58.78**	**258**	P	**P**		**20 54 43.7 +1.7**	
	comp=Z,0.4nm,0.5s,baz=27,slow=7.6,SNR=4.4							
	comp=Z,0.4nm,0.5s							
FINES	**FINESS Array B**	**59.81**	**337**	P	P		20 54 50.3 +1.7	
	comp=Z,2.0nm,0.6s,baz=47,slow=6.5,SNR=15							
	comp=Z,2.0nm,0.6s							
FINES	**FINESS Array B**	**59.81**	**337**	P	**P**		**20 54 49.7 +1.2**	
FINES	**FINESS Array B**	**59.81**	**337**	P	**P**		**20 54 49.7 +1.2**	
BELG	**Belogornoye**	**60.62**	**320**	LR	LR		21 23 40.7	
	comp=Z,48nm,18.5s,baz=124,slow=38							
NB2	**NORSAR Subarra**	**63.16**	**344**	P	P		20 55 12.5 +1.3	
	comp=Z,1.1nm,0.5s,baz=20,slow=6.9							
NOA	**NORSAR Array B**	**63.16**	**344**	P	P		20 55 12.7 +1.5	
	comp=Z,1.6nm,0.6s,baz=25,slow=6.6,SNR=7.4							
	comp=Z,1.6nm,0.6s							
AKASG	**Malin Array Be**	**68.40**	**329**	P	**P**		**20 55 45.2 +0.3**	
	comp=Z,0.7nm,0.4s,baz=28,slow=6.6,SNR=5.6							
	comp=Z,0.7nm,0.4s							
AKASG	**Malin Array Be**	**68.40**	**329**	IAmb	IAmb		20 55 48.5	
	comp=Z,2.3nm,1.3s							
TXAR	**Lajitas Array**	**69.97**	**68**	P	P		20 55 59.3 +4.2	
	comp=Z,0.4nm,0.7s,baz=310,slow=7.7,SNR=3.7							
	comp=Z,0.4nm,0.7s							
GERES	**GERESS Array B**	**74.19**	**338**	P	P		20 56 22.1 +2.0	
	comp=Z,0.6nm,0.6s,baz=38,slow=6.8,SNR=6.6							
	comp=Z,0.6nm,0.6s							
WRA	**Warramunga Arr**	**76.79**	**206**	P	P		20 56 37.4 +2.4	
	comp=Z,0.5nm,1.0s,baz=15,slow=5.8,SNR=1.9							
	comp=Z,0.5nm,1.0s							
ESDC	**Sonseca Array**	**86.15**	**348**	P	P		20 57 27.0 +2.5	
	comp=Z,0.4nm,0.7s,baz=0.9,slow=4.4,SNR=4.7							
	comp=Z,0.4nm,0.7s							

MAN 08 20:44:55.2,13°.67N×120°.99E,h35km,mb3.9,ML2.6,

MS2.2,1C-3D,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PGP	**Puerto Galera**	**0.17**	**192**	*e*P	Pn	20 45 02.9	+0.1
PGP				*i* S		20 45 06.6	
TGY	**Tagaytay City**	**0.43**	**353**	*e*P	Pn	20 45 06.4	+1.4
TGY				*i* S		20 45 13.0	
MACP	**Maragondon, Ca**	**0.64**	**336**	*e*P	Pn	20 45 09.2	+1.3
LUBP	**Lubang**	**0.73**	**275**	*e*P	Pb	20 45 10.6	+0.7

IDC ***08*** *20:45:32.6±0.8, 2°.20N×125°.60E, h0km, mb4.1/8, mbtmp4.1/8, Error ellipse: s-maj=62.7km s-min=17.2km az=77.0*

NEIC ***08*** *20:45:41.1±1.1, 2°.4N±0°.1×126°.16E±0°.10, h70km±10km, mb4.3/15, Error ellipse: s-maj=16.6km s-min=12.5km az=213.0*

DJA ***08*** *20:45:41.2±1.1, 2°.1N±2°×12°6E±°, h24km±10km, M4.1/12, mb4.3/7, mB4.8/4, MLv4.0/12, Mw(mB)4.1/4*

ISC 08 20:45:40.8±0.6, 2°.35N±0°.05×126°.22E±0°.08, h70km, n41, σ1s83/44, mb4.2/16, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.50**	**333**	P	**Pn**	**20 46 05.9**	**+0.1**
SGSI				S	**Sn**	**20 46 23.9**	**-0.7**
TNTI	**Ternate**	**1.94**	**144**	Pn	**Pn**	**20 46 12.6**	**+0.8**
TNTI	**Ternate**	**1.94**	**144**	P	**Pn**	**20 46 13.0**	**+1.3**
KMSI	**Cibinong**	**2.84**	**232**	P	**Pn**	**20 46 24.8**	**+0.9**
LBMI	**Labuha**	**3.23**	**157**	P	**Pn**	**20 46 31.2**	**+1.9**
LBMI				S	**Sn**	**20 47 07.8**	**+1.2**
SANI	**Sanana**	**4.37**	**183**	P	**Pn**	**20 46 43.9**	**-0.9**
SANI				S	**Sn**	**20 47 30.0**	**-4.5**
MRSI	**Marisa**	**4.66**	**247**	P	**Pn**	**20 46 50.7**	**+2.0**
LUWI	**Luwuk**	**4.81**	**226**	Pn	**Pn**	**20 46 50.7**	**-0.1**
LUWI	**Luwuk**	**4.81**	**226**	P	**Pn**	**20 46 53.6**	**+2.7**
TOLI2	**Tolitoli**	**5.57**	**257**	Pn	**Pn**	**20 47 00.5**	**-0.7**
APSI	**Ampana**	**5.60**	**235**	P	**Pn**	**20 47 05.3**	**+3.8**
	0.2nm47nm44nm,0.7s						
MPSI	**Mapaga**	**6.62**	**253**	P	**Pn**	**20 47 18.3**	**+2.7**
	0.1nm10.0nm,0.9s						
FAKI	**Fak Fak**	**7.98**	**131**	Pn	**Pn**	**20 47 31.0**	**-3.2**
MYLDM	**Lahad Datu**	**8.20**	**290**	Pn	**Pn**	**20 47 40.1**	**+3.0**
YULB	**Yu-li**	**21.46**	**348**	P	**P**	**20 50 19.7**	**-3.9**
YULB				IAmb	IAmb	20 50 30.7	
	comp=Z,12nm,1.4s						
TPUB	**Ta-pu**	**21.52**	**346**	P	**P**	**20 50 22.4**	**-1.8**
TPUB				IAmb	IAmb	20 50 23.9	
	comp=Z,24nm,1.2s						
KASI	**Kota Agung**	**23.06**	**250**	P	P	20 50 50.5	+10
	comp=Z,39nm,1.0s						
WB0	**Warramunga Arr**	**23.40**	**160**	P	**P**	**20 50 43.4**	**-0.4**
WB0				IAmb	IAmb	20 50 46.8	
	comp=Z,8.9nm,1.2s						
WRA	**Warramunga Arr**	**23.54**	**161**	P	**P**	**20 50 45.2**	**+0.1**
	comp=Z,1.2nm,0.3s,baz=335,slow=11,SNR=26						
	comp=Z,1.2nm,0.3s						
WRA	**Warramunga Arr**	**23.54**	**161**	P	**P**	**20 50 43.9**	**-1.2**
WB2	**Warramunga Arr**	**23.55**	**161**	P	**P**	**20 50 44.3**	**-0.8**
WR0	**Warramunga Arr**	**23.63**	**160**	P	**P**	**20 50 45.6**	**-0.2**
WR0				IAmb	IAmb	20 50 49.0	
	comp=Z,16nm,1.4s						
JOW	**Kunigami**	**24.43**	**4**	P	**P**	**20 50 56.0**	**+3.0**
	comp=Z,10nm,0.8s,baz=192,slow=9.7,SNR=4.7						
	comp=Z,10nm,0.8s						
JOW	**Kunigami**	**24.43**	**4**	IAmb	IAmb	20 50 57.0	
	comp=Z,13nm,0.9s						
AS31	**Alice Springs**	**26.92**	**164**	P	**P**	**20 51 14.5**	**-1.2**
ASAR	**Alice Springs**	**26.92**	**164**	P	**P**	**20 51 16.5**	**+0.8**
	comp=Z,0.5nm,0.5s,baz=344,slow=7.6,SNR=12						
ASAR				PcP	**PcP**	**20 54 37.9**	**+1.5**
	comp=Z,0.3nm,0.4s,baz=346,slow=2.5,SNR=4.0						
	comp=Z,0.5nm,0.5s						
ASAR	**Alice Springs**	**26.92**	**164**	P	**P**	**20 51 15.8**	**+0.1**
KSRS	**Korea Array**	**34.97**	**2**	P	**P**	**20 52 28.1**	**+1.8**
	comp=Z,1.6nm,0.8s,baz=182,slow=9.0,SNR=7.5						
	comp=Z,1.6nm,0.8s						
BBOO	**Buckleboo**	**36.19**	**166**	P	**P**	**20 52 37.8**	**+1.0**
KLR	**Kul'dur**	**46.95**	**5**	P	**P**	**20 54 05.5**	**+1.0**
	comp=Z,0.6nm,0.4s,baz=170,slow=9.0,SNR=4.8						
	comp=Z,0.6nm,0.4s						
MK31	**Makanchi Array**	**58.40**	**326**	P	**P**	**20 55 28.1**	**-1.1**
MK31				IAmb	IAmb	20 55 29.9	
	comp=Z,0.8nm,0.5s						
MKAR	**Makanchi Array**	**58.40**	**326**	P	**P**	**20 55 28.7**	**-0.5**
	comp=Z,0.8nm,0.4s,baz=122,slow=8.1,SNR=21						
MKAR				PcP	**PcP**	**20 56 19.4**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=138,slow=4.6,SNR=5.7						
	comp=Z,0.8nm,0.4s						
MKAR	**Makanchi Array**	**58.40**	**326**	P	**P**	**20 55 28.5**	**-0.7**
MAKZ	**Makanchi**	**58.58**	**326**	P	**P**	**20 55 29.7**	**-0.8**
MAKZ				IAmb	IAmb	20 55 31.5	
	comp=Z,1.0nm,0.6s						
KDJ	**Kajisay**	**59.04**	**319**	P	**P**	**20 55 33.3**	**-0.6**
KURK	**Kurchatov**	**62.63**	**328**	P	**P**	**20 55 57.4**	**-0.5**
KURK				IAmb	IAmb	20 55 58.8	
	comp=Z,5.9nm,1.3s						
NRIK	**Noril'sk**	**71.64**	**346**	P	**P**	**20 56 55.7**	**+1.1**
	comp=Z,3.1nm,0.6s,baz=128,slow=4.0,SNR=4.4						
	comp=Z,3.1nm,0.6s						
NRIK	**Noril'sk**	**71.64**	**346**	P	**P**	**20 56 55.6**	**+1.1**
NRIK				IAmb	IAmb	20 56 56.2	
	comp=Z,3.6nm,0.7s						
ABKAR	**Akbulak array**	**72.89**	**321**	P	**P**	**20 56 59.5**	**-3.0**
FINES	**FINESS Array B**	**92.80**	**332**	P	**P**	**20 58 45.6**	**+0.2**
	comp=Z,2.3nm,0.8s,baz=56,slow=3.4,SNR=4.2						
	comp=Z,2.3nm,0.8s						
BUR08	**Bucovina Ar. S**	**95.69**	**318**	P	**P**	**20 58 58.4**	**-0.8**

MAN 08 20:49:50.1,13°.74N×120°.62E,h89km,mb3.6,ML2.4, MS1.8,Mindoro

IDC ***08*** *20:53:53.1±0.8, 43°.91N×151°.63E, h0km, mb3.8/13, mbtmp3.8/17, ML3.4/3, MS2.9/3, Error ellipse: s-maj=20.3km s-min=17.7km az=155.0*

NEIC ***08*** *20:53:55.2±1.3, 43°.9N±0°.1×151°.6E±0°.1, h10km±1km, mb4.1/13, Error ellipse: s-maj=20.3km s-min=12.6km az=170.0*

JMA ***08*** *20:53:55.6±0.9, 44°.1N±4°×15°1E±°, h30km, MV4.0/14, FAR SE OFF KURILE ISL*

NIED ***08*** *20:53:55.6, 44°.28N×151°.46E, h30km, MW4.1, Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁵Nm; Mrr-0.85; Mθθ0.75; Mφφ0.11; Mrθ1.12; Mrφ0.13; Mθφ0.14; Fault plane solution: M₀1.39000×10¹⁵ NP1:φs76.00000°, δ18.00000°, λ-96.00000°. NP2:φs262.00000°, δ72.00000°, λ-88.00000°.*

MOS ***08*** *20:53:56.2±1.0, 43°.89N×151°.46E, h34km, mb4.1/1 Error ellipse: s-maj=13.3km s-min=10.0km az=37.0*

SKHL ***08*** *20:53:56.4±0.3, 43°.70N×151°.40E, h45km±3km, mb4.3/3*

ISC 08 20:53:56.3±0.7, 43°.76N±0°.08×151°.44E±0°.06, h24km, n66, σ1s71/79, mb4.0/19, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.95**	**301**	*e*PN	**Pn**	**20 54 40.9**	**-0.7**
KUR				*e*S	**Sn**	**20 55 13.4**	**-2.8**
KUR				pmax	pmax		
	comp=Z,42nm,0.5s						
KUR				smax	smax		
	comp=E,278nm,0.5s						
KUR				smax	smax		
	comp=N,253nm,0.6s						
KUR	**Kuril'sk**	**2.95**	**301**	*e*P	**Pn**	**20 54 40.6**	**-1.0**
KUR				AMB	AMB	20 54 42.2	
	comp=N,40nm,0.3s						
KUR				*e*S	**Sn**	**20 55 13.3**	**-2.9**
KUR				A	A	20 55 17.6	
	comp=N,300nm,0.6s						
KUR				A	A	20 55 17.6	
	comp=N,310nm,0.6s						
SHO	**Shikotan**	**3.34**	**273**	*e*PN	**Pn**	**20 54 46.5**	**-0.4**
SHO				pmax	pmax		
	comp=Z,11nm,0.3s						
SHO	**Shikotan**	**3.34**	**273**	*e*P	**Pn**	**20 54 46.5**	**-0.4**
SHO				AMB	AMB	20 54 51.8	
	comp=Z,20nm,0.4s						
SHO				*e*S	**Sn**	**20 55 23.7**	**-2.1**
SHO				A	A	20 55 28.1	
	comp=Z,110nm,0.6s						
SHO				A	A	20 55 28.1	
	comp=Z,100nm,0.6s						
YUK	**Yuzh-Kuril'sk**	**4.04**	**276**	*e*PN	**Pn**	**20 54 56.0**	**-0.5**
YUK				pmax	pmax		
	comp=Z,84nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**4.04**	**276**	*e*P	**Pn**	**20 54 56.1**	**-0.5**
YUK				AMB	AMB	20 54 58.3	
	comp=Z,30nm,0.3s						
YUK				*e*S	**Sn**	**20 55 40.7**	**-2.4**
YUK				A	A	20 55 42.4	
	comp=Z,130nm,0.6s						
YUK				A	A	20 55 42.4	
	comp=Z,170nm,0.6s						
NEM2	**Nemuro 2**	**4.16**	**266**	*e*P	**Pn**	**20 54 57.4**	**-0.8**
NEM2				*e*S	**Sn**	**20 55 43.1**	**-2.9**
NMR	**Nemuro--Hokkai**	**4.17**	**267**	*e*PN	**Pn**	**20 54 57.8**	**-0.5**
NMR	**Nemuro--Hokkai**	**4.17**	**267**	*e*P	**Pn**	**20 54 57.8**	**-0.5**
NMR				*e*S	**Sn**	**20 55 43.7**	**-2.6**
GLVR	**Golovnino**	**4.29**	**272**	*e*S	**Sn**	**20 55 47.9**	**-1.3**
RUSJ	**Misakicho**	**4.49**	**276**	*e*PN	**Pn**	**20 55 02.8**	**+0.1**
JRA	**Rausu**	**4.57**	**274**	*e*P	**Pn**	**20 55 04.7**	**+0.8**
AKK	**Akkeshi**	**4.87**	**263**	*e*P	**Pn**	**20 55 08.1**	**+0.2**
AKK				*e*S	**Sn**	**20 56 01.1**	**-2.3**
JNK	**Nakash**	**4.88**	**270**	*e*P	**Pn**	**20 55 07.9**	**-0.2**
JNK				*e*S	**Sn**	**20 56 01.3**	**-2.5**
JAK	**Akkeshi**	**4.97**	**263**	*e*P	**Pn**	**20 55 09.3**	**-0.1**
JAK				*e*S	**Sn**	**20 56 03.9**	**-2.3**
JTKR	**Abashiri--Toko**	**5.45**	**275**	*e*P	**Pn**	**20 55 16.5**	**+0.5**
JAR	**Ashorobuto**	**5.60**	**268**	*e*P	**Pn**	**20 55 18.3**	**+0.3**
JAR				*e*S	**Sn**	**20 56 20.4**	**-1.1**
JOB	**Onbets**	**5.61**	**264**	*e*S	**Sn**	**20 56 18.2**	**-3.7**
JCH	**Churui**	**6.02**	**262**	*e*S	**Sn**	**20 56 28.1**	**-3.7**
ERM	**Erimo**	**6.33**	**257**	Pn	**Pn**	**20 55 30.3**	**+2.3**
ERM				Sn	**Sn**	**20 56 38.7**	**-0.8**
JKA	**Kamikawa-asahi**	**6.39**	**276**		**Pn**	**20 55 31.8**	**+2.9**
JKA					**Sn**	**20 56 46.4**	**+5.3**
ASAJ	**Asahikawa**	**6.39**	**276**	Pn	**Pn**	**20 55 31.8**	**+2.9**
	comp=Z,1.0nm,0.3s,baz=101,slow=12,SNR=9.4						
ASAJ				Sn	**Sn**	**20 56 46.4**	**+5.2**
	comp=Z,0.2nm,0.3s,baz=108,slow=20,SNR=1.0						
ASAJ				LR	LR	20 58 12.4	
	comp=Z,35nm,19.5s,baz=78,slow=40						
	comp=Z,4.0nm,0.4s						
JNBK	**Urakawa-nobuka**	**6.54**	**260**	*e*P	**Pn**	**20 55 31.0**	**+0.1**
JNBK				*e*S	**Sn**	**20 56 41.1**	**-3.6**
JEW	**Eniwo**	**7.35**	**266**		**Sn**	**20 57 04.8**	**+0.2**
JANG	**Nango**	**8.12**	**249**	*e*P	**Pn**	**20 55 51.5**	**-1.1**
JANG				*e*S	Sn	20 57 16.1	-7.6
JTM	**Tenmabayashi**	**8.24**	**252**	Pn	**Pn**	**20 55 54.0**	**-0.4**
JMM	**Marumori**	**9.99**	**237**	Pn	**Pn**	**20 56 17.5**	**-0.7**
JSD	**Sado**	**11.49**	**245**	Pn	**Pn**	**20 56 37.9**	**-0.9**
KLR	**Kul'dur**	**14.61**	**299**	Pn	**Pn**	**20 57 22.9**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=118,slow=15,SNR=2.4						
KLR				LR	LR	21 03 56.3	
	comp=Z,46nm,18.7s,baz=208,slow=41						
	comp=Z,0.7nm,0.5s						
KLR	**Kul'dur**	**14.61**	**299**	P	**Pn**	**20 57 23.0**	**+1.7**
MA2	**Magadan**	**15.84**	**359**	Pn	**Pn**	**20 57 36.8**	**-0.7**
	comp=Z,2.7nm,0.3s,baz=159,slow=13,SNR=3.7						
SEY	**Seymchan**	**19.21**	**1**	P	**P**	**20 58 16.9**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=189,slow=6.1,SNR=4.0						
	comp=Z,0.7nm,0.4s						
TIXI	**Tiksi**	**30.04**	**346**	P	**P**	**20 59 59.9**	**-3.0**
	comp=Z,0.3nm,0.4s,baz=270,slow=20,SNR=2.2						
TIXI	**Tiksi**	**30.04**	**346**	IAmb	IAmb	21 00 08.5	
	comp=Z,4.4nm,1.4s						
SONM	**Songino Array**	**31.32**	**293**	P	**P**	**21 00 14.8**	**+0.1**
	comp=Z,1.0nm,0.6s,baz=98,slow=11,SNR=2.4			

KAPI	**Kappang**	**2.89**	**169**	Pn		**Pn**	**21 12 36.7**	**-0.5**
	4.8nm,0.3s,baz=331,slow=15,SNR=8.0							
KAPI				Sn		**Sn**	**21 13 10.9**	**-1.1**
	13nm,0.3s,baz=229,slow=21,SNR=8.7							
	17nm,0.4s							
BKSI	**Bulukumba**	**3.28**	**163**	P		**Pn**	**21 12 42.8**	**+0.3**
BKSI				S		**Sn**	**21 13 22.8**	**+1.2**
LUWI	**Luwuk**	**3.76**	**73**	P		**Pn**	**21 12 48.3**	**-0.9**
MRSI	**Marisa**	**3.81**	**47**	P		**Pn**	**21 12 50.4**	**+0.5**
BSSI	**Bau Bau, Buton**	**4.17**	**162**	P		**Pn**	**21 12 56.4**	**+1.6**
BBKI	**Banjar Baru**	**4.52**	**253**	P		**Pn**	**21 12 56.6**	**-3.0**
BBSI	**Bau Bau**	**4.73**	**134**	P		**Pn**	**21 13 02.0**	**-0.6**
KMSI	**Cibinong**	**5.52**	**61**	P		**Pn**	**21 13 11.4**	**-2.0**
	0.3nm42nm,0.4s							
LBMI	**Labuha**	**8.46**	**80**	P		**Pn**	**21 13 55.3**	**+1.5**
	18nm,0.9s							
WRA	**Warramunga Arr**	**23.06**	**141**	P		**P**	**21 16 53.0**	**-4.0**
	0.8nm,0.8s,baz=313,slow=12,SNR=6.7							
	0.8nm,0.8s							
ASAR	**Alice Springs**	**25.70**	**147**	P		P	21 17 15.0	-6.7
	0.4nm,0.8s,baz=332,slow=9.4,SNR=3.7							
	0.4nm,0.8s							
MKAR	**Makanchi Array**	**58.54**	**331**	P		**P**	**21 21 51.4**	**+3.5**
	0.4nm,0.6s,baz=123,slow=6.5,SNR=4.2							
	0.4nm,0.6s							

*IDC **08** 21:21:17.7±2.1, 43°.62N×105°.51W, h0km, mbtmp3.8/2, ML2.6/1, Error ellipse: s-maj=52.2km s-min=9.9km az=151.0*
*NEIC **08** 21:21:18.6±1.8, 43°.53N±0°.05×105°.26W±0°.05, h0km±2km, ML3.3/51, Error ellipse: s-maj=9.8km s-min=3.0km az=323.0*

ISC 08 21:21:17.6±1.1, 43°.52N±0°.05×105°.28W±0°.06, h0km, n46, σ1§27/44, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**1.08**	**56**	Pg	**Pg**	**21 21 38.6**	**+0.2**
K22A	**Casper**	**1.26**	**227**	Pn	**Pg**	**21 21 41.2**	**-0.5**
K22A				IAML		21 22 09.2	
	comp=N,434nm,0.3s						
PHWY	**Pilot Hill**	**2.22**	**183**	Pn	**Pn**	**21 21 57.2**	**+1.3**
RWWY	**Rawlins**	**2.32**	**219**	Pn	**Pn**	**21 21 59.3**	**+2.1**
N23A	**Red Feather La**	**2.67**	**191**	Pn	**Pn**	**21 22 00.8**	**-1.3**
N23A				IAML		21 22 46.2	
	comp=E,141nm,0.5s						
N23A				IAML		21 22 47.2	
	comp=N,166nm,0.6s						
PD31	**Pinedale Array**	**3.22**	**258**	Pn	**Pn**	**21 22 10.7**	**+1.0**
PDAR	**Pinedale Array**	**3.22**	**258**	Pn	**Pn**	**21 22 10.7**	**+1.0**
	comp=N,5.4nm,0.3s,baz=76,slow=17,SNR=35						
PDAR				Lg	Lg	21 22 54.5	
	comp=N,9.9nm,0.3s,baz=76,slow=31,SNR=2.3						
BW06	**Boulder Array**	**3.22**	**258**		**Pn**	**21 22 11.5**	**+1.8**
BW06				IAML		21 23 02.3	
	comp=N,51nm,0.5s						
LAO	**LASA Array**	**3.24**	**348**	Pn	**Pn**	**21 22 10.5**	**+0.7**
RLMT	**Red Lodge**	**3.28**	**301**	Pn	**Pn**	**21 22 11.7**	**+1.2**
RLMT				IAML		21 23 03.5	
	comp=N,64nm,0.3s						
RLMT				IAML		21 23 07.9	
	comp=N,68nm,0.7s						
OGNE	**Ogallala**	**3.52**	**136**	Pn	**Pn**	**21 22 15.7**	**+2.0**
ISCO	**Idaho Springs**	**3.72**	**184**	Pn	**Pn**	**21 22 18.1**	**+1.5**
GCMT	**Greycliff**	**3.87**	**308**		**Pn**	**21 22 19.6**	**+1.1**
H17A	**Grant Village**	**3.92**	**285**		**Pn**	**21 22 19.5**	**+0.1**
H17A				IAML		21 22 48.0	
	comp=E,35nm,1.4s						
H17A				IAML		21 23 25.8	
	comp=N,41nm,1.2s						
FLWY	**Flagg Ranch**	**3.96**	**280**		**Pn**	**21 22 21.8**	**+1.9**
MOOW	**Moose Ponds**	**3.97**	**275**	Pn	**Pn**	**21 22 21.7**	**+1.7**
SNOW	**Snow King Moun**	**3.98**	**271**		**Pn**	**21 22 22.2**	**+2.0**
REDW	**Red Top Meadow**	**4.06**	**270**		**Pn**	**21 22 23.0**	**+1.8**
YPP	**Pitchstone Pla**	**4.06**	**283**		**Pn**	**21 22 22.6**	**+1.3**
YPP				IAML		21 23 32.4	
	comp=E,28nm,2.5s						
TPAW	**Teton Pass**	**4.13**	**272**	Pn	**Pn**	**21 22 23.5**	**+1.3**
TPAW				IAML		21 23 41.1	
	comp=E,26nm,1.2s						
TPAW				IAML		21 24 04.5	
	comp=E,47nm,1.1s						
FXWY	**Fox Creek**	**4.18**	**274**	Pn	**Pn**	**21 22 24.8**	**+2.0**
FXWY				IAML		21 23 38.4	
	comp=E,26nm,2.0s						
AHID	**Auburn Hatcher**	**4.33**	**262**		**Pn**	**21 22 25.8**	**+1.0**
AHID				IAML		21 23 50.8	
	comp=E,33nm,0.7s						
AHID				IAML		21 24 00.8	
	comp=E,28nm,1.2s						
RDMU	**Red Mountain**	**4.34**	**229**	Pn	**Pn**	**21 22 26.2**	**+1.1**
RDMU				IAML		21 23 52.9	
	comp=E,36nm,1.4s						
RDMU				IAML		21 24 05.2	
	comp=N,34nm,1.3s						
YHL	**Hebgen Lake**	**4.45**	**289**		**Pn**	**21 22 27.7**	**+1.0**
YHL				IAML		21 23 56.0	
	comp=E,40nm,1.3s						
E28A	**Huff**	**4.46**	**45**	Pn	**Pn**	**21 22 27.4**	**+0.9**
Q24A	**Divide**	**4.55**	**179**		**Pn**	**21 22 29.4**	**+1.4**
QLMT	**Earthquake Lak**	**4.62**	**289**	Pn	**Pn**	**21 22 28.1**	**-0.7**
BOZ	**Bozeman (W)**	**4.99**	**297**		**Pn**	**21 22 33.8**	**-0.1**
BOZ				IAML		21 24 06.5	
	comp=E,17nm,1.5s						
BOZ				IAML		21 25 45.2	
	comp=E,17nm,4.3s						
DGMT	**Dagmar**	**5.01**	**8**	Pn	**Pn**	**21 22 34.2**	**+0.1**
HWUT	**Hardware Ranch**	**5.02**	**250**	Pn	**Pn**	**21 22 34.5**	**+0.1**
HWUT				IAML		21 24 22.3	
	comp=E,26nm,0.9s						
HWUT				IAML		21 24 34.5	
	comp=E,27nm,1.1s						
P18A	**Preston Nutter**	**5.38**	**225**	Pn	**Pn**	**21 22 40.1**	**+0.7**
EGMT	**Eagleton**	**5.49**	**327**		**Pn**	**21 22 41.3**	**+0.7**
LRM	**Limekiln Ridge**	**5.61**	**297**		**Pn**	**21 22 42.8**	**+0.3**
PV15	**Paradox Valley**	**5.71**	**206**		**Pn**	**21 22 45.9**	**+2.1**
P17A	**Butcher Ranch,**	**5.75**	**227**		**Pn**	**21 22 46.1**	**+1.7**
SDCO	**Great Sand Dun**	**5.77**	**182**	Pn	**Pn**	**21 22 43.5**	**-1.3**
HVU	**Hansel Valley**	**5.79**	**255**		**Pn**	**21 22 44.3**	**-0.6**
PV23	**Carpenter Ridg**	**5.79**	**210**		**Pn**	**21 22 45.6**	**+0.6**
SRU	**San Rafael Swe**	**5.91**	**224**		**Pn**	**21 22 47.4**	**+0.8**
ECSD	**EROS Data Cent**	**6.29**	**85**		**Pn**	**21 22 50.7**	**-1.0**
T25A	**Trinidad**	**6.41**	**174**	Pn	**Pn**	**21 22 53.7**	**+0.2**
DUG	**Dugway, Tooele**	**6.53**	**242**	Pn	**Pn**	**21 22 55.1**	**0.0**
ULM	**Lac du Bonnet**	**9.31**	**40**	Pn	**Pn**	**21 23 31.5**	**-1.6**
	comp=E,1.0nm,0.3s,baz=236,slow=12,SNR=6.6						
ULM				Lg	Lg	21 26 05.9	
	comp=E,0.2nm,0.3s,baz=294,slow=20,SNR=1.3						
	comp=E,3.7nm,0.5s						
ULM	**Lac du Bonnet**	**9.31**	**40**	Pn	**Pn**	**21 23 32.0**	**-1.1**
I56US	**NEWPORT INFRAS**	**9.53**	**304**	*i*		22 14 26.1	
	baz=117,slow=310,SNR=3.1						
TXAR	**Lajitas Array**	**14.21**	**174**	Lg	Lg	21 28 41.2	
	baz=0.5,slow=22,SNR=3.1						

DJA 08 21:21:28.6±1.0, 10°S±5°×117°E±°, h29km±10km, M3.9/11, mb4.2/1, MLv3.7/11, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**1.04**	**29**	P	Pn	21 21 47.3	0.0
PLAI				S	Sn	21 22 00.5	-0.3
WBSI	**Waikabubak, Su**	**2.10**	**88**	P	Pn	21 22 01.4	-0.5
WBSI				S	Sn	21 22 27.6	+0.4
IGBI	**Denpasar**	**2.28**	**294**	P	Pn	21 22 02.1	-2.2
IGBI				S	Sn	21 22 30.1	-1.3
DNP	**Denpasar**	**2.28**	**297**	P	Pn	21 22 05.3	+1.0
DNP				S	Sn	21 22 31.4	-0.1
SRBI	**Singaraja**	**2.61**	**309**	P	Pn	21 22 09.4	+0.6
SRBI				S	Sn	21 22 41.3	+1.8
JAGI	**Jajag, Banyuwa**	**3.32**	**292**	P	Pn	21 22 18.5	-0.1
JAGI				S	Sn	21 22 55.0	-2.1
ABJI	**Asem Bagus**	**3.56**	**303**	P	Pn	21 22 23.2	+1.3
GMJI	**Gumukmas**	**4.04**	**291**	P	Pn	21 22 28.2	-0.3
EDFI	**Ende, Flores**	**4.48**	**78**	P	Pn	21 22 34.9	+0.2
PWJI	**Pagerwojo**	**5.66**	**287**	P	Pn	21 22 51.0	+0.3

*NEIC **08** 22:18:28.8±1.3, 20°.88S±0°.03×68°.85W±0°.05, h107km±5km, Error ellipse: s-maj=7.4km s-min=4.2km az=113.0*
*GUC **08** 22:18:29.3±0.7, 20°.88S×68°.84W, h105km±3km, ML3.8*

*IDC **08** 22:18:30.3±1.3, 21°.04S×68°.18W, h107km±16km, mb3.6/2, mbtmp3.9/4, Error ellipse: s-maj=48.3km s-min=14.7km az=110.0*

ISC 08 22:18:28.4±0.7, 20°.87S±0°.03×68°.87W±0°.06, h110km±6km, n52, σ0§86/78, mb4.0/4, 9C-4D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB01	**IPOC Station P**	**0.61**	**253**		**Pn**	**22 18 45.9**	**-0.3**
PB01				Sn	**Sn**	**22 18 59.2**	**-0.3**
PB01	**IPOC Station P**	**0.61**	**253**	*eP*	**Pn**	**22 18 46.1**	**0.0**
PB01				*eS*	**Sn**	**22 18 59.1**	**-0.4**
PB01				IAML		22 19 00.8	
	comp=E,10μm,0.2s						
PB08	**IPOC Station P**	**0.78**	**340**		**Pn**	**22 18 48.4**	**+0.5**
PB08				Sn	**Sn**	**22 19 02.9**	**+0.4**
PB08	**IPOC Station P**	**0.78**	**340**	*eP*	**Pn**	**22 18 48.4**	**+0.5**
PB08				*eS*	**Sn**	**22 19 02.9**	**+0.4**
PB08				IAML		22 19 04.8	
	comp=E,2μm,0.5s						
PB09	**IPOC Station P**	**0.99**	**201**		**Pn**	**22 18 50.1**	**+0.4**
PB09				Sn	**Sn**	**22 19 06.5**	**+0.8**
PB09	**IPOC Station P**	**0.99**	**201**	*eP*	**Pn**	**22 18 50.0**	**+0.4**
PB09				*eS*	**Sn**	**22 19 06.0**	**+0.3**
PB09				IAML		22 19 09.9	
	comp=N,1μm,0.3s						
PB02	**IPOC Station P**	**1.06**	**245**		**Pn**	**22 18 50.6**	**+0.2**
PB02				Sn	**Sn**	**22 19 07.6**	**+0.7**
PB02	**IPOC Station P**	**1.06**	**245**	*eP*	**Pn**	**22 18 50.6**	**+0.2**
PB02				*eS*	**Sn**	**22 19 06.4**	**-0.6**
PB02				IAML		22 19 10.5	
	comp=E,5μm,0.6s						
HMBC	**Humberstone**	**1.13**	**301**	*eP*	**Pn**	**22 18 51.3**	**+0.2**
HMBC				*eS*	**Sn**	**22 19 08.4**	**+0.2**
HMBC				IAML		22 19 10.1	
	comp=N,3μm,0.6s						
PATCX	**Punta Patache**	**1.21**	**272**		**Pn**	**22 18 52.2**	**+0.3**
PATCX				Sn	**Sn**	**22 19 10.4**	**+0.7**
PATCX	**Punta Patache**	**1.21**	**272**	*eP*	**Pn**	**22 18 52.2**	**+0.3**
PATCX				*eS*	**Sn**	**22 19 09.1**	**-0.5**
PATCX				IAML		22 19 15.7	
	comp=N,2μm,0.3s						
GO01	**Chusmiza**	**1.24**	**345**		**Pn**	**22 18 53.3**	**+0.6**
GO01				Sn	**Sn**	**22 19 12.7**	**+1.7**
GO01	**Chusmiza**	**1.24**	**345**	*eP*	**Pn**	**22 18 53.3**	**+0.6**
GO01				*i* S	**Sn**	**22 19 10.9**	**0.0**
GO01				IAML		22 19 14.1	
	comp=N,2μm,0.3s						
TA01	**Diego Aracena**	**1.27**	**284**	Pn	**Pn**	**22 18 52.6**	**+0.1**
TA01	**Diego Aracena**	**1.27**	**284**	*eP*	**Pn**	**22 18 52.6**	**+0.1**
TA01				*eS*	**Sn**	**22 19 10.9**	**+0.2**
TA01				IAML		22 19 15.8	
	comp=E,1μm,0.2s						
PB07	**IPOC Station P**	**1.28**	**228**		**Pn**	**22 18 52.9**	**+0.1**
PB07	**IPOC Station P**	**1.28**	**228**	*eP*	**Pn**	**22 18 52.8**	**0.0**
PB07				*eS*	**Sn**	**22 19 11.6**	**+0.3**
PB07				IAML		22 19 13.4	
	comp=E,4μm,0.4s						
TA02	**Huaiquique**	**1.33**	**296**		**Pn**	**22 18 53.4**	**+0.3**
TA02	**Huaiquique**	**1.33**	**296**	*eP*	**Pn**	**22 18 53.5**	**+0.4**
TA02				*eS*	**Sn**	**22 19 11.8**	**-0.2**
TA02				IAML		22 19 17.0	
	comp=N,4μm,0.1s						
PB11	**IPOC Station P**	**1.33**	**326**		**Pn**	**22 18 53.8**	**+0.5**
PB11				Sn	**Sn**	**22 19 12.5**	**+0.2**
PB11	**IPOC Station P**	**1.33**	**326**	*eP*	**Pn**	**22 18 53.9**	**+0.5**
PB11				*eS*	**Sn**	**22 19 12.7**	**+0.4**
PB11				IAML		22 19 14.5	
	comp=N,2μm,0.4s						
LVC	**Limon Verde**	**1.73**	**181**	P	**Pn**	**22 18 59.2**	**+0.8**
	comp=N,103nm,0.6s,baz=43,slow=12,SNR=228						
LVC				S	**Sn**	**22 19 22.4**	**+1.2**
	comp=N,134nm,0.3s,baz=37,slow=20,SNR=31						
LVC	**Limon Verde**	**1.73**	**181**	*eP*	**Pn**	**22 18 59.1**	**+0.7**
LVC				*i* S	**Sn**	**22 19 22.1**	**+0.9**
PB04	**IPOC Station P**	**1.88**	**219**		**Pn**	**22 18 60.0**	**-0.1**
PB04	**IPOC Station P**	**1.88**	**219**	*eP*	**Pn**	**22 18 59.5**	**-0.6**
PB04				*eS*	**Sn**	**22 19 24.6**	**+0.3**
PB04				IAML		22 19 31.2	
	comp=E,797nm,0.3s						
PB06	**IPOC Station P**	**1.94**	**200**		**Pn**	**22 19 00.8**	**0.0**
PB06	**IPOC Station P**	**1.94**	**200**	*eP*	**Pn**	**22 19 01.0**	**+0.2**
PB06				*eS*	**Sn**	**22 19 25.8**	**+0.2**
PB06				IAML		22 19 32.6	
	comp=E,690nm,0.2s						
AF01	**San Pedro de A**	**2.17**	**163**		**Pn**	**22 19 03.8**	**0.0**
PB15	**IPOC Station P**	**2.39**	**193**		**Pn**	**22 19 06.9**	**+0.3**
PB15	**IPOC Station P**	**2.39**	**193**	*eP*	**Pn**	**22 19 07.2**	**+0.6**
PB15				*eS*	**Sn**	**22 19 36.5**	**+0.5**
PB16	**IPOC Station P**	**2.59**	**346**	Pn	**Pn**	**22 19 09.8**	**+0.1**
PB16	**IPOC Station P**	**2.59**	**346**	*eP*	**Pn**	**22 19 10.7**	**+1.1**
PB16				*eS*	**Sn**	**22 19 43.4**	**+2.2**
PB16				IAML		22 19 56.6	
	comp=E,75nm,0.6s						
PB12	**IPOC Station P**	**2.63**	**328**		**Pn**	**22 19 09.6**	**-0.1**
PB12	**IPOC Station P**	**2.63**	**328**	*eP*	**Pn**	**22 19 09.4**	**-0.3**
PB12				*eS*	**Sn**	**22 19 41.2**	**-0.2**
PB12				IAML		22 19 52.4	
	comp=E,328nm,0.5s						
PB10	**IPOC Station P**	**3.06**	**210**	Pn	**Pn**	**22 19 15.9**	**+0.7**
GO02	**Mina Guanaco**	**4.32**	**189**	Pn	**Pn**	**22 19 32.6**	**+0.2**
LPAZ	**La Paz**	**4.61**	**9**	P	**Pn**	**22 19 39.4**	**+2.8**
	comp=E,3.3nm,0.4s,baz=176,slow=5.2,SNR=27						
LPAZ				S	**Sn**	**22 20 28.5**	**-0.9**
	comp=E,4.2nm,0.6s,baz=152,slow=10,SNR=4.3						
LPAZ	**La Paz**	**4.61**	**9**	Pn	**Pn**	**22 19 38.7**	**+2.1**
AC01	**Pan de Azucar**	**5.49**	**197**	Pn	**Pn**	**22 19 45.8**	**-2.0**
AC02	**Maricunga**	**5.94**	**182**	Pn	**Pn**	**22 19 53.4**	**-1.0**
SIV	**San Ignacio**	**8.85**	**58**	P	**Pn**	**22 20 30.2**	**-3.2**
	comp=E,6.0nm,0.5s,baz=234,slow=11,SNR=30						
ITAB	**Concordia**	**16.54**	**116**		**P**	**22 22 14.1**	**-0.3**
PLCA	**Paso Flores**	**19.85**	**184**	P	**Pn**	**22 22 53.1**	**-0.2**
PLCA				IAmb	IAmb	22 23 06.9	
	comp=E,8.5nm,1.2s						
BDFB	**Brasilia**	**20.47**	**79**	P	**P**	**22 22 56.0**	**-1.6**
BDFB				IAmb	IAmb	22 23 23.9	
	comp=E,12nm,1.5s						
SNAA	**Sanae**	**62.86**	**161**	P	**P**	**22 28 42.3**	**0.0**
	comp=E,1.8nm,1.0s,baz=292,slow=19,SNR=2.9						
	comp=E,1.8nm,1.0s						
SNAA	**Sanae**	**62.86**	**161**	P	**P**	**22 28 42.2**	**0.0**
QSPA	**South Pole Qui**	**69.32**	**180**	P	**P**	**22 29 25.2**	**+1.5**
QSPA				IAmb	IAmb	22 29 43.0	
	comp=E,4.3nm,1.4s						
TOA0	**Torodi Ar. Sit**	**77.11**	**70**	P	**P**	**22 30 09.3**	**-0.9**
TOA0				IAmb	IAmb	22 30 37.9	
	comp=E,4.2nm,1.5s						
TORD	**Torodi Ar. Bea**	**77.11**	**70**	P	**P**	**22 30 09.8**	**-0.4**
	comp=E,0.6nm,0.4s,baz=252,slow=5.5,SNR=14						
	comp=E,0.6nm,0.4s						
TORD	**Torodi Ar. Bea**	**77.11**	**70**	P	**P**	**22 30 09.5**	**-0.7**
MKAR	**Makanchi Array**	**145.10**	**35**	PKP	**PKPdf**	**22 37 53.5**	**+0.7**
	comp=Z,1.5nm,0.8s,baz=322,slow=3.4,SNR=11						
MKAR	**Makanchi Array**	**145.10**	**35**		**PKPdf**	**22 37 53.1**	**+0.3**

*IDC **08** 22:38:12.0±1.7, 1°.11N×125°.78E, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=166.6km s-min=24.9km az=65.0*
*DJA **08** 22:38:17.3±0.4, 1°N±3°×126°E±°, h58km±15km, M4.0/12, mb4.2/4, mB5.0/2, MLv3.9/12, Mw(mB)4.3/2*

ISC 08 22:38:17.7±1.0, 1°.30N±0°.06×126°.27E±0°.06, h50km, n12, σ1§16/16, mb3.6/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.22**	**115**	P	**Pn**	**22 38 37.7**	**-0.7**
TNTI				S	**Sn**	**22 38 53.5**	**-0.3**
LBMI	**Labuha**	**2.28**	**147**	P	**Pn**	**22 38 53.1**	**+0.1**
LBMI				S	**Sn**	**22 39 19.0**	**-0.9**
KMSI	**Cibinong**	**2.39**	**253**	P	**Pn**	**22 38 56.0**	**+1.5**
SGSI	**Sangihe**	**2.49**	**343**	P	**Pn**	**22 38 55.3**	**-0.5**
SGSI				S	**Sn**	**22 39 24.9**	**0.0**
LUWI	**Luwuk**	**4.19**	**236**	P	**Pn**	**22 39 19.0**	**-0.2**
MRSI	**Marisa**	**4.40**	**259**	P	**Pn**	**22 39 18.8**	**-3.2**
APSI	**Ampana**	**5.11**	**245**	P	**Pn**	**22 39 31.9**	**+0.1**
	0.2nm697nm60nm,0.6s						
MPSI	**Mapaga**	**6.44**	**262**	P	**Pn**	**22 39 49.4**	**-0.6**
	0.0nm10nm,0.8s						
TTSI	**Tana Toraja**	**7.75**	**236**	P	**Pn**	**22 40 07.0**	**-1.0**
WRA	**Warramunga Arr**	**22.54**	**160**	P	**P**	**22 43 13.5**	**-0.2**
	2.3nm,0.4s,baz=336,slow=11,SNR=45						
	2.3nm,0.4s						
ASAR	**Alice Springs**	**25.90**	**164**	P	**P**	**22 43 46.3**	**+1.1**
	0.6nm,0.5s,baz=344,slow=10.0,SNR=11						
ASAR				PcP	**PcP**	**22 47 13.4**	**+0.1**
	0.2nm,0.3s,baz=332,slow=3.4,SNR=2.4						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**59.29**	**326**	P	**P**	**22 48 15.2**	**+0.8**
	0.2nm,0.4s,baz=119,slow=7.9,SNR=6.4						
	0.2nm,0.4s						

IDC 08 22:56:59.8±7.3, 30°.57S×177°.59W, h0km, mb3.4/2, mbtmp3.4/2, Error ellipse: s-maj=311.3km s-min=55.0km az=156.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**43.45**	**267**	P	P	23 05 04.9	+0.1
	0.2nm,0.4s,baz=105,slow=8.3,SNR=1.6						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**44.46**	**272**	P	P	23 05 12.3	-0.6
	0.4nm,0.4s,baz=113,slow=6.4,SNR=10						
	0.4nm,0.4s						
FINES	**FINESS Array B**	**145.42**	**340**	PKPbc	PKPbc	23 16 38.4	-0.6
	1.6nm,0.5s,baz=49,slow=4.1,SNR=18						

*IDC **08** 23:19:19.3±1.7, 2°.45S×127°.84E, h0km, mb3.2/2, mbtmp3.3/4, ML3.2/2, Error ellipse: s-maj=43.6km s-min=28.4km az=75.0*
*DJA **08** 23:19:25.7±1.0, 2°.5S±2°×127°.8E±°, h18km±10km, M3.6/9, mb4.3/1, MLv3.2/9*

ISC 08 23:19:25.6±1.0, 2°.19S±0°.05×127°.96E±0°.05, h35km, n11, σ2§78/16, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**1.51**	**140**	P	**Pn**	**23 19 51.5**	**+1.3**
MSAI				S	**Sn**	**23 20 11.3**	**+2.7**
AAI	**Ambon**	**1.51**	**171**	P	**Pn**	**23 19 52.4**	**+2.2**
AAI				S	**Sn**	**23 20 10.6**	**+1.9**
LBMI	**Labuha**	**1.60**	**344**	P	**Pn**	**23 19 53.8**	**+2.2**
SANI	**Sanana**	**1.97**	**274**	P	**Pn**	**23 19 59.9**	**+3.3**
SANI				S	**Sn**	**23 20 16.7**	**-3.4**
TNTI	**Ternate**	**3.00**	**349**	P	**Pn**	**23 20 12.8**	**+2.1**
SWI	**Sorong**	**3.56**	**68**	P	**Pn**	**23 20 19.4**	**+1.0**
SWI				S	**Sn**	**23 20 59.8**	**+0.6**
SIJI	**Sorong**	**3.56**	**68**	Pn	**Pn**	**23 20 18.9**	**+0.5**
	2.0nm,0.3s,baz=164,slow=18,SNR=8.6						
SIJI				Sn	**Sn**	**23 20 59.6**	**+0.3**
	2.6nm,0.3s,baz=180,slow=20,SNR=5.6						
	5.4nm,0.3s						
APSI	**Ampana**	**6.43**	**281**	P	**Pn**	**23 21 01.3**	**+3.4**
WRA	**Warramunga Arr**	**18.72**	**161**	P	**P**	**23 23 36.9**	**-4.5**
	0.1nm,0.3s,baz=340,slow=12,SNR=5.3						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**22.11**	**165**	P	**P**	**23 24 13.9**	**-4.3**
	0.4nm,0.5s,baz=345,slow=11,SNR=6.1						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**63.11**	**327**	P	**P**	**23 29 49.9**	**+0.1**
	0.2nm,0.5s,baz=134,slow=6.2,SNR=2.5						
	0.2nm,0.5s						

NOU 08 23:25:48.7, 18°.93S×169°.34E, h171km, MLv4.0/11, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTV	**Rentapao**	**1.43**	**322**	P	Pn	23 26 19.5	+0.3
DVP	**Devils Point**	**1.62**	**317**	P	Pn	23 26 21.3	+0.1
MARNC	**Mare, Loyalty**	**2.82**	**206**	P	Pn	23 26 34.2	-0.5
DZM	**Mont Dzumac**	**4.14**	**220**	P	Pn	23 26 50.9	-0.5
NOUC	**Port Laguerre**	**4.25**	**222**	P	Pn	23 26 53.4	+0.7
KOUNC	**Koumac, New Ca**	**5.03**	**250**	P	Pn	23 27 02.8	0.0

*IDC **08** 23:30:55.3±3.1, 17°.47S×167°.83E, h0km, mb3.7/4, mbtmp3.7/5, ML3.4/1, MS3.7/4, Error ellipse: s-maj=67.0km s-min=37.6km az=107.0*
*NOU **08** 23:30:59.0, 17°.42S×167°.95E, h10km, MLv4.7/9, Vanuatu Islands*
*NEIC **08** 23:31:01.1±2.0, 17°.7S±0°.1×168°.1E±0°.1, h35km±2km, mb4.6/7, Error ellipse: s-maj=22.0km s-min=18.1km az=83.0*

ISC 08 23:30:59.1±0.8, 17°.64S±0°.08×167°.96E±0°.07, h27km, n28, σ1§26/29, mb4.7/7, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**0.23**	**112**	P	**Pn**	**23 31 07.1**	**+0.3**
RTV	**Rentapao**	**0.47**	**109**	P	**Pn**	**23 31 10.8**	**+0.7**
MARNC	**Mare, Loyalty**	**3.82**	**179**	Pn	**Pn**	**23 31 56.8**	**+0.5**
MARNC				Sn	**Sn**	**23 32 38.0**	**-2.3**
KOUNC	**Koumac, New Ca**	**4.52**	**230**		**Pn**	**23 32 06.3**	**+0.5**
DZM	**Mont Dzumac**	**4.63**	**198**	Pn	**Pn**	**23 32 08.3**	**+0.8**
	1.6nm,0.3s,baz=69,slow=6.4,SNR=32						
DZM				Sn	**Sn**	**23 33 00.1**	**-0.4**
	10nm,0.3s,baz=112,slow=21,SNR=15				

0.4nm,0.2s,baz=90,slow=9.0,SNR=8.4
0.4nm,0.2s
ASAR Alice Springs 32.48 254 P P 23 38 34.8 +0.3
1.1nm,0.8s,baz=80,slow=8.5,SNR=2.2
1.1nm,0.8s
SONM Songino Array 85.37 323 P P 23 44 41.4 +0.1
2.0nm,0.6s,baz=139,slow=6.8,SNR=4.4
2.0nm,0.6s
ILAR Eielson Array 89.12 18 P P 23 44 58.8 -0.1
0.2nm,0.6s,baz=230,slow=7.0,SNR=1.7
0.2nm,0.6s

*NEIC **08** 23:32:46.5±1.1,22.43S±0.06×67.84W±0.08, h173km±5km, mb4.2/5, Error ellipse: s-maj=10.8km s-min=8.0km az=64.0*
*GUC **08** 23:32:46.6±0.9,22.38S×67.86W, h178km±7km, ML4.0*
*SCB **08** 23:32:47.7±2.5,22.35S×67.72W, h117km±42km, MB3.7/8, MW3.3, Error ellipse: s-maj=13.1km s-min=5.6km az=0.0*
ISC 08 23:32:46.0±0.8, 22.40S±0.04×67.75W±0.04, h169km±7km, n69, σ1s27/95, mb4.2/3, 3C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AF01	**San Pedro de A**	**0.68**	**216**	Pn		**Pn**	**23 33 11.1**	**+0.3**
AF01				Sn		**Sn**	**23 33 30.2**	**+0.3**
LVC	**Limon Verde**	**1.09**	**259**	Pn		**Pn**	**23 33 13.8**	**+0.1**
LVC				Sn		**Sn**	**23 33 35.0**	**-0.1**
LVC	**Limon Verde**	**1.09**	**259**	*e*P		**Pn**	**23 33 13.3**	**-0.5**
LVC				*i* S		**Sn**	**23 33 34.1**	**-0.9**
LVC	**Limon Verde**	**1.09**	**259**	P		**Pn**	**23 33 13.8**	**+0.1**
PB09	**IPOC Station P**	**1.51**	**293**	Pn		**Pn**	**23 33 18.0**	**+0.7**
PB09				Sn		**Sn**	**23 33 41.5**	**+0.1**
PB09	**IPOC Station P**	**1.51**	**293**	↑ *i*P		**Pn**	**23 33 18.0**	**+0.7**
PB09				*e*S		**Sn**	**23 33 41.6**	**+0.2**
PB09	**IPOC Station P**	**1.51**	**293**	P		**Pn**	**23 33 17.8**	**+0.5**
PB09				IAML			23 33 42.3	
	320nm,0.4s							
PB06	**IPOC Station P**	**1.71**	**259**	Pn		**Pn**	**23 33 19.8**	**+0.4**
PB06				Sn		**Sn**	**23 33 44.3**	**-0.8**
PB06	**IPOC Station P**	**1.71**	**259**	*e*P		**Pn**	**23 33 19.4**	**+0.1**
PB06				*e*S		**Sn**	**23 33 44.6**	**-0.5**
PB06				IAML			23 33 46.5	
	comp=N,705nm,0.2s							
PB06	**IPOC Station P**	**1.71**	**259**	P		**Pn**	**23 33 19.5**	**+0.1**
PB06				IAML			23 33 47.4	
	comp=N,391nm,0.1s							
PB15	**IPOC Station P**	**1.78**	**243**	Pn		**Pn**	**23 33 20.4**	**+0.3**
PB15				Sn		**Sn**	**23 33 46.5**	**-0.1**
PB15	**IPOC Station P**	**1.78**	**243**	*e*P		**Pn**	**23 33 20.5**	**+0.3**
PB15				*i* S		**Sn**	**23 33 46.5**	**-0.1**
PB15	**IPOC Station P**	**1.78**	**243**	P		**Pn**	**23 33 20.2**	**0.0**
PB15				IAML			23 33 51.3	
	comp=N,2μm,0.2s							
YJA	**Yavi**	**2.08**	**84**	P		**Pn**	**23 33 23.3**	**-0.4**
PB07	**IPOC Station P**	**2.09**	**288**	Pn		**Pn**	**23 33 23.5**	**-0.1**
PB07				Sn		**Sn**	**23 33 51.2**	**-1.3**
PB07	**IPOC Station P**	**2.09**	**288**	↑ *i*P		**Pn**	**23 33 23.7**	**+0.2**
PB07				*e*S		**Sn**	**23 33 51.2**	**-1.3**
PB07				IAML			23 33 51.8	
	comp=N,928nm,0.3s							
PB07	**IPOC Station P**	**2.09**	**288**	P		**Pn**	**23 33 23.8**	**+0.2**
PB07				S		**Sn**	**23 33 48.8**	**-3.7**
PB07				IAML			23 33 52.8	
	comp=N,347nm,0.3s							
PB01	**IPOC Station P**	**2.10**	**309**	Pn		**Pn**	**23 33 23.6**	**0.0**
PB01				Sn		**Sn**	**23 33 52.0**	**-0.6**
PB01	**IPOC Station P**	**2.10**	**309**	*i* P		**Pn**	**23 33 23.6**	**0.0**
PB01				*e*S		**Sn**	**23 33 52.0**	**-0.6**
PB01				IAML			23 33 54.9	
	comp=E,601nm,0.1s							
PB01	**IPOC Station P**	**2.10**	**309**	P		**Pn**	**23 33 23.8**	**+0.2**
PB01				IAML			23 33 56.1	
	comp=E,483nm,0.2s							
PB04	**IPOC Station P**	**2.22**	**271**	Pn		**Pn**	**23 33 24.8**	**-0.2**
PB04	**IPOC Station P**	**2.22**	**271**	*e*P		**Pn**	**23 33 25.0**	**0.0**
PB04				*e*S		**Sn**	**23 33 53.8**	**-1.4**
PB04				IAML			23 33 56.4	
	comp=E,947nm,0.1s							
PB04	**IPOC Station P**	**2.22**	**271**	P		**Pn**	**23 33 25.2**	**+0.2**
PB04				IAML			23 33 56.0	
	comp=E,433nm,0.2s							
PB02	**IPOC Station P**	**2.26**	**298**	Pn		**Pn**	**23 33 25.3**	**-0.2**
PB02	**IPOC Station P**	**2.26**	**298**	*i* P		**Pn**	**23 33 25.2**	**-0.2**
PB02				*i* S		**Sn**	**23 33 54.5**	**-1.5**
PB02				IAML			23 33 55.3	
	comp=N,832nm,0.4s							
PB02	**IPOC Station P**	**2.26**	**298**	P		**Pn**	**23 33 25.6**	**+0.1**
PB02				IAML			23 33 56.7	
	comp=N,392nm,0.4s							
MOCB	**Mochara**	**2.27**	**60**	P		**Pn**	**23 33 25.7**	**-0.2**
MOCB				S		**Sn**	**23 33 52.1**	**-4.5**
PB08	**IPOC Station P**	**2.60**	**329**	Pn		**Pn**	**23 33 30.5**	**+0.8**
PB08	**IPOC Station P**	**2.60**	**329**	↑ *i*P		**Pn**	**23 33 30.5**	**+0.8**
PB08				*e*S		**Sn**	**23 34 03.7**	**+0.2**
PB08				IAML			23 34 05.7	
	comp=N,185nm,0.2s							
PB08	**IPOC Station P**	**2.60**	**329**	P		**Pn**	**23 33 30.6**	**+0.9**
PATCX	**Punta Patache**	**2.73**	**305**	Pn		**Pn**	**23 33 30.6**	**-0.4**
PATCX	**Punta Patache**	**2.73**	**305**	*e*P		**Pn**	**23 33 30.7**	**-0.4**
PATCX				*e*S		**Sn**	**23 34 03.9**	**-1.9**
PATCX				IAML			23 34 06.2	
	comp=E,312nm,0.3s							
PB10	**IPOC Station P**	**2.81**	**246**	Pn		**Pn**	**23 33 31.5**	**-0.4**
PB10	**IPOC Station P**	**2.81**	**246**	*e*P		**Pn**	**23 33 31.6**	**-0.2**
PB10				*e*S		**Sn**	**23 34 05.2**	**-2.3**
PB10				IAML			23 34 06.7	
	comp=E,174nm,0.2s							
PB10	**IPOC Station P**	**2.81**	**246**	P		**Pn**	**23 33 31.7**	**-0.2**
PB10				IAML			23 34 08.2	
	comp=E,123nm,0.3s							
HMBC	**Humberstone**	**2.90**	**316**	*e*P		**Pn**	**23 33 32.2**	**-0.9**
HMBC				*e*S		**Sn**	**23 34 07.6**	**-2.1**
HMBC				IAML			23 34 09.5	
	comp=E,390nm,0.1s							
TA01	**Diego Aracena**	**2.91**	**308**	Pn		**Pn**	**23 33 32.9**	**-0.2**
TA01	**Diego Aracena**	**2.91**	**308**	*e*P		**Pn**	**23 33 32.4**	**-0.6**
TA01				*e*S		**Sn**	**23 34 07.2**	**-2.3**
GO01	**Chusmiza**	**3.03**	**333**	Pn		**Pn**	**23 33 35.3**	**+0.3**
GO01	**Chusmiza**	**3.03**	**333**	*e*P		**Pn**	**23 33 35.4**	**+0.3**
GO01				*e*S		**Sn**	**23 34 13.6**	**+0.4**
GO01				IAML			23 34 17.3	
	comp=N,350nm,0.2s							
TA02	**Huaiquique**	**3.07**	**313**	Pn		**Pn**	**23 33 34.4**	**-0.6**
TA02	**Huaiquique**	**3.07**	**313**	*e*P		**Pn**	**23 33 33.8**	**-1.2**
TA02				*e*S		**Sn**	**23 34 10.0**	**-3.1**
PB11	**IPOC Station P**	**3.17**	**325**	Pn		**Pn**	**23 33 35.8**	**-0.7**
PB11	**IPOC Station P**	**3.17**	**325**	*e*P		**Pn**	**23 33 36.0**	**-0.7**
PB11				*e*S		**Sn**	**23 34 13.6**	**-2.1**
PB11				IAML			23 34 14.8	
	comp=E,318nm,0.4s							
PB11	**IPOC Station P**	**3.17**	**325**	P		**Pn**	**23 33 36.0**	**-0.5**
GO02	**Mina Guanaco**	**3.23**	**211**			**Pn**	**23 33 37.1**	**-0.2**
GO02	**Mina Guanaco**	**3.23**	**211**	‖ *i*P		**Pn**	**23 33 37.0**	**-0.2**
GO02				*e*S		**Sn**	**23 34 15.3**	**-1.9**
PB14	**IPOC Station P**	**3.29**	**227**	Pn		**Pn**	**23 33 37.9**	**-0.3**
PB14	**IPOC Station P**	**3.29**	**227**	*e*P		**Pn**	**23 33 37.8**	**-0.3**
PB16	**IPOC Station P**	**4.37**	**337**	Pn		**Pn**	**23 33 53.4**	**+1.2**
PB16	**IPOC Station P**	**4.37**	**337**	P		**Pn**	**23 33 52.6**	**+0.5**
PB12	**IPOC Station P**	**4.47**	**327**	Pn		**Pn**	**23 33 51.9**	**-1.1**
PB12	**IPOC Station P**	**4.47**	**327**	*e*P		**Pn**	**23 33 51.0**	**-2.0**
AC01	**Pan de Azucar**	**4.55**	**214**	Pn		**Pn**	**23 33 52.3**	**-1.5**
AC01	**Pan de Azucar**	**4.55**	**214**	*e*P		**Pn**	**23 33 52.4**	**-1.5**
AC02	**Maricunga**	**4.59**	**196**			**Pn**	**23 33 54.6**	**-0.3**
AC06	**Mina Casimiro**	**5.47**	**205**	Pn		**Pn**	**23 34 03.0**	**-3.0**
BBOE	**La Paz, Chanca**	**5.56**	**358**	P		**Pn**	**23 34 09.0**	**+1.3**
GO03	**Copiap**	**5.64**	**203**	Pn		**Pn**	**23 34 05.6**	**-2.7**
LPAZ	**La Paz**	**6.09**	**357**	Pn		**Pn**	**23 34 15.6**	**+0.9**
LPAZ	**La Paz**	**6.09**	**357**	P		**Pn**	**23 34 15.6**	**+0.9**
LCO	**Las Campanas**	**7.10**	**201**	Pn		**Pn**	**23 34 23.9**	**-3.8**
CO01	**Juntas del Tor**	**7.84**	**195**	Pn		**Pn**	**23 34 35.8**	**-1.7**
SAML	**Samuel**	**14.07**	**19**	Pn		**Pn**	**23 35 58.9**	**+0.7**
ITAB	**Concordia**	**14.97**	**112**			**Pn**	**23 36 10.8**	**+1.5**
QSPA	**South Pole Qui**	**67.80**	**180**	P		**P**	**23 43 27.5**	**+1.9**
QSPA				IAmb		IAmb	23 43 36.8	
	comp=Z,6.0nm,1.1s							
TOA0	**Torodi Ar. Sit**	**76.65**	**70**	P		**P**	**23 44 18.1**	**-0.6**
TOA0				IAmb		IAmb	23 44 21.1	
	comp=Z,5.6nm,1.3s							
TORD	**Torodi Ar. Bea**	**76.65**	**70**	P		**P**	**23 44 18.5**	**-0.2**
BOSA	**Boshof**	**82.08**	**118**	P		**P**	**23 44 48.7**	**+0.6**
BOSA				IAmb		IAmb	23 44 52.4	
	comp=Z,6.8nm,1.4s							

*IDC **08** 23:43:06.6±1.0, 1.47N×126.63E, h0km, mb4.1/6, mbtmp4.1/7, ML4.1/1, MS3.2/3, Error ellipse: s-maj=55.9km s-min=19.0km az=68.0*
*NEIC **08** 23:43:11.5±1.4, 1.46N±0.10×126.48E±0.06, h25km±5km, mb4.3/19, Error ellipse: s-maj=15.7km s-min=6.1km az=207.0*
*DJA **08** 23:43:13.4±0.2, 1.1N±2.1×126.6E±1°, h54km±6km, M4.2/12, mb4.4/12, mB5.1/2, MLv4.1/12, Mw(mB)4.5/2*
ISC 08 23:43:13.5±1.1, 1.34N±0.06×126.43E±0.05, h48km±11km, n53, σ1s02/59, mb4.2/14, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**1.09**	**121**			**Pn**	**23 43 31.3**	**-1.1**
TNTI				Sn		**Sn**	**23 43 46.5**	**+0.1**
TNTI	**Ternate**	**1.09**	**121**	P		**Pn**	**23 43 31.3**	**-1.1**
TNTI				S		**Sn**	**23 43 48.6**	**+2.2**
LBMI	**Labuha**	**2.24**	**151**	P		**Pn**	**23 43 47.7**	**-0.4**
LBMI				S		**Sn**	**23 44 14.4**	**-0.1**
SGSI	**Sangihe**	**2.50**	**339**	P		**Pn**	**23 43 51.5**	**-0.2**
SGSI				S		**Sn**	**23 44 22.1**	**+1.2**
KMSI	**Cibinong**	**2.57**	**253**	P		**Pn**	**23 43 52.4**	**-0.2**
KMSI				S		**Sn**	**23 44 21.8**	**-0.8**
SANI	**Sanana**	**3.40**	**188**	P		**Pn**	**23 44 06.0**	**+2.0**
LUWI	**Luwuk**	**4.36**	**237**	Pn		**Pn**	**23 44 17.4**	**+0.2**
LUWI	**Luwuk**	**4.36**	**237**	P		**Pn**	**23 44 17.7**	**+0.5**
LUWI				S		**Sn**	**23 45 08.3**	**+1.5**
MRSI	**Marisa**	**4.57**	**259**	P		**Pn**	**23 44 21.2**	**+1.1**
MRSI				S		**Sn**	**23 45 10.9**	**-1.1**
APSI	**Ampana**	**5.28**	**245**	P		**Pn**	**23 44 31.4**	**+1.5**
	0.3nm1μm73nm,0.6s							
SIJI	**Sorong**	**5.31**	**114**	LR		LR	23 45 49.4	
	comp=Z,41nm,21.7s,baz=254,slow=31							
TOLI2	**Tolitoli**	**5.65**	**268**	Pn		**Pn**	**23 44 34.9**	**-0.1**
FAKI	**Fak Fak**	**7.19**	**126**	Pn		**Pn**	**23 44 55.7**	**-0.4**
SPSI	**Sidrap Palu**	**8.49**	**232**	P		**Pn**	**23 45 15.8**	**+1.8**
	20nm,0.6s							
BNSI	**Bone**	**8.52**	**228**	P		**Pn**	**23 45 13.5**	**-0.8**
	22nm,0.7s							
BKSI	**Bulukumba**	**9.14**	**224**	P		**Pn**	**23 45 25.6**	**+2.8**
	13nm,0.5s							
KAPI	**Kappang**	**9.19**	**227**	Pn		**Pn**	**23 45 23.5**	**0.0**
	2.0nm,0.3s,baz=18,slow=6.2,SNR=6.9							
	4.0nm,0.3s							
KAPI	**Kappang**	**9.19**	**227**			**Pn**	**23 45 23.9**	**+0.4**
SMKI	**Samarinda**	**9.39**	**259**	P		**Pn**	**23 45 26.3**	**0.0**
	119nm,0.4s							
EDFI	**Ende, Flores**	**11.08**	**205**	P		**Pn**	**23 45 47.8**	**-1.7**
	5.9nm,1.9s							
MTN	**Manton Dam**	**14.85**	**162**	Pn		**Pn**	**23 46 41.2**	**+0.7**
MMPI	**Merauke**	**16.98**	**125**	P		**Pn**	**23 47 05.5**	**-2.3**
	16nm,0.6s							
KNRA	**Kununurra**	**17.07**	**172**	Pn		**Pn**	**23 47 09.0**	**+0.2**
KNRA				IAmb		IAmb	23 47 11.6	
	comp=Z,64nm,1.3s							
WB0	**Warramunga Arr**	**22.39**	**160**	P		**P**	**23 48 07.4**	**-0.5**
WB0				IAmb		IAmb	23 48 12.0	
	comp=Z,12nm,0.8s							
YULB	**Yu-li**	**22.48**	**348**	P		**P**	**23 48 07.2**	**-1.7**
YULB				IAmb		IAmb	23 48 17.3	
	comp=Z,10nm,1.2s							
WRA	**Warramunga Arr**	**22.53**	**160**	P		**P**	**23 48 09.0**	**-0.5**
	comp=Z,5.7nm,0.4s,baz=339,slow=11,SNR=78							
WRA				PcP		**PcP**	**23 52 02.1**	**0.0**
	comp=Z,0.2nm,0.8s,baz=340,slow=1.8,SNR=1.2							
	comp=Z,5.7nm,0.4s							
WRA	**Warramunga Arr**	**22.53**	**160**	P		**P**	**23 48 08.1**	**-1.4**
WB2	**Warramunga Arr**	**22.53**	**160**	P		**P**	**23 48 09.2**	**-0.3**
WB2				IAmb		IAmb	23 48 10.2	
	comp=Z,8.3nm,0.7s							
PSA00	**Pilbara Seismi**	**23.67**	**195**	P		**P**	**23 48 20.6**	**-0.2**
AS31	**Alice Springs**	**25.90**	**164**	P		**P**	**23 48 41.9**	**+0.8**
ASAR	**Alice Springs**	**25.90**	**164**	P		**P**	**23 48 41.2**	**0.0**
	comp=Z,1.7nm,0.4s,baz=346,slow=12,SNR=33							
ASAR				PcP		**PcP**	**23 52 10.4**	**+1.1**
	comp=Z,0.2nm,0.4s,baz=344,slow=2.2,SNR=1.9							
	comp=Z,1.7nm,0.4s							
ASAR	**Alice Springs**	**25.90**	**164**	P		**P**	**23 48 42.6**	**+1.4**
BBOO	**Buckleboo**	**35.16**	**166**	P		**P**	**23 50 02.5**	**-0.4**
STKA	**Stephens Creek**	**36.03**	**158**	P		**P**	**23 50 09.0**	**-1.3**
	comp=Z,1.6nm,0.5s,baz=321,slow=14,SNR=1.5							
	comp=Z,1.6nm,0.5s							
STKA	**Stephens Creek**	**36.03**	**158**	P		**P**	**23 50 09.5**	**-0.7**
STKA				IAmb		IAmb	23 50 18.6	
	comp=Z,3.3nm,1.2s							
DZM	**Mont Dzumac**	**45.45**	**123**	LR		LR	00 11 19.1	
	comp=Z,84nm,18.1s,baz=217,slow=37							
MK31	**Makanchi Array**	**59.35**	**326**	P		**P**	**23 53 10.4**	**-0.4**
MKAR	**Makanchi Array**	**59.35**	**326**	P		**P**	**23 53 10.6**	**-0.2**
	comp=Z,0.7nm,0.4s,baz=120,slow=7.8,SNR=18							
	comp=Z,0.7nm,0.4s							
MKAR	**Makanchi Array**	**59.35**	**326**	P		**P**	**23 53 10.2**	**-0.5**
KDJ	**Kajisay**	**59.94**	**319**	P		**P**	**23 53 15.1**	**0.0**
BKZ	**Black Stump Fm**	**61.03**	**137**	P		**P**	**23 53 23.1**	**+0.7**
ZALV	**Zalesovo Beam**	**62.58**	**334**	P		**P**	**23 53 32.1**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=130,slow=8.3,SNR=2.3							
	comp=Z,0.5nm,0.3s							
KURK	**Kurchatov**	**63.59**	**328**	P		**P**	**23 53 39.2**	**-0.1**
KURK				IAmb		IAmb	23 53 43.2	
	comp=Z,3.8nm,0.7s							
KK31	**Karatay Array**	**64.78**	**318**	P		**P**	**23 53 48.3**	**+1.0**
KK31				IAmb		IAmb	23 53 56.0	
	comp=Z,3.1nm,1.4s							
KKAR	**Karatay Array**	**64.78**	**318**	P		**P**	**23 53 47.8**	**+0.6**
BRVK	**Borovoye**	**69.23**	**328**	P		**P**	**23 54 16.1**	**+0.8**
BRVK				IAmb		IAmb	23 54 17.8	
	comp=Z,1.7nm,0.9s							
ABKAR	**Akbulak array**	**73.81**	**321**	P		**P**	**23 54 42.8**	**-0.2**
ABKAR	**Akbulak array**	**73.81**	**321**	P		**P**	**23 54 42.8**	**-0.2**
ABKAR				IAmb		IAmb	23 54 48.0	
	comp=Z,1.5nm,1.1s							
ARU	**Arti**	**76.79**	**328**	P		**P**	**23 54 59.7**	**-0.2**
ARU				IAmb		IAmb	23 55 19.9	
	comp=Z,4.3nm,1.1s							
VNDA	**Vanda**	**81.11**	**173**	P		**P**	**23 55 24.0**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=337,slow=5.5,SNR=4.0							
	comp=Z,0.7nm,0.6s							
VNDA	**Vanda**	**81.11**	**173**	P		**P**	**23 55 24.0**	**+0.8**
VNDA				IAmb		IAmb	23 55 25.8	
	comp=Z,5.7nm,1.4s							
RAYN	**Ar Rayn**	**81.15**	**293**	P		**P**	**23 55 24.4**	**-0.2**
RAYN				IAmb		IAmb	23 55 25.7	
	comp=Z,1.6nm,0.8s							
HFS	**Hagfors**	**99.98**	**332**	LR		LR	00 45 04.4	
	comp=Z,29nm,21.4s,baz=89,slow=37							

*NIED **08** 23:51:07.1,31.04N×129.02E, h12km, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^14Nm; Mrr-1.11; Mθθ0.75; Mφφ0.35; Mrθ-1.15; Mθφ0.99; Mφr1.11; Fault plane solution: Mo2.00000×10^14 NP1: φs201.00000°,δ50.00000°,λ-144.00000°. NP2: φs86.00000°,δ63.00000°,λ-46.00000°.*
JMA 08 23:51:07.1±0.4, 31.0N±0.6×129.2E±1°, h12km±3km, MV3.6/22, SW OFF KYUSHU, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JSJ	**Shimokoshiki**	**0.88**	**43**	P		Pg	23 51 23.4	-0.6
JKC	**Kuchinoerabu**	**1.16**	**119**	*e*P		Pb	23 51 28.8	-0.3
JSU	**Suzuyama**	**1.31**	**69**	P		Pb	23 51 31.6	-0.2
JSU				S		Sb	23 51 48.5	-0.1
JNN	**Nakanoshima**	**1.40**	**148**	P		Pn	23 51 31.9	-0.6
JYAK	**Yakushimahirau**	**1.51**	**121**	P		Pn	23 51 33.2	-0.8
JFU	**Fukue jima 2**	**1.63**	**352**	P		Pn	23 51 36.4	+0.7
JTN	**Tanegashima 3**	**1.73**	**102**	P		Pn	23 51 36.9	-0.1
JMTN	**Minamitane**	**1.74**	**111**	P		Pn	23 51 37.6	+0.5

*IDC **09** 00:10:19.7±1.6,2.13S×119.31E, h0km, mb3.5/4, mbtmp3.5/5, ML3.3/1, Error ellipse: s-maj=54.1km s-min=20.8km az=56.0*
*DJA **09** 00:10:23.2±0.8,2.2S±2.1×119.9E±1°, h11km±5km, M4.0/12, mb4.3/2, MLv3.9/12*
ISC 09 00:10:21.6±1.8, 2.12S±0.04×119.10E±0.05, h10km±12km, n17, σ2s07/26, mb3.4/3, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TTSI	**Tana Toraja**	**1.17**	**142**	P		**Pg**	**00 10 44.3**	**+0.2**
TTSI				S		**Sg**	**00 11 00.3**	**+1.1**
SPSI	**Sidrap Palu**	**1.95**	**160**	P		**Pn**	**00 10 55.8**	**+1.0**
SPSI				S		**Sb**	**00 11 20.7**	**-1.0**
BKB	**Balikpapan**	**2.36**	**291**	P		**Pn**	**00 11 02.2**	**+1.8**
BKB				S		**Sn**	**00 11 31.1**	**+1.6**
BNSI	**Bone**	**2.48**	**156**	P		**Pn**	**00 11 02.6**	**+0.6**
BNSI				S		**Sb**	**00 11 37.5**	**+0.6**
APSI	**Ampana**	**2.82**	**65**	P		**Pn**	**00 11 08.9**	**+2.2**
APSI				S		**Sb**	**00 11 44.9**	**-1.7**
KAPI	**Kappang**	**2.95**	**167**	Pn		**Pn**	**00 11 08.9**	**+0.4**
	4.5nm,0.3s,baz=281,slow=9.7,SNR=8.8							
KAPI				Sn		**Sn**	**00 11 43.5**	**-0.5**
	17nm,0.3s,baz=294,slow=20,SNR=6.4							
	11nm,0.3s							
BKSI	**Bulukumba**	**3.34**	**162**	P		**Pn**	**00 11 15.5**	**+1.6**
BKSI				S		**Sn**	**00 11 54.6**	**+0.9**
LUWI	**Luwuk**	**3.83**	**74**	P		**Pn**	**00 11 23.6**	**+3.0**
LUWI				S		**Sb**	**00 12 12.5**	**-3.1**
MRSI	**Marisa**	**3.84**	**48**	P		**Pb**	**00 11 26.8**	**-2.6**
BSSI	**Bau Bau, Buton**	**4.23**	**161**	P		**Pn**	**00 11 28.8**	**+2.6**
BBKI	**Banjar Baru**	**4.46**	**252**	P		**Pn**	**00 11 28.4**	**-0.9**
BBKI				S		**Sn**	**00 12 20.4**	**-0.8**
BBSI	**Bau Bau**	**4.82**	**134**	P		**Pn**	**00 11 37.9**	**+3.7**
LBMI	**Labuha**	**8.53**	**80**	P		**Pn**	**00 12 28.8**	**+3.6**
	14nm,0.6s							
PSI	**Prapat**	**20.75**	**284**	P		**P**	**00 15 03.8**	**+0.9**
	2.9nm,0.4s,baz=119,slow=10,SNR=4.7							
	2.9nm,0.4s							
WRA	**Warramunga Arr**	**23.14**	**141**	P		**P**	**00 15 25.6**	**-2.6**
	1.1nm,0.7s,baz=315,slow=12,SNR=8.4							
	1.1nm,0.7s							
ASAR	**Alice Springs**	**25.77**	**147**	P		**P**	**00 15 51.0**	**-1.9**
	0.4nm,0.7s,baz=334,slow=9.8,SNR=1.7							
	0.4nm,0.7s							
MKAR	**Makanchi Array**	**58.46**	**331**	P		**P**	**00 20 18.8**	**+1.0**
	0.2nm,0.6s,baz=134,slow=6.2,SNR=2.4							
	0.2nm,0.6s							

*IDC **09** 00:47:03.8±3.2, 58.02N×156.40W, h125km±22km, mb3.0/5, mbtmp3.6/8, Error ellipse: s-maj=36.6km s-min=20.6km az=60.0*
*NEIC **09** 00:47:04.2±1.6, 57.77N±0.04×156.34W±0.09, h145km±5km, Error ellipse: s-maj=6.8km s-min=6.4km az=67.0*
*ANF **09** 00:47:04.2±0.3, 57.76N×156.33W, h140km±4km, ML3.5/32, Error ellipse: s-maj=3.1km s-min=2.6km az=86.0*
*AEIC **09** 00:47:06.1±6.6, 57.78N±0.04×156.34W±0.09, h130km±5km, ML3.4, ML3.3/46(NEIC), Error ellipse: s-maj=6.9km s-min=6.3km az=103.0*
ISC 09 00:47:04.5±0.7, 57.81N±0.04×156.29W±0.04, h140km±6km, n242, σ1s05/263, mb3.3/4, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PLK2	**Peulik 2**	**0.04**	**201**			**Pn**	**00 47 23.3**	**0.0**
PLK3	**Peulik 3**	**0.12**	**173**			**Pn**	**00 47 23.4**	**0.0**
PLK3						**Sn**	**00 47 37.5**	**-0.2**
PLK1	**Peulik 1**	**0.17**	**269**			**Pn**	**00 47 23.3**	**-0.1**
PLK4	**Peulik 4**	**0.18**	**191**			**Pn**	**00 47 23.4**	**-0.2**
PLBL	**Peulik Blue Cr**	**0.30**	**250**			**Pn**	**00 47 23.6**	**-0.2**
PLK5	**Peulik 5**	**0.37**	**302**			**Pn**	**00 47 24.1**	**+0.1**
KELA	**Mount Kelaz**	**0.70**	**25**			**Pn**	**00 47 26.1**	**+0.1**
KELA						**Sn**	**00 47 41.3**	**-1.1**
KAHC	**Katmai Hardscr**	**1.09**	**38**			**Pn**	**00 47 29.5**	**+0.3**
KAHC						**Sn**	**00 47 48.0**	**0.0**
KAHG	**Katmai Hook Gl**	**1.16**	**53**			**Pn**	**00 47 30.5**	**+0.7**
KAPH	**Katmai Pasha**	**1.30**	**52**			**Pn**	**00 47 32.0**	**+0.8**
ANNW	**Aniakchak Nort**	**1.34**	**232**			**Pn**	**00 47 31.9**	**+0.3**
P17K	**Kvichak River**	**1.40**	**357**			**Pn**	**00 47 32.5**	**+0.4**
P17K						**Sn**	**00 47 53.0**	**-0.2**
P17K	**Kvichak River**	**1.40**	**357**	P		**Pn**	**00 47 32.5**	**+0.4**
	baz=178,SNR=99							
P17K				S		**Sn**	**00 47 52.7**	**-0.6**
	baz=178							
ANPB	**Aniakchak Plen**	**1.47**	**228**			**Pn**	**00 47 32.5**	**-0.6**
P16K	**Nushagak River**	**1.52**	**325**			**Pn**	**00 47 33.4**	**0.0**
P16K						**Sn**	**00 47 55.4**	**-0.1**
**P16

baz=185,SNR=39
N16K Nishlik Lake 2.96 336 Pn 00 47 51.0 0.0
N16K Nishlik Lake 2.96 336 P Pn 00 47 50.9 0.0
baz=154,SNR=32
O20K Slope Mountain 2.97 38 Pn 00 47 52.4 +1.4
O20K Slope Mountain 2.97 38 P Pn 00 47 51.6 +0.5
baz=221,SNR=6.6
CNPM China Poot 3.16 55 Pn 00 47 54.2 +0.8
CNPM China Poot 3.16 55 IAML 00 48 30.5
comp=N,81nm,0.4s
CNPM IAML 00 48 31.5
comp=E,51nm,0.5s
N19K Bonanza Creek 3.16 16 Pn 00 47 54.5 +1.1
N19K Bonanza Creek 3.16 16 P Pn 00 47 54.6 +1.2
baz=198,SNR=197
RED Redoubt Volcan 3.19 33 Pn 00 47 54.6 +0.8
RDSO Redoubt South 3.23 33 Pn 00 47 55.0 +0.6
RDWB Redoubt West 3.23 32 Pn 00 47 55.0 +0.6
RSO Redoubt South 3.23 33 Pn 00 47 55.2 +0.7
NCT North Crescent 3.26 31 Pn 00 47 55.6 +0.8
SVW2 Sparrevohn 3.32 6 Pn 00 47 55.9 +0.4
DFR Drift River 3.35 32 Pn 00 47 56.9 +0.9
SDPT Sand Point 3.38 225 Pn 00 47 55.1 -1.1
SDPT Sand Point 3.38 225 IAML 00 48 34.0
comp=E,90nm,0.5s
SDPT IAML 00 48 39.4
comp=N,82nm,0.7s
SDPT Sand Point 3.38 225 P Pn 00 47 55.1 -1.1
baz=42
SDPT S Sn 00 48 32.8 -3.5
baz=42
BRLK Bradley Lake 3.43 53 Pn Pn 00 47 56.9 -0.1
BRLK IAML 00 48 37.7
comp=E,102nm,0.1s
BRLK IAML 00 48 37.9
comp=N,71nm,0.2s
BRSE Bradley Lake S 3.48 54 Pn 00 47 57.9 +0.3
BRSE Bradley Lake S 3.48 54 P Pn 00 47 57.9 +0.3
baz=238
BRSE S Sn 00 48 36.2 -2.6
baz=238
CHNA Chernabura Isl 3.50 213 P Pn 00 47 56.2 -1.6
baz=30
CNBA Chernabura Isl 3.51 213 Pn 00 47 56.1 -1.8
CNBA Chernabura Isl 3.51 213 IAML 00 48 41.1
comp=E,99nm,0.8s
CNBA IAML 00 48 42.0
comp=N,118nm,0.4s
BLHA Black Hill 3.81 239 Pn 00 48 01.9 -0.1
N20K Mount Spurr 3.99 30 P Pn 00 48 05.4 +1.1
baz=213
SPCR Spurr Chakacha 3.99 30 P Pn 00 48 05.4 +1.1
baz=213,SNR=12
SPBG Spurr Blockage 4.00 28 Pn 00 48 06.3 +1.9
SPU Mount Spurr 4.02 31 Pn 00 48 05.5 +0.9
SPCP Crater Peak Br 4.06 30 Pn 00 48 06.9 +1.6
SPCG Spurr Capps Gl 4.12 30 Pn 00 48 07.3 +1.3
SLKM Skilak Lake 4.14 47 Pn 00 48 06.5 +0.3
M19K Big River Lodg 4.22 12 Pn 00 48 08.4 +1.1
M19K Big River Lodg 4.22 12 IAML 00 49 37.2
comp=E,15nm,1.1s
M19K Big River Lodg 4.22 12 P Pn 00 48 08.4 +1.1
baz=194
SEW Seward 4.23 54 Pn 00 48 07.1 -0.2
SEW Seward 4.23 54 P Pn 00 48 07.6 +0.3
baz=240
O22K Cooper Landing 4.32 49 Pn 00 48 10.2 +1.6
STLK Strandline Lak 4.34 30 Pn 00 48 10.1 +1.1
M20K Styx River 4.39 20 Pn 00 48 11.4 +1.8
M20K Styx River 4.39 20 IAML 00 49 02.9
comp=N,12nm,0.8s
M20K IAML 00 49 36.6
comp=E,11nm,0.9s
M20K Styx River 4.39 20 P Pn 00 48 11.2 +1.6
baz=203,SNR=67
L19K White Mountain 4.45 9 Pn 00 48 11.0 +0.7
L19K White Mountain 4.45 9 IAML 00 49 40.2
comp=E,15nm,1.1s
L19K IAML 00 49 51.2
comp=N,13nm,1.3s
L19K White Mountain 4.45 9 P Pn 00 48 11.1 +0.7
baz=190,SNR=29
SUA Susitna One 4.62 35 Pn 00 48 13.3 +0.6
SUA Susitna One 4.62 35 P Pn 00 48 13.4 +0.6
baz=220,SNR=56
SUA S Sn 00 49 03.9 -1.9
baz=220
RC01 Rabbit Creek A 4.70 43 Pn 00 48 13.4 -0.1
RC01 IAML 00 49 10.6
comp=N,46nm,0.6s
RC01 Rabbit Creek A 4.70 43 P Pn 00 48 13.5 -0.1
baz=228,SNR=7.7
RC01 S Sn 00 49 04.5 -2.8
baz=228
SKT Skwentna 4.83 28 Pn 00 48 16.4 +1.1
SKT Skwentna 4.83 28 IAML 00 49 14.2
comp=N,30nm,0.5s
SKT IAML 00 49 15.8
comp=E,22nm,0.7s
SKT Skwentna 4.83 28 P Pn 00 48 16.2 +0.9
baz=212,SNR=20
SKT S Sn 00 49 11.3 +0.8
baz=212
L20K Farewell, AK 4.84 13 Pn 00 48 16.9 +1.4
L20K Farewell, AK 4.84 13 P Pn 00 48 17.0 +1.4
baz=196,SNR=35
M22K Willow 5.04 36 S Sn 00 49 15.4 -0.1
baz=221
TT01 Tatalina 5.12 1 Pn 00 48 20.1 +0.9
TTA Tatalina 5.14 1 Pn Pn 00 48 20.1 +0.5
TTA IAML 00 50 09.2
comp=E,10.0nm,1.4s
TTA IAML 00 50 13.7
comp=N,8.4nm,1.1s
TTA Tatalina 5.14 1 P Pn 00 48 20.1 +0.5
baz=182,SNR=12
ISLZ Isanotski Laza 5.16 236 Pn 00 48 19.4 -0.4
KNK Knik Glacier 5.38 44 Pn 00 48 22.1 -0.5
KNK Knik Glacier 5.38 44 P Pn 00 48 22.1 -0.5
baz=231
KNK S Sn 00 49 18.7 -4.9
baz=231
GHO Glory Hole Cre 5.45 40 Pn 00 48 23.2 -0.5
PPLA Purkeypile 5.50 20 Pn Pn 00 48 26.9 +2.5
PPLA Purkeypile 5.50 20 P Pn 00 48 26.6 +2.3
baz=204,SNR=15
CUT Chulitna 5.51 31 Pn 00 48 24.7 +0.4
CUT Chulitna 5.51 31 P Pn 00 48 24.5 +0.2
baz=216
GLI Glacier Island 5.62 53 Pn 00 48 25.7 -0.2
GLI Glacier Island 5.62 53 P Pn 00 48 25.1 -0.8
baz=241
HIN Hinchinbrook I 5.67 59 Pn 00 48 27.0 +0.4
K20K Telida 5.68 10 Pn 00 48 27.7 +1.1
K20K Telida 5.68 10 P Pn 00 48 27.8 +1.1
baz=192,SNR=54
SML Sawmill 5.68 42 Pn 00 48 25.6 -1.1
SML Sawmill 5.68 42 P Pn 00 48 25.6 -1.1
baz=228
WECS Westdahl Cape 5.76 239 Pn 00 48 28.4 +0.5
FID Port Fidalgo 5.83 55 Pn 00 48 28.1 -0.6
M23K Glacier View 5.89 44 P Pn 00 48 28.8 -0.6
baz=231,SNR=9.5
JPK Jack Peak 5.92 53 Pn 00 48 30.2 +0.3
SCM Sheep Creek Mo 6.06 44 Pn 00 48 31.3 -0.6
SCM Sheep Creek Mo 6.06 44 P Pn 00 48 31.2 -0.6
baz=232,SNR=16
EYAK Cordova Ski Ar 6.08 59 Pn 00 48 31.9 0.0
EYAK Cordova Ski Ar 6.08 59 P Pn 00 48 31.2 -0.7
baz=248
DIV Divide 6.31 54 Pn 00 48 35.5 +0.4
WAT1 Susitna Watana 6.34 34 Pn 00 48 34.6 -0.9
WAT1 Susitna Watana 6.34 34 P Pn 00 48 34.6 -0.9
baz=221
KTH Kantishna Hill 6.34 22 Pn 00 48 36.2 +0.7
TRF Thorofare Moun 6.38 25 Pn 00 48 36.2 -0.1
TRF Thorofare Moun 6.38 25 P Pn 00 48 36.2 -0.1
baz=210,SNR=12
WAT6 Susitna Watana 6.41 38 Pn 00 48 35.2 -1.4
WAT6 Susitna Watana 6.41 38 P Pn 00 48 35.2 -1.4
baz=226,SNR=12
KLU Klutina 6.42 51 Pn 00 48 36.6 -0.1
KLU Klutina 6.42 51 P Pn 00 48 36.6 -0.1
baz=239,SNR=28
AKUT Akutan 6.47 239 Pn Pn 00 48 36.7 -0.5

J20K Nowinta River 6.48 8 Pn 00 48 38.5 +1.1
J20K Nowinta River 6.48 8 P Pn 00 48 38.0 +0.7
baz=190,SNR=14
M24K Tolsona, Glenn 6.66 45 Pn 00 48 39.7 -0.2
M24K Tolsona, Glenn 6.66 45 P Pn 00 48 39.7 -0.2
baz=234,SNR=19
HMT Hamilton 6.70 63 Pn 00 48 40.8 +0.5
RND Reindeer 6.70 30 Pn 00 48 39.7 -0.7
BMRM Bremner River 6.76 57 Pn 00 48 41.1 -0.1
BMRM Bremner River 6.76 57 P Pn 00 48 41.2 +0.1
baz=247,SNR=6.2
NICHA Nichawak Mount 6.81 64 Pn 00 48 42.4 +0.5
BPAW Bear Paw Mtn. 6.82 20 Pn 00 48 41.6 -0.3
BPAW Bear Paw Mtn. 6.82 20 P Pn 00 48 42.2 +0.2
baz=205,SNR=9.6
SUCK Suckling Hills 6.87 65 Pn Pn 00 48 43.2 +0.7
DHY Denali Highway 6.88 36 Pn 00 48 41.5 -1.4
DHY Denali Highway 6.88 36 P Pn 00 48 41.5 -1.4
baz=224,SNR=9.6
MCK McKinley 6.95 28 Pn 00 48 43.1 -0.5
MCK McKinley 6.95 28 P Pn 00 48 43.1 -0.5
baz=215,SNR=9.4
GCSA Galena City Sc 6.97 358 P Pn 00 48 44.6 +0.8
baz=178
UNV Unalaska Valle 6.99 240 Pn 00 48 43.0 -1.2
UNV Unalaska Valle 6.99 240 P Pn 00 48 43.1 -1.1
baz=51
N25K Chitina, Valde 7.04 52 Pn 00 48 45.2 +0.3
N25K Chitina, Valde 7.04 52 P Pn 00 48 45.2 +0.3
baz=242,SNR=23
MSW Makushin Switc 7.07 241 Pn 00 48 44.6 -0.8
BWN Browne 7.20 25 Pn Pn 00 48 46.8 -0.1
KHIT Khitrov Hills 7.21 63 Pn 00 48 47.7 +0.4
HARP HAARP 7.22 46 P Pn 00 48 47.5 +0.2
baz=235
GLB Gilahina Butte 7.30 55 Pn 00 48 48.7 +0.2
SNH Sunshine Point 7.35 65 Pn Pn 00 48 50.3 +1.3
VRDI Verde Repeater 7.38 57 Pn 00 48 49.9 +0.3
WAX Waxell Ridge 7.41 63 Pn 00 48 50.7 +0.9
PAX Paxson 7.45 41 Pn 00 48 51.0 +0.5
PAX Paxson 7.45 41 P Pn 00 48 50.5 +0.1
baz=231,SNR=48
MCARA McCarthy VSAT 7.63 56 P Pn 00 48 53.0 +0.3
baz=248
NEA2 Nenana 7.65 24 Pn 00 48 52.2 -0.7
NEA2 Nenana 7.65 24 P Pn 00 48 52.3 -0.7
baz=210,SNR=14
I21K Tanana 7.68 14 Pn Pn 00 48 54.2 +0.8
I21K Tanana 7.68 14 P Pn 00 48 54.0 +0.6
baz=198
ISLE Juniper Island 7.69 63 Pn 00 48 54.9 +1.1
MLY Manley 7.72 18 Pn 00 48 54.9 +0.9
MLY Manley 7.72 18 P Pn 00 48 54.0 0.0
baz=203,SNR=5.2
WRH Wood River Hil 7.77 27 Pn 00 48 53.6 -1.0
MESA MESA 7.78 66 P Pn 00 48 55.2 +0.3
baz=258
BAGL Bagley Icefiel 7.78 64 Pn 00 48 56.1 +1.3
PTPK Patty Peak 7.81 58 Pn 00 48 56.1 +0.8
K24K Donnelly Dome 7.91 36 P Pn 00 48 57.1 +0.7
baz=225,SNR=14
YAH Yahtse 7.92 65 Pn Pn 00 48 58.2 +1.3
CCB Clear Creek Bu 7.99 27 Pn 00 48 56.2 -1.2
GRNC Granite Creek 8.00 62 Pn 00 48 58.7 +0.7
HDA Harding Lake 8.02 30 Pn 00 48 56.5 -1.5
HDA Harding Lake 8.02 30 P Pn 00 48 56.4 -1.5
baz=219,SNR=34
H21K Melozitna Rive 8.05 10 Pn 00 48 59.5 +1.1
H21K Melozitna Rive 8.05 10 P Pn 00 48 59.4 +1.0
baz=194,SNR=26
MENT Mentasta 8.07 45 Pn 00 48 59.1 +0.3
I23K Minto, Yukon-K 8.07 21 Pn 00 48 58.2 -0.5
I23K Minto, Yukon-K 8.07 21 P Pn 00 48 58.0 -0.7
baz=208,SNR=7.3
M26K Nabesna, AK 8.08 50 Pn 00 48 59.6 +0.8
M26K Nabesna, AK 8.08 50 P Pn 00 48 59.3 +0.5
baz=241,SNR=36
MDM Murphy Dome 8.15 25 Pn 00 48 58.2 -1.5
RIDG Independent Ri 8.16 38 Pn 00 48 59.2 -0.7
RIDG Independent Ri 8.16 38 P Pn 00 48 59.1 -0.9
baz=228,SNR=10
CTG Chitna Glacier 8.26 61 P Pn 00 49 01.9 +0.5
baz=254,SNR=7.7
CTGM Chitina Glacie 8.26 61 Pn 00 49 02.1 +0.7
IM03 8.29 7 Pn 00 49 03.0 +1.4
IMAR Indian Mountai 8.29 7 Pn 00 49 02.7 +1.0
IL31 8.32 29 Pn 00 49 00.7 -1.2
ILAR Eielson Array 8.32 29 P Pn 00 49 00.3 -1.7
comp=N,15nm,0.5s,baz=216,slow=13,SNR=214
ILAR S Sn 00 50 30.2 -4.0
comp=N,5.2nm,0.8s,baz=218,slow=18,SNR=25
ILAR Eielson Array 8.32 29 Pn 00 49 00.6 -1.4
LOGN Logan Glacier 8.38 62 Pn Pn 00 49 03.9 +0.9
POKR Poker Plat Res 8.46 26 Pn Pn 00 49 03.5 -0.4
POKR Poker Plat Res 8.46 26 P Pn 00 49 02.5 -1.5
baz=214
M27K Edge Creek, AK 8.52 52 Pn 00 49 05.8 +1.0
M27K Edge Creek, AK 8.52 52 P Pn 00 49 05.3 +0.5
baz=244,SNR=8.4
PINM Pinnacle 8.60 68 P Pn 00 49 06.1 +0.3
baz=261
SCRK Sand Creek 8.61 39 P Pn 00 49 04.7 -1.3
baz=230
J25K Salcha River, 8.62 33 Pn 00 49 04.5 -1.5
J25K Salcha River, 8.62 33 P Pn 00 49 04.4 -1.6
baz=223,SNR=21
H23K Yukon River 8.65 19 Pn Pn 00 49 05.8 -0.6
H23K Yukon River 8.65 19 P Pn 00 49 04.2 -2.3
baz=205,SNR=6.2
YUK2 White River 8.74 56 Pn 00 49 09.3 +1.5
L27K Beaver Creek, 8.87 48 Pn 00 49 10.1 +0.7
L27K Beaver Creek, 8.87 48 P Pn 00 49 09.7 +0.3
baz=240,SNR=16
BC03 8.89 48 Pn 00 49 10.4 +0.9
BCAR Beaver Creek A 8.89 48 Pn Pn 00 49 10.1 +0.4
YUK3 Moose Creek 8.91 57 Pn 00 49 11.4 +1.2
YUK3 Moose Creek 8.91 57 P Pn 00 49 10.9 +0.7
baz=250,SNR=16
H24K Noodor Dome 8.98 23 Pn 00 49 09.2 -1.6
H24K Noodor Dome 8.98 23 P Pn 00 49 09.1 -1.7
baz=210
YUK8 Steele Glacier 9.08 60 P Pn 00 49 14.3 +1.8
baz=255,SNR=18
J26L Joseph Creek 9.09 37 P Pn 00 49 12.1 -0.3
baz=228,SNR=12
K27K Chicken 9.30 42 P Pn 00 49 15.3 +0.1
baz=234
YUK6 Outpost Mounta 9.67 63 P Pn 00 49 21.3 +1.0
baz=259
HYT Haines Junctio 10.06 65 Pn Pn 00 49 27.6 +2.2
DAWY Dawson 10.32 46 P Pn 00 49 29.4 +0.6
baz=240,SNR=5.6
N30M Aishikik Lake 10.38 61 P Pn 00 49 30.7 +1.2
baz=258
M30M Minto, Yukon 10.80 56 P Pn 00 49 35.1 +0.1
baz=252
TOLK Toolik Lake Re 11.28 13 Pn Pn 00 49 41.5 +0.1
INK Inuvik 14.62 35 P Pn 00 50 23.1 -1.2
comp=N,1.1nm,0.6s,baz=214,slow=12,SNR=2.2
INK S Sn 00 53 07.7 +1.8
comp=N,1.3nm,0.8s,baz=228,slow=6.6,SNR=1.4
YKA Yellowknife Ar 20.98 60 P P 00 51 37.7 +1.5
comp=N,0.7nm,0.6s,baz=279,slow=10.0,SNR=2.9
comp=N,0.7nm,0.6s
PDAR Pinedale Array 32.69 97 P P 00 53 24.4 +0.9
comp=N,0.4nm,0.5s,baz=317,slow=6.3,SNR=3.7
comp=N,0.4nm,0.5s
TXAR Lajitas Array 45.94 105 P P 00 55 16.2 +3.0
comp=N,0.4nm,0.9s,baz=304,slow=9.7,SNR=3.4
comp=N,0.4nm,0.9s
MKAR Makanchi Array 65.04 320 P P 00 57 28.9 -0.4
comp=N,0.2nm,0.5s,baz=46,slow=10,SNR=1.8
comp=N,0.2nm,0.5s
ESDC Sonseca Array 80.15 21 P P 00 58 57.0 -1.8
comp=N,0.5nm,1.0s,baz=343,slow=4.0,SNR=4.1
comp=N,0.5nm,1.0s

NOU 09 01:23:42.2, 16°11'S × 167°62'E, h13 km, MLv3.5/4, Vanuatu Islands, Vanuatu Islands

*IDC **09** 01:37:49.4 ± 0.9, 32°.01N × 95°.23E, h0 km, mb3.6/7, mbtmp3.5/8, ML3.3/1, Error ellipse: s-maj=56.2km s-min=19.7km az=54.0*

ISC 09 01:37:51.0 ± 1.1, 32°.0N ± 0°.2 × 95°.2E ± 0°.3, h10 km, n8, σ0°72/8, mb3.7/7, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	17.79	330	P	P	01 42 00.5	+1.0
	0.1nm,0.3s,baz=146,slow=16,SNR=3.9						
	0.4nm,0.7s						
KURBB	Kurchatov Arra	22.33	331	P	P	01 42 47.6	-1.1
	0.4nm,0.4s,baz=139,slow=12,SNR=4.3						
	0.4nm,0.4s						
AKASG	Malin Array Be	51.18	312	P	P	01 46 54.6	+0.4
	0.2nm,0.3s,baz=67,slow=6.2,SNR=1.7						
	0.2nm,0.3s						
NOA	NORSAR Array B	59.74	326	P	P	01 47 55.6	-0.2
	0.4nm,0.7s,baz=76,slow=6.9,SNR=1.7						
	0.4nm,0.7s						
WRA	Warramunga Arr	63.82	139	P	P	01 48 23.8	+0.2
	0.7nm,0.8s,baz=328,slow=7.2,SNR=7.4						
	0.7nm,0.8s						
ASAR	Alice Springs	66.58	141	P	P	01 48 41.5	-0.1
	0.7nm,0.6s,baz=327,slow=6.4,SNR=7.9						
	0.7nm,0.6s						
ILAR	Eielson Array	72.16	23	P	P	01 49 15.6	0.0
	0.4nm,1.0s,baz=312,slow=9.4,SNR=4.2						
	0.4nm,1.0s						
TORD	Torodi Ar. Bea	86.08	283	P	P	01 50 32.3	-0.3
	1.0nm,1.1s,baz=46,slow=4.9,SNR=2.5						
	1.0nm,1.1s						

*CRAAG **09** 01:56:19.9, 36°.36N × 3°.50E, Ml3.0, Hypocentre not reviewed by the ISC*

MDD 09 01:56:24.5 ± 1.1, 36°.44N × 3°.53E, h12 km ± 10 km, Mb3.6/10, M_mb2.8/8, 8C, Error ellipse: s-maj=9.7km s-min=4.2km az=152.0, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ADJB	Djebel Djouab	0.29	195	P		01 56 25.4	
AKET	Djebel Ketaf	0.49	144	P		01 56 30.1	
ABA	Alger-Bouzarea	0.54	312	P		01 56 32.5	
EIBI	Ibiza	3.11	327	P	Pn	01 57 12.3	-1.1
EIBI				⇑iVmb_V		01 57 16.0	
	127nm,SNR=1.1						
EIBI				S	Sn	01 57 46.4	-4.0
ETOS	Mallorca	3.37	351	P	Pn	01 57 15.3	-1.7
ETOS				⇑iVmb_V		01 57 17.5	
	79nm,SNR=1.5						
ETOS				S	Sn	01 57 52.8	-4.0
EMUR	La Murta	4.06	292	P	Pn	01 57 26.1	-0.3
EMUR				⇑iVmb_V		01 57 27.1	
	74nm,SNR=1.5						
EMUR				S	Sn	01 58 11.0	-2.9
ECOL	Islas Columbre	4.12	328	P	Pn	01 57 25.5	-1.7
ETOB	Tobarra	4.59	300	P	Pn	01 57 31.8	-2.0
ETOB				⇑iVmb_V		01 57 34.9	
	49nm,SNR=0.7						
ETOB				S	Sn	01 58 22.6	-4.5
ECHE	Chera	4.74	313	P	Pn	01 57 34.9	-1.0
ECHE				⇑iVmb_V		01 57 37.3	
	38nm,SNR=0.4						
EMOS	Mosqueruela	5.02	322	P	Pn	01 57 38.4	-1.4
EMOS				⇑iVmb_V		01 57 42.1	
	24nm,SNR=0.4						
EMOS				S	Sn	01 58 32.8	-5.0
EQES	Quesada	5.45	286	P	Pn	01 57 45.2	-0.4
EQES				⇑iVmb_V		01 57 48.3	
	21nm,SNR=0.5						
EQES				S	Sn	01 58 43.6	-4.6
VSL	Villasalto	5.54	55	P	Pn	01 57 45.0	-1.7
VSL				S	Sn	01 58 45.3	-5.0
EJON	La Jonquera	6.02	355	P	Pn	01 57 53.0	-0.4
EJON				⇑iVmb_V		01 57 55.9	
	100nm,SNR=1.4						

*IDC **09** 01:57:38.9 ± 0.9, 13°.62N × 144°.67E, h127 km ± 7 km, mb3.4/4, mbtmp3.7/4, MS3.5/3, Error ellipse: s-maj=38.8km s-min=25.4km az=77.0*

*NEIC **09** 01:57:38.8 ± 1.1, 13°.78N ± 0°.08 × 144°.5E ± 0°.2, h128 km ± 8 km, mb4.4/8, Error ellipse: s-maj=24.9km s-min=12.0km az=89.0*

ISC 09 01:57:38.4 ± 0.8, 13°.7N ± 0°.1 × 144°.6E ± 0°.2, h129 km, n23, σ0°95/18, mb4.3/8, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	0.29	121	P	Pn	01 57 57.4	+1.0
	1μm,0.3s,baz=135,slow=1.4,SNR=68						
GUMO				S	Sn	01 58 10.7	+0.7
	1μm,0.3s,baz=263,slow=22,SNR=31						
H11S3	WAKE ISLAND Hy	21.72	75	T	T	02 24 30.2	
	baz=261,slow=73,SNR=6.3						
H11S1	WAKE ISLAND Hy	21.73	74	T	T	02 24 27.7	
	baz=261,slow=73,SNR=4.7						
H11S2	WAKE ISLAND Hy	21.74	75	T	T	02 24 26.1	
	baz=261,slow=73,SNR=3.6						
JTM	Tenmabayashi	27.12	354	P	P	02 03 09.4	+0.1
JTM				IAmb	IAmb	02 03 15.8	
	comp=Z,15nm,1.1s						
HNR	Honiara	27.59	146	LR	LR	02 14 16.6	
	comp=Z,66nm,19.1s,baz=129,slow=36						
KSRS	Korea Array	27.91	331	LR	LR	02 12 52.9	
	comp=Z,50nm,19.8s,baz=220,slow=33						
WB0	Warramunga Arr	34.78	197	P	P	02 04 15.9	-0.8
WB0				IAmb	IAmb	02 04 51.3	
	comp=Z,8.8nm,1.5s						
WR0	Warramunga Arr	34.92	197	P	P	02 04 17.4	-0.6
WR0				IAmb	IAmb	02 04 29.6	
	comp=Z,15nm,1.5s						
WB2	Warramunga Arr	34.96	197	P	P	02 04 17.5	-0.8
WB2				IAmb	IAmb	02 04 37.1	
	comp=Z,6.3nm,1.4s						
WRA	Warramunga Arr	34.96	197	P	P	02 04 17.8	-0.6
	comp=Z,0.7nm,0.6s,baz=25,slow=9.3,SNR=9.6						
	comp=Z,0.7nm,0.6s						
WRA	Warramunga Arr	34.96	197	P	P	02 04 18.3	0.0
AS31	Alice Springs	38.62	196	P	P	02 04 48.4	-0.9
ASAR	Alice Springs	38.62	196	P	P	02 04 48.9	-0.5
	comp=Z,0.4nm,0.7s,baz=18,slow=12,SNR=8.2						
	comp=Z,0.4nm,0.7s						
ASAR	Alice Springs	38.62	196	P	P	02 04 49.0	-0.3
DZM	Mont Dzumac	41.53	149	P	P	02 05 13.3	-0.1
	comp=Z,4.0nm,0.6s,baz=294,slow=18,SNR=6.5						
	comp=Z,4.0nm,0.6s						
DZM	Mont Dzumac	41.53	149	P	P	02 05 13.3	-0.1
URZ	Urewera	60.02	151	LR	LR	02 30 22.5	
	comp=Z,97nm,20.0s,baz=211,slow=33						
MKAR	Makanchi Array	61.21	316	P	P	02 07 40.8	+1.1
	comp=Z,0.1nm,0.3s,baz=95,slow=8.1,SNR=1.8						
	comp=Z,0.1nm,0.3s						
MKAR	Makanchi Array	61.21	316	P	P	02 07 39.4	-0.3
SIT	Sitka	73.19	34	P	P	02 08 53.2	-1.8
LPAZ	La Paz	148.29	99	PKPbc	PKPbc	02 17 10.7	-0.5
	comp=Z,1.0nm,0.6s,baz=327,slow=4.9,SNR=5.4						
LPAZ	La Paz	148.29	99		PKPdf	02 17 09.7	+2.0

*NEIC **09** 01:58:42.3 ± 1.0, 57°.03N ± 0°.02 × 158°.09W ± 0°.04, h6 km ± 5 km, Error ellipse: s-maj=3.7km s-min=2.8km az=138.0*

*AEIC **09** 01:58:42 ± 1.2, 57°.02N ± 0°.03 × 158°.12W ± 0°.07, h9 km ± 5 km, ML3.5, ML3.6/26(NEIC), Error ellipse: s-maj=5.4km s-min=4.5km az=109.0*

*IDC **09** 01:58:49.1 ± 5.0, 57°.19N × 157°.85W, h45 km ± 48 km, mb3.3/6, mbtmp3.5/7, ML3.4/1, Error ellipse: s-maj=42.4km s-min=22.5km az=15.0*

ISC 09 01:58:42.2 ± 1.5, 57°.03N ± 0°.03 × 158°.07W ± 0°.04, h2 km ± 10 km, n83, σ0°66/82, mb3.5/6, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANNW	Aniakchak Nort	0.10	229		Pg	01 58 44.9	+0.8
ANPB	Aniakchak Plen	0.26	206		Pg	01 58 47.0	-0.1
PLBL	Peulik Blue Cr	0.95	45		Pg	01 59 00.6	+0.2
PLBL					Sn	01 59 15.9	-0.9
VNHG	Veniaminof 1	1.01	217		Pg	01 59 00.9	-0.7
PLK1	Peulik 1	1.11	45		Pg	01 59 03.5	+0.1
PLK1					Sn	01 59 18.9	-1.6
VNFG	Fog Glacier, M	1.11	228		Pg	01 59 02.9	-0.4
VNFG	Fog Glacier, M	1.11	228	P	Pg	01 59 02.9	-0.4
	baz=46						
PLK5	Peulik 5	1.16	33		Pb	01 59 04.6	-0.4
PLK3	Peulik 3	1.18	55		Pb	01 59 04.9	-0.3

PLK3					Sn	01 59 22.2	-0.2
CHIR	**Chirikof Islan**	**1.82**	**131**		**Pn**	**01 59 14.0**	**-0.6**
CHIR					Sb	01 59 39.0	-0.5
CHIR	**Chirikof Islan** comp=N,511nm,0.8s	**1.82**	**131**	IAML		01 59 41.9	
CHIR	**Chirikof Islan** baz=312	**1.82**	**131**	P	**Pn**	**01 59 14.0**	**-0.6**
CHIR	baz=312			S	**Sb**	**01 59 39.0**	**-0.5**
KELA	**Mount Kelaz**	**1.89**	**41**		**Pn**	**01 59 14.9**	**-0.6**
P16K	**Nushagak River**	**2.00**	**1**		**Pn**	**01 59 16.9**	**-0.2**
P16K	**Nushagak River** baz=182	**2.00**	**1**	P	**Pn**	**01 59 16.8**	**-0.2**
KCG	**Knife Ck. Glac**	**2.04**	**50**		**Pn**	**01 59 17.3**	**-0.3**
SDPT	**Sand Point**	**2.16**	**220**		**Pn**	**01 59 18.5**	**-0.5**
SDPT	**Sand Point** comp=E,357nm,0.9s	**2.16**	**220**	IAML		02 00 01.1	
SDPT	**Sand Point** baz=37	**2.16**	**220**	P	**Pn**	**01 59 18.5**	**-0.5**
SII	**Sitkinak Islan**	**2.19**	**101**		**Pn**	**01 59 20.0**	**+0.4**
SII					**Sb**	**01 59 49.4**	**-0.7**
SII	**Sitkinak Islan** baz=284	**2.19**	**101**	P	**Pn**	**01 59 20.0**	**+0.4**
SII	baz=284			S	**Sb**	**01 59 49.4**	**-0.7**
P17K	**Kvichak River**	**2.34**	**21**		**Pn**	**01 59 20.8**	**-0.7**
P17K	**Kvichak River** baz=203	**2.34**	**21**	P	**Pn**	**01 59 20.8**	**-0.7**
CHNA	**Chernabura Isl** baz=20	**2.37**	**202**	P	**Pn**	**01 59 20.6**	**-1.4**
CHNA	baz=20			S	**Sn**	**01 59 51.3**	**-0.2**
CNBA	**Chernabura Isl**	**2.38**	**202**		**Pn**	**01 59 20.6**	**-1.5**
CNBA					**Sn**	**01 59 51.3**	**-0.5**
CNBA	**Chernabura Isl** comp=E,414nm,1.0s	**2.38**	**202**	IAML		01 59 59.8	
CNBA	comp=N,308nm,0.7s			IAML		02 00 00.2	
O16K	**Kokwok River B**	**2.57**	**360**		**Pn**	**01 59 24.9**	**+0.1**
O16K	**Kokwok River B** baz=180	**2.57**	**360**	P	**Pn**	**01 59 24.9**	**+0.1**
OHAK	**Old Harbor**	**2.62**	**84**		**Pn**	**01 59 25.4**	**0.0**
OHAK	**Old Harbor** baz=268	**2.62**	**84**	P	**Pn**	**01 59 25.4**	**0.0**
O17K	**Koliganek Bris**	**2.80**	**10**		**Pn**	**01 59 27.2**	**-0.7**
O17K	**Koliganek Bris** baz=192	**2.80**	**10**	P	**Pn**	**01 59 27.2**	**-0.7**
P18K	**Big Mountain,**	**2.80**	**31**		**Pn**	**01 59 27.4**	**-0.6**
P18K	**Big Mountain,** comp=E,150nm,0.8s	**2.80**	**31**	IAML		02 00 15.7	
P18K	**Big Mountain,** baz=214	**2.80**	**31**	P	**Pn**	**01 59 27.4**	**-0.6**
Q19K	**Cape Douglas,**	**3.03**	**49**		**Pn**	**01 59 30.9**	**-0.2**
Q19K	**Cape Douglas,** comp=E,255nm,1.4s	**3.03**	**49**	IAML		02 00 48.7	
Q19K	**Cape Douglas,** baz=233	**3.03**	**49**	P	**Pn**	**01 59 30.9**	**-0.2**
KDAK	**Kodiak Island**	**3.06**	**74**		**Pn**	**01 59 32.0**	**+0.4**
O18K	**Koktuh Hills**	**3.21**	**27**		**Pn**	**01 59 33.4**	**-0.2**
O18K	**Koktuh Hills** comp=E,123nm,0.7s	**3.21**	**27**	IAML		02 00 26.7	
O18K	**Koktuh Hills** baz=210	**3.21**	**27**	P	**Pn**	**01 59 33.4**	**-0.2**
AUL	**Augustine Lava**	**3.40**	**44**		**Pn**	**01 59 36.4**	**+0.1**
N16K	**Nishlik Lake**	**3.47**	**354**		**Pn**	**01 59 37.3**	**+0.1**
N16K	**Nishlik Lake** baz=174	**3.47**	**354**	P	**Pn**	**01 59 37.3**	**+0.1**
N18K	**Kilae Creek**	**3.83**	**16**		**Pn**	**01 59 41.8**	**-0.3**
N18K	**Kilae Creek** comp=E,117nm,0.6s	**3.83**	**16**	IAML		02 00 47.9	
N18K	comp=N,89nm,0.5s			IAML		02 00 57.6	
N18K	**Kilae Creek** baz=198	**3.83**	**16**	P	**Pn**	**01 59 41.8**	**-0.3**
IVE	**Iliamna Volcan**	**4.00**	**39**		**Pn**	**01 59 44.1**	**-0.4**
N19K	**Bonanza Creek**	**4.22**	**25**		**Pn**	**01 59 47.8**	**+0.2**
N19K	**Bonanza Creek** comp=N,92nm,0.5s	**4.22**	**25**	IAML		02 00 58.5	
N19K	comp=E,99nm,0.6s			IAML		02 00 59.6	
N19K	**Bonanza Creek** baz=208	**4.22**	**25**	P	**Pn**	**01 59 47.8**	**+0.2**
SVW2	**Sparrevohn**	**4.28**	**16**		**Pn**	**01 59 47.7**	**-0.6**
SVW2	**Sparrevohn** comp=N,85nm,0.5s	**4.28**	**16**	IAML		02 01 09.5	
RED	**Redoubt Volcan**	**4.38**	**37**		**Pn**	**01 59 50.1**	**+0.4**
RDWB	**Redoubt West**	**4.41**	**36**		**Pn**	**01 59 50.1**	**-0.1**
NCT	**North Crescent**	**4.44**	**35**		**Pn**	**01 59 50.7**	**+0.2**
DFR	**Drift River**	**4.54**	**36**		**Pn**	**01 59 52.7**	**+0.8**
M19K	**Big River Lodg**	**5.23**	**19**		**Pn**	**02 00 01.5**	**+0.1**
M19K	**Big River Lodg** comp=N,42nm,0.6s	**5.23**	**19**	IAML		02 01 38.7	
M19K	**Big River Lodg** baz=203	**5.23**	**19**	P	**Pn**	**02 00 01.5**	**+0.1**
L19K	**White Mountain**	**5.42**	**16**		**Pn**	**02 00 03.4**	**-0.5**
L19K	**White Mountain** baz=199	**5.42**	**16**	P	**Pn**	**02 00 03.4**	**-0.5**
M20K	**Styx River**	**5.48**	**25**		**Pn**	**02 00 05.6**	**+0.8**
M20K	**Styx River** baz=210	**5.48**	**25**	P	**Pn**	**02 00 05.6**	**+0.8**
SUA	**Susitna One**	**5.82**	**37**		**Pn**	**02 00 10.7**	**+1.1**
SUA	**Susitna One** baz=224	**5.82**	**37**	P	**Pn**	**02 00 10.6**	**+1.1**
L20K	**Farewell, AK**	**5.86**	**19**		**Pn**	**02 00 10.5**	**+0.5**
L20K	**Farewell, AK** baz=203	**5.86**	**19**	P	**Pn**	**02 00 10.5**	**+0.5**
SKT	**Skwentna**	**5.97**	**31**		**Pn**	**02 00 12.7**	**+1.2**
SKT	**Skwentna** baz=217	**5.97**	**31**	P	**Pn**	**02 00 12.7**	**+1.2**
TT01	**Tatalina**	**5.98**	**9**		**Pn**	**02 00 11.2**	**-0.4**
TTA	**Tatalina**	**6.01**	**9**		**Pn**	**02 00 11.2**	**-0.9**
TTA	**Tatalina** baz=191	**6.01**	**9**	P	**Pn**	**02 00 11.2**	**-0.9**
K20K	**Telida**	**6.65**	**16**		**Pn**	**02 00 20.1**	**-0.7**
K20K	**Telida** baz=199	**6.65**	**16**	P	**Pn**	**02 00 20.1**	**-0.7**
ILAR	**Eielson Array** comp=N,0.4nm,0.3s,baz=218,slow=13,SNR=14 comp=N,1.1nm,0.5s	**9.47**	**30**	P	**Pn**	**02 01 00.0**	**+0.6**
YKA	**Yellowknife Ar** comp=N,0.9nm,0.7s,baz=273,slow=9.8,SNR=5.0 comp=N,0.9nm,0.7s	**22.21**	**58**	P	**P**	**02 03 39.3**	**-0.2**
PETK	**Petropavlovsk-** comp=N,2.3nm,0.8s,baz=102,slow=13,SNR=4.9 comp=N,2.3nm,0.8s	**25.28**	**280**	P	**P**	**02 04 11.6**	**+2.0**
NVAR	**Mina Array Bea** comp=N,0.3nm,0.4s,baz=303,slow=8.3,SNR=2.8 comp=N,0.3nm,0.4s	**31.97**	**108**	P	**P**	**02 05 09.8**	**+0.2**
TXAR	**Lajitas Array** comp=N,0.2nm,0.6s,baz=312,slow=9.4,SNR=3.7 comp=N,0.2nm,0.6s	**46.69**	**103**	P	**P**	**02 07 12.8**	**+0.5**
MKAR	**Makanchi Array** comp=N,0.1nm,0.4s,baz=60,slow=6.8,SNR=2.0 comp=N,0.1nm,0.4s	**65.00**	**319**	P	**P**	**02 09 24.1**	**+0.8**
EKA	**Eskdalemuir Ar** comp=N,0.8nm,0.8s,baz=340,slow=5.3,SNR=4.6 comp=N,0.8nm,0.8s	**66.16**	**15**	P	**P**	**02 09 29.8**	**-0.7**

*TIR **09** 02:05:37.9, 44˚.41N×21˚.92E, h18km±19km, Ml4.8*
*RHSSO **09** 02:05:39.5±0.5, 44˚.46N×21˚.81E, h4km±3km, ML4.4/20*
*IASPEI **09** 02:05:40.7±0.9, 44˚.47N±0˚.02×21˚.63E±0˚.02, h5km±7km, mb4.5/49, MS3.6/31, Error ellipse: s-maj=2.9km s-min=2.3km az=99.6, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
*IDC **09** 02:05:40.0±0.5, 44˚.44N×21˚.55E, h0km, mb4.3/20, mbtmp4.2/37, ML3.7/11, MS3.5/43, Error ellipse: s-maj=8.5km s-min=6.5km az=13.0*
*NEIC **09** 02:05:40.7±1.3, 44˚.49N±0˚.03×21˚.62E±0˚.04, h6km±3km, Error ellipse: s-maj=4.9km s-min=3.6km az=175.0*
*PDG **09** 02:05:40.5±0.8, 44˚.46N×21˚.65E, h12km±1km, MD4.5/4, ML4.5/13, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*
*NEIC **09** 02:05:40.1, 44˚.46N×21˚.62E, h6km, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr=1.45; Mθθ=2.61; Mφφ- 1.16; Mrθ-0.45; Mθφ 0.48; Mφr 1.41; Fault plane solution: M0 2.75000×10¹⁵ NP1:φs228.76000°, δ55.05000°, λ-145.30000°. NP2:φs117.12000°, δ62.19000°, λ-40.37000°. Principal axes: T 2.6949, Plg4.0000°, Azm174.0000°; N 0.1096, Plg42.0000°, Azm268.0000°; P -2.8045, Plg47.0000°, Azm80.0000°;*
*MED_RC **09** 02:05:40.0±0.2, 44˚.53N×21˚.74E, h13km±1km, MW4.4/12, Moment Tensor Solution.Mantle waves: s12,c16; Duration: 1s0 Moment tensor: Scale 10¹⁵Nm; Mrr-2.65±.30; Mθθ4.91±.28; Mφφ-2.26±.23; Mrθ2.18±.42; Mθφ 1.29±.15; Mφr-1.23±.42; Best double couple: M04.99000×10¹⁵ NP1:φs291.00000°, δ68.00000°, λ-49.00000°. NP2:φs44.00000°, δ45.00000°, λ-149.00000°. Principal axes: T 5.6100, Plg14.0000°, Azm353.0000°; N -1.2300, Plg38.0000°, Azm94.0000°; P -4.3800, Plg49.0000°, Azm246.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*BEO **09** 02:05:41.1±0.2, 44˚.46N×21˚.70E, h4km±1km, ML4.3/17*
*MCSM **09** 02:05:41.1±1.0, 44˚.50N±8˚×21˚.62E±1˚.0, h9km±2km, mb4.6*
*MOS **09** 02:05:42.3±0.9, 44˚.49N×21˚.56E, h36km, mb4.6/14, Error ellipse: s-maj=4.0km s-min=3.1km az=92.7*
*LDG **09** 02:05:42.2±0.1, 44˚.48N×21˚.70E, h5km, Ml3.8/24, Error ellipse: s-maj=4.0km s-min=3.0km az=10.0*
*PRU **09** 02:05:43.1±0.0, 44˚.50N×21˚.63E, h16km, M4.4*
*SOF **09** 02:05:44.1, 44˚.21N×21˚.69E, h18km, MD4.6*

ISC 09 02:05:40.9±0.8, **44˚.47N**±0˚.01×**21˚.62E**±0˚.01, **h7**km±5km, **n723**, σ1**s71**/880, **mb4.5**/49, **MS3.6**/31, **161C-159D**, **Fault plane solution: NP1**:φs75.76520°, δ58.77193°, λ-119.55351°. **NP2**:φs303.32675°, δ41.93901°, λ-50.87061°. **Principal axes:** T Plg9.1715°, Azm186.4537°; N Plg24.9465°, Azm92.1465°; P Plg63.1996°, Azm295.0935°; **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KUBS	**Kucevo**	**0.07**	**144**	*e*Pg			**Pg**	**02 05 41.8**	**-0.8**
KUBS				*e*Sg			**Sg**	**02 05 43.4**	**-0.5**
MDVR	**Moldovita**	**0.32**	**12**	*e*Pg			**Pg**	**02 05 47.3**	**+0.1**
MDVR				*e*Sg			**Sg**	**02 05 51.4**	**-0.1**
MDVR	**Moldovita**	**0.32**	**12**	⇑P			**Pg**	**02 05 47.4**	**+0.2**
MDVR				⇑S			**Sg**	**02 05 51.9**	**+0.4**
MDVR	**Moldovita**	**0.32**	**12**				**Pg**	**02 05 47.4**	**+0.2**
MDVR							**Sg**	**02 05 51.9**	**+0.4**
SVIS	**Svilajnac**	**0.35**	**236**	*e*Pg			**Pb**	**02 05 49.0**	**-0.5**
SVIS				*e*Sg			**Sb**	**02 05 53.9**	**-1.4**
DJES	**Djerdap**	**0.67**	**72**	*e*Pg			**Pg**	**02 05 53.2**	**-0.6**
DJES				*e*Sg			**Sg**	**02 06 01.5**	**-1.1**
DJES	**Djerdap**	**0.67**	**72**	⇑P			**Pg**	**02 05 53.3**	**-0.6**
DJES				⇓S			**Sg**	**02 06 01.8**	**-0.8**
DJES	**Djerdap**	**0.67**	**72**				**Pg**	**02 05 53.2**	**-0.6**
DJES							**Sg**	**02 06 01.8**	**-0.8**
HERR	**Herculane**	**0.70**	**54**	⇑P			**Pg**	**02 05 53.9**	**-0.5**
HERR	**Herculane**	**0.70**	**54**				**Pg**	**02 05 53.9**	**-0.5**
ZAGS	**Zajecar**	**0.79**	**146**	*e*Pg			**Pg**	**02 05 55.4**	**-0.6**
ZAGS				*e*Sg			**Sg**	**02 06 05.7**	**-0.5**
RMGR	**Halanga-Turnu**	**0.79**	**75**	⇓P			**Pg**	**02 05 56.0**	**0.0**
RMGR	**Halanga-Turnu**	**0.79**	**75**				**Pg**	**02 05 56.0**	**0.0**
BOVS	**Bovan**	**0.83**	**176**	*e*Pg			**Pg**	**02 05 56.4**	**-0.5**
BOVS				*e*Sg			**Sg**	**02 06 08.2**	**+0.5**
BOVS	**Bovan**	**0.83**	**176**	⇑P			**Pg**	**02 05 56.6**	**-0.3**
BOVS				⇑S			**Sg**	**02 06 08.2**	**+0.5**
BOVS	**Bovan**	**0.83**	**176**				**Pg**	**02 05 56.6**	**-0.3**
BOVS							**Sg**	**02 06 08.2**	**+0.5**
GRUS	**Gruza**	**0.87**	**229**	*e*Pg			**Pb**	**02 05 58.6**	**+0.3**
GRUS				*e*Sg			**Sb**	**02 06 10.8**	**+0.6**
BEO	**Beograd**	**0.89**	**293**	*e*Pg			**Pg**	**02 05 57.6**	**-0.3**
BEO				*e*Sg			**Sb**	**02 06 10.7**	**0.0**
TRUS	**Trudelj**	**0.91**	**255**	*e*Pg			**Pb**	**02 05 59.4**	**+0.5**
TRUS				*e*Sg			**Sn**	**02 06 13.0**	**-0.4**
PUNG	**Punghina**	**0.96**	**101**	⇑P			**Pg**	**02 05 58.9**	**-0.4**
PUNG				⇓S			**Sg**	**02 06 11.5**	**-0.2**
PUNG	**Punghina**	**0.96**	**101**				**Pg**	**02 05 58.9**	**-0.4**
PUNG							**Sg**	**02 06 11.5**	**-0.2**
BANR	**Banloc**	**0.98**	**340**	⇑P			**Pb**	**02 06 00.0**	**-0.2**
BANR				⇑S			**Sb**	**02 06 14.1**	**+0.8**
BANR	**Banloc**	**0.98**	**340**				**Pb**	**02 06 00.0**	**-0.2**
BANR							**Sb**	**02 06 14.1**	**+0.8**
BLKB	**Belogradchik**	**1.14**	**138**	⇑P			**Pg**	**02 06 02.0**	**-0.7**
BLKB				⇑S			**Sg**	**02 06 17.3**	**0.0**
BLKB	**Belogradchik**	**1.14**	**138**				**Pg**	**02 06 02.0**	**-0.7**
BLKB							**Sg**	**02 06 17.3**	**0.0**
SRE	**Strehaia**	**1.15**	**80**	⇓P			**Pb**	**02 06 03.2**	**+0.1**
SRE				⇑S			**Sn**	**02 06 18.9**	**-0.5**
SRE	**Strehaia**	**1.15**	**80**				**Pb**	**02 06 03.2**	**+0.1**
SRE							**Sn**	**02 06 18.9**	**-0.5**
SRE	**Strehaia**	**1.15**	**80**	P			**Pb**	**02 06 03.2**	**+0.1**
SRE								02 06 18.9	
BZS	**Buzias**	**1.15**	**360**	*e*Pg			**Pg**	**02 06 02.1**	**-0.8**
BZS				*e*Sg			**Sg**	**02 06 11.9**	**+0.4**
BZS	**Buzias**	**1.15**	**360**	⇑P			**Pg**	**02 06 02.3**	**-0.7**
BZS				⇓S			**Sb**	**02 06 18.3**	**+0.1**
BZS	**Buzias**	**1.15**	**360**				**Pg**	**02 06 02.3**	**-0.7**
BZS							**Sb**	**02 06 18.3**	**+0.1**
BZS	**Buzias**	**1.15**	**360**	P			**Pg**	**02 06 02.3**	**-0.7**
BZS								02 06 18.3	
DIVS	**Divibare**	**1.23**	**253**	⇓*e*Pg			**Pg**	**02 06 04.4**	**+0.1**
DIVS				*e*Sg			**Sn**	**02 06 21.8**	**+0.4**
DIVS	**Divibare**	**1.23**	**253**	Pn			**Pn**	**02 06 04.5**	**0.0**
DIVS				Sn			**Sn**	**02 06 22.2**	**+0.7**
DIVS	**Divibare**	**1.23**	**253**	⇓*i*Pg			**Pn**	**02 06 04.5**	**0.0**
DIVS				*e*Sg			**Sn**	**02 06 22.3**	**+0.9**
GZR	**Gura Zlata**	**1.24**	**41**	⇑P			**Pg**	**02 06 03.5**	**-1.1**
GZR				⇓S			**Sg**	**02 06 20.0**	**-0.7**
GZR	**Gura Zlata**	**1.24**	**41**				**Pg**	**02 06 03.5**	**-1.1**
GZR							**Sg**	**02 06 20.0**	**-0.7**
GZR	**Gura Zlata**	**1.24**	**41**	P			**Pg**	**02 06 03.5**	**-1.1**
GZR								02 06 20.0	
SELS	**Selova**	**1.30**	**196**	*e*Pg			**Pn**	**02 06 05.2**	**-0.3**
SELS				*e*Sg			**Sb**	**02 06 22.5**	**0.0**
TIM	**Timisoara**	**1.30**	**348**	⇑P			**Pn**	**02 06 05.1**	**-0.4**
TIM				⇑S			**Sn**	**02 06 23.2**	**+0.1**
TIM	**Timisoara**	**1.30**	**348**				**Pn**	**02 06 05.1**	**-0.4**
TIM							**Sn**	**02 06 23.2**	**+0.1**
TIM	**Timisoara**	**1.30**	**348**	P			**Pn**	**02 06 05.1**	**-0.4**
TIM								02 06 23.2	
BAIL	**Bailesti**	**1.32**	**109**	⇑P			**Pn**	**02 06 05.6**	**-0.1**
BAIL				⇓S			**Sn**	**02 06 23.5**	**0.0**
BAIL	**Bailesti**	**1.32**	**109**				**Pn**	**02 06 05.6**	**-0.1**
BAIL							**Sn**	**02 06 23.5**	**0.0**
IVAS	**Ivanjica**	**1.38**	**231**	⇓*e*Pg			**Pn**	**02 06 06.1**	**-0.6**
IVAS				*e*Sg			**Sg**	**02 06 26.4**	**+1.1**
FRGS	**Fruska Gora**	**1.46**	**299**	*e*Pg			**Pn**	**02 06 07.2**	**-0.5**
FRGS				*e*Sg			**Sg**	**02 06 28.8**	**+0.9**
FRGS	**Fruska Gora**	**1.46**	**299**	⇑P			**Pn**	**02 06 07.7**	**-0.1**
FRGS	**Fruska Gora**	**1.46**	**299**				**Pn**	**02 06 07.7**	**-0.1**
FRGS	**Fruska Gora**	**1.46**	**299**	*e*Pn			**Pn**	**02 06 07.3**	**-0.5**
FRGS				*e*Sn			**Sg**	**02 06 29.7**	**+1.8**
BARS	**Barje**	**1.66**	**175**	⇑*e*Pg			**Pn**	**02 06 10.2**	**-0.2**
BARS				*e*Sg			**Sg**	**02 06 33.4**	**-0.6**
DEV	**Deva**	**1.68**	**32**	⇓P			**Pn**	**02 06 10.7**	**0.0**
DEV				⇓S			**Sg**	**02 06 34.5**	**-0.4**
DEV	**Deva**	**1.68**	**32**				**Pn**	**02 06 10.7**	**0.0**
DEV							**Sg**	**02 06 34.5**	**-0.4**
DEV	**Deva**	**1.68**	**32**	P			**Pn**	**02 06 10.7**	**0.0**
DEV								02 06 34.5	
SJES	**Sjenica**	**1.69**	**225**	⇓*e*Pn			**Pn**	**02 06 11.3**	**+0.3**
SJES				*e*Sn			**Sb**	**02 06 33.6**	**-0.4**
SJES	**Sjenica**	**1.69**	**225**	*e*Pn			**Pn**	**02 06 11.4**	**+0.4**
SJES				*e*Sn			**Sg**	**02 06 34.8**	**-0.5**
BBLS	**Lazići**	**1.70**	**250**	⇓*e*Pg			**Pn**	**02 06 11.4**	**+0.4**
BBLS				*e*Sg			**Sg**	**02 06 36.7**	**+1.1**
BBLS	**Lazići**	**1.70**	**250**	⇓*i*Pn			**Pn**	**02 06 11.5**	**+0.4**
BBLS				*e*Sn			**Sg**	**02 06 35.5**	**-0.1**
BLJ	**Bijeljina**	**1.71**	**281**	*e*Sn			**Sg**	**02 06 36.4**	**+0.6**
SIRR	**Siria**	**1.80**	**1**	⇓P			**Pn**	**02 06 11.9**	**-0.5**
SIRR				⇓S			**Sb**	**02 06 37.8**	**+0.7**
SIRR	**Siria**	**1.80**	**1**				**Pn**	**02 06 11.9**	**-0.5**
SIRR							**Sb**	**02 06 37.8**	**+0.7**
LOT	**Lotru**	**1.81**	**56**	⇑P			**Pn**	**02 06 13.2**	**+0.6**
LOT				⇑S			**Sb**	**02 06 37.2**	**-0.3**
LOT	**Lotru**	**1.81**	**56**	P			**Pn**	**02 06 13.3**	**+0.6**
LOT	**Lotru**	**1.81**	**56**				**Pn**	**02 06 13.2**	**+0.6**
LOT							**Sb**	**02 06 37.2**	**-0.3**
RUDO	**Rudo**	**1.83**	**243**	*e*Pn			**Pn**	**02 06 12.3**	**-0.5**
RUDO				*e*Sn			**Sb**	**02 06 37.9**	**+0.1**
PLE	**Pljevlja**	**1.97**	**236**	⇓*i*Pn			**Pn**	**02 06 15.4**	**+0.6**
PLE				*i* Sn			**Sb**	**02 06 42.1**	**+0.1**
PRVS	**Prvonek**	**1.98**	**170**	⇓*e*Pn			**Pn**	**02 06 14.7**	**-0.2**
PRVS				*e*Sn			**Sn**	**02 06 39.8**	**-0.3**
IVA	**Berane**	**2.03**	**219**	⇓*i*Pn			**Pn**	**02 06 16.2**	**+0.6**
IVA				*i* Sn			**Sb**	**02 06 43.3**	**-0.3**
VLAD	**Vladila**	**2.05**	**102**	⇓P			**Pn**	**02 06 15.3**	**-0.5**
VLAD	**Vladila**	**2.05**	**102**				**Pn**	**02 06 15.3**	**-0.5**
BOSS	**Bosilegrad**	**2.07**	**162**	⇓*e*Pn			**Pn**	**02 06 15.9**	**-0.1**
BOSS				*e*Sn			**Sn**	**02 06 41.5**	**-0.5**
SOF	**Sofiya**	**2.17**	**144**	P			**Pn**	**02 06 18.4**	**+0.9**
VTS	**Vitosha**	**2.19**	**147**	⇑P			**Pn**	**02 06 17.8**	**0.0**
VTS	**Vitosha**	**2.19**	**147**	Pn			**Pn**	**02 06 17.5**	**-0.3**
VTS	**Vitosha**	**2.19**	**147**	P			**Pn**	**02 06 17.5**	**-0.3**
VTS	**Vitosha**	**2.19**	**147**	P			**Pn**	**02 06 17.8**	**0.0**
VTS	**Vitosha**	**2.19**	**147**	P			**Pn**	**02 06 17.8**	**0.0**
KOME	**Kolasin**	**2.22**	**224**	⇓*i*Pn			**Pn**	**02 06 18.9**	**+0.6**
KOME				*i* Sn			**Sb**	**02 06 48.1**	**-1.1**
PVY	**Plav**	**2.23**	**213**	⇓*i*Pn			**Pn**	**02 06 18.6**	**+0.3**
PVY				*i* Sn			**Sb**	**02 06 48.2**	**-1.2**
ARR	**Arges**	**2.32**	**66**	⇓P			**Pn**	**02 06 20.7**	**+1.1**
ARR				⇓S			**Sb**	**02 06 50.6**	**-1.5**
ARR	**Arges**	**2.32**	**66**				**Pn**	**02 06 20.7**	**+1.1**
ARR							**Sb**	**02 06 50.6**	**-1.5**
UPM	**Unac-Piva**	**2.34**	**238**	⇓*i*Pn			**Pn**	**02 06 20.4**	**+0.5**
UPM				*e*Sn			**Sn**	**02 06 50.6**	**+1.7**
UPM	**Unac-Piva**	**2.34**	**238**	⇓*i*Pn			**Pn**	**02 06 20.4**	**+0.5**
UPM				*i* Sn			**Sb**	**02 06 50.9**	**-1.6**
HUMR	**Humele**	**2.41**	**87**	⇑P			**Pn**	**02 06 20.7**	**+0.1**
HUMR	**Humele**	**2.41**	**87**				**Pn**	**02 06 20.7**	**+0.1**
STFAR	**Stefanesti-Arg**	**2.42**	**79**	⇓P			**Pn**	**02 06 21.8**	**+0.9**
STFAR	**Stefanesti-Arg**	**2.42**	**79**				**Pn**	**02 06 21.8**	**+0.9**
DRGR		**2.45**	**18**	⇓P			**Pn**	**02 06 21.0**	**-0.3**
DRGR		**2.45**	**18**				**Pn**	**02 06 21.0**	**-0.3**
DRGR		**2.45**	**18**	P			**Pn**	**02 06 21.0**	**-0.3**
NKY	**Niksic**	**2.52**	**230**	⇓*i*Pn			**Pn**	**02 06 22.9**	**+0.5**
NKY				*i* Sn			**Sb**	**02 06 55.7**	**-2.2**
DOB	**Doboj**	**2.53**	**277**	*e*Pn			**Pn**	**02 06 23.2**	**+0.8**
DOB				*e*Sn			**Sb**	**02 06 56.5**	**-1.4**
MTUR	**Matau**	**2.56**	**72**	⇑P			**Pn**	**02 06 24.0**	**+1.1**
MTUR	**Matau**	**2.56**	**72**				**Pn**	**02 06 24.0**	**+1.1**
MTUR	**Matau**	**2.56**	**72**	P			**Pn**	**02 06 24.0**	**+1.1**
MDB	**Medias**	**2.57**	**48**	⇑P			**Pn**	**02 06 24.0**	**+1.1**
MDB	**Medias**	**2.57**	**48**				**Pn**	**02 06 24.0**	**+1.1**
MDB	**Medias**	**2.57**	**48**	P			**Pn**	**02 06 24.0**	**+1.1**
NKME	**Niksic**	**2.58**	**230**	⇓*i*Pn			**Pn**	**02 06 23.4**	**+0.3**
NKME				*i* Sn			**Sb**	**02 06 57.4**	**-1.9**
COPA	**Copaceanca**	**2.60**	**96**	⇑P			**Pn**	**02 06 23.1**	**-0.3**
COPA	**Copaceanca**	**2.60**	**96**				**Pn**	**02 06 23.1**	**-0.3**
VOIR		**2.62**	**67**	⇓P			**Pn**	**02 06 25.1**	**+1.4**
VOIR		**2.62**	**67**				**Pn**	**02 06 25.1**	**+1.4**
VOIR		**2.62**	**67**	P			**Pn**	**02 06 25.1**	**+1.4**
BORR	**Bors**	**2.63**	**2**	⇓P			**Pn**	**02 06 23.8**	**+0.1**
BORR	**Bors**	**2.63**	**2**				**Pn**	**02 06 23.8**	**+0.1**
CJR	**Cluj-Napoca**	**2.64**	**31**	⇓P			**Pn**	**02 06 24.1**	**+0.1**
CJR	**Cluj-Napoca**	**2.64**	**31**				**Pn**	**02 06 24.1**	**+0.1**
CJR	**Cluj-Napoca**	**2.64**	**31**	P			**Pn**	**02 06 24.1**	**+0.1**
PGB	**Panagyurishte**	**2.66**	**135**	P			**Pn**	**02 06 24.8**	**+0.5**
PDG	**Podgorica**	**2.67**	**221**	⇓P			**Pn**	**02 06 24.8**	**+0.6**
PDG	**Podgorica**	**2.67**	**221**	Pn			**Pn**	**02 06 24.6**	**+0.4**
PDG	**Podgorica**	**2.67**	**221**	⇓*i*Pn			**Pn**	**02 06 24.8**	**+0.6**
PDG				*e*Sn			**Sn**	**02 06 57.8**	**+1.0**
TTG	**Podgorica**	**2.67**	**221**	⇓*i*Pn			**Pn**	**02 06 24.8**	**+0.6**
TTG				*e*Sn			**Sn**	**02 06 57.8**	**+1.0**
CBBR	**Cluj-Babes-Bol**	**2.67**	**30**	⇑P			**Pn**	**02 06 24.3**	**0.0**
CBBR	**Cluj-Babes-Bol**	**2.67**	**30**				**Pn**	**02 06 24.3**	**0.0**
BRY	**Bratogost**	**2.73**	**236**	⇓*i*Pn	

JOSR	Joseni	3.53	49	⇑P	Pn	02 06 37.1	+0.9			
JOSR	Joseni	3.53	49		Pn	02 06 37.1	+0.9			
PRIJ	Prijedor	3.53	280	*e*Pn	Pn	02 06 36.5	+0.3			
PRIJ				*e*Sn	Sn	02 07 20.0	+1.8			
GRG	Griva	3.55	170	P	Pn	02 06 36.2	-0.3			
GRG	Griva	3.55	170	P	Pn	02 06 36.4	-0.1			
ISR	Istrita	3.56	78	⇑P	Pn	02 06 37.4	+0.8			
ISR	Istrita	3.56	78		Pn	02 06 37.4	+0.8			
ISR	Istrita	3.56	78	P	Pn	02 06 37.4	+0.8			
TIH	Tihany	3.57	314	P	Pn	02 06 36.9	+0.3			
TIH				S	Sn	02 07 18.6	-0.5			
RZN	Rozhen	3.58	140	P	Pn	02 06 37.3	+0.2			
RZN	Rozhen	3.58	140	P	Pn	02 06 37.1	+0.1			
RAZG	Razgrad	3.64	103	⇑P	Pn	02 06 37.2	-0.4			
RAZG	Razgrad	3.64	103		Pn	02 06 37.2	-0.4			
A050A	Klekovaca	3.64	272	⇓*i*Pn	Pn	02 06 38.5	+0.7			
A050A				*e*Sn	Sn	02 07 22.7	+1.7			
SRS	Serrai	3.65	156	P	Pn	02 06 37.5	-0.3			
PSZ	Piszkesteto	3.66	341	⇑P	Pn	02 06 37.2	-0.8			
PSZ	Piszkesteto	3.66	341	Pn	Pn	02 06 37.1	-0.8			
PSZ	Piszkesteto	3.66	341		Pn	02 06 37.2	-0.8			
PSZ	Piszkesteto	3.66	341	P	Pn	02 06 37.1	-0.8			
PSZ	Piszkesteto	3.66	341	P	Pn	02 06 37.2	-0.8			
PSZ				S	Sn	02 07 17.8	-3.6			
FNA	Florina	3.69	183	P	Pn	02 06 38.9	+0.6			
FNA	Florina	3.69	183	P	Pn	02 06 38.3	0.0			
FNA	Florina	3.69	183	Pn	Pn	02 06 38.8	+0.5			
FNA	Florina	3.69	183	P	Pn	02 06 38.8	+0.5			
LEHL	Lehliu	3.72	88	⇑P	Pn	02 06 39.0	+0.2			
LEHL	Lehliu	3.72	88		Pn	02 06 39.0	+0.2			
CSKK	Cskako	3.73	322	P	Pn	02 06 39.0	+0.2			
CSKK				S	Sn	02 07 21.9	-1.1			
DIM	Dimitrovgrad	3.74	129	P	Pn	02 06 39.1	+0.1			
BISRR	Bisoca	3.77	72	⇓P	Pn	02 06 42.1	+2.6			
PLOR	Plostina	3.82	67	⇑P	Pn	02 06 40.8	+0.7			
PLOR	Plostina	3.82	67		Pn	02 06 40.8	+0.7			
PLOR	Plostina	3.82	67	P	Pn	02 06 40.8	+0.7			
PGOR	Pogoanele	3.85	82	⇓P	Pn	02 06 42.0	+1.4			
PGOR	Pogoanele	3.85	82		Pn	02 06 42.0	+1.4			
SOH	Sokhos	3.86	160	P	Pn	02 06 39.8	-0.9			
VRI	Vrincioaia	3.87	67	⇓P	Pn	02 06 42.0	+1.1			
VRI	Vrincioaia	3.87	67	P	Pn	02 06 41.7	+0.8			
VRI	Vrincioaia	3.87	67		Pn	02 06 42.0	+1.1			
VRI	Vrincioaia	3.87	67	P	Pn	02 06 42.0	+1.1			
KBN	Korca	3.89	189	P	Pn	02 06 42.0	+0.8			
KBN	Korca	3.89	189		Pn	02 06 41.9	+0.8			
KBN	Korca	3.89	189	P	Pn	02 06 41.9	+0.8			
GRER		3.91	75	⇑P	Pn	02 06 41.0	-0.3			
GRER		3.91	75		Pn	02 06 41.0	-0.3			
MPLH	Magyarpolny	3.93	315	P	Pn	02 06 42.4	+0.8			
MPLH				S	Sn	02 07 25.1	-2.9			
BEHE	Becsehely	3.95	302	⇓*i*Pn	Pn	02 06 42.3	+0.3			
BEHE				*e*Sn	Sn	02 07 29.4	+0.8			
BEHE	Becsehely	3.95	302	P	Pn	02 06 42.2	+0.2			
BEHE				S	Sn	02 07 30.5	+1.9			
KDZ	Kurdzhali	3.96	134	P	Pn	02 06 41.5	-0.5			
THE	Thessaloniki	3.96	165	P	Pn	02 06 40.4	-1.6			
RASA	Rasa	3.97	92	⇑P	Pn	02 06 42.3	+0.1			
RASA	Rasa	3.97	92		Pn	02 06 42.3	+0.1			
SRO2	Moca	3.99	327	*e*P	Pn	02 06 42.0	-0.4			
SRO2				*e*		02 07 28.0				
SRO2	Moca	3.99	327	*e*PN	Pn	02 06 42.0	-0.4			
SRO2				*e*SG	Sn	02 07 28.0	-1.4			
BIZ	Bicaz	4.00	50	⇑P	Pn	02 06 43.1	+0.6			
BIZ	Bicaz	4.00	50		Pn	02 06 43.1	+0.6			
HORT	Hortiatis	4.02	164	P	Pn	02 06 42.7	-0.2			
HORT	Hortiatis	4.02	164	P	Pn	02 06 42.2	-0.7			
BURAR	Bucovina Array	4.02	37	⇓P	Pn	02 06 44.3	+1.3			
BURAR	Bucovina Array	4.02	37	Pn	Pn	02 06 43.2	+0.2			
BURAR	Bucovina Array	4.02	37		Pn	02 06 44.3	+1.3			
BUR08	Bucovina Ar. S	4.04	37		Pn	02 06 43.8	+0.5			
ODBI	Odobesti	4.06	69	⇑P	Pn	02 06 44.2	+0.8			
ODBI	Odobesti	4.06	69		Pn	02 06 44.2	+0.8			
KAVA	Kavala	4.07	147	P	Pn	02 06 44.0	+0.5			
NEST	Nestorio	4.07	186	P	Pn	02 06 44.3	+0.6			
TESR	Tescani	4.08	58	⇑P	Pn	02 06 44.9	+1.1			
TESR	Tescani	4.08	58		Pn	02 06 44.9	+1.1			
AMRR	Amara	4.09	86	⇑P	Pn	02 06 43.9	+0.1			
AMRR	Amara	4.09	86		Pn	02 06 43.9	+0.1			
AMRR	Amara	4.09	86	P	Pn	02 06 43.9	+0.1			
KECS	Kecovo	4.09	349	*e*P	Pn	02 06 44.0	+0.1			
KECS				*e*		02 07 29.6				
KECS	Kecovo	4.09	349	*e*PN	Pn	02 06 44.0	+0.1			
KECS				*e*SG	Sn	02 07 29.6	-2.4			
JMB	Yambol	4.13	117	P	Pn	02 06 43.7	-0.6			
PANC	Panciu	4.15	68	⇑P	Pn	02 06 45.7	+1.0			
PANC	Panciu	4.15	68		Pn	02 06 45.7	+1.0			
KZN	Kozani	4.16	178	P	Pn	02 06 44.7	-0.1			
UZHM	Uzhgorod	4.19	6	Pn	Pn	02 06 44.3	-0.9			
UZH	Uzhgorod	4.19	6	*e*P	Pn	02 06 44.6	-0.6			
UZH				*e*S	Sn	02 07 35.6	+1.2			
GIRR	Girov	4.23	52	⇑P	Pn	02 06 47.1	+1.4			
GIRR	Girov	4.23	52		Pn	02 06 47.1	+1.4			
PLG	Polygyros	4.31	161	P	Pn	02 06 45.8	-1.0			
PRD	Provadia	4.37	105	P	Pn	02 06 48.0	+0.4			
PRD	Provadia	4.37	105	P	Pn	02 06 48.0	+0.4			
LSK	Leskovik	4.38	190	P	Pn	02 06 49.2	+1.3			
GHRR		4.39	67	⇓P	Pn	02 06 49.0	+1.1			
GHRR		4.39	67		Pn	02 06 49.0	+1.1			
ROIA	ROIAK	4.39	106	P	Pn	02 06 48.3	+0.4			
RDO	Rodhopi	4.39	138	P	Pn	02 06 47.4	-0.6			
RDO	Rodhopi	4.39	138	P	Pn	02 06 47.8	-0.2			
RDO	Rodhopi	4.39	138	Pn	Pn	02 06 47.4	-0.6			
LIT	Litokhoron	4.41	171	P	Pn	02 06 48.6	+0.4			
LIT	Litokhoron	4.41	171		Pn	02 06 47.2	-1.0			
LIT	Litokhoron	4.41	171	P	Pn	02 06 47.2	-1.0			
TUDR		4.43	73	⇑P	Pn	02 06 48.4	-0.1			
TUDR		4.43	73		Pn	02 06 48.4	-0.1			
CRVS	Cervenica-Dubn	4.44	359	*e*P	Pn	02 06 48.6	0.0			
CRVS	Cervenica-Dubn	4.44	359	*e*PN	Pn	02 06 48.6	0.0			
ICOR	Ion Corvin	4.45	92	⇑P	Pn	02 06 48.9	+0.2			
ICOR	Ion Corvin	4.45	92		Pn	02 06 48.9	+0.2			
OUR	Ouranopolis	4.48	156	P	Pn	02 06 48.9	-0.3			
OUR	Ouranopolis	4.48	156	P	Pn	02 06 48.7	-0.5			
THAS	Thassos island	4.49	148	P	Pn	02 06 49.1	-0.1			
IZVR	Izvoarele	4.49	74	⇓P	Pn	02 06 44.4	-4.8			
KOLS	Kolonicke sedl	4.49	5	*e*P	Pn	02 06 49.4	+0.1			
KOLS	Kolonicke sedl	4.49	5	*e*PN	Pn	02 06 49.4	+0.1			
KOLS				*e*SG	Sg	02 08 03.7	-1.3			
KPIO	Kipourio	4.51	183	P	Pn	02 06 49.3	+0.7			
HARR	Harsova	4.51	85	⇓P	Pn	02 06 49.3	-0.3			
HARR	Harsova	4.51	85		Pn	02 06 49.3	-0.3			
HARR	Harsova	4.51	85	P	Pn	02 06 49.3	-0.3			
CRES	Cresnjev	4.57	289	⇓*i*Pn	Pn	02 06 50.2	-0.2			
CRES				*e*Sn	Sn	02 07 44.1	+0.4			
EDRB	Edirne	4.57	123	P	Pn	02 06 49.7	-0.7			
EDRB	Edirne	4.57	123	P	Pn	02 06 49.9	-0.5			
TLBR	Topalu	4.60	87	⇓P	Pn	02 06 50.5	-0.2			
TLBR	Topalu	4.60	87		Pn	02 06 50.5	-0.2			
BIR	Birlad	4.60	65	⇑P	Pn	02 06 51.2	+0.4			
BIR	Birlad	4.60	65		Pn	02 06 51.2	+0.4			
BIR	Birlad	4.60	65	P	Pn	02 06 51.2	+0.4			
BOJS	Bojanci	4.64	285	*i* Pn	Pn	02 06 51.1	-0.2			
BOJS				*i*		02 07 06.2				
BOJS				*i* Pg	Pg	02 07 09.5	-0.2			
BOJS				*e*Sn	Sn	02 07 43.1	-2.3			
BOJS				*e*		02 08 06.8				
BOJS				IAML		02 08 23.5				
	comp=Z,382nm,1.1s									
KOLL	Kolacno	4.67	333	*e*PN	Pn	02 06 51.5	-0.3			
KOLL				*e*SN	Sn	02 07 46.2	-0.1			
CFR	Carcaliu	4.69	79	⇑P	Pn	02 06 51.0	-1.0			
CFR	Carcaliu	4.69	79		Pn	02 06 51.0	-1.0			
CFR	Carcaliu	4.69	79	P	Pn	02 06 51.0	-1.0			
TATR	Tataca	4.70	74	⇑P	Pn	02 06 51.6	-0.5			
TATR	Tataca	4.70	74		Pn	02 06 51.6	-0.5			
SRN	Sarande	4.74	195	P	Pn	02 06 54.0	+1.3			
SOP	Sopron	4.77	314	P	Pn	02 06 53.2	0.0			
SOP				S	Sn	02 07 46.0	-2.7			
VLDR	Vladesti	4.77	71	⇑P	Pn	02 06 53.7	+0.5			
VLDR	Vladesti	4.77	71		Pn	02 06 53.7	+0.5			
PAIG	Paliouri	4.79	161	P	Pn	02 06 52.9	-0.5			
ALN	Alexandroupoli	4.83	136	P	Pn	02 06 53.6	-0.4			
ALN	Alexandroupoli	4.83	136	P	Pn	02 06 54.1	+0.1			
ALN	Alexandroupoli	4.83	136		Pn	02 06 53.8	-0.2			
ALN	Alexandroupoli	4.83	136	P	Pn	02 06 53.8	-0.2			
TIRR	Tirgusor	4.86	88	⇑P	Pn	02 06 53.7	-0.7			
TIRR	Tirgusor	4.86	88	⇑P	Pn	02 06 53.7	-0.7			
TIRR	Tirgusor	4.86	88		Pn	02 06 53.1	-1.3			
TIRR	Tirgusor	4.86	88	P	Pn	02 06 53.7	-0.7			
TIRR	Tirgusor	4.86	88	P	Pn	02 06 53.1	-1.3			
TPGR	Topolog	4.87	83	⇓P	Pn	02 06 54.0	-0.5			
TPGR	Topolog	4.87	83		Pn	02 06 54.0	-0.5			
ZST	Bratislava	4.87	322	*e*P	Pn	02 06 54.5	0.0			
ZST				*e*		02 07 47.3				
ZST	Bratislava	4.87	322	*e*PN	Pn	02 06 54.5	0.0			
ZST				*e*SN	Sn	02 07 47.2	-3.9			
THL	Klokotos Trika	4.91	176	P	Pn	02 06 56.3	+1.3			
LANS	Liptovska Anna	4.91	343	*e*P	Pn	02 06 55.5	+0.3			
LANS	Liptovska Anna	4.91	343	*e*PN	Pn	02 06 55.5	+0.3			
RONA	Rosalia, Austr	4.92	313	*i* Pn	Pn	02 06 55.6	+0.4			
	comp=Z,77nm,0.6s,SNR=103									
MODS	Modra-Piesok	4.93	324	*e*P	Pn	02 06 55.1	-0.3			
MODS				*e*		02 07 50.3				
MODS	Modra-Piesok	4.93	324	*e*PN	Pn	02 06 55.1	-0.3			
MODS				*e*SN	Sn	02 07 50.3	-2.3			
KEK	Kerkira	4.94	197	P	Pn	02 06 56.1	+0.6			
KEK	Kerkira	4.94	197		Pn	02 06 56.3	+0.8			
UKOP	Uzunkopru-Edir	4.97	130	P	Pn	02 06 55.7	-0.2			
SCTE	Santa Cesarea	4.97	209	Pn	Pn	02 06 56.0	0.0			
SMOL	Smolenice	4.98	326	*e*P	Pn	02 06 55.5	-0.5			
SMOL				*e*		02 07 51.1				
SMOL	Smolenice	4.98	326	*e*PN	Pn	02 06 55.5	-0.5			
SMOL				*e*SN	Sn	02 07 51.1	-2.7			
ENEZ	Enez	5.01	137	P	Pn	02 06 55.9	-0.5			
IGT	Igoumenitsa	5.02	191	P	Pn	02 06 58.4	+1.8			
NIE	Niedzica	5.04	350	*e*P	Pn	02 06 57.9	+1.0			
MANR	Mangalia	5.06	95	⇓P	Pn	02 06 57.0	-0.1			
MANR	Mangalia	5.06	95		Pn	02 06 57.0	-0.1			
SGRT	San Giovanni R	5.08	240	Pn	Pn	02 06 57.1	-0.4			
ARSA	Arzberg	5.09	305	*i* Pn	Pn	02 06 58.0	+0.4			
	comp=Z,56nm,0.3s,SNR=28									
ARSA	Arzberg	5.09	305	⇓*i*Pn	Pn	02 06 57.7	+0.1			
ARSA				*e*Sn	Sn	02 07 56.8	+0.2			
SOKA	Soboth	5.13	298	*i* Pn	Pn	02 06 58.1	-0.1			
	comp=Z,8.2nm,0.5s,SNR=10									
JAVC	Velka Javorina	5.17	330	*e*PN	Pn	02 06 58.3	-0.4			
TLCR		5.17	79	⇑P	Pn	02 06 58.8	+0.2			
TLCR		5.17	79		Pn	02 06 58.8	+0.2			
TLCR		5.17	79	P	Pn	02 06 58.8	+0.2			
XOR	Xorichti	5.23	167	P	Pn	02 06 59.1	-0.4			
ERIK	Erikli-Kesan	5.24	135	P	Pn	02 06 59.6	0.0			
CEY	Cerknica	5.25	287	*e*Pn	Pn	02 07 00.4	+0.6			
CEY				*e*Sn	Sn	02 08 00.9	+0.3			
LJU	Ljubljana	5.25	290	*e*Pn	Pn	02 07 00.4	+0.6			
LJU				*e*Sn	Sn	02 07 59.9	-0.7			
MATE	Matera	5.26	225	⇓P	Pn	02 06 60.0	0.0			
MATE	Matera	5.26	225		Pn	02 06 60.0	0.0			
LIA	Limnos Island	5.28	149	P	Pn	02 06 59.9	-0.2			
KMPD	K-Podol'skiy	5.29	37	Pn	Pn	02 07 00.3	+0.1			
KMPD				Pn	Pn	02 06 59.9	-0.3			
	comp=Z,30nm,1.3s									
KMPD				pP	Pn	02 07 02.1	+1.9			
	comp=Z,30nm,1.3s									
KMPD				Sn	Sn	02 08 00.6	-0.8			
	comp=Z,30nm,1.3s									
CONA	Conrad Observa	5.29	313	*i* Pn	Pn	02 07 00.6	+0.2			
	comp=Z,16nm,0.4s,SNR=35									
NEO	Neokhori	5.29	166	P	Pn	02 06 59.7	-0.7			
GADA	Gvkgeada	5.32	142	P	Pn	02 07 01.0	+0.3			
OBKA	Obir	5.38	295	*i* Pn	Pn	02 07 01.8	+0.2			
	comp=Z,7.6nm,0.6s									
OBKA	Obir	5.38	295	⇓*i*Pn	Pn	02 07 01.5	-0.1			
OBKA				*e*Sn	Sn	02 08 04.1	+0.3			
SKDS	Skadanscina	5.50	284	*e*Pn	Pn	02 07 03.5	+0.3			
SKDS				*e*Sn	Sn	02 08 06.2	-0.6			
EVR	Evrytania	5.55	178	P	Pn	02 07 04.8	+0.9			
MAUC	Maruska	5.55	333	*e*PN	Pn	02 07 03.6	-0.3			
MAUC				*e*SN	Sn	02 08 06.1	-1.8			
MAUC				AMS	AMS	02 09 10.0				
	comp=Z,3µm,4.9s									
TKR	Tekirdag	5.57	127	P	Pn	02 07 03.7	-0.5			
CRLT	Corlu	5.60	124	P	Pn	02 07 03.9	-0.7			
MAR3	Marsite Statio	5.60	130	P	Pn	02 07 04.4	-0.2			
LVV	L'vov	5.60	16	*e*P	Pn	02 07 04.6	0.0			
LVV				*e*S	Sn	02 08 08.2	-1.0			
LVV				pmax	pmax					
	comp=Z,120nm,1.2s									
LVV				smax	smax					
	comp=N,200nm,1.6s									
LVV				smax	smax					
	comp=E,160nm,1.4s									
LVV				MLR	MLR					
	comp=E,2µm,3.0s									
LVV				MLR	MLR					
	comp=N,1µm,3.5s									
LVV				MLR	MLR					
	comp=Z,1µm,3.0s									
MILM	Milestii Mici	5.60	62	*e*P	Pn	02 07 05.7	+1.1			
	comp=Z,130nm,0.7s									
MILM				*e*S	Sn	02 08 09.0	-0.2			
MILM				*e*L	L	02 09 00.0				
MILM				LQM		02 09 19.0				
MILM				LRM	MLR	02 11 02.0				
	comp=Z,600nm,9.0s									
MILM	Milestii Mici	5.60	62	⇑P	Pn	02 07 05.3	+0.8			
MILM	Milestii Mici	5.60	62		Pn	02 07 05.3	+0.8			
MILM	Milestii Mici	5.60	62	*e*P	Pn	02 07 06.0	+1.4			
MILM				*e*S	Sn	02 08 09.0	-0.2			
MILM				pmax	pmax					
	comp=Z,100nm,0.7s									
MILM				MLR	MLR					
	comp=Z,600nm,9.0s									
MAR6	Marsite Statio	5.61	130	P	Pn	02 07 04.8	+0.1			
GZKV	Gazikoy-Tekird	5.62	129	P	Pn	02 07 04.5	-0.2			
KIS	Kishinev	5.64	61	*e*P	Pn	02 07 07.0	+1.9			
	comp=Z,70nm,0.5s									
KIS				*e*S	Sn	02 08 12.0	+2.0			
KIS				*e*L	L	02 08 50.0				
KIS				LRM	MLR	02 10 33.0				
	comp=Z,300nm,7.0s									
KIS	Kishinev	5.64	61	*e*P	Pn	02 07 07.0	+1.9			
KIS				*e*S	Sn	02 08 12.0	+2.0			
KIS				pmax	pmax					
	comp=Z,11µm,6.0s									
KIS				MLR	MLR					
	comp=Z,200nm,9.3s									
KIS				MLR	MLR					
	comp=E,300nm,7.0s									
BOZC	Bozcaada	5.67	143	P	Pn	02 07 05.4	-0.2			
TRI	Trieste	5.70	285	Pn	Pn	02 07 05.9	0.0			
TRI	Trieste	5.70	285	P	Pn	02 07 05.9	0.0			
CTYL	Yalikoy Yolu	5.73	119	P	Pn	02 07 06.7	+0.3			
EZN	Ezine	5.81	141	P	Pn	02 07 07.1	-0.3			
EZN	Ezine	5.81	141	P	Pn	02 07 07.0	-0.3			
SLVT	Silivri	5.82	121	P	Pn	02 07 07.7	+0.1			
KRUC	Moravsky	5.83	324	*e*PN	Pn	02 07 06.7	-1.0			
KRUC				*e*SN	Sn	02 08 11.1	-3.7			
KRBG	Karabiga-Canak	5.85	132	P	Pn	02 07 08.2	+0.2			
MRMT	Marmara Adasi	5.86	129	P	Pn	02 07 07.9	-0.3			
OKC	Ostrava-Krasne	5.87	337	*e*P	Pn	02 07 08.1	-0.2			
OKC				*e*		02 08 12.5				
OKC	Ostrava-Krasne	5.87	337	*e*PN	Pn	02 07 08.1	-0.2			
OKC				*e*SN	Sn	02 08 12.5	-3.3			
SORM	Soroca	5.93	49	⇓P	Pn	02 07 08.9	-0.2			
SORM	Soroca	5.93	49		Pn	02 07 08.9	-0.2			
SORM	Soroca	5.93	49	P	Pn	02 07 08.9	-0.2			
VRAC	Vranov	5.94	326	Pn	Pn	02 07 09.0	-0.3			
	comp=E,2.4nm,0.3s,baz=148,slow=12,SNR=27									
VRAC				Sn	Sn	02 08 15.4	-2.2			
	comp=E,3.4nm,0.3s,baz=141,slow=11,SNR=1.9									
VRAC				LR	LR	02 09 31.7				
	comp=E,308nm,21.3s,baz=121,slow=39									
	comp=E,11nm,0.3s									
VRAC	Vranov	5.94	326	*e*PN	Pn	02 07 08.5	-0.8			
VRAC				*e*SN	Sn	02 08 15.2	-2.4			
MORC	Moravsky Berou	6.00	334	Pn	Pn	02 07 10.0	-0.1			
MORC	Moravsky Berou	6.00	334	P	Pn	02 07 10.0	-0.1			
MORC	Moravsky Berou	6.00	334	*e*PN	Pn	02 07 09.5	-0.6			
MORC				*e*SN	Sn	02 08 16.8	-2.2			
CTKS	Kestanelik-??a	6.00	120	P	Pn	02 07 10.1	0.0			
MYKA	Terra Mystica	6.01	294	*i* Pn	Pn	02 07 12.1	+1.9			
	comp=E,7.4nm,0.7s									
MYKA				*e*Sn	Sn	02 08 17.5	-1.8			
	comp=E,38nm,0.6s									
MOA	Molln	6.13	306	*i* Pn	Pn	02 07 13.2	+1.4			
	comp=E,8.0nm,0.5s,SNR=14									
PURM	Purcari	6.16	68	⇑P	Pn	02 07 12.9	+0.7			
PURM	Purcari	6.16	68		Pn	02 07 12.9	+0.7			
EDC	Edincik	6.19	130	P	Pn	02 07 12.6	0.0			
BGKT	Bogazkoy	6.20	120	P	Pn	02 07 13.0	+0.2			
CUC	Castrocucco	6.21	226		Pn	02 07 12.9	0.0			
PAOL	Paolisi	6.22	239		Pn	02 07 13.2	0.0			
GONE	Gonen-Balikesi	6.30	132	P	Pn	02 07 14.3	+0.1			
KLYT	Kilyos	6.33	118	P	Pn	02 07 14.9	+0.4			
AQU	L'Aquila	6.35	253	Pn	Pn	02 07 14.7	-0.2			
AQU	L'Aquila	6.35	253	P	Pn	02 07 14.7	-0.2			
KBA	Koelnbreinsper	6.35	297	*i* Pn	Pn	02 07 16.5	+1.5			
	comp=E,4.2nm,0.6s,SNR=6.9									
KBA				*e*Sn	Sn	02 08 26.6	-1.3			
	comp=E,26nm,0.6s									
NRCA	Norcia	6.38	258		Pn	02 07 15.2	-0.2			
TREC	Trest	6.40	321	*e*P	Pn	02 07 15.2	-0.4			
TREC				*e*		02 08 25.8				
TREC				MLR	MLR					
	comp=Z,500nm,7.9s									
TREC	Trest	6.40	321	*e*PN	Pn	02 07 15.2	-0.4			
TREC				*e*SN	Sn	02 08 25.8	-3.1			
TREC				AMS	AMS	02 11 00.0				
	comp=Z,500nm,7.9s									
TIP	Timpagrande	6.41	216	⇑P	Pn	02 07 15.9	+0.1			
TIP	Timpagrande	6.41	216		Pn	02 07 15.4	-0.4			
BIOA	Bad Ischl, Aus	6.42	303	*e*Pn	Pn	02 07 17.9	+2.0			
	comp=Z,16nm,0.6s,SNR=19									
ISK	Istanbul-Kandi	6.44	119	P	Pn	02 07 16.4	+0.3			
KAVV	Kandilli-Istan	6.44	119	P	Pn	02 07 16.6	+0.5			
KRLC	Kraliky	6.50	331	*e*P	Pn	02 07 17.1	+0.1			
KRLC				*e*		02 08 28.1				
KRLC				MLR	MLR					
	comp=Z,400nm,8.3s									
KRLC	Kraliky	6.50	331	*e*PN	Pn	02 07 17.1	+0.1			
KRLC				*e*SN	Sn	02 08 28.1	-3.4			
KRLC				AMS	AMS	02 10 30.0				
	comp=Z,400nm,8.3s									
STAL	STALIGIAL	6.53	289		Pn	02 07 17.7	+0.3			
CKRC	Cesky Krumlov	6.65	313	*e*PN	Pn	02 07 19.2	+0.2			
BALB	Balikesir	6.70	134	Pn	Pn	02 07 19.8	+0.1			
ABTA	Abfaltersbach	6.78	293	*i* Pn	Pn	02 07 22.1	+1.2			
	comp=Z,20nm,0.8s,SNR=22									
ABTA				*e*Sn	Sn	02 08 37.6	-0.8			
	comp=Z,47nm,0.7s									
LUBAR	Lubar, Ukraine	6.87	35	Pn	Pn	02 07 21.7	-0.3			
LUBAR				pP	Pn	02 07 24.0	+2.0			
LUBAR				sP	Pn	02 07 25.4	+3.4			
DPC

comp=Z,3.0nm,0.6s
BRG pmax pmax
comp=Z,420nm,12.9s
BRG MLR MLR
comp=N,570nm,16.3s
BRG MLR MLR
comp=E,780nm,16.4s
NKC Novy Kostel 8.49 316 *e*P **Pn 02 07 43.7 -0.5**
NKC MLR MLR
comp=Z,500nm,11.5s
NKC Novy Kostel 8.49 316 *e*PN **Pn 02 07 43.7 -0.5**
NKC AMS AMS 02 11 20.0
comp=Z,500nm,11.5s
DAVOX Davos/Dischmat 8.55 290 Pn **Pn 02 07 47.8 +2.6**
comp=Z,1.7nm,0.3s,baz=128,slow=11,SNR=79
DAVOX Sn **Sn 02 09 21.9 -0.1**
comp=Z,1.3nm,0.3s,baz=208,slow=19,SNR=2.1
DAVOX LR LR 02 11 04.6
comp=Z,180nm,18.8s,baz=104,slow=38
SEV Sevastopol' 8.61 85 *e*P **Pn 02 07 45.0 -0.9**
SEV *e*S **Sn 02 09 19.3 -3.9**
SEV pmax pmax
comp=Z,23nm,0.3s
SEV smax smax
comp=E,35nm,0.4s
SEV smax smax
comp=N,47nm,0.3s
DAVA Damuels 8.66 293 *i* Pn **Pn 02 07 48.9 +2.2**
comp=N,5.9nm,0.6s,SNR=9.8
MSSA Maissana 8.67 273 Pn 02 07 46.0 -0.7
GRA1 Grafenberg Arr 8.81 310 Pn 02 07 48.1 -0.5
GRF Grafenberg Arr 8.81 310 P **Pn 02 07 48.1 -0.5**
GRFO Grafenberg 8.81 310 Pn 02 07 48.5 -0.1
GRFO Grafenberg 8.81 310 P **Pn 02 07 48.5 -0.1**
VAE Valguarnera 8.85 220 Pn Pn 02 07 54.8 +5.5
comp=N,0.8nm,0.3s,baz=95,slow=4.2,SNR=7.2
VAE Sn **Sn 02 09 28.9 -0.5**
comp=N,0.4nm,0.3s,baz=156,slow=20,SNR=3.8
TUE Stuetta 8.86 287 Pn **Pn 02 07 49.0 -0.5**
SIM Simferopol' 8.91 83 *e*P **Pn 02 07 51.3 +1.3**
SIM *e*S **Sn 02 09 27.7 -3.0**
SIM *e*S **Sn 02 09 29.3 -1.4**
SIM pmax pmax
comp=Z,22nm,0.6s
SIM smax smax
comp=E,151nm,1.1s
CLL Collm 8.96 323 Pn **Pn 02 07 50.3 -0.3**
CLL Collm 8.96 323 *e*P **Pn 02 07 48.0 -2.6**
CLL *e* 02 09 27.0
CLL Collm 8.96 323 *e*Pn **Pn 02 07 48.0 -2.6**
CLL *ex* x 02 07 59.0
CLL *e*(Sn) **Sn 02 09 27.0 -4.8**
CLL *e*Sb Sg 02 09 46.0 -42
CLL *ex* x 02 10 00.0
CLL LmH 02 10 00.0
comp=Z,200nm,21.6s
CLL *e*Sg Sg 02 10 27.0 -1.3
comp=Z,46nm,1.2s
CLL Lmax 02 12 00.0
YAL Yalta 8.96 85 *e*P **Pn 02 07 50.0 -0.7**
YAL *e*S **Sn 02 09 28.0 -3.8**
YAL pmax pmax
comp=Z,28nm,0.5s
YAL smax smax
comp=E,47nm,0.4s
YAL smax smax
comp=N,44nm,0.6s
ALU Alushta 9.13 84 *e*P **Pn 02 07 53.4 +0.5**
ALU *e*S **Sn 02 09 34.8 -1.1**
ALU pmax pmax
comp=Z,21nm,0.6s
ALU smax smax
comp=E,16nm,0.6s
ALU smax smax
comp=N,28nm,0.6s
GKP Gorka Klasztor 9.27 343 *e*P **Pn 02 07 56.0 +1.1**
GKP Gorka Klasztor 9.27 343 *e*P Pn 02 07 59.7 +4.8
PGF Pioggiola 9.37 263 *e*Pn **Pn 02 07 56.8 +0.4**
PGF *e*Sn **Sn 02 09 36.1 -6.0**
comp=N,8.9nm,0.8s
IDI Anoyia 9.50 164 Pn **Pn 02 07 59.5 +1.3**
comp=N,1.2nm,0.3s,baz=355,slow=9.5,SNR=8.7
IDI LR LR 02 11 58.8
comp=N,170nm,21.9s,baz=25,slow=40
comp=N,12nm,0.7s
IDI Anoyia 9.50 164 Pn 02 07 57.4 -0.8
ILGA Ilgaz 9.53 107 Pn 02 07 59.1 +0.4
SUDU Sudak 9.54 83 *e*P **Pn 02 07 57.8 -0.8**
SUDU *e*S **Sn 02 09 43.2 -2.9**
SUDU pmax pmax
comp=Z,24nm,0.4s
SUDU smax smax
comp=E,56nm,0.5s
SUDU smax smax
comp=N,163nm,0.5s
STU Stuttgart 9.57 301 Pn 02 07 57.9 -1.1
STU Stuttgart 9.57 301 P **Pn 02 07 57.9 -1.1**
SUW Suwalki 9.61 6 *e*P **Pn 02 07 58.8 -0.7**
SUW Suwalki 9.61 6 Pn 02 07 59.0 -0.5
SUW Suwalki 9.61 6 P **Pn 02 07 59.0 -0.5**
SUW Suwalki 9.61 6 *e*P **Pn 02 08 00.4 +0.9**
FEO Feodosiya 9.82 82 *e*P **Pn 02 08 01.2 -1.2**
FEO *e*S **Sn 02 09 51.9 -0.9**
FEO pmax pmax
comp=Z,21nm,0.4s
FEO smax smax
comp=E,42nm,0.5s
FEO smax smax
comp=N,42nm,0.4s
BFO Black Forest 9.96 298 Pn Pn 02 08 04.0 -0.4
BFO Black Forest 9.96 298 P **Pn 02 08 04.0 -0.4**
BRTR Keskin Array B 10.11 114 Pn **Pn 02 08 06.9 +0.3**
comp=N,0.5nm,0.3s,baz=291,slow=13,SNR=12
BRTR Sn **Sn 02 09 54.5 -5.7**
comp=N,0.2nm,0.3s,baz=281,slow=13,SNR=1.4
BRTR Lg Lg 02 11 09.6
comp=N,0.1nm,0.3s,baz=306,slow=38,SNR=2.7
BRTR LR LR 02 11 53.3
comp=N,222nm,20.1s,baz=313,slow=37
comp=N,1.8nm,0.5s
BRTR Keskin Array B 10.11 114 *i* P **Pn 02 08 07.3 +0.8**
BRTR pmax pmax
comp=Z,2.0nm,0.5s
SBF Sospel 10.21 272 *e*Pn **Pn 02 08 06.7 -1.2**
SBF *e*Sn **Sn 02 09 56.4 -6.3**
comp=Z,5.5nm,0.5s
SENIN Lac Senin/Sane 10.25 286 Pn **Pn 02 08 09.0 +0.5**
LPG La Plagne 10.59 281 *e*Pn **Pn 02 08 14.3 +1.1**
LPG *e*Sn **Sn 02 10 05.5 -6.7**
comp=Z,9.1nm,0.7s
MBDF Montbardon 10.60 277 *e*Pn **Pn 02 08 12.0 -1.2**
MBDF *e*Sn **Sn 02 10 05.6 -6.6**
comp=Z,5.5nm,0.5s
LPL La Plagne 10.60 281 *e*Sn **Sn 02 10 05.6 -6.8**
comp=Z,14nm,0.8s
BNI Bardonecchia 10.65 278 Pn **Pn 02 08 13.3 -0.6**
BNI Bardonecchia 10.65 278 P **Pn 02 08 13.3 -0.6**
CDF Champ du Feu 10.66 297 *e*Pn **Pn 02 08 11.7 -2.3**
CDF *e*Sn **Sn 02 10 09.1 -4.4**
comp=Z,5.2nm,0.5s
HINF Hinteralfeld 10.78 293 *e*Pn **Pn 02 08 13.9 -1.7**
HINF *e*Sn **Sn 02 10 09.8 -6.7**
comp=Z,5.8nm,0.4s
MNK Minsk 10.83 20 *i* P **Pn 02 08 13.5 -2.7**
MNK *i* S **Sn 02 10 14.4 -3.3**
MNK pmax pmax
comp=Z,28nm,0.8s
MNK Minsk 10.83 20 *i* P **Pn 02 08 13.5 -2.7**
MNK *i* P **Pn 02 08 13.5 -2.7**
MNK *i* P **Pn 02 08 13.5 -2.7**
comp=Z,28nm,0.8s,baz=205
MNK *i* PP **PnPn 02 08 21.2 -2.6**
MNK *i* S **Sn 02 10 14.4 -3.3**
MNK *i* SS **SnSn 02 10 27.1 -2.3**
MNK *i* LQ LQ 02 11 19.8
MNK *i* LR LR 02 12 07.7
NACGM Naroch 10.97 16 *e*P **Pn 02 08 18.1 0.0**
LMR La Mourre 10.97 269 *e*Pn **Pn 02 08 18.1 0.0**
LMR *e*Sn **Sn 02 10 14.2 -6.8**
comp=Z,1.8nm,0.5s
CABF La Chapelle 11.11 287 *e*Pn **Pn 02 08 20.2 +0.1**
CABF *e*Sn **Sn 02 10 17.5 -7.1**
comp=Z,4.0nm,0.6s
PABE Paberze 11.15 7 Pn 02 08 20.3 -0.3
PABE Paberze 11.15 7 *e*P **Pn 02 08 24.4 +3.8**

HAU Haudompre 11.15 294 *e*Pn **Pn 02 08 21.5 +0.8**
HAU *e*Sn **Sn 02 10 19.2 -6.5**
comp=Z,7.7nm,0.5s
ORIF Oris-en-Rattie 11.22 278 *e*Pn **Pn 02 08 22.1 +0.4**
ORIF *e*Sn **Sn 02 10 20.6 -6.8**
comp=Z,12nm,0.7s
ANN Anapa 11.28 83 *e*P **Pn 02 08 22.6 +0.3**
ANN *e*S **Sn 02 10 23.4 -5.2**
ANN pmax pmax
comp=Z,45nm,1.7s
ANN MLR MLR
comp=Z,254nm,8.0s
IIGN Ignalina 11.29 14 *e*P **Pn 02 08 22.4 -0.1**
IDID Didziasalis 11.35 15 *e*P **Pn 02 08 23.7 +0.5**
ISAL Salakas 11.48 13 *e*P **Pn 02 08 24.2 -0.9**
BSD Bornholm Skovb 11.50 340 *e*P **Pn 02 08 24.7 -0.6**
BSD Bornholm Skovb 11.50 340 *i* P **Pn 02 08 25.9 +0.6**
BSD *i* S 02 08 35.7
SMRF Simiane la Rot 11.53 273 *e*Pn **Pn 02 08 25.8 -0.1**
SMRF *e*Sn **Sn 02 10 27.5 -7.4**
comp=Z,1.3nm,0.2s
PAGF Fort de Pagny 11.69 296 *e*Pn **Pn 02 08 26.4 -1.6**
VIVF Saint-Julien-l 12.08 278 *e*Pn **Pn 02 08 32.8 -0.6**
VIVF *e*Sn **Sn 02 10 40.5 -7.8**
comp=Z,5.3nm,0.7s
SAVF Savonnieres en 12.09 296 *e*Pn **Pn 02 08 30.7 -2.8**
SSB Saint Sauveur 12.15 280 Pn 02 08 34.4 0.0
SSB Saint Sauveur 12.15 280 P **Pn 02 08 34.4 0.0**
BLEU Blekinge 12.41 345 *i* P **Pn 02 08 39.1 +1.4**
SMF Signal de Mont 12.65 286 *e*Pn **Pn 02 08 41.1 -0.1**
SMF *e*Sn **Sn 02 10 54.6 -7.7**
comp=Z,1.0nm,0.4s
LOR Lormes 12.69 289 *e*Pn **Pn 02 08 43.5 +1.7**
baz=108
LOR *e*Sn **Sn 02 10 54.4 -8.9**
comp=Z,2.2nm,0.5s
LASF Ste Croix 12.74 274 *e*Pn **Pn 02 08 42.5 +0.1**
LASF *e*Sn **Sn 02 10 56.7 -7.8**
comp=Z,0.4nm,0.3s
KEST Kesra 12.81 231 Pn **Pn 02 08 43.4 -0.1**
comp=Z,1.4nm,1.0s,baz=140,slow=3.6,SNR=1.3
KEST Kesra 12.81 231 Pn 02 08 41.5 -1.9
BJUU Bjuv 12.84 338 *i* P **Pn 02 08 44.4 +0.7**
SSF Saint Saulge 12.91 288 *e*Pn **Pn 02 08 44.5 -0.2**
SSF *e*Sn **Sn 02 11 00.5 -8.1**
comp=Z,2.7nm,0.6s
DEL Delary 12.98 341 *e*P **Pn 02 08 46.1 +0.5**
DEL Delary 12.98 341 *i* P **Pn 02 08 45.0 -0.6**
AVF Avril sur Loir 13.00 287 *e*Pn **Pn 02 08 45.9 0.0**
AVF *e*Sn **Sn 02 11 02.5 -8.2**
comp=Z,3.9nm,0.8s
BGF Bois d'Agland 13.33 286 *e*Pn **Pn 02 08 49.1 -1.4**
BGF *e*Sn **Sn 02 11 10.5 -8.4**
comp=Z,4.0nm,0.5s
HYF Humbligny 13.52 289 *e*Pn **Pn 02 08 52.3 -0.7**
VORD Divnogorie 13.54 55 *e*P **Pn 02 08 53.1 -0.2**
VORD pmax pmax
comp=Z,40nm,0.8s
VSR Storozhevoye 13.56 54 *e*P **Pn 02 08 53.5 -0.1**
VSR pmax pmax
comp=Z,40nm,1.2s
TCF Toulx Ste Croi 13.77 284 *e*Pn **Pn 02 08 54.2 -2.2**
TCF *e*Sn **Sn 02 11 21.1 -8.4**
comp=Z,0.4nm,0.3s
VORR Voronezh 13.77 52 *e*P **Pn 02 08 54.1 -2.3**
VORR pmax pmax
comp=Z,10.0nm,0.4s
CAF Calviac 13.92 279 *e*Pn **Pn 02 08 57.6 -0.9**
CAF *e*Sn **Sn 02 11 24.6 -8.7**
comp=Z,0.6nm,0.3s
LPSR Galich'ya Gora 14.04 48 *e*P **Pn 02 09 00.4 +0.4**
LPSR pmax pmax
comp=Z,10.0nm,0.7s
MTLF Montolieu 14.04 272 *e*Pn **Pn 02 08 59.5 -0.6**
ARXR Arkhyz 14.18 87 *i* P **Pn 02 09 03.9 +1.8**
MTSE Matsula 14.33 5 *e*P **Pn 02 09 03.7 -0.3**
OBN Obninsk 14.34 37 Pn **Pn 02 09 00.0 -4.2**
comp=Z,0.5nm,0.3s,baz=91,slow=23,SNR=1.7
OBN Sn **Sn 02 11 45.0 +1.6**
comp=Z,0.7nm,0.3s,baz=226,slow=23,SNR=1.9
OBN Lg Lg 02 13 12.1
comp=Z,0.3nm,0.3s,baz=51,slow=22,SNR=1.0
comp=Z,2.6nm,0.4s
OBN Obninsk 14.34 37 *e*P **Pn 02 09 00.4 -3.8**
OBN pmax pmax
comp=Z,64nm,3.3s
VSU Vasula 14.37 11 *e*P **Pn 02 09 05.6 +1.1**
TJOU Tjoern 14.93 339 *i* P **Pn 02 09 14.9 +2.8**
VRH Novokhopyorsk 15.06 56 *e*P **Pn 02 09 12.8 -1.1**
VRH pmax pmax
comp=Z,60nm,0.7s
KIV Kislovodsk 15.12 85 Pn **Pn 02 09 12.7 -2.1**
KIV IAmb IAmb 02 09 29.6
comp=Z,10nm,0.9s
KIV Kislovodsk 15.12 85 *e*P **Pn 02 09 14.7 -0.1**
KIV pmax pmax
comp=Z,11nm,1.0s
KIV MLR MLR
comp=Z,40nm,13.0s
SHA1 Shidzhatmaz 15.13 85 *i* P **Pn 02 09 16.8 +1.6**
MOS Moscow 15.21 36 *e*P **P 02 09 20.8 -0.2**
MOS *e*S **Sn 02 12 10.0 +5.5**
MOS pmax pmax
comp=Z,36nm,0.9s
GOF Gofitskoye 15.23 80 *e*P Pn 02 08 59.1 -17
KBZ Khabaz 15.30 85 Pn **Pn 02 09 16.6 -0.7**
comp=Z,0.1nm,0.3s,baz=188,slow=20,SNR=2.2
KBZ Sn **Sn 02 12 06.0 -0.8**
comp=Z,0.1nm,0.3s,baz=262,slow=20,SNR=1.7
KBZ LR LR 02 17 01.8
comp=Z,89nm,19.3s,baz=256,slow=44
comp=Z,0.6nm,0.3s
MMAI Mount Meron Ar 15.67 132 LR LR 02 15 31.4
comp=Z,99nm,21.8s,baz=92,slow=38
ONI Oni 15.94 89 Pn 02 09 27.2 +1.6
ONI Oni 15.94 89 P **Pn 02 09 27.2 +1.6**
ONI pmax pmax
comp=Z,4.0nm,0.7s
ZEI Tsey 16.21 88 *e*P **P 02 09 34.6 +2.1**
ZEI pmax pmax
comp=Z,13nm,0.8s
KARS Kars 16.26 96 P **Pn 02 09 29.7 -0.1**
KARS IAmb IAmb 02 09 38.9
comp=Z,55nm,1.2s
KARS Kars 16.26 96 P **Pn 02 09 29.7 -0.1**
KARS pmax pmax
comp=Z,55nm,1.2s
HFS Hagfors 16.40 346 Pn **Pn 02 09 27.1 -4.3**
comp=Z,2.7nm,0.7s,baz=86,slow=23,SNR=2.6
RAF Rauma 16.59 0 *e*P Pn 02 09 24.0 -10
FINES FINESS Array B 17.21 7 Pn **Pn 02 09 39.7 -1.8**
comp=Z,0.5nm,0.3s,baz=174,slow=12,SNR=15
FINES LR LR 02 17 01.4
comp=Z,150nm,18.9s,baz=180,slow=40
comp=Z,3.2nm,0.6s
FINES FINESS Array B 17.21 7 Pn 02 09 40.0 -1.6
FINES FINESS Array B 17.21 7 *e*P **Pn 02 09 39.8 -1.7**
FINES pmax pmax
comp=Z,1.0nm,0.3s
GROC Groznyy 17.48 86 *e*P **Pn 02 09 44.1 -0.9**
GROC pmax pmax
comp=Z,10.0nm,0.6s
GNI Garni 17.62 96 P **Pn 02 09 47.2 +0.2**
comp=Z,2.5nm,0.5s,baz=88,slow=14,SNR=1.7
GNI Garni 17.62 96 P **P 02 09 48.8 +0.8**
GNI IAmb IAmb 02 09 56.2
comp=Z,50nm,1.4s
GNI Garni 17.62 96*ce*P **P 02 09 51.4 +3.4**
GNI pmax pmax
comp=Z,49nm,1.5s
NC405 NORSAR Array S 17.68 344 Pn 02 09 47.2 -0.2
NC405 IAmb IAmb 02 10 24.1
comp=Z,34nm,1.2s
NB2 NORSAR Subarra 17.72 343 P **P 02 09 49.8 +1.0**
comp=Z,6.0nm,0.7s,baz=161,slow=11
NOA NORSAR Array B 17.72 343 P **Pn 02 09 47.9 0.0**
comp=Z,0.1nm,0.3s,baz=150,slow=11,SNR=19
NOA LR LR 02 16 50.4
comp=Z,140nm,19.7s,baz=160,slow=38
comp=Z,2.3nm,0.8s
NOA NORSAR Array B 17.72 343 *e*P **P 02 09 49.2 +0.4**
DVE Vedeno 17.77 86 *i* P **P 02 09 50.8 +1.3**
NBO00 NORSAR Array S 17.80 343 Pn 02 09 48.8 -0.1
NBO00 IAmb IAmb 02 10 03.9
comp=Z,40nm,1.1s

BTLR Botlikh 17.91 87 *i* P **P 02 09 53.3 +2.3**
NC204 NORSAR Array S 18.02 343 Pn 02 09 49.6 -2.1
NC204 IAmb IAmb 02 10 06.5
comp=Z,57nm,1.2s
EIL Elat 18.16 140 P **P 02 09 55.3 +1.4**
comp=Z,0.3nm,0.3s,baz=352,slow=15,SNR=5.0
EIL LR LR 02 19 45.0
comp=Z,73nm,20.8s,baz=38,slow=46
comp=Z,4.5nm,0.7s
GNBR Gunib 18.50 88 *i* P **Pn 02 10 01.0 +3.3**
MAK Makhachkala 18.75 86 *e*P **P 02 09 57.6 -2.6**
MAK *e*S **Sn 02 13 29.4 -1.1**
MAK pmax pmax
comp=Z,38nm,0.3s
MAK MLR MLR
comp=Z,121nm,17.0s
BELG Belogornoye 18.91 56 P **Pn 02 10 02.6 +0.1**
comp=Z,50nm,0.8s,baz=131,slow=0.6,SNR=12
EKA Eskdalemuir Ar 19.20 313 P **P 02 10 05.5 +0.3**
comp=Z,3.0nm,0.5s,baz=112,slow=11,SNR=44
ESBB Sonseca Array 19.55 265 P 02 10 08.5 -0.7
ESDC Sonseca Array 19.55 265 P **P 02 10 09.7 +0.6**
comp=Z,0.1nm,0.3s,baz=68,slow=11,SNR=59
ESDC LR LR 02 18 06.0
comp=Z,69nm,20.6s,baz=78,slow=38
comp=Z,5.1nm,0.8s
KLMR Klimovskoe 19.56 27 *e*P **P 02 10 08.8 -0.2**
KLMR pmax pmax
comp=Z,23nm,1.2s
KLMR Klimovskoe 19.56 27 *e*P **P 02 10 08.8 -0.2**
KLMR AMP 02 10 14.0
comp=Z,23nm,1.2s
PAB San Pablo 19.88 265 P **P 02 10 13.1 +0.4**
PAB San Pablo 19.88 265 P **P 02 10 13.1 +0.4**
PAB pmax pmax
comp=Z,6.0nm,0.9s
PBRG Braganca 20.83 273 *e*P **P 02 10 24.1 +1.1**
comp=Z,26nm,1.8s
MVO Moncorvo 21.23 271 *e*P **P 02 10 28.6 +1.3**
comp=Z,35nm,1.5s
TDRA Tendrara 21.61 246 P **P 02 10 36.0 +4.5**
PVRL Vila Real 21.68 272 *e*P **P 02 10 33.3 +1.1**
FIGM Figuig 21.69 243 P **P 02 10 34.0 +1.5**
POLO Lamas de Olo 21.71 272 *e*P **P 02 10 33.7 +1.2**
PCAB Cabril 21.77 273 *e*P **P 02 10 34.2 +1.1**
comp=Z,32nm,1.4s
MTE Manteigas 21.85 269 *e*P **P 02 10 34.8 +0.8**
comp=Z,31nm,1.1s
MTE Manteigas 21.85 269 P **P 02 10 32.7 -1.3**
PGAV Gavieira, Arco 21.87 274 *e*P **P 02 10 35.9 +1.6**
AKLM AKL 21.96 252 P **P 02 10 39.0 +3.8**
PVIS Viseu 21.99 271 *e*P **P 02 10 36.2 +0.7**
comp=Z,24nm,1.8s
PCBR Castelo Branco 22.00 268 *e*P **P 02 10 36.4 +0.8**
comp=Z,25nm,1.1s
PMRV Marv??o 22.10 267 *e*P **P 02 10 37.3 +0.7**
comp=Z,21nm,1.3s
KIRV Kirov 22.11 40 P **P 02 10 37.6 +1.1**
comp=Z,21nm,0.7s,baz=221,slow=8.0,SNR=8.5
KIRV LR LR 02 19 52.7
comp=Z,92nm,19.2s,baz=235,slow=38
comp=Z,21nm,0.7s
PRGR Permogore 22.23 31 *e*P **P 02 10 38.3 +0.5**
PESTR Estremoz 22.46 266 *e*P **P 02 10 40.6 +0.1**
comp=Z,23nm,1.3s
PESTR Estremoz 22.46 266 P **P 02 10 39.5 -1.0**
PESTR IAmb IAmb 02 10 41.5
comp=Z,7.1nm,0.9s
COI Coimbra 22.54 270 *e*P **P 02 10 42.5 +1.2**
comp=Z,64nm,1.0s
COI Coimbra 22.54 270 P **P 02 10 40.9 -0.4**
COI Coimbra 22.54 270 P **P 02 10 40.9 -0.4**
COI pmax pmax
comp=Z,47nm,1.1s
CHEFC Chefchaouen 22.64 255 P **P 02 10 45.0 +2.5**
PCAS Casmilo, Conde 22.66 269 *e*P **P 02 10 43.1 +0.5**
PMTG Montargil 22.83 267 *e*P **P 02 10 44.8 +0.4**
EVO Evora 22.90 265 *e*P **P 02 10 44.9 -0.2**
comp=Z,17nm,1.0s
PVAQ Vaqueiros 23.18 262 *e*P **P 02 10 48.6 +0.6**
PCVE Castro Verde 23.30 263 *e*P **P 02 10 49.6 +0.3**
comp=Z,34nm,1.3s
PNCL Nicolau / Gran 23.44 265 *e*P **P 02 10 51.2 +0.5**
MDT Midelt 23.45 249 P **P 02 10 49.2 -1.8**
comp=Z,6.0nm,1.0s,baz=87,slow=10,SNR=9.2
comp=Z,6.0nm,1.0s
AKTO Aktyubinsk 25.14 63 P **P 02 11 07.0 +0.6**
comp=Z,4.3nm,0.8s,baz=274,slow=7.2,SNR=15
AKTO LR LR 02 22 31.3
comp=Z,79nm,19.0s,baz=272,slow=40
comp=Z,4.3nm,0.8s
ARCES ARCESS Array B 25.21 3 P **P 02 11 07.8 +1.0**
comp=Z,3.0nm,0.6s,baz=168,slow=9.2,SNR=10.0
ARCES LR LR 02 21 50.8
comp=Z,147nm,18.9s,baz=5.0,slow=38
comp=Z,3.0nm,0.6s
ARCES ARCESS Array B 25.21 3 *e*P **P 02 11 09.7 +2.8**
ARCES pmax pmax
comp=Z,3.0nm,0.6s
TZRR Tazzarine 25.36 247 P **P 02 11 11.0 +2.3**
ARU Arti 26.05 49 P **P 02 11 14.8 +0.2**
comp=Z,18nm,0.7s,baz=254,slow=6.1,SNR=29
ARU LR LR 02 21 02.6
comp=Z,68nm,19.5s,baz=246,slow=35
comp=Z,18nm,0.7s
ARU Arti 26.05 49 P **P 02 11 14.5 -0.1**
ARU Arti 26.05 49*c* *i*P **P 02 11 15.0 +0.4**
ARU 02 11 54.1
ARU S **S 02 15 48.0 +2.3**
ARU SS **SnSn 02 16 45.0 +2.2**
ARU pmax pmax
comp=Z,30nm,0.9s
ABKAR Akbulak array 26.44 66 P **P 02 11 17.7 -0.4**
ABKAR Akbulak array 26.44 66 IAmb IAmb 02 11 34.2
comp=Z,4.0nm,0.8s
OUK Oukaimeden 26.62 250 P **P 02 11 22.0 +1.6**
SVE Sverdlovsk 27.26 49 *e*P **P 02 11 28.1 +2.7**
SVE pmax pmax
comp=Z,22nm,1.2s
TTIG Tnine Tigouga, 27.42 250 P **P 02 11 30.0 +2.7**
GEYT Alibeck 28.06 91 P **P 02 11 33.9 +1.0**
comp=Z,1.2nm,0.5s,baz=290,slow=8.6,SNR=2.4
comp=Z,1.2nm,0.5s
JMIC Jan Mayen 30.40 341 LR LR 02 22 52.9
comp=Z,25nm,20.0s,baz=65,slow=34
BRVK Borovoye 32.64 57 P **P 02 12 11.6 -1.6**
BRVK Borovoye 32.64 57*ce*P **P 02 12 14.1 +0.9**
BRVK pmax pmax
comp=Z,7.0nm,0.8s
SPITS Spitsbergen Ar 33.89 358 LR LR 02 27 30.5
comp=Z,116nm,18.6s,baz=146,slow=39
KK31 Karatay Array 34.90 75 IAmb IAmb 02 12 37.0
comp=Z,5.6nm,0.8s
KKAR Karatay Array 34.90 75 IAmb IAmb 02 12 37.0
comp=Z,5.6nm,0.8s
TOA0 Torodi Ar. Sit 35.56 215 P **P 02 12 37.5 -1.2**
TOA0 IAmb IAmb 02 12 41.0
comp=Z,5.4nm,0.9s
TORD Torodi Ar. Bea 35.56 215 P **P 02 12 39.9 +1.1**
comp=Z,3.8nm,0.7s,baz=12,slow=8.5,SNR=21
TORD PcP **PcP 02 15 07.0 -0.8**
comp=Z,0.8nm,0.6s,baz=358,slow=3.2,SNR=3.5
comp=Z,3.8nm,0.7s
TORD Torodi Ar. Bea 35.56 215 P **P 02 12 37.7 -1.1**
TORD PcP **PcP 02 15 06.2 -1.6**
AAK Ala-Archa 37.81 74*ce*P **P 02 13 01.6 +3.6**
AAK pmax pmax
comp=Z,17nm,1.6s
KURK Kurchatov 38.11 60*ce*P **P 02 13 02.6 +2.4**
KURK pmax pmax
comp=Z,4.0nm,1.3s
KSH Kashi 40.07 78 P **P 02 13 18.8 +1.9**
KSH pmax pmax
comp=Z,4.0nm,1.2s
NRIK Noril'sk 40.86 30*ce*P **P 02 13 25.4 +2.5**
NRIK pmax pmax
comp=Z,3.0nm,0.9s
ZALV Zalesovo Beam 41.07 53 P **P 02 13 25.1 +0.3**
comp=Z,0.9nm,0.5s,baz=289,slow=9.2,SNR=6.6
ZALV LR LR 02 31 56.7
comp=Z,77nm,19.0s,baz=252,slow=38
comp=Z,0.9nm,0.5s
ZALV Zalesovo Beam 41.07 53 *e*P **P 02 13 27.2 +2.4**
ZALV pmax pmax
comp=Z,1.0nm,0.5s
MK31 Makanchi Array 41.56 65 P **P 02 13 28.4 -0.6**

MK31	**Makanchi Array**	**41.56**	**65**	*i* P		**P**	**02 13 29.9**	**+0.9**
MKAR	**Makanchi Array**	**41.56**	**65**	P		**P**	**02 13 29.9**	**+0.9**
	comp=Z,3.4nm,0.8s,baz=281,slow=7.1,SNR=21							
MKAR				PP		**PnPn**	**02 15 08.2**	**-1.3**
	comp=Z,1.0nm,0.8s,baz=284,slow=10,SNR=2.3							
MKAR				LR		LR	02 33 21.1	
	comp=Z,69nm,18.9s,baz=238,slow=40							
	comp=Z,3.4nm,0.8s							
MKAR	**Makanchi Array**	**41.56**	**65**	P		**P**	**02 13 28.7**	**-0.3**
MKAR	**Makanchi Array**	**41.56**	**65**	*eP*		**P**	**02 13 29.9**	**+0.9**
MKAR				pmax		pmax		
	comp=Z,4.0nm,0.8s							
SFJD	**Kangerlussuaq**	**43.30**	**327**	LR		LR	02 31 42.4	
	comp=Z,61nm,19.4s,baz=76,slow=36							
DBIC	**Dimbokro**	**44.18**	**219**	P		**P**	**02 13 49.8**	**-0.6**
	comp=Z,6.8nm,1.0s,baz=31,slow=7.7,SNR=4.4							
	comp=Z,6.8nm,1.0s							
DBIC	**Dimbokro**	**44.18**	**219**	P		**P**	**02 13 49.1**	**-1.4**
MBAR	**Mbarara**	**45.60**	**167**	LR		LR	02 34 05.9	
	comp=Z,32nm,18.9s,baz=49,slow=37							
WMQ	**Urumqi**	**46.22**	**66**	*eP*		**P**	**02 14 04.6**	**-1.9**
WMQ				sP		sP	02 14 15.0	+5.3
WMQ				pmax		pmax		
	comp=Z,26nm,0.9s							
KMBO	**Kilima Mbogo**	**47.49**	**159**	LR		LR	02 36 50.0	
	comp=Z,34nm,18.4s,baz=56,slow=39							
FRB	**Frobisher Bay**	**51.37**	**325**	LR		LR	02 35 48.2	
	comp=Z,31nm,20.7s,baz=22,slow=35							
TIXI	**Tiksi**	**53.49**	**22**	LR		LR	02 39 59.9	
	comp=Z,92nm,20.8s,baz=351,slow=38							
GOMU	**GeErMu**	**54.70**	**72**	P		**P**	**02 15 10.2**	**-0.9**
GOMU				pP		pP	02 15 13.4	0.0
GOMU				sP		sP	02 15 14.6	+0.4
GOMU				pmax		pmax		
	comp=Z,2.0nm,0.4s							
GOMU				pmax		pmax		
	comp=Z,82nm,4.9s							
SONM	**Songino Array**	**55.96**	**54**	P		**P**	**02 15 20.9**	**+1.2**
	comp=Z,2.6nm,0.6s,baz=297,slow=9.2,SNR=6.4							
	comp=Z,2.6nm,0.6s							
SONM	**Songino Array**	**55.96**	**54**	P		**P**	**02 15 18.6**	**-1.1**
SONM				IAmb		IAmb	02 15 23.9	
	comp=Z,2.6nm,0.8s							
SONM	**Songino Array**	**55.96**	**54**	*eP*		**P**	**02 15 23.6**	**+3.9**
SONM				pmax		pmax		
	comp=Z,3.0nm,0.7s							
ULN	**Ulaanbaatar**	**56.32**	**54**	*ceP*		**P**	**02 15 23.9**	**+1.5**
ULN				pmax		pmax		
	comp=Z,2.0nm,1.0s							
YAK	**Yakutsk**	**59.27**	**31**	LR		LR	02 43 25.7	
	comp=Z,121nm,18.3s,baz=268,slow=38							
LSZ	**Lusaka**	**59.75**	**173**	LR		LR	02 43 00.7	
	comp=Z,47nm,18.2s,baz=72,slow=38							
HHC	**Hu-ho-hao-te**	**62.91**	**58**	*eP*		**P**	**02 16 09.4**	**+1.6**
HHC				pmax		pmax		
	comp=Z,16nm,1.0s							
HHC				pmax		pmax		
	comp=Z,160nm,4.8s							
TSUM	**Tsumeb**	**63.46**	**184**	LR		LR	02 45 06.9	
	comp=Z,65nm,18.3s,baz=322,slow=37							
PZH	**PanZhiHua**	**65.17**	**77**	P		**P**	**02 16 23.5**	**+0.6**
PZH				pmax		pmax		
	comp=Z,10.0nm,0.6s							
PZH				pmax		pmax		
	comp=Z,110nm,5.5s							
XAN	**Xi'an**	**65.36**	**66**	P		**P**	**02 16 27.1**	**+3.2**
XAN				pP		sP	02 16 32.0	+4.9
XAN				pmax		pmax		
	comp=Z,8.0nm,0.9s							
SEY	**Seymchan**	**65.99**	**22**	LR		LR	02 48 38.9	
	comp=Z,69nm,18.4s,baz=312,slow=39							
SADO	**Sadowa**	**66.75**	**310**	LR		LR	02 43 59.4	
	comp=Z,38nm,19.1s,baz=311,slow=34							
YKA	**Yellowknife Ar**	**67.78**	**340**	P		**P**	**02 16 39.0**	**+0.1**
	comp=Z,3.9nm,0.7s,baz=32,slow=6.1,SNR=10							
	comp=Z,3.9nm,0.7s							
YKA	**Yellowknife Ar**	**67.78**	**340**	P		**P**	**02 16 37.7**	**-1.1**
YKA	**Yellowknife Ar**	**67.78**	**340**	*eP*		**P**	**02 16 41.9**	**+3.1**
YKA				pmax		pmax		
	comp=Z,4.0nm,0.7s							
MA2	**Magadan**	**68.23**	**25**	LR		LR	02 49 25.9	
	comp=Z,75nm,19.7s,baz=292,slow=38							
CMAR	**Chiang Mai Arr**	**68.36**	**85**	P		**P**	**02 16 43.9**	**+0.7**
	comp=Z,1.2nm,0.2s,baz=306,slow=7.9,SNR=9.3							
	comp=Z,1.2nm,0.2s							
CMAR	**Chiang Mai Arr**	**68.36**	**85**	*eP*		**P**	**02 16 46.1**	**+2.9**
CMAR				pmax		pmax		
	comp=Z,2.0nm,0.4s							
KLR	**Kul'dur**	**68.55**	**41**	LR		LR	02 47 32.5	
	comp=Z,65nm,18.3s,baz=262,slow=37							
KLR	**Kul'dur**	**68.55**	**41**	*ceP*		**P**	**02 16 46.8**	**+2.9**
KLR				pmax		pmax		
	comp=Z,2.0nm,1.0s							
DGAR	**Diego Garcia**	**68.96**	**125**	*ceP*		**P**	**02 16 48.0**	**+1.2**
DGAR				pmax		pmax		
	comp=Z,131nm,1.7s							
LBTB	**Lobatse**	**69.24**	**176**	LR		LR	02 48 07.1	
	comp=Z,50nm,20.3s,baz=39,slow=37							
ILAR	**Eielson Array**	**70.73**	**355**	P		**P**	**02 16 57.7**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=0.8,slow=7.5,SNR=12							
	comp=Z,0.7nm,0.6s							
ILAR	**Eielson Array**	**70.73**	**355**	P		**P**	**02 16 56.4**	**-0.7**
ULM	**Lac du Bonnet**	**71.16**	**323**	P		**P**	**02 16 59.6**	**-0.3**
	comp=Z,1.8nm,0.5s,baz=38,slow=8.1,SNR=4.8							
ULM				LR		LR	02 49 35.3	
	comp=Z,33nm,18.6s,baz=318,slow=37							
	comp=Z,1.8nm,0.5s							
ULM	**Lac du Bonnet**	**71.16**	**323**	P		**P**	**02 16 57.8**	**-2.1**
ULM				IAmb		IAmb	02 17 23.8	
	comp=Z,3.1nm,0.9s							
BOSA	**Boshof**	**72.80**	**177**	P		**P**	**02 17 09.6**	**-0.4**
	comp=Z,5.6nm,0.9s,baz=6.7,slow=6.6,SNR=8.9							
BOSA				LR		LR	02 55 22.0	
	comp=Z,74nm,19.1s,baz=14,slow=41							
	comp=Z,5.6nm,0.9s							
KSRS	**Korea Array**	**74.77**	**52**	P		**P**	**02 17 21.3**	**-0.2**
	comp=Z,1.0nm,0.6s,baz=317,slow=6.0,SNR=4.5							
	comp=Z,1.0nm,0.6s							
KSRS	**Korea Array**	**74.77**	**52**	*eP*		**P**	**02 17 21.9**	**+0.4**
KSRS				pmax		pmax		
	comp=Z,1.0nm,0.6s							
DLBC	**Dease Lake**	**74.80**	**345**	LR		LR	02 50 38.4	
	comp=Z,78nm,19.1s,baz=101,slow=36							
TKL	**Tuckaleechee C**	**75.50**	**306**	LR		LR	02 51 17.0	
	comp=Z,48nm,18.0s,baz=26,slow=36							
PETK	**Petropavlovsky**	**75.76**	**26**	LR		LR	02 54 40.3	
	comp=Z,59nm,19.3s,baz=308,slow=39							
SUR	**Sutherland**	**76.48**	**181**	LR		LR	02 54 12.3	
	comp=Z,70nm,18.4s,baz=68,slow=38							
KDAK	**Kodiak Island**	**78.00**	**357**	LR		LR	02 55 01.0	
	comp=Z,40nm,19.6s,baz=183,slow=38							
PDAR	**Pinedale Array**	**82.81**	**326**	P		**P**	**02 18 05.0**	**-1.0**
	comp=Z,0.9nm,0.8s,baz=63,slow=4.2,SNR=4.4							
PDAR				LR		LR	02 55 45.8	
	comp=Z,17nm,18.4s,baz=72,slow=36							
ELK	**Elko**	**86.74**	**329**	LR		LR	02 58 20.9	
	comp=Z,41nm,18.5s,baz=239,slow=36							
BDFB	**Brasilia**	**86.96**	**245**	P		**P**	**02 18 27.2**	**+0.2**
	comp=Z,2.2nm,0.5s,baz=146,slow=8.5,SNR=5.1							
	comp=Z,2.2nm,0.5s							
BDFB	**Brasilia**	**86.96**	**245**	P		**P**	**02 18 25.8**	**-1.2**
ANMO	**Albuquerque**	**87.98**	**320**	*ceP*		**P**	**02 18 33.6**	**+1.7**
ANMO				pmax		pmax		
	comp=Z,2.0nm,1.7s							
YBH	**Yreka Blue Hor**	**88.42**	**334**	LR		LR	03 00 31.1	
	comp=Z,23nm,18.9s,baz=217,slow=37							
NVAR	**Mina Array Bea**	**89.90**	**330**	P		**P**	**02 18 40.8**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=77,slow=3.7,SNR=3.6							
	comp=Z,0.2nm,0.3s							
TXAR	**Lajitas Array**	**91.20**	**315**	P		**P**	**02 18 45.9**	**-1.1**
	comp=Z,0.9nm,0.9s,baz=75,slow=5.3,SNR=6.2							
	comp=Z,0.9nm,0.9s							
ASAR	**Alice Springs**	**121.84**	**93**	PKP		**PKiKP**	**02 24 36.4**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=298,slow=2.0,SNR=1.5							

*IDC **09** 02:14:55.2±0.9, 3°.52N×126°.69E, h0km, mb4.0/7, mbtmp4.0/7 Error ellipse: s-maj=92.1km s-min=17.7km az=72.0.*
*NEIC **09** 02:15:01.1±0.9, 3°.5N±0°.1×126°.56E±0°.08, h35km±2km, mb4.2/8, Error ellipse: s-maj=23.2km s-min=11.0km az=154.0*

ISC 09 02:15:02.2±0.8, **3°.5N**±0°.1×**126°.5E**±0°.2, **h53**km, **n21,** σ0**s66/18, mb4.1/11, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOLI2	**Tolitoli**	**6.19**	**248**	Pn	**Pn**	**02 16 30.5**	**-0.5**
WB0	**Warramunga Arr**	**24.34**	**162**	P	**P**	**02 20 14.7**	**-0.5**
WB0				IAmb	IAmb	02 20 17.5	
	comp=Z,8.9nm,1.1s						
WRA	**Warramunga Arr**	**24.48**	**162**	P	**P**	**02 20 16.5**	**-0.1**
	comp=Z,3.3nm,0.9s,baz=337,slow=11,SNR=15						
	comp=Z,3.3nm,0.9s						
WRA	**Warramunga Arr**	**24.48**	**162**	P	**P**	**02 20 15.8**	**-0.7**
WB2	**Warramunga Ar**	**24.49**	**162**	P	**P**	**02 20 16.9**	**+0.3**
WB2				IAmb	IAmb	02 20 19.0	
	comp=Z,8.0nm,1.1s						
WR0	**Warramunga Arr**	**24.56**	**162**	P	**P**	**02 20 17.6**	**+0.3**
WR0				IAmb	IAmb	02 20 19.0	
	comp=Z,6.8nm,1.1s						
ASAR	**Alice Springs**	**27.90**	**165**	P	**P**	**02 20 47.4**	**0.0**
	comp=Z,0.4nm,0.6s,baz=349,slow=7.5,SNR=3.4						
	comp=Z,0.4nm,0.6s						
ASAR	**Alice Springs**	**27.90**	**165**	P	**P**	**02 20 47.6**	**+0.3**
KSRS	**Korea Array**	**33.87**	**2**	P	**P**	**02 21 38.8**	**-0.9**
	comp=Z,1.1nm,0.6s,baz=183,slow=9.9,SNR=6.7						
	comp=Z,1.1nm,0.6s						
STKA	**Stephens Creek**	**37.95**	**159**	P	**P**	**02 22 14.8**	**0.0**
	comp=Z,2.0nm,0.6s,baz=330,slow=12,SNR=3.7						
	comp=Z,2.0nm,0.6s						
STKA	**Stephens Creek**	**37.95**	**159**	P	**P**	**02 22 15.3**	**+0.6**
H11S3	**WAKE ISLAND Hy**	**42.03**	**66**	T	T	03 07 11.2	
	baz=253						
H11S2	**WAKE ISLAND Hy**	**42.05**	**66**	T	T	03 07 11.8	
	baz=253						
H11S1	**WAKE ISLAND Hy**	**42.05**	**66**	T	T	03 07 10.2	
	baz=253						
SONM	**Songino Array**	**47.49**	**342**	P	**P**	**02 23 32.4**	**+0.3**
	comp=Z,1.4nm,0.6s,baz=156,slow=11,SNR=3.1						
	comp=Z,1.4nm,0.6s						
MK31	**Makanchi Array**	**57.66**	**325**	P	**P**	**02 24 48.4**	**+1.2**
MK31				IAmb	IAmb	02 24 50.2	
	comp=Z,1.3nm,0.7s						
MKAR	**Makanchi Array**	**57.66**	**325**	P	**P**	**02 24 47.8**	**+0.6**
	comp=Z,1.6nm,0.6s,baz=121,slow=8.3,SNR=22						
	comp=Z,1.6nm,0.6s						
MKAR	**Makanchi Array**	**57.66**	**325**	P	**P**	**02 24 47.4**	**+0.2**
KURK	**Kurchatov**	**61.86**	**328**	P	**P**	**02 25 17.2**	**+1.3**
BPAW	**Bear Paw Mtn.**	**83.63**	**26**	P	**P**	**02 27 24.2**	**-0.6**
ARCES	**ARCESS Array B**	**90.64**	**340**	P	**P**	**02 27 58.7**	**+0.1**
	comp=Z,1.1nm,0.7s,baz=82,slow=6.5,SNR=3.9						
	comp=Z,1.1nm,0.7s						

*INET **09** 02:19:16.1±0.1, 11°.79N×88°.80W, h15km, MW3.1*
*SNET **09** 02:19:26.5±1.2, 12°.97N×87°.74W, h151km±13km, ML2.7*

ISC 09 02:19:27.5±2.3, **12°.1N**±0°.1×**88°.10W**±0°.08, **h35**km, **n12,** σ1**s25/14, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**1.18**	**60**	*eP*	**Pn**	**02 19 47.4**	**-0.3**
CNCH	**Conchagua**	**1.19**	**13**	*eP*	**Pn**	**02 19 47.5**	**-0.2**
CNCH				*eS*	**Sn**	**02 20 04.5**	**+1.7**
LCND	**La Caada**	**1.21**	**10**	*eP*	**Pn**	**02 19 47.5**	**-0.5**
LCND				IAML		02 20 17.4	
	comp=Z,97nm,0.3s						
RANC	**El Ranchito**	**1.33**	**352**	*eP*	**Pn**	**02 19 49.7**	**0.0**
PACA	**Pacayal**	**1.37**	**351**	*eP*	**Pn**	**02 19 50.4**	**+0.2**
CNGN	**Cerro Negro**	**1.43**	**74**	*eP*	**Pn**	**02 19 51.5**	**+0.5**
CNGN				*eS*	Sn	02 20 17.1	+8.6
COEB	**Comit de Eme**	**1.44**	**343**	*eP*	**Pn**	**02 19 50.3**	**-1.0**
COPN	**Copaltepe**	**1.48**	**87**	*eP*	**Pn**	**02 19 50.5**	**-1.1**
FAGO	**Alcalda de S**	**1.58**	**360**	*eP*	**Pn**	**02 19 49.7**	**-3.3**
SCLA	**Alcaldia de Sa**	**1.70**	**339**	*eP*	**Pn**	**02 19 54.3**	**-0.4**
SCLA				*eS*	**Sn**	**02 20 15.7**	**+0.4**
SCLA				IAML		02 20 26.0	
	comp=Z,30nm,0.7s						
LFRS	**El Faro**	**1.77**	**328**	IAML		02 20 26.1	
	comp=Z,204nm,0.4s						
NUBE	**Las Nubes**	**2.42**	**318**	*eP*	**Pn**	**02 20 05.2**	**+0.4**
NUBE				*eS*	**Sn**	**02 20 33.5**	**+0.2**
NUBE				IAML		02 20 48.4	
	comp=Z,19nm,0.4s						

*IDC **09** 02:23:38.8±0.8, 55°.26S×27°.84W, h0km, mb4.3/7, mbtmp4.2/8, ML4.3/1, MS3.4/5, Error ellipse: s-maj=23.8km s-min=20.4km az=70.0*
*NEIC **09** 02:23:41.7±1.7, 55°.3S±0°.1×28°.1W±0°.2, h19km±5km, mb4.5/15, Error ellipse: s-maj=16.7km s-min=14.8km az=197.0*

ISC 09 02:23:42.1±0.7, **55°.26S**±0°.10×**28°.12W**±0°.08, **h26**km, **n39,** σ1**s55/33, mb4.4/10, MS3.3/5, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**4.94**	**278**		**Pn**	**02 24 54.6**	**0.0**
HOPE				Sn	**Sn**	**02 25 48.0**	**-2.8**
ORCD	**Orcadas**	**10.37**	**231**	Pn	**Pn**	**02 26 09.6**	**+0.6**
VNA1	**Neumayer--Stat**	**17.73**	**158**	P	**P**	**02 27 47.9**	**+0.5**
VNA3	**Neumayer Olymp**	**17.91**	**161**	P	**P**	**02 27 49.8**	**+0.3**
VNA2	**Neumayer--Watz**	**18.12**	**158**	P	**P**	**02 27 52.5**	**+0.7**
	baz=314,slow=14						
SNAA	**Sanae**	**19.68**	**156**	P	**P**	**02 28 08.7**	**-0.2**
SNAA	**Sanae**	**19.68**	**156**	P	**P**	**02 28 08.8**	**0.0**
	0.9nm,0.3s,baz=302,slow=11,SNR=69						
	3.3nm,0.5s						
SNAA	**Sanae**	**19.68**	**156**	P	**P**	**02 28 08.9**	**0.0**
PMSA	**Palmer Station**	**20.04**	**227**	LR	LR	02 34 15.4	
	comp=Z,49nm,18.9s,baz=72,slow=32						
TROLL	**Troll, Antarti**	**21.19**	**154**	P	**P**	**02 28 18.8**	**-6.5**
BELA	**Belgrano 2**	**22.83**	**184**	P	**P**	**02 28 42.1**	**-0.5**
QSPA	**South Pole Qui**	**34.99**	**180**	P	**P**	**02 30 32.8**	**+0.9**
	1.6nm,0.5s,baz=182,slow=1.7,SNR=9.7						
	1.6nm,0.5s						
QSPA	**South Pole Qui**	**34.99**	**180**	P	**P**	**02 30 32.9**	**+0.9**
QSPA				IAmb	IAmb	02 30 51.8	
	comp=Z,5.8nm,1.2s						
GO05	**Huala**	**36.16**	**286**	P	**P**	**02 30 41.7**	**-0.4**
GO05				IAmb	IAmb	02 30 56.3	
	comp=Z,12nm,1.1s						
MT09	**Talagante**	**36.56**	**288**	P	**P**	**02 30 45.5**	**-0.3**
MT01	**Popeta**	**36.64**	**288**	P	**P**	**02 30 46.5**	**+0.2**
MT02	**Curacav**	**37.04**	**288**	P	**P**	**02 30 49.7**	**+0.1**
SUR	**Sutherland**	**40.95**	**77**	P	**P**	**02 31 21.6**	**-1.0**
	comp=Z,8.2nm,1.0s,baz=105,slow=5.9,SNR=3.8						
	comp=Z,8.2nm,1.0s						
MAW	**Mawson**	**41.10**	**144**	LR	LR	02 47 08.4	
	comp=Z,44nm,19.3s,baz=345,slow=34						
LVC	**Limon Verde**	**44.45**	**300**	P	**P**	**02 31 52.9**	**+1.7**
	comp=Z,2.5nm,0.6s,baz=174,slow=5.0,SNR=1.9						
	comp=Z,2.5nm,0.6s						
LVC	**Limon Verde**	**44.45**	**300**	P	**P**	**02 31 53.2**	**+2.0**
LVC				IAmb	IAmb	02 32 26.4	
	comp=Z,5.1nm,0.9s						
PB01	**IPOC Station P**	**46.05**	**301**	P	**P**	**02 32 05.0**	**+1.4**
PB01				IAmb	IAmb	02 32 39.9	
	comp=Z,13nm,1.5s						
BOSA	**Boshof**	**46.30**	**77**	P	**P**	**02 32 04.8**	**-0.7**
	comp=Z,2.8nm,0.8s,baz=235,slow=7.3,SNR=7.1						
	comp=Z,2.8nm,0.8s						
BOSA	**Boshof**	**46.30**	**77**	P	**P**	**02 32 04.5**	**-1.1**
BOSA				IAmb	IAmb	02 32 05.8	
	comp=Z,3.1nm,0.8s						
GO01	**Chusmiza**	**47.08**	**302**	P	**P**	**02 32 13.2**	**+1.1**
GO01				IAmb	IAmb	02 32 18.3	
	comp=Z,4.2nm,0.7s						
VNDA	**Vanda**	**47.34**	**183**	P	**P**	**02 32 12.7**	**-0.2**
	comp=Z,1.6nm,0.8s,baz=194,slow=4.8,SNR=8.7						
	comp=Z,1.6nm,0.8s						
VNDA	**Vanda**	**47.34**	**183**	P	**P**	**02 32 13.5**	**+0.6**
H10N1	**ASCENSION HYDR**	**48.52**	**18**	T	T	03 25 35.2	
	baz=190						
H10N3	**ASCENSION HYDR**	**48.52**	**18**	T	T	03 26 01.3	
	baz=190						
H10N2	**ASCENSION HYDR**	**48.54**	**18**	T	T	03 25 45.7	
	baz=190						
LPAZ	**La Paz**	**49.49**	**306**	P	**P**	**02 32 32.2**	**+1.3**
	comp=Z,1.3nm,0.4s,baz=138,slow=4.1,SNR=11						
LPAZ				LR	LR	02 52 31.1	
	comp=Z,21nm,20.9s,baz=130,slow=35						
	comp=Z,1.3nm,0.4s						
LPAZ	**La Paz**	**49.49**	**306**	P	**P**	**02 32 32.5**	**+1.6**
LPAZ				IAmb	IAmb	02 32 46.7	
	comp=Z,2.7nm,0.8s						
DBIC	**Dimbokro**	**64.67**	**26**	LR	LR	02 57 45.5	
	comp=Z,36nm,19.2s,baz=144,slow=32						
TORD	**Torodi Ar. Bea**	**72.63**	**30**	P	**P**	**02 35 07.1**	**0.0**
	comp=Z,3.6nm,0.8s,baz=197,slow=6.6,SNR=10						
	comp=Z,3.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**72.63**	**30**	P	**P**	**02 35 07.4**	**+0.3**
TORD				IAmb	IAmb	02 35 08.3	
	comp=Z,4.7nm,1.1s						
KEST	**Kesra**	**96.14**	**30**	LR	LR	03 15 55.4	
	comp=Z,47nm,20.2s,baz=68,slow=33						
ILAR	**Eielson Array**	**149.19**	**313**	PKPbc	**PKiKP**	**02 43 27.8**	**-0.1**
	comp=Z,1.9nm,0.6s,baz=124,slow=2.2,SNR=27						
ILAR	**Eielson Array**	**149.19**	**313**		**PKiKP**	**02 43 27.5**	**-0.3**
SONM	**Songino Array**	**151.20**	**86**	PKPbc	**PKiKP**	**02 43 33.5**	**+0.8**
	comp=Z,1.0nm,0.6s,baz=251,slow=4.4,SNR=2.5						

*NEIC **09** 02:40:31.9±1.5, 9°.15S±0°.07×115°.85E±0°.07, h92km±7km, mb4.2/19, Error ellipse: s-maj=10.8km s-min=8.9km az=147.0*
*DJA **09** 02:40:31.1±0.2, 9°.S±3°×11°.6E±°, h108km±3km, M4.6/25, mb4.7/8, mB5.0/5, MLv4.7/25, Mw(mB)4.4/5*
*IDC **09** 02:40:33.0±2.2, 8°.72S×115°.82E, h131km±20km, mb3.9/8, mbtmp4.4/10, Error ellipse: s-maj=20.8km s-min=16.3km az=82.0*

ISC 09 02:40:31.7±0.7, **9°.05S**±0°.06×**115°.86E**±0°.04, **h109**km±6km, **n82,** σ1**s58**/102, **mb4.4**/13, **South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DNP	**Denpasar**	**0.74**	**300**	P	**Pn**	**02 40 52.4**	**+2.1**
DNP				S	**Sn**	**02 41 06.4**	**+2.1**
IGBI	**Denpasar**	**0.74**	**288**	P	**Pn**	**02 40 51.7**	**+1.4**
IGBI				S	**Sn**	**02 41 05.5**	**+1.2**
SRBI	**Singaraja**	**1.15**	**326**	P	**Pn**	**02 40 55.0**	**+0.5**
SRBI				S	**Sn**	**02 41 10.8**	**-0.9**
JAGI	**Jajag, Banyuwa**	**1.78**	**289**		**Pn**	**02 41 01.8**	**-0.1**
JAGI				Sn	**Sn**	**02 41 23.7**	**-1.3**
JAGI	**Jajag, Banyuwa**	**1.78**	**289**	P	**Pn**	**02 41 01.8**	**-0.1**
JAGI				S	**Sn**	**02 41 23.4**	**-1.6**
PLAI	**Plampang**	**1.91**	**83**	P	**Pn**	**02 41 05.7**	**+2.2**
PLAI				S	**Sn**	**02 41 30.3**	**+2.5**
ABJI	**Asem Bagus**	**2.03**	**308**	P	**Pn**	**02 41 05.2**	**+0.1**
ABJI				S	**Sn**	**02 41 29.3**	**-1.3**
GMJI	**Gumukmas**	**2.51**	**288**	P	**Pn**	**02 41 10.6**	**-0.6**
GMJI				S	**Sn**	**02 41 39.4**	**-2.1**
BLJI	**Banyuglugur**	**2.59**	**300**	P	**Pn**	**02 41 12.0**	**-0.2**
BLJI				S	**Sn**	**02 41 41.8**	**-1.6**
KMMI	**Kalianget**	**2.73**	**317**	P	**Pn**	**02 41 14.3**	**+0.2**
KMMI				S	**Sn**	**02 41 46.7**	**-0.1**
WBSI	**Waikabubak, Su**	**3.54**	**100**	P	**Pn**	**02 41 23.6**	**-1.3**
WBSI				S	**Sn**	**02 42 05.6**	**-0.4**
GRJI	**Gresik**	**3.96**	**302**	P	**Pn**	**02 41 30.6**	**+0.1**
PWJI	**Pagerwojo**	**4.14**	**284**	P	**Pn**	**02 41 33.6**	**+0.7**
PWJI				S	**Sn**	**02 42 19.0**	**-1.4**
BWJI	**Bawean**	**4.49**	**315**	P	**Pn**	**02 41 38.1**	**+0.4**
TBJI	**Tambak Boyo**	**4.55**	**299**	P	**Pn**	**02 41 37.8**	**-0.6**
PCJI	**Pacitan**	**4.71**	**280**	P	**Pn**	**02 41 39.5**	**-1.0**
PCJI				S	**Sn**	**02 42 31.6**	**-2.5**
BASI	**Baing, Sumba**	**4.80**	**104**	P	**Pn**	**02 41 41.2**	**-0.6**
BASI				S	**Sn**	**02 42 34.5**	**-1.8**
WOJI	**Wonogiri, Jawa**	**5.03**	**284**	P	**Pn**	**02 41 44.5**	**-0.4**
WOJI				S	**Sn**	**02 42 39.5**	**-2.4**
UGM	**Wanagama**	**5.40**	**282**	Pn	**Pn**	**02 41 50.0**	**+0.1**
UGM	**Wanagama**	**5.40**	**282**	P	**Pn**	**02 41 50.8**	**+0.9**
	1.9nm201nm,1.5s						
UGM				S	**Sn**	**02 42 45.9**	**-5.0**
	1.9nm201nm,1.5s						
BSSI	**Bau Bau, Buton**	**5.42**	**58**	P	**Pn**	**02 41 51.6**	**+1.3**
	0.4nm2μm133nm,0.7s						
KAPI	**Kappang**	**5.57**	**44**	P	**Pn**	**02 41 53.0**	**+0.8**
	26nm,0.4s,baz=214,slow=8.2,SNR=24						
KAPI				S	**Sn**	**02 42 53.3**	**-1.7**
	54nm,0.8s,baz=47,slow=22,SNR=14						
BKSI	**Bulukumba**	**5.62**	**49**	P	**Pn**	**02 41 54.3**	**+1.3**
	0.3nm854nm63nm,0.6s						
BKSI				S	**Sn**	**02 42 55.5**	**-0.8**
	0.3nm854nm63nm,0.6s						
EDFI	**Ende, Flores**	**5.77**	**87**	P	**Pn**	**02 41 54.3**	**-0.8**
	0.4nm2μm45nm,0.5s						
EDFI				S	**Sn**	**02 42 59.0**	**-1.1**
	0.4nm2μm45nm,0.5s						
BNSI	**Bone**	**6.26**	**43**	P	**Pn**	**02 42 04.9**	**+3.3**
	0.3nm76nm,0.8s						
MMRI	**Maumere**	**6.32**	**87**	Pn	**Pn**	**02 42 01.9**	**-0.5**
MMRI	**Maumere**	**6.32**	**87**	P	**Pn**	**02 42 02.1**	**-0.3**
	0.8nm3μm193nm,0.5s						
MMRI				S	**Sn**	**02 43 11.

baz=95
HHC Hu-ho-hao-te 49.81 356 *e*P P 02 49 20.6 +7.1
HHC pmax pmax
comp=Z,26nm,1.0s
HHC pmax pmax
comp=Z,210nm,6.0s
WMQ Urumqi 58.50 336 *e*P P 02 50 23.5 +6.9
MKAR Makanchi Array 63.13 335 P P 02 50 43.8 -4.1
comp=Z,0.3nm,0.4s,baz=160,slow=6.6,SNR=7.4
comp=Z,0.3nm,0.4s
KK31 Karatay Array 66.30 325 P **P 02 51 10.7 +2.3**
KKAR Karatay Array 66.30 325 P **P 02 51 10.6 +2.1**
MAW Mawson 68.15 199 P **P 02 51 21.1 +1.4**
comp=Z,4.3nm,0.6s,baz=72,slow=6.9,SNR=13
comp=Z,4.3nm,0.6s
MAW Mawson 68.15 199 P **P 02 51 21.0 +1.4**
MAW IAmb IAmb 02 51 21.8
comp=Z,1.1nm,0.8s
VNDA Vanda 72.43 171 P **P 02 51 46.2 +0.6**
comp=Z,1.1nm,0.4s,baz=99,slow=10,SNR=11
comp=Z,1.1nm,0.4s
VNDA Vanda 72.43 171 P **P 02 51 46.3 +0.6**
VNDA IAmb IAmb 02 51 48.2
comp=Z,4.3nm,1.2s
SBA Scott Base 73.46 170 P **P 02 51 54.4 +2.7**
QSPA South Pole Qui 80.95 180 P **P 02 52 35.2 +1.3**
comp=Z,4.7nm,1.1s,baz=87,slow=1.2,SNR=15
comp=Z,4.7nm,1.1s
QSPA South Pole Qui 80.95 180 P **P 02 52 34.9 +1.0**
QSPA IAmb IAmb 02 52 36.5
comp=Z,11nm,1.2s
BOSA Boshof 86.25 242 P **P 02 53 01.2 -0.6**
comp=Z,6.1nm,0.7s,baz=88,slow=5.3,SNR=18
comp=Z,6.1nm,0.7s
BOSA Boshof 86.25 242 P **P 02 53 02.1 +0.3**
SNAA Sanae 90.10 196 P **P 02 53 20.5 +1.4**
VNA2 Neumayer-Watz 91.75 196 P **P 02 53 27.9 +1.3**
baz=100,slow=3.0
TORD Torodi Ar. Bea 115.42 280 PKP **PKPdf 02 58 58.6 -3.1**
comp=Z,0.5nm,0.5s,baz=74,slow=1.5,SNR=2.7
DBIC Dimbokro 121.28 272 PKP **PKPdf 02 59 11.2 -1.7**
comp=Z,3.1nm,0.9s,baz=129,slow=6.8,SNR=1.1
DBIC Dimbokro 121.28 272 PKPdf 02 59 11.8 -1.2
CPUP Villa Florida 144.21 190 PKP **PKPab 02 59 54.4 +0.9**
comp=Z,2.4nm,0.5s,baz=162,slow=1.2,SNR=5.6
CPUP Villa Florida 144.21 190 PKPab 02 59 54.7 +1.2
BDFB Brasilia 150.72 213 PKPbc **PKPbc 03 00 11.2 -1.1**
comp=Z,2.8nm,0.7s,baz=50,slow=9.2,SNR=4.1
LPAZ La Paz 154.52 171 PKPab **PKPab 03 00 36.6 +0.7**
comp=Z,0.6nm,0.3s,baz=254,slow=8.4,SNR=8.9

*PRE **09** 02:53:10.6±1.4, 13°.91S×31°.41E, h10km, ML2.9*
ISC 09 02:52:58.4±3.0, 13°.6S±0°.2×31°.51E±0°.07, h10km, n10, σ0s80/17, Zambia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TETE	**Tete**	**3.25**	**142**	*e*P		**Pg**	**02 54 00.8**	**0.0**
TETE				*e*S		**Sb**	**02 54 35.0**	**-0.8**
TETE				IAML			02 54 48.3	
comp=Z,45nm,0.4s								
LSZ	**Lusaka**	**3.64**	**242**	*i* P		**Pb**	**02 54 02.9**	**0.0**
LSZ				*i* S		**Sg**	**02 54 54.5**	**-0.8**
LSZ	**Lusaka**	**3.64**	**242**	*i* P		**Pb**	**02 54 02.9**	**0.0**
LSZ				*i* S		**Sg**	**02 54 54.5**	**-0.8**
BLWY	**Bulawayo**	**7.10**	**203**	*e*P		Pn	02 54 51.9	+9.3
BLWY				*e*S		**Sn**	**02 56 05.2**	**+1.9**
BLWY				IAML			02 56 59.2	
comp=Z,11nm,0.3s								
BLWY	**Bulawayo**	**7.10**	**203**	*i* P		**Pn**	**02 54 43.0**	**+0.5**
BLWY				*i* S		**Sn**	**02 56 03.8**	**+0.4**
BLWY	**Bulawayo**	**7.10**	**203**	*i* P		**Pn**	**02 54 43.0**	**+0.5**
BLWY				*i* S		**Sn**	**02 56 03.8**	**+0.4**
MATP	**Matopo**	**7.40**	**202**	*e*P		Pn	02 54 54.5	+7.9
MATP				*e*S		**Sn**	**02 56 12.5**	**+1.7**
MATP				IAML			02 57 21.1	
comp=Z,71nm,0.5s								
MATP	**Matopo**	**7.40**	**202**	*i* P		**Pn**	**02 54 46.8**	**+0.2**
MATP				*i* S		**Sn**	**02 56 10.6**	**-0.3**
MATP	**Matopo**	**7.40**	**202**	*i* P		**Pn**	**02 54 46.8**	**+0.2**
MATP				*i* S		**Sn**	**02 56 10.6**	**-0.3**
MOPA	**Mopani**	**9.89**	**181**	*e*P		Pn	02 55 27.9	+7.1
MOPA				*e*S		**Sn**	**02 57 11.9**	**-0.1**
MOPA				IAML			02 58 22.9	
comp=Z,1.5nm,0.7s								

*IDC **09** 03:27:40.9±1.2, 37°.27S×176°.47E, h303km±12km, mb3.1/4, mbtmp3.8/6, Error ellipse: s-maj=23.1km s-min=15.6km az=76.0*
*WEL **09** 03:27:44.2±0.8, 38°S±6°×17°6E±°, h281km±6km, M3.6/57, MLv3.6/57, Error ellipse: s-maj=0.0km s-min=0.0km az=30.9*
ISC 09 03:27:40.1±0.7, 37°.66S±0°.06×176°.29E±0°.06, h315km±6km, n160, σ1s69/168, mb3.2/4, North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TGRZ	**Tauranga**	**0.07**	**197**	P		**Pn**	**03 28 20.7**	**+1.0**
OPRZ	**Ohinepanea**	**0.28**	**131**	P		**Pn**	**03 28 20.3**	**+0.4**
KARZ	**Kaharoa**	**0.36**	**186**	P		**Pn**	**03 28 20.9**	**+0.9**
OMRZ	**Omania**	**0.45**	**172**	P		**Pn**	**03 28 21.2**	**+1.0**
HLRZ	**Highlands Stat**	**0.59**	**175**	P		**Pn**	**03 28 22.5**	**+1.9**
TOZ	**Tahuroa Road**	**0.63**	**263**	P		**Pn**	**03 28 22.1**	**+1.4**
HSRZ	**Hossack Road**	**0.65**	**183**	P		**Pn**	**03 28 22.3**	**+1.5**
RRRZ	**Republican Roa**	**0.70**	**165**	P		**Pn**	**03 28 22.0**	**+1.1**
GRRZ	**Galatos Road**	**0.70**	**191**	P		**Pn**	**03 28 22.4**	**+1.5**
HRRZ	**Handcock Road**	**0.73**	**180**	P		**Pn**	**03 28 22.3**	**+1.3**
PRRZ	**Plateau Road**	**0.84**	**174**	P		**Pn**	**03 28 22.5**	**+1.1**
WPRZ	**Whakapapatarin**	**0.87**	**187**	P		**Pn**	**03 28 22.9**	**+1.5**
URZ	**Urewera**	**0.89**	**133**	P		**Pn**	**03 28 21.7**	**+0.2**
243nm,0.3s,baz=251,slow=3.4,SNR=1146								
URZ				S		**S**	**03 28 51.6**	**-2.9**
308nm,0.4s,baz=35,slow=23,SNR=21								
URZ	**Urewera**	**0.89**	**133**	P		**Pn**	**03 28 21.7**	**+0.2**
URZ				S		**S**	**03 28 51.9**	**-2.6**
TLZ	**Tolley Road**	**0.90**	**221**	P		**Pn**	**03 28 23.5**	**+1.8**
MUGZ	**Murupara**	**0.90**	**155**	P		**Pn**	**03 28 22.6**	**+1.0**
ALRZ	**Allen Road**	**0.90**	**177**	P		**Pn**	**03 28 23.3**	**+1.7**
KUTZ	**Kaahu Road**	**0.91**	**204**	P		**Pn**	**03 28 23.3**	**+1.7**
KUZ	**Kuaotunu**	**1.02**	**333**	P		**Pn**	**03 28 22.1**	**-0.1**
MKAZ	**Moumakai**	**1.05**	**301**	P		**Pn**	**03 28 23.3**	**+0.9**
MKAZ				S		**S**	**03 28 55.5**	**-0.5**
RTZ	**Ruatahuna**	**1.10**	**151**	P		**Pn**	**03 28 23.7**	**+1.2**
RTZ				S		**S**	**03 28 54.8**	**-1.6**
WATZ	**Wairara**	**1.14**	**202**	P		**Pn**	**03 28 24.4**	**+1.7**
RUGZ	**Raukumara Rang**	**1.14**	**106**	P		**Pn**	**03 28 22.4**	**-0.5**
RUGZ				S		**S**	**03 28 53.0**	**-3.9**
MRHZ	**Matea Rd**	**1.18**	**175**	P		**Pn**	**03 28 24.2**	**+1.3**
MRHZ				S		**S**	**03 28 57.3**	**+0.2**
HAZ	**Te Kaha**	**1.19**	**95**	P		**Pn**	**03 28 22.7**	**-0.2**
HAZ				S		**S**	**03 28 53.2**	**-3.8**
MWZ	**Matawai**	**1.19**	**125**	P		**Pn**	**03 28 23.7**	**+0.7**
RAGZ	**Rawiri**	**1.22**	**134**	P		**Pn**	**03 28 24.5**	**+1.3**
RAGZ				S		**S**	**03 28 56.3**	**-1.3**
HATZ	**Hinemaiaia**	**1.24**	**187**	P		**Pn**	**03 28 24.8**	**+1.6**
WIAZ	**Waiheke Island**	**1.26**	**313**	P		**Pn**	**03 28 23.9**	**+0.5**
MTHZ	**Maungataniwha**	**1.27**	**160**	P		**Pn**	**03 28 24.8**	**+1.4**
RATZ	**Rangitukua**	**1.27**	**198**	P		**Pn**	**03 28 25.0**	**+1.6**
ETAZ	**East Tamaki Re**	**1.29**	**303**	P		**Pn**	**03 28 23.5**	**0.0**
RITZ	**Rihia Road**	**1.36**	**194**	P		**Pn**	**03 28 25.9**	**+2.1**
SNGZ	**Shannon Statio**	**1.39**	**144**	P		**Pn**	**03 28 25.7**	**+1.6**
KATZ	**Kakaramea**	**1.40**	**199**	P		**Pn**	**03 28 26.0**	**+1.8**
RAHZ	**Arahi**	**1.40**	**154**	P		**Pn**	**03 28 26.0**	**+1.9**
HIZ	**Hauiti**	**1.42**	**233**	P		**Pn**	**03 28 26.3**	**+2.2**
TWGZ	**Tauwhareparae**	**1.44**	**112**	P		**Pn**	**03 28 25.6**	**+1.3**
PKGZ	**Pakihiroa**	**1.44**	**100**	P		**Pn**	**03 28 25.0**	**+0.7**
AWAZ	**Awhitu Peninsu**	**1.44**	**294**	P		**Pn**	**03 28 25.4**	**+1.1**
TKGZ	**Te Karaka**	**1.46**	**123**	P		**Pn**	**03 28 25.6**	**+1.2**
NMHZ	**Naumai**	**1.49**	**164**	P		**Pn**	**03 28 27.0**	**+2.3**
BKZ	**Black Stump Fm**	**1.51**	**174**	P		**Pn**	**03 28 26.4**	**+1.6**
NTVZ	**North Tongarir**	**1.52**	**198**	P		**Pn**	**03 28 26.6**	**+1.7**
TMVZ	**Te Maari**	**1.53**	**197**	P		**Pn**	**03 28 26.6**	**+1.7**
ETVZ	**East Tongariro**	**1.54**	**197**	P		**Pn**	**03 28 26.9**	**+1.8**
GRZ	**Great Barrier**	**1.56**	**334**	P		**Pn**	**03 28 25.0**	**-0.1**
WTVZ	**West Tongariro**	**1.56**	**200**	P		**Pn**	**03 28 27.0**	**+1.8**
TWVZ	**Taurewa**	**1.56**	**205**	P		**Pn**	**03 28 26.9**	**+1.8**
RIGZ	**Rimuhau**	**1.56**	**132**	P		**Pn**	**03 28 26.7**	**+1.6**
NNVZ	**North Ngauruho**	**1.56**	**200**	P		**Pn**	**03 28 27.3**	**+2.1**
ABAZ	**Army Bay**	**1.57**	**312**	P		**Pn**	**03 28 25.9**	**+0.8**
OTVZ	**Oturere**	**1.58**	**198**	P		**Pn**	**03 28 27.2**	**+1.8**
MXZ	**Matakaoa Point**	**1.60**	**87**	P		**Pn**	**03 28 25.9**	**+0.5**
NGZ	**Ngauruhoe**	**1.61**	**199**	P		**Pn**	**03 28 27.4**	**+1.9**
SNVZ	**South Ngauruho**	**1.61**	**198**	P		**Pn**	**03 28 27.0**	**+1.5**
PUZ	**Puketiti**	**1.61**	**105**	P		**Pn**	**03 28 26.1**	**+0.7**
TUVZ	**Tukino**	**1.68**	**197**	P		**Pn**	**03 28 27.9**	**+1.9**
WMGZ	**Waiomatatini S**	**1.69**	**96**	P		**Pn**	**03 28 26.6**	**+0.7**
ARHZ	**Aropaoanui**	**1.70**	**161**	P		**Pn**	**03 28 28.0**	**+2.1**
FWVZ	**Far West T-bar**	**1.70**	**200**	P		**Pn**	**03 28 28.0**	**+1.8**
WHVZ	**Whangaehu Hut**	**1.71**	**198**	P		**Pn**	**03 28 28.0**	**+1.7**
CNGZ	**Carnagh Statio**	**1.72**	**119**	P		**Pn**	**03 28 27.7**	**+1.6**
TRVZ	**Turoa**	**1.74**	**199**	P		**Pn**	**03 28 28.4**	**+2.0**
KNZ	**Kokohu**	**1.74**	**142**	P		**Pn**	**03 28 27.7**	**+1.5**
WNVZ	**Wahianoa**	**1.75**	**198**	P		**Pn**	**03 28 28.3**	**+1.8**
KWHZ	**Kaweka Forest**	**1.77**	**177**	P		**Pn**	**03 28 28.5**	**+2.0**
PRGZ	**Paritu Road**	**1.78**	**136**	P		**Pn**	**03 28 28.0**	**+1.4**
MOVZ	**Moawhango**	**1.80**	**193**	P		**Pn**	**03 28 28.2**	**+1.5**
MCHZ	**McNeill Hill**	**1.81**	**170**	P		**Pn**	**03 28 29.0**	**+2.3**
BHHZ	**Black Hill Sta**	**1.84**	**185**	P		**Pn**	**03 28 28.7**	**+1.8**
MTVZ	**Mangateitei**	**1.84**	**200**	P		**Pn**	**03 28 28.9**	**+1.9**
VRZ	**Vera Road**	**1.90**	**219**	P		**Pn**	**03 28 29.7**	**+2.4**
MHGZ	**Mahia Peninsul**	**1.96**	**140**	P		**Pn**	**03 28 29.7**	**+1.9**
KRHZ	**Kereru**	**1.98**	**178**	P		**Pn**	**03 28 29.8**	**+1.8**
CKHZ	**Cape Kidnapper**	**2.09**	**163**	P		**Pn**	**03 28 31.0**	**+2.2**
KAHZ	**Kahuranaki**	**2.18**	**168**	P		**Pn**	**03 28 31.8**	**+2.3**
DREZ	**Durham Road**	**2.24**	**226**	P		**Pn**	**03 28 32.8**	**+2.8**
PNHZ	**Pukenui**	**2.25**	**182**	P		**Pn**	**03 28 31.8**	**+1.7**
WCZ	**Waipu Caves**	**2.32**	**317**	P		**Pn**	**03 28 31.1**	**+0.4**
LREZ	**Lake Rotokare**	**2.33**	**219**	P		**Pn**	**03 28 33.3**	**+2.6**
WAZ	**Wanganui**	**2.33**	**206**	P		**Pn**	**03 28 32.9**	**+2.2**
NEZ	**North Egmont**	**2.36**	**226**	P		**Pn**	**03 28 34.0**	**+2.9**
PKE	**Pukeiti**	**2.37**	**229**	P		**Pn**	**03 28 34.2**	**+3.1**
PREZ	**Palmer Road**	**2.37**	**224**	P		**Pn**	**03 28 33.9**	**+2.8**
WPHZ	**Waipukurau**	**2.41**	**177**	P		**Pn**	**03 28 33.3**	**+2.0**
PXZ	**Pawanui**	**2.41**	**169**	P		**Pn**	**03 28 33.5**	**+2.1**
TSZ	**Takapari Road**	**2.41**	**186**	P		**Pn**	**03 28 33.2**	**+1.8**
KHEZ	**Kahui Hut**	**2.42**	**227**	P		**Pn**	**03 28 34.5**	**+2.9**
NBEZ	**Newall Road No**	**2.49**	**229**	P		**Pn**	**03 28 35.2**	**+3.1**
PRHZ	**Porangahau**	**2.62**	**174**	P		**Pn**	**03 28 35.4**	**+2.1**
DVHZ	**Dannevirke**	**2.64**	**182**	P		**Pn**	**03 28 35.0**	**+1.6**
OHWZ	**Ohakea**	**2.66**	**196**	P		**Pn**	**03 28 36.1**	**+2.6**
POWZ	**Post Office Ro**	**2.76**	**188**	P		**Pn**	**03 28 36.2**	**+1.7**
ANWZ	**Angora Road**	**2.80**	**177**	P		**Pn**	**03 28 37.2**	**+2.3**
PRWZ	**Pori Road**	**2.90**	**185**	P		**Pn**	**03 28 37.8**	**+2.0**
BFZ	**Birch Farm**	**3.02**	**181**	P		**Pn**	**03 28 38.9**	**+1.9**
MRZ	**Mangatainoka R**	**3.05**	**190**	P		**Pn**	**03 28 38.8**	**+1.6**
TIWZ	**Tintock**	**3.13**	**186**	P		**Pn**	**03 28 39.9**	**+1.9**
CPWZ	**Castlepoint**	**3.25**	**181**	P		**Pn**	**03 28 41.7**	**+2.6**
OUZ	**Omahuta**	**3.26**	**317**	P		**Pn**	**03 28 39.6**	**+0.1**
OGWZ	**Otaki Gorge**	**3.27**	**195**	P		**Pn**	**03 28 41.1**	**+1.7**
HOWZ	**Holdsworth Sta**	**3.29**	**190**	P		**Pn**	**03 28 41.0**	**+1.4**
KIW	**Kapiti Island**	**3.37**	**198**	P		**Pn**	**03 28 41.9**	**+1.5**
TMWZ	**Te Maipa**	**3.46**	**185**	P		**Pn**	**03 28 43.1**	**+1.8**
MTW	**Mount Morrison**	**3.55**	**190**	P		**Pn**	**03 28 43.6**	**+1.4**
CAW	**Cannon Point**	**3.57**	**195**	P		**Pn**	**03 28 44.0**	**+1.5**
DUWZ	**D'Urville Isla**	**3.64**	**210**	P		**Pn**	**03 28 44.4**	**+1.3**
TRWZ	**Traveller**	**3.76**	**187**	P		**Pn**	**03 28 46.2**	**+1.8**
PAWZ	**Paruwai Farm**	**3.78**	**190**	P		**Pn**	**03 28 46.1**	**+1.5**
WEL	**Wellington**	**3.81**	**198**	P		**Pn**	**03 28 46.4**	**+1.5**
MSWZ	**Moikau Station**	**3.84**	**192**	P		**Pn**	**03 28 46.6**	**+1.4**
TCW	**Tory Channel**	**3.88**	**203**	P		**Pn**	**03 28 47.1**	**+1.5**
BHW	**Baring Head**	**3.90**	**196**	P		**Pn**	**03 28 47.3**	**+1.4**
PLWZ	**Palliser**	**3.99**	**191**	P		**Pn**	**03 28 48.2**	**+1.3**
TUWZ	**Tuamarina**	**4.18**	**205**	P		**Pn**	**03 28 50.4**	**+1.5**
NNZ	**Nelson**	**4.21**	**211**	P		**Pn**	**03 28 50.2**	**+1.0**
QRZ	**Quartz Range**	**4.30**	**222**	P		**Pn**	**03 28 50.6**	**+0.3**
CMWZ	**Cape Campbell**	**4.39**	**201**	P		**Pn**	**03 28 53.6**	**+2.4**
BSWZ	**Blackbirch Sta**	**4.46**	**204**	P		**Pn**	**03 28 53.7**	**+1.7**
MRNZ	**Matariki Terra**	**4.63**	**215**	P		**Pn**	**03 28 54.1**	**+0.3**
THZ	**Tophouse**	**4.86**	**211**	P		**Pn**	**03 28 57.2**	**+0.6**
KHZ	**Kahutara**	**5.20**	**203**	P		**Pn**	**03 29 01.9**	**+1.7**
DSZ	**Denniston Nort**	**5.35**	**219**	P		**Pn**	**03 29 02.3**	**+0.1**
GVZ	**Greta Valley S**	**5.86**	**204**	P		**Pn**	**03 29 09.2**	**+1.3**
LTZ	**Lake Taylor**	**5.97**	**210**	P		**Pn**	**03 29 10.1**	**+0.8**
AMCZ	**Amberley**	**6.17**	**206**	P		**Pn**	**03 29 12.8**	**+1.2**
INZ	**Inchbonnie**	**6.27**	**215**	P		**Pn**	**03 29 14.1**	**+1.2**
OXZ	**Oxford**	**6.52**	**208**	P		**Pn**	**03 29 16.1**	**+0.2**
OKCZ	**Okains Bay**	**6.54**	**201**	P		**Pn**	**03 29 17.5**	**+1.4**
MQZ	**McQueen's Vall**	**6.64**	**203**	P		**Pn**	**03 29 17.8**	**+0.6**
AKCZ	**Akaroa Harbour**	**6.72**	**201**	P		**Pn**	**03 29 19.4**	**+1.2**
RACZ	**Rakaia**	**6.83**	**206**	P		**Pn**	**03 29 20.2**	**+0.7**
WVZ	**Waitaha Valley**	**6.87**	**216**	P		**Pn**	**03 29 20.5**	**+0.5**
WACZ	**Wakanui South**	**7.13**	**207**	P		**Pn**	**03 29 24.1**	**+1.0**
RPZ	**Rata Peaks**	**7.24**	**212**	P		**Pn**	**03 29 25.0**	**+0.6**
RPZ	33nm,0.3s,baz=38,slow=2.8,SNR=40			S		**S**	**03 30 43.4**	**-5.7**
	59nm,0.5s,baz=143,slow=22,SNR=18							
RPZ	**Rata Peaks**	**7.24**	**212**	P		**Pn**	**03 29 24.9**	**+0.4**
GCSZ	**Gaunt Creek Bo**	**7.25**	**217**	P		**Pn**	**03 29 25.5**	**+0.9**
ARCZ	**Arundel**	**7.38**	**210**	P		**Pn**	**03 29 26.8**	**+0.7**
FOZ	**Fox Glacier**	**7.66**	**218**	P		**Pn**	**03 29 30.1**	**+0.6**
TMZ	**Timaru**	**7.81**	**209**	P		**Pn**	**03 29 32.6**	**+1.2**
LBZ	**Lake Benmore**	**8.15**	**213**	P		**Pn**	**03 29 36.3**	**+0.8**
ODZ	**Otahua Downs**	**8.51**	**208**	P		**Pn**	**03 29 41.5**	**+1.7**
JCZ	**Jackson Bay**	**8.56**	**219**	P		**Pn**	**03 29 41.9**	**+1.3**
WKZ	**Wanaka**	**9.01**	**215**	P		**Pn**	**03 29 46.4**	**+0.4**
EAZ	**Earnscleugh**	**9.20**	**212**	P		**Pn**	**03 29 48.3**	**+0.1**
HHSZ	**Highcliff Hill**	**9.25**	**206**	P		**P**	**03 29 52.3**	**-0.3**
TUZ	**Tuapeka**	**9.66**	**209**	P		**P**	**03 29 56.6**	**-0.5**
MLZ	**Mavora Lakes**	**9.84**	**216**	P		**Pn**	**03 29 57.5**	**+1.5**
WHZ	**Wether Hill Ro**	**10.33**	**214**	P		**Pn**	**03 30 02.7**	**+0.9**
SYZ	**Scrubby Hill**	**10.34**	**209**	P		**P**	**03 30 02.2**	**+0.6**
APZ	**The Paps**	**11.03**	**211**	P		**P**	**03 30 12.8**	**+0.4**
DZM	**Mont Dzumac**	**17.71**	**329**	P		**P**	**03 31 25.4**	**-0.5**
	4.2nm,0.8s,baz=229,slow=19,SNR=1.0							
MSVF	**Nonsavu**	**19.91**	**5**	P		**P**	**03 31 46.9**	**-2.4**
	2.4nm,0.4s,baz=276,slow=23,SNR=6.9							
ASAR	**Alice Springs**	**38.71**	**279**	P		**P**	**03 34 36.9**	**+2.2**
	0.4nm,0.4s,baz=123,slow=8.4,SNR=9.3							
	0.4nm,0.4s							
WRA	**Warramunga Arr**	**40.40**	**284**	P		**P**	**03 34 50.6**	**+2.1**
	0.3nm,0.4s,baz=123,slow=7.0,SNR=14							
	0.3nm,0.4s							
QSPA	**South Pole Qui**	**52.47**	**180**	P		P	03 36 26.0	+5.0
	1.3nm,0.7s,baz=192,slow=3.3,SNR=17							
	1.3nm,0.7s							
NVAR	**Mina Array Bea**	**96.73**	**46**	P		**P**	**03 40 36.1**	**+1.0**
	0.1nm,0.4s,baz=201,slow=4.7,SNR=2.2							
	0.1nm,0.4s							
ARCES	**ARCESS Array B**	**144.40**	**343**	PKP		**PKPdf**	**03 46 37.2**	**-0.6**
	2.7nm,0.9s,baz=31,slow=4.2,SNR=1.5							
FINES	**FINESS Array B**	**149.83**	**332**	PKPbc		**PKiKP**	**03 46 52.4**	**-0.5**
	4.9nm,1.1s,baz=63,slow=3.7,SNR=2.0							

*NEIC **09** 03:31:06.3, 44°.73N×111°.76W, h11km, Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr=1.11; Mθθ1.00; Mφφ0.10; Mrθ-0.75; Mθφ-0.72; Mrφ0.37; Fault plane solution: M₀1.53000×10¹⁴ NP1:φs301.42000°, δ28.27000°, λ-86.28000°. NP2:φs117.20000°, δ61.80000°, λ-92.00000°. Principal axes: T 1.6518, Plg17.0000°, Azm209.0000°; N -0.2933, Plg2.0000°, Azm118.0000°; P -1.3585, Plg73.0000°, Azm22.0000°;*
*BUT **09** 03:31:06.3±2.1, 44°.73N±0°.02×111°.76W±0°.03, h10km±6km, ML3.7/29, ML3.4/62(NEIC), Mwr3.4/28(NEIC) Error ellipse: s-maj=3.6km s-min=2.8km az=63.0*
NEIC 09 03:31:07.5±2.2, 44°.76N±0°.04×111°.78W±0°.02, h8km±7km, Error ellipse: s-maj=5.7km s-min=1.6km az=192.0, Hebgen Lake region, Montana

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CMI	**Centennial Mou**	**0.26**	**154**			Pg	03 31 12.7	-0.1
QLMT	**Earthquake Lak**	**0.26**	**74**			Pg	03 31 12.8	0.0
YPDC	**Denny Creek**	**0.39**	**97**			Pg	03 31 15.2	0.0
YHB	**Horse Butte**	**0.42**	**91**			Pg	03 31 15.7	0.0
YHB						Sg	03 31 21.3	0.0
YHL	**Hebgen Lake**	**0.44**	**78**			Pg	03 31 16.1	0.0
YHL	**Hebgen Lake**	**0.44**	**78**	Sg		Sg	03 31 21.6	-0.2
YHL				IAML			03 31 22.6	
comp=E,10µm,0.6s								
YHL				IAML			03 31 22.6	
comp=N,7µm,0.4s								
GCR	**Grayling Creek**	**0.48**	**85**			Pg	03 31 17.2	+0.3
YPWB	**West Boundary**	**0.51**	**107**			Pg	03 31 17.7	+0.3
YMC	**Maple Creek**	**0.55**	**90**			Pg	03 31 18.4	+0.2
PZCI	**Patelzick Cree**	**0.57**	**223**			Pg	03 31 18.6	+0.1
YMR	**Madison River**	**0.59**	**99**			Pg	03 31 18.9	0.0
YMR	**Madison River**	**0.59**	**99**	Sg		Sg	03 31 26.6	-0.1
YMR				IAML			03 31 27.3	
comp=E,5µm,0.7s								
YMR				IAML			03 31 27.9	
comp=N,6µm,0.4s								
YPM	**Purple Mountai**	**0.66**	**99**			Pg	03 31 20.6	+0.4
YHH	**Holmes Hill**	**0.67**	**87**			Pg	03 31 20.3	0.0
MCID	**Moose Creek**	**0.71**	**143**			Pg	03 31 21.2	0.0
MCMT	**McKenzie Canyo**	**0.76**	**275**			Pg	03 31 22.5	+0.3
YNR	**Norris Junctio**	**0.79**	**93**			Pg	03 31 22.5	-0.2
YNR	**Norris Junctio**	**0.79**	**93**	IAML			03 31 33.1	
comp=N,2µm,0.4s								
YNR				IAML			03 31 33.5	
comp=E,3µm,0.3s								
YMV	**Mammoth Vault**	**0.81**	**74**			Pg	03 31 22.9	-0.1
DLMT	**Dillon**	**0.83**	**317**			Pb	03 31 24.1	-0.2
DLMT	**Dillon**	**0.83**	**317**	IAML			03 31 36.8	
comp=E,1µm,0.6s								
DLMT				IAML			03 31 37.5	
comp=E,971nm,0.4s								
BOZ	**Bozeman (W)**	**0.84**	**7**			Pg	03 31 23.9	+0.1
BOZ	**Bozeman (W)**	**0.84**	**7**	IAML			03 31 35.9	
comp=E,2µm,0.2s								
BOZ				IAML			03 31 41.0	
comp=E,1µm,0.2s								
YPP	**Pitchstone Pla**	**0.85**	**125**			Pg	03 31 23.6	-0.3
YPP				IAML			03 31 35.4	
comp=N,1µm,0.2s								
YPP				IAML			03 31 35.4	
comp=E,1µm,0.2s								
YLT	**Little Thumb C**	**0.91**	**110**			Pg	03 31 25.1	+0.1
ICI	**Italian Canyon**	**0.93**	**243**			Pg	03 31 25.1	-0.3
H17A	**Grant Village**	**0.94**	**113**	Pn		Pg	03 31 25.7	+0.2
LKWY	**Lake**	**1.01**	**101**			Pb	03 31 27.6	+0.2
YMS	**Mount Sheridan**	**1.03**	**118**			Pg	03 31 27.0	-0.2
FLWY	**Flagg Ranch**	**1.03**	**131**			Pg	03 31 26.7	-0.6
FLWY	**Flagg Ranch**	**1.03**	**131**	IAML			03 31 40.6	
comp=E,652nm,0.4s								
FLWY				IAML			03 31 40.8	
comp=E,1µm,0.5s								
EMI	**Eightmile Cany**	**1.07**	**230**			Pg	03 31 27.3	-0.7
YTP	**The Promontory**	**1.13**	**108**			Pg	03 31 28.7	-0.6
LRM	**Limekiln Ridge**	**1.16**	**336**	Pn		Pb	03 31 29.9	0.0
YPSB	**Soda Butte**	**1.17**	**83**			Pg	03 31 29.7	-0.2
BCYI	**Bear Canyon**	**1.24**	**249**			Pb	03 31 30.8	-0.5
FXWY	**Fox Creek**	**1.25**	**154**			Pb	03 31 30.2	-1.2
FXWY				IAML			03 31 51.3	
comp=E,746nm,0.6s								
MOOW	**Moose Ponds**	**1.26**	**143**			Pn	03 31 30.0	-1.6
TPAW	**Teton Pass**	**1.40**	**154**			Pn	03 31 33.0	-0.6
**TPA

PB09				IAML		03 39 53.3	
	41nm,0.5s						
LVC	**Limon Verde**	**2.65**	**233**	P	**Pn**	**03 38 50.7**	**+0.4**
	46nm,0.2s,baz=50,slow=9.5,SNR=292						
LVC				S	**S**	**03 39 27.7**	**-0.9**
	74nm,0.3s,baz=240,slow=20,SNR=35						
LVC	**Limon Verde**	**2.65**	**233**		**Pn**	**03 38 50.1**	**-0.2**
LVC	**Limon Verde**	**2.65**	**233**	P	**Pn**	**03 38 50.8**	**+0.5**
PB01	**IPOC Station P**	**2.69**	**269**		**Pn**	**03 38 50.1**	**-0.3**
PB01	**IPOC Station P**	**2.69**	**269**	P	**Pn**	**03 38 50.3**	**-0.1**
PB01				IAML		03 39 47.2	
	38nm,0.2s						
GO01	**Chusmiza**	**2.78**	**299**		**Pn**	**03 38 51.9**	**+0.1**
PB02	**IPOC Station P**	**3.08**	**264**		**Pn**	**03 38 54.2**	**-0.5**
PB02	**IPOC Station P**	**3.08**	**264**	P	**Pn**	**03 38 54.5**	**-0.2**
PB02				S	**S**	**03 39 32.6**	**-3.9**
PB02				IAML		03 39 35.1	
	801nm,0.3s						
PB02				IAML		03 39 55.6	
	114nm,0.4s						
PB11	**IPOC Station P**	**3.13**	**293**		**Pn**	**03 38 54.7**	**-0.6**
PB07	**IPOC Station P**	**3.13**	**257**		**Pn**	**03 38 54.9**	**-0.4**
PB07	**IPOC Station P**	**3.13**	**257**	P	**Pn**	**03 38 55.2**	**-0.1**
PB07				S	**S**	**03 39 33.0**	**-4.6**
PB07				IAML		03 39 35.1	
	642nm,0.3s						
PB07				IAML		03 40 04.9	
	74nm,0.3s						
PB06	**IPOC Station P**	**3.21**	**238**		**Pn**	**03 38 55.9**	**-0.3**
PATCX	**Punta Patache**	**3.32**	**273**		**Pn**	**03 38 56.6**	**-0.8**
TA01	**Diego Aracena**	**3.37**	**277**	Pn	**Pn**	**03 38 57.0**	**-0.9**
TA02	**Huaiquique**	**3.38**	**282**		**Pn**	**03 38 57.4**	**-0.6**
PB15	**IPOC Station P**	**3.42**	**230**		**Pn**	**03 38 58.9**	**+0.3**
PB15	**IPOC Station P**	**3.42**	**230**	P	**Pn**	**03 38 59.4**	**+0.8**
PB15				IAML		03 39 49.7	
	1µm,0.6s						
PB04	**IPOC Station P**	**3.53**	**248**		**Pn**	**03 38 59.1**	**-0.8**
PB04	**IPOC Station P**	**3.53**	**248**	P	**Pn**	**03 39 00.0**	**+0.1**
PB04				IAML		03 40 09.3	
	74nm,0.4s						
PB16	**IPOC Station P**	**3.83**	**314**	Pn	**Pn**	**03 39 04.3**	**+0.5**
PB16	**IPOC Station P**	**3.83**	**314**	P	**Pn**	**03 39 05.1**	**+1.3**
PB16				IAML		03 40 13.1	
	22nm,0.6s						
PB12	**IPOC Station P**	**4.25**	**304**	Pn	**Pn**	**03 39 06.6**	**-1.6**
BBOE	**La Paz, Chanca**	**4.40**	**343**	P	**Pn**	**03 39 12.3**	**+1.8**
BBOE				IAML		03 40 35.7	
	7.8nm,0.6s						
AP01	**Chacalluta**	**4.40**	**306**	Pn	**Pn**	**03 39 08.6**	**-1.4**
PB10	**IPOC Station P**	**4.41**	**235**	Pn	**Pn**	**03 39 09.7**	**-0.3**
PB10	**IPOC Station P**	**4.41**	**235**	P	**Pn**	**03 39 09.8**	**-0.2**
PB10				IAML		03 40 21.9	
	41nm,2.1s						
BBOD	**La Paz, Gloria**	**4.76**	**336**	P	**Pn**	**03 39 16.0**	**+1.0**
GO02	**Mina Guanaco**	**4.94**	**213**	Pn	**Pn**	**03 39 17.0**	**+0.3**
LPAZ	**La Paz**	**4.94**	**343**	P	**Pn**	**03 39 17.6**	**+0.4**
	4.6nm,0.5s,baz=130,slow=6.7,SNR=41						
LPAZ				S	**S**	**03 40 14.4**	**-2.7**
	6.6nm,0.7s,baz=321,slow=19,SNR=9.9						
LPAZ	**La Paz**	**4.94**	**343**	Pn	**Pn**	**03 39 16.4**	**-0.7**
LPAZ	**La Paz**	**4.94**	**343**	P	**Pn**	**03 39 18.0**	**+0.8**
PB14	**IPOC Station P**	**5.00**	**224**	Pn	**Pn**	**03 39 17.0**	**-0.5**
AC02	**Maricunga**	**6.21**	**201**	Pn	**Pn**	**03 39 33.0**	**+0.2**
AC01	**Pan de Azucar**	**6.26**	**215**	Pn	**Pn**	**03 39 31.9**	**-1.0**
AC06	**Mina Casimiro**	**7.16**	**208**	Pn	**Pn**	**03 39 42.6**	**-1.6**
SIV	**San Ignacio**	**7.27**	**47**	P	**Pn**	**03 39 44.5**	**-1.3**
	47nm,0.7s,baz=232,slow=11,SNR=198						
SIV				S	**S**	**03 41 02.1**	**-7.1**
	3.5nm,0.8s,baz=295,slow=16,SNR=1.6						
AC04	**Llanos de Chal**	**8.21**	**209**	Pn	**Pn**	**03 39 54.3**	**-3.2**
CPUP	**Villa Florida**	**10.00**	**124**	P	**Pn**	**03 40 20.2**	**-0.1**
	0.9nm,0.3s,baz=288,slow=9.6,SNR=1.7						
CPUP	**Villa Florida**	**10.00**	**124**		**Pn**	**03 40 20.4**	**0.0**
VILB	**Vilhena**	**10.11**	**38**	*e*P	**Pn**	**03 40 21.8**	**0.0**
TRCB	**Terra Rica**	**13.09**	**100**	*e*P	P	03 41 06.2	+5.3
PDRB	**Porto dos Gac**	**13.33**	**47**	*e*P	**P**	**03 41 04.5**	**+0.9**
PTGB	**Pitanga**	**13.90**	**108**	*e*P	**P**	**03 41 13.7**	**+3.8**
CLDB	**Colider**	**14.49**	**47**	*e*P	**Pn**	**03 41 16.0**	**-0.1**
CNLB	**Canela**	**16.46**	**123**	*e*P	**P**	**03 41 31.7**	**-6.3**
PET01	**Itanhaem-SP**	**18.14**	**104**	*e*P	**P**	**03 41 57.6**	**+1.4**
BDFB	**Brasilia**	**18.45**	**76**	P	**P**	**03 41 59.6**	**-0.2**
	7.5nm,0.5s,baz=248,slow=8.5,SNR=19						
BDFB	**Brasilia**	**18.45**	**76**	P	**P**	**03 41 58.2**	**-1.5**
BDFB				IAmb	IAmb	03 42 04.0	
	comp=Z,8.3nm,0.5s						
PARB	**Paraibuna**	**19.57**	**101**	*e*P	**P**	**03 42 11.4**	**-0.3**
PEXB	**Peixe**	**19.65**	**66**	*e*P	**P**	**03 42 13.2**	**+0.6**
PLCA	**Paso Flores**	**19.92**	**189**	P	**Pn**	**03 42 18.4**	**-1.7**
	comp=Z,2.0nm,0.8s,baz=33,slow=10,SNR=5.0						
	comp=Z,2.0nm,0.8s						
PLCA	**Paso Flores**	**19.92**	**189**	P	**P**	**03 42 16.3**	**+1.1**
SLP01	**Ubatuba-SP**	**20.00**	**101**	*e*P	**P**	**03 42 16.1**	**-0.2**
BOSC	**San Juan Bosco**	**21.21**	**325**	P	**P**	**03 42 30.0**	**+0.9**
JANB	**Januaria**	**22.01**	**78**	*e*P	**P**	**03 42 36.2**	**-0.3**
SDBA	**SAO DESIDERIO**	**22.47**	**71**	*e*P	**P**	**03 42 39.9**	**-0.8**
SJMB	**Sao Joao De Ma**	**24.02**	**89**	*e*P	**P**	**03 42 55.4**	**+0.7**
NAN01	**Guarapari, ES**	**25.17**	**87**	*e*P	**P**	**03 43 04.9**	**-0.2**
GUA01	**Guaratinga, BA**	**25.74**	**85**	*e*P	**P**	**03 43 10.5**	**+0.2**
GDU01	**Guandu, BA**	**26.78**	**79**	*e*P	**P**	**03 43 18.7**	**-0.9**
NBPN	**Ponto Novo - B**	**27.30**	**72**	*e*P	**P**	**03 43 22.8**	**-1.5**
NBLA	**Lagarto - SE**	**29.40**	**75**	*e*P	**P**	**03 43 41.7**	**-1.1**
NBMA	**Muriti-CE**	**30.15**	**67**	*e*P	**P**	**03 43 48.3**	**-1.2**
NBAN	**Anadia - AL**	**31.30**	**73**	*e*P	**P**	**03 43 58.8**	**-0.7**
RCBR	**Riachuelo**	**33.38**	**67**	P	**P**	**03 44 17.7**	**+0.1**
	comp=Z,7.2nm,0.8s,baz=301,slow=12,SNR=2.4						
	comp=Z,7.2nm,0.8s						
RCBR	**Riachuelo**	**33.38**	**67**	P	**P**	**03 44 18.1**	**+0.5**
RCBR				IAmb	IAmb	03 44 18.5	
	comp=Z,6.7nm,0.9s						
WVT	**Waverly**	**60.30**	**340**	P	**P**	**03 47 45.0**	**+0.2**
WVT				IAmb	IAmb	03 47 46.0	
	comp=Z,4.4nm,0.8s						
TXAR	**Lajitas Array**	**61.51**	**323**	P	**P**	**03 47 54.6**	**+1.4**
	comp=Z,0.6nm,0.5s,baz=147,slow=7.4,SNR=9.2						
	comp=Z,0.6nm,0.5s						
TXAR	**Lajitas Array**	**61.51**	**323**	P	**P**	**03 47 53.3**	**+0.1**
CCM	**Cathedral Cave**	**63.18**	**338**	P	**P**	**03 48 04.3**	**+0.4**
CCM				IAmb	IAmb	03 48 04.9	
	comp=Z,4.0nm,0.7s						
S39A	**Bolivar**	**63.60**	**337**	P	**P**	**03 48 07.7**	**+1.0**
S39A				IAmb	IAmb	03 48 08.3	
	comp=Z,5.7nm,0.6s						
MSTX	**Muleshoe**	**64.64**	**327**	P	**P**	**03 48 13.7**	**0.0**
MSTX				IAmb	IAmb	03 48 16.2	
	comp=Z,5.1nm,0.8s						
DBIC	**Dimbokro**	**66.55**	**73**	P	**P**	**03 48 26.4**	**+0.2**
	comp=Z,4.6nm,0.8s,baz=235,slow=7.1,SNR=3.9						
	comp=Z,4.6nm,0.8s						
SDCO	**Great Sand Dun**	**68.97**	**328**	P	**P**	**03 48 40.7**	**-0.4**
PDAR	**Pinedale Array**	**74.81**	**329**	P	**P**	**03 49 17.0**	**+1.5**
	comp=Z,0.2nm,0.4s,baz=102,slow=7.5,SNR=2.5						
TORD	**Torodi Ar. Bea**	**75.19**	**69**	P	**P**	**03 49 18.1**	**+0.1**
	comp=Z,3.9nm,0.5s,baz=255,slow=5.3,SNR=22						
	comp=Z,3.9nm,0.5s						
ULM	**Lac du Bonnet**	**75.55**	**341**	P	**P**	**03 49 19.6**	**+0.4**
	comp=Z,2.4nm,0.6s,baz=159,slow=3.0,SNR=6.3						
	comp=Z,2.4nm,0.6s						
ULM	**Lac du Bonnet**	**75.55**	**341**	P	**P**	**03 49 19.8**	**+0.6**
NVAR	**Mina Array Bea**	**76.47**	**321**	P	**P**	**03 49 27.2**	**+2.2**
	comp=Z,0.2nm,0.4s,baz=144,slow=5.3,SNR=4.9						
	comp=Z,0.2nm,0.4s						
BOSA	**Boshof**	**81.76**	**117**	P	**P**	**03 49 55.2**	**+1.3**
	comp=Z,1.8nm,1.1s,baz=335,slow=20,SNR=1.4						
	comp=Z,1.8nm,1.1s						
YKA	**Yellowknife Ar**	**91.48**	**340**	P	**P**	**03 50 41.0**	**+1.0**
	comp=Z,1.6nm,0.6s,baz=129,slow=4.7,SNR=10						
	comp=Z,1.6nm,0.6s						
YKA	**Yellowknife Ar**	**91.48**	**340**	P	**P**	**03 50 41.2**	**+1.2**
WRA	**Warramunga Arr**	**134.40**	**208**	PKP	**PKPdf**	**03 56 51.9**	**+0.3**
	comp=Z,0.5nm,0.9s,baz=160,slow=1.7,SNR=5.7						
MKAR	**Makanchi Array**	**143.99**	**37**	PKP	**PKPdf**	**03 57 08.1**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=324,slow=2.0,SNR=2.7						

IDC ***09*** *03:38:22.8±1.1, 11.98N×60.84W, h0km, mb4.2/6, mbtmp4.2/9, ML3.7/3, MS2.9/4, Error ellipse: s-maj=28.0km s-min=20.4km az=96.0*

NEIC ***09*** *03:38:31.5±2.1, 11.82N±0.05×60.96W±0.05, h67km±8km, mb4.1/5, Md4.1(TRN), Error ellipse: s-maj=7.8km s-min=5.9km az=46.0*

TRN ***09*** *03:38:31.5, 11.87N×61.02W, h25km, MD4.0*

ISC 09 03:38:31.3±0.8, 11°85N±0.03×61°04W±0.04, h62km±8km, n100, σ1°49/117, mb4.1/6, 1D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GRGR	**Grenville**	**0.66**	**295**			**Pn**	**Pn**	**03 38 44.9**	**-0.3**
GRGR						Sn	**Sn**	**03 38 56.4**	**+0.9**
GRGR	**Grenville**	**0.66**	**295**				*i*P	**Pn**	**03 38 45.0**	**-0.3**
GRGR						*e*S	**Sn**	**03 38 54.6**	**-1.0**
TPR	**Prospect**	**0.70**	**159**		*e*P	**Pn**	**Pn**	**03 38 46.3**	**+0.5**
GRFF	**Grenada Fort F**	**0.71**	**287**		*e*P	**Pn**	**Pn**	**03 38 45.6**	**-0.2**
GRFF						*e*S	**Sn**	**03 38 56.0**	**-0.5**
TOSP	**Speyside**	**0.74**	**138**		Pn	**Pn**	**Pn**	**03 38 45.4**	**-0.7**
TOSP						Sn	**Sn**	**03 38 55.7**	**-1.3**
TOSP	**Speyside**	**0.74**	**138**		*e*P	**Pn**	**Pn**	**03 38 45.6**	**-0.5**
TOSP						*e*S	**Sn**	**03 38 55.9**	**-1.1**
GCMP	**Grenada, Carri**	**0.74**	**329**		*i*P	**Pn**	**Pn**	**03 38 45.9**	**-0.3**
GCMP						*e*S	**Sn**	**03 38 56.6**	**-0.5**
TRN	**Trinidad (W)**	**1.24**	**197**		*e*P	**Pn**	**Pn**	**03 38 54.1**	**+1.5**
TRN						*e*S	**Sn**	**03 39 10.8**	**+2.2**
SVOC	**Richmond Hill,**	**1.31**	**352**		*e*P	**Pn**	**Pn**	**03 38 54.5**	**+1.0**
SVOC						*e*S	**Sn**	**03 39 11.4**	**+1.2**
TBH	**Brigand Hill**	**1.35**	**181**		*e*P	**Pn**	**Pn**	**03 38 54.8**	**+0.7**
SVV	**Soufriere Volc**	**1.47**	**353**		*e*P	**Pn**	**Pn**	**03 38 57.5**	**+1.8**
SVV						*e*S	**Sn**	**03 39 15.7**	**+1.7**
TPP	**Pointe-a-Pierr**	**1.57**	**195**		*e*P	**Pn**	**Pn**	**03 38 58.8**	**+1.7**
MCLT	**Moule a Chique**	**1.85**	**3**	Pn		**Pn**	**Pn**	**03 39 01.4**	**+0.6**
MCLT	**Moule a Chique**	**1.85**	**3**		*e*P	**Pn**	**Pn**	**03 39 01.4**	**+0.6**
MCLT						*e*S	**Sn**	**03 39 23.0**	**-0.3**
BCHC	**Barbados, Cave**	**1.88**	**47**		*e*P	**Pn**	**Pn**	**03 39 02.7**	**+1.5**
BBGH	**Gun Hill**	**1.94**	**48**	Pn		**Pn**	**Pn**	**03 39 01.5**	**-0.4**
BBGH						Sn	**Sn**	**03 39 22.5**	**-2.8**
BBGH	**Gun Hill**	**1.94**	**48**		*e*P	**Pn**	**Pn**	**03 39 03.6**	**+1.6**
SLB	**Belfond**	**1.97**	**360**		*e*P	**Pn**	**Pn**	**03 39 04.1**	**+1.6**
BBSP	**Saint Philip**	**1.99**	**51**		*e*P	**Pn**	**Pn**	**03 39 04.5**	**+1.8**
SLAC	**Saint Lucia, A**	**2.04**	**4**		*e*P	**Pn**	**Pn**	**03 39 03.6**	**+0.2**
SLAC						*e*S	**Sn**	**03 39 27.4**	**-0.4**
SLCP	**Castries, St.**	**2.15**	**1**		*e*P	**Pn**	**Pn**	**03 39 05.5**	**+0.7**
SLCP						*e*S	**Sn**	**03 39 30.3**	**-0.2**
SLW	**Petit Monier**	**2.16**	**3**		*e*P	**Pn**	**Pn**	**03 39 05.3**	**+0.3**
SLW						*e*S	**Sn**	**03 39 31.6**	**+0.8**
SLBI	**Saint Lucia, B**	**2.17**	**2**		*e*P	**Pn**	**Pn**	**03 39 05.4**	**+0.4**
SLBI						*e*S	**Sn**	**03 39 31.0**	**+0.3**
H05S1	**Guadeloupe/Mar**	**2.57**	**4**	Pn		**Pn**	**Pn**	**03 39 10.2**	**-0.4**
H05S1						Sn	**Sn**	**03 39 39.0**	**-1.6**
MPOM	**Morne Pois Mar**	**2.59**	**4**	Pn		**Pn**	**Pn**	**03 39 11.2**	**+0.4**
MPOM						Sn	**Sn**	**03 39 40.7**	**-0.4**
MPOM	**Morne Pois Mar**	**2.59**	**4**		*e*P	**Pn**	**Pn**	**03 39 11.1**	**+0.3**
MPOM						*e*S	**Sn**	**03 39 42.3**	**+1.2**
BIM	**Bigot**	**2.66**	**359**			**Pn**	**Pn**	**03 39 13.0**	**+1.2**
BIM	**Bigot**	**2.66**	**359**		*e*P	**Pn**	**Pn**	**03 39 12.7**	**+0.9**
BIM						*e*S	**Sn**	**03 39 43.7**	**+0.9**
ZAM	**Aeronautique**	**2.71**	**0**		*e*P	**Pn**	**Pn**	**03 39 14.3**	**+1.9**
LPMF	**Morne Lapointe**	**2.71**	**2**		*e*P	**Pn**	**Pn**	**03 39 13.7**	**+1.2**
FDF	**Fort de France**	**2.87**	**358**			**Pn**	**Pn**	**03 39 15.9**	**+1.2**
FDF	**Fort de France**	**2.87**	**358**		*e*P	**Pn**	**Pn**	**03 39 15.8**	**+1.0**
FDF						*e*S	**Sn**	**03 39 47.5**	**-0.6**
ILAM	**Ilet Lapin Mar**	**2.92**	**3**	Pn		**Pn**	**Pn**	**03 39 16.2**	**+0.9**
ILAM	**Ilet Lapin Mar**	**2.92**	**3**		*e*P	**Pn**	**Pn**	**03 39 16.0**	**+0.7**
ILAM						*e*S	**Sn**	**03 39 49.5**	**+0.4**
PML	**Morne Lenard**	**2.92**	**357**		*e*P	**Pn**	**Pn**	**03 39 16.6**	**+1.2**
GBMF	**Grand Be**	**2.94**	**358**		*e*P	**Pn**	**Pn**	**03 39 17.4**	**+1.8**
CXM	**Morne La Croix**	**2.95**	**358**		*e*P	**Pn**	**Pn**	**03 39 16.8**	**+0.9**
BAMF	**Morne Balai**	**2.95**	**358**		*e*P	**Pn**	**Pn**	**03 39 17.2**	**+1.3**
PCM	**Pelee Case Pet**	**2.96**	**357**		*e*P	**Pn**	**Pn**	**03 39 17.0**	**+1.2**
SVN	**Savane Anatole**	**2.98**	**358**			**Pn**	**Pn**	**03 39 17.2**	**+1.0**
SVN	**Savane Anatole**	**2.98**	**358**		*e*P	**Pn**	**Pn**	**03 39 17.4**	**+1.2**
MDN	**Morne-Daniel**	**3.47**	**354**		*e*P	**Pn**	**Pn**	**03 39 24.4**	**+1.6**
MDN						*e*S	**Sn**	**03 40 02.6**	**-0.1**
DSLB	**Salisbury**	**3.59**	**354**		*e*P	**Pn**	**Pn**	**03 39 25.5**	**+2.0**
DSLB						*e*S	**Sn**	**03 40 05.0**	**-0.7**
MDVC	**Dominica, Viel**	**3.76**	**355**		*e*P	**Pn**	**Pn**	**03 39 27.8**	**+0.9**
MDCT	**Cottage Hill,**	**3.77**	**354**		*e*P	**Pn**	**Pn**	**03 39 29.5**	**+2.5**
TDBA	**Terre de Bas,**	**4.02**	**352**		*e*P	**Pn**	**Pn**	**03 39 32.0**	**+1.6**
TDBA						*e*S	**Sn**	**03 40 15.7**	**-0.5**
TBG	**Guadaloupe-3**	**4.03**	**352**		*e*P	**Pn**	**Pn**	**03 39 31.7**	**+1.3**
TBG	**Guadaloupe-3**	**4.03**	**352**		*e*S	**Sn**	**Sn**	**03 40 17.7**	**+1.4**
MAGL	**Barre de l'ile**	**4.09**	**357**		*e*P	**Pn**	**Pn**	**03 39 32.2**	**+0.9**
MAGL	**Barre de l'ile**	**4.09**	**357**		*e*S	**Sn**	**Sn**	**03 40 18.0**	**+0.2**
CBE	**Ff, Capester**	**4.23**	**353**			**Pn**	**Pn**	**03 39 35.4**	**+2.0**
CBE	**Ff, Capester**	**4.23**	**353**		*e*P	**Pn**	**Pn**	**03 39 35.5**	**+2.2**
CBE	**Ff, Capester**	**4.23**	**353**		*e*S	**Sn**	**Sn**	**03 40 21.2**	**-0.3**
H05N1	**Guadeloupe/Mar**	**4.44**	**360**	Pn		**Pn**	**Pn**	**03 39 35.7**	**-0.5**
H05N1						Sn	**Sn**	**03 40 23.6**	**-3.0**
ABD	**La Joyeuse, An**	**4.62**	**355**		*e*P	**Pn**	**Pn**	**03 39 40.7**	**+2.1**
ABD	**La Joyeuse, An**	**4.62**	**355**		*e*S	**Sn**	**Sn**	**03 40 30.5**	**-0.5**
MLYT	**Lee's Yard**	**4.97**	**347**		*e*P	**Pn**	**Pn**	**03 39 46.0**	**+2.6**
MLYT	**Lee's Yard**	**4.97**	**347**		*e*S	**Sn**	**Sn**	**03 40 34.6**	**-0.3**
MBFL	**Flemmings, Mon**	**5.00**	**347**		*e*P	**Pn**	**Pn**	**03 39 45.9**	**+2.1**
MBFL	**Flemmings, Mon**	**5.00**	**347**		*e*S	**Sn**	**Sn**	**03 40 40.1**	**-0.3**
ANBD	**Bethesda, Anti**	**5.22**	**352**		*e*P	**Pn**	**Pn**	**03 39 49.6**	**+2.8**
ANBD	**Bethesda, Anti**	**5.22**	**352**		*e*S	**Sn**	**Sn**	**03 40 45.9**	**+0.3**
BPA	**Boggy Peak**	**5.23**	**351**		*e*P	**Pn**	**Pn**	**03 39 48.3**	**+1.3**
BPA	**Boggy Peak**	**5.23**	**351**		*e*S	**Sn**	**Sn**	**03 40 46.2**	**+0.2**
BIRV	**Birongo**	**5.31**	**256**	Pn		**Pn**	**Pn**	**03 39 49.1**	**+1.0**
SKI	**Saint Kitts**	**5.70**	**343**		*e*P	**Pn**	**Pn**	**03 39 56.0**	**+2.7**
SKI	**Saint Kitts**	**5.70**	**343**		*e*S	**Sn**	**Sn**	**03 40 56.6**	**-0.8**
ANWB	**Willy Bob**	**5.83**	**353**		*e*P	**Pn**	**Pn**	**03 39 57.8**	**+2.6**
CDVI	**St. Croix**	**6.89**	**329**			**Pn**	**Pn**	**03 40 10.9**	**+1.3**
BAUV	**El Baul**	**7.47**	**248**	Pn		**Pn**	**Pn**	**03 40 17.1**	**-0.6**
STVI	**Saint Thomas**	**7.49**	**330**	Pn		**Pn**	**Pn**	**03 40 18.9**	**+1.0**
MTP	**Monte Pirata**	**7.59**	**325**	Pn		**Pn**	**Pn**	**03 40 20.2**	**+0.9**
SJG	**San Juan**	**7.95**	**322**	Pn		**Pn**	**Pn**	**03 40 21.6**	**-2.6**
	2.5nm,0.3s,baz=316,slow=23,SNR=7.7								
SJG						Sn	**Sn**	**03 41 45.7**	**-6.9**
	1.3nm,0.3s,baz=266,slow=21,SNR=2.0								
SJG						LR	LR	03 43 42.6	
	comp=Z,13nm,19.3s,baz=88,slow=40								
	6.1nm,0.3s								
SJG	**San Juan**	**7.95**	**322**	Pn		**Pn**	**Pn**	**03 40 24.3**	**+0.1**
GCPR	**Guaynabo City**	**8.06**	**323**			**Pn**	**Pn**	**03 40 26.6**	**+0.8**
AOPR	**Arecibo Observ**	**8.50**	**320**		*e*P	**Pn**	**Pn**	**03 40 33.1**	**+1.4**
SDV	**Santo Domingo**	**9.88**	**254**	Pn		**Pn**	**Pn**	**03 40 49.2**	**-1.6**
	0.7nm,0.3s,baz=81,slow=10,SNR=6.9								
SDV						Sn	**Sn**	**03 42 39.0**	**-1.4**
	1.4nm,0.3s,baz=34,slow=18,SNR=5.1								
SDV						LR	LR	03 45 50.2	
	comp=Z,60nm,18.3s,baz=87,slow=44								
	4.4nm,0.6s								
SDV	**Santo Domingo**	**9.88**	**254**	Pn		**Pn**	**Pn**	**03 40 52.0**	**+1.1**
DR12	**Loma Pena Alta**	**10.60**	**312**			**Pn**	**Pn**	**03 41 01.9**	**+1.4**
MDP	**Montagnes des**	**10.67**	**128**	Pn		**Pn**	Pn	03 40 56.3	-5.2
	2.7nm,0.3s,baz=318,slow=16,SNR=52								
MDP						Sn	Sn	03 42 45.7	-14
	4.1nm,0.3s,baz=307,slow=10,SNR=13								
	11nm,0.5s								
BANI	**BANI**	**11.10**	**307**	Pn		**Pn**	**Pn**	**03 41 09.9**	**+2.5**
SDDR	**Presa de Saban**	**12.16**	**307**			**Pn**	**Pn**	**03 41 24.1**	**+2.2**
OCAC	**Ocana**	**12.61**	**255**			**Pn**	**Pn**	**03 41 30.5**	**+2.4**
ROSC	**El Rosal**	**14.86**	**243**	LR		LR	LR	03 49 14.4	
	comp=Z,109nm,21.5s,baz=28,slow=43								
SAML	**Samuel**	**20.77**	**186**	P		**P**	**P**	**03 43 06.9**	**-0.4**
ATAH	**Atahualpa**	**25.56**	**223**	P		**P**	**P**	**03 43 56.6**	**+1.5**
	7.9nm,0.7s,baz=40,slow=6.6,SNR=5.4								
	7.9nm,0.7s								
NNA	**Nana**	**28.40**	**214**	P		**P**	**P**	**03 44 21.8**	**+1.7**
	6.5nm,0.6s,baz=345,slow=8.2,SNR=3.9								
	6.5nm,0.6s								
LPAZ	**La Paz**	**28.82**	**194**	P		**P**	**P**	**03 44 24.5**	**+0.1**
	0.4nm,0.4s,baz=45,slow=17,SNR=1.5								
	0.4nm,0.4s								
LPAZ	**La Paz**	**28.82**	**194**	P		P	P	03 44 23.1	-1.4
LPAZ				IAmb		IAmb	IAmb	03 44 56.4	
	comp=Z,4.8nm,1.4s								
LVC	**Limon Verde**	**35.10**	**193**	LR		LR	LR	04 01 13.6	
	comp=Z,40nm,19.0s,baz=286,slow=39								
Q24A	**Divide**	**47.49**	**313**	P		P	P	03 46 59.1	-1.5
ULM	**Lac du Bonnet**	**47.76**	**330**	P		**P**	**P**	**03 47 00.8**	**-1.2**
	comp=Z,2.8nm,0.4s,baz=132,slow=8.3,SNR=6.8								
	comp=Z,2.8nm,0.4s								
H10N3	**ASCENSION HYDR**	**50.24**	**111**	T		T	T	04 42 21.5	
	baz=293,slow=75,SNR=45								
H10N2	**ASCENSION HYDR**	**50.25**	**111**	T		T	T	04 42 14.2	
	baz=293,slow=75,SNR=43								
H10N1	**ASCENSION HYDR**	**50.26**	**111**	T		T	T	04 42 22.4	
	baz=293,slow=75,SNR=40								
H10S3	**ASCENSION HYDR**	**50.52**	**112**	T		T	T	04 42 37.4	
	baz=295,slow=75,SNR=25								
H10S2	**ASCENSION HYDR**	**50.54**	**112**	T		T	T	04 42 38.8	
	baz=285,slow=75,SNR=9.2								
ESDC	**Sonseca Array**	**57.29**	**50**	P		**P**	**P**	**03 48 11.4**	**-1.5**
	comp=Z,0.4nm,0.6s,baz=254,slow=7.7,SNR=2.5								
	comp=Z,0.4nm,0.6s								
ESDC	**Sonseca Array**	**57.29**	**50**	P		**P**	**P**	**03 48 11.3**	**-1.5**
ESDC				IAmb		IAmb	IAmb	03 48 46.6	
	comp=Z,2.5nm,1.4s								
YKA	**Yellowknife Ar**	**63.22**	**335**	P		**P**	**P**	**03 48 52.1**	**-0.7**
	comp=Z,0.8nm,0.6s,baz=108,slow=7.3,SNR=5.5								
	comp=Z,0.8nm,0.6s								

MAN 09 03:57:13.0, 6.81N×125.25E, h14km, mb4.4, ML3.2, MS3.0, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.83**	**147**				*e*P	Pb	03 57 28.6	+0.3
DDMP						*e*S		03 58 42.0	
BIPH	**Bislig**	**1.75**	**39**				*i*P	Pn	03 57 41.3	+2.9
BIPH						*i*S		03 57 41.3	
GLSP	**General Luna,**	**3.08**	**16**				*e*P	Pn	03 58 01.8	+0.2

KRSC 09 04:08:13.3±1.7, 53.78N×168.22E, h7km±42km, ML3.9, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**1.94**	**318**		*e*P	Pn		04 08 47.7	+0.9
BKI						*

8.9nm2µm15µm1µm,0.7s
GRJI S Sn 04 15 34.5 +0.4
8.9nm2µm15µm1µm,0.7s
PCJI Pacitan 5.81 300 P Pn 04 14 33.4 0.0
27nm97µm41µm3µm,1.0s
PCJI S Sn 04 15 33.5 -5.3
27nm97µm41µm3µm,1.0s
EDFI Ende, Flores 5.83 67 P Pn 04 14 35.4 +1.6
12nm25µm20µm808nm,0.5s
EDFI S Sn 04 15 39.0 -0.5
12nm25µm20µm808nm,0.5s
TBJI Tambak Boyo 6.12 314 P Pn 04 14 39.4 +1.7
10nm105µm18µm1µm,0.9s
TBJI S Sn 04 15 45.8 -0.7
10nm105µm18µm1µm,0.9s
WOJI Wonogiri, Jawa 6.21 301 P Pn 04 14 40.6 +1.7
29nm66µm26µm1µm,0.6s
WOJI S Sn 04 15 43.8 -4.9
29nm66µm26µm1µm,0.6s
BWJI Bawean 6.34 325 P Pn 04 14 42.8 +2.0
16nm89µm26µm2µm,0.8s
MMRI Maumere 6.37 68 Pn Pn 04 14 41.7 +0.5
MMRI Maumere 6.37 68 P Pn 04 14 42.5 +1.3
31nm34µm38µm2µm,0.5s
MMRI S Sn 04 15 50.2 -2.5
31nm34µm38µm2µm,0.5s
MMRI Maumere 6.37 68 P Pn 04 14 43.4 +2.2
MMRI Maumere 6.37 68 ⇑P Pn 04 14 40.6 -0.5
BSSI Bau Bau, Buton 6.47 40 P Pn 04 14 45.8 +3.3
18nm36µm31µm2µm,0.5s
UGM Wanagama 6.51 299 Pn 04 14 43.6 +0.5
UGM Wanagama 6.51 299 P Pn 04 14 45.7 +2.6
38nm97µm47µm4µm,0.9s
UGM S Sn 04 15 52.1 -4.1
38nm97µm47µm4µm,0.9s
UGM Wanagama 6.51 299 P Pn 04 14 43.9 +0.8
YOGI Yogyakarta 6.75 299 P Pn 04 14 46.6 +0.2
21nm52µm24µm2µm,0.8s
YOGI S Sn 04 16 00.2 -2.0
21nm52µm24µm2µm,0.8s
BKSI Bulukumba 6.91 34 P Pn 04 14 51.8 +3.3
15nm90µm38µm5µm,0.6s
KAPI Kappang 6.98 30 Pn Pn 04 14 52.9 +3.4
154nm,0.3s,baz=206,slow=7.9,SNR=146
KAPI Sn Sn 04 16 06.7 -0.9
180nm,0.3s,baz=114,slow=23,SNR=7.2
KAPI LR LR 04 18 08.8
comp=Z,63µm,18.9s,baz=200,slow=44
KAPI Kappang 6.98 30 Pn Pn 04 14 53.1 +3.6
KAPI Kappang 6.98 30 P Pn 04 14 53.1 +3.6
KAPI Kappang 6.98 30 P Pn 04 14 53.5 +4.0
KAPI Kappang 6.98 30 ⇑P Pn 04 14 53.3 +3.8
UWJI Ujung Watu 7.04 311 P Pn 04 14 52.1 +1.7
8.9nm16µm1µm,0.8s
UWJI S Sn 04 16 06.3 -2.9
8.9nm16µm1µm,0.8s
SMRI Semarang 7.04 305 Pn Pn 04 14 51.8 +1.4
SMRI Semarang 7.04 305 P Pn 04 14 52.0 +1.6
21nm111µm28µm2µm,1.1s
SMRI S Sn 04 16 14.8 +5.5
21nm111µm28µm2µm,1.1s
SMRI Semarang 7.04 305 P Pn 04 14 53.2 +2.8
SMRI Semarang 7.04 305 ⇑P Pn 04 14 52.0 +1.6
BATI Baumata 7.32 84 Pn Pn 04 14 52.8 -1.4
336nm,0.3s,baz=252,slow=2.2,SNR=65
BATI Sn Sn 04 16 13.4 -2.6
724nm,0.3s,baz=26,slow=23,SNR=11
716nm,0.5s
BATI Baumata 7.32 84 P Pn 04 14 55.3 +1.1
12nm17µm12µm1µm,0.8s
BATI S Sn 04 16 13.0 -3.0
12nm17µm12µm1µm,0.8s
BNSI Bone 7.68 30 P Pn 04 15 03.0 +3.9
8.4nm66µm19µm2µm,0.7s
BNSI S Sn 04 16 28.5 +3.6
8.4nm66µm19µm2µm,0.7s
BBKI Banjar Baru 7.74 349 P Pn 04 15 04.0 +4.0
6.8nm82µm33µm1µm,1.0s
SPSI Sidrap Palu 7.91 26 P Pn 04 15 05.3 +3.0
81µm9µm838nm,0.7s
SOEI Soe 7.97 81 Pn 04 15 04.0 +0.7
SOEI Soe 7.97 81 P Pn 04 15 03.5 +0.2
26µm29µm3µm,0.7s
SOEI S Sn 04 16 29.2 -3.2
26µm29µm3µm,0.7s
SOEI Soe 7.97 81 P Pn 04 15 05.2 +1.9
SOEI Soe 7.97 81 ⇓P Pn 04 15 04.3 +1.0
KPJI Karang Pucung 8.17 297 P Pn 04 15 07.1 +1.2
82µm25µm3µm,1.1s
KPJI S Sn 04 16 37.7 +0.7
82µm25µm3µm,1.1s
BBSI Bau Bau 8.37 49 P Pn 04 15 11.8 +3.2
1µm132nm,0.8s
CMJI Cimerak 8.41 293 P Pn 04 15 15.2 +6.1
TTSI Tana Toraja 8.76 24 P Pn 04 15 19.1 +5.1
85µm18µm1µm,1.2s
JCJI Jatiwangi 9.15 300 P Pn 04 15 18.3 -1.1
97µm19µm1µm,0.7s
PBKI Pangkalan Bun 9.53 331 P Pn 04 15 27.0 +2.5
14µm953nm,0.8s
LEM Lembang 9.56 296 Pn Pn 04 15 25.2 +0.1
40nm,0.3s,baz=116,slow=12,SNR=36
LEM Sn Sn 04 17 09.4 -1.9
38nm,0.3s,baz=192,slow=24,SNR=2.1
LEM LR LR 04 19 33.5
comp=Z,67µm,21.9s,baz=116,slow=41
387nm,0.8s
LEM Lembang 9.56 296 P Pn 04 15 27.1 +2.0
36µm8µm574nm,0.9s
CNJI Cibinong 9.79 292 P Pn 04 15 28.4 +0.3
37µm24µm2µm,1.0s
BKB Balikpapan 9.82 4 Pn 04 15 33.6 +5.2
BKB Balikpapan 9.82 4 P Pn 04 15 36.5 +8.0
103µm21µm916nm,1.4s
BKB Balikpapan 9.82 4 ⇑P Pn 04 15 36.8 +8.4
MTKI Muara Teweh, K 10.21 352 P Pn 04 15 37.3 +3.5
54µm21µm1µm,0.8s
XMI Christmas Isla 10.43 273 P Pn 04 15 35.7 -1.1
XMI Christmas Isla 10.43 273 ⇑P Pn 04 15 35.3 -1.5
SKJI Sukabumi 10.44 292 P Pn 04 15 38.1 +1.2
18µm1µm,0.9s
DBJI Dramaga 10.45 295 P Pn 04 15 37.6 +0.4
45µm19µm943nm,0.9s
XMIS Christmas Isla 10.46 272 Pn Pn 04 15 33.5 -3.8
XMIS Christmas Isla 10.46 272 P Pn 04 15 37.3 0.0
MBWA Marble Bar 10.52 162 Pn 04 15 30.6 -7.3
MBWA Marble Bar 10.52 162 ⇑P Pn 04 15 30.6 -7.4
SMKI Samarinda 10.65 5 P Pn 04 15 43.4 +3.6
95um17µm1µm,0.9s
PSA00 Pilbara Seismi 10.94 162 Pn 04 15 36.1 -7.7
PSA00 Pilbara Seismi 10.94 162 Pn Pn 04 15 35.6 -8.1
SBJI Serang 11.20 296 P Pn 04 15 46.9 -0.4
17µm1µm,0.9s
APSI Ampana 11.46 28 P Pn 04 15 55.3 +4.3
30um6µm452nm,1.8s
GIRL Giralia 11.62 189 P Pn 04 15 46.7 -6.4
baz=12,SNR=947
GIRL Giralia 11.62 189 Pn Pn 04 15 46.5 -6.6
GIRL Giralia 11.62 189 ⇑P Pn 04 15 46.5 -6.6
GIRL ⇑S Sn 04 17 49.1 -12
LUWI Luwuk 11.91 33 Pn 04 16 00.1 +3.0
LUWI Luwuk 11.91 33 P Pn 04 16 01.4 +4.3
38µm11µm794nm,1.2s
LUWI Luwuk 11.91 33 P Pn 04 16 02.8 +5.7
LUWI Luwuk 11.91 33 ⇑P Pn 04 16 01.1 +4.0
MPSI Mapaga 11.94 18 P Pn 04 16 02.6 +5.1
56µm12µm440nm,1.0s
STKI Sintang 12.10 336 P Pn 04 16 02.9 +3.2
36µm14µm700nm,0.8s
BLSI Bandar Lampung 12.32 297 P Pn 04 16 03.2 +0.4
10um500nm,0.8s
MRSI Marisa 12.83 26 P Pn 04 16 13.5 +3.9
38µm5µm378nm,1.0s
KLI Kotabumi 12.90 298 P Pn 04 16 10.7 0.0
37µm10µm1µm,0.8s
KASI Kota Agung 12.91 295 P Pn 04 16 09.6 -1.2
34µm16µm1µm,1.0s
TOLI2 Tolitoli 12.95 21 Pn Pn 04 16 16.0 +4.6
TOLI2 Tolitoli 12.95 21 P P 04 16 17.1 -4.2
KNRA Kununurra 12.96 112 P Pn 04 16 08.3 -3.2
baz=13,SNR=247
KNRA Kununurra 12.96 112 Pn 04 16 08.3 -3.2
KNRA Kununurra 12.96 112 P Pn 04 16 09.6 -1.9
SANI Sanana 13.20 48 P Pn 04 16 17.8 +3.1
15µm7µm343nm,1.1s
SANI Sanana 13.20 48 P Pn 04 16 18.7 +4.0
SANI Sanana 13.20 48 ⇑P Pn 04 16 16.6 +1.9
PPBI Pangkal Pinang 13.44 311 P Pn 04 16 18.6 +0.6
39µm559nm,0.9s
LWLI Liwa 13.53 296 P Pn 04 16 18.9 -0.5
23µm14µm791nm,0.8s
MDSI Maura Dua 13.68 298 P Pn 04 16 20.3 -1.0
20µm5µm214nm,0.9s
KSM Kuching 13.85 334 Pn 04 16 24.6 +1.0
KSM Kuching 13.85 334 P Pn 04 16 26.0 +2.4
KSM Kuching 13.85 334 P Pn 04 16 26.9 +3.3
KSM Kuching 13.85 334 ⇑P Pn 04 16 24.8 +1.2
KMSI Cibinong 13.92 34 P P 04 16 29.9 -2.1
748nm11µm978nm,0.8s
AAI Ambon 13.93 59 P Pn 04 16 28.3 +3.6
16µm6µm388nm,1.1s
PMBI Palembang 14.02 305 P P 04 16 29.8 -3.3
36µm50µm949nm,1.0s
SBUM Sibu 14.08 343 Pn 04 16 29.5 +2.8
SBUM Sibu 14.08 343 P P 04 16 31.0 -2.7
SBUM Sibu 14.08 343 ⇑P Pn 04 16 29.5 +2.8
MTN Manton Dam 14.63 98 P Pn 04 16 33.5 -0.8
baz=15,SNR=34
MTN Manton Dam 14.63 98 Pn 04 16 32.3 -1.9
MTN Manton Dam 14.63 98 P Pn 04 16 33.4 -0.8
MTN Manton Dam 14.63 98 ⇓P Pn 04 16 32.4 -1.9
MTN ⇓S Sn 04 19 08.6 -6.7
MSAI Masohi 14.73 59 P P 04 16 38.8 -2.2
908nm72nm,0.9s
MNAI Manna 14.81 296 Pn 04 16 34.5 -2.1
MNAI Manna 14.81 296 P Pn 04 16 34.8 -1.8
28µm32µm3µm,1.6s
MNAI Manna 14.81 296 P Pn 04 16 37.0 +0.4
MNAI Manna 14.81 296 ⇑P Pn 04 16 35.0 -1.6
SAUI Saumlaki 15.14 79 Pn 04 16 40.8 -0.1
SAUI Saumlaki 15.14 79 P Pn 04 16 42.0 +1.0
23µm3µm,1.0s
SAUI Saumlaki 15.14 79 P Pn 04 16 42.4 +1.4
SAUI Saumlaki 15.14 79 ⇑P Pn 04 16 40.9 -0.1
LBMI Labuha 15.26 48 P P 04 16 46.1 -0.8
11µm10µm1µm,1.1s
DSRI Dabo 15.71 312 P Pn 04 16 49.9 +1.4
19µm2µm90nm,1.1s
KDU Kakadu 15.92 97 P Pn 04 16 49.6 -1.6
baz=16,SNR=103
KDU Kakadu 15.92 97 P P 04 16 53.0 -1.3
KDU Kakadu 15.92 97 ⇑P Pn 04 16 49.5 -1.6
TNTI Ternate 16.16 44 Pn P 04 16 55.9 -1.0
TNTI Ternate 16.16 44 P P 04 16 55.9 -1.0
11µm10µm1µm,1.1s
TNTI Ternate 16.16 44 P P 04 16 58.0 +1.1
TNTI Ternate 16.16 44 ⇑P Pn 04 16 55.2 +1.1
MYLDM Lahad Datu 16.35 8 P P 04 17 00.1 +1.1
MYLDM Lahad Datu 16.35 8 ⇑P P 04 17 01.5 +2.5
TPRI Tanjung Pinang 16.72 315 P P 04 17 05.1 +1.9
6µm338nm,0.8s
KRJI Kerinci 17.23 300 P Pn 04 17 06.7 -1.0
24um4µm5µm,1.1s
SGSI Sangihe 17.36 33 P P 04 17 13.2 +3.0
4µm410nm,0.9s
FAKI Fak Fak 17.81 64 Pn Pn 04 17 12.4 -2.4
FAKI Fak Fak 17.81 64 P Pn 04 17 13.4 -1.4
10µm8µm730nm,0.9s
FAKI Fak Fak 17.81 64 P Pn 04 17 14.7 -0.1
FAKI Fak Fak 17.81 64 ⇑P Pn 04 17 11.8 -3.0
MYKOM Kota Tinggi 17.82 315 P 04 17 15.1 -0.1
MYKOM Kota Tinggi 17.82 315 P P 04 17 16.0 +0.8
MORW Morawa 17.86 181 P Pn 04 17 08.6 -6.7
baz=18,SNR=242
MORW Morawa 17.86 181 Pn Pn 04 17 08.8 -6.4
MORW IAmb IAmb 04 17 13.0
comp=Z,2µm,1.5s
MORW Morawa 17.86 181 ⇑P Pn 04 17 08.5 -6.7
WRKA Warakurna 17.93 142 P Pn 04 17 10.8 -5.4
baz=18,SNR=758
WRKA Warakurna 17.93 142 ⇑P Pn 04 17 10.8 -5.4
SWI Sorong 18.04 57 P Pn 04 17 17.6 0.0
comp=Z,11µmcomp=Z,11µmcomp=Z,1µm,1.1s
SIJI Sorong 18.04 57 P Pn 04 17 16.5 -1.1
comp=Z,8.2nm,0.3s,baz=231,slow=7.2,SNR=30
SIJI S Sn 04 20 34.8 -3.2
comp=Z,126nm,0.8s,baz=255,slow=23,SNR=9.5
SIJI LR LR 04 24 44.1
comp=Z,27µm,21.3s,baz=245,slow=39
comp=Z,191nm,0.8s
PPSI Pulau Pagai 18.15 296 P Pn 04 17 19.0 +0.1
comp=Z,24µmcomp=Z,22µmcomp=Z,2µm,0.8s
BKNI Bangkinang 18.94 306 P Pn 04 17 28.7 +0.2
BKNI IAmb IAmb 04 17 38.4
comp=Z,1µm,1.1s
BKNI Bangkinang 18.94 306 P Pn 04 17 28.4 -0.2
comp=Z,27µmcomp=Z,21µmcomp=Z,1µm,1.4s
BKNI Bangkinang 18.94 306 P Pn 04 17 31.4 +2.8
PPI Padang Panjang 19.01 303 P P 04 17 27.9 -0.5
comp=Z,535nm,1.0s
COCO West Island 19.07 265 P P 04 17 27.3 -1.8
COCO West Island 19.07 265 P P 04 17 27.3 -1.8
COCO pmax pmax
comp=Z,4µm,1.9s
BLDU Ballidu 19.40 179 P P 04 17 29.6 -3.0
baz=19,SNR=103
BLDU Ballidu 19.40 179 P P 04 17 30.4 -2.2
WB0 Warramunga Arr 19.45 118 P P 04 17 31.5 -1.7
WB0 IAmb IAmb 04 17 37.9
comp=Z,415nm,0.7s
WRA Warramunga Arr 19.47 119 P P 04 17 32.1 -1.4
comp=Z,14nm,0.3s,baz=292,slow=13,SNR=245
WRA S S 04 20 59.2 -12
comp=Z,160nm,0.5s,baz=297,slow=26,SNR=10
WRA LR LR 04 24 57.3
comp=Z,53µm,21.1s,baz=290,slow=36
WRA P3KPbc 04 52 00.7
comp=Z,1.1nm,1.0s,baz=103,slow=4.4,SNR=6.1
comp=Z,468nm,1.2s
WRA Warramunga Arr 19.47 119 P P 04 17 33.2 -0.3
WRA Warramunga Arr 19.47 119 P P 04 17 33.2 -0.3
WRA pmax pmax
comp=Z,91nm,1.2s
WRAB Tennant Creek 19.48 119 P P 04 17 32.1 -1.4
WRAB IAmb IAmb 04 17 37.1
comp=Z,802nm,1.2s
WRAB Tennant Creek 19.48 119 *i* P P 04 17 32.8 -0.7
WRAB MLR MLR
comp=Z,47µm,18.0s
WRAB Tennant Creek 19.48 119 P Pn 04 17 34.8 -0.2
WRAB Tennant Creek 19.48 119 ⇓P P 04 17 32.9 -0.6
WB2 Warramunga Arr 19.48 119 P P 04 17 33.0 -0.5
WB2 IAmb IAmb 04 17 37.1
comp=Z,600nm,1.1s
SISI Saibi 19.65 299 P P 04 17 34.3 -1.1
comp=Z,5µmcomp=Z,428nm,0.8s
WR0 Warramunga Arr 19.65 119 P P 04 17 35.1 -0.3
CTBH Cotabato--PC H 19.87 24 ⇓*i*P Pn 04 17 40.6 +0.9
PAGZ Pagadian 20.13 21 ⇑*e*P Pn 04 17 43.3 +0.6
DAV Davao City (W) 20.31 28 P P 04 17 43.2 +0.6
comp=Z,152nm,0.4s,baz=242,slow=18,SNR=6.9
DAV LR LR 04 26 40.0
comp=Z,24µm,19.6s,baz=212,slow=40
comp=Z,152nm,0.4s
DAV Davao City (W) 20.31 28 IAMs_20 IAMs_20 04 26 08.1
comp=Z,26µm,20.0s
KLBR Kellerberrin 20.41 176 P P 04 17 42.3 -1.3
baz=20,SNR=28
KLBR Kellerberrin 20.41 176 P P 04 17 44.7 +1.1
MTKN Mount Kenneth 20.71 181 P Pn 04 17 49.1 -0.3
MUN Mundaring 20.75 180 P P 04 17 47.9 +0.6
baz=21,SNR=117
MUN Mundaring 20.75 180 P Pn 04 17 48.8 -1.0
BUKP Musuan 20.80 25 ⇓*e*P Pn 04 17 50.7 +0.1
ASAR Alice Springs 20.91 129 P P 04 17 48.8 -0.3
comp=Z,334nm,0.6s,baz=301,slow=10,SNR=325
ASAR S S 04 21 29.9 -10
comp=Z,109nm,0.7s,baz=303,slow=24,SNR=5.3
ASAR LR LR 04 25 54.9
comp=Z,19µm,21.0s,baz=304,slow=37
ASAR P3KPbc 04 51 53.5
comp=Z,0.5nm,0.6s,baz=132,slow=5.6,SNR=7.9
comp=Z,334nm,0.6s
ASAR Alice Springs 20.91 129 P P 04 17 48.7 -0.4
AS31 Alice Springs 20.91 129 P P 04 17 48.9 -0.2
SNPH Sibulan 21.48 19 *e*P P 04 17 55.9 +0.7
BIPH Bislig 21.65 28 ⇓*e*P P 04 17 45.8 -11
IPM Ipoh 21.70 315 P P 04 17 59.1 +1.5
IPM IAmb IAmb 04 18 09.9
comp=Z,772nm,1.2s
IPM Ipoh 21.70 315 P P 04 17 59.9 +2.4
NWAO Narrogin (SRO) 21.72 178 P P 04 17 55.8 -1.8
NWAO Narrogin (SRO) 21.72 178 P P 04 17 55.8 -1.8
NWAO pmax pmax
comp=Z,786nm,0.5s
NWAO Narrogin (SRO) 21.72 178 P P 04 17 59.0 +1.4
CNOP Candoni, Negro 21.75 17 ⇑*e*P P 04 17 59.3 +1.2
SRPI Serui, Papua 21.84 67 P P 04 18 01.8 +2.7
comp=Z,8µmcomp=Z,6µmcomp=Z,332nm,0.8s
TBP Tagbilaran 22.01 20 ⇑*e*P P 04 17 59.4 -1.4
TBP *i* S S 04 22 03.6 +1.8
BAKI Biak 22.02 65 P P 04 18 04.4 +3.3
comp=Z,10µmcomp=Z,540nm,0.8s
PSI Prapat 22.12 308 P P 04 18 01.8 -0.5
comp=Z,120nm,0.8s,baz=151,slow=7.3,SNR=53
PSI S S 04 21 56.6 -7.6
comp=Z,4.7nm,0.3s,baz=107,slow=13,SNR=1.1
PSI LR LR 04 28 04.3
comp=Z,52µm,21.1s,baz=132,slow=41
comp=Z,120nm,0.8s
GSI Gunungsitoli 22.32 302 P P 04 18 04.0 -0.3
GSI Gunungsitoli 22.32 302 P P 04 18 03.0 -1.3
comp=Z,24µmcomp=Z,8µmcomp=Z,380nm,0.9s
GSI Gunungsitoli 22.32 302 P P 04 18 06.2 +1.9
GSI Gunungsitoli 22.32 302 ⇑P P 04 18 03.5 -0.8
FORT Forrest 22.41 153 P P 04 18 04.1 -1.0
baz=22,SNR=151
FORT Forrest 22.41 153 P P 04 18 03.3 -1.7
FORT Forrest 22.41 153 P P 04 18 05.2 +0.2
FORT Forrest 22.41 153 ⇑P P 04 18 03.9 -1.2
KULM Kulim 22.54 316 P P 04 18 07.5 +0.9
KULM IAmb IAmb 04 18 26.7
comp=Z,938nm,1.3s
KULM Kulim 22.54 316 ⇓P P 04 18 07.0 +0.4
LLP Lapu-Lapu 22.63 20 *e*P P 04 18 06.6 -0.9
LLP *e*S S 04 22 13.9 +0.9
MSLP Maasin 22.78 22 ⇑*e*P P 04 18 08.4 -0.6
TSI Tuntungan 22.84 309 P P 04 18 11.2 +1.4
comp=Z,34µmcomp=Z,51µmcomp=Z,2µm,1.0s
WAMI Wamena 23.36 74 P P 04 18 19.5 +4.5
comp=Z,21µmcomp=Z,1µm,0.9s
RKGY Rocky Gully 23.39 179 P P 04 18 15.1 0.0
baz=23,SNR=16
RKGY Rocky Gully 23.39 179 P P 04 18 16.1 +1.0
RCP Roxas 23.43 16 ⇓*e*P P 04 18 17.2 +1.5
RCP Roxas 23.43 16 ⇑*e*P S 04 22 28.0 +1.6
KCSI Kotacane, Aceh 23.47 307 P P 04 18 15.8 -0.3
comp=Z,14µmcomp=Z,1µm,1.1s
H01W3 Cape Leeuwin H 23.73 184 P P 04 18 30.2 +12
baz=14,slow=10,SNR=40
H01W3 S S 04 22 35.7 +5.2
baz=152,slow=77,SNR=3.8
H01W1 Cape Leeuwin H 23.74 184 P P 04 18 29.3 +11
baz=14,slow=10,SNR=31
H01W1 S S 04 22 35.3 +4.6
baz=152,slow=77,SNR=4.4
H01W2 Cape Leeuwin H 23.75 184 P P 04 18 28.6 +10
baz=14,slow=10,SNR=38
H01W2 S S 04 22 37.0 +6.2
baz=152,slow=77,SNR=3.7
SMPI Sarmi 24.04 69 P P 04 18 24.0 +2.6
comp=Z,9µmcomp=Z,6µmcomp=Z,350nm,1.0s
QIS Mount Isa 24.29 116 P P 04 18 24.1 +0.3
baz=24,SNR=148
QIS Mount Isa 24.29 116 P P 04 18 24.9 +1.1
OOD Oodnadatta 24.64 135 P P 04 18 27.1 +0.3
LUBP Lubang 25.01 9 ⇓*e*P P 04 18 33.6 +3.4
GENI Genyem 25.17 72 P P 04 18 34.4 +2.7
comp=Z,13µmcomp=Z,14µmcomp=Z,952nm,1.0s
GENI Genyem 25.17 72 P P 04 18 35.6 +3.9
GENI Genyem 25.17 72 ⇑P P 04 18 34.6 +2.9
LHMI Lhok Sumawe 25.18 309 P P 04 18 31.5 -0.3
LHMI Lhok Sumawe 25.18 309 P P 04 18 33.7 +1.9
comp=Z,30µmcomp=Z,39µmcomp=Z,2µm,1.3s
LHMI Lhok Sumawe 25.18 309 P P 04 18 34.8 +3.0
LHMI Lhok Sumawe 25.18 309 ⇑P P 04 18 33.3 +1.5
MULG Mulgathing 25.23 142 P P 04 18 32.3 +0.2
TGY Tagaytay City 25.48 11 P P 04 18 36.1 +1.6
comp=Z,374nm,0.6s,baz=144,slow=7.5,SNR=11
TGY LR LR 04 30 20.5
comp=Z,10µm,19.8s,baz=228,slow=41
comp=Z,374nm,0.6s
JCNP Jose Panganiba 26.04 14 ⇓*e*P P 04 18 40.3 +0.8
COEN Coen 26.40 99 P P 04 18 45.2 +2.3
baz=26,SNR=20
COEN Coen 26.40 99 P P 04 18 43.9 +1.0
COEN Coen 26.40 99 P P 04 18 45.4 +2.5
COEN Coen 26.40 99 ⇑P P 04 18 44.5 +1.6
MTSU Mount Surprise 27.98 108 P P 04 18 58.9 +1.7
baz=28,SNR=42
MTSU Mount Surprise 27.98 108 P P 04 18 59.5 +2.3
LCRK Leigh Creek 28.01 137 P P 04 18 58.6 +1.4
BBOO Buckleboo 28.22 143 P P 04 18 58.8 -0.3
baz=28,SNR=59
BBOO Buckleboo 28.22 143 P 04 18 58.5 -0.6
BBOO Buckleboo 28.22 143 P P 04 18 59.6 +0.5
INKA Innaminka 28.29 129 P P 04 19 03.4 +3.7
WHYH Whyalla 29.29 141 P P 04 19 10.2 +1.7
PTPS Port Pirie 29.64 141 P P 04 19 14.2 +2.5
NAPP Napperby 29.75 141 P P 04 19 13.7 +1.1
CTA Charters Tower 30.17 111 P P 04 19 17.5 +0.9
comp=Z,18nm,0.8s,baz=274,slow=10.0,SNR=26
CTA S S 04 24 12.9 -0.4
comp=Z,12nm,0.8s,baz=169,slow=21,SNR=1.8
CTA LR LR 04 31 44.6
comp=Z,24µm,21.3s,baz=281,slow=37
comp=Z,18nm,0.8s
CTA Charters Tower 30.17 111 P P 04 19 19.0 +2.5
CTAO Charters Tower 30.17 111 P P 04 19 16.8 +0.2
CTAO Charters Tower 30.17 111 IAMs_20 IAMs_20 04 31 31.7
comp=Z,23nm,21.0s
CTAO Charters Tower 30.17 111 P P 04 19 16.8 +0.2
CTAO pmax pmax
comp=Z,140nm,1.0s
CTAO MLR MLR
comp=Z,23µm,21.0s
CTAO Charters Tower 30.17 111 P P 04 19 18.7 +2.2
CTAO Charters Tower 30.17 111 ⇑P P 04 19 18.0 +1.5
HTT Hallett 30.39 140 P P 04 19 19.2 +0.8
baz=30,SNR=44
HTT Hallett 30.39 140 P P 04 19 19.2 +0.8
HTT Hallett 30.39 140 ⇓P P 04 19 19.1 +0.8
PMG Port Moresby 30.43 90 P P 04 19 19.5 +0.7
comp=Z,7.0nm,0.5s,baz=281,slow=8.3,SNR=1.9
PMG S S 04 24 17.7 +0.3
comp=Z,6.7nm,0.5s,baz=226,slow=14,SNR=1.4
PMG LR LR 04 33 16.5
comp=Z,22µm,20.1s,baz=244,slow=40
comp=Z,7.0nm,0.5s
PMG Port Moresby 30.43 90 IAMs_20 IAMs_20 04 33 05.1
comp=Z,22µm,20.0s
QLP Quilpie 30.50 124 P P 04 19 22.8 +3.5
baz=30,SNR=5.4
QLP Quilpie 30.50 124 P P 04 19 21.3 +2.0
QLP Quilpie 30.50 124 ⇓P P 04 19 22.1 +2.8
QIZ Qiongzhong 30.63 348 P P 04 19 22.3 +1.9
QIZ IAmb IAmb 04 19 31.9
comp=Z,569nm,1.9s
QIZ Qiongzhong 30.63 348 ⇓*i*P P 04 19 23.1 +2.7
QIZ S S 04 24 18.0 -2.3
QIZ pmax pmax
comp=Z,86nm,0.9s
QIZ pmax pmax
comp=Z,1µm,5.3s
QIZ LR LR
comp=Z,7µm,16.5s
QIZ LR LR
comp=Z,3µm,16.7s
QIZ LR LR
comp=Z,7µm,16.1s
QIZ Qiongzhong 30.63 348 P P 04 19 22.9 +2.5
STKA Stephens Creek 31.18 135 P P 04 19 26.4 +1.0
comp=Z,113nm,0.7s,baz=309,slow=9.4,SNR=116
STKA S S 04 24 24.4 -4.5
comp=Z,16nm,0.7s,baz=350,slow=20,SNR=1.4
comp=Z,113nm,0.7s
STKA Stephens Creek 31.18 135 P P 04 19 26.2 +0.9
baz=31,SNR=135
STKA Stephens Creek 31.18 135 P P 04 19 26.1 +0.8
STKA Stephens Creek 31.18 135 P P 04 19 26.6 +1.3
DGPR DIGLIPUR 33.46 316 *eP* P 04 19 44.9 -0.6
DGPR IAmb IAmb 04 19 58.4
comp=Z,517nm,1.0s
CMSA Cobar Meteorol 33.92 131 P P 04 19 49.1 -0.2
baz=34,SNR=22
CMSA Cobar Meteorol 33.92 131 P P 04 19 51.5 +2.2

CM31 Chiang Mai Arr 34.01 330 P **P** **04 19 50.4 +0.2**
CM31 IAmb IAmb 04 20 02.2
comp=Z,352nm,1.1s
CMAR Chiang Mai Arr 34.01 330 P **P** **04 19 52.1 +2.0**
comp=Z,58nm,0.8s,baz=158,slow=7.4,SNR=83
CMAR PcP **PcP** **04 22 30.0 +2.4**
comp=Z,26nm,0.9s,baz=184,slow=2.6,SNR=6.4
CMAR LR LR 04 35 55.9
comp=Z,17µm,18.7s,baz=145,slow=40
comp=Z,58nm,0.8s
CMAR Chiang Mai Arr 34.01 330 P **P** **04 19 51.8 +1.7**
CMAR **PcP** **04 22 28.4 +0.7**
CMAR Chiang Mai Arr 34.01 330 P **P** **04 19 51.8 +1.7**
CMAR 04 22 28.4
GZH Guangzhou 34.12 355 P P 04 19 59.7 +8.7
GZH S S 04 25 32.8 +18
GZH LR LR
comp=Z,5µm,14.9s
GZH LR LR
comp=Z,4µm,17.6s
RMQ Roma 34.20 121 P **P** **04 19 52.1 +0.3**
baz=34,SNR=6.0
RMQ Roma 34.20 121 P **P** **04 19 54.5 +2.7**
CHTO Chiang Mai 34.31 330 IAMs_20 IAMs_20 04 35 53.7
comp=Z,20µm,19.0s
CHTO Chiang Mai 34.31 330 P **P** **04 19 54.4 +1.7**
CHTO P **P** **04 19 54.4 +1.7**
CHTO Chiang Mai 34.31 330 P **P** **04 19 55.8 +3.0**
CHTO Chiang Mai 34.31 330 ⇓P **P** **04 19 54.4 +1.7**
ARPS Mount Arapiles 34.39 142 P **P** **04 19 53.9 +0.6**
baz=34,SNR=29
ARPS Mount Arapiles 34.39 142 P **P** **04 19 55.3 +2.0**
TPUB Ta-pu 34.48 7 P **P** **04 19 55.2 +1.1**
TPUB IAmb IAmb 04 20 04.3
comp=Z,160nm,1.0s
TPUB Ta-pu 34.48 7 P **P** **04 19 57.4 +3.3**
YULB Yu-li 34.65 8 P **P** **04 19 55.5 -0.1**
RK1H Rockhampton Ha 34.78 115 P **P** **04 19 58.3 +1.5**
SSLB Suanglung 35.00 7 P **P** **04 19 58.6 0.0**
SSLB IAmb IAmb 04 20 09.0
comp=Z,294nm,1.3s
SSLB Suanglung 35.00 7 P **P** **04 20 01.8 +3.2**
KNMB Chin-men Tao 35.43 3 P **P** **04 20 02.7 +0.4**
KNMB IAmb IAmb 04 20 12.0
comp=Z,204nm,0.9s
NACB Ninganchiao 35.46 8 P **P** **04 20 03.4 +0.8**
NACB IAmb IAmb 04 20 12.3
comp=Z,248nm,1.4s
EIDS Eidsvold 35.83 118 P **P** **04 20 04.5 -1.4**
baz=36,SNR=4.9
EIDS Eidsvold 35.83 118 P **P** **04 20 05.6 -0.3**
EIDS Eidsvold 35.83 118 P **P** **04 20 07.7 +1.8**
EIDS Eidsvold 35.83 118 ⇑P **P** **04 20 08.5 +2.6**
QZH Quanzhou 35.92 4 ⇓*i*P **P** **04 20 07.8 +1.3**
QZH pP **pP** **04 20 15.0 -1.4**
QZH S **S** **04 25 40.0 -2.2**
QZH pmax pmax
comp=Z,70nm,1.0s
QZH pmax pmax
comp=Z,920nm,9.7s
QZH LR LR
comp=Z,4µm,17.1s
QZH LR LR
comp=Z,2µm,17.5s
QZH LR LR
comp=Z,5µm,16.6s
YHNB Yeheng 35.92 8 P **P** **04 20 07.8 +1.2**
YHNB IAmb IAmb 04 20 16.1
comp=Z,186nm,0.9s
YHNB Yeheng 35.92 8 P **P** **04 20 07.4 +0.8**
YOJ Yonaguni jima 35.97 10 P **P** **04 20 08.0 +1.1**
YOJ Yonaguni jima 35.97 10 P **P** **04 20 08.0 +1.1**
YOJ pmax pmax
comp=Z,75nm,0.9s
YOJ Yonaguni jima 35.97 10 P **P** **04 20 09.8 +2.8**
YOJ Yonaguni jima 35.97 10 ⇑P P 04 20 15.2 +8.2
KRVT Keravat (AS076 36.04 82 P **P** **04 20 08.9 +1.2**
comp=Z,40nm,0.3s,baz=318,slow=12,SNR=1.6
KRVT LR LR 04 36 23.2
comp=Z,5µm,21.2s,baz=32,slow=39
comp=Z,40nm,0.3s
BRAT Ballarat 36.17 141 P **P** **04 20 10.4 +1.8**
TATO Taipei 36.24 8 P **P** **04 20 09.2 0.0**
GULI GuiLin 36.65 351 ⇓P **P** **04 20 12.2 -0.5**
GULI S **S** **04 25 51.2 -2.2**
GULI pmax pmax
comp=Z,80nm,1.8s
GULI pmax pmax
comp=Z,2µm,8.6s
GULI LR LR
comp=Z,5µm,19.1s
GULI LR LR
comp=Z,4µm,16.8s
GULI LR LR
comp=Z,6µm,18.2s
TOO Toolangi 37.15 140 P **P** **04 20 17.2 +0.2**
baz=37,SNR=38
TOO Toolangi 37.15 140 P **P** **04 20 16.8 -0.2**
TOO Toolangi 37.15 140 P **P** **04 20 16.8 -0.2**
TOO pmax pmax
comp=Z,98nm,0.9s
TOO Toolangi 37.15 140 P **P** **04 20 18.3 +1.3**
TOO Toolangi 37.15 140 ⇑P **P** **04 20 18.0 +1.0**
GUMO Guam 37.51 50 P **P** **04 20 20.4 +0.2**
comp=Z,126nm,0.8s,baz=217,slow=20,SNR=6.2
GUMO LR LR 04 36 37.8
comp=Z,2µm,19.5s,baz=231,slow=38
comp=Z,126nm,0.8s
GUMO Guam 37.51 50 P **P** **04 20 20.7 +0.4**
GUMO IAmb IAmb 04 20 41.9
comp=Z,278nm,0.9s
GUMO Guam 37.51 50 P **P** **04 20 20.7 +0.4**
GUMO pmax pmax
comp=Z,278nm,0.9s
ARMA Armidale 38.00 126 P **P** **04 20 27.3 +3.0**
baz=38,SNR=18
ARMA Armidale 38.00 126 P **P** **04 20 24.4 0.0**
ARMA Armidale 38.00 126 P **P** **04 20 26.2 +1.8**
ARMA Armidale 38.00 126 ⇑P **P** **04 20 27.5 +3.2**
CAN Canberra 38.23 134 P **P** **04 20 25.1 -1.1**
CAN Canberra 38.23 134 P **P** **04 20 25.1 -1.1**
CAN pmax pmax
comp=Z,49nm,1.0s
CAN MLR MLR
comp=Z,27µm,20.0s
CAN Canberra 38.23 134 P **P** **04 20 27.3 +1.1**
CAN Canberra 38.23 134 ⇑P **P** **04 20 29.4 +3.3**
KMI Kunming 38.37 340 ⇓P **P** **04 20 30.4 +2.8**
KMI pP pP 04 20 37.0 -0.6
KMI sP pwP 04 20 39.7 -2.1
KMI S **S** **04 26 21.4 +1.4**
KMI pmax pmax
comp=Z,110nm,1.5s
KMI pmax pmax
comp=Z,2µm,8.7s
KMI LR LR
comp=Z,6µm,29.6s
KMI LR LR
comp=Z,10µm,19.9s
KMI LR LR
comp=Z,7µm,22.4s
CNB Canberra Magne 38.48 134 P **P** **04 20 30.2 +1.9**
GYA Guiyang 38.51 346 ⇑*i*P **P** **04 20 30.5 +1.9**
GYA pP pP 04 20 38.2 -0.4
GYA S **S** **04 26 22.6 +0.8**
GYA pmax pmax
comp=Z,150nm,1.7s
GYA pmax pmax
comp=Z,2µm,5.5s
GYA LR LR
comp=Z,10µm,18.0s
GYA LR LR
comp=Z,4µm,19.7s
GYA LR LR
comp=Z,13µm,19.1s
MGCD Mangrove Creek 38.75 130 P **P** **04 20 32.5 +2.0**
CNSH ChangSha 39.21 355 ⇑P **P** **04 20 33.2 -1.1**
CNSH PP **PP** **04 22 07.6 +2.8**
CNSH S **S** **04 26 32.6 +0.6**
CNSH SS **SS** **04 29 22.1 -4.3**
CNSH LR LR
comp=Z,6µm,18.8s
CNSH LR LR
comp=Z,4µm,19.3s
CNSH LR LR
comp=Z,7µm,20.3s
HALK Hakmana 39.34 294 ⇓P **P** **04 20 36.8 +1.1**
JOW Kunigami 39.49 17 P **P** **04 20 37.5 +0.8**
comp=Z,92nm,0.9s,baz=223,slow=7.8,SNR=26
JOW LR LR 04 38 27.2
comp=Z,5µm,20.5s,baz=198,slow=38
comp=Z,92nm,0.9s
JOW Kunigami 39.49 17 P **P** **04 20 37.4 +0.7**
JOW IAmb IAmb 04 20 47.2
comp=Z,333nm,1.3s
JOW Kunigami 39.49 17 P **P** **04 20 37.9 +1.2**
JOW Kunigami 39.49 17 ⇑P **P** **04 20 38.2 +1.6**
JOW ⇑P **PP** **04 22 12.6 +4.7**
PALK Pallekele 39.84 296 P **P** **04 20 40.2 +0.4**
comp=Z,24nm,0.8s,baz=233,slow=8.6,SNR=11
PALK PcP **PcP** **04 22 46.9 +1.5**
comp=Z,35nm,0.9s,baz=212,slow=3.7,SNR=6.0
PALK LR LR 04 38 49.8
comp=Z,9µm,18.8s,baz=224,slow=39
comp=Z,24nm,0.8s
PALK Pallekele 39.84 296 P **P** **04 20 40.3 +0.4**
PALK **PcP** **04 22 45.9 +0.4**
PALK Pallekele 39.84 296 IAMs_20 IAMs_20 04 38 48.1
comp=Z,12µm,19.0s
PALK Pallekele 39.84 296 P **P** **04 20 40.3 +0.4**
PALK 04 22 45.9
PALK pmax pmax
comp=Z,227nm,1.2s
PALK MLR MLR
comp=Z,12µm,19.0s
PALK Pallekele 39.84 296 P **P** **04 20 42.5 +2.6**
PALK P **P** **04 20 42.5 +2.6**
PALK Pallekele 39.84 296 ⇓P **P** **04 20 41.3 +1.4**
PZH PanZhiHua 39.98 340 P **P** **04 20 42.5 +1.6**
PZH pP **pP** **04 20 51.8 +1.1**
PZH sP **pwP** **04 20 57.3 +1.2**
PZH PcS **PcS** **04 26 37.4 +1.1**
PZH S **S** **04 26 45.3 +1.3**
PZH pmax pmax
comp=Z,130nm,1.1s
PZH pmax pmax
comp=Z,2µm,11.2s
PZH LR LR
comp=Z,7µm,19.1s
PZH LR LR
comp=Z,8µm,19.6s
PZH LR LR
comp=Z,9µm,18.6s
MALK Mahakanadarawa 40.50 297 ⇓P **P** **04 20 46.3 +1.0**
GLAD Gladstone 40.78 142 P **P** **04 20 48.7 +1.4**
WHN Wuhan 41.47 357 P **P** **04 20 54.1 +1.2**
WHN S **S** **04 27 03.4 -2.3**
WHN pmax pmax
comp=Z,310nm,1.0s
WHN LR LR
comp=Z,7µm,13.9s
WHN LR LR
comp=Z,5µm,16.9s
WHN LR LR
comp=Z,23µm,26.7s
AZL Aizawl 41.62 326 *e*P **P** **04 20 55.9 +1.4**
AZL IAmb IAmb 04 21 05.3
comp=Z,646nm,1.3s
ENH Enshi 41.67 351 P **P** **04 20 55.6 +0.9**
ENH IAmb IAmb 04 21 05.2
comp=Z,312nm,0.9s
IMP Imphal 41.85 329 *e*P **P** **04 20 56.9 +0.6**
IMP IAmb IAmb 04 21 06.5
comp=Z,298nm,1.1s
SSE Sheshan 42.24 6 P **P** **04 21 01.6 +2.4**
SSE S **S** **04 27 16.4 -0.7**
SSE pmax pmax
comp=Z,36nm,1.4s
SSE pmax pmax
comp=Z,640nm,6.0s
SSE LR LR
comp=Z,1µm,17.3s
SSE LR LR
comp=Z,1µm,16.2s
KOHI KOHIMA 42.51 330 *e*P **P** **04 21 02.0 +0.2**
KOHI IAmb IAmb 04 21 11.6
comp=Z,2µm,1.7s
MOKO MOKOCHONG 42.81 331 *e*P **P** **04 21 04.9 +0.6**
MOKO IAmb IAmb 04 21 14.8
comp=Z,2µm,1.8s
HNR Honiara 42.97 92 P **P** **04 21 07.1 +1.5**
comp=Z,95nm,0.3s,baz=270,slow=8.1,SNR=2.0
HNR LR LR 04 40 13.7
comp=Z,6µm,20.1s,baz=251,slow=38
comp=Z,95nm,0.3s
NJ2 Nanjing 43.00 3 ⇓*i*P **P** **04 21 07.8 +2.4**
NJ2 pP **pP** **04 21 13.1 -2.5**
NJ2 PP **PP** **04 22 51.6 +5.7**
NJ2 S **S** **04 27 27.8 -0.5**
NJ2 pmax pmax
comp=Z,89nm,1.0s
NJ2 pmax pmax
comp=Z,1µm,4.1s
NJ2 LR LR
comp=Z,3µm,21.1s
NJ2 LR LR
comp=Z,3µm,18.9s
NJ2 LR LR
comp=Z,6µm,19.4s
JORH JORHAT 43.30 331 *e*P **P** **04 21 09.2 +1.3**
H08S2 Diego Garcia H 43.31 271 T T 05 07 44.1
baz=96,slow=75,SNR=6.1
H08S3 Diego Garcia H 43.32 271 T T 05 07 48.0
baz=96,slow=75,SNR=5.6
H08S1 Diego Carcia H 43.33 271 T T 05 07 38.8
baz=96,slow=75,SNR=8.7
DGAR Diego Garcia 43.38 271 IAMs_20 IAMs_20 04 38 24.7
comp=Z,13µm,19.0s
CD2 Chengdu 43.49 344 ⇓P **P** **04 21 10.1 +0.6**
CD2 pP pP 04 21 19.1 -0.2
CD2 PP **PP** **04 22 55.2 +4.0**
CD2 S **S** **04 27 35.7 +0.1**
CD2 pmax pmax
comp=Z,330nm,0.6s
CD2 pmax pmax
comp=Z,2µm,9.0s
CD2 LR LR
comp=Z,9µm,18.0s
CD2 LR LR
comp=Z,7µm,14.3s
SHL Shillong 43.53 327 *e*P **P** **04 21 10.8 +0.7**
SHL IAmb IAmb 04 21 20.7
comp=Z,233nm,0.8s
AIS Amsterdam Isla 43.64 226 IAMs_20 IAMs_20 04 35 32.1
comp=Z,10µm,20.0s
ITAN ITANAGAR 43.89 330 *e*P **P** **04 21 13.4 +0.7**
TEZP TEZPUR 43.91 329 *e*P **P** **04 21 13.2 +0.4**
TEZP IAmb IAmb 04 21 22.9
comp=Z,129nm,0.6s
GUWA GUWAHATI 44.13 328 *e*P **P** **04 21 15.5 +0.8**
GUWA IAmb IAmb 04 21 25.4
comp=Z,484nm,1.1s
JSU Suzuyama 44.51 17 P **P** **04 21 18.6 +1.0**
JSU IAmb IAmb 04 21 27.6
comp=Z,231nm,1.1s
JSU Suzuyama 44.51 17 ⇑P **P** **04 21 18.1 +0.5**
KAAM Kaadhehdhoo 44.54 282 P **P** **04 21 18.9 +0.8**
KAAM IAMs_20 IAMs_20 04 40 25.0
comp=Z,12µm,19.0s
KAAM Kaadhehdhoo 44.54 282 ⇓P **P** **04 21 20.6 +2.4**
DHUB DHUBRI 44.91 326 *e*P **P** **04 21 21.8 +0.9**
DHUB IAmb IAmb 04 21 31.9
comp=Z,351nm,0.8s
XAN Xi'an 45.45 351 ⇓P **P** **04 21 25.5 +0.4**
XAN pP pP 04 21 36.1 +1.1
XAN PcP **PcP** **04 23 07.7 +3.9**
XAN S **S** **04 28 02.8 -1.3**
XAN ScS **ScS** **04 31 19.1 +0.4**
XAN pmax pmax
comp=Z,220nm,1.1s
XAN pmax pmax
comp=Z,2µm,11.2s
XAN LR LR
comp=Z,6µm,18.8s
XAN LR LR
comp=Z,7µm,18.8s
XAN LR LR
comp=Z,8µm,21.1s
PATS Pohnpei 45.48 69 P **P** **04 21 26.2 +0.6**
baz=46,SNR=3.0
JCJ Chichijima 45.56 33 P **P** **04 21 25.4 -0.6**
comp=Z,142nm,0.8s,baz=222,slow=3.6,SNR=9.5
JCJ S **S** **04 27 57.8 -8.0**
comp=Z,22nm,0.9s,baz=292,slow=19,SNR=1.3
JCJ LR LR 04 43 25.7
comp=Z,1µm,18.2s,baz=230,slow=40
comp=Z,142nm,0.8s
JCJ Chichijima 45.56 33 P **P** **04 21 25.7 -0.3**
JCJ IAmb IAmb 04 21 37.1
comp=Z,228nm,0.7s
JCJ Chichijima 45.56 33 P **P** **04 21 28.3 +2.3**
JCJ Chichijima 45.56 33 ⇑P **P** **04 21 26.4 +0.4**
LYN LuoYang 45.57 356 ⇓P **P** **04 21 27.2 +1.3**
LYN pP pP 04 21 34.7 -1.2
LYN PcP **PcP** **04 23 06.0 +1.9**
LYN PP **PP** **04 23 16.6 +3.4**
LYN S **S** **04 28 01.8 -3.8**
LYN pmax pmax
comp=Z,50nm,1.5s
LYN pmax pmax
comp=Z,2µm,11.4s
LYN LR LR
comp=Z,4µm,21.1s
LYN LR LR
comp=Z,4µm,16.7s
LYN LR LR
comp=Z,8µm,23.0s
BOK Bokaro 45.69 320 *e*P **P** **04 21 28.1 +1.0**
BOK IAmb IAmb 04 21 31.6
comp=Z,107nm,0.7s
JNU Nakatsue 46.15 17 P **P** **04 21 29.8 -0.8**
comp=Z,58nm,0.7s,baz=194,slow=2.7,SNR=14
comp=Z,58nm,0.7s
JNU Nakatsue 46.15 17 P **P** **04 21 31.6 +1.0**
JNU IAmb IAmb 04 21 40.6
comp=Z,139nm,0.9s
JNU Nakatsue 46.15 17 P **P** **04 21 31.6 +1.0**
JNU Nakatsue 46.15 17 ⇓P **P** **04 21 32.0 +1.4**
GTK Tadong 46.70 325 *e*P **P** **04 21 37.0 +1.8**
GTK IAmb IAmb 04 21 46.6
comp=Z,322nm,1.1s
HYB Hyderabad 46.83 307 *e*P **P** **04 21 36.2 -0.1**
HYB IAmb IAmb 04 21 46.6
comp=Z,364nm,0.9s
HYBB Hyderabad (bro 46.84 307 *e*P **P** **04 21 36.0 -0.3**
HYBB IVmBBB 04 21 38.1
comp=Z,573nm,0.7s
HYBB *e*pP **pP** **04 21 42.9 -2.9**
HYBB *e*sP **sP** **04 21 45.5 -4.8**
HYBB *e*PcP **PcP** **04 23 10.9 +1.9**
HYBB *e*PP **PP** **04 23 28.5 +1.5**
HYBB *e*S **S** **04 28 27.1 +2.6**
HYBB IVMs_BB IVMs_BB 04 43 17.4
comp=Z,1µm,17.1s
KOUNC Koumac, New Ca 46.98 108 P **P** **04 21 38.5 +1.1**
KOUNC IAmb IAmb 04 21 47.3
comp=Z,266nm,1.4s
KOUNC Koumac, New Ca 46.98 108 P P 04 21 42.5 +5.1
KOUNC Koumac, New Ca 46.98 108 ⇓P **P** **04 21 41.2 +3.8**
ODAN Odare 47.04 324 *e*P **P** **04 21 38.2 +0.3**
comp=Z,1µm,2.3s
JTU Tsushima 47.07 15 P **P** **04 21 37.7 -0.1**
JTU Tsushima 47.07 15 ⇓P **P** **04 21 38.5 +0.7**
TIA Tai'an 47.09 1 ⇑P **P** **04 21 37.9 0.0**
TIA S **S** **04 28 24.2 -3.2**
TIA pmax pmax
comp=Z,180nm,0.8s
TIA pmax pmax
comp=Z,1µm,10.4s
TIA LR LR
comp=Z,4µm,22.9s
TIA LR LR
comp=Z,3µm,21.4s
TIA LR LR
comp=Z,7µm,21.1s
TAPN Taplejung 47.23 325 *e*P **P** **04 21 40.8 +1.3**
comp=Z,862nm,0.9s
LSA Lhasa 47.26 330 P **P** **04 21 41.1 +1.3**
LSA IAmb IAmb 04 21 59.0
comp=Z,226nm,1.1s
LSA Lhasa 47.26 330 P **P** **04 21 41.2 +1.3**
LSA pmax pmax
comp=Z,226nm,1.1s
LSA Lhasa 47.26 330 P **P** **04 21 41.5 +1.5**
LSA pmax pmax
comp=Z,70nm,0.8s
LSA LR LR
comp=Z,7µm,22.1s
LSA LR LR
comp=Z,6µm,22.4s
LSA LR LR
comp=Z,5µm,21.0s
LSA Lhasa 47.26 330 P **P** **04 21 41.4 +1.5**
LSA P **P** **04 21 41.4 +1.5**
LSA Lhasa 47.26 330 P **P** **04 21 41.5 +1.5**
RAMN Ramite 47.57 323 *e*P **P** **04 21 43.2 +1.1**
comp=Z,563nm,0.8s
JMN Monobe 47.65 20 P **P** **04 21 42.4 +0.1**
HNS HongShan 48.29 358 ⇑P **P** **04 21 47.7 +0.6**
HNS pP **pP** **04 21 55.9 -1.3**
HNS sP **sP** **04 22 01.6 +0.2**
HNS PcP **PcP** **04 23 18.3 +4.7**
HNS S **S** **04 28 39.8 -4.5**
HNS sS **sS** **04 28 56.5 -3.8**
HNS ScS **ScS** **04 31 39.6 +2.6**
HNS pmax pmax
comp=Z,52nm,1.5s
HNS pmax pmax
comp=Z,710nm,4.7s
HNS LR LR
comp=Z,2µm,17.7s
HNS LR LR
comp=Z,7µm,19.8s
HNS LR LR
comp=Z,6µm,19.0s
JIRN Jiri 48.34 323 *e*P **P** **04 21 49.3 +1.1**
comp=Z,2µm,0.6s
TJN Taejon 48.39 12 P **P** **04 21 49.2 +1.3**
TJN IAmb IAmb 04 23 19.6
comp=Z,277nm,1.2s
TJN Taejon 48.39 12 *c*eP **P** **04 21 48.8 +0.9**
TJN Taejon 48.39 12 P **P** **04 21 50.8 +2.9**
LZH Lanzhou 48.40 347 ⇓P **P** **04 21 49.6 +1.4**
LZH pP pP 04 21 59.2 +0.9
LZH sP sP 04 22 02.8 +0.2
LZH S **S** **04 28 43.8 -2.5**
LZH sS sS 04 29 01.3 -0.9
LZH pmax pmax
comp=Z,370nm,1.3s
LZH pmax pmax
comp=Z,3µm,6.4s
LZH LR LR
comp=Z,7µm,14.6s
LZH LR LR
comp=Z,9µm,15.0s
LZH LR LR
comp=Z,9µm,17.2s
JHS Saijyo 48.57 18 P **P** **04 21 50.6 +1.2**
JHS IAmb IAmb 04 21 53.0
comp=Z,228nm,0.9s
JHS Saijyo 48.57 18 ⇓P **P** **04 21 50.0 +0.6**
JHS Saijyo 48.57 18 P **P** **04 21 50.1 +0.7**
GUN Gumba 48.71 323 *e*P **P** **04 21 52.1 +1.1**
comp=Z,2µm,0.7s
TIY Taiyuan 48.71 356 ⇑P **P** **04 21 52.4 +1.9**
TIY S S 04 28 41.5 -9.0
TIY pmax pmax
comp=Z,69nm,0.8s
TIY pmax pmax
comp=Z,1µm,6.3s
TIY LR LR
comp=Z,4µm,19.2s
TIY LR LR
comp=Z,1µm,12.4s
TIY LR LR
comp=Z,4µm,19.9s
PKI Pulchoki 48.73 323 *e*P **P** **04 21 51.7 +0.5**
comp=Z,483nm,0.9s
PKIN Phulchoki 48.74 323 *e*P **P** **04 21 51.8 +0.6**
comp=Z,469nm,0.7s
JAD Aida 48.85 20 P **P** **04 21 52.5 +1.0**
DMN Daman 48.94 322 *e*P **P** **04 21 53.5 +0.8**
comp=Z,584nm,0.6s
NOUC Port Laguerre 48.97 110 P **P** **04 21 55.1 +2.4**
KKN Kakani 48.97 323 *e*P **P** **04 21 52.9 0.0**
comp=Z,1µm,2.0s

DZM **Mont Dzumac** 49.10 110 P **P** 04 21 54.3 +0.4
comp=Z,14nm,1.1s,baz=286,slow=18,SNR=3.6
DZM LR LR 04 44 15.6
comp=Z,20µm,18.9s,baz=280,slow=38
comp=Z,14nm,1.1s
DZM Mont Dzumac 49.10 110 P **P** **04 21 52.6 -1.2**
DZM Mont Dzumac 49.10 110 P **P** **04 21 56.2 +2.3**
JHJ Hachijo jima 2 49.38 26 P **P** **04 21 56.1 +0.6**
comp=Z,43nm,0.7s,baz=215,slow=16,SNR=2.4
JHJ LR LR 04 41 01.6
comp=Z,3µm,21.6s,baz=234,slow=34
comp=Z,43nm,0.7s
GKN Gorkha 49.51 322 *e*P **P** **04 21 57.7 +0.8**
comp=Z,537nm,0.6s
KSAR Wonju Array Be 49.52 12 P **P** **04 21 57.7 +1.1**
KSAR Wonju Array Be 49.52 12 P **P** **04 21 57.7 +1.1**
KSRS Korea Array 49.54 12 P **P** **04 21 57.4 +0.7**
comp=Z,38nm,0.8s,baz=191,slow=8.4,SNR=64
KSRS PcP **PcP** **04 23 21.1 +3.0**
comp=Z,12nm,0.8s,baz=184,slow=3.7,SNR=4.2
KSRS LR LR 04 45 50.3
comp=Z,2µm,19.3s,baz=195,slow=40
comp=Z,38nm,0.8s
JWT Wachi 49.58 21 P **P** **04 21 57.8 +0.7**
KS19 Wonju Array Si 49.58 12 P **P** **04 21 57.2 +0.2**
KS19 IAmb IAmb 04 22 07.6
comp=Z,110nm,1.0s
HJU Haeju 49.70 10 P **P** **04 21 59.7 +1.8**
HJU pP **pP** **04 22 04.0 -4.1**
HJU S **S** **04 29 02.4 -1.8**
HJU AmB
comp=Z,672nm,2.0s
HJU AMS AMS
comp=N,3µm,6.3s
HJU AMS AMS
comp=E,3µm,6.0s
HJU AMS AMS
comp=Z,4µm,8.9s
KOLN Koldanda 49.97 321 *e*P **P** **04 22 00.3 -0.2**
comp=Z,484nm,0.9s
DL2 Dalian 50.02 5⇓*i*P **P** **04 22 00.3 0.0**
DL2 S **S** **04 29 09.6 +1.0**
DL2 ScS **ScS** **04 31 50.0 +1.4**
DL2 pmax pmax
comp=Z,81nm,0.7s
DL2 pmax pmax
comp=Z,700nm,7.1s
DL2 LR LR
comp=Z,2µm,19.4s
DL2 LR LR
comp=Z,2µm,18.0s
DL2 LR LR
comp=Z,2µm,21.6s
INU Inuyama 50.21 22 P **P** **04 22 03.3 +1.4**
SEHB SEOHWA 50.39 12 P **P** **04 22 03.7 +0.5**
MARNC Mare, Loyalty 50.53 109 P **P** **04 22 08.5 +3.9**
JGF Kuroka 50.56 22 P **P** **04 22 05.5 +0.9**
JGF Kuroka 50.56 22 ⇓P **P** **04 22 04.6 0.0**
DVP Devils Point 50.57 104 P **P** **04 22 07.4 +2.4**
PYAG Pyongyang 50.69 10 P **P** **04 22 06.9 +1.5**
PYAG pP **pP** **04 22 11.2 -4.4**
PYAG S **S** **04 29 15.7 -2.2**
PYAG AmB
comp=Z,253nm,1.2s
PYAG AMS AMS
comp=N,2µm,6.4s
PYAG AMS AMS
comp=E,690nm,2.4s
PYAG AMS AMS
comp=Z,2µm,7.6s
BJT Baijiatuau 50.88 360 P **P** **04 22 07.2 +0.4**
BJT IAmb IAmb 04 22 30.2
comp=Z,152nm,1.0s
BJT Baijiatuau 50.88 360 P **P** **04 22 07.2 +0.4**
BJT pmax pmax
comp=Z,152nm,1.0s
BJI Beijing 50.90 360 P **P** **04 22 07.2 +0.2**
BJI S **S** **04 29 17.4 -3.4**
BJI ScS **ScS** **04 31 55.8 +1.2**
BJI pmax pmax
comp=Z,78nm,1.4s
BJI pmax pmax
comp=Z,2µm,9.7s
BJI LR LR
comp=Z,5µm,21.8s
BJI LR LR
comp=Z,3µm,19.9s
BJI LR LR
comp=Z,7µm,21.3s
JGN Niukaw 51.10 22 P **P** **04 22 08.5 -0.2**
BHPL Bhopal 51.11 312 *e*P **P** **04 22 08.6 -0.4**
BHPL IAmb IAmb 04 22 19.1
comp=Z,309nm,0.9s
POO Poona 51.19 305 IAmb IAmb 04 22 20.8
comp=Z,198nm,1.0s
GOMU GeErMu 51.24 338 P **P** **04 22 11.2 +1.1**
GOMU pP pP 04 22 18.9 -1.3
GOMU sP sP 04 22 21.0 -3.5
GOMU PcP **PcP** **04 23 24.7 -0.3**
GOMU PP **PP** **04 24 10.1 +2.7**
GOMU S **S** **04 29 22.7 -3.7**
GOMU sS pS 04 29 47.5 -0.6
GOMU pmax pmax
comp=Z,45nm,1.4s
GOMU pmax pmax
comp=Z,2µm,7.9s
GOMU LR LR
comp=Z,3µm,20.7s
GOMU LR LR
comp=Z,4µm,20.1s
GOMU LR LR
comp=Z,3µm,21.3s
JRY Ryogami san 51.52 23 P **P** **04 22 11.9 +0.1**
SUJ Sinuiju 51.53 8 P **P** **04 22 12.8 +1.1**
SUJ pP **pP** **04 22 17.3 -4.5**
SUJ S **S** **04 29 25.6 -3.9**
SUJ AmB
comp=Z,867nm,2.9s
SUJ AMS AMS
comp=N,3µm,7.8s
SUJ AMS AMS
comp=E,2µm,5.5s
SUJ AMS AMS
comp=Z,2µm,7.3s
MJAR Matsushiro Arr 51.72 23 P **P** **04 22 12.2 -1.0**
comp=Z,37nm,0.8s,baz=196,slow=7.0,SNR=53
MJAR PcP **PcP** **04 23 29.1 +2.8**
comp=Z,27nm,1.0s,baz=203,slow=4.5,SNR=4.9
MJAR LR LR 04 44 24.8
comp=Z,2µm,20.7s,baz=214,slow=36
comp=Z,37nm,0.8s
MJAR Matsushiro Arr 51.72 23 P **P** **04 22 12.6 -0.6**
MJAR Matsushiro Arr 51.72 23 P **P** **04 22 12.6 -0.6**
MJAR pmax pmax
comp=Z,47nm,1.0s
MAJO Matsushiro 51.72 23 P **P** **04 22 12.5 -0.7**
MAJO IAmb IAmb 04 22 22.5
comp=Z,265nm,1.8s
MAJO Matsushiro 51.72 23 *i*P **P** **04 22 14.5 +1.3**
MAJO pmax pmax
comp=Z,93nm,1.7s
MAJO MLR MLR
comp=Z,2µm,20.0s
MAJO Matsushiro 51.72 23 P **P** **04 22 13.8 +0.6**
MAJO Matsushiro 51.72 23 ⇑P **P** **04 22 12.9 -0.3**
MJB9 Matsu-Tunnel 51.72 23 P **P** **04 22 12.7 -0.6**
MJB9 IAmb IAmb 04 22 22.4
comp=Z,272nm,1.8s
BTO Baotou 51.79 354 *e*P **P** **04 22 13.8 0.0**
BTO S **S** **04 29 36.0 +2.7**
BTO LR LR
comp=Z,11µm,22.6s
BTO LR LR
comp=Z,14µm,20.1s
HHU Hamhung 51.85 11 P **P** **04 22 16.1 +2.0**
HHU pP **pP** **04 22 20.8 -3.4**
HHU S **S** **04 29 32.9 -1.0**
HHU AmB
comp=Z,2µm,5.1s
HHU AMS AMS
comp=N,2µm,7.1s
HHU AMS AMS
comp=E,2µm,6.6s
HHU AMS AMS
comp=Z,3µm,8.4s
HHC Hu-ho-hao-te 51.89 355 *e*P **P** **04 22 14.8 +0.2**

HHC S **S** **04 29 31.1 -3.6**
HHC pmax pmax
comp=Z,57nm,1.1s
HHC pmax pmax
comp=Z,3µm,6.3s
HHC LR LR
comp=Z,6µm,21.7s
HHC LR LR
comp=Z,3µm,17.6s
HHC LR LR
comp=Z,10µm,19.8s
GTA Gaotai 52.56 344 ⇓P **P** **04 22 21.0 +1.4**
GTA pP pP 04 22 27.3 -2.4
GTA sP sP 04 22 30.7 -3.3
GTA PP **PP** **04 24 22.7 +3.7**
GTA S **S** **04 29 45.3 +1.3**
GTA pmax pmax
comp=Z,59nm,1.8s
GTA pmax pmax
comp=Z,3µm,8.7s
GTA LR LR
comp=Z,3µm,22.2s
GTA LR LR
comp=Z,6µm,22.5s
GTA LR LR
comp=Z,4µm,23.3s
JSD Sado 53.06 22 P **P** **04 22 22.7 -0.4**
JSD IAmb IAmb 04 22 25.8
comp=Z,115nm,0.9s
JSD Sado 53.06 22 ⇓P **P** **04 22 22.9 -0.2**
JSD Sado 53.06 22 P **P** **04 22 22.9 -0.2**
SNY Shenyang 53.12 7 ⇓P **P** **04 22 23.2 -0.2**
SNY pmax pmax
comp=Z,110nm,0.8s
SNY LR LR
comp=Z,3µm,20.1s
SNY LR LR
comp=Z,2µm,18.7s
SNY LR LR
comp=Z,5µm,18.5s
JMM Marumori 53.87 24 P **P** **04 22 29.0 -0.1**
JMM IAmb IAmb 04 22 39.2
comp=Z,206nm,1.3s
JMM Marumori 53.87 24 ⇓P **P** **04 22 29.4 +0.4**
JMM Marumori 53.87 24 P **P** **04 22 31.2 +2.1**
JYA Atsumi 54.09 23 P **P** **04 22 32.7 +2.1**
XLT XiLinHaoTe 54.76 360 ⇓*i*P **P** **04 22 37.0 +1.4**
XLT pP pP 04 22 47.1 +1.3
XLT sP pwP 04 22 51.8 +1.1
XLT S **S** **04 30 06.6 -6.9**
XLT ScS **ScS** **04 32 18.9 -2.8**
XLT pmax pmax
comp=Z,130nm,1.2s
XLT pmax pmax
comp=Z,3µm,9.5s
XLT LR LR
comp=Z,420nm,22.4s
XLT LR LR
comp=Z,3µm,22.8s
XLT LR LR
comp=Z,6µm,22.3s
DCZ Deep Cove 55.11 138 P **P** **04 22 37.4 -0.6**
DCZ IAmb IAmb 04 22 48.5
comp=Z,161nm,1.3s
DDI Dehra Dun 55.22 319 *e*P **P** **04 22 38.5 -0.6**
DDI IAmb IAmb 04 22 49.1
comp=Z,378nm,1.0s
CASY Casey 55.23 183 P **P** **04 22 37.8 -0.8**
CASY IAmb IAmb 04 22 41.6
comp=Z,100nm,1.0s
CASY Casey 55.23 183 ⇑P **P** **04 22 38.2 -0.3**
CN2 Changchun 55.30 8 *e*P **P** **04 22 39.2 -0.1**
CN2 pP pP 04 22 47.1 -2.5
CN2 PcP **PcP** **04 23 40.2 +0.5**
CN2 S **S** **04 30 23.4 +2.9**
CN2 pmax pmax
comp=Z,30nm,1.1s
CN2 pmax pmax
comp=Z,2µm,10.0s
CN2 LR LR
comp=Z,2µm,17.0s
CN2 LR LR
comp=Z,2µm,17.0s
CN2 LR LR
comp=Z,2µm,19.0s
WHZ Wether Hill Ro 55.78 139 P **P** **04 22 41.6 -1.3**
VLA Vladivostok 55.83 14 *i*P **P** **04 22 44.1 +0.9**
VLA pmax pmax
comp=Z,259nm,1.6s
VLA MLR MLR
comp=Z,2µm,18.0s
WKZ Wanaka 56.12 137 P **P** **04 22 44.5 -0.9**
WKZ IAmb IAmb 04 22 49.7
comp=Z,108nm,0.7s
SMLA Simla 56.33 319 *e*P **P** **04 22 47.0 0.0**
SMLA IAmb IAmb 04 22 57.2
comp=Z,1µm,1.0s
JTM Tenmabayashi 56.51 22 P **P** **04 22 48.1 +0.1**
JTM IAmb IAmb 04 23 07.8
comp=Z,109nm,1.1s
JTM Tenmabayashi 56.51 22 ⇓P **P** **04 22 48.8 +0.8**
LBZ Lake Benmore 56.76 136 P **P** **04 22 48.9 -1.0**
LBZ IAmb IAmb 04 23 12.6
comp=Z,135nm,1.3s
MDJ Mudanjiang 56.77 11 P **P** **04 22 49.7 -0.2**
MDJ IAmb IAmb 04 22 53.3
comp=Z,118nm,0.7s
MDJ Mudanjiang 56.77 11 P **P** **04 22 49.6 -0.2**
MDJ pP pP 04 22 58.6 -1.6
MDJ sP sP 04 23 01.9 -2.6
MDJ PcP **PcP** **04 23 40.2 -5.2**
MDJ S **S** **04 30 37.8 -2.4**
MDJ sS pS 04 30 52.9 +0.3
MDJ ScS **ScS** **04 32 32.8 -3.2**
MDJ pmax pmax
comp=Z,42nm,0.7s
MDJ pmax pmax
comp=Z,2µm,8.7s
MDJ LR LR
comp=Z,2µm,21.4s
MDJ LR LR
comp=Z,2µm,17.7s
MDJ LR LR
comp=Z,4µm,22.4s
MDJ Mudanjiang 56.77 11 P **P** **04 22 51.7 +1.8**
USA0B Ussuriysk Arra 56.88 13 P **P** **04 22 51.2 +0.6**
USA0B IAmb IAmb 04 22 54.2
comp=Z,335nm,1.4s
USA0B Ussuriysk Arra 56.88 13 *d*P **P** **04 22 51.1 +0.5**
USRK Ussuriysk Ar. 56.88 13 P **P** **04 22 51.2 +0.6**
comp=Z,70nm,0.6s,baz=194,slow=5.9,SNR=78
comp=Z,70nm,0.6s
JOT Ohata 57.02 22 P **P** **04 22 54.0 +2.4**
RPZ Rata Peaks 57.15 135 P **P** **04 22 53.0 +0.3**
comp=Z,106nm,0.7s,baz=272,slow=3.7,SNR=27
RPZ LR LR 04 49 11.7
comp=Z,23µm,18.1s,baz=292,slow=38
comp=Z,106nm,0.7s
RPZ Rata Peaks 57.15 135 P **P** **04 22 51.9 -0.8**
RPZ IAmb IAmb 04 22 56.7
comp=Z,139nm,0.8s
ODZ Otahua Downs 57.28 137 P **P** **04 22 53.8 +0.2**
ODZ Otahua Downs 57.28 137 ⇑P **P** **04 22 56.4 +2.8**
BNX BinXian 57.48 9 ⇑P **P** **04 22 54.7 -0.1**
BNX pP **pP** **04 23 02.3 -2.8**
BNX sP **sP** **04 23 05.6 -3.9**
BNX PP **PP** **04 25 03.0 +0.2**
BNX S **S** **04 30 46.7 -2.7**
BNX pmax pmax
comp=Z,26nm,0.5s
BNX pmax pmax
comp=Z,3µm,6.3s
BNX LR LR
comp=Z,3µm,14.0s
BNX LR LR
comp=Z,2µm,14.2s
BNX LR LR
comp=Z,3µm,17.2s
TARA Tarawa 57.66 81 IAMs_20 IAMs_20 04 46 31.3
comp=Z,5µm,22.0s
OXZ Oxford 57.72 134 P **P** **04 22 56.5 -0.2**
OXZ IAmb IAmb 04 23 01.7
comp=Z,104nm,0.6s
LTZ Lake Taylor 57.73 134 P **P** **04 22 57.1 +0.3**
THZ Tophouse 57.92 132 P **P** **04 22 58.3 +0.1**

THZ IAmb IAmb 04 23 07.1
comp=Z,120nm,1.0s
WAKE Wake Island 58.11 59 P **P** **04 23 00.7 +0.9**
WAKE IAmb IAmb 04 23 17.4
comp=Z,98nm,1.0s
NNZ Nelson 58.13 132 P **P** **04 22 59.7 +0.1**
NNZ IAmb IAmb 04 23 07.8
comp=Z,172nm,1.1s
MQZ McQueen's Vall 58.26 135 P **P** **04 23 01.1 +0.7**
MQZ IAmb IAmb 04 23 04.8
comp=Z,217nm,1.5s
ERM Erimo 58.36 23*ce*P **P** **04 23 03.0 +1.9**
ERM pmax pmax
comp=Z,63nm,1.7s
ERM MLR MLR
comp=Z,3µm,19.0s
ERM Erimo 58.36 23 P **P** **04 23 04.0 +2.9**
ERM Erimo 58.36 23 ⇓P **P** **04 23 02.7 +1.6**
JEM Erimo 58.36 23 P **P** **04 23 03.5 +2.4**
KHZ Kahutara 58.54 133 P **P** **04 23 03.0 +0.6**
KHZ IAmb IAmb 04 23 06.3
comp=Z,125nm,1.1s
KHZ Kahutara 58.54 133 ⇓P **P** **04 23 04.4 +2.0**
TUWZ Tuamarina 58.59 132 P **P** **04 23 03.1 +0.2**
TEY Ternei 58.84 17⇓*e*P **P** **04 23 04.9 +0.5**
TEY *e* 04 30 59.6
TEY pmax pmax
comp=E,10.0nm,1.3s
TEY pmax pmax
comp=N,20nm,1.2s
TEY pmax pmax
comp=Z,40nm,1.3s
TEY pmax pmax
comp=E,20nm,0.6s
TEY pmax pmax
comp=N,80nm,0.8s
TEY pmax pmax
comp=Z,190nm,0.8s
TEY pmax pmax
comp=Z,10.0nm,16.0s
SNZO South Karori 59.12 132 P **P** **04 23 06.7 +0.2**
SNZO IAmb IAmb 04 23 09.7
comp=Z,262nm,1.2s
SNZO South Karori 59.12 132 P **P** **04 23 07.5 +1.0**
SNZO South Karori 59.12 132 ⇓P **P** **04 23 06.9 +0.4**
BHW Baring Head 59.27 132 P **P** **04 23 07.6 +0.1**
ULN Ulaanbaatar 59.30 353 P **P** **04 23 08.9 +1.2**
ULN IAmb IAmb 04 23 18.9
comp=Z,112nm,1.1s
ULN Ulaanbaatar 59.30 353*d*P **P** **04 23 08.3 +0.6**
ULN pmax pmax
comp=Z,135nm,1.1s
ULN Ulaanbaatar 59.30 353 P **P** **04 23 07.9 +0.2**
ULN P **P** **04 23 07.9 +0.2**
ULN Ulaanbaatar 59.30 353 ⇓P **P** **04 23 08.2 +0.5**
SONM Songino Array 59.35 352 P **P** **04 23 08.6 +0.6**
comp=Z,44nm,0.8s,baz=171,slow=7.8,SNR=47
SONM LR LR 04 52 03.5
comp=Z,4µm,19.8s,baz=191,slow=39
comp=Z,44nm,0.8s
SONM Songino Array 59.35 352 P **P** **04 23 09.2 +1.2**
SONM IAmb IAmb 04 23 19.2
comp=Z,143nm,1.0s
SONM Songino Array 59.35 352 P **P** **04 23 09.2 +1.2**
SONM pmax pmax
comp=Z,143nm,1.0s
ASAJ Asahikawa 59.96 22 P **P** **04 23 13.6 +1.5**
ASAJ pmax pmax
comp=Z,58nm,0.8s
JKA Kamikawa-asahi 59.96 22 P **P** **04 23 13.6 +1.5**
MSVF Nonsavu 59.97 104 P **P** **04 23 14.5 +1.6**
comp=Z,50nm,1.1s,baz=246,slow=10.0,SNR=3.1
MSVF LR LR 04 48 52.1
comp=Z,5µm,19.7s,baz=259,slow=36
comp=Z,50nm,1.1s
MSVF Nonsavu 59.97 104 P **P** **04 23 13.0 +0.2**
MSVF IAmb IAmb 04 23 36.0
comp=Z,359nm,1.7s
MSVF Nonsavu 59.97 104 IAMs_20 IAMs_20 04 46 46.7
comp=Z,8µm,22.0s
MSVF Nonsavu 59.97 104 P **P** **04 23 13.6 +0.7**
MSVF Nonsavu 59.97 104 ⇑P **P** **04 23 16.5 +3.6**
BKZ Black Stump Fm 60.03 129 P **P** **04 23 13.3 +0.4**
BKZ IAmb IAmb 04 23 33.0
comp=Z,105nm,1.0s
BKZ Black Stump Fm 60.03 129 P **P** **04 23 15.0 +2.1**
BFZ Birch Farm 60.13 131 P **P** **04 23 15.2 +1.7**
HIA Hailar 60.20 3 P **P** **04 23 15.4 +1.7**
HIA Hailar 60.20 3 P **P** **04 23 15.4 +1.7**
HIA pmax pmax
comp=Z,49nm,1.0s
URZ Urewera 60.35 128 P **P** **04 23 15.6 +0.6**
comp=Z,16nm,0.7s,baz=252,slow=3.2,SNR=2.1
URZ LR LR 04 48 49.2
comp=Z,19µm,20.5s,baz=281,slow=36
comp=Z,16nm,0.7s
MSEY Mahe Island 60.48 271 ⇓P **P** **04 23 18.5 +2.2**
WMQ Urumqi 60.56 337 P **P** **04 23 17.3 +1.0**
WMQ pP pP 04 23 26.8 +0.1
WMQ sP pwP 04 23 33.8 +2.4
WMQ PcP **PcP** **04 24 03.1 +2.6**
WMQ PP **PP** **04 25 35.0 +4.7**
WMQ ScP **ScP** **04 28 00.9 +2.0**
WMQ S **S** **04 31 30.0 +0.5**
WMQ pmax pmax
comp=Z,150nm,2.1s
WMQ pmax pmax
comp=Z,2µm,3.8s
WMQ LR LR
comp=Z,4µm,26.1s
WMQ LR LR
comp=Z,4µm,26.1s
WMQ LR LR
comp=Z,4µm,24.5s
YUK Yuzh-Kuril'sk 61.13 24 *e*P **P** **04 23 18.4 -1.7**
YUK *e* 04 24 00.4
YUK *e* 04 25 32.7
YUK *e*S **S** **04 31 35.4 -1.2**
YUK *e* 04 33 06.0
YUK *e*SS **SS** **04 35 36.9 -0.5**
YUK pmax pmax
comp=Z,468nm,1.6s
YUK pmax pmax
comp=Z,514nm,1.2s
YUK pmax pmax
comp=E,549nm,1.1s
YUK pmax pmax
comp=N,564nm,1.5s
YUK MLR MLR
comp=Z,1µm,15.0s
YUK MLR MLR
comp=N,303nm,13.0s
YUK MLR MLR
comp=E,2µm,16.0s
KLR Kul'dur 61.62 11 P **P** **04 23 23.5 +0.2**
comp=E,23nm,0.6s,baz=204,slow=6.3,SNR=44
KLR PKP2bc **P'P'bc** **04 52 45.4 +4.7**
comp=E,1.8nm,0.8s,baz=22,slow=3.5,SNR=6.1
comp=E,23nm,0.6s
KLR Kul'dur 61.62 11*d*i P **P** **04 23 23.0 -0.3**
KLR pmax pmax
comp=Z,186nm,2.0s
DGTI Dogotuki 61.66 103 P **P** **04 23 26.7 +2.4**
ZAK Zakamensk 62.29 351 *e*P **P** **04 23 28.7 +0.8**
ZAK pmax pmax
comp=Z,72nm,1.3s
YSS Yuzh-Sakhalins 62.47 20 P **P** **04 23 30.4 +1.4**
YSS IAmb IAmb 04 23 32.7
comp=Z,260nm,1.4s
YSS Yuzh-Sakhalins 62.47 20*de*P **P** **04 23 30.6 +1.5**
YSS *e**PP **pP** **04 23 39.0 -0.5**
YSS *e* 04 24 08.5
YSS *e*S **S** **04 31 53.5 0.0**
YSS *e*PS **PnS** **04 32 09.7 -3.3**
YSS *e*SS **SS** **04 35 53.5 -4.8**
YSS pmax pmax
comp=N,200nm,3.2s
YSS pmax pmax
comp=Z,700nm,3.2s
YSS pmax pmax
comp=Z,120nm,1.3s
YSS pmax pmax
comp=Z,200nm,3.6s
YSS smax smax
comp=N,2µm,11.4s

YSS	**Yuzh-Sakhalins**	**62.47**	**20**	P	**P**	**04 23 31.8**	**+2.7**
KSH	**Kashi**	**62.77**	**326**	P	**P**	**04 23 32.5**	**+1.1**
KSH				pP	pP	04 23 42.7	+1.3
KSH				S	**S**	**04 31 55.9**	**-2.0**
KSH				pmax	pmax		
	comp=N,420nm,0.9s						
KSH				pmax	pmax		
	comp=N,4μm,5.8s						
KSH				LR	LR		
	comp=N,5μm,17.9s						
KSH				LR	LR		
	comp=N,4μm,18.9s						
KSH				LR	LR		
	comp=N,5μm,17.2s						
LKBA	**Tubou, Lakemba**	**62.92**	**105**	P	**P**	**04 23 35.1**	**+2.4**
KUR	**Kuril'sk**	**62.93**	**25***d*	*i* P	**P**	**04 23 32.5**	**+0.4**
KUR				*e*		04 25 52.9	
KUR				*i* S	**S**	**04 31 57.0**	**-2.3**
KUR				*e* SS	**SS**	**04 36 05.6**	**+0.1**
KUR				pmax	pmax		
	comp=N,155nm,1.6s						
KUR				pmax	pmax		
	comp=Z,231nm,1.6s						
KUR				pmax	pmax		
	comp=Z,2μm,5.1s						
KUR				MLR	MLR		
	comp=Z,1μm,21.0s						
KUR				MLR	MLR		
	comp=N,1μm,18.0s						
CIT	**Chita**	**62.93**	**358**	*e* P	**P**	**04 23 35.2**	**+3.1**
CIT				*e*		04 23 50.1	
CIT				*e*		04 24 13.8	
CIT				pmax	pmax		
	comp=Z,310nm,2.1s						
RAO	**Raoul Island**	**63.59**	**117**	LR	LR	04 50 34.7	
	comp=Z,10μm,19.9s,baz=302,slow=35						
SHLS	**Shalkode**	**63.62**	**331**	*e* P	**P**	**04 23 35.8**	**-1.1**
SHLS				*e* S	**S**	**04 32 06.5**	**-1.9**
SHLS				pmax	pmax		
	comp=Z,212nm,1.2s						
SHLS				smax	smax		
	comp=E,304nm,3.8s						
SHLS	**Shalkode**	**63.62**	**331**	*e* P	**P**	**04 23 35.9**	**-1.1**
	comp=E,212nm,1.2s,baz=331						
SHLS				*e* S	**S**	**04 32 06.5**	**-1.9**
	comp=E,304nm,3.8s,baz=331						
PRZ	**Przheval'sk**	**63.64**	**330**	P	**P**	**04 23 38.7**	**+1.5**
PRZ	**Przheval'sk**	**63.64**	**330**	P	**P**	**04 23 38.7**	**+1.5**
PRZ				pmax	pmax		
	comp=Z,513nm,1.0s						
PDGK	**Podgornoye**	**63.74**	**331**	P	**P**	**04 23 38.6**	**+0.9**
KBL	**Kabul**	**63.77**	**318**	P	**P**	**04 23 39.1**	**+0.8**
KBL	**Kabul**	**63.77**	**318**	P	**P**	**04 23 39.1**	**+0.8**
KBL				pmax	pmax		
	comp=Z,1μm,1.7s						
KBL	**Kabul**	**63.77**	**318**	P	**P**	**04 23 37.0**	**-1.2**
KBL				P	**P**	**04 23 37.0**	**-1.2**
MOY	**Mondy**	**63.92**	**349**	*e* P	**P**	**04 23 39.8**	**+1.1**
MOY				pmax	pmax		
	comp=Z,255nm,1.8s						
IRK	**Irkutsk**	**63.95**	**352**	*e* P	**P**	**04 23 39.7**	**+0.9**
IRK				pmax	pmax		
	comp=Z,288nm,2.1s						
KDJ	**Kajisay**	**63.99**	**329**	P	**P**	**04 23 40.9**	**+1.4**
KDJ	**Kajisay**	**63.99**	**329**	P	**P**	**04 23 40.9**	**+1.4**
KDJ				pmax	pmax		
	comp=Z,3μm,1.9s						
GRNR	**Gornyy**	**64.09**	**14**	⇓*i* P	**P**	**04 23 40.9**	**+1.2**
GRNR				*e*		04 25 59.0	
GRNR				pmax	pmax		
	comp=Z,20nm,0.8s						
GRNR				MLR	MLR		
	comp=E,450nm,15.0s						
GRNR				MLR	MLR		
	comp=N,350nm,14.0s						
GRNR				MLR	MLR		
	comp=Z,940nm,19.0s						
UGL	**Uglegorsk**	**64.11**	**19**	*e* P	**P**	**04 23 41.4**	**+1.6**
UGL				*e* S	**S**	**04 32 14.2**	**+0.4**
UGL				pmax	pmax		
	comp=Z,220nm,1.1s						
UGL				pmax	pmax		
	comp=Z,2μm,7.0s						
UGL				smax	smax		
	comp=N,3μm,12.0s						
UGL				smax	smax		
	comp=E,4μm,12.0s						
UGL				MLR	MLR		
	comp=N,1μm,21.0s						
UGL				MLR	MLR		
	comp=E,2μm,21.0s						
UGL				MLR	MLR		
	comp=E,2μm,21.0s						
KPKS	**Kokpek**	**64.23**	**330**	*d i* P	**P**	**04 23 41.8**	**+0.9**
KPKS				*e* S	**S**	**04 32 11.7**	**-4.1**
KPKS				pmax	pmax		
	comp=Z,272nm,1.3s						
KPKS				smax	smax		
	comp=N,349nm,4.5s						
KPKS	**Kokpek**	**64.23**	**330**	⇓*i* P	**P**	**04 23 41.8**	**+0.9**
	comp=N,272nm,1.3s,baz=331						
KPKS				*e* S	**S**	**04 32 11.7**	**-4.1**
	comp=N,349nm,4.5s,baz=331						
ULHL	**Ulahol**	**64.56**	**328**	P	**P**	**04 23 44.4**	**+1.1**
	SNR=37						
ZSN	**Zaisan**	**64.68**	**337**	*d i* P	**P**	**04 23 44.8**	**+1.2**
ZSN				*e* S	**S**	**04 32 19.7**	**-1.3**
ZSN				pmax	pmax		
	comp=Z,374nm,3.1s						
ZSN				smax	smax		
	comp=E,653nm,5.1s						
ZSN	**Zaisan**	**64.68**	**337**	⇓*i* P	**P**	**04 23 44.9**	**+1.2**
	comp=E,374nm,3.1s,baz=337						
ZSN				*e* S	**S**	**04 32 19.8**	**-1.3**
	comp=E,653nm,5.1s,baz=337						
SBV	**Sambava**	**64.71**	**260**	P	**P**	**04 23 45.0**	**+0.5**
TNSS	**Tian-Shan**	**64.77**	**329**	*e* P	**P**	**04 23 45.7**	**+0.9**
TNSS	**Tian-Shan**	**64.77**	**329**	*e* P	**P**	**04 23 45.7**	**+0.9**
	baz=329						
MDOK	**Medeo**	**64.81**	**329**	*e* P	**P**	**04 23 45.9**	**+1.1**
MDOK				*e* S	**S**	**04 32 22.4**	**-0.7**
MDOK	**Medeo**	**64.81**	**329**	*e* P	**P**	**04 23 46.0**	**+1.1**
	baz=330						
MDOK				*e* S	**S**	**04 32 22.5**	**-0.7**
	baz=330						
JLN	**Jalan Bani Buh**	**64.82**	**301**	P	**P**	**04 23 47.1**	**+2.0**
	SNR=9.7						
BOOM	**Boomskoye usch**	**64.89**	**328**	P	**P**	**04 23 46.5**	**+1.1**
BOOM	**Boomskoye usch**	**64.89**	**328**	P	**P**	**04 23 46.5**	**+1.1**
BOOM				pmax	pmax		
	comp=Z,503nm,0.9s						
KNDC	**Almaty**	**64.89**	**329**	P	**P**	**04 23 49.1**	**+3.9**
AAA	**Alma-Ata**	**64.91**	**329**	*e* P	**P**	**04 23 45.4**	**0.0**
AAA	**Alma-Ata**	**64.91**	**329**	*e* P	**P**	**04 23 45.2**	**-0.2**
	baz=330						
AAA				*e* S	**S**	**04 32 22.9**	**-1.3**
	baz=330						
MK31	**Makanchi Array**	**65.17**	**335**	P	**P**	**04 23 48.3**	**+1.4**
MK31	**Makanchi Array**	**65.17**	**335**	*i* P	**P**	**04 23 47.5**	**+0.6**
MK31				pmax	pmax		
	comp=Z,425nm,0.9s						
MKAR	**Makanchi Array**	**65.17**	**335**	P	**P**	**04 23 47.9**	**+1.0**
	comp=Z,132nm,0.6s,baz=148,slow=6.5,SNR=279						
MKAR				S	**S**	**04 32 21.8**	**-5.4**
	comp=Z,0.8nm,0.8s,baz=141,slow=17,SNR=1.5						
MKAR				PKP2bc	**P'P'bc**	**04 52 34.3**	**+2.1**
	comp=Z,0.9nm,0.8s,baz=303,slow=3.2,SNR=6.9						
	comp=Z,132nm,0.6s						
MKAR	**Makanchi Array**	**65.17**	**335**	P	**P**	**04 23 48.3**	**+1.4**
ARXS	**Arharly**	**65.20**	**330**	P	**P**	**04 23 47.1**	**-0.1**
ZEA	**Zeya**	**65.28**	**7**	*e* P	**P**	**04 23 48.1**	**+0.7**
ZEA				*e* S	**S**	**04 32 27.9**	**-0.2**
ZEA				*e* SS	**SS**	**04 36 40.5**	**-1.4**
ZEA				pmax	pmax		
	comp=N,500nm,2.8s						
ZEA				pmax	pmax		
	comp=Z,1μm,6.7s						
ZEA				pmax	pmax		
	comp=E,30nm,0.9s						
ZEA				pmax	pmax		
	comp=N,80nm,1.5s						
ZEA				pmax	pmax		
	comp=Z,120nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,300nm,10.0s						
ZEA				smax	smax		
	comp=E,500nm,14.7s						
ZEA				smax	smax		
	comp=N,2μm,16.2s						
ZEA				MLR	MLR		
	comp=N,900nm,20.0s						
ZEA				MLR	MLR		
	comp=Z,1μm,19.0s						
MAKZ	**Makanchi**	**65.32**	**335**	P	**P**	**04 23 49.4**	**+1.6**
MAKZ				IAMs_20	IAMs_20	04 55 36.0	
	comp=Z,3μm,22.0s						
MAKZ	**Makanchi**	**65.32**	**335**	P	**P**	**04 23 49.4**	**+1.6**
MAKZ				pmax	pmax		
	comp=Z,305nm,1.2s						
MAKZ				MLR	MLR		
	comp=Z,3μm,22.0s						
CHKK	**Chushkaly**	**65.34**	**330**	*e* P	**P**	**04 23 48.0**	**-0.1**
CHKK	**Chushkaly**	**65.34**	**330**	*e* P	**P**	**04 23 48.0**	**-0.1**
	baz=330						
TKM2	**Tokmak 2**	**65.38**	**328**	P	**P**	**04 23 49.6**	**+1.0**
	SNR=127						
TKM2	**Tokmak 2**	**65.38**	**328**	*i* P	**P**	**04 23 49.1**	**+0.5**
TKM2				pmax	pmax		
	comp=Z,479nm,1.0s						
WBK	**Wadi Bani Khal**	**65.38**	**301**	P	**P**	**04 23 49.4**	**+0.7**
	SNR=9.2						
UCH	**Uchtor**	**65.46**	**327**	P	**P**	**04 23 52.4**	**+3.0**
	SNR=59						
TDK	**Taldyqorghan**	**65.51**	**331**	*d i* P	**P**	**04 23 50.1**	**+1.0**
TDK				*e* S	**S**	**04 32 31.1**	**-0.3**
TDK				smax	smax		
	comp=N,877nm,3.8s						
TDK	**Taldyqorghan**	**65.51**	**331**	⇓*i* P	**P**	**04 23 50.1**	**+1.0**
	baz=332						
TDK				*e* S	**S**	**04 32 31.2**	**-0.2**
	comp=N,877nm,3.8s,baz=332						
KBK	**Karagaybulak**	**65.53**	**328**	P	**P**	**04 23 51.1**	**+1.6**
	SNR=97						
MHTO	**MHTO**	**65.57**	**299**	P	**P**	**04 23 49.8**	**-0.2**
	SNR=11						
MHTO				P	**P**	**04 23 49.8**	**-0.2**
	SNR=11						
KUU	**Kurty**	**65.69**	**329**	*i* P	**P**	**04 23 51.0**	**+0.6**
KUU				*e* S	**S**	**04 32 31.1**	**-2.6**
KUU				pmax	pmax		
	comp=Z,837nm,2.1s						
KUU				smax	smax		
	comp=E,692nm,3.9s						
KUU	**Kurty**	**65.69**	**329**	*i* P	**P**	**04 23 50.1**	**-0.3**
	comp=E,837nm,2.1s,baz=330						
KUU				*e* S	**S**	**04 32 31.2**	**-2.5**
	comp=E,692nm,3.9s,baz=330						
GAR	**Garm**	**65.70**	**322**	P	**P**	**04 23 52.0**	**+1.3**
AAK	**Ala-Archa**	**65.75**	**327**	P	**P**	**04 23 52.5**	**+1.6**
	SNR=48						
AAK	**Ala-Archa**	**65.75**	**327**	P	**P**	**04 23 52.1**	**+1.1**
	comp=E,71nm,0.9s,baz=144,slow=5.4,SNR=79						
AAK				S	**S**	**04 32 32.3**	**-2.5**
	comp=E,1.4nm,0.3s,baz=224,slow=11,SNR=1.5						
AAK				PKP2bc	**P'P'bc**	**04 52 31.6**	**+0.2**
	comp=E,1.3nm,0.3s,baz=191,slow=5.7,SNR=1.4						
AAK				LR	LR	04 57 45.6	
	comp=E,7μm,19.4s,baz=152,slow=41						
	comp=E,71nm,0.9s						
AAK	**Ala-Archa**	**65.75**	**327**	P	**P**	**04 23 52.0**	**+1.1**
AAK	**Ala-Archa**	**65.75**	**327**	IAMs_20	IAMs_20	04 57 33.3	
	comp=Z,7μm,20.0s						
AAK	**Ala-Archa**	**65.75**	**327**	*d i* P	**P**	**04 23 52.0**	**+1.1**
AAK				pmax	pmax		
	comp=Z,718nm,1.0s						
AAK	**Ala-Archa**	**65.75**	**327**	P	**P**	**04 23 53.0**	**+2.0**
AAK	**Ala-Archa**	**65.75**	**327**	*i* P	**P**	**04 23 52.5**	**+1.6**
	SNR=50						
AML	**Almayashu**	**65.83**	**327**	P	**P**	**04 23 53.0**	**+1.3**
	SNR=73						
AML	**Almayashu**	**65.83**	**327**	P	**P**	**04 23 53.0**	**+1.3**
AML	**Almayashu**	**65.83**	**327**	*i* P	**P**	**04 23 53.0**	**+1.3**
	SNR=74						
TYV	**Tymovskoe**	**65.86**	**18**	*e* P	**P**	**04 23 55.4**	**+4.2**
TYV				*e* S	**S**	**04 32 43.7**	**+8.4**
TYV				pmax	pmax		
	comp=Z,1μm,4.4s						
TYV				pmax	pmax		
	comp=Z,85nm,1.8s						
TYV				smax	smax		
	comp=N,2μm,7.1s						
TYV				smax	smax		
	comp=E,1μm,7.1s						
CHMS	**Chumysh**	**65.87**	**328**	P	**P**	**04 23 52.2**	**+0.7**
	SNR=15						
CHMS	**Chumysh**	**65.87**	**328**	*i* P	**P**	**04 23 50.9**	**-0.6**
CHMS				pmax	pmax		
	comp=Z,220nm,1.1s						
WSAR	**Wadi Sarin**	**65.93**	**302**	P	**P**	**04 23 52.9**	**+0.6**
	comp=Z,54nm,0.7s,baz=148,slow=6.1,SNR=33						
WSAR				LR	LR	04 54 13.7	
	comp=Z,7μm,18.6s,baz=140,slow=38						
	comp=Z,54nm,0.7s						
JMDO	**Jabal Madar**	**66.01**	**301**	P	**P**	**04 23 53.4**	**+0.5**
	SNR=8.2						
JMDO				P	**P**	**04 23 53.4**	**+0.5**
	SNR=8.2						
SOCY	**Socotra**	**66.05**	**289**	P	**P**	**04 23 53.6**	**+0.4**
SOCY	**Socotra**	**66.05**	**289**	P	**P**	**04 23 53.8**	**+0.5**
SOCY	**Socotra**	**66.05**	**289**	⇑P	**P**	**04 23 54.2**	**+1.0**
BTK	**Batken**	**66.08**	**323**	P	**P**	**04 23 54.5**	**+1.5**
BTK	**Batken**	**66.08**	**323**	P	**P**	**04 23 54.5**	**+1.5**
BTK				pmax	pmax		
	comp=Z,2μm,1.6s						
EKS2	**Erkin-Say**	**66.15**	**327**	P	**P**	**04 23 55.0**	**+1.6**
	SNR=101						
USP	**Ospenovka**	**66.19**	**328**	P	**P**	**04 23 54.6**	**+1.0**
	SNR=60						
CHGR	**Chuyangaron**	**66.19**	**321**	P	**P**	**04 23 54.4**	**+0.6**
CHGR	**Chuyangaron**	**66.19**	**321**	P	**P**	**04 23 54.4**	**+0.6**
CHGR				pmax	pmax		
	comp=Z,2μm,1.5s						
SGDS	**Sogindy**	**66.25**	**328**	*d i* P	**P**	**04 23 54.6**	**+0.6**
SGDS				*e* S	**S**	**04 32 39.1**	**-1.5**
SGDS				pmax	pmax		
	comp=Z,170nm,1.6s						
SGDS	**Sogindy**	**66.25**	**328**	⇓*i* P	**P**	**04 23 54.7**	**+0.7**
	comp=Z,170nm,1.6s,baz=328						
SGDS				*e* S	**S**	**04 32 39.2**	**-1.5**
	baz=328						
SMDO	**Samad**	**66.34**	**301**	P	**P**	**04 23 55.2**	**+0.2**
MAW	**Mawson**	**66.34**	**200**	P	**P**	**04 23 54.4**	**+0.4**
	comp=Z,18nm,0.7s,baz=91,slow=7.4,SNR=27						
MAW				LR	LR	04 46 45.5	
	comp=Z,6μm,21.6s,baz=55,slow=30						
MAW				PKP2bc	**P'P'df**	**04 52 29.5**	**+0.4**
	comp=Z,28nm,1.2s,baz=205,slow=4.4,SNR=13						
	comp=Z,18nm,0.7s						
MAW	**Mawson**	**66.34**	**200**	P	**P**	**04 23 54.5**	**+0.4**
	baz=66,SNR=26						
MAW	**Mawson**	**66.34**	**200**	P	**P**	**04 23 54.6**	**+0.5**
MAW	**Mawson**	**66.34**	**200**	P	**P**	**04 23 54.6**	**+0.5**
MAW				pmax	pmax		
	comp=Z,14nm,1.2s						
BIDO	**Bidbid**	**66.47**	**302**	P	**P**	**04 23 56.6**	**+0.9**
	SNR=22						
BIDO				P	**P**	**04 23 56.6**	**+0.9**
	SNR=22						
SHAO	**Shalim**	**66.50**	**295**	P	**P**	**04 23 56.7**	**+0.7**
SHAO	**Shalim**	**66.50**	**295**	P	**P**	**04 23 56.5**	**+0.4**
ABPO	**Ambohimpanom**	**66.79**	**254**	P	**P**	**04 23 57.9**	**-0.3**
ABPO	**Ambohimpanom**	**66.79**	**254**	IAMs_20	IAMs_20	04 46 55.3	
	comp=Z,5μm,20.0s						
ABPO	**Ambohimpanom**	**66.79**	**254**	P	**P**	**04 23 57.9**	**-0.3**
ABPO				pmax	pmax		
	comp=Z,33nm,0.9s						
ABPO	**Ambohimpanom**	**66.79**	**254**	⇓P	**P**	**04 23 58.6**	**+0.4**
ABPO				⇑P	**P**	**04 23 59.0**	**+0.8**
OPO	**Ambohidratompo**	**66.86**	**254**	P	**P**	**04 23 58.5**	**-0.1**
	comp=Z,9.8nm,0.7s,baz=118,slow=4.3,SNR=10						
	comp=Z,9.8nm,0.7s						
DMTO	**DMTO**	**66.99**	**295**	P	**P**	**04 23 58.6**	**-0.5**
VOI	**Vohitsoka**	**67.01**	**251**	P	**P**	**04 23 59.9**	**+0.4**
VOI				IAmb	IAmb	04 24 03.5	
	comp=Z,334nm,2.0s						
VOI	**Vohitsoka**	**67.01**	**251**	P	**P**	**04 24 00.5**	**+1.1**
VOI	**Vohitsoka**	**67.01**	**251**	P	**P**	**04 24 01.5**	**+2.0**
VOI	**Vohitsoka**	**67.01**	**251**	⇓P	**P**	**04 23 59.8**	**+0.3**
HOQ	**Hoqain**	**67.17**	**301**	P	**P**	**04 24 01.6**	**+1.4**
	SNR=28						
NKL	**Nikolayevsk**	**67.34**	**16**	*e* P	**P**	**04 23 58.9**	**-1.7**
NKL				*e* S	**S**	**04 32 52.5**	**-0.6**
NKL				pmax	pmax		
	comp=E,3.0nm,0.7s						
NKL				pmax	pmax		
	comp=N,1.0nm,1.9s						
NKL				pmax	pmax		
	comp=Z,228nm,1.2s						
NKL				smax	smax		
	comp=E,10.0nm,2.7s						
NKL				smax	smax		
	comp=N,1.0nm,1.9s						
NKL				MLR	MLR		
	comp=E,25nm,13.0s						
NKL				MLR	MLR		
	comp=N,12nm,11.0s						
NKL				MLR	MLR		
	comp=Z,667nm,15.0s						
RBK	**Rabkut**	**67.58**	**294**	P	**P**	**04 24 03.5**	**+0.5**
	SNR=9.3						
DZA	**Taraz**	**67.64**	**326**	*e* P	**P**	**04 24 02.1**	**-0.6**
DZA				*e* S	**S**	**04 32 55.3**	**-1.9**
DZA	**Taraz**	**67.64**	**326**	*e* P	**P**	**04 24 02.2**	**-0.6**
	baz=326						
DZA				*e* S	**S**	**04 32 55.4**	**-1.9**
	baz=326						
BTLS	**Baital**	**67.66**	**329**	*d i* P	**P**	**04 24 03.1**	**+0.2**
BTLS				*e* S	**S**	**04 32 54.9**	**-2.5**
BTLS				pmax	pmax		
	comp=Z,87nm,1.8s						
BTLS				smax	smax		
	comp=N,128nm,4.6s						
BTLS	**Baital**	**67.66**	**329**	⇓*i* P	**P**	**04 24 03.1**	**+0.2**
	comp=N,86nm,1.8s,baz=329						
BTLS				*e* S	**S**	**04 32 54.9**	**-2.5**
	comp=N,128nm,4.6s,baz=329						
TAS	**Tashkent**	**67.78**	**323**	P	**P**	**04 24 05.0**	**+1.3**
TAS	**Tashkent**	**67.78**	**323**	P	**P**	**04 24 05.0**	**+1.3**
TAS				pmax	pmax		
	comp=Z,602nm,1.0s						
IUG	**Iuzhnay**	**67.88**	**325**	*d i* P	**P**	**04 24 05.3**	**+0.9**
IUG				*e* S	**S**	**04 32 58.0**	**-2.3**
IUG	**Iuzhnay**	**67.88**	**325**	⇓*i* P	**P**	**04 24 05.3**	**+0.9**
	baz=325						
IUG				*e* S	**S**	**04 32 58.1**	**-2.3**
	baz=325						
DOK	**Doka**	**68.04**	**295**	P	**P**	**04 24 05.6**	**-0.2**
	SNR=10						
DOK				P	**P**	**04 24 05.6**	**-0.2**
	SNR=10						
SOHO	**SOHO**	**68.05**	**302**	P	**P**	**04 24 06.3**	**+0.6**
SOHO	**SOHO**	**68.05**	**302**	*i* P	**P**	**04 24 05.5**	**-0.2**
	SNR=16						
WHFO	**Wadi Hawf**	**68.11**	**294**	P	**P**	**04 24 06.2**	**-0.1**
	SNR=10						
WHFO				P	**P**	**04 24 06.2**	**-0.1**
	SNR=10						
KK31	**Karatay Array**	**68.23**	**326**	P	**P**	**04 24 07.4**	**+0.9**
KK31				IAmb	IAmb	04 24 32.0	
	comp=Z,71nm,0.8s						
KK31	**Karatay Array**	**68.23**	**326**	P	**P**	**04 24 07.4**	**+0.9**
KK31				pmax	pmax		
	comp=Z,71nm,0.8s						
KKAR	**Karatay Array**	**68.23**	**326**	P	**P**	**04 24 08.3**	**+1.8**
KKAR				IAmb	IAmb	04 24 32.0	
	comp=Z,71nm,0.8s						
KKAR	**Karatay Array**	**68.23**	**326**	P	**P**	**04 24 06.8**	**+0.4**
KKAR	**Karatay Array**	**68.23**	**326**	P	**P**	**04 24 08.3**	**+1.8**
KKAR				pmax	pmax		
	comp=Z,71nm,0.8s						
ABTO	**Aybut**	**68.35**	**294**	P	**P**	**04 24 08.2**	**+0.5**
	SNR=17						
ABTO				P	**P**	**04 24 08.2**	**+0.5**
	SNR=17						
HRA	**Herat**	**68.35**	**314**	P	**P**	**04 24 07.3**	**-0.3**
HRA				IAmb	IAmb	04 24 18.2	
	comp=Z,161nm,2.0s						
BRLS	**Borolday**	**68.56**	**325**	*e* P	**P**	**04 24 09.8**	**+1.3**
BRLS				*e* S	**S**	**04 33 03.4**	**-4.8**
BRLS	**Borolday**	**68.56**	**325**	*e* P	**P**	**04 24 09.8**	**+1.3**
	baz=325						
BRLS				*e* S	**S**	**04 33 03.4**	**-4.8**
	baz=325						
UMZA	**Um Al Zommool**	**68.64**	**300**	P	**P**	**04 24 09.8**	**+0.3**
UOSS	**Minazif**	**68.65**	**302**	P	**P**	**04 24 10.0**	**+0.5**
UOSS				IAmb	IAmb	04 24 20.5	
	comp=Z,156nm,1.1s						
UOSS	**Minazif**	**68.65**	**302**	P	**P**	**04 24 10.0**	**+0.5**
UOSS				P	**P**	**04 24 10.0**	**+0.5**
UOSS	**Minazif**	**68.65**	**302**	*i* P	**P**	**04 24 09.0**	**-0.5**
	SNR=15						
UOSS	**Minazif**	**68.65**	**302**	⇑P	**P**	**04 24 08.7**	**-0.8**
HATD	**Hatta, Dubai**	**68.66**	**302**	P	**P**	**04 24 10.3**	**+0.7**
	SNR=30						
HATD				P	**P**	**04 24 10.3**	**+0.7**
	SNR=30						
HATD	**Hatta, Dubai**	**68.66**	**302**	*i* P	**P**	**04 24 09.8**	**+0.3**
	SNR=26						
ASHO	**Ashiyiah**	**68.66**	**302**	P	**P**	**04 24 10.0**	**+0.4**
	SNR=35						
ASHO				P	**P**	**04 24 10.0**	**+0.4**
	SNR=35						
ASHO	**Ashiyiah**	**68.66**	**302**	*i* P	**P**	**04 24 09.8**	**+0.2**
	SNR=26						
ALNE	**Al Ain**	**68.67**	**301**	P	**P**	**04 24 10.4**	**+0.8**
ALNE				P	**P**	**04 24 10.4**	**+0.8**
ALNE	**Al Ain**	**68.67**	**301**	*i* P	**P**	**04 24 09.5**	**-0.1**
	SNR=12						
BOD	**Bodaibo**	**68.72**	**359**	*e* P	**P**	**04 24 09.9**	**+0.7**
BOD				pmax	pmax		
	comp=Z,370nm,1.8s						
MSFE	**Esma-Masafi**	**68.85**	**303**	*i* P	**P**	**04 24 10.6**	**-0.1**
	SNR=6.4						
MASF	**Masafi**	**68.86**	**303**	P	**P**	**04 24 11.7**	**+0.9**
	SNR=13						
SEM	**Semipalatinsk**	**68.86**	**336**	*d i* P	**P**	**04 24 11.0**	**+0.5**
SEM				*e* S	**S**	**04 33 10.2**	**-1.8**
SEM				pmax	pmax		
	comp=Z,354nm,1.7s						
SEM	**Semipalatinsk**	**68.86**	**336**	⇓*i* P	**P**	**04 24 11.0**	**+0.5**
	comp=Z,354nm,1.7s,baz=336						
SEM				*e* S	**S**	**04 33 10.2**	**-1.8**
	baz=336						
BANOM	**Banah**	**68.97**	**303**	P	**P**	**04 24 12.9**	**+1.4**
	SNR=12						
BANOM	**Banah**	**68.97**	**303**	*i* P	**P**	**04 24 11.9**	**+0.4**
	SNR=13						
FAQ	**Al Faqa, Dubai**	**69.08**	**302**	P	**P**	**04 24 12.7**	**+0.5**
	SNR=23						
FAQ				P	**P**	**04 24 12.7**	**+0.5**
	SNR=23						
FAQ	**Al Faqa, Dubai**	**69.08**	**302**	*i* P	**P**	**04 24 12.4**	**+0.3**
	SNR=51						
NAZ	**Nazwa, Dubai**	**69.12**	**302**	P	**P**	**04 24 13.2**	**+0.9**
	SNR=11						
NAZ				P	**P**	**04 24 13.2**	**+0.9**
	SNR=11						
NAZ	**Nazwa, Dubai**	**69.12**	**302**	*i* P	**P**	**04 24 12.5**	**+0.1**
	SNR=7.5						
SHME	**Shamm**	**69.15**	**303**	P	**P**	**04 24 13.5**	**+0.9**
	SNR=7.4						
SHME				P	**P**	**04 24 13.5**	**+0.9**
	SNR=7.4						
SHME	**Shamm**	**69.15**	**303**	*i* P	**P**	**04 24 13.2**	**+0.6**
	SNR=8.7						
ASUD	**Al Ashush, Dub**	**69.25**	**302**	P	**P**	**04 24 13.9**	**+0.7**
	SNR=13						
ASUD				P	**P**	**04 24 13.9**	**+0.7**
	SNR=13						
ASUD	**Al Ashush, Dub**	**69.25**	**302**	*i* P	**P**	**04 24 13.6**	**+0.5**
	SNR=13						
AJN	**Ajban**	**69.51**	**302**	P	**P**	**04 24 16.4**	**+1.6**
KURBB	**Kurchatov Arra**	**69.72**	**335**	P	**P**	**04 24 16.5**	**+0.9**
	comp=Z,94nm,0.6s,baz=149,sl

ZALV **Zalesovo Beam** 70.11 341 P **P** 04 24 17.9 +0.1
comp=Z,178nm,0.6s,baz=147,slow=4.3,SNR=190
ZALV S **S** 04 33 21.9 -4.0
comp=Z,2.5nm,0.9s,baz=134,slow=10,SNR=5.3
ZALV PKPPKP **P'P'df** 04 52 19.6 +1.0
comp=Z,1.2nm,0.8s,baz=357,slow=7.4,SNR=5.2
ZALV LR LR 04 59 31.7
comp=Z,3µm,18.7s,baz=170,slow=40
comp=Z,178nm,0.6s
ZALV Zalesovo Beam 70.11 341 P **P** 04 24 18.2 +0.4
ZALV Zalesovo Beam 70.11 341 *i* P **P** 04 24 17.8 0.0
ZALV pmax pmax
comp=Z,181nm,0.6s
MZWR Madinat Zayed 70.13 300 P **P** 04 24 19.3 +0.6
MZR Muzera 70.19 299 P **P** 04 24 19.7 +0.7
MZR Muzera 70.19 299 *i* P **P** 04 24 19.1 +0.1
SNR=14
VNDA Vanda 70.33 171 P **P** 04 24 19.2 +0.2
comp=Z,43nm,1.2s,baz=314,slow=6.3,SNR=33
VNDA PKPPKP **P'P'df** 04 52 20.9 -1.2
comp=Z,2.6nm,1.1s,baz=254,slow=0.5,SNR=4.6
VNDA LR LR 04 53 33.9
comp=Z,10µm,20.1s,baz=332,slow=34
comp=Z,43nm,1.2s
VNDA Vanda 70.33 171 P **P** 04 24 19.7 +0.7
VNDA Vanda 70.33 171 P **P** 04 24 19.7 +0.7
VNDA pmax pmax
comp=Z,94nm,1.3s
SKR Severo-Kuril's 70.64 26*d* *i* P **P** 04 24 22.0 +0.9
SKR *i* S **S** 04 33 33.7 +1.4
SKR *e* 04 34 23.1
SKR pmax pmax
comp=Z,700nm,12.1s
SKR pmax pmax
comp=Z,81nm,0.7s
SKR MLR MLR
comp=Z,700nm,19.0s
OTUK Ortayu 70.74 331 P **P** 04 24 22.4 +0.5
GHWR Ruwais 71.06 300 P **P** 04 24 25.0 +0.7
SBA Scott Base 71.36 170 P **P** 04 24 25.3 +0.1
SBA IAmb IAmb 04 24 45.0
comp=Z,170nm,1.6s
SBA Scott Base 71.36 170 P **P** 04 24 25.3 +0.1
SBA pmax pmax
comp=Z,170nm,1.6s
BRZS Berezniki 71.79 332 *e*P **P** 04 24 28.8 +0.6
BRZS *e*S **S** 04 33 44.4 -1.4
BRZS pmax pmax
comp=Z,132nm,1.5s
BRZS Berezniki 71.79 332 *e*P **P** 04 24 28.8 +0.6
comp=Z,132nm,1.5s,baz=332
BRZS *e*S **S** 04 33 44.5 -1.4
baz=332
KHOR Al-Khor Airpor 72.83 301 P **P** 04 24 35.8 +1.0
GEYT Alibeck 73.02 315 P **P** 04 24 35.8 0.0
comp=Z,42nm,0.9s,baz=113,slow=10,SNR=33
GEYT S **S** 04 33 57.0 -3.3
comp=Z,1.5nm,0.5s,baz=126,slow=48,SNR=1.3
GEYT LR LR 04 59 32.6
comp=Z,6µm,21.3s,baz=140,slow=38
comp=Z,42nm,0.9s
GEYT Alibeck 73.02 315 P **P** 04 24 37.2 +1.3
GEYT IAmb IAmb 04 24 48.4
comp=Z,197nm,1.1s
GYA0 ALIBECK ARRAY 73.02 315 P **P** 04 24 36.9 +1.1
GYA0B ALIBECK ARRAY 73.02 315 P **P** 04 24 37.3 +1.5
SMRA Abu-Samra 73.09 300 P **P** 04 24 37.1 +0.7
PEA0B Petropavlovsk- 73.10 25 P **P** 04 24 36.9 +1.1
PEA0B IAmb IAmb 04 24 48.0
comp=Z,216nm,1.1s
PEA0B Petropavlovsk- 73.10 25*ce* P **P** 04 24 37.2 +1.3
PETK Petropavlovsk- 73.10 25 P **P** 04 24 37.0 +1.1
comp=Z,34nm,0.6s,baz=226,slow=1.3,SNR=44
PETK LR LR 04 55 45.6
comp=Z,1µm,21.8s,baz=218,slow=35
comp=Z,34nm,0.6s
PETK Petropavlovsk- 73.10 25 P **P** 04 24 37.3 +1.4
PETK Petropavlovsk- 73.10 25 P **P** 04 24 37.3 +1.4
SHMA Al-Shehemyia 73.37 301 P **P** 04 24 39.4 +1.3
PET Petropavlovsk 73.43 25*d* *i* P **P** 04 24 39.3 +1.5
PET *e* 04 24 48.3
PET *i* S **SKiKP** 04 34 05.8 +0.1
PET pmax pmax
comp=Z,202nm,1.5s
PET pmax pmax
comp=Z,2µm,13.9s
PET pmax pmax
comp=Z,2µm,8.4s
PET MLR MLR
comp=Z,2µm,22.0s
PET MLR MLR
comp=Z,2µm,21.0s
PET Petropavlovsk 73.43 25 P **P** 04 24 40.8 +3.0
PET Petropavlovsk 73.43 25 ⇓P **P** 04 24 39.6 +1.8
YAK Yakutsk 73.68 7 S **SKiKP** 04 34 01.7 -4.1
comp=Z,8.6nm,0.3s,baz=262,slow=0.9,SNR=1.6
YAK Yakutsk 73.68 7 P **P** 04 24 39.5 +0.5
YAK Yakutsk 73.68 7 *e*P **P** 04 24 39.0 -0.1
YAK *e**PP **pP** 04 24 48.6 -0.7
YAK *e* 04 24 57.7
YAK *e* 04 27 19.6
YAK *e*S **SKiKP** 04 34 05.9 +0.1
YAK *e* 04 34 51.2
YAK pmax pmax
comp=Z,284nm,1.0s
YAK pmax pmax
comp=E,45nm,1.4s
YAK pmax pmax
comp=N,142nm,1.3s
YAK pmax pmax
comp=Z,189nm,2.2s
YAK pmax pmax
comp=E,53nm,2.0s
YAK pmax pmax
comp=N,42nm,2.0s
YAK smax smax
comp=N,2µm,6.6s
YAK smax smax
comp=E,671nm,6.1s
YAK MLR MLR
comp=Z,2µm,19.0s
YAK MLR MLR
comp=N,1µm,19.0s
YAK MLR MLR
comp=E,448nm,21.0s
SAKB Bahrain 73.77 301 P **P** 04 24 41.4 +1.0
BRVK Borovoye 75.01 333 P **P** 04 24 48.2 +1.2
BRVK Borovoye 75.01 333 *i* P **P** 04 24 47.4 +0.3
BRVK pmax pmax
comp=Z,334nm,1.2s
BRVK Borovoye 75.01 333 P **P** 04 24 47.3 +0.3
MIDW Midway 75.09 57 P **P** 04 24 52.4 +4.4
MA2 Magadan 75.72 17 S **S** 04 34 27.5 -2.1
comp=Z,4.8nm,0.4s,baz=45,slow=20,SNR=2.7
MA2 Magadan 75.72 17 P **P** 04 24 52.5 +1.6
MA2 IAmb IAmb 04 25 03.1
comp=Z,152nm,0.9s
MA2 Magadan 75.72 17*ce* P **P** 04 24 52.3 +1.3
MA2 pmax pmax
comp=Z,346nm,1.8s
MA2 Magadan 75.72 17 P **P** 04 24 54.4 +3.4
ATD Arta Tunnel 76.33 285 P **P** 04 24 57.4 +1.8
comp=Z,40nm,1.1s,baz=72,slow=4.5,SNR=2.6
ATD LR LR 04 52 17.3
comp=Z,1µm,20.1s,baz=98,slow=31
comp=Z,40nm,1.1s
ATD Arta Tunnel 76.33 285 P **P** 04 24 56.1 +0.6
ATD IAmb IAmb 04 25 09.3
comp=Z,219nm,1.4s
ATD Arta Tunnel 76.33 285 *e*P **P** 04 24 57.2 +1.7
ATD *e*S **S** 04 34 39.8 +1.5
ATD Arta Tunnel 76.33 285 *e*P **P** 04 24 57.3 +1.8
ATD Arta Tunnel 76.33 285⇓*e*P **P** 04 24 54.7 -0.9
ATD Arta Tunnel 76.33 285 *e*P **P** 04 24 57.9 +2.4
ATD Arta Tunnel 76.33 285 *e*P **P** 04 24 58.8 +3.3
ATD Arta Tunnel 76.33 285 *e*P **P** 04 24 57.3 +1.8
ATD Arta Tunnel 76.33 285⇓*e*P **P** 04 24 54.7 -0.9
ATD Arta Tunnel 76.33 285 *e*P **P** 04 24 53.9 -1.6
ATD Arta Tunnel 76.33 285 *i* P **P** 04 24 59.4 +3.8
ATD Arta Tunnel 76.33 285 *e*P **P** 04 24 57.2 +1.7
ATD *e*S **S** 04 34 39.8 +1.5
ATD Arta Tunnel 76.33 285 *e*P **P** 04 24 56.7 +1.1
ATD *e*S **S** 04 34 39.9 +1.7
RAYN Ar Rayn 77.26 297 P **P** 04 25 01.1 +0.6
RAYN IAmb IAmb 04 25 12.4
comp=Z,176nm,1.1s
RAYN Ar Rayn 77.26 297 IAMs_20 IAMs_20 05 00 56.8
comp=Z,5µm,20.0s
RAYN Ar Rayn 77.26 297 P **P** 04 25 01.1 +0.6
RAYN pmax pmax
comp=Z,176nm,1.1s
RAYN MLR MLR
comp=Z,5µm,20.0s
RAYN Ar Rayn 77.26 297 P **P** 04 25 00.5 0.0
RAYN Ar Rayn 77.26 297 *i* P **P** 04 25 00.8 +0.2
SNR=76
AB31 Akbulak array 77.78 326 *i* P **P** 04 25 03.7 +0.9
ABKAR Akbulak array 77.78 326 P **P** 04 25 03.9 +1.1
ABKAR IAmb IAmb 04 25 14.9
comp=Z,224nm,0.9s
ABKAR Akbulak array 77.78 326 P **P** 04 25 04.0 +1.1
KIBK Kibwezi 78.01 270 P **P** 04 25 05.8 +0.8
KIBK IAmb IAmb 04 25 10.2
comp=Z,116nm,1.0s
TEND Ethiopian Broa 78.15 285 *e*P **P** 04 25 06.5 +0.8
TEND *e*S **S** 04 35 03.5 +5.6
TEND Ethiopian Broa 78.15 285 *e*P **P** 04 25 06.5 +0.8
TEND *e*S **S** 04 35 03.5 +5.6
ANKE Ethiopia-Afar 78.84 282 *e*P **P** 04 25 08.9 -1.1
ANKE *e*S **S** 04 35 09.6 +3.5
ANKE Ethiopia-Afar 78.84 282 *e*P **P** 04 25 08.9 -1.1
ANKE *e*S **S** 04 35 09.6 +3.5
ANKE Ethiopia-Afar 78.84 282 *e*P **P** 04 25 07.0 -3.0
ANKE Ethiopia-Afar 78.84 282 *e*P **P** 04 25 12.9 +2.9
ANKE Ethiopia-Afar 78.84 282 *e*P **P** 04 25 09.8 -0.1
ANKE *e*S **S** 04 35 13.0 +6.9
QSPA South Pole Qui 78.89 180 LR LR 04 56 37.7
comp=Z,11µm,21.7s,baz=330,slow=33
SEY Seymchan 78.91 16 S **S** 04 35 03.1 -1.0
comp=Z,0.7nm,0.3s,baz=61,slow=21,SNR=9.4
SEY Seymchan 78.91 16*d* *i* P **P** 04 25 10.2 +1.4
SEY pmax pmax
comp=Z,263nm,1.5s
KMBO Kilima Mbogo 79.02 271 P **P** 04 25 12.1 +1.3
comp=Z,54nm,0.9s,baz=67,slow=7.9,SNR=45
KMBO S **S** 04 35 15.1 +7.4
comp=Z,2.2nm,0.9s,baz=27,slow=19,SNR=1.8
KMBO LR LR 04 56 25.8
comp=Z,6µm,19.6s,baz=97,slow=33
comp=Z,54nm,0.9s
KMBO Kilima Mbogo 79.02 271 P **P** 04 25 11.2 +0.4
KMBO IAmb IAmb 04 25 16.2
comp=Z,147nm,1.1s
KMBO Kilima Mbogo 79.02 271 *i* P **P** 04 25 12.6 +1.9
KMBO pmax pmax
comp=Z,54nm,0.9s
KMBO Kilima Mbogo 79.02 271⇓*e*P **P** 04 25 12.1 +1.3
KMBO ⇓*e*S **SKSac** 04 35 24.6 +0.1
KMBO Kilima Mbogo 79.02 271⇓*e*P **P** 04 25 12.4 +1.6
KMBO Kilima Mbogo 79.02 271⇓*e*P **P** 04 25 10.8 0.0
KMBO Kilima Mbogo 79.02 271⇓*e*S S 04 35 20.1 +12
KMBO Kilima Mbogo 79.02 271 *e*P **P** 04 25 12.6 +1.9
KMBO Kilima Mbogo 79.02 271 *e*P **P** 04 25 12.1 +1.3
KMBO Kilima Mbogo 79.02 271⇓*e*P **P** 04 25 12.4 +1.6
KMBO Kilima Mbogo 79.02 271⇓*e*P **P** 04 25 10.8 0.0
KMBO Kilima Mbogo 79.02 271 *e*P **P** 04 25 08.4 -2.4
KMBO Kilima Mbogo 79.02 271 *i* P **P** 04 25 12.9 +2.1
KMBO Kilima Mbogo 79.02 271⇓*e*P **P** 04 25 12.1 +1.3
KMBO ⇓*e*S **SKSac** 04 35 24.6 +0.1
KMBO Kilima Mbogo 79.02 271 *e*P **P** 04 25 12.7 +1.9
KMBO *e*S **S** 04 35 16.3 +8.6
KMBO Kilima Mbogo 79.02 271 *i* P **P** 04 25 12.6 +1.9
SNR=50
DESE Dese 79.29 284⇓*e*P **P** 04 25 13.4 +1.1
DESE *e*S **S** 04 35 04.1 -6.6
DESE Dese 79.29 284 *e*P **P** 04 25 12.6 +0.2
DESE *e*S **S** 04 35 04.8 -6.0
DESE Dese 79.29 284 *e*P **P** 04 25 12.6 +0.2
DESE *e*S **S** 04 35 04.8 -6.0
DESE Dese 79.29 284⇓*e*P **P** 04 25 12.8 +0.5
DESE Dese 79.29 284⇓*e*P **P** 04 25 11.3 -1.0
DESE Dese 79.29 284 *e*S S 04 35 00.4 -10
DESE Dese 79.29 284 *e*P **P** 04 25 16.8 +4.4
DESE Dese 79.29 284 *e*P **P** 04 25 16.1 +3.7
DESE Dese 79.29 284 *e*P **P** 04 25 14.4 +2.1
DESE Dese 79.29 284⇓*e*P **P** 04 25 11.3 -1.0
DESE Dese 79.29 284 *e*P **P** 04 25 10.2 -2.1
DESE Dese 79.29 284 *e*P **P** 04 25 10.7 -1.6
DESE *e*S **S** 04 35 14.6 +3.8
DESE Dese 79.29 284⇓*e*P **P** 04 25 13.4 +1.1
DESE *e*S **S** 04 35 04.1 -6.6
DESE Dese 79.29 284 *e*P **P** 04 25 10.9 -1.4
DESE *e*S **S** 04 35 13.2 +2.5
AKTO Aktyubinsk 79.47 326 P **P** 04 25 13.2 +1.0
comp=Z,81nm,0.6s,baz=110,slow=5.9,SNR=101
AKTO S **S** 04 35 04.6 -5.9
comp=Z,1.1nm,0.8s,baz=166,slow=13,SNR=1.8
AKTO LR LR 05 05 16.8
comp=Z,4µm,21.5s,baz=126,slow=39
comp=Z,81nm,0.6s
DILA Dilla 79.54 279 *e*P **P** 04 25 11.3 -2.2
DILA *e*S **SKSac** 04 35 25.5 -2.4
DILA *e*S **SKKSac** 04 35 28.3 -1.2
DILA Dilla 79.54 279 *e*P **P** 04 25 11.3 -2.2
DILA *e*S **SKSac** 04 35 25.5 -2.4
DILA *e*S **SKKSac** 04 35 28.3 -1.2
DILA Dilla 79.54 279 *e*P **P** 04 25 11.1 -2.4
DILA Dilla 79.54 279 *e*P **P** 04 25 16.4 +2.9
DILA Dilla 79.54 279 *e*P **P** 04 25 16.4 +2.9
DILA *e*S **SKSac** 04 35 25.5 -2.4
AAE Adis Abeba 79.65 281⇓*e*P **P** 04 25 17.2 +3.0
AAE *e*S **SKSac** 04 35 26.9 -2.0
AAE Adis Abeba 79.65 281⇓*e*P **P** 04 25 16.9 +2.6
AAE Adis Abeba 79.65 281 *e*P **P** 04 25 15.5 +1.3
AAE Adis Abeba 79.65 281 *e*P **P** 04 25 17.1 +2.8
AAE Adis Abeba 79.65 281 *e*P **P** 04 25 17.3 +3.0
AAE Adis Abeba 79.65 281 *e*P **P** 04 25 16.1 +1.8
AAE Adis Abeba 79.65 281 *e*P **P** 04 25 15.5 +1.3
AAE Adis Abeba 79.65 281 *e*P **P** 04 25 11.1 -3.2
AAE Adis Abeba 79.65 281 *e*P **P** 04 25 17.1 +2.8
AAE Adis Abeba 79.65 281⇓*e*P **P** 04 25 17.2 +3.0
AAE *e*S **SKSac** 04 35 26.9 -2.0
AAE Adis Abeba 79.65 281 *e*P **P** 04 25 15.1 +0.8
AAE *e*S **S** 04 35 19.8 +5.3
FURI Furi 79.70 281 *e*P P 04 25 19.7 +5.1
FURI ⇓*e*S S 04 35 24.6 +9.4
FURI Furi 79.70 281 *e*P **P** 04 25 15.0 +0.4
FURI *e*S **SKSac** 04 35 26.7 -2.6
FURI Furi 79.70 281 *e*P **P** 04 25 15.0 +0.4
FURI *e*S **SKSac** 04 35 26.7 -2.6
FURI Furi 79.70 281⇓*e*P **P** 04 25 17.5 +3.0
FURI Furi 79.70 281 *e*P **P** 04 25 16.0 +1.5
FURI Furi 79.70 281 *e*S **SKSac** 04 35 27.6 -1.7
FURI Furi 79.70 281 *e*P **P** 04 25 18.3 +3.7
FURI Furi 79.70 281 *e*P **P** 04 25 17.5 +3.0
FURI Furi 79.70 281 *e*P **P** 04 25 16.1 +1.5
FURI Furi 79.70 281 *e*P **P** 04 25 16.0 +1.5
FURI Furi 79.70 281 *e*P **P** 04 25 10.7 -3.9
FURI Furi 79.70 281 *e*P **P** 04 25 15.4 +0.8
FURI Furi 79.70 281 *e*P **P** 04 25 15.1 +0.4
FURI *e*S **S** 04 35 23.3 +8.2
FURI Furi 79.70 281 *e*P P 04 25 19.7 +5.1
FURI ⇓*e*S S 04 35 24.6 +9.4
FURI Furi 79.70 281 *e*P **P** 04 25 16.9 +2.3
FURI *e*S **S** 04 35 19.3 +4.2
CNG Changalane 79.91 245 *e*P **P** 04 25 15.7 +0.5
CNG IAmb IAmb 04 25 18.9
comp=Z,9.6nm,0.9s
TETE Tete 80.05 255 *e*P **P** 04 25 17.2 +1.1
TETE IAmb IAmb 04 25 20.5
comp=Z,89nm,1.2s
POGA Pongola 80.20 244 *e*P **P** 04 25 17.3 +0.6
POGA IAmb IAmb 04 25 21.0
comp=Z,75nm,0.9s
SHEM Shemya Is, Ala 80.46 31 LR LR 04 58 35.8
comp=Z,471nm,20.5s,baz=256,slow=34
SMY Shemya 80.46 31 P **P** 04 25 19.1 +1.7
SMY IAmb IAmb 04 25 22.2
comp=Z,224nm,0.9s
SMY Shemya 80.46 31 P **P** 04 25 19.1 +1.7
SMY pmax pmax
comp=Z,224nm,0.9s
RAR Rarotonga 80.47 110 LR LR 04 58 28.5
comp=Z,5µm,21.6s,baz=254,slow=34
MOPA Mopani 81.00 248 *e*P **P** 04 25 20.6 -0.5
MOPA IAmb IAmb 04 25 25.0
comp=Z,96nm,1.2s
MOPA Mopani 81.00 248 *i* P **P** 04 25 19.4 -1.7
MOPA Mopani 81.00 248 *i* P **P** 04 25 19.4 -1.7
SVE Sverdlovsk 81.70 333*ce* P **P** 04 25 24.5 +0.6
SVE *e* 04 28 27.0
SVE *e* 04 30 25.2
SVE *e*S **S** 04 35 31.3 -2.3
SVE pmax pmax
comp=Z,323nm,1.6s
SVE pmax pmax
comp=Z,1µm,10.8s
LODK Lodwar 81.76 275 P **P** 04 25 24.6 -0.7
LODK IAMs_20 IAMs_20 04 57 09.9
comp=Z,5µm,21.0s
LODK Lodwar 81.76 275 *e*P **P** 04 25 27.0 +1.7
LODK *e*S **S** 04 35 40.3 +4.1
LODK Lodwar 81.76 275 *e*P **P** 04 25 26.6 +1.2
LODK Lodwar 81.76 275 *e*P **P** 04 25 24.4 -1.0
LODK Lodwar 81.76 275 *e*P **P** 04 25 26.1 +0.8
LODK Lodwar 81.76 275 *e*P **P** 04 25 27.1 +1.7
LODK Lodwar 81.76 275 *e*P **P** 04 25 26.6 +1.2
LODK Lodwar 81.76 275 *e*P **P** 04 25 24.4 -1.0
LODK Lodwar 81.76 275 *e*P P 04 25 20.5 -4.8
LODK Lodwar 81.76 275 *i* P **P** 04 25 28.2 +2.9
LODK Lodwar 81.76 275 *e*P **P** 04 25 27.0 +1.7
LODK *e*S **S** 04 35 40.3 +4.1
LODK Lodwar 81.76 275 *e*P **P** 04 25 25.5 +0.2
LODK ⇓*e*S **S** 04 35 39.8 +3.6
KSTD Kokstad 81.84 240 *e*P **P** 04 25 26.1 +0.5
KSTD IAmb IAmb 04 25 29.9
comp=Z,59nm,1.0s
CRLN Carolina, Mapu 81.88 245 *e*P **P** 04 25 28.2 +2.4
CRLN IAmb IAmb 04 25 29.9
comp=Z,35nm,1.1s
ARU Arti 82.42 332 P **P** 04 25 27.8 0.0
comp=Z,44nm,0.9s,baz=117,slow=3.4,SNR=37
ARU S **S** 04 35 37.6 -3.5
comp=Z,1.5nm,0.3s,baz=74,slow=23,SNR=1.1
ARU LR LR 05 07 03.5
comp=Z,4µm,21.2s,baz=132,slow=39
comp=Z,44nm,0.9s
ARU Arti 82.42 332 P **P** 04 25 28.4 +0.6
ARU IAMs_20 IAMs_20 05 09 00.0
comp=Z,4µm,19.0s
ARU Arti 82.42 332*d* *i* P **P** 04 25 28.2 +0.5
ARU pmax pmax
comp=Z,226nm,1.5s
MAK Makhachkala 82.49 316 *e*P **P** 04 25 25.8 -2.6
MAK *e*S **S** 04 35 40.4 -1.9
MAK *e*SS **SS** 04 41 01.5 -2.9
MAK *e*SSS SSS 04 44 31.2
MAK pmax pmax
comp=Z,244nm,1.1s
NRIK Noril'sk 82.75 350 P **P** 04 25 29.7 +0.6
comp=Z,20nm,0.5s,baz=158,slow=4.7,SNR=39
NRIK PP **PP** 04 28 41.2 +1.6
comp=Z,18nm,1.0s,baz=166,slow=8.2,SNR=4.0
NRIK S **S** 04 35 38.6 -5.3
comp=Z,0.9nm,0.3s,baz=83,slow=5.3,SNR=1.4
comp=Z,20nm,0.5s
NRIK Noril'sk 82.75 350 P **P** 04 25 30.3 +1.1
NRIK IAmb IAmb 04 25 43.1
comp=Z,172nm,1.4s
NRIK Noril'sk 82.75 350*d* *i* P **P** 04 25 29.7 +0.6
NRIK pmax pmax
comp=Z,113nm,1.5s
TIXI Tiksi 83.02 4 P **P** 04 25 30.4 0.0
comp=Z,40nm,0.5s,baz=104,slow=11,SNR=68
TIXI S S 04 35 37.4 -9.2
comp=Z,1.1nm,0.3s,baz=271,slow=24,SNR=1.4
comp=Z,40nm,0.5s
TIXI Tiksi 83.02 4 P **P** 04 25 30.5 0.0
TIXI Tiksi 83.02 4*d* *i* P **P** 04 25 30.3 -0.2
TIXI pmax pmax
comp=Z,250nm,1.5s
GNI Garni 83.39 313 P **P** 04 25 33.7 +0.4
comp=Z,45nm,1.0s,baz=27,slow=19,SNR=1.1
GNI S **S** 04 35 48.7 -3.3
comp=Z,4.9nm,0.6s,baz=156,slow=18,SNR=0.8
GNI LR LR 05 06 05.7
comp=Z,1µm,21.6s,baz=112,slow=38
comp=Z,45nm,1.0s
GNI Garni 83.39 313*d* *i* P **P** 04 25 34.7 +1.4
GNI pmax pmax
comp=Z,299nm,1.4s
GNI Garni 83.39 313 P **P** 04 25 35.0 +1.6
GNI Garni 83.39 313 P **P** 04 25 34.9 +1.6
SLR Silverton 83.47 245⇓*i* P **P** 04 25 34.8 +0.7
SLR IAmb IAmb 04 25 37.9
comp=Z,50nm,0.9s
SNKL Senekal, Frees 83.52 243 *e*P **P** 04 25 34.7 +0.3
SNKL IAmb IAmb 04 25 38.0
comp=Z,56nm,0.9s
GROC Groznyy 83.74 316 *e*P **P** 04 25 34.7 -0.1
GROC *e* 04 28 48.8
GROC *e*S **S** 04 35 54.2 -0.8
GROC pmax pmax
comp=Z,436nm,1.5s
HRAO HartRAO 83.97 245 *i* P **P** 04 25 36.8 +0.1
HRAO IAmb IAmb 04 25 40.1
comp=Z,463nm,2.5s
MQOL MQOL 84.00 292 AMP 04 25 49.2
comp=Z,379nm,1.0s
MQOL MQOL 84.00 292 *i* P **P** 04 25 37.9 +1.2
MQOL MQOL 84.00 292 *i* P 04 25 46.4 +10
baz=253,slow=18
BLWY Bulawayo 84.08 251 *e*P **P** 04 25 37.2 -0.1
BLWY IAmb IAmb 04 25 41.0
comp=Z,646nm,1.6s
BLWY Bulawayo 84.08 251 *i* P **P** 04 25 34.9 -2.5
BLWY Bulawayo 84.08 251 *i* P **P** 04 25 34.9 -2.5
PRYS Parys 84.09 244⇓*i* P **P** 04 25 37.4 +0.1
PRYS IAmb IAmb 04 25 40.8
comp=Z,98nm,0.8s
WDLM Western Deep L 84.12 244 *e*P **P** 04 25 37.9 +0.3
WDLM IAmb IAmb 04 25 41.4
comp=Z,40nm,0.9s
MATP Matopo 84.14 250⇓*i* P **P** 04 25 37.8 +0.2
MATP IAmb IAmb 04 25 41.4
comp=Z,6µm,1.8s
MATP Matopo 84.14 250 LR LR 04 56 10.9
comp=Z,5µm,22.0s,baz=74,slow=31
MATP Matopo 84.14 250 *i* P **P** 04 25 34.9 -2.7
MATP Matopo 84.14 250 *i* P **P** 04 25 34.9 -2.7
NVL N'lazarevskaya 84.28 199 *e*P **P** 04 25 38.6 +1.5
NVL *e*S **S** 04 35 57.3 -2.2
NVL pmax pmax
comp=Z,66nm,1.5s
AKH Akhalkalaki 84.71 314 ⇑P **P** 04 25 42.7 +2.7
KIWB Kanaga Island 84.74 35 P **P** 04 25 41.3 +1.6
KARS Kars 84.75 313 P **P** 04 25 41.5 +1.3
KARS Kars 84.75 313 P **P** 04 25 41.5 +1.3
KARS pmax pmax
comp=Z,1µm,1.1s
GURO Guroymak-BITLI 84.84 311 P **P** 04 25 42.8 +2.0
ZEI Tsey 84.89 315 *e*P **P** 04 25 42.3 +1.3
ZEI pmax pmax
comp=Z,246nm,1.4s
ADK Adak 85.01 35 P **P** 04 25 42.4 +1.3
ADK Adak 85.01 35 IAMs_20 IAMs_20 05 00 13.4
comp=Z,2µm,22.0s
ADK Adak 85.01 35 P **P** 04 25 42.4 +1.3
ADK pmax pmax
comp=Z,551nm,1.6s
ADK Adak 85.01 35 P **P** 04 25 45.3 +4.2
ONI Oni 85.14 315 P **P** 04 25 43.5 +1.4
ONI IAmb IAmb 04 26 07.9
comp=Z,161nm,1.2s
ONI Oni 85.14 315 P **P** 04 25 43.5 +1.4
ONI pmax pmax
comp=Z,161nm,1.2s
KROM Kromhout 85.21 236 *e*P **P** 04 25 43.2 +0.6
KROM IAmb IAmb 04 25 46.8
comp=Z,118nm,1.1s
ROSN Rosenhof 85.28 236 *e*P **P** 04 25 44.0 +1.1
ROSN IAmb IAmb 04 25 47.1
comp=Z,105nm,1.0s
LSZ Lusaka 85.31 255 LR LR 04 58 29.9
comp=Z,7µm,21.8s,baz=112,slow=32
LSZ Lusaka 85.31 255 P **P** 04 25 43.9 +0.3
LSZ Lusaka 85.31 255 P **P** 04 25 43.9 +0.3
LSZ pmax pmax
comp=Z,414nm,2.0s
MARD Mardin 85.40 309 P **P** 04 25 44.8 +1.3
GSTR Great Sitkin T 85.45 35 P **P** 04 25 44.2 +0.9
MBAR Mbarara 85.51 270 S **S** 04 36 17.1 +2.9

comp=Z,3.1nm,0.2s,baz=84,slow=22,SNR=1.7
MBAR LR LR 05 02 35.9
comp=Z,3μm,18.2s,baz=87,slow=35
MBAR Mbarara 85.51 270 P **P** **04 25 46.2 +1.5**
MBAR Mbarara 85.51 270 P **P** **04 25 46.2 +1.5**
MBAR pmax pmax
comp=Z,367nm,1.4s
MBAR MLR MLR
comp=Z,6μm,19.0s
MBAR Mbarara 85.51 270⇓ *e*P **P** **04 25 45.9 +1.3**
MBAR *e*S **S** **04 36 17.2 +3.0**
MBAR Mbarara 85.51 270 *e*P **P** **04 25 45.9 +1.3**
MBAR Mbarara 85.51 270 *e*P **P** **04 25 44.7 0.0**
MBAR Mbarara 85.51 270 *e*S S 04 36 27.4 +13
MBAR Mbarara 85.51 270 *e*P **P** **04 25 46.2 +1.5**
MBAR Mbarara 85.51 270 *e*P **P** **04 25 46.2 +1.5**
MBAR Mbarara 85.51 270 *e*P **P** **04 25 45.9 +1.3**
MBAR Mbarara 85.51 270 *e*P **P** **04 25 44.7 0.0**
MBAR Mbarara 85.51 270 *e*P P 04 25 38.6 -6.1
MBAR Mbarara 85.51 270 *i* P **P** **04 25 45.8 +1.1**
MBAR Mbarara 85.51 270⇓ *e*P **P** **04 25 45.9 +1.3**
MBAR *e*S **S** **04 36 17.2 +3.0**
MBAR Mbarara 85.51 270 *e*P **P** **04 25 44.4 -0.3**
MBAR *e*S **S** **04 36 14.5 +0.3**
BOSA Boshof 85.64 242⇓ *i* P **P** **04 25 45.5 +0.4**
BOSA IAmb IAmb 04 25 48.8
comp=Z,128nm,0.9s
BOSA Boshof 85.64 242 P **P** **04 25 45.3 +0.3**
comp=Z,84nm,0.8s,baz=104,slow=4.2,SNR=109
BOSA LR LR 05 01 07.4
comp=Z,4μm,18.1s,baz=100,slow=34
comp=Z,84nm,0.8s
BOSA Boshof 85.64 242 P **P** **04 25 45.1 0.0**
BOSA IAmb IAmb 04 25 49.0
comp=Z,126nm,0.9s
BOSA Boshof 85.64 242 *i* P **P** **04 25 47.3 +2.2**
BOSA Boshof 85.64 242 *i* P **P** **04 25 47.3 +2.2**
SWZ Schweizer 85.83 243 *e*P **P** **04 25 46.5 +0.5**
SWZ IAmb IAmb 04 25 49.8
comp=Z,142nm,1.2s
KBZ Khabaz 85.90 316 P **P** **04 25 47.4 +1.7**
comp=Z,43nm,1.0s,baz=85,slow=2.7,SNR=37
KBZ S **SKSac** **04 36 07.8 -0.7**
comp=Z,0.8nm,0.5s,baz=29,slow=7.0,SNR=1.5
KBZ LR LR 05 09 18.1
comp=Z,1μm,20.4s,baz=94,slow=39
comp=Z,43nm,1.0s
KBZ Khabaz 85.90 316*d* *i*P **P** **04 25 47.4 +1.7**
KBZ pmax pmax
comp=Z,183nm,1.1s
LBTB Lobatse 85.98 245⇓ *i*P **P** **04 25 47.1 +0.4**
LBTB IAmb IAmb 04 25 50.7
comp=Z,340nm,1.8s
LBTB Lobatse 85.98 245 LR LR 04 59 17.6
comp=Z,8μm,19.1s,baz=106,slow=32
LBTB Lobatse 85.98 245 P **P** **04 25 46.8 0.0**
LBTB IAmb IAmb 04 25 51.0
comp=Z,69nm,0.9s
LBTB Lobatse 85.98 245 P **P** **04 25 46.8 0.0**
LBTB pmax pmax
comp=Z,69nm,0.9s
LBTB Lobatse 85.98 245 *i* P **P** **04 25 45.7 -1.1**
LBTB Lobatse 85.98 245 *i* P **P** **04 25 45.7 -1.1**
BATM Batumi 86.05 314⇑ P **P** **04 25 48.6 +2.1**
BATM Batumi 86.05 314⇑ P **P** **04 25 48.6 +2.1**
SHA1 Shidzhatmaz 86.07 316 *i* P **P** **04 25 48.2 +1.3**
KVAR Kislovodsk Arr 86.11 316 P **P** **04 25 49.2 +2.3**
comp=Z,4.9nm,0.5s,baz=90,slow=20,SNR=2.3
KVAR LR LR 05 08 43.9
comp=Z,1μm,21.1s,baz=224,slow=39
comp=Z,4.9nm,0.5s
KIV Kislovodsk 86.12 316⇑ P **P** **04 25 49.6 +2.7**
KIV Kislovodsk 86.12 316 P **P** **04 25 48.4 +1.4**
KIV IAmb IAmb 04 26 07.2
comp=Z,120nm,1.3s
KIV Kislovodsk 86.12 316 *e*P **P** **04 25 48.4 +1.4**
KIV *e* 04 29 08.9
KIV *e*PPP PPP 04 31 03.3
KIV *e* 04 36 10.7
KIV *e*SSS SSS 04 45 33.8
KIV pmax pmax
comp=Z,59nm,1.1s
KIV pmax pmax
comp=Z,704nm,4.7s
KIV Kislovodsk 86.12 316 P **P** **04 25 48.1 +1.1**
KIV Kislovodsk 86.12 316 *i* P **P** **04 25 48.7 +1.7**
SNR=26
BELG Belogornoye 86.13 325 P **P** **04 25 46.5 -0.1**
comp=Z,413nm,1.3s,baz=342,slow=0.8,SNR=35
BELG PP **PP** **04 29 08.1 +0.5**
comp=Z,27nm,0.9s,baz=320,slow=14,SNR=1.9
BELG S **S** **04 36 14.0 -4.3**
comp=Z,4.9nm,0.6s,baz=58,slow=21,SNR=1.6
BELG LR LR 05 10 58.6
comp=Z,1μm,18.1s,baz=125,slow=40
comp=Z,413nm,1.3s
CHVG Ch'k'valeri 86.13 315⇓ P **P** **04 25 49.3 +2.4**
CHVG Ch'k'valeri 86.13 315⇓ P **P** **04 25 49.3 +2.4**
GOF Gofitskoye 86.25 317⇑ *e*P **P** **04 25 49.0 +1.6**
GOF *e*S **S** **04 36 22.8 +3.0**
GOF pmax pmax
comp=Z,378nm,1.3s
GOF smax smax
comp=N,84nm,1.7s
GOF smax smax
comp=E,131nm,2.1s
KOPT Kop Dagi 86.42 312 P **P** **04 25 50.1 +1.3**
ATKA Atka Island 86.55 35 P **P** **04 25 51.0 +2.3**
BILL Bilibino 86.58 17 P **P** **04 25 49.6 +1.1**
BILL Bilibino 86.58 17*c* *e*P **P** **04 25 49.5 +1.0**
BILL *i**PP **pP** **04 25 55.4 -3.6**
BILL *i**SP **pwP** **04 26 04.3 -0.6**
BILL *e* 04 29 11.7
BILL *i*S **SKSac** **04 36 11.0 -0.7**
BILL *e**SS **ScS** **04 36 27.0 -3.2**
BILL *e*PPS PPS 04 37 33.9
BILL *e*SS **SS** **04 42 04.6 +0.9**
BILL pmax pmax
comp=Z,91nm,2.3s
BILL MLR MLR
comp=Z,812nm,20.0s
TROLL Troll, Antarti 86.60 197 PcP **P** **04 25 49.5 +0.6**
XMAS Kiritimati 86.74 87 IAMs_20 IAMs_20 05 00 48.3
comp=Z,5μm,22.0s
JAWL J.Aulia 86.99 286 *i* P **P** **04 25 49.1 -2.6**
JAWL J.Aulia 86.99 286 *i* **P** **04 25 49.9 -1.8**
baz=360,slow=11
ASF Jabal al Asfar 87.03 303 P **P** **04 25 53.8 +2.1**
comp=Z,56nm,0.7s,baz=122,slow=5.6,SNR=38
ASF S **S** **04 36 25.5 -2.7**
comp=Z,1.7nm,0.8s,baz=265,slow=22,SNR=1.6
ASF LR LR 05 11 07.2
comp=Z,2μm,18.3s,baz=107,slow=40
comp=Z,56nm,0.7s
KTUT Trabzon 87.25 313⇑ P **P** **04 25 56.5 +4.2**
GRAN Grantham 87.57 238 *e*P **P** **04 25 55.2 +0.9**
GRAN IAmb IAmb 04 25 58.5
comp=Z,11nm,0.7s
KIRV Kirov 87.78 331 P **P** **04 25 55.0 +0.5**
comp=Z,28nm,0.8s,baz=93,slow=2.3,SNR=15
KIRV S **S** **04 36 27.8 -6.1**
comp=Z,6.6nm,0.5s,baz=5.1,slow=2.1,SNR=2.2
KIRV LR LR 05 08 13.6
comp=Z,2μm,21.4s,baz=124,slow=38
comp=Z,28nm,0.8s
KIRV Kirov 87.78 331*d* *i*P **P** **04 25 55.0 +0.5**
GHAJ Ghor Haditha 87.91 302 IAMs_20 IAMs_20 05 08 57.9
comp=Z,4μm,20.0s
EIL Elat 88.03 301 P **P** **04 25 57.5 +1.2**
comp=Z,82nm,0.8s,baz=128,slow=1.7,SNR=26
EIL S **S** **04 36 31.6 -6.0**
comp=Z,2.0nm,0.4s,baz=7.0,slow=22,SNR=1.8
EIL LR LR 05 08 25.1
comp=Z,3μm,18.8s,baz=98,slow=38
comp=Z,82nm,0.8s
SOC Sochi 88.05 315 *e*P **P** **04 25 56.5 +0.4**
SOC *e**PP **pP** **04 26 04.8 -1.9**
SOC *e* 04 29 20.4
SOC *e*S **S** **04 36 31.5 -5.7**
SOC *e*SSS SSS 04 45 54.8
SOC pmax pmax
comp=Z,124nm,1.8s
SNAA Sanae 88.24 196 PcP **P** **04 25 57.5 +0.8**
SNAA Sanae 88.24 196 *e*P **P** **04 25 57.5 +0.8**
SNAA IAmb IAmb 04 26 00.5
comp=Z,4μm,0.9s
SNAA Sanae 88.24 196 P **P** **04 25 56.1 -0.6**
SNAA IAmb IAmb 04 26 00.7
comp=Z,66nm,0.9s
SNAA Sanae 88.24 196 *i* P **P** **04 25 56.4 -0.3**
SNAA pmax pmax
comp=Z,84nm,0.9s
SHBL Chebaa 88.27 304 *e*P **P** **04 25 59.2 +1.6**
MMAI Mount Meron Ar 88.46 304 P **P** **04 25 58.0 -0.5**
comp=Z,7.4nm,0.8s,baz=16,slow=34,SNR=2.4
MMAI LR LR 05 12 24.0
comp=Z,2μm,18.2s,baz=272,slow=40
comp=Z,7.4nm,0.8s
BHL Bhannes 88.48 305 *e*P **P** **04 25 59.8 +1.2**
SUR Sutherland 88.68 237 LR LR 05 00 33.9
comp=Z,7μm,19.5s,baz=108,slow=32
SUR Sutherland 88.68 237 P **P** **04 25 59.2 -0.6**
SUR IAmb IAmb 04 26 04.9
comp=Z,61nm,1.0s
MATJ Matjiesfontein 88.68 237 *e*P **P** **04 26 00.6 +1.0**
MATJ IAmb IAmb 04 26 04.1
comp=Z,229nm,1.5s
VRH Novokhopyorsk 89.12 323 *e*P **P** **04 26 01.9 +0.9**
VRH *e*S **S** **04 36 38.0 -8.9**
VRH pmax pmax
comp=Z,180nm,0.9s
VRH smax smax
comp=N,1μm,7.7s
VRH MLR MLR
comp=Z,2μm,23.0s
UPI Upington 89.15 241 *e*P **P** **04 26 02.5 +0.5**
UPI IAmb IAmb 04 26 06.4
comp=Z,51nm,1.5s
KEIM Keimoes 89.32 241 *e*P **P** **04 26 03.5 +0.9**
KEIM IAmb IAmb 04 26 07.3
comp=Z,68nm,1.2s
TOKA Tokat 89.47 311 P **P** **04 26 04.6 +1.7**
BNN Bunyan 89.56 310 P **P** **04 26 05.1 +1.5**
BELA Belgrano 2 89.65 186 P **P** **04 26 03.3 +0.2**
BELA IAmb IAmb 04 26 06.5
comp=Z,116nm,1.5s
CER Ceres 89.71 236 *e*P **P** **04 26 07.2 +2.8**
CER IAmb IAmb 04 26 09.1
comp=Z,108nm,2.1s
CVNA Calvinia 89.75 238 *e*P **P** **04 26 06.5 +1.8**
CVNA IAmb IAmb 04 26 09.4
comp=Z,66nm,1.2s
VNA2 Neumayer--Watz 89.88 196 PKKPbc PKKPbc 04 43 35.8 -3.1
baz=317,slow=6.0
VNA2 Neumayer--Watz 89.88 196 PcP **P** **04 26 04.9 +0.6**
baz=113,slow=4.0
AUGR Augrabies 89.89 241 *e*P **P** **04 26 07.0 +1.7**
AUGR IAmb IAmb 04 26 09.9
comp=Z,77nm,1.1s
ANN Anapa 89.97 316 *e*P **P** **04 26 05.3 +0.2**
ANN *e* 04 29 38.9
ANN *e*PPP PPP 04 31 33.6
ANN *e* 04 36 30.2
ANN pmax pmax
comp=Z,101nm,1.1s
VNA1 Neumayer--Stat 90.27 196 PKKPbc PKKPbc 04 43 35.9 -1.9
VNA1 Neumayer--Stat 90.27 196 PcP **PcP** **04 26 07.0 -0.3**
VNA3 Neumayer Olymp 90.29 195 PKKPbc PKKPbc 04 43 36.4 -1.5
VNA3 Neumayer Olymp 90.29 195 PcP **P** **04 26 06.6 +0.4**
SPIA Saint Paul Isl 90.50 31 P **P** **04 26 07.4 +0.2**
baz=250
VORD Divnogorie 90.50 322 *e*P **P** **04 26 07.7 +0.3**
VORD pmax pmax
comp=Z,50nm,0.9s
PPT Papeete 90.58 108 LR LR 05 03 30.9
comp=Z,4μm,21.2s,baz=260,slow=33
CSS Mathiatis 90.59 305 P **P** **04 26 09.8 +1.4**
CSS IAmb IAmb 04 26 30.4
comp=Z,86nm,1.5s
CSS IAMs_20 IAMs_20 05 08 53.9
comp=Z,3μm,20.0s
VSR Storozhevoye 90.65 322 *e*P **P** **04 26 08.3 +0.1**
VSR *e*S **S** **04 37 00.8 -0.4**
VSR pmax pmax
comp=Z,100nm,1.2s
VSR smax smax
comp=E,2μm,12.0s
VSR MLR MLR
comp=Z,2μm,22.0s
PRGR Permogore 90.75 333 *e*P **P** **04 26 09.9 +1.5**
VORR Voronezh 90.76 323 *e*P **P** **04 26 09.5 +0.9**
VORR pmax pmax
comp=Z,73nm,0.3s
LPSR Galich'ya Gora 91.19 323 *e*P **P** **04 26 10.9 +0.3**
LPSR pmax pmax
comp=Z,60nm,1.1s
LPSR MLR MLR
comp=Z,3μm,22.0s
BR131 Keskin Array S 91.44 310 P **P** **04 26 12.8 +0.5**
BR131 IAmb IAmb 04 26 24.3
comp=Z,89nm,1.1s
BR131 Keskin Array S 91.44 310*d* *i*P **P** **04 26 12.8 +0.5**
BRTR Keskin Array B 91.44 310 P **P** **04 26 12.8 +0.5**
comp=Z,33nm,0.9s,baz=127,slow=5.4,SNR=37
BRTR PP **PP** **04 29 50.9 +0.3**
comp=Z,9.1nm,1.0s,baz=126,slow=6.3,SNR=5.3
BRTR LR LR 05 10 19.6
comp=Z,3μm,20.9s,baz=118,slow=38
comp=Z,33nm,0.9s
UNV Unalaska Valle 91.47 35 P **P** **04 26 12.1 +0.2**
baz=253
ILGA Ilgaz 91.68 311 P **P** **04 26 14.5 +1.0**
ILGA IAmb IAmb 04 26 25.3
comp=Z,78nm,1.1s
ANTO Ankara 92.10 310 P **P** **04 26 16.1 +0.9**
ANTO IAmb IAmb 04 26 19.7
comp=Z,52nm,1.1s
ANTO IAMs_20 IAMs_20 05 14 27.8
comp=Z,2μm,21.0s
ANTO Ankara 92.10 310 P **P** **04 26 16.2 +0.9**
ANTO pmax pmax
comp=Z,52nm,1.1s
BR231 Keskin MP Arra 92.11 310 IAmb IAmb 04 26 27.8
comp=Z,101nm,1.5s
GAMB Gambell 92.13 25 P **P** **04 26 16.1 +1.4**
baz=249
SIM Simferopol' 92.29 315 *e*P **P** **04 26 16.9 +1.0**
SIM *e* 04 29 59.0
SIM S **S** **04 37 08.0 -8.3**
SIM pmax pmax
comp=Z,57nm,1.0s
SIM pmax pmax
comp=Z,78nm,1.2s
SIM MLR MLR
comp=Z,2μm,23.0s
MOS Moscow 92.80 326 *e*P **P** **04 26 17.8 -0.2**
MOS *e* 04 29 57.8
MOS *e*S **SKSac** **04 36 48.9 +0.3**
MOS *e*PS PS 04 38 32.0 -5.2
MOS pmax pmax
comp=Z,85nm,1.5s
OBN Obninsk 93.22 326 P **P** **04 26 19.7 -0.2**
comp=Z,4.2nm,0.5s,baz=90,slow=3.8,SNR=11
OBN PP **PP** **04 30 06.3 +2.4**
comp=Z,5.1nm,0.5s,baz=162,slow=10,SNR=1.7
OBN S **SKSac** **04 37 00.3 +9.4**
comp=Z,3.7nm,0.4s,baz=134,slow=19,SNR=1.4
OBN LR LR 05 13 56.0
comp=Z,874nm,20.9s,baz=110,slow=39
comp=Z,4.2nm,0.5s
OBN Obninsk 93.22 326 IAMs_20 IAMs_20 05 12 04.5
comp=Z,4μm,21.0s
OBN Obninsk 93.22 326*de* P **P** **04 26 20.6 +0.7**
OBN *i**PP **pP** **04 26 30.1 -0.4**
OBN *i**SP **pwP** **04 26 36.5 0.0**
OBN *e* 04 30 07.3
OBN PPP PPP 04 32 08.0
OBN S **SKSac** **04 36 56.0 +5.1**
OBN *e* 04 37 28.9
OBN *e*PPS PPS 04 39 21.8
OBN SS **SS** **04 43 40.0 -0.3**
OBN SSS SSS 04 47 18.0
OBN pmax pmax
comp=Z,109nm,1.5s
OBN MLR MLR
comp=Z,4μm,24.0s
KLMR Klimovskoe 93.27 331 *e*P **P** **04 26 18.8 -1.3**
KLMR *e* 04 30 01.3
KLMR *e*S **SKSac** **04 36 50.1 -0.9**
KLMR *e*SS **SS** **04 43 40.8 0.0**
KLMR pmax pmax
comp=Z,179nm,1.5s
KLMR Klimovskoe 93.27 331 *e*P **P** **04 26 18.9 -1.2**
KLMR AMP 04 26 23.6
comp=Z,179nm,1.5s
KLMR *e*PP **PP** **04 30 01.3 -2.9**
KLMR *e*S **SKSac** **04 36 50.2 -0.8**
KLMR *e*S **SKSac** **04 36 50.2 -0.8**
KLMR *e*SS **SS** **04 43 40.8 0.0**
KLMR *e*SS **SS** **04 43 40.8 0.0**
KLMR LQ LQ 05 01 52.2
KLMR LQ LQ 05 01 52.2
KLMR LR LR 05 07 26.0
KLMR AMP 05 14 23.6
comp=Z,2μm,19.2s
ISP Isparta 93.41 308 IAMs_20 IAMs_20 05 13 50.9
comp=Z,3μm,21.0s
TNA Tin City 94.25 24 P **P** **04 26 26.2 +1.8**
baz=252
TSUM Tsumeb 94.45 250 *e*P **P** **04 26 27.7 +1.0**
TSUM IAmb IAmb 04 26 31.0
comp=Z,122nm,1.1s
TSUM Tsumeb 94.45 250 LR LR 05 05 22.1
comp=Z,8μm,18.9s,baz=106,slow=33
TSUM Tsumeb 94.45 250 P **P** **04 26 26.6 -0.1**
SDPT Sand Point 95.25 35 P **P** **04 26 29.3 0.0**
baz=258
PURM Purcari 95.52 316⇑ P **P** **04 26 31.5 +0.8**
CHNA Chernabura Isl 95.64 35 P **P** **04 26 31.3 +0.2**
baz=259
KARP Karpathos 95.66 305 IAMs_20 IAMs_20 05 16 11.0
comp=Z,2μm,20.0s
TIRR Tirgusor 96.18 314⇑ P **P** **04 26 34.3 +0.5**
TIRR Tirgusor 96.18 314⇑ P **P** **04 26 34.3 +0.5**
TPGR Topolog 96.24 314⇑ P **P** **04 26 34.8 +0.7**
MILM Milestii Mici 96.30 316 *e*P **P** **04 26 31.0 -3.3**
comp=Z,500nm,9.6s
MILM Milestii Mici 96.30 316 *e*PP **PP** **04 30 33.0 +4.8**
comp=Z,1μm,9.2s
MILM *e*SKS SKSac 04 37 19.0 +11
MILM *e*SKKS **SKKSac** **04 37 27.0 -6.1**
MILM *e*S S 04 37 40.0 -11
MILM Milestii Mici 96.30 316 *e*PS PS 04 39 11.0 -5.1
MILM *e*L L 05 02 48.0
MILM LRM MLR 05 12 40.0
comp=Z,1μm,24.0s
MILM Milestii Mici 96.30 316⇑ P **P** **04 26 34.4 +0.1**
MILM Milestii Mici 96.30 316 *e*P **P** **04 26 31.0 -3.3**
MILM *e* 04 30 33.0
MILM *e*S S 04 37 40.0 -11
MILM *e*PS **PS** **04 39 11.0 -5.1**
MILM pmax pmax
comp=Z,500nm,9.6s
MILM pmax pmax
comp=Z,1μm,9.2s
MILM MLR MLR
comp=Z,2μm,21.0s
KIS Kishinev 96.31 317 *e*P **P** **04 26 31.0 -3.3**
comp=Z,210nm,9.5s
KIS Kishinev 96.31 317 *i* PP **PP** **04 30 36.0 +7.7**
comp=Z,450nm,4.3s
KIS *e*SKS **SKSac** **04 37 18.0 +10**
KIS *e*SKKS **SKKSac** **04 37 27.0 -6.2**
KIS *e*S S 04 37 41.0 -10
KIS *e*L L 05 06 00.0
KIS LRM MLR 05 12 29.0
comp=Z,600nm,24.5s
KIS Kishinev 96.31 317 *e*P **P** **04 26 31.0 -3.3**
KIS *i* 04 30 36.0
KIS *e*S S 04 37 41.0 -10
KIS pmax pmax
comp=Z,210nm,9.5s
KIS MLR MLR
comp=Z,600nm,24.5s
CFR Carcaliu 96.49 315⇑ P **P** **04 26 35.4 +0.2**
CFR Carcaliu 96.49 315⇑ P **P** **04 26 35.4 +0.2**
AKASG Malin Array Be 96.65 320 P **P** **04 26 35.4 -0.4**
comp=Z,7.9nm,0.9s,baz=72,slow=4.1,SNR=32
AKASG PP **PP** **04 30 26.4 -4.4**
comp=Z,27nm,1.1s,baz=83,slow=6.2,SNR=9.3
AKASG LR LR 05 17 02.1
comp=Z,2μm,20.7s,baz=105,slow=40
comp=Z,7.9nm,0.9s
AKASG Malin Array Be 96.65 320 *i* P **P** **04 26 35.4 -0.4**
AKASG pmax pmax
comp=Z,10.0nm,0.9s
PRD Provadia 96.70 313 *e*P **P** **04 26 36.0 -0.2**
SORM Soroca 96.81 318⇓ P **P** **04 26 36.8 +0.3**
SORM Soroca 96.81 318⇓ P **P** **04 26 36.8 +0.3**
RDOG Red Dog Mine 96.82 22 IAmb IAmb 04 26 38.6
comp=Z,32nm,1.0s
RDOG Red Dog Mine 96.82 22 P **P** **04 26 35.2 -1.0**
baz=257
N16K Nishlik Lake 97.11 30 P Pdif 04 26 37.9 +0.2
baz=260,SNR=20
P16K Nushagak River 97.25 31 P **P** **04 26 38.1 -0.2**
baz=261
O16K Kokwok River B 97.30 31 P Pdif 04 26 38.6 +0.1
baz=260,SNR=16
IDI Anoyia 97.45 304 P Pdif 04 26 41.5 +1.5
comp=Z,12nm,0.7s,baz=94,slow=5.0,SNR=2.4
comp=Z,12nm,0.7s
APA Apatity 97.48 337⇓ *i*P **P** **04 26 35.0 -4.2**
APA *i* 04 30 46.0
APA *i* 04 37 11.0
APA *i*S **S** **04 37 53.0 -7.6**
APA *i*PS PS 04 39 22.0 -6.2
APA *i*SS **SS** **04 44 38.0 -2.3**
APA pmax pmax
comp=Z,14nm,1.2s
APA MLR MLR
comp=Z,4μm,25.0s
VRI Vrincioaia 97.57 315⇑ P Pdif 04 26 41.5 +1.3
VRI Vrincioaia 97.57 315⇑ P Pdif 04 26 41.5 +1.3
PLOR Plostina 97.62 315⇑ P Pdif 04 26 41.3 +0.9
PLOR Plostina 97.62 315⇑ P Pdif 04 26 41.3 +0.9
TESR Tescani 97.71 316⇓ P Pdif 04 26 41.1 +0.4
SZH Strazhica 97.77 313 *e*P **P** **04 26 40.0 -1.0**
O17K Koliganek Bris 97.82 31 P Pdif 04 26 41.8 +0.9
baz=261,SNR=6.0
MNK Minsk 98.03 324 *i* P **P** **04 26 39.5 -2.3**
MNK *i* 04 30 38.8
MNK *i* PPP PPP 04 32 44.0
MNK *i*S **SKSac** **04 37 09.9 -6.5**
MNK *i*SS **SS** **04 44 44.0 -4.5**
MNK *i*SSS SSS 04 48 35.2
MNK pmax pmax
comp=E,2.0nm,1.1s
MNK pmax pmax
comp=Z,32nm,1.1s
MNK MLR MLR
comp=E,395nm,22.0s
MNK MLR MLR
comp=Z,10μm,21.0s
MNK Minsk 98.03 324 *i* P **P** **04 26 39.6 -2.3**
comp=E,2.0nm,1.1s,baz=278
MNK *i* P **P** **04 26 39.6 -2.3**
MNK *i* P **P** **04 26 39.6 -2.3**
comp=Z,32nm,1.1s
MNK *i* PP **PP** **04 30 38.9 -2.4**
MNK *i* PPP PPP 04 32 44.0
MNK *i* SKS **SKiKP** **04 34 48.2 +1.2**
MNK *i*S **SKSac** **04 37 09.9 -6.5**
MNK *i*SS **SS** **04 44 44.1 -4.5**
MNK *i* SSS SSS 04 48 35.2
MNK *i* LQ LQ 05 05 11.9
MNK *i* LR LR 05 08 45.5
MNK *i* LRM MLR 05 11 35.6
comp=E,395nm,21.6s
MNK *i* LRM MLR 05 11 35.8
comp=Z,10μm,21.4s
CHIR Chirikof Islan 98.04 35 IAmb IAmb 04 26 46.1
comp=Z,36nm,0.7s
CHIR Chirikof Islan 98.04 35 Pdiff Pdif 04 26 42.4 +0.4
baz=262
MLR Muntele Rosu 98.06 315⇑ P Pdif 04 26 43.3 +0.8
MLR Muntele Rosu 98.06 315 P Pdif 04 26 43.4 +0.9
comp=Z,4.6nm,0.6s,baz=84,slow=1.3,SNR=16
MLR PP **PP** **04 30 40.9 -1.1**
comp=Z,21nm,0.9s,baz=72,slow=4.6,SNR=10.0
MLR LR LR 05 15 57.6
comp=Z,2μm,21.1s,baz=76,slow=38
comp=Z,4.6nm,0.6s
MLR Muntele Rosu 98.06 315 IAmb IAmb 04 30 42.1
comp=Z,92nm,1.6s

MLR IAMs_20 IAMs_20 05 15 34.6
comp=Z,4µm,22.0s
MLR Muntele Rosu 98.06 315 ⇑P Pdif 04 26 43.3 +0.8
P17K Kvichak River 98.07 31 Pdiff **P** **04 26 41.9 0.0**
baz=262
RZN Rozhen 98.46 311 *e*P **P** **04 26 42.0 -2.4**
DOPR Dopca 98.51 315 ⇑P **P** **04 26 44.4 0.0**
N18K Kilae Creek 98.55 30 IAmb IAmb 04 26 49.0
comp=Z,50nm,1.6s
N18K Kilae Creek 98.55 30 Pdiff Pdif 04 26 44.5 +0.3
baz=263
GCSA Galena City Sc 98.62 26 Pdiff Pdif 04 26 44.7 +0.3
baz=262
VOIR 98.68 315 ⇓P Pdif 04 26 46.1 +0.9
VOIR 98.68 315 ⇓P Pdif 04 26 46.1 +0.9
P18K Big Mountain, 98.71 31 Pdiff **P** **04 26 43.9 -1.0**
baz=263
NACGM Naroch 98.71 324 PP **PP** **04 30 50.4 +3.9**
baz=97
TTA Tatalina 98.77 28 IAmb IAmb 04 26 49.9
comp=Z,59nm,1.7s
TTA Tatalina 98.77 28 Pdiff Pdif 04 26 46.4 +1.2
baz=263
O18K Koktuh Hills 98.78 31 IAmb IAmb 04 26 49.5
comp=Z,75nm,2.0s
O18K Koktuh Hills 98.78 31 Pdiff **P** **04 26 44.4 -0.8**
baz=263
IDID Didziasalis 98.79 325 *e*P **PP** **04 30 50.6 +3.6**
BURAR Bucovina Array 98.83 317 ⇑P Pdif 04 26 46.7 +0.9
BURAR Bucovina Array 98.83 317 ⇑P Pdif 04 26 46.7 +0.9
SII Sitkinak Islan 98.93 34 IAMs_20 IAMs_20 05 08 15.4
comp=Z,2µm,20.0s
SII Sitkinak Islan 98.93 34 Pdiff Pdif 04 26 47.1 +1.1
baz=263
IIGN Ignalina 99.08 325 *e*P **PP** **04 30 50.2 +0.9**
ISAL Salakas 99.16 325 *e*P **PP** **04 30 52.6 +2.8**
L19K White Mountain 99.22 28 IAmb IAmb 04 26 51.8
comp=Z,78nm,1.8s
L19K White Mountain 99.22 28 Pdiff **Pdif** **04 26 48.5 +1.4**
baz=264
N19K Bonanza Creek 99.25 30 IAmb IAmb 04 26 52.0
comp=Z,35nm,1.1s
N19K Bonanza Creek 99.25 30 Pdiff **Pdif** **04 26 48.8 +1.4**
baz=264
O19K Port Alsworth 99.26 30 Pdiff **Pdif** **04 26 46.3 -0.9**
baz=264
M19K Big River Lodg 99.41 29 IAmb IAmb 04 26 53.0
comp=Z,91nm,1.9s
M19K Big River Lodg 99.41 29 Pdiff **Pdif** **04 26 48.1 +0.1**
baz=264
Q19K Cape Douglas, 99.47 32 IAmb IAmb 04 26 51.5
comp=Z,24nm,0.7s
Q19K Cape Douglas, 99.47 32 Pdiff **Pdif** **04 26 47.5 -0.8**
baz=264
OHAK Old Harbor 99.49 33 Pdiff **Pdif** **04 26 49.2 +0.9**
baz=264
VTS Vitosha 99.66 312 ⇓P **Pdif** **04 26 49.7 0.0**
VTS Vitosha 99.66 312 ⇓P **Pdif** **04 26 49.7 0.0**
KKB Krupnik 99.69 311 *e*P **Pdif** **04 26 50.0 +0.3**
K20K Telida 99.69 27 IAmb IAmb 04 26 54.3
comp=Z,64nm,1.7s
K20K Telida 99.69 27 Pdiff **Pdif** **04 26 50.1 +0.9**
baz=265
L20K Farewell, AK 99.70 28 Pdiff **Pdif** **04 26 50.3 +1.1**
baz=265
J20K Nowinta River 99.74 26 Pdiff **Pdif** **04 26 50.4 +1.1**
baz=265
FINES FINESS Array B 99.77 331 P **Pdif** **04 26 49.9 +0.4**
comp=Z,25nm,1.0s,baz=96,slow=5.7,SNR=15
FINES PP **PP** **04 30 56.1 +1.8**
comp=Z,2.6nm,0.7s,baz=90,slow=12,SNR=1.3
FINES LR LR 05 15 33.6
comp=Z,2µm,21.1s,baz=108,slow=38
comp=Z,25nm,1.0s
LVV L'vov 99.84 319 *e*P **Pdif** **04 26 51.8 +1.7**
LVV *e* 04 30 51.6
LVV *e*PPP PPP 04 33 10.6
LVV *e*S **S** **04 38 17.7 -3.7**
LVV *e*PS PS 04 39 49.4 -5.0
LVV pmax pmax
comp=Z,50nm,1.4s
LVV MLR MLR
comp=E,2µm,22.0s
LVV MLR MLR
comp=N,900nm,20.0s
LVV MLR MLR
comp=Z,2µm,22.0s
KDAK Kodiak Island 99.92 33 LR LR 05 07 58.9
comp=Z,648nm,21.7s,baz=280,slow=33
KDAK Kodiak Island 99.92 33 Pdiff **Pdif** **04 26 50.1 -0.2**
baz=265
M20K Styx River 100.00 29 Pdiff **Pdif** **04 26 50.0 -0.6**
baz=265
Q20K Shuyak Island 100.09 32 Pdiff **Pdif** **04 26 51.1 +0.1**
baz=265
BLKB Belogradchik 100.17 313 ⇑P **Pdif** **04 26 52.1 +0.3**
GZR Gura Zlata 100.27 314 ⇑P **Pdif** **04 26 53.2 +1.0**
GZR Gura Zlata 100.27 314 ⇑P **Pdif** **04 26 53.2 +1.0**
PABE Paberze 100.38 325 IAMs_20 IAMs_20 05 17 16.8
comp=Z,4µm,22.0s
PABE Paberze 100.38 325 *e*P **PP** **04 31 00.1 +1.0**
H21K Melozitna Rive 100.42 25 Pdiff **Pdif** **04 26 52.9 +0.5**
baz=266
DRGR 100.44 316 ⇓P **Pdif** **04 26 53.5 +0.5**
DRGR 100.44 316 ⇓P **Pdif** **04 26 53.5 +0.5**
HERR Herculane 100.47 314 ⇑P **Pdif** **04 26 53.8 +0.8**
PPLA Purkeypile 100.51 28 Pdiff **Pdif** **04 26 53.9 +0.9**
baz=266
CHUM Lake Minchumin 100.52 27 Pdiff **Pdif** **04 26 54.3 +1.5**
baz=266
HOM Homer 100.56 31 Pdiff **Pdif** **04 26 53.8 +0.7**
baz=266
CAST Castle Rocks 100.59 27 Pdiff **Pdif** **04 26 52.9 -0.3**
baz=266
ARCES ARCESS Array B 100.61 339 P **Pdif** **04 26 53.5 +0.3**
comp=Z,11nm,0.6s,baz=92,slow=4.2,SNR=26
SUW Suwalki 100.72 323 IAMs_20 IAMs_20 05 21 53.0
comp=Z,2µm,18.0s
SUW Suwalki 100.72 323 *e*P **PP** **04 31 03.0 +1.3**
I21K Tanana 100.74 25 Pdiff **Pdif** **04 26 54.4 +0.7**
baz=267
SKT Skwentna 100.76 29 Pdiff **Pdif** **04 26 54.9 +0.9**
baz=267
BOVS Bovan 100.87 313 ⇑P **Pdif** **04 26 54.9 +0.1**
UZH Uzhgorod 100.88 318 *e*P **Pdif** **04 27 00.6 +5.9**
UZH *i* 04 31 04.2
UZH *e*S **Sdif** **04 38 32.6 +2.6**
UZH *i* SS **SS** **04 45 26.0 -2.7**
KOLS Kolonicke sedl 100.91 318 *e*P **Pdif** **04 26 57.8 +2.9**
KOLS *e* 04 31 09.9
KOLS Kolonicke sedl 100.91 318 *e*PDIFF **Pdif** **04 26 57.8 +2.9**
KOLS *e*PP **PP** **04 31 09.9 +6.5**
MDVR Moldovita 100.96 314 ⇑P **Pdif** **04 26 55.4 +0.1**
BRSE Bradley Lake S 101.02 31 Pdiff **Pdif** **04 26 55.4 +0.3**
baz=267
BZS Buzias 101.10 315 ⇑P **Pdif** **04 26 56.4 +0.6**
BZS Buzias 101.10 315 ⇑P **Pdif** **04 26 56.4 +0.6**
SUA Susitna One 101.10 29 Pdiff **Pdif** **04 26 55.5 -0.1**
baz=267
BPAW Bear Paw Mtn. 101.11 27 Pdiff **Pdif** **04 26 55.9 +0.4**
baz=268
SIRR Siria 101.12 315 ⇓P **Pdif** **04 26 55.8 -0.2**
MLY Manley 101.26 26 Pdiff **Pdif** **04 26 56.5 +0.4**
baz=268
TRF Thorofare Moun 101.40 27 Pdiff **Pdif** **04 26 57.3 +0.3**
baz=268
M22K Willow 101.42 29 Pdiff **Pdif** **04 26 56.7 -0.1**
baz=268
CRVS Cervenica-Dubn 101.44 318 *e*PP **PKiKP** **04 31 15.6 -5.7**
COLD Coldfoot 101.54 23 Pdiff **Pdif** **04 26 56.7 -0.6**
baz=269
RC01 Rabbit Creek A 101.58 30 Pdiff **Pdif** **04 26 58.0 +0.4**
baz=268
SEW Seward 101.68 31 Pdiff **Pdif** **04 26 57.5 -0.6**
baz=268
H23K Yukon River 101.78 25 Pdiff **Pdif** **04 26 59.3 +0.9**
baz=269
TOLK Toolik Lake Re 101.79 22 Pdiff **Pdif** **04 26 60.0 +1.5**
baz=270
I23K Minto, Yukon-K 101.84 26 Pdiff **Pdif** **04 27 00.5 +1.8**
baz=269
PMR Palmer 101.88 29 Pdiff **Pdif** **04 26 58.8 -0.1**
baz=269
NEA2 Nenana 101.96 26 Pdiff **Pdif** **04 26 60.0 +0.7**
baz=269
MCK McKinley 102.01 27 Pdiff **Pdif** **04 26 59.7 +0.2**
baz=269
TIR Tirane 102.05 310 IAMs_20 IAMs_20 05 19 20.0
comp=Z,2µm,19.0s
KECS Kecovo 102.06 317 *e*PP **PKiKP** **04 31 22.1 -0.3**
WAT1 Susitna Watana 102.17 29 Pdiff **Pdif** **04 27 00.5 +0.2**
baz=269
KNK Knik Glacier 102.20 29 Pdiff **Pdif** **04 27 01.4 +1.0**
baz=269
SML Sawmill 102.27 29 Pdiff **Pdif** **04 27 01.7 +0.9**
baz=269
PSZ Piszkesteto 102.43 317 ⇑P **Pdif** **04 27 02.8 +1.0**
PSZ Piszkesteto 102.43 317 IAMs_20 IAMs_20 05 20 20.1
comp=Z,2µm,21.0s
PSZ Piszkesteto 102.43 317 ⇑P **Pdif** **04 27 02.8 +1.0**
H24K Noodor Dome 102.46 25 Pdiff **Pdif** **04 27 02.8 +1.3**
baz=271
TCOL CIGO, UAF Yank 102.48 26 Pdiff **Pdif** **04 27 01.9 +0.4**
baz=270
COLA College 102.49 26 Pdiff **Pdif** **04 27 01.2 -0.3**
baz=270
WAT6 Susitna Watana 102.55 28 Pdiff **Pdif** **04 27 03.0 +0.9**
baz=270
M23K Glacier View 102.56 29 Pdiff **Pdif** **04 27 03.0 +1.1**
baz=270
PDG Podgorica 102.57 311 ⇑P **Pdif** **04 27 02.1 -0.4**
PDG Podgorica 102.57 311 IAMs_20 IAMs_20 05 15 10.8
comp=Z,1µm,21.0s
POKR Poker Flat Res 102.66 26 Pdiff **Pdif** **04 27 01.8 -0.5**
baz=271
DHY Denali Highway 102.71 28 Pdiff **Pdif** **04 27 03.6 +0.8**
baz=270
SCM Sheep Creek Mo 102.74 29 Pdiff **Pdif** **04 27 03.4 +0.5**
baz=270
SPITS Spitsbergen Ar 102.85 348 P **Pdif** **04 27 03.5 +0.5**
baz=100,slow=7.9
GLI Glacier Island 102.86 30 Pdiff **Pdif** **04 27 02.7 -0.6**
baz=270
HDA Harding Lake 102.88 26 Pdiff **Pdif** **04 27 03.6 +0.3**
baz=271
ILAR Eielson Array 102.90 26 P **Pdif** **04 27 04.1 +0.7**
comp=Z,1.8nm,0.6s,baz=246,slow=4.9,SNR=16
ILAR PP **PP** **04 31 14.5 -3.3**
comp=Z,1.2nm,0.9s,baz=294,slow=8.6,SNR=5.6
ILAR PKKPbc **PKKPbc** **04 43 03.0 -0.6**
comp=Z,2.7nm,1.1s,baz=116,slow=1.5,SNR=7.2
HIN Hinchinbrook I 103.16 30 IAMs_20 IAMs_20 05 11 08.0
comp=Z,1µm,22.0s
MORH Mrgy, Hungar 103.21 315 ⇑P **Pdif** **04 27 05.8 +0.7**
MORH Mrgy, Hungar 103.21 315 ⇑P **PP** **04 31 14.5 -6.2**
MORH Mrgy, Hungar 103.21 315 P **Pdif** **04 27 07.2 +2.0**
M24K Tolsona, Glenn 103.28 29 Pdiff **Pdif** **04 27 05.4 +0.1**
baz=271
K24K Donnelly Dome 103.41 27 Pdiff **Pdif** **04 27 05.9 +0.2**
baz=272
KLU Klutina 103.42 29 Pdiff **Pdif** **04 27 05.6 -0.3**
baz=271
EYAK Cordova Ski Ar 103.53 30 Pdiff **Pdif** **04 27 05.6 -0.6**
baz=271
J25K Salcha River, 103.56 26 Pdiff **Pdif** **04 27 06.7 +0.3**
baz=273
PAX Paxson 103.58 28 Pdiff **Pdif** **04 27 07.8 +1.2**
baz=272
OKC Ostrava-Krasne 103.65 319 *e*P **Pdif** **04 27 08.9 +1.8**
OKC *e* 04 31 24.7
OKC *e*S SKKSac 04 38 37.4 +11
OKC MLR MLR
comp=Z,1µm,18.1s
OKC Ostrava-Krasne 103.65 319 *e*PDIFF **Pdif** **04 27 08.9 +1.8**
OKC *e*PP **PP** **04 31 24.7 +0.8**
OKC *ex* x 04 38 37.4
OKC AMS AMS 05 22 10.0
comp=Z,1µm,18.1s
HARP HAARP 103.75 28 Pdiff **Pdif** **04 27 07.5 +0.2**
baz=272
RIDG Independent Ri 103.83 27 Pdiff **Pdif** **04 27 08.0 +0.4**
baz=273
MAUC Maruska 103.85 318 *e*PDIFF **Pdif** **04 27 12.4 +4.4**
MAUC *e*PP **PKiKP** **04 31 27.3 +1.6**
MAUC AMS AMS 05 20 50.0
comp=Z,3µm,19.7s
JAVC Velka Javorina 103.94 318 *e*PDIFF **Pdif** **04 27 10.2 +1.7**
JAVC *e*PP **PP** **04 31 26.6 +0.4**
JAVC *e* 04 38 01.0
MORC Moravsky Berou 104.04 319 ⇓P **Pdif** **04 27 10.5 +1.6**
MORC Moravsky Berou 104.04 319 ⇓P **Pdif** **04 27 10.5 +1.6**
MORC Moravsky Berou 104.04 319 *e*PDIFF **Pdif** **04 27 11.3 +2.4**
MORC *e*PP **PP** **04 31 27.8 +1.0**
MORC *e* 04 37 59.6
N25K Chitina, Valde 104.05 29 Pdiff **Pdif** **04 27 09.3 +0.6**
baz=273
BMRM Bremner River 104.08 30 IAMs_20 IAMs_20 05 11 00.3
comp=Z,2µm,21.0s
BMRM Bremner River 104.08 30 Pdiff **Pdif** **04 27 08.0 -0.8**
baz=272
SMOL Smolenice 104.10 317 *e*PP PKiKP 04 31 34.9 +8.7
MODS Modra-Piesok 104.19 317 *e*PP PKiKP 04 31 36.1 +10
SCRK Sand Creek 104.20 27 Pdiff **Pdif** **04 27 10.6 +1.3**
baz=274
ZST Bratislava 104.31 317 *e*PP PKiKP 04 31 36.0 +9.5
J26L Joseph Creek 104.34 26 Pdiff **Pdif** **04 27 10.8 +0.9**
baz=274
KRLC Kraliky 104.53 319 *e*P **Pdif** **04 27 20.3 +9.2**
KRLC *e* 04 31 28.6
KRLC *e*S **Sdif** **04 38 58.1 -2.5**
KRLC MLR MLR
comp=Z,2µm,21.3s
KRLC Kraliky 104.53 319 *e*pP **Pdif** **04 27 20.3 +9.2**
KRLC *e*PP **PKiKP** **04 31 28.6 +1.6**
KRLC *e*SDIF **Sdif** **04 38 58.1 -2.5**
KRLC AMS AMS 05 21 10.0
comp=Z,2µm,21.3s
VRAC Vranov 104.65 318 PP **PKiKP** **04 31 29.4 +2.3**
comp=Z,1.6nm,0.4s,baz=76,slow=10,SNR=3.2
VRAC Vranov 104.65 318 *e*PP **PKiKP** **04 31 29.3 +2.1**
VRAC *e* 04 38 02.3
M26K Nabesna, AK 104.75 28 PKiKP **PKiKP** **04 31 26.0 -1.0**
baz=274
KRUC Moravsky 104.78 318 *e*PP **PKiKP** **04 31 29.6 +2.2**
KRUC *e* 04 38 02.8
DPC Dobruska-Polom 104.83 319 *e*P **Pdif** **04 27 16.7 +4.3**
DPC *e* 04 31 31.5
DPC *e*S **Sdif** **04 39 02.0 -1.0**
DPC MLR MLR
comp=Z,2µm,21.7s
DPC Dobruska-Polom 104.83 319 *e*PDIFF **Pdif** **04 27 16.7 +4.3**
DPC *e*PP **PP** **04 31 31.5 -1.2**
DPC *e*SDIF **Sdif** **04 39 02.0 -1.0**
DPC AMS AMS 05 16 50.0
comp=Z,2µm,21.7s
OSTC Ostas 104.89 319 *e*PDIFF **Pdif** **04 27 21.7 +9.1**
OSTC *e*PP **PP** **04 31 32.8 -0.3**
OSTC *e*SDIF **Sdif** **04 39 01.4 -2.1**
OSTC AMS AMS 05 16 40.0
comp=Z,2µm,22.9s
CHVC Chvalec 105.00 320 *e*PDIFF **Pdif** **04 27 21.0 +7.9**
CHVC *e*PP **PP** **04 31 32.3 -1.6**
CHVC AMS AMS 05 16 50.0
comp=Z,2µm,22.1s
UPC Upice 105.02 319 *e*P **Pdif** **04 27 21.0 +7.8**
UPC *e* 04 31 32.6
UPC *e*S **Sdif** **04 39 00.2 -4.3**
UPC MLR MLR
comp=Z,3µm,22.0s
UPC Upice 105.02 319 *e*pP **Pdif** **04 27 21.0 +7.8**
UPC *e*PP **PP** **04 31 32.6 -1.5**
UPC *e*SDIF **Sdif** **04 39 00.2 -4.3**
UPC AMS AMS 05 16 50.0
comp=Z,3µm,22.0s
CONA Conrad Observa 105.14 317 *e*PKPdf **PKiKP** **04 31 28.5 +0.3**
comp=Z,52nm,1.4s
TREC Trest 105.38 318 *e*P **Pdif** **04 27 24.6 +10**
TREC *e* 04 31 37.6
TREC *e*S **Sdif** **04 39 08.4 +0.8**
TREC MLR MLR
comp=Z,2µm,29.1s
TREC Trest 105.38 318 *e*pP **Pdif** **04 27 24.6 +10**
TREC *e*PP **PP** **04 31 37.6 +0.8**
TREC *e*SDIF **Sdif** **04 39 08.4 +0.8**
TREC AMS AMS 05 12 10.0
comp=Z,2µm,29.1s
CRES Cresnjev 105.42 315 *e*Pdiff **Pdif** **04 27 22.1 +7.0**
CRES *i* PP **PP** **04 31 34.8 -2.4**
CRES *i* 04 38 06.0
CRES *i* 04 39 06.1
PERS Pernice 105.65 315 *i* PP **PKiKP** **04 31 36.0 +6.8**
CTG Chitna Glacier 105.66 30 PKiKP **PKiKP** **04 31 27.4 -1.4**
baz=275
SOKA Soboth 105.71 315 *e*P **PP** **04 31 38.7 -0.7**
comp=Z,42nm,1.6s
HFS Hagfors 105.84 329 Pdiff **Pdif** **04 27 14.9 -1.7**
comp=Z,4.0nm,0.9s,baz=69,slow=7.9,SNR=3.4
HFS PP **PP** **04 31 37.5 -2.3**
comp=Z,9.8nm,0.8s,baz=95,slow=11,SNR=5.5
PVCC Panska Ves 105.94 319 *e*P **Pdif** **04 27 23.2 +5.9**
PVCC MLR MLR
comp=Z,2µm,19.7s
PVCC Panska Ves 105.94 319 *e*PDIFF **Pdif** **04 27 23.2 +5.9**
PVCC AMS AMS 05 21 50.0
comp=Z,2µm,19.7s
PRU Pruhonice 105.98 319 *e*P **Pdif** **04 27 22.5 +5.1**
PRU *e* 04 31 38.8
PRU MLR MLR
comp=Z,2µm,23.8s
PRU Pruhonice 105.98 319 *e*PDIFF **Pdif** **04 27 22.5 +5.1**
PRU *e*PP **PP** **04 31 38.8 -2.3**
PRU AMS AMS 05 13 20.0
comp=Z,2µm,23.8s
YUK3 Moose Creek 106.00 29 PKiKP **PKiKP** **04 31 27.8 -1.7**
baz=276
VAE Valguarnera 106.06 306 PP **PP** **04 31 45.6 +3.4**
comp=Z,11nm,0.4s,baz=107,slow=7.1,SNR=4.2
LJU Ljubljana 106.07 315 *i* PP **PP** **04 31 39.9 -2.0**
LJU *e*SP SP 04 40 57.7 +2.8
CKRC Cesky Krumlov 106.16 318 *e*PDIFF **Pdif** **04 27 21.7 +3.4**
CKRC *e*PP **PP** **04 31 43.1 +0.5**
CKRC *e*SDIF **Sdif** **04 39 05.2 -9.0**
PINM Pinnacle 106.29 31 PKiKP **PKiKP** **04 31 29.0 -0.9**
baz=276
BRG Berggiesshubel 106.33 320 *e*(P) **Pdif** **04 27 21.8 +2.8**
BRG Amp 04 27 22.9
comp=Z,5.4nm,1.2s
BRG Berggiesshubel 106.33 320 *e*P **Pdif** **04 27 21.7 +2.8**
BRG pmax pmax
comp=Z,5.0nm,1.2s
YUK8 Steele Glacier 106.39 29 PKiKP **PKiKP** **04 31 28.8 -1.6**
baz=277
RGN Rugen 106.50 324 IAMs_20 IAMs_20 05 23 07.7
comp=Z,3µm,20.0s
GERES GERESS Array B 106.56 318 Pdiff **Pdif** **04 27 20.3 +0.1**
comp=Z,0.4nm,0.5s,baz=56,slow=3.6,SNR=5.8
GERES PKiKP **PKiKP** **04 31 29.8 -1.1**
comp=Z,2.2nm,0.9s,baz=56,slow=2.5,SNR=2.5
GERES PP **PP** **04 31 44.4 -1.2**
comp=Z,5.3nm,0.8s,baz=103,slow=5.8,SNR=10.0
GERES PKKPbc **PKKPbc** **04 42 52.2 +0.2**
comp=Z,0.7nm,0.2s,baz=318,slow=1.8,SNR=4.4
KHC Kasperske Hory 106.63 318 *e*P **Pdif** **04 27 17.4 -3.0**
KHC *e* 04 31 45.0
KHC MLR MLR
comp=Z,2µm,21.5s
KHC Kasperske Hory 106.63 318 *e*PDIFF **Pdif** **04 27 17.4 -3.0**
KHC *e*PP **PP** **04 31 45.0 -1.0**
KHC *e*SDIF **Sdif** **04 39 16.6 -1.5**
KHC AMS AMS 05 20 40.0
comp=Z,2µm,21.5s
BIOA Bad Ischl, Aus 106.64 317 *e*PP **PP** **04 31 46.8 +0.7**
comp=Z,21nm,1.3s
MYKA Terra Mystica 106.67 315 *e*PP **PP** **04 31 46.6 +0.1**
comp=Z,48nm,1.8s
PNL Peninsula 106.76 31 PKiKP **PKiKP** **04 31 29.2 -1.5**
baz=277
KBA Koelnbreinsper 106.86 316 *e*PP **PP** **04 31 48.1 +0.1**
comp=Z,24nm,1.6s
CLL Collm 106.90 320 IAMs_20 IAMs_20 05 22 37.3
comp=Z,2µm,19.0s
CLL Collm 106.90 320 *e*P **Pdif** **04 27 25.0 +3.5**
CLL *e* 04 31 48.0
CLL pmax pmax
comp=Z,29nm,1.5s
CLL MLR MLR
comp=Z,2µm,21.5s
CLL Collm 106.90 320 *e*Pdif **Pdif** **04 27 25.0 +3.5**
CLL *es*Pdif **pPdif** **04 27 32.0 -0.1**
CLL *ex* x 04 31 07.0
CLL *e*PKiKP **PKiKP** **04 31 30.0 -1.2**
CLL *e*PP **PP** **04 31 48.0 +0.2**
comp=Z,29nm,1.5s
CLL *i* sPP 04 32 01.0
comp=Z,40nm,1.5s
CLL *e*PPP PPP 04 34 12.0
CLL *e*PPPP 04 35 48.0
CLL *e*SKSac SKSac 04 38 12.0 +14
CLL *e*Sdif SKKSac 04 39 21.0 +32
CLL *e*PS **PS** **04 41 14.0 +5.5**
CLL *e*PPS PPS 04 42 09.0
CLL *ex* x 04 45 54.0
CLL *e*SS **SKKPbc** **04 46 38.0 +5.8**
CLL *ex* x 04 47 22.0
CLL *ex* x 04 50 06.0
CLL *e*SSS SSS 04 51 12.0
CLL *e*SSSS 04 54 18.0
CLL LmV 05 22 00.0
comp=Z,2µm,21.5s
AQU L'Aquila 106.91 311 IAMs_20 IAMs_20 05 21 12.5
comp=Z,2µm,22.0s
EPYK Eagle Plains 106.92 24 PKiKP **PKiKP** **04 31 29.1 -1.8**
baz=281
NB2 NORSAR Subarra 106.95 331 P **Pdif** **04 27 24.5 +2.9**
baz=77,slow=4.6
NB2 NORSAR Subarra 106.95 331 P **Pdif** **04 27 24.5 +2.9**
comp=Z,7.9nm,1.0s,baz=77,slow=4.6
NOA NORSAR Array B 106.95 331 Pdiff **Pdif** **04 27 19.8 -1.8**
comp=Z,1.7nm,1.0s,baz=82,slow=4.7,SNR=2.8
NOA PP **PP** **04 31 49.2 +1.2**
comp=Z,12nm,1.1s,baz=88,slow=7.7,SNR=5.6
NKC Novy Kostel 107.31 319 *e*P **Pdif** **04 27 28.2 +4.8**
NKC *e* 04 31 59.7
NKC MLR MLR
comp=Z,3µm,21.8s
NKC Novy Kostel 107.31 319 *e*PDIFF **Pdif** **04 27 28.2 +4.8**
NKC *e*PP PP 04 31 59.7 +8.7
NKC *e*SDIF **Sdif** **04 39 23.5 -0.2**
NKC AMS AMS 05 22 30.0
comp=Z,3µm,21.8s
HYT Haines Junctio 107.54 30 PKiKP **PKiKP** **04 31 29.8 -2.5**
baz=279
M30M Minto, Yukon 107.59 28 PKiKP **PKiKP** **04 31 30.8 -1.5**
baz=280
N30M Aishikik Lake 107.64 29 PKiKP **PKiKP** **04 31 30.9 -1.5**
baz=279
INK Inuvik 107.69 21 PKiKP **PKiKP** **04 31 32.7 +0.5**
comp=Z,6.4nm,1.0s,baz=234,slow=4.2,SNR=4.8
INK PP **PP** **04 31 49.4 -3.7**
comp=Z,6.7nm,1.0s,baz=320,slow=8.0,SNR=4.1
INK Inuvik 107.69 21 PKiKP **PKiKP** **04 31 31.2 -1.0**
baz=285
KONO Kongsberg 107.95 329 IAMs_20 IAMs_20 05 27 00.9
comp=Z,2µm,20.0s
WTTA Wattenberg 108.02 316 *e*PP **PP** **04 31 55.7 -0.7**
comp=Z,50nm,1.6s
WATA Walderalm 108.06 316 *e*P **PKiKP** **04 31 34.0 +0.3**
comp=Z,18nm,1.1s
WATA *e*PP **PP** **04 31 55.8 -0.8**
comp=Z,33nm,1.4s
GRA1 Grafenberg Arr 108.14 319 IAMs_20 IAMs_20 05 19 13.2
comp=Z,2µm,22.0s
GRFO Grafenberg 108.14 319 IAMs_20 IAMs_20 05 19 14.2
comp=Z,1µm,21.0s
O30N Mendenhall 108.23 30 PKiKP **PKiKP** **04 31 31.3 -2.2**
baz=280
N31M Braeburn, Yuko 108.25 29 PKiKP **PKiKP** **04 31 31.8 -1.7**
baz=280
SQTA Sankt Quirin 108.31 316 *e*P **PKiKP** **04 31 33.7 -0.4**
comp=Z,16nm,1.3s
SQTA *e*PP **PP** **04 31 57.3 -1.1**
comp=Z,28nm,1.4s
PLBC Pleasant Camp 108.32 31 PKiKP **PKiKP** **04 31 32.3 -1.3**
baz=279
MOTA Moosalm 108.38 316 *e*P **PKiKP** **04 31 33.7 -0.6**
comp=Z,8.8nm,1.1s
MOTA *e*PP **PP** **04 31 57.9 -1.1**
comp=Z,20nm,1.3s
ALE Alert 108.59 360 IAMs_20 IAMs_20 05 18 43.9
comp=Z,2µm,21.0s
RETA Reutte 108.60 316 *e*PP **PP** **04 31 59.8 -0.7**
comp=Z,51nm,1.9s
FETA Feichten 108.65 316 *e*PP **PP** **04 32 00.1 -0.9**
comp=Z,22nm,1.1s
M31M Drury Creek, Y 108.76 28 PKiKP **PKiKP** **04 31 33.0 -1.5**
baz=282
WHY Whitehorse 108.84 30 PKiKP **PKiKP** **04 31 31.8 -2.9**

baz=281
VLC Villacollemand 109.06 313 IAMs_20 IAMs_20 05 24 49.6
comp=Z,1µm,21.0s
DAVA Damuels 109.21 316 *e*P **PKiKP 04 31 34.4 -1.5**
DAVA comp=Z,12nm,1.1s *e*PP **PP 04 32 04.1 -0.9**
comp=Z,85nm,1.3s
DAVOX Davos/Dischmat 109.25 316 Pdiff **Pdif 04 27 31.6 -0.7**
DAVOX PP **PP 04 32 03.4 -2.0**
comp=Z,3.9nm,0.6s,baz=112,slow=5.4,SNR=4.2
SIT Sitka 109.26 33 PKiKP **PKiKP 04 31 34.3 -1.1**
baz=279
STU Stuttgart 109.54 318 IAMs_20 IAMs_20 05 20 27.3
comp=Z,1µm,20.0s
TUE Stuetta 109.64 315 IAMs_20 IAMs_20 05 23 55.9
comp=Z,2µm,22.0s
P33M Teslin, Yukon 109.93 30 PKiKP **PKiKP 04 31 34.9 -1.8**
baz=283
KEST Kesra 110.12 304 PP **PP 04 32 09.6 -2.4**
comp=Z,6.6nm,1.0s,baz=324,slow=4.2,SNR=5.0
BFO Black Forest 110.16 317 IAMs_20 IAMs_20 05 26 13.6
comp=Z,2µm,20.0s
HOPE Hope Point 110.88 197 IAMs_20 IAMs_20 05 10 26.4
comp=Z,3µm,21.0s
ECH Echery 110.95 317 IAMs_20 IAMs_20 05 21 30.5
comp=Z,2µm,21.0s
SENIN Lac Senin/Sane 111.06 315 IAMs_20 IAMs_20 05 27 20.5
comp=Z,1µm,20.0s
BTNL Ternell 111.30 320 *dx* x 04 32 26.4
MEM Membach 111.37 320 *dx* x 04 32 28.6
BHOU Houvegnez 111.41 320 *dx* x 04 32 29.5
WLF Walferdange 111.42 319 IAMs_20 IAMs_20 05 27 25.8
comp=Z,2µm,20.0s
WLF Walferdange 111.42 319 *dx* x 04 32 28.8
BEBN Eben Emael 111.55 320 *d*PP **PP 04 32 21.0 -0.6**
BNI Bardonecchia 111.63 314 IAMs_20 IAMs_20 05 25 52.6
comp=Z,2µm,20.0s
BSTI Sart Tilman 111.65 320 *d*PP **PP 04 32 23.4 +1.1**
BSTI *dx* x 04 32 31.2
DLBC Dease Lake 111.75 31 PKiKP **PKiKP 04 31 42.0 +1.8**
comp=Z,5.2nm,0.9s,baz=275,slow=6.0,SNR=7.4
DLBC Dease Lake 111.75 31 PKiKP **PKiKP 04 31 39.0 -1.2**
baz=285
BCLA Clavier 111.84 320 *d*PP **PP 04 32 25.0 +1.3**
RCHB Rochefort 111.93 320 *d*PP **PP 04 32 23.2 -1.2**
RCHB *dx* x 04 32 32.8
BGES Gesves 111.99 320 *d*PP **PP 04 32 24.0 -0.7**
T35M Bob Quinn 111.99 33 PKiKP **PKiKP 04 31 38.2 -2.5**
baz=284
BMRD Maredsous 112.20 320 *d*PP **PP 04 32 26.5 +0.3**
BMRD *dx* x 04 32 34.9
DOU Dourbes 112.34 320 *d*PP **PP 04 32 27.3 0.0**
SNF Seneffe 112.47 320 *dx* x 04 32 37.0
SSB Saint Sauveur 113.10 315 IAMs_20 IAMs_20 05 28 44.6
comp=Z,1µm,20.0s
WRGLY Wrigley 113.26 25 PKiKP **PKiKP 04 31 40.6 -2.2**
baz=293
MAHO Mahon 113.92 309 PP **PP 04 32 32.2 -6.7**
MAHO Mahon 113.92 309 PS PS 04 42 25.2 +8.7
RES Resolute Bay 114.08 9 PKP **PKiKP 04 31 45.0 +0.9**
comp=Z,7.4nm,0.8s,baz=315,slow=1.2,SNR=3.4
RES Resolute Bay 114.08 9 PKiKP **PKiKP 04 31 45.0 +0.9**
CLF Chambon-Foret 114.22 318 IAMs_20 IAMs_20 05 23 16.0
comp=Z,1µm,22.0s
TULEG Thule 114.54 1 IAMs_20 IAMs_20 05 29 45.0
comp=Z,2µm,19.0s
SCO Scoresbysund 115.25 346 IAMs_20 IAMs_20 05 23 43.5
comp=Z,3µm,22.0s
SCO Scoresbysund 115.25 346 *i* P **PKiKP 04 31 46.4 0.0**
EKA Eskdalemuir Ar 115.65 326 PKP **PKPdf 04 31 48.6 +0.9**
comp=Z,1.9nm,0.6s,baz=30,slow=1.9,SNR=12
EKA PP **PP 04 32 47.3 -3.2**
comp=Z,3.6nm,0.8s,baz=94,slow=6.9,SNR=4.8
ESK Eskdalemuir 115.68 326 IAMs_20 IAMs_20 05 30 39.5
comp=Z,2µm,20.0s
TORD Torodi Ar. Bea 116.17 279 PKP **PKiKP 04 31 49.9 +0.1**
comp=Z,8.2nm,0.6s,baz=77,slow=1.4,SNR=28
TORD Torodi Ar. Bea 116.17 279 **PKPdf 04 31 49.5 -0.4**
SUMG Summit 116.75 352 IAMs_20 IAMs_20 05 33 04.4
comp=Z,2µm,22.0s
SUMG Summit 116.75 352 *i* P **PKPdf 04 31 49.0 -0.9**
YKA Yellowknife Ar 117.21 24 PKP **PKiKP 04 31 51.0 +0.5**
comp=Z,14nm,0.6s,baz=310,slow=1.9,SNR=52
YKA PKKPbc **PKKPbc 04 42 16.1 -0.9**
comp=Z,0.8nm,0.7s,baz=108,slow=4.0,SNR=4.6
UPNV Upernavik 118.21 357 *i* P **PKiKP 04 31 52.4 +0.3**
CART Cartagena 118.28 307 PS PS 04 42 57.1 +0.8
CART Cartagena 118.28 307 IAMs_20 IAMs_20 05 25 57.8
comp=Z,1µm,19.0s
D03D Eldon 118.67 42 PKiKP **PKPdf 04 31 51.1 -2.7**
baz=286
FIGM Figuig 119.11 301 P **PKiKP 04 31 60.0 +4.7**
F04D Rainier, OR 119.11 43 PKiKP **PKPdf 04 31 52.8 -1.9**
baz=285
G03D McMinnville, O 119.16 44 IAMs_20 IAMs_20 05 19 34.0
comp=Z,1µm,19.0s
G03D McMinnville, O 119.16 44 PKiKP **PKPdf 04 31 52.2 -2.5**
baz=284
J01E Myrtle Point 119.17 47 IAMs_20 IAMs_20 05 20 56.5
comp=Z,1µm,19.0s
J01E Myrtle Point 119.17 47 PKiKP **PKPdf 04 31 52.2 -2.6**
baz=283
COR Corvallis 119.29 45 IAMs_20 IAMs_20 05 23 51.0
comp=Z,1µm,20.0s
K02D Willamette Mer 119.47 47 PKiKP **PKPdf 04 31 52.6 -3.0**
baz=283
UCM Universidad Co 119.56 310 PP PP 04 33 15.2 -3.1
UCM Universidad Co 119.56 310 PS PS 04 43 13.0 +5.2
L02F Cave Junction 119.66 48 PKiKP **PKPdf 04 31 52.1 -3.8**
baz=282
H04D Lebanon 119.69 45 IAMs_20 IAMs_20 05 16 45.2
comp=Z,1µm,21.0s
H04D Lebanon 119.69 45 PKiKP **PKPdf 04 31 55.4 -0.4**
baz=284
CHAS Isla Isabel II 119.74 304 PS PS 04 43 01.7 -7.9
TAF Taforalt 119.78 304 P **PKiKP 04 32 01.0 +4.5**
JBK JBK 119.96 303 P **PKiKP 04 31 60.0 +3.0**
HUMO Hull Mountain 120.00 47 IAMs_20 IAMs_20 05 22 00.3
comp=Z,1µm,20.0s
ICESG Greenland Ices 120.04 350 *i* P **PKiKP 04 31 57.6 +1.4**
I04A Tendick Farm, 120.10 46 PKiKP **PKiKP 04 31 56.9 +0.1**
baz=284
WMELI Melilla 120.15 304 PP PP 04 33 18.1 -4.3
WMELI Melilla 120.15 304 PS PS 04 43 13.0 -0.2
ESDC Sonseca Array 120.22 309 PKP **PKiKP 04 31 57.5 +0.4**
comp=Z,4.7nm,0.7s,baz=22,slow=2.7,SNR=30
ESDC PP **PP 04 33 17.6 -5.2**
comp=Z,1.5nm,0.8s,baz=52,slow=5.2,SNR=5.2
ESDC PKKPbc **PKKPab 04 42 06.0 +0.4**
comp=Z,2.2nm,1.1s,baz=274,slow=4.5,SNR=9.3
ESDC SKKPbc SKKPbc 04 45 59.1 +7.7
comp=Z,0.3nm,0.6s,baz=268,slow=3.5,SNR=4.4
ESDC Sonseca Array 120.22 309 PKPdf **PKiKP 04 31 57.9 +0.8**
YBH Yreka Blue Hor 120.37 48 PKP **PKiKP 04 31 58.6 +1.2**
comp=Z,3.7nm,0.7s,baz=330,slow=2.6,SNR=13
YBH Yreka Blue Hor 120.37 48 IAMs_20 IAMs_20 05 23 23.3
comp=Z,2µm,20.0s
J04D Umpqua Nationa 120.45 46 PKiKP **PKiKP 04 31 57.9 +0.2**
baz=284
G05D Wamic, OR 120.48 44 PKiKP **PKPdf 04 31 56.2 -1.1**
baz=286
PAB San Pablo 120.54 309 **PKiKP 04 31 58.0 +0.2**
PAB San Pablo 120.54 309 IAMs_20 IAMs_20 05 29 47.5
comp=Z,2µm,22.0s
PAB San Pablo 120.54 309 PKiKP **PKiKP 04 31 58.0 +0.2**
PAB San Pablo 120.54 309 P **PKiKP 04 32 00.7 +2.9**
L04D Klamath Falls 120.56 47 PKiKP **PKiKP 04 31 58.4 +0.6**
baz=283
HOPS Hopland Field 120.67 51 IAMs_20 IAMs_20 05 23 23.3
comp=Z,1µm,19.0s
I05D Terrebonne, OR 120.71 45 PKiKP **PKPdf 04 31 56.2 -1.6**
baz=285
K04D Chiloquin, OR 120.85 47 PKiKP **PKPdf 04 31 57.2 -1.1**
baz=284
MCCM Marconi Confer 120.97 52 IAMs_20 IAMs_20 05 33 13.4
comp=Z,1µm,21.0s
J05D Fort Rock, OR 121.06 46 PKiKP **PKPdf 04 31 57.1 -1.6**
baz=285
PVLZ Peæn de 121.26 304 PP PP 04 33 23.9 -6.2
PVLZ Peæn de 121.26 304 PS PS 04 43 19.0 -4.1
HAWA Hanford 121.34 42 IAMs_20 IAMs_20 05 16 17.5
comp=Z,1µm,21.0s
ILULI Ilulissat 121.40 355 IAMs_20 IAMs_20 05 35 39.0
comp=Z,2µm,21.0s
KIC Kosan Boka 121.59 271⇑ *e*P **PKPdf 04 32 00.4 +0.1**
comp=Z,40nm,0.8s

DBIC Dimbokro 121.75 271 *e*P **PKiKP 04 32 01.2 +0.4**
DBIC Dimbokro 121.75 271 PKP **PKiKP 04 32 01.7 +0.9**
comp=Z,23nm,0.8s,baz=84,slow=1.7,SNR=18
PBRG Braganca 121.81 312 *e*PKPdf **PKiKP 04 32 01.3 +1.1**
PBRG Braganca 121.81 312 *e*PP **PP 04 33 36.2 +2.6**
MDT Midelt 121.84 302 P **PKiKP 04 32 06.2 +5.6**
LIC Lamto 121.85 270⇑ *i*P **PKiKP 04 32 03.6 +2.6**
comp=Z,53nm,1.0s
TIC Toumodi 121.91 271⇑ *e*P **PKiKP 04 32 01.3 +0.2**
comp=Z,62nm,0.9s
LCRM LCR 121.94 303 P **PKiKP 04 32 05.0 +4.1**
CEU Ceuta 122.01 305 PP PP 04 33 28.8 -6.3
CEU Ceuta 122.01 305 PS PS 04 43 23.0 -6.7
MOD Modoc Plateau 122.08 47 IAMs_20 IAMs_20 05 24 32.4
comp=Z,1µm,20.0s
IFR Ifrane 122.18 303 PP PP 04 33 37.0 +0.4
IFR Ifrane 122.18 303 PS PS 04 43 33.3 +1.5
MVO Moncorvo 122.18 312 *e*PKPdf **PKiKP 04 32 02.6 +1.6**
MVO Moncorvo 122.18 312 *e*PP **PP 04 33 38.2 +2.1**
MVO Moncorvo 122.18 312 *e*SS SS 04 50 02.8 -10
MVO Moncorvo 122.18 312 *e*LR LR 05 15 23.1
comp=Z,1µm,18.0s
NEW Newport 122.25 39 PKP **PKiKP 04 32 02.4 +1.6**
comp=Z,16nm,0.7s,baz=306,slow=2.4,SNR=30
NEW Newport 122.25 39 PKiKP **PKPdf 04 31 59.8 -0.8**
baz=291
SICH Sidi Chahed 122.25 303 P **PKiKP 04 32 05.0 +3.7**
GOLM Goulmima 122.27 300 P **PKiKP 04 32 06.0 +4.5**
SAO San Andreas Ge 122.35 53 IAMs_20 IAMs_20 05 36 36.0
comp=Z,2µm,18.0s
SFS San Fernando 122.57 306 PP PP 04 33 32.9 -5.9
SFS San Fernando 122.57 306 PS PS 04 43 33.7 -1.0
PVRL Vila Real 122.66 312 *e*PKPdf **PKiKP 04 32 02.8 +0.9**
PVRL Vila Real 122.66 312 *e*PP PP 04 33 51.3 +12
POLO Lamas de Olo 122.69 312 *e*PKPdf **PKiKP 04 32 03.1 +1.1**
POLO Lamas de Olo 122.69 312 *e*PP **PP 04 33 41.6 +2.0**
POLO Lamas de Olo 122.69 312 *e*SS SS 04 50 27.5 +8.1
ANGG Ammassalik, Gr 122.71 347 IAMs_20 IAMs_20 05 29 21.6
comp=Z,2µm,22.0s
MTE Manteigas 122.75 311 *e*PKPdf **PKiKP 04 32 03.5 +1.4**
MTE Manteigas 122.75 311 *e*PP **PP 04 33 42.0 +2.0**
MTE Manteigas 122.75 311 *e*LR LR 05 15 45.2
comp=Z,1µm,20.0s
MTE Manteigas 122.75 311 IAMs_20 IAMs_20 05 29 54.8
comp=Z,2µm,20.0s
PCAB Cabril 122.77 313 *e*PKPdf **PKiKP 04 32 04.8 +2.7**
PCAB Cabril 122.77 313 *e*PP PP 04 33 51.3 +11
PCBR Castelo Branco 122.83 310 *e*PKPdf **PKiKP 04 32 03.4 +1.2**
PMRV Marv??o 122.87 310 *e*PKPdf **PKiKP 04 32 04.9 +2.6**
PMRV Marv??o 122.87 310 *e*PP **PP 04 33 44.4 +3.6**
PMRV Marv??o 122.87 310 *e*LR LR 05 14 54.1
comp=Z,1µm,20.0s
PGAV Gavieira, Arco 122.87 313 *e*PKPdf **PKiKP 04 32 03.9 +1.6**
PGAV Gavieira, Arco 122.87 313 *e*PP **PP 04 33 43.0 +2.2**
PGAV Gavieira, Arco 122.87 313 *e*LR LR 05 17 08.4
comp=Z,1µm,20.0s
PBAR Barrancos 122.88 308 *e*SS SS 04 50 30.7 +8.8
TZRR Tazzarine 122.91 299 P **PKiKP 04 32 07.0 +4.2**
CMB Columbia Colle 122.92 52 IAMs_20 IAMs_20 05 29 08.0
comp=Z,1µm,20.0s
PVIS Viseu 122.93 311 *e*PKPdf **PKiKP 04 32 04.0 +1.6**
ZGR Zagora 123.03 299 P **PKiKP 04 32 07.0 +3.9**
WVOR Wild Horse Val 123.13 46 IAMs_20 IAMs_20 05 24 02.1
comp=Z,1µm,20.0s
PESTR Estremoz 123.15 309 *e*PKPdf **PKiKP 04 32 05.9 +3.0**
PESTR Estremoz 123.15 309‖ *e*PP **PP 04 33 43.2 +0.5**
PESTR Estremoz 123.15 309 *e*SS SS 04 50 17.0 -8.3
BMO Blue Mountains 123.31 43 IAMs_20 IAMs_20 05 26 47.7
comp=Z,1µm,21.0s
COI Coimbra 123.44 311 *e*PKPdf **PKiKP 04 32 04.9 +1.5**
COI Coimbra 123.44 311 *e*PP **PP 04 33 49.0 +4.4**
COI Coimbra 123.44 311 *e*SS SS 04 50 33.9 +5.1
COI Coimbra 123.44 311 IAMs_20 IAMs_20 05 35 49.1
comp=Z,2µm,20.0s
ZHG ZHG 123.44 303 P **PKiKP 04 32 07.0 +3.3**
DY2G Dye2 123.46 352 *i* P **PKiKP 04 32 03.1 +0.1**
SFJD Kangerlussuaq 123.50 354 PKPdf **PKiKP 04 32 03.9 +1.2**
SFJD Kangerlussuaq 123.50 354 PKIKP **PKiKP 04 32 03.9 +1.2**
SFJD Kangerlussuaq 123.50 354 *i* P **PKPdf 04 31 57.8 -4.6**
PCAS Casmilo, Conde 123.54 311 *e*PKPdf **PKiKP 04 32 05.0 +1.4**
PCAS Casmilo, Conde 123.54 311 *e*PP **PP 04 33 51.6 +6.3**
PCAS Casmilo, Conde 123.54 311 *e*SS SS 04 50 30.8 +0.6
EVO Evora 123.55 309 PP PP 04 33 35.8 -10
EVO Evora 123.55 309 *e*PP **PP 04 33 47.6 +2.2**
PVAQ Vaqueiros 123.57 308 *e*PKPdf **PKiKP 04 32 06.9 +3.2**
PVAQ Vaqueiros 123.57 308 *e*PP **PP 04 33 49.2 +3.6**
PVAQ Vaqueiros 123.57 308 *e*LR LR 05 14 40.4
comp=Z,1µm,22.0s
PMTG Montargil 123.58 310 *e*PKPdf **PKiKP 04 32 04.3 +0.6**
PMTG Montargil 123.58 310 *e*PP **PP 04 33 47.9 +2.3**
PCVE Castro Verde 123.77 308 *e*PKPdf **PKiKP 04 32 04.8 +0.7**
PCVE Castro Verde 123.77 308 *e*PP **PP 04 33 49.6 +2.7**
PBDV Barranco-do-Ve 123.77 307 *e*PKPdf **PKiKP 04 32 05.9 +1.7**
MESJ Messejana 123.86 308 *e*PKPdf **PKPdf 04 32 03.7 -0.3**
MESJ *e*PP **PP 04 33 48.0 +0.5**
MESJ IAMs_20 IAMs_20 05 29 13.9
comp=N,1µm,12.2s
MESJ Messejana 123.86 308 *e*PKPdf **PKiKP 04 32 05.5 +1.2**
MESJ Messejana 123.86 308 *e*PP **PP 04 33 49.2 +1.7**
MESJ Messejana 123.86 308 *e*PKIKP **PKPdf 04 32 03.7 -0.3**
MESJ *e* 04 33 48.0
PSBE So Bento 123.90 310 *e*PKPdf **PKiKP 04 32 07.4 +3.0**
PSBE So Bento 123.90 310 *e*PP **PP 04 33 51.9 +4.1**
OUZM OUZ 123.91 300 P **PKiKP 04 32 09.0 +4.2**
PKM Mcpherson Peak 124.00 55 PKiKP **PKPdf 04 32 01.4 -3.3**
baz=281
PNCL Nicolau / Gran 124.04 309 *e*PKPdf **PKiKP 04 32 05.9 +1.3**
PNCL Nicolau / Gran 124.04 309 *e*PP **PP 04 33 51.3 +2.6**
PNCL Nicolau / Gran 124.04 309 *e*SS SS 04 50 46.2 +10
AVE Averroes 124.11 303 PP PP 04 33 45.4 -4.0
AVE Averroes 124.11 303 PS PS 04 43 40.9 -7.6
MLAC Mammoth, Mammt 124.21 52 PKiKP **PKPdf 04 32 02.2 -2.8**
baz=283
MORF Marmelete 124.32 308 *e*PKPdf **PKPdf 04 32 04.7 -0.3**
MORF *e*PP **PP 04 33 51.1 +0.4**
MORF IAMs_20 IAMs_20 05 35 13.4
comp=E,2µm,19.3s
MORF Marmelete 124.32 308 *e*PKIKP **PKPdf 04 32 04.6 -0.3**
MORF *e* 04 33 51.1
LIS Lisbon 124.36 309 *e*PP **PP 04 33 51.3 +0.5**
LIS IAMs_20 IAMs_20 05 31 19.8
comp=N,4µm,37.1s
VES Vestal, Richgr 124.40 54 PKiKP **PKPdf 04 32 03.2 -1.9**
baz=282
PMAFR Mafra 124.41 310 *e*PKPdf **PKiKP 04 32 06.6 +1.2**
PMAFR Mafra 124.41 310 *e*PP **PP 04 33 53.1 +2.0**
PMAFR Mafra 124.41 310 *e*SS SS 04 50 45.3 +4.2
NVAR Mina Array Bea 124.43 51 PKP **PKiKP 04 32 07.6 +1.9**
comp=N,12nm,0.7s,baz=255,slow=2.1,SNR=41
NVAR PP **PP 04 33 52.0 +0.4**
comp=N,1.7nm,0.7s,baz=273,slow=6.0,SNR=1.8
NVAR PKKPbc **PKKPab 04 41 48.5 +0.6**
comp=N,0.4nm,0.6s,baz=120,slow=3.2,SNR=3.6
SRHM Skhour des Reh 124.64 302 P **PKiKP 04 32 10.0 +3.9**
MSO Missoula 124.79 40 PKiKP **PKPdf 04 32 02.7 -3.0**
baz=293
OUK Oukaimeden 124.81 300 P **PKiKP 04 32 11.0 +4.2**
TIN Tinemaha, Big 124.81 52 PKiKP **PKPdf 04 32 03.1 -2.9**
baz=283
OSI Osito Audit: C 124.94 56 PKiKP **PKPdf 04 32 03.6 -2.7**
baz=281
CWC Cottonwood Cre 125.07 53 PKiKP **PKPdf 04 32 04.1 -2.6**
baz=283
DECC Green Verdugo 125.32 56 PKiKP **PKPdf 04 32 03.5 -3.5**
baz=281
PASC Pasadena Art C 125.46 56 IAMs_20 IAMs_20 05 19 50.4
comp=Z,1µm,22.0s
GRAC Grapevine Rang 125.50 52 PKiKP **PKPdf 04 32 04.4 -2.8**
baz=284
LRMC Laurel Mtn Rad 125.59 54 PKiKP **PKPdf 04 32 05.1 -2.6**
baz=282
MPMC Manual Prospec 125.62 54 PKiKP **PKPdf 04 32 04.2 -3.5**
baz=283
HLID Hailey 125.70 44 PKiKP **PKPdf 04 32 07.0 -0.6**
baz=291
FURC Furnace Creek, 126.02 53 PKiKP **PKiKP 04 32 08.4 -0.2**
baz=284
ELK Elko 126.06 47 PKP **PKiKP 04 32 10.2 +1.3**
comp=Z,10nm,0.7s,baz=306,slow=1.4,SNR=28
ELK PP **PP 04 34 03.3 +0.9**
comp=Z,2.7nm,1.0s,baz=295,slow=3.9,SNR=1.7
ELK Elko 126.06 47 IAMs_20 IAMs_20 05 30 36.9
comp=Z,1µm,20.0s
RRX Edison Barstow 126.27 55 PKiKP **PKPdf 04 32 05.7 -3.1**
baz=283
GSC Goldstone, Bar 126.33 54 PKiKP **PKPdf 04 32 08.8 -0.1**
baz=283
TPNV Topopah Spring 126.38 52 IAMs_20 IAMs_20 05 21 11.5
comp=Z,1µm,20.0s
TPNV Topopah Spring 126.38 52 PKiKP **PKPdf 04 32 08.5 -0.6**
baz=285
MURC Murrieta 126.38 56 PKiKP **PKPdf 04 32 07.4 -1.6**
baz=282
BBRC Big Bear Solar 126.47 56 PKiKP **PKPdf 04 32 08.8 -0.6**
baz=282
R11A Troy Canyon, C 126.51 50 PKiKP **PKPdf 04 32 09.5 +0.2**
baz=286
109C Camp Elliot, M 126.59 57 IAMs_20 IAMs_20 05 26 38.5
comp=Z,1µm,20.0s
109C Camp Elliot, M 126.59 57 PKiKP **PKPdf 04 32 08.4 -1.0**
baz=281
SHOC Shoshone, Teco 126.61 53 PKiKP **PKPdf 04 32 07.2 -2.2**
baz=284
BOZ Bozeman (W) 126.75 41 IAMs_20 IAMs_20 05 29 16.7
comp=Z,1µm,19.0s
BOZ Bozeman (W) 126.75 41 PKiKP **PKPdf 04 32 08.4 -1.2**
baz=295
HEC Hector,Ludlow 126.81 55 PKiKP **PKPdf 04 32 08.9 -1.0**
baz=283
EGMT Eagleton 126.83 37 PKiKP **PKPdf 04 32 08.1 -1.4**
baz=299
PFO Pinyon Flats O 126.98 56 PKP **PKiKP 04 32 12.4 +1.6**
comp=Z,9.9nm,0.9s,baz=244,slow=1.2,SNR=14
PFO PP **PP 04 34 07.6 -1.0**
comp=Z,2.3nm,0.9s,baz=171,slow=3.3,SNR=1.3
PFO Pinyon Flats O 126.98 56 PKPdf **PKiKP 04 32 10.8 0.0**
PFO Pinyon Flats O 126.98 56 IAMs_20 IAMs_20 05 28 43.8
comp=Z,2µm,19.0s
PFO Pinyon Flats O 126.98 56 PKiKP **PKiKP 04 32 10.8 0.0**
PFO MLR MLR
comp=Z,2µm,19.0s
PFO Pinyon Flats O 126.98 56 PKiKP **PKPdf 04 32 09.9 -0.4**
baz=282
TPFO Pinon Flats 126.98 56 PKiKP **PKPdf 04 32 09.0 -1.3**
baz=282
TUQ Turquoise Moun 127.00 54 PKiKP **PKPdf 04 32 08.4 -1.9**
baz=284
MONP2 Monument Peak 127.16 57 PKiKP **PKPdf 04 32 09.0 -1.8**
baz=282
FCC Fort Churchill 127.22 19 PKPdf **PKiKP 04 32 10.9 +0.6**
FCC Fort Churchill 127.22 19 PKIKP **PKiKP 04 32 10.9 +0.6**
BELC Belle Mtn. Jos 127.27 56 PKiKP **PKiKP 04 32 11.8 +0.4**
baz=283
GMRC Granite Mounta 127.36 55 PKiKP **PKPdf 04 32 09.9 -1.1**
baz=284
IKP In-Ko-Pah, Jac 127.46 57 PKiKP **PKPdf 04 32 11.0 -0.2**
baz=282
SWSC Sam W. Stewart 127.66 57 PKiKP **PKPdf 04 32 09.9 -1.5**
baz=282
BC3 Big Chuckawall 127.79 56 PKiKP **PKPdf 04 32 10.7 -1.1**
baz=283
IRM Iron Mountain 127.92 55 PKiKP **PKPdf 04 32 09.5 -2.5**
baz=283
H17A Grant Village 127.94 42 PKiKP **PKPdf 04 32 11.5 -0.5**
baz=295
FLWY Flagg Ranch 127.99 42 IAMs_20 IAMs_20 05 40 11.4
comp=Z,1µm,21.0s
DUG Dugway, Tooele 127.99 47 IAMs_20 IAMs_20 05 27 56.9
comp=Z,1µm,20.0s
DUG Dugway, Tooele 127.99 47 PKiKP **PKPdf 04 32 11.3 -0.7**
baz=290
PLCA Paso Flores 128.02 173 PKP **PKiKP 04 32 12.9 +0.2**
comp=Z,9.5nm,0.9s,baz=273,slow=1.7,SNR=11
PLCA Paso Flores 128.02 173 *e*P **PKPdf 04 32 11.7 -0.4**
REDW Red Top Meadow 128.18 43 IAMs_20 IAMs_20 05 34 22.6
comp=Z,1µm,19.0s
NEE2 Needles Airpor 128.20 54 PKiKP **PKPdf 04 32 07.6 -4.8**
baz=284
NRS Narsarsuaq 128.28 349 IAMs_20 IAMs_20 05 30 05.8
comp=Z,2µm,21.0s
GLA Glamis 128.43 57 PKiKP **PKPdf 04 32 09.6 -3.4**
baz=283
RLMT Red Lodge 128.46 40 IAMs_20 IAMs_20 05 35 36.9
comp=Z,949nm,20.0s
RLMT Red Lodge 128.46 40 PKiKP **PKPdf 04 32 11.6 -1.3**
baz=296
PDMCI Parker Dam,Lak 128.70 55 PKiKP **PKPdf 04 32 11.3 -2.0**
baz=284
BW06 Boulder Array 129.29 43 PKiKP **PKPdf 04 32 12.5 -2.1**
baz=294
PDAR Pinedale Array 129.29 43 PKP **PKiKP 04 32 17.0 +1.7**
comp=Z,2.8nm,0.5s,baz=147,slow=1.8,SNR=18
LAO LASA Array 129.58 37 P **PKiKP 04 32 16.7 +1.2**
baz=301
LAO LASA Array 129.58 37 PKiKP **PKPdf 04 32 13.1 -1.7**
baz=301
DGMT Dagmar 129.79 34 PKiKP **PKPdf 04 32 13.9 -1.2**
baz=304
214A Organ Pipe Nat 130.34 57 PKiKP **PKPdf 04 32 14.5 -2.2**
baz=283
WUAZ Wupatki 130.56 53 IAMs_20 IAMs_20 05 23 34.2
comp=Z,2µm,22.0s
WUAZ Wupatki 130.56 53 PKiKP **PKPdf 04 32 16.6 -0.5**
baz=287
O20A White River Ci 131.27 46 PKiKP **PKPdf 04 32 17.3 -1.1**
baz=294
K22A Casper 131.35 42 P **PKiKP 04 32 19.2 -0.2**
baz=297
K22A Casper 131.35 42 PKiKP **PKPdf 04 32 16.2 -2.2**
baz=297
TUC Tucson 131.92 56 IAMs_20 IAMs_20 05 41 00.5
comp=Z,1µm,18.0s
TUC Tucson 131.92 56 PKiKP **PKPdf 04 32 18.0 -1.6**
baz=285
W18A Petrified Fore 131.95 52 PKiKP **PKPdf 04 32 17.0 -2.8**
baz=288
PMAR Madeira 132.02 304 *e*PKPdf **PKiKP 04 32 23.9 +2.9**
MVCO Mesa Verde 132.19 49 IAMs_20 IAMs_20 05 33 08.5
comp=Z,1µm,20.0s
MVCO Mesa Verde 132.19 49 PKiKP **PKPdf 04 32 17.0 -3.3**
baz=291
RSSD Black Hills 132.22 39 IAMs_20 IAMs_20 05 33 25.2
comp=Z,1µm,21.0s
RSSD Black Hills 132.22 39 P **PKiKP 04 32 21.2 0.0**
baz=301
RSSD Black Hills 132.22 39 PKiKP **PKPdf 04 32 16.9 -3.1**
baz=301
PMOZ Porto Moniz, M 132.22 304 *e*SS SS 04 52 29.4 +11
PMOZ Porto Moniz, M 132.22 304 *e*LR LR 05 27 29.2
comp=Z,1µm,20.0s
N23A Red Feather La 132.53 44 PKiKP **PKPdf 04 32 17.9 -2.9**
baz=296
MDND Maddock 132.63 32 P **PKiKP 04 32 21.1 -0.5**
baz=309
MDND Maddock 132.63 32 PKiKP **PKPdf 04 32 19.2 -1.2**
baz=309
PHWY Pilot Hill 132.68 43 IAMs_20 IAMs_20 05 38 42.6
comp=Z,953nm,21.0s
E28A Huff 132.82 34 P **PKiKP 04 32 21.7 -0.3**
baz=306
ULM Lac du Bonnet 132.88 28 PKP **PKiKP 04 32 22.4 +0.4**
comp=Z,14nm,0.7s,baz=309,slow=2.0,SNR=24
S22A 4UR Ranch, Ce 133.22 48 PKiKP **PKPdf 04 32 19.2 -3.1**
baz=293
ISCO Idaho Springs 133.24 45 IAMs_20 IAMs_20 05 40 56.7
comp=Z,1µm,20.0s
ISCO Idaho Springs 133.24 45 P **PKPdf 04 32 21.6 -0.7**
baz=296,SNR=7.1
ISCO Idaho Springs 133.24 45 PKiKP **PKPdf 04 32 21.0 -1.3**
baz=296
Q24A Divide 133.93 46 PKiKP **PKPdf 04 32 21.4 -2.2**
baz=296
SDCO Great Sand Dun 134.19 47 IAMs_20 IAMs_20 05 30 54.0
comp=Z,1µm,20.0s
SDCO Great Sand Dun 134.19 47 P **PKiKP 04 32 23.0 -1.0**
baz=294,SNR=6.7
SDCO Great Sand Dun 134.19 47 PKiKP **PKPdf 04 32 21.5 -2.5**
baz=294
AGMN Agassiz Nation 134.24 30 IAMs_20 IAMs_20 05 37 18.9
comp=Z,1µm,22.0s
AGMN Agassiz Nation 134.24 30 PKiKP **PKPdf 04 32 20.7 -2.7**
baz=313
121A Cookes Peak, D 134.29 55 PKiKP **PKPdf 04 32 22.5 -1.8**
baz=288
SLBS Sierra La Lagu 134.35 68 IAMs_20 IAMs_20 05 28 55.4
comp=Z,2µm,20.0s
Y22D IRIS PASSCAL I 134.49 53 IAMs_20 IAMs_20 05 26 57.3
comp=Z,1µm,21.0s
ANMO Albuquerque 134.55 51 PKhKP PKPpre 04 32 12.5
comp=Z,2.1nm,0.8s,baz=297,slow=6.0,SNR=4.1
ANMO PKP **PKPdf 04 32 25.3 +0.6**
comp=Z,9.6nm,0.8s,baz=229,slow=4.1,SNR=11

ANMO PP PP 04 34 58.3 +0.7
comp=Z,2.9nm,1.0s,baz=308,slow=8.4,SNR=3.3
ANMO Albuquerque 134.55 51 IAMs_20 IAMs_20 05 39 02.8
comp=Z,1µm,20.0s
ANMO Albuquerque 134.55 51 PKiKP PKPdf 04 32 21.7 -3.0
baz=291
SUSD Miller 135.07 36 PKiKP PKPdf 04 32 23.9 -1.2
baz=307
OGNE Ogallala 135.11 42 IAMs_20 IAMs_20 05 39 53.0
comp=Z,2µm,20.0s
OGNE Ogallala 135.11 42 PKiKP PKPdf 04 32 22.5 -2.9
baz=300
T25A Trinidad 135.23 48 PKiKP PKPdf 04 32 23.8 -2.2
baz=295
EPT El Paso 135.56 56 IAMs_20 IAMs_20 05 29 18.8
comp=Z,2µm,20.0s
KSCO Kaye Shedlock' 135.66 44 PKiKP PKPdf 04 32 24.1 -2.5
baz=298
F33A 5 Mile Ranch, 135.66 33 P PKiKP 04 32 28.6 +0.8
baz=311
PLTB Pedras Altas 136.27 193 eP PKPdf 04 32 28.2 +0.4
SCHQ Schefferville 136.33 3 PKhKP PKPpre 04 32 18.5
comp=Z,3.0nm,0.7s,baz=13,slow=5.0,SNR=5.1
SCHQ PKP PKiKP 04 32 29.4 +0.6
comp=Z,18nm,0.7s,baz=18,slow=5.0,SNR=14
SCHQ PP PP 04 35 04.5 -2.6
comp=Z,15nm,1.0s,baz=347,slow=7.6,SNR=4.8
MNTX Cornudas Mount 136.49 55 IAMs_20 IAMs_20 05 29 37.5
comp=Z,2µm,21.0s
MNTX Cornudas Mount 136.49 55 P PKPdf 04 32 26.8 -1.4
baz=289,SNR=9.9
MNTX Cornudas Mount 136.49 55 PKiKP PKPdf 04 32 25.9 -2.3
baz=289
EYMN Ely 136.53 27 PKPdf PKiKP 04 32 28.9 -0.5
EYMN Ely 136.53 27 IAMs_20 IAMs_20 05 34 00.2
comp=Z,1µm,22.0s
EYMN Ely 136.53 27 PKiKP PKPdf 04 32 26.7 -1.0
baz=318
ECSD EROS Data Cent 136.84 35 IAMs_20 IAMs_20 05 36 29.1
comp=Z,1µm,20.0s
ECSD EROS Data Cent 136.84 35 PKiKP PKPdf 04 32 25.3 -3.2
baz=309
BGNE Belgrade 137.33 39 PKiKP PKPdf 04 32 27.4 -2.1
baz=305
CPSB Cacapava Do Su 137.54 193 eP PKPdf 04 32 31.2 +1.0
CBKS Cedar Bluff 137.72 43 IAMs_20 IAMs_20 05 33 39.1
comp=Z,1µm,22.0s
CBKS Cedar Bluff 137.72 43 PKiKP PKPdf 04 32 27.1 -3.2
baz=301
MSTX Muleshoe 137.74 51 P PKPdf 04 32 25.2 -5.4
baz=293,SNR=5.9
MSTX Muleshoe 137.74 51 PKiKP PKPdf 04 32 27.3 -3.3
baz=293
SPMN Marine on St. 137.88 31 PKiKP PKPdf 04 32 27.7 -2.6
baz=315
AMTX Amarillo 138.19 49 IAMs_20 IAMs_20 05 47 40.9
comp=Z,2µm,22.0s
AMTX Amarillo 138.19 49 PKiKP PKPdf 04 32 27.9 -3.4
baz=295
TXAR Lajitas Array 138.63 58 PKhKP PKPpre 04 32 23.3
comp=Z,2.2nm,0.7s,baz=269,slow=3.4,SNR=22
ITQB Itaqui 138.87 189 eP PKPdf 04 32 32.4 -0.3
COWI Conover 138.98 27 IAMs_20 IAMs_20 05 37 59.0
comp=Z,1µm,22.0s
U32A Winter Ranch, 139.44 46 PKPdf 04 32 33.9 +0.4
LCO Las Campanas 139.53 171 IAMs_20 IAMs_20 05 32 31.8
comp=Z,2µm,22.0s
KSU1 Kansas State U 139.61 41 IAMs_20 IAMs_20 05 41 10.0
comp=Z,2µm,22.0s
KSU1 Kansas State U 139.61 41 PKiKP PKPdf 04 32 30.3 -3.4
baz=305
SCIA State Center 139.93 35 PKiKP PKPdf 04 32 31.3 -2.9
baz=311
WMOK Wichita Mounta 140.39 48 IAMs_20 IAMs_20 05 48 48.1
comp=Z,1µm,21.0s
WMOK Wichita Mounta 140.39 48 P PKPdf 04 32 30.7 -4.6
baz=298,SNR=36
WMOK Wichita Mounta 140.39 48 PKiKP PKPdf 04 32 31.8 -3.5
baz=298
ABTX Abilene, Hawle 140.68 51 PKiKP PKPdf 04 32 32.5 -3.4
baz=295
E46A Sault Ste Mari 140.76 23 P PKPdf 04 32 31.9 -3.6
baz=327,SNR=11
JFWS Jewell Farm 140.82 31 IAMs_20 IAMs_20 05 48 56.2
comp=Z,2µm,22.0s
JFWS Jewell Farm 140.82 31 PKiKP PKPdf 04 32 32.8 -3.0
baz=316
T35B Sooner Cattle 140.89 43 P PKPdf 04 32 32.8 -3.3
baz=303,SNR=8.3
MAN01 Angra dos Reis 141.07 210 eP PKPdf 04 32 36.5 -0.4
X34A Smith Ranch, M 141.14 48 PKPdf 04 32 37.2 +0.6
P38A Dawn 141.21 38 P PKPdf 04 32 31.5 -5.1
baz=309,SNR=56
PET01 Itanhaem-SP 141.31 204 eP PKPdf 04 32 37.4 +0.2
G45A Suttons Bay 141.32 25 P PKPdf 04 32 32.6 -4.0
baz=324,SNR=9.1
G45A P PKPdf 04 32 32.6 -4.0
baz=324,SNR=9.1
JCT Junction City 141.40 55 IAMs_20 IAMs_20 05 33 04.4
comp=Z,1µm,21.0s
JCT Junction City 141.40 55 P PKPdf 04 32 36.7 -0.5
baz=292,SNR=14
JCT Junction City 141.40 55 PKiKP PKPdf 04 32 34.1 -3.1
baz=292
PARB Paraibuna 141.44 207 eP PKPdf 04 32 38.9 +1.3
L42A Oliver, Polo 141.77 32 P PKPdf 04 32 35.0 -2.5
baz=316,SNR=7.2
AC02 Maricunga 141.91 172 PKPdf PKPdf 04 32 36.7 -2.2
TUL1 Leonard 141.91 44 PKPdf 04 32 35.4 -2.6
TUL1 Leonard 141.91 44 P PKPdf 04 32 36.7 -1.2
baz=302,SNR=13
TUL1 Leonard 141.91 44 PKiKP PKPdf 04 32 34.7 -3.3
baz=302
GLMI Grayling 141.92 24 IAMs_20 IAMs_20 05 50 20.7
comp=Z,2µm,22.0s
N41A Harden Midland 142.05 34 P PKPdf 04 32 34.8 -3.2
baz=313,SNR=14
P40A Paris 142.16 37 P PKPdf 04 32 34.8 -3.4
baz=311,SNR=25
Z35A Perchaven, San 142.16 49 P PKPdf 04 32 36.2 -2.2
baz=298,SNR=14
CPUP Villa Florida 142.26 189 PKhKP PKPpre 04 32 34.0
comp=Z,5.8nm,0.8s,baz=104,slow=2.0,SNR=6.3
CPUP Villa Florida 142.26 189 PKPdf 04 32 37.3 -1.5
CPUP Villa Florida 142.26 189 PKiKP PKPdf 04 32 37.3 -1.5
CPUP Villa Florida 142.26 189 eP PKPdf 04 32 38.6 -0.3
VAO Valinhos 142.32 206 eP PKPdf 04 32 40.6 +1.5
833A Chaparral WMA, 142.50 58 P PKPdf 04 32 36.8 -2.4
baz=290
833A Chaparral WMA, 142.50 58 PKiKP PKPdf 04 32 36.7 -2.4
baz=290
S39A Bolivar 142.53 40 P PKPdf 04 32 36.1 -2.9
baz=307,SNR=37
L44A Lake County Fo 142.53 30 IAMs_20 IAMs_20 05 47 46.4
comp=Z,2µm,21.0s
U38A Gravette 142.57 43 P PKPdf 04 32 35.5 -3.6
baz=305,SNR=56
R40A Maddies Statio 142.82 38 P PKPdf 04 32 35.9 -3.5
baz=309,SNR=57
X37A Clayton 142.90 46 P PKPdf 04 32 37.8 -2.0
baz=301,SNR=28
SJMB Sao Joao De Ma 142.95 217 eP PKPdf 04 32 41.2 +1.0
HHAR Hobbs 142.96 42 P PKPdf 04 32 36.8 -3.0
baz=305
NAN01 Guarapari, ES 142.97 219 eP PKPdf 04 32 40.6 +0.3
HDIL Hopedale 143.00 33 P PKPdf 04 32 36.9 -2.8
baz=315,SNR=25
HDIL Hopedale 143.00 33 PKiKP PKPbc 04 32 35.9 -0.6
baz=315
435B Jarrell 143.03 53 IAMs_20 IAMs_20 05 37 01.6
comp=Z,2µm,20.0s
435B Jarrell 143.03 53 PKiKP PKPbc 04 32 37.0 0.0
baz=294
M44A Midewin, Midew 143.05 31 P PKPdf 04 32 39.8 +0.1
baz=318,SNR=7.2
RCLB Rio Claro- Sao 143.08 205 eP PKPdf 04 32 40.6 +0.1
J47A Sunmer 143.13 26 P PKPbc 04 32 37.5 +0.8
baz=324
J47A P PKPbc 04 32 37.5 +0.8
baz=324
L46A Eue Claire 143.44 29 P PKPbc 04 32 38.5 +0.9
baz=321,SNR=9.3
L46A P PKPbc 04 32 38.5 +0.9
baz=321,SNR=9.3
P43A Skaggs, Pawnee 143.52 34 P PKPbc 04 32 38.5 +0.6
baz=314,SNR=43
CCM Cathedral Cave 143.59 38 PKPdf PKPbc 04 32 38.9 +0.6
CCM Cathedral Cave 143.59 38 PKIKP PKPbc 04 32 38.9 +0.7
CCM Cathedral Cave 143.59 38 P PKPbc 04 32 38.7 +0.5
baz=310,SNR=52
CCM Cathedral Cave 143.59 38 PKiKP PKPbc 04 32 38.4 +0.2
baz=310
U40A Yellville 143.63 42 IAMs_20 IAMs_20 05 45 24.4
comp=Z,2µm,21.0s
U40A Yellville 143.63 42 P PKPbc 04 32 39.0 +0.6
baz=306,SNR=81
U40A P PKPbc 04 32 39.0 +0.6
baz=306,SNR=81
U40A Yellville 143.63 42 PKiKP PKPbc 04 32 38.5 +0.1
baz=306
W39A Magazine 143.68 44 IAMs_20 IAMs_20 05 40 29.8
comp=Z,2µm,20.0s
W39A Magazine 143.68 44 P PKPdf 04 32 39.9 -1.2
baz=304,SNR=47
W39A Magazine 143.68 44 PKiKP PKPbc 04 32 39.6 +1.1
baz=304
GUA01 Guaratinga, BA 143.70 221 eP PKPdf 04 32 41.2 -0.4
O44A Mansfield 143.74 33 P PKPbc 04 32 39.1 +0.6
baz=316,SNR=13
SLM Saint Louis 143.80 36 P PKPbc 04 32 39.4 +0.6
baz=312,SNR=27
Z38A Mt. Pleasant 143.86 47 P PKPdf 04 32 41.5 0.0
baz=300,SNR=33
237A Washetta, Mont 143.86 50 P PKPdf 04 32 41.7 +0.2
baz=298,SNR=60
D62A Allapoint, All 143.88 6 P PKPdf 04 32 40.0 -1.1
baz=351,SNR=7.7
D62A P PKPdf 04 32 40.0 -1.1
baz=351,SNR=7.7
KVTX Kingsville 144.02 58 P PKPdf 04 32 43.6 +1.7
baz=290
FVM French Village 144.12 37 P PKPbc 04 32 40.7 +0.9
baz=311,SNR=108
MIAR Mount Ida 144.18 45 IAMs_20 IAMs_20 05 36 44.2
comp=Z,2µm,21.0s
MIAR Mount Ida 144.18 45 P PKPdf 04 32 41.7 -0.2
baz=303,SNR=190
MIAR Mount Ida 144.18 45 PKiKP PKPdf 04 32 41.7 -0.2
baz=303
SFIN Lafayette 144.28 31 P PKPbc 04 32 41.1 +0.9
baz=318,SNR=48
SFIN Lafayette 144.28 31 PKiKP PKPdf 04 32 41.2 -0.7
baz=318
Q44A Meyer Farm, Va 144.32 35 P PKPdf 04 32 41.4 -0.7
baz=314,SNR=56
L48A N Adams 144.34 27 P PKPdf 04 32 41.7 -0.4
baz=324,SNR=73
L48A P PKPdf 04 32 41.7 -0.4
baz=324,SNR=73
PQI Presque Isle 144.38 5 IAMs_20 IAMs_20 05 48 14.1
comp=Z,1µm,20.0s
AAM Ann Arbor 144.39 26 IAMs_20 IAMs_20 05 51 29.1
comp=Z,2µm,21.0s
AAM Ann Arbor 144.39 26 P PKPdf 04 32 41.9 -0.2
baz=325
AAM Ann Arbor 144.39 26 PKiKP PKPdf 04 32 41.5 -0.6
baz=325
CMC01 Camacan, BA 144.41 223 eP PKPdf 04 32 42.7 -0.2
K50A Casco 144.43 24 P PKPdf 04 32 41.8 -0.3
baz=327
K50A P PKPdf 04 32 41.8 -0.3
baz=327
TRCB Terra Rica 144.58 198 eP PKPbc 04 32 41.8 +0.1
E63A Oxbow 144.59 6 P PKPdf 04 32 41.9 -0.4
baz=352,SNR=38
E63A P PKPdf 04 32 41.9 -0.4
baz=352,SNR=38
N47A Urbana 144.60 29 P PKPdf 04 32 42.2 -0.3
baz=321,SNR=60
N47A P PKPdf 04 32 42.2 -0.3
baz=321,SNR=60
X40A Basin Creek Fa 144.72 44 IAMs_20 IAMs_20 05 49 24.5
comp=Z,2µm,22.0s
X40A Basin Creek Fa 144.72 44 P PKPab 04 32 41.7 0.0
baz=304,SNR=40
X40A P PKPab 04 32 41.7 0.0
baz=304,SNR=40
X40A Basin Creek Fa 144.72 44 PKiKP PKPdf 04 32 43.2 +0.3
baz=304
W41B Gary Mavity, V 144.72 43 P PKPbc 04 32 42.1 +0.3
baz=306,SNR=94
W41B Gary Mavity, V 144.72 43 PKiKP PKPdf 04 32 42.4 -0.5
baz=306
HKT Hockley 144.76 53 IAMs_20 IAMs_20 05 39 43.0
comp=Z,2µm,20.0s
HKT Hockley 144.76 53 P PKPdf 04 32 44.5 +1.5
baz=295
P46A Rosedale 144.79 32 P PKPdf 04 32 43.1 +0.3
baz=317,SNR=68
NATX Nacogdoches 144.83 50 IAMs_20 IAMs_20 05 35 59.0
comp=Z,2µm,21.0s
NATX Nacogdoches 144.83 50 P PKPdf 04 32 44.8 +1.6
baz=299,SNR=49
NATX Nacogdoches 144.83 50 PKiKP PKPdf 04 32 43.8 +0.6
baz=299
LCAR Lake Charles 144.90 40 P PKPdf 04 32 43.4 +0.3
baz=308,SNR=188
PBMO Poplar Bluff 144.90 39 P PKPdf 04 32 43.2 +0.1
baz=306,SNR=339
F62A Pittston Farm, 144.94 8 P PKPdf 04 32 43.6 +0.7
baz=349
F62A P PKPdf 04 32 43.6 +0.7
baz=349
S44A Carbondale 145.01 37 P PKPdf 04 32 43.5 +0.2
baz=312,SNR=94
BMNY Brushton-Moira 145.15 13 P PKPdf 04 32 43.8 +0.5
baz=341,SNR=65
F64A Sherman 145.16 6 P PKPdf 04 32 43.1 -0.2
baz=352,SNR=37
F64A P PKPdf 04 32 43.1 -0.2
baz=352,SNR=37
F63A Nahmakanta, Br 145.23 7 P PKPdf 04 32 44.2 +0.7
baz=351,SNR=57
F63A P PKPdf 04 32 44.2 +0.7
baz=351,SNR=57
PCMB Pacaembu 145.25 201 eP PKPbc 04 32 42.1 -1.8
N49A Columbus Grove 145.27 28 P PKPdf 04 32 44.2 +0.6
baz=323,SNR=107
N49A P PKPdf 04 32 44.2 +0.6
baz=323,SNR=107
LONY Lake Ozonia 145.34 14 IAMs_20 IAMs_20 05 43 58.3
comp=Z,2µm,21.0s
LONY Lake Ozonia 145.34 14 PKiKP PKPdf 04 32 44.6 +0.9
baz=341
O48B Farmland 145.34 29 P PKPdf 04 32 44.6 +0.8
baz=321,SNR=196
O48B Farmland 145.34 29 PKiKP PKPdf 04 32 44.2 +0.4
baz=321
FRNY Flat Rock 145.35 12 P PKPbc 04 32 43.3 -0.2
baz=343,SNR=58
M50A Fremont 145.39 26 P PKPab 04 32 44.8 +0.9
baz=325,SNR=36
M50A P PKPab 04 32 44.8 +0.9
baz=325,SNR=36
NBRF Rio Formoso - 145.41 236 eP PKPbc 04 32 44.2 -0.4
Z41A Richland Creek 145.42 46 P PKiKP 04 32 46.2 -1.9
baz=303,SNR=72
Z41A P PKiKP 04 32 46.2 -1.9
baz=303,SNR=72
Z41A Richland Creek 145.42 46 PKiKP PKiKP 04 32 46.4 -1.7
baz=303
J54A Appleton 145.45 19 P PKPab 04 32 45.2 +1.1
baz=334,SNR=29
J54A P PKPab 04 32 45.2 +1.1
baz=334,SNR=29
G62A West of Eustis 145.53 9 P PKPab 04 32 45.6 +1.2
baz=348,SNR=33
G62A P PKPab 04 32 45.6 +1.2
baz=348,SNR=33
HBAR Harrisburg 145.53 41 P PKPab 04 32 45.5 +0.8
baz=308,SNR=26
GDU01 Guandu, BA 145.61 225 eP PKPdf 04 32 45.1 +0.1
PKME Peaks-Kenny Pk 145.65 7 IAMs_20 IAMs_20 05 51 03.5
comp=Z,2µm,21.0s
PKME Peaks-Kenny Pk 145.65 7 P PKPab 04 32 45.7 +1.0
baz=350,SNR=42
PKME Peaks-Kenny Pk 145.65 7 PKiKP PKPab 04 32 45.9 +1.2
baz=350
WCNY West Carthage 145.67 15 P PKPab 04 32 45.3 +0.5
baz=339,SNR=34
J55A Hilton 145.72 18 P PKPab 04 32 45.7 +0.7
baz=335,SNR=33
J55A P PKPab 04 32 45.7 +0.7
baz=335,SNR=33
CCAR Cane Creek 145.77 44 P PKPab 04 32 46.9 +1.3
baz=305,SNR=131
NBAN Anadia - AL 145.77 234 eP PKPdf 04 32 45.4 +0.1
O49A Covington 145.78 29 P PKPab 04 32 45.7 +0.3
baz=322,SNR=95
O49A P PKPab 04 32 45.7 +0.3
baz=322,SNR=95
P48A Milroy 145.82 31 P PKPab 04 32 46.0 +0.4
baz=320,SNR=63
P48A P PKPab 04 32 46.0 +0.4
baz=320,SNR=63
T45B Paducah 145.82 37 P PKPab 04 32 46.1 +0.4
baz=313,SNR=24
G65A Princeton 145.88 5 P PKPab 04 32 46.8 +1.2
baz=353,SNR=18
G65A P PKPab 04 32 46.8 +1.2
baz=353,SNR=18
LNXT Lenox 145.92 39 P PKPab 04 32 46.7 +0.7
baz=310,SNR=13
M52A Chesterland 145.97 24 P PKPab 04 32 46.6 +0.5
baz=328,SNR=25
M52A P PKPab 04 32 46.6 +0.5
baz=328,SNR=25
J56A Wolcott 146.00 17 P PKPab 04 32 46.4 +0.3
baz=336,SNR=11
J56A P PKPab 04 32 46.4 +0.3
baz=336,SNR=11
ERPA Erie 146.00 22 P PKPab 04 32 46.5 +0.3
baz=331,SNR=25
ERPA Erie 146.00 22 PKiKP PKPab 04 32 46.8 +0.6
baz=331
VT1 Waterbury 146.01 12 IAMs_20 IAMs_20 05 52 42.2
comp=Z,2µm,22.0s
NCB Newcomb 146.03 14 P PKPab 04 32 47.2 +0.9
baz=341,SNR=72
H62A Milan 146.06 10 P PKPab 04 32 47.2 +0.9
baz=347,SNR=26
H62A P PKPab 04 32 47.2 +0.9
baz=347,SNR=26
N51A Ashland 146.07 26 P PKPab 04 32 46.5 0.0
baz=326,SNR=60
N51A P PKPab 04 32 46.5 0.0
baz=326,SNR=60
LVC Limon Verde 146.09 171 IAMs_20 IAMs_20 05 36 40.4
comp=Z,2µm,22.0s
LVC Limon Verde 146.09 171 eP PKPdf 04 32 45.7 -0.4
P49A Miami Univ. Ec 146.11 30 IAMs_20 IAMs_20 05 50 13.1
comp=Z,2µm,21.0s
P49A Miami Univ. Ec 146.11 30 P PKPab 04 32 46.9 +0.2
baz=321,SNR=111
P49A Miami Univ. Ec 146.11 30 PKiKP PKPab 04 32 47.0 +0.2
baz=321
NBLA Lagarto - SE 146.13 230 eP PKPdf 04 32 45.7 -0.2
WVNY West Valley, N 146.23 20 P PKPab 04 32 47.2 +0.1
baz=333,SNR=29
LBNH Lisbon 146.25 11 IAMs_20 IAMs_20 05 45 27.7
comp=Z,2µm,22.0s
LBNH Lisbon 146.25 11 P PKPab 04 32 47.1 0.0
baz=345,SNR=15
LBNH Lisbon 146.25 11 PKiKP PKPab 04 32 47.7 +0.6
baz=345
WVL Waterville 146.29 8 IAMs_20 IAMs_20 05 45 15.5
comp=Z,1µm,20.0s
WVL Waterville 146.29 8 P PKPab 04 32 47.6 +0.4
baz=350,SNR=28
MCVT Middlebury Col 146.32 12 P PKPab 04 32 48.0 +0.6
baz=344,SNR=22
M53A WI Miller and 146.33 23 IAMs_20 IAMs_20 05 49 23.2
comp=Z,2µm,21.0s
M53A WI Miller and 146.33 23 PKiKP PKPab 04 32 47.5 +0.1
baz=329
J58A Remsen 146.35 15 P PKPab 04 32 47.8 +0.3
baz=339,SNR=37
J58A P PKPab 04 32 47.8 +0.3
baz=339,SNR=37
ALLY Alegheny Colle 146.35 22 P PKPab 04 32 47.8 +0.2
baz=330,SNR=10.0
ACSO Alum Creek Sta 146.37 27 IAMs_20 IAMs_20 05 52 50.6
comp=Z,2µm,21.0s
ACSO Alum Creek Sta 146.37 27 P PKPab 04 32 48.0 +0.4
baz=324,SNR=78
ACSO Alum Creek Sta 146.37 27 PKiKP PKPab 04 32 48.0 +0.4
baz=324
EMMW East Machias 146.38 5 IAMs_20 IAMs_20 05 51 17.9
comp=Z,2µm,21.0s
EMMW East Machias 146.38 5 P PKPab 04 32 47.6 +0.1
baz=353,SNR=21
441A DeRidder 146.42 50 P PKiKP 04 32 49.9 -0.3
baz=299,SNR=19
J59A Piesco 146.45 14 P PKPab 04 32 48.5 +0.6
baz=341,SNR=60
J59A P PKPab 04 32 48.5 +0.6
baz=341,SNR=60
K57A Scipio Center 146.59 17 P PKPab 04 32 48.5 0.0
baz=337,SNR=38
ITRB Iturama 146.66 203 eP PKPbc 04 32 47.7 -0.5
I63A Otisfield 146.66 9 P PKPab 04 32 49.0 +0.4
baz=348,SNR=20
I63A P PKPab 04 32 49.0 +0.4
baz=348,SNR=20
HNH Hanover 146.70 11 IAMs_20 IAMs_20 05 47 44.3
comp=Z,2µm,22.0s
HNH Hanover 146.70 11 P PKPab 04 32 49.5 +0.7
baz=345,SNR=30
143A Socs Landing, 146.70 46 P PKPab 04 32 49.0 -0.1
baz=304,SNR=45
I62A Tamworth 146.71 10 P PKPab 04 32 48.8 -0.1
baz=346,SNR=12
I62A P PKPab 04 32 48.8 -0.1
baz=346,SNR=12
W45A Hickory Valley 146.72 40 P PKPab 04 32 48.7 -0.4
baz=310,SNR=45
ACCN Adirondack Com 146.72 13 P PKPab 04 32 48.9 0.0
baz=342,SNR=36
T47A Sharon Grove 146.73 35 P PKPab 04 32 48.8 -0.4
baz=315,SNR=120
342B Flagon Creek P 146.75 48 P PKiKP 04 32 51.3 +0.4
baz=301,SNR=61
N53A Lisbon 146.80 24 P PKPab 04 32 49.1 -0.2
baz=328,SNR=69
N53A P PKPab 04 32 49.1 -0.2
baz=328,SNR=69
L56A Greenwood 146.82 19 P PKPab 04 32 49.2 -0.2
baz=335,SNR=70
L56A P PKPab 04 32 49.2 -0.2
baz=335,SNR=70
R49A Shelbyville 146.83 32 P PKPab 04 32 49.0 -0.5
baz=319,SNR=119
R49A P PKPab 04 32 49.0 -0.5
baz=319,SNR=119
WVT Waverly 146.91 37 PKPdf 04 32 47.1 +0.5
WVT Waverly 146.91 37 IAMs_20 IAMs_20 05 52 39.8
comp=Z,2µm,22.0s
WVT Waverly 146.91 37 PKiKP PKPdf 04 32 47.1 +0.5
WVT Waverly 146.91 37 P PKPbc 04 32 48.7 +0.3
baz=313,SNR=365
WVT Waverly 146.91 37 PKiKP PKPbc 04 32 49.0 +0.5
baz=313
P51A Williamsport 146.94 28 P PKPab 04 32 49.2 -0.7
baz=324,SNR=29
P51A P PKPab 04 32 49.2 -0.7
baz=324,SNR=29
O52A Adamsville 146.97 26 P PKPab 04 32 49.4 -0.6
baz=326,SNR=93
O52A P PKPab 04 32 49.4 -0.6
baz=326,SNR=93
OXF Oxford 146.98 41 IAMs_20 IAMs_20 05 42 26.1
comp=Z,1µm,19.0s
OXF Oxford 146.98 41 P PKPbc 04 32 48.5 -0.2
baz=309,SNR=217
OXF Oxford 146.98 41 PKiKP PKPbc 04 32 49.4 +0.7
baz=309
J61A Chester 146.99 12 P PKPbc 04 32 48.4 -0.1
baz=344,SNR=44
J61A P PKPbc 04 32 48.4 -0.1
baz=344,SNR=44
M55A Ridgway 147.01 21 P PKPbc 04 32 49.1 +0.5
baz=332,SNR=54
M55A P PKPbc 04 32 49.1 +0.5
baz=332,SNR=54
FFD Franklin Falls 147.05 11 P PKPab 04 32 50.1 -0.1
baz=346,SNR=16
O53A New Philadelph 147.12 25 PKiKP PKPab 04 32 50.0 -0.6
baz=327
Q51A Peebles 147.17 29 P PKPbc 04 32 49.5 +0.4
baz=323,SNR=62
Q51A P PKPbc 04 32 49.5 +0.4
baz=323,SNR=62
HCNY Howe Caverns 147.20 15 P PKPbc 04 32 49.6 +0.5

baz=340,SNR=35
BINY Binghamton 147.24 17 P **PKPbc 04 32 50.1 +0.8**
baz=337,SNR=62
BINY Binghamton 147.24 17 PKiKP **PKPab 04 32 50.4 -0.6**
baz=337
P52A Corning 147.24 27 IAMs_20 IAMs_20 05 54 00.5
comp=Z,2µm,20.0s
P52A Corning 147.24 27 PKiKP **PKPbc 04 32 49.7 +0.4**
baz=325
R50A Paris 147.27 31 P **PKPbc 04 32 49.2 -0.3**
R50A P **PKPbc 04 32 49.2 -0.3**
baz=320,SNR=69
IPMB Ipameri, GO 147.27 208 *eP* **PKPdf 04 32 47.1 -0.7**
Y45A Yeager Farm, C 147.29 42 P **PKPbc 04 32 49.7 +0.1**
baz=308,SNR=109
TRY Troy 147.34 14 IAMs_20 IAMs_20 05 53 38.3
comp=Z,2µm,20.0s
TRY Troy 147.34 14 P **PKPbc 04 32 49.8 +0.3**
baz=342,SNR=30
L59A Walton 147.51 16 P **PKPbc 04 32 50.7 +0.7**
baz=339,SNR=52
L59A P **PKPbc 04 32 50.7 +0.7**
baz=339,SNR=52
O54A Avella 147.52 24 P **PKPbc 04 32 50.5 +0.5**
baz=328,SNR=77
O54A P **PKPbc 04 32 50.5 +0.5**
baz=328,SNR=77
PLAL Pickwick Lake 147.52 39 IAMs_20 IAMs_20 05 42 09.8
comp=Z,2µm,22.0s
UNH University of 147.55 10 P **PKPab 04 32 51.7 -0.4**
baz=347,SNR=18
RCBR Riachuelo 147.59 240 *eP* **PKPdf 04 32 48.9 +0.5**
VBMS Vicksburg 147.59 45 P **PKiKP 04 32 52.3 -0.3**
baz=304,SNR=41
VBMS Vicksburg 147.59 45 PKiKP **PKPbc 04 32 50.7 +0.2**
baz=304
JANB Januaria 147.65 217 *eP* **PKPdf 04 32 46.5 -1.9**
M57A Sunshine Farm, 147.68 19 P **PKiKP 04 32 52.0 -0.5**
baz=335,SNR=56
M57A P **PKiKP 04 32 52.0 -0.5**
baz=335,SNR=56
P53A Whipple 147.68 26 P **PKPbc 04 32 49.7 -0.9**
baz=326,SNR=103
P53A P **PKPbc 04 32 49.7 -0.9**
baz=326,SNR=103
K62A Royalston 147.71 12 P **PKPdf 04 32 48.0 +0.3**
baz=344,SNR=17
K62A P **PKPdf 04 32 48.0 +0.3**
baz=344,SNR=17
Q52A Bidwell 147.72 28 P **PKPbc 04 32 50.1 -0.6**
baz=324,SNR=45
Q52A P **PKPbc 04 32 50.1 -0.6**
baz=324,SNR=45
V48A Smith Brothers 147.77 37 P **PKPbc 04 32 50.7 -0.2**
baz=314,SNR=132
U49A Red Boiling Sp 147.82 35 P **PKPbc 04 32 49.8 -1.2**
baz=316,SNR=188
L61B Northampton 147.83 12 PKiKP **PKPbc 04 32 51.3 +0.4**
baz=343
344A Westbrook Farm 147.87 47 P **PKPbc 04 32 52.2 +0.9**
baz=303,SNR=60
KSPA Keystone Colle 147.89 17 P **PKiKP 04 32 52.3 -0.7**
baz=337,SNR=50
T50A Nancy 147.96 33 P **PKPbc 04 32 50.9 -0.5**
baz=318
T50A P **PKPbc 04 32 50.9 -0.5**
baz=318
HRV Adam Dziewonsk 148.00 11 **PKiKP 04 32 52.3 -0.8**
HRV Adam Dziewonsk 148.00 11 IAMs_20 IAMs_20 05 52 40.5
comp=Z,2µm,21.0s
HRV Adam Dziewonsk 148.00 11 PKP2 **PKiKP 04 32 52.3 -0.8**
HRV Adam Dziewonsk 148.00 11 P **PKiKP 04 32 52.3 -0.8**
baz=345,SNR=20
HRV Adam Dziewonsk 148.00 11 PKiKP **PKPbc 04 32 51.6 +0.4**
baz=345
NBPN Ponto Novo - B 148.01 228 *eP* **PKPdf 04 32 50.1 +1.0**
SSPA Standing Stone 148.05 21 **PKPbc 04 32 50.0 -1.5**
SSPA Standing Stone 148.05 21 P **PKPbc 04 32 52.2 +0.7**
baz=333,SNR=68
SSPA Standing Stone 148.05 21 PKiKP **PKPbc 04 32 51.5 0.0**
baz=333
S51A Beattyville 148.14 31 P **PKPbc 04 32 51.6 -0.2**
baz=321,SNR=112
S51A P **PKPbc 04 32 51.6 -0.2**
baz=321,SNR=112
NPNY Mohonk Preserv 148.15 15 P **PKPbc 04 32 51.4 -0.3**
baz=340,SNR=68
MCWV Mont Chateau 148.18 24 P **PKPbc 04 32 51.4 -0.5**
baz=329,SNR=38
MCWV Mont Chateau 148.18 24 PKiKP **PKPbc 04 32 52.0 +0.1**
baz=329
N58A Sunbury 148.26 19 P **PKPbc 04 32 52.1 +0.1**
baz=335,SNR=29
N58A P **PKPbc 04 32 52.1 +0.1**
baz=335,SNR=29
Q54A Coxs Mills 148.34 26 P **PKPbc 04 32 52.6 +0.3**
baz=327,SNR=74
Q54A P **PKPbc 04 32 52.6 +0.3**
baz=327,SNR=74
146A Union 148.36 43 P **PKPbc 04 32 53.4 +0.8**
baz=307,SNR=31
R53A Hurricane 148.38 28 P **PKPbc 04 32 52.2 -0.3**
baz=324,SNR=63
R53A P **PKPbc 04 32 52.2 -0.3**
baz=324,SNR=63
BRNY Black Rk. Fore 148.50 15 P **PKPbc 04 32 53.1 +0.4**
baz=340,SNR=27
X48A Hartselle 148.51 39 P **PKPbc 04 32 51.5 -1.4**
baz=312,SNR=39
BRYW Bryant College 148.57 11 IAMs_20 IAMs_20 05 54 07.7
comp=Z,2µm,21.0s
ODNJ Ogdensburg 148.66 16 P **PKPbc 04 32 53.3 +0.2**
baz=339,SNR=34
Z47A Carrollton 148.67 42 P **PKPbc 04 32 54.0 +0.7**
baz=309,SNR=30
L64A Middleborough 148.68 10 P **PKiKP 04 32 54.9 +0.4**
baz=346,SNR=9.3
L64A P **PKiKP 04 32 54.9 +0.4**
baz=346,SNR=9.3
PAL Palisades 148.91 15 IAMs_20 IAMs_20 05 54 46.9
comp=Z,2µm,21.0s
PAL Palisades 148.91 15 P **PKPbc 04 32 54.2 +0.6**
baz=340,SNR=27
PAL Palisades 148.91 15 PKiKP **PKPbc 04 32 53.3 -0.4**
baz=340
TZTN Tazewell 149.00 32 P **PKPbc 04 32 53.2 -0.9**
baz=320,SNR=74
TZTN Tazewell 149.00 32 PKiKP **PKPbc 04 32 53.5 -0.6**
baz=320
W50A Signal Mountai 149.02 36 P **PKPbc 04 32 52.9 -1.4**
baz=315,SNR=118
P57A Homestead Farm 149.03 22 P **PKPbc 04 32 52.8 -1.3**
baz=332,SNR=31
P57A P **PKPbc 04 32 52.8 -1.3**
baz=332,SNR=31
BRNJ Basking Ridge 149.04 16 P **PKPbc 04 32 53.8 -0.2**
baz=339,SNR=12
FOR Fordham 149.05 15 P **PKPbc 04 32 54.0 0.0**
baz=340,SNR=9.1
S54A Dingess, Beckl 149.10 28 P **PKPbc 04 32 54.2 -0.2**
baz=325,SNR=53
S54A P **PKPbc 04 32 54.2 -0.2**
baz=325,SNR=53
NBMA Muriti-CE 149.11 235 *eP* **PKPdf 04 32 49.5 -1.4**
V51A Loudon 149.13 34 P **PKPbc 04 32 53.3 -1.2**
baz=318,SNR=56
BDFB Brasilia 149.19 211 PKPbc **PKPbc 04 32 54.2 -1.0**
comp=Z,26nm,0.7s,baz=160,slow=4.1,SNR=14
BDFB Brasilia 149.19 211 PKPdf **PKPdf 04 32 50.9 -0.1**
BDFB Brasilia 149.19 211 PKHKP PKPpre 04 32 50.9
BDFB Brasilia 149.19 211 *eP* **PKPdf 04 32 51.0 -0.1**
R55A Marlinton 149.23 26 P **PKPbc 04 32 54.7 0.0**
baz=327,SNR=32
R55A P **PKPbc 04 32 54.7 0.0**
baz=327,SNR=32
PANJ Princeton 149.29 17 P **PKPbc 04 32 54.5 -0.1**
baz=339,SNR=22
Y49A Blount Mountai 149.29 39 P **PKPdf 04 32 52.1 +1.5**
baz=312,SNR=83
TUPA Temple Univers 149.34 17 P **PKPbc 04 32 53.5 -1.3**
baz=338,SNR=16
LRAL Lakeview Retre 149.47 41 IAMs_20 IAMs_20 05 42 20.8
comp=Z,2µm,21.0s
LRAL Lakeview Retre 149.47 41 P **PKPbc 04 32 53.6 -1.7**
baz=310,SNR=144
LRAL Lakeview Retre 149.47 41 PKiKP **PKPbc 04 32 54.1 -1.2**
baz=310

V52A Sevierville 149.51 33 P **PKPdf 04 32 52.8 +2.0**
baz=319,SNR=187
GEDE Greenville 149.53 18 P **PKPbc 04 32 53.1 -2.1**
baz=336,SNR=22
TKL Tuckaleechee C 149.55 33 P **PKPdf 04 32 52.7 +1.7**
baz=318,SNR=143
X51A Calhoun 149.74 36 P **PKPbc 04 32 54.5 -1.5**
baz=315,SNR=42
X51A P **PKPbc 04 32 54.5 -1.5**
baz=315,SNR=42
W52A Murphy 149.88 34 P **PKPdf 04 32 53.1 +1.6**
baz=316,SNR=20
U54A Nelsons Funny 149.89 30 P **PKPbc 04 32 54.7 -1.7**
baz=323,SNR=22
U54A P **PKPbc 04 32 54.7 -1.7**
baz=323,SNR=22
P61A Hammonton 149.91 17 P **PKPdf 04 32 52.5 +1.2**
baz=338,SNR=6.1
P61A P **PKPdf 04 32 52.5 +1.2**
baz=338,SNR=6.1
BLA Blacksburg 149.99 27 P **PKPdf 04 32 52.5 +0.9**
baz=326,SNR=20
BLA Blacksburg 149.99 27 PKiKP **PKPbc 04 32 55.0 -1.5**
baz=326
V53A Saluda 150.05 32 P **PKPdf 04 32 54.1 +2.3**
baz=320,SNR=106
V53A P **PKPdf 04 32 54.1 +2.3**
baz=320,SNR=106
SDBA SAO DESIDERIO 150.07 219 *eP* **PKPdf 04 32 52.5 0.0**
S57A Dark Hollow, R 150.16 25 P **PKPbc 04 32 55.5 -1.5**
baz=329,SNR=25
S57A P **PKPbc 04 32 55.5 -1.5**
baz=329,SNR=25
CBN Corbin Frederi 150.39 22 P **PKPbc 04 32 56.3 -1.2**
baz=332,SNR=18
CBN Corbin Frederi 150.39 22 PKiKP **PKPbc 04 32 55.7 -1.7**
baz=332
R58B Mineral 150.41 23 P **PKPdf 04 32 54.5 +2.3**
baz=331,SNR=31
R58B P **PKPdf 04 32 54.5 +2.3**
baz=331,SNR=31
Z51A Franklin 150.42 38 P **PKPdf 04 32 54.7 +2.3**
baz=313
CASEE Lake Jocassee 150.50 33 P **PKPdf 04 32 54.3 +1.8**
baz=319,SNR=67
BRAL Brewton 150.60 44 IAMs_20 IAMs_20 05 41 04.2
comp=Z,2µm,22.0s
BRAL Brewton 150.60 44 P **PKPdf 04 32 55.3 +2.6**
baz=308,SNR=50
BRAL Brewton 150.60 44 PKiKP **PKPbc 04 32 56.9 -1.3**
baz=308
250A Grady 150.62 42 P **PKPbc 04 32 55.7 -2.5**
baz=310,SNR=122
T57A Hurt 150.68 26 P **PKPdf 04 32 52.9 +0.2**
baz=328,SNR=26
T57A P **PKPdf 04 32 52.9 +0.2**
baz=328,SNR=26
Y52A Lilburn 150.70 36 P **PKPbc 04 32 56.1 -2.2**
baz=316,SNR=118
Y52A P **PKPbc 04 32 56.1 -2.2**
baz=316,SNR=118
U56A King 150.72 28 P **PKPdf 04 32 54.1 +1.3**
baz=325,SNR=18
U56A P **PKPdf 04 32 54.1 +1.3**
baz=325,SNR=18
V55A Taylorsville 150.72 30 P **PKPdf 04 32 54.3 +1.5**
baz=323,SNR=20
V55A P **PKPdf 04 32 54.3 +1.5**
baz=323,SNR=20
NBPB Pedra_Branca-C 150.82 237 *eP* **PKPdf 04 32 54.2 +0.6**
152A Waverly Hall 151.14 39 P **PKPdf 04 32 55.3 +1.8**
baz=313,SNR=46
KMSC Kings Mountain 151.22 31 P **PKPdf 04 32 54.9 +1.3**
baz=322,SNR=48
KMSC Kings Mountain 151.22 31 PKiKP **PKPbc 04 32 57.2 -2.3**
baz=322
PAULI Pauline 151.22 32 P **PKPbc 04 32 56.6 -2.9**
baz=321,SNR=50
GOGA Godfrey 151.37 36 P **PKPdf 04 32 55.8 +1.9**
baz=316,SNR=39
GOGA Godfrey 151.37 36 PKiKP **PKPbc 04 32 57.6 -2.3**
baz=316
T59A Double "B" Far 151.40 24 P **PKPdf 04 32 56.4 +2.7**
baz=331,SNR=34
T59A P **PKPdf 04 32 56.4 +2.7**
baz=331,SNR=34
HODGE Hodges 151.44 33 P **PKPdf 04 32 55.5 +1.6**
baz=319,SNR=42
T60A Surry 151.57 22 P **PKiKP 04 33 01.9 +1.3**
baz=332,SNR=10
T60A P **PKiKP 04 33 01.9 +1.3**
baz=332,SNR=10
V58A Windy Hill, Pi 151.75 27 P **PKPdf 04 32 56.8 +2.4**
baz=327,SNR=23
V58A P **PKPdf 04 32 56.8 +2.4**
baz=327,SNR=23
352A Blakely 151.81 41 P **PKPdf 04 32 57.7 +3.1**
baz=311,SNR=48
451A Vernon 151.82 43 P **PKPdf 04 32 57.7 +3.2**
baz=309,SNR=27
U59A Littleton 151.84 25 P **PKPbc 04 32 57.8 -3.1**
baz=330,SNR=11
U59A P **PKPbc 04 32 57.8 -3.1**
baz=330,SNR=11
W57A Gilead 151.87 29 P **PKPdf 04 32 56.0 +1.4**
baz=324,SNR=29
W57A P **PKPdf 04 32 56.0 +1.4**
baz=324,SNR=29
JSC Jenkinsville 151.93 32 P **PKPdf 04 32 56.4 +1.7**
baz=321,SNR=21
SALV Santo Antonio 152.00 197 *eP* **PKPdf 04 32 55.1 -0.1**
BIRD Birdtown, Kers 152.05 30 P **PKPdf 04 32 56.5 +1.7**
baz=323,SNR=16
154A Montrose 152.15 37 P **PKPdf 04 32 57.2 +2.2**
baz=316,SNR=7.4
PEXB Peixe 152.30 214 *eP* **PKPdf 04 32 56.6 +0.8**
LPAZ La Paz 152.42 171 PKP **PKPdf 04 32 58.6 +2.0**
comp=Z,27nm,1.2s,baz=337,slow=0.6,SNR=24
LPAZ La Paz 152.42 171 *eP* **PKPdf 04 32 56.3 -0.4**
NBMO Morrinhos-CE 152.42 240 *eP* **PKPdf 04 32 56.6 +0.6**
HAW Hawthorne Fire 152.45 34 P **PKPdf 04 32 57.3 +1.9**
baz=319,SNR=16
Y57A Sumter 152.58 31 P **PKPdf 04 32 58.3 +2.7**
baz=322,SNR=11
Y57A P **PKPdf 04 32 58.3 +2.7**
baz=322,SNR=11
X58A Rowland 152.67 29 P **PKPdf 04 32 58.2 +2.5**
baz=325,SNR=14
X58A P **PKPdf 04 32 58.2 +2.5**
baz=325,SNR=14
TIGA Tifton 152.68 39 P **PKPdf 04 32 58.7 +2.9**
baz=313,SNR=29
TIGA Tifton 152.68 39 PKiKP **PKPbc 04 32 59.8 -3.1**
baz=313
CNNC Cliffs of the 152.75 26 P **PKPdf 04 32 58.7 +2.9**
baz=328
CNNC Cliffs of the 152.75 26 PKiKP **PKPbc 04 33 01.9 -1.0**
baz=328
V61A Roper 152.81 23 P **PKiKP 04 33 03.8 +0.5**
baz=332,SNR=6.2
V61A P **PKiKP 04 33 03.8 +0.5**
baz=332,SNR=6.2
255A Hazlehurst 153.01 37 P **PKPbc 04 33 01.2 -2.4**
baz=316,SNR=13
Y58A Scranton 153.04 30 P **PKPdf 04 32 58.1 +1.8**
baz=324,SNR=9.0
Y58A P **PKPdf 04 32 58.1 +1.8**
baz=324,SNR=9.0
PTLB Pontes e Lacer 153.21 190 *eP* **PKPdf 04 32 56.3 -0.7**
Y59A Loris 153.35 29 P **PKPdf 04 32 58.7 +2.0**
baz=325
Y59A P **PKPdf 04 32 58.7 +2.0**
baz=325
NHSC New Hope 153.41 32 PKiKP **PKPbc 04 33 03.9 -0.5**
baz=322
NNA Nana 153.60 150 PKPdf **PKPdf 04 32 57.2 -0.5**
NNA Nana 153.60 150 PKiKP **PKPdf 04 32 57.2 -0.5**
SNDB Serra Nova Dou 153.94 209 *eP* **PKPdf 04 32 58.4 +0.2**
SMTB Santa Maria do 154.47 220 *eP* **PKPdf 04 32 58.7 -0.3**
VILB Vilhena 155.83 188 *eP* **PKPdf 04 32 59.5 -1.2**
ROSB Rosario 156.04 236 *eP* **PKPdf 04 33 00.7 -0.3**
DWPF Disney Wildern 156.31 42 IAMs_20 IAMs_20 05 56 39.2
comp=Z,2µm,21.0s
PDRB Porto dos Gac 156.37 197 *eP* **PKPdf 04 33 01.9 +0.5**
CLDB Colider 156.77 200 *eP* **PKPdf 04 33 01.6 -0.4**
TGUH Tegucigalpa,Un 156.83 80 IAMs_20 IAMs_20 05 37 32.2
comp=Z,1µm,22.0s
TGUH Tegucigalpa,Un 156.83 80 *eP* **PKPdf 04 33 04.6 +2.5**

PRPB Parauapebas 157.94 220 *eP* **PKPdf 04 33 04.0 +0.5**
ETMB Extrema 159.05 173 *eP* **PKPdf 04 33 04.9 +0.1**
JTS Las Juntas de 159.12 90 IAMs_20 IAMs_20 05 39 15.5
comp=Z,2µm,20.0s
CZSB Cruzeiro do Su 159.25 154 *eP* **PKPdf 04 33 04.9 -0.2**
TMAB Tom-Au,PA,Br 159.47 230 *eP* **PKPdf 04 33 05.2 -0.1**
NPGB Novo Progresso 160.12 205 *eP* **PKPdf 04 33 06.7 +0.6**
PAC1 Pacto, Paraso 161.55 125 *eP* **PKPdf 04 33 08.2 +0.5**
OTAV Otavalo 161.80 125 *eP* **PKPdf 04 33 09.6 +1.2**
OTAV Otavalo 161.80 125 *eP* **PKPdf 04 33 08.1 -0.3**
TULM Tulcn-Chalpat 162.62 126 *eP* **PKPdf 04 33 10.4 +1.1**
CACAO El Cacao, Vera 162.67 101 *eP* **PKPdf 04 33 11.9 +3.2**
ITTB Itatuba 162.68 208 *eP* **PKPdf 04 33 09.3 +0.6**
GCUF Volcan Galeras 163.28 125 *eP* **PKPdf 04 33 10.9 +1.0**
AZU Azuero 163.34 100 *eP* **PKPdf 04 33 09.4 +0.1**
MCPB Macapa, AP 163.73 226 *eP* **PKPdf 04 33 11.1 +1.3**
CRUC La Cruz 163.79 125 *eP* **PKPdf 04 33 13.1 +2.9**
BCIP Isla Barro Col 164.02 96 *eP* **PKPdf 04 33 11.8 +1.8**
MALB Monte Alegre 164.04 217 *eP* **PKPdf 04 33 11.4 +1.4**
UPA Univ. de Panam 164.28 96 *eP* **PKPdf 04 33 09.4 -0.7**
SOTA Rioblanco 164.40 124 *eP* **PKPdf 04 33 11.4 +0.4**
PTLC Puerto Leguiza 164.52 134 *eP* **PKPdf 04 33 09.9 -0.5**
POPC Popayan, Colom 164.58 123 *eP* **PKPdf 04 33 08.0 -2.8**
PCON Cinco Dias 164.69 124 *eP* **PKPdf 04 33 14.9 +3.6**
FLOC Florencia 164.83 128 *i* Pg **PKPdf 04 33 11.6 +0.8**
GARC Garzon, Huila 165.33 126 *eP* **PKPdf 04 33 12.3 +0.8**
MARP Paez Belalcaza 165.34 123 *eP* **PKPdf 04 33 14.1 +2.6**
MACA Manacapuru-AM 165.49 192 *eP* **PKPdf 04 33 12.0 +0.7**
PTAC Punta Ardita, 165.54 105 *eP* **PKPdf 04 33 12.4 +1.1**
YOTC Yotoco, Valle 165.62 119 *eP* **PKPdf 04 33 09.4 -2.1**
UPD2 Meteti 165.69 99 *eP* **PKPdf 04 33 06.6 -4.8**
PLMC San Jos del P 166.12 115 *eP* **PKPdf 04 33 11.7 -0.2**
ORTC Ortega, Tolima 166.52 121 *eP* **PKPdf 04 33 12.1 -0.1**
MACC Macarena, Meta 166.56 131 *eP* **PKPdf 04 33 12.2 +0.1**
ANIL Santa Ana 166.69 119 *eP* **PKPdf 04 33 15.4 +2.9**
PRAC Prado 166.71 123 *eP* **PKPdf 04 33 11.5 -0.8**
CBOC Ciudad Bolivar 166.77 112 *eP* **PKPdf 04 33 12.3 -0.2**
DBBC Dabeiba 167.01 107 *eP* **PKPdf 04 33 14.8 +2.2**
HELC Santa Helena 167.34 112 *eP* **PKPdf 04 33 13.2 +0.1**
NORC Norcasia 167.67 116 *eP* **PKPdf 04 33 11.9 -1.1**
ROSC El Rosal 167.79 120 PKP **PKPdf 04 33 15.2 +1.7**
comp=Z,8.6nm,0.8s,baz=20,slow=1.9,SNR=12
ROSC El Rosal 167.79 120 *eP* **PKPdf 04 33 12.5 -1.1**
UREC San Jos de Ur 167.88 105 *eP* **PKPdf 04 33 12.3 -0.7**
VILC Villavicencio, 167.91 124 *eP* **PKPdf 04 33 10.4 -2.9**
CHIC Chingaza 168.17 122 *eP* **PKPdf 04 33 12.5 -1.3**
SPBC San Pablo de B 168.41 117 *eP* **PKPdf 04 33 12.3 -1.2**
PTBC PUERTO BERRIO 168.46 112 *eP* **PKPdf 04 33 10.8 -2.6**
SJCC San Jacinto, C 168.67 95 *eP* **PKPdf 04 33 13.3 -0.4**
PTGC Puerto Gaitan, 169.19 129 *eP* **PKPdf 04 33 15.2 +1.2**
BRRC Barranca, Sant 169.36 111 *eP* **PKPdf 04 33 14.1 +0.1**
RUSC La Rusia 169.38 119 *eP* **PKPdf 04 33 14.1 -0.6**
BARC Barichara 169.63 115 *eP* **PKPdf 04 33 15.9 +1.4**
SMRC Santa Marta, M 169.69 89 *eP* **PKPdf 04 33 16.2 +2.0**
OCAC Ocana 170.11 106 *eP* **PKPdf 04 33 14.8 +0.2**
PAMC Pamplona, Colo 170.37 112 *i* Pg **PKPdf 04 33 16.9 +1.6**
BOAV Boa Vista 170.77 200 *eP* **PKPdf 04 33 15.2 +0.3**
TAMC Tame, Arauca 170.77 120 *eP* **PKPdf 04 33 15.2 +0.3**
SJG San Juan 172.67 18 *eP* **PKPdf 04 33 17.1 +1.6**
SJG San Juan 172.67 18 *eP* PKPdf 04 33 04.7 -11
SDV Santo Domingo 172.84 107 *eP* **PKPdf 04 33 15.3 -0.8**
SDV Santo Domingo 172.84 107 *eP* **PKPdf 04 33 16.1 +0.1**
SMRT St. Maarten 173.09 355 *eP* **PKPdf 04 33 18.6 +2.8**
ANWB Willy Bob 173.23 344 *eP* **PKPdf 04 33 18.6 +2.8**
SEUS St. Eustatius 173.63 354 *eP* **PKPdf 04 33 18.6 +2.6**
ANBD Bethesda, Anti 173.81 342 *eP* **PKPdf 04 33 13.9 -2.1**
MBFL Flemmings, Mon 174.22 345 *eP* **PKPdf 04 33 13.3 -2.9**
MLYT Lee's Yard 174.24 345 *eP* PKPdf 04 33 08.1 -8.1
MAGL Barre de l'ile 174.65 334 *eP* **PKPdf 04 33 18.6 +2.2**
TDBA Terre de Bas, 174.88 337 *eP* **PKPdf 04 33 23.3 +6.8**
DSLB Salisbury 175.16 333 *eP* **PKPdf 04 33 18.6 +2.1**
BAUV El Baul 175.23 117 *eP* **PKPdf 04 33 18.6 +2.0**
BBGH Gun Hill 175.46 297 *eP* **PKPdf 04 33 18.6 +2.0**
MPOM Morne Pois Mar 175.68 320 *eP* **PKPdf 04 33 18.6 +1.9**
SLBI Saint Lucia, B 176.06 317 *eP* **PKPdf 04 33 09.3 -7.4**
MCLT Moule a Chique 176.26 314 *eP* **PKPdf 04 33 13.9 -2.9**
TOSP Speyside 176.87 273 *eP* PKPdf 04 33 27.9 +11
GCMP Grenada, Carri 177.38 301 *eP* **PKPdf 04 33 18.6 +1.6**
TRN Trinidad (W) 177.67 258 *eP* **PKPdf 04 33 13.9 -3.1**
GRGR Grenville 177.74 297 *eP* PKPdf 04 33 09.3 -7.8

*TUL **09** 04:13:16.1±0.6, 36°.45N±0°.03×98°.78W±0°.05, h6km±5km, ML2.8, mb_Lg2.5/36(NEIC) Error ellipse: s-maj=6.5km s-min=3.6km az=111.0*

NEIC 09 04:13:16.4±0.6, 36°.44N±0°.03×98°.76W±0°.06, h8km, Error ellipse: s-maj=7.3km s-min=3.6km az=118.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
U32A	**Winter Ranch,**	**0.20**	**253**	Pg	Pg	04 13 20.4	-0.2
U32A				Sg	Sg	04 13 23.3	0.0
FNO	**Franklin**	**1.62**	**136**	Pn	Pn	04 13 45.2	0.0
WMOK	**Wichita Mounta**	**1.70**	**181**		Pn	04 13 46.2	-0.1
T35A	**Sooner Cattle**	**1.87**	**75**		Pn	04 13 48.6	-0.1
R32A	**Long Quarter,**	**1.98**	**1**		Pn	04 13 50.0	-0.3
X34A	**Smith Ranch, M**	**1.98**	**157**		Pn	04 13 50.3	+0.1
X34A				IAmb_Lg		04 14 20.8	
comp=Z,22nm,0.8s							
TUL1	**Leonard**	**2.46**	**101**	Pn	Pn	04 13 57.0	+0.3
AMTX	**Amarillo**	**2.84**	**238**	IAmb_Lg		04 14 50.8	
comp=Z,21nm,0.9s							
X37A	**Clayton**	**3.32**	**123**	IAmb_Lg		04 15 09.4	
comp=Z,16nm,1.0s							
U38A	**Gravette**	**3.53**	**89**	IAmb_Lg		04 15 14.6	
comp=Z,13nm,0.9s							
KSCO	**Kaye Shedlock'**	**4.00**	**311**	IAmb_Lg		04 15 25.9	
comp=Z,11nm,0.7s							
MSTX	**Muleshoe**	**4.11**	**234**	IAmb_Lg		04 15 29.2	
comp=Z,14nm,1.0s							
N33A	**J Bar K, Exete**	**4.41**	**13**	IAmb_Lg		04 15 43.3	
comp=Z,15nm,0.7s							
S39A	**Bolivar**	**4.53**	**72**		Pn	04 14 26.3	+1.1
S39A				IAmb_Lg		04 15 42.2	
comp=Z,6.7nm,0.8s							
T25A	**Trinidad**	**4.59**	**280**		Pn	04 14 26.8	+0.5
T25A				IAmb_Lg		04 15 40.8	
comp=Z,12nm,0.9s							
MIAR	**Mount Ida**	**4.63**	**113**	Pn	Pn	04 14 27.9	+1.2
U40A	**Yellville**	**4.77**	**89**	Pn	Pn	04 14 28.4	-0.1
U40A				IAmb_Lg		04 15 46.9	
comp=Z,11nm,0.8s							
BGNE	**Belgrade**	**4.99**	**5**	IAmb_Lg		04 16 07.1	
comp=Z,11nm,0.8s							
P38A	**Dawn**	**5.21**	**51**	IAmb_Lg		04 16 14.5	
comp=Z,6.1nm,0.7s							
X40A	**Basin Creek Fa**	**5.21**	**110**	IAmb_Lg		04 16 10.2	
comp=Z,5.9nm,0.8s							
FCAR	**Ozark Folk Cen**	**5.40**	**94**	IAmb_Lg		04 16 13.2	
comp=Z,5.6nm,0.9s							
W41B	**Gary Mavity, V**	**5.44**	**101**	IAmb_Lg		04 16 09.9	
comp=Z,10nm,1.1s							
Q24A	**Divide**	**5.66**	**298**	IAmb_Lg		04 16 15.6	
comp=Z,7.0nm,1.0s							
JCT	**Junction City**	**6.01**	**189**	IAmb_Lg		04 16 33.2	
comp=Z,5.9nm,0.8s							
S44A	**Carbondale**	**7.70**	**78**	IAmb_Lg		04 17 29.6	
comp=Z,5.0nm,0.8s							

*IDC **09** 04:13:32.5±1.9, 18°.48S×175°.91E, h0km, mb4.5/4, mbtmp4.4/5, ML4.4/2, MS3.5/3, Error ellipse: s-maj=99.3km s-min=25.1km az=163.0*

*NEIC **09** 04:13:42.4±1.4, 17°.6S±0°.2×176°.38E±0°.05, h28km±3km, mb4.9/28, Error ellipse: s-maj=33.6km s-min=7.0km az=179.0*

ISC 09 04:13:36.6±0.9, 18°.8S±0°.3×176°.0E±0°.2, h30km, n46, σ1s15/43, mb4.8/19, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**2.18**	**62**	Pn	**Pn**	**04 14 09.0**	**-2.0**
19nm,0.3s,baz=255,slow=23,SNR=34							
MSVF				Sn	**Sn**	**04 14 37.1**	**+0.1**
69nm,0.3s,baz=305,slow=23,SNR=19							
MSVF				LR	LR	04 14 56.7	
comp=Z,1µm,18.0s,baz=208,slow=39							
MSVF	**Nonsavu**	**2.18**	**62**		**Pn**	**04 14 08.9**	**-2.0**
MSVF				Sn	**Sn**	**04 14 36.7**	**-0.3**
DZM	**Mont Dzumac**	**9.56**	**248**	Pn	**Pn**	**04 15 50.5**	**-1.9**
0.5nm,0.3s,baz=86,slow=10,SNR=9.4							
DZM				LR	LR	04 19 02.3	

	comp=Z,561nm,22.0s,baz=47,slow=34 18nm,0.9s							
AFI	**Afiamalu**	**12.66**	**69**	LR	LR	04 20 52.0		
	comp=Z,79nm,18.9s,baz=198,slow=35							
GEXS	**Deakin Univers**	**33.71**	**228**	P	**P**	**04 20 15.6**	**+0.4**	
H11S2	**WAKE ISLAND Hy**	**38.15**	**346**	T	T	05 01 52.0		
	baz=166,slow=76,SNR=8.4							
H11S3	**WAKE ISLAND Hy**	**38.16**	**346**	T	T	05 01 55.4		
	baz=166,slow=76,SNR=4.7							
H11S1	**WAKE ISLAND Hy**	**38.16**	**346**	T	T	05 01 53.5		
	baz=166,slow=76,SNR=6.1							
FORT	**Forrest**	**44.86**	**245**	P	P	04 22 00.3	+12	
P18K	**Big Mountain,**	**81.36**	**14**	P	**P**	**04 25 49.8**	**-0.2**	
GLA	**Glamis**	**83.71**	**52**	P	**P**	**04 26 04.8**	**+1.9**	
GLA				IAmb	IAmb	04 26 08.2		
	comp=Z,8.6nm,0.8s							
NVAR	**Mina Array Bea**	**83.77**	**46**	P	**P**	**04 26 04.2**	**+1.0**	
	comp=Z,4.3nm,1.0s,baz=229,slow=8.2,SNR=21 comp=Z,4.3nm,1.0s							
GHO	**Glory Hole Cre**	**84.99**	**16**	P	**P**	**04 26 09.1**	**+0.4**	
GHO				IAmb	IAmb	04 26 10.2		
	comp=Z,10nm,1.0s							
ILAR	**Eielson Array**	**88.00**	**15**	P	**P**	**04 26 22.1**	**-1.2**	
	comp=Z,1.4nm,0.8s,baz=227,slow=4.8,SNR=14 comp=Z,1.4nm,0.8s							
ILAR	**Eielson Array**	**88.00**	**15**	P	**P**	**04 26 22.6**	**-0.8**	
DLBC	**Dease Lake**	**88.78**	**25**		**P**	**04 26 28.0**	**+0.7**	
DLBC				IAmb	IAmb	04 26 29.7		
	comp=Z,11nm,1.4s							
HLID	**Hailey**	**88.81**	**43**		**P**	**04 26 28.2**	**+0.3**	
Q16A	**Castle Valley**	**88.95**	**48**	P	**P**	**04 26 30.0**	**+1.4**	
HVU	**Hansel Valley**	**89.08**	**45**		**P**	**04 26 30.8**	**+1.6**	
TMUT	**Trail Mountain**	**89.08**	**48**	P	**P**	**04 26 30.5**	**+1.1**	
TMUT				IAmb	IAmb	04 26 34.6		
	comp=Z,5.4nm,1.0s							
M30M	**Minto, Yukon**	**89.16**	**20**		**P**	**04 26 29.7**	**+0.8**	
JLU	**Jordanelle**	**89.47**	**47**	P	**P**	**04 26 31.1**	**-0.1**	
JLU				IAmb	IAmb	04 26 32.8		
	comp=Z,4.7nm,1.0s							
P17A	**Butcher Ranch,**	**89.48**	**48**	P	**P**	**04 26 31.6**	**+0.4**	
P17A				IAmb	IAmb	04 26 35.1		
	comp=Z,4.7nm,1.2s							
SRU	**San Rafael Swe**	**89.48**	**48**	P	**P**	**04 26 32.2**	**+1.0**	
SRU				IAmb	IAmb	04 26 33.2		
	comp=Z,8.4nm,1.1s							
PV23	**Carpenter Ridg**	**90.29**	**49**	P	**P**	**04 26 34.7**	**-0.4**	
PV23				IAmb	IAmb	04 26 39.3		
	comp=Z,7.6nm,0.9s							
PV13	**Radium Mtn., P**	**90.31**	**50**	P	**P**	**04 26 36.2**	**+1.0**	
PV13				IAmb	IAmb	04 26 37.2		
	comp=Z,9.0nm,1.4s							
MNTX	**Cornudas Mount**	**90.43**	**57**		**P**	**04 26 36.2**	**+0.6**	
I29M	**Ogilvie Camp,**	**90.74**	**17**	P	**P**	**04 26 35.7**	**-0.5**	
I29M				IAmb	IAmb	04 26 37.2		
	comp=Z,7.3nm,1.4s							
DLMT	**Dillon**	**90.78**	**42**	P	**P**	**04 26 37.1**	**+0.1**	
ANMO	**Albuquerque**	**90.81**	**53**		**P**	**04 26 36.5**	**-1.0**	
TX31	**Lajitas Ar. Si**	**90.95**	**59**	P	**P**	**04 26 38.8**	**+0.6**	
TX32	**Lajitas Array**	**90.95**	**59**	P	**P**	**04 26 37.9**	**-0.3**	
TX32				IAmb	IAmb	04 26 40.7		
	comp=Z,6.4nm,1.2s							
TXAR	**Lajitas Array**	**90.95**	**59**	P	**P**	**04 26 39.2**	**+1.1**	
	comp=Z,2.3nm,0.9s,baz=225,slow=5.0,SNR=22 comp=Z,2.3nm,0.9s							
REDW	**Red Top Meadow**	**91.05**	**44**	P	**P**	**04 26 37.1**	**-1.3**	
REDW				IAmb	IAmb	04 26 43.3		
	comp=Z,7.3nm,1.1s							
S22A	**4UR Ranch, Cre**	**91.60**	**51**		**P**	**04 26 41.8**	**+0.6**	
S22A				IAmb	IAmb	04 26 46.3		
	comp=Z,11nm,1.2s							
PDAR	**Pinedale Array**	**91.66**	**45**	P	**P**	**04 26 40.6**	**-0.7**	
	comp=Z,0.2nm,0.4s,baz=243,slow=1.0,SNR=2.5							
PDAR	**Pinedale Array**	**91.66**	**45**	P	**P**	**04 26 41.2**	**-0.1**	
SMCO	**Snowmass**	**92.04**	**49**		**P**	**04 26 42.9**	**-0.5**	
SMCO				IAmb	IAmb	04 26 44.8		
	comp=Z,3.5nm,0.9s							
SDCO	**Great Sand Dun**	**92.57**	**51**	P	**P**	**04 26 45.6**	**-0.1**	
LL03	**Petrohue**	**93.06**	**135**	P	P	04 26 55.9	+8.2	
YKA	**Yellowknife Ar**	**97.37**	**26**	P	**P**	**04 27 06.5**	**-0.1**	
	comp=Z,1.2nm,1.0s,baz=250,slow=3.7,SNR=3.2 comp=Z,1.2nm,1.0s							
SCHQ	**Schefferville**	**120.73**	**37**	PKPdf	**PKiKP**	**04 32 28.9**	**+3.4**	
BURAR	**Bucovina Array**	**142.67**	**327**	⇓P	**Pdif**	**04 30 30.8**	**+2.1**	
CLL	**Collm**	**144.87**	**341**	*i* (PKPdf)	**PKPab**	**04 33 09.1**	**-0.5**	
	comp=Z,29nm,0.9s							
CLL				*i* x	**PKPdf**	**04 33 11.6**	**+1.1**	
CLL				*i* x	x	04 33 15.8		
GERES	**GERESS Array B**	**146.77**	**339**	PKPbc	**PKPdf**	**04 33 14.8**	**+0.8**	
	comp=Z,2.9nm,0.9s,baz=35,slow=3.6,SNR=2.8							
FNA	**Florina**	**149.13**	**321**		**PKPbc**	**04 33 21.2**	**-1.1**	

WEL 09 04:16:26.6±0.8, 35°S±10°×17°9E±1°5, h318km±10km, M4.1/21, mB4.6/8, ML4.5/22, MLv4.4/21, Mw(mB)3.8/8, Error ellipse: s-maj=0.0km s-min=0.0km az=117.7, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.62**	**196**	S	S	04 18 03.1	+0.4
WMGZ	**Waiomatatini S**	**2.85**	**193**	P	Pn	04 17 22.7	+0.6
WMGZ				S	S	04 18 07.1	+0.6
HAZ	**Te Kaha**	**2.94**	**202**	P	Pn	04 17 21.2	-1.7
HAZ				S	S	04 18 07.8	-0.3
MWZ	**Matawai**	**3.55**	**202**	P	Pn	04 17 29.2	+0.1
MWZ				S	S	04 18 19.8	+0.7
URZ	**Urewera**	**3.63**	**207**	P	Pn	04 17 29.1	-0.6
URZ				S	S	04 18 19.7	-0.7
RIGZ	**Rimuhau**	**3.84**	**197**	P	Pn	04 17 32.3	+0.3
RIGZ				S	S	04 18 28.1	+3.6
MUGZ	**Murupara**	**3.95**	**209**	P	Pn	04 17 32.9	-0.2
MUGZ				S	S	04 18 26.6	0.0
TOZ	**Tahuroa Road**	**4.01**	**227**	P	Pn	04 17 34.9	+1.1
PRGZ	**Paritu Road**	**4.02**	**195**	P	Pn	04 17 35.2	+1.3
PRGZ				S	S	04 18 29.5	+1.5
HRRZ	**Handcock Road**	**4.08**	**214**	P	Pn	04 17 35.9	+1.2
KNZ	**Kokohu**	**4.16**	**197**	P	Pn	04 17 35.5	+0.2
KNZ				S	S	04 18 29.8	-0.8
ALRZ	**Allen Road**	**4.20**	**212**	P	Pn	04 17 36.3	+0.5
ALRZ				S	S	04 18 33.2	+1.7
RAHZ	**Arahi**	**4.22**	**203**	P	Pn	04 17 36.1	-0.1
RAHZ				S	S	04 18 32.9	+0.9
MTHZ	**Maungataniwha**	**4.25**	**206**	P	Pn	04 17 36.9	+0.5
MTHZ				S	S	04 18 32.1	-0.5
TLZ	**Tolley Road**	**4.41**	**221**	P	Pn	04 17 39.6	+1.4
NMHZ	**Naumai**	**4.48**	**205**	P	Pn	04 17 39.4	+0.4
NMHZ				S	S	04 18 39.2	+2.1
ARHZ	**Aropaoanui**	**4.57**	**202**	P	Pn	04 17 39.9	0.0
ARHZ				S	S	04 18 41.5	+2.6
BKZ	**Black Stump Fm**	**4.65**	**207**	P	Pn	04 17 40.8	-0.1
BKZ				S	S	04 18 41.7	+1.1
MCHZ	**McNeill Hill**	**4.83**	**204**	P	Pn	04 17 43.2	+0.4
MCHZ				S	S	04 18 45.4	+1.3
KWHZ	**Kaweka Forest**	**4.91**	**206**	P	Pn	04 17 43.6	-0.2
KWHZ				S	S	04 18 45.6	-0.3
CKHZ	**Cape Kidnapper**	**4.91**	**200**	P	Pn	04 17 43.9	+0.1
CKHZ				S	S	04 18 45.4	-0.4
HIZ	**Hauiti**	**4.92**	**224**	P	Pn	04 17 44.8	+1.0
NTVZ	**North Tongarir**	**4.94**	**214**	P	Pn	04 17 44.1	0.0
TMVZ	**Te Maari**	**4.94**	**213**	P	Pn	04 17 43.3	-0.9
ETVZ	**East Tongariro**	**4.95**	**213**	P	Pn	04 17 43.8	-0.6
OTVZ	**Oturere**	**4.99**	**213**	P	Pn	04 17 44.3	-0.5
KAHZ	**Kahuranaki**	**5.09**	**201**	P	Pn	04 17 46.4	+0.5
KAHZ				S	S	04 18 51.4	+1.7
BHHZ	**Black Hill Sta**	**5.10**	**208**	P	Pn	04 17 45.0	-1.0
BHHZ				S	S	04 18 48.1	-1.8
KRHZ	**Kereru**	**5.12**	**205**	P	Pn	04 17 45.7	-0.5
KRHZ				S	S	04 18 49.8	-0.4
WNVZ	**Wahianoa**	**5.16**	**213**	P	Pn	04 17 45.7	-1.0
PXZ	**Pawanui**	**5.32**	**200**	P	Pn	04 17 49.7	+1.4
PNHZ	**Pukenui**	**5.42**	**205**	P	Pn	04 17 48.5	-1.1
WPHZ	**Waipukurau**	**5.47**	**203**	P	Pn	04 17 50.9	+0.7
PRHZ	**Porangahau**	**5.60**	**201**	P	Pn	04 17 51.6	0.0
TSZ	**Takapari Road**	**5.63**	**206**	P	Pn	04 17 51.0	-1.0
DVHZ	**Dannevirke**	**5.78**	**204**	P	Pn	04 17 53.1	-0.6
ANWZ	**Angora Road**	**5.83**	**201**	P	Pn	04 17 54.6	+0.4
POWZ	**Post Office Ro**	**6.00**	**206**	P	Pn	04 17 55.7	-0.6
PRWZ	**Pori Road**	**6.07**	**204**	P	Pn	04 17 57.3	+0.2
BFZ	**Birch Farm**	**6.10**	**202**	P	Pn	04 17 56.9	-0.6
TIWZ	**Tintock**	**6.30**	**204**	P	Pn	04 17 59.4	-0.4
MRZ	**Mangatainoka R**	**6.30**	**206**	P	Pn	04 17 58.0	-1.9
CPWZ	**Castlepoint**	**6.32**	**201**	P	Pn	04 18 01.0	+0.9
HOWZ	**Holdsworth Sta**	**6.53**	**205**	P	Pn	04 18 01.1	-1.5
OGWZ	**Otaki Gorge**	**6.59**	**208**	P	Pn	04 18 01.7	-1.6
TMWZ	**Te Maipa**	**6.60**	**202**	P	Pn	04 18 03.1	-0.3
KIW	**Kapiti Island**	**6.73**	**209**	P	Pn	04 18 03.0	-1.9
MTW	**Mount Morrison**	**6.77**	**204**	P	Pn	04 18 03.8	-1.6
CAW	**Cannon Point**	**6.88**	**207**	P	Pn	04 18 05.1	-1.7
TRWZ	**Traveller**	**6.92**	**202**	P	Pn	04 18 06.8	-0.5
PAWZ	**Paruwai Farm**	**6.99**	**204**	P	Pn	04 18 06.8	-1.3
MSWZ	**Moikau Station**	**7.08**	**205**	P	Pn	04 18 07.6	-1.6
DUWZ	**D'Urville Isla**	**7.11**	**214**	P	Pn	04 18 07.0	-2.5
BHW	**Baring Head**	**7.21**	**207**	P	Pn	04 18 08.7	-2.0
PLWZ	**Palliser**	**7.22**	**204**	P	Pn	04 18 09.4	-1.5
TCW	**Tory Channel**	**7.28**	**211**	P	Pn	04 18 09.0	-2.5
TUWZ	**Tuamarina**	**7.60**	**211**	P	Pn	04 18 13.1	-2.3

*TUL **09** 04:44:06.1±1.0, 36°76N±0°.02×98°.07W±0°.02, h6km±6km, ML2.9, mb_Lg2.5/41(NEIC), Error ellipse: s-maj=3.1km s-min=1.8km az=135.0*

NEIC 09 04:44:06.2±0.7, 36°73N±0°.02×98°06W±0°.01, h8km±6km, Error ellipse: s-maj=3.0km s-min=0.7km az=154.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
U32A	**Winter Ranch,**	**0.84**	**246**		Pg	04 44 22.1	-0.2
T35A	**Sooner Cattle**	**1.25**	**81**		Pn	04 44 29.6	-0.5
FNO	**Franklin**	**1.56**	**160**		Pn	04 44 34.8	+0.4
R32A	**Long Quarter,**	**1.77**	**343**		Pn	04 44 37.6	+0.3
R32A				IAmb_Lg		04 45 03.3	
	comp=Z,25nm,0.8s						
TUL1	**Leonard**	**2.00**	**113**	Pn	Pn	04 44 40.6	+0.2
WMOK	**Wichita Mounta**	**2.07**	**197**		Pn	04 44 42.2	+0.8
WMOK				IAmb_Lg		04 45 16.0	
	comp=Z,18nm,0.8s						
X34A	**Smith Ranch, M**	**2.13**	**175**		Pn	04 44 42.6	+0.4
X34A				IAmb_Lg		04 45 14.1	
	comp=Z,19nm,0.8s						
U38A	**Gravette**	**2.97**	**94**	Pn	Pn	04 44 54.7	+1.0
X37A	**Clayton**	**3.06**	**134**		Pn	04 44 55.8	+0.9
X37A				IAmb_Lg		04 45 46.9	
	comp=Z,16nm,0.8s						
HHAR	**Hobbs**	**3.35**	**96**		Pn	04 44 59.2	+0.3
AMTX	**Amarillo**	**3.47**	**239**		Pn	04 45 00.2	-0.5
W39A	**Magazine**	**3.79**	**113**	Pn	Pn	04 45 07.1	+2.1
S39A	**Bolivar**	**3.90**	**74**	Pn	Pn	04 45 07.0	+0.4
U40A	**Yellville**	**4.21**	**94**		Pn	04 45 10.6	-0.1
MIAR	**Mount Ida**	**4.25**	**120**	IAmb_Lg		04 46 24.2	
	comp=Z,12nm,1.0s						
KSCO	**Kaye Shedlock'**	**4.27**	**304**	IAmb_Lg		04 46 27.5	
	comp=Z,8.2nm,0.7s						
Z38A	**Mt. Pleasant**	**4.28**	**143**	IAmb_Lg		04 46 28.1	
	comp=Z,13nm,0.8s						
ABTX	**Abilene, Hawle**	**4.30**	**198**	IAmb_Lg		04 46 23.9	
	comp=Z,8.0nm,0.9s						
P38A	**Dawn**	**4.59**	**50**	Pn	Pn	04 45 19.3	+3.3
P38A				IAmb_Lg		04 46 41.6	
	comp=Z,14nm,0.7s						
BGNE	**Belgrade**	**4.67**	**359**	IAmb_Lg		04 46 37.5	
	comp=Z,13nm,0.7s						
MSTX	**Muleshoe**	**4.74**	**236**	IAmb_Lg		04 46 43.4	
	comp=Z,12nm,1.2s						
X40A	**Basin Creek Fa**	**4.81**	**116**	IAmb_Lg		04 46 43.6	
	comp=Z,8.4nm,0.9s						
R40A	**Maddies Statio**	**4.86**	**70**	Pn	Pn	04 45 20.2	+0.6
R40A				IAmb_Lg		04 46 42.2	
	comp=Z,8.6nm,0.8s						
WHAR	**Wooly Hollow**	**4.89**	**105**	IAmb_Lg		04 46 45.9	
	comp=Z,13nm,1.1s						
W41B	**Gary Mavity, V**	**4.96**	**107**	IAmb_Lg		04 46 45.8	
	comp=Z,6.6nm,0.7s						
T25A	**Trinidad**	**5.11**	**276**	Pn	Pn	04 45 23.3	0.0
Z41A	**Richland Creek**	**5.53**	**127**	IAmb_Lg		04 47 10.7	
	comp=Z,6.4nm,0.8s						
N38A	**Joes South For**	**5.54**	**41**	IAmb_Lg		04 47 03.9	
	comp=Z,12nm,0.7s						
CCM	**Cathedral Cave**	**5.58**	**74**	Pn	Pn	04 45 30.2	+0.5
CCM				IAmb_Lg		04 47 07.6	
	comp=Z,7.3nm,0.9s						
PBMO	**Poplar Bluff**	**6.12**	**87**	IAmb_Lg		04 47 22.3	
	comp=Z,7.3nm,0.8s						
JCT	**Junction City**	**6.40**	**194**	IAmb_Lg		04 47 34.1	
	comp=Z,10nm,1.1s						
SIUC	**Southern Illin**	**7.12**	**79**	IAmb_Lg		04 47 56.2	
	comp=Z,9.1nm,0.8s						

*NOU **09** 05:18:31.8, 24°.36S×179°.67W, h524km, mb4.8/23, South of Fiji Islands*
*IDC **09** 05:18:31.8±1.2, 24°.26S×179°.94W, h497km±11km, mb3.9/23, mbtmp4.8/25, Error ellipse: s-maj=13.2km s-min=10.7km az=106.0*
*NEIC **09** 05:18:33.6±1.7, 24°.26S±0°.08×180°.0E±0°.1, h511km±6km, mb4.6/57, Error ellipse: s-maj=16.9km s-min=10.9km az=104.0*

ISC 09 05:18:32.5±0.3, 24°35S±0°.05×180°00W±0°.07, h505km, n265, σ1°42/294, mb4.6/61, 29C-5D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**5.21**	**160**	P	**P**	**05 20 03.3**	**+1.7**
RAO	**Raoul Island**	**5.22**	**160**	P	**P**	**05 20 04.0**	**+2.3**
GLKZ	**Green Lake**	**5.23**	**160**	P	**P**	**05 20 03.0**	**+1.3**
GLKZ				S	**S**	**05 21 13.6**	**-1.1**
LKBA	**Tubou, Lakemba**	**6.19**	**11**	P	**P**	**05 20 10.7**	**-0.3**
MSVF	**Nonsavu**	**6.83**	**344**	P	**P**	**05 20 16.8**	**-0.6**
	68nm,0.5s,baz=183,slow=6.1,SNR=108						
MSVF	**Nonsavu**	**6.83**	**344**		**P**	**05 20 17.1**	**-0.3**
MSVF	**Nonsavu**	**6.83**	**344**	P	**P**	**05 20 17.4**	**0.0**
TAVE	**Taveuni**	**7.60**	**1**	P	**P**	**05 20 25.7**	**+0.6**
MARNC	**Mare, Loyalty**	**11.39**	**282**	P	**P**	**05 21 05.9**	**+1.2**
MARNC	**Mare, Loyalty**	**11.39**	**282**	P	**P**	**05 21 06.2**	**+1.5**
PINNC	**Pines Island,**	**11.65**	**276**	P	**P**	**05 21 08.9**	**+1.5**
OUZ	**Omahuta**	**12.17**	**206**	P	**P**	**05 21 15.2**	**+2.5**
DZM	**Mont Dzumac**	**12.67**	**278**	P	**P**	**05 21 19.8**	**+1.5**
	28nm,0.7s,baz=89,slow=15,SNR=30						
DZM	**Mont Dzumac**	**12.67**	**278**	P	**P**	**05 21 21.2**	**+2.9**
DZM	**Mont Dzumac**	**12.67**	**278**	P	**P**	**05 21 20.7**	**+2.4**
DZM	**Mont Dzumac**	**12.67**	**278**	P	**P**	**05 21 20.7**	**+2.4**
NOUC	**Port Laguerre**	**12.79**	**277**	P	**P**	**05 21 22.0**	**+2.5**
NOUC	**Port Laguerre**	**12.79**	**277**	P	**P**	**05 21 21.9**	**+2.5**
KUZ	**Kuaotunu**	**12.89**	**196**	P	**P**	**05 21 21.5**	**+1.2**
AFI	**Afiamalu**	**12.96**	**38**	P	P	05 21 16.4	-5.1
	60nm,0.7s,baz=17,slow=11,SNR=4.6						
URZ	**Urewera**	**14.08**	**189**	P	**P**	**05 21 30.7**	**-2.1**
	39nm,0.5s,baz=328,slow=0.4,SNR=28						
URZ				S	**S**	**05 24 01.4**	**-0.1**
	14nm,0.5s,baz=208,slow=24,SNR=9.2						
URZ	**Urewera**	**14.08**	**189**	P	**P**	**05 21 30.8**	**-2.0**
WATZ	**Wairara**	**14.77**	**193**	P	**P**	**05 21 41.0**	**+0.9**
HIZ	**Hauiti**	**14.78**	**196**	P	P	05 21 45.0	+4.9
HIZ	**Hauiti**	**14.78**	**196**	P	**P**	**05 21 40.7**	**+0.5**
HIZ	**Hauiti**	**14.78**	**196**	P	**P**	**05 21 41.2**	**+1.0**
RATZ	**Rangitukua**	**14.91**	**193**	P	**P**	**05 21 42.7**	**+1.1**
RITZ	**Rihia Road**	**15.00**	**193**	P	**P**	**05 21 43.9**	**+1.4**
BKZ	**Black Stump Fm**	**15.07**	**191**	P	**P**	**05 21 43.0**	**-0.3**
BKZ	**Black Stump Fm**	**15.07**	**191**	P	**P**	**05 21 42.3**	**-0.9**
ARHZ	**Aropaoanui**	**15.09**	**189**	P	**P**	**05 21 44.2**	**+0.9**
ARHZ				S	**S**	**05 24 17.9**	**-2.8**
NTVZ	**North Tongarir**	**15.15**	**193**	P	**P**	**05 21 43.9**	**-0.3**
TMVZ	**Te Maari**	**15.16**	**193**	P	**P**	**05 21 44.3**	**0.0**
ETVZ	**East Tongariro**	**15.18**	**193**	P	**P**	**05 21 45.6**	**+1.1**
NNVZ	**North Ngauruho**	**15.20**	**193**	P	**P**	**05 21 42.0**	**-2.7**
OTVZ	**Oturere**	**15.22**	**193**	P	**P**	**05 21 44.2**	**-0.7**
MCHZ	**McNeill Hill**	**15.31**	**190**	P	**P**	**05 21 46.3**	**+0.6**
TUVZ	**Tukino**	**15.32**	**193**	P	**P**	**05 21 46.8**	**+0.8**
KWHZ	**Kaweka Forest**	**15.33**	**191**	P	**P**	**05 21 45.6**	**-0.4**
KWHZ				S	**S**	**05 24 24.6**	**-0.9**
VRZ	**Vera Road**	**15.38**	**196**	P	**P**	**05 21 50.1**	**+3.6**
WNVZ	**Wahianoa**	**15.39**	**193**	P	**P**	**05 21 45.8**	**-0.9**
MOVZ	**Moawhango**	**15.44**	**192**	P	**P**	**05 21 46.1**	**-1.0**
BHHZ	**Black Hill Sta**	**15.46**	**192**	P	**P**	**05 21 43.7**	**-3.6**
BHHZ				S	**S**	**05 24 25.3**	**-2.6**
CKHZ	**Cape Kidnapper**	**15.46**	**188**	P	**P**	**05 21 48.0**	**+0.7**
KRHZ	**Kereru**	**15.55**	**191**	P	**P**	**05 21 47.3**	**-1.0**
KRHZ				S	**S**	**05 24 26.3**	**-3.4**
KAHZ	**Kahuranaki**	**15.62**	**189**	P	**P**	**05 21 48.9**	**-0.1**
KAHZ				S	**S**	**05 24 27.1**	**-4.0**
NEZ	**North Egmont**	**15.69**	**197**	P	**P**	**05 21 53.5**	**+3.7**
PNHZ	**Pukenui**	**15.85**	**191**	P	**P**	**05 21 49.9**	**-1.4**
PNHZ				S	**S**	**05 24 31.5**	**-3.7**
PXZ	**Pawanui**	**15.86**	**189**	P	**P**	**05 21 51.7**	**+0.4**
NMEZ	**Namu Road**	**15.89**	**198**	P	**P**	**05 21 55.5**	**+3.9**
WAZ	**Wanganui**	**15.93**	**194**	P	**P**	**05 21 53.3**	**+1.1**
WPHZ	**Waipukurau**	**15.95**	**190**	P	**P**	**05 21 52.1**	**-0.2**
WPHZ				S	**S**	**05 24 37.1**	**0.0**
PRHZ	**Porangahau**	**16.12**	**189**	P	**P**	**05 21 53.9**	**-0.2**
PRHZ				S	**S**	**05 24 37.2**	**-3.0**
DVHZ	**Dannevirke**	**16.23**	**191**	P	**P**	**05 21 53.5**	**-1.7**
DVHZ				S	**S**	**05 24 40.2**	**-1.9**
ANWZ	**Angora Road**	**16.34**	**190**	P	**P**	**05 21 55.3**	**-1.0**
ANWZ				S	**S**	**05 24 38.6**	**-5.4**
POWZ	**Post Office Ro**	**16.39**	**192**	P	**P**	**05 21 55.9**	**-1.0**
PRWZ	**Pori Road**	**16.51**	**191**	P	**P**	**05 21 57.0**	**-1.1**
BFZ	**Birch Farm**	**16.59**	**190**	P	**P**	**05 21 57.1**	**-1.8**
BFZ				S	**S**	**05 24 44.6**	**-3.8**
BFZ	**Birch Farm**	**16.59**	**190**	P	**P**	**05 21 55.3**	**-3.7**
MRZ	**Mangatainoka R**	**16.68**	**192**	P	**P**	**05 21 55.9**	**-4.0**
TIWZ	**Tintock**	**16.74**	**191**	P	**P**	**05 21 59.2**	**-1.3**
CPWZ	**Castlepoint**	**16.82**	**190**	P	**P**	**05 22 02.0**	**+0.8**
OGWZ	**Otaki Gorge**	**16.91**	**193**	P	**P**	**05 21 59.1**	**-3.1**
HOWZ	**Holdsworth Sta**	**16.92**	**192**	P	**P**	**05 21 59.7**	**-2.6**
KIW	**Kapiti Island**	**17.01**	**193**	P	**P**	**05 21 59.9**	**-3.3**
TMWZ	**Te Maipa**	**17.06**	**191**	P	**P**	**05 22 01.6**	**-2.1**
DUWZ	**D'Urville Isla**	**17.18**	**196**	P	**P**	**05 22 02.9**	**-2.0**
MTW	**Mount Morrison**	**17.18**	**192**	P	**P**	**05 22 03.6**	**-1.3**
CAW	**Cannon Point**	**17.21**	**193**	P	**P**	**05 22 03.7**	**-1.5**
TRWZ	**Traveller**	**17.38**	**191**	P	**P**	**05 22 04.8**	**-2.0**
PAWZ	**Paruwai Farm**	**17.41**	**192**	P	**P**	**05 22 04.9**	**-2.1**
MSWZ	**Moikau Station**	**17.48**	**192**	P	**P**	**05 22 06.8**	**-0.8**
TCW	**Tory Channel**	**17.48**	**195**	P	**P**	**05 22 07.0**	**-0.6**
SNZO	**South Karori**	**17.48**	**193**	P	**P**	**05 22 05.7**	**-1.9**
BHW	**Baring Head**	**17.54**	**193**	P	**P**	**05 22 06.2**	**-2.0**
QRZ	**Quartz Range**	**17.58**	**199**	P	**P**	**05 22 08.3**	**-0.3**
QRZ	**Quartz Range**	**17.58**	**199**	P	**P**	**05 22 08.3**	**-0.3**
PLWZ	**Palliser**	**17.62**	**192**	P	**P**	**05 22 06.5**	**-2.5**
TUWZ	**Tuamarina**	**17.77**	**195**	P	**P**	**05 22 08.8**	**-1.4**
KHZ	**Kahutara**	**18.80**	**195**	P	**P**	**05 22 17.7**	**-2.0**
KHZ	**Kahutara**	**18.80**	**195**	P	**P**	**05 22 18.0**	**-1.7**
OXZ	**Oxford**	**20.03**	**197**	P	**P**	**05 22 29.6**	**-1.3**
RPZ	**Rata Peaks**	**20.67**	**199**	P	**P**	**05 22 36.2**	**-0.5**
	40nm,0.5s,baz=328,slow=2.5,SNR=25 40nm,0.5s						
RPZ	**Rata Peaks**	**20.67**	**199**	P	**P**	**05 22 36.2**	**-0.5**
ODZ	**Otahua Downs**	**22.00**	**198**	P	**P**	**05 22 47.7**	**-1.1**
ARMA	**Armidale**	**25.87**	**250**	P	**P**	**05 23 25.9**	**+2.4**
ARMA				IAmb	IAmb	04 24 18.8	
	comp=Z,26nm,1.5s						
EIDS	**Eidsvold**	**26.24**	**262**	P	**P**	**05 23 27.1**	**+0.3**
EIDS				IAmb	IAmb	05 23 28.6	
	comp=Z,12nm,0.7s						
EIDS	**Eidsvold**	**26.24**	**262**	P	**P**	**05 23 27.0**	**+0.3**
RMQ	**Roma**	**28.27**	**259**	P	**P**	**05 23 45.8**	**+1.2**
CMSA	**Cobar Meteorol**	**31.05**	**249**	P	**P**	**05 24 09.7**	**+1.0**
CTA	**Charters Tower**	**31.48**	**271**	P	**P**	**05 24 13.4**	**+0.9**
	comp=Z,79nm,0.5s,baz=94,slow=10,SNR=129 comp=Z,79nm,0.5s						
CTAO	**Charters Tower**	**31.48**	**271**	P	**P**	**05 24 13.8**	**+1.3**
CTAO	**Charters Tower**	**31.48**	**271**	P	**P**	**05 24 13.4**	**+0.9**
MTSU	**M

JSU	**Suzuyama**	**73.01**	**317**	P	**P**	**05 29 10.0**	**-0.7**
JSU				IAmb	IAmb	05 29 11.4	
	comp=Z,16nm,0.8s						
JHS	**Saijyo**	**73.88**	**321**	P	**P**	**05 29 15.6**	**0.0**
JHS				IAmb	IAmb	05 29 16.8	
	comp=Z,17nm,1.0s						
YULB	**Yu-li**	**74.13**	**305**	P	**P**	**05 29 16.0**	**-1.2**
YULB				IAmb	IAmb	05 29 36.1	
	comp=Z,18nm,1.4s						
SMAI	**San Martin Ant**	**75.69**	**159**	P	**P**	**05 29 26.9**	**+1.7**
SMAI				IAmb	IAmb	05 29 27.4	
	comp=Z,13nm,0.9s						
ADK	**Adak**	**75.96**	**2**	P	**P**	**05 29 26.4**	**-0.3**
BELA	**Belgrano 2**	**75.99**	**173**	P	**P**	**05 29 27.1**	**+0.3**
MAW	**Mawson**	**77.33**	**200**	P	**P**	**05 29 35.3**	**+1.0**
	comp=Z,2.7nm,0.5s,baz=142,slow=4.9,SNR=10						
	comp=Z,2.7nm,0.5s						
MAW	**Mawson**	**77.33**	**200**	P	**P**	**05 29 35.2**	**+1.0**
NIKH	**Nikolski High**	**77.60**	**7**	P	**P**	**05 29 35.3**	**-0.5**
KSRS	**Korea Array**	**78.59**	**320**	P	**P**	**05 29 42.0**	**+0.6**
	comp=Z,3.1nm,0.7s,baz=133,slow=5.9,SNR=17						
	comp=Z,3.1nm,0.7s						
KSAR	**Wonju Array Be**	**78.61**	**320**	P	**P**	**05 29 41.4**	**-0.1**
KS19	**Wonju Array Si**	**78.66**	**320**	P	**P**	**05 29 41.9**	**+0.1**
PEA0B	**Petropavlovsk-**	**79.53**	**347**	P	**P**	**05 29 46.3**	**+0.2**
PEA0B				IAmb	IAmb	05 32 00.9	
	comp=Z,60nm,1.8s						
PETK	**Petropavlovsk-**	**79.53**	**347**	P	**P**	**05 29 45.9**	**-0.3**
	comp=Z,7.3nm,0.8s,baz=131,slow=6.5,SNR=11						
	comp=Z,7.3nm,0.8s						
PETK	**Petropavlovsk-**	**79.53**	**347**	P	**P**	**05 29 46.3**	**+0.2**
NJ2	**Nanjing**	**80.95**	**311**	*e*P	**P**	**05 29 53.3**	**-0.7**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
USRK	**Ussuriysk Ar.**	**81.14**	**327**	P	**P**	**05 29 55.3**	**+0.6**
	comp=Z,3.4nm,0.5s,baz=151,slow=3.3,SNR=8.4						
	comp=Z,3.4nm,0.5s						
USRK	**Ussuriysk Ar.**	**81.14**	**327**	P	**P**	**05 29 55.9**	**+1.2**
IPM	**Ipoh**	**81.83**	**279**	P	**P**	**05 29 58.5**	**-0.5**
IPM				IAmb	IAmb	05 29 59.7	
	comp=Z,16nm,0.6s						
KULM	**Kulim**	**82.51**	**279**	P	**P**	**05 30 02.9**	**+0.4**
KULM				IAmb	IAmb	05 30 03.4	
	comp=Z,9.9nm,0.8s						
PSI	**Prapat**	**83.03**	**276**	P	**P**	**05 30 03.6**	**-1.6**
	comp=Z,7.2nm,0.9s,baz=193,slow=17,SNR=6.1						
	comp=Z,7.2nm,0.9s						
WHN	**Wuhan**	**83.28**	**308**	⇑P	**P**	**05 30 04.6**	**-1.3**
KSXB	**Camp Six Broad**	**83.83**	**39**	P	**P**	**05 30 09.8**	**+1.3**
KSXB				IAmb	IAmb	05 33 08.1	
	comp=Z,34nm,1.8s						
TROLL	**Troll, Antarti**	**83.88**	**181**	P	**P**	**05 30 08.6**	**+0.1**
SNAA	**Sanae**	**84.22**	**179**	P	**P**	**05 30 09.5**	**-0.5**
CN2	**Changchun**	**84.25**	**324**	*e*P	**P**	**05 30 09.1**	**-1.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VNA3	**Neumayer Olymp**	**84.43**	**177**	P	**P**	**05 30 10.7**	**-0.2**
YBH	**Yreka Blue Hor**	**84.43**	**39**	P	**P**	**05 30 12.0**	**+0.5**
	comp=Z,1.2nm,0.8s,baz=216,slow=8.5,SNR=5.1						
	comp=Z,1.2nm,0.8s						
VNA2	**Neumayer--Watz**	**84.84**	**178**	P	**P**	**05 30 12.8**	**-0.2**
	baz=197,slow=4.0						
KDAK	**Kodiak Island**	**84.98**	**14**	P	**P**	**05 30 13.0**	**-0.6**
	comp=Z,4.1nm,0.7s,baz=68,slow=5.4,SNR=2.7						
	comp=Z,4.1nm,0.7s						
KDAK	**Kodiak Island**	**84.98**	**14**	P	**P**	**05 30 13.4**	**-0.2**
NVAR	**Mina Array Bea**	**85.07**	**44**	P	**P**	**05 30 14.2**	**-0.7**
	comp=Z,0.8nm,0.8s,baz=221,slow=8.8,SNR=5.5						
	comp=Z,0.8nm,0.8s						
KVN	**Kaiserville**	**85.57**	**44**	P	**P**	**05 30 17.2**	**0.0**
Q19K	**Cape Douglas,**	**85.80**	**13**	P	**P**	**05 30 17.3**	**-0.3**
Q19K				IAmb	IAmb	05 30 17.7	
	comp=Z,15nm,0.8s						
CNPM	**China Poot**	**86.86**	**14**	P	**P**	**05 30 22.6**	**0.0**
CNPM				IAmb	IAmb	05 32 49.4	
	comp=Z,22nm,1.4s						
I07A	**Izee**	**87.74**	**39**	P	**P**	**05 30 28.1**	**+0.8**
L19K	**White Mountain**	**88.55**	**12**	P	**P**	**05 30 31.0**	**+0.4**
L19K				IAmb	IAmb	05 30 31.3	
	comp=Z,6.5nm,0.8s						
SUA	**Susitna One**	**88.71**	**14**	P	**P**	**05 30 31.1**	**-0.2**
SUA				IAmb	IAmb	05 30 31.7	
	comp=Z,7.8nm,0.7s						
G08A	**Pilot Rock**	**88.78**	**38**	P	**P**	**05 30 32.2**	**+0.1**
G08A				IAmb	IAmb	05 30 33.5	
	comp=Z,7.2nm,1.2s						
XAN	**Xi'an**	**89.02**	**308**	P	**P**	**05 30 34.6**	**+1.2**
XAN				pP	pwP	05 32 27.5	-2.0
XAN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LTY	**Liberty**	**89.04**	**36**	IAmb	IAmb	05 30 38.4	
	comp=Z,5.2nm,0.5s						
KMI	**Kunming**	**89.47**	**298**	⇓P	**P**	**05 30 37.2**	**+1.3**
KMI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MFID	**Camas Ranch**	**89.50**	**41**	P	**P**	**05 30 35.6**	**+0.1**
CMAR	**Chiang Mai Arr**	**89.68**	**290**	P	**P**	**05 30 38.3**	**+1.5**
	comp=Z,1.4nm,0.3s,baz=137,slow=3.1,SNR=15						
	comp=Z,1.4nm,0.3s						
TX31	**Lajitas Ar. Si**	**90.67**	**58**	IAmb	IAmb	05 33 33.2	
	comp=Z,28nm,1.9s						
TX32	**Lajitas Array**	**90.67**	**58**	IAmb	IAmb	05 33 33.2	
	comp=Z,9.5nm,1.9s						
TXAR	**Lajitas Array**	**90.67**	**58**	P	**P**	**05 30 41.4**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=213,slow=6.8,SNR=20						
	comp=Z,1.3nm,0.7s						
TXAR	**Lajitas Array**	**90.67**	**58**	P	**P**	**05 30 41.9**	**+0.7**
HHC	**Hu-ho-hao-te**	**90.74**	**315**	*e*P	**P**	**05 30 42.7**	**+1.4**
HHC				pmax	pmax		
	comp=Z,23nm,0.9s						
HHC				pmax	pmax		
	comp=Z,430nm,7.8s						
PZH	**PanZhiHua**	**90.90**	**299**	P	**P**	**05 30 43.1**	**+0.7**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ILAR	**Eielson Array**	**92.47**	**14**	P	**P**	**05 30 46.9**	**-1.6**
	comp=Z,0.5nm,0.6s,baz=229,slow=5.2,SNR=3.4						
	comp=Z,0.5nm,0.6s						
PDAR	**Pinedale Array**	**93.01**	**44**	P	**P**	**05 30 50.8**	**-1.1**
	comp=Z,0.5nm,0.6s,baz=202,slow=4.5,SNR=4.2						
	comp=Z,0.5nm,0.6s						
LZH	**Lanzhou**	**93.65**	**308**	*e*P	**P**	**05 30 55.9**	**+1.0**
LZH				pP	pwP	05 32 52.3	+0.9
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
GTA	**Gaotai**	**97.98**	**310**	*e*P	**P**	**05 31 15.5**	**+1.2**
GTA				pP	Pdif	05 31 19.2	+4.9
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
GOMU	**GeErMu**	**100.32**	**305**	Pdif	**Pdif**	**05 31 27.0**	**+1.9**
GOMU				AMB	AMB		
	comp=Z,180nm,9.4s						
MKAR	**Makanchi Array**	**112.46**	**313**	PKiKP	**PKiKP**	**05 36 09.3**	**-1.4**
	comp=Z,0.5nm,0.4s,baz=75,slow=1.6,SNR=9.5						
MKAR	**Makanchi Array**	**112.46**	**313**		**PKiKP**	**05 36 09.8**	**-1.0**
KKAR	**Karatay Array**	**120.13**	**307**		**PKPdf**	**05 36 25.2**	**-0.5**
ARCES	**ARCESS Array B**	**132.32**	**348**	PKP	**PKPdf**	**05 36 47.1**	**-1.1**
	comp=Z,2.9nm,0.7s,baz=5.4,slow=1.9,SNR=11						
FINES	**FINESS Array B**	**138.87**	**341**	PKhKP	PKPpre	05 36 50.9	
	comp=Z,1.6nm,0.6s,baz=29,slow=3.2,SNR=9.4						
FINES				PKP	**PKPdf**	**05 37 01.1**	**+0.7**
	comp=Z,1.3nm,0.5s,baz=56,slow=2.5,SNR=1.5						
FINES				SKPbc	**SKPbc**	**05 39 47.7**	**+0.1**
	comp=Z,3.2nm,0.7s,baz=42,slow=3.1,SNR=7.9						
NB2	**NORSAR Subarra**	**142.52**	**351**	PKP	**PKPdf**	**05 37 02.4**	**-4.7**
	comp=Z,1.1nm,0.7s,baz=8.2,slow=3.0						
NOA	**NORSAR Array B**	**142.52**	**351**	PKhKP	PKPpre	05 37 01.8	
	comp=Z,2.1nm,0.8s,baz=9.0,slow=2.3,SNR=6.8						
MARD	**Mardin**	**142.95**	**300**		**PKPdf**	**05 37 06.4**	**-2.3**
KONO	**Kongsberg**	**144.09**	**352**		PKPbc	05 37 08.2	-1.0
PABE	**Paberze**	**144.23**	**337**		PKPbc	05 37 09.6	-0.1
AKASG	**Malin Array Be**	**145.35**	**327**	PKPbc	**PKPdf**	**05 37 12.0**	**-0.2**
	comp=Z,2.8nm,0.4s,baz=38,slow=4.2,SNR=37						
AKASG				SKPbc	**SKiKP**	**05 40 04.3**	**-0.1**
	comp=Z,0.8nm,0.4s,baz=31,slow=3.0,SNR=8.6						
AKBB	**Malin Array Si**	**145.35**	**327**	PKPdf	**PKPdf**	**05 37 12.3**	**+0.1**
SUW	**Suwalki**	**145.67**	**336**	*e*PKP	**PKPbc**	**05 37 13.7**	**-0.4**
SORM	**Soroca**	**147.36**	**324**	⇑P	**PKPbc**	**05 37 18.2**	**-0.7**
PURM	**Purcari**	**147.42**	**320**	⇑P	**PKPbc**	**05 37 19.1**	**0.0**
MILM	**Milestii Mici**	**147.82**	**322**	⇓P	**PKPbc**	**05 37 19.6**	**-0.5**
BR131	**Keskin Array S**	**147.85**	**307**	PKPdf	**PKPdf**	**05 37 15.8**	**-1.2**
BR131					**PKPbc**	**05 37 20.4**	**-0.3**
BR131				PKPab	**PKPab**	**05 37 24.8**	**-0.2**
BRTR	**Keskin Array B**	**147.85**	**307**	PKPbc	**PKPbc**	**05 37 20.1**	**-0.6**
	comp=Z,4.1nm,0.6s,baz=148,slow=4.2,SNR=10						
BRTR	**Keskin Array B**	**147.85**	**307**	PKPdf	**PKPdf**	**05 37 16.2**	**-0.8**
BRTR					**PKPbc**	**05 37 20.6**	**-0.1**
BRTR					**PKPab**	**05 37 24.8**	**-0.2**
BEL	**Belsk**	**148.28**	**335**	*e*PKP	**PKiKP**	**05 37 21.7**	**-0.7**
TLCR		**148.76**	**319**	⇑P	**PKPbc**	**05 37 22.6**	**+0.1**
GHRR		**149.10**	**321**	⇑P	**PKPbc**	**05 37 23.3**	**0.0**
CFR	**Carcaliu**	**149.17**	**319**	⇑P	**PKPbc**	**05 37 22.9**	**-0.7**
TPGR	**Topolog**	**149.18**	**319**	⇑P	**PKPbc**	**05 37 23.4**	**-0.3**
TESR	**Tescani**	**149.26**	**323**	⇑P	**PKPbc**	**05 37 23.0**	**-0.8**
BIZ	**Bicaz**	**149.30**	**324**	⇑P	**PKiKP**	**05 37 24.2**	**-0.5**
BURAR	**Bucovina Array**	**149.34**	**326**	⇑P	**PKPbc**	**05 37 21.5**	**-2.6**
TIRR	**Tirgusor**	**149.39**	**318**	⇑P	**PKPbc**	**05 37 24.3**	**+0.2**
HARR	**Harsova**	**149.56**	**319**	⇑P	**PKiKP**	**05 37 25.0**	**-0.3**
VRI	**Vrincioaia**	**149.60**	**322**	⇑P	**PKPbc**	**05 37 24.1**	**-0.5**
PLOR	**Plostina**	**149.66**	**322**	⇓P	**PKPbc**	**05 37 24.9**	**+0.1**
KOLS	**Kolonicke sedl**	**149.86**	**330**	*e*PKP	**PKiKP**	**05 37 25.9**	**+0.1**
NEHR	**Nehoiu**	**150.10**	**321**	⇑P	**PKPbc**	**05 37 25.4**	**-0.5**
CRVS	**Cervenica-Dubn**	**150.25**	**331**	*e*PKP	**PKiKP**	**05 37 26.3**	**-0.3**
MLR	**Muntele Rosu**	**150.27**	**322**	⇑P	**PKPbc**	**05 37 25.8**	**-0.6**
MLR	**Muntele Rosu**	**150.27**	**322**	PKPdf	**PKPdf**	**05 37 20.3**	**-0.3**
MLR					**PKPbc**	**05 37 25.1**	**-1.3**
DOPR	**Dopca**	**150.29**	**323**	⇓P	**PKiKP**	**05 37 26.7**	**-0.1**
NIE	**Niedzica**	**150.36**	**333**	*e*PKP	**PKiKP**	**05 37 26.9**	**+0.1**
KSP	**Ksiaz**	**150.71**	**339**	*e*PKP	**PKiKP**	**05 37 27.3**	**-0.2**
VOIR		**150.80**	**322**	⇑P	**PKPbc**	**05 37 27.2**	**-0.3**
LANS	**Liptovska Anna**	**150.91**	**333**	*e*PKP	**PKiKP**	**05 37 29.1**	**+1.1**
OSTC	**Ostas**	**150.97**	**338**	⇑*e*PKP	**PKiKP**	**05 37 27.8**	**-0.3**
CHVC	**Chvalec**	**151.00**	**339**	⇑*e*PKP	**PKPbc**	**05 37 27.7**	**-0.1**
DPC	**Dobruska-Polom**	**151.11**	**338**	⇑*e*PKP	**PKPbc**	**05 37 28.0**	**-0.1**
DPC				*e*PKPAB	**PKPab**	**05 37 38.2**	**+0.1**
MORC	**Moravsky Berou**	**151.16**	**336**	⇑P	**PKPbc**	**05 37 25.2**	**-3.0**
MORC	**Moravsky Berou**	**151.16**	**336**	PKPdf	**PKPdf**	**05 37 21.5**	**-0.2**
MORC					**PKPbc**	**05 37 27.8**	**-0.3**
MORC				PKPab	**PKPab**	**05 37 38.5**	**+0.2**
MORC	**Moravsky Berou**	**151.16**	**336**	*e*PKP	**PKPbc**	**05 37 28.0**	**-0.2**
DRGR		**151.16**	**327**	⇑P	**PKPbc**	**05 37 26.8**	**-1.5**
KRLC	**Kraliky**	**151.19**	**337**	⇑*e*PKP	**PKPbc**	**05 37 28.1**	**-0.1**
KRLC				*e*PKPAB	**PKPab**	**05 37 38.2**	**-0.2**
CLL	**Collm**	**151.28**	**343**		**PKiKP**	**05 37 28.3**	**-0.3**
CLL				PKPab	**PKPab**	**05 37 38.3**	**-0.4**
CLL	**Collm**	**151.28**	**343**	⇓*i*PKPbc	**PKPbc**	**05 37 28.1**	**-0.2**
	comp=Z,17nm,0.8s						
CLL				*e*PKPab	**PKPab**	**05 37 38.0**	**-0.6**
CLL				*e*pPKPab	**pPKPab**	**05 39 37.0**	**+5.2**
MAUC	**Maruska**	**151.39**	**335**	⇑*e*PKP	**PKiKP**	**05 37 28.9**	**-0.1**
BRG	**Berggiesshubel**	**151.41**	**341**	*i* PKP	**PKiKP**	**05 37 28.6**	**-0.3**
BRG				Amp		05 37 29.1	
	comp=Z,11nm,0.5s						
JAVC	**Velka Javorina**	**151.86**	**335**	*e*PKP	**PKiKP**	**05 37 30.8**	**+0.8**
SIRR	**Siria**	**152.05**	**327**	⇑P	**PKPbc**	**05 37 29.3**	**-0.9**
GZR	**Gura Zlata**	**152.07**	**324**	⇑P	**PKPbc**	**05 37 29.7**	**-0.6**
KRUC	**Moravsky**	**152.17**	**337**	*e*PKP	**PKPbc**	**05 37 30.1**	**-0.3**
NKC	**Novy Kostel**	**152.41**	**343**	*e*PKP	**PKiKP**	**05 37 32.2**	**+1.1**
NKC				*e*PKPAB	**PKPab**	**05 37 43.3**	**-0.2**
HERR	**Herculane**	**152.60**	**324**	⇑P	**PKPbc**	**05 37 31.1**	**-0.3**
KHC	**Kasperske Hory**	**153.06**	**340**	⇑*e*PKP	**PKPbc**	**05 37 32.0**	**-0.4**
KHC				*e*PKPAB	**PKPab**	**05 37 46.3**	**0.0**
BLKB	**Belogradchik**	**153.26**	**322**	⇑P	**PKPbc**	**05 37 32.2**	**-0.8**
GERES	**GERESS Array B**	**153.28**	**340**	PKPbc	**PKPbc**	**05 37 31.8**	**-1.2**
	comp=Z,0.7nm,0.5s,baz=41,slow=3.1,SNR=5.7						
GERES				PKPab	**PKPab**	**05 37 47.0**	**-0.4**
	comp=Z,0.8nm,0.8s,baz=56,slow=3.7,SNR=4.1						
VTS	**Vitosha**	**153.54**	**319**	⇑P	**PKiKP**	**05 37 33.6**	**-0.2**
ESDC	**Sonseca Array**	**164.36**	**11**	PKPab	**PKPab**	**05 38 33.9**	**-1.8**
	comp=Z,1.1nm,0.8s,baz=336,slow=4.5,SNR=7.8						
ESDC	**Sonseca Array**	**164.36**	**11**		**PKPab**	**05 38 35.2**	**-0.5**
TORD	**Torodi Ar. Bea**	**168.74**	**188**	PKPab	**PKPab**	**05 38 55.1**	**-0.4**
	comp=Z,0.9nm,0.6s,baz=182,slow=3.4,SNR=6.4						
TORD	**Torodi Ar. Bea**	**168.74**	**188**		**PKPab**	**05 38 56.1**	**+0.6**

*SNET **09** 05:38:26.1±0.9, 12.°84N×88.°72W, h35km±14km, ML2.4*
*INET **09** 05:38:29.4±1.8, 13.°96N×88.°50W, h59km±39km, MW2.5*

ISC 09 05:38:25.4±3.0, 13.°1N±0.°3×88.°6W±0.°1, h89km±26km, n12, σ0°71/21, 1C-1D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COEB	**Comit de Eme**	**0.45**	**10**	⇓*e*P	**Pn**	**05 38 39.7**	**-0.2**
COEB				*e*S	**Sn**	**05 38 50.2**	**-0.3**
COEB	**Comit de Eme**	**0.45**	**10**	*e*P	**Pn**	**05 38 39.8**	**-0.1**
COEB				*e*S	**Sn**	**05 38 50.3**	**-0.3**
PQSS	**Presa 15 de Se**	**0.57**	**5**	*e*P	**Pn**	**05 38 41.3**	**+0.6**
PQSS				*e*S	**Sn**	**05 38 53.2**	**+1.2**
PQSS				IAML		05 38 55.0	
	comp=Z,121nm,0.1s						
COEG	**Centro de Oper**	**0.63**	**335**	*e*P	**Pn**	**05 38 41.0**	**-0.3**
COEG				*e*S	**Sn**	**05 38 52.6**	**-0.5**
COEG				IAML		05 38 54.9	
	comp=Z,105nm,0.2s						
COEG	**Centro de Oper**	**0.63**	**335**	*e*P	**Pn**	**05 38 41.0**	**-0.3**
SCLA	**Alcaldia de Sa**	**0.66**	**350**	*e*P	**Pn**	**05 38 42.3**	**+0.8**
SCLA				*e*S	**Sn**	**05 38 54.7**	**+1.2**
SJTE	**Alcalda de S**	**0.68**	**325**	*e*P	**Pn**	**05 38 41.3**	**-0.5**
SJTE				*e*S	**Sn**	**05 38 53.0**	**-1.1**
PAVA	**Las Pavas**	**0.73**	**334**	*e*P	**Pn**	**05 38 42.5**	**+0.2**
PAVA				*e*S	**Sn**	**05 38 55.1**	**+0.1**
PAVA				IAML		05 38 56.7	
	comp=Z,106nm,0.1s						
PAVA	**Las Pavas**	**0.73**	**334**	*e*P	**Pn**	**05 38 42.5**	**+0.2**
LCND	**La Caada**	**0.75**	**70**	⇑*e*P	**Pn**	**05 38 42.7**	**+0.4**
LCND				*e*S	**Sn**	**05 38 55.3**	**+0.4**
LCND				IAML		05 38 58.0	
	comp=Z,131nm,0.4s						
FAGO	**Alcalda de S**	**0.81**	**37**	*e*P	**Pn**	**05 38 41.4**	**-1.6**
NUBE	**Las Nubes**	**1.42**	**307**	*e*P	**Pn**	**05 38 50.6**	**+0.3**
NUBE				*e*S	**Sn**	**05 39 08.9**	**-0.2**

*BJI **09** 05:54:25.0±0.0, 32.°67N×142.°29E, h5km, mb4.6/63, mB4.8/36, Ms4.4/44, Ms7 4.2/43*
*IDC **09** 05:54:29.6±0.4, 32.°69N×141.°85E, h0km, mb4.5/26, mbtmp4.5/31, ML3.3/3, MS4.0/6, Error ellipse: s-maj=13.1km s-min=11.0km az=78.0*
*MOS **09** 05:54:29.2±0.9, 32.°68N×141.°84E, h10km, mb5.0/43, MS4.0/5, Error ellipse: s-maj=9.3km s-min=4.7km az=122.9*
*NEIC **09** 05:54:31.3±1.9, 32.°72N±0.°06×141.°93E±0.°08, h10km±1km, mb4.9/180, Error ellipse: s-maj=11.7km s-min=10.1km az=83.0*
*JMA **09** 05:54:32.5±0.5, 33.°N±1.°×14.°2E±.°, h27km, MD4.7/38, MV4.5/38, E OFF HACHIJOJIMA ISLAND*
*NIED **09** 05:54:32.5, 32.°81N×141.°85E, h27km, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^15 Nm; Mrr6.30; Mθθ0.66; Mϕϕ -6.95; Mrθ3.85; Mθϕ -1.30; Mrϕ-5.94; Fault plane solution: M0 9.76000×10^15 NP1:ϕs31.00000°, δ30.00000°, λ135.00000°. NP2:ϕs162.00000°, δ69.00000°, λ68.00000°.*

ISC 09 05:54:29.4±1.1, 32.°70N±0.°04×141.°89E±0.°04, h2km±6km, n497, σ1°§22/428, mb4.8/150, MS4.2/17, 17C-8D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**1.79**	**284**		**Pb**	**05 55 02.2**	**-0.7**
JHJ2	**Mitsune**	**1.79**	**284**	P	**Pb**	**05 55 02.2**	**-0.7**
JHJ2	**Mitsune**	**1.79**	**284**	A	A	05 55 02.2	
	comp=E,17nm,6.6s,comp=E,14nm,4.8s						
JHCJ	**Hachijojimakas**	**1.80**	**282**	P	**Pn**	**05 55 01.8**	**+0.3**
JHCJ	**Hachijojimakas**	**1.80**	**282**	A	A	05 55 01.8	
	comp=E,16nm,4.3s,comp=E,14nm,7.4s						
JAOM	**Aogashimamukai**	**1.81**	**263**	P	**Pb**	**05 55 02.6**	**-0.7**
JAOM	**Aogashimamukai**	**1.81**	**263**	A	A	05 55 02.6	
	comp=E,31nm,6.9s,comp=E,28nm,6.1s						
JHJ	**Hachijo jima 2**	**1.82**	**284**	Pn	**Pn**	**05 55 02.0**	**+0.2**
	147nm,0.3s,baz=111,slow=12,SNR=83						
JHJ				Sn	**Sb**	**05 55 25.4**	**-1.3**
	171nm,0.3s,baz=67,slow=22,SNR=10						
BSO1	**Boso 1**	**2.09**	**339**	⇓P	**Pn**	**05 55 05.7**	**+0.8**
JMKN	**Mikurajimanish**	**2.26**	**302**	P	**Pn**	**05 55 08.5**	**+0.6**
JMKN	**Mikurajimanish**	**2.26**	**302**	A	A	05 55 08.5	
	comp=E,14nm,5.4s,comp=E,10.0nm,6.7s						
BSO3	**Boso 3**	**2.39**	**332**	*e*P	**Pn**	**05 55 09.9**	**+0.6**
JKO	**Kozu shima**	**2.74**	**303**	A	A	05 55 15.0	
	comp=E,13nm,3.5s,comp=E,10.0nm,3.4s						
JNIO	**Niijimaoohara**	**2.74**	**308**	A	A	05 55 14.9	
	comp=E,12nm,7.9s,comp=E,9.0nm,3.7s						
JSKK	**Shikinejimakit**	**2.77**	**307**	A	A	05 55 15.4	
	comp=E,8.0nm,1.9s,comp=E,8.0nm,7.5s						
JKUC	**kamogawauchiur**	**2.83**	**331**	A	A	05 55 15.9	
	comp=E,6.0nm,6.6s,comp=E,6.0nm,5.9s						
JTHY	**Toshimahigashi**	**2.83**	**311**	A	A	05 55 16.2	
	comp=E,7.0nm,5.6s,comp=E,8.0nm,6.0s						
TATJ	**Tateyama 2**	**2.86**	**325**	P	**Pn**	**05 55 16.6**	**+0.6**
TATJ				S	**Sn**	**05 55 50.8**	**-0.3**
TATJ	**Tateyama 2**	**2.86**	**325**	A	A	05 55 16.6	
	comp=E,10.0nm,8.5s,comp=E,7.0nm,6.0s						
JIM2	**Oshima 3**	**2.87**	**315**	P	**Pn**	**05 55 16.3**	**+0.1**
JIM2	**Oshima 3**	**2.87**	**315**	A	A	05 55 16.3	
	comp=E,6.0nm,4.8s,comp=E,6.0nm,3.6s						
JCN	**Nagara**	**3.05**	**333**	A	A	05 55 19.2	
	comp=E,14nm,8.4s,comp=E,11nm,7.3s						
CHOJ	**Chosi**	**3.11**	**344**	A	A	05 55 20.0	
	comp=E,3.0nm,7.8s,comp=E,4.0nm,5.9s						
JYO	**Yokosk**	**3.12**	**324**	S	**Sn**	**05 55 56.7**	**-0.8**
JYO	**Yokosk**	**3.12**	**324**	A	A	05 55 56.7	
	comp=E,7.0nm,5.5s,comp=E,8.0nm,10.8s						
JSMT	**Sammumatsuo**	**3.17**	**338**	A	A	05 55 20.7	
	comp=E,16nm,6.7s,comp=E,17nm,7.6s						
JIZS	**Izushimoda**	**3.22**	**309**	P	**Pn**	**05 55 21.7**	**+0.7**
JIZS				S	**Sn**	**05 55 57.2**	**-2.6**
JIZS	**Izushimoda**	**3.22**	**309**	A	A	05 55 21.7	
	comp=E,3.0nm,4.5s,comp=E,3.0nm,9.3s						
JIHU	**Itakohorinouch**	**3.44**	**341**	A	A	05 55 24.7	
	comp=E,13nm,3.3s,comp=E,12nm,4.9s						
JOD2	**Odawara 2**	**3.46**	**318**	P	**Pn**	**05 55 24.4**	**+0.1**
JOD2	**Odawara 2**	**3.46**	**318**	A	A	05 55 24.4	
	comp=E,2.0nm,4.2s,comp=E,2.0nm,11.5s						
TOK	**Tokyo**	**3.46**	**330**	A	A	05 55 25.0	
	comp=E,10.0nm,4.3s,comp=E,13nm,9.5s						
JFNN	**Fujinakano**	**3.64**	**314**	*e*P	**Pn**	**05 55 28.7**	**+1.9**
JFNN	**Fujinakano**	**3.64**	**314**	A	A	05 55 28.7	
	comp=E,5.0nm,14.0s,comp=E,5.0nm,8.0s						
JSG	**Sagara**	**3.66**	**303**	A	A	05 55 28.2	
	comp=E,5.0nm,5.3s,comp=E,5.0nm,50.9s						
TK02	**Tokai 2**	**3.68**	**291**	P	**Pn**	**05 55 28.5**	**+1.5**
JYT	**Yasato**	**3.79**	**339**		**Pn**	**05 55 30.6**	**+1.8**
JYT				Sn	**Sn**	**05 56 12.8**	**-1.1**
JYN	**Shimob**	**3.93**	**316**	P	**Pn**	**05 55 32.4**	**+1.5**
JRY	**Ryogami san**	**4.13**	**324**	P	**Pn**	**05 55 34.1**	**+0.6**
JAG	**Ashikaga**	**4.22**	**332**	P	**Pn**	**05 55 35.7**	**+0.9**
JAG				*e*S	**Sn**	**05 56 23.1**	**-1.6**
JNY	**Yasuok**	**4.27**	**309**	A	A	05 55 36.6	
	comp=E,1.0nm,9.7s,comp=E,2.0nm,12.2s						
JSB	**Shiboa**	**4.55**	**340**	A	A	05 55 40.4	
	comp=E,3.0nm,6.3s,comp=E,4.0nm,4.7s						
JGF	**Kuroka**	**4.74**	**309**		**Pn**	**05 55 44.7**	**+2.7**
INU	**Inuyama**	**4.83**	**304**		**Pn**	**05 55 45.8**	**+2.7**
MJAR	**Matsushiro Arr**	**4.89**	**323

GRNR MLR MLR
comp=E,220nm,17.0s
GRNR MLR MLR
comp=N,220nm,15.0s
GRNR MLR MLR
comp=Z,320nm,16.0s
GUMO Guam 19.22 171 P **Pn** **05 58 55.3 -0.4**
comp=Z,59nm,1.0s,baz=166,slow=19,SNR=1.6
GUMO Guam 19.22 171 P **P** **05 58 54.9 0.0**
NJ2 Nanjing 19.46 274 *e*P **Pn** **05 58 58.7 +0.1**
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
NJ2 LR LR
comp=Z,490nm,14.2s
NJ2 LR LR
comp=Z,370nm,16.1s
NJ2 LR LR
comp=Z,680nm,21.1s
YHNB Yeheng 19.68 251 P **P** **05 58 59.5 -0.4**
YULB Yu-li 20.38 248 P **P** **05 59 07.0 -0.5**
SSLB Suanglung 20.44 250 P **P** **05 59 07.7 -0.5**
BJI Beijing 21.91 297 P **P** **05 59 21.1 -2.8**
BJI pmax pmax
comp=Z,6.0nm,1.0s
BJI LR LR
comp=Z,270nm,15.5s
BJI LR LR
comp=Z,310nm,18.0s
BJI LR LR
comp=Z,550nm,13.6s
HNS HongShan 22.71 290 ⇓P **P** **05 59 31.3 -1.1**
HNS S **S** **06 03 42.2 +0.5**
HNS pmax pmax
comp=Z,11nm,0.8s
HNS LR LR
comp=Z,420nm,13.9s
HNS LR LR
comp=Z,650nm,15.9s
HNS LR LR
comp=Z,820nm,15.9s
XLT XiLinHaoTe 23.04 306 ⇓*i*P **P** **05 59 34.4 -1.6**
XLT pP pP 05 59 37.5 +3.0
XLT sP pwP 05 59 43.4 -0.2
XLT S **S** **06 03 43.3 -4.4**
XLT sS sS 06 03 50.7 +5.6
XLT pmax pmax
comp=Z,51nm,1.1s
XLT pmax pmax
comp=Z,230nm,3.6s
XLT LR LR
comp=Z,50nm,15.2s
XLT LR LR
comp=Z,410nm,15.9s
XLT LR LR
comp=Z,550nm,14.1s
PETK Petropavlovsk- 23.35 24 P **P** **05 59 40.5 +1.5**
comp=Z,3.3nm,0.9s,baz=212,slow=10,SNR=4.9
comp=Z,3.3nm,0.9s
PETK Petropavlovsk- 23.35 24 P **P** **05 59 38.3 -0.7**
PETK Petropavlovsk- 23.35 24 P **P** **05 59 38.3 -0.7**
HIA Hailar 23.39 322 P **P** **05 59 38.6 -0.9**
HIA IAmb IAmb 05 59 51.3
comp=Z,16nm,0.6s
HIA Hailar 23.39 322 P **P** **05 59 38.6 -0.9**
HIA pmax pmax
comp=Z,17nm,0.6s
ZEA Zeya 23.49 338 *e*P **P** **05 59 41.5 +1.2**
ZEA pmax pmax
comp=N,80nm,0.6s
ZEA pmax pmax
comp=E,50nm,0.6s
ZEA pmax pmax
comp=Z,160nm,0.7s
WHN Wuhan 23.53 272 ⇑P **P** **05 59 40.8 -0.1**
HHC Hu-ho-hao-te 25.52 297 *e*P **P** **05 59 59.4 0.0**
HHC S **S** **06 04 29.4 +1.6**
HHC pmax pmax
comp=Z,29nm,1.0s
HHC pmax pmax
comp=Z,410nm,5.2s
HHC LR LR
comp=Z,900nm,13.2s
HHC LR LR
comp=Z,1μm,14.2s
HHC LR LR
comp=Z,1μm,14.8s
H11N2 WAKE ISLAND Hy 25.81 114 T T 06 27 01.5
baz=306,slow=74,SNR=19
H11N1 WAKE ISLAND Hy 25.82 114 T T 06 26 56.7
baz=306,slow=74,SNR=12
H11N3 WAKE ISLAND Hy 25.83 114 T T 06 27 01.6
baz=306,slow=74,SNR=15
H11S3 WAKE ISLAND Hy 26.38 116 T T 06 27 55.6
baz=304,slow=74,SNR=5.2
H11S1 WAKE ISLAND Hy 26.38 116 T T 06 27 50.9
baz=304,slow=74,SNR=5.1
H11S2 WAKE ISLAND Hy 26.39 116 T T 06 27 57.3
baz=304,slow=74,SNR=5.8
BTO Baotou 26.65 296 *e*P **P** **06 00 10.4 +0.7**
BTO S **S** **06 04 48.8 +3.2**
BTO LR LR
comp=Z,2μm,13.9s
BTO LR LR
comp=Z,2μm,14.1s
XAN Xi'an 27.50 282 P **P** **06 00 15.7 -1.7**
XAN pP pP 06 00 19.7 +4.0
XAN pmax pmax
comp=Z,17nm,1.3s
XAN LR LR
comp=Z,540nm,16.5s
XAN LR LR
comp=Z,280nm,18.6s
XAN LR LR
comp=Z,690nm,13.5s
MA2 Magadan 27.52 10 P **P** **06 00 18.0 +0.8**
comp=Z,4.4nm,0.5s,baz=187,slow=11,SNR=3.7
comp=Z,4.4nm,0.5s
MA2 Magadan 27.52 10 P **P** **06 00 16.6 -0.6**
MA2 IAmb IAmb 06 00 30.6
comp=Z,14nm,0.9s
MA2 Magadan 27.52 10 *i*P **P** **06 00 18.0 +0.8**
MA2 pmax pmax
comp=Z,9.0nm,0.9s
ENH Enshi 27.68 274 P **P** **06 00 17.7 -1.3**
ENH IAmb IAmb 06 00 50.8
comp=Z,18nm,1.1s
ULN Ulaanbaatar 30.29 310 P **P** **06 00 43.2 +1.1**
ULN IAmb IAmb 06 00 46.2
comp=Z,19nm,0.8s
ULN Ulaanbaatar 30.29 310 *ce*P **P** **06 00 43.1 +1.1**
ULN pmax pmax
comp=Z,22nm,0.8s
YAK Yakutsk 30.38 349 P **P** **06 00 42.0 -0.5**
YAK Yakutsk 30.38 349 *e*P **P** **06 00 42.4 -0.1**
YAK *e**PP **pwP** **06 00 49.4 -0.6**
YAK *e* 06 03 40.6
YAK *e*S **S** **06 05 43.2 -0.4**
YAK *e*SS **ScP** **06 07 25.4 -0.3**
YAK *e* 06 11 24.6
YAK pmax pmax
comp=Z,15nm,0.9s
YAK pmax pmax
comp=E,2.0nm,1.0s
YAK pmax pmax
comp=N,5.0nm,1.0s
YAK smax smax
comp=E,22nm,2.0s
YAK smax smax
comp=N,19nm,2.0s
YAK MLR MLR
comp=Z,594nm,20.0s
YAK MLR MLR
comp=N,502nm,19.0s
YAK MLR MLR
comp=E,242nm,17.0s
SONM Songino Array 30.70 310 P **P** **06 00 46.5 +0.8**
comp=E,14nm,0.8s,baz=114,slow=8.7,SNR=25
SONM LR LR 06 13 25.2
comp=E,342nm,19.8s,baz=72,slow=37
comp=E,14nm,0.8s
SONM Songino Array 30.70 310 P **P** **06 00 46.0 +0.3**
SONM IAmb IAmb 06 00 51.8
comp=Z,18nm,0.9s
SEY Seymchan 30.97 9 P **P** **06 00 48.8 +1.0**
comp=Z,3.1nm,0.6s,baz=198,slow=7.4,SNR=12
comp=Z,3.1nm,0.6s

SEY Seymchan 30.97 9 *ce*P **P** **06 00 48.8 +1.0**
SEY pmax pmax
comp=Z,8.0nm,1.9s
LZH Lanzhou 31.44 287 *e*P **P** **06 00 52.9 +0.5**
LZH sP pwP 06 00 59.4 -0.6
LZH pmax pmax
comp=Z,20nm,1.3s
LZH LR LR
comp=Z,500nm,12.2s
LZH LR LR
comp=Z,710nm,13.4s
LZH LR LR
comp=Z,710nm,15.5s
ZAK Zakamensk 33.40 313 *e*P **P** **06 01 10.3 +1.0**
ZAK pmax pmax
comp=Z,9.0nm,1.0s
GTA Gaotai 34.43 293 ⇓P **P** **06 01 18.2 -0.3**
GTA pP pwP 06 01 23.0 -3.0
GTA sP pP 06 01 26.9 +10
GTA pmax pmax
comp=Z,4.0nm,1.0s
GTA pmax pmax
comp=Z,83nm,5.8s
GTA LR LR
comp=Z,290nm,17.4s
GTA LR LR
comp=Z,330nm,16.4s
GTA LR LR
comp=Z,360nm,18.2s
SMPI Sarmi 34.64 186 P P 06 01 26.3 +6.1
comp=Z,1μmcomp=Z,11nm,1.6s
KMI Kunming 34.94 268 ⇓P **P** **06 01 25.3 +2.1**
KMI pmax pmax
comp=Z,7.0nm,0.6s
PZH PanZhiHua 35.30 271 P **P** **06 01 27.1 +1.0**
PZH pmax pmax
comp=Z,10.0nm,0.6s
PZH pmax pmax
comp=Z,150nm,8.4s
KNGR Kungurtug, Tuv 37.02 312 *i*P **P** **06 01 41.6 +1.0**
BILL Bilibino 38.09 15 ⇑*i*P **P** **06 01 50.1 +0.9**
BILL *e* 06 01 55.1
BILL PPP PPP 06 03 38.0
BILL *e* 06 04 08.5
BILL S **S** **06 07 39.0 -3.5**
BILL pmax pmax
comp=Z,5.0nm,1.1s
BILL MLR MLR
comp=Z,151nm,17.0s
GOMU GeErMu 38.68 289 P **P** **06 01 54.8 -0.3**
GOMU pP pwP 06 01 58.8 -3.8
GOMU sP pP 06 02 00.9 +7.4
GOMU pmax pmax
comp=Z,14nm,1.0s
GOMU pmax pmax
comp=Z,93nm,6.1s
GOMU LR LR
comp=Z,160nm,12.0s
GOMU LR LR
comp=Z,130nm,13.9s
GOMU LR LR
comp=Z,220nm,16.4s
TIXI Tiksi 39.63 354 P **P** **06 02 02.4 +0.3**
TIXI IAmb IAmb 06 03 30.1
comp=Z,12nm,0.3s
TIXI Tiksi 39.63 354 *ce*P **P** **06 02 02.6 +0.6**
TIXI pmax pmax
comp=Z,5.0nm,0.8s
NIKH Nikolski High 40.44 45 P **P** **06 02 08.8 -0.3**
baz=260
CMAR Chiang Mai Arr 40.97 260 P **P** **06 02 14.3 +0.4**
comp=Z,1.5nm,0.4s,baz=52,slow=7.1,SNR=6.1
comp=Z,1.5nm,0.4s
CMAR Chiang Mai Arr 40.97 260 P **P** **06 02 13.4 -0.5**
CMAR Chiang Mai Arr 40.97 260 *i*P **P** **06 02 14.6 +0.7**
CMAR pmax pmax
comp=Z,2.0nm,0.4s
SBUM Sibu 41.00 229 P **P** **06 02 14.1 0.0**
WMQ Urumqi 43.28 301 *e*P **P** **06 02 34.7 +2.2**
WMQ LR LR
comp=Z,530nm,25.5s
WMQ LR LR
comp=Z,190nm,28.9s
ZSN Zaisan 45.06 306 *e*P **P** **06 02 47.1 +0.4**
ZSN pmax pmax
comp=Z,8.0nm,1.0s
ZSN Zaisan 45.06 306 *e*P **P** **06 02 47.1 +0.4**
comp=Z,7.7nm,1.0s,baz=306
ZAA0 Zalesovo Array 45.20 316 P **P** **06 02 47.8 +0.1**
ZAA0 IAmb IAmb 06 03 00.8
comp=Z,12nm,1.0s
ZALV Zalesovo Beam 45.20 316 P **P** **06 02 47.6 0.0**
comp=Z,7.0nm,0.8s,baz=99,slow=7.7,SNR=12
ZALV PcP **PcP** **06 04 28.2 +0.4**
comp=Z,2.8nm,0.7s,baz=88,slow=3.6,SNR=2.8
comp=Z,7.0nm,0.8s
ZALV Zalesovo Beam 45.20 316 P **P** **06 02 47.4 -0.3**
ZALV Zalesovo Beam 45.20 316 *i*P **P** **06 02 48.0 +0.3**
ZALV pmax pmax
comp=Z,7.0nm,0.8s
CHNA Chernabura Isl 46.11 43 P **P** **06 02 55.4 +0.6**
baz=266
COEN Coen 46.41 178 P **P** **06 02 57.4 -0.2**
COEN IAmb IAmb 06 03 31.1
comp=Z,20nm,1.3s
MTN Manton Dam 46.44 195 P **P** **06 02 58.3 +0.5**
MK31 Makanchi Array 46.85 306 P **P** **06 03 01.7 +0.8**
MK31 IAmb IAmb 06 03 04.4
comp=Z,10nm,0.8s
MK31 Makanchi Array 46.85 306 *i*P **P** **06 03 00.7 -0.2**
MK31 pmax pmax
comp=Z,6.0nm,0.5s
MKAR Makanchi Array 46.85 306 P **P** **06 03 01.2 +0.4**
comp=Z,13nm,0.7s,baz=88,slow=9.9,SNR=69
MKAR PcP **PcP** **06 04 34.7 +0.9**
comp=Z,3.1nm,0.8s,baz=86,slow=5.8,SNR=2.1
MKAR LR LR 06 21 47.4
comp=Z,249nm,20.0s,baz=48,slow=35
comp=Z,13nm,0.7s
MAKZ Makanchi 47.07 306 P **P** **06 03 03.4 +0.8**
MAKZ Makanchi 47.07 306 P **P** **06 03 03.4 +0.8**
MAKZ pmax pmax
comp=Z,12nm,0.7s
N16K Nishlik Lake 47.15 36 P **P** **06 03 03.9 +0.9**
baz=262
ODAN Odare 47.23 278 *e*P **P** **06 03 01.9 -2.4**
IPM Ipoh 47.36 242 P **P** **06 03 04.3 -0.9**
IPM IAmb IAmb 06 03 10.5
comp=Z,7.5nm,0.9s
O16K Kokwok River B 47.37 37 P **P** **06 03 05.0 +0.3**
baz=263
NRIK Noril'sk 47.38 337 P **P** **06 03 04.7 +0.1**
comp=Z,5.2nm,0.5s,baz=116,slow=7.3,SNR=10
comp=Z,5.2nm,0.5s
NRIK Noril'sk 47.38 337 P **P** **06 03 04.8 +0.3**
NRIK IAmb IAmb 06 03 18.2
comp=Z,18nm,1.3s
NRIK Noril'sk 47.38 337 *ce*P **P** **06 03 04.7 +0.1**
NRIK pmax pmax
comp=Z,13nm,1.2s
RAMN Ramite 47.86 278 *e*P **P** **06 03 05.8 -3.4**
comp=Z,38nm,0.8s
O17K Koliganek Bris 47.89 37 P **P** **06 03 08.9 +0.2**
baz=264
JIRN Jiri 47.95 279 *e*P **P** **06 03 10.2 +0.1**
comp=Z,38nm,0.7s
SEM Semipalatinsk 47.97 311 *e*P **P** **06 03 08.0 -1.7**
SEM Semipalatinsk 47.97 311 *e*P **P** **06 03 08.1 -1.7**
baz=311
GUN Gumba 48.12 280 *e*P **P** **06 03 13.0 +1.6**
comp=Z,44nm,0.8s
N18K Kilae Creek 48.59 35 P **P** **06 03 14.3 +0.2**
baz=264
PKIN Phulchoki 48.64 280 *e*P **P** **06 03 13.7 -1.6**
comp=Z,11nm,0.6s
P18K Big Mountain, 48.80 37 IAmb IAmb 06 03 33.1
comp=Z,8.6nm,0.9s
P18K Big Mountain, 48.80 37 P **P** **06 03 16.2 +0.4**
baz=266
TTA Tatalina 48.80 33 P **P** **06 03 15.6 -0.2**
baz=262
O18K Koktuh Hills 48.85 37 P **P** **06 03 16.3 +0.1**
baz=265
KURK Kurchatov 48.99 311 P **P** **06 03 17.3 -0.1**
KURK Kurchatov 48.99 311 *i*P **P** **06 03 17.2 -0.1**
KURK pmax pmax
comp=Z,22nm,0.9s
GKN Gorkha 49.12 280 *e*P **P** **06 03 18.4 -0.5**
comp=Z,18nm,0.7s
L19K White Mountain 49.24 34 P **P** **06 03 19.0 -0.2**
baz=264
N19K Bonanza Creek 49.29 35 P **P** **06 03 18.9 -0.6**
baz=265
SHLS Shalkode 49.30 301 *e*P **P** **06 03 16.8 -3.2**
SHLS Shalkode 49.30 301 *e*P **P** **06 03 16.8 -3.2**
baz=301
M19K Big River Lodg 49.43 34 P **P** **06 03 20.1 -0.4**
baz=264
L20K Farewell, AK 49.73 33 P **P** **06 03 22.7 -0.1**
baz=264
K20K Telida 49.73 32 P **P** **06 03 22.5 -0.4**
baz=263
OHAK Old Harbor 49.74 40 P **P** **06 03 23.0 +0.1**
baz=269
TDK Taldyqorghan 49.76 304 *e*P **P** **06 03 21.9 -1.4**
TDK Taldyqorghan 49.76 304 *e*P **P** **06 03 22.0 -1.4**
baz=304
J20K Nowinta River 49.80 31 P **P** **06 03 23.7 +0.4**
baz=263
KPKS Kokpek 49.81 302 *e*P **P** **06 03 23.7 -0.1**
KPKS pmax pmax
comp=Z,3.0nm,0.7s
KPKS Kokpek 49.81 302 *e*P **P** **06 03 23.8 -0.1**
comp=Z,3.3nm,0.7s,baz=302
M20K Styx River 50.02 34 P **P** **06 03 24.6 -0.5**
baz=266
KOLN Koldanda 50.07 281 *e*P **P** **06 03 22.0 -4.1**
SATY Saty 50.08 301 *e*P **P** **06 03 25.6 -0.3**
SATY Saty 50.08 301 *e*P **P** **06 03 25.7 -0.3**
baz=301
KDAK Kodiak Island 50.12 39 P **P** **06 03 26.0 +0.2**
comp=Z,8.2nm,0.6s,baz=283,slow=7.5,SNR=10.0
comp=Z,8.2nm,0.6s
KDAK Kodiak Island 50.12 39 P **P** **06 03 24.9 -0.9**
baz=269
ARXS Arharly 50.29 303 P **P** **06 03 27.6 +0.1**
PPLA Purkeypile 50.54 33 P **P** **06 03 29.0 -0.1**
baz=266
H21K Melozitna Rive 50.55 29 P **P** **06 03 26.9 -2.2**
H21K Melozitna Rive 50.55 29 P **P** **06 03 28.8 -0.2**
baz=263
CAST Castle Rocks 50.63 32 IAmb IAmb 06 03 39.9
comp=Z,7.5nm,0.7s
SKT Skwentna 50.78 34 P **P** **06 03 30.4 -0.4**
baz=267
CHKK Chushkaly 50.95 302 *e*P **P** **06 03 32.6 +0.2**
CHKK Chushkaly 50.95 302 *e*P **P** **06 03 32.6 +0.2**
baz=302
MDOK Medeo 51.04 302 *e*P **P** **06 03 33.6 +0.4**
MDOK Medeo 51.04 302 *e*P **P** **06 03 33.6 +0.4**
baz=302
AAA Alma-Ata 51.13 302 *e*P **P** **06 03 32.8 -0.9**
AAA Alma-Ata 51.13 302 *e*P **P** **06 03 32.9 -0.9**
baz=302
SUA Susitna One 51.13 35 P **P** **06 03 33.1 -0.5**
baz=268
TNSS Tian-Shan 51.14 301 *e*P **P** **06 03 34.9 +0.7**
TNSS Tian-Shan 51.14 301 *e*P **P** **06 03 35.0 +0.7**
baz=302
KDJ Kajisay 51.15 300 P **P** **06 03 33.0 -1.1**
KDJ IAmb IAmb 06 03 41.7
comp=Z,7.9nm,0.8s
KDJ Kajisay 51.15 300 P **P** **06 03 33.0 -1.1**
KDJ pmax pmax
comp=Z,8.0nm,0.8s
BPAW Bear Paw Mtn. 51.17 31 P **P** **06 03 33.1 -0.6**
baz=266
MLY Manley 51.35 30 P **P** **06 03 34.6 -0.4**
baz=265
KUU Kurty 51.41 303 *e*P **P** **06 03 35.8 0.0**
KUU pmax pmax
comp=Z,19nm,0.9s
KUU Kurty 51.41 303 *e*P **P** **06 03 35.9 0.0**
comp=Z,19nm,0.9s,baz=303
TRF Thorofare Moun 51.44 32 P **P** **06 03 35.3 -0.6**
baz=267
SEW Seward 51.75 36 P **P** **06 03 37.3 -0.8**
baz=270
H23K Yukon River 51.91 29 P **P** **06 03 38.1 -1.2**
baz=266
I23K Minto, Yukon-K 51.94 30 P **P** **06 03 38.3 -1.1**
baz=266
NEA2 Nenana 52.03 31 IAmb IAmb 06 04 00.4
comp=Z,14nm,1.0s
NEA2 Nenana 52.03 31 P **P** **06 03 39.9 -0.3**
baz=267,SNR=9.5
MCK McKinley 52.05 32 P **P** **06 03 40.5 +0.1**
baz=268
TKM2 Tokmak 2 52.13 302 *i*P **P** **06 03 41.7 +0.2**
TKM2 pmax pmax
comp=Z,20nm,1.1s
TOLK Toolik Lake Re 52.17 26 P **P** **06 03 41.8 +0.7**
baz=263
KNK Knik Glacier 52.23 35 P **P** **06 03 41.8 +0.1**
baz=270
SML Sawmill 52.29 34 P **P** **06 03 42.1 -0.1**
baz=270
MDM Murphy Dome 52.41 30 IAmb IAmb 06 04 02.8
comp=Z,17nm,1.2s
WAT6 Susitna Watana 52.57 33 P **P** **06 03 44.8 +0.5**
baz=270
M23K Glacier View 52.58 34 P **P** **06 03 44.1 -0.1**
baz=270
H24K Noodor Dome 52.60 29 P **P** **06 03 45.2 +0.8**
baz=267
KSH Kashi 52.63 297 P P 06 03 49.5 +4.4
KSH pP pwP 06 03 54.4 +1.8
KSH pmax pmax
comp=Z,12nm,0.9s
CTA Charters Tower 52.66 175 P **P** **06 03 45.5 +0.3**
comp=Z,0.8nm,0.3s,baz=15,slow=8.4,SNR=3.8
comp=Z,0.8nm,0.3s
SGDS Sogindy 52.71 302 *e*P **P** **06 03 45.1 -0.5**
SGDS Sogindy 52.71 302 *e*P **P** **06 03 45.1 -0.5**
baz=302
POKR Poker Plat Res 52.75 30 P **P** **06 03 46.0 +0.5**
baz=268
SCM Sheep Creek Mo 52.77 34 P **P** **06 03 45.3 -0.5**
baz=271
BTLS Baital 52.80 304 *e*P **P** **06 03 46.6 +0.6**
BTLS pmax pmax
comp=Z,8.0nm,0.8s
BTLS Baital 52.80 304 *e*P **P** **06 03 46.7 +0.6**
comp=Z,7.8nm,0.8s,baz=304
WRAB Tennant Creek 52.83 189 P **P** **06 03 46.7 +0.2**
WRAB IAmb IAmb 06 04 02.1
comp=Z,18nm,0.8s
WRAB Tennant Creek 52.83 189 *ce*P **P** **06 03 46.3 -0.2**
WRAB pmax pmax
comp=Z,18nm,1.3s
WR0 Warramunga Arr 52.84 189 P **P** **06 03 46.6 +0.1**
WR0 IAmb IAmb 06 04 02.1
comp=Z,17nm,0.8s
WB2 Warramunga Arr 52.84 189 P **P** **06 03 46.5 0.0**
WB2 IAmb IAmb 06 04 02.6
comp=Z,19nm,0.9s
WRA Warramunga Arr 52.84 189 P **P** **06 03 46.4 -0.2**
comp=Z,4.6nm,0.6s,baz=3.2,slow=7.6,SNR=95
WRA PcP **PcP** **06 04 57.5 +1.6**
comp=Z,2.3nm,0.7s,baz=2.6,slow=4.1,SNR=1.6
comp=Z,4.6nm,0.6s
WRA Warramunga Arr 52.84 189 P **P** **06 03 46.3 -0.3**
WRA Warramunga Arr 52.84 189 *i*P **P** **06 03 44.5 -2.1**
WRA pmax pmax
comp=Z,5.0nm,0.6s
BRZS Berezniki 52.85 311 *e*P **P** **06 03 45.9 -0.5**
BRZS Berezniki 52.85 311 *e*P **P** **06 03 46.0 -0.5**
baz=311
HDA Harding Lake 52.94 31 P **P** **06 03 46.9 0.0**
baz=269,SNR=6.5
ILAR Eielson Array 52.98 31 P **P** **06 03 47.5 +0.3**
comp=Z,3.1nm,0.7s,baz=266,slow=6.1,SNR=44
comp=Z,3.1nm,0.7s
AAK Ala-Archa 52.98 301 P **P** **06 03 48.5 +0.8**
AAK IAmb IAmb 06 03 59.9
comp=Z,6.9nm,0.8s
AAK Ala-Archa 52.98 301 *ce*P **P** **06 03 48.6 +0.8**
AAK pmax pmax
comp=Z,7.0nm,1.1s
M24K Tolsona, Glenn 53.31 34 P **P** **06 03 49.4 -0.3**
baz=272
Q23K Middleton Isla 53.34 37 P **P** **06 03 49.8 0.0**
baz=273

OTUK **Ortayu** 53.36 309 P **P** 06 03 50.5 +0.3
KLU **Klutina** 53.45 35 P **P** 06 03 50.7 0.0
baz=272
K24K **Donnelly Dome** 53.46 32 P **P** 06 03 51.0 +0.3
baz=271
PAX **Paxson** 53.61 33 P **P** 06 03 52.4 +0.5
baz=272
J25K **Salcha River,** 53.63 31 P **P** 06 03 52.1 +0.1
baz=270
HARP **HAARP** 53.78 34 P **P** 06 03 52.6 -0.5
baz=272
RIDG **Independent Ri** 53.87 32 P **P** 06 03 52.8 -1.0
baz=272
BRVK **Borovoye** 53.89 315 P **P** 06 03 54.5 +0.5
BRVK IAmb IAmb 06 03 55.7
comp=Z,9.9nm,0.8s
BRVK **Borovoye** 53.89 315 *ce*P **P** 06 03 54.5 +0.5
BRVK pmax pmax
comp=Z,11nm,0.9s
N25K **Chitina, Valde** 54.08 34 P **P** 06 03 54.6 -0.7
baz=273
BMRM **Bremner River** 54.11 35 P **P** 06 03 54.7 -0.9
baz=274
SCRK **Sand Creek** 54.25 32 P **P** 06 03 56.7 +0.1
SCRK IAmb IAmb 06 03 59.9
comp=Z,12nm,1.4s
SCRK **Sand Creek** 54.25 32 P **P** 06 03 55.7 -0.8
baz=272,SNR=6.2
J26L **Joseph Creek** 54.41 31 P **P** 06 03 57.3 -0.4
baz=272,SNR=6.8
L26K **Log Cabin Wild** 54.58 33 P **P** 06 03 58.8 -0.1
baz=273,SNR=5.2
M26K **Nabesna, AK** 54.78 33 P **P** 06 03 59.7 -0.7
baz=274
K27K **Chicken** 55.08 31 P **P** 06 04 02.7 +0.2
baz=274
L27K **Beaver Creek,** 55.27 33 P **P** 06 04 03.9 0.0
baz=275
M27K **Edge Creek, AK** 55.30 33 P **P** 06 04 03.2 -1.1
baz=275
KK31 **Karatay Array** 55.72 303 P **P** 06 04 07.9 +0.5
KK31 **Karatay Array** 55.72 303 *i*P **P** 06 04 07.4 0.0
KKAR **Karatay Array** 55.72 303 P **P** 06 04 07.8 +0.4
KKAR **Karatay Array** 55.72 303 P **P** 06 04 07.9 +0.4
KKAR pmax pmax
comp=Z,23nm,1.0s
DRK **Karamyk** 55.76 298 P **P** 06 04 08.8 +0.7
DRK IAmb IAmb 06 04 19.9
comp=Z,16nm,1.1s
YUK3 **Moose Creek** 56.03 34 P **P** 06 04 09.4 -0.2
baz=277
DAWY **Dawson** 56.26 31 IAmb IAmb 06 04 50.2
comp=Z,14nm,1.7s
DAWY **Dawson** 56.26 31 P **P** 06 04 10.8 -0.2
baz=276
IUG **luzhnay** 56.31 302 *e*P **P** 06 04 11.2 -0.6
IUG **luzhnay** 56.31 302 *e*P **P** 06 04 11.3 -0.6
baz=302
BTK **Batken** 56.32 299 P **P** 06 04 10.9 -1.0
BTK IAmb IAmb 06 04 25.2
comp=Z,11nm,1.1s
BTK **Batken** 56.32 299 P **P** 06 04 10.9 -1.0
BTK pmax pmax
comp=Z,11nm,1.1s
ASAR **Alice Springs** 56.57 189 P **P** 06 04 13.6 -0.1
comp=Z,1.5nm,0.6s,baz=14,slow=13,SNR=19
ASAR PcP **PcP** 06 05 11.5 +1.4
comp=Z,1.6nm,0.7s,baz=15,slow=2.8,SNR=5.2
comp=Z,1.5nm,0.6s
ASAR **Alice Springs** 56.57 189 P **P** 06 04 13.7 +0.1
I29M **Ogilvie Camp,** 56.58 30 IAmb IAmb 06 04 27.4
comp=Z,14nm,1.3s
I29M **Ogilvie Camp,** 56.58 30 P **P** 06 04 13.5 +0.2
baz=276,SNR=11
GAR **Garm** 57.00 298 P **P** 06 04 16.4 -0.3
EPYK **Eagle Plains** 57.11 28 P **P** 06 04 17.1 +0.1
baz=277,SNR=12
M30M **Minto, Yukon** 57.62 33 P **P** 06 04 22.7 +2.0
M30M **Minto, Yukon** 57.62 33 P **P** 06 04 20.8 +0.1
baz=279,SNR=6.5
N30M **Aishikik Lake** 57.67 34 P **P** 06 04 20.9 -0.2
baz=280
INK **Inuvik** 58.08 26 P **P** 06 04 25.0 +1.3
INK **Inuvik** 58.08 26 P **P** 06 04 25.0 +1.3
INK pmax pmax
comp=Z,5.0nm,0.9s
INK **Inuvik** 58.08 26 P **P** 06 04 24.5 +0.8
baz=278
O30N **Mendenhall** 58.27 35 P **P** 06 04 24.7 -0.5
baz=281
N31M **Braeburn, Yuko** 58.28 34 IAmb IAmb 06 04 43.2
comp=Z,7.9nm,0.8s
N31M **Braeburn, Yuko** 58.28 34 P **P** 06 04 25.1 -0.3
baz=281
PLBC **Pleasant Camp** 58.39 36 P **P** 06 04 25.7 -0.4
baz=282
EIDS **Eidsvold** 58.41 170 P **P** 06 04 27.8 +1.3
SVE **Sverdlovsk** 58.69 321 *e*P **P** 06 04 29.0 +0.8
SVE pmax pmax
comp=Z,24nm,0.8s
M31M **Drury Creek, Y** 58.79 33 IAmb IAmb 06 04 31.9
comp=Z,6.5nm,0.7s
M31M **Drury Creek, Y** 58.79 33 P **P** 06 04 28.6 -0.3
baz=281,SNR=9.6
WHY **Whitehorse** 58.87 35 IAmb IAmb 06 04 44.2
comp=Z,11nm,1.2s
WHY **Whitehorse** 58.87 35 P **P** 06 04 29.1 -0.5
baz=282
FARO **Faro, Yukon** 59.26 33 P **P** 06 04 31.6 -0.5
baz=282,SNR=11
ARU **Arti** 59.90 320 P **P** 06 04 37.1 +0.5
ARU **Arti** 59.90 320 *c i*P **P** 06 04 37.0 +0.5
ARU S **S** 06 12 51.7 +2.5
ARU SS **SS** 06 16 43.4 -1.4
ARU pmax pmax
comp=Z,20nm,0.6s
P33M **Teslin, Yukon** 59.97 35 IAmb IAmb 06 04 41.7
comp=Z,7.3nm,0.9s
P33M **Teslin, Yukon** 59.97 35 P **P** 06 04 38.0 +0.9
baz=284,SNR=7.0
MMPY **Sheldon Lake,** 60.12 32 P **P** 06 04 38.8 +0.7
baz=284
AB31 **Akbulak array** 61.08 312 *i*P **P** 06 04 44.4 -0.3
ABKAR **Akbulak array** 61.08 312 P **P** 06 04 44.5 -0.2
ABKAR **Akbulak array** 61.08 312 IAmb IAmb 06 04 46.4
comp=Z,5.5nm,0.6s
C36M **Paulatuk** 61.21 24 P **P** 06 04 46.2 +1.0
C36M IAmb IAmb 06 04 47.2
comp=Z,7.8nm,0.7s
C36M **Paulatuk** 61.21 24 P **P** 06 04 44.8 -0.4
baz=286
DLBC **Dease Lake** 61.83 37 P **P** 06 04 50.1 +0.4
baz=287
AKTO **Aktyubinsk** 61.91 314 P **P** 06 04 50.0 -0.3
T35M **Bob Quinn** 62.15 38 P **P** 06 04 51.4 -0.5
baz=288
KIRV **Kirov** 63.96 324 *ce*P **P** 06 05 04.7 +0.9
STKA **Stephens Creek** 64.23 180 P **P** 06 05 06.6 +0.7
comp=Z,2.1nm,0.6s,baz=324,slow=8.7,SNR=4.4
comp=Z,2.1nm,0.6s
STKA **Stephens Creek** 64.23 180 P **P** 06 05 07.0 +1.2
STKA **Stephens Creek** 64.23 180 P **P** 06 05 07.0 +1.2
STKA pmax pmax
comp=Z,7.0nm,1.5s
EUNU **Eureka** 64.40 8 P **P** 06 05 07.6 +1.1
EUNU IAmb IAmb 06 05 19.6
comp=Z,6.4nm,0.7s
PRGR **Permogore** 64.63 328 *e*P **P** 06 05 08.7 +0.6
HRA **Herat** 64.68 296 P **P** 06 05 10.1 +0.8
HRA IAmb IAmb 06 05 13.8
comp=Z,8.3nm,0.9s
GEYT **Alibeck** 66.33 301 P **P** 06 05 19.7 0.0
comp=Z,5.3nm,0.7s,baz=30,slow=20,SNR=6.4
comp=Z,5.3nm,0.7s
GEYT **Alibeck** 66.33 301 IAmb IAmb 06 05 25.1
comp=Z,6.6nm,0.8s
YKA **Yellowknife Ar** 67.37 29 P **P** 06 05 26.3 +0.6
comp=Z,1.9nm,0.8s,baz=295,slow=6.0,SNR=8.7
comp=Z,1.9nm,0.8s
YKA **Yellowknife Ar** 67.37 29 *i*P **P** 06 05 26.2 +0.4
YKA pmax pmax
comp=Z,2.0nm,0.8s
KLMR **Klimovskoe** 67.64 329 *e*P **P** 06 05 26.9 -0.6
KLMR pmax pmax
comp=Z,15nm,1.2s
KLMR **Klimovskoe** 67.64 329 *e*P **P** 06 05 27.0 -0.6
KLMR AMP 06 05 41.1
comp=Z,15nm,1.2s
ARCES **ARCESS Array B** 68.19 340 P **P** 06 05 30.4 -0.5
comp=Z,5.8nm,0.9s,baz=83,slow=9.2,SNR=3.2
comp=Z,5.8nm,0.9s
ARCES **ARCESS Array B** 68.19 340 P **P** 06 05 31.4 +0.5
ARCES **ARCESS Array B** 68.19 340 P **P** 06 05 31.4 +0.5
ARCES pmax pmax
comp=Z,115nm,1.9s
NLWA **Neilton Lookou** 69.38 46 IAmb IAmb 06 05 43.6
comp=Z,15nm,1.2s
D03D **Eldon** 69.79 46 P **P** 06 05 40.6 -0.6
baz=296
MOS **Moscow** 70.98 325 *e*P P 06 06 06.6 +18
J01E **Myrtle Point** 71.24 50 P **P** 06 05 50.1 -0.1
baz=297
I03D **Drain, OR** 71.37 50 P **P** 06 05 50.8 -0.1
baz=298
H04D **Lebanon** 71.38 49 P **P** 06 05 50.9 -0.1
baz=298
K02D **Willamette Mer** 71.63 51 P **P** 06 05 51.8 -0.8
baz=298
B08A **Colville Reser** 71.65 44 P **P** 06 05 52.9 +0.3
B08A IAmb IAmb 06 06 06.6
comp=Z,8.2nm,1.0s
H04A **Detroit Lake** 71.65 48 IAmb IAmb 06 06 06.4
comp=Z,11nm,1.0s
HOOD **Mount Hood Mea** 71.69 48 IAmb IAmb 06 05 57.4
comp=Z,12nm,0.9s
OBN **Obninsk** 71.81 324 ⇑ *e*P **P** 06 05 54.5 +1.2
OBN *e* 06 05 58.4
OBN *e* 06 06 10.3
OBN pmax pmax
comp=Z,6.0nm,0.5s
OBN MLR MLR
comp=Z,474nm,19.0s
I04A **Tendick Farm,** 71.93 49 P **P** 06 05 53.5 -0.9
baz=298
G05D **Wamic, OR** 71.94 48 P **P** 06 05 53.5 -0.8
baz=299
L02F **Cave Junction** 71.96 51 P **P** 06 05 53.9 -0.6
baz=298
VORR **Voronezh** 72.21 320 *e*P **P** 06 05 59.4 +3.6
VORR pmax pmax
comp=Z,60nm,0.5s
I05D **Terrebonne, OR** 72.35 48 P **P** 06 05 56.4 -0.5
baz=299
J04D **Umpqua Nationa** 72.38 50 P **P** 06 05 56.0 -1.3
baz=298
C09A **Chrisman Ranch** 72.54 44 IAmb IAmb 06 06 00.2
comp=Z,6.9nm,0.7s
DBG **Daneborg** 72.60 355 *i*P P 06 06 06.4 +8.7
L04D **Klamath Falls** 72.74 51 IAmb IAmb 06 06 03.7
comp=Z,16nm,1.1s
L04D **Klamath Falls** 72.74 51 P **P** 06 05 58.3 -1.1
baz=299
FINES **FINESS Array B** 72.83 333 P **P** 06 05 59.6 +0.3
comp=Z,6.6nm,0.8s,baz=69,slow=6.3,SNR=8.7
comp=Z,6.6nm,0.8s
FINES **FINESS Array B** 72.83 333 *i*P **P** 06 05 59.9 +0.6
FINES pmax pmax
comp=Z,7.0nm,0.8s
J05D **Fort Rock, OR** 72.92 49 P **P** 06 05 59.2 -1.2
baz=299,SNR=5.2
NEW **Newport** 72.98 43 IAmb IAmb 06 06 14.5
comp=Z,6.8nm,0.9s
NEW **Newport** 72.98 43 P **P** 06 05 59.5 -1.1
baz=300,SNR=5.2
ZEI **Tsey** 73.88 311 *e*P **P** 06 06 05.8 -0.3
ZEI pmax pmax
comp=Z,9.0nm,1.3s
KBZ **Khabaz** 74.05 312 P **P** 06 06 07.2 +0.4
comp=Z,5.7nm,0.8s,baz=57,slow=5.3,SNR=9.9
comp=Z,5.7nm,0.8s
KBZ **Khabaz** 74.05 312 *ce*P **P** 06 06 07.7 +0.9
KBZ pmax pmax
comp=Z,10.0nm,0.9s
KVAR **Kislovodsk Arr** 74.06 312 LR LR 06 40 07.5
comp=Z,191nm,19.5s,baz=324,slow=37
KIV **Kislovodsk** 74.07 312 *e*P **P** 06 06 08.3 +1.2
KIV pmax pmax
comp=Z,10.0nm,1.1s
KIV MLR MLR
comp=Z,252nm,18.0s
J08A **Circle Bar Ran** 74.64 48 IAmb IAmb 06 06 15.0
comp=Z,9.4nm,1.0s
SUMG **Summit** 75.00 0 IAmb IAmb 06 06 26.2
comp=Z,14nm,0.9s
SUMG **Summit** 75.00 0 *i*P **P** 06 06 14.0 +1.6
SUMG IAmb IAmb 06 06 14.9
comp=Z,7.9nm,0.6s
BEKR **Beckworth** 75.18 52 IAmb IAmb 06 06 27.5
comp=Z,6.4nm,0.9s
MSO **Missoula** 75.57 43 IAmb IAmb 06 06 29.0
comp=Z,8.0nm,1.1s
MSO **Missoula** 75.57 43 P **P** 06 06 15.0 -0.7
baz=302
CMB **Columbia Colle** 76.09 54 IAmb IAmb 06 06 32.9
comp=Z,11nm,1.3s
MFID **Camas Ranch** 76.26 47 IAmb IAmb 06 06 22.4
comp=Z,5.9nm,0.7s
SCO **Scoresbysund** 76.45 354 P **P** 06 06 22.4 +2.2
SCO IAmb IAmb 06 06 34.1
comp=Z,16nm,1.2s
SCO **Scoresbysund** 76.45 354 P **P** 06 06 22.4 +2.2
SCO pmax pmax
comp=Z,16nm,1.2s
SCO **Scoresbysund** 76.45 354 *i*P **P** 06 06 21.5 +1.3
SCO IAmb IAmb 06 06 22.5
comp=Z,4.5nm,0.7s
HLID **Hailey** 77.05 46 P **P** 06 06 23.1 -1.2
baz=303,SNR=5.9
KVN **Kaiserville** 77.10 52 IAmb IAmb 06 06 28.8
comp=Z,7.3nm,1.1s
EGMT **Eagleton** 77.27 41 P **P** 06 06 24.5 -0.9
baz=305
NVAR **Mina Array Bea** 77.29 53 P **P** 06 06 27.2 +1.4
comp=Z,2.5nm,0.7s,baz=288,slow=5.5,SNR=23
comp=Z,2.5nm,0.7s
BOZ **Bozeman (W)** 77.59 44 IAmb IAmb 06 06 31.4
comp=Z,12nm,1.2s
BOZ **Bozeman (W)** 77.59 44 P **P** 06 06 26.5 -0.8
baz=304,SNR=15
FCC **Fort Churchill** 77.70 26 P **P** 06 06 27.6 +0.2
FCC IAmb IAmb 06 06 41.5
comp=Z,9.4nm,1.1s
FCC **Fort Churchill** 77.70 26 P **P** 06 06 27.6 +0.2
FCC pmax pmax
comp=Z,9.0nm,1.1s
AKASG **Malin Array Be** 77.97 323 P **P** 06 06 29.2 +0.1
comp=Z,1.6nm,0.6s,baz=44,slow=5.9,SNR=12
comp=Z,1.6nm,0.6s
AKASG **Malin Array Be** 77.97 323 *i*P **P** 06 06 29.2 +0.1
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKBB **Malin Array Si** 77.97 323 IAmb IAmb 06 06 46.0
comp=Z,6.7nm,0.7s
ELK **Elko** 78.06 49 P **P** 06 06 32.2 +2.1
ELK **Elko** 78.06 49 P **P** 06 06 32.2 +2.1
ELK pmax pmax
comp=Z,5.0nm,1.0s
VES **Vestal, Richgr** 78.11 55 P **P** 06 06 29.8 -0.3
baz=302
YHL **Hebgen Lake** 78.27 44 IAmb IAmb 06 06 35.9
comp=Z,11nm,1.0s
NB2 **NORSAR Subarra** 78.33 338 P **P** 06 06 31.2 +0.3
comp=Z,10nm,1.0s,baz=39,slow=5.6
NOA **NORSAR Array B** 78.33 338 P **P** 06 06 31.2 +0.3
comp=Z,6.3nm,0.9s,baz=40,slow=5.6,SNR=18
comp=Z,6.3nm,0.9s
ICESG **Greenland Ices** 78.50 1 *i*P **P** 06 06 33.3 +1.2
ICESG IAmb IAmb 06 06 34.3
comp=Z,9.4nm,0.8s
ISA **Isabella, Lake** 78.63 55 P **P** 06 06 32.6 -0.5
baz=302
H17A **Grant Village** 78.88 44 P **P** 06 06 34.8 +0.2
baz=305,SNR=11
HVU **Hansel Valley** 79.04 47 IAmb IAmb 06 06 38.2
comp=Z,6.1nm,0.6s
MPMC **Manual Prospec** 79.09 54 P **P** 06 06 34.6 -1.2
baz=302
R11A **Troy Canyon, C** 79.14 51 P **P** 06 06 34.1 -1.9
baz=303,SNR=5.0
FURC **Furnace Creek,** 79.30 54 P **P** 06 06 36.0 -0.7
baz=303
EDW2 **Edwards Air Fo** 79.38 55 P **P** 06 06 36.2 -1.0
baz=302
TPNV **Topopah Spring** 79.45 53 IAmb IAmb 06 06 51.6
comp=Z,11nm,1.1s
TPNV **Topopah Spring** 79.45 53 P **P** 06 06 36.9 -0.8
baz=303
QSM **Queen of Sheba** 79.57 54 IAmb IAmb 06 06 56.3
comp=Z,12nm,1.0s
GWY **Greenwater Val** 79.58 54 IAmb IAmb 06 07 11.2
comp=Z,14nm,1.2s
DUG **Dugway, Tooele** 79.90 49 IAmb IAmb 06 06 45.1
comp=Z,8.7nm,0.9s
DUG **Dugway, Tooele** 79.90 49 P **P** 06 06 39.4 -0.7
baz=304,SNR=9.2
LAO **LASA Array** 80.00 40 IAmb IAmb 06 06 45.3
comp=Z,12nm,1.2s
LAO **LASA Array** 80.00 40 P **P** 06 06 39.7 -0.7
baz=307
PRN **Pahroc Range** 80.00 52 IAmb IAmb 06 06 59.6
comp=Z,14nm,1.4s
PSUT **Pine Spring** 80.17 50 IAmb IAmb 06 06 46.2
comp=Z,11nm,1.2s
SHPR **Sheep Range** 80.43 53 P **P** 06 06 44.8 +1.7
BW06 **Boulder Array** 80.43 45 P **P** 06 06 42.4 -0.6
baz=306
PDAR **Pinedale Array** 80.43 45 P **P** 06 06 44.3 +1.3
comp=Z,1.9nm,0.6s,baz=257,slow=1.6,SNR=17
comp=Z,1.9nm,0.6s
TUQ **Turquoise Moun** 80.50 54 P **P** 06 06 43.5 +0.1
baz=303
JLU **Jordanelle** 80.53 48 IAmb IAmb 06 06 48.0
comp=Z,16nm,1.4s
MPU **Maple Canyon** 80.75 48 IAmb IAmb 06 06 49.0
comp=Z,8.6nm,1.0s
GMRC **Granite Mounta** 81.04 54 P **P** 06 06 45.5 -0.8
baz=304
PFO **Pinyon Flats O** 81.13 56 P **P** 06 06 48.2 +1.4
PFO **Pinyon Flats O** 81.13 56 P **P** 06 06 48.2 +1.4
PFO pmax pmax
comp=Z,8.0nm,0.4s
PFO **Pinyon Flats O** 81.13 56 P **P** 06 06 45.3 -1.5
baz=303
TPFO **Pinon Flats** 81.14 56 P **P** 06 06 44.9 -1.9
baz=303
BELC **Belle Mtn. Jos** 81.24 55 P **P** 06 06 45.7 -1.7
baz=304
LCMT **Little Creek M** 81.42 51 IAmb IAmb 06 07 02.6
comp=Z,9.0nm,0.9s
MTPU **Mount Pierson** 81.53 50 IAmb IAmb 06 06 53.6
comp=Z,6.6nm,0.9s
P17A **Butcher Ranch,** 81.63 48 IAmb IAmb 06 07 03.6
comp=Z,15nm,0.9s
Q16A **Castle Valley** 81.67 49 IAmb IAmb 06 07 06.6
comp=Z,10nm,0.9s
RDMU **Red Mountain** 81.71 47 IAmb IAmb 06 07 03.7
comp=Z,12nm,0.7s
IRM **Iron Mountain** 81.74 55 P **P** 06 06 48.6 -1.2
baz=304
BC3 **Big Chickawall** 81.81 55 P **P** 06 06 48.9 -1.4
baz=304
P18A **Preston Nutter** 81.85 48 IAmb IAmb 06 06 58.8
comp=Z,6.7nm,0.7s
IKP **In-Ko-Pah, Jac** 81.90 56 P **P** 06 06 48.9 -2.0
baz=304
BURAR **Bucovina Array** 81.96 322 P **P** 06 06 51.3 +0.4
BRTR **Keskin Array B** 82.03 312 P **P** 06 06 52.4 +0.9
comp=Z,3.2nm,0.8s,baz=89,slow=4.3,SNR=6.8
comp=Z,3.2nm,0.8s
BRTR **Keskin Array B** 82.03 312 P **P** 06 06 51.3 -0.1
K22A **Casper** 82.29 44 IAmb IAmb 06 06 56.5
comp=Z,27nm,1.8s
K22A **Casper** 82.29 44 P **P** 06 06 50.5 -2.3
baz=308
U15A **North Rim** 82.38 52 IAmb IAmb 06 06 58.7
comp=Z,22nm,1.9s
GLA **Glamis** 82.58 56 IAmb IAmb 06 07 07.7
comp=Z,5.5nm,0.8s
RAYN **Ar Rayn** 82.69 293 P **P** 06 06 55.1 +0.1
RAYN IAmb IAmb 06 07 11.3
comp=Z,6.8nm,0.9s
RAYN **Ar Rayn** 82.69 293 P **P** 06 06 55.1 +0.1
RAYN pmax pmax
comp=Z,7.0nm,1.0s
O20A **White River Ci** 82.79 47 IAmb IAmb 06 07 13.0
comp=Z,10nm,1.0s
O20A **White River Ci** 82.79 47 P **P** 06 06 53.8 -1.7
baz=307
RSSD **Black Hills** 82.80 42 P **P** 06 06 52.9 -2.6
baz=309
ULM **Lac du Bonnet** 82.90 33 P **P** 06 06 55.8 +0.2
comp=Z,1.6nm,0.7s,baz=288,slow=6.4,SNR=3.2
comp=Z,1.6nm,0.7s
ULM **Lac du Bonnet** 82.90 33 IAmb IAmb 06 07 12.0
comp=Z,21nm,1.8s
N23A **Red Feather La** 83.71 45 P **P** 06 06 59.7 -0.7
baz=308,SNR=5.2
PV15 **Paradox Valley** 83.72 48 IAmb IAmb 06 07 18.4
comp=Z,7.7nm,0.8s
X16A **Lo Mia Camp, P** 84.11 53 IAmb IAmb 06 07 20.2
comp=Z,6.1nm,1.1s
SMCO **Snowmass** 84.14 47 IAmb IAmb 06 07 17.1
comp=Z,13nm,1.3s
MORC **Moravsky Berou** 84.20 327 *e*P **P** 06 07 02.5 +0.1
AGMN **Agassiz Nation** 84.27 35 P **P** 06 07 02.6 0.0
baz=314
MVCO **Mesa Verde** 84.38 49 IAmb IAmb 06 07 30.0
comp=Z,12nm,1.2s
MVCO **Mesa Verde** 84.38 49 P **P** 06 07 03.1 -0.7
baz=307
PSZ **Piszkesteto** 84.41 325 P **P** 06 07 03.2 -0.3
PSZ **Piszkesteto** 84.41 325 P **P** 06 07 03.2 -0.3
PSZ pmax pmax
comp=Z,17nm,1.1s
ISCO **Idaho Springs** 84.59 46 P **P** 06 07 03.7 -1.2
baz=309
214A **Organ Pipe Nat** 84.60 55 IAmb IAmb 06 07 09.3
comp=Z,10nm,1.3s
214A **Organ Pipe Nat** 84.60 55 P **P** 06 07 03.3 -1.4
baz=305
JAVC **Velka Javorina** 84.80 327 *e*P **P** 06 07 06.0 +0.6
CLL **Collm** 85.05 331 ⇑ *i*P **P** 06 07 06.7 +0.2
CLL *i* 06 07 10.6
CLL pmax pmax
comp=Z,6.0nm,0.7s
CLL **Collm** 85.05 331 ⇑ *i*P **P** 06 07 06.7 +0.2
comp=Z,6.0nm,0.7s
CLL *i* pP **PcP** 06 07 10.6 +0.8
CLL *i* x x 06 07 17.3
CLL *i* PP **PP** 06 10 23.5 +0.8
S22A **4UR Ranch, Cre** 85.11 48 IAmb IAmb 06 07 25.7
comp=Z,8.6nm,1.1s
S22A **4UR Ranch, Cre** 85.11 48 P **P** 06 07 06.7 -0.8
baz=308,SNR=7.0
KRUC **Moravsky** 85.24 327 *e*P **P** 06 07 05.5 -2.0
TUC **Tucson** 85.79 54 P **P** 06 07 09.8 -0.9
baz=306
SDCO **Great Sand Dun** 85.94 47 IAmb IAmb 06 07 16.4
comp=Z,10nm,1.6s
SDCO **Great Sand Dun** 85.94 47 P **P** 06 07 10.7 -0.9
baz=309
OGNE **Ogallala** 85.97 43 P **P** 06 07 10.9 -0.6
baz=311
EYMN **Ely** 86.56 33 P **P** 06 07 13.5 -0.7
baz=317
T25A **Trinidad** 86.99 47 P **P** 06 07 15.4 -1.3
baz=309
GRFO **Grafenberg** 87.02 330 P **P** 06 07 14.5 -1.8
GRFO **Grafenberg** 87.02 330 P **P** 06 07 14.5 -1.8
GRFO pmax pmax
comp=Z,15nm,0.6s
ECSD **EROS Data Cent** 87.07 38 IAmb IAmb 06 07 19.8
comp=Z,13nm,1.2s
ECSD **EROS Data Cent** 87.07 38 P **P** 06 07 14.7 -2.1
baz=314
ANMO **Albuquerque** 87.07 50 P **P** 06 07 16.2 -0.9
baz=308
SPMN **Marine on St.** 87.93 35 IAmb IAmb 06 07 33.9
comp=Z,6.2nm,0.9s
G40A **Rib Lake** 89.15 34 IAmb IAmb 06 07 39.6
comp=Z,6.8nm,1.0s
TXAR **Lajitas Array** 92.44 53 P **P** 06 07 43.5 +1.2
comp=Z,2.0nm,0.7s,baz=307,slow=3.4,SNR=23
comp=Z,2.0nm,0.7s
TUL1 **Leonard** 92.98 43 P **P** 06 07 42.6 -1.9
baz=315
HDIL **Hopedale** 93.12 36 P **P** 06 07 44.0 -1.1
baz=319
CCM **Cathedral Cave** 93.97 39 P **P** 06 07 47.6 -1.5
baz=318
JCT **Junction City** 94.23 50 P **P** 06 07 48.6 -1.9
baz=312
U40A **Yellville** 94.33 41 IAmb IAmb 06 07 54.2

comp=Z,6.9nm,1.1s
U40A Yellville 94.33 41 P **P** **06 07 48.6 -2.2**
baz=316
MIAR Mount Ida 95.22 43 IAmb IAmb 06 08 12.0
comp=Z,7.7nm,1.1s
MIAR Mount Ida 95.22 43 P **P** **06 07 53.2 -1.6**
baz=316
TORD Torodi Ar. Bea 120.62 314 PKP **PKPdf** **06 13 23.1 -0.5**
comp=Z,1.2nm,0.6s,baz=22,slow=1.2,SNR=7.5
LPAZ La Paz 148.32 66 PKPbc **PKPbc** **06 14 17.4 -1.3**
comp=Z,6.1nm,0.7s,baz=345,slow=3.1,SNR=23
LPAZ La Paz 148.32 66 **PKPbc** **06 14 17.8 -0.9**
LPAZ La Paz 148.32 66 PKP2 **PKPbc** **06 14 17.8 -0.9**

TEH 09 06:04:12.0, 33.95N×48.60E, h9km, ML3.5, Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HSAM	**Samen**	**0.26**	**1**			*e*Pg	Pg	06 04 18.3	-0.8
HSAM						*e*Sg	Sb	06 04 23.0	-0.9
IDOB	**Doab**	**0.39**	**246**			*e*Pg	Pb	06 04 20.8	-0.3
IDOB						*e*Sg	Sb	06 04 26.8	-0.5
IKFM	**Kafar-mosalman**	**0.76**	**236**			*e*Pg	Pb	06 04 27.5	+0.2
IKFM						*e*Sg	Sb	06 04 39.0	+1.3
IKFM						*e*		06 04 43.3	
	comp=Z,35μm,0.3s								
IBZA	**Bozab**	**0.80**	**311**			*e*Pg	Pg	06 04 27.8	+0.3
IBZA						*e*Sg	Sn	06 04 41.3	-0.7
IKOM	**Komasi**	**0.93**	**284**			*e*Pg	Pb	06 04 30.7	+0.3
IKOM						*e*		06 04 50.2	
	comp=Z,11μm,0.3s								
HAGD	**Aghdareh**	**0.98**	**27**			*e*Pg	Pg	06 04 30.1	-0.8
HAGD						*e*		06 04 44.0	
	comp=Z,32μm,0.2s								
KHMZ	**Khomeyn**	**1.15**	**100**			*e*Pg	Pg	06 04 32.2	-1.9
KER	**Kermanshah**	**1.29**	**290**			*e*Pg	Pg	06 04 37.8	+1.0
ASAO	**Ashtian**	**1.32**	**63**			*e*Pn	Pn	06 04 36.1	-0.8
KCHF	**Cheshme Sefid,**	**1.33**	**285**			*e*Pg	Pg	06 04 38.4	+0.8
KCHF						*e*		06 04 41.2	
	comp=Z,8μm,0.4s								
ILIN	**Lien**	**1.66**	**306**			*e*Pg	Pg	06 04 44.9	+1.0
ILIN						*e*		06 04 45.8	
	comp=Z,5μm,0.3s								
DHL1	**Dehloran**	**1.68**	**222**			*e*Pg	Pg	06 04 44.7	+0.5
IGHG	**Ghaleghazi**	**1.73**	**283**			*e*Pn	Pg	06 04 45.4	+0.3
IGHG						*e*		06 05 15.9	
	comp=Z,6μm,0.6s								
IRAZ	**Razeghan**	**1.82**	**37**			*e*Pn	Pb	06 04 45.2	-0.4
IRAZ						*e*		06 05 16.1	
	comp=Z,6μm,0.4s								
IDHR	**Dehrash**	**1.98**	**293**			*e*Pn	Pb	06 04 49.1	+0.8
IDHR						*e*		06 04 51.1	
	comp=Z,6μm,0.3s								
IQOM	**Qom**	**2.23**	**66**			*e*Pn	Pb	06 04 52.0	-0.6
IQOM						*e*		06 05 24.9	
	comp=Z,3μm,0.2s								
GHVR	**GHOM**	**2.30**	**76**			*e*Pn	Pn	06 04 51.7	+1.6
IPIR	**Pirpir**	**2.30**	**123**			*e*Pn	Pb	06 04 52.8	-1.0
IPIR						*e*		06 05 29.3	
	comp=Z,2μm,0.5s								
QAMS	**Qamsar**	**2.34**	**94**			*e*Pn	Pb	06 04 53.1	-1.4
QAMS						*e*		06 05 32.0	
	comp=Z,3μm,0.4s								
AMIS	**Naft Sefid**	**2.35**	**166**			*e*Pn	Pb	06 04 53.0	-1.5
AMIS						*e*		06 05 40.4	
	comp=Z,2μm,0.4s								
IMHD	**Mahdasht**	**2.43**	**44**			*e*Pn	Pb	06 04 55.1	-0.9
IMHD						*e*		06 05 30.7	
	comp=Z,2μm,0.6s								
SHK1	**Shahrekord**	**2.51**	**129**			*e*Pn	Pb	06 04 55.9	-1.4
SHK1						*e*		06 05 41.9	
	comp=Z,1μm,0.6s								
IKLH	**Kolahrood**	**2.56**	**103**			*e*Pn	Pb	06 04 56.2	-2.1
IKLH						*e*		06 05 41.8	
	comp=Z,2μm,0.7s								
ZNJK	**Zanjan**	**2.72**	**1**			*e*Pn	Pb	06 05 00.7	-0.2
IGZV	**Ghazvin**	**2.77**	**28**			*e*Pn	Pn	06 04 58.9	+2.1
IGZV						*e*		06 05 49.1	
	comp=Z,1μm,0.7s								
IVRN	**Varamin**	**2.79**	**67**			*e*Pn	Pb	06 05 00.0	-2.0
IVRN						*e*		06 05 46.9	
	comp=Z,1μm,0.4s								
CHTH	**Charan**	**2.85**	**46**			*e*Pn	Pb	06 05 01.3	-2.0
KRSH	**Karshahi**	**2.94**	**89**			*e*Pn	Pb	06 05 01.9	-2.8
KRSH						*e*		06 05 49.1	
	comp=Z,1μm,0.4s								
IBRJ	**Brojen**	**3.02**	**132**			*e*		06 06 05.1	
	comp=Z,657nm,1.2s								
ISFB	**Sefidab**	**3.05**	**81**			*e*Pn	Pn	06 05 03.2	+2.7
ISFB						*e*		06 05 51.7	
	comp=Z,505nm,0.5s								
DAMV	**Damavand**	**3.24**	**58**			*e*Pn	Pn	06 05 06.0	+2.7
IDMV	**Damavand**	**3.26**	**59**			*e*		06 05 59.7	
	comp=Z,659nm,0.8s								
IDMV						*e*Pn	Pn	06 05 06.4	+2.8
IZEF	**Zefreh**	**3.29**	**108**			*e*Pn	Pn	06 05 06.7	+2.7
IHSH	**Hashtrud**	**3.52**	**342**			*e*Pn	Pn	06 05 10.5	+3.3
NASN	**Na'in**	**3.70**	**107**			*e*Pn	Pn	06 05 11.2	+1.5
IFIR	**Firoozkooh**	**3.81**	**63**			*e*Pn	Pn	06 05 13.7	+2.5
KLNJ	**Kolanjah**	**3.87**	**138**			*e*Pn	Pn	06 05 13.8	+1.8
ISHM	**Shahmirzad**	**4.28**	**63**			*e*Pn	Pn	06 05 20.7	+3.1
ANAR	**Anarak**	**4.35**	**99**			*e*Pn	Pn	06 05 20.7	+2.3
GRMI	**Germi**	**4.88**	**354**			*e*Pn	Pn	06 05 30.2	+4.4

NNC 09 06:15:53.4±3.8, 54.20N×86.30E, h0km, mb3.8, mpv3.0, 4C-5D, Error ellipse: s-maj=36.0km s-min=18.4km az=3.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**0.91**	**254**	⇑P			Pg	06 16 09.6	-1.1
	0.6nm,0.5s								
ZAA0				⇓S			Sb	06 16 23.9	-0.7
	7.0nm,0.8s								
KURK	**Kurchatov**	**5.85**	**236**	⇑Pn			Pn	06 17 25.3	+4.1
	2.9nm,0.6s								
KURK				⇓Sn			Sn	06 18 29.8	+0.9
	1.1nm,0.6s								
KURK				⇓Lg			Lg	06 19 00.2	
	5.6nm,0.8s								
KURBB	**Kurchatov Arra**	**5.95**	**236**	⇓Pn			Pn	06 17 23.4	+0.7
	3.8nm,0.5s								
KURBB				⇑Sn			Sn	06 18 32.0	+0.5
	3.4nm,0.6s								
KURBB				⇑Lg			Lg	06 19 03.3	
	13nm,0.9s								
MK31	**Makanchi Array**	**7.84**	**201**	Pn			Pn	06 17 48.5	-0.2
	0.3nm,0.3s,baz=28,slow=13,SNR=24								
MK31				Sn			Sn	06 19 19.0	+0.9
	0.4nm,0.5s,baz=26,slow=27,SNR=4.3								
MK31				⇓Lg			Lg	06 19 57.0	
	2.5nm,0.9s,baz=26,slow=30,SNR=4.2								

*DJA **09** 06:50:00.5±0.4, 11°S±2°×11°9E±°, h35km±5km, M4.9/26, mB5.3/10, mb5.1/26, MLv5.0/22, Mw(mB)4.8/10*
*NEIC **09** 06:50:01.1±1.6, 10.61S±0.07×119.11E±0.07, h44km±7km, mb4.7/49, Error ellipse: s-maj=10.9km s-min=9.5km az=215.0*
*IDC **09** 06:50:05.8±2.8, 10.36S×119.32E, h74km±24km, mb4.2/13, mbtmp4.5/15, Error ellipse: s-maj=23.8km s-min=10.8km az=58.0*

ISC 09 06:50:00.5±0.4, 10.64S±0.04×119.18E±0.04, h41km, n140, σ1=95/155, mb4.8/57, MS4.5/5, 3C-1D, Sumba region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**1.02**	**12**			P	**Pn**	**06 50 16.9**	**-1.5**
WBSI						S	**Sn**	**06 50 29.4**	**-2.1**
BASI	**Baing, Sumba**	**1.44**	**73**			P	**Pn**	**06 50 25.7**	**+1.5**
BASI						S	**Sn**	**06 50 44.9**	**+3.0**
PLAI	**Plampang**	**2.27**	**322**			P	**Pn**	**06 50 35.5**	**0.0**
PLAI						S	**Sn**	**06 51 02.8**	**+0.5**
EDFI	**Ende, Flores**	**3.11**	**53**			P	**Pn**	**06 50 47.0**	**-0.2**
EDFI						S	**Sn**	**06 51 22.0**	**-1.2**
MMRI	**Maumere**	**3.62**	**57**			Pn	**Pn**	**06 50 54.3**	**+0.3**
MMRI	**Maumere**	**3.62**	**57**			P	**Pn**	**06 50 54.5**	**+0.4**
MMRI						S	**Sn**	**06 51 34.4**	**-1.2**
IGBI	**Denpasar**	**4.37**	**294**			P	**Pn**	**06 51 02.0**	**-2.4**
IGBI						S	**Sn**	**06 51 51.4**	**-2.6**
BATI	**Baumata**	**4.44**	**85**			P	**Pn**	**06 51 07.9**	**+2.5**
	160nm,0.3s,baz=262,slow=1.4,SNR=16								
BATI						S	**Sn**	**06 51 57.5**	**+1.6**
	479nm,0.4s,baz=12,slow=20,SNR=5.5								
BATI	**Baumata**	**4.44**	**85**			P	**Pn**	**06 51 07.2**	**+1.8**
BATI						S	**Sn**	**06 51 57.3**	**+1.5**
BSSI	**Bau Bau, Buton**	**4.66**	**16**			P	**Pn**	**06 51 08.8**	**+0.4**
BSSI						S	**Sn**	**06 52 02.7**	**+1.5**
SRBI	**Singaraja**	**4.66**	**303**			P	**Pn**	**06 51 08.2**	**-0.2**
SRBI						S	**Sn**	**06 51 59.5**	**-1.8**
SOEI	**Soe**	**5.09**	**80**			P	**Pn**	**06 51 16.5**	**+2.1**
SOEI	**Soe**	**5.09**	**80**			P	**Pn**	**06 51 16.1**	**+1.7**
	2.0nm3μm162nm,0.6s								
SOEI						S	**Sn**	**06 52 13.2**	**+1.2**
	2.0nm3μm162nm,0.6s								
BKSI	**Bulukumba**	**5.37**	**10**			P	**Pn**	**06 51 18.7**	**+0.6**
	3.4nm10μm854nm,0.6s								
BKSI						S	**Sn**	**06 52 19.5**	**+0.8**
	3.4nm10μm854nm,0.6s								
JAGI	**Jajag, Banyuwa**	**5.40**	**293**				**Pn**	**06 51 16.9**	**-1.7**
JAGI						Sn	**Sn**	**06 52 17.4**	**-2.3**
JAGI	**Jajag, Banyuwa**	**5.40**	**293**			P	**Pn**	**06 51 15.6**	**-3.0**
	1.5nm5μm208nm,0.5s								
KAPI	**Kappang**	**5.62**	**6**			P	**Pn**	**06 51 23.0**	**+1.4**
	baz=148,slow=22,SNR=31								
KAPI						S	**Sn**	**06 52 25.8**	**+0.9**
	230nm,0.3s,baz=316,slow=21,SNR=13								
KAPI	**Kappang**	**5.62**	**6**			Pn	**Pn**	**06 51 22.6**	**+1.0**
ABJI	**Asem Bagus**	**5.64**	**300**			P	**Pn**	**06 51 20.7**	**-1.1**
	0.7nm160nm,0.6s								
GMJI	**Gumukmas**	**6.12**	**292**			P	**Pn**	**06 51 26.0**	**-2.5**
	0.8nm115nm,1.0s								
BBSI	**Bau Bau**	**6.12**	**34**			P	**Pn**	**06 51 29.0**	**+0.4**
	0.1nm15nm,0.5s								
BLJI	**Banyuglugur**	**6.21**	**297**			P	**Pn**	**06 51 28.7**	**-1.1**
	0.6nm97nm,0.5s								
BLJI						S	**Sn**	**06 52 36.3**	**-3.3**
	0.6nm97nm,0.5s								
BNSI	**Bone**	**6.27**	**9**			P	**Pn**	**06 51 33.7**	**+3.2**
	0.9nm2μm166nm,0.9s								
BNSI						S	**Sn**	**06 52 46.2**	**+5.3**
	0.9nm2μm166nm,0.9s								
SPSI	**Sidrap Palu**	**6.66**	**5**			P	**Pn**	**06 51 37.8**	**+1.9**
	0.5nm2μm84nm,0.9s								
SPSI						S	**Sn**	**06 52 52.6**	**+2.0**
	0.5nm2μm84nm,0.9s								
TTSI	**Tana Toraja**	**7.57**	**5**			P	**Pn**	**06 51 51.7**	**+3.3**
	0.3nm88nm,0.5s								
PWJI	**Pagerwojo**	**7.73**	**289**			P	**Pn**	**06 51 50.0**	**-0.5**
	0.7nm65nm,0.5s								
PCJI	**Pacitan**	**8.26**	**286**			P	**Pn**	**06 51 57.6**	**-0.2**
	101nm,1.3s								
BBKI	**Banjar Baru**	**8.33**	**329**			P	Pn	06 52 04.1	+5.3
UGM	**Wanagama**	**8.96**	**287**			Pn	**Pn**	**06 52 08.8**	**+1.4**
MBWA	**Marble Bar**	**10.47**	**177**				**Pn**	**06 52 27.9**	**-0.3**
KNRA	**Kununurra**	**10.59**	**119**			Pn	**Pn**	**06 52 30.5**	**+0.7**
PSA00	**Pilbara Seismi**	**10.89**	**177**			Pn	**Pn**	**06 52 33.5**	**-0.4**
MTN	**Manton Dam**	**11.91**	**102**			Pn	**Pn**	**06 52 47.9**	**0.0**
GIRL	**Giralia**	**12.84**	**201**			Pn	**Pn**	**06 53 00.6**	**+0.1**
TNTI	**Ternate**	**13.96**	**36**			Pn	**Pn**	**06 53 14.1**	**-1.8**
SBUM	**Sibu**	**14.73**	**332**			Pn	**Pn**	**06 53 25.4**	**-0.9**
KSM	**Kuching**	**14.92**	**323**				**Pn**	**06 53 28.1**	**-0.7**
FAKI	**Fak Fak**	**15.07**	**60**			Pn	**Pn**	**06 53 27.1**	**-3.7**
FAKI						IAmb	IAmb	06 53 50.7	
	comp=Z,52nm,1.4s								
KASI	**Kota Agung**	**15.39**	**288**			P	**P**	**06 53 42.5**	**+3.5**
LWLI	**Liwa**	**15.98**	**289**			P	**P**	**06 53 49.4**	**+3.7**
MDSI	**Maura Dua**	**16.07**	**291**			P	**P**	**06 53 47.6**	**+1.1**
	comp=Z,11nm,0.7s								
MNAI	**Manna**	**17.24**	**290**			P	**Pn**	**06 53 55.5**	**-3.0**
WB0	**Warramunga Arr**	**17.25**	**124**			P	**Pn**	**06 53 57.6**	**-0.9**
WRA	**Warramunga Arr**	**17.29**	**124**			P	**Pn**	**06 53 57.9**	**-1.2**
	comp=Z,4.7nm,0.6s,baz=296,slow=15,SNR=69								
WRA						S	**Sn**	**06 57 01.9**	**-8.7**
	comp=Z,4.6nm,0.8s,baz=291,slow=22,SNR=4.8								
WRA	**Warramunga Arr**	**17.29**	**124**			P	**Pn**	**06 53 58.2**	**-0.8**
WB2	**Warramunga Arr**	**17.30**	**124**				**Pn**	**06 53 57.8**	**-1.4**
WR0	**Warramunga Arr**	**17.46**	**124**				**Pn**	**06 53 59.7**	**-1.5**
MORW	**Morawa**	**18.57**	**189**				**P**	**06 54 14.5**	**+0.5**
MORW						IAmb	IAmb	06 54 29.3	
	comp=Z,30nm,0.8s								
AS31	**Alice Springs**	**19.10**	**135**				**Pn**	**06 54 23.0**	**+1.9**
ASAR	**Alice Springs**	**19.10**	**135**			P	**Pn**	**06 54 22.6**	**+1.4**
	comp=Z,12nm,0.7s,baz=320,slow=12,SNR=121								
ASAR						S	**Sn**	**06 57 44.2**	**-10**
	comp=Z,2.9nm,0.8s,baz=310,slow=24,SNR=1.6								
KRJI	**Kerinci**	**19.53**	**295**			P	**Pn**	**06 54 26.3**	**-0.1**
	comp=Z,424nm,0.6s								
NWAO	**Narrogin (SRO)**	**22.25**	**184**			P	**P**	**06 54 56.5**	**+2.5**
NWAO						IAmb	IAmb	06 55 07.5	
	comp=Z,24nm,0.8s								
IPM	**Ipoh**	**23.50**	**309**			P	**P**	**06 55 05.9**	**-1.0**
IPM						IAmb	IAmb	06 55 07.7	
	comp=Z,11nm,0.5s								
COEN	**Coen**	**23.68**	**100**			P	**P**	**06 55 09.7**	**+1.1**
COEN						IAmb	IAmb	06 55 36.0	
	comp=Z,11nm,0.8s								
KULM	**Kulim**	**24.30**	**310**			P	**P**	**06 55 11.2**	**-3.2**
KULM						IAmb	IAmb	06 55 21.9	
	comp=Z,18nm,1.3s								
GSI	**Gunungsitoli**	**24.55**	**298**			P	**P**	**06 55 15.3**	**-1.3**
GSI						IAmb	IAmb	06 55 29.5	
	comp=Z,33nm,1.0s								
TSI	**Tuntungan**	**24.87**	**303**			P	**P**	**06 55 22.1**	**+2.6**
	comp=Z,245nm,0.7s								
KCSI	**Kotacane, Aceh**	**25.53**	**302**			P	**P**	**06 55 24.7**	**-0.9**
	comp=Z,30nm,0.7s								
BBOO	**Buckleboo**	**26.99**	**147**			P	**P**	**06 55 38.7**	**+0.1**
CTA	**Charters Tower**	**27.71**	**113**			P	**P**	**06 55 47.5**	**+2.3**
	comp=Z,1.8nm,0.7s,baz=287,slow=9.0,SNR=3.0								
	comp=Z,1.8nm,0.7s								
CTAO	**Charters Tower**	**27.71**	**113**			P	**P**	**06 55 44.8**	**-0.4**
STKA	**Stephens Creek**	**29.60**	**139**			P	**P**	**06 56 04.5**	**+2.7**
	comp=Z,2.0nm,0.5s,baz=305,slow=11,SNR=5.5								
	comp=Z,2.0nm,0.5s								
STKA	**Stephens Creek**	**29.60**	**139**			P	**P**	**06 56 04.5**	**+2.7**
TPUB	**Ta-pu**	**33.76**	**2**			P	**P**	**06 56 38.5**	**0.0**
CMAR	**Chiang Mai Arr**	**35.14**	**325**			P	**P**	**06 56 51.2**	**+0.7**
	comp=Z,2.0nm,0.4s,baz=149,slow=6.8,SNR=10								
	comp=Z,2.0nm,0.4s								
CMAR	**Chiang Mai Arr**	**35.14**	**325**			P	**P**	**06 56 50.2**	**-0.3**
SLVN	**Son La**	**35.14**	**335**			P	**P**	**06 56 50.1**	**-0.4**
CHTO	**Chiang Mai**	**35.42**	**326**			P	**P**	**06 56 52.1**	**-0.8**
CHTO						IAmb	IAmb	06 57 16.1	
	comp=Z,10nm,1.2s								
KMI	**Kunming**	**38.99**	**336**			⇑P	**P**	**06 57 25.3**	**+1.9**
KMI						pmax	pmax		
	comp=Z,12nm,0.8s								
PZH	**PanZhiHua**	**40.62**	**336**			P	**P**	**06 57 37.6**	**+0.8**
PZH						pmax	pmax		
	comp=Z,10.0nm,0.7s								
PZH						pmax	pmax		
	comp=Z,110nm,6.9s								
ENH	**Enshi**	**41.73**	**347**			P	**P**	**06 57 44.5**	**-1.2**
ENH						IAmb	IAmb	06 57 46.1	
	comp=Z,18nm,0.8s								
PALK	**Pallekele**	**42.23**	**293**			P	**P**	**06 57 52.0**	**+1.8**
	comp=Z,13nm,0.9s,baz=177,slow=12,SNR=4.1								
	comp=Z,13nm,0.9s								
PALK	**Pallekele**	**42.23**	**293**			P	**P**	**06 57 48.5**	**-1.6**
PALK						IAmb	IAmb	06 57 59.1	
	comp=Z,20nm,0.9s								
NJ2	**Nanjing**	**42.45**	**360**			*e*P	P	06 57 57.4	+5.9
NJ2						pmax	pmax		
	comp=Z,7.0nm,0.5s								
XAN	**Xi'an**	**45.49**	**348**			P	**P**	**06 58 14.8**	**-1.2**
XAN						pP	pP	06 58 24.2	-2.3
XAN						pmax	pmax		
	comp=Z,29nm,0.8s								
H08S2	**Diego Garcia H**	**46.15**	**270**			T	T	07 48 04.9	
	baz=95,slow=75,SNR=18								
H08S3	**Diego Garcia H**	**46.16**	**270**			T	T	07 48 05.1	
	baz=95,slow=75,SNR=17								
H08S1	**Diego Garcia H**	**46.17**	**270**			T	T	07 48 04.8	
	baz=95,slow=75,SNR=16								
HNS	**HongShan**	**47.97**	**355**			⇓P	**P**	**06 58 34.5**	**-0.7**
HNS						pmax	pmax		
	comp=Z,8.0nm,0.9s								
ODAN	**Odare**	**48.39**	**321**			*e*P	**P**	**06 58 37.9**	**-1.1**
KSAR	**Wonju Array Be**	**48.52**	**9**			P	**P**	**06 58 38.9**	**-0.6**
KSRS	**Korea Array**	**48.54**	**9**			P	**P**	**06 58 39.2**	**-0.4**
	comp=Z,5.4nm,0.8s,baz=186,slow=8.2,SNR=27								
	comp=Z,5.4nm,0.8s								
TAPN	**Taplejung**	**48.55**	**322**			*e*P	**P**	**06 58 39.5**	**-0.8**
	comp=Z,29nm,0.8s								
KS19	**Wonju Array Si**	**48.58**	**9**			P	**P**	**06 58 39.1**	**-0.8**
KS19						IAmb	IAmb	06 58 39.9	
	comp=Z,5.2nm,0.8s								
LZH	**Lanzhou**	**48.67**	**343**			*e*P	**P**	**06 58 41.1**	**+0.2**
LZH						pP	pP	06 58 53.6	+2.0
LZH						sP	sP	06 59 00.9	+4.9
LZH						pmax	pmax		
	comp=Z,21nm,1.3s								
LZH						LR	LR		
	comp=N,290nm,15.1s								
LZH						LR	LR		
	comp=E,380nm,15.2s								
LZH						LR	LR		
	comp=Z,320nm,17.4s								
INU	**Inuyama**	**48.76**	**19**			P	**P**	**06 58 39.5**	**-1.8**
INU						IAmb	IAmb	06 58 54.5	
	comp=Z,5.6nm,0.7s								
RAMN	**Ramite**	**48.95**	**320**			*e*P	**P**	**06 58 42.2**	**-1.1**
	comp=Z,14nm,0.6s								
JIRN	**Jiri**	**49.71**	**321**			*e*P	**P**	**06 58 48.4**	**-0.8**
	comp=Z,21nm,0.6s								
GUN	**Gumba**	**50.08**	**321**			*e*P	**P**	**06 58 51.1**	**-0.9**
PKI	**Pulchoki**	**50.14**	**320**			*e*P	**P**	**06 58 51.1**	**-1.3**
	comp=Z,8.8nm,0.4s								
PKIN	**Phulchoki**	**50.15**	**320**			*e*P	**P**	**06 58 51.0**	**-1.5**
	comp=Z,7.9nm,0.4s								
MJAR	**Matsushiro Arr**	**50.24**	**20**			P	**P**	**06 58 50.8**	**-1.9**
	comp=Z,1.2nm,0.4s,baz=192,slow=9.3,SNR=2.3								
	comp=Z,1.2nm,0.4s								
DMN	**Daman**	**50.35**	**320**			*e*P	**P**	**06 58 53.0**	**-1.0**
	comp=Z,8.1nm,0.3s								
BJI	**Beijing**	**50.50**	**357**			P	**P**	**06 58 53.8**	**-0.7**
BJI						pmax	pmax		
	comp=Z,10.0nm,0.8s								
GKN	**Gorkha**	**50.93**	**320**			*e*P	**P**	**06 58 57.0**	**-1.2**
	comp=Z,15nm,0.3s								
KOLN	**Koldanda**	**51.43**	**319**			*e*P	**P**	**06 59 00.4**	**-1.6**
JSD	**Sado**	**51.61**	**19**			P	**P**	**06 59 01.2**	**-1.8**
JSD						IAmb	IAmb	06 59 02.6	
	comp=Z,8.7nm,0.6s								
HHC	**Hu-ho-hao-te**	**51.71**	**353**			*e*P	**P**	**06 59 03.3**	**-0.5**
HHC						pmax	pmax		
	comp=Z,33nm,0.8s								
HHC						pmax	pmax		
	comp=Z,310nm,6.5s								
HHC						LR	LR		
	comp=N,610nm,20.6s								
HHC						LR	LR		
	comp=E,500nm,19.1s								
HHC						LR	LR		
	comp=Z,880nm,20.6s								
GOMU	**GeErMu**	**51.94**	**335**			P	**P**	**06 59 09.6**	**+3.7**
GOMU						pP	pP	06 59 14.3	-2.3
GOMU						sP	pwP	06 59 15.8	-5.1
GOMU						S	**S**	**07 06 29.7**	**+3.2**
GOMU						sS	sS	07 06 46.3	+2.2
GOMU						pmax	pmax		
	comp=Z,5.0nm,0.5s								
GOMU						LR	LR		
	comp=N,450nm,14.5s								
GOMU						LR	LR		
	comp=E,140nm,13.6s								
GOMU						LR	LR		
	comp=Z,210nm,15.2s								
PYUN	**Piuthan**	**52.05**	**319**			*e*P	**P**	**06 59 05.7**	**-1.0**
	comp=Z,21nm,0.5s								
GTA	**Gaotai**	**52.95**	**341**			⇑P	**P**	**06 59 13.2**	**+0.2**
GTA						pP	pP	06 59 21.1	-2.7
GTA						sP	pwP	06 59 24.5	-3.7
GTA						pmax	pmax		
	comp=Z,14nm,0.8s								
GTA						pmax	pmax		
	comp=Z,130nm,8.0s								
GTA						LR	LR		
	comp=N,240nm,18.2s								
GTA						LR	LR		
	comp=E,250nm,17.8s								
GTA						LR	LR		
	comp=Z,190nm,19.6s								
XLT	**XiLinHaoTe**	**54.35**	**357**			⇑*i*P	**P**	**06 59 22.4**	**-0.7**
XLT						pP	pP	06 59 33.2	-0.8
XLT						sP	sP	06 59 37.2	-1.2
XLT						pmax	pmax		
	comp=Z,17nm,0.9s								
XLT						pmax	pmax		
	comp=Z,130nm,9.5s								
MDJ	**Mudanjiang**	**55.80**	**9**			P	**P**	**06 59 32.8**	**-0.7**
MDJ	**Mudanjiang**	**55.80**	**9**			P	**P**	**06 59 32.8**	**-0.7**
MDJ						pP	pP	06 59 44.4	0.0
MDJ						pmax	pmax		
	comp=Z,18nm,0.6s								
MDJ						pmax	pmax		
	comp=Z,82nm,4.9s								
MDJ						LR	LR		
	comp=Z,370nm,19.9s								
USA0B	**Ussuriysk Arra**	**55.81**	**11**			P	**P**	**06 59 32.7**	**-0

comp=Z,2.1nm,0.6s
YKA **Yellowknife Ar** 115.61 25 PKP **PKPdf** 07 08 40.1 +2.2
comp=Z,0.3nm,0.6s,baz=298,slow=1.5,SNR=2.2
TORD **Torodi Ar. Bea** 118.90 279 PKP **PKiKP** 07 08 48.3 +2.6
comp=Z,0.8nm,0.8s,baz=72,slow=1.5,SNR=3.6
TORD **Torodi Ar. Bea** 118.90 279 **PKPdf** 07 08 43.6 -2.0
LPAZ **La Paz** 152.28 165 PKPab **PKPab** 07 10 06.8 +3.4
comp=Z,1.0nm,0.5s,baz=156,slow=3.7,SNR=7.0

*UPA **09** 06:59:30.1±2.1, 7°.43N×81°.44W, h0km±8km, MW4.0*
*UCR **09** 06:59:51.5±1.9, 8°.32N×82°.41W, h20km±22km, MW3.7*
ISC 09 06:59:28.9±1.7,**7°.39N**±0°.07×**81°.44W**±0°.03,**h1**km±12km,
n44,σ1°**28**/63,**9C-17D,Panama**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GMAL	**Guarumal, Vera**	**0.42**	**28**	⇑*iP*		**Pb**	**06 59 39.1**	**-0.1**
GMAL				*i* S		**Sb**	**06 59 45.8**	**-0.3**
MARI3	**Mariato, Verag**	**0.51**	**60**	⇓*iP*		**Pb**	**06 59 40.8**	**+0.1**
MARI3				*eS*		**Sb**	**06 59 49.6**	**+1.0**
CACAO	**El Cacao, Vera**	**0.57**	**94**	⇑*iP*		**Pb**	**06 59 42.5**	**+0.8**
RSUS3	**Rio de Jesus,**	**0.65**	**25**	⇑*iP*		**Pb**	**06 59 42.5**	**-0.5**
RSUS3				*i* S		**Sb**	**06 59 51.6**	**-1.0**
STIA3	**Santiago, Vera**	**0.84**	**33**	⇓*eP*		**Pg**	**06 59 46.0**	**+1.0**
STIA3				*i* S		**Sb**	**06 59 57.8**	**-0.4**
PESE3	**Pese, Herrera**	**0.96**	**58**	⇓*iP*		**Pg**	**06 59 48.2**	**+0.9**
PESE3				*i* S		**Sb**	**07 00 01.5**	**-0.2**
CHIT3	**Chitre**	**1.16**	**61**	⇓*eP*		**Pn**	**06 59 52.2**	**-0.1**
AZU	**Azuero**	**1.22**	**71**	⇓*eP*		**Pn**	**06 59 52.3**	**-0.8**
AZU				*eS*		**Sn**	**07 00 10.4**	**+0.1**
CHIR3	**Chiriqui UPA,**	**1.34**	**318**	⇓*iP*		**Pn**	**06 59 53.7**	**-1.0**
PEDA3	**Pedasi**	**1.41**	**84**	*eP*		**Pn**	**06 59 53.9**	**-1.8**
DVD	**David**	**1.45**	**316**	*eP*		**Pn**	**06 59 55.1**	**-1.1**
DVD				*eS*		**Sg**	**07 00 17.1**	**+1.7**
BAGA3	**Bagala, Chiriq**	**1.52**	**315**	⇓*iP*		**Pn**	**06 59 56.7**	**-0.6**
PNME	**Penonome**	**1.55**	**45**	⇑*eP*		**Pn**	**06 59 57.8**	**+0.1**
PNME				*i* S		**Sb**	**07 00 18.2**	**-0.3**
PTPM	**Petroterminale**	**1.64**	**300**	⇓*eP*		**Pn**	**06 59 59.2**	**+0.2**
PTPM				*eS*		**Sg**	**07 00 21.7**	**0.0**
LESP3	**La Esperanza,**	**1.68**	**307**	⇓*eP*		**Pn**	**06 59 58.7**	**-0.8**
CHGR2	**Aguacate**	**1.69**	**336**	⇓*eP*		**Pn**	**06 59 59.3**	**-0.4**
CHGR2				*eS*		**Sg**	**07 00 23.2**	**0.0**
BCO2	**Palmira**	**1.71**	**321**	⇓*iP*		**Pn**	**06 59 59.6**	**-0.4**
BCO2				*eS*		**Sg**	**07 00 25.0**	**+1.2**
LNBQ3	**Los Naranjos,**	**1.71**	**324**	⇓*eP*		**Pn**	**06 59 59.3**	**-0.8**
LNBQ3				*i* S		**Sg**	**07 00 23.3**	**-0.6**
VTON	**El Valle, Cocl**	**1.79**	**47**	⇑*eP*		**Pb**	**07 00 01.7**	**-0.8**
VTON				*eS*		**Sg**	**07 00 27.0**	**+0.7**
CDITO	**Canoas**	**1.85**	**310**	*eP*		**Pn**	**07 00 02.3**	**+0.5**
CDITO	**Canoas**	**1.85**	**310**	⇓*eP*		**Pn**	**07 00 02.3**	**+0.5**
BRU2	**Volcan**	**1.87**	**318**	⇓*iP*		**Pn**	**07 00 02.4**	**+0.2**
BRU2				*eS*		**Sg**	**07 00 29.0**	**0.0**
MLIR3	**Monte Lirio, C**	**1.96**	**315**	⇓*eP*		**Pn**	**07 00 04.8**	**-0.6**
EDSV	**San Vito**	**2.08**	**313**	*eP*		**Pb**	**07 00 06.2**	**-1.4**
ZANG	**Zanguenga, Cho**	**2.20**	**45**	⇑*eP*		**Pn**	**07 00 07.0**	**+0.4**
ZANG				*eS*		**Sb**	**07 00 35.7**	**-1.6**
CNI2	**El Empalme, Bo**	**2.27**	**333**	⇓*eP*		**Pb**	**07 00 09.9**	**-0.8**
CNI2				*eS*		**Sb**	**07 00 39.6**	**+0.3**
POTG	**Potrero Grande**	**2.35**	**315**	*eP*		**Pn**	**07 00 09.2**	**+0.5**
BCIP	**Isla Barro Col**	**2.37**	**42**	⇑*eP*		**Pb**	**07 00 11.4**	**-1.0**
BCIP				*eS*		**Sb**	**07 00 41.0**	**-1.2**
MLIR	**Monte Lirio**	**2.42**	**40**	*eP*		**Pn**	**07 00 09.3**	**-0.3**
GAMB1	**Gamboa**	**2.42**	**45**	⇓*eP*		**Pb**	**07 00 13.8**	**+0.4**
UPA	**Univ. de Panam**	**2.46**	**50**	⇑*eP*		**Pn**	**07 00 11.2**	**+1.0**
UPA				*eS*		**Sb**	**07 00 44.3**	**-0.4**
FRIJ	**El Hiral**	**2.48**	**43**	⇑*eP*		**Pb**	**07 00 13.2**	**-1.2**
SABA3	**Sabanitas, Col**	**2.53**	**40**	*eP*		**Pg**	**07 00 16.9**	**-0.6**
EDPN	**Palmar Norte**	**2.54**	**308**	*eP*		**Pn**	**07 00 12.4**	**+1.1**
DRK0	**Durika**	**2.58**	**316**	*eP*		**Pn**	**07 00 13.7**	**+1.7**
CHPO	**Chepo, Panama**	**2.90**	**52**	*eP*		**Pb**	**07 00 19.2**	**-2.2**
CDM	**Cerro de Muert**	**3.15**	**313**	*eP*		**Pn**	**07 00 21.7**	**+1.6**
BATAN	**Batan**	**3.31**	**325**	*eP*		**Pn**	**07 00 24.0**	**+2.2**
RIMA	**Rio Macho**	**3.37**	**315**	*eP*		**Pn**	**07 00 24.6**	**+1.7**
VTCV	**VTCV, Calle Va**	**3.43**	**319**	*eP*		**Pb**	**07 00 27.2**	**-3.4**
UPD2	**Meteti**	**3.58**	**71**	*eP*		**Pb**	**07 00 31.0**	**-2.0**
JACO	**JACO, Garabito**	**3.91**	**306**	*eP*		**Pb**	**07 00 35.5**	**-3.1**
JTS	**Las Juntas de**	**4.52**	**310**	*eP*		**Pn**	**07 00 42.4**	**+3.9**
JTS	**Las Juntas de**	**4.52**	**310**	*eP*		**Pn**	**07 00 39.8**	**+1.3**
JTS				*eS*		**Sn**	**07 01 33.6**	**+1.9**

*IDC **09** 07:09:50.4±2.2, 10°.64S×118°.85E, h0km, mb4.0/3, mbtmp3.9/6, ML3.7/3, MS4.0/1, Error ellipse: s-maj=68.6km s-min=24.6km az=48.0*
*DJA **09** 07:09:59.7±0.7, 10°.S±5°×11°9E±°, h40km±15km, M4.2/13, mb4.4/6, mB4.9/1, MLv4.2/13, Mw(mB)4.2/1*
ISC 09 07:09:56.2±0.9,**10°.62S**±0°.07×**119°.19E**±0°.05,**h41**km,**n20,**
σ2°**75**/28,**mb4.2/3,Sumba region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**0.99**	**12**	P		**Pn**	**07 10 13.2**	**-0.5**
WBSI				S		**Sn**	**07 10 24.5**	**-2.1**
BASI	**Baing, Sumba**	**1.42**	**74**	P		**Pn**	**07 10 21.4**	**+1.8**
BASI				S		**Sn**	**07 10 38.2**	**+1.0**
PLAI	**Plampang**	**2.26**	**322**	P		**Pn**	**07 10 33.2**	**+2.1**
PLAI				S		**Sn**	**07 10 54.4**	**-3.4**
EDFI	**Ende, Flores**	**3.09**	**53**	P		**Pn**	**07 10 42.9**	**+0.3**
EDFI				S		**Sn**	**07 11 17.5**	**-0.9**
MMRI	**Maumere**	**3.60**	**57**	P		**Pn**	**07 10 50.9**	**+1.4**
MMRI				S		**Sn**	**07 11 31.1**	**+0.4**
DNP	**Denpasar**	**4.37**	**296**	P		**Pn**	**07 11 01.2**	**+1.1**
BATI	**Baumata**	**4.42**	**85**	Pn		**Pn**	**07 11 03.6**	**+2.8**
	13nm,0.3s,baz=263,slow=1.4,SNR=4.6							
BATI				Sn		**Sn**	**07 11 53.2**	**+2.0**
	27nm,0.3s,baz=30,slow=20,SNR=10.0 35nm,0.3s							
BATI	**Baumata**	**4.42**	**85**	P		**Pn**	**07 11 03.8**	**+2.9**
BSSI	**Bau Bau, Buton**	**4.63**	**16**	P		**Pn**	**07 11 03.3**	**-0.4**
SRBI	**Singaraja**	**4.66**	**302**	P		**Pn**	**07 11 07.8**	**+3.7**
SOEI	**Soe**	**5.07**	**81**	P		**Pn**	**07 11 10.2**	**+0.3**
	0.4nm65nm,0.8s							
BKSI	**Bulukumba**	**5.34**	**10**	P		**Pn**	**07 11 15.8**	**+2.3**
	0.2nm53nm,0.5s							
KAPI	**Kappang**	**5.60**	**6**	Pn		**Pn**	**07 11 19.4**	**+2.4**
	1.2nm,0.3s,baz=149,slow=12,SNR=3.2							
KAPI				Sn		**Sn**	**07 12 22.2**	**+2.1**
	7.2nm,0.3s,baz=83,slow=23,SNR=12							
BNSI	**Bone**	**6.25**	**8**	P		**Pn**	**07 11 27.9**	**+2.0**
WRA	**Warramunga Arr**	**17.29**	**124**	P		**Pn**	**07 13 55.2**	**+0.4**
	0.2nm,0.3s,baz=299,slow=13,SNR=11							
WRA				S		**Sn**	**07 16 58.4**	**-8.0**
	0.4nm,0.7s,baz=288,slow=24,SNR=2.0 0.7nm,0.5s							
ASAR	**Alice Springs**	**19.11**	**135**	P		**P**	**07 14 18.4**	**+2.5**
	0.2nm,0.3s,baz=302,slow=10,SNR=19							
ASAR				S		**Sn**	**07 17 44.2**	**-6.0**
	0.6nm,0.8s,baz=309,slow=22,SNR=4.0 1.0nm,0.5s							
PSI	**Prapat**	**24.18**	**302**	LR		LR	07 25 05.1	
	comp=Z,301nm,18.1s,baz=318,slow=38							
KSRS	**Korea Array**	**48.52**	**9**	P		**P**	**07 18 35.2**	**+0.1**
	0.4nm,0.3s,baz=194,slow=9.7,SNR=1.9 0.4nm,0.3s							
SONM	**Songino Array**	**59.30**	**350**	P		**P**	**07 19 54.1**	**+0.2**
	1.5nm,0.7s,baz=169,slow=8.8,SNR=5.3 1.5nm,0.7s							
ZALV	**Zalesovo Beam**	**70.61**	**339**	P		**P**	**07 21 06.5**	**-0.6**
	1.0nm,0.4s,baz=144,slow=7.6,SNR=2.8 1.0nm,0.4s							

*IDC **09** 07:13:34.9±1.2, 35°.08N×80°.92E, h0km, mb3.6/6, mbtmp3.6/10, ML3.0/3, MS3.5/7, Error ellipse: s-maj=31.5km s-min=17.4km az=67.0*
ISC 09 07:13:37.9±1.0,**35°.1N**±0°.1×**81°.1E**±0°.2,**h16**km,**n15,**
σ1°**17**/11,**mb3.6**/6,**MS3.5**/5,**Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**9.07**	**328**	Pn		**Pn**	**07 15 48.9**	**+0.7**
	0.5nm,0.3s,baz=190,slow=18,SNR=1.5							
AAK				Pg			07 16 20.5	
	0.6nm,0.3s,baz=212,slow=9.5,SNR=1.8							
AAK				Lg		Lg	07 18 21.9	
	0.5nm,0.3s,baz=289,slow=18,SNR=1.6							
AAK				LR		LR	07 18 50.6	
	comp=Z,150nm,18.0s,baz=334,slow=35 1.5nm,0.3s							
MKAR	**Makanchi Array**	**11.68**	**4**	Pn		**Pn**	**07 16 23.6**	**-0.1**
	0.2nm,0.3s,baz=183,slow=12,SNR=9.1							
MKAR				Sn		**Sn**	**07 18 33.4**	**-0.4**
	0.1nm,0.3s,baz=183,slow=23,SNR=2.6 0.6nm,0.5s							
KURBB	**Kurchatov Arra**	**15.58**	**354**	Pn		**Pn**	**07 17 14.6**	**-2.1**
	baz=173,slow=12,SNR=8.2							
KURBB				Lg		Lg	07 21 51.5	
	0.1nm,0.3s,baz=68,slow=27,SNR=3.3 1.2nm,1.0s							
GEYT	**Alibeck**	**18.65**	**285**	LR		LR	07 26 27.4	
	comp=Z,126nm,19.8s,baz=107,slow=42							
ZALV	**Zalesovo Beam**	**18.98**	**7**	P		**Pn**	**07 17 58.7**	**-0.5**
	0.7nm,0.3s,baz=190,slow=7.5,SNR=5.3							
SONM	**Songino Array**	**22.70**	**48**	P		**P**	**07 18 40.3**	**+1.4**
	1.0nm,0.8s,baz=242,slow=12,SNR=6.4 1.0nm,0.8s							
CMAR	**Chiang Mai Arr**	**22.97**	**132**	P		**P**	**07 18 40.4**	**-1.4**
	1.8nm,0.4s,baz=313,slow=11,SNR=8.8							
CMAR				LR		LR	07 27 45.2	
	comp=Z,74nm,19.1s,baz=175,slow=37 1.8nm,0.4s							
PALK	**Pallekele**	**27.74**	**181**	LR		LR	07 30 22.1	
	comp=Z,140nm,20.1s,baz=118,slow=36							
GNI	**Garni**	**29.06**	**291**	LR		LR	07 34 18.2	
	comp=Z,61nm,20.3s,baz=82,slow=43							
EIL	**Elat**	**39.05**	**275**	LR		LR	07 40 28.1	
	comp=Z,106nm,18.9s,baz=90,slow=41							
JCJ	**Chichijima**	**52.22**	**81**	LR		LR	07 47 52.2	
	comp=Z,60nm,19.7s,baz=120,slow=39							
ILAR	**Eielson Array**	**73.59**	**19**	P		**P**	**07 25 09.8**	**-0.1**
	0.4nm,0.8s,baz=304,slow=4.9,SNR=4.7 0.4nm,0.8s							
TORD	**Torodi Ar. Bea**	**73.94**	**275**	P		**P**	**07 25 12.0**	**-0.7**
	0.5nm,0.8s,baz=58,slow=3.6,SNR=2.2 0.5nm,0.8s							
ASAR	**Alice Springs**	**76.98**	**131**	P		**P**	**07 25 31.0**	**+1.1**
	0.4nm,0.8s,baz=330,slow=6.4,SNR=2.4 0.4nm,0.8s							
YKA	**Yellowknife Ar**	**81.88**	**7**	P		**P**	**07 25 56.2**	**+0.1**
	0.6nm,0.8s,baz=339,slow=4.5,SNR=4.3 0.6nm,0.8s							

*IDC **09** 07:23:42.5±0.5, 10°.33S×119°.22E, h0km, mb4.7/20, mbtmp4.8/22, ML4.7/2, MS4.0/29, Error ellipse: s-maj=18.6km s-min=13.0km az=65.0*
*DJA **09** 07:23:47.3±0.4, 11°.S±1°×11°9E±°, h35km±5km, M5.0/48, mB5.5/19, mb5.1/48, MLv5.3/26, Mw(mB)5.0/19*
*NEIC **09** 07:23:47.2±1.9, 10°.54S±0°.06×119°.12E±0°.06, h38km±6km, mb4.9/57, Error ellipse: s-maj=9.1km s-min=8.0km az=183.0*
ISC 09 07:23:46.5±0.4,**10°.55S**±0°.04×**119°.16E**±0°.03,**h32**km±2km,
h32km:**pP-P,n323,**σ1°**48**/325,**mb5.0**/77,**MS4.0**/25,**2C-2D,**
Sumba region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**0.93**	**14**	P		**Pn**	**07 24 03.2**	**-0.2**
WBSI				S		**Sb**	**07 24 16.2**	**0.0**
BASI	**Baing, Sumba**	**1.44**	**77**	P		**Pb**	**07 24 12.0**	**-0.7**
BASI				S		**Sb**	**07 24 31.0**	**+0.4**
PLAI	**Plampang**	**2.18**	**321**	P		**Pn**	**07 24 21.9**	**+1.3**
PLAI				S		**Sn**	**07 24 47.4**	**+0.8**
PLAI	**Plampang**	**2.18**	**321**	P		**Pn**	**07 24 22.3**	**+1.7**
EDFI	**Ende, Flores**	**3.07**	**55**	P		**Pn**	**07 24 33.3**	**+0.4**
EDFI				S		**Sn**	**07 25 09.7**	**+1.0**
MMRI	**Maumere**	**3.58**	**58**	Pn		**Pn**	**07 24 41.3**	**+1.3**
MMRI				Sn		**Sn**	**07 25 21.2**	**0.0**
MMRI	**Maumere**	**3.58**	**58**	P		**Pn**	**07 24 40.7**	**+0.8**
MMRI				S		**Sn**	**07 25 20.7**	**-0.5**
MMRI	**Maumere**	**3.58**	**58**	P		**Pn**	**07 24 41.2**	**+1.3**
DNP	**Denpasar**	**4.31**	**295**	P		**Pn**	**07 24 50.2**	**+0.3**
DNP				S		**Sn**	**07 25 40.6**	**+1.4**
IGBI	**Denpasar**	**4.31**	**293**	P		**Pn**	**07 24 48.7**	**-1.2**
IGBI				S		**Sn**	**07 25 37.9**	**-1.2**
BATI	**Baumata**	**4.45**	**86**	Pn		**Pn**	**07 24 53.8**	**+1.9**
	182nm,0.3s,baz=305,slow=1.9,SNR=55							
BATI				Sn		**Sn**	**07 25 44.0**	**+1.5**
	161nm,0.3s,baz=21,slow=22,SNR=17							
BATI	**Baumata**	**4.45**	**86**	P		**Pn**	**07 24 53.6**	**+1.8**
BATI				S		**Sn**	**07 25 44.1**	**+1.5**
BSSI	**Bau Bau, Buton**	**4.57**	**17**	P		**Pn**	**07 24 55.4**	**+1.9**
BSSI				S		**Sn**	**07 25 48.9**	**+3.3**
SRBI	**Singaraja**	**4.60**	**302**	P		**Pn**	**07 24 54.5**	**+0.7**
SRBI				S		**Sn**	**07 25 45.0**	**-1.2**
SOEI	**Soe**	**5.09**	**82**			**Pn**	**07 25 02.1**	**+1.3**
SOEI	**Soe**	**5.09**	**82**	P		**Pn**	**07 25 03.0**	**+2.2**
	4.1nm5μm318nm,0.6s							
SOEI				S		**Sn**	**07 25 58.8**	**+0.2**
	4.1nm5μm318nm,0.6s							
SOEI	**Soe**	**5.09**	**82**	P		**Pn**	**07 25 03.3**	**+2.5**
BKSI	**Bulukumba**	**5.28**	**11**	P		**Pn**	**07 25 05.3**	**+2.1**
	4.3nm11μm835nm,0.6s							
BKSI				S		**Sn**	**07 26 05.6**	**+2.6**
	4.3nm11μm835nm,0.6s							
JAGI	**Jajag, Banyuwa**	**5.35**	**292**	Pn		**Pn**	**07 25 03.5**	**-0.7**
JAGI	**Jajag, Banyuwa**	**5.35**	**292**	P		**Pn**	**07 25 03.1**	**-1.1**
	4.3nm8μm598nm,0.5s							
JAGI				S		**Sn**	**07 26 01.5**	**-3.3**
	4.3nm8μm598nm,0.5s							
JAGI	**Jajag, Banyuwa**	**5.35**	**292**	P		**Pn**	**07 25 04.1**	**-0.1**
KAPI	**Kappang**	**5.53**	**6**	Pn		**Pn**	**07 25 07.5**	**+0.9**
	31nm,0.3s,baz=159,slow=8.1,SNR=45							
KAPI				Sn		**Sn**	**07 26 10.6**	**+1.4**
	138nm,0.3s,baz=76,slow=23,SNR=17							
KAPI				LR		LR	07 27 31.3	
	comp=Z,2μm,21.1s,baz=186,slow=43							
KAPI	**Kappang**	**5.53**	**6**	Pn		**Pn**	**07 25 08.2**	**+1.6**
KAPI	**Kappang**	**5.53**	**6**	P		**Pn**	**07 25 10.0**	**+3.3**
ABJI	**Asem Bagus**	**5.58**	**299**	P		**Pn**	**07 25 06.8**	**-0.5**
	2.1nm323nm,0.8s							
ABJI				S		**Sn**	**07 26 10.9**	**+0.6**
	2.1nm323nm,0.8s							
BBSI	**Bau Bau**	**6.06**	**34**	P		**Pn**	**07 25 15.0**	**+1.1**
	0.1nm36nm,0.7s							
GMJI	**Gumukmas**	**6.07**	**291**	P		**Pn**	**07 25 12.6**	**-1.5**
	2.1nm5μm296nm,0.8s							
BLJI	**Banyuglugur**	**6.16**	**296**	P		**Pn**	**07 25 15.7**	**+0.4**
	2.0nm3μm129nm,0.6s							
BNSI	**Bone**	**6.18**	**9**	P		**Pn**	**07 25 19.7**	**+4.1**
	1.7nm3μm329nm,0.7s							
KMMI	**Kalianget**	**6.20**	**304**	P		**Pn**	**07 25 16.4**	**+0.6**
	0.6nm153nm,1.2s							
SPSI	**Sidrap Palu**	**6.57**	**5**	P		**Pn**	**07 25 24.7**	**+3.8**
	0.7nm2μm196nm,0.8s							
TTSI	**Tana Toraja**	**7.48**	**5**	P		**Pn**	**07 25 37.9**	**+4.4**
	0.5nm102nm,0.8s							
GRJI	**Gresik**	**7.52**	**298**	P		**Pn**	**07 25 37.4**	**+3.4**
	0.6nm189nm,0.6s							
PWJI	**Pagerwojo**	**7.68**	**288**	P		**Pn**	**07 25 39.4**	**+3.2**
	1.4nm119nm,0.6s							
PCJI	**Pacitan**	**8.21**	**286**	P		**Pn**	**07 25 42.6**	**-0.9**
	183nm,1.0s							
BBKI	**Banjar Baru**	**8.24**	**328**	P		**Pn**	**07 25 48.6**	**+4.7**
	2μm59nm,0.7s							
WOJI	**Wonogiri, Jawa**	**8.56**	**288**	P		**Pn**	**07 25 50.3**	**+2.0**
	100nm,1.6s							
UGM	**Wanagama**	**8.91**	**286**	Pn		**Pn**	**07 25 52.0**	**-1.2**
UGM	**Wanagama**	**8.91**	**286**	P		**Pn**	**07 25 57.4**	**+4.2**
	353nm,1.7s							
APSI	**Ampana**	**9.89**	**15**	P		**Pn**	**07 26 07.9**	**+1.4**
	42nm,0.8s							
MBWA	**Marble Bar**	**10.57**	**177**	Pn		**Pn**	**07 26 13.3**	**-2.5**
MBWA	**Marble Bar**	**10.57**	**177**	P		**Pn**	**07 26 14.2**	**-1.6**
KPJI	**Karang Pucung**	**10.59**	**287**	P		**Pn**	**07 26 15.4**	**-0.8**
	50nm,1.1s							
KNRA	**Kununurra**	**10.65**	**120**	Pn		**Pn**	**07 26 16.1**	**-0.9**
KNRA	**Kununurra**	**10.65**	**120**	P		**Pn**	**07 26 16.3**	**-0.7**
MPSI	**Mapaga**	**10.84**	**4**	P		**Pn**	**07 26 22.0**	**+2.5**
	18nm,1.2s							
CMJI	**Cimerak**	**10.92**	**284**	P		**Pn**	**07 26 23.9**	**+3.2**
	227nm,0.7s							
PSA00	**Pilbara Seismi**	**10.98**	**177**	Pn		**Pn**	**07 26 19.9**	**-1.6**
PSA00	**Pilbara Seismi**	**10.98**	**177**			**Pn**	**07 26 18.5**	**-3.0**
PSA00	**Pilbara Seismi**	**10.98**	**177**	P		**Pn**	**07 26 20.0**	**-1.6**
MRSI	**Marisa**	**11.30**	**14**	P		Pn	07 26 31.5	+5.7
	648nm36nm,1.1s							
MTN	**Manton Dam**	**11.95**	**102**	Pn		**Pn**	**07 26 33.2**	**-1.6**
MTN	**Manton Dam**	**11.95**	**102**	P		**Pn**	**07 26 33.4**	**-1.4**
LEM	**Lembang**	**11.99**	**287**	Pn		**Pn**	**07 26 39.1**	**+3.6**
	3.0nm,0.3s,baz=17,slow=22,SNR=2.4							
LEM				Sn		**Sn**	**07 28 50.2**	**+2.0**
	7.1nm,0.3s,baz=336,slow=20,SNR=2.2							
LEM				LR		LR	07 31 51.5	
	comp=Z,439nm,18.7s,baz=96,slow=41							
CBJI	**Citeko**	**12.84**	**288**	P		**Pn**	**07 26 46.1**	**-0.9**
	102nm,0.7s							

GIRL	**Giralia**	**12.92**	**201**	Pn		**Pn**	**07 26 46.9**	**-1.1**
STKI	**Sintang**	**13.02**	**324**	P		**P**	**07 26 56.8**	**-2.6**
KDU	**Kakadu**	**13.22**	**101**	P		**Pn**	**07 26 53.0**	**+0.9**
TNTI	**Ternate**	**13.90**	**36**	Pn		**Pn**	**07 27 02.3**	**+0.9**
SBUM	**Sibu**	**14.64**	**331**			**Pn**	**07 27 12.4**	**+0.8**
KSM	**Kuching**	**14.84**	**323**			**Pn**	**07 27 14.5**	**+0.3**
FAKI	**Fak Fak**	**15.04**	**61**	P		**Pn**	**07 27 15.0**	**-1.9**
	702nm42nm,0.8s							
KLI	**Kotabumi**	**15.25**	**291**	P		**Pn**	**07 27 21.5**	**+1.8**
	12μm120nm,0.8s							
KASI	**Kota Agung**	**15.35**	**288**	P		**P**	**07 27 24.0**	**-1.3**
	176nm,1.0s							
SWI	**Sorong**	**15.40**	**52**	P		**Pn**	**07 27 19.4**	**-2.3**
	51nm,0.7s							
SIJI	**Sorong**	**15.40**	**52**	Pn		**Pn**	**07 27 18.2**	**-3.4**
	4.3nm,0.3s,baz=20,slow=22,SNR=6.9							
SIJI				Sn		**Sn**	**07 30 12.9**	**+1.5**
	1.6nm,0.3s,baz=17,slow=19,SNR=2.2							
SIJI				LR		LR	07 33 56.7	
	comp=Z,538nm,19.6s,baz=130,slow=40 31nm,0.7s							
MYLDM	**Lahad Datu**	**15.64**	**358**	Pn		**Pn**	**07 27 23.9**	**-0.8**
LWLI	**Liwa**	**15.93**	**289**	P		**P**	**07 27 32.8**	**+0.9**
	8μm139nm,0.7s							
MDSI	**Maura Dua**	**16.02**	**291**	P		**P**	**07 27 33.1**	**+0.3**
	15nm,0.9s							
WRKA	**Warakurna**	**16.82**	**150**	P		**Pn**	**07 27 38.9**	**-0.9**
WRA	**Warramunga Arr**	**17.36**	**124**	P		**Pn**	**07 27 44.0**	**-2.5**
	10nm,0.8s,baz=297,slow=15,SNR=64							
WRA				S		Sn	07 30 43.5	-15
	3.2nm,0.5s,baz=288,slow=24,SNR=4.0							
WRA				LR		LR	07 34 56.2	
	comp=Z,537nm,19.1s,baz=280,slow=39							
WRA	**Warramunga Arr**	**17.36**	**124**	P		**Pn**	**07 27 44.3**	**-2.2**
DSRI	**Dabo**	**17.61**	**304**	P		**P**	**07 27 52.4**	**+2.0**
	24nm,1.2s							
DAV	**Davao City (W)**	**18.63**	**20**	LR		LR	07 36 59.4	
	comp=Z,246nm,18.0s,baz=152,slow=43							
MORW	**Morawa**	**18.66**	**189**	P		**Pn**	**07 28 03.1**	**+0.8**
AS31	**Alice Springs**	**19.18**	**135**	P		**Pn**	**07 28 09.2**	**+0.4**
ASAR	**Alice Springs**	**19.18**	**135**	P		**Pn**	**07 28 08.6**	**-0.2**
	1.9nm,0.3s,baz=324,slow=14,SNR=166							
ASAR				S		**Sn**	**07 31 33.0**	**-10**
	6.7nm,0.9s,baz=313,slow=24,SNR=5.1							
ASAR				LR		LR	07 35 22.5	
	comp=Z,457nm,21.9s,baz=310,slow=36 36nm,0.8s							
ASAR	**Alice Springs**	**19.18**	**135**	P		**Pn**	**07 28 09.2**	**+0.4**
KRJI	**Kerinci**	**19.48**	**294**	P		**Pn**	**07 28 13.3**	**+0.9**
	65μm681nm,0.6s							
BLDU	**Ballidu**	**20.10**	**186**	P		**P**	**07 28 18.2**	**+0.6**
BKNI	**Bangkinang**	**21.01**	**300**	P		**P**	**07 28 26.1**	**-1.5**
BKNI	**Bangkinang**	**21.01**	**300**	P		**P**	**07 28 29.8**	**+2.2**
	88nm,0.6s							
BKNI	**Bangkinang**	**21.01**	**300**	P		**P**	**07 28 29.6**	**+2.0**
	146nm,1.4s							
PPI	**Padang Panjang**	**21.17**	**297**	P		**P**	**07 28 29.2**	**-0.2**
	35nm,1.1s							
SMPI	**Sarmi**	**21.20**	**68**	P		**P**	**07 28 33.3**	**+3.7**
	2μm18nm,1.0s							
FORT	**Forrest**	**21.77**	**159**	P		**P**	**07 28

JHS IAmb IAmb 07 32 16.9
comp=Z,16nm,1.3s
HNS HongShan 47.87 355 ⇓P **P** **07 32 20.7 -0.8**
HNS pmax pmax
comp=Z,8.0nm,0.8s
LSA Lhasa 48.26 327 P **P** **07 32 24.1 -1.1**
LSA IAmb IAmb 07 32 26.8
comp=Z,16nm,1.1s
ODAN Odare 48.31 321 *eP* **P** **07 32 25.5 +0.1**
KSAR Wonju Array Be 48.43 9 P **P** **07 32 25.0 -0.8**
KSRS Korea Array 48.45 9 P **P** **07 32 25.2 -0.8**
comp=Z,9.3nm,0.7s,baz=189,slow=8.2,SNR=42
comp=Z,9.3nm,0.7s
TAPN Taplejung 48.47 322 *eP* **P** **07 32 26.2 -0.5**
comp=Z,36nm,0.8s
LZH Lanzhou 48.58 343 *eP* **P** **07 32 27.3 +0.1**
LZH pP pwP 07 32 40.7 +0.7
LZH sP sP 07 32 49.0 +10
LZH pmax pmax
comp=Z,20nm,1.3s
LZH pmax pmax
comp=Z,85nm,6.2s
LZH LR LR
comp=N,380nm,15.0s
LZH LR LR
comp=E,420nm,14.7s
LZH LR LR
comp=Z,340nm,17.5s
RAMN Ramite 48.87 320 *eP* **P** **07 32 29.2 -0.5**
comp=Z,24nm,0.5s
JGF Kuroka 49.02 20 P **P** **07 32 29.5 -1.0**
JIRN Jiri 49.62 321 *eP* **P** **07 32 34.5 -1.1**
comp=Z,24nm,0.5s
GUN Gumba 50.00 321 *eP* **P** **07 32 37.4 -1.0**
comp=Z,33nm,0.6s
PKI Pulchoki 50.05 320 *eP* **P** **07 32 37.3 -1.5**
comp=Z,14nm,0.5s
PKIN Phulchoki 50.06 320 *eP* **P** **07 32 36.9 -2.0**
comp=Z,17nm,0.6s
MJAR Matsushiro Arr 50.16 20 P **P** **07 32 37.1 -2.0**
comp=Z,3.1nm,0.6s,baz=193,slow=7.6,SNR=7.6
comp=Z,3.1nm,0.6s
DMN Daman 50.27 320 *eP* **P** **07 32 39.5 -0.9**
comp=Z,23nm,0.6s
BJT Baijiatuan 50.38 357 P **P** **07 32 39.6 -1.1**
BJT IAmb IAmb 07 32 40.9
comp=Z,9.4nm,0.7s
BJT Baijiatuan 50.38 357 P **P** **07 32 40.0 -0.7**
BJI Beijing 50.41 357 P **P** **07 32 40.1 -0.7**
BJI PcP **PcP** **07 34 01.0 +2.0**
BJI pmax pmax
comp=Z,13nm,0.7s
GKN Gorkha 50.84 320 *eP* **P** **07 32 43.4 -1.2**
comp=Z,33nm,0.5s
KOLN Koldanda 51.35 319 *eP* **P** **07 32 46.8 -1.7**
JSD Sado 51.53 19 P **P** **07 32 48.2 -1.2**
HHC Hu-ho-hao-te 51.62 353 *eP* **P** **07 32 51.7 +1.6**
HHC pmax pmax
comp=Z,45nm,0.8s
HHC pmax pmax
comp=Z,300nm,5.6s
GOMU GeErMu 51.85 335 P **P** **07 32 52.4 +0.1**
GOMU pP pP 07 32 56.7 -4.2
GOMU sP sP 07 32 57.9 -6.3
GOMU PP **PP** **07 34 47.2 -3.2**
GOMU pmax pmax
comp=Z,4.0nm,0.7s
GOMU pmax pmax
comp=Z,120nm,6.3s
GTA Gaotai 52.86 341 ⇓P **P** **07 32 59.8 +0.4**
GTA pP pP 07 33 07.6 -0.4
GTA sP pwP 07 33 13.1 +0.8
GTA pmax pmax
comp=Z,4.0nm,1.2s
GTA pmax pmax
comp=Z,47nm,5.1s
GTA LR LR
comp=N,120nm,18.5s
GTA LR LR
comp=E,550nm,16.7s
GTA LR LR
comp=Z,140nm,17.1s
XLT XiLinHaoTe 54.26 357 *eP* **P** **07 33 08.8 -0.7**
XLT pP pP 07 33 19.7 +1.6
XLT sP pwP 07 33 25.0 +2.5
XLT pmax pmax
comp=Z,22nm,0.7s
XLT pmax pmax
comp=Z,190nm,6.1s
CN2 Changchun 54.39 6 *eP* **P** **07 33 08.5 -1.9**
CN2 *ePP* pP 07 33 20.5 +1.4
CN2 pmax pmax
comp=Z,10.0nm,0.6s
JTM Tenmabayashi 54.94 20 P **P** **07 33 13.4 -1.0**
OUZ Omahuta 55.07 126 P **P** **07 33 13.0 -2.5**
RPZ Rata Peaks 55.58 136 LR LR 07 57 28.5
comp=Z,322nm,19.7s,baz=284,slow=36
MDJ Mudanjiang 55.71 9 P **P** **07 33 18.6 -1.3**
MDJ Mudanjiang 55.71 9 P **P** **07 33 19.3 -0.6**
MDJ pmax pmax
comp=Z,29nm,0.7s
MDJ pmax pmax
comp=Z,180nm,4.7s
MDJ Mudanjiang 55.71 9 P **P** **07 33 18.9 -1.0**
MDJ sP **sP** **07 33 30.9 -1.2**
USA0B Ussuriysk Arra 55.72 11 P **P** **07 33 19.1 -0.8**
USA0B IAmb IAmb 07 33 19.8
comp=Z,14nm,0.8s
USRK Ussuriysk Ar. 55.72 11 P **P** **07 33 19.1 -0.9**
comp=Z,18nm,0.8s,baz=191,slow=6.4,SNR=27
comp=Z,18nm,0.8s
URZ Urewera 58.47 128 LR LR 07 59 39.7
comp=Z,130nm,18.6s,baz=29,slow=37
ULN Ulaanbaatar 59.14 351 P **P** **07 33 44.4 +0.1**
ULN IAmb IAmb 07 33 44.6
comp=Z,8.7nm,0.8s
ULN Ulaanbaatar 59.14 351 P **P** **07 33 44.0 -0.3**
ULN pP **pP** **07 33 52.5 -0.5**
ULN sP **sP** **07 33 55.8 -0.4**
SONM Songino Array 59.22 350 P **P** **07 33 44.5 -0.3**
comp=Z,17nm,0.6s,baz=167,slow=8.5,SNR=72
SONM LR LR 08 00 25.5
comp=Z,96nm,21.0s,baz=176,slow=37
comp=Z,17nm,0.6s
SONM Songino Array 59.22 350 P **P** **07 33 44.8 0.0**
KLR Kul'dur 60.54 9 LR LR 08 02 02.9
comp=Z,48nm,18.8s,baz=231,slow=38
WMQ Urumqi 61.21 334 *eP* **P** **07 33 58.6 +0.2**
WMQ pP pwP 07 34 11.8 +0.4
WMQ PcP **PcP** **07 34 45.4 +4.5**
WMQ pmax pmax
comp=Z,33nm,0.9s
KSH Kashi 63.94 324 P **P** **07 34 16.8 0.0**
KSH sP pwP 07 34 34.6 +4.8
KSH pmax pmax
comp=Z,24nm,0.6s
PRZ Przheval'sk 64.62 328 P **P** **07 34 20.5 -0.8**
PRZ IAmb IAmb 07 34 34.7
comp=Z,9.7nm,0.8s
KDJ Kajisay 65.02 327 P **P** **07 34 24.4 +0.5**
KDJ IAmb IAmb 07 34 25.7
comp=Z,5.7nm,0.6s
KBL Kabul 65.30 316 P **P** **07 34 25.4 -0.5**
KBL IAmb IAmb 07 34 26.0
comp=Z,13nm,0.7s
MK31 Makanchi Array 65.90 333 P **P** **07 34 28.7 -0.5**
MK31 IAmb IAmb 07 34 30.3
comp=Z,5.8nm,0.6s
MKAR Makanchi Array 65.90 333 P **P** **07 34 28.9 -0.4**
comp=Z,11nm,0.6s,baz=152,slow=6.8,SNR=141
comp=Z,11nm,0.6s
BOOM Boomskoye usch 65.94 326 P **P** **07 34 29.5 -0.3**
BOOM IAmb IAmb 07 34 30.6
comp=Z,9.1nm,0.6s
MAKZ Makanchi 66.05 333 P **P** **07 34 30.1 -0.1**
MAKZ IAmb IAmb 07 34 30.8
comp=Z,4.1nm,0.7s
MAKZ Makanchi 66.05 333 P **P** **07 34 29.8 -0.4**
TKM2 Tokmak 2 66.42 326 P **P** **07 34 32.2 -0.7**
SNR=11
UCH Uchtor 66.56 325 P **P** **07 34 34.2 +0.1**
SNR=6.2
KBK Karagaybulak 66.60 326 P **P** **07 34 34.3 +0.3**
SNR=6.3
AAK Ala-Archa 66.84 326 P **P** **07 34 36.2 +0.7**
SNR=5.0
AAK Ala-Archa 66.84 326 LR LR 08 07 26.7
comp=Z,83nm,20.9s,baz=140,slow=39
AAK Ala-Archa 66.84 326 P **P** **07 34 35.5 0.0**
AAK IAmb IAmb 07 34 36.6
comp=Z,8.7nm,0.6s
AAK Ala-Archa 66.84 326 P **P** **07 34 35.6 0.0**
AAK sP **sP** **07 34 48.0 +0.3**
AML Almayashu 66.95 325 P **P** **07 34 37.0 +0.4**
SNR=7.0
GAR Garm 67.03 320 P **P** **07 34 36.2 -0.5**
USP Ospenovka 67.25 326 P **P** **07 34 37.6 -0.3**
SNR=7.0
EKS2 Erkin-Say 67.25 325 P **P** **07 34 38.9 +0.7**
SNR=6.4
CHGR Chuyangaron 67.56 320 P **P** **07 34 39.0 -1.1**
MAW Mawson 67.84 200 LR LR 08 03 56.6
comp=Z,75nm,18.6s,baz=50,slow=36
WSAR Wadi Sarin 68.06 300 LR LR 08 05 20.8
comp=Z,114nm,19.5s,baz=144,slow=37
KK31 Karatay Array 69.39 324 P **P** **07 34 50.9 -0.4**
KKAR Karatay Array 69.39 324 P **P** **07 34 50.5 -0.8**
KKAR Karatay Array 69.39 324 P **P** **07 34 50.6 -0.7**
KKAR IAmb IAmb 07 35 15.1
comp=Z,2.1nm,0.7s
KURK Kurchatov 70.44 334 P **P** **07 34 57.2 -0.4**
KURK IAmb IAmb 07 35 02.2
comp=Z,11nm,1.1s
KURK Kurchatov 70.44 334 P **P** **07 34 57.1 -0.6**
VNDA Vanda 70.44 171 P **P** **07 34 59.0 +1.6**
comp=Z,3.7nm,1.0s,baz=293,slow=5.1,SNR=11
comp=Z,3.7nm,1.0s
VNDA Vanda 70.44 171 P **P** **07 34 58.9 +1.6**
VNDA IAmb IAmb 07 34 59.8
comp=Z,9.9nm,1.3s
VNDA Vanda 70.44 171 P **P** **07 34 59.2 +1.9**
ZAA0 Zalesovo Array 70.53 339 P **P** **07 34 57.0 -1.1**
ZAA0 IAmb IAmb 07 35 11.1
comp=Z,7.7nm,0.7s
ZALV Zalesovo Beam 70.53 339 P **P** **07 34 56.8 -1.3**
comp=Z,9.4nm,0.4s,baz=135,slow=5.0,SNR=42
comp=Z,9.4nm,0.4s
ZALV Zalesovo Beam 70.53 339 P **P** **07 34 57.0 -1.1**
PETK Petropavlovsk- 71.42 23 P **P** **07 35 03.2 -0.3**
comp=Z,4.4nm,0.5s,baz=222,slow=2.5,SNR=12
comp=Z,4.4nm,0.5s
PETK Petropavlovsk- 71.42 23 P **P** **07 35 02.9 -0.7**
SBA Scott Base 71.45 171 P **P** **07 35 05.7 +2.4**
SBA pP **pP** **07 35 13.6 +1.3**
SBA sP **pwP** **07 35 19.4 +2.8**
MA2 Magadan 74.36 16 P **P** **07 35 20.9 +0.1**
MA2 IAmb IAmb 07 35 22.0
comp=Z,12nm,0.7s
GEYT Alibeck 74.62 314 P **P** **07 35 23.6 +0.7**
comp=Z,1.8nm,0.4s,baz=215,slow=13,SNR=3.6
comp=Z,1.8nm,0.4s
BRVK Borovoye 75.80 332 P **P** **07 35 28.8 -0.4**
SEY Seymchan 77.61 15 P **P** **07 35 39.2 0.0**
comp=Z,8.8nm,0.6s,baz=214,slow=7.0,SNR=8.2
comp=Z,8.8nm,0.6s
RAR Rarotonga 78.00 110 LR LR 08 09 54.1
comp=Z,130nm,18.7s,baz=110,slow=36
ABKAR Akbulak array 78.91 325 P **P** **07 35 46.1 -0.6**
ABKAR Akbulak array 78.91 325 P **P** **07 35 46.1 -0.6**
ABKAR IAmb IAmb 07 35 47.0
comp=Z,5.6nm,0.6s
ATD Arta Tunnel 78.93 284 LR LR 08 08 26.2
comp=Z,54nm,18.6s,baz=346,slow=34
QSPA South Pole Qui 79.46 180 P **P** **07 35 51.7 +2.0**
QSPA IAmb IAmb 07 35 52.4
comp=Z,13nm,1.1s
RAYN Ar Rayn 79.52 296 P **P** **07 35 49.7 -1.1**
KMBO Kilima Mbogo 81.84 270 P **P** **07 36 05.0 +1.4**
comp=Z,2.4nm,0.6s,baz=45,slow=4.9,SNR=5.8
KMBO LR LR 08 06 16.6
comp=Z,66nm,20.7s,baz=90,slow=31
comp=Z,2.4nm,0.6s
TIXI Tiksi 82.27 3 LR LR 08 15 37.6
comp=Z,56nm,20.0s,baz=182,slow=38
TIXI Tiksi 82.27 3 P **P** **07 36 03.4 -0.9**
TIXI IAmb IAmb 07 36 04.2
comp=Z,5.7nm,0.8s
NRIK Noril'sk 82.69 349 P **P** **07 36 06.4 -0.1**
comp=Z,3.7nm,0.6s,baz=119,slow=5.5,SNR=5.6
comp=Z,3.7nm,0.6s
NRIK Noril'sk 82.69 349 P **P** **07 36 06.4 -0.1**
ARU Arti 83.28 331 P **P** **07 36 08.6 -1.3**
ARU IAmb IAmb 07 36 37.9
comp=Z,4.5nm,0.6s
KBZ Khabaz 87.47 315 P **P** **07 36 31.8 +0.8**
comp=Z,2.8nm,0.9s,baz=229,slow=6.1,SNR=4.5
comp=Z,2.8nm,0.9s
MBAR Mbarara 88.34 270 LR LR 08 11 10.3
comp=Z,63nm,19.7s,baz=142,slow=32
KIRV Kirov 88.66 331 LR LR 08 20 39.9
comp=Z,70nm,20.2s,baz=127,slow=39
LBTB Lobatse 88.79 245 LR LR 08 12 45.1
comp=Z,92nm,18.1s,baz=105,slow=33
SNAA Sanae 89.56 196 PcP **PcP** **07 36 42.7 +0.8**
SNAA Sanae 89.56 196 LR LR 08 12 27.2
comp=Z,114nm,21.6s,baz=48,slow=33
SNAA Sanae 89.56 196 P **P** **07 36 41.5 +0.9**
EIL Elat 90.18 300 LR LR 08 20 53.1
comp=Z,81nm,18.7s,baz=88,slow=38
MMAI Mount Meron Ar 90.50 303 LR LR 08 23 01.1
comp=Z,77nm,19.5s,baz=256,slow=39
BELA Belgrano 2 90.50 185 P **P** **07 36 46.0 +1.2**
BELA IAmb IAmb 07 36 47.5
comp=Z,7.5nm,0.9s
VNA2 Neumayer--Watz 91.19 195 PcP **PcP** **07 36 50.7 +1.6**
baz=115,slow=4.0
VNA3 Neumayer Olymp 91.57 195 PcP **PcP** **07 36 52.2 +1.5**
VNA1 Neumayer--Stat 91.59 195 PcP **PcP** **07 36 52.6 +1.8**
BRTR Keskin Array B 93.24 310 P **P** **07 36 58.5 +0.2**
comp=Z,1.8nm,0.8s,baz=138,slow=7.6,SNR=3.8
comp=Z,1.8nm,0.8s
N16K Nishlik Lake 95.21 30 P **P** **07 37 07.3 +0.6**
baz=258
P16K Nushagak River 95.30 31 P **P** **07 37 07.9 +0.8**
baz=258
O16K Kokwok River B 95.36 30 P **P** **07 37 07.8 +0.5**
baz=258
O17K Koliganek Bris 95.89 30 P **P** **07 37 10.1 +0.3**
baz=259
N19K Bonanza Creek 97.35 30 P **P** **07 37 16.5 0.0**
baz=262
L19K White Mountain 97.37 28 P Pdif 07 37 17.1 +0.5
baz=262
L20K Farewell, AK 97.87 28 P Pdif 07 37 19.4 +0.6
baz=262
K20K Telida 97.90 27 P Pdif 07 37 19.4 +0.5
baz=262
J20K Nowinta River 97.97 26 P Pdif 07 37 19.4 +0.2
baz=262
AKASG Malin Array Be 98.03 320 LR LR 08 28 18.6
comp=Z,41nm,19.8s,baz=54,slow=40
M20K Styx River 98.14 29 P Pdif 07 37 20.2 +0.1
baz=263
CHUM Lake Minchumin 98.74 27 P **P** **07 37 22.5 0.0**
baz=264
CAST Castle Rocks 98.79 27 P **P** **07 37 22.6 -0.2**
baz=264
SKT Skwentna 98.90 29 P **P** **07 37 22.6 -0.8**
baz=264
SUA Susitna One 99.22 29 P **Pdif** **07 37 24.6 -0.4**
baz=265
BPAW Bear Paw Mtn. 99.34 26 P **Pdif** **07 37 25.5 +0.2**
baz=265
MLY Manley 99.52 25 P **Pdif** **07 37 25.1 -1.0**
baz=266
TRF Thorofare Moun 99.60 27 P **Pdif** **07 37 26.0 -0.6**
baz=266
RC01 Rabbit Creek A 99.68 30 P **Pdif** **07 37 26.2 -0.6**
baz=266
SEW Seward 99.75 31 P **Pdif** **07 37 26.6 -0.6**
baz=266
H23K Yukon River 100.07 25 P **Pdif** **07 37 28.4 -0.1**
baz=267
I23K Minto, Yukon-K 100.11 25 P **Pdif** **07 37 29.0 +0.3**
baz=267
KNK Knik Glacier 100.32 29 P **Pdif** **07 37 30.2 +0.5**
baz=267
WAT1 Susitna Watana 100.35 28 P **Pdif** **07 37 29.7 -0.2**
baz=267
SML Sawmill 100.40 29 P **Pdif** **07 37 29.7 -0.4**
baz=267
FINES FINESS Array B 100.65 331 P **Pdif** **07 37 31.1 0.0**
comp=Z,6.0nm,1.2s,baz=103,slow=6.1,SNR=1.4
M23K Glacier View 100.69 29 P **Pdif** **07 37 31.5 +0.2**
baz=268
WAT6 Susitna Watana 100.71 28 P **Pdif** **07 37 31.2 -0.4**
baz=268
HDA Harding Lake 101.12 26 P **Pdif** **07 37 32.6 -0.6**
baz=269
M24K Tolsona, Glenn 101.43 29 P **Pdif** **07 37 34.2 -0.5**
baz=269
K24K Donnelly Dome 101.62 27 P **Pdif** **07 37 35.3 -0.2**
baz=270
PAX Paxson 101.76 28 P **Pdif** **07 37 36.3 +0.2**
baz=270
RIDG Independent Ri 102.04 27 P **Pdif** **07 37 37.1 -0.2**
baz=271
SCRK Sand Creek 102.42 27 P **Pdif** **07 37 38.8 -0.3**
baz=272
J26L Joseph Creek 102.58 26 P **Pdif** **07 37 39.5 -0.3**
baz=272
L26K Log Cabin Wild 102.73 28 P **Pdif** **07 37 40.4 0.0**
baz=272
K27K Chicken 103.25 27 P **Pdif** **07 37 43.0 +0.3**
baz=273
L27K Beaver Creek, 103.42 28 P **Pdif** **07 37 43.6 +0.1**
baz=273
O30N Mendenhall 106.34 30 P **PKiKP** **07 42 07.7 0.0**
baz=278
PLBC Pleasant Camp 106.37 31 P **PKiKP** **07 42 07.4 -0.3**
baz=277
YKA Yellowknife Ar 115.53 25 PKP **PKPdf** **07 42 25.4 +0.5**
comp=Z,0.9nm,0.7s,baz=308,slow=1.7,SNR=10
J05D Fort Rock, OR 118.62 46 P **PKPdf** **07 42 30.8 -0.9**
baz=283
TORD Torodi Ar. Bea 118.87 279 PKP **PKiKP** **07 42 33.8 +1.0**
comp=Z,2.6nm,0.8s,baz=82,slow=1.5,SNR=12
NVAR Mina Array Bea 121.87 51 PKP **PKiKP** **07 42 40.0 +1.6**
comp=Z,0.3nm,0.5s,baz=264,slow=4.0,SNR=4.9
ESDC Sonseca Array 122.03 310 PKP **PKiKP** **07 42 39.5 +1.1**
comp=Z,0.7nm,0.8s,baz=15,slow=5.3,SNR=4.9
MSO Missoula 122.52 41 P **PKPdf** **07 42 38.8 -0.3**
baz=291
CIS Catalina Islan 122.73 57 P **PKPdf** **07 42 39.1 -0.6**
baz=279
MPMC Manual Prospec 123.00 54 P **PKPdf** **07 42 39.9 -0.5**
baz=282
BOZ Bozeman (W) 124.47 41 P **PKPdf** **07 42 42.6 -0.2**
baz=293
DBIC Dimbokro 124.57 271 PKP **PKiKP** **07 42 44.9 +0.9**
comp=Z,4.4nm,0.9s,baz=29,slow=4.5,SNR=4.0
IKP In-Ko-Pah, Jac 124.77 58 P **PKPdf** **07 42 43.0 -0.7**
baz=280
LAO LASA Array 127.40 38 P **PKiKP** **07 42 49.0 +0.1**
baz=298
RSSD Black Hills 129.98 40 P **PKiKP** **07 42 54.0 -0.4**
baz=299
EYMN Ely 134.70 29 P **PKiKP** **07 43 02.9 -0.5**
baz=315
ECSD EROS Data Cent 134.72 37 P **PKPdf** **07 43 02.9 +0.7**
baz=306
TXAR Lajitas Array 135.92 59 PKhKP PKPpre 07 42 54.3
comp=Z,0.2nm,0.6s,baz=263,slow=3.1,SNR=3.8
TXAR PKP **PKPdf** **07 43 05.0 0.0**
comp=Z,0.7nm,0.8s,baz=270,slow=2.5,SNR=5.9
CPUP Pala Florida 143.19 185 PKhKP PKPpre 07 43 16.1
comp=Z,3.8nm,1.0s,baz=63,slow=4.5,SNR=3.3
P49A Miami Univ. Ec 144.16 32 P PKPbc 07 43 18.6 +1.0
baz=317
ACSO Alum Creek Sta 144.52 30 P **PKPdf** **07 43 19.6 -0.5**
baz=320
M53A WI Miller and 144.62 26 P **PKPdf** **07 43 19.7 -0.6**
baz=325
OXF Oxford 144.66 43 P **PKPdf** **07 43 20.4 -0.1**
baz=306,SNR=16
WVT Waverly 144.70 39 P **PKPdf** **07 43 20.5 0.0**
baz=310
VBMS Vicksburg 145.15 47 P **PKPdf** **07 43 23.2 +1.7**
baz=302
O53A New Philadelph 145.34 28 P **PKPdf** **07 43 22.2 +0.6**
baz=323,SNR=11
P52A Corning 145.40 30 P **PKPab** **07 43 22.0 +0.3**
baz=321,SNR=9.2
BINY Binghamton 145.79 20 P **PKPab** **07 43 23.6 +0.5**
baz=333,SNR=8.0
MCWV Mont Chateau 146.44 27 P **PKPab** **07 43 25.8 +0.2**
baz=325,SNR=9.6
SSPA Standing Stone 146.45 24 P **PKPab** **07 43 25.7 +0.1**
baz=329
L61B Northampton 146.57 16 P **PKPab** **07 43 26.7 +0.7**
baz=339
HRV Adam Dziewonsk 146.81 15 P **PKPab** **07 43 26.9 0.0**
baz=341
TZTN Tazewell 146.96 35 P **PKPab** **07 43 27.6 -0.2**
baz=316,SNR=8.5
LRAL Lakeview Retre 147.15 43 P **PKPab** **07 43 28.1 -0.5**
baz=307
PAL Palisades 147.54 19 P **PKPab** **07 43 29.1 -0.8**
baz=336
BLA Blacksburg 148.12 30 P **PKPbc** **07 43 30.3 +0.8**
baz=322
BRAL Brewton 148.20 46 P **PKiKP** **07 43 31.7 +0.1**
baz=305
CBN Corbin Frederi 148.72 26 P **PKiKP** **07 43 32.1 -0.4**
baz=328
GOGA Godfrey 149.19 39 P **PKiKP** **07 43 33.9 +0.3**
baz=313
KMSC Kings Mountain 149.22 34 P **PKiKP** **07 43 33.6 0.0**
baz=318
TIGA Tifton 150.40 42 P **PKiKP** **07 43 37.1 +0.9**
baz=310
CNNC Cliffs of the 150.93 30 P **PKiKP** **07 43 38.1 +1.0**
baz=324
BDFB Brasilia 151.04 206 PKPbc **PKiKP** **07 43 39.1 +1.1**
comp=Z,5.0nm,0.7s,baz=166,slow=4.4,SNR=6.2
NHSC New Hope 151.36 35 P **PKiKP** **07 43 39.3 +1.3**
baz=317
LPAZ La Paz 152.38 165 PKPbc **PKiKP** **07 43 42.7 +1.3**
comp=Z,3.4nm,1.0s,baz=65,slow=2.0,SNR=9.0
LPAZ PKPab **sPKPbc** **07 43 53.4 -0.3**
comp=Z,4.1nm,0.8s,baz=115,slow=13,SNR=6.6

*IDC **09** 07:34:42.0±1.0, 48°.00N×27°.67W, h0km, mb3.7/12, mbtmp3.7/14, ML4.0/2, MS3.5/22, Error ellipse: s-maj=32.7km s-min=17.8km az=178.0*
*NEIC **09** 07:34:44.1±1.4, 47°.97N±0°.10×27°.58W±0°.05, h10km±1km, mb4.6/19, Error ellipse: s-maj=16.8km s-min=4.0km az=164.0*
ISC 09 07:34:43.5±0.6, **47°.95N**±0°.09×**27°.60W**±0°.08, **h10**km, **n56, s0°73/37, mb4.2/22, MS3.5/20, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ROSA	**Rosais**	**9.24**	**183**	Pn	**Pn**	**07 36 57.0**	**+0.2**
COI	**Coimbra**	**15.78**	**112**	Pn	**Pn**	**07 38 25.4**	**-0.3**
COI				IAmb	IAmb	07 38 33.6	
	comp=Z,14nm,0.5s						
EKA	**Eskdalemuir Ar**	**16.81**	**55**	Pn	**Pn**	**07 38 39.0**	**+0.2**
	baz=249,slow=7.3						
EKA				LR	LR	07 43 51.3	
	comp=Z,119nm,18.2s,baz=288,slow=33						
	comp=Z,2.4nm,0.9s						
ESDC	**Sonseca Array**	**18.90**	**107**	P	**Pn**	**07 39 05.8**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=296,slow=13,SNR=9.6						
ESDC				LR	LR	07 44 57.0	
	comp=Z,77nm,19.3s,baz=273,slow=32						
	comp=Z,0.8nm,0.5s						
ESDC	**Sonseca Array**	**18.90**	**107**	P	**P**	**07 39 03.4**	**-0.8**
AVE	**Averroes**	**21.09**	**127**	P	**P**	**07 39 28.2**	**+0.2**
AVE				IAmb	IAmb	07 39 29.9	
	comp=Z,81nm,1.4s						
SCO	**Scoresbysund**	**22.77**	**5**	P	**P**	**07 39 46.7**	**+1.1**
MDT	**Midelt**	**23.01**	**123**	LR	LR	07 45 54.8	
	comp=Z,50nm,19.9s,baz=308,slow=29						
SCHQ	**Schefferville**	**25.17**	**301**	LR	LR	07 49 13.5	
	comp=Z,76nm,18.0s,baz=110,slow=35						
DAVOX	**Davos/Dischmat**	**25.25**	**79**	LR	LR	07 48 51.7	
	comp=Z,101nm,22.0s,baz=260,slow=34						
NBO00	**NORSAR Array S**	**25.41**	**45**	P	**P**	**07 40 11.6**	**+0.7**
NBO00				IAmb	IAmb	07 40 16.3	
	comp=Z,24nm,1.2s						
NOA	**NORSAR Array B**	**25.62**	**45**	P	**P**	**07 40 13.1**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=256,slow=9.5,SNR=2.8						
NOA				LR	LR	07 48 43.9	
	comp=Z,37nm,19.7s,baz=75,slow=33						
	comp=Z,0.7nm,0.7s						
GERES	**GERESS Array B**	**27.20**	**73**	P	**P**	**07 40 27.2**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=276,slow=14,SNR=4.9						

GERES				LR		LR		07 50 45.6	
	comp=Z,109nm,19.1s,baz=282,slow=35 comp=Z,0.6nm,0.6s								
STAL	**STALIGIAL**	**27.27**	**78**	P		**P**		**07 40 27.6**	**-0.2**
VRAC	**Vranov**	**28.93**	**71**	LR		LR		07 51 09.8	
	comp=Z,107nm,21.4s,baz=275,slow=34								
CUC	**Castrocucco**	**31.89**	**88**	P		**P**		**07 41 08.9**	**0.0**
ARCES	**ARCESS Array B**	**33.39**	**31**	P		**P**		**07 41 20.6**	**-1.1**
	comp=Z,2.3nm,0.8s,baz=264,slow=8.2,SNR=4.8 comp=Z,2.3nm,0.8s								
SADO	**Sadowa**	**35.18**	**284**	LR		LR		07 55 09.9	
	comp=Z,62nm,19.2s,baz=46,slow=35								
MLR	**Muntele Rosu**	**36.18**	**73**	LR		LR		07 57 13.0	
	comp=Z,99nm,19.3s,baz=3.0,slow=37								
AKASG	**Malin Array Be**	**36.36**	**64**	P		**P**		**07 41 46.9**	**-0.6**
AKASG	comp=Z,0.2nm,0.3s,baz=279,slow=8.5,SNR=4.1				LR		LR	07 56 30.1	
	comp=Z,98nm,20.1s,baz=240,slow=36 comp=Z,0.2nm,0.3s								
TORD	**Torodi Ar. Bea**	**42.40**	**135**	LR		LR		07 59 30.3	
	comp=Z,91nm,18.3s,baz=232,slow=35								
TKL	**Tuckaleechee C**	**42.75**	**275**	LR		LR		07 59 18.5	
	comp=Z,61nm,21.1s,baz=49,slow=35								
SJG	**San Juan**	**43.22**	**240**	LR		LR		07 57 56.7	
	comp=Z,25nm,19.6s,baz=106,slow=32								
ULM	**Lac du Bonnet**	**43.34**	**300**	LR		LR		07 59 09.5	
	comp=Z,72nm,18.1s,baz=42,slow=34								
BRTR	**Keskin Array B**	**43.88**	**77**	LR		LR		08 01 08.1	
	comp=Z,49nm,19.5s,baz=316,slow=36								
BELG	**Belogornoye**	**46.36**	**55**	LR		LR		08 03 37.1	
	comp=Z,42nm,18.8s,baz=147,slow=37								
CCM	**Cathedral Cave**	**46.37**	**282**			**P**		**07 43 09.1**	**-0.7**
CCM	comp=Z,4.1nm,0.7s				IAmb		IAmb	07 43 11.5	
Y45A	**Yeager Farm, C**	**47.65**	**276**	P		**P**		**07 43 20.2**	**+0.4**
KBZ	**Khabaz**	**47.73**	**67**	LR		LR		08 03 19.0	
	comp=Z,49nm,20.4s,baz=115,slow=36								
YKA	**Yellowknife Ar**	**47.78**	**321**	P		**P**		**07 43 19.6**	**-0.8**
	comp=Z,0.5nm,0.8s,baz=72,slow=7.9,SNR=3.6 comp=Z,0.5nm,0.8s								
146A	**Union**	**48.06**	**275**	P		**P**		**07 43 24.3**	**+1.3**
INK	**Inuvik**	**51.78**	**333**	LR		LR		08 05 37.5	
	comp=Z,43nm,18.4s,baz=42,slow=36								
PDAR	**Pinedale Array**	**55.24**	**297**	P		**P**		**07 44 16.2**	**-0.7**
	comp=Z,0.4nm,0.6s,baz=61,slow=7.3,SNR=4.0								
PDAR					LR		LR	08 07 26.9	
	comp=Z,34nm,18.0s,baz=314,slow=36 comp=Z,0.4nm,0.6s								
H10N2	**ASCENSION HYDR**	**56.73**	**164**	T		T		08 45 20.7	
	baz=350,slow=75,SNR=8.7								
H10N3	**ASCENSION HYDR**	**56.74**	**164**	T		T		08 45 20.0	
	baz=350,slow=75,SNR=10.0								
H10N1	**ASCENSION HYDR**	**56.75**	**164**	T		T		08 45 20.4	
	baz=350,slow=75,SNR=9.4								
ILAR	**Eielson Array**	**58.14**	**334**	P		**P**		**07 44 36.5**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=42,slow=5.8,SNR=6.3 comp=Z,0.6nm,0.7s								
MDM	**Murphy Dome**	**58.39**	**335**	P		**P**		**07 44 39.2**	**+0.5**
MDM	comp=Z,4.1nm,1.1s				IAmb		IAmb	07 44 40.3	
HDA	**Harding Lake**	**58.42**	**334**	P		**P**		**07 44 38.7**	**-0.1**
HDA	comp=Z,2.9nm,0.8s				IAmb		IAmb	07 44 40.3	
WRH	**Wood River Hil**	**58.71**	**334**	P		**P**		**07 44 40.9**	**+0.1**
WRH	comp=Z,2.5nm,0.8s				IAmb		IAmb	07 44 41.9	
NEA2	**Nenana**	**58.91**	**335**	P		**P**		**07 44 42.3**	**+0.1**
NEA2	comp=Z,3.8nm,0.9s				IAmb		IAmb	07 44 43.8	
IMAR	**Indian Mountai**	**59.13**	**337**	P		**P**		**07 44 43.5**	**-0.2**
H21K	**Melozitna Rive**	**59.13**	**337**	P		**P**		**07 44 44.5**	**+0.8**
H21K	comp=Z,3.3nm,0.9s				IAmb		IAmb	07 44 45.6	
MSU	**Marysvale**	**59.41**	**295**	P		**P**		**07 44 47.0**	**+0.6**
MVU	**Marysvale**	**59.44**	**295**	P		**P**		**07 44 47.3**	**+0.7**
MVU	comp=Z,27nm,1.2s				IAmb		IAmb	07 44 49.2	
ELK	**Elko**	**59.85**	**299**	LR		LR		08 09 07.0	
	comp=Z,81nm,18.2s,baz=256,slow=34								
TX32	**Lajitas Array**	**59.86**	**281**	P		**P**		**07 44 48.8**	**-0.6**
TX32	comp=Z,4.6nm,1.5s				IAmb		IAmb	07 45 04.6	
TXAR	**Lajitas Array**	**59.86**	**281**	P		**P**		**07 44 48.9**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=73,slow=7.2,SNR=11 comp=Z,0.8nm,0.7s								
ZALV	**Zalesovo Beam**	**63.54**	**38**	P		**P**		**07 45 15.3**	**+1.6**
	comp=Z,0.6nm,0.4s,baz=331,slow=8.0,SNR=2.4 comp=Z,0.6nm,0.4s								
MKAR	**Makanchi Array**	**67.62**	**44**	P		**P**		**07 45 39.6**	**-0.6**
	comp=Z,1.0nm,1.0s,baz=302,slow=3.2,SNR=4.0 comp=Z,1.0nm,1.0s								
LPIG	**La Paz**	**67.76**	**282**	LR		LR		08 13 50.7	
	comp=Z,42nm,18.3s,baz=208,slow=35								
SEY	**Seymchan**	**69.47**	**0**	P		**P**		**07 45 52.4**	**+0.9**
	comp=Z,0.5nm,0.4s,baz=64,slow=6.7,SNR=3.6 comp=Z,0.5nm,0.4s								
SONM	**Songino Array**	**76.56**	**30**	P		**P**		**07 46 34.0**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=327,slow=7.6,SNR=2.8 comp=Z,0.6nm,0.6s								
WRA	**Warramunga Arr**	**148.46**	**34**	PKPbc		**PKPbc**		**07 54 29.1**	**-1.4**
	comp=Z,1.0nm,1.0s,baz=336,slow=2.8,SNR=9.7								
VNDA	**Vanda**	**150.09**	**184**	PKPbc		**PKPbc**		**07 54 33.2**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=260,slow=4.2,SNR=3.8								
ASAR	**Alice Springs**	**151.65**	**38**	PKPbc		**PKPbc**		**07 54 37.3**	**-0.8**
	comp=Z,0.8nm,0.7s,baz=340,slow=1.5,SNR=9.1								

IDC 09 07:45:43.2±3.5, 5.77S×152.66E, h0km, mb3.4/2, mbtmp3.4/2, MS3.3/1, Error ellipse: s-maj=86.0km s-min=25.8km az=97.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.59**	**336**	Pn	Pg	07 46 14.0	+0.2
	162nm,0.3s,baz=224,slow=1.3,SNR=33						
KRVT				Sn	Sn	07 46 30.2	-3.8
	76nm,0.3s,baz=213,slow=16,SNR=5.9						
GUMO	**Guam**	**20.74**	**338**	LR	LR	07 57 18.1	
	comp=Z,84nm,18.8s,baz=126,slow=34						
WRA	**Warramunga Arr**	**22.71**	**230**	P	P	07 50 45.6	-1.3
	0.6nm,0.6s,baz=53,slow=10.0,SNR=12 0.6nm,0.6s						
ASAR	**Alice Springs**	**25.35**	**224**	P	P	07 51 13.5	+1.3
	0.7nm,0.6s,baz=58,slow=8.7,SNR=13 0.7nm,0.6s						
TORD	**Torodi Ar. Bea**	**150.47**	**286**	PKPbc	PKPbc	08 05 36.1	-1.9
	0.3nm,0.6s,baz=34,slow=2.2,SNR=1.7						

IDC 09 07:54:20.0±1.2, 12.57N×145.45E, h0km, mb3.6/4, mbtmp3.6/4, MS3.1/1, Error ellipse: s-maj=40.0km s-min=17.4km az=83.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.16**	**331**	Pn	Pn	07 54 44.3	+0.8
	55nm,0.3s,baz=11,slow=7.5,SNR=38						
GUMO				Sn	Sb	07 54 59.3	+0.7
	226nm,0.3s,baz=341,slow=22,SNR=12						
DAV	**Davao City (W)**	**20.32**	**256**	LR	LR	08 08 14.1	
	comp=Z,47nm,19.1s,baz=168,slow=41						
WRA	**Warramunga Arr**	**34.11**	**199**	P	P	08 01 06.2	-0.4
	1.6nm,0.8s,baz=22,slow=9.9,SNR=14 1.6nm,0.8s						
ASAR	**Alice Springs**	**37.74**	**197**	P	P	08 01 38.0	+0.2
	0.3nm,0.6s,baz=22,slow=10.0,SNR=6.7 0.3nm,0.6s						
ILAR	**Eielson Array**	**69.24**	**25**	P	P	08 05 27.9	-0.6
	0.2nm,0.6s,baz=250,slow=5.4,SNR=2.6 0.2nm,0.6s						
YKA	**Yellowknife Ar**	**83.50**	**27**	P	P	08 06 49.9	+0.4
	0.5nm,0.7s,baz=291,slow=4.8,SNR=4.9 0.5nm,0.7s						

*IDC **09** 08:02:00.6±0.9, 36.53N×98.77W, h0km, mb3.4/2, mbtmp3.5/8, ML3.3/5, MS2.2/1, Error ellipse: s-maj=13.5km s-min=9.6km az=111.0*

*NEIC **09** 08:02:02.9±0.5, 36.44N±0.01×98.77W±0.03, h5km±4km, Error ellipse: s-maj=3.5km s-min=2.1km az=81.0*

*TUL **09** 08:02:02.1±0.5, 36.45N±0.01×98.78W±0.04, h7km±4km, ML4.0, mb_Lg3.7/111(NEIC), Mwr3.4/23(SLM), Error ellipse: s-maj=4.6km s-min=2.0km az=90.0*

*ANF **09** 08:02:02.3±0.5, 36.41N×98.75W, h4km±4km, ML4.7/21, Error ellipse: s-maj=2.4km s-min=2.1km az=96.0*

*NEIC **09** 08:02:02.1, 36.45N×98.77W, h6km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=0.18; $M_{\theta\theta}$=0.66; $M_{\phi\phi}$=0.48; $M_{r\theta}$=0.44; $M_{r\phi}$=1.30; $M_{\theta\phi}$=0.33; Fault plane solution: $M_0$1.53000×10^{14} NP1:ϕ_s14.00000°, δ70.00000°, λ-169.00000°. NP2:ϕ_s280.00000°, δ80.00000°, λ-20.00000°. Principal axes: T 1.5302, Plg7.0000°, Azm328.0000°; N -0.0002, Plg68.0000°, Azm75.0000°; P -1.5300, Plg21.0000°, Azm235.0000°;*

ISC 09 08:02:02.1±1.3, 36.44N±0.03×98.71W±0.03, h6km±9km, n136, σ1$\hat{9}$16/112, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
U32A	**Winter Ranch,**	**0.24**	**255**	Pg	**Pg**	**08 02 06.4**	**-0.5**
U32A				Sg	**Sg**	**08 02 09.6**	**-0.5**
U32A	**Winter Ranch,**	**0.24**	**255**	P	**Pg**	**08 02 06.4**	**-0.5**
	baz=69,SNR=313						
U32A				S	**Sg**	**08 02 09.4**	**-0.7**
	baz=69						
OKCFA	**Oklahoma City**	**1.45**	**135**		**Pn**	**08 02 29.2**	**+0.4**
OKCFA	**Oklahoma City**	**1.45**	**135**	P	**Pn**	**08 02 29.2**	**+0.4**
	baz=314,SNR=50						
OKCFA				S	**Sn**	**08 02 49.5**	**+1.2**
	baz=314						
OKCSW	**OKLAHOMA CITY**	**1.46**	**135**		**Pn**	**08 02 29.4**	**+0.3**
FNO	**Franklin**	**1.59**	**138**		**Pn**	**08 02 31.7**	**+0.8**
WMOK	**Wichita Mounta**	**1.70**	**182**	Pn	**Pn**	**08 02 32.1**	**-0.2**
WMOK	**Wichita Mounta**	**1.70**	**182**	P	**Pn**	**08 02 32.2**	**-0.2**
	baz=0.0,SNR=211						
WMOK				S	**Sn**	**08 02 54.8**	**+0.3**
	baz=0.0						
WMOK	**Wichita Mounta**	**1.70**	**182**	P	**Pn**	**08 02 32.2**	**-0.2**
	baz=0.0,SNR=71						
WMOK				S	**Sn**	**08 02 54.6**	**+0.1**
	baz=0.0						
T35A	**Sooner Cattle**	**1.83**	**74**	Pn	**Pn**	**08 02 34.9**	**+0.7**
T35B	**Sooner Cattle**	**1.83**	**74**	P	**Pn**	**08 02 35.1**	**+0.9**
	baz=256,SNR=204						
T35B				S	**Sb**	**08 03 00.3**	**+1.0**
	baz=256						
X34A	**Smith Ranch, M**	**1.97**	**158**		**Pn**	**08 02 37.6**	**+1.5**
X34A				IAmb_Lg		08 03 07.2	
	comp=Z,374nm,0.7s						
R32A	**Long Quarter,**	**1.98**	**0**		**Pn**	**08 02 36.4**	**+0.2**
R32A				IAmb_Lg		08 03 08.0	
	comp=Z,545nm,0.8s						
R32A	**Long Quarter,**	**1.98**	**0**	P	**Pn**	**08 02 36.4**	**+0.2**
	baz=182,SNR=65						
R32A				S	**Sb**	**08 03 03.5**	**0.0**
	baz=182						
TUL1	**Leonard**	**2.42**	**102**	Pn	**Pn**	**08 02 43.0**	**+0.7**
TUL1	**Leonard**	**2.42**	**102**	P	**Pn**	**08 02 43.2**	**+0.9**
	baz=283,SNR=28						
TUL1				S	**Sn**	**08 03 14.1**	**+1.9**
	baz=283						
TUL1	**Leonard**	**2.42**	**102**	P	**Pn**	**08 02 43.0**	**+0.7**
	baz=283,SNR=45						
TUL1				S	**Sn**	**08 03 14.2**	**+1.9**
	baz=283						
CBKS	**Cedar Bluff**	**2.50**	**341**	P	**Pn**	**08 02 43.8**	**+0.3**
	baz=162,SNR=35						
CBKS				S	**Sb**	**08 03 18.9**	**+0.2**
	baz=162						
CBKS	**Cedar Bluff**	**2.50**	**341**	P	**Pn**	**08 02 43.7**	**+0.3**
	baz=162,SNR=27						
AMTX	**Amarillo**	**2.87**	**238**	Pn	**Pn**	**08 02 49.0**	**+0.4**
AMTX				IAmb_Lg		08 03 35.2	
	comp=Z,314nm,0.9s						
AMTX	**Amarillo**	**2.87**	**238**	P	**Pn**	**08 02 49.3**	**+0.7**
	baz=56,SNR=38						
AMTX				S	**Sn**	**08 03 23.5**	**0.0**
	baz=56						
AMTX	**Amarillo**	**2.87**	**238**	P	**Pn**	**08 02 48.6**	**0.0**
	baz=56						
AMTX				Sb	**Sb**	**08 03 30.5**	**+1.1**
	baz=56						
KSU1	**Kansas State U**	**3.13**	**31**	Pn	**Pn**	**08 02 53.1**	**+1.0**
KSU1				IAmb_Lg		08 03 47.8	
	comp=Z,188nm,0.8s						
KSU1	**Kansas State U**	**3.13**	**31**	P	**Pn**	**08 02 53.2**	**+1.1**
	baz=214,SNR=23						
KSU1	**Kansas State U**	**3.13**	**31**	P	**Pn**	**08 02 52.9**	**+0.9**
	baz=214						
KSU1				Sb	**Sb**	**08 03 39.5**	**+2.7**
	baz=214						
X37A	**Clayton**	**3.29**	**123**	P	**Pn**	**08 02 55.1**	**+0.9**
	baz=305,SNR=37						
Z35A	**Perchaven, San**	**3.33**	**158**	P	**Pn**	**08 02 55.8**	**+1.1**
	baz=338,SNR=22						
U38A	**Gravette**	**3.49**	**89**	IAmb_Lg		08 04 01.4	
	comp=Z,158nm,0.8s						
U38A	**Gravette**	**3.49**	**89**	P	**Pn**	**08 02 58.3**	**+1.3**
	baz=271,SNR=50						
HHAR	**Hobbs**	**3.85**	**91**	IAmb_Lg		08 04 14.5	
	comp=Z,154nm,0.8s						
ABTX	**Abilene, Hawle**	**3.88**	**192**	IAmb_Lg		08 04 09.8	
	comp=Z,124nm,1.0s						
ABTX	**Abilene, Hawle**	**3.88**	**192**	P	**Pn**	**08 03 02.3**	**-0.1**
	baz=10						
KSCO	**Kaye Shedlock'**	**4.03**	**311**	Pn	**Pn**	**08 03 04.4**	**-0.1**
KSCO	**Kaye Shedlock'**	**4.03**	**311**	P	**Pn**	**08 03 04.7**	**+0.2**
	baz=129,SNR=5.9						
KSCO	**Kaye Shedlock'**	**4.03**	**311**	P	**Pn**	**08 03 04.4**	**-0.1**
	baz=129,SNR=34						
KSCO				Sb	**Sb**	**08 04 05.8**	**+3.3**
	baz=129						
MSTX	**Muleshoe**	**4.14**	**235**	IAmb_Lg		08 04 15.3	
	comp=Z,163nm,1.0s						
MSTX	**Muleshoe**	**4.14**	**235**	P	**Pn**	**08 03 06.0**	**0.0**
	baz=52						
MSTX				Sb	**Sb**	**08 04 08.7**	**+2.9**
	baz=52						
W39A	**Magazine**	**4.19**	**106**	IAmb_Lg		08 04 25.1	
	comp=Z,139nm,0.8s						
N33B	**J Bar K, Exete**	**4.40**	**13**	P	**Pn**	**08 03 08.9**	**-0.6**
	baz=194						
Z38A	**Mt. Pleasant**	**4.41**	**135**	IAmb_Lg		08 04 29.5	
	comp=Z,119nm,0.9s						
Z38A	**Mt. Pleasant**	**4.41**	**135**	P	**Pn**	**08 03 10.2**	**+0.5**
	baz=317						
S39A	**Bolivar**	**4.49**	**72**	IAmb_Lg		08 04 26.9	
	comp=Z,161nm,0.8s						
S39A	**Bolivar**	**4.49**	**72**	P	**Pn**	**08 03 11.1**	**+0.4**
	baz=256,SNR=37						
WHTX	**Lake Whitney,**	**4.56**	**166**	P	**Pn**	**08 03 12.2**	**+0.5**
	baz=347,SNR=18						
WHTX	**Lake Whitney,**	**4.56**	**166**	P	**Pn**	**08 03 12.3**	**+0.7**
	baz=347						
MIAR	**Mount Ida**	**4.60**	**113**	Pn	**Pn**	**08 03 13.0**	**+0.8**
MIAR				IAmb_Lg		08 04 39.8	
	comp=Z,171nm,0.7s						
MIAR	**Mount Ida**	**4.60**	**113**	P	**Pn**	**08 03 13.3**	**+1.1**
	baz=296						
MIAR				S	**Sn**	**08 04 06.8**	**+0.9**
	baz=296						
T25A	**Trinidad**	**4.63**	**280**	P	**Pn**	**08 03 12.5**	**-0.3**
	baz=97						
T25A				Sb	**Sb**	**08 04 23.6**	**+3.7**
	baz=97						
U40A	**Yellville**	**4.73**	**89**	P	**Pn**	**08 03 14.9**	**+0.9**
	baz=273,SNR=8.1						
U40A				S	**Sn**	**08 04 09.6**	**+0.5**
	baz=273						
BGNE	**Belgrade**	**4.98**	**5**		**Pn**	**08 03 17.5**	**0.0**
BGNE	**Belgrade**	**4.98**	**5**	P	**Pn**	**08 03 17.5**	**0.0**
	baz=186						
BGNE	**Belgrade**	**4.98**	**5**	P	**Pn**	**08 03 17.4**	**0.0**
	baz=186						
BGNE				S	**Sn**	**08 04 15.5**	**+0.1**
	baz=186						
N35A	**Tabor**	**5.02**	**28**	P	**Pn**	**08 03 19.3**	**+1.2**
	baz=210,SNR=7.1						
237A	**Washetta, Mont**	**5.04**	**151**	IAmb_Lg		08 04 56.1	
	comp=Z,103nm,0.9s						
237A	**Washetta, Mont**	**5.04**	**151**	P	**Pn**	**08 03 18.1**	**-0.2**
	baz=332						
P38A	**Dawn**	**5.18**	**51**	IAmb_Lg		08 04 56.6	
	comp=Z,127nm,0.8s						
P38A	**Dawn**	**5.18**	**51**	P	**Pn**	**08 03 21.1**	**+1.0**
	baz=234,SNR=20						
X40A	**Basin Creek Fa**	**5.18**	**110**	IAmb_Lg		08 04 59.4	
	comp=Z,143nm,0.8s						
X40A	**Basin Creek Fa**	**5.18**	**110**	P	**Pn**	**08 03 21.3**	**+1.1**
	baz=294						
X40A				S	**Sn**	**08 04 20.6**	**+0.3**
	baz=294						
OGNE	**Ogallala**	**5.19**	**331**	IAmb_Lg		08 04 57.9	
	comp=Z,141nm,0.7s						
OGNE	**Ogallala**	**5.19**	**331**	P	**Pn**	**08 03 21.3**	**+0.8**
	baz=150,SNR=31						
OGNE	**Ogallala**	**5.19**	**331**	P	**Pn**	**08 03 20.8**	**+0.3**
	baz=150,SNR=11						
MGMO	**Mountain Grove**	**5.22**	**80**	IAmb_Lg		08 04 54.9	
	comp=Z,156nm,0.9s						
WHAR	**Wooly Hollow**	**5.34**	**101**	IAmb_Lg		08 05 01.4	
	comp=Z,127nm,0.8s						
WLAR	**White Oak Lake**	**5.35**	**119**	IAmb_Lg		08 05 08.5	
	comp=Z,130nm,0.8s						
FCAR	**Ozark Folk Cen**	**5.36**	**94**	IAmb_Lg		08 04 57.8	
	comp=Z,108nm,0.8s						
W41B	**Gary Mavity, V**	**5.40**	**102**	IAmb_Lg		08 05 05.2	
	comp=Z,122nm,0.9s						
W41B	**Gary Mavity, V**	**5.40**	**102**	P	**Pn**	**08 03 24.4**	**+1.2**
	baz=285,SNR=12						
W41B	**Gary Mavity, V**	**5.40**	**102**	P	**Pn**	**08 03 23.7**	**+0.5**
	baz=285						
UALR	**University of**	**5.45**	**106**	IAmb_Lg		08 05 05.8	
	comp=Z,97nm,0.7s						
R40A	**Maddies Statio**	**5.45**	**68**	IAmb_Lg		08 04 59.4	
	comp=Z,99nm,0.8s						
R40A	**Maddies Statio**	**5.45**	**68**	P	**Pn**	**08 03 24.9**	**+1.0**
	baz=252,SNR=15						
SDCO	**Great Sand Dun**	**5.58**	**286**	P	**Pn**	**08 03 26.8**	**+0.8**
	baz=102,SNR=12						
SDCO				Sb	**Sb**	**08 04 51.7**	**+4.2**
	baz=102						
Q24A	**Divide**	**5.69**	**298**	IAmb_Lg		08 05 02.2	
	comp=Z,120nm,0.9s						
Q24A	**Divide**	**5.69**	**298**	P	**Pn**	**08 03 27.5**	**0.0**
	baz=115						
435B	**Jarrell**	**5.72**	**170**	IAmb_Lg		08 05 12.4	
	comp=Z,182nm,0.8s						
Z41A	**Richland Creek**	**5.80**	**121**	IAmb_Lg		08 05 23.1	
	comp=Z,105nm,0.8s						
JCT	**Junction City**	**6.02**	**189**	IAmb_Lg		08 05 19.3	
	comp=Z,160nm,0.8s						
JCT	**Junction City**	**6.02**	**189**	P	**Pn**	**08 03 32.1**	**+0.4**
	baz=7.8						
P40A	**Paris**	**6.10**	**58**	IAmb_Lg		08 05 20.3	
	comp=Z,132nm,0.7s						
LCAR	**Lake Charles**	**6.12**	**91**	IAmb_Lg		08 05 19.2	
	comp=Z,100nm,0.7s						
CCM	**Cathedral Cave**	**6.17**	**73**	IAmb_Lg		08 05 21.7	
	comp=Z,141nm,0.8s						
CCM	**Cathedral Cave**	**6.17**	**73**	P	**Pn**	**08 03 34.4**	**+0.6**
	baz=257						
K31A	**O'Neill**	**6.17**	**360**	P	**Pn**	**08 03 33.9**	**0.0**
	baz=180						
ISCO	**Idaho Springs**	**6.39**	**304**	P	**Pn**	**08 03 37.4**	**+0.3**
	baz=120						
ANMO	**Albuquerque**	**6.48**	**259**	Pn	**Pn**	**08 03 38.6**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=79,slow=16,SNR=8.6						
ANMO				Pg	**Pb**	**08 03 58.5**	**+3.1**
	comp=Z,1.7nm,0.3s,baz=76,slow=17,SNR=17						
ANMO				Lg	Lg	08 05 20.6	
	comp=Z,4.3nm,0.3s,baz=345,slow=19,SNR=11 comp=Z,0.7nm,0.3s						
ANMO	**Albuquerque**	**6.48**	**259**	P	**Pn**	**08 03 38.3**	**+0.1**
	baz=74						
FVM	**French Village**	**6.79**	**74**	IAmb_Lg		08 05 41.8	
	comp=Z,96nm,0.9s						
SCIA	**State Center**	**6.93**	**36**	IAmb_Lg		08 05 52.4	
	comp=Z,109nm,0.7s						
SCIA	**State Center**	**6.93**	**36**	P	**Pn**	**08 03 45.2**	**+1.0**
	baz=220						
Y22D	**IRIS PASSCAL I**	**7.12**	**253**	IAmb_Lg		08 06 06.5	
	comp=Z,80nm,0.9s						
PHWY	**Pilot Hill**	**7.16**	**315**		**Pn**	**08 03 47.0**	**-0.6**
PHWY				IAmb_Lg		08 05 48.6	
	comp=Z,71nm,0.8s						
N23A	**Red Feather La**	**7.20**	**310**	Pn	**Pn**	**08 03 47.8**	**-0.4**
N23A				IAmb_Lg		08 05 58.7	
	comp=Z,112nm,0.9s						
N23A	**Red Feather La**	**7.20**	**310**	P	**Pn**	**08 03 48.1**	**-0.1**
	baz=126,SNR=8.2						
MET	**Memphis--Engin**	**7.25**	**98**	IAmb_Lg		08 05 55.8	
	comp=Z,132nm,0.7s						
MNTX	**Cornudas Mount**	**7.28**	**231**	P	**Pn**	**08 03 48.8**	**-0.3**
	baz=47,SNR=18						
MNTX	**Cornudas Mount**	**7.28**	**231**	P	**Pn**	**08 03 48.2**	**-0.9**
	baz=47,SNR=12						
ECSD	**EROS Data Cent**	**7.46**	**12**	IAmb_Lg		08 06 06.3	
	comp=Z,69nm,0.9s						
ECSD	**EROS Data Cent**	**7.46**	**12**	P	**Pn**	**08 03 49.6**	**-1.9**
	baz=194,SNR=13						
N41A	**Harden Midland**	**7.48**	**53**	IAmb_Lg		08 06 01.7	
	comp=Z,112nm,0.7s						
735A	**Kenedy**	**7.60**	**174**	IAmb_Lg		08 06 23.4	
	comp=Z,69nm,0.8s						
S44A	**Carbondale**	**7.66**	**78**	IAmb_Lg		08 06 12.8	
	comp=Z,112nm,0.9s						
SIUC	**Southern Illin**	**7.70**	**78**	IAmb_Lg		08 06 14.9	
	comp=Z,119nm,0.8s						
OXF	**Oxford**	**7.83**	**102**	IAmb_Lg		08 06 22.6	
	comp=Z,119nm,1.1s						
OXF	**Oxford**	**7.83**	**102**	P	**Pn**	**08 03 55.7**	**-0.9**
	baz=287						
W45A	**Hickory Valley**	**7.84**	**97**	IAmb_Lg		08 06 24.7	
	comp=Z,108nm,0.8s						
MVCO	**Mesa Verde**	**7.89**	**278**	IAmb_Lg		08 06 17.4	
	comp=Z,58nm,1.0s						
Y45A	**Yeager Farm, C**	**7.94**	**106**	IAmb_Lg		08 06 29.5	
	comp=Z,93nm,0.8s						
SUSD	**Miller**	**8.00**	**359**	IAmb_Lg		08 06 23.6	
	comp=Z,86nm,0.7s						
L40A	**Anamosa**	**8.08**	**44**	IAmb_Lg		08 06 23.2	
	comp=Z,94nm,0.8s						
833A	**Chaparral WMA,**	**8.12**	**184**	P	**Pn**	**08 04 01.1**	**+0.6**
	baz=3.5						
TX31	**Lajitas Ar. Si**	**8.22**	**212**	P	**Pn**	**08 04 00.9**	**-1.1**
	baz=29,S

comp=Z,0.4nm,0.3s,baz=180,slow=10,SNR=2.7
ULM Sn Sn 08 07 42.3 -13
comp=Z,0.5nm,0.3s,baz=144,slow=17,SNR=3.2
ULM Lg Lg 08 09 09.2
baz=198,slow=20
comp=Z,1.0nm,0.3s
YBH Yreka Blue Hor 19.34 293 P **P 08 06 27.4 -0.9**
comp=Z,0.1nm,0.3s,baz=113,slow=7.7,SNR=2.4
comp=Z,0.5nm,0.5s
YKA Yellowknife Ar 27.89 344 P **P 08 07 51.5 -1.0**
comp=Z,0.4nm,0.7s,baz=146,slow=9.0,SNR=3.8
comp=Z,0.4nm,0.7s
ILAR Eielson Array 40.11 330 P **P 08 09 37.0 -1.2**
comp=Z,0.3nm,0.7s,baz=99,slow=7.5,SNR=5.5
comp=Z,0.3nm,0.7s

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*PGC **09** 08:29:49.7±1.4, 49°.43N×129°.43W, h10km, MLSn3.2/46, Mw3.8/46, 201km Wsw of Pt. Hardy, Bc Vancouver Island, Canada Region*
*IDC **09** 08:29:51.6±1.6, 49°.59N×129°.05W, h0km, mb3.5/4, mbtmp3.6/13, ML3.5/8, MS3.4/7, Error ellipse: s-maj=27.2km s-min=9.6km az=69.0*
ISC 09 08:29:50.7±2.5, 49°.52N±0°.04×129°.19W±0°.05, h3km±16km, n98, σ1§80/121, mb3.4/4, MS3.6/4, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BPBC	**Brooks Peninsu**	**1.12**	**55**	P	**Pb**	**08 30 11.7**	**-1.0**
HOLB	**Holberg**	**1.31**	**31**	Pn	**Pn**	**08 30 14.3**	**-1.7**
HOLB				Sn	**Sg**	**08 30 32.0**	**-0.9**
EDB	**Eliza Dome**	**1.39**	**75**	Pn	**Pn**	**08 30 15.2**	**-1.9**
EDB				Sn	**Sb**	**08 30 33.8**	**-1.7**
PACB	**Port Alice, BC**	**1.43**	**50**	Pn	**Pn**	**08 30 15.8**	**-1.7**
PACB				Sn	**Sn**	**08 30 34.6**	**-2.2**
MAYB	**Maynard**	**1.57**	**55**	Pn	**Pn**	**08 30 18.0**	**-1.7**
PHC	**Port Hardy**	**1.64**	**43**	Pn	**Pn**	**08 30 19.2**	**-1.2**
PHC				Sn	**Sb**	**08 30 40.3**	**-2.4**
ETB	**Estevan Point**	**1.74**	**94**	Pn	**Pn**	**08 30 19.8**	**-1.9**
NC89	**ODP889**	**1.76**	**118**	Sn	**Sn**	**08 30 41.6**	**-3.1**
WOSB	**Woss**	**1.81**	**68**	Pn	**Pn**	**08 30 22.2**	**-0.8**
WOSB				Sn	**Sn**	**08 30 45.0**	**-1.4**
TLCB	**Telegraph Cove**	**1.83**	**55**	Pn	**Pn**	**08 30 22.2**	**-0.9**
TLCB				Sn	**Sn**	**08 30 45.1**	**-1.7**
GDR	**Gold River**	**2.07**	**82**	Pn	**Pn**	**08 30 24.8**	**-1.6**
TOFB	**Tofino**	**2.18**	**99**	Pn	**Pn**	**08 30 25.9**	**-2.0**
TOFB				Sn	**Sn**	**08 30 52.0**	**-3.3**
NCRB	**Newcastle Ridg**	**2.21**	**65**	Pn	**Pn**	**08 30 27.7**	**-0.7**
NCRB				Sn	**Sn**	**08 30 54.9**	**-1.4**
NCBC	**Barkley Canyon**	**2.27**	**118**	Sn	**Sn**	**08 30 53.7**	**-3.8**
SPLB	**Strathcona Par**	**2.33**	**80**	Pn	**Pn**	**08 30 29.1**	**-0.8**
BTB	**Buttle Lake**	**2.40**	**90**	Pn	**Pn**	**08 30 29.6**	**-1.3**
B012	**Ucluelet**	**2.47**	**103**	Pn	**Pn**	**08 30 30.4**	**-1.4**
B012				Sn	**Sn**	**08 30 58.9**	**-3.5**
OZB	**Mount Ozzard**	**2.49**	**102**	Pn	**Pn**	**08 30 30.6**	**-1.6**
OZB				Sn	**Sn**	**08 30 60.0**	**-3.1**
CBB	**Campbell River**	**2.53**	**77**	Pn	**Pn**	**08 30 32.2**	**-0.6**
CBB				Sn	**Sn**	**08 31 03.8**	**-0.3**
MWAB	**Mount Washingt**	**2.54**	**84**	Pn	**Pn**	**08 30 32.1**	**-0.8**
MWAB				Sn	**Sn**	**08 31 03.5**	**-0.9**
BFSB	**Bamfield**	**2.75**	**103**	Pn	**Pn**	**08 30 34.1**	**-1.5**
BFSB				Sn	**Sn**	**08 31 06.0**	**-3.4**
B928	**Bamfield**	**2.75**	**103**	Pn	**Pn**	**08 30 34.3**	**-1.3**
B928				Sn	**Sn**	**08 31 05.8**	**-3.6**
BBB	**Bella Bella**	**2.75**	**14**	Pn	**Pn**	**08 30 34.6**	**-1.1**
	5.8nm,0.3s,baz=202,slow=7.4,SNR=59						
BBB				Sn	**Sn**	**08 31 06.3**	**-3.0**
	17nm,0.3s,baz=103,slow=21,SNR=10						
	11nm,0.3s						
BBB	**Bella Bella**	**2.75**	**14**	Pn	**Pn**	**08 30 34.6**	**-1.1**
BBB				Sn	**Sn**	**08 31 06.4**	**-3.0**
B927	**Port Alberni**	**2.88**	**94**	Pn	**Pn**	**08 30 35.8**	**-1.6**
B927				Sn	**Sn**	**08 31 10.9**	**-1.6**
MGB	**Mount Grey**	**3.00**	**98**	Pn	**Pn**	**08 30 38.1**	**-1.1**
MGB				Sn	**Sn**	**08 31 13.0**	**-2.7**
HG4B	**Hotspring**	**3.05**	**336**	Pn	**Pn**	**08 30 36.3**	**-3.6**
TXB	**Texada**	**3.10**	**85**	Pn	**Pn**	**08 30 40.3**	**-0.2**
OCP	**Olym-Cheeka Pk**	**3.25**	**110**	Pn	**Pn**	**08 30 41.5**	**-1.1**
PFB	**Port Renfrew**	**3.27**	**105**	Pn	**Pn**	**08 30 41.4**	**-1.5**
PFB				Sn	**Sn**	**08 31 18.6**	**-3.6**
B926	**Mesachie Lake**	**3.40**	**100**	Pn	**Pn**	**08 30 44.0**	**-0.6**
B926				Sn	**Sn**	**08 31 23.3**	**-2.0**
CLRS	**Cowichan Lake**	**3.40**	**100**	Pn	**Pn**	**08 30 44.0**	**-0.6**
CLRS				Sn	**Sn**	**08 31 23.1**	**-2.2**
NLLB	**Nanaimo Lost L**	**3.41**	**93**	Pn	**Pn**	**08 30 44.3**	**-0.6**
NLLB				Sn	**Sn**	**08 31 25.3**	**-0.5**
BNB	**Barry Inlet**	**3.46**	**333**	Pn	**Pn**	**08 30 41.8**	**-3.7**
SHB	**Sechelt**	**3.46**	**87**	Pn	**Pn**	**08 30 45.6**	**0.0**
SHB				Sn	**Sn**	**08 31 27.1**	**0.0**
BUTB	**Butedale**	**3.57**	**7**	Pn	**Pn**	**08 30 45.9**	**-1.2**
BUTB				Sn	**Sn**	**08 31 27.7**	**-2.2**
GOBB	**Galiano Island**	**3.77**	**97**	Pn	**Pn**	**08 30 50.0**	**+0.3**
BNKB	**Banks Island**	**3.84**	**354**	Pn	**Pn**	**08 30 48.8**	**-1.9**
BIB	**Bowen Island**	**3.84**	**90**	Pn	**Pn**	**08 30 50.8**	**+0.2**
B009	**North Saanich**	**3.87**	**101**	Pn	**Pn**	**08 30 50.7**	**-0.4**
B009				Sn	**Sn**	**08 31 35.2**	**-1.9**
B010	**North Saanich**	**3.87**	**101**	Pn	**Pn**	**08 30 50.4**	**-0.7**
PGC	**Sidney**	**3.87**	**101**	Pn	**Pn**	**08 30 50.5**	**-0.7**
PGC				Sn	**Sn**	**08 31 34.2**	**-2.9**
B011	**North Saanich**	**3.88**	**101**	Pn	**Pn**	**08 30 50.6**	**-0.6**
B011				Sn	**Sn**	**08 31 34.1**	**-3.1**
WPB	**Watts Point**	**3.90**	**86**	Pn	**Pn**	**08 30 52.2**	**+0.8**
SNB	**Saturna Island**	**4.02**	**98**	Pn	**Pn**	**08 30 52.4**	**-0.9**
VGZ	**Gonzales**	**4.02**	**104**	Pn	**Pn**	**08 30 52.9**	**-0.3**
BNAB	**Bonilla**	**4.08**	**348**	Pn	**Pn**	**08 31 57.9**	**-2.0**
HWKB	**Hawksbury Isla**	**4.08**	**0**	Pn	**Pn**	**08 30 52.4**	**-1.6**
HWKB				Sn	**Sn**	**08 31 39.0**	**-3.3**
WSLR	**Whistler**	**4.11**	**79**	Pn	**Pn**	**08 30 55.5**	**+1.1**
DIB	**Dawson Inlet,**	**4.22**	**332**	Pn	**Pn**	**08 30 52.6**	**-3.3**
H02S1	**DAWSON INLET T**	**4.22**	**332**	Pn	**Pn**	**08 30 53.5**	**-2.3**
HNBB	**Haney**	**4.33**	**91**	Pn	**Pn**	**08 30 57.4**	**0.0**
HNBB				Sn	**Sn**	**08 31 48.0**	**-0.4**
GRNB	**Grenville Isla**	**4.36**	**354**	Pn	**Pn**	**08 30 56.5**	**-1.3**
GRNB				Sn	**Sn**	**08 31 46.7**	**-2.3**
KITB	**Kitimat**	**4.57**	**4**	Pn	**Pn**	**08 30 59.4**	**-1.4**
KITB				Sn	**Sn**	**08 31 52.1**	**-2.2**
UBRB	**Upper Baezaeko**	**4.66**	**42**	Pn	**Pn**	**08 31 03.8**	**+1.8**
VDB	**Vedder Mountai**	**4.67**	**93**	Pn	**Pn**	**08 31 02.5**	**+0.4**
A05A	**Maple Falls**	**4.69**	**94**	Pn	**Pn**	**08 31 02.5**	**+0.3**
CMW	**Cultus Mountai**	**4.79**	**101**	Pn	**Pn**	**08 31 04.0**	**+0.2**
LLLB	**Lillooet**	**4.83**	**74**	Pn	**Pn**	**08 31 04.6**	**+0.2**
MBW	**Mount Baker**	**4.84**	**96**	Pn	**Pn**	**08 31 05.1**	**+0.5**
RUBB	**Prince Rupert**	**4.85**	**353**	Pn	**Pn**	**08 31 03.8**	**-0.8**
RPW	**Rockport**	**5.17**	**99**	Pn	**Pn**	**08 31 09.6**	**+0.6**
B06A	**Marblemount**	**5.17**	**98**	Pn	**Pn**	**08 31 08.9**	**-0.1**
FSJB	**Fort St James**	**5.79**	**30**	Pn	**Pn**	**08 31 18.6**	**+1.0**
FSJB				Sn	**Sn**	**08 32 24.4**	**-0.1**
FSB	**Fort Saint Jam**	**5.80**	**29**	Pn	**Pn**	**08 31 18.7**	**+1.1**
LTY	**Liberty**	**6.11**	**109**	Pn	**Pn**	**08 31 22.6**	**+0.6**
PNT	**Penticton**	**6.25**	**88**	Pn	**Pn**	**08 31 24.6**	**+0.7**
B08A	**Colville Reser**	**6.60**	**96**	Pn	**Pn**	**08 31 29.3**	**+0.7**
MNB	**Mounoet Dainar**	**7.35**	**65**	Pn	**Pn**	**08 31 40.1**	**+1.0**
C09A	**Chrisman Ranch**	**7.43**	**99**	Pn	**Pn**	**08 31 40.6**	**+0.6**
BMBC	**Bull Mountain**	**7.81**	**31**	Pn	**Pn**	**08 31 47.2**	**+2.0**
NEW	**Newport**	**8.06**	**94**	Pn	**Pn**	**08 31 48.9**	**+0.3**
	1.2nm,0.3s,baz=290,slow=12,SNR=18						
NEW				LR	LR	08 34 59.0	
	comp=Z,305nm,20.6s,baz=260,slow=39						
	3.4nm,0.4s						
BDMTA	**Bald Mountain**	**8.24**	**46**	Pn	**Pn**	**08 31 54.0**	**+2.9**
NBC5	**NorthernBC 5**	**8.90**	**23**	Pn	**Pn**	**08 32 02.0**	**+1.8**
DLBC	**Dease Lake**	**8.95**	**357**	Pn	**Pn**	**08 32 01.4**	**+0.7**
	0.2nm,0.3s,baz=207,slow=13,SNR=4.2						
	1.3nm,0.6s						
DLBC	**Dease Lake**	**8.95**	**357**	Pn	**Pn**	**08 32 01.0**	**+0.2**
YBH	**Yreka Blue Hor**	**9.02**	**147**	Pn	**Pn**	**08 32 03.8**	**+2.0**
	1.4nm,0.9s,baz=333,slow=15,SNR=6.1						
YBH				LR	LR	08 35 00.4	
	comp=Z,81nm,18.9s,baz=342,slow=34						
BSMT	**Bassoo Peak**	**9.68**	**94**	Pn	**Pn**	**08 32 12.0**	**+1.0**
FNBB	**Fort Nelson**	**10.05**	**19**	Pn	**Pn**	**08 32 17.0**	**+1.0**
NBC6	**NorthernBC 6**	**10.18**	**24**	Pn	**Pn**	**08 32 18.8**	**+1.2**
NVAR	**Mina Array Bea**	**13.56**	**141**	Pn	**Pn**	**08 33 06.4**	**+2.3**
	baz=317,slow=11,SNR=6.2						
	0.8nm,0.9s						
PDAR	**Pinedale Array**	**15.17**	**109**	Pn	**Pn**	**08 33 28.6**	**+2.5**
	0.1nm,0.3s,baz=314,slow=12,SNR=21						
PDAR				LR	LR	08 39 38.8	
	comp=Z,94nm,18.0s,baz=308,slow=39						
	4.3nm,1.0s						
YKA	**Yellowknife Ar**	**15.29**	**26**	Pn	**Pn**	**08 33 23.9**	**-3.3**
	0.1nm,0.3s,baz=215,slow=12,SNR=6.6						
	0.7nm,0.8s						
ILAR	**Eielson Array**	**17.94**	**335**	P	**P**	**08 34 01.8**	**+0.3**
	baz=148,slow=10,SNR=7.6						
	0.7nm,0.8s						
INK	**Inuvik**	**18.96**	**355**	P	**Pn**	**08 34 14.8**	**+1.5**
	0.1nm,0.3s,baz=147,slow=13,SNR=2.5						
	1.3nm,0.6s						
ULM	**Lac du Bonnet**	**21.38**	**75**	P	**P**	**08 34 40.6**	**+1.4**
	8.4nm,0.7s,baz=281,slow=9.7,SNR=15						
ULM				LR	LR	08 42 01.7	
	comp=Z,56nm,20.4s,baz=310,slow=34						
	8.4nm,0.7s						
ANMO	**Albuquerque**	**22.14**	**123**	P	**P**	**08 34 49.3**	**+1.7**
	0.5nm,0.6s,baz=322,slow=10.0,SNR=2.5						
	0.5nm,0.6s						
TXAR	**Lajitas Array**	**27.97**	**127**	P	**P**	**08 35 43.1**	**+0.5**
	0.4nm,1.0s,baz=289,slow=8.5,SNR=3.1						
	0.4nm,1.0s						
SADO	**Sadowa**	**33.86**	**79**	LR	LR	08 50 35.1	
	comp=Z,126nm,19.4s,baz=281,slow=37						
SCHQ	**Schefferville**	**37.48**	**57**	LR	LR	08 52 22.1	
	comp=Z,110nm,19.8s,baz=69,slow=36						
H11N2	**WAKE ISLAND Hy**	**58.36**	**264**	T	T	09 42 42.7	
	baz=43,slow=75,SNR=24						
H11N3	**WAKE ISLAND Hy**	**58.37**	**264**	T	T	09 42 43.8	
	baz=43,slow=75,SNR=25						
H11N1	**WAKE ISLAND Hy**	**58.38**	**264**	T	T	09 42 46.2	
	baz=43,slow=75,SNR=18						
H11S1	**WAKE ISLAND Hy**	**59.38**	**263**	T	T	09 44 02.9	
	baz=42						
H11S2	**WAKE ISLAND Hy**	**59.39**	**263**	T	T	09 44 05.0	
	baz=42						
H11S3	**WAKE ISLAND Hy**	**59.40**	**263**	T	T	09 44 05.0	
	baz=42						
ESDC	**Sonseca Array**	**78.92**	**40**	P	**P**	**08 41 57.6**	**+2.2**
	0.4nm,0.7s,baz=311,slow=5.3,SNR=4.1						
	0.4nm,0.7s						
MSVF	**Nonsavu**	**81.59**	**230**	LR	LR	09 11 19.5	
	comp=Z,64nm,20.7s,baz=77,slow=30						

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*IDC **09** 08:35:31.2±0.6, 52°.00N×177°.15E, h0km, mb4.0/24, mbtmp4.0/29, ML4.3/4, MS3.8/54, Error ellipse: s-maj=18.9km s-min=10.7km az=174.0*
*AEIC **09** 08:35:32±2.1, 52°.0N±0°.1×177°.25E±0°.04, h3km±4km, ML4.1, mb4.4/64(NEIC), Error ellipse: s-maj=17.7km s-min=3.3km az=177.0*
*MOS **09** 08:35:33.4±1.0, 52°.15N×177°.17E, h23km, mb4.6/17, Error ellipse: s-maj=10.3km s-min=8.5km az=83.2*
*NEIC **09** 08:35:35.5±1.4, 52°.02N±0°.09×177°.20E±0°.08, h28km±5km, Error ellipse: s-maj=13.2km s-min=7.1km az=186.0*
ISC 09 08:35:36.0±0.5, 52°.06N±0°.09×177°.22E±0°.04, h31km, n311, σ1§03/279, mb4.3/65, MS3.9/58, 10C-8D, Rat Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHEM	**Shemya Is, Ala**	**2.03**	**291**	Pn	**Pn**	**08 36 07.7**	**-0.2**
	283nm,0.3s,baz=97,slow=8.1,SNR=86						
SHEM				Sn	**Sn**	**08 36 33.2**	**+1.0**
	268nm,0.3s,baz=59,slow=19,SNR=15						
SHEM				LR	LR	08 36 48.8	
	comp=Z,961nm,20.0s,baz=82,slow=39						
	444nm,0.3s						
SMY	**Shemya**	**2.03**	**291**	Pn	**Pn**	**08 36 07.3**	**-0.6**
SMY				Sn	**Sn**	**08 36 32.3**	**+0.1**
GANO	**Gareloi North**	**2.47**	**94**		**Pn**	**08 36 13.6**	**-0.5**
GAEA	**Gareloi East**	**2.51**	**95**		**Pn**	**08 36 14.1**	**-0.5**
TASE	**Tanaga Southea**	**2.94**	**93**		**Pn**	**08 36 20.3**	**-0.3**
TAFP	**Tanaga Falls P**	**2.97**	**91**		**Pn**	**08 36 20.5**	**-0.5**
TAPA	**Tanaga Point A**	**3.08**	**93**		**Pn**	**08 36 22.2**	**-0.3**
KIMD	**Kanaga Island**	**3.45**	**93**		**Pn**	**08 36 27.3**	**-0.2**
KICM	**Kanaga Island**	**3.46**	**90**		**Pn**	**08 36 27.6**	**0.0**
KIKV	**Kanaga Island**	**3.47**	**91**		**Pn**	**08 36 28.2**	**+0.3**
KIWB	**Kanaga Island**	**3.49**	**91**		**Pn**	**08 36 28.7**	**+0.6**
ADK	**Adak**	**3.77**	**90**	Pn	**Pn**	**08 36 32.4**	**+0.4**
ADK	**Adak**	**3.77**	**90**	P	**Pn**	**08 36 32.4**	**+0.4**
GSCK	**Great Sitkin C**	**4.09**	**88**		**Pn**	**08 36 35.9**	**-0.4**
GSTD	**Great Sitkin T**	**4.09**	**87**		**Pn**	**08 36 35.5**	**-0.9**
GSTR	**Great Sitkin T**	**4.15**	**87**	Pn	**Pn**	**08 36 37.4**	**+0.3**
GSMY	**Great Sitkin M**	**4.15**	**88**		**Pn**	**08 36 37.2**	**+0.1**
KOKL	**Mount Kliuchef**	**5.29**	**84**		**Pn**	**08 36 53.3**	**+0.5**
ATKA	**Atka Island**	**5.29**	**85**		**Pn**	**08 36 53.4**	**+0.7**
KOFP	**Korovin Flat P**	**5.35**	**84**		**Pn**	**08 36 55.6**	**+2.0**
PET	**Petropavlovsk**	**11.35**	**282**	i*e*P	**Pn**	**08 38 17.4**	**+1.6**
PET				pmax	pmax		
	comp=Z,9.0nm,1.1s						
PEA0B	**Petropavlovsk-**	**11.92**	**283**	Pn	**Pn**	**08 38 23.4**	**-0.2**
PEA0B	**Petropavlovsk-**	**11.92**	**283**	P	**Pn**	**08 38 23.5**	**-0.2**
PETK	**Petropavlovsk-**	**11.92**	**283**	Pn	**Pn**	**08 38 22.2**	**-1.4**
	comp=Z,2.5nm,0.8s,baz=76,slow=18,SNR=4.7						
PETK				Sn	**Sn**	**08 40 33.4**	**-2.1**
	comp=Z,0.3nm,0.3s,baz=151,slow=17,SNR=1.5						
PETK				LR	LR	08 42 35.7	
	comp=Z,420nm,21.9s,baz=102,slow=36						
P16K	**Nushagak River**	**15.60**	**54**	P	**Pn**	**08 39 13.8**	**+0.5**
	baz=254						
N16K	**Nishlik Lake**	**15.69**	**48**	P	**Pn**	**08 39 15.2**	**+0.7**
	baz=248						
O16K	**Kokwok River B**	**15.71**	**52**	P	**Pn**	**08 39 14.0**	**-0.8**
	baz=252						
O17K	**Koliganek Bris**	**16.25**	**52**	P	**Pn**	**08 39 22.7**	**+1.0**
	baz=253						
P17K	**Kvichak River**	**16.42**	**54**	P	**Pn**	**08 39 24.6**	**+0.8**
	baz=256						
MA2	**Magadan**	**16.57**	**307**	Pn	**Pn**	**08 39 25.2**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=131,slow=20,SNR=2.6						
MA2				LR	LR	08 45 23.3	
	comp=Z,312nm,18.5s,baz=129,slow=36						
	comp=Z,13nm,1.1s						
MA2	**Magadan**	**16.57**	**307**	i*e*P	**P**	**08 39 28.5**	**+0.5**
MA2				pmax	pmax		
	comp=Z,18nm,1.3s						
BILL	**Bilibino**	**16.89**	**346**		**Pn**	**08 39 29.8**	**+0.1**
BILL	**Bilibino**	**16.89**	**346**	*ce*P	**P**	**08 39 32.1**	**+0.7**
BILL				pmax	pmax		
	comp=Z,27nm,2.5s						
BILL				MLR	MLR		
	comp=Z,239nm,15.0s						
P18K	**Big Mountain,**	**17.07**	**54**	P	**Pn**	**08 39 31.7**	**-0.3**
P18K				IAmb	IAmb	08 39 42.4	
	comp=Z,25nm,1.1s						
P18K	**Big Mountain,**	**17.07**	**54**	P	**Pn**	**08 39 32.1**	**+0.1**
	baz=256						
SEY	**Seymchan**	**17.09**	**319**	P	**Pn**	**08 39 31.5**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=135,slow=13,SNR=8.0						
SEY				LR	LR	08 45 21.8	
	comp=Z,381nm,21.1s,baz=102,slow=34						
	comp=Z,2.5nm,0.9s						
SEY	**Seymchan**	**17.09**	**319**	i*e*P	**Pn**	**08 39 32.2**	**-0.1**
SEY				pmax	pmax		
	comp=Z,15nm,1.7s						
N18K	**Kilae Creek**	**17.10**	**49**	P	**Pn**	**08 39 33.3**	**+0.9**
	baz=252						
O18K	**Koktuh Hills**	**17.19**	**52**	P	**Pn**	**08 39 33.9**	**+0.3**
	baz=255						
SVW2	**Sparrevohn**	**17.38**	**48**	P	**Pn**	**08 39 34.3**	**-1.5**
O19K	**Port Alsworth**	**17.71**	**52**	P	**Pn**	**08 39 40.5**	**+0.6**
	baz=255						
OHAK	**Old Harbor**	**17.75**	**61**	P	**Pn**	**08 39 40.4**	**0.0**
	baz=266						
Q19K	**Cape Douglas,**	**17.77**	**56**	P	**Pn**	**08 39 38.9**	**-1.9**
Q19K				IAmb	IAmb	08 40 06.9	
	comp=Z,50nm,1.4s						
Q19K	**Cape Douglas,**	**17.77**	**56**	P	**Pn**	**08 39 40.7**	**-0.1**
	baz=260						
N19K	**Bonanza Creek**	**17.80**	**49**	P	**Pn**	**08 39 39.5**	**-1.7**
N19K				IAmb	IAmb	08 40 00.9	
	comp=Z,31nm,1.1s						
N19K	**Bonanza Creek**	**17.80**	**49**	P	**Pn**	**08 39 41.3**	**+0.1**
	baz=253						
TTA	**Tatalina**	**17.88**	**42**		**Pn**	**08 39 40.1**	**-2.0**
TTA	**Tatalina**	**17.88**	**42**	P	**Pn**	**08 39 40.1**	**-2.0**
TTA				pmax	pmax		
	comp=Z,19nm,1.5s						
TTA	**Tatalina**	**17.88**	**42**	P	**P**	**08 39 42.8**	**+0.2**
	baz=245						
L19K	**White Mountain**	**18.08**	**45**		**Pn**	**08 39 42.5**	**-2.0**
L19K	**White Mountain**	**18.08**	**45**	P	**Pn**	**08 39 44.7**	**+0.2**
	baz=249						
KDAK	**Kodiak Island**	**18.17**	**60**	P	**Pn**	**08 39 45.5**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=263,slow=6.8,SNR=5.0						
	comp=Z,12nm,1.1s						
KDAK	**Kodiak Island**	**18.17**	**60**	P	**Pn**	**08 39 45.4**	**-0.3**
	baz=264						
M19K	**Big River Lodg**	**18.19**	**46**	P	**Pn**	**08 39 44.4**	**-1.4**
	baz=250						
GCSA	**Galena City Sc**	**18.41**	**36**	P	**Pn**	**08 39 49.6**	**+1.2**
	baz=238						
O20K	**Slope Mountain**	**18.51**	**52**	P	**P**	**08 39 49.7**	**+0.2**
	baz=258						
L20K	**Farewell, AK**	**18.61**	**45**	P	**P**	**08 39 50.5**	**-0.1**
	baz=249						
M20K	**Styx River**	**18.74**	**47**	P	**P**	**08 39 51.9**	**-0.1**
M20K	**Styx River**	**18.74**	**47**	P	**Pn**	**08 39 52.9**	**+0.2**
	baz=252						
K20K	**Telida**	**18.86**	**42**		**P**	**08 39 52.9**	**-0.4**
K20K	**Telida**	**18.86**	**42**	P	**Pn**	**08 39 54.2**	**+0.3**
	baz=246						
N20K	**Mount Spurr**	**18.97**	**49**	P	**P**	**08 39 54.8**	**+0.3**
	baz=255						
SPCR	**Spurr Chakacha**	**18.97**	**49**	P	**Pn**	**08 39 55.3**	**-0.1**
	baz=255						
CNPM	**China Poot**	**19.09**	**55**	P	**P**	**08 39 53.9**	**-1.9**
CNPM				IAmb	IAmb	08 40 00.6	
	comp=Z,19nm,0.9s						
J20K	**Nowinta River**	**19.17**	**40**	P	**P**	**08 39 55.0**	**-1.6**
J20K				IAmb	IAmb	08 40 11.1	
	comp=Z,20nm,1.2s						
J20K	**Nowinta River**	**19.17**	**40**	P	**Pn**	**08 39 57.7**	**0.0**
	baz=244						
BRLK	**Bradley Lake**	**19.31**	**54**	P	**P**	**08 39 58.8**	**+0.6**
BRLK				IAmb	IAmb	08 40 20.5	
	comp=Z,34nm,1.1s						
BRSE	**Bradley Lake S**	**19.38**	**54**	P	**P**	**08 39 59.8**	**+0.9**
	baz=261,SNR=13						
PPLA	**Purkeypile**	**19.49**	**44**	P	**P**	**08 40 00.8**	**+0.5**
	baz=250						
SKT	**Skwentna**	**19.50**	**47**	P	**P**	**08 40 00.3**	**+0.1**
	baz=254,SNR=13						
SUA	**Susitna One**	**19.72**	**49**	P	**P**	**08 40 02.7**	**0.0**
	baz=256						
CHUM	**Lake Minchumin**	**19.79**	**42**	P	**P**	**08 40 04.0**	**+0.6**
	baz=248,SNR=7.5						
O22K	**Cooper Landing**	**20.00**	**52**	P	**P**	**08 40 05.7**	**0.0**
SEW	**Seward**	**20.07**	**53**	P	Pn	08 40 08.0	-0.3
	baz=261,SNR=17						
M22K	**Willow**	**20.08**	**48**	P	**P**	**08 40 04.7**	**-1.8**
M22K	**Willow**	**20.08**	**48**	P	**P**	**08 40 06.9**	**+0.4**
	baz=256						
RC01	**Rabbit Creek A**	**20.11**	**50**	P	**P**	**08 40 06.5**	**-0.4**
RC01				IAmb	IAmb	08 40 13.6	
	comp=Z,20nm,1.1s						
RC01	**Rabbit Creek A**	**20.11**	**50**	P	**P**	**08 40 07.9**	**+1.0**
	baz=258						
IMAR	**Indian Mountai**	**20.17**	**35**	P	**P**	**08 40 07.3**	**-0.1**
CUT	**Chulitna**	**20.18**	**47**	P	**P**	**08 40 07.2**	**-0.5**
CUT	**Chulitna**	**20.18**	**47**	P	**P**	**08 40 07.8**	**+0.2**
	baz=254						
KTH	**Kantishna Hill**	**20.25**	**43**	P	**P**	**08 40 08.2**	**-0.3**
KTH				IAmb	IAmb	08 40 13.2	
	comp=Z,17nm,1.0s						
H21K	**Melozitna River**	**20.35**	**37**	P	**P**	**08 40 10.2**	**+0.8**
	baz=242						
BPAW	**Bear Paw Mtn.**	**20.41**	**42**		**P**	**08 40 09.6**	**-0.6**
BPAW				IAmb	IAmb	08 40 34.5	
	comp=Z,21nm,1.4s						
BPAW	**Bear Paw Mtn.**	**20.41**	**42**	P	**P**	**08 40 11.1**	**+0.9**
	baz=249						
I21K	**Tanana**	**20.45**	**38**	P	**P**	**08 40 11.5**	**+1.0**
	baz=245						
TRF	**Thorofare Moun**	**20.48**	**44**	P	**P**	**08 40 11.1**	**0.0**
	baz=251						
PMR	**Palmer**	**20.50**	**49**	P	**P**	**08 40 10.0**	**-1.1**
PMR	**Palmer**	**20.50**	**49**	P	**P**	**08 40 10.0**	**-1.1**
PMR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
PMR	**Palmer**	**20.50**	**49**	P	**P**	**08 40 11.4**	**+0.3**
	baz=258						
GHO	**Glory Hole Cre**	**20.64**	**49**	P	**P**	**08 40 11.6**	**-1.1**
KNK	**Knik Glacier**	**20.78**	**50**	P	**P**	**08 40 13.7**	**-0.5**
	baz=259						
MLY	**Manley**	**20.

baz=262,SNR=8.2
YSS Yuzh-Sakhalins 22.81 271 *e*P P 08 40 28.5 -7.5
J25K Salcha River, 22.90 42 P **P 08 40 36.8 0.0**
baz=254,SNR=5.0
TOLK Toolik Lake Re 22.90 31 P **P 08 40 37.3 +0.5**
baz=240,SNR=9.4
RIDG Independent Ri 22.91 45 P **P 08 40 36.9 0.0**
baz=257
SCRK Sand Creek 23.33 44 P **P 08 40 40.8 -0.5**
baz=258,SNR=8.4
MCARA McCarthy VSAT 23.37 51 P **P 08 40 42.1 +0.6**
baz=264
L26K Log Cabin Wild 23.43 47 P **P 08 40 42.8 +0.7**
baz=260
M26K Nabesna, AK 23.50 48 P **P 08 40 42.8 0.0**
baz=262
J26L Joseph Creek 23.62 43 P **P 08 40 44.0 -0.1**
J26L IAmb IAmb 08 40 48.3
comp=Z,9.6nm,0.8s
J26L Joseph Creek 23.62 43 P **P 08 40 44.3 +0.2**
baz=257,SNR=20
ISLE Juniper Island 23.64 53 P **P 08 40 43.7 -0.6**
GRNC Granite Creek 23.94 53 P **P 08 40 46.9 -0.3**
BARN Barnard Glacie 24.00 52 P **P 08 40 48.0 +0.2**
M27K Edge Creek, AK 24.01 49 P **P 08 40 49.1 +1.4**
M27K IAmb IAmb 08 40 59.2
comp=Z,14nm,1.1s
M27K Edge Creek, AK 24.01 49 P **P 08 40 48.2 +0.5**
baz=263,SNR=9.2
L27K Beaver Creek, 24.12 47 P **P 08 40 48.8 +0.1**
L27K IAmb IAmb 08 41 04.7
comp=Z,14nm,0.9s
L27K Beaver Creek, 24.12 47 P **P 08 40 49.0 +0.3**
baz=262,SNR=20
BCAR Beaver Creek A 24.14 47 P **P 08 40 49.1 +0.3**
CTG Chitna Glacier 24.15 52 P **P 08 40 49.4 +0.3**
baz=267,SNR=6.6
K27K Chicken 24.16 45 P **P 08 40 50.0 +0.9**
K27K IAmb IAmb 08 41 18.1
comp=Z,20nm,1.4s
K27K Chicken 24.16 45 P **P 08 40 49.7 +0.6**
baz=260
YUK3 Moose Creek 24.62 50 P **P 08 40 54.0 +0.6**
baz=266,SNR=20
PCA Pinnacle 24.66 54 P **P 08 40 54.5 +0.8**
PINM Pinnacle 24.67 54 P **P 08 40 54.3 +0.6**
baz=270,SNR=7.4
YUK8 Steele Glacier 24.93 51 P **P 08 40 56.8 +0.5**
baz=268,SNR=14
PNL Peninsula 25.10 55 P **P 08 40 58.5 +0.9**
baz=272
DAWY Dawson 25.34 45 **P 08 41 01.2 +1.5**
DAWY Dawson 25.34 45 P **P 08 41 00.7 +1.0**
baz=262,SNR=24
YUK4 Talbot Arm 25.47 51 P **P 08 41 01.9 +0.8**
baz=269,SNR=6.0
YUK6 Outpost Mounta 25.60 52 P **P 08 41 02.6 +0.2**
baz=270,SNR=5.3
I29M Ogilvie Camp, 25.99 42 P **P 08 41 06.7 +1.1**
I29M IAmb IAmb 08 41 10.1
comp=Z,8.1nm,0.9s
I29M Ogilvie Camp, 25.99 42 P **P 08 41 07.0 +1.4**
baz=261
HYT Haines Junctio 26.02 53 P **P 08 41 06.9 +0.8**
baz=271,SNR=10
N30M Aishikik Lake 26.22 51 P **P 08 41 08.1 +0.4**
baz=270,SNR=12
M30M Minto, Yukon 26.38 49 P **P 08 41 09.6 +0.4**
baz=268
O30N Mendenhall 26.72 53 P **P 08 41 12.6 +0.4**
baz=272
EPYK Eagle Plains 26.80 40 P **P 08 41 12.1 -0.8**
baz=260
YAK Yakutsk 27.10 310 LR LR 08 51 47.6
comp=Z,172nm,18.6s,baz=89,slow=36
YAK Yakutsk 27.10 310 *i*P **P 08 41 15.6 +0.1**
M31M Drury Creek, Y 27.49 49 P **P 08 41 20.5 +1.4**
M31M IAmb IAmb 08 41 28.6
comp=Z,6.1nm,1.1s
M31M Drury Creek, Y 27.49 49 P **P 08 41 19.2 0.0**
baz=271
FARO Faro, Yukon 27.98 49 P **P 08 41 23.0 -0.5**
baz=272
INK Inuvik 28.35 36 P **P 08 41 28.7 +2.0**
comp=Z,1.6nm,0.7s,baz=192,slow=16,SNR=5.5
INK LR LR 08 53 08.6
comp=Z,249nm,19.9s,baz=233,slow=37
comp=Z,1.6nm,0.7s
INK Inuvik 28.35 36 P **P 08 41 27.1 +0.5**
INK IAmb IAmb 08 41 36.5
comp=Z,13nm,1.4s
INK Inuvik 28.35 36 P **P 08 41 26.9 +0.3**
baz=260
P33M Teslin, Yukon 28.37 54 P **P 08 41 27.4 +0.3**
P33M IAmb IAmb 08 41 32.0
comp=Z,15nm,1.4s
P33M Teslin, Yukon 28.37 54 P **P 08 41 26.9 -0.2**
baz=276
KLR Kul'dur 28.61 283 P **P 08 41 28.7 -0.5**
comp=Z,1.8nm,0.8s,baz=75,slow=9.1,SNR=3.6
KLR LR LR 08 53 07.1
comp=Z,198nm,19.4s,baz=68,slow=37
comp=Z,1.8nm,0.8s
KLR Kul'dur 28.61 283⇑ *e*P **P 08 41 29.5 +0.3**
KLR pmax pmax
comp=Z,4.0nm,1.3s
TIXI Tiksi 28.82 331 LR LR 08 53 12.9
comp=Z,145nm,19.6s,baz=182,slow=37
TIXI Tiksi 28.82 331⇓ *e*P **P 08 41 29.7 -1.1**
TIXI pmax pmax
comp=Z,4.0nm,1.7s
MMPY Sheldon Lake, 28.94 48 P **P 08 41 31.3 -0.7**
baz=273,SNR=5.7
DLBC Dease Lake 30.05 57 LR LR 08 54 03.7
comp=Z,330nm,18.9s,baz=279,slow=37
DLBC Dease Lake 30.05 57 P **P 08 41 41.6 -0.4**
baz=281
MJAR Matsushiro Arr 31.50 256 LR LR 08 51 51.4
comp=Z,91nm,21.9s,baz=33,slow=31
C36M Paulatuk 31.87 35 P **P 08 41 57.4 -0.4**
baz=268
BBB Bella Bella 32.89 68 LR LR 08 56 01.0
comp=Z,108nm,18.4s,baz=280,slow=37
JHJ Hachijo jima 2 32.95 250 LR LR 08 53 15.7
comp=Z,77nm,19.5s,baz=76,slow=32
H11N2 WAKE ISLAND Hy 33.26 198 T T 09 17 22.3
baz=11,slow=76,SNR=583
H11N3 WAKE ISLAND Hy 33.27 198 T T 09 17 23.2
baz=11,slow=76,SNR=620
H11N1 WAKE ISLAND Hy 33.28 198 T T 09 17 23.7
baz=11,slow=76,SNR=655
H11S1 WAKE ISLAND Hy 34.49 198 T T 09 18 54.6
baz=11,slow=76,SNR=65
H11S3 WAKE ISLAND Hy 34.51 198 T T 09 18 57.0
baz=11,slow=76,SNR=61
H11S2 WAKE ISLAND Hy 34.51 198 T T 09 18 57.1
baz=11,slow=76,SNR=29
CN2 Changchun 34.99 277 *e*P **P 08 42 29.3 +4.1**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 LR LR
comp=N,200nm,18.0s
CN2 LR LR
comp=E,100nm,18.0s
CN2 LR LR
comp=Z,200nm,21.0s
JCJ Chichijima 36.19 240 LR LR 08 54 54.9
comp=Z,26nm,21.9s,baz=120,slow=32
YKA Yellowknife Ar 36.55 46 P **P 08 42 39.7 +1.3**
comp=Z,4.0nm,0.9s,baz=286,slow=8.0,SNR=17
YKA PcP **PcP 08 45 01.8 +0.6**
comp=Z,0.3nm,0.5s,baz=347,slow=3.1,SNR=4.1
YKA LR LR 08 58 56.2
comp=Z,270nm,19.5s,baz=283,slow=38
comp=Z,4.0nm,0.9s
YKA Yellowknife Ar 36.55 46 P **P 08 42 39.2 +0.8**
YKA Yellowknife Ar 36.55 46 P **P 08 42 39.2 +0.8**
KSRS Korea Array 37.18 267 P **P 08 42 44.5 +0.5**
comp=Z,0.7nm,0.6s,baz=52,slow=8.2,SNR=2.1
KSRS LR LR 08 58 27.6
comp=Z,47nm,18.0s,baz=125,slow=37
comp=Z,0.7nm,0.6s
RES Resolute Bay 40.14 24 P **P 08 43 08.0 -0.4**
comp=Z,3.6nm,1.0s,baz=313,slow=5.5,SNR=2.1
RES LR LR 09 02 32.3
comp=Z,58nm,18.8s,baz=302,slow=40
comp=Z,3.6nm,1.0s
XLT XiLinHaoTe 40.63 284 *e*P **P 08 43 13.8 +0.9**
XLT pP sP 08 43 24.2 -1.2
XLT pmax pmax
comp=Z,8.0nm,1.3s
XLT pmax pmax
comp=Z,140nm,5.3s
NEW Newport 40.95 68 P **P 08 43 15.4 -0.1**
comp=Z,1.4nm,0.8s,baz=318,slow=6.9,SNR=3.0
NEW LR LR 08 58 15.1
comp=Z,78nm,19.1s,baz=289,slow=33
comp=Z,1.4nm,0.8s
NEW Newport 40.95 68 P **P 08 43 13.9 -1.6**
NEW Newport 40.95 68 P **P 08 43 14.2 -1.2**
baz=301
YBH Yreka Blue Hor 41.22 80 P **P 08 43 19.0 +1.2**
comp=Z,0.7nm,0.7s,baz=7.1,slow=16,SNR=3.0
YBH LR LR 08 56 55.7
comp=Z,88nm,20.3s,baz=296,slow=31
comp=Z,0.7nm,0.7s
YBH Yreka Blue Hor 41.22 80 P **P 08 43 19.0 +1.2**
NRIK Noril'sk 42.55 328 P **P 08 43 26.9 -1.3**
comp=Z,1.2nm,0.3s,baz=62,slow=5.4,SNR=3.6
NRIK LR LR 09 02 16.4
comp=Z,59nm,18.3s,baz=56,slow=38
comp=Z,1.2nm,0.3s
NRIK Noril'sk 42.55 328⇓ *e*P **P 08 43 30.5 +2.3**
NRIK pmax pmax
comp=Z,8.0nm,1.7s
MSO Missoula 43.54 68 P **P 08 43 34.5 -2.1**
baz=303
ULN Ulaanbaatar 43.73 294⇑ *e*P **P 08 43 38.8 +0.6**
ULN pmax pmax
comp=Z,4.0nm,1.3s
SONM Songino Array 44.12 294 P **P 08 43 41.6 +0.3**
comp=Z,1.2nm,0.6s,baz=61,slow=10,SNR=4.9
SONM LR LR 09 03 17.4
comp=Z,121nm,18.5s,baz=72,slow=38
comp=Z,1.2nm,0.6s
SONM Songino Array 44.12 294 P **P 08 43 41.6 +0.3**
SONM pmax pmax
comp=Z,3.0nm,1.1s
JOW Kunigami 44.31 255 LR LR 09 01 28.2
comp=Z,71nm,21.1s,baz=118,slow=35
HLID Hailey 45.12 72 P **P 08 43 47.9 -1.5**
baz=306
HHC Hu-ho-hao-te 45.12 283 *e*P **P 08 43 49.5 +0.1**
HHC pP pP 08 43 56.1 -2.1
HHC pmax pmax
comp=Z,35nm,0.9s
HHC pmax pmax
comp=Z,140nm,5.1s
HHC LR LR
comp=N,430nm,16.7s
HHC LR LR
comp=E,390nm,15.9s
HHC LR LR
comp=Z,350nm,17.7s
HNS HongShan 45.36 277⇑ P **P 08 43 53.2 +2.1**
HNS pmax pmax
comp=Z,9.0nm,0.5s
BOZ Bozeman (W) 45.56 69 P **P 08 43 51.4 -1.4**
baz=305
LHV Little Huntoon 45.89 81 P **P 08 43 55.1 -0.2**
NVAR Mina Array Bea 45.90 81 P **P 08 43 56.2 +0.5**
comp=Z,0.5nm,0.6s,baz=304,slow=6.8,SNR=5.6
comp=Z,0.5nm,0.6s
MDPB Devils Postpil 45.94 82 P **P 08 43 55.7 -0.3**
MDPB IAmb IAmb 08 44 00.3
comp=Z,4.0nm,0.9s
YHL Hebgen Lake 46.25 69 P **P 08 43 58.3 -0.1**
YHL IAmb IAmb 08 44 10.9
comp=Z,8.1nm,1.4s
GUMO Guam 46.30 226 LR LR 09 02 22.2
comp=Z,67nm,18.2s,baz=44,slow=35
ELK Elko 46.32 76 LR LR 09 01 18.2
comp=Z,137nm,19.3s,baz=272,slow=33
NJ2 Nanjing 46.34 268 *e*P **P 08 43 55.4 -3.5**
NJ2 pmax pmax
comp=Z,11nm,0.5s
R11A Troy Canyon, C 47.61 79 P **P 08 44 08.4 -0.6**
baz=310
MPMC Manual Prospec 47.92 83 P **P 08 44 10.0 -1.5**
baz=311
TPNV Topopah Spring 48.10 81 P **P 08 44 11.4 -1.4**
baz=310
DUG Dugway, Tooele 48.11 75 P **P 08 44 12.0 -0.8**
baz=309
PDAR Pinedale Array 48.44 70 P **P 08 44 15.3 -0.1**
comp=Z,0.5nm,0.7s,baz=330,slow=5.6,SNR=4.6
PDAR LR LR 09 04 17.3
comp=Z,63nm,18.4s,baz=318,slow=36
comp=Z,0.5nm,0.7s
PRN Pahroc Range 48.53 80 P **P 08 44 15.7 -0.4**
PRN IAmb IAmb 08 44 19.5
comp=Z,7.6nm,1.5s
GSC Goldstone, Bar 48.84 83 P **P 08 44 17.4 -1.1**
baz=312
GMRC Granite Mounta 49.88 83 P **P 08 44 26.1 -0.4**
baz=312
PFO Pinyon Flats O 50.18 84 LR LR 09 04 51.8
comp=Z,65nm,18.1s,baz=279,slow=35
XAN Xi'an 51.11 278 P **P 08 44 30.9 -4.7**
XAN pP pP 08 44 43.2 -1.4
XAN pmax pmax
comp=Z,4.0nm,0.8s
XAN LR LR
comp=N,240nm,20.4s
XAN LR LR
comp=E,200nm,23.1s
XAN LR LR
comp=Z,180nm,19.2s
ULM Lac du Bonnet 51.35 55 P **P 08 44 37.2 +0.1**
comp=Z,1.1nm,0.6s,baz=285,slow=10,SNR=1.9
ULM LR LR 09 07 32.8
comp=Z,207nm,18.5s,baz=307,slow=37
comp=Z,1.1nm,0.6s
ZALV Zalesovo Beam 51.74 311 LR LR 09 07 16.4
comp=Z,89nm,19.2s,baz=357,slow=37
AGMN Agassiz Nation 52.57 57 P **P 08 44 44.9 -1.4**
baz=309
ISCO Idaho Springs 52.61 71 P **P 08 44 46.1 -1.0**
baz=311
LZH Lanzhou 52.82 283 *e*P **P 08 44 52.2 +3.8**
LZH pP sP 08 45 02.1 +1.0
LZH sP pP 08 45 07.0 +9.5
LZH pmax pmax
comp=Z,15nm,1.3s
LZH LR LR
comp=N,270nm,15.5s
LZH LR LR
comp=E,280nm,18.2s
LZH LR LR
comp=Z,260nm,19.6s
GTA Gaotai 53.01 289⇑ P **P 08 44 50.8 +1.0**
GTA pP pP 08 44 55.5 -3.4
GTA sP sP 08 45 01.5 -1.0
GTA pmax pmax
comp=Z,6.0nm,0.9s
GTA pmax pmax
comp=Z,110nm,6.2s
GTA LR LR
comp=N,200nm,16.7s
GTA LR LR
comp=E,210nm,20.0s
GTA LR LR
comp=Z,190nm,19.6s
S22A 4UR Ranch, Cre 53.25 74 P **P 08 44 50.8 -1.0**
baz=312
FRB Frobisher Bay 53.71 30 LR LR 09 10 28.9
comp=Z,240nm,18.4s,baz=358,slow=39
SDCO Great Sand Dun 54.03 73 P **P 08 44 56.8 -0.7**
baz=312
TUC Tucson 54.55 81 P **P 08 45 00.3 -0.8**
baz=314
EYMN Ely 55.04 55 P **P 08 45 03.1 -1.2**
baz=311
T25A Trinidad 55.08 73 P **P 08 45 04.3 -0.7**
baz=313
ANMO Albuquerque 55.35 76 P **P 08 45 07.5 +0.5**
comp=Z,0.2nm,0.3s,baz=307,slow=5.1,SNR=1.6
ANMO LR LR 09 07 11.2
comp=Z,107nm,18.0s,baz=301,slow=34
comp=Z,0.2nm,0.3s
BNM Barren Site 55.80 77 P **P 08 45 10.4 +0.2**
KURK Kurchatov 56.73 311 P **P 08 45 16.2 -0.2**
KURK Kurchatov 56.73 311 *de*P **P 08 45 16.1 -0.2**
KURK pmax pmax
comp=Z,15nm,1.3s
WMQ Urumqi 56.88 300 *e*P **P 08 45 20.5 +2.9**
WMQ LR LR
comp=N,350nm,19.5s
WMQ LR LR
comp=E,520nm,26.5s
WMQ LR LR
comp=Z,130nm,29.0s
MK31 Makanchi Array 57.65 306 P **P 08 45 22.2 -0.7**
MK31 IAmb IAmb 08 45 23.3
comp=Z,4.0nm,1.4s
MK31 Makanchi Array 57.65 306 *ce*P **P 08 45 22.3 -0.7**
MKAR Makanchi Array 57.65 306 P **P 08 45 21.5 -1.4**
comp=Z,0.8nm,0.7s,baz=61,slow=5.7,SNR=7.2
MKAR LR LR 09 10 35.9
comp=Z,54nm,19.4s,baz=74,slow=36
comp=Z,0.8nm,0.7s
MKAR Makanchi Array 57.65 306 P **P 08 45 22.1 -0.9**
MKAR Makanchi Array 57.65 306 *i*P **P 08 45 22.6 -0.4**
MKAR pmax pmax
comp=Z,1.0nm,0.7s
GOMU GeErMu 58.09 289 P **P 08 45 27.1 +0.5**
GOMU pP pP 08 45 31.6 -4.3
GOMU sP sP 08 45 34.2 -5.3
GOMU PcP PcP 08 45 52.7 -25
GOMU PP PP 08 47 14.9 -20
GOMU S S 08 53 15.4 -10
GOMU sS pS 08 53 35.3 -1.8
MNTX Cornudas Mount 58.25 78 P **P 08 45 27.3 -0.1**
MNTX Cornudas Mount 58.25 78 P **P 08 45 26.5 -0.9**
baz=315
BRVK Borovoye 58.76 318 P **P 08 45 30.6 0.0**
BRVK Borovoye 58.76 318 *di*P **P 08 45 30.5 0.0**
BRVK pmax pmax
comp=Z,13nm,1.7s
N38A Joes South For 58.96 62 P **P 08 45 31.4 -0.7**
ARU Arti 60.69 326 *di*P **P 08 45 44.5 +0.7**
ARU S **S 08 54 00.9 +3.0**
ARU SS **SS 08 57 54.1 -1.7**
ARU pmax pmax
comp=Z,12nm,1.5s
ARU MLR MLR
comp=Z,117nm,18.0s
PZH PanZhiHua 60.80 276 P **P 08 45 46.4 +1.3**
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,100nm,5.1s
TUL1 Leonard 60.94 68 P **P 08 45 45.2 -0.6**
baz=315
SCHQ Schefferville 60.97 37 P **P 08 45 45.2 -0.5**
comp=Z,6.7nm,0.9s,baz=341,slow=4.9,SNR=5.0
SCHQ LR LR 09 13 07.6
comp=Z,139nm,19.6s,baz=308,slow=37
comp=Z,6.7nm,0.9s
TX31 Lajitas Ar. Si 60.97 79 P **P 08 45 46.0 -0.2**
TXAR Lajitas Array 60.97 79 P **P 08 45 45.9 -0.3**
comp=Z,1.1nm,0.8s,baz=305,slow=4.4,SNR=8.4
comp=Z,1.1nm,0.8s
KIRV Kirov 61.84 332⇑ *e*P **P 08 45 52.0 +0.5**
KLMR Klimovskoe 62.46 338 *e*P **P 08 45 53.9 -1.7**
KLMR pmax pmax
comp=Z,9.0nm,1.0s
KLMR Klimovskoe 62.46 338 *e*P **P 08 45 54.0 -1.7**
KLMR AMP 08 46 05.3
comp=Z,9.0nm,1.0s
SADO Sadowa 63.36 51 LR LR 09 13 26.6
comp=Z,149nm,21.2s,baz=342,slow=36
AAK Ala-Archa 64.50 307 LR LR 09 17 19.3
comp=Z,59nm,18.5s,baz=106,slow=39
AAK Ala-Archa 64.50 307⇑ *e*P **P 08 46 10.6 +1.0**
AAK pmax pmax
comp=Z,8.0nm,1.7s
FINES FINESS Array B 64.53 345 LR LR 09 19 35.4
comp=Z,48nm,18.1s,baz=90,slow=41
ABKAR Akbulak array 65.86 320 P **P 08 46 18.3 +0.2**
ABKAR Akbulak array 65.86 320 P **P 08 46 18.7 +0.6**
ABKAR IAmb IAmb 08 46 34.1
comp=Z,3.6nm,1.1s
KK31 Karatay Array 66.07 310 P **P 08 46 19.3 -0.3**
KK31 Karatay Array 66.07 310 P **P 08 46 19.3 -0.3**
KK31 pmax pmax
comp=Z,9.0nm,1.5s
KKAR Karatay Array 66.07 310 P **P 08 46 19.8 +0.1**
KKAR Karatay Array 66.07 310 P **P 08 46 19.8 +0.1**
KSH Kashi 66.08 304 P **P 08 46 24.6 +4.7**
KSH sP sP 08 46 36.3 +3.6
KSH pmax pmax
comp=Z,5.0nm,1.0s
PMG Port Moresby 66.45 213 LR LR 09 10 28.0
comp=Z,79nm,20.2s,baz=24,slow=32
NOA NORSAR Array B 66.69 353 P **P 08 46 23.7 +0.4**
comp=Z,1.2nm,0.9s,baz=3.9,slow=7.3,SNR=3.5
NOA LR LR 09 15 02.4
comp=Z,31nm,20.4s,baz=355,slow=36
comp=Z,1.2nm,0.9s
HFS Hagfors 67.38 351 LR LR 09 18 47.2
comp=Z,52nm,18.4s,baz=356,slow=38
TKL Tuckaleechee C 67.80 60 LR LR 09 17 49.1
comp=Z,183nm,18.4s,baz=328,slow=37
CMAR Chiang Mai Arr 68.49 273 P **P 08 46 36.3 +1.0**
comp=Z,2.0nm,0.3s,baz=19,slow=6.6,SNR=4.2
comp=Z,2.0nm,0.3s
AKASG Malin Array Be 74.09 339 P **P 08 47 08.7 +0.1**
comp=Z,0.5nm,0.4s,baz=25,slow=6.7,SNR=7.5
AKASG LR LR 09 23 27.2
comp=Z,67nm,18.3s,baz=35,slow=39
comp=Z,0.5nm,0.4s
AKASG Malin Array Be 74.09 339 P **P 08 47 08.7 +0.1**
AKASG pmax pmax
comp=Z,2.0nm,1.3s
DZM Mont Dzumac 74.41 190 LR LR 09 11 48.1
comp=Z,109nm,21.5s,baz=140,slow=29
PPT Papeete 75.12 147 LR LR 09 13 22.5
comp=Z,184nm,19.4s,baz=64,slow=30
GEYT Alibeck 75.87 315 LR LR 09 25 38.0
comp=Z,130nm,18.1s,baz=64,slow=40
KBZ Khabaz 76.75 328 P **P 08 47 24.2 +0.2**
comp=Z,0.6nm,0.3s,baz=47,slow=3.7,SNR=1.6
KBZ LR LR 09 25 54.6
comp=Z,37nm,18.1s,baz=52,slow=39
comp=Z,0.6nm,0.3s
KBZ Khabaz 76.75 328⇓ *e*P **P 08 47 25.5 +1.5**
KBZ pmax pmax
comp=Z,5.0nm,1.6s
CTA Charters Tower 76.76 210 P **P 08 47 23.8 -0.4**
comp=Z,1.5nm,0.8s,baz=11,slow=5.2,SNR=4.0
CTA LR LR 09 18 48.7
comp=Z,38nm,18.4s,baz=41,slow=34
comp=Z,1.5nm,0.8s
ZEI Tsey 77.25 327 *e*P **P 08 47 27.5 +0.4**
ZEI pmax pmax
comp=Z,4.0nm,0.9s
VRAC Vranov 77.67 347 LR LR 09 26 16.6
comp=Z,56nm,18.1s,baz=34,slow=39
SOC Sochi 77.90 330 *e*P P 08 47 19.2 -11
SOC *e*S **S 08 57 19.8 -1.4**
SOC MLR MLR
comp=Z,191nm,19.0s
GNI Garni 79.30 325 LR LR 09 27 44.8
comp=Z,128nm,18.8s,baz=31,slow=40
MLR Muntele Rosu 79.73 340 LR LR 09 24 56.2
comp=Z,43nm,21.0s,baz=40,slow=37
WRA Warramunga Arr 80.86 220 P **P 08 47 45.4 -1.3**
comp=Z,2.0nm,1.0s,baz=36,slow=6.0,SNR=8.3
WRA LR LR 09 20 45.1
comp=Z,67nm,18.9s,baz=239,slow=34
comp=Z,2.0nm,1.0s
WRA Warramunga Arr 80.86 220 IAmb IAmb 08 47 50.9
comp=Z,0.4nm,1.4s
WRA Warramunga Arr 80.86 220 *i*P **P 08 47 47.7 +1.0**
WRA pmax pmax
comp=Z,2.0nm,1.0s
ASAR Alice Springs 84.38 219 P **P 08 48 05.3 +0.3**
comp=Z,0.7nm,0.7s,baz=21,slow=5.4,SNR=5.7
ASAR LR LR 09 24 36.3
comp=Z,44nm,21.2s,baz=340,slow=35
comp=Z,0.7nm,0.7s
WSAR Wadi Sarin 87.89 306 LR LR 09 32 37.3
comp=Z,70nm,18.3s,baz=113,slow=39
STKA Stephens Creek 89.22 210 LR LR 09 22 07.6
comp=Z,61nm,20.4s,baz=22,slow=31
SJG San Juan 91.15 58 LR LR 09 31 48.0
comp=Z,43nm,19.2s,baz=219,slow=37
EIL Elat 92.15 328 LR LR 09 36 42.3
comp=Z,61nm,18.4s,baz=89,slow=40

WEL 09 08:41:04.3±1.5, 35°S×31°×18°0E±2°, h261km±45km, M4.5/13, ML4.6/17, MLv4.5/13, Error ellipse: s-maj=0.0km s-min=0.0km az=148.6, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**3.19**	**199**	P	Pn	08 41 59.3	0.0
WMGZ	**Waiomatatini S**	**3.40**	**196**	P	Pn	08 42 02.4	+0.7
HAZ	**Te Kaha**	**3.52**	**204**	P	Pn	08 42 02.4	-0.6
HAZ				S	S	08 42 50.1	+0.3
PKGZ	**Pakihiroa**	**3.55**	**200**	P	Pn	08 42 03.3	-0.2
PKGZ				S	S	08 42 51.1	+0.5
PUZ	**Puketiti**	**3.68**	**197**	P	Pn	08 42 04.7	-0.1
PUZ				S	S	08 42 53.4	+0.3
RUGZ	**Raukumara Rang**	**3.75**	**204**	P	Pn	08 42 06.1	+0.4
RUGZ				S	S	08 42 51.2	-3.5
TWGZ	**Tauwhareparae**	**3.85**	**199**	P	Pn	08 42 06.8	0.0
TWGZ				S	S	08 42 59.3	+2.6
CNGZ	**Carnagh Statio**	**4.08**	**195**	P	Pn	08 42 09.7	+0.3
OPRZ	**Ohinepanea**	**4.11**	**216**	P	Pn	08 42 09.5	-0.2
MWZ	**Matawai**	**4.13**	**203**	P	Pn	08 42 09.6	-0.4
MWZ				S	S	08 43 03.5	+1.0
TKGZ	**Te Karaka**	**4.13**	**199**	P	Pn	08 42 09.6	-0.4
MARZ	**Manawahe**	**4.16**	**214**	P	Pn	08 42 11.5	+1.1
URZ	**Urewera**	**4.21**	**208**	P	Pn	08 42 09.7	-1.2
RAGZ	**Rawiri**	**4.31**	**203**	P	Pn	08 42 13.8	+1.6
OMRZ	**Omania**	**4.40**	**215**	P	Pn	08 42 14.6	+1.3
RIGZ	**Rimuhau**	**4.41**	**199**	P	Pn	08 42 12.5	-0.7
RRRZ	**Republican Roa**	**4.53**	**212**	P	Pn	08 42 16.2	+1.5
MUGZ	**Murupara**	**4.53**	**209**	P	Pn	08 42 13.5	-1.2
RTZ	**Ruatahuna**	**4.57**	**207**	P	Pn	08 42 14.0	-1.3
PRGZ	**Paritu Road**	**4.58**	**197**	P	Pn	08 42 14.9	-0.4
SNGZ	**Shannon Statio**	**4.60**	**203**	P	Pn	08 42 15.1	-0.5
HSRZ	**Hossack Road**	**4.63**	**215**	P	Pn	08 42 18.2	+2.3
HRRZ	**Handcock Road**	**4.67**	**214**	P	Pn	08 42 17.9	+1.5
PRRZ	**Plateau Road**	**4.71**	**212**	P	Pn	08 42 17.5	+0.7
KNZ	**Kokohu**	**4.72**	**198**	P	Pn	08 42 15.8	-1.1
ALRZ	**Allen Road**	**4.79**	**212**	P	Pn	08 42 17.8	0.0
MHGZ	**Mahia Peninsul**	**4.79**	**196**	P	Pn	08 42 17.8	0.0
RAHZ	**Arahi**	**4.82**	**204**	P	Pn	08 42 17.1	-0.9
MTHZ	**Maungataniwha**	**4.83**	**206**	P	Pn	08 42 18.4	+0.1
WPRZ	**Whakapapatarin**	**4.83**	**214**	P	Pn	08 42 19.3	+0.9
KUTZ	**Kaahu Road**	**4.97**	**217**	P	Pn	08 42 21.4	+1.4
MRHZ	**Matea Rd**	**4.98**	**210**	P	Pn	08 42 19.9	-0.2
TLZ	**Tolley Road**	**4.99**	**220**	P	Pn	08 42 21.7	+1.4
NMHZ	**Naumai**	**5.06**	**205**	P	Pn	08 42 20.3	-0.8
ARHZ	**Aropaoanui**	**5.15**	**203**	P	Pn	08 42 21.1	-1.0
HATZ	**Hinemaiaia**	**5.17**	**212**	P	Pn	08 42 22.3	-0.1
WATZ	**Wairara**	**5.18**	**216**	P	Pn	08 42 23.5	+0.9
BKZ	**Black Stump Fm**	**5.24**	**207**	P	Pn	08 42 22.0	-1.3
RATZ	**Rangitukua**	**5.29**	**214**	P	Pn	08 42 24.4	+0.5
RITZ	**Rihia Road**	**5.34**	**213**	P	Pn	08 42 24.9	+0.4
MCHZ	**McNeill Hill**	**5.41**	**205**	P	Pn	08 42 24.1	-1.2
CKHZ	**Cape Kidnapper**	**5.48**	**201**	P	Pn	08 42 25.1	-1.1
KWHZ	**Kaweka Forest**	**5.49**	**207**	P	Pn	08 42 24.7	-1.6
HIZ	**Hauiti**	**5.50**	**223**	P	Pn	08 42 27.6	+1.2
NTVZ	**North Tongarir**	**5.52**	**214**	P	Pn	08 42 26.4	-0.4
TMVZ	**Te Maari**	**5.53**	**213**	P	Pn	08 42 26.5	-0.3
ETVZ	**East Tongariro**	**5.54**	**213**	P	Pn	08 42 26.9	-0.1
OTVZ	**Oturere**	**5.58**	**213**	P	Pn	08 42 26.8	-0.8
KAHZ	**Kahuranaki**	**5.67**	**202**	P	Pn	08 42 27.3	-1.1
BHHZ	**Black Hill Sta**	**5.69**	**209**	P	Pn	08 42 27.3	-1.4
KRHZ	**Kereru**	**5.70**	**206**	P	Pn	08 42 26.7	-2.1
FWVZ	**Far West T-bar**	**5.71**	**213**	P	Pn	08 42 28.8	-0.3
WHVZ	**Whangaehu Hut**	**5.71**	**213**	P	Pn	08 42 29.1	-0.1
MOVZ	**Moawhango**	**5.74**	**211**	P	Pn	08 42 28.3	-1.1
WNVZ	**Wahianoa**	**5.75**	**213**	P	Pn	08 42 29.0	-0.6
MTVZ	**Mangateitei**	**5.85**	**213**	P	Pn	08 42 30.5	-0.3
PXZ	**Pawanui**	**5.89**	**201**	P	Pn	08 42 29.1	-2.1
VRZ	**Vera Road**	**5.99**	**219**	P	Pn	08 42 32.8	+0.4
PNHZ	**Pukenui**	**6.00**	**206**	P	Pn	08 42 30.1	-2.5
WPHZ	**Waipukurau**	**6.05**	**204**	P	Pn	08 42 32.5	-0.7
PRHZ	**Porangahau**	**6.18**	**202**	P	Pn	08 42 33.5	-1.2
DREZ	**Durham Road**	**6.34**	**221**	P	Pn	08 42 37.9	+1.2
DVHZ	**Dannevirke**	**6.36**	**204**	P	Pn	08 42 34.8	-2.2
WAZ	**Wanganui**	**6.37**	**214**	P	Pn	08 42 36.3	-0.8
ANWZ	**Anggora Road**	**6.40**	**202**	P	Pn	08 42 36.8	+1.7
LREZ	**Lake Rotokare**	**6.43**	**219**	P	Pn	08 42 37.9	+0.1
NEZ	**North Egmont**	**6.45**	**221**	P	Pn	08 42 39.4	+1.2
POWZ	**Post Office Ro**	**6.58**	**206**	P	Pn	08 42 38.3	-1.4
OHWZ	**Ohakea**	**6.60**	**210**	P	Pn	08 42 39.0	-0.8
PRWZ	**Pori Road**	**6.65**	**205**	P	Pn	08 42 39.5	-1.1
TIWZ	**Tintock**	**6.88**	**204**	P	Pn	08 42 42.1	-1.4
CPWZ	**Castlepoint**	**6.90**	**202**	P	Pn	08 42 43.7	+0.1

IDC 09 08:43:02.8±2.2, 5.61°S×130.58°E, h0km, mb3.7/1, mbtmp3.3/3, ML3.2/2, Error ellipse: s-maj=112.8km s-min=31.7km az=71.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.71**	**166**	Pn	Pn	08 46 32.2	-0.1
	0.1nm,0.3s,baz=346,slow=11,SNR=7.4						
WRA				Sn	Sn	08 49 02.5	-14
	0.2nm,0.3s,baz=356,slow=24,SNR=1.9						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**18.24**	**170**	P	Pn	08 47 17.3	-0.2
	0.1nm,0.3s,baz=344,slow=10,SNR=5.4						
ASAR				S	Sn	08 50 28.2	-14
	0.3nm,0.6s,baz=360,slow=28,SNR=1.0						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**67.39**	**326**	P	P	08 54 00.1	+0.1
	0.5nm,0.5s,baz=122,slow=7.8,SNR=5.6						
	0.5nm,0.5s						

*NNC **09** 08:52:15.8±8.9, 53.99N×87.46E, h0km, mb3.2, mpv3.0, Error ellipse: s-maj=74.2km s-min=52.6km az=19.0, Suspected Mining explosion.*

*IDC **09** 08:52:17.3±2.8, 54.17N×87.24E, h0km, mbtmp3.0/2, ML2.8/2, Error ellipse: s-maj=23.5km s-min=18.0km az=52.0*

ISC 09 08:52:17.6±4.3, 54.3N±0.2×87.1E±0.2, h0km, n8, σ0s88/10, 6C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.40**	**258**	*i*		09 01 30.0	
	baz=80,slow=305,SNR=5.7						
ZAA0	**Zalesovo Array**	**1.40**	**258**	⇓P	**Pn**	**08 52 44.3**	**0.0**
	0.4nm,0.3s						
ZAA0				⇑S	**Sn**	**08 53 04.5**	**+1.1**
	7.3nm,0.9s						
ZALV	**Zalesovo Beam**	**1.40**	**258**	Pg	**Pn**	**08 52 43.1**	**-1.2**
	2.9nm,0.3s,baz=80,slow=16,SNR=33						
ZALV				Lg	Lg	08 53 03.1	
	2.4nm,0.3s,baz=80,slow=24,SNR=11						
KURK	**Kurchatov**	**6.29**	**239**	⇓Pn	**Pn**	**08 53 52.0**	**+0.4**
	4.3nm,0.7s						
KURK				⇑Sn	**Sn**	**08 55 03.5**	**-0.7**
	1.0nm,0.6s						
KURK				⇑Lg	Lg	08 55 39.2	
	5.1nm,0.9s						
KURBB	**Kurchatov Arra**	**6.40**	**239**	Pn	**Pn**	**08 53 53.7**	**+0.7**
	0.1nm,0.3s,baz=54,slow=13,SNR=8.2						
KURBB				Sn	**Sn**	**08 55 05.7**	**-1.0**
	baz=53,slow=23,SNR=1.1						
KURBB				Lg	Lg	08 55 41.3	
	baz=55,slow=26,SNR=3.3						
	0.5nm,0.3s						
KURBB	**Kurchatov Arra**	**6.40**	**239**	⇑Pn	**Pn**	**08 53 53.9**	**+0.9**
	1.1nm,0.5s						
KURBB				⇑Sn	**Sn**	**08 55 06.7**	**0.0**
	1.9nm,0.5s						
KURBB				⇓Lg	Lg	08 55 43.2	
	9.1nm,0.8s						
MK31	**Makanchi Array**	**8.09**	**204**	⇑Lg	Lg	08 56 33.8	
	2.7nm,1.1s,baz=30,slow=35,SNR=4.3						
MKAR	**Makanchi Array**	**8.09**	**204**	Pn	**Pn**	**08 54 16.3**	**0.0**
	0.2nm,0.3s,baz=27,slow=14,SNR=5.8						
MKAR				Lg	Lg	08 56 30.8	
	0.1nm,0.3s,baz=21,slow=20,SNR=1.9						
	0.3nm,0.2s						

*NEIC **09** 09:02:09.0±1.5, 4.6S±0.2×125.6E±0.2, h442km±5km, mb4.1/10, Error ellipse: s-maj=36.2km s-min=15.4km az=57.0*

*IDC **09** 09:02:09.4±2.1, 4.59S×125.70E, h451km±25km, mb3.2/5, mbtmp4.2/7, Error ellipse: s-maj=53.3km s-min=10.8km az=66.0*

ISC 09 09:02:08.8±0.7, 4.6S±0.1×125.6E±0.1, h441km, n32, σ0s79/34, mb3.6/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.76**	**57**	P	**P**	**09 03 51.5**	**+0.6**
	15nm,0.5s,baz=247,slow=22,SNR=3.1						
FAKI	**Fak Fak**	**6.82**	**76**	P	**P**	**09 03 51.6**	**+0.2**
TOLI2	**Tolitoli**	**7.49**	**320**	P	**P**	**09 03 59.2**	**+0.5**
TOLI2	**Tolitoli**	**7.49**	**320**	P	**P**	**09 03 59.8**	**+1.1**
MTN	**Manton Dam**	**9.80**	**147**	P	**P**	**09 04 24.4**	**+0.7**
MTN	**Manton Dam**	**9.80**	**147**	P	**P**	**09 04 24.4**	**+0.7**
KDU	**Kakadu**	**10.47**	**140**	P	**P**	**09 04 31.6**	**+0.5**
KNRA	**Kununurra**	**11.40**	**165**	P	**P**	**09 04 41.8**	**+0.6**
KNRA	**Kununurra**	**11.40**	**165**	P	**P**	**09 04 42.2**	**+1.0**
WB0	**Warramunga Arr**	**17.30**	**151**	P	**P**	**09 05 44.2**	**-0.3**
WRAB	**Tennant Creek**	**17.42**	**152**	P	**P**	**09 05 43.6**	**-2.3**
WRAB	**Tennant Creek**	**17.42**	**152**	P	**P**	**09 05 45.5**	**-0.3**
WRA	**Warramunga Arr**	**17.42**	**152**	P	**P**	**09 05 45.3**	**-0.6**
	9.1nm,0.4s,baz=332,slow=10.0,SNR=110						
WRA				S	**S**	**09 08 44.0**	**-1.0**
	0.5nm,0.7s,baz=325,slow=20,SNR=2.6						
WRA	**Warramunga Arr**	**17.42**	**152**	P	**P**	**09 05 45.0**	**-0.8**
WB2	**Warramunga Arr**	**17.43**	**152**	P	**P**	**09 05 45.5**	**-0.5**
WB2				IAmb	IAmb	09 05 47.6	
	comp=Z,13nm,0.6s						
WR0	**Warramunga Arr**	**17.53**	**151**	P	**P**	**09 05 46.5**	**-0.5**
WR0				IAmb	IAmb	09 05 48.5	
	comp=Z,8.8nm,0.7s						
COEN	**Coen**	**19.62**	**119**	P	**P**	**09 06 06.9**	**-0.4**
COEN				IAmb	IAmb	09 06 13.3	
	comp=Z,8.9nm,1.4s						
COEN	**Coen**	**19.62**	**119**	P	**P**	**09 06 07.0**	**-0.4**
WRKA	**Warakurna**	**20.45**	**173**	P	**P**	**09 06 15.9**	**+1.1**
AS31	**Alice Springs**	**20.54**	**158**	P	**P**	**09 06 16.3**	**+0.6**
AS31				IAmb	IAmb	09 06 19.2	
	comp=Z,4.1nm,0.3s						
ASAR	**Alice Springs**	**20.54**	**158**	P	**P**	**09 06 16.5**	**+0.8**
	comp=Z,2.5nm,0.3s,baz=342,slow=9.4,SNR=98						
ASAR				S	**S**	**09 09 36.8**	**0.0**
	comp=Z,1.2nm,1.0s,baz=358,slow=21,SNR=4.2						
ASAR				ScP	**ScP**	**09 13 01.1**	**-0.8**
	comp=Z,0.4nm,0.8s,baz=340,slow=2.2,SNR=2.4						
	comp=Z,2.5nm,0.3s						
QIS	**Mount Isa**	**20.86**	**141**	P	**P**	**09 06 19.2**	**+0.5**
OOD	**Oodnadatta**	**24.94**	**158**	P	**P**	**09 06 55.8**	**+0.5**
STKA	**Stephens Creek**	**30.96**	**153**	P	**P**	**09 07 48.6**	**+0.4**
	comp=Z,1.0nm,0.4s,baz=326,slow=12,SNR=1.4						
	comp=Z,1.0nm,0.4s						
STKA	**Stephens Creek**	**30.96**	**153**	P	**P**	**09 07 48.5**	**+0.4**
MK31	**Makanchi Array**	**63.91**	**328**	P	**P**	**09 11 56.8**	**-0.2**
MK31				IAmb	IAmb	09 12 15.8	
	comp=Z,2.0nm,1.4s						
MKAR	**Makanchi Array**	**63.91**	**328**	P	**P**	**09 11 57.0**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=123,slow=7.9,SNR=12						
	comp=Z,0.9nm,0.5s						
ZALV	**Zalesovo Beam**	**67.59**	**335**	P	**P**	**09 12 18.8**	**-1.1**
	comp=Z,1.0nm,0.6s,baz=121,slow=5.7,SNR=3.7						
	comp=Z,1.0nm,0.6s						
KURBB	**Kurchatov Arra**	**68.27**	**330**	P	**P**	**09 12 23.8**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=129,slow=5.0,SNR=10						
	comp=Z,1.0nm,0.7s						
KURK	**Kurchatov**	**68.28**	**330**	P	**P**	**09 12 23.8**	**-0.4**
KURK	**Kurchatov**	**68.28**	**330**	IAmb	IAmb	09 12 24.7	
	comp=Z,2.6nm,1.1s						
ABKAR	**Akbulak array**	**77.98**	**322**	P	**P**	**09 13 19.2**	**-1.1**

IDC 09 09:14:56.9±2.5, 53.60N×86.96E, h0km, mbtmp2.8/2, ML2.4/2, Error ellipse: s-maj=23.0km s-min=13.0km az=78.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.32**	**286**	*i*		09 23 00.0	
	baz=103,slow=307,SNR=3.3						
ZALV	**Zalesovo Beam**	**1.32**	**286**	Pg	Pg	09 15 20.6	-1.6
	1.1nm,0.3s,baz=103,slow=17,SNR=12						
ZALV				Lg	Lg	09 15 39.5	
	0.9nm,0.3s,baz=108,slow=28,SNR=11						
KURBB	**Kurchatov Arra**	**5.99**	**244**	Pn	Pn	09 16 27.8	+1.1
	baz=59,slow=13,SNR=4.5						
KURBB				Lg	Lg	09 18 07.0	
	baz=59,slow=31,SNR=2.7						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**7.44**	**206**	Pn	Pn	09 16 48.1	+1.4
	0.1nm,0.3s,baz=26,slow=14,SNR=5.4						
MKAR				Sn	Sn	09 18 11.6	-0.2
	0.1nm,0.3s,baz=28,slow=26,SNR=2.5						
MKAR				Lg	Lg	09 18 52.4	
	baz=21,slow=28,SNR=4.2						
	0.2nm,0.3s						

*MOS **09** 09:29:48.7±0.0, 41.85N×45.87E, h24km, MPVA4.3*
*NORS **09** 09:29:49.2±0.0, 41.83N×45.88E, h10km, MPVA4.2*
*NSSP **09** 09:29:49.8, 41.83N×45.73E, h10km, Ms3.5*
*TIF **09** 09:29:49.8, 41.93N×45.84E, h28km*
*AZER **09** 09:29:49.7±0.1, 41.65N×45.93E, h2km, Error ellipse: s-maj=2.4km s-min=0.6km az=333.0*
*DRS **09** 09:29:50.8±0.0, 41.87N×45.82E, h16km*
*DDA **09** 09:29:50.0±0.0, 41.96N×45.53E, h14km±7km, MW3.4*

ISC 09 09:29:49.6±1.0, 41.86N±0.01×45.84E±0.01, h10km±8km, n144, σ1s26/269, 12C-11D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LGD	**Lagodekhi**	**0.30**	**95**	P	**Pb**	**09 29 57.7**	**+0.6**
LGD				S	**Sb**	**09 30 03.5**	**+1.3**
LGD	**Lagodekhi**	**0.30**	**95**	⇓PG	**Pb**	**09 29 57.7**	**+0.6**
LGD				S	**Sb**	**09 30 03.5**	**+1.3**
DDFL	**Dedoflistskaro**	**0.47**	**153**	P	**Pn**	**09 30 03.6**	**+1.2**
DDFL	**Dedoflistskaro**	**0.47**	**153**	⇓PG	**Pn**	**09 30 03.1**	**+0.7**
DDFL	**Dedoflistskaro**	**0.47**	**153**	P	**Pn**	**09 30 03.8**	**+1.3**
DDFL				S	**Sb**	**09 30 15.3**	**+8.3**
ZKTA	**Zakatala**	**0.63**	**111**	P	**Pb**	**09 30 02.7**	**0.0**
	SNR=237						
ZKTA				S	**Sb**	**09 30 11.7**	**+0.2**
SEAG	**Tbilisi Sea**	**0.78**	**263**	P	**Pb**	**09 30 05.3**	**0.0**
SEAG				S	**Sn**	**09 30 17.1**	**-1.5**
SEAG	**Tbilisi Sea**	**0.78**	**263**	PG	**Pb**	**09 30 05.3**	**0.0**
SEAG				S	**Sn**	**09 30 17.1**	**-1.5**
BTNK	**Botanikuri**	**0.80**	**257**	P	Pg	09 30 00.0	-4.9
BTNK				S	**Sg**	**09 30 12.1**	**-3.3**
BTNK	**Botanikuri**	**0.80**	**257**	⇑PG	Pg	09 30 00.0	-5.0
BTNK				S	**Sg**	**09 30 12.1**	**-3.3**
BTLR	**Botlikh**	**0.85**	**19**	⇓*i*PG	**Pg**	**09 30 06.0**	**0.0**
BTLR				*e*S	**Sb**	**09 30 17.9**	**-0.2**
BTLR	**Botlikh**	**0.85**	**19**	*i* Pg	**Pg**	**09 30 06.0**	**0.0**
BTLR				*e*Sg	**Sb**	**09 30 17.9**	**-0.2**
QZX	**Qazax, Azerbai**	**0.88**	**204**	P	**Pb**	**09 30 06.8**	**-0.2**
	SNR=128						
QZX				S	**Sb**	**09 30 18.7**	**0.0**
XNZR	**Khunzakh**	**0.94**	**43**	*e*PG	**Pg**	**09 30 07.8**	**+0.2**
XNZR				*i* S	**Sb**	**09 30 20.7**	**+0.1**
XNZR				pmax	pmax		
	comp=Z,153nm,0.4s						
XNZR				smax	smax		
	comp=E,574nm,0.4s						
XNZR	**Khunzakh**	**0.94**	**43**	*e*Pg	**Pg**	**09 30 07.9**	**+0.2**
XNZR				*e*Sg	**Sb**	**09 30 20.5**	**-0.1**
KMKR	**Kumukh**	**0.98**	**74**	⇑*i*PG	**Pg**	**09 30 08.3**	**-0.1**
KMKR				*i* S	**Sb**	**09 30 21.9**	**+0.1**
KMKR				pmax	pmax		
	comp=Z,565nm,0.1s						
KMKR				smax	smax		
	comp=N,4μm,0.2s						
KMKR	**Kumukh**	**0.98**	**74**	*e*Pg	**Pg**	**09 30 08.4**	**0.0**
KMKR				*e*Sg	**Sb**	**09 30 21.7**	**-0.2**
GNBR	**Gunib**	**0.99**	**57**	⇑*i*PG	**Pg**	**09 30 08.6**	**0.0**
GNBR				*i* S	**Sb**	**09 30 22.6**	**+0.6**
GNBR				pmax	pmax		
	comp=Z,303nm,0.3s						
GNBR	**Gunib**	**0.99**	**57**	*i* Pg	**Pg**	**09 30 08.7**	**+0.1**
GNBR				*e*Sg	**Sb**	**09 30 22.5**	**+0.5**
UNCR	**Uncukul**	**1.11**	**40**	*e*PG	**Pb**	**09 30 10.8**	**-0.1**
UNCR				*e*S	**Sb**	**09 30 25.5**	**+0.1**
UNCR	**Uncukul**	**1.11**	**40**	*e*Pg	**Pb**	**09 30 10.8**	**-0.1**
UNCR				*e*Sg	**Sb**	**09 30 25.5**	**+0.1**
DVE	**Vedeno**	**1.11**	**11**	⇓*i*PG	**Pb**	**09 30 10.7**	**-0.3**
DVE				*e*S	**Sg**	**09 30 26.1**	**+0.6**
DVE	**Vedeno**	**1.11**	**11**	*i* Pg	**Pb**	**09 30 10.7**	**-0.3**
DVE				*e*Sg	**Sg**	**09 30 26.1**	**+0.6**
ARKR	**Arakani**	**1.13**	**49**	⇓*i*PG	**Pb**	**09 30 11.2**	**-0.1**
ARKR				*e*S	**Sb**	**09 30 26.1**	**-0.1**
ARKR	**Arakani**	**1.13**	**49**	*i* Pg	**Pb**	**09 30 11.2**	**-0.1**
ARKR				*e*Sg	**Sb**	**09 30 26.1**	**-0.1**
GDB	**GEDABAY**	**1.14**	**183**	P	**Pb**	**09 30 10.5**	**-1.0**
	SNR=290						
GDB				S	**Sb**	**09 30 25.9**	**-0.7**
GUDG	**Gudauri**	**1.18**	**301**	P	**Pb**	**09 30 11.1**	**-1.1**
GUDG				S	**Sb**	**09 30 26.6**	**-1.0**
GUDG	**Gudauri**	**1.18**	**301**	PG	**Pb**	**09 30 11.1**	**-1.1**
GUDG				S	**Sb**	**09 30 26.6**	**-1.0**
KZRT	**Kazreti**	**1.18**	**247**	P	**Pb**	**09 30 10.9**	**-1.2**
KZRT				S	**Sb**	**09 30 27.0**	**-0.5**
KZRT	**Kazreti**	**1.18**	**247**	PG	**Pb**	**09 30 10.9**	**-1.2**
KZRT				S	**Sb**	**09 30 27.0**	**-0.5**
KZRT	**Kazreti**	**1.18**	**247**	P	**Pb**	**09 30 11.2**	**-0.9**
KZRT				S	**Sb**	**09 30 26.6**	**-0.9**
PNSH	**Pansheti**	**1.19**	**311**	P	**Pb**	**09 30 11.2**	**-1.2**
PNSH				S	**Sb**	**09 30 26.9**	**-1.1**
PNSH	**Pansheti**	**1.19**	**311**	PG	**Pb**	**09 30 11.2**	**-1.2**
PNSH				S	**Sb**	**09 30 26.9**	**-1.1**
SEKA	**Sheki**	**1.21**	**122**	PG	**Pn**	**09 30 12.0**	**-0.7**
SEKA	**Sheki**	**1.21**	**122**	P	**Pn**	**09 30 12.0**	**-0.7**
	SNR=136						
SEKA				S	**Sn**	**09 30 29.0**	**-0.3**
KRNR	**Karanay**	**1.25**	**39**	*e*PG	**Pn**	**09 30 13.0**	**-0.2**
KRNR				*e*S	**Sb**	**09 30 29.4**	**-0.1**
KRNR	**Karanay**	**1.25**	**39**	*e*Pg	**Pn**	**09 30 13.0**	**-0.2**
KRNR				*e*Sg	**Sb**	**09 30 29.4**	**-0.1**
GANJ	**Ganja**	**1.27**	**163**	PG	**Pn**	**09 30 12.5**	**-0.9**
GANJ	**Ganja**	**1.27**	**163**	P	**Pn**	**09 30 12.5**	**-0.9**
	SNR=20						
GANJ				S	**Sb**	**09 30 29.8**	**-0.3**
CKLZ	**Chkalov**	**1.29**	**224**	⇓*i*P	**Pg**	**09 30 17.9**	**+3.7**
CKLZ				⇑*i*S	**Sg**	**09 30 35.5**	**+4.5**
GROC	**Groznyy**	**1.34**	**359**	⇑*i*PG	**Pg**	**09 30 15.8**	**+0.5**
GROC				*e*S	**Sg**	**09 30 35.1**	**+2.4**
GROC	**Groznyy**	**1.34**	**359**	*i* Pg	**Pg**	**09 30 15.8**	**+0.5**
GROC				*e*Sg	**Sg**	**09 30 34.9**	**+2.2**
TRLG	**Trialeti**	**1.34**	**257**	P	**Pn**	**09 30 13.7**	**-0.8**
TRLG				S	**Sn**	**09 30 32.0**	**-0.5**
TRLG	**Trialeti**	**1.34**	**257**	PG	**Pn**	**09 30 13.7**	**-0.8**
TRLG				S	**Sn**	**09 30 32.1**	**-0.5**
DLMR	**Dylym**	**1.34**	**26**	*e*PG	**Pb**	**09 30 14.9**	**0.0**
DLMR				*e*S	**Sg**	**09 30 33.2**	**+0.4**
DLMR	**Dylym**	**1.34**	**26**	*e*Pg	**Pb**	**09 30 14.9**	**0.0**
DLMR				*e*Sg	**Sg**	**09 30 33.2**	**+0.4**
BUJR	**Buynaksk**	**1.35**	**44**	*e*PG	**Pb**	**09 30 15.3**	**+0.4**
BUJR				*i* S	**Sg**	**09 30 33.6**	**+0.7**
BUJR				pmax	pmax		
	comp=Z,120nm,0.3s						
BUJR				smax	smax		
	comp=E,635nm,0.7s						
BUJR	**Buynaksk**	**1.35**	**44**	*e*Pg	**Pb**	**09 30 14.9**	**-0.1**
BUJR				*e*Sg	**Sg**	**09 30 33.4**	**+0.5**
DMNI	**Dmanisi**	**1.35**	**247**	P	**Pn**	**09 30 13.6**	**-1.0**
DMNI				S	**Sb**	**09 30 31.7**	**-0.6**
DMNI	**Dmanisi**	**1.35**	**247**	PG	**Pn**	**09 30 13.6**	**-1.0**
DMNI				S	**Sb**	**09 30 31.7**	**-0.6**
DBC	**Dubki**	**1.37**	**32**	*e*PG	**Pb**	**09 30 15.3**	**-0.1**
DBC				*e*S	**Sg**	**09 30 33.6**	**-0.1**
DBC	**Dubki**	**1.37**	**32**	*e*Pg	**Pb**	**09 30 15.3**	**-0.1**
DBC				*e*Sg	**Sg**	**09 30 33.6**	**-0.1**
URKR	**Urkarakh**	**1.37**	**77**	*e*PG	**Pb**	**09 30 15.5**	**+0.1**
URKR				*e*S	**Sn**	**09 30 33.5**	**+0.2**
URKR	**Urkarakh**	**1.37**	**77**	*e*Pg	**Pb**	**09 30 15.5**	**+0.1**
URKR				*e*Sg	**Sn**	**09 30 33.5**	**+0.2**
STEZ	**Stepenevan**	**1.38**	**232**	⇓*i*P	**Pg**	**09 30 19.5**	**+3.4**
STEZ				⇓*i*S	**Sg**	**09 30 38.6**	**+4.5**
KMGR	**Komgaron**	**1.39**	**329**	*e*PG	**Pg**	**09 30 16.7**	**+0.4**
KMGR				*e*S	**Sg**	**09 30 36.1**	**+1.7**
KMGR	**Komgaron**	**1.39**	**329**	*e*Pg	**Pg**	**09 30 16.6**	**+0.2**
KMGR				*e*Sg	**Sg**	**09 30 36.3**	**

ONI	**Oni**	**1.92**	**293**	⇑	*e*PN	**Pn**	**09 30 23.2**	**+0.8**
ONI	**Oni**	**1.92**	**293**		*e*Pg	**Pn**	**09 30 23.2**	**+0.8**
ONI					*e*Sg	**Sb**	**09 30 48.1**	**-0.6**
DIGR	**Digorskoe uzhe**	**1.97**	**303**		*e*PN	**Pb**	**09 30 25.1**	**-0.6**
DIGR					*e*S	**Sb**	**09 30 51.3**	**+1.0**
DIGR	**Digorskoe uzhe**	**1.97**	**303**		*e*Pg	**Pn**	**09 30 24.1**	**+0.9**
DIGR					*e*Sg	**Sb**	**09 30 49.2**	**-1.1**
STDR	**Stavd-Durt**	**2.00**	**320**		*e*PN	**Pg**	**09 30 27.3**	**-0.5**
STDR					*e*S	**Sg**	**09 30 55.3**	**+1.6**
STDR	**Stavd-Durt**	**2.00**	**320**		*e*Pg	**Pn**	**09 30 24.0**	**+0.6**
STDR					*e*Sg	**Sn**	**09 30 49.0**	**+0.5**
AGDM	**Agdam** SNR=8.3	**2.00**	**151**		Pn	**Pb**	**09 30 25.2**	**-0.9**
AGDM					Sn	**Sb**	**09 30 51.8**	**+0.8**
TRKR	**Terskaya**	**2.03**	**337**		*e*PN	**Pn**	**09 30 24.2**	**+0.3**
TRKR	**Terskaya**	**2.03**	**337**		*e*Pg	**Pn**	**09 30 24.2**	**+0.3**
TRKR					*e*Sg	**Sn**	**09 30 49.2**	**-0.1**
EAK	**Akyaka**	**2.05**	**236**		P	**Pn**	**09 30 25.0**	**+0.6**
EAK					S	**Sb**	**09 30 53.4**	**+0.7**
QUBA	**Quba, Azerbaij** SNR=7.6	**2.05**	**103**		Pn	**Pb**	**09 30 27.0**	**0.0**
QUBA					Sn	**Sb**	**09 30 53.1**	**+0.4**
ZRD	**Zardab** SNR=16	**2.11**	**138**		Pn	**Pb**	**09 30 27.2**	**-0.7**
ZRD					Sn	**Sg**	**09 30 56.2**	**-1.1**
TKB	**Tkibuli**	**2.17**	**284**		P	**Pn**	**09 30 26.1**	**+0.2**
TKB					S	**Sb**	**09 30 54.9**	**+1.1**
TKB	**Tkibuli**	**2.17**	**284**		PN	**Pn**	**09 30 26.1**	**+0.2**
TKB					S	**Sb**	**09 30 54.9**	**-1.1**
ABS	**Abastumani**	**2.26**	**268**		P	**Pn**	**09 30 27.1**	**-0.2**
ABS	**Abastumani**	**2.26**	**268**		PN	**Pn**	**09 30 27.1**	**-0.2**
HYR	**Heyderabad** SNR=6.8	**2.27**	**200**		Pn	**Pb**	**09 30 30.8**	**+0.1**
HYR					Sn	**Sg**	**09 31 01.5**	**-0.9**
KDMR	**Kurdemir**	**2.31**	**129**		Pn	**Pb**	**09 30 31.2**	**-0.2**
KDMR					Sn	**Sb**	**09 30 59.5**	**-0.5**
PQL	**Pirkuli** SNR=11	**2.34**	**116**		Pn	**Pb**	**09 30 30.1**	**-1.8**
PQL					Sn	**Sb**	**09 30 59.9**	**-0.9**
DIGO	**Kars**	**2.36**	**233**		P	**Pb**	**09 30 32.0**	**-0.3**
EPOS	**Posof**	**2.36**	**262**		P	**Pn**	**09 30 29.5**	**+1.0**
IGDI	**IGDIR**	**2.40**	**214**		P	**Pb**	**09 30 32.4**	**-0.5**
SIZA	**Siyzn** SNR=8.6	**2.43**	**108**		Pn	**Pg**	**09 30 35.2**	**-0.9**
SIZA					Sn	**Sb**	**09 31 03.7**	**+0.1**
SBZ	**Shahbuz** SNR=15	**2.47**	**185**		Pn	**Pb**	**09 30 34.2**	**0.0**
SBZ					Sn	**Sb**	**09 31 04.2**	**-0.6**
BLQ	**Beylaqan**	**2.51**	**148**		Pn	**Pb**	**09 30 33.0**	**-1.7**
BLQ					Sn	**Sb**	**09 31 04.2**	**-1.5**
ATGJ	**Altiaghaj** SNR=5.3	**2.54**	**112**		Pn	**Pg**	**09 30 36.9**	**-1.3**
ATGJ					Sn	**Sb**	**09 31 06.8**	**+0.1**
QRD	**Qoradiz**	**2.65**	**154**		Pn	**Pb**	**09 30 34.7**	**-2.4**
QRD					Sn	**Sb**	**09 31 09.6**	**-0.2**
GBS	**Qobustan**	**2.69**	**118**		Pn	**Pn**	**09 30 34.4**	**+1.3**
GBS					Sn	**Sb**	**09 31 12.2**	**+1.2**
SAAT	**Saatly**	**2.80**	**135**		Sn	**Sb**	**09 31 12.1**	**-2.0**
KBZ	**Khabaz**	**2.86**	**312**		*e*PN	**Pn**	**09 30 36.7**	**+1.5**
KBZ					*e*S	**Sn**	**09 31 12.4**	**+2.7**
KBZ	**Khabaz**	**2.86**	**312**		*e*Pn	**Pn**	**09 30 36.7**	**+1.5**
KBZ					*e*Sn	**Sn**	**09 31 12.4**	**+2.7**
ORD	**Ordubad** SNR=12	**2.93**	**178**		Pg	**Pb**	**09 30 41.8**	**-0.2**
ORD					Sn	**Sb**	**09 31 15.8**	**-2.2**
SHA1	**Shidzhatmaz**	**3.00**	**310**		*e*PN	**Pn**	**09 30 38.3**	**+0.9**
SHA1					*e*S	**Sn**	**09 31 14.4**	**+0.8**
SHA1	**Shidzhatmaz**	**3.00**	**310**		*e*Pn	**Pn**	**09 30 38.4**	**+0.9**
SHA1					*e*Sn	**Sn**	**09 31 14.4**	**+0.8**
ALIB	**Äli-Bayra**	**3.06**	**127**		Pg	**Pb**	**09 30 42.3**	**-1.9**
ALIB					Sn	**Sb**	**09 31 20.9**	**-0.7**
BEYR	**Belyy Ugol+**	**3.09**	**315**		*e*PN	**Pn**	**09 30 41.3**	**+2.8**
BEYR					*e*S	**Sn**	**09 31 15.2**	**-0.3**
BEYR	**Belyy Ugol+**	**3.09**	**315**		*e*Pn	**Pn**	**09 30 41.3**	**+2.8**
BEYR					*e*Sn	**Sn**	**09 31 15.2**	**-0.3**
KIV0	**Kislovodsk Arr**	**3.12**	**313**		*e*Pn	**Pb**	**09 30 42.0**	**-3.2**
KIV0					*e*Sn	**Sn**	**09 31 17.3**	**+1.0**
KIV	**Kislovodsk**	**3.12**	**313**		*e*PN	**Pb**	**09 30 42.0**	**-3.2**
KIV					*e*S	**Sn**	**09 31 17.3**	**+0.9**
KIV	**Kislovodsk**	**3.12**	**313**		*e*Pn	**Pn**	**09 30 41.7**	**+2.8**
KIV					*e*Sn	**Sn**	**09 31 16.8**	**+0.4**
GLBA	**Clilabad** SNR=4.2	**3.26**	**143**		Pn	**Pn**	**09 30 40.3**	**-0.5**
GLBA					Sn	**Sn**	**09 31 20.8**	**+1.1**
YRD	**Yardimli** SNR=5.5	**3.47**	**147**		Pn	**Pn**	**09 30 44.2**	**+0.3**
YRD					Sn	**Sn**	**09 31 24.9**	**-0.2**
GOF	**Gofitskoye**	**3.79**	**328**	⇑	*e*PN	**Pn**	**09 30 48.0**	**0.0**
GOF					*e*S	**Sg**	**09 31 47.8**	**-3.4**
GOF	comp=Z,21nm,0.5s				pmax	pmax		
GOF	comp=E,34nm,0.6s				smax	smax		
GOF	comp=N,28nm,0.5s				smax	smax		
ASTR	**Astara**	**4.00**	**145**		Pn	**Pn**	**09 30 50.6**	**-0.3**
ASTR					Sn	**Sn**	**09 31 39.9**	**+2.0**
ANN	**Anapa**	**6.79**	**298**	⇓	*e*P	**Pn**	**09 31 29.9**	**+0.6**
ANN	comp=Z,51nm,1.2s				pmax	pmax		
ARU	**Arti**	**16.74**	**25**		P	**P**	**09 33 46.2**	**-0.1**
ARU					S	**Sn**	**09 36 54.4**	**+4.5**
BRVK	**Borovoye**	**19.86**	**47**	⇑	*e*P	**P**	**09 34 16.5**	**-4.1**
BRVK	comp=Z,1.0nm,0.9s				pmax	pmax		

*IDC **09** 09:35:53.4±1.2, 19°.63S×70°.89W, h0km, mb4.0/3, mbtmp4.0/5, ML4.0/2, MS3.2/2, Error ellipse: s-maj=41.6km s-min=18.0km az=58.0*
*NEIC **09** 09:35:55.9±1.1, 19°.79S±0°.02×71°.02W±0°.09, h18km±5km, mb4.1/4, ML4.1(GUC), Error ellipse: s-maj=12.8km s-min=2.4km az=99.0*
*GUC **09** 09:35:56.8±0.7, 19°.70S×71°.03W, h36km±4km, ML4.1*
ISC 09 09:35:53.3±3.5, 19°.73S±0°.03×71°.06W±0°.07, h3km±22km, n59, σ0s86/57, mb4.2/3, 15C-1D, Off coast of northern Chile

Code	Station Name	Δ°	AZ°		Phase ID Op	ISC	Time h m s	Res ISC
TA02	**Huaiquique**	**1.03**	**122**			**Pb**	**09 36 14.0**	**+0.2**
TA02	**Huaiquique**	**1.03**	**122**	⇑	*i*P	**Pb**	**09 36 14.0**	**+0.2**
TA02					*i* S	**Sb**	**09 36 27.7**	**0.0**
TA02	comp=N,7µm,0.4s				IAML		09 36 28.4	
TA01	**Diego Aracena**	**1.17**	**135**		Pn	**Pn**	**09 36 16.4**	**-0.4**
TA01	**Diego Aracena**	**1.17**	**135**	⇑	*i*P	**Pn**	**09 36 16.3**	**-0.4**
TA01					*i* S	**Sb**	**09 36 31.7**	**-0.2**
TA01	comp=E,8µm,0.4s				IAML		09 36 36.2	
PB12	**IPOC Station P**	**1.31**	**32**		Pn	**Pn**	**09 36 18.4**	**-0.3**
PB12	**IPOC Station P**	**1.31**	**32**	⇑	*i*P	**Pn**	**09 36 18.4**	**-0.3**
PB12					*i* S	**Sb**	**09 36 34.6**	**-1.4**
PB11	**IPOC Station P**	**1.32**	**92**			**Pn**	**09 36 18.3**	**-0.6**
PB11	**IPOC Station P**	**1.32**	**92**	⇓	*i*P	**Pn**	**09 36 18.4**	**-0.6**
PB11					*i* S	**Sb**	**09 36 35.1**	**-1.3**
PB11	comp=N,5µm,0.6s				IAML		09 36 40.5	
PATCX	**Punta Patache**	**1.38**	**142**			**Pn**	**09 36 19.3**	**-0.3**
PATCX	**Punta Patache**	**1.38**	**142**	⇑	*i*P	**Pn**	**09 36 19.3**	**-0.3**
PATCX					*i* S	**Sn**	**09 36 37.7**	**-0.8**
PATCX	comp=E,2µm,0.2s				IAML		09 36 43.2	
AP01	**Chacalluta**	**1.51**	**27**			**Pn**	**09 36 21.7**	**+0.3**
AP01	**Chacalluta**	**1.51**	**27**		*e*P	**Pn**	**09 36 21.5**	**+0.2**
AP01	comp=N,15µm,0.9s				IAML		09 36 48.9	
GO01	**Chusmiza**	**1.76**	**88**			**Pn**	**09 36 25.4**	**+0.2**
GO01	**Chusmiza**	**1.76**	**88**	⇑	*i*P	**Pn**	**09 36 25.5**	**+0.2**
GO01					*i* S	**Sn**	**09 36 48.1**	**-0.3**
GO01	comp=N,6µm,0.1s				IAML		09 36 49.6	
PB08	**IPOC Station P**	**1.84**	**103**			**Pn**	**09 36 26.3**	**+0.1**
PB08	**IPOC Station P**	**1.84**	**103**	⇑	*i*P	**Pn**	**09 36 26.3**	**+0.1**
PB08					*i* S	**Sn**	**09 36 49.9**	**-0.3**
PB08	comp=N,1µm,0.5s				IAML		09 36 57.2	
PB02	**IPOC Station P**	**1.92**	**146**			**Pn**	**09 36 27.2**	**0.0**
PB02	**IPOC Station P**	**1.92**	**146**	⇑	*i*P	**Pn**	**09 36 27.1**	**0.0**
PB02					*i* S	**Sn**	**09 36 52.5**	**+0.6**
PB02					IAML		09 37 02.1	
PB01	**IPOC Station P**	**1.97**	**132**			**Pn**	**09 36 28.1**	**+0.3**
PB01	**IPOC Station P**	**1.97**	**132**	⇑	*i*P	**Pn**	**09 36 27.9**	**+0.2**
PB01	comp=N,1µm,0.3s				IAML		09 36 59.9	
PB16	**IPOC Station P**	**2.02**	**47**		Pn	**Pn**	**09 36 29.2**	**+0.4**
PB16	**IPOC Station P**	**2.02**	**47**	⇑	*i*P	**Pn**	**09 36 29.3**	**+0.4**
PB16					*i* S	**Sn**	**09 36 55.2**	**+0.2**
PB16	comp=E,1µm,0.4s				IAML		09 37 03.7	
PB07	**IPOC Station P**	**2.27**	**151**			**Pn**	**09 36 31.3**	**-0.7**
PB07	**IPOC Station P**	**2.27**	**151**	⇑	*i*P	**Pn**	**09 36 31.8**	**-0.2**
PB07					*i* S	**Sb**	**09 37 05.3**	**+1.6**
PB07	comp=N,898nm,0.6s				IAML		09 37 16.8	
PB09	**IPOC Station P**	**2.67**	**141**			**Pn**	**09 36 38.5**	**+1.0**
PB09	**IPOC Station P**	**2.67**	**141**	⇑	*i*P	**Pn**	**09 36 38.5**	**+1.0**
PB09					*i* S	**Sb**	**09 37 14.5**	**-0.7**
PB09	comp=N,1µm,0.3s				IAML		09 37 24.5	
PB04	**IPOC Station P**	**2.73**	**162**			**Pn**	**09 36 37.8**	**-0.5**
PB04	**IPOC Station P**	**2.73**	**162**	⇑	*i*P	**Pn**	**09 36 37.7**	**-0.5**
PB04	comp=N,651nm,0.7s				IAML		09 37 29.9	
PB06	**IPOC Station P**	**3.27**	**155**			**Pn**	**09 36 45.2**	**-0.5**
PB06	**IPOC Station P**	**3.27**	**155**	⇑	*i*P	**Pn**	**09 36 45.2**	**-0.5**
PB06	comp=N,376nm,0.6s				IAML		09 37 45.6	
LVC	**Limon Verde**	**3.50**	**145**		Pn	**Pn**	**09 36 50.1**	**+1.1**
LVC	comp=N,7.2nm,0.3s,baz=42,slow=8.4,SNR=41				Sn	**Sn**	**09 37 33.4**	**+2.3**
LVC	comp=N,26nm,0.3s,baz=182,slow=6.0,SNR=5.4				Lg	Lg	09 37 44.4	
LVC	comp=N,38nm,0.3s,baz=40,slow=19,SNR=11 comp=N,20nm,0.4s				LR	LR	09 38 52.2	
LVC	**Limon Verde**	**3.50**	**145**		Pn	**Pn**	**09 36 50.2**	**+1.2**
PB15	**IPOC Station P**	**3.76**	**157**			**Pn**	**09 36 52.0**	**-0.6**
PB15	**IPOC Station P**	**3.76**	**157**	⇑	*i*P	**Pn**	**09 36 52.0**	**-0.6**
PB10	**IPOC Station P**	**3.79**	**173**			**Pn**	**09 36 51.7**	**-1.2**
PB10	**IPOC Station P**	**3.79**	**173**	⇑	*i*P	**Pn**	**09 36 51.6**	**-1.2**
LPAZ	**La Paz**	**4.42**	**40**		Pn	Pb	09 37 08.6	-3.4
LPAZ	comp=N,2.6nm,0.3s,baz=227,slow=8.0,SNR=29 comp=N,140nm,20.6s,baz=239,slow=42				LR	LR	09 38 52.2	
LPAZ	**La Paz**	**4.42**	**40**			**Pn**	**09 37 05.1**	**+3.2**
AC02	**Maricunga**	**7.29**	**166**		Pn	**Pn**	**09 37 41.0**	**-0.3**
SIV	**San Ignacio** comp=N,0.2nm,0.3s,baz=266,slow=9.1,SNR=20 comp=N,4.1nm,0.5s	**10.21**	**70**		Pn	**Pn**	**09 38 20.8**	**-0.2**
H03N1	**Juan Fernandez** baz=31	**15.35**	**206**		T	T	09 55 17.0	
H03N2	**Juan Fernandez** baz=31,slow=74	**15.35**	**206**		T	T	09 55 22.0	
H03N3	**Juan Fernandez** baz=31,slow=74	**15.36**	**206**		T	T	09 55 21.0	
PLCA	**Paso Flores** comp=N,2.3nm,0.9s,baz=359,slow=12,SNR=4.0	**20.94**	**179**		P	Pn	09 40 42.4	+2.5
PLCA	**Paso Flores** comp=Z,11nm,1.3s	**20.94**	**179**		IAmb	IAmb	09 40 46.7	
NVAR	**Mina Array Bea** comp=Z,0.3nm,0.7s,baz=145,slow=6.5,SNR=2.7 comp=Z,0.3nm,0.7s	**72.87**	**323**		P	**P**	**09 47 25.0**	**+0.9**
NVAR	**Mina Array Bea**	**72.87**	**323**		P	**P**	**09 47 25.0**	**+0.9**
TORD	**Torodi Ar. Bea** comp=Z,1.7nm,0.6s,baz=251,slow=5.0,SNR=12 comp=Z,1.7nm,0.6s	**78.69**	**72**		P	**P**	**09 47 56.0**	**-1.5**
TORD	**Torodi Ar. Bea** comp=Z,1.9nm,0.8s	**78.69**	**72**		IAmb	IAmb	09 47 56.8	
YKA	**Yellowknife Ar** comp=Z,1.2nm,0.8s,baz=136,slow=4.8,SNR=14 comp=Z,1.2nm,0.8s	**88.87**	**341**		P	**P**	**09 48 48.8**	**+0.2**
DAVOX	**Davos/Dischmat** comp=Z,20nm,18.0s,baz=83,slow=36	**98.16**	**43**		LR	LR	10 34 57.8	
H11S2	**WAKE ISLAND Hyl** baz=99,slow=75	**125.64**	**279**		T	T	12 14 13.8	
H11S1	**WAKE ISLAND Hyl** baz=99,slow=75	**125.64**	**279**		T	T	12 14 15.3	
H11S3	**WAKE ISLAND Hyl** baz=99,slow=75	**125.65**	**279**		T	T	12 14 16.2	
H11N3	**WAKE ISLAND Hyl** baz=102,slow=74	**125.68**	**281**		T	T	12 14 15.9	
H11N2	**WAKE ISLAND Hyl** baz=102,slow=74	**125.69**	**281**		T	T	12 14 17.5	
H11N1	**WAKE ISLAND Hyl** baz=102	**125.69**	**281**		T	T	12 14 15.9	
WRA	**Warramunga Arr** comp=Z,0.5nm,0.9s,baz=180,slow=1.8,SNR=5.0	**133.37**	**214**		PKP	**PKPdf**	**09 55 12.1**	**+0.2**
MKAR	**Makanchi Array** comp=Z,1.4nm,1.0s,baz=309,slow=4.1,SNR=6.6	**145.32**	**33**		PKPbc	**PKPdf**	**09 55 32.5**	**-0.2**

*ISK **09** 09:47:24.1, 34°.78N×29°.97E, h84km, ML3.4/12*
*NIC **09** 09:47:24.7±0.0, 34°.93N×29°.95E, h36km±36km, MI3.4/4*
*DDA **09** 09:47:25.7±0.0, 34°.96N×29°.99E, h28km±3km, MW3.4*
*GII **09** 09:47:31.2±0.8, 34°.32N×30°.12E, h40km, Mm3.3/2*
ISC 09 09:47:21.7±1.6, 34.77N±0°.03×29.96E±0°.03, h9km±12km, n57, σ1s90/81, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKAS	**Kas**	**1.49**	**349**	PN	**Pg**	**09 47 50.2**	**-0.1**
AKAS				SN	**Sg**	**09 48 09.5**	**-0.2**
AKAS	**Kas**	**1.49**	**349**	P	**Pb**	**09 47 49.9**	**+0.2**
AKAS				S	**Sn**	**09 48 06.7**	**-1.8**
AKUM	**Antalya-Kumluc**	**1.58**	**11**	P	**Pb**	**09 47 51.3**	**+0.1**
AKUM				S	**Sb**	**09 48 11.0**	**-0.3**
OSC1	**CSNet OBS 1**	**1.67**	**139**	S	**Sb**	**09 48 15.3**	**+1.6**
AKMS	**Akamas**	**1.97**	**82**	P	**Pn**	**09 47 56.7**	**+1.5**
AKMS				S	**Sn**	**09 48 20.0**	**-0.1**
AKMS	0.9nm,0.2s			AML	AML	09 48 20.6	
AKMS	0.9nm,0.2s			AML	AML	09 48 20.6	
AKMS	1.0nm,0.4s			AML	AML	09 48 20.8	
AKMS	1.0nm,0.4s			AML	AML	09 48 20.8	
ELL	**Elmali**	**1.98**	**359**	PN	**Pb**	**09 47 56.9**	**-1.0**
ELL				SN	**Sn**	**09 48 20.9**	**+0.4**
ELL	**Elmali**	**1.98**	**359**	S	**Sn**	**09 48 15.8**	**-4.6**
FETY	**Fethiye**	**2.00**	**339**	PN	**Pb**	**09 47 57.1**	**-1.1**
FETY				SN	**Sn**	**09 48 21.3**	**+0.5**
FETY	**Fethiye**	**2.00**	**339**	P	**Pb**	**09 47 58.1**	**-0.1**
FETY				S	**Sn**	**09 48 20.4**	**-0.4**
ALFC	**Alefka**	**2.20**	**79**	P	**Pn**	**09 47 59.6**	**+1.1**
ALFC				S	**Sn**	**09 48 25.1**	**-0.8**
ALFC	0.7nm,0.2s			AML	AML	09 48 26.3	
ALFC	0.7nm,0.2s			AML	AML	09 48 26.3	
ALFC	0.6nm,0.4s			AML	AML	09 48 32.2	
ALFC	0.6nm,0.4s			AML	AML	09 48 32.2	
CAME	**Cameli-Denizli**	**2.24**	**346**	PN	**Pn**	**09 48 00.4**	**+1.4**
KORT	**Korkueli**	**2.25**	**8**	PN	**Pn**	**09 48 00.9**	**+1.7**
KORT	**Korkueli**	**2.25**	**8**	P	**Pn**	**09 47 58.5**	**-0.8**
KORT				S	**Sb**	**09 48 28.5**	**-2.2**
SZAC	**Souni**	**2.41**	**89**	P	**Pn**	**09 48 01.9**	**+0.7**
SZAC				S	**Sn**	**09 48 31.5**	**+0.6**
SZAC	0.4nm,0.4s			AML	AML	09 48 34.1	
SZAC	0.4nm,0.4s			AML	AML	09 48 34.1	
SZAC	0.5nm,0.4s			AML	AML	09 48 35.7	
SZAC	0.5nm,0.4s			AML	AML	09 48 35.7	
CAEL	**Denizli, Camel**	**2.41**	**348**	P	**Pb**	**09 48 03.6**	**-1.7**
CAEL				S	**Sn**	**09 48 32.5**	**+1.5**
GAZI	**Gazipasa**	**2.42**	**52**	PN	**Pn**	**09 48 02.9**	**+1.5**
GAZI	**Gazipasa**	**2.42**	**52**	P	**Pn**	**09 48 03.0**	**+1.5**
GAZI				S	**Sn**	**09 48 29.6**	**-1.5**
KARP	**Karpathos**	**2.42**	**290**	PN	**Pn**	**09 48 03.1**	**+1.6**
KARP	**Karpathos**	**2.42**	**290**	S	**Sn**	**09 48 30.3**	**-1.0**
LEF	**Lefka**	**2.43**	**81**	PN	**Pn**	**09 48 02.8**	**+1.2**
TURN	**Turunc**	**2.44**	**326**	PN	**Pn**	**09 48 03.7**	**+2.0**
GOLH	**Golhisar**	**2.49**	**353**	P	**Pb**	**09 48 06.2**	**-0.4**
GOLH				S	**Sn**	**09 48 34.4**	**+1.4**
KEPZ	**Antalya-Kepez**	**2.52**	**32**	P	**Pn**	**09 48 04.6**	**+1.9**
KEPZ				S	**Sn**	**09 48 34.5**	**+0.9**
OSC2	**CSNet OBS 4**	**2.56**	**131**	P	**Pn**	**09 48 05.5**	**+2.2**
ASGA	**Asgata**	**2.71**	**89**	P	**Pn**	**09 48 06.9**	**+1.5**
ASGA	0.3nm,0.3s			AML	AML	09 48 39.1	
ASGA	0.3nm,0.3s			S	**Sn**	**09 48 39.2**	**+1.0**
ASGA	0.4nm,0.3s			AML	AML	09 48 39.9	
ASGA	0.4nm,0.3s			AML	AML	09 48 39.9	
YER	**Yerkesik**	**2.73**	**331**	PN	**Pn**	**09 48 07.3**	**+1.6**
DAT	**Datca**	**2.75**	**316**	PN	**Pn**	**09 48 07.8**	**+1.7**
TAVA	**DENIZLI_Tavas**	**2.82**	**343**	P	**Pn**	**09 48 09.2**	**+2.1**
TAVA				S	**Sn**	**09 48 41.6**	**+0.4**
NIS1	**Nisyros Isl.**	**2.91**	**310**	PN	**Pn**	**09 48 09.9**	**+1.7**
TEKE	**Tekeli-Mersin**	**2.92**	**61**	PN	**Pn**	**09 48 10.0**	**+1.7**
BRDR	**BURDUR-Merkez**	**2.93**	**2**	P	**Pb**	**09 48 11.9**	**-2.2**
LFK	**Lefkose**	**2.98**	**79**	PN	**Pn**	**09 48 10.7**	**+1.6**
HDMB	**Hadim**	**3.00**	**42**	PN	**Pn**	**09 48 11.1**	**+1.4**
MVOU	**Mavrovouni**	**3.03**	**84**	S	**Sn**	**09 48 46.0**	**-0.2**
SEYD	**Seydisehir-KON**	**3.04**	**29**	PN	**Pn**	**09 48 11.5**	**+1.4**
SEDI	**Konya, Seydise**	**3.05**	**28**	P	**Pb**	**09 48 13.3**	**-2.9**
SEDI				S	**Sn**	**09 48 47.8**	**+0.9**
MLSB	**Milas**	**3.08**	**326**	PN	**Pn**	**09 48 12.0**	**+1.5**
ZKR	**Zakros**	**3.09**	**278**	PN	**Pn**	**09 48 12.5**	**+1.8**
BODT	**Bodrum**	**3.14**	**318**	PN	**Pn**	**09 48 13.2**	**+1.8**
AKKU	**Akkuyu-Mersin**	**3.25**	**64**	PN	**Pn**	**09 48 14.2**	**+1.5**
TEVE	**Tevekalti-Mers**	**3.29**	**59**	PN	**Pn**	**09 48 15.1**	**+1.6**
TISA	**Tisan-Mersin**	**3.34**	**64**	PN	**Pn**	**09 48 15.6**	**+1.5**
KARG	**Kargicak-Mersi**	**3.38**	**64**	PN	**Pn**	**09 48 16.1**	**+1.5**
KKBE	**Karaman, Kazim**	**3.44**	**44**	P	**Pn**	**09 48 19.1**	**+3.5**
KKBE				S	**Sn**	**09 48 57.5**	**+0.9**
EREN	**Erenkoy**	**3.53**	**76**	PN	**Pn**	**09 48 18.2**	**+1.5**
SILI	**Silifke-Mersin**	**3.61**	**63**	PN	**Pn**	**09 48 19.1**	**+1.4**
GCAM	**G?zelcaml?**	**3.67**	**324**	PN	**Pn**	**09 48 20.1**	**+1.6**
KIZK	**Mersin**	**3.81**	**62**	PN	**Pn**	**09 48 21.9**	**+1.3**
MERS	**Mersin**	**4.26**	**59**	PN	**Pn**	**09 48 27.9**	**+1.1**
MMA0B	**Mount Meron ar**	**4.85**	**110**	Pn	Pn	**09 48 39.5**	**+4.6**
MMA0B				Sn	**Sn**	**09 49 32.1**	**+0.8**
GEM	**Giv'at Ha'Em**	**4.99**	**107**	Pn	**Pn**	**09 48 39.9**	**+3.2**
GEM				Sn	**Sn**	**09 49 34.1**	**-0.4**
KZIT	**Kziot**	**5.36**	**135**	Pn	**Pn**	**09 48 44.0**	**+2.1**
KZIT				Sn	**Sn**	**09 49 41.1**	**-2.7**
YTIR	**Yattir**	**5.50**	**127**	Pn	**Pn**	**09 48 46.6**	**+2.8**
DSI	**Dead Sea**	**5.55**	**124**	Pn	**Pn**	**09 48 46.8**	**+2.3**
PRNI	**Paran**	**6.12**	**135**	Pn	**Pn**	**09 48 54.2**	**+1.8**
PRNI				Sn	**Sn**	**09 49 58.3**	**-4.3**
KRMI	**Paran Flat**	**6.14**	**138**	Pn	**Pn**	**09 48 53.8**	**+1.2**
KRMI				Sn	**Sn**	**09 49 58.6**	**-4.4**
EIL	**Elat**	**6.61**	**139**	Pn	**Pn**	**09 49 00.8**	**+1.8**
EIL				Sn	**Sn**	**09 50 10.3**	**-4.2**

*IDC **09** 10:06:20.6±3.3, 32°.25S×179°.49W, h0km, mb3.4/2, mbtmp3.6/3, ML4.3/1, Error ellipse: s-maj=69.3km s-min=46.4km az=102.0*
*WEL **09** 10:06:28.0±0.6, 33°.5S±15°×17°.9W±3°.7, h33km, M4.4/7, mB5.0/6, ML4.7/13, MLv4.5/7, Mw(mB)4.3/6, Error ellipse: s-maj=0.1km s-min=0.0km az=111.2*
ISC 09 10:06:27.1±0.9, 32°.41S±0°.09×179°.7W±0°.2, h35km, n21, σ1s56/34, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.48**	**26**	P	**Pn**	**10 07 17.2**	**-1.6**
GLKZ				S	**Sn**	**10 08 00.7**	**+2.0**
WMGZ	**Waiomatatini S**	**5.62**	**196**	P	**Pn**	**10 07 50.1**	**+1.9**
WMGZ				S	**Sn**	**10 08 53.7**	**+2.3**
HAZ	**Te Kaha**	**5.73**	**201**	P	**Pn**	**10 07 51.2**	**+1.5**
HAZ				S	**Sn**	**10 08 55.7**	**+1.6**
PKGZ	**Pakihiroa**	**5.77**	**198**	P	**Pn**	**10 07 51.8**	**+1.5**
PKGZ				S	**Sn**	**10 08 52.5**	**-2.7**
PUZ	**Puketiti**	**5.90**	**196**	P	**Pn**	**10 07 50.7**	**-1.3**
PUZ				S	**Sn**	**10 08 57.7**	**-0.6**
RUGZ	**Raukumara Rang**	**5.95**	**201**	P	**Pn**	**10 07 55.0**	**+2.1**
RUGZ				S	**Sn**	**10 08 58.9**	**-1.0**
TWGZ	**Tauwhareparae**	**6.07**	**198**	P	**Pn**	**10 07 54.7**	**+0.3**
TWGZ				S	**Sn**	**10 09 03.2**	**+0.7**
OPRZ	**Ohinepanea**	**6.24**	**209**	P	Pn	10 08 02.0	+5.3
CNGZ	**Carnagh Statio**	**6.30**	**195**	P	**Pn**	**10 07 59.0**	**+1.5**
MWZ	**Matawai**	**6.34**	**200**	P	**Pn**	**10 07 58.3**	**+0.2**
MWZ				S	**Sn**	**10 09 09.1**	**-0.2**
URZ	**Urewera** 5.9nm,0.3s,baz=257,slow=5.7,SNR=23	**6.40**	**203**	Pn	**Pn**	**10 07 59.0**	**+0.1**
URZ	1.7nm,0.3s,baz=21,slow=20,SNR=2.0 7.5nm,0.3s			Sn	**Sn**	**10 09 08.9**	**-1.8**
URZ	**Urewera**	**6.40**	**203**	P	**Pn**	**10 07 59.7**	**+0.8**
URZ				S	**Sn**	**10 09 09.2**	**-1.5

WRKA	**Warakurna**	**6.47**	**33**	P	Pn	10 19 40.0	+6.6
	baz=6.8,SNR=5.0							
BLDU	**Ballidu**	**6.65**	**267**	P	**Pn**	**10 19 37.2**	**+1.3**
	baz=6.6							
BLDU				S	**Sn**	**10 20 49.3**	**-2.4**
	baz=6.6							
MUN	**Mundaring**	**7.18**	**256**	P	**Pn**	**10 19 44.1**	**+1.0**
	baz=7.1							
MORW	**Morawa**	**7.43**	**279**	P	**Pn**	**10 19 48.3**	**+1.8**
	baz=7.5							
RKGY	**Rocky Gully**	**7.48**	**235**	P	**Pn**	**10 19 49.5**	**+2.3**
	baz=7.3,SNR=6.2							
RKGY				S	**Sn**	**10 21 08.7**	**-3.4**
	baz=7.3							
MULG	**Mulgathing**	**8.33**	**91**	P	**Pn**	**10 20 00.8**	**+2.0**
	baz=8.3							
BBOO	**Buckleboo**	**10.17**	**106**	P	**Pn**	**10 20 24.5**	**+0.4**
	baz=10							
BBOO				S	**Sn**	**10 22 11.6**	**-6.6**
	baz=10							
OOD	**Oodnadatta**	**10.22**	**77**	P	**Pn**	**10 20 25.8**	**+0.9**
	baz=10							
ASPA	**Alice Springs**	**10.87**	**53**	P	**Pn**	**10 20 37.4**	**+3.6**
	baz=11							
ASAR	**Alice Springs**	**10.87**	**53**	Pn	**Pn**	**10 20 36.0**	**+2.2**
	0.2nm,0.3s,baz=227,slow=12,SNR=12							
ASAR				Sn	**Sn**	**10 22 34.5**	**-1.1**
	0.4nm,0.3s,baz=232,slow=21,SNR=6.4							
ASAR				Lg	Lg	10 23 35.2		
	0.3nm,0.3s,baz=227,slow=27,SNR=3.0							
	0.3nm,0.3s							
LCRK	**Leigh Creek**	**11.90**	**93**	P	**Pn**	**10 20 47.4**	**-0.4**
	baz=12							
HTT	**Hallett**	**12.64**	**107**	P	**Pn**	**10 20 59.4**	**+1.4**
	baz=13							
WRA	**Warramunga Arr**	**13.84**	**43**	Pn	**Pn**	**10 21 15.7**	**+1.3**
	0.1nm,0.3s,baz=219,slow=13,SNR=3.3							
WRA				Sn	**Sn**	**10 23 42.8**	**-5.5**
	0.1nm,0.3s,baz=216,slow=24,SNR=2.3							
WRA				Lg	Lg	10 25 09.7		
	baz=219,slow=29							
	0.3nm,0.4s							
WB2	**Warramunga Arr**	**13.85**	**43**	P	**Pn**	**10 21 15.3**	**+0.8**
	baz=14							
STKA	**Stephens Creek**	**14.76**	**100**	Pn	**Pn**	**10 21 28.0**	**+1.1**
	0.2nm,0.3s,baz=274,slow=14,SNR=4.2							
STKA				Sn	Sn	10 23 57.9	-13	
	0.2nm,0.3s,baz=240,slow=18,SNR=1.3							
STKA				Lg	Lg	10 25 35.5		
	baz=128,slow=16							
	3.5nm,1.1s							
STKA	**Stephens Creek**	**14.76**	**100**	P	**Pn**	**10 21 28.8**	**+2.0**
	baz=15							
CMSA	**Cobar Meteorol**	**18.25**	**99**	P	**Pn**	**10 22 12.4**	**+0.9**
	baz=18							

*JMA **09** 10:23:54.1±0.2,43°.3N±0°.7×14°.7E±°, h41km±2km, MV3.5/38,E OFF HOKKAIDO*
*SKHL **09** 10:23:55.0±0.3,43°.40N×147°.00E, h35km±4km, mb4.7/4*
ISC 09 10:23:53.0±2.1,43°.38N±0°.07×146°.99E±0°.08, h20km±10km, n18,σ0s73/34, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.50**	**347**	*i* P	**Pn**	**10 24 05.4**	**+0.4**
SHO				AMB	AMB	10 24 05.9	
	570nm,0.4s						
SHO				*e*S	**Sn**	**10 24 12.5**	**-0.6**
SHO				A	A	10 24 14.0	
	5μm,0.3s						
SHO				A	A	10 24 14.0	
	4μm,0.3s						
NEM2	**Nemuro 2**	**0.91**	**269**	P	**Pg**	**10 24 10.4**	**-0.4**
NEM2				*e*S	**Sb**	**10 24 22.1**	**+0.4**
NMR	**Nemuro--Hokkai**	**0.92**	**270**	*i* P	**Pb**	**10 24 10.4**	**+0.1**
NMR				*e*S	**Sb**	**10 24 22.1**	**+0.1**
YUK	**Yuzh-Kuril'sk**	**1.05**	**309**	*i* P	**Pb**	**10 24 12.4**	**0.0**
YUK				AMB	AMB	10 24 12.9	
	690nm,0.5s						
YUK				*i* S	**Sb**	**10 24 25.5**	**-0.2**
YUK				A	A	10 24 26.5	
	1μm,0.4s						
YUK				A	A	10 24 26.5	
	3μm,0.4s						
GLVR	**Golovnino**	**1.13**	**289**	*i* P	**Pn**	**10 24 13.6**	**0.0**
GLVR				AMB	AMB	10 24 15.6	
	350nm,0.3s						
GLVR				*e*S	**Sb**	**10 24 27.8**	**-0.2**
GLVR				A	A	10 24 31.1	
	580nm,0.2s						
GLVR				A	A	10 24 31.1	
	1μm,0.2s						
JKHN	**Kushirohamanak**	**1.37**	**258**	P	**Pn**	**10 24 17.0**	**+0.1**
JKHN				*e*S	**Sn**	**10 24 34.2**	**-0.3**
JRA	**Rausu**	**1.46**	**293**	*e*P	**Pn**	**10 24 18.6**	**+0.3**
JRA				*e*S	**Sn**	**10 24 36.8**	**-0.1**
JNSB	**Nemuroshibetsu**	**1.50**	**286**	*i* P	**Pn**	**10 24 19.0**	**+0.3**
JNSB				*e*S	**Sn**	**10 24 37.3**	**-0.3**
AKK	**Akkeshi**	**1.61**	**258**	*e*P	**Pn**	**10 24 20.6**	**+0.3**
AKK				*e*S	**Sn**	**10 24 39.0**	**-1.5**
JNK	**Nakash**	**1.67**	**278**	*e*P	**Pn**	**10 24 21.0**	**0.0**
JNK				*e*S	**Sn**	**10 24 40.5**	**-1.3**
JAK	**Akkeshi**	**1.72**	**258**	*e*P	**Pn**	**10 24 21.9**	**+0.1**
JAK				*e*S	**Sn**	**10 24 42.1**	**-1.0**
KUR	**Kuril'sk**	**1.95**	**18**	*e*P	**Pn**	**10 24 25.5**	**+0.5**
KUR				AMB	AMB	10 24 27.3	
	50nm,0.2s						
KUR				*e*S	**Sn**	**10 24 48.1**	**-0.8**
KUR				A	A	10 24 52.0	
	110nm,0.2s						
KUR				A	A	10 24 52.0	
	170nm,0.2s						
JTKR	**Abashiri--Toko**	**2.31**	**286**	*e*P	**Pn**	**10 24 31.1**	**+1.2**
JTKR				*e*S	**Sn**	**10 24 58.6**	**+0.8**
JAR	**Ashorobuto**	**2.35**	**269**	*e*P	**Pn**	**10 24 31.2**	**+0.7**
JAR				*e*S	**Sn**	**10 24 58.4**	**-0.4**
JOB	**Onbets**	**2.36**	**259**	*e*P	**Pn**	**10 24 31.4**	**+0.8**
JOB				*e*S	**Sn**	**10 24 58.7**	**-0.2**
JMP	**Maruseppu**	**2.71**	**285**	*e*P	**Pn**	**10 24 36.9**	**+1.5**
JCH	**Churui**	**2.77**	**255**	*e*P	**Pn**	**10 24 36.8**	**+0.6**
JCH				*e*S	**Sn**	**10 25 08.2**	**-0.9**
JEM	**Erimo**	**3.14**	**245**	*e*P	**Pn**	**10 24 42.5**	**+1.2**

NNC 09 10:25:16.0±2.1,44°.17N×86°.53E, h0km, mb4.0, mpv3.7, 3C-2D, Error ellipse: s-maj=15.5km s-min=9.1km az=121.0, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZSN	**Zaisan**	**3.48**	**341**	Pg	Pg	10 26 21.1	-1.6
	19nm,0.6s						
ZSN				Lg	Lg	10 27 07.2	
	16nm,0.8s						
MK31	**Makanchi Array**	**3.97**	**313**	⇓Pn	Pn	10 26 16.5	-1.6
	0.3nm,0.2s,baz=129,slow=14,SNR=28						
MK31				⇑Lg	Lg	10 27 26.2	
	11nm,0.6s,baz=137,slow=27,SNR=6.6						
MAKZ	**Makanchi**	**4.14**	**311**	⇑Pn	Pn	10 26 18.9	-1.6
	1.2nm,0.3s						
MAKZ				⇓Sn	Sn	10 27 12.8	+3.1
	4.2nm,0.5s						
MAKZ				⇑Lg	Lg	10 27 30.3	
	6.7nm,0.6s						
KTMS	**Ketmen**	**4.53**	**263**	Pg	Pb	10 26 38.1	+1.7
	2.7nm,0.4s						
KTMS				Lg	Lg	10 27 36.3	
	11nm,0.4s						
DJR	**Jarkent**	**4.84**	**274**	Pg	Pb	10 26 44.0	+2.3
	5.9nm,0.5s						
DJR				Lg	Lg	10 27 46.7	
	14nm,0.4s						
PDGK	**Podgornoye**	**5.17**	**263**	Pg	Pb	10 26 49.5	+2.2
	2.8nm,0.8s						
PDGK				Lg	Lg	10 27 55.7	
	5.5nm,0.6s						
SHLS	**Shalkode**	**5.22**	**261**	Pg	Pb	10 26 46.1	-2.2
	5.8nm,0.2s						
SHLS				Lg	Lg	10 27 49.9	
	15nm,0.5s						
KAPS	**Kapalarasan**	**5.23**	**285**	Pg	Pb	10 26 51.6	+3.4
	2.8nm,0.2s						
KAPS				Lg	Lg	10 27 59.4	
	13nm,0.3s						
KPKS	**Kokpek**	**5.72**	**266**	Pg	Pg	10 27 02.0	-3.6
	3.9nm,0.3s						
KPKS				Lg	Lg	10 28 16.9	
	14nm,0.3s						
TDK	**Taldyqorghan**	**5.86**	**281**	Pg	Pb	10 27 03.5	+4.5
	82nm,0.4s						
TDK				Lg	Lg	10 28 19.8	
	60nm,0.1s						
SATY	**Saty**	**6.00**	**262**	Pg	Pg	10 27 07.2	-3.7
	4.2nm,0.2s						
SATY				Lg	Lg	10 28 25.9	
	7.0nm,0.2s						
KURS	**Kuram**	**6.08**	**266**	Pg	Pg	10 27 08.7	-3.9
	3.3nm,0.3s						
KURS				Lg	Lg	10 28 28.8	
	5.2nm,0.7s						
ARXS	**Arharly**	**6.25**	**273**	Pg	Pg	10 27 12.0	-3.8
	5.7nm,0.9s						
ARXS				Lg	Lg	10 28 34.6	
	11nm,0.5s						
MDOK	**Medeo**	**6.95**	**265**	Pg	Pg	10 27 24.5	-4.5
	2.2nm,0.1s						
MDOK				Lg	Lg	10 28 56.0	
	4.2nm,0.5s						
TNSS	**Tian-Shan**	**7.04**	**264**	Pg	Pg	10 27 27.4	-3.6
	1.3nm,0.3s						
TNSS				Lg	Lg	10 29 00.8	
	1.8nm,0.4s						
KTBS	**Karatobe**	**7.12**	**270**	Pg	Pg	10 27 27.6	-4.8
	1.1nm,0.6s						
KTBS				Lg	Lg	10 29 01.3	
	10nm,0.9s						
KUU	**Kurty**	**7.35**	**271**	Pg	Pg	10 27 31.9	-4.8
	2.3nm,0.3s						
DGS	**Degeres**	**7.85**	**267**	Pg	Pg	10 27 41.7	-4.6
	2.3nm,0.5s						
DGS				Lg	Lg	10 29 25.3	
	79nm,0.5s						
SGDS	**Sogindy**	**8.63**	**269**	Pg	Pg	10 27 55.7	-5.6
	1.3nm,0.6s						
SGDS				Lg	Lg	10 29 48.9	
	2.1nm,0.3s						

*KRNET **09** 10:26:41.5±0.1,40°.81N×74°.42E, h17km, mb2.4*
*SOME **09** 10:26:43.6,41°.03N×74°.07E, h0km*
ISC 09 10:26:40.5±2.0,40.76N±0°.08×74.41E±0°.03, h11km±13km, n18,σ0s84/35, 19C-9D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARLS	**Aral**	**1.10**	**357**	⇑*i*P	**Pb**	**10 27 01.4**	**-0.3**
	baz=56						
ARLS				⇑*i*S	**Sn**	**10 27 16.0**	**-1.3**
	baz=56						
UCH	**Uchtor**	**1.47**	**3**	⇑*i*P	**Pb**	**10 27 08.3**	**+0.2**
	baz=3.0						
UCH				⇑*i*S	**Sg**	**10 27 27.9**	**+0.1**
	baz=3.0						
AAK	**Ala-Archa**	**1.88**	**2**	⇑*i*P	**Pb**	**10 27 15.6**	**+0.7**
	baz=2.0						
AAK				⇑*i*S	**Sg**	**10 27 40.3**	**-0.6**
	baz=2.0						
KBK	**Karagaybulak**	**1.94**	**12**	⇑*e*P	**Pb**	**10 27 16.4**	**+0.5**
	baz=12						
KBK				⇑*i*S	**Sg**	**10 27 42.0**	**-0.8**
	baz=12						
EKS2	**Erkin-Say**	**1.96**	**346**	⇑*i*P	**Pb**	**10 27 17.1**	**+0.9**
	baz=46						
EKS2				⇑*i*S	**Sg**	**10 27 43.0**	**-0.5**
	baz=46						
ULHL	**Ulahol**	**2.02**	**42**	⇑*e*P	**Pb**	**10 27 18.3**	**+0.9**
	baz=43						
ULHL				⇑*i*S	**Sg**	**10 27 45.0**	**-0.6**
	baz=43						
BOOM	**Boomskoye usch**	**2.08**	**33**	⇓*e*P	**Pb**	**10 27 18.9**	**+0.6**
	baz=34						
BOOM				⇓*i*S	**Sg**	**10 27 46.2**	**-1.0**
	baz=34						
ARK	**Arkit**	**2.12**	**300**	⇑*i*P	**Pb**	**10 27 20.1**	**+1.2**
	baz=99						
ARK				⇑*i*S	**Sg**	**10 27 47.7**	**-0.8**
	baz=99						
TKM2	**Tokmak 2**	**2.33**	**22**	⇓*e*P	**Pb**	**10 27 22.6**	**-0.1**
	baz=22						
TKM2				⇓*i*S	**Sb**	**10 27 52.3**	**+0.7**
	baz=22						
TKM2	**Tokmak 2**	**2.33**	**22**	⇓P	**Pg**	**10 27 26.4**	**+1.2**
	0.5nm,0.3s						
TKM2				⇓S	**Sg**	**10 27 56.0**	**+0.5**
	1.1nm,0.2s						
KDJ	**Kajisay**	**2.49**	**56**	⇑*i*P	**Pb**	**10 27 25.0**	**-0.4**
	baz=57						
KDJ				⇑*i*S	**Sb**	**10 27 56.7**	**+0.5**
	baz=57						
USP	**Ospenovka**	**2.51**	**2**	⇑*e*P	**Pb**	**10 27 24.9**	**-0.6**
	baz=1.0						
USP				⇑*i*S	**Sb**	**10 27 56.2**	**-0.2**
	baz=1.0						
TRKS	**Terek-Say**	**2.59**	**288**	⇓*i*P	**Pb**	**10 27 25.5**	**-1.4**
	baz=86						
TRKS				⇓*i*S	**Sb**	**10 27 58.4**	**-0.4**
	baz=86						
KRBS	**Karabastau**	**3.08**	**17**	*e*P	**Pg**	**10 27 38.9**	**-0.7**
	2.4nm,0.2s						
KRBS				*e*S	**Sg**	**10 28 18.7**	**-0.8**
	3.7nm,0.4s						
KRBS	**Karabastau**	**3.08**	**17**	Pg	**Pg**	**10 27 38.8**	**-0.7**
	2.9nm,0.4s						
KTBS	**Karatobe**	**3.40**	**29**	*e*P	**Pg**	**10 27 45.8**	**+0.2**
	0.8nm,0.2s						
KTBS				*e*S	**Sg**	**10 28 30.3**	**+0.7**
	5.6nm,0.5s						
IUG	**Iuzhnay**	**3.57**	**294**	*e*P	**Pb**	**10 27 44.6**	**+0.9**
IUG				*e*S	**Sb**	**10 28 28.2**	**+1.1**
KK31	**Karatay Array**	**3.73**	**310**	⇑P	**Pb**	**10 27 46.6**	**+0.2**
	0.2nm,0.3s,baz=126,slow=16,SNR=4.5						
KK31				⇓S	**Sb**	**10 28 33.5**	**+1.8**
	0.7nm,0.3s,baz=152,slow=31,SNR=3.5						

*TUL **09** 10:35:04.7±0.5,36°.14N±0°.01×97°.827W±0°.006, h6km±4km, ML2.7, mb_Lg2.6/36(NEIC), Error ellipse: s-maj=1.6km s-min=0.7km az=182.0*
NEIC 09 10:35:04.7±0.5,36°.14N±0°.01×97°.83W±0°.01, h5km, Error ellipse: s-maj=1.8km s-min=1.5km az=217.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKCFA	**Oklahoma City**	**0.78**	**157**		Pg	10 35 19.7	0.0
OKCSW	**OKLAHOMA CITY**	**0.80**	**156**		Pg	10 35 20.0	+0.1
FNO	**Franklin**	**0.94**	**158**		Pg	10 35 22.6	-0.2
U32A	**Winter Ranch,**	**0.98**	**285**		Pg	10 35 23.4	-0.1
T35A	**Sooner Cattle**	**1.31**	**53**		Pn	10 35 29.2	-0.6
X34A	**Smith Ranch, M**	**1.53**	**180**		Pb	10 35 33.5	-0.1
WMOK	**Wichita Mounta**	**1.60**	**209**		Pn	10 35 33.4	-0.2
TUL1	**Leonard**	**1.67**	**97**		Pn	10 35 34.6	0.0
TUL1				IAmb_Lg		10 35 59.0	
	comp=Z,32nn,0.9s						
R32A	**Long Quarter,**	**2.39**	**343**	Pn	Pn	10 35 45.2	+0.7
X37A	**Clayton**	**2.53**	**127**		Pn	10 35 46.9	+0.5
X37A				IAmb_Lg		10 36 25.6	
	comp=Z,14nn,0.8s						
U38A	**Gravette**	**2.80**	**83**	Pn	Pn	10 35 51.1	+1.0
Z35A	**Perchaven, San**	**2.84**	**170**	Pn	Pn	10 35 51.6	+0.9
AMTX	**Amarillo**	**3.38**	**249**	Pn	Pn	10 35 58.6	+0.4
W39A	**Magazine**	**3.42**	**105**	IAmb_Lg		10 36 57.6	
	comp=Z,13nn,0.8s						
MIAR	**Mount Ida**	**3.82**	**113**	IAmb_Lg		10 37 09.0	
	comp=Z,11nn,0.9s						
X40A	**Basin Creek Fa**	**4.40**	**110**	IAmb_Lg		10 37 24.9	
	comp=Z,17nn,0.8s						
MGMO	**Mountain Grove**	**4.58**	**76**	IAmb_Lg		10 37 41.3	
	comp=Z,9.6nn,0.7s						
W41B	**Gary Mavity, V**	**4.64**	**100**	IAmb_Lg		10 37 39.7	
	comp=Z,8.4nn,0.9s						
KSCO	**Kaye Shedlock'**	**4.77**	**308**	IAmb_Lg		10 37 48.7	
	comp=Z,12nn,0.8s						
P38A	**Dawn**	**4.87**	**43**	IAmb_Lg		10 37 43.9	
	comp=Z,8.0nn,0.8s						
T25A	**Trinidad**	**5.39**	**283**	IAmb_Lg		10 38 09.3	
	comp=Z,13nn,1.0s						
JCT	**Junction City**	**5.88**	**197**	IAmb_Lg		10 38 24.0	
	comp=Z,9.8nn,0.7s						
PBMO	**Poplar Bluff**	**6.00**	**82**	IAmb_Lg		10 38 25.7	
	comp=Z,8.7nn,0.8s						
SDCO	**Great Sand Dun**	**6.35**	**287**	IAmb_Lg		10 38 29.2	
	comp=Z,5.3nn,1.3s						
S44A	**Carbondale**	**7.04**	**75**	IAmb_Lg		10 38 49.2	
	comp=Z,8.4nn,0.8s						
SIUC	**Southern Illin**	**7.07**	**75**	IAmb_Lg		10 38 45.1	
	comp=Z,8.9nn,0.8s						
N23A	**Red Feather La**	**7.94**	**309**	IAmb_Lg		10 39 30.0	
	comp=Z,4.4nn,0.8s						
SUSD	**Miller**	**8.34**	**354**	IAmb_Lg		10 39 48.9	
	comp=Z,7.6nn,0.8s						

*KRNET **09** 10:38:33.3±0.1,41°.31N×69°.90E, h12km, mb2.6*
*ISU **09** 10:38:34.2,40°.88N×69°.65E, h15km*
ISC 09 10:38:34.8±1.3,41°.11N±0°.03×69°.83E±0°.04, h3km±12km, n12,σ2s46/22, 10C-6D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAS	**Tashkent**	**0.46**	**299**	⇑*i*P	**Pg**	**10 38 42.0**	**-1.6**
	baz=73						
TAS				⇑*i*S	**Sg**	**10 38 48.1**	**-1.4**
	baz=73						
CHMG	**Chimgan**	**0.46**	**17**	P	**Pn**	**10 38 48.0**	**-0.5**
CHMG				S	**Sb**	**10 38 58.3**	**+5.2**
CHRV	**Charvak**	**0.54**	**10**	S	**Sn**	**10 38 58.7**	**-0.5**
TRKS	**Terek-Say**	**1.08**	**66**	⇑*i*P	Pb	10 38 51.9	-4.3
	baz=80						
TRKS				⇑*i*S	**Sg**	**10 39 04.6**	**-4.8**
	baz=80						
BTK	**Batken**	**1.29**	**144**	⇑*i*P	**Pn**	**10 39 00.4**	**+0.5**
	baz=50						
BTK				⇑*i*S	**Sg**	**10 39 19.1**	**+2.8**
	baz=50						
FRG	**Fergana**	**1.66**	**116**	P	**Pn**	**10 39 05.0**	**+0.2**
FRG				S	**Sb**	**10 39 28.2**	**+0.9**
ARK	**Arkit**	**1.75**	**66**	⇓*i*P	**Pn**	**10 39 03.9**	**-2.3**
	baz=72						
ARK				⇓*i*S	**Sn**	**10 39 25.5**	**-3.5**
	baz=72						
SHAK	**Shakhimardan**	**1.86**	**128**	P	**Pn**	**10 39 08.7**	**+1.0**
SHAK				S	**Sb**	**10 39 33.1**	**-0.1**
KK31	**Karatay Array**	**2.06**	**14**	⇑Pn	**Pg**	**10 39 15.4**	**+1.1**
	1.9nm,0.4s,baz=197,slow=16,SNR=4.3						
KK31				⇑Sn	**Sg**	**10 39 45.3**	**+4.3**
	4.1nm,0.5s,baz=192,slow=24,SNR=7.2						
GAR	**Garm**	**2.14**	**170**	⇓*e*P	**Pb**	**10 39 14.3**	**0.0**
	baz=72						
GAR				⇓*i*S	**Sg**	**10 39 43.8**	**+0.3**
	baz=72						
DRK	**Karamyk**	**2.22**	**136**	⇓*i*P	**Pn**	**10 39 14.5**	**+1.7**
	baz=41						
DRK				⇓*i*S	**Sb**	**10 39 44.5**	**+0.8**
	baz=41						
CHGR	**Chuyangaron**	**2.50**	**192**	⇑*i*P	**Pb**	**10 39 19.6**	**-0.8**
	baz=92						
CHGR				⇑*i*S	**Sb**	**10 39 53.1**	**+1.5**
	baz=92						

*IEPN **09** 10:53:08.0, 73°.45N×10°.13E, h10km*
*IDC **09** 10:53:08.2±1.3, 73°.73N×8°.69E, h0km, mb3.3/1, mbtmp3.8/6, ML2.9/4, MS2.8/6, Error ellipse: s-maj=23.8km s-min=12.4km az=79.0*
*BER **09** 10:53:09.8±3.5, 73°.85N×8°.96E, h10km, ML2.1, ML3.3(NAO), Confirmed Earthquake*
*NAO **09** 10:53:10.5±4.5, 73°.87N×9°.82E, ML3.3*
ISC 09 10:53:07.3±0.9, 73°.76N±0°.05×9°.32E±0°.07, h10km, n37, σ2s32/46, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJO1	**Bjornoya**	**2.76**	**70**	Pn	**Pn**	**10 53 53.0**	**+1.4**
BJO1				Sn	**Sn**	**10 54 23.5**	**-1.4**
BJO1	**Bjornoya**	**2.76**	**70**	*e*P	**Pn**	**10 53 53.1**	**+1.5**
BJO1				*e*S	**Sn**	**10 54 23.5**	**-1.4**
BJO1				IAML		10 54 25.2	
	comp=Z,15nn,0.5s						
BJO1	**Bjornoya**	**2.76**	**70**	P	**Pn**	**10 53 52.8**	**+1.2**
BJO1				*e*S	**Sn**	**10 54 23.4**	**-1.5**
BRBA	**Barentsburg A**	**4.48**	**13**	Pn	**Pn**	**10 54 15.8**	**+0.6**
BRBA	**Barentsburg A**	**4.48**	**13**	*e*P	**Pn**	**10 54 15.7**	**+0.6**
BRBA				IAML		10 55 35.9	
	comp=Z,5.3nn,0.6s						
SPA0	**Spitsbergen Ar**	**4.76**	**18**	Pn	**Pn**	**10 54 20.4**	**+1.4**
	baz=186,slow=18						
SPA0	**Spitsbergen Ar**	**4.76**	**18**	Pn	**Pn**	**10 54 20.4**	**+1.4**
	baz=186,slow=18						
SPA0	**Spitsbergen Ar**	**4.76**	**18**	*e*P	**Pn**	**10 54 20.4**	**+1.4**
SPA0				*e*S	**Sn**	**10 55 14.4**	**+0.4**
SPITS	**Spitsbergen Ar**	**4.76**	**18**	Pn	**Pn**	**10 54 20.6**	**+1.6**
	comp=Z,11nn,0.3s,baz=201,slow=10.0,SNR=115						
SPITS				Sn	**Sn**	**10 55 14.2**	**+0.1**
	baz=205,slow=27						
HOPEN	**Hopen**	**4.88**	**48**	Pn	**Pn**	**10 54 21.8**	**+1.1**
HOPEN				Sn	**Sn**	**10 55 15.8**	**-1.3**
HOPEN	**Hopen**	**4.88**	**48**	*e*P	**Pn**	**10 54 22.0**	**+1.4**
HOPEN				*e*S	**Sn**	**10 55 14.3**	**-2.8**
HOPEN	**Hopen**	**4.88**	**48**	*e*P	**Pn**	**10 54 21.4**	**+0.8**
HOPEN				*e*S	**Sn**	**10 55 14.1**	**-3.0**
KBS	**Kingsbay**	**5.23**	**6**	Pn	**Pn**	**10 54 26.5**	**+1.0**
KBS				Sn	**Sn**	**10 55 23.5**	**-2.2**
KBS	**Kingsbay**	**5.23**	**6**	*i* P	**Pn**	**10 54 25.9**	**+0.5**
KBS	**Kingsbay**	**5.23**	**6**	*e*P	**Pn**	**10 54 25.4**	**0.0**
KBS				IAML		10 55 41.9	
	comp=Z,3.8nn,0.7s						
KBS	**Kingsbay**	**5.23**	**6**	*e*P	**Pn**	**10 54 25.3**	**-0.2**
KBS				*e*S	**Sn**	**10 55 22.7**	**-3.0**
HAMF	**Hammerfest**	**5.40**	**118**	*e*S	**Sn**	**10 55 27.0**	**-2.8**
HAMF				IAML		10 55 27.7	
	comp=Z,9.5nn,0.8s						
KIF	**Kilpisjarvi**	**6.02**	**137**	*e*P	**Pn**	**10 54 39.3**	**+3.1**
KIF				*e*S	**Sn**	**10 55 42.6**	**-2.4**
JMIC	**Jan Mayen**	**6.07**	**251**	Pn	**Pn**	**10 54 34.7**	**-2.3**
	comp=Z,2.9nn,0.3s,baz=42,slow=16,SNR=1.9						
JMIC				LR	LR	10 56 01.9	
	comp=Z,21nn,20.4s,baz=62,slow=30						
	comp=Z,13nn,0.4s						
JMIC	**Jan Mayen**	**6.07**	**251**	*e*P	**Pn**	**10 54 34.8**	**-2.1**
ARA0	**ARCESS Array S**	**6.62**	**122**	Pn	**Pn**	**10 54 47.7**	**+3.2**
	baz=313,slow=12						
ARA0				Sn	**Sn**	**10 55 57.4**	**-2.6**
	baz=319,slow=22						
ARA0	**ARCESS Array S**	**6.62**	**122**	Pn	**Pn**	**10 54 47.7**	**+3.2**
	baz=313,slow=12						
ARA0				Sn	**Sn**	**10 55 57.4**	**-2.6**
	baz=319,slow=22						
ARA0				IAML		10 56 02.3	
	comp=Z,4.3nn,0.3s						
ARCES	**ARCESS Array B**	**6.62**	**122**	Pn	**Pn**	**10 54 48.0**	**+3.4**
	comp=Z,0.3nn,0.3s,baz=317,slow=12,SNR=14						
ARCES				Sn	**Sn**	**10 55 57.2**	**-2.7**
	comp=Z,0.8nn,0.3s,baz=321,slow=20,SNR=12						

comp=Z,45nm,18.7s,baz=238,slow=35

ROM 09 10:54:20.4±0.1, 42.696N±0.006×11.963E±0.009, h8km, ML1.8/5, 5C-1D, Error ellipse: s-maj=0.7km s-min=0.5km az=313.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
LATE	Laterza	0.14	235	P	Pg	10 54 24.3	+0.9
LATE				S	Sg	10 54 26.3	+0.7
LATE	Laterza	0.14	235	⇑P	Pg	10 54 24.4	+0.9
SACS	San Casciano d	0.16	346	⇑P	Pg	10 54 24.3	+0.6
SACS				S	Sg	10 54 27.4	+1.3
SACS				AML	AML		
	comp=E,1410µm,0.5s						
SACS				AML	AML		
	comp=E,1400µm,0.5s						
SACS				AML	AML		
	comp=N,688µm,0.6s						
SACS				AML	AML		
	comp=N,689µm,0.6s						
SACS				AML	AML		
	comp=N,626µm,1.0s						
SACS				AML	AML		
	comp=E,1405µm,0.5s						
SACS	San Casciano d	0.16	346	⇑P	Pg	10 54 24.3	+0.6
MCIV	Monte Civitell	0.23	292	P	Pg	10 54 25.6	+0.7
MCIV				S	Sg	10 54 29.3	+1.2
MCIV				AML	AML		
	comp=E,298µm,0.4s						
MCIV				AML	AML		
	comp=N,172µm,1.4s						
MCIV				AML	AML		
	comp=E,298µm,0.4s						
MCIV	Monte Civitell	0.23	292	P	Pg	10 54 25.6	+0.6
MCIV				AML	AML		
	comp=E,298µm,0.4s						
MCIV				AML	AML		
	comp=N,172µm,1.4s						
MCIV				AML	AML		
	comp=E,298µm,0.4s						
MCIV				AML	AML		
	comp=N,172µm,1.4s						
MCIV				AML	AML		
	comp=E,298µm,0.4s						
MCIV				AML	AML		
	comp=N,172µm,1.4s						
MCIV				AML	AML		
	comp=E,298µm,0.4s						
MCIV				AML	AML		
	comp=N,172µm,1.4s						
MGAB	Montegabbione	0.24	27	⇑P	Pg	10 54 25.7	+0.4
MGAB				S	Sg	10 54 29.9	+1.3
MGAB				AML	AML		
	comp=N,608µm,1.2s						
MGAB				AML	AML		
	comp=E,674µm,0.2s						
MGAB				AML	AML		
	comp=N,622µm,0.4s						
MGAB				AML	AML		
	comp=E,626µm,0.2s						
MGAB	Montegabbione	0.24	27	⇑P	Pg	10 54 25.7	+0.5
MGAB				AML	AML		
	comp=E,626µm,0.2s						
MGAB				AML	AML		
	comp=N,608µm,1.2s						
MGAB				AML	AML		
	comp=E,674µm,0.2s						
MGAB				AML	AML		
	comp=N,622µm,0.4s						
MGAB				AML	AML		
	comp=E,626µm,0.2s						
MGAB				AML	AML		
	comp=N,608µm,1.2s						
MGAB				AML	AML		
	comp=E,674µm,0.2s						
MGAB				AML	AML		
	comp=N,622µm,0.4s						
MGAB				AML	AML		
	comp=E,626µm,0.2s						
MGAB				AML	AML		
	comp=E,674µm,0.2s						
MGAB				AML	AML		
	comp=N,608µm,1.2s						
MGAB				AML	AML		
	comp=N,622µm,0.4s						
MGAB				AML	AML		
	comp=E,626µm,0.2s						
MGAB				AML	AML		
	comp=E,674µm,0.2s						
MGAB				AML	AML		
	comp=N,608µm,1.2s						
MGAB				AML	AML		
	comp=N,622µm,0.4s						
ARCI	Arcidosso	0.39	294	P	Pg	10 54 28.6	+0.5
ARCI				S	Sb	10 54 34.7	-1.1
ARCI				AML	AML		
	comp=E,46µm,0.5s						
ARCI				AML	AML		
	comp=N,54µm,1.0s						
CESX	Cesi	0.46	100	P	Pb	10 54 30.3	-0.5
CESX				AML	AML		
	comp=N,51µm,0.7s						
CESX				AML	AML		
	comp=E,58µm,0.3s						
ATTE	AVT- Monte Tez	0.58	30	⇓P	Pb	10 54 32.3	-0.5
ATTE	AVT- Monte Tez	0.58	30	S	Sb	10 54 42.0	+0.8
ARRO	Arrone	0.60	101	P	Pg	10 54 32.5	+0.5
ASSB	Assisi San Ben	0.62	56	P	Pb	10 54 33.0	-0.4
TOLF	Tolfa	0.63	177	P	Pg	10 54 32.4	-0.2
TOLF	Tolfa	0.63	177	S	Sg	10 54 33.0	-7.8
CAFI	Castiglion Fio	0.63	0	P	Pg	10 54 32.8	+0.2
CASP	Castiglione de	0.81	277	P	Pb	10 54 36.8	+0.1
NRCA	Norcia	0.86	80	S	Sg	10 54 44.0	-4.1

IDC 09 10:54:33.2±3.5, 53.61N×90.78E, h0km, mbtmp3.1/3, ML2.8/3, Error ellipse: s-maj=33.3km s-min=23.9km az=34.0
NNC 09 10:54:34.2±3.2, 53.56N×90.57E, h0km, mb3.4, mpv3.1, Error ellipse: s-maj=23.5km s-min=18.2km az=57.0, Suspected Mining explosion.
ISC 09 10:54:36.9±3.9, 53.6N±0.1×90.4E±0.2, h0km, n8, σ0°93/11, 5C-5D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	3.33	279	*i*		11 16 10.0	
	0.1nm,1.0s,baz=91,slow=311,SNR=9.0						
ZAA0	Zalesovo Array	3.33	279	⇓Pg	Pb	10 55 36.4	-0.3
	0.7nm,0.5s						
ZAA0				⇑Lg	Lg	10 56 26.0	
	4.1nm,0.8s						
ZALV	Zalesovo Beam	3.33	279	Pn	Pn	10 55 31.1	+1.0
	1.6nm,0.3s,baz=93,slow=15,SNR=11						
ZALV				Lg	Lg	10 56 24.6	
	1.3nm,0.3s,baz=90,slow=27,SNR=6.1						
	1.6nm,0.4s						
KURK	Kurchatov	7.77	253	⇓Pn	Pn	10 56 29.9	-1.2
	1.4nm,0.6s						
KURK				⇑Sn	Sn	10 57 59.9	+0.2
	5.3nm,0.8s						
KURK				⇑Lg	Lg	10 58 46.2	
	14nm,0.9s						
KURBB	Kurchatov Arra	7.87	253	Pn	Pn	10 56 31.7	-0.7
	0.1nm,0.3s,baz=64,slow=15,SNR=5.4						
KURBB				Sn	Sn	10 58 03.1	+1.1
	0.1nm,0.3s,baz=67,slow=25,SNR=3.4						
KURBB				Lg	Lg	10 58 53.0	
	0.1nm,0.3s,baz=64,slow=34,SNR=6.9						
	0.7nm,0.4s						
KURBB	Kurchatov Arra	7.87	253	⇓Pn	Pn	10 56 31.3	-1.1
	2.3nm,0.6s						
KURBB				⇓Sn	Sn	10 58 01.8	-0.2
	18nm,1.1s						
KURBB				⇑Lg	Lg	10 58 51.9	
	20nm,0.8s						
MK31	Makanchi Array	8.52	221	Pn	Pn	10 56 41.5	+0.1
	0.2nm,0.5s,baz=33,slow=13,SNR=13						
MK31				⇓Sn	Sn	10 58 19.3	+1.1
	0.5nm,0.6s						
MK31				⇑Lg	Lg	10 59 06.3	
	2.5nm,0.9s						
MKAR	Makanchi Array	8.52	221	Pn	Pn	10 56 41.3	-0.1
	0.3nm,0.3s,baz=37,slow=14,SNR=12						
MKAR				Lg	Lg	10 59 08.5	
	0.1nm,0.3s,baz=43,slow=28,SNR=3.2						
	0.4nm,0.4s						

ROM 09 10:54:43.0±0.1, 41.213N±0.007×14.862E±0.008, h11km, ML2.2/5, MS2.7/1, Error ellipse: s-maj=0.8km s-min=0.3km az=203.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
PSB1	Pescosannita	0.04	286	P	Pg	10 54 45.3	+0.1
PSB1				S	Sg	10 54 47.1	+0.5
MRB1	Monte Rocchett	0.12	136	P	Pg	10 54 46.4	+0.3
MRB1				S	Sg	10 54 49.3	+1.0
MRB1				AML	AML		
	comp=E,5555µm,1.2s						
MRB1				AML	AML		
	comp=N,6785µm,0.4s						
MRB1				AML	AML		
	comp=N,7145µm,0.4s						
MRB1				AML	AML		
	comp=N,6780µm,0.4s						
MRB1				AML	AML		
	comp=E,5715µm,1.2s						
VITU	Vitulano (BN)	0.18	261	P	Pg	10 54 47.3	+0.4
VITU				S	Sg	10 54 51.1	+1.4
BIOG	Biogem	0.20	93	P	Pb	10 54 48.5	-0.3
SACR	S. Croce Del S	0.22	328	P	Pb	10 54 48.9	-0.2
MOCO	Biccari - m.te	0.27	55	P	Pg	10 54 49.3	+0.6
MOCO				S	Sb	10 54 53.8	-0.9
PAOL	Paolisi	0.29	231	P	Pg	10 54 49.1	+0.2
PTRJ	Pietraroja	0.29	301	P	Pg	10 54 49.2	+0.2
GATE	Gambatesa	0.30	7	P	Pb	10 54 50.0	-0.5
CAFE	Carife	0.34	123	P	Pg	10 54 49.8	-0.1
SGTA	Sant Agata di	0.39	101	P	Pg	10 54 51.0	+0.2
SGTA				S	Sb	10 54 57.5	-0.5
SNAL	S. Angelo Dei	0.39	137	P	Pb	10 54 50.5	-0.3
SNAL				S	Sb	10 54 57.0	-1.0
BSSO	Busso	0.39	329	P	Pg	10 54 51.0	+0.2
BSSO				AML	AML		
	comp=N,134µm,0.3s						
BSSO				AML	AML		
	comp=E,157µm,0.4s						
SGG	Gregorio Mates	0.40	296	P	Pg	10 54 51.4	+0.4
SGG				S	Sg	10 54 56.3	-0.1
CIGN	Sant'Elia a Pi	0.44	4	P	Pg	10 54 52.1	+0.3
CIGN				S	Sg	10 54 58.5	+0.9
MCRV	Calabrutti - M	0.49	152	P	Pg	10 54 51.8	-0.8
VVDG	Vesuvio Valle	0.50	221	P	Pg	10 54 53.4	+0.5
PIGN	Pignataro Magg	0.51	269	P	Pg	10 54 52.8	-0.3
VAGA	Valle Agricola	0.51	293	P	Pg	10 54 53.2	+0.1
MIDA	Miranda	0.63	313	P	Pg	10 54 55.0	-0.3
RNI2	Rionero Sannit	0.72	313	AML	AML		
	comp=N,202µm,0.4s						
RNI2				AML	AML		
	comp=E,192µm,0.6s						
CERA	Filignano	0.74	302	P	Pb	10 54 58.3	+0.2
APRC	Apricena	0.75	43	P	Pg	10 54 55.7	-1.8
CDRU	Civita di Ruta	0.80	155	P	Pg	10 54 57.8	-0.6
SGRT	San Giovanni R	0.86	50	P	Pg	10 54 58.3	-1.3
PALZ	Palazzo San Ge	0.87	108	P	Pb	10 55 00.2	0.0
MSAG	Monte S. Angel	0.93	57	P	Pg	10 54 59.7	-1.3
POFI	Posta Fibreno	1.00	301	P	Pb	10 55 02.6	+0.1
POFI				AML	AML		
	comp=E,64µm,1.0s						
POFI				AML	AML		
	comp=N,54µm,0.9s						
POFI				AML	AML		
	comp=E,64µm,1.0s						
POFI				AML	AML		
	comp=N,54µm,0.4s						
SLCN	Sala Consilina	1.01	144	P	Pg	10 55 02.1	-0.4
MRVN	Minervino Murg	1.02	98	P	Pg	10 55 02.1	-0.5
INTR	Introdacqua	1.07	318	AML	AML		
	comp=E,30µm,1.5s						
INTR				AML	AML		
	comp=N,65µm,0.7s						
INTR				AML	AML		
	comp=E,69µm,0.9s						
INTR				AML	AML		
	comp=N,161µm,0.9s						
MCEL	Monticello	1.14	141	P	Pn	10 55 05.4	+0.4
VVLD	Villa Vallelon	1.14	306	P	Pn	10 55 05.0	0.0
BULG	Bulgheria - Ca	1.20	161	P	Pb	10 55 05.2	-0.6
AMUR	Altamura	1.35	102	P	Pn	10 55 08.0	+0.1
LSTV	Lastovo	2.17	44	*e*Pn	Pn	10 55 19.3	+0.2
LSTV				Sn	Sn	10 55 43.9	-2.1
PIPA	Pietrapaola	2.28	138	S	Sb	10 55 51.0	-1.5
HVAR	Hvar	2.29	30	*e*Pn	Pn	10 55 20.1	-0.6
HVAR				Sn	Sn	10 55 46.5	-2.5
ZIRJ	Zirje	2.51	13	*e*Pn	Pn	10 55 23.7	-0.1
ZIRJ				Sn	Sn	10 55 51.4	-2.9
MORI	Morici	2.73	13	*e*Pn	Pn	10 55 25.8	-0.9
MORI				Sn	Sn	10 55 55.8	-3.8
DUGI	Dugi Otok	2.78	3	*e*Pn	Pn	10 55 27.7	+0.2
DUGI				Sn	Sn	10 55 58.4	-2.7
RICI	Ricice	2.83	36	*e*Pn	Pn	10 55 28.0	-0.3
RICI				Sn	Sn	10 55 59.6	-2.8
KIJV	Kijevo	3.01	22	*e*Pn	Pn	10 55 30.3	-0.4
KIJV				Sn	Sn	10 56 04.7	-2.2
CAFI	Castiglion Fio	3.02	316	AML	AML		
	comp=N,33µm,1.2s						
CAFI				AML	AML		
	comp=E,47µm,0.6s						
VIRC	Vir	3.08	3	*e*Pn	Pn	10 55 31.1	-0.5
VIRC				Sn	Sn	10 56 05.5	-3.0

IDC 09 10:55:44.1±4.2, 5.81S×151.14E, h0km, mb3.0/2, mbtmp3.0/2, MS2.7/1, Error ellipse: s-maj=164.5km s-min=55.3km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
GUMO	Guam	20.25	342	LR	LR	11 06 43.1	
	comp=Z,24nm,20.3s,baz=192,slow=32						
WRA	Warramunga Arr	21.55	228	P	P	11 00 35.1	-0.2
	0.4nm,0.6s,baz=54,slow=10,SNR=2.7						
	0.4nm,0.6s						
ASAR	Alice Springs	24.30	221	P	P	11 01 03.5	-0.1
	0.3nm,0.6s,baz=56,slow=8.2,SNR=5.6						
	0.3nm,0.6s						
TORD	Torodi Ar. Bea	149.02	286	PKPbc	PKPbc	11 15 35.0	-0.3
	0.4nm,1.0s,baz=52,slow=3.1,SNR=1.6						

IDC 09 11:10:54.0±1.2, 29.65S×178.38W, h0km, mb4.0/5, mbtmp4.0/5, MS3.4/6, Error ellipse: s-maj=52.0km s-min=12.8km az=146.0
ISC 09 11:10:55.4±0.8, 29.7S±0.2×178.3W±0.2, h10km, n22, σ1°21/12, mb4.1/5, MS3.4/3, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
RAO	Raoul Island	0.58	39	Pn	Pn	11 11 09.6	-0.1
	947nm,0.3s,baz=89,slow=3.2,SNR=11						
RAO				Sn	Sn	11 11 19.6	+0.3
	2µm,0.3s,baz=292,slow=22,SNR=20						
MSVF	Nonsavu	12.37	344	LR	LR	11 17 42.4	
	comp=Z,104nm,19.9s,baz=28,slow=33						
DZM	Mont Dzumac	15.65	296	LR	LR	11 19 29.2	
	comp=Z,180nm,18.0s,baz=84,slow=33						
RAR	Rarotonga	18.76	67	LR	LR	11 21 50.9	
	comp=Z,197nm,18.3s,baz=102,slow=35						
CTA	Charters Tower	33.40	278	LR	LR	11 29 19.2	
	comp=Z,72nm,19.3s,baz=86,slow=33						
STKA	Stephens Creek	34.35	256	P	P	11 17 43.9	+1.4
	4.3nm,1.0s,baz=108,slow=9.6,SNR=2.5						
	4.3nm,1.0s						
ASAR	Alice Springs	42.86	266	P	P	11 18 54.0	-0.1
	0.5nm,0.4s,baz=102,slow=7.7,SNR=12						
ASAR				LR	LR	11 37 14.6	
	comp=Z,63nm,18.1s,baz=359,slow=37						
	0.5nm,0.4s						
WRA	Warramunga Arr	43.78	272	P	P	11 19 01.3	-0.2
	1.2nm,0.5s,baz=110,slow=7.5,SNR=14						
	1.2nm,0.5s						
GUMO	Guam	55.78	315	LR	LR	11 41 15.8	
	comp=Z,24nm,20.8s,baz=102,slow=33						
VNA3	Neumayer Olymp	79.01	176	P	P	11 22 59.2	+0.1
VNA2	Neumayer--Watz	79.44	177	P	P	11 23 01.4	-0.1
	baz=174,slow=4.0						
H03S2	Juan Fernandez	81.09	124	T	T	12 52 43.1	
	baz=237						
H03S1	Juan Fernandez	81.10	124	T	T	12 52 36.0	
	baz=237						
H03S3	Juan Fernandez	81.11	124	T	T	12 52 35.8	
	baz=237						
H03N3	Juan Fernandez	81.28	123	T	T	12 52 48.7	
	baz=238,slow=79						
H03N2	Juan Fernandez	81.28	123	T	T	12 52 52.9	
	baz=238,slow=79						
H03N1	Juan Fernandez	81.30	123	T	T	12 52 47.8	
	baz=238,slow=79						
PETK	Petropavlovsk-	85.07	346	P	P	11 23 30.6	-0.3
	1.3nm,0.7s,baz=156,slow=7.6,SNR=2.3						
	1.3nm,0.7s						
NVAR	Mina Array Bea	87.93	43	P	P	11 23 47.4	+1.8
	0.7nm,0.8s,baz=224,slow=7.6,SNR=5.7						
	0.7nm,0.8s						
FINES	FINESS Array B	144.40	340	PKP	PKPdf	11 30 29.3	-1.8
	4.0nm,1.0s,baz=29,slow=3.2,SNR=7.3						
AKASG	Malin Array Be	150.57	323	PKPbc	PKPbc	11 30 45.1	-2.1
	0.7nm,0.5s,baz=45,slow=1.7,SNR=4.7						
TORD	Torodi Ar. Bea	163.52	180	PKPab	PKPab	11 31 49.9	-0.3
	0.7nm,0.6s,baz=179,slow=4.0,SNR=3.7						

IDC 09 11:11:51.6±7.7, 1.22N×124.13E, h248km±78km, mb3.3/6, mbtmp3.8/6, Error ellipse: s-maj=62.8km s-min=17.9km az=75.0
ISC 09 11:11:51.8±1.0, 1.3N±0.2×124.2E±0.4, h250km, n6, σ0°68/8, mb3.5/6, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.31	155	P	P	11 16 37.4	-0.4
	3.2nm,0.4s,baz=334,slow=10,SNR=104						
	3.2nm,0.4s						
ASAR	Alice Springs	26.52	160	P	P	11 17 06.7	-0.1
	0.4nm,0.3s,baz=337,slow=7.7,SNR=22						
ASAR				PcP	PcP	11 20 25.2	+0.6
	0.5nm,1.0s,baz=349,slow=2.2,SNR=1.9						
	0.4nm,0.3s						
STKA	Stephens Creek	36.86	155	P	P	11 18 36.8	+0.3
	1.0nm,0.3s,baz=329,slow=12,SNR=5.3						
	1.0nm,0.3s						
USRK	Ussuriysk Ar.	43.33	8	P	P	11 19 30.1	+0.8
	0.9nm,0.4s,baz=195,slow=7.1,SNR=5.0						
	0.9nm,0.4s						
MKAR	Makanchi Array	58.18	327	P	P	11 21 19.6	-0.1
	0.2nm,0.4s,baz=132,slow=7.7,SNR=4.5						
MKAR				PcP	PcP	11 22 08.2	-0.1
	0.4nm,0.7s,baz=131,slow=4.0,SNR=3.1						
	0.2nm,0.4s						
ILAR	Eielson Array	88.43	25	P	P	11 24 14.3	-1.0
	0.2nm,0.6s,baz=254,slow=5.5,SNR=1.4						
	0.2nm,0.6s						

NEIC 09 11:15:28.4±0.9, 36.590N±0.008×97.61W±0.01, h4km±7km, Error ellipse: s-maj=1.6km s-min=0.6km az=50.0
TUL 09 11:15:28.4±1.3, 36.60N±0.01×97.61W±0.01, h7km±7km, ML3.3, mb_Lg3.4/105(NEIC), Error ellipse: s-maj=1.7km s-min=1.6km az=143.0
ANF 09 11:15:28.7±0.3, 36.59N×97.62W, h7km, ML4.0/13, Error ellipse: s-maj=3.2km s-min=2.7km az=160.0
IDC 09 11:15:34.4±2.7, 36.75N×98.94W, h0km, mb3.1/1, mbtmp3.0/3, ML3.8/2, Error ellipse: s-maj=41.9km s-min=14.5km az=84.0
ISC 09 11:15:27.9±1.2, 36.59N±0.03×97.62W±0.03, h5km±10km, n112, σ1°22/89, Oklahoma

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
T35A	Sooner Cattle	0.95	70		Pg	11 15 46.2	+0.2
T35B	Sooner Cattle	0.95	70	P	Pg	11 15 46.2	+0.2
	baz=250,SNR=101						
T35B				S	Sg	11 15 58.8	+0.5
	baz=250						
U32A	Winter Ranch,	1.13	260	Pg	Pg	11 15 49.6	0.0
U32A	Winter Ranch,	1.13	260	P	Pg	11 15 49.6	0.0
	baz=79,SNR=62						
U32A				S	Sg	11 16 05.1	+0.8
	baz=79						
OKCFA	Oklahoma City	1.18	173		Pg	11 15 50.6	0.0
OKCFA	Oklahoma City	1.18	173	P	Pg	11 15 50.7	+0.2
	baz=354,SNR=14						
OKCFA				S	Sg	11 16 06.8	+1.0
	baz=354						
OKCSW	OKLAHOMA CITY	1.19	173	Pg	Pg	11 15 50.8	+0.1
FNO	Franklin	1.34	172		Pn	11 15 53.4	0.0
TUL1	Leonard	1.63	114		Pn	11 15 57.7	+0.5
TUL1				IAmb_Lg		11 16 22.2	
	comp=Z,264nm,0.9s						
TUL1	Leonard	1.63	114	P	Pn	11 15 57.8	+0.5
	baz=295,SNR=198						
TUL1				S	Sb	11 16 19.8	+0.5
	baz=295						
TUL1	Leonard	1.63	114	P	Pn	11 15 57.8	+0.5
	baz=295						
TUL1				S	Sb	11 16 19.5	+0.3
	baz=295						
X34A	Smith Ranch, M	2.00	185		Pn	11 16 04.1	+1.8
R32A	Long Quarter,	2.02	335	Pn	Pb	11 16 04.5	-0.7
R32A				IAmb_Lg		11 16 35.5	
	comp=Z,190nm,0.7s						
R32A	Long Quarter,	2.02	335	P	Pb	11 16 04.7	-0.4
	baz=154,SNR=36						
R32A				S	Sn	11 16 29.3	+0.9
	baz=154						
WMOK	Wichita Mounta	2.08	207		Pn	11 16 03.8	+0.4
WMOK				IAmb_Lg		11 16 37.0	
	comp=Z,146nm,0.8s						
WMOK	Wichita Mounta	2.08	207	P	Pn	11 16 04.5	+1.0
	baz=27,SNR=165						
WMOK				S	Sb	11 16 32.0	-0.2
	baz=27						
WMOK	Wichita Mounta	2.08	207	P	Pn	11 16 04.5	+1.0
	baz=27						
WMOK				S	Sb	11 16 31.9	-0.4
	baz=27						
U38A	Gravette	2.61	92		Pn	11 16 12.7	+1.9
KSU1	Kansas State U	2.63	17	Pn	Pn	11 16 12.1	+1.1
KSU1	Kansas State U	2.63	17	P	Pn	11 16 12.2	+1.2
	baz=198,SNR=18						
X37A	Clayton	2.71	137		Pn	11 16 14.0	+1.9
X37A				IAmb_Lg		11 17 00.6	
	comp=Z,140nm,0.7s						
X37A	Clayton	2.71	137	S	Sn	11 16 47.0	+1.6
	baz=318						
CBKS	Cedar Bluff	2.78	323	P	Pn	11 16 14.9	+1.7
	baz=142						
HHAR	Hobbs	2.98	95		Pn	11 16 17.1	+1.2
Z35A	Perchaven, San	3.27	175	Pn	Pn	11 16 21.2	+1.4
Z35A	Perchaven, San	3.27	175	P	Pn	11 16 21.4	+1.6
	baz=355						
W39A	Magazine	3.41	113	Pn	Pn	11 16 24.5	+2.7
W39A				IAmb_Lg		11 17 20.3	
	comp=Z,84nm,0.8s						
W39A	Magazine	3.41	113	P	Pn	11 16 22.7	+1.0
	baz=295						
S39A	Bolivar	3.60	71		Pn	11 16 25.6	+1.2
S39A				IAmb_Lg		11 17 24.3	
	comp=Z,84nm,0.7s						
S39A	Bolivar	3.60	71	P	Pn	11 16 25.3	+0.9
	baz=254,SNR=10						
AMTX	Amarillo	3.72	244	Pn	Pn	11 16 27.4	+1.3
AMTX	Amarillo	3.72	244	S	Sn	11 17 12.5	+2.1
	baz=62						
U40A	Yellville	3.85	92	Pn	Pn	11 16 28.3	+0.5
U40A				IAmb_Lg		11 17 31.4	
	comp=Z,104nm,0.7s						
U40A	Yellville	3.85	92	P	Pn	11 16 28.6	+0.8
	baz=275,SNR=21						
U40A				P	Pn	11 16 28.6	+0.8
	baz=275,SNR=21						
U40A	Yellville	3.85	92	P	Pn	11 16 28.6	+0.8
	baz=275,SNR=13						
U40A				S	Sn	11 17 13.5	+0.1
	baz=275						
MIAR	Mount Ida	3.88	121		Pn	11 16 29.6	+1.4
MIAR				IAmb_Lg		11 17 32.4	
	comp=Z,87nm,0.8s						
MIAR	Mount Ida	3.88	121	P	Pn	11 16 29.2	+1.0
	baz=303,SNR=12						
MIAR	Mount Ida	3.88	121	P	Pn	11 16 29.1	+1.0
	baz=303,SNR=19						
MIAR				S	Sn	11 17 15.0	+0.9
	baz=303						

N33A	**J Bar K, Exete**	**4.14**	**2**	Pn	**Pn**	**11 16 31.6**	**-0.3**
N33A				IAmb_Lg		11 17 51.4	
	comp=Z,63nm,0.7s						
ABTX	**Abilene, Hawle**	**4.30**	**203**	IAmb_Lg		11 17 48.6	
	comp=Z,47nm,0.8s						
MGMO	**Mountain Grove**	**4.33**	**81**		**Pn**	**11 16 35.6**	**+1.2**
MGMO				IAmb_Lg		11 17 51.5	
	comp=Z,92nm,0.7s						
P38A	**Dawn**	**4.42**	**46**	Pn	**Pn**	**11 16 37.6**	**+2.0**
P38A				IAmb_Lg		11 17 48.4	
	comp=Z,140nm,0.7s						
X40A	**Basin Creek Fa**	**4.43**	**117**		**Pn**	**11 16 37.1**	**+1.4**
X40A				IAmb_Lg		11 17 56.4	
	comp=Z,62nm,0.8s						
X40A	**Basin Creek Fa**	**4.43**	**117**	P	**Pn**	**11 16 37.2**	**+1.4**
	baz=300,SNR=8.1						
X40A				P	**Pn**	**11 16 37.2**	**+1.4**
	baz=300,SNR=8.1						
X40A	**Basin Creek Fa**	**4.43**	**117**	P	**Pn**	**11 16 37.1**	**+1.4**
	baz=300,SNR=18						
FCAR	**Ozark Folk Cen**	**4.50**	**97**		**Pn**	**11 16 38.0**	**+1.3**
FCAR				IAmb_Lg		11 17 52.7	
	comp=Z,49nm,0.8s						
WHAR	**Wooly Hollow**	**4.52**	**105**	IAmb_Lg		11 17 51.1	
	comp=Z,124nm,1.1s						
N35A	**Tabor**	**4.53**	**19**	Pn	**Pn**	**11 16 38.1**	**+0.9**
N35A	**Tabor**	**4.53**	**19**	P	**Pn**	**11 16 38.4**	**+1.2**
	baz=200,SNR=11						
R40A	**Maddies Statio**	**4.58**	**67**		**Pn**	**11 16 38.6**	**+0.8**
R40A				IAmb_Lg		11 17 57.1	
	comp=Z,63nm,0.8s						
R40A	**Maddies Statio**	**4.58**	**67**	P	**Pn**	**11 16 38.6**	**+0.8**
	baz=250,SNR=11						
W41B	**Gary Mavity, V**	**4.58**	**106**	Pn	**Pn**	**11 16 40.6**	**+2.7**
W41B				IAmb_Lg		11 17 54.1	
	comp=Z,100nm,0.8s						
W41B	**Gary Mavity, V**	**4.58**	**106**	P	**Pn**	**11 16 38.5**	**+0.6**
	baz=290						
WHTX	**Lake Whitney,**	**4.59**	**178**	Pn	**Pn**	**11 16 38.5**	**+0.5**
WHTX	**Lake Whitney,**	**4.59**	**178**	P	**Pn**	**11 16 39.1**	**+1.1**
	baz=358						
WHTX				S	**Sn**	**11 17 31.1**	**-0.7**
	baz=358						
KSCO	**Kaye Shedlock'**	**4.64**	**303**	IAmb_Lg		11 18 08.9	
	comp=Z,95nm,1.0s						
KSCO	**Kaye Shedlock'**	**4.64**	**303**	P	**Pn**	**11 16 40.2**	**+1.4**
	baz=120,SNR=12						
UALR	**University of**	**4.66**	**111**	IAmb_Lg		11 17 56.3	
	comp=Z,48nm,0.9s						
WLAR	**White Oak Lake**	**4.69**	**127**	IAmb_Lg		11 18 00.2	
	comp=Z,54nm,0.7s						
237A	**Washetta, Mont**	**4.82**	**161**	Pn	**Pn**	**11 16 41.8**	**+0.7**
237A				IAmb_Lg		11 18 13.9	
	comp=Z,66nm,1.0s						
BGNE	**Belgrade**	**4.83**	**355**	IAmb_Lg		11 18 11.3	
	comp=Z,123nm,0.7s						
BGNE	**Belgrade**	**4.83**	**355**	P	**Pn**	**11 16 42.2**	**+1.0**
	baz=175						
Z41A	**Richland Creek**	**5.17**	**129**	S	**Sn**	**11 17 44.1**	**-1.8**
	baz=312						
LCAR	**Lake Charles**	**5.25**	**94**	Pn	**Pn**	**11 16 48.8**	**+1.8**
LCAR				IAmb_Lg		11 18 14.6	
	comp=Z,40nm,0.8s						
P40A	**Paris**	**5.28**	**55**	IAmb_Lg		11 18 20.1	
	comp=Z,84nm,0.8s						
CCM	**Cathedral Cave**	**5.29**	**72**	IAmb_Lg		11 18 17.2	
	comp=Z,83nm,0.8s						
CCM	**Cathedral Cave**	**5.29**	**72**	P	**Pn**	**11 16 48.1**	**+0.6**
	baz=256						
NATX	**Nacogdoches**	**5.41**	**152**	IAmb_Lg		11 18 32.0	
	comp=Z,46nm,0.8s						
N38A	**Joes South For**	**5.42**	**38**	IAmb_Lg		11 18 21.6	
	comp=Z,108nm,0.8s						
T25A	**Trinidad**	**5.47**	**278**	Pn	**Pn**	**11 16 50.9**	**+0.6**
T25A				IAmb_Lg		11 18 26.3	
	comp=Z,104nm,0.9s						
T25A	**Trinidad**	**5.47**	**278**	P	**Pn**	**11 16 50.9**	**+0.6**
	baz=94						
CCAR	**Cane Creek**	**5.48**	**117**	IAmb_Lg		11 18 28.8	
	comp=Z,45nm,1.0s						
OGNE	**Ogallala**	**5.55**	**323**	Pn	**Pn**	**11 16 52.9**	**+1.7**
OGNE	**Ogallala**	**5.55**	**323**	P	**Pn**	**11 16 52.7**	**+1.5**
	baz=140						
PBMO	**Poplar Bluff**	**5.78**	**86**	IAmb_Lg		11 18 32.8	
	comp=Z,86nm,0.8s						
435B	**Jarrell**	**5.79**	**180**	IAmb_Lg		11 18 39.5	
	comp=Z,48nm,0.7s						
FVM	**French Village**	**5.90**	**74**	IAmb_Lg		11 18 35.2	
	comp=Z,94nm,0.9s						
SLM	**Saint Louis**	**6.21**	**69**	IAmb_Lg		11 18 46.8	
	comp=Z,98nm,1.1s						
JCT	**Junction City**	**6.36**	**197**	IAmb_Lg		11 19 08.8	
	comp=Z,47nm,0.8s						
SDCO	**Great Sand Dun**	**6.40**	**283**	IAmb_Lg		11 19 06.0	
	comp=Z,30nm,1.0s						
SDCO	**Great Sand Dun**	**6.40**	**283**	P	**Pn**	**11 17 04.2**	**+1.1**
	baz=98,SNR=7.3						
Q24A	**Divide**	**6.42**	**294**	IAmb_Lg		11 18 59.0	
	comp=Z,66nm,1.3s						
Q24A	**Divide**	**6.42**	**294**	P	**Pn**	**11 17 04.3**	**+1.0**
	baz=109						
HALT	**Halls**	**6.72**	**93**	IAmb_Lg		11 19 18.1	
	comp=Z,86nm,1.0s						
W45A	**Hickory Valley**	**7.00**	**99**	IAmb_Lg		11 19 17.6	
	comp=Z,39nm,0.7s						
OXF	**Oxford**	**7.01**	**105**	IAmb_Lg		11 19 23.2	
	comp=Z,37nm,0.9s						
OXF	**Oxford**	**7.01**	**105**	P	**Pn**	**11 17 11.7**	**+0.5**
	baz=290						
ISCO	**Idaho Springs**	**7.06**	**299**	Pn	**Pn**	**11 17 12.8**	**+0.6**
ISCO	**Idaho Springs**	**7.06**	**299**	P	**Pn**	**11 17 11.9**	**-0.3**
	baz=114						
ECSD	**EROS Data Cent**	**7.17**	**6**	Pn	**Pn**	**11 17 12.8**	**-0.6**
ECSD	**EROS Data Cent**	**7.17**	**6**	P	**Pn**	**11 17 12.9**	**-0.6**
	baz=186						
L40A	**Anamosa**	**7.38**	**40**	IAmb_Lg		11 19 23.9	
	comp=Z,40nm,0.8s						
PHWY	**Pilot Hill**	**7.71**	**310**	IAmb_Lg		11 19 36.6	
	comp=Z,31nm,0.8s						
N23A	**Red Feather La**	**7.79**	**306**	IAmb_Lg		11 19 45.0	
	comp=Z,53nm,0.8s						
SUSD	**Miller**	**7.91**	**353**	IAmb_Lg		11 19 56.6	
	comp=Z,47nm,0.8s						
O44A	**Mansfield**	**8.02**	**61**	IAmb_Lg		11 20 04.1	
	comp=Z,45nm,0.8s						
MNTX	**Cornudas Mount**	**8.07**	**235**	IAmb_Lg		11 19 54.5	
	comp=Z,23nm,0.7s						
MNTX	**Cornudas Mount**	**8.07**	**235**	P	**Pn**	**11 17 27.1**	**+1.3**
	baz=51						
I37A	**Lemond, Waseca**	**8.08**	**22**	IAmb_Lg		11 20 07.9	
	comp=Z,29nm,0.9s						
L42A	**Oliver, Polo**	**8.20**	**46**	IAmb_Lg		11 19 54.4	
	comp=Z,47nm,0.8s						
JFWS	**Jewell Farm**	**8.49**	**40**	IAmb_Lg		11 20 05.1	
	comp=Z,36nm,0.7s						
TX31	**Lajitas Ar. Si**	**8.84**	**217**	Pn	**Pn**	**11 17 35.7**	**-0.7**
TXAR	**Lajitas Array**	**8.84**	**217**	Pn	**Pn**	**11 17 36.0**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=35,slow=10,SNR=18						
TXAR				Lg	Lg	11 19 53.0	
	comp=Z,1.2nm,0.3s,baz=32,slow=29,SNR=3.4						
	comp=Z,0.5nm,0.5s						
TXAR	**Lajitas Array**	**8.84**	**217**		**Pn**	**11 17 35.5**	**-1.0**
RSSD	**Black Hills**	**8.97**	**329**	IAmb_Lg		11 20 16.1	
	comp=Z,31nm,0.8s						
RWWY	**Rawlins**	**9.02**	**307**	IAmb_Lg		11 20 20.2	
	comp=Z,31nm,0.8s						
I40A	**Norwalk**	**9.04**	**34**	IAmb_Lg		11 20 14.9	
	comp=Z,20nm,0.8s						
K22A	**Casper**	**9.15**	**314**	IAmb_Lg		11 20 39.1	
	comp=Z,48nm,1.1s						
K43A	**Burlington**	**9.41**	**47**	IAmb_Lg		11 20 27.2	
	comp=Z,49nm,0.8s						
PDAR	**Pinedale Array**	**11.07**	**307**	Pn	**Pn**	**11 18 03.1**	**-4.0**
	comp=Z,0.1nm,0.3s,baz=119,slow=12,SNR=1.6						
PDAR				Pg		11 18 39.8	
	comp=Z,0.1nm,0.3s,baz=112,slow=19,SNR=2.6						
PDAR				Lg	Lg	11 20 50.7	
	comp=Z,0.2nm,0.3s,baz=109,slow=32,SNR=1.5						
	comp=Z,0.2nm,0.4s						
ULM	**Lac du Bonnet**	**13.71**	**5**	Lg	Lg	11 22 24.9	
	comp=Z,0.2nm,0.3s,baz=214,slow=17,SNR=1.8						
ILAR	**Eielson Array**	**40.42**	**330**	P	**P**	**11 23 08.3**	**+1.6**
	comp=Z,0.2nm,0.7s,baz=104,slow=6.6,SNR=4.2						
	comp=Z,0.2nm,0.7s						

IDC 09 11:22:04.6±2.0, 0.°11N×126.°10E, h0km, mb3.2/3,
mbtmp3.2/3, Error ellipse: s-maj=176.6km
s-min=27.9km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.51**	**158**	P	P	11 26 54.8	-0.6
	0.3nm,0.4s,baz=337,slow=11,SNR=1.4						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**24.82**	**163**	P	P	11 27 29.1	+0.3
	0.3nm,0.5s,baz=342,slow=7.9,SNR=8.7						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**60.18**	**327**	P	P	11 32 14.3	-0.1
	0.2nm,0.4s,baz=123,slow=6.3,SNR=4.1						
	0.2nm,0.4s						

*SOME **09** 11:31:25.9, 39.°18N×71.°53E, h10km*
*IDC **09** 11:31:27.7±1.8, 38.°71N×70.°69E, h0km, mb3.4/2,*
mbtmp3.6/7, ML3.4/5, MS2.6/1, Error ellipse: s-maj=22.1km
s-min=17.6km az=144.0
*NNC **09** 11:31:36.3±6.3, 39.°40N×70.°57E, h0km, mb4.3, mpv3.9,*
Error ellipse: s-maj=48.6km s-min=27.3km az=7.0
ISC 09 11:31:31.3±1.0, 39.°08N±0.°06×70.°21E±0.°07, h13km, n34,
σ2=33/44, 3C-2D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**luzhnay**	**3.07**	**358**	*e*P	**Pb**	**11 32 24.9**	**-0.9**
	330nm,0.3s						
IUG				*e*S	**Sg**	**11 33 07.6**	**-2.3**
	652nm,0.6s						
IUG	**luzhnay**	**3.07**	**358**	Pg	**Pb**	**11 32 26.4**	**+0.6**
	338nm,0.3s						
IUG				Lg	Lg	11 33 07.0	
	652nm,0.6s						
BRLS	**Borolday**	**3.96**	**356**	*e*P	**Pn**	**11 32 35.4**	**+3.7**
	2.4nm,0.2s						
BRLS				*e*S	**Sb**	**11 33 25.7**	**-3.0**
	35nm,0.3s						
BRLS	**Borolday**	**3.96**	**356**	Pg	**Pn**	**11 32 35.6**	**+3.9**
	3.6nm,0.2s						
BRLS				Lg	Lg	11 33 21.1	
	3.5nm,0.8s						
KK31	**Karatay Array**	**4.03**	**3**	⇑Pn	**Pb**	**11 32 38.7**	**-3.4**
	3.4nm,0.3s,baz=174,slow=12,SNR=54						
KK31				⇑Sn	**Sb**	**11 33 27.3**	**-3.4**
	10nm,0.3s,baz=181,slow=28,SNR=6.2						
AML	**Almayashu**	**4.04**	**40**	P	**Pn**	**11 32 34.5**	**+1.4**
	SNR=21						
MRKS	**Merke**	**4.32**	**31**	*e*P	**Pn**	**11 32 36.5**	**-0.2**
	3.8nm,0.3s						
MRKS				*e*S	**Sn**	**11 33 27.3**	**+0.4**
	98nm,0.6s						
MRKS	**Merke**	**4.32**	**31**	Pg	**Pb**	**11 32 43.3**	**-3.8**
	24nm,0.4s						
MRKS				Lg	Lg	11 33 35.9	
	98nm,0.7s						
EKS2	**Erkin-Say**	**4.49**	**36**	P	**Pn**	**11 32 42.7**	**+3.6**
	SNR=7.9						
UCH	**Uchtor**	**4.54**	**45**	P	**Pn**	**11 32 40.8**	**+0.7**
	SNR=25						
AAK	**Ala-Archa**	**4.82**	**41**	P	**Pn**	**11 32 47.0**	**+3.4**
	SNR=13						
AAK	**Ala-Archa**	**4.82**	**41**	Pn	**Pn**	**11 32 45.6**	**+2.0**
	6.0nm,0.3s,baz=216,slow=6.2,SNR=22						
AAK				Pg	**Pb**	**11 32 56.6**	**+1.0**
	7.9nm,0.3s,baz=217,slow=14,SNR=6.2						
AAK				Sn	**Sn**	**11 33 44.5**	**+5.1**
	3.4nm,0.3s,baz=306,slow=20,SNR=6.6						
AAK				Lg	Lg	11 34 00.3	
	3.5nm,0.3s,baz=343,slow=20,SNR=4.4						
AAK				LR	LR	11 34 45.8	
	comp=Z,64nm,20.6s,baz=165,slow=41						
	23nm,0.4s						
KBK	**Karagaybulak**	**5.07**	**44**	P	**Pn**	**11 32 48.9**	**+1.8**
	SNR=36						
CHMS	**Chumysh**	**5.21**	**40**	P	**Pn**	**11 32 50.6**	**+1.7**
	SNR=8.7						
USP	**Ospenovka**	**5.29**	**36**	P	**Pn**	**11 32 51.2**	**+1.2**
	SNR=22						
CEP	**Cherat**	**5.42**	**165**	P	**Pn**	**11 32 53.8**	**+1.9**
SGDS	**Sogindy**	**5.49**	**36**	*e*P	**Pn**	**11 32 54.1**	**+1.3**
	12nm,0.4s						
SGDS				*e*S	**Sn**	**11 33 58.0**	**+2.1**
	62nm,0.6s						
ULHL	**Ulahol**	**5.57**	**53**	P	**Pn**	**11 32 53.6**	**-0.5**
	SNR=10						
TKM2	**Tokmak 2**	**5.60**	**45**	P	**Pn**	**11 32 55.1**	**+0.7**
	SNR=31						
TKM2	**Tokmak 2**	**5.60**	**45**	⇓Pn	**Pn**	**11 32 55.3**	**+0.9**
	9.1nm,0.5s						
TKM2				⇑Sn	**Sn**	**11 34 01.6**	**+2.9**
	30nm,0.6s						
KST	**Kastek**	**5.88**	**46**	*e*P	**Pn**	**11 32 59.6**	**+1.4**
	5.1nm,0.5s						
KST				*e*S	**Sn**	**11 34 07.4**	**+1.9**
	24nm,0.6s						
KST	**Kastek**	**5.88**	**46**	Pg	**Pb**	**11 33 14.9**	**+1.1**
	4.2nm,0.4s						
DGS	**Degeres**	**5.91**	**43**	Pg	**Pb**	**11 33 12.9**	**-1.2**
	7.3nm,0.6s						
DGS				Lg	Lg	11 34 25.9	
	21nm,0.7s						
CHCP	**Chirah Chowk**	**5.94**	**155**	P	**Pn**	**11 32 59.4**	**+0.4**
BTLS	**Baital**	**6.61**	**24**	*e*P	Pb	11 33 20.3	-5.6
	2.2nm,0.6s						
BTLS				*e*S	**Sb**	**11 34 43.2**	**-1.6**
	18nm,0.6s						
KTBS	**Karatobe**	**6.71**	**44**	Pg	**Pb**	**11 33 27.3**	**-0.5**
	3.0nm,0.6s						
KTBS				Lg	Lg	11 34 51.1	
	25nm,0.7s						
MKAR	**Makanchi Array**	**11.73**	**45**	Pn	**Pn**	**11 34 17.9**	**-0.4**
	0.2nm,0.3s,baz=229,slow=13,SNR=21						
	2.2nm,0.7s						
AB31	**Akbulak array**	**12.55**	**327**	P	**Pn**	**11 34 32.6**	**+3.2**
	1.0nm,0.4s,baz=142,slow=12,SNR=31						
KURBB	**Kurchatov Arra**	**12.95**	**24**	Pn	**Pn**	**11 34 32.8**	**-2.1**
	baz=214,slow=12,SNR=3.4						
	0.2nm,0.3s						
AKTO	**Aktyubinsk**	**14.26**	**327**	Pn	**Pn**	**11 34 55.5**	**+2.7**
	0.3nm,0.3s,baz=138,slow=18,SNR=2.4						
AKTO				Sn	**Sn**	**11 37 33.2**	**+2.5**
	0.3nm,0.3s,baz=177,slow=15,SNR=5.0						
	0.6nm,0.4s						
AKTO	**Aktyubinsk**	**14.26**	**327**	⇓P	**P**	**11 34 59.6**	**-0.5**
	1.8nm,0.7s						
ZALV	**Zalesovo Beam**	**17.90**	**29**	P	**Pn**	**11 35 38.3**	**-1.4**
	0.4nm,0.3s,baz=224,slow=11,SNR=6.2						
	1.0nm,0.4s						
YKA	**Yellowknife Ar**	**78.70**	**2**	P	**P**	**11 43 32.4**	**-0.4**
	0.1nm,0.5s,baz=348,slow=5.6,SNR=2.8						
	0.1nm,0.5s						
WRA	**Warramunga Arr**	**83.88**	**122**	P	**P**	**11 43 57.2**	**-3.7**
	0.4nm,0.8s,baz=325,slow=5.1,SNR=2.5						
	0.4nm,0.8s						

*IDC **09** 11:49:08.6±1.7, 6.°39S×153.°17E, h0km, mb3.5/4,*
mbtmp3.7/6, ML2.0/1, Error ellipse: s-maj=49.2km
s-min=24.6km az=116.0
ISC 09 11:49:14.0±1.5, 6.°30S±0.°09×153.°0E±0.°2, h31km, n7,
σ=80/8, mb3.6/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**2.19**	**335**	Pn	**Pn**	**11 49 48.3**	**+0.1**
	183nm,0.3s,baz=152,slow=3.7,SNR=76						
KRVT				Sn	**Sn**	**11 50 13.8**	**-0.6**
	63nm,0.3s,baz=54,slow=24,SNR=14						
PMG	**Port Moresby**	**6.52**	**241**	Pn	**Pn**	**11 50 47.7**	**-0.2**
	1.8nm,0.3s,baz=68,slow=11,SNR=2.9						
	8.5nm,0.4s						
WRA	**Warramunga Arr**	**22.61**	**231**	P	**P**	**11 54 12.5**	**+0.2**
	0.4nm,0.6s,baz=58,slow=11,SNR=3.1						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**25.18**	**225**	P	**P**	**11 54 37.1**	**+0.2**
	0.9nm,0.9s,baz=54,slow=9.3,SNR=3.0						
	0.9nm,0.9s						
SONM	**Songino Array**	**67.67**	**328**	P	**P**	**12 00 09.6**	**+1.3**
	0.6nm,0.7s,baz=112,slow=3.9,SNR=3.9						
	0.6nm,0.7s						
ILAR	**Eielson Array**	**83.48**	**22**	P	**P**	**12 01 37.9**	**-0.5**
	0.9nm,0.9s,baz=253,slow=5.2,SNR=6.1						
	0.9nm,0.9s						
TORD	**Torodi Ar. Bea**	**150.89**	**286**	PKPbc	**PKPbc**	**12 09 03.7**	**-0.9**
	0.5nm,0.7s,baz=76,slow=1.2,SNR=3.2						

MAN 09 12:00:08.3, 9.°76N×122.°79E, h29km, mb3.7, ML2.4, MS1.9,
Negros

IDC 09 12:10:33.4±2.0, 1.°80N×126.°18E, h0km, mb3.3/3,
mbtmp3.3/3, Error ellipse: s-maj=174.8km
s-min=24.7km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.05**	**160**	P	P	12 15 40.8	+0.3
	0.4nm,0.4s,baz=339,slow=11,SNR=6.2						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**26.41**	**164**	P	P	12 16 11.7	-0.2
	0.3nm,0.6s,baz=344,slow=7.7,SNR=9.9						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**58.83**	**326**	P	P	12 20 33.9	0.0
	0.2nm,0.4s,baz=123,slow=7.4,SNR=2.9						
	0.2nm,0.4s						

WEL 09 12:15:24.1±0.4, 43.°S±3.°×177.°5E±.°, h33km, M2.7/15,
ML2.9/24, MLv2.7/15, Error ellipse: s-maj=0.0km
s-min=0.0km az=130.3, Off east coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHZ	**Kahutara**	**0.84**	**295**	P	Pb	12 15 39.9	-0.3
KHZ				S	Sn	12 15 50.3	-0.4
CMWZ	**Cape Campbell**	**1.06**	**346**	P	Pb	12 15 44.3	+0.4
GVZ	**Greta Valley S**	**1.14**	**260**	P	Pn	12 15 44.2	+0.5
BSWZ	**Blackbirch Sta**	**1.18**	**334**	P	Pb	12 15 45.5	-0.4
BSWZ				S	Sb	12 15 60.0	-0.8
PLWZ	**Palliser**	**1.31**	**23**	P	Pn	12 15 46.7	+0.6
BHW	**Baring Head**	**1.39**	**10**	P	Pn	12 15 47.8	+0.7
TUWZ	**Tuamarina**	**1.42**	**341**	P	Pb	12 15 48.9	-1.1
TUWZ				S	Sn	12 16 04.9	-0.3
OKCZ	**Okains Bay**	**1.45**	**229**	P	Pn	12 15 48.4	+0.4
OKCZ				S	Sn	12 16 05.6	-0.3
MSWZ	**Moikau Station**	**1.45**	**21**	P	Pn	12 15 48.4	+0.4
MSWZ				S	Sn	12 16 04.6	-1.3
WEL	**Wellington**	**1.50**	**6**	P	Pn	12 15 49.5	+0.8
PAWZ	**Paruwai Farm**	**1.54**	**25**	P	Pn	12 15 49.5	+0.3
PAWZ				S	Sn	12 16 06.9	-1.1
TCW	**Tory Channel**	**1.58**	**352**	P	Pn	12 15 50.5	+0.8
TCW				S	Sn	12 16 07.7	-1.4
THZ	**Tophouse**	**1.59**	**309**	P	Pb	12 15 51.8	-1.2
THZ				S	Sb	12 16 11.7	-1.1
TRWZ	**Traveller**	**1.61**	**32**	P	Pn	12 15 50.6	+0.5
TRWZ				S	Sn	12 16 08.9	-0.9
AKCZ	**Akaroa Harbour**	**1.63**	**227**	P	Pn	12 15 50.6	+0.2
AKCZ				S	Sn	12 16 09.6	-0.7
MQZ	**McQueen's Vall**	**1.68**	**236**	P	Pn	12 15 51.1	0.0
MQZ				S	Sn	12 16 09.9	-1.5
LTZ	**Lake Taylor**	**1.69**	**269**	P	Pn	12 15 52.6	+1.3
LTZ				S	Sn	12 16 11.6	-0.2
CAW	**Cannon Point**	**1.71**	**13**	P	Pn	12 15 52.3	+0.8
CAW				S	Sn	12 16 11.5	-0.7
MTW	**Mount Morrison**	**1.76**	**24**	P	Pn	12 15 52.6	+0.4
MTW				S	Sn	12 16 12.1	-1.5
NNZ	**Nelson**	**1.79**	**330**	P	Pn	12 15 52.9	+0.3
MRNZ	**Matariki Terra**	**1.92**	**315**	P	Pn	12 15 56.3	+1.8
MRNZ				S	Sn	12 16 18.9	+1.3
OXZ	**Oxford**	**1.93**	**253**	P	Pn	12 15 55.5	+0.9
OXZ				S	Sn	12 16 18.1	-1.6
KIW	**Kapiti Island**	**1.93**	**8**	P	Pn	12 15 55.5	+0.9
HOWZ	**Holdsworth Sta**	**2.01**	**21**	P	Pn	12 15 56.2	+0.5
OGWZ	**Otaki Gorge**	**2.01**	**13**	P	Pn	12 15 56.3	+0.7
OGWZ				S	Sn	12 16 18.5	-1.1
DUWZ	**D'Urville Isla**	**2.03**	**346**	P	Pn	12 15 57.5	+1.5
DUWZ				S	Sn	12 16 19.7	-0.5
TIWZ	**Tintock**	**2.23**	**27**	P	Pn	12 15 59.5	+0.8
MRZ	**Mangatainoka R**	**2.25**	**20**	P	Pn	12 15 59.4	+0.5
WACZ	**Wakanui South**	**2.30**	**239**	P	Pn	12 16 00.7	+1.0
WACZ				S	Sn	12 16 25.9	-1.0
PRWZ	**Pori Road**	**2.46**	**26**	P	Pn	12 16 02.3	+0.5
POWZ	**Post Office Ro**	**2.55**	**21**	P	Pn	12 16 03.9	+0.8
POWZ				S	Sn	12 16 32.6	-0.4
ARCZ	**Arundel**	**2.73**	**244**	P	Pn	12 16 06.7	+1.1
ARCZ				S	Sn	12 16 35.4	-2.1
DVHZ	**Dannevirke**	**2.75**	**26**	P	Pn	12 16 05.9	+1.0
TSZ	**Takapari Road**	**2.91**	**22**	P	Pn	12 16 08.7	+0.6
WAZ	**Wanganui**	**3.04**	**6**	P	Pn	12 16 12.5	+2.7
TMZ	**Timaru**	**3.04**	**237**	P	Pn	12 16 10.7	+0.9
TMZ				S	Sn	12 16 42.2	-2.9
PNHZ	**Pukenui**	**3.12**	**24**	P	Pn	12 16 11.1	+0.2
KRHZ	**Kereru**	**3.41**	**24**	P	Pn	12 16 15.4	+0.4
BHHZ	**Black Hill Sta**	**3.47**	**20**	P	Pn	12 16 16.8	+0.9
MOVZ	**Moawhango**	**3.48**	**15**	P	Pn	12 16 17.6	+1.6
ODZ	**Otahua Downs**	**3.63**	**230**	P	Pn	12 16 18.6	+0.8
KWHZ	**Kaweka Forest**	**3.63**	**23**	P	Pn	12 16 18.7	+0.6
VRZ	**Vera Road**	**3.65**	**2**	P	Pn	12 16 20.8	+2.6
NTVZ	**North Tongarir**	**3.77**	**13**	P	Pn	12 16 21.9	+1.9
HATZ	**Hinemaiaia**	**4.05**	**17**	P	Pn	12 16 24.9	+1.1
HIZ	**Hauiti**	**4.26**	**3**	P	Pn	12 16 29.2	+2.5
EAZ	**Earnscleugh**	**4.52**	**235**	P	Pn	12 16 31.3	+1.2

*IDC **09** 12:27:30.6±2.3, 16.°96S×179.°12W, h569km±22km, mb2.8/5,*
mbtmp3.7/7, Error ellipse: s-maj=94.6km s-min=23.5km
az=149.0
ISC 09 12:27:29.5±1.6, 16.°8S±0.°6×179.°1W±0.°4, h550km, n7,
σ=19/60/7, mb3.1/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.83**	**251**	P	**P**	**12 28 46

SPA0 Sn Sn 12 33 14.5 -2.4
baz=315,slow=56
SPA0 Spitsbergen Ar 4.29 117 Pn Pn 12 32 29.8 +1.5
baz=309,slow=6.2
SPA0 Sn Sn 12 33 14.5 -2.4
baz=315,slow=56
SPA0 Spitsbergen Ar 4.29 117⇑ *i*P Pn 12 32 29.6 +1.4
SPA0 *e*S Sn 12 33 14.6 -2.4
SPITS Spitsbergen Ar 4.29 117 Pn Pn 12 32 29.6 +1.4
baz=321,slow=7.8
SPITS Sn Sn 12 33 13.8 -3.2
baz=325,slow=5.2
comp=Z,49nm,0.3s
DAG Danmarks Havn 5.06 227 *i* P Pn 12 32 39.8 +1.1
DAG *i* S Sn 12 33 31.8 -4.0
DAG IAML 12 33 38.1
comp=Z,51nm,0.2s
DAG Danmarks Havn 5.06 227 *e*P Pn 12 32 40.1 +1.3
DAG *e*S Sn 12 33 32.0 -3.8
HSPB Hornsund (broa 5.09 128 Pn Pn 12 32 41.3 +2.1
HSPB Sn Sn 12 33 37.1 +0.4
HSPB Hornsund (broa 5.09 128 *e*P Pn 12 32 41.3 +2.1
HSPB *e*S Sn 12 33 36.9 +0.2
HSPB IAML 12 33 40.4
comp=Z,8.7nm,0.4s
HOPEN Hopen 6.81 114 Pn Pn 12 33 03.3 +0.5
HOPEN Sn Sn 12 34 16.4 -2.4
HOPEN Hopen 6.81 114 *e*P Pn 12 33 03.6 +0.9
HOPEN *e*S Sn 12 34 16.0 -2.8
HOPEN IAML 12 34 19.6
comp=Z,9.3nm,0.4s
HOPEN Hopen 6.81 114 *e*P Pn 12 33 03.1 +0.4
HOPEN S Sn 12 34 12.3 -6.5
DBG Daneborg 7.46 220 Pn Pn 12 33 12.3 +0.6
DBG Sn Sn 12 34 30.2 -4.5
DBG Daneborg 7.46 220 *i* P Pn 12 33 12.3 +0.6
DBG *i* S Sn 12 34 30.1 -4.6
DBG Daneborg 7.46 220 *e*P Pn 12 33 12.2 +0.6
DBG *e*S Sn 12 34 30.2 -4.6
BJO1 Bjornoya 7.70 133 Pn Pn 12 33 18.2 +3.2
BJO1 Bjornoya 7.70 133 Pn Pn 12 33 18.2 +3.2
BJO1 Bjornoya 7.70 133 *e*P Pn 12 33 17.9 +3.0
BJO1 S Sn 12 34 36.0 -4.7
ZFI2 Zemlya Franca- 7.85 65 *e*P Pn 12 33 18.2 +1.2
ZFI2 *e*S Sn 12 34 38.1 -6.2
comp=Z,36nm,2.0s
ZFI Zemlya Franca- 7.85 65 *e*P Pn 12 33 18.2 +1.2
ZFI *e*S Sn 12 34 38.0 -6.3
JNW Jan Mayen West 9.86 191 *e*P Pn 12 33 47.6 +3.1
JMIC Jan Mayen 9.90 192 Pn Pn 12 33 47.7 +2.6
comp=Z,5.1nm,0.3s,baz=158,slow=2.1,SNR=9.8
JMIC Sn Sn 12 35 30.7 -4.1
comp=Z,0.3nm,0.3s,baz=202,slow=5.5,SNR=1.8
comp=Z,10nm,0.3s
JMIC Jan Mayen 9.90 192 *e*P Pn 12 33 47.8 +2.6
JMI Jan Mayen 9.97 192 *e*P Pn 12 33 48.8 +2.8
SUMG Summit 11.35 244 *i* P Pn 12 34 05.0 -0.3
TULEG Thule 12.95 287 *i* P Pn 12 34 23.4 -3.4
ARCES ARCESS Array B 13.08 133 Pn Pn 12 34 31.1 +2.6
comp=Z,0.2nm,0.3s,baz=336,slow=13,SNR=6.3
comp=Z,2.5nm,0.8s
UPNV Upernavik 13.92 265 *i* P Pn 12 34 36.8 -3.2
ICESG Greenland Ices 14.68 239 *i* P Pn 12 34 48.8 -1.7
SFJD Kangerlussuaq 18.21 249 Pn Pn 12 35 33.2 -1.9
comp=Z,1.5nm,0.3s,baz=15,slow=14,SNR=5.6
SFJD LR LR 12 42 59.1
comp=Z,65nm,20.2s,baz=13,slow=38
RES Resolute Bay 18.29 302 Pn P 12 35 34.2 -1.7
comp=Z,0.6nm,0.3s,baz=73,slow=13,SNR=8.4
NOA NORSAR Array B 20.17 160 LR LR 12 42 43.1
comp=Z,16nm,19.3s,baz=100,slow=34
FINES FINESS Array B 20.97 140 LR LR 12 45 00.9
comp=Z,36nm,20.1s,baz=98,slow=39
HFS Hagfors 21.22 157 P P 12 36 12.7 +4.8
comp=Z,3.2nm,0.7s,baz=17,slow=7.7,SNR=5.0
comp=Z,3.2nm,0.7s
FRB Frobisher Bay 24.07 265 LR LR 12 45 36.0
comp=Z,72nm,18.9s,baz=46,slow=35
ARU Arti 30.22 105 LR LR 12 52 42.1
comp=Z,26nm,19.0s,baz=308,slow=42
AKASG Malin Array Be 31.87 141 LR LR 12 53 44.5
comp=Z,31nm,18.3s,baz=46,slow=42
YKA Yellowknife Ar 32.26 306 P P 12 37 54.2 +4.0
comp=Z,0.2nm,0.6s,baz=11,slow=9.0,SNR=4.2
comp=Z,0.2nm,0.6s
SCHQ Schefferville 32.28 258 LR LR 12 51 10.9
comp=Z,51nm,18.4s,baz=96,slow=37
AKTO Aktyubinsk 35.94 108 LR LR 12 54 53.5
comp=Z,22nm,18.8s,baz=96,slow=39
ZALV Zalesovo Beam 36.83 80 LR LR 12 57 38.6
comp=Z,36nm,18.6s,baz=200,slow=43
MKAR Makanchi Array 43.35 85 P P 12 39 29.1 +5.3
comp=Z,0.5nm,0.6s,baz=346,slow=7.4,SNR=6.1
comp=Z,0.5nm,0.6s

IDC ***09*** *12:49:35.1±0.6,57.°93S×149.°45E, h0km, mb4.4/8, mbtmp4.4/8, MS3.7/20, Error ellipse: s-maj=41.3km s-min=17.1km az=75.0*
NEIC ***09*** *12:49:37.6±1.1, 58.°08S±0.°10×149.°0E±0.°3, h10km±1km, mb4.7/24, Error ellipse: s-maj=31.8km s-min=14.4km az=74.0*
ISC 09 12:49:37.1±0.5**, 58.°02S**±0.°08×**149.°3E**±0.°2**, h10**km**, n147, σ0s72/113, mb4.7/17, MS3.7/19, 28C-5D, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TAU	**Tasmania Unive**	**15.18**	**355**	Pn		**Pn**	**12 53 13.3**	**+2.0**
RPZ	**Rata Peaks**	**19.72**	**53**	LR		LR	13 00 35.4	
	comp=Z,79nm,20.0s,baz=205,slow=34							
VNDA	**Vanda**	**20.05**	**172**	P		**P**	**12 54 11.0**	**+1.1**
	14nm,0.9s,baz=342,slow=12,SNR=57							
VNDA				LR		LR	13 00 57.9	
	comp=Z,409nm,18.9s,baz=349,slow=34							
	14nm,0.9s							
VNDA	**Vanda**	**20.05**	**172**	P		**P**	**12 54 10.1**	**+0.2**
VNDA				IAmb		IAmb	12 54 12.4	
	comp=Z,25nm,1.1s							
TOO	**Toolangi**	**20.62**	**351**	P		Pn	12 54 17.3	-1.3
TOO				IAmb		IAmb	12 54 22.2	
	comp=Z,43nm,1.1s							
SBA	**Scott Base**	**20.78**	**170**	P		Pn	12 54 19.2	-0.9
STKA	**Stephens Creek**	**26.67**	**345**	LR		LR	13 04 46.0	
	comp=Z,88nm,18.6s,baz=205,slow=34							
QSPA	**South Pole Qui**	**32.08**	**180**	P		**P**	**12 56 04.1**	**+0.2**
	comp=Z,4.4nm,1.1s,baz=297,slow=2.4,SNR=5.4							
QSPA				PcP		**PcP**	**12 58 52.3**	**-0.5**
	comp=Z,3.5nm,0.7s,baz=48,slow=3.6,SNR=31							
QSPA				LR		LR	13 08 33.8	
	comp=Z,258nm,20.1s,baz=24,slow=35							
	comp=Z,4.4nm,1.1s							
QSPA	**South Pole Qui**	**32.08**	**180**	IAmb		IAmb	12 56 06.2	
	comp=Z,13nm,1.3s							
H01W1	**Cape Leeuwin H**	**32.87**	**299**	T		T	13 30 47.1	
	baz=144,slow=74,SNR=26							
H01W2	**Cape Leeuwin H**	**32.87**	**299**	T		T	13 30 48.8	
	baz=144,slow=74,SNR=23							
H01W3	**Cape Leeuwin H**	**32.88**	**299**	T		T	13 30 47.4	
	baz=144,slow=74,SNR=23							
ASAR	**Alice Springs**	**36.06**	**336**	P		**P**	**12 56 38.5**	**-0.1**
	comp=Z,3.1nm,0.8s,baz=163,slow=9.2,SNR=29							
ASAR				PcP		**PcP**	**12 59 03.6**	**-1.0**
	comp=Z,1.8nm,0.9s,baz=155,slow=3.7,SNR=8.0							
	comp=Z,3.1nm,0.8s							
AS31	**Alice Springs**	**36.06**	**336**	P		**P**	**12 56 38.6**	**-0.1**
MAW	**Mawson**	**37.36**	**219**	LR		LR	13 09 47.5	
	comp=Z,64nm,21.9s,baz=116,slow=32							
CTA	**Charters Tower**	**37.95**	**355**	LR		LR	13 10 55.7	
	comp=Z,180nm,18.5s,baz=160,slow=34							
CTAO	**Charters Tower**	**37.95**	**355**	P		**P**	**12 56 54.6**	**-0.1**
DZM	**Mont Dzumac**	**38.01**	**26**	LR		LR	13 09 30.0	
	comp=Z,102nm,18.3s,baz=200,slow=32							
KOUNC	**Koumac, New Ca**	**39.00**	**23**	P		**P**	**12 57 04.4**	**+0.9**
KOUNC				IAmb		IAmb	12 57 08.4	
	comp=Z,28nm,1.2s							
WR0	**Warramunga Arr**	**39.52**	**338**	P		**P**	**12 57 07.6**	**-0.3**
WR0				IAmb		IAmb	12 57 10.9	
	comp=Z,26nm,1.4s							
WB2	**Warramunga Arr**	**39.58**	**338**	P		**P**	**12 57 08.1**	**-0.3**
WB2				IAmb		IAmb	12 57 11.8	
	comp=Z,18nm,1.1s							
WRA	**Warramunga Arr**	**39.58**	**338**	P		**P**	**12 57 07.5**	**-0.8**
	comp=Z,5.3nm,0.9s,baz=165,slow=7.3,SNR=21							
WRA				PcP		**PcP**	**12 59 13.4**	**-2.1**
	comp=Z,1.6nm,0.9s,baz=179,slow=2.9,SNR=5.0							
	comp=Z,5.3nm,0.9s							
WRA	**Warramunga Arr**	**39.58**	**338**	P		**P**	**12 57 08.0**	**-0.4**
WB0	**Warramunga Arr**	**39.74**	**338**	P		**P**	**12 57 09.4**	**-0.3**
PSA00	**Pilbara Seismi**	**42.19**	**317**	P		**P**	**12 57 29.6**	**-0.3**
MBWA	**Marble Bar**	**42.61**	**317**	P		**P**	**12 57 32.9**	**-0.4**
BELA	**Belgrano 2**	**44.33**	**179**	P		**P**	**12 57 47.6**	**+1.0**
KNRA	**Kununurra**	**44.97**	**331**	P		**P**	**12 57 52.4**	**+0.2**
MSVF	**Nonsavu**	**45.51**	**40**	LR		LR	13 12 22.2	
	comp=Z,78nm,19.1s,baz=217,slow=30							
MTN	**Manton Dam**	**47.14**	**336**	P		**P**	**12 58 08.9**	**-0.5**
TROLL	**Troll, Antarti**	**48.20**	**193**	PcP		**PcP**	**12 59 44.8**	**+0.7**
TROLL	**Troll, Antarti**	**48.20**	**193**	P		**P**	**12 58 17.4**	**+0.2**
PMG	**Port Moresby**	**48.53**	**357**	LR		LR	13 15 46.7	
	comp=Z,80nm,20.2s,baz=148,slow=32							
SNAA	**Sanae**	**49.13**	**191**	P		**P**	**12 58 24.8**	**+0.5**
SNAA	**Sanae**	**49.13**	**191**	PcP		**PcP**	**12 59 47.5**	**+0.1**
SNAA	**Sanae**	**49.13**	**191**	LR		LR	13 20 24.5	
	comp=Z,50nm,19.1s,baz=196,slow=38							
SNAA	**Sanae**	**49.13**	**191**	P		**P**	**12 58 24.8**	**+0.5**
SNAA				IAmb		IAmb	12 58 25.3	
	comp=Z,8.4nm,1.3s							
VNA3	**Neumayer Olymp**	**50.17**	**189**	P		**P**	**12 58 32.2**	**+0.1**
VNA3	**Neumayer Olymp**	**50.17**	**189**	PcP		**PcP**	**12 59 51.2**	**0.0**
VNA2	**Neumayer--Watz**	**50.28**	**190**	P		**P**	**12 58 33.1**	**+0.1**
	baz=160,slow=7.0							
VNA2	**Neumayer--Watz**	**50.28**	**190**	PcP		**PcP**	**12 59 51.8**	**+0.2**
VNA1	**Neumayer--Stat**	**50.63**	**189**	P		**P**	**12 58 36.0**	**+0.5**
VNA1	**Neumayer--Stat**	**50.63**	**189**	PcP		**PcP**	**12 59 53.0**	**+0.2**
BATI	**Baumata**	**51.58**	**327**	LR		LR	13 18 26.8	
	comp=Z,231nm,19.9s,baz=258,slow=34							
BATI	**Baumata**	**51.58**	**327**	P		**P**	**12 58 42.9**	**-0.5**
	comp=Z,14nm,1.2s							
PMSA	**Palmer Station**	**54.94**	**163**	LR		LR	13 20 18.8	
	comp=Z,50nm,18.5s,baz=148,slow=34							
FAKI	**Fak Fak**	**56.57**	**339**	P		**P**	**12 59 20.2**	**+0.5**
FAKI				IAmb		IAmb	12 59 23.5	
	comp=Z,9.3nm,0.9s							
FAKI	**Fak Fak**	**56.57**	**339**	P		**P**	**12 59 20.6**	**+0.9**
	comp=Z,14nm,1.0s							
KAPI	**Kappang**	**57.67**	**324**	LR		LR	13 23 19.0	
	comp=Z,83nm,18.1s,baz=175,slow=35							
SPSI	**Sidrap Palu**	**58.66**	**325**	P		**P**	**12 59 35.5**	**+1.1**
	comp=Z,9.6nm,1.1s							
CMJI	**Cimerak**	**59.14**	**311**	P		**P**	**12 59 39.8**	**+2.0**
	comp=Z,206nm,0.8s							
MPSI	**Mapaga**	**62.70**	**326**	P		**P**	**13 00 02.3**	**+0.4**
	comp=Z,8.3nm,1.7s							
KSM	**Kuching**	**66.92**	**317**	P		**P**	**13 00 28.7**	**-0.8**
KSM				IAmb		IAmb	13 00 33.6	
	comp=Z,6.6nm,0.9s							
GUMO	**Guam**		**71.44**	**355**	LR	LR	13 30 24.0	
	comp=Z,16nm,19.4s,baz=182,slow=34							
KULM	**Kulim**		**74.17**	**309**	P	**P**	**13 01 13.5**	**-0.3**
PLCA	**Paso Flores**		**76.13**	**150**	P	**P**	**13 01 25.4**	**+0.6**
	comp=Z,5.8nm,1.0s,baz=201,slow=4.1,SNR=8.4							
PLCA					LR	LR	13 28 25.1	
	comp=Z,31nm,19.2s,baz=180,slow=31							
	comp=Z,5.8nm,1.0s							
PLCA	**Paso Flores**		**76.13**	**150**	IAmb	IAmb	13 01 26.8	
	comp=Z,12nm,1.1s							
H08S2	**Diego Garcia H**		**76.56**	**277**	T	T	14 25 23.3	
	baz=148,slow=76,SNR=18							
H08S1	**Diego Garcia H**		**76.57**	**277**	T	T	14 25 20.1	
	baz=148,slow=76,SNR=16							
H08S3	**Diego Garcia H**		**76.58**	**277**	T	T	14 25 24.9	
	baz=148,slow=76,SNR=21							
H03S1	**Juan Fernandez**		**79.98**	**141**	T	T	14 30 40.8	
	baz=202							
H03S2	**Juan Fernandez**		**79.98**	**141**	T	T	14 30 42.6	
	baz=202							
H03S3	**Juan Fernandez**		**79.99**	**141**	T	T	14 30 39.9	
	baz=202							
BOSA	**Boshof**		**81.86**	**227**	P	**P**	**13 01 56.9**	**+0.4**
	comp=Z,5.6nm,0.8s,baz=153,slow=5.8,SNR=6.9							
	comp=Z,5.6nm,0.8s							
BOSA	**Boshof**		**81.86**	**227**	IAmb	IAmb	13 01 57.3	
	comp=Z,8.3nm,0.9s							
JOW	**Kunigami**		**86.34**	**341**	LR	LR	13 39 04.3	
	comp=Z,33nm,20.4s,baz=128,slow=34							
CMAR	**Ching Mai Arr**		**86.79**	**313**	P	**P**	**13 02 22.1**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=180,slow=5.1,SNR=6.2							
CMAR					LR	LR	13 41 24.1	
	comp=Z,46nm,18.1s,baz=160,slow=36							
	comp=Z,0.4nm,0.3s							
JHJ	**Hachijo jima 2**		**91.14**	**352**	LR	LR	13 46 16.0	
	comp=Z,19nm,18.1s,baz=146,slow=37							
MJAR	**Matsushiro Arr**		**94.67**	**351**	P	**P**	**13 02 57.4**	**-0.3**
	comp=Z,2.7nm,1.1s,baz=193,slow=4.9,SNR=2.8							
MJAR					LR	LR	13 46 22.9	
	comp=Z,44nm,18.3s,baz=180,slow=36							
	comp=Z,2.7nm,1.1s							
MJAR	**Matsushiro Arr**		**94.67**	**351**	IAmb	IAmb	13 03 14.6	
	comp=Z,2.5nm,1.3s							
KSRS	**Korea Array**		**96.79**	**343**	LR	LR	13 48 53.1	
	comp=Z,24nm,18.1s,baz=215,slow=37							
MKAR	**Makanchi Array**		**118.18**	**314**	PKP	**PKPdf**	**13 08 21.9**	**-1.3**
	comp=Z,0.4nm,0.8s,baz=107,slow=7.8,SNR=5.0							
NVAR	**Mina Array Bea**		**122.80**	**69**	PKP	**PKiKP**	**13 08 33.3**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=216,slow=4.9,SNR=4.0							
ZALV	**Zalesovo Beam**		**123.18**	**320**	PKP	**PKPdf**	**13 08 30.4**	**-2.2**
	comp=Z,0.5nm,0.5s,baz=174,slow=2.9,SNR=1.9							
TXAR	**Lajitas Array**		**123.30**	**87**	PKP	**PKPdf**	**13 08 31.8**	**-2.0**
	comp=Z,0.6nm,1.0s,baz=197,slow=3.9,SNR=4.0							
TORD	**Torodi Ar. Bea**		**128.97**	**222**	PKP	**PKPdf**	**13 08 44.1**	**-0.8**
	comp=Z,2.5nm,0.9s,baz=151,slow=2.0,SNR=8.0							
TORD	**Torodi Ar. Bea**		**128.97**	**222**	P	**PKPdf**	**13 08 44.5**	**-0.5**
ILAR	**Eielson Array**		**131.64**	**31**	PKP	**PKPdf**	**13 08 48.0**	**-0.4**
	comp=Z,1.3nm,0.7s,baz=274,slow=3.2,SNR=13							
KBZ	**Khabaz**		**133.79**	**286**	PKP	**PKPdf**	**13 08 53.6**	**+0.5**
	comp=Z,1.7nm,0.7s,baz=140,slow=6.2,SNR=3.5							
YKA	**Yellowknife Ar**		**140.91**	**47**	PKhKP	PKPpre	13 08 57.8	
	comp=Z,0.5nm,0.7s,baz=234,slow=3.0,SNR=10.0							
ULM	**Lac du Bonnet**		**142.44**	**73**	PKhKP	PKPpre	13 09 03.1	
	comp=Z,2.2nm,0.6s,baz=253,slow=6.0,SNR=4.3							
VTS	**Vitosha**		**143.35**	**269**	⇑P	PKPab	13 09 06.7	-0.3
NEHR	**Nehoiu**		**143.62**	**275**	⇓P	PKPbc	13 09 08.2	-0.4
VRI	**Vrincioaia**		**143.68**	**276**	⇑P	PKPbc	13 09 08.4	-0.3
MLR	**Muntele Rosu**		**143.85**	**275**	⇓P	PKPab	13 09 08.8	+0.1
MLR	**Muntele Rosu**		**143.85**	**275**	PKP	PKPab	13 09 08.7	0.0
	comp=Z,7.4nm,0.6s,baz=194,slow=1.0,SNR=12							
COVR	**Voineasa-Covas**		**143.94**	**276**	⇑P	PKPab	13 09 07.9	-1.0
TESR	**Tescani**		**144.14**	**277**	⇑P	**PKPab**	**13 09 09.4**	**-0.3**
SORM	**Soroca**		**144.27**	**280**	⇑P	**PKPab**	**13 09 09.3**	**-0.8**
VOIR			**144.29**	**274**	⇑P	**PKPab**	**13 09 09.7**	**-0.7**
BLKB	**Belogradchik**		**144.34**	**270**	⇑P	**PKPab**	**13 09 10.6**	**0.0**
DOPR	**Dopca**		**144.46**	**275**	⇑P	**PKPab**	**13 09 10.9**	**0.0**
ARR	**Arges**		**144.46**	**274**	⇑P	**PKPab**	**13 09 10.5**	**-0.5**
BIZ	**Bicaz**		**144.70**	**277**	⇑P	PKPbc	13 09 11.9	0.0
BOVS	**Bovan**		**144.86**	**269**	⇑P	**PKPab**	**13 09 11.8**	**-0.6**
DJES	**Djerdap**		**145.12**	**271**	⇑P	**PKPbc**	**13 09 12.7**	**-0.6**
HERR	**Herculane**		**145.32**	**271**	⇑P	**PKPab**	**13 09 13.9**	**-0.2**
AKASG	**Malin Array Be**		**145.37**	**284**	PKPbc	**PKPbc**	**13 09 12.8**	**-1.1**
	comp=Z,12nm,0.8s,baz=73,slow=2.0,SNR=32							
MATE	**Matera**		**145.42**	**261**	⇑P	**PKPbc**	**13 09 14.1**	**-0.2**
KEST	**Kesra**		**145.44**	**247**	PKPbc	**PKPab**	**13 09 15.4**	**+0.5**
	comp=Z,10nm,0.8s,baz=245,slow=1.1,SNR=12							
GZR	**Gura Zlata**		**145.47**	**272**	⇓P	**PKPdf**	**13 09 14.1**	**-0.3**
BURAR	**Bucovina Array**		**145.60**	**277**	⇓P	**PKPab**	**13 09 15.5**	**+0.3**
MDVR	**Moldovita**		**145.63**	**271**	⇑P	**PKPbc**	**13 09 14.9**	**-0.1**
DRGR			**146.41**	**274**	⇑P	**PKPbc**	**13 09 17.1**	**-0.2**
SIRR	**Siria**		**146.63**	**273**	⇑P	**PKPbc**	**13 09 17.6**	**-0.3**
FRGS	**Fruska Gora**		**146.89**	**270**	⇓P	**PKPbc**	**13 09 18.0**	**-0.7**
MORH	**Mrgy, Hungar**		**148.20**	**270**	⇑P	**PKPbc**	**13 09 21.9**	**-0.3**
CRVS	**Cervenica-Dubn**		**148.37**	**276**	*e*PKP	**PKPbc**	**13 09 22.3**	**-0.3**
NACGM	**Naroch**		**148.90**	**289**⇑	*e*PKP	**PKPbc**	**13 09 24.1**	**+0.4**
	baz=120							
MODS	**Modra-Piesok**		**150.27**	**272**	*e*PKP	**PKPbc**	**13 09 26.5**	**-0.8**
JAVC	**Velka Javorina**		**150.35**	**273**	*e*PKP	**PKiKP**	**13 09 27.9**	**-0.4**
RONA	**Rosalia, Austr**		**150.38**	**270**	*e*P	**PKPbc**	**13 09 25.6**	**-2.0**
	comp=Z,12nm,1.0s							
SOKA	**Soboth**		**150.42**	**268**	*e*P	**PKPbc**	**13 09 27.7**	**-0.1**
	comp=Z,18nm,1.0s							
ARSA	**Arzberg**		**150.52**	**269**	*e*P	**PKPbc**	**13 09 28.1**	**+0.1**
	comp=Z,13nm,0.8s							
OBKA	**Obir**		**150.57**	**267**	*e*P	**PKiKP**	**13 09 28.6**	**-0.3**
	comp=Z,8.5nm,1.1s							
CONA	**Conrad Observa**		**150.75**	**270**	*e*P	**PKPbc**	**13 09 27.9**	**-0.7**
	comp=Z,6.3nm,1.0s							
MORC	**Moravsky Berou**		**150.96**	**275**	⇑P	**PKiKP**	**13 09 29.3**	**-0.3**
MORC	**Moravsky Berou**		**150.96**	**275**	*e*PKP	**PKPbc**	**13 09 28.7**	**-0.2**
MYKA	**Terra Mystica**		**151.12**	**266**	*e*P	**PKiKP**	**13 09 29.8**	**-0.2**
	comp=Z,9.6nm,0.8s							
KRUC	**Moravsky**		**151.15**	**273**	*e*PKP	**PKPbc**	**13 09 28.9**	**-0.4**
VRAC	**Vranov**		**151.19**	**273**	⇑P	**PKPbc**	**13 09 29.2**	**-0.2**
VRAC	**Vranov**		**151.19**	**273**	PKPbc	**PKPbc**	**13 09 29.2**	**-0.2**
	comp=Z,7.4nm,0.9s,baz=162,slow=3.2,SNR=7.6							
VRAC	**Vranov**		**151.19**	**273**	*e*PKP	**PKPbc**	**13 09 28.9**	**-0.5**
KRLC	**Kraliky**		**151.53**	**275**⇑	*e*PKP	**PKPbc**	**13 09 30.3**	**0.0**
MOA	**Molln**		**151.56**	**269**	*e*P	**PKPbc**	**13 09 29.8**	**-0.6**
	comp=Z,4.1nm,0.6s							
KBA	**Koelnbreinsper**		**151.57**	**267**	*e*P	**PKPbc**	**13 09 30.0**	**-0.6**
	comp=Z,13nm,0.9s							
TREC	**Trest**		**151.77**	**272**⇑	*e*PKP	**PKPbc**	**13 09 30.6**	**-0.2**
BIOA	**Bad Ischl, Aus**		**151.79**	**268**	*e*P	**PKPbc**	**13 09 30.4**	**-0.5**
	comp=Z,7.9nm,0.9s							
ABTA	**Abfaltersbach**		**151.80**	**265**	*e*P	**PKPbc**	**13 09 30.9**	**-0.2**
	comp=Z,6.3nm,0.6s							
DPC	**Dobruska-Polom**		**151.93**	**275**⇑	*e*PKP	**PKPbc**	**13 09 31.0**	**-0.2**
FINES	**FINESS Array B**		**151.95**	**301**	PKPbc	**PKPbc**	**13 09 30.2**	**-0.5**
	comp=Z,8.3nm,0.7s,baz=96,slow=2.7,SNR=19							
OSTC	**Ostas**		**152.10**	**275**⇑	*e*PKP	**PKiKP**	**13 09 31.8**	**0.0**
CKRC	**Cesky Krumlov**		**152.12**	**270**⇑	*e*PKP	**PKPbc**	**13 09 31.1**	**-0.5**
CHVC	**Chvalec**		**152.21**	**275**⇑	*e*PKP	**PKPbc**	**13 09 31.6**	**-0.1**
GERES	**GERESS Array B**		**152.46**	**270**	PKPbc	**PKPbc**	**13 09 31.4**	**-1.1**
	comp=Z,4.0nm,0.7s,baz=174,slow=2.7,SNR=32							
WTTA	**Wattenberg**		**152.59**	**265**	*e*P	**PKPbc**	**13 09 32.6**	**-0.3**
	comp=Z,5.4nm,0.6s							
WATA	**Walderalm**		**152.67**	**266**	*e*P	**PKPbc**	**13 09 32.6**	**-0.4**
	comp=Z,2.3nm,0.5s							
KHC	**Kasperske Hory**		**152.69**	**270**⇑	*e*PKP	**PKPbc**	**13 09 30.6**	**-2.3**
SQTA	**Sankt Quirin**		**152.79**	**265**	*e*P	**PKPbc**	**13 09 33.0**	**-0.3**
	comp=Z,10nm,0.7s							
FETA	**Feichten**		**152.92**	**264**	*e*P	**PKPbc**	**13 09 33.5**	**-0.2**
	comp=Z,9.7nm,1.1s							
MOTA	**Moosalm**		**152.92**	**265**	*e*P	**PKPbc**	**13 09 33.2**	**-0.4**
	comp=Z,16nm,1.3s							
RETA	**Reutte**		**153.19**	**265**	*e*P	**PKPbc**	**13 09 33.9**	**-0.2**
	comp=Z,4.2nm,0.7s							
DAVOX	**Davos/Dischmat**		**153.21**	**263**	PKPbc	**PKPbc**	**13 09 33.7**	**-0.6**
	comp=Z,2.8nm,0.6s,baz=133,slow=6.9,SNR=4.0							
DAVA	**Damuels**		**153.53**	**264**	*e*P	**PKPbc**	**13 09 34.7**	**-0.2**
	comp=Z,7.9nm,0.9s							
ARCES	**ARCESS Array B**		**153.72**	**319**	PKPbc	**PKPbc**	**13 09 33.6**	**-0.8**
	comp=Z,1.4nm,0.7s,baz=119,slow=1.5,SNR=3.9							
CLL	**Colln**		**154.22**	**274**	*e*PKPab	**PKPab**	**13 09 50.0**	**-0.1**
	comp=Z,5.0nm,1.1s							
ESDC	**Sonseca Array**		**154.83**	**235**	PKP	**PKPdf**	**13 09 29.0**	**-0.2**
	comp=Z,0.5nm,0.9s,baz=202,slow=0.8,SNR=4.8							
ESDC					PKPbc	**PKPbc**	**13 09 37.7**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=164,slow=32,SNR=4.0							
ESDC					PKPab	**PKPab**	**13 09 52.8**	**-0.3**
	comp=Z,1.6nm,0.7s,baz=157,slow=3.4,SNR=8.3							

IDC ***09*** *13:19:03.8±3.1, 14.°87S×167.°42E, h145km±27km, mb3.7/13, mbtmp4.1/14, MS3.1/1, Error ellipse: s-maj=21.2km s-min=16.7km az=73.0*
ISC 09 13:19:04.2±0.7**, 14.°89S**±0.°08×**167.°4E**±0.°1**, h150**km**, n19, σ0s90/17, mb3.8/11, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DZM	**Mont Dzumac**	**7.20**	**187**	P		**Pn**	**13 20 47.4**	**+0.3**
	7.6nm,0.3s,baz=350,slow=4.1,SNR=39							
DZM				S		**Sn**	**13 22 06.6**	**-1.1**
	9.9nm,0.6s,baz=297,slow=22,SNR=1.4							
DZM				LR		LR	13 22 50.8	
	comp=Z,124nm,18.7s,baz=192,slow=32							
HNR	**Honiara**	**9.10**	**306**	S		**Sn**	**13 22 53.6**	**+0.1**
	63nm,0.4s,baz=337,slow=23,SNR=6.0							
CTA	**Charters Tower**	**20.84**	**253**	P		**P**	**13 23 34.9**	**+0.7**
	5.8nm,0.9s,baz=74,sl

	10nm,0.5s,baz=215,slow=6.2,SNR=12							
MSVF	**Nonsavu**	**6.31**	**281**	Pn	**Pn**	**13 39 56.6**	**-2.3**
MARNC	**Mare, Loyalty**	**15.69**	**258**		**P**	**13 41 54.8**	**+0.5**
PINNC	**Pines Island,**	**16.38**	**255**		**Pn**	**13 42 03.8**	**+0.3**
DZM	**Mont Dzumac**	**17.22**	**257**	P	**Pn**	**13 42 12.9**	**-0.6**
	12nm,0.7s,baz=65,slow=21,SNR=16							
DZM	**Mont Dzumac**	**17.22**	**257**	P	**P**	**13 42 11.7**	**+0.6**
DZM				IAmb	IAmb	13 42 14.1		
	comp=Z,22nm,1.0s							
KOUNC	**Koumac, New Ca**	**19.13**	**262**	P	**Pn**	**13 42 35.2**	**-0.5**
KOUNC				IAmb	IAmb	13 42 37.2		
	comp=Z,37nm,1.2s							
URZ	**Urewera**	**20.22**	**197**	P	**P**	**13 42 42.3**	**-0.8**
	comp=Z,6.0nm,0.3s,baz=338,slow=2.4,SNR=11							
URZ				S	**S**	**13 46 08.7**	**-6.8**	
	comp=Z,14nm,0.9s,baz=25,slow=16,SNR=1.8							
	comp=Z,6.0nm,0.3s							
TUWZ	**Tuamarina**	**24.09**	**200**	P	P	13 43 11.4	-8.3	
RPZ	**Rata Peaks**	**27.09**	**202**	P	**P**	**13 43 50.0**	**+3.4**
	comp=Z,4.2nm,0.5s,baz=70,slow=3.2,SNR=1.4							
EIDS	**Eidsvold**	**31.57**	**252**	P	**P**	**13 44 26.4**	**+0.1**
EIDS				IAmb	IAmb	13 44 27.7		
	comp=Z,16nm,1.4s							
ARMA	**Armidale**	**31.87**	**243**	P	**P**	**13 44 29.6**	**+0.6**
ARMA				IAmb	IAmb	13 44 55.2		
	comp=Z,12nm,1.2s							
CTAO	**Charters Tower**	**36.05**	**262**	P	**P**	**13 45 04.5**	**-0.4**
CTAO				IAmb	IAmb	13 45 06.2		
	comp=Z,22nm,0.8s							
COEN	**Coen**	**39.93**	**271**	P	**P**	**13 45 36.5**	**-0.7**
STKA	**Stephens Creek**	**40.59**	**243**	P	**P**	**13 45 42.9**	**+0.4**
	comp=Z,3.4nm,0.8s,baz=90,slow=11,SNR=10							
	comp=Z,3.4nm,0.8s							
STKA	**Stephens Creek**	**40.59**	**243**	P	**P**	**13 45 43.2**	**+0.8**
BBOO	**Buckleboo**	**45.35**	**242**	P	**P**	**13 46 21.1**	**+0.6**
WR0	**Warramunga Arr**	**47.01**	**260**	P	**P**	**13 46 33.2**	**-0.3**
WR0				IAmb	IAmb	13 46 35.5		
	comp=Z,5.6nm,1.0s							
WB0	**Warramunga Arr**	**47.17**	**260**	P	**P**	**13 46 34.5**	**-0.3**
WB0				IAmb	IAmb	13 46 36.0		
	comp=Z,7.5nm,0.6s							
WB2	**Warramunga Arr**	**47.19**	**260**	P	**P**	**13 46 34.7**	**-0.3**
WB2				IAmb	IAmb	13 46 35.8		
	comp=Z,6.8nm,0.8s							
WRAB	**Tennant Creek**	**47.19**	**260**	P	**P**	**13 46 32.9**	**-2.0**
WRAB				IAmb	IAmb	13 46 51.4		
	comp=Z,9.2nm,0.6s							
WRA	**Warramunga Arr**	**47.20**	**260**	P	**P**	**13 46 34.4**	**-0.6**
	comp=Z,3.1nm,0.4s,baz=98,slow=6.1,SNR=75							
	comp=Z,3.1nm,0.4s							
WRA	**Warramunga Arr**	**47.20**	**260**	P	**P**	**13 46 34.3**	**-0.8**
AS31	**Alice Springs**	**47.20**	**255**	P	**P**	**13 46 35.0**	**-0.1**
AS31				IAmb	IAmb	13 46 36.9		
	comp=Z,9.3nm,0.7s							
ASAR	**Alice Springs**	**47.20**	**255**	P	**P**	**13 46 35.0**	**-0.1**
	comp=Z,28nm,0.6s,baz=94,slow=8.7,SNR=355							
ASAR				S	**S**	**13 53 05.4**	**-3.3**	
	comp=Z,0.4nm,0.8s,baz=89,slow=15,SNR=4.6							
	comp=Z,28nm,0.6s							
ASAR	**Alice Springs**	**47.20**	**255**	P	**P**	**13 46 34.0**	**-1.1**
MTN	**Manton Dam**	**51.58**	**268**	P	**P**	**13 47 05.7**	**-2.4**
KNRA	**Kununurra**	**53.17**	**264**	P	**P**	**13 47 18.4**	**-1.4**
SBA	**Scott Base**	**59.49**	**184**	P	P	13 47 46.1	-17	
VNDA	**Vanda**	**59.58**	**186**	P	**P**	**13 48 06.2**	**+2.3**
	comp=Z,0.6nm,0.9s,baz=0.6,slow=5.9,SNR=3.8							
	comp=Z,0.6nm,0.9s							
MJAR	**Matsushiro Arr**	**70.50**	**322**	P	**P**	**13 49 15.7**	**+1.1**
	comp=Z,1.7nm,0.8s,baz=159,slow=6.5,SNR=6.6							
	comp=Z,1.7nm,0.8s							
CMAR	**Chiang Mai Arr**	**91.91**	**289**	P	**P**	**13 51 09.6**	**+2.2**
	comp=Z,0.7nm,0.9s,baz=135,slow=2.2,SNR=4.9							
	comp=Z,0.7nm,0.9s							

IDC 09 14:04:11.7±6.7, 15°.94S×173°.35W, h0km, mb3.7/3, mbtmp3.8/4, ML4.0/1, MS3.3/1, Error ellipse: s-maj=303.1km s-min=24.8km az=140.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.52**	**37**	Pn	Pn	14 04 52.4	-1.6
	32nm,0.3s,baz=211,slow=3.5,SNR=33						
AFI				Sn	Sn	14 05 21.1	-4.5
	50nm,0.3s,baz=58,slow=22,SNR=14						
	67nm,0.2s						
DZM	**Mont Dzumac**	**20.05**	**249**	LR	LR	14 15 06.5	
	comp=Z,92nm,20.1s,baz=26,slow=33						
H11S2	**WAKE ISLAND Hy**	**39.45**	**329**	T	T	14 53 53.2	
	baz=149,slow=76,SNR=5.7						
H11S3	**WAKE ISLAND Hy**	**39.46**	**329**	T	T	14 53 53.8	
	baz=149,slow=76,SNR=6.4						
H11S1	**WAKE ISLAND Hy**	**39.47**	**329**	T	T	14 53 56.4	
	baz=149,slow=76,SNR=6.8						
H11N3	**WAKE ISLAND Hy**	**40.40**	**331**	T	T	14 55 04.7	
	baz=150,slow=76,SNR=5.7						
H11N1	**WAKE ISLAND Hy**	**40.41**	**331**	T	T	14 55 05.5	
	baz=150,slow=76,SNR=8.2						
H11N2	**WAKE ISLAND Hy**	**40.42**	**331**	T	T	14 55 07.0	
	baz=150,slow=76,SNR=4.5						
WRA	**Warramunga Arr**	**49.77**	**257**	P	P	14 13 06.2	-0.4
	0.6nm,0.9s,baz=92,slow=7.2,SNR=6.1						
	0.6nm,0.9s						
ASAR	**Alice Springs**	**49.99**	**252**	P	P	14 13 07.5	-0.7
	1.5nm,0.7s,baz=89,slow=8.0,SNR=29						
	1.5nm,0.7s						
ILAR	**Eielson Array**	**82.96**	**11**	P	P	14 16 38.6	+0.5
	0.4nm,0.8s,baz=215,slow=6.2,SNR=6.9						
	0.4nm,0.8s						
BRTR	**Keskin Array B**	**146.60**	**321**	PKPbc	PKPab	14 23 56.3	-0.5
	1.1nm,0.6s,baz=95,slow=3.0,SNR=5.0						

RSNC 09 14:16:53.7±1.4, 5°.71N×76°.08W, h45km±6km, ML3.6, 2C-7D, Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBOC	**Ciudad Bolivar**	**0.17**	**24**⇑	*i*P	Pn	14 17 01.1	-0.4
CBOC				*e*S	Sn	14 17 07.9	+0.9
CBOC				*i*		14 17 10.6	
	comp=Z,5μm,0.5s						
HELC	**Santa Helena**	**0.73**	**49**⇓	*i*P	Pn	14 17 06.2	-1.8
HELC				*e*S	Sn	14 17 17.5	-0.7
HELC				*i*		14 17 19.4	
	comp=Z,1μm,0.3s						
PLMC	**San Jos del P**	**0.83**	**194**⇓	*e*P	Pn	14 17 07.6	-1.4
PLMC				*e*S	Sn	14 17 19.7	-0.5
PLMC				*i*		14 17 20.9	
	comp=Z,8μm,0.3s						
NORC	**Norcasia**	**1.21**	**97**⇓	*e*P	Pn	14 17 12.9	-1.4
NORC				*e*S	Sn	14 17 28.9	-0.7
NORC				*i*		14 17 29.8	
	comp=Z,2μm,0.2s						
DBBC	**Dabeiba**	**1.30**	**354**⇓	*e*P	Pn	14 17 14.8	-0.8
ANIL	**Santa Ana**	**1.39**	**151**	*e*P	Pn	14 17 15.8	-1.1
ANIL				*e*S	Sn	14 17 34.0	-0.2
ANIL				*i*		14 17 35.3	
	comp=Z,2μm,0.3s						
SOLC	**Bahia Solano**	**1.42**	**291**	*e*P	Pn	14 17 16.1	-0.9
SOLC				*e*S	Sn	14 17 33.9	-0.7
PIZC	**Pizarro, Choco**	**1.48**	**240**⇓	*e*P	Pn	14 17 17.5	-0.3
PIZC				*e*S	Sn	14 17 35.6	-0.4
YOTC	**Yotoco, Valle**	**1.74**	**189**⇓	*i*P	Pn	14 17 19.8	-1.7
YOTC				*e*S	Sn	14 17 41.9	-0.7
YOTC				*i*		14 17 42.2	
	comp=Z,306nm,0.4s						
PTBC	**PUERTO BERRIO,**	**1.81**	**63**⇓	*e*P	Pn	14 17 21.7	-0.8
PTBC				*e*S	Sn	14 17 44.3	0.0
PTBC				*i*		14 17 47.1	
	comp=Z,460nm,0.6s						
ORTC	**Ortega, Tolima**	**1.97**	**155**	*e*P	Pn	14 17 24.4	-0.4
ORTC				*e*S	Sn	14 17 47.9	-0.4
SPBC	**San Pablo de B**	**2.00**	**92**	*e*P	Pn	14 17 24.7	-0.4
SPBC				*e*S	Sn	14 17 48.4	-0.6
SPBC				*i*		14 17 52.0	
	comp=Z,269nm,0.4s						
UREC	**San Jos de Ur**	**2.10**	**15**	*e*P	Pn	14 17 26.0	-0.5
UREC				*e*S	Sn	14 17 51.5	+0.1
UREC				*i*		14 17 55.0	
	comp=Z,240nm,0.3s						
MALC	**Bahia Malaga**	**2.10**	**217**	*e*P	Pn	14 17 26.0	-0.5
MALC				*e*S	Sn	14 17 52.3	+0.9
PTAC	**Punta Ardita,**	**2.23**	**310**⇑	*i*P	Pn	14 17 26.9	-1.3
PTAC				*e*S	Sn	14 17 53.3	-1.3
PRAC	**Prado**	**2.31**	**149**	*e*P	Pn	14 17 29.2	-0.2
PRAC				*e*S	Sn	14 17 57.0	+0.3
PRAC				*i*		14 18 09.2	
	comp=Z,135nm,0.7s						
CHIC	**Chingaza**	**2.57**	**115**	*e*P	Pn	14 17 33.9	+0.6
BRRC	**Barranca, Sant**	**2.73**	**59**	*e*P	Pn	14 17 34.2	-0.9
MARP	**Paez Belalcaza**	**2.85**	**178**	*e*P	Pn	14 17 36.5	-0.5
MARP				*e*S	Sn	14 18 09.6	-0.7
VILC	**Villavicencio,**	**2.86**	**124**	*e*P	Pn	14 17 38.4	+1.4
VILC				*e*S	Sn	14 18 25.9	+16
RUSC	**La Rusia**	**2.99**	**86**	*e*P	Pn	14 17 38.8	-0.2
RUSC				*i*		14 18 35.1	
	comp=Z,69nm,0.7s						
BARC	**Barichara**	**3.01**	**73**	*e*P	Pn	14 17 38.4	-0.7
BARC				*e*S	Sn	14 18 14.1	0.0
BARC				*i*		14 18 31.4	
	comp=Z,174nm,0.5s						
BETC	**Betania**	**3.08**	**168**	*e*P	Pn	14 17 39.3	-0.6
BETC				*e*S	Sn	14 18 14.8	-0.6
LCBC	**Los crdobas,**	**3.14**	**355**	*e*P	Pn	14 17 40.7	0.0
LCBC				*e*S	Sn	14 18 15.9	-1.0
CAPC	**Capurgana**	**3.17**	**337**	*e*P	Pn	14 17 42.0	+0.9
CAPC				*e*S	Sn	14 18 17.4	-0.3
POPC	**Popayan, Colom**	**3.21**	**191**	*e*P	Pn	14 17 41.2	-0.6
POPC				*e*S	Sn	14 18 18.0	-0.9
POPC				*i*		14 18 26.1	
	comp=Z,50nm,0.5s						
PCON	**Cinco Dias**	**3.38**	**185**	*e*P	Pn	14 17 45.2	+0.8
PCON				*e*S	Sn	14 18 30.2	+6.7
GR1C	**Gorgona, Isla**	**3.40**	**218**	*e*P	Pn	14 17 41.9	-2.4
GR1C				*e*S	Sn	14 18 22.7	-0.7
GARC	**Garzon, Huila**	**3.55**	**170**	*e*P	Pn	14 17 44.9	-1.6
SOTA	**Rioblanco**	**3.59**	**188**	*e*P	Pn	14 17 47.9	+0.5
SOTA				*e*S	Sn	14 18 28.8	0.0
OCAC	**Ocana**	**3.72**	**47**	*e*P	Pn	14 17 48.6	-0.2
OCAC				*e*S	Sn	14 18 31.4	0.0
OCAC				*i*		14 18 36.5	
	comp=Z,264nm,0.5s						
PAMC	**Pamplona, Colo**	**3.73**	**64**	*e*P	Pn	14 17 49.2	0.0
PAMC				*e*S	Sn	14 18 32.5	+0.4
PAMC				*i*		14 18 37.6	
	comp=Z,91nm,0.4s						
FLOC	**Florencia**	**4.12**	**174**	*e*P	Pn	14 17 52.8	-1.5
FLOC				*e*S	Sn	14 18 40.6	-0.6
FLOC				*i*		14 19 02.9	
	comp=Z,35nm,0.7s						
MACC	**Macarena, Meta**	**4.18**	**148**	*e*P	Pn	14 17 54.5	-0.6
MACC				*e*S	Sn	14 18 50.8	+8.1
TAMC	**Tame, Arauca**	**4.32**	**80**	*e*P	Pn	14 17 56.3	-0.7
TAMC				*e*S	Sn	14 18 45.2	-1.0
TAMC				*e*		14 18 45.6	
AZU	**Azuero**	**4.65**	**297**	*e*P	Pn	14 17 59.9	-1.5
AZU				*e*S	Sn	14 18 52.8	-1.4
AZU				*i*		14 18 53.5	
	comp=Z,62nm,0.4s						
OTAV	**Otavalo**	**5.93**	**204**	*e*P	Pn	14 18 16.9	-2.6
CRJC	**Cerrejon, Guaj**	**6.15**	**31**	*e*P	Pn	14 18 19.8	-2.3
CRJC				*e*S	Sn	14 19 27.1	-4.1

NOU 09 14:24:56.3, 16°.24S×167°.55E, h9km, MLv4.3/11, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**1.60**	**158**	P	Pn	14 25 25.1	+0.3
KOUNC	**Koumac, New Ca**	**5.29**	**215**	P	Pn	14 26 15.3	-0.2
DZM	**Mont Dzumac**	**5.89**	**190**	P	Pn	14 26 23.6	-0.3
NOUC	**Port Laguerre**	**5.95**	**191**	P	Pn	14 26 24.4	-0.2
PINNC	**Pines Island,**	**6.34**	**181**	P	Pn	14 26 29.7	-0.3

*CNRM **09** 14:42:58.9, 37°.13N×7°.70W, h18km, ml2.1*
*MDD **09** 14:43:00.7±0.4, 37°.30N×7°.77W, h12km, mb_Lg2.5/7, Error ellipse: s-maj=3.8km s-min=2.6km az=173.0*
*INMG **09** 14:43:00.6±1.4, 37°.26N×7°.74W, h11km±4km, ML2.2, Error ellipse: s-maj=2.0km s-min=1.5km az=115.0*
*SFS **09** 14:43:00.0, 37°.28N×7°.78W, h12km, ML2.6, S.BRAS DE ALPORTEL (PORTUGAL)*
*IGIL **09** 14:43:00.5, 37°.26N×7°.74W, h8km, ML2.3*

ISC 09 14:42:59.9±0.8, 37°.23N±0°.02×7°.76W±0°.02, h18km±5km, n39, σ1°.15/74, 2C-2D, Portugal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PTAV	**Tavira**	**0.14**	**142**	*e*Pg	**Pg**	**14 43 03.9**	**0.0**
PTAV				*e*Sg	**Sb**	**14 43 06.4**	**-0.1**
PTAV				A	A	14 43 06.7	
	295nm,0.2s						
PBDV	**Barranco-do-Ve**	**0.14**	**274**⇑	*i*Pg	**Pg**	**14 43 03.9**	**-0.1**
PBDV				*e*Sg	**Sg**	**14 43 06.3**	**-0.4**
PBDV				A	A	14 43 08.0	
	189nm,0.3s						
PVAQ	**Vaqueiros**	**0.17**	**11**⇑	*i*Pg	**Pg**	**14 43 03.9**	**-0.6**
PVAQ				*e*Sg	**Sg**	**14 43 06.4**	**-1.1**
PVAQ				A	A	14 43 07.3	
	270nm,0.1s						
PVAQ	**Vaqueiros**	**0.17**	**11**	P	**Pg**	**14 43 04.4**	**-0.1**
PVAQ				S	**Sg**	**14 43 08.3**	**+0.7**
PFARO	**Faro**	**0.24**	**212**	*e*Pg	**Pg**	**14 43 06.2**	**+0.7**
PFARO				*e*Sg	**Sg**	**14 43 10.3**	**+1.1**
PFARO				A	A	14 43 13.2	
	341nm,0.2s						
EGRO	**El Granado**	**0.37**	**36**	Pg	**Pg**	**14 43 07.0**	**-0.7**
EGRO				Sg	**Sg**	**14 43 11.7**	**-1.3**
EGRO				*i* Vmb_Lg		14 43 12.3	
PALBU	**Albufeira**	**0.41**	**251**	*e*Pg	**Pg**	**14 43 08.9**	**+0.5**
PALBU				*e*Sg	**Sg**	**14 43 15.1**	**+1.0**
PCVE	**Castro Verde**	**0.46**	**331**⇓	*i*Pg	**Pg**	**14 43 08.6**	**-0.6**
PCVE				*e*Sg	**Sg**	**14 43 14.6**	**-0.8**
PCVE				A	A	14 43 17.2	
	30nm,0.2s						
MESJ	**Messejana**	**0.71**	**329**	*e*P	**Pb**	**14 43 13.0**	**-0.8**
MESJ				*e*S	**Sb**	**14 43 22.0**	**-1.2**
MESJ				IAML		14 43 24.6	
	comp=N,47nm,0.1s						
MESJ	**Messejana**	**0.71**	**329**⇓	*e*Pg	**Pb**	**14 43 13.0**	**-0.8**
MESJ				*e*Sg	**Sb**	**14 43 22.3**	**-0.9**
MESJ				A	A	14 43 24.7	
	comp=N,45nm,0.1s						
MORF	**Marmelete**	**0.71**	**276**	*e*P	**Pb**	**14 43 13.5**	**-0.4**
MORF				*e*S	**Sb**	**14 43 23.3**	**-0.1**
MORF				IAML		14 43 26.5	
	comp=N,177nm,0.2s						
MORF	**Marmelete**	**0.71**	**276**	*e*P	**Pb**	**14 43 13.5**	**-0.4**
MORF				*e*S	**Sb**	**14 43 23.8**	**+0.4**
MORF				A	A	14 43 26.4	
	comp=N,112nm,0.1s						
PLAGO	**Lagos**	**0.75**	**260**	*e*S	**Sb**	**14 43 25.5**	**+1.0**
PLAGO				A	A	14 43 26.9	
	comp=N,348nm,0.2s						
PBEJ	**Beja**	**0.80**	**354**	*e*P	**Pb**	**14 43 15.1**	**-0.2**
PBEJ				*e*S	**Sb**	**14 43 24.7**	**-1.1**
PBEJ				A	A	14 43 27.7	
	comp=N,36nm,0.2s						
PALJ	**Aljezur**	**0.83**	**276**	*e*S	**Sb**	**14 43 27.6**	**+0.9**
PFVI	**Vila Bisbo**	**0.86**	**264**	*e*P	**Pb**	**14 43 16.2**	**-0.1**
PFVI				*e*S	**Sb**	**14 43 28.3**	**+0.8**
PFVI				A	A	14 43 30.6	
	comp=N,58nm,0.1s						
PFVI	**Vila Bisbo**	**0.86**	**264**	P	**Pb**	**14 43 17.4**	**+1.1**
PFVI				S	**Sb**	**14 43 27.8**	**+0.3**
EMIN	**Mina Concepcio**	**1.02**	**58**	Pg	**Pb**	**14 43 18.4**	**-0.6**
EMIN				Sg	**Sb**	**14 43 32.1**	**0.0**
EMIN				*i* Vmb_Lg		14 43 33.1	
PNCL	**Nicolau / Gran**	**1.07**	**325**	*e*P	**Pb**	**14 43 19.0**	**-0.9**
PNCL				*e*S	**Sb**	**14 43 33.6**	**0.0**
PNCL				A	A	14 43 35.1	
	comp=N,35nm,0.3s						
PBAR	**Barrancos**	**1.10**	**31**	*e*P	**Pb**	**14 43 19.9**	**-0.6**
PBAR				*e*S	**Sb**	**14 43 34.3**	**-0.2**
EVO	**Evora**	**1.31**	**351**	P	**Pn**	**14 43 23.4**	**0.0**
EVO				S	**Sn**	**14 43 39.6**	**-0.9**
EVO	**Evora**	**1.31**	**351**	*e*Pg	**Pn**	**14 43 23.9**	**+0.5**
EVO				*e*Sg	**Sn**	**14 43 40.5**	**0.0**
EVO				A	A	14 43 42.2	
	comp=N,38nm,0.1s						
ESPR	**Espera**	**1.57**	**103**	Pg	**Pn**	**14 43 27.3**	**+0.4**
ESPR				Sg	**Sg**	**14 43 50.8**	**+0.4**
ESPR				*i* Vmb_Lg		14 43 54.3	
EBAD	**Badajoz**	**1.63**	**21**	Pg	**Pn**	**14 43 28.6**	**+0.8**
EBAD				Sg	**Sn**	**14 43 49.6**	**+1.2**
EBAD				*i* Vmb_Lg		14 43 51.0	
PESTR	**Estremoz**	**1.64**	**5**	*e*Pg	**Pb**	**14 43 29.9**	**+0.3**
PESTR				*e*Sn	**Sn**	**14 43 49.0**	**+0.4**
PESTR				A	A	14 43 55.0	
	comp=N,13nm,0.5s						
PESTR	**Estremoz**	**1.64**	**5**	P	**Pb**	**14 43 30.8**	**+1.1**
PESTR				S	**Sn**	**14 43 49.3**	**+0.7**
PACT	**Alcochete**	**1.75**	**331**	*e*Pg	**Pb**	**14 43 31.8**	**+0.3**
PACT				*e*Sg	**Sg**	**14 43 57.1**	**+0.7**
PMTG	**Montargil**	**1.87**	**349**	*e*Pn	**Pn**	**14 43 30.5**	**-0.6**
PMTG				*e*Sg	**Sb**	**14 43 57.3**	**+0.7**
PMTG				A	A	14 44 02.4	
	comp=N,12nm,0.3s						
ECAB	**El Cabril**	**2.04**	**65**	Pn	**Pn**	**14 43 34.4**	**+0.9**
ECAB				Pg	**Pb**	**14 43 37.6**	**+1.1**
ECAB				Sg	**Sb**	**14 44 02.6**	**+1.0**
ECAB				*i* Vmb_Lg		14 44 05.3	
PMAFR	**Mafra**	**2.10**	**326**	*e*Pg	**Pb**	**14 43 39.0**	**+1.5**
PMAFR				*e*Sg	**Sg**	**14 44 06.9**	**-0.6**
PMRV	**Marv??o**	**2.21**	**7**	*e*Pn	**Pn**	**14 43 35.2**	**-0.6**
PMRV				*e*Sg	**Sb**	**14 44 05.9**	**-0.6**
PMRV				A	A	14 44 08.4	
	comp=N,19nm,0.3s						
PCBR	**Castelo Branco**	**2.61**	**5**	*e*Sg	**Sb**	**14 44 19.1**	**+1.1**
PCBR				A	A	14 44 21.4	
	comp=N,4.5nm,0.4s						
EADA	**Adamuz**	**2.69**	**69**	Pn	**Pn**	**14 43 42.6**	**+0.2**
EADA				Sn	**Sn**	**14 44 15.1**	**+0.5**
EADA				Sg	**Sb**	**14 44 22.5**	**+2.2**
EADA				*i* Vmb_Lg		14 44 28.7	
PCAS	**Casmilo, Conde**	**2.88**	**349**	*e*Sg	**Sb**	**14 44 29.4**	**+3.8**
PCAS				A	A	14 44 36.4	
	comp=N,8.9nm,0.6s						
EPLA	**Plasencia**	**3.12**	**24**	Pn	**Pn**	**14 43 48.0**	**-0.2**
EPLA				Sn	**Sn**	**14 44 22.3**	**-2.8**
EPLA				Sg	**Sb**	**14 44 34.1**	**+1.5**
EPLA				*i* Vmb_Lg		14 44 41.7	
MTE	**Manteigas**	**3.17**	**3**	*e*Sg	**Sb**	**14 44 37.7**	**+3.7**
MTE				A	A	14 44 41.6	
	comp=N,8.8nm,0.4s						
ZHG	**ZHG**	**3.89**	**166**	P	**Pn**	**14 43 57.7**	**-1.2**
ZHG				S	**Sn**	**14 44 40.7**	**-3.4**
MD31	**MD31**	**5.00**	**150**	P	**Pn**	**14 44 13.6**	**-0.7**
MDT	**Midelt**	**5.11**	**149**	P	**Pn**	**14 44 14.5**	**-1.2**

TAP 09 14:43:12.6, 24°.70N×121°.08E, h7km, ML1.5, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NFF	**Wufeng Townshi**	**0.08**	**151**	*i* P	Pg	14 43 15.3	+0.7
	baz=151						
NFF				S	Sg	14 43 17.3	+1.2
	baz=151						
NSTT	**Nanjuang**	**0.10**	**224**	*i* P	Pg	14 43 15.5	+0.7
	baz=218						
NSTT				*i* S	Sg	14 43 17.8	+1.4
	baz=218						
SBCB	**Hsinchu**	**0.12**	**318**	*e*P	Pg	14 43 17.2	+2.0
	baz=327						
SBCB				*e*S	Sg	14 43 20.2	+3.1
	baz=327						
HSN	**Hsinchu**	**0.14**	**316**	*e*P	Pg	14 43 16.5	+1.0
	baz=337						
HSN				*e*S	Sg	14 43 18.8	+1.3
	baz=337						
NSK	**Sanguang**	**0.26**	**96**	P	Pg	14 43 18.3	+0.6
	baz=109						
NSK				*e*S	Sg	14 43 22.7	+1.5
	baz=109						
YHNB	**Yeheng**	**0.28**	**97**	P	Pg	14 43 18.7	+0.6
	baz=110						
YHNB				S	Sg	14 43 23.1	+1.4
	baz=110						
NMLH	**Miaoli**	**0.31**	**238**	*e*P	Pb	14 43 20.0	-0.4
	baz=237						
NMLH				*e*S	Sb	14 43 25.0	-0.6
	baz=237						
NNSB	**Datong**	**0.39**	**134**	*e*P	Pb	14 43 21.4	-0.5
	baz=135						
NNSB				*e*S	Sg	14 43 26.7	+1.3
	baz=135						
NWLT	**Wulai**	**0.40**	**79**	*e*P	Pg	14 43 21.0	+0.7
	baz=90						
NWLT				*e*S	Sb	14 43 26.9	-1.3
	baz=90						
NSY	**Sanyi**	**0.40**	**225**	*e*P	Pb	14 43 22.2	+0.1
	baz=223						
NSY				*e*S	Sb	14 43 28.9	+0.4
	baz=223						
WHP	**Taichung City**	**0.44**	**196**	*e*P	Pb	14 43 22.2	-0.4
	baz=186						
WHP				*e*S	Sb	14 43 28.5	-1.0
	baz=186						
LATG	**Datong**	**0.44**	**112**	*e*P	Pb	14 43 22.3	-0.5
	baz=112						
LATG				*e*S	Sb	14 43 28.7	-0.9
	baz=112						
ENTT	**Nioudou**	**0.45**	**98**	*e*P	Pg	14 43 21.9	+0.6
	baz=108						
ENTT				*e*S	Sb	14 43 28.8	-1.0
	baz=108						
FUSB	**Fushanzhiwuyua**	**0.47**	**83**	*e*P	Pb	14 43 22.5	-0.7
	baz=93						
FUSB				*e*S	Sb	14 43 29.9	-0.5
	baz=93						
FUSS	**Fushou**	**0.48**	**161**	*e*P	Pb	14 43 22.8	-0.7
	baz=162						
FUSS				*e*S	Sg	14 43 28.9	+0.7
	baz=162						
TWE	**Neicheng**	**0.54**	**88**	*e*P	Pb	14 43 24.2	-0.1
	baz=97						
TWE		

MIAR	**Mount Ida**	**3.32**	**109**	Pn	Pn	14 51 19.1	-0.6
W41B	**Gary Mavity, V**	**4.23**	**95**	Pn	Pn	14 51 31.7	-0.5

MAN 09 15:02:44.0, 7°.64N × 126°.75E, h18 km, mb4.5, ML3.3, MS3.1, 5D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.67**	**325**	‖ *iP*	Pg	15 02 56.2	+0.6
BIPH				*i* S		15 03 04.9	
MATI	**Mati**	**0.84**	**215**	‖ *eP*	Pg	15 02 59.8	+0.1
KCP	**Kidapawan**	**1.76**	**249**	‖ *eP*	Pn	15 03 14.1	+0.5
DDMP	**Don Marcelino,**	**1.84**	**214**	‖ *eP*	Pn	15 03 14.7	+0.8
DDMP				*eS*		15 03 47.6	
GLSP	**General Luna,**	**2.22**	**344**	‖ *eP*	Pn	15 03 20.0	+0.9
GLSP				*eS*		15 03 51.9	

*IDC **09** 15:14:38.6±2.7, 17°.41N × 40°.25E, h0 km, mb3.5/6, mbtmp3.6/6, MS3.3/14, Error ellipse: s-maj=62.3km s-min=31.4km az=157.0*

ISC 09 15:14:40.0±2.5, 17°.4N±0°.3 × 40°.3E±0°.3, h10 km, n18, σ1s07/6, mb3.6/6, MS3.4/11, Red Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EIL	**Elat**	**13.12**	**339**	LR	LR	15 21 41.9	
	comp=Z,76nm,19.7s,baz=90,slow=32						
WSAR	**Wadi Sarin**	**18.17**	**68**	LR	LR	15 25 16.8	
	comp=Z,52nm,21.1s,baz=289,slow=35						
KMBO	**Kilima Mbogo**	**18.67**	**189**	LR	LR	15 26 16.0	
	comp=Z,94nm,19.7s,baz=88,slow=37						
MBAR	**Mbarara**	**20.21**	**209**	LR	LR	15 26 08.2	
	comp=Z,45nm,19.7s,baz=27,slow=34						
BRTR	**Keskin Array B**	**22.96**	**347**	P	**P**	**15 19 45.8**	**+1.0**
	1.9nm,1.0s,baz=172,slow=10.0,SNR=6.6						
BRTR				LR	LR	15 27 56.3	
	comp=Z,28nm,21.4s,baz=122,slow=35 1.9nm,1.0s						
GNI	**Garni**	**22.98**	**9**	LR	LR	15 29 35.3	
	comp=Z,34nm,22.0s,baz=183,slow=39						
GEYT	**Alibeck**	**25.75**	**34**	LR	LR	15 30 53.9	
	comp=Z,72nm,20.6s,baz=198,slow=38						
KBZ	**Khabaz**	**26.32**	**4**	LR	LR	15 31 29.4	
	comp=Z,31nm,19.3s,baz=176,slow=38						
AKASG	**Malin Array Be**	**34.36**	**348**	P	**P**	**15 21 25.8**	**-1.1**
	0.3nm,0.4s,baz=153,slow=8.3,SNR=1.6 0.3nm,0.4s						
LSZ	**Lusaka**	**34.60**	**201**	LR	LR	15 36 10.8	
	comp=Z,109nm,19.4s,baz=107,slow=37						
TORD	**Torodi Ar. Bea**	**37.40**	**269**	P	**P**	**15 21 53.6**	**+0.1**
	0.3nm,0.6s,baz=71,slow=6.9,SNR=2.1 0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**45.03**	**34**	P	**P**	**15 22 55.6**	**-0.1**
	0.6nm,0.7s,baz=238,slow=8.2,SNR=4.1 0.6nm,0.7s						
DBIC	**Dimbokro**	**45.28**	**262**	LR	LR	15 41 42.7	
	comp=Z,46nm,18.2s,baz=106,slow=36						
MKAR	**Makanchi Array**	**45.30**	**40**	P	**P**	**15 22 57.8**	**-0.3**
	0.6nm,0.9s,baz=244,slow=9.7,SNR=3.0						
MKAR				LR	LR	15 42 36.8	
	comp=Z,47nm,20.7s,baz=173,slow=37 0.6nm,0.9s						
ZALV	**Zalesovo Beam**	**50.05**	**33**	P	**P**	**15 23 35.8**	**+1.0**
	0.4nm,0.3s,baz=258,slow=7.2,SNR=2.1 0.4nm,0.3s						
SUR	**Sutherland**	**52.90**	**201**	LR	LR	15 47 00.9	
	comp=Z,119nm,18.3s,baz=131,slow=37						
SONM	**Songino Array**	**61.31**	**45**	LR	LR	15 56 03.7	
	comp=Z,62nm,18.2s,baz=246,slow=40						
KLR	**Kul'dur**	**77.97**	**42**	LR	LR	16 03 02.2	
	comp=Z,66nm,18.1s,baz=224,slow=37						

RSNC 09 16:02:55.4±1.1, 6°.80N × 73°.16W, h136 km±5 km, ML3.0, Mw3.5, 2C-2D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.21**	**186**	‖ *iP*	Pn	16 03 13.8	-0.5
BARC				*eS*	Sn	16 03 28.0	-0.6
BARC				*i*		16 03 29.6	
	comp=Z,250nm,0.3s						
BRRC	**Barranca, Sant**	**0.63**	**299**	↑ *iP*	Pn	16 03 15.8	-0.2
BRRC				*eS*	Sn	16 03 31.8	+0.3
BRRC				*i*		16 03 33.7	
	comp=Z,226nm,0.1s						
PAMC	**Pamplona, Colo**	**0.70**	**40**	*eP*	Pn	16 03 16.7	-0.3
PAMC				*eS*	Sn	16 03 33.5	+0.1
PAMC				*i*		16 03 35.7	
	comp=Z,364nm,0.5s						
RUSC	**La Rusia**	**0.91**	**175**	*eP*	Pn	16 03 17.9	-0.7
RUSC				*eS*	Sn	16 03 36.5	+0.3
RUSC				*i*		16 03 37.9	
	comp=Z,62nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.31**	**259**	*eP*	Pn	16 03 20.5	-1.5
PTBC				*eS*	Sn	16 03 41.3	-0.9
PTBC				*i*		16 03 43.8	
	comp=Z,97nm,0.3s						
TAMC	**Tame, Arauca**	**1.41**	**105**	‖ *iP*	Pn	16 03 22.2	-0.7
TAMC				*eS*	Sn	16 03 43.7	-0.2
TAMC				*i*		16 03 44.3	
	comp=Z,74nm,0.5s						
OCAC	**Ocana**	**1.44**	**354**	↑ *eP*	Pn	16 03 22.2	-1.3
OCAC				*eS*	Sn	16 03 44.5	-0.3
OCAC				*i*		16 03 48.0	
	comp=Z,434nm,0.2s						
SPBC	**San Pablo de B**	**1.46**	**219**	*eP*	Pn	16 03 22.7	-0.9
SPBC				*eS*	Sn	16 03 44.3	-0.8
SPBC				*i*		16 03 52.2	
	comp=Z,103nm,0.4s						
NORC	**Norcasia**	**2.10**	**234**	*eP*	Pn	16 03 29.9	-1.1
NORC				*eS*	Sn	16 03 58.2	0.0
NORC				*i*		16 03 59.7	
	comp=Z,57nm,0.1s						
CHIC	**Chingaza**	**2.23**	**195**	*eP*	Pn	16 03 33.0	0.0
CHIC				*eS*	Sn	16 04 01.2	-0.5
CHIC				*i*		16 04 05.7	
	comp=Z,40nm,0.5s						
ROSC	**El Rosal**	**2.27**	**211**	*eP*	Pn	16 03 34.3	+1.0
ROSC				*eS*	Sn	16 04 02.5	+0.1
ROSC				*i*		16 04 10.2	
	comp=Z,123nm,0.5s						
HELC	**Santa Helena**	**2.43**	**256**	*eP*	Pn	16 03 35.2	-0.2
HELC				*eS*	Sn	16 04 05.9	-0.1
HELC				*i*		16 04 14.6	
	comp=Z,35nm,0.2s						
UREC	**San Jos de Ur**	**2.54**	**292**	*eP*	Pn	16 03 34.2	-2.2
UREC				*eS*	Sn	16 04 06.0	-1.9
UREC				*i*		16 04 07.7	
	comp=Z,95nm,0.2s						
VILC	**Villavicencio,**	**2.72**	**191**	*eP*	Pn	16 03 37.7	-1.1
VILC				*eS*	Sn	16 04 13.2	+0.8
PTGC	**Puerto Gaitan,**	**2.78**	**158**	*eP*	Pn	16 03 37.2	-2.2
PTGC				*eS*	Sn	16 04 10.3	-3.1
PTGC				*i*		16 04 12.9	
	comp=Z,64nm,0.5s						
LL6C	**La Loma 6 Bece**	**2.92**	**358**	*eP*	Pn	16 03 38.8	-2.4
LL6C				*eS*	Sn	16 04 19.6	+3.0
CBOC	**Ciudad Bolivar**	**2.98**	**252**	*eP*	Pn	16 03 42.1	-0.1
CBOC				*eS*	Sn	16 04 18.3	0.0
CBOC				*i*		16 04 24.1	
	comp=Z,12nm,0.2s						
DBBC	**Dabeiba**	**3.04**	**274**	*eP*	Pn	16 03 42.1	-0.7
DBBC				*eS*	Sn	16 04 18.6	-0.8
DBBC				*i*		16 04 20.9	
	comp=Z,111nm,0.3s						
ANIL	**Santa Ana**	**3.20**	**224**	*eP*	Pn	16 03 46.0	+0.8
ANIL				*eS*	Sn	16 04 24.3	+0.8
ANIL				*i*		16 04 29.9	
	comp=Z,89nm,0.3s						
ARGC	**Ariguani, Magd**	**3.22**	**341**	*eP*	Pn	16 03 45.3	+0.2
ARGC				*eS*	Sn	16 04 23.4	-0.3
PRAC	**Prado**	**3.52**	**209**	*eP*	Pn	16 03 48.2	-0.8
PRAC				*eS*	Sn	16 04 29.0	-1.5
PRAC				*i*		16 04 35.3	
	comp=Z,35nm,0.3s						
ORTC	**Ortega, Tolima**	**3.55**	**216**	*eP*	Pn	16 03 49.0	-0.4
ORTC				*eS*	Sn	16 04 32.0	+0.8
ORTC				*i*		16 04 37.2	
	comp=Z,41nm,0.5s						
SJCC	**San Jacinto, C**	**3.67**	**327**	*eP*	Pn	16 03 48.3	-2.8
SJCC				*eS*	Sn	16 04 29.6	-4.5
SJCC				*i*		16 04 33.9	
	comp=Z,59nm,0.4s						
LCBC	**Los crdobas,**	**3.78**	**303**	*eS*	Sn	16 04 36.2	-0.4
CRJC	**Cerrejon, Guaj**	**4.20**	**4**	*eP*	Pn	16 03 54.6	-3.5
CRJC				*eS*	Sn	16 04 41.5	-5.2
YOTC	**Yotoco, Valle**	**4.23**	**229**	*eP*	Pn	16 03 58.0	-0.5
YOTC				*eS*	Sn	16 04 44.5	-3.0

*IDC **09** 16:05:18.1±2.3, 17°.76N × 40°.09E, h0 km, mb3.6/6, mbtmp3.6/6, MS3.2/5, Error ellipse: s-maj=55.4km s-min=29.3km az=159.0*

*SGS **09** 16:05:19.0, 17°.93N × 40°.18E, h20 km, Ml3.1*

ISC 09 16:05:19.0±1.1, 17°.7N±0°.1 × 40°.23E±0°.10, h10 km, n21, σ1s08/16, mb3.7/6, MS3.4/3, Red Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FRSS2	**Sair Farasan I**	**1.70**	**118**	S	**Sn**	**16 06 11.5**	**+0.8**
FRSS2	**Sair Farasan I**	**1.70**	**118**	P	**Pn**	**16 05 48.9**	**+0.1**
FRSS	**Farasan al Kab**	**2.03**	**117**	S	**Sn**	**16 06 18.7**	**0.0**
FRSS	**Farasan al Kab**	**2.03**	**117**	P	**Pn**	**16 05 53.2**	**0.0**
AKWA	**Algayed**	**2.40**	**99**	P	**Pn**	**16 05 57.2**	**-1.1**
BESHS	**BESHS**	**2.51**	**96**	S	**Sn**	**16 06 28.6**	**-2.0**
BESHS	**BESHS**	**2.51**	**96**	P	**Pn**	**16 05 59.2**	**-0.8**
JAZS	**Jizan**	**2.64**	**103**	P	**Pn**	**16 06 01.0**	**-0.6**
DJNS	**Zahran al Janu**	**3.17**	**89**	P	**Pn**	**16 06 10.0**	**+0.9**
KNGHS	**KNGHS**	**3.17**	**78**	P	**Pn**	**16 06 09.4**	**+0.1**
MMAI	**Mount Meron Ar**	**15.89**	**345**	LR	LR	16 14 10.5	
	comp=Z,46nm,21.7s,baz=302,slow=34						
WSAR	**Wadi Sarin**	**18.11**	**69**	LR	LR	16 16 40.3	
	comp=Z,70nm,20.6s,baz=221,slow=38						
BRTR	**Keskin Array B**	**22.71**	**347**	P	**P**	**16 10 22.0**	**+0.9**
	2.1nm,1.0s,baz=172,slow=10.0,SNR=5.2 2.1nm,1.0s						
GNI	**Garni**	**22.74**	**9**	LR	LR	16 20 54.9	
	comp=Z,33nm,19.3s,baz=122,slow=41						
GEYT	**Alibeck**	**25.56**	**34**	LR	LR	16 21 50.7	
	comp=Z,124nm,19.3s,baz=220,slow=39						
AKASG	**Malin Array Be**	**34.11**	**348**	P	**P**	**16 12 02.1**	**-1.6**
	0.1nm,0.3s,baz=172,slow=7.4,SNR=5.0 0.1nm,0.3s						
TORD	**Torodi Ar. Bea**	**37.37**	**269**	P	**P**	**16 12 31.9**	**-0.4**
	1.7nm,1.0s,baz=87,slow=7.9,SNR=4.7 1.7nm,1.0s						
MKAR	**Makanchi Array**	**45.13**	**41**	P	**P**	**16 13 37.0**	**+1.3**
	0.7nm,0.9s,baz=233,slow=7.6,SNR=3.9 0.7nm,0.9s						
DBIC	**Dimbokro**	**45.29**	**262**	LR	LR	16 33 06.6	
	comp=Z,64nm,18.1s,baz=128,slow=37						
ZALV	**Zalesovo Beam**	**49.86**	**33**	P	**P**	**16 14 11.9**	**-0.4**
	0.9nm,0.6s,baz=248,slow=7.8,SNR=4.7 0.9nm,0.6s						
SONM	**Songino Array**	**61.15**	**45**	P	**P**	**16 15 35.4**	**+1.5**
	0.4nm,0.5s,baz=248,slow=7.6,SNR=2.9 0.4nm,0.5s						

*IDC **09** 16:10:37.8±1.1, 4°.95S × 129°.71E, h0 km, mb3.7/5, mbtmp3.8/9, ML3.8/4, MS2.7/2, Error ellipse: s-maj=33.4km s-min=19.4km az=74.0*

*DJA **09** 16:10:41.2±0.3, 5°.S±3° × 13°.0E±°, h10 km, M4.1/6, mb4.4/6, MLv3.9/6*

*NEIC **09** 16:10:43.6±1.9, 4°.94S±0°.07 × 129°.74E±0°.08, h46 km±12 km, mb4.0/13, Error ellipse: s-maj=11.3km s-min=10.1km az=76.0*

ISC 09 16:10:42.0±0.6, 5°.01S±0°.06 × 129°.68E±0°.07, h35 km, n51, σ2s09/51, mb4.0/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.53**	**25**	P	**Pn**	**16 10 50.6**	**-2.5**
MSAI	**Masohi**	**1.81**	**336**	P	**Pn**	**16 11 09.2**	**-1.6**
AAI	**Ambon**	**1.98**	**311**	P	**Pn**	**16 11 10.5**	**-2.5**
FAKI	**Fak Fak**	**3.30**	**51**		**Pn**	**16 11 32.0**	**+0.8**
FAKI	**Fak Fak**	**3.30**	**51**	P	**Pn**	**16 11 32.0**	**+0.8**
FAKI	**Fak Fak**	**3.30**	**51**	P	**Pn**	**16 11 32.2**	**+1.0**
SAUI	**Saumlaki**	**3.36**	**152**	P	Pn	16 11 37.1	+5.0
SIJI	**Sorong**	**4.41**	**21**	Pn	**Pn**	**16 11 46.0**	**-0.5**
	6.7nm,0.3s,baz=129,slow=23,SNR=20						
SIJI				Sn	**Sn**	**16 12 34.0**	**-2.6**
	4.7nm,0.3s,baz=46,slow=22,SNR=6.3						
SIJI				LR	LR	16 13 35.8	
	comp=Z,63nm,21.0s,baz=300,slow=41 14nm,0.3s						
SWI	**Sorong**	**4.41**	**21**	P	**Pn**	**16 11 46.8**	**+0.3**
SANI	**Sanana**	**4.71**	**308**	P	**Pn**	**16 11 50.7**	**0.0**
SANI	**Sanana**	**4.71**	**308**	P	**Pn**	**16 11 50.7**	**0.0**
LBMI	**Labuha**	**4.86**	**333**	P	**Pn**	**16 11 51.5**	**-1.1**
TNTI	**Ternate**	**6.19**	**338**	P	**Pn**	**16 12 10.6**	**-0.4**
	0.1nm11nm,0.9s						
SOEI	**Soe**	**7.14**	**228**	Pn	**Pn**	**16 12 27.2**	**+3.1**
SOEI	**Soe**	**7.14**	**228**	P	**Pn**	**16 12 27.3**	**+3.1**
	0.1nm17nm,0.9s						
BATI	**Baumata**	**7.89**	**229**	Pn	**Pn**	**16 12 36.4**	**+2.1**
	4.4nm,0.3s,baz=199,slow=5.4,SNR=5.3 20nm,0.5s						
BATI	**Baumata**	**7.89**	**229**	P	**Pn**	**16 12 37.3**	**+3.0**
	18nm,0.8s						
MTN	**Manton Dam**	**7.92**	**170**	Pn	**Pn**	**16 12 36.7**	**+2.0**
MTN	**Manton Dam**	**7.92**	**170**	P	**Pn**	**16 12 37.5**	**+2.8**
LUWI	**Luwuk**	**7.95**	**300**	Pn	**Pn**	**16 12 36.5**	**+1.4**
KDU	**Kakadu**	**8.11**	**160**	P	**Pn**	**16 12 38.4**	**+1.1**
KNRA	**Kununurra**	**10.64**	**185**		**Pn**	**16 13 12.1**	**0.0**
KNRA	**Kununurra**	**10.64**	**185**	P	**Pn**	**16 13 12.5**	**+0.5**
DAV	**Davao City (W)**	**12.68**	**341**	LR	LR	16 18 57.7	
	comp=Z,60nm,18.1s,baz=160,slow=40						
WB0	**Warramunga Arr**	**15.37**	**163**	Pn	**Pn**	**16 14 14.2**	**-2.2**
WB0				IAmb	IAmb	16 14 44.2	
	comp=Z,17nm,1.6s						
WRA	**Warramunga Arr**	**15.52**	**163**	Pn	**Pn**	**16 14 16.7**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=344,slow=14,SNR=8.4						
WRA				Sn	**Sn**	**16 17 01.7**	**-7.6**
	comp=Z,0.2nm,0.3s,baz=330,slow=24,SNR=3.0 comp=Z,0.4nm,0.4s						
WRA	**Warramunga Arr**	**15.52**	**163**		**Pn**	**16 14 15.4**	**-3.0**
WB2	**Warramunga Arr**	**15.53**	**163**	Pn	**Pn**	**16 14 14.6**	**-3.8**
WB2				IAmb	IAmb	16 14 24.8	
	comp=Z,21nm,1.8s						
WR0	**Warramunga Arr**	**15.60**	**163**	Pn	**Pn**	**16 14 15.6**	**-3.7**
WR0				IAmb	IAmb	16 15 04.1	
	comp=Z,15nm,1.7s						
COEN	**Coen**	**16.00**	**125**	Pn	**Pn**	**16 14 24.5**	**0.0**
COEN				IAmb	IAmb	16 14 39.1	
	comp=Z,22nm,1.6s						
QIS	**Mount Isa**	**18.22**	**149**	P	**P**	**16 14 53.8**	**+1.6**
AS31	**Alice Springs**	**18.99**	**168**	P	**P**	**16 15 00.1**	**-0.6**
ASAR	**Alice Springs**	**18.99**	**168**	P	**P**	**16 15 02.1**	**+1.4**
	comp=Z,0.4nm,0.3s,baz=343,slow=9.8,SNR=24 comp=Z,1.7nm,0.7s						
ASAR	**Alice Springs**	**18.99**	**168**	P	**P**	**16 14 59.9**	**-0.8**
PSA00	**Pilbara Seismi**	**19.03**	**209**	P	**P**	**16 15 01.6**	**+0.5**
MTSU	**Mount Surprise**	**19.36**	**134**	P	**P**	**16 15 05.8**	**+1.0**
WRKA	**Warakurna**	**19.96**	**184**	P	**P**	**16 15 13.8**	**+2.5**
CTA	**Charters Tower**	**22.02**	**134**	P	**P**	**16 15 34.4**	**+0.9**
	comp=Z,1.7nm,1.0s,baz=301,slow=12,SNR=1.8 comp=Z,1.7nm,1.0s						
CTAO	**Charters Tower**	**22.02**	**134**	P	**P**	**16 15 37.3**	**+3.8**
OOD	**Oodnadatta**	**23.37**	**166**	P	**P**	**16 15 49.2**	**+1.7**
CMAR	**Chiang Mai Arr**	**38.23**	**308**	P	**P**	**16 17 59.9**	**+0.9**
	comp=Z,0.8nm,0.7s,baz=135,slow=7.8,SNR=7.3 comp=Z,0.8nm,0.7s						
CMAR	**Chiang Mai Arr**	**38.23**	**308**	P	**P**	**16 17 59.0**	**0.0**
USRK	**Ussuriysk Ar.**	**49.03**	**2**	P	**P**	**16 19 26.3**	**+0.9**
	comp=Z,0.9nm,0.5s,baz=170,slow=29,SNR=2.7 comp=Z,0.9nm,0.5s						
ULN	**Ulaanbaatar**	**56.29**	**342**	P	**P**	**16 20 19.5**	**+0.3**
ULN				IAmb	IAmb	16 20 20.9	
	comp=Z,2.0nm,0.9s						
SONM	**Songino Array**	**56.47**	**341**	P	**P**	**16 20 21.5**	**+1.0**
	comp=Z,0.7nm,0.9s,baz=175,slow=6.0,SNR=3.7 comp=Z,0.7nm,0.9s						
SONM	**Songino Array**	**56.47**	**341**	P	**P**	**16 20 20.9**	**+0.4**
SONM				IAmb	IAmb	16 22 04.7	
	comp=Z,1.3nm,1.1s						
MK31	**Makanchi Array**	**66.40**	**327**	P	**P**	**16 21 27.7**	**+0.1**
MKAR	**Makanchi Array**	**66.40**	**327**	P	**P**	**16 21 27.7**	**+0.2**
	comp=Z,1.1nm,0.5s,baz=113,slow=8.0,SNR=24 comp=Z,1.1nm,0.5s						
MKAR	**Makanchi Array**	**66.40**	**327**	P	**P**	**16 21 27.4**	**-0.1**
MAKZ	**Makanchi**	**66.58**	**326**	P	**P**	**16 21 28.7**	**0.0**
MAKZ				IAmb	IAmb	16 21 29.6	
	comp=Z,2.7nm,1.1s						
KURK	**Kurchatov**	**70.67**	**328**	P	**P**	**16 21 53.9**	**-0.2**

*NOU **09** 16:21:16.1, 37°.42S × 176°.66E, h265 km, MLv3.7/5, North Island, New Zealand*

*WEL **09** 16:21:27.6±0.8, 38°.S±7° × 17°.6E±°, h167 km±7 km, M2.7/18, MLv2.7/18, Error ellipse: s-maj=0.0km s-min=0.0km az=147.1*

ISC 09 16:21:22.1±2.4, 37°.78S±0°.09 × 176°.38E±0°.07, h211 km±13 km, n64, σ1s79/75, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOZ	**Tahuroa Road**	**0.70**	**274**	P	**Pn**	**16 21 52.8**	**+1.4**
PRRZ	**Plateau Road**	**0.71**	**179**	P	**Pn**	**16 21 53.0**	**+1.6**
URZ	**Urewera**	**0.75**	**130**	P	**Pn**	**16 21 52.5**	**+1.0**
URZ				S	**Sn**	**16 22 11.9**	**-2.6**
URZ	**Urewera**	**0.75**	**130**	P	**Pn**	**16 21 52.4**	**+0.9**
RUGZ	**Raukumara Rang**	**1.04**	**100**	P	**Pn**	**16 21 54.3**	**+0.8**
RUGZ				S	**Sn**	**16 22 14.2**	**-3.6**
MRHZ	**Matea Rd**	**1.05**	**178**	P	**Pn**	**16 21 54.8**	**+1.4**
MWZ	**Matawai**	**1.06**	**122**	P	**Pn**	**16 21 53.4**	**-0.1**
MWZ				S	**Sn**	**16 22 16.5**	**-1.4**
HAZ	**Te Kaha**	**1.11**	**89**	P	**Pn**	**16 21 54.7**	**+1.0**
HAZ				S	**Sn**	**16 22 16.2**	**-2.1**
MTHZ	**Maungataniwha**	**1.13**	**161**	P	**Pn**	**16 21 55.8**	**+1.9**
MTHZ				S	**Sn**	**16 22 17.3**	**-1.5**
RATZ	**Rangitukua**	**1.18**	**204**	P	**Pn**	**16 21 56.3**	**+1.9**
SNGZ	**Shannon Statio**	**1.25**	**143**	P	**Pn**	**16 21 56.9**	**+2.1**
SNGZ				S	**Sn**	**16 22 18.9**	**-1.5**
RAHZ	**Arahi**	**1.26**	**154**	P	**Pn**	**16 21 57.1**	**+2.3**
RAHZ				S	**Sn**	**16 22 19.7**	**-0.8**
RITZ	**Rihia Road**	**1.26**	**199**	P	**Pn**	**16 21 57.2**	**+2.3**
TWGZ	**Tauwhareparae**	**1.32**	**108**	P	**Pn**	**16 21 57.4**	**+2.0**
TWGZ				S	**Sn**	**16 22 20.7**	**-0.6**
TKGZ	**Te Karaka**	**1.33**	**120**	P	**Pn**	**16 21 57.3**	**+1.9**
TKGZ				S	**Sn**	**16 22 19.5**	**-1.8**
PKGZ	**Pakihiroa**	**1.35**	**95**	P	**Pn**	**16 21 57.2**	**+1.6**
PKGZ				S	**Sn**	**16 22 20.5**	**-1.1**
BKZ	**Black Stump Fm**	**1.38**	**176**	P	**Pn**	**16 21 57.4**	**+1.5**
BKZ				S	**Sn**	**16 22 20.4**	**-1.9**
BKZ	**Black Stump Fm**	**1.38**	**176**	P	**Pn**	**16 21 57.4**	**+1.5**
HIZ	**Hauiti**	**1.41**	**238**	P	**Pn**	**16 21 58.2**	**+2.2**
HIZ	**Hauiti**	**1.41**	**238**	P	**Pn**	**16 21 58.2**	**+2.2**
RIGZ	**Rimuhau**	**1.42**	**131**	P	**Pn**	**16 21 58.5**	**+2.3**
OTVZ	**Oturere**	**1.49**	**202**	P	**Pn**	**16 21 59.1**	**+2.3**
PUZ	**Puketiti**	**1.51**	**102**	P	**Pn**	**16 21 58.1**	**+1.2**
PUZ				S	**Sn**	**16 22 22.4**	**-1.6**
ARHZ	**Aropaoanui**	**1.55**	**162**	P	**Pn**	**16 21 59.6**	**+2.4**
KNZ	**Kokohu**	**1.60**	**141**	P	**Pn**	**16 21 59.8**	**+2.2**
CNGZ	**Carnagh Statio**	**1.60**	**116**	P	**Pn**	**16 22 00.4**	**+2.8**
WMGZ	**Waiomatatini S**	**1.61**	**92**	P	**Pn**	**16 21 59.6**	**+1.9**
KWHZ	**Kaweka Forest**	**1.64**	**179**	P	**Pn**	**16 22 00.2**	**+2.1**
MCHZ	**McNeill Hill**	**1.68**	**172**	P	**Pn**	**16 22 00.9**	**+2.5**
MOVZ	**Moawhango**	**1.69**	**197**	P	**Pn**	**16 22 00.0**	**+1.5**
BHHZ	**Black Hill Sta**	**1.72**	**188**	P	**Pn**	**16 22 00.4**	**+1.6**
MHGZ	**Mahia Peninsul**	**1.82**	**139**	P	**Pn**	**16 22 02.4**	**+2.7**
VRZ	**Vera Road**	**1.85**	**223**	P	**Pn**	**16 22 02.8**	**+2.8**
KRHZ	**Kereru**	**1.86**	**180**	P	**Pn**	**16 22 01.9**	**+1.9**
CKHZ	**Cape Kidnapper**	**1.95**	**164**	P	**Pn**	**16 22 03.4**	**+2.5**
KAHZ	**Kahuranaki**	**2.04**	**169**	P	**Pn**	**16 22 04.3**	**+2.4**
PNHZ	**Pukenui**	**2.13**	**184**	P	**Pn**	**16 22 04.5**	**+1.7**
PXZ	**Pawanui**	**2.27**	**171**	P	**Pn**	**16 22 06.3**	**+2.1**
WPHZ	**Waipukurau**	**2.28**	**179**	P	**Pn**	**16 22 06.1**	**+1.8**
TSZ	**Takapari Road**	**2.29**	**188**	P	**Pn**	**16 22 06.1**	**+1.6**
PRHZ	**Porangahau**	**2.49**	**176**	P	**Pn**	**16 22 08.4**	**+1.9**
DVHZ	**Dannevirke**	**2.52**	**184**	P	**Pn**	**16 22 08.3**	**+1.4**
NMEZ	**Namu Road**	**2.55**	**230**	P	**Pn**	**16 22 09.5**	**+2.4**
POWZ	**Post Office Ro**	**2.65**	**190**	P	**Pn**	**16 22 09.7**	**+1.4**
ANWZ	**Angora Road**	**2.67**	**178**	P	**Pn**	**16 22 10.6**	**+2.1**
PRWZ	**Pori Road**	**2.79**	**186**	P	**Pn**	**16 22 11.5**	**+1.7**
BFZ	**Birch Farm**	**2.90**	**182**	P	**Pn**	**16 22 12.5**	**+1.5**
BFZ	**Birch Farm**	**2.90**	**182**	P	**Pn**	**16 22 12.6**	**+1.5**
MRZ	**Mangatainoka R**	**2.94**	**192**	P	**Pn**	**16 22 12.7**	**+1.1**
CPWZ	**Castlepoint**	**3.12**	**183**	P	**Pn**	**16 22 15.6**	**+1.9**
OGWZ	**Otaki Gorge**	**3.17**	**197**	P	**Pn**	**16 22 15.4**	**+1.2**
HOWZ	**Holdsworth Sta**	**3.18**	**192**	P	**Pn**	**16 22 15.3**	**+0.9**
MTW	**Mount Morrison**	**3.44**	**191**	P	**Pn**	**16 22 18.0**	**+0.6**
CAW	**Cannon Point**	**3.47**	**197**	P	**Pn**	**16 22 18.5**	**+0.7**
TRWZ	**Traveller**	**3.65**	**188**	P	**Pn**	**16 22 20.6**	**+0.7**
PAWZ	**Paruwai Farm**	**3.67**	**191**	P	**Pn**	**16 22 20.7**	**+0.5**
TCW	**Tory Channel**	**3.79**	**205**	P	**Pn**	**16 22 22.2**	**+0.6**
PLWZ	**Palliser**	**3.88**	**193**	P	**Pn**	**16 22 23.1**	**+0.3**
TUWZ	**Tuamarina**	**4

ISC 09 16:38:43.7±0.4, 10°33S±0°05×118°97E±0°04, h35km, n102, σ2°02/100, mb4.4/21, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WBSI	**Waikabubak, Su**	**0.80**	**31**	P	**Pn**	**16 38 57.4**	**-1.1**
WBSI				S	**Sn**	**16 39 09.1**	**-0.1**
BASI	**Baing, Sumba**	**1.59**	**86**	P	**Pn**	**16 39 11.5**	**+2.2**
BASI				S	**Sn**	**16 39 33.4**	**+4.8**
PLAI	**Plampang**	**1.90**	**322**	P	**Pn**	**16 39 14.3**	**+0.7**
PLAI				S	**Sn**	**16 39 38.6**	**+2.3**
PLAI	**Plampang**	**1.90**	**322**	P	**Pn**	**16 39 14.6**	**+1.0**
EDFI	**Ende, Flores**	**3.11**	**60**	P	**Pn**	**16 39 31.8**	**+1.5**
MMRI	**Maumere**	**3.63**	**63**		**Pn**	**16 39 34.7**	**-2.8**
MMRI	**Maumere**	**3.63**	**63**	P	**Pn**	**16 39 39.9**	**+2.4**
MMRI	**Maumere**	**3.63**	**63**	P	**Pn**	**16 39 40.3**	**+2.8**
DNP	**Denpasar**	**4.05**	**294**	P	**Pn**	**16 39 44.1**	**+0.8**
IGBI	**Denpasar**	**4.06**	**291**	P	**Pn**	**16 39 43.2**	**-0.1**
SRBI	**Singaraja**	**4.33**	**301**	P	**Pn**	**16 39 48.5**	**+1.5**
BSSI	**Bau Bau, Buton**	**4.42**	**20**	P	**Pn**	**16 39 50.4**	**+2.1**
BATI	**Baumata**	**4.62**	**89**	Pn	**Pn**	**16 39 54.4**	**+3.3**
	12nm,0.3s,baz=40,slow=1.0,SNR=11						
BATI				Sn	**Sn**	**16 40 47.5**	**+3.9**
	12nm,0.3s,baz=216,slow=21,SNR=2.2						
BATI	**Baumata**	**4.62**	**89**	P	**Pn**	**16 39 54.0**	**+2.9**
JAGI	**Jajag, Banyuwa**	**5.10**	**291**		**Pn**	**16 39 57.0**	**-0.6**
JAGI	**Jajag, Banyuwa**	**5.10**	**291**	P	**Pn**	**16 39 56.5**	**-1.1**
	1.1nm108nm,0.6s						
JAGI	**Jajag, Banyuwa**	**5.10**	**291**	P	**Pn**	**16 39 57.3**	**-0.3**
BKSI	**Bulukumba**	**5.10**	**13**	P	**Pn**	**16 39 59.4**	**+1.7**
	1.2nm4µm300nm,0.6s						
SOEI	**Soe**	**5.25**	**84**		**Pn**	**16 39 58.8**	**-1.0**
SOEI	**Soe**	**5.25**	**84**	P	**Pn**	**16 40 02.2**	**+2.4**
	0.4nm77nm,0.7s						
SOEI				S	**Sn**	**16 41 04.1**	**+4.9**
	0.4nm77nm,0.7s						
SOEI	**Soe**	**5.25**	**84**	P	**Pn**	**16 40 03.5**	**+3.7**
ABJI	**Asem Bagus**	**5.31**	**298**	P	**Pn**	**16 40 01.6**	**+1.1**
	0.7nm92nm,1.1s						
KAPI	**Kappang**	**5.33**	**8**	Pn	**Pn**	**16 40 02.6**	**+1.7**
	11nm,0.3s,baz=183,slow=8.9,SNR=25						
KAPI				Sn	**Sn**	**16 41 02.0**	**+0.9**
	8.3nm,0.3s,baz=16,slow=22,SNR=2.5						
KAPI				LR	LR	16 42 17.1	
	comp=Z,399nm,19.6s,baz=164,slow=42						
KAPI	**Kappang**	**5.33**	**8**		**Pn**	**16 39 58.5**	**-2.4**
KAPI	**Kappang**	**5.33**	**8**	P	**Pn**	**16 40 03.3**	**+2.4**
GMJI	**Gumukmas**	**5.82**	**290**	P	**Pn**	**16 40 09.2**	**+1.6**
	0.5nm113nm,0.9s						
BLJI	**Banyuglugur**	**5.90**	**295**	P	**Pn**	**16 40 08.7**	**+0.1**
	0.3nm50nm,0.6s						
KMMI	**Kalianget**	**5.92**	**303**	P	**Pn**	**16 40 11.4**	**+2.5**
	0.3nm40nm,1.4s						
BBSI	**Bau Bau**	**5.99**	**37**	P	**Pn**	**16 40 11.6**	**+1.8**
	0.0nm108nm9.0nm,0.8s						
BNSI	**Bone**	**5.99**	**11**	P	**Pn**	**16 40 11.4**	**+1.5**
	0.4nm92nm,0.8s						
SPSI	**Sidrap Palu**	**6.37**	**7**	P	**Pn**	**16 40 15.7**	**+0.6**
	0.2nm590nm70nm,0.7s						
GRJI	**Gresik**	**7.26**	**297**	P	**Pn**	**16 40 28.6**	**+1.3**
	0.2nm36nm,0.4s						
TTSI	**Tana Toraja**	**7.28**	**7**	P	**Pn**	**16 40 29.5**	**+1.9**
	0.1nm40nm,0.6s						
BWJI	**Bawean**	**7.67**	**305**	P	**Pn**	**16 40 33.7**	**+0.7**
	0.8nm114nm,0.8s						
UGM	**Wanagama**	**8.68**	**285**	Pn	**Pn**	**16 40 48.7**	**+1.8**
MBWA	**Marble Bar**	**10.80**	**176**	Pn	**Pn**	**16 41 16.3**	**+0.5**
KNRA	**Kununurra**	**10.92**	**120**	Pn	**Pn**	**16 41 18.6**	**+1.1**
PSA00	**Pilbara Seismi**	**11.21**	**176**	Pn	**Pn**	**16 41 20.5**	**-1.1**
PSA00	**Pilbara Seismi**	**11.21**	**176**	Pn	**Pn**	**16 41 21.2**	**-0.3**
PSA00	**Pilbara Seismi**	**11.21**	**176**	P	**Pn**	**16 41 22.9**	**+1.3**
MTN	**Manton Dam**	**12.18**	**103**		**Pn**	**16 41 34.9**	**+0.1**
GIRL	**Giralia**	**13.06**	**200**	Pn	**Pn**	**16 41 48.0**	**+1.2**
GIRL	**Giralia**	**13.06**	**200**	P	**Pn**	**16 41 48.4**	**+1.6**
SBUM	**Sibu**	**14.36**	**332**	P	**Pn**	**16 42 06.4**	**+1.8**
KSM	**Kuching**	**14.55**	**323**	P	**Pn**	**16 42 07.6**	**+0.4**
FAKI	**Fak Fak**	**15.10**	**62**	P	**Pn**	**16 42 15.4**	**+0.9**
KASI	**Kota Agung**	**15.11**	**287**	P	**P**	**16 42 16.3**	**-3.1**
	23nm,1.5s						
MYLDM	**Lahad Datu**	**15.41**	**358**	P	**Pn**	**16 42 14.7**	**-4.0**
MYLDM				IAmb	IAmb	16 42 42.2	
	comp=Z,8.0nm,1.0s						
MNAI	**Manna**	**16.95**	**289**	P	**Pn**	**16 42 36.5**	**-1.8**
WB0	**Warramunga Arr**	**17.59**	**124**		**Pn**	**16 42 45.5**	**-0.8**
WRA	**Warramunga Arr**	**17.64**	**125**	P	**P**	**16 42 47.4**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=300,slow=14,SNR=6.7						
WRA				S	**Sn**	**16 45 53.5**	**-8.9**
	comp=Z,0.9nm,0.7s,baz=298,slow=18,SNR=5.0						
	comp=Z,0.4nm,0.4s						
WRA	**Warramunga Arr**	**17.64**	**125**	IAmb	IAmb	16 42 55.0	
	comp=Z,0.1nm,0.6s						
WB2	**Warramunga Arr**	**17.64**	**125**	P	**Pn**	**16 42 45.8**	**-1.1**
WR0	**Warramunga Arr**	**17.81**	**124**	P	**Pn**	**16 42 48.7**	**-0.2**
DAV	**Davao City (W)**	**18.49**	**21**	LR	LR	16 51 01.1	
	comp=Z,51nm,18.8s,baz=150,slow=40						
MORW	**Morawa**	**18.85**	**188**	P	**Pn**	**16 43 02.8**	**+1.3**
MORW				IAmb	IAmb	16 43 12.7	
	comp=Z,11nm,0.9s						
AS31	**Alice Springs**	**19.47**	**135**	P	**Pn**	**16 43 08.8**	**-0.3**
ASAR	**Alice Springs**	**19.47**	**135**	P	**Pn**	**16 43 09.6**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=314,slow=11,SNR=17						
ASAR				S	**S**	**16 46 39.9**	**-6.0**
	comp=Z,1.0nm,0.7s,baz=306,slow=22,SNR=5.4						
ASAR				LR	LR	16 50 32.7	
	comp=Z,80nm,19.9s,baz=307,slow=36						
	comp=Z,1.2nm,0.5s						
ASAR	**Alice Springs**	**19.47**	**135**	S	**S**	**16 46 42.1**	**-3.8**
NWAO	**Narrogin (SRO)**	**22.55**	**184**	P	**P**	**16 43 42.3**	**+1.5**
IPM	**Ipoh**	**23.14**	**309**	P	**P**	**16 43 45.1**	**-2.0**
IPM				IAmb	IAmb	16 44 33.5	
	comp=Z,5.1nm,0.9s						
RPSI	**Rantau Prapat**	**23.78**	**302**	P	**P**	**16 43 54.4**	**+1.1**
PSI	**Prapat**	**23.84**	**302**	P	**P**	**16 43 54.4**	**+0.4**
	comp=Z,4.9nm,0.4s,baz=144,slow=11,SNR=4.6						
	comp=Z,4.9nm,0.4s						
COEN	**Coen**	**23.93**	**101**	P	**P**	**16 43 55.4**	**+0.6**
COEN				IAmb	IAmb	16 44 19.1	
	comp=Z,10nm,1.1s						
GSI	**Gunungsitoli**	**24.22**	**297**	P	**P**	**16 43 57.8**	**+0.3**
GSI				IAmb	IAmb	16 44 20.8	
	comp=Z,8.8nm,0.9s						
TGY	**Tagaytay City**	**24.35**	**5**	P	**P**	**16 44 00.6**	**+2.0**
	comp=Z,138nm,0.4s,baz=153,slow=9.6,SNR=3.9						
CMAR	**Chiang Mai Arr**	**34.77**	**325**	P	**P**	**16 45 31.4**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=157,slow=7.6,SNR=6.7						
CMAR				LR	LR	17 00 05.6	
	comp=Z,88nm,18.3s,baz=205,slow=37						
	comp=Z,0.8nm,0.6s						
CMAR	**Chiang Mai Arr**	**34.77**	**325**	P	**P**	**16 45 30.4**	**-0.6**
JOW	**Kunigami**	**38.02**	**14**	LR	LR	17 00 52.0	
	comp=Z,51nm,21.0s,baz=206,slow=35						
PZH	**PanZhiHua**	**40.26**	**336**	P	P	16 46 27.5	+10
PZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PZH				pmax	pmax		
	comp=Z,130nm,8.0s						
ENH	**Enshi**	**41.38**	**348**	P	**P**	**16 46 25.9**	**-0.8**
ENH				IAmb	IAmb	16 46 27.2	
	comp=Z,8.4nm,0.7s						
PALK	**Pallekele**	**41.92**	**293**	P	**P**	**16 46 32.1**	**+0.7**
	comp=Z,4.5nm,0.6s,baz=227,slow=5.3,SNR=4.1						
	comp=Z,4.5nm,0.6s						
PALK	**Pallekele**	**41.92**	**293**	P	**P**	**16 46 32.4**	**+1.1**
PALK				IAmb	IAmb	16 47 07.2	
	comp=Z,12nm,1.0s						
NJ2	**Nanjing**	**42.14**	**360**	*e*P	P	16 46 39.0	+6.3
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
JTU	**Tsushima**	**45.69**	**12**	P	**P**	**16 47 00.1**	**-1.1**
H08S2	**Diego Garcia H**	**45.95**	**269**	T	T	17 36 20.2	
	baz=96,slow=75,SNR=19						
H08S3	**Diego Garcia H**	**45.97**	**269**	T	T	17 36 17.2	
	baz=96,slow=75,SNR=19						
H08S1	**Diego Carcia H**	**45.97**	**269**	T	T	17 36 25.3	
	baz=96,slow=75,SNR=18						
KSRS	**Korea Array**	**48.26**	**10**	P	**P**	**16 47 21.4**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=183,slow=8.8,SNR=7.3						
	comp=Z,0.8nm,0.6s						
MJAR	**Matsushiro Arr**	**50.01**	**20**	P	**P**	**16 47 34.5**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=192,slow=8.3,SNR=3.5						
	comp=Z,1.1nm,0.6s						
JSD	**Sado**	**51.38**	**20**	P	**P**	**16 47 43.2**	**-1.8**
GOMU	**GeErMu**	**51.57**	**335**	P	P	16 47 35.3	-12
GOMU				pP	pP	16 47 39.8	-17
GOMU				sP	pwP	16 47 43.1	-17
GOMU				pmax	pmax		
	comp=Z,49nm,4.0s						
GTA	**Gaotai**	**52.59**	**341**	*e*P	**P**	**16 47 54.9**	**+0.7**
GTA				pP	pP	16 48 00.4	-3.4
GTA				sP	pwP	16 48 03.4	-4.1
GTA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
USA0B	**Ussuriysk Arra**	**55.54**	**11**	P	**P**	**16 48 14.2**	**-1.2**
USA0B				IAmb	IAmb	16 48 15.8	
	comp=Z,3.1nm,0.6s						
USRK	**Ussuriysk Ar.**	**55.54**	**11**	P	**P**	**16 48 14.9**	**-0.4**
	comp=Z,3.2nm,0.5s,baz=200,slow=7.4,SNR=14						
	comp=Z,3.2nm,0.5s						
USRK	**Ussuriysk Ar.**	**55.54**	**11**	P	**P**	**16 48 14.6**	**-0.8**
SONM	**Songino Array**	**58.97**	**350**	P	**P**	**16 48 40.0**	**+0.2**
	comp=Z,3.2nm,0.7s,baz=168,slow=8.9,SNR=23						
	comp=Z,3.2nm,0.7s						
SONM	**Songino Array**	**58.97**	**350**	IAmb	IAmb	16 48 40.6	
	comp=Z,2.6nm,0.7s						
MK31	**Makanchi Array**	**65.62**	**333**	P	**P**	**16 49 23.9**	**-0.2**
MK31				IAmb	IAmb	16 49 24.8	
	comp=Z,2.2nm,0.8s						
MKAR	**Makanchi Array**	**65.62**	**333**	P	**P**	**16 49 24.0**	**-0.1**
	comp=Z,1.6nm,0.4s,baz=149,slow=7.6,SNR=31						
	comp=Z,1.6nm,0.4s						
MKAR	**Makanchi Array**	**65.62**	**333**	P	**P**	**16 49 24.2**	**0.0**
BOOM	**Boomskoye usch**	**65.66**	**326**	P	**P**	**16 49 25.1**	**+0.4**
BOOM				IAmb	IAmb	16 49 25.6	
	comp=Z,1.8nm,0.6s						
KURK	**Kurchatov**	**70.17**	**334**	P	**P**	**16 49 52.6**	**0.0**
KURK				IAmb	IAmb	16 49 53.3	
	comp=Z,3.1nm,1.0s						
ZAA0	**Zalesovo Array**	**70.26**	**339**	P	**P**	**16 49 52.5**	**-0.7**
ZALV	**Zalesovo Beam**	**70.26**	**339**	P	**P**	**16 49 52.5**	**-0.7**
	comp=Z,5.7nm,0.6s,baz=141,slow=4.9,SNR=28						
	comp=Z,5.7nm,0.6s						
ZALV	**Zalesovo Beam**	**70.26**	**339**	P	**P**	**16 49 52.0**	**-1.1**
ABKAR	**Akbulak array**	**78.62**	**325**	P	**P**	**16 50 42.1**	**+0.2**
RSO	**Redoubt South**	**98.05**	**30**	P	**P**	**16 52 15.1**	**-1.4**
TORD	**Torodi Ar. Bea**	**118.65**	**279**	PKP	**PKiKP**	**16 57 30.6**	**+1.5**
	comp=Z,0.6nm,0.9s,baz=178,slow=1.0,SNR=2.4						
TORD	**Torodi Ar. Bea**	**118.65**	**279**		**PKiKP**	**16 57 30.0**	**+0.9**
TKL	**Tuckaleechee C**	**147.39**	**36**	PKPbc	**PKPbc**	**16 58 24.2**	**-0.1**
	comp=Z,2.5nm,0.5s,baz=214,slow=5.8,SNR=5.0						
TKL	**Tuckaleechee C**	**147.39**	**36**		**PKPbc**	**16 58 23.7**	**-0.6**

JMA 09 16:50:08.4±0.3, 25°N±4°×122°9E±1°0, h124km±2km, MV2.0/13, NW OFF ISHIGAKIJIMA IS, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.32**	**165**	P	Pn	16 50 26.2	+0.3
JYNG				*e*S	Sn	16 50 38.8	-0.2
YOJ	**Yonaguni jima**	**0.33**	**154**	P	Pn	16 50 26.1	+0.2
YOJ				*e*S	Sn	16 50 39.2	+0.2
IRIF	**Iriomote-Funau**	**0.90**	**118**	P	Pn	16 50 29.7	-0.1
IRIF				S	Sn	16 50 46.0	0.0
HATJ	**Hateruma jima**	**1.12**	**129**	P	Pn	16 50 32.5	+0.7
HATJ				S	Sn	16 50 49.8	+0.1
JKRS	**Kuro-shima**	**1.18**	**116**	P	Pn	16 50 33.0	+0.5
JKRS				S	Sn	16 50 50.9	+0.1
JIJ	**Ishigaki jima**	**1.24**	**108**	P	Pn	16 50 33.4	+0.2
JIJ				S	Sn	16 50 50.8	-1.1
JISG	**Ishigakijimahi**	**1.34**	**97**	*e*P	Pn	16 50 34.1	0.0
JISG				S	Sn	16 50 53.0	-0.8
JTJ	**Tarama**	**1.69**	**94**	P	Pn	16 50 38.3	+0.1
JTJ				*e*S	Sn	16 51 00.1	-0.8
JIRB	**Irabujima**	**2.11**	**88**	P	Pn	16 50 43.2	-0.1
JIRB				S	Sn	16 51 09.8	-0.3
JMJ2	**Miyako jima3**	**2.25**	**90**	P	Pn	16 50 45.9	+0.8
JOGS	**Gusukube**	**2.32**	**89**	P	Pn	16 50 46.8	+0.8

TAP 09 16:50:20.1, 23°22N×120°96E, h12km, ML1.8, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ELDTW	**Lidau**	**0.06**	**115**	P	Pg	16 50 23.1	+0.5
	baz=113						
ELDTW				*e*S	Sg	16 50 24.4	0.0
	baz=113						
STYH	**Taoyuan**	**0.17**	**255**	*e*P	Pg	16 50 24.1	+0.1
	baz=257						
STYH				*e*S	Sg	16 50 26.0	-0.6
	baz=257						
STYT	**Tauyuan**	**0.19**	**254**	*i* P	Pg	16 50 24.5	+0.2
	baz=252						
STYT				*i* S	Sg	16 50 26.9	-0.2
	baz=252						
ECS	**Chishang**	**0.27**	**116**	P	Pb	16 50 27.4	+0.4
	baz=116						
ECS				*e*S	Sb	16 50 31.8	+0.2
	baz=116						
YUS	**Yu-Shan**	**0.27**	**359**	*e*P	Pb	16 50 26.7	-0.6
YUS				*e*S	Sg	16 50 30.9	+1.0
TPUB	**Ta-pu**	**0.31**	**286**	P	Pb	16 50 27.6	-0.1
	baz=285						
TPUB				S	Sb	16 50 32.1	-0.6
	baz=285						
FULB	**Fuli**	**0.31**	**93**	*e*P	Pb	16 50 28.6	+0.9
	baz=93						
FULB				*e*S	Sb	16 50 34.1	+1.3
	baz=93						
WTP	**Ta-pu**	**0.32**	**276**	*e*P	Pb	16 50 27.6	-0.2
	baz=275						
WTP				*e*S	Sb	16 50 32.2	-0.7
	baz=275						
ALS	**Alishan**	**0.32**	**335**	*e*P	Pb	16 50 27.6	-0.5
	baz=335						
ALS				*e*S	Sb	16 50 32.4	-1.0
	baz=335						
LONT	**Longtian**	**0.35**	**152**	P	Pb	16 50 28.4	+0.1
	baz=152						
LONT				S	Sb	16 50 32.9	-0.9
	baz=152						
EYUL	**Yuli**	**0.36**	**69**	P	Pb	16 50 28.7	+0.2
	baz=68						
EYUL				S	Sb	16 50 33.4	-0.8
	baz=68						
YULB	**Yu-li**	**0.36**	**61**	P	Pb	16 50 28.5	0.0
	baz=60						
YULB				S	Sg	16 50 33.0	+0.9
	baz=60						
SGST	**Jiashian**	**0.37**	**249**	P	Pg	16 50 27.6	+0.1
	baz=248						
CHN1	**Nanshi**	**0.39**	**266**	*e*P	Pb	16 50 29.4	+0.3
	baz=265						
CHN1				*e*S	Sb	16 50 35.5	+0.4
	baz=265						
EDH	**Donghe**	**0.40**	**127**	*e*P	Pb	16 50 29.9	+0.7
	baz=126						
TWG	**Pinlang**	**0.41**	**165**	P	Pb	16 50 29.2	-0.1
	baz=163						
TWG				*e*S	Sb	16 50 35.3	-0.2
	baz=163						
TWGBT	**Beinan**	**0.41**	**164**	P	Pb	16 50 29.3	-0.1
	baz=163						
TWGBT				*e*S	Sb	16 50 35.1	-0.5
	baz=163						
SNST	**Tainan City**	**0.42**	**271**	*e*P	Pb	16 50 30.1	+0.5
	baz=270						
SNST				*e*S	Sb	16 50 36.6	+0.7
	baz=270						
TWK	**Hsinying**	**0.43**	**277**	*e*P	Pb	16 50 30.3	+0.5
	baz=276						
TWK				*e*S	Sb	16 50 36.9	+0.7
	baz=276						
EHY	**Hungye**	**0.44**	**49**	*e*P	Pb	16 50 29.8	-0.1
	baz=50						
EHY				*e*S	Sg	16 50 35.5	+0.7
	baz=50						
HGSD	**Ruisui**	**0.51**	**57**	*e*P	Pn	16 50 32.6	-0.7
	baz=57						
SCST	**Cishan**	**0.54**	**232**	*e*P	Pb	16 50 31.8	+0.3
	baz=232						
SSD	**Sandimen**	**0.55**	**213**	*e*P	Pg	16 50 31.4	+0.4
	baz=211						
VWDT	**VWDT**	**0.56**	**18**	*e*P	Pb	16 50 31.8	-0.2
	baz=17						
SSLB	**Suanglung**	**0.57**	**360**	*e*P	Pb	16 50 32.2	+0.1
	baz=359						
SSLB				*e*S	Sg	16 50 38.9	+0.1
	baz=359						
TSMG	**Majia**	**0.58**	**209**	*e*P	Pg	16 50 31.8	+0.3
	baz=209						
ECL	**Taimali**	**0.62**	**180**	*e*P	Pb	16 50 32.8	-0.1
	baz=179						
SMLT	**Sun Moon Lake**	**0.67**	**356**	*e*P	Pb	16 50 33.8	0.0
	baz=356						
SMLT				S	Sb	16 50 43.5	+0.4
	baz=356						
MASBT	**Mashibuluo**	**0.67**	**206**	*e*P	Pg	16 50 32.4	-0.7
	baz=206						
TYC	**Yuchr**	**0.69**	**353**	*e*P	Pb	16 50 34.7	+0.6
	baz=353						
TYC				*e*S	Sb	16 50 43.5	-0.2
	baz=353						
LDUT	**Ludao**	**0.72**	**139**	*e*P	Pb	16 50 35.2	+0.6
	baz=138						
LDUT				*e*S	Sn	16 50 46.8	-0.3
	baz=138						

IDC 09 16:52:48.0±2.7, 16°74S×179°33W, h570km±24km, mb3.0/4, mbtmp3.9/5, Error ellipse: s-maj=230.3km s-min=26.6km az=154.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**2.69**	**248**	P	P	16 54 03.0	0.0
	13nm,0.7s,baz=146,slow=4.8,SNR=8.6						
CTA	**Charters Tower**	**32.79**	**259**	P	P	16 58 36.0	+0.7
	0.9nm,0.6s,baz=84,slow=9.2,SNR=2.3						
	0.9nm,0.6s						
WRA	**Warramunga Arr**	**43.99**	**258**	P	P	17 00 05.8	-0.1
	0.5nm,0.5s,baz=90,slow=7.5,SNR=8.5						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**44.27**	**253**	P	P	17 00 07.5	-0.5
	7.1nm,0.6s,baz=89,slow=8.2,SNR=124						
	7.1nm,0.6s						
NVAR	**Mina Array Bea**	**79.20**	**44**	P	P	17 03 54.9	+0.1
	0.4nm,0.6s,baz=222,slow=9.4,SNR=2.4						
	0.4nm,0.6s						

*IDC **09** 17:02:22.2±1.0, 67°13N×20°44E, h0km, mbtmp2.7/3, ML1.9/3, Error ellipse: s-maj=10.1km s-min=4.2km az=155.0*
*UPP **09** 17:02:23.3±0.1, 67°07N×20°94E, h1km, ML2.4, Explosion*
*NAO **09** 17:02:23.9±0.8, 67°06N×21°03E, ML2.5*
*HEL **09** 17:02:23.9±0.1, 67°08N×20°92E, h0km, ML2.1, ML2.4(UPP), Explosion*
*KOLA **09** 17:02:25.5, 67°21N×20°71E, h0km, ML2.6*
*BER **09** 17:02:26.9±2.5, 67°01N×21°37E, h0km, ML1.6, ML2.5(NAO), Suspected explosion*

ISC 09 17:02:23.6±0.7, 67°11N±0°02×20°92E±0°02, h0km, n63, σ1°09/96, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DUNU	**Dundret**	**0.14**	**277**	P	**Pg**	**17 02 26.4**	**+0.2**
DUNU				S	**Sg**	**17 02 28.6**	**+0.6**
DUNU	**Dundret**	**0.14**	**277**	*i* P	**Pg**	**17 02 26.4**	**+0.2**
DUNU				*i* S	**Sg**	**17 02 28.6**	**+0.6**
MASU	**Masugnsbyn**	**0.55**	**49**	P	**Pg**	**17 02 34.0**	**-0.1**
MASU				S	**Sg**	**17 02 41.9**	**+0.8**
MASU	**Masugnsbyn**	**0.55**	**49**	*i* P	**Pg**	**17 02 34.0**	**-0.1**
MASU				*i* S	**Sg**	**17 02 41.9**	**+0.8**
RATU	**Laukkuluspa**	**0.89**	**325**	P	**Pg**	**17 02 40.1**	**-0.4**
RATU	**Laukkuluspa**	**0.89**	**325**	*e*P	**Pg**	**17 02 40.1**	**-0.4**
HARU	**Harads**	**0.95**	**179**	P	**Pg**	**17 02 40.3**	**-1.4**
HARU	**Harads**	**0.95**	**179**	*e*P	**Pg**	**17 02 40.3**	**-1.4**
SALU	**Saltoluokta**	**0.98**	**288**	*e*P	**Pg**	**17 02 41.9**	**-0.4**
SALU				*e*S	**Sb**	**17 02 56.0**	**-0.8**
SALU	**Saltoluokta**	**0.98**	**288**	P	**Pg**	**17 02 41.7**	**-0.6**
SALU	**Saltoluokta**	**0.98**	**288**	*e*P	**Pg**	**17 02 41.7**	**-0.6**
LANU	**Lannavaara**	**1.03**	**23**	P	**Pg**	**17 02 42.9**	**-0.4**
LANU	**Lannavaara**	**1.03**	**23**	*e*P	**Pg**	**17 02 42.4**	**-1.0**
LANU				*e*SB	**Sb**	**17 02 58.1**	**-0.3**
KOVU	**Salmi**	**1.16**	**346**	P	**Pg**	**17 02 45.3**	**-0.5**
KOVU	**Salmi**	**1.16**	**346**	*e*P	**Pg**	**17 02 45.3**	**-0.5**
KLF	**Kolari**	**1.20**	**82**	*e*P	**Pg**	**17 02 45.3**	**-1.1**
	baz=267						
KLF				*e*SN	**Sn**	**17 03 04.1**	**-0.3**
KALU	**Kalix**	**1.59**	**141**	P	**Pn**	**17 02 51.8**	**-1.1**
KALU	**Kalix**	**1.59**	**141**	*e*P	**Pn**	**17 02 51.8**	**-1.1**
	baz=318						
KALU				*e*SN	**Sg**	**17 03 15.9**	**+1.4**
SJUU	**Sjulsmark**	**1.63**	**170**	P	**Pn**	**17 02 52.7**	**-0.8**
SJUU	**Sjulsmark**	**1.63**	**170**	*e*P	**Pn**	**17 02 52.7**	**-0.8**
HEF	**Hetta**	**1.67**	**37**	Pn	**Pn**	**17 02 53.8**	**-0.3**
HEF				Sn	**Sb**	**17 03 16.5**	**-0.4**
HEF	**Hetta**	**1.67**	**37**	*e*P	**Pn**	**17 02 53.9**	**-0.3**
HEF				*e*S	**Sg**	**17 03 16.8**	**-0.5**
HEF	**Hetta**	**1.67**	**37**	*e*P	**Pn**	**17 02 53.6**	**-0.6**
	baz=220						
HEF				MSG		17 03 13.6	
	comp=Z,11nm,0.2s						
TOF	**Tornio**	**1.71**	**126**	*e*PG	**Pn**	**17 02 54.2**	**-0.3**
TOF				MSG		17 03 14.1	
	comp=Z,26nm,0.2s						
TOF				*e*SN	**Sn**	**17 03 16.8**	**-0.1**
KIF	**Kilpisjarvi**	**1.91**	**359**	Pn	**Pb**	**17 02 58.7**	**-0.5**
KIF				Sn	**Sg**	**17 03 25.5**	**+0.7**
KIF	**Kilpisjarvi**	**1.91**	**359**	Pn	**Pb**	**17 02 58.7**	**-0.5**
K

baz=280,slow=37
APA0 Apatity Array 4.69 78 Pn **Pn** 17 03 35.1 -0.5
baz=274,slow=10
APA0 Apatity Array 4.69 78 P **Pn** 17 03 37.4 +1.8
APA0 S **Sn** 17 04 30.9 +0.3
RMF Romuvaara 4.72 124 *e*P **Pn** 17 03 37.1 +1.1
FIA0 FINESS Array S 6.11 156 Pn **Pn** 17 03 55.5 +0.6
baz=340,slow=14
FIA0 Sn **Sn** 17 05 03.4 -2.0
baz=342,slow=22
FIA0 FINESS Array S 6.11 156 Pn **Pn** 17 03 55.5 +0.6
baz=340,slow=14
FINES FINESS Array B 6.11 156 Pn **Pn** 17 03 55.3 +0.3
comp=Z,0.1nm,0.3s,baz=344,slow=13,SNR=2.3
FINES Pg Pb 17 04 04.4 -6.3
comp=Z,0.1nm,0.3s,baz=351,slow=12,SNR=9.2
FINES Sn **Sn** 17 05 04.0 -1.4
comp=Z,0.1nm,0.3s,baz=345,slow=24,SNR=5.0
FINES Lg Lg 17 05 38.1
comp=Z,0.3nm,0.3s,baz=342,slow=27,SNR=1.8
comp=Z,1.6nm,0.8s
NB2 NORSAR Subarra 7.42 219 Pn **Pn** 17 04 13.9 +0.9
baz=31,slow=14
NB2 NORSAR Subarra 7.42 219 Pn **Pn** 17 04 13.9 +0.9
baz=31,slow=14
NOA NORSAR Array B 7.42 219 Pn **Pn** 17 04 10.3 -2.7
baz=27,slow=1.9,SNR=2.0
comp=Z,0.2nm,0.6s
HFS Hagfors 7.70 208 Pn **Pn** 17 04 14.5 -2.3
baz=34,slow=16

MAN 09 17:19:00.9, 10.03N×123.00E, h1km, mb3.9, ML2.6, MS2.2, 3C-2D, Cebu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CNOP	**Candoni, Negro**	**0.41**	**240**	||*e*P	Pg	17 19 09.3	+0.7
GUIM	**Jordan**	**0.72**	**325**	||*e*P	Pb	17 19 14.8	+0.2
GUIM					*e*S		17 19 26.9	
SNPH	**Sibulan**	**0.72**	**162**	||*i*P	Pb	17 19 15.2	0.0
SNPH					*i* S		17 19 25.9	
TBP	**Tagbilaran**	**0.91**	**112**		*e*P	Pb	17 19 18.4	+0.5
TBP					*i* S		17 19 34.3	
LLP	**Lapu-Lapu**	**0.99**	**73**	||*e*P	Pb	17 19 19.5	+0.5
LLP					*i* S		17 19 33.2	
MSLP	**Maasin**	**1.83**	**87**	||*e*P	Pg	17 19 34.2	+0.4
MSLP					*e*S		17 19 59.6	

*UPP **09** 17:24:55.8±0.1, 58.73N×18.14E, h0km, ML2.2, Explosion*
*IDC **09** 17:24:55.6±1.1, 58.76N×17.98E, h0km, mb3.4/1, mbtmp3.4/6, ML3.3/5, MS3.4/1, Error ellipse: s-maj=13.1km s-min=6.6km az=7.0*
*DNK **09** 17:24:56.0±1.7, 58.74N×18.14E, h0km, ML2.7, Explosion*
*HEL **09** 17:24:56.6±0.0, 58.74N×18.14E, h0km, ML2.5, ML2.2(UPP), Explosion*
*BER **09** 17:24:57.0±2.5, 58.75N×18.18E, h0km, ML2.3, ML2.2(UPP), Suspected explosion*
*NAO **09** 17:24:58.6±2.2, 58.96N×18.07E, ML2.6*
ISC 09 17:24:55.0±0.6, 58.74N±0.02×18.15E±0.02, h0km, n97, σ1s33/141, Baltic Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VIKU	**Vikbolandet**	**0.79**	**253**	P		**Pg**	**17 25 10.6**	**+0.4**
VIKU				S		**Sg**	**17 25 21.1**	**+0.6**
VIKU	**Vikbolandet**	**0.79**	**253**	P		**Pg**	**17 25 10.6**	**+0.4**
VIKU				S		**Sg**	**17 25 21.1**	**+0.6**
VIKU	**Vikbolandet**	**0.79**	**253**	P		**Pg**	**17 25 10.6**	**+0.4**
VIKU				S		**Sg**	**17 25 21.1**	**+0.6**
VIKU	**Vikbolandet**	**0.79**	**253**	*i* P		**Pg**	**17 25 10.6**	**+0.4**
VIKU				*i* S		**Sg**	**17 25 21.1**	**+0.6**
NRTU	**Norrtaelje**	**0.97**	**15**	P		**Pg**	**17 25 14.1**	**+0.4**
NRTU	**Norrtaelje**	**0.97**	**15**	P		**Pg**	**17 25 14.1**	**+0.4**
NRTU	**Norrtaelje**	**0.97**	**15**	P		**Pg**	**17 25 14.1**	**+0.4**
NRTU	**Norrtaelje**	**0.97**	**15**	*e*P		**Pg**	**17 25 14.1**	**+0.4**
ESKU	**Eskilstuna**	**1.03**	**299**	P		**Pg**	**17 25 14.9**	**+0.1**
ESKU	**Eskilstuna**	**1.03**	**299**	P		**Pg**	**17 25 14.9**	**+0.1**
ESKU	**Eskilstuna**	**1.03**	**299**	P		**Pg**	**17 25 14.9**	**+0.1**
ESKU	**Eskilstuna**	**1.03**	**299**	*e*P		**Pg**	**17 25 14.9**	**+0.1**
GOTU	**Gotland**	**1.08**	**168**	P		**Pg**	**17 25 15.7**	**0.0**
GOTU				S		**Sg**	**17 25 30.1**	**+0.3**
GOTU	**Gotland**	**1.08**	**168**	P		**Pg**	**17 25 15.7**	**0.0**
GOTU				S		**Sg**	**17 25 30.1**	**+0.3**
GOTU	**Gotland**	**1.08**	**168**	P		**Pg**	**17 25 15.7**	**0.0**
GOTU				S		**Sg**	**17 25 30.1**	**+0.3**
GOTU	**Gotland**	**1.08**	**168**	*e*P		**Pg**	**17 25 15.7**	**0.0**
GOTU				*e*S		**Sg**	**17 25 30.1**	**+0.3**
UPP	**Uppsala**	**1.15**	**347**	P		**Pg**	**17 25 17.4**	**+0.3**
UPP	**Uppsala**	**1.15**	**347**	*e*P		**Pg**	**17 25 17.4**	**+0.3**
FIBU	**Brunna**	**1.23**	**341**	P		**Pg**	**17 25 18.9**	**+0.2**
FIBU	**Brunna**	**1.23**	**341**	P		**Pg**	**17 25 18.9**	**+0.2**
FIBU	**Brunna**	**1.23**	**341**	P		**Pg**	**17 25 18.9**	**+0.2**
BACU	**Backbrunna**	**1.24**	**335**	P		**Pg**	**17 25 18.9**	**+0.2**
BACU	**Backbrunna**	**1.24**	**335**	P		**Pg**	**17 25 18.9**	**+0.2**
BACU	**Backbrunna**	**1.24**	**335**	P		**Pg**	**17 25 18.9**	**+0.2**
BACU	**Backbrunna**	**1.24**	**335**	*e*P		**Pg**	**17 25 18.9**	**+0.2**
VSTU	**Vaestervik**	**1.38**	**219**	P		**Pg**	**17 25 21.3**	**-0.1**
VSTU				S		**Sg**	**17 25 39.2**	**0.0**
VSTU	**Vaestervik**	**1.38**	**219**	P		**Pg**	**17 25 21.3**	**-0.1**
VSTU				S		**Sg**	**17 25 39.2**	**0.0**
VSTU	**Vaestervik**	**1.38**	**219**	P		**Pg**	**17 25 21.3**	**-0.1**
VSTU				S		**Sg**	**17 25 39.2**	**0.0**
VSTU	**Vaestervik**	**1.38**	**219**	*e*P		**Pg**	**17 25 21.3**	**-0.1**
VSTU				*e*S		**Sg**	**17 25 39.2**	**0.0**
LNKU	**Linkoeping**	**1.48**	**251**	P		**Pn**	**17 25 23.0**	**+0.1**
LNKU	**Linkoeping**	**1.48**	**251**	P		**Pn**	**17 25 23.0**	**+0.1**
LNKU	**Linkoeping**	**1.48**	**251**	P		**Pn**	**17 25 23.0**	**+0.1**
LNKU	**Linkoeping**	**1.48**	**251**	*e*P		**Pn**	**17 25 23.0**	**+0.1**
BYXU	**Byxelkrok**	**1.58**	**203**	P		**Pn**	**17 25 24.9**	**+0.7**
BYXU				S		**Sn**	**17 25 45.6**	**+0.4**
BYXU	**Byxelkrok**	**1.58**	**203**	P		**Pn**	**17 25 24.9**	**+0.7**
BYXU				S		**Sn**	**17 25 45.6**	**+0.4**
BYXU	**Byxelkrok**	**1.58**	**203**	P		**Pn**	**17 25 24.9**	**+0.7**
BYXU				S		**Sn**	**17 25 45.6**	**+0.4**
BYXU	**Byxelkrok**	**1.58**	**203**	*e*P		**Pn**	**17 25 24.9**	**+0.7**
BYXU				*e*S		**Sn**	**17 25 45.6**	**+0.4**
AAL	**Aland**	**1.72**	**32**	*e*P		**Pn**	**17 25 26.6**	**+0.4**
AAL	**Aland**	**1.72**	**32**	*e*P		**Pn**	**17 25 27.0**	**+0.8**
AAL				*e*S		**Sn**	**17 25 49.4**	**+0.6**
SLIT	**Slitere, Latvi**	**2.46**	**115**	*e*P		**Pn**	**17 25 38.4**	**+2.1**
HFS	**Hagfors**	**2.67**	**303**	Pg		**Pn**	**17 25 40.4**	**+1.1**
	6.5nm,0.3s,baz=123,slow=17,SNR=84							
HFS				Lg		Lg	17 26 16.7	
	14nm,0.3s,baz=120,slow=33,SNR=21							
HFS	**Hagfors**	**2.67**	**303**	Pn		**Pn**	**17 25 41.2**	**+2.0**
	baz=128,slow=16							
HFS				Lg		Lg	17 26 16.7	
	baz=115,slow=37							
HFS	**Hagfors**	**2.67**	**303**	Pn		**Pn**	**17 25 41.2**	**+2.0**
	baz=128,slow=16							
BLEU	**Blekinge**	**2.75**	**208**	*i* P		**Pn**	**17 25 41.9**	**+1.7**
BLEU				*i* S		**Sg**	**17 26 22.0**	**-1.2**
RAF	**Rauma**	**2.93**	**37**	*e*P		**Pn**	**17 25 44.9**	**+2.1**
RAF	**Rauma**	**2.93**	**37**	*e*P		**Pn**	**17 25 44.6**	**+1.9**
RAF				*e*S		**Sn**	**17 26 20.0**	**+1.4**
RAF				MSG			17 26 29.4	
	comp=Z,16nm,0.2s							
MTSE	**Matsula**	**2.96**	**88**	*e*P		**Pn**	**17 25 43.3**	**+0.1**
MTSE	**Matsula**	**2.96**	**88**	*e*S		**Sn**	**17 26 20.0**	**+0.7**
DEL	**Delary**	**3.24**	**227**	*e*P		**Pn**	**17 25 48.3**	**+1.3**
DEL				IAML			17 26 37.6	
	comp=Z,11nm,0.2s							
DEL	**Delary**	**3.24**	**227**	*i* P		**Pn**	**17 25 48.0**	**+1.0**
DEL				*e*S		**Sb**	**17 26 35.6**	**+2.5**
DEL				IAML			17 26 37.3	
	comp=Z,11nm,0.3s							
PBUR	**Paburge**	**3.41**	**141**	*e*P		**Pn**	**17 25 52.9**	**+3.5**
TJOU	**Tjoern**	**3.51**	**261**	*i* P		**Pn**	**17 25 53.2**	**+2.5**
MEF	**Metsahovi**	**3.52**	**62**	*e*P		**Pb**	**17 25 55.1**	**-2.9**
MEF				IAML			17 26 45.7	
	comp=Z,15nm,0.3s							
MEF	**Metsahovi**	**3.52**	**62**	*e*S		**Sn**	**17 26 32.9**	**-0.2**
MEF				MSG			17 26 46.7	
	comp=Z,7.6nm,0.2s							
ONAU	**Onsala**	**3.57**	**250**	*i* P		**Pn**	**17 25 53.4**	**+1.8**
STRU	**Stroemstad**	**3.63**	**278**	*i* P		**Pn**	**17 25 53.6**	**+1.2**
STRU	**Stroemstad**	**3.63**	**278**	*e*P		**Pn**	**17 25 53.4**	**+1.0**
STRU				*e*S		**Sn**	**17 26 35.8**	**0.0**
NUR	**Nurmijrvi**	**3.75**	**59**	*e*P		**Pn**	**17 25 55.5**	**+1.5**
NUR				*e*S		**Sn**	**17 26 39.4**	**+0.6**

BJUU Bjuv 3.85 228 *i* P **Pn** 17 25 56.0 +0.6
NC602 NORSAR Array S 3.90 304 *e*P **Pn** 17 25 56.6 +0.5
NC602 IAML 17 27 02.5
comp=Z,17nm,0.2s
NRA0 NORESS Array S 3.90 304 Pn **Pn** 17 25 56.9 +0.9
baz=111,slow=11
NRA0 Pg **Pb** 17 26 05.9 +1.4
baz=110,slow=16
NRA0 Lg Lg 17 26 56.4
baz=119,slow=37
NRA0 NORESS Array S 3.90 304 Pn **Pn** 17 25 56.9 +0.9
baz=111,slow=11
NRA0 Pg **Pb** 17 26 05.9 +1.4
baz=110,slow=16
NRA0 Sg **Sb** 17 26 56.4 +4.2
baz=119,slow=37
OSL Oslo 3.99 291 *e*P **Pn** 17 25 58.0 +0.7
OSL *e*S **Sn** 17 26 42.7 -1.9
OSL *e*Sg **Sg** 17 27 00.5 -2.5
OSL IAML 17 27 04.3
comp=Z,32nm,0.4s
BSD Bornholm Skovb 4.04 207 *e*P **Pn** 17 25 58.9 +0.8
BSD Bornholm Skovb 4.04 207 *i* P **Pn** 17 25 58.0 -0.1
NB2 NORSAR Subarra 4.18 306 Pn **Pn** 17 26 01.4 +1.3
baz=122,slow=14
NB2 Pg **Pb** 17 26 10.1 +0.6
NB2 Sn **Sn** 17 26 52.0 +2.4
NB2 Lg Lg 17 27 06.5
baz=122,slow=28
NB2 NORSAR Subarra 4.18 306 Pn **Pn** 17 26 01.4 +1.3
baz=122,slow=14
NB2 Pg **Pb** 17 26 10.1 +0.6
NOA NORSAR Array B 4.18 306 Pn **Pn** 17 25 59.4 -0.7
comp=Z,0.1nm,0.3s,baz=126,slow=13,SNR=21
NOA Pg **Pb** 17 26 09.3 -0.2
comp=Z,0.3nm,0.3s,baz=134,slow=13,SNR=14
NOA Lg Lg 17 27 03.2
comp=Z,0.5nm,0.3s,baz=131,slow=18,SNR=4.3
comp=Z,0.8nm,0.3s
PVF Pernaja 4.31 62 *e*P **Pn** 17 26 02.9 +1.1
PVF *e*S **Sn** 17 26 52.8 +0.1
PVF MSG 17 27 14.5
comp=Z,16nm,0.2s
KONO Kongsberg 4.49 285 *e*P **Pn** 17 26 05.3 +1.1
KONO *e*S **Sn** 17 26 53.3 -3.8
VSU Vasula 4.50 90 *e*P **Pn** 17 26 08.5 +4.1
PABE Paberze 4.54 133 *e*P **Pn** 17 26 07.0 +2.1
KEF Keuruu 4.78 41 *e*P **Pn** 17 26 10.1 +1.9
KEF *e*S **Sn** 17 27 04.8 +0.4
FIA0 FINESS Array S 4.81 52 Pn **Pn** 17 26 10.1 +1.6
baz=233,slow=12
FIA0 Sn **Sn** 17 27 05.2 +0.4
baz=234,slow=22
FIA0 Lg Lg 17 27 24.4
baz=244,slow=28
FIA0 FINESS Array S 4.81 52 *e*P **Pn** 17 26 10.1 +1.6
FIA0 *e*S **Sn** 17 27 05.0 +0.1
FINES FINESS Array B 4.81 52 Pn **Pn** 17 26 10.1 +1.6
comp=Z,2.5nm,0.3s,baz=242,slow=12,SNR=64
FINES Pg **Pb** 17 26 21.2 +1.2
comp=Z,1.3nm,0.3s,baz=241,slow=17,SNR=3.1
FINES Sn **Sn** 17 27 05.3 +0.4
comp=Z,2.1nm,0.3s,baz=244,slow=21,SNR=8.7
FINES Lg Lg 17 27 24.4
comp=Z,5.2nm,0.3s,baz=245,slow=27,SNR=11
comp=Z,3.9nm,0.3s
FIA1 FINESS Array S 4.81 52 *e*P **Pn** 17 26 10.0 +1.5
FIA1 *e*S **Sn** 17 27 05.0 +0.1
HOMB Homborsund 5.08 269 *i* P **Pn** 17 26 12.0 -0.3
HOMB Homborsund 5.08 269 *e*P **Pn** 17 26 13.2 +0.9
HOMB *e*S **Sn** 17 27 09.2 -2.3
HOMB IAML 17 27 17.6
comp=Z,6.8nm,0.4s
VJF Virojoki 5.10 65 *e*S **Sn** 17 27 10.8 -1.4
KAF Kangasniemi 5.27 47 *e*P **Pn** 17 26 16.7 +1.8
KAF *e*S **Sn** 17 27 15.7 -0.5
SKAR Skarslia 5.35 296 *e*P **Pn** 17 26 16.6 +0.5
SKAR *e*S **Sn** 17 27 15.1 -3.3
SKAR IAML 17 27 44.1
comp=Z,7.0nm,0.4s
IIGN Ignalina 5.56 124 *e*P **Pn** 17 26 19.9 +0.9
SUF Sumiainen 5.60 41 *e*P **Pn** 17 26 20.2 +0.8
SUF *e*S **Sn** 17 27 23.5 -0.8
SNART Snartemo 5.74 271 *i* P **Pn** 17 26 19.7 -1.7
RUFX Ruokolahti 6.04 59 *e*P **Pn** 17 26 26.0 +0.5
RUFX *e*S **Sn** 17 27 33.5 -1.7
OUF Merijarvi 6.46 26 *e*P **Pn** 17 26 32.4 +1.2
OUF *e*S **Sn** 17 27 44.5 -1.1
OBF0 Syolatti, Pyha 6.46 24 *e*P **Pn** 17 26 32.4 +1.2
OBF0 *e*S **Sn** 17 27 44.5 -1.1
AKASG Malin Array Be 10.28 137 Pn Pn 17 27 18.5 -5.1
comp=Z,1.0nm,0.3s,baz=320,slow=12,SNR=2.8
comp=Z,0.3nm,0.3s
APA0 Apatity Array 11.10 31 Pn **Pn** 17 27 33.6 -1.2
baz=229,slow=12
APA0 Apatity Array 11.10 31 Pn **Pn** 17 27 33.6 -1.2
baz=229,slow=12
ARA0 ARCESS Array S 11.29 13 Pn **Pn** 17 27 35.4 -2.0
baz=190,slow=14
ARA0 ARCESS Array S 11.29 13 Pn **Pn** 17 27 35.4 -2.0
baz=190,slow=14
ARCES ARCESS Array B 11.29 13 Pn **Pn** 17 27 33.9 -3.5
comp=Z,0.8nm,0.3s,baz=196,slow=14,SNR=72
ARCES Sn Sn 17 29 34.2 -10
comp=Z,0.3nm,0.3s,baz=203,slow=18,SNR=2.2
comp=Z,1.6nm,0.3s
EKA Eskdalemuir Ar 12.08 263 Pn **Pn** 17 27 45.8 -2.4
baz=69,slow=14
comp=Z,0.1nm,0.3s
YKA Yellowknife Ar 53.74 335 P **P** 17 34 18.3 0.0
comp=Z,0.2nm,0.3s,baz=24,slow=7.4,SNR=2.4
comp=Z,0.2nm,0.3s
MA2 Magadan 56.30 27 LR LR 18 01 58.0
comp=Z,31nm,19.1s,baz=336,slow=40

MAN 09 17:42:08.8, 9.41N×122.32E, h18km, mb4.1, ML2.9, MS2.6, 1C-4D, Negros

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CNOP	**Candoni, Negro**	**0.52**	**37**	||*i*P	Pn	17 42 20.1	+0.7
CNOP					*i* S		17 42 28.4	
SNPH	**Sibulan**	**0.91**	**94**	||*i*P	Pn	17 42 24.4	+0.1
SNPH					*i* S		17 42 34.6	
GUIM	**Jordan**	**1.23**	**12**	||*e*P	Pb	17 43 31.0	0.0
GUIM					*e*S		17 43 04.3	
PAGZ	**Pagadian**	**1.88**	**146**	||*e*P	Pn	17 42 40.2	+1.5
CUYO	**Cuyo Island**	**1.92**	**318**	||*e*P	Pn	17 42 41.3	+0.9
CUYO					*e*S		17 42 47.7	

IDC 09 17:46:34.9±3.2, 21.78S×175.71W, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=311.1km s-min=36.0km az=161.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**46.32**	**258**	P		P	17 55 02.4	-0.5
	0.6nm,0.8s,baz=98,slow=7.1,SNR=13							
	0.6nm,0.8s							
WRA	**Warramunga Arr**	**46.55**	**263**	P		P	17 55 05.0	+0.3
	0.8nm,0.5s,baz=100,slow=8.3,SNR=8.9							
	0.8nm,0.5s							
TXAR	**Lajitas Array**	**85.97**	**56**	P		P	17 59 17.4	0.0
	0.3nm,0.9s,baz=232,slow=4.4,SNR=2.5							
	0.3nm,0.9s							

*MDD **09** 17:58:08.1±1.0, 43.02N×11.36W, h33km±31km, mb_Lg3.1/13, Error ellipse: s-maj=17.8km s-min=3.9km az=121.0*
*LDG **09** 17:58:08.0±0.3, 43.12N×11.37W, h39km, Md3.3/2, Ml3.2/22, Error ellipse: s-maj=6.5km s-min=3.1km az=93.0*
*INMG **09** 17:58:09.3±1.0, 43.14N×11.49W, h10km, ML2.5, Error ellipse: s-maj=4.8km s-min=2.7km az=103.0*
ISC 09 17:58:03.9±2.6, 42.97N±0.08×11.3W±0.1, h10km, n61, σ1s75/77, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
EMAZ	**Mazaricos**	**1.72**	**90**	Pn		**Pn**	**17 58 35.1**	**+1.2**
EMAZ				Sn		**Sn**	**17 58 54.6**	**-1.4**
EMAZ				*i* Vmb_Lg			17 58 55.5	
EZAM	**Zamans**	**2.11**	**112**	Pn		**Pn**	**17 58 41.2**	**+2.0**
EZAM				Sn		**Sn**	**17 59 05.5**	**0.0**
EZAM				*i* Vmb_Lg			17 59 07.3	
EAGO	**Agolada(Pontev**	**2.38**	**93**	Pn		**Pn**	**17 58 44.3**	**+1.3**
EAGO				Sn		**Sn**	**17 59 10.5**	**-1.7**
EAGO				*i* Vmb_Lg			17 59 11.7	
PGAV	**Gavieira, Arco**	**2.47**	**113**	*e*Pn		**Pn**	**17 58 46.5**	**+2.2**
PGAV				*e*Sn		**Sn**	**17 59 14.4**	**-0.2**
PGAV				A		A	17 59 14.9	
	20nm,0.1s							
ELOB	**Lobios**	**2.65**	**113**	Pn		**Pn**	**17 58 48.7**	**+1.9**
ELOB				Sn		**Sn**	**17 59 18.5**	**-0.6**
ELOB				*i* Vmb_Lg			17 59 21.5	
PCAB	**Cabril**	**2.75**	**116**	*e*Pn		**Pn**	**17 58 50.2**	**+2.1**
PCAB				*e*Sn		**Sn**	**17 59 21.0**	**-0.3**
PCAB				A		A	17 59 23.5	
	27nm,0.1s							
POLO	**Lamas de Olo**	**3.07**	**120**	*e*Pn		**Pn**	**17 58 54.6**	**+2.1**
POLO				*e*Sn		**Sn**	**17 59 28.8**	**-0.5**
POLO				A		A	17 59 29.4	
	4.4nm,0.2s							
PVRL	**Vila Real**	**3.17**	**121**	*e*Sn		**Sn**	**17 59 30.9**	**-0.9**
PVIS	**Viseu**	**3.41**	**130**	*e*Pn		**Pn**	**17 58 58.9**	**+1.7**
PVIS				*e*Sn		**Sn**	**17 59 36.6**	**-1.1**
PVIS				A		A	17 59 40.6	
	7.0nm,0.1s							
ECAL	**Calabor**	**3.54**	**105**	Pn		**Pn**	**17 59 01.1**	**+2.1**
ECAL				Sn		**Sn**	**17 59 39.5**	**-1.6**
ECAL				*i* Vmb_Lg			17 59 42.5	
PBRG	**Braganca**	**3.59**	**107**	*e*Pn		**Pn**	**17 59 01.6**	**+2.0**
PBRG				*e*Sn		**Sn**	**17 59 40.6**	**-1.5**
PBRG				A		A	17 59 44.4	
	5.7nm,0.3s							
PCAS	**Casmilo, Conde**	**3.60**	**143**	*e*Pn		**Pn**	**17 59 02.0**	**+2.2**
PCAS				*e*Sn		**Sn**	**17 59 43.2**	**+0.8**
MVO	**Moncorvo**	**3.67**	**118**	*e*Pn		**Pn**	**17 59 02.5**	**+1.7**
MVO				*e*Sn		**Sn**	**17 59 42.5**	**-1.6**
MVO				A		A	17 59 43.2	
	4.7nm,0.5s							
MTE	**Manteigas**	**3.82**	**131**	*e*Pn		**Pn**	**17 59 04.8**	**+2.0**
MTE				*e*Sn		**Sn**	**17 59 47.6**	**-0.2**
MTE				A		A	17 59 51.3	
	5.2nm,0.4s							
PSBE	**So Bento**	**3.94**	**150**	*e*Sn		**Sn**	**17 59 49.6**	**-1.2**
PCBR	**Castelo Branco**	**4.26**	**136**	*e*Pn		**Pn**	**17 59 11.1**	**+2.3**
PMAFR	**Mafra**	**4.30**	**158**	*e*Pn		**Pn**	**17 59 11.0**	**+1.7**
PMAFR				*e*Sn		**Sn**	**17 59 58.0**	**-1.5**
PMAFR				A		A	18 00 01.3	
	16nm,0.3s							
EARI	**Arriondas**	**4.49**	**84**	Pn		**Pn**	**17 59 13.7**	**+1.8**
EARI				Sn		**Sn**	**18 00 01.3**	**-2.9**
EARI				*i* Vmb_Lg			18 00 06.0	
PMTG	**Montargil**	**4.55**	**148**	*e*Pn		**Pn**	**17 59 13.9**	**+1.2**
PMTG				*e*Sn		**Sn**	**18 00 03.5**	**-2.1**
PMTG				A		A	18 00 05.3	
	2.2nm,0.5s							
EPLA	**Plasencia**	**4.89**	**125**	Pn		**Pn**	**17 59 19.0**	**+1.5**
EPLA				Sn		**Sn**	**18 00 11.9**	**-2.2**
EPLA				*i* Vmb_Lg			18 00 15.3	
PESTR	**Estremoz**	**4.98**	**144**	*e*Pn		**Pn**	**17 59 20.1**	**+1.4**
PESTR				*e*Sn		**Sn**	**18 00 14.6**	**-1.7**
EVO	**Evora**	**5.09**	**149**	P		**Pn**	**17 59 25.7**	**+5.4**
EVO				S		**Sn**	**18 00 16.4**	**-2.8**
EVO	**Evora**	**5.09**	**149**	*e*Pn		**Pn**	**17 59 22.3**	**+2.0**
EVO				*e*Sn		**Sn**	**18 00 17.3**	**-1.9**
PNCL	**Nicolau / Gran**	**5.30**	**155**	*e*Pn		**Pn**	**17 59 25.4**	**+2.3**
PNCL				*e*Sn		**Sn**	**18 00 21.9**	**-2.2**
PNCL				A		A	18 00 35.6	
	2.7nm,0.7s							
EBAD	**Badajoz**	**5.33**	**141**	Pn		**Pn**	**17 59 24.6**	**+1.1**
EBAD				Sn		**Sn**	**18 00 22.3**	**-2.6**
EBAD				*i* Vmb_Lg			18 00 27.0	
PBEJ	**Beja**	**5.60**	**151**	*e*Sn		**Sn**	**18 00 29.1**	**-2.4**
MESJ	**Messejana**	**5.64**	**154**	*e*Sn		**Sn**	**18 00 30.4**	**-2.3**
MESJ				A		A	18 00 33.9	
	2.3nm,0.2s							
PTEO	**Sao Teotonio**	**5.77**	**159**	*e*Sn		**Sn**	**18 00 33.6**	**-2.2**
ELAN	**Lanestosa**	**5.78**	**85**	Pn		**Pn**	**17 59 31.9**	**+2.2**
ELAN				Sn		Sn	18 00 31.6	-4.5
ELAN				*i* Vmb_Lg			18 00 36.2	
PBAR	**Barrancos**	**5.79**	**144**	*e*Sn		**Sn**	**18 00 34.4**	**-2.0**
GUD	**Guadarrama**	**5.84**	**111**	Pn		**Pn**	**17 59 33.1**	**+2.4**
GUD				Sn		Sn	18 00 33.8	-3.9
GUD				*i* Vmb_Lg			18 00 39.5	
PCVE	**Castro Verde**	**5.89**	**154**	*e*Sn		**Sn**	**18 00 35.6**	**-3.2**
MORF	**Marmelete**	**6.01**	**159**	*e*Sn		Sn	18 00 37.9	-4.0
MORF				A		A	18 00 40.6	
	4.1nm,0.5s							
EGRO	**El Granado**	**6.17**	**150**	Sn		**Sn**	**18 00 42.6**	**-3.1**
PVAQ	**Vaqueiros**	**6.21**	**152**	*e*Pn		**Pn**	**17 59 38.1**	**+2.6**
PVAQ				*e*Sn		Sn	18 00 42.1	-4.4
PVAQ				A		A	18 00 43.9	
	2.9nm,0.6s							
PAB	**San Pablo**	**6.27**	**121**	Pn		**Pn**	**17 59 38.6**	**+2.1**
PAB				Sn		Sn	18 00 44.5	-3.7
PAB				*i* Vmb_Lg			18 00 51.6	
PBDV	**Barranco-do-Ve**	**6.28**	**154**	*e*Pn		**Pn**	**17 59 39.0**	**+2.4**
PBDV				*e*Sn		**Sn**	**18 00 45.6**	**-2.8**
EMIN	**Mina Concepcio**	**6.29**	**144**	Pn		**Pn**	**17 59 38.6**	**+1.9**
EMIN				Sn		Sn	18 00 44.8	-3.9
EMIN				*i* Vmb_Lg			18 00 53.9	
ECAB	**El Cabril**	**6.64**	**135**	Pn		**Pn**	**17 59 42.8**	**+1.3**
ECAB				Sn		Sn	18 00 52.9	-4.4
ECAB				*i* Vmb_Lg			18 01 02.2	
EADA	**Adamuz**	**7.03**	**131**	Pn		**Pn**	**17 59 48.5**	**+1.7**
EADA				Sn		Sn	18 01 02.6	-4.1
SJPF	**Ste Jean**	**7.40**	**85**	*e*Pn		**Pn**	**17 59 52.5**	**+0.6**
SJPF				*e*Sn		Sn	18 01 10.9	-5.0
	2.3nm,0.3s							
QUIF	**Quistinic**	**7.57**	**46**	*e*Pn		Pn	17 59 52.8	-1.5
QUIF				*e*Sn		Sn	18 01 11.5	-8.6
	0.8nm,0.2s							
ROSF	**Rostrenen**	**7.78**	**44**	*e*Pn		Pn	17 59 55.5	-1.6
ROSF				*e*Sn		Sn	18 01 18.5	-6.8
	2.0nm,0.3s							
ETSF	**Etsaut**	**7.90**	**87**	*e*Pn		**Pn**	**17 59 59.4**	**+0.5**
ETSF				*e*Sn		Sn	18 01 23.0	-5.3
	1.0nm,0.2s							
SGMF	**Saint Gilles**	**8.10**	**46**	*e*Pn		Pn	17 59 59.9	-1.6
SGMF				*e*Sn		Sn	18 01 26.0

0.9nm,0.4s
SSF Saint Saulge 11.26 64 *e*Pn **Pn** 18 00 44.5 **-0.3**
SSF *e*Sn Sn 18 02 39.4 -11
0.7nm,0.2s

IDC 09 18:00:26.2±57.0, 22°43S×175°14W, h0km, mb4.2/3, mbtmp4.2/3, Error ellipse: s-maj=1073.0km s-min=182.7km az=86.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.41**	**247**	P	P	18 07 58.1	+0.2
	7.0nm,1.3s,baz=105,slow=16,SNR=2.0						
	7.0nm,1.3s						
ASAR	**Alice Springs**	**46.70**	**258**	P	P	18 08 57.0	-0.2
	1.9nm,0.8s,baz=96,slow=7.4,SNR=50						
	1.9nm,0.8s						
WRA	**Warramunga Arr**	**47.00**	**263**	P	P	18 08 59.3	-0.2
	1.9nm,0.5s,baz=103,slow=8.2,SNR=40						
	1.9nm,0.5s						

GUC 09 18:09:25.6±0.8, 22°48S×69°07W, h86km±4km, ML3.5, 4D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.20**	**132**	↓*i* P	Pn	18 09 38.6	0.0
LVC				*i* S	Sn	18 09 48.0	-0.2
PB06	**IPOC Station P**	**0.52**	**244**	↓*i* P	Pn	18 09 40.4	+0.1
PB06				*i* S	Sn	18 09 52.3	+1.1
PB06				IAML		18 09 53.0	
	comp=N,2μm,0.1s						
PB09	**IPOC Station P**	**0.69**	**347**	↓*i* P	Pn	18 09 42.6	+0.6
PB09				*i* S	Sn	18 09 55.4	+1.4
PB15	**IPOC Station P**	**0.82**	**207**	*e*P	Pn	18 09 43.5	+0.3
PB15				*e*S	Sn	18 09 57.4	+1.0
AF01	**San Pedro de A**	**0.95**	**120**	*i* P	Pn	18 09 45.2	+0.5
AF01				*e*S	Sn	18 10 00.6	+1.6
PB04	**IPOC Station P**	**1.01**	**278**	↓*i* P	Pn	18 09 45.5	+0.2
PB04				*e*S	Sn	18 10 01.2	+1.1
PB04				IAML		18 10 02.1	
	comp=N,2μm,0.1s						
PB07	**IPOC Station P**	**1.06**	**314**	*e*P	Pn	18 09 46.4	+0.4
PB07				*e*S	Sn	18 10 02.4	+1.2
PB07				IAML		18 10 02.9	
	comp=N,3μm,0.2s						
PB02	**IPOC Station P**	**1.38**	**326**	*e*P	Pn	18 09 50.2	+0.4
PB02				*e*S	Sn	18 10 09.1	+1.0
PB02				IAML		18 10 15.7	
	comp=E,2μm,0.4s						
PB01	**IPOC Station P**	**1.48**	**345**	*e*P	Pn	18 09 51.5	+0.5
PB01				*e*S	Sn	18 10 11.3	+1.1
PB01				IAML		18 10 12.5	
	comp=E,857nm,0.1s						
PB10	**IPOC Station P**	**1.71**	**233**	*e*P	Pn	18 09 54.7	+0.8
PATCX	**Punta Patache**	**1.93**	**328**	*i* P	Pn	18 09 56.4	-0.5
PATCX				*e*S	Sn	18 10 21.6	+1.0
PATCX				IAML		18 10 26.4	
	comp=N,526nm,0.2s						
TA01	**Diego Aracena**	**2.16**	**331**	*e*P	Pn	18 09 59.0	-0.9
HMBC	**Humberstone**	**2.32**	**341**	*i* P	Pn	18 10 01.2	-0.8
HMBC				IAML		18 10 37.8	
	comp=N,343nm,0.5s						
PB08	**IPOC Station P**	**2.33**	**358**	*i* P	Pn	18 10 02.7	+0.3
PB08				*e*S	Sn	18 10 30.1	-0.3
PB08				IAML		18 10 40.8	
	comp=N,88nm,0.2s						
GO02	**Mina Guanaco**	**2.72**	**190**	*e*P	Pn	18 10 07.1	-0.5
GO02				IAML		18 10 52.1	
	comp=N,176nm,0.3s						
PB11	**IPOC Station P**	**2.76**	**348**	*e*P	Pn	18 10 07.1	-0.9
PB11				IAML		18 10 50.2	
	comp=N,169nm,0.3s						
GO01	**Chusmiza**	**2.80**	**358**	*e*P	Pn	18 10 08.7	-0.1
GO01				IAML		18 10 56.9	
	comp=E,244nm,0.1s						
PB12	**IPOC Station P**	**4.02**	**343**	*e*P	Pn	18 10 22.3	-2.7

*NEIC **09** 18:16:01.9±0.8, 43°.76N±0°.05×105°.32W±0°.09, h0km±2km, ML3.3/46, Error ellipse: s-maj=10.4km s-min=8.9km az=98.0*
*IDC **09** 18:16:02.2±0.9, 44°.03N×105°.80W, h0km, mb3.8/1, mbtmp3.5/5, ML3.1/3, MS3.3/1, Error ellipse: s-maj=22.4km s-min=7.8km az=147.0*

ISC 09 18:16:00.9±0.8, 43°73N±0°.05×105°35W±0°.05, h0km, n41, σ1§50/42, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.03**	**67**	Pg	**Pg**	**18 16 20.3**	**-0.3**
K22A	**Casper**	**1.38**	**219**		**Pg**	**18 16 27.0**	**-0.3**
K22A				IAML		18 16 50.3	
	comp=E,370nm,0.3s						
K22A				IAML		18 16 52.1	
	comp=N,655nm,0.3s						
PHWY	**Pilot Hill**	**2.43**	**182**		**Pn**	**18 16 43.7**	**+1.7**
PHWY				IAML		18 17 22.1	
	comp=N,107nm,0.8s						
RWWY	**Rawlins**	**2.46**	**214**		**Pn**	**18 16 44.6**	**+2.2**
N23A	**Red Feather La**	**2.87**	**189**		**Pn**	**18 16 49.9**	**+1.8**
N23A				IAML		18 17 37.2	
	comp=N,89nm,0.4s						
N23A				IAML		18 17 44.3	
	comp=E,63nm,0.8s						
LAO	**LASA Array**	**3.02**	**349**		**Pn**	**18 16 52.4**	**+2.3**
LAO				IAML		18 17 52.5	
	comp=E,138nm,0.8s						
RLMT	**Red Lodge**	**3.13**	**298**		**Pn**	**18 16 52.5**	**+0.8**
RLMT				IAML		18 17 49.9	
	comp=E,59nm,0.6s						
RLMT				IAML		18 17 50.3	
	comp=E,51nm,0.7s						
BW06	**Boulder Array**	**3.22**	**254**		**Pn**	**18 16 54.5**	**+1.6**
PD31	**Pinedale Array**	**3.22**	**254**		**Pn**	**18 16 54.3**	**+1.4**
PDAR	**Pinedale Array**	**3.22**	**254**	Pn	**Pn**	**18 16 54.5**	**+1.6**
	comp=E,6.9nm,0.3s,baz=68,slow=16,SNR=48						
PDAR				Pg	**Pb**	**18 16 59.5**	**+0.4**
	comp=E,16nm,0.3s,baz=68,slow=20,SNR=21						
PDAR				Lg	Lg	18 17 37.9	
	comp=E,14nm,0.3s,baz=71,slow=35,SNR=2.7						
PDAR	**Pinedale Array**	**3.22**	**254**		**Pn**	**18 16 53.9**	**+1.0**
GCMT	**Greycliff**	**3.70**	**305**		**Pn**	**18 17 00.5**	**+1.1**
OGNE	**Ogallala**	**3.71**	**137**		**Pn**	**18 17 01.3**	**+1.7**
LOHW	**Long Hollow**	**3.81**	**270**		**Pn**	**18 17 02.0**	**+1.0**
FLWY	**Flagg Ranch**	**3.88**	**277**		**Pn**	**18 17 03.0**	**+1.0**
FLWY				IAML		18 18 13.0	
	comp=E,63nm,2.0s						
FLWY				IAML		18 18 13.2	
	comp=E,35nm,1.4s						
MOOW	**Moose Ponds**	**3.91**	**272**		**Pn**	**18 17 03.7**	**+1.4**
ISCO	**Idaho Springs**	**3.93**	**183**		**Pn**	**18 17 04.0**	**+1.3**
REDW	**Red Top Meadow**	**4.01**	**267**		**Pn**	**18 17 05.1**	**+1.3**
REDW				IAML		18 18 14.4	
	comp=E,35nm,1.4s						
REDW				IAML		18 18 16.8	
	comp=E,56nm,1.1s						
TPAW	**Teton Pass**	**4.07**	**269**		**Pn**	**18 17 06.0**	**+1.3**
TPAW				IAML		18 18 26.6	
	comp=E,28nm,0.9s						
TPAW				IAML		18 18 33.3	
	comp=E,42nm,0.9s						
AHID	**Auburn Hatcher**	**4.31**	**259**		**Pn**	**18 17 08.9**	**+1.0**
AHID				IAML		18 18 22.3	
	comp=E,35nm,1.6s						
AHID				IAML		18 18 32.4	
	comp=E,27nm,0.9s						
YHL	**Hebgen Lake**	**4.33**	**287**		**Pn**	**18 17 09.9**	**+1.7**
YHL				IAML		18 18 24.9	
	comp=N,32nm,1.1s						
YHL				IAML		18 18 42.6	
	comp=E,33nm,1.0s						
E28A	**Huff**	**4.35**	**48**		**Pn**	**18 17 08.4**	**+0.1**
RDMU	**Red Mountain**	**4.45**	**226**		**Pn**	**18 17 10.8**	**+1.0**
RDMU				IAML		18 17 42.2	
	comp=E,35nm,1.5s						
RDMU				IAML		18 18 27.4	
	comp=N,23nm,1.4s						
Q24A	**Divide**	**4.76**	**178**	Pn	**Pn**	**18 17 15.3**	**+1.1**
Q24A				IAML		18 18 35.2	
	comp=N,16nm,0.3s						
BOZ	**Bozeman (W)**	**4.85**	**295**		**Pn**	**18 17 15.9**	**+0.6**
BOZ				IAML		18 18 35.9	
	comp=N,14nm,0.9s						
BOZ				IAML		18 18 40.2	
	comp=N,18nm,0.9s						
HWUT	**Hardware Ranch**	**5.05**	**247**		**Pn**	**18 17 19.4**	**+1.4**
HWUT				IAML		18 18 50.7	
	comp=N,27nm,0.8s						
KSCO	**Kaye Shedlock'**	**5.14**	**156**		**Pn**	**18 17 20.2**	**+0.9**
EGMT	**Eagleton**	**5.28**	**326**		**Pn**	**18 17 21.4**	**+0.4**
LRM	**Limekiln Ridge**	**5.47**	**295**		**Pn**	**18 17 24.9**	**+1.1**
MDND	**Maddock**	**5.75**	**42**		**Pn**	**18 17 27.4**	**-0.2**
HVU	**Hansel Valley**	**5.80**	**253**		**Pn**	**18 17 29.5**	**+1.2**
P17A	**Butcher Ranch,**	**5.86**	**225**		**Pn**	**18 17 27.7**	**-1.5**
SDCO	**Great Sand Dun**	**5.98**	**181**		**Pg**	**18 17 56.6**	**+1.2**
SRU	**San Rafael Swe**	**6.03**	**222**		**Pn**	**18 17 27.9**	**-3.7**
ECSD	**EROS Data Cent**	**6.33**	**87**	Pn	**Pn**	**18 17 35.8**	**+0.3**
Q16A	**Castle Valley**	**6.50**	**224**		**Pn**	**18 17 36.8**	**-1.2**
ELK	**Elko**	**7.92**	**251**	Pn	**Pn**	**18 17 58.9**	**+1.4**
	comp=N,0.4nm,0.3s,baz=90,slow=11,SNR=3.6						
ELK				Sn	**Sn**	**18 19 23.9**	**-4.0**
	comp=N,0.1nm,0.3s,baz=38,slow=24,SNR=1.5						
	comp=N,0.7nm,0.3s						
ULM	**Lac du Bonnet**	**9.19**	**41**	Pn	**Pn**	**18 18 13.9**	**-0.6**
	comp=N,1.9nm,0.3s,baz=230,slow=13,SNR=9.4						
ULM				Pg		18 18 40.8	
	comp=N,0.6nm,0.3s,baz=231,slow=17,SNR=1.6						
ULM				Lg	Lg	18 20 43.0	
	comp=N,0.6nm,0.3s,baz=125,slow=21,SNR=1.7						
	comp=N,3.2nm,0.3s						
TXAR	**Lajitas Array**	**14.43**	**174**	Pn	**P**	**18 19 33.5**	**-0.1**
	baz=0.6,slow=11,SNR=2.3						
TXAR				Lg	Lg	18 23 42.8	
	baz=358,slow=27,SNR=4.2						
	comp=N,0.2nm,0.8s						
SHEM	**Shemya Is, Ala**	**51.74**	**310**	LR	LR	18 46 40.3	
	comp=N,30nm,21.7s,baz=64,slow=36						
MKAR	**Makanchi Array**	**89.61**	**355**	P	**P**	**18 29 00.4**	**+0.1**
	comp=N,0.4nm,0.7s,baz=3.1,slow=3.7,SNR=4.1						
	comp=N,0.4nm,0.7s						

*ATH **09** 18:29:54.4, 36°.64N×26°.64E, h62km±31km, ML3.0/3, Error ellipse: s-maj=31.6km s-min=2.1km az=0.0*
*GII **09** 18:29:56.7±1.2, 36°.15N×27°.10E, h60km*
*ISK **09** 18:29:56.0, 36°.43N×26°.94E, h120km±1km, ML2.9/16*
*THE **09** 18:29:57.2, 36°.41N×26°.96E, h149km±4km, ML3.0/8, Error ellipse: s-maj=4.9km s-min=1.0km az=143.0*

ISC 09 18:29:55.1±1.5, 36°39N±0°.05×26°98E±0°.04, h129km±10km, n44, σ1§24/71, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	**Datca**	**0.59**	**55**	PG	**Pn**	**18 30 14.9**	**+0.1**
DAT				SG	**Sn**	**18 30 29.2**	**-0.5**
BODT	**Bodrum**	**0.72**	**22**	PG	**Pn**	**18 30 15.6**	**0.0**
BODT				SG	**Sn**	**18 30 30.1**	**-1.1**
KARP	**Karpathos**	**0.85**	**170**	P	**Pn**	**18 30 17.3**	**+0.6**
KARP				S	**Sn**	**18 30 32.8**	**-0.2**
KARP				AML	AML	18 30 33.1	
	comp=N,1023μm,0.2s						
KARP				AML	AML	18 30 36.7	
	comp=E,900μm,0.1s						
KARP	**Karpathos**	**0.85**	**170**	P	**Pn**	**18 30 17.3**	**+0.6**
KARP				S	**Sn**	**18 30 32.8**	**-0.2**
	comp=E,565nm,0.1s						
KARP	**Karpathos**	**0.85**	**170**	PG	**Pn**	**18 30 17.6**	**+0.9**
KARP				SG	**Sn**	**18 30 33.2**	**+0.2**
ARG	**Arkhangelos**	**0.95**	**100**	P	**Pn**	**18 30 18.5**	**+1.1**
ARG				S	**Sn**	**18 30 34.8**	**+0.5**
ARG				AML	AML	18 30 35.2	
	comp=N,729μm,0.4s						
ARG				AML	AML	18 30 36.7	
	comp=E,1608μm,0.3s						
ARG	**Arkhangelos**	**0.95**	**100**	P	**Pn**	**18 30 18.5**	**+1.1**
ARG				S	**Sn**	**18 30 34.8**	**+0.5**
	comp=E,590nm,0.3s						
ARG	**Arkhangelos**	**0.95**	**100**	PG	**Pn**	**18 30 18.4**	**+1.1**
TURN	**Turunc**	**1.09**	**69**	PN	**Pn**	**18 30 19.8**	**+1.0**
TURN				SN	**Sn**	**18 30 36.3**	**-0.5**
MLSB	**Milas**	**1.11**	**35**	PN	**Pn**	**18 30 19.7**	**+0.7**
YER	**Yerkesik**	**1.29**	**54**	PN	**Pn**	**18 30 21.7**	**+0.9**
YER				SN	**Sn**	**18 30 40.4**	**-0.1**
SMG	**Samos**	**1.32**	**355**	P	**Pn**	**18 30 21.1**	**+0.1**
APE	**Apeiranthos**	**1.34**	**301**	P	**Pn**	**18 30 21.8**	**+0.4**
APE				S	**Sn**	**18 30 42.0**	**+0.5**
	comp=E,122nm,1.8s						
APE	**Apeiranthos**	**1.34**	**301**	Pn	**Pn**	**18 30 22.1**	**+0.7**
ZKR	**Zakros**	**1.41**	**206**	P	**Pn**	**18 30 24.1**	**+1.9**
ZKR				S	**Sn**	**18 30 44.1**	**+1.3**
ZKR	**Zakros**	**1.41**	**206**	P	**Pn**	**18 30 24.1**	**+1.9**
ZKR				S	**Sn**	**18 30 44.1**	**+1.3**
	comp=E,402nm,0.3s						
ZKR	**Zakros**	**1.41**	**206**	PN	**Pn**	**18 30 23.4**	**+1.2**
ZKR				SN	**Sn**	**18 30 43.8**	**+1.0**
DALY	**Dalyan (Mula)**	**1.42**	**72**	PN	**Pn**	**18 30 23.5**	**+1.4**
DALY				SN	**Sn**	**18 30 43.3**	**+0.5**
NPS	**Neapolis**	**1.58**	**225**	P	**Pn**	**18 30 24.6**	**+0.5**
NPS				S	**Sn**	**18 30 45.5**	**-0.6**
NPS	**Neapolis**	**1.58**	**225**	P	**Pn**	**18 30 24.6**	**+0.5**
NPS				S	**Sn**	**18 30 46.5**	**+0.4**
	comp=E,4μm,0.5s						
FRMA	**Ierapetra Chan**	**1.70**	**217**	P	**Pn**	**18 30 26.5**	**+1.0**
FRMA				S	**Sn**	**18 30 48.2**	**-0.4**
FRMA	**Ierapetra Chan**	**1.70**	**217**	P	**Pn**	**18 30 26.4**	**+1.0**
FRMA				S	**Sn**	**18 30 48.2**	**-0.4**
	comp=E,120nm,0.2s						
FETY	**Fethiye**	**1.72**	**81**	PN	**Pn**	**18 30 26.8**	**+1.2**
AYDB	**Zeytinkoy-Aydi**	**1.72**	**25**	PN	**Pn**	**18 30 26.3**	**+0.5**
KSTL	**Kastelli Herak**	**1.89**	**236**	P	**Pn**	**18 30 27.2**	**-0.4**
KSTL				S	**Sn**	**18 30 49.4**	**-3.2**
KSTL	**Kastelli Herak**	**1.89**	**236**	P	**Pn**	**18 30 27.2**	**-0.4**
KSTL				S	**Sn**	**18 30 49.9**	**-2.6**
	comp=E,102nm,0.3s						
CAME	**Cameli-Denizli**	**1.95**	**73**	PN	**Pn**	**18 30 29.7**	**+1.2**
CAME				SN	**Sn**	**18 30 54.5**	**+0.4**
IDI	**Anoyia**	**2.02**	**238**	P	**Pn**	**18 30 29.6**	**+0.3**
IDI				S	**Sn**	**18 30 53.8**	**-1.7**
IDI				AML	AML	18 30 56.6	
	comp=N,522μm,0.5s						
IDI				AML	AML	18 30 56.7	
	comp=E,390μm,0.3s						
IDI	**Anoyia**	**2.02**	**238**	P	**Pn**	**18 30 29.6**	**+0.3**
IDI				S	**Sn**	**18 30 54.8**	**-0.7**
	comp=E,198nm,0.3s						
IDI	**Anoyia**	**2.02**	**238**	PN	**Pn**	**18 30 29.6**	**+0.3**
AKAS	**Kas**	**2.13**	**93**	PN	**Pn**	**18 30 32.3**	**+1.6**
APMY	**Acipayam-Deniz**	**2.15**	**59**	PN	**Pn**	**18 30 32.0**	**+1.0**
ELL	**Elmali**	**2.39**	**81**	PN	**Pn**	**18 30 35.5**	**+1.6**
IMMV	**Iera Moni Meta**	**2.60**	**250**	P	**Pn**	**18 30 37.2**	**+0.7**
KORT	**Korkueli**	**2.78**	**76**	PN	**Pn**	**18 30 40.7**	**+1.8**
ANKY	**Antikythira Is**	**3.02**	**261**	P	**Pn**	**18 30 42.4**	**+0.5**
ANKY	**Antikythira Is**	**3.02**	**261**	P	**Pn**	**18 30 42.4**	**+0.5**
CSS	**Mathiatis**	**5.37**	**104**	Pn	**Pn**	**18 31 13.7**	**+0.6**
MMA0B	**Mount Meron ar**	**7.71**	**113**	Pn	**Pn**	**18 31 44.5**	**-0.2**
MMA0B				Sn	**Sn**	**18 33 08.7**	**-1.9**
GEM	**Giv'at Ha'Em**	**7.82**	**111**	Sn	**Sn**	**18 33 10.2**	**-2.8**
NATI	**Neve Ativ**	**7.85**	**111**	Pn	**Pn**	**18 31 46.5**	**0.0**
NATI				Sn	**Sn**	**18 33 11.2**	**-2.5**
HMDT	**Nahal Hemdat**	**8.19**	**118**	Pn	**Pn**	**18 31 51.1**	**+0.1**
HMDT				Sn	**Sn**	**18 33 20.4**	**-1.5**
KZIT	**Kziot**	**8.26**	**129**	Pn	**Pn**	**18 31 50.7**	**-1.3**
KZIT				Sn	**Sn**	**18 33 19.8**	**-3.8**
DSI	**Dead Sea**	**8.47**	**122**	Sn	**Sn**	**18 33 27.1**	**-1.8**

*NEIC **09** 18:36:49.1±1.2, 14°.68S±0°.06×166°.5E±0°.2, h15km±7km, mb4.0/6, Error ellipse: s-maj=29.7km s-min=8.6km az=83.0*
*IDC **09** 18:36:53.9±4.2, 14°.91S×167°.14E, h99km±28km, mb3.5/6, mbtmp4.0/8, Error ellipse: s-maj=50.2km s-min=21.5km az=66.0*

ISC 09 18:36:55.2±1.2, 15°04S±0°.08×166°8E±0°.1, h100km, n21, σ2§47/24, mb3.8/8, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOUNC	**Koumac, New Ca**	**6.00**	**204**		**Pn**	**18 39 19.9**	**-1.6**
KOUNC				Sn	**Sn**	**18 39 28.6**	**-0.3**
MARNC	**Mare, Loyalty**	**6.51**	**170**	Pn	**Pn**	**18 39 27.5**	**-0.9**
MARNC				Sn	**Sn**	**18 39 35.2**	**-6.0**
DZM	**Mont Dzumac**	**7.01**	**183**	P	**Pn**	**18 38 36.5**	**+1.2**
	7.6nm,0.5s,baz=297,slow=12,SNR=34						
DZM				S	**Sn**	**18 39 55.4**	**+1.8**
	5.2nm,0.3s,baz=136,slow=21,SNR=2.2						
DZM	**Mont Dzumac**	**7.01**	**183**		**Pn**	**18 38 36.2**	**+0.9**
DZM				Sn	**Sn**	**18 39 52.7**	**-0.8**
PINNC	**Pines Island,**	**7.56**	**176**	Pn	**Pn**	**18 38 43.7**	**+1.0**
HNR	**Honiara**	**8.74**	**309**	P	**Pn**	**18 38 59.2**	**+0.4**
	12nm,0.4s,baz=192,slow=16,SNR=1.6						
HNR				S	**Sn**	**18 40 31.3**	**-4.3**
	9.6nm,0.3s,baz=180,slow=19,SNR=1.5						
CTA	**Charters Tower**	**20.25**	**253**	P	Pn	18 41 26.6	+1.0
	1.0nm,0.3s,baz=89,slow=9.0,SNR=3.9						
	1.0nm,0.3s						
CTAO	**Charters Tower**	**20.25**	**253**	P	**P**	**18 41 20.6**	**-2.1**
CTAO				IAmb	IAmb	18 41 34.1	
	comp=Z,7.0nm,1.4s						
STKA	**Stephens Creek**	**28.48**	**230**	P	**P**	**18 42 43.5**	**+2.5**
	comp=Z,6.6nm,0.5s,baz=53,slow=9.0,SNR=34						
	comp=Z,6.6nm,0.5s						
STKA	**Stephens Creek**	**28.48**	**230**	IAmb	IAmb	18 42 44.1	
	comp=Z,1.4nm,0.6s						
WRA	**Warramunga Arr**	**31.35**	**256**	P	**P**	**18 43 07.0**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=85,slow=9.8,SNR=5.0						
WRA				pP	**pwP**	**18 43 33.6**	**+0.2**
	comp=Z,0.7nm,1.0s,baz=86,slow=8.6,SNR=2.4						
	comp=Z,0.4nm,0.6s						
WRA	**Warramunga Arr**	**31.35**	**256**	IAmb	IAmb	18 43 07.7	
	comp=Z,0.3nm,1.4s						
AS31	**Alice Springs**	**32.17**	**249**	P	**P**	**18 43 13.6**	**-0.2**
AS31				IAmb	IAmb	18 43 40.5	
	comp=Z,1.7nm,1.2s						
ASAR	**Alice Springs**	**32.18**	**249**	P	**P**	**18 43 14.2**	**+0.4**
	comp=Z,1.4nm,0.7s,baz=78,slow=9.1,SNR=30						
	comp=Z,1.4nm,0.7s						
BBOO	**Buckleboo**	**33.06**	**232**	P	**P**	**18 43 23.2**	**+1.8**
BBOO				IAmb	IAmb	18 43 41.9	
	comp=Z,18nm,1.1s						
FORT	**Forrest**	**38.78**	**239**	P	**P**	**18 44 11.8**	**+1.6**
VNDA	**Vanda**	**62.55**	**181**	P	**P**	**18 47 07.4**	**-0.6**
	comp=Z,0.8nm,0.9s,baz=346,slow=4.2,SNR=2.8						
	comp=Z,0.8nm,0.9s						
CMAR	**Chiang Mai Arr**	**74.69**	**294**	P	**P**	**18 48 24.9**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=123,slow=3.3,SNR=2.5						
CMAR				pP	**pP**	**18 48 55.1**	**+5.8**
	comp=Z,0.7nm,0.8s,baz=136,slow=4.1,SNR=4.1						
	comp=Z,0.4nm,0.8s						
MKAR	**Makanchi Array**	**97.14**	**316**	pP	pP	18 50 44.1	+1.2
	comp=Z,0.2nm,0.5s,baz=90,slow=3.6,SNR=3.0						
MURB	**Monte Urbino**	**144.30**	**327**	PKPdf	**PKiKP**	**18 56 20.6**	**-2.9**
BNI	**Bardonecchia**	**145.70**	**335**		**PKiKP**	**18 56 24.8**	**-1.6**

IDC 09 18:50:38.2±2.4, 7°15S×129°61E, h122km±28km, mb3.2/1, mbtmp3.5/5, Error ellipse: s-maj=40.2km s-min=23.5km az=92.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.45**	**15**	P	Pn	18 52 10.8	+0.1
	1.4nm,0.2s,baz=109,slow=1.0,SNR=22						
SIJI				S	Sn	18 53 18.0	-5.0
	2.9nm,0.3s,baz=253,slow=23,SNR=6.9						
BATI	**Baumata**	**6.62**	**242**	P	Pn	18 52 13.4	+0.3
	6.2nm,0.5s,baz=277,slow=23,SNR=1.4						
BATI				S	Sn	18 53 23.5	-3.8
	7.8nm,0.3s,baz=345,slow=21,SNR=1.7						
WRA	**Warramunga Arr**	**13.52**	**161**	P	Pn	18 53 43.9	-1.3
	0.3nm,0.3s,baz=334,slow=13,SNR=11						
WRA				S	Sn	18 56 06.0	-8.4
	2.1nm,0.6s,baz=331,slow=22,SNR=9.3						
ASAR	**Alice Springs**	**16.94**	**166**	P	Pn	18 54 28.9	+1.0
	0.4nm,0.5s,baz=341,slow=9.1,SNR=19						
ASAR				S	Sn	18 57 27.5	-9.2
	0.4nm,0.4s,baz=317,slow=16,SNR=6.4						
MKAR	**Makanchi Array**	**68.14**	**327**	P	P	19 01 25.1	0.0
	0.3nm,0.5s,baz=117,slow=8.2,SNR=5.5						
	0.3nm,0.5s						

*NEIC **09** 19:05:06.9±2.1, 12°.44N±0°.03×145°.0E±0°.2, h10km±1km, mb4.4/39, Error ellipse: s-maj=28.2km s-min=4.4km az=82.0*
*IDC **09** 19:05:11.5±1.9, 12°.48N×144°.94E, h50km±14km, mb3.7/14, mbtmp4.0/14, MS3.3/8, Error ellipse: s-maj=26.5km s-min=14.0km az=98.0*

ISC 09 19:05:05.5±0.6, 12°36N±0°.07×145°0E±0°.1, h10km, n64, σ1§28/58, mb4.4/33, MS3.1/7, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.23**	**352**	P	**Pn**	**19 05 30.6**	**+1.7**
	1μm,0.3s,baz=161,slow=15,SNR=191						
GUMO				S	**Sn**	**19 05 45.2**	**-0.3**
	2μm,0.4s,baz=184,slow=20,SNR=12						
PATS	**Pohnpei**	**14.19**	**112**	Pn	**Pn**	**19 08 26.1**	**-0.7**
MANU	**Manus Island**	**14.50**	**171**		**S**	**19 11 28.4**	**-3.1**
SIJI	**Sorong**	**18.96**	**227**	LR	LR	19 16 01.0	
	comp=Z,100nm,19.1s,baz=102,slow=34						
FAKI	**Fak Fak**	**19.80**	**221**	P	**P**	**19 09 38.5**	**+2.3**
FAKI				IAmb	IAmb	19 09 44.6	
	comp=Z,24nm,0.9s						
JHJ	**Hachijo jima 2**	**21.21**	**348**	LR	LR	19 17 16.4	
	comp=Z,54nm,19.1s,baz=128,slow=34						
JOW	**Kunigami**	**21.33**	**315**	P	**P**	**19 09 52.5**	**-0.3**
	comp=Z,7.9nm,0.5s,baz=134,slow=11,SNR=15						
	comp=Z,7.9nm,0.5s						
JOW	**Kunigami**	**21.33**	**315**	P	**P**	**19 09 53.9**	**+1.1**
JGF	**Kuroka**	**24.16**	**345**	P	**P**	**19 10 21.7**	**-0.3**
MJAR	**Matsushiro Arr**	**24.85**	**347**	P	**P**	**19 10 27.6**	**-0.7**
	comp=Z,2.5nm,0.7s,baz=165,slow=8.2,SNR=7.7						
MJAR				LR	LR	19 20 12.8	
	comp=Z,39nm,18.6s,baz=160,slow=36						
	comp=Z,2.5nm,0.7s						
MAJO	**Matsushiro**	**24.85**	**347**	P	**P**	**19 10 27.4**	**-0.8**
MAJO				IAm

TIXI	**Tiksi**	**60.07**	**354**	P	**P**	**19 15 11.2**	**-1.2**
TIXI				IAmb	IAmb	19 15 13.9	
	comp=Z,2.7nm,0.8s						
MK31	**Makanchi Array**	**62.48**	**316**	P	**P**	**19 15 29.6**	**+0.3**
MKAR	**Makanchi Array**	**62.48**	**316**	P	**P**	**19 15 29.2**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=94,slow=8.6,SNR=12						
	comp=Z,0.3nm,0.4s						
MAKZ	**Makanchi**	**62.70**	**316**	P	**P**	**19 15 31.1**	**+0.4**
ZALV	**Zalesovo Beam**	**62.71**	**325**	P	**P**	**19 15 29.5**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=126,slow=9.1,SNR=1.9						
ZALV				PcP	**PcP**	**19 16 09.3**	**+0.1**
	comp=Z,1.4nm,0.5s,baz=126,slow=3.1,SNR=6.5						
	comp=Z,0.5nm,0.5s						
KDAK	**Kodiak Island**	**65.02**	**32**	LR	LR	19 46 16.2	
	comp=Z,38nm,18.0s,baz=221,slow=38						
N19K	**Bonanza Creek**	**65.08**	**28**	P	**P**	**19 15 48.6**	**+2.4**
N19K				IAmb	IAmb	19 15 49.7	
	comp=Z,3.1nm,0.7s						
KURK	**Kurchatov**	**65.62**	**320**	P	**P**	**19 15 49.5**	**-0.2**
KURK				IAmb	IAmb	19 15 54.5	
	comp=Z,2.6nm,1.1s						
PPLA	**Purkeypile**	**66.81**	**26**	P	**P**	**19 15 57.8**	**+0.4**
CAST	**Castle Rocks**	**67.03**	**26**	P	**P**	**19 16 00.0**	**+1.4**
CAST				IAmb	IAmb	19 16 11.9	
	comp=Z,2.2nm,1.0s						
IMAR	**Indian Mountai**	**67.25**	**23**	P	**P**	**19 16 01.9**	**+2.0**
PMR	**Palmer**	**67.78**	**28**	P	**P**	**19 16 04.5**	**+1.1**
GHO	**Glory Hole Cre**	**67.93**	**28**	P	**P**	**19 16 05.9**	**+1.5**
GHO				IAmb	IAmb	19 16 06.9	
	comp=Z,3.5nm,0.8s						
KNK	**Knik Glacier**	**68.05**	**28**	P	**P**	**19 16 06.6**	**+1.5**
MLY	**Manley**	**68.10**	**24**	P	**P**	**19 16 06.2**	**+0.7**
MLY				IAmb	IAmb	19 16 22.2	
	comp=Z,2.2nm,1.2s						
SML	**Sawmill**	**68.21**	**28**	P	**P**	**19 16 06.0**	**-0.1**
SCM	**Sheep Creek Mo**	**68.68**	**28**	P	**P**	**19 16 10.1**	**+1.0**
I23K	**Minto, Yukon-K**	**68.70**	**24**	P	**P**	**19 16 10.7**	**+1.7**
I23K				IAmb	IAmb	19 16 27.5	
	comp=Z,1.8nm,0.9s						
HIN	**Hinchinbrook I**	**68.73**	**30**	P	**P**	**19 16 10.7**	**+1.2**
WRH	**Wood River Hil**	**69.02**	**25**	P	**P**	**19 16 11.8**	**+0.7**
WRH				IAmb	IAmb	19 16 12.9	
	comp=Z,2.8nm,1.0s						
IL31		**69.60**	**25**	P	**P**	**19 16 14.7**	**+0.1**
IL31				IAmb	IAmb	19 16 15.6	
	comp=Z,2.4nm,0.5s						
ILAR	**Eielson Array**	**69.60**	**25**	P	**P**	**19 16 13.8**	**-0.8**
	comp=Z,1.3nm,0.4s,baz=247,slow=5.9,SNR=15						
	comp=Z,1.3nm,0.4s						
TOLK	**Toolik Lake Re**	**69.70**	**21**	P	**P**	**19 16 16.9**	**+1.6**
TOLK				IAmb	IAmb	19 16 20.6	
	comp=Z,5.6nm,1.2s						
J25K	**Salcha River,**	**70.20**	**25**	P	**P**	**19 16 18.8**	**+0.4**
J25K				IAmb	IAmb	19 16 47.1	
	comp=Z,2.9nm,1.3s						
SCRK	**Sand Creek**	**70.65**	**26**	P	**P**	**19 16 22.4**	**+1.2**
J26L	**Joseph Creek**	**70.94**	**26**	P	**P**	**19 16 23.8**	**+0.8**
J26L				IAmb	IAmb	19 16 25.1	
	comp=Z,2.8nm,0.7s						
BMAR	**Burnt Mountain**	**71.17**	**23**	P	**P**	**19 16 27.0**	**+2.8**
BCAR	**Beaver Creek A**	**71.45**	**27**	P	**P**	**19 16 27.1**	**+1.1**
INK	**Inuvik**	**75.43**	**22**	P	**P**	**19 16 49.8**	**+0.5**
	comp=Z,2.1nm,0.7s,baz=42,slow=7.4,SNR=4.4						
	comp=Z,2.1nm,0.7s						
INK	**Inuvik**	**75.43**	**22**	IAmb	IAmb	19 17 11.2	
	comp=Z,6.6nm,1.4s						
ABKAR	**Akbulak array**	**77.56**	**318**	P	**P**	**19 17 01.5**	**-0.3**
YKA	**Yellowknife Ar**	**83.87**	**27**	P	**P**	**19 17 36.8**	**+1.5**
	comp=Z,1.4nm,0.6s,baz=286,slow=5.1,SNR=9.3						
	comp=Z,1.4nm,0.6s						
FINES	**FINESS Array B**	**92.34**	**335**	P	**P**	**19 18 15.2**	**-0.7**
	comp=Z,1.5nm,0.5s,baz=98,slow=2.7,SNR=14						
	comp=Z,1.5nm,0.5s						

*IDC **09** 19:11:23.0±1.3,24°.75N×122°.32E,h0km,mb3.5/4, mbtmp3.5/5,ML2.7/1,Error ellipse: s-maj=45.2km s-min=24.1km az=64.0*
*TAP **09** 19:11:24.9,24°.79N×122°.43E,h17km,ML3.5,C*
*JMA **09** 19:11:25.5±0.1,25°N±1°×122°.5E±0°.4,h38km±2km, MV3.3/11,NW OFF ISHIGAKIJIMA IS*

ISC 09 19:11:24.7±1.0,24°.77N±0°.02×122°.45E±0°.02,h15km±7km, n124,σ1♀03/179,mb3.6/4,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
EGS		**0.48**	**279**	P		**Pb**	**19 11 34.6**	**-0.2**
	baz=267							
EGS				*e*S		**Sg**	19 11 40.3	-0.4
	baz=267							
TWB1	**Santiao Chiao**	**0.48**	**300**	*i* P		**Pg**	**19 11 34.4**	**0.0**
	baz=298							
TWB1				*i* S		**Sg**	19 11 39.9	-1.0
	baz=298							
JYNG	**Yonagunijimaku**	**0.55**	**125**	P		**Pb**	**19 11 36.5**	**+0.4**
JYNG				S		**Sb**	**19 11 44.0**	**+0.3**
TWC	**Suao**	**0.57**	**254**	*i* P		**Pg**	**19 11 35.6**	**-0.3**
	baz=257							
TWC				*e*S		**Sg**	19 11 42.9	-0.7
	baz=257							
NTC	**Toucheng**	**0.57**	**279**	P		**Pb**	**19 11 36.1**	**-0.3**
	baz=276							
YOJ	**Yonaguni jima**	**0.60**	**121**	*i* P		**Pb**	**19 11 37.2**	**+0.4**
	baz=122							
YOJ				*i* S		**Sg**	19 11 45.1	+0.7
	baz=122							
YOJ	**Yonaguni jima**	**0.60**	**121**	P		**Pb**	**19 11 37.3**	**+0.4**
YOJ				S		**Sb**	**19 11 45.4**	**+0.3**
TIPB	**Shuangxi**	**0.60**	**290**	*i* P		**Pb**	**19 11 36.7**	**-0.3**
	baz=288							
TIPB				*e*S		**Sb**	19 11 44.9	-0.4
	baz=288							
SXI1	**Grass Mountain**	**0.61**	**302**	*i* P		**Pb**	**19 11 37.0**	**-0.2**
	baz=300							
SXI1				S		**Sg**	19 11 44.7	-0.3
	baz=300							
ILA	**Ilan**	**0.64**	**270**	*e*P		**Pb**	**19 11 37.8**	**+0.2**
	baz=267							
ILA				*e*S		**Sn**	19 11 47.3	-1.7
	baz=267							
NWF	**Wu-fen Shan**	**0.68**	**297**	*i* P		**Pb**	**19 11 38.5**	**+0.2**
	baz=295							
NWF				S		**Sb**	19 11 47.3	-0.2
	baz=295							
WFSB	**Wu-fen Shan**	**0.68**	**297**	*i* P		**Pb**	**19 11 38.4**	**+0.1**
	baz=295							
WFSB				*i* S		**Sb**	19 11 47.4	0.0
	baz=295							
NDS	**Dongshan**	**0.68**	**259**	*i* P		**Pg**	**19 11 37.7**	**-0.3**
	baz=256							
NDS				S		**Sb**	19 11 47.6	+0.1
	baz=256							
EWUT	**Wuta**	**0.69**	**242**	*i* P		**Pb**	**19 11 38.3**	**-0.2**
	baz=248							
EWUT				S		**Sb**	19 11 47.5	-0.2
	baz=248							
TWE	**Neicheng**	**0.71**	**266**	P		**Pg**	**19 11 38.3**	**-0.4**
	baz=263							
TWE				S		**Sb**	19 11 47.9	-0.5
	baz=263							
TNOU	**National Taiwa**	**0.72**	**302**	*i* P		**Pb**	**19 11 38.9**	**-0.1**
	baz=300							
TNOU				*i* S		**Sb**	19 11 48.5	-0.2
	baz=300							
ENA	**Nanau**	**0.73**	**242**	P		**Pb**	**19 11 38.8**	**-0.3**
	baz=247							
ENA				*e*S		**Sb**	19 11 48.3	-0.6
	baz=247							
FUSB	**Fushanzhiwuyua**	**0.78**	**270**	*i* P		**Pb**	**19 11 39.6**	**-0.5**
	baz=267							
FUSB				S		**Sg**	19 11 50.7	+0.3
	baz=267							
ENTT	**Nioudou**	**0.81**	**261**	P		**Pg**	**19 11 40.5**	**-0.1**
	baz=246							
ENTT				*e*S		**Sg**	19 11 51.3	0.0
	baz=246							
TWA	**Mucha**	**0.81**	**285**	P		**Pg**	**19 11 40.8**	**+0.2**
	baz=283							
TWA				S		**Sg**	19 11 51.4	+0.1
	baz=283							
NWRT	**Kuosheng**	**0.84**	**301**	*e*P		**Pb**	**19 11 40.4**	**-0.6**
	baz=300							
NWRT				*e*S		**Sg**	19 11 51.9	-0.1
	baz=300							
NWLT	**Wulai**	**0.86**	**271**	P		**Pg**	**19 11 41.5**	**0.0**
	baz=268							
NWLT				*e*S		**Sg**	**19 11 52.7**	**-0.1**
	baz=268							
NHDH	**Xindian Distri**	**0.86**	**283**	*i* P		**Pn**	**19 11 41.7**	**-0.6**
	baz=281							
NHDH				*i* S		**Sg**	**19 11 53.0**	**+0.2**
	baz=281							
LATG	**Datong**	**0.87**	**255**	P		**Pg**	**19 11 41.5**	**-0.2**
	baz=252							
YM01	**YM01**	**0.88**	**295**	*i* P		**Pg**	**19 11 41.7**	**-0.2**
	baz=294							
YM01				S		**Sb**	**19 11 53.0**	**-0.4**
	baz=294							
TWY	**Chenhua**	**0.92**	**303**	P		**Pg**	**19 11 42.6**	**-0.1**
	baz=302							
TWY				*e*S		**Sg**	19 11 54.7	0.0
	baz=302							
PCYT	**Pengchaiyu**	**0.92**	**338**	*i* P		**Pb**	**19 11 41.8**	**-0.6**
	baz=339							
PCYT				*e*S		**Sb**	19 11 53.1	-1.4
	baz=339							
ETL	**Fush Village**	**0.97**	**231**	*e*P		**Pn**	19 11 43.5	-0.3
	baz=238							
ETL				*e*S		**Sg**	19 11 55.7	-0.4
	baz=238							
NACB	**Ninganchiao**	**0.98**	**233**	P		**Pb**	19 11 42.9	-0.5
	baz=241							
NACB				*e*S		**Sb**	19 11 55.7	-0.4
	baz=241							
YHNB	**Yeheng**	**0.98**	**264**	P		**Pn**	19 11 43.6	-0.4
	baz=262							
YHNB				*e*S		**Sb**	19 11 55.8	-0.5
	baz=262							
NTST	**Danshui**	**0.99**	**294**	*e*P		**Pn**	19 11 44.4	+0.3
	baz=292							
NTST				*e*S		**Sb**	19 11 56.0	-0.5
	baz=292							
NSK	**Sanguang**	**1.00**	**265**	P		**Pb**	19 11 43.1	-0.7
	baz=263							
NSK				*e*S		**Sb**	19 11 55.5	-1.2
	baz=263							
NNSB	**Datong**	**1.03**	**251**	P		**Pb**	19 11 43.9	-0.4
	baz=249							
NNSB				*e*S		**Sb**	19 11 57.1	-0.5
	baz=249							
NNS	**Nan Shan**	**1.03**	**252**	*e*P		**Pn**	19 11 44.4	-0.4
	baz=249							
NNS				*e*S		**Sg**	19 11 57.9	-0.4
	baz=249							
TWD	**Chiawan**	**1.04**	**229**	*e*P		**Pg**	19 11 44.6	-0.2
	baz=232							
TWD				*e*S		**Sn**	19 11 58.4	-0.5
	baz=232							
ETLH	**Xiulin Townshi**	**1.04**	**238**	P		**Pg**	19 11 44.8	-0.1
	baz=245							
ETLH				*e*S		**Sn**	19 11 58.8	-0.4
	baz=245							
HWA	**Hwalien**	**1.10**	**224**	*e*P		**Pg**	19 11 45.8	-0.2
	baz=202							
HWA				*e*S		**Sg**	**19 12 01.8**	**+1.3**
	baz=202							
NCU	**National Centr**	**1.16**	**280**	*e*P		**Pg**	19 11 46.8	-0.4
	baz=278							
NCUH	**Zhongli**	**1.17**	**280**	*e*P		**Pg**	19 11 47.7	+0.4
	baz=278							
FUSS	**Fushou**	**1.21**	**245**	*e*P		**Pg**	19 11 48.2	0.0
	baz=243							
FUSS				*e*S		**Sn**	19 12 03.1	-0.6
	baz=243							
NFF	**Wufeng Townshi**	**1.22**	**264**	*i* P		**Pg**	19 11 47.7	-0.6
	baz=262							
NFF				*e*S		**Sn**	19 12 03.0	-0.5
	baz=262							
IRIF	**Iriomote-Funau**	**1.24**	**110**	P		**Pn**	19 11 46.7	-0.8
IRIF				*e*S		**Sb**	**19 12 02.4**	**-1.3**
WHF	**Hehuan Shan**	**1.25**	**240**	*i* P		**Pg**	19 11 48.6	-0.2
	baz=248							
WHF				*e*S		**Sb**	19 12 03.5	-0.7
	baz=248							
TWT	**Tachien**	**1.27**	**246**	*e*P		**Pg**	19 11 49.5	+0.2
	baz=244							
TWT				*e*S		**Sg**	19 12 06.0	+0.2
	baz=244							
TDCB	**Techi**	**1.28**	**247**	*e*P		**Pg**	19 11 49.5	0.0
	baz=245							
TDCB				*e*S		**Sg**	19 12 06.3	0.0
	baz=245							
NSTT	**Nanjuang**	**1.32**	**264**	*e*P		**Pb**	19 11 48.9	-0.4
	baz=262							
ESL	**Shilin**	**1.33**	**224**	*e*P		**Pg**	19 11 49.7	-0.6
	baz=204							
SBCB	**Hsinchu**	**1.33**	**271**	*e*P		**Pn**	19 11 48.4	-0.4
	baz=270							
CHGB	**Renai**	**1.36**	**239**	*e*P		**Pg**	19 11 51.1	+0.1
	baz=245							
CHGB				*e*S		**Sg**	19 12 09.3	+0.6
	baz=245							
OWD	**Renai**	**1.42**	**235**	*e*P		**Pg**	19 11 51.8	-0.3
	baz=241							
OWD				*e*S		**Sb**	19 12 09.0	+0.1
	baz=241							
HATJ	**Hateruma jima**	**1.43**	**120**	P		**Pn**	19 11 49.9	-0.2
HATJ				*e*S		**Sn**	19 12 07.3	-1.2
EGFH	**Guangfu**	**1.44**	**221**	*e*P		**Pb**	19 11 51.0	-0.3
	baz=202							
WUSB	**Renai**	**1.44**	**238**	P		**Pg**	19 12 52.0	-0.5
	baz=222							
WHP	**Taichung City**	**1.45**	**251**	P		**Pg**	19 11 53.1	+0.4
	baz=249							
WHP				*e*S		**Sg**	19 12 11.2	-0.5
	baz=249							
JKRS	**Kuro-shima**	**1.52**	**110**	P		**Pn**	19 11 51.0	-0.3
JKRS				S		**Sn**	**19 12 09.3**	**-1.5**
NMLH	**Miaoli**	**1.53**	**262**	*e*P		**Pg**	19 11 53.3	-0.8
	baz=275							
VWDT	**VWDT**	**1.56**	**230**	*i* P		**Pb**	19 11 53.2	-0.1
	baz=212							
VWDT				*e*S		**Sb**	19 12 12.4	-0.5
	baz=212							
WCS	**Beigang Elemen**	**1.57**	**243**	P		**Pg**	19 11 54.2	-0.7
	baz=253							
WCS				*e*S		**Sb**	19 12 13.5	+0.4
	baz=253							
NSY	**Sanyi**	**1.58**	**257**	*e*P		**Pg**	19 11 55.1	0.0
	baz=272							
HGSD	**Ruisui**	**1.58**	**217**	*e*P		**Pb**	19 11 52.7	-1.0
	baz=201							
TWQ1	**Liyutan**	**1.58**	**255**	*e*P		**Pg**	19 11 54.3	-0.9
	baz=272							
JIJ	**Ishigaki jima**	**1.59**	**104**	P		**Pn**	19 11 51.6	-0.8
JIJ				S		**Sn**	**19 12 10.7**	**-2.0**
EHY	**Hungye**	**1.62**	**220**	*e*P		**Pn**	**19 11 52.9**	**+0.1**
	baz=217							
SMLT	**Sun Moon Lake**	**1.67**	**238**	*e*P		**Pb**	19 11 55.6	+0.4
	baz=247							
SMLT				*e*S		**Sb**	19 12 16.0	0.0
	baz=247							
SSLB	**Suanglung**	**1.68**	**235**	*e*P		**Pb**	19 11 55.5	+0.1
	baz=243							
SSLB				*e*S		**Sg**	19 12 18.2	-0.6
	baz=243							
TYC	**Yuchr**	**1.69**	**240**	*e*P		**Pg**	19 11 56.4	-0.8
	baz=244							
TYC				*e*S		**Sg**	19 12 18.5	-0.6
	baz=244							
WDJ	**Dajia District**	**1.70**	**256**	*e*P		**Pg**	19 11 56.3	-1.1
	baz=273							
JISG	**Ishigakijimahi**	**1.70**	**96**	P		**Pn**	19 11 52.8	-1.0
YULB	**Yu-li**	**1.73**	**218**	*e*P		**Pn**	19 11 54.6	+0.3
	baz=216							
TCU	**Taichung**	**1.73**	**249**	*e*P		**Pn**	19 11 54.8	+0.5
	baz=248							
EYUL	**Yuli**	**1.75**	**216**	*e*P		**Pb**	19 11 55.7	-0.9
	baz=202							
WJS	**Zhushan**	**1.83**	**239**	*e*P		**Pg**	19 11 58.8	-1.2
	baz=238							
WNT	**Mingjian**	**1.84**	**242**	*e*P		**Pb**	19 11 58.6	+0.5
	baz=240							
YUS	**Yu-Shan**	**1.87**	**227**	*e*P		**Pb**	19 11 57.9	-1.0
	baz=208							
FULB	**Fuli**	**1.89**	**214**	*e*P		**Pn**	19 11 57.0	+0.5
	baz=197							
ALS	**Alishan**	**1.96**	**230**	*e*P		**Pb**	19 12 00.1	-0.1
	baz=213							
ELDTW	**Lidau**	**2.05**	**220**	*e*P		**Pn**	19 11 59.4	+0.6
	baz=205							
WDLH	**Douliu**	**2.05**	**239**	*e*P		**Pb**	**19 12 01.9**	**+0.2**
	baz=237							
JTJ	**Tarama**	**2.05**	**93**	*e*P		**Pn**	19 11 57.3	-1.4
JTJ				S		**Sn**	19 12 19.4	-4.7
EDH	**Donghe**	**2.07**	**211**	*e*P		**Pn**	**19 11 59.1**	**+0.2**
	baz=198							
EDH				*e*S		**Sn**	19 12 23.0	-1.6
	baz=198							
WRL	**Guolierlin Hig**	**2.08**	**246**	*e*P		**Pb**	19 12 00.8	-1.3
	baz=244							
WTK	**Tuku**	**2.17**	**241**	*e*P		**Pb**	19 12 02.8	-0.9
	baz=239							
STYH	**Taoyuan**	**2.21**	**224**	*e*P		**Pb**	19 12 02.6	-1.7
	baz=209							
STYH				*e*S		**Sb**	19 12 29.1	-2.4
	baz=209							
LONT	**Longtian**	**2.21**	**213**	*e*P		**Pn**	19 12 00.8	-0.1
	baz=212							
TPUB	**Ta-pu**	**2.21**	**229**	*e*P		**Pb**	19 12 03.6	-0.9
	baz=212							
CHY	**Chiayi**	**2.24**	**236**	*e*P		**Pb**	19 12 03.4	-1.5
	baz=234							
WTP	**Ta-pu**	**2.26**	**228**	*e*P		**Pb**	19 12 03.7	-1.6
	baz=210							
LDUT	**Ludao**	**2.27**	**203**	*e*P		**Pn**	19 12 00.8	-0.9
	baz=202							
TWGBT	**Beinan**	**2.31**	**213**	*e*P		**Pn**	19 12 02.5	+0.2
	baz=212							
TWG	**Pinlang**	**2.31**	**213**	*e*P		**Pn**	19 12 02.9	+0.6
	baz=212							
WSF	**Szhu**	**2.32**	**241**	*e*P		**Pb**	19 12 04.5	-1.9
	baz=240							
TWK	**Hsinying**	**2.33**	**231**	*e*P		**Pb**	19 12 05.6	-1.0
	baz=212							
SNST	**Tainan City**	**2.36**	**230**	*e*P		**Pb**	19 12 05.6	-1.3
	baz=228							
CHN1	**Nanshi**	**2.36**	**228**	*e*P		**Pb**	19 12 05.9	-1.1
	baz=227							
WSL	**Shuilin Townsh**	**2.38**	**239**	*e*P		**Pb**	19 12 05.3	-2.0
	baz=237							
SGST	**Jiashian**	**2.40**	**226**	*e*P		**Pb**	19 12 05.6	-2.0
	baz=209							
ICHU	**Yijhu**	**2.43**	**235**	*e*P		**Pb**	19 12 06.4	-1.7
	baz=217							
ECL	**Taimali**	**2.56**	**213**	*e*P		**Pn**	19 12 06.4	+0.7
	baz=211							
SCST	**Cishan**	**2.59**	**224**	*e*P		**Pb**	19 12 09.0	-1.9
	baz=222							
SHHT	**Tainan City**	**2.59**	**228**	*e*P		**Pb**	19 12 10.7	-0.2
	baz=227							
SSD	**Sandimen**	**2.61**	**220**	*e*P		**Pb**	19 12 09.2	-2.0
	baz=208							
TSMG	**Majia**	**2.64**	**219**	*e*P		**Pb**	19 12 08.9	-2.8
	baz=218							
MATB	**Ma-tsu**	**2.65**	**302**	*e*P		**Pn**	19 12 05.9	-1.0
	baz=301							
TSCK	**Chigu Township**	**2.70**	**234**	*e*P		**Pn**	19 12 09.4	+1.9
	baz=217							
MASBT	**Mashibuluo**	**2.72**	**218**	*e*P		**Pn**	19 12 09.8	+2.0
	baz=206							
VWUC	**VWUC**	**2.73**	**275**	*e*P		**Pn**	19 12 07.3	-0.8
	baz=274							
EAST	**Anshuo**	**2.79**	**212**	*e*P		**Pn**	19 12 09.7	+0.8
	baz=210							
TAWH	**Dawu Township**	**2.81**	**211**	*e*P		**Pn**	19 12 09.0	-0.1
	baz=210							
SSPT	**Xinbi**	**2.85**	**218**	*e*P		**Pb**	19 12 12.5	-2.9
	baz=216							
PNG	**Penghu**	**2.90**	**246**	*e*P		**Pn**	19 12 11.2	+0.8
	baz=245							
PHUB	**P'eng-hu**	**2.91**	**245**	*e*P		**Pn**	19 12 11.6	+1.1
	baz=244							
SCZT	**Fangliau**	**2.92**	**215**	*e*P		**Pn**	19 12 13.0	+2.4
	baz=201							
SLIU	**Shizi**	**2.96**	**211**	*e*P		**Pn**	19 12 11.9	+0.8
	baz=200							
XPSS	**Dashiqiu**	**2.96**	**317**	*e*P		**Pn**	19 12 09.8	-1.4
	baz=316							
LYJJ	**Jianjiangzhen**	**3.01**	**307**	*e*P		**Pn**	19 12 10.6	-1.2
	baz=306							
PTMZ	**Houxiangcun**	**3.04**	**276**	*e*P		**Pn**	19 12 11.7	-0.5
	baz=275							
VCHM	**Qimei**	**3.17**	**241**	*e*P		**Pn**	19 12 16.6	+2.6
	baz=240							
AXDP	**Jialang**	**4.07**	**273**	*e*P		**Pn**	19 12 25.9	-0.6
	baz=272							
JOW	**Kunigami**	**5.64**	**67**	Pn		**Pn**	**19 12 49.4**	**+1.4**
	0.5nm,0.3s,baz=152,slow=18,SNR=1.6							
	2.9nm,0.8s							
KSRS	**Korea Array**	**13.48**	**19**	Pn		**Pn**	**19 14 40.0**	**+4.5**
	0.1nm,0.3s,baz=328,slow=12,SNR=1.9							
SONM	**Songino Array**	**26.30**	**335**	P		**P**	**19 17 00.7**	**+0.9**
	0.7nm,0.3s,baz=128,slow=9.6,SNR=4.9							
	0.7nm,0.3s							
MKAR	**Makanchi Array**	**38.73**	**315**	P		**P**	**19 18 47.5**	**-0.8**
	0.2nm,0.7s,baz=107,slow=7.7,SNR=2.0							
	0.2nm,0.7s							
WRA	**Warramunga Arr**	**45.92**	**164**	P		**P**	**19 19 48.0**	**+1.0**
	0.7nm,0.7s,baz=346,slow=8.8,SNR=4.4							
	0.7nm,0.7s							
ASAR	**Alice Springs**	**49.41**	**166**	P		**P**	**19 20 14.6**	**+0.4**
	0.3nm,0.7s,baz=348,slow=9.3,SNR=2.9							
	0.3nm,0.7s							

*REN **09** 19:28:59.4±1.1,39°.57N±0°.03×115°.82W±0°.05,h5km±7km, ML2.6/2,ML2.3/38(NEIC),Error ellipse: s-maj=5.5km s-min=4.4km az=98.0*

NEIC 09 19:28:58.8±1.0,39°.62N±0°.04×115°.80W±0°.02,h7km±6km, Error ellipse: s-maj=5.4km s-min=1.4km az=189.0, Nevada

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ELK	**Elko**	**1.21**	**21**			Pn	19 29 22.7	+0.4
ELK						Sn	19 29 38.9	-0.2
ELK	**Elko**	**1.21**	**21**	IAML			19 29 40.9	
	34nm,0.5s							
R11A	**Troy Canyon, C**	**1.28**	**172**		Pn	Pn	19 29 22.9	-0.4
R11A				IAML			19 29 40.8	
	comp=N,39nm,0.3s							
R11A				IAML			19 29 41.6	
	comp=E,49nm,0.2s							
BMN	**Battle Mountai**	**1.36**	**307**			Pn	19 29 24.3	-0.1
BMN	**Battle Mountai**	**1.36**	**307**	IAML			19 29 45.2	
	comp=E,39nm,0.3s							
BMN				IAML			19 29 45.5	
	comp=N,47nm,0.5s							
PSUT	**Pine Spring**	**1.86**	**125**		Pn	Pn	19 29 31.6	+0.2
PSUT				IAML			19 29 59.8	
	comp=N,51nm,0.3s							
KVN	**Kaiserville**	**1.87**	**253**			Pn	19 29 31.0	-0.4
KVN				IAML			19 29 59.1	
	comp=N,21nm,0.6s							
KVN				IAML			19 30 02.5	
	comp=E,16nm,0.7s

Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENTT	**Nioudou** baz=73	**0.08**	**71**	P	Pg	19 45 02.8	+1.0
ENTT	baz=73			S	Sg	19 45 04.6	+1.1
LATG	**Datong** baz=150	**0.09**	**151**	P	Pg	19 45 02.4	+0.5
LATG	baz=150			S	Sg	19 45 04.5	+0.8
YHNB	**Yeheng** baz=301	**0.11**	**301**	P	Pg	19 45 03.0	+0.9
YHNB	baz=301			S	Sg	19 45 05.1	+0.9
NSK	**Sanguang** baz=300	**0.13**	**300**	*e*P	Pg	19 45 03.2	+0.9
NSK	baz=300			*e*S	Sg	19 45 05.3	+0.8
NWLT	**Wulai** baz=7.0	**0.17**	**7**	*e*P	Pg	19 45 04.0	+1.0
NWLT	baz=7.0			*e*S	Sg	19 45 06.8	+1.3
FUSB	**Fushanzhiwuyua** baz=34	**0.18**	**34**	*e*P	Pg	19 45 03.9	+0.7
FUSB	baz=34			*e*S	Sg	19 45 07.2	+1.4
TWE	**Neicheng** baz=60	**0.20**	**58**	*e*P	Pg	19 45 04.5	+0.9
NNSB	**Datong** baz=205	**0.20**	**206**	*e*P	Pg	19 45 04.2	+0.5
NDS	**Dongshan** baz=84	**0.22**	**85**	*e*P	Pg	19 45 04.6	+0.8

JMA 09 19:45:18.0±0.1, 24°.1N±0°.7×123°.4E±0°.3, h24km±2km, MV1.3/9, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.40**	**61**	P	Pb	19 45 26.3	-0.3
IRIF				*e*S	Sb	19 45 32.6	+0.2
HATJ	**Hateruma jima**	**0.43**	**101**	P	Pb	19 45 26.6	-0.3
HATJ				*e*S	Sb	19 45 33.5	+0.4
YOJ	**Yonaguni jima**	**0.45**	**317**	*e*S	Sb	19 45 33.4	-0.2
JYNG	**Yonagunijimaku**	**0.48**	**311**	*e*P	Pb	19 45 27.7	-0.1
JYNG				*e*S	Sb	19 45 34.4	-0.1
JKRS	**Kuro-shima**	**0.61**	**80**	P	Pb	19 45 30.1	0.0
JKRS				*e*S	Sb	19 45 39.0	+0.7
JIJ	**Ishigaki jima**	**0.76**	**73**	P	Pb	19 45 32.2	-0.4
JIJ				*e*S	Sb	19 45 42.9	+0.3
JISG	**Ishigakijimahi**	**0.99**	**63**	*e*P	Pn	19 45 35.6	-0.7

MAN 09 19:50:18.8, 6°.39N×126°.49E, h12km, mb4.7, ML3.6, MS3.5, 3C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.59**	**337**	*e*P	Pn	19 50 31.1	-0.6
DDMP	**Don Marcelino,**	**0.82**	**250**	*e*P	Pb	19 50 33.6	+1.1
KCP	**Kidapawan**	**1.52**	**294**	*e*P	Pn	19 50 43.0	-1.0
KCP				*i* S	Sn	19 51 02.4	-4.1
GSPH	**General Santos**	**1.56**	**259**	*i*P	Pn	19 50 42.1	-0.6
GSPH				*i* S	Sn	19 51 00.2	-4.1
BIPH	**Bislig**	**1.78**	**356**	*e*P	Pn	19 50 46.5	-0.9
BIPH				*e*S	Sn	19 51 08.6	-4.0
BUTP	**Butuan**	**2.70**	**341**	*e*P	Pn	19 51 03.2	+2.7
BUTP				*e*S	Sb	19 51 45.8	+1.4
GLSP	**General Luna,**	**3.39**	**354**	*e*P	Pn	19 51 11.3	+1.8
GLSP				*e*S	Sn	19 51 42.5	-10

*IDC **09** 19:54:32.9±0.3, 16°.59N×121°.01E, h0km, mb5.0/41, mbtmp5.0/44, ML4.7/3, MS4.5/73, Error ellipse: s-maj=11.4km s-min=7.4km az=79.0*

*MOS **09** 19:54:33.6±0.9, 16°.58N×121°.05E, h18km, mb5.4/60, MS4.8/30, Error ellipse: s-maj=6.2km s-min=3.5km az=113.1*

*GCMT **09** 19:54:34.4±0.1, 16°.47N±0°.01×120°.95E±0°.01, h12km, MW5.2/135, Moment Tensor Solution. s93,c150; s135,c252; Duration: 1s0 Moment tensor: Scale 10^{17} Nm; M_{rr}0.70±.01; $M_{\theta\theta}$-0.31±.01; $M_{\phi\phi}$-0.39±.01; $M_{r\theta}$0.08±.03; $M_{\theta\phi}$-0.59±.01; $M_{\phi r}$-0.33±.03; Best double couple: $M_0$0.90900×10^{17} NP1:ϕ_s66.00000°, δ44.00000°, λ126.00000°. NP2:ϕ_s201.00000°, δ56.00000°, λ60.00000°. Principal axes: T 0.8540, Plg65.0000°, Azm56.0000°; N 0.1090, Plg24.0000°, Azm218.0000°; P -0.9630, Plg7.0000°, Azm311.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **09** 19:54:34.4±1.8, 16°.57N±0°.05×121°.10E±0°.09, h8km±1km, mb5.3/268, Mwb5.2/21, Mww5.4 Error ellipse: s-maj=13.9km s-min=9.0km az=270.0*

*BJI **09** 19:54:38.2±0.0, 16°.64N×121°.05E, h43km, mb5.0/81, mB5.5/76, Ms5.2/93, Ms7 4.9/87*

*NEIC **09** 19:54:39.2, 16°.54N×121°.06E, h5km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}4.98; $M_{\theta\theta}$-1.46; $M_{\phi\phi}$-3.53; $M_{r\theta}$4.25; $M_{\theta\phi}$-0.96; $M_{\phi r}$4.97; Fault plane solution: $M_0$7.97000×10^{16} NP1:ϕ_s197.14000°, δ17.84000°, λ71.22000°. NP2:ϕ_s36.80000°, δ73.14000°, λ95.91000°. Principal axes: T 8.5358, Plg61.0000°, Azm316.0000°; N -1.2998, Plg6.0000°, Azm215.0000°; P -7.2361, Plg28.0000°, Azm122.0000°;*

*NEIC **09** 19:54:40, 16°.57N×121°.11E, h12km, Moment Tensor Solution. Duration: 12s0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.81; $M_{\theta\theta}$-0.29; $M_{\phi\phi}$-0.52; $M_{r\theta}$0.39; $M_{\theta\phi}$-0.67; $M_{\phi r}$1.46; Fault plane solution: $M_0$1.80000×10^{17} NP1: ϕ_s246.00000°, δ21.00000°, λ135.00000°. NP2: ϕ_s18.00000°, δ75.00000°, λ74.00000°. Principal axes: T 1.7486, Plg57.0000°, Azm268.0000°; N 0.0974, Plg15.0000°, Azm22.0000°; P -1.8460, Plg29.0000°, Azm121.0000°;*

*DJA **09** 19:54:41.5±0.4, 17°.1N±2°.2×122°.1E±°, h71km±4km, M5.0/63, mb5.1/63, mB5.5/41, MLv5.3/1, Mw(mB)5.0/41, MwMwp5.0/11, Mwp5.3/11*

ISC 09 19:54:36.9±0.4, 16°.50N±0°.02×121°.02E±0°.03, h27km±2km, h28km:pP-P, n1100, σ1s58/1167, mb5.2/287, MS4.7/123, 244C-88D, Fault plane solution: NP1:ϕ_s67.98817°, δ62.26616°, λ125.66140°. **NP2:**ϕ_s190.95342°, δ44.01662°, λ42.04530°. **Principal axes:** T Plg56.8844°, Azm26.9752°; N Plg31.0656°, Azm229.5228°; P Plg10.3374°, Azm133.2141°; **Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPP	**San Manuel, Pa**	**0.47**	**223**	*e*P	**Pb**	**19 54 42.5**	**-4.3**
SAMP	**Sagada Mountai**	**0.59**	**349**	*e*P	**Pb**	**19 54 45.2**	**-3.6**
BALP	**Baler**	**0.92**	**144**	*e*P	**Pn**	**19 54 52.1**	**-2.1**
BOLP	**Bolinao**	**1.07**	**264**	*e*P	**Pn**	**19 54 53.2**	**-2.9**
PALP	**Palanan**	**1.46**	**67**	*e*P	**Pb**	**19 55 02.6**	**-0.9**
PALP				*e*S	**Sb**	**19 55 25.9**	**+4.2**
QVP	**Quezon City--P**	**1.86**	**180**	*e*P	**Pn**	**19 55 06.3**	**-0.8**
QVP				*e*S	**Sb**	**19 55 32.8**	**-0.5**
SGCP	**Gonzaga**	**1.99**	**29**	*e*P	**Pn**	**19 55 09.7**	**+0.8**
SGCP	**Gonzaga**	**1.99**	**29**	*e*P	Pb	19 55 19.1	+6.5
SGCP				*e*S	**Sb**	**19 55 39.2**	**+2.3**
MACP	**Maragondon, Ca**	**2.24**	**187**	*e*P	**Pn**	**19 55 12.2**	**-0.1**
TGY	**Tagaytay City** 380nm,0.3s,baz=352,slow=2.4,SNR=43	**2.38**	**182**	Pn	**Pn**	**19 55 15.4**	**+1.2**
TGY	2µm,0.3s,baz=0.2,slow=24,SNR=20 6µm,0.8s			Lg	Lg	19 55 52.8	
JCNP	**Jose Panganiba**	**2.73**	**143**	*e*P	**Pn**	**19 55 20.3**	**+1.3**
JCNP				*e*S	**Sb**	**19 55 54.7**	**-3.4**
LUBP	**Lubang**	**2.85**	**195**	*e*P	**Pn**	**19 55 19.2**	**-1.4**
LUBP				*e*S	**Sn**	**19 55 54.8**	**+0.8**
LUBP	**Lubang**	**2.85**	**195**	*e*P	**Pn**	**19 55 20.7**	**+0.1**
LUBP				*e*S	Sn	19 55 39.9	-14
BOAC	**Boac**	**3.12**	**165**	*e*P	**Pn**	**19 55 26.1**	**+1.7**
SCSP	**San Jose Seism**	**3.72**	**139**	*e*P	**Pn**	**19 55 33.8**	**+1.2**
SCSP				*e*S	Pn	19 55 39.2	+6.6
SJMP	**San Jose**	**4.01**	**179**	*e*P	**Pn**	**19 55 38.8**	**+2.1**
SJMP				*e*S	**Pb**	**19 55 48.7**	**+1.7**
PVCP	**Virac**	**4.18**	**133**	*e*P	**Pn**	**19 55 39.2**	**+0.3**
RCP	**Roxas**	**5.19**	**161**	*e*P	**Pn**	**19 55 55.5**	**+2.7**
ENPP	**El Nido**	**5.48**	**197**	*e*P	**Pn**	**19 55 59.6**	**+2.7**
JAP	**San Jose, Anti**	**5.79**	**171**	*e*P	**Pn**	**19 56 04.0**	**+3.0**
GUIM	**Jordan**	**6.03**	**165**	*e*P	**Pn**	**19 56 08.0**	**+3.6**
GUIM				*e*S	Sn	19 56 54.5	-18
TWG	**Pinlang**	**6.29**	**0**		**Pn**	**19 56 06.6**	**-1.3**
TPUB	**Ta-pu**	**6.78**	**357**	Pn	**Pn**	**19 56 15.2**	**+0.5**
TPUB	**Ta-pu**	**6.78**	**357**	P	**Pn**	**19 56 16.8**	**+2.1**
LLP	**Lapu-Lapu**	**6.78**	**155**	*e*P	**Pn**	**19 56 17.1**	**+2.4**
CNOP	**Candoni, Negro**	**6.81**	**166**	*e*P	**Pn**	**19 56 16.5**	**+1.4**
CNOP				*e*S	Pb	19 56 41.1	+6.4
YULB	**Yu-li**	**6.87**	**2**		**Pn**	**19 56 14.8**	**-1.1**
PPR	**Puerto Princes**	**7.04**	**199**	*i*P	**Pn**	**19 56 19.2**	**+0.9**
SSLB	**Suanglung**	**7.25**	**360**		**Pn**	**19 56 22.1**	**+0.9**
SSLB	**Suanglung**	**7.25**	**360**	P	**Pn**	**19 56 23.9**	**+2.7**
TBP	**Tagbilaran**	**7.31**	**157**	*i*P	**Pn**	**19 56 24.2**	**+2.2**
TBP				*i* S	Pb	19 56 36.0	-7.1
MSLP	**Maasin**	**7.35**	**149**	*e*P	**Pn**	**19 56 24.4**	**+1.9**
SNPH	**Sibulan**	**7.43**	**163**	*e*P	**Pn**	**19 56 27.4**	**+3.6**
NACB	**Ninganchiao**	**7.66**	**4**		**Pn**	**19 56 26.4**	**-0.4**
YHNB	**Yeheng**	**8.14**	**2**		**Pn**	**19 56 34.4**	**+1.0**
YHNB	**Yeheng**	**8.14**	**2**	P	**Pn**	**19 56 36.3**	**+2.9**
YOJ	**Yonaguni jima**	**8.14**	**13**		**Pn**	**19 56 34.6**	**+1.3**
YOJ	**Yonaguni jima**	**8.14**	**13**	P	**Pn**	**19 56 34.7**	**+1.3**
YOJ	**Yonaguni jima**	**8.14**	**13**	P	**Pn**	**19 56 35.2**	**+1.8**
BATP	**Bataraza**	**8.27**	**203**	*e*P	**Pn**	**19 56 36.9**	**+1.7**
BATP				*e*S	Pb	19 57 08.1	+8.6
KNMB	**Chin-men Tao**	**8.30**	**343**		**Pn**	**19 56 35.4**	**-0.2**
GLSP	**General Luna,**	**8.32**	**143**	*e*P	**Pn**	**19 56 36.9**	**+1.0**
TATO	**Taipei**	**8.45**	**3**	Pn	**Pn**	**19 56 38.8**	**+1.2**
QZH	**Quanzhou**	**8.70**	**345**	*i*P	**Pn**	**19 56 41.5**	**+0.4**
QZH				S	**Sn**	**19 58 17.6**	**-0.7**
QZH	comp=N,3µm,16.1s			LR	LR		
QZH	comp=E,4µm,16.6s			LR	LR		
QZH	comp=Z,6µm,16.1s			LR	LR		
BUTP	**Butuan**	**8.72**	**148**	*e*P	Pn	19 56 46.6	+5.2
PAGZ	**Pagadian**	**8.90**	**165**	*e*P	**Pn**	**19 56 46.8**	**+3.0**
MCO	**Taipa Grande**	**8.99**	**310**	P	**Pn**	**19 56 45.0**	**-0.1**
JMJ	**Miyako jima 2**	**9.19**	**25**	P	**Pn**	**19 56 48.2**	**+0.4**
CTBH	**Cotabato--PC H**	**9.74**	**161**	*i*P	**Pn**	**19 56 58.8**	**+3.4**
BIPH	**Bislig**	**9.77**	**147**	*i*P	**Pn**	**19 56 58.0**	**+2.2**
KCP	**Kidapawan**	**10.24**	**157**	*e*P	**Pn**	**19 57 04.8**	**+2.6**
DAV	**Davao City (W)** 28nm,0.3s,baz=290,slow=8.8,SNR=2.6 102nm,0.4s	**10.38**	**154**	Pn	**Pn**	**19 57 05.5**	**+1.5**
DAV	**Davao City (W)**	**10.38**	**154**		**Pn**	**19 57 04.4**	**+0.3**
QIZ	**Qiongzhong**	**10.94**	**285**		**Pn**	**19 57 09.7**	**-2.1**
QIZ					**Sn**	**19 59 10.2**	**-3.1**
QIZ	**Qiongzhong**	**10.94**	**285**	P	**Pn**	**19 57 13.2**	**+1.4**
QIZ				S	**Sn**	**19 59 15.2**	**+1.8**
QIZ	comp=N,4µm,20.0s			LR	LR		
QIZ	comp=E,4µm,17.5s			LR	LR		
QIZ	comp=Z,5µm,15.7s			LR	LR		
MYLDM	**Lahad Datu**	**11.52**	**193**	Pn	**Pn**	**19 57 21.0**	**+1.3**
JOW	**Kunigami** 2.9nm,0.3s,baz=218,slow=11,SNR=33	**12.29**	**32**	Pn	**Pn**	**19 57 29.6**	**-0.7**
JOW	0.8nm,0.3s,baz=67,slow=27,SNR=1.4			Sn	**Sn**	**19 59 44.0**	**-2.4**
JOW	comp=Z,2µm,19.3s,baz=230,slow=38 43nm,0.6s			LR	LR	20 02 13.2	
JOW	**Kunigami**	**12.29**	**32**	Pn	**Pn**	**19 57 29.0**	**-1.3**
JOW	**Kunigami**	**12.29**	**32**	P	**Pn**	**19 57 29.9**	**-0.4**
GULI	**GuiLin**	**13.25**	**313**	P	**Pn**	**19 57 40.9**	**-2.4**
GULI	comp=Z,10.0nm,1.2s			pmax	pmax		
GULI	comp=N,4µm,14.6s			LR	LR		
GULI	comp=E,4µm,14.6s			LR	LR		
GULI	comp=Z,5µm,16.3s			LR	LR		
SGSI	**Sangihe** 1µm91nm,1.2s	**13.48**	**160**	P	**P**	**19 57 51.4**	**-4.1**
CNSH	**ChangSha**	**13.82**	**329**	P	**Pn**	**19 57 51.2**	**+0.1**
CNSH				S	**Sn**	**20 00 29.4**	**+5.7**
CNSH	comp=Z,40nm,1.1s			pmax	pmax		
CNSH	comp=N,6µm,14.7s			LR	LR		
CNSH	comp=E,4µm,13.4s			LR	LR		
CNSH	comp=Z,4µm,21.2s			LR	LR		
SSE	**Sheshan**	**14.53**	**1**	P	**Pn**	**19 58 00.7**	**-0.1**
SSE				S	**Sn**	**20 00 47.3**	**+6.2**
SSE	comp=Z,17nm,1.1s			pmax	pmax		
SSE	comp=Z,540nm,8.6s			pmax	pmax		
SSE	comp=N,700nm,16.4s			LR	LR		
SSE	comp=E,2µm,16.3s			LR	LR		
TOLI2	**Tolitoli**	**15.29**	**181**	Pn	**Pn**	**19 58 12.2**	**+1.1**
TOLI2				IAmb	IAmb	19 58 20.9	
TOLI2	**Tolitoli** comp=Z,154nm,1.2s	**15.29**	**181**	P	**P**	**19 58 15.3**	**-0.3**
NJ2	**Nanjing**	**15.61**	**353**	*i*P	**Pn**	**19 58 16.7**	**+1.6**
NJ2				pP	**P**	**19 58 19.7**	**+0.6**
NJ2				sP	**pP**	**19 58 23.4**	**-3.5**
NJ2				S	**Sn**	**20 01 06.8**	**-0.5**
NJ2	comp=Z,32nm,1.5s			pmax	pmax		
NJ2	comp=Z,1µm,3.8s			pmax	pmax		
NJ2	comp=Z,5µm,17.0s			LR	LR		
NJ2	comp=Z,4µm,16.5s			LR	LR		
NJ2	comp=Z,6µm,17.1s			LR	LR		
MRSI	**Marisa** comp=Z,2µmcomp=Z,2µmcomp=Z,78nm,1.1s	**15.95**	**177**	P	**P**	**19 58 22.7**	**-0.2**
KMSI	**Cibinong** comp=Z,3µmcomp=Z,189nm,1.0s	**16.09**	**169**	P	**P**	**19 58 25.5**	**+1.0**
MPSI	**Mapaga** comp=Z,2µmcomp=Z,146nm,1.3s	**16.10**	**184**	P	**P**	**19 58 26.7**	**+2.1**
GYA	**Guiyang**	**16.62**	**309**	*i*P	**P**	**19 58 30.2**	**-0.3**
GYA				pP	pP	19 58 37.0	-1.3
GYA	comp=Z,29nm,1.2s			pmax	pmax		
GYA	comp=Z,1µm,4.0s			pmax	pmax		
GYA	comp=Z,3µm,15.0s			LR	LR		
GYA	comp=Z,3µm,16.3s			LR	LR		
GYA	comp=Z,5µm,16.2s			LR	LR		
TNTI	**Ternate**	**16.83**	**158**	Pn	**Pn**	**19 58 28.3**	**-2.5**
TNTI	**Ternate** comp=Z,2µmcomp=Z,2µmcomp=Z,117nm,1.1s	**16.83**	**158**	P	**P**	**19 58 33.2**	**+0.5**
TNTI	**Ternate** comp=Z,117nm,1.1s	**16.83**	**158**	P	**P**	**19 58 32.2**	**-0.5**
JSU	**Suzuyama**	**17.23**	**28**	P	**Pn**	**19 58 35.5**	**-0.3**
JSU	comp=Z,194nm,1.2s			IAmb	IAmb	19 58 42.8	
APSI	**Ampana** comp=Z,2µmcomp=Z,170nm,1.5s	**17.31**	**178**	P	**P**	**19 58 41.1**	**+3.1**
BKB	**Balikpapan** comp=Z,3µmcomp=Z,155nm,1.8s	**18.11**	**193**	P	**P**	**19 58 48.6**	**+1.8**
LBMI	**Labuha** comp=Z,2µmcomp=Z,2µmcomp=Z,85nm,1.0s	**18.19**	**159**	P	**P**	**19 58 49.8**	**+2.1**
KSM	**Kuching**	**18.28**	**216**	P	**P**	**19 58 47.6**	**-1.1**
MTKI	**Muara Teweh, K** comp=Z,2µmcomp=Z,42nm,0.9s	**18.35**	**200**	P	**Pn**	**19 58 52.4**	**+2.8**
STKI	**Sintang** comp=Z,32nm,1.6s	**18.84**	**211**	P	**Pn**	**19 58 57.7**	**+2.1**
SANI	**Sanana** comp=Z,1µmcomp=Z,80nm,1.0s	**19.07**	**165**	P	**P**	**19 58 57.8**	**+0.4**
SANI	**Sanana**	**19.07**	**165**	P	**Pn**	**19 58 59.4**	**+1.1**
KMI	**Kunming**	**19.11**	**300**	∥P	**Pn**	**19 59 00.5**	**+1.5**
KMI				pP	sP	19 59 10.0	+0.5
KMI				PP	**PnPn**	**19 59 21.4**	**+10**
KMI				S	**Sn**	**20 02 31.7**	**-0.7**
KMI	comp=Z,61nm,2.5s			pmax	pmax		
KMI	comp=Z,3µm,7.2s			pmax	pmax		
KMI	comp=Z,3µm,14.9s			LR	LR		
KMI	comp=Z,3µm,18.8s			LR	LR		
KMI	comp=Z,5µm,17.4s			LR	LR		
TTSI	**Tana Toraja** comp=Z,1µmcomp=Z,100nm,1.3s	**19.45**	**184**	P	**Pn**	**19 59 03.9**	**+1.0**
JTU	**Tsushima**	**19.46**	**21**	P	**Pn**	**19 59 02.4**	**-0.5**
JTU	comp=Z,155nm,0.9s			IAmb	IAmb	19 59 05.1	
LYN	**LuoYang**	**19.55**	**338**	P	**Pn**	**19 59 04.9**	**+1.0**
LYN				pP	sP	19 59 17.1	+2.9
LYN				S	**S**	**20 02 41.9**	**+0.1**
LYN	comp=Z,40nm,0.9s			pmax	pmax		
LYN	comp=Z,3µm,9.4s			pmax	pmax		
LYN	comp=Z,3µm,18.0s			LR	LR		
LYN	comp=Z,3µm,19.2s			LR	LR		
LYN	comp=Z,3µm,19.8s			LR	LR		
NAWB	**Namwon**	**19.69**	**16**	P	**P**	**19 59 04.0**	**-0.1**
TIA	**Tai'an**	**19.94**	**351**	P	**Pn**	**19 59 08.3**	**-0.3**
TIA	comp=Z,86nm,1.5s			pmax	pmax		
TIA	comp=Z,2µm,8.2s			pmax	pmax		
TIA	comp=Z,3µm,17.1s			LR	LR		
TIA	comp=Z,3µm,15.9s			LR	LR		
TIA	comp=Z,4µm,19.1s			LR	LR		
SIJI	**Sorong** comp=Z,1µm,21.1s,baz=351,slow=40	**20.00**	**149**	LR	LR	20 07 59.8	
SPSI	**Sidrap Palu** comp=Z,2µmcomp=Z,115nm,1.4s	**20.37**	**184**	P	Pn	19 59 14.7	+1.0
PZH	**PanZhiHua**	**20.49**	**302**	P	Pn	19 59 15.6	+0.3
PZH				sP	sP	19 59 30.5	+6.0
PZH				PP	**PnPn**	**19 59 36.5**	**+5.8**
PZH				S	**S**	**20 02 55.9**	**-5.3**
PZH				SS	**SnSn**	**20 03 31.9**	**+11**
PZH				PcS	**PcS**	**20 07 00.5**	**-1.8**
PZH	comp=Z,40nm,1.1s			pmax	pmax		
PZH	comp=Z,2µm,8.8s			pmax	pmax		
PZH	comp=Z,2µm,16.7s			LR	LR		
PZH	comp=Z,4µm,16.9s			LR	LR		
PZH	comp=Z,4µm,17.2s			LR	LR		
XAN	**Xi'an**	**20.58**	**330**	P	Pn	19 59 15.2	-1.0
XAN				pP	sP	19 59 26.5	+1.1
XAN				sP	pP	19 59 31.8	+10
XAN				S	**S**	**20 03 03.6**	**+0.9**
XAN				SS	**SnSn**	**20 03 27.9**	**+5.3**
XAN	comp=Z,150nm,0.7s			pmax	pmax		
XAN	comp=Z,3µm,5.1s			pmax	pmax		
XAN	comp=Z,3µm,13.9s			LR	LR		
XAN	comp=Z,4µm,16.7s			LR	LR		
XAN	comp=Z,4µm,20.6s			LR	LR		
TJN	**Taejon**	**20.59**	**15**	P	**P**	**19 59 12.8**	**-1.0**
TJN	**Taejon**	**20.59**	**15**	*c*P	**P**	**19 59 13.2**	**-0.6**
TJN	**Taejon**	**20.59**	**15**	P	**P**	**19 59 14.3**	**+0.5**
BBKI	**Banjar Baru** comp=Z,108nm,2.0s	**20.75**	**198**	P	Pn	19 59 18.1	-0.1
BNSI	**Bone** comp=Z,3µmcomp=Z,256nm,1.3s	**20.78**	**183**	P	Pn	19 59 18.5	-0.1
CM31	**Chiang Mai Arr**	**21.15**	**279**	P	**P**	**19 59 21.8**	**+1.8**
CMAR	**Chiang Mai Arr** comp=Z,16nm,0.8s,baz=103,slow=7.8,SNR=104	**21.15**	**279**	P	**P**	**19 59 21.3**	**+1.3**
CMAR	comp=Z,1.8nm,0.6s,baz=110,slow=0.8,SNR=8.6			PcP	**PcP**	**20 03 25.9**	**+0.4**
CMAR	comp=Z,2µm,18.2s,baz=95,slow=38 comp=Z,16nm,0.8s			LR	LR	20 07 54.4	
CMAR	**Chiang Mai Arr**	**21.15**	**279**	P	**P**	**19 59 20.9**	**+0.8**
CMAR					**PcP**	**20 03 25.5**	**0.0**
CMAR	**Chiang Mai Arr**	**21.15**	**279**	*i*P	**P**	**19 59 22.2**	**+2.2**
CMAR	comp=Z,17nm,0.6s			pmax	pmax		
CHTO	**Chiang Mai**	**21.16**	**280**	P	**P**	**19 59 21.0**	**+0.8**
CHTO	**Chiang Mai**	**21.16**	**280**	P	**P**	**19 59 21.0**	**+0.8**
CHTO	comp=Z,32nm,0.9s			pmax	pmax		
PBKI	**Pangkalan Bun** comp=Z,2µmcomp=Z,146nm,1.0s	**21.20**	**207**	P	**P**	**19 59 22.7**	**+2.1**
KSCHJ	**Chungju**	**21.21**	**16**	P	**P**	**19 59 19.5**	**-1.0**
KSCHJ	comp=Z,134nm,1.2s			IAmb	IAmb	19 59 24.1	
CD2	**Chengdu**	**21.30**	**315**	P	**P**	**19 59 22.0**	**+0.3**
CD2				sP	sP	19 59 38.8	+5.6
CD2	comp=Z,280nm,0.9s			pmax	pmax		
CD2	comp=Z,2µm,7.1s			pmax	pmax		
CD2	comp=Z,340nm,13.3s			LR	LR		
CD2	comp=Z,3µm,13.3s			LR	LR		
CD2	comp=Z,4µm,17.1s			LR	LR		
JHS	**Saijyo**	**21.37**	**28**	P	**P**	**19 59 22.1**	**-0.2**
JHS	comp=Z,91nm,0.8s			IAmb	IAmb	19 59 25.1	
KAPI	**Kappang** comp=Z,46nm,1.0s,baz=2.9,slow=8.1,SNR=27	**21.41**	**183**	P	**P**	**19 59 24.6**	**+1.8**
KAPI	comp=Z,2µm,21.7s,baz=1.5,slow=37 comp=Z,46nm,1.0s			LR	LR	20 07 49.4	
KAPI	**Kappang**	**21.41**	**183**	P	**P**	**19 59 23.5**	**+0.7**
KAPI	**Kappang**	**21.41**	**183**	P	**P**	**19 59 25.3**	**+2.5**
INCN	**Inchon**	**21.48**	**12**	P	**P**	**19 59 22.6**	**-0.9**
INCN	comp=Z,86nm,0.9s			IAmb	IAmb	19 59 27.2	
INCN	**Inchon**	**21.48**	**12**	P	**P**	**19 59 22.6**	**-0.9**
INCN	comp=Z,86nm,1.0s			pmax	pmax		
INCN	**Inchon**	**21.48**	**12**	P	**P**	**19 59 23.9**	**+0.4**
HNS	**HongShan**	**21.55**	**346**	P	**Pn**	**19 59 25.8**	**+1.6**
HNS				pP	**sP**	**19 59 36.9**	**+0.9**
HNS				PP	**PnPn**	**19 59 50.6**	**+5.4**
HNS	comp=Z,90nm,1.1s			pmax	pmax		
HNS	comp=Z,2µm,5.4s			pmax	pmax		
HNS	comp=Z,4µm,14.0s			LR	LR		
HNS	comp=Z,2µm,14.0s			LR	LR		
HNS	comp=Z,4µm,18.4s			LR	LR		
BKSI	**Bulukumba** comp=Z,1µmcomp=Z,84nm,1.4s	**21.70**	**182**	P	**P**	**19 59 27.6**	**+1.7**
KSAR	**Wonju Array Be**	**21.73**	**15**	P	**P**	**19 59 25.3**	**-0.8**
KSAR	**Wonju Array Be**	**21.73**	**15**	P	**P**	**19 59 25.3**	**-0.8**
KSRS	**Korea Array** comp=Z,49nm,0.6s,baz=196,slow=10,SNR=234	**21.75**	**15**	P	**P**	**19 59 25.6**	**-0.6**
KSRS	comp=Z,2µm,19.0s,baz=200,slow=39 comp=Z,49nm,0.6s			LR	LR	20 08 37.5	
KS19	**Wonju Array Si**	**21.78**	**15**	P	**P**	**19 59 25.2**	**-1.5**
KS19				IAmb	IAmb	19 59 27.1	
HJU	**Haeju** comp=Z,68nm,0.8s	**21.86**	**10**	P	**P**	**19 59 26.8**	**-0.7**
HJU				sP	**pP**	**19 59 34.3**	**-1.0**
HJU				S	Sn	20 03 32.9	-5.2
HJU	comp=Z,1µm,3.2s			AmB			
HJU	comp=N,820nm,5.7s			AMS	AMS		
HJU	comp=E,654nm,4.6s			AMS	AMS		
HJU	comp=Z,614nm,4.3s			AMS	AMS		
BBSI	**Bau Bau**	**21.90**	**176**	P	**P**	**19 59 29.9**	**+1.8**

comp=Z,134nmcomp=Z,9.5nm,1.3s
FAKI Fak Fak 22.26 149 P P 19 59 34.0 +2.0
JCJ Chichijima 22.27 58 LR LR 20 07 32.9
comp=Z,717nm,19.6s,baz=150,slow=35
SRIT Nakonsritamara 22.32 252 P P 19 59 33.2 +0.6
SRIT IAmb IAmb 19 59 45.7
comp=Z,81nm,1.1s
DL2 Dalian 22.33 1⇓*i*P P 19 59 33.9 +1.4
DL2 S S **20 03 38.2 +1.6**
DL2 pmax pmax
comp=Z,77nm,0.8s
DL2 pmax pmax
comp=Z,820nm,7.3s
DL2 LR LR
comp=Z,1μm,17.1s
DL2 LR LR
comp=Z,4μm,16.5s
DL2 LR LR
comp=Z,2μm,16.7s
MYKOM Kota Tinggi 22.34 231 P P 19 59 32.3 -0.6
TIY Taiyuan 22.45 342 ⇑P P 19 59 35.5 +1.6
TIY pP **sP 19 59 44.8 -0.9**
TIY PP **PnPn 20 00 03.7 +6.2**
TIY pmax pmax
comp=Z,27nm,0.5s
TIY pmax pmax
comp=Z,2μm,3.9s
TIY LR LR
comp=Z,1μm,15.8s
TIY LR LR
comp=Z,3μm,16.7s
TIY LR LR
comp=Z,3μm,17.9s
BSSI Bau Bau, Buton 22.50 181 P P 19 59 35.5 +1.0
comp=Z,2μmcomp=Z,81nm,1.6s
SEHB SEOHWA 22.60 15 P P 19 59 34.8 -0.6
PYAG Pyongyang 22.85 10 P P 19 59 37.7 -0.3
PYAG pP **pP 19 59 44.1 -1.8**
PYAG S Sn 20 03 54.9 -6.9
PYAG AmB
comp=Z,413nm,1.5s
PYAG AMS AMS
comp=N,591nm,7.0s
PYAG AMS AMS
comp=E,437nm,5.1s
PYAG AMS AMS
comp=Z,252nm,3.0s
KULM Kulim 22.86 243 P P 19 59 38.4 0.0
IPM Ipoh 22.97 241 P P 19 59 38.4 -1.2
GUMO Guam 23.21 94 P P 19 59 43.5 +1.5
comp=Z,78nm,1.0s,baz=275,slow=2.2,SNR=2.6
GUMO LR LR 20 07 52.6
comp=Z,381nm,19.7s,baz=273,slow=34
comp=Z,78nm,1.0s
TPI Tanjungpandan 23.25 216 P P 19 59 42.9 +0.6
DSRI Dabo 23.40 225 P P 19 59 44.2 +0.4
comp=Z,16nm,1.5s
INU Inuyama 23.59 34 P P 19 59 44.0 -1.5
INU Inuyama 23.59 34 P P 19 59 44.6 -0.9
JHJ Hachijo jima 2 23.68 42 P P 19 59 46.1 -0.3
comp=Z,178nm,0.8s,baz=245,slow=8.3,SNR=10
JHJ LR LR 20 08 16.6
comp=Z,808nm,20.8s,baz=270,slow=35
comp=Z,178nm,0.8s
BWJI Bawean 23.70 201 P P 19 59 47.9 +1.2
comp=Z,257nm,1.3s
JHJ2 Mitsune 23.70 42 P P 19 59 45.9 -0.7
JHJ2 Mitsune 23.70 42 P P 19 59 46.5 -0.1
SUJ Sinuiju 23.71 7 P P 19 59 46.2 -0.4
SUJ pP **pP 19 59 51.0 -3.9**
SUJ S **S 20 04 08.3 +8.2**
SUJ AmB
comp=Z,1μm,1.5s
SUJ AMS AMS
comp=N,436nm,7.9s
SUJ AMS AMS
comp=E,885nm,16.1s
SUJ AMS AMS
comp=Z,228nm,4.1s
BJT Baijiatuau 23.81 351 P P 19 59 48.8 +1.2
BJT IAmb IAmb 19 59 56.5
comp=Z,92nm,0.9s
BJT Baijiatuau 23.81 351 P P 19 59 48.8 +1.2
BJT pmax pmax
comp=Z,92nm,0.9s
BJI Beijing 23.83 351 P P 19 59 48.3 +0.5
BJI S **S 20 04 04.4 +2.4**
BJI pmax pmax
comp=Z,87nm,1.5s
BJI pmax pmax
comp=Z,3μm,3.8s
BJI LR LR
comp=Z,2μm,17.6s
BJI LR LR
comp=Z,2μm,16.6s
BJI LR LR
comp=Z,3μm,17.9s
JGF Kuroka 23.96 34 P P 19 59 47.8 -1.4
JGF IAmb IAmb 19 59 50.0
comp=Z,80nm,1.0s
HHU Hamhung 24.02 12 P P 19 59 50.2 +0.6
HHU pP **pP 19 59 54.3 -3.6**
HHU S S 20 04 16.7 +12
HHU AmB
comp=Z,2μm,3.5s
HHU AMS AMS
comp=N,140nm,4.0s
HHU AMS AMS
comp=E,308nm,8.8s
HHU AMS AMS
comp=Z,90nm,2.6s
KMMI Kalianget 24.41 197 P P 19 59 54.5 +1.2
comp=Z,78nm,1.4s
LZH Lanzhou 24.78 325 ⇑P P 19 59 58.0 +1.3
LZH sP sP 20 00 16.3 +7.5
LZH PP **PnPn 20 00 37.8 +8.4**
LZH S **S 20 04 19.6 +1.9**
LZH sS sS 20 04 31.7 +0.2
LZH pmax pmax
comp=Z,250nm,1.3s
LZH pmax pmax
comp=Z,2μm,5.1s
LZH LR LR
comp=Z,4μm,12.8s
LZH LR LR
comp=Z,4μm,13.0s
LZH LR LR
comp=Z,5μm,15.7s
TBJI Tambak Boyo 24.88 202 P P 19 59 58.9 +1.3
comp=Z,83nm,1.3s
MMRI Maumere 25.00 177 P P 20 00 00.8 +2.1
comp=Z,3μmcomp=Z,142nm,1.8s
SRBI Singaraja 25.09 194 P P 20 00 04.0 +4.5
comp=Z,83nm,1.7s
MAJO Matsushiro 25.12 34 P P 19 59 57.6 -2.0
MAJO Matsushiro 25.12 34*ce*P P 19 59 57.7 -2.0
MAJO pmax pmax
comp=Z,17nm,1.0s
MAJO Matsushiro 25.12 34 P P 19 59 58.9 -0.8
MJAR Matsushiro Arr 25.12 34 P P 19 59 58.5 -1.2
comp=Z,10.0nm,0.8s,baz=213,slow=8.1,SNR=26
comp=Z,10.0nm,0.8s
MJAR Matsushiro Arr 25.12 34 P P 19 59 57.1 -2.6
MJB9 Matsu-Tunnel 25.12 34 P P 19 59 57.6 -2.1
MJB9 IAmb IAmb 20 00 16.5
comp=Z,56nm,1.3s
BLJI Banyuglugur 25.18 198 P P 20 00 03.6 +3.3
SNY Shenyang 25.34 4 ⇑P P 20 00 01.2 -0.3
SNY pmax pmax
comp=Z,97nm,1.1s
SNY LR LR
comp=Z,2μm,16.1s
SNY LR LR
comp=Z,2μm,13.7s
SNY LR LR
comp=Z,2μm,18.0s
PLAI Plampang 25.37 187 P P 20 00 03.4 +1.4
comp=Z,97nm,1.0s
PLAI Plampang 25.37 187 P P 20 00 05.2 +3.2
BKNI Bangkinang 25.42 233 P P 20 00 02.4 -0.1
BKNI Bangkinang 25.42 233 P P 20 00 03.1 +0.6
comp=Z,168nm,1.1s
TSI Tuntungan 25.56 242 P P 20 00 05.4 +1.6
comp=Z,171nm,1.2s
HHC Hu-ho-hao-te 25.61 343 *e*P P 20 00 05.2 +1.1
HHC S S **20 04 34.2 +3.5**
HHC sS sS 20 04 49.6 +4.8
HHC pmax pmax
comp=Z,150nm,1.0s
HHC LR LR
comp=Z,6μm,16.9s
HHC LR LR
comp=Z,5μm,16.7s
HHC LR LR
comp=Z,6μm,17.5s
PSI Prapat 25.64 240 P P 20 00 04.7 0.0
comp=Z,38nm,1.0s,baz=32,slow=5.1,SNR=11
comp=Z,38nm,1.0s
BTO Baotou 25.85 341 *e*P P 20 00 07.7 +1.4
BTO S **S 20 04 38.0 +3.6**
BTO LR LR
comp=Z,9μm,17.8s
BTO LR LR
comp=Z,7μm,15.5s
JYT Yasato 26.01 37 P P 20 00 07.1 -0.6
PWJI Pagerwojo 26.01 201 P P 20 00 09.0 +1.2
comp=Z,82nm,2.7s
LHMI Lhok Sumawe 26.12 247 P P 20 00 14.0 +5.1
KCSI Kotacane, Aceh 26.23 243 P P 20 00 08.7 -1.2
comp=Z,922nmcomp=Z,45nm,1.0s
JSD Sado 26.28 32 P P 20 00 08.7 -1.4
JSD IAmb IAmb 20 00 15.8
comp=Z,56nm,1.1s
PPI Padang Panjang 26.41 232 P P 20 00 11.6 +0.1
comp=Z,63nm,1.1s
BATI Baumata 26.66 174 P P 20 00 14.7 +0.9
comp=Z,92nm,0.7s,baz=180,slow=2.3,SNR=6.0
comp=Z,92nm,0.7s
LEM Lembang 26.70 211 P P 20 00 16.8 +2.5
comp=Z,22nm,0.7s,baz=136,slow=4.8,SNR=3.7
LEM LR LR 20 11 41.3
comp=Z,597nm,18.8s,baz=47,slow=38
comp=Z,22nm,0.7s
LEM Lembang 26.70 211 P P 20 00 17.8 +3.5
comp=Z,27nm,1.4s
KRJI Kerinci 26.72 228 P P 20 00 19.4 +5.0
comp=Z,79nm,1.7s
GENI Genyem 26.79 133 P P 20 00 16.9 +2.0
comp=Z,1μmcomp=Z,104nm,1.3s
DBJI Dramaga 26.91 213 P P 20 00 17.9 +2.0
comp=Z,43nm,1.1s
LWLI Liwa 27.17 220 P P 20 00 20.3 +1.8
comp=Z,100nm,1.4s
CN2 Changchun 27.48 7 *e*P P 20 00 20.2 -0.6
CN2 S **S 20 04 56.5 -3.3**
CN2 pmax pmax
comp=Z,30nm,0.8s
CN2 pmax pmax
comp=Z,400nm,8.0s
CN2 LR LR
comp=Z,1μm,13.0s
CN2 LR LR
comp=Z,2μm,13.0s
CN2 LR LR
comp=Z,1μm,16.0s
JMM Marumori 27.50 35 P P 20 00 19.9 -1.2
JMM IAmb IAmb 20 00 22.9
comp=Z,64nm,0.8s
GSI Gunungsitoli 27.59 239 P P 20 00 20.6 -1.5
GSI IAmb IAmb 20 00 32.0
comp=Z,109nm,1.3s
GSI Gunungsitoli 27.59 239 P P 20 00 20.9 -1.2
comp=Z,67nm,1.5s
XLT XiLinHaoTe 27.63 352⇓*i*P P 20 00 22.9 +0.6
XLT pP sP 20 00 34.4 +0.3
XLT sP pP 20 00 40.4 +9.4
XLT SS **SnSn 20 06 16.6 +1.5**
XLT pmax pmax
comp=Z,91nm,1.3s
XLT pmax pmax
comp=Z,1μm,3.9s
XLT LR LR
comp=Z,240nm,19.2s
XLT LR LR
comp=Z,2μm,16.5s
XLT LR LR
comp=Z,3μm,17.7s
SISI Saibi 27.97 233 P P 20 00 27.8 +2.3
comp=Z,60nm,1.1s
VLA Vladivostok 28.11 17*c i*P P 20 00 27.0 +0.6
VLA pmax pmax
comp=Z,32nm,1.4s
MDJ Mudanjiang 28.95 13 P P 20 00 33.9 -0.1
MDJ IAmb IAmb 20 00 35.4
comp=Z,57nm,1.0s
MDJ Mudanjiang 28.95 13 P P 20 00 34.0 +0.1
MDJ pP sP 20 00 45.6 -0.2
MDJ sP pP 20 00 51.0 +8.7
MDJ S **S 20 05 24.4 +1.4**
MDJ pmax pmax
comp=Z,53nm,1.0s
MDJ pmax pmax
comp=Z,380nm,3.9s
MDJ LR LR
comp=Z,2μm,20.4s
MDJ LR LR
comp=Z,3μm,15.6s
MDJ LR LR
comp=Z,3μm,19.9s
USA0B Ussuriysk Arra 29.14 16 P P 20 00 35.0 -0.5
USA0B IAmb IAmb 20 00 37.4
comp=Z,106nm,1.5s
USA0B Ussuriysk Arra 29.14 16*c i*P P 20 00 35.6 0.0
USRK Ussuriysk Ar. 29.14 16 P P 20 00 35.8 +0.3
comp=Z,14nm,0.7s,baz=205,slow=8.2,SNR=46
USRK LR LR 20 13 47.4
comp=Z,804nm,18.1s,baz=193,slow=40
comp=Z,14nm,0.7s
USRK Ussuriysk Ar. 29.14 16 P P 20 00 35.2 -0.4
GTA Gaotai 29.38 325 ⇑P P 20 00 38.4 +0.4
GTA PP **PnPn 20 01 37.3 +5.0**
GTA PcP **PcP 20 03 43.9 +0.1**
GTA S **S 20 05 30.8 +0.5**
GTA sS sS 20 05 43.5 -0.8
GTA pmax pmax
comp=Z,12nm,1.8s
GTA pmax pmax
comp=Z,400nm,7.6s
GTA LR LR
comp=Z,1μm,19.3s
GTA LR LR
comp=Z,2μm,18.5s
GTA LR LR
comp=Z,3μm,20.0s
JTM Tenmabayashi 29.78 32 P P 20 00 38.5 -2.9
LSA Lhasa 30.35 301 P P 20 00 48.0 +0.9
LSA Lhasa 30.35 301 P P 20 00 48.0 +0.9
LSA pmax pmax
comp=Z,20nm,0.9s
LSA Lhasa 30.35 301 P P 20 00 48.0 +0.9
LSA S **S 20 05 44.5 -1.8**
LSA pmax pmax
comp=Z,13nm,0.9s
LSA LR LR
comp=Z,660nm,15.3s
LSA LR LR
comp=Z,840nm,14.9s
LSA LR LR
comp=Z,1μm,16.7s
GOMU GeErMu 30.44 315 P P 20 00 48.7 +1.0
GOMU pP pP 20 00 55.7 -0.5
GOMU S **S 20 05 48.8 +1.4**
GOMU sS sS 20 06 06.3 +4.8
GOMU pmax pmax
comp=Z,6.0nm,0.6s
GOMU pmax pmax
comp=Z,230nm,7.6s
GOMU LR LR
comp=Z,3μm,14.8s
GOMU LR LR
comp=Z,1μm,13.0s
GOMU LR LR
comp=Z,2μm,15.8s
TEY Ternei 31.33 21 *e*P P 20 00 54.1 -0.8
TEY *e* 20 02 05.5
TEY pmax pmax
comp=Z,100nm,6.0s
ERM Erimo 31.75 32⇑*e*P P 20 00 57.3 -1.4
ERM pmax pmax
comp=Z,17nm,1.2s
TAPN Taplejung 32.64 295 *e*P P 20 01 07.2 +0.1
HIA Hailar 32.70 358 P P 20 01 06.6 -0.4
HIA IAmb IAmb 20 01 07.8
comp=Z,39nm,1.3s
HIA Hailar 32.70 358 P P 20 01 06.6 -0.4
HIA pmax pmax
comp=Z,39nm,1.3s
ODAN Odare 32.82 294 *e*P P 20 01 08.5 -0.1
KNRA Kununurra 32.87 166 P P 20 01 09.0 +0.3
ASAJ Asahikawa 33.04 29 P P 20 01 10.2 +0.2
ASAJ pmax pmax
comp=Z,29nm,1.0s
JKA Kamikawa-asahi 33.04 29 P P 20 01 10.2 +0.2
JKA IAmb IAmb 20 01 23.6
comp=Z,29nm,1.0s
ULN Ulaanbaatar 33.33 343 P P 20 01 12.9 +0.3
ULN Ulaanbaatar 33.33 343*c i*P P 20 01 13.0 +0.3
ULN pmax pmax
comp=Z,16nm,0.9s
SONM Songino Array 33.49 342 P P 20 01 14.3 +0.2
comp=Z,15nm,0.6s,baz=162,slow=9.9,SNR=78
SONM PcP **PcP 20 03 54.4 -0.3**
comp=Z,3.8nm,0.8s,baz=179,slow=3.0,SNR=4.1
SONM LR LR 20 15 41.3
comp=Z,2μm,19.5s,baz=153,slow=38
comp=Z,15nm,0.6s
SONM Songino Array 33.49 342 P P 20 01 13.9 -0.1
RAMN Ramite 33.52 294 *e*P P 20 01 14.2 -0.6
KLR Kul'dur 33.80 13 P P 20 01 16.8 +0.2
comp=Z,49nm,0.9s,baz=220,slow=7.3,SNR=125
KLR PcP **PcP 20 03 54.8 -0.5**
comp=Z,3.5nm,0.7s,baz=191,slow=3.5,SNR=4.4
KLR LR LR 20 16 13.9
comp=Z,2μm,19.6s,baz=198,slow=39
comp=Z,49nm,0.9s
KLR Kul'dur 33.80 13*c i*P P 20 01 16.6 +0.1
KLR pmax pmax
comp=Z,63nm,1.0s
JIRN Jiri 34.02 295 *e*P P 20 01 19.4 +0.2
GUN Gumba 34.34 295 *e*P P 20 01 22.0 0.0
PKI Pulchoki 34.68 295 *e*P P 20 01 24.3 -0.6
PKIN Phulchoki 34.70 295 *e*P P 20 01 24.4 -0.6
KKN Kakani 34.84 295 *e*P P 20 01 25.7 -0.4
DMN Daman 34.95 295 *e*P P 20 01 26.8 -0.4
YSS Yuzh-Sakhalins 35.31 26 P P 20 01 29.6 -0.1
YSS Yuzh-Sakhalins 35.31 26 *e*P P 20 01 29.8 +0.2
YSS pmax pmax
comp=Z,70nm,1.3s
YSS pmax pmax
comp=Z,400nm,6.7s
YSS Yuzh-Sakhalins 35.31 26 P P 20 01 29.5 -0.1
GKN Gorkha 35.44 295 *e*P P 20 01 30.5 -0.7
CIT Chita 35.94 352 *e*P P 20 01 34.9 -0.1
CIT *e* 20 03 00.5
CIT *e* 20 03 17.9
CIT *e* 20 04 01.9
CIT pmax pmax
comp=Z,67nm,2.1s
KOLN Koldanda 36.30 295 *e*P P 20 01 36.6 -2.1
GRNR Gornyy 36.36 17⇑*i*P P 20 01 33.0 -5.6
GRNR *e* 20 02 57.4
GRNR *e*S S 20 07 09.0 -9.1
GRNR pmax pmax
comp=N,10.0nm,0.6s
GRNR pmax pmax
comp=E,10.0nm,0.6s
GRNR pmax pmax
comp=Z,10.0nm,0.6s
GRNR smax smax
comp=N,2.0nm,0.6s
GRNR MLR MLR
comp=E,220nm,19.0s
GRNR MLR MLR
comp=N,640nm,16.0s
GRNR MLR MLR
comp=Z,800nm,15.0s
KUR Kuril'sk 36.44 32*c i*P P 20 01 39.1 -0.2
KUR *e*PP **sP 20 01 51.0 -0.2**
KUR *e* 20 03 01.4
KUR *e*PPP PPP 20 03 18.7
KUR S **S 20 07 18.2 -1.1**
KUR pmax pmax
comp=Z,422nm,1.3s
KUR MLR MLR
comp=Z,600nm,17.0s
ZAK Zakamensk 36.70 341 *e*P P 20 01 41.0 -0.6
ZAK pmax pmax
comp=Z,16nm,1.4s
KRVT Keravat (AS076 36.97 121 LR LR 20 14 23.8
comp=Z,656nm,19.2s,baz=93,slow=32
RABL Rabaul 37.02 121 P P 20 01 44.7 0.0
ZEA Zeya 37.48 6 *e*P P 20 01 47.7 -0.4
ZEA *e* 20 03 18.2
ZEA *e*S S **20 07 28.3 -6.7**
ZEA pmax pmax
comp=N,10.0nm,1.0s
ZEA pmax pmax
comp=E,10.0nm,1.0s
ZEA pmax pmax
comp=Z,20nm,0.9s
ZEA pmax pmax
comp=N,200nm,4.2s
ZEA pmax pmax
comp=Z,300nm,4.1s
ZEA smax smax
comp=E,200nm,13.8s
ZEA MLR MLR
comp=N,800nm,16.0s
ZEA MLR MLR
comp=Z,800nm,16.0s
PATS Pohnpei 37.70 100 P P 20 01 51.3 +0.9
PATS Pohnpei 37.70 100 P P 20 01 48.8 -1.7
IRK Irkutsk 38.05 343 *e*P P 20 01 52.7 -0.3
IRK pmax pmax
comp=Z,763nm,2.7s
WB0 Warramunga Arr 38.36 159 P P 20 01 54.2 -1.7
WB0 IAmb IAmb 20 01 58.5
comp=Z,80nm,1.2s
TYV Tymovskoe 38.42 22 *e*P P 20 01 56.9 +0.8
TYV *e*S S **20 07 50.3 +0.9**
TYV pmax pmax
comp=Z,200nm,4.6s
TYV pmax pmax
comp=Z,24nm,0.8s
TYV smax smax
comp=E,200nm,4.3s
WRAB Tennant Creek 38.50 160 P P 20 01 57.2 +0.2
WRAB IAmb IAmb 20 02 03.9
comp=Z,86nm,1.1s
WRAB Tennant Creek 38.50 160⇑*e*P P 20 01 57.2 +0.2
WRAB pmax pmax
comp=Z,53nm,1.1s
WRAB Tennant Creek 38.50 160 P P 20 01 57.8 +0.7
WRA Warramunga Arr 38.51 160 P P 20 01 56.5 -0.6
comp=Z,26nm,0.9s,baz=338,slow=9.2,SNR=25
WRA S **S 20 07 55.4 +4.2**
comp=Z,1.5nm,0.8s,baz=304,slow=29,SNR=5.2
WRA LR LR 20 19 21.0
comp=Z,288nm,21.2s,baz=16,slow=39
comp=Z,26nm,0.9s
WRA Warramunga Arr 38.51 160 P P 20 01 55.3 -1.8
WRA Warramunga Arr 38.51 160 *i* P P 20 01 56.5 -0.6
WRA pmax pmax
comp=Z,28nm,0.9s
MOY Mondy 38.54 340 *e*P P 20 01 57.4 +0.2
MOY pmax pmax
comp=Z,55nm,2.2s
WMQ Urumqi 39.20 321 *e*P P 20 02 03.4 +0.6
WMQ PP **PnPn 20 03 36.6 +1.0**
WMQ PcS **PcS 20 07 59.8 -1.6**
WMQ sS sS 20 08 23.1 +7.5
WMQ pmax pmax
comp=Z,22nm,1.3s
WMQ pmax pmax
comp=Z,610nm,8.1s
WMQ LR LR
comp=Z,3μm,15.5s
WMQ LR LR
comp=Z,2μm,19.9s
WMQ LR LR
comp=Z,1μm,29.0s
NKL Nikolayevsk 39.70 18 *e*P P 20 02 03.6 -3.1
NKL *e*S S **20 08 04.4 -4.1**
NKL pmax pmax
comp=E,7.0nm,1.5s
NKL pmax pmax
comp=N,1.0nm,0.9s

NKL pmax pmax
comp=Z,64nm,1.2s
NKL smax smax
comp=E,4.0nm,2.0s
NKL smax smax
comp=N,1.0nm,1.3s
NKL MLR MLR
comp=E,16nm,15.0s
NKL MLR MLR
comp=N,5.0nm,14.0s
NKL MLR MLR
comp=Z,777nm,17.0s
PALK Pallekele 40.43 262 P **P 20 02 14.5 +1.1**
comp=Z,7.2nm,0.6s,baz=171,slow=8.8,SNR=8.4
comp=Z,7.2nm,0.6s
HYBB Hyderabad (bro 40.57 278 *e*P **P 20 02 15.0 +0.5**
HYBB *e*sP **pP 20 02 18.3 -4.9**
HYBB *e*PP **PnPn 20 03 58.3 +6.1**
HYBB *e*S **S 20 08 25.7 +3.1**
QIS Mount Isa 41.10 153 P **P 20 02 18.7 0.0**
ASAR Alice Springs 41.86 162 P **P 20 02 25.6 +0.8**
comp=Z,14nm,0.6s,baz=332,slow=6.5,SNR=14
comp=Z,14nm,0.6s
ASAR Alice Springs 41.86 162 P **P 20 02 24.9 +0.1**
ZSN Zaisan 42.86 324 *e*P **P 20 02 31.7 -1.1**
ZSN Zaisan 42.86 324 *e*P **P 20 02 31.8 -1.1**
baz=324
PCHI Peechi 43.77 268 *e*P **P 20 02 37.6 -3.0**
PCHI *e*S **S 20 09 14.8 +5.1**
CTA Charters Tower 44.01 145 P **P 20 02 43.7 +1.4**
comp=Z,24nm,0.8s,baz=322,slow=9.5,SNR=16
CTA LR LR 20 20 43.8
comp=Z,346nm,21.3s,baz=330,slow=36
comp=Z,24nm,0.8s
CTA Charters Tower 44.01 145 P **P 20 02 43.6 +1.3**
MK31 Makanchi Array 44.01 322 P **P 20 02 42.3 +0.2**
MK31 Makanchi Array 44.01 322*c* i P **P 20 02 42.4 +0.3**
MKAR Makanchi Array 44.01 322 P **P 20 02 42.5 +0.4**
comp=Z,20nm,0.8s,baz=119,slow=8.6,SNR=182
MKAR PcP **PcP 20 04 27.4 -0.1**
comp=Z,12nm,0.7s,baz=157,slow=1.0,SNR=13
MKAR LR LR 20 21 59.1
comp=Z,1μm,21.9s,baz=99,slow=38
comp=Z,20nm,0.8s
SHLS Shalkode 44.14 316*c* i P **P 20 02 41.7 -1.6**
SHLS *e* 20 04 27.4
SHLS pmax pmax
comp=Z,15nm,0.8s
SHLS Shalkode 44.14 316⇑ *i* P **P 20 02 41.8 -1.6**
comp=Z,15nm,0.8s,baz=316
SHLS *e*PP **PP 20 04 27.5 +1.1**
baz=316
SKR Severo-Kuril's 44.19 32*c* i P **P 20 02 41.2 -2.2**
SKR *e* 20 04 25.3
SKR *e*S **S 20 09 13.9 -1.0**
SKR pmax pmax
comp=Z,300nm,9.4s
SKR pmax pmax
comp=Z,77nm,1.0s
SKR MLR MLR
comp=Z,200nm,18.0s
MAKZ Makanchi 44.20 322 P **P 20 02 43.6 0.0**
MAKZ Makanchi 44.20 322 P **P 20 02 43.6 0.0**
MAKZ pmax pmax
comp=Z,21nm,1.0s
UZB Uzynbulak 44.43 316 *e*P **P 20 02 43.8 -1.8**
UZB Uzynbulak 44.43 316 *e*P **P 20 02 43.9 -1.8**
baz=316
PRZ Przheval'sk 44.59 314 P **P 20 02 48.4 +1.3**
PRZ IAmb IAmb 20 02 54.7
comp=Z,35nm,0.9s
PRZ Przheval'sk 44.59 314 P **P 20 02 48.4 +1.3**
PRZ pmax pmax
comp=Z,35nm,1.0s
KPKS Kokpek 44.78 316*c* i P **P 20 02 48.5 +0.1**
KPKS pmax pmax
comp=Z,9.0nm,0.7s
KPKS Kokpek 44.78 316⇑ *i* P **P 20 02 48.5 +0.1**
comp=Z,9.1nm,0.7s,baz=316
SATY Saty 44.81 315 *e*P **P 20 02 47.5 -1.2**
SATY *e* 20 04 35.4
SATY pmax pmax
comp=Z,35nm,1.4s
SATY Saty 44.81 315 *e*P **P 20 02 47.5 -1.2**
comp=Z,35nm,1.4s,baz=315
SATY *e*PP **PP 20 04 35.4 +1.9**
baz=315
ZHN Zhinishke 44.83 315 *e*P **P 20 02 49.1 +0.3**
ZHN Zhinishke 44.83 315 *e*P **P 20 02 49.2 +0.3**
baz=315
KDJ Kajisay 45.30 314 P **P 20 02 53.4 +0.7**
KDJ Kajisay 45.30 314 P **P 20 02 53.4 +0.7**
KDJ pmax pmax
comp=Z,18nm,0.9s
KSH Kashi 45.32 310 P **P 20 02 55.9 +3.1**
KSH PP PP 20 04 46.8 +7.8
KSH pmax pmax
comp=Z,20nm,0.8s
KSH pmax pmax
comp=Z,450nm,5.6s
KSH LR LR
comp=Z,1μm,18.2s
KSH LR LR
comp=Z,2μm,16.5s
KSH LR LR
comp=Z,3μm,16.5s
MORW Morawa 45.55 186 P **P 20 02 54.4 -0.1**
MORW Morawa 45.55 186 P **P 20 02 55.4 +0.9**
TDK Taldyqorghan 45.59 318*ce*P **P 20 02 55.1 +0.4**
TDK pmax pmax
comp=Z,49nm,0.8s
TDK Taldyqorghan 45.59 318⇑ *e*P **P 20 02 55.2 +0.4**
comp=Z,49nm,0.8s,baz=318
MDOK Medeo 45.77 315 *e*P **P 20 02 56.1 -0.2**
MDOK *e* 20 04 46.1
MDOK Medeo 45.77 315 *e*P **P 20 02 56.1 -0.2**
baz=315
MDOK *e*PP **PP 20 04 46.2 +2.4**
baz=315
TNSS Tian-Shan 45.79 315 *e*P **P 20 02 57.9 +1.1**
TNSS Tian-Shan 45.79 315 *e*P **P 20 02 58.0 +1.1**
baz=315
AAA Alma-Ata 45.88 315 *e*P **P 20 02 55.6 -1.5**
AAA Alma-Ata 45.88 315 *e*P **P 20 02 55.6 -1.5**
baz=315
YAK Yakutsk 45.89 6 P **P 20 02 56.6 -0.2**
comp=Z,7.4nm,0.5s,baz=234,slow=2.1,SNR=26
YAK LR LR 20 23 37.6
comp=Z,849nm,18.2s,baz=210,slow=38
comp=Z,7.4nm,0.5s
YAK Yakutsk 45.89 6 P **P 20 02 55.6 -1.1**
YAK Yakutsk 45.89 6*c* i P **P 20 02 55.8 -1.0**
YAK *e* 20 04 31.6
YAK *e* 20 04 43.1
YAK *e*S **S 20 09 36.0 -3.2**
YAK *e* 20 12 46.7
YAK pmax pmax
comp=Z,52nm,1.0s
YAK pmax pmax
comp=E,10.0nm,1.1s
YAK pmax pmax
comp=N,35nm,1.2s
YAK pmax pmax
comp=Z,50nm,1.8s
YAK pmax pmax
comp=N,47nm,1.9s
YAK pmax pmax
comp=E,13nm,1.4s
YAK smax smax
comp=E,170nm,5.4s
YAK smax smax
comp=N,61nm,4.2s
YAK MLR MLR
comp=Z,796nm,17.0s
YAK MLR MLR
comp=N,490nm,16.0s
ULHL Ulahol 46.00 313 P **P 20 02 59.2 +0.9**
SNR=48
CHKK Chushkaly 46.07 316 *e*P **P 20 02 57.8 -0.7**
CHKK Chushkaly 46.07 316 *e*P **P 20 02 57.8 -0.7**
baz=316
OOD Oodnadatta 46.27 162 P **P 20 03 02.5 +2.4**
BOOM Boomskoye usch 46.29 314 P **P 20 03 00.8 +0.3**
BOOM Boomskoye usch 46.29 314 P **P 20 03 00.8 +0.3**
BOOM pmax pmax
comp=Z,16nm,1.0s

HNR Honiara 46.34 121 LR LR 20 19 54.6
comp=Z,516nm,20.6s,baz=307,slow=33
PEA0B Petropavlovsk- 46.45 30 P **P 20 03 01.4 0.0**
PEA0B Petropavlovsk- 46.45 30*ce*P **P 20 03 01.4 0.0**
PETK Petropavlovsk- 46.45 30 P **P 20 03 00.8 -0.5**
comp=Z,47nm,0.8s,baz=213,slow=7.9,SNR=99
PETK LR LR 20 21 48.6
comp=Z,558nm,22.0s,baz=228,slow=35
comp=Z,47nm,0.8s
PETK Petropavlovsk- 46.45 30 P **P 20 03 00.7 -0.6**
KUU Kurty 46.52 316 *e*P **P 20 03 01.4 -0.7**
KUU pmax pmax
comp=Z,74nm,0.8s
KUU Kurty 46.52 316 *e*P **P 20 03 01.4 -0.7**
comp=Z,74nm,0.8s,baz=316
TKM2 Tokmak 2 46.68 314 P **P 20 03 04.4 +0.8**
SNR=23
ZAA0 Zalesovo Array 46.74 331 P **P 20 03 02.8 -0.9**
ZAA0 IAmb IAmb 20 03 11.3
comp=Z,20nm,1.0s
ZALV Zalesovo Beam 46.74 331 P **P 20 03 02.8 -0.8**
comp=Z,13nm,0.8s,baz=123,slow=7.0,SNR=50
ZALV PcP **PcP 20 04 35.5 -1.2**
comp=Z,4.0nm,0.6s,baz=108,slow=3.2,SNR=6.6
ZALV LR LR 20 23 35.0
comp=Z,1μm,19.7s,baz=124,slow=37
comp=Z,13nm,0.8s
PET Petropavlovsk 46.86 30 P **P 20 03 04.3 -0.2**
PET Petropavlovsk 46.86 30 *e*P **P 20 03 04.8 +0.3**
PET *e* 20 04 51.2
PET *e*S **S 20 09 57.2 +3.9**
PET pmax pmax
comp=Z,84nm,0.9s
PET pmax pmax
comp=Z,400nm,8.0s
PET pmax pmax
comp=Z,200nm,5.3s
PET MLR MLR
comp=Z,600nm,22.0s
PET MLR MLR
comp=Z,600nm,22.0s
SEM Semipalatinsk 47.02 325 *e*P **P 20 03 03.6 -2.5**
SEM Semipalatinsk 47.02 325 *e*P **P 20 03 03.6 -2.5**
baz=325
KBK Karagaybulak 47.04 313 P **P 20 03 07.5 +1.2**
SNR=36
UCH Uchtor 47.20 313 P **P 20 03 09.4 +1.4**
SNR=31
CHMS Chumysh 47.29 314 P **P 20 03 08.7 +0.6**
SNR=14
FRU1 Bishkek 47.31 314 P **P 20 03 08.8 +0.5**
FRU1 IAmb IAmb 20 03 14.8
comp=Z,32nm,0.9s
FRU1 Bishkek 47.31 314 P **P 20 03 08.8 +0.5**
FRU1 pmax pmax
comp=Z,32nm,0.9s
AAK Ala-Archa 47.35 313 P **P 20 03 09.6 +0.9**
comp=Z,4.1nm,0.5s,baz=99,slow=8.0,SNR=11
AAK LR LR 20 23 00.2
comp=Z,652nm,21.7s,baz=94,slow=36
comp=Z,4.1nm,0.5s
AAK Ala-Archa 47.35 313 P **P 20 03 08.1 -0.7**
AAK Ala-Archa 47.35 313*ce*P **P 20 03 09.4 +0.6**
AAK pmax pmax
comp=Z,41nm,2.5s
FORT Forrest 47.49 172 P **P 20 03 10.0 +0.4**
FORT Forrest 47.49 172 P **P 20 03 10.9 +1.3**
SGDS Sogindy 47.52 314 *e*P **P 20 03 08.2 -1.8**
SGDS Sogindy 47.52 314 *e*P **P 20 03 08.2 -1.8**
baz=314
USP Ospenovka 47.55 314 P **P 20 03 10.7 +0.5**
SNR=26
AML Almayashu 47.75 312 P **P 20 03 13.4 +1.2**
SNR=16
EKS2 Erkin-Say 47.86 313 P **P 20 03 13.7 +1.0**
SNR=14
INKA Innaminka 47.95 156 P **P 20 03 13.8 +0.5**
KURK Kurchatov 48.07 325 P **P 20 03 14.0 0.0**
KURK Kurchatov 48.07 325*c* i P **P 20 03 14.1 +0.1**
KURK pmax pmax
comp=Z,58nm,0.9s
KURBB Kurchatov Arra 48.07 325 LR LR 20 23 54.3
comp=Z,499nm,20.5s,baz=96,slow=37
MULG Mulgathing 48.17 165 P **P 20 03 16.3 +1.3**
MA2 Magadan 48.18 20 P **P 20 03 14.9 +0.2**
comp=Z,26nm,0.9s,baz=238,slow=6.1,SNR=6.3
MA2 LR LR 20 24 44.9
comp=Z,697nm,20.2s,baz=228,slow=38
comp=Z,26nm,0.9s
MA2 Magadan 48.18 20 P **P 20 03 14.3 -0.4**
MA2 Magadan 48.18 20*ce*P **P 20 03 14.6 -0.1**
MA2 pmax pmax
comp=Z,41nm,1.2s
QLP Quilpie 48.40 152 P **P 20 03 17.2 +0.4**
DRK Karamyk 48.42 308 P **P 20 03 18.1 +0.9**
DRK IAmb IAmb 20 03 23.4
comp=Z,33nm,1.1s
BTLS Baital 48.46 316*c* i P **P 20 03 17.0 -0.1**
BTLS pmax pmax
comp=Z,9.0nm,0.8s
BTLS Baital 48.46 316⇑ *i* P **P 20 03 17.1 -0.1**
comp=Z,8.7nm,0.8s,baz=316
BTK Batken 49.29 309 P **P 20 03 23.9 +0.2**
BTK Batken 49.29 309 P **P 20 03 23.9 +0.2**
BTK pmax pmax
comp=Z,14nm,0.8s
GAR Garm 49.43 307 P **P 20 03 24.8 0.0**
DZA Taraz 49.65 313 *e*P **P 20 03 25.2 -1.1**
DZA Taraz 49.65 313 *e*P **P 20 03 25.2 -1.1**
baz=313
KBL Kabul 49.67 301 P **P 20 03 26.9 0.0**
KBL IAmb IAmb 20 03 37.3
comp=Z,20nm,0.7s
KBL Kabul 49.67 301 P **P 20 03 26.9 0.0**
KBL pmax pmax
comp=Z,20nm,0.7s
CHGR Chuyangaron 50.25 307 P **P 20 03 30.8 -0.2**
CHGR Chuyangaron 50.25 307 P **P 20 03 30.8 -0.2**
CHGR pmax pmax
comp=Z,81nm,0.8s
KK31 Karatay Array 50.28 313 P **P 20 03 31.1 0.0**
KK31 IAmb IAmb 20 03 32.3
comp=Z,26nm,0.7s
KK31 Karatay Array 50.28 313 P **P 20 03 31.1 0.0**
KK31 pmax pmax
comp=Z,26nm,0.7s
KKAR Karatay Array 50.28 313 P **P 20 03 30.9 -0.1**
KKAR IAmb IAmb 20 03 32.3
comp=Z,26nm,0.7s
KKAR Karatay Array 50.28 313 P **P 20 03 31.0 -0.1**
KKAR pmax pmax
comp=Z,26nm,0.7s
IUG luzhnay 50.37 311 *e*P **P 20 03 32.5 +0.6**
IUG luzhnay 50.37 311 *e*P **P 20 03 32.5 +0.6**
baz=311
TAS Tashkent 50.71 310 P **P 20 03 34.2 -0.2**
TAS IAmb IAmb 20 03 35.7
comp=Z,35nm,0.8s
TAS Tashkent 50.71 310 P **P 20 03 34.2 -0.2**
TAS pmax pmax
comp=Z,35nm,0.8s
EIDS Eidsvold 50.88 144 P **P 20 03 35.4 -0.3**
EIDS IAmb IAmb 20 03 40.7
comp=Z,42nm,1.1s
BBOO Buckleboo 51.10 164 P **P 20 03 36.5 -0.7**
BRZS Berezniki 51.16 322*c* i P **P 20 03 37.6 0.0**
BRZS pmax pmax
comp=Z,24nm,1.5s
BRZS Berezniki 51.16 322⇑ *i* P **P 20 03 37.6 0.0**
comp=Z,24nm,1.5s,baz=322
STKA Stephens Creek 51.99 158 P **P 20 03 44.2 +0.3**
comp=Z,19nm,0.9s,baz=334,slow=7.9,SNR=14
comp=Z,19nm,0.9s
STKA Stephens Creek 51.99 158 P **P 20 03 43.1 -0.8**
BRVK Borovoye 53.74 325 P **P 20 03 56.4 -0.2**
BRVK IAmb IAmb 20 04 02.1
comp=Z,29nm,0.9s
BRVK Borovoye 53.74 325*c* i P **P 20 03 56.7 +0.1**
BRVK pmax pmax
comp=Z,21nm,0.9s
HRA Herat 55.25 301 P **P 20 04 07.0 -1.2**
TIXI Tiksi 55.34 3 LR LR 20 31 27.5
comp=Z,606nm,18.5s,baz=181,slow=40
TIXI Tiksi 55.34 3 P **P 20 04 06.3 -1.6**
TIXI IAmb IAmb 20 04 09.3
comp=Z,30nm,0.8s

TIXI Tiksi 55.34 3*c* i P **P 20 04 06.8 -1.1**
TIXI pmax pmax
comp=Z,25nm,0.9s
TIXI MLR MLR
comp=Z,599nm,20.0s
KOUNC Koumac, New Ca 56.21 129 P **P 20 04 15.1 +0.2**
NRIK Noril'sk 56.78 346 P **P 20 04 18.1 -0.1**
comp=Z,68nm,0.8s,baz=133,slow=7.0,SNR=84
NRIK LR LR 20 30 28.0
comp=Z,2μm,18.1s,baz=151,slow=38
comp=Z,68nm,0.8s
NRIK Noril'sk 56.78 346 P **P 20 04 17.9 -0.4**
NRIK Noril'sk 56.78 346*c* i P **P 20 04 17.9 -0.4**
NRIK pmax pmax
comp=Z,77nm,0.9s
TOO Toolangi 58.51 157 P **P 20 04 30.7 -0.2**
TOO IAmb IAmb 20 04 35.9
comp=Z,52nm,1.4s
TOO Toolangi 58.51 157 P **P 20 04 30.7 -0.2**
TOO pmax pmax
comp=Z,52nm,1.4s
WSAR Wadi Sarin 58.69 287 P **P 20 04 32.9 +0.4**
comp=Z,5.5nm,0.6s,baz=169,slow=7.6,SNR=7.9
WSAR LR LR 20 31 03.4
comp=Z,160nm,21.3s,baz=117,slow=37
comp=Z,5.5nm,0.6s
DZM Mont Dzumac 58.73 129 P **P 20 04 33.7 +0.9**
comp=Z,28nm,1.1s,baz=192,slow=18,SNR=8.6
DZM LR LR 20 26 51.5
comp=Z,138nm,20.6s,baz=310,slow=33
comp=Z,28nm,1.1s
DZM Mont Dzumac 58.73 129 P **P 20 04 33.6 +0.9**
GEYT Alibeck 58.78 305 P **P 20 04 33.2 +0.2**
comp=Z,9.3nm,0.7s,baz=98,slow=9.1,SNR=16
GEYT LR LR 20 33 36.5
comp=Z,809nm,18.1s,baz=70,slow=40
comp=Z,9.3nm,0.7s
GEYT Alibeck 58.78 305 P **P 20 04 33.4 +0.4**
GEYT IAmb IAmb 20 04 47.7
comp=Z,16nm,0.9s
GYA0B ALIBECK ARRAY 58.78 305 P **P 20 04 32.8 -0.2**
GYA0B IAmb IAmb 20 04 47.6
comp=Z,27nm,0.9s
ABKAR Akbulak array 58.85 318 P **P 20 04 33.0 -0.2**
ABKAR Akbulak array 58.85 318 P **P 20 04 33.2 0.0**
ABKAR IAmb IAmb 20 04 34.3
comp=Z,54nm,0.7s
BILL Bilibino 58.97 18 P **P 20 04 33.7 0.0**
BILL IAmb IAmb 20 04 39.1
comp=Z,28nm,0.8s
BILL Bilibino 58.97 18*d* i P **P 20 04 33.5 -0.2**
BILL *i* 20 04 38.4
BILL *i* 20 05 17.1
BILL *e*S S 20 12 48.5 +10
BILL SS **SS 20 16 37.0 +5.3**
BILL pmax pmax
comp=Z,22nm,0.9s
BILL MLR MLR
comp=Z,395nm,18.0s
SVE Sverdlovsk 60.24 327*d* i P **P 20 04 42.6 0.0**
SVE pmax pmax
comp=Z,94nm,0.9s
SVE MLR MLR
comp=Z,797nm,17.0s
AKTO Aktyubinsk 60.30 319 LR LR 20 32 05.5
comp=Z,2μm,21.9s,baz=102,slow=37
ARU Arti 61.24 326 LR LR 20 32 47.5
comp=Z,595nm,19.4s,baz=91,slow=38
ARU Arti 61.24 326 P **P 20 04 48.7 -0.8**
ARU Arti 61.24 326*d* i P **P 20 04 48.5 -0.9**
ARU 20 05 28.1
ARU 20 07 00.1
ARU S **S 20 13 07.4 -0.2**
ARU 20 14 37.9
ARU SS **SS 20 17 05.3 -2.5**
ARU pmax pmax
comp=Z,64nm,0.7s
ARU MLR MLR
comp=Z,605nm,15.0s
SPIA Saint Paul Isl 64.77 34 P **P 20 05 11.6 -1.3**
baz=261
NIKH Nikolski High 65.04 39 P **P 20 05 13.4 -1.3**
NIKH Nikolski High 65.04 39 P **P 20 05 13.5 -1.3**
baz=264
GAMB Gambell 65.33 27 P **P 20 05 14.5 -1.8**
baz=257
MSVF Nonsavu 65.66 119 LR LR 20 31 53.8
comp=Z,310nm,18.8s,baz=292,slow=34
LKRN Lenkeran, Azer 66.13 305 P **P 20 05 21.8 -0.2**
KIRV Kirov 66.48 327 LR LR 20 36 31.0
comp=Z,1μm,19.4s,baz=96,slow=38
KIRV Kirov 66.48 327*c* i P **P 20 05 23.3 -0.6**
MAK Makhachkala 66.95 310 *e*P **P 20 05 24.0 -3.2**
MAK *e*PPP PPP 20 09 28.7
MAK *e*S **S 20 14 13.1 -5.7**
MAK *e**SS **sS 20 14 40.8 +7.1**
MAK *e*SS **SS 20 18 34.6 -2.7**
MAK pmax pmax
comp=Z,212nm,1.0s
MAK MLR MLR
comp=Z,703nm,13.0s
BELG Belogornoye 66.98 320 LR LR 20 35 29.9
comp=Z,414nm,19.3s,baz=109,slow=37
BELG Belogornoye 66.98 320*c* i P **P 20 05 26.5 -0.7**
BELG pmax pmax
comp=Z,17nm,0.9s
SEKA Sheki 67.24 308 P **P 20 05 28.9 -0.3**
TNA Tin City 67.28 25 P **P 20 05 28.3 -0.6**
baz=260
MNGR Mingechevir, A 67.34 308 P **P 20 05 29.5 -0.2**
GANJ Ganja 67.93 308 P **P 20 05 32.4 -1.1**
GROC Groznyy 68.19 310 *e*P **P 20 05 34.8 -0.2**
GROC *e* 20 05 59.1
GROC *e*S **S 20 14 30.6 -3.1**
GROC *e* 20 14 50.7
GROC pmax pmax
comp=Z,18nm,0.7s
NAX Nakhchivan 68.66 306 P **P 20 05 37.7 -0.4**
PRGR Permogore 68.68 330⇓ *i* P **P 20 05 37.3 -0.4**
GNI Garni 69.16 307 LR LR 20 39 57.8
comp=Z,480nm,20.5s,baz=94,slow=39
GNI Garni 69.16 307⇑ *e*P **P 20 05 41.7 +0.3**
GNI pmax pmax
comp=Z,32nm,1.6s
ZEI Tsey 69.61 310 *e*P **P 20 05 41.5 -2.6**
ZEI pmax pmax
comp=Z,26nm,1.3s
RDOG Red Dog Mine 69.62 23 P **P 20 05 39.9 -3.6**
baz=263
ONI Oni 69.95 310 P **P 20 05 46.3 +0.3**
ONI IAmb IAmb 20 05 48.3
comp=Z,20nm,0.9s
ONI Oni 69.95 310 P **P 20 05 46.3 +0.3**
ONI pmax pmax
comp=Z,20nm,0.9s
AKH Akhalkalaki 70.01 309 ⇑P **P 20 05 45.8 -0.8**
SDPT Sand Point 70.07 37 P **P 20 05 43.1 -3.3**
baz=270
GOF Gofitskoye 70.08 312⇑ *e*P **P 20 05 43.7 -3.0**
GOF pmax pmax
comp=Z,17nm,0.9s
KBZ Khabaz 70.27 311 P **P 20 05 47.8 -0.1**
comp=Z,12nm,1.0s,baz=97,slow=5.1,SNR=18
KBZ LR LR 20 39 22.8
comp=Z,598nm,21.2s,baz=78,slow=38
comp=Z,12nm,1.0s
KBZ Khabaz 70.27 311*ce*P **P 20 05 47.7 -0.1**
KBZ pmax pmax
comp=Z,17nm,1.0s
KARS Kars 70.39 308 P **P 20 05 47.6 -1.2**
KARS Kars 70.39 308 P **P 20 05 47.7 -1.2**
KVAR Kislovodsk Arr 70.40 311 LR LR 20 40 11.6
comp=Z,458nm,18.7s,baz=230,slow=39
KIV Kislovodsk 70.41 311 ⇓P **P 20 05 49.3 +0.4**
KIV Kislovodsk 70.41 311 P **P 20 05 48.7 -0.2**
KIV IAmb IAmb 20 05 55.7
comp=Z,31nm,0.8s
KIV Kislovodsk 70.41 311 *e*P **P 20 05 48.7 -0.2**
KIV *e*S **S 20 14 58.4 -1.7**
KIV pmax pmax
comp=Z,42nm,1.0s
KIV MLR MLR
comp=Z,561nm,18.0s
CHNA Chernabura Isl 70.59 37 P **P 20 05 46.2 -3.4**
baz=271

RAYN **Ar Rayn** 70.59 290 P **P** 20 05 49.8 -0.5
RAYN IAmb IAmb 20 05 56.8
comp=Z,27nm,0.9s
RAYN **Ar Rayn** 70.59 290 P **P** 20 05 49.8 -0.5
RAYN pmax pmax
comp=Z,27nm,1.0s
GEVA **Gevas** 70.63 305 P **P** 20 05 50.4 -0.1
GEVA IAmb IAmb 20 05 57.4
comp=Z,22nm,1.0s
VRH **Novokhopyorsk** 70.64 319 *e*P **P** 20 05 49.1 -0.9
VRH pmax pmax
comp=Z,80nm,0.8s
N16K **Nishlik Lake** 70.98 31 P **P** 20 05 52.4 +0.5
baz=270,SNR=7.1
O16K **Kokwok River B** 71.32 32 P **P** 20 05 53.7 -0.3
baz=271,SNR=5.7
GURO **Guroymak-BITLI** 71.41 306 P **P** 20 05 55.6 +0.5
GURO IAmb IAmb 20 05 57.0
comp=Z,21nm,0.9s
KLMR **Klimovskoe** 71.61 329 *e*P **P** 20 05 53.8 -1.9
KLMR *e* 20 08 32.3
KLMR *e*S **S** 20 15 11.9 -1.2
KLMR pmax pmax
comp=Z,63nm,1.2s
KLMR **Klimovskoe** 71.61 329 *e*P **P** 20 05 53.8 -1.9
KLMR AMP 20 06 00.2
comp=Z,63nm,1.2s
KLMR *e*PP **PP** 20 08 32.3 -2.2
KLMR *e*S **S** 20 15 11.9 -1.2
KLMR *e*S **S** 20 15 11.9 -1.2
KLMR LQ LQ 20 31 42.2
KLMR LQ LQ 20 31 42.2
KLMR LR LR 20 36 12.7
O17K **Koliganek Bris** 71.82 32 P **P** 20 05 56.3 -0.7
baz=272
GCSA **Galena City Sc** 71.85 27 P **P** 20 05 57.5 +0.5
baz=270,SNR=7.3
A21K **Barrow** 72.05 20 P **P** 20 05 58.9 +0.8
baz=268
P17K **Kvichak River** 72.18 32 P **P** 20 05 59.5 +0.4
baz=272,SNR=9.4
VORD **Divnogorie** 72.19 319 *e*P **P** 20 05 57.7 -1.6
VORD pmax pmax
comp=Z,20nm,0.8s
VORR **Voronezh** 72.19 320 *e*P **P** 20 05 58.7 -0.6
VORR pmax pmax
comp=Z,70nm,0.4s
VSR **Storozhevoye** 72.25 319 *e*P **P** 20 05 57.8 -1.9
VSR pmax pmax
comp=Z,30nm,0.9s
TTA **Tatalina** 72.26 28 P **P** 20 06 00.1 +0.5
baz=272
R17K **Ugashik Creek** 72.28 34 P **P** 20 06 00.1 +0.3
baz=273
LPSR **Galich'ya Gora** 72.29 321 *e*P **P** 20 05 59.2 -0.7
LPSR pmax pmax
comp=Z,60nm,0.8s
N18K **Kilae Creek** 72.39 31 P **P** 20 06 00.6 +0.2
N18K IAmb IAmb 20 06 22.2
comp=Z,36nm,1.4s
N18K **Kilae Creek** 72.39 31 P **P** 20 06 00.9 +0.5
baz=272
KOPT **Kop Dagi** 72.42 307 P **P** 20 06 01.7 +0.4
SVW2 **Sparrevohn** 72.53 30 P **P** 20 06 01.9 +0.6
MARD **Mardin** 72.54 305 P **P** 20 06 01.8 -0.1
MARD IAmb IAmb 20 06 03.1
comp=Z,20nm,0.7s
SOC **Sochi** 72.58 311 *e*P **P** 20 05 58.6 -3.3
SOC *e*S **S** 20 15 21.4 -3.6
SOC *e*SS **SS** 20 20 03.9 -0.1
SOC pmax pmax
comp=Z,25nm,0.8s
O18K **Koktuh Hills** 72.77 32 P **P** 20 06 02.9 +0.2
O18K **Koktuh Hills** 72.77 32 P **P** 20 06 03.3 +0.5
baz=273,SNR=16
P18K **Big Mountain,** 72.79 32 P **P** 20 06 02.7 -0.1
P18K IAmb IAmb 20 06 03.8
comp=Z,15nm,0.9s
P18K **Big Mountain,** 72.79 32 P **P** 20 06 02.4 -0.4
baz=273
L19K **White Mountain** 72.83 29 P **P** 20 06 03.6 +0.6
L19K IAmb IAmb 20 06 31.3
comp=Z,28nm,1.1s
L19K **White Mountain** 72.83 29 P **P** 20 06 03.5 +0.6
baz=273,SNR=8.9
MOS **Moscow** 72.83 324 *e*P **P** 20 06 00.7 -2.4
MOS *e* 20 06 17.2
MOS *e* 20 08 42.4
MOS *e*S **S** 20 15 28.0 +0.7
MOS pmax pmax
comp=Z,33nm,0.8s
MOS MLR MLR
comp=Z,500nm,20.0s
AFI **Afiamalu** 72.93 111 LR LR 20 32 57.7
comp=Z,175nm,18.9s,baz=342,slow=32
J20K **Nowinta River** 73.05 27 P **P** 20 06 05.0 +0.7
baz=273
M19K **Big River Lodg** 73.06 30 P **P** 20 06 05.0 +0.7
baz=273
N19K **Bonanza Creek** 73.08 31 P **P** 20 06 04.2 -0.4
N19K IAmb IAmb 20 06 06.4
comp=Z,28nm,1.1s
N19K **Bonanza Creek** 73.08 31 P **P** 20 06 05.1 +0.5
baz=274
K20K **Telida** 73.13 28 P **P** 20 06 05.4 +0.7
K20K IAmb IAmb 20 06 15.0
comp=Z,42nm,1.5s
K20K **Telida** 73.13 28 P **P** 20 06 05.3 +0.5
baz=273,SNR=9.9
IMAR **Indian Mountai** 73.13 25 P **P** 20 06 04.9 +0.2
L20K **Farewell, AK** 73.26 29 P **P** 20 06 06.0 +0.4
baz=274,SNR=5.1
OBN **Obninsk** 73.48 323 LR LR 20 39 56.3
comp=Z,98nm,20.1s,baz=60,slow=37
OBN **Obninsk** 73.48 323 P **P** 20 06 04.0 -2.9
OBN IAmb IAmb 20 06 06.7
comp=Z,25nm,0.7s
OBN **Obninsk** 73.48 323 *c i*P **P** 20 06 06.1 -0.8
OBN *i* 20 06 10.8
OBN *i* 20 06 22.5
OBN 20 08 52.0
OBN PPP PPP 20 10 39.0
OBN *e*S **SKiKP** 20 15 41.4 +5.6
OBN *i* 20 16 21.6
OBN pmax pmax
comp=Z,23nm,0.9s
OBN MLR MLR
comp=Z,435nm,20.0s
LVZ **Lovozero** 73.49 337 P **P** 20 06 08.4 +1.6
LVZ **Lovozero** 73.49 337 P **P** 20 06 08.4 +1.6
LVZ pmax pmax
comp=Z,39nm,0.7s
H21K **Melozitna Rive** 73.54 26 P **P** 20 06 07.7 +0.6
H21K IAmb IAmb 20 06 12.9
comp=Z,42nm,1.1s
H21K **Melozitna Rive** 73.54 26 P **P** 20 06 08.0 +0.9
baz=274,SNR=30
SII **Sitkinak Islan** 73.55 35 P **P** 20 06 06.7 -0.7
baz=275
Q19K **Cape Douglas,** 73.64 33 P **P** 20 06 06.2 -1.7
Q19K IAmb IAmb 20 06 24.3
comp=Z,68nm,1.5s
Q19K **Cape Douglas,** 73.64 33 P **P** 20 06 06.8 -1.1
baz=275
M20K **Styx River** 73.65 29 P **P** 20 06 08.5 +0.5
M20K **Styx River** 73.65 29 P **P** 20 06 08.2 +0.2
baz=274
CHUM **Lake Minchumin** 73.87 27 P **P** 20 06 09.8 +0.8
baz=274,SNR=8.1
I21K **Tanana** 73.92 26 P **P** 20 06 10.1 +0.7
I21K IAmb IAmb 20 06 11.5
comp=Z,44nm,1.2s
I21K **Tanana** 73.92 26 P **P** 20 06 10.0 +0.7
baz=274,SNR=9.6
RSO **Redoubt South** 73.95 31 P **P** 20 06 09.4 -0.5
OHAK **Old Harbor** 73.98 34 P **P** 20 06 09.3 -0.5
OHAK IAmb IAmb 20 06 10.3
comp=Z,22nm,0.8s
OHAK **Old Harbor** 73.98 34 P **P** 20 06 09.1 -0.7
baz=276
APA **Apatity** 73.98 336 ⇓ *i*P **P** 20 06 11.9 +2.3
APA pmax pmax
comp=Z,51nm,0.6s
APA MLR MLR
comp=Z,1μm,20.0s

PPLA **Purkepyile** 74.01 28 P **P** 20 06 10.2 +0.1
PPLA IAmb IAmb 20 06 15.2
comp=Z,27nm,1.1s
PPLA **Purkepyile** 74.01 28 P **P** 20 06 10.4 +0.3
baz=275,SNR=6.3
CAST **Castle Rocks** 74.01 28 P **P** 20 06 10.2 +0.2
CAST IAmb IAmb 20 06 11.5
comp=Z,36nm,0.8s
CAST **Castle Rocks** 74.01 28 P **P** 20 06 10.4 +0.4
baz=275,SNR=42
O20K **Slope Mountain** 74.05 31 P **P** 20 06 09.9 -0.4
baz=275
ANN **Anapa** 74.07 313 *e*P **P** 20 06 08.4 -2.2
ANN pmax pmax
comp=Z,22nm,0.6s
ANN MLR MLR
comp=Z,393nm,16.0s
N20K **Mount Spurr** 74.15 30 P **P** 20 06 10.1 -0.8
baz=275
SPCR **Spurr Chakacha** 74.15 30 P **P** 20 06 10.5 -0.3
baz=275
SPU **Mount Spurr** 74.23 30 P **P** 20 06 10.9 -0.4
KDAK **Kodiak Island** 74.30 34 LR LR 20 41 56.0
comp=Z,83nm,18.9s,baz=273,slow=38
KDAK **Kodiak Island** 74.30 34 P **P** 20 06 11.0 -0.6
KDAK IAmb IAmb 20 06 11.8
comp=Z,26nm,0.9s
KDAK **Kodiak Island** 74.30 34 P **P** 20 06 11.0 -0.6
KDAK pmax pmax
comp=Z,26nm,0.9s
KDAK **Kodiak Island** 74.30 34 P **P** 20 06 11.1 -0.6
baz=276
Q20K **Shuyak Island** 74.31 33 P **P** 20 06 10.8 -1.0
baz=276
HIZ **Hauiti** 74.39 139 P **P** 20 06 13.7 +1.3
SKT **Skwentna** 74.40 29 P **P** 20 06 11.5 -0.8
SKT **Skwentna** 74.40 29 P **P** 20 06 11.2 -1.0
baz=276,SNR=11
BPAW **Bear Paw Mtn.** 74.44 27 P **P** 20 06 12.7 +0.3
BPAW IAmb IAmb 20 06 14.1
comp=Z,49nm,1.0s
BPAW **Bear Paw Mtn.** 74.44 27 P **P** 20 06 12.8 +0.4
baz=276,SNR=41
MLY **Manley** 74.45 26 P **P** 20 06 12.8 +0.2
MLY IAmb IAmb 20 06 14.2
comp=Z,28nm,0.8s
MLY **Manley** 74.45 26 P **P** 20 06 13.1 +0.5
baz=276,SNR=47
COLD **Coldfoot** 74.46 24 P **P** 20 06 13.0 +0.5
COLD **Coldfoot** 74.46 24 P **P** 20 06 13.2 +0.8
baz=275,SNR=6.0
KTH **Kantishna Hill** 74.52 28 P **P** 20 06 12.7 -0.2
TOLK **Toolik Lake Re** 74.56 22 P **P** 20 06 13.0 -0.1
TOLK **Toolik Lake Re** 74.56 22 P **P** 20 06 13.5 +0.5
baz=276,SNR=8.7
CNPM **China Poot** 74.81 32 P **P** 20 06 14.1 -0.5
TRF **Thorofare Moun** 74.81 28 P **P** 20 06 14.9 +0.1
TRF **Thorofare Moun** 74.81 28 P **P** 20 06 14.2 -0.6
baz=276,SNR=9.6
SUA **Susitna One** 74.83 30 P **P** 20 06 13.7 -1.2
SUA IAmb IAmb 20 06 18.2
comp=Z,27nm,0.9s
SUA **Susitna One** 74.83 30 P **P** 20 06 14.0 -0.8
baz=276,SNR=22
H23K **Yukon River** 74.87 25 P **P** 20 06 15.3 +0.4
H23K **Yukon River** 74.87 25 P **P** 20 06 15.8 +0.9
baz=276,SNR=46
CUT **Chulitna** 74.94 29 P **P** 20 06 14.8 -0.5
CUT IAmb IAmb 20 06 16.6
comp=Z,32nm,0.8s
CUT **Chulitna** 74.94 29 P **P** 20 06 14.5 -0.8
baz=277
BRLK **Bradley Lake** 74.96 32 P **P** 20 06 14.2 -1.3
BRLK IAmb IAmb 20 06 17.3
comp=Z,19nm,0.9s
I23K **Minto, Yukon-K** 75.02 26 P **P** 20 06 15.5 -0.2
I23K IAmb IAmb 20 06 21.1
comp=Z,21nm,0.9s
I23K **Minto, Yukon-K** 75.02 26 P **P** 20 06 16.2 +0.5
baz=277,SNR=20
BRSE **Bradley Lake S** 75.03 32 P **P** 20 06 14.8 -1.1
baz=277
M22K **Willow** 75.09 29 P **P** 20 06 15.1 -1.1
M22K **Willow** 75.09 29 P **P** 20 06 15.2 -0.9
baz=277
BWN **Browne** 75.09 27 P **P** 20 06 15.9 -0.3
BWN IAmb IAmb 20 06 22.5
comp=Z,49nm,1.1s
NEA2 **Nenana** 75.21 26 P **P** 20 06 16.6 -0.2
NEA2 IAmb IAmb 20 06 18.1
comp=Z,27nm,0.8s
NEA2 **Nenana** 75.21 26 P **P** 20 06 16.7 -0.2
baz=277,SNR=23
RC01 **Rabbit Creek A** 75.36 30 P **P** 20 06 16.6 -1.2
RC01 **Rabbit Creek A** 75.36 30 P **P** 20 06 16.9 -0.8
baz=278
MCK **McKinley** 75.38 27 P **P** 20 06 17.1 -0.8
MCK IAmb IAmb 20 06 18.7
comp=Z,43nm,1.0s
MCK **McKinley** 75.38 27 P **P** 20 06 17.1 -0.8
MCK pmax pmax
comp=Z,43nm,1.0s
MCK **McKinley** 75.38 27 P **P** 20 06 17.4 -0.5
baz=278,SNR=17
TOKA **Tokat** 75.42 308 P **P** 20 06 17.2 -1.4
RND **Reindeer** 75.46 28 P **P** 20 06 17.2 -1.2
RND IAmb IAmb 20 06 18.9
comp=Z,36nm,1.0s
RND **Reindeer** 75.46 28 P **P** 20 06 17.2 -1.2
RND pmax pmax
comp=Z,36nm,1.0s
MDM **Murphy Dome** 75.52 26 P **P** 20 06 18.1 -0.6
MDM IAmb IAmb 20 06 20.1
comp=Z,26nm,0.9s
H24K **Noodor Dome** 75.55 25 P **P** 20 06 19.4 +0.5
H24K IAmb IAmb 20 06 27.0
comp=Z,32nm,1.0s
H24K **Noodor Dome** 75.55 25 P **P** 20 06 19.5 +0.7
baz=278,SNR=32
PMR **Palmer** 75.58 30 P **P** 20 06 17.9 -1.1
PMR IAmb IAmb 20 06 19.2
comp=Z,19nm,0.8s
PMR **Palmer** 75.58 30 P **P** 20 06 17.9 -1.1
PMR pmax pmax
comp=Z,19nm,0.8s
PMR **Palmer** 75.58 30 P **P** 20 06 18.2 -0.8
baz=278
ATD **Arta Tunnel** 75.59 278 LR LR 20 36 09.5
comp=Z,47nm,21.7s,slow=33
SEW **Seward** 75.63 31 P **P** 20 06 18.3 -1.0
SEW IAmb IAmb 20 06 22.1
comp=Z,22nm,1.2s
SEW **Seward** 75.63 31 P **P** 20 06 18.3 -1.0
baz=278
WRH **Wood River Hil** 75.65 27 P **P** 20 06 19.1 -0.3
WRH IAmb IAmb 20 06 20.5
comp=Z,15nm,0.8s
WAT1 **Susitna Watana** 75.67 28 P **P** 20 06 18.4 -1.2
baz=278
URZ **Urewera** 75.68 138 LR LR 20 42 21.9
comp=Z,182nm,18.6s,baz=30,slow=38
TCOL **CIGO, UAF Yank** 75.69 26 P **P** 20 06 19.1 -0.5
TCOL **CIGO, UAF Yank** 75.69 26 P **P** 20 06 19.4 -0.1
baz=278
COLA **College** 75.69 26 P **P** 20 06 19.2 -0.4
COLA **College** 75.69 26 *ce*P **P** 20 06 20.2 +0.6
COLA pmax pmax
comp=Z,17nm,0.9s
COLA **College** 75.69 26 P **P** 20 06 19.4 -0.1
baz=278
CCB **Clear Creek Bu** 75.75 26 P **P** 20 06 18.7 -1.2
BKZ **Black Stump Fm** 75.81 139 P **P** 20 06 20.2 -0.5
POKR **Poker Plat Res** 75.83 26 P **P** 20 06 19.9 -0.5
POKR IAmb IAmb 20 06 30.5
comp=Z,18nm,0.9s
POKR **Poker Plat Res** 75.83 26 P **P** 20 06 19.7 -0.7
baz=278
KNK **Knik Glacier** 75.92 30 P **P** 20 06 20.0 -1.1
KNK IAmb IAmb 20 06 21.3
comp=Z,21nm,0.8s
KNK **Knik Glacier** 75.92 30 P **P** 20 06 20.7 -0.3
baz=278,SNR=10.0
SML **Sawmill** 75.92 29 P **P** 20 06 20.3 -0.8
SML IAmb IAmb 20 06 21.9
comp=Z,53nm,1.3s
SML **Sawmill** 75.92 29 P **P** 20 06 20.6 -0.4

baz=278,SNR=15
WAT6 **Susitna Watana** 76.08 28 P **P** 20 06 21.6 -0.4
baz=279,SNR=27
IL31 76.12 26 P **P** 20 06 19.7 -2.3
ILAR **Eielson Array** 76.12 26 P **P** 20 06 20.6 -1.4
comp=Z,3.3nm,0.7s,baz=238,slow=3.6,SNR=26
ILAR PP **PP** 20 09 14.4 +1.7
comp=Z,2.0nm,1.1s,baz=279,slow=8.2,SNR=4.9
ILAR LR LR 20 42 06.4
comp=Z,163nm,19.6s,baz=279,slow=38
comp=Z,3.3nm,0.7s
ILAR **Eielson Array** 76.12 26 P **P** 20 06 20.0 -2.1
HDA **Harding Lake** 76.15 27 P **P** 20 06 20.7 -1.5
HDA **Harding Lake** 76.15 27 P **P** 20 06 21.0 -1.2
baz=279,SNR=13
BNN **Bunyan** 76.15 307 P **P** 20 06 22.6 -0.3
DHY **Denali Highway** 76.17 28 P **P** 20 06 22.0 -0.6
baz=279
M23K **Glacier View** 76.21 29 P **P** 20 06 22.1 -0.6
baz=279,SNR=7.3
SCM **Sheep Creek Mo** 76.39 29 P **P** 20 06 23.3 -0.4
SCM **Sheep Creek Mo** 76.39 29 P **P** 20 06 23.3 -0.4
SCM pmax pmax
comp=Z,51nm,1.0s
SCM **Sheep Creek Mo** 76.39 29 P **P** 20 06 23.6 -0.2
baz=279,SNR=26
ASF **Jabal al Asfar** 76.53 300 P **P** 20 06 25.3 +0.1
comp=Z,8.3nm,0.8s,baz=93,slow=3.5,SNR=13
comp=Z,8.3nm,0.8s
BMAR **Burnt Mountain** 76.59 23 P **P** 20 06 24.8 0.0
ARA0 **ARCESS Array S** 76.60 339 *e*P **P** 20 06 24.3 -0.4
ARCES **ARCESS Array B** 76.60 339 P **P** 20 06 24.9 +0.2
comp=Z,14nm,0.7s,baz=69,slow=6.6,SNR=15
ARCES LR LR 20 43 41.8
comp=Z,404nm,18.4s,baz=84,slow=38
comp=Z,14nm,0.7s
ARCES **ARCESS Array B** 76.60 339 P **P** 20 06 24.4 -0.3
ARCES IAmb IAmb 20 06 29.9
comp=Z,26nm,0.9s
GLI **Glacier Island** 76.66 30 P **P** 20 06 24.4 -0.8
GLI IAmb IAmb 20 06 25.4
comp=Z,22nm,0.8s
GLI **Glacier Island** 76.66 30 P **P** 20 06 24.8 -0.4
baz=280,SNR=19
K24K **Donnelly Dome** 76.75 27 P **P** 20 06 24.9 -0.8
baz=280,SNR=19
J25K **Salcha River,** 76.78 26 P **P** 20 06 24.0 -1.9
J25K **Salcha River,** 76.78 26 P **P** 20 06 24.2 -1.7
baz=280,SNR=12
M24K **Tolsona, Glenn** 76.88 29 P **P** 20 06 26.9 +0.4
M24K **Tolsona, Glenn** 76.88 29 P **P** 20 06 26.9 +0.4
baz=280,SNR=14
SPB2 **Spitsbergen Ar** 76.93 348 P **P** 20 06 26.9 +0.5
SPA0 **Spitsbergen Ar** 76.93 348 *e*P **P** 20 06 26.8 +0.4
SPITS **Spitsbergen Ar** 76.93 348 LR LR 20 45 18.1
comp=Z,1μm,18.3s,baz=36,slow=40
SPITS **Spitsbergen Ar** 76.93 348 P **P** 20 06 26.6 +0.1
SPITS pmax pmax
comp=Z,92nm,1.2s
FID **Port Fidalgo** 76.98 30 P **P** 20 06 26.5 -0.5
FID IAmb IAmb 20 06 28.0
comp=Z,40nm,1.3s
HAMF **Hammerfest** 76.98 340 *e*P **P** 20 06 26.4 -0.4
HIN **Hinchinbrook I** 77.03 31 P **P** 20 06 26.9 -0.4
HIN IAmb IAmb 20 06 28.4
comp=Z,59nm,1.5s
PAX **Paxson** 77.04 28 P **P** 20 06 27.0 -0.4
PAX IAmb IAmb 20 06 28.0
comp=Z,20nm,1.1s
PAX **Paxson** 77.04 28 P **P** 20 06 27.0 -0.4
PAX pmax pmax
comp=Z,20nm,1.1s
PAX **Paxson** 77.04 28 P **P** 20 06 27.3 -0.2
baz=281,SNR=19
KLU **Klutina** 77.11 29 P **P** 20 06 27.2 -0.6
KLU **Klutina** 77.11 29 P **P** 20 06 27.6 -0.3
baz=281,SNR=9.4
RIDG **Independent Ri** 77.17 27 P **P** 20 06 27.3 -0.7
RIDG **Independent Ri** 77.17 27 P **P** 20 06 27.4 -0.7
baz=281,SNR=32
DIV **Divide** 77.25 30 P **P** 20 06 28.3 -0.3
DIV IAmb IAmb 20 06 29.8
comp=Z,32nm,1.0s
Q23K **Middleton Isla** 77.29 32 P **P** 20 06 28.6 -0.1
baz=281
HARP **HAARP** 77.30 28 P **P** 20 06 28.5 -0.3
baz=281,SNR=5.0
ILGA **Ilgaz** 77.36 309 P **P** 20 06 29.8 0.0
ILGA IAmb IAmb 20 06 41.2
comp=Z,30nm,1.0s
EYAK **Cordova Ski Ar** 77.37 30 P **P** 20 06 28.7 -0.4
EYAK IAmb IAmb 20 06 44.0
comp=Z,23nm,1.1s
EYAK **Cordova Ski Ar** 77.37 30 P **P** 20 06 29.3 +0.1
baz=281,SNR=8.8
KTK1 **Kautokeino** 77.50 339 *e*P **P** 20 06 29.3 -0.4
SCRK **Sand Creek** 77.50 27 P **P** 20 06 29.1 -0.9
SCRK IAmb IAmb 20 06 31.0
comp=Z,26nm,1.2s
SCRK **Sand Creek** 77.50 27 P **P** 20 06 29.6 -0.5
baz=282,SNR=21
DOT **Dot Lake** 77.53 27 P **P** 20 06 29.0 -1.1
DOT IAmb IAmb 20 06 33.9
comp=Z,20nm,0.8s
J26L **Joseph Creek** 77.57 26 P **P** 20 06 29.7 -0.7
J26L **Joseph Creek** 77.57 26 P **P** 20 06 29.7 -0.7
baz=282,SNR=19
MMAI **Mount Meron Ar** 77.60 301 LR LR 20 44 55.7
comp=Z,245nm,18.6s,baz=242,slow=39
BR131 **Keskin Array S** 77.67 308 P **P** 20 06 30.8 -0.7
BR131 **Keskin Array S** 77.67 308 *de*P **P** 20 06 31.0 -0.5
BRTR **Keskin Array B** 77.67 308 P **P** 20 06 30.9 -0.5
comp=Z,4.1nm,0.8s,baz=113,slow=3.2,SNR=16
BRTR LR LR 20 45 35.9
comp=Z,370nm,19.6s,baz=82,slow=40
comp=Z,4.1nm,0.8s
BRTR **Keskin Array B** 77.67 308 P **P** 20 06 29.8 -1.7
BRTR **Keskin Array B** 77.67 308 *i* P **P** 20 06 31.0 -0.5
BRTR pmax pmax
comp=Z,5.0nm,0.8s
N25K **Chitina, Valde** 77.71 29 P **P** 20 06 31.0 -0.2
N25K IAmb IAmb 20 06 32.7
comp=Z,21nm,1.1s
N25K **Chitina, Valde** 77.71 29 P **P** 20 06 31.3 +0.1
baz=282,SNR=13
GHAJ **Ghor Haditha** 77.82 299 P **P** 20 06 32.8 +0.5
GHAJ IAmb IAmb 20 06 33.9
comp=Z,39nm,0.9s
MENT **Mentasta** 77.83 28 P **P** 20 06 32.0 +0.2
BMRM **Bremner River** 77.84 30 P **P** 20 06 30.7 -1.1
BMRM IAmb IAmb 20 06 33.0
comp=Z,33nm,1.2s
BMRM **Bremner River** 77.84 30 P **P** 20 06 31.7 -0.1
baz=282,SNR=12
L26K **Log Cabin Wild** 77.98 28 P **P** 20 06 32.5 -0.1
L26K **Log Cabin Wild** 77.98 28 P **P** 20 06 32.8 +0.2
baz=282,SNR=7.1
FIA1 **FINESS Array S** 78.00 331 P **P** 20 06 32.0 -0.7
FIA1 IAmb IAmb 20 06 32.8
comp=Z,31nm,0.9s
FINES **FINESS Array B** 78.01 331 P **P** 20 06 32.4 -0.3
comp=Z,15nm,0.7s,baz=55,slow=6.1,SNR=48
FINES LR LR 20 43 28.9
comp=Z,918nm,19.1s,baz=76,slow=38
comp=Z,15nm,0.7s
FINES **FINESS Array B** 78.01 331 P **P** 20 06 32.3 -0.4
GLB **Gilahina Butte** 78.11 29 P **P** 20 06 33.0 -0.4
GLB IAmb IAmb 20 06 34.8
comp=Z,42nm,1.3s
HMT **Hamilton** 78.14 30 P **P** 20 06 33.4 -0.1
M26K **Nabesna, AK** 78.28 28 P **P** 20 06 33.9 -0.4
M26K IAmb IAmb 20 06 35.6
comp=Z,24nm,0.9s
M26K **Nabesna, AK** 78.28 28 P **P** 20 06 34.5 +0.2
baz=283,SNR=20
ANTO **Ankara** 78.28 308 P **P** 20 06 33.5 -1.3
ANTO **Ankara** 78.28 308 P **P** 20 06 33.5 -1.3
ANTO pmax pmax
comp=Z,11nm,0.9s
K27K **Chicken** 78.31 27 P **P** 20 06 35.2 +0.8
baz=283
VSU **Vasula** 78.32 328 *c i*P **P** 20 06 33.9 -0.6
VSU pmax pmax
comp=Z,135nm,0.9s
VSU **Vasula** 78.32 328 *e*P **P** 20 06 34.4 -0.1
VRDI **Verde Repeater** 78.33 29 P **P** 20 06 34.6 -0.2

JETT Jettan, Norway 78.34 339 *e*P **P 20 06 34.3 -0.1**
MCARA McCarthy VSAT 78.50 29 P **P 20 06 35.6 +0.2**
MCARA IAmb IAmb 20 06 53.5
comp=Z,20nm,1.0s
MCARA McCarthy VSAT 78.50 29 P **P 20 06 35.8 +0.3**
baz=283,SNR=5.8
AKASG Malin Array Be 78.54 320 P **P 20 06 34.6 -1.2**
comp=Z,10nm,0.7s,baz=54,slow=4.6,SNR=111
AKASG LR LR 20 44 18.8
comp=Z,388nm,18.2s,baz=80,slow=38
comp=Z,10nm,0.7s
AKASG Malin Array Be 78.54 320 P **P 20 06 34.3 -1.6**
AKBB Malin Array Si 78.54 320 P **P 20 06 34.1 -1.7**
AKBB IAmb IAmb 20 06 35.8
comp=Z,30nm,0.8s
AKBB Malin Array Si 78.54 320*c* *i*P **P 20 06 34.6 -1.2**
MNK Minsk 78.54 324 *i* P **P 20 06 35.4 -0.3**
MNK *i* *PP **sP** **20 06 49.8 +1.2**
MNK *i* PPP PPP 20 11 23.2
MNK *i* S **S** **20 16 29.7 -0.8**
MNK *i* SS **SS** **20 21 38.3 +4.6**
MNK pmax pmax
comp=Z,34nm,0.8s
MNK pmax pmax
comp=E,7.0nm,1.4s
MNK Minsk 78.54 324 *i* P **P 20 06 35.5 -0.3**
comp=E,7.0nm,1.4s
MNK *i* P **P 20 06 35.5 -0.3**
MNK *i* P **P 20 06 35.5 -0.3**
comp=Z,34nm,0.8s,baz=257
MNK *i* pP **sP** **20 06 49.9 +1.2**
MNK *i* PP PP 20 09 10.1 -23
MNK *i* PPP PPP 20 11 23.3
MNK *i* S **S** **20 16 29.7 -0.8**
MNK *i* SS **SS** **20 21 38.3 +4.6**
MNK *i* SSS SSS 20 25 03.9
MNK *i* LQ LQ 20 36 27.5
MNK *i* LR LR 20 41 17.2
L27K Beaver Creek, 78.65 27 P **P 20 06 36.6 +0.3**
L27K IAmb IAmb 20 06 37.7
comp=Z,20nm,1.0s
L27K Beaver Creek, 78.65 27 P **P 20 06 36.8 +0.5**
baz=284,SNR=23
BGLC Bering Glacier 78.66 31 P **P 20 06 36.4 +0.1**
baz=283
BCAR Beaver Creek A 78.67 27 P **P 20 06 37.0 +0.6**
EIL Elat 78.68 298 P **P 20 06 36.5 -0.6**
comp=Z,20nm,0.9s,baz=31,slow=2.2,SNR=10
EIL LR LR 20 44 25.8
comp=Z,163nm,21.1s,baz=88,slow=38
comp=Z,20nm,0.9s
TGL Tana Glacier 78.73 30 P **P 20 06 37.0 +0.1**
TGL IAmb IAmb 20 06 43.2
comp=Z,26nm,1.2s
WAX Waxell Ridge 78.79 30 P **P 20 06 36.9 -0.3**
WAX IAmb IAmb 20 06 38.6
comp=Z,36nm,1.3s
M27K Edge Creek, AK 78.80 28 P **P 20 06 37.3 0.0**
M27K Edge Creek, AK 78.80 28 P **P 20 06 37.5 +0.3**
baz=284,SNR=15
TRO Tromso 78.81 340 *e*P **P 20 06 36.9 -0.1**
SNH Sunshine Point 78.86 30 P **P 20 06 37.7 +0.1**
SNH IAmb IAmb 20 06 39.1
comp=Z,22nm,1.0s
CSS Mathiatis 78.89 303 P **P 20 06 37.9 -0.2**
ISLE Juniper Island 79.00 30 P **P 20 06 36.5 -2.0**
IDID Didziasalis 79.01 324 *e*P **P 20 06 38.2 -0.1**
NACGM Naroch 79.08 324⇓ *e*P **P 20 06 38.9 +0.1**
baz=77
MEF Metsahovi 79.09 330 *e*P **P 20 06 38.2 -0.5**
BARN Barnard Glacier 79.22 29 P **P 20 06 39.6 -0.1**
BARN IAmb IAmb 20 06 40.7
comp=Z,16nm,0.8s
BVCY Beaver Creek 79.24 28 P **P 20 06 40.3 +0.7**
baz=285
GRNC Granite Creek 79.25 30 P **P 20 06 39.8 -0.1**
GRNC IAmb IAmb 20 06 41.5
comp=Z,39nm,1.4s
IIGN Ignalina 79.29 325 *e*P **P 20 06 39.7 -0.2**
ISAL Salakas 79.29 325 *e*P **P 20 06 39.5 -0.4**
MESA MESA 79.30 30 P **P 20 06 38.6 -1.5**
MESA MESA 79.30 30 P **P 20 06 39.8 -0.3**
baz=284
YAH Yahtse 79.35 30 P **P 20 06 40.0 -0.4**
YAH IAmb IAmb 20 06 50.4
comp=Z,39nm,1.5s
MDUB Mudurnu 79.35 309 P **P 20 06 40.1 -0.6**
CTG Chitna Glacier 79.39 29 P **P 20 06 41.1 +0.6**
baz=285,SNR=24
CTGM Chitina Glacie 79.39 29 P **P 20 06 41.0 +0.4**
CTGM IAmb IAmb 20 06 42.2
comp=Z,33nm,0.8s
DAWY Dawson 79.44 26 P **P 20 06 40.3 -0.4**
DAWY Dawson 79.44 26 P **P 20 06 40.8 +0.2**
baz=286,SNR=19
I29M Ogilvie Camp, 79.53 25 P **P 20 06 40.6 -0.4**
I29M Ogilvie Camp, 79.53 25 P **P 20 06 40.8 -0.2**
baz=286
LOGN Logan Glacier 79.58 30 P **P 20 06 41.9 +0.3**
LOGN IAmb IAmb 20 06 48.5
comp=Z,30nm,1.0s
YUK3 Moose Creek 79.59 29 P **P 20 06 41.9 +0.2**
baz=285,SNR=12
KIS Kishinev 79.60 316 *e*P **P 20 06 41.0 -0.7**
KIS *e*L L 20 42 03.0
KIS LRM MLR 20 45 20.0
comp=Z,300nm,16.5s
KIS Kishinev 79.60 316 *e*P **P 20 06 41.0 -0.7**
KIS MLR MLR
comp=Z,300nm,16.5s
TABL Table Mountain 79.62 30 P **P 20 06 42.1 +0.2**
TABL IAmb IAmb 20 06 48.1
comp=Z,24nm,1.0s
MILM Milestii Mici 79.62 316⇑ *i*P **P 20 06 40.0 -1.8**
comp=Z,280nm,6.5s
MILM Milestii Mici 79.62 316 *e*PP PP 20 09 47.0 +4.5
MILM *e*L L 20 39 15.0
MILM LRM MLR 20 45 19.0
comp=Z,500nm,18.5s
MILM Milestii Mici 79.62 316⇓ *e*P **P 20 06 40.9 -0.9**
MILM Milestii Mici 79.62 316*c* *i*P **P 20 06 40.0 -1.8**
MILM *i* 20 06 56.0
MILM *e* 20 09 47.0
MILM pmax pmax
comp=Z,280nm,6.5s
MILM MLR MLR
comp=Z,700nm,19.5s
SORM Soroca 79.65 317⇑ P **P 20 06 40.9 -1.1**
MTSE Matsula 79.75 328 *e*P **P 20 06 41.6 -0.6**
J29M Klondike Camp 79.83 26 P **P 20 06 42.5 -0.2**
J29M IAmb IAmb 20 06 45.5
comp=Z,34nm,0.8s
J29M Klondike Camp 79.83 26 P **P 20 06 43.5 +0.8**
baz=287
EPYK Eagle Plains 79.86 24 P **P 20 06 42.2 -0.5**
EPYK Eagle Plains 79.86 24 P **P 20 06 42.3 -0.5**
baz=288,SNR=8.3
NOR Nord 79.93 354 *i* P **P 20 06 41.1 -1.8**
NOR IAmb IAmb 20 06 48.3
comp=Z,5.8nm,0.7s
TLCR 80.01 314⇑ P **P 20 06 43.6 -0.3**
BORA Eskisehir 80.04 309 P **P 20 06 43.5 -0.9**
YUK8 Steele Glacier 80.04 29 P **P 20 06 44.7 +0.5**
baz=286,SNR=14
JURR Jurilovca 80.06 314⇑ P **P 20 06 43.6 -0.7**
RAF Rauma 80.13 331 *e*P **P 20 06 44.4 +0.1**
PCA Pinnacle 80.14 30 P **P 20 06 43.9 -0.6**
PCA IAmb IAmb 20 06 53.0
comp=Z,21nm,0.9s
PINM Pinnacle 80.14 30 P **P 20 06 44.7 +0.2**
baz=286
TPGR Topolog 80.36 314⇑ P **P 20 06 45.6 -0.3**
VLDR Vladesti 80.36 315⇑ P **P 20 06 45.6 -0.3**
INK Inuvik 80.39 21 LR LR 20 46 04.7
comp=Z,119nm,18.6s,baz=279,slow=38
INK Inuvik 80.39 21 P **P 20 06 44.7 -0.9**
INK Inuvik 80.39 21 P **P 20 06 44.7 -0.9**
INK pmax pmax
comp=Z,14nm,0.9s
INK Inuvik 80.39 21 P **P 20 06 45.1 -0.5**
baz=290,SNR=15
VSVD Vaisvydziai 80.39 326 *e*P **P 20 06 45.3 -0.5**
TIRR Tirgusor 80.46 313⇑ P **P 20 06 45.7 -0.7**
TIRR Tirgusor 80.46 313 P **P 20 06 45.5 -0.9**
TIRR IAmb IAmb 20 06 52.4
comp=Z,37nm,1.0s
TIRR Tirgusor 80.46 313 P **P 20 06 45.5 -0.9**
TIRR pmax pmax
comp=Z,37nm,1.0s
CFR Carcaliu 80.48 314⇓ P **P 20 06 46.3 -0.2**
PABE Paberze 80.50 325 P **P 20 06 45.7 -0.6**
PABE Paberze 80.50 325 *e*P **P 20 06 45.8 -0.6**
YUK4 Talbot Arm 80.54 29 P **P 20 06 47.1 +0.3**
baz=287
BIR Birlad 80.57 315⇑ P **P 20 06 47.1 +0.1**
STEI Steigen 80.64 338 *e*P **P 20 06 46.2 -0.7**
PNL Peninsula 80.67 30 P **P 20 06 47.8 +0.5**
baz=286
HARR Harsova 80.74 314⇑ P **P 20 06 46.8 -1.2**
GHRR 80.77 315⇑ P **P 20 06 48.3 +0.3**
YUK6 Outpost Mounta 80.79 29 P **P 20 06 49.1 +0.9**
baz=287,SNR=7.9
PSN Preselentsi 80.80 313 P **P 20 06 48.4 +0.1**
FAUS Fauske 80.81 338 *e*P **P 20 06 47.2 -0.6**
SLIT Slitere, Latvi 80.82 327 *e*P **P 20 06 46.8 -1.2**
ICOR Ion Corvin 80.97 313⇑ P **P 20 06 48.6 -0.5**
PANC Panciu 80.99 315⇑ P **P 20 06 49.5 +0.2**
M30M Minto, Yukon 81.00 27 P **P 20 06 49.2 +0.2**
M30M IAmb IAmb 20 06 51.3
comp=Z,45nm,1.4s
M30M Minto, Yukon 81.00 27 P **P 20 06 49.9 +0.8**
baz=288,SNR=20
ODBI Odobesti 81.08 315⇑ P **P 20 06 50.0 +0.3**
LOF Lofoten 81.16 339 *e*P **P 20 06 48.6 -1.1**
TESR Tescani 81.16 316⇓ P **P 20 06 49.6 -0.6**
ELL Elmali 81.19 306 P **P 20 06 49.7 -1.0**
ELL Elmali 81.19 306 P **P 20 06 49.7 -1.0**
ELL pmax pmax
comp=Z,64nm,1.0s
AAL Aland 81.21 330 *e*P **P 20 06 49.7 -0.4**
N30M Aishikik Lake 81.22 28 P **P 20 06 51.2 +0.9**
baz=288,SNR=15
HYT Haines Junctio 81.23 29 P **P 20 06 50.7 +0.3**
HYT IAmb IAmb 20 06 52.4
comp=Z,26nm,1.3s
HYT Haines Junctio 81.23 29 P **P 20 06 51.1 +0.7**
baz=288,SNR=14
VRI Vrincioaia 81.27 315⇑ P **P 20 06 50.9 0.0**
PLOR Plostina 81.33 315⇑ P **P 20 06 50.9 -0.2**
SUW Suwalki 81.34 324 *e*P **P 20 06 50.2 -0.7**
SUW Suwalki 81.34 324 P **P 20 06 49.8 -1.1**
SUW Suwalki 81.34 324 P **P 20 06 49.8 -1.1**
SUW pmax pmax
comp=Z,118nm,0.8s
SUW Suwalki 81.34 324 *e*P **P 20 06 50.3 -0.6**
BISRR Bisoca 81.36 315⇓ P **P 20 06 50.8 -0.5**
BIZ Bicaz 81.42 316⇑ P **P 20 06 51.3 -0.2**
PBUR Paburge 81.46 326 *e*P **P 20 06 51.4 -0.1**
PRD Provadia 81.48 312 P **P 20 06 51.6 -0.3**
A36M Sachs Harbour 81.48 17 P **P 20 06 50.9 -0.4**
baz=297
MOR8 Moi Rana 81.57 337 *e*P **P 20 06 50.9 -1.0**
COVR Voineasa-Covas 81.63 315⇑ P **P 20 06 52.4 -0.3**
NEHR Nehoiu 81.68 315⇑ P **P 20 06 53.3 +0.3**
N31M Braeburn, Yuko 81.81 28 P **P 20 06 54.1 +0.7**
N31M IAmb IAmb 20 06 59.6
comp=Z,17nm,0.9s
N31M Braeburn, Yuko 81.81 28 P **P 20 06 54.0 +0.7**
baz=289,SNR=9.2
BURAR Bucovina Array 81.83 317⇑ P **P 20 06 53.7 -0.1**
BURAR Bucovina Array 81.83 317 P **P 20 06 53.1 -0.7**
BUR08 Bucovina Ar. S 81.83 317 P **P 20 06 53.4 -0.4**
BUR08 IAmb IAmb 20 06 56.6
comp=Z,20nm,0.8s
MLR Muntele Rosu 81.90 315⇓ P **P 20 06 54.2 0.0**
MLR Muntele Rosu 81.90 315 P **P 20 06 54.3 +0.1**
baz=90,slow=4.0
MLR LR LR 20 47 22.4
comp=Z,1µm,21.5s,baz=65,slow=39
MLR Muntele Rosu 81.90 315 P **P 20 06 53.5 -0.8**
MLR IAmb IAmb 20 06 59.3
comp=Z,19nm,0.8s
O30N Mendenhall 81.90 29 P **P 20 06 54.4 +0.5**
baz=289,SNR=9.2
LVV L'vov 81.99 320 *e*P **P 20 06 51.1 -3.4**
LVV MLR MLR
comp=E,300nm,20.0s
LVV MLR MLR
comp=N,400nm,19.0s
LVV MLR MLR
comp=Z,500nm,20.0s
DOPR Dopca 82.15 316⇓ P **P 20 06 55.1 -0.3**
M31M Drury Creek, Y 82.18 27 P **P 20 06 55.2 -0.1**
M31M Drury Creek, Y 82.18 27 P **P 20 06 55.5 +0.2**
baz=290,SNR=13
PLBC Pleasant Camp 82.21 30 P **P 20 06 55.7 +0.3**
baz=289
JMB Yambol 82.24 312 P **P 20 06 56.0 0.0**
SZH Strazhica 82.49 313 P **P 20 06 56.6 -0.7**
WHY Whitehorse 82.50 29 P **P 20 06 57.3 +0.2**
WHY IAmb IAmb 20 06 58.3
comp=Z,14nm,0.8s
WHY Whitehorse 82.50 29 P **P 20 06 57.3 +0.2**
baz=290,SNR=11
VOIR 82.52 315⇑ P **P 20 06 56.5 -0.9**
ARCR ARCALIA 82.53 317⇑ P **P 20 06 57.5 +0.1**
FARO Faro, Yukon 82.63 27 P **P 20 06 57.9 +0.2**
baz=291,SNR=15
SKAG Skagway 82.70 30 P **P 20 06 58.5 +0.5**
SKAG IAmb IAmb 20 07 00.0
comp=Z,21nm,1.0s
SKAG Skagway 82.70 30 P **P 20 06 58.3 +0.4**
baz=290
COPA Copaceanca 82.76 314⇑ P **P 20 06 58.0 -0.6**
HUMR Humele 82.82 314⇑ P **P 20 06 58.1 -0.8**
ARR Arges 82.82 315⇑ P **P 20 06 58.7 -0.3**
CASY Casey 82.90 184 P **P 20 06 59.0 +0.3**
CASY IAmb IAmb 20 07 02.9
comp=Z,20nm,1.3s
C36M Paulatuk 83.08 19 P **P 20 06 59.2 -0.5**
C36M IAmb IAmb 20 07 03.4
comp=Z,15nm,0.7s
C36M Paulatuk 83.08 19 P **P 20 06 59.0 -0.8**
baz=299,SNR=5.8
DIM Dimitrovgrad 83.11 312 P **P 20 07 00.1 -0.4**
CJR Cluj-Napoca 83.14 317⇑ P **P 20 07 01.0 +0.4**
CBBR Cluj-Babes-Bol 83.15 317⇑ P **P 20 07 00.6 0.0**
NSS Namsos 83.16 336 *e*P **P 20 06 59.0 -1.3**
KOLS Kolonicke sedl 83.34 319 *e*P **P 20 07 01.7 +0.1**
KOLS pmax pmax
comp=Z,12nm,0.7s
KOLS Kolonicke sedl 83.34 319 *e*P **P 20 07 01.7 +0.1**
RDO Rodhopi 83.35 311 P **P 20 07 00.4 -1.3**
BEL Belsk 83.36 322 *e*P **P 20 07 01.9 +0.3**
VLAD Vladila 83.36 314⇑ P **P 20 07 01.6 -0.1**
MMPY Sheldon Lake, 83.38 26 P **P 20 07 01.8 +0.3**
baz=293,SNR=5.7
LOT Lotru 83.38 315⇑ P **P 20 07 02.4 +0.4**
UZH Uzhgorod 83.42 319 *e*P **P 20 07 01.2 -0.7**
UZH *e* 20 07 04.2
UZH *e* 20 07 09.4
UZH *e* 20 10 10.0
UZH *e*S **S** **20 17 18.2 -3.3**
UZH *e*SS **SS** **20 22 49.6 +2.9**
UZH MLR MLR
comp=Z,80nm,19.0s
P32M Atlin 83.43 30 P **P 20 07 01.6 -0.2**
baz=291
SIT Sitka 83.53 32 P **P 20 07 02.7 +0.4**
baz=290
P33M Teslin, Yukon 83.62 29 P **P 20 07 03.0 +0.2**
P33M Teslin, Yukon 83.62 29 P **P 20 07 03.2 +0.3**
baz=292
DRGR 83.69 317⇑ P **P 20 07 03.5 0.0**
RZN Rozhen 83.79 312 P **P 20 07 03.5 -0.8**
DEV Deva 83.84 316⇑ P **P 20 07 04.2 +0.1**
CRVS Cervenica-Dubn 83.86 319 *e*P **P 20 07 04.2 0.0**
CRVS pmax pmax
comp=Z,40nm,1.1s
CRVS Cervenica-Dubn 83.86 319 *e*P **P 20 07 04.2 0.0**
DAG Danmarks Havn 83.90 351 *i* P **P 20 07 01.4 -2.4**
DAG IAmb IAmb 20 07 03.8
comp=Z,18nm,0.7s
PGB Panagyurishte 83.94 312 P **P 20 07 04.3 -0.5**
MPEP Malo Peshtene 84.01 313 P **P 20 07 04.7 -0.4**
HFS Hagfors 84.18 331 LR LR 20 48 11.1
comp=Z,875nm,18.1s,baz=58,slow=38
PUNG Punghina 84.29 314⇓ P **P 20 07 07.0 +0.5**
KMBO Kilima Mbogo 84.34 267 P **P 20 07 08.1 +0.5**
comp=Z,4.5nm,1.0s,baz=40,slow=8.9,SNR=6.2
KMBO LR LR 20 42 16.1
comp=Z,122nm,20.8s,baz=90,slow=34
comp=Z,4.5nm,1.0s
KMBO Kilima Mbogo 84.34 267 P **P 20 07 08.3 +0.8**
KMBO IAmb IAmb 20 07 13.8
comp=Z,17nm,1.4s
KMBO Kilima Mbogo 84.34 267 *i* P **P 20 07 08.8 +1.2**
KMBO pmax pmax
comp=Z,6.0nm,1.1s
TBLU Trondheim 84.39 335 *e*P **P 20 07 05.3 -1.2**
NIE Niedzica 84.42 320 *e*P **P 20 07 07.3 +0.2**
HERR Herculane 84.47 315⇑ P **P 20 07 07.0 -0.3**
MMB Musomiste 84.53 312 P **P 20 07 06.7 -1.1**
SIRR Siria 84.55 317⇓ P **P 20 07 07.5 -0.2**
VTS Vitosha 84.58 313⇑ P **P 20 07 07.3 -0.9**
VTS Vitosha 84.58 313 P **P 20 07 07.9 -0.3**
VTS Vitosha 84.58 313 P **P 20 07 07.9 -0.3**
VTS pmax pmax
comp=Z,40nm,1.3s
VTS Vitosha 84.58 313 P **P 20 07 07.7 -0.5**
BLKB Belogradchik 84.67 314⇑ P **P 20 07 08.2 -0.3**
NC405 NORSAR Array S 84.68 333 P **P 20 07 06.9 -1.2**
BZS Buzias 84.78 316⇑ P **P 20 07 08.0 -1.0**
NC303 NORSAR Array S 84.78 333 P **P 20 07 07.4 -1.2**
LODK Lodwar 84.88 272 P **P 20 07 10.2 +0.1**
NB201 NORSAR Array S 84.89 333 P **P 20 07 08.1 -1.1**
KKB Krupnik 84.91 312 P **P 20 07 08.7 -1.0**
NC602 NORSAR Array S 84.92 332 P **P 20 07 08.0 -1.3**
NC602 NORSAR Array S 84.92 332 *e*P **P 20 07 07.8 -1.5**
GKP Gorka Klasztor 84.93 324 *e*P **P 20 07 09.3 -0.2**
GKP Gorka Klasztor 84.93 324 *e*P **P 20 07 09.5 0.0**
NB2 NORSAR Subarra 84.93 333 P **P 20 07 08.0 -1.4**
comp=Z,44nm,1.0s,baz=64,slow=4.6
NOA NORSAR Array B 84.93 333 P **P 20 07 08.1 -1.3**
comp=Z,22nm,0.8s,baz=64,slow=4.8,SNR=84
NOA LR LR 20 47 47.6
comp=Z,1µm,20.2s,baz=70,slow=38
comp=Z,22nm,0.8s
MDVR Moldovita 84.97 315⇓ P **P 20 07 09.9 -0.1**
LANS Liptovska Anna 85.02 320 *e*P **P 20 07 10.8 +0.6**
LANS pmax pmax
comp=Z,7.0nm,0.8s
LANS Liptovska Anna 85.02 320 *e*P **P 20 07 10.8 +0.6**
NC204 NORSAR Array S 85.03 333 P **P 20 07 08.8 -1.1**
TGTN Hyland Airport 85.12 27 P **P 20 07 10.8 +0.5**
baz=296
BSZH Besenyszg 85.13 318 P **P 20 07 10.6 -0.1**
NBO00 NORSAR Array S 85.13 333 P **P 20 07 08.9 -1.5**
NAO01 NORSAR Array S 85.16 333 P **P 20 07 09.3 -1.2**
PSZ Piszkesteto 85.16 319⇑ P **P 20 07 10.7 -0.2**
PSZ Piszkesteto 85.16 319 P **P 20 07 10.1 -0.8**
PSZ IAmb IAmb 20 07 21.8
comp=Z,32nm,1.2s
PSZ Piszkesteto 85.16 319 P **P 20 07 10.1 -0.8**
PSZ pmax pmax
comp=Z,32nm,1.2s
PSZ Piszkesteto 85.16 319 P **P 20 07 10.5 -0.4**
WRAK Wrangell Islan 85.30 32 P **P 20 07 11.7 +0.4**
baz=293
DOMB Dombas 85.42 334 *e*P **P 20 07 11.2 -0.6**
IDI Anoyia 85.50 305 P **P 20 07 11.8 -1.0**
comp=Z,12nm,0.8s,baz=44,slow=10,SNR=3.9
IDI LR LR 20 51 07.6
comp=Z,199nm,19.9s,baz=86,slow=40
comp=Z,12nm,0.8s
BSD Bornholm Skovb 85.52 326 *e*P **P 20 07 12.4 0.0**
DEL Delary 85.54 328 *e*P **P 20 07 11.4 -1.0**
OKC Ostrava-Krasne 85.60 321 *e*P **P 20 07 12.2 -0.7**
OKC MLR MLR
comp=Z,400nm,14.4s
OKC Ostrava-Krasne 85.60 321 *e*P **P 20 07 12.2 -0.7**
OKC AMS AMS 20 48 00.0
comp=Z,400nm,14.4s
OSL Oslo 85.62 332 *e*P **P 20 07 12.3 -0.5**
DLBC Dease Lake 85.63 30 LR LR 20 46 38.7
comp=Z,196nm,20.2s,baz=286,slow=36
DLBC Dease Lake 85.63 30 P **P 20 07 13.6 +0.6**
DLBC IAmb IAmb 20 07 15.2
comp=Z,19nm,1.1s
DLBC Dease Lake 85.63 30 P **P 20 07 13.9 +0.8**
baz=294
MOL Molde 85.80 335 *e*P **P 20 07 13.6 -0.1**
BUD Budapest 85.86 318 P **P 20 07 14.0 -0.3**
KOLL Kolacno 85.88 319 *e*P **P 20 07 14.9 +0.5**
MAUC Maruska 85.96 320 *e*P **P 20 07 14.5 -0.3**
MAUC AMS AMS 20 47 50.0
comp=Z,900nm,16.7s
MORC Moravsky Berou 85.99 321⇑ P **P 20 07 14.9 -0.1**
MORC Moravsky Berou 85.99 321 P **P 20 07 14.6 -0.3**
MORC IAmb IAmb 20 07 16.0
comp=Z,14nm,0.7s
MORC Moravsky Berou 85.99 321 P **P 20 07 14.6 -0.3**
MORC pmax pmax
comp=Z,14nm,0.7s
MORC Moravsky Berou 85.99 321 *e*P **P 20 07 14.7 -0.3**
DBG Daneborg 86.10 350 *i* P **P 20 07 12.7 -2.3**
DBG IAmb IAmb 20 07 14.2
comp=Z,2.9nm,0.8s
FRGS Fruska Gora 86.13 316⇑ P **P 20 07 15.1 -0.6**
T35M Bob Quinn 86.13 31 P **P 20 07 15.3 -0.2**
baz=294
SRO2 Moca 86.17 319 *e*P **P 20 07 14.8 -1.0**
SRO2 pmax pmax
comp=Z,29nm,0.8s
SRO2 Moca 86.17 319 *e*P **P 20 07 14.8 -1.0**
JMIC Jan Mayen 86.19 345 LR LR 20 50 31.7
comp=Z,435nm,18.5s,baz=60,slow=39
RAR Rarotonga 86.21 113 LR LR 20 41 38.3
comp=Z,64nm,20.5s,baz=301,slow=33
AKN Aaknes 86.22 335 *e*P **P 20 07 15.3 -0.4**
JAVC Velka Javorina 86.24 320 *e*P **P 20 07 17.1 +0.9**
RES Resolute Bay 86.24 9 LR LR 20 51 05.9
comp=Z,266nm,18.6s,baz=334,slow=39
RES Resolute Bay 86.24 9 P **P 20 07 15.2 -0.4**
RES IAmb IAmb 20 07 31.2
comp=Z,20nm,0.9s
RES Resolute Bay 86.24 9 P **P 20 07 15.2 -0.4**
RES pmax pmax
comp=Z,20nm,1.0s
KONO Kongsberg 86.26 332 P **P 20 07 14.9 -1.1**
KONO Kongsberg 86.26 332*ce*P **P 20 07 14.8 -1.2**
KONO pmax pmax
comp=Z,25nm,0.8s
KONO Kongsberg 86.26 332 *e*P **P 20 07 15.2 -0.8**
WRGLY Wrigley 86.31 24 P **P 20 07 16.4 +0.2**
baz=300
KRLC Kraliky 86.34 321 *e*P **P 20 07 16.0 -0.7**
KRLC *e*S **S** **20 17 53.6 +3.0**
KRLC MLR MLR
comp=Z,600nm,12.9s
KRLC Kraliky 86.34 321 *e*P **P 20 07 16.0 -0.7**
KRLC *e*S **S** **20 17 53.6 +3.0**
KRLC AMS AMS 20 48 10.0
comp=Z,600nm,12.9s
KSP Ksiaz 86.35 322 *e*P **P 20 07 16.8 +0.1**
DIVS Divibare 86.36 315 P **P 20 07 15.6 -1.3**
SKAR Skarslia 86.37 333 *e*P **P 20 07 15.8 -0.8**
CSKK Cskako 86.39 318 P **P 20 07 16.4 -0.6**
FNA Florina 86.47 311 P **P 20 07 15.2 -2.3**
FNA Florina 86.47 311 P **P 20 07 15.2 -2.3**
FNA pmax pmax
comp=Z,11nm,0.9s
OSTC Ostas 86.50 322 *e*P **P 20 07 17.2 -0.2**
OSTC *e*S **S** **20 17 48.6 -3.5**
OSTC AMS AMS 20 48 10.0
comp=Z,400nm,15.3s
SMOL Smolenice 86.51 320 *e*P **P 20 07 17.7 +0.2**
SMOL pmax pmax
comp=Z,40nm,2.6s
SMOL Smolenice 86.51 320 *e*P **P 20 07 17.7 +0.2**
DPC Dobruska-Polom 86.52 322 *e*P **P 20 07 17.2 -0.3**
DPC *e*S **S** **20 17 46.9 -5.4**
DPC MLR MLR
comp=Z,500nm,16.4s
DPC Dobruska-Polom 86.52 322 *e*P **P 20 07 17.2 -0.3**
DPC *e*S **S** **20 17 46.9 -5.4**
DPC AMS AMS 20 48 10.0
comp=Z,500nm,16.4s
MORH Mrgy, Hungar 86.54 317⇑ P **P 20 07 17.1 -0.6**
MORH Mrgy, Hungar 86.54 317 P **P 20 07 17.1 -0.6**
CHVC Chvalec 86.59 322 *e*P **P 20 07 17.2 -0.7**
CHVC AMS AMS 20 48 50.0
comp=Z,300nm,17.3s

UPC	**Upice**	**86.64**	**322**	*e*P		**P**	**20 07 17.0**	**-1.1**
UPC				*e*S		**SKSac**	**20 17 42.1**	**-1.0**
UPC					MLR	MLR		
	comp=Z,400nm,16.0s							
UPC	**Upice**	**86.64**	**322**	*e*P		**P**	**20 07 17.0**	**-1.1**
UPC				*e*SKS		**SKSac**	**20 17 42.1**	**-1.0**
UPC					AMS	AMS	20 48 20.0	
	comp=Z,400nm,16.0s							
MODS	**Modra-Piesok**	**86.65**	**320**	*e*P		**P**	**20 07 18.0**	**-0.2**
MODS					pmax	pmax		
	comp=Z,31nm,1.1s							
MODS	**Modra-Piesok**	**86.65**	**320**	*e*P		**P**	**20 07 18.0**	**-0.2**
VRAC	**Vranov**	**86.73**	**321**	⇑P		**P**	**20 07 18.6**	**-0.1**
VRAC	**Vranov**	**86.73**	**321**	LR		LR	20 48 08.5	
	comp=Z,458nm,19.6s,baz=74,slow=37							
VRAC	**Vranov**	**86.73**	**321**	*e*P		**P**	**20 07 18.5**	**-0.1**
ZST	**Bratislava**	**86.83**	**319**	*e*P		**P**	**20 07 19.2**	**+0.2**
ZST	**Bratislava**	**86.83**	**319**	*e*P		**P**	**20 07 19.2**	**+0.2**
MPLH	**Magyarpolny**	**86.92**	**318**	P		**P**	**20 07 19.1**	**-0.4**
KOVH	**Kovagotottos**	**86.94**	**317**	P		**P**	**20 07 18.6**	**-1.0**
KRUC	**Moravsky**	**86.95**	**320**	*e*P		**P**	**20 07 19.4**	**-0.2**
HYA	**Hoyanger**	**87.05**	**334**	*e*P		**P**	**20 07 18.6**	**-1.2**
ITM	**Ithomi**	**87.21**	**308**	P		**P**	**20 07 19.0**	**-2.2**
ITM				IAmb		IAmb	20 07 20.4	
	comp=Z,26nm,1.0s							
FOO	**Floro**	**87.31**	**335**	*e*P		**P**	**20 07 20.8**	**-0.2**
TREC	**Trest**	**87.41**	**321**	AMS		AMS	20 48 50.0	
	comp=Z,500nm,13.8s							
PDG	**Podgorica**	**87.43**	**313**	⇑P		**P**	**20 07 20.9**	**-1.1**
ODD1	**Odda**	**87.47**	**333**	*e*P		**P**	**20 07 21.7**	**-0.2**
PVCC	**Panska Ves**	**87.48**	**322**	AMS		AMS	20 50 10.0	
	comp=Z,400nm,17.7s							
RONA	**Rosalia, Austr**	**87.51**	**319**	*i* P		**P**	**20 07 22.1**	**-0.3**
	comp=Z,8.4nm,1.1s							
CONA	**Conrad Observa**	**87.70**	**319**	*i* P		**P**	**20 07 23.0**	**-0.4**
	comp=Z,12nm,1.2s,SNR=7.2							
SUE	**Sulen**	**87.70**	**334**	*e*P		**P**	**20 07 23.4**	**+0.4**
PRU	**Pruhonice**	**87.71**	**322**	*e*P		**P**	**20 07 23.0**	**-0.3**
PRU				*e*S		**SKSac**	**20 17 55.2**	**+5.6**
PRU					MLR	MLR		
	comp=Z,500nm,13.3s							
PRU	**Pruhonice**	**87.71**	**322**	*e*P		**P**	**20 07 23.0**	**-0.3**
PRU				*e*S		**SKSac**	**20 17 55.2**	**+5.6**
PRU					AMS	AMS	20 49 00.0	
	comp=Z,500nm,13.3s							
BRG	**Berggiesshubel**	**87.72**	**323**	*i* P		**P**	**20 07 22.7**	**-0.6**
BRG					Amp		20 07 23.9	
	comp=Z,11nm,0.8s							
BRG	**Berggiesshubel**	**87.72**	**323**	*i* P		**P**	**20 07 22.7**	**-0.6**
BRG					pmax	pmax		
	comp=Z,11nm,0.8s							
BRG					MLR	MLR		
	comp=N,270nm,16.4s							
BRG					MLR	MLR		
	comp=Z,670nm,17.1s							
BRG					MLR	MLR		
	comp=E,520nm,17.4s							
BLS5	**Blasjo**	**87.78**	**332**	*e*P		**P**	**20 07 23.1**	**-0.3**
BER	**Bergen**	**87.80**	**333**	*e*P		**P**	**20 07 23.1**	**-0.3**
ASK	**Askoy**	**87.81**	**334**	*e*P		**P**	**20 07 23.4**	**0.0**
CLL	**Collm**	**88.08**	**323**	P		**P**	**20 07 23.8**	**-1.2**
CLL				IAmb		IAmb	20 07 25.1	
	comp=Z,9.7nm,0.8s							
CLL	**Collm**	**88.08**	**323**	⇑*i* P		**P**	**20 07 24.1**	**-0.9**
CLL				*e*S		**S**	**20 18 01.0**	**-6.2**
CLL					pmax	pmax		
	comp=Z,12nm,0.9s							
CLL					MLR	MLR		
	comp=Z,600nm,19.4s							
CLL	**Collm**	**88.08**	**323**	⇑*i* P		**P**	**20 07 24.1**	**-0.9**
	comp=Z,12nm,0.9s							
CLL				*i* (sP)		**PcP**	**20 07 28.2**	**+1.4**
CLL				*ex*		x	20 07 38.0	
CLL				*e*SKKSac		**S**	**20 18 01.0**	**-6.2**
CLL				*e*(SP)			20 19 03.0	
CLL				*e*SS		**SS**	**20 23 54.0**	**-1.0**
CLL				*ex*		x	20 25 00.0	
CLL				*e*SSS		SSS	20 27 30.0	
CLL				*ex*		x	20 29 00.0	
CLL				*e*SSSS			20 30 24.0	
CLL					Lm	MLR	20 51 00.0	
	comp=Z,600nm,19.4s							
ARSA	**Arzberg**	**88.17**	**319**	*e*P		**P**	**20 07 25.0**	**-0.5**
	comp=Z,4.6nm,0.8s							
CKRC	**Cesky Krumlov**	**88.31**	**321**	*e*P		**P**	**20 07 25.4**	**-0.8**
CKRC				*e*S		**SKSac**	**20 17 56.7**	**+3.4**
KHC	**Kasperske Hory**	**88.63**	**321**	P		**P**	**20 07 26.8**	**-0.9**
KHC	**Kasperske Hory**	**88.63**	**321**	*de*P		**P**	**20 07 27.6**	**-0.1**
KHC					pmax	pmax		
	comp=Z,11nm,0.9s							
KHC	**Kasperske Hory**	**88.63**	**321**	*e*P		**P**	**20 07 26.8**	**-0.9**
KHC				*e*SKS		**SKSac**	**20 17 56.0**	**+0.7**
KHC					AMS	AMS	20 49 30.0	
	comp=Z,600nm,16.2s							
GEC2	**GERESS Array S**	**88.67**	**321**	P		**P**	**20 07 27.0**	**-0.9**
GEC2				IAmb		IAmb	20 07 28.4	
	comp=Z,8.8nm,0.8s							
GERES	**GERESS Array B**	**88.67**	**321**	P		**P**	**20 07 27.4**	**-0.6**
	comp=Z,6.6nm,0.7s,baz=72,slow=4.3,SNR=67							
GERES				LR		LR	20 47 48.9	
	comp=Z,389nm,21.3s,baz=72,slow=36							
	comp=Z,6.6nm,0.7s							
GERES	**GERESS Array B**	**88.67**	**321**	P		**P**	**20 07 26.8**	**-1.2**
SOKA	**Soboth**	**88.70**	**319**	*i* P		**P**	**20 07 27.5**	**-0.6**
	comp=Z,8.8nm,0.7s,SNR=7.5							
MOA	**Molln**	**88.72**	**320**	*i* P		**P**	**20 07 28.1**	**-0.1**
	comp=Z,17nm,0.8s,SNR=10.0							
CRES	**Cresnjev**	**88.75**	**318**	*i* P		**P**	**20 07 27.9**	**-0.5**
NKC	**Novy Kostel**	**88.85**	**322**	*e*P		**P**	**20 07 27.5**	**-1.2**
NKC				*e*S		**S**	**20 18 19.3**	**+4.7**
NKC					MLR	MLR		
	comp=Z,400nm,16.4s							
NKC	**Novy Kostel**	**88.85**	**322**	*e*P		**P**	**20 07 27.5**	**-1.2**
NKC				*e*S		**S**	**20 18 19.3**	**+4.7**
NKC					AMS	AMS	20 52 40.0	
	comp=Z,400nm,16.4s							
PDKS	**Podkum**	**88.96**	**318**	*i* P		**P**	**20 07 28.9**	**-0.5**
OBKA	**Obir**	**89.07**	**319**	*i* P		**P**	**20 07 29.3**	**-0.6**
	comp=Z,8.8nm,0.8s							
BIOA	**Bad Ischl, Aus**	**89.17**	**320**	*i* P		**P**	**20 07 29.7**	**-0.5**
	comp=Z,9.6nm,0.7s							
BBB	**Bella Bella**	**89.31**	**35**	LR		LR	20 45 43.2	
	comp=Z,62nm,20.5s,baz=320,slow=34							
MYKA	**Terra Mystica**	**89.60**	**319**	*i* P		**P**	**20 07 31.2**	**-1.1**
	comp=Z,6.5nm,0.6s							
KBA	**Koelnbreinsper**	**89.60**	**319**	*i* P		**P**	**20 07 31.5**	**-1.0**
	comp=Z,10nm,0.6s,SNR=6.9							
YKA	**Yellowknife Ar**	**90.09**	**23**	P		**P**	**20 07 33.9**	**-0.3**
	comp=Z,2.9nm,0.7s,baz=310,slow=4.1,SNR=24							
	comp=Z,2.9nm,0.7s							
SUMG	**Summit**	**90.09**	**354**	P		**P**	**20 07 34.2**	**-0.3**
SUMG				IAmb		IAmb	20 07 35.5	
	comp=Z,21nm,1.0s							
SUMG	**Summit**	**90.09**	**354**	P		**P**	**20 07 34.2**	**-0.3**
SUMG					pmax	pmax		
	comp=Z,21nm,1.0s							
SUMG	**Summit**	**90.09**	**354**	*i* P		**P**	**20 07 33.0**	**-1.5**
SUMG				IAmb		IAmb	20 07 42.3	
	comp=Z,9.2nm,0.9s							
ABTA	**Abfaltersbach**	**90.26**	**319**	*i* P		**P**	**20 07 34.0**	**-1.5**
	comp=Z,15nm,0.8s,SNR=8.4							
STAL	**STALIGIAL**	**90.33**	**319**	P		**P**	**20 07 34.4**	**-1.3**
STAL				IAmb		IAmb	20 07 35.4	
	comp=Z,22nm,0.8s							
TIP	**Timpagrande**	**90.35**	**311**	P		**P**	**20 07 34.4**	**-1.7**
TIP				IAmb		IAmb	20 07 42.8	
	comp=Z,12nm,0.9s							
MBAR	**Mbarara**	**90.44**	**270**	LR		LR	20 49 48.7	
	comp=Z,104nm,18.1s,baz=52,slow=37							
MBAR	**Mbarara**	**90.44**	**270**	⇑*e*P		**P**	**20 07 36.3**	**-0.7**
WTTA	**Wattenberg**	**90.58**	**320**	*i* P		**P**	**20 07 36.3**	**-0.8**
	comp=Z,37nm,0.7s,SNR=16							
WATA	**Walderalm**	**90.59**	**320**	*e*P		**P**	**20 07 36.0**	**-1.0**
	comp=Z,16nm,0.7s,SNR=9.5							
CUC	**Castrocucco**	**90.72**	**312**	P		**P**	**20 07 35.4**	**-2.3**
SQTA	**Sankt Quirin**	**90.87**	**320**	*i* P		**P**	**20 07 37.5**	**-0.8**
	comp=Z,26nm,0.7s,SNR=15							
MOTA	**Moosalm**	**90.88**	**320**	*i* P		**P**	**20 07 37.4**	**-1.0**
	comp=Z,24nm,1.0s,SNR=13							
RETA	**Reutte**	**91.02**	**320**	*i* P		**P**	**20 07 38.1**	**-0.9**
	comp=Z,5.8nm,0.8s							
CTI	**Castel Tesino**	**91.09**	**319**	P		**P**	**20 07 37.9**	**-1.5**
CTI				IAmb		IAmb	20 07 46.4	
	comp=Z,12nm,0.8s							
CTI	**Castel Tesino**	**91.09**	**319**	P		**P**	**20 07 37.9**	**-1.5**
CTI					pmax	pmax		
	comp=Z,12nm,0.8s							
FETA	**Feichten**	**91.25**	**320**	*i* P		**P**	**20 07 39.6**	**-0.6**
	comp=Z,26nm,1.0s,SNR=12							
CEL	**Celeste**	**91.32**	**311**	P		**P**	**20 07 39.4**	**-1.1**
TEOL	**Teolo**	**91.37**	**318**	P		**P**	**20 07 39.5**	**-1.0**
AQU	**L'Aquila**	**91.48**	**315**	P		**P**	**20 07 40.6**	**-0.6**
AQU	**L'Aquila**	**91.48**	**315**	P		**P**	**20 07 40.6**	**-0.6**
AQU					pmax	pmax		
	comp=Z,28nm,1.1s							
NRCA	**Norcia**	**91.48**	**316**	P		**P**	**20 07 40.4**	**-0.8**
NRCA					IAmb	IAmb	20 07 41.7	
	comp=Z,14nm,1.0s							
DAVA	**Damuels**	**91.65**	**321**	*i* P		**P**	**20 07 41.5**	**-0.5**
	comp=Z,9.5nm,0.8s,SNR=6.5							
MURB	**Monte Urbino**	**91.69**	**316**	P		**P**	**20 07 42.7**	**+0.5**
DAVOX	**Davos/Dischmat**	**91.88**	**320**	LR		LR	20 53 25.9	
	comp=Z,367nm,20.2s,baz=51,slow=38							
SALO	**Salr**	**91.99**	**319**	P		**P**	**20 07 42.5**	**-0.9**
ZCCA	**Zocca**	**92.25**	**318**	P		**P**	**20 07 45.5**	**+0.8**
TUE	**Stuetta**	**92.34**	**320**	P		**P**	**20 07 44.3**	**-1.0**
BSTI	**Sart Tilman**	**92.60**	**325**	*d*PcP		**P**	**20 07 45.8**	**-0.3**
VAE	**Valguarnera**	**92.70**	**310**	LR		LR	20 56 47.1	
	comp=Z,95nm,18.0s,baz=31,slow=40							
WLF	**Walferdange**	**92.73**	**324**	P		**P**	**20 07 46.3**	**-0.4**
WLF					IAmb	IAmb	20 07 47.7	
	comp=Z,13nm,0.9s							
WLF	**Walferdange**	**92.73**	**324**	P		**P**	**20 07 46.3**	**-0.4**
WLF					pmax	pmax		
	comp=Z,13nm,0.9s							
WLF	**Walferdange**	**92.73**	**324**	*d*PcP		**P**	**20 07 46.3**	**-0.4**
ECH	**Echery**	**92.85**	**322**	P		**P**	**20 07 45.5**	**-1.9**
ECH	**Echery**	**92.85**	**322**	P		**P**	**20 07 45.5**	**-1.9**
ECH					pmax	pmax		
	comp=Z,5.0nm,0.9s							
RCHB	**Rochefort**	**93.00**	**325**	*d*PcP		**P**	**20 07 47.4**	**-0.5**
BMRD	**Maredsous**	**93.19**	**325**	*d*PcP		**P**	**20 07 47.9**	**-0.9**
DOU	**Dourbes**	**93.39**	**325**	*d*PcP		**P**	**20 07 49.0**	**-0.8**
SENIN	**Lac Senin/Sane**	**93.65**	**321**	P		**P**	**20 07 50.5**	**-0.9**
MAW	**Mawson**	**93.82**	**199**	LR		LR	20 46 38.4	
	comp=Z,130nm,19.6s,baz=50,slow=33							
PPT	**Papeete**	**94.31**	**107**	LR		LR	20 49 00.8	
	comp=Z,111nm,18.1s,baz=302,slow=35							
D03D	**Eldon**	**94.38**	**38**	P		**P**	**20 07 54.5**	**+0.2**
	baz=300							
EKA	**Eskdalemuir Ar**	**94.38**	**332**	LR		LR	20 55 07.2	
	comp=Z,404nm,18.9s,baz=30,slow=38							
ESK	**Eskdalemuir**	**94.41**	**332**	P		**P**	**20 07 52.9**	**-1.4**
ESK					IAmb	IAmb	20 08 07.3	
	comp=Z,24nm,1.2s							
ESK	**Eskdalemuir**	**94.41**	**332**	P		**P**	**20 07 52.9**	**-1.4**
ESK					pmax	pmax		
	comp=Z,24nm,1.3s							
BNI	**Bardonecchia**	**94.66**	**320**	P		**P**	**20 07 54.8**	**-1.1**
BNI					IAmb	IAmb	20 07 56.0	
	comp=Z,8.5nm,0.6s							
BNI	**Bardonecchia**	**94.66**	**320**	P		**P**	**20 07 54.8**	**-1.1**
BNI					pmax	pmax		
	comp=Z,8.0nm,0.6s							
CLF	**Chambon-Foret**	**95.78**	**324**	P		**P**	**20 07 59.9**	**-0.8**
CLF					IAmb	IAmb	20 08 01.0	
	comp=Z,15nm,0.9s							
H04D	**Lebanon**	**96.10**	**40**	P		**P**	**20 08 01.6**	**-0.7**
	baz=300							
I03D	**Drain, OR**	**96.13**	**41**	P		**P**	**20 08 02.5**	**+0.1**
	baz=300							
SFJD	**Kangerlussuaq**	**96.52**	**357**	LR		LR	20 55 10.9	
	comp=Z,152nm,18.1s,baz=7.5,slow=38							
I04A	**Tendick Farm,**	**96.67**	**41**	P		**P**	**20 08 04.7**	**-0.2**
	baz=300							
VNDA	**Vanda**	**96.75**	**172**	P		**P**	**20 08 05.6**	**+1.3**
	comp=Z,1.0nm,0.9s,baz=278,slow=7.1,SNR=3.6							
VNDA					LR	LR	20 54 19.6	
	comp=Z,132nm,18.8s,baz=329,slow=37							
	comp=Z,1.0nm,0.9s							
L02F	**Cave Junction**	**96.76**	**43**	P		**P**	**20 08 05.0**	**-0.3**
	baz=299							
KEST	**Kesra**	**97.13**	**310**	LR		LR	21 00 06.2	
	comp=Z,199nm,19.1s,baz=328,slow=40							
NEW	**Newport**	**97.38**	**35**	P		**P**	**20 08 07.6**	**-0.4**
	baz=305							
YBH	**Yreka Blue Hor**	**97.51**	**43**	LR		LR	20 44 21.4	
	comp=Z,159nm,21.8s,baz=318,slow=31							
L04D	**Klamath Falls**	**97.53**	**42**	P		**P**	**20 08 08.2**	**-0.8**
	baz=300							
FRB	**Frobisher Bay**	**99.67**	**4**	LR		LR	20 58 41.3	
	comp=Z,163nm,18.4s,baz=356,slow=39							
MSO	**Missoula**	**99.96**	**35**	P		**Pdif**	**20 08 18.8**	**-1.0**
	baz=307							
PDAR	**Pinedale Array**	**104.93**	**36**	PP		**PKiKP**	**20 12 59.3**	**+2.2**
	comp=Z,0.3nm,0.6s,baz=266,slow=4.5,SNR=4.5							
WUAZ	**Wupatki**	**108.32**	**43**	P		**PKiKP**	**20 13 02.7**	**-0.7**
	baz=307							
EYMN	**Ely**	**109.57**	**23**	P		**PKiKP**	**20 13 04.9**	**-0.3**
	baz=327							
ECSD	**EROS Data Cent**	**110.87**	**28**	P		**PKiKP**	**20 13 06.9**	**-1.0**
	baz=321							
T25A	**Trinidad**	**111.61**	**38**	P		**PKiKP**	**20 13 08.2**	**-1.5**
	baz=313							
TORD	**Torodi Ar. Bea**	**113.20**	**292**	PKiKP		**PKiKP**	**20 13 11.2**	**-1.7**
	comp=Z,2.2nm,0.7s,baz=38,slow=2.0,SNR=12							
TORD				PP		**PP**	**20 13 56.3**	**-6.4**
	comp=Z,1.8nm,0.8s,baz=70,slow=6.9,SNR=3.7							
TROLL	**Troll, Antarti**	**114.23**	**197**	PKPdf		PKPdf	20 13 13.1	-0.4
JFWS	**Jewell Farm**	**114.27**	**25**	P		**PKiKP**	**20 13 13.4**	**-0.9**
	baz=327							
SNAA	**Sanae**	**115.90**	**197**	PKPdf		**PKiKP**	**20 13 14.9**	**-1.7**
S39A	**Bolivar**	**117.17**	**30**			**PKPdf**	**20 13 18.8**	**-1.2**
R40A	**Maddies Statio**	**117.19**	**29**			**PKPdf**	**20 13 18.6**	**-1.4**
TXAR	**Lajitas Array**	**117.26**	**44**	PKP		**PKPdf**	**20 13 20.3**	**-0.2**
	comp=Z,1.2nm,0.7s,baz=213,slow=0.5,SNR=16							
LONY	**Lake Ozonia**	**117.54**	**13**	P		**PKPdf**	**20 13 19.7**	**-0.8**
	baz=343							
VNA2	**Neumayer--Watz**	**117.55**	**197**	PKPdf		**PKPdf**	**20 13 19.0**	**-0.6**
	baz=78,slow=1.0							
PKME	**Peaks-Kenny Pk**	**117.82**	**8**	P		**PKPdf**	**20 13 20.1**	**-0.9**
	baz=349							
VNA1	**Neumayer--Stat**	**117.94**	**197**	PKPdf		**PKPdf**	**20 13 19.8**	**-0.6**
VNA3	**Neumayer Olymp**	**117.99**	**196**	PKPdf		**PKPdf**	**20 13 19.7**	**-0.8**
LBNH	**Lisbon**	**118.41**	**11**	P		**PKPdf**	**20 13 21.2**	**-1.1**
	baz=346							
U40A	**Yellville**	**118.45**	**31**			**PKPdf**	**20 13 21.3**	**-1.2**
U40A	**Yellville**	**118.45**	**31**	P		**PKPdf**	**20 13 21.6**	**-1.0**
	baz=323							
O48B	**Farmland**	**118.50**	**23**	P		**PKPdf**	**20 13 21.2**	**-1.4**
	baz=331							
W39A	**Magazine**	**118.90**	**32**	P		**PKPdf**	**20 13 22.2**	**-1.2**
	baz=321							
JCT	**Junction City**	**118.97**	**40**	P		**PKPdf**	**20 13 22.7**	**-1.0**
	baz=314							
FCAR	**Ozark Folk Cen**	**119.18**	**31**			**PKPdf**	**20 13 22.7**	**-1.2**
ACSO	**Alum Creek Sta**	**119.30**	**21**	P		**PKPdf**	**20 13 23.6**	**-0.5**
	baz=334							
LCAR	**Lake Charles**	**119.50**	**30**			**PKPdf**	**20 13 23.5**	**-1.0**
MIAR	**Mount Ida**	**119.51**	**33**	PKPdf		**PKPdf**	**20 13 23.7**	**-0.9**
MIAR	**Mount Ida**	**119.51**	**33**	PKIKP		**PKPdf**	**20 13 23.7**	**-0.9**
MIAR	**Mount Ida**	**119.51**	**33**	P		**PKPdf**	**20 13 23.4**	**-1.2**
	baz=321							
W41B	**Gary Mavity, V**	**119.69**	**31**	P		**PKPdf**	**20 13 23.6**	**-1.3**
	baz=323							
L61B	**Northampton**	**120.00**	**12**	P		**PKPdf**	**20 13 24.7**	**-0.7**
	baz=345							
P52A	**Corning**	**120.12**	**21**	P		**PKPdf**	**20 13 24.7**	**-0.9**
	baz=334							
HRV	**Adam Dziewonsk**	**120.16**	**11**	P		**PKPdf**	**20 13 24.6**	**-1.0**
	baz=346							
SSPA	**Standing Stone**	**120.50**	**17**	P		**PKPdf**	**20 13 26.0**	**-0.4**
	baz=339							
833A	**Chaparral WMA,**	**120.72**	**42**	P		**PKPdf**	**20 13 26.8**	**-0.3**
	baz=314							
WVT	**Waverly**	**120.97**	**27**			**PKPdf**	**20 13 26.2**	**-1.2**
WVT	**Waverly**	**120.97**	**27**	PKIKP		**PKPdf**	**20 13 26.2**	**-1.2**
WVT	**Waverly**	**120.97**	**27**	P		**PKPdf**	**20 13 26.8**	**-0.5**
	baz=327							
S51A	**Beattyville**	**121.38**	**23**			**PKPdf**	**20 13 26.8**	**-1.3**
T50A	**Nancy**	**121.45**	**24**			**PKPdf**	**20 13 27.1**	**-1.2**
U49A	**Red Boiling Sp**	**121.51**	**25**			**PKPdf**	**20 13 27.3**	**-1.1**
OXF	**Oxford**	**121.60**	**29**	P		**PKPdf**	**20 13 27.6**	**-1.0**
	baz=325							
DBIC	**Dimbokro**	**121.73**	**289**	PKP		**PKPdf**	**20 13 28.6**	**-0.8**
	comp=Z,9.7nm,0.9s,baz=64,slow=3.0,SNR=6.1							
KIC	**Kosan Boka**	**121.75**	**288**	*e*PKP2		**PKPdf**	**20 13 29.0**	**-0.4**
	comp=Z,14nm,0.6s							
PLAL	**Pickwick Lake**	**121.82**	**28**			**PKPdf**	**20 13 27.2**	**-1.8**
TIC	**Toumodi**	**121.89**	**289**	*e*PKP2		**PKPdf**	**20 13 29.2**	**-0.5**
	comp=Z,5.2nm,0.3s							
LIC	**Lamto**	**122.06**	**288**	*e*PKP2		**PKiKP**	**20 13 30.2**	**0.0**
	comp=Z,11nm,0.6s							
TZTN	**Tazewell**	**122.36**	**23**	P		**PKPdf**	**20 13 28.9**	**-1.2**
	baz=332							
W50A	**Signal Mountai**	**122.83**	**26**			**PKPdf**	**20 13 29.9**	**-1.2**
BLA	**Blacksburg**	**122.89**	**20**	P		**PKPdf**	**20 13 30.1**	**-1.0**
	baz=335							
V53A	**Saluda**	**123.42**	**23**			**PKPdf**	**20 13 31.3**	**-0.9**
LRAL	**Lakeview Retre**	**123.94**	**28**	P		**PKPdf**	**20 13 32.1**	**-1.0**
	baz=327							
KMSC	**Kings Mountain**	**124.43**	**22**	P		**PKPdf**	**20 13 33.3**	**-0.8**
	baz=334							
GOGA	**Godfrey**	**125.14**	**25**	P		**PKPdf**	**20 13 34.8**	**-0.7**
	baz=331							
152A	**Waverly Hall**	**125.26**	**27**	PKPdf		**PKPdf**	**20 13 35.2**	**-0.5**
PMSA	**Palmer Station**	**131.64**	**177**	*e*P		**PKiKP**	**20 13 48.1**	**+0.4**
MTP	**Monte Pirata**	**145.02**	**11**	PKPdf		**PKPab**	**20 14 10.5**	**-1.4**
BRU2	**Volcan**	**145.62**	**45**	*e*P		**PKiKP**	**20 14 18.3**	**+0.3**
CAPC	**Capurgana**	**149.11**	**37**	*e*P		**PKPdf**	**20 14 20.8**	**+1.2**
SJCC	**San Jacinto, C**	**149.27**	**33**	PKPdf		**PKPdf**	**20 14 18.0**	**-1.9**
SJCC	**San Jacinto, C**	**149.27**	**33**	*e*P		**PKPbc**	**20 14 22.1**	**-2.1**
CRJC	**Cerrejon, Guaj**	**149.40**	**28**	*e*P		**PKPbc**	**20 14 24.9**	**+0.4**
LL6C	**La Loma 6 Bece**	**150.35**	**29**	*e*P		**PKPbc**	**20 14 26.6**	**-0.2**
UREC	**San Jos de Ur**	**150.87**	**35**	*e*P		**PKPbc**	**20 14 27.1**	**-0.9**
DBBC	**Dabeiba**	**151.08**	**37**	*e*P		**PKiKP**	**20 14 29.5**	**+0.3**
OCAC	**Ocana**	**151.62**	**31**	*e*P		**PKPbc**	**20 14 29.9**	**0.0**
CBOC	**Ciudad Bolivar**	**152.12**	**39**	*e*P		**PKPbc**	**20 14 29.6**	**-1.5**
SDV	**Santo Domingo**	**152.27**	**25**	*e*P		**PKPdf**	**20 14 26.8**	**+2.1**
SDV	**Santo Domingo**	**152.27**	**25**	*e*P		**PKPdf**	**20 14 25.0**	**+0.2**
BRRC	**Barranca, Sant**	**152.39**	**33**	*e*P		**PKPdf**	**20 14 23.3**	**-1.4**
PTBC	**PUERTO BERRIO**	**152.46**	**35**	*e*P		**PKPbc**	**20 14 29.1**	**-2.6**
PAMC	**Pamplona, Colo**	**152.70**	**31**	*e*P		**PKPbc**	**20 14 32.6**	**-0.2**
PLMC	**San Jos del P**	**152.71**	**40**	*e*P		**PKPbc**	**20 14 30.4**	**-1.9**
GUY2C	**Guyana, Caldas**	**153.01**	**38**	*e*P		**PKPbc**	**20 14 32.8**	**-0.7**
NORC	**Norcasia**	**153.03**	**37**	*e*P		**PKPbc**	**20 14 31.9**	**-1.2**
LL04	**Puerto Octay**	**153.04**	**157**			**PKPbc**	**20 14 29.2**	**-3.0**
BARC	**Barichara**	**153.10**	**33**	*e*P		**PKiKP**	**20 14 33.5**	**0.0**
BAUV	**El Baul**	**153.18**	**20**			**PKPbc**	**20 14 32.2**	**-1.1**
YOTC	**Yotoco, Valle**	**153.38**	**42**	*e*P		**PKPbc**	**20 14 30.1**	**-3.8**
SPBC	**San Pablo de B**	**153.41**	**35**	*e*P		**PKPbc**	**20 14 33.4**	**-0.5**
RUSC	**La Rusia**	**153.74**	**33**	*e*P		**PKPbc**	**20 14 31.7**	**-3.4**
PLCA	**Paso Flores**	**153.85**	**160**	PKPbc		**PKiKP**	**20 14 34.6**	**+0.4**
	comp=Z,4.0nm,0.7s,baz=225,slow=1.6,SNR=12							
ORTC	**Ortega, Tolima**	**154.12**	**40**	*e*P		**PKiKP**	**20 14 35.7**	**+0.2**
NBAN	**Anadia - AL**	**156.88**	**284**	*e*P		**PKPdf**	**20 14 31.6**	**+0.7**
NBPB	**Pedra_Branca-C**	**158.09**	**298**	*e*P		**PKPdf**	**20 14 33.4**	**+1.0**
NBLA	**Lagarto - SE**	**158.71**	**282**	*e*P		**PKPdf**	**20 14 34.0**	**+0.9**
ROSB	**Rosrio**	**160.10**	**311**	*e*P		**PKPdf**	**20 14 35.0**	**+0.3**
GUA01	**Guaratinga, BA**	**161.61**	**267**	*e*P		**PKPdf**	**20 14 37.2**	**+0.9**
MCPB	**Macapa, AP**	**162.57**	**336**	*e*P		**PKPdf**	**20 14 38.1**	**+0.7**
ITAB	**Concordia**	**167.57**	**210**	*e*P		**PKPdf**	**20 14 42.5**	**+1.3**
**LP

comp=Z,37nm,0.6s
PSA00 Pilbara Seismi 17.93 213 P **Pn** **20 01 46.6 -0.5**
PSA00 IAmb IAmb 20 01 52.9
comp=Z,32nm,1.3s
PSA00 Pilbara Seismi 17.93 213 P **Pn** **20 01 47.4 +0.2**
MTSU Mount Surprise 17.94 131 P **Pn** **20 01 47.6 +0.3**
WRKA Warakurna 18.43 185 P **Pn** **20 01 52.9 -0.2**
CTA Charters Tower 20.58 132 P **P** **20 02 15.3 +0.9**
comp=Z,16nm,0.8s,baz=311,slow=12,SNR=27
comp=Z,16nm,0.8s
CTA Charters Tower 20.58 132 P **P** **20 02 16.0 +1.6**
CTAO Charters Tower 20.58 132 P **P** **20 02 15.7 +1.3**
CTAO IAmb IAmb 20 02 19.0
comp=Z,16nm,0.8s
CTAO Charters Tower 20.58 132 P **P** **20 02 16.3 +1.9**
OOD Oodnadatta 21.73 167 P **P** **20 02 27.4 +0.8**
INKA Innaminka 23.31 156 P **P** **20 02 44.2 +2.4**
MULG Mulgathing 23.85 172 P **P** **20 02 48.9 +2.2**
QLP Quilpie 23.97 148 P **P** **20 02 50.0 +2.1**
FORT Forrest 24.15 184 P **P** **20 02 50.0 +0.6**
LCRK Leigh Creek 24.91 163 P **P** **20 02 57.8 +1.5**
BBOO Buckleboo 26.66 169 P **P** **20 03 12.1 0.0**
BBOO Buckleboo 26.66 169 P **P** **20 03 13.1 +1.0**
STKA Stephens Creek 27.33 158 P **P** **20 03 18.3 +0.2**
comp=Z,4.7nm,0.4s,baz=336,slow=8.3,SNR=37
comp=Z,4.7nm,0.4s
STKA Stephens Creek 27.33 158 P **P** **20 03 18.5 +0.4**
STKA IAmb IAmb 20 03 46.6
comp=Z,6.0nm,0.9s
STKA Stephens Creek 27.33 158 P **P** **20 03 18.8 +0.7**
HTT Hallett 27.92 164 P **P** **20 03 24.6 +1.2**
CMSA Cobar Meteorol 28.75 152 P **P** **20 03 32.3 +1.5**
ARPS Mount Arapiles 31.88 162 P **P** **20 03 59.6 +1.4**
JOW Kunigami 33.27 357 P **P** **20 04 10.2 -0.2**
comp=Z,13nm,0.6s,baz=188,slow=10.0,SNR=11
comp=Z,13nm,0.6s
JOW Kunigami 33.27 357 P **P** **20 04 10.0 -0.5**
COCO West Island 33.34 258 P **P** **20 04 10.9 -0.3**
CAN Canberra 33.43 151 P **P** **20 04 13.5 +1.7**
CAN IAmb IAmb 20 04 28.2
comp=Z,20nm,1.0s
CAN Canberra 33.43 151 P **P** **20 04 13.9 +2.1**
PZH PanZhiHua 42.92 321 P **P** **20 05 33.0 +1.6**
PZH pmax pmax
comp=Z,10.0nm,0.7s
MJAR Matsushiro Arr 43.56 9 P **P** **20 05 33.8 -2.4**
comp=Z,3.8nm,0.8s,baz=186,slow=9.5,SNR=8.2
comp=Z,3.8nm,0.8s
MJAR Matsushiro Arr 43.56 9 IAmb IAmb 20 05 36.6
comp=Z,1.9nm,1.1s
KSRS Korea Array 43.86 357 P **P** **20 05 38.3 -0.3**
comp=Z,1.6nm,0.6s,baz=174,slow=8.9,SNR=7.9
comp=Z,1.6nm,0.6s
HHC Hu-ho-hao-te 50.21 342 *eP* **P** **20 06 28.4 +0.4**
HHC pmax pmax
comp=Z,27nm,0.9s
HHC pmax pmax
comp=Z,970nm,7.8s
USRK Ussuriysk Ar. 50.58 2 P **P** **20 06 30.0 -0.5**
comp=Z,2.4nm,0.6s,baz=193,slow=9.1,SNR=4.2
comp=Z,2.4nm,0.6s
GTA Gaotai 53.70 331 *eP* **P** **20 06 53.9 0.0**
GTA pmax pmax
comp=Z,2.0nm,0.7s
KLR Kul'dur 55.60 1 P **P** **20 07 06.7 -0.5**
comp=Z,3.0nm,1.0s,baz=319,slow=2.8,SNR=4.2
comp=Z,3.0nm,1.0s
ULN Ulaanbaatar 57.93 342 P **P** **20 07 21.8 -2.1**
ULN IAmb IAmb 20 07 24.9
comp=Z,3.2nm,0.8s
SONM Songino Array 58.11 341 P **P** **20 07 24.6 -0.5**
comp=Z,0.8nm,0.5s,baz=160,slow=9.3,SNR=3.9
comp=Z,0.8nm,0.5s
WMQ Urumqi 63.15 327 *eP* **P** **20 08 01.9 +2.7**
WMQ LR LR
comp=E,460nm,16.7s
WMQ LR LR
comp=Z,170nm,29.1s
PETK Petropavlovsk- 63.88 18 P **P** **20 08 03.4 -0.3**
comp=Z,3.7nm,0.5s,baz=178,slow=4.5,SNR=4.5
comp=Z,3.7nm,0.5s
MK31 Makanchi Array 67.98 327 P **P** **20 08 29.7 -0.5**
MKAR Makanchi Array 67.98 327 P **P** **20 08 30.2 +0.1**
comp=Z,2.4nm,0.5s,baz=114,slow=8.3,SNR=32
comp=Z,2.4nm,0.5s
MKAR Makanchi Array 67.98 327 P **P** **20 08 29.9 -0.3**
MAKZ Makanchi 68.16 327 P **P** **20 08 31.0 -0.2**
YAK Yakutsk 68.42 360 P **P** **20 08 31.5 -1.0**
YAK IAmb IAmb 20 08 32.7
comp=Z,9.7nm,0.7s
VNDA Vanda 72.83 173 P **P** **20 08 59.9 +0.8**
comp=Z,1.0nm,0.5s,baz=309,slow=6.2,SNR=9.5
comp=Z,1.0nm,0.5s

MAN 09 20:08:10.2, 16°46N×120°93E, h1 km, mb4.7, ML3.6, MS3.5, 5D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMPP	**San Manuel, Pa**	**0.40**	**218**	⇓*eP*	Pb	20 08 18.9	-4.4
SMPP				*eS*	Sn	20 08 45.3	+12
SAMP	**Sagada Mountai**	**0.61**	**357**	⇓*eP*	Pn	20 08 22.2	-0.4
SAMP				*eS*	Sb	20 08 27.2	+1.1
BALP	**Baler**	**0.95**	**139**	⇓*eP*	Pn	20 08 28.3	-4.1
BOLP	**Bolinao**	**0.98**	**265**	⇓*eP*	Pb	20 08 29.8	-1.0
JCNP	**Jose Panganiba**	**2.75**	**142**	⇓*eP*	Pn	20 08 57.0	-0.3
JCNP				*eS*	Sn	20 09 31.1	-0.6

MAN 09 20:23:19.6, 16°48N×120°85E, h32 km, mb4.3, ML3.2, MS2.9, 5D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMPP	**San Manuel, Pa**	**0.37**	**207**	⇓*eP*	Pb	20 23 29.2	+4.3
SMPP				*eS*		20 23 36.6	
SAMP	**Sagada Mountai**	**0.60**	**5**	⇓*eP*	Pb	20 23 32.1	+0.9
BOLP	**Bolinao**	**0.91**	**264**	⇓*eP*	Pn	20 23 36.5	+1.2
BALP	**Baler**	**1.01**	**137**	⇓*eP*	Pn	20 23 37.9	+0.3
BALP				*eS*		20 23 41.8	
PALP	**Palanan**	**1.61**	**69**	⇓*eP*	Pn	20 23 45.9	+1.9

NNC 09 20:27:44.7±9.5, 38°34N×72°06E, h0 km, mb3.8, mpv3.4, 2C-2D, Error ellipse: s-maj=92.1km s-min=47.0km az=159.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**4.91**	**347**	P	Pn	20 29 00.3	+0.7
	7.5nm,0.2s,baz=166,slow=12,SNR=82						
KK31				⇑S	Sn	20 29 58.3	+1.1
	1.9nm,0.3s,baz=170,slow=23,SNR=6.0						
TKM2	**Tokmak 2**	**5.31**	**29**	⇓P	Pn	20 29 05.0	-0.4
	0.5nm,0.5s						
TKM2				⇑S	Sn	20 30 08.5	+1.1
	1.3nm,0.6s						
AB31	**Akbulak array**	**13.97**	**325**	P	Pn	20 30 58.4	-5.4
	0.2nm,0.3s,baz=131,slow=14,SNR=23						
AKTO	**Aktyubinsk**	**15.69**	**325**	⇓P	P	20 31 32.6	+1.5
	2.0nm,0.7s						

ASRS 09 20:30:04.3±0.4, 53°N×2°×9°8E×, h5 km, MLh3.2/8, Error ellipse: s-maj=4.5km s-min=3.0km az=57.0, confirmed, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KNGR	**Kungurtug, Tuv**	**2.06**	**188**	Pg	Pg	20 30 45.0	+1.4
KNGR				Sg	Sg	20 31 11.1	+0.8
KZLR	**Kyzyl**	**2.36**	**248**	Pg	Pg	20 30 50.5	+1.0
KZLR				Sg	Sg	20 31 21.0	+0.9
ARDR	**Aradan**	**2.77**	**271**	Pg	Pg	20 30 59.5	+2.1
ARDR				Sg	Sg	20 31 34.4	+1.1
MINR	**Mina**	**3.19**	**317**	Pg	Pg	20 31 10.2	+4.9
MINR				Sg	Sg	20 31 56.5	+10
CERR	**Cheremushki**	**4.00**	**276**	Pg	Pg	20 31 23.2	+2.4
CERR				Sg	Sg	20 32 15.7	+3.2
DJOS	**Djoyskaya Sosn**	**4.00**	**275**	Pg	Pg	20 31 24.3	+3.3
DJOS				Sg	Sg	20 32 16.4	+3.5
ZAK	**Zakamensk**	**4.01**	**122**	Sg	Sg	20 32 15.1	+2.2
DJO	**Djoy, Khakassi**	**4.11**	**275**	Pg	Pg	20 31 23.4	+0.4
DJO				Sg	Sg	20 32 16.8	+0.4
GZL	**Zheleznogorsk**	**4.46**	**326**	Sg	Sg	20 32 30.2	+2.7
GZLN	**Zheleznogorsk**	**4.48**	**328**	Sg	Sg	20 32 30.8	+2.7
SHTK	**Zheleznogorsk-**	**4.50**	**327**	Pg	Pg	20 31 28.0	-2.3
SHTK				Sg	Sg	20 32 30.2	+1.6
LUZB	**Luzhba, Kemero**	**5.56**	**284**	Sg	Sg	20 33 00.9	-1.8

*NEIC **09** 20:42:56.6±0.8, 43.62N±0.05×66.17W±0.05, h5km±2km, mb_Lg2.6/6, mb_Lg3.0(OTT), Error ellipse: s-maj=8.7km s-min=5.8km az=174.0*
*OTT **09** 20:42:57.2±0.2, 43.61N×66.24W, h5km, MN3.2/9*
OTT 27km south from Yarmouth, Ns. Felt Eastern Background Seismic Zone. Felt at Yarmouth, Ns.

ISC 09 20:42:56.5±1.6, 43.60N±0.06×66.20W±0.03, h5km±12km, n31, σ0 79/48, Nova Scotia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EMMW	**East Machias**	**1.44**	**321**	Pn	**Pn**	**20 43 22.7**	**-0.4**
EMMW				Pg	**Pg**	**20 43 24.3**	**+0.3**
EMMW					**Sg**	**20 43 43.0**	**+0.4**
GGN	**Saint George**	**1.59**	**343**	Pn	**Pn**	**20 43 24.8**	**-0.4**
GGN				Pg	**Pb**	**20 43 26.5**	**+0.2**
GGN				Sn	**Sb**	**20 43 47.1**	**+0.4**
GGN	**Saint George**	**1.59**	**343**	PN	**Pn**	**20 43 25.4**	**+0.1**
GGN				SN	**Sn**	**20 43 46.4**	**+0.2**
GGN				Trac		20 43 49.3	
	comp=Z,65nm,0.2s						
G65A	**Princeton**	**1.88**	**329**	Pn	**Pn**	**20 43 29.2**	**0.0**
G65A				Pg	**Pg**	**20 43 32.8**	**+0.3**
G65A					**Sn**	**20 43 52.9**	**-0.4**
WCNB	**Wards Creek**	**2.11**	**13**	PN	**Pn**	**20 43 32.7**	**+0.4**
WCNB				SN	**Sn**	**20 43 59.8**	**+0.8**
WCNB				LG	Lg	20 44 03.7	
WCNB				Trac		20 44 03.9	
	comp=Z,26nm,0.1s						
HAL	**Halifax**	**2.15**	**60**	Pg	**Pb**	**20 43 36.6**	**+0.8**
HAL				IAmb_Lg		20 44 02.2	
	comp=Z,18nm,0.9s						
HAL					**Sb**	**20 44 03.1**	**+0.5**
HAL	**Halifax**	**2.15**	**60**	PN	**Pn**	**20 43 34.2**	**+1.3**
HAL				SN	**Sn**	**20 44 00.7**	**+0.9**
HAL				Trac		20 44 09.5	
	comp=Z,32nm,0.1s						
SRNB	**Snider Mountai**	**2.27**	**10**	PN	**Pn**	**20 43 35.2**	**+0.6**
SRNB				SN	**Sn**	**20 44 03.1**	**+0.1**
SRNB				Trac		20 44 17.7	
	comp=Z,5.3nm,0.0s						
ELNB	**Elgin, New Bru**	**2.38**	**18**	PN	**Pn**	**20 43 36.3**	**+0.2**
ELNB				SN	**Sn**	**20 44 05.7**	**+0.1**
ELNB				Trac		20 44 13.1	
	comp=Z,19nm,0.2s						
HKNB	**Havelock Quarr**	**2.45**	**13**	PN	**Pn**	**20 43 34.9**	**-2.2**
HKNB				SN	**Sn**	**20 44 07.0**	**-0.4**
HKNB				LG	Lg	20 44 14.1	
HKNB				Trac		20 44 22.2	
	comp=Z,33nm,0.1s						
LMN	**Caledonia Moun**	**2.46**	**23**	Pn	**Pn**	**20 43 37.3**	**0.0**
LMN				IAmb_Lg		20 44 16.6	
	comp=Z,27nm,1.2s						
LMN	**Caledonia Moun**	**2.46**	**23**	PN	**Pn**	**20 43 37.6**	**+0.3**
LMN				SN	**Sn**	**20 44 07.8**	**0.0**
LMN				Trac		20 44 14.2	
	comp=Z,33nm,0.1s						
LMN				LG	Lg	20 44 15.1	
WVL	**Waterville**	**2.68**	**292**	Pn	**Pn**	**20 43 40.6**	**+0.5**
F64A	**Sherman**	**2.74**	**327**	Pn	**Pn**	**20 43 40.9**	**-0.1**
PKME	**Peaks-Kenny Pk**	**2.78**	**308**	Pn	**Pn**	**20 43 41.9**	**+0.3**
PKME				IAmb_Lg		20 44 26.9	
	comp=Z,28nm,1.2s						
PKME	**Peaks-Kenny Pk**	**2.78**	**308**	PN	**Pn**	**20 43 41.9**	**+0.3**
PKME				SN	**Sn**	**20 44 13.9**	**-1.5**
PKME				Trac		20 44 29.5	
	comp=Z,34nm,0.2s						
F63A	**Nahmakanta, Br**	**2.96**	**316**	Pn	**Pn**	**20 43 44.1**	**+0.1**
I63A	**Otisfield**	**3.21**	**280**	Pn	**Pn**	**20 43 46.9**	**-0.5**
PQI	**Presque Isle**	**3.33**	**338**	Pn	**Pn**	**20 43 48.7**	**-0.6**
G62A	**West of Eustis**	**3.51**	**299**	Pn	**Pn**	**20 43 51.7**	**+0.1**
BATG	**Bathurst New B**	**3.68**	**1**	Pn	**Pn**	**20 43 53.6**	**-0.5**
BATG	**Bathurst New B**	**3.68**	**1**	PN	**Pn**	**20 43 54.3**	**+0.3**
BATG				SN	**Sn**	**20 44 35.3**	**-2.5**
BATG				LG	Lg	20 44 54.2	
BATG				Trac		20 45 05.9	
	comp=Z,9.8nm,0.2s						
H62A	**Milan**	**3.71**	**287**	Pn	**Pn**	**20 43 55.0**	**+0.7**
I62A	**Tamworth**	**3.74**	**276**	Pn	**Pn**	**20 43 55.3**	**+0.5**
GBN	**Guysborough**	**3.81**	**60**	Pn	**Pn**	**20 43 55.8**	**0.0**
GBN				Pg	**Pg**	**20 44 07.4**	**-2.0**
WES	**Weston**	**3.95**	**254**	Pn	**Pn**	**20 43 56.5**	**-1.1**
D62A	**Allapoint, All**	**4.03**	**331**	Pn	**Pn**	**20 43 58.4**	**-0.3**
D62A				IAmb_Lg		20 45 13.9	
	comp=Z,12nm,0.8s						
HRV	**Adam Dziewonsk**	**4.08**	**256**	Pn	**Pn**	**20 43 59.2**	**-0.3**
LBNH	**Lisbon**	**4.19**	**281**	Pn	**Pn**	**20 44 01.9**	**+0.9**
K62A	**Royalston**	**4.52**	**260**	Pn	**Pn**	**20 44 05.8**	**+0.3**
LMQ	**La Malbaie**	**4.90**	**325**	Pn	**Pn**	**20 44 10.8**	**0.0**

*IDC **09** 20:43:29.7±1.7, 58.73N×18.12E, h0km, mbtmp3.1/5, ML2.9/5, Error ellipse: s-maj=19.0km s-min=6.8km az=178.0*
*DNK **09** 20:43:30.2±0.9, 58.73N×18.13E, h0km, Explosion*
*UPP **09** 20:43:30.0±0.1, 58.74N×18.14E, h0km, ML2.9, Explosion*
*NAO **09** 20:43:33.5±2.0, 59.00N×18.03E, ML2.3*
*BER **09** 20:43:34.2±3.1, 58.99N×18.03E, h0km, ML2.3(NAO), Suspected explosion*
*HEL **09** 20:43:37.0±0.3, 58.90N×19.19E, h0km, ML2.0, Explosion*

ISC 09 20:43:29.2±0.7, 58.75N±0.02×18.09E±0.03, h0 km, n66, σ2s 47/94, 1C, Baltic Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NYNU	**Nynaeshamn**	**0.26**	**350**	P	**Pg**	**20 43 35.4**	**+1.3**
NYNU				S	**Sg**	**20 43 38.8**	**+1.4**
NYNU	**Nynaeshamn**	**0.26**	**350**	P	**Pg**	**20 43 35.4**	**+1.3**
NYNU				S	**Sg**	**20 43 38.8**	**+1.4**
VIKU	**Vikbolandet**	**0.77**	**251**	P	**Pg**	**20 43 44.9**	**+0.9**
VIKU	**Vikbolandet**	**0.77**	**251**	P	**Pg**	**20 43 44.9**	**+0.9**
NRTU	**Norrtaelje**	**0.97**	**16**	P	**Pg**	**20 43 48.2**	**+0.6**
NRTU				S	**Sg**	**20 44 00.8**	**+0.6**
NRTU	**Norrtaelje**	**0.97**	**16**	P	**Pg**	**20 43 48.2**	**+0.6**
NRTU				S	**Sg**	**20 44 00.8**	**+0.6**
ESKU	**Eskilstuna**	**1.00**	**299**	P	**Pg**	**20 43 49.1**	**+0.7**
ESKU	**Eskilstuna**	**1.00**	**299**	P	**Pg**	**20 43 49.1**	**+0.7**
GOTU	**Gotland**	**1.10**	**167**	P	**Pg**	**20 43 50.0**	**-0.3**
GOTU				S	**Sg**	**20 44 04.5**	**0.0**
GOTU	**Gotland**	**1.10**	**167**	P	**Pg**	**20 43 50.0**	**-0.3**
GOTU				S	**Sg**	**20 44 04.5**	**0.0**
UPP	**Uppsala**	**1.13**	**348**	P	**Pg**	**20 43 51.6**	**+0.7**
FIBU	**Brunna**	**1.21**	**342**	P	**Pg**	**20 43 53.0**	**+0.6**
FIBU	**Brunna**	**1.21**	**342**	P	**Pg**	**20 43 53.0**	**+0.6**
BACU	**Backbrunna**	**1.21**	**336**	P	**Pg**	**20 43 53.1**	**+0.7**
BACU	**Backbrunna**	**1.21**	**336**	P	**Pg**	**20 43 53.1**	**+0.7**
FLYU	**Flymyra**	**1.38**	**356**	P	**Pn**	**20 43 55.9**	**+0.2**
FLYU	**Flymyra**	**1.38**	**356**	P	**Pn**	**20 43 55.9**	**+0.2**
BYXU	**Byxelkrok**	**1.58**	**202**	P	**Pn**	**20 43 59.0**	**+0.6**
BYXU	**Byxelkrok**	**1.58**	**202**	P	**Pn**	**20 43 59.0**	**+0.6**
GRAU	**Graesoe**	**1.60**	**8**	P	**Pn**	**20 43 59.5**	**+0.8**
GRAU	**Graesoe**	**1.60**	**8**	P	**Pn**	**20 43 59.5**	**+0.8**
AAL	**Aland**	**1.73**	**33**	*eP*	**Pn**	**20 44 01.2**	**+0.8**
AAL				IAML		20 44 27.7	
	comp=Z,28nm,0.3s						
AAL	**Aland**	**1.73**	**33**	P	**Pn**	**20 44 01.3**	**+0.8**
AAL	**Aland**	**1.73**	**33**	*eP*	**Pn**	**20 44 01.3**	**+0.8**
AAL				*eS*	**Sn**	**20 44 17.6**	**-5.6**
SLIT	**Slitere, Latvi**	**2.49**	**115**	*eP*	**Pn**	**20 44 12.7**	**+1.7**
SLIT	**Slitere, Latvi**	**2.49**	**115**	*eP*	**Pn**	**20 44 12.4**	**+1.5**
SLIT				*eS*	**Sn**	**20 44 38.2**	**-3.8**
HFS	**Hagfors**	**2.64**	**303**	Pn	**Pn**	**20 44 13.4**	**+0.5**
	comp=Z,3.0nm,0.3s,baz=122,slow=15,SNR=62						
HFS				Pg	**Pb**	**20 44 15.4**	**-1.9**
	comp=Z,3.0nm,0.3s,baz=118,slow=16,SNR=14						
HFS				Lg	Lg	20 44 51.0	
	comp=Z,6.9nm,0.3s,baz=118,slow=31,SNR=19						
	comp=Z,3.6nm,0.3s						
HFS	**Hagfors**	**2.64**	**303**	Pn	**Pn**	**20 44 15.6**	**+2.6**
	baz=131,slow=16						
HFS				Lg	Lg	20 44 50.7	
	baz=120,slow=28						
HFS	**Hagfors**	**2.64**	**303**	Pn	**Pn**	**20 44 15.6**	**+2.6**
	baz=131,slow=16						
HFS				Sg	**Sb**	**20 44 50.7**	**+0.5**
	baz=120,slow=28						
BLEU	**Blekinge**	**2.75**	**208**	*i* P	**Pn**	**20 44 15.8**	**+1.3**
RAF	**Rauma**	**2.93**	**38**	*eP*	**Pn**	**20 44 18.9**	**+1.9**
RAF	**Rauma**	**2.93**	**38**	*eP*	**Pn**	**20 44 19.1**	**+2.1**
RAF				MSG		20 45 04.5	
	comp=Z,6.8nm,0.2s						
MTSE	**Matsula**	**2.98**	**88**	*eP*	**Pn**	**20 44 20.0**	**+2.3**
DEL	**Delary**	**3.23**	**227**	*eP*	**Pn**	**20 44 22.3**	**+1.3**
DEL	**Delary**	**3.23**	**227**	*i* P	**Pn**	**20 44 22.0**	**+1.0**
PBUR	**Paburge**	**3.44**	**141**	*eP*	**Pn**	**20 44 26.6**	**+2.7**
MEF	**Metsahovi**	**3.53**	**63**	*eP*	**Pn**	**20 44 28.4**	**+3.2**
MEF	**Metsahovi**	**3.53**	**63**	*eS*	**Sn**	**20 45 00.4**	**-7.3**
MEF				MSG		20 45 25.4	
	comp=Z,4.5nm,0.2s						
ONAU	**Onsala**	**3.55**	**250**	*i* P	**Pn**	**20 44 27.1**	**+1.6**
STRU	**Stroemstad**	**3.60**	**277**	*i* P	**Pn**	**20 44 28.0**	**+1.9**
NUR	**Nurmijrvi**	**3.77**	**59**	*eP*	**Pn**	**20 44 28.8**	**+0.4**
BJUU	**Bjuv**	**3.84**	**228**	⇑*iP*	**Pn**	**20 44 29.5**	**+0.1**
NRA0	**NORESS Array S**	**3.87**	**304**	Pn	**Pn**	**20 44 31.0**	**+1.2**
	baz=117,slow=11						
NRA0				Pg	**Pb**	**20 44 40.2**	**+2.0**
	baz=112,slow=14						
NRA0				Lg	Lg	20 45 29.8	
	baz=111,slow=28						
NRA0	**NORESS Array S**	**3.87**	**304**	Pn	**Pn**	**20 44 31.0**	**+1.2**
	baz=117,slow=11						
NRA0				Pg	**Pb**	**20 44 40.2**	**+2.0**
	baz=112,slow=14						
NRA0				Sg	**Sb**	**20 45 29.8**	**+4.3**
	baz=111,slow=28						
BSD	**Bornholm Skovb**	**4.04**	**207**	*eP*	**Pn**	**20 44 33.5**	**+1.2**
BSD	**Bornholm Skovb**	**4.04**	**207**	*i* P	**Pn**	**20 44 32.7**	**+0.5**
NB2	**NORSAR Subarra**	**4.15**	**306**	Pn	**Pn**	**20 44 34.9**	**+1.1**
	baz=121,slow=14						
NB2				Pg	**Pb**	**20 44 44.6**	**+1.5**
	baz=123,slow=16						
NB2				Lg	Lg	20 45 39.8	
	baz=118,slow=37						
NB2	**NORSAR Subarra**	**4.15**	**306**	Pn	**Pn**	**20 44 34.9**	**+1.1**
	baz=121,slow=14						
NB2				Pg	**Pb**	**20 44 44.6**	**+1.5**
	baz=123,slow=16						
NB2				Sg	**Sg**	**20 45 39.8**	**-2.8**
	baz=118,slow=37						
NOA	**NORSAR Array B**	**4.15**	**306**	Pn	**Pn**	**20 44 33.9**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=126,slow=13,SNR=2.7						
NOA				Pg	**Pb**	**20 44 43.7**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=122,slow=14,SNR=16						
NOA				Lg	Lg	20 45 43.5	
	comp=Z,0.3nm,0.3s,baz=141,slow=13,SNR=3.0						
	comp=Z,0.4nm,0.3s						
PVF	**Pernaja**	**4.33**	**62**	*eP*	**Pn**	**20 44 36.5**	**+0.3**
PVF				*eS*	**Sn**	**20 45 20.2**	**-7.2**
VSU	**Vasula**	**4.53**	**90**	*eP*	**Pn**	**20 44 41.2**	**+2.3**
VSU				IAML		20 44 53.3	
	comp=Z,28nm,0.3s						
KEF	**Keuruu**	**4.79**	**42**	*eP*	**Pn**	**20 44 44.2**	**+1.7**
KEF				*eS*	**Sn**	**20 45 32.9**	**-5.8**
FIA0	**FINESS Array S**	**4.82**	**53**	Pn	**Pn**	**20 44 44.6**	**+1.7**
	baz=240,slow=12						
FIA0				Sn	**Sn**	**20 45 40.0**	**+0.7**
	baz=243,slow=28						
FIA0				Lg	Lg	20 45 58.4	
	baz=250,slow=37						
FIA0	**FINESS Array S**	**4.82**	**53**	Pn	**Pn**	**20 44 44.6**	**+1.7**
	baz=240,slow=12						
FIA0				Sn	**Sn**	**20 45 40.0**	**+0.7**
	baz=243,slow=28						
FIA0				Sg	**Sb**	**20 45 58.4**	**+5.5**
	baz=250,slow=37						
FINES	**FINESS Array B**	**4.82**	**53**	Pn	**Pn**	**20 44 42.3**	**-0.6**
	comp=Z,1.0nm,0.3s,baz=236,slow=12,SNR=35						
FINES				Pg	**Pb**	**20 44 55.6**	**+1.2**
	comp=Z,0.8nm,0.3s,baz=243,slow=12,SNR=6.9						
FINES				Sn	**Sn**	**20 45 38.8**	**-0.5**
	comp=Z,1.7nm,0.3s,baz=244,slow=21,SNR=9.3						
FINES				Lg	Lg	20 45 58.8	
	comp=Z,3.3nm,0.3s,baz=244,slow=27,SNR=14						
	comp=Z,1.6nm,0.3s						
KAF	**Kangasniemi**	**5.28**	**47**	*eP*	**Pn**	**20 44 50.7**	**+1.5**
KAF				*eS*	**Sn**	**20 45 44.1**	**-6.6**
IGN	**Ignalina**	**5.60**	**124**	*eP*	**Pn**	**20 44 54.0**	**+0.4**
SUF	**Sumiainen**	**5.61**	**41**	*eP*	**Pn**	**20 44 54.9**	**+1.2**
SUF				*eS*	**Sn**	**20 45 51.9**	**-6.8**
IDID	**Didziasalis**	**5.84**	**122**	*eP*	**Pn**	**20 44 56.8**	**-0.2**
OUF	**Merijarvi**	**6.46**	**27**	*eP*	**Pn**	**20 45 07.1**	**+1.7**
OUF				*eS*	**Sn**	**20 46 14.8**	**-4.9**
APA0	**Apatity Array**	**11.10**	**31**	Pn	**Pn**	**20 46 08.8**	**-0.2**
	baz=220,slow=18						
APA0	**Apatity Array**	**11.10**	**31**	Pn	**Pn**	**20 46 08.8**	**-0.2**
	baz=220,slow=18						
ARA0	**ARCESS Array S**	**11.28**	**13**	Pn	**Pn**	**20 46 09.7**	**-1.8**
	baz=191,slow=14						
ARA0	**ARCESS Array S**	**11.28**	**13**	Pn	**Pn**	**20 46 09.7**	**-1.8**
	baz=191,slow=14						
ARCES	**ARCESS Array B**	**11.28**	**13**	Pn	**Pn**	**20 46 09.2**	**-2.2**
	comp=Z,0.5nm,0.3s,baz=194,slow=13,SNR=34						
ARCES				Sn	**Sn**	**20 48 10.2**	**-7.9**
	comp=Z,0.1nm,0.3s,baz=193,slow=23,SNR=1.5						
	comp=Z,0.8nm,0.3s						
EKA	**Eskdalemuir Ar**	**12.05**	**263**	Pn	**Pn**	**20 46 21.3**	**-0.8**
	baz=68,slow=12						
	comp=Z,0.1nm,0.3s						

MAN 09 20:48:50.1, 16°47N×120°82E, h32 km, mb4.2, ML3.1, MS2.8, 4D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMPP	**San Manuel, Pa**	**0.35**	**203**	⇓*eP*	Pn	20 48 59.9	+1.7
SAMP	**Sagada Mountai**	**0.61**	**7**	⇓*eP*	Pb	20 49 02.8	+0.1
SAMP				*eS*		20 49 12.1	
BALP	**Baler**	**1.03**	**135**	⇓*eP*	Pn	20 49 08.3	+0.2
BALP				*eS*		20 49 16.2	
BOAC	**Boac**	**3.15**	**162**	⇓*eP*	Pn	20 49 38.4	+1.3

*IDC **09** 20:54:18.0±1.0, 4.92S×141.19E, h0km, mb4.0/5, mbtmp4.1/9, ML4.7/3, MS3.5/1, Error ellipse: s-maj=33.5km s-min=17.7km az=85.0*
*NEIC **09** 20:54:19.2±2.1, 4.79S±0.08×141.20E±0.08, h6km±3km

comp=Z,2.8nm,0.3s,baz=16,slow=11,SNR=33
WRA Sn Sn 21 00 59.8 -13
comp=Z,0.4nm,0.3s,baz=42,slow=13,SNR=3.4
WRA Lg Lg 21 02 55.3
comp=Z,0.3nm,0.3s,baz=23,slow=30,SNR=4.8
comp=Z,3.9nm,0.5s
WRA Warramunga Arr 16.39 204 Pn 20 58 06.5 -4.0
SOEI Soe 17.51 253 P **Pn 20 58 23.2 -1.5**
SOEI Soe 17.51 253 P **Pn 20 58 26.5 +1.8**
comp=Z,64nm,0.8s
SOEI Soe 17.51 253 P **Pn 20 58 22.1 -2.6**
SGSI Sangihe 17.87 298 P **Pn 20 58 30.0 +0.9**
comp=Z,21nm,0.5s
BATI Baumata 18.20 252 P **Pn 20 58 31.5 -1.7**
comp=Z,6.0nm,0.3s,baz=100,slow=17,SNR=9.3
comp=Z,36nm,0.6s
BATI Baumata 18.20 252 P **Pn 20 58 35.1 +1.9**
comp=Z,37nm,0.8s
BBSI Bau Bau 18.60 267 P **P 20 58 39.5 +1.7**
comp=Z,131nmcomp=Z,2.4nm,1.3s
EDFI Ende, Flores 19.78 258 P **P 20 58 52.5 +1.6**
comp=Z,9.0nm,0.8s
AS31 Alice Springs 19.95 200 P 20 58 52.3 -0.2
ASAR Alice Springs 19.95 200 P **P 20 58 52.3 -0.3**
comp=Z,0.9nm,0.3s,baz=32,slow=8.6,SNR=62
ASAR S S 21 02 28.2 -8.9
comp=Z,2.3nm,1.0s,baz=16,slow=29,SNR=4.3
ASAR Lg Lg 21 04 47.7
baz=17,slow=29
ASAR LR LR 21 06 46.5
comp=Z,130nm,20.6s,baz=347,slow=38
comp=Z,5.4nm,0.6s
ASAR Alice Springs 19.95 200 P 20 58 52.4 -0.1
BSSI Bau Bau, Buton 20.69 266 P **P 20 59 02.3 +1.6**
comp=Z,27nm,1.2s
TOLI2 Tolitoli 21.30 286 P P 20 59 05.2 -2.0
TOLI2 IAmb IAmb 20 59 10.0
comp=Z,12nm,0.8s
TOLI2 Tolitoli 21.30 286 P P 20 59 06.3 -0.9
SPSI Sidrap Palu 21.43 272 P P 20 59 10.4 +1.8
comp=Z,8.0nm,1.0s
TTSI Tana Toraja 21.45 274 P P 20 59 10.5 +1.6
EIDS Eidsvold 22.43 156 P P 20 59 20.4 +1.2
EIDS IAmb IAmb 20 59 24.0
comp=Z,14nm,0.9s
EIDS Eidsvold 22.43 156 P P 20 59 23.4 +4.1
INKA Innaminka 22.71 181 P P 20 59 23.7 +1.5
comp=Z,42nm,0.9s
OOD Oodnadatta 23.37 192 P P 20 59 29.1 +0.1
WRKA Warakurna 23.56 211 P P 20 59 29.9 -1.1
STKA Stephens Creek 26.83 179 P P 20 59 59.6 -1.2
comp=Z,3.0nm,0.8s,baz=356,slow=13,SNR=3.4
comp=Z,3.0nm,0.8s
MYKOM Kota Tinggi 37.94 279 P P 21 01 37.3 -1.0
CMAR Chiang Mai Arr 47.72 300 P P 21 02 56.6 -1.0
comp=Z,0.8nm,0.6s,baz=119,slow=7.3,SNR=5.9
comp=Z,0.8nm,0.6s
PZH PanZhiHua 49.37 311 P P 21 03 11.7 +1.4
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,110nm,7.5s
WMQ Urumqi 68.29 321 *eP* **P 21 05 23.5 +1.9**
MK31 Makanchi Array 73.06 322 P P 21 05 50.9 +0.3
MK31 IAmb IAmb 21 05 57.6
comp=Z,1.7nm,1.1s
MKAR Makanchi Array 73.06 322 P P 21 05 50.1 -0.5
comp=Z,1.2nm,0.8s,baz=113,slow=7.5,SNR=14
comp=Z,1.2nm,0.8s
MKAR Makanchi Array 73.06 322 P P 21 05 51.2 +0.6
MAKZ Makanchi 73.26 322 P P 21 05 52.0 +0.3
MAKZ IAmb IAmb 21 05 55.8
comp=Z,1.7nm,0.7s
VNDA Vanda 73.39 175 P P 21 05 51.5 -0.5
comp=Z,0.7nm,0.7s,baz=349,slow=4.9,SNR=4.5
comp=Z,0.7nm,0.7s
VNDA Vanda 73.39 175 P P 21 05 52.3 +0.3
VNDA IAmb IAmb 21 06 15.9
comp=Z,2.9nm,1.4s
KSH Kashi 74.42 313 P P 21 06 01.7 +2.9
KSH pP sP 21 06 07.6 +3.7
KSH PcP **PcP 21 06 20.1 +6.6**
KSH pmax pmax
comp=Z,3.0nm,0.6s
KDJ Kajisay 74.49 316 P P 21 05 58.2 -1.0
KDJ IAmb IAmb 21 06 03.7
comp=Z,2.8nm,1.0s
QSPA South Pole Qui 85.05 180 P P 21 06 55.9 -0.2
ILAR Eielson Array 86.78 24 P P 21 07 03.0 -1.4
comp=Z,0.6nm,0.5s,baz=257,slow=4.2,SNR=6.4
comp=Z,0.6nm,0.5s
ABKAR Akbulak array 88.02 320 P P 21 07 09.0 -1.7
ABKAR Akbulak array 88.02 320 P P 21 07 08.6 -2.1
ABKAR IAmb IAmb 21 07 11.9
comp=Z,1.6nm,1.1s
L27K Beaver Creek, 88.45 26 P P 21 07 13.7 +1.2
L27K IAmb IAmb 21 07 17.3
comp=Z,2.0nm,1.0s
BCAR Beaver Creek A 88.47 26 P P 21 07 14.3 +1.7
TORD Torodi Ar. Bea 139.27 284 PKP **PKPdf 21 13 47.2 -1.4**
comp=Z,0.1nm,0.6s,baz=90,slow=6.5,SNR=1.2
LPAZ La Paz 144.12 127 PKP **PKPdf 21 13 58.4 +0.4**
comp=Z,0.6nm,0.4s,baz=318,slow=9.6,SNR=2.2
DBIC Dimbokro 146.23 275 PKPbc **PKPdf 21 14 01.4 +0.4**
comp=Z,9.7nm,1.1s,baz=99,slow=2.6,SNR=4.9
DBIC Dimbokro 146.23 275 PKPdf 21 13 57.4 -3.6

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*JMA **09** 21:15:29.8±0.1,23.9N±0.4×121.5E±0.8,h6km±1km,*
MV3.2/11,TAIWAN REGION
*TAP **09** 21:15:31.6,24.00N×121.62E,h9km,ML3.5,C*
ISC 09 21:15:31.5±0.8,23.98N±0.01×121.62E±0.02,h10km±4km,
n127,σ1s10/197,4C-16D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien** baz=200	**0.01**	**231**	*i* P		**Pg**	**21 15 33.7**	**+0.4**
HWA				S		**Sg**	**21 15 35.3**	**+0.7**
TWD	**Chiawan** baz=349	**0.10**	**350**	⇓*i* P		**Pg**	**21 15 34.2**	**+0.1**
TWD				*i* S		**Sg**	**21 15 35.9**	**-0.1**
ETL	**Fush Village** baz=360	**0.17**	**2**	⇓*i* P		**Pg**	**21 15 35.3**	**0.0**
ETL				*i* S		**Sg**	**21 15 37.8**	**-0.1**
NACB	**Ninganchiao** baz=359	**0.19**	**354**	⇓*i* P		**Pg**	**21 15 35.5**	**0.0**
NACB				*i* S		**Sg**	**21 15 38.2**	**-0.2**
ESL	**Shilin** baz=228	**0.24**	**224**	⇑P		**Pg**	**21 15 36.9**	**+0.5**
ESL				S		**Sg**	**21 15 40.4**	**+0.7**
ETLH	**Xiulin Townshi** baz=328	**0.25**	**331**	⇓*i* P		**Pg**	**21 15 37.0**	**+0.3**
ETLH				*i* S		**Sg**	**21 15 40.5**	**+0.2**
EGFH	**Guangfu** baz=217	**0.36**	**209**	*e*P		**Pb**	**21 15 39.6**	**-0.3**
EGFH				*e*S		**Sb**	**21 15 46.1**	**+0.6**
WHF	**Hehuan Shan** baz=295	**0.36**	**297**	⇓*i* P		**Pb**	**21 15 39.1**	**-1.0**
WHF				*i* S		**Sb**	**21 15 44.0**	**-2.0**
OWD	**Renai** baz=274	**0.40**	**266**	*e*P		**Pb**	**21 15 40.2**	**-0.5**
OWD				S		**Sb**	**21 15 46.3**	**-0.7**
CHGB	**Renai** baz=279	**0.41**	**281**	⇓*i* P		**Pb**	**21 15 40.4**	**-0.5**
FUSS	**Fushou** baz=306	**0.43**	**308**	⇓*i* P		**Pb**	**21 15 40.7**	**-0.6**
FUSS				*i* S		**Sb**	**21 15 46.6**	**-1.2**
WUSB	**Renai** baz=270	**0.46**	**271**	P		**Pb**	**21 15 41.3**	**-0.3**
WUSB				*e*S		**Sb**	**21 15 47.7**	**-0.8**
ENA	**Nanau** baz=15	**0.46**	**15**	⇓*i* P		**Pg**	**21 15 40.5**	**0.0**
ENA				*i* S		**Sg**	**21 15 46.5**	**0.0**
TWT	**Tachien** baz=301	**0.48**	**304**	⇓*i* P		**Pb**	**21 15 42.0**	**-0.1**
TWT				*i* S		**Sb**	**21 15 49.3**	**-0.1**
EWUT	**Wuta** baz=18	**0.48**	**18**	*i* P		**Pg**	**21 15 41.0**	**+0.1**
EWUT				S		**Sg**	**21 15 47.4**	**+0.1**
NNSB	**Datong** baz=333	**0.49**	**334**	⇓*i* P		**Pb**	**21 15 41.5**	**-0.8**
NNSB				S		**Sg**	**21 15 47.8**	**+0.1**
VWDT	**VWDT** baz=242	**0.49**	**242**	⇑*i* P		**Pb**	**21 15 42.1**	**-0.1**
VWDT				*e*S		**Sb**	**21 15 49.4**	**+0.1**
TDCB	**Techi** baz=301	**0.50**	**303**	P		**Pb**	**21 15 42.0**	**-0.3**
TDCB				*e*S		**Sb**	**21 15 47.7**	**-2.0**
NNS	**Nan Shan** baz=334	**0.51**	**334**	⇓*i* P		**Pb**	**21 15 41.8**	**-0.7**
NNS				S		**Sb**	**21 15 49.0**	**-1.0**
HGSD	**Ruisui** baz=187	**0.52**	**200**	⇓P		**Pn**	**21 15 43.3**	**-1.6**
HGSD				*i* S		**Sb**	**21 15 51.4**	**+1.2**
EHY	**Hungye** baz=218	**0.55**	**209**	P		**Pb**	**21 15 42.7**	**-0.4**
EHY				*e*S		**Sb**	**21 15 50.7**	**-0.3**
LATG	**Datong** baz=351	**0.55**	**352**	⇓*i* P		**Pb**	**21 15 42.5**	**-0.9**
LATG				*e*S		**Sg**	**21 15 49.0**	**-0.6**
SSLB	**Suanglung** baz=263	**0.64**	**252**	*e*P		**Pn**	**21 15 44.8**	**-1.7**
SSLB				*e*S		**Sb**	**21 15 52.3**	**-1.3**
WCS	**Beigang Elemen** baz=276	**0.65**	**277**	P		**Pn**	**21 15 45.3**	**-1.4**
WCS				*e*S		**Sb**	**21 15 54.1**	**+0.2**
NDS	**Dongshan** baz=8.0	**0.65**	**8**	⇓*i* P		**Pb**	**21 15 44.3**	**-0.6**
NDS				*e*S		**Sg**	**21 15 52.8**	**+0.1**
ENTT	**Nioudou** baz=356	**0.65**	**356**	⇓*i* P		**Pb**	**21 15 44.6**	**-0.4**
ENTT				*e*S		**Sg**	**21 15 52.2**	**-0.6**
YULB	**Yu-li** baz=219	**0.66**	**206**	*e*P		**Pb**	**21 15 44.8**	**-0.2**
YULB				*e*S		**Sb**	**21 15 53.0**	**-1.2**
TWC	**Suao** baz=20	**0.66**	**19**	*e*P		**Pb**	**21 15 44.4**	**-0.6**
TWC				*e*S		**Sg**	**21 15 52.6**	**-0.3**
WHP	**Taichung City** baz=288	**0.68**	**296**	P		**Pn**	**21 15 45.8**	**-1.4**
WHP				*e*S		**Sb**	**21 15 55.0**	**+0.1**
EYUL	**Yuli** baz=220	**0.69**	**203**	*e*P		**Pb**	**21 15 45.3**	**-0.3**
TYC	**Yuchr** baz=263	**0.70**	**264**	⇑P		**Pn**	**21 15 45.9**	**-1.4**
TYC				*e*S		**Sn**	**21 15 55.5**	**-2.7**
YHNB	**Yeheng** baz=342	**0.72**	**342**	*e*P		**Pb**	**21 15 45.9**	**-0.1**
YHNB				*e*S		**Sb**	**21 15 55.3**	**-0.7**
NSK	**Sanguang** baz=341	**0.73**	**341**	*i* P		**Pb**	**21 15 46.1**	**-0.1**
NSK				*e*S		**Sb**	**21 15 55.4**	**-0.9**
TWE	**Neicheng** baz=5.0	**0.73**	**4**	⇓*i* P		**Pb**	**21 15 46.0**	**-0.3**
TWE				*e*S		**Sg**	**21 15 55.5**	**+0.2**
FUSB	**Fushanzhiwuyua** baz=358	**0.77**	**358**	P		**Pb**	**21 15 46.6**	**-0.4**
FUSB				*e*S		**Sg**	**21 15 56.5**	**0.0**
YUS	**Yu-Shan** baz=244	**0.78**	**231**	*e*P		**Pn**	**21 15 47.8**	**-1.2**
ILA	**Ilan** baz=8.0	**0.79**	**9**	*e*P		**Pb**	**21 15 47.1**	**-0.1**
NFF	**Wufeng Townshi** baz=324	**0.79**	**325**	*e*P		**Pn**	**21 15 47.7**	**-1.0**
NFF				*e*S		**Sb**	**21 15 58.0**	**0.0**
NWLT	**Wulai** baz=352	**0.80**	**353**	*e*P		**Pb**	**21 15 47.5**	**+0.1**
NWLT				*e*S		**Sg**	**21 15 57.4**	**+0.1**
WJS	**Zhushan** baz=259	**0.83**	**259**	*e*P		**Pn**	**21 15 50.0**	**+0.9**
WJS				*e*S		**Sn**	**21 16 01.8**	**+0.4**
FULB	**Fuli** baz=216	**0.84**	**201**	*e*P		**Pn**	**21 15 49.1**	**-0.2**
FULB				*e*S		**Sn**	**21 16 03.1**	**+1.5**
TWQ1	**Liyutan** baz=308	**0.85**	**295**	P		**Pn**	**21 15 49.7**	**+0.2**
TWQ1				*e*S		**Sn**	**21 16 02.1**	**+0.2**
NSTT	**Nanjuang** baz=319	**0.85**	**319**	P		**Pn**	**21 15 49.2**	**-0.3**
NSTT				*e*S		**Sb**	**21 15 58.5**	**-1.4**
WNT	**Mingjian** baz=268	**0.86**	**263**	*i* P		**Pn**	**21 15 50.4**	**+0.9**
WNT				*e*S		**Sn**	**21 16 02.5**	**+0.4**
ALS	**Alishan** baz=248	**0.88**	**238**	*e*P		**Pn**	**21 15 49.5**	**-0.7**
NTC	**Toucheng** baz=2.0	**0.89**	**13**	*e*P		**Pb**	**21 15 48.6**	**-0.3**
NTC				*e*S		**Sg**	**21 15 59.6**	**-0.6**
NSY	**Sanyi** baz=311	**0.89**	**299**	*e*P		**Pn**	**21 15 50.8**	**+0.8**
NSY				*e*S		**Sn**	**21 16 03.4**	**+0.5**
EGS	baz=17	**0.90**	**19**	*e*P		**Pn**	**21 15 49.9**	**-0.3**
NMLH	**Miaoli** baz=306	**0.93**	**306**	*e*P		**Pn**	**21 15 51.6**	**+1.1**
NMLH				*e*S		**Sn**	**21 16 03.9**	**0.0**
WDJ	**Dajia District** baz=302	**0.96**	**292**	*e*P		**Pn**	**21 15 52.9**	**+1.9**
WDJ				*e*S		**Sn**	**21 16 06.0**	**+1.3**
ELDTW	**Lidau** baz=203	**0.96**	**215**	*e*P		**Pn**	**21 15 50.2**	**-0.9**
WCHH	**Zhanghua** baz=276	**0.97**	**276**	*e*P		**Pn**	**21 15 52.3**	**+1.2**
WCHH				*e*S		**Sn**	**21 16 06.0**	**+1.1**
NHDH	**Xindian Distri** baz=346	**0.98**	**355**	*e*P		**Pn**	**21 15 50.7**	**-0.5**
NHDH				*e*S		**Sb**	**21 16 03.4**	**-0.1**
SBCB	**Hsinchu** baz=324	**0.99**	**325**	*e*P		**Pn**	**21 15 51.9**	**+0.6**
SBCB				*e*S		**Sn**	**21 16 04.4**	**-0.9**
TWA	**Mucha** baz=349	**0.99**	**358**	⇑*i* P		**Pn**	**21 15 51.4**	**0.0**
TWA				S		**Sg**	**21 16 02.2**	**-1.3**
TIPB	**Shuangxi** baz=2.0	**1.00**	**11**	P		**Pb**	**21 15 51.0**	**+0.1**
TIPB				*e*S		**Sg**	**21 16 02.2**	**-1.6**
HSN	**Hsinchu** baz=327	**1.00**	**324**	*e*P		**Pn**	**21 15 52.8**	**+1.2**
HSN				*e*S		**Sn**	**21 16 06.1**	**+0.3**
WDLH	**Douliu** baz=255	**1.03**	**254**	*e*P		**Pn**	**21 15 53.5**	**+1.6**
EDH	**Donghe** baz=177	**1.05**	**196**	*e*P		**Pn**	**21 15 51.6**	**-0.6**
EDH				*e*S		**Sn**	**21 16 07.1**	**+0.3**
NCUH	**Zhongli** baz=336	**1.05**	**338**	*e*P		**Pn**	**21 15 52.7**	**+0.4**
TAP	**Taipei** baz=346	**1.05**	**355**	*e*P		**Pn**	**21 15 52.6**	**+0.3**
TAP				*e*S		**Sn**	**21 16 06.4**	**-0.6**
NCU	**National Centr** baz=349	**1.06**	**338**	*e*P		**Pn**	**21 15 53.9**	**+1.6**
NCU				*e*S		**Sn**	**21 16 08.7**	**+1.7**
TWB1	**Santiao Chiao** baz=10.0	**1.07**	**18**	*e*P		**Pn**	**21 15 52.3**	**-0.2**
NWF	**Wu-fen Shan** baz=6.0	**1.09**	**8**	*e*P		**Pn**	**21 15 52.5**	**-0.4**
STYH	**Taoyuan** baz=225	**1.12**	**224**	P		**Pn**	**21 15 54.2**	**+1.1**
STYH				*e*S		**Sn**	**21 16 08.7**	**+0.2**
TWS1	**Kuangyinshan** baz=351	**1.13**	**351**	*e*P		**Pn**	**21 15 54.2**	**+1.0**
TWS1				*e*S		**Sn**	**21 16 08.7**	**0.0**
SXI1	**Grass Mountain** baz=5.0	**1.13**	**12**	P		**Pn**	**21 15 53.6**	**+0.2**
SXI1				*e*S		**Sn**	**21 16 10.2**	**+1.2**
TPUB	**Ta-pu** baz=235	**1.13**	**233**	*i* P		**Pn**	**21 15 54.1**	**+0.7**
TPUB				*e*S		**Sn**	**21 16 11.3**	**+2.4**
WRL	**Guolierlin Hig** baz=254	**1.14**	**266**	P		**Pn**	**21 15 54.7**	**+1.3**
WRL				*e*S		**Sn**	**21 16 11.1**	**+2.1**
CHN2	**Minshiung** baz=263	**1.14**	**247**	*e*P		**Pn**	**21 15 54.6**	**+1.2**
CHN2				*e*S		**Sn**	**21 16 10.5**	**+1.5**
YM01	**YM01** baz=7.0	**1.16**	**358**	P		**Pn**	**21 15 54.5**	**+0.8**
YM01				*e*S		**Sn**	**21 16 10.3**	**+0.7**
WTK	**Tuku** baz=257	**1.16**	**256**	*e*P		**Pn**	**21 15 55.1**	**+1.4**
LONT	**Longtian** baz=206	**1.16**	**203**	*e*P		**Pb**	**21 15 52.8**	**-0.8**
WTP	**Ta-pu** baz=234	**1.18**	**232**	*e*P		**Pn**	**21 15 55.5**	**+1.6**
NTST	**Danshui** baz=353	**1.19**	**353**	*e*P		**Pn**	**21 15 55.9**	**+1.9**
NTST				*e*S		**Sn**	**21 16 11.6**	**+1.4**
CHY	**Chiayi** baz=248	**1.19**	**246**	*e*P		**Pn**	**21 15 55.1**	**+0.9**
TWK	**Hsinying** baz=225	**1.26**	**236**	*e*P		**Pn**	**21 15 57.3**	**+2.2**
TWK				*e*S		**Sn**	**21 16 14.3**	**+2.2**
TWG	**Pinlang** baz=206	**1.26**	**203**	*e*P		**Pb**	**21 15 53.4**	**-1.9**
TWGBT	**Beinan** baz=206	**1.26**	**203**	*e*P		**Pb**	**21 15 53.7**	**-1.6**
CHN1	**Nanshi** baz=235	**1.28**	**232**	*e*P		**Pg**	**21 15 57.6**	**+1.6**
SNST	**Tainan City** baz=225	**1.28**	**234**	*e*P		**Pg**	**21 15 57.5**	**+1.5**
SNST				*e*S		**Sn**	**21 16 16.8**	**+4.4**
TWY	**Chenhua** baz=346	**1.29**	**359**	*e*P		**Pg**	**21 15 57.2**	**+1.0**
JYNG	**Yonagunijimaku**	**1.30**	**69**	P		**Pb**	**21 15 56.0**	**0.0**
JYNG				*e*S		**Sb**	**21 16 13.4**	**+0.7**
SGST	**Jiashian** baz=213	**1.30**	**227**	*e*P		**Pg**	**21 15 56.5**	**0.0**
LDUT	**Ludao** baz=172	**1.31**	**186**	*e*P		**Pn**	**21 15 54.3**	**-1.4**
LDUT				*e*S		**Sb**	**21 16 12.2**	**-0.8**
WSF	**Szhu** baz=257	**1.32**	**255**	*e*P		**Pg**	**21 15 57.9**	**+1.1**
WSL	**Shuilin Townsh** baz=252	**1.35**	**250**	*e*P		**Pg**	**21 15 58.6**	**+1.2**
WSL				*e*S		**Sn**	**21 16 16.8**	**+2.5**
YOJ	**Yonaguni jima** baz=69	**1.36**	**69**	*e*P		**Pn**	**21 15 56.5**	**+0.1**
YOJ	**Yonaguni jima**	**1.36**	**69**	P		**Pn**	**21 15 56.7**	**+0.2**
YOJ				*e*S		**Sb**	**21 16 14.9**	**+0.5**
ICHU	**Yijhu** baz=246	**1.37**	**243**	*e*P		**Pg**	**21 15 58.8**	**+0.9**
ICHU				*e*S		**Sn**	**21 16 18.0**	**+3.2**
CHN8	**Yiju** baz=246	**1.44**	**244**	*e*P		**Pg**	**21 15 60.0**	**+0.9**
SCST	**Cishan** baz=212	**1.50**	**223**	*e*P		**Pg**	**21 16 01.5**	**+1.2**
SHHT	**Tainan City** baz=233	**1.51**	**231**	*e*P		**Pg**	**21 16 01.9**	**+1.5**
ECL	**Taimali** baz=186	**1.51**	**204**	*e*P		**Pn**	**21 15 58.1**	**-0.4**
SSD	**Sandimen** baz=209	**1.53**	**216**	*e*P		**Pg**	**21 16 01.1**	**+0.3**
TSMG	**Majia** baz=208	**1.55**	**215**	*e*P		**Pg**	**21 16 00.8**	**-0.5**
TWM1	**Shoushan** baz=226	**1.59**	**224**	*e*P		**Pg**	**21 16 03.4**	**+1.3**
TSCK	**Chigu Township** baz=242	**1.63**	**240**	*e*P		**Pg**	**21 16 02.5**	**-0.3**
MASBT	**Mashibuluo** baz=206	**1.64**	**214**	*e*P		**Pb**	**21 16 01.0**	**-0.7**
PCYT	**Pengchaiyu** baz=11	**1.69**	**14**	*e*P		**Pb**	**21 16 01.9**	**-0.7**
EAST	**Anshuo** baz=189	**1.74**	**204**	*e*P		**Pn**	**21 16 01.3**	**-0.5**
TAWH	**Dawu Township** baz=189	**1.77**	**202**	*e*P		**Pn**	**21 16 01.1**	**-1.0**
SSPT	**Xinbi** baz=206	**1.78**	**213**	*e*P		**Pb**	**21 16 03.5**	**-0.6**
SCZT	**Fangliau** baz=201	**1.85**	**210**	*e*P		**Pg**	**21 16 05.4**	**-1.5**
SLIU	**Shizi** baz=192	**1.91**	**203**	*e*P		**Pb**	**21 16 04.8**	**-1.6**
PHUB	**P'eng-hu** baz=257	**1.93**	**256**	*e*P		**Pn**	**21 16 04.2**	**-0.1**
PNG	**Penghu** baz=259	**1.93**	**258**	*e*P		**Pb**	**21 16 05.9**	**-0.9**
WDGT	**Dungji** baz=249	**1.93**	**248**	*e*P		**Pb**	**21 16 05.6**	**-1.2**
LAY	**Lan-yu** baz=180	**1.94**	**182**	*e*P		**Pn**	**21 16 03.0**	**-1.4**
IRIF	**Iriomote-Funau**	**1.96**	**79**	*e*P		**Pn**	**21 16 05.1**	**+0.4**
IRIF				S		**Sn**	**21 16 30.7**	**+1.3**
LYUB	**Lan-yu** baz=179	**1.97**	**181**	*e*P		**Pn**	**21 16 01.9**	**-3.0**
HATJ	**Hateruma jima**	**2.00**	**87**	*e*S		**Sn**	**21 16 30.6**	**+0.2**
VCHM	**Qimei** baz=250	**2.15**	**249**	*e*P		**Pb**	**21 16 08.7**	**-1.7**
JKRS	**Kuro-shima**	**2.20**	**83**	P		**Pn**	**21 16 09.0**	**+1.0**
VWUC	**VWUC** baz=297	**2.21**	**297**	*e*P		**Pn**	**21 16 07.7**	**-0.5**
JIJ	**Ishigaki jima**	**2.34**	**80**	P		**Pn**	**21 16 10.1**	**+0.2**
PTMZ	**Houxiangcun** baz=295	**2.50**	**295**	*e*P		**Pn**	**21 16 13.2**	**+1.1**
JISG	**Ishigakijimahi**	**2.53**	**76**	P		**Pn**	**21 16 12.7**	**+0.2**
MATB	**Ma-tsu** baz=309	**2.64**	**325**	*e*P		**Pn**	**21 16 15.4**	**+1.4**
JTJ	**Tarama**	**2.89**	**76**	P		**Pn**	**21 16 18.5**	**+0.9**
JTJ				*e*S		**Sn**	**21 16 53.0**	**+0.7**
KNM	**Kinmen** baz=278	**2.94**	**279**	*e*P		**Pb**	**21 16 20.1**	**-3.8**
KNMB	**Chin-men Tao** baz=279	**2.98**	**280**	*e*P		**Pn**	**21 16 19.7**	**+0.9**
MHZQ	**Yeshan** baz=311	**3.15**	**312**	*e*P		**Pn**	**21 16 21.8**	**+0.7**
XPSS	**Dashiqiu** baz=334	**3.20**	**337**	*e*P		**Pn**	**21 16 21.8**	**0.0**
AXDP	**Jialang** baz=285	**3.44**	**286**	*e*P		**Pn**	**21 16 25.2**	**+0.1**
ZPLA	**Ao Xicun** baz=269	**3.54**	**270**	*e*P		**Pn**	**21 16 27.3**	**+0.9**
SXFK	**Yanhouchang** baz=304	**4.33**	**305**	*e*P		**Pn**	**21 16 37.3**	**0.0**

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*IDC **09** 21:50:48.8±0.6,29.33S×61.14E,h0km,mb4.0/11,*
mbtmp4.1/12,ML4.5/1,MS3.6/17,Error ellipse:
s-maj=24.9km s-min=18.6km az=73.0

*NEIC **09** 21:50:51.1±2.1,29.°32S±0.°10×61.°0E±0.°2,h10km±1km, mb4.4/9, Error ellipse: s-maj=22.9km s-min=16.3km az=253.0*

ISC 09 21:50:51.3±0.5, 29.°30S±0.°10×61.°0E±0.°1, h14km, n56, σ1§44/33, mb4.2/14, MS3.6/17, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	**Riviere de l'E**	**9.38**	**329**		**Pn**	**21 53 02.8**	**-3.5**
FOMA	**Nahampoana Res**	**13.17**	**286**		**Pn**	**21 53 56.9**	**-1.1**
VOI	**Vohitsoka**	**14.74**	**297**		**Pn**	**21 54 19.6**	**-0.1**
ABPO	**Ambohimpanom**	**16.17**	**306**	Pn	**Pn**	**21 54 38.6**	**+0.2**
OPO	**Ambohidratompo**	**16.50**	**307**	Pn	**Pn**	**21 54 41.9**	**-0.7**
	0.2nm,0.3s,baz=127,slow=13,SNR=12						
OPO				Sn	Sn	21 57 31.0	-15
	0.1nm,0.3s,baz=315,slow=20,SNR=2.4 4.3nm,0.4s						
H08S1	**Diego Carcia H**	**24.12**	**29**	T	T	22 20 47.7	
	baz=209,slow=76						
H08S2	**Diego Garcia H**	**24.12**	**29**	T	T	22 20 48.6	
	baz=209,slow=76						
H08S3	**Diego Garcia H**	**24.14**	**29**	T	T	22 20 50.6	
	baz=209,slow=76						
MSEY	**Mahe Island**	**25.04**	**347**	P	**P**	**21 56 17.0**	**+1.7**
BOSA	**Boshof**	**31.18**	**262**	LR	LR	22 06 51.9	
	comp=Z,62nm,19.6s,baz=236,slow=31						
KMBO	**Kilima Mbogo**	**35.99**	**317**	LR	LR	22 09 28.3	
	comp=Z,83nm,21.6s,baz=94,slow=31						
MAW	**Mawson**	**38.34**	**179**	LR	LR	22 09 51.6	
	comp=Z,92nm,18.7s,baz=250,slow=30						
MBAR	**Mbarara**	**40.56**	**309**	LR	LR	22 13 36.0	
	comp=Z,92nm,19.4s,baz=129,slow=34						
TSUM	**Tsumeb**	**40.61**	**274**	LR	LR	22 12 52.8	
	comp=Z,57nm,20.3s,baz=124,slow=32						
ATD	**Arta Tunnel**	**44.20**	**334**	LR	LR	22 14 55.5	
	comp=Z,84nm,18.3s,baz=158,slow=33						
H01W2	**Cape Leeuwin H**	**44.95**	**111**	T	T	22 46 44.2	
	baz=261,slow=75						
H01W3	**Cape Leeuwin H**	**44.96**	**111**	T	T	22 46 45.0	
	baz=261,slow=75						
H01W1	**Cape Leeuwin H**	**44.97**	**111**	T	T	22 46 46.1	
	baz=261,slow=75						
WSAR	**Wadi Sarin**	**52.29**	**357**	LR	LR	22 16 46.0	
	comp=Z,38nm,20.5s,baz=180,slow=30						
SNAA	**Sanae**	**54.27**	**200**	P	**P**	**22 00 16.5**	**-0.1**
	1.4nm,0.9s,baz=109,slow=13,SNR=6.0 1.4nm,0.9s						
SNAA	**Sanae**	**54.27**	**200**	P	**P**	**22 00 17.2**	**+0.5**
SNAA				IAmb	IAmb	22 00 27.0	
	comp=Z,2.9nm,1.1s						
CMAR	**Chiang Mai Arr**	**59.98**	**42**	P	**P**	**22 00 57.1**	**-0.5**
	comp=Z,0.7nm,0.3s,baz=224,slow=8.5,SNR=1.5 comp=Z,0.7nm,0.3s						
BKB	**Balikpapan**	**60.02**	**73**	P	**P**	**22 00 58.1**	**+0.1**
QSPA	**South Pole Qui**	**60.85**	**180**	P	**P**	**22 01 02.9**	**-0.3**
	comp=Z,3.8nm,1.0s,baz=283,slow=2.5,SNR=7.8						
QSPA				LR	LR	22 23 49.7	
	comp=Z,92nm,19.7s,baz=124,slow=33 comp=Z,3.8nm,1.0s						
QSPA	**South Pole Qui**	**60.85**	**180**	P	**P**	**22 01 03.4**	**+0.2**
QSPA				IAmb	IAmb	22 01 07.6	
	comp=Z,3.3nm,0.9s						
EIL	**Elat**	**63.68**	**335**	LR	LR	22 27 43.8	
	comp=Z,41nm,18.2s,baz=115,slow=35						
VNDA	**Vanda**	**63.94**	**166**	P	**P**	**22 01 23.5**	**+0.1**
	comp=Z,1.2nm,0.7s,baz=274,slow=6.3,SNR=5.2 comp=Z,1.2nm,0.7s						
VNDA	**Vanda**	**63.94**	**166**	P	**P**	**22 01 24.0**	**+0.6**
VNDA				IAmb	IAmb	22 01 24.4	
	comp=Z,1.3nm,0.8s						
ASAR	**Alice Springs**	**64.58**	**104**	P	**P**	**22 01 26.6**	**-2.0**
	comp=Z,1.5nm,0.8s,baz=242,slow=6.5,SNR=12 comp=Z,1.5nm,0.8s						
WRA	**Warramunga A**	**66.41**	**100**	P	**P**	**22 01 39.4**	**-1.1**
	comp=Z,1.1nm,0.8s,baz=246,slow=5.6,SNR=4.2 comp=Z,1.1nm,0.8s						
GNI	**Garni**	**70.73**	**347**	LR	LR	22 30 24.5	
	comp=Z,43nm,22.0s,baz=148,slow=34						
TOA0	**Torodi Ar. Sit**	**71.05**	**298**	P	**P**	**22 02 09.1**	**-0.2**
TOA0				IAmb	IAmb	22 02 23.8	
	comp=Z,13nm,1.4s						
TORD	**Torodi Ar. Bea**	**71.05**	**298**	P	**P**	**22 02 10.1**	**+0.8**
	comp=Z,2.0nm,0.9s,baz=118,slow=4.7,SNR=8.0 comp=Z,2.0nm,0.9s						
TORD	**Torodi Ar. Bea**	**71.05**	**298**	IAmb	IAmb	22 02 13.0	
	comp=Z,2.5nm,0.9s						
BRTR	**Keskin Array B**	**73.23**	**338**	P	**P**	**22 02 23.4**	**+1.4**
	comp=Z,0.5nm,0.6s,baz=141,slow=7.5,SNR=3.6 comp=Z,0.5nm,0.6s						
BRTR	**Keskin Array B**	**73.23**	**338**	P	**P**	**22 02 23.1**	**+1.1**
KBZ	**Khabaz**	**74.54**	**347**	LR	LR	22 33 37.3	
	comp=Z,50nm,21.3s,baz=134,slow=34						
LZH	**Lanzhou**	**76.53**	**35**	*eP*	**P**	**22 02 44.8**	**+3.6**
LZH				pP	pwP	22 02 48.4	-2.6
LZH				pmax	pmax		
	comp=Z,19nm,1.6s						
GTA	**Gaotai**	**77.35**	**30**	*eP*	**P**	**22 02 48.8**	**+3.1**
GTA				sP	PcP	22 03 08.7	+13
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MK31	**Makanchi Array**	**78.16**	**15**	P	**P**	**22 02 51.1**	**+1.2**
MKAR	**Makanchi Array**	**78.16**	**15**	P	**P**	**22 02 50.1**	**+0.2**
	comp=Z,1.6nm,0.9s,baz=173,slow=4.9,SNR=13 comp=Z,1.6nm,0.9s						
MKAR	**Makanchi Array**	**78.16**	**15**	P	**P**	**22 02 50.4**	**+0.5**
ABKAR	**Akbulak array**	**78.21**	**359**	P	**P**	**22 02 49.7**	**-0.3**
AKTO	**Aktyubinsk**	**79.43**	**358**	LR	LR	22 34 55.7	
	comp=Z,26nm,20.1s,baz=156,slow=33						
RPZ	**Rata Peaks**	**83.24**	**137**	LR	LR	22 33 00.2	
	comp=Z,139nm,19.2s,baz=244,slow=30						
AKASG	**Malin Array Be**	**84.46**	**340**	P	**P**	**22 03 23.5**	**+0.3**
	comp=Z,0.2nm,0.2s,baz=168,slow=3.3,SNR=4.5 comp=Z,0.2nm,0.2s						
ZALV	**Zalesovo Beam**	**85.44**	**14**	P	**P**	**22 03 27.3**	**-0.8**
	comp=Z,1.1nm,0.5s,baz=219,slow=3.8,SNR=6.8 comp=Z,1.1nm,0.5s						
MDT	**Midelt**	**87.62**	**310**	LR	LR	22 43 53.5	
	comp=Z,42nm,18.0s,baz=141,slow=36						
VRAC	**Vranov**	**87.68**	**333**	LR	LR	22 43 16.6	
	comp=Z,28nm,18.4s,baz=80,slow=36						
ESDC	**Sonseca Array**	**91.37**	**316**	LR	LR	22 44 26.1	
	comp=Z,28nm,20.7s,baz=134,slow=35						
NOA	**NORSAR Array B**	**98.67**	**338**	LR	LR	22 48 28.0	
	comp=Z,9.4nm,20.9s,baz=95,slow=35						
YKA	**Yellowknife Ar**	**146.68**	**356**	PKPbc	**PKPbc**	**22 10 30.9**	**-1.1**
	comp=Z,1.0nm,0.6s,baz=1.5,slow=3.1,SNR=9.2						
ULM	**Lac du Bonnet**	**152.73**	**327**	PKPbc	**PKPbc**	**22 10 46.8**	**-0.6**
	comp=Z,3.2nm,0.8s,baz=180,slow=3.0,SNR=4.0						
PDAR	**Pinedale Array**	**164.55**	**333**	PKP	**PKPdf**	**22 10 53.2**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=60,slow=2.2,SNR=3.9						
TXAR	**Lajitas Array**	**166.59**	**274**	PKP	**PKPdf**	**22 10 55.0**	**-1.8**
	comp=Z,0.5nm,0.7s,baz=158,slow=1.3,SNR=5.6						
NVAR	**Mina Array Bea**	**170.88**	**356**	PKP	**PKPdf**	**22 10 58.0**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=212,slow=3.2,SNR=1.7						

*NOU **09** 21:51:11.3,20.°30S×168.°34E, h0km, MLv4.4/9, Loyalty Islands*
*IDC **09** 21:51:11.2±1.1,20.°50S×168.°37E, h0km, mb4.0/8, mbtmp4.0/9, ML3.1/1, MS3.5/9, Error ellipse: s-maj=34.0km s-min=22.9km az=149.0*
*NEIC **09** 21:51:15.0±2.1,20.°53S±0.°04×168.°22E±0.°09, h10km±1km, mb4.5/19, Error ellipse: s-maj=13.8km s-min=6.8km az=272.0*

ISC 09 21:51:13.3±0.6, 20.°47S±0.°06×168.°29E±0.°07, h10km, n48, σ1§09/46, mb4.3/16, MS3.5/8, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**1.03**	**193**	Pg	**Pg**	**21 51 32.2**	**-1.0**
MARNC				Sg	**Sg**	**21 51 46.2**	**-0.5**
MARNC	**Mare, Loyalty**	**1.03**	**193**	P	**Pg**	**21 51 33.2**	**0.0**
PINNC	**Pines Island,**	**2.27**	**200**		**Pn**	**21 51 51.4**	**+0.5**
PINNC	**Pines Island,**	**2.27**	**200**	P	**Pn**	**21 51 52.2**	**+1.3**
DZM	**Mont Dzumac**	**2.34**	**227**	Pn	**Pn**	**21 51 52.2**	**+0.2**
	4.8nm,0.3s,baz=110,slow=11,SNR=235						
DZM				Sn	**Sn**	**21 52 21.3**	**+0.5**
	91nm,0.3s,baz=210,slow=20,SNR=7.7						
DZM				LR	LR	21 52 41.6	
	comp=Z,385nm,20.3s,baz=17,slow=38 21nm,0.3s						
DZM	**Mont Dzumac**	**2.34**	**227**		**Pn**	**21 51 52.1**	**+0.1**
DZM	**Mont Dzumac**	**2.34**	**227**	P	**Pn**	**21 51 53.3**	**+1.3**
NOUC	**Port Laguerre**	**2.46**	**228**	P	**Pn**	**21 51 55.1**	**+1.6**
KOUNC	**Koumac, New Ca**	**3.75**	**268**		**Pn**	**21 52 11.9**	**+0.7**
KOUNC	**Koumac, New Ca**	**3.75**	**268**	P	**Pn**	**21 52 12.0**	**+0.8**
HIZ	**Hauiti**	**18.86**	**164**	P	**P**	**21 55 32.3**	**-1.3**
HIZ				IAmb	IAmb	21 55 43.1	
	comp=Z,40nm,1.0s						
BKZ	**Black Stump Fm**	**19.93**	**161**	P	**Pn**	**21 55 48.0**	**+1.0**
BKZ				IAmb	IAmb	21 55 51.5	
	comp=Z,26nm,1.1s						
NIUE	**Niue**	**20.55**	**90**	P	**P**	**21 55 54.1**	**+1.9**
CTA	**Charters Tower**	**20.67**	**267**	P	**P**	**21 55 53.9**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=80,slow=14,SNR=4.6						
CTA				LR	LR	22 02 47.8	
	comp=Z,70nm,20.4s,baz=84,slow=34 comp=Z,0.7nm,0.3s						
CTAO	**Charters Tower**	**20.67**	**267**	P	**P**	**21 55 54.2**	**+0.7**
THZ	**Tophouse**	**21.59**	**171**	P	**P**	**21 56 04.3**	**+1.1**
THZ				IAmb	IAmb	21 56 10.4	
	comp=Z,25nm,1.2s						
KHZ	**Kahutara**	**22.33**	**170**	P	**P**	**21 56 12.3**	**+1.2**
KHZ				IAmb	IAmb	21 56 21.5	
	comp=Z,22nm,1.2s						
LBZ	**Lake Benmore**	**23.90**	**177**	P	**P**	**21 56 28.6**	**+1.4**
LBZ				IAmb	IAmb	21 56 45.4	
	comp=Z,17nm,1.2s						
ODZ	**Otahua Downs**	**24.59**	**176**	P	**P**	**21 56 33.3**	**-0.2**
ODZ				IAmb	IAmb	21 56 48.1	
	comp=Z,25nm,1.2s						
COEN	**Coen**	**24.82**	**281**	P	**P**	**21 56 35.6**	**-0.4**
COEN				IAmb	IAmb	21 56 49.3	
	comp=Z,6.3nm,0.9s						
PYZ	**Puysegur Point**	**25.66**	**183**	P	**P**	**21 56 42.7**	**-0.6**
TOO	**Toolangi**	**26.12**	**224**	P	**P**	**21 56 48.1**	**+0.5**
TOO				IAmb	IAmb	21 56 58.9	
	comp=Z,13nm,1.1s						
STKA	**Stephens Creek**	**26.44**	**239**	P	**P**	**21 56 51.2**	**+0.8**
	comp=Z,1.6nm,0.5s,baz=59,slow=13,SNR=3.4						
STKA				LR	LR	22 06 15.7	
	comp=Z,93nm,18.3s,baz=97,slow=34 comp=Z,1.6nm,0.5s						
RAR	**Rarotonga**	**29.84**	**97**	P	**P**	**21 57 21.7**	**+0.8**
WR0	**Warramunga Arr**	**31.64**	**265**	P	**P**	**21 57 39.3**	**+2.4**
WB0	**Warramunga Arr**	**31.80**	**265**	P	**P**	**21 57 36.1**	**-2.2**
WB0				IAmb	IAmb	21 57 44.3	
	comp=Z,2.1nm,1.1s						
WB2	**Warramunga Arr**	**31.82**	**265**	P	**P**	**21 57 38.8**	**+0.3**
WRA	**Warramunga Arr**	**31.83**	**265**	P	**P**	**21 57 37.5**	**-1.0**
	comp=Z,0.3nm,0.6s,baz=96,slow=8.6,SNR=2.4 comp=Z,0.3nm,0.6s						
WRA	**Warramunga Arr**	**31.83**	**265**	P	**P**	**21 57 36.7**	**-1.8**
AS31	**Alice Springs**	**31.98**	**258**	P	**P**	**21 57 40.6**	**+0.8**
AS31				IAmb	IAmb	21 57 51.4	
	comp=Z,1.7nm,0.6s						
ASAR	**Alice Springs**	**31.98**	**258**	P	**P**	**21 57 39.1**	**-0.7**
	comp=Z,2.5nm,0.7s,baz=86,slow=8.8,SNR=20						
ASAR				LR	LR	22 11 40.1	
	comp=Z,79nm,19.4s,baz=117,slow=38 comp=Z,2.5nm,0.7s						
FORT	**Forrest**	**37.52**	**246**	P	**P**	**21 58 26.6**	**-1.1**
QSPA	**South Pole Qui**	**69.59**	**180**	P	**P**	**22 02 22.4**	**-0.1**
	comp=Z,2.0nm,0.8s,baz=275,slow=2.9,SNR=3.1 comp=Z,2.0nm,0.8s						
PETK	**Petropavlovsk-**	**73.84**	**353**	LR	LR	22 29 00.1	
	comp=Z,13nm,21.9s,baz=108,slow=31						
CMAR	**Chiang Mai Arr**	**78.19**	**295**	P	**P**	**22 03 15.0**	**+1.5**
	comp=Z,1.0nm,0.3s,baz=111,slow=4.9,SNR=4.4 comp=Z,1.0nm,0.3s						
CMAR	**Chiang Mai Arr**	**78.19**	**295**	P	**P**	**22 03 14.3**	**+0.8**
BELA	**Belgrano 2**	**80.96**	**175**	P	**P**	**22 03 26.5**	**-1.1**
BELA				IAmb	IAmb	22 03 27.7	
	comp=Z,6.5nm,0.8s						
MA2	**Magadan**	**81.03**	**351**	LR	LR	22 40 07.1	
	comp=Z,19nm,18.0s,baz=16,slow=36						
TROLL	**Troll, Antarti**	**87.25**	**184**	P	**P**	**22 03 59.3**	**-0.6**
SNAA	**Sanae**	**87.90**	**183**	P	**P**	**22 04 02.0**	**-0.9**
SNAA	**Sanae**	**87.90**	**183**	P	**P**	**22 04 02.1**	**-0.8**
	comp=Z,1.7nm,1.0s,baz=231,slow=5.4,SNR=5.5						
SNAA				LR	LR	22 41 57.5	
	comp=Z,42nm,20.6s,baz=88,slow=35 comp=Z,1.7nm,1.0s						
VNA3	**Neumayer Olymp**	**88.52**	**181**	P	**P**	**22 04 04.8**	**-1.0**
VNA2	**Neumayer--Watz**	**88.80**	**181**	P	**P**	**22 04 06.2**	**-0.9**
	baz=179,slow=5.0						
YBH	**Yreka Blue Hor**	**88.80**	**44**	LR	LR	22 41 16.3	
	comp=Z,34nm,18.0s,baz=190,slow=34						
PFO	**Pinyon Flats O**	**89.56**	**54**	LR	LR	22 38 48.8	
	comp=Z,50nm,18.1s,baz=189,slow=32						
NVAR	**Mina Array Bea**	**90.28**	**49**	P	**P**	**22 04 13.3**	**-1.5**
	comp=Z,0.7nm,0.6s,baz=222,slow=8.9,SNR=4.7 comp=Z,0.7nm,0.6s						
BRTR	**Keskin Array B**	**136.84**	**307**	PKP	**PKPdf**	**22 10 35.8**	**-0.8**
	comp=Z,0.4nm,0.8s,baz=126,slow=2.0,SNR=2.5						
GERES	**GERESS Array B**	**145.13**	**330**	PKPbc	**PKPbc**	**22 10 50.1**	**-0.5**
	comp=Z,0.5nm,0.8s,baz=127,slow=2.6,SNR=4.2						

*NEIC **09** 21:58:36.1±1.0,36.°27N±0.°01×97.°56W±0.°02, h5km±7km, Error ellipse: s-maj=3.3km s-min=0.7km az=59.0*
*TUL **09** 21:58:36.3±1.2,36.°29N±0.°02×97.°51W±0.°03, h7km±7km, ML3.6, mb_Lg3.3/88(NEIC), Error ellipse: s-maj=3.4km s-min=1.3km az=55.0*
*ANF **09** 21:58:36.1±0.3,36.°30N×97.°51W, h7km, ML3.7/10, Error ellipse: s-maj=3.5km s-min=2.5km az=119.0*

ISC 09 21:58:36.2±0.8, 36.°29N±0.°02×97.°54W±0.°03, h10km, n79, σ1§19/64, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK005	**Luther M Schoo**	**0.70**	**156**	Pg	**Pg**	**21 58 49.5**	**-0.2**
OKCFA	**Oklahoma City**	**0.88**	**175**	Pg	**Pg**	**21 58 52.6**	**-0.4**
OKCFA	**Oklahoma City**	**0.88**	**175**	P	**Pg**	**21 58 52.7**	**-0.4**
	baz=357						
OKCFA				S	**Sg**	**21 59 04.5**	**0.0**
	baz=357						
OKCSW	**OKLAHOMA CITY**	**0.89**	**174**		**Pg**	**21 58 52.9**	**-0.4**
FNO	**Franklin**	**1.04**	**174**	Pg	**Pg**	**21 58 55.6**	**-0.6**
T35A	**Sooner Cattle**	**1.04**	**53**	Pg	**Pg**	**21 58 55.6**	**-0.5**
T35B	**Sooner Cattle**	**1.04**	**53**	P	**Pg**	**21 58 55.6**	**-0.6**
	baz=232						
T35B				S	**Sg**	**21 59 08.9**	**-0.8**
	baz=232						
U32A	**Winter Ranch,**	**1.18**	**275**	Pg	**Pb**	**21 58 58.4**	**-0.3**
U32A	**Winter Ranch,**	**1.18**	**275**	P	**Pb**	**21 58 58.5**	**-0.3**
	baz=94						
TUL1	**Leonard**	**1.47**	**104**	Pn	**Pn**	**21 59 02.4**	**-0.4**
TUL1				IAmb_Lg		21 59 23.8	
	comp=Z,120nm,0.8s						
TUL1	**Leonard**	**1.47**	**104**	P	**Pn**	**21 59 02.3**	**-0.4**
	baz=286						
TUL1				S	**Sb**	**21 59 22.1**	**-0.3**
	baz=286						
X34A	**Smith Ranch, M**	**1.70**	**188**		**Pb**	**21 59 07.3**	**-0.3**
X34A				IAmb_Lg		21 59 33.0	
	comp=Z,135nm,1.0s						
WMOK	**Wichita Mounta**	**1.85**	**213**		**Pn**	**21 59 09.0**	**+1.0**
WMOK	**Wichita Mounta**	**1.85**	**213**	P	**Pn**	**21 59 09.0**	**+1.0**
	baz=33						
WMOK				S	**Sb**	**21 59 33.9**	**+0.6**
	baz=33						
R32A	**Long Quarter,**	**2.32**	**337**		**Pn**	**21 59 15.5**	**+1.0**
R32A	**Long Quarter,**	**2.32**	**337**	S	**Sn**	**21 59 44.9**	**+1.7**
	baz=156						
X37A	**Clayton**	**2.46**	**133**		**Pn**	**21 59 16.7**	**+0.4**
X37A	**Clayton**	**2.46**	**133**	P	**Pn**	**21 59 17.3**	**+1.0**
	baz=315						
U38A	**Gravette**	**2.55**	**86**		**Pn**	**21 59 19.1**	**+1.4**
KSU1	**Kansas State U**	**2.90**	**15**		**Pn**	**21 59 23.0**	**+0.6**
KSU1	**Kansas State U**	**2.90**	**15**	P	**Pn**	**21 59 22.9**	**+0.4**
	baz=194						
HHAR	**Hobbs**	**2.91**	**89**		**Pn**	**21 59 23.6**	**+0.9**
Z35A	**Perchaven, San**	**2.96**	**175**		**Pn**	**21 59 24.5**	**+1.2**
Z35A	**Perchaven, San**	**2.96**	**175**	P	**Pn**	**21 59 23.7**	**+0.4**
	baz=356						
CBKS	**Cedar Bluff**	**3.06**	**326**	Pn	**Pn**	**21 59 26.0**	**+1.3**
CBKS				Pg	**Pg**	**21 59 34.7**	**-0.2**
W39A	**Magazine**	**3.25**	**109**		**Pn**	**21 59 27.9**	**+0.7**
W39A				Pg	**Pg**	**21 59 36.2**	**-2.2**
W39A				IAmb_Lg		22 00 23.0	
	comp=Z,75nm,0.9s						
AMTX	**Amarillo**	**3.65**	**249**		**Pb**	**21 59 43.4**	**+2.5**
AMTX				IAmb_Lg		22 00 33.1	
	comp=Z,76nm,0.7s						
S39A	**Bolivar**	**3.66**	**66**		**Pn**	**21 59 33.7**	**+0.9**
S39A				IAmb_Lg		22 00 40.0	
	comp=Z,56nm,0.8s						
S39A	**Bolivar**	**3.66**	**66**	P	**Pn**	**21 59 33.6**	**+0.8**
	baz=248						
MIAR	**Mount Ida**	**3.68**	**117**		**Pn**	**21 59 33.9**	**+0.7**
MIAR	**Mount Ida**	**3.68**	**117**	P	**Pn**	**21 59 34.0**	**+0.8**
	baz=300						
Z38A	**Mt. Pleasant**	**3.69**	**144**		**Pg**	**21 59 44.1**	**-2.7**
U40A	**Yellville**	**3.79**	**88**		**Pn**	**21 59 35.2**	**+0.6**
U40A				IAmb_Lg		22 00 38.1	
	comp=Z,72nm,0.8s						
ABTX	**Abilene, Hawle**	**4.05**	**206**	Pn	**Pn**	**21 59 36.4**	**-1.8**
ABTX					**Pb**	**21 59 47.6**	**-0.1**
X40A	**Basin Creek Fa**	**4.25**	**114**		**Pn**	**21 59 41.4**	**+0.4**
X40A				IAmb_Lg		22 00 54.6	
	comp=Z,41nm,0.7s						
WHTX	**Lake Whitney,**	**4.29**	**179**	Pn	**Pn**	**21 59 41.0**	**-0.6**
MGMO	**Mountain Grove**	**4.32**	**77**		**Pn**	**21 59 42.4**	**+0.4**
MGMO				IAmb_Lg		22 00 55.6	
	comp=Z,50nm,0.7s						
WHAR	**Wooly Hollow**	**4.39**	**102**		**Pn**	**21 59 43.8**	**+1.0**
WHAR				IAmb_Lg		22 01 07.4	
	comp=Z,37nm,0.9s						
FCAR	**Ozark Folk Cen**	**4.41**	**94**		**Pn**	**21 59 44.6**	**+1.5**
N33A	**J Bar K, Exete**	**4.44**	**1**	Pn	**Pn**	**21 59 44.3**	**+0.6**
W41B	**Gary Mavity, V**	**4.45**	**103**		**Pn**	**21 59 44.1**	**+0.4**
WLAR	**White Oak Lake**	**4.47**	**124**		**Pn**	**21 59 42.4**	**-1.7**
WLAR				IAmb_Lg		22 01 07.9	
	comp=Z,44nm,0.8s						
UALR	**University of**	**4.50**	**108**	Pn	**Pn**	**21 59 44.8**	**+0.3**
237A	**Washetta, Mont**	**4.51**	**161**	Pn	**Pn**	**21 59 44.3**	**-0.4**
P38A	**Dawn**	**4.60**	**42**		**Pg**	**22 00 01.7**	**-2.5**
P38A				IAmb_Lg		22 01 09.4	
	comp=Z,46nm,0.8s						
R40A	**Maddies Statio**	**4.66**	**63**		**Pn**	**21 59 46.7**	**+0.2**
N35A	**Tabor**	**4.80**	**17**		**Pn**	**21 59 49.0**	**+0.5**
KSCO	**Kaye Shedlock'**	**4.86**	**305**		**Pn**	**21 59 50.0**	**+0.5**
KSCO				IAmb_Lg		22 01 14.8	
	comp=Z,40nm,0.8s						
MSTX	**Muleshoe**	**4.87**	**243**		**Pb**	**22 00 04.3**	**+2.6**
Z41A	**Richland Creek**	**4.94**	**126**	Pn	**Pn**	**21 59 49.9**	**-0.5**
Z41A				IAmb_Lg		22 01 21.8	
	comp=Z,44nm,0.8s						
NATX	**Nacogdoches**	**5.11**	**151**	Pn	**Pn**	**21 59 53.6**	**+0.7**
NATX				IAmb_Lg		22 01 28.4	
	comp=Z,39nm,1.0s						
BGNE	**Belgrade**	**5.13**	**355**		**Pn**	**21 59 53.2**	**0.0**
BGNE				IAmb_Lg		22 01 33.6	
	comp=Z,62nm,0.8s						
LCAR	**Lake Charles**	**5.17**	**91**	Pn	**Pn**	**21 59 54.8**	**+1.1**
LCAR				IAmb_Lg		22 01 23.7	
	comp=Z,34nm,1.0s						
CCAR	**Cane Creek**	**5.29**	**115**	IAmb_Lg		22 01 28.8	
	comp=Z,56nm,0.9s						
CCM	**Cathedral Cave**	**5.33**	**69**	IAmb_Lg		22 01 24.2	
	comp=Z,55nm,0.8s						
P40A	**Paris**	**5.42**	**52**		**Pn**	**21 59 58.0**	**+1.0**
T25A	**Trinidad**	**5.58**	**281**	Pn	**Pn**	**21 59 59.5**	**0.0**
T25A					**Pg**	**22 00 19.3**	**-3.8**
T25A				IAmb_Lg		22 01 42.4	
	comp=Z,39nm,0.9s						
HBAR	**Harrisburg**	**5.64**	**95**	IAmb_Lg		22 01 41.5	
	comp=Z,55nm,0.8s						
L34A	**Svendsen Farm,**	**5.74**	**9**	IAmb_Lg		22 01 53.7	
	comp=Z,53nm,0.8s						
PBMO	**Poplar Bluff**	**5.75**	**83**	IAmb_Lg		22 01 38.3	
	comp=Z,42nm,0.7s						
OGNE	**Ogallala**	**5.83**	**324**	IAmb_Lg		22 01 50.5	
	comp=Z,53nm,0.8s						
FVM	**French Village**	**5.93**	**71**	IAmb_Lg		22 01 47.6	
	comp=Z,50nm,0.8s						
JCT	**Junction City**	**6.10**	**199**	IAmb_Lg		22 01 54.8	
	comp=Z,48nm,1.0s						
SCIA	**State Center**	**6.54**	**30**	IAmb_Lg		22 02 08.0	
	comp=Z,46nm,0.7s						
Q24A	**Divide**	**6.60**	**296**	IAmb_Lg		22 02 09.2	
	comp=Z,35nm,0.9s						
W45A	**Hickory Valley**	**6.89**	**97**	IAmb_Lg		22 02 17.5	
	comp=Z,32nm,0.7s						
K38A	**Parkersburg**	**7.34**	**29**	IAmb_Lg		22 02 42.1	
	comp=Z,48nm,0.7s						
ANMO	**Albuquerque**	**7.38**	**262**		**Pg**	**22 00 55.3**	**-2.3**
L40A	**Anamosa**	**7.57**	**38**	IAmb_Lg		22 02 41.5	
	comp=Z,33nm,0.9s						
PHWY	**Pilot Hill**	**7.95**	**311**	IAmb_Lg		22 02 57.8	
	comp=Z,17nm,0.8s						
N23A	**Red Feather La**	**8.02**	**307**	IAmb_Lg		22 02 55.2	
	comp=Z,29nm,0.9s						
SUSD	**Miller**	**8.21**	**353**	IAmb_Lg		22 03 09.7	
	comp=Z,26nm,0.7s						
I37A	**Lemond, Waseca**	**8.34**	**21**	IAmb_Lg		22 03 07.0	
	comp=Z,40nm,1.2s						
L42A	**Oliver

RCC	**Rio Carpintero**	**2.59**	**39**	*eP*		**Pn**	**22 21 36.4**	**+1.4**
RCC				*eS*		**Sn**	**22 22 04.5**	**-0.9**
GTBY	**Guantanamo Bay**	**2.93**	**48**	*eP*		**Pn**	**22 21 40.8**	**+1.2**
GTBY				*eS*		**Sn**	**22 22 11.7**	**-2.0**
CCCC	**Cccc**	**3.22**	**354**	*eP*		**Pn**	**22 21 45.1**	**+1.5**
MASC	**Masc**	**3.73**	**54**	*eP*		**Pn**	**22 21 52.2**	**+1.5**
MASC				*eS*		**Sn**	**22 22 33.0**	**-0.5**

MAN 09 22:45:42.6, 16°54N×120°75E, h34km, mb3.7, ML2.5, MS2.0, 3D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPP	**San Manuel, Pa**	**0.39**	**189**	‖*eP*	Pn	22 45 53.3	+1.2
SAMP	**Sagada Mountai**	**0.56**	**15**	‖*eP*	Pn	22 45 55.3	+0.3
SAMP				*eS*		22 46 00.1	
BALP	**Baler**	**1.12**	**135**	‖*eP*	Pn	22 46 02.4	0.0
BALP				*eS*		22 46 03.8	

MAN 09 22:50:03.1, 16°48N×120°76E, h34km, mb4.0, ML2.7, MS2.3, Luzon

MAN 09 22:55:12.1, 16°49N×120°78E, h33km, mb4.0, ML2.8, MS2.4, 3D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPP	**San Manuel, Pa**	**0.35**	**195**	‖*eP*	Pn	22 55 21.9	+2.3
SAMP	**Sagada Mountai**	**0.60**	**12**	‖*eP*	Pn	22 55 24.7	+1.6
SAMP				*eS*		22 55 28.8	
BALP	**Baler**	**1.07**	**134**	‖*eP*	Pn	22 55 30.9	+5.4
BALP				*eS*		22 55 34.3	

NOU 09 23:34:05.0, 16°31S×167°48E, h14km, ML3.9/7, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOUNC	**Koumac, New Ca**	**5.19**	**215**	P	Pn	23 35 22.6	+0.3
DZM	**Mont Dzumac**	**5.81**	**190**	P	Pn	23 35 30.4	-0.5
NOUC	**Port Laguerre**	**5.87**	**191**	P	Pn	23 35 31.6	0.0

MAN 09 23:38:56.4, 16°54N×120°69E, h35km, mb3.8, ML2.6, MS2.1, 3D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPP	**San Manuel, Pa**	**0.39**	**181**	‖*eP*	Pn	23 39 07.0	+1.7
SAMP	**Sagada Mountai**	**0.57**	**21**	‖*eP*	Pn	23 39 09.7	+1.9
SAMP				*eS*		23 39 13.9	
BALP	**Baler**	**1.17**	**133**	‖*eP*	Pb	23 39 17.1	+0.2
BALP				*eS*		23 39 17.6	

*IDC **09** 23:50:33.3±1.7, 35°.20N×23°.69E, h0km, mb3.5/4, mbtmp3.5/4, MS2.6/1, Error ellipse: s-maj=365.0km s-min=28.1km az=139.0*
*ISK **09** 23:50:37.9, 35°.00N×23°.90E, h17km, ML3.2/16*
*THE **09** 23:50:38.6, 35°.03N×23°.91E, h13km±1km, ML2.8/8, Error ellipse: s-maj=1.7km s-min=0.5km az=212.0*
*ATH **09** 23:50:38.5, 35°.01N×23°.92E, h15km±2km, ML3.0/5, Error ellipse: s-maj=2.7km s-min=1.3km az=217.0*
ISC 09 23:50:38.2±0.9, 34°.98N±0°.04×23°.89E±0°.04, h24km±6km, n43, σ1§16/58, mb3.5/4, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVDS	**Gavdos**	**0.21**	**130**	P	**Pb**	**23 50 43.1**	**-0.8**
GVDS				S	**Sb**	**23 50 47.5**	**-0.3**
	17μm,0.2s						
GVD	**Gavdhos**	**0.21**	**131**	P	**Pb**	**23 50 43.5**	**-0.5**
GVD	**Gavdhos**	**0.21**	**131**	P	**Pb**	**23 50 43.5**	**-0.5**
GVD				S	**Sb**	**23 50 48.0**	**+0.1**
	13μm,0.3s						
GVD	**Gavdhos**	**0.21**	**131**	PG	**Pb**	**23 50 43.3**	**-0.7**
GVD				SG	**Sb**	**23 50 48.2**	**+0.3**
KNDR	**Palaiochora Ch**	**0.30**	**326**	P	**Pb**	**23 50 44.8**	**-0.4**
KNDR				S	**Sb**	**23 50 50.7**	**+0.7**
KNDR				AML	AML	23 50 51.2	
	comp=E,23556μm,0.2s						
KNDR				AML	AML	23 50 51.4	
	comp=N,20480μm,0.2s						
KNDR	**Palaiochora Ch**	**0.30**	**326**	P	**Pb**	**23 50 44.8**	**-0.4**
KNDR				S	**Sb**	**23 50 50.7**	**+0.7**
	comp=N,4μm,0.2s						
KNDR	**Palaiochora Ch**	**0.30**	**326**	PG	**Pb**	**23 50 44.8**	**-0.4**
KNDR				SG	**Sb**	**23 50 50.6**	**+0.6**
IMMV	**Iera Moni Meta**	**0.48**	**9**	P	**Pb**	**23 50 46.9**	**-1.2**
IMMV				AML	AML	23 50 56.1	
	comp=E,4857μm,0.3s						
IMMV				AML	AML	23 50 56.3	
	comp=N,5618μm,0.2s						
IMMV	**Iera Moni Meta**	**0.48**	**9**	P	**Pb**	**23 50 46.9**	**-1.2**
IMMV				S	**Sb**	**23 50 53.8**	**-1.1**
	comp=N,3μm,0.3s						
IMMV	**Iera Moni Meta**	**0.48**	**9**	PG	**Pb**	**23 50 47.3**	**-0.8**
IMMV				SG	**Sb**	**23 50 55.5**	**+0.6**
CHAN	**Chania**	**0.55**	**13**	P	**Pb**	**23 50 48.5**	**-0.8**
CHAN				S	**Sb**	**23 50 56.5**	**-0.2**
CHAN				AML	AML	23 50 59.6	
	comp=N,2924μm,0.3s						
CHAN				AML	AML	23 50 59.6	
	comp=E,3995μm,0.4s						
RODP	**Rodopos**	**0.59**	**349**	P	**Pb**	**23 50 49.2**	**-0.7**
RODP				S	**Sb**	**23 50 57.4**	**-0.5**
	comp=E,295nm,0.3s						
RODP	**Rodopos**	**0.59**	**349**	PG	**Pb**	**23 50 49.4**	**-0.5**
RODP				SG	**Sb**	**23 50 58.2**	**+0.3**
TMBK	**Timbaki Herakl**	**0.72**	**82**	P	**Pb**	**23 50 52.0**	**-0.1**
TMBK				AML	AML	23 51 04.9	
	comp=N,2288μm,0.4s						
TMBK				AML	AML	23 51 08.1	
	comp=E,2206μm,0.2s						
TMBK	**Timbaki Herakl**	**0.72**	**82**	P	**Pb**	**23 50 52.0**	**-0.1**
TMBK				S	**Sb**	**23 51 02.3**	**+0.7**
	comp=E,382nm,0.3s						
SIVA	**Sivas**	**0.76**	**87**	P	**Pb**	**23 50 52.5**	**-0.2**
SIVA				S	**Sn**	**23 51 04.0**	**0.0**
IDI	**Anoyia**	**0.87**	**69**	P	**Pb**	**23 50 53.6**	**-1.2**
IDI	**Anoyia**	**0.87**	**69**	P	**Pb**	**23 50 53.6**	**-1.2**
IDI				S	**Sn**	**23 51 07.7**	**+0.7**
	comp=E,260nm,0.4s						
IDI	**Anoyia**	**0.87**	**69**	PG	**Pb**	**23 50 54.4**	**-0.3**
IDI				SG	**Sn**	**23 51 07.3**	**+0.3**
ANKY	**Antikythira Is**	**1.01**	**332**	P	**Pb**	**23 50 56.7**	**-0.2**
ANKY				AML	AML	23 51 16.9	
	comp=N,715μm,0.5s						
ANKY				AML	AML	23 51 17.1	
	comp=E,463μm,0.6s						
ANKY	**Antikythira Is**	**1.01**	**332**	P	**Pb**	**23 50 56.7**	**-0.2**
ANKY				S	**Sn**	**23 51 10.5**	**+0.3**
	comp=E,295nm,0.5s						
KSTL	**Kastelli Herak**	**1.02**	**71**	P	**Pn**	**23 50 59.8**	**+2.9**
KSTL	**Kastelli Herak**	**1.02**	**71**	P	**Pn**	**23 50 59.9**	**+2.9**
HRKL	**Herakleio**	**1.05**	**71**	PG	**Pn**	**23 50 58.0**	**+0.7**
NPS	**Neapolis**	**1.44**	**78**	P	**Pb**	**23 51 04.4**	**+0.1**
KTHA	**Kythira Island**	**1.44**	**332**	P	**Pb**	**23 51 04.7**	**+0.4**
KTHR	**Kythira**	**1.47**	**331**	P	**Pb**	**23 51 04.8**	**0.0**
SANT	**Santorini**	**1.89**	**42**	PN	**Pn**	**23 51 09.9**	**+1.0**
VLI	**Veliai**	**1.90**	**336**	P	**Pb**	**23 51 12.0**	**-0.2**
ZKR	**Zakros**	**1.91**	**85**	PN	**Pn**	**23 51 10.4**	**+1.2**
APE	**Apeiranthos**	**2.47**	**32**	PN	**Pn**	**23 51 18.3**	**+1.3**
ITM	**Ithomi**	**2.71**	**325**	PN	**Pn**	**23 51 21.9**	**+1.7**
ARG	**Arkhangelos**	**3.67**	**69**	PN	**Pn**	**23 51 35.4**	**+2.1**
TURN	**Turunc**	**3.96**	**62**	PN	**Pn**	**23 51 39.2**	**+1.8**
YER	**Yerkesik**	**4.16**	**58**	PN	**Pn**	**23 51 42.3**	**+2.1**
DALY	**Dalyan (Mula)**	**4.28**	**63**	PN	**Pn**	**23 51 44.1**	**+2.4**
CAME	**Cameli-Denizli**	**4.81**	**64**	PN	**Pn**	**23 51 51.6**	**+2.4**
ELL	**Elmali**	**5.20**	**68**	PN	**Pn**	**23 51 56.1**	**+1.6**
VRAC	**Vranov**	**15.29**	**342**	LR	LR	00 00 46.6	
	comp=E,23nm,20.2s,baz=60,slow=41						
TORD	**Torodi Ar. Bea**	**29.59**	**228**	P	**P**	**23 56 40.3**	**-1.1**
	comp=E,0.2nm,0.8s,baz=33,slow=10,SNR=1.5						
	comp=E,0.2nm,0.8s						
KURBB	**Kurchatov Arra**	**42.04**	**51**	P	**P**	**23 58 26.5**	**-1.1**
	comp=E,0.4nm,0.4s,baz=272,slow=8.6,SNR=3.4						
	comp=E,0.4nm,0.4s						
MKAR	**Makanchi Array**	**44.74**	**56**	P	**P**	**23 58 48.1**	**-1.4**
	comp=E,0.3nm,0.5s,baz=267,slow=7.3,SNR=5.1						
	comp=E,0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**45.88**	**46**	P	**P**	**23 58 56.6**	**-1.7**
	comp=E,0.7nm,0.5s,baz=288,slow=6.0,SNR=3.7						
	comp=E,0.7nm,0.5s						

*IDC **09** 23:59:53.8±1.8, 0°.01N×123°.90E, h96km±16km, mb3.8/10, mbtmp4.2/12, MS3.1/3, Error ellipse: s-maj=16.0km s-min=12.3km az=68.0*
*NEIC **09** 23:59:56.0±2.1, 0°.08S±0°.07×123°.93E±0°.06, h110km±4km, mb4.3/31, Error ellipse: s-maj=10.0km s-min=8.3km az=188.0*
*DJA **09** 23:59:56.2±0.2, 0°.5±2°×12°.4E±°, h80km±8km, M4.5/22, mb4.6/13, mB5.0/6, MLv4.7/22, Mw(mB)4.3/6*
ISC 09 23:59:55.3±0.4, 0°.09S±0°.05×123°.94E±0°.05, h110km, n75, σ1§15/85, mb4.2/26, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.66**	**4**	P	**Pn**	**00 00 13.6**	**+0.2**
KMSI				S	**Sn**	**00 00 27.7**	**+0.7**
MRSI	**Marisa**	**2.08**	**286**	P	**Pn**	**00 00 28.5**	**-0.8**
APSI	**Ampana**	**2.43**	**250**	P	**Pn**	**00 00 34.0**	**+0.2**
APSI				S	**Sn**	**00 01 03.9**	**+0.5**
SANI	**Sanana**	**2.82**	**133**	P	**Pn**	**00 00 36.3**	**-2.7**
TOLI2	**Tolitoli**	**3.38**	**291**		**Pn**	**00 00 46.6**	**+0.3**
TOLI2				Sn	**Sn**	**00 01 25.4**	**-0.3**
TNTI	**Ternate**	**3.53**	**76**	P	**Pn**	**00 00 48.3**	**-0.1**
TNTI				Sn	**Sn**	**00 01 28.8**	**-0.7**
TNTI	**Ternate**	**3.53**	**76**	P	**Pn**	**00 00 48.0**	**-0.4**
LBMI	**Labuha**	**3.60**	**99**	P	**Pn**	**00 00 48.8**	**-0.5**
MPSI	**Mapaga**	**4.06**	**276**	P	**Pn**	**00 00 57.2**	**+1.7**
SGSI	**Sangihe**	**4.08**	**23**	P	**Pn**	**00 00 58.0**	**+2.3**
TTSI	**Tana Toraja**	**5.05**	**235**	P	**Pn**	**00 01 09.0**	**+0.1**
	1.2nm4μm267nm,0.5s						
TTSI				S	**Sn**	**00 02 05.4**	**-0.8**
	1.2nm4μm267nm,0.5s						
AAI	**Ambon**	**5.55**	**130**	P	**Pn**	**00 01 14.8**	**-0.8**
	0.4nm71nm,0.6s						
SPSI	**Sidrap Palu**	**5.67**	**227**	P	**Pn**	**00 01 18.1**	**+0.9**
	1.0nm3μm220nm,0.4s						
BNSI	**Bone**	**5.74**	**222**	P	**Pn**	**00 01 18.2**	**0.0**
	0.3nm48nm,0.6s						
MSAI	**Masohi**	**5.94**	**123**	P	**Pn**	**00 01 20.1**	**-0.8**
	0.2nm881nm26nm,0.4s						
KAPI	**Kappang**	**6.43**	**220**	P	**Pn**	**00 01 28.6**	**+1.1**
	26nm,0.4s,baz=55,slow=3.5,SNR=11						
KAPI				S	**Sn**	**00 02 38.7**	**-0.9**
	39nm,0.6s,baz=52,slow=19,SNR=12						
KAPI				LR	LR	00 04 11.7	
	comp=E,111nm,20.2s,baz=83,slow=40						
KAPI	**Kappang**	**6.43**	**220**		**Pn**	**00 01 28.1**	**+0.6**
KAPI					**Sn**	**00 02 37.4**	**-2.2**
BKSI	**Bulukumba**	**6.44**	**216**	P	**Pn**	**00 01 28.8**	**+1.1**
	0.2nm26nm,0.5s						
BSSI	**Bau Bau, Buton**	**6.92**	**210**	P	**Pn**	**00 01 34.1**	**-0.2**
	0.3nm51nm,0.5s						
BKB	**Balikpapan**	**7.14**	**261**	Pn	**Pn**	**00 01 35.9**	**-1.2**
BKB	**Balikpapan**	**7.14**	**261**	P	**Pn**	**00 01 37.8**	**+0.7**
	0.9nm4μm109nm,1.1s						
DAV	**Dao City (W)**	**7.30**	**13**	LR	LR	00 04 38.0	
	comp=Z,98nm,21.2s,baz=182,slow=39						
SWI	**Sorong**	**7.36**	**96**	P	**Pn**	**00 01 40.3**	**+0.2**
	0.2nm38nm,0.6s						
SIJI	**Sorong**	**7.37**	**96**	P	**Pn**	**00 01 40.2**	**-0.1**
	18nm,0.5s,baz=257,slow=8.2,SNR=13						
SIJI				S	**Sn**	**00 03 01.6**	**-0.7**
	5.7nm,0.3s,baz=13,slow=23,SNR=3.6						
MYLDM	**Lahad Datu**	**7.55**	**314**		**Pn**	**00 01 46.8**	**+4.2**
FAKI	**Fak Fak**	**8.77**	**109**	Pn	**Pn**	**00 01 57.8**	**-1.5**
FAKI	**Fak Fak**	**8.77**	**109**	P	**Pn**	**00 01 57.4**	**-1.9**
	792nm18nm,1.1s						
SOEI	**Soe**	**9.60**	**178**	Pn	**Pn**	**00 02 12.1**	**+1.3**
SOEI	**Soe**	**9.60**	**178**	P	**Pn**	**00 02 09.8**	**-0.9**
	15nm,0.6s						
BATI	**Baumata**	**10.05**	**182**	P	**Pn**	**00 02 15.9**	**-0.8**
KSM	**Kuching**	**13.72**	**277**	Pn	**Pn**	**00 03 04.8**	**-0.5**
KNRA	**Kununurra**	**16.20**	**163**		**Pn**	**00 03 37.0**	**+0.4**
KNRA				IAmb	IAmb	00 03 41.0	
	comp=Z,22nm,0.8s						
MBWA	**Marble Bar**	**21.34**	**191**	P	**P**	**00 04 34.4**	**+0.7**
MBWA				IAmb	IAmb	00 04 35.0	
	comp=Z,20nm,0.8s						
PSA00	**Pilbara Seismi**	**21.72**	**190**	P	**P**	**00 04 38.5**	**+0.7**
WB0	**Warramunga Arr**	**22.07**	**153**	P	**P**	**00 04 41.2**	**-0.3**
WB0				IAmb	IAmb	00 04 44.8	
	comp=Z,16nm,1.0s						
WRAB	**Tennant Creek**	**22.20**	**153**	P	**P**	**00 04 42.3**	**-0.5**
WRAB				IAmb	IAmb	00 04 43.2	
	comp=Z,20nm,1.1s						
WRA	**Warramunga Arr**	**22.20**	**153**	P	**P**	**00 04 42.3**	**-0.6**
	comp=Z,7.2nm,0.6s,baz=332,slow=10,SNR=45						
WRA				PcP	**PcP**	**00 08 36.4**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=314,slow=2.4,SNR=2.0						
WRA				ScP	**ScP**	**00 12 03.8**	**+0.6**
	comp=Z,0.6nm,1.0s,baz=337,slow=1.8,SNR=2.1						
	comp=Z,7.2nm,0.6s						
WRA	**Warramunga Arr**	**22.20**	**153**	P	**P**	**00 04 42.5**	**-0.4**
WB2	**Warramunga Arr**	**22.21**	**153**	P	**P**	**00 04 43.9**	**+0.9**
WB2				IAmb	IAmb	00 04 45.6	
	comp=Z,10nm,0.7s						
WR0	**Warramunga Arr**	**22.31**	**153**	P	**P**	**00 04 43.8**	**-0.2**
WR0				IAmb	IAmb	00 04 46.5	
	comp=Z,9.9nm,0.8s						
COEN	**Coen**	**23.50**	**127**	P	**P**	**00 04 57.1**	**+1.6**
NACB	**Ninganchiao**	**24.23**	**355**	P	**P**	**00 04 58.6**	**-3.4**
NACB				IAmb	IAmb	00 05 05.6	
	comp=Z,10nm,0.6s						
AS31	**Alice Springs**	**25.35**	**158**	P	**P**	**00 05 13.0**	**+0.8**
AS31				IAmb	IAmb	00 05 14.7	
	comp=Z,2.4nm,0.4s						
ASAR	**Alice Springs**	**25.35**	**158**	P	**P**	**00 05 12.6**	**+0.3**
	comp=Z,2.2nm,0.3s,baz=332,slow=9.0,SNR=23						
ASAR				PcP	**PcP**	**00 08 43.3**	**+1.0**
	comp=Z,1.2nm,0.5s,baz=351,slow=2.0,SNR=12						
	comp=Z,2.2nm,0.3s						
ASAR	**Alice Springs**	**25.35**	**158**	P	**P**	**00 05 13.4**	**+1.2**
MORW	**Morawa**	**29.79**	**194**	P	**P**	**00 05 51.8**	**+0.1**
MORW				IAmb	IAmb	00 05 53.7	
	comp=Z,8.0nm,1.1s						
FORT	**Forrest**	**30.77**	**173**	P	**P**	**00 06 00.8**	**+0.4**
CHTO	**Chiang Mai**	**30.91**	**309**	P	**P**	**00 06 02.7**	**+0.9**
NWAO	**Narrogin (SRO)**	**33.27**	**190**	P	**P**	**00 06 22.5**	**+0.3**
BBOO	**Buckleboo**	**34.49**	**162**	P	**P**	**00 06 33.9**	**+1.0**
BBOO				IAmb	IAmb	00 06 45.8	
	comp=Z,8.0nm,0.9s						
STKA	**Stephens Creek**	**35.75**	**154**	P	**P**	**00 06 44.8**	**+1.1**
	comp=Z,3.2nm,0.5s,baz=327,slow=9.0,SNR=15						
STKA				PcP	**PcP**	**00 09 10.4**	**+0.9**
	comp=Z,1.1nm,0.4s,baz=328,slow=3.9,SNR=2.9						
STKA				LR	LR	00 21 29.4	
	comp=Z,54nm,18.5s,baz=207,slow=36						
	comp=Z,3.2nm,0.5s						
STKA	**Stephens Creek**	**35.75**	**154**	IAmb	IAmb	00 06 51.8	
	comp=Z,0.5nm,1.1s						
ARMA	**Armidale**	**40.03**	**141**	P	**P**	**00 07 21.9**	**+2.1**
ARMA				IAmb	IAmb	00 07 34.7	
	comp=Z,4.7nm,0.9s						
CAN	**Canberra**	**42.12**	**149**	P	**P**	**00 07 39.4**	**+2.5**
TOO	**Toolangi**	**42.27**	**154**	P	**P**	**00 07 38.6**	**+0.6**
KLR	**Kul'dur**	**49.59**	**7**	P	**P**	**00 08 34.8**	**-0.4**
	comp=Z,1.5nm,0.7s,baz=198,slow=5.8,SNR=5.3						
	comp=Z,1.5nm,0.7s						
SONM	**Songino Array**	**50.12**	**345**	P	**P**	**00 08 38.6**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=162,slow=11,SNR=3.1						
	comp=Z,0.5nm,0.6s						
SONM	**Songino Array**	**50.12**	**345**	P	**P**	**00 08 40.2**	**+0.8**
MK31	**Makanchi Array**	**59.19**	**328**	P	**P**	**00 09 44.3**	**-0.5**
MK31				IAmb	IAmb	00 09 45.8	
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**59.19**	**328**	P	**P**	**00 09 44.1**	**-0.7**
	comp=Z,1.3nm,0.6s,baz=120,slow=8.4,SNR=18						
MKAR				PcP	**PcP**	**00 10 31.8**	**-0.3**
	comp=Z,1.2nm,0.7s,baz=131,slow=5.8,SNR=5.2						
	comp=Z,1.3nm,0.6s						
MAKZ	**Makanchi**	**59.36**	**328**	P	**P**	**00 09 46.2**	**+0.2**
MAKZ				IAmb	IAmb	00 09 47.5	
	comp=Z,1.1nm,0.5s						
KDJ	**Kajisay**	**59.44**	**321**	P	**P**	**00 09 46.4**	**-0.4**
LBZ	**Lake Benmore**	**60.20**	**143**	P	**P**	**00 09 52.5**	**+0.8**
KURBB	**Kurchatov Arra**	**63.52**	**330**	P	**P**	**00 10 12.7**	**-1.1**
	comp=Z,1.1nm,0.6s,baz=134,slow=6.2,SNR=14						
	comp=Z,1.1nm,0.6s						
KURK	**Kurchatov**	**63.53**	**330**	P	**P**	**00 10 14.5**	**+0.7**
KURK				IAmb	IAmb	00 10 15.0	
	comp=Z,3.2nm,0.7s						
CASY	**Casey**	**66.73**	**186**	P	**P**	**00 10 32.5**	**-1.8**
CASY				IAmb	IAmb	00 10 46.7	
	comp=Z,3.8nm,0.9s						
SOCY	**Socotra**	**70.44**	**283**	P	**P**	**00 10 57.7**	**-0.8**
TIXI	**Tiksi**	**71.70**	**2**	P	**P**	**00 11 04.3**	**-0.5**
	comp=Z,1.2nm,0.3s,baz=269,slow=22,SNR=3.9						
	comp=Z,1.2nm,0.3s						
TIXI	**Tiksi**	**71.70**	**2**	IAmb	IAmb	00 11 10.3	
	comp=Z,1.6nm,0.7s						
ABKAR	**Akbulak array**	**73.38**	**322**	P	**P**	**00 11 14.3**	**-1.0**
AKTO	**Aktyubinsk**	**74.95**	**323**	P	**P**	**00 11 23.2**	**-1.2**
	comp=Z,1.1nm,0.5s,baz=93,slow=10						
	comp=Z,1.1nm,0.5s						
ABPO	**Ambohimpanom**	**77.41**	**251**	P	**P**	**00 11 39.3**	**+0.1**
ABPO				IAmb	IAmb	00 11 40.5	
	comp=Z,6.6nm,0.9s						
VOI	**Vohitsoka**	**78.04**	**248**	P	**P**	**00 11 42.3**	**-0.2**
VOI				IAmb	IAmb	00 11 52.3	
	comp=Z,7.2nm,1.1s						
VNDA	**Vanda**	**80.03**	**172**	P	**P**	**00 11 53.4**	**+1.3**
	comp=Z,0.9nm,0.7s,baz=312,slow=8.8,SNR=4.0						
	comp=Z,0.9nm,0.7s						
TORD	**Torodi Ar. Bea**	**121.34**	**285**	PKP	**PKPdf**	**00 18 36.4**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=106,slow=1.8,SNR=9.5						

*NEIC **10** 00:08:12.6±1.8, 46°.88N±0°.07×146°.9E±0°.2, h340km±8km, mb4.0/26, Error ellipse: s-maj=17.5km s-min=9.7km az=84.0*
*IDC **10** 00:08:14.0±3.2, 47°.04N×146°.96E, h359km±32km, mb3.2/12, mbtmp3.9/15, Error ellipse: s-maj=23.1km s-min=20.0km az=158.0*
ISC 10 00:08:13.0±0.6, 46°.82N±0°.08×146°.90E±0°.09, h346km, n52, σ1§21/54, mb3.8/26, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YSS	**Yuzh-Sakhalins**	**2.84**	**274**		**Pn**	**00 09 11.6**	**+1.0**
ERM	**Erimo**	**5.50**	**210**	Pn	**Pn**	**00 09 37.8**	**-0.2**
ERM				Sn	**S**	**00 10 46.5**	**-0.3**
JTM	**Tenmabayashi**	**7.36**	**217**	Pn	**Pn**	**00 09 58.4**	**-1.1**
KLR	**Kul'dur**	**10.43**	**289**	P	**P**	**00 10 36.9**	**-0.3**
	1.7nm,0.5s,baz=116,slow=14,SNR=6.9						
USRK	**Ussuriysk Ar.**	**10.79**	**261**	P	**Pn**	**00 10 40.9**	**+0.6**
	2.1nm,0.6s,baz=69,slow=14,SNR=2.2						
KSRS	**Korea Array**	**16.87**	**243**	P	**P**	**00 11 50.1**	**+2.2**
	1.1nm,0.8s,baz=49,slow=12,SNR=1.8						
IMAR	**Indian Mountai**	**36.24**	**37**	P	**P**	**00 14 42.5**	**-1.3**
H23K	**Yukon River**	**37.97**	**37**	P	**P**	**00 14 58.4**	**+0.2**
H24K	**Noodor Dome**	**38.65**	**37**	P	**P**	**00 15 02.6**	**-1.3**
ZALV	**Zalesovo Beam**	**39.06**	**304**	P	**P**	**00 15 05.9**	**-1.4**
	0.3nm,0.3s,baz=64,slow=5.6,SNR=2.2						
	0.3nm,0.3s						
ILAR	**Eielson Array**	**39.15**	**38**	P	**P**	**00 15 06.3**	**-1.6**
	0.5nm,0.7s,baz=266,slow=9.3,SNR=5.3						
	0.5nm,0.7s						
BCAR	**Beaver Creek A**	**41.64**	**40**	P	**P**	**00 15 27.9**	**-0.2**
TGL	**Tana Glacier**	**41.66**	**44**	P	**P**	**00 15 26.1**	**-2.4**
M27K	**Edge Creek, AK**	**41.74**	**42**	P	**P**	**00 15 29.5**	**+0.4**
MK31	**Makanchi Array**	**43.07**	**295**	P	**P**	**00 15 39.8**	**+0.1**
MK31				IAmb	IAmb	00 15 40.2	
	comp=Z,3.2nm,0.6s						
MKAR	**Makanchi Array**	**43.07**	**295**	P	**P**	**00 15 39.8**	**0.0**
	comp=Z,2.3nm,0.5s,baz=69,slow=6.5,SNR=32						
	comp=Z,2.3nm,0.5s						
MAKZ	**Makanchi**	**43.26**	**295**	P	**P**	**00 15 41.3**	**+0.1**
MAKZ				IAmb	IAmb	00 15 41.8	
	comp=Z,2.7nm,0.6s						
KURK	**Kurchatov**	**43.72**	**301**	P	**P**	**00 15 44.4**	**-0.4**
KURK				IAmb	IAmb	00 15 44.8	
	comp=Z,3.5nm,0.7s						
KURBB	**Kurchatov Arra**	**43.81**	**301**	P	**P**	**00 15 44.9**	**-0.6**
	comp=Z,2.6nm,0.6s,baz=70,slow=8.6,SNR=18						
KURBB				PcP	**PcP**	**00 17 24.3**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=71,slow=3.5,SNR=3.0						
	comp=Z,2.6nm,0.6s						
HYT	**Haines Junctio**	**44.16**	**43**	P	**P**	**00 15 49.2**	**+1.0**
P33M	**Teslin, Yukon**	**46.55**	**43**	P	**P**	**00 16 07.6**	**+0.8**
KDJ	**Kajisay**	**48.48**	**291**	P	**P**	**00 16 22.5**	**+0.7**
KDJ				IAmb	IAmb	00 16 23.2	
	comp=Z,3.3nm,0.7s						
BOOM	**Boomskoye usch**	**49.08**	**292**	P	**P**	**00 16 27.4**	**+1.0**
BOOM				IAmb	IAmb	00 16 28.0	
	comp=Z,4.6nm,0.5s						
ARU	**Arti**	**52.01**	**315**	P	**P**	**00 16 46.0**	**-1.6**
	comp=Z,1.5nm,0.3s,baz=45,slow=4.3,SNR=5.1						
	comp=Z,1.5nm,0.3s						
KK31	**Karatay Array**	**52.17**	**296**	P	**P**	**00 16 48.9**	**-0.2**
KK31				IAmb	IAmb	00 16 49.6	
	comp=Z,2.2nm,0.8s						
KKAR	**Karatay Array**	**52.17**	**296**	P	**P**	**00 16 48.8**	**-0.2**
KKAR	**Karatay Array**	**52.17**	**296**	P	**P**	**00 16 48.7**	**-0.3**

PALP	**Palanan**	**1.59**	**67**	⇓*e*P	Pg	00 14 36.4	+0.1
PALP				*e*S		00 14 37.8	
JCNP	**Jose Panganiba**	**2.77**	**141**	⇓*e*P	Pn	00 14 53.8	+1.8
JCNP				*e*S		00 14 58.8	

***IDC* 10 00:36:36.3±2.4, 5°.95S×126°.64E, h0km, mb3.5/1, mbtmp3.6/3, ML3.7/2, Error ellipse: s-maj=333.7km s-min=31.8km az=64.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.79**	**152**	Pn	Pn	00 40 22.1	+1.7
	0.5nm,0.3s,baz=332,slow=12,SNR=20						
WRA				Sn	Sn	00 43 00.0	-16
	0.1nm,0.3s,baz=339,slow=22,SNR=1.9 2.4nm,0.6s						
ASAR	**Alice Springs**	**18.95**	**159**	P	P	00 40 58.3	-1.0
	0.1nm,0.3s,baz=339,slow=10,SNR=4.7 0.3nm,0.3s						
MKAR	**Makanchi Array**	**65.55**	**328**	P	P	00 47 21.9	+0.1
	0.2nm,0.4s,baz=122,slow=7.1,SNR=2.1 0.2nm,0.4s						

IDC **10** *00:43:03.1±1.9, 38°.39N×72°.12E, h0km, mb3.6/6, mbtmp3.6/12, ML3.6/3, MS3.4/2, Error ellipse: s-maj=33.5km s-min=16.6km az=147.0*
NNC **10** *00:43:03.7±4.1, 38°.52N×71°.70E, h0km, mb4.3, mpv4.0, Error ellipse: s-maj=32.9km s-min=18.6km az=7.0*
ISC 10 00:43:08.7±0.7, 38°.70N±0°.05×71°.69E±0°.07, h10km, n36, σ2s47/40, mb3.7/5, 3C-7D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**3.67**	**340**	Pg	Pn	00 44 09.2	+3.6
	870nm,0.5s						
IUG				Lg	Lg	00 44 54.4	
	168nm,0.7s						
AML	**Almayashu**	**3.75**	**23**	P	Pn	00 44 07.3	+0.3
	SNR=33						
UCH	**Uchtor**	**4.13**	**31**	P	Pn	00 44 13.5	+1.2
	SNR=10						
DZA	**Taraz**	**4.19**	**356**	Pg	Pn	00 44 15.1	+2.4
	45nm,0.1s						
DZA				Lg	Lg	00 45 03.1	
	86nm,0.2s						
MRKS	**Merke**	**4.20**	**16**	Pg	Pn	00 44 19.0	+6.0
	35nm,0.6s						
MRKS				Lg	Lg	00 45 11.1	
	36nm,0.6s						
EKS2	**Erkin-Say**	**4.26**	**21**	P	Pn	00 44 18.1	+4.3
	SNR=14						
AAK	**Ala-Archa**	**4.47**	**28**	Pn	Pn	00 44 18.5	+1.7
	2.1nm,0.3s,baz=196,slow=6.4,SNR=4.4						
AAK				Sn	Sn	00 45 12.1	+3.2
	1.1nm,0.3s,baz=140,slow=22,SNR=1.4 4.8nm,0.3s						
KK31	**Karatay Array**	**4.49**	**349**	⇓Pn	Pn	00 44 17.6	+0.8
	18nm,0.6s,baz=170,slow=13,SNR=127						
KK31				⇓Sn	Sn	00 45 13.8	+4.8
	4.9nm,0.4s,baz=168,slow=13,SNR=5.9						
BRLS	**Borolday**	**4.54**	**343**	Pg	Pn	00 44 18.3	+0.7
	10nm,0.6s						
BRLS				Lg	Lg	00 45 09.2	
	9.7nm,0.5s						
CEP	**Cherat**	**4.87**	**178**	P	Pn	00 44 23.1	+0.9
CEP				S	Sb	00 45 38.0	+5.0
CHMS	**Chumysh**	**4.88**	**27**	P	Pn	00 44 24.5	+2.3
	SNR=5.9						
CHMS	**Chumysh**	**4.88**	**27**	⇑Pn	Pn	00 44 22.2	-0.1
	7.7nm,0.6s						
CHMS				⇓Sn	Sn	00 45 21.0	+2.3
	36nm,0.8s						
USP	**Ospenovka**	**5.03**	**24**	P	Pn	00 44 26.3	+2.0
	SNR=6.4						
TKM2	**Tokmak 2**	**5.15**	**34**	⇓Pn	Pn	00 44 26.2	+0.1
	2.4nm,0.7s						
TKM2				⇓Pg	Pb	00 44 41.4	+2.4
	12nm,1.1s						
TKM2				⇑Lg	Lg	00 45 52.5	
	26nm,0.8s						
CHCP	**Chirah Chowk**	**5.19**	**165**	P	Pn	00 44 26.3	-0.2
KST	**Kastek**	**5.41**	**35**	Pg	Pb	00 44 45.7	+2.3
	8.0nm,0.6s						
KST				Lg	Lg	00 45 57.7	
	27nm,0.5s						
KRBS	**Karabastau**	**5.82**	**30**	Pg	Pb	00 44 52.2	+1.8
	5.1nm,0.5s						
KRBS				Lg	Lg	00 46 07.3	
	7.6nm,0.5s						
TNSS	**Tian-Shan**	**5.88**	**41**	Pg	Pb	00 44 52.2	+0.6
	4.2nm,0.8s						
TNSS				Lg	Lg	00 46 08.2	
	10nm,1.2s						
THW	**Thamme Wali**	**5.90**	**180**	P	Pn	00 44 35.8	-0.4
MDOK	**Medeo**	**6.03**	**41**	Pg	Pb	00 44 53.5	-0.4
	5.7nm,0.7s						
MDOK				⇓Pg	Pg	00 44 56.4	-7.7
	5.5nm,0.6s						
MDOK				Lg	Lg	00 46 09.5	
	8.9nm,0.9s						
MDOK				Lg	Lg	00 46 19.8	
	31nm,1.3s						
KUU	**Kurty**	**6.26**	**33**	Pg	Pb	00 44 58.9	+1.1
	3.7nm,0.6s						
KUU				Lg	Lg	00 46 18.7	
	15nm,1.0s						
ARXS	**Arharly**	**7.18**	**38**	Pg	Pb	00 45 15.1	+1.6
	5.3nm,0.8s						
ARXS				Lg	Lg	00 46 46.8	
	7.5nm,1.0s						
GEYT	**Alibeck**	**10.69**	**270**	Pn	Pn	00 45 42.5	+0.5
	0.5nm,0.3s,baz=90,slow=16,SNR=2.3 1.2nm,0.5s						
MKAR	**Makanchi Array**	**11.22**	**41**	Pn	Pn	00 45 47.8	-1.4
	0.1nm,0.3s,baz=220,slow=13,SNR=6.7						
MKAR				Lg	Lg	00 48 56.1	
	baz=226,slow=27,SNR=2.4 0.8nm,0.8s						
KURBB	**Kurchatov Arra**	**12.87**	**20**	Pn	Pn	00 46 07.8	-3.7
	0.1nm,0.3s,baz=212,slow=12,SNR=2.0						
KURBB				Lg	Lg	00 49 57.4	
	baz=207,slow=28,SNR=4.4 0.3nm,0.2s						
AB31	**Akbulak array**	**13.50**	**325**	Pn	Pn	00 46 19.5	-0.7
	2.7nm,0.6s,baz=145,slow=11,SNR=34						
AB31				⇓Sn	Sn	00 48 50.2	-0.1
	1.4nm,0.6s,baz=139,slow=24,SNR=4.4						
AKTO	**Aktyubinsk**	**15.22**	**325**	Pn	Pn	00 46 43.7	+0.1
	0.2nm,0.3s,baz=138,slow=10,SNR=3.5						
AKTO				Sn	Sn	00 49 25.4	-6.6
	0.1nm,0.3s,baz=110,slow=11,SNR=1.3						
AKTO				LR	LR	00 53 12.9	
	comp=Z,34nm,18.4s,baz=158,slow=39 1.3nm,0.5s						
AKTO	**Aktyubinsk**	**15.22**	**325**	⇑Pn	Pn	00 46 43.2	-0.4
	8.4nm,0.9s						
ZALV	**Zalesovo Beam**	**17.69**	**26**	P	Pn	00 47 12.4	-2.6
	0.4nm,0.3s,baz=208,slow=10,SNR=2.9 0.8nm,0.4s						
ARU	**Arti**	**19.76**	**338**	P	P	00 47 39.6	+0.9
	1.4nm,0.4s,baz=90,slow=7.1,SNR=2.2 1.4nm,0.4s						
SONM	**Songino Array**	**26.68**	**59**	P	P	00 48 43.1	-4.9
	0.4nm,0.4s,baz=260,slow=8.6,SNR=2.5 0.4nm,0.4s						
FINES	**FINESS Array B**	**35.99**	**324**	P	P	00 50 08.2	-1.3
	1.8nm,0.9s,baz=114,slow=9.6,SNR=7.4 1.8nm,0.9s						
ARCES	**ARCESS Array B**	**39.33**	**336**	P	P	00 50 36.0	-1.7
	1.5nm,0.8s,baz=92,slow=8.2,SNR=3.9 1.5nm,0.8s						
NOA	**NORSAR Array B**	**42.97**	**322**	P	P	00 51 08.8	+1.1
	0.4nm,0.6s,baz=94,slow=8.5,SNR=1.7 0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**66.33**	**268**	P	P	00 53 54.9	-2.9
	0.5nm,0.9s,baz=49,slow=4.7,SNR=1.7 0.5nm,0.9s						
ULM	**Lac du Bonnet**	**90.75**	**352**	LR	LR	01 42 25.3	
	comp=Z,79nm,20.6s,baz=318,slow=39						

IDC **10** *00:45:46.0±0.4, 11°.43N×140°.93E, h0km, mb4.8/43, mbtmp4.7/44, ML5.1/2, MS4.1/57, Error ellipse: s-maj=14.2km s-min=9.8km az=95.0*

MOS **10** *00:45:49.1±0.9, 11°.37N×140°.83E, h32km, mb5.1/72, MS4.5/4, Error ellipse: s-maj=7.4km s-min=4.5km az=111.5*
BJI **10** *00:45:49.2±0.0, 11°.26N×141°.08E, h39km, mb5.1/73, mB5.0/46, Ms4.4/53, Ms7 4.2/51*
NEIC **10** *00:45:51.9±1.5, 11°.37N±0°.07×140°.95E±0°.09, h35km±1km, mb5.0/262, Error ellipse: s-maj=14.9km s-min=12.4km az=106.0*
GCMT **10** *00:45:52.9±0.3, 11°.22N±0°.02×140°.66E±0°.03, h26km, MW5.0/95, Moment Tensor Solution. s39,c44; s95,c135; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 3.21±.16; Mθθ -3.08±.11; Mϕϕ -0.12±.10; Mre 1.38±.17; Mθϕ -0.20±.08; Mϕr -0.89±.25; Best double couple: Mo 3.54400×10^16 NP1: ϕs 253.00000°, δ 35.00000°, λ 67.00000°. NP2: ϕs 101.00000°, δ 58.00000°, λ 106.00000°. Principal axes: T 3.7180, Plg 72.0000°, Azm 49.0000°; N -0.3470, Plg 13.0000°, Azm 273.0000°; P -3.3690, Plg 12.0000°, Azm 180.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
DJA **10** *00:45:56.5±0.6, 11°.N±3°.×14°.1E±°, h79km±6km, M5.0/28, mB5.4/13, mb5.0/28, MLv5.2/1, Mw(mB) 4.9/13*
ISC 10 00:45:52.6±0.5, 11°.38N±0°.04×140°.92E±0°.05, h45km±4km, h47km; pP-P, n669, σ1s09/656, mb5.0/228, MS4.2/78, 67C-47D, Fault plane solution: NP1: ϕs 190.42734°, δ 27.09108°, λ 20.30312°. NP2: ϕs 82.19643°, δ 80.90801°, λ 115.62928°. Principal axes: T Plg 47.8391°, Azm 19.3049°; N Plg 25.2844°, Azm 257.8611°; P Plg 31.1840°, Azm 151.2488°; Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.44**	**60**	Pn	Pn	00 47 00.5	+3.1
	46nm,0.3s,baz=226,slow=6.6,SNR=13						
GUMO				Sn	Sn	00 47 48.8	+1.0
	30nm,0.3s,baz=12,slow=23,SNR=1.2						
GUMO	**Guam**	**4.44**	**60**		Pn	00 46 57.3	-0.1
GUMO	**Guam**	**4.44**	**60**	P	Pn	00 46 57.3	-0.1
SMPI	**Sarmi**	**13.46**	**190**	P	Pn	00 49 03.9	+2.9
	867nm23nm,1.0s						
GENI	**Genyem**	**13.90**	**183**	P	Pn	00 49 09.9	+2.9
	188nm,0.7s						
SRPI	**Serui, Papua**	**13.96**	**200**	P	Pn	00 49 10.7	+2.9
MANU	**Manus Island**	**14.79**	**154**		Pn	00 49 15.9	-3.1
WAMI	**Wamena**	**15.32**	**188**	P	P	00 49 31.8	+1.9
SWI	**Sorong**	**15.49**	**219**	P	P	00 49 30.5	-1.4
SIJI	**Sorong**	**15.50**	**219**	Pn	Pn	00 49 28.3	+0.1
	1.0nm,0.3s,baz=22,slow=19,SNR=1.6						
SIJI				LR	LR	00 54 16.1	
	comp=Z,528nm,18.4s,baz=68,slow=33 3.8nm,0.3s						
JCJ	**Chichijima**	**15.68**	**4**	Pn	Pn	00 49 32.6	+2.1
	8.1nm,0.3s,baz=174,slow=9.4,SNR=5.6						
JCJ				LR	LR	00 54 16.4	
	comp=Z,568nm,19.0s,baz=85,slow=33						
JCJ	**Chichijima**	**15.68**	**4**		Pn	00 49 28.8	-1.7
DAV	**Davao City (W)**	**15.74**	**256**	Pn	P	00 49 33.6	-1.0
	32nm,0.3s,baz=72,slow=5.7,SNR=4.1						
DAV				LR	LR	00 54 13.8	
	comp=Z,429nm,21.2s,baz=65,slow=32						
DAV	**Davao City (W)**	**15.74**	**256**	IAmb	IAmb	00 49 38.2	
	comp=Z,247nm,1.1s						
FAKI	**Fak Fak**	**16.62**	**212**		Pn	00 49 41.0	-1.4
FAKI				IAmb	IAmb	00 49 53.0	
	comp=Z,117nm,1.2s						
FAKI	**Fak Fak**	**16.62**	**212**	P	P	00 49 44.1	-0.2
	comp=Z,935nmcomp=Z,84nm,1.5s						
SGSI	**Sangihe**	**17.06**	**245**	P	P	00 49 50.2	+1.0
LBMI	**Labuha**	**17.90**	**229**	P	Pn	00 50 00.1	+1.7
	comp=Z,707nmcomp=Z,54nm,1.1s						
MSAI	**Masohi**	**18.88**	**220**	P	Pn	00 50 10.4	+0.2
	comp=Z,4μmcomp=Z,20nm,0.9s						
KRVT	**Keravat (AS076**	**19.10**	**144**	P	P	00 50 13.6	+1.9
	comp=Z,36nm,0.4s,baz=329,slow=5.9,SNR=5.8						
KRVT				LR	LR	00 56 54.1	
	comp=Z,544nm,18.1s,baz=100,slow=35						
JOW	**Kunigami**	**19.45**	**324**	P	Pn	00 50 18.2	+1.2
	comp=Z,82nm,0.6s,baz=152,slow=10,SNR=39						
JOW				LR	LR	00 56 19.2	
	comp=Z,666nm,20.2s,baz=160,slow=33						
JOW	**Kunigami**	**19.45**	**324**	P	P	00 50 15.7	+0.2
JOW				IAmb	IAmb	00 50 19.7	
	comp=Z,99nm,0.8s						
AAI	**Ambon**	**19.60**	**221**	P	Pn	00 50 19.3	+0.4
	comp=Z,192nm,0.8s						
TGY	**Tagaytay City**	**19.68**	**280**	P	P	00 50 18.1	0.0
	comp=Z,48nm,0.3s,baz=151,slow=9.9,SNR=5.1						
KMSI	**Cibinong**	**19.96**	**239**	P	Pn	00 50 22.1	-1.0
PMG	**Port Moresby**	**21.56**	**163**	P	P	00 50 37.8	-0.6
	comp=Z,46nm,0.9s,baz=284,slow=21,SNR=12						
PMG				LR	LR	00 58 53.8	
	comp=Z,616nm,18.1s,baz=310,slow=36 comp=Z,46nm,0.9s						
PMG	**Port Moresby**	**21.56**	**163**	P	P	00 50 37.7	-0.6
PMG				IAmb	IAmb	00 50 39.3	
	comp=Z,74nm,1.0s						
PMG	**Port Moresby**	**21.56**	**163**	*c i*P	P	00 50 37.9	-0.4
PMG				pmax	pmax		
	comp=Z,97nm,1.3s						
JHJ	**Hachijo jima 2**	**21.67**	**357**	P	P	00 50 39.1	-0.2
	comp=Z,48nm,0.6s,baz=153,slow=14,SNR=4.3						
JHJ				LR	LR	00 57 29.9	
	comp=Z,1μm,18.8s,baz=169,slow=33 comp=Z,48nm,0.6s						
MRSI	**Marisa**	**21.74**	**241**	P	P	00 50 41.6	+1.3
	comp=Z,2μmcomp=Z,142nm,1.2s						
JSU	**Suzuyama**	**22.25**	**336**	P	P	00 50 46.0	+0.3
TOLI2	**Tolitoli**	**22.45**	**244**	P	P	00 50 46.8	-1.2
APSI	**Ampana**	**22.72**	**239**	P	P	00 50 52.0	+1.2
	comp=Z,550nmcomp=Z,48nm,1.0s						
MYLDM	**Lahad Datu**	**23.02**	**256**	P	P	00 50 54.1	+0.2
MPSI	**Mapaga**	**23.59**	**244**	P	P	00 50 59.3	-0.1
	comp=Z,3μmcomp=Z,9.5nm,0.4s						
INU	**Inuyama**	**24.13**	**352**	P	P	00 51 03.9	-0.3
INU				IAmb	IAmb	00 51 05.5	
	comp=Z,36nm,1.0s						
JGF	**Kuroka**	**24.33**	**353**	P	P	00 51 05.3	-0.9
JHS	**Saijyo**	**24.57**	**344**	P	P	00 51 07.7	-0.6
JHS				IAmb	IAmb	00 51 10.3	
	comp=Z,30nm,0.9s						
JYT	**Yasato**	**24.75**	**359**	P	P	00 51 08.9	-1.0
MJAR	**Matsushiro Arr**	**25.18**	**355**	P	P	00 51 11.4	-2.4
	comp=Z,8.7nm,0.8s,baz=172,slow=11,SNR=17 comp=Z,8.7nm,0.8s						
MJAR	**Matsushiro Arr**	**25.18**	**355**	P	P	00 51 12.2	-1.6
MAJO	**Matsushiro**	**25.18**	**355**	P	P	00 51 12.4	-1.4
MAJO	**Matsushiro**	**25.18**	**355**	P	P	00 51 12.4	-1.4
MAJO				pmax	pmax		
	comp=Z,20nm,0.8s						
MJB9	**Matsu-Tunnel**	**25.18**	**355**	P	P	00 51 13.1	-0.8
COEN	**Coen**	**25.27**	**175**	P	P	00 51 14.5	-0.2
TTSI	**Tana Toraja**	**25.42**	**237**	P	P	00 51 16.1	-0.1
	comp=Z,17nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**25.86**	**71**	T	T	01 20 06.4	
	baz=252,slow=78,SNR=34						
H11S1	**WAKE ISLAND Hy**	**25.87**	**71**	T	T	01 20 07.0	
	baz=252,slow=78,SNR=13						
H11S2	**WAKE ISLAND Hy**	**25.87**	**71**	T	T	01 20 07.6	
	baz=252,slow=78,SNR=30						
H11N1	**WAKE ISLAND Hy**	**26.33**	**68**	T	T	01 20 36.6	
	baz=254						
SMKI	**Samarinda**	**26.33**	**245**	P	P	00 51 25.3	+0.8
	comp=Z,7μmcomp=Z,187nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**26.34**	**68**	T	T	01 20 38.4	
	baz=254						
H11N3	**WAKE ISLAND Hy**	**26.34**	**68**	T	T	01 20 34.9	
	baz=254						
JMM	**Marumori**	**26.38**	**360**	P	P	00 51 23.8	-0.8
BKSI	**Bulukumba**	**26.52**	**232**	P	P	00 51 27.2	+1.0
	comp=Z,14nm,0.9s						
KAPI	**Kappang**	**26.63**	**233**	P	P	00 51 25.8	-1.3
	comp=Z,2.9nm,0.3s,baz=213,slow=4.1,SNR=2.7 comp=Z,2.9nm,0.3s						
KAPI	**Kappang**	**26.63**	**233**	P	P	00 51 26.0	-1.1
JSD	**Sado**	**26.66**	**355**	P	P	00 51 26.6	-0.5
SOEI	**Soe**	**26.74**	**219**	P	P	00 51 28.3	0.0
SOEI	**Soe**	**26.74**	**219**	P	P	00 51 28.3	0.0
	comp=Z,34nm,0.7s						
SSE	**Sheshan**	**26.81**	**320**	P	P	00 51 29.8	+1.2
SSE				S	S	00 56 02.8	+1.0
SSE				pmax	pmax		
	comp=Z,31nm,1.0s						
SSE				pmax	pmax		
	comp=Z,61nm,3.9s						
SSE				LR	LR		
	comp=Z,130nm,19.6s						
SSE				LR	LR		
	comp=Z,130nm,20.8s						
NAWB	**Namwon**	**26.91**	**335**	P	P	00 51 29.5	+0.1
NAWB				IAmb	IAmb	00 51 34.4	
	comp=Z,42nm,0.9s						
BATI	**Baumata**	**27.46**	**219**	P	P	00 51 36.0	+1.3
	comp=Z,22nm,0.6s,baz=127,slow=2.8,SNR=1.9						
BATI				LR	LR	01 01 35.9	
	comp=Z,332nm,20.1s,baz=78,slow=34 comp=Z,22nm,0.6s						
TJN	**Taejon**	**27.74**	**336**	P	P	00 51 36.3	-0.6
TJN	**Taejon**	**27.74**	**336**	*c i*P	P	00 51 36.8	-0.1
HKPS	**Hong Kong Po S**	**27.78**	**296**	P	P	00 51 37.6	+0.2
KSCHJ	**Chungju**	**27.94**	**337**	P	P	00 51 38.6	-0.1
KSCHJ				IAmb	IAmb	00 51 39.9	
	comp=Z,40nm,0.9s						
HNR	**Honiara**	**28.02**	**137**	LR	LR	01 02 39.5	
	comp=Z,150nm,19.7s,baz=324,slow=36						
KSRS	**Korea Array**	**28.47**	**338**	P	P	00 51 43.0	-0.4
	comp=Z,4.9nm,0.8s,baz=169,slow=9.3,SNR=20						
KSRS				PcP	PcP	00 54 55.4	+0.8
	comp=Z,0.5nm,0.3s,baz=183,slow=2.5,SNR=4.1 comp=Z,4.9nm,0.8s						
KSAR	**Wonju Array Be**	**28.48**	**338**	P	P	00 51 43.2	-0.3
KSAR	**Wonju Array Be**	**28.48**	**338**	P	P	00 51 43.2	-0.3
KS19	**Wonju Array Si**	**28.54**	**338**	P	P	00 51 43.3	-0.7
NJ2	**Nanjing**	**28.93**	**319**	*e*P	P	00 51 49.0	+1.4
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,390nm,18.1s						
NJ2				LR	LR		
	comp=Z,380nm,16.7s						
NJ2				LR	LR		
	comp=Z,740nm,18.8s						
SEHB	**SEOHWA**	**29.08**	**339**	P	P	00 51 49.1	+0.3
QIZ	**Qiongzhong**	**30.91**	**288**	P	P	00 52 04.6	-0.6
QIZ				S	S	00 57 08.4	+1.9
QIZ				pmax	pmax		
	comp=Z,140nm,8.4s						
QIZ				LR	LR		
	comp=Z,210nm,18.9s						
QIZ				LR	LR		
	comp=Z,180nm,16.6s						
QIZ				LR	LR		
	comp=Z,280nm,18.9s						
JEW	**Eniwo**	**31.35**	**1**	P	P	00 52 08.9	+0.1
WB0	**Warramunga Arr**	**31.61**	**192**	P	P	00 52 11.1	-0.2
CTA	**Charters Tower**	**31.70**	**170**	P	P	00 52 12.6	+0.4
	comp=Z,8.7nm,1.0s,baz=334,slow=11,SNR=10.0						
CTA				LR	LR	01 04 10.2	
	comp=Z,288nm,20.7s,baz=340,slow=35 comp=Z,8.7nm,1.0s						
CTAO	**Charters Tower**	**31.70**	**170**	P	P	00 52 11.8	-0.3
CTAO				IAmb	IAmb	00 52 28.9	
	comp=Z,23nm,1.2s						
CTAO	**Charters Tower**	**31.70**	**170**	P	P	00 52 11.8	-0.3
CTAO				pmax	pmax		
	comp=Z,23nm,1.3s						
CTAO	**Charters Tower**	**31.70**	**170**	P	P	00 52 13.0	+0.9
CTAO				pP	pP	00 52 19.1	-3.3
CTAO				sP	sP	00 52 22.2	-5.0
WR0	**Warramunga Arr**	**31.77**	**191**	P	P	00 52 11.8	-0.9
WRAB	**Tennant Creek**	**31.78**	**192**	P	P	00 52 11.4	-1.4
WRAB	**Tennant Creek**	**31.78**	**192**	*ce*P	P	00 52 12.8	0.0
WRAB				pmax	pmax		
	comp=Z,17nm,1.7s						
WRAB	**Tennant Creek**	**31.78**	**192**	P	P	00 52 12.2	-0.6
WB2	**Warramunga Arr**	**31.79**	**192**	P	P	00 52 11.3	-1.6
WRA	**Warramunga Arr**	**31.79**	**192**	P	P	00 52 12.2	-0.7
	comp=Z,7.7nm,0.9s,baz=11,slow=9.3,SNR=26						
WRA				LR	LR	01 05 05.5	
	comp=Z,407nm,20.1s,baz=26,slow=36 comp=Z,7.7nm,0.9s						
WRA	**Warramunga Arr**	**31.79**	**192**	P	P	00 52 11.5	-1.4
WRA	**Warramunga Arr**	**31.79**	**192**	*i* P	P	00 52 12.8	-0.1
WRA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TIA	**Tai'an**	**32.77**	**323**	P	P	00 52 21.7	+0.3
TIA				sP	pP	00 52 35.9	+3.7
TIA				PP	PP	00 53 33.8	-2.3
TIA				pmax	pmax		
	comp=Z,14nm,0.8s						
TIA				pmax	pmax		
	comp=Z,38nm,4.0s						
TIA				LR	LR		
	comp=Z,290nm,14.2s						
TIA				LR	LR		
	comp=Z,140nm,17.8s						
TIA				LR	LR		
	comp=Z,250nm,15.0s						
USA0B	**Ussuriysk Arra**	**33.60**	**348**	P	P	00 52 28.0	-0.6
USA0B				IAmb	IAmb	00 52 30.1	
	comp=Z,15nm,1.0s						
USA0B	**Ussuriysk Arra**	**33.60**	**348**	*c i*P	P	00 52 28.6	+0.1
USRK	**Ussuriysk Ar.**	**33.60**	**348**	P	P	00 52 28.1	-0.4
	comp=Z,9.7nm,0.8s,baz=173,slow=9.7,SNR=16 comp=Z,9.7nm,0.8s						
USRK	**Ussuriysk Ar.**	**33.60**	**348**	P	P	00 52 27.7	-0.8
USRK	**Ussuriysk Ar.**	**33.60**	**348**	P	P	00 52 27.7	-0.8
MDJ	**Mudanjiang**	**34.53**	**346**	P	P	00 52 37.7	+1.2
MDJ	**Mudanjiang**	**34.53**	**346**	P	P	00 52 41.7	+5.2
MDJ				pmax	pmax		
	comp=Z,9.0nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,120nm,5.1s						
MDJ				LR	LR		
	comp=Z,440nm,17.2s						
MDJ				LR	LR		
	comp=Z,260nm,17.7s						
MDJ				LR	LR		
	comp=Z,560nm,16.2s						
LYN	**LuoYang**	**34.69**	**316**	⇑P	P	00 52 38.3	+0.2
LYN				pP	pP	00 52 50.8	+1.8
LYN				S	S	00 58 14.9	+10
LYN				pmax	pmax		
	comp=Z,50nm,0.8s						
LYN				pmax	pmax		
	comp=Z,120nm,4.2s						
LYN				LR	LR		
	comp=Z,570nm,18.2s						
LYN				LR	LR		
	comp=Z,260nm,21.6s						
LYN				LR	LR		
	comp=Z,560nm,17.5s						
ENH	**Enshi**	**34.70**	**308**	P	P	00 52 38.9	+0.6
ENH	**Enshi**	**34.70**	**308**	P	P	00 52 39.4	+1.1
ENH				pP	pP	00 52 46.1	-3.2
CN2	**Changchun**	**34.97**	**340**	*e*P	P	00 52 39.3	-1.1
CN2				PP	PnPn	00 53 58.5	+0.1
CN2				S	S	00 58 07.3	-1.8
CN2				sS	sS	00 58 27.6	+0.1
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
CN2				LR	LR		
	comp=Z,390nm,16.0s						
CN2				LR	LR		
	comp=Z,400nm,16.0s						
CN2				LR	LR		
	comp=Z,600nm,18.0s						
HNS	**HongShan**	**35.00**	**322**	⇑P	P	00 52 41.4	+0.7
HNS				S	S	00 58 11.2	+1.5
HNS				sS	sS	00 58 24.7	-3.4
HNS				ScS	ScS

ASAR Alice Springs 35.50 191 P **P** **00 52 44.2 -1.0**
ASAR Alice Springs 35.50 191 P **P** **00 52 44.2 -1.0**
GYA Guiyang 35.57 300 ⇑P **P** **00 52 48.0 +2.0**
GYA pmax pmax
comp=Z,24nm,1.0s
BJT Baijiatuau 35.97 327 P **P** **00 52 49.2 +0.2**
BJT Baijiatuau 35.97 327 P **P** **00 52 49.2 +0.2**
BJT pmax pmax
comp=Z,33nm,0.7s
BJT Baijiatuau 35.97 327 P **P** **00 52 49.8 +0.9**
BJT x x 00 52 53.3
BJI Beijing 35.98 327 P **P** **00 52 49.6 +0.5**
BJI pmax pmax
comp=Z,43nm,1.2s
BNX BinXian 36.14 344 ⇓P **P** **00 52 51.0 +0.6**
BNX pmax pmax
comp=Z,64nm,1.0s
BNX pmax pmax
comp=Z,150nm,4.7s
TIY Taiyuan 36.59 321 ⇓P **P** **00 52 55.9 +1.4**
TIY pmax pmax
comp=Z,53nm,0.5s
TIY pmax pmax
comp=Z,150nm,5.9s
TIY LR LR
comp=Z,160nm,15.8s
TIY LR LR
comp=Z,280nm,16.2s
TIY LR LR
comp=Z,340nm,19.2s
XAN Xi'an 36.90 313 P **P** **00 52 57.2 +0.1**
XAN pP pP 00 53 07.0 -1.1
XAN S **S** **00 58 42.5 +3.6**
XAN PcS **PcS** **00 59 01.1 -5.2**
XAN pmax pmax
comp=Z,24nm,1.0s
XAN pmax pmax
comp=Z,240nm,9.2s
XAN LR LR
comp=Z,230nm,14.9s
XAN LR LR
comp=Z,280nm,15.7s
XAN LR LR
comp=Z,450nm,21.4s
XAN Xi'an 36.90 313 P **P** **00 52 57.2 +0.1**
KLR Kul'dur 38.50 350*c i*P **P** **00 53 11.0 +0.6**
KLR pmax pmax
comp=Z,43nm,0.7s
KMI Kunming 38.61 296 ⇓P **P** **00 53 14.1 +2.2**
KMI pP pP 00 53 21.4 -1.5
KMI pmax pmax
comp=Z,17nm,1.4s
KMI LR LR
comp=Z,250nm,15.0s
KMI LR LR
comp=Z,210nm,17.7s
KMI LR LR
comp=Z,200nm,18.8s
XLT XiLinHaoTe 38.86 331 *e*P **P** **00 53 14.1 +0.5**
XLT pP pP 00 53 25.0 +0.3
XLT sP sP 00 53 35.2 +5.8
XLT PcP **PcP** **00 55 22.8 -1.1**
XLT S **S** **00 59 11.4 +2.9**
XLT pmax pmax
comp=Z,71nm,0.9s
XLT pmax pmax
comp=Z,270nm,4.2s
XLT LR LR
comp=Z,360nm,18.1s
XLT LR LR
comp=Z,320nm,18.5s
HHC Hu-ho-hao-te 39.10 324 *e*P P 00 53 20.2 +4.5
HHC pmax pmax
comp=Z,36nm,0.9s
HHC pmax pmax
comp=Z,200nm,4.8s
HHC LR LR
comp=Z,380nm,14.6s
HHC LR LR
comp=Z,470nm,15.9s
HHC LR LR
comp=Z,500nm,14.8s
KOUNC Koumac, New Ca 39.17 144 P **P** **00 53 15.2 -1.1**
KOUNC IAmb IAmb 00 53 24.9
comp=Z,48nm,1.4s
TYV Tymovskoe 39.40 2 *e*P **P** **00 53 18.8 +1.0**
TYV *e*S **S** **00 59 21.5 +5.3**
TYV pmax pmax
comp=Z,114nm,0.7s
TYV pmax pmax
comp=Z,100nm,0.9s
TYV smax smax
comp=N,100nm,3.5s
TYV smax smax
comp=E,100nm,3.5s
GRNR Gornyy 39.45 356⇑*i*P **P** **00 53 18.8 +0.5**
GRNR pmax pmax
comp=Z,20nm,0.7s
PZH PanZhiHua 39.81 298 P **P** **00 53 23.1 +1.3**
PZH S **S** **00 59 26.3 +2.9**
PZH pmax pmax
comp=Z,20nm,0.6s
PZH pmax pmax
comp=Z,130nm,8.0s
PZH LR LR
comp=Z,430nm,18.2s
PZH LR LR
comp=Z,420nm,17.3s
PZH LR LR
comp=Z,520nm,19.2s
IPM Ipoh 40.07 263 P **P** **00 53 22.6 -1.4**
KULM Kulim 40.27 265 P **P** **00 53 24.8 -0.8**
KULM IAmb IAmb 00 53 28.4
comp=Z,25nm,1.1s
SRIT Nakonsritamara 40.77 270 P **P** **00 53 29.6 -0.1**
SRIT IAmb IAmb 00 53 31.7
comp=Z,27nm,0.9s
CMAR Chiang Mai Arr 41.10 285 P **P** **00 53 33.6 +1.2**
comp=Z,5.7nm,0.8s,baz=86,slow=6.1,SNR=23
CMAR PcP **PcP** **00 55 32.2 +0.7**
comp=Z,1.1nm,0.3s,baz=126,slow=1.6,SNR=4.7
CMAR LR LR 01 09 11.9
comp=Z,133nm,20.8s,baz=100,slow=34
comp=Z,5.7nm,0.8s
CMAR Chiang Mai Arr 41.10 285 P **P** **00 53 33.3 +0.9**
CHTO Chiang Mai 41.12 286 P **P** **00 53 32.1 -0.5**
CHTO Chiang Mai 41.12 286 P **P** **00 53 32.1 -0.5**
CHTO pmax pmax
comp=Z,8.0nm,1.3s
SKR Severo-Kuril's 41.13 15 *e*P **P** **00 53 33.6 +1.5**
SKR pmax pmax
comp=Z,20nm,0.9s
SKR pmax pmax
comp=Z,100nm,6.8s
SKR MLR MLR
comp=Z,100nm,16.0s
LZH Lanzhou 41.53 313 *e*P **P** **00 53 37.0 +1.1**
LZH pP pP 00 53 49.9 +2.8
LZH sS sS 01 00 07.9 +0.5
LZH SS **SS** **01 02 55.8 +1.1**
LZH pmax pmax
comp=Z,30nm,1.3s
LZH pmax pmax
comp=Z,160nm,5.4s
LZH LR LR
comp=Z,300nm,14.4s
LZH LR LR
comp=Z,340nm,14.0s
LZH LR LR
comp=Z,460nm,16.7s
DZM Mont Dzumac 41.61 143 *e*S S 01 00 12.0 +22
comp=Z,156nm,27.9s
DZM *e*LR LR 01 05 43.6
comp=Z,444nm,22.2s
DZM Mont Dzumac 41.61 143 LR LR 01 08 23.7
comp=Z,334nm,20.2s,baz=355,slow=33
DZM Mont Dzumac 41.61 143 P **P** **00 53 37.1 +0.5**
DZM IAmb IAmb 00 53 48.2
comp=Z,33nm,1.1s
DZM Mont Dzumac 41.61 143 P **P** **00 53 38.7 +2.1**
DZM pP **pP** **00 53 45.0 -2.4**
DZM sP sP 00 53 47.9 -4.2
HIA Hailar 41.67 339 P **P** **00 53 37.3 +0.7**
HIA IAmb IAmb 00 53 38.4
comp=Z,18nm,0.8s
HIA Hailar 41.67 339*ce*P **P** **00 53 37.1 +0.5**

HIA pmax pmax
comp=Z,21nm,0.9s
PSI Prapat 42.49 262 P **P** **00 53 42.9 -1.1**
comp=Z,23nm,0.9s,baz=83,slow=4.4,SNR=13
PSI LR LR 01 12 51.7
comp=Z,119nm,19.3s,baz=349,slow=38
comp=Z,23nm,0.9s
RPSI Rantau Prapat 42.52 262 P **P** **00 53 42.9 -1.2**
STKA Stephens Creek 43.01 179 P **P** **00 53 46.3 -1.4**
comp=Z,7.5nm,0.9s,baz=343,slow=8.4,SNR=5.9
STKA LR LR 01 12 42.3
comp=Z,239nm,18.8s,baz=17,slow=38
comp=Z,7.5nm,0.9s
STKA Stephens Creek 43.01 179 P **P** **00 53 47.3 -0.4**
ZEA Zeya 43.64 348 *e*P **P** **00 53 53.0 +0.5**
ZEA *e* 00 54 03.5
ZEA pmax pmax
comp=N,20nm,0.8s
ZEA pmax pmax
comp=Z,30nm,0.9s
ZEA MLR MLR
comp=N,200nm,18.0s
ZEA MLR MLR
comp=Z,200nm,14.0s
PETK Petropavlovsk- 43.75 15 P **P** **00 53 52.0 -1.4**
comp=Z,3.4nm,0.9s,baz=188,slow=8.0,SNR=3.7
PETK LR LR 01 10 00.1
comp=Z,134nm,21.9s,baz=186,slow=33
comp=Z,3.4nm,0.9s
PETK Petropavlovsk- 43.75 15 P **P** **00 53 52.2 -1.2**
PET Petropavlovsk 43.91 15 P **P** **00 53 55.4 +0.7**
PET Petropavlovsk 43.91 15 *e*P P 00 54 03.0 +8.3
PET *e*S S 01 00 32.5 +10
PET *e*PS 01 00 46.4
PET *e*SS SS 01 03 26.1 -14
PET pmax pmax
comp=Z,100nm,14.6s
PET MLR MLR
comp=Z,200nm,15.0s
PET MLR MLR
comp=Z,400nm,15.0s
GTA Gaotai 45.87 315 ⇑P **P** **00 54 11.3 +0.6**
GTA pP pP 00 54 21.3 -0.7
GTA sP pwP 00 54 26.9 -0.2
GTA PcP **PcP** **00 55 49.1 +1.7**
GTA S **S** **01 00 51.1 -0.9**
GTA SS **SS** **01 04 11.4 -5.7**
GTA pmax pmax
comp=Z,41nm,1.0s
GTA pmax pmax
comp=Z,92nm,5.8s
GTA LR LR
comp=Z,150nm,18.2s
GTA LR LR
comp=Z,240nm,17.8s
GTA LR LR
comp=Z,240nm,18.5s
ULN Ulaanbaatar 46.12 329 P **P** **00 54 13.2 +0.6**
ULN IAmb IAmb 00 54 14.8
comp=Z,24nm,0.9s
ULN Ulaanbaatar 46.12 329 P **P** **00 54 13.2 +0.6**
ULN pmax pmax
comp=Z,24nm,0.9s
ULN Ulaanbaatar 46.12 329 P **P** **00 54 13.7 +1.1**
SONM Songino Array 46.44 328 P **P** **00 54 15.9 +0.8**
comp=Z,11nm,0.8s,baz=139,slow=8.2,SNR=52
SONM PcP **PcP** **00 55 48.9 -0.3**
comp=Z,2.2nm,0.7s,baz=164,slow=4.6,SNR=3.1
SONM LR LR 01 14 31.4
comp=Z,624nm,18.4s,baz=97,slow=37
comp=Z,11nm,0.8s
SONM Songino Array 46.44 328 P **P** **00 54 15.7 +0.7**
SONM IAmb IAmb 00 54 17.3
comp=Z,36nm,1.4s
SONM Songino Array 46.44 328 P **P** **00 54 15.7 +0.7**
SONM pmax pmax
comp=Z,36nm,1.4s
MSVF Nonsavu 46.70 128 LR LR 01 11 51.1
comp=Z,382nm,19.1s,baz=344,slow=34
MSVF Nonsavu 46.70 128 P **P** **00 54 17.0 -0.4**
MSVF IAmb IAmb 00 54 21.8
comp=Z,26nm,1.0s
MSVF Nonsavu 46.70 128 P **P** **00 54 17.0 -0.4**
MSVF pmax pmax
comp=Z,26nm,1.0s
CAN Canberra 47.07 171 P **P** **00 54 19.9 -0.1**
CAN Canberra 47.07 171 P **P** **00 54 19.9 -0.1**
CAN pmax pmax
comp=Z,42nm,1.5s
GOMU GeErMu 48.31 309 P **P** **00 54 31.0 +0.9**
GOMU pP pP 00 54 37.4 -4.0
GOMU sP pwP 00 54 41.0 -5.4
GOMU PcP **PcP** **00 55 55.3 -1.1**
GOMU PP **PP** **00 56 27.8 +5.0**
GOMU S **S** **01 01 18.6 -8.7**
GOMU sS sS 01 01 44.9 -1.4
GOMU pmax pmax
comp=Z,19nm,1.0s
GOMU pmax pmax
comp=Z,100nm,7.3s
GOMU LR LR
comp=Z,100nm,18.4s
GOMU LR LR
comp=Z,130nm,17.3s
GOMU LR LR
comp=Z,99nm,15.3s
MA2 Magadan 48.67 7 P **P** **00 54 32.1 +0.1**
comp=Z,17nm,0.8s,baz=184,slow=15,SNR=4.6
comp=Z,17nm,0.8s
MA2 Magadan 48.67 7 IAmb IAmb 00 54 36.0
comp=Z,25nm,0.9s
MA2 Magadan 48.67 7⇑*e*P **P** **00 54 30.5 -1.5**
MA2 pmax pmax
comp=Z,10.0nm,0.6s
SHEM Shemya Is, Ala 49.10 26 LR LR 01 13 47.6
comp=Z,297nm,19.9s,baz=261,slow=34
ZAK Zakamensk 49.64 329 *e*P **P** **00 54 40.1 +0.4**
ZAK pmax pmax
comp=Z,61nm,1.1s
LSA Lhasa 49.64 299 P **P** **00 54 40.8 +0.3**
LSA IAmb IAmb 00 54 43.2
comp=Z,20nm,1.4s
LSA Lhasa 49.64 299 P **P** **00 54 40.8 +0.3**
LSA pmax pmax
comp=Z,20nm,1.4s
YAK Yakutsk 51.23 353 P **P** **00 54 50.3 -1.0**
comp=Z,32nm,0.5s,baz=353,slow=1.9,SNR=18
comp=Z,32nm,0.5s
YAK Yakutsk 51.23 353 P **P** **00 54 51.0 -0.3**
YAK Yakutsk 51.23 353*de*P **P** **00 54 51.3 0.0**
YAK pmax pmax
comp=Z,104nm,0.9s
YAK Yakutsk 51.23 353 P **P** **00 54 51.4 +0.1**
MOY Mondy 51.56 329 *e*P **P** **00 54 55.1 +0.9**
MOY pmax pmax
comp=Z,42nm,1.4s
WMQ Urumqi 55.94 316 *e*P **P** **00 55 27.5 +1.2**
WMQ pP pP 00 55 34.4 -3.5
WMQ pmax pmax
comp=Z,36nm,1.3s
WMQ LR LR
comp=Z,160nm,16.7s
WMQ LR LR
comp=Z,380nm,23.5s
WMQ LR LR
comp=Z,140nm,19.5s
ZSN Zaisan 58.97 319 *e*P **P** **00 55 46.8 -0.7**
ZSN Zaisan 58.97 319 *e*P **P** **00 55 46.9 -0.7**
baz=319
BILL Bilibino 59.01 11 P **P** **00 55 47.4 0.0**
BILL Bilibino 59.01 11*d i*P **P** **00 55 46.5 -0.9**
BILL *e* 00 56 35.8
BILL *e* 00 57 57.8
BILL *e*PPP PPP 00 59 19.4
BILL pmax pmax
comp=Z,16nm,1.0s
BILL MLR MLR
comp=Z,71nm,17.0s
BILL Bilibino 59.01 11 P **P** **00 55 47.1 -0.3**
UNV Unalaska Valle 59.27 33 P **P** **00 55 49.5 +0.1**
baz=245
URZ Urewera 59.85 147 LR LR 01 20 46.4
comp=Z,127nm,18.5s,baz=31,slow=35
MK31 Makanchi Array 60.46 318*ce*P **P** **00 55 57.6 -0.2**
MK31 pmax pmax
comp=Z,3.0nm,0.5s

MKAR Makanchi Array 60.46 318 P **P** **00 55 58.3 +0.5**
comp=Z,3.8nm,0.6s,baz=101,slow=9.6,SNR=51
MKAR LR LR 01 21 42.1
comp=Z,106nm,21.7s,baz=100,slow=36
comp=Z,3.8nm,0.6s
MKAR Makanchi Array 60.46 318 P **P** **00 55 58.2 +0.4**
MKAR Makanchi Array 60.46 318*ce*P **P** **00 55 58.4 +0.6**
MKAR pmax pmax
comp=Z,3.0nm,0.4s
HYBB Hyderabad (bro 60.50 284 *e*P **P** **00 55 58.2 -0.4**
HYBB *es*P **pP** **00 56 13.3 +3.1**
HYBB *e*PcP **PcP** **00 56 42.4 -0.5**
HYBB *e*PP **PP** **00 58 12.4 +0.1**
MAKZ Makanchi 60.67 318 P **P** **00 55 59.6 +0.4**
MAKZ IAmb IAmb 00 56 01.7
comp=Z,9.8nm,0.9s
MAKZ Makanchi 60.67 318 P **P** **00 55 59.6 +0.4**
MAKZ pmax pmax
comp=Z,10.0nm,1.0s
MAKZ Makanchi 60.67 318 P **P** **00 55 59.9 +0.7**
TIXI Tiksi 60.68 356 P **P** **00 55 58.0 -0.8**
comp=Z,4.9nm,0.6s,baz=270,slow=22,SNR=13
TIXI LR LR 01 20 17.8
comp=Z,102nm,21.9s,baz=181,slow=34
comp=Z,4.9nm,0.6s
TIXI Tiksi 60.68 356 P **P** **00 55 58.2 -0.6**
TIXI IAmb IAmb 00 56 01.9
comp=Z,6.3nm,0.7s
TIXI Tiksi 60.68 356 P **P** **00 55 58.2 -0.6**
TIXI pmax pmax
comp=Z,6.0nm,0.7s
TIXI Tiksi 60.68 356 P **P** **00 55 58.3 -0.6**
ZAA0 Zalesovo Array 61.23 326 P **P** **00 56 02.4 -0.5**
ZAA0 IAmb IAmb 00 56 03.8
comp=Z,22nm,1.4s
ZALV Zalesovo Beam 61.23 326 P **P** **00 56 02.5 -0.3**
comp=Z,5.3nm,0.4s,baz=110,slow=7.5,SNR=33
ZALV LR LR 01 23 32.1
comp=Z,266nm,18.7s,baz=122,slow=37
comp=Z,5.3nm,0.4s
ZALV Zalesovo Beam 61.23 326 *i* P **P** **00 56 02.7 -0.1**
ZALV pmax pmax
comp=Z,5.0nm,0.4s
RPZ Rata Peaks 61.31 155 LR LR 01 21 40.0
comp=Z,84nm,18.2s,baz=272,slow=35
FALS False Pass 61.33 33 P **P** **00 56 02.7 -0.8**
baz=247
SHLS Shalkode 61.55 313 *e*P **P** **00 56 02.2 -3.2**
SHLS Shalkode 61.55 313 *e*P **P** **00 56 02.2 -3.2**
baz=313
PDGK Podgornoye 61.56 313 P **P** **00 56 05.4 -0.1**
UZB Uzynbulak 61.86 313 *e*P **P** **00 56 06.3 -1.2**
UZB Uzynbulak 61.86 313 *e*P **P** **00 56 06.4 -1.2**
baz=313
KPKS Kokpek 62.17 313 *e*P **P** **00 56 08.6 -0.9**
KPKS pmax pmax
comp=Z,14nm,1.8s
KPKS Kokpek 62.17 313 *e*P **P** **00 56 08.6 -0.9**
comp=Z,14nm,1.8s,baz=313
PRZ Przheval'sk 62.19 312 P **P** **00 56 10.9 +1.1**
PRZ Przheval'sk 62.19 312 P **P** **00 56 10.9 +1.1**
PRZ pmax pmax
comp=Z,29nm,1.0s
SATY Saty 62.29 313 *e*P **P** **00 56 09.4 -1.0**
SATY pmax pmax
comp=Z,15nm,1.6s
SATY Saty 62.29 313 *e*P **P** **00 56 09.4 -1.0**
comp=Z,15nm,1.6s,baz=313
TDK Taldyqorghan 62.67 315 *e*P **P** **00 56 12.0 -0.7**
TDK Taldyqorghan 62.67 315 *e*P **P** **00 56 12.0 -0.7**
baz=315
SEM Semipalatinsk 62.75 321 *e*P **P** **00 56 11.5 -1.9**
SEM Semipalatinsk 62.75 321 *e*P **P** **00 56 11.6 -1.9**
baz=321
KDJ Kajisay 63.02 312 P **P** **00 56 15.5 +0.2**
KDJ IAmb IAmb 00 56 17.9
comp=Z,12nm,0.8s
KDJ Kajisay 63.02 312 P **P** **00 56 15.5 +0.2**
KDJ pmax pmax
comp=Z,12nm,0.9s
SDPT Sand Point 63.09 33 P **P** **00 56 14.7 -0.5**
baz=250
MDOK Medeo 63.29 313 *e*P **P** **00 56 15.7 -1.3**
MDOK Medeo 63.29 313 *e*P **P** **00 56 15.7 -1.3**
baz=313
TNSS Tian-Shan 63.34 313 *e*P **P** **00 56 17.8 +0.1**
TNSS Tian-Shan 63.34 313 *e*P **P** **00 56 17.8 +0.1**
baz=312
CHNA Chernabura Isl 63.39 34 P **P** **00 56 16.2 -1.0**
baz=251
CHKK Chushkaly 63.45 313 *e*P **P** **00 56 17.3 -0.6**
CHKK Chushkaly 63.45 313 *e*P **P** **00 56 17.4 -0.6**
baz=313
KSH Kashi 63.55 308 P **P** **00 56 22.4 +3.6**
KSH pP pP 00 56 33.3 +2.8
KSH pmax pmax
comp=Z,12nm,0.8s
KSH pmax pmax
comp=Z,90nm,3.9s
ULHL Ulahol 63.73 312 P **P** **00 56 19.3 -0.7**
SNR=12
KURK Kurchatov 63.83 321 P **P** **00 56 20.2 0.0**
KURK Kurchatov 63.83 321*ce*P **P** **00 56 19.9 -0.4**
KURK pmax pmax
comp=Z,34nm,0.9s
KURK Kurchatov 63.83 321 P **P** **00 56 20.6 +0.3**
KURK pP **pP** **00 56 29.1 -2.9**
KURK sP pwP 00 56 32.7 -4.4
KUU Kurty 63.92 313 *e*P **P** **00 56 20.2 -0.8**
KUU pmax pmax
comp=Z,17nm,1.1s
KUU Kurty 63.92 313 *e*P **P** **00 56 20.2 -0.8**
comp=Z,17nm,1.1s,baz=313
BOOM Boomskoye usch 63.99 312 P **P** **00 56 21.8 +0.1**
BOOM Boomskoye usch 63.99 312 P **P** **00 56 21.8 +0.1**
BOOM pmax pmax
comp=Z,6.0nm,0.9s
TKM2 Tokmak 2 64.30 312 P **P** **00 56 24.1 +0.3**
SNR=7.2
KBK Karagaybulak 64.73 312 P **P** **00 56 27.4 +0.8**
SNR=6.2
CHMS Chumysh 64.92 312 P **P** **00 56 28.2 +0.5**
SNR=5.2
UCH Uchtor 65.00 311 P **P** **00 56 29.8 +1.1**
SNR=11
AAK Ala-Archa 65.06 312 LR LR 01 27 52.6
comp=Z,104nm,18.1s,baz=112,slow=39
AAK Ala-Archa 65.06 312 P **P** **00 56 29.4 +0.7**
AAK Ala-Archa 65.06 312*de*P **P** **00 56 29.6 +0.9**
AAK pmax pmax
comp=Z,8.0nm,1.7s
SGDS Sogindy 65.08 313 *e*P **P** **00 56 26.9 -1.8**
SGDS Sogindy 65.08 313 *e*P **P** **00 56 26.9 -1.8**
baz=313
USP Ospenovka 65.14 312 P **P** **00 56 29.3 +0.2**
SNR=5.5
AML Almayashu 65.59 311 P **P** **00 56 33.7 +1.3**
SNR=9.3
BTLS Baital 65.72 314 *e*P **P** **00 56 31.9 -0.8**
BTLS pmax pmax
comp=Z,7.0nm,1.3s
BTLS Baital 65.72 314 *e*P **P** **00 56 32.0 -0.8**
comp=Z,7.1nm,1.3s,baz=314
N16K Nishlik Lake 65.74 28 P **P** **00 56 32.4 -0.2**
baz=249
O16K Koliganek River B 65.75 29 P **P** **00 56 31.9 -0.6**
baz=250
O17K Koliganek Bris 66.29 29 P **P** **00 56 36.2 +0.2**
baz=251
P17K Kvichak River 66.42 30 P **P** **00 56 37.1 +0.2**
baz=252
DRK Karamyk 66.76 308 P **P** **00 56 40.5 +0.6**
DRK IAmb IAmb 00 57 00.3
comp=Z,12nm,0.8s
NRIK Noril'sk 66.99 342 P **P** **00 56 39.8 -0.6**
comp=Z,15nm,0.9s,baz=111,slow=7.5,SNR=19
comp=Z,15nm,0.9s
NRIK Noril'sk 66.99 342 P **P** **00 56 40.4 0.0**
P18K Big Mountain, 67.08 30 P **P** **00 56 40.2 -0.9**
P18K IAmb IAmb 00 56 42.7
comp=Z,19nm,1.0s
N18K Kilae Creek 67.15 28 P **P** **00 56 40.4 -1.1**
N18K Kilae Creek 67.15 28 P **P** **00 56 42.1 +0.5**
baz=252
O18K Koktuh Hills 67.22 29 P **P** **00 56 42.1 +0.1**
O18K IAmb IAmb 00 56 43.0

comp=Z,15nm,0.8s
O18K Koktuh Hills 67.22 29 P P 00 56 41.3 -0.7
baz=253
BRZS Berezniki 67.40 320 *e*P P 00 56 42.3 -1.0
BRZS pmax pmax
comp=Z,7.0nm,1.3s
BRZS Berezniki 67.40 320 *e*P P 00 56 42.4 -1.0
comp=Z,7.4nm,1.3s,baz=320
SVW2 Sparrevohn 67.42 28 P P 00 56 42.9 -0.4
BTK Batken 67.56 309 P P 00 56 45.0 +0.3
BTK IAmb IAmb 00 56 47.1
comp=Z,22nm,1.5s
BTK Batken 67.56 309 P P 00 56 45.0 +0.3
BTK pmax pmax
comp=Z,22nm,1.5s
Q19K Cape Douglas, 67.73 31 P P 00 56 44.3 -1.0
baz=254
TTA Tatalina 67.82 26 P P 00 56 45.4 -0.4
baz=251
N19K Bonanza Creek 67.85 29 P P 00 56 46.1 0.0
N19K IAmb IAmb 00 56 47.4
comp=Z,12nm,0.7s
N19K Bonanza Creek 67.85 29 P P 00 56 45.9 -0.1
baz=253
GAR Garm 67.88 307 P P 00 56 46.9 +0.1
KDAK Kodiak Island 67.97 32 P P 00 56 46.2 -0.6
comp=Z,9.5nm,0.6s,baz=300,slow=1.4,SNR=12
KDAK LR LR 01 27 07.6
comp=Z,123nm,18.8s,baz=257,slow=36
comp=Z,9.5nm,0.6s
KDAK Kodiak Island 67.97 32 P P 00 56 46.2 -0.6
KDAK IAmb IAmb 00 56 47.7
comp=Z,13nm,0.8s
KDAK Kodiak Island 67.97 32 P P 00 56 46.2 -0.6
KDAK pmax pmax
comp=Z,13nm,0.8s
KDAK Kodiak Island 67.97 32 P P 00 56 46.7 0.0
baz=256
KDAK Kodiak Island 67.97 32 P P 00 56 46.8 0.0
KK31 Karatay Array 68.03 312 P P 00 56 47.8 +0.3
KK31 Karatay Array 68.03 312 *i* P P 00 56 47.6 +0.2
L19K White Mountain 68.09 27 IAmb IAmb 00 56 48.7
comp=Z,11nm,0.9s
L19K White Mountain 68.09 27 P P 00 56 47.3 -0.2
baz=252,SNR=5.4
M19K Big River Lodg 68.22 27 P P 00 56 48.2 0.0
M19K Big River Lodg 68.22 27 P P 00 56 48.9 +0.7
baz=253
Q20K Shuyak Island 68.28 31 P P 00 56 47.9 -0.7
baz=256
IUG luzhnay 68.30 311 *e*P P 00 56 47.8 -1.5
IUG luzhnay 68.30 311 *e*P P 00 56 47.8 -1.5
baz=311
BRLS Borolday 68.51 312 *e*P P 00 56 48.2 -2.3
BRLS Borolday 68.51 312 *e*P P 00 56 48.2 -2.3
baz=312
L20K Farewell, AK 68.61 27 P P 00 56 51.1 +0.3
baz=253
KBL Kabul 68.75 303 P P 00 56 51.7 -0.7
KBL Kabul 68.75 303 P P 00 56 51.7 -0.7
KBL pmax pmax
comp=Z,7.0nm,0.7s
CHGR Chuyangaron 68.77 307 P P 00 56 52.6 +0.3
CHGR Chuyangaron 68.77 307 P P 00 56 52.6 +0.3
CHGR pmax pmax
comp=Z,39nm,0.9s
M20K Styx River 68.78 28 P P 00 56 52.0 +0.2
M20K Styx River 68.78 28 P P 00 56 52.1 +0.2
baz=254
K20K Telida 68.79 26 P P 00 56 52.4 +0.5
baz=252,SNR=6.5
J20K Nowinta River 69.01 25 IAmb IAmb 00 56 54.8
comp=Z,14nm,0.8s
J20K Nowinta River 69.01 25 P P 00 56 53.9 +0.7
baz=252
BRLK Bradley Lake 69.31 30 IAmb IAmb 00 56 55.0
comp=Z,15nm,0.8s
BRVK Borovoye 69.36 323 P P 00 56 55.7 +0.2
BRVK IAmb IAmb 00 56 57.6
comp=Z,19nm,0.9s
BRVK Borovoye 69.36 323 *ce*P P 00 56 55.3 -0.2
BRVK pmax pmax
comp=Z,16nm,0.9s
BRVK Borovoye 69.36 323 P P 00 56 55.9 +0.4
BRSE Bradley Lake S 69.37 30 P P 00 56 54.5 -1.0
baz=257
PPLA Purkeypile 69.48 27 P P 00 56 55.8 -0.4
PPLA Purkeypile 69.48 27 P P 00 56 55.9 -0.4
baz=254
SKT Skwentna 69.54 28 P P 00 56 55.5 -1.0
SKT Skwentna 69.54 28 P P 00 56 55.1 -1.3
baz=255,SNR=5.2
CAST Castle Rocks 69.67 26 P P 00 56 57.1 -0.2
CAST IAmb IAmb 00 56 58.1
comp=Z,14nm,0.7s
CAST Castle Rocks 69.67 26 P P 00 56 57.0 -0.2
baz=254,SNR=5.8
CHUM Lake Minchumin 69.70 26 P P 00 56 57.7 +0.3
baz=254,SNR=9.3
IMAR Indian Mountai 69.74 23 P P 00 56 57.2 -0.3
SUA Susitna One 69.77 28 P P 00 56 57.1 -0.9
baz=256
H21K Melozitna Rive 70.01 24 P P 00 56 59.6 +0.3
H21K IAmb IAmb 00 57 00.8
comp=Z,11nm,0.8s
H21K Melozitna Rive 70.01 24 P P 00 56 59.5 +0.2
baz=253,SNR=15
SEW Seward 70.08 30 P P 00 56 59.3 -0.5
SEW IAmb IAmb 00 57 00.3
comp=Z,19nm,0.9s
SEW Seward 70.08 30 P P 00 56 59.4 -0.3
baz=258
M22K Willow 70.13 28 P P 00 56 58.5 -1.5
M22K Willow 70.13 28 P P 00 56 59.5 -0.5
baz=257
RC01 Rabbit Creek A 70.16 29 P P 00 56 59.3 -0.9
RC01 IAmb IAmb 00 57 00.4
comp=Z,11nm,0.9s
RC01 Rabbit Creek A 70.16 29 P P 00 56 59.4 -0.9
baz=257
I21K Tanana 70.20 24 P P 00 57 00.8 +0.4
I21K IAmb IAmb 00 57 02.4
comp=Z,15nm,0.9s
I21K Tanana 70.20 24 P P 00 57 00.8 +0.4
baz=254,SNR=12
KTH Kantishna Hill 70.21 26 IAmb IAmb 00 57 01.6
comp=Z,16nm,0.9s
BPAW Bear Paw Mtn. 70.32 26 P P 00 57 01.2 -0.1
BPAW IAmb IAmb 00 57 02.1
comp=Z,16nm,0.9s
BPAW Bear Paw Mtn. 70.32 26 P P 00 57 01.1 -0.1
baz=255,SNR=18
TRF Thorofare Moun 70.46 26 IAmb IAmb 00 57 02.3
comp=Z,14nm,0.9s
TRF Thorofare Moun 70.46 26 P P 00 57 01.2 -1.0
baz=256,SNR=12
PMR Palmer 70.55 28 P P 00 57 01.7 -0.9
PMR IAmb IAmb 00 57 02.6
comp=Z,11nm,0.7s
PMR Palmer 70.55 28 P P 00 57 01.7 -0.9
PMR pmax pmax
comp=Z,11nm,0.7s
PMR Palmer 70.55 28 P P 00 57 01.8 -0.9
baz=258
A21K Barrow 70.63 18 P P 00 57 02.9 -0.1
A21K Barrow 70.63 18 P P 00 57 03.1 +0.1
baz=247
MLY Manley 70.67 25 P P 00 57 03.5 +0.1
MLY IAmb IAmb 00 57 04.5
comp=Z,16nm,0.9s
MLY Manley 70.67 25 P P 00 57 03.3 -0.1
baz=255,SNR=23
GHO Glory Hole Cre 70.69 28 IAmb IAmb 00 57 03.8
comp=Z,12nm,0.9s
KNK Knik Glacier 70.83 29 P P 00 57 03.6 -0.8
KNK IAmb IAmb 00 57 05.0
comp=Z,13nm,1.0s
KNK Knik Glacier 70.83 29 P P 00 57 03.9 -0.5
baz=258
SML Sawmill 70.97 28 P P 00 57 04.9 -0.4
SML IAmb IAmb 00 57 05.8
comp=Z,19nm,0.9s
SML Sawmill 70.97 28 P P 00 57 04.7 -0.6
baz=258,SNR=8.6
RND Reindeer 71.08 27 IAmb IAmb 00 57 06.5
comp=Z,10.0nm,0.8s

WAT1 Susitna Watana 71.08 27 P P 00 57 05.0 -1.0
baz=258
MCK McKinley 71.11 26 P P 00 57 05.3 -0.8
MCK IAmb IAmb 00 57 06.9
comp=Z,18nm,1.1s
MCK McKinley 71.11 26 P P 00 57 05.3 -0.8
MCK pmax pmax
comp=Z,18nm,1.1s
MCK McKinley 71.11 26 P P 00 57 04.9 -1.1
baz=257,SNR=7.0
NEA2 Nenana 71.25 25 P P 00 57 06.8 -0.1
NEA2 Nenana 71.25 25 P P 00 57 06.5 -0.4
baz=257
M23K Glacier View 71.25 28 P P 00 57 06.3 -0.6
baz=259
I23K Minto, Yukon-K 71.26 25 P P 00 57 07.2 +0.3
I23K IAmb IAmb 00 57 08.2
comp=Z,12nm,0.7s
I23K Minto, Yukon-K 71.26 25 P P 00 57 07.0 +0.1
baz=256,SNR=11
H23K Yukon River 71.35 24 P P 00 57 07.1 -0.4
H23K IAmb IAmb 00 57 09.0
comp=Z,14nm,0.8s
H23K Yukon River 71.35 24 P P 00 57 07.8 +0.4
baz=256,SNR=15
GLI Glacier Island 71.38 29 P P 00 57 07.4 -0.3
GLI IAmb IAmb 00 57 08.2
comp=Z,11nm,0.8s
GLI Glacier Island 71.38 29 P P 00 57 07.3 -0.4
baz=260,SNR=6.2
WAT6 Susitna Watana 71.40 28 P P 00 57 07.5 -0.5
baz=259,SNR=20
SCM Sheep Creek Mo 71.44 28 P P 00 57 07.7 -0.5
SCM Sheep Creek Mo 71.44 28 P P 00 57 07.7 -0.5
SCM pmax pmax
comp=Z,30nm,0.9s
SCM Sheep Creek Mo 71.44 28 P P 00 57 07.9 -0.3
baz=259,SNR=11
COLD Coldfoot 71.45 23 P P 00 57 08.7 +0.6
COLD IAmb IAmb 00 57 10.2
comp=Z,16nm,0.8s
COLD Coldfoot 71.45 23 P P 00 57 08.5 +0.5
baz=255,SNR=11
Q23K Middleton Isla 71.50 31 P P 00 57 08.8 +0.3
baz=261
WRH Wood River Hil 71.64 26 P P 00 57 08.0 -1.1
WRH IAmb IAmb 00 57 09.3
comp=Z,15nm,1.0s
FID Port Fidalgo 71.66 30 P P 00 57 08.6 -0.8
MDM Murphy Dome 71.68 25 IAmb IAmb 00 57 11.1
comp=Z,10.0nm,0.7s
COLA College 71.82 25 *e*P P 00 57 09.7 -0.5
COLA pmax pmax
comp=Z,5.0nm,0.8s
EYAK Cordova Ski Ar 71.98 30 P P 00 57 11.2 -0.1
baz=261
H24K Noodor Dome 72.02 24 P P 00 57 11.7 +0.2
H24K Noodor Dome 72.02 24 P P 00 57 11.7 +0.2
baz=257,SNR=11
KLU Klutina 72.04 29 P P 00 57 11.4 -0.3
KLU IAmb IAmb 00 57 12.9
comp=Z,15nm,0.9s
KLU Klutina 72.04 29 P P 00 57 11.7 -0.1
baz=261,SNR=8.1
POKR Poker Plat Res 72.05 25 P P 00 57 12.0 +0.4
TOLK Toolik Lake Re 72.05 21 P P 00 57 11.7 0.0
TOLK IAmb IAmb 00 57 13.4
comp=Z,20nm,0.9s
TOLK Toolik Lake Re 72.05 21 P P 00 57 12.2 +0.5
TOLK Toolik Lake Re 72.05 21 P P 00 57 12.4 +0.7
baz=255
DIV Divide 72.06 29 P P 00 57 11.5 -0.3
DIV IAmb IAmb 00 57 13.0
comp=Z,13nm,0.9s
HDA Harding Lake 72.11 26 P P 00 57 11.1 -1.0
HDA IAmb IAmb 00 57 12.8
comp=Z,10nm,0.8s
HDA Harding Lake 72.11 26 P P 00 57 10.6 -1.4
baz=259,SNR=13
IL31 72.21 25 P P 00 57 11.2 -1.3
IL31 IAmb IAmb 00 57 12.0
comp=Z,9.9nm,0.7s
ILAR Eielson Array 72.21 25 P P 00 57 11.3 -1.2
comp=Z,10nm,0.8s,baz=254,slow=5.5,SNR=73
ILAR LR LR 01 26 20.1
comp=Z,161nm,20.7s,baz=250,slow=34
comp=Z,10nm,0.8s
PAX Paxson 72.50 27 P P 00 57 14.0 -0.5
PAX IAmb IAmb 00 57 15.3
comp=Z,15nm,0.8s
PAX Paxson 72.50 27 P P 00 57 14.0 -0.5
PAX pmax pmax
comp=Z,15nm,0.8s
PAX Paxson 72.50 27 P P 00 57 14.0 -0.5
baz=260,SNR=10
K24K Donnelly Dome 72.50 26 P P 00 57 13.8 -0.7
baz=260,SNR=10
HARP HAARP 72.55 28 P P 00 57 14.8 +0.1
baz=261,SNR=6.1
BMRM Bremner River 72.59 30 P P 00 57 15.1 +0.1
BMRM IAmb IAmb 00 57 16.2
comp=Z,22nm,1.1s
BMRM Bremner River 72.59 30 P P 00 57 15.0 -0.1
baz=262,SNR=6.1
HMT Hamilton 72.68 30 P P 00 57 14.9 -0.6
HMT IAmb IAmb 00 57 16.6
comp=Z,15nm,0.9s
N25K Chitina, Valde 72.69 29 P P 00 57 15.7 0.0
N25K IAmb IAmb 00 57 16.9
comp=Z,18nm,1.4s
N25K Chitina, Valde 72.69 29 P P 00 57 15.8 +0.2
baz=262
J25K Salcha River, 72.82 26 P P 00 57 15.3 -1.0
J25K Salcha River, 72.82 26 P P 00 57 14.9 -1.5
baz=260
RIDG Independent Ri 72.90 27 P P 00 57 16.4 -0.5
RIDG IAmb IAmb 00 57 18.0
comp=Z,21nm,1.0s
RIDG Independent Ri 72.90 27 P P 00 57 16.5 -0.4
baz=261,SNR=14
GLB Gilahina Butte 73.04 29 P P 00 57 17.6 0.0
GLB IAmb IAmb 00 57 18.7
comp=Z,17nm,1.0s
VRDI Verde Repeater 73.18 29 P P 00 57 18.2 -0.5
VRDI IAmb IAmb 00 57 19.5
comp=Z,11nm,0.8s
MENT Mentasta 73.28 28 P P 00 57 18.5 -0.6
MENT IAmb IAmb 00 57 24.9
comp=Z,12nm,0.8s
SCRK Sand Creek 73.31 26 P P 00 57 18.6 -0.8
SCRK Sand Creek 73.31 26 P P 00 57 18.9 -0.4
baz=262,SNR=11
SNH Sunshine Point 73.36 30 P P 00 57 20.2 +0.6
WAX Waxell Ridge 73.39 30 P P 00 57 19.7 -0.1
WAX IAmb IAmb 00 57 21.0
comp=Z,16nm,0.8s
MCARA McCarthy VSAT 73.41 29 IAmb IAmb 00 57 21.4
comp=Z,16nm,0.8s
MCARA McCarthy VSAT 73.41 29 P P 00 57 19.9 +0.1
baz=263,SNR=6.1
TGL Tana Glacier 73.43 30 P P 00 57 19.8 -0.3
TGL IAmb IAmb 00 57 21.2
comp=Z,14nm,0.9s
L26K Log Cabin Wild 73.46 27 P P 00 57 20.3 +0.1
L26K IAmb IAmb 00 57 21.3
comp=Z,13nm,0.8s
L26K Log Cabin Wild 73.46 27 P P 00 57 20.2 +0.1
baz=262,SNR=8.2
M26K Nabesna, AK 73.54 28 P P 00 57 20.4 -0.3
M26K Nabesna, AK 73.54 28 P P 00 57 20.4 -0.3
baz=263
J26L Joseph Creek 73.57 26 P P 00 57 20.3 -0.5
baz=262,SNR=12
ISLE Juniper Island 73.65 30 IAmb IAmb 00 57 22.5
comp=Z,17nm,1.0s
MESA MESA 73.80 30 P P 00 57 23.1 +0.7
MESA MESA 73.80 30 P P 00 57 22.6 +0.3
baz=264
YAH Yahtse 73.92 30 P P 00 57 23.2 +0.1
YAH IAmb IAmb 00 57 24.6
comp=Z,13nm,0.8s
GRNC Granite Creek 73.95 30 P P 00 57 23.1 -0.2
GRNC IAmb IAmb 00 57 24.5
comp=Z,19nm,0.8s
BARN Barnard Glacie 74.03 30 P P 00 57 23.1 -0.6
M27K Edge Creek, AK 74.06 28 P P 00 57 23.6 -0.2

M27K Edge Creek, AK 74.06 28 P P 00 57 24.1 +0.3
baz=264,SNR=12
K27K Chicken 74.15 26 P P 00 57 24.6 +0.5
baz=263,SNR=9.6
L27K Beaver Creek, 74.16 28 P P 00 57 24.3 +0.1
L27K Beaver Creek, 74.16 28 P P 00 57 24.4 +0.1
baz=264,SNR=11
CTG Chitna Glacier 74.18 30 P P 00 57 25.1 +0.7
baz=265
CTGM Chitina Glacie 74.18 30 P P 00 57 24.6 +0.1
CTGM IAmb IAmb 00 57 26.4
comp=Z,20nm,0.8s
TABL Table Mountain 74.23 30 P P 00 57 25.4 +0.5
LOGN Logan Glacier 74.33 30 P P 00 57 25.1 -0.2
PPT Papeete 74.41 112 LR LR 01 23 38.3
comp=Z,155nm,19.5s,baz=311,slow=30
PPT2 Papeete2 74.41 112 *e*LR LR 01 20 48.0
comp=Z,135nm,21.0s
BVCY Beaver Creek 74.53 28 P P 00 57 27.1 +0.7
baz=265
PCA Pinnacle 74.64 31 P P 00 57 26.4 -0.7
PCA IAmb IAmb 00 57 44.0
comp=Z,14nm,0.6s
PINM Pinnacle 74.64 31 P P 00 57 27.3 +0.2
baz=266
YUK3 Moose Creek 74.67 29 P P 00 57 27.7 +0.3
baz=265,SNR=19
YUK8 Steele Glacier 74.96 29 P P 00 57 29.9 +0.7
baz=266,SNR=13
PNL Peninsula 75.05 31 P P 00 57 29.5 +0.1
baz=267
SVE Sverdlovsk 75.25 326 *e*P P 00 57 30.4 -0.2
SVE pmax pmax
comp=Z,24nm,1.4s
SVE MLR MLR
comp=Z,368nm,19.0s
DAWY Dawson 75.33 27 P P 00 57 31.1 +0.1
DAWY IAmb IAmb 00 57 32.6
comp=Z,18nm,1.0s
DAWY Dawson 75.33 27 P P 00 57 31.7 +0.7
baz=266,SNR=12
AB31 Akbulak array 75.60 318 *i* P P 00 57 32.2 -0.5
YUK6 Outpost Mounta 75.62 30 P P 00 57 33.8 +0.8
baz=268,SNR=7.2
I29M Ogilvie Camp, 75.89 25 IAmb IAmb 00 57 35.6
comp=Z,17nm,1.1s
I29M Ogilvie Camp, 75.89 25 P P 00 57 34.4 +0.3
baz=266,SNR=16
HYT Haines Junctio 76.04 30 P P 00 57 35.3 +0.1
HYT IAmb IAmb 00 57 37.2
comp=Z,18nm,0.9s
HYT Haines Junctio 76.04 30 P P 00 57 35.9 +0.7
baz=268,SNR=14
N30M Aishikik Lake 76.26 29 P P 00 57 37.1 +0.8
baz=268,SNR=15
TBI Tubuai 76.31 118 *e*LR LR 01 21 45.4
comp=Z,202nm,30.2s
ARU Arti 76.39 325 P P 00 57 36.6 -0.5
comp=Z,6.3nm,0.5s,baz=78,slow=1.1,SNR=14
ARU LR LR 01 33 26.8
comp=Z,414nm,18.9s,baz=89,slow=38
comp=Z,6.3nm,0.5s
ARU Arti 76.39 325 P P 00 57 36.2 -0.9
ARU IAmb IAmb 00 57 38.5
comp=Z,13nm,1.0s
ARU Arti 76.39 325 *ce*P P 00 57 36.4 -0.7
ARU pmax pmax
comp=Z,7.0nm,0.8s
M30M Minto, Yukon 76.43 28 P P 00 57 37.5 +0.2
M30M IAmb IAmb 00 57 39.1
comp=Z,12nm,0.9s
M30M Minto, Yukon 76.43 28 P P 00 57 38.0 +0.7
baz=268,SNR=14
PLBC Pleasant Camp 76.58 31 P P 00 57 38.8 +0.7
baz=270,SNR=6.2
EPYK Eagle Plains 76.59 24 IAmb IAmb 00 57 39.5
comp=Z,20nm,1.0s
EPYK Eagle Plains 76.59 24 P P 00 57 38.1 0.0
baz=268,SNR=13
O30N Mendenhall 76.73 30 P P 00 57 39.5 +0.5
baz=270
AKTO Aktyubinsk 76.82 319 P P 00 57 39.1 -0.5
baz=85,slow=10
AKTO LR LR 01 33 48.9
comp=Z,67nm,18.9s,baz=95,slow=38
N31M Braeburn, Yuko 76.89 29 P P 00 57 40.0 +0.1
N31M IAmb IAmb 00 57 41.9
comp=Z,22nm,1.1s
N31M Braeburn, Yuko 76.89 29 P P 00 57 40.6 +0.7
baz=270,SNR=6.1
SIT Sitka 77.15 34 P P 00 57 42.4 +1.1
baz=271
WHY Whitehorse 77.33 30 IAmb IAmb 00 57 44.3
comp=Z,20nm,0.9s
WHY Whitehorse 77.33 30 P P 00 57 43.2 +0.7
baz=271,SNR=11
BESE Bessie Mountai 77.37 32 P P 00 57 43.2 +0.6
GEYT Alibeck 77.46 307 P P 00 57 44.0 +0.4
comp=Z,6.5nm,0.8s,baz=82,slow=3.1,SNR=9.3
GEYT LR LR 01 35 40.6
comp=Z,134nm,19.6s,baz=122,slow=39
comp=Z,6.5nm,0.8s
GEYT Alibeck 77.46 307 P P 00 57 43.4 -0.2
GYA0B ALIBECK ARRAY 77.46 307 P P 00 57 44.0 +0.4
GYA0B IAmb IAmb 00 57 50.9
comp=Z,13nm,0.9s
M31M Drury Creek, Y 77.55 29 P P 00 57 43.5 0.0
M31M IAmb IAmb 00 57 45.0
comp=Z,15nm,0.9s
M31M Drury Creek, Y 77.55 29 P P 00 57 44.0 +0.4
baz=271,SNR=12
JIS Juneau Island 77.63 33 P P 00 57 44.6 +0.7
INK Inuvik 77.87 22 P P 00 57 44.9 -0.2
comp=Z,11nm,0.9s,baz=260,slow=5.8,SNR=17
INK LR LR 01 31 40.1
comp=Z,58nm,20.3s,baz=286,slow=35
comp=Z,11nm,0.9s
INK Inuvik 77.87 22 P P 00 57 44.9 -0.2
INK IAmb IAmb 00 57 45.8
comp=Z,14nm,1.0s
INK Inuvik 77.87 22 P P 00 57 44.9 -0.2
INK pmax pmax
comp=Z,14nm,1.0s
INK Inuvik 77.87 22 P P 00 57 45.0 -0.2
baz=270
FARO Faro, Yukon 78.03 29 P P 00 57 46.7 +0.5
baz=272,SNR=12
P33M Teslin, Yukon 78.36 31 P P 00 57 48.2 0.0
P33M Teslin, Yukon 78.36 31 P P 00 57 48.4 +0.2
baz=272
WSAR Wadi Sarin 78.59 292 LR LR 01 32 37.1
comp=Z,57nm,21.8s,baz=120,slow=36
WRAK Wrangell Islan 78.81 34 P P 00 57 50.7 +0.1
WRAK IAmb IAmb 00 57 52.4
comp=Z,20nm,0.8s
WRAK Wrangell Islan 78.81 34 P P 00 57 51.7 +1.1
baz=274
DIB Dawson Inlet, 78.96 38 P P 00 57 51.0 -0.4
DIB IAmb IAmb 00 57 52.5
comp=Z,14nm,0.9s
DLBC Dease Lake 79.91 32 P P 00 57 57.0 +0.4
comp=Z,12nm,0.9s,baz=297,slow=3.5,SNR=20
DLBC LR LR 01 31 07.5
comp=Z,57nm,20.2s,baz=266,slow=34
comp=Z,12nm,0.9s
DLBC Dease Lake 79.91 32 P P 00 57 56.8 +0.1
DLBC IAmb IAmb 00 57 58.7
comp=Z,15nm,0.9s
DLBC Dease Lake 79.91 32 P P 00 57 57.6 +0.9
baz=275,SNR=9.2
T35M Bob Quinn 79.92 34 P P 00 57 57.7 +1.0
baz=275
GRNB Grenville Isla 80.40 37 P P 00 57 59.4 +0.1
A36M Sachs Harbour 80.45 18 P P 00 57 59.3 +0.1
A36M Sachs Harbour 80.45 18 P P 00 57 59.1 -0.1
baz=277
TGTN Hyland Airport 80.48 29 P P 00 58 00.4 +0.7
baz=276
UOSS Minazif 80.55 294 P P 00 58 00.5 -0.3
KIRV Kirov 81.17 328 P P 00 58 03.2 -0.1
comp=Z,10nm,0.6s,baz=103,slow=3.6,SNR=8.3
KIRV LR LR 01 36 51.4
comp=Z,418nm,18.1s,baz=79,slow=38
comp=Z,10nm,0.6s
C36M Paulatuk 81.21 21 P P 00 58 03.6 +0.3
C36M IAmb IAmb 00 58 08.0
comp=Z,21nm,1.1s

C36M	**Paulatuk**	81.21	21	P		P	00 58 02.9	-0.4	
	baz=279								
HOLB	**Holberg**	81.91	40	P		P	00 58 07.9	+0.5	
WRGLY	**Wrigley**	82.46	27	P		P	00 58 10.5	+0.6	
	baz=280								
PRGR	**Permogore**	82.59	331	*e*P		P	00 58 10.6	-0.1	
PRGR				*e**PP		PcP	00 58 19.5	+3.9	
TLCB	**Telegraph Cove**	82.74	40	P		P	00 58 11.2	-0.5	
TLCB				IAmb	IAmb		00 58 13.5		
	comp=Z,17nm,1.3s								
BELG	**Belogornoye**	83.09	322	P		P	00 58 13.4	-0.1	
	comp=Z,41nm,0.8s,baz=112,slow=4.0,SNR=20								
BELG				LR	LR		01 37 19.7		
	comp=Z,138nm,18.5s,baz=104,slow=37								
	comp=Z,41nm,0.8s								
BELG	**Belogornoye**	83.09	322	*c i*P		P	00 58 13.2	-0.3	
BELG				pmax	pmax				
	comp=Z,8.0nm,0.9s								
CLRS	**Cowichan Lake**	84.77	41	P		P	00 58 22.1	0.0	
CLRS				IAmb	IAmb		00 58 24.2		
	comp=Z,9.5nm,1.0s								
NLWA	**Neilton Lookou**	85.22	43	P		P	00 58 25.1	+0.6	
B04A	**Port Angeles**	85.33	42	P		P	00 58 25.7	+0.7	
SPITS	**Spitsbergen Ar**	85.58	350	LR	LR		01 35 34.2		
	comp=Z,139nm,21.5s,baz=22,slow=35								
E03A	**Lebam**	85.60	44	P		P	00 58 26.1	-0.2	
KLMR	**Klimovskoe**	85.64	331	*e*P		P	00 58 23.6	-2.6	
KLMR				pmax	pmax				
	comp=Z,8.0nm,0.8s								
KLMR	**Klimovskoe**	85.64	331	*e*P		P	00 58 23.6	-2.6	
KLMR				AMP			00 58 25.9		
	comp=Z,8.0nm,0.8s								
D03D	**Eldon**	85.71	43	P		P	00 58 28.2	+1.3	
	baz=282,SNR=13								
LLLB	**Lillooet**	85.83	39	P		P	00 58 27.4	0.0	
LLLB				IAmb	IAmb		00 58 29.4		
	comp=Z,12nm,1.1s								
I02E	**Swisshome, OR**	85.90	46	P		P	00 58 28.9	+1.1	
	baz=282								
J01E	**Myrtle Point**	86.03	47	P		P	00 58 29.4	+0.9	
	baz=282								
G03D	**McMinnville, O**	86.08	45	P		P	00 58 29.5	+0.8	
	baz=282								
K02D	**Willamette Mer**	86.32	47	P		P	00 58 30.6	+0.5	
	baz=282								
I03D	**Drain, OR**	86.33	46	P		P	00 58 31.1	+1.1	
	baz=282								
BUCK	**Buck Mountain**	86.48	46	P		P	00 58 31.1	+0.2	
F04A	**Amboy**	86.50	44	P		P	00 58 29.9	-0.9	
L02F	**Cave Junction**	86.50	48	P		P	00 58 32.1	+1.2	
	baz=282								
D05A	**Enumclaw**	86.52	43	P		P	00 58 30.8	-0.1	
YKA	**Yellowknife Ar**	86.57	27	P		P	00 58 31.2	+0.4	
	comp=Z,5.0nm,0.4s,baz=292,slow=5.2,SNR=66								
YKA				LR	LR		01 37 24.3		
	comp=Z,49nm,19.7s,baz=298,slow=36								
	comp=Z,5.0nm,0.4s								
H04D	**Lebanon**	86.59	45	P		P	00 58 31.5	+0.2	
H04D	**Lebanon**	86.59	45	P		P	00 58 32.5	+1.2	
	baz=282								
KHMM	**Horse Mountain**	86.65	49	P		P	00 58 30.8	-1.0	
KHMM				IAmb	IAmb		00 58 34.5		
	comp=Z,12nm,0.9s								
HUMO	**Hull Mountain**	86.85	47	P		P	00 58 32.5	-0.2	
HUMO				IAmb	IAmb		00 58 35.0		
	comp=Z,9.1nm,0.8s								
H04A	**Detroit Lake**	86.94	45	P		P	00 58 32.6	-0.4	
I04A	**Tendick Farm,**	86.98	46	P		P	00 58 33.8	+0.6	
	baz=283								
YBH	**Yreka Blue Hor**	87.22	48	P		P	00 58 35.4	+0.9	
	comp=Z,6.9nm,0.8s,baz=292,slow=4.3,SNR=31								
YBH				LR	LR		01 34 01.6		
	comp=Z,63nm,18.5s,baz=298,slow=33								
	comp=Z,6.9nm,0.8s								
YBH	**Yreka Blue Hor**	87.22	48	P		P	00 58 35.0	+0.5	
YBH				IAmb	IAmb		00 58 36.8		
	comp=Z,9.4nm,0.8s								
YBH	**Yreka Blue Hor**	87.22	48	P		P	00 58 35.0	+0.5	
YBH				pmax	pmax				
	comp=Z,9.0nm,0.9s								
J04D	**Umpqua Nationa**	87.31	47	P		P	00 58 34.6	-0.5	
J04D	**Umpqua Nationa**	87.31	47	P		P	00 58 35.7	+0.6	
	baz=283								
LTY	**Liberty**	87.37	42	P		P	00 58 35.2	0.0	
LTY				IAmb	IAmb		00 58 36.7		
	comp=Z,14nm,1.2s								
L04D	**Klamath Falls**	87.40	48	P		P	00 58 35.5	0.0	
L04D	**Klamath Falls**	87.40	48	P		P	00 58 36.1	+0.6	
	baz=283								
G05D	**Wamic, OR**	87.41	44	P		P	00 58 35.9	+0.6	
	baz=284								
GNI	**Garni**	87.43	310	LR	LR		01 42 25.7		
	comp=Z,77nm,18.2s,baz=92,slow=39								
ZEI	**Tsey**	87.46	313	*e*P		P	00 58 34.5	-1.3	
ZEI				pmax	pmax				
	comp=Z,6.0nm,0.9s								
RES	**Resolute Bay**	87.56	13	P		P	00 58 35.5	+0.2	
	comp=Z,7.2nm,0.8s,baz=310,slow=4.4,SNR=24								
RES				LR	LR		01 41 02.2		
	comp=Z,66nm,19.0s,baz=342,slow=38								
	comp=Z,7.2nm,0.8s								
RES	**Resolute Bay**	87.56	13	IAmb	IAmb		00 58 37.0		
	comp=Z,8.1nm,0.8s								
K04D	**Chiloquin, OR**	87.71	47	P		P	00 58 37.7	+0.8	
	baz=283								
J05D	**Fort Rock, OR**	87.93	46	P		P	00 58 38.9	+0.9	
	baz=284,SNR=14								
KBZ	**Khabaz**	87.95	314	P		P	00 58 36.9	-0.9	
	comp=Z,1.9nm,0.7s,baz=181,slow=0.3,SNR=4.2								
KBZ				LR	LR		01 41 59.2		
	comp=Z,113nm,19.8s,baz=54,slow=38								
	comp=Z,1.9nm,0.7s								
KBZ	**Khabaz**	87.95	314	*de*P		P	00 58 37.7	-0.1	
KBZ				pmax	pmax				
	comp=Z,4.0nm,0.9s								
ARCES	**ARCESS Array B**	87.97	341	P		P	00 58 36.7	-0.7	
	comp=Z,8.5nm,0.7s,baz=66,slow=6.7,SNR=24								
ARCES				LR	LR		01 40 47.4		
	comp=Z,117nm,20.4s,baz=46,slow=38								
	comp=Z,8.5nm,0.7s								
B08A	**Colville Reser**	87.97	41	P		P	00 58 38.2	+0.2	
PINE	**Pine Mountain**	88.01	46	P		P	00 58 39.0	+0.5	
KIV	**Kislovodsk**	88.05	314	*e*P		P	00 58 38.2	-0.2	
KIV				pmax	pmax				
	comp=Z,5.0nm,1.0s								
MOS	**Moscow**	88.05	327	*e*P		P	00 58 35.7	-2.3	
MOS				*e*			01 02 01.5		
MOS				pmax	pmax				
	comp=Z,32nm,1.1s								
K05A	**Summer Lake**	88.30	47	P		P	00 58 40.1	+0.3	
VORR	**Voronezh**	88.32	322	*e*P		P	00 58 39.2	-0.2	
VORR				pmax	pmax				
	comp=Z,30nm,0.4s								
HAWA	**Hanford**	88.34	43	P		P	00 58 39.6	-0.1	
ORV	**Oroville**	88.61	50	P		P	00 58 40.9	-0.2	
ORV				IAmb	IAmb		00 58 42.8		
	comp=Z,8.3nm,0.9s								
ORV	**Oroville**	88.61	50	P		P	00 58 40.9	-0.2	
ORV				pmax	pmax				
	comp=Z,8.0nm,1.0s								
OBN	**Obninsk**	88.81	326	*e*P		P	00 58 41.3	-0.3	
OBN				*e*			01 02 10.2		
OBN				pmax	pmax				
	comp=Z,6.0nm,1.0s								
OBN				MLR	MLR				
	comp=Z,378nm,20.0s								
MOD	**Modoc Plateau**	88.93	48	P		P	00 58 43.1	+0.4	
MOD				IAmb	IAmb		00 58 44.2		
	comp=Z,6.7nm,0.9s								
I07A	**Izee**	88.95	45	P		P	00 58 42.9	+0.2	
I07A				IAmb	IAmb		00 58 44.9		
	comp=Z,7.0nm,1.1s								
G08A	**Pilot Rock**	89.01	44	P		P	00 58 43.3	+0.3	
G08A				IAmb	IAmb		00 58 45.0		
	comp=Z,10nm,1.4s								
BEKR	**Beckworth**	89.39	50	P		P	00 58 45.8	+0.9	
NEW	**Newport**	89.42	41	P		P	00 58 44.5	-0.3	
NEW				LR	LR		01 37 17.5		
	comp=Z,3.9nm,0.9s,baz=273,slow=4.4,SNR=6.9								
	comp=Z,78nm,18.1s,baz=308,slow=35								
	comp=Z,3.9nm,0.9s								
NEW	**Newport**	89.42	41	P		P	00 58 44.6	-0.1	
NEW				IAmb	IAmb		00 58 47.2		
	comp=Z,7.1nm,1.1s								
NEW	**Newport**	89.42	41	P		P	00 58 45.5	+0.7	
	baz=286,SNR=5.2								

VNDA	**Vanda**	89.54	176	P		P	00 58 45.2	+0.7	
	comp=Z,0.7nm,0.9s,baz=326,slow=5.3,SNR=1.8								
VNDA				LR	LR		01 36 44.2		
	comp=Z,62nm,21.5s,baz=356,slow=34								
	comp=Z,0.7nm,0.9s								
VNDA	**Vanda**	89.54	176	P		P	00 58 45.2	+0.7	
VNDA				pmax	pmax				
	comp=Z,9.0nm,1.5s								
CMB	**Columbia Colle**	89.81	51	P		P	00 58 47.0	+0.2	
CMB				IAmb	IAmb		00 58 48.9		
	comp=Z,7.4nm,0.9s								
CMB	**Columbia Colle**	89.81	51	P		P	00 58 47.0	+0.2	
CMB				pmax	pmax				
	comp=Z,7.0nm,0.9s								
GURO	**Guroymak-BITLI**	89.84	309	P		P	00 58 47.0	0.0	
J08A	**Circle Bar Ran**	89.86	46	P		P	00 58 47.0	-0.1	
J08A				IAmb	IAmb		00 58 49.2		
	comp=Z,12nm,1.0s								
WVOR	**Wild Horse Val**	89.99	47	P		P	00 58 48.3	+0.7	
WVOR				IAmb	IAmb		00 58 49.7		
	comp=Z,8.9nm,0.8s								
WVOR	**Wild Horse Val**	89.99	47	P		P	00 58 48.3	+0.7	
WVOR				pmax	pmax				
	comp=Z,9.0nm,0.8s								
PNTR	**Pine Nut**	90.15	50	P		P	00 58 48.4	-0.2	
PNTR				IAmb	IAmb		00 58 51.0		
	comp=Z,11nm,0.9s								
BMO	**Blue Mountains**	90.26	44	P		P	00 58 49.3	+0.5	
BMO				IAmb	IAmb		00 58 51.4		
	comp=Z,7.1nm,1.1s								
BMO	**Blue Mountains**	90.26	44	P		P	00 58 49.3	+0.5	
BMO				pmax	pmax				
	comp=Z,7.0nm,1.1s								
RAYN	**Ar Rayn**	90.42	294	P		P	00 58 49.4	-0.5	
RAYN	**Ar Rayn**	90.42	294	P		P	00 58 49.4	-0.5	
RAYN				pmax	pmax				
	comp=Z,5.0nm,0.9s								
PKM	**Mcpherson Peak**	91.04	54	P		P	00 58 54.3	+1.5	
	baz=285,SNR=5.1								
RYN	**Ryan**	91.08	50	P		P	00 58 52.9	0.0	
RYN				IAmb	IAmb		00 58 55.2		
	comp=Z,8.8nm,0.9s								
LHV	**Little Huntoon**	91.19	51	P		P	00 58 53.2	+0.1	
LHV				IAmb	IAmb		00 58 56.0		
	comp=Z,7.8nm,1.0s								
KVN	**Kaiserville**	91.28	50	P		P	00 58 53.9	0.0	
KVN				IAmb	IAmb		00 58 56.1		
	comp=Z,6.6nm,0.9s								
KVN	**Kaiserville**	91.28	50	P		P	00 58 53.9	0.0	
KVN				pmax	pmax				
	comp=Z,7.0nm,0.9s								
NVAR	**Mina Array Bea**	91.30	51	P		P	00 58 54.6	+0.7	
	comp=Z,7.7nm,0.8s,baz=260,slow=6.3,SNR=38								
	comp=Z,7.7nm,0.8s								
NVAR	**Mina Array Bea**	91.30	51	P		P	00 58 54.3	+0.4	
NV11	**Mina Array Sit**	91.41	50	P		P	00 58 54.4	0.0	
NV11				IAmb	IAmb		00 58 56.8		
	comp=Z,6.3nm,0.9s								
FINES	**FINESS Array B**	91.50	334	P		P	00 58 52.2	-1.9	
	comp=Z,17nm,0.6s,baz=60,slow=4.6,SNR=129								
FINES				LR	LR		01 41 55.8		
	comp=Z,160nm,19.7s,baz=72,slow=37								
	comp=Z,17nm,0.6s								
BMN	**Battle Mountai**	91.56	48	P		P	00 58 54.1	-0.9	
BMN	**Battle Mountai**	91.56	48	P		P	00 58 54.1	-0.9	
BMN				pmax	pmax				
	comp=Z,3.0nm,0.8s								
MFID	**Camas Ranch**	91.69	45	P		P	00 58 56.1	+0.6	
MFID				IAmb	IAmb		00 58 57.6		
	comp=Z,6.7nm,0.9s								
CWC	**Cottonwood Cre**	92.00	52	P		P	00 58 58.4	+1.2	
	baz=286								
LCH	**Last Change Ra**	92.12	52	P		P	00 58 58.0	+0.3	
TPH	**Tonopah**	92.21	51	P		P	00 58 58.4	+0.2	
TPH	**Tonopah**	92.21	51	P		P	00 58 58.4	+0.2	
TPH				pmax	pmax				
	comp=Z,30nm,0.9s								
EDW2	**Edwards Air Fo**	92.49	54	P		P	00 59 00.2	+0.9	
	baz=286								
CIS	**Catalina Islan**	92.54	55	P		P	00 59 00.3	+0.7	
	baz=285								
MPMC	**Manual Prospec**	92.56	53	P		P	00 59 01.1	+1.2	
	baz=286,SNR=9.3								
HEL	**Helsinki**	92.57	333	P		P	00 59 01.0	+2.0	
HEL				pmax	pmax				
	comp=Z,8.0nm,0.9s								
HLID	**Hailey**	92.63	45	P		P	00 59 00.6	+0.6	
HLID				IAmb	IAmb		00 59 02.0		
	comp=Z,4.5nm,0.9s								
HLID	**Hailey**	92.63	45	P		P	00 59 01.0	+1.0	
	baz=288,SNR=11								
ELK	**Elko**	92.91	48	P		P	00 59 02.1	+0.7	
	comp=Z,3.7nm,0.8s,baz=296,slow=5.5,SNR=16								
ELK				LR	LR		01 33 44.8		
	comp=Z,78nm,20.4s,baz=238,slow=31								
	comp=Z,3.7nm,0.8s								
ELK	**Elko**	92.91	48	P		P	00 59 01.9	+0.5	
ELK				IAmb	IAmb		00 59 03.4		
	comp=Z,3.6nm,0.8s								
ELK	**Elko**	92.91	48	P		P	00 59 01.9	+0.5	
ELK				pmax	pmax				
	comp=Z,4.0nm,0.8s								
FURC	**Furnace Creek,**	92.94	52	P		P	00 59 02.5	+1.2	
	baz=286								
QSM	**Queen of Sheba**	93.08	53	P		P	00 59 02.5	+0.6	
LRM	**Limekiln Ridge**	93.22	42	P		P	00 59 02.7	0.0	
TPNV	**Topopah Spring**	93.27	51	P		P	00 59 03.4	+0.4	
TPNV				IAmb	IAmb		00 59 06.4		
	comp=Z,6.9nm,0.8s								
TPNV	**Topopah Spring**	93.27	51	P		P	00 59 03.4	+0.4	
TPNV				pmax	pmax				
	comp=Z,7.0nm,0.9s								
TPNV	**Topopah Spring**	93.27	51	P		P	00 59 04.2	+1.1	
	baz=287,SNR=6.1								
DLMT	**Dillon**	93.28	43	P		P	00 59 02.5	-0.4	
GSC	**Goldstone, Bar**	93.31	53	P		P	00 59 03.5	+0.3	
GSC				IAmb	IAmb		00 59 05.4		
	comp=Z,8.1nm,0.9s								
GSC	**Goldstone, Bar**	93.31	53	P		P	00 59 03.5	+0.3	
GSC				pmax	pmax				
	comp=Z,8.0nm,0.9s								
GSC	**Goldstone, Bar**	93.31	53	P		P	00 59 04.4	+1.2	
	baz=286,SNR=7.5								
MURC	**Vieta**	93.47	55	P		P	00 59 04.6	+0.8	
	baz=286								
109C	**Camp Elliot, M**	93.74	56	P		P	00 59 05.6	+0.5	
	baz=286								
HEC	**Hector,Ludlow**	93.81	54	P		P	00 59 06.4	+1.0	
	baz=287								
BOZ	**Bozeman (W)**	93.83	42	P		P	00 59 05.6	+0.2	
BOZ	**Bozeman (W)**	93.83	42	P		P	00 59 05.6	+0.2	
BOZ				pmax	pmax				
	comp=Z,3.0nm,1.1s								
BOZ	**Bozeman (W)**	93.83	42	P		P	00 59 06.1	+0.6	
	baz=290								
TUQ	**Turquoise Moun**	93.96	53	P		P	00 59 07.3	+1.1	
	baz=287								
PFO	**Pinyon Flats O**	94.06	55	LR	LR		01 36 05.6		
	comp=Z,59nm,19.3s,baz=262,slow=32								
PFO	**Pinyon Flats O**	94.06	55	P		P	00 59 07.5	+0.8	
PFO				IAmb	IAmb		00 59 08.6		
	comp=Z,5.8nm,0.9s								
PFO	**Pinyon Flats O**	94.06	55	P		P	00 59 07.5	+0.8	
PFO				pmax	pmax				
	comp=Z,6.0nm,1.0s								
PFO	**Pinyon Flats O**	94.06	55	P		P	00 59 07.3	+0.6	
	baz=286,SNR=5.5								
TPFO	**Pinon Flats**	94.06	55	P		P	00 59 07.3	+0.6	
	baz=286								
EGMT	**Eagleton**	94.16	39	P		P	00 59 07.1	+0.3	
	baz=292								
SHPR	**Sheep Range**	94.24	52	P		P	00 59 07.9	+0.4	
SHPR				IAmb	IAmb		00 59 11.1		
	comp=Z,3.4nm,0.8s								
MONP2	**Monument Peak**	94.29	55	P		P	00 59 08.7	+0.9	
	baz=286,SNR=6.9								
BELC	**Belle Mtn. Jos**	94.32	54	P		P	00 59 08.6	+0.7	
	baz=287,SNR=5.5								
HVU	**Hansel Valley**	94.35	46	P		P	00 59 07.9	0.0	
HVU				IAmb	IAmb		00 59 09.5		
	comp=Z,4.8nm,1.0s								
HVU	**Hansel Valley**	94.35	46	P		P	00 59 07.9	0.0	
HVU				pmax	pmax				
	comp=Z,5.0nm,1.0s								
GMRC	**Granite Mounta**	94.36	53	P		P	00 59 08.9	+0.8	
	baz=287,SNR=8.0								

AKASG	**Malin Array Be**	94.55	324	P		P	00 59 06.4	-1.9	
	comp=Z,0.3nm,0.3s,baz=47,slow=4.1,SNR=2.2								
AKASG				LR	LR		01 43 11.5		
	comp=Z,151nm,20.7s,baz=56,slow=36								
	comp=Z,0.3nm,0.3s								
PSUT	**Pine Spring**	94.61	49	P		P	00 59 09.8	+0.6	
PSUT				IAmb	IAmb		00 59 14.1		
	comp=Z,5.6nm,0.9s								
IKP	**In-Ko-Pah, Jac**	94.61	56	P		P	00 59 10.0	+0.8	
	baz=287								
YUH	**Yuha Desert**	94.76	56	P		P	00 59 09.6	-0.2	
YUH				IAmb	IAmb		00 59 12.2		
	comp=Z,5.4nm,0.9s								
SWSC	**Sam W. Stewart**	94.78	55	P		P	00 59 10.5	+0.7	
	baz=287								
DUG	**Dugway, Tooele**	94.84	48	P		P	00 59 09.8	-0.4	
DUG				IAmb	IAmb		00 59 11.9		
	comp=Z,3.6nm,0.8s								
DUG	**Dugway, Tooele**	94.84	48	P		P	00 59 09.8	-0.4	
DUG				pmax	pmax				
	comp=Z,4.0nm,0.8s								
DUG	**Dugway, Tooele**	94.84	48	P		P	00 59 10.7	+0.6	
	baz=289								
BC3	**Big Chuckawall**	94.85	54	P		P	00 59 11.0	+0.7	
	baz=287								
IRM	**Iron Mountain**	94.95	54	P		P	00 59 11.6	+0.9	
	baz=287,SNR=5.5								
JMIC	**Jan Mayen**	95.25	350	LR	LR		01 40 21.8		
	comp=Z,30nm,21.3s,baz=80,slow=34								
HWUT	**Hardware Ranch**	95.26	46	P		P	00 59 12.4	+0.3	
HWUT				IAmb	IAmb		00 59 13.6		
	comp=Z,4.3nm,0.7s								
NLU	**North Lily Min**	95.45	48	P		P	00 59 13.1	+0.1	
SZCU	**Shurtz Canyon**	95.48	50	P		P	00 59 13.4	+0.2	
SZCU				IAmb	IAmb		00 59 16.7		
	comp=Z,5.0nm,0.7s								
GLA	**Glamis**	95.53	55	P		P	00 59 13.8	+0.5	
GLA	**Glamis**	95.53	55	P		P	00 59 13.8	+0.5	
GLA				pmax	pmax				
	comp=Z,11nm,0.9s								
GLA	**Glamis**	95.53	55	P		P	00 59 14.2	+0.9	
	baz=287,SNR=6.8								
BLYC	**Blythe**	95.56	54	P		P	00 59 13.5	+0.1	
W13A	**Hualapai Mount**	95.65	53	P		P	00 59 14.2	+0.1	
PDMCI	**Parker Dam,Lak**	95.70	53	P		P	00 59 15.2	+1.2	
	baz=288								
BRTR	**Keskin Array B**	95.74	312	P		P	00 59 13.5	-0.8	
	comp=Z,0.4nm,0.7s,baz=61,slow=7.5,SNR=2.4								
	comp=Z,0.4nm,0.7s								
BRTR	**Keskin Array B**	95.74	312	P		P	00 59 13.9	-0.3	
PDAR	**Pinedale Array**	96.24	44	P		P	00 59 15.9	-0.7	
	comp=Z,0.3nm,0.6s,baz=292,slow=9.6,SNR=1.9								
PDAR				LR	LR		01 35 52.3		
	comp=Z,48nm,21.9s,baz=298,slow=31								
	comp=Z,0.3nm,0.6s								
U15A	**North Rim**	96.46	51	P		P	00 59 16.8	-1.0	
U15A				IAmb	IAmb		00 59 35.2		
	comp=Z,4.2nm,0.9s								
113A	**Mohawk Valley,**	96.46	55	P		P	00 59 18.0	+0.5	
113A				IAmb	IAmb		00 59 19.4		
	comp=Z,3.7nm,0.9s								
MMAI	**Mount Meron Ar**	96.56	305	LR	LR		01 46 53.5		
	comp=Z,49nm,20.8s,baz=230,slow=38								
Y14A	**Wickenburg**	96.71	54	P		P	00 59 19.3	+0.6	
Y14A				IAmb	IAmb		00 59 21.6		
	comp=Z,5.0nm,0.8s								
SRU	**San Rafael Swe**	96.87	48	P		P	00 59 19.0	-0.5	
SRU	**San Rafael Swe**	96.87	48	P		P	00 59 19.0	-0.5	
SRU				pmax	pmax				
	comp=Z,3.0nm,0.9s								
HFS	**Hagfors**	97.31	336	LR	LR		01 48 09.1		
	comp=Z,183nm,18.1s,baz=68,slow=38								
WUAZ	**Wupatki**	97.46	52	P		Pdif	00 59 23.0	+0.7	
	baz=290								
214A	**Organ Pipe Nat**	97.48	55	P		Pdif	00 59 22.5	+0.2	
214A				IAmb	IAmb		00 59 24.9		
	comp=Z,5.0nm,0.8s								
214A	**Organ Pipe Nat**	97.48	55	P		Pdif	00 59 23.3	+1.0	
	baz=288								
NB2	**NORSAR Subarra**	97.69	338	P		P	00 59 20.4	-2.1	
	comp=Z,1.1nm,0.7s,baz=49,slow=4.6								
NOA	**NORSAR Array B**	97.69	338	P		P	00 59 20.6	-1.9	
	comp=Z,0.6nm,0.7s,baz=49,slow=4.8,SNR=4.1								
NOA				LR	LR		01 46 27.6		
	comp=Z,105nm,21.0s,baz=40,slow=37								
	comp=Z,0.6nm,0.7s								
EIL	**Elat**	97.95	302	LR	LR		01 47 21.8		
	comp=Z,44nm,19.4s,baz=94,slow=38								
PV23	**Carpenter Ridg**	98.21	48	P		P	00 59 25.1	-0.6	
PV23				IAmb	IAmb		00 59 28.3		
	comp=Z,6.2nm,0.9s								
PV15	**Paradox Valley**	98.64	48	P		P	00 59 26.3	-1.2	
MLR	**Muntele Rosu**	98.74	320	LR	LR		01 46 31.5		
	comp=Z,121nm,19.6s,baz=71,slow=37								
TUC	**Tucson**	99.00	54	P		Pdif	00 59 30.3	+1.3	
	baz=290								
N23A	**Red Feather La**	99.45	45	P		Pdif	00 59 32.0	+0.8	
	baz=294								
ULM	**Lac du Bonnet**	101.21	33	P		Pdif	00 59 39.0	+0.7	
	comp=Z,1.0nm,0.5s,baz=307,slow=20,SNR=3.0								
MNTX	**Cornudas Mount**	103.50	53	P		Pdif	00 59 50.0	+1.0	
	baz=293								
GERES	**GERESS Array B**	104.17	327	Pdiff		Pdif	00 59 49.2	-2.5	

HAZ	**Te Kaha**	**3.55**	**210**	P	Pn	00 49 02.8 -0.6
HAZ				S	S	00 49 49.5 +1.6
PKGZ	**Pakihiroa**	**3.55**	**205**	P	Pn	00 49 02.0 -1.5
PKGZ				S	S	00 49 49.2 +1.1
PUZ	**Puketiti**	**3.66**	**202**	P	Pn	00 49 03.3 -1.4
PUZ				S	S	00 49 49.2 -1.1
RUGZ	**Raukumara Rang**	**3.77**	**209**	P	Pn	00 49 06.7 +0.5
TWGZ	**Tauwhareparae**	**3.84**	**205**	P	Pn	00 49 06.7 -0.3
TWGZ				S	S	00 49 56.7 +2.3
CNGZ	**Carnagh Statio**	**4.05**	**200**	P	Pn	00 49 08.7 -0.8
MWZ	**Matawai**	**4.15**	**208**	P	Pn	00 49 10.9 +0.1
URZ	**Urewera**	**4.26**	**212**	P	Pn	00 49 11.6 -0.5
URZ				S	S	00 50 05.4 +2.0
RIGZ	**Rimuhau**	**4.39**	**204**	P	Pn	00 49 13.8 0.0
RIGZ				S	S	00 50 07.4 +0.8
RAHZ	**Arahi**	**4.82**	**208**	P	Pn	00 49 19.7 +0.6
RAHZ				S	S	00 50 16.0 -0.3
ARHZ	**Aropaoanui**	**5.16**	**207**	P	Pn	00 49 23.7 +0.4
BKZ	**Black Stump Fm**	**5.28**	**211**	P	Pn	00 49 25.2 +0.3
HIZ	**Hauiti**	**5.63**	**226**	P	Pn	00 49 31.5 +2.2
HIZ				S	S	00 50 33.2 -1.5
KAHZ	**Kahuranaki**	**5.67**	**205**	P	Pn	00 49 30.3 +0.4
KAHZ				S	S	00 50 36.1 +0.3
BHHZ	**Black Hill Sta**	**5.73**	**212**	P	Pn	00 49 30.8 +0.1

TAP ***10*** *00:49:11.8, 21.93N×121.27E, h76km, ML4.1, D*
JMA ***10*** *00:49:11.9±0.5, 22.2°N×12.2°E±°, h9km, MV4.3/15, TAIWAN REGION*
ISC 10 00:49:11.7±1.6**, 21.92N**±0.06×**121.33E**±0.03**, h78**km±7km**, n130, σ1§05/212, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LAY	**Lan-yu**	**0.24**	**59**	*i* P	**Pn**	**00 49 23.6**	**+0.1**
	baz=68						
LAY				S	**Sn**	**00 49 32.3**	**+0.2**
	baz=68						
LYUB	**Lan-yu**	**0.25**	**70**	*e*P	**Pn**	**00 49 23.5**	**+0.1**
	baz=69						
LYUB				*e*S	**Sn**	**00 49 31.4**	**-0.7**
	baz=69						
TSEB	**Hengchuen, Pin**	**0.40**	**268**	*i* P	**Pn**	**00 49 25.2**	**+0.8**
	baz=269						
TSEB				S	**Sn**	**00 49 35.0**	**+1.2**
	baz=269						
SMST	**Manzhou Townsh**	**0.47**	**283**	*i* P	**Pn**	**00 49 25.4**	**+0.4**
	baz=282						
SMST				S	**Sn**	**00 49 34.8**	**+0.1**
	baz=282						
TWKBT	**Hengchun**	**0.48**	**273**	*i* P	**Pn**	**00 49 25.6**	**+0.6**
	baz=271						
TWKBT				S	**Sn**	**00 49 34.9**	**0.0**
	baz=271						
HEN	**Hengchun**	**0.56**	**279**	*e*P	**Pn**	**00 49 26.5**	**+0.7**
	baz=278						
HEN				*e*S	**Sn**	**00 49 36.6**	**+0.5**
	baz=278						
SLIU	**Shizi**	**0.58**	**301**	P	**Pn**	**00 49 25.9**	**-0.1**
	baz=310						
SLIU				*e*S	**Sn**	**00 49 36.7**	**+0.1**
	baz=310						
TAWH	**Dawu Township**	**0.59**	**316**	*i* P	**Pn**	**00 49 25.9**	**-0.1**
	baz=319						
TAWH				*e*S	**Sn**	**00 49 34.9**	**-1.8**
	baz=319						
TAW	**Tawu**	**0.60**	**318**	*i* P	**Pn**	**00 49 25.9**	**-0.2**
	baz=321						
TAW				*e*S	**Sn**	**00 49 36.1**	**-0.8**
	baz=321						
EAST	**Anshuo**	**0.65**	**316**	P	**Pn**	**00 49 26.7**	**0.0**
	baz=319						
EAST				*e*S	**Sn**	**00 49 36.6**	**-1.2**
	baz=319						
ECL	**Taimali**	**0.76**	**333**	*e*P	**Pn**	**00 49 27.5**	**-0.4**
	baz=340						
ECL				*e*S	**Sn**	**00 49 38.5**	**-1.4**
	baz=340						
LDUT	**Ludao**	**0.77**	**10**	P	**Pn**	**00 49 27.5**	**-0.4**
	baz=17						
LDUT				*e*S	**Sn**	**00 49 39.1**	**-0.9**
	baz=17						
SCZT	**Fangliau**	**0.80**	**305**	*i* P	**Pn**	**00 49 28.6**	**+0.3**
	baz=306						
SCZT				*e*S	**Sn**	**00 49 40.2**	**-0.4**
	baz=306						
TTN	**Taitung**	**0.85**	**349**	*e*P	**Pn**	**00 49 29.9**	**+1.0**
	baz=344						
TTN				*e*S	**Sn**	**00 49 42.9**	**+1.3**
	baz=344						
SSPT	**Xinbi**	**0.91**	**309**	P	**Pn**	**00 49 30.2**	**+0.7**
	baz=313						
SSPT				*e*S	**Sn**	**00 49 43.4**	**+0.6**
	baz=313						
TWGBT	**Beinan**	**0.93**	**346**	P	**Pn**	**00 49 29.4**	**-0.4**
	baz=348						
TWGBT				*e*S	**Sn**	**00 49 42.1**	**-1.2**
	baz=348						
TWG	**Pinlang**	**0.93**	**345**	P	**Pn**	**00 49 29.6**	**-0.2**
	baz=348						
TWG				*e*S	**Sn**	**00 49 42.0**	**-1.4**
	baz=348						
MASBT	**Mashibuluo**	**0.95**	**317**	*e*P	**Pn**	**00 49 30.3**	**+0.3**
	baz=319						
MASBT				*e*S	**Sn**	**00 49 42.6**	**-1.0**
	baz=319						
WLCH	**Liuqiu**	**0.98**	**296**	*e*P	**Pn**	**00 49 31.9**	**+1.5**
	baz=297						
WLCH				*e*S	**Sn**	**00 49 47.2**	**+2.8**
	baz=297						
LONT	**Longtian**	**1.00**	**349**	P	**Pn**	**00 49 30.4**	**-0.3**
	baz=345						
LONT				*e*S	**Sn**	**00 49 44.1**	**-0.8**
	baz=345						
TSMG	**Majia**	**1.01**	**321**	P	**Pn**	**00 49 31.0**	**+0.3**
	baz=323						
TSMG				*e*S	**Sn**	**00 49 44.9**	**-0.1**
	baz=323						
SSD	**Sandimen**	**1.05**	**322**	*e*P	**Pn**	**00 49 31.7**	**+0.5**
	baz=324						
SSD				*e*S	**Sn**	**00 49 45.4**	**-0.4**
	baz=324						
EDH	**Donghe**	**1.05**	**359**	*e*P	**Pn**	**00 49 31.6**	**+0.4**
	baz=355						
EDH				*e*S	**Sn**	**00 49 44.7**	**-1.2**
	baz=355						
KAU	**Kaohsiung**	**1.15**	**305**	*e*P	**Pn**	**00 49 33.9**	**+1.4**
	baz=296						
KAU				*e*S	**Sn**	**00 49 50.1**	**+2.1**
	baz=296						
TWM1	**Shoushan**	**1.23**	**317**	*e*P	**Pn**	**00 49 35.2**	**+1.6**
	baz=318						
TWM1				*e*S	**Sn**	**00 49 53.1**	**+3.1**
	baz=318						
SCST	**Cishan**	**1.24**	**321**	*e*P	**Pn**	**00 49 34.4**	**+0.8**
	baz=333						
SCST				*e*S	**Sn**	**00 49 50.2**	**+0.2**
	baz=333						
FULB	**Fuli**	**1.28**	**358**	*e*P	**Pn**	**00 49 34.5**	**+0.4**
	baz=352						
FULB				*e*S	**Sn**	**00 49 51.7**	**+0.7**
	baz=352						
ELDTW	**Lidau**	**1.30**	**347**	*e*P	**Pn**	**00 49 34.6**	**+0.1**
	baz=352						
STYH	**Taoyuan**	**1.35**	**338**	*e*P	**Pn**	**00 49 35.7**	**+0.7**
	baz=339						
STYH				*e*S	**Sn**	**00 49 52.8**	**+0.2**
	baz=339						
SGST	**Jiashian**	**1.35**	**329**	*e*P	**Pn**	**00 49 34.8**	**-0.3**
	baz=331						
SGST				*e*S	**Sn**	**00 49 51.2**	**-1.4**
	baz=331						
EYUL	**Yuli**	**1.43**	**360**	*e*P	**Pn**	**00 49 35.6**	**-0.4**
	baz=355						
SHHT	**Tainan City**	**1.43**	**321**	*e*P	**Pn**	**00 49 37.8**	**+1.8**
	baz=333						
SHHT				*e*S	**Sn**	**00 49 56.6**	**+2.2**
	baz=333						
CHN3	**Shinhua**	**1.46**	**322**	*e*P	**Pn**	**00 49 38.0**	**+1.6**
	baz=334						
CHN3				*e*S	**Sn**	**00 49 56.5**	**+1.5**
	baz=334						
CHN1	**Nanshi**	**1.47**	**330**	*e*P	**Pn**	**00 49 37.0**	**+0.5**
	baz=331						
CHN1				*e*S	**Sn**	**00 49 55.2**	**0.0**
	baz=331						
YULB	**Yu-li**	**1.47**	**359**	*e*P	**Pn**	**00 49 36.2**	**-0.4**
	baz=356						
WTP	**Ta-pu**	**1.48**	**334**	*e*P	**Pn**	**00 49 37.6**	**+0.9**
	baz=335						
WTP				*e*S	**Sn**	**00 49 56.5**	**+0.8**
	baz=335						
SNST	**Tainan City**	**1.51**	**329**	*e*P	**Pn**	**00 49 38.0**	**+0.9**
	baz=331						
SNST				*e*S	**Sn**	**00 49 56.6**	**+0.4**
	baz=331						
TAI1	**Yung-k'ang**	**1.52**	**318**	*e*P	**Pn**	**00 49 39.4**	**+2.3**
	baz=329						
TAI1				*e*S	**Sn**	**00 49 56.9**	**+0.6**
	baz=329						
TPUB	**Ta-pu**	**1.52**	**335**	*e*P	**Pn**	**00 49 37.8**	**+0.6**
	baz=336						
TPUB				*e*S	**Sn**	**00 49 55.7**	**-0.9**
	baz=336						
TWK	**Hsinying**	**1.56**	**330**	*i* P	**Pn**	**00 49 38.2**	**+0.5**
	baz=331						
TWK				*e*S	**Sn**	**00 49 57.0**	**-0.3**
	baz=331						
HGSD	**Ruisui**	**1.57**	**3**	*e*P	**Pn**	**00 49 38.2**	**+0.3**
	baz=5.0						
HGSD				*e*S	**Sn**	**00 49 58.9**	**+1.2**
	baz=5.0						
EHY	**Hungye**	**1.58**	**360**	*e*P	**Pn**	**00 49 38.0**	**-0.1**
	baz=356						
EHY				*e*S	**Sn**	**00 49 56.9**	**-1.1**
	baz=356						
SCLT	**Jiali**	**1.64**	**320**	*e*P	**Pn**	**00 49 39.5**	**+0.8**
	baz=330						
SCLT				*e*S	**Sn**	**00 49 59.4**	**+0.2**
	baz=330						
ALS	**Alishan**	**1.66**	**343**	*i* P	**Pn**	**00 49 40.2**	**+0.9**
	baz=335						
ALS				*e*S	**Sn**	**00 50 00.9**	**+0.7**
	baz=335						
TSCK	**Chigu Township**	**1.68**	**317**	*e*P	**Pn**	**00 49 39.4**	**+0.1**
	baz=308						
TSCK				*e*S	**Sn**	**00 49 59.6**	**-0.6**
	baz=308						
ICHU	**Yijhu**	**1.74**	**326**	*e*P	**Pn**	**00 49 40.3**	**+0.2**
	baz=337						
ICHU				*e*S	**Sn**	**00 50 00.0**	**-1.5**
	baz=337						
EGFH	**Guangfu**	**1.75**	**3**	*e*P	**Pn**	**00 49 40.9**	**+0.6**
	baz=5.0						
CHN8	**Yiju**	**1.76**	**324**	*e*P	**Pn**	**00 49 41.0**	**+0.7**
	baz=335						
CHN8				*e*S	**Sn**	**00 50 01.7**	**-0.4**
	baz=335						
CHY	**Chiayi**	**1.78**	**332**	*e*P	**Pn**	**00 49 40.9**	**+0.2**
	baz=333						
CHY				*e*S	**Sn**	**00 50 02.3**	**-0.4**
	baz=333						
VWDT	**VWDT**	**1.84**	**355**	*e*P	**Pn**	**00 49 43.0**	**+1.6**
	baz=344						
VWDT				*e*S	**Sn**	**00 50 05.1**	**+1.2**
	baz=344						
ESL	**Shilin**	**1.89**	**3**	*e*P	**Pn**	**00 49 43.6**	**+1.5**
	baz=5.0						
SSLB	**Suanglung**	**1.90**	**350**	*e*P	**Pn**	**00 49 42.7**	**+0.5**
	baz=340						
SSLB				*e*S	**Sn**	**00 50 06.1**	**+0.8**
	baz=340						
WSL	**Shuilin Townsh**	**1.90**	**328**	*e*P	**Pn**	**00 49 42.5**	**+0.3**
	baz=328						
WSL				*e*S	**Sn**	**00 50 03.9**	**-1.4**
	baz=328						
WDLH	**Douliu**	**1.91**	**338**	*e*P	**Pn**	**00 49 42.9**	**+0.5**
	baz=329						
WDLH				*e*S	**Sn**	**00 50 05.4**	**-0.3**
	baz=329						
WTK	**Tuku**	**1.97**	**334**	*e*P	**Pn**	**00 49 42.5**	**-0.6**
	baz=335						
WTK				*e*S	**Sn**	**00 50 06.0**	**-0.9**
	baz=335						
WJS	**Zhushan**	**1.98**	**344**	*e*P	**Pn**	**00 49 43.6**	**+0.4**
	baz=337						
WJS				*e*S	**Sn**	**00 50 08.3**	**+1.0**
	baz=337						
WSF	**Szhu**	**2.00**	**329**	*e*P	**Pn**	**00 49 43.2**	**-0.3**
	baz=330						
WSF				*e*S	**Sn**	**00 50 07.0**	**-0.7**
	baz=330						
SMLT	**Sun Moon Lake**	**2.00**	**349**	P	**Pn**	**00 49 44.3**	**+0.6**
	baz=340						
SMLT				*e*S	**Sn**	**00 50 08.9**	**+1.0**
	baz=340						
TYC	**Yuchr**	**2.03**	**348**	P	**Pn**	**00 49 44.7**	**+0.8**
	baz=349						
TYC				*e*S	**Sn**	**00 50 09.1**	**+0.7**
	baz=349						
OWD	**Renai**	**2.04**	**356**	*e*P	**Pn**	**00 49 45.2**	**+1.0**
	baz=346						
OWD				*e*S	**Sn**	**00 50 09.1**	**+0.3**
	baz=346						
WNT	**Mingjian**	**2.04**	**343**	*e*P	**Pn**	**00 49 45.0**	**+0.9**
	baz=344						
WNT				*e*S	**Sn**	**00 50 09.6**	**+0.7**
	baz=344						
WDGT	**Dungji**	**2.04**	**311**	*e*P	**Pn**	**00 49 43.6**	**-0.5**
	baz=311						
WDGT				*e*S	**Sn**	**00 50 06.7**	**-2.1**
	baz=311						
HWA	**Hwalien**	**2.07**	**7**	*e*P	**Pn**	**00 49 46.6**	**+2.2**
	baz=2.0						
WUSB	**Renai**	**2.08**	**355**	*e*P	**Pn**	**00 49 45.8**	**+1.1**
	baz=345						
WUSB				*e*S	**Sn**	**00 50 11.1**	**+1.2**
	baz=345						
CHGB	**Renai**	**2.14**	**356**	*e*P	**Pn**	**00 49 46.8**	**+1.2**
	baz=346						
CHGB				*e*S	**Sn**	**00 50 12.4**	**+0.9**
	baz=346						
WRL	**Guolierlin Hig**	**2.16**	**336**	*e*P	**Pn**	**00 49 45.3**	**-0.5**
	baz=337						
WRL				*e*S	**Sn**	**00 50 09.9**	**-1.8**
	baz=337						
WCS	**Beigang Elemen**	**2.17**	**350**	*e*P	**Pn**	**00 49 46.8**	**+1.0**
	baz=351						
WCS				*e*S	**Sn**	**00 50 11.8**	**0.0**
	baz=351						
TWD	**Chiawan**	**2.17**	**6**	*e*P	**Pn**	**00 49 46.6**	**+0.8**
	baz=357						
TWD				*e*S	**Sn**	**00 50 12.5**	**+0.7**
	baz=357						
VCHM	**Qimei**	**2.18**	**307**	*e*P	**Pn**	**00 49 44.6**	**-1.3**
	baz=307						
VCHM				*e*S	**Sn**	**00 50 09.6**	**-2.5**
	baz=307						
WHF	**Hehuan Shan**	**2.22**	**358**	*e*P	**Pn**	**00 49 48.4**	**+1.5**
	baz=6.0						
WHF				*e*S	**Sn**	**00 50 13.9**	**+0.1**
	baz=6.0						
ETL	**Fush Village**	**2.25**	**7**	*e*P	**Pn**	**00 49 47.6**	**+0.7**
	baz=357						
NACB	**Ninganchiao**	**2.26**	**6**	*e*P	**Pn**	**00 49 47.2**	**+0.1**
	baz=358						
NACB				*e*S	**Sn**	**00 50 13.2**	**-0.8**
	baz=358						
WCHH	**Zhanghua**	**2.27**	**342**	*e*P	**Pn**	**00 49 47.5**	**+0.3**
	baz=335						
PHUB	**P'eng-hu**	**2.27**	**315**	*e*P	**Pn**	**00 49 45.8**	**-1.3**
	baz=308						
ETLH	**Xiulin Townshi**	**2.29**	**3**	*e*P	**Pn**	**00 49 48.4**	**+0.9**
	baz=13						
TCU	**Taichung**	**2.30**	**345**	*e*P	**Pn**	**00 49 47.7**	**+0.1**
	baz=337						
TCU				*e*S	**Sn**	**00 50 16.0**	**+0.9**
	baz=337						
PNG	**Penghu**	**2.32**	**315**	*e*P	**Pn**	**00 49 47.0**	**-0.8**
	baz=315						
FUSS	**Fushou**	**2.32**	**358**	*e*P	**Pn**	**00 49 49.6**	**+1.5**
	baz=348						
TWT	**Tachien**	**2.33**	**357**	*e*P	**Pn**	**00 49 49.6**	**+1.4**
	baz=347						
TWT				*e*S	**Sn**	**00 50 16.6**	**+0.6**
	baz=347						
TDCB	**Techi**	**2.33**	**356**	*e*P	**Pn**	**00 49 48.9**	**+0.7**
	baz=347						
TDCB				*e*S	**Sn**	**00 50 15.3**	**-0.7**
	baz=347						
WHP	**Taichung City**	**2.38**	**352**	*e*P	**Pn**	**00 49 49.5**	**+0.8**
	baz=343						
WHP				*e*S	**Sn**	**00 50 17.8**	**+0.8**
	baz=343						
TWQ1	**Liyutan**	**2.48**	**348**	*e*P	**Pn**	**00 49 50.9**	**+1.0**
	baz=340						
NNSB	**Datong**	**2.50**	**1**	*e*P	**Pn**	**00 49 51.8**	**+1.4**
	baz=6.0						
NNSB				*e*S	**Sn**	**00 50 19.9**	**-0.1**
	baz=6.0						
NNS	**Nan Shan**	**2.51**	**1**	*e*P	**Pn**	**00 49 51.9**	**+1.3**
	baz=10.0						
ENA	**Nanau**	**2.53**	**9**	*e*P	**Pn**	**00 49 51.7**	**+1.1**
	baz=357						
ENA				*e*S	**Sn**	**00 50 20.8**	**+0.3**
	baz=357						
NSY	**Sanyi**	**2.54**	**348**	*e*P	**Pn**	**00 49 51.9**	**+1.0**
	baz=341						
EWUT	**Wuta**	**2.55**	**9**	*e*P	**Pn**	**00 49 51.6**	**+0.7**
	baz=357						
EWUT				*e*S	**Sn**	**00 50 20.2**	**-0.9**
	baz=357						
LATG	**Datong**	**2.62**	**4**	*e*P	**Pn**	**00 49 53.1**	**+1.2**
	baz=11						
NMLH	**Miaoli**	**2.66**	**349**	*e*P	**Pn**	**00 49 55.1**	**+2.7**
	baz=341						
NFF	**Wufeng Townshi**	**2.71**	**356**	*e*P	**Pn**	**00 49 53.6**	**+0.5**
	baz=357						
ENTT	**Nioudou**	**2.72**	**5**	*e*P	**Pn**	**00 49 54.5**	**+1.2**
	baz=12						
NSTT	**Nanjuang**	**2.72**	**354**	*e*P	**Pn**	**00 49 53.7**	**+0.4**
	baz=355						
TWC	**Suao**	**2.72**	**10**	*e*P	**Pn**	**00 49 54.2**	**+0.9**
	baz=359						
NDS	**Dongshan**	**2.73**	**7**	*e*P	**Pn**	**00 49 55.0**	**+1.6**
	baz=358						
YHNB	**Yeheng**	**2.74**	**1**	*e*P	**Pn**	**00 49 55.8**	**+2.2**
	baz=349						
NSK	**Sanguang**	**2.75**	**1**	*e*P	**Pn**	**00 49 55.4**	**+1.7**
	baz=349						
TWE	**Neicheng**	**2.81**	**6**	*e*P	**Pn**	**00 49 56.0**	**+1.5**
	baz=8.0						
NWLT	**Wulai**	**2.85**	**3**	*e*P	**Pn**	**00 49 55.8**	**+0.7**
	baz=14						
JYNG	**Yonagunijimaku**	**2.93**	**30**	*e*P	**Pn**	**00 49 56.8**	**+0.8**
JYNG				*e*S	**Sn**	**00 50 29.7**	**-0.5**
NTC	**Toucheng**	**2.96**	**9**	*e*P	**Pn**	**00 49 58.5**	**+2.0**
	baz=359						
YOJ	**Yonaguni jima**	**2.97**	**31**	*e*P	**Pn**	**00 49 56.8**	**+0.2**
	baz=41						
YOJ	**Yonaguni jima**	**2.97**	**31**	P	**Pn**	**00 49 57.6**	**+1.0**
YOJ				*e*S	**Sn**	**00 50 31.0**	**-0.2**
TWA	**Mucha**	**3.06**	**4**	*e*P	**Pn**	**00 50 00.3**	**+2.4**
	baz=6.0						
TIPB	**Shuangxi**	**3.08**	**8**	*e*P	**Pn**	**00 49 59.9**	**+1.8**
	baz=359						
HATJ	**Hateruma jima**	**3.12**	**46**	P	**Pn**	**00 49 59.2**	**+0.6**
HATJ				*e*S	**Sn**	**00 50 33.7**	**-1.2**
TWB1	**Santiao Chiao**	**3.14**	**11**	*e*P	**Pn**	**00 50 00.7**	**+1.8**
NWF	**Wu-fen Shan**	**3.17**	**7**	*e*P	**Pn**	**00 50 01.5**	**+2.1**
	baz=358						
SXI1	**Grass Mountain**	**3.20**	**9**	*e*P	**Pn**	**00 50 02.0**	**+2.1**
	baz=359						
YM01	**YM01**	**3.22**	**4**	*e*P	**Pn**	**00 50 00.1**	**0.0**
	baz=5.0						
IRIF	**Iriomote-Funau**	**3.27**	**42**	P	**Pn**	**00 50 01.6**	**+0.9**
IRIF				S	**Sn**	**00 50 38.2**	**-0.2**
JKRS	**Kuro-shima**	**3.38**	**46**	P	**Pn**	**00 50 03.2**	**+1.0**
JKRS				S	**Sn**	**00 50 40.5**	**-0.7**
VWUC	**VWUC**	**3.52**	**331**	*e*P	**Pn**	**00 50 02.8**	**-1.2**
	baz=331						
JIJ	**Ishigaki jima**	**3.56**	**46**	P	**Pn**	**00 50 05.0**	**+0.5**
JIJ				S	**Sn**	**00 50 43.8**	**-1.7**
KNM	**Kinmen**	**3.65**	**314**	*e*P	**Pn**	**00 50 07.0**	**+1.2**
	baz=310						
KNMB	**Chin-men Tao**	**3.71**	**314**	*e*P	**Pn**	**00 50 06.5**	**-0.2**
	baz=312						
PTMZ	**Houxiangcun**	**3.71**	**327**	*e*P	**Pn**	**00 50 06.0**	**-0.7**
	baz=327						
PCYT	**Pengchaiyu**	**3.76**	**10**	*e*P	**Pn**	**00 50 08.8**	**+1.4**
	baz=360						
JISG	**Ishigakijimahi**	**3.82**	**45**	P	**Pn**	**00 50 08.5**	**+0.3**
JISG				*e*S	**Sn**	**00 50 51.0**	**-0.9**
ZPLA	**Ao Xicun**	**3.86**	**302**	*e*P	**Pn**	**00 50 07.8**	**-0.9**
	baz=300						
JTJ	**Tarama**	**4.12**	**48**	*e*P	**Pn**	**00 50 12.5**	**+0.3**
JTJ				*e*S	**Sn**	**00 50 58.1**	**-1.1**
AXDP	**Jialang**	**4.29**	**315**	*e*P	**Pn**	**00 50 13.9**	**-0.6**
	baz=313						
MATB	**Ma-tsu**	**4.40**	**344**	*e*P	**Pn**	**00 50 16.0**	**-0.1**
	baz=344						
JIRB	**Irabujima**	**4.57**	**50**	*e*P	**Pn**	**00 50 18.9**	**+0.6**
JIRB				*e*S	**Sn**	**00 51 10.1**	**-0.1**
JMJ2	**Miyako jima3**	**4.63**	**52**	*e*P	**Pn**	**00 50 20.5**	**+1.4**
JMJ2				*e*S	**Sn**	**00 51 11.3**	**-0.3**
MHZQ	**Yeshan**	**4.67**	**334**	*e*P	**Pn**	**00 50 18.9**	**-0.8**
	baz=334						
JIKM	**Ikemajima**	**4.68**	**49**	*e*S	**Sn**	**00 51 12.0**	**-0.9**
JOGS	**Gusukube**	**4.70**	**52**	*e*S	**Sn**	**00 51 13.3**	**0.0**
LYJJ	**Jianjiangzhen**	**4.83**	**343**	*e*P	**Pn**	**00 50 20.9**	**-1.1**
	baz=344						
XPSS	**Dashiqiu**	**5.10**	**348**	*e*P	**Pn**	**00 50 25.0**	**-0.5**
	baz=359						
SXFK	**Yanhouchang**	**5.59**	**324**	*e*P	**Pn**	**00 50 31.4**	**-0.9**
	baz=322						

VAO ***10*** *00:53:51.9±1.6, 12.49S×74.39W, h10km, mb4.5*
IDC ***10*** *00:54:07.4±1.7, 11.70S×74.14W, h110km±19km, mb3.3/5, mbtmp3.7/9, Error ellipse: s-maj=23.2km s-min=13.8km az=39.0*
ISC 10 00:54:06.7±0.7**, 11.64S**±0.08×**74.06W**±0.06**, h100**km**, n17,** σ1§**08/18, mb3.6/5, Central Peru**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**2.74**	**262**	P	**Pn**	**00 54 49.4**	**+0.3**
	248nm,0.3s,baz=94,slow=10,SNR=60						
NNA				S	**Sn**	**00 55 21.5**	**-0.2**
	344nm,0.4s,baz=91,slow=12,SNR=7.4						
CZSB	**Cruzeiro do Su**	**4.11**	**19**	*e*P	**Pn**	**00 55 07.2**	**-0.2**
ATAH	**Atahualpa**	**6.19**	**316**	P	**Pn**	**00 55 35.5**	**-0.5**
	6.8nm,0.6s,baz=122,slow=9.5,SNR=14						
ATAH				S	**Sn**	**00 56 47.7**	**+2.2**
	32nm,0.8s,baz=72,slow=20,SNR=4.8						
LPAZ	**La Paz**	**7.38**	**129**	P	**Pn**	**00 55 54.0**	**+1.7**
	0.6nm,0.6s,baz=326,slow=12,SNR=2.3						
SIV	**San Ignacio**	**13.33**	**110**	P	**Pn**	**00 57 11.9**	**-0.2**
	0.8nm,0.5s,baz=290,slow=12,SNR=2.3						
MACA	**Manacapuru-AM**	**15.71**	**59**	*e*P	**Pn**	**00 57 41.5**	**-0.9**
ITTB	**Itaituba**	**19.52**	**70**	*e*P	**P**	**00 58 26.6**	**+0.2**
CPUP	**Vila Florida**	**21.50**	**135**	P	**P**	**00 58 48.5**	**+1.0**
	2.1nm,0.6s,baz=318,slow=14,SNR=4.3						
	2.1nm,0.6s						
MALB	**Monte Alegre**	**21.91**	**65**	*e*P	**P**	**00 58 53.8**	**+1.8**
MCPB	**Macapa, AP**	**24.55**	**64**	*e*P	**P**	**00 59 17.9**	**+0.5**
PLCA	**Paso Flores**	**29.14**	**175**	P	**P**	**00 59 57.5**	**-0.8**
	1.5nm,0.8s,baz=335,slow=14,SNR=1.9						
	1.5nm,0.6s						
TXAR	**Lajitas Array**	**49.75**	**326**	P	**P**	**01 02 49.1**	**-0.2**
	0.1nm,0.5s,baz=153,slow=8.1,SNR=2.6						
	0.1nm,0.5s						
TORD	**Torodi Ar. Bea**	**79.08**	**74**	P	**P**	**01 06 00.2**	**-0.4**
	0.9nm,0.6s,baz=255,slow=5.2,SNR=4.2						
	0.9nm,0.6s						
YKA	**Yellowknife Ar**	**80.32**	**342**	P	**P**	**01 06 06.5**	**+0.1**
	0.4nm,0.6s,baz=134,slow=4.4,SNR=3.9						
	0

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.97**	**194**	Pn	**Pn**	**00 59 08.8**	**-1.7**
MXZ				Sn	**Sn**	**00 59 48.9**	**-0.2**
MXZ	**Matakaoa Point**	**2.97**	**194**	P	**Pn**	**00 59 10.6**	**+0.2**
MXZ				S	**Sn**	**00 59 49.2**	**+0.1**
HAZ	**Te Kaha**	**3.28**	**200**	P	**Pn**	**00 59 15.0**	**+0.8**
HAZ				S	**Sn**	**00 59 55.9**	**+0.2**
PUZ	**Puketiti**	**3.47**	**193**	P	**Pn**	**00 59 16.9**	**+0.4**
PUZ				S	**Sn**	**00 59 59.8**	**-0.1**
RUGZ	**Raukumara Rang**	**3.50**	**200**	P	**Pn**	**00 59 18.4**	**+1.4**
RUGZ				S	**Sn**	**00 59 59.3**	**-1.5**
KUZ	**Kuaotunu**	**3.51**	**233**	P	**Pn**	**00 59 18.9**	**+1.9**
TWGZ	**Tauwhareparae**	**3.63**	**196**	P	**Pn**	**00 59 19.3**	**+0.9**
TWGZ				S	**Sn**	**01 00 05.2**	**+1.8**
OPRZ	**Ohinepanea**	**3.82**	**214**	P	**Pn**	**00 59 22.3**	**+1.6**
CNGZ	**Carnagh Statio**	**3.88**	**192**	P	**Pn**	**00 59 21.9**	**+0.4**
CNGZ				S	**Sn**	**01 00 03.9**	**-5.0**
MWZ	**Matawai**	**3.89**	**200**	P	**Pn**	**00 59 22.5**	**+0.8**
MWZ				S	**Sn**	**01 00 09.1**	**-0.2**
TKGZ	**Te Karaka**	**3.91**	**196**	P	**Pn**	**00 59 22.0**	**+0.2**
TKGZ				S	**Sn**	**01 00 09.0**	**-0.5**
URZ	**Urewera**	**3.95**	**205**	P	**Pn**	**00 59 23.1**	**+0.7**
	32nm,0.5s,baz=31,slow=7.2,SNR=29						
URZ				S	**Sn**	**01 00 10.2**	**-0.3**
	62nm,0.4s,baz=60,slow=20,SNR=10						
URZ	**Urewera**	**3.95**	**205**	Pn	**Pn**	**00 59 22.7**	**+0.3**
URZ				Sn	**Sn**	**01 00 09.4**	**-1.2**
URZ	**Urewera**	**3.95**	**205**	P	**Pn**	**00 59 23.2**	**+0.9**
URZ				S	**Sn**	**01 00 09.8**	**-0.7**
URZ	**Urewera**	**3.95**	**205**	P	**Pn**	**00 59 23.6**	**+1.2**
RIGZ	**Rimuhau**	**4.18**	**196**	P	**Pn**	**00 59 25.5**	**+0.2**
RIGZ				S	**Sn**	**01 00 15.2**	**-0.6**
SNGZ	**Shannon Statio**	**4.36**	**200**	P	**Pn**	**00 59 28.2**	**+0.7**
SNGZ				S	**Sn**	**01 00 20.0**	**+0.3**
PRGZ	**Paritu Road**	**4.37**	**194**	P	**Pn**	**00 59 27.3**	**-0.3**
PRGZ				S	**Sn**	**01 00 15.8**	**-4.1**
KNZ	**Kokohu**	**4.50**	**196**	P	**Pn**	**00 59 28.4**	**-0.9**
KNZ				S	**Sn**	**01 00 20.6**	**-2.3**
ALRZ	**Allen Road**	**4.51**	**210**	P	**Pn**	**00 59 30.1**	**+0.7**
RAHZ	**Arahi**	**4.56**	**201**	P	**Pn**	**00 59 29.8**	**-0.2**
RAHZ				S	**Sn**	**01 00 23.4**	**-0.9**
MTHZ	**Maungataniwha**	**4.58**	**204**	P	**Pn**	**00 59 31.0**	**+0.8**
MTHZ				S	**Sn**	**01 00 24.8**	**+0.1**
MHGZ	**Mahia Peninsul**	**4.58**	**193**	P	**Pn**	**00 59 30.4**	**+0.1**
MHGZ				S	**Sn**	**01 00 21.1**	**-3.7**
OUZ	**Omahuta**	**4.65**	**262**	Pn	**Pn**	**00 59 31.5**	**+0.4**
OUZ	**Omahuta**	**4.65**	**262**	P	**Pn**	**00 59 32.6**	**+1.5**
ARHZ	**Aropaoanui**	**4.91**	**201**	P	**Pn**	**00 59 32.9**	**-1.5**
ARHZ				S	**Sn**	**01 00 30.3**	**-1.8**
BKZ	**Black Stump Fm**	**4.98**	**205**	Pn	**Pn**	**00 59 35.3**	**0.0**
BKZ	**Black Stump Fm**	**4.98**	**205**	P	**Pn**	**00 59 35.2**	**-0.2**
BKZ				S	**Sn**	**01 00 31.6**	**-2.3**
BKZ	**Black Stump Fm**	**4.98**	**205**	P	**Pn**	**00 59 34.6**	**-0.8**
MCHZ	**McNeill Hill**	**5.16**	**202**	P	**Pn**	**00 59 38.3**	**+0.7**
MCHZ				S	**Sn**	**01 00 36.7**	**-1.4**
HIZ	**Hauiti**	**5.19**	**221**	Pn	**Pn**	**00 59 38.6**	**+0.6**
HIZ	**Hauiti**	**5.19**	**221**	P	**Pn**	**00 59 40.1**	**+2.1**
HIZ	**Hauiti**	**5.19**	**221**	P	**Pn**	**00 59 40.1**	**+2.1**
KWHZ	**Kaweka Forest**	**5.23**	**204**	P	**Pn**	**00 59 37.8**	**-0.9**
KWHZ				S	**Sn**	**01 00 37.0**	**-2.8**
BHHZ	**Black Hill Sta**	**5.42**	**207**	P	**Pn**	**00 59 39.8**	**-1.3**
BHHZ				S	**Sn**	**01 00 41.8**	**-2.3**
KAHZ	**Kahuranaki**	**5.43**	**199**	P	**Pn**	**00 59 40.7**	**-0.5**
KAHZ				S	**Sn**	**01 00 42.3**	**-2.1**
KRHZ	**Kereru**	**5.45**	**204**	P	**Pn**	**00 59 39.5**	**-1.9**
KRHZ				S	**Sn**	**01 00 40.5**	**-4.3**
MOVZ	**Moawhango**	**5.47**	**209**	P	**Pn**	**00 59 40.0**	**-1.7**
MOVZ				S	**Sn**	**01 00 41.6**	**-3.7**
PXZ	**Pawanui**	**5.66**	**199**	P	**Pn**	**00 59 41.9**	**-2.1**
PXZ				S	**Sn**	**01 00 44.8**	**-4.7**
WPHZ	**Waipukurau**	**5.81**	**202**	P	**Pn**	**00 59 44.7**	**-1.3**
WPHZ				S	**Sn**	**01 00 50.3**	**-2.8**
RAO	**Raoul Island**	**5.94**	**25**	Pn	**Pn**	**00 59 45.0**	**-2.8**
PRHZ	**Porangahau**	**5.94**	**199**	P	**Pn**	**00 59 45.3**	**-2.4**
PRHZ				S	**Sn**	**01 00 52.3**	**-3.8**
TSZ	**Takapari Road**	**5.96**	**205**	P	**Pn**	**00 59 47.0**	**-1.0**
TSZ				S	**Sn**	**01 00 52.7**	**-3.9**
DVHZ	**Dannevirke**	**6.11**	**202**	P	**Pn**	**00 59 47.3**	**-2.5**
DVHZ				S	**Sn**	**01 00 55.0**	**-5.0**
PRWZ	**Pori Road**	**6.40**	**203**	P	**Pn**	**00 59 52.7**	**-1.0**
BFZ	**Birch Farm**	**6.43**	**201**	Pn	**Pn**	**00 59 53.7**	**-0.3**
BFZ	**Birch Farm**	**6.43**	**201**	P	**Pn**	**00 59 51.5**	**-2.5**
BFZ	**Birch Farm**	**6.43**	**201**	P	**Pn**	**00 59 51.6**	**-2.5**
MSWZ	**Moikau Station**	**7.42**	**204**	Pn	**Pn**	**01 00 05.2**	**-1.6**
SNZO	**South Karori**	**7.51**	**207**	Pn	**Pn**	**01 00 05.5**	**-2.6**
BHW	**Baring Head**	**7.54**	**206**	Pn	**Pn**	**01 00 10.3**	**+1.9**
PLWZ	**Palliser**	**7.55**	**203**	Pn	**Pn**	**01 00 09.6**	**+1.0**
TUWZ	**Tuamarina**	**7.92**	**210**	Pn	**Pn**	**01 00 09.4**	**-3.9**
NNZ	**Nelson**	**7.99**	**214**	Pn	**Pn**	**01 00 15.5**	**+1.2**
CMWZ	**Cape Campbell**	**8.08**	**208**	Pn	**Pn**	**01 00 16.2**	**+0.7**
QRZ	**Quartz Range**	**8.10**	**219**	Pn	**Pn**	**01 00 17.7**	**+2.0**
QRZ	**Quartz Range**	**8.10**	**219**	P	**Pn**	**01 00 13.0**	**-2.7**
BSWZ	**Blackbirch Sta**	**8.18**	**209**	Pn	**Pn**	**01 00 16.5**	**-0.3**
THZ	**Tophouse**	**8.64**	**213**	Pn	**Pn**	**01 00 20.9**	**-1.8**
KHZ	**Kahutara**	**8.91**	**208**	Pn	**Pn**	**01 00 25.9**	**-0.2**
KHZ	**Kahutara**	**8.91**	**208**	P	**Pn**	**01 00 21.5**	**-4.7**
LTZ	**Lake Taylor**	**9.73**	**212**	Pn	**Pn**	**01 00 36.6**	**-0.4**
OXZ	**Oxford**	**10.28**	**211**	Pn	**Pn**	**01 00 41.6**	**-2.0**
MQZ	**McQueen's Vall**	**10.35**	**207**	Pn	**Pn**	**01 00 41.6**	**-3.2**
MLZ	**Mavora Lakes**	**13.63**	**215**	P	**P**	**01 01 29.8**	**+1.0**
PINNC	**Pines Island,**	**15.84**	**316**	P	**Pn**	**01 01 54.1**	**+0.4**
DZM	**Mont Dzumac**	**16.84**	**315**	P	**Pn**	**01 02 05.6**	**-0.1**
	12nm,0.6s,baz=160,slow=10,SNR=20						
DZM	**Mont Dzumac**	**16.84**	**315**	P	**Pn**	**01 02 05.4**	**-0.4**
DZM				IAmb	IAmb	01 02 08.5	
	comp=Z,16nm,0.9s						
MSVF	**Nonsavu**	**16.91**	**356**	P	**P**	**01 02 05.5**	**+0.1**
	comp=Z,6.8nm,0.6s,baz=216,slow=18,SNR=9.4						
MSVF	**Nonsavu**	**16.91**	**356**	P	**P**	**01 02 05.8**	**+0.5**
MSVF				IAmb	IAmb	01 02 08.7	
	comp=Z,12nm,0.8s						
KOUNC	**Koumac, New Ca**	**19.29**	**313**	P	**Pn**	**01 02 32.5**	**-2.0**
ARMA	**Armidale**	**23.61**	**273**	P	**P**	**01 03 16.9**	**+2.7**
ARMA				IAmb	IAmb	01 03 27.8	
	comp=Z,5.5nm,1.1s						
BBOO	**Buckleboo**	**35.74**	**260**	P	**P**	**01 05 01.6**	**+0.6**
COEN	**Coen**	**38.49**	**293**	P	**P**	**01 05 24.4**	**+0.1**
COEN				IAmb	IAmb	01 05 25.3	
	comp=Z,9.6nm,0.8s						
AS31	**Alice Springs**	**40.76**	**273**	P	**P**	**01 05 42.5**	**-0.5**
AS31				IAmb	IAmb	01 05 43.0	
	comp=Z,2.7nm,0.7s						
ASAR	**Alice Springs**	**40.76**	**273**	P	**P**	**01 05 42.3**	**-0.7**
	comp=Z,6.8nm,0.7s,baz=116,slow=7.7,SNR=73						
ASAR				PcP	**PcP**	**01 07 39.3**	**-0.9**
	comp=Z,0.8nm,0.7s,baz=112,slow=5.5,SNR=2.0						
ASAR				ScP	**ScP**	**01 11 06.5**	**-4.2**
	comp=Z,0.6nm,0.7s,baz=114,slow=3.9,SNR=3.1						
	comp=Z,6.8nm,0.7s						
WR0	**Warramunga Arr**	**41.97**	**279**	P	**P**	**01 05 52.1**	**-0.8**
WR0				IAmb	IAmb	01 05 56.9	
	comp=Z,2.9nm,1.0s						
WB2	**Warramunga Arr**	**42.14**	**278**	P	**P**	**01 05 53.5**	**-0.7**
WB2				IAmb	IAmb	01 05 54.0	
	comp=Z,5.4nm,0.6s						
WRA	**Warramunga Arr**	**42.15**	**278**	P	**P**	**01 05 53.3**	**-1.0**
	comp=Z,3.6nm,0.5s,baz=117,slow=7.8,SNR=47						
WRA				PcP	**PcP**	**01 07 43.9**	**-1.0**
	comp=Z,0.9nm,0.6s,baz=126,slow=3.0,SNR=3.5						
WRA				ScP	**ScP**	**01 11 12.1**	**-4.1**
	comp=Z,0.8nm,0.9s,baz=116,slow=4.0,SNR=3.4						
	comp=Z,3.6nm,0.5s						
WRA	**Warramunga Arr**	**42.15**	**278**	P	**P**	**01 05 53.5**	**-0.8**
WB0	**Warramunga Arr**	**42.19**	**279**	P	**P**	**01 05 53.8**	**-0.8**
WB0				IAmb	IAmb	01 05 54.0	
	comp=Z,5.6nm,0.5s						
FORT	**Forrest**	**42.84**	**260**	P	**P**	**01 06 01.2**	**+1.5**
SBA	**Scott Base**	**43.61**	**184**	P	**P**	**01 06 09.8**	**+4.6**
VNDA	**Vanda**	**43.62**	**185**	P	**P**	**01 06 07.4**	**+2.1**
	comp=Z,0.7nm,0.7s,baz=5.5,slow=7.8,SNR=3.3						
	comp=Z,0.7nm,0.7s						
MORW	**Morawa**	**53.18**	**257**	P	**P**	**01 07 17.5**	**-1.4**
MORW				IAmb	IAmb	01 07 35.6	
	comp=Z,8.8nm,1.1s						
MBWA	**Marble Bar**	**53.57**	**268**	P	**P**	**01 07 20.7**	**-1.1**
QSPA	**South Pole Qui**	**55.44**	**180**	P	**P**	**01 07 37.7**	**+2.9**
BELA	**Belgrano 2**	**65.86**	**173**	P	**P**	**01 08 46.5**	**+1.7**
BELA				IAmb	IAmb	01 08 47.3	
	comp=Z,3.1nm,0.9s						
MAW	**Mawson**	**67.48**	**202**	P	**P**	**01 08 56.1**	**+1.0**
	comp=Z,6.6nm,0.9s,baz=120,slow=9.4,SNR=5.6						
	comp=Z,6.6nm,0.9s						
MAW	**Mawson**	**67.48**	**202**	IAmb	IAmb	01 08 57.8	
	comp=Z,1.4nm,0.9s						
TROLL	**Troll, Antarti**	**73.58**	**181**	P	**P**	**01 09 33.4**	**+1.3**
SNAA	**Sanae**	**73.93**	**179**	P	**P**	**01 09 35.3**	**+1.3**
SNAA	**Sanae**	**73.93**	**179**	P	**P**	**01 09 35.3**	**+1.3**
VNA3	**Neumayer Olymp**	**74.18**	**177**	P	**P**	**01 09 36.7**	**+1.3**
VNA2	**Neumayer--Watz**	**74.58**	**178**	P	**P**	**01 09 39.5**	**+1.7**
	baz=147,slow=9.8						
VNA1	**Neumayer--Stat**	**74.83**	**177**	P	**P**	**01 09 40.9**	**+1.8**
LL02	**Futaleuf**	**79.00**	**135**	P	**P**	**01 10 02.4**	**-0.5**
LL02				IAmb	IAmb	01 10 06.6	
	comp=Z,3.9nm,0.7s						
H03S2	**Juan Fernandez**	**80.04**	**124**	T	T	02 38 59.4	
	baz=232						
H03S1	**Juan Fernandez**	**80.05**	**124**	T	T	02 38 59.4	
	baz=232						
H03S3	**Juan Fernandez**	**80.05**	**124**	T	T	02 38 56.3	
	baz=232						
H03N3	**Juan Fernandez**	**80.26**	**124**	T	T	02 39 10.3	
	baz=237,slow=72,SNR=7.8						
H03N2	**Juan Fernandez**	**80.26**	**124**	T	T	02 39 05.0	
	baz=237,slow=72,SNR=6.4						
H03N1	**Juan Fernandez**	**80.27**	**124**	T	T	02 39 06.9	
	baz=237,slow=72,SNR=10						
PLCA	**Paso Flores**	**81.28**	**134**	P	**P**	**01 10 17.5**	**+2.2**
	comp=Z,1.3nm,0.6s,baz=255,slow=6.5,SNR=7.7						
	comp=Z,1.3nm,0.6s						
PLCA	**Paso Flores**	**81.28**	**134**	P	**P**	**01 10 16.8**	**+1.5**
KSRS	**Korea Array**	**86.15**	**322**	P	**P**	**01 10 39.7**	**+0.1**
	comp=Z,0.6nm,0.4s,baz=135,slow=4.6,SNR=1.7						
	comp=Z,0.6nm,0.4s						
PETK	**Petropavlovsk-**	**89.41**	**347**	P	**P**	**01 10 54.0**	**-0.7**
	comp=Z,5.1nm,0.8s,baz=165,slow=8.2,SNR=10						
	comp=Z,5.1nm,0.8s						
NVAR	**Mina Array Bea**	**92.95**	**44**	P	**P**	**01 11 13.5**	**+1.7**
	comp=Z,0.8nm,0.7s,baz=221,slow=10,SNR=5.5						
	comp=Z,0.8nm,0.7s						
MKAR	**Makanchi Array**	**118.68**	**309**	PKP	**PKPdf**	**01 16 43.1**	**-2.0**
	comp=Z,0.5nm,0.6s,baz=95,slow=1.3,SNR=6.7						
ZALV	**Zalesovo Beam**	**119.62**	**317**	PKP	**PKPdf**	**01 16 44.5**	**-2.1**
	comp=Z,0.6nm,0.4s,baz=112,slow=1.6,SNR=3.0						
NRIK	**Noril'sk**	**122.55**	**335**	PKP	**PKPdf**	**01 16 50.0**	**-1.8**
	comp=Z,1.6nm,0.6s,baz=78,slow=7.0,SNR=2.7						
ARCES	**ARCESS Array B**	**142.20**	**345**	PKhKP	PKPpre	01 17 24.3	
	comp=Z,2.0nm,0.8s,baz=48,slow=1.3,SNR=6.8						
KBZ	**Khabaz**	**145.31**	**298**	PKPbc	**PKPdf**	**01 17 34.1**	**-0.6**
	comp=Z,2.6nm,0.8s,baz=185,slow=3.7,SNR=3.6						
FINES	**FINESS Array B**	**148.22**	**336**	PKPbc	**PKPbc**	**01 17 41.4**	**-1.3**
	comp=Z,11nm,0.9s,baz=51,slow=3.9,SNR=26						
LIC	**Lamto**	**151.41**	**171**	∥*i*PKIKP	**PKiKP**	**01 17 53.3**	**+1.0**
	comp=Z,20nm,0.7s						
KIC	**Kosan Boka**	**151.58**	**172**	∥*e*PKIKP	**PKPbc**	**01 17 53.1**	**+0.8**
	comp=Z,18nm,0.5s						
TIC	**Toumoit**	**151.83**	**171**	∥*i*PKIKP	**PKPbc**	**01 17 53.6**	**+0.7**
DBIC	**Dimbokro**	**151.87**	**171**	PKPbc	**PKPbc**	**01 17 53.5**	**+0.6**
	comp=Z,2.1nm,0.4s,baz=206,slow=0.8,SNR=9.2						
BRTR	**Keskin Array B**	**152.23**	**291**	PKPbc	**PKPbc**	**01 17 51.8**	**-1.5**
	comp=Z,3.9nm,0.6s,baz=139,slow=3.7,SNR=24						
NB2	**NORSAR Subarra**	**152.52**	**347**	PKP	**PKPbc**	**01 17 51.8**	**-1.2**
	comp=Z,1.3nm,0.7s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**152.52**	**347**	PKPbc	**PKPbc**	**01 17 52.0**	**-1.0**
	comp=Z,1.9nm,0.6s,baz=18,slow=4.1,SNR=11						
AKASG	**Malin Array Be**	**153.00**	**316**	PKPbc	**PKPbc**	**01 17 52.1**	**-2.2**
	comp=Z,1.7nm,0.4s,baz=47,slow=2.3,SNR=12						
TORD	**Torodi Ar. Bea**	**158.44**	**187**	PKP	**PKPdf**	**01 17 55.5**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=114,slow=0.7,SNR=4.0						
TORD				PKPab	**PKPab**	**01 18 30.8**	**+0.2**
	comp=Z,1.8nm,0.5s,baz=164,slow=5.1,SNR=12						
ESDC	**Sonseca Array**	**174.41**	**26**	PKP	**PKPdf**	**01 18 06.7**	**-0.1**
	comp=Z,0.5nm,0.9s,baz=357,slow=2.6,SNR=3.5						

WEL 10 00:58:55.4±0.5, 44°S±3°×17°3E±°, h5km, M2.5/7, ML2.6/7, MLv2.5/7, Error ellipse: s-maj=0.0km s-min=0.0km az=89.9, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MQZ	**McQueen's Vall**	**0.20**	**191**	P	Pg	00 58 59.8	+0.3
MQZ				S	Sg	00 59 03.1	+0.9
AMCZ	**Amberley**	**0.33**	**353**	P	Pg	00 59 02.3	+0.5
AMCZ				S	Sg	00 59 06.9	+0.7
OKCZ	**Okains Bay**	**0.34**	**131**	P	Pg	00 59 02.4	+0.4
AKCZ	**Akaroa Harbour**	**0.40**	**158**	P	Pg	00 59 03.5	+0.4
RACZ	**Rakaia**	**0.47**	**242**	P	Pg	00 59 05.1	+0.7
OXZ	**Oxford**	**0.52**	**290**	P	Pg	00 59 05.6	+0.2
OXZ				S	Sg	00 59 13.4	+1.2
GVZ	**Greta Valley S**	**0.59**	**24**	P	Pg	00 59 07.2	+0.5
GVZ				S	Sb	00 59 15.9	-1.0
WACZ	**Wakanui South**	**0.77**	**235**	P	Pb	00 59 10.8	-0.4
LTZ	**Lake Taylor**	**0.79**	**336**	P	Pg	00 59 10.8	+0.2
LTZ				S	Sb	00 59 21.8	-0.9
ARCZ	**Arundel**	**1.20**	**248**	P	Pg	00 59 17.0	-1.3
KHZ	**Kahutara**	**1.25**	**30**	P	Pg	00 59 17.4	-1.9
TMZ	**Timaru**	**1.51**	**234**	P	Pb	00 59 23.7	-0.3
CMWZ	**Cape Campbell**	**2.08**	**33**	P	Pg	00 59 34.9	-0.3
ODZ	**Otahua Downs**	**2.14**	**223**	P	Pg	00 59 35.7	-0.6
TMWZ	**Te Maipa**	**3.36**	**46**	P	Pn	00 59 44.6	-4.0
MRZ	**Mangatainoka R**	**3.56**	**38**	P	Pn	00 59 53.4	+2.2

*BJI **10** 01:36:11.0±0.0, 29°.11N×142°.50E, h6km, mb4.5/39, mB4.7/23, Ms4.3/28, Ms7 4.1/27*
*IDC **10** 01:36:12.2±0.6, 29°.23N×142°.52E, h0km, mb4.1/20, mbtmp4.1/22, ML3.6/3, MS3.9/53, Error ellipse: s-maj=18.1km s-min=14.6km az=82.0*
*NEIC **10** 01:36:13.2±1.7, 29°.28N±0°.05×142°.8E±0°.1, h10km±1km, mb4.7/36, Error ellipse: s-maj=18.7km s-min=9.2km az=90.0*
*MOS **10** 01:36:14.5±1.1, 29°.31N×142°.52E, h27km, mb4.6/26, Error ellipse: s-maj=14.7km s-min=6.6km az=114.8*
*NIED **10** 01:36:15.3, 29°.27N×142°.23E, h57km, MW4.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^16^Nm; Mrr-0.57; Mθθ 0.49; Mφφ 0.08; Mrθ 0.07; Mrφ-0.73; Mθφ-0.82; Fault plane solution: M0 1.23000×10^16^ NP1:φs 93.00000°, δ 40.00000°, λ -152.00000°. NP2:φs 341.00000°, δ 72.00000°, λ -54.00000°.*
*GCMT **10** 01:36:16.2±0.4, 29°.22N±0°.04×142°.68E±0°.03, h17km±1km, MW4.8/86, Moment Tensor Solution. s17,c19; s86,c114; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr 1.79±.13; Mθθ-0.47±.07; Mφφ-1.33±.09; Mrθ 0.42±.26; Mrφ-0.30±.05; Mθφ 0.49±.21; Best double couple: M0 1.72600×10^16^ NP1:φs 192.00000°, δ 35.00000°, λ 80.00000°. NP2: φs 25.00000°, δ 56.00000°, λ 97.00000°. Principal axes: T 1.9240, Plg 78.0000°, Azm 320.0000°; N -0.4000, Plg 6.0000°, Azm 201.0000°; P -1.5290, Plg 10.0000°, Azm 110.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 01:36:15.9±0.4, 29°.23N±0°.05×142°.55E±0°.07, h27km, n172, σ1§49/145, mb4.5/55, MS4.0/57, 10C-7D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**2.15**	**189**	Pn	**Pn**	**01 36 49.6**	**-0.3**
	18nm,0.3s,baz=262,slow=22,SNR=2.6						
JCJ				Sn	**Sn**	**01 37 13.8**	**-1.9**
	89nm,0.3s,baz=32,slow=23,SNR=12						
JCJ	**Chichijima**	**2.15**	**189**		**Pn**	**01 36 49.2**	**-0.7**
JHJ2	**Mitsune**	**4.53**	**330**	Pn	**Pn**	**01 37 21.8**	**-0.8**
JHJ	**Hachijo jima 2**	**4.55**	**329**	Pn	**Pn**	**01 37 21.3**	**-1.6**
	13nm,0.3s,baz=42,slow=23,SNR=4.3						
JHJ				Sn	**Sn**	**01 38 13.3**	**-1.6**
	16nm,0.3s,baz=258,slow=23,SNR=3.5						
JHJ				LR	LR	01 39 00.6	
	comp=Z,1μm,19.4s,baz=240,slow=37						
	57nm,0.5s						
JYT	**Yasato**	**7.26**	**345**	Pn	**Pn**	**01 37 58.6**	**-1.5**
INU	**Inuyama**	**7.69**	**324**	Pn	**Pn**	**01 38 06.1**	**0.0**
JGF	**Kuroka**	**7.72**	**327**		**Pn**	**01 38 06.7**	**+0.1**
MJAR	**Matsushiro Arr**	**8.15**	**335**	Pn	**Pn**	**01 38 11.5**	**-1.0**
	0.5nm,0.3s,baz=156,slow=11,SNR=32						
MJAR				LR	LR	01 41 33.5	
	comp=Z,466nm,18.0s,baz=120,slow=39						
	6.8nm,0.6s						
MJAR	**Matsushiro Arr**	**8.15**	**335**	Pn	**Pn**	**01 38 11.0**	**-1.5**
MJAR	**Matsushiro Arr**	**8.15**	**335**	P	**Pn**	**01 38 11.0**	**-1.5**
MAJO	**Matsushiro**	**8.16**	**335**		**Pn**	**01 38 11.1**	**-1.4**
MAJO	**Matsushiro**	**8.16**	**335**	P	**Pn**	**01 38 11.1**	**-1.4**
MJB9	**Matsu-Tunnel**	**8.16**	**335**		**Pn**	**01 38 12.1**	**-0.5**
JMM	**Marumori**	**8.74**	**351**		**Pn**	**01 38 18.1**	**-2.3**
JSD	**Sado**	**9.48**	**339**	Pn	**Pn**	**01 38 29.2**	**-1.5**
ERM	**Erimo**	**12.77**	**2**	∥*eP*	**Pn**	**01 39 13.7**	**-1.9**
JOW	**Kunigami**	**12.83**	**263**	LR	LR	01 44 00.3	
	comp=Z,522nm,19.4s,baz=128,slow=36						
KSRS	**Korea Array**	**14.71**	**308**	Pn	**P**	**01 39 46.1**	**-1.8**
	0.5nm,0.3s,baz=117,slow=12,SNR=18						
KSRS				LR	LR	01 45 35.9	
	comp=Z,525nm,18.6s,baz=120,slow=38						
SEHB	**SEOHWA**	**14.91**	**311**	Pn	**P**	**01 39 47.0**	**-3.2**
INCN	**Inchon**	**15.63**	**306**		**P**	**01 39 57.1**	**-1.1**
INCN				IAmb	IAmb	01 40 00.1	
	comp=Z,26nm,0.6s						
INCN	**Inchon**	**15.63**	**306**	P	**P**	**01 39 57.1**	**-1.1**
INCN				pmax	pmax		
	comp=Z,26nm,0.6s						
USRK	**Ussuriysk Ar.**	**17.15**	**333**	P	**P**	**01 40 15.9**	**+1.0**
	comp=Z,4.0nm,0.6s,baz=164,slow=11,SNR=8.8						
USRK				LR	LR	01 46 44.9	
	comp=Z,291nm,18.8s,baz=135,slow=37						
USRK	**Ussuriysk Ar.**	**17.15**	**333**	Pn	**Pn**	**01 40 11.7**	**-1.8**
USRK	**Ussuriysk Ar.**	**17.15**	**333**	P	**Pn**	**01 40 11.7**	**-1.8**
MDJ	**Mudanjiang**	**18.49**	**330**	P	**Pn**	**01 40 29.9**	**-0.1**
MDJ				pmax	pmax		
	comp=Z,8.0nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,140nm,5.8s						
MDJ				LR	LR		
	comp=Z,450nm,17.6s						
MDJ				LR	LR		
	comp=Z,460nm,15.7s						
MDJ				LR	LR		
	comp=Z,340nm,19.6s						
SSE	**Sheshan**	**18.57**	**281**	P	**P**	**01 40 27.5**	**-3.2**
SSE				S	**Sn**	**01 43 56.2**	**-1.6**
SSE				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SSE				pmax	pmax		
	comp=Z,49nm,6.5s						
SSE				LR	LR		
	comp=Z,170nm,16.2s						
SSE				LR	LR		
	comp=Z,100nm,17.7s						
YHNB	**Yeheng**	**19.41**	**261**		**Pn**	**01 40 42.0**	**+0.7**
YHNB				IAmb	IAmb	01 40 54.8	
	comp=Z,73nm,1.5s						
SSLB	**Suanglung**	**20.06**	**259**	P	Pn	01 40 48.1	-0.9
SSLB				IAmb	IAmb	01 41 05.1	
	comp=Z,70nm,1.2s						
BNX	**BinXian**	**20.34**	**328**	∥P	Pn	01 40 50.1	-2.0
BNX				S	**S**	**01 44 34.1**	**-2.5**
BNX				sS	sS	01 44 44.7	-0.5
BNX				pmax	pmax		
	comp=Z,54nm,0.7s						
BNX				pmax	pmax		
	comp=Z,200nm,3.7s						
BNX				LR	LR		
	comp=Z,330nm,14.7s						
BNX				LR	LR		
	comp=Z,430nm,16.5s						
BNX				LR	LR		
	comp=Z,210nm,14.3s						
NJ2	**Nanjing**	**20.57**	**284**	*eP*	Pn	01 40 54.0	-0.9
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KLR	**Kul'dur**	**21.61**	**341**	P	**P**	**01 41 04.5**	**+0.8**
	comp=Z,3.0nm,0.7s,baz=160,slow=7.0,SNR=7.0						
	comp=Z,3

GTA pP pP 01 43 24.3 -0.2
GTA sP pwP 01 43 29.4 -3.6
GTA pmax pmax
comp=Z,3.0nm,0.7s
MOY Mondy 38.05 318 *eP* **P 01 43 33.0 +1.0**
MOY pmax pmax
comp=Z,11nm,1.8s
GOMU GeErMu 40.43 293 P **P 01 43 51.2 -1.2**
GOMU pP pP 01 43 55.5 -3.0
GOMU sP sP 01 43 57.2 -3.9
GOMU PP **PP 01 45 24.7 -0.9**
GOMU PcP **PcP 01 45 56.4 +1.3**
GOMU S **S 01 49 56.6 -3.0**
GOMU pmax pmax
comp=Z,2.0nm,0.5s
GOMU pmax pmax
comp=Z,60nm,5.0s
GOMU LR LR
comp=Z,89nm,11.0s
GOMU LR LR
comp=Z,100nm,12.9s
GOMU LR LR
comp=Z,170nm,13.5s
CMAR Chiang Mai Arr 41.09 265 P **P 01 43 57.7 +0.1**
comp=Z,1.3nm,0.4s,baz=62,slow=5.5,SNR=8.0
CMAR LR LR 02 01 15.9
comp=Z,165nm,21.2s,baz=75,slow=37
comp=Z,1.3nm,0.4s
CMAR Chiang Mai Arr 41.09 265 P **P 01 43 58.5 +0.9**
BILL Bilibino 41.31 13 *eP* **P 01 43 58.5 -0.3**
BILL pmax pmax
comp=Z,1.0nm,0.9s
HNR Honiara 41.94 154 LR LR 01 59 37.7
comp=Z,138nm,19.4s,baz=328,slow=34
TIXI Tiksi 43.13 354 LR LR 02 09 00.0
comp=Z,62nm,18.5s,baz=180,slow=46
TIXI Tiksi 43.13 354⇓ *eP* **P 01 44 14.8 +1.3**
TIXI pmax pmax
comp=Z,6.0nm,2.5s
WMQ Urumqi 45.62 304 *eP* **P 01 44 35.3 +1.4**
WMQ PcP **PcP 01 46 09.8 -2.2**
WMQ LR LR
comp=Z,190nm,15.7s
WMQ LR LR
comp=Z,170nm,18.5s
KNRA Kununurra 46.59 198 P **P 01 44 42.2 +0.6**
ZAA0 Zalesovo Array 48.11 318 P **P 01 44 53.4 +0.2**
ZAA0 IAmb IAmb 01 45 07.7
comp=Z,8.7nm,1.4s
ZALV Zalesovo Beam 48.11 318 P **P 01 44 53.4 +0.3**
comp=Z,2.7nm,0.6s,baz=104,slow=7.4,SNR=9.0
ZALV PcP **PcP 01 46 19.0 -1.4**
comp=Z,0.5nm,0.4s,baz=107,slow=4.8,SNR=1.7
ZALV LR LR 02 06 14.0
comp=Z,201nm,18.3s,baz=130,slow=38
comp=Z,2.7nm,0.6s
ZALV Zalesovo Beam 48.11 318 P **P 01 44 52.7 -0.4**
ZALV Zalesovo Beam 48.11 318 P **P 01 44 52.7 -0.4**
ZALV 01 46 19.0
CTA Charters Tower 49.16 175 LR LR 02 04 40.3
comp=Z,115nm,21.6s,baz=354,slow=35
WB0 Warramunga Arr 49.34 190 P **P 01 45 02.1 -0.8**
MK31 Makanchi Array 49.39 308 P **P 01 45 03.6 +0.4**
MK31 IAmb IAmb 01 45 05.6
comp=Z,3.6nm,0.7s
MK31 Makanchi Array 49.39 308 P **P 01 45 03.6 +0.4**
MK31 pmax pmax
comp=Z,4.0nm,0.7s
MKAR Makanchi Array 49.39 308 P **P 01 45 03.2 +0.1**
comp=Z,4.5nm,0.7s,baz=91,slow=9.7,SNR=46
MKAR LR LR 02 07 15.9
comp=Z,194nm,18.5s,baz=91,slow=38
comp=Z,4.5nm,0.7s
MKAR Makanchi Array 49.39 308 P **P 01 45 03.5 +0.4**
MKAR Makanchi Array 49.39 308*ceP* **P 01 45 03.7 +0.6**
MKAR pmax pmax
comp=Z,5.0nm,0.6s
WRAB Tennant Creek 49.51 190⇑ *eP* **P 01 45 04.5 +0.3**
WRAB pmax pmax
comp=Z,9.0nm,0.9s
WB2 Warramunga Arr 49.52 190 P **P 01 45 04.2 -0.1**
WRA Warramunga Arr 49.52 190 P **P 01 45 04.7 +0.4**
comp=Z,6.3nm,0.7s,baz=8.5,slow=8.4,SNR=32
comp=Z,6.3nm,0.7s
WRA Warramunga Arr 49.52 190 *i* P **P 01 45 04.4 +0.1**
WRA pmax pmax
comp=Z,6.0nm,0.7s
MAKZ Makanchi 49.60 308 P **P 01 45 04.9 +0.1**
MAKZ Makanchi 49.60 308 P **P 01 45 04.9 +0.1**
MAKZ pmax pmax
comp=Z,3.0nm,0.9s
NRIK Noril'sk 50.79 338 LR LR 02 10 00.9
comp=Z,140nm,18.0s,baz=142,slow=40
NRIK Noril'sk 50.79 338 *eP* **P 01 45 12.3 -1.1**
NRIK pmax pmax
comp=Z,5.0nm,1.4s
KURK Kurchatov 51.74 313 P **P 01 45 20.6 -0.2**
KURK IAmb IAmb 01 45 23.6
comp=Z,9.8nm,0.7s
KURK Kurchatov 51.74 313*deP* **P 01 45 21.6 +0.8**
KURK pmax pmax
comp=Z,8.0nm,0.6s
KURBB Kurchatov Arra 51.80 313 LR LR 02 07 59.5
comp=Z,244nm,18.2s,baz=55,slow=37
KDAK Kodiak Island 52.48 38 P **P 01 45 26.1 -0.1**
comp=Z,2.5nm,0.4s,baz=270,slow=3.0,SNR=4.5
KDAK LR LR 02 06 31.5
comp=Z,239nm,20.7s,baz=258,slow=35
comp=Z,2.5nm,0.4s
IMAR Indian Mountai 53.01 27 P **P 01 45 26.6 -3.3**
PPLA Purkeypile 53.18 31 P **P 01 45 28.6 -2.8**
PPLA IAmb IAmb 01 45 51.9
comp=Z,8.8nm,1.2s
ASAR Alice Springs 53.24 190 P **P 01 45 31.9 -0.1**
comp=Z,0.6nm,0.4s,baz=4.7,slow=5.6,SNR=13
comp=Z,0.6nm,0.4s
ASAR Alice Springs 53.24 190 P **P 01 45 32.0 -0.1**
ASAR Alice Springs 53.24 190 P **P 01 45 32.0 -0.1**
H21K Melozitna Rive 53.33 28 P **P 01 45 28.8 -3.6**
KDJ Kajisay 53.44 303 P **P 01 45 33.8 +0.1**
KDJ Kajisay 53.44 303 P **P 01 45 33.8 +0.1**
KDJ pmax pmax
comp=Z,2.0nm,0.8s
BOOM Boomskoye usch 54.30 303 P **P 01 45 40.3 +0.3**
BOOM IAmb IAmb 01 45 43.8
comp=Z,3.2nm,0.6s
BOOM Boomskoye usch 54.30 303 P **P 01 45 40.3 +0.3**
BOOM pmax pmax
comp=Z,3.0nm,0.6s
KSH Kashi 54.78 300 P P 01 45 47.4 +3.9
KSH pmax pmax
comp=Z,4.0nm,0.6s
PSA00 Pilbara Seismi 55.04 206 P **P 01 45 45.4 +0.1**
AAK Ala-Archa 55.33 304 LR LR 02 09 52.7
comp=Z,141nm,21.4s,baz=69,slow=36
AAK Ala-Archa 55.33 304⇓ *eP* **P 01 45 48.6 +1.2**
AAK pmax pmax
comp=Z,11nm,2.5s
ILAR Eielson Array 55.70 29 P **P 01 45 49.0 -0.6**
comp=Z,0.9nm,0.9s,baz=260,slow=5.5,SNR=6.0
ILAR LR LR 02 09 07.9
comp=Z,69nm,19.6s,baz=258,slow=36
comp=Z,0.9nm,0.9s
ILAR Eielson Array 55.70 29 P **P 01 45 49.0 -0.6**
DZM Mont Dzumac 55.96 153 LR LR 02 06 53.0
comp=Z,114nm,21.8s,baz=27,slow=33
BRVK Borovoye 56.77 317 P **P 01 45 57.1 -0.3**
BRVK IAmb IAmb 01 46 21.6
comp=Z,6.7nm,0.9s
BRVK Borovoye 56.77 317*ceP* **P 01 45 57.8 +0.5**
BRVK pmax pmax
comp=Z,6.0nm,1.0s
SCRK Sand Creek 56.93 30 P **P 01 45 58.1 -0.3**
MSVF Nonsavu 57.92 139 LR LR 02 07 11.9
comp=Z,103nm,21.0s,baz=210,slow=32
KK31 Karatay Array 58.12 305 IAmb IAmb 01 46 20.8
comp=Z,7.8nm,0.9s
KKAR Karatay Array 58.12 305 P **P 01 46 07.4 +0.3**
KKAR Karatay Array 58.12 305 P **P 01 46 07.4 +0.3**
EPYK Eagle Plains 59.91 27 P **P 01 46 19.7 +0.5**
EPYK IAmb IAmb 01 46 35.4
comp=Z,16nm,1.4s
CHGR Chuyangaron 60.14 300 P **P 01 46 21.0 -0.2**
CHGR Chuyangaron 60.14 300 P **P 01 46 21.0 -0.2**
CHGR pmax pmax
comp=Z,23nm,0.8s

AFI Afiamalu 61.51 128 LR LR 02 11 07.2
comp=Z,85nm,18.7s,baz=3.5,slow=34
ARU Arti 62.95 322 LR LR 02 16 25.9
comp=Z,137nm,18.1s,baz=76,slow=38
ARU Arti 62.95 322 P **P 01 46 39.8 +0.1**
ARU IAmb IAmb 01 46 53.1
comp=Z,6.5nm,0.8s
ARU Arti 62.95 322*d iP* **P 01 46 40.3 +0.6**
ARU 01 47 21.0
ARU S **S 01 55 10.8 +2.9**
ARU SS **SS 01 59 13.3 +0.3**
ARU pmax pmax
comp=Z,14nm,1.5s
ARU MLR MLR
comp=Z,134nm,17.0s
ABKAR Akbulak array 63.85 314 P **P 01 46 46.2 +0.3**
DLBC Dease Lake 64.29 36 LR LR 02 12 40.7
comp=Z,133nm,21.3s,baz=289,slow=34
AKTO Aktyubinsk 64.74 315 LR LR 02 16 03.6
comp=Z,162nm,19.6s,baz=76,slow=37
BBB Bella Bella 67.11 42 LR LR 02 14 22.1
comp=Z,44nm,19.6s,baz=240,slow=34
KIRV Kirov 67.12 325 LR LR 02 17 50.8
comp=Z,85nm,20.2s,baz=75,slow=37
GEYT Alibeck 68.63 302 P **P 01 47 17.8 +1.1**
comp=Z,1.3nm,0.6s,baz=230,slow=22,SNR=2.5
GEYT LR LR 02 20 13.7
comp=Z,118nm,19.4s,baz=84,slow=38
comp=Z,1.3nm,0.6s
GEYT Alibeck 68.63 302 P **P 01 47 17.5 +0.8**
YKA Yellowknife Ar 70.12 29 P **P 01 47 25.6 +0.2**
comp=Z,0.7nm,0.6s,baz=299,slow=5.7,SNR=6.1
comp=Z,0.7nm,0.6s
YKA Yellowknife Ar 70.12 29 *i* P **P 01 47 26.8 +1.3**
YKA pmax pmax
comp=Z,1.0nm,0.6s
ARCES ARCESS Array B 71.64 341 P **P 01 47 35.5 +0.9**
comp=Z,3.4nm,0.9s,baz=49,slow=9.9,SNR=2.5
ARCES LR LR 02 22 21.7
comp=Z,75nm,21.6s,baz=82,slow=39
comp=Z,3.4nm,0.9s
ARCES ARCESS Array B 71.64 341 IAmb IAmb 01 48 02.7
comp=Z,11nm,1.2s
ARCES ARCESS Array B 71.64 341 P **P 01 47 35.5 +0.9**
ARCES pmax pmax
comp=Z,11nm,1.2s
YBH Yreka Blue Hor 74.45 51 LR LR 02 14 47.3
comp=Z,94nm,21.3s,baz=326,slow=31
URZ Urewera 74.51 152 LR LR 02 19 49.6
comp=Z,47nm,19.4s,baz=31,slow=35
PINE Pine Mountain 74.74 48 P **P 01 47 52.7 -0.9**
PINE IAmb IAmb 01 47 56.2
comp=Z,7.1nm,1.2s
RAR Rarotonga 74.85 125 LR LR 02 16 30.5
comp=Z,236nm,20.2s,baz=282,slow=32
FINES FINESS Array B 76.18 334 P **P 01 48 01.8 +0.5**
comp=Z,1.0nm,0.6s,baz=70,slow=6.3,SNR=8.1
comp=Z,1.0nm,0.6s
FINES FINESS Array B 76.18 334 *i* P **P 01 48 04.1 +2.8**
FINES pmax pmax
comp=Z,1.0nm,0.5s
KBZ Khabaz 76.80 313 P **P 01 48 05.5 +0.4**
comp=Z,1.6nm,0.6s,baz=108,slow=5.2,SNR=4.2
KBZ LR LR 02 24 47.4
comp=Z,125nm,19.3s,baz=65,slow=38
comp=Z,1.6nm,0.6s
KBZ Khabaz 76.80 313⇑ *eP* **P 01 48 05.2 +0.1**
KBZ pmax pmax
comp=Z,3.0nm,0.9s
KIV Kislovodsk 76.83 313 *eP* **P 01 48 03.9 -1.5**
KIV pmax pmax
comp=Z,3.0nm,1.1s
KIV MLR MLR
comp=Z,104nm,18.0s
GNI Garni 77.23 309 LR LR 02 25 04.5
comp=Z,62nm,19.8s,baz=84,slow=38
JMIC Jan Mayen 77.98 351 LR LR 02 26 56.4
comp=Z,16nm,18.2s,baz=90,slow=39
KVN Kaiserville 78.80 52 P **P 01 48 16.9 +0.3**
KVN Kaiserville 78.80 52 P **P 01 48 16.9 +0.3**
KVN pmax pmax
comp=Z,6.0nm,1.4s
NVAR Mina Array Bea 78.96 52 P **P 01 48 19.0 +1.4**
comp=Z,0.9nm,0.6s,baz=297,slow=5.5,SNR=7.5
NVAR LR LR 02 19 27.6
comp=Z,108nm,19.2s,baz=274,slow=33
comp=Z,0.9nm,0.6s
ELK Elko 79.90 49 LR LR 02 20 27.2
comp=Z,123nm,18.7s,baz=270,slow=33
PPT Papeete 80.31 116 LR LR 02 19 47.9
comp=Z,105nm,18.2s,baz=301,slow=33
AKASG Malin Array Be 81.09 324 P **P 01 48 28.4 -0.2**
comp=Z,0.2nm,0.3s,baz=47,slow=5.6,SNR=4.5
AKASG LR LR 02 26 56.2
comp=Z,132nm,18.5s,baz=42,slow=38
comp=Z,0.2nm,0.3s
AKASG Malin Array Be 81.09 324*ceP* **P 01 48 28.5 0.0**
HFS Hagfors 81.60 337 LR LR 02 28 50.8
comp=Z,74nm,18.8s,baz=42,slow=39
NB2 NORSAR Subarra 81.75 338 P **P 01 48 31.5 -0.4**
comp=Z,1.9nm,0.8s,baz=41,slow=5.3
NOA NORSAR Array B 81.75 338 P **P 01 48 31.1 -0.8**
comp=Z,0.5nm,0.6s,baz=41,slow=5.2,SNR=3.9
NOA LR LR 02 29 55.0
comp=Z,84nm,20.3s,baz=50,slow=39
comp=Z,0.5nm,0.6s
PDAR Pinedale Array 82.48 45 P **P 01 48 38.4 +2.0**
comp=Z,0.4nm,0.3s,baz=211,slow=0.9,SNR=3.9
PDAR LR LR 02 20 34.1
comp=Z,52nm,20.3s,baz=311,slow=32
comp=Z,0.4nm,0.3s
PFO Pinyon Flats O 82.61 56 LR LR 02 18 41.2
comp=Z,59nm,20.0s,baz=270,slow=31
SFJD Kangerlussuaq 83.56 5 LR LR 02 34 39.9
comp=Z,32nm,18.0s,baz=351,slow=42
RAYN Ar Rayn 84.58 294 P **P 01 48 47.5 +0.2**
RAYN Ar Rayn 84.58 294 P **P 01 48 47.5 +0.2**
RAYN pmax pmax
comp=Z,15nm,1.3s
BR131 Keskin Array S 84.79 313 P **P 01 48 47.5 -0.6**
BR131 IAmb IAmb 01 49 04.4
comp=Z,3.4nm,0.8s
BR131 Keskin Array S 84.79 313⇓ *eP* **P 01 48 48.2 +0.1**
BRTR Keskin Array B 84.79 313 P **P 01 48 49.0 +0.9**
comp=Z,1.2nm,0.7s,baz=92,slow=3.6,SNR=9.9
BRTR LR LR 02 31 02.5
comp=Z,73nm,18.8s,baz=74,slow=39
comp=Z,1.2nm,0.7s
BRTR Keskin Array B 84.79 313*ceP* **P 01 48 48.7 +0.6**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
PV23 Carpenter Ridg 85.20 48 P **P 01 48 50.1 -0.3**
ULM Lac du Bonnet 85.49 33 LR LR 02 25 17.5
comp=Z,76nm,21.7s,baz=296,slow=34
MMAI Mount Meron Ar 87.31 307 LR LR 02 33 12.6
comp=Z,77nm,18.1s,baz=234,slow=39
VRAC Vranov 88.20 328 LR LR 02 31 38.8
comp=Z,51nm,19.2s,baz=49,slow=38
ANMO Albuquerque 88.87 50 LR LR 02 23 20.9
comp=Z,79nm,21.1s,baz=294,slow=32
DAVOX Davos/Dischmat 93.11 330 LR LR 02 34 42.2
comp=Z,79nm,20.0s,baz=70,slow=38
TX31 Lajitas Ar. Si 94.07 53 P **P 01 49 30.8 -1.5**
TX31 IAmb IAmb 01 49 35.5
comp=Z,6.1nm,1.1s
TXAR Lajitas Array 94.08 53 P **P 01 49 33.9 +1.6**
comp=Z,0.9nm,0.8s,baz=311,slow=3.3,SNR=10.0
comp=Z,0.9nm,0.8s
TORD Torodi Ar. Bea 123.40 313 PKP **PKiKP 01 55 11.3 -0.2**
comp=Z,0.6nm,0.7s,baz=68,slow=1.3,SNR=8.1
LPAZ La Paz 149.02 72 PKPbc **PKiKP 01 56 03.2 -1.0**
comp=Z,1.9nm,0.7s,baz=264,slow=2.4,SNR=11
LPAZ La Paz 149.02 72 PKPbc **PKPbc 01 56 01.7 -1.2**
LPAZ La Paz 149.02 72 PKP2 **PKPbc 01 56 01.7 -1.2**
PLCA Paso Flores 150.72 122 PKPbc **PKiKP 01 56 07.4 +1.1**
comp=Z,1.7nm,0.9s,baz=252,slow=3.2,SNR=1.8

TRN 10 01:45:15.5, 15°33N×60°81W, h73km, MD3.6, 5C, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
DLPL	**La Plaine**	**0.42**	**270**	*eP*		Pn	01 45 29.5	+1.6
DLPL				*eS*		Sn	01 45 39.5	+2.5
ILAM	**Ilet Lapin Mar**	**0.56**	**186**	*eP*		Pn	01 45 30.6	+1.5
ILAM				*eS*		Sn	01 45 41.0	+1.9
MDN	**Morne-Daniel**	**0.56**	**269**	*eP*		Pn	01 45 30.6	+1.5
MDN				*eS*		Sn	01 45 42.2	+3.0
SVN	**Savane Anatole**	**0.59**	**215**	*eP*		Pn	01 45 30.8	+1.3
DSLB	**Salisbury**	**0.59**	**280**	*eP*		Pn	01 45 31.5	+1.9
DSLB				*eS*		Sn	01 45 42.6	+2.7
BAMF	**Morne Balai**	**0.60**	**212**	*eP*		Pn	01 45 31.1	+1.4
CXM	**Morne La Croix**	**0.62**	**214**⇑	*eP*		Pn	01 45 30.7	+0.7
GBMF	**Grand Be**	**0.63**	**213**⇑	*eP*		Pn	01 45 31.2	+1.3
MDVC	**Dominica, Viel**	**0.64**	**296**	*eP*		Pn	01 45 31.2	+1.3
MDVC				*eS*		Sn	01 45 42.2	+1.6
PCM	**Pelee Case Pet**	**0.64**	**217**⇑	*eP*		Pn	01 45 31.4	+1.4
PCM	**Pelee Case Pet**	**0.64**	**217**	*eP*		Pn	01 45 31.5	+1.5
PML	**Morne Lenard**	**0.65**	**213**⇑	*eP*		Pn	01 45 31.5	+1.3
FDF	**Fort de France**	**0.68**	**209**	*eP*		Pn	01 45 31.6	+1.1
FDF				*eS*		Sn	01 45 43.0	+1.5
MDCT	**Cottage Hill,**	**0.69**	**295**	*eP*		Pn	01 45 32.0	+1.5
MDCT				*eS*		Sn	01 45 43.5	+1.9
MAGL	**Barre de l'ile**	**0.76**	**324**	*i P*		Sn	01 45 33.0	+1.7
MAGL				*eS*		Sn	01 45 45.2	+2.1
LPMF	**Morne Lapointe**	**0.77**	**191**	*eP*		Pn	01 45 32.3	+1.0
ZAM	**Aeronautique**	**0.78**	**195**⇑	*eP*		Pn	01 45 32.5	+0.9
BIM	**Bigot**	**0.85**	**197**	*eP*		Pn	01 45 33.3	+1.0
BIM				*eS*		Sn	01 45 46.2	+1.4
MPOM	**Morne Pois Mar**	**0.88**	**183**	*eP*		Pn	01 45 34.0	+1.3
MPOM				*eS*		Sn	01 45 47.0	+1.5
TDBA	**Terre de Bas,**	**0.94**	**303**	*eP*		Pn	01 45 35.0	+1.5
TDBA				*eS*		Sn	01 45 48.9	+2.0
TBG	**Guadaloupe-3**	**0.95**	**303**	*eP*		Pn	01 45 35.1	+1.5
TBG				*eS*		Sn	01 45 48.9	+1.9
CBE	**Ff, Capester**	**1.06**	**314**	*eP*		Pn	01 45 36.6	+1.7
CBE				*eS*		Sn	01 45 52.0	+2.5
SLW	**Petit Monier**	**1.31**	**185**	*eP*		Pn	01 45 40.2	+2.1
SLW				*eS*		Sn	01 45 57.7	+2.7
SLBI	**Saint Lucia, B**	**1.31**	**187**	*eP*		Pn	01 45 39.0	+0.9
SLBI				*eS*		Sn	01 45 55.5	+0.5
ABD	**La Joyeuse, An**	**1.31**	**330**	*i P*		Pn	01 45 39.8	+1.7
ABD				*eS*		Sn	01 45 57.6	+2.5
SLCP	**Castries, St.**	**1.32**	**187**	*eP*		Pn	01 45 39.5	+1.2
SLCP				*eS*		Sn	01 45 56.7	+1.3
SLAC	**Saint Lucia, A**	**1.43**	**183**	*eP*		Pn	01 45 40.8	+1.1
SLAC				*eS*		Sn	01 45 59.5	+1.7
SLB	**Belfond**	**1.51**	**188**	*eP*		Pn	01 45 43.2	+2.4
SLB				*eS*		Sn	01 46 01.2	+1.4
MCLT	**Moule a Chique**	**1.62**	**184**	*eP*		Pn	01 45 43.6	+1.5
MCLT				*eS*		Sn	01 46 03.6	+1.3
MLYT	**Lee's Yard**	**1.92**	**316**	*eP*		Pn	01 45 48.5	+2.3
MLYT				*eS*		Sn	01 46 11.5	+2.1
ANBD	**Bethesda, Anti**	**1.94**	**332**	*eP*		Pn	01 45 47.7	+1.4
ANBD				*eS*		Sn	01 46 10.9	+1.0
MBFL	**Flemmings, Mon**	**1.95**	**317**	*eP*		Pn	01 45 48.4	+1.8
MBFL				*eS*		Sn	01 46 12.2	+2.0
BPA	**Boggy Peak**	**1.98**	**330**	*eP*		Pn	01 45 48.2	+1.2
BPA				*eS*		Sn	01 46 11.4	+0.5
ANDO	**Antigua, Disas**	**2.02**	**331**	*eP*		Pn	01 45 48.6	+1.0
ANDO				*eS*		Sn	01 46 12.9	+0.9
SVV	**Soufriere Volc**	**2.04**	**191**	*eP*		Pn	01 45 48.9	+1.1
SVV				*eS*		Sn	01 46 13.8	+1.5
SVOC	**Richmond Hill,**	**2.20**	**190**	*eP*		Pn	01 45 52.5	+2.6
SVOC				*eS*		Sn	01 46 17.4	+1.2
BBGH	**Gun Hill**	**2.49**	**151**	*eP*		Pn	01 45 56.3	+2.4
BBGH				*eS*		Sn	01 46 25.0	+1.7
ANWB	**Willy Bob**	**2.50**	**338**	*eP*		Pn	01 45 54.7	+0.7
ANWB				*eS*		Sn	01 46 24.1	+0.6
BBSP	**Saint Philip**	**2.57**	**149**	*eP*		Pn	01 45 58.1	+3.1
BBSP				*eS*		Sn	01 46 25.7	+0.4
SKOC	**St. Kitts, UWI**	**2.68**	**317**	*eP*		Pn	01 45 59.2	+2.7
SKOC				*eS*		Sn	01 46 29.1	+1.2
SKI	**Saint Kitts**	**2.72**	**317**	*eP*		Pn	01 45 59.5	+2.5
SKI				*eS*		Sn	01 46 30.9	+2.1
GCMP	**Grenada, Carri**	**2.89**	**192**	*eP*		Pn	01 46 00.1	+0.9
GCMP				*eS*		Sn	01 46 33.4	+0.5
SEUS	**St. Eustatius**	**2.99**	**316**	*eS*		Sn	01 46 37.6	+2.2
GRGR	**Grenville**	**3.28**	**195**	*eP*		Pn	01 46 05.9	+1.2
GRGR				*eS*		Sn	01 46 44.6	+2.0
GRFF	**Grenada Fort F**	**3.38**	**196**	*eP*		Pn	01 46 06.4	+0.4
SMRT	**St. Maarten**	**3.47**	**322**	*eP*		Pn	01 46 09.2	+2.1
SMRT				*eS*		Sn	01 46 46.6	-0.4
TOSP	**Speyside**	**4.02**	**176**	*eP*		Pn	01 46 16.1	+1.5
TRN	**Trinidad (W)**	**4.69**	**187**	*eP*		Pn	01 46 26.5	+2.7
TRN	**Trinidad (W)**	**4.69**	**187**	*eS*		Sn	01 47 17.3	+0.4

NEIC ***10*** *01:57:30.8±2.0, 25.07N±0.08×124.31E±0.08, h89km±7km, mb4.3/31, Error ellipse: s-maj=12.6km s-min=8.8km az=148.0*

NIED ***10*** *01:57:31.8, 25.00N×124.21E, h86km, MW4.3, Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁵Nm; Mrr1.05; Mθθ-1.46; Mφφ 0.41; Mrθ-2.10; Mθφ 0.29; Mφr-1.04; Fault plane solution: M0 2.69000×10¹⁵ NP1: φs127.00000°, δ22.00000°, λ147.00000°. NP2: φs248.00000°, δ78.00000°, λ71.00000°.*

JMA ***10*** *01:57:31.8±0.2, 25.07N±2.1×124.12E±0.7, h86km±2km, MD4.1/12, MV4.0/12, NW OFF ISHIGAKIJIMA IS*

JMA Felt I J1 at NW OFF ISHIGAKIJIMA IS .

IDC ***10*** *01:57:33.1±1.0, 25.16N×124.41E, h113km±8km, mb3.8/20, mbtmp4.2/23, MS3.2/6, Error ellipse: s-maj=12.7km s-min=11.0km az=54.0*

ISC 10 01:57:31.4±0.5, 25°04N±0°05×124°24E±0°03, h100km±5km, n108, σ1s24/107, mb4.3/39, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
JTJ	**Tarama**	**0.58**	**134**	P		**Pn**	**01 57 47.1**	**-0.7**
JTJ				S		**Sn**	**01 57 58.7**	**-1.3**
JTJ	**Tarama**	**0.58**	**134**	A		A	01 57 47.1	
	comp=E,44nm,0.4s,comp=E,42nm,0.7s							
JIJ	**Ishigaki jima**	**0.68**	**187**	P		**Pn**	**01 57 47.2**	**-1.4**
JIJ				S		**Sn**	**01 57 58.7**	**-2.8**
JIJ	**Ishigaki jima**	**0.68**	**187**	A		A	01 57 47.2	
	comp=E,10.0nm,2.0s,comp=E,6.0nm,3.4s							
JKRS	**Kuro-shima**	**0.83**	**195**	P		**Pn**	**01 57 49.1**	**-1.0**
JKRS				S		**Sn**	**01 58 02.1**	**-1.9**
JKRS	**Kuro-shima**	**0.83**	**195**	A		A	01 57 49.1	
	comp=E,16nm,2.3s,comp=E,13nm,0.7s							
IRIF	**Iriomote-Funau**	**0.84**	**213**	P		**Pn**	**01 57 49.0**	**-1.2**
IRIF				S		**Sn**	**01 58 02.0**	**-2.3**
IRIF	**Iriomote-Funau**	**0.84**	**213**	A		A	01 57 49.0	
	comp=E,17nm,1.2s,comp=E,16nm,1.2s							
JIRB	**Irabujima**	**0.87**	**104**	*i* P		**Pn**	**01 57 49.9**	**-0.6**
JIRB				*eS*		**Sn**	**01 58 03.2**	**-1.6**
JIRB	**Irabujima**	**0.87**	**104**	A		A	01 57 49.9	
	comp=E,8.0nm,0.9s,comp=E,15nm,2.0s							
JIKM	**Ikemajima**	**0.92**	**97**	*i* P		**Pn**	**01 57 50.8**	**-0.2**
JIKM				S		**Sn**	**01 58 05.0**	**-0.7**
JIKM	**Ikemajima**	**0.92**	**97**	A		A	01 57 50.8	
	comp=E,11nm,2.5s,comp=E,14nm,2.1s							
JMJ	**Miyako jima 2**	**0.98**	**103**	P		**Pn**	**01 57 52.0**	**+0.4**
JMJ2	**Miyako jima3**	**1.03**	**107**	*i* P		**Pn**	**01 57 52.1**	**0.0**
JMJ2				S		**Sn**	**01 58 07.3**	**-0.5**
JMJ2	**Miyako jima3**	**1.03**	**107**	A		A	01 57 52.1	
	comp=E,10.0nm,0.7s,comp=E,23nm,1.3s							
HATJ	**Hateruma jima**	**1.06**	**202**	P		**Pn**	**01 57 51.5**	**-1.0**
HATJ				S		**Sn**	**01 58 06.5**	**-1.8**
HATJ	**Hateruma jima**	**1.06**	**202**	A		A	01 57 51.5	
	comp=E,10.0nm,2.2s,comp=E,12nm,1.0s							
JOGS	**Gusukube**	**1.10**	**105**	P		**Pn**	**01 57 52.9**	**+0.1**
JOGS				S		**Sn**	**01 58 08.8**	**-0.3**
JOGS	**Gusukube**	**1.10**	**105**	A		A	01 57 52.9	
	comp=E,11nm,1.4s,comp=E,18nm,0.7s							
YOJ	**Yonaguni jima**	**1.26**	**243**	Pn		**Pn**	**01 57 54.2**	**-0.5**
YOJ	**Yonaguni jima**	**1.26**	**243**	P		**Pn**	**01 57 54.1**	**-0.6**
YOJ	**Yonaguni jima**	**1.26**	**243**	P		**Pn**	**01 57 54.2**	**-0.5**
YOJ				*eS*		**Sn**	**01 58 10.3**	**-2.0**
JYNG	**Yonagunijimaku**	**1.32**	**244**	P		**Pn**	**01 57 54.9**	**-0.5**
JYNG				*eS*		**Sn**	**01 58 11.4**	**-2.2**
TATO	**Taipei**	**2.50**	**269**			**Pn**	**01 58 09.9**	**-0.6**
NACB	**Ninganchiao**	**2.56**	**251**			**Pn**	**01 58 09.7**	**-1.6**
YHNB	**Yeheng**	**2.63**	**262**			**Pn**	**01 58 13.1**	**+0.8**
YHNB	**Yeheng**	**2.63**	**262**	P		**Pn**	**01 58 13.6**	**+1.3**
YULB	**Yu-li**	**3.15**	**239**			**Pn**	**01 58 16.6**	**-2.6**
SSLB	**Suanglung**	**3.25**	**248**	Pn		**Pn**	**01 58 18.7**	**-1.8**
SSLB	**Suanglung**	**3.25**	**248**	P		**Pn**	**01 58 20.6**	**+0.1**
TWG	**Pinlang**	**3.65**	**233**			**Pn**	**01 58 23.2**	**-2.6**
TPUB	**Ta-pu**	**3.73**	**243**			**Pn**	**01 58 25.7**	**-1.2**
TPUB	**Ta-pu**	**3.73**	**243**	P		**Pn**	**01 58 27.3**	**+0.4**
JOW	**Kunigami**	**4.04**	**63**	P		**Pn**	**01 58 28.9**	**-2.3**
	38nm,0.2s,baz=126,slow=8.3,SNR=15							
JOW				S		**Sn**	**01 59 15.7**	**-1.9**
	38nm,0.3s,baz=162,slow=20,SNR=1.8							
JOW	**Kunigami**	**4.04**	**63**	Pn		**Pn**	**01 58 27.6**	**-3.6**

KSAR	Wonju Array Be	12.74	13	Pn		Pn	02 00 26.5 -2.4
KSRS	Korea Array	12.76	13	P		Pn	02 00 30.2 +1.1
	4.6nm,0.9s,baz=197,slow=13,SNR=18						
KSRS				LR		LR	02 05 40.3
	comp=Z,46nm,18.4s,baz=200,slow=39						
KS19	Wonju Array Si	12.80	13	Pn		Pn	02 00 28.5 -1.1
ENH	Enshi	14.07	295	Pn		Pn	02 00 44.3 -2.0
JCJ	Chichijima	16.25	79	LR		LR	02 06 46.4
	comp=Z,189nm,18.3s,baz=102,slow=34						
BJT	Baijiatuau	16.40	338			Pn	02 01 15.3 -0.2
MJAR	Matsushiro Arr	16.57	43	P		P	02 01 18.5 -0.1
	1.1nm,0.4s,baz=224,slow=8.6,SNR=8.1						
DAV	Davao City (W)	17.92	176	LR		LR	02 07 48.0
	comp=Z,76nm,21.9s,baz=356,slow=34						
MYLDM	Lahad Datu	20.50	197	P		P	02 02 02.8 +1.1
MYLDM				IAmb		IAmb	02 02 05.4
	comp=Z,22nm,1.3s						
SGSI	Sangihe	21.27	176	P		P	02 02 10.6 +0.7
TOLI2	Tolitoli	24.03	189	P		P	02 02 35.6 -1.6
TOLI2				IAmb		IAmb	02 02 37.9
	comp=Z,15nm,1.4s						
TNTI	Ternate	24.32	172	P		P	02 02 40.9 +1.0
	comp=Z,33nm,1.0s						
KMSI	Cibinong	24.33	181	P		P	02 02 40.5 +0.6
	comp=Z,50nm,0.6s						
CMAR	Chiang Mai Arr	24.37	259	P		P	02 02 43.8 +3.4
	comp=Z,2.7nm,0.2s,baz=48,slow=7.4,SNR=6.3						
	comp=Z,2.7nm,0.2s						
MRSI	Marisa	24.52	186	P		P	02 02 42.1 +0.4
	comp=Z,15nm,0.6s						
KLR	Kul'dur	24.85	12	P		P	02 02 44.6 +0.2
	comp=Z,1.3nm,0.6s,baz=165,slow=16,SNR=4.0						
KLR				pP		pwP	02 03 07.0 +0.8
	comp=Z,0.7nm,0.5s,baz=216,slow=8.9,SNR=2.2						
	comp=Z,1.3nm,0.6s						
SBUM	Sibu	25.28	209	P		P	02 02 48.9 +0.3
SBUM				IAmb		IAmb	02 02 50.5
	comp=Z,3.9nm,0.6s						
LBMI	Labuha	25.73	172	P		P	02 02 53.7 +1.0
	comp=Z,18nm,1.0s						
SMKI	Samarinda	26.24	196	P		P	02 02 57.3 0.0
SONM	Songino Array	26.77	333	P		P	02 03 02.1 +0.1
	comp=Z,0.5nm,0.3s,baz=142,slow=7.5,SNR=3.7						
SONM				pP		pP	02 03 27.4 +3.5
	comp=Z,1.7nm,0.9s,baz=147,slow=9.0,SNR=3.0						
SONM				LR		LR	02 14 16.4
	comp=Z,80nm,19.4s,baz=130,slow=38						
	comp=Z,0.5nm,0.3s						
SONM	Songino Array	26.77	333	IAmb		IAmb	02 03 09.7
	comp=Z,1.0nm,0.8s						
SANI	Sanana	26.99	176	P		P	02 03 04.9 +0.9
	comp=Z,3μmcomp=Z,763nmcomp=Z,18nm,0.7s						
KRJI	Kerinci	34.86	223	P		P	02 04 12.8 -0.6
MA2	Magadan	39.16	21	LR		LR	02 20 59.8
	comp=Z,27nm,18.3s,baz=168,slow=36						
MK31	Makanchi Array	39.70	314	P		P	02 04 54.0 +0.1
MK31				IAmb		IAmb	02 04 55.2
	comp=Z,3.2nm,0.8s						
MKAR	Makanchi Array	39.70	314	P		P	02 04 53.9 0.0
	comp=Z,2.9nm,0.6s,baz=99,slow=10,SNR=36						
MKAR				pP		pwP	02 05 20.4 +1.8
	comp=Z,0.9nm,0.6s,baz=90,slow=11,SNR=3.5						
	comp=Z,2.9nm,0.6s						
MKAR	Makanchi Array	39.70	314	P		P	02 04 53.7 -0.2
MAKZ	Makanchi	39.91	314	P		P	02 04 55.5 -0.1
MAKZ				IAmb		IAmb	02 04 57.1
	comp=Z,4.9nm,0.8s						
ZAA0	Zalesovo Array	41.08	325	P		P	02 05 04.1 -1.1
ZAA0				IAmb		IAmb	02 05 05.6
	comp=Z,13nm,1.3s						
ZALV	Zalesovo Beam	41.08	325	P		P	02 05 04.7 -0.4
	comp=Z,3.6nm,0.4s,baz=119,slow=7.9,SNR=15						
	comp=Z,3.6nm,0.4s						
ZALV	Zalesovo Beam	41.08	325	P		P	02 05 04.2 -0.9
KDJ	Kajisay	42.18	306	P		P	02 05 14.4 -0.1
KDJ				IAmb		IAmb	02 05 18.0
	comp=Z,3.7nm,1.1s						
COEN	Coen	42.94	152	P		P	02 05 20.0 -0.6
BOOM	Boomskoye usch	43.15	306	P		P	02 05 22.8 +0.5
KURK	Kurchatov	43.26	318	P		P	02 05 23.0 +0.2
KURK				IAmb		IAmb	02 05 23.4
	comp=Z,11nm,1.4s						
AAK	Ala-Archa	44.22	306	P		P	02 05 30.9 0.0
AAK				IAmb		IAmb	02 05 38.8
	comp=Z,3.8nm,1.2s						
WRA	Warramunga Arr	45.78	167	P		P	02 05 43.5 +0.3
	comp=Z,9.2nm,0.7s,baz=349,slow=8.5,SNR=48						
WRA				PcP		PcP	02 07 19.1 -0.2
	comp=Z,0.8nm,0.8s,baz=351,slow=3.8,SNR=2.3						
	comp=Z,9.2nm,0.7s						
WRA	Warramunga Arr	45.78	167	P		P	02 05 44.0 +0.7
PSA00	Pilbara Seismi	46.53	186	P		P	02 05 48.4 -0.6
KKAR	Karatay Array	47.18	306	P		P	02 05 53.4 -0.6
KBL	Kabul	48.32	295	P		P	02 06 03.7 +0.5
KBL				IAmb		IAmb	02 06 05.4
	comp=Z,8.7nm,0.8s						
BRVK	Borovoye	48.87	320	P		P	02 06 06.8 -0.1
BRVK				IAmb		IAmb	02 06 08.2
	comp=Z,7.2nm,1.2s						
AS31	Alice Springs	49.32	168	IAmb		IAmb	02 06 11.9
	comp=Z,3.4nm,0.6s						
ASAR	Alice Springs	49.32	168	P		P	02 06 11.6 +1.0
	comp=Z,6.0nm,0.5s,baz=352,slow=10,SNR=69						
ASAR				PcP		PcP	02 07 32.4 +0.5
	comp=Z,1.5nm,0.7s,baz=9.2,slow=3.1,SNR=5.5						
	comp=Z,6.0nm,0.5s						
NRIK	Noril'sk	49.33	344	P		P	02 06 08.5 -1.6
	comp=Z,2.4nm,0.6s,baz=124,slow=8.1,SNR=3.6						
	comp=Z,2.4nm,0.6s						
CTA	Charters Tower	49.71	152	LR		LR	02 26 23.7
	comp=Z,25nm,19.8s,baz=248,slow=35						
CTAO	Charters Tower	49.71	152	P		P	02 06 14.0 +0.4
CTAO				IAmb		IAmb	02 06 15.5
	comp=Z,5.6nm,0.9s						
ABKAR	Akbulak array	54.84	314	P		P	02 06 51.5 +0.3
ARU	Arti	56.11	322	P		P	02 06 59.3 -0.9
GEYT	Alibeck	56.77	300	P		P	02 07 07.4 +2.2
	comp=Z,3.6nm,0.7s,baz=191,slow=6.8,SNR=6.1						
	comp=Z,3.6nm,0.7s						
GEYT	Alibeck	56.77	300	IAmb		IAmb	02 07 07.5
	comp=Z,5.1nm,1.0s						
GYA0B	ALIBECK ARRAY	56.77	300	P		P	02 07 05.6 +0.4
STKA	Stephens Creek	58.98	163	P		P	02 07 21.1 +0.6
	comp=Z,4.5nm,0.7s,baz=340,slow=6.1,SNR=8.1						
	comp=Z,4.5nm,0.7s						
STKA	Stephens Creek	58.98	163	IAmb		IAmb	02 07 21.7
	comp=Z,1.0nm,0.8s						
KBZ	Khabaz	67.11	309	P		P	02 08 15.3 +1.0
	comp=Z,4.5nm,0.8s,baz=45,slow=1.4,SNR=7.3						
	comp=Z,4.5nm,0.8s						
IL31		67.17	28	P		P	02 08 12.2 -2.2
ILAR	Eielson Array	67.17	28	P		P	02 08 13.8 -0.5
	comp=Z,0.4nm,0.6s,baz=252,slow=5.3,SNR=7.6						
	comp=Z,0.4nm,0.6s						
KIV	Kislovodsk	67.21	309	P		P	02 08 15.7 +0.6
J26L	Joseph Creek	68.63	28	P		P	02 08 23.1 -0.5
J26L				IAmb		IAmb	02 08 29.0
	comp=Z,2.3nm,0.9s						
BCAR	Beaver Creek A	69.75	29	P		P	02 08 30.6 +0.1
ARCES	ARCESS Array B	69.78	338	P		P	02 08 30.4 -0.2
	comp=Z,0.5nm,0.4s,baz=68,slow=7.1,SNR=8.5						
	comp=Z,0.5nm,0.4s						
FINES	FINESS Array B	72.10	330	P		P	02 08 44.0 -0.7
	comp=Z,0.7nm,0.5s,baz=20,slow=6.1,SNR=7.5						
	comp=Z,0.7nm,0.5s						
AKASG	Malin Array Be	74.07	319	P		P	02 08 55.5 -0.9
	comp=Z,0.4nm,0.5s,baz=48,slow=5.5,SNR=6.7						
	comp=Z,0.4nm,0.5s						
AKASG	Malin Array Be	74.07	319	IAmb		IAmb	02 08 57.2
	comp=Z,2.5nm,1.2s						
P33M	Teslin, Yukon	74.73	30	P		P	02 09 01.4 +1.1
P33M				IAmb		IAmb	02 09 04.3
	comp=Z,2.4nm,0.8s						
BRTR	Keskin Array B	74.89	307	P		P	02 09 02.4 +0.7
	comp=Z,3.4nm,0.8s,baz=95,slow=5.0,SNR=17						
	comp=Z,3.4nm,0.8s						
BRTR	Keskin Array B	74.89	307	P		P	02 09 01.9 +0.2
RES	Resolute Bay	77.36	10	P		P	02 09 14.8 +0.1
	comp=Z,0.8nm,0.7s,baz=299,slow=11,SNR=2.4						
	comp=Z,0.8nm,0.7s						
NOA	NORSAR Array B	78.75	333	P		P	02 09 22.6 -0.2
	comp=Z,0.7nm,0.7s,baz=59,slow=5.2,SNR=2.5						
	comp=Z,0.7nm,0.7s						
YKA	Yellowknife Ar	81.08	24	P		P	02 09 35.5 +0.3
	comp=Z,1.6nm,0.7s,baz=303,slow=5.6,SNR=9.3						
	comp=Z,1.6nm,0.7s						
YKA	Yellowknife Ar	81.08	24	P		P	02 09 35.4 +0.1
CLL	Collm	83.02	324	eP		P	02 09 46.0 +0.4
GERES	GERESS Array B	83.92	322	P		P	02 09 49.9 -0.5
	comp=Z,0.7nm,0.9s,baz=17,slow=3.6,SNR=3.8						
	comp=Z,0.7nm,0.9s						

DJA 10 02:11:07.2±0.4, 0°N±3°×12°2E±°, h130km±5km, M3.9/11, mb4.4/3, mB4.6/1, MLv3.6/11, Mw(mB)3.8/1, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MRSI	Marisa	0.41	282	P		Pn	02 11 27.0	+1.2
MRSI				S		Sn	02 11 42.7	+2.9
APSI	Ampana	1.47	208	P		Pn	02 11 34.9	0.0
APSI				S		Sn	02 11 56.7	+0.7
KMSI	Cibinong	1.65	84	P		Pn	02 11 37.2	+0.2
KMSI				S		Sn	02 12 00.3	+0.6
MPSI	Mapaga	2.44	269	P		Pn	02 11 47.0	+0.3
MPSI				S		Sn	02 12 17.5	+0.5
TTSI	Tana Toraja	4.24	216	P		Pn	02 12 10.0	-0.2
TTSI				S		Sn	02 12 59.6	+0.5
SGKI	Sangatta, Kali	4.82	259	P		Pn	02 12 16.8	-1.2
SMKI	Samarinda	5.20	261	P		Pn	02 12 23.0	0.0
	3.5nm219nm,0.6s							
BNSI	Bone	5.26	205	P		Pn	02 12 23.9	+0.1
	0.1nm14nm,0.6s							
LBMI	Labuha	5.26	101	P		Pn	02 12 24.1	+0.3

KRSC 10 02:15:41.4±1.0, 54.78N×163.18E, h20km±19km, ML3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MKZ	Mys Kozlova	0.87	256	eP		Pb	02 15 57.9	+0.1
MKZ				eS		Sn	02 16 10.1	-0.4
KBTR	Krutoberegovo	1.45	352	eP		Pn	02 16 06.7	+0.3
KBG	Krutoberegovo	1.50	350	eP		Pn	02 16 07.6	+0.5
BKI	Bering	1.66	74	eP		Pb	02 16 12.0	+0.7
BKI				eS		Sb	02 16 32.2	+0.5
TUMR	Tumrok	1.82	287	eP		Pb	02 16 13.1	-0.9
TUMR				eS		Sb	02 16 37.8	+1.4
BZGR	Bezymyannyi-Gr	1.83	310	eP		Pb	02 16 13.2	-1.1
BZWR	Bezymyannyi-We	1.94	309	eP		Pb	02 16 15.0	-1.1
KMNR	Kamenistaya	1.95	301	eP		Pb	02 16 15.0	-1.2
KIRR	Kirishev	2.00	307	eP		Pb	02 16 16.1	-1.1
SMKR	Semkarok	2.05	332	eP		Pb	02 16 17.1	-0.8
KPT	Kopyto	2.06	306	eP		Pb	02 16 16.7	-1.5
KRSR	Krestovskiy	2.07	315	eP		Pn	02 16 16.1	+1.0
KLY	Klyuchi	2.10	318	eP		Pn	02 16 15.7	+0.3
BDR	Baidarnaya	2.11	329	eP		Pn	02 16 17.2	+1.6
SRKR	Sorokina	2.20	330	eP		Pb	02 16 18.9	-1.5
KII	Karymskiy	2.31	253	eP		Pb	02 16 20.5	-1.8
SPN	Mys Shipunski	2.52	229	eP		Pn	02 16 22.5	+1.4
SPN				eS		Sn	02 16 52.8	+1.7
NLC	Nalytchevo	2.78	236	eS		Sn	02 16 59.9	+2.3
ESO	Esso	2.80	296	eP		Pn	02 16 26.1	+1.0
SDLR	Sedlovina	2.95	241	eP		Pn	02 16 30.2	+3.1
SMAR	Somma	3.00	241	eP		Pn	02 16 30.8	+2.9
KRER	Koryakskii	3.00	242	eP		Pn	02 16 31.1	+3.1
UGLR	Uglovaya	3.02	240	eP		Pn	02 16 30.7	+2.6
KRX	Arik	3.03	244	eP		Pn	02 16 31.3	+3.1
AVH	Avacha	3.03	242	eP		Pb	02 16 31.8	-2.8
AVH				eS		Sb	02 17 08.1	-3.1
KOK	Koryaka	3.07	243	eP		Pn	02 16 31.8	+3.0
DALK	Dalny	3.15	238	eP		Pn	02 16 33.0	+3.2
GNL	Ganaly	3.26	253	eP		Pn	02 16 34.5	+3.1
KRMR	Karymshinskiy	3.58	239	eP		Pn	02 16 39.1	+3.5
MTVR	Mutnovka	3.76	234	eP		Pn	02 16 41.2	+2.9
GRL	Gorelyy	3.77	236	eP		Pn	02 16 42.0	+3.6
ASAK	Asacha	3.96	235	eP		Pn	02 16 45.3	+4.3

*IDC **10** 02:31:37.4±0.9, 11.48N×141.01E, h0km, mb4.0/11, mbtmp3.9/11, MS2.9/3, Error ellipse: s-maj=36.1km s-min=20.8km az=89.0*
*NEIC **10** 02:31:45.3±1.4, 11.19N±0.1×141.1E±0.06, h38km±10km, mb4.3/9, Error ellipse: s-maj=20.6km s-min=7.9km az=183.0*

ISC 10 02:31:44.4±0.8, 11.9N±0.1×141.1E±0.1, h35km, n27, σ0°93/22, mb4.2/16, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GUMO	Guam	4.09	65	LR		LR	02 33 41.1	
	comp=Z,33nm,20.4s,baz=97,slow=29							
GUMO	Guam	4.09	65	Pn		Pn	02 32 44.2	-0.2
JCJ	Chichijima	15.19	4	LR		LR	02 40 06.5	
	comp=Z,140nm,21.9s,baz=98,slow=33							
JCJ	Chichijima	15.19	4	Pn		Pn	02 35 15.6	-0.8
KSRS	Korea Array	28.08	337	LR		LR	02 47 34.7	
	comp=Z,44nm,19.2s,baz=135,slow=34							
SBUM	Sibu	30.08	254	P		P	02 37 50.1	-0.6
SBUM				IAmb		IAmb	02 38 12.6	
	comp=Z,5.3nm,1.1s							
WRA	Warramunga Arr	32.29	192	P		P	02 38 03.4	-6.7
	comp=Z,0.7nm,0.7s,baz=8.9,slow=10.0,SNR=3.6							
	comp=Z,0.7nm,0.7s							
MDJ	Mudanjiang	34.09	345	P		P	02 38 25.3	-0.3
ASAR	Alice Springs	36.00	191	P		P	02 38 38.1	-4.1
	comp=Z,0.3nm,0.5s,baz=20,slow=12,SNR=8.8							
	comp=Z,0.3nm,0.5s							
ASAR	Alice Springs	36.00	191	P		P	02 38 42.2	-0.1
KULM	Kulim	40.46	264	P		P	02 39 20.5	+0.6
KULM				IAmb		IAmb	02 39 22.4	
	comp=Z,8.8nm,0.9s							
SONM	Songino Array	46.10	328	P		P	02 40 07.2	+1.9
	comp=Z,0.7nm,0.5s,baz=138,slow=6.9,SNR=3.3							
	comp=Z,0.7nm,0.5s							
MK31	Makanchi Array	60.19	317	P		P	02 41 48.4	-0.5
MKAR	Makanchi Array	60.19	317	P		P	02 41 49.4	+0.5
	comp=Z,0.5nm,0.4s,baz=98,slow=9.6,SNR=8.3							
	comp=Z,0.5nm,0.4s							
ZAA0	Zalesovo Array	60.91	326	P		P	02 41 52.5	-1.1
ZAA0				IAmb		IAmb	02 41 58.4	
	comp=Z,2.1nm,1.1s							
ZALV	Zalesovo Beam	60.91	326	P		P	02 41 53.1	-0.5
	comp=Z,0.8nm,0.4s,baz=115,slow=7.4,SNR=4.1							
	comp=Z,0.8nm,0.4s							
KURK	Kurchatov	63.54	321	P		P	02 42 11.6	+0.3
KURK				IAmb		IAmb	02 42 17.1	
	comp=Z,2.5nm,0.8s							
KURBB	Kurchatov Arra	63.58	321	P		P	02 42 12.2	+0.7
	comp=Z,1.7nm,0.8s,baz=106,slow=6.8,SNR=5.9							
	comp=Z,1.7nm,0.8s							
BOOM	Boomskoye usch	63.77	312	P		P	02 42 14.3	+1.1
BOOM				IAmb		IAmb	02 42 20.6	
	comp=Z,3.3nm,1.2s							
KK31	Karatay Array	67.81	312	P		P	02 42 38.4	-0.6
KKAR	Karatay Array	67.81	312	P		P	02 42 38.4	-0.6
ILAR	Eielson Array	71.71	25	P		P	02 43 02.7	+0.1
	comp=Z,0.6nm,0.6s,baz=247,slow=5.9,SNR=12							
	comp=Z,0.6nm,0.6s							
YKA	Yellowknife Ar	86.08	27	P		P	02 44 22.7	+1.4
	comp=Z,0.5nm,0.4s,baz=289,slow=4.8,SNR=6.1							
	comp=Z,0.5nm,0.4s							
ARCES	ARCESS Array B	87.56	341	P		P	02 44 27.9	-0.6
	comp=Z,0.9nm,0.6s,baz=60,slow=6.0,SNR=5.1							
	comp=Z,0.9nm,0.6s							
NVAR	Mina Array Bea	90.88	51	P		P	02 44 46.1	+1.1
	comp=Z,0.9nm,0.9s,baz=254,slow=6.4,SNR=2.5							
	comp=Z,0.9nm,0.9s							
NVAR	Mina Array Bea	90.88	51	P		P	02 44 44.2	-0.8
FINES	FINESS Array B	91.12	334	P		P	02 44 43.6	-1.7
	comp=Z,1.4nm,0.4s,baz=57,slow=4.1,SNR=18							
	comp=Z,1.4nm,0.4s							

*DDA **10** 02:31:45.6±0.0, 35.58N×28.02E, h6km±3km, ML2.5*
*ATH **10** 02:31:47.9, 35.93N×27.78E, h63km±5km, ML2.8/2, Error ellipse: s-maj=6.7km s-min=1.5km az=129.0*
*NIC **10** 02:31:47.5±0.0, 35.60N×28.12E, h23km±1km, MI3.5/4*
*ISK **10** 02:31:48.3, 35.70N×28.01E, h26km, ML2.9/34*
*THE **10** 02:31:50.9, 35.77N×27.91E, h20km±2km, ML2.7/3, Error ellipse: s-maj=4.7km s-min=0.9km az=123.0*
*HLW **10** 02:31:50.1, 35.35N×28.16E, h21km±14km, Md3.4*

ISC 10 02:31:47.7±1.3, 35.64N±0.03×28.05E±0.03, h26km±14km, n85, σ1°05/106, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ARG	Arkhangelos	0.58	6	P		Pn	02 31 60.0	-0.3
ARG				S		Sn	02 32 08.8	-0.1
ARG				AML		AML	02 32 10.1	
	comp=N,1074μm,0.2s							
ARG				AML		AML	02 32 13.6	
	comp=E,1076μm,0.3s							
ARG	Arkhangelos	0.58	6	P		Pn	02 32 00.0	-0.3
ARG				S		Sn	02 32 08.8	-0.1
	comp=E,540nm,0.2s							
ARG	Arkhangelos	0.58	6	PG		Pn	02 32 00.0	-0.3
ARG	Arkhangelos	0.58	6	P		Pn	02 31 60.0	-0.3
ARG				S		Sn	02 32 09.3	+0.4
KARP	Karpathos	0.73	263	P		Pn	02 32 02.7	+0.4
KARP				S		Sn	02 32 13.6	+0.9
KARP				AML		AML	02 32 15.0	
	comp=N,2884μm,0.2s							
KARP				AML		AML	02 32 15.0	
	comp=E,2950μm,0.3s							
KARP	Karpathos	0.73	263	P		Pn	02 32 02.8	+0.4
KARP				S		Sn	02 32 13.5	+0.9
	comp=E,1μm,0.3s							
KARP	Karpathos	0.73	263	PG		Pn	02 32 02.8	+0.4
KARP				SG		Sn	02 32 13.9	+1.3
KARP	Karpathos	0.73	263	P		Pn	02 32 02.7	+0.4
KARP				S		Sn	02 32 14.3	+1.7
KARP				AML		AML	02 32 14.5	
	comp=E,2.9nm,0.2s							
KARP				AML		AML	02 32 14.5	
	comp=E,2.9nm,0.2s							
KARP				AML		AML	02 32 14.7	
	comp=E,2.9nm,0.3s							
KARP				AML		AML	02 32 14.7	
	comp=E,2.9nm,0.3s							
TURN	Turunc	1.15	8	PN		Pb	02 32 08.8	-0.1
TURN				SN		Sn	02 32 22.8	-0.1
TURN	Turunc	1.15	8	P		Pb	02 32 08.8	-0.1
TURN				S		Sn	02 32 23.8	+1.0
TURN				i AML		AML	02 32 25.0	
	comp=E,142nm,0.4s							
TURN				i AML		AML	02 32 27.0	
	comp=E,134nm,0.2s							
DAT	Datca	1.15	341	P		Pn	02 32 08.0	-0.3
DAT				S		Sb	02 32 21.5	-2.2
DAT	Datca	1.15	341	PN		Pn	02 32 08.0	-0.3
DAT				SN		Sn	02 32 22.9	-0.3
DAT	Datca	1.15	341	P		Pn	02 32 08.0	-0.3
DAT				S		Sn	02 32 23.0	-0.3
DAT				i AML		AML	02 32 23.0	
	comp=E,309nm,0.4s							
DAT				i AML		AML	02 32 23.0	
	comp=E,353nm,0.4s							
NIS1	Nisyros Isl.	1.19	324	P		Pn	02 32 08.3	-0.4
NIS1	Nisyros Isl.	1.19	324	PN		Pn	02 32 08.5	-0.2
DALY	Dalyan (Mula)	1.27	22	PN		Pb	02 32 11.0	0.0
FETY	Fethiye	1.30	40	PN		Pn	02 32 10.7	+0.5
FETY	Fethiye	1.30	40	P		Pb	02 32 14.0	+2.5
AKAS	Kas	1.40	64	PN		Pn	02 32 12.6	+1.0
AKAS	Kas	1.40	64	P		Pn	02 32 11.3	-0.3
AKAS				S		Sn	02 32 29.8	+0.6
AKAS				i AML		AML	02 32 32.0	
	comp=E,49nm,0.2s							
AKAS				i AML		AML	02 32 32.0	
	comp=E,75nm,0.3s							
KOSK	Kos Island	1.41	322	PN		Pn	02 32 11.7	+0.1
YER	Yerkesik	1.50	7	P		Pn	02 32 13.8	+0.8
YER				S		Sn	02 32 31.9	0.0
YER	Yerkesik	1.50	7	PN		Pn	02 32 13.4	+0.4
BDRM	Kayabasi	1.51	341	P		Pn	02 32 12.2	-0.8
BDRM				i AML		AML	02 32 31.0	
	comp=E,246nm,0.2s							
BDRM				i AML		AML	02 32 31.0	
	comp=E,232nm,0.3s							
BDRM				S		Sn	02 32 31.1	-0.7
BODT	Bodrum	1.54	337	P		Pn	02 32 12.7	-0.8
BODT				S		Sn	02 32 31.5	-1.2
BODT	Bodrum	1.54	337	PN		Pn	02 32 13.6	+0.1
ZKR	Zakros	1.59	251	P		Pn	02 32 15.9	+1.8
ZKR	Zakros	1.59	251	P		Pb	02 32 16.5	+0.2
ZKR	Zakros	1.59	251	PN		Pn	02 32 15.2	+1.1
ZKR	Zakros	1.59	251	P		Pn	02 32 14.6	+0.6
ZKR				S		Sb	02 32 36.1	+0.1
CAME	Cameli-Denizli	1.65	37	PN		Pn	02 32 15.9	+0.8
MLSB	Milas	1.67	353	PN		Pn	02 32 15.2	-0.1
ELL	Elmali	1.87	53	PN		Pn	02 32 19.1	+1.0
ELL	Elmali	1.87	53	S		Sn	02 32 41.1	+0.2
TAVA	DENIZLI_Tavas	1.95	21	P		Pn	02 32 19.4	+0.2
TAVA				S		Sb	02 32 45.6	-1.0
TAVA				i AML		AML	02 32 51.0	
	comp=E,24nm,0.4s							
TAVA				i AML		AML	02 32 55.0	
	comp=E,31nm,0.4s							
GOLH	Golhisar	2.01	37	P		Pn	02 32 21.0	+1.0
AYDN	Tasoluk	2.02	356	P		Pn	02 32 21.0	+0.9
AYDN				S		Sn	02 32 44.6	-0.1
AYDN				i AML		AML	02 32 46.0	
	comp=E,48nm,0.6s							
AYDN				i AML		AML	02 32 54.0	
	comp=E,44nm,0.5s							
APMY	Acipayam-Deniz	2.09	28	PN		Pn	02 32 21.6	+0.5
GCAM	G?zelcaml?	2.16	343	PN		Pn	02 32 22.6	+0.6
THR8	Santorini-Mono	2.22	291	P		Pn	02 32 22.7	-0.1
SANT	Santorini	2.22

RYAN	**Fayoum** baz=163	**6.80 163**	PN	**Pn**	**02 33 25.4**	**-0.4**
NBNS	**Bani Suef** baz=157	**7.52 158**	PN	**Pn**	**02 33 34.7**	**-0.9**

IDC ***10*** *02:42:11.8±2.1, 24.°73N×122.°25E, h0km, mb3.5/4, mbtmp3.5/4, MS3.5/2, Error ellipse: s-maj=173.6km s-min=23.2km az=65.0*
TAP ***10*** *02:42:22.4, 24.°82N×122.°30E, h86km, ML3.8, C*
JMA ***10*** *02:42:22.2±0.2, 25.°1N×122.°3E±0.4, h90km±2km, MV3.1/13, TAIWAN REGION*
ISC 10 02:42:22.4±0.9**, 24.°77N**±0.°03×**122.°29E**±0.°02**, h88**km±5km**, n127, σ0999/200, mb3.5/4, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EGS	baz=266	**0.34**	**284**	*e*P		**Pn**		**02 42 35.9**	**+0.2**
EGS	baz=266			*e*S		**Sn**		**02 42 45.8**	**+0.1**
TWB1	**Santiao Chiao** baz=297	**0.37**	**311**	*i* P		**Pn**		**02 42 36.1**	**+0.2**
TWB1	baz=297			*i* S		**Sn**		**02 42 45.5**	**-0.5**
NTC	**Toucheng** baz=274	**0.43**	**282**	*i* P		**Pn**		**02 42 36.5**	**+0.2**
NTC	baz=274			S		**Sn**		**02 42 46.1**	**-0.6**
TWC	**Suao** baz=242	**0.43**	**249**	*i* P		**Pn**		**02 42 36.5**	**+0.1**
TWC	baz=242			*i* S		**Sn**		**02 42 46.6**	**-0.2**
TIPB	**Shuangxi** baz=286	**0.47**	**296**	P		**Pn**		**02 42 37.0**	**+0.4**
TIPB	baz=286			*e*S		**Sn**		**02 42 47.0**	**-0.3**
ILA	**Ilan** baz=256	**0.50**	**270**	*e*P		**Pn**		**02 42 37.5**	**+0.7**
ILA	baz=256			*e*S		**Sn**		**02 42 48.0**	**+0.5**
SXI1	**Grass Mountain** baz=305	**0.50**	**311**	*i* P		**Pn**		**02 42 37.1**	**+0.1**
SXI1	baz=305			*i* S		**Sn**		**02 42 47.7**	**-0.2**
NDS	**Dongshan** baz=247	**0.54**	**256**	P		**Pn**		**02 42 37.9**	**+0.7**
NDS	baz=247			*e*S		**Sn**		**02 42 48.1**	**-0.1**
NWF	**Wu-fen Shan** baz=292	**0.56**	**303**	*i* P		**Pn**		**02 42 37.8**	**+0.4**
NWF	baz=292			S		**Sn**		**02 42 47.8**	**-0.9**
EWUT	**Wuta** baz=232	**0.57**	**236**	P		**Pn**		**02 42 38.2**	**+0.8**
EWUT	baz=232			*e*S		**Sn**		**02 42 49.6**	**+1.0**
TWE	**Neicheng** baz=259	**0.57**	**266**	*i* P		**Pn**		**02 42 38.0**	**+0.6**
TWE	baz=259			*e*S		**Sn**		**02 42 48.8**	**+0.2**
ENA	**Nanau** baz=231	**0.60**	**236**	*i* P		**Pn**		**02 42 38.4**	**+0.7**
ENA	baz=231			S		**Sn**		**02 42 50.0**	**+0.8**
FUSB	**Fushanzhiwuyua** baz=264	**0.64**	**270**	*i* P		**Pn**		**02 42 38.5**	**+0.3**
FUSB	baz=264			S		**Sn**		**02 42 49.3**	**-0.7**
JYNG	**Yonagunijimaku**	**0.67**	**118**	P		**Pn**		**02 42 38.6**	**+0.2**
JYNG				*e*S		**Sn**		**02 42 51.1**	**+0.8**
ENTT	**Nioudou** baz=256	**0.67**	**260**	*e*P		**Pn**		**02 42 39.3**	**+0.8**
ENTT	baz=256			*e*S		**Sn**		**02 42 50.7**	**+0.3**
TWA	**Mucha** baz=283	**0.68**	**289**	*e*P		**Pn**		**02 42 38.6**	**+0.1**
TWA	baz=283			*e*S		**Sn**		**02 42 50.8**	**+0.2**
NWLT	**Wulai** baz=273	**0.72**	**271**	*e*P		**Pn**		**02 42 39.3**	**+0.4**
NWLT	baz=273			*e*S		**Sn**		**02 42 50.8**	**-0.4**
YOJ	**Yonaguni jima**	**0.72**	**115**	P		**Pn**		**02 42 39.2**	**+0.4**
YOJ	**Yonaguni jima** baz=119	**0.72**	**115**	*i* P		**Pn**		**02 42 39.0**	**+0.2**
YOJ	baz=119			*i* S		**Sn**		**02 42 51.7**	**+0.6**
YOJ	**Yonaguni jima**	**0.72**	**115**	P		**Pn**		**02 42 39.1**	**+0.2**
YOJ				*e*S		**Sn**		**02 42 51.1**	**-0.1**
NHDH	**Xindian Distri** baz=281	**0.73**	**286**	*e*P		**Pn**		**02 42 39.2**	**+0.3**
NHDH	baz=281			*e*S		**Sn**		**02 42 51.2**	**-0.1**
LATG	**Datong** baz=249	**0.73**	**252**	P		**Pn**		**02 42 40.3**	**+1.2**
LATG	baz=249			*e*S		**Sn**		**02 42 51.8**	**+0.2**
YM01	**YM01** baz=287	**0.76**	**300**	*i* P		**Pn**		**02 42 39.5**	**+0.2**
YM01	baz=287			*i* S		**Sn**		**02 42 51.8**	**-0.2**
YHNB	**Yeheng**	**0.84**	**264**	P		**Pn**		**02 42 41.1**	**+0.9**
YHNB	**Yeheng** baz=265	**0.84**	**264**	*e*P		**Pn**		**02 42 40.7**	**+0.5**
YHNB	baz=265			*e*S		**Sn**		**02 42 53.9**	**+0.3**
NSK	**Sanguang** baz=266	**0.86**	**264**	*e*P		**Pn**		**02 42 40.8**	**+0.4**
NSK	baz=266			*e*S		**Sn**		**02 42 54.1**	**+0.3**
ETL	**Fush Village** baz=214	**0.86**	**226**	*e*P		**Pn**		**02 42 40.6**	**+0.3**
ETL	baz=214			*e*S		**Sn**		**02 42 53.9**	**0.0**
NTST	**Danshui** baz=293	**0.86**	**298**	*e*P		**Pn**		**02 42 40.9**	**+0.6**
NTST	baz=293			*e*S		**Sn**		**02 42 54.0**	**+0.2**
NACB	**Ninganchiao** baz=216	**0.87**	**227**	P		**Pn**		**02 42 40.3**	**-0.2**
NACB	baz=216			*e*S		**Sn**		**02 42 54.1**	**+0.2**
PCYT	**Pengchaiyu** baz=338	**0.88**	**347**	*e*P		**Pn**		**02 42 41.1**	**+0.5**
NNSB	**Datong** baz=236	**0.89**	**248**	*i* P		**Pn**		**02 42 41.5**	**+0.6**
NNSB	baz=236			*e*S		**Sn**		**02 42 55.0**	**+0.4**
NNS	**Nan Shan** baz=237	**0.90**	**249**	*e*P		**Pn**		**02 42 41.6**	**+0.7**
NNS	baz=237			*e*S		**Sn**		**02 42 55.1**	**+0.4**
ETLH	**Xiulin Townshi** baz=230	**0.93**	**233**	*e*P		**Pn**		**02 42 41.6**	**+0.5**
ETLH	baz=230			*e*S		**Sn**		**02 42 55.1**	**-0.1**
TWD	**Chiawan** baz=213	**0.93**	**223**	*e*P		**Pn**		**02 42 41.1**	**-0.1**
TWD	baz=213			*e*S		**Sn**		**02 42 55.5**	**+0.3**
HWA	**Hwalien** baz=208	**1.00**	**219**	*e*P		**Pn**		**02 42 42.3**	**+0.3**
HWA	baz=208			*e*S		**Sn**		**02 42 58.1**	**+1.5**
NCU	**National Centr** baz=285	**1.03**	**282**	*e*P		**Pn**		**02 42 42.8**	**+0.6**
NCU	baz=285			*e*S		**Sn**		**02 42 57.5**	**+0.5**
NCUH	**Zhongli** baz=285	**1.03**	**282**	*e*P		**Pn**		**02 42 43.1**	**+0.9**
NCUH	baz=285			*e*S		**Sn**		**02 42 58.3**	**+1.2**
NFF	**Wufeng Townshi** baz=259	**1.08**	**263**	P		**Pn**		**02 42 43.7**	**+0.9**
NFF	baz=259			*e*S		**Sn**		**02 42 58.9**	**+0.7**
FUSS	**Fushou** baz=233	**1.09**	**242**	*e*P		**Pn**		**02 42 44.1**	**+1.0**
FUSS	baz=233			*e*S		**Sn**		**02 42 59.1**	**+0.4**
WHF	**Hehuan Shan** baz=227	**1.12**	**237**	P		**Pn**		**02 42 44.4**	**+0.6**
WHF	baz=227			*e*S		**Sn**		**02 42 59.6**	**-0.1**
TWT	**Tachien** baz=233	**1.14**	**244**	*e*P		**Pn**		**02 42 45.6**	**+1.9**
TWT	baz=233			*e*S		**Sn**		**02 43 00.5**	**+0.8**
TDCB	**Techi** baz=233	**1.15**	**244**	*e*P		**Pn**		**02 42 45.0**	**+1.2**
TDCB	baz=233			*e*S		**Sn**		**02 43 00.5**	**+0.5**
NSTT	**Nanjuang** baz=260	**1.18**	**264**	P		**Pn**		**02 42 44.9**	**+0.8**
NSTT	baz=260			S		**Sn**		**02 43 01.1**	**+0.7**
SBCB	**Hsinchu** baz=268	**1.19**	**272**	*e*P		**Pn**		**02 42 44.8**	**+0.7**
SBCB	baz=268			*e*S		**Sn**		**02 43 01.5**	**+1.0**
ESL	**Shilin** baz=226	**1.23**	**220**	*e*P		**Pn**		**02 42 44.0**	**-0.6**
CHGB	**Renai** baz=225	**1.24**	**236**	P		**Pn**		**02 42 45.6**	**+0.7**
CHGB	baz=225			*e*S		**Sn**		**02 43 01.5**	**-0.4**
OWD	**Renai** baz=223	**1.30**	**232**	*e*P		**Pn**		**02 42 46.8**	**+1.2**
OWD	baz=223			*e*S		**Sn**		**02 43 02.9**	**-0.3**
WHP	**Taichung City** baz=246	**1.32**	**249**	*e*P		**Pn**		**02 42 47.4**	**+1.6**
WHP	baz=246			*e*S		**Sn**		**02 43 03.8**	**+0.3**
WUSB	**Renai** baz=225	**1.32**	**235**	*e*P		**Pn**		**02 42 46.8**	**+0.9**
WUSB	baz=225			*e*S		**Sn**		**02 43 03.9**	**+0.3**
EGFH	**Guangfu** baz=222	**1.35**	**216**	*e*P		**Pn**		**02 42 46.1**	**0.0**
EGFH	baz=222			*e*S		**Sn**		**02 43 03.0**	**-1.0**
IRIF	**Iriomote-Funau**	**1.38**	**108**	P		**Pn**		**02 42 46.4**	**-0.1**
IRIF				S		**Sn**		**02 43 04.7**	**+0.1**
NMLH	**Miaoli** baz=257	**1.39**	**261**	*e*P		**Pn**		**02 42 48.5**	**+1.9**
NMLH	baz=257			*e*S		**Sn**		**02 43 05.5**	**+0.7**
NSY	**Sanyi** baz=253	**1.44**	**256**	*e*P		**Pn**		**02 42 48.3**	**+1.1**
NSY	baz=253			*e*S		**Sn**		**02 43 07.3**	**+1.2**
WCS	**Beigang Elemen** baz=232	**1.44**	**241**	*e*P		**Pn**		**02 42 48.7**	**+1.4**
WCS	baz=232			*e*S		**Sn**		**02 43 06.4**	**+0.3**
TWQ1	**Liyutan** baz=251	**1.45**	**254**	*e*P		**Pn**		**02 42 48.0**	**+0.7**
TWQ1	baz=251			*e*S		**Sn**		**02 43 06.6**	**+0.4**
VWDT	**VWDT** baz=218	**1.46**	**226**	*e*P		**Pn**		**02 42 48.3**	**+0.9**
VWDT	baz=218			*e*S		**Sn**		**02 43 06.8**	**+0.5**
HGSD	**Ruisui** baz=221	**1.50**	**212**	*e*P		**Pn**		**02 42 47.9**	**0.0**
HGSD	baz=221			*e*S		**Sn**		**02 43 07.2**	**-0.1**
EHY	**Hungye** baz=221	**1.54**	**216**	*e*P		**Pn**		**02 42 47.9**	**-0.6**
EHY	baz=221			*e*S		**Sn**		**02 43 06.5**	**-1.8**
SMLT	**Sun Moon Lake** baz=233	**1.54**	**236**	*e*P		**Pn**		**02 42 50.7**	**+2.0**
SMLT	baz=233			*e*S		**Sn**		**02 43 10.6**	**+2.0**
HATJ	**Hateruma jima**	**1.55**	**117**	P		**Pn**		**02 42 49.2**	**+0.7**
HATJ				*e*S		**Sn**		**02 43 09.0**	**+0.5**
WDJ	**Dajia District** baz=252	**1.56**	**255**	*e*P		**Pn**		**02 42 49.7**	**+1.0**
WDJ	baz=252			*e*S		**Sn**		**02 43 09.0**	**+0.2**
SSLB	**Suanglung**	**1.56**	**232**	P		**Pn**		**02 42 50.8**	**+2.0**
SSLB	**Suanglung** baz=224	**1.56**	**232**	P		**Pn**		**02 42 50.5**	**+1.6**
SSLB	baz=224			*e*S		**Sn**		**02 43 10.1**	**+1.2**
TYC	**Yuchr** baz=229	**1.57**	**237**	*e*P		**Pn**		**02 42 50.3**	**+1.5**
TYC	baz=229			*e*S		**Sn**		**02 43 10.4**	**+1.5**
YULB	**Yu-li** baz=219	**1.64**	**214**	*e*P		**Pn**		**02 42 49.4**	**-0.5**
YULB	baz=219			*e*S		**Sn**		**02 43 08.1**	**-2.6**
JKRS	**Kuro-shima**	**1.65**	**108**	P		**Pn**		**02 42 50.3**	**+0.4**
JKRS				*e*S		**Sn**		**02 43 10.6**	**-0.1**
EYUL	**Yuli** baz=219	**1.67**	**212**	*e*P		**Pn**		**02 42 50.8**	**+0.6**
EYUL	baz=219			*e*S		**Sn**		**02 43 11.3**	**0.0**
WJS	**Zhushan** baz=245	**1.71**	**237**	*e*P		**Pn**		**02 42 51.9**	**+1.2**
WJS	baz=245			*e*S		**Sn**		**02 43 14.9**	**+2.7**
WNT	**Mingjian** baz=247	**1.71**	**239**	*e*P		**Pn**		**02 42 52.1**	**+1.3**
JIJ	**Ishigaki jima**	**1.73**	**103**	P		**Pn**		**02 42 50.8**	**-0.2**
JIJ				S		**Sn**		**02 43 12.2**	**-0.5**
FULB	**Fuli** baz=218	**1.81**	**211**	*e*P		**Pn**		**02 42 51.9**	**-0.1**
ALS	**Alishan** baz=217	**1.85**	**228**	*e*P		**Pn**		**02 42 54.2**	**+1.5**
ALS	baz=217			*e*S		**Sn**		**02 43 17.9**	**+2.0**
WDLH	**Douliu** baz=244	**1.93**	**237**	*e*P		**Pn**		**02 42 54.5**	**+0.9**
WDLH	baz=244			*e*S		**Sn**		**02 43 19.1**	**+1.8**
WRL	**Guolierlin Hig** baz=242	**1.95**	**244**	*e*P		**Pn**		**02 42 54.4**	**+0.6**
WRL	baz=242			*e*S		**Sn**		**02 43 16.8**	**-1.0**
ELDTW	**Lidau** baz=214	**1.96**	**217**	*e*P		**Pn**		**02 42 53.9**	**-0.2**
ELDTW	baz=214			*e*S		**Sn**		**02 43 17.9**	**-0.3**
EDH	**Donghe** baz=215	**2.00**	**207**	*e*P		**Pn**		**02 42 53.5**	**-1.0**
WTK	**Tuku** baz=237	**2.04**	**239**	*e*P		**Pn**		**02 42 55.9**	**+0.9**
WTK	baz=237			*e*S		**Sn**		**02 43 22.1**	**+2.1**
TPUB	**Ta-pu**	**2.11**	**227**	P		**Pn**		**02 42 58.0**	**+2.1**
TPUB	**Ta-pu** baz=236	**2.11**	**227**	*e*P		**Pn**		**02 42 57.2**	**+1.3**
STYH	**Taoyuan** baz=219	**2.11**	**221**	*e*P		**Pn**		**02 42 57.4**	**+1.4**
STYH	baz=219			*e*S		**Sn**		**02 43 22.3**	**+0.8**
CHY	**Chiayi** baz=242	**2.12**	**234**	*e*P		**Pn**		**02 42 57.1**	**+1.0**
LONT	**Longtian** baz=208	**2.13**	**210**	*e*P		**Pn**		**02 42 56.0**	**-0.2**
LONT	baz=208			*e*S		**Sn**		**02 43 21.1**	**-1.1**
WTP	**Ta-pu** baz=236	**2.15**	**226**	*e*P		**Pn**		**02 42 58.6**	**+2.0**
JTJ	**Tarama**	**2.19**	**93**	P		**Pn**		**02 42 58.2**	**+1.2**
JTJ				*e*S		**Sn**		**02 43 24.6**	**+1.1**
LDUT	**Ludao** baz=198	**2.21**	**200**	*e*P		**Pn**		**02 42 56.2**	**-1.2**
LDUT	baz=198			*e*S		**Sn**		**02 43 22.2**	**-1.9**
TWK	**Hsinying** baz=237	**2.23**	**228**	*e*P		**Pn**		**02 42 59.4**	**+1.9**
TWGBT	**Beinan** baz=202	**2.23**	**210**	*e*P		**Pn**		**02 42 56.8**	**-0.8**
TWG	**Pinlang** baz=202	**2.24**	**210**	*e*P		**Pn**		**02 42 57.4**	**-0.3**
CHN1	**Nanshi** baz=235	**2.25**	**226**	*e*P		**Pn**		**02 42 59.5**	**+1.6**
WSL	**Shuilin Townsh** baz=235	**2.26**	**237**	*e*P		**Pn**		**02 42 57.5**	**-0.4**
SGST	**Jiashian** baz=221	**2.29**	**223**	*e*P		**Pn**		**02 42 58.9**	**+0.5**
SGST	baz=221			*e*S		**Sn**		**02 43 28.0**	**+2.0**
ICHU	**Yijhu** baz=232	**2.31**	**233**	*e*P		**Pn**		**02 42 59.3**	**+0.7**
ECL	**Taimali** baz=204	**2.48**	**210**	*e*P		**Pn**		**02 42 59.8**	**-1.1**
SHHT	**Tainan City** baz=234	**2.49**	**226**	*e*P		**Pn**		**02 43 03.0**	**+2.1**
SCST	**Cishan** baz=220	**2.49**	**222**	*e*P		**Pn**		**02 43 02.4**	**+1.4**
SSD	**Sandimen** baz=215	**2.52**	**217**	*e*P		**Pn**		**02 43 03.8**	**+2.3**
MATB	**Ma-tsu** baz=300	**2.53**	**304**	*e*P		**Pn**		**02 43 00.7**	**-0.8**
TSMG	**Majia** baz=215	**2.55**	**217**	*e*P		**Pn**		**02 43 03.3**	**+1.5**
TSCK	**Chigu Township** baz=230	**2.58**	**232**	*e*P		**Pn**		**02 43 03.0**	**+0.8**
VWUC	**VWUC** baz=273	**2.59**	**276**	*e*P		**Pn**		**02 43 01.7**	**-0.6**
JIRB	**Irabujima**	**2.62**	**88**	S		**Sn**		**02 43 35.3**	**+1.6**
MASBT	**Mashibuluo** baz=214	**2.63**	**216**	*e*P		**Pn**		**02 43 04.0**	**+1.1**
EAST	**Anshuo** baz=202	**2.72**	**210**	*e*P		**Pn**		**02 43 03.8**	**-0.3**
TAWH	**Dawu Township** baz=201	**2.74**	**208**	*e*P		**Pn**		**02 43 03.9**	**-0.4**
JMJ2	**Miyako jima3**	**2.76**	**90**	*e*S		**Sn**		**02 43 38.0**	**+0.9**
SSPT	**Xinbi** baz=213	**2.77**	**215**	*e*P		**Pn**		**02 43 06.4**	**+1.7**
PHUB	**P'eng-hu** baz=242	**2.78**	**244**	*e*P		**Pn**		**02 43 04.1**	**-0.8**
LAY	**Lan-yu** baz=193	**2.80**	**194**	*e*P		**Pn**		**02 43 04.6**	**-0.6**
LYUB	**Lan-yu** baz=192	**2.83**	**193**	*e*P		**Pn**		**02 43 04.2**	**-1.3**
JOGS	**Gusukube**	**2.83**	**89**	P		**Pn**		**02 43 07.6**	**+2.0**
SCZT	**Fangliau** baz=223	**2.83**	**213**	*e*P		**Pn**		**02 43 08.0**	**+2.4**
WDGT	**Dungji** baz=237	**2.84**	**239**	*e*P		**Pn**		**02 43 06.3**	**+0.7**
WDGT	baz=237			*e*S		**Sn**		**02 43 37.3**	**-1.7**
XPSS	**Dashiqiu** baz=317	**2.87**	**319**	*e*P		**Pn**		**02 43 04.7**	**-1.3**
SLIU	**Shizi** baz=207	**2.88**	**209**	*e*P		**Pn**		**02 43 06.7**	**+0.3**
PTMZ	**Houxiangcun** baz=273	**2.90**	**276**	*e*P		**Pn**		**02 43 05.6**	**-0.8**
LYJJ	**Jianjiangzhen** baz=306	**2.90**	**308**	*e*P		**Pn**		**02 43 07.0**	**+0.6**
VCHM	**Qimei** baz=239	**3.04**	**240**	*e*P		**Pn**		**02 43 08.7**	**+0.3**
MHZQ	**Yeshan** baz=292	**3.24**	**295**	*e*P		**Pn**		**02 43 10.8**	**-0.3**
KNM	**Kinmen** baz=254	**3.53**	**265**	*e*P		**Pn**		**02 43 16.5**	**+1.5**
AXDP	**Jialang** baz=270	**3.93**	**273**	*e*P		**Pn**		**02 43 19.8**	**-0.6**
ZPLA	**Ao Xicun** baz=258	**4.23**	**260**	*e*P		**Pn**		**02 43 23.6**	**-0.8**
SONM	**Songino Array** 0.4nm,0.4s,baz=141,slow=7.1,SNR=3.3 0.4nm,0.4s	**26.25**	**335**	P		**P**		**02 47 49.0**	**-0.3**
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=99,slow=7.4,SNR=1.9 0.1nm,0.3s	**38.63**	**315**	P		**P**		**02 49 36.7**	**-0.5**
WRA	**Warramunga Arr** 1.3nm,0.7s,baz=347,slow=8.7,SNR=7.5 1.3nm,0.7s	**45.96**	**164**	P		**P**		**02 50 36.5**	**-0.3**
ASAR	**Alice Springs** 0.7nm,0.8s,baz=335,slow=8.2,SNR=7.4 0.7nm,0.8s	**49.44**	**166**	P		**P**		**02 51 03.5**	**-0.1**
ARU	**Arti** comp=Z,48nm,18.7s,baz=134,slow=40	**55.26**	**323**	LR		LR		03 18 48.4	
GEYT	**Alibeck** comp=Z,47nm,20.4s,baz=164,slow=42	**55.38**	**300**	LR		LR		03 21 01.6	

MAN 10 03:09:05.5, 13.°82N×120.°66E, h118km, mb3.8, ML2.5, MS2.0, Mindoro

IDC 10 03:09:46.0±1.6, 25.°02S×179.°67W, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=51.0km s-min=33.9km az=6.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ASAR	**Alice Springs** 0.2nm,0.3s,baz=92,slow=7.7,SNR=5.2 0.2nm,0.3s	**42.16**	**262**	P		P		03 17 40.5	-0.2
WRA	**Warramunga Arr** 0.9nm,0.6s,baz=102,slow=6.9,SNR=13 0.9nm,0.6s	**42.65**	**267**	P		P		03 17 44.4	-0.1
QSPA	**South Pole Qui** 0.9nm,0.7s,baz=296,slow=1.9,SNR=6.5 0.9nm,0.7s	**65.07**	**180**	P		P		03 20 27.8	-0.3
TXAR	**Lajitas Array** 0.2nm,0.7s,baz=233,slow=7.5,SNR=3.4 0.2nm,0.7s	**90.76**	**58**	P		P		03 22 51.8	+0.5

IDC ***10*** *03:11:57.3±2.8, 36.°28N×70.°83E, h171km±25km, mb3.5/11, mbtmp4.0/15, Error ellipse: s-maj=19.9km s-min=15.6km az=6.0*
NNC ***10*** *03:12:06.6±1.8, 37.°03N×70.°96E, h216km±21km, mb3.1, mpv4.3, Error ellipse: s-maj=16.7km s-min=9.7km az=20.0*
ISC 10 03:11:59.8±0.5**, 36.°62N**±0.°05×**70.°83E**±0.°06**, h188**km**, n45, σ1§48/52, mb3.7**/10**, 4C-6D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.92**	**162**	P		**Pn**		**03 12 49.9**	**+1.8**
CEP				S		**Sn**		**03 13 26.0**	**+0.3**
CHCP	**Chirah Chowk**	**3.56**	**145**	P		**Pn**		**03 12 57.5**	**+1.8**
THW	**Thamme Wali**	**3.89**	**169**	P		**Pn**		**03 13 01.2**	**+1.4**
SARP	**Sargodha**	**4.92**	**161**	P		**Pn**		**03 13 13.5**	**+0.6**
AML	**Almayashu** SNR=256	**5.94**	**21**	P		**Pn**		**03 13 28.3**	**+2.0**
UCH	**Uchtor** SNR=27	**6.29**	**26**	P		**Pn**		**03 13 32.9**	**+2.0**
EKS2	**Erkin-Say** SNR=21	**6.45**	**20**	P		**Pn**		**03 13 34.9**	**+2.2**
KK31	**Karatay Array** 7.3nm,0.3s,baz=187,slow=12,SNR=129	**6.48**	**358**	⇓P		**Pn**		**03 13 35.1**	**+2.1**
KK31	13nm,0.5s,baz=181,slow=20,SNR=11			S		**Sn**		**03 14 45.8**	**-1.1**
AAK	**Ala-Archa** SNR=7.7	**6.64**	**24**	P		**Pn**		**03 13 37.6**	**+2.3**
AAK	**Ala-Archa** 12nm,0.3s,baz=172,slow=5.0,SNR=14	**6.64**	**24**	P		**Pn**		**03 13 37.2**	**+1.9**
AAK	8.0nm,0.3s,baz=336,slow=23,SNR=18			S		**Sn**		**03 14 50.5**	**-0.3**
KBK	**Karagaybulak** SNR=13	**6.81**	**26**	P		**Pn**		**03 13 40.0**	**+2.4**
CHMS	**Chumysh** 7.8nm,0.5s	**7.05**	**24**	⇑P		**Pn**		**03 13 42.3**	**+1.8**
CHMS	18nm,0.7s			⇓S		**Sn**		**03 14 59.0**	**-1.4**
USP	**Ospenovka** SNR=8.6	**7.21**	**22**	P		**Pn**		**03 13 44.6**	**+2.0**
TKM2	**Tokmak 2** SNR=40	**7.29**	**29**	P		**Pn**		**03 13 45.6**	**+1.8**
TKM2	**Tokmak 2** 28nm,0.6s	**7.29**	**29**	⇓P		**Pn**		**03 13 45.5**	**+1.8**
TKM2	8.9nm,0.8s			⇑S		**Sn**		**03 15 04.5**	**-1.6**
MDOK	**Medeo** 7.3nm,0.5s	**8.10**	**34**	⇑P		**Pn**		**03 13 56.0**	**+1.7**
GEYT	**Alibeck** 1.1nm,0.3s,baz=90,slow=25,SNR=1.4	**10.22**	**281**	P		**Pn**		**03 14 20.6**	**-1.4**
GEYT	1.5nm,0.3s,baz=135,slow=57,SNR=1.8			S		**Sn**		**03 16 15.1**	**-0.7**
MAKZ	**Makanchi** 2.7nm,0.8s	**13.14**	**36**	⇑P		**Pn**		**03 14 59.6**	**+0.3**
MK31	**Makanchi Array** 1.2nm,0.7s,baz=212,slow=8.4,SNR=5.4	**13.28**	**36**	⇓P		**P**		**03 15 02.5**	**-1.6**
MKAR	**Makanchi Array** 0.5nm,0.5s,baz=226,slow=14,SNR=5.6	**13.28**	**36**	P		**Pn**		**03 15 02.3**	**+1.3**
KOLN	**Koldanda**	**13.94**	**126**	*e*P		**Pn**		**03 15 08.3**	**-1.3**
GKN	**Gorkha** 18nm,0.4s	**14.48**	**122**	*e*P		**Pn**		**03 15 15.9**	**-0.4**
AB31	**Akbulak array** 1.5nm,0.5s,baz=138,slow=12,SNR=61	**14.92**	**331**	P		**P**		**03 15 22.3**	**0.0**
AB31	0.7nm,0.5s,baz=157,slow=23,SNR=3.2			⇓S		**Sn**		**03 18 06.0**	**-1.8**
DMN	**Daman** 11nm,0.3s	**15.05**	**123**	*e*P		**Pn**		**03 15 23.3**	**-0.1**
KURBB	**Kurchatov Arra** 0.4nm,0.5s,baz=209,slow=11,SNR=4.1	**15.06**	**19**	P		**Pn**		**03 15 22.5**	**-0.5**
PKIN	**Phulchoki** 24nm,0.5s	**15.27**	**122**	*e*P		**Pn**		**03 15 26.1**	**0.0**
PKI	**Pulchoki**	**15.28**	**122**	*e*P		**Pn**		**03 15 26.1**	**-0.2**
GUN	**Gumba**	**15.39**	**120**	*e*P		**Pn**		**03 15 27.3**	**-0.3**

12nm,0.3s
JIRN Jiri 15.76 120 *e*P **Pn 03 15 31.8 -0.4**
24nm,0.5s
RAMN Ramite 16.49 121 *e*P **P 03 15 40.1 0.0**
7.7nm,0.3s
AKTO Aktyubinsk 16.61 330 P **Pn 03 15 43.8 +2.0**
2.9nm,0.5s,baz=142,slow=12,SNR=14
AKTO Aktyubinsk 16.61 330 ⇓P **Pn 03 15 43.5 +1.7**
5.1nm,0.8s
TAPN Taplejung 17.02 118 *e*P **Pn 03 15 47.1 -0.1**
9.5nm,0.3s
ZALV Zalesovo Beam 19.86 25 P **Pn 03 16 18.1 -2.1**
1.6nm,0.4s,baz=218,slow=12,SNR=7.2
1.6nm,0.4s
BELG Belogornoye 22.71 321 P **P 03 16 46.4 +1.1**
6.4nm,0.6s,baz=177,slow=10,SNR=2.1
6.4nm,0.6s
FINES FINESS Array B 37.31 326 P **P 03 18 55.6 +2.1**
1.5nm,0.8s,baz=111,slow=10,SNR=6.6
1.5nm,0.8s
ARCES ARCESS Array B 40.98 338 P **P 03 19 25.5 +1.7**
1.8nm,0.7s,baz=119,slow=7.6,SNR=9.2
1.8nm,0.7s
NB2 NORSAR Subarra 44.21 323 P **P 03 19 51.3 +1.5**
comp=Z,0.8nm,0.6s,baz=98,slow=7.9
NOA NORSAR Array B 44.21 323 P **P 03 19 50.8 +0.9**
comp=Z,0.9nm,0.6s,baz=97,slow=7.8,SNR=5.6
comp=Z,0.9nm,0.6s
ESDC Sonseca Array 57.28 298 P **P 03 21 28.2 +0.4**
comp=Z,0.3nm,0.7s,baz=55,slow=5.6,SNR=2.4
comp=Z,0.3nm,0.7s
TORD Torodi Ar. Bea 65.59 268 P **P 03 22 22.8 -0.9**
comp=Z,0.6nm,0.5s,baz=48,slow=6.0,SNR=10
comp=Z,0.6nm,0.5s
BOSA Boshof 77.75 220 P **P 03 23 34.8 -1.2**
comp=Z,2.1nm,0.9s,baz=104,slow=16,SNR=1.7
comp=Z,2.1nm,0.9s
YKA Yellowknife Ar 81.13 3 P **P 03 23 55.0 +1.3**
comp=Z,1.2nm,0.5s,baz=351,slow=5.3,SNR=14
comp=Z,1.2nm,0.5s
WRA Warramunga Arr 82.17 122 P **P 03 23 57.9 -1.8**
comp=Z,0.8nm,0.5s,baz=324,slow=4.9,SNR=5.7
comp=Z,0.8nm,0.5s
ASAR Alice Springs 84.43 125 P **P 03 24 10.1 -1.2**
comp=Z,1.2nm,0.6s,baz=311,slow=5.1,SNR=17
comp=Z,1.2nm,0.6s

IDC ***10*** *03:25:19.9±0.4, 12°.85N×86°.98W, h0km, mb5.2/42, mbtmp5.2/45, ML3.5/2, MS6.0/55, Error ellipse: s-maj=13.7km s-min=7.5km az=44.0*

INET ***10*** *03:25:21.4±1.1, 12°.88N×87°.07W, h2km±4km, MW6.0*

MOS ***10*** *03:25:22.1±1.0, 12°.84N×86°.97W, h23km, mb6.0/48, MS6.0/46, Error ellipse: s-maj=8.3km s-min=5.8km az=90.0*

BJI ***10*** *03:25:22.5±0.0, 13°.00N×86°.95W, h10km, mB6.1/50, Ms6.5/57, Ms7 6.3/55*

UCR ***10*** *03:25:22.7±2.4, 12°.94N×86°.97W, h10km, MW6.0, mb6.2(NEIC)*

NEIC ***10*** *03:25:22.9±2.1, 12°.83N±0°.05×86°.96W±0°.06, h10km±1km, mb6.0/810, Ms_20 6.1/412, Mwb6.0/82, Mww6.1, Md6.1(SNET), Error ellipse: s-maj=11.9km s-min=5.4km az=225.0*

NEIC ***10*** *03:25:22.9, 12°.83N×86°.99W, h10km, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr=0.38; Mθθ=0.85; Mφφ 1.23; Mrθ=0.11; Mθφ=0.30; Mφr=0.15; Fault plane solution: M₀1.15000×10¹⁸ NP1:φs36.08000°, δ83.96000°, λ=12.71000°. NP2:φs127.44000°, δ77.36000°, λ=173.80000°. Principal axes: T 1.2853, Plg5.0000°, Azm82.0000°; N -0.3604, Plg76.0000°, Azm191.0000°; P -0.9249, Plg13.0000°, Azm351.0000°;*

GCG ***10*** *03:25:24.4±3.5, 12°.84N×87°.02W, h10km, MD5.6, MW6.1(NEIC)*

GCMT ***10*** *03:25:25.9±0.1, 12°.92N×87°.13W, h14km, MW6.1/170, Moment Tensor Solution. s162,c364; s170,c625; Duration: 2s8 Moment tensor: Scale 10¹⁸Nm; Mrr=0.57±.01; Mθθ-1.30±.01; Mφφ 1.87±.01; Mrθ=0.40±.02; Mθφ=0.81±.01; Mφr=0.17±.02; Best double couple: M₀1.86600×10¹⁸ NP1:φs123.00000°, δ74.00000°, λ=166.00000°. NP2:φs29.00000°, δ76.00000°, λ=17.00000°. Principal axes: T 2.0690, Plg2.0000°, Azm77.0000°; N -0.4080, Plg69.0000°, Azm171.0000°; P -1.6630, Plg21.0000°, Azm346.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***10*** *03:25:29, 12°.94N×87°.22W, h12km, Moment Tensor Solution. Duration: 14s0 Moment tensor: Scale 10¹⁸Nm; Mrr=0.68; Mθθ-1.12; Mφφ 1.80; Mrθ=0.13; Mθφ=0.82; Mφr=0.14; Fault plane solution: M₀1.79000×10¹⁸ NP1: φs210.00000°, δ82.00000°, λ-2.00000°. NP2:φs301.00000°, δ87.00000°, λ=172.00000°. Principal axes: T 2.0277, Plg4.0000°, Azm75.0000°; N -0.6783, Plg82.0000°, Azm320.0000°; P -1.3494, Plg8.0000°, Azm166.0000°;*

ISC 10 03:25:22.7±0.3, 12°.81N±0°.02×87°.01W±0°.02, h17km±1km, h17km:pP-P,n1973,σ2s18/2331,mb6.0/513,MS6.1/334, 221C-641D, Fault plane solution: NP1:φs313.36356°, δ85.25645°, λ153.24458°. **NP2:**φs45.75095°, δ63.34348°, λ5.30923°. **Principal axes:** T Plg22.0683°, Azm266.3102°; N Plg62.8579°, Azm124.0484°; P Plg14.9966°, Azm2.5451°; **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.12**	**198**	Pg	**Pb**	**03 25 26.2**	**-0.4**
CRIN	**San Cristobal**	**0.12**	**198**	*e*P	**Pb**	**03 25 26.1**	**-0.4**
CRIN				*e*S	**Sg**	**03 25 29.4**	**+0.4**
TEL3	**Telica 3**	**0.29**	**145**	*e*P	**Pb**	**03 25 29.6**	**+0.1**
CNGN	**Cerro Negro**	**0.44**	**135**		**Pb**	**03 25 31.9**	**-0.1**
CNGN				Sg	**Sg**	**03 25 36.1**	**-1.5**
CNGN	**Cerro Negro**	**0.44**	**135**	*e*P	**Pb**	**03 25 31.9**	**-0.1**
CNGN	**Cerro Negro**	**0.44**	**135**	*e*P	**Pb**	**03 25 32.2**	**+0.2**
MOMN	**Momotombo**	**0.61**	**131**	*e*P	**Pb**	**03 25 35.5**	**+0.5**
COPN	**Copaltepe**	**0.75**	**147**	*e*P	**Pg**	**03 25 37.6**	**+0.2**
APYN	**Apoyeque**	**0.87**	**131**	*e*P	**Pb**	**03 25 39.2**	**-0.1**
CNCH	**Conchagua**	**0.92**	**300**	*e*P	**Pb**	**03 25 38.0**	**-2.4**
CNCH				*e*P	**Pg**	**03 25 38.4**	**-2.3**
CNCH				*e*S	**Sb**	**03 25 51.2**	**-1.2**
CNCH	**Conchagua**	**0.92**	**300**	*e*P	**Pb**	**03 25 38.0**	**-2.4**
CNCH				*e*P	**Pg**	**03 25 38.4**	**-2.3**
CNCH				*e*S	**Sb**	**03 25 51.2**	**-1.2**
HUEN		**0.95**	**120**	*e*P	**Pb**	**03 25 40.8**	**+0.1**
LCND	**La Caada**	**0.99**	**300**	*e*P	**Pb**	**03 25 39.4**	**-2.0**
LCND				*e*S	**Sb**	**03 25 53.3**	**-0.8**
LCND	**La Caada**	**0.99**	**300**	*e*P	**Pb**	**03 25 39.4**	**-2.0**
LCND				*e*P	**Pn**	**03 25 39.6**	**-2.2**
LCND				*e*S	**Sb**	**03 25 53.3**	**-0.8**
LCND				*e*S	**Sg**	**03 25 53.9**	**-1.0**
MGAN	**Managua**	**1.00**	**131**	*e*P	**Pn**	**03 25 42.0**	**0.0**
MATN	**Matagalpa**	**1.07**	**84**	Pg	**Pb**	**03 25 41.3**	**-1.4**
MATN	**Matagalpa**	**1.07**	**84**	*e*P	**Pb**	**03 25 41.0**	**-1.8**
MATN	**Matagalpa**	**1.07**	**84**	*e*P	**Pb**	**03 25 41.4**	**-1.4**
CRUN	**El Crucero**	**1.08**	**140**	*e*P	**Pb**	**03 25 40.6**	**-2.4**
MASN	**Masaya**	**1.18**	**134**	*e*P	**Pn**	**03 25 44.3**	**-0.1**
TGUH	**Tegucigalpa,Un**	**1.26**	**349**	Pn	**Pn**	**03 25 44.6**	**-1.2**
TGUH	**Tegucigalpa,Un**	**1.26**	**349**	⇓*e*P	**Pn**	**03 25 45.0**	**-0.7**
TGUH	**Tegucigalpa,Un**	**1.26**	**349**	*i* P	**Pn**	**03 25 45.1**	**-0.7**
TGUH	**Tegucigalpa,Un**	**1.26**	**349**	*i* P	**Pn**	**03 25 45.1**	**-0.7**
TGUH	**Tegucigalpa,Un**	**1.26**	**349**	⇓P	**Pn**	**03 25 44.0**	**-1.8**
CNRM	**Centro Naciona**	**1.31**	**300**	*e*P	**Pn**	**03 25 45.2**	**-1.0**
CNRM	**Centro Naciona**	**1.31**	**300**	*e*P	**Pn**	**03 25 45.2**	**-1.0**
BOAB	**BOACO BROADBAN**	**1.36**	**105**		**Pn**	**03 25 46.2**	**-0.8**
BOAB	**BOACO BROADBAN**	**1.36**	**105**	*e*P	**Pn**	**03 25 46.7**	**-0.3**
BOAB	**BOACO BROADBAN**	**1.36**	**105**	⇑P	**Pn**	**03 25 46.2**	**-0.8**
LCY	**Lacayo**	**1.39**	**296**	*e*P	**Pn**	**03 25 45.7**	**-1.7**
LCY	**Lacayo**	**1.39**	**296**	*e*P	**Pn**	**03 25 45.7**	**-1.7**
COEB	**Comit de Eme**	**1.63**	**295**	*e*P	**Pn**	**03 25 50.0**	**-0.7**
COEB	**Comit de Eme**	**1.63**	**295**	*e*P	**Pn**	**03 25 50.0**	**-0.7**
CONN	**Concepcion**	**1.84**	**132**	*e*P	**Pn**	**03 25 54.0**	**+0.4**
ACON	**Acoyapa**	**1.98**	**115**	Pn	**Pn**	**03 25 54.7**	**-0.8**
ACON	**Acoyapa**	**1.98**	**115**	*e*P	**Pn**	**03 25 54.9**	**-0.6**
ACON	**Acoyapa**	**1.98**	**115**	*e*P	**Pn**	**03 25 55.3**	**-0.2**
LFRS	**El Faro**	**2.15**	**292**	*e*P	**Pn**	**03 25 57.5**	**-0.5**
LFRS	**El Faro**	**2.15**	**292**	*e*P	**Pn**	**03 25 57.5**	**-0.5**
LBRS	**Las Brisas**	**2.18**	**295**	*e*P	**Pn**	**03 25 58.6**	**+0.3**
LBRS	**Las Brisas**	**2.18**	**295**	*e*P	**Pn**	**03 25 58.6**	**+0.3**
LFU	**La Fuente**	**2.25**	**295**	*e*P	**Pn**	**03 25 59.9**	**+0.6**
LFU	**La Fuente**	**2.25**	**295**	*e*P	**Pn**	**03 25 59.9**	**+0.6**
SNET	**Serv Nac Est T**	**2.33**	**292**	Pn	**Pn**	**03 25 59.9**	**-0.5**
SNET	**Serv Nac Est T**	**2.33**	**292**	*e*P	**Pn**	**03 26 01.5**	**+1.2**
SNET				*e*S	**Sb**	**03 26 32.6**	**-0.2**
SNET	**Serv Nac Est T**	**2.33**	**292**	*e*P	**Pn**	**03 26 01.5**	**+1.2**
SNET				*e*S	**Sb**	**03 26 32.6**	**-0.2**
LALI	**Alcalda de L**	**2.35**	**287**	*e*P	**Pn**	**03 26 00.9**	**+0.4**
UEES	**Universidad Ev**	**2.35**	**293**	*e*P	**Pn**	**03 26 01.2**	**+0.6**
UEES				*e*S	**Sb**	**03 26 35.5**	**+2.2**
UEES	**Universidad Ev**	**2.35**	**293**	*e*P	**Pn**	**03 26 01.2**	**+0.6**
UEES				*e*S	**Sb**	**03 26 35.5**	**+2.2**
VRLE	**La Escondida,**	**2.58**	**141**	*e*P	**Pn**	**03 26 04.7**	**+0.9**
GPS2	**Hotel Rincn d**	**2.61**	**141**	*e*P	**Pn**	**03 26 05.9**	**+1.6**
VMAR	**Armenia, Volca**	**2.72**	**137**	*e*P	**Pn**	**03 26 05.9**	**+0.2**
ESPN	**Las Esperanzas**	**2.72**	**103**	Pn	**Pn**	**03 26 05.9**	**+0.2**
ESPN	**Las Esperanzas**	**2.72**	**103**	*e*P	**Pn**	**03 26 06.1**	**+0.5**
ESPN	**Las Esperanzas**	**2.72**	**103**	*e*P	**Pn**	**03 26 06.3**	**+0.6**
GUAB	**Guayabo de Bag**	**2.73**	**140**	*e*P	**Pn**	**03 26 07.2**	**+1.4**
SNJE	**San Jose**	**2.73**	**293**	*e*P	**Pn**	**03 26 06.7**	**+0.7**
SNJE	**San Jose**	**2.73**	**293**	*e*P	**Pn**	**03 26 06.7**	**+0.7**
SBLS	**San Blas**	**2.74**	**292**	*e*P	**Pn**	**03 26 06.9**	**+0.8**
SBLS	**San Blas**	**2.74**	**292**	*e*P	**Pn**	**03 26 06.9**	**+0.8**
COLC	**Colonia**	**2.77**	**140**	*e*P	**Pn**	**03 26 08.0**	**+1.6**
CUI	**Cuipilapa**	**2.80**	**140**	*e*P	**Pn**	**03 26 08.6**	**+1.7**
ESQI	**Esquipulas**	**2.85**	**308**	Pn	**Pn**	**03 26 07.2**	**-0.4**
ORTG	**Ortega, Santa**	**2.87**	**148**	Pn	**Pn**	**03 26 08.9**	**+1.0**
ORTG	**Ortega, Santa**	**2.87**	**148**	*e*P	**Pn**	**03 26 09.7**	**+1.8**
PLVR	**Palo Verde**	**2.94**	**146**	*e*P	**Pn**	**03 26 10.5**	**+1.6**
SAJU	**San Juanillo,**	**3.01**	**155**	*e*P	**Pn**	**03 26 11.2**	**+1.6**
NICO	**Nicoya**	**3.07**	**150**	*e*P	**Pn**	**03 26 12.7**	**+2.2**
DUNO	**Dulce Nombre,**	**3.10**	**151**	Pn	**Pn**	**03 26 12.7**	**+1.9**
DUNO	**Dulce Nombre,**	**3.10**	**151**	*e*P	**Pn**	**03 26 13.0**	**+2.2**
JTS	**Las Juntas de**	**3.22**	**141**	Pn	**Pn**	**03 26 13.4**	**+0.8**
	2μm,0.8s,baz=38,slow=12,SNR=382						
JTS				Sn	**Sb**	**03 26 55.9**	**-2.5**
	272nm,0.3s,baz=246,slow=20,SNR=2.3						
JTS				Lg	Lg	03 27 04.5	
	238nm,0.3s,baz=192,slow=19,SNR=2.9						
JTS				LR	LR	03 27 48.0	
	comp=Z,214μm,19.4s,baz=48,slow=46						
JTS	**Las Juntas de**	**3.22**	**141**	Pn	**Pn**	**03 26 13.1**	**+0.6**
JTS	**Las Juntas de**	**3.22**	**141**	*c* P	**Pn**	**03 26 14.0**	**+1.5**
JTS				pmax	pmax		
	comp=Z,6μm,1.1s						
JTS	**Las Juntas de**	**3.22**	**141**	*e*P	**Pn**	**03 26 14.0**	**+1.5**
JTS	**Las Juntas de**	**3.22**	**141**	*e*P	**Pn**	**03 26 13.2**	**+0.6**
JTS	**Las Juntas de**	**3.22**	**141**	⇑P	**Pn**	**03 26 13.2**	**+0.6**
INDI	**Punta indio, G**	**3.28**	**153**	*e*P	**Pn**	**03 26 14.9**	**+1.6**
MRL	**Marmol**	**3.44**	**311**	⇑*e*P	**Pn**	**03 26 16.5**	**+0.7**
LAFE	**Finca La Fe, P**	**3.63**	**145**	*e*P	**Pn**	**03 26 20.0**	**+1.9**
NBG	**Las Nubes**	**3.69**	**299**	*e*P	**Pn**	**03 26 20.9**	**+1.6**
CRPO	**Crater poas**	**3.77**	**133**	*e*P	**Pn**	**03 26 21.0**	**+0.6**
PCG	**Pacaya**	**3.83**	**295**	*e*P	**Pn**	**03 26 24.1**	**+2.9**
PCG				*e*S	**Sg**	**03 27 29.2**	**+3.3**
RIFO	**Rio Frio, Sara**	**3.91**	**129**	*e*P	**Pn**	**03 26 22.1**	**0.0**
FUG	**Fuego 3**	**4.06**	**294**	*e*P	**Pn**	**03 26 28.5**	**+4.2**
FUG				*e*S	**Sg**	**03 27 31.9**	**-1.3**
CVTR	**Volcan Turrial**	**4.23**	**131**	Pn	**Pn**	**03 26 27.9**	**+1.1**
CVTR	**Volcan Turrial**	**4.23**	**131**	*e*P	**Pn**	**03 26 27.9**	**+0.8**
RAFA	**San Farael, Vo**	**4.23**	**132**	*e*P	**Pn**	**03 26 27.5**	**+0.8**
LCR2	**La Lucha 2**	**4.24**	**136**	*e*P	**Pn**	**03 26 27.4**	**+0.6**
RIMA	**Rio Macho**	**4.32**	**134**	Pn	**Pn**	**03 26 29.1**	**+1.2**
RIMA	**Rio Macho**	**4.32**	**134**	*e*P	**Pn**	**03 26 28.9**	**+1.0**
BATAN	**Batan**	**4.47**	**127**	Pn	**Pn**	**03 26 31.1**	**+1.4**
CDM	**Cerro de Muert**	**4.54**	**135**	*e*P	**Pn**	**03 26 32.5**	**+1.4**
PEZE	**Perez Zeledon,**	**4.72**	**136**	Pn	**Pn**	**03 26 35.5**	**+2.1**
PEZE	**Perez Zeledon,**	**4.72**	**136**	*e*P	**Pn**	**03 26 34.9**	**+1.5**
STG3	**Santiaguito 3,**	**4.81**	**294**	*e*P	**Pn**	**03 26 37.7**	**+3.0**
RTAL	**Retalhuleu**	**4.86**	**291**	Pn	**Pn**	**03 26 36.7**	**+1.6**
PETF	**Flores**	**4.93**	**326**	Pn	**Pn**	**03 26 36.2**	**+0.2**
HUEH	**Huehuetenango**	**5.02**	**300**	Pn	**Pn**	**03 26 39.6**	**+2.1**
SRBA	**San Rafael, Bu**	**5.05**	**134**		**Pn**	**03 26 40.4**	**+2.6**
DRK0	**Durika**	**5.11**	**133**	Pn	**Pn**	**03 26 41.4**	**+2.7**
POTG	**Potrero Grande**	**5.35**	**134**	*e*P	**Pn**	**03 26 43.9**	**+2.1**
RGM0	**Gandoca**	**5.38**	**126**	Pn	**Pn**	**03 26 43.6**	**+1.4**
PRVC	**Isla de Provid**	**5.53**	**84**	Pn	**Pn**	**03 26 45.0**	**+0.6**
PRVC	**Isla de Provid**	**5.53**	**84**	*e*P	**Pn**	**03 26 45.7**	**+1.3**
PRVC	**Isla de Provid**	**5.53**	**84**	*e*P	**Pn**	**03 26 45.5**	**+1.2**
BRU2	**Volcan**	**5.83**	**133**	*e*P	**Pn**	**03 26 50.9**	**+2.3**
BRU2	**Volcan**	**5.83**	**133**	*e*P	**Pn**	**03 26 50.4**	**+1.8**
CCIG	**Comitan**	**6.04**	**305**	⇓P	**Pn**	**03 26 52.2**	**+0.7**
PNME	**Penonome**	**7.85**	**123**	*e*P	**Pn**	**03 27 20.5**	**+4.3**
BCIP	**Isla Barro Col**	**7.92**	**116**	Pn	**Pn**	**03 27 16.9**	**-0.3**
BCIP	**Isla Barro Col**	**7.92**	**116**	P	**Pn**	**03 27 16.9**	**-0.3**
BCIP	**Isla Barro Col**	**7.92**	**116**	*e*P	**Pn**	**03 27 17.1**	**0.0**
BCIP	**Isla Barro Col**	**7.92**	**116**	⇓P	**Pn**	**03 27 16.9**	**-0.3**
CACAO	**El Cacao, Vera**	**8.13**	**131**	*e*P	**Pn**	**03 27 22.2**	**+2.0**
UPA	**Univ. de Panam**	**8.27**	**117**	*e*P	**Pn**	**03 27 26.6**	**+4.5**
AZU	**Azuero**	**8.30**	**126**	*e*P	Pn	03 27 27.5	+5.2
AZU	**Azuero**	**8.30**	**126**	*e*P	**Pn**	**03 27 23.0**	**+0.7**
CMIG	**Matias Romero**	**8.71**	**300**	Pn	**Pn**	**03 27 28.8**	**+0.8**
	comp=Z,1.1nm,0.3s,baz=127,slow=11,SNR=92						
CMIG				Sn	**Sn**	**03 29 11.8**	**+5.8**
	comp=Z,4.7nm,0.3s,baz=128,slow=18,SNR=2.0						
CMIG				Lg	Lg	03 29 48.5	
	comp=Z,3.9nm,0.3s,baz=224,slow=5.6,SNR=4.2						
	comp=Z,141nm,0.9s						
UPD2	**Meteti**	**9.80**	**115**	*e*P	**Pn**	**03 27 45.2**	**+2.2**
MCJ	**Malvern**	**10.33**	**59**	*i* P	**Pn**	**03 27 54.3**	**+3.9**
CAPC	**Capurgana**	**10.36**	**113**	*e*P	**Pn**	**03 27 50.5**	**-0.2**
CVJ	**Coleyville**	**10.60**	**58**	*i* P	**Pn**	**03 27 56.8**	**+2.8**
MTDJ	**Mount Denham**	**10.60**	**58**	Pn	**Pn**	**03 27 55.8**	**+1.7**
MTDJ	**Mount Denham**	**10.60**	**58**	*e*P	**Pn**	**03 27 57.0**	**+2.9**
MTDJ	**Mount Denham**	**10.60**	**58**	⇑P	**Pn**	**03 27 55.5**	**+1.0**
SOR	**Soroa**	**10.63**	**20**	Pn	**Pn**	**03 27 56.5**	**+2.2**
SOR	**Soroa**	**10.63**	**20**	P	**Pn**	**03 27 56.5**	**+2.2**
PTAC	**Punta Ardita,**	**10.67**	**121**	*e*P	**Pn**	**03 27 55.3**	**+0.4**
STH	**Stony Hill**	**11.14**	**61**	*i* P	**Pn**	**03 28 04.6**	**+3.2**
STH				*i* S		03 31 17.1	
HOJ	**Hope**	**11.16**	**61**	*i* P	**Pn**	**03 28 05.3**	**+3.7**
LCBC	**Los crdobas,**	**11.17**	**110**	*e*P	**Pn**	**03 28 04.3**	**+2.5**
GWJ	**Greenwich**	**11.21**	**61**	*i* P	**Pn**	**03 28 06.3**	**+3.9**
SJCC	**San Jacinto, C**	**11.96**	**103**	Pn	**Pn**	**03 28 12.9**	**+0.3**
SJCC	**San Jacinto, C**	**11.96**	**103**	*e*P	**Pn**	**03 28 11.8**	**-0.8**
DBBC	**Dabeiba**	**12.10**	**117**	*e*P	**Pn**	**03 28 16.1**	**+1.6**
PIZC	**Pizarro, Choco**	**12.31**	**128**	*e*P	Pn	03 28 22.9	+5.5
UREC	**San Jos de Ur**	**12.36**	**113**	*e*P	**Pn**	**03 28 17.9**	**-0.2**
SMRC	**Santa Marta, M**	**12.62**	**96**	*e*P	**Pn**	**03 28 20.0**	**-1.6**
ARGC	**Ariguani, Magd**	**12.86**	**102**	*e*P	**Pn**	**03 28 24.9**	**+0.1**
CBOC	**Ciudad Bolivar**	**12.86**	**121**	*e*P	**Pn**	**03 28 26.4**	**+1.4**
MALC	**Bahia Malaga**	**12.96**	**132**	*e*P	P	03 28 31.7	-5.0
HELC	**Santa Helena**	**13.10**	**119**	*e*P	**Pn**	**03 28 31.3**	**+1.9**
GR1C	**Gorgona, Isla**	**13.10**	**137**	*e*P	**Pn**	**03 28 32.2**	**+4.1**
PLMC	**San Jos del P**	**13.19**	**126**	*e*P	**Pn**	**03 28 31.7**	**+2.2**
GTBY	**Guantanamo Bay**	**13.43**	**57**	Pn	**Pn**	**03 28 34.6**	**+2.0**
GTBY	**Guantanamo Bay**	**13.43**	**57**	*e*P	**Pn**	**03 28 33.7**	**+1.1**
GTBY	**Guantanamo Bay**	**13.43**	**57**	⇑P	**Pn**	**03 28 34.1**	**+1.5**
LL1C	**La Loma 1 Cana**	**13.60**	**102**	*e*P	**Pn**	**03 28 35.1**	**+0.2**
CTUM2	**Tumaco**	**13.66**	**142**	*e*P	**P**	**03 28 43.6**	**-1.0**
TUMC	**Tumaco**	**13.66**	**142**	*e*P	**P**	**03 28 41.2**	**-3.3**
YOTC	**Yotoco, Valle**	**13.72**	**129**	*e*P	**P**	**03 28 43.1**	**-2.2**
YOTC	**Yotoco, Valle**	**13.72**	**129**	*e*P	**Pn**	**03 28 38.9**	**+2.2**
GUY2C	**Guyana, Caldas**	**13.75**	**122**	*e*P	**Pn**	**03 28 40.1**	**+2.6**
PAYG	**Puerto Ayora**	**13.79**	**194**	*e*P	**P**	**03 28 43.6**	**-2.3**
PAYG	**Puerto Ayora**	**13.79**	**194**	⇓P	**P**	**03 28 43.5**	**-2.4**
LL6C	**La Loma 6 Bece**	**13.82**	**101**	*e*P	**Pn**	**03 28 37.6**	**-0.4**
PTBC	**PUERTO BERRIO,**	**13.86**	**116**	*e*P	**Pn**	**03 28 38.2**	**-0.2**
CRJC	**Cerrejon, Guaj**	**13.94**	**96**	*e*P	**Pn**	**03 28 37.5**	**-2.2**
CNOCA	**NORCASIA, CALD**	**13.98**	**120**	*e*P	**P**	**03 28 46.4**	**-1.7**
NORC	**Norcasia**	**13.98**	**120**	*e*P	**Pn**	**03 28 42.9**	**+2.7**
ANIL	**Santa Ana**	**14.14**	**125**	*e*P	**Pn**	**03 28 46.2**	**+3.6**
061Z	**Ochoppi**	**14.20**	**23**	P	**Pn**	**03 28 43.6**	**+0.4**
	baz=205						
061Z				S	**Sn**	**03 31 18.9**	**-1.5**
	baz=205						
OCAC	**Ocana**	**14.21**	**107**	*e*P	**Pn**	**03 28 42.0**	**-1.4**
BRRC	**Barranca, Sant**	**14.27**	**112**	*e*P	**Pn**	**03 28 44.1**	**-0.1**
POPC	**Popayan, Colom**	**14.45**	**134**	*e*P	**Pn**	**03 28 49.2**	**+2.4**
ORTC	**Ortega, Tolima**	**14.61**	**126**	*e*P	**Pn**	**03 28 51.8**	**+2.9**
SPBC	**San Pablo de B**	**14.62**	**118**	*e*P	**Pn**	**03 28 50.6**	**+1.6**
URIC	**Uribia, Colomb**	**14.72**	**93**	Pn	**Pn**	**03 28 50.6**	**+0.3**
URIC	**Uribia, Colomb**	**14.72**	**93**	*e*P	**Pn**	**03 28 49.8**	**-0.6**
MARP	**Paez Belalcaza**	**14.76**	**131**	*e*P	**P**	**03 28 55.1**	**-2.0**
SOTA	**Rioblanco**	**14.79**	**135**	*e*P	**P**	**03 28 54.9**	**-2.7**
PCON	**Cinco Dias**	**14.80**	**134**	*e*P	**P**	**03 28 55.5**	**-2.2**
CROSA	**EL ROSAL, CUND**	**14.82**	**121**	*e*P	**P**	**03 28 56.4**	**-1.5**
ROSC	**El Rosal**	**14.83**	**121**	Pn	**P**	**03 28 55.6**	**-2.3**
	comp=Z,1.0nm,0.3s,baz=332,slow=7.9,SNR=61						
ROSC				LR	LR	03 35 07.9	
	comp=Z,61μm,18.4s,baz=350,slow=40						
ROSC	**El Rosal**	**14.83**	**121**	P	**P**	**03 28 56.8**	**-1.1**
ROSC	**El Rosal**	**14.83**	**121**	P	**P**	**03 28 56.8**	**-1.1**
ROSC	**El Rosal**	**14.83**	**121**	*e*P	**P**	**03 28 55.6**	**-2.3**
CMBC	**Cumbal**	**14.90**	**142**	*e*P	**P**	**03 28 56.8**	**-2.1**
BARC	**Barichara**	**14.96**	**113**	*e*P	**Pn**	**03 28 55.3**	**+1.5**
CRUC	**La Cruz**	**14.97**	**137**	*e*P	**P**	**03 28 58.5**	**-1.1**
GCUF	**Volcan Galeras**	**14.97**	**139**	*e*P	**P**	**03 28 57.7**	**-2.0**
PRAC	**Prado**	**15.02**	**126**	*e*P	**Pn**	**03 28 54.4**	**0.0**
CPAS2	**Pasto**	**15.04**	**139**	*e*P	**P**	**03 29 02.2**	**+1.9**
CUSE	**Cuicocha Este**	**15.08**	**145**	*e*P	**P**	**03 28 59.4**	**-1.4**
TULM	**Tulcn-Chalpat**	**15.10**	**142**	IAmb	IAmb	03 29 10.0	
	comp=Z,943nm,1.2s						
TULM	**Tulcn-Chalpat**	**15.10**	**142**	*e*P	**P**	**03 29 01.1**	**0.0**
PAMC	**Pamplona, Colo**	**15.10**	**110**	*e*P	**Pn**	**03 28 57.6**	**+1.7**
OTAV	**Otavalo**	**15.10**	**145**	P	**P**	**03 28 59.9**	**-1.2**
OTAV	**Otavalo**	**15.10**	**145**	P	**P**	**03 28 59.9**	**-1.2**
060A	**Indiantown**	**15.47**	**23**	P	**Pn**	**03 29 00.5**	**+0.4**
	baz=205						
060A				S	**Sn**	**03 31 50.8**	**-0.4**
	baz=205						
GARC	**Garzon, Huila**	**15.54**	**132**	*e*P	**P**	**03 29 04.0**	**-1.7**
VILC	**Villavicencio,**	**15.75**	**122**	*e*P	**P**	**03 29 08.3**	**+0.4**
CFLOR	**Florencia**	**15.84**	**134**	*e*P	**P**	**03 29 11.4**	**+2.6**
FLOC	**Florencia**	**15.85**	**134**	*e*P	**P**	**03 29 07.9**	**-1.0**
SLOR	**San Lorenzo -**	**15.89**	**147**	IAmb	IAmb	03 29 17.5	
	comp=Z,2μm,1.3s						
DWPF	**Disney Wildern**	**16.09**	**18**		**Pn**	**03 29 09.6**	**+1.4**
DWPF	**Disney Wildern**	**16.09**	**18**	P	**Pn**	**03 29 08.7**	**+0.5**
	baz=200,SNR=6.8						
DWPF				S	**S**	**03 32 19.0**	**-0.7**
	baz=200						
DWPF	**Disney Wildern**	**16.09**	**18**	P	**Pn**	**03 29 08.7**	**+0.5**
	baz=200						
DWPF				S	**Sn**	**03 31 56.8**	**-10**
	baz=200						
DWPF	**Disney Wildern**	**16.09**	**18**	⇓P	**Pn**	**03 29 08.5**	**+0.3**
TAMC	**Tame, Arauca**	**16.28**	**111**	*e*P	**Pn**	**03 29 11.5**	**+0.7**
TAMC	**Tame, Arauca**	**16.28**	**111**	*e*P	**Pn**	**03 29 11.7**	**+0.8**
**SDD

comp=Z,999nm,1.4s
BAUV El Baul 19.02 100 *e*P **P 03 29 40.2 -3.8**
BAUV El Baul 19.02 100 *e* 03 33 19.3
250A Grady 19.09 2 P **Pn 03 29 46.9 +1.5**
baz=182,SNR=105
250A S **S 03 33 21.2 +0.6**
baz=182
342A Flagon Creek P 19.11 346 IAmb IAmb 03 29 49.2
comp=Z,2µm,1.4s
342B Flagon Creek P 19.11 346 P **Pn 03 29 47.7 +2.0**
baz=164,SNR=73
342B S **S 03 33 29.2 +8.1**
baz=164
833A Chaparral WMA, 19.28 325 P **P 03 29 47.0 +0.3**
833A IAmb IAmb 03 29 57.9
comp=Z,2µm,1.4s
833A Chaparral WMA, 19.28 325 P **Pn 03 29 47.2 -0.5**
baz=141,SNR=414
833A S **Sn 03 33 22.7 -0.9**
baz=141
833A Chaparral WMA, 19.28 325 P **Pn 03 29 47.6 -0.1**
baz=141,SNR=414
833A S **Sn 03 33 23.3 -0.2**
baz=141
255A Hazlehurst 19.48 12 P **Pn 03 29 51.0 +0.9**
baz=193,SNR=30
255A S **S 03 33 32.0 +3.6**
baz=193
VBMS Vicksburg 19.58 351 P **Pn 03 29 52.3 +1.0**
baz=170,SNR=126
VBMS S **Sn 03 33 36.4 +5.5**
baz=170
VBMS Vicksburg 19.58 351 P **Pn 03 29 52.5 +1.1**
baz=170,SNR=126
VBMS S **Sn 03 33 33.9 +3.0**
baz=170
146A Union 19.82 355 IAmb IAmb 03 30 02.4
comp=Z,2µm,1.4s
146A Union 19.82 355 P **Pn 03 29 55.2 +1.0**
baz=174,SNR=48
146A S **Sn 03 33 37.5 +0.8**
baz=174
257A Skidaway Islan 19.85 15 P **Pn 03 29 55.3 +0.8**
baz=197
257A S **Sn 03 33 37.6 +0.2**
baz=197
152A Waverly Hall 19.88 6 IAmb IAmb 03 30 04.1
comp=Z,690nm,1.4s
152A Waverly Hall 19.88 6 P **Pn 03 29 55.7 +0.8**
baz=186,SNR=94
152A S **Sn 03 33 38.0 0.0**
baz=186
MLPR Magueyes Islan 19.92 73 IAmb IAmb 03 30 02.6
comp=Z,709nm,1.5s
AGPR Aguadilla, PR 19.97 71 IAmb IAmb 03 30 02.8
comp=Z,1µm,1.2s
154A Montrose 20.03 10 IAmb IAmb 03 29 59.6
comp=Z,677nm,1.1s
154A Montrose 20.03 10 P Pn 03 29 56.8 +0.1
baz=191,SNR=58
154A S **S 03 33 40.7 +1.1**
baz=191
NATX Nacogdoches 20.13 341 P Pn 03 29 58.1 +0.2
baz=158,SNR=112
NATX S Sn 03 33 49.0 +4.9
baz=158
NATX Nacogdoches 20.13 341 P Pn 03 29 58.1 +0.3
baz=158,SNR=112
NATX S Sn 03 33 44.7 +0.6
baz=158
LRAL Lakeview Retre 20.13 0 Pn 03 29 57.7 -0.2
LRAL IAmb IAmb 03 30 04.5
comp=Z,1µm,1.1s
LRAL Lakeview Retre 20.13 0 P Pn 03 29 58.7 +0.9
baz=180,SNR=390
LRAL S Sn 03 33 45.0 +0.9
baz=180
LRAL Lakeview Retre 20.13 0 P Pn 03 29 57.6 -0.3
baz=180,SNR=390
LRAL S Sn 03 33 43.9 -0.2
baz=180
143A Socs Landing, 20.20 349 IAmb IAmb 03 30 03.9
comp=Z,773nm,1.1s
143A Socs Landing, 20.20 349 P Pn 03 29 58.9 +0.2
baz=167,SNR=49
143A S Sn 03 33 50.4 +4.5
baz=167
AOPR Arecibo Observ 20.27 72 IAmb IAmb 03 30 06.9
comp=Z,975nm,1.4s
AOPR Arecibo Observ 20.27 72 *e*P **P 03 29 53.6 -4.0**
Z47A Carrollton 20.32 357 IAmb IAmb 03 30 05.8
comp=Z,919nm,1.1s
Z47A Carrollton 20.32 357 P Pn 03 30 00.5 +0.5
baz=177,SNR=236
Z47A S Sn 03 33 47.5 -1.1
baz=177
OBIP Obispado Ponce 20.34 73 IAmb IAmb 03 30 07.7
comp=Z,839nm,1.2s
435B Jarrell 20.38 333 IAmb IAmb 03 30 12.9
comp=Z,1µm,1.0s
435B Jarrell 20.38 333 P Pn 03 30 00.4 -0.4
baz=149,SNR=54
435B S **S 03 33 47.1 +0.6**
baz=149
435B Jarrell 20.38 333 P Pn 03 29 59.8 -0.9
baz=149
435B S **S 03 33 48.3 +1.8**
baz=149
ICMP Isla Caja de M 20.39 73 P Pn 03 30 00.5 -0.4
ICMP IAmb IAmb 03 30 12.7
comp=Z,623nm,1.2s
BIRV Birongo 20.45 94 P Pn 03 30 00.9 -0.9
BIRV IAmb IAmb 03 30 14.5
comp=Z,641nm,1.1s
Z51A Franklin 20.48 4 P Pn 03 30 02.0 +0.1
baz=185,SNR=28
Z51A S **S 03 33 49.7 +1.2**
baz=185
237A Washetta, Mont 20.74 338 P Pn 03 30 04.8 -0.2
baz=155,SNR=90
237A S Sn 03 33 59.2 +0.5
baz=155
GOGA Godfrey 20.76 8 P **P 03 30 04.0 +1.2**
GOGA Godfrey 20.76 8 P **P 03 30 04.0 +1.2**
GOGA pmax pmax
comp=Z,405nm,1.1s
GOGA MLR MLR
comp=Z,31µm,18.0s
GOGA Godfrey 20.76 8 P Pn 03 30 05.0 -0.2
baz=190,SNR=137
GOGA S **S 03 33 55.8 +1.8**
baz=190
GOGA Godfrey 20.76 8 P Pn 03 30 05.1 -0.1
baz=190,SNR=137
SJG San Juan 20.78 73 P **P 03 30 03.6 +0.4**
comp=Z,161nm,1.1s,baz=262,slow=8.3,SNR=24
SJG S Sn 03 33 57.4 -2.5
comp=Z,6.2nm,0.8s,baz=225,slow=17,SNR=1.0
SJG LR LR 03 38 12.5
comp=Z,130µm,20.6s,baz=273,slow=37
comp=Z,161nm,1.1s
SJG San Juan 20.78 73 P **P 03 30 04.1 +1.0**
SJG IAmb IAmb 03 30 09.9
comp=Z,621nm,1.4s
SJG San Juan 20.78 73 P **P 03 30 04.1 +1.0**
SJG pmax pmax
comp=Z,621nm,1.4s
SJG MLR MLR
comp=Z,122µm,20.0s
SJG San Juan 20.78 73 *e*P **P 03 30 03.9 +0.7**
SJG San Juan 20.78 73 *e*P **P 03 30 02.0 -1.2**
SJG San Juan 20.78 73 ⇑P **P 03 30 03.6 +0.4**
Y49A Blount Mountai 20.96 1 IAmb IAmb 03 30 12.0
comp=Z,2µm,1.4s
Y49A Blount Mountai 20.96 1 P Pn 03 30 07.5 -0.1
baz=182,SNR=205
Y49A S Sn 03 34 01.6 -2.5
baz=182
Z41A Richland Creek 21.03 346 IAmb IAmb 03 30 17.3
comp=Z,872nm,1.2s
Z41A Richland Creek 21.03 346 P **P 03 30 07.7 +2.0**
baz=164,SNR=62
Z41A P **P 03 30 07.7 +2.0**
baz=164,SNR=62
Z41A S Sn 03 34 06.5 +0.8
baz=164
Z41A S Sn 03 34 06.5 +0.8
baz=164
Z41A Richland Creek 21.03 346 P **P 03 30 07.5 +1.8**
baz=164,SNR=62
Z41A S Sn 03 34 04.3 -1.4
baz=164
HAW Hawthorne Fire 21.04 13 P **P 03 30 07.8 +1.9**
baz=195,SNR=85
HAW S Sn 03 34 02.9 -3.2
baz=195
CSU Charleston Sou 21.06 16 IAmb IAmb 03 30 13.0
comp=Z,1µm,1.2s
Y45A Yeager Farm, C 21.09 354 P **P 03 30 09.0 +2.7**
baz=173,SNR=201
Y45A S Sn 03 34 05.0 -2.0
baz=173
Y52A Lilburn 21.13 7 IAmb IAmb 03 30 10.9
comp=Z,717nm,1.1s
Y52A Lilburn 21.13 7 P **P 03 30 09.0 +2.2**
baz=188,SNR=225
Y52A P **P 03 30 09.0 +2.2**
baz=188,SNR=225
Y52A S **S 03 34 04.4 +3.0**
baz=188
Y52A S **S 03 34 04.4 +3.0**
baz=188
NHSC New Hope 21.15 16 P **P 03 30 09.0 +2.1**
NHSC New Hope 21.15 16 P **P 03 30 09.4 +2.4**
baz=199,SNR=67
NHSC S Sn 03 34 06.5 -2.0
baz=199
NHSC New Hope 21.15 16 P **P 03 30 09.4 +2.4**
baz=199,SNR=67
NHSC S **S 03 34 04.6 +2.9**
baz=199
JCT Junction City 21.19 328 P **P 03 30 07.8 +0.3**
baz=143,SNR=77
JCT S **S 03 34 01.4 -1.2**
baz=143
JCT Junction City 21.19 328 P **P 03 30 07.8 +0.3**
baz=143,SNR=77
JCT S **S 03 34 02.9 +0.2**
baz=143
JCT Junction City 21.19 328 ⇓P **P 03 30 07.2 -0.3**
MTP Monte Pirata 21.34 73 P **P 03 30 09.8 +0.7**
MTP IAmb IAmb 03 30 19.6
comp=Z,565nm,1.1s
WHTX Lake Whitney, 21.37 335 P **P 03 30 10.4 +1.0**
baz=151,SNR=42
WHTX S **S 03 34 09.5 +3.5**
baz=151
WHTX Lake Whitney, 21.37 335 P **P 03 30 10.8 +1.4**
baz=151,SNR=42
WHTX S **S 03 34 08.8 +2.8**
baz=151
CCAR Cane Creek 21.45 349 P **P 03 30 12.2 +2.0**
baz=167,SNR=77
CCAR S Sn 03 34 15.2 -0.7
baz=167
WLAR White Oak Lake 21.51 346 IAmb IAmb 03 30 14.6
comp=Z,1µm,1.3s
X48A Hartselle 21.55 360 IAmb IAmb 03 30 18.8
comp=Z,1µm,1.3s
X48A Hartselle 21.55 360 P **P 03 30 13.0 +1.8**
baz=180,SNR=244
X48A S **S 03 34 12.0 +2.5**
baz=180
ATAH Atahualpa 21.59 156 P **P 03 30 14.9 +2.6**
comp=Z,118nm,1.0s,baz=336,slow=11,SNR=33
ATAH LR LR 03 37 59.5
comp=Z,77µm,20.4s,baz=339,slow=35
Z38A Mt. Pleasant 21.62 342 P **P 03 30 13.1 +1.1**
Z38A Mt. Pleasant 21.62 342 P **P 03 30 14.2 +2.2**
baz=158,SNR=250
Z38A S Sn 03 34 17.4 -2.4
baz=158
FPAL Fort Paine 21.67 3 IAmb IAmb 03 30 21.5
comp=Z,963nm,1.3s
OXF Oxford 21.71 355 P **P 03 30 14.7 +1.7**
baz=174,SNR=205
OXF S **S 03 34 16.4 +3.6**
baz=174
OXF Oxford 21.71 355 P **P 03 30 14.7 +1.7**
baz=174,SNR=205
OXF S **S 03 34 16.7 +3.9**
baz=174
X51A Calhoun 21.75 5 P **P 03 30 15.4 +2.0**
baz=186,SNR=307
X51A P **P 03 30 15.4 +2.0**
baz=186,SNR=307
X51A S **S 03 34 17.2 +3.7**
baz=186
X51A S **S 03 34 17.2 +3.7**
baz=186
HODGE Hodges 21.76 11 P **P 03 30 15.2 +1.7**
baz=192,SNR=62
HODGE S **S 03 34 16.2 +2.5**
baz=192
STVI Saint Thomas 21.94 73 IAmb IAmb 03 30 24.6
comp=Z,705nm,1.1s
Y57A Sumter 21.95 15 IAmb IAmb 03 30 22.7
comp=Z,798nm,1.3s
Y57A Sumter 21.95 15 P **P 03 30 17.8 +2.2**
baz=197,SNR=46
Y57A P **P 03 30 17.8 +2.2**
baz=197,SNR=46
Y57A S **S 03 34 19.8 +2.3**
baz=197
Y57A S **S 03 34 19.8 +2.3**
baz=197
JSC Jenkinsville 22.01 13 IAmb IAmb 03 30 23.2
comp=Z,936nm,1.5s
JSC Jenkinsville 22.01 13 P **P 03 30 18.1 +2.0**
baz=195,SNR=112
JSC S **S 03 34 21.6 +3.1**
baz=195
CDVI St. Croix 22.01 74 *e*P **P 03 30 13.8 -2.6**
Y58A Scranton 22.04 16 IAmb IAmb 03 30 28.1
comp=Z,492nm,1.0s
Y58A Scranton 22.04 16 P **P 03 30 18.7 +2.1**
baz=199,SNR=44
Y58A P **P 03 30 18.7 +2.1**
baz=199,SNR=44
Y58A S **S 03 34 22.4 +3.3**
baz=199
Y58A S **S 03 34 22.4 +3.3**
baz=199
PLAL Pickwick Lake 22.09 358 IAmb IAmb 03 30 21.2
comp=Z,462nm,1.2s
X40A Basin Creek Fa 22.22 347 P **P 03 30 19.5 +1.1**
baz=165,SNR=101
X40A P **P 03 30 19.5 +1.1**
baz=165,SNR=101
X40A S **S 03 34 24.8 +2.3**
baz=165
X40A S **S 03 34 24.8 +2.3**
baz=165
X40A Basin Creek Fa 22.22 347 P **P 03 30 19.6 +1.1**
baz=165,SNR=101
X40A S **S 03 34 23.0 +0.5**
baz=165
W45A Hickory Valley 22.34 355 P **P 03 30 21.1 +1.4**
baz=174,SNR=116
W45A S Sn 03 34 32.7 -4.3
baz=174
W50A Signal Mountai 22.34 4 P **P 03 30 20.7 +0.8**
W50A IAmb IAmb 03 30 29.2
comp=Z,440nm,1.1s
W50A Signal Mountai 22.34 4 P **P 03 30 21.4 +1.5**
baz=184,SNR=180
W50A S **S 03 34 28.9 +3.9**
baz=184
Y59A Loris 22.35 18 IAmb IAmb 03 30 48.0
comp=Z,833nm,1.4s
Y59A Loris 22.35 18 P **P 03 30 21.7 +1.8**
baz=201,SNR=23
Y59A P **P 03 30 21.7 +1.8**
baz=201,SNR=23
Y59A S **S 03 34 29.3 +4.3**
baz=201
Y59A S **S 03 34 29.3 +4.3**
baz=201
W52A Murphy 22.36 7 IAmb IAmb 03 30 26.6
comp=Z,825nm,1.4s
W52A Murphy 22.36 7 P **P 03 30 22.1 +2.0**
baz=188,SNR=91
W52A S **S 03 34 29.6 +4.3**
baz=188
MET Memphis--Engin 22.37 354 IAmb IAmb 03 30 23.8
comp=Z,795nm,1.2s
BG3 Lake Jocassee 22.39 9 IAmb IAmb 03 30 25.0
comp=Z,830nm,1.4s
CASEE Lake Jocassee 22.39 9 P **P 03 30 22.5 +2.1**
baz=190,SNR=149
CASEE S **S 03 34 30.7 +4.9**
baz=190
UALR University of 22.39 348 IAmb IAmb 03 30 43.0
comp=Z,692nm,1.4s
PAULI Pauline 22.41 11 IAmb IAmb 03 30 24.2
comp=Z,553nm,1.2s
PAULI Pauline 22.41 11 P **P 03 30 22.3 +1.8**
baz=193,SNR=63
PAULI S **S 03 34 31.2 +5.0**
baz=193
HPIG 22.43 312 ⇓P **P 03 30 20.6 -0.5**
MIAR Mount Ida 22.44 346 P **P 03 30 21.7 +0.8**
baz=163,SNR=170
MIAR S **S 03 34 31.4 +4.7**
baz=163
MIAR Mount Ida 22.44 346 P **P 03 30 21.9 +1.1**
baz=163,SNR=170
MIAR S **S 03 34 27.4 +0.7**
baz=163
MIAR Mount Ida 22.44 346 ⇑P **P 03 30 21.2 +0.3**
Z35A Perchaven, San 22.46 337 P **P 03 30 22.4 +1.3**
baz=153,SNR=174
Z35A S **S 03 34 29.3 +2.2**
baz=153
BIRD Birdtown, Kers 22.54 14 P **P 03 30 23.1 +1.2**
BIRD IAmb IAmb 03 30 26.0
comp=Z,564nm,1.2s
BIRD Birdtown, Kers 22.54 14 P **P 03 30 23.4 +1.6**
baz=197,SNR=89
BIRD S **S 03 34 32.2 +3.8**
baz=197
Y60A Bolivia 22.57 19 P **P 03 30 23.3 +1.1**
baz=203,SNR=15
Y60A P **P 03 30 23.3 +1.1**
baz=203,SNR=15
Y60A S **S 03 34 33.0 +4.0**
baz=203
Y60A S **S 03 34 33.0 +4.0**
baz=203
TXAR Lajitas Array 22.57 319 P **P 03 30 22.4 0.0**
comp=Z,71nm,1.1s,baz=140,slow=9.1,SNR=214
TXAR S **S 03 34 33.0 +3.6**
comp=Z,18nm,1.2s,baz=56,slow=9.3,SNR=1.3
comp=Z,71nm,1.1s
TX31 Lajitas Ar. Si 22.57 319 P **P 03 30 22.5 +0.1**
TX31 Lajitas Ar. Si 22.57 319 P **P 03 30 22.4 -0.1**
baz=133,SNR=295
TX31 S **S 03 34 34.7 +5.3**
baz=133
TX32 Lajitas Array 22.57 319 P **P 03 30 22.4 -0.1**
TX32 IAmb IAmb 03 30 49.9
comp=Z,629nm,1.4s
CPCT Cooper Cave 22.65 5 IAmb IAmb 03 30 28.1
comp=Z,885nm,1.2s
X58A Rowland 22.74 17 IAmb IAmb 03 30 28.6
comp=Z,489nm,1.1s
X58A Rowland 22.74 17 P **P 03 30 25.1 +1.0**
baz=200,SNR=54
X58A P **P 03 30 25.1 +1.0**
baz=200,SNR=54
X58A S **S 03 34 36.2 +4.2**
baz=200
X58A S **S 03 34 36.2 +4.2**
baz=200
W41B Gary Mavity, V 22.76 349 IAmb IAmb 03 30 27.3
comp=Z,1µm,1.4s
W41B Gary Mavity, V 22.76 349 P **P 03 30 25.1 +0.9**
baz=167,SNR=225
W41B S **S 03 34 31.5 -1.0**
baz=167
W41B Gary Mavity, V 22.76 349 P **P 03 30 25.3 +1.1**
baz=167,SNR=225
W41B S **S 03 34 32.8 +0.3**
baz=167
KMSC Kings Mountain 22.82 12 IAmb IAmb 03 30 42.9
comp=Z,440nm,1.4s
KMSC Kings Mountain 22.82 12 P **P 03 30 26.7 +1.8**
baz=194,SNR=76
KMSC S **S 03 34 38.2 +4.7**
baz=194
KMSC Kings Mountain 22.82 12 P **P 03 30 26.6 +1.7**
baz=194,SNR=76
KMSC S **S 03 34 36.3 +2.8**
baz=194
V48A Smith Brothers 22.83 0 IAmb IAmb 03 30 28.0
comp=Z,1µm,1.4s
V48A Smith Brothers 22.83 0 P **P 03 30 26.3 +1.3**
baz=180,SNR=431
V48A S **S 03 34 34.9 +1.2**
baz=180
ABTX Abilene, Hawle 22.86 332 P **P 03 30 25.6 +0.2**
baz=147,SNR=156
ABTX S **S 03 34 34.9 +0.5**
baz=147
ABTX Abilene, Hawle 22.86 332 P **P 03 30 25.4 0.0**
baz=147,SNR=156
ABTX S **S 03 34 34.6 +0.2**
baz=147
HBAR Harrisburg 22.88 352 P **P 03 30 27.2 +1.7**
baz=171,SNR=62
HBAR S Sn 03 34 42.4 -7.7
baz=171
TKL Tuckaleechee C 22.94 7 P **P 03 30 27.7 +1.6**
comp=Z,380nm,0.9s,baz=180,slow=10,SNR=173
TKL S **S 03 34 37.9 +2.4**
comp=Z,12nm,0.9s,baz=130,slow=24,SNR=1.5
TKL LR LR 03 39 27.2
comp=Z,18µm,20.0s,baz=179,slow=37
TKL Tuckaleechee C 22.94 7 P **P 03 30 26.7 +0.6**
TKL Tuckaleechee C 22.94 7 P **P 03 30 26.7 +0.6**
TKL pmax pmax
comp=Z,1µm,1.3s
TKL Tuckaleechee C 22.94 7 P **P 03 30 28.3 +2.2**
baz=188,SNR=378
TKL S **S 03 34 39.5 +4.0**
baz=188
X37A Clayton 22.97 342 P **P 03 30 27.6 +1.1**
baz=159,SNR=453
X37A S **S 03 34 40.8 +4.7**
baz=159
V51A Loudon 23.02 6 P **P 03 30 28.8 +1.9**
baz=186,SNR=277
V51A S **S 03 34 38.8 +1.8**
baz=186
V53A Saluda 23.07 9 IAmb IAmb 03 30 55.0
comp=Z,624nm,1.3s
V53A Saluda 23.07 9 P **P 03 30 29.8 +2.2**
baz=190,SNR=169
V53A P **P 03 30 29.8 +2.2**
baz=190,SNR=169
V53A S **S 03 34 42.1 +4.1**
baz=190
V53A S **S 03 34 42.1 +4.1**
baz=190
W39A Magazine 23.11 346 IAmb IAmb 03 30 30.3
comp=Z,979nm,1.4s
W39A Magazine 23.11 346 P **P 03 30 29.0 +1.1**
baz=163,SNR=221
W39A S **S 03 34 42.4 +3.8**
baz=163
W39A Magazine 23.11 346 P **P 03 30 29.2 +1.3**
baz=163,SNR=221
W39A S **S 03 34 39.4 +0.9**
baz=163
W57A Gilead 23.14 15 P **P 03 30 29.1 +1.0**
baz=198,SNR=68
W57A P **P 03 30 29.1 +1.0**
baz=198,SNR=68
W57A S **S 03 34 41.5 +2.7**
baz=198
W57A S **S 03 34 41.5 +2.7**
baz=198
V52A Sevierville 23.14 7 IAmb IAmb 03 30 37.5
comp=Z,997nm,1.4s
V52A Sevierville 23.14 7 P **P 03 30 30.1 +2.0**
baz=188,SNR=197
V52A S **S 03 34 41.4 +2.4**
baz=188
WVT Waverly 23.23 358 P **P 03 30 29.7 +0.6**
WVT Waverly 23.23 358 P **P 03 30 29.7 +0.6**
WVT pmax pmax
comp=Z,1µm,1.4s
WVT Waverly 23.23 358 P **P 03 30 29.6 +0.5**
baz=178,SNR=357

WVT S S 03 34 40.8 +0.3
baz=178
WVT Waverly 23.23 358 P P 03 30 29.9 +0.8
baz=178
WVT S S 03 34 41.7 +1.2
baz=178
WVT Waverly 23.23 358 ⇑P P 03 30 28.8 -0.3
LNXT Lenox 23.30 355 P P 03 30 31.0 +1.2
baz=174,SNR=88
LNXT S S 03 34 49.5 +8.0
baz=174
FCAR Ozark Folk Cen 23.44 350 IAmb IAmb 03 30 33.2
comp=Z,783nm,1.2s
LCAR Lake Charles 23.46 352 IAmb IAmb 03 30 33.4
comp=Z,865nm,1.2s
LCAR Lake Charles 23.46 352 P P 03 30 31.6 +0.3
baz=170,SNR=451
LCAR S S 03 34 45.1 +1.0
baz=170
V55A Taylorsville 23.53 12 IAmb IAmb 03 30 42.2
comp=Z,387nm,1.2s
V55A Taylorsville 23.53 12 P P 03 30 34.1 +2.0
baz=194,SNR=61
V55A P P 03 30 34.1 +2.0
baz=194,SNR=61
V55A S S 03 34 49.2 +3.9
baz=194
V55A S S 03 34 49.2 +3.9
baz=194
U49A Red Boiling Sp 23.63 2 P P 03 30 34.2 +1.2
baz=183,SNR=386
U49A S S 03 34 48.0 +1.1
baz=183
SMRT St. Maarten 23.65 74 IAmb IAmb 03 30 47.3
comp=Z,638nm,1.4s
SMRT IAMs_20 IAMs_20 03 40 12.7
comp=Z,55µm,20.0s
SMRT St. Maarten 23.65 74 eP P 03 30 28.4 -5.0
SEUS St. Eustatius 23.65 76 eP P 03 30 29.8 -3.6
H06E1 SOCORRO T-PHAS 23.75 288 P P 03 30 37.1 +2.7
SNR=8.8
H06S1 SOCORRO T 23.77 287 P P 03 30 38.4 +3.9
CNNC Cliffs of the 23.81 19 IAmb IAmb 03 30 38.5
comp=Z,358nm,1.2s
CNNC Cliffs of the 23.81 19 P P 03 30 36.7 +2.0
baz=202,SNR=12
CNNC S S 03 34 54.7 +5.0
baz=202
CNNC Cliffs of the 23.81 19 P P 03 30 36.6 +1.8
baz=202,SNR=12
CNNC S S 03 34 55.1 +5.3
baz=202
CNNC Cliffs of the 23.81 19 ⇓P P 03 30 36.1 +1.4
X34A Smith Ranch, M 23.81 337 P 03 30 35.8 +0.9
H06N1 SOCORRO T-PHAS 23.82 288 P P 03 30 36.9 +1.8
TZTN Tazewell 23.84 7 P P 03 30 37.0 +1.9
baz=188,SNR=205
TZTN S S 03 34 52.9 +2.7
baz=188
TZTN Tazewell 23.84 7 P P 03 30 37.3 +2.3
baz=188,SNR=205
TZTN S S 03 34 54.4 +4.1
baz=188
SKI Saint Kitts 23.86 76 eP P 03 30 35.6 +0.2
PARMO Parma 23.88 355 IAmb IAmb 03 30 42.5
comp=Z,650nm,1.1s
V58A Windy Hill, Pi 23.97 16 IAmb IAmb 03 30 39.1
comp=Z,444nm,1.0s
V58A Windy Hill, Pi 23.97 16 P P 03 30 37.6 +1.3
baz=199,SNR=154
V58A P P 03 30 37.6 +1.3
baz=199,SNR=154
V58A S S 03 34 55.4 +3.1
baz=199
V58A S S 03 34 55.4 +3.1
baz=199
U40A Yellville 24.03 348 P P 03 30 37.2 +0.4
baz=166,SNR=164
U40A P P 03 30 37.2 +0.4
baz=166,SNR=164
U40A S S 03 34 55.0 +1.7
baz=166
U40A S S 03 34 55.0 +1.7
baz=166
U40A Yellville 24.03 348 P P 03 30 37.4 +0.5
baz=166,SNR=164
U40A S S 03 34 58.1 +4.8
baz=166
PBMO Poplar Bluff 24.06 353 P P 03 30 37.4 +0.2
baz=172,SNR=99
PBMO S S 03 34 54.5 +0.7
baz=172
U54A Nelsons Funny 24.07 10 IAmb IAmb 03 30 42.2
comp=Z,385nm,1.0s
U54A Nelsons Funny 24.07 10 P P 03 30 39.1 +1.9
baz=192,SNR=126
U54A P P 03 30 39.1 +1.9
baz=192,SNR=126
U54A S S 03 34 57.2 +3.1
baz=192
U54A S S 03 34 57.2 +3.1
baz=192
T47A Sharon Grove 24.08 360 P P 03 30 38.4 +1.1
baz=180,SNR=395
T47A S S 03 34 53.5 -0.5
baz=180
T45B Paducah 24.15 357 P P 03 30 38.5 +0.6
baz=176,SNR=27
T45B S S 03 35 02.5 +7.3
baz=176
U56A King 24.18 13 IAmb IAmb 03 30 43.7
comp=Z,555nm,1.3s
U56A King 24.18 13 P P 03 30 40.6 +2.3
baz=196,SNR=70
U56A P P 03 30 40.6 +2.3
baz=196,SNR=70
U56A S S 03 35 00.5 +4.6
baz=196
U56A S S 03 35 00.5 +4.6
baz=196
T50A Nancy 24.19 4 IAmb IAmb 03 30 40.9
comp=Z,453nm,1.1s
T50A Nancy 24.19 4 P P 03 30 39.7 +1.3
baz=185
T50A P P 03 30 39.7 +1.3
baz=185
T50A S S 03 34 55.1 -0.8
baz=185
T50A S S 03 34 55.1 -0.8
baz=185
HHAR Hobbs 24.19 346 IAmb IAmb 03 30 42.0
comp=Z,466nm,1.3s
HHAR Hobbs 24.19 346 P P 03 30 38.2 -0.2
baz=163
HHAR S S 03 34 57.1 +1.1
baz=163
SLBS Sierra La Lagu 24.28 300 P P 03 30 40.3 +0.9
SLBS IAmb IAmb 03 31 02.4
comp=Z,327nm,1.4s
SLBS Sierra La Lagu 24.28 300 ⇑P P 03 30 40.2 +0.8
MBFL Flemmings, Mon 24.29 78 eP P 03 30 39.8 +0.3
WMOK Wichita Mounta 24.30 336 P P 03 30 39.3 -0.1
baz=151,SNR=288
WMOK S S 03 34 58.0 +0.3
baz=151
WMOK Wichita Mounta 24.30 336 P P 03 30 39.4 0.0
baz=151,SNR=288
WMOK S S 03 35 01.5 +3.7
baz=151
WMOK Wichita Mounta 24.30 336 ⇓P P 03 30 39.0 -0.5
MLYT Lee's Yard 24.31 78 eP P 03 30 38.5 -1.2
TUL1 Leonard 24.32 342 P P 03 30 40.1 +0.5
baz=159,SNR=587
TUL1 S S 03 34 57.2 -0.9
baz=159
TUL1 Leonard 24.32 342 P P 03 30 39.9 +0.3
baz=159,SNR=587
TUL1 S S 03 35 02.7 +4.7
baz=159
OKCFA Oklahoma City 24.40 339 P P 03 30 40.7 +0.4
baz=155,SNR=49
OKCFA S S 03 35 05.1 +5.7
baz=155
U38A Gravette 24.44 346 P P 03 30 40.6 -0.1
baz=162,SNR=63
U38A S S 03 35 04.1 +4.1
baz=162
BPA Boggy Peak 24.66 77 eP P 03 30 39.5 -3.4

GDHS Morne Mazeau, 24.68 79 IAmb IAmb 03 30 52.4
comp=Z,674nm,1.3s
GDHS IAMs_20 IAMs_20 03 40 36.2
comp=Z,55µm,18.0s
ANDO Antigua, Disas 24.69 77 eP P 03 30 33.9 -9.2
GRFF Grenada Fort F 24.69 89 eP P 03 30 46.1 +3.0
LPIG La Paz 24.74 300 P P 03 30 43.9 +0.4
comp=Z,19nm,0.3s,baz=158,slow=1.4,SNR=12
LPIG LR LR 03 40 19.0
comp=Z,100µm,21.2s,baz=118,slow=36
comp=Z,19nm,0.3s
V61A Roper 24.74 21 IAmb IAmb 03 30 48.7
comp=Z,522nm,1.3s
V61A Roper 24.74 21 P P 03 30 44.8 +1.5
baz=205,SNR=9.0
V61A P P 03 30 44.8 +1.5
baz=205,SNR=9.0
V61A S S 03 35 08.8 +4.0
baz=205
V61A S S 03 35 08.8 +4.0
baz=205
ANBD Bethesda, Anti 24.75 77 eP P 03 30 38.1 -5.5
TBG Guadaloupe-3 24.76 80 eP P 03 30 45.9 +2.2
TDBA Terre de Bas, 24.77 80 IAMs_20 IAMs_20 03 39 29.7
comp=Z,44µm,22.0s
TDBA Terre de Bas, 24.77 80 eP P 03 30 43.1 -0.7
GRGR Grenville 24.77 89 eP P 03 30 45.4 +1.6
GRGR Grenville 24.77 89 ⇑P P 03 30 45.5 +1.6
ANWB Willy Bob 24.80 76 IAMs_20 IAMs_20 03 40 09.4
comp=Z,46µm,21.0s
ANWB Willy Bob 24.80 76 eP P 03 30 38.1 -6.0
CBE Ff, Capester 24.81 79 IAMs_20 IAMs_20 03 40 40.7
comp=Z,60µm,18.0s
CBE Ff, Capester 24.81 79 eP P 03 30 43.2 -1.1
S44A Carbondale 24.86 356 P P 03 30 44.9 +0.5
baz=175,SNR=169
S44A S S 03 35 06.5 -0.2
baz=175
U59A Littleton 24.87 18 P P 03 30 46.7 +2.2
baz=202,SNR=57
U59A P P 03 30 46.7 +2.2
baz=202,SNR=57
U59A S S 03 35 10.8 +4.0
baz=202
U59A S S 03 35 10.8 +4.0
baz=202
S51A Beattyville 24.91 6 P P 03 30 46.6 +1.7
baz=188,SNR=235
S51A P P 03 30 46.6 +1.7
baz=188,SNR=235
S51A S S 03 35 10.8 +3.2
baz=188
S51A S S 03 35 10.8 +3.2
baz=188
DSLB Salisbury 24.95 81 eP P 03 30 45.0 -0.5
ABD La Joyeuse, An 24.96 78 IAMs_20 IAMs_20 03 40 52.5
comp=Z,67µm,19.0s
ABD La Joyeuse, An 24.96 78 eP P 03 30 42.5 -3.0
GCMP Grenada, Carri 24.97 88 eP P 03 30 44.7 -0.9
MDN Morne-Daniel 24.97 81 eP P 03 30 45.2 -0.5
MDVC Dominica, Viel 24.98 81 eP P 03 30 46.6 +0.9
BLA Blacksburg 25.01 13 IAmb IAmb 03 30 49.8
comp=Z,285nm,1.1s
BLA Blacksburg 25.01 13 P P 03 30 48.3 +2.5
baz=195,SNR=52
BLA S S 03 35 09.9 +0.8
baz=195
BLA Blacksburg 25.01 13 P P 03 30 47.9 +2.1
baz=195,SNR=52
BLA S S 03 35 12.0 +2.8
baz=195
T57A Hurt 25.07 15 IAmb IAmb 03 30 50.0
comp=Z,454nm,1.1s
T57A Hurt 25.07 15 P P 03 30 48.5 +2.2
baz=198,SNR=128
T57A P P 03 30 48.5 +2.2
baz=198,SNR=128
T57A S S 03 35 13.5 +3.4
baz=198
T57A S S 03 35 13.5 +3.4
baz=198
MAGL Barre de l'ile 25.11 80 IAMs_20 IAMs_20 03 40 31.9
comp=Z,53µm,18.0s
MAGL Barre de l'ile 25.11 80 eP P 03 30 49.1 +2.1
SVOC Richmond Hill, 25.13 86 eP P 03 30 40.3 -6.8
TRN Trinidad (W) 25.16 92 eP P 03 30 43.2 -4.2
FDF Fort de France 25.19 83 IAmb IAmb 03 31 02.5
comp=Z,462nm,1.1s
FDF Fort de France 25.19 83 eP P 03 30 43.1 -4.6
FDF Fort de France 25.19 83 ⇑P P 03 30 48.6 +1.0
FVM French Village 25.25 354 IAmb IAmb 03 30 56.3
comp=Z,242nm,1.2s
FVM French Village 25.25 354 P P 03 30 47.5 -0.4
baz=172,SNR=50
FVM S S 03 35 21.4 +8.4
baz=172
BIM Bigot 25.26 83 eP P 03 30 46.8 -1.6
MNTX Cornudas Mount 25.27 321 P P 03 30 47.7 -0.6
baz=134,SNR=344
MNTX S S 03 35 19.7 +6.2
baz=134
MNTX Cornudas Mount 25.27 321 P P 03 30 48.0 -0.3
baz=134,SNR=344
MNTX S S 03 35 17.0 +3.5
baz=134
GDSD La Dsirade Is 25.35 79 IAMs_20 IAMs_20 03 41 05.8
comp=Z,51µm,19.0s
SLBI Saint Lucia, B 25.36 84 eP P 03 30 46.6 -2.5
H05N1 Guadeloupe/Mar 25.36 79 eP P 03 30 53.3 +4.2
MCLT Moule a Chique 25.39 85 eP P 03 30 47.8 -1.6
S54A Dingess, Beckl 25.40 11 IAmb IAmb 03 30 53.9
comp=Z,627nm,1.2s
S54A Dingess, Beckl 25.40 11 P P 03 30 51.2 +1.9
baz=193,SNR=81
S54A P P 03 30 51.2 +1.9
baz=193,SNR=81
S54A S S 03 35 19.0 +3.6
baz=193
S54A S S 03 35 19.0 +3.6
baz=193
S39A Bolivar 25.41 348 IAmb IAmb 03 30 51.0
comp=Z,412nm,1.1s
S39A Bolivar 25.41 348 P P 03 30 48.9 -0.5
baz=166,SNR=333
S39A S S 03 35 26.2 +11
baz=166
CCM Cathedral Cave 25.42 352 P P 03 30 49.2 -0.3
CCM Cathedral Cave 25.42 352 P P 03 30 49.2 -0.3
CCM pmax pmax
comp=Z,779nm,1.2s
CCM MLR MLR
comp=Z,15µm,22.0s
CCM Cathedral Cave 25.42 352 P P 03 30 50.0 +0.5
baz=170,SNR=332
CCM S S 03 35 18.0 +2.3
baz=170
CCM Cathedral Cave 25.42 352 P P 03 30 49.6 +0.1
baz=170
CCM S S 03 35 19.7 +4.1
baz=170
CCM Cathedral Cave 25.42 352 ⇓P P 03 30 49.1 -0.4
R49A Shelbyville 25.43 3 P P 03 30 50.8 +1.2
baz=184,SNR=281
R49A P P 03 30 50.8 +1.2
baz=184,SNR=281
R49A S S 03 35 16.9 +1.1
baz=184
R49A S S 03 35 16.9 +1.1
baz=184
SLAC Saint Lucia, A 25.43 85 eP P 03 30 49.5 -0.4
ILAM Ilet Lapin Mar 25.46 83 eP P 03 30 50.0 -0.1
MPOM Morne Pois Mar 25.47 83 eP P 03 30 47.7 -2.4
T35B Sooner Cattle 25.47 342 P P 03 30 50.0 +0.1
baz=158,SNR=183
T35B S S 03 35 21.4 +4.9
baz=158
R50A Paris 25.48 5 P P 03 30 51.6 +1.6
baz=186,SNR=284
R50A P P 03 30 51.6 +1.6
baz=186,SNR=284
R50A S S 03 35 19.0 +2.4
baz=186
R50A S S 03 35 19.0 +2.4
baz=186
MSTX Muleshoe 25.48 328 IAmb IAmb 03 30 56.4
comp=Z,530nm,1.1s
MSTX Muleshoe 25.48 328 P P 03 30 50.3 +0.1
baz=142,SNR=206
MSTX S S 03 35 20.9 +3.9
baz=142
MSTX Muleshoe 25.48 328 P P 03 30 50.0 -0.2
baz=142,SNR=206
MSTX S S 03 35 23.9 +7.0
baz=142
H05S1 Guadeloupe/Mar 25.49 83 P P 03 30 52.1 +1.7
T59A Double "B" Far 25.51 18 P P 03 30 52.4 +2.1
baz=202,SNR=158
T59A P P 03 30 52.4 +2.1
baz=202,SNR=158
T59A S S 03 35 20.8 +3.7
baz=202
T59A S S 03 35 20.8 +3.7
baz=202
AMTX Amarillo 25.68 331 P P 03 30 52.5 +0.5
AMTX Amarillo 25.68 331 P P 03 30 52.5 +0.5
baz=145,SNR=98
AMTX S S 03 35 22.4 +2.4
baz=145
AMTX Amarillo 25.68 331 P P 03 30 52.3 +0.3
baz=145
AMTX S S 03 35 23.8 +3.8
baz=145
R40A Maddies Statio 25.80 350 IAmb IAmb 03 30 54.4
comp=Z,418nm,1.2s
R40A Maddies Statio 25.80 350 P P 03 30 52.5 -0.4
baz=168,SNR=178
R40A S S 03 35 22.8 +1.1
baz=168
R53A Hurricane 25.81 9 IAmb IAmb 03 30 58.5
comp=Z,622nm,1.2s
R53A Hurricane 25.81 9 P P 03 30 54.8 +1.7
baz=191,SNR=98
R53A P P 03 30 54.8 +1.7
baz=191,SNR=98
R53A S S 03 35 24.2 +2.3
baz=191
R53A S S 03 35 24.2 +2.3
baz=191
U32A Winter Ranch, 25.83 337 P P 03 30 53.8 +0.5
baz=152,SNR=71
U32A S S 03 35 22.4 +0.3
baz=152
S57A Dark Hollow, R 25.87 15 P P 03 30 55.6 +2.1
baz=198,SNR=66
S57A P P 03 30 55.6 +2.1
baz=198,SNR=66
S57A S S 03 35 26.3 +3.5
baz=198
S57A S S 03 35 26.3 +3.5
baz=198
SLM Saint Louis 25.88 354 IAmb IAmb 03 30 57.4
comp=Z,509nm,1.4s
SLM Saint Louis 25.88 354 P P 03 30 53.8 +0.2
baz=173,SNR=15
SLM S S 03 35 23.8 +0.9
baz=173
T60A Surry 25.92 19 P P 03 30 55.5 +1.5
T60A IAmb IAmb 03 30 57.8
comp=Z,617nm,1.1s
T60A Surry 25.92 19 P P 03 30 55.9 +1.9
baz=203,SNR=12
T60A P P 03 30 55.9 +1.9
baz=203,SNR=12
TOSP Speyside 25.93 90 eP P 03 30 52.5 -1.9
KIDD KIDD Seismic O 26.02 320 P P 03 30 54.0 -1.1
baz=132,SNR=11
KIDD S S 03 35 35.6 +10
baz=132
Q44A Meyer Farm, Va 26.05 356 IAmb IAmb 03 30 57.2
comp=Z,550nm,1.0s
Q44A Meyer Farm, Va 26.05 356 P P 03 30 55.7 +0.5
baz=176,SNR=88
Q44A S S 03 35 34.7 +9.2
baz=176
R55A Marlinton 26.10 12 P P 03 30 57.5 +1.8
R55A IAmb IAmb 03 30 59.2
comp=Z,361nm,1.1s
R55A Marlinton 26.10 12 P P 03 30 58.4 +2.6
baz=195,SNR=84
R55A P P 03 30 58.4 +2.6
baz=195,SNR=84
R55A S S 03 35 27.3 +0.8
baz=195
R55A S S 03 35 27.3 +0.8
baz=195
BLO Bloomington 26.26 1 P P 03 30 57.4 +0.3
BLO Bloomington 26.26 1 P P 03 30 57.4 +0.3
BLO pmax pmax
comp=Z,995nm,1.4s
Q51A Peebles 26.31 6 P P 03 30 59.1 +1.5
baz=188,SNR=410
Q51A P P 03 30 59.1 +1.5
baz=188,SNR=410
Q51A S S 03 35 30.9 +1.2
baz=188
Q51A S S 03 35 30.9 +1.2
baz=188
R58B Mineral 26.34 16 IAmb IAmb 03 31 01.7
comp=Z,492nm,1.2s
R58B Mineral 26.34 16 P P 03 31 00.1 +2.3
baz=200,SNR=96
R58B P P 03 31 00.1 +2.3
baz=200,SNR=96
R58B S S 03 35 34.4 +4.2
baz=200
R58B S S 03 35 34.4 +4.2
baz=200
Q52A Bidwell 26.39 8 P P 03 30 60.0 +1.7
baz=190,SNR=185
Q52A P P 03 30 60.0 +1.7
baz=190,SNR=185
Q52A S S 03 35 33.8 +2.9
baz=190
Q52A S S 03 35 33.8 +2.9
baz=190
P48A Milroy 26.58 3 P P 03 31 00.4 +0.4
baz=183,SNR=211
P48A P P 03 31 00.4 +0.4
baz=183,SNR=211
P48A S S 03 35 34.2 +0.3
baz=183
P48A S S 03 35 34.2 +0.3
baz=183
NNA Nana 26.62 157 P P 03 31 01.8 +1.2
comp=Z,11nm,0.8s,baz=323,slow=11,SNR=12
NNA LR LR 03 40 37.9
comp=Z,15µm,21.9s,baz=340,slow=34
comp=Z,11nm,0.8s
NNA Nana 26.62 157 P P 03 31 05.5 +4.9
NNA Nana 26.62 157 P P 03 31 05.5 +4.9
NNA pmax pmax
comp=Z,240nm,1.5s
NNA Nana 26.62 157 ⇑P P 03 31 05.0 +4.3
Q54A Coxs Mills 26.64 11 IAmb IAmb 03 31 03.5
comp=Z,419nm,1.2s
Q54A Coxs Mills 26.64 11 P P 03 31 02.4 +1.8
baz=193
Q54A P P 03 31 02.4 +1.8
baz=193
Q54A S S 03 35 39.4 +4.5
baz=193
Q54A S S 03 35 39.4 +4.5
baz=193
BCHC Barbados, Cave 26.68 86 eP P 03 31 05.3 +4.1
P49A Miami Univ. Ec 26.70 4 P P 03 31 01.9 +0.8
baz=185,SNR=210
P49A S S 03 35 36.9 +1.2
baz=185
P49A Miami Univ. Ec 26.70 4 P P 03 31 01.7 +0.6
baz=185,SNR=210
P49A S S 03 35 36.2 +0.4
baz=185
P46A Rosedale 26.70 360 IAmb IAmb 03 31 02.7
comp=Z,344nm,1.1s
P46A Rosedale 26.70 360 P P 03 31 01.9 +0.9
baz=180,SNR=51
P46A S S 03 35 35.3 -0.5
baz=180
CBN Corbin Frederi 26.71 17 IAMs_20 IAMs_20 03 41 37.5
comp=Z,43µm,18.0s
CBN Corbin Frederi 26.71 17 P P 03 31 03.6 +2.5
baz=201,SNR=34
CBN S S 03 35 39.9 +3.9
baz=201
CBN Corbin Frederi 26.71 17 P P 03 31 03.8 +2.7

baz=201,SNR=34
CBN S **S** **03 35 39.2 +3.2**
baz=201
BBGH Gun Hill 26.75 86 *e*P **P** **03 31 00.8 -1.0**
S61A Accomac 26.76 20 P **P** **03 31 04.4 +2.8**
baz=205,SNR=5.3
S61A P **P** **03 31 04.4 +2.8**
baz=205,SNR=5.3
P51A Williamsport 26.80 7 P **P** **03 31 03.9 +1.9**
baz=188,SNR=120
P51A P **P** **03 31 03.9 +1.9**
baz=188,SNR=120
P51A S **S** **03 35 39.2 +1.8**
baz=188
P51A S **S** **03 35 39.2 +1.8**
baz=188
P43A Skaggs, Pawnee 26.82 356 IAmb IAmb 03 31 04.1
comp=Z,324nm,1.2s
P43A Skaggs, Pawnee 26.82 356 P **P** **03 31 02.8 +0.6**
baz=174,SNR=34
P43A S **S** **03 35 44.7 +7.0**
baz=174
BBSP Saint Philip 26.85 86 *e*P **P** **03 31 09.1 +6.4**
P40A Paris 26.98 351 IAmb IAmb 03 31 05.0
comp=Z,511nm,1.5s
P40A Paris 26.98 351 P **P** **03 31 03.4 -0.2**
baz=169,SNR=88
P40A S **S** **03 35 46.2 +5.9**
baz=169
P53A Whipple 27.03 10 P **P** **03 31 06.3 +2.2**
baz=192,SNR=164
P53A P **P** **03 31 06.3 +2.2**
baz=192,SNR=164
P53A S **S** **03 35 45.1 +4.1**
baz=192
P53A S **S** **03 35 45.1 +4.1**
baz=192
P52A Corning 27.06 8 P **P** **03 31 06.1 +1.7**
baz=190,SNR=178
P52A S **S** **03 35 42.4 +0.8**
baz=190
O44A Mansfield 27.27 358 IAmb IAmb 03 31 12.8
comp=Z,637nm,1.3s
O44A Mansfield 27.27 358 P **P** **03 31 06.5 +0.4**
baz=177,SNR=67
O44A S **S** **03 35 46.8 +2.1**
baz=177
P38A Dawn 27.32 349 IAmb IAmb 03 31 07.9
comp=Z,426nm,0.9s
P38A Dawn 27.32 349 P **P** **03 31 06.2 -0.5**
baz=166,SNR=180
P38A S **S** **03 35 46.2 +0.6**
baz=166
121A Cookes Peak, D 27.34 319 P **P** **03 31 08.0 +0.9**
121A IAmb IAmb 03 31 14.3
comp=Z,498nm,1.5s
121A Cookes Peak, D 27.34 319 P **P** **03 31 08.1 +1.0**
baz=131,SNR=294
121A Cookes Peak, D 27.34 319 P **P** **03 31 07.9 +0.8**
baz=131,SNR=294
121A S **S** **03 35 43.5 -2.9**
baz=131
O49A Covington 27.37 4 P **P** **03 31 08.6 +1.4**
baz=186,SNR=177
O49A P **P** **03 31 08.6 +1.4**
baz=186,SNR=177
O49A S **S** **03 35 47.7 +1.3**
baz=186
O49A S **S** **03 35 47.7 +1.3**
baz=186
O48B Farmland 27.39 3 P **P** **03 31 07.8 +0.6**
baz=184,SNR=144
O48B S **S** **03 35 45.9 -0.8**
baz=184
O48B Farmland 27.39 3 P **P** **03 31 07.9 +0.6**
baz=184,SNR=144
O48B S **S** **03 35 44.4 -2.3**
baz=184
R61A Willards 27.46 20 S **S** **03 35 53.2 +5.4**
baz=205
R61A S **S** **03 35 53.2 +5.4**
baz=205
SFIN Lafayette 27.46 360 IAmb IAmb 03 31 10.9
comp=Z,605nm,1.4s
SFIN Lafayette 27.46 360 P **P** **03 31 08.5 +0.6**
baz=180,SNR=106
SFIN S **S** **03 35 54.6 +6.8**
baz=180
SFIN Lafayette 27.46 360 P **P** **03 31 08.2 +0.3**
baz=180,SNR=106
SFIN S **S** **03 35 46.0 -1.8**
baz=180
HSIG 27.48 310 ⇓P **P** **03 31 07.4 -0.8**
MCWV Mont Chateau 27.48 12 IAmb IAmb 03 31 11.1
comp=Z,232nm,1.2s
MCWV IAMs_20 IAMs_20 03 42 29.0
comp=Z,35µm,21.0s
MCWV Mont Chateau 27.48 12 P **P** **03 31 10.0 +1.9**
baz=195,SNR=27
MCWV S **S** **03 35 51.1 +2.9**
baz=195
MCWV Mont Chateau 27.48 12 P **P** **03 31 10.1 +1.9**
baz=195,SNR=27
MCWV S **S** **03 35 53.0 +4.9**
baz=195
KSU1 Kansas State U 27.53 344 P **P** **03 31 08.7 +0.1**
baz=159,SNR=12
KSU1 S **S** **03 35 50.8 +1.8**
baz=159
KSU1 Kansas State U 27.53 344 P **P** **03 31 08.5 -0.1**
baz=159,SNR=12
KSU1 S **S** **03 35 51.5 +2.5**
baz=159
KSU1 Kansas State U 27.53 344 ⇓P **P** **03 31 08.6 0.0**
ACSO Alum Creek Sta 27.54 7 IAMs_20 IAMs_20 03 42 16.7
comp=Z,33µm,18.0s
ACSO Alum Creek Sta 27.54 7 P **P** **03 31 10.4 +1.7**
baz=188,SNR=230
ACSO S **S** **03 35 51.1 +2.0**
baz=188
ACSO Alum Creek Sta 27.54 7 P **P** **03 31 10.2 +1.5**
baz=188,SNR=230
ACSO S **S** **03 35 50.7 +1.5**
baz=188
R32A Long Quarter, 27.55 340 IAmb IAmb 03 31 13.4
comp=Z,503nm,1.4s
R32A Long Quarter, 27.55 340 P **P** **03 31 09.1 +0.3**
baz=155,SNR=33
R32A S S 03 36 00.6 +11
baz=155
O52A Adamsville 27.58 9 P **P** **03 31 11.0 +2.1**
baz=191,SNR=112
O52A P **P** **03 31 11.0 +2.1**
baz=191,SNR=112
O52A S **S** **03 35 52.0 +2.3**
baz=191
O52A S **S** **03 35 52.0 +2.3**
baz=191
HDIL Hopedale 27.71 356 P **P** **03 31 10.2 +0.1**
baz=175,SNR=50
HDIL S **S** **03 35 58.8 +7.0**
baz=175
HDIL Hopedale 27.71 356 P **P** **03 31 10.4 +0.3**
baz=175,SNR=50
HDIL S **S** **03 35 52.2 +0.4**
baz=175
P57A Homestead Farm 27.73 15 P **P** **03 31 13.1 +2.7**
baz=199,SNR=97
P57A P **P** **03 31 13.1 +2.7**
baz=199,SNR=97
P57A S **S** **03 35 56.1 +3.9**
baz=199
P57A S **S** **03 35 56.1 +3.9**
baz=199
Y22A Socorro 27.78 323 P **P** **03 31 11.9 +0.8**
baz=134,SNR=298
Y22A S **S** **03 35 54.0 +0.5**
baz=134
O53A New Philadelph 27.80 10 P **P** **03 31 12.9 +1.9**
baz=192,SNR=124
O53A S **S** **03 35 55.0 +1.7**
baz=192
Y22D IRIS PASSCAL I 27.85 323 P **P** **03 31 12.9 +1.2**
baz=135,SNR=33
Y22D IRIS PASSCAL I 27.85 323 P **P** **03 31 12.9 +1.2**
baz=135,SNR=33
O54A Avella 27.89 11 IAmb IAmb 03 31 14.3
comp=Z,246nm,1.2s
O54A Avella 27.89 11 P **P** **03 31 13.1 +1.3**
baz=194,SNR=39
O54A P **P** **03 31 13.1 +1.3**
baz=194,SNR=39
O54A S **S** **03 35 55.8 +1.3**
baz=194
O54A S **S** **03 35 55.8 +1.3**
baz=194
MIDE Milford 27.96 20 P **P** **03 31 14.2 +1.8**
baz=205
MIDE S **S** **03 36 01.9 +6.2**
baz=205
N47A Urbana 27.99 2 IAmb IAmb 03 31 14.3
comp=Z,402nm,1.2s
N47A Urbana 27.99 2 P **P** **03 31 12.3 -0.3**
baz=183,SNR=73
N47A P **P** **03 31 12.3 -0.3**
baz=183,SNR=73
N47A S **S** **03 35 52.7 -3.4**
baz=183
N47A S **S** **03 35 52.7 -3.4**
baz=183
N41A Harden Midland 27.99 354 IAmb IAmb 03 31 13.8
comp=Z,319nm,1.1s
N41A Harden Midland 27.99 354 P **P** **03 31 12.2 -0.4**
baz=172,SNR=68
N41A S **S** **03 36 02.2 +6.0**
baz=172
N49A Columbus Grove 28.11 5 P **P** **03 31 14.7 +0.9**
baz=186,SNR=376
N49A P **P** **03 31 14.7 +0.9**
baz=186,SNR=376
N49A S **S** **03 35 59.3 +1.2**
baz=186
N49A S **S** **03 35 59.3 +1.2**
baz=186
ANMO Albuquerque 28.21 325 P **P** **03 31 15.1 +0.2**
comp=Z,85nm,1.2s,baz=142,slow=11,SNR=161
ANMO S **S** **03 36 03.5 +3.4**
comp=Z,4.1nm,0.8s,baz=187,slow=21,SNR=1.4
comp=Z,85nm,1.2s
ANMO Albuquerque 28.21 325 P **P** **03 31 15.1 +0.2**
ANMO IAmb IAmb 03 31 22.5
comp=Z,193nm,1.2s
ANMO Albuquerque 28.21 325 *d* P **P** **03 31 15.8 +0.9**
ANMO pmax pmax
comp=Z,378nm,1.6s
ANMO MLR MLR
comp=Z,11µm,16.0s
ANMO Albuquerque 28.21 325 P **P** **03 31 15.5 +0.6**
baz=137,SNR=196
ANMO S **S** **03 36 04.1 +4.0**
baz=137
ANMO Albuquerque 28.21 325 P **P** **03 31 15.6 +0.7**
baz=137
ANMO S **S** **03 35 58.3 -1.9**
baz=137
ANMO Albuquerque 28.21 325 ⇓P **P** **03 31 15.0 +0.1**
CBKS Cedar Bluff 28.25 339 IAmb IAmb 03 31 20.4
comp=Z,373nm,1.4s
CBKS Cedar Bluff 28.25 339 P **P** **03 31 15.1 0.0**
baz=153,SNR=16
CBKS S **S** **03 36 02.5 +2.0**
baz=153
CBKS Cedar Bluff 28.25 339 P **P** **03 31 15.4 +0.3**
baz=153,SNR=16
CBKS S **S** **03 36 01.8 +1.4**
baz=153
CBKS Cedar Bluff 28.25 339 ⇓P **P** **03 31 15.2 +0.2**
N51A Ashland 28.29 7 P **P** **03 31 16.5 +1.2**
baz=190,SNR=101
N51A P **P** **03 31 16.5 +1.2**
baz=190,SNR=101
N51A S **S** **03 36 00.3 -0.6**
baz=190
N51A S **S** **03 36 00.3 -0.6**
baz=190
N38A Joes South For 28.41 350 IAmb IAmb 03 31 18.5
comp=Z,624nm,1.5s
N38A Joes South For 28.41 350 P **P** **03 31 16.4 +0.1**
baz=167,SNR=44
N38A S **S** **03 36 09.1 +6.4**
baz=167
N53A Lisbon 28.41 10 IAmb IAmb 03 31 24.4
comp=Z,405nm,1.1s
N53A Lisbon 28.41 10 P **P** **03 31 17.7 +1.3**
baz=193,SNR=111
N53A P **P** **03 31 17.7 +1.3**
baz=193,SNR=111
N53A S **S** **03 36 01.6 -1.2**
baz=193
N53A S **S** **03 36 01.6 -1.2**
baz=193
M44A Midewin, Midew 28.48 358 IAmb IAmb 03 31 18.4
comp=Z,337nm,1.1s
M44A Midewin, Midew 28.48 358 P **P** **03 31 17.1 +0.1**
baz=178,SNR=40
M44A S **S** **03 36 03.5 -0.4**
baz=178
MVL Millersville 28.67 17 IAmb IAmb 03 31 22.1
comp=Z,366nm,1.3s
M50A Fremont 28.70 6 P **P** **03 31 20.1 +1.2**
baz=188,SNR=105
M50A P **P** **03 31 20.1 +1.2**
baz=188,SNR=105
M50A S **S** **03 36 07.2 0.0**
baz=188
M50A S **S** **03 36 07.2 0.0**
baz=188
GEDE Greenville 28.71 18 P **P** **03 31 21.2 +2.2**
baz=204,SNR=24
GEDE S **S** **03 36 11.3 +3.9**
baz=204
T25A Trinidad 28.80 330 IAmb IAmb 03 31 41.5
comp=Z,330nm,1.4s
T25A Trinidad 28.80 330 P **P** **03 31 21.4 +1.2**
baz=143,SNR=92
T25A S **S** **03 36 10.5 +1.0**
baz=143
P61A Hammonton 28.85 20 P **P** **03 31 22.4 +2.1**
baz=205
P61A P **P** **03 31 22.4 +2.1**
baz=205
P61A S **S** **03 36 15.3 +5.6**
baz=205
P61A S **S** **03 36 15.3 +5.6**
baz=205
SSPA Standing Stone 28.85 14 P **P** **03 31 20.2 -0.1**
SSPA IAmb IAmb 03 31 23.4
comp=Z,250nm,1.1s
SSPA Standing Stone 28.85 14 IAMs_20 IAMs_20 03 42 46.3
comp=Z,35µm,18.0s
SSPA Standing Stone 28.85 14 P **P** **03 31 22.7 +2.4**
baz=199,SNR=79
SSPA S **S** **03 36 14.9 +5.1**
baz=199
SSPA Standing Stone 28.85 14 P **P** **03 31 22.5 +2.1**
baz=199
SSPA S **S** **03 36 13.1 +3.4**
baz=199
SSPA Standing Stone 28.85 14 ⇑P **P** **03 31 22.4 +2.1**
N35A Tabor 28.95 346 P **P** **03 31 21.5 +0.3**
baz=162,SNR=43
M52A Chesterland 29.05 9 IAmb IAmb 03 31 25.8
comp=Z,559nm,1.4s
M52A Chesterland 29.05 9 P **P** **03 31 22.9 +0.9**
baz=191,SNR=41
M52A P **P** **03 31 22.9 +0.9**
baz=191,SNR=41
M52A S **S** **03 36 13.6 +0.9**
baz=191
M52A S **S** **03 36 13.6 +0.9**
baz=191
M53A WI Miller and 29.05 10 P **P** **03 31 23.4 +1.2**
baz=193,SNR=103
M53A S **S** **03 36 14.0 +1.1**
baz=193
L46A Eue Claire 29.10 1 P **P** **03 31 22.0 -0.5**
baz=181,SNR=63
L46A P **P** **03 31 22.0 -0.5**
baz=181,SNR=63
L46A S **S** **03 36 19.7 +6.1**
baz=181
L46A S **S** **03 36 19.7 +6.1**
baz=181
L48A N Adams 29.11 4 P **P** **03 31 23.0 +0.4**
baz=185,SNR=113
L48A P **P** **03 31 23.0 +0.4**
baz=185,SNR=113
L48A S **S** **03 36 12.3 -1.5**
baz=185
L48A S **S** **03 36 12.3 -1.5**
baz=185
TUPA Temple Univers 29.17 19 P **P** **03 31 25.6 +2.4**
baz=204,SNR=59
TUPA S **S** **03 36 18.5 +3.7**
baz=204
L42A Oliver, Polo 29.18 356 IAmb IAmb 03 31 24.6
comp=Z,365nm,1.1s
L42A Oliver, Polo 29.18 356 P **P** **03 31 23.4 +0.2**
baz=175,SNR=70
L42A S **S** **03 36 15.7 +0.9**
baz=175
TUC Tucson 29.18 316 P **P** **03 31 24.4 +1.0**
TUC Tucson 29.18 316 IAMs_20 IAMs_20 03 44 20.8
comp=Z,39µm,21.0s
TUC Tucson 29.18 316 P **P** **03 31 24.4 +1.0**
TUC pmax pmax
comp=Z,121nm,1.2s
TUC MLR MLR
comp=Z,39µm,21.0s
TUC Tucson 29.18 316 P **P** **03 31 23.2 -0.2**
baz=126
TUC S **S** **03 36 21.5 +6.2**
baz=126
TUC Tucson 29.18 316 ⇑P **P** **03 31 23.2 -0.2**
L44A Lake County Fo 29.27 359 P **P** **03 31 24.2 +0.2**
baz=178,SNR=31
L44A S **S** **03 36 21.8 +5.5**
baz=178
L44A Lake County Fo 29.27 359 P **P** **03 31 23.7 -0.3**
baz=178,SNR=31
L44A S **S** **03 36 15.9 -0.3**
baz=178
N33B J Bar K, Exete 29.29 344 P **P** **03 31 24.4 +0.2**
baz=159,SNR=34
N33B S **S** **03 36 17.5 +0.9**
baz=159
N58A Sunbury 29.35 16 IAmb IAmb 03 31 27.9
comp=Z,334nm,1.2s
N58A Sunbury 29.35 16 P **P** **03 31 27.0 +2.3**
baz=201,SNR=66
N58A P **P** **03 31 27.0 +2.3**
baz=201,SNR=66
N58A S **S** **03 36 20.6 +3.1**
baz=201
N58A S **S** **03 36 20.6 +3.1**
baz=201
ALLY Alegheny Colle 29.35 11 IAmb IAmb 03 31 27.2
comp=Z,340nm,1.1s
ALLY Alegheny Colle 29.35 11 P **P** **03 31 26.6 +1.8**
baz=194,SNR=22
ALLY S **S** **03 36 19.3 +1.8**
baz=194
L40A Anamosa 29.37 354 IAmb IAmb 03 31 26.3
comp=Z,251nm,0.9s
L40A Anamosa 29.37 354 P **P** **03 31 25.1 +0.2**
baz=172,SNR=90
L40A S **S** **03 36 11.9 -5.9**
baz=172
M55A Ridgway 29.45 13 IAmb IAmb 03 31 28.2
comp=Z,304nm,1.3s
M55A Ridgway 29.45 13 P **P** **03 31 27.6 +1.9**
baz=196,SNR=50
M55A P **P** **03 31 27.6 +1.9**
baz=196,SNR=50
M55A S **S** **03 36 20.7 +1.6**
baz=196
M55A S **S** **03 36 20.7 +1.6**
baz=196
SCIA State Center 29.49 351 P **P** **03 31 25.8 -0.1**
baz=168,SNR=17
SCIA S **S** **03 36 24.0 +4.3**
baz=168
SCIA State Center 29.49 351 P **P** **03 31 25.8 -0.1**
baz=168,SNR=17
SCIA S **S** **03 36 17.8 -1.9**
baz=168
LUPA Lehigh Univers 29.51 18 IAmb IAmb 03 31 31.4
comp=Z,432nm,1.4s
PANJ Princeton 29.52 19 P **P** **03 31 28.9 +2.7**
baz=205,SNR=30
PANJ S **S** **03 36 23.5 +3.3**
baz=205
AAM Ann Arbor 29.53 5 IAMs_20 IAMs_20 03 43 30.2
comp=Z,28µm,18.0s
AAM Ann Arbor 29.53 5 P **P** **03 31 27.3 +1.1**
baz=187,SNR=67
AAM S **S** **03 36 21.2 +1.0**
baz=187
AAM Ann Arbor 29.53 5 P **P** **03 31 27.6 +1.3**
baz=187,SNR=67
AAM S **S** **03 36 19.2 -1.1**
baz=187
KSCO Kaye Shedlock' 29.54 335 P **P** **03 31 26.8 +0.2**
KSCO IAmb IAmb 03 31 36.4
comp=Z,299nm,1.1s
KSCO Kaye Shedlock' 29.54 335 P **P** **03 31 27.2 +0.6**
baz=148,SNR=28
KSCO S **S** **03 36 28.8 +7.9**
baz=148
KSCO Kaye Shedlock' 29.54 335 P **P** **03 31 27.2 +0.6**
baz=148,SNR=28
KSCO S **S** **03 36 26.0 +5.1**
baz=148
M57A Sunshine Farm, 29.70 15 P **P** **03 31 30.1 +2.2**
baz=200,SNR=117
M57A P **P** **03 31 30.1 +2.2**
baz=200,SNR=117
M57A S **S** **03 36 24.9 +1.8**
baz=200
M57A S **S** **03 36 24.9 +1.8**
baz=200
K43A Burlington 29.81 358 IAmb IAmb 03 31 30.1
comp=Z,351nm,1.1s
K43A Burlington 29.81 358 P **P** **03 31 28.4 -0.4**
baz=177,SNR=45
K43A S **S** **03 36 21.3 -3.4**
baz=177
SDCO Great Sand Dun 29.81 330 IAmb IAmb 03 31 32.2
comp=Z,306nm,1.5s
SDCO Great Sand Dun 29.81 330 P **P** **03 31 30.0 +0.8**
baz=142,SNR=140
SDCO S **S** **03 36 26.2 +0.7**
baz=142
SDCO Great Sand Dun 29.81 330 P **P** **03 31 30.2 +1.0**
baz=142,SNR=140
SDCO S **S** **03 36 26.4 +0.8**
baz=142
ERPA Erie 29.83 11 P **P** **03 31 30.9 +1.9**
baz=194,SNR=46
ERPA S **S** **03 36 25.3 +0.2**
baz=194
ERPA Erie 29.83 11 P **P** **03 31 30.4 +1.4**
baz=194,SNR=46
ERPA S **S** **03 36 26.8 +1.6**
baz=194
BRNJ Basking Ridge 29.84 19 IAmb IAmb 03 31 32.4
comp=Z,231nm,1.2s
BRNJ Basking Ridge 29.84 19 P **P** **03 31 31.3 +2.2**
baz=205,SNR=20
BRNJ S **S** **03 36 30.2 +5.0**
baz=205
X18A Snowflake 30.01 320 IAmb IAmb 03 31 37.8
comp=Z,192nm,1.2s
K50A Casco 30.10 6 IAmb IAmb 03 31 33.6
comp=Z,378nm,1.0s
K50A Casco 30.10 6 P **P** **03 31 32.5 +1.1**
baz=188,SNR=31
K50A P **P** **03 31 32.5 +1.1**
baz=188,SNR=31
K50A S **S** **03 36 29.9 +0.7**
baz=188
K50A S **S** **03 36 29.9 +0.7**
baz=188
BGNE Belgrade 30.11 343 IAmb IAmb 03 31 36.7
comp=Z,151nm,0.8s
BGNE Belgrade 30.11 343 P **P** **03 31 31.8 +0.3**
baz=158,SNR=11
BGNE S S 03 36 38.6 +9.1
baz=158
BGNE Belgrade 30.11 343 P **P** **03 31 31.8 +0.3**
baz=158,SNR=11
BGNE S **S** **03 36 33.1 +3.6**
baz=158
JFWS Jewell Farm 30.12 355 IAmb IAmb 03 31 33.2

comp=Z,385nm,1.4s
JFWS Jewell Farm 30.12 355 P **P** **03 31 31.8 +0.2**
baz=174,SNR=56
JFWS S **S** **03 36 28.3 -1.4**
baz=174
JFWS Jewell Farm 30.12 355 P **P** **03 31 31.4 -0.2**
baz=174,SNR=56
JFWS S **S** **03 36 29.4 -0.3**
baz=174
K38A Parkersburg 30.14 352 IAmb IAmb 03 31 39.9
comp=Z,287nm,1.1s
K38A Parkersburg 30.14 352 P **P** **03 31 31.8 +0.1**
baz=169,SNR=27
L34A Svendsen Farm, 30.17 346 IAmb IAmb 03 31 39.9
comp=Z,193nm,1.1s
L34A Svendsen Farm, 30.17 346 P **P** **03 31 31.5 -0.5**
baz=162,SNR=14
L34A S **S** **03 36 36.9 +6.5**
baz=162
ODNJ Ogdensburg 30.19 19 P **P** **03 31 33.2 +1.0**
ODNJ Ogdensburg 30.19 19 P **P** **03 31 34.4 +2.3**
baz=204,SNR=27
ODNJ S **S** **03 36 35.2 +4.5**
baz=204
FOR Fordham 30.22 20 P **P** **03 31 34.4 +2.0**
baz=206,SNR=7.3
FOR S **S** **03 36 34.1 +2.9**
baz=206
W18A Petrified Fore 30.26 321 IAmb IAmb 03 31 40.2
comp=Z,424nm,1.2s
W18A Petrified Fore 30.26 321 P **P** **03 31 34.2 +1.0**
baz=132,SNR=20
W18A S **S** **03 36 33.1 +0.7**
baz=132
KSPA Keystone Colle 30.28 17 P **P** **03 31 35.1 +2.2**
baz=202,SNR=69
KSPA S **S** **03 36 35.5 +3.4**
baz=202
PAL Palisades 30.34 20 IAmb IAmb 03 31 36.5
comp=Z,173nm,1.2s
PAL Palisades 30.34 20 P **P** **03 31 35.5 +2.0**
baz=206,SNR=13
PAL S **S** **03 36 37.1 +4.0**
baz=206
PAL Palisades 30.34 20 P **P** **03 31 35.4 +2.0**
baz=206,SNR=13
PAL S **S** **03 36 36.1 +3.0**
baz=206
L56A Greenwood 30.35 14 P **P** **03 31 35.6 +1.9**
baz=198,SNR=58
L56A P **P** **03 31 35.6 +1.9**
baz=198,SNR=58
L56A S **S** **03 36 35.4 +2.0**
baz=198
L56A S **S** **03 36 35.4 +2.0**
baz=198
J47A Sunmer 30.38 3 P **P** **03 31 33.6 -0.2**
baz=184,SNR=54
J47A P **P** **03 31 33.6 -0.2**
baz=184,SNR=54
J47A S **S** **03 36 32.7 -1.0**
baz=184
J47A S **S** **03 36 32.7 -1.0**
baz=184
WVNY West Valley, N 30.38 12 P **P** **03 31 35.8 +1.9**
baz=196,SNR=43
WVNY S **S** **03 36 35.9 +2.2**
baz=196
214A Organ Pipe Nat 30.39 313 P **P** **03 31 33.8 -0.3**
baz=123,SNR=15
214A S **S** **03 36 28.3 -6.0**
baz=123
N62A Caumsett State 30.43 21 P **P** **03 31 36.1 +1.8**
baz=207
N62A P **P** **03 31 36.1 +1.8**
baz=207
N62A S **S** **03 36 39.2 +4.8**
baz=207
N62A S **S** **03 36 39.2 +4.8**
baz=207
S22A 4UR Ranch, Cre 30.48 328 IAmb IAmb 03 31 42.2
comp=Z,271nm,1.3s
S22A 4UR Ranch, Cre 30.48 328 P **P** **03 31 36.1 +0.9**
baz=139,SNR=186
S22A S **S** **03 36 37.2 +1.1**
baz=139
Q24A Divide 30.61 332 P **P** **03 31 36.9 +0.6**
baz=143,SNR=19
Q24A S **S** **03 36 38.3 +0.3**
baz=143
BRNY Black Rk. Fore 30.68 19 P **P** **03 31 38.2 +1.7**
baz=205,SNR=16
BRNY S **S** **03 36 42.0 +3.6**
baz=205
WSPT Westport, CT 30.69 20 IAmb IAmb 03 31 39.3
comp=Z,196nm,1.3s
WSPT IAMs_20 IAMs_20 03 43 52.0
comp=Z,49µm,19.0s
BINY Binghamton 30.81 16 IAMs_20 IAMs_20 03 45 00.1
comp=Z,39µm,18.0s
BINY Binghamton 30.81 16 P **P** **03 31 39.4 +1.8**
baz=201,SNR=105
BINY S **S** **03 36 43.2 +2.7**
baz=201
BINY Binghamton 30.81 16 P **P** **03 31 39.7 +2.0**
baz=201,SNR=105
BINY S **S** **03 36 43.2 +2.7**
baz=201
X16A Lo Mia Camp, P 30.89 318 IAmb IAmb 03 31 45.9
comp=Z,113nm,0.8s
NPNY Mohonk Preserv 30.94 19 P **P** **03 31 41.1 +2.3**
baz=205,SNR=38
NPNY S **S** **03 36 46.8 +4.3**
baz=205
YLE Yale 30.95 21 IAmb IAmb 03 31 41.9
comp=Z,189nm,1.2s
YLE IAMs_20 IAMs_20 03 43 59.3
comp=Z,40µm,19.0s
OGNE Ogallala 30.96 338 P **P** **03 31 39.9 +0.7**
baz=151,SNR=20
OGNE Ogallala 30.96 338 P **P** **03 31 40.1 +1.0**
baz=151,SNR=20
OGNE S **S** **03 36 46.5 +3.4**
baz=151
MVCO Mesa Verde 30.98 325 P **P** **03 31 39.7 +0.2**
MVCO IAmb IAmb 03 31 46.2
comp=Z,274nm,1.3s
MVCO Mesa Verde 30.98 325 P **P** **03 31 40.1 +0.6**
baz=136,SNR=86
MVCO S **S** **03 36 43.4 -0.4**
baz=136
I42A Draeger Farm, 31.01 357 P **P** **03 31 39.5 +0.1**
baz=176,SNR=148
I42A S **S** **03 36 42.4 -1.1**
baz=176
L59A Walton 31.07 17 P **P** **03 31 42.2 +2.2**
baz=203,SNR=92
L59A P **P** **03 31 42.2 +2.2**
baz=203,SNR=92
L59A S **S** **03 36 47.1 +2.5**
baz=203
L59A S **S** **03 36 47.1 +2.5**
baz=203
I45A Fountain 31.12 1 P **P** **03 31 40.2 -0.1**
baz=181,SNR=39
I45A P **P** **03 31 40.2 -0.1**
baz=181,SNR=39
I40A Norwalk 31.13 355 IAmb IAmb 03 31 41.7
comp=Z,248nm,1.1s
I40A Norwalk 31.13 355 P **P** **03 31 39.7 -0.7**
baz=173,SNR=59
I40A S **S** **03 36 44.5 -0.8**
baz=173
KSCT Kent School, K 31.13 20 IAmb IAmb 03 31 43.5
comp=Z,267nm,1.4s
K57A Scipio Center 31.17 15 P **P** **03 31 42.4 +1.5**
baz=200,SNR=57
K57A S **S** **03 36 46.7 +0.6**
baz=200
J54A Appleton 31.20 12 P **P** **03 31 42.2 +1.1**
baz=196,SNR=26
J54A P **P** **03 31 42.2 +1.1**
baz=196,SNR=26
J54A S **S** **03 36 47.9 +1.3**
baz=196
J54A S **S** **03 36 47.9 +1.3**
baz=196
I49A Point Hope 31.23 6 P **P** **03 31 41.5 +0.2**
baz=188,SNR=54
I49A P **P** **03 31 41.5 +0.2**
baz=188,SNR=54
I49A S **S** **03 36 45.7 -1.3**
baz=188
I49A S **S** **03 36 45.7 -1.3**
baz=188
M63A Gales Ferry 31.35 22 P **P** **03 31 44.8 +2.4**
baz=209,SNR=16
M63A P **P** **03 31 44.8 +2.4**
baz=209,SNR=16
M63A S **S** **03 36 52.2 +3.5**
baz=209
M63A S **S** **03 36 52.2 +3.5**
baz=209
J55A Hilton 31.37 13 IAmb IAmb 03 31 45.5
comp=Z,457nm,1.4s
J55A Hilton 31.37 13 P **P** **03 31 43.7 +1.1**
baz=197,SNR=16
J55A P **P** **03 31 43.7 +1.1**
baz=197,SNR=16
J55A S **S** **03 36 50.4 +1.3**
baz=197
J55A S **S** **03 36 50.4 +1.3**
baz=197
K31A O'Neill 31.40 343 P **P** **03 31 42.9 0.0**
baz=158,SNR=26
ISCO Idaho Springs 31.50 332 P **P** **03 31 44.5 +0.4**
baz=144,SNR=53
ISCO S **S** **03 36 56.8 +4.9**
baz=144
ISCO Idaho Springs 31.50 332 P **P** **03 31 44.6 +0.5**
baz=144,SNR=53
ISCO S **S** **03 36 54.0 +2.2**
baz=144
WUAZ Wupatki 31.54 320 IAmb IAmb 03 31 51.9
comp=Z,205nm,1.1s
WUAZ IAMs_20 IAMs_20 03 46 03.1
comp=Z,43µm,20.0s
WUAZ Wupatki 31.54 320 P **P** **03 31 45.0 +0.7**
baz=130,SNR=113
WUAZ S **S** **03 36 58.1 +5.8**
baz=130
WUAZ Wupatki 31.54 320 ⇑P **P** **03 31 44.8 +0.5**
H43A Windswept, Lux 31.56 359 P **P** **03 31 44.0 -0.2**
baz=178,SNR=60
H43A S **S** **03 36 50.5 -1.5**
baz=178
I37A Lemond, Waseca 31.58 351 P **P** **03 31 44.4 0.0**
I37B Waseca 31.58 351 P **P** **03 31 44.1 -0.3**
baz=168,SNR=59
I37B S **S** **03 36 57.6 +5.2**
baz=168
J56A Wolcott 31.60 14 P **P** **03 31 46.0 +1.4**
baz=199,SNR=61
J56A P **P** **03 31 46.0 +1.4**
baz=199,SNR=61
J56A S **S** **03 36 52.9 +0.2**
baz=199
J56A S **S** **03 36 52.9 +0.2**
baz=199
SMCO Snowmass 31.65 330 IAmb IAmb 03 31 48.5
comp=Z,236nm,1.4s
SMCO Snowmass 31.65 330 ⇓P **P** **03 31 46.3 +0.7**
HCNY Howe Caverns 31.72 18 P **P** **03 31 47.5 +1.8**
baz=204,SNR=28
HCNY S **S** **03 36 58.1 +3.4**
baz=204
PV15 Paradox Valley 31.80 327 IAmb IAmb 03 31 53.8
comp=Z,228nm,1.4s
PV13 Radium Mtn., P 31.84 326 IAmb IAmb 03 31 54.0
comp=Z,301nm,1.2s
ECSD EROS Data Cent 31.90 347 IAmb IAmb 03 31 48.1
comp=Z,225nm,1.1s
ECSD EROS Data Cent 31.90 347 P **P** **03 31 46.5 -0.8**
baz=162,SNR=137
ECSD EROS Data Cent 31.90 347 P **P** **03 31 46.4 -0.9**
baz=162,SNR=137
ECSD S **S** **03 36 55.8 -1.7**
baz=162
GLMI Grayling 31.97 3 P **P** **03 31 48.0 +0.1**
baz=184,SNR=65
GLMI Grayling 31.97 3 P **P** **03 31 47.7 -0.1**
baz=184,SNR=65
PV11 David Mesa, Pa 31.98 326 IAmb IAmb 03 31 50.9
comp=Z,450nm,1.4s
TRY Troy 31.98 19 P **P** **03 31 50.0 +2.1**
baz=205,SNR=61
TRY S **S** **03 37 02.8 +4.2**
baz=205
BRYW Bryant College 31.98 22 IAMs_20 IAMs_20 03 45 23.2
comp=Z,50µm,19.0s
QUA2 Belchertown 32.01 21 IAMs_20 IAMs_20 03 43 47.9
comp=Z,28µm,20.0s
QUA2 Belchertown 32.01 21 P **P** **03 31 50.2 +2.0**
baz=208,SNR=17
QUA2 S **S** **03 37 00.8 +1.7**
baz=208
L61B Northampton 32.05 20 IAmb IAmb 03 31 52.0
comp=Z,278nm,1.2s
L61B IAMs_20 IAMs_20 03 44 41.8
comp=Z,38µm,18.0s
L61B Northampton 32.05 20 P **P** **03 31 50.7 +2.1**
baz=207,SNR=29
L61B S **S** **03 36 56.5 -3.3**
baz=207
L61B Northampton 32.05 20 P **P** **03 31 49.8 +1.3**
baz=207,SNR=29
L61B S **S** **03 36 59.9 +0.2**
baz=207
SAML Samuel 32.06 131 P **P** **03 31 48.2 -0.7**
SAML IAMs_20 IAMs_20 03 45 02.0
comp=Z,25µm,19.0s
SAML Samuel 32.06 131 P **P** **03 31 48.3 -0.7**
SAML pmax pmax
comp=Z,55nm,1.3s
SAML MLR MLR
comp=Z,25µm,19.0s
J58A Remsen 32.08 16 P **P** **03 31 50.5 +1.7**
baz=202,SNR=68
J58A P **P** **03 31 50.5 +1.7**
baz=202,SNR=68
J58A S **S** **03 37 02.1 +1.8**
baz=202
J58A S **S** **03 37 02.1 +1.8**
baz=202
PV10 Paradox Valley 32.12 326 IAmb IAmb 03 31 55.5
comp=Z,249nm,1.1s
G45A Suttons Bay 32.14 2 P **P** **03 31 49.1 -0.2**
baz=182,SNR=149
G45A P **P** **03 31 49.1 -0.2**
baz=182,SNR=149
PV23 Carpenter Ridg 32.16 326 IAmb IAmb 03 31 56.5
comp=Z,261nm,1.2s
PECO Prince Edward 32.19 14 IAmb IAmb 03 31 52.5
comp=Z,437nm,1.3s
L64A Middleborough 32.26 23 P **P** **03 31 52.0 +1.7**
baz=210
L64A P **P** **03 31 52.0 +1.7**
baz=210
L64A S **S** **03 37 06.0 +3.0**
baz=210
L64A S **S** **03 37 06.0 +3.0**
baz=210
K62A Royalston 32.39 21 P **P** **03 31 53.8 +2.3**
baz=208,SNR=24
K62A P **P** **03 31 53.8 +2.3**
baz=208,SNR=24
K62A S **S** **03 37 08.3 +3.2**
baz=208
K62A S **S** **03 37 08.3 +3.2**
baz=208
J59A Piesco 32.40 17 P **P** **03 31 53.5 +1.9**
baz=203,SNR=66
J59A P **P** **03 31 53.5 +1.9**
baz=203,SNR=66
J59A S **S** **03 37 06.2 +1.0**
baz=203
J59A S **S** **03 37 06.2 +1.0**
baz=203
GLA Glamis 32.42 313 P **P** **03 31 52.0 0.0**
baz=122,SNR=19
GLA S **S** **03 37 06.7 +0.8**
baz=122
G40A Rib Lake 32.46 356 IAmb IAmb 03 31 53.5
comp=Z,346nm,1.1s
G40A Rib Lake 32.46 356 P **P** **03 31 51.8 -0.4**
baz=174,SNR=109
G40A S **S** **03 37 05.1 -1.1**
baz=174
WES Weston 32.47 22 IAmb IAmb 03 31 55.1
comp=Z,343nm,1.5s
WES Weston 32.47 22 P **P** **03 31 53.4 +1.3**
baz=209,SNR=14
WES S **S** **03 37 07.3 +1.1**
baz=209
BCX Boston College 32.48 22 IAmb IAmb 03 31 55.5
comp=Z,196nm,1.3s
BCX IAMs_20 IAMs_20 03 45 46.4
comp=Z,46µm,18.0s
HRV Adam Dziewonsk 32.49 22 P **P** **03 31 53.4 +1.0**
HRV IAmb IAmb 03 31 55.4
comp=Z,223nm,1.4s
HRV Adam Dziewonsk 32.49 22 P **P** **03 31 53.4 +1.0**
HRV pmax pmax
comp=Z,223nm,1.5s
HRV MLR MLR
comp=Z,49µm,18.0s
HRV Adam Dziewonsk 32.49 22 P **P** **03 31 54.3 +1.9**
baz=209,SNR=13
HRV S **S** **03 37 10.8 +4.2**
baz=209
HRV Adam Dziewonsk 32.49 22 P **P** **03 31 54.5 +2.2**
baz=209
HRV S **S** **03 37 10.6 +4.0**
baz=209
HRV Adam Dziewonsk 32.49 22 ⇑P **P** **03 31 54.6 +2.2**
N23A Red Feather La 32.53 333 P **P** **03 31 53.6 +0.5**
baz=144,SNR=30
N23A S **S** **03 37 13.9 +6.0**
baz=144
SADO Sadowa 32.55 10 P **P** **03 31 53.2 +0.3**
comp=Z,223nm,1.0s,baz=217,slow=9.0,SNR=102
SADO S **S** **03 37 06.1 -1.5**
comp=Z,12nm,1.1s,baz=121,slow=20,SNR=1.6
SADO LR LR 03 47 16.3
comp=Z,6µm,18.1s,baz=201,slow=40
comp=Z,223nm,1.0s
SADO Sadowa 32.55 10 ⇓P **P** **03 31 53.7 +0.7**
WCNY West Carthage 32.56 15 P **P** **03 31 54.2 +1.2**
baz=201,SNR=33
WCNY S **S** **03 37 04.9 -2.8**
baz=201
ACCN Adirondack Com 32.57 18 P **P** **03 31 54.8 +1.7**
baz=205,SNR=49
ACCN S **S** **03 37 11.0 +3.1**
baz=205
BLYC Blythe 32.58 314 IAmb IAmb 03 31 60.0
comp=Z,193nm,1.4s
DELO Deloro Mine 32.61 13 IAmb IAmb 03 31 56.1
comp=Z,456nm,1.4s
PDMCI Parker Dam,Lak 32.62 316 P **P** **03 31 53.8 +0.1**
baz=124,SNR=130
PDMCI S **S** **03 37 09.5 +0.6**
baz=124
PHWY Pilot Hill 32.64 334 IAmb IAmb 03 31 56.9
comp=Z,207nm,1.4s
SPMN Marine on St. 32.68 352 P **P** **03 31 53.8 -0.3**
baz=170,SNR=121
SPMN S **S** **03 37 14.2 +4.6**
baz=170
SPMN Marine on St. 32.68 352 P **P** **03 31 53.4 -0.6**
baz=170,SNR=121
SPMN S **S** **03 37 11.5 +1.9**
baz=170
U15A North Rim 32.69 320 IAmb IAmb 03 32 01.8
comp=Z,185nm,1.3s
F42A Maple Grove Fa 32.85 359 IAmb IAmb 03 31 57.6
comp=Z,318nm,1.4s
F42A Maple Grove Fa 32.85 359 P **P** **03 31 55.4 -0.2**
baz=178,SNR=14
J61A Chester 32.89 20 P **P** **03 31 58.3 +2.4**
baz=206,SNR=63
J61A P **P** **03 31 58.3 +2.4**
baz=206,SNR=63
J61A S **S** **03 37 16.3 +3.4**
baz=206
J61A S **S** **03 37 16.3 +3.4**
baz=206
W13A Hualapai Mount 32.91 317 IAmb IAmb 03 32 03.9
comp=Z,155nm,1.0s
NCB Newcomb 32.94 17 P **P** **03 31 57.6 +1.2**
NCB Newcomb 32.94 17 P **P** **03 31 57.7 +1.3**
baz=203,SNR=54
NCB S **S** **03 37 15.2 +1.4**
baz=203
O20A White River Ci 33.01 329 P **P** **03 31 58.6 +1.3**
baz=140,SNR=148
O20A S **S** **03 37 15.1 -0.2**
baz=140
SWSC Sam W. Stewart 33.06 312 P **P** **03 31 57.7 +0.2**
baz=121,SNR=19
SWSC S **S** **03 37 13.3 -2.5**
baz=121
IKP In-Ko-Pah, Jac 33.14 311 P **P** **03 31 58.4 0.0**
baz=120,SNR=15
IKP S **S** **03 37 14.9 -2.3**
baz=120
SUSD Miller 33.14 344 P **P** **03 31 58.0 -0.2**
baz=158,SNR=19
SUSD Miller 33.14 344 P **P** **03 31 57.5 -0.6**
baz=158,SNR=19
SUSD S **S** **03 37 19.4 +2.5**
baz=158
BC3 Big Chuckawall 33.18 313 P **P** **03 31 59.0 +0.3**
baz=122,SNR=53
BC3 S **S** **03 37 18.3 +0.4**
baz=122
NEE2 Needles Airpor 33.21 316 P **P** **03 31 59.1 +0.2**
baz=124,SNR=16
NEE2 S **S** **03 37 18.6 +0.5**
baz=124
COWI Conover 33.23 357 IAmb IAmb 03 31 60.0
comp=Z,258nm,0.9s
COWI Conover 33.23 357 P **P** **03 31 58.1 -0.8**
baz=176
COWI S **S** **03 37 14.3 -3.9**
baz=176
IRM Iron Mountain 33.23 314 P **P** **03 31 59.5 +0.4**
baz=123,SNR=22
IRM S **S** **03 37 20.7 +2.2**
baz=123
UNH University of 33.25 22 P **P** **03 32 01.2 +2.3**
baz=210,SNR=12
UNH S **S** **03 37 23.0 +4.6**
baz=210
MCVT Middlebury Col 33.29 19 P **P** **03 32 00.6 +1.2**
baz=205,SNR=37
MCVT S **S** **03 37 19.8 +0.7**
baz=205
HNH Hanover 33.30 20 IAmb IAmb 03 32 02.6
comp=Z,216nm,1.4s
HNH IAMs_20 IAMs_20 03 45 20.0
comp=Z,35µm,19.0s
HNH Hanover 33.30 20 P **P** **03 32 01.8 +2.4**
baz=207,SNR=16
HNH S **S** **03 37 25.9 +6.7**
baz=207
FFD Franklin Falls 33.30 21 IAMs_20 IAMs_20 03 44 26.1
comp=Z,28µm,20.0s
FFD Franklin Falls 33.30 21 P **P** **03 32 02.2 +2.8**
baz=208,SNR=22
F36A Milaca 33.40 352 IAmb IAmb 03 32 01.1
comp=Z,271nm,1.1s
F36A Milaca 33.40 352 P **P** **03 31 59.5 -0.9**
baz=168,SNR=128
F36A S **S** **03 37 26.3 +5.5**
baz=168
LONY Lake Ozonia 33.44 16 P **P** **03 32 02.2 +1.5**
baz=202,SNR=120
LONY S **S** **03 37 23.9 +2.5**
baz=202
E43A Lone Tree Farm 33.46 0 P **P** **03 32 00.7 -0.1**
baz=180,SNR=110
E43A S **S** **03 37 19.5 -2.1**
baz=180
SRU San Rafael Swe 33.46 326 IAmb IAmb 03 32 03.6
comp=Z,381nm,1.4s
MONP2 Monument Peak 33.49 312 P **P** **03 32 01.0 -0.5**
baz=120,SNR=16
MONP2 S **S** **03 37 21.9 -1.0**
baz=120
E46A Sault Ste Mari 33.52 3 P **P** **03 32 01.7 +0.3**
E46A IAmb IAmb 03 32 04.0
comp=Z,271nm,1.4s
E46A Sault Ste Mari 33.52 3 P **P** **03 32 01.3 -0.1**

baz=185,SNR=56
E46A S **S** 03 37 22.0 -0.6
baz=185
LCMT Little Creek M 33.65 320 IAmb IAmb 03 32 09.7
comp=Z,138nm,1.2s
BMNY Brushton-Moira 33.66 16 P **P** 03 32 03.9 +1.3
baz=202,SNR=102
BMNY S **S** 03 37 25.8 +1.0
baz=202
P18A Preston Nutter 33.67 327 IAmb IAmb 03 32 09.8
comp=Z,334nm,1.2s
Q16A Castle Valley 33.68 325 IAmb IAmb 03 32 06.9
comp=Z,292nm,1.5s
VT1 Waterbury 33.71 19 IAmb IAmb 03 32 07.2
comp=Z,282nm,1.4s
VT1 IAMs_20 IAMs_20 03 45 47.7
comp=Z,25µm,19.0s
VT1 Waterbury 33.71 19 P **P** 03 32 04.6 +1.5
baz=206,SNR=24
BELC Belle Mtn. Jos 33.75 314 P **P** 03 32 03.3 -0.4
baz=122,SNR=36
BELC S **S** 03 37 29.7 +2.9
baz=122
I62A Tamworth 33.76 21 P **P** 03 32 05.7 +2.2
baz=208,SNR=52
I62A P **P** 03 32 05.7 +2.2
baz=208,SNR=52
I62A S **S** 03 37 30.0 +3.5
baz=208
I62A S **S** 03 37 30.0 +3.5
baz=208
P17A Butcher Ranch, 33.83 326 IAmb IAmb 03 32 11.0
comp=Z,353nm,1.2s
F33A 5 Mile Ranch, 33.85 348 IAmb IAmb 03 32 04.9
comp=Z,227nm,0.9s
F33A 5 Mile Ranch, 33.85 348 P **P** 03 32 03.1 -1.1
baz=164,SNR=83
F33A S **S** 03 37 27.1 -0.6
baz=164
TPFO Pinon Flats 33.87 313 P **P** 03 32 04.5 -0.3
baz=121,SNR=29
TPFO S **S** 03 37 32.7 +4.1
baz=121
PFO Pinyon Flats O 33.88 313 P **P** 03 32 06.0 +1.2
comp=Z,22nm,0.9s,baz=113,slow=9.2,SNR=25
PFO LR LR 03 46 15.6
comp=Z,29µm,19.7s,baz=144,slow=37
comp=Z,22nm,0.9s
PFO Pinyon Flats O 33.88 313 P **P** 03 32 05.1 +0.3
PFO Pinyon Flats O 33.88 313 IAMs_20 IAMs_20 03 46 35.4
comp=Z,31µm,19.0s
PFO Pinyon Flats O 33.88 313 P **P** 03 32 05.1 +0.3
PFO pmax pmax
comp=Z,72nm,1.1s
PFO MLR MLR
comp=Z,31µm,19.0s
PFO Pinyon Flats O 33.88 313 P **P** 03 32 04.8 0.0
baz=121,SNR=24
PFO S **S** 03 37 32.8 +4.1
baz=121
LBNH Lisbon 33.89 20 IAMs_20 IAMs_20 03 45 38.6
comp=Z,32µm,19.0s
LBNH Lisbon 33.89 20 P **P** 03 32 06.5 +1.8
baz=207,SNR=38
LBNH S **S** 03 37 32.7 +4.3
baz=207
LBNH Lisbon 33.89 20 P **P** 03 32 06.6 +2.0
baz=207,SNR=38
LBNH S **S** 03 37 29.8 +1.4
baz=207
E38A The Farm, Brul 33.90 354 P **P** 03 32 04.1 -0.7
baz=172,SNR=48
E38A S **S** 03 37 25.4 -3.2
baz=172
FRNY Flat Rock 33.91 17 P **P** 03 32 05.9 +1.1
baz=204,SNR=65
FRNY S **S** 03 37 30.8 +2.0
baz=204
SZCU Shurtz Canyon 33.92 321 IAmb IAmb 03 32 12.2
comp=Z,307nm,1.2s
GMRC Granite Mounta 33.93 315 P **P** 03 32 05.4 +0.2
baz=123,SNR=108
GMRC S **S** 03 37 31.3 +1.8
baz=123
TMUT Trail Mountain 33.97 325 IAmb IAmb 03 32 13.2
comp=Z,220nm,1.3s
109C Camp Elliot, M 33.99 311 IAMs_20 IAMs_20 03 46 03.5
comp=Z,42µm,19.0s
109C Camp Elliot, M 33.99 311 P **P** 03 32 05.1 -0.5
baz=119
RDMU Red Mountain 34.01 329 IAmb IAmb 03 32 13.3
comp=Z,282nm,1.5s
CCUT Cedar City 34.06 321 P **P** 03 32 07.3 +0.8
CCUT IAmb IAmb 03 32 13.8
comp=Z,144nm,1.1s
D41A Chassel 34.17 358 P **P** 03 32 07.2 +0.2
baz=177,SNR=44
D41A S **S** 03 37 40.6 +8.1
baz=177
I63A Otisfield 34.18 21 P **P** 03 32 09.4 +2.3
baz=209,SNR=26
I63A P **P** 03 32 09.4 +2.3
baz=209,SNR=26
I63A S **S** 03 37 36.9 +4.0
baz=209
I63A S **S** 03 37 36.9 +4.0
baz=209
TCRU Three Creeks R 34.20 323 IAmb IAmb 03 32 14.6
comp=Z,319nm,1.1s
K22A Casper 34.20 334 IAmb IAmb 03 32 10.3
comp=Z,458nm,1.5s
K22A Casper 34.20 334 P **P** 03 32 08.5 +0.9
baz=145,SNR=92
K22A S **S** 03 37 35.3 +1.7
baz=145
K22A Casper 34.20 334 P **P** 03 32 08.1 +0.5
baz=145,SNR=92
K22A S **S** 03 37 37.0 +3.4
baz=145
GAC Glen Almond 34.22 14 ⇓P **P** 03 32 08.3 +0.9
MURC Murrieta 34.40 312 P **P** 03 32 09.1 -0.2
baz=120,SNR=20
MURC S **S** 03 37 36.7 0.0
baz=120
LPAZ La Paz 34.42 147 P **P** 03 32 10.4 +0.2
comp=Z,6.6nm,1.1s,baz=334,slow=10,SNR=7.8
LPAZ LR LR 03 46 57.7
comp=Z,26µm,21.2s,baz=326,slow=38
LPAZ La Paz 34.42 147 eP **P** 03 32 11.6 +1.5
LPAZ La Paz 34.42 147 ⇓P **P** 03 32 13.8 +3.6
HEC Hector,Ludlow 34.42 315 P **P** 03 32 09.4 -0.1
baz=122,SNR=35
HEC S **S** 03 37 38.9 +1.8
baz=122
H62A Milan 34.44 20 IAmb IAmb 03 32 21.1
comp=Z,174nm,1.1s
H62A Milan 34.44 20 P **P** 03 32 11.7 +2.3
baz=208,SNR=22
H62A P **P** 03 32 11.7 +2.3
baz=208,SNR=22
H62A S **S** 03 37 40.0 +3.0
baz=208
H62A S **S** 03 37 40.0 +3.0
baz=208
RSSD Black Hills 34.45 338 P **P** 03 32 10.1 +0.3
RSSD IAmb IAmb 03 32 12.0
comp=Z,240nm,1.5s
RSSD Black Hills 34.45 338 P **P** 03 32 10.1 +0.3
RSSD pmax pmax
comp=Z,240nm,1.5s
RSSD MLR MLR
comp=Z,8µm,22.0s
RSSD Black Hills 34.45 338 P **P** 03 32 10.8 +1.0
baz=150,SNR=89
RSSD S **S** 03 37 41.1 +3.6
baz=150
RSSD Black Hills 34.45 338 P **P** 03 32 10.8 +1.0
baz=150
RSSD S **S** 03 37 41.2 +3.7
baz=150
RSSD Black Hills 34.45 338 ⇓P **P** 03 32 10.5 +0.7
TUQ Turquoise Moun 34.47 316 P **P** 03 32 09.8 -0.1
baz=124
TUQ S **S** 03 37 40.0 +2.1
baz=124
BBRC Big Bear Solar 34.54 313 P **P** 03 32 10.7 0.0
baz=121
MDP Montagnes des 34.77 100 P **P** 03 32 13.5 +0.8
comp=Z,77nm,1.1s,baz=279,slow=7.4,SNR=20
MDP LR LR 03 47 52.1
comp=Z,34µm,19.5s,baz=285,slow=39
comp=Z,77nm,1.1s
NLU North Lily Min 34.90 325 IAmb IAmb 03 32 20.6
comp=Z,248nm,1.4s
RRX Edison Barstow 34.91 314 P **P** 03 32 13.9 +0.3
baz=122
RRX S **S** 03 37 47.8 +3.4
baz=122
TRQ Mont Tremblant 34.93 15 IAmb IAmb 03 32 16.6
comp=Z,385nm,1.2s
WVL Waterville 34.96 22 IAMs_20 IAMs_20 03 47 11.0
comp=Z,33µm,19.0s
WVL Waterville 34.96 22 P **P** 03 32 16.7 +2.9
baz=210,SNR=29
WVL S **S** 03 37 50.5 +5.6
baz=210
SHOC Shoshone, Teco 34.96 316 P **P** 03 32 14.2 +0.1
baz=124
SHOC S **S** 03 37 46.8 +1.6
baz=124
PSUT Pine Spring 34.99 322 IAmb IAmb 03 32 21.4
comp=Z,214nm,1.1s
GSC Goldstone, Bar 35.00 315 P **P** 03 32 14.6 +0.1
baz=122,SNR=34
GSC S **S** 03 37 49.1 +3.1
baz=122
JLU Jordanelle 35.02 327 IAmb IAmb 03 32 21.3
comp=Z,213nm,1.3s
PRN Pahroc Range 35.03 319 IAmb IAmb 03 32 21.9
comp=Z,208nm,1.2s
PRN Pahroc Range 35.03 319 ⇑P **P** 03 32 15.5 +0.7
BFSC Mount Baldy Ra 35.05 313 P **P** 03 32 15.0 -0.1
baz=120,SNR=12
SCI2 San Clemente I 35.10 310 P **P** 03 32 14.8 -0.5
baz=118
CIS Catalina Islan 35.20 311 P **P** 03 32 16.3 +0.2
baz=118,SNR=6.8
G62A West of Eustis 35.22 20 P **P** 03 32 18.4 +2.3
baz=208,SNR=72
G62A P **P** 03 32 18.4 +2.3
baz=208,SNR=72
G62A S **S** 03 37 52.2 +3.3
baz=208
G62A S **S** 03 37 52.2 +3.3
baz=208
EYMN Ely 35.23 355 P **P** 03 32 14.5 -1.7
EYMN IAmb IAmb 03 32 16.9
comp=Z,287nm,1.2s
EYMN Ely 35.23 355 P **P** 03 32 14.9 -1.3
baz=172,SNR=44
EYMN S **S** 03 37 45.4 -3.6
baz=172
EYMN Ely 35.23 355 P **P** 03 32 15.4 -0.8
baz=172,SNR=44
EYMN S **S** 03 37 46.5 -2.4
baz=172
D32A Dogwood Acres, 35.23 348 IAmb IAmb 03 32 22.8
comp=Z,220nm,1.0s
D32B Dogwood Acres, 35.23 348 P **P** 03 32 15.3 -0.9
baz=163
FMP Fort Macarthur 35.26 311 P **P** 03 32 16.3 -0.3
baz=119
PASC Pasadena Art C 35.40 312 IAMs_20 IAMs_20 03 46 48.8
comp=Z,38µm,22.0s
DUG Dugway, Tooele 35.48 325 IAmb IAmb 03 32 25.5
comp=Z,219nm,1.2s
DUG IAMs_20 IAMs_20 03 49 19.4
comp=Z,33µm,20.0s
DUG Dugway, Tooele 35.48 325 P **P** 03 32 19.2 +0.6
baz=133,SNR=194
DUG S **S** 03 37 58.4 +5.1
baz=133
TPNV Topopah Spring 35.54 318 IAmb IAmb 03 32 27.0
comp=Z,164nm,1.0s
TPNV IAMs_20 IAMs_20 03 49 00.4
comp=Z,42µm,19.0s
TPNV Topopah Spring 35.54 318 P **P** 03 32 20.2 +1.0
baz=125,SNR=95
TPNV S **S** 03 37 56.3 +2.0
baz=125
TPNV Topopah Spring 35.54 318 ⇓P **P** 03 32 20.2 +1.0
DECC Green Verdugo 35.55 312 P **P** 03 32 19.4 +0.3
baz=119,SNR=9.2
DECC S **S** 03 37 57.3 +3.0
baz=119
E28A Huff 35.58 344 IAmb IAmb 03 32 25.2
comp=Z,348nm,1.2s
E28A Huff 35.58 344 P **P** 03 32 18.8 -0.4
baz=157,SNR=18
EDW2 Edwards Air Fo 35.61 313 P **P** 03 32 19.5 -0.2
baz=120,SNR=28
EDW2 S **S** 03 37 56.9 +1.5
baz=120
BW06 Boulder Array 35.66 331 P **P** 03 32 20.4 +0.2
BW06 Boulder Array 35.66 331 P **P** 03 32 20.3 0.0
baz=140,SNR=64
BW06 S **S** 03 37 57.6 +1.3
baz=140
PD31 Pinedale Array 35.66 331 ⇓P **P** 03 32 19.9 -0.3
PDAR Pinedale Array 35.66 331 P **P** 03 32 20.6 +0.3
comp=Z,95nm,1.3s,baz=134,slow=8.5,SNR=101
PDAR PcP **PcP** 03 34 47.7 -0.9
comp=Z,4.9nm,0.9s,baz=122,slow=3.3,SNR=1.9
PDAR S **S** 03 37 55.4 -0.8
comp=Z,0.8nm,0.4s,baz=82,slow=22,SNR=2.1
PDAR LR LR 03 50 09.9
comp=Z,12µm,19.2s,baz=140,slow=42
comp=Z,95nm,1.3s
FURC Furnace Creek, 35.67 317 P **P** 03 32 20.7 +0.6
baz=124,SNR=27
PKME Peaks-Kenny Pk 35.69 22 IAMs_20 IAMs_20 03 47 51.5
comp=Z,36µm,18.0s
PKME Peaks-Kenny Pk 35.69 22 P **P** 03 32 22.3 +2.2
baz=210,SNR=34
PKME S **S** 03 38 00.6 +4.5
baz=210
PKME Peaks-Kenny Pk 35.69 22 P **P** 03 32 22.4 +2.2
baz=210,SNR=34
PKME S **S** 03 38 00.5 +4.4
baz=210
LRMC Laurel Mtn Rad 35.70 314 P **P** 03 32 20.6 0.0
baz=122,SNR=11
MPMC Manual Prospec 35.87 315 P **P** 03 32 22.1 -0.1
baz=122,SNR=94
MPMC S **S** 03 38 02.7 +3.1
baz=122
B35A Bob, Littlefor 35.88 352 IAmb IAmb 03 32 22.4
comp=Z,282nm,1.3s
B35A Bob, Littlefor 35.88 352 P **P** 03 32 20.8 -1.0
baz=169,SNR=70
B35A S **S** 03 37 56.7 -2.2
baz=169
EMMW East Machias 35.92 24 IAmb IAmb 03 32 25.9
comp=Z,276nm,1.3s
EMMW IAMs_20 IAMs_20 03 47 06.4
comp=Z,26µm,18.0s
EMMW East Machias 35.92 24 P **P** 03 32 23.4 +1.3
baz=214,SNR=7.6
EMMW S **S** 03 38 03.1 +3.5
baz=214
R11A Troy Canyon, C 35.94 320 IAmb IAmb 03 32 29.6
comp=Z,193nm,1.2s
R11A Troy Canyon, C 35.94 320 P **P** 03 32 23.3 +0.7
baz=127,SNR=232
R11A S **S** 03 38 03.3 +2.8
baz=127
SNCC San Nicolas Is 35.95 310 P **P** 03 32 22.9 +0.3
baz=117
SNCC S **S** 03 38 03.7 +3.3
baz=117
OSI Osito Audit: C 36.00 312 P **P** 03 32 22.4 -0.7
baz=119
OSI S **S** 03 38 03.2 +1.9
baz=119
F62A Pittston Farm, 36.01 20 P **P** 03 32 24.1 +1.2
baz=209
F62A P **P** 03 32 24.1 +1.2
baz=209
F62A S **S** 03 38 04.4 +3.5
baz=209
F62A S **S** 03 38 04.4 +3.5
baz=209
VLDQ Val d'Or 36.09 11 IAmb IAmb 03 32 25.9
comp=Z,268nm,1.1s
BGU Big Grassy Mou 36.10 326 IAmb IAmb 03 32 30.6
comp=Z,512nm,1.3s
F63A Nahmakanta, Br 36.14 21 IAmb IAmb 03 32 27.5
comp=Z,268nm,1.2s
F63A Nahmakanta, Br 36.14 21 P **P** 03 32 25.7 +1.7
baz=210,SNR=25
F63A P **P** 03 32 25.7 +1.7
baz=210,SNR=25
F63A S **S** 03 38 05.8 +2.9
baz=210
F63A S **S** 03 38 05.8 +2.9
baz=210
AGMN Agassiz Nation 36.14 350 IAmb IAmb 03 32 25.0
comp=Z,376nm,1.2s
AGMN Agassiz Nation 36.14 350 P **P** 03 32 23.0 -1.0
baz=165,SNR=122
AGMN S **S** 03 38 00.9 -2.0
baz=165
AGMN Agassiz Nation 36.14 350 P **P** 03 32 23.3 -0.7
baz=165,SNR=122
AGMN S **S** 03 38 00.9 -2.0
baz=165
G65A Princeton 36.28 23 P **P** 03 32 27.7 +2.5
baz=213,SNR=30
G65A P **P** 03 32 27.7 +2.5
baz=213,SNR=30
G65A S **S** 03 38 09.3 +4.1
baz=213
G65A S **S** 03 38 09.3 +4.1
baz=213
GRAC Grapevine Rang 36.30 317 IAmb IAmb 03 32 32.9
comp=Z,437nm,1.4s
GRAC Grapevine Rang 36.30 317 P **P** 03 32 26.5 +0.9
baz=124,SNR=8.7
GRAC S **S** 03 38 08.4 +2.5
baz=124
ARVC Arvin 36.33 313 P **P** 03 32 25.8 0.0
baz=120,SNR=18
ARVC S **S** 03 38 09.3 +3.1
baz=120
ISA Isabella, Lake 36.35 314 P **P** 03 32 26.4 +0.4
ISA Isabella, Lake 36.35 314 P **P** 03 32 26.5 +0.4
ISA pmax pmax
comp=Z,68nm,1.4s
ISA Isabella, Lake 36.35 314 P **P** 03 32 26.3 +0.3
baz=121,SNR=12
ISA S **S** 03 38 09.5 +2.9
baz=121
SCZ2 Santa Cruz Isl 36.37 311 P **P** 03 32 26.1 -0.1
baz=118
AHID Auburn Hatcher 36.41 330 IAmb IAmb 03 32 32.9
comp=Z,428nm,1.3s
LATQ La Tuque 36.47 16 IAmb IAmb 03 32 29.8
comp=Z,439nm,1.1s
MDND Maddock 36.48 346 P **P** 03 32 26.7 -0.2
baz=159,SNR=13
MDND S **S** 03 38 07.9 -0.2
baz=159
MDND Maddock 36.48 346 P **P** 03 32 26.8 -0.1
baz=159,SNR=13
MDND S **S** 03 38 07.8 -0.4
baz=159
CWC Cottonwood Cre 36.48 316 P **P** 03 32 27.3 0.0
baz=122
GGN Saint George 36.50 24 IAmb IAmb 03 32 31.1
comp=Z,362nm,1.4s
F64A Sherman 36.55 22 IAmb IAmb 03 32 31.2
comp=Z,449nm,1.2s
F64A Sherman 36.55 22 P **P** 03 32 29.6 +2.1
baz=212,SNR=36
F64A P **P** 03 32 29.6 +2.1
baz=212,SNR=36
F64A S **S** 03 38 11.8 +2.6
baz=212
F64A S **S** 03 38 11.8 +2.6
baz=212
HVU Hansel Valley 36.55 327 IAmb IAmb 03 32 35.3
comp=Z,310nm,1.2s
PB11 IPOC Station P 36.60 152 P **P** 03 32 28.8 +0.4
SBC Santa Barbara 36.64 312 P **P** 03 32 28.4 0.0
baz=118
LOHW Long Hollow 36.80 331 IAmb IAmb 03 32 36.6
comp=Z,479nm,1.4s
VES Vestal, Richgr 36.87 314 P **P** 03 32 30.5 +0.1
baz=120,SNR=36
TIN Tinemaha, Big 36.91 316 P **P** 03 32 31.3 +0.4
baz=123,SNR=15
PKM Mcpherson Peak 36.92 312 P **P** 03 32 31.2 +0.1
baz=118,SNR=15
E63A Oxbow 37.00 22 P **P** 03 32 33.4 +2.1
baz=211,SNR=28
E63A P **P** 03 32 33.4 +2.1
baz=211,SNR=28
E63A S **S** 03 38 18.8 +2.8
baz=211
E63A S **S** 03 38 18.8 +2.8
baz=211
FLWY Flagg Ranch 37.20 331 IAmb IAmb 03 32 40.1
comp=Z,588nm,1.4s
ELK Elko 37.23 324 LR LR 03 51 12.6
comp=Z,40µm,18.1s,baz=142,slow=42
ELK Elko 37.23 324 IAmb IAmb 03 32 40.4
comp=Z,323nm,1.1s
ELK IAMs_20 IAMs_20 03 49 30.0
comp=Z,28µm,18.0s
Q09A Carvers 37.23 320 IAmb IAmb 03 32 45.1
comp=Z,226nm,1.0s
SMMC Simmler 37.26 313 P **P** 03 32 33.8 +0.1
baz=119
SMMC S **S** 03 38 22.4 +2.0
baz=119
VOG Valley Oaks Go 37.32 315 P **P** 03 32 34.2 0.0
baz=121
LMQ La Malbaie 37.34 19 IAmb IAmb 03 32 36.5
comp=Z,262nm,1.2s
D62A Allapoint, All 37.35 20 P **P** 03 32 35.4 +1.1
D62A IAmb IAmb 03 32 37.8
comp=Z,464nm,1.1s
D62A Allapoint, All 37.35 20 P **P** 03 32 36.1 +1.8
baz=210
D62A P **P** 03 32 36.1 +1.8
baz=210
D62A S **S** 03 38 23.0 +1.7
baz=210
D62A S **S** 03 38 23.0 +1.7
baz=210
PQI Presque Isle 37.36 22 IAmb IAmb 03 32 38.0
comp=Z,426nm,1.4s
PQI IAMs_20 IAMs_20 03 48 43.5
comp=Z,34µm,18.0s
RLMT Red Lodge 37.37 334 IAmb IAmb 03 32 36.9
comp=Z,275nm,1.2s
RLMT Red Lodge 37.37 334 P **P** 03 32 35.2 +0.4
baz=142,SNR=87
RLMT S **S** 03 38 24.3 +2.1
baz=142
H17A Grant Village 37.39 332 P **P** 03 32 36.1 +1.1
baz=140,SNR=75
H17A S S 03 38 33.2 +11
baz=140
LKWY Lake 37.44 332 IAmb IAmb 03 32 38.9
comp=Z,293nm,1.4s
LAO LASA Array 37.45 338 IAmb IAmb 03 32 38.5
comp=Z,662nm,1.4s
LAO LASA Array 37.45 338 P **P** 03 32 35.4 +0.2
baz=148,SNR=22
LAO S **S** 03 38 23.8 +0.8
baz=148
LAO LASA Array 37.45 338 P **P** 03 32 35.8 +0.6
baz=148,SNR=22
LAO S **S** 03 38 25.1 +2.0
baz=148
YFT Old Faithful 37.55 332 IAmb IAmb 03 32 50.7
comp=Z,472nm,1.3s
NV11 Mina Array Sit 37.62 318 IAmb IAmb 03 32 44.0
comp=Z,327nm,1.2s
MLAC Mammoth, Mammo 37.63 317 P **P** 03 32 37.6 +0.5
baz=123
NVAR Mina Array Bea 37.72 318 P **P** 03 32 38.9 +1.1
comp=Z,52nm,0.9s,baz=130,slow=6.3,SNR=237
NVAR PcP **PcP** 03 34 54.8 -0.1
comp=Z,13nm,0.9s,baz=130,slow=3.9,SNR=3.1
NVAR LR LR 03 51 00.3
comp=Z,43µm,19.6s,baz=131,slow=41
comp=Z,52nm,0.9s
NVAR Mina Array Bea 37.72 318 P **P** 03 32 38.2 +0.4
LHV Little Huntoon 37.75 318 IAmb IAmb 03 32 45.4
comp=Z,307nm,1.1s
YMR Madison River 37.77 332 IAmb IAmb 03 32 46.0
comp=Z,428nm,1.1s

PB02 IPOC Station P 37.86 153 P **P** **03 32 39.3 +0.4**
LMN Caledonia Moun 37.93 25 IAmb IAmb 03 32 42.7
comp=Z,446nm,1.1s
KVN Kaiserville 37.94 319 IAmb IAmb 03 32 46.2
comp=Z,168nm,1.0s
YHL Hebgen Lake 38.01 332 IAmb IAmb 03 32 48.6
comp=Z,475nm,1.3s
ULM Lac du Bonnet 38.03 351 P **P** **03 32 38.9 -1.2**
comp=Z,116nm,1.0s,baz=170,slow=8.5,SNR=112
ULM S **S** **03 38 25.8 -5.9**
comp=Z,6.7nm,0.9s,baz=128,slow=13,SNR=1.8
ULM LR LR 03 50 17.1
comp=Z,11µm,20.0s,baz=160,slow=39
comp=Z,116nm,1.0s
ULM Lac du Bonnet 38.03 351 IAmb IAmb 03 32 40.4
comp=Z,288nm,1.2s
ULM Lac du Bonnet 38.03 351 ⇓P **P** **03 32 38.5 -1.5**
BMN Battle Mountai 38.21 322 IAmb IAmb 03 32 48.6
comp=Z,584nm,1.3s
PB07 IPOC Station P 38.22 154 P **P** **03 32 43.3 +1.2**
DGMT Dagmar 38.31 342 P **P** **03 32 43.0 +0.6**
baz=152,SNR=67
DGMT S **S** **03 38 37.8 +1.7**
baz=152
DGMT Dagmar 38.31 342 P **P** **03 32 43.1 +0.6**
baz=152,SNR=67
DGMT S **S** **03 38 38.2 +2.2**
baz=152
SIV San Ignacio 38.44 137 LR LR 03 49 27.2
comp=Z,36µm,19.5s,baz=332,slow=38
BATG Bathurst New B 38.59 23 IAmb IAmb 03 32 48.5
comp=Z,439nm,1.3s
HLID Hailey 38.66 328 IAMs_20 IAMs_20 03 51 13.9
comp=Z,28µm,20.0s
HLID Hailey 38.66 328 P **P** **03 32 46.0 +0.3**
baz=134,SNR=169
HLID S **S** **03 38 45.2 +3.4**
baz=134
BOZ Bozeman (W) 38.79 332 P **P** **03 32 47.0 +0.4**
BOZ IAmb IAmb 03 32 53.5
comp=Z,326nm,1.2s
BOZ Bozeman (W) 38.79 332 P **P** **03 32 47.0 +0.4**
BOZ pmax pmax
comp=Z,326nm,1.2s
BOZ Bozeman (W) 38.79 332 P **P** **03 32 47.6 +0.9**
baz=140,SNR=268
BOZ S **S** **03 38 47.0 +3.4**
baz=140
CMB Columbia Colle 38.88 316 IAMs_20 IAMs_20 03 49 37.0
comp=Z,27µm,20.0s
SAO San Andreas Ge 38.98 314 IAMs_20 IAMs_20 03 48 53.7
comp=Z,38µm,21.0s
SAO San Andreas Ge 38.98 314 ⇓P **P** **03 32 47.5 -0.8**
MFID Camas Ranch 39.32 326 P **P** **03 32 51.8 +0.7**
MFID IAMs_20 IAMs_20 03 51 17.2
comp=Z,32µm,20.0s
LVC Limon Verde 39.42 153 P **P** **03 32 50.6 -1.8**
comp=Z,4.1nm,0.8s,baz=4.1,slow=5.6,SNR=2.8
LVC LR LR 03 49 21.9
comp=Z,22µm,21.6s,baz=332,slow=37
comp=Z,4.1nm,0.8s
LVC Limon Verde 39.42 153 P **P** **03 32 53.9 +1.5**
LVC Limon Verde 39.42 153 IAMs_20 IAMs_20 03 49 09.7
comp=Z,19µm,21.0s
LVC Limon Verde 39.42 153 P **P** **03 32 53.9 +1.5**
LVC pmax pmax
comp=Z,127nm,1.5s
LVC MLR MLR
comp=Z,19µm,21.0s
LVC Limon Verde 39.42 153 ⇑P **P** **03 32 57.0 +4.6**
EGMT Eagleton 39.90 336 IAmb IAmb 03 32 58.4
comp=Z,748nm,1.4s
WVOR Wild Horse Val 40.27 323 IAmb IAmb 03 33 05.2
comp=Z,330nm,1.2s
WVOR IAMs_20 IAMs_20 03 52 11.5
comp=Z,26µm,20.0s
WVOR Wild Horse Val 40.27 323 ⇓P **P** **03 32 58.3 -0.7**
ORV Oroville 40.42 318 IAMs_20 IAMs_20 03 51 54.6
comp=Z,22µm,20.0s
PLID Pearl Lake 40.54 328 P **P** **03 33 00.8 -0.6**
PLID IAmb IAmb 03 33 07.0
comp=Z,437nm,1.2s
PLID IAMs_20 IAMs_20 03 52 10.6
comp=Z,23µm,22.0s
MCCM Marconi Confer 40.64 315 IAMs_20 IAMs_20 03 49 59.7
comp=Z,36µm,20.0s
J08A Circle Bar Ran 40.75 324 P **P** **03 33 02.8 -0.2**
J08A IAmb IAmb 03 33 08.3
comp=Z,298nm,1.3s
MSO Missoula 40.77 332 P **P** **03 33 03.6 +0.5**
MSO Missoula 40.77 332 P **P** **03 33 03.4 +0.3**
baz=138,SNR=304
MSO S **S** **03 39 14.2 +1.0**
baz=138
MOD Modoc Plateau 40.95 321 IAMs_20 IAMs_20 03 53 20.6
comp=Z,27µm,19.0s
BMO Blue Mountains 41.07 327 IAmb IAmb 03 33 10.6
comp=Z,309nm,1.3s
BMO IAMs_20 IAMs_20 03 53 12.5
comp=Z,28µm,19.0s
GO02 Mina Guanaco 41.39 156 P **P** **03 33 09.9 +1.3**
F10A Beach Ranch, E 41.78 328 IAmb IAmb 03 33 16.9
comp=Z,364nm,1.2s
F10A Beach Ranch, E 41.78 328 ⇓P **P** **03 33 10.7 -0.7**
K04D Chiloquin, OR 42.25 321 P **P** **03 33 14.4 -0.9**
baz=124
K04D S **S** **03 39 35.2 0.0**
baz=124
J05D Fort Rock, OR 42.31 322 P **P** **03 33 14.8 -1.1**
baz=126,SNR=48
J05D S **S** **03 39 38.0 +1.8**
baz=126
YBH Yreka Blue Hor 42.35 320 P **P** **03 33 14.3 -1.8**
comp=Z,13nm,1.0s,baz=134,slow=6.7,SNR=28
YBH LR LR 03 53 37.2
comp=Z,34µm,18.4s,baz=152,slow=40
comp=Z,13nm,1.0s
YBH Yreka Blue Hor 42.35 320 P **P** **03 33 14.5 -1.6**
YBH Yreka Blue Hor 42.35 320 P **P** **03 33 14.5 -1.6**
YBH pmax pmax
comp=Z,95nm,1.5s
YBH MLR MLR
comp=Z,33µm,19.0s
L04D Klamath Falls 42.36 320 IAmb IAmb 03 33 21.6
comp=Z,501nm,1.5s
L04D Klamath Falls 42.36 320 P **P** **03 33 15.1 -1.2**
baz=123
WALA Waterton Lakes 42.42 334 IAmb IAmb 03 33 23.1
comp=Z,610nm,1.4s
WALA Waterton Lakes 42.42 334 ⇓P **P** **03 33 16.8 +0.1**
KMPM Mount Pierce 42.59 317 P **P** **03 33 18.2 +0.2**
E09A Wood Farm, Sta 42.61 328 IAmb IAmb 03 33 20.4
comp=Z,508nm,1.5s
J04D Umpqua Nationa 42.81 322 IAmb IAmb 03 33 26.4
comp=Z,414nm,1.1s
J04D IAMs_20 IAMs_20 03 53 04.8
comp=Z,25µm,19.0s
J04D Umpqua Nationa 42.81 322 P **P** **03 33 19.5 -0.4**
baz=124,SNR=74
J04D S **S** **03 39 43.3 -0.3**
baz=124
KRPM Rodgers 42.90 318 IAmb IAmb 03 33 27.5
comp=Z,297nm,1.0s
HUMO Hull Mountain 42.98 321 IAMs_20 IAMs_20 03 52 10.2
comp=Z,36µm,22.0s
HUMO Hull Mountain 42.98 321 ⇑P **P** **03 33 19.2 -1.9**
I05D Terrebonne, OR 42.99 324 P **P** **03 33 20.9 -0.3**
baz=126,SNR=24
I05D S **S** **03 39 47.7 +1.8**
baz=126
AC02 Maricunga 43.07 156 P **P** **03 33 23.5 +1.0**
E08A Dider Farm, El 43.07 328 IAmb IAmb 03 33 26.9
comp=Z,305nm,1.4s
L02F Cave Junction 43.10 320 P **P** **03 33 20.8 -1.4**
baz=122,SNR=7.7
L02F S **S** **03 39 46.6 -1.0**
baz=122
KSXB Camp Six Broad 43.15 319 P **P** **03 33 22.1 -0.5**
HAWA Hanford 43.26 327 IAMs_20 IAMs_20 03 54 38.4
comp=Z,32µm,20.0s
HAWA Hanford 43.26 327 ⇓P **P** **03 33 22.7 -0.6**
NEW Newport 43.30 331 P **P** **03 33 23.4 -0.3**
comp=Z,75nm,1.1s,baz=143,slow=8.3,SNR=103
NEW PcP **PcP** **03 35 12.2 -0.2**
comp=Z,16nm,0.9s,baz=145,slow=13,SNR=1.7
NEW LR LR 03 55 54.3
comp=Z,16µm,18.7s,baz=150,slow=42
comp=Z,75nm,1.1s
NEW Newport 43.30 331 IAmb IAmb 03 33 29.1
comp=Z,243nm,1.4s
NEW Newport 43.30 331 IAMs_20 IAMs_20 03 54 21.5
comp=Z,18µm,22.0s
NEW Newport 43.30 331 P **P** **03 33 23.3 -0.3**
baz=134,SNR=102
NEW S **S** **03 39 51.0 +0.6**
baz=134
I04A Tendick Farm, 43.30 322 P **P** **03 33 22.8 -1.0**
baz=125,SNR=58
D08A Wollman Farm, 43.37 328 IAmb IAmb 03 33 30.0
comp=Z,349nm,1.1s
K02D Willamette Mer 43.47 320 P **P** **03 33 23.8 -1.3**
baz=122,SNR=24
K02D S **S** **03 39 52.5 -0.6**
baz=122
G05D Wamic, OR 43.52 325 P **P** **03 33 26.0 +0.6**
baz=127,SNR=33
G05D S **S** **03 39 55.9 +2.3**
baz=127
KBO Bosley Butte 43.56 319 P **P** **03 33 26.8 +0.8**
KBO IAmb IAmb 03 33 32.8
comp=Z,331nm,1.1s
AC04 Llanos de Chal 43.60 159 P **P** **03 33 26.0 -0.1**
H04A Detroit Lake 43.68 323 IAmb IAmb 03 33 32.3
comp=Z,269nm,1.0s
I03D Drain, OR 43.81 322 P **P** **03 33 26.6 -1.1**
baz=123,SNR=40
I03D S **S** **03 39 57.9 0.0**
baz=123
BUCK Buck Mountain 43.87 322 IAmb IAmb 03 33 34.0
comp=Z,184nm,1.0s
J01E Myrtle Point 43.88 321 IAmb IAmb 03 33 35.0
comp=Z,245nm,0.9s
J01E Myrtle Point 43.88 321 P **P** **03 33 28.0 -0.3**
baz=122,SNR=30
J01E S **S** **03 39 59.7 +0.9**
baz=122
H04D Lebanon 43.91 323 IAmb IAmb 03 33 34.0
comp=Z,170nm,1.1s
H04D IAMs_20 IAMs_20 03 54 18.9
comp=Z,22µm,19.0s
H04D Lebanon 43.91 323 P **P** **03 33 27.3 -1.3**
baz=125,SNR=29
H04D S **S** **03 39 58.4 -0.9**
baz=125
KEBM Edson Butte 43.98 320 IAmb IAmb 03 33 36.1
comp=Z,442nm,1.1s
COR Corvallis 44.28 323 P **P** **03 33 30.5 -1.0**
COR IAmb IAmb 03 33 37.3
comp=Z,361nm,1.3s
COR Corvallis 44.28 323 P **P** **03 33 30.5 -1.0**
COR pmax pmax
comp=Z,361nm,1.3s
COR MLR MLR
comp=Z,35µm,20.0s
COR Corvallis 44.28 323 ⇓P **P** **03 33 30.8 -0.7**
I02E Swisshome, OR 44.34 322 IAmb IAmb 03 33 37.9
comp=Z,134nm,0.8s
I02E Swisshome, OR 44.34 322 P **P** **03 33 31.8 -0.2**
baz=123
I02E S **S** **03 40 03.8 -1.8**
baz=123
LTY Liberty 44.41 327 IAmb IAmb 03 33 38.4
comp=Z,233nm,1.1s
B08A Colville Reser 44.44 329 IAmb IAmb 03 33 38.3
comp=Z,209nm,1.1s
LCO Las Campanas 44.47 159 P **P** **03 33 34.0 +0.5**
LCO Las Campanas 44.47 159 *e*P **P** **03 33 33.0 -0.4**
G03D McMinnville, O 44.61 323 IAmb IAmb 03 33 40.5
comp=Z,273nm,1.1s
G03D McMinnville, O 44.61 323 P **P** **03 33 33.9 -0.2**
baz=125,SNR=22
G03D S **S** **03 40 09.2 -0.3**
baz=125
SCHQ Schefferville 44.81 16 P **P** **03 33 35.7 +0.1**
comp=Z,206nm,1.1s,baz=217,slow=6.5,SNR=94
SCHQ S **S** **03 40 10.6 -1.6**
comp=Z,5.2nm,1.0s,baz=122,slow=18,SNR=1.1
SCHQ LR LR 03 52 30.3
comp=Z,8µm,19.0s,baz=206,slow=36
comp=Z,206nm,1.1s
SCHQ Schefferville 44.81 16 P **P** **03 33 35.7 +0.1**
SCHQ IAmb IAmb 03 33 37.5
comp=Z,413nm,1.2s
SCHQ Schefferville 44.81 16 ⇑P **P** **03 33 35.9 +0.2**
D05A Enumclaw 45.07 326 IAmb IAmb 03 33 44.1
comp=Z,216nm,1.0s
PNT Penticton 45.23 330 ⇑P **P** **03 33 38.8 -0.2**
E03A Lebam 45.55 325 IAmb IAmb 03 33 48.0
comp=Z,279nm,0.9s
D03D Eldon 45.87 326 P **P** **03 33 43.5 -0.7**
baz=127,SNR=85
WISH Wishkah 46.00 325 IAmb IAmb 03 33 51.5
comp=Z,302nm,1.1s
CO03 El Pedregal 46.15 160 P **P** **03 33 46.6 0.0**
CO03 IAmb IAmb 03 33 52.1
comp=Z,140nm,1.4s
FCC Fort Churchill 46.17 355 IAmb IAmb 03 33 53.0
comp=Z,217nm,1.2s
NLWA Neilton Lookou 46.22 326 IAmb IAmb 03 33 53.0
comp=Z,282nm,1.1s
NLWA IAMs_20 IAMs_20 03 55 35.8
comp=Z,25µm,19.0s
NLWA Neilton Lookou 46.22 326 ⇑P **P** **03 33 47.0 +0.1**
CO02 Combarbal 46.39 161 IAmb IAmb 03 33 59.7
comp=Z,74nm,0.8s
CLRS Cowichan Lake 47.20 327 IAmb IAmb 03 34 15.2
comp=Z,263nm,1.4s
ZON Zonda 47.48 159 IAmb IAmb 03 34 05.1
comp=Z,165nm,1.5s
VA06 Catapilco 47.55 162 P **P** **03 33 58.3 +0.9**
BDFB Brasilia 47.83 125 P **P** **03 33 59.7 -0.4**
comp=Z,17nm,0.9s,baz=343,slow=4.8,SNR=12
BDFB LR LR 03 55 01.7
comp=Z,21µm,18.9s,baz=300,slow=37
comp=Z,17nm,0.9s
BDFB Brasilia 47.83 125 P **P** **03 33 59.1 -0.9**
BDFB Brasilia 47.83 125 P **P** **03 33 59.1 -0.9**
BDFB pmax pmax
comp=Z,76nm,1.2s
VA03 San Esteban 47.97 161 IAmb IAmb 03 34 12.6
comp=Z,92nm,0.8s
OZB Mount Ozzard 48.01 327 IAmb IAmb 03 34 07.1
comp=Z,203nm,1.0s
CPUP Villa Florida 48.45 144 P **P** **03 34 04.5 +0.1**
comp=Z,4.4nm,0.9s,baz=314,slow=5.4,SNR=3.8
CPUP LR LR 03 56 51.4
comp=Z,10µm,18.9s,baz=328,slow=39
comp=Z,4.4nm,0.9s
MT05 Renca 48.50 162 P **P** **03 34 05.7 +0.9**
MT05 IAmb IAmb 03 34 10.2
comp=Z,301nm,1.4s
MT03 Universidad Ad 48.66 162 IAmb IAmb 03 34 13.1
comp=Z,286nm,1.4s
LMEL Las Melosas 49.08 161 IAmb IAmb 03 34 16.8
comp=Z,191nm,1.4s
BO04 La Punta 49.09 162 IAmb IAmb 03 34 17.0
comp=Z,167nm,1.4s
GO05 Huala 49.66 164 IAmb IAmb 03 34 22.9
comp=Z,126nm,1.1s
ML02 Panimavida 50.51 164 IAmb IAmb 03 34 27.5
comp=Z,358nm,1.4s
BBB Bella Bella 51.23 329 LR LR 04 00 51.8
comp=Z,15µm,18.8s,baz=152,slow=42
BBB Bella Bella 51.23 329 IAmb IAmb 03 34 32.2
comp=Z,192nm,1.1s
BBB Bella Bella 51.23 329 ⇓P **P** **03 34 25.7 +0.4**
ITQB Itaqui 51.41 146 P **P** **03 34 28.7 +1.8**
FRB Frobisher Bay 52.50 10 S **S** **03 41 57.2 -2.9**
comp=Z,1.3nm,0.7s,baz=219,slow=6.5,SNR=0.8
FRB LR LR 03 59 08.4
comp=Z,16µm,18.3s,baz=196,slow=39
FRB Frobisher Bay 52.50 10 ⇓P **P** **03 34 33.8 -0.8**
HG4B Hotspring 52.88 328 IAmb IAmb 03 34 44.5
comp=Z,137nm,1.1s
GRNB Grenville Isla 53.09 330 IAmb IAmb 03 34 46.0
comp=Z,237nm,1.1s
YKA Yellowknife Ar 53.38 344 P **P** **03 34 41.0 -0.1**
comp=Z,151nm,1.0s,baz=137,slow=7.9,SNR=464
YKA LR LR 04 01 08.1
comp=Z,10µm,18.8s,baz=160,slow=40
comp=Z,151nm,1.0s
RUBB Prince Rupert 53.50 330 IAmb IAmb 03 34 48.8
comp=Z,146nm,1.1s
DIB Dawson Inlet, 54.02 328 IAmb IAmb 03 34 53.2
comp=Z,164nm,1.0s
H02S1 DAWSON INLET T 54.02 328 P **P** **03 34 46.5 +0.6**
RCBR Riachuelo 54.05 107 LR LR 03 59 47.6
comp=Z,15µm,19.5s,baz=87,slow=38
RCBR Riachuelo 54.05 107 P **P** **03 34 48.7 +1.8**
RCBR Riachuelo 54.05 107 IAMs_20 IAMs_20 03 57 34.0
comp=Z,17µm,22.0s
RCBR Riachuelo 54.05 107 P **P** **03 34 48.7 +1.8**
RCBR pmax pmax
comp=Z,845nm,1.4s
RCBR MLR MLR
comp=Z,17µm,22.0s
RCBR Riachuelo 54.05 107 ⇑P **P** **03 34 47.8 +0.9**
LPA La Plata 54.90 151 *i* P **P** **03 34 55.6 +3.1**
LPA sP **sP** **03 35 01.6 +1.6**
LPA PCP **PcP** **03 36 00.8 +6.3**
LPA PP PP 03 37 06.2 +11
LPA PPP PPP 03 38 33.8
LPA PKIKP **PKiKP** **03 42 24.9 -2.8**
LPA S **S** **03 42 30.9 -2.4**
LPA sS **sS** **03 42 43.6 +1.1**
LPA PS **PnS** **03 42 49.5 +5.5**
LPA PSP PSP 03 42 55.6
LPA SCS **ScS** **03 44 43.4 +2.2**
LPA SKIKP 03 45 58.7
LPA PKIKS 03 46 04.6
LPA SS **SS** **03 46 17.9 +0.7**
LPA SSS SSS 03 48 26.3
LPA SKIKS 03 49 30.1
T35M Bob Quinn 55.01 333 P **P** **03 34 54.1 +0.9**
baz=125,SNR=48
T35M S **S** **03 42 39.8 +5.2**
baz=125
PLCA Paso Flores 55.41 165 P **P** **03 34 57.0 +0.8**
comp=Z,47nm,1.0s,baz=339,slow=8.2,SNR=20
PLCA LR LR 03 54 20.5
comp=Z,4µm,21.1s,baz=3.0,slow=31
comp=Z,47nm,1.0s
PLCA Paso Flores 55.41 165 P **P** **03 34 56.9 +0.6**
PLCA IAmb IAmb 03 35 03.7
comp=Z,172nm,1.2s
PLCA Paso Flores 55.41 165 P **P** **03 34 56.9 +0.6**
PLCA pmax pmax
comp=Z,172nm,1.2s
PLCA Paso Flores 55.41 165 ⇓P **P** **03 34 57.2 +0.9**
CRAG Craig 55.52 330 IAmb IAmb 03 35 03.8
comp=Z,178nm,1.2s
CRAG Craig 55.52 330 P **P** **03 34 56.6 -0.1**
baz=122,SNR=12
CRAG S **S** **03 42 45.6 +4.5**
baz=122
WRAK Wrangell Islan 55.65 331 P **P** **03 34 57.6 -0.1**
baz=123,SNR=14
WRAK S **S** **03 42 47.3 +4.3**
baz=123
DLBC Dease Lake 55.77 334 LR LR 04 03 49.5
comp=Z,20µm,18.3s,baz=132,slow=41
DLBC Dease Lake 55.77 334 P **P** **03 34 59.4 +0.8**
baz=126,SNR=182
DLBC S **S** **03 42 49.5 +4.7**
baz=126
IVI Ivigtut 55.90 22 IAmb IAmb 03 35 07.2
comp=Z,271nm,1.2s
IVI Ivigtut 55.90 22 *i* P **P** **03 34 58.9 -0.5**
IVI IAmb IAmb 03 35 06.0
comp=Z,225nm,1.1s
IVI Ivigtut 55.90 22 ⇑P **P** **03 34 59.5 +0.2**
PTCN Pitcairn Islan 56.41 228 IAMs_20 IAMs_20 03 53 38.7
comp=Z,12µm,19.0s
WRGLY Wrigley 56.51 341 P **P** **03 35 03.2 -0.5**
baz=136,SNR=40
NUUK Nuuk 56.85 18 *i* P **P** **03 35 04.6 -1.5**
NUUK Nuuk 56.85 18 ⇓P **P** **03 35 06.6 +0.5**
NRS Narsarsuaq 56.88 23 P **P** **03 35 05.9 -0.5**
NRS IAmb IAmb 03 35 13.2
comp=Z,299nm,1.2s
NRS IAMs_20 IAMs_20 04 00 15.6
comp=Z,16µm,18.0s
NRS Narsarsuaq 56.88 23 P **P** **03 35 05.9 -0.5**
NRS pmax pmax
comp=Z,299nm,1.2s
NRS MLR MLR
comp=Z,16µm,18.0s
NRS Narsarsuaq 56.88 23 *i* P **P** **03 35 05.6 -0.8**
NRS IAmb IAmb 03 35 12.9
comp=Z,320nm,1.2s
GO07 Milladeo Hill, 56.98 168 IAmb IAmb 03 35 18.4
comp=Z,104nm,0.9s
TGTN Hyland Airport 56.99 338 P **P** **03 35 07.6 +0.3**
baz=130,SNR=27
TGTN S **S** **03 43 02.1 +1.3**
baz=130
TAOE Nuku Hiva Isla 57.00 251 *e*P **P** **03 35 10.0 +1.9**
comp=Z,680nm,24.8s
TAOE *e*S **S** **03 42 55.4 -6.9**
comp=Z,9µm,26.2s
TAOE *e*LR LR 03 51 20.8
comp=Z,31µm,29.2s
SIT Sitka 57.38 331 P **P** **03 35 09.6 -0.4**
baz=120
CALA Caldeira 57.42 52 *e*P **P** **03 35 15.5 +4.7**
comp=Z,645nm,1.7s
PCED Cedros 57.43 52 *e*P **P** **03 35 15.5 +4.8**
comp=Z,673nm,1.7s
PCAN Candelaria 57.57 52 *e*P **P** **03 35 12.1 +0.4**
comp=Z,524nm,1.4s
JIS Juneau Island 57.58 333 IAmb IAmb 03 35 13.4
comp=Z,159nm,1.5s
JIS IAMs_20 IAMs_20 04 04 18.8
comp=Z,17µm,19.0s
PICO Pico 57.62 52 *e*P **P** **03 35 15.8 +3.6**
comp=Z,703nm,1.6s
PPNO Prainha do Nor 57.74 53 *e*P P 03 35 19.5 +6.5
comp=Z,1µm,1.5s
ROSA Rosais 57.80 52 *e*P P 03 35 20.1 +6.7
comp=Z,482nm,1.4s
PID Ribeirinha 57.85 53 *e*P **P** **03 35 17.0 +3.3**
comp=Z,1µm,1.7s
PMAN Manadas 57.91 52 *e*P P 03 35 20.7 +6.6
comp=Z,480nm,1.6s
BESE Bessie Mountai 57.95 333 IAmb IAmb 03 35 20.1
comp=Z,124nm,1.2s
P33M Teslin, Yukon 57.97 335 IAmb IAmb 03 35 20.1
comp=Z,118nm,1.2s
P33M IAMs_20 IAMs_20 04 04 58.9
comp=Z,12µm,18.0s
P33M Teslin, Yukon 57.97 335 P **P** **03 35 14.2 0.0**
baz=124,SNR=43
P33M S **S** **03 43 16.4 +2.7**
baz=124
SRBC Serra Branca 58.01 52 *e*P **P** **03 35 17.4 +2.6**
comp=Z,375nm,0.6s
SKAG Skagway 58.62 333 P **P** **03 35 18.4 -0.3**
baz=121
PAGU Agualva, Azore 58.63 52 *e*P P 03 35 24.4 +5.3
comp=Z,910nm,1.4s
MMPY Sheldon Lake, 58.77 338 P **P** **03 35 20.0 +0.2**
baz=127,SNR=134
MMPY S **S** **03 43 26.6 +2.4**
baz=127
WHY Whitehorse 59.07 335 P **P** **03 35 21.2 -0.7**
baz=122,SNR=19
WHY S **S** **03 43 29.9 +1.8**
baz=122
PLBC Pleasant Camp 59.07 333 P **P** **03 35 21.8 -0.1**
baz=120,SNR=16
PLBC S **S** **03 43 31.2 +3.3**
baz=120
SFJD Kangerlussuaq 59.26 16 P **P** **03 35 22.4 -0.6**
comp=Z,68nm,1.0s,baz=209,slow=6.4,SNR=13
SFJD S **S** **03 43 28.5 -1.5**
comp=Z,9.3nm,1.0s,baz=190,slow=11,SNR=1.7
SFJD LR LR 04 00 59.0
comp=Z,16µm,18.1s,baz=220,slow=36
comp=Z,68nm,1.0s
SFJD Kangerlussuaq 59.26 16 P **P** **03 35 22.4 -0.6**
SFJD IAmb IAmb 03 35 29.7
comp=Z,167nm,1.0s
SFJD Kangerlussuaq 59.26 16 P **P** **03 35 22.4 -0.6**
SFJD pmax pmax
comp=Z,167nm,1.0s
SFJD Kangerlussuaq 59.26 16 *i* P **P** **03 35 22.1 -0.8**
SFJD IAmb IAmb 03 35 29.2
comp=Z,180nm,1.1s
SFJD Kangerlussuaq 59.26 16 ⇓P **P** **03 35 22.5 -0.5**
FARO Faro, Yukon 59.33 337 P **P** **03 35 23.0 -0.6**
baz=125,SNR=69
FARO S **S** **03 43 32.7 +1.4**

baz=125
O30N Mendenhall 59.63 335 P **P** 03 35 25.6 -0.1
baz=121,SNR=64
O30N S **S** 03 43 35.4 +0.1
baz=121
PSET Sete Cidades 59.63 54 *e*P **P** 03 35 29.7 +3.6
comp=Z,659nm,1.7s
COYC Coyhaique 59.66 168 ⇓P **P** 03 35 27.3 +1.4
PDA Ponta Delgada 59.67 54 *e*P P 03 35 32.1 +5.8
comp=Z,607nm,1.4s
M31M Drury Creek, Y 59.72 336 IAmb IAmb 03 35 32.0
comp=Z,181nm,1.5s
M31M IAMs_20 IAMs_20 04 05 49.1
comp=Z,13µm,18.0s
M31M Drury Creek, Y 59.72 336 P **P** 03 35 26.1 -0.2
baz=124,SNR=62
GRON Grota Negra 59.77 54 *e*P P 03 35 34.6 +7.5
comp=Z,551nm,1.5s
CMLA Cha da Macela 59.78 54 *e*P **P** 03 35 29.7 +2.6
comp=Z,542nm,1.7s
CMLA Cha da Macela 59.78 54 IAMs_20 IAMs_20 03 58 34.2
comp=Z,9µm,19.0s
CMLA Cha da Macela 59.78 54 P P 03 35 35.8 +8.6
CMLA Cha da Macela 59.78 54 ⇑P **P** 03 35 31.3 +4.2
PCALD Caldeiras da R 59.81 54 *e*P P 03 35 34.9 +7.6
comp=Z,699nm,1.4s
N31M Braeburn, Yuko 59.88 335 IAmb IAmb 03 35 33.1
comp=Z,130nm,1.1s
N31M Braeburn, Yuko 59.88 335 P **P** 03 35 27.2 -0.2
baz=122,SNR=29
PSMA Santa Maria 60.00 55 *e*P **P** 03 35 30.3 +1.7
comp=Z,624nm,1.5s
PSMN Pico do Norte, 60.05 55 *e*P **P** 03 35 30.9 +1.9
comp=Z,564nm,1.6s
BART Pico Bartolome 60.06 54 *e*P P 03 35 34.9 +5.8
comp=Z,659nm,1.4s
DY2G Dye2 60.10 18 *i*P **P** 03 35 28.3 -0.9
DY2G IAmb IAmb 03 35 35.5
comp=Z,623nm,1.5s
HYT Haines Junctio 60.26 334 IAmb IAmb 03 35 36.4
comp=Z,85nm,1.2s
HYT Haines Junctio 60.26 334 P **P** 03 35 29.9 -0.2
baz=120,SNR=30
HYT S **S** 03 43 46.2 +2.7
baz=120
N30M Aishikik Lake 60.40 335 P **P** 03 35 31.0 0.0
baz=121,SNR=49
N30M S **S** 03 43 48.5 +3.3
baz=121
PNL Peninsula 60.53 332 P **P** 03 35 31.8 0.0
baz=117
YUK6 Outpost Mounta 60.68 334 P **P** 03 35 32.9 -0.3
baz=119,SNR=42
BCPM Bancas Point 60.77 333 IAMs_20 IAMs_20 04 06 19.0
comp=Z,10µm,19.0s
ILULI Ilulisat 60.80 14 IAmb IAmb 03 35 39.8
comp=Z,105nm,1.0s
ILULI IAMs_20 IAMs_20 04 02 50.1
comp=Z,13µm,18.0s
ILULI Ilulissat 60.80 14 *i*P **P** 03 35 33.5 0.0
ILULI IAmb IAmb 03 35 39.3
comp=Z,100nm,0.9s
M30M Minto, Yukon 60.86 336 IAmb IAmb 03 35 39.6
comp=Z,131nm,1.2s
M30M Minto, Yukon 60.86 336 P **P** 03 35 33.5 -0.6
baz=122,SNR=59
M30M S **S** 03 43 52.9 +1.9
baz=122
YUK4 Talbot Arm 61.00 334 P **P** 03 35 35.5 +0.2
baz=119
PINM Pinnacle 61.11 333 P **P** 03 35 35.8 -0.1
baz=117,SNR=7.6
PCA Pinnacle 61.11 333 IAmb IAmb 03 35 42.0
comp=Z,84nm,1.1s
C36M Paulatuk 61.17 346 IAmb IAmb 03 35 36.6
comp=Z,130nm,1.2s
C36M IAMs_20 IAMs_20 04 04 52.3
comp=Z,12µm,20.0s
C36M Paulatuk 61.17 346 P **P** 03 35 34.8 -1.2
baz=138,SNR=22
C36M S **S** 03 43 54.1 -0.5
baz=138
YUK8 Steele Glacier 61.44 334 P **P** 03 35 38.0 -0.3
baz=118,SNR=30
TABL Table Mountain 61.66 333 IAmb IAmb 03 35 46.5
comp=Z,87nm,0.9s
TABL IAMs_20 IAMs_20 04 06 17.6
comp=Z,14µm,19.0s
LOGN Logan Glacier 61.77 333 IAmb IAmb 03 35 47.2
comp=Z,151nm,1.2s
LOGN IAMs_20 IAMs_20 04 04 19.5
comp=Z,20µm,22.0s
ISOG Isortoq, Green 61.85 21 *i*P **P** 03 35 39.5 -1.2
ISOG IAmb IAmb 03 35 46.8
comp=Z,422nm,0.9s
YAH Yahtse 61.89 333 IAmb IAmb 03 35 48.6
comp=Z,188nm,1.2s
MESA MESA 61.91 332 P **P** 03 35 42.3 +0.9
MESA IAmb IAmb 03 35 47.8
comp=Z,127nm,1.2s
MESA MESA 61.91 332 P **P** 03 35 41.3 -0.1
baz=115,SNR=13
MESA S **S** 03 44 08.1 +3.4
baz=115
YUK3 Moose Creek 61.97 334 P **P** 03 35 41.2 -0.6
baz=117,SNR=58
YUK3 S **S** 03 44 07.5 +2.1
baz=117
CTGM Chitina Glacie 61.97 333 IAmb IAmb 03 35 48.0
comp=Z,74nm,1.0s
CTG Chitna Glacier 61.98 333 P **P** 03 35 41.8 -0.1
baz=116,SNR=8.6
RES Resolute Bay 62.02 358 LR LR 04 02 55.9
comp=Z,12µm,19.3s,baz=171,slow=36
RES Resolute Bay 62.02 358 ⇓P **P** 03 35 40.6 -1.0
GRNC Granite Creek 62.06 333 IAmb IAmb 03 35 49.1
comp=Z,123nm,1.1s
GRNC IAMs_20 IAMs_20 04 07 00.2
comp=Z,12µm,18.0s
NUUG Nuugaatsiaq 62.16 12 *i*P **P** 03 35 42.3 -0.3
NUUG IAmb IAmb 03 35 49.1
comp=Z,106nm,0.9s
BARN Barnard Glacie 62.16 333 IAMs_20 IAMs_20 04 04 30.8
comp=Z,18µm,22.0s
ISLE Juniper Island 62.26 333 IAmb IAmb 03 35 50.3
comp=Z,171nm,1.2s
ISLE IAMs_20 IAMs_20 04 04 09.6
comp=Z,18µm,20.0s
SNH Sunshine Point 62.31 332 IAmb IAmb 03 35 51.3
comp=Z,212nm,1.4s
ANGG Ammassalik, Gr 62.35 21 IAMs_20 IAMs_20 04 01 24.1
comp=Z,14µm,19.0s
ANGG Ammassalik, Gr 62.35 21 *i*P **P** 03 35 43.0 -1.0
ANGG IAmb IAmb 03 35 49.8
comp=Z,230nm,0.8s
ANGG Ammassalik, Gr 62.35 21 *i*P **P** 03 35 42.0 -2.0
ANGG Ammassalik, Gr 62.35 21 ⇓P **P** 03 35 44.0 0.0
ANGG ⇓P **pP** 03 35 48.8 -0.7
ANGG ⇑p **sP** 03 35 49.9 -1.7
J29M Klondike Camp 62.38 338 IAmb IAmb 03 35 50.5
comp=Z,77nm,0.9s
J29M IAMs_20 IAMs_20 04 03 53.6
comp=Z,19µm,22.0s
J29M Klondike Camp 62.38 338 P **P** 03 35 43.1 -1.3
baz=121
BVCY Beaver Creek 62.43 335 P **P** 03 35 44.0 -0.6
baz=117,SNR=9.4
WAX Waxell Ridge 62.43 332 IAmb IAmb 03 35 51.1
comp=Z,130nm,1.2s
BGLC Bering Glacier 62.49 332 P **P** 03 35 45.3 +0.2
baz=114
TGL Tana Glacier 62.55 333 IAmb IAmb 03 35 52.2
comp=Z,94nm,1.0s
TGL IAMs_20 IAMs_20 04 04 18.0
comp=Z,15µm,20.0s
DAWY Dawson 62.63 337 IAmb IAmb 03 35 51.6
comp=Z,85nm,1.1s
DAWY Dawson 62.63 337 P **P** 03 35 44.4 -1.6
baz=120,SNR=62
DAWY S **S** 03 44 12.6 -0.8
baz=120
DAWY Dawson 62.63 337 ⇓P **P** 03 35 46.3 +0.2
UPNV Upernavik 62.64 10 *i*P **P** 03 35 43.5 -2.3
UPNV IAmb IAmb 03 35 59.3
comp=Z,104nm,1.2s
SUCK Suckling Hills 62.70 332 IAMs_20 IAMs_20 04 02 49.1
comp=Z,15µm,20.0s
M27K Edge Creek, AK 62.83 335 IAmb IAmb 03 35 49.2
comp=Z,136nm,1.4s
M27K IAMs_20 IAMs_20 04 08 10.4
comp=Z,15µm,20.0s
M27K Edge Creek, AK 62.83 335 P **P** 03 35 46.8 -0.7
baz=116,SNR=44
M27K S **S** 03 44 16.2 +0.1
baz=116
EPYK Eagle Plains 62.88 340 IAMs_20 IAMs_20 04 06 28.5
comp=Z,13µm,19.0s
EPYK Eagle Plains 62.88 340 P **P** 03 35 46.9 -0.7
baz=123,SNR=88
EPYK S **S** 03 44 17.5 +1.1
baz=123
I29M Ogilvie Camp, 62.89 338 IAMs_20 IAMs_20 04 08 15.9
comp=Z,13µm,19.0s
I29M Ogilvie Camp, 62.89 338 P **P** 03 35 46.9 -0.8
baz=121,SNR=24
I29M S **S** 03 44 17.2 +0.8
baz=121
MCARA McCarthy VSAT 62.89 333 P **P** 03 35 48.1 +0.4
MCARA IAmb IAmb 03 35 54.8
comp=Z,156nm,1.2s
MCARA McCarthy VSAT 62.89 333 P **P** 03 35 47.3 -0.5
baz=115,SNR=26
MCARA S **S** 03 44 18.6 +1.9
baz=115
INK Inuvik 62.99 342 S **S** 03 44 14.2 -3.4
comp=Z,1.6nm,0.4s,baz=97,slow=22,SNR=4.7
INK LR LR 04 08 25.4
comp=Z,16µm,18.4s,baz=127,slow=41
INK Inuvik 62.99 342 P **P** 03 35 48.0 -0.2
baz=127,SNR=103
INK S **S** 03 44 16.0 -1.6
baz=127
INK Inuvik 62.99 342 ⇓P **P** 03 35 47.8 -0.5
INK ⇑P **P** 03 35 48.0 -0.2
VRDI Verde Repeater 63.02 333 IAmb IAmb 03 35 54.7
comp=Z,98nm,1.2s
VRDI IAMs_20 IAMs_20 04 07 18.6
comp=Z,9µm,20.0s
HMT Hamilton 63.02 332 IAmb IAmb 03 35 55.5
comp=Z,96nm,1.2s
HMT IAMs_20 IAMs_20 04 07 53.7
comp=Z,14µm,19.0s
L27K Beaver Creek, 63.12 335 IAmb IAmb 03 35 55.8
comp=Z,151nm,1.2s
L27K IAMs_20 IAMs_20 04 07 35.1
comp=Z,16µm,20.0s
L27K Beaver Creek, 63.12 335 P **P** 03 35 48.8 -0.5
baz=117,SNR=119
L27K S **S** 03 44 21.0 +1.5
baz=117
GLB Gilahina Butte 63.26 333 IAmb IAmb 03 35 56.9
comp=Z,117nm,1.3s
GLB IAMs_20 IAMs_20 04 08 30.0
comp=Z,11µm,20.0s
M26K Nabesna, AK 63.31 334 IAmb IAmb 03 35 57.3
comp=Z,111nm,1.5s
M26K Nabesna, AK 63.31 334 P **P** 03 35 49.7 -0.9
baz=115,SNR=31
M26K S **S** 03 44 23.6 +1.6
baz=115
A36M Sachs Harbour 63.40 348 IAMs_20 IAMs_20 04 06 42.1
comp=Z,17µm,20.0s
A36M Sachs Harbour 63.40 348 P **P** 03 35 49.8 -1.1
baz=138,SNR=56
A36M S **S** 03 44 22.9 +0.4
baz=138
BMRM Bremner River 63.43 333 IAmb IAmb 03 35 57.4
comp=Z,79nm,1.0s
BMRM IAMs_20 IAMs_20 04 07 43.4
comp=Z,17µm,20.0s
BMRM Bremner River 63.43 333 P **P** 03 35 51.2 -0.2
baz=113,SNR=21
BMRM S **S** 03 44 24.4 +0.9
baz=113
K27K Chicken 63.66 336 IAmb IAmb 03 35 58.8
comp=Z,88nm,0.9s
K27K Chicken 63.66 336 P **P** 03 35 52.4 -0.3
baz=117
K27K S **S** 03 44 26.2 +0.1
baz=117
Q23K Middleton Isla 63.66 331 IAMs_20 IAMs_20 04 02 37.6
comp=Z,10µm,22.0s
Q23K Middleton Isla 63.66 331 P **P** 03 35 52.7 -0.2
baz=111
N25K Chitina, Valde 63.67 333 IAmb IAmb 03 35 59.2
comp=Z,71nm,1.0s
N25K IAMs_20 IAMs_20 04 05 56.9
comp=Z,12µm,21.0s
N25K Chitina, Valde 63.67 333 P **P** 03 35 52.7 -0.4
baz=113,SNR=38
N25K S **S** 03 44 28.3 +1.7
baz=113
ICESG Greenland Ices 63.72 17 *i*P **P** 03 35 52.7 -0.8
ICESG IAmb IAmb 03 35 59.7
comp=Z,420nm,1.0s
L26K Log Cabin Wild 63.73 335 IAMs_20 IAMs_20 04 07 16.2
comp=Z,13µm,21.0s
L26K Log Cabin Wild 63.73 335 P **P** 03 35 52.9 -0.4
baz=115,SNR=12
EYAK Cordova Ski Ar 63.79 332 IAmb IAmb 03 36 00.6
comp=Z,202nm,1.4s
EYAK Cordova Ski Ar 63.79 332 P **P** 03 35 52.8 -0.9
baz=112,SNR=13
EYAK S **S** 03 44 28.0 +0.3
baz=112
DIV Divide 64.01 333 IAmb IAmb 03 36 01.7
comp=Z,96nm,1.1s
HIN Hinchinbrook I 64.08 332 IAMs_20 IAMs_20 04 06 27.7
comp=Z,16µm,20.0s
FID Port Fidalgo 64.19 332 IAmb IAmb 03 36 03.0
comp=Z,97nm,1.1s
FID IAMs_20 IAMs_20 04 08 41.0
comp=Z,16µm,19.0s
KLU Klutina 64.22 333 IAmb IAmb 03 36 02.3
comp=Z,122nm,1.3s
KLU IAMs_20 IAMs_20 04 04 25.2
comp=Z,9µm,20.0s
KLU Klutina 64.22 333 P **P** 03 35 56.1 -0.5
baz=112,SNR=20
KLU S **S** 03 44 34.4 +1.1
baz=112
HARP HAARP 64.23 334 P **P** 03 35 56.2 -0.4
baz=113,SNR=9.6
DOT Dot Lake 64.28 335 IAmb IAmb 03 35 58.6
comp=Z,204nm,1.4s
SCRK Sand Creek 64.39 336 IAmb IAmb 03 36 04.5
comp=Z,92nm,1.2s
SCRK Sand Creek 64.39 336 P **P** 03 35 57.2 -0.5
baz=115,SNR=85
SCRK S **S** 03 44 36.9 +1.4
baz=115
J26L Joseph Creek 64.45 336 P **P** 03 35 58.0 -0.1
baz=116,SNR=122
J26L S **S** 03 44 35.3 -0.8
baz=116
TULEG Thule 64.45 5 P **P** 03 35 58.3 +0.5
TULEG IAMs_20 IAMs_20 04 05 32.5
comp=Z,16µm,21.0s
TULEG Thule 64.45 5 *i*P **P** 03 35 57.5 -0.2
TULEG IAmb IAmb 03 35 59.3
comp=Z,910nm,1.8s
GLI Glacier Island 64.52 332 IAMs_20 IAMs_20 04 08 41.4
comp=Z,14µm,20.0s
GLI Glacier Island 64.52 332 P **P** 03 35 57.3 -1.2
baz=110
GLI S **S** 03 44 37.4 +0.5
baz=110
M24K Tolsona, Glenn 64.56 333 IAmb IAmb 03 36 05.6
comp=Z,147nm,1.1s
M24K IAMs_20 IAMs_20 04 09 32.2
comp=Z,10µm,20.0s
M24K Tolsona, Glenn 64.56 333 P **P** 03 35 58.7 -0.1
baz=112,SNR=14
PAX Paxson 64.59 334 P **P** 03 35 57.9 -1.1
baz=113,SNR=40
PAX S **S** 03 44 37.5 -0.3
baz=113
RIDG Independent Ri 64.64 335 IAmb IAmb 03 36 05.2
comp=Z,128nm,1.0s
RIDG Independent Ri 64.64 335 P **P** 03 35 59.0 -0.3
baz=114,SNR=71
SCM Sheep Creek Mo 64.97 333 IAmb IAmb 03 36 10.7
comp=Z,85nm,1.0s
SCM IAMs_20 IAMs_20 04 08 40.1
comp=Z,9µm,20.0s
SCM Sheep Creek Mo 64.97 333 P **P** 03 36 00.6 -0.9
baz=111,SNR=12
SCM S **S** 03 44 43.2 +0.7
baz=111
K24K Donnelly Dome 65.04 335 P **P** 03 36 01.1 -0.8
baz=113,SNR=46
M23K Glacier View 65.13 333 P **P** 03 36 01.2 -1.3
baz=110,SNR=14
J25K Salcha River, 65.20 336 IAmb IAmb 03 36 04.7
comp=Z,172nm,1.4s
J25K Salcha River, 65.20 336 P **P** 03 36 02.3 -0.7
baz=114,SNR=90
J25K S **S** 03 44 45.1 -0.2
baz=114
KNK Knik Glacier 65.33 332 IAmb IAmb 03 36 09.8
comp=Z,118nm,1.2s
KNK Knik Glacier 65.33 332 P **P** 03 36 02.6 -1.2
baz=110,SNR=22
KNK S **S** 03 44 46.9 0.0
baz=110
SEW Seward 65.37 331 IAmb IAmb 03 36 09.0
comp=Z,65nm,1.0s
SEW Seward 65.37 331 P **P** 03 36 02.7 -1.3
baz=108,SNR=5.8
SEW S **S** 03 44 45.8 -1.5
baz=108
SML Sawmill 65.40 333 P **P** 03 36 03.4 -0.9
baz=110,SNR=23
SML S **S** 03 44 47.3 -0.5
baz=110
WAT6 Susitna Watana 65.41 334 P **P** 03 36 03.4 -1.1
baz=111,SNR=49
WAT6 S **S** 03 44 47.4 -0.7
baz=111
DHY Denali Highway 65.43 334 IAMs_20 IAMs_20 04 07 09.5
comp=Z,9µm,19.0s
DHY Denali Highway 65.43 334 P **P** 03 36 03.1 -1.5
baz=111
DHY S **S** 03 44 44.6 -3.8
baz=111
O22K Cooper Landing 65.61 331 IAMs_20 IAMs_20 04 04 38.3
comp=Z,9µm,20.0s
O22K Cooper Landing 65.61 331 P **P** 03 36 04.2 -1.3
baz=108
GHO Glory Hole Cre 65.66 333 IAmb IAmb 03 36 11.8
comp=Z,86nm,0.9s
GHO IAMs_20 IAMs_20 04 09 38.3
comp=Z,11µm,18.0s
PMR Palmer 65.69 332 P **P** 03 36 04.8 -1.3
baz=109,SNR=12
PMR S **S** 03 44 50.5 -0.7
baz=109
HDA Harding Lake 65.75 336 IAMs_20 IAMs_20 04 09 35.7
comp=Z,15µm,20.0s
HDA Harding Lake 65.75 336 P **P** 03 36 05.4 -1.0
baz=112,SNR=80
HDA S **S** 03 44 51.2 -0.7
baz=112
HDA S **S** 03 44 51.2 -0.7
baz=112
POHA Pohakuloa 65.77 286 P **P** 03 36 08.4 +0.8
POHA Pohakuloa 65.77 286 IAMs_20 IAMs_20 03 58 22.8
comp=Z,10µm,21.0s
POHA Pohakuloa 65.77 286 ⇓P **P** 03 36 09.1 +1.5
SOEG Soedalen 65.80 20 *i*P **P** 03 36 05.3 -1.3
SOEG IAmb IAmb 03 36 12.7
comp=Z,55nm,0.9s
RC01 Rabbit Creek A 65.81 332 IAmb IAmb 03 36 12.7
comp=Z,68nm,1.0s
RC01 IAMs_20 IAMs_20 04 07 32.4
comp=Z,13µm,21.0s
RC01 Rabbit Creek A 65.81 332 P **P** 03 36 05.8 -1.1
baz=108,SNR=12
RC01 S **S** 03 44 50.9 -1.8
baz=108
WAT1 Susitna Watana 65.85 334 P **P** 03 36 05.8 -1.4
baz=110
IL31 65.86 336 P **P** 03 36 06.8 -0.3
IL31 IAmb IAmb 03 36 13.2
comp=Z,194nm,1.3s
ILAR Eielson Array 65.86 336 P **P** 03 36 06.6 -0.6
comp=Z,47nm,1.1s,baz=118,slow=3.9,SNR=205
ILAR PP **PP** 03 38 30.9 -1.1
comp=Z,5.7nm,1.0s,baz=111,slow=2.1,SNR=2.0
ILAR LR LR 04 09 42.8
comp=Z,19µm,18.8s,baz=112,slow=40
comp=Z,47nm,1.1s
BRSE Bradley Lake S 65.88 330 P **P** 03 36 06.1 -1.3
baz=107,SNR=15
BRSE S **S** 03 44 53.3 -0.3
baz=107
BRLK Bradley Lake 65.96 330 IAmb IAmb 03 36 13.9
comp=Z,106nm,1.0s
BRLK IAMs_20 IAMs_20 04 06 59.6
comp=Z,10µm,20.0s
FIS Fire Island 66.05 332 IAMs_20 IAMs_20 04 07 28.7
comp=Z,13µm,21.0s
CNPM China Poot 66.06 330 IAMs_20 IAMs_20 04 07 56.2
comp=Z,10µm,20.0s
SUMG Summit 66.14 14 P **P** 03 36 09.4 +0.1
SUMG IAMs_20 IAMs_20 04 05 10.0
comp=Z,13µm,18.0s
SUMG Summit 66.14 14 P **P** 03 36 09.4 +0.1
SUMG pmax pmax
comp=Z,333nm,1.2s
SUMG MLR MLR
comp=Z,13µm,18.0s
SUMG Summit 66.14 14 *i*P **P** 03 36 08.9 -0.3
SUMG IAmb IAmb 03 36 17.1
comp=Z,233nm,1.0s
SUMG Summit 66.14 14 ⇑P **P** 03 36 08.9 -0.3
RND Reindeer 66.18 334 IAMs_20 IAMs_20 04 06 48.0
comp=Z,15µm,21.0s
CCB Clear Creek Bu 66.18 336 IAMs_20 IAMs_20 04 09 50.1
comp=Z,15µm,20.0s
M22K Willow 66.19 332 IAMs_20 IAMs_20 04 09 21.4
comp=Z,14µm,20.0s
M22K Willow 66.19 332 P **P** 03 36 08.2 -1.1
baz=108
M22K S **S** 03 44 56.3 -0.9
baz=108
POKR Poker Plat Res 66.21 336 IAmb IAmb 03 36 18.6
comp=Z,62nm,0.9s
POKR Poker Plat Res 66.21 336 P **P** 03 36 08.6 -0.8
baz=112,SNR=16
POKR S **S** 03 44 57.1 -0.4
baz=112
WRH Wood River Hil 66.23 336 IAmb IAmb 03 36 18.2
comp=Z,72nm,1.0s
WRH IAMs_20 IAMs_20 04 10 31.5
comp=Z,14µm,19.0s
PMOZ Porto Moniz, M 66.28 60 *e*P **P** 03 36 13.2 +2.6
comp=Z,296nm,1.6s
PMOZ *e*S **S** 03 45 04.8 +5.1
PMOZ Porto Moniz, M 66.28 60 *e*LR LR 03 56 33.6
comp=Z,8µm,18.0s
COLA College 66.29 336 P **P** 03 36 08.8 -1.1
COLA College 66.29 336 *d*P **P** 03 36 09.4 -0.4
COLA pmax pmax
comp=Z,85nm,1.3s
COLA MLR MLR
comp=Z,15µm,18.0s
COLA College 66.29 336 P **P** 03 36 08.5 -1.3
baz=112
COLA S **S** 03 44 56.6 -1.7
baz=112
COLA College 66.29 336 ⇓P **P** 03 36 08.1 -1.7
KDAK Kodiak Island 66.29 328 LR LR 04 06 08.4
comp=Z,12µm,19.8s,baz=134,slow=37
KDAK Kodiak Island 66.29 328 IAMs_20 IAMs_20 04 05 47.2
comp=Z,10µm,20.0s
KDAK Kodiak Island 66.29 328 P **P** 03 36 08.3 -1.6
baz=104
KDAK S **S** 03 44 57.2 -1.3
baz=104
TCOL CIGO, UAF Yank 66.29 336 IAmb IAmb 03 36 25.7
comp=Z,71nm,1.1s
TCOL CIGO, UAF Yank 66.29 336 P **P** 03 36 08.5 -1.4
baz=112,SNR=9.7
TCOL S **S** 03 44 56.0 -2.4
baz=112
PMOR Pomariorio Ree 66.30 247 *e*T T 04 47 32.2
comp=Z,2.3nm,0.3s
HOM Homer 66.30 330 IAMs_20 IAMs_20 04 07 09.5
comp=Z,9µm,20.0s
HOM Homer 66.30 330 P **P** 03 36 09.3 -0.7
baz=106
MCK McKinley 66.32 335 IAmb IAmb 03 36 19.4
comp=Z,102nm,1.1s

MCK IAMs_20 IAMs_20 04 07 12.8
comp=Z,12µm,22.0s
MCK McKinley 66.32 335 P **P** **03 36 09.2 -0.9**
MCK baz=110,SNR=32 S **S** **03 44 57.2 -1.8**
baz=110
CAPN Captain Cook N 66.37 331 IAMs_20 IAMs_20 04 05 21.3
comp=Z,9µm,19.0s
CAPN Captain Cook N 66.37 331 P **P** **03 36 09.5 -1.0**
baz=107
SUA Susitna One 66.39 332 IAMs_20 IAMs_20 04 07 51.7
comp=Z,14µm,20.0s
SUA Susitna One 66.39 332 P **P** **03 36 09.7 -1.0**
baz=107,SNR=12
SUA S **S** **03 44 58.5 -1.4**
baz=107
Q20K Shuyak Island 66.39 329 P **P** **03 36 09.9 -0.7**
baz=105
Q20K S **S** **03 44 59.9 0.0**
baz=105
CUT Chulitna 66.46 333 IAMs_20 IAMs_20 04 10 39.5
comp=Z,11µm,20.0s
CUT Chulitna 66.46 333 P **P** **03 36 09.8 -1.2**
baz=108,SNR=14
CUT S **S** **03 45 00.9 +0.4**
baz=108
MDM Murphy Dome 66.47 336 IAmb IAmb 03 36 16.9
comp=Z,126nm,1.3s
PMAR Madeira 66.52 60 *e*P **P** **03 36 16.2 +4.0**
comp=Z,460nm,1.6s
OHAK Old Harbor 66.52 327 P **P** **03 36 10.4 -1.1**
baz=103
H24K Noodor Dome 66.65 337 IAmb IAmb 03 36 13.7
comp=Z,142nm,1.2s
H24K Noodor Dome 66.65 337 P **P** **03 36 11.6 -0.7**
baz=112,SNR=65
H24K S **S** **03 45 02.5 -0.4**
baz=112
NEA2 Nenana 66.67 335 IAMs_20 IAMs_20 04 10 36.1
comp=Z,11µm,18.0s
NEA2 Nenana 66.67 335 P **P** **03 36 11.1 -1.3**
baz=110,SNR=52
NEA2 S **S** **03 45 01.3 -1.8**
baz=110
BWN Browne 66.69 335 IAMs_20 IAMs_20 04 06 30.8
comp=Z,12µm,22.0s
TRF Thorofare Moun 66.80 334 IAmb IAmb 03 36 20.4
comp=Z,100nm,1.1s
TRF IAMs_20 IAMs_20 04 05 29.5
comp=Z,12µm,20.0s
TRF Thorofare Moun 66.80 334 P **P** **03 36 12.1 -1.3**
baz=109,SNR=46
TRF S **S** **03 45 03.8 -1.2**
baz=109
SII Sitkinak Islan 66.86 326 IAMs_20 IAMs_20 04 05 47.4
comp=Z,9µm,20.0s
SII Sitkinak Islan 66.86 326 P **P** **03 36 13.0 -0.7**
baz=102
O20K Slope Mountain 66.89 330 P **P** **03 36 12.3 -1.6**
baz=105
O20K S **S** **03 45 04.6 -1.3**
baz=105
SKT Skwentna 66.90 332 IAmb IAmb 03 36 19.8
comp=Z,145nm,1.4s
SKT Skwentna 66.90 332 P **P** **03 36 12.6 -1.2**
baz=107,SNR=31
SKT S **S** **03 45 03.7 -2.2**
baz=107
I23K Minto, Yukon-K 66.98 336 IAmb IAmb 03 36 15.8
comp=Z,239nm,1.4s
I23K IAMs_20 IAMs_20 04 10 15.2
comp=Z,15µm,19.0s
I23K Minto, Yukon-K 66.98 336 P **P** **03 36 13.3 -1.0**
baz=110,SNR=80
I23K S **S** **03 45 04.9 -1.8**
baz=110
SPCR Spurr Chakacha 66.99 331 P **P** **03 36 13.3 -1.3**
baz=106
SPCR S **S** **03 45 06.3 -0.9**
baz=106
MACI Morro de la Ar 66.99 65 P **P** **03 36 16.6 +1.3**
PMPS Porto Santo 67.01 59 *e*P **P** **03 36 17.6 +2.5**
comp=Z,496nm,1.7s
PMPST Porto Santo, M 67.01 59 *e*P **P** **03 36 16.5 +1.4**
comp=Z,522nm,1.8s
KTH Kantishna Hill 67.10 334 IAMs_20 IAMs_20 04 05 47.5
comp=Z,11µm,20.0s
Q19K Cape Douglas, 67.11 329 IAmb IAmb 03 36 20.4
comp=Z,77nm,0.9s
Q19K IAMs_20 IAMs_20 04 09 03.8
comp=Z,9µm,19.0s
Q19K Cape Douglas, 67.11 329 P **P** **03 36 14.0 -1.3**
baz=104
H23K Yukon River 67.29 337 IAmb IAmb 03 36 17.7
comp=Z,134nm,1.5s
H23K Yukon River 67.29 337 P **P** **03 36 15.4 -0.9**
baz=110,SNR=48
H23K S **S** **03 45 08.8 -1.7**
baz=110
BPAW Bear Paw Mtn. 67.30 335 IAMs_20 IAMs_20 04 07 52.7
comp=Z,13µm,21.0s
BPAW Bear Paw Mtn. 67.30 335 P **P** **03 36 15.2 -1.2**
baz=108,SNR=55
BPAW S **S** **03 45 09.9 -0.9**
baz=108
PPLA Purkeypile 67.45 333 IAmb IAmb 03 36 23.1
comp=Z,110nm,1.4s
PPLA Purkeypile 67.45 333 P **P** **03 36 16.0 -1.5**
baz=106,SNR=22
PPLA S **S** **03 45 08.6 -4.3**
baz=106
MLY Manley 67.50 336 IAmb IAmb 03 36 22.9
comp=Z,85nm,0.8s
MLY IAMs_20 IAMs_20 04 11 01.8
comp=Z,8µm,20.0s
MLY Manley 67.50 336 P **P** **03 36 16.4 -1.2**
baz=109,SNR=133
MLY S **S** **03 45 10.1 -3.0**
baz=109
CHIR Chirikof Islan 67.50 325 IAMs_20 IAMs_20 04 09 24.5
comp=Z,10µm,18.0s
CHIR Chirikof Islan 67.50 325 P **P** **03 36 17.1 -0.7**
baz=100
CAST Castle Rocks 67.56 334 P **P** **03 36 16.2 -1.9**
baz=107,SNR=28
M20K Styx River 67.60 332 P **P** **03 36 16.8 -1.6**
baz=105,SNR=17
M20K S **S** **03 45 12.4 -2.1**
baz=105
O19K Port Alsworth 67.74 330 IAmb IAmb 03 36 23.8
comp=Z,100nm,1.4s
O19K IAMs_20 IAMs_20 04 07 54.7
comp=Z,9µm,22.0s
O19K Port Alsworth 67.74 330 P **P** **03 36 16.8 -2.3**
baz=104
O19K S **S** **03 45 15.2 -0.8**
baz=104
CHUM Lake Minchumin 67.79 334 P **P** **03 36 18.0 -1.4**
baz=107,SNR=16
CHUM S **S** **03 45 15.2 -1.3**
baz=107
MBO M'Bour 67.87 80 IAMs_20 IAMs_20 04 04 08.4
comp=Z,8µm,19.0s
MG03 Isla Dawson 67.88 170 P **P** **03 36 22.2 +2.2**
KIP Kipapa 67.92 288 P **P** **03 36 22.3 +1.3**
KIP Kipapa 67.92 288 IAMs_20 IAMs_20 04 00 13.8
comp=Z,10µm,21.0s
KIP Kipapa 67.92 288 *de*P **P** **03 36 21.2 +0.2**
KIP pmax pmax
comp=Z,415nm,1.8s
N19K Bonanza Creek 67.96 331 P **P** **03 36 19.4 -1.3**
N19K IAmb IAmb 03 36 26.2
comp=Z,87nm,1.2s
N19K IAMs_20 IAMs_20 04 05 02.3
comp=Z,10µm,22.0s
N19K Bonanza Creek 67.96 331 P **P** **03 36 19.2 -1.5**
baz=104,SNR=14
N19K S **S** **03 45 17.6 -1.3**
baz=104
P18K Big Mountain, 68.00 329 IAMs_20 IAMs_20 04 06 43.6
comp=Z,9µm,20.0s
P18K Big Mountain, 68.00 329 P **P** **03 36 18.6 -2.3**
baz=102
P18K S **S** **03 45 16.9 -2.5**
baz=102
COLD Coldfoot 68.02 338 IAmb IAmb 03 36 28.2
comp=Z,141nm,1.0s
COLD Coldfoot 68.02 338 P **P** **03 36 20.9 0.0**
baz=110,SNR=100
COLD S **S** **03 45 20.6 +1.3**
baz=110
I21K Tanana 68.04 336 IAmb IAmb 03 36 26.9
comp=Z,93nm,1.1s
I21K IAMs_20 IAMs_20 04 06 37.2
comp=Z,17µm,22.0s
I21K Tanana 68.04 336 P **P** **03 36 19.3 -1.7**
baz=108,SNR=37
I21K S **S** **03 45 16.8 -2.7**
baz=108
L20K Farewell, AK 68.09 333 P **P** **03 36 19.5 -1.9**
baz=105,SNR=37
L20K S **S** **03 45 17.4 -2.9**
baz=105
O18K Koktuh Hills 68.09 330 IAMs_20 IAMs_20 04 07 16.9
comp=Z,10µm,19.0s
O18K Koktuh Hills 68.09 330 P **P** **03 36 19.5 -1.9**
baz=102
O18K S **S** **03 45 17.8 -2.6**
baz=102
M19K Big River Lodg 68.18 332 IAMs_20 IAMs_20 04 08 57.3
comp=Z,12µm,21.0s
M19K Big River Lodg 68.18 332 P **P** **03 36 19.7 -2.2**
baz=104
M19K S **S** **03 45 19.3 -2.0**
baz=104
BORG Borgarnes 68.20 25 P **P** **03 36 22.2 +0.2**
BORG IAmb IAmb 03 36 29.4
comp=Z,75nm,1.0s
BORG Borgarnes 68.20 25 P **P** **03 36 22.2 +0.2**
BORG pmax pmax
comp=Z,75nm,1.0s
TOLK Toolik Lake Re 68.30 340 IAmb IAmb 03 36 28.9
comp=Z,91nm,1.1s
TOLK IAMs_20 IAMs_20 04 09 36.0
comp=Z,15µm,19.0s
TOLK Toolik Lake Re 68.30 340 P **P** **03 36 22.2 -0.4**
baz=111,SNR=53
TOLK S **S** **03 45 28.5 +5.9**
baz=111
K20K Telida 68.40 333 IAMs_20 IAMs_20 04 06 10.8
comp=Z,11µm,22.0s
K20K Telida 68.40 333 P **P** **03 36 21.3 -2.0**
baz=105,SNR=35
K20K S **S** **03 45 21.3 -2.6**
baz=105
L19K White Mountain 68.46 332 IAMs_20 IAMs_20 04 09 06.4
comp=Z,12µm,22.0s
L19K White Mountain 68.46 332 P **P** **03 36 21.7 -2.0**
baz=104,SNR=9.2
L19K S **S** **03 45 23.3 -1.4**
baz=104
H21K Melozitna Rive 68.51 336 IAMs_20 IAMs_20 04 11 22.6
comp=Z,14µm,19.0s
H21K Melozitna Rive 68.51 336 P **P** **03 36 22.3 -1.7**
baz=107,SNR=28
P17K Kvichak River 68.57 329 P **P** **03 36 22.3 -2.1**
baz=101
P17K S **S** **03 45 24.3 -1.6**
baz=101
N18K Kilae Creek 68.60 330 P **P** **03 36 24.4 -0.2**
N18K IAMs_20 IAMs_20 04 08 33.4
comp=Z,11µm,21.0s
N18K Kilae Creek 68.60 330 P **P** **03 36 22.4 -2.3**
baz=102
N18K S **S** **03 45 23.6 -2.9**
baz=102
J20K Nowinta River 68.65 334 IAMs_20 IAMs_20 04 08 31.6
comp=Z,9µm,20.0s
J20K Nowinta River 68.65 334 P **P** **03 36 23.2 -1.6**
baz=105
J20K S **S** **03 45 23.8 -2.9**
baz=105
PPT Papeete 68.74 245 LR LR 04 00 00.9
comp=Z,15µm,18.4s,baz=66,slow=30
PPT2 Papeete2 68.74 245 *e*P **P** **03 36 28.6 +2.3**
comp=Z,890nm,15.8s
PPT2 *e*S **S** **03 45 23.6 -5.9**
comp=Z,5µm,21.8s
PPT2 Papeete2 68.74 245 *e*LR LR 03 56 46.7
comp=Z,34µm,29.5s
EFI East Falkland 68.96 161 IAMs_20 IAMs_20 04 08 36.8
comp=Z,11µm,20.0s
O17K Koliganek Bris 69.01 329 P **P** **03 36 25.0 -2.1**
baz=101
O17K S **S** **03 45 30.0 -1.2**
baz=101
TTA Tatalina 69.15 333 P **P** **03 36 26.0 -2.1**
baz=103,SNR=18
TTA S **S** **03 45 30.5 -2.4**
baz=103
USHA Ushuaia 69.19 169 LR LR 04 01 09.0
comp=Z,7µm,21.5s,baz=357,slow=31
P16K Nushagak River 69.33 328 P **P** **03 36 27.0 -2.1**
baz=100
O16K Kokwok River B 69.48 329 P **P** **03 36 28.4 -1.7**
baz=100
O16K S **S** **03 45 36.4 -0.3**
baz=100
CNBA Chernabura Isl 69.59 324 IAMs_20 IAMs_20 04 05 26.9
comp=Z,9µm,21.0s
CHNA Chernabura Isl 69.59 324 P **P** **03 36 29.1 -1.8**
baz=97
SCO Scoresbysund 69.78 19 *i* P **P** **03 36 31.1 -0.5**
SCO IAmb IAmb 03 36 36.5
comp=Z,523nm,2.4s
GCSA Galena City Sc 69.94 335 P **P** **03 36 31.1 -1.7**
baz=103
N16K Nishlik Lake 69.96 330 P **P** **03 36 31.6 -1.5**
baz=100
N16K S **S** **03 45 42.7 +0.2**
baz=100
SDPT Sand Point 70.16 324 P **P** **03 36 32.1 -2.2**
baz=96
XMAS Kiritimati 70.47 268 IAMs_20 IAMs_20 03 58 57.2
comp=Z,10µm,22.0s
TBI Tubuai 70.86 240 *e*P **P** **03 36 42.6 +3.5**
comp=Z,1µm,16.0s
TBI *e*S **S** **03 45 52.5 -1.5**
comp=Z,4µm,24.8s
TBI Tubuai 70.86 240 *e*LR LR 03 57 45.7
comp=Z,22µm,27.5s
A21K Barrow 71.45 341 IAMs_20 IAMs_20 04 13 32.1
comp=Z,10µm,19.0s
A21K Barrow 71.45 341 P **P** **03 36 41.0 -0.8**
baz=105,SNR=13
A21K S **S** **03 45 58.6 -0.8**
baz=105
DBG Daneborg 71.54 15 *i* P **P** **03 36 42.1 -0.3**
DBG IAmb IAmb 03 36 43.6
comp=Z,546nm,2.6s
PMAFR Mafra 72.57 53 *e*P **P** **03 36 49.3 +0.1**
comp=Z,224nm,2.2s
PMAFR *e*S **S** **03 46 16.1 +2.7**
PMST Lisbon--Monsan 72.66 53 *e*P **P** **03 36 51.3 +1.6**
comp=Z,238nm,2.0s
LIS Lisbon 72.68 53 *e*P **P** **03 36 50.0 +0.1**
LIS *e*S **S** **03 46 16.1 +1.5**
LIS IAMs_20 IAMs_20 03 56 40.1
comp=N,14µm,19.0s
LIS Lisbon 72.68 53 *e*P **P** **03 36 50.0 +0.1**
LIS *e*S **S** **03 46 16.1 +1.5**
DAG Danmarks Havn 72.71 13 *i* P **P** **03 36 48.6 -0.7**
DAG IAmb IAmb 03 36 54.9
comp=Z,92nm,0.9s
PSBE So Bento 72.92 52 *e*P **P** **03 36 52.8 +1.4**
comp=Z,427nm,2.0s
PSBE *e*S **S** **03 46 20.4 +2.9**
PACT Alcochete 72.93 53 *e*P **P** **03 36 53.0 +1.7**
comp=Z,644nm,2.0s
RDOG Red Dog Mine 72.93 338 IAMs_20 IAMs_20 04 11 37.3
comp=Z,12µm,22.0s
RDOG Red Dog Mine 72.93 338 P P 03 36 45.3 -5.5
baz=98,SNR=7.3
PTO Porto 73.00 51 *e*P **P** **03 36 52.7 +1.0**
comp=Z,351nm,1.6s
PFVI Vila Bisbo 73.02 55 *e*P **P** **03 36 53.4 +1.5**
comp=Z,368nm,1.9s
PFVI *e*S **SKiKP** **03 46 21.9 -2.4**
PFVI Vila Bisbo 73.02 55 IAmb IAmb 03 37 00.0
comp=Z,226nm,1.2s
PTEO Sao Teotonio 73.08 54 *e*P **P** **03 36 53.3 +1.0**
comp=Z,527nm,1.8s
PCAS Casmilo, Conde 73.12 52 *e*P **P** **03 36 52.9 +0.4**
comp=Z,614nm,1.7s
PCAS *e*S **SKiKP** **03 46 22.2 -2.2**
MORF Marmelete 73.15 55 *e*P **P** **03 36 52.9 +0.1**
MORF *e*S **S** **03 46 21.6 +1.3**
MORF IAMs_20 IAMs_20 04 08 16.4
comp=Z,13µm,20.0s
MORF Marmelete 73.15 55 *e*P **P** **03 36 53.3 +0.5**
comp=Z,372nm,1.8s
MORF *e*S **SKiKP** **03 46 22.6 -2.0**
MORF Marmelete 73.15 55 *e*P **P** **03 36 52.9 +0.1**
MORF *e*S **S** **03 46 21.5 +1.3**
COI Coimbra 73.18 52 *e*P **P** **03 36 53.3 +0.5**
comp=Z,578nm,1.6s
COI *e*S **S** **03 46 21.9 +1.6**
PNCL Nicolau / Gran 73.20 54 *e*P **P** **03 36 53.0 0.0**
comp=Z,114nm,2.0s
PNCL *e*S **SKiKP** **03 46 23.2 -1.4**
PGAV Gavieira, Arco 73.22 50 *e*P **P** **03 36 53.1 0.0**
comp=Z,309nm,2.0s
PGAV *e*S **SKiKP** **03 46 22.8 -1.8**
PGAV Gavieira, Arco 73.22 50 *e*LR LR 03 57 23.6
comp=Z,7µm,20.0s
PMTG Montargil 73.39 53 *e*P **P** **03 36 54.1 0.0**
comp=Z,291nm,1.8s
PCAB Cabril 73.41 50 *e*P **P** **03 36 53.9 -0.3**
comp=Z,178nm,1.9s
MESJ Messejana 73.46 54 *e*P **P** **03 36 54.8 +0.3**
MESJ *e*S **SKiKP** **03 46 25.0 +0.1**
MESJ IAMs_20 IAMs_20 04 08 16.0
comp=E,10µm,23.1s
MESJ Messejana 73.46 54 *e*P **P** **03 36 54.5 0.0**
comp=E,158nm,1.9s
MESJ Messejana 73.46 54 *e*P **P** **03 36 54.8 +0.3**
MESJ *e*S **SKiKP** **03 46 25.0 +0.1**
ANM Nome 73.52 334 IAMs_20 IAMs_20 04 14 14.1
comp=Z,13µm,19.0s
ANM Nome 73.52 334 P **P** **03 36 53.2 -1.1**
baz=95
PVIS Viseu 73.55 51 *e*P **P** **03 36 55.2 +0.1**
comp=Z,290nm,1.8s
UNV Unalaska Valle 73.57 323 P **P** **03 36 52.7 -2.1**
baz=91
EVO Evora 73.58 53 P **P** **03 36 54.9 -0.3**
EVO S **S** **03 46 24.3 -0.6**
EVO Evora 73.58 53 *e*P **P** **03 36 55.5 +0.3**
comp=Z,201nm,2.0s
IDGL Inch Island, C 73.59 36 *e*P **P** **03 36 53.6 -1.4**
POLO Lamas de Olo 73.60 50 *e*P **P** **03 36 55.3 -0.1**
comp=Z,78nm,1.8s
POLO *e*S **S** **03 46 27.7 +2.5**
PCVE Castro Verde 73.62 54 *e*P **P** **03 36 55.9 +0.4**
comp=Z,191nm,1.9s
PCVE *e*S **S** **03 46 27.3 +2.0**
PVRL Vila Real 73.66 51 *e*P **P** **03 36 56.7 +1.0**
comp=Z,202nm,1.7s
PBDV Barranco-do-Ve 73.73 55 *e*P **P** **03 36 57.0 +0.8**
comp=Z,297nm,1.9s
PBDV *e*S **S** **03 46 29.9 +3.2**
PBEJ Beja 73.73 54 *e*P **P** **03 36 56.9 +0.8**
comp=Z,150nm,1.9s
MTE Manteigas 73.84 51 *e*P **P** **03 36 56.5 -0.3**
comp=Z,286nm,1.6s
MTE *e*S **S** **03 46 31.6 +3.7**
MTE Manteigas 73.84 51 *e*LR LR 04 00 08.6
comp=Z,11µm,20.0s
MTE Manteigas 73.84 51 IAmb IAmb 03 37 04.1
comp=Z,194nm,1.1s
MTE IAMs_20 IAMs_20 04 04 35.2
comp=Z,12µm,20.0s
TTIG Tnine Tigouga, 73.85 62 P P 03 37 03.0 +5.9
PVAQ Vaqueiros 73.89 55 *e*P **P** **03 36 58.2 +1.2**
comp=Z,240nm,1.7s
PVAQ *e*S **S** **03 46 30.9 +2.5**
PVAQ Vaqueiros 73.89 55 *e*LR LR 03 59 41.7
comp=Z,11µm,18.0s
PVAQ Vaqueiros 73.89 55 IAmb IAmb 03 37 04.9
comp=Z,114nm,1.2s
PESTR Estremoz 73.89 53 *e*P **P** **03 36 57.0 -0.1**
comp=Z,246nm,1.9s
PESTR *e*S **S** **03 46 31.0 +2.6**
PCBR Castelo Branco 73.92 52 *e*P **P** **03 36 58.1 +0.9**
comp=Z,316nm,1.9s
PMRV Marv??o 74.01 52 *e*P **P** **03 36 57.8 0.0**
comp=Z,296nm,2.0s
PMRV *e*S **S** **03 46 32.9 +3.1**
PMRV Marv??o 74.01 52 *e*LR LR 04 00 11.8
comp=Z,11µm,22.0s
IWEX Carrickbyrne, 74.01 39 *e*P **P** **03 36 56.8 -0.7**
IWEX IAMs_20 IAMs_20 04 05 19.4
comp=Z,8µm,17.8s
MVO Moncorvo 74.19 51 *e*P **P** **03 36 58.4 -0.4**
comp=Z,218nm,1.8s
MVO *e*S **S** **03 46 34.7 +2.9**
MVO Moncorvo 74.19 51 *e*LR LR 04 00 15.1
comp=Z,9µm,18.0s
JMIC Jan Mayen 74.23 19 P **P** **03 36 58.3 -0.1**
comp=Z,42nm,1.2s,baz=96,slow=9.2
comp=Z,42nm,1.2s
DSB Dublin 74.25 38 IAMs_20 IAMs_20 04 08 04.3
comp=Z,8µm,19.0s
ILTH Belurgan, Co L 74.27 37 *e*P **P** **03 36 58.1 -0.8**
PBRG Braganca 74.36 50 *e*P **P** **03 37 00.0 +0.2**
comp=Z,257nm,1.8s
PBRG *e*S **S** **03 46 36.5 +2.8**
PBAR Barrancos 74.37 54 *e*S **S** **03 46 37.6 +3.8**
AVE Averroes 74.46 59 P **P** **03 36 59.8 -0.7**
AVE S **S** **03 46 33.9 -1.1**
AVE Averroes 74.46 59 IAMs_20 IAMs_20 04 06 14.2
comp=Z,8µm,20.0s
AVE Averroes 74.46 59 P P 03 37 07.3 +6.8
NOR Nord 74.56 8 *i* P **P** **03 36 59.4 -0.7**
NOR IAmb IAmb 03 37 01.6
comp=Z,594nm,1.9s
KPL Plockton 74.66 34 *e*P **P** **03 36 60.0 -1.1**
KPL IAmb IAmb 03 37 05.1
comp=Z,200nm,1.3s
KPL IAMs_20 IAMs_20 04 04 04.5
comp=Z,9µm,19.2s
TNA Tin City 74.67 335 P **P** **03 36 59.9 -1.1**
baz=93
TNA S **S** **03 46 37.7 +1.6**
baz=93
KAC Achnashellach 74.85 34‖ *e*P **P** **03 37 00.6 -1.6**
NIKH Nikolski High 74.98 322 P **P** **03 37 00.8 -2.2**
baz=89
ZHG ZHG 75.09 59 P P 03 37 10.0 +5.7
SFS San Fernando 75.17 55 P **P** **03 37 03.5 -1.0**
SFS S **S** **03 46 44.9 +2.2**
GAL1 Galloway 75.21 36‖ *e*P **P** **03 37 02.8 -1.5**
GAL1 IAmb IAmb 03 37 08.3
comp=Z,121nm,1.2s
GAL1 IAMs_20 IAMs_20 04 18 12.1
comp=Z,7µm,21.4s
WIM Isle of Man 75.25 37‖ *e*P **P** **03 37 03.5 -1.1**
RSBS Rosebush, Pemb 75.27 39‖ *e*P **P** **03 37 03.5 -1.3**
RSBS IAmb IAmb 03 37 05.1
comp=Z,126nm,1.5s
RSBS IAMs_20 IAMs_20 04 08 51.1
comp=Z,8µm,17.2s
IOMK Kirk Michael 75.31 37 *e*P **P** **03 37 04.2 -0.8**
IOMK IAmb IAmb 03 37 06.2
comp=Z,399nm,1.4s
IOMK IAMs_20 IAMs_20 04 11 19.2
comp=Z,19µm,16.8s
PGBU Glenifferbraes 75.32 35‖ *e*P **P** **03 37 03.0 -1.9**
PGBU IAmb IAmb 03 37 09.8
comp=Z,401nm,1.6s
PGBU IAMs_20 IAMs_20 04 13 39.3
comp=Z,6µm,16.6s
YRC Rhoscolyn 75.33 38‖ *e*P **P** **03 37 03.4 -1.7**
WPS Cemaes, Angles 75.37 38‖ *e*P **P** **03 37 03.9 -1.4**
WPS IAmb IAmb 03 37 10.0
comp=Z,177nm,1.5s
WPS IAMs_20 IAMs_20 04 10 10.5
comp=Z,8µm,17.3s
EAB Aberfoyle 75.39 35 *e*P **P** **03 37 03.9 -1.5**
WLF1 Llynfaes 75.44 38 *e*P **P** **03 37 04.2 -1.4**
WLF1 IAmb IAmb 03 37 11.2
comp=Z,377nm,1.8s
WLF1 IAMs_20 IAMs_20 04 10 21.3
comp=Z,15µm,18.5s
NEWG New Galloway 75.48 36 *e*P **P** **03 37 04.5 -1.4**
NEWG IAmb IAmb 03 37 06.3
comp=Z,216nm,1.5s
NEWG IAMs_20 IAMs_20 04 15 18.7
comp=Z,7µm,20.6s
WME Myndd Eilian 75.49 38‖ *e*P **P** **03 37 04.5 -1.5**
INVG Invergeldie, C 75.55 35 *e*P **P** **03 37 04.4 -1.9**
INVG IAMs_20 IAMs_20 04 18 56.0

comp=Z,6µm,18.2s
SPIA Saint Paul Isl 75.68 326 P P 03 37 05.3 -1.7
baz=89
CEU Ceuta 75.89 56 P P 03 37 09.5 +0.9
CEU S S 03 46 54.2 +3.4
SMIR Smir Dam 75.91 56 P P 03 37 16.0 +7.3
MCD Coleburn Disti 75.95 34 *eP* P 03 37 07.5 -1.0
CHEFC Chefchaouen 76.00 57 P P 03 37 16.0 +6.5
ESK Eskdalemuir 76.06 36⇓*eP* P 03 37 07.8 -1.4
ESK IAmb IAmb 03 37 09.5
comp=Z,190nm,1.4s
ESK IAMs_20 IAMs_20 04 14 20.8
comp=Z,9µm,16.2s
ESK Eskdalemuir 76.06 36 P P 03 37 08.7 -0.5
ESK IAmb IAmb 03 37 13.5
comp=Z,154nm,1.2s
ESK Eskdalemuir 76.06 36 IAMs_20 IAMs_20 04 11 01.1
comp=Z,7µm,18.0s
ESK Eskdalemuir 76.06 36 P P 03 37 08.7 -0.5
ESK pmax pmax
comp=Z,154nm,1.2s
ESK MLR MLR
comp=Z,7µm,18.0s
EKA Eskdalemuir Ar 76.09 36 P P 03 37 08.1 -1.2
comp=Z,57nm,1.1s,baz=274,slow=4.1,SNR=68
EKA PP PP 03 39 57.8 -2.2
comp=Z,5.7nm,1.0s,baz=270,slow=5.0,SNR=2.2
comp=Z,57nm,1.1s
EDU Dundee 76.12 35 *eP* P 03 37 08.4 -1.2
EBL Broad Law 76.13 35⇓*eP* P 03 37 08.1 -1.5
FOEL Foel Wylfa 76.17 38 *eP* P 03 37 08.8 -1.1
FOEL IAmb IAmb 03 37 15.5
comp=Z,181nm,1.5s
FOEL IAMs_20 IAMs_20 04 16 53.2
comp=Z,6µm,18.8s
GAMB Gambell 76.26 333 IAMs_20 IAMs_20 04 12 44.6
comp=Z,9µm,19.0s
GAMB Gambell 76.26 333 P P 03 37 09.0 -1.1
baz=89
IFR Ifrane 76.34 58 P P 03 37 06.0 -5.5
IFR S S 03 46 53.4 -2.9
MCH1 Michaelchurch 76.35 39 *eP* P 03 37 09.4 -1.6
MCH1 IAmb IAmb 03 37 16.5
comp=Z,175nm,1.3s
MCH1 IAMs_20 IAMs_20 04 09 49.9
comp=Z,7µm,18.6s
PAB San Pablo 76.35 52 P P 03 37 11.1 -0.2
PAB IAmb IAmb 03 37 17.0
comp=Z,108nm,1.2s
PAB San Pablo 76.35 52 IAMs_20 IAMs_20 04 05 56.7
comp=Z,10µm,21.0s
PAB San Pablo 76.35 52 P P 03 37 11.1 -0.2
PAB pmax pmax
comp=Z,108nm,1.3s
ESY Stoneypath 76.37 35⇓*eP* P 03 37 09.8 -1.1
HLM1 Long Mynd 76.39 39⇓*eP* P 03 37 10.0 -1.2
HLM1 IAmb IAmb 03 37 15.3
comp=Z,141nm,1.3s
MONM Monmouth 76.48 39⇓*eP* P 03 37 10.3 -1.4
MONM IAmb IAmb 03 37 17.5
comp=Z,190nm,1.3s
MONM IAMs_20 IAMs_20 04 06 39.6
comp=Z,8µm,19.7s
LCRM LCR 76.55 58 P P 03 37 18.0 +5.3
ESDC Sonseca Array 76.63 52 P P 03 37 13.1 +0.1
comp=Z,41nm,0.9s,baz=284,slow=4.7,SNR=66
ESDC S S 03 46 57.2 -1.8
comp=Z,0.4nm,1.0s,baz=344,slow=22,SNR=1.1
ESDC PKPPKP P'P'df 04 04 33.2 +3.9
comp=Z,0.9nm,1.0s,baz=39,slow=1.5,SNR=4.5
ESDC LR LR 04 06 38.6
comp=Z,9µm,20.4s,baz=278,slow=32
comp=Z,41nm,0.9s
ESDC Sonseca Array 76.63 52 IAmb IAmb 03 37 20.3
comp=Z,125nm,1.1s
ESBB Sonseca Array 76.64 52 IAmb IAmb 03 37 20.3
comp=Z,136nm,1.1s
STNC Stoke 76.76 38⇓*eP* P 03 37 12.5 -0.7
STNC IAmb IAmb 03 37 19.3
comp=Z,280nm,1.5s
STNC IAMs_20 IAMs_20 04 10 46.0
comp=Z,6µm,18.3s
EDMD Edmundbyers 76.80 36 *eP* P 03 37 12.2 -1.2
EDMD IAmb IAmb 03 37 17.5
comp=Z,195nm,1.5s
EDMD IAMs_20 IAMs_20 04 12 13.1
comp=Z,7µm,18.4s
PVLZ Peæn de 76.84 57 P P 03 37 10.9 -3.1
PVLZ S S 03 46 58.6 -2.6
MDT Midelt 76.86 59 P P 03 37 14.7 +0.4
comp=Z,19nm,1.0s,baz=279,slow=7.0,SNR=23
MDT LR LR 04 08 37.0
comp=Z,8µm,18.6s,baz=292,slow=34
comp=Z,19nm,1.0s
STRD Stroud 76.88 39 *eP* P 03 37 13.1 -0.8
STRD IAmb IAmb 03 37 19.8
comp=Z,453nm,1.5s
STRD IAMs_20 IAMs_20 04 06 51.8
comp=Z,7µm,19.4s
LBWR Ladybower, Pea 77.03 38 *eP* P 03 37 14.2 -0.6
LBWR IAmb IAmb 03 37 20.8
comp=Z,157nm,1.2s
LBWR IAMs_20 IAMs_20 04 11 01.3
comp=Z,7µm,17.9s
JVM Valle D.L. Mar 77.04 42 *eP* P 03 37 14.1 -0.8
JSA Saint Aubin 77.07 42⇓*eP* P 03 37 14.1 -1.0
JSA IAmb IAmb 03 37 21.2
comp=Z,261nm,1.5s
JSA IAMs_20 IAMs_20 04 05 25.8
comp=Z,12µm,20.2s
UCM Universidad Co 77.12 51 P P 03 37 10.0 -5.6
UCM S S 03 47 01.7 -2.5
JQE Queens East 77.15 42 *eP* P 03 37 14.5 -1.0
AKLM AKL 77.27 57 P P 03 37 22.0 +5.3
GDLE Glaisdale, N Y 77.49 37 *eP* P 03 37 16.4 -0.9
GDLE IAMs_20 IAMs_20 04 12 44.8
comp=Z,8µm,17.0s
WMELI Melilla 77.92 56 P P 03 37 13.6 -6.5
CHAS Isla Isabel II 78.36 56 P P 03 37 18.0 -4.6
CHAS S S 03 47 14.8 -2.9
ELMS Elmsett, Ipswi 78.79 39 *eP* P 03 37 23.8 -0.8
ELMS IAMs_20 IAMs_20 04 10 51.9
comp=Z,6µm,19.6s
TDRA Tendrara 78.98 58 P P 03 37 32.0 +5.7
RAR Rarotonga 79.02 245 IAMs_20 IAMs_20 04 04 33.8
comp=Z,10µm,18.0s
CART Cartagena 79.18 54 P P 03 37 22.0 -5.0
CART S S 03 47 20.7 -5.7
KBS Kingsbay 79.23 11 P P 03 37 27.8 +1.2
KBS IAmb IAmb 03 37 29.7
comp=Z,266nm,1.4s
KBS Kingsbay 79.23 11 *d iP* P 03 37 28.0 +1.5
KBS pmax pmax
comp=Z,242nm,1.5s
KBS MLR MLR
comp=Z,14µm,18.0s
KBS Kingsbay 79.23 11 *i* P P 03 37 27.0 +0.5
KBS Kingsbay 79.23 11⇓*iP* P 03 37 28.1 +1.5
PMSA Palmer Station 79.29 170 LR LR 04 06 57.0
comp=Z,3µm,18.5s,baz=332,slow=32
HOPE Hope Point 79.33 153 IAMs_20 IAMs_20 04 12 19.3
comp=Z,8µm,22.0s
JOHN Johnston Islan 79.35 285 P P 03 37 28.2 0.0
JOHN IAmb IAmb 03 37 34.2
comp=Z,298nm,1.2s
JOHN Johnston Islan 79.35 285 IAMs_20 IAMs_20 04 04 43.8
comp=Z,10µm,22.0s
SUE Sulen 79.76 30⇓*iP* P 03 37 29.4 -0.3
SUE IVmB_BB 03 37 31.1
comp=Z,2µm,1.9s
SUE *e*ScS ScS 03 47 54.1 +1.1
SUE IVMs_BB IVMs_BB 04 13 29.4
comp=Z,3µm,19.2s
FOO Floro 79.82 29⇓*iP* P 03 37 29.6 -0.3
FOO IVmB_BB 03 37 37.7
comp=E,505nm,2.3s
FOO *e*PP PP 03 40 31.9 +0.9
FOO *e*S S 03 47 33.6 +1.4
FOO *e*ScS ScS 03 47 53.8 +0.4
FOO *e*SS SS 03 52 43.4 +2.5
FOO IVMs_BB IVMs_BB 04 13 04.7
comp=E,1µm,19.8s
ASK Askoy 80.05 30 *eP* P 03 37 31.5 +0.3
ASK IVmB_BB 03 37 35.2
comp=Z,3µm,2.5s
ASK *e*PP PP 03 40 33.4 +0.4
ASK *e*S S 03 47 37.6 +2.9
ASK *e*SS SS 03 52 45.7 +1.3
ASK IVMs_BB IVMs_BB 04 07 40.1
comp=Z,4µm,12.3s
CLF Chambon-Foret 80.12 43 P P 03 37 31.3 -0.6
CLF IAmb IAmb 03 37 38.6
comp=Z,341nm,1.3s
CLF IAMs_20 IAMs_20 04 09 15.9
comp=Z,8µm,21.0s
BER Bergen 80.13 30⇓*iP* P 03 37 31.4 -0.3
BER IVmB_BB 03 37 33.0
comp=Z,1µm,1.9s
BER *e*PP PP 03 40 34.6 +1.0
BER *e*S S 03 47 37.1 +1.6
BER *e*SS SS 03 52 49.0 +3.4
BER IVMs_BB IVMs_BB 04 13 33.7
comp=Z,2µm,16.6s
KOWA Kowa 80.21 77 IAMs_20 IAMs_20 04 11 19.0
comp=Z,10µm,19.0s
KMY Karmoy 80.26 31 *eP* P 03 37 32.4 0.0
SPA0 Spitsbergen Ar 80.27 12 *eP* P 03 37 32.6 +0.4
SPA0 *e*ScS SKKSac 03 47 57.3 +6.5
SPA0 *e*SS SS 03 52 50.6 +3.6
SPITS Spitsbergen Ar 80.27 12 LR LR 04 14 05.1
comp=Z,10µm,18.9s,baz=254,slow=36
SPB2 Spitsbergen Ar 80.27 12 IAmb IAmb 03 37 41.4
comp=Z,126nm,1.2s
HSPB Hornsund (broa 80.41 13 *eP* P 03 37 34.2 +1.3
HSPB *e*S S 03 47 40.5 +2.6
HSPB *e*L L 04 13 58.5
comp=Z,16µm,19.1s
HSPB Hornsund (broa 80.41 13⇓*iP* P 03 37 33.8 +0.9
HYA Hoyanger 80.43 29 *eP* P 03 37 33.2 0.0
HYA *e*S S 03 47 40.1 +1.5
HYA IVMs_BB IVMs_BB 04 07 58.8
comp=Z,2µm,24.3s
ORCD Orcadas 80.64 160 P P 03 37 33.6 -0.6
ORCD IAmb IAmb 03 37 40.8
comp=Z,137nm,1.0s
AKN Aaknes 80.64 28 *eP* P 03 37 34.4 -0.1
AKN IVmB_BB 03 37 40.4
comp=Z,1µm,1.4s
AKN *e*S S 03 47 42.4 +1.4
AKN *e*SKSac SKSac 03 47 51.8 -0.2
AKN *e*SS SS 03 52 56.3 +3.0
AKN IVMs_BB IVMs_BB 04 09 45.7
comp=Z,2µm,17.7s
TIC Toumodi 80.78 85 *eP* P 03 37 35.5 -0.6
comp=Z,1µm,1.6s
MOL Molde 80.83 28 *eP* P 03 37 35.6 +0.2
MOL IVmB_BB 03 37 39.6
comp=Z,941nm,2.2s
MOL *e*pP pP 03 37 40.2 -0.8
MOL *e*S S 03 47 44.2 +1.4
MOL *e*ScS ScS 03 48 02.3 +0.6
MOL *e*SS SS 03 52 59.1 +3.2
MOL IVMs_BB IVMs_BB 04 07 01.5
comp=Z,2µm,23.2s
BLS5 Blasjo 80.84 31⇓*iP* P 03 37 35.7 +0.1
BLS5 *e*PP PP 03 40 39.7 +0.1
BLS5 *e*S S 03 47 44.3 +1.2
BLS5 *e*ScS ScS 03 48 02.6 +0.5
BLS5 *e*SS SS 03 52 59.6 +3.2
ODD1 Odda 80.85 31 *eP* P 03 37 35.9 +0.2
LIC Lamto 80.86 86 *eP* P 03 37 37.3 +0.8
comp=Z,577nm,1.5s
DBIC Dimbokro 80.93 85 P P 03 37 35.9 -1.0
comp=Z,42nm,1.1s,baz=294,slow=5.2,SNR=7.5
DBIC S S 03 47 41.7 -3.9
comp=Z,9.0nm,1.2s,baz=198,slow=6.4,SNR=1.5
DBIC LR LR 04 10 50.6
comp=Z,12µm,20.4s,baz=278,slow=34
comp=Z,42nm,1.1s
DBIC Dimbokro 80.93 85 P P 03 37 36.1 -0.8
DBIC Dimbokro 80.93 85 P P 03 37 36.1 -0.8
DBIC pmax pmax
comp=Z,408nm,1.4s
KIC Kosan Boka 81.11 85 *eP* P 03 37 37.8 -0.1
comp=Z,65nm,0.8s
DOU Dourbes 81.32 41 *dP* P 03 37 37.2 -1.1
comp=Z,28nm,1.5s
SNART Snartemo 81.41 32 *eP* P 03 37 39.4 +0.8
SKAR Skarslia 81.53 30 *eP* P 03 37 37.9 -1.3
SKAR IVmB_BB 03 37 41.0
comp=Z,1µm,10.0s
SKAR *e*S S 03 47 51.2 +0.8
SKAR *e*SKSac SKSac 03 47 58.1 -0.1
SKAR *e*SS SS 03 53 09.3 +2.7
SKAR IVMs_BB IVMs_BB 04 14 43.7
comp=Z,3µm,18.3s
BGES Gesves 81.58 40 *bP* P 03 37 39.2 -0.5
comp=Z,38nm,1.5s
DOMB Dombas 81.63 28 *eP* P 03 37 40.1 +0.4
DOMB IVmB_BB 03 37 43.8
comp=Z,1µm,5.2s
DOMB *e*S S 03 47 52.4 +1.2
DOMB *e*SKSac SKSac 03 47 59.3 +0.6
DOMB *e*SS SS 03 53 10.2 +2.3
DOMB IVMs_BB IVMs_BB 04 07 58.0
comp=Z,2µm,20.5s
BCLA Clavier 81.71 40 *bP* P 03 37 39.8 -0.5
comp=Z,33nm,1.5s
BEBN Eben Emael 81.88 40 *dP* P 03 37 40.9 -0.4
TBLU Trondheim 81.92 27 *eP* P 03 37 41.8 +0.7
TBLU IVmB_BB 03 37 45.7
comp=Z,1µm,2.4s
TBLU *es*P pP 03 37 47.6 +0.8
TBLU *e*PP PP 03 40 49.1 +0.7
TBLU *e*SKSac SKSac 03 48 01.6 +1.1
TBLU *e*SS SS 03 53 16.4 +4.3
TBLU IVMs_BB IVMs_BB 04 16 37.7
comp=Z,2µm,18.1s
BJO1 Bjornoya 81.96 15⇓*iP* P 03 37 42.0 +0.8
SMAI San Martin Ant 81.99 173 P P 03 37 42.5 +1.3
SMAI IAmb IAmb 03 37 47.2
comp=Z,225nm,1.4s
HOMB Homborsund 82.10 32 *eP* P 03 37 42.5 +0.3
HOMB *ep*P PcP 03 37 46.8 -0.8
HOMB *e*S S 03 47 57.5 +1.4
HOMB *e*ScS ScS 03 48 12.1 -0.2
LOF Lofoten 82.11 22 IVmB_BB 03 37 46.1
comp=Z,2µm,2.5s
NSS Namsos 82.37 26 *eP* P 03 37 42.6 -0.8
NSS IVmB_BB 03 37 47.6
comp=Z,1µm,4.5s
NSS *es*P pP 03 37 50.1 +0.9
NSS *e*S S 03 48 00.6 +2.0
NSS *e*ScS ScS 03 48 14.8 +0.5
NSS *e*SS SS 03 53 21.8 +3.2
NSS IVMs_BB IVMs_BB 04 18 17.9
comp=Z,2µm,20.5s
KONO Kongsberg 82.37 31 P P 03 37 43.0 -0.6
KONO Kongsberg 82.37 31*de*P P 03 37 43.5 -0.1
KONO pmax pmax
comp=Z,76nm,1.4s
KONO MLR MLR
comp=Z,4µm,17.0s
KONO Kongsberg 82.37 31 *eP* P 03 37 43.6 0.0
WLF Walferdange 82.39 41 IAmb IAmb 03 37 50.5
comp=Z,215nm,1.5s
WLF IAMs_20 IAMs_20 04 13 50.8
comp=Z,8µm,19.0s
NC204 NORSAR Array S 82.58 29 P P 03 37 45.0 +0.2
NC204 IAmb IAmb 03 37 50.7
comp=Z,157nm,1.2s
HOPEN Hopen 82.63 13⇓*iP* P 03 37 45.2 +0.6
STEI Steigen 82.78 22 *eP* P 03 37 46.0 +0.4
NB2 NORSAR Subarra 82.85 29 P P 03 37 46.3 +0.1
baz=282,slow=5.1
NB2 NORSAR Subarra 82.85 29 P P 03 37 46.3 +0.1
comp=Z,215nm,1.7s,baz=282,slow=5.1
NOA NORSAR Array B 82.85 29 P P 03 37 46.0 -0.2
comp=Z,31nm,1.1s,baz=284,slow=5.1,SNR=38
NOA PKPPKP P'P'df 04 04 12.8 -4.6
comp=Z,0.3nm,0.7s,baz=212,slow=6.7,SNR=3.3
NOA LR LR 04 14 38.9
comp=Z,3µm,18.3s,baz=280,slow=36
comp=Z,31nm,1.1s
MAHO Mahon 82.88 51 P P 03 37 42.5 -4.2
MAHO S S 03 48 00.6 -4.2
MAHO Mahon 82.88 51 IAMs_20 IAMs_20 04 16 18.4
comp=Z,7µm,19.0s
FAUS Fauske 82.95 22 *eP* P 03 37 45.2 -1.3
FAUS IVmB_BB 03 37 47.3
comp=Z,1µm,2.4s
FAUS *e*PP PP 03 40 56.9 +0.2
FAUS *e*S S 03 48 05.5 +1.0
FAUS *e*ScS ScS 03 48 18.2 -0.7
FAUS *e*SS SS 03 53 30.1 +3.0
FAUS IVMs_BB IVMs_BB 04 14 16.0
comp=Z,3µm,19.9s
MOR8 Moi Rana 82.96 24 *eP* P 03 37 46.6 0.0
MOR8 IVmB_BB 03 37 51.1
comp=Z,1µm,3.0s
MOR8 *e*S S 03 48 06.7 +2.0
MOR8 *e*ScS ScS 03 48 20.4 +1.3
MOR8 *e*SS SS 03 53 31.7 +4.3
MOR8 IVMs_BB IVMs_BB 04 15 07.4
comp=Z,3µm,19.1s
NC602 NORSAR Array S 83.07 29 *eP* P 03 37 46.0 -1.3
NC602 *e*S S 03 48 07.1 +1.1
NC602 *e*ScS ScS 03 48 20.0 -0.2
ECH Echery 83.32 42 IAmb IAmb 03 37 54.4
comp=Z,124nm,1.4s
ECH IAMs_20 IAMs_20 04 11 14.5
comp=Z,9µm,21.0s
TRO Tromso 83.54 20 *eP* P 03 37 48.3 -1.1
TRO IVmB_BB 03 37 53.9
comp=Z,2µm,2.6s
TRO *e*PP PP 03 41 03.9 +2.5
TRO *e*SKSac SKSac 03 48 11.6 +0.5
TRO *e*ScS ScS 03 48 24.6 +1.0
TRO *e*SS SS 03 53 38.4 +2.6
TRO IVMs_BB IVMs_BB 04 14 11.1
comp=Z,3µm,17.4s
BNI Bardonecchia 83.63 45 P P 03 37 50.5 -0.1
BNI IAMs_20 IAMs_20 04 09 55.0
comp=Z,8µm,20.0s
BNI Bardonecchia 83.63 45 P P 03 37 50.6 -0.1
BNI pmax pmax
comp=Z,69nm,1.5s
SENIN Lac Senin/Sane 83.79 44 IAmb IAmb 03 37 59.3
comp=Z,130nm,1.4s
SENIN IAMs_20 IAMs_20 04 10 30.1
comp=Z,7µm,20.0s
BFO Black Forest 84.06 42 P P 03 37 51.5 -1.2
BFO IAmb IAmb 03 37 58.4
comp=Z,97nm,1.5s
BFO IAMs_20 IAMs_20 04 10 17.1
comp=Z,8µm,20.0s
BFO Black Forest 84.06 42 P P 03 37 51.5 -1.2
BFO pmax pmax
comp=Z,97nm,1.5s
HFS Hagfors 84.26 30 P P 03 37 53.0 -0.3
comp=Z,18nm,1.0s,baz=319,slow=4.3,SNR=15
HFS LR LR 04 14 42.0
comp=Z,5µm,20.2s,baz=280,slow=35
comp=Z,18nm,1.0s
BILL Bilibino 84.34 339 P P 03 37 51.9 -1.7
BILL IAmb IAmb 03 37 55.5
comp=Z,74nm,1.2s
BILL IAMs_20 IAMs_20 04 17 00.9
comp=Z,6µm,21.0s
BILL Bilibino 84.34 339*c iP* P 03 37 52.2 -1.4
BILL *e*S S 03 48 20.3 +1.8
BILL *e*SSS SSS 03 57 19.2
BILL pmax pmax
comp=Z,72nm,1.3s
BILL MLR MLR
comp=Z,5µm,20.0s
STU Stuttgart 84.52 41 IAmb IAmb 03 38 00.5
comp=Z,89nm,1.2s
STU IAMs_20 IAMs_20 04 13 38.3
comp=Z,7µm,20.0s
HAMF Hammerfest 84.68 18 *eP* P 03 37 56.0 +0.8
HAMF *e* 03 48 23.4
HAMF *e*SS SS 03 53 55.6 +3.1
DFRA Djebel Bou Aff 84.78 54 P 03 37 57.4
COP Copenhagen 84.78 34 *i* P P 03 37 54.1 -2.0
COP IAmb IAmb 03 38 01.4
comp=Z,244nm,1.2s
TUE Stuetta 85.15 44 IAMs_20 IAMs_20 04 15 13.1
comp=Z,9µm,20.0s
KTK1 Kautokeino 85.19 20 *eP* P 03 37 56.8 -1.1
KTK1 IVmB_BB 03 38 02.1
comp=Z,1µm,2.1s
KTK1 *e*PP PP 03 41 14.9 -0.1
KTK1 *e*S S 03 48 28.3 +1.4
KTK1 *e*ScS ScS 03 48 38.1 +0.8
SHEM Shemya Is, Ala 85.22 323 LR LR 04 17 58.1
comp=Z,3µm,18.2s,baz=70,slow=37
SHEL Horse Pasture 85.28 107 IAMs_20 IAMs_20 04 17 05.7
comp=Z,7µm,21.0s
DAVA Damuels 85.32 43 *i* P P 03 37 59.3 +0.1
comp=Z,157nm,1.6s,SNR=38
CASM Ain Smara 85.32 54 P 03 38 00.4
DEL Delary 85.35 33 *eP* P 03 37 59.0 +0.1
DAVOX Davos/Dischmat 85.44 43 P P 03 37 59.9 0.0
comp=Z,14nm,0.9s,baz=282,slow=4.4,SNR=35
DAVOX S S 03 48 24.7 -5.9
comp=Z,0.5nm,0.3s,baz=313,slow=18,SNR=1.6
DAVOX LR LR 04 12 17.1
comp=Z,5µm,19.4s,baz=284,slow=33
comp=Z,14nm,0.9s
CKFL Kef-Lekhel 85.47 54 P 03 38 00.9
GRFO Grafenberg 85.59 40 P P 03 38 00.3 +0.1
GRFO IAmb IAmb 03 38 01.6
comp=Z,114nm,1.3s
GRFO IAMs_20 IAMs_20 04 16 48.6
comp=Z,10µm,19.0s
GRFO Grafenberg 85.59 40 P P 03 38 00.4 +0.1
GRFO pmax pmax
comp=Z,114nm,1.3s
GRFO MLR MLR
comp=Z,10µm,19.0s
GRA1 Grafenberg Arr 85.60 40 IAmb IAmb 03 38 07.1
comp=Z,197nm,1.5s
GRA1 IAMs_20 IAMs_20 04 14 29.6
comp=Z,9µm,19.0s
ARCES ARCESS Array B 85.71 19 P P 03 37 60.0 -0.5
comp=Z,11nm,1.0s,baz=259,slow=2.5,SNR=11
ARCES PP PP 03 41 17.3 -1.9
comp=Z,14nm,1.0s,baz=302,slow=7.0,SNR=5.8
ARCES LR LR 04 15 23.2
comp=Z,5µm,18.5s,baz=294,slow=35
comp=Z,11nm,1.0s
RETA Reutte 85.85 42 *i* P P 03 38 01.8 +0.1
comp=Z,129nm,1.4s,SNR=38
TORD Torodi Ar. Bea 85.92 78 P P 03 38 01.4 -1.2
comp=Z,19nm,1.1s,baz=295,slow=6.9,SNR=29
TORD PP PP 03 41 22.1 -0.3
comp=Z,6.6nm,1.1s,baz=297,slow=6.3,SNR=3.2
TORD S S 03 48 30.2 -5.9
comp=Z,0.4nm,0.9s,baz=233,slow=11,SNR=1.5
TORD PKPPbc PKKPbc 03 56 03.1 +0.3
comp=Z,0.5nm,0.7s,baz=108,slow=1.8,SNR=4.4
TORD PKPPKP P'P'df 04 04 09.4 -2.8
comp=Z,1.2nm,1.1s,baz=59,slow=1.0,SNR=2.7
TORD LR LR 04 11 55.6
comp=Z,10µm,21.9s,baz=279,slow=33
comp=Z,19nm,1.1s
FETA Feichten 85.94 43 *i* P P 03 38 02.4 +0.1
comp=Z,39nm,1.3s,SNR=20
CMAH Djebel Manchou 85.97 54 P 03 38 02.3
KEV Kevo 86.08 19 IAMs_20 IAMs_20 04 19 00.2
comp=Z,5µm,18.0s
ABSA Djebel Ababsia 86.10 54 P 03 38 03.5
MOTA Moosalm 86.11 42 *i* P P 03 38 02.9 -0.2
comp=Z,135nm,1.6s,SNR=32
SALO Salr 86.15 44 IAmb IAmb 03 38 08.5
comp=Z,257nm,1.5s
SQTA Sankt Quirin 86.21 43 *i* P P 03 38 03.5 -0.1
comp=Z,110nm,1.6s,SNR=25
NKC Novy Kostel 86.22 39 *eP* P 03 38 03.4 0.0
NKC *e* 03 38 06.9
NKC *e* 03 48 30.9
NKC MLR MLR
comp=Z,8µm,22.1s
NKC Novy Kostel 86.22 39 *eP* P 03 38 03.4 0.0
NKC *ep*P PcP 03 38 06.9 +0.9
NKC *eP*P PP 03 41 33.1 +9.2
NKC *e*SKS SKSac 03 48 30.9 +1.9
NKC AMS AMS 04 10 30.0
comp=Z,8µm,22.1s
CLL Collm 86.27 38 IAmb IAmb 03 38 09.3
comp=Z,86nm,1.1s
CLL IAMs_20 IAMs_20 04 17 36.4
comp=Z,6µm,20.0s
CLL Collm 86.27 38⇓*iP* P 03 38 02.9 -0.7
CLL *i* *PP PcP 03 38 07.1 +0.9
CLL *e*S S 03 48 38.0 -0.2

CLL					pmax	pmax		
	comp=Z,108nm,1.4s							
CLL					MLR	MLR		
	comp=Z,6μm,19.8s							
CLL	**Collm**	**86.27**	**38**	⇓*iP*	**P**		**03 38 02.9**	**-0.7**
	comp=Z,108nm,1.4s							
CLL				*i* pP	**PcP**		**03 38 07.1**	**+0.9**
	comp=Z,125nm,1.3s							
CLL				*ex*	x		03 41 18.0	
CLL				*e*PP	**PP**		**03 41 26.0**	**+1.8**
CLL				*e*PPP	PPP		03 43 18.0	
CLL				*ex*	x		03 46 36.0	
CLL				*e*S	**S**		**03 48 38.0**	**-0.2**
CLL				*e*SP	**SPn**		**03 49 30.0**	**-4.2**
CLL				*e*SS	**SS**		**03 54 13.0**	**-4.0**
CLL				*e*SSS	SSS		03 57 53.0	
CLL				LmV			04 17 00.0	
	comp=Z,6μm,19.8s							
BSD	**Bornholm Skovb**	**86.30**	**34**	*eP*	**P**		**03 38 02.0**	**-1.6**
BSD	**Bornholm Skovb**	**86.30**	**34**	*i* P	**P**		**03 38 02.0**	**-1.6**
BSD				IAmb	IAmb		03 38 07.6	
	comp=Z,342nm,2.1s							
VLC	**Villacollemand**	**86.42**	**46**	P	**P**		**03 38 05.6**	**+1.1**
WATA	**Walderalm**	**86.42**	**42**	*i* P	**P**		**03 38 04.4**	**-0.3**
	comp=Z,67nm,1.5s,SNR=14							
WTTA	**Wattenberg**	**86.48**	**42**	*i* P	**P**		**03 38 04.9**	**-0.1**
	comp=Z,21nm,1.3s,SNR=10							
ZCCA	**Zocca**	**86.78**	**45**	IAmb	IAmb		03 38 15.6	
	comp=Z,126nm,1.3s							
CTI	**Castel Tesino**	**86.80**	**44**	IAmb	IAmb		03 38 11.6	
	comp=Z,123nm,1.4s							
VSL	**Villasalto**	**86.82**	**50**	IAmb	IAmb		03 38 12.4	
	comp=Z,211nm,1.4s							
VSL				IAMs_20	IAMs_20		04 12 39.6	
	comp=Z,9μm,20.0s							
BRG	**Berggiesshubel**	**86.96**	**39**	*i* P	**P**		**03 38 06.6**	**-0.5**
BRG				Amp			03 38 09.1	
	comp=Z,152nm,1.8s							
BRG				*ex*	x		03 38 12.0	
BRG				Amp			03 38 14.5	
	comp=Z,209nm,1.7s							
BRG				*ex*	x		03 38 28.0	
BRG				Amp			03 38 29.8	
	comp=Z,65nm,1.6s							
BRG				PP	**PP**		**03 41 32.7**	**+2.9**
BRG				Amp			03 41 36.0	
	comp=Z,50nm,1.7s							
BRG	**Berggiesshubel**	**86.96**	**39**	*i* P	**P**		**03 38 06.5**	**-0.5**
BRG				*e*			03 38 11.9	
BRG							03 41 32.6	
BRG				S	**S**		**03 48 40.0**	**-4.9**
BRG				SS	**SS**		**03 54 33.0**	**+5.9**
BRG				pmax	pmax			
	comp=Z,152nm,1.8s							
BRG				pmax	pmax			
	comp=Z,50nm,1.7s							
TEOL	**Teolo**	**87.00**	**44**	IAmb	IAmb		03 38 12.7	
	comp=Z,154nm,1.3s							
CASP	**Castiglione de**	**87.09**	**47**	IAmb	IAmb		03 38 12.9	
	comp=Z,156nm,1.5s							
ABTA	**Abfaltersbach**	**87.19**	**43**	*i* P	**P**		**03 38 08.3**	**-0.1**
	comp=Z,52nm,1.2s,SNR=27							
KHC	**Kasperske Hory**	**87.23**	**40**	IAmb	IAmb		03 38 14.3	
	comp=Z,75nm,1.2s							
KHC	**Kasperske Hory**	**87.23**	**40**	*eP*	**P**		**03 38 08.0**	**-0.4**
KHC				*e*			03 38 12.6	
KHC				*e*			03 41 38.9	
KHC				*e*			03 48 42.6	
KHC				MLR	MLR			
	comp=Z,10μm,19.7s							
KHC	**Kasperske Hory**	**87.23**	**40**	*eP*	**P**		**03 38 08.0**	**-0.4**
KHC				*e*pP	**pP**		**03 38 12.6**	**-1.5**
KHC				*e*PP	**PP**		**03 41 38.9**	**+6.8**
KHC				*e*SKS	**SKSac**		**03 48 42.6**	**+7.3**
KHC				AMS	AMS		04 14 50.0	
	comp=Z,10μm,19.7s							
GEC2	**GERESS Array S**	**87.39**	**41**	P	**P**		**03 38 09.1**	**-0.2**
GEC2				IAmb	IAmb		03 38 14.8	
	comp=Z,102nm,1.4s							
GERES	**GERESS Array B**	**87.39**	**41**	P	**P**		**03 38 09.0**	**-0.2**
	comp=Z,12nm,1.1s,baz=248,slow=5.0,SNR=68							
GERES				PP	**PP**		**03 41 34.3**	**+0.9**
	comp=Z,2.9nm,1.0s,baz=297,slow=6.5,SNR=3.1							
GERES				LR	LR		04 13 25.9	
	comp=Z,7μm,20.3s,baz=284,slow=33							
	comp=Z,12nm,1.1s							
PVCC	**Panska Ves**	**87.44**	**39**	*eP*	**P**		**03 38 09.4**	**+0.1**
PVCC				*e*			03 38 13.9	
PVCC				*e*			03 48 26.2	
PVCC				MLR	MLR			
	comp=Z,6μm,20.2s							
PVCC	**Panska Ves**	**87.44**	**39**	*eP*	**P**		**03 38 09.4**	**+0.1**
PVCC				*e*pP	**pP**		**03 38 13.9**	**-1.1**
PVCC				*ex*	x		03 48 26.2	
PVCC				AMS	AMS		04 11 00.0	
	comp=Z,6μm,20.2s							
STAL	**STALIGIAL**	**87.46**	**43**	IAmb	IAmb		03 38 14.7	
	comp=Z,141nm,1.4s							
PRU	**Pruhonice**	**87.58**	**39**	*eP*	**P**		**03 38 09.5**	**-0.5**
PRU				*e*			03 38 14.4	
PRU				*e*			03 48 46.5	
PRU				MLR	MLR			
	comp=Z,9μm,22.2s							
PRU	**Pruhonice**	**87.58**	**39**	*eP*	**P**		**03 38 09.5**	**-0.5**
PRU				*e*pP	**pP**		**03 38 14.4**	**-1.3**
PRU				*ex*	x		03 48 46.5	
PRU				AMS	AMS		04 11 10.0	
	comp=Z,9μm,22.2s							
KBA	**Koelnbreinsper**	**87.65**	**42**	*i* P	**P**		**03 38 10.5**	**-0.2**
	comp=Z,46nm,1.4s,SNR=33							
BIOA	**Bad Ischl, Aus**	**87.67**	**42**	*i* P	**P**		**03 38 10.3**	**-0.2**
	comp=Z,39nm,1.4s,SNR=18							
KEST	**Kesra**	**87.70**	**54**	P	**P**		**03 38 10.7**	**-0.3**
	comp=Z,21nm,1.0s,baz=194,slow=2.7,SNR=15							
KEST				S	**SKSac**		**03 48 44.6**	**+5.8**
	comp=Z,1.5nm,0.6s,baz=332,slow=15,SNR=1.7							
	comp=Z,21nm,1.0s							
KEST	**Kesra**	**87.70**	**54**	IAmb	IAmb		03 38 34.1	
	comp=Z,84nm,1.2s							
RAF	**Rauma**	**87.73**	**27**	*eP*	**P**		**03 38 10.4**	**-0.1**
CKRC	**Cesky Krumlov**	**87.78**	**40**	*eP*	**P**		**03 38 10.9**	**-0.1**
CKRC				*ex*	x		03 38 14.7	
CKRC				*e*PP	PP		03 41 21.3	-15
CKRC				*e*SKS	**SKSac**		**03 48 35.2**	**-3.5**
LATE	**Laterza**	**87.81**	**47**	IAmb	IAmb		03 38 17.5	
	comp=Z,141nm,1.5s							
MYKA	**Terra Mystica**	**87.97**	**43**	*i* P	**P**		**03 38 11.6**	**-0.5**
	comp=Z,33nm,1.4s,SNR=17							
MOA	**Molln**	**88.03**	**41**	*i* P	**P**		**03 38 11.9**	**-0.3**
	comp=Z,31nm,1.3s,SNR=14							
AFI	**Afiamalu**	**88.06**	**255**	IAMs_20	IAMs_20		04 10 52.6	
	comp=Z,5μm,18.0s							
MURB	**Monte Urbino**	**88.14**	**46**	IAmb	IAmb		03 38 21.3	
	comp=Z,75nm,1.4s							
TRI	**Trieste**	**88.32**	**44**	IAmb	IAmb		03 38 19.1	
	comp=Z,124nm,1.5s							
UPC	**Upice**	**88.33**	**38**	*eP*	**P**		**03 38 13.5**	**-0.1**
UPC				*e*			03 38 18.0	
UPC				*e*			03 48 43.4	
UPC				MLR	MLR			
	comp=Z,6μm,18.9s							
UPC	**Upice**	**88.33**	**38**	*eP*	**P**		**03 38 13.5**	**-0.1**
UPC				*e*pP	**pP**		**03 38 18.0**	**-1.3**
UPC				*e*SKS	**SKSac**		**03 48 43.4**	**+1.5**
UPC				AMS	AMS		04 19 10.0	
	comp=Z,6μm,18.9s							
CHVC	**Chvalec**	**88.33**	**38**	*eP*	**P**		**03 38 12.5**	**-1.1**
CHVC				*ex*	x		03 38 18.3	
CHVC				*e*SKS	**SKSac**		**03 48 43.0**	**+1.1**
CHVC				AMS	AMS		04 19 20.0	
	comp=Z,6μm,18.9s							
TREC	**Trest**	**88.38**	**40**	*eP*	**P**		**03 38 13.3**	**-0.6**
TREC				*e*			03 48 44.2	
TREC				MLR	MLR			
	comp=Z,10μm,19.6s							
TREC	**Trest**	**88.38**	**40**	*eP*	**P**		**03 38 13.3**	**-0.6**
TREC				*e*SKS	**SKSac**		**03 48 44.2**	**+1.9**
TREC				AMS	AMS		04 15 50.0	
	comp=Z,10μm,19.6s							
KSP	**Ksiaz**	**88.39**	**38**	*eP*	**P**		**03 38 13.8**	**0.0**
KSP				*e*L	L		04 16 01.2	
	comp=Z,6μm,20.3s							
OSTC	**Ostas**	**88.44**	**38**	*eP*	**P**		**03 38 14.0**	**-0.1**
OSTC				*ex*	x		03 38 18.4	
OSTC				*e*SKS	**SKSac**		**03 48 45.7**	**+3.2**
OSTC				AMS	AMS		04 19 10.0	
	comp=Z,6μm,19.1s							
DPC	**Dobruska-Polom**	**88.57**	**39**	*eP*	**P**		**03 38 14.6**	**-0.2**
DPC				*e*			03 38 19.2	
DPC				*e*			03 48 36.8	
DPC				MLR	MLR			
	comp=Z,7μm,19.8s							
DPC	**Dobruska-Polom**	**88.57**	**39**	*eP*	**P**		**03 38 14.6**	**-0.2**
DPC				*e*pP	**pP**		**03 38 19.2**	**-1.3**
DPC				*e*SKS	**SKSac**		**03 48 36.8**	**-6.6**
DPC				AMS	AMS		04 18 30.0	
	comp=Z,7μm,19.8s							
OBKA	**Obir**	**88.61**	**43**	*i* P	**P**		**03 38 14.6**	**-0.5**
	comp=Z,26nm,1.4s,SNR=17							
LJU	**Ljubljana**	**88.73**	**43**	*i* P	**P**		**03 38 15.1**	**-0.5**
LJU				*i*			03 41 26.2	
LJU				*e*PP	**PP**		**03 41 45.8**	**+1.6**
LJU				*e*SKSac	**SKSac**		**03 48 42.0**	**-2.5**
LJU				*e*			03 48 58.4	
LJU				*e*			03 49 09.9	
LJU				IAMs_20	IAMs_20		04 14 18.5	
	comp=Z,7μm,19.4s							
SOKA	**Soboth**	**88.88**	**42**	*i* P	**P**		**03 38 15.7**	**-0.7**
	comp=Z,28nm,1.4s,SNR=20							
KRLC	**Kraliky**	**88.93**	**39**	*eP*	**P**		**03 38 16.2**	**-0.3**
KRLC				*e*			03 48 40.7	
KRLC				MLR	MLR			
	comp=Z,7μm,18.9s							
KRLC	**Kraliky**	**88.93**	**39**	*eP*	**P**		**03 38 16.2**	**-0.3**
KRLC				*e*SKS	**SKSac**		**03 48 40.7**	**-4.9**
KRLC				AMS	AMS		04 18 30.0	
	comp=Z,7μm,18.9s							
PERS	**Pernice**	**88.94**	**42**	*i* P	**P**		**03 38 15.0**	**-1.6**
AQU	**L'Aquila**	**89.02**	**47**	IAMs_20	IAMs_20		04 18 02.6	
	comp=Z,8μm,19.0s							
KRUC	**Moravsky**	**89.02**	**40**	⇓*iP*	**P**		**03 38 16.2**	**-0.7**
KRUC				*e*SKS	**SKSac**		**03 48 47.1**	**+1.1**
ARSA	**Arzberg**	**89.02**	**42**	*i* P	**P**		**03 38 16.6**	**-0.4**
	comp=Z,31nm,1.4s,SNR=17							
CONA	**Conrad Observa**	**89.03**	**41**	*i* P	**P**		**03 38 17.2**	**+0.1**
	comp=Z,50nm,1.2s,SNR=24							
VRAC	**Vranov**	**89.06**	**40**	⇑P	**P**		**03 38 17.2**	**+0.1**
VRAC	**Vranov**	**89.06**	**40**	P	**P**		**03 38 16.5**	**-0.6**
	comp=Z,16nm,1.2s,baz=282,slow=6.3,SNR=25							
VRAC				LR	LR		04 16 55.8	
	comp=Z,7μm,19.0s,baz=283,slow=35							
	comp=Z,16nm,1.2s							
VRAC	**Vranov**	**89.06**	**40**	⇓*iP*	**P**		**03 38 16.5**	**-0.6**
VRAC				*e*SKS	**SKSac**		**03 48 47.9**	**+1.6**
APA	**Apatity**	**89.20**	**19**	⇓*iP*	**P**		**03 38 20.0**	**+2.7**
APA				*i*			03 41 44.0	
APA				*i*			03 48 44.0	
APA				*i* S	**S**		**03 49 06.0**	**+0.4**
APA				*i* PS	**PS**		**03 50 14.0**	**+2.0**
APA				pmax	pmax			
	comp=Z,10.0nm,1.1s							
APA				MLR	MLR			
	comp=Z,5μm,17.0s							
MEF	**Metsahovi**	**89.25**	**28**	*eP*	**P**		**03 38 17.4**	**-0.2**
BOJS	**Bojanci**	**89.38**	**43**	*i* P	**P**		**03 38 17.7**	**-0.9**
RONA	**Rosalia, Austr**	**89.38**	**41**	*i* P	**P**		**03 38 18.7**	**0.0**
	comp=Z,48nm,1.3s,SNR=22							
LVZ	**Lovozero**	**89.42**	**19**	IAMs_20	IAMs_20		04 17 33.5	
	comp=Z,7μm,20.0s							
LVZ	**Lovozero**	**89.42**	**19**	⇓*eP*	**P**		**03 38 17.7**	**-0.7**
LVZ				pmax	pmax			
	comp=Z,94nm,1.6s							
LVZ				MLR	MLR			
	comp=Z,7μm,19.0s							
FINES	**FINESS Array B**	**89.46**	**26**	P	**P**		**03 38 18.1**	**-0.5**
	comp=Z,9.1nm,1.0s,baz=291,slow=5.3,SNR=10							
FINES				PP	**PP**		**03 41 43.5**	**-6.0**
	comp=Z,7.2nm,1.1s,baz=300,slow=5.6,SNR=3.0							
FINES				LR	LR		04 15 49.9	
	comp=Z,6μm,20.6s,baz=296,slow=34							
	comp=Z,9.1nm,1.0s							
MORC	**Moravsky Berou**	**89.50**	**39**	⇓P	**P**		**03 38 19.3**	**+0.2**
MORC	**Moravsky Berou**	**89.50**	**39**	P	**P**		**03 38 19.3**	**+0.2**
MORC	**Moravsky Berou**	**89.50**	**39**	P	**P**		**03 38 19.3**	**+0.2**
MORC				pmax	pmax			
	comp=Z,46nm,1.4s							
MORC	**Moravsky Berou**	**89.50**	**39**	⇓*iP*	**P**		**03 38 18.6**	**-0.6**
MORC				*e*SKS	**SKSac**		**03 48 44.8**	**-4.1**
SOP	**Sopron**	**89.56**	**41**	P	**P**		**03 38 19.1**	**-0.3**
SOP				PP	**pP**		**03 38 23.9**	**-1.2**
MTSE	**Matsula**	**89.60**	**29**	*eP*	**P**		**03 38 19.3**	**0.0**
ZST	**Bratislava**	**89.74**	**40**	*eP*	**P**		**03 38 20.4**	**+0.2**
ZST				pmax	pmax			
	comp=Z,158nm,1.3s							
ZST	**Bratislava**	**89.74**	**40**	*eP*	**P**		**03 38 20.4**	**+0.2**
MODS	**Modra-Piesok**	**89.79**	**40**	*eP*	**P**		**03 38 20.9**	**+0.4**
MODS				pmax	pmax			
	comp=Z,150nm,1.5s							
MODS	**Modra-Piesok**	**89.79**	**40**	*eP*	**P**		**03 38 20.9**	**+0.4**
MAUC	**Maruska**	**89.81**	**39**	*eP*	**P**		**03 38 20.6**	**0.0**
MAUC				*ex*	x		03 38 26.2	
MAUC				*e*SKS	**SKSac**		**03 48 44.2**	**-6.5**
MAUC				AMS	AMS		04 17 00.0	
	comp=Z,14μm,18.8s							
SMOL	**Smolenice**	**89.84**	**40**	*eP*	**P**		**03 38 21.2**	**+0.5**
SMOL				pmax	pmax			
	comp=Z,22nm,1.4s							
SMOL	**Smolenice**	**89.84**	**40**	*eP*	**P**		**03 38 21.2**	**+0.5**
OKC	**Ostrava-Krasne**	**89.84**	**39**	*eP*	P		03 38 08.1	-13
OKC				MLR	MLR			
	comp=Z,9μm,18.6s							
OKC	**Ostrava-Krasne**	**89.84**	**39**	*eP*	P		03 38 08.1	-13
OKC				*e*SKS	**SKSac**		**03 48 55.1**	**+4.3**
OKC				AMS	AMS		04 19 10.0	
	comp=Z,9μm,18.6s							
JAVC	**Velka Javorina**	**89.88**	**40**	⇓*iP*	**P**		**03 38 21.4**	**+0.4**
JAVC				*e*SKS	**SKSac**		**03 48 52.0**	**+0.8**
BEHE	**Becsehely**	**90.08**	**42**	P	**P**		**03 38 22.1**	**+0.1**
BEHE				PP	**pP**		**03 38 26.6**	**-1.0**
MPLH	**Magyarpolny**	**90.35**	**41**	P	**P**		**03 38 23.0**	**-0.1**
MPLH				PP	**pP**		**03 38 26.8**	**-2.1**
KOLL	**Kolacno**	**90.43**	**40**	*eP*	**P**		**03 38 23.8**	**+0.3**
KOLL				*e*PP	**PP**		**03 42 00.6**	**+3.0**
SRO2	**Moca**	**90.70**	**41**	*eP*	**P**		**03 38 23.9**	**-0.8**
SRO2	**Moca**	**90.70**	**41**	*eP*	**P**		**03 38 23.9**	**-0.8**
BEL	**Belsk**	**90.70**	**36**	*eP*	**P**		**03 38 25.1**	**+0.5**
BEL				*e*S	**S**		**03 49 21.0**	**+0.9**
BEL				*e*L	L		04 19 10.7	
	comp=Z,8μm,20.0s							
CSKK	**Cskako**	**90.75**	**41**	P	**P**		**03 38 24.7**	**-0.3**
CSKK				PP	**pP**		**03 38 29.6**	**-1.1**
LANS	**Liptovska Anna**	**90.89**	**39**	*eP*	**P**		**03 38 26.5**	**+0.8**
LANS				pmax	pmax			
	comp=Z,16nm,1.3s							
LANS	**Liptovska Anna**	**90.89**	**39**	*eP*	**P**		**03 38 26.5**	**+0.8**
LANS				*e*PP	**PP**		**03 42 05.0**	**+3.7**
PABE	**Paberze**	**91.00**	**32**	IAmb	IAmb		03 38 31.4	
	comp=Z,137nm,1.5s							
PABE				IAMs_20	IAMs_20		04 13 08.1	
	comp=Z,6μm,22.0s							
PABE	**Paberze**	**91.00**	**32**	*eP*	**P**		**03 38 25.7**	**-0.3**
KOVH	**Kovagotottos**	**91.08**	**42**	P	**P**		**03 38 26.3**	**-0.2**
KOVH				PP	**pP**		**03 38 31.2**	**-1.0**
VSU	**Vasula**	**91.09**	**29**	⇑*eP*	**P**		**03 38 25.2**	**-1.1**
VSU				pmax	pmax			
	comp=Z,64nm,1.3s							
VSU				MLR	MLR			
	comp=Z,16μm,18.0s							
VSU	**Vasula**	**91.09**	**29**	*eP*	**P**		**03 38 24.0**	**-2.3**
VAE	**Valguarnera**	**91.16**	**51**	P	**P**		**03 38 25.9**	**-1.2**
	comp=Z,8.4nm,0.5s,baz=350,slow=6.6,SNR=5.3							
VAE				LR	LR		04 15 35.3	
	comp=Z,6μm,20.6s,baz=310,slow=33							
	comp=Z,8.4nm,0.5s							
BUD	**Budapest**	**91.20**	**41**	P	**P**		**03 38 27.1**	**+0.1**
BUD				PP	**pP**		**03 38 31.8**	**-0.9**
SUW	**Suwalki**	**91.20**	**34**	*eP*	**P**		**03 38 25.5**	**-1.4**
SUW				*e*L	L		04 13 21.5	
	comp=Z,5μm,22.6s							
SUW	**Suwalki**	**91.20**	**34**	IAMs_20	IAMs_20		04 23 03.3	
	comp=Z,6μm,18.0s							
SUW	**Suwalki**	**91.20**	**34**	*eP*	**P**		**03 38 25.3**	**-1.5**
MORH	**Mrgy, Hungar**	**91.39**	**42**	⇑P	**P**		**03 38 27.7**	**-0.3**
MORH	**Mrgy, Hungar**	**91.39**	**42**	P	**P**		**03 38 27.4**	**-0.6**
MORH				PP	**pP**		**03 38 31.9**	**-1.7**
PSZ	**Piszkesteto**	**91.59**	**40**	⇑P	**P**		**03 38 28.8**	**-0.2**
PSZ	**Piszkesteto**	**91.59**	**40**	IAmb	IAmb		03 38 35.4	
	comp=Z,114nm,1.5s							
PSZ				IAMs_20	IAMs_20		04 17 53.2	
	comp=Z,5μm,20.0s							
PSZ	**Piszkesteto**	**91.59**	**40**	P	**P**		**03 38 29.5**	**+0.5**
PSZ				PP	**pP**		**03 38 34.1**	**-0.6**
MATE	**Matera**	**91.89**	**48**	⇓P	**P**		**03 38 30.1**	**-0.3**
CEL	**Celeste**	**92.04**	**50**	IAMs_20	IAMs_20		04 14 25.0	
	comp=Z,5μm,22.0s							
ISAL	**Salakas**	**92.08**	**32**	*eP*	**P**		**03 38 30.9**	**-0.1**
CRVS	**Cervenica-Dubn**	**92.20**	**39**	*eP*	**P**		**03 38 32.3**	**+0.5**
CRVS				pmax	pmax			
	comp=Z,56nm,1.4s							
CRVS	**Cervenica-Dubn**	**92.20**	**39**	*eP*	**P**		**03 38 32.2**	**+0.5**
CRVS				*e*PP	**PP**		**03 42 15.0**	**+3.4**
IIGN	**Ignalina**	**92.23**	**32**	*eP*	**P**		**03 38 31.8**	**+0.2**
TIXI	**Tiksi**	**92.37**	**349**	P	**P**		**03 38 30.2**	**-1.8**
	comp=Z,16nm,1.1s,baz=267,slow=24,SNR=17							
TIXI				PP	**PP**		**03 42 13.6**	**+1.5**
	comp=Z,22nm,1.2s,baz=89,slow=23,SNR=3.9							
TIXI				LR	LR		04 23 11.7	
	comp=Z,6μm,21.4s,baz=0.0,slow=38							
	comp=Z,16nm,1.1s							
TIXI	**Tiksi**	**92.37**	**349**	P	**P**		**03 38 30.6**	**-1.4**
TIXI				IAMs_20	IAMs_20		04 22 37.8	
	comp=Z,9μm,21.0s							
TIXI	**Tiksi**	**92.37**	**349**	P	**P**		**03 38 30.6**	**-1.4**
TIXI				pmax	pmax			
	comp=Z,24nm,0.8s							
TIXI				MLR	MLR			
	comp=Z,9μm,21.0s							
TIP	**Timpagrande**	**92.40**	**49**	⇓P	**P**		**03 38 32.0**	**-0.9**
TIP	**Timpagrande**	**92.40**	**49**	IAmb	IAmb		03 38 37.1	
	comp=Z,72nm,1.4s							
IDID	**Didziasalis**	**92.51**	**32**	*eP*	**P**		**03 38 32.9**	**-0.1**
FRGS	**Fruska Gora**	**92.53**	**43**	⇓P	**P**		**03 38 33.3**	**0.0**
KOLS	**Kolonicke sedl**	**92.69**	**39**	*eP*	**P**		**03 38 35.2**	**+1.3**
KOLS				pmax	pmax			
	comp=Z,18nm,1.3s							
KOLS	**Kolonicke sedl**	**92.69**	**39**	*eP*	**P**		**03 38 35.2**	**+1.3**
NACGM	**Naroch**	**92.72**	**32**	⇓*eP*	**P**		**03 38 33.8**	**-0.1**
	baz=297							
UZH	**Uzhgorod**	**92.81**	**39**	*eP*	**P**		**03 38 32.8**	**-1.7**
UZH				*e*			03 38 36.5	
UZH				*i*			03 38 46.7	
UZH				*e*			03 42 15.6	
UZH				*e*			03 44 23.2	
UZH				*e*			03 49 06.0	
UZH				*e*S	**S**		**03 49 32.7**	**-6.6**
DIVS	**Divibare**	**93.02**	**44**	IAMs_20	IAMs_20		04 22 02.4	
	comp=Z,6μm,19.0s							
PDG	**Podgorica**	**93.11**	**45**	IAMs_20	IAMs_20		04 18 42.9	
	comp=Z,8μm,20.0s							
SIRR	**Siria**	**93.32**	**41**	⇓P	**P**		**03 38 37.2**	**+0.3**
LVV	**L'vov**	**93.38**	**37**	*eP*	P		03 38 29.3	-7.8
LVV				*e*			03 42 21.1	
LVV				*i* S	**SKSac**		**03 49 15.0**	**+4.1**
LVV				pmax	pmax			
	comp=Z,120nm,1.5s							
LVV				MLR	MLR			
	comp=N,3μm,19.0s							
LVV				MLR	MLR			
	comp=E,3μm,19.0s							
LVV				MLR	MLR			
	comp=Z,3μm,18.0s							
MNK	**Minsk**	**93.47**	**32**	*i* P	**P**		**03 38 35.8**	**-1.6**
MNK				*i*			03 42 19.7	
MNK				*i* S	**SKSac**		**03 49 09.8**	**-1.3**
MNK				*i* PS	**PS**		**03 50 58.5**	**-1.2**
MNK				*i* SS	**SS**		**03 56 01.5**	**+0.7**
MNK				*i* SSS	SSS		03 59 41.9	
MNK				pmax	pmax			
	comp=N,10.0nm,1.1s							
MNK				pmax	pmax			
	comp=E,2.0nm,1.0s							
MNK				pmax	pmax			
	comp=Z,45nm,1.0s							
MNK				MLR	MLR			
	comp=N,21nm,19.0s							
MNK				MLR	MLR			
	comp=E,298nm,17.0s							
MNK				MLR	MLR			
	comp=Z,11μm,22.0s							
MNK	**Minsk**	**93.47**	**32**	*i* P	**P**		**03 38 35.8**	**-1.6**
	comp=E,2.0nm,1.0s							
MNK				*i* P	**P**		**03 38 35.8**	**-1.6**
	comp=N,10.0nm,1.1s							
MNK				*i* P	**P**		**03 38 35.8**	**-1.6**
	comp=Z,45nm,1.0s,baz=117							
MNK				*i* PP	**PP**		**03 42 19.7**	**-1.6**
MNK				*i* PPP	PPP		03 44 14.8	
MNK				*i* S	**SKSac**		**03 49 09.8**	**-1.3**
MNK				*i* PS	**PS**		**03 50 58.6**	**-1.2**
MNK				*i* SS	**SS**		**03 56 01.6**	**+0.7**
MNK				*i* SSS	SSS		03 59 42.0	
MNK				*i* LQ	LQ		04 13 26.1	
MNK				*i* LR	LR		04 16 57.0	
MNK				*i* LRM	MLR		04 21 18.2	
	comp=N,21nm,19.2s							
MNK				*i* LRM	MLR		04 22 09.4	
	comp=E,298nm,16.6s							
MNK				*i* LRM	MLR		04 22 33.6	
	comp=Z,11μm,21.7s							
BZS	**Buzias**	**93.54**	**42**	⇑P	**P**		**03 38 38.0**	**0.0**
DRGR		**93.79**	**40**	⇓P	**P**		**03 38 38.8**	**-0.4**
PET	**Petropavlovsk**	**93.85**	**327**	*eP*	**P**		**03 38 40.9**	**+1.7**
PET				*e*			03 42 26.1	
PET				*e*S	**S**		**03 49 44.2**	**-4.0**
PET				*e*PS	**PS**		**03 51 09.5**	**+5.5**
PET				*e*SS	SS		03 56 20.3	+14
PET				pmax	pmax			
	comp=Z,300nm,

AKASG **Malin Array Be** 95.98 35 *i* P P 03 38 47.4 -1.6
AKBB **Malin Array Si** 95.98 35⇑ *e*P P 03 38 47.2 -1.8
MLR **Muntele Rosu** 96.38 41 ⇑P P 03 38 51.0 -0.1
MLR **Muntele Rosu** 96.38 41 P P 03 38 50.5 -0.5
comp=Z,13nm,1.2s,baz=324,slow=3.3,SNR=15
comp=Z,13nm,1.2s
MLR **Muntele Rosu** 96.38 41 IAmb IAmb 03 38 57.2
comp=Z,64nm,1.5s
MLR IAMs_20 IAMs_20 04 19 12.8
comp=Z,8µm,21.0s
COVR **Voineasa-Covas** 96.39 40 ⇓P P 03 39 00.6 +10
SORM **Soroca** 96.68 38 ⇑P P 03 38 51.0 -1.2
PRGR **Permogore** 97.01 21⇑ *i*P P 03 38 53.3 -0.1
OBN **Obninsk** 97.45 29 P P 03 38 54.6 -1.0
comp=Z,2.3nm,0.4s,baz=278,slow=7.1
OBN PP PP 03 42 52.7 +0.6
comp=Z,2.3nm,0.4s,baz=308,slow=5.8,SNR=7.4
comp=Z,2.3nm,0.4s
OBN **Obninsk** 97.45 29 IAMs_20 IAMs_20 04 23 44.4
comp=Z,5µm,20.0s
OBN **Obninsk** 97.45 29 *ce*P P 03 38 54.5 -1.0
OBN *e* 03 42 50.5
OBN *e*PPP PPP 03 44 57.2
OBN pmax pmax
comp=Z,71nm,1.7s
OBN MLR MLR
comp=Z,5µm,17.0s
KIS **Kishinev** 97.49 38 *e*P P 03 38 53.0 -2.9
comp=Z,100nm,7.0s
KIS **Kishinev** 97.49 38 *e*PP PP 03 42 54.0 +1.3
KIS *e*SKS SKSac 03 49 50.0 +17
KIS *e*S **S** 03 50 14.0 -6.0
KIS *e*L L 04 09 57.0
KIS LQM 04 17 44.0
comp=Z,1µm,22.0s
KIS LRM MLR 04 23 00.0
comp=Z,2µm,20.0s
KIS **Kishinev** 97.49 38 *e*P P 03 38 53.0 -2.9
KIS *e* 03 42 54.0
KIS *e* 03 49 30.0
KIS *e*S **S** 03 50 14.0 -6.0
KIS pmax pmax
comp=Z,100nm,7.0s
KIS MLR MLR
comp=Z,2µm,20.0s
MILM **Milestii Mici** 97.52 38 *e*P P 03 38 53.0 -3.0
comp=Z,270nm,6.2s
MILM **Milestii Mici** 97.52 38 *e*PP PP 03 42 52.0 -0.9
MILM *e*SKS **SKSac** 03 49 33.0 +0.1
MILM *e*SKKS **SKKSac** 03 49 55.0 -5.6
MILM *e*S **S** 03 50 13.0 -7.3
MILM **Milestii Mici** 97.52 38 *e*P P 03 38 53.0 -3.0
MILM *e* 03 42 52.0
MILM *e* 03 49 33.0
MILM *e*S **S** 03 50 13.0 -7.3
MILM *e*PPS PPS 03 51 46.0
MILM pmax pmax
comp=Z,270nm,6.2s
MILM MLR MLR
comp=Z,4µm,20.0s
MOS **Moscow** 97.58 28 *e*P P 03 38 54.2 -1.9
MOS *e* 03 42 51.4
MOS *e*PPP PPP 03 44 56.6
MOS *e*S **SKSac** 03 49 28.8 -4.0
MOS *e*SP **SP** 03 51 41.4 -0.5
MOS *e*SS **SS** 03 56 55.9 -3.0
MOS *e*SSS SSS 04 00 43.6
MOS pmax pmax
comp=Z,41nm,0.6s
CFR **Carcaliu** 97.90 40 ⇓P P 03 38 55.0 -2.7
NRIK **Noril'sk** 97.97 2 P P 03 38 57.0 -0.5
comp=Z,1.9nm,0.4s,baz=13,slow=1.9,SNR=1.7
NRIK PP PP 03 42 54.2 -1.4
comp=Z,1.4nm,0.3s,baz=0.4,slow=13,SNR=3.6
NRIK LR LR 04 25 28.8
comp=Z,7µm,19.7s,baz=6.5,slow=37
comp=Z,1.9nm,0.4s
NRIK **Noril'sk** 97.97 2⇓ *e*P P 03 38 57.2 -0.4
NRIK pmax pmax
comp=Z,6.0nm,1.1s
NRIK MLR MLR
comp=Z,8µm,20.0s
VNA3 **Neumayer Olymp** 98.01 161 P P 03 38 57.6 -0.1
VNA1 **Neumayer--Stat** 98.30 161 Pdiff Pdif 03 38 59.3 +0.4
VNA2 **Neumayer--Watz** 98.64 161 Pdiff Pdif 03 39 02.3 +1.8
YAK **Yakutsk** 100.05 343 PP PP 03 43 10.5 -1.0
comp=Z,11nm,0.3s,baz=67,slow=3.3,SNR=5.9
LPSR **Galich'ya Gora** 100.06 30 *e*P Pdif 03 39 05.4 -1.8
LPSR pmax pmax
comp=Z,20nm,1.2s
LPSR MLR MLR
comp=Z,4µm,18.0s
SNAA **Sanae** 100.23 161 PP PP 03 43 16.7 +3.1
SNAA **Sanae** 100.23 161 Pdiff Pdif 03 39 08.8 +1.2
SNAA **Sanae** 100.23 161 IAMs_20 IAMs_20 04 23 08.6
comp=Z,5µm,22.0s
SNAA **Sanae** 100.23 161⇑ *e*P Pdif 03 39 09.2 +1.6
SNAA pmax pmax
comp=Z,16nm,1.6s
SNAA MLR MLR
comp=Z,5µm,21.0s
KIRV **Kirov** 100.52 22 PP PP 03 43 14.0 -1.2
comp=Z,9.5nm,0.5s,baz=331,slow=9.8,SNR=5.0
KIRV **Kirov** 100.52 22 *ce*P Pdif 03 39 08.7 -0.4
VORR **Voronezh** 100.75 31 P Pdif 03 39 09.9 -0.5
VORR pmax pmax
comp=Z,33nm,1.9s
VORR MLR MLR
comp=Z,9µm,19.0s
VSR **Storozhevoye** 101.00 31 *e*P Pdif 03 39 06.5 -5.0
VSR pmax pmax
comp=Z,8.0nm,0.5s
VSR MLR MLR
comp=Z,6µm,21.0s
VORD **Divnogorie** 101.22 31 *e*P Pdif 03 39 09.5 -2.9
VORD pmax pmax
comp=Z,5.0nm,1.3s
TROLL **Troll, Antarti** 101.95 161 Pdiff Pdif 03 39 16.8 +1.5
VRH **Novokhopyorsk** 102.28 30 *e*P Pdif 03 39 16.3 -0.9
VRH pmax pmax
comp=Z,20nm,1.0s
VRH MLR MLR
comp=Z,7µm,18.0s
QSPA **South Pole Qui** 102.77 180 IAMs_20 IAMs_20 04 30 37.4
comp=Z,4µm,20.0s
ANTO **Ankara** 103.44 43 IAMs_20 IAMs_20 04 30 34.2
comp=Z,4µm,20.0s
KUR **Kuril'sk** 103.92 323 P Pdif 03 39 23.4 -1.2
KUR *e* 03 43 39.8
BRTR **Keskin Array B** 104.08 43 Pdiff Pdif 03 39 27.6 +2.0
comp=Z,0.6nm,0.9s,baz=289,slow=8.7,SNR=2.1
BRTR PP PP 03 43 42.5 -0.4
comp=Z,2.6nm,1.1s,baz=292,slow=6.5,SNR=5.6
BRTR PKKPbc PKKPbc 03 55 15.3 -0.1
comp=Z,0.9nm,0.8s,baz=121,slow=5.2,SNR=5.3
ARU **Arti** 105.30 19 PP PP 03 43 49.6 -1.4
comp=Z,4.2nm,0.6s,baz=326,slow=5.7,SNR=9.1
ARU **Arti** 105.30 19 IAMs_20 IAMs_20 04 33 39.2
comp=Z,6µm,18.0s
YSS **Yuzh-Sakhalins** 105.73 327 IAMs_20 IAMs_20 04 32 55.1
comp=Z,4µm,20.0s
YSS **Yuzh-Sakhalins** 105.73 327 *e*P Pdif 03 39 30.7 -1.9
YSS *e*PPP PPP 03 46 09.5
YSS *e*S **Sdif** 03 51 18.9 -10
YSS MLR MLR
comp=N,3µm,19.0s
YSS MLR MLR
comp=Z,4µm,19.0s
YSS MLR MLR
comp=E,2µm,18.0s
SOC **Sochi** 105.82 37 *e*P Pdif 03 39 28.5 -4.6
SOC *e* 03 44 04.9
SOC *e*S **Sdif** 03 51 24.4 -5.5
SOC MLR MLR
comp=Z,2µm,20.0s
KIV **Kislovodsk** 107.31 36 *e*P Pdif 03 39 38.1 -1.8
KIV *e* 03 44 03.9
KIV *e* 03 50 17.7
KIV *e*PS **PS** 03 53 26.6 -1.7
KIV *e*SS SS 03 59 12.3 -1.8
KIV pmax pmax
comp=Z,7.0nm,1.1s
KIV MLR MLR
comp=Z,3µm,21.0s
KBZ **Khabaz** 107.57 36 PP PP 03 44 10.7 +2.5
comp=Z,8.3nm,1.1s,baz=286,slow=8.6,SNR=6.6
TSUM **Tsumeb** 107.72 106 IAMs_20 IAMs_20 04 32 29.2
comp=Z,6µm,19.0s
ERM **Erimo** 108.58 323 IAMs_20 IAMs_20 04 38 57.3
comp=Z,4µm,20.0s
KLR **Kul'dur** 109.40 334 PP PP 03 44 19.7 -1.5
comp=Z,8.0nm,1.1s,baz=29,slow=6.8,SNR=7.9
AKTO **Aktyubinsk** 109.99 23 PP PP 03 44 24.2 -1.2
comp=Z,4.3nm,1.0s,baz=299,slow=3.3,SNR=6.5
AKTO PKKPbc PKKPbc 03 54 58.1 +0.8
comp=Z,1.8nm,1.0s,baz=82,slow=1.8,SNR=5.0
MAK **Makhachkala** 110.64 34 *e*P Pdif 03 39 45.8 -8.7
MAK *e* 03 50 23.9
MAK *e*SS SS 03 59 54.6 -3.9
MAK *e*SSS SSS 04 04 02.9
MAK pmax pmax
comp=Z,464nm,1.3s
BRVK **Borovoye** 111.56 15 *di*PKIKP PKiKP 03 43 54.6 -1.7
BRVK pmax pmax
comp=Z,8.0nm,1.7s
USRK **Ussuriysk Ar.** 113.09 331 PP PP 03 44 48.0 +0.1
comp=Z,0.9nm,0.6s,baz=180,slow=3.2,SNR=4.4
ZALV **Zalesovo Beam** 113.14 5 PP PP 03 44 45.0 -2.8
comp=Z,11nm,0.9s,baz=0.0,slow=4.6,SNR=9.2
ZALV PKKPab PKKPab 03 54 54.1 -0.9
comp=Z,1.7nm,0.6s,baz=158,slow=4.3,SNR=5.7
MDJ **Mudanjiang** 113.89 332 IAMs_20 IAMs_20 04 40 29.7
comp=Z,6µm,20.0s
BRZS **Berezniki** 114.98 14 *e*PP PP 03 44 59.9 -1.0
baz=14
MAJO **Matsushiro** 115.00 321 IAMs_20 IAMs_20 04 40 54.1
comp=Z,5µm,22.0s
MOY **Mondy** 115.42 354 *e*PKIKP PKiKP 03 43 54.6 -9.2
BOSA **Boshof** 115.47 116 PKP PKiKP 03 44 05.9 +1.3
comp=Z,3.2nm,0.8s,baz=219,slow=4.5,SNR=4.7
KURK **Kurchatov** 115.51 10⇑ *i*PKIKP PKiKP 03 44 02.1 -1.8
KURBB **Kurchatov Arra** 115.58 10 PP PP 03 44 59.5 -5.5
comp=Z,2.3nm,0.8s,baz=347,slow=6.5,SNR=6.6
KURBB PKKPbc PKKPbc 03 54 36.3 -2.3
comp=Z,2.7nm,1.0s,baz=188,slow=3.2,SNR=5.5
SEM **Semipalatinsk** 116.07 9 *e*PP PP 03 45 07.5 -1.2
baz=9.1
CN2 **Changchun** 116.36 334 *e*PKP PKiKP 03 43 57.0 -8.7
CN2 *e*PP **PP** 03 45 06.1 -4.7
CN2 SKS **SKSdf** 03 51 08.1 -9.2
CN2 AMB AMB
comp=Z,550nm,6.5s
CN2 LR LR
comp=N,5µm,26.0s
CN2 LR LR
comp=E,4µm,26.0s
CN2 LR LR
comp=Z,10µm,27.0s
MBAR **Mbarara** 117.16 84 IAMs_20 IAMs_20 04 30 17.2
comp=Z,6µm,21.0s
LSZ **Lusaka** 117.29 101 PKKPab PKKPab 03 54 34.9 -0.4
comp=Z,2.7nm,0.7s,baz=73,slow=8.6,SNR=4.3
LSZ **Lusaka** 117.29 101 IAMs_20 IAMs_20 04 38 28.3
comp=Z,6µm,20.0s
MATP **Matopo** 118.07 106 PKKPab PKKPab 03 54 32.3 +0.5
comp=Z,5.9nm,0.9s,baz=83,slow=4.2,SNR=7.2
ULN **Ulaanbaatar** 118.31 349 *di*PKIKP PKiKP 03 44 10.5 +0.9
ULN pmax pmax
comp=Z,5.0nm,1.7s
SONM **Songino Array** 118.45 350 PKP PKPdf 03 44 08.9 -0.9
comp=Z,1.2nm,1.1s,baz=0.0,slow=1.6,SNR=4.4
SONM PP PP 03 45 22.8 -2.5
comp=Z,5.3nm,0.9s,baz=7.5,slow=4.6,SNR=11
SONM PKKPbc PKKPbc 03 54 28.0 -0.6
comp=Z,1.9nm,0.8s,baz=184,slow=2.9,SNR=6.6
ZSN **Zaisan** 119.58 6 *e*PP PP 03 45 32.4 -0.4
baz=6.4
XLT **XiLinHaoTe** 119.76 341 *e*PKP PKiKP 03 44 15.8 +3.3
XLT PP PP 03 45 34.3 -0.1
XLT PKS PKSdf 03 47 48.6 -0.5
XLT AMB AMB
comp=Z,400nm,5.3s
XLT LR LR
comp=Z,640nm,21.9s
XLT LR LR
comp=Z,5µm,21.1s
XLT LR LR
comp=Z,8µm,19.4s
MAKZ **Makanchi** 119.84 9 IAMs_20 IAMs_20 04 42 18.5
comp=Z,6µm,21.0s
MK31 **Makanchi Array** 119.90 8 *i* PKIKP PKiKP 03 44 12.7 +0.1
MKAR **Makanchi Array** 119.90 8 PKP PKPdf 03 44 11.9 -0.6
comp=Z,1.5nm,1.1s,baz=344,slow=3.1,SNR=3.9
MKAR PP PP 03 45 35.9 +0.8
comp=Z,3.2nm,0.9s,baz=2.8,slow=5.0,SNR=5.1
MKAR PKKPbc PKKPbc 03 54 22.6 -0.6
comp=Z,0.4nm,0.7s,baz=134,slow=5.2,SNR=4.5
BTLS **Baital** 119.92 15 *e*PP PP 03 45 34.6 -0.6
baz=15
KSRS **Korea Array** 120.19 328 PKP PKPdf 03 44 12.1 -1.2
comp=Z,6.5nm,0.9s,baz=282,slow=0.1,SNR=12
KSRS PP PP 03 45 38.3 +0.7
comp=Z,2.3nm,1.1s,baz=35,slow=6.7,SNR=1.8
KSAR **Wonju Array Be** 120.22 328 PKPdf PKPdf 03 44 11.9 -1.4
KSAR **Wonju Array Be** 120.22 328 PKIKP PKPdf 03 44 11.9 -1.4
LODK **Lodwar** 120.55 78 IAMs_20 IAMs_20 04 33 06.8
comp=Z,4µm,21.0s
RAYN **Ar Rayn** 121.17 52 IAMs_20 IAMs_20 04 36 14.7
comp=Z,5µm,20.0s
IUG **luzhnay** 121.38 20 *e*PP PP 03 45 43.9 -1.6
baz=20
SGDS **Sogindy** 121.55 16 *e*PP PP 03 45 46.0 -0.5
baz=16
DL2 **Dalian** 122.01 334 PKP PKiKP 03 44 17.7 +0.8
DL2 SS SS 04 02 26.2 -0.6
DL2 AMB AMB
comp=Z,410nm,8.8s
DL2 LR LR
comp=Z,2µm,21.6s
DL2 LR LR
comp=Z,4µm,20.4s
DL2 LR LR
comp=Z,4µm,21.6s
AAK **Ala-Archa** 122.27 16 IAMs_20 IAMs_20 04 44 00.1
comp=Z,5µm,20.0s
MDOK **Medeo** 122.42 14 *e*PP PP 03 45 48.7 -3.9
baz=14
KPKS **Kokpek** 122.49 12 *e*PP PP 03 45 52.0 -0.9
baz=12
ZHN **Zhinishke** 122.72 13 *e*PP PP 03 45 53.4 -1.1
baz=13
SHLS **Shalkode** 122.94 12 *e*PP PP 03 45 55.9 -0.2
baz=11
BJT **Baijiatuau** 123.19 339 IAMs_20 IAMs_20 04 43 11.3
comp=Z,5µm,20.0s
WMQ **Urumqi** 123.44 5 *e*PKP PKiKP 03 44 20.7 +1.0
WMQ LR LR
comp=Z,6µm,20.7s
WMQ LR LR
comp=Z,4µm,22.5s
WMQ LR LR
comp=Z,7µm,27.5s
KMBO **Kilima Mbogo** 123.60 83 IAMs_20 IAMs_20 04 40 31.8
comp=Z,5µm,19.0s
HHC **Hu-ho-hao-te** 123.91 343 *e*PKP PKPdf 03 44 15.3 -5.2
HHC LR LR
comp=Z,9µm,17.1s
HHC LR LR
comp=Z,10µm,17.1s
HHC LR LR
comp=Z,8µm,18.4s
BTO **Baotou** 124.56 344 *e*PKP PKiKP 03 44 25.1 +3.1
BTO LR LR
comp=Z,17µm,21.2s
BTO LR LR
comp=Z,15µm,18.4s
KIBK **Kibwezi** 124.67 84 IAMs_20 IAMs_20 04 35 55.2
comp=Z,5µm,20.0s
ATD **Arta Tunnel** 124.68 66 IAMs_20 IAMs_20 04 35 16.1
comp=Z,4µm,21.0s
KSH **Kashi** 125.58 16 PKP PKiKP 03 44 29.4 +5.2
KSH PP PP 03 46 16.5 +2.7
KSH SS SS 04 03 13.9 +2.1
KSH AMB AMB
comp=Z,2µm,6.4s
KSH LR LR
comp=Z,2µm,18.5s
KSH LR LR
comp=Z,8µm,22.3s
KSH LR LR
comp=Z,5µm,21.0s
HNS **HongShan** 126.05 339 ⇑PKP PKiKP 03 44 28.6 +3.7
HNS AMB AMB
comp=Z,620nm,5.4s
HNS LR LR
comp=Z,5µm,21.0s
HNS LR LR
comp=Z,5µm,24.7s
TIA **Tai'an** 126.18 336 PKP PKPdf 03 44 23.7 -1.1
TIA PP PP 03 46 18.8 +1.0
TIA AMB AMB
comp=Z,800nm,5.7s
TIA LR LR
comp=Z,3µm,23.5s
TIA LR LR
comp=Z,2µm,22.8s
TIA LR LR
comp=Z,2µm,22.8s
GTA **Gaotai** 127.66 353 *e*PKP PKPdf 03 44 26.7 -1.1
GTA LR LR
comp=Z,2µm,23.3s
GTA LR LR
comp=Z,4µm,22.5s
GTA LR LR
comp=Z,3µm,23.4s
UOSS **Minazif** 128.08 44 IAMs_20 IAMs_20 04 46 49.6
comp=Z,3µm,19.0s
CTAO **Charters Tower** 128.57 254 PKPdf 03 44 29.7 -0.1
CTAO **Charters Tower** 128.57 254 PKIKP PKPdf 03 44 29.7 -0.1
SSE **Sheshan** 128.62 329 PKP PKiKP 03 44 31.0 +0.8
SSE PP PP 03 46 39.8 +5.6
SSE SS SS 04 03 53.5 +3.3
SSE AMB AMB
comp=Z,100nm,6.2s
SSE LR LR
comp=Z,2µm,19.1s
SSE LR LR
comp=Z,1µm,21.6s
NJ2 **Nanjing** 128.97 332 *e*PKP PKPdf 03 44 30.0 -0.2
NJ2 sPKP 03 44 34.0
NJ2 PP PP 03 46 40.2 +3.8
NJ2 SS SS 04 04 02.9 +8.6
NJ2 AMB AMB
comp=Z,300nm,3.8s
NJ2 LR LR
comp=Z,3µm,19.6s
NJ2 LR LR
comp=Z,5µm,21.1s
NJ2 LR LR
comp=Z,8µm,19.6s
LYN **LuoYang** 129.39 339 *e*PKP PKiKP 03 44 34.2 +2.5
LYN PP PP 03 46 39.7 +0.8
LYN SKKS 03 53 37.5
LYN AMB AMB
comp=Z,650nm,10.6s
LZH **Lanzhou** 130.30 348 ⇓PKP PKPdf 03 44 31.5 -1.4
LZH sPKP 03 44 38.0
LZH SKS **SKSdf** 03 51 41.5 -2.7
LZH AMB AMB
comp=Z,600nm,8.3s
LZH LR LR
comp=Z,6µm,17.7s
LZH LR LR
comp=Z,6µm,18.1s
LZH LR LR
comp=Z,9µm,20.3s
XAN **Xi'an** 131.00 342 PKP PKPdf 03 44 33.0 -1.1
XAN PKPab pPKPdf 03 44 38.5 -1.5
XAN PP PP 03 46 52.8 +3.5
XAN SS SS 04 04 25.8 +7.0
XAN AMB AMB
comp=Z,570nm,13.5s
XAN LR LR
comp=Z,6µm,22.9s
XAN LR LR
comp=Z,6µm,19.6s
XAN LR LR
comp=Z,9µm,21.0s
GOMU **GeErMu** 131.23 358 PKP PKiKP 03 44 39.8 +3.9
GOMU pPKP sPKPdf 03 44 55.2 +12
GOMU sPKP 03 44 58.6
GOMU PP PP 03 46 48.7 -2.3
GOMU SKS **SKSdf** 03 51 52.4 +6.1
GOMU SKKS **SKKSac** 03 53 49.6 +0.8
GOMU **GeErMu** 131.23 358 SS SS 04 04 22.1 +0.2
GOMU AMB AMB
comp=Z,20nm,5.0s
GOMU LR LR
comp=N,1µm,16.9s
GOMU LR LR
comp=E,1µm,22.8s
GOMU LR LR
comp=Z,1µm,17.5s
GOMU **GeErMu** 131.23 358 PKP PKPdf 03 44 33.9 -1.0
GOMU sPKP 03 44 40.9
GOMU SKS **SKSdf** 03 51 46.2 -0.1
GOMU SKKS **SKKSac** 03 53 46.8 -2.0
GOMU SS **SS** 04 04 26.4 +4.5
GOMU LR LR
comp=Z,4µm,22.9s
GOMU LR LR
comp=Z,2µm,19.1s
GOMU LR LR
comp=Z,2µm,19.1s
COEN **Coen** 131.23 263 PKPdf **PKiKP** 03 44 35.4 -0.5
STKA **Stephens Creek** 131.64 239 PKP **PKPdf** 03 44 34.1 -1.1
comp=Z,4.0nm,0.7s,baz=110,slow=5.6,SNR=10
STKA **Stephens Creek** 131.64 239 PKPdf **PKPdf** 03 44 35.0 -0.3
STKA **Stephens Creek** 131.64 239 PKIKP **PKPdf** 03 44 35.0 -0.3
WHN **Wuhan** 132.25 335 ⇓PKP **PKiKP** 03 44 40.3 +2.7
WHN PP **PP** 03 46 57.1 -0.4
WHN AMB AMB
comp=Z,1µm,6.4s
WHN LR LR
comp=Z,1µm,13.1s
WHN LR LR
comp=Z,7µm,16.2s
WHN LR LR
comp=Z,20µm,21.7s
SOCY **Socotra** 134.03 59 IAMs_20 IAMs_20 04 42 40.4
comp=Z,3µm,21.0s
ENH **Enshi** 134.31 340 PKPdf 03 44 40.7 +0.2
CD2 **Chengdu** 135.31 347 PKP PKPdf 03 44 42.2 -0.2
CD2 SKS **SKSdf** 03 51 52.1 -1.0
CD2 SS **SS** 04 05 11.9 +0.9
CD2 AMB AMB
comp=Z,530nm,6.4s
CD2 LR LR
comp=Z,5µm,22.7s
CD2 LR LR
comp=Z,7µm,24.6s
LSA **Lhasa** 137.70 2 IAMs_20 IAMs_20 04 56 43.1
comp=Z,2µm,20.0s
GYA **Guiyang** 138.76 341 ⇓PKP PKPdf 03 44 46.2 -2.7
GYA sPKP 03 44 55.0
GYA PP PP 03 47 39.0 +0.4
GYA SKKS 03 54 32.0
GYA SS **SS** 04 05 54.9 +2.5
GYA LR LR
comp=Z,4µm,24.9s
GYA LR LR
comp=Z,3µm,23.7s
GYA LR LR
comp=Z,3µm,27.2s
WRAB **Tennant Creek** 139.77 254 PKPdf 03 44 49.8 -0.9
WRAB **Tennant Creek** 139.77 254 PKIKP PKPdf 03 44 49.8 -0.9
WRA **Warramunga Arr** 139.78 254 PKhKP PKPpre 03 44 43.1
comp=Z,10nm,0.9s,baz=96,slow=2.5,SNR=22
WRA PKP PKPdf 03 44 50.3 -0.4
comp=Z,15nm,0.9s,baz=90,slow=2.7,SNR=14
AS31 **Alice Springs** 139.80 248 PKPdf PKPdf 03 44 50.1 -0.6
ASAR **Alice Springs** 139.80 248 PKhKP PKPpre 03 44 42.5
comp=Z,2.3nm,0.6s,baz=104,slow=3.1,SNR=17
PZH **PanZhiHua** 140.00 348 PKP PKPdf 03 44 49.7 -1.5
PZH PP PP 03 47 48.4 +2.3
PZH PKS PKSdf 03 48 24.1 -3.4
PZH SS SS 04 06 06.5 -0.3
PZH AMB AMB
comp=Z,560nm,5.9s
PZH LR LR
comp=Z,3µm,23.1s
PZH LR LR
comp=Z,3µm,22.0s
PZH LR LR
comp=Z,3µm,26.5s
SWI **Sorong** 140.26 284 PKP PKPdf 03 44 49.7 -2.1
KMI **Kunming** 141.12 346 ⇑PKP PKPdf 03 44 52.5 -0.9

KMI				sPKP		03 44 58.1	
KMI				AMB	AMB		
	comp=Z,290nm,7.4s						
KMI				LR	LR		
	comp=Z,3μm,22.0s						
KMI				LR	LR		
	comp=Z,2μm,19.8s						
KMI				LR	LR		
	comp=Z,3μm,31.4s						
MTN	**Manton Dam**	**142.83 266**		PKPdf	**PKPdf**	**03 44 54.0**	**-2.3**
FORT	**Forrest**	**143.06 235**		PKPdf	**PKPdf**	**03 44 56.3**	**0.0**
TNTI	**Ternate**	**143.32 289**		PKPdf	**PKPdf**	**03 44 56.0**	**-1.3**
AAI	**Ambon**	**144.04 282**		PKP	**PKPab**	**03 44 55.0**	**-1.0**
QIZ	**Qiongzhong**	**144.26 332**		PKP	**PKPab**	**03 44 56.4**	**-0.2**
QIZ				PP	**PP**	**03 48 14.2**	**+1.9**
QIZ				SS	SS	04 06 56.7	0.0
QIZ				AMB	AMB		
	comp=Z,690nm,9.6s						
QIZ				LR	LR		
	comp=Z,1μm,15.9s						
QIZ				LR	LR		
	comp=Z,2μm,22.3s						
QIZ				LR	LR		
	comp=Z,3μm,18.3s						
KNRA	**Kununurra**	**145.23 261**			**PKPbc**	**03 44 58.8**	**-1.3**
SANI	**Sanana**	**145.62 285**		PKP	**PKPdf**	**03 44 57.5**	**-3.8**
KMSI	**Cibinong**	**146.50 291**		PKP	**PKPdf**	**03 45 03.0**	**+0.2**
HYBB	**Hyderabad (bro**	**146.75 26**		*e*PKiKP	**PKiKP**	**03 45 08.1**	**+0.5**
HYBB				*e*PP	**PP**	**03 48 26.9**	**-0.1**
HYBB				*e*SKSdf	**SKSdf**	**03 52 11.6**	**-0.2**
CHTO	**Chiang Mai**	**148.03 349**			**PKPbc**	**03 45 06.9**	**-1.4**
CHTO	**Chiang Mai**	**148.03 349**		PKP2	**PKPbc**	**03 45 06.9**	**-1.4**
CMAR	**Chiang Mai Arr**	**148.38 349**		PKPbc	**PKPbc**	**03 45 08.2**	**-0.9**
	comp=Z,11nm,0.8s,baz=331,slow=3.3,SNR=27						
MRSI	**Marisa**	**148.39 293**		PKP	**PKPdf**	**03 45 01.3**	**-4.6**
TOLI2	**Tolitoli**	**149.15 295**		IAMs_20	IAMs_20	04 44 58.3	
	comp=Z,4μm,22.0s						
SOEI	**Soe**	**149.18 272**		PKPbc	**PKiKP**	**03 45 12.8**	**0.0**
SOEI	**Soe**	**149.18 272**		PKP	**PKPbc**	**03 45 11.4**	**-0.1**
APSI	**Ampana**	**149.24 290**		PKP	**PKPdf**	**03 45 07.0**	**-0.3**
BATI	**Baumata**	**149.84 272**		PKP	**PKPbc**	**03 45 13.1**	**+0.1**
MPSI	**Mapaga**	**150.28 294**		PKP	**PKPdf**	**03 45 08.2**	**-0.7**
MMRI	**Maumere**	**150.97 275**		PKP	**PKPbc**	**03 45 12.9**	**-2.8**
EDFI	**Ende, Flores**	**151.53 275**		PKP	**PKPdf**	**03 45 13.1**	**+2.1**
BNSI	**Bone**	**151.94 285**		PKP	**PKPdf**	**03 45 06.1**	**-5.4**
SPSI	**Sidrap Palu**	**152.11 286**		PKP	**PKPdf**	**03 45 10.3**	**-1.4**
BKSI	**Bulukumba**	**152.21 283**		PKP	**PKPbc**	**03 45 15.6**	**-3.0**
KAPI	**Kappang**	**152.47 284**			**PKPbc**	**03 45 17.3**	**-1.9**
KAPI	**Kappang**	**152.47 284**		PKIKP	**PKPbc**	**03 45 17.3**	**-1.9**
MBWA	**Marble Bar**	**153.14 248**			**PKPbc**	**03 45 18.6**	**-1.8**
WBSI	**Waikabubak, Su**	**153.91 274**		PKP	**PKPdf**	**03 45 15.2**	**+0.8**

*IDC **10** 03:28:04.3±1.7, 12°.71N×87°.13W, h0km, mb4.4/3, mbtmp4.5/4, ML4.8/1 Error ellipse: s-maj=76.3km s-min=24.8km az=50.0*
*INET **10** 03:28:06.1±1.3, 12°.82N×87°.03W, h3km±5km, MW5.0*
*NEIC **10** 03:28:07.0±2.7, 12°.86N±0°.02×86°.94W±0°.04, h10km±1km, mb5.2/15, Error ellipse: s-maj=7.4km s-min=3.5km az=259.0*

ISC 10 03:28:05.9±1.3, 12°.87N±0°.05×86°.98W±0°.05, h6km±8km, n49, σ1°37/53, mb5.1/12, 1C-1D, Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.18**	**201**	Pg		**Pg**	**03 28 09.1**	**-0.5**
CRIN	**San Cristobal**	**0.18**	**201**	*e*P		**Pg**	**03 28 09.1**	**-0.5**
CRIN				*e*S		**Sg**	**03 28 12.3**	**+0.3**
CRIN				IAML			03 28 19.0	
	comp=Z,12nm,0.7s							
CNGN	**Cerro Negro**	**0.46**	**143**	Pg		**Pg**	**03 28 14.3**	**-0.6**
APYN	**Apoyeque**	**0.88**	**136**	*e*P		**Pg**	**03 28 23.1**	**+0.1**
APYN				IAML			03 28 43.0	
	comp=Z,35μm,3.7s							
MATN	**Matagalpa**	**1.03**	**87**	Pg		**Pb**	**03 28 24.6**	**-1.7**
MATN	**Matagalpa**	**1.03**	**87**	*e*P		**Pb**	**03 28 25.8**	**-0.5**
MASN	**Masaya**	**1.20**	**137**	*e*P		**Pn**	**03 28 28.8**	**-0.5**
MASN				IAML			03 28 48.9	
	comp=Z,1μm,1.1s							
TGUH	**Tegucigalpa,Un**	**1.21**	**347**			**Pn**	**03 28 28.2**	**-1.4**
BOAB	**BOACO BROADBAN**	**1.35**	**108**			**Pn**	**03 28 30.4**	**-1.0**
COEB	**Comit de Eme**	**1.63**	**293**	*e*P		**Pn**	**03 28 34.0**	**-1.3**
SNET	**Serv Nac Est T**	**2.33**	**291**	Pn		**Pn**	**03 28 45.0**	**0.0**
ORTG	**Ortega, Santa**	**2.91**	**149**	Pn		**Pn**	**03 28 51.9**	**-0.9**
DUNO	**Dulce Nombre,**	**3.13**	**152**	Pn		**Pn**	**03 28 55.7**	**-0.2**
JTS	**Las Juntas de**	**3.24**	**142**	Pn		**Pn**	**03 28 57.4**	**0.0**
	comp=Z,113nm,0.3s,baz=341,slow=10,SNR=1.1							
JTS				Sn		**Sn**	**03 29 36.9**	**+0.4**
	comp=Z,21nm,0.3s,baz=270,slow=14,SNR=1.7							
	comp=Z,927nm,0.8s							
JTS	**Las Juntas de**	**3.24**	**142**			**Pn**	**03 28 56.4**	**-1.0**
RIMA	**Rio Macho**	**4.34**	**135**	Pn		**Pn**	**03 29 12.2**	**-0.5**
SRBA	**San Rafael, Bu**	**5.07**	**135**	Pn		**Pn**	**03 29 22.8**	**+0.1**
TXAR	**Lajitas Array**	**22.55**	**319**	P		**P**	**03 33 07.7**	**+0.7**
	comp=Z,9.3nm,1.0s,baz=144,slow=14,SNR=1.0							
	comp=Z,9.3nm,1.0s							
BINY	**Binghamton**	**30.75**	**16**	P		**P**	**03 34 21.9**	**-0.2**
BINY				IAmb		IAmb	03 34 25.8	
	comp=Z,39nm,1.1s							
X16A	**Lo Mia Camp, P**	**30.86**	**318**	P		**P**	**03 34 24.9**	**+1.5**
PV07	**Paradox Valley**	**31.92**	**327**	P		**P**	**03 34 32.9**	**+0.2**
SADO	**Sadowa**	**32.49**	**10**	P		**P**	**03 34 39.4**	**+2.1**
SADO				IAmb		IAmb	03 34 46.0	
	comp=Z,39nm,1.2s							
SADO	**Sadowa**	**32.49**	**10**	PcP		**P**	**03 34 39.9**	**+2.6**
	comp=Z,9.6nm,0.8s,baz=272,slow=21,SNR=1.4							
BAR	**Barrett**	**33.55**	**311**	P		**P**	**03 34 46.9**	**+0.1**
PFO	**Pinyon Flats O**	**33.86**	**313**	P		**P**	**03 34 47.8**	**-1.8**
PFO				IAmb		IAmb	03 34 48.8	
	comp=Z,23nm,1.1s							
REDW	**Red Top Meadow**	**36.70**	**330**	P		**P**	**03 35 14.7**	**+0.6**
SNOW	**Snow King Moun**	**36.72**	**331**	P		**P**	**03 35 14.9**	**+0.6**
SNOW				IAmb		IAmb	03 35 19.4	
	comp=Z,42nm,1.1s							
LLLB	**Lillooet**	**47.14**	**330**	P		**P**	**03 36 37.9**	**-1.2**
VA03	**San Esteban**	**48.02**	**161**	P		**P**	**03 36 47.1**	**+1.0**
VA03				IAmb		IAmb	03 36 53.1	
	comp=Z,29nm,1.0s							
MT03	**Universidad Ad**	**48.71**	**162**	P		**P**	**03 36 52.6**	**+1.2**
MT03				IAmb		IAmb	03 36 56.7	
	comp=Z,36nm,1.3s							
YKA	**Yellowknife Ar**	**53.33**	**344**	P		**P**	**03 37 26.5**	**+0.7**
	comp=Z,9.6nm,0.9s,baz=137,slow=7.4,SNR=2.6							
	comp=Z,9.6nm,0.9s							
PLCA	**Paso Flores**	**55.46**	**165**	P		**P**	**03 37 40.6**	**-1.0**
PLCA				IAmb		IAmb	03 37 48.6	
	comp=Z,29nm,1.5s							
DLBC	**Dease Lake**	**55.73**	**334**	P		**P**	**03 37 43.7**	**+0.3**
K27K	**Chicken**	**63.61**	**336**	P		**P**	**03 38 40.4**	**+2.9**
K27K				IAmb		IAmb	03 38 49.0	
	comp=Z,14nm,1.2s							
ESDC	**Sonseca Array**	**76.57**	**52**	P		**P**	**03 39 58.3**	**+0.7**
	comp=Z,3.6nm,1.0s,baz=270,slow=6.4,SNR=1.5							
	comp=Z,3.6nm,1.0s							
CLL	**Collm**	**86.21**	**38**	*e*P		**P**	**03 40 48.0**	**-0.3**
	comp=Z,34nm,2.0s							
CLL				*e*S		**S**	**03 51 23.0**	**-0.8**
XLT	**XiLinHaoTe**	**119.72**	**341**	*e*PKP		**PKiKP**	**03 46 58.4**	**+0.9**
XLT				SKS		**SKSdf**	**03 54 07.3**	**-3.0**
XLT				AMB	AMB			
	comp=Z,250nm,12.2s							
XLT				LR	LR			
	comp=Z,2μm,42.1s							
WMQ	**Urumqi**	**123.38**	**5**	*e*PKP		**PKiKP**	**03 47 04.7**	**0.0**
HHC	**Hu-ho-hao-te**	**123.86**	**343**	*e*PKP		**PKPdf**	**03 47 01.7**	**-3.8**
GTA	**Gaotai**	**127.61**	**353**	*e*PKP		**PKiKP**	**03 47 16.4**	**+3.1**
LZH	**Lanzhou**	**130.25**	**349**	*e*PKP		**PKPdf**	**03 47 17.1**	**-0.8**
CNSH	**ChangSha**	**134.86**	**335**	∥PKP		PKPpre	03 47 14.4	
CD2	**Chengdu**	**135.26**	**347**	PKP		**PKPdf**	**03 47 25.1**	**-2.3**
WRA	**Warramunga Arr**	**139.82**	**254**	PKP		**PKPdf**	**03 47 35.0**	**-1.0**
	comp=Z,2.7nm,0.8s,baz=89,slow=2.5,SNR=2.4							
ASAR	**Alice Springs**	**139.85**	**249**	PKP		**PKPdf**	**03 47 34.3**	**-1.6**
	comp=Z,3.4nm,0.9s,baz=95,slow=2.3,SNR=3.0							
PZH	**PanZhiHua**	**139.96**	**348**	PKP		**PKPdf**	**03 47 35.1**	**-1.1**
KMI	**Kunming**	**141.07**	**346**	⇑PKP		**PKiKP**	**03 47 42.8**	**+1.7**
HYBB	**Hyderabad (bro**	**146.69**	**26**	*e*PKPab		**PKPbc**	**03 47 49.6**	**-0.1**
HYBB				*ep*PKiKP		pPKPab	03 47 55.1	+2.3
HYBB				*e*PP		**PP**	**03 51 12.3**	**+0.6**
CMAR	**Chiang Mai Arr**	**148.33**	**349**	PKPbc		**PKPdf**	**03 47 50.8**	**0.0**
	comp=Z,3.0nm,0.4s,baz=20,slow=11,SNR=1.4							

IDC 10 03:28:58.5±49.0, 15°.64S×176°.81W, h0km, mb4.2/3, mbtmp4.2/3, MS3.9/1, Error ellipse: s-maj=915.6km s-min=171.6km az=77.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RAR	**Rarotonga**	**17.09**	**111**	LR		LR	03 37 57.6	
	comp=Z,439nm,21.6s,baz=108,slow=32							
STKA	**Stephens Creek**	**41.08**	**239**	P		P	03 36 43.8	-0.4
	2.0nm,0.7s,baz=82,slow=7.1,SNR=3.5							
	2.0nm,0.7s							
WRA	**Warramunga Arr**	**46.58**	**257**	P		P	03 37 28.2	-0.5
	0.9nm,0.7s,baz=91,slow=7.6,SNR=7.3							
	0.9nm,0.7s							
ASAR	**Alice Springs**	**46.91**	**252**	P		P	03 37 31.5	+0.3
	7.3nm,0.5s,baz=88,slow=8.1,SNR=104							
	7.3nm,0.5s							

*SSNC **10** 03:31:09.2±1.4, 17°.26N×72°.68W, h120km±139km, MD3.6, ML2.7*
*OSPL **10** 03:31:12.8±1.6, 17°.83N×72°.39W, h12km±5km, ML2.8*

ISC 10 03:31:09.3±2.0, 17°.8N±0°.1×72°.46W±0°.05, h15km±14km, n11, σ1°53/21, Haiti region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JAKH	**Jacmel**	**0.48**	**353**	*i* P		**Pb**	**03 31 20.6**	**+1.0**
JAKH				*e*S		**Sb**	**03 31 27.0**	**+0.5**
JAKH				IAML			03 31 27.9	
	comp=Z,883nm,0.3s							
LOPE2	**Hotel El Peder**	**0.73**	**68**	*i* P		**Pg**	**03 31 23.5**	**-0.1**
LOPE2				IAML			03 31 32.6	
	comp=Z,506nm,0.5s							
LOPE2				*e*S		**Sg**	**03 31 32.7**	**-0.7**
SDDR	**Presa de Saban**	**1.65**	**42**	*i* P		**Pn**	**03 31 38.5**	**+0.7**
SDDR				*e*S		**Sn**	**03 31 58.4**	**-0.4**
SDDR				IAML			03 32 03.3	
	comp=Z,125nm,0.9s							
LODA1	**ITESIL, Dajabo**	**1.92**	**22**	*i* P		**Pb**	**03 31 43.0**	**-1.0**
LODA1				*e*S		**Sn**	**03 32 03.8**	**-1.5**
BANI	**BANI**	**2.10**	**72**	*i* P		**Pn**	**03 31 45.6**	**+1.6**
BANI				IAML			03 32 19.0	
	comp=Z,86nm,2.8s							
MASC	**Masc**	**2.93**	**325**	*e*P		**Pn**	**03 31 57.3**	**+1.9**
MASC				*e*S		**Sb**	**03 32 35.5**	**-1.6**
MASC				IAML			03 32 36.4	
	comp=E,16nm,0.1s							
MASC				IAML			03 32 36.5	
	comp=N,5.5nm,0.4s							
MASC	**Masc**	**2.93**	**325**	*i* P		**Pn**	**03 31 57.1**	**+1.7**
MASC				*e*S		**Sn**	**03 32 29.6**	**-0.8**
GTBY	**Guantanamo Bay**	**3.31**	**311**	*e*P		**Pn**	**03 32 02.2**	**+1.6**
GTBY				*e*S		**Sn**	**03 32 41.3**	**+1.6**
GTBY	**Guantanamo Bay**	**3.31**	**311**	*i* P		**Pn**	**03 32 02.7**	**+2.1**
GTBY				*e*S		**Sn**	**03 32 39.7**	**0.0**
RCC	**Rio Carpintero**	**3.79**	**307**	*e*P		**Pn**	**03 32 08.1**	**+0.9**
RCC				*e*S		**Sn**	**03 32 51.0**	**-0.5**
RCC				IAML			03 32 53.0	
	comp=N,8.1nm,0.3s							
RCC				IAML			03 32 53.6	
	comp=E,6.9nm,0.4s							
LMGC	**Las Mercedes**	**4.88**	**299**	*e*P		**Pn**	**03 32 21.6**	**-0.6**
LMGC				*e*S		**Sn**	**03 33 15.0**	**-3.3**
LMGC				IAML			03 33 16.6	
	comp=E,4.4nm,0.3s							
LMGC				IAML			03 33 16.8	
	comp=N,3.5nm,0.3s							

*IDC **10** 03:34:17.4±0.8, 16°.30N×87°.21W, h0km, mb4.4/19, mbtmp4.4/23, ML4.0/4, Error ellipse: s-maj=23.7km s-min=16.3km az=40.0*
*NEIC **10** 03:34:20.2±2.6, 16°.41N±0°.06×87°.22W±0°.06, h10km±1km, mb4.7/38, Error ellipse: s-maj=11.0km s-min=9.5km az=219.0*
*GCG **10** 03:34:34.2±5.5, 14°.39N×88°.11W, h1km±999km, MD4.6*

ISC 10 03:34:19.3±0.4, 16°.39N±0°.05×87°.23W±0°.05, h10km, n190, σ1°55/185, mb4.6/32, North of Honduras

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TGUH	**Tegucigalpa,Un**	**2.32**	**181**	Pn		**Pn**	**03 34 59.2**	**+1.5**
PETF	**Flores**	**2.58**	**282**	Pn		**Pn**	**03 35 01.4**	**+0.2**
MRL	**Marmol**	**2.69**	**242**	*e*P		**Pn**	**03 35 01.7**	**-1.3**
MRL				*e*S		**Sn**	**03 35 31.4**	**-4.4**
ESQI	**Esquipulas**	**2.73**	**228**			**Pn**	**03 35 03.7**	**+0.4**
SNET	**Serv Nac Est T**	**3.31**	**216**	Pn		**Pn**	**03 35 11.7**	**+0.4**
NBG	**Las Nubes**	**3.50**	**240**	*e*P		**Pn**	**03 35 13.5**	**-0.6**
NBG				*e*S		Sn	03 35 38.5	-17
MATN	**Matagalpa**	**3.66**	**160**	Pn		**Pn**	**03 35 17.1**	**+0.9**
FUG	**Fuego 3**	**3.98**	**241**	*e*P		**Pn**	**03 35 20.1**	**-0.5**
FUG				*e*S		Sn	03 35 54.0	-13
BOAB	**BOACO BROADBAN**	**4.20**	**159**			**Pn**	**03 35 23.4**	**-0.1**
HUEH	**Huehuetenango**	**4.25**	**256**	Pn		**Pn**	**03 35 23.4**	**-0.9**
STG3	**Santiaguito 3,**	**4.50**	**249**	*e*P		**Pn**	**03 35 29.0**	**+1.2**
RTAL	**Retalhuleu**	**4.69**	**247**	Pn		**Pn**	**03 35 29.8**	**-0.4**
ESPN	**Las Esperanzas**	**5.04**	**145**	Pn		**Pn**	**03 35 34.0**	**-1.1**
JTS	**Las Juntas de**	**6.45**	**160**	Pg		**Pb**	**03 36 12.7**	**+0.9**
	3.0nm,0.3s,baz=227,slow=21,SNR=2.0							
JTS				Lg		Lg	03 37 33.7	
	1.8nm,0.3s,baz=240,slow=23,SNR=2.0							
CMIG	**Matias Romero**	**7.36**	**277**	Pn		**Pn**	**03 36 05.7**	**-1.3**
	1.7nm,0.3s,baz=115,slow=9.0,SNR=11							
CMIG				Sn		Sn	03 37 22.8	-7.9
	5.9nm,0.3s,baz=96,slow=9.4,SNR=2.1							
	4.0nm,0.3s							
SOR	**Soroa**	**7.51**	**31**	Pn		**Pn**	**03 36 07.8**	**-1.2**
MTDJ	**Mount Denham**	**9.44**	**77**	Pn		**Pn**	**03 36 36.7**	**+1.1**
BCIP	**Isla Barro Col**	**10.17**	**134**	Pn		**Pn**	**03 36 43.7**	**-1.9**
061Z	**Ochoppi**	**11.12**	**31**	Pn		**Pn**	**03 36 59.5**	**+1.0**
GTBY	**Guantanamo Bay**	**12.05**	**71**			**Pn**	**03 37 11.2**	**0.0**
656A	**Willston**	**13.62**	**18**	Pn		**Pn**	**03 37 31.5**	**-1.2**
553A	**Crawfordville**	**13.97**	**10**	Pn		**Pn**	**03 37 38.0**	**+0.5**
451A	**Vernon**	**14.23**	**5**	Pn		**Pn**	**03 37 41.8**	**+0.9**
441A	**DeRidder**	**15.30**	**340**	Pn		**Pn**	**03 37 54.9**	**-0.5**
441A				IAmb		IAmb	03 37 59.5	
	comp=Z,33nm,0.7s							
344A	**Westbrook Farm**	**15.33**	**349**	Pn		**Pn**	**03 37 58.0**	**+2.1**
250A	**Grady**	**15.54**	**3**	Pn		**Pn**	**03 37 58.4**	**-0.3**
250A				IAmb		IAmb	03 38 18.8	
	comp=Z,29nm,0.9s							
342A	**Flagon Creek P**	**15.62**	**344**	P		**Pn**	**03 38 02.1**	**+2.4**
342A				IAmb		IAmb	03 38 14.4	
	comp=Z,50nm,0.9s							
HKT	**Hockley**	**15.63**	**331**			**Pn**	**03 38 02.0**	**+2.2**
HKT				IAmb		IAmb	03 38 05.0	
	comp=Z,24nm,0.8s							
255A	**Hazlehurst**	**16.06**	**15**	Pn		**Pn**	**03 38 05.1**	**-0.2**
146A	**Union**	**16.26**	**354**	Pn		**Pn**	**03 38 08.4**	**+0.5**
146A				IAmb		IAmb	03 38 10.3	
	comp=Z,57nm,0.7s							
833A	**Chaparral WMA,**	**16.34**	**319**	Pn		**Pn**	**03 38 08.6**	**-0.4**
833A				IAmb		IAmb	03 38 12.0	
	comp=Z,57nm,0.9s							
LRAL	**Lakeview Retre**	**16.58**	**1**			**Pn**	**03 38 13.1**	**+1.2**
LRAL	**Lakeview Retre**	**16.58**	**1**	P		**P**	**03 38 14.3**	**-0.1**
	baz=181							
NATX	**Nacogdoches**	**16.73**	**338**	P		**Pn**	**03 38 15.4**	**+1.5**
NATX				IAmb		IAmb	03 38 18.6	
	comp=Z,58nm,0.7s							
NATX	**Nacogdoches**	**16.73**	**338**	P		**P**	**03 38 16.9**	**+0.8**
	baz=154							
Z47A	**Carrollton**	**16.76**	**358**			**Pn**	**03 38 15.7**	**+1.5**
Z51A	**Franklin**	**16.96**	**6**			**P**	**03 38 20.3**	**+1.6**
435B	**Jarrell**	**17.17**	**328**	P		**P**	**03 38 21.3**	**+0.3**
435B				IAmb		IAmb	03 38 23.1	
	comp=Z,73nm,0.8s							
435B	**Jarrell**	**17.17**	**328**	P		**P**	**03 38 22.0**	**+1.0**
	baz=144							
DR12	**Loma Pena Alta**	**17.19**	**79**			**P**	**03 38 22.3**	**+0.9**
GOGA	**Godfrey**	**17.29**	**11**	Pn		**Pn**	**03 38 20.4**	**-0.4**
GOGA	**Godfrey**	**17.29**	**11**	P		**P**	**03 38 24.1**	**+1.8**
	baz=192							
Z41A	**Richland Creek**	**17.53**	**344**	P		**P**	**03 38 28.0**	**+3.0**
	baz=162							
SDV	**Santo Domingo**	**17.82**	**113**	P		**Pn**	**03 38 27.1**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=1.0,slow=15,SNR=1.4							
	comp=Z,5.9nm,0.7s							
CCAR	**Cane Creek**	**17.93**	**348**	P		**P**	**03 38 32.0**	**+2.6**
X48A	**Hartselle**	**17.99**	**0**			**P**	**03 38 31.9**	**+1.9**
WHTX	**Lake Whitney,**	**18.10**	**331**	P		**P**	**03 38 35.0**	**+3.7**
	baz=147,SNR=14							
JCT	**Junction City**	**18.14**	**323**	P		**P**	**03 38 34.8**	**+3.0**
	baz=138							

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
OXF	**Oxford**	**18.15**	**354**	P		**P**	**03 38 35.6**	**+3.7**
	baz=173							
X40A	**Basin Creek Fa**	**18.71**	**345**	P		**Pn**	**03 38 41.4**	**+3.0**
	baz=163							
MIAR	**Mount Ida**	**18.96**	**344**	P		**Pn**	**03 38 44.5**	**+3.1**
	baz=161							
W41B	**Gary Mavity, V**	**19.24**	**347**	P		**Pn**	**03 38 46.9**	**+2.2**
	baz=165							
KMSC	**Kings Mountain**	**19.41**	**15**	P		**Pn**	**03 38 47.9**	**+1.1**
	baz=197							
TKL	**Tuckaleechee C**	**19.44**	**8**	P		**Pn**	**03 38 47.9**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=225,slow=14,SNR=2.4							
TKL				S		**Sn**	**03 42 15.0**	**-10**
	comp=Z,4.3nm,0.7s,baz=93,slow=11,SNR=4.0							
	comp=Z,17nm,1.1s							
WVT	**Waverly**	**19.67**	**359**	P		**Pn**	**03 38 51.7**	**+1.7**
	baz=178							
ABTX	**Abilene, Hawle**	**19.69**	**327**	P		**Pn**	**03 38 51.9**	**+1.6**
	baz=142							
TXAR	**Lajitas Array**	**19.85**	**313**	P		**Pn**	**03 38 52.7**	**+0.5**
	comp=Z,0.9nm,0.3s,baz=129,slow=11,SNR=36							
TXAR				S		S	03 42 22.0	-12
	comp=Z,0.3nm,0.4s,baz=99,slow=14,SNR=2.5							
	comp=Z,18nm,0.8s							
U40A	**Yellville**	**20.51**	**347**	P		Pn	03 39 01.1	+1.3
	baz=164,SNR=5.6							
HHAR	**Hobbs**	**20.69**	**345**	IAmb		IAmb	03 39 03.5	
	comp=Z,52nm,0.9s							
TUL1	**Leonard**	**20.89**	**340**	P		Pn	03 39 04.8	+0.6
	baz=156							
WMOK	**Wichita Mounta**	**21.00**	**333**	P		**P**	**03 39 05.7**	**+2.6**
	baz=148							
BLA	**Blacksburg**	**21.60**	**15**	P		**P**	**03 39 12.5**	**+3.0**
	baz=198							
CCM	**Cathedral Cave**	**21.87**	**351**	P		**P**	**03 39 14.8**	**+2.4**
	baz=170							
MSTX	**Muleshoe**	**22.40**	**324**	P		**P**	**03 39 20.2**	**+2.0**
	baz=138							
MNTX	**Cornudas Mount**	**22.46**	**316**	P		**P**	**03 39 20.0**	**+1.2**
	baz=129							
AMTX	**Amarillo**	**22.51**	**328**	P		**P**	**03 39 20.9**	**+1.6**
	baz=141							
P49A	**Miami Univ. Ec**	**23.16**	**5**	P		**P**	**03 39 28.3**	**+2.2**
	baz=186							
P52A	**Corning**	**23.58**	**10**	P		**P**	**03 39 31.7**	**+1.5**
	baz=192							
O48B	**Farmland**	**23.85**	**4**	P		**P**	**03 39 34.1**	**+1.3**
	baz=185							
HDIL	**Hopedale**	**24.15**	**356**	P		**P**	**03 39 37.4**	**+1.8**
	baz=175							
O53A	**New Philadelph**	**24.34**	**11**	P		**P**	**03 39 39.9**	**+2.5**
	baz=194							
121A	**Cookes Peak, D**	**24.59**	**315**	P		**P**	**03 39 42.0**	**+2.0**
121A				IAmb		IAmb	03 39 44.0	
	comp=Z,15nm,0.8s							
121A	**Cookes Peak, D**	**24.59**	**315**	P		**P**	**03 39 42.5**	**+2.5**
	baz=126,SNR=7.0							
LENM	**Lemitar**	**25.06**	**319**	P		**P**	**03 39 45.8**	**+1.6**
ANMO	**Albuquerque**	**25.25**	**321**	P		**P**	**03 39 47.9**	**+2.0**
	baz=132							
SSPA	**Standing Stone**	**25.48**	**17**	P		**P**	**03 39 50.2**	**+2.4**
	baz=201							
M53A	**WI Miller and**	**25.60**	**11**	P		**P**	**03 39 50.9**	**+2.2**
	baz=195							
ERPA	**Erie**	**26.39**	**12**	P		**P**	**03 39 57.6**	**+1.7**
	baz=196							
JFWS	**Jewell Farm**	**26.56**	**355**	P		**P**	**03 39 58.0**	**+0.5**
	baz=174							
TUC	**Tucson**	**26.59**	**311**	P		**P**	**03 39 58.7**	**+0.7**
	baz=121							
SADO	**Sadowa**	**29.10**	**12**	P		**P**	**03 40 21.4**	**+1.2**
	comp=Z,15nm,0.5s,baz=215,slow=8.7,SNR=17							
	comp=Z,15nm,0.5s							
SPMN	**Marine on St.**	**29.13**	**352**	P		**P**	**03 40 20.7**	**+0.3**
	baz=169							
F33A	**5 Mile Ranch,**	**30.33**	**347**	IAmb		IAmb	03 40 32.2	
	comp=Z,18nm,0.8s							
TPFO	**Pinon Flats**	**31.39**	**309**	P		**P**	**03 40 42.1**	**+1.3**
	baz=116							
PSUT	**Pine Spring**	**32.

baz=115
INK Inuvik 59.54 342 P **P** 03 44 23.7 +1.0
baz=126
L27K Beaver Creek, 59.81 335 P **P** 03 44 25.7 +1.0
baz=115
BMRM Bremner River 60.18 332 P **P** 03 44 28.1 +0.8
baz=111
K27K Chicken 60.32 336 P **P** 03 44 28.9 +0.8
baz=115
KLU Klutina 60.97 332 P **P** 03 44 33.4 +0.8
baz=110
DOT Dot Lake 60.97 335 IAmb IAmb 03 44 34.5
comp=Z,7.4nm,0.9s
SCRK Sand Creek 61.07 335 P **P** 03 44 34.6 +1.2
baz=114
J26L Joseph Creek 61.11 336 P **P** 03 44 34.0 +0.4
baz=114
PAX Paxson 61.30 334 P **P** 03 44 35.4 +0.5
baz=112
RIDG Independent Ri 61.33 335 P **P** 03 44 35.7 +0.7
baz=112,SNR=6.2
K24K Donnelly Dome 61.73 335 P **P** 03 44 38.6 +0.9
baz=112
J25K Salcha River, 61.87 335 P **P** 03 44 39.5 +0.8
baz=112,SNR=5.1
HDA Harding Lake 62.43 335 IAmb IAmb 03 44 43.4
comp=Z,4.2nm,0.9s
HDA Harding Lake 62.43 335 P **P** 03 44 42.9 +0.5
baz=111
IL31 62.54 335 P **P** 03 44 43.4 +0.4
IL31 IAmb IAmb 03 44 44.6
comp=Z,6.5nm,1.1s
ILAR Eielson Array 62.54 335 P **P** 03 44 43.5 +0.4
comp=Z,2.7nm,0.8s,baz=110,slow=5.3,SNR=16
comp=Z,2.7nm,0.8s
ILAR Eielson Array 62.54 335 P **P** 03 44 43.3 +0.2
SUMG Summit 62.75 15 P **P** 03 44 44.7 -0.1
SUMG Summit 62.75 15 *i* P **P** 03 44 43.6 -1.2
SUMG IAmb IAmb 03 44 46.5
comp=Z,23nm,1.2s
POKR Poker Plat Res 62.88 336 P **P** 03 44 46.0 +0.7
baz=111
MCK McKinley 63.03 334 P **P** 03 44 46.8 +0.4
baz=108
Q20K Shuyak Island 63.26 328 P **P** 03 44 48.2 +0.2
baz=103
H24K Noodor Dome 63.30 336 P **P** 03 44 48.5 +0.3
baz=110
TRF Thorofare Moun 63.52 333 P **P** 03 44 50.3 +0.4
baz=107
I23K Minto, Yukon-K 63.66 335 P **P** 03 44 51.1 +0.7
I23K IAmb IAmb 03 44 52.3
comp=Z,7.9nm,0.9s
I23K Minto, Yukon-K 63.66 335 P **P** 03 44 51.3 +0.8
baz=109
SKT Skwentna 63.66 332 P **P** 03 44 50.4 -0.2
baz=105
EUNU Eureka 63.70 0 P **P** 03 44 51.3 +0.7
H23K Yukon River 63.95 336 P **P** 03 44 52.9 +0.4
baz=109
BPAW Bear Paw Mtn. 64.00 334 IAmb IAmb 03 44 53.7
comp=Z,6.2nm,0.9s
BPAW Bear Paw Mtn. 64.00 334 P **P** 03 44 53.2 +0.4
baz=107,SNR=5.4
MLY Manley 64.17 335 P **P** 03 44 54.4 +0.4
baz=107
PPLA Purkeypile 64.19 333 P **P** 03 44 53.9 -0.4
baz=105
CHUM Lake Minchumin 64.50 334 P **P** 03 44 55.4 -0.7
baz=105
COLD Coldfoot 64.65 337 P **P** 03 44 58.0 +1.0
baz=109
I21K Tanana 64.72 335 P **P** 03 44 57.8 +0.3
baz=106
N19K Bonanza Creek 64.76 330 P **P** 03 44 57.7 -0.2
baz=102
L20K Farewell, AK 64.85 332 P **P** 03 44 58.4 0.0
baz=103
M19K Big River Lodg 64.95 331 P **P** 03 44 59.1 0.0
baz=102
K20K Telida 65.13 333 P **P** 03 45 00.2 0.0
baz=103
H21K Melozitna Rive 65.18 335 P **P** 03 45 00.7 +0.2
baz=106
L19K White Mountain 65.22 331 P **P** 03 45 01.3 +0.4
baz=102
J20K Nowinta River 65.36 334 P **P** 03 45 02.0 +0.4
baz=104
N18K Kilae Creek 65.42 330 P **P** 03 45 02.3 +0.2
baz=100
O17K Koliganek Bris 65.85 329 P **P** 03 45 04.7 -0.2
baz=99
TTA Tatalina 65.90 332 P **P** 03 45 04.6 -0.7
baz=101
SCO Scoresbysund 66.48 19 *i* P **P** 03 45 05.2 -3.5
SCO IAmb IAmb 03 45 10.2
comp=Z,9.5nm,1.0s
A21K Barrow 68.02 341 P **P** 03 45 18.2 -0.2
baz=104
DBG Daneborg 68.17 16 *i* P **P** 03 45 18.2 -1.2
DAG Danmarks Havn 69.29 13 *i* P **P** 03 45 25.0 -1.3
DAG IAmb IAmb 03 45 26.6
comp=Z,3.3nm,0.6s
EKA Eskdalemuir Ar 73.34 36 P **P** 03 45 50.4 -0.8
comp=Z,4.6nm,0.8s,baz=270,slow=5.8,SNR=17
comp=Z,4.6nm,0.8s
ESDC Sonseca Array 74.62 53 P **P** 03 45 59.7 +0.6
comp=Z,2.2nm,0.8s,baz=286,slow=6.0,SNR=15
comp=Z,2.2nm,0.8s
ESDC Sonseca Array 74.62 53 P **P** 03 45 59.2 +0.1
ESBB Sonseca Array 74.63 53 P **P** 03 45 58.8 -0.3
ESBB IAmb IAmb 03 46 09.6
comp=Z,4.0nm,0.8s
NB2 NORSAR Subarra 79.84 29 P **P** 03 46 28.8 +0.8
comp=Z,4.0nm,0.9s,baz=287,slow=5.6
NOA NORSAR Array B 79.84 29 P **P** 03 46 28.9 +0.9
comp=Z,2.1nm,0.8s,baz=285,slow=5.3,SNR=7.4
comp=Z,2.1nm,0.8s
HFS Hagfors 81.28 30 P **P** 03 46 36.2 +0.6
comp=Z,4.1nm,0.8s,baz=286,slow=5.9,SNR=6.3
comp=Z,4.1nm,0.8s
ARCES ARCESS Array B 82.41 19 P **P** 03 46 41.6 +0.2
comp=Z,2.0nm,0.6s,baz=306,slow=4.2,SNR=14
comp=Z,2.0nm,0.6s
ARCES ARCESS Array B 82.41 19 IAmb IAmb 03 47 04.1
comp=Z,12nm,1.4s
GERES GERESS Array B 84.82 41 P **P** 03 46 54.6 +0.2
comp=Z,0.9nm,0.8s,baz=241,slow=7.2,SNR=4.7
comp=Z,0.9nm,0.8s
TORD Torodi Ar. Bea 85.36 78 P **P** 03 46 56.1 -1.5
comp=Z,0.5nm,0.9s,baz=281,slow=5.0,SNR=1.7
comp=Z,0.5nm,0.9s
FINES FINESS Array B 86.36 26 P **P** 03 47 01.5 -0.1
comp=Z,1.5nm,0.6s,baz=259,slow=1.9,SNR=4.8
comp=Z,1.5nm,0.6s
WRA Warramunga Arr 140.41 258 PKhKP PKPpre 03 53 41.7
comp=Z,0.6nm,0.9s,baz=86,slow=4.0,SNR=2.2
WRA PKP **PKPdf** **03 53 49.5 -0.2**
comp=Z,1.2nm,0.9s,baz=86,slow=2.1,SNR=7.2
ASAR Alice Springs 140.78 253 PKhKP PKPpre 03 53 42.1
comp=Z,0.8nm,0.8s,baz=103,slow=3.0,SNR=3.7
ASAR PKP **PKPdf** **03 53 50.1 -0.2**
comp=Z,1.0nm,0.8s,baz=95,slow=2.3,SNR=4.1
CMAR Chiang Mai Arr 144.84 350 PKP **PKPab** **03 53 56.6 +0.1**
comp=Z,2.7nm,0.3s,baz=329,slow=3.0,SNR=7.0
CMAR Chiang Mai Arr 144.84 350 **PKPab** **03 53 55.9 -0.6**
KNRA Kununurra 145.43 266 PKPbc **PKPbc** **03 53 57.8 -0.7**

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*SNET **10** 03:37:12.1±2.3, 13°.16N×86°.87W, h12km±24km, ML4.1, ML4.1*
UCR 10 03:37:20.6±0.8, **13°.21N×87°.41W, h14**km±52km, **ML3.8, mb4.7**(NEIC), **Honduras**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNCH	**Conchagua**	**0.42**	**279**	*e*P	Pg	03 37 29.0	-0.1
CNCH				*e*S	Sn	03 37 44.7	+4.7
CNCH				IAML		03 37 46.5	
	comp=Z,13μm,0.5s						
CNCH	**Conchagua**	**0.42**	**279**	*e*P	Pg	03 37 29.0	-0.1
CNCH				*e*S	Sn	03 37 44.7	+4.7
CNCH				IAML		03 37 46.5	
	comp=Z,13μm,0.5s						
LCND	**La Caada**	**0.48**	**282**	*e*P	Pg	03 37 30.0	-0.2
LCND				*e*S	Sn	03 37 43.5	+2.2
LCND				IAML		03 37 47.0	
	comp=Z,6μm,0.4s						
LCY	**Lacayo**	**0.89**	**284**	*e*P	Pg	03 37 36.1	-1.8
LCY	**Lacayo**	**0.89**	**284**	*e*P	Pg	03 37 36.1	-1.8
PACA	**Pacayal**	**0.93**	**286**	*e*P	Pb	03 37 38.0	-0.5
PACA				IAML		03 38 03.5	
	comp=Z,10μm,0.5s						
PACA	**Pacayal**	**0.93**	**286**	*e*P	Pb	03 37 38.0	-0.5
PACA				IAML		03 38 03.5	
	comp=Z,10μm,0.5s						
CAHU	**Cacacuatique**	**0.96**	**305**	*e*P	Pb	03 37 38.0	-1.1
CAHU	**Cacacuatique**	**0.96**	**305**	*e*P	Pb	03 37 38.0	-1.1
COEB	**Comit de Eme**	**1.13**	**285**	*e*P	Pb	03 37 41.1	-0.9
COEB				*e*S	Sn	03 38 01.8	+4.2
COEB				IAML		03 38 05.9	
	comp=Z,567nm,0.4s						
COEB	**Comit de Eme**	**1.13**	**285**	*e*P	Pb	03 37 41.1	-0.9
COEB				*e*S	Sn	03 38 01.8	+4.2
COEB				IAML		03 38 05.9	
	comp=Z,567nm,0.4s						
COEG	**Centro de Oper**	**1.49**	**286**	*e*P	Pn	03 37 47.0	-0.1
COEG				*e*S	Sg	03 38 12.6	+3.8
COEG				IAML		03 38 15.6	
	comp=Z,638nm,0.5s						
COEG	**Centro de Oper**	**1.49**	**286**	*e*P	Pn	03 37 47.0	-0.1
COEG				*e*S	Sg	03 38 12.6	+3.8
COEG				IAML		03 38 15.6	
	comp=Z,638nm,0.5s						

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*IDC **10** 03:39:27.5±0.8, 12°.98N×86°.91W, h0km, mb4.0/16, mbtmp4.0/18, ML4.2/2, Error ellipse: s-maj=28.1km s-min=13.2km az=59.0*
*GCG **10** 03:39:28.6±4.0, 11°.99N×87°.21W, h18km±999km, MD4.6*
*UCR **10** 03:39:28.8±1.1, 12°.99N×86°.89W, h10km, ML4.9, mb4.6(NEIC)*
*SNET **10** 03:39:28.4±2.8, 13°.00N×86°.96W, h0km±22km, ML5.1, ML5.1*
*INET **10** 03:39:29.4±1.0, 12°.82N×87°.08W, h7km±3km, MW4.5*
*NEIC **10** 03:39:30.9±2.2, 12°.84N±0°.06×86°.93W±0°.03, h10km±1km, mb4.6/38, Md5.1(SNET), Error ellipse: s-maj=10.8km s-min=3.0km az=196.0*
ISC 10 03:39:29.1±1.2, **12°.89N**±0°.03×**86°.98W**±0°.03, **h6**km±8km, **n151**, σ1≥**41**/173, **mb4.4**/29, **Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**0.20**	**201**		**Pg**	**03 39 33.3**	**+0.2**
CRIN	**San Cristobal**	**0.20**	**201**	*e*P	**Pg**	**03 39 33.4**	**+0.3**
CNGN	**Cerro Negro**	**0.47**	**145**		**Pb**	**03 39 39.3**	**-0.6**
CNGN	**Cerro Negro**	**0.47**	**145**	*e*P	**Pb**	**03 39 39.4**	**-0.6**
CNGN				*e*S	**Sb**	**03 39 47.2**	**0.0**
COPN	**Copaltepe**	**0.80**	**152**	*e*P	**Pg**	**03 39 44.3**	**-0.1**
APYN	**Apoyeque**	**0.89**	**137**	*e*P	**Pg**	**03 39 46.5**	**+0.3**
APYN				*e*S	**Sb**	**03 40 00.1**	**+0.9**
CNCH	**Conchagua**	**0.92**	**295**	*e*P	**Pg**	**03 39 46.3**	**-0.5**
CNCH				*e*S	**Sb**	**03 40 00.3**	**+0.1**
CNCH				IAML		03 40 05.9	
	comp=Z,148μm,0.5s						
CNCH	**Conchagua**	**0.92**	**295**	*e*P	**Pg**	**03 39 46.3**	**-0.5**
CNCH				*e*S	**Sb**	**03 40 00.3**	**+0.1**
CNCH				IAML		03 40 05.9	
	comp=Z,148μm,0.5s						
HUEN		**0.96**	**125**	*e*P	**Pb**	**03 39 48.1**	**0.0**
HUEN				*e*S	**Sn**	**03 40 03.0**	**-0.1**
LCND	**La Caada**	**0.98**	**295**	*e*P	**Pg**	**03 39 47.0**	**-1.0**
LCND				*e*S	**Sb**	**03 40 01.6**	**-0.3**
LCND				IAML		03 40 04.2	
	comp=Z,64μm,0.4s						
LCND	**La Caada**	**0.98**	**295**	*e*P	**Pg**	**03 39 47.0**	**-1.0**
LCND				*e*S	**Sb**	**03 40 01.6**	**-0.3**
LCND				IAML		03 40 04.2	
	comp=Z,64μm,0.4s						
MATN	**Matagalpa**	**1.03**	**88**		**Pg**	**03 39 48.7**	**-0.1**
CRUN	**El Crucero**	**1.12**	**144**	*e*P	**Pg**	**03 39 49.3**	**-1.2**
TGUH	**Tegucigalpa,Un**	**1.20**	**346**	Pn	**Pb**	**03 39 52.6**	**+0.2**
BOAB	**BOACO BROADBAN**	**1.35**	**109**	Pn	**Pn**	**03 39 54.0**	**-0.6**
BOAB	**BOACO BROADBAN**	**1.35**	**109**	*e*P	**Pn**	**03 39 54.1**	**-0.5**
LCY	**Lacayo**	**1.39**	**293**	*e*P	**Pn**	**03 39 54.1**	**-1.2**
LCY	**Lacayo**	**1.39**	**293**	*e*P	**Pn**	**03 39 54.1**	**-1.2**
PACA	**Pacayal**	**1.43**	**294**	*e*P	**Pn**	**03 39 54.6**	**-1.2**
PACA				*e*S	**Sg**	**03 40 15.4**	**+0.2**
PACA				IAML		03 40 22.0	
	comp=Z,114μm,0.6s						
PACA	**Pacayal**	**1.43**	**294**	*e*P	**Pn**	**03 39 54.6**	**-1.2**
PACA				*e*S	**Sg**	**03 40 15.4**	**+0.2**
PACA				IAML		03 40 22.0	
	comp=Z,114μm,0.6s						
CAHU	**Cacacuatique**	**1.49**	**306**	*e*P	**Pn**	**03 39 55.7**	**-0.9**
CAHU	**Cacacuatique**	**1.49**	**306**	*e*P	**Pn**	**03 39 55.7**	**-0.9**
COEB	**Comit de Eme**	**1.63**	**292**	*e*P	**Pn**	**03 39 57.5**	**-1.1**
COEB				*e*S	**Sn**	**03 40 20.0**	**0.0**
COEB				IAML		03 40 21.8	
	comp=Z,7μm,0.4s						
COEB	**Comit de Eme**	**1.63**	**292**	*e*P	**Pn**	**03 39 57.5**	**-1.1**
COEB				*e*S	**Sn**	**03 40 20.0**	**0.0**
COEB				IAML		03 40 21.8	
	comp=Z,7μm,0.4s						
PQSS	**Presa 15 de Se**	**1.71**	**296**	*e*P	**Pn**	**03 39 59.4**	**-0.1**
PQSS	**Presa 15 de Se**	**1.71**	**296**	*e*P	**Pn**	**03 39 59.4**	**-0.1**
CONN	**Concepcion**	**1.86**	**135**	*e*S	**Sb**	**03 40 26.6**	**-0.7**
ACON	**Acoyapa**	**1.98**	**117**		**Pn**	**03 40 03.8**	**+0.5**
COEG	**Centro de Oper**	**1.99**	**292**	*e*P	**Pn**	**03 40 02.6**	**-0.9**
COEG				*e*S	**Sb**	**03 40 30.1**	**-0.8**
COEG				IAML		03 40 38.2	
	comp=Z,7μm,0.4s						
COEG	**Centro de Oper**	**1.99**	**292**	*e*P	**Pn**	**03 40 02.6**	**-0.9**
COEG				*e*S	**Sb**	**03 40 30.1**	**-0.8**
COEG				IAML		03 40 38.2	
	comp=Z,7μm,0.4s						
SNET	**Serv Nac Est T**	**2.33**	**290**		**Pn**	**03 40 08.5**	**+0.3**
LALI	**Alcalda de L**	**2.36**	**285**	*e*P	**Pn**	**03 40 08.6**	**+0.2**
LALI				*e*S	**Sn**	**03 40 38.9**	**+1.1**
LALI	**Alcalda de L**	**2.36**	**285**	*e*P	**Pn**	**03 40 08.6**	**+0.2**
LALI				*e*S	**Sn**	**03 40 38.9**	**+1.1**
BUAI	**Buenos Aires**	**2.57**	**141**	*e*P	**Pn**	**03 40 11.9**	**+0.6**
GBSS	**Finca Las Img**	**2.57**	**144**	*e*P	**Pn**	**03 40 11.1**	**-0.2**
BUEV	**Buena Vista**	**2.58**	**143**	*e*P	**Pn**	**03 40 12.1**	**-0.4**
LAPC	**Finca la Perla**	**2.59**	**144**	*e*P	**Pn**	**03 40 11.2**	**-0.5**
GPS2	**Hotel Rincn d**	**2.65**	**143**	*e*P	**Pn**	**03 40 12.7**	**+0.2**
ESPN	**Las Esperanzas**	**2.70**	**104**	Pn	**Pn**	**03 40 12.8**	**-0.4**
CEVE	**Cerro Verde**	**2.74**	**290**	*e*S	**Sb**	**03 40 53.9**	**+1.2**
CEVE				IAML		03 41 04.1	
	comp=Z,3μm,0.4s						
VMAR	**Armenia, Volca**	**2.75**	**138**	*e*P	**Pn**	**03 40 14.7**	**+0.8**
LIM1	**Limonal**	**2.75**	**142**	*e*P	**Pn**	**03 40 14.2**	**+0.2**
GUAB	**Guayabo de Bag**	**2.76**	**142**	*e*P	**Pn**	**03 40 14.2**	**+0.2**
HORNC	**Hornillas**	**2.79**	**141**	*e*P	**Pn**	**03 40 14.9**	**+0.5**
COLC	**Colonia**	**2.81**	**142**	*e*P	**Pn**	**03 40 15.7**	**+1.0**
COLC				*e*S	**Sb**	**03 40 53.1**	**-1.5**
ESQI	**Esquipulas**	**2.84**	**306**	Pn	**Pn**	**03 40 16.1**	**+1.0**
CUI	**Cuipilapa**	**2.84**	**141**	*e*P	**Pn**	**03 40 15.8**	**+0.7**
CUI				*e*S	**Sb**	**03 40 53.2**	**-2.3**
PTEN	**Parque Tenorio**	**2.91**	**138**	*e*P	**Pn**	**03 40 17.4**	**+1.3**
ORTG	**Ortega, Santa**	**2.92**	**149**	Pn	**Pn**	**03 40 16.6**	**+0.4**
ACAL	**Aguas Claras**	**2.94**	**139**	*e*P	**Pn**	**03 40 17.5**	**+1.0**
GUAI	**GUAI**	**2.97**	**151**	*e*P	**Pn**	**03 40 17.3**	**+0.4**
GUAI				*e*S	**Sn**	**03 40 54.1**	**+1.2**
SAJU	**San Juanillo,**	**3.07**	**156**	*e*P	**Pn**	**03 40 18.4**	**+0.3**
DUNO	**Dulce Nombre,**	**3.15**	**152**		**Pn**	**03 40 20.0**	**+0.7**
JTS	**Las Juntas de**	**3.25**	**142**	Pn	**Pn**	**03 40 20.5**	**-0.4**
	comp=Z,101nm,0.3s,baz=34,slow=10,SNR=46						
JTS				Sn	**Sn**	**03 40 59.5**	**-0.4**
	comp=Z,19nm,0.3s,baz=40,slow=21,SNR=1.5						
	comp=Z,277nm,0.4s						
JTS	**Las Juntas de**	**3.25**	**142**	Pn	**Pn**	**03 40 21.3**	**+0.5**
JTS	**Las Juntas de**	**3.25**	**142**	*e*P	**Pn**	**03 40 21.7**	**+0.9**
CEDE	**Laguna Cedeo**	**3.26**	**137**	*e*P	**Pn**	**03 40 22.2**	**+1.2**
CASO	**Castillo**	**3.28**	**138**	*e*P	**Pn**	**03 40 21.9**	**+0.7**
FORC	**Fortuna**	**3.30**	**137**	*e*P	**Pn**	**03 40 21.6**	**+0.2**
INDI	**Punta indio, G**	**3.33**	**154**	*e*P	**Pn**	**03 40 22.2**	**+0.3**
MRL	**Marmol**	**3.41**	**310**	*e*P	**Pb**	**03 40 29.0**	**-1.2**
MRL				*e*S	**Sb**	**03 41 14.3**	**+2.2**
LAFE	**Finca La Fe, P**	**3.67**	**146**	*e*P	**Pn**	**03 40 27.7**	**+1.2**
NBG	**Las Nubes**	**3.69**	**298**	*e*P	**Pn**	**03 40 30.2**	**+3.2**
NBG				*e*S	**Sb**	**03 41 22.7**	**+2.8**
SRA1	**San Ramn**	**3.71**	**138**	*e*P	**Pn**	**03 40 29.9**	**+2.7**
PCG	**Pacaya**	**3.83**	**293**	*e*P	**Pn**	**03 40 29.5**	**+0.6**
FUG	**Fuego 3**	**4.07**	**293**	*e*P	**Pn**	**03 40 30.9**	**-1.2**
FUG				*e*S	**Sn**	**03 41 15.3**	**-4.9**
CVTR	**Volcan Turrial**	**4.25**	**132**	Pn	**Pn**	**03 40 36.5**	**+1.6**
LCR2	**La Lucha 2**	**4.27**	**137**	*e*P	**Pn**	**03 40 37.0**	**+1.9**
RIMA	**Rio Macho**	**4.35**	**135**		**Pn**	**03 40 37.1**	**+1.0**
RIMA	**Rio Macho**	**4.35**	**135**	*e*P	**Pn**	**03 40 38.5**	**+2.4**
BATAN	**Batan**	**4.49**	**128**	Pn	**Pn**	**03 40 38.4**	**+0.7**
CDM	**Cerro de Muert**	**4.57**	**136**	*e*P	**Pn**	**03 40 41.6**	**+2.3**
EDDO	**Dominical**	**4.73**	**139**	*e*P	**Pn**	**03 40 44.3**	**+3.2**
PEZE	**Perez Zeledon,**	**4.76**	**137**		**Pn**	**03 40 42.6**	**+1.1**
STG3	**Santiaguito 3,**	**4.82**	**293**	*e*P	**Pn**	**03 40 45.3**	**+2.8**
STG3				*e*S	**Sn**	**03 41 42.9**	**+4.2**
RTAL	**Retalhuleu**	**4.87**	**290**		**Pn**	**03 40 43.7**	**+0.8**
PETF	**Flores**	**4.88**	**325**	Pn	**Pn**	**03 40 44.4**	**+1.2**
HUEH	**Huehuetenango**	**5.01**	**299**	Pn	**Pn**	**03 40 46.7**	**+1.6**
SRBA	**San Rafael, Bu**	**5.08**	**135**		**Pn**	**03 40 47.3**	**+1.3**
SRBA	**San Rafael, Bu**	**5.08**	**135**	*e*P	**Pn**	**03 40 47.6**	**+1.6**
DRK0	**Durika**	**5.14**	**134**	Pn	**Pn**	**03 40 48.5**	**+1.6**
PRVC	**Isla de Provid**	**5.49**	**84**	Pn	**Pn**	**03 40 52.2**	**+0.7**
BRU2	**Volcan**	**5.85**	**134**	Pn	**Pn**	**03 40 59.0**	**+2.3**
BCIP	**Isla Barro Col**	**7.92**	**117**	Pn	**Pn**	**03 41 23.7**	**-1.3**
CMIG	**Matias Romero**	**8.71**	**300**	Pn	**Pn**	**03 41 35.2**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=124,slow=10,SNR=4.2						
CMIG				Sn	**Sn**	**03 43 16.6**	**+2.3**
	comp=Z,0.6nm,0.3s,baz=99,slow=18,SNR=1.1						
	comp=Z,6.6nm,0.8s						
MTDJ	**Mount Denham**	**10.53**	**59**	Pn	**Pn**	**03 42 02.5**	**+1.7**
OCAC	**Ocana**	**14.20**	**108**	Pn	**Pn**	**03 42 52.4**	**+1.3**
ROSC	**El Rosal**	**14.84**	**121**	Pn	**P**	**03 43 10.3**	**+4.3**
	baz=229,slow=19						
ROSC	**El Rosal**	**14.84**	**121**	Pn	**Pn**	**03 42 58.0**	**-2.0**
TULM	**Tulcn-Chalpat**	**15.14**	**142**	Pn	**Pn**	**03 43 01.9**	**-2.3**
TULM				IAmb	IAmb	03 43 06.6	
	comp=Z,28nm,1.5s						
PORT	**Chimborazo Vol**	**16.42**	**150**	Pn	**Pn**	**03 43 18.8**	**-2.2**
SDV	**Santo Domingo**	**16.53**	**102**	Pn	**Pn**	**03 43 21.1**	**-1.0**
441A	**DeRidder**	**18.68**	**343**	P	**P**	**03 43 47.6**	**-0.5**
HKT	**Hockley**	**18.86**	**336**	P	**Pn**	**03 43 52.4**	**+1.8**
HKT				IAmb	IAmb	03 44 00.1	
	comp=Z,35nm,1.4s						
BAUV	**El Baul**	**19.00**	**100**	P	**P**	**03 43 51.5**	**-0.3**
250A	**Grady**	**19.01**	**2**	P	**P**	**03 43 50.8**	**-1.0**
833A	**Chaparral WMA,**	**19.23**	**325**		**Pn**	**03 43 54.8**	**-0.4**
833A				IAmb	IAmb	03 44 03.5	
	comp=Z,44nm,0.9s						
NATX	**Nacogdoches**	**20.07**	**341**	P	**P**	**03 44 04.1**	**+0.8**
NATX				IAmb	IAmb	03 44 10.2	
	comp=Z,17nm,0.8s						
435B	**Jarrell**	**20.32**	**333**	P	**P**	**03 44 06.0**	**-0.1**
X48A	**Hartselle**	**21.47**	**360**	P	**P**	**03 44 20.3**	**+1.8**
Z35A	**Perchaven, San**	**22.41**	**337**	P	**P**	**03 44 29.6**	**+1.0**
Z35A				IAmb	IAmb	03 44 32.8	
	comp=Z,18nm,0.8s						
BIRD	**Birdtown, Kers**	**22.45**	**14**	P	**P**	**03 44 30.5**	**+1.5**
TXAR	**Lajitas Array**	**22.54**	**319**	P	**P**	**03 44 29.7**	**-0.5**
	comp=Z,2.7nm,1.0s,baz=133,slow=10.0,SNR=4.4						
	comp=Z,2.7nm,1.0s						
TXAR	**Lajitas Array**	**22.54**	**319**	P	**P**	**03 44 29.9**	**-0.2**
V48A	**Smith Brothers**	**22.75**	**0**	P	**P**	**03 44 34.4**	**+2.2**
V48A				IAmb	IAmb	03 44 35.7	
	comp=Z,12nm,0.9s						
HBAR	**Harrisburg**	**22.81**	**352**	P	**P**	**03 44 33.3**	**+0.5**
TKL	**Tuckaleechee C**	**22.86**	**7**	P	**P**	**03 44 31.3**	**-1.9**
	comp=Z,4.9nm,0.9s,baz=125,slow=13,SNR=1.3						
	comp=Z,4.9nm,0.9s						
TKL	**Tuckaleechee C**	**22.86**	**7**	IAmb	IAmb	03 44 38.4	
	comp=Z,26nm,1.3s						
CLTN	**Cedars of Leba**	**23.11**	**1**	P	**P**	**03 44 37.2**	**+1.3**
CLTN				IAmb	IAmb	03 44 38.8	
	comp=Z,11nm,0.7s						
LCAR	**Lake Charles**	**23.39**	**351**	P	**P**	**03 44 39.1**	**+0.4**
U49A	**Red Boiling Sp**	**23.55**	**2**	P	**P**	**03 44 41.8**	**+1.4**
U49A				IAmb	IAmb	03 44 42.7	
	comp=Z,9.4nm,0.7s						
WMOK	**Wichita Mounta**	**24.24**	**336**	P	**P**	**03 44 47.6**	**+0.6**
WMOK				IAmb	IAmb	03 44 50.4	
	comp=Z,13nm,0.9s						
S51A	**Beattyville**	**24.83**	**6**	P	**P**	**03 44 53.6**	**+1.3**
S51A				IAmb	IAmb	03 45 01.5	
	comp=Z,10nm,0.7s						
CCM	**Cathedral Cave**	**25.35**	**352**	P	**P**	**03 44 56.4**	**-0.6**
CCM				IAmb	IAmb	03 44 58.0	
	comp=Z,8.3nm,0.8s						
T35A	**Sooner Cattle**	**25.41**	**342**	P	**P**	**03 44 58.8**	**+1.3**
T35A				IAmb	IAmb	03 45 00.3	
	comp=Z,15nm,0.9s						
Q51A	**Peebles**	**26.23**	**6**	P	**P**	**03 45 06.6**	**+1.6**
NNA	**Nana**	**26.68**	**157**	P	**P**	**03 45 09.2**	**-0.1**
	comp=Z,2.7nm,0.3s,baz=263,slow=16,SNR=2.0						
	comp=Z,2.7nm,0.3s						
O49A	**Covington**	**27.29**	**4**	P	**P**	**03 45 15.2**	**+0.6**
O49A				IAmb	IAmb	03 45 18.2	
	comp=Z,14nm,1.2s						
CRNM	**Carthage**	**27.62**	**323**	P	**P**	**03 45 18.6**	**+0.9**
N49A	**Columbus Grove**	**28.03**	**5**	P	**P**	**03 45 21.8**	**+0.6**
ANMO	**Albuquerque**	**28.17**	**325**	P	**P**	**03 45 22.1**	**-0.5**
	comp=Z,1.1nm,0.8s,baz=151,slow=4.6,SNR=3.1						
	comp=Z,1.1nm,0.8s						
SADO	**Sadowa**	**32.47**	**10**	P	**P**	**03 46 00.1**	**-0.3**
	comp=Z,3.4nm,0.5s,baz=211,slow=8.3,SNR=4.5						
	comp=Z,3.4nm,0.5s						
E43A	**Lone Tree Farm**	**33.38**	**360**	P	**P**	**03 46 09.2**	**+0.9**
E43A				IAmb	IAmb	03 46 15.5	
	comp=Z,9.0nm,1.0s						
PDAR	**Pinedale Array**	**35.61**	**331**	P	**P**	**03 46 25.5**	**-2.5**
	comp=Z,0.3nm,0.3s,baz=118,slow=12,SNR=1.6						
	comp=Z,0.3nm,0.3s						
NVAR	**Mina Array Bea**	**37.68**	**318**	P	**P**	**03 46 44.2**	**-1.5**
	comp=Z,0.9nm,0.6s,baz=108,slow=8.6,SNR=4.7						
	comp=Z,0.9nm,0.6s						
YMR	**Madison River**	**37.72**	**332**	P	**P**	**03 46 46.3**	**+0.4**
SIV	**San Ignacio**	**38.47**	**138**	P	**P**	**03 46 51.9**	**-0.4**
	comp=Z,1.1nm,0.6s,baz=279,slow=19,SNR=2.0						
	comp=Z,1.1nm,0.6s						
J08A	**Circle Bar Ran**	**40.71**	**324**	P	**P**	**03 47 13.4**	**+2.6**
SCHQ	**Schefferville**	**44.73**	**16**	P	**P**	**03 47 42.0**	**-1.1**
	comp=Z,3.5nm,0.7s,baz=228,slow=6.0,SNR=6.1						
	comp=Z,3.5nm,0.7s						
FRB	**Frobisher Bay**	**52.41**	**10**	P	**P**	**03 48 40.6**	**-1.5**
	comp=Z,2.3nm,0

mbtmp4.1/21,ML2.9/2,Error ellipse: s-maj=23.8km s-min=12.1km az=51.0
INET ***10*** *03:45:09.2±1.1, 12°.81N×87°.07W, h1km±1km,MW4.3*
UCR ***10*** *03:45:10.3±1.5, 12°.85N×87°.09W, h11km±8km,ML4.4, mb4.7(NEIC)*
NEIC ***10*** *03:45:11.3±1.6, 12°.86N±0°.03×86°.96W±0°.04, h10km±1km, mb4.7/148,Md4.9(SNET),Error ellipse: s-maj=7.2km s-min=5.5km az=245.0*
SNET ***10*** *03:45:11.5±1.0, 12°.92N×87°.18W, h4km±7km,ML4.5*
GCG ***10*** *03:45:13.3±4.5, 12°.88N×86°.95W, h10km, MD4.5, MW4.6(NEIC)*

ISC 10 03:45:10.4±0.8, 12°.87N±0°.03×87°.05W±0°.03, h16km±5km, n239, σ1§42/248, mb4.6/72, 1C-1D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.17**	**181**		**Pg**	**03 45 14.0**	**-0.7**
CRIN				Sg	**Sg**	**03 45 19.5**	**+1.9**
CRIN	**San Cristobal**	**0.17**	**181**	*eP*	**Pg**	**03 45 14.0**	**-0.7**
CNGN	**Cerro Negro**	**0.50**	**137**		**Pg**	**03 45 19.6**	**-0.8**
CNGN				Sg	**Sb**	**03 45 27.7**	**-0.2**
CNGN	**Cerro Negro**	**0.50**	**137**	*eP*	**Pb**	**03 45 19.8**	**-1.1**
CNGN				*eS*	**Sb**	**03 45 29.1**	**+1.1**
COPN	**Copaltepe**	**0.81**	**147**	*eP*	**Pb**	**03 45 24.7**	**-1.6**
CNCH	**Conchagua**	**0.87**	**298**	*eP*	**Pg**	**03 45 25.9**	**-1.5**
CNCH				*eS*	**Sg**	**03 45 37.5**	**-1.2**
CNCH	**Conchagua**	**0.87**	**298**	*eP*	**Pg**	**03 45 25.9**	**-1.5**
CNCH				*eS*	**Sg**	**03 45 37.5**	**-1.2**
APYN	**Apoyeque**	**0.93**	**133**	*eP*	**Pg**	**03 45 27.1**	**-1.4**
APYN				*eS*	**Sb**	**03 45 40.6**	**+0.3**
LCND	**La Caada**	**0.93**	**298**	*eP*	**Pg**	**03 45 26.7**	**-1.8**
LCND				*eS*	**Sg**	**03 45 39.7**	**-1.1**
LCND				IAML		03 45 43.0	
	comp=Z,25μm,0.6s						
LCND	**La Caada**	**0.93**	**298**	*eP*	**Pg**	**03 45 26.7**	**-1.8**
LCND				*eS*	**Sg**	**03 45 39.7**	**-1.1**
LCND				IAML		03 45 43.0	
	comp=Z,25μm,0.6s						
HUEN		**1.00**	**121**	*eP*	**Pg**	**03 45 28.6**	**-1.3**
HUEN				*eS*	**Sn**	**03 45 43.6**	**-0.1**
MATN	**Matagalpa**	**1.10**	**87**	Pn	**Pb**	**03 45 29.0**	**-2.1**
CRUN	**El Crucero**	**1.14**	**140**	*eP*	**Pg**	**03 45 29.8**	**-2.7**
TGUH	**Tegucigalpa,Un**	**1.20**	**350**	Pn	**Pn**	**03 45 32.0**	**-0.7**
TGUH	**Tegucigalpa,Un**	**1.20**	**350**	*eP*	**Pn**	**03 45 31.8**	**-0.9**
TGUH				*eS*	**Sb**	**03 45 48.7**	**+0.4**
TGUH	**Tegucigalpa,Un**	**1.20**	**350**	*eP*	**Pn**	**03 45 31.8**	**-0.9**
TGUH				*eS*	**Sb**	**03 45 48.7**	**+0.4**
VSM	**San Miguel**	**1.32**	**295**	*eP*	**Pn**	**03 45 33.7**	**-0.8**
VSM				*eS*	**Sb**	**03 45 51.1**	**-0.6**
VSM	**San Miguel**	**1.32**	**295**	*eP*	**Pn**	**03 45 33.7**	**-0.8**
VSM				*eS*	**Sb**	**03 45 51.1**	**-0.6**
PACA	**Pacayal**	**1.38**	**296**	*eP*	**Pn**	**03 45 34.6**	**-0.5**
PACA				*eS*	**Sb**	**03 45 52.1**	**-1.2**
PACA	**Pacayal**	**1.38**	**296**	*eP*	**Pn**	**03 45 34.6**	**-0.5**
PACA				*eS*	**Sb**	**03 45 52.1**	**-1.2**
BOAB	**BOACO BROADBAN**	**1.41**	**107**	Pn	**Pn**	**03 45 34.4**	**-1.1**
BOAB	**BOACO BROADBAN**	**1.41**	**107**	*eP*	**Pn**	**03 45 34.6**	**-0.9**
BOAB				*eS*	**Sn**	**03 45 53.9**	**+0.2**
COEB	**Comit de Eme**	**1.57**	**294**	*eP*	**Pn**	**03 45 37.3**	**-0.5**
COEB				IAML		03 46 02.0	
	comp=Z,8μm,0.4s						
COEB	**Comit de Eme**	**1.57**	**294**	*eP*	**Pn**	**03 45 37.3**	**-0.5**
COEB				IAML		03 46 02.0	
	comp=Z,8μm,0.4s						
COEB	**Comit de Eme**	**1.57**	**294**	*eP*	**Pn**	**03 45 37.4**	**-0.5**
PQSS	**Presa 15 de Se**	**1.65**	**297**	*eP*	**Pn**	**03 45 38.6**	**-0.2**
PQSS	**Presa 15 de Se**	**1.65**	**297**	*eP*	**Pn**	**03 45 38.6**	**-0.2**
SCLA	**Alcaldia de Sa**	**1.83**	**297**	*eP*	**Pn**	**03 45 42.5**	**+1.1**
SCLA				*eS*	**Pn**	**03 46 05.5**	**+1.2**
SCLA	**Alcaldia de Sa**	**1.83**	**297**	*eP*	**Pn**	**03 45 42.5**	**+1.1**
SCLA				*eS*	**Sn**	**03 46 05.5**	**+1.2**
CONN	**Concepcion**	**1.90**	**133**	*eP*	**Pn**	**03 45 41.7**	**-0.6**
COEG	**Centro de Oper**	**1.94**	**293**	*eP*	**Pn**	**03 45 43.4**	**+0.7**
COEG				IAML		03 46 13.1	
	comp=Z,5μm,0.5s						
COEG	**Centro de Oper**	**1.94**	**293**	*eP*	**Pn**	**03 45 43.4**	**+0.7**
COEG				IAML		03 46 13.1	
	comp=Z,5μm,0.5s						
PAVA	**Las Pavas**	**2.02**	**295**	*eP*	**Pn**	**03 45 44.5**	**+0.5**
PAVA				*eS*	**Sn**	**03 46 09.9**	**+0.8**
PAVA				IAML		03 46 17.1	
	comp=Z,4μm,0.5s						
PAVA	**Las Pavas**	**2.02**	**295**	*eP*	**Pn**	**03 45 44.5**	**+0.5**
PAVA				*eS*	**Sn**	**03 46 09.9**	**+0.8**
PAVA				IAML		03 46 17.1	
	comp=Z,4μm,0.5s						
ACON	**Acoyapa**	**2.04**	**116**		**Pn**	**03 45 44.5**	**+0.4**
ACON	**Acoyapa**	**2.04**	**116**	*eP*	**Pn**	**03 45 45.1**	**+1.0**
SNET	**Serv Nac Est T**	**2.28**	**291**		**Pn**	**03 45 49.2**	**+1.7**
SNET	**Serv Nac Est T**	**2.28**	**291**	*eP*	**Pn**	**03 45 48.3**	**+0.8**
SNET				*eS*	**Sn**	**03 46 16.1**	**+0.8**
SNET				IAML		03 46 22.4	
	comp=Z,2μm,0.4s						
SNET	**Serv Nac Est T**	**2.28**	**291**	*eP*	**Pn**	**03 45 48.3**	**+0.8**
SNET				*eS*	**Sn**	**03 46 16.1**	**+0.8**
SNET				IAML		03 46 22.4	
	comp=Z,2μm,0.4s						
GBS3	**Finca Las Img**	**2.59**	**143**	*eP*	**Pn**	**03 45 51.5**	**-0.3**
BUAI	**Buenos Aires**	**2.59**	**139**	*eP*	**Pn**	**03 45 51.9**	**+0.1**
BUEV	**Buena Vista**	**2.61**	**142**	*eP*	**Pn**	**03 45 51.8**	**-0.3**
LAPC	**Finca la Perla**	**2.62**	**143**	*eP*	**Pn**	**03 45 51.6**	**-0.6**
GPS2	**Hotel Rincn d**	**2.68**	**141**	*eP*	**Pn**	**03 45 53.1**	**+0.1**
ESPN	**Las Esperanzas**	**2.77**	**104**	Pn	**Pn**	**03 45 55.0**	**+0.8**
VMAR	**Armenia, Volca**	**2.78**	**137**	*eP*	**Pn**	**03 45 55.5**	**+1.1**
LIM1	**Limonal**	**2.78**	**141**	*eP*	**Pn**	**03 45 54.6**	**+0.2**
GUAB	**Guayabo de Bag**	**2.79**	**140**	*eP*	**Pn**	**03 45 54.8**	**+0.3**
ESQI	**Esquipulas**	**2.79**	**307**		**Pn**	**03 45 57.5**	**+2.8**
HORNC	**Hornillas**	**2.82**	**139**	*eP*	**Pn**	**03 45 54.4**	**-0.5**
COLC	**Colonia**	**2.84**	**140**	*eP*	**Pn**	**03 45 55.1**	**-0.1**
CUI	**Cuipilapa**	**2.87**	**140**	*eP*	**Pn**	**03 45 56.9**	**+0.3**
ORTG	**Ortega, Santa**	**2.94**	**148**		**Pn**	**03 45 57.2**	**+0.7**
PTEN	**Parque Tenorio**	**2.94**	**136**	*eP*	**Pn**	**03 45 57.6**	**+1.0**
ACAL	**Aguas Claras**	**2.97**	**138**	*eP*	**Pn**	**03 45 57.3**	**+0.3**
GUAI	**GUAI**	**2.99**	**150**	*eP*	**Pn**	**03 45 58.0**	**+0.8**
GUAI				*eS*	**Sb**	**03 46 34.7**	**-4.9**
SAJU	**San Juanillo,**	**3.08**	**155**	*eP*	**Pn**	**03 45 58.6**	**+0.2**
DUNO	**Dulce Nombre,**	**3.16**	**151**		**Pn**	**03 46 00.2**	**+0.6**
JTS	**Las Juntas de**	**3.28**	**141**	Pn	**Pn**	**03 46 01.1**	**-0.2**
	comp=Z,161nm,0.3s,baz=32,slow=16,SNR=25						
JTS				Sn	**Sn**	**03 46 42.2**	**+2.2**
	comp=Z,35nm,0.3s,baz=43,slow=16,SNR=2.2						
JTS	**Las Juntas de**	**3.28**	**141**		**Pn**	**03 46 01.2**	**-0.1**
JTS	**Las Juntas de**	**3.28**	**141**	*eP*	**Pn**	**03 46 01.6**	**+0.3**
CEDE	**Laguna Cedeo**	**3.30**	**136**	*eP*	**Pn**	**03 46 02.9**	**+2.3**
CASO	**Castillo**	**3.31**	**137**	*eP*	**Pn**	**03 46 02.1**	**+0.3**
FORC	**Fortuna**	**3.33**	**135**	*eP*	**Pn**	**03 46 02.2**	**+0.2**
INDI	**Punta indio, G**	**3.34**	**153**	*eP*	**Pn**	**03 46 02.6**	**+0.5**
MRL	**Marmol**	**3.38**	**311**	*eP*	**Pb**	**03 46 09.1**	**-1.0**
MRL				*eS*	**Sb**	**03 46 53.7**	**+2.7**
NBG	**Las Nubes**	**3.63**	**298**	*eP*	**Pb**	**03 46 13.3**	**-1.1**
NBG				*eS*	**Sg**	**03 47 03.1**	**-4.2**
LAFE	**Finca La Fe, P**	**3.69**	**145**	*eP*	**Pn**	**03 46 07.8**	**+0.9**
SRA1	**San Ramn**	**3.74**	**137**	*eP*	**Pn**	**03 46 09.4**	**+1.8**
PCG	**Pacaya**	**3.78**	**294**	*eP*	**Pn**	**03 46 11.2**	**+2.9**
FUG	**Fuego 3**	**4.01**	**294**	*eP*	**Pn**	**03 46 15.4**	**+4.0**
FUG				*eS*	**Sb**	**03 47 05.5**	**-3.7**
CVTR	**Volcan Turrial**	**4.29**	**131**		**Pn**	**03 46 16.3**	**+0.8**
LCR2	**La Lucha 2**	**4.31**	**136**	*eP*	**Pn**	**03 46 16.6**	**+1.1**
RIMA	**Rio Macho**	**4.39**	**134**		**Pn**	**03 46 16.9**	**+0.3**
RIMA	**Rio Macho**	**4.39**	**134**	*eP*	**Pn**	**03 46 18.3**	**+1.7**
BATAN	**Batan**	**4.53**	**127**		**Pn**	**03 46 19.4**	**+1.0**
CDM	**Cerro de Muert**	**4.61**	**135**	*eP*	**Pn**	**03 46 21.8**	**+1.9**
STG3	**Santiaguito 3,**	**4.76**	**293**	*eP*	**Pn**	**03 46 25.4**	**+3.6**
STG3				*eS*	**Sn**	**03 47 14.5**	**-2.3**
EDDO	**Dominical**	**4.76**	**139**	*eP*	**Pn**	**03 46 24.0**	**+2.4**
PEZE	**Perez Zeledon,**	**4.79**	**136**		**Pn**	**03 46 22.4**	**+0.4**
RTAL	**Retalhuleu**	**4.81**	**291**		**Pn**	**03 46 24.9**	**+2.6**
PETF	**Flores**	**4.86**	**326**		**Pn**	**03 46 25.8**	**+2.8**
HUEH	**Huehuetenango**	**4.96**	**300**	Pn	**Pn**	**03 46 27.7**	**+3.2**
SRBA	**San Rafael, Bu**	**5.11**	**135**		**Pn**	**03 46 28.0**	**+1.5**
SRBA	**San Rafael, Bu**	**5.11**	**135**	*eP*	**Pn**	**03 46 28.6**	**+2.0**
DRK0	**Durika**	**5.17**	**133**		**Pn**	**03 46 29.2**	**+1.8**
BRU2	**Volcan**	**5.89**	**133**		**Pn**	**03 46 37.7**	**+0.4**
CDITO	**Canoas**	**5.92**	**136**	Pn	**Pn**	**03 46 37.9**	**+0.4**
CMIG	**Matias Romero**	**8.66**	**300**	Pn	**Pn**	**03 47 14.8**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=130,slow=14,SNR=1.1						
CMIG				Sn	**Sn**	**03 48 52.7**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=112,slow=12,SNR=1.3						
CMIG				Lg	Lg	03 49 36.8	
	comp=Z,0.5nm,0.3s,baz=219,slow=21,SNR=4.0						
	comp=Z,2.8nm,0.7s						
SOR	**Soroa**	**10.59**	**21**	Pn	**Pn**	**03 47 42.5**	**+0.8**
SJCC	**San Jacinto, C**	**12.01**	**103**	Pn	**Pn**	**03 48 01.7**	**+0.6**
GTBY	**Guantanamo Bay**	**13.43**	**57**	Pn	**Pn**	**03 48 20.7**	**+0.2**
ROSC	**El Rosal**	**14.88**	**121**	Pn	**P**	**03 48 47.2**	**+0.8**
	comp=Z,0.5nm,0.3s,baz=348,slow=3.2,SNR=7.3						
ROSC	**El Rosal**	**14.88**	**121**	Pn	**Pn**	**03 48 41.1**	**+0.3**
TULM	**Tulcn-Chalpat**	**15.17**	**142**	Pn	**Pn**	**03 48 45.9**	**+1.3**
TULM				IAmb	IAmb	03 48 56.8	
	comp=Z,21nm,0.8s						
SLOR	**San Lorenzo -**	**15.95**	**147**		**Pn**	**03 48 54.9**	**+0.1**
PORT	**Chimborazo Vol**	**16.44**	**149**		**P**	**03 49 02.0**	**-1.9**
PORT				IAmb	IAmb	03 49 12.9	
	comp=Z,61nm,1.4s						
SDV	**Santo Domingo**	**16.60**	**102**	Pn	**Pn**	**03 49 02.7**	**-0.2**
	comp=Z,0.8nm,0.3s,baz=316,slow=10,SNR=1.5						
	comp=Z,3.2nm,0.3s						
SDV	**Santo Domingo**	**16.60**	**102**	Pn	**Pn**	**03 49 02.6**	**-0.2**
SDV				IAmb	IAmb	03 49 17.7	
	comp=Z,17nm,1.0s						
346A	**Big Creek Wild**	**18.57**	**353**	P	**P**	**03 49 27.4**	**+0.7**
TIGA	**Tifton**	**18.76**	**9**	P	**P**	**03 49 30.0**	**+1.2**
TIGA				IAmb	IAmb	03 50 10.0	
	comp=Z,114nm,1.9s						
735A	**Kenedy**	**18.80**	**329**	P	**Pn**	**03 49 30.9**	**+1.1**
735A				IAmb	IAmb	03 49 42.7	
	comp=Z,114nm,2.0s						
344A	**Westbrook Farm**	**18.81**	**350**	P	**P**	**03 49 30.5**	**+1.2**
344A				IAmb	IAmb	03 49 51.3	
	comp=Z,53nm,1.6s						
HKT	**Hockley**	**18.85**	**336**	P	**Pn**	**03 49 32.0**	**+1.7**
250A	**Grady**	**19.04**	**2**	P	**P**	**03 49 33.6**	**+1.7**
342A	**Flagon Creek P**	**19.05**	**346**	P	**P**	**03 49 32.4**	**+0.3**
BAUV	**El Baul**	**19.06**	**100**	P	**P**	**03 49 33.0**	**+0.7**
833A	**Chaparral WMA,**	**19.21**	**325**	P	**P**	**03 49 35.0**	**+1.2**
833A				IAmb	IAmb	03 49 40.9	
	comp=Z,39nm,1.1s						
VBMS	**Vicksburg**	**19.52**	**351**	P	**P**	**03 49 39.5**	**+2.3**
VBMS				IAmb	IAmb	03 49 48.4	
	comp=Z,96nm,1.6s						
152A	**Waverly Hall**	**19.83**	**6**	P	**P**	**03 49 41.0**	**+0.4**
152A				IAmb	IAmb	03 49 44.7	
	comp=Z,53nm,1.9s						
154A	**Montrose**	**19.98**	**10**	P	**P**	**03 49 43.1**	**+0.9**
154A				IAmb	IAmb	03 49 46.6	
	comp=Z,32nm,1.2s						
LRAL	**Lakeview Retre**	**20.08**	**0**	P	**P**	**03 49 45.5**	**+2.3**
Z47A	**Carrollton**	**20.26**	**358**	P	**P**	**03 49 46.4**	**+1.2**
435B	**Jarrell**	**20.31**	**333**	P	**P**	**03 49 46.9**	**+1.0**
435B				IAmb	IAmb	03 49 55.8	
	comp=Z,34nm,1.4s						
Z51A	**Franklin**	**20.43**	**4**	P	**P**	**03 49 49.3**	**+2.3**
Z51A				IAmb	IAmb	03 49 55.9	
	comp=Z,42nm,1.6s						
SJG	**San Juan**	**20.80**	**73**	P	**P**	**03 49 51.0**	**-0.2**
	comp=Z,9.6nm,0.9s,baz=260,slow=3.2,SNR=3.2						
	comp=Z,9.6nm,0.9s						
SJG	**San Juan**	**20.80**	**73**	P	**P**	**03 49 50.8**	**-0.4**
SJG				IAmb	IAmb	03 49 52.9	
	comp=Z,32nm,1.3s						
GCPR	**Guaynabo City**	**20.90**	**72**	P	**P**	**03 49 53.3**	**+1.0**
Y49A	**Blount Mountai**	**20.91**	**1**	P	**P**	**03 49 54.1**	**+1.9**
Z41A	**Richland Creek**	**20.97**	**346**	P	**P**	**03 49 54.5**	**+1.6**
Y45A	**Yeager Farm, C**	**21.03**	**354**	P	**P**	**03 49 55.4**	**+1.8**
Y45A				IAmb	IAmb	03 50 06.2	
	comp=Z,58nm,1.4s						
Y52A	**Lilburn**	**21.08**	**7**	P	**P**	**03 49 55.6**	**+1.5**
JCT	**Junction City**	**21.12**	**328**	P	**P**	**03 49 55.5**	**+0.8**
WHTX	**Lake Whitney,**	**21.30**	**335**	P	**P**	**03 49 57.0**	**+0.5**
WHTX				IAmb	IAmb	03 50 10.3	
	comp=Z,18nm,0.8s						
WLAR	**White Oak Lake**	**21.45**	**346**	P	**P**	**03 49 59.3**	**+1.2**
X48A	**Hartselle**	**21.49**	**0**	P	**P**	**03 49 58.7**	**+0.2**
Z38A	**Mt. Pleasant**	**21.56**	**342**	P	**P**	**03 50 01.2**	**+2.0**
Z38A				IAmb	IAmb	03 50 14.4	
	comp=Z,39nm,1.1s						
FPAL	**Fort Paine**	**21.62**	**3**	P	**P**	**03 50 01.7**	**+1.7**
ATAH	**Atahualpa**	**21.65**	**156**	P	**P**	**03 50 00.2**	**-0.6**
	comp=Z,3.9nm,0.7s,baz=20,slow=14,SNR=3.9						
	comp=Z,3.9nm,0.7s						
OXF	**Oxford**	**21.66**	**355**	P	**P**	**03 50 01.9**	**+1.6**
OXF				IAmb	IAmb	03 50 08.8	
	comp=Z,38nm,1.1s						
X51A	**Calhoun**	**21.69**	**5**	P	**P**	**03 50 02.0**	**+1.3**
X51A				IAmb	IAmb	03 50 08.2	
	comp=Z,22nm,0.9s						
STVI	**Saint Thomas**	**21.96**	**73**	P	**P**	**03 50 03.1**	**-0.6**
JSC	**Jenkinsville**	**21.96**	**13**	P	**P**	**03 50 05.3**	**+1.7**
Y58A	**Scranton**	**22.00**	**17**	P	**P**	**03 50 05.0**	**+1.1**
Y58A				IAmb	IAmb	03 50 09.1	
	comp=Z,22nm,0.7s						
PLAL	**Pickwick Lake**	**22.04**	**358**	P	**P**	**03 50 05.2**	**+0.8**
SWET	**Sewanee**	**22.27**	**2**	P	**P**	**03 50 08.6**	**+1.6**
SWET				IAmb	IAmb	03 50 10.8	
	comp=Z,52nm,1.7s						
W45A	**Hickory Valley**	**22.28**	**355**	P	**P**	**03 50 08.6**	**+1.7**
W45A				IAmb	IAmb	03 50 27.4	
	comp=Z,24nm,0.9s						
W50A	**Signal Mountai**	**22.29**	**4**	P	**P**	**03 50 08.7**	**+1.5**
W50A				IAmb	IAmb	03 50 11.1	
	comp=Z,13nm,0.7s						
W52A	**Murphy**	**22.31**	**7**	P	**P**	**03 50 09.4**	**+2.0**
BG3	**Lake Jocassee**	**22.34**	**9**	P	**P**	**03 50 09.3**	**+1.6**
BG3				IAmb	IAmb	03 50 11.9	
	comp=Z,35nm,1.6s						
MIAR	**Mount Ida**	**22.38**	**346**	P	**P**	**03 50 09.3**	**+1.2**
MIAR				IAmb	IAmb	03 50 17.9	
	comp=Z,33nm,1.7s						
Z35A	**Perchaven, San**	**22.40**	**337**	P	**P**	**03 50 09.9**	**+1.6**
Z35A				IAmb	IAmb	03 50 21.4	
	comp=Z,32nm,1.2s						
BIRD	**Birdtown, Kers**	**22.49**	**14**	P	**P**	**03 50 09.7**	**+0.4**
TXAR	**Lajitas Array**	**22.51**	**319**	P	**P**	**03 50 09.9**	**+0.2**
	comp=Z,1.8nm,0.8s,baz=134,slow=8.9,SNR=13						
	comp=Z,1.8nm,0.8s						
TXAR	**Lajitas Array**	**22.51**	**319**	P	**P**	**03 50 11.2**	**+1.5**
TX31	**Lajitas Ar. Si**	**22.51**	**319**	P	**P**	**03 50 11.3**	**+1.7**
TX31				IAmb	IAmb	03 50 18.0	
	comp=Z,30nm,1.0s						
TX32	**Lajitas Array**	**22.51**	**319**	P	**P**	**03 50 12.2**	**+2.5**
CPCT	**Cooper Cave**	**22.60**	**5**	P	**P**	**03 50 12.0**	**+1.5**
CPCT				IAmb	IAmb	03 50 14.8	
	comp=Z,15nm,0.8s						
X58A	**Rowland**	**22.70**	**17**	P	**P**	**03 50 11.0**	**-0.5**
X58A				IAmb	IAmb	03 50 15.2	
	comp=Z,16nm,0.8s						
W41B	**Gary Mavity, V**	**22.70**	**349**	P	**P**	**03 50 12.0**	**+0.5**
KMSC	**Kings Mountain**	**22.77**	**12**	P	**P**	**03 50 13.2**	**+1.0**
KMSC				IAmb	IAmb	03 50 16.8	
	comp=Z,20nm,1.3s						
V48A	**Smith Brothers**	**22.77**	**0**	P	**P**	**03 50 14.2**	**+1.9**
V48A				IAmb	IAmb	03 50 15.6	
	comp=Z,19nm,1.1s						
ABTX	**Abilene, Hawle**	**22.80**	**332**	P	**P**	**03 50 13.4**	**+0.8**
ABTX				IAmb	IAmb	03 50 20.5	
	comp=Z,22nm,1.4s						
HBAR	**Harrisburg**	**22.82**	**352**	P	**P**	**03 50 13.1**	**+0.3**
TKL	**Tuckaleechee C**	**22.88**	**7**	P	**P**	**03 50 13.4**	**0.0**
	comp=Z,26nm,1.1s,baz=184,slow=12,SNR=11						
	comp=Z,26nm,1.1s						
TKL	**Tuckaleechee C**	**22.88**	**7**	P	**P**	**03 50 15.0**	**+1.5**
TKL				IAmb	IAmb	03 50 17.5	
	comp=Z,40nm,1.2s						
X37A	**Clayton**	**22.91**	**342**		**P**	**03 50 15.9**	**+2.2**
X37A				IAmb	IAmb	03 50 16.5	
	comp=Z,20nm,0.9s						
V51A	**Loudon**	**22.97**	**6**	P	**P**	**03 50 17.2**	**+3.0**
V51A				IAmb	IAmb	03 50 18.9	
	comp=Z,31nm,1.1s						
V53A	**Saluda**	**23.02**	**9**	P	**P**	**03 50 16.2**	**+1.3**
V53A				IAmb	IAmb	03 50 34.6	
	comp=Z,54nm,1.9s						
W39A	**Magazine**	**23.05**	**346**	P	**P**	**03 50 16.4**	**+1.2**
W39A				IAmb	IAmb	03 50 21.8	
	comp=Z,36nm,1.8s						
V52A	**Sevierville**	**23.09**	**7**	P	**P**	**03 50 16.7**	**+1.1**
W57A	**Gilead**	**23.09**	**15**	P	**P**	**03 50 16.3**	**+0.7**
CLTN	**Cedars of Leba**	**23.13**	**1**	P	**P**	**03 50 17.3**	**+1.3**
WVT	**Waverly**	**23.17**	**358**	P	**P**	**03 50 18.1**	**+1.7**
GLAT	**Glass**	**23.39**	**355**	P	**P**	**03 50 19.1**	**+0.6**
UTMT	**University of**	**23.43**	**356**	P	**P**	**03 50 20.4**	**+1.4**
V55A	**Taylorsville**	**23.48**	**12**	P	**P**	**03 50 20.7**	**+1.2**
V55A				IAmb	IAmb	03 50 54.2	
	comp=Z,55nm,1.9s						
U49A	**Red Boiling Sp**	**23.57**	**3**	IAmb	IAmb	03 50 22.5	
	comp=Z,14nm,0.7s						
X34A	**Smith Ranch, M**	**23.75**	**337**		**P**	**03 50 24.1**	**+2.0**
X34A				IAmb	IAmb	03 51 00.2	
	comp=Z,41nm,1.4s						
TZTN	**Tazewell**	**23.79**	**7**	P	**P**	**03 50 23.7**	**+1.3**
TZTN				IAmb	IAmb	03 50 27.1	
	comp=Z,17nm,0.9s						
V58A	**Windy Hill, Pi**	**23.92**	**16**	P	**P**	**03 50 24.6**	**+0.8**
V58A				IAmb	IAmb	03 50 26.6	
	comp=Z,18nm,0.7s						
PBMO	**Poplar Bluff**	**24.00**	**353**	P	**P**	**03 50 24.7**	**+0.3**
PBMO				IAmb	IAmb	03 50 26.5	
	comp=Z,7.9nm,0.6s						
U54A	**Nelsons Funny**	**24.02**	**10**	P	**P**	**03 50 25.7**	**+0.9**
U54A				IAmb	IAmb	03 50 47.0	
	comp=Z,22nm,1.3s						
T47A	**Sharon Grove**	**24.02**	**360**	P	**P**	**03 50 25.6**	**+1.0**
HHAR	**Hobbs**	**24.13**	**346**	IAmb	IAmb	03 50 33.8	
	comp=Z,29nm,1.9s						
T50A	**Nancy**	**24.13**	**4**	P	**P**	**03 50 27.0**	**+1.3**
T50A				IAmb	IAmb	03 50 27.8	
	comp=Z,10.0nm,0.8s						
U56A	**King**	**24.14**	**13**	P	**P**	**03 50 27.5**	**+1.8**
U56A				IAmb	IAmb	03 50 45.7	
	comp=Z,39nm,1.8s						
FNO	**Franklin**	**24.18**	**339**	IAmb	IAmb	03 50 36.5	
	comp=Z,20nm,0.8s						
WMOK	**Wichita Mounta**	**24.23**	**336**	IAmb	IAmb	03 50 42.6	
	comp=Z,15nm,1.2s						
S44A	**Carbondale**	**24.80**	**356**	IAmb	IAmb	03 50 35.2	
	comp=Z,14nm,0.9s						
U59A	**Littleton**	**24.82**	**18**	IAmb	IAmb	03 50 35.2	
	comp=Z,14nm,1.0s						
BLA	**Blacksburg**	**24.96**	**13**	IAmb	IAmb	03 50 37.1	
	comp=Z,22nm,1.1s						
MNTX	**Cornudas Mount**	**25.21**	**321**	IAmb	IAmb	03 50 41.6	
	comp=Z,19nm,1.4s						
S39A	**Bolivar**	**25.35**	**348**	IAmb	IAmb	03 50 37.7	
	comp=Z,8.5nm,0.7s						
CCM	**Cathedral Cave**	**25.36**	**352**	P	**P**	**03 50 37.2**	**+0.3**
CCM				IAmb	IAmb	03 50 39.0	
	comp=Z,8.6nm,0.8s						
R49A	**Shelbyville**	**25.38**	**3**	IAmb	IAmb	03 50 39.9	
	comp=Z,19nm,1.2s						
R50A	**Paris**	**25.43**	**5**	IAmb	IAmb	03 50 40.1	
	comp=Z,23nm,0.9s						
P48A	**Milroy**	**26.53**	**3**	IAmb	IAmb	03 50 49.7	
	comp=Z,30nm,1.2s						
P52A	**Corning**	**27.01**	**8**	P	**P**	**03 50 52.8**	**+1.0**
O49A	**Covington**	**27.32**	**5**	IAmb	IAmb	03 50 56.5	
	comp=Z,17nm,0.9s						
O52A	**Adamsville**	**27.53**	**9**	IAmb	IAmb	03 50 58.9	
	comp=Z,20nm,0.9s						
P57A	**Homestead Farm**	**27.69**	**15**	IAmb	IAmb	03 51 01.5	
	comp=Z,20nm,1.1s						
ANMO	**Albuquerque**	**28.14**	**325**	P	**P**	**03 51 01.8**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=180,slow=2.0,SNR=1.7						
	comp=Z,0.2nm,0.3s						
N53A	**Lisbon**	**28.36**	**10**	IAmb	IAmb	03 51 06.3	
	comp=Z,18nm,1.0s						
L48A	**N Adams**	**29.06**	**4**	IAmb	IAmb	03 51 12.0

baz=66,slow=71,SNR=120
H03N3 Juan Fernandez 6.83 229 Pn **Pn 03 49 17.2 +0.5**
baz=113,slow=19
H03N3 T T 03 56 38.3
baz=66,slow=71,SNR=151
H03S3 Juan Fernandez 7.05 226 Pn **Pn 03 49 18.7 -1.1**
baz=53
H03S1 Juan Fernandez 7.06 226 Pn **Pn 03 49 18.1 -1.8**
baz=53
H03S2 Juan Fernandez 7.07 226 Pn **Pn 03 49 19.4 -0.6**
baz=53
LVC Limon Verde 7.33 29 Pn **Pn 03 49 26.5 +2.3**
0.3nm,0.3s,baz=173,slow=9.1,SNR=2.1
LVC Pg **Pb 03 49 44.2 -0.1**
0.6nm,0.3s,baz=223,slow=8.3,SNR=2.3
LVC Sn **Sn 03 50 46.2 -1.5**
0.4nm,0.3s,baz=298,slow=9.8,SNR=1.9
LVC Lg Lg 03 51 21.1
1.7nm,0.3s,baz=26,slow=11,SNR=6.8
1.5nm,0.4s
LPAZ La Paz 13.44 20 Pn **P 03 50 55.2 -2.5**
0.1nm,0.3s,baz=189,slow=5.5,SNR=5.3
0.9nm,0.6s
SIV San Ignacio 16.92 42 Pn **Pn 03 51 35.2 +1.5**
baz=223,slow=12,SNR=5.9
1.2nm,0.6s
SNAA Sanae 56.37 159 LR LR 04 17 35.0
comp=Z,2μm,21.6s,baz=296,slow=32
PPT2 Papeete2 70.37 260 *e*LR LR 03 58 46.4
comp=Z,8μm,20.8s
MAW Mawson 78.06 164 LR LR 04 30 42.6
comp=Z,4μm,21.9s,baz=192,slow=34
TORD Torodi Ar. Bea 83.17 71 P **P 04 00 01.9 -1.6**
1.6nm,0.8s,baz=251,slow=5.4,SNR=6.0
1.6nm,0.8s
ZALV Zalesovo Beam 150.28 27 PKPbc **PKiKP 04 07 29.5 +1.0**
3.0nm,0.6s,baz=298,slow=3.9,SNR=12
ZALV PKPab **sPKPab 04 07 37.9 +1.5**
2.7nm,0.7s,baz=302,slow=3.1,SNR=8.1
MKAR Makanchi Array 153.73 41 PKPbc **PKPbc 04 07 36.7 +0.9**
0.1nm,0.4s,baz=291,slow=1.2,SNR=2.1

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*ISK **10** 03:50:27.9, 38.°73N×26.°47E, h16km, ML2.8/20*
*ATH **10** 03:50:27.5, 38.°64N×26.°55E, h37km±7km, ML2.8/5, Error ellipse: s-maj=8.1km s-min=1.9km az=272.0*
*THE **10** 03:50:28.8, 38.°71N×26.°46E, h6km±3km, ML2.6/5, Error ellipse: s-maj=3.7km s-min=0.8km az=248.0*
*DDA **10** 03:50:28.2±0.0, 38.°71N×26.°44E, h7km±1km, ML2.5*
ISC 10 03:50:28.5±0.9, 38.°71N±0.°02×26.°47E±0.°02, h16km±7km, n54, σ0s58/74, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
FOCM	**Foa**	**0.20**	**89**		PG	**Pg**	**03 50 32.9**	**-0.3**
FOCM					SG	**Sb**	**03 50 36.6**	**-0.7**
CAND	**Candarli**	**0.35**	**47**		PG	**Pg**	**03 50 35.6**	**-0.2**
URLA	**Izmir**	**0.36**	**165**		PG	**Pg**	**03 50 35.9**	**-0.1**
URLA					SG	**Sb**	**03 50 42.1**	**+0.2**
URLA	**Izmir**	**0.36**	**165**		P	**Pg**	**03 50 35.8**	**-0.1**
URLA					S	**Sb**	**03 50 42.2**	**+0.2**
URLA				*i*	AML	AML	03 50 43.0	
	comp=E,539nm,0.3s							
URLA				*i*	AML	AML	03 50 45.0	
	comp=N,428nm,0.3s							
CHOS	**Chios island**	**0.46**	**226**		P	**Pb**	**03 50 38.1**	**-0.2**
CHOS					S	**Sb**	**03 50 44.2**	**-0.6**
CHOS					AML	AML	03 50 44.3	
	comp=N,1698μm,0.3s							
CHOS					AML	AML	03 50 47.1	
	comp=E,2902μm,0.2s							
CHOS	**Chios island**	**0.46**	**226**		P	**Pb**	**03 50 38.0**	**-0.2**
CHOS					S	**Sg**	**03 50 44.0**	**0.0**
	comp=E,1μm,0.2s							
CHOS	**Chios island**	**0.46**	**226**		PG	**Pb**	**03 50 38.1**	**-0.2**
ZEYE	**Izmir, Urla-Ze**	**0.47**	**177**		P	**Pg**	**03 50 37.7**	**-0.2**
ZEYE					S	**Sb**	**03 50 46.2**	**+1.1**
ZEYE				*i*	AML	AML	03 50 47.0	
	comp=E,642nm,0.3s							
ZEYE				*i*	AML	AML	03 50 49.0	
	comp=E,570nm,0.4s							
DKL	**Dikili**	**0.49**	**43**		PG	**Pg**	**03 50 38.0**	**-0.3**
DKL					SG	**Sb**	**03 50 45.4**	**-0.3**
ZEDA	**zmir-Bergama**	**0.54**	**61**		P	**Pb**	**03 50 39.1**	**-0.4**
ZEDA					S	**Sb**	**03 50 46.8**	**-0.2**
ZEDA				*i*	AML	AML	03 50 47.0	
	comp=E,150nm,0.3s							
ZEDA				*i*	AML	AML	03 50 47.0	
	comp=E,125nm,0.4s							
BLCB	**Balcova**	**0.55**	**126**		P	**Pb**	**03 50 39.6**	**-0.2**
BLCB					S	**Sb**	**03 50 47.1**	**-0.3**
BLCB	**Balcova**	**0.55**	**126**		PG	**Pb**	**03 50 39.5**	**-0.2**
PRK	**Paraskevi**	**0.56**	**344**		P	**Pb**	**03 50 40.6**	**+0.8**
PRK					S	**Sn**	**03 50 49.7**	**-1.0**
PRK					AML	AML	03 50 52.1	
	comp=E,1672μm,0.3s							
PRK					AML	AML	03 50 52.5	
	comp=N,1153μm,0.2s							
PRK	**Paraskevi**	**0.56**	**344**		P	**Pb**	**03 50 40.6**	**+0.8**
PRK					S	**Sb**	**03 50 48.7**	**+1.1**
	comp=N,860nm,0.3s							
AYVA	**Ayvalik**	**0.62**	**16**		P	**Pg**	**03 50 40.5**	**-0.2**
AYVA					S	**Sb**	**03 50 49.4**	**0.0**
AYVA				*i*	AML	AML	03 50 51.0	
	comp=N,181nm,0.3s							
AYVA				*i*	AML	AML	03 50 52.0	
	comp=N,239nm,0.4s							
SIGR	**SIGRI**	**0.69**	**316**		P	**Pb**	**03 50 42.2**	**0.0**
SIGR					S	**Sn**	**03 50 53.4**	**-0.6**
SIGR					AML	AML	03 50 54.0	
	comp=N,842μm,0.3s							
SIGR					AML	AML	03 50 54.8	
	comp=E,1318μm,0.5s							
SIGR	**SIGRI**	**0.69**	**316**		P	**Pb**	**03 50 42.1**	**-0.1**
SIGR					S	**Sg**	**03 50 51.2**	**-0.1**
	comp=E,545nm,0.4s							
DGB	**zmir**	**0.73**	**154**		P	**Pg**	**03 50 42.4**	**-0.4**
DGB					S	**Sb**	**03 50 53.4**	**+0.8**
DGB				*i*	AML	AML	03 50 55.0	
	comp=E,228nm,0.2s							
DGB				*i*	AML	AML	03 50 55.0	
	comp=E,272nm,0.4s							
PSRA	**Psara**	**0.73**	**257**		P	**Pb**	**03 50 43.2**	**+0.4**
PSRA					S	**Sn**	**03 50 53.7**	**-1.2**
PSRA					AML	AML	03 50 57.4	
	comp=N,2053μm,0.2s							
PSRA					AML	AML	03 50 57.5	
	comp=E,2107μm,0.1s							
GPNR	**Gulpinar-Canak**	**0.79**	**340**		PG	**Pb**	**03 50 43.4**	**-0.4**
BUHA	**Balikesir, Bur**	**0.92**	**31**		P	**Pg**	**03 50 46.0**	**-0.3**
BUHA					S	**Sn**	**03 50 59.8**	**+0.3**
BUHA				*i*	AML	AML	03 51 01.0	
	comp=E,345nm,0.9s							
BUHA				*i*	AML	AML	03 51 01.0	
	comp=E,203nm,0.4s							
SMG	**Samos**	**1.04**	**164**		AML	AML	03 51 06.0	
	comp=E,1302μm,0.4s							
SMG					AML	AML	03 51 07.3	
	comp=N,1571μm,0.3s							
SMG	**Samos**	**1.04**	**164**		P	**Pn**	**03 50 48.1**	**-0.3**
SMG					S	**Sn**	**03 51 04.0**	**+1.4**
	comp=N,722nm,0.3s							
AKS	**Akhisar**	**1.06**	**80**		PG	**Pg**	**03 50 48.7**	**-0.3**
EZN	**Ezine**	**1.12**	**354**		P	**Pb**	**03 50 49.3**	**-0.2**
EZN					S	**Sg**	**03 51 04.9**	**+0.2**
	comp=N,198nm,0.4s							
EZN	**Ezine**	**1.12**	**354**		PN	**Pb**	**03 50 49.2**	**-0.2**
GOMA	**Golmarmara-Man**	**1.13**	**90**		PN	**Pn**	**03 50 49.6**	**0.0**
GCAM	**G?zelcaml?**	**1.17**	**149**		PN	**Pg**	**03 50 50.5**	**-0.6**
GCAM	**G?zelcaml?**	**1.17**	**149**		P	**Pg**	**03 50 50.6**	**-0.5**
GCAM					S	**Sg**	**03 51 06.2**	**-0.2**
GCAM				*i*	AML	AML	03 51 08.0	
	comp=N,86nm,0.3s							
GCAM				*i*	AML	AML	03 51 09.0	
	comp=N,219nm,0.5s							
STEP	**BALIKESIR_Sava**	**1.18**	**55**		P	**Pg**	**03 50 50.8**	**-0.4**
STEP					S	**Sg**	**03 51 08.2**	**+1.6**
STEP				*i*	AML	AML	03 51 09.0	
	comp=N,220nm,0.6s							
STEP				*i*	AML	AML	03 51 10.0	
	comp=N,184nm,0.3s							
BOZC	**Bozcaada**	**1.18**	**344**		PN	**Pn**	**03 50 50.1**	**-0.1**
AYDB	**Zeytinkoy-Aydi**	**1.35**	**124**		PN	**Pb**	**03 50 53.0**	**-0.4**
BALB	**Balikesir**	**1.43**	**49**		PN	**Pn**	**03 50 53.9**	**+0.1**
AYDN	**Tasoluk**	**1.52**	**133**		P	**Pb**	**03 50 55.8**	**-0.6**
GADA	**Gvkgeada**	**1.54**	**343**		PN	**Pn**	**03 50 55.4**	**+0.1**
LIA	**Limnos Island**	**1.55**	**320**		P	**Pb**	**03 50 55.9**	**-0.8**
LIA	**Limnos Island**	**1.55**	**320**		P	**Pn**	**03 50 55.8**	**+0.4**
GONE	**Gonen-Balikesi**	**1.63**	**35**		PN	**Pn**	**03 50 56.5**	**0.0**
KULA	**Kula-Manisa**	**1.72**	**96**		P	**Pb**	**03 50 58.8**	**-1.0**
KULA	**Kula-Manisa**	**1.72**	**96**		PN	**Pn**	**03 50 58.2**	**+0.3**
MLSB	**Milas**	**1.75**	**144**		PN	**Pn**	**03 50 58.9**	**+0.8**
BODT	**Bodrum**	**1.77**	**158**		P	**Pn**	**03 50 59.1**	**+0.6**
BODT	**Bodrum**	**1.77**	**158**		PN	**Pn**	**03 50 58.9**	**+0.4**
KRBG	**Karabiga-Canak**	**1.80**	**21**		PN	**Pn**	**03 50 59.3**	**+0.5**
APE	**Apeiranthos**	**1.80**	**205**		P	**Pn**	**03 50 58.3**	**-0.6**
APE	**Apeiranthos**	**1.80**	**205**		PN	**Pn**	**03 50 59.3**	**+0.4**
SMTH	**Samothraki Isl**	**1.90**	**338**		P	**Pn**	**03 51 00.4**	**+0.2**
EDC	**Edincik**	**1.96**	**33**		PN	**Pn**	**03 51 01.1**	**+0.1**
SIMA	**Simav-Kutahya**	**1.99**	**78**		PN	**Pn**	**03 51 01.7**	**+0.2**
YER	**Yerkesik**	**2.13**	**137**		PN	**Pn**	**03 51 04.0**	**+0.6**
DAT	**Datca**	**2.16**	**156**		PN	**Pn**	**03 51 04.9**	**+1.0**
ALN	**Alexandroupoli**	**2.21**	**352**		P	**Pn**	**03 51 05.1**	**+0.7**
TURN	**Turunc**	**2.39**	**143**		PN	**Pn**	**03 51 07.6**	**+0.7**
DALY	**Dalyan (Mula)**	**2.56**	**137**		PN	**Pn**	**03 51 10.4**	**+1.2**

TAP 10 03:54:51.1, 24.°23N×121.°80E, h19km, ML2.1, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.18**	**248**	*e*	P	Pg	03 54 56.3	+0.4
ETL	baz=249			*e*	S	Sg	03 54 59.6	+0.5
	baz=249							
NACB	**Ninganchiao**	**0.20**	**254**		P	Pg	03 54 56.0	-0.1
NACB	baz=256			*e*	S	Sg	03 55 00.1	+0.5
	baz=256							
ENA	**Nanau**	**0.21**	**344**	*i*	P	Pg	03 54 56.4	+0.1
ENA	baz=345				S	Sg	03 55 00.5	+0.6
	baz=345							
EWUT	**Wuta**	**0.22**	**354**	*i*	P	Pg	03 54 56.6	+0.2
EWUT	baz=347				S	Sg	03 55 00.5	+0.4
	baz=347							
TWD	**Chiawan**	**0.24**	**232**	*e*	P	Pg	03 54 57.0	+0.2
TWD	baz=237			*e*	S	Sg	03 55 01.0	+0.4
	baz=237							
ETLH	**Xiulin Townshi**	**0.29**	**266**		P	Pb	03 54 57.8	0.0
ETLH	baz=266			*e*	S	Sb	03 55 02.5	+0.2
	baz=266							
TWC	**Suao**	**0.38**	**6**		P	Pb	03 54 59.4	0.0
TWC	baz=2.0			*e*	S	Sb	03 55 05.5	+0.5
	baz=2.0							
LATG	**Datong**	**0.40**	**321**		P	Pb	03 54 59.9	+0.1
LATG	baz=319			*e*	S	Sb	03 55 06.2	+0.6
	baz=319							
NDS	**Dongshan**	**0.41**	**349**	*i*	P	Pb	03 55 00.0	+0.1
NDS	baz=347				S	Sb	03 55 06.3	+0.5
	baz=347							
NNSB	**Datong**	**0.43**	**298**		P	Pb	03 55 00.5	+0.1
NNSB	baz=297			*e*	S	Sb	03 55 06.9	+0.4
	baz=297							
NNS	**Nan Shan**	**0.45**	**299**	*e*	P	Pb	03 55 00.6	0.0
NNS	baz=298			*e*	S	Sb	03 55 07.3	+0.4
	baz=298							
ENTT	**Nioudou**	**0.46**	**332**	*i*	P	Pb	03 55 01.0	+0.2
ENTT	baz=331			*e*	S	Sb	03 55 08.1	+0.8
	baz=331							
WHF	**Hehuan Shan**	**0.50**	**261**		P	Pb	03 55 01.6	+0.1
WHF	baz=261			*e*	S	Sb	03 55 08.8	+0.3
	baz=261							
TWE	**Neicheng**	**0.51**	**346**	*e*	P	Pn	03 55 02.8	-0.6
TWE	baz=345			*e*	S	Sb	03 55 09.4	+0.9
	baz=345							
FUSS	**Fushou**	**0.51**	**272**		P	Pb	03 55 01.6	0.0
FUSS	baz=273			*e*	S	Sb	03 55 09.8	+1.1
	baz=273							
FUSB	**Fushanzhiwuyua**	**0.56**	**340**	*e*	P	Pg	03 55 02.6	+0.1
FUSB	baz=333			*e*	S	Sg	03 55 11.2	+1.0
	baz=333							
YHNB	**Yeheng**	**0.59**	**319**		P	Pg	03 55 03.3	+0.3
YHNB	baz=318			*e*	S	Sg	03 55 11.9	+1.0
	baz=318							
CHGB	**Renai**	**0.60**	**254**		P	Pg	03 55 03.4	+0.2
CHGB	baz=247			*e*	S	Sg	03 55 11.9	+0.7
	baz=247							
NSK	**Sanguang**	**0.60**	**318**		P	Pg	03 55 03.1	-0.1
NSK	baz=317			*e*	S	Sg	03 55 12.3	+1.0
	baz=317							
NWLT	**Wulai**	**0.61**	**334**	*e*	P	Pb	03 55 03.2	+0.1
NWLT	baz=332			*e*	S	Sg	03 55 12.0	+0.4
	baz=332							
OWD	**Renai**	**0.63**	**245**	*e*	P	Pg	03 55 04.1	+0.3
OWD	baz=245			*e*	S	Sg	03 55 13.1	+0.8
	baz=245							
WUSB	**Renai**	**0.67**	**250**		P	Pg	03 55 04.4	0.0
TIPB	**Shuangxi**	**0.74**	**2**	*e*	P	Pg	03 55 05.9	+0.1
TIPB				*e*	S	Sg	03 55 16.2	+0.5
VWDT	**VWDT**	**0.77**	**232**	*e*	P	Pb	03 55 05.6	-0.2
	baz=223							
SXI1	**Grass Mountain**	**0.87**	**4**	*e*	P	Pn	03 55 08.5	+0.1
SXI1	baz=6.0			*e*	S	Sn	03 55 20.3	-0.2
	baz=6.0							

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*IDC **10** 04:04:33.7±0.7, 17.°63S×172.°90W, h0km, mb4.2/11, mbtmp4.2/12, ML3.5/1, MS5.0/2, Error ellipse: s-maj=35.6km s-min=15.9km az=139.0*
*NEIC **10** 04:04:36.4±1.9, 17.°4S±0.°1×173.°0W±0.°1, h10km±1km, mb4.4/23, Error ellipse: s-maj=26.1km s-min=16.9km az=120.0*
ISC 10 04:04:35.1±0.5, 17.°3S±0.°1×173.°0W±0.°1, h10km, n48, σ1s20/46, mb4.3/22, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**3.43**	**121**			Pn	04 05 17.3	-11
AFI	**Afiamalu**	**3.61**	**20**		Pn	**Pn**	**04 05 29.5**	**-1.7**
	9.7nm,0.3s,baz=286,slow=5.9,SNR=4.1							
AFI					Sn	**Sn**	**04 06 10.8**	**-3.1**
	25nm,0.3s,baz=246,slow=21,SNR=4.1							
RAO	**Raoul Island**	**12.69**	**200**		LR	LR	04 11 41.1	
	comp=Z,3μm,21.5s,baz=106,slow=34							
PINNC	**Pines Island,**	**19.08**	**251**		P	**P**	**04 08 57.3**	**-0.6**
PINNC					IAmb	IAmb	04 09 11.5	
	comp=Z,40nm,1.2s							
DZM	**Mont Dzumac**	**19.88**	**253**		P	**Pn**	**04 09 08.4**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=7.8,slow=21,SNR=2.1							
	comp=Z,4.1nm,1.0s							
DZM	**Mont Dzumac**	**19.88**	**253**		IAmb	IAmb	04 09 14.4	
	comp=Z,9.5nm,1.2s							
OUZ	**Omahuta**	**21.44**	**211**		P	**P**	**04 09 22.1**	**-1.3**
OUZ					IAmb	IAmb	04 09 26.0	
	comp=Z,14nm,1.1s							
URZ	**Newera**	**22.57**	**201**		P	**P**	**04 09 34.2**	**-1.4**
	comp=Z,20nm,0.8s,baz=265,slow=5.4,SNR=8.1							
	comp=Z,20nm,0.8s							
RPZ	**Rata Peaks**	**29.55**	**204**		P	**P**	**04 10 37.3**	**-2.7**
	comp=Z,14nm,0.6s,baz=40,slow=12,SNR=2.6							
	comp=Z,14nm,0.6s							
CTAO	**Charters Tower**	**38.59**	**259**		P	**P**	**04 11 59.5**	**+0.9**
STKA	**Stephens Creek**	**43.41**	**242**		P	**P**	**04 12 37.2**	**-1.0**
	comp=Z,0.8nm,0.3s,baz=108,slow=19,SNR=1.7							
	comp=Z,0.8nm,0.3s							
BBOO	**Buckleboo**	**48.17**	**241**		P	**P**	**04 13 15.1**	**-0.8**
WB2	**Warramunga Arr**	**49.76**	**258**		P	**P**	**04 13 28.1**	**-0.2**
WB2					IAmb	IAmb	04 13 40.2	
	comp=Z,3.8nm,0.9s							
WRA	**Warramunga Arr**	**49.77**	**258**		P	**P**	**04 13 28.3**	**0.0**
	comp=Z,2.0nm,0.4s,baz=97,slow=6.8,SNR=49							
	comp=Z,2.0nm,0.4s							
AS31	**Alice Springs**	**49.87**	**253**		P	**P**	**04 13 28.6**	**-0.5**
AS31					IAmb	IAmb	04 13 40.4	
	comp=Z,3.3nm,0.7s							
ASAR	**Alice Springs**	**49.87**	**253**		P	**P**	**04 13 28.9**	**-0.1**
	comp=Z,12nm,0.6s,baz=90,slow=8.5,SNR=148							
ASAR					PcP	**PcP**	**04 14 50.8**	**+1.2**
	comp=Z,1.1nm,0.7s,baz=97,slow=4.5,SNR=1.4							
	comp=Z,12nm,0.6s							
VNDA	**Vanda**	**61.51**	**186**		P	**P**	**04 14 52.2**	**+0.5**
VNDA					IAmb	IAmb	04 15 02.8	
	comp=Z,3.2nm,1.4s							
JOW	**Kunigami**	**71.90**	**307**		LR	LR	04 44 41.2	
	comp=Z,2μm,20.8s,baz=106,slow=33							
NVAR	**Mina Array Bea**	**75.53**	**41**		P	**P**	**04 16 21.1**	**+0.9**
	comp=Z,1.3nm,0.7s,baz=227,slow=10,SNR=11							
	comp=Z,1.3nm,0.7s							
TPH	**Tonopah**	**76.01**	**42**		P	**P**	**04 16 22.8**	**-0.1**
TUC	**Tucson**	**77.34**	**50**		P	**P**	**04 16 30.6**	**+0.1**
TUC					IAmb	IAmb	04 16 31.8	
	comp=Z,2.3nm,0.9s							
G08A	**Pilot Rock**	**79.28**	**36**		P	**P**	**04 16 41.6**	**+0.6**
G08A					IAmb	IAmb	04 16 42.5	
	comp=Z,2.5nm,1.0s							
F10A	**Beach Ranch, E**	**80.66**	**36**		P	**P**	**04 16 48.5**	**+0.1**
HLID	**Hailey**	**80.89**	**39**		P	**P**	**04 16 50.5**	**+0.8**
TXAR	**Lajitas Array**	**81.39**	**56**		P	**P**	**04 16 53.2**	**+0.6**
	comp=Z,0.4nm,0.8s,baz=218,slow=5.7,SNR=3.3							
	comp=Z,0.4nm,0.8s							
ANMO	**Albuquerque**	**81.77**	**50**		P	**P**	**04 16 55.3**	**+0.7**
	comp=Z,1.2nm,0.9s,baz=166,slow=4.8,SNR=4.2							
	comp=Z,1.2nm,0.9s							
KTH	**Kantishna Hill**	**82.44**	**10**		P	**P**	**04 16 58.3**	**+1.0**
KTH					IAmb	IAmb	04 17 00.8	
	comp=Z,6.3nm,1.2s							
S22A	**4UR Ranch, Cre**	**82.82**	**47**		P	**P**	**04 17 00.9**	**+0.7**
S22A					IAmb	IAmb	04 17 01.8	
	comp=Z,2.5nm,0.9s							
PDAR	**Pinedale Array**	**83.46**	**42**		P	**P**	**04 17 03.8**	**+0.5**
	comp=Z,0.9nm,0.8s,baz=227,slow=3.7,SNR=4.6							
	comp=Z,0.9nm,0.8s							
PDAR	**Pinedale Array**	**83.46**	**42**		P	**P**	**04 17 03.4**	**+0.1**
YHL	**Hebgen Lake**	**83.54**	**39**		P	**P**	**04 17 05.2**	**+1.4**
YHL					IAmb	IAmb	04 17 16.9	
	comp=Z,6.0nm,1.0s							
WRH	**Wood River Hil**	**83.77**	**11**		P	**P**	**04 17 05.9**	**+1.8**
CCB	**Clear Creek Bu**	**83.98**	**11**		P	**P**	**04 17 06.6**	**+1.4**
CCB					IAmb	IAmb	04 17 07.4	
	comp=Z,3.1nm,0.8s							
IL31		**84.26**	**11**		P	**P**	**04 17 08.8**	**+2.3**
IL31					IAmb	IAmb	04 17 11.0	
	comp=Z,6.3nm,1.4s							
ILAR	**Eielson Array**	**84.26**	**11**		P	**P**	**04 17 08.1**	**+1.5**
	comp=Z,0.7nm,0.6s,baz=227,slow=6.1,SNR=8.3							
	comp=Z,0.7nm,0.6s							
MT03	**Universidad Ad**	**90.60**	**125**		P	**P**	**04 17 38.5**	**+0.3**
YKA	**Yellowknife Ar**	**91.72**	**23**		P	**P**	**04 17 43.8**	**+1.4**
	comp=Z,0.4nm,0.8s,baz=237,slow=3.9,SNR=3.9							
	comp=Z,0.4nm,0.8s							
ARCES	**ARCESS Array B**	**126.56**	**352**		PKP	**PKiKP**	**04 23 39.0**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=29,slow=2.8,SNR=5.4							
LBTB	**Lobatse**	**134.16**	**204**		PKPdf	**PKPdf**	**04 23 53.6**	**-0.3**
CLL	**Collm**	**145.76**	**353**			**PKPdf**	**04 24 13.3**	**-0.5**
CLL	**Collm**	**145.76**	**353**	*i*	PKPbc	**PKPab**	**04 24 16.1**	**+1.5**
	comp=Z,12nm,1.0s							
CLL				*i*	(PKiKP)		04 24 18.6	
CLL				*i*	x	x	04 24 26.7	
	comp=Z,12nm,0.9s							
CLL				*ex*		x	04 24 35.0	
BUR08	**Bucovina Ar. S**	**146.26**	**338**		PKPbc	**PKPbc**	**04 24 17.0**	**+0.9**
KHC	**Kasperske Hory**	**147.83**	**352**		PKPbc	**PKiKP**	**04 24 22.8**	**+0.5**
BRTR	**Keskin Array B**	**147.85**	**319**		PKPbc	**PKPbc**	**04 24 22.0**	**+1.1**
	comp=Z,0.8nm,0.6s,baz=302,slow=2.8,SNR=5.1							
GERES	**GERESS Array B**	**148.09**	**352**		PKPbc	**PKPbc**	**04 24 22.3**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=169,slow=0.7,SNR=7.7							
BFO	**Black Forest**	**149.06**	**358**		PKPbc	**PKiKP**	**04 24 24.9**	**-0.1**
TORD	**Torodi Ar. Bea**	**173.43**	**129**		PKPab	**PKPab**	**04 26 12.5**	**-1.8**
	comp=Z,0.2nm,0.4s,baz=204,slow=2.5,SNR=1.2							
TORD	**Torodi Ar. Bea**	**173.43**	**129**		PKPdf	**PKPdf**	**04 24 43.9**	**-1.8**

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*BER **10** 04:06:07.7±1.8, 61.°95N×4.°87E, h13km±3km, ML2.7, ML2.5(NAO), Confirmed Earthquake*
*DNK **10** 04:06:08.2±2.2, 61.°75N×5.°43E, h0km±24km, ML2.8*
*NAO **10** 04:06:08.2±1.6, 61.°92N×5.°14E, h14km±8km, ML2.5*
*IDC **10** 04:06:10.2±1.9, 61.°38N×5.°37E, h0km, mbtmp3.1/5, ML2.3/4, Error ellipse: s-maj=20.8km s-min=14.1km az=8.0*
*UPP **10** 04:06:11.2±2.7, 61.°62N×5.°67E, h0km, ML2.0, Explosion*
ISC 10 04:06:06.9±1.0, 61.°90N±0.°04×5.°02E±0.°04, h10km, n68, σ2s43/121, 1C-2D, Southern Norway

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
FOO	**Floro**	**0.30**	**178**		Pg	**Pg**	**04 06 15.2**	**+2.3**
FOO					Lg	Lg	04 06 20.3	
FOO	**Floro**	**0.30**	**178**	⇓*i*	P	**Pg**	**04 06 15.2**	**+2.3**
FOO				*e*	S	**Sg**	**04 06 20.3**	**+3.3**
FOO					IAML		04 06 20.8	
	comp=Z,746nm,0.2s							
SUE	**Sulen**	**0.85**	**189**	*e*	P	**Pg**	**04 06 23.8**	**+0.5**
SUE				*e*	Pg	**Pb**	**04 06 24.6**	**+0.8**
SUE				*e*	S	**Sg**	**04 06 35.4**	**+0.9**
SUE					IAML		04 06 39.7	
	comp=Z,344nm,0.3s							
HYA	**Hoyanger**	**0.92**	**142**		Pg	**Pg**	**04 06 25.3**	**+0.7**
HYA					Lg	Lg	04 06 38.9	
HYA	**Hoyanger**	**0.92**	**142**	⇓*i*	P	**Pg**	**04 06 25.3**	**+0.7**
HYA				*e*	S	**Sg**	**04 06 38.8**	**+2.1**
HYA					IAML		04 06 39.4	
	comp=Z,564nm,0.2s							
AKN	**Aaknes**	**0.97**	**72**		Pg	**Pg**	**04 06 25.8**	**+0.1**
AKN					Lg	Lg	04 06 38.9	
AKN	**Aaknes**	**0.97**	**72**		Pg	**Pg**	**04 06 25.8**	**+0.1**
AKN					Sg	**Sg**	**04 06 38.9**	**+0.7**
MOL	**Molde**	**1.36**	**59**		Pg	**Pn**	**04 06 32.0**	**0.0**
MOL					Lg	Lg	04 06 49.9	
MOL	**Molde**	**1.36**	**59**	*e*	P	**Pn**	**04 06 31.9**	**-0.1**
MOL				*e*	S	**Sn**	**04 06 49.8**	**-0.2**
MOL					IAML		04 06 52.0	
	comp=Z,154nm,0.3s							
ASK	**Askoy**	**1.42**	**177**	⇑*i*	P	**Pn**	**04 06 32.5**	**-0.2**
ASK				*e*	S	**Sn**	**04 06

NB2				Lg	Lg	04 07 41.3	
	baz=291,slow=37						
NB2	**NORSAR Subarra**	**3.10**	**103**	Pn	**Pn**	**04 06 55.2**	**-0.6**
	baz=289,slow=14						
NB2				Pg	**Pb**	**04 07 00.2**	**-1.8**
NB2				Sg	**Sb**	**04 07 41.3**	**+1.5**
	baz=291,slow=37						
NOA	**NORSAR Array B**	**3.10**	**103**	Pn	**Pn**	**04 06 56.2**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=213,slow=23,SNR=39						
NOA				Pg	**Pb**	**04 07 00.6**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=293,slow=15,SNR=14						
NOA				Lg	Lg	04 07 38.7	
	comp=Z,1.0nm,0.3s,baz=318,slow=26,SNR=5.1						
	comp=Z,0.5nm,0.2s						
KONO	**Kongsberg**	**3.18**	**133**	*eP*	**Pn**	**04 06 57.2**	**+0.3**
KONO				*eS*	**Sn**	**04 07 33.4**	**-1.5**
NC602	**NORSAR Array S**	**3.35**	**107**	*eP*	**Pn**	**04 06 58.9**	**-0.4**
NC602				*eS*	**Sn**	**04 07 37.4**	**-1.8**
NC602				*eSg*	**Sb**	**04 07 48.5**	**+1.3**
NRA0	**NORESS Array S**	**3.35**	**107**	Pn	**Pn**	**04 06 58.6**	**-0.7**
	baz=296,slow=12						
NRA0				Pg	**Pb**	**04 07 04.9**	**-1.5**
	baz=301,slow=16						
NRA0				Sn	**Sn**	**04 07 36.9**	**-2.3**
	baz=287,slow=22						
NRA0				Lg	Lg	04 07 46.5	
	baz=297,slow=28						
NRA0	**NORESS Array S**	**3.35**	**107**	Pn	**Pn**	**04 06 58.6**	**-0.7**
	baz=296,slow=12						
NRA0				Pg	**Pb**	**04 07 04.9**	**-1.5**
	baz=301,slow=16						
NRA0				Sn	**Sn**	**04 07 36.9**	**-2.3**
	baz=287,slow=22						
NRA0				Sg	**Sb**	**04 07 46.5**	**-0.7**
	baz=297,slow=28						
OSL	**Oslo**	**3.41**	**123**	*eP*	**Pn**	**04 07 00.2**	**+0.2**
OSL				*eS*	**Sn**	**04 07 39.0**	**-1.5**
OSL				*eSg*	**Sb**	**04 07 51.4**	**+2.7**
OSL				IAML		04 07 58.9	
	comp=Z,61nm,0.3s						
LRW	**Lerwick**	**3.50**	**242**	*eP*	**Pn**	**04 06 59.4**	**-1.8**
LRW				*eS*	**Sn**	**04 07 37.7**	**-5.0**
SNART	**Snartemo**	**3.74**	**162**	*i* P	**Pn**	**04 07 04.0**	**-0.6**
SNART				*i* S	**Sn**	**04 07 44.7**	**-3.9**
SNART				IAML		04 08 08.0	
	comp=Z,42nm,0.4s						
SNART	**Snartemo**	**3.74**	**162**	*eP*	**Pn**	**04 07 04.3**	**-0.2**
SNART				*eS*	**Sn**	**04 07 45.6**	**-2.9**
HOMB	**Homborsund**	**4.04**	**153**	*i* P	**Pn**	**04 07 08.8**	**+0.2**
HOMB				*i* S	**Sn**	**04 07 53.1**	**-2.7**
HOMB				IAML		04 08 14.8	
	comp=Z,16nm,0.9s						
HOMB	**Homborsund**	**4.04**	**153**	*eP*	**Pn**	**04 07 08.8**	**+0.2**
HOMB				*eS*	**Sn**	**04 07 53.2**	**-2.7**
STRU	**Stroemstad**	**4.19**	**131**	*i* P	**Pn**	**04 07 10.1**	**-0.6**
STRU				*i* S	**Sn**	**04 07 54.4**	**-5.3**
STRU				S	Sb	04 07 54.9	-16
STRU				IAML		04 08 21.8	
	comp=Z,9.2nm,0.6s						
STRU	**Stroemstad**	**4.19**	**131**	P	**Pn**	**04 07 09.5**	**-1.3**
STRU				S	**Sn**	**04 07 54.9**	**-4.8**
UDD	**Uddeholm**	**4.56**	**110**	P	**Pn**	**04 07 16.2**	**+0.3**
HFS	**Hagfors**	**4.58**	**109**	Pn	**Pn**	**04 07 15.6**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=285,slow=11,SNR=14						
HFS				Pg	**Pb**	**04 07 25.0**	**-2.2**
	comp=Z,0.3nm,0.3s,baz=291,slow=12,SNR=9.3						
HFS				Sn	**Sn**	**04 08 04.9**	**-4.3**
	comp=Z,1.4nm,0.3s,baz=284,slow=20,SNR=7.0						
HFS				Lg	Lg	04 08 24.0	
	comp=Z,2.3nm,0.3s,baz=289,slow=32,SNR=6.1						
	comp=Z,1.5nm,0.7s						
HFS	**Hagfors**	**4.58**	**109**	Pn	**Pn**	**04 07 16.0**	**-0.1**
	baz=287,slow=14						
HFS				Sn	**Sn**	**04 08 06.9**	**-2.3**
	baz=292,slow=22						
HFS				Lg	Lg	04 08 28.1	
	baz=301,slow=37						
HFS	**Hagfors**	**4.58**	**109**	Pn	**Pn**	**04 07 16.0**	**-0.1**
	baz=287,slow=14						
HFS				Sn	**Sn**	**04 08 06.9**	**-2.3**
	baz=292,slow=22						
HFS				Sg	**Sb**	**04 08 28.1**	**+5.8**
	baz=301,slow=37						
VANU	**Vaenersborg**	**4.90**	**131**	P	**Pn**	**04 07 19.8**	**-0.8**
VANU				S	**Sn**	**04 08 11.9**	**-5.4**
VANU	**Vaenersborg**	**4.90**	**131**	P	**Pn**	**04 07 19.8**	**-0.8**
VANU				S	**Sn**	**04 08 11.9**	**-5.4**
NASU	**Vaermlandsnaes**	**5.03**	**123**	P	**Pn**	**04 07 21.4**	**-0.8**
NASU	**Vaermlandsnaes**	**5.03**	**123**	P	**Pn**	**04 07 21.4**	**-0.8**
TJOU	**Tjoern**	**5.10**	**137**	P	**Pn**	**04 07 22.8**	**-0.5**
TJOU	**Tjoern**	**5.10**	**137**	P	**Pn**	**04 07 22.8**	**-0.5**
ROTU	**Roteberg**	**5.17**	**91**	P	**Pn**	**04 07 25.0**	**+0.8**
ROTU	**Roteberg**	**5.17**	**91**	P	**Pn**	**04 07 25.0**	**+0.8**
OVD	**Ostervraa, Den**	**5.30**	**148**	*i* S	**Sn**	**04 08 24.0**	**-2.9**
FALU	**Falun**	**5.42**	**100**	P	**Pn**	**04 07 27.2**	**-0.4**
FALU	**Falun**	**5.42**	**100**	P	**Pn**	**04 07 27.2**	**-0.4**
HASU	**Hassela**	**5.46**	**82**	S	**Sn**	**04 08 28.0**	**-3.1**
HASU	**Hassela**	**5.46**	**82**	S	**Sn**	**04 08 28.0**	**-3.1**
BIGH	**Upper Bighouse**	**5.61**	**236**	*eP*	**Pn**	**04 07 28.4**	**-1.9**
BIGH				*eS*	**Sn**	**04 08 26.7**	**-8.1**
ONAU	**Onsala**	**5.71**	**139**	*i* P	**Pn**	**04 07 30.2**	**-1.4**
ONAU				*i* S	Sn	04 08 30.4	-6.7
FKPU	**Falk**	**5.75**	**127**	P	**Pn**	**04 07 31.4**	**-0.8**
FKPU	**Falk**	**5.75**	**127**	P	**Pn**	**04 07 31.4**	**-0.8**
MUD	**Monsted U'grnd**	**5.86**	**157**	*i* S	**Sn**	**04 08 36.8**	**-4.1**
IGGU	**Iggoen**	**6.00**	**94**	P	**Pn**	**04 07 34.7**	**-0.9**
IGGU				S	**Sn**	**04 08 39.8**	**-4.5**
IGGU	**Iggoen**	**6.00**	**94**	P	**Pn**	**04 07 34.7**	**-0.9**
IGGU				S	**Sn**	**04 08 39.8**	**-4.5**
DRUM	**Mains of Drumt**	**6.30**	**221**	*eP*	**Pn**	**04 07 37.9**	**-1.9**
DRUM				*eS*	**Sn**	**04 08 43.2**	**-8.4**
KPL	**Plockton**	**7.08**	**235**	*eP*	**Pn**	**04 07 48.0**	**-2.5**
KPL				*eS*	Sn	04 09 01.1	-10
DEL	**Delary**	**7.09**	**136**	*i* P	**Pn**	**04 07 50.0**	**-0.6**
DEL				*i* S	Sn	04 09 02.1	-8.9
DEL				IAML		04 09 54.7	
	comp=Z,4.5nm,0.6s						
BJUU	**Bjuv**	**7.15**	**141**	*i* P	**Pn**	**04 07 50.0**	**-1.4**
BJUU				*i* S	Sn	04 09 04.1	-8.6
BJUU				IAML		04 09 35.0	
	comp=Z,8μm,9.9s						
EKA	**Eskdalemuir Ar**	**7.84**	**217**	Pn	**Pn**	**04 08 00.1**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=26,slow=12,SNR=22						
EKA				Sn	**Sn**	**04 09 23.2**	**-6.4**
	baz=40,slow=23						
BLEU	**Blekinge**	**7.89**	**130**	*i* P	**Pn**	**04 08 00.7**	**-0.8**
BLEU				*eS*	Sn	04 09 21.4	-9.4
EDMD	**Edmundbyers**	**7.98**	**210**	*eP*	**Pn**	**04 08 00.5**	**-2.3**
EDMD				*eS*	Sn	04 09 22.6	-10
BSD	**Bornholm Skovb**	**8.54**	**138**	*i* S	Sn	04 09 38.1	-8.7
BSD				IAML		04 09 42.0	
	comp=Z,0.5nm,0.1s						
FINES	**FINESS Array B**	**10.01**	**83**	Pn	**Pn**	**04 08 31.9**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=284,slow=11,SNR=1.4						
FINES				Sn	**Sn**	**04 10 19.1**	**-3.7**
	comp=Z,0.2nm,0.3s,baz=274,slow=25,SNR=1.8						
FINES				Lg	Lg	04 11 21.5	
	comp=Z,0.5nm,0.3s,baz=276,slow=26,SNR=5.2						
	comp=Z,1.6nm,0.9s						
ARCES	**ARCESS Array B**	**11.33**	**39**	Pn	Pn	04 08 54.5	+6.0
	comp=Z,0.1nm,0.3s,baz=236,slow=13,SNR=1.0						
ARCES				Sn	**Sn**	**04 11 01.6**	**+6.7**
	comp=Z,0.1nm,0.3s,baz=234,slow=21,SNR=1.7						
	comp=Z,0.9nm,0.9s						

*IDC **10** 04:09:42.8±1.5, 12°.88N×87°.02W, h0km, mb3.6/6, mbtmp3.6/8, ML3.4/2, Error ellipse: s-maj=45.7km s-min=19.9km az=41.0*
*SNET **10** 04:09:43.5±0.8, 12°.88N×87°.02W, h15km±3km, ML3.9*
*UCR **10** 04:09:43.5±0.8, 12°.89N×87°.00W, h18km±3km, ML3.8*
*INET **10** 04:09:44.4±0.7, 12°.90N×86°.99W, h3km±5km, MW3.7*
ISC 10 04:09:44.3±1.2, 12°.94N±0°.05×87°.02W±0°.04, h11km±8km, n38, σ1°916/56, mb3.6/6, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.24**	**187**	*eP*	**Pg**		**04 09 49.7**	**+0.4**
CRIN				*eS*	**Sg**		**04 09 54.0**	**+1.4**
CNGN	**Cerro Negro**	**0.54**	**144**	*eP*	**Pg**		**04 09 54.7**	**0.0**
COPN	**Copaltepe**	**0.86**	**151**	*eP*	**Pb**		**04 09 59.9**	**-1.4**
CNCH	**Conchagua**	**0.86**	**293**	*eP*	**Pb**		**04 09 59.9**	**-1.5**
CNCH				*eS*	**Sb**		**04 10 13.3**	**+0.3**
CNCH				IAML			04 10 17.9	
	comp=Z,15μm,0.3s							
CNCH	**Conchagua**	**0.86**	**293**	*eP*	**Pb**		**04 09 59.9**	**-1.5**
CNCH				*eS*	**Sb**		**04 10 13.3**	**+0.3**
CNCH				IAML			04 10 17.9	
	comp=Z,15μm,0.3s							
LCND	**La Caada**	**0.93**	**294**	*eP*	**Pb**		**04 10 00.8**	**-1.6**
LCND				*eS*	**Sb**		**04 10 13.8**	**-0.9**
LCND				IAML			04 10 16.3	
	comp=Z,4μm,0.3s							
LCND	**La Caada**	**0.93**	**294**	*eP*	**Pb**		**04 10 00.8**	**-1.6**
LCND				*eS*	**Sb**		**04 10 13.8**	**-0.9**
LCND				IAML			04 10 16.3	
	comp=Z,4μm,0.3s							
APYN	**Apoyeque**	**0.96**	**137**	*eP*	**Pb**		**04 10 01.3**	**-1.6**
TGUH	**Tegucigalpa,Un**	**1.14**	**348**	*eP*	**Pb**		**04 10 05.1**	**-1.1**
TGUH				*eS*	**Sb**		**04 10 20.8**	**-0.3**
TGUH	**Tegucigalpa,Un**	**1.14**	**348**	*eP*	**Pb**		**04 10 05.1**	**-1.1**
TGUH				*eS*	**Sb**		**04 10 20.8**	**-0.3**
CRUN	**El Crucero**	**1.18**	**143**	*eP*	**Pn**		**04 10 05.4**	**-1.5**
VSM	**San Miguel**	**1.32**	**292**	*eP*	**Pn**		**04 10 07.6**	**-1.3**
VSM	**San Miguel**	**1.32**	**292**	*eP*	**Pn**		**04 10 07.6**	**-1.3**
LCY	**Lacayo**	**1.33**	**291**	*eP*	**Pn**		**04 10 07.3**	**-1.7**
LCY	**Lacayo**	**1.33**	**291**	*eP*	**Pn**		**04 10 07.3**	**-1.7**
PACA	**Pacayal**	**1.38**	**293**	*eP*	**Pn**		**04 10 08.0**	**-1.6**
PACA				*eS*	**Sn**		**04 10 27.4**	**-0.5**
PACA	**Pacayal**	**1.38**	**293**	*eP*	**Pn**		**04 10 08.0**	**-1.6**
PACA				*eS*	**Sn**		**04 10 27.4**	**-0.5**
BOAB	**BOACO BROADBAN**	**1.41**	**110**	*eP*	**Pn**		**04 10 08.6**	**-1.3**
BOAB				*eS*	**Sn**		**04 10 28.4**	**0.0**
COEB	**Comit de Eme**	**1.57**	**291**	*eP*	**Pn**		**04 10 10.9**	**-1.4**
COEB				*eS*	**Sn**		**04 10 33.1**	**+0.4**
COEB				IAML			04 10 35.8	
	comp=Z,986nm,0.4s							
COEB	**Comit de Eme**	**1.57**	**291**	*eP*	**Pn**		**04 10 10.9**	**-1.4**
COEB				*eS*	**Sn**		**04 10 33.1**	**+0.4**
COEB				IAML			04 10 35.8	
	comp=Z,986nm,0.4s							
SCLA	**Alcaldia de Sa**	**1.83**	**295**	*eP*	**Pn**		**04 10 14.8**	**-1.0**
SCLA				*eS*	**Sn**		**04 10 39.2**	**+0.2**
SCLA	**Alcaldia de Sa**	**1.83**	**295**	*eP*	**Pn**		**04 10 14.8**	**-1.0**
SCLA				*eS*	**Sn**		**04 10 39.2**	**+0.2**
CONN	**Concepcion**	**1.93**	**135**	*eP*	**Pn**		**04 10 16.8**	**-0.2**
COEG	**Centro de Oper**	**1.94**	**291**	*eP*	**Pn**		**04 10 16.3**	**-1.0**
COEG				*eS*	**Sn**		**04 10 41.7**	**+0.1**
COEG				IAML			04 10 49.2	
	comp=Z,1μm,0.5s							
COEG	**Centro de Oper**	**1.94**	**291**	*eP*	**Pn**		**04 10 16.3**	**-1.0**
COEG				*eS*	**Sn**		**04 10 41.7**	**+0.1**
COEG				IAML			04 10 49.2	
	comp=Z,1μm,0.5s							
PAVA	**Las Pavas**	**2.02**	**293**	*eP*	**Pn**		**04 10 17.5**	**-1.0**
PAVA	**Las Pavas**	**2.02**	**293**	*eP*	**Pn**		**04 10 17.5**	**-1.0**
ACON	**Acoyapa**	**2.04**	**118**	*eP*	**Pn**		**04 10 17.0**	**-1.6**
SJTE	**Alcalda de S**	**2.05**	**289**	*eP*	**Pn**		**04 10 17.8**	**-1.0**
SJTE				IAML			04 10 53.8	
	comp=Z,215nm,0.5s							
SJTE	**Alcalda de S**	**2.05**	**289**	*eP*	**Pn**		**04 10 17.8**	**-1.0**
SJTE				IAML			04 10 53.8	
	comp=Z,215nm,0.5s							
JTS	**Las Juntas de**	**3.32**	**142**	Pn	**Pn**		**04 10 35.9**	**-0.3**
	comp=Z,7.0nm,0.3s,baz=36,slow=16,SNR=14							
JTS				Sn	**Sn**		**04 11 16.1**	**+0.3**
	baz=328,slow=20							
	comp=Z,14nm,0.3s							
CMIG	**Matias Romero**	**8.65**	**300**	Pn	**Pn**		**04 11 51.4**	**+1.9**
	comp=Z,0.2nm,0.3s,baz=145,slow=7.5,SNR=4.8							
CMIG				Sn	**Sn**		**04 13 29.5**	**+2.4**
	comp=Z,0.1nm,0.3s,baz=338,slow=18,SNR=1.5							
	comp=Z,1.8nm,0.6s							
TXAR	**Lajitas Array**	**22.48**	**319**	P	**P**		**04 14 44.2**	**+0.3**
	comp=Z,0.7nm,0.9s,baz=138,slow=8.5,SNR=6.2							
	comp=Z,0.7nm,0.9s							
NVAR	**Mina Array Bea**	**37.62**	**318**	P	**P**		**04 17 00.6**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=128,slow=5.8,SNR=9.5							
	comp=Z,0.3nm,0.3s							
SCHQ	**Schefferville**	**44.70**	**16**	P	**P**		**04 17 59.4**	**+2.1**
	comp=Z,1.8nm,0.7s,baz=180,slow=11,SNR=5.4							
	comp=Z,1.8nm,0.7s							
YKA	**Yellowknife Ar**	**53.26**	**344**	P	**P**		**04 19 02.4**	**-0.3**
	comp=Z,0.8nm,0.7s,baz=137,slow=8.4,SNR=9.1							
	comp=Z,0.8nm,0.7s							
ILAR	**Eielson Array**	**65.75**	**336**	P	**P**		**04 20 28.2**	**-0.7**
	comp=Z,0.4nm,0.9s,baz=151,slow=4.5,SNR=4.2							
	comp=Z,0.4nm,0.9s							
ESDC	**Sonseca Array**	**76.56**	**52**	P	**P**		**04 21 35.3**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=284,slow=5.2,SNR=2.3							
	comp=Z,0.3nm,0.6s							

*NEIC **10** 04:16:34.6±1.5, 37°.07N±0°.04×141°.08E±0°.10, h48km±7km, mb4.2/13, Error ellipse: s-maj=11.5km s-min=5.5km az=95.0*
*JMA **10** 04:16:34.0±0.1, 37°.1N±0°.4×141°.2E±0°.8, h51km, MD4.0/40, MV4.4/40, E OFF FUKUSHIMA PREF*
JMA Felt II J1 at E OFF FUKUSHIMA PREF .
*IDC **10** 04:16:36.5±2.7, 37°.02N×141°.11E, h72km±24km, mb3.7/13, mbtmp4.0/17, Error ellipse: s-maj=28.1km s-min=20.3km az=17.0*
ISC 10 04:16:33.7±1.1, 37°.05N±0°.04×141°.20E±0°.07, h47km±8km, n75, σ0°90/72, mb4.1/20, 18D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.32**	**279**	*i* P		**Pn**	**04 16 43.0**	**+0.2**
ONAJ				↓S		**Sn**	**04 16 49.2**	**0.0**
ONAJ	**Iwakimizuishiy**	**0.32**	**279**	A		A	04 16 43.0	
	comp=E,83nm,0.3s,comp=E,70nm,0.2s							
JFK	**Kawauchi**	**0.41**	**321**	↓*i* P		**Pn**	**04 16 43.8**	**+0.1**
JFK				↓S		**Sn**	**04 16 50.6**	**-0.2**
JFK	**Kawauchi**	**0.41**	**321**	A		A	04 16 43.8	
	comp=E,20nm,0.3s,comp=E,22nm,0.3s							
JFFD	**Fukushimafurud**	**0.51**	**275**	↓*i* P		**Pn**	**04 16 45.0**	**+0.1**
JFFD				↓S		**Sn**	**04 16 52.4**	**-0.4**
JFFD	**Fukushimafurud**	**0.51**	**275**	A		A	04 16 45.0	
	comp=E,15nm,1.1s,comp=E,12nm,0.3s							
JHO	**Hitachi**	**0.67**	**229**	↓*i* P		**Pn**	**04 16 46.7**	**-0.2**
JHO				↓S		**Sn**	**04 16 55.5**	**-0.9**
JHO	**Hitachi**	**0.67**	**229**	A		A	04 16 46.7	
	comp=E,8.0nm,1.1s,comp=E,7.0nm,0.2s							
JMST	**Minamisoumatoc**	**0.72**	**340**	A		A	04 16 47.7	
	comp=E,7.0nm,0.9s,comp=E,10.0nm,0.3s							
JFT	**Otama**	**0.83**	**304**	↓*i* P		**Pn**	**04 16 49.9**	**+0.8**
JFT				↓S		**Sn**	**04 17 00.9**	**+0.7**
JFT	**Otama**	**0.83**	**304**	A		A	04 16 49.9	
	comp=E,27nm,0.4s,comp=E,16nm,0.2s							
JHYU	**Hitachinakayam**	**0.86**	**215**	A		A	04 16 49.8	
	comp=E,4.0nm,0.8s,comp=E,7.0nm,0.4s							
JMM	**Marumori**	**0.87**	**339**			**Pn**	**04 16 49.7**	**+0.1**
JMM						**Sn**	**04 17 00.6**	**-0.6**
JMM	**Marumori**	**0.87**	**339**	↓*i* P		**Pn**	**04 16 49.7**	**+0.1**
JMM				↓S		**Sn**	**04 17 01.0**	**-0.3**
JMM	**Marumori**	**0.87**	**339**	A		A	04 16 49.7	
	comp=E,9.0nm,0.4s,comp=E,8.0nm,2.0s							
JSB	**Shiboa**	**1.02**	**266**	A		A	04 16 51.8	
	comp=E,8.0nm,0.9s,comp=E,7.0nm,1.0s							
JYT	**Yasato**	**1.15**	**225**	Pn		**Pn**	**04 16 53.1**	**-0.3**
JYT	**Yasato**	**1.15**	**225**	A		A	04 16 53.8	
	comp=E,17nm,0.3s,comp=E,14nm,0.3s							
JYAR	**Yonezawaarcadi**	**1.20**	**316**	A		A	04 16 54.3	
	comp=E,8.0nm,0.5s,comp=E,6.0nm,0.8s							
JFY	**Yanaizu**	**1.24**	**287**	*eP*		**Pn**	**04 16 55.0**	**+0.4**
JOU	**Okura**	**1.38**	**342**	↓*i* P		**Pn**	**04 16 56.8**	**+0.3**
JOU	**Okura**	**1.38**	**342**	A		A	04 16 56.8	
	comp=E,5.0nm,0.5s,comp=E,4.0nm,0.4s							
JIO	**Ouri**	**1.41**	**5**	↓*i* P		**Pn**	**04 16 56.8**	**0.0**
JYS	**Shirataka**	**1.47**	**323**	↓*i* P		**Pn**	**04 16 58.4**	**+0.7**
JYS				↓S		**Sn**	**04 17 17.1**	**+1.2**
JAG	**Ashikaga**	**1.53**	**246**	↓*i* P		**Pn**	**04 16 58.6**	**+0.1**
JAG				↓S		**Sn**	**04 17 16.9**	**-0.5**
JKT	**Katashina**	**1.59**	**260**	*i* P		**Pn**	**04 17 00.1**	**+0.7**
MJAR	**Matsushiro Arr**	**2.45**	**259**	P		**Pn**	**04 17 11.2**	**+0.1**
	22nm,0.4s,baz=86,slow=18,SNR=59							
MJAR				S		**Sn**	**04 17 41.9**	**+2.0**
	39nm,0.4s,baz=18,slow=13,SNR=7.5							
MJAR	**Matsushiro Arr**	**2.45**	**259**	Pn		**Pn**	**04 17 11.4**	**+0.2**
MAJO	**Matsushiro**	**2.45**	**259**			**Pn**	**04 17 12.2**	**+1.0**
MJB9	**Matsu-Tunnel**	**2.45**	**259**			**Pn**	**04 17 12.3**	**+1.1**
JSD	**Sado**	**2.53**	**294**	Pn		**Pn**	**04 17 11.9**	**-0.4**
JGF	**Kuroka**	**3.42**	**246**	Pn		**Pn**	**04 17 26.2**	**+1.7**
JTM	**Tenmabayashi**	**3.73**	**359**			**Pn**	**04 17 30.4**	**+1.6**
INU	**Inuyama**	**3.78**	**245**	Pn		**Pn**	**04 17 31.4**	**+1.9**
JHJ	**Hachijo jima 2**	**4.09**	**197**	P		**Pn**	**04 17 35.0**	**+1.3**
	73nm,0.3s,baz=329,slow=22,SNR=16							
JHJ				S		**Sn**	**04 18 19.6**	**-0.7**
	214nm,0.4s,baz=89,slow=23,SNR=9.4							
JHJ2	**Mitsune**	**4.09**	**196**	Pn		**Pn**	**04 17 35.0**	**+1.3**
ERM	**Erimo**	**5.18**	**16**	Pn		**Pn**	**04 17 49.5**	**+0.9**
JEW	**Eniwo**	**5.79**	**2**	Pn		**Pn**	**04 17 57.1**	**+0.2**
JHS	**Saijyo**	**6.86**	**255**	Pn		**Pn**	**04 18 11.4**	**-0.3**
USRK	**Ussuriysk Ar.**	**9.99**	**318**	P		**Pn**	**04 18 57.0**	**+2.5**
	6.2nm,0.7s,baz=127,slow=14,SNR=7.7							
USRK	**Ussuriysk Ar.**	**9.99**	**318**			**Pn**	**04 18 54.0**	**-0.5**
KSRS	**Korea Array**	**10.59**	**276**	P		**Pn**	**04 19 06.2**	**+3.5**
	2.5nm,0.6s,baz=89,slow=14,SNR=12							
KLR	**Kul'dur**	**13.97**	**334**	P		**P**	**04 19 55.5**	**-0.1**
	0.7nm,0.6s,baz=140,slow=11,SNR=4.7							
ULN	**Ulaanbaatar**	**27.20**	**304**	P		**P**	**04 22 12.9**	**-0.1**
ULN				IAmb		IAmb	04 22 16.7	
	comp=Z,3.9nm,1.1s							
SONM	**Songino Array**	**27.63**	**304**	P		**P**	**04 22 16.8**	**0.0**
	comp=Z,0.9nm,0.5s,baz=79,slow=7.8,SNR=4.8							
	comp=Z,0.9nm,0.5s							
SONM	**Songino Array**	**27.63**	**304**	IAmb		IAmb	04 22 19.0	
	comp=Z,2.6nm,1.2s							
CHTO	**Chiang Mai**	**41.13**	**256**	P		**P**	**04 24 13.1**	**-0.3**
CHTO				IAmb		IAmb	04 24 26.4	
	comp=Z,7.7nm,1.4s							
ZAA0	**Zalesovo Array**	**41.77**	**312**	P		**P**	**04 24 16.9**	**-1.3**
ZAA0				IAmb		IAmb	04 24 19.1	
	comp=Z,3.3nm,0.6s							
ZALV	**Zalesovo Beam**	**41.77**	**312**	P		**P**	**04 24 18.4**	**+0.1**
	comp=Z,3.4nm,0.4s,baz=97,slow=7.1,SNR=12							
ZALV				PcP		**PcP**	**04 26 13.0**	**-0.7**
	comp=Z,0.9nm,0.4s,baz=123,slow=4.6,SNR=3.5							
	comp=Z,3.4nm,0.4s							
ZALV	**Zalesovo Beam**	**41.77**	**312**	P		**P**	**04 24 18.5**	**+0.3**
MK31	**Makanchi Array**	**43.96**	**302**	P		**P**	**04 24 35.7**	**-0.4**
MKAR	**Makanchi Array**	**43.96**	**302**	P		**P**	**04 24 36.0**	**0.0**
	comp=Z,1.3nm,0.7s,baz=86,slow=9.3,SNR=12							
MKAR				PcP		**PcP**	**04 26 20.5**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=96,slow=5.3,SNR=2.8							
	comp=Z,1.3nm,0.7s							
KURK	**Kurchatov**	**45.78**	**308**	P		**P**	**04 24 50.1**	**-0.3**
IL31		**49.57**	**32**	P		**P**	**04 25 20.3**	**+0.7**
IL31				IAmb		IAmb	04 25 45.7	
	comp=Z,2.3nm,0.8s							
ILAR	**Eielson Array**	**49.57**	**32**	P		**P**	**04 25 20.7**	**+1.0**
	comp=Z,0.5nm,0.8s,baz=272,slow=7.8,SNR=4.9							
	comp=Z,0.5nm,0.8s							
KK31	**Karatay Array**	**52.97**	**300**	P		**P**	**04 25 45.2**	**-0.1**
KK31				IAmb		IAmb	04 26 03.5	
	comp=Z,2.4nm,1.1s							
KKAR	**Karatay Array**	**52.97**	**300**	P		**P**	**04 25 44.7**	**-0.7**
KKAR				IAmb		IAmb	04 26 03.5	
	comp=Z,2.4nm,1.1s							
ARU	**Arti**	**56.23**	**318**	P		**P**	**04 26 08.4**	**-0.4**
ABKAR	**Akbulak array**	**57.80**	**310**	P		**P**	**04 26 18.7**	**-1.3**
ARCES	**ARCESS Array B**	**63.92**	**339**	P		**P**	**04 27 01.0**	**-0.3**
	comp=Z,2.0nm,0.9s,baz=46,slow=6.9,SNR=5.6							
	comp=Z,2.0nm,0.9s							
FINES	**FINESS Array B**	**68.72**	**332**	P		**P**	**04 27 31.7**	**-0.3**
	comp=Z,1.9nm,0.6s,baz=40,slow=7.4,SNR=6.9							
	comp=Z,1.9nm,0.6s							
KBZ	**Khabaz**	**70.76**	**311**	P		**P**	**04 27 45.3**	**+0.4**
	comp=Z,2.4nm,0.8s,baz=329,slow=6.7,SNR=3.8							
	comp=Z,2.4n

HNR	Honiara	0.92	221			Pb		04 18 03.2	+1.3
HNR	Honiara	0.92	221		P	Pb		04 18 03.9	+2.1
HNR	Honiara	0.92	221		⇑P	Pb		04 18 03.4	+1.5
RABL	Rabaul	9.48	298			Pn		04 20 00.0	+1.4
RABL	Rabaul	9.48	298		P	Pn		04 20 01.3	+2.7
RABL	Rabaul	9.48	298		⇑P	Pn		04 20 00.6	+1.9
KRVT	Keravat (AS076 266nm,0.4s,baz=128,slow=3.3,SNR=16	9.54	297		P	Pn		04 20 03.9	+4.4
KRVT					S	Sn		04 21 49.7	+4.0
	676nm,1.0s,baz=159,slow=20,SNR=1.0								
DVP	Devils Point	11.62	141		P	Pn		04 20 30.2	+2.3
RTV	Rentapao	11.82	140		P	Pn		04 20 34.1	+3.4
KOUNC	Koumac, New Ca	12.29	163		Pn	Pn		04 20 39.0	+1.9
KOUNC	Koumac, New Ca	12.29	163		P	Pn		04 20 41.5	+4.4
KOUNC	Koumac, New Ca	12.29	163		⇑P	Pn		04 20 39.0	+1.9
PMG	Port Moresby 172nm,1.1s,baz=79,slow=8.5,SNR=38	13.25	266		P	P		04 20 55.5	-4.2
PMG					LR	LR		04 25 57.8	
	comp=Z,123µm,18.8s,baz=110,slow=37								
PMG	Port Moresby	13.25	266		Pn	Pn		04 20 53.8	+3.6
PMG	Port Moresby	13.25	266	*ce*	P	P		04 20 56.0	-3.6
PMG					pmax	pmax			
	comp=Z,438nm,1.7s								
PMG	Port Moresby	13.25	266		P	Pn		04 20 51.4	+1.2
PMG	Port Moresby	13.25	266		P	Pn		04 20 51.7	+1.5
PMG	Port Moresby	13.25	266		⇑P	P		04 20 55.7	-3.9
NOUC	Port Laguerre	14.40	158		P	P		04 21 09.7	-2.7
DZM	Mont Dzumac 172nm,1.6s	14.43	158	*e*	P	Pn		04 21 07.2	+0.9
DZM	comp=Z,2µm,1.6s			*e*	S	Sn		04 23 46.0	+0.7
	comp=Z,480nm,1.2s								
DZM	Mont Dzumac	14.43	158		P	Pn		04 21 09.3	+3.0
	comp=Z,38nm,0.6s,baz=104,slow=13,SNR=40								
DZM					S	Sn		04 23 48.6	+3.3
	comp=Z,122nm,0.7s,baz=286,slow=19,SNR=4.4								
DZM					LR	LR		04 26 19.7	
	comp=Z,78µm,19.7s,baz=330,slow=36								
DZM					PcP	PcP		04 26 22.7	+1.5
	comp=Z,9.2nm,0.6s,baz=270,slow=3.0,SNR=1.9								
DZM	Mont Dzumac	14.43	158		Pn	Pn		04 21 07.5	+1.2
DZM	Mont Dzumac	14.43	158		P	Pn		04 21 09.5	+3.2
DZM	Mont Dzumac	14.43	158		⇑P	Pn		04 21 08.2	+1.9
DZM					⇑S	Sn		04 23 52.4	+7.1
MARNC	Mare, Loyalty	14.58	151		Pn	Pn		04 21 10.3	+1.9
MARNC	Mare, Loyalty	14.58	151		P	P		04 21 12.0	-2.4
MARNC	Mare, Loyalty	14.58	151		⇑P	Pn		04 21 09.3	+1.0
MANU	Manus Island	14.71	296			Pn		04 21 09.5	-0.7
PINNC	Pines Island,	15.31	155		Pn	Pn		04 21 19.0	+0.9
PINNC	Pines Island,	15.31	155		P	P		04 21 22.1	-0.4
PATS	Pohnpei baz=16,SNR=8.9	15.62	352		P	Pn		04 21 20.6	-1.6
PATS	Pohnpei	15.62	352		Pn	Pn		04 21 18.7	-3.5
PATS	Pohnpei	15.62	352		P	Pn		04 21 19.5	-2.7
TARA	Tarawa	15.88	51		Pn	Pn		04 21 23.0	-2.6
TARA					IAmb	IAmb		04 21 46.2	
	comp=Z,1µm,0.9s								
TARA	Tarawa	15.88	51		P	Pn		04 21 24.7	-0.9
TARA	Tarawa	15.88	51		⇓p	Pn		04 21 23.6	-2.0
RK1H	Rockhampton Ha	17.48	212		P	P		04 21 47.7	+1.2
COEN	Coen baz=18,SNR=61	17.81	251		P	P		04 21 52.3	+2.0
COEN	Coen	17.81	251		P	P		04 21 51.3	+1.0
COEN					IAmb	IAmb		04 22 08.4	
	comp=Z,2µm,2.4s								
COEN	Coen	17.81	251		P	P		04 21 53.6	+3.3
COEN	Coen	17.81	251		⇑P	P		04 21 53.8	+3.5
CTA	Charters Tower 172nm,1.1s,baz=53,slow=12,SNR=130	17.85	229		P	P		04 21 53.5	+2.7
CTA					S	Sn		04 25 08.2	-0.4
	comp=Z,18nm,0.7s,baz=54,slow=12,SNR=1.1								
CTA					LR	LR		04 28 18.5	
	comp=Z,61µm,20.5s,baz=52,slow=35								
CTA	Charters Tower	17.85	229		P	P		04 21 54.7	+3.9
CTAO	Charters Tower	17.85	229		P	P		04 21 51.9	+1.1
CTAO	Charters Tower	17.85	229		P	P		04 21 51.9	+1.1
CTAO					pmax	pmax			
	comp=Z,774nm,1.2s								
CTAO	Charters Tower	17.85	229		P	P		04 21 54.7	+3.9
CTAO	Charters Tower	17.85	229		⇑P	P		04 21 53.7	+3.0
MTSU	Mount Surprise baz=18,SNR=75	18.34	238		P	Pn		04 22 00.1	+3.9
MTSU	Mount Surprise	18.34	238		P	Pn		04 21 59.8	+3.5
FUNA	Funafuti	18.43	91		P	Pn		04 21 58.1	+0.7
FUNA					IAmb	IAmb		04 22 20.7	
	comp=Z,2µm,1.6s								
FUNA	Funafuti	18.43	91		P	Pn		04 21 58.9	+1.5
FUNA	Funafuti	18.43	91		⇑P	Pn		04 21 58.9	+1.5
KWAJ	Kwajalein Atol	18.78	22			Pn		04 22 01.4	-0.2
KWAJ	Kwajalein Atol	18.78	22		P	Pn		04 22 01.4	-0.2
KWAJ					pmax	pmax			
	comp=Z,1µm,0.7s								
KWAJ	Kwajalein Atol	18.78	22		P	Pn		04 22 03.8	+2.2
EIDS	Eidsvold baz=19,SNR=56	18.85	207		P	Pn		04 22 04.9	+2.5
EIDS	Eidsvold	18.85	207		P	Pn		04 22 04.7	+2.3
EIDS	Eidsvold	18.85	207		⇑P	Pn		04 22 04.8	+2.5
MSVF	Nonsavu	19.22	120		P	Pn		04 22 08.9	+1.8
	comp=Z,33nm,1.0s,baz=278,slow=5.5,SNR=12								
MSVF					LR	LR		04 28 34.0	
	comp=Z,42µm,18.3s,baz=300,slow=34								
MSVF	Nonsavu	19.22	120		P	Pn		04 22 07.0	0.0
MSVF					IAmb	IAmb		04 22 32.0	
	comp=Z,2µm,1.8s								
MSVF	Nonsavu	19.22	120	*c i*	P	Pn		04 22 08.0	+1.0
MSVF					pmax	pmax			
	comp=Z,1µm,1.5s								
MSVF					MLR	MLR			
	comp=Z,37µm,18.0s								
MSVF	Nonsavu	19.22	120		P	Pn		04 22 09.3	+2.3
MSVF	Nonsavu	19.22	120		⇑P	Pn		04 22 08.9	+1.8
DGTI	Dogotuki	20.17	114		P	Pn		04 22 19.4	+1.2
TAVE	Taveuni	20.63	115		P	Pn		04 22 23.2	-0.4
RMQ	Roma baz=21,SNR=63	20.91	211		P	Pn		04 22 27.0	+0.3
RMQ	Roma	20.91	211		P	Pn		04 22 27.4	+0.6
GENI	Genyem	21.18	286		P	P		04 22 27.3	+0.2
	comp=Z,20µmcomp=Z,12µmcomp=Z,677nm,1.5s								
GENI	Genyem	21.18	286		P	P		04 22 29.2	+2.1
NFK	Norfolk Island	21.37	162		P	P		04 22 30.5	+1.5
LKBA	Tubou, Lakemba	22.15	117		P	P		04 22 39.3	+1.8
LHI	Lord Howe Isla baz=23,SNR=4.9	22.72	183		P	P		04 22 44.9	+1.5
LHI	Lord Howe Isla	22.72	183		P	P		04 22 43.6	+0.2
LHI					IAmb	IAmb		04 22 47.4	
	comp=Z,456nm,1.1s								
LHI	Lord Howe Isla	22.72	183		P	P		04 22 45.6	+2.2
SMPI	Sarmi	22.75	286		P	P		04 22 44.5	+0.6
	comp=Z,13µmcomp=Z,5µmcomp=Z,246nm,1.1s								
ARMA	Armidale baz=23,SNR=111	23.14	200		P	P		04 22 48.8	+1.0
ARMA	Armidale	23.14	200		P	P		04 22 48.4	+0.5
ARMA					IAmb	IAmb		04 22 51.5	
	comp=Z,623nm,1.4s								
ARMA	Armidale	23.14	200		P	P		04 22 49.2	+1.3
ARMA	Armidale	23.14	200		⇑P	P		04 22 48.9	+1.0
QIS	Mount Isa baz=24,SNR=104	23.40	238		P	P		04 22 50.5	0.0
QIS	Mount Isa	23.40	238		P	P		04 22 51.1	+0.6
QLP	Quilpie	23.55	219		P	P		04 22 52.8	+0.9
QLP	Quilpie	23.55	219		⇑P	P		04 22 52.4	+0.5
SRPI	Serui, Papua	25.14	284		P	P		04 23 04.4	-2.3
NTLH	Newcastle Hard	25.41	198		P	P		04 23 10.3	+1.4
MGCD	Mangrove Creek baz=26,SNR=25	25.88	198		P	P		04 23 15.6	+2.4
MGCD	Mangrove Creek	25.88	198		P	P		04 23 14.6	+1.4
CMSA	Cobar Meteorol baz=27,SNR=29	26.58	209		P	P		04 23 20.0	+0.5
CMSA	Cobar Meteorol	26.58	209		P	P		04 23 20.4	+0.9
INKA	Innaminka	26.60	222		P	P		04 23 20.9	+1.2
GUMO	Guam	27.10	325		P	P		04 23 26.4	+2.2
	comp=Z,90nm,0.6s,baz=165,slow=4.2,SNR=6.3								
GUMO					LR	LR		04 33 19.2	
	comp=Z,12µm,21.0s,baz=140,slow=34								
	comp=Z,90nm,0.6s								
GUMO	Guam	27.10	325		P	P		04 23 24.4	+0.1
GUMO	Guam	27.10	325		P	P		04 23 24.5	+0.2
WR0	Warramunga Arr	27.52	243		P	P		04 23 27.4	-0.7
WB0	Warramunga Arr	27.59	244		P	P		04 23 27.9	-0.8
AFI	Afiamalu	27.60	103		P	P		04 23 29.8	+0.9
	comp=Z,52nm,0.9s,baz=236,slow=23,SNR=4.3								
AFI					LR	LR		04 32 51.1	
	comp=Z,24µm,18.3s,baz=284,slow=33								
	comp=Z,52nm,0.9s								
AFI	Afiamalu	27.60	103		P	P		04 23 28.7	-0.2
AFI					IAmb	IAmb		04 24 08.3	
	comp=Z,457nm,1.3s								
AFI	Afiamalu	27.60	103		P	P		04 23 30.0	+1.0
WRAB	Tennant Creek	27.68	243	*c i*	P	P		04 23 29.3	-0.3
WRAB					pmax	pmax			
	comp=Z,396nm,1.7s								
WRAB					MLR	MLR			
	comp=Z,36µm,19.0s								
WRAB	Tennant Creek	27.68	243		P	P		04 23 29.5	-0.1
WRAB	Tennant Creek	27.68	243		⇑P	P		04 23 29.1	-0.5
WB2	Warramunga Arr	27.68	243		P	P		04 23 29.2	-0.4
WRA	Warramunga Arr	27.69	243		P	P		04 23 29.5	-0.2
	comp=Z,104nm,0.8s,baz=66,slow=8.7,SNR=262								
WRA					PcP	PcP		04 26 46.6	+0.2
	comp=Z,26nm,0.9s,baz=64,slow=3.0,SNR=5.0								
WRA					ScP	ScP		04 30 26.5	+1.7
	comp=Z,3.7nm,0.8s,baz=68,slow=3.5,SNR=2.8								
WRA					LR	LR		04 34 21.3	
	comp=Z,39µm,19.7s,baz=62,slow=36								
WRA					PKiKP	PKiKP		04 34 22.9	-0.3
	comp=Z,8.9nm,0.9s,baz=284,slow=0.9,SNR=7.1								
	comp=Z,104nm,0.8s								
H11S2	WAKE ISLAND Hy baz=192,slow=76	27.72	13		T	T		04 52 10.1	
H11S3	WAKE ISLAND Hy baz=192,slow=76	27.72	13		T	T		04 52 06.7	
H11S1	WAKE ISLAND Hy baz=192,slow=76	27.73	13		T	T		04 52 06.2	
KDU	Kakadu baz=28,SNR=17	27.86	259		P	P		04 23 30.2	-1.0
KDU	Kakadu	27.86	259		P	P		04 23 30.7	-0.5
KDU	Kakadu	27.86	259		⇑P	P		04 23 30.2	-1.0
KNTN	Kanton	28.20	80		P	P		04 23 34.4	+0.2
KNTN	Kanton	28.20	80		P	P		04 23 34.3	+0.1
KNTN					pP	pP		04 23 42.7	-1.0
CNB	Canberra Magne baz=28,SNR=23	28.38	200		P	P		04 23 37.1	+1.5
CNB	Canberra Magne	28.38	200		P	P		04 23 37.3	+1.6
CAN	Canberra	28.50	200		P	P		04 23 36.6	-0.2
CAN					IAmb	IAmb		04 24 07.9	
	comp=Z,241nm,1.1s								
CAN	Canberra	28.50	200		P	P		04 23 36.6	-0.2
CAN					pmax	pmax			
	comp=Z,241nm,1.1s								
CAN	Canberra	28.50	200		P	P		04 23 38.5	+1.7
CAN	Canberra	28.50	200		⇑P	P		04 23 38.1	+1.4
CAN	Canberra	28.50	200		P	P		04 23 38.1	+1.4
CAN					pP	pP		04 23 46.6	+0.6
CAN					sP	sP		04 23 50.2	+0.5
CAN					x	x		04 23 54.3	
RAO	Raoul Island comp=Z,27µm,21.1s,baz=314,slow=32	28.73	138		LR	LR		04 33 19.5	
FAKI	Fak Fak	28.73	280		P	P		04 23 38.8	-0.3
FAKI	Fak Fak	28.73	280		P	P		04 23 36.6	-2.4
FAKI	Fak Fak	28.73	280		⇑P	P		04 23 37.0	-2.1
H11N1	WAKE ISLAND Hy baz=188,slow=76	28.94	12		T	T		04 53 41.8	
H11N3	WAKE ISLAND Hy baz=188,slow=76	28.95	12		T	T		04 53 50.1	
H11N2	WAKE ISLAND Hy baz=188,slow=76	28.96	12		T	T		04 53 43.0	
STKA	Stephens Creek comp=Z,22nm,0.4s,baz=54,slow=11,SNR=21	29.00	215		P	P		04 23 40.5	-0.7
STKA					ScP	ScP		04 30 28.8	+0.2
	comp=Z,10nm,0.7s,baz=33,slow=6.3,SNR=4.2								
STKA					LR	LR		04 35 37.4	
	comp=Z,53µm,19.1s,baz=28,slow=37								
	comp=Z,22nm,0.4s								
STKA	Stephens Creek baz=29,SNR=34	29.00	215		P	P		04 23 41.3	+0.2
STKA	Stephens Creek	29.00	215		P	P		04 23 40.9	-0.3
STKA	Stephens Creek	29.00	215		P	P		04 23 40.9	-0.3
STKA					pmax	pmax			
	comp=Z,98nm,1.9s								
STKA	Stephens Creek	29.00	215		P	P		04 23 41.5	+0.3
MTN	Manton Dam baz=29,SNR=10	29.18	259		P	P		04 23 42.3	-0.7
MTN	Manton Dam	29.18	259		P	P		04 23 42.0	-1.0
MTN	Manton Dam	29.18	259		P	P		04 23 42.6	-0.4
MTN	Manton Dam	29.18	259		⇑P	P		04 23 41.6	-1.3
AS31	Alice Springs	29.51	237		P	P		04 23 44.3	-1.5
ASAR	Alice Springs comp=Z,31nm,0.5s,baz=61,slow=10,SNR=311	29.51	237		P	P		04 23 44.8	-1.1
ASAR					PcP	PcP		04 26 50.7	-0.2
	comp=Z,11nm,0.5s,baz=56,slow=2.4,SNR=4.9								
ASAR					ScP	ScP		04 30 30.4	-0.1
	comp=Z,5.1nm,0.7s,baz=70,slow=2.7,SNR=4.6								
ASAR					PKiKP	PKiKP		04 34 23.4	-0.8
	comp=Z,1.4nm,0.8s,baz=77,slow=2.1,SNR=4.4								
ASAR					LR	LR		04 35 39.2	
	comp=Z,42µm,18.6s,baz=62,slow=36								
ASAR					P3KPbc			04 55 48.6	
	comp=Z,1.6nm,1.0s,baz=243,slow=4.1,SNR=6.3								
	comp=Z,31nm,0.5s								
LCRK	Leigh Creek	30.04	221		P	P		04 23 50.2	-0.2
OOD	Oodnadatta	30.17	228		P	P		04 23 51.2	-0.4
SIJI	Sorong comp=Z,19nm,0.7s,baz=74,slow=7.6,SNR=11	30.19	283		P	P		04 23 51.1	-0.8
SIJI					LR	LR		04 39 12.8	
	comp=Z,19µm,18.1s,baz=104,slow=43								
	comp=Z,19nm,0.7s								
SWI	Sorong comp=Z,1µmcomp=Z,34nm,0.6s	30.20	283		P	P		04 23 50.8	-1.2
MKAZ	Moumakai	31.20	157		P	P		04 24 02.0	+1.4
HTT	Hallett baz=32,SNR=54	31.66	216		P	P		04 24 04.9	+0.1
HTT	Hallett	31.66	216		P	P		04 24 04.9	+0.1
HTT	Hallett	31.66	216		⇑P	P		04 24 04.8	+0.1
TOO	Toolangi baz=32,SNR=14	31.79	203		P	P		04 24 07.1	+1.4
TOO	Toolangi	31.79	203		P	P		04 24 05.9	+0.1
TOO	Toolangi	31.79	203		P	P		04 24 05.9	+0.1
TOO					pmax	pmax			
	comp=Z,137nm,1.1s								
TOO	Toolangi	31.79	203		P	P		04 24 07.3	+1.5
TOO	Toolangi	31.79	203		⇑P	P		04 24 07.0	+1.2
KNRA	Kununurra baz=32,SNR=166	31.80	254		P	P		04 24 05.4	-0.7
KNRA	Kununurra	31.80	254		P	P		04 24 05.2	-1.0
KNRA	Kununurra	31.80	254		P	P		04 24 05.9	-0.2
TOZ	Tahuroa Road	31.88	157		P	P		04 24 06.8	+0.3
MSAI	Masohi comp=Z,1µmcomp=Z,11nm,1.1s	31.89	278		P	P		04 24 06.7	-0.2
NAPP	Napperby	31.95	217		P	P		04 24 08.0	+0.8
WHYH	Whyalla	32.19	218		P	P		04 24 09.2	-0.1
HIZ	Hauiti	32.33	159		P	P		04 24 11.2	+0.7
HIZ	Hauiti	32.33	159		P	P		04 24 12.2	+1.8
BRAT	Ballarat	32.40	205		P	P		04 24 12.7	+1.6
AAI	Ambon comp=Z,2µmcomp=Z,52nm,0.9s	32.55	277		P	P		04 24 10.8	-1.9
ARPS	Mount Arapiles baz=33,SNR=28	32.68	209		P	P		04 24 14.8	+1.2
ARPS	Mount Arapiles	32.68	209		P	P		04 24 14.8	+1.2
MULG	Mulgathing	32.76	225		P	P		04 24 13.8	-0.6
GEXS	Deakin Univers	32.80	204		P	P		04 24 16.9	+2.3
URZ	Urewera comp=Z,20nm,0.4s,baz=246,slow=2.8,SNR=25	32.97	156		P	P		04 24 15.5	-0.6
URZ					PcP	PcP		04 26 59.4	-0.3
	comp=Z,29nm,0.7s,baz=14,slow=7.1,SNR=3.4								
URZ					LR	LR		04 36 37.2	
	comp=Z,23µm,19.1s,baz=330,slow=34								
	comp=Z,20nm,0.4s								
URZ	Urewera	32.97	156		IAmb	IAmb		04 24 17.6	
	comp=Z,607nm,2.1s								
URZ	Urewera	32.97	156		P	P		04 24 15.8	-0.2
URZ	Urewera	32.97	156		P	P		04 24 15.9	-0.2
URZ	Urewera	32.97	156		⇓P	P		04 24 15.8	-0.2
RATZ	Rangitukua	32.98	158		P	P		04 24 19.0	+2.8
BBOO	Buckleboo baz=33,SNR=147	32.98	220		P	P		04 24 16.1	-0.2
BBOO	Buckleboo	32.98	220		P	P		04 24 15.5	-0.8
BBOO					IAmb	IAmb		04 25 02.9	
	comp=Z,202nm,1.1s								
BBOO	Buckleboo	32.98	220		P	P		04 24 16.3	0.0
TWOA	Tennyson Woods	33.02	214		P	P		04 24 17.1	+0.5
PKGZ	Pakihiroa	33.06	154		P	P		04 24 17.4	+0.5
WTVZ	West Tongariro	33.13	158		P	P		04 24 18.3	+0.7
WMGZ	Waiomatatini S	33.15	154		P	P		04 24 17.7	0.0
OTVZ	Oturere	33.20	158		P	P		04 24 20.6	+2.3
TWGZ	Tauwhareparae	33.26	155		P	P		04 24 19.3	+0.5
MTHZ	Maungataniwha	33.37	157		P	P		04 24 20.6	+1.0
BKZ	Black Stump Fm	33.51	157		P	P		04 24 20.3	-0.6
BKZ					IAmb	IAmb		04 24 23.6	
	comp=Z,96nm,0.4s								
BKZ	Black Stump Fm	33.51	157		P	P		04 24 20.5	-0.4
RAHZ	Arahi	33.52	156		P	P		04 24 20.8	-0.2
NMHZ	Naumai	33.57	157		P	P		04 24 22.2	+0.7
RIGZ	Rimuhau	33.62	155		P	P		04 24 21.9	+0.1
BHHZ	Black Hill Sta	33.63	158		P	P		04 24 22.1	+0.2
ARHZ	Aropaoanui	33.79	157		P	P		04 24 23.0	-0.2
KRHZ	Kereru	33.88	158		P	P		04 24 23.7	-0.4
LBMI	Labuha comp=Z,3µmcomp=Z,118nm,1.0s	33.88	282		P	P		04 24 25.7	+1.3
TNTI	Ternate	34.39	284		P	P		04 24 28.1	-0.7
TNTI	Ternate comp=Z,1µmcomp=Z,46nm,1.5s	34.39	284		P	P		04 24 29.0	+0.2
WRKA	Warakurna baz=35,SNR=490	34.74	238		P	P		04 24 30.1	-1.6
WRKA	Warakurna	34.74	238		P	P		04 24 30.6	-1.1
WRKA	Warakurna	34.74	238		⇑P	P		04 24 30.6	-1.1
BFZ	Birch Farm	34.75	159		P	P		04 24 30.4	-1.1
SANI	Sanana comp=Z,2µmcomp=Z,65nm,1.1s	35.03	279		P	P		04 24 33.5	-0.8
SANI	Sanana	35.03	279		P	P		04 24 33.7	-0.6
KHZ	Kahutara	35.45	163		⇑P	P		04 24 35.9	-1.5
MOO	Moorlands baz=36,SNR=4.0	35.58	197		P	P		04 24 40.1	+1.5
MOO	Moorlands	35.58	197		P	P		04 24 40.5	+1.8
SOEI	Soe	35.82	265		P	P		04 24 39.8	-1.4
SOEI					IAmb	IAmb		04 25 05.6	
	comp=Z,229nm,1.0s								
SOEI	Soe	35.82	265		P	P		04 24 42.9	+1.6
	comp=Z,20µmcomp=Z,4µmcomp=Z,273nm,1.1s								
SOEI	Soe	35.82	265		P	P		04 24 41.2	-0.1
SOEI	Soe	35.82	265		⇑P	P		04 24 40.8	-0.4
TAU	Tasmania Unive	35.97	197		P	P		04 24 41.8	-0.2
TAU					IAmb	IAmb		04 25 14.4	
	comp=Z,365nm,1.4s								
TAU	Tasmania Unive	35.97	197		P	P		04 24 41.8	-0.2
TAU					pmax	pmax			
	comp=Z,365nm,1.5s								
RPZ	Rata Peaks comp=Z,94nm,0.7s,baz=348,slow=1.2,SNR=14	36.04	167		P	P		04 24 42.0	-0.6
RPZ					LR	LR		04 38 13.7	
	comp=Z,16µm,21.4s,baz=333,slow=34								
	comp=Z,94nm,0.7s								
RPZ	Rata Peaks	36.04	167		P	P		04 24 41.6	-1.0
BATI	Baumata comp=Z,291nm,0.8s,baz=194,slow=1.0,SNR=27	36.41	265		P	P		04 24 46.4	+0.3
BATI					LR	LR		04 40 42.2	
	comp=Z,32µm,21.4s,baz=104,slow=38								
	comp=Z,291nm,0.8s								
BATI	Baumata comp=Z,4µmcomp=Z,209nm,1.0s	36.41	265		P	P		04 24 46.2	0.0
SGSI	Sangihe comp=Z,3µmcomp=Z,278nm,0.8s	37.04	288		P	P		04 24 53.7	+2.2
ODZ	Otahua Downs	37.22	168		⇓P	P		04 24 51.7	-0.9
FORT	Forrest baz=38,SNR=42	37.41	230		P	P		04 24 54.1	-0.3
FORT	Forrest	37.41	230		P	P		04 24 53.5	-0.9
FORT					IAmb	IAmb		04 25 30.1	
	comp=Z,154nm,0.8s								
FORT	Forrest	37.41	230		P	P		04 24 54.0	-0.5
FORT	Forrest	37.41	230		⇑P	P		04 24 53.9	-0.5
KMSI	Cibinong comp=Z,128nm,0.6s	37.59	282		P	P		04 24 55.6	-0.6
BBSI	Bau Bau comp=Z,291nmcomp=Z,17nm,1.5s	37.82	272		P	P		04 24 58.0	-0.1
MMRI	Maumere	37.87	267		P	P		04 24 56.5	-2.0
MMRI	Maumere comp=Z,8µmcomp=Z,648nm,1.3s	37.87	267		P	P		04 24 57.3	-1.2
MMRI	Maumere	37.87	267		P	P		04 24 57.5	-1.0
MMRI	Maumere	37.87	267		⇑P	P		04 24 56.7	-1.9
DAV	Davao City (W) comp=Z,193nm,0.4s,baz=94,slow=7.0,SNR=3.6	38.23	293		P	P		04 25 02.6	+1.0
DAV					LR	LR		04 41 39.4	
	comp=Z,6µm,18.4s,baz=92,slow=37								
	comp=Z,193nm,0.4s								
EDFI	Ende, Flores comp=Z,2µmcomp=Z,130nm,1.6s	38.40	267		P	P		04 25 01.4	-1.8
JOHN	Johnston Islan	38.93	50		P	P		04 25 07.5	+0.1
JOHN	Johnston Islan	38.93	50		P	P		04 25 09.5	+2.1
JOHN	Johnston Islan	38.93	50		⇓P	P		04 25 08.0	+0.6
JOHN	Johnston Islan	38.93	50		P	P		04 25 08.6	+1.2
JOHN					pP	pP		04 25 17.1	+0.2
JOHN					sP	sP		04 25 20.3	-0.1
JOHN					x	x		04 25 24.9	
BASI	Baing, Sumba comp=Z,4µmcomp=Z,408nm,0.9s	39.44	265		P	P		04 25 10.9	-0.9
APSI	Ampana comp=Z,2µmcomp=Z,69nm,1.1s	39.51	279		P	P	

MCQ pmax pmax
comp=Z,501nm,1.4s
MCQ Macquarie Isla 45.66 181 P **P** **04 26 02.4 +0.7**
BBKI Banjar Baru 45.73 274 P **P** **04 26 00.7 -2.2**
comp=Z,7µmcomp=Z,101nm,0.8s
KLBR Kellerberrin 45.77 234 P **P** **04 26 02.1 -0.8**
baz=46,SNR=74
KLBR Kellerberrin 45.77 234 P **P** **04 26 02.3 -0.7**
ABJI Asem Bagus 45.83 268 P **P** **04 26 02.9 -0.7**
comp=Z,120nm,1.7s
JHJ Hachijo jima 2 46.08 336 LR LR 04 45 14.6
comp=Z,8µm,19.6s,baz=156,slow=36
MTKI Muara Teweh, K 46.11 277 P **P** **04 26 04.9 -1.0**
KMMI Kalianget 46.16 269 P **P** **04 26 03.8 -2.4**
comp=Z,3µmcomp=Z,95nm,2.0s
BLDU Ballidu 46.29 236 P **P** **04 26 06.7 -0.4**
baz=46,SNR=77
BLDU Ballidu 46.29 236 P **P** **04 26 06.9 -0.2**
MORW Morawa 46.37 238 P **P** **04 26 07.2 -0.6**
baz=46,SNR=74
MORW Morawa 46.37 238 P **P** **04 26 06.7 -1.1**
MORW IAmb IAmb 04 26 08.9
comp=Z,197nm,0.9s
MORW Morawa 46.37 238 P **P** **04 26 07.5 -0.3**
MORW Morawa 46.37 238 ⇑P **P** **04 26 07.3 -0.4**
BLJI Banyuglugur 46.46 268 P **P** **04 26 06.7 -1.9**
comp=Z,59nm,1.1s
GIRL Giralia 46.49 247 P **P** **04 26 09.3 +0.6**
baz=47,SNR=4.4
GMJI Gumukmas 46.57 267 P **P** **04 26 06.7 -2.8**
comp=Z,75nm,1.9s
NWAO Narrogin (SRO) 46.65 233 P **P** **04 26 09.2 -0.7**
NWAO Narrogin (SRO) 46.65 233 P **P** **04 26 09.2 -0.7**
NWAO pmax pmax
comp=Z,985nm,2.1s
NWAO Narrogin (SRO) 46.65 233 P **P** **04 26 09.7 -0.2**
NWAO Narrogin (SRO) 46.65 233 P **P** **04 26 09.6 -0.2**
NWAO pP **pP** **04 26 18.9 -0.2**
MUN Mundaring 47.14 234 P **P** **04 26 13.4 -0.2**
baz=47,SNR=21
MUN Mundaring 47.14 234 P **P** **04 26 13.7 0.0**
JOW Kunigami 47.23 319 P **P** **04 26 15.4 +1.0**
comp=Z,25nm,0.8s,baz=153,slow=6.7,SNR=10
comp=Z,25nm,0.8s
JOW Kunigami 47.23 319 P **P** **04 26 14.9 +0.5**
JOW Kunigami 47.23 319 P **P** **04 26 14.3 -0.1**
JOW Kunigami 47.23 319 ⇑P **P** **04 26 15.3 +1.0**
MTKN Mount Kenneth 47.47 234 P **P** **04 26 17.2 +0.9**
RKGY Rocky Gully 47.47 230 P **P** **04 26 17.0 +0.7**
baz=48,SNR=19
RKGY Rocky Gully 47.47 230 P **P** **04 26 17.1 +0.8**
PWJI Pagerwojo 48.21 267 P **P** **04 26 19.9 -2.3**
comp=Z,142nm,1.0s
JOD2 Odawara 2 48.23 336 *e*P **P** **04 26 21.4 -0.6**
JIE Ise 48.48 333 *e*P **P** **04 26 24.0 +0.1**
JYT Yasato 48.65 338 P **P** **04 26 25.4 +0.2**
JYT IAmb IAmb 04 26 41.2
comp=Z,184nm,1.1s
PCJI Pacitan 48.82 267 P **P** **04 26 26.4 -0.5**
comp=Z,7µmcomp=Z,588nm,1.4s
JRY Ryogami san 48.96 337 *e*P **P** **04 26 27.2 -0.5**
PBKI Pangkalan Bun 48.98 274 P **P** **04 26 26.6 -1.6**
comp=Z,237nm,1.0s
WOJI Wonogiri, Jawa 49.09 267 P **P** **04 26 28.1 -1.0**
comp=Z,103nm,1.1s
INU Inuyama 49.15 334 P **P** **04 26 28.4 -0.7**
INU Inuyama 49.15 334 P **P** **04 26 29.0 -0.1**
INU Inuyama 49.15 334 ⇑P **P** **04 26 29.4 +0.3**
INU Inuyama 49.15 334 P **P** **04 26 29.6 +0.5**
INU pP **pP** **04 26 38.9 +0.5**
INU sP **sP** **04 26 43.5 +1.2**
JGF Kuroka 49.22 335 P **P** **04 26 29.0 -0.7**
JGF Kuroka 49.22 335 ⇑P **P** **04 26 29.6 -0.1**
JGF Kuroka 49.22 335 *e*P **P** **04 26 29.1 -0.7**
PPT Papeete 49.23 106 LR LR 04 43 22.5
comp=Z,6µm,19.7s,baz=274,slow=31
PPT2 Papeete2 49.23 106 *e*P **P** **04 26 32.2 +2.1**
comp=Z,1µm,25.2s
PPT2 *e*S **S** **04 33 31.3 -2.9**
comp=Z,4µm,31.2s
PPT2 *e*LR LR 04 40 28.4
comp=Z,17µm,24.2s
YOJ Yonaguni jima 49.29 313 P **P** **04 26 31.0 +0.6**
YOJ Yonaguni jima 49.29 313 P **P** **04 26 31.0 +0.6**
YOJ pmax pmax
comp=Z,308nm,1.3s
YOJ Yonaguni jima 49.29 313 P **P** **04 26 31.7 +1.4**
YOJ Yonaguni jima 49.29 313 ⇑P **P** **04 26 30.7 +0.4**
JSU Suzuyama 49.30 326 P **P** **04 26 29.9 -0.4**
JSU IAmb IAmb 04 26 43.5
comp=Z,117nm,1.1s
JSU Suzuyama 49.30 326 *e*P **P** **04 26 30.1 -0.2**
SBUM Sibu 49.45 281 P **P** **04 26 30.6 -1.1**
SBUM Sibu 49.45 281 ⇑P **P** **04 26 31.1 -0.6**
UGM Wanagama 49.48 267 P **P** **04 26 30.7 -1.4**
UGM Wanagama 49.48 267 P **P** **04 26 31.0 -1.1**
SMRI Semarang 49.64 268 P **P** **04 26 32.1 -1.1**
SMRI Semarang 49.64 268 P **P** **04 26 33.1 -0.2**
comp=Z,231nm,0.9s
SMRI Semarang 49.64 268 P **P** **04 26 32.8 -0.5**
STKI Sintang 49.66 278 P **P** **04 26 32.5 -0.9**
comp=Z,45nm,1.0s
MJAR Matsushiro Arr 49.69 336 P **P** **04 26 32.9 -0.3**
comp=Z,7.2nm,0.8s,baz=167,slow=9.1,SNR=15
MJAR LR LR 04 46 48.8
comp=Z,4µm,20.1s,baz=65,slow=35
comp=Z,7.2nm,0.8s
MJAR Matsushiro Arr 49.69 336 P **P** **04 26 32.3 -0.9**
MAJO Matsushiro 49.69 336 P **P** **04 26 33.1 -0.1**
MAJO Matsushiro 49.69 336 P **P** **04 26 33.1 -0.1**
MAJO pmax pmax
comp=Z,40nm,0.9s
MAJO Matsushiro 49.69 336 P **P** **04 26 32.8 -0.4**
MAJO pP **pP** **04 26 42.4 -0.4**
MAT Matsushiro 49.69 336 *e*P **P** **04 26 31.8 -1.4**
MJB9 Matsu-Tunnel 49.69 336 P **P** **04 26 32.5 -0.8**
YOGI Yogyakarta 49.72 267 P **P** **04 26 33.9 +0.1**
comp=Z,339nm,0.7s
TWG Pinlang 49.77 310 P **P** **04 26 34.7 +0.6**
JGN Niukaw 49.77 335 *e*P **P** **04 26 32.8 -1.1**
JWT Wachi 49.80 333 P **P** **04 26 34.0 -0.1**
JMM Marumori 49.90 340 IAmb IAmb 04 26 58.5
comp=Z,149nm,1.1s
JMM Marumori 49.90 340 *e*P **P** **04 26 34.6 -0.1**
YULB Yu-li 49.93 311 IAmb IAmb 04 26 55.3
comp=Z,75nm,0.8s
TBI Tubuai 49.94 113 *e*P **P** **04 26 38.4 +3.1**
comp=Z,1µm,25.2s
TBI *e*S **S** **04 33 40.0 -3.9**
comp=Z,2µm,36.5s
TBI *e*LR LR 04 40 40.2
comp=Z,23µm,30.0s
JAD Aida 50.09 332 *e*P **P** **04 26 35.8 -0.5**
NACB Ninganchiao 50.16 312 IAmb IAmb 04 26 41.4
comp=Z,175nm,1.0s
JNU Nakatsue 50.30 327 *e*P **P** **04 26 37.8 -0.1**
TPUB Ta-pu 50.38 310 P **P** **04 26 38.3 -0.3**
TPUB IAmb IAmb 04 26 40.5
comp=Z,199nm,1.1s
TPUB Ta-pu 50.38 310 P **P** **04 26 38.9 +0.2**
SSLB Suanglung 50.41 311 IAmb IAmb 04 27 15.5
comp=Z,94nm,0.8s
SSLB Suanglung 50.41 311 P **P** **04 26 41.3 +2.4**
YHNB Yeheng 50.61 312 IAmb IAmb 04 27 01.6
comp=Z,153nm,0.9s
YHNB Yeheng 50.61 312 P **P** **04 26 41.4 +0.9**
JHS Saijyo 50.64 331 ⇑P **P** **04 26 40.6 +0.1**
JHS Saijyo 50.64 331 *e*P **P** **04 26 40.1 -0.3**
OPA Opana 50.66 53 P **P** **04 26 41.4 +0.6**
OPA Opana 50.66 53 P **P** **04 26 41.4 +0.6**
OPA pmax pmax
comp=Z,345nm,0.8s
TATO Taipei 50.71 312 P **P** **04 26 41.0 -0.1**
TATO IAmb IAmb 04 26 44.9
comp=Z,113nm,0.9s
TATO Taipei 50.71 312 P **P** **04 26 41.4 +0.3**
TATO pP **pP** **04 26 49.3 -1.2**
TATO sP **sP** **04 26 53.7 -0.7**
JYA Atsumi 50.93 339 P **P** **04 26 42.8 +0.3**
JSD Sado 50.97 337 P **P** **04 26 42.9 0.0**
JSD Sado 50.97 337 ⇑P **P** **04 26 42.9 0.0**
KSM Kuching 51.09 279 P **P** **04 26 42.9 -1.3**
KSM Kuching 51.09 279 P **P** **04 26 43.3 -0.9**
KSM Kuching 51.09 279 ⇑P **P** **04 26 42.9 -1.3**

JFU Fukue jima 2 51.12 325 *e*P **P** **04 26 43.9 -0.1**
HMH Humu'ula Sheep 51.64 57 P **P** **04 26 48.4 -0.2**
POHA Pohakuloa 51.68 56 P **P** **04 26 50.2 +1.5**
JCJI Jatiwangi 51.84 269 P **P** **04 26 48.9 -0.9**
comp=Z,653nm,0.8s
JTM Tenmabayashi 52.45 341 IAmb IAmb 04 27 19.6
comp=Z,160nm,1.1s
JTM Tenmabayashi 52.45 341 ⇑P **P** **04 26 55.2 +1.4**
LEM Lembang 52.45 268 LR LR 04 50 30.8
comp=Z,5µm,21.2s,baz=121,slow=37
LEM Lembang 52.45 268 P **P** **04 26 53.2 -1.4**
comp=Z,3µmcomp=Z,151nm,1.0s
KNMB Chin-men Tao 52.73 310 P **P** **04 26 54.6 -1.6**
KNMB IAmb IAmb 04 27 08.3
comp=Z,266nm,1.5s
QZH Quanzhou 52.84 310 ⇑*i*P **P** **04 26 57.8 +0.8**
QZH sP **pP** **04 27 08.4 +1.9**
QZH S **S** **04 34 26.0 +2.2**
QZH sS **sS** **04 34 40.0 +0.5**
QZH pmax pmax
comp=Z,170nm,1.2s
QZH pmax pmax
comp=Z,1µm,4.7s
QZH LR LR
comp=Z,3µm,20.7s
QZH LR LR
comp=Z,5µm,19.5s
QZH LR LR
comp=Z,5µm,19.2s
TPI Tanjungpandan 52.93 273 P **P** **04 26 57.6 -0.3**
CBJI Citeko 53.25 268 P **P** **04 26 58.6 -1.7**
comp=Z,264nm,1.0s
DBJI Dramaga 53.34 268 P **P** **04 26 58.2 -2.7**
comp=Z,8µmcomp=Z,136nm,1.2s
TNG Tangerang 53.48 269 P **P** **04 27 00.7 -1.3**
TNG P **P** **04 27 00.3 -1.7**
comp=Z,536nm,0.4s
SKJI Sukabumi 53.48 268 P **P** **04 27 00.3 -1.7**
comp=Z,2µmcomp=Z,169nm,0.9s
NAWB Namwon 53.92 326 P **P** **04 27 05.0 +0.2**
SBJI Serang 54.00 269 P **P** **04 27 02.6 -3.1**
comp=Z,130nm,0.6s
JEW Eniwo 54.20 343 P **P** **04 27 06.6 -0.1**
JEW IAmb IAmb 04 27 23.2
comp=Z,160nm,0.9s
PPBI Pangkal Pinang 54.52 274 P **P** **04 27 09.0 -0.6**
TJN Taejon 54.65 327 P **P** **04 27 10.1 +0.1**
TJN Taejon 54.65 327 *c* *i*P **P** **04 27 10.0 0.0**
TJN Taejon 54.65 327 P **P** **04 27 10.4 +0.4**
SSE Sheshan 54.68 318 P **P** **04 27 10.9 +0.5**
SSE S **S** **04 34 52.6 +4.1**
SSE pmax pmax
comp=Z,48nm,1.4s
SSE pmax pmax
comp=Z,580nm,7.4s
SSE LR LR
comp=Z,2µm,18.9s
SSE LR LR
comp=Z,880nm,23.9s
KSCHJ Chungju 54.70 328 P **P** **04 27 10.0 -0.4**
JMP Maruseppu 54.76 345 *e*P **P** **04 27 11.4 +0.7**
KUR Kuril'sk 54.92 349 ⇑*e*P **P** **04 27 10.9 -0.9**
KUR pmax pmax
comp=Z,167nm,1.1s
KUR MLR MLR
comp=Z,10µm,19.0s
BLSI Bandar Lampung 54.96 270 P **P** **04 27 10.0 -2.8**
comp=Z,150nm,0.4s
JKA Kamikawa-asahi 55.06 344 P **P** **04 27 13.6 +0.8**
JKA IAmb IAmb 04 27 34.0
comp=Z,108nm,0.9s
ASAJ Asahikawa 55.06 344 LR LR 04 48 20.8
comp=Z,24µm,21.6s,baz=176,slow=33
ASAJ Asahikawa 55.06 344 P **P** **04 27 13.6 +0.7**
ASAJ pmax pmax
comp=Z,108nm,0.9s
ASAJ Asahikawa 55.06 344 P **P** **04 27 13.4 +0.5**
KSRS Korea Array 55.16 328 P **P** **04 27 14.2 +0.4**
comp=Z,15nm,1.0s,baz=145,slow=6.0,SNR=42
KSRS LR LR 04 49 17.2
comp=Z,7µm,20.3s,baz=135,slow=34
KSRS PKP2ab 04 57 47.2
comp=Z,0.5nm,0.3s,baz=314,slow=3.7,SNR=4.6
comp=Z,15nm,1.0s
KSAR Wonju Array Be 55.17 328 P **P** **04 27 13.9 +0.1**
KSAR Wonju Array Be 55.17 328 P **P** **04 27 13.9 +0.1**
KS19 Wonju Array Si 55.23 328 P **P** **04 27 13.9 -0.3**
KLI Kotabumi 55.40 270 P **P** **04 27 12.5 -3.5**
comp=Z,160nm,0.5s
SEHB SEOHWA 55.62 329 P **P** **04 27 17.1 0.0**
KASI Kota Agung 55.68 269 P **P** **04 27 16.2 -1.7**
comp=Z,173nm,1.2s
PMBI Palembang 55.75 272 P **P** **04 27 17.4 -1.0**
comp=Z,42µmcomp=Z,390nm,0.4s
INCN Inchon 55.86 328 P **P** **04 27 19.3 +0.5**
INCN Inchon 55.86 328 P **P** **04 27 19.3 +0.5**
INCN pmax pmax
comp=Z,463nm,1.6s
INCN Inchon 55.86 328 P **P** **04 27 19.5 +0.7**
GZH Guangzhou 55.97 305 P **P** **04 27 21.2 +1.4**
LWLI Liwa 56.17 270 P **P** **04 27 17.9 -3.7**
comp=Z,7µmcomp=Z,118nm,0.7s
DSRI Dabo 56.33 275 P **P** **04 27 20.3 -2.3**
comp=Z,3µmcomp=Z,23nm,1.0s
TPRI Tanjung Pinang 56.64 277 P **P** **04 27 23.5 -1.3**
HJU Haeju 56.76 327 P **P** **04 27 25.1 -0.1**
HJU pP **pP** **04 27 33.5 -1.2**
HJU S **S** **04 35 16.6 +0.6**
HJU AmB
comp=Z,1µm,2.2s
HJU AMS AMS
comp=N,7µm,20.4s
HJU AMS AMS
comp=E,5µm,14.5s
HJU AMS AMS
comp=Z,4µm,11.5s
NJ2 Nanjing 56.83 318 ⇑*i*P **P** **04 27 26.4 +0.6**
NJ2 pP **pP** **04 27 33.3 -2.0**
NJ2 sP **pwP** **04 27 36.3 -1.0**
NJ2 PcP **PcP** **04 28 20.7 -0.6**
NJ2 S **S** **04 35 19.1 +2.0**
NJ2 sS **sS** **04 35 34.9 +1.5**
NJ2 pmax pmax
comp=Z,98nm,1.2s
NJ2 pmax pmax
comp=Z,1µm,3.5s
NJ2 LR LR
comp=Z,3µm,19.1s
NJ2 LR LR
comp=Z,5µm,18.1s
NJ2 LR LR
comp=Z,8µm,19.1s
QIZ Qiongzhong 57.09 299 IAmb IAmb 04 27 30.6
comp=Z,198nm,1.1s
QIZ Qiongzhong 57.09 299 ⇑*i*P **P** **04 27 28.8 +0.9**
QIZ pP **pP** **04 27 38.1 +0.7**
QIZ S **S** **04 35 17.4 -3.6**
QIZ sS **sS** **04 35 36.1 -1.2**
QIZ ScS **ScS** **04 37 13.9 -1.5**
QIZ pmax pmax
comp=Z,140nm,1.2s
QIZ LR LR
comp=Z,2µm,21.7s
QIZ LR LR
comp=Z,3µm,18.6s
QIZ LR LR
comp=Z,4µm,21.7s
QIZ Qiongzhong 57.09 299 P **P** **04 27 29.5 +1.6**
QIZ Qiongzhong 57.09 299 P **P** **04 27 29.0 +1.1**
QIZ pP **pwP** **04 27 39.1 -0.5**
HHU Hamhung 57.25 330 P **P** **04 27 28.8 +0.2**
HHU S **S** **04 35 24.0 +1.7**
HHU AmB
comp=Z,2µm,4.4s
HHU AMS AMS
comp=N,394nm,3.8s
HHU AMS AMS
comp=E,6µm,58.3s
HHU AMS AMS
comp=Z,1µm,10.9s
MYKOM Kota Tinggi 57.47 278 P **P** **04 27 29.2 -1.5**
PYAG Pyongyang 57.49 328 P **P** **04 27 30.8 +0.6**
PYAG pP **pwP** **04 27 41.1 -0.9**
PYAG S **S** **04 35 26.7 +1.2**
PYAG AmB
comp=Z,990nm,3.2s
PYAG AMS AMS
comp=N,282nm,3.0s
PYAG AMS AMS
comp=E,586nm,6.2s
PYAG AMS AMS
comp=Z,204nm,2.2s
YSS Yuzh-Sakhalins 57.66 346 P **P** **04 27 32.0 +0.7**
YSS Yuzh-Sakhalins 57.66 346 *e*P **P** **04 27 32.0 +0.7**
YSS pmax pmax
comp=Z,80nm,0.9s
YSS MLR MLR
comp=Z,15µm,18.0s
YSS MLR MLR
comp=N,11µm,17.0s
YSS MLR MLR
comp=E,6µm,18.0s
YSS Yuzh-Sakhalins 57.66 346 P **P** **04 27 32.0 +0.7**
TEY Ternei 57.71 340 ⇑*e*P **P** **04 27 31.8 +0.1**
TEY *e* 04 27 41.7
TEY *e* 04 35 18.0
TEY pmax pmax
comp=Z,10.0nm,3.0s
TEY pmax pmax
comp=E,300nm,9.8s
VLA Vladivostok 57.83 335 *c*e**P** **P** **04 27 33.0 +0.4**
VLA pmax pmax
comp=Z,30nm,0.8s
VLA MLR MLR
comp=Z,5µm,19.0s
TAOE Nuku Hiva Isla 58.54 95 *e*S **S** **04 35 39.6 -0.9**
comp=Z,3µm,26.8s
TAOE *e*LR LR 04 44 48.3
comp=Z,15µm,23.6s
TAOE Nuku Hiva Isla 58.54 95 *e*T T 05 30 28.0
comp=Z,421nm,0.2s
RGRI Rengat 58.57 275 P **P** **04 27 37.9 -0.5**
comp=Z,32µmcomp=Z,222nm,0.4s
USA0B Ussuriysk Arra 58.69 336 P **P** **04 27 39.2 +0.6**
USA0B IAmb IAmb 04 27 53.1
comp=Z,206nm,1.3s
USA0B Ussuriysk Arra 58.69 336 *c* *i*P **P** **04 27 39.0 +0.4**
USRK Ussuriysk Ar. 58.69 336 P **P** **04 27 39.2 +0.6**
comp=Z,38nm,0.9s,baz=147,slow=7.0,SNR=45
USRK LR LR 04 51 28.7
comp=Z,5µm,20.5s,baz=127,slow=34
USRK PKPPKP **P'P'df** **04 57 18.1 +5.0**
comp=Z,1.9nm,0.6s,baz=200,slow=3.9,SNR=5.6
comp=Z,38nm,0.9s
USRK Ussuriysk Ar. 58.69 336 P **P** **04 27 38.9 +0.3**
CNSH ChangSha 58.85 310 ⇑P **P** **04 27 40.9 +0.9**
CNSH S **S** **04 35 50.3 +6.6**
CNSH pmax pmax
comp=Z,96nm,1.3s
CNSH LR LR
comp=Z,4µm,25.0s
CNSH LR LR
comp=Z,3µm,23.5s
CNSH LR LR
comp=Z,5µm,25.7s
SUJ Sinuiju 58.92 328 P **P** **04 27 40.1 -0.2**
SUJ pP **pP** **04 27 48.8 -1.0**
SUJ S **S** **04 35 43.2 -1.0**
SUJ AmB
comp=Z,769nm,3.3s
SUJ AMS AMS
comp=N,3µm,16.5s
SUJ AMS AMS
comp=E,4µm,19.0s
SUJ AMS AMS
comp=Z,3µm,14.3s
WHN Wuhan 59.07 313 ⇑P **P** **04 27 41.7 +0.2**
WHN S **S** **04 35 40.5 -6.0**
WHN pmax pmax
comp=Z,250nm,1.3s
WHN LR LR
comp=Z,9µm,16.9s
WHN LR LR
comp=Z,5µm,16.8s
WHN LR LR
comp=Z,20µm,21.7s
KRJI Kerinci 59.14 273 P **P** **04 27 40.5 -2.0**
comp=Z,15µmcomp=Z,225nm,1.2s
SKR Severo-Kuril's 59.29 357 *e*P **P** **04 27 43.8 +1.2**
SKR *e* 04 28 02.6
SKR *e*S **S** **04 35 47.9 -0.7**
SKR *e*SS **ScS** **04 37 31.1 +1.0**
SKR pmax pmax
comp=Z,1µm,10.5s
SKR pmax pmax
comp=Z,59nm,0.9s
SKR MLR MLR
comp=Z,7µm,17.0s
GULI GuiLin 59.41 306 P **P** **04 27 41.7 -2.3**
GULI S **S** **04 35 48.3 -2.8**
GULI pmax pmax
comp=Z,100nm,1.6s
GULI LR LR
comp=Z,2µm,19.5s
GULI LR LR
comp=Z,4µm,19.5s
GULI LR LR
comp=Z,5µm,18.4s
DRV Dumont d'Urvil 59.53 189 P **P** **04 27 43.9 -0.3**
DL2 Dalian 59.62 325 P **P** **04 27 45.7 +0.5**
DL2 pmax pmax
comp=Z,130nm,1.1s
UGL Uglegorsk 59.81 346 *e*P **P** **04 27 47.1 +0.9**
UGL *e*S **S** **04 35 54.1 -1.2**
UGL pmax pmax
comp=Z,110nm,1.1s
UGL pmax pmax
comp=Z,2µm,5.0s
UGL smax smax
comp=N,2µm,8.0s
UGL smax smax
comp=E,3µm,8.0s
BKNI Bangkinang 59.96 275 P **P** **04 27 46.8 -1.2**
BKNI Bangkinang 59.96 275 P **P** **04 27 46.1 -1.9**
comp=E,5µmcomp=E,221nm,1.1s
BKNI Bangkinang 59.96 275 P **P** **04 27 47.3 -0.7**
MDJ Mudanjiang 60.01 335 IAmb IAmb 04 28 20.9
comp=Z,116nm,1.3s
MDJ Mudanjiang 60.01 335 P **P** **04 27 48.4 +0.7**
MDJ pmax pmax
comp=Z,68nm,1.1s
MDJ pmax pmax
comp=Z,2µm,6.9s
MDJ Mudanjiang 60.01 335 P **P** **04 27 47.9 +0.2**
MDJ Mudanjiang 60.01 335 P **P** **04 27 48.3 +0.5**
PPI Padang Panjang 60.46 274 P **P** **04 27 49.9 -1.5**
comp=Z,79nm,1.6s
PPSI Pulau Pagai 60.48 272 P **P** **04 27 49.9 -1.7**
comp=Z,251nm,0.6s
TIA Tai'an 60.53 320 ⇑P **P** **04 27 51.2 -0.3**
TIA pP **pP** **04 28 01.0 -0.1**
TIA S **S** **04 36 05.4 +0.2**
TIA pmax pmax
comp=Z,52nm,0.9s
TIA LR LR
comp=Z,850nm,18.5s
TIA LR LR
comp=Z,2µm,18.5s
TIA LR LR
comp=Z,7µm,15.7s
SNY Shenyang 60.66 329 ⇑P **P** **04 27 51.9 -0.3**
SNY pmax pmax
comp=Z,27nm,1.3s
SNY LR LR
comp=Z,2µm,15.2s
SNY LR LR
comp=Z,1µm,19.7s
SNY LR LR
comp=Z,5µm,18.0s
IPM Ipoh 60.79 280 P **P** **04 27 51.7 -2.0**
IPM IAmb IAmb 04 27 53.2
comp=Z,104nm,1.4s
IPM Ipoh 60.79 280 P **P** **04 27 52.7 -1.0**
CN2 Changchun 61.21 332 *e*P **P** **04 27 55.0 -1.0**
CN2 sP sP 04 28 09.1 -0.3
CN2 PP **PP** **04 30 12.4 +1.2**
CN2 S **S** **04 36 12.0 -1.6**
CN2 pmax pmax
comp=Z,80nm,1.8s
CN2 LR LR
comp=Z,5µm,22.0s

CN2 LR LR
comp=Z,4μm,22.0s
CN2 LR LR
comp=Z,10μm,23.0s
KULM Kulim 61.33 281 P **P** **04 27 55.5 -1.8**
KULM Kulim 61.33 281 ⇑P **P** **04 27 55.9 -1.5**
TYV Tymovskoe 61.34 347 *e*P **P** **04 27 57.9 +1.2**
TYV *e*S **S** **04 36 17.3 +2.3**
TYV pmax pmax
comp=Z,26nm,2.5s
TYV pmax pmax
comp=Z,500nm,4.1s
TYV smax smax
comp=N,2μm,7.2s
TYV smax smax
comp=E,1μm,7.2s
PET Petropavlovsk 61.53 359 P **P** **04 27 57.9 0.0**
PET Petropavlovsk 61.53 359 *e*P **P** **04 27 58.9 +1.0**
PET *e* 04 28 07.5
PET *e*S **S** **04 36 17.8 +0.6**
PET pmax pmax
comp=Z,123nm,1.1s
PET MLR MLR
comp=Z,8μm,20.0s
PET MLR MLR
comp=Z,6μm,20.0s
PET Petropavlovsk 61.53 359 P **P** **04 27 58.1 +0.2**
PET Petropavlovsk 61.53 359 P **P** **04 27 58.0 +0.2**
PET pP **pP** **04 28 07.3 -0.3**
PETK Petropavlovsk- 61.64 358 P **P** **04 27 58.8 +0.1**
comp=Z,52nn,0.9s,baz=153,slow=7.6,SNR=40
PETK LR LR 04 50 26.4
comp=Z,20μm,21.9s,baz=166,slow=32
PETK PKP2bc 04 57 17.3
comp=Z,0.9nm,0.4s,baz=151,slow=3.4,SNR=4.1
comp=Z,52nn,0.9s
PETK Petropavlovsk- 61.64 358 P **P** **04 27 58.2 -0.5**
BNX BinXian 61.84 334 ⇑P **P** **04 28 00.0 -0.1**
BNX pP **pP** **04 28 10.5 +0.5**
BNX sP **sP** **04 28 15.4 +1.9**
BNX PcP **PcP** **04 28 40.3 -0.6**
BNX S **S** **04 36 21.4 0.0**
BNX sS **sS** **04 36 37.2 0.0**
BNX pmax pmax
comp=Z,76nm,1.4s
BNX pmax pmax
comp=Z,900nm,2.7s
BNX LR LR
comp=Z,7μm,20.5s
BNX LR LR
comp=Z,4μm,21.1s
BNX LR LR
comp=Z,7μm,20.6s
PSI Prapat 62.49 278 LR LR 04 58 48.4
comp=Z,3μm,19.4s,baz=118,slow=39
ENH Enshi 62.50 311 P **P** **04 28 04.2 -0.8**
ENH IAmb IAmb 04 28 06.2
comp=Z,180nm,1.2s
ENH Enshi 62.50 311 P **P** **04 28 04.7 -0.3**
ENH pP **pP** **04 28 13.7 -0.9**
ENH sP **sP** **04 28 17.0 -1.4**
LYN LuoYang 62.62 316 ⇑ *i*P **P** **04 28 05.2 -0.4**
LYN pP pP 04 28 15.3 +0.1
LYN sP sP 04 28 19.3 +0.3
LYN S **S** **04 36 34.1 +2.4**
LYN pmax pmax
comp=Z,90nm,1.3s
LYN pmax pmax
comp=Z,2μm,12.4s
LYN LR LR
comp=Z,3μm,18.6s
LYN LR LR
comp=Z,5μm,18.2s
LYN LR LR
comp=Z,8μm,18.2s
HNS HongShan 62.79 320 ⇑P **P** **04 28 07.2 +0.5**
HNS pP **pwP** **04 28 17.9 -0.5**
HNS sP **sP** **04 28 21.2 +1.1**
HNS S **S** **04 36 30.8 -3.0**
HNS sS **sS** **04 36 52.6 +3.1**
HNS ScS **SKSac** **04 37 53.5 -3.5**
HNS pmax pmax
comp=Z,180nm,1.3s
HNS pmax pmax
comp=Z,1μm,3.9s
HNS LR LR
comp=Z,4μm,18.6s
HNS LR LR
comp=Z,6μm,20.0s
HNS LR LR
comp=Z,7μm,21.0s
GYA Guiyang 62.91 306 ⇑ *i*P **P** **04 28 08.6 +0.7**
GYA pP sP 04 28 19.7 -1.6
GYA S **S** **04 36 35.9 0.0**
GYA pmax pmax
comp=Z,110nm,1.1s
GYA pmax pmax
comp=Z,2μm,3.8s
GYA LR LR
comp=Z,3μm,18.8s
GYA LR LR
comp=Z,3μm,18.8s
GYA LR LR
comp=Z,7μm,18.8s
TSI Tuntungan 62.98 278 P **P** **04 28 06.9 -1.6**
comp=Z,168nm,0.8s
KLR Kul'dur 63.00 339 LR LR 04 52 55.0
comp=Z,4μm,21.5s,baz=146,slow=33
KLR Kul'dur 63.00 339 *c i*P **P** **04 28 08.2 +0.4**
KLR pmax pmax
comp=Z,61nm,1.0s
KIWB Kanaga Island 63.32 15 P **P** **04 28 10.7 +0.8**
ADK Adak 63.47 16 P **P** **04 28 11.3 +0.5**
ADK Adak 63.47 16 P **P** **04 28 11.3 +0.5**
ADK pmax pmax
comp=Z,403nm,1.6s
ADK Adak 63.47 16 P **P** **04 28 11.7 +0.8**
ADK Adak 63.47 16 ⇑P **P** **04 28 11.6 +0.8**
ADK Adak 63.47 16 P **P** **04 28 11.6 +0.8**
ADK pP **pP** **04 28 21.2 +0.3**
BJT Baijiatuau 63.52 323 P **P** **04 28 11.4 0.0**
BJT IAmb IAmb 04 28 13.3
comp=Z,181nm,1.7s
BJT Baijiatuau 63.52 323 P **P** **04 28 11.4 0.0**
BJT pmax pmax
comp=Z,181nm,1.7s
BJT Baijiatuau 63.52 323 P **P** **04 28 11.9 +0.5**
BJI Beijing 63.52 323 P **P** **04 28 11.6 +0.1**
BJI pmax pmax
comp=Z,52nm,1.7s
BJI pmax pmax
comp=Z,970nm,3.7s
BJI LR LR
comp=Z,2μm,17.9s
BJI LR LR
comp=Z,3μm,18.5s
BJI LR LR
comp=Z,4μm,18.4s
GSI Gunungsitoli 63.54 276 P **P** **04 28 10.6 -1.6**
GSI IAmb IAmb 04 28 11.9
comp=Z,196nm,1.1s
GSI Gunungsitoli 63.54 276 P **P** **04 28 09.4 -2.8**
comp=Z,170nm,1.0s
GSI Gunungsitoli 63.54 276 P **P** **04 28 11.0 -1.2**
GSI Gunungsitoli 63.54 276 ⇑P **P** **04 28 10.5 -1.7**
KCSI Kotacane, Aceh 63.76 278 P **P** **04 28 10.6 -3.1**
comp=Z,2μmcomp=Z,107nm,0.6s
GSTR Great Sitkin T 63.82 16 P **P** **04 28 13.7 +0.4**
TIY Taiyuan 64.44 319 ⇑P **P** **04 28 18.2 +0.5**
TIY pmax pmax
comp=Z,54nm,0.8s
TIY pmax pmax
comp=Z,1μm,6.5s
TIY LR LR
comp=Z,3μm,15.8s
TIY LR LR
comp=Z,4μm,17.2s
TIY LR LR
comp=Z,6μm,17.2s
ATKA Atka Island 64.44 17 P **P** **04 28 17.3 +0.1**
XAN Xi'an 64.82 314 ⇑P **P** **04 28 20.2 0.0**
XAN pP pP 04 28 30.3 +0.4
XAN S **S** **04 36 56.6 -2.6**
XAN pmax pmax
comp=Z,120nm,1.2s
XAN pmax pmax
comp=Z,2μm,4.0s
XAN LR LR
comp=Z,4μm,18.6s
XAN LR LR
comp=Z,6μm,20.7s
XAN LR LR
comp=Z,9μm,21.1s
XAN Xi'an 64.82 314 P **P** **04 28 20.2 0.0**
XAN pP **pP** **04 28 29.7 -0.1**
KMI Kunming 65.56 303 ⇑P **P** **04 28 26.7 +1.2**
KMI pP pwP 04 28 36.9 -0.4
KMI sP sP 04 28 41.6 +2.7
KMI S **S** **04 37 12.3 +3.2**
KMI pmax pmax
comp=Z,180nm,1.4s
KMI pmax pmax
comp=Z,2μm,14.2s
KMI LR LR
comp=Z,3μm,19.6s
KMI LR LR
comp=Z,3μm,17.9s
KMI LR LR
comp=Z,8μm,19.9s
KMI Kunming 65.56 303 P **P** **04 28 26.9 +1.4**
KMI pP **pwP** **04 28 36.2 -1.1**
XLT XiLinHaoTe 66.06 326 *e*P **P** **04 28 29.3 +1.2**
XLT pP pP 04 28 35.7 -2.0
XLT sP pwP 04 28 39.5 -0.5
XLT PcP **PcP** **04 28 57.1 -1.3**
XLT S **S** **04 37 15.7 +1.5**
XLT sS sS 04 37 30.0 0.0
XLT pmax pmax
comp=Z,310nm,1.3s
XLT pmax pmax
comp=Z,2μm,4.2s
XLT LR LR
comp=Z,640nm,19.4s
XLT LR LR
comp=Z,3μm,18.1s
XLT LR LR
comp=Z,8μm,21.1s
CM31 Chiang Mai Arr 66.50 294 P **P** **04 28 31.5 +0.2**
CM31 IAmb IAmb 04 28 33.6
comp=Z,154nm,1.2s
CMAR Chiang Mai Arr 66.50 294 P **P** **04 28 31.9 +0.6**
comp=Z,42nn,0.8s,baz=115,slow=4.5,SNR=112
CMAR PKPPKP **P'P'df** **04 56 59.4 -4.6**
comp=Z,1.3nm,0.3s,baz=290,slow=4.7,SNR=6.2
CMAR PKP2ab 04 57 08.7
comp=Z,2.3nm,0.3s,baz=288,slow=4.9,SNR=6.8
CMAR LR LR 04 57 32.4
comp=Z,2μm,20.2s,baz=80,slow=36
comp=Z,42nn,0.8s
CMAR Chiang Mai Arr 66.50 294 P **P** **04 28 31.2 -0.1**
CMAR Chiang Mai Arr 66.50 294 P **P** **04 28 32.0 +0.6**
CHTO Chiang Mai 66.62 295 P **P** **04 28 31.9 -0.1**
CHTO IAmb IAmb 04 28 33.9
comp=Z,156nm,1.2s
CHTO Chiang Mai 66.62 295 P **P** **04 28 31.9 -0.1**
CHTO pmax pmax
comp=Z,156nm,1.3s
CHTO Chiang Mai 66.62 295 P **P** **04 28 32.3 +0.2**
CHTO Chiang Mai 66.62 295 ⇑P **P** **04 28 32.2 +0.2**
CHTO Chiang Mai 66.62 295 P **P** **04 28 32.3 +0.2**
CHTO pP **pP** **04 28 42.1 +0.4**
CHTO sP **sP** **04 28 45.5 -0.1**
CASY Casey 66.74 200 P **P** **04 28 31.2 -0.7**
CASY IAmb IAmb 04 28 33.0
comp=Z,137nm,1.0s
CASY Casey 66.74 200 ⇑P **P** **04 28 31.3 -0.7**
CASY Casey 66.74 200 P **P** **04 28 31.7 -0.3**
CASY pP **pP** **04 28 41.4 -0.2**
CASY sP **sP** **04 28 44.9 -0.6**
NIKH Nikolski High 66.76 20 P **P** **04 28 31.9 -0.3**
NIKH Nikolski High 66.76 20 P **P** **04 28 31.3 -0.9**
baz=213
NIKH S **S** **04 37 24.6 +2.5**
baz=213
HHC Hu-ho-hao-te 66.81 321 *e*P **P** **04 28 33.6 +0.6**
HHC S **S** **04 37 25.4 +2.1**
HHC pmax pmax
comp=Z,180nm,1.4s
HHC pmax pmax
comp=Z,2μm,7.0s
HHC LR LR
comp=Z,9μm,19.0s
HHC LR LR
comp=Z,5μm,18.4s
HHC LR LR
comp=Z,10μm,18.4s
PZH PanZhiHua 66.93 304 ⇑P **P** **04 28 34.4 +0.3**
PZH pP **pP** **04 28 44.0 +0.3**
PZH sP **sP** **04 28 48.7 +1.1**
PZH PcP **PcP** **04 29 02.0 -0.5**
PZH PP **PP** **04 31 01.2 -0.7**
PZH S **S** **04 37 25.3 -0.1**
PZH sS **sS** **04 37 41.2 -0.3**
PZH ScS **SKSac** **04 38 26.8 -2.5**
PZH pmax pmax
comp=Z,60nm,1.4s
PZH pmax pmax
comp=Z,2μm,6.6s
PZH LR LR
comp=Z,2μm,21.0s
PZH LR LR
comp=Z,3μm,19.5s
PZH LR LR
comp=Z,6μm,20.6s
CD2 Chengdu 67.16 309 P **P** **04 28 35.7 +0.4**
CD2 pP pP 04 28 44.3 -0.7
CD2 PP **PP** **04 31 03.0 -0.7**
CD2 S **S** **04 37 27.5 -0.3**
CD2 sS sS 04 37 44.0 +0.1
CD2 pmax pmax
comp=Z,150nm,1.2s
CD2 pmax pmax
comp=Z,2μm,6.2s
CD2 LR LR
comp=Z,5μm,20.8s
CD2 LR LR
comp=Z,7μm,23.7s
BTO Baotou 67.63 321 *e*P **P** **04 28 39.7 +1.5**
BTO S **S** **04 37 38.4 +5.2**
BTO LR LR
comp=Z,14μm,19.6s
BTO LR LR
comp=Z,14μm,19.4s
HIA Hailar 67.90 332 P **P** **04 28 39.7 +0.1**
HIA Hailar 67.90 332 *c i*P **P** **04 28 40.1 +0.5**
HIA Hailar 67.90 332 P **P** **04 28 40.2 +0.5**
HIA pP **pP** **04 28 50.5 +0.9**
UNV Unalaska Valle 68.27 20 P **P** **04 28 41.1 -0.6**
baz=215
UNV S **S** **04 37 40.6 +0.5**
baz=215
ZEA Zeya 68.31 339 *e*P **P** **04 28 43.0 +1.0**
ZEA *e* 04 28 53.3
ZEA pmax pmax
comp=N,50nm,1.4s
ZEA pmax pmax
comp=Z,70nm,1.1s
MA2 Magadan 68.53 355 LR LR 04 54 51.9
comp=Z,10μm,21.9s,baz=170,slow=32
MA2 Magadan 68.53 355 P **P** **04 28 42.9 -0.4**
MA2 IAmb IAmb 04 28 53.5
comp=Z,83nm,0.9s
MA2 Magadan 68.53 355 *c i*P **P** **04 28 42.4 -0.9**
MA2 pmax pmax
comp=Z,115nm,1.0s
MA2 MLR MLR
comp=Z,6μm,17.0s
MA2 Magadan 68.53 355 P **P** **04 28 43.1 -0.2**
MA2 Magadan 68.53 355 P **P** **04 28 42.9 -0.4**
MA2 pP **pP** **04 28 52.7 -0.5**
MA2 sP **sP** **04 28 56.6 -0.2**
VNDA Vanda 68.77 180 P **P** **04 28 44.3 -0.3**
comp=Z,14nm,0.6s,baz=335,slow=7.1,SNR=69
VNDA LR LR 04 53 45.4
comp=Z,16μm,21.4s,baz=359,slow=31
VNDA PKP2bc 04 57 00.0
comp=Z,0.8nm,1.0s,baz=196,slow=7.4,SNR=3.3
comp=Z,14nm,0.6s
VNDA Vanda 68.77 180 P **P** **04 28 44.1 -0.5**
VNDA IAmb IAmb 04 29 16.6
comp=Z,110nm,1.3s
VNDA Vanda 68.77 180 P **P** **04 28 44.1 -0.5**
VNDA pP **pP** **04 28 53.6 -0.6**
VNDA sP **sP** **04 28 57.6 -0.5**
SBA Scott Base 69.17 179 P **P** **04 28 47.3 +0.2**
SBA Scott Base 69.17 179 P **P** **04 28 47.3 +0.2**
SBA pmax pmax
comp=Z,642nm,2.5s
SBA Scott Base 69.17 179 P **P** **04 28 47.7 +0.6**
SBA pP **pP** **04 28 56.0 -0.7**
LZH Lanzhou 69.45 314 ⇑P **P** **04 28 51.1 +1.4**
LZH pP pwP 04 29 01.2 +1.8
LZH S **S** **04 37 54.1 -1.1**
LZH sS sS 04 38 13.4 +2.0
LZH pmax pmax
comp=Z,180nm,1.3s
LZH pmax pmax
comp=Z,2μm,6.4s
LZH LR LR
comp=Z,6μm,14.6s
LZH LR LR
comp=Z,6μm,15.0s
LZH LR LR
comp=Z,9μm,18.2s
CCD Concordia, Ant 69.56 190 P **P** **04 28 49.9 -0.2**
CCD pP **pP** **04 28 59.8 +0.1**
SPIA Saint Paul Isl 69.91 16 P **P** **04 28 51.0 -0.8**
baz=211
FALS False Pass 70.17 21 P **P** **04 28 53.1 -0.3**
FALS IAmb IAmb 04 29 11.0
comp=Z,106nm,0.8s
FALS False Pass 70.17 21 P **P** **04 28 52.5 -0.9**
baz=218
FALS False Pass 70.17 21 P **P** **04 28 53.2 -0.3**
CHNA Chernabura Isl 71.57 23 P **P** **04 29 02.1 +0.1**
baz=222
CHNA S **S** **04 38 18.1 -0.7**
baz=222
SDPT Sand Point 71.62 22 P **P** **04 29 02.4 +0.1**
baz=221
CIT Chita 72.66 332 *e*P **P** **04 29 09.7 +1.0**
CIT *e* 04 29 20.2
CIT *e* 04 29 27.6
CIT pmax pmax
comp=Z,441nm,2.1s
MOKO MOKOCHONG 72.91 301 *e*P **P** **04 29 11.0 +0.1**
MOKO IAmb IAmb 04 29 13.4
comp=Z,106nm,0.6s
IMP Imphal 72.92 299 *e*P **P** **04 29 10.1 -0.8**
IMP IAmb IAmb 04 29 12.4
comp=Z,170nm,1.0s
KOHI KOHIMA 73.07 300 *e*P **P** **04 29 11.3 -0.5**
KOHI IAmb IAmb 04 29 13.3
comp=Z,232nm,0.9s
ULN Ulaanbaatar 73.47 326 P **P** **04 29 14.1 +0.4**
ULN Ulaanbaatar 73.47 326 *c i*P **P** **04 29 14.7 +1.0**
ULN pmax pmax
comp=Z,442nm,1.7s
ULN Ulaanbaatar 73.47 326 ⇑P **P** **04 29 14.9 +1.2**
AZL Aizawl 73.68 298 *e*P **P** **04 29 14.7 -0.7**
AZL IAmb IAmb 04 29 16.4
comp=Z,126nm,1.2s
GTA Gaotai 73.80 315 ⇑P **P** **04 29 17.0 +1.2**
GTA pP pwP 04 29 27.2 -0.5
GTA sP PcP 04 29 32.8 +1.5
GTA pmax pmax
comp=Z,140nm,1.3s
GTA pmax pmax
comp=Z,2μm,5.8s
GTA LR LR
comp=Z,3μm,17.8s
GTA LR LR
comp=Z,4μm,18.9s
GTA LR LR
comp=Z,4μm,21.1s
SONM Songino Array 73.83 325 P **P** **04 29 16.7 +1.0**
comp=Z,51nm,0.8s,baz=137,slow=4.0,SNR=213
SONM PKPPKP **P'P'df** **04 56 42.2 -6.8**
comp=Z,0.7nm,0.7s,baz=242,slow=3.2,SNR=4.0
SONM LR LR 04 59 44.0
comp=Z,4μm,22.0s,baz=113,slow=34
comp=Z,51nm,0.8s
SONM Songino Array 73.83 325 P **P** **04 29 16.2 +0.4**
SONM IAmb IAmb 04 29 35.7
comp=Z,269nm,1.3s
CHIR Chirikof Islan 73.86 24 P **P** **04 29 14.5 -1.1**
baz=225
ZIRO ZIRO 73.87 302 *e*P **P** **04 29 16.8 +0.3**
TEZP TEZPUR 74.47 301 *e*P **P** **04 29 19.2 -0.5**
TEZP IAmb IAmb 04 29 32.6
comp=Z,128nm,1.0s
YAK Yakutsk 74.51 345 LR LR 04 59 06.9
comp=Z,13μm,21.9s,baz=136,slow=33
YAK Yakutsk 74.51 345 P **P** **04 29 19.2 -0.1**
YAK IAmb IAmb 04 29 30.3
comp=Z,140nm,0.8s
YAK Yakutsk 74.51 345 *c i*P **P** **04 29 19.4 +0.2**
YAK *e* 04 29 28.4
YAK *e**PP **PcP** **04 29 35.8 +2.2**
YAK *e* 04 32 06.3
YAK *e*PPP PPP 04 33 51.6
YAK *e*S **S** **04 38 50.4 -1.5**
YAK *e**SS **SKSac** **04 39 18.5 -6.1**
YAK *e* 04 39 28.1
YAK *e*SS **SS** **04 43 35.0 -4.3**
YAK *e*SSS SSS 04 46 48.5
YAK pmax pmax
comp=Z,103nm,1.1s
YAK pmax pmax
comp=N,24nm,1.0s
YAK pmax pmax
comp=E,9.0nm,1.2s
YAK pmax pmax
comp=Z,1μm,5.9s
YAK pmax pmax
comp=N,581nm,5.4s
YAK pmax pmax
comp=E,363nm,5.9s
YAK smax smax
comp=N,165nm,2.8s
YAK smax smax
comp=E,191nm,3.3s
SHL Shillong 74.93 299 *e*P **P** **04 29 22.7 -0.1**
SHL IAmb IAmb 04 29 24.1
comp=Z,204nm,1.1s
SII Sitkinak Islan 74.95 24 P **P** **04 29 22.5 +0.5**
baz=227
SII Sitkinak Islan 74.95 24 P **P** **04 29 22.7 +0.7**
P16K Nushagak River 75.28 21 P **P** **04 29 23.3 -0.5**
baz=223
GUWA GUWAHATI 75.28 300 *e*P **P** **04 29 24.5 0.0**
GAMB Gambell 75.31 12 P **P** **04 29 26.2 +2.4**
baz=208
GAMB S **S** **04 38 58.7 -2.0**
baz=208
O16K Kokwok River B 75.66 20 P **P** **04 29 26.8 +0.9**
baz=222
O16K S **S** **04 39 04.4 -0.4**
baz=222
OHAK Old Harbor 75.76 24 IAmb IAmb 04 29 39.2
comp=Z,465nm,1.9s
OHAK Old Harbor 75.76 24 P **P** **04 29 25.2 -1.4**
baz=227
OHAK S **S** **04 39 05.9 -0.1**
baz=227
P17K Kvichak River 75.95 21 P **P** **04 29 28.7 +1.2**
baz=224
N16K Nishlik Lake 76.09 19 P **P** **04 29 29.2 +0.8**
baz=222,SNR=11
N16K S **S** **04 39 11.5 +1.9**
baz=222
GOMU GeErMu 76.12 311 P **P** **04 29 30.4 +0.8**
GOMU pP pP 04 29 34.4 -5.0
GOMU PcP **sP** **04 29 43.6 +0.4**
GOMU PP **PP** **04 32 19.5 -1.4**
GOMU S **S** **04 39 16.9 +5.2**
GOMU sS sS 04 39 29.5 +1.5
GOMU pmax pmax
comp=Z,50nm,2.0s
GOMU pmax pmax
comp=Z,970nm,6.8s
GOMU LR LR
comp=Z,3μm,19.5s
GOMU LR LR
comp=Z,3μm,20.8s
GOMU LR LR

comp=Z,4µm,21.0s
O17K Koliganek Bris 76.14 21 P P 04 29 29.0 +0.3
baz=223
O17K S **S** **04 39 08.5 -1.5**
baz=223
BOD Bodaibo 76.32 336 *e*P **P** **04 29 29.8 0.0**
BOD pmax pmax
comp=Z,119nm,1.5s
KDAK Kodiak Island 76.42 24 P **P** **04 29 30.7 +0.3**
comp=Z,36nm,0.9s,baz=196,slow=3.7,SNR=12
KDAK LR LR 05 00 44.9
comp=Z,8µm,18.4s,baz=248,slow=34
comp=Z,36nm,0.9s
KDAK Kodiak Island 76.42 24 P **P** **04 29 30.1 -0.2**
KDAK Kodiak Island 76.42 24 P **P** **04 29 30.8 +0.6**
baz=228
KDAK S **S** **04 39 13.4 +0.1**
baz=228
KDAK Kodiak Island 76.42 24 ⇑P **P** **04 29 30.6 +0.3**
KDAK ⇓P **P** **04 29 30.9 +0.6**
P18K Big Mountain, 76.53 22 IAmb IAmb 04 29 42.8
comp=Z,221nm,1.4s
P18K Big Mountain, 76.53 22 P **P** **04 29 29.8 -1.1**
baz=225
P18K S **S** **04 39 11.2 -3.3**
baz=225
BILL Bilibino 76.69 2 P **P** **04 29 31.8 +0.1**
BILL IAmb IAmb 04 29 42.8
comp=Z,203nm,1.1s
BILL Bilibino 76.69 2*d i*P **P** **04 29 31.7 +0.1**
BILL *i* 04 29 42.0
BILL *e*S **S** **04 39 14.4 -1.4**
BILL *e*SSS SSS 04 47 35.0
BILL pmax pmax
comp=Z,80nm,1.0s
Q19K Cape Douglas, 76.79 22 IAmb IAmb 04 29 49.3
comp=Z,163nm,0.8s
Q19K Cape Douglas, 76.79 22 P **P** **04 29 32.4 -0.1**
baz=227
Q19K S **S** **04 39 16.4 -1.0**
baz=227
LSA Lhasa 76.81 303 P **P** **04 29 34.0 +0.2**
LSA Lhasa 76.81 303 P **P** **04 29 34.0 +0.2**
LSA pmax pmax
comp=Z,93nm,1.1s
LSA Lhasa 76.81 303 P **P** **04 29 34.0 +0.2**
LSA pmax pmax
comp=Z,87nm,1.6s
O18K Koktuh Hills 76.86 21 P **P** **04 29 33.3 +0.5**
baz=225
O18K S **S** **04 39 15.8 -2.2**
baz=225
ZAK Zakamensk 76.92 326 *e*P **P** **04 29 33.5 0.0**
ZAK pmax pmax
comp=Z,135nm,1.5s
Q20K Shuyak Island 77.05 23 P **P** **04 29 34.1 +0.3**
baz=228
Q20K S **S** **04 39 20.6 +0.5**
baz=228
N18K Kilae Creek 77.21 20 IAmb IAmb 04 29 48.9
comp=Z,162nm,1.3s
N18K Kilae Creek 77.21 20 P **P** **04 29 35.4 +0.7**
baz=224,SNR=14
N18K S **S** **04 39 23.0 +1.1**
baz=224
IRK Irkutsk 77.38 328 *e*P **P** **04 29 35.5 -0.4**
IRK *e*S **S** **04 39 29.9 +5.9**
IRK pmax pmax
comp=Z,312nm,1.9s
O19K Port Alsworth 77.42 21 P **P** **04 29 35.6 -0.2**
baz=226
O19K S **S** **04 39 22.2 -1.8**
baz=226
ANM Nome 77.43 14 P **P** **04 29 35.2 -0.7**
baz=215
ANM S **S** **04 39 26.1 +2.0**
baz=215
SVW2 Sparrevohn 77.61 20 IAmb IAmb 04 29 48.9
comp=Z,189nm,1.1s
TNA Tin City 77.67 13 IAmb IAmb 04 29 47.7
comp=Z,167nm,1.5s
TNA Tin City 77.67 13 P **P** **04 29 37.6 +0.4**
baz=212
TNA S **S** **04 39 28.3 +1.8**
baz=212
TNA Tin City 77.67 13 ⇑P **P** **04 29 38.5 +1.3**
TNA ⇓P **pP** **04 29 46.8 -0.4**
N19K Bonanza Creek 77.79 21 P **P** **04 29 38.1 0.0**
baz=226,SNR=11
N19K S **S** **04 39 27.1 -1.2**
baz=226
O20K Slope Mountain 77.96 22 P **P** **04 29 37.8 -1.2**
baz=227
O20K S **S** **04 39 29.0 -1.1**
baz=227
HOM Homer 78.04 23 P **P** **04 29 37.7 -1.7**
baz=228
HOM S **S** **04 39 31.3 +0.5**
baz=228
GTK Tadong 78.25 300 *e*P **P** **04 29 42.3 +0.8**
GTK IAmb IAmb 04 29 56.6
comp=Z,93nm,0.8s
BRLK Bradley Lake 78.40 23 P **P** **04 29 41.4 0.0**
BRLK IAmb IAmb 04 29 58.7
comp=Z,128nm,1.0s
BRSE Bradley Lake S 78.44 23 P **P** **04 29 42.0 +0.4**
baz=229,SNR=11
BRSE S **S** **04 39 36.3 +1.1**
baz=229
M19K Big River Lodg 78.59 20 IAmb IAmb 04 29 56.9
comp=Z,291nm,1.4s
M19K Big River Lodg 78.59 20 P **P** **04 29 43.7 +1.3**
baz=226
M19K S **S** **04 39 39.0 +2.3**
baz=226
L19K White Mountain 78.63 20 IAmb IAmb 04 29 56.1
comp=Z,128nm,1.1s
L19K White Mountain 78.63 20 P **P** **04 29 43.7 +1.0**
baz=225,SNR=39
L19K S **S** **04 39 40.1 +3.0**
baz=225
TTA Tatalina 78.79 19 P **P** **04 29 44.3 +0.7**
baz=224,SNR=16
TTA S **S** **04 39 41.5 +2.6**
baz=224
TTA Tatalina 78.79 19 ⇑P **P** **04 29 44.3 +0.7**
TTA ⇓P **pP** **04 29 53.5 -0.4**
MOY Mondy 78.82 327 *e*P **P** **04 29 44.4 +0.4**
MOY pmax pmax
comp=Z,220nm,1.8s
SPCR Spurr Chakacha 78.86 21 P **P** **04 29 42.8 -1.2**
baz=228
SPCR S **S** **04 39 37.7 -2.1**
baz=228
CAPN Captain Cook N 78.96 22 P **P** **04 29 45.5 +1.1**
baz=229
M20K Styx River 79.00 20 IAmb IAmb 04 29 57.9
comp=Z,208nm,1.4s
M20K Styx River 79.00 20 P **P** **04 29 45.2 +0.4**
baz=227
M20K S **S** **04 39 41.7 +0.4**
baz=227
TAPN Taplejung 79.02 300 *e*P **P** **04 29 46.1 +0.2**
ODAN Odare 79.16 299 *e*P **P** **04 29 46.0 -0.6**
L20K Farewell, AK 79.17 20 P **P** **04 29 46.5 +0.9**
baz=226,SNR=22
L20K S **S** **04 39 44.0 +1.1**
baz=226
SEW Seward 79.17 23 IAmb IAmb 04 29 59.8
comp=Z,113nm,1.0s
SEW Seward 79.17 23 P **P** **04 29 45.8 +0.2**
baz=230,SNR=13
SEW S **S** **04 39 43.5 +0.7**
baz=230
O22K Cooper Landing 79.31 23 P **P** **04 29 45.2 -1.1**
baz=230
O22K S **S** **04 39 44.8 +0.5**
baz=230
SUA Susitna One 79.57 22 P **P** **04 29 47.6 -0.3**
baz=229,SNR=14
SUA S **S** **04 39 45.2 -2.1**
baz=229
SKT Skwentna 79.63 21 P **P** **04 29 46.8 -1.3**
baz=228,SNR=9.2
BOK Bokaro 79.69 296 *e*P **P** **04 29 49.5 +0.2**
BOK IAmb IAmb 04 29 51.1
comp=Z,177nm,1.4s

RC01 Rabbit Creek A 79.69 22 P **P** **04 29 48.7 +0.2**
baz=230,SNR=14
RC01 S **S** **04 39 48.7 +0.3**
baz=230
K20K Telida 79.72 19 IAmb IAmb 04 30 07.7
comp=Z,326nm,1.9s
K20K Telida 79.72 19 P **P** **04 29 49.4 +0.8**
baz=226,SNR=23
K20K S **S** **04 39 50.7 +2.1**
baz=226
GCSA Galena City Sc 79.85 17 P **P** **04 29 49.7 +0.5**
baz=223,SNR=5.6
GCSA S **S** **04 39 51.5 +1.6**
baz=223
RAMN Ramite 79.87 299 *e*P **P** **04 29 50.4 -0.1**
M22K Willow 79.98 21 P **P** **04 29 49.8 -0.1**
baz=230,SNR=10
M22K S **S** **04 39 50.3 -1.1**
baz=230
Q23K Middleton Isla 79.99 25 P **P** **04 29 48.3 -1.7**
baz=233
Q23K S **S** **04 39 53.1 +1.6**
baz=233
PPLA Purkeypile 80.02 20 P **P** **04 29 50.2 -0.2**
baz=228,SNR=11
PPLA S **S** **04 39 51.4 -0.7**
baz=228
PMR Palmer 80.24 22 IAmb IAmb 04 30 02.3
comp=Z,106nm,1.0s
PMR Palmer 80.24 22 P **P** **04 29 51.5 +0.2**
baz=230,SNR=20
PMR S **S** **04 39 54.9 +0.8**
baz=230
KNGR Kungurtug, Tuv 80.25 325*c i*P **P** **04 29 52.5 +0.7**
J20K Nowinta River 80.27 18 IAmb IAmb 04 30 10.4
comp=Z,439nm,2.1s
J20K Nowinta River 80.27 18 P **P** **04 29 52.0 +0.5**
baz=225
J20K S **S** **04 39 55.5 +1.2**
baz=225
CUT Chulitna 80.36 21 IAmb IAmb 04 30 47.2
comp=Z,192nm,1.2s
CUT Chulitna 80.36 21 P **P** **04 29 50.8 -1.1**
baz=229
CUT S **S** **04 39 51.8 -3.5**
baz=229
KNK Knik Glacier 80.38 22 P **P** **04 29 52.5 +0.4**
baz=231,SNR=10
KNK S **S** **04 39 56.1 +0.4**
baz=231
JIRN Jiri 80.41 300 *e*P **P** **04 29 53.7 +0.2**
CAST Castle Rocks 80.41 20 P **P** **04 29 51.8 -0.6**
CAST IAmb IAmb 04 30 05.4
comp=Z,471nm,2.0s
CAST Castle Rocks 80.41 20 P **P** **04 29 51.7 -0.6**
baz=228,SNR=82
GHO Glory Hole Cre 80.43 22 IAmb IAmb 04 30 05.2
comp=Z,156nm,1.2s
HIN Hinchinbrook I 80.51 24 IAmb IAmb 04 30 05.7
comp=Z,139nm,1.4s
GLI Glacier Island 80.57 23 P **P** **04 29 53.4 +0.2**
baz=232,SNR=10
GLI S **S** **04 39 58.5 +0.9**
baz=232
CHUM Lake Minchumin 80.65 19 P **P** **04 29 53.7 +0.2**
baz=227,SNR=38
CHUM S **S** **04 39 57.6 -0.8**
baz=227
SML Sawmill 80.67 22 IAmb IAmb 04 30 06.8
comp=Z,220nm,1.3s
SML Sawmill 80.67 22 P **P** **04 29 54.4 +0.6**
baz=231,SNR=32
SML S **S** **04 39 59.6 +0.7**
baz=231
GUN Gumba 80.73 300 *e*P **P** **04 29 55.3 +0.1**
RDOG Red Dog Mine 80.86 13 P **P** **04 29 50.2 -4.4**
baz=217
M23K Glacier View 80.89 22 P **P** **04 29 53.9 -1.0**
baz=232,SNR=14
M23K S **S** **04 40 02.6 +1.6**
baz=232
EYAK Cordova Ski Ar 80.90 24 P **P** **04 29 55.3 +0.4**
baz=234
EYAK S **S** **04 40 00.7 -0.3**
baz=234
HALK Hakmana 80.97 278 ⇑P **P** **04 29 56.9 +0.5**
TRF Thorofare Moun 81.03 20 P **P** **04 29 54.9 -0.9**
baz=229,SNR=47
TRF S **S** **04 40 01.5 -1.3**
baz=229
PKI Pulchoki 81.05 300 *e*P **P** **04 29 56.7 -0.2**
PKIN Phulchoki 81.06 300 *e*P **P** **04 29 56.5 -0.4**
SCM Sheep Creek Mo 81.06 22 IAmb IAmb 04 30 50.0
comp=Z,127nm,1.2s
SCM Sheep Creek Mo 81.06 22 P **P** **04 29 56.4 +0.6**
baz=232,SNR=19
SCM S **S** **04 40 04.0 +1.0**
baz=232
PALK Pallekele 81.15 279 LR LR 05 08 34.7
comp=Z,3µm,20.0s,baz=178,slow=38
PALK Pallekele 81.15 279 P **P** **04 29 56.7 -0.6**
PALK IAmb IAmb 04 30 00.2
comp=Z,88nm,0.8s
PALK Pallekele 81.15 279 P **P** **04 29 56.7 -0.6**
PALK pmax pmax
comp=Z,88nm,0.9s
KKN Kakani 81.22 300 *e*P **P** **04 29 58.1 +0.4**
BPAW Bear Paw Mtn. 81.23 19 IAmb IAmb 04 30 13.2
comp=Z,206nm,2.0s
BPAW Bear Paw Mtn. 81.23 19 P **P** **04 29 55.9 -0.8**
baz=228,SNR=12
BPAW S **S** **04 40 03.9 -0.6**
baz=228
WAT1 Susitna Watana 81.24 21 P **P** **04 29 56.0 -0.7**
baz=231
WAT1 S **S** **04 40 04.0 -0.7**
baz=231
QSPA South Pole Qui 81.26 180 P **P** **04 29 56.0 -1.0**
comp=Z,17nm,0.5s,baz=311,slow=0.7,SNR=50
QSPA LR LR 05 03 45.2
comp=Z,10µm,18.5s,baz=8.5,slow=34
comp=Z,17nm,0.5s
QSPA South Pole Qui 81.26 180 P **P** **04 29 55.9 -1.0**
QSPA South Pole Qui 81.26 180 ⇑P **P** **04 29 56.0 -1.0**
DMN Daman 81.32 300 *e*P **P** **04 29 58.2 -0.1**
comp=Z,606nm,1.2s
WAT6 Susitna Watana 81.37 22 P **P** **04 29 57.9 +0.3**
baz=232,SNR=22
WAT6 S **S** **04 40 07.0 +0.7**
baz=232
HMT Hamilton 81.38 24 P **P** **04 29 57.6 +0.1**
HMT IAmb IAmb 04 30 10.7
comp=Z,216nm,1.6s
KLU Klutina 81.39 23 P **P** **04 29 58.3 +0.6**
baz=234,SNR=18
KLU S **S** **04 40 07.6 +1.2**
baz=234
MALK Mahakanadarawa 81.50 280 ⇑P **P** **04 29 59.8 +0.6**
BMRM Bremner River 81.60 24 P **P** **04 29 59.3 +0.5**
BMRM IAmb IAmb 04 30 17.3
comp=Z,234nm,1.6s
BMRM Bremner River 81.60 24 P **P** **04 29 58.2 -0.5**
baz=235
BMRM S **S** **04 40 09.1 +0.6**
baz=235
I21K Tanana 81.64 18 P **P** **04 29 59.2 +0.5**
baz=227,SNR=24
I21K S **S** **04 40 08.9 +0.3**
baz=227
BGLC Bering Glacier 81.66 25 P **P** **04 29 59.6 +0.7**
baz=236
BGLC S **S** **04 40 10.8 +1.9**
baz=236
M24K Tolsona, Glenn 81.66 22 IAmb IAmb 04 30 12.6
comp=Z,171nm,1.1s
M24K Tolsona, Glenn 81.66 22 P **P** **04 29 60.0 +0.9**
baz=233,SNR=13
M24K S **S** **04 40 10.9 +1.7**
baz=233
MCK McKinley 81.68 20 IAmb IAmb 04 30 09.5
comp=Z,177nm,1.1s
MCK McKinley 81.68 20 P **P** **04 29 58.6 -0.5**
baz=230,SNR=64
MCK S **S** **04 40 07.7 -1.5**
baz=230
H21K Melozitna Rive 81.71 18 IAmb IAmb 04 30 18.2
comp=Z,266nm,1.9s
H21K Melozitna Rive 81.71 18 P **P** **04 29 59.9 +0.7**
baz=227,SNR=18
H21K S **S** **04 40 11.1 +1.7**
baz=227
BWN Browne 81.78 20 IAmb IAmb 04 30 53.0
comp=Z,175nm,1.0s
DHY Denali Highway 81.81 21 P **P** **04 29 59.9 -0.1**
baz=232
DHY S **S** **04 40 10.7 -0.1**
baz=232
GKN Gorkha 81.82 300 *e*P **P** **04 30 00.6 -0.2**
SNH Sunshine Point 81.87 25 IAmb IAmb 04 30 20.4
comp=Z,97nm,0.6s
MLY Manley 81.93 19 P **P** **04 30 00.4 0.0**
baz=229,SNR=35
MLY S **S** **04 40 10.8 -0.9**
baz=229
N25K Chitina, Valde 81.97 23 P **P** **04 30 01.4 +0.7**
N25K IAmb IAmb 04 30 13.9
comp=Z,140nm,1.4s
N25K Chitina, Valde 81.97 23 P **P** **04 30 01.2 +0.5**
baz=235,SNR=12
N25K S **S** **04 40 13.4 +1.0**
baz=235
WAX Waxell Ridge 82.02 25 IAmb IAmb 04 30 14.2
comp=Z,206nm,1.5s
NEA2 Nenana 82.19 20 IAmb IAmb 04 30 13.5
comp=Z,189nm,1.4s
NEA2 Nenana 82.19 20 P **P** **04 30 01.3 -0.3**
baz=230,SNR=18
NEA2 S **S** **04 40 12.6 -1.6**
baz=230
TGL Tana Glacier 82.20 24 IAmb IAmb 04 30 14.8
comp=Z,141nm,1.4s
HARP HAARP 82.22 22 P **P** **04 30 00.4 -1.6**
baz=234
HARP S **S** **04 40 16.6 +1.8**
baz=234
MESA MESA 82.24 25 IAmb IAmb 04 30 17.2
comp=Z,288nm,1.8s
MESA MESA 82.24 25 P **P** **04 30 01.3 -1.0**
baz=237
YAH Yahtse 82.43 25 IAmb IAmb 04 30 23.3
comp=Z,201nm,1.5s
WRH Wood River Hil 82.44 20 IAmb IAmb 04 30 19.6
comp=Z,312nm,1.8s
PAX Paxson 82.44 22 P **P** **04 30 03.0 -0.1**
baz=234,SNR=7.1
PAX S **S** **04 40 16.8 -0.4**
baz=234
I23K Minto, Yukon-K 82.45 19 P **P** **04 30 02.5 -0.5**
baz=230,SNR=13
I23K S **S** **04 40 14.9 -1.9**
baz=230
MCARA McCarthy VSAT 82.47 24 P **P** **04 30 03.5 +0.3**
MCARA McCarthy VSAT 82.47 24 P **P** **04 30 03.5 +0.3**
baz=236,SNR=6.7
MCARA S **S** **04 40 16.4 -0.9**
baz=236
KOLN Koldanda 82.66 299 *e*P **P** **04 30 04.0 -1.2**
MDM Murphy Dome 82.70 20 IAmb IAmb 04 30 14.6
comp=Z,131nm,1.2s
TABL Table Mountain 82.72 25 IAmb IAmb 04 30 28.4
comp=Z,99nm,1.0s
TCOL CIGO, UAF Yank 82.77 20 IAmb IAmb 04 30 16.5
comp=Z,115nm,0.9s
TCOL CIGO, UAF Yank 82.77 20 P **P** **04 30 04.0 -0.7**
baz=231,SNR=15
TCOL S **S** **04 40 17.0 -3.1**
baz=231
COLA College 82.77 20 P **P** **04 30 04.3 -0.3**
COLA IAmb IAmb 04 30 16.5
comp=Z,114nm,0.9s
COLA College 82.77 20 P **P** **04 30 04.3 -0.3**
COLA pmax pmax
comp=Z,114nm,1.0s
COLA College 82.77 20 P **P** **04 30 03.5 -1.2**
baz=231
COLA S **S** **04 40 18.0 -2.1**
baz=231
COLA College 82.77 20 ⇑P **P** **04 30 04.1 -0.5**
HDA Harding Lake 82.78 20 IAmb IAmb 04 30 15.4
comp=Z,142nm,1.1s
HDA Harding Lake 82.78 20 P **P** **04 30 04.7 -0.1**
baz=232,SNR=51
HDA S **S** **04 40 19.0 -1.4**
baz=232
HDA S **S** **04 40 19.0 -1.4**
baz=232
K24K Donnelly Dome 82.83 21 P **P** **04 30 05.5 +0.4**
baz=233,SNR=22
K24K S **S** **04 40 20.2 -0.8**
baz=233
H23K Yukon River 82.83 19 IAmb IAmb 04 30 16.4
comp=Z,99nm,1.1s
H23K Yukon River 82.83 19 P **P** **04 30 05.1 +0.1**
baz=230,SNR=54
H23K S **S** **04 40 19.7 -1.1**
baz=230
BARN Barnard Glacie 82.84 25 IAmb IAmb 04 30 53.3
comp=Z,125nm,1.3s
TIXI Tiksi 82.91 350 LR LR 05 09 39.6
comp=Z,5µm,18.4s,baz=180,slow=38
TIXI Tiksi 82.91 350 P **P** **04 30 04.8 -0.5**
TIXI Tiksi 82.91 350*c i*P **P** **04 30 04.6 -0.7**
TIXI pmax pmax
comp=Z,76nm,1.7s
TIXI MLR MLR
comp=Z,6µm,18.0s
TIXI Tiksi 82.91 350 ⇑P **P** **04 30 04.9 -0.3**
TIXI ⇑p **pP** **04 30 15.5 +0.1**
PCA Pinnacle 82.92 26 IAmb IAmb 04 30 17.3
comp=Z,140nm,1.2s
CTG Chitna Glacier 82.92 25 P **P** **04 30 06.5 +0.7**
baz=238,SNR=6.7
PINM Pinnacle 82.92 26 P **P** **04 30 05.3 -0.4**
baz=239,SNR=6.4
PINM S **S** **04 40 23.9 +1.8**
baz=239
CTGM Chitina Glacie 82.92 25 IAmb IAmb 04 30 45.3
comp=Z,95nm,1.1s
IL31 83.03 20 IAmb IAmb 04 30 18.0
comp=Z,95nm,1.1s
ILAR Eielson Array 83.03 20 P **P** **04 30 05.3 -0.8**
comp=Z,17nm,0.8s,baz=240,slow=4.8,SNR=97
ILAR PKKPbc **PKKPbc** **04 48 27.4 -3.9**
comp=Z,1.0nm,0.5s,baz=345,slow=1.9,SNR=11
ILAR PKPPKP **P'P'df** **04 56 31.8 +0.4**
comp=Z,0.5nm,0.7s,baz=342,slow=2.2,SNR=4.5
ILAR LR LR 05 01 34.3
comp=Z,6µm,21.8s,baz=211,slow=32
comp=Z,17nm,0.8s
ILAR Eielson Array 83.03 20 P **P** **04 30 05.4 -0.6**
ILAR Eielson Array 83.03 20 P **P** **04 30 05.4 -0.6**
M26K Nabesna, AK 83.05 23 P **P** **04 30 06.5 +0.3**
baz=236,SNR=14
M26K S **S** **04 40 22.7 -0.6**
baz=236
POKR Poker Plat Res 83.06 20 P **P** **04 30 05.5 -0.7**
baz=232,SNR=8.2
POKR S **S** **04 40 20.0 -3.2**
baz=232
PNL Peninsula 83.07 26 P **P** **04 30 06.6 +0.2**
baz=240
PNL S **S** **04 40 24.2 +0.6**
baz=240
BCPM Bancas Point 83.11 26 IAmb IAmb 04 30 41.6
comp=Z,85nm,0.8s
RIDG Independent Ri 83.12 21 IAmb IAmb 04 30 19.5
comp=Z,189nm,1.4s
RIDG Independent Ri 83.12 21 P **P** **04 30 06.4 -0.3**
baz=234,SNR=43
RIDG S **S** **04 40 24.0 0.0**
baz=234
L26K Log Cabin Wild 83.27 22 P **P** **04 30 08.2 +0.8**
baz=236,SNR=7.7
L26K S **S** **04 40 24.7 -0.7**
baz=236
DOT Dot Lake 83.36 22 IAmb IAmb 04 30 20.6
comp=Z,104nm,1.1s
H24K Noodor Dome 83.36 19 P **P** **04 30 07.2 -0.6**
baz=231,SNR=19
H24K S **S** **04 40 24.3 -2.0**
baz=231
J25K Salcha River, 83.45 21 P **P** **04 30 08.4 +0.1**
J25K IAmb IAmb 04 30 21.1
comp=Z,169nm,1.2s
J25K Salcha River, 83.45 21 P **P** **04 30 08.8 +0.4**
baz=234,SNR=56

J25K S **S** **04 40 25.7 -1.6**
baz=234
M27K Edge Creek, AK 83.46 23 IAmb IAmb 04 30 20.5
comp=Z,176nm,1.3s
M27K Edge Creek, AK 83.46 23 P **P** **04 30 09.5 +1.0**
baz=237,SNR=38
M27K S **S** **04 40 26.7 -1.0**
baz=237
COLD Coldfoot 83.55 17 IAmb IAmb 04 30 27.9
comp=Z,233nm,2.0s
COLD Coldfoot 83.55 17 P **P** **04 30 09.5 +0.9**
baz=229,SNR=5.3
COLD S **S** **04 40 29.0 +1.0**
baz=229
SCRK Sand Creek 83.57 21 IAmb IAmb 04 30 20.4
comp=Z,95nm,1.1s
SCRK Sand Creek 83.57 21 P **P** **04 30 09.4 +0.4**
baz=235,SNR=70
SCRK S **S** **04 40 29.6 +0.9**
baz=235
YUK3 Moose Creek 83.71 24 P **P** **04 30 10.8 +0.9**
baz=238,SNR=20
YUK3 S **S** **04 40 29.8 -0.5**
baz=238
SIT Sitka 83.71 30 P **P** **04 30 10.7 +1.0**
baz=244
SIT S **S** **04 40 31.7 +1.7**
baz=244
YUK8 Steele Glacier 83.74 25 P **P** **04 30 11.2 +1.1**
baz=239,SNR=43
YUK8 S **S** **04 40 32.3 +1.5**
baz=239
L27K Beaver Creek, 83.86 23 IAmb IAmb 04 30 29.6
comp=Z,209nm,1.9s
L27K Beaver Creek, 83.86 23 P **P** **04 30 11.5 +1.0**
baz=237,SNR=26
L27K S **S** **04 40 32.0 +0.5**
baz=237
WMQ Urumqi 83.87 316⇑*i*P **P** **04 30 11.1 +0.2**
WMQ pP PcP 04 30 17.6 +2.7
WMQ pmax pmax
comp=Z,160nm,2.3s
WMQ pmax pmax
comp=Z,4μm,4.1s
WMQ LR LR
comp=Z,3μm,21.5s
WMQ LR LR
comp=Z,4μm,24.7s
WMQ LR LR
comp=Z,4μm,29.3s
BVCY Beaver Creek 83.89 24 P **P** **04 30 11.4 +0.9**
baz=238,SNR=10
BVCY S **S** **04 40 32.1 +0.4**
baz=238
J26L Joseph Creek 84.02 21 P **P** **04 30 11.9 +0.6**
baz=235,SNR=21
J26L S **S** **04 40 33.3 +0.1**
baz=235
CRAG Craig 84.14 32 P **P** **04 30 13.1 +1.2**
baz=246
CRAG S **S** **04 40 38.0 +3.7**
baz=246
YUK6 Outpost Mounta 84.16 25 P **P** **04 30 13.1 +0.9**
baz=240,SNR=13
YUK6 S **S** **04 40 37.7 +2.8**
baz=240
YUK4 Talbot Arm 84.24 25 P **P** **04 30 14.5 +1.9**
baz=240
K27K Chicken 84.30 22 P **P** **04 30 13.8 +1.2**
baz=237
K27K S **S** **04 40 35.6 -0.1**
baz=237
PLBC Pleasant Camp 84.32 27 P **P** **04 30 13.5 +0.7**
baz=242,SNR=13
PLBC S **S** **04 40 38.0 +2.0**
baz=242
HYT Haines Junctio 84.47 26 P **P** **04 30 15.0 +1.3**
baz=241,SNR=24
HYT S **S** **04 40 38.3 +0.5**
baz=241
KMPM Mount Pierce 84.61 48 P **P** **04 30 16.2 +1.3**
TOLK Toolik Lake Re 84.66 16 P **P** **04 30 15.0 +0.7**
baz=229,SNR=13
TOLK S **S** **04 40 39.7 +0.5**
baz=229
A21K Barrow 84.79 13 IAmb IAmb 04 30 44.3
comp=Z,186nm,1.3s
A21K Barrow 84.79 13 P **P** **04 30 14.8 0.0**
baz=222
A21K S **S** **04 40 39.0 -1.2**
baz=222
JCC Jacoby Creek, 84.79 48 IAmb IAmb 04 30 49.8
comp=Z,196nm,1.6s
SKAG Skagway 84.79 27 P **P** **04 30 16.1 +1.0**
baz=243
SKAG S **S** **04 40 40.4 -0.3**
baz=243
KRPM Rodgers 84.89 47 IAmb IAmb 04 30 30.6
comp=Z,236nm,1.6s
MAW Mawson 84.92 202 P **P** **04 30 15.3 -0.4**
comp=Z,12nm,0.6s,baz=101,slow=6.2,SNR=22
MAW LR LR 05 03 27.5
comp=Z,7μm,22.0s,baz=88,slow=32
comp=Z,12nm,0.6s
MAW Mawson 84.92 202 P **P** **04 30 15.6 -0.1**
baz=85,SNR=11
MAW Mawson 84.92 202 P **P** **04 30 15.1 -0.6**
WRAK Wrangell Islan 84.93 31 P **P** **04 30 16.0 +0.2**
baz=246
WRAK S **S** **04 40 42.0 -0.2**
baz=246
MCCM Marconi Confer 84.93 50⇓p P 04 30 26.6 +10
N30M Aishikik Lake 84.95 25 P **P** **04 30 17.1 +1.1**
baz=242,SNR=11
N30M S **S** **04 40 40.7 -1.7**
baz=242
HOPS Hopland Field 85.01 49 IAmb IAmb 04 30 35.8
comp=Z,104nm,1.3s
KHMM Horse Mountain 85.03 48 IAmb IAmb 04 30 38.0
comp=Z,102nm,1.2s
HYB Hyderabad 85.04 288 *e*P **P** **04 30 16.4 -1.0**
HYB IAmb IAmb 04 30 17.7
comp=Z,168nm,1.2s
HYBB Hyderabad (bro 85.04 288 *e*P **P** **04 30 16.5 -0.9**
HYBB IVmB_BB 04 30 17.3
comp=Z,1μm,3.6s
HYBB *e*PcP **PcP** **04 30 20.8 +0.2**
HYBB *e*pP **pP** **04 30 27.1 -0.1**
HYBB *e*sP **sP** **04 30 30.7 -0.3**
HYBB *e*PP **PP** **04 33 34.3 -0.5**
HYBB *e*SKSac **SKSac** **04 40 38.0 -2.3**
HYBB IVMs_BB IVMs_BB 04 54 58.6
comp=Z,738nm,18.2s
O30N Mendenhall 85.05 26 P **P** **04 30 17.6 +1.1**
baz=242,SNR=26
O30N S **S** **04 40 41.7 -1.7**
baz=242
KEBM Edson Butte 85.15 45 IAmb IAmb 04 30 31.6
comp=Z,197nm,1.5s
GDXM Geysers 85.17 50 IAmb IAmb 04 30 50.8
comp=Z,163nm,1.6s
KSXB Camp Six Broad 85.18 47 P **P** **04 30 17.6 -0.1**
KSXB IAmb IAmb 04 30 31.8
comp=Z,106nm,1.5s
GRNB Grenville Isla 85.19 34 IAmb IAmb 04 30 31.0
comp=Z,155nm,1.4s
DAWY Dawson 85.32 22 IAmb IAmb 04 30 31.7
comp=Z,256nm,1.8s
DAWY Dawson 85.32 22 P **P** **04 30 18.5 +0.7**
baz=239,SNR=19
DAWY S **S** **04 40 44.9 -1.1**
baz=239
DAWY Dawson 85.32 22⇑P **P** **04 30 18.7 +1.0**
DAWY ⇑P **PcP** **04 30 18.9 -1.9**
DAWY ⇑p **pP** **04 30 28.8 +0.6**
L02F Cave Junction 85.48 46 P **P** **04 30 20.5 +1.4**
baz=254,SNR=7.3
L02F S **S** **04 40 52.6 +4.2**
baz=254
J01E Myrtle Point 85.52 45 P **P** **04 30 20.2 +1.0**
baz=254
J01E S **S** **04 40 50.0 +1.4**
baz=254
N31M Braeburn, Yuko 85.52 26 P **P** **04 30 20.2 +1.4**
baz=243,SNR=53
N31M S **S** **04 40 49.6 +1.6**
baz=243
WHY Whitehorse 85.53 26 P **P** **04 30 20.0 +1.0**
baz=244,SNR=14
WHY S **S** **04 40 49.2 +0.9**
baz=244
WHY Whitehorse 85.53 26⇑P **P** **04 30 19.4 +0.4**
WHY ⇑P **PcP** **04 30 19.8 -2.1**
K02D Willamette Mer 85.57 46 P **P** **04 30 21.3 +1.7**
baz=254,SNR=12
K02D S **S** **04 40 51.2 +1.8**
baz=254
M30M Minto, Yukon 85.60 24 P **P** **04 30 20.2 +1.0**
M30M Minto, Yukon 85.60 24 P **P** **04 30 20.2 +1.0**
baz=242,SNR=24
M30M S **S** **04 40 49.6 +0.8**
baz=242
BBB Bella Bella 85.64 36 LR LR 05 01 51.4
comp=Z,8μm,20.1s,baz=265,slow=31
SAO San Andreas Ge 85.69 52 IAmb IAmb 04 30 39.1
comp=Z,125nm,1.5s
SAO San Andreas Ge 85.69 52⇑P **P** **04 30 21.5 +1.4**
I02E Swisshome, OR 85.84 44 P **P** **04 30 22.5 +1.8**
baz=254
I02E S **S** **04 40 50.6 -1.1**
baz=254
J29M Klondike Camp 85.96 22 P **P** **04 30 22.3 +1.3**
baz=240
J29M S **S** **04 40 54.6 +2.3**
baz=240
DBO Dodson Butte 85.99 45 IAmb IAmb 04 30 35.6
comp=Z,140nm,1.4s
YBH Yreka Blue Hor 86.00 47 IAmb IAmb 04 30 55.8
comp=Z,113nm,1.3s
HUMO Hull Mountain 86.05 46 IAmb IAmb 04 30 43.4
comp=Z,91nm,1.1s
HUMO Hull Mountain 86.05 46⇑P **P** **04 30 23.0 +1.1**
HUMO ⇑P **PcP** **04 30 23.6 -0.9**
I03D Drain, OR 86.07 45 P **P** **04 30 22.8 +0.9**
baz=254
I03D S **S** **04 40 57.9 +3.8**
baz=254
OZB Mount Ozzard 86.17 39 P **P** **04 30 23.8 +1.4**
OZB IAmb IAmb 04 30 36.0
comp=Z,122nm,1.4s
T35M Bob Quinn 86.21 31 P **P** **04 30 23.0 +0.7**
baz=248
T35M S **S** **04 40 58.1 +3.2**
baz=248
HEBO Mount Hebo 86.21 43 P **P** **04 30 23.6 +1.0**
P33M Teslin, Yukon 86.26 27 P **P** **04 30 23.1 +0.5**
baz=245,SNR=8.3
P33M S **S** **04 40 58.4 +3.0**
baz=245
ORV Oroville 86.33 49 IAmb IAmb 04 30 41.9
comp=Z,110nm,1.6s
COR Corvallis 86.35 44⇑p P 04 30 32.3 +9.1
COR ⇓p pP 04 30 34.4 +0.8
I29M Ogilvie Camp, 86.38 22 IAmb IAmb 04 31 22.8
comp=Z,93nm,1.2s
I29M Ogilvie Camp, 86.38 22 P **P** **04 30 23.7 +0.7**
baz=240,SNR=58
I29M S **S** **04 40 56.6 +0.4**
baz=240
PAGB Antelope Grade 86.38 53 IAmb IAmb 04 30 42.9
comp=Z,221nm,1.7s
SNCC San Nicolas Is 86.40 56 P **P** **04 30 24.9 +1.1**
baz=257
L04D Klamath Falls 86.42 47 IAmb IAmb 04 30 48.1
comp=Z,186nm,1.4s
L04D Klamath Falls 86.42 47 P **P** **04 30 24.9 +1.1**
baz=255,SNR=11
L04D S **S** **04 41 00.5 +2.7**
baz=255
M31M Drury Creek, Y 86.43 25 IAmb IAmb 04 30 38.9
comp=Z,62nm,0.9s
M31M Drury Creek, Y 86.43 25 P **P** **04 30 23.8 +0.5**
baz=244,SNR=37
M31M S **S** **04 40 58.3 +1.4**
baz=244
BUCK Buck Mountain 86.46 44 IAmb IAmb 04 30 38.0
comp=Z,128nm,1.1s
SCZ2 Santa Cruz Isl 86.48 55 P **P** **04 30 25.5 +1.3**
baz=257
SCZ2 S **S** **04 41 00.7 +2.2**
baz=257
SMMC Simmler 86.49 54 P **P** **04 30 25.7 +1.5**
baz=257
SMMC S **S** **04 41 01.7 +3.1**
baz=257
SBC Santa Barbara 86.52 55 P **P** **04 30 25.3 +1.0**
baz=257
SBC S **S** **04 41 02.3 +3.6**
baz=257
PKM Mcpherson Peak 86.53 54 P **P** **04 30 26.0 +1.4**
baz=257
PKM S **S** **04 41 02.4 +3.0**
baz=257
G03D McMinnville, O 86.54 43 P **P** **04 30 25.4 +1.2**
baz=254
G03D S **S** **04 41 03.0 +4.4**
baz=254
CBB Campbell River 86.58 38 P **P** **04 30 25.2 +0.9**
H04D Lebanon 86.72 44 P **P** **04 30 26.5 +1.5**
baz=254,SNR=5.7
H04D S **S** **04 41 03.4 +3.0**
baz=254
NLWA Neilton Lookou 86.75 41⇑p **P** **04 30 25.9 +0.6**
NLWA ⇑p **pP** **04 30 36.5 +0.9**
NLWA ⇑p **sP** **04 30 37.2 -1.7**
I04A Tendick Farm, 86.75 45 P **P** **04 30 26.3 +0.9**
baz=255,SNR=6.7
J04D Umpqua Nationa 86.82 46 P **P** **04 30 27.2 +1.4**
baz=255,SNR=6.1
J04D S **S** **04 41 05.2 +3.4**
baz=255
ZSN Zaisan 86.84 319*c i*P **P** **04 30 25.5 -0.1**
ZSN *e*S **SKSac** **04 40 46.3 -4.0**
ZSN pmax pmax
comp=Z,293nm,3.6s
ZSN Zaisan 86.84 319⇑*i*P **P** **04 30 25.6 -0.1**
comp=Z,293nm,3.6s,baz=319
ZSN *e*S **SKSac** **04 40 46.4 -3.9**
baz=319
BCW Bitter Crk WRg 86.87 54 IAmb IAmb 04 30 38.1
comp=Z,132nm,1.1s
DLBC Dease Lake 86.87 30 LR LR 05 06 16.0
comp=Z,5μm,18.1s,baz=272,slow=33
DLBC Dease Lake 86.87 30 IAmb IAmb 04 30 37.8
comp=Z,94nm,1.4s
DLBC Dease Lake 86.87 30 P **P** **04 30 26.3 +0.7**
baz=248,SNR=14
DLBC S **S** **04 41 04.6 +3.2**
baz=248
FARO Faro, Yukon 86.88 25 P **P** **04 30 26.0 +0.4**
baz=245,SNR=26
FARO S **S** **04 41 03.3 +2.0**
baz=245
K04D Chiloquin, OR 86.91 46 P **P** **04 30 27.4 +1.2**
baz=255
K04D S **S** **04 41 05.2 +2.6**
baz=255
CLRS Cowichan Lake 86.99 40 P **P** **04 30 26.4 +0.1**
CLRS IAmb IAmb 04 30 40.1
comp=Z,92nm,1.5s
H04A Detroit Lake 87.14 44 P **P** **04 30 27.9 +0.7**
H04A IAmb IAmb 04 30 40.4
comp=Z,128nm,1.3s
SCI2 San Clemente I 87.15 56 P **P** **04 30 28.3 +0.9**
baz=258
SCI2 S **S** **04 41 08.2 +3.2**
baz=258
BHPL Bhopal 87.16 294 *e*P **P** **04 30 26.5 -1.3**
BHPL IAmb IAmb 04 30 39.4
comp=Z,22nm,0.8s
VOG Valley Oaks Go 87.20 53 P **P** **04 30 28.2 +0.7**
baz=257
BEKR Beckworth 87.26 49 P **P** **04 30 29.0 +0.9**
D03D Eldon 87.30 41 P **P** **04 30 28.9 +1.1**
baz=254
D03D S **S** **04 41 09.0 +3.2**
baz=254
VES Vestal, Richgr 87.33 53 P **P** **04 30 29.1 +0.9**
baz=257,SNR=7.2
VES S **S** **04 41 08.6 +2.0**
baz=257
CIS Catalina Islan 87.34 56 P **P** **04 30 29.4 +1.0**
baz=258
CIS S **S** **04 41 09.6 +2.7**
baz=258
OSI Osito Audit: C 87.35 55 P **P** **04 30 29.7 +1.3**
baz=258
OSI S **S** **04 41 10.1 +3.1**
baz=258
ARVC Arvin 87.38 54 P **P** **04 30 29.8 +1.4**
baz=258
ARVC S **S** **04 41 10.7 +3.6**
baz=258
EPYK Eagle Plains 87.44 21 IAmb IAmb 04 30 41.5
comp=Z,86nm,0.9s
EPYK Eagle Plains 87.44 21 P **P** **04 30 29.1 +1.0**
baz=242,SNR=23
EPYK S **S** **04 41 12.1 +5.5**
baz=242
J05D Fort Rock, OR 87.45 46 P **P** **04 30 30.3 +1.5**
baz=256,SNR=35
J05D S **S** **04 41 09.7 +1.9**
baz=256
FMP Fort Macarthur 87.51 56 P **P** **04 30 30.1 +1.0**
baz=258
FMP S **S** **04 41 10.8 +2.5**
baz=258
DECC Green Verdugo 87.59 55 P **P** **04 30 30.3 +0.8**
baz=258
DECC S **S** **04 41 11.2 +2.0**
baz=258
I05D Terrebonne, OR 87.64 45 P **P** **04 30 30.9 +1.3**
baz=256,SNR=8.8
I05D S **S** **04 41 12.0 +2.6**
baz=256
PNTR Pine Nut 87.65 50 IAmb IAmb 04 30 41.5
comp=Z,69nm,1.1s
MDPB Devils Postpil 87.72 52 IAmb IAmb 04 30 41.7
comp=Z,87nm,1.4s
ISA Isabella, Lake 87.77 54 IAmb IAmb 04 31 03.2
comp=Z,162nm,1.8s
ISA Isabella, Lake 87.77 54 P **P** **04 30 31.6 +1.1**
baz=258,SNR=7.3
ISA S **S** **04 41 13.0 +2.0**
baz=258
MOD Modoc Plateau 87.78 47 P **P** **04 30 30.9 +0.5**
MOD IAmb IAmb 04 30 41.9
comp=Z,104nm,1.3s
PINE Pine Mountain 87.78 45 IAmb IAmb 04 30 44.6
comp=Z,136nm,1.3s
G05D Wanic, OR 87.88 44 P **P** **04 30 31.1 +0.4**
baz=256
G05D S **S** **04 41 13.6 +2.0**
baz=256
MLAC Mammoth, Mammc 87.91 52 P **P** **04 30 32.7 +1.3**
baz=257
MLAC S **S** **04 41 14.6 +2.0**
baz=257
MMPY Sheldon Lake, 87.93 25 P **P** **04 30 31.3 +0.7**
baz=247,SNR=28
MMPY S **S** **04 41 12.9 +1.6**
baz=247
PAHR Pah Rah Range 87.95 49 IAmb IAmb 04 30 42.7
comp=Z,61nm,1.1s
EDW2 Edwards Air Fo 87.99 54 P **P** **04 30 32.9 +1.3**
baz=258,SNR=16
EDW2 S **S** **04 41 16.0 +2.8**
baz=258
CCAC Calif City Air 88.03 54 IAmb IAmb 04 30 55.6
comp=Z,65nm,1.2s
BFSC Mount Baldy Ra 88.13 55 P **P** **04 30 33.3 +1.0**
baz=258,SNR=12
BFSC S **S** **04 41 15.7 +1.0**
baz=258
ELS Elsinore Mount 88.20 56 IAmb IAmb 04 31 02.7
comp=Z,87nm,1.4s
CWC Cottonwood Cre 88.25 53 P **P** **04 30 33.7 +0.9**
baz=258
CWC S **S** **04 41 17.6 +1.9**
baz=258
TIN Tinemaha, Big 88.26 52 P **P** **04 30 34.2 +1.4**
baz=258
TIN S **S** **04 41 18.2 +2.4**
baz=258
LHV Little Huntoon 88.30 51 IAmb IAmb 04 31 06.1
comp=Z,169nm,1.7s
109C Camp Elliot, M 88.31 57 P **P** **04 30 34.0 +1.0**
baz=259
109C S **S** **04 41 18.9 +2.7**
baz=259
MK31 Makanchi Array 88.36 318 P **P** **04 30 32.9 -0.1**
MK31 IAmb IAmb 04 30 34.5
comp=Z,62nm,0.9s
MK31 Makanchi Array 88.36 318*c i*P **P** **04 30 32.8 -0.2**
MKAR Makanchi Array 88.36 318 P **P** **04 30 33.0 0.0**
comp=Z,40nm,0.7s,baz=97,slow=6.2,SNR=239
MKAR PKKPbc **PKKPbc** **04 48 16.7 -1.0**
comp=Z,1.4nm,0.7s,baz=302,slow=2.5,SNR=10
MKAR PKPPKP **P'P'df** **04 56 23.2 -0.1**
comp=Z,0.7nm,0.8s,baz=231,slow=0.8,SNR=5.5
MKAR LR LR 05 11 40.5
comp=Z,2μm,20.4s,baz=76,slow=37
comp=Z,40nm,0.7s
MKAR Makanchi Array 88.36 318 P **P** **04 30 33.0 0.0**
LRMC Laurel Mtn Rad 88.37 54 P **P** **04 30 34.7 +1.3**
baz=258
LRMC S **S** **04 41 19.1 +2.3**
baz=258
RYN Ryan 88.37 51 IAmb IAmb 04 30 53.7
comp=Z,75nm,1.4s
MURC Murrieta 88.38 56 P **P** **04 30 34.4 +1.1**
baz=258,SNR=8.4
MURC S **S** **04 41 20.1 +3.3**
baz=258
NVAR Mina Array Bea 88.50 51 P **P** **04 30 35.2 +1.2**
comp=Z,5.5nm,0.8s,baz=240,slow=7.4,SNR=34
NVAR PKKPbc **PKKPbc** **04 48 18.2 +1.0**
comp=Z,1.0nm,0.7s,baz=79,slow=3.5,SNR=6.7
NVAR PKPPKP **P'P'df** **04 56 23.6 -0.4**
comp=Z,1.1nm,0.8s,baz=83,slow=3.7,SNR=7.0
NVAR LR LR 05 04 02.0
comp=Z,9μm,19.7s,baz=276,slow=31
comp=Z,5.5nm,0.8s
CBX Cerro Bola 88.57 57 P **P** **04 30 35.1 +0.7**
MAKZ Makanchi 88.57 318 P **P** **04 30 33.5 -0.4**
MAKZ Makanchi 88.57 318 P **P** **04 30 33.5 -0.4**
MAKZ pmax pmax
comp=Z,137nm,1.2s
MAKZ Makanchi 88.57 318⇑P **P** **04 30 33.7 -0.2**
MAKZ ⇑P **PcP** **04 30 33.9 -1.7**
NV11 Mina Array Sit 88.61 51 IAmb IAmb 04 31 07.4
comp=Z,167nm,1.7s
BAR Barrett 88.63 57 IAmb IAmb 04 31 11.3
comp=Z,74nm,1.3s
MPMC Manual Prospec 88.64 53 P **P** **04 30 36.1 +1.4**
baz=258,SNR=24
MPMC S **S** **04 41 21.3 +1.8**
baz=258
ZAA0 Zalesovo Array 88.72 325 IAmb IAmb 04 30 34.2
comp=Z,83nm,1.4s
ZALV Zalesovo Beam 88.72 325 P **P** **04 30 33.4 -1.0**
comp=Z,20nm,0.9s,baz=108,slow=4.8,SNR=51
ZALV PKKPbc **PKKPbc** **04 48 14.7 -2.4**
comp=Z,1.5nm,0.4s,baz=274,slow=2.4,SNR=5.4
ZALV PKPPKP **P'P'df** **04 56 24.5 +2.6**
comp=Z,0.8nm,0.8s,baz=256,slow=4.4,SNR=4.2
ZALV LR LR 05 10 15.4
comp=Z,3μm,21.0s,baz=98,slow=36
comp=Z,20nm,0.9s
ZALV Zalesovo Beam 88.72 325 P **P** **04 30 33.2 -1.1**
BBRC Big Bear Solar 88.74 55 P **P** **04 30 36.3 +1.0**
baz=259
BBRC S **S** **04 41 21.8 +1.2**
baz=259
RRX Edison Barstow 88.80 55 P **P** **04 30 36.3 +1.0**
baz=259
RRX S **S** **04 41 21.6 +0.9**
baz=259
LTY Liberty 88.81 42 IAmb IAmb 04 30 54.7
comp=Z,127nm,2.0s
TGTN Hyland Airport 88.82 27 P **P** **04 30 35.5 +0.6**
baz=249
TGTN S **S** **04 41 20.9 +1.0**
baz=249
SMLA Simla 88.85 302 *e*P **P** **04 30 34.6 -1.0**
SMLA IAmb IAmb 04 30 48.8
comp=Z,86nm,0.8s
I07A Izee 88.86 45 IAmb IAmb 04 30 49.4
comp=Z,154nm,1.5s
MONP2 Monument Peak 88.88 57 P **P** **04 30 37.5 +1.5**
baz=259,SNR=25
MONP2 S **S** **04 41 24.3 +2.4**
baz=259

GRAC Grapevine Rang 88.93 52 P P 04 30 37.4 +1.5
baz=258
GRAC S S 04 41 24.1 +2.2
baz=258
PFO Pinyon Flats O 88.99 56 LR LR 05 03 44.7
comp=Z,23µm,19.9s,baz=296,slow=31
PFO Pinyon Flats O 88.99 56 P P 04 30 37.1 +0.8
PFO Pinyon Flats O 88.99 56 P P 04 30 37.1 +0.8
PFO pmax pmax
comp=Z,429nm,2.2s
PFO Pinyon Flats O 88.99 56 P P 04 30 37.4 +1.0
baz=259,SNR=15
PFO S S 04 41 23.9 +1.2
baz=259
TPFO Pinon Flats 88.99 56 P P 04 30 37.5 +1.1
baz=259,SNR=16
TPFO S S 04 41 23.9 +1.1
baz=259
GSC Goldstone, Bar 89.03 54 IAmb IAmb 04 30 48.0
comp=Z,196nm,1.9s
GSC Goldstone, Bar 89.03 54 P P 04 30 37.8 +1.3
baz=259,SNR=15
GSC S S 04 41 25.5 +2.5
baz=259
IKP In-Ko-Pah, Jac 89.09 57 P P 04 30 38.5 +1.7
baz=259,SNR=11
IKP S S 04 41 26.2 +2.6
baz=259
RMX La Rumorosa 89.11 57 P P 04 30 38.6 +1.7
WVOR Wild Horse Val 89.11 47 ⇑P P 04 30 38.0 +1.3
WVOR ⇑P P 04 30 38.1 +1.3
WVOR ⇑p pP 04 30 45.3 -1.7
WVOR ⇑p sP 04 30 48.8 -1.6
E07A Sunnyside 89.19 43 IAmb IAmb 04 30 49.1
comp=Z,221nm,2.0s
FURC Furnace Creek, 89.22 53 P P 04 30 38.5 +1.4
baz=259,SNR=14
FURC S S 04 41 26.4 +2.0
baz=259
YUH Yuha Desert 89.25 57 IAmb IAmb 04 31 10.6
comp=Z,144nm,1.4s
HEC Hector,Ludlow 89.32 55 P P 04 30 39.0 +1.2
baz=259,SNR=25
HEC S S 04 41 26.9 +1.1
baz=259
HAWA Hanford 89.37 43 P P 04 30 38.2 +0.5
HAWA Hanford 89.37 43 ⇑P P 04 30 38.6 +1.0
HAWA ⇑p pP 04 30 48.6 +0.7
SWSC Sam W. Stewart 89.40 57 P P 04 30 39.6 +1.4
baz=259,SNR=14
SWSC S S 04 41 29.1 +2.7
baz=259
INK Inuvik 89.43 20 P P 04 30 36.6 -0.7
comp=Z,3.5nm,0.6s,baz=244,slow=6.5,SNR=14
INK LR LR 05 06 50.7
comp=Z,7µm,20.3s,baz=236,slow=33
comp=Z,3.5nm,0.6s
INK Inuvik 89.43 20 IAmb IAmb 04 30 52.7
comp=Z,95nm,1.7s
INK Inuvik 89.43 20 P P 04 30 37.6 +0.2
baz=244,SNR=5.7
INK S S 04 41 24.6 -0.4
baz=244
BELC Belle Mtn. Jos 89.44 56 P P 04 30 39.8 +1.4
baz=259,SNR=47
BELC S S 04 41 29.3 +2.3
baz=259
SHLS Shalkode 89.47 314 c iP P 04 30 36.2 -2.2
SHLS eS SKSac 04 41 00.7 -5.8
SHLS pmax pmax
comp=Z,107nm,2.1s
SHLS Shalkode 89.47 314 ⇑ iP P 04 30 36.2 -2.2
comp=Z,107nm,2.1s,baz=314
SHLS eS SKSac 04 41 00.7 -5.8
baz=314
PDGK Podgornoye 89.49 314 P P 04 30 37.2 -1.3
SHOC Shoshone, Teco 89.57 54 P P 04 30 40.0 +1.1
baz=259,SNR=7.9
SHOC S S 04 41 29.9 +2.0
baz=259
POO Poona 89.64 289 eP P 04 30 38.0 -1.6
POO IAmb IAmb 04 30 40.3
comp=Z,37nm,0.9s
E08A Dider Farm, El 89.71 43 IAmb IAmb 04 30 59.5
comp=Z,76nm,1.5s
BMN Battle Mountai 89.73 49 IAmb IAmb 04 31 12.8
comp=Z,198nm,1.8s
TUQ Turquoise Moun 89.77 54 P P 04 30 41.2 +1.2
baz=259,SNR=11
TUQ S S 04 41 34.1 +4.1
baz=259
UZB Uzynbulak 89.78 314 eP P 04 30 38.1 -1.8
UZB Uzynbulak 89.78 314 eP P 04 30 38.1 -1.8
baz=314
TPNV Topopah Spring 89.79 53 P P 04 30 41.4 +1.3
baz=259,SNR=39
TPNV Topopah Spring 89.79 53 ⇑P P 04 30 41.4 +1.3
TPNV ⇓P PcP 04 30 41.9 +0.5
TPNV ⇕p pP 04 30 50.8 +0.3
BC3 Big Chuckawall 89.82 56 P P 04 30 41.9 +1.7
baz=260,SNR=27
BC3 S S 04 41 32.0 +1.5
baz=260
GMRC Granite Mounta 89.86 55 P P 04 30 41.9 +1.5
baz=259,SNR=46
GMRC S S 04 41 32.2 +1.3
baz=259
D08A Wollman Farm, 89.93 42 IAmb IAmb 04 30 53.8
comp=Z,138nm,1.8s
KPKS Kokpek 90.09 314 c iP P 04 30 41.1 -0.1
KPKS eS SKSac 04 41 07.9 -2.1
KPKS pmax pmax
comp=Z,156nm,2.1s
KPKS Kokpek 90.09 314 ⇑ iP P 04 30 41.1 -0.1
comp=Z,156nm,2.1s,baz=314
KPKS eS SKSac 04 41 08.0 -2.1
baz=314
IRM Iron Mountain 90.16 56 P P 04 30 43.4 +1.7
baz=260,SNR=19
IRM S S 04 41 37.3 +3.8
baz=260
ZHN Zhinishke 90.21 314 eP P 04 30 40.0 -1.8
ZHN Zhinishke 90.21 314 eP P 04 30 40.0 -1.8
baz=314
GLA Glamis 90.23 57 IAmb IAmb 04 30 54.2
comp=Z,158nm,1.2s
GLA Glamis 90.23 57 P P 04 30 43.9 +1.9
baz=260,SNR=16
GLA S S 04 41 36.2 +2.1
baz=260
S11A Rachel 90.32 52 IAmb IAmb 04 31 10.6
comp=Z,161nm,1.4s
E09A Wood Farm, Sta 90.33 43 IAmb IAmb 04 31 02.9
comp=Z,72nm,1.1s
SEM Semipalatinsk 90.54 321 eP P 04 30 39.8 -3.5
SEM Semipalatinsk 90.54 321 eP P 04 30 39.9 -3.5
baz=321
SHPR Sheep Range 90.57 53 IAmb IAmb 04 31 03.2
comp=Z,97nm,1.2s
R11A Troy Canyon, C 90.57 51 IAmb IAmb 04 30 55.3
comp=Z,67nm,1.2s
R11A Troy Canyon, C 90.57 51 P P 04 30 45.1 +1.4
baz=259,SNR=47
R11A S S 04 41 36.4 -1.0
baz=259
BLYC Blythe 90.60 56 IAmb IAmb 04 30 55.6
comp=Z,79nm,1.1s
TDK Taldyqorghan 90.60 315 eP P 04 30 41.8 -1.7
TDK Taldyqorghan 90.60 315 eP P 04 30 41.9 -1.7
baz=315
NEE2 Needles Airpor 90.70 55 P P 04 30 46.0 +1.8
baz=260,SNR=9.5
F10A Beach Ranch, E 90.84 44 IAmb IAmb 04 31 04.6
comp=Z,97nm,1.1s
KDJ Kajisay 90.91 312 P P 04 30 44.7 -0.5
KDJ Kajisay 90.91 312 P P 04 30 44.7 -0.5
PDMCI Parker Dam,Lak 91.01 56 P P 04 30 46.9 +1.4
baz=260,SNR=14
PDMCI S S 04 41 39.8 -1.3
baz=260
113A Mohawk Valley, 91.06 57 IAmb IAmb 04 31 00.1
comp=Z,180nm,1.7s
MDOK Medeo 91.20 313 eP P 04 30 46.2 -0.3
MDOK Medeo 91.20 313 eP P 04 30 46.2 -0.3
baz=313
TNSS Tian-Shan 91.25 313 eP P 04 30 45.2 -1.8
TNSS Tian-Shan 91.25 313 eP P 04 30 45.2 -1.8
baz=313
ELK Elko 91.27 49 LR LR 05 04 29.4
comp=Z,4µm,21.5s,baz=221,slow=31
ELK Elko 91.27 49 IAmb IAmb 04 31 19.1
comp=Z,97nm,1.4s
AAA Alma-Ata 91.31 313 eP P 04 30 44.6 -2.3
AAA Alma-Ata 91.31 313 eP P 04 30 44.6 -2.3
baz=313
KSH Kashi 91.34 310 P P 04 30 49.2 +2.0
KSH sP sP 04 31 00.5 -0.4
KSH S S 04 41 50.8 +6.6
KSH pmax pmax
comp=Z,57nm,1.5s
KSH pmax pmax
comp=Z,2µm,5.0s
W13A Hualapai Mount 91.35 55 IAmb IAmb 04 30 59.2
comp=Z,114nm,1.2s
NEW Newport 91.37 41 LR LR 05 04 11.2
comp=Z,8µm,21.0s,baz=253,slow=30
NEW Newport 91.37 41 IAmb IAmb 04 30 59.8
comp=Z,106nm,1.8s
NEW Newport 91.37 41 P P 04 30 47.4 +0.4
baz=258,SNR=12
NEW S S 04 41 45.3 +1.3
baz=258
WRGLY Wrigley 91.49 26 P P 04 30 47.7 +0.6
baz=254
WRGLY S S 04 41 44.4 +0.2
baz=254
PLID Pearl Lake 91.52 45 IAmb IAmb 04 30 58.7
comp=Z,68nm,1.1s
KURK Kurchatov 91.62 321 P P 04 30 47.3 -0.7
KURK IAmb IAmb 04 30 49.0
comp=Z,92nm,1.2s
KURK Kurchatov 91.62 321 c iP P 04 30 47.2 -0.8
KURK pmax pmax
comp=Z,120nm,1.6s
KURK MLR MLR
comp=Z,5µm,21.0s
ULHL Ulahol 91.62 312 P P 04 30 48.8 +0.3
SNR=34
KURBB Kurchatov Arra 91.65 321 LR LR 05 10 53.8
comp=Z,4µm,21.7s,baz=56,slow=35
KURBB Kurchatov Arra 91.65 321 P P 04 30 46.4 -1.8
214A Organ Pipe Nat 91.72 58 IAmb IAmb 04 31 03.6
comp=Z,145nm,1.6s
214A Organ Pipe Nat 91.72 58 P P 04 30 50.8 +1.8
baz=261,SNR=10
214A S S 04 41 52.9 +5.1
baz=261
Y14A Wickenburg 91.88 56 IAmb IAmb 04 31 21.9
comp=Z,91nm,1.7s
BOOM Boomskoye usch 91.88 313 IAmb IAmb 04 31 03.9
comp=Z,57nm,1.0s
CCUT Cedar City 92.17 53 IAmb IAmb 04 31 03.4
comp=Z,72nm,1.1s
LCMT Little Creek M 92.17 53 IAmb IAmb 04 31 05.4
comp=Z,95nm,1.3s
NRIK Noril'sk 92.20 340 P P 04 30 49.4 -0.9
comp=Z,23nm,1.0s,baz=113,slow=5.0,SNR=36
NRIK LR LR 05 11 50.7
comp=Z,9µm,20.9s,baz=102,slow=35
comp=Z,23nm,1.0s
NRIK Noril'sk 92.20 340 P P 04 30 49.2 -1.1
NRIK IAmb IAmb 04 30 50.8
comp=Z,41nm,1.1s
TKM2 Tokmak 2 92.21 313 P P 04 30 50.9 -0.3
SNR=14
TKM2 Tokmak 2 92.21 313 P P 04 30 50.0 -1.2
HLID Hailey 92.37 46 IAmb IAmb 04 31 06.1
comp=Z,136nm,1.6s
HLID Hailey 92.37 46 P P 04 30 53.6 +1.7
baz=260,SNR=77
HLID S S 04 41 55.9 +2.5
baz=260
SZCU Shurtz Canyon 92.39 53 IAmb IAmb 04 31 11.8
comp=Z,83nm,1.1s
KBK Karagaybulak 92.63 313 P P 04 30 53.0 -0.2
SNR=6.0
LPIG La Paz 92.73 66 LR LR 05 06 26.5
comp=Z,10µm,19.1s,baz=266,slow=32
CHMS Chumysh 92.83 313 P P 04 30 53.6 -0.3
SNR=8.9
UCH Uchtor 92.88 312 P P 04 30 55.2 +0.5
SNR=21
BGU Big Grassy Mou 92.95 49 IAmb IAmb 04 31 20.8
comp=Z,67nm,1.2s
AAK Ala-Archa 92.96 313 P P 04 30 54.6 0.0
SNR=5.9
AAK Ala-Archa 92.96 313 P P 04 30 54.2 -0.5
AAK Ala-Archa 92.96 313 P P 04 30 54.2 -0.5
AAK pmax pmax
comp=Z,46nm,1.5s
SGDS Sogindy 92.99 313 eP P 04 30 53.7 -1.0
SGDS pmax pmax
comp=Z,70nm,2.4s
SGDS Sogindy 92.99 313 eP P 04 30 53.7 -1.0
comp=Z,70nm,2.4s,baz=313
SLBS Sierra La Lagu 93.00 67 P P 04 30 55.5 +0.4
C36M Paulatuk 93.00 20 IAmb IAmb 04 31 05.7
comp=Z,39nm,0.9s
C36M Paulatuk 93.00 20 P P 04 30 54.1 +0.1
baz=253
C36M S S 04 41 58.2 +0.7
baz=253
DUG Dugway, Tooele 93.00 50 P P 04 30 56.2 +1.3
baz=261,SNR=9.9
DUG S S 04 41 55.6 -3.6
baz=261
TCRU Three Creeks R 93.05 52 IAmb IAmb 04 31 25.2
comp=Z,54nm,1.0s
USP Ospenovka 93.06 313 P P 04 30 54.6 -0.3
SNR=18
BELA Belgrano 2 93.11 177 P P 04 30 53.1 -1.4
BELA IAmb IAmb 04 31 32.9
comp=Z,68nm,1.3s
MTPU Mount Pierson 93.16 52 IAmb IAmb 04 31 23.1
comp=Z,126nm,1.5s
MSO Missoula 93.23 43 P P 04 30 55.9 +0.2
baz=261
A36M Sachs Harbour 93.41 17 IAmb IAmb 04 31 17.3
comp=Z,49nm,0.9s
A36M Sachs Harbour 93.41 17 P P 04 30 56.5 +0.7
baz=252
A36M S S 04 42 02.0 +0.9
baz=252
WUAZ Wupatki 93.44 55 IAmb IAmb 04 31 29.5
comp=Z,156nm,1.9s
WUAZ Wupatki 93.44 55 P P 04 30 58.8 +1.7
baz=262,SNR=6.3
AML Almayashu 93.47 312 P P 04 30 58.1 +0.8
SNR=15
TUC Tucson 93.47 58 P P 04 30 58.0 +0.8
TUC IAmb IAmb 04 31 10.2
comp=Z,102nm,2.1s
TUC Tucson 93.47 58 P P 04 30 58.0 +0.8
TUC pmax pmax
comp=Z,102nm,2.1s
TUC Tucson 93.47 58 P P 04 30 59.0 +1.8
baz=262
EKS2 Erkin-Say 93.49 312 P P 04 30 57.6 +0.6
SNR=11
WALA Waterton Lakes 93.61 41 IAmb IAmb 04 31 16.4
comp=Z,66nm,1.5s
BTLS Baital 93.65 315 eP P 04 30 56.9 -0.6
BTLS pmax pmax
comp=Z,87nm,2.2s
BTLS Baital 93.65 315 eP P 04 30 57.0 -0.6
comp=Z,87nm,2.2s,baz=315
Q16A Castle Valley 94.08 51 IAmb IAmb 04 31 14.5
comp=Z,161nm,1.8s
TMUT Trail Mountain 94.10 51 IAmb IAmb 04 31 26.2
comp=Z,161nm,2.0s
X18A Snowflake 94.47 56 IAmb IAmb 04 31 16.0
comp=Z,114nm,2.0s
P17A Butcher Ranch, 94.48 51 IAmb IAmb 04 31 16.0
comp=Z,139nm,1.8s
SRU San Rafael Swe 94.60 51 IAmb IAmb 04 31 14.9
comp=Z,90nm,1.8s
BOZ Bozeman (W) 94.64 45 IAmb IAmb 04 31 16.1
comp=Z,181nm,2.0s
BOZ Bozeman (W) 94.64 45 P P 04 31 03.4 +1.1
baz=262,SNR=22
AHID Auburn Hatcher 94.64 48 IAmb IAmb 04 31 26.7
comp=Z,60nm,1.6s
W18A Petrified Fore 94.72 55 P P 04 31 04.4 +1.4
baz=263
W18A S S 04 42 18.8 +4.3
baz=263
TPAW Teton Pass 94.85 47 IAmb IAmb 04 31 48.5
comp=Z,115nm,1.7s
YHL Hebgen Lake 94.86 46 P P 04 31 04.0 +0.5
P18A Preston Nutter 94.88 51 IAmb IAmb 04 31 37.0
comp=Z,78nm,1.5s
SNOW Snow King Moun 94.98 47 IAmb IAmb 04 31 18.1
comp=Z,161nm,1.9s
YFT Old Faithful 95.05 46 IAmb IAmb 04 31 47.0
comp=Z,67nm,1.4s
YPP Pitchstone Pla 95.05 46 IAmb IAmb 04 31 38.3
comp=Z,71nm,1.7s
FLWY Flagg Ranch 95.10 46 IAmb IAmb 04 31 29.5
comp=Z,81nm,1.6s
LOHW Long Hollow 95.11 47 IAmb IAmb 04 31 18.4
comp=Z,131nm,1.9s
H17A Grant Village 95.23 46 P P 04 31 07.4 +2.2
baz=263,SNR=9.2
BRZS Berezniki 95.25 320 eP P 04 31 03.4 -1.4
BRZS pmax pmax
comp=Z,74nm,2.8s
BRZS Berezniki 95.25 320 eP P 04 31 03.5 -1.4
comp=Z,74nm,2.8s,baz=320
YKA Yellowknife Ar 95.29 28 P P 04 31 04.5 -0.1
comp=Z,8.6nm,0.8s,baz=256,slow=4.5,SNR=74
YKA PKKPbc PKKPbc 04 47 56.4 -4.0
comp=Z,1.2nm,0.8s,baz=73,slow=2.9,SNR=7.3
YKA LR LR 05 08 04.9
comp=Z,8µm,20.3s,baz=267,slow=32
comp=Z,8.6nm,0.8s
BTK Batken 95.35 310 P P 04 31 03.8 -1.8
BTK Batken 95.35 310 P P 04 31 03.8 -1.8
RDMU Red Mountain 95.51 50 IAmb IAmb 04 31 20.3
comp=Z,139nm,1.8s
GAR Garm 95.61 308 IAmb IAmb 04 31 08.1
comp=Z,144nm,1.6s
BW06 Boulder Array 95.77 48 IAmb IAmb 04 31 20.7
comp=Z,49nm,1.3s
BW06 Boulder Array 95.77 48 P P 04 31 08.2 +0.6
baz=264
BW06 S S 04 42 23.2 -0.2
baz=264
PD31 Pinedale Array 95.77 48 P P 04 31 08.2 +0.6
PDAR Pinedale Array 95.77 48 P P 04 31 08.2 +0.6
comp=Z,11nm,1.0s,baz=249,slow=2.9,SNR=37
PDAR PP PP 04 35 01.9 +2.1
comp=Z,2.0nm,0.9s,baz=254,slow=6.2,SNR=2.7
PDAR PKPPKP P'P'df 04 56 11.1 +0.9
comp=Z,1.2nm,0.9s,baz=90,slow=1.5,SNR=8.4
PDAR LR LR 05 09 32.3
comp=Z,6µm,19.7s,baz=310,slow=32
comp=Z,11nm,1.0s
KK31 Karatay Array 95.92 313 P P 04 31 06.8 -1.3
KK31 Karatay Array 95.92 313 i P P 04 31 06.7 -1.3
KKAR Karatay Array 95.92 313 P P 04 31 06.4 -1.7
KKAR Karatay Array 95.92 313 P P 04 31 06.4 -1.7
MVCO Mesa Verde 95.96 53 P P 04 31 10.0 +1.4
baz=264
MVCO S S 04 42 28.6 +3.3
baz=264
121A Cookes Peak, D 96.02 58 P P 04 31 09.4 +0.5
121A Cookes Peak, D 96.02 58 P P 04 31 10.6 +1.6
baz=264
121A Cookes Peak, D 96.02 58 P P 04 31 09.5 +0.5
baz=264
121A S S 04 42 33.1 +7.2
baz=264
KBL Kabul 96.12 304 P P 04 31 07.6 -1.8
KBL Kabul 96.12 304 P P 04 31 07.6 -1.8
KBL pmax pmax
comp=Z,23nm,1.1s
IUG luzhnay 96.17 312 eP P 04 31 08.9 -0.4
IUG luzhnay 96.17 312 eP P 04 31 09.0 -0.4
baz=312
RLMT Red Lodge 96.24 45 P P 04 31 11.1 +1.4
baz=264
RLMT S S 04 42 29.5 +2.2
baz=264
SMAI San Martin Ant 96.30 164 P P 04 31 09.2 0.0
CHGR Chuyangaron 96.47 308 P P 04 31 09.9 -0.8
CHGR Chuyangaron 96.47 308 P P 04 31 09.9 -0.8
CHGR pmax pmax
comp=Z,739nm,2.8s
O20A White River Ci 96.47 50 P P 04 31 12.0 +1.2
baz=264
Y22A Socorro 96.85 57 P P 04 31 14.2 +1.5
baz=264
Y22D IRIS PASSCAL I 96.90 57 P P 04 31 13.8 +1.0
baz=264
BRVK Borovoye 97.07 323 P P 04 31 12.0 -0.9
BRVK IAmb IAmb 04 31 13.5
comp=Z,48nm,1.1s
BRVK Borovoye 97.07 323 c iP P 04 31 11.9 -1.1
BRVK pmax pmax
comp=Z,51nm,1.1s
BRVK MLR MLR
comp=Z,4µm,21.0s
S22A 4UR Ranch, Cre 97.33 53 P Pdif 04 31 16.4 +1.4
baz=265
ANMO Albuquerque 97.37 56 PP PP 04 35 12.9 +0.6
comp=Z,0.9nm,1.0s,baz=260,slow=9.7,SNR=1.6
ANMO LR LR 05 07 31.3
comp=Z,7µm,21.0s,baz=289,slow=31
ANMO Albuquerque 97.37 56 P Pdif 04 31 15.4 +0.3
ANMO Albuquerque 97.37 56 ⇓ eP Pdif 04 31 15.7 +0.6
ANMO pmax pmax
comp=Z,21nm,2.1s
ANMO Albuquerque 97.37 56 P Pdif 04 31 16.3 +1.2
ANMO Albuquerque 97.37 56 P Pdif 04 31 15.4 +0.3
baz=265
RWWY Rawlins 97.40 49 IAmb IAmb 04 31 25.9
comp=Z,46nm,1.2s
NVL N'lazarevskaya 97.92 190 eP Pdif 04 31 23.6 +7.1
NVL pmax pmax
comp=Z,20nm,1.2s
NVL MLR MLR
comp=Z,8µm,17.0s
MNTX Cornudas Mount 97.96 59 P Pdif 04 31 18.5 +0.9
baz=265
MNTX Cornudas Mount 97.96 59 P Pdif 04 31 17.7 +0.1
baz=265
K22A Casper 97.99 48 IAmb IAmb 04 31 43.1
comp=Z,92nm,1.8s
K22A Casper 97.99 48 P Pdif 04 31 18.7 +1.1
baz=266
K22A Casper 97.99 48 P Pdif 04 31 18.5 +0.9
baz=266
TROLL Troll, Antarti 98.14 187 P P 04 31 15.8 -1.9
TROLL Troll, Antarti 98.14 187 pP pP 04 31 30.9 +3.1
N23A Red Feather La 98.28 50 IAmb IAmb 04 31 32.0
comp=Z,93nm,1.8s
N23A Red Feather La 98.28 50 P Pdif 04 31 19.7 +0.6
baz=266
SDCO Great Sand Dun 98.38 53 Pdiff Pdif 04 31 20.3 +0.6
baz=266
ISCO Idaho Springs 98.45 51 P Pdif 04 31 21.5 +1.5
baz=266
ISCO Idaho Springs 98.45 51 Pdiff Pdif 04 31 21.3 +1.3
baz=266
LAO LASA Array 98.49 44 IAmb IAmb 04 31 31.1
comp=Z,67nm,1.2s
LAO LASA Array 98.49 44 P Pdif 04 31 21.0 +1.4
baz=266
LAO LASA Array 98.49 44 Pdiff Pdif 04 31 20.5 +0.9
baz=266
Q24A Divide 98.75 52 Pdiff Pdif 04 31 22.7 +1.4
baz=266
SNAA Sanae 99.02 185 Pdiff Pdif 04 31 20.4 -1.1
SNAA Sanae 99.02 185 P Pdif 04 31 21.8 +0.3
comp=Z,1.7nm,0.4s,baz=211,slow=7.9,SNR=26
SNAA PKKPbc PKKPbc 04 47 49.9 -0.3
comp=Z,4.6nm,1.3s,baz=25,slow=7.2,SNR=3.3
SNAA LR LR 05 12 16.6
comp=Z,9µm,21.4s,baz=158,slow=33
comp=Z,1.7nm,0.4s
SNAA Sanae 99.02 185 Pdif 04 31 20.2 -1.3
SNAA Sanae 99.02 185 ⇑ eP Pdif 04 31 19.0 -2.5
SNAA pmax pmax
comp=Z,18nm,1.8s
T25A Trinidad 99.20 54 Pdiff Pdif 04 31 23.9 +0.7
baz=266
TX31 Lajitas Ar. Si 99.23 62 P Pdif 04 31 24.2 +0.8
baz=265
TXAR Lajitas Array 99.23 62 P Pdif 04 31 24.2 +0.9
comp=Z,1.0nm,0.8s,baz=241,slow=4.1,SNR=11
TXAR PP PP 04 35 26.3 -0.2

comp=Z,0.9nm,1.0s,baz=256,slow=5.5,SNR=1.5
TXAR PKKPbc **PKKPbc** **04 47 48.9 +0.4**
comp=Z,0.7nm,0.6s,baz=104,slow=3.7,SNR=7.6
TXAR LR LR 05 08 16.4
comp=Z,7µm,21.3s,baz=262,slow=30
comp=Z,1.0nm,0.8s
TXAR Lajitas Array 99.23 62 P **Pdif** **04 31 24.0 +0.7**
PMSA Palmer Station 99.52 162 LR LR 05 10 40.7
comp=Z,4µm,19.2s,baz=232,slow=32
PMSA Palmer Station 99.52 162 *eP* **Pdif** **04 31 24.0 +0.3**
RSSD Black Hills 99.89 47 Pdif **Pdif** **04 31 26.4 +0.3**
RSSD Black Hills 99.89 47 P **Pdif** **04 31 26.4 +0.3**
RSSD pmax pmax
comp=Z,29nm,1.3s
RSSD Black Hills 99.89 47 P **Pdif** **04 31 26.9 +0.8**
baz=268
RSSD Black Hills 99.89 47 Pdiff **Pdif** **04 31 27.2 +1.1**
baz=268
VNA3 Neumayer Olymp 99.93 183 PKiKP **PKiKP** **04 35 51.6 -1.8**
VNA3 Neumayer Olymp 99.93 183 Pdiff **Pdif** **04 31 23.9 -1.7**
VNA3 Neumayer Olymp 99.93 183 pPdiff sP 04 31 39.3 0.0
DGMT Dagmar 99.94 42 Pdiff **Pdif** **04 31 27.4 +1.4**
baz=268
VNA2 Neumayer--Watz 100.11 184 PKiKP **PKiKP** **04 35 54.3 +0.5**
VNA2 Neumayer--Watz 100.11 184 Pdiff **Pdif** **04 31 25.3 -1.1**
VNA2 Neumayer--Watz 100.11 184 pPdiff pPdif 04 31 41.5 +5.1
VNA2 Neumayer--Watz 100.11 184 sPdiff sP 04 31 45.4 +5.3
MSTX Muleshoe 100.33 57 Pdiff **Pdif** **04 31 28.5 +0.3**
baz=266
VNA1 Neumayer--Stat 100.44 184 Pdiff **Pdif** **04 31 25.9 -1.8**
KSCO Kaye Shedlock' 100.72 52 Pdiff **Pdif** **04 31 30.8 +0.9**
baz=268
AMTX Amarillo 101.28 56 Pdiff **Pdif** **04 31 32.9 +0.5**
baz=267
HRA Herat 101.71 303 Pdif **Pdif** **04 31 33.5 -1.0**
SVE Sverdlovsk 102.68 326 *eP* **Pdif** **04 31 37.3 -0.6**
ABTX Abilene, Hawle 102.88 59 Pdif **Pdif** **04 31 38.9 -0.5**
833A Chaparral WMA, 102.90 63 Pdiff **Pdif** **04 31 39.9 +0.3**
baz=267
AB31 Akbulak array 103.48 319 *i* P **Pdif** **04 31 39.2 -2.5**
ABKAR Akbulak array 103.48 319 Pdif **Pdif** **04 31 39.8 -1.9**
WMOK Wichita Mounta 103.66 56 Pdiff **Pdif** **04 31 44.5 +1.6**
baz=269
ARU Arti 103.86 326 Pdiff **Pdif** **04 31 40.9 -2.2**
comp=Z,1.8nm,0.3s,baz=75,slow=4.8,SNR=1.4
ARU PKKPbc **PKKPbc** **04 47 33.8 -2.0**
comp=Z,8.1nm,0.6s,baz=268,slow=2.4,SNR=11
ARU Arti 103.86 326 Pdif **Pdif** **04 31 41.7 -1.5**
ARU Arti 103.86 326 *c iP* **Pdif** **04 31 42.3 -0.9**
ARU 04 35 56.9
ARU S **SKSac** **04 42 17.6 -3.0**
ARU pmax pmax
comp=Z,22nm,1.4s
ARU MLR MLR
comp=Z,6µm,21.0s
AKTO Aktyubinsk 104.67 320 Pdiff **Pdif** **04 31 45.2 -1.7**
comp=Z,3.4nm,1.0s,baz=100,slow=4.2,SNR=2.3
AKTO PKiKP **PKiKP** **04 36 00.8 -1.8**
comp=Z,3.8nm,1.0s,baz=22,slow=1.8,SNR=3.7
AKTO PKKPbc **PKKPbc** **04 47 31.5 -1.8**
comp=Z,4.1nm,0.9s,baz=231,slow=3.0,SNR=9.3
AKTO PKPPKP **P'P'df** **04 55 53.1 +0.7**
comp=Z,0.9nm,0.6s,baz=5.2,slow=20,SNR=4.3
GYA0B ALIBECK ARRAY 105.11 307 Pdif **Pdif** **04 31 48.8 -0.4**
ECSD EROS Data Cent 105.25 47 PKiKP **PKiKP** **04 36 02.6 -1.2**
baz=272
ULM Lac du Bonnet 105.34 40 PKiKP **PKiKP** **04 36 02.1 -1.7**
comp=Z,3.3nm,0.7s,baz=282,slow=4.2,SNR=3.5
S39A Bolivar 108.03 53 P **PKiKP** **04 36 09.3 +0.1**
baz=273
SPITS Spitsbergen Ar 108.23 353 PKKPbc PKKPbc 04 47 19.4 -3.5
comp=Z,1.9nm,0.5s,baz=166,slow=5.2,SNR=14
KIRV Kirov 108.37 329 Pdiff **Pdif** **04 32 02.7 -0.4**
comp=Z,5.4nm,0.4s,baz=108,slow=3.2,SNR=5.2
KIRV PKKPbc **PKKPbc** **04 47 19.3 -2.6**
comp=Z,13nm,0.6s,baz=231,slow=5.7,SNR=5.5
U40A Yellville 108.47 55 P **PKiKP** **04 36 09.9 -0.1**
baz=273
U40A P **PKiKP** **04 36 09.9 -0.1**
baz=273
U40A Yellville 108.47 55 PKiKP **PKiKP** **04 36 08.9 -1.2**
baz=273
OPO Ambohidratompo 108.92 247 PKiKP **PKiKP** **04 36 10.8 -0.8**
comp=Z,5.5nm,0.9s,baz=286,slow=9.1,SNR=3.6
W41B Gary Mavity, V 109.02 56 PKiKP **PKiKP** **04 36 09.5 -1.5**
baz=273
CCM Cathedral Cave 109.65 53 PKiKP **PKiKP** **04 36 11.3 -0.8**
baz=274
JFWS Jewell Farm 109.94 48 PKiKP **PKiKP** **04 36 11.5 -1.1**
baz=277
PBMO Poplar Bluff 110.39 54 P **PKiKP** **04 36 13.2 -0.4**
baz=274
BELG Belogornoye 110.80 323 Pdiff **Pdif** **04 32 13.1 -1.0**
comp=Z,7.5nm,0.3s,baz=45,slow=2.9,SNR=5.2
BELG PKiKP **PKiKP** **04 36 14.2 +0.3**
comp=Z,16nm,0.7s,baz=39,slow=2.4,SNR=7.0
BELG PKKPbc **PKKPbc** **04 47 12.3 -1.6**
comp=Z,19nm,1.0s,baz=63,slow=2.0,SNR=7.9
BELG Belogornoye 110.80 323 *d* iPKiKP **PKiKP** **04 36 14.1 +0.3**
BELG MLR MLR
comp=Z,891nm,23.0s
OXF Oxford 111.39 56 PKiKP **PKiKP** **04 36 14.4 -1.2**
baz=274
APA Apatity 111.61 341 ⇓ *i* PKiKP **PKiKP** **04 36 17.9 +2.9**
APA pmax pmax
comp=Z,9.0nm,1.0s
APA MLR MLR
comp=Z,10µm,22.0s
PLCA Paso Flores 111.94 140 PKiKP **PKiKP** **04 36 16.2 -0.4**
comp=Z,2.9nm,0.8s,baz=307,slow=6.7,SNR=3.9
PLCA PKKPab **PKKPab** **04 47 17.6 -1.6**
comp=Z,3.5nm,0.8s,baz=55,slow=1.5,SNR=5.1
PLCA Paso Flores 111.94 140 **PKiKP** **04 36 15.5 -1.1**
DAG Danmarks Havn 111.98 360 *i* P **PKiKP** **04 36 12.0 -3.5**
DAG IAMs_20 IAMs_20 05 28 23.0
comp=Z,3µm,20.9s
KLMR Klimovskoe 112.39 333 *eP* **Pdif** **04 32 24.2 +3.2**
KLMR *i* 04 36 15.2
KLMR pmax pmax
comp=Z,17nm,1.5s
KLMR Klimovskoe 112.39 333 *eP* **Pdif** **04 32 24.2 +3.2**
KLMR AMP 04 32 25.4
comp=Z,17nm,1.5s
KLMR *e* PKiKP **PKiKP** **04 36 15.2 -1.4**
KLMR LQ LQ 05 13 40.1
KLMR LQ LQ 05 13 40.1
KLMR LR LR 05 24 07.5
KLMR AMP 05 26 55.0
comp=Z,4µm,22.5s
WVT Waverly 112.54 55 PKiKP **PKiKP** **04 36 17.2 -0.5**
baz=276
SFIN Lafayette 112.61 50 PKiKP **PKiKP** **04 36 17.2 -0.5**
baz=278
MAK Makhachkala 112.74 313 *eP* **Pdif** **04 32 21.4 -1.6**
MAK *i* 04 36 17.6
MAK *e* 04 37 05.7
MAK *e* 04 42 59.1
MAK *e* PS **PS** **04 46 33.4 -7.3**
MAK *e* SS SS 04 52 43.4 -2.3
MAK *e* SSS SSS 04 56 57.9
MAK pmax pmax
comp=Z,429nm,1.2s
ARCES ARCESS Array B 112.78 344 PKiKP **PKiKP** **04 36 16.6 -0.6**
comp=Z,1.3nm,0.4s,baz=60,slow=1.4,SNR=31
ARCES PKKPbc **PKKPbc** **04 47 03.9 -4.0**
comp=Z,6.8nm,0.5s,baz=248,slow=1.8,SNR=48
LRAL Lakeview Retre 113.51 58 PKiKP **PKiKP** **04 36 18.9 -0.7**
baz=275
GLMI Grayling 113.66 45 PKiKP **PKiKP** **04 36 19.3 -0.3**
baz=282
J47A Sunmer 113.82 47 P **PKiKP** **04 36 19.8 -0.2**
baz=281
J47A P **PKiKP** **04 36 19.8 -0.2**
baz=281
GROC Groznyy 113.93 313 *i* PKiKP **PKiKP** **04 36 20.5 +0.4**
GROC *e* 04 37 14.0
GROC *e* 04 43 25.1
GROC pmax pmax
comp=Z,31nm,1.0s
O48B Farmland 114.09 50 PKiKP PKPdf 04 36 20.4 -0.1
baz=279
U49A Red Boiling Sp 114.14 54 P PKPdf 04 36 20.3 -0.4
baz=277
DBG Daneborg 114.46 0 *i* P **PKiKP** **04 36 19.0 -1.2**
DBG IAMs_20 IAMs_20 05 22 53.4
comp=Z,6µm,21.4s

P49A Miami Univ. Ec 114.54 51 P PKPdf 04 36 20.8 -0.7
baz=279
P49A Miami Univ. Ec 114.54 51 PKiKP PKPdf 04 36 20.7 -0.7
baz=279
VRH Novokhopyorsk 114.65 323 *i* PKIKP **PKiKP** **04 36 19.6 -1.6**
VRH pmax pmax
comp=Z,20nm,1.4s
VRH MLR MLR
comp=Z,4µm,23.0s
N49A Columbus Grove 114.71 49 P PKPdf 04 36 21.7 0.0
baz=280
N49A P PKPdf 04 36 21.7 0.0
baz=280
O49A Covington 114.72 50 P **PKiKP** **04 36 21.9 +0.2**
baz=280
O49A P **PKiKP** **04 36 21.9 +0.2**
baz=280
T50A Nancy 114.82 53 P PKPdf 04 36 21.1 -0.9
baz=278
T50A P PKPdf 04 36 21.1 -0.9
baz=278
SUMG Summit 115.17 6 *i* P **PKiKP** **04 36 22.0 -0.2**
GNI Garni 115.26 310 PKiKP **PKiKP** **04 36 22.8 -0.2**
comp=Z,4.2nm,0.4s,baz=186,slow=5.0,SNR=4.9
GNI Garni 115.26 310 ⇑ *i* PKIKP **PKPdf** **04 36 23.3 +0.3**
MOS Moscow 115.36 328 *i* PKIKP **PKiKP** **04 36 21.2 -1.2**
MOS *e* PS **PKKPbc** **04 46 55.7 -3.0**
ZEI Tsey 115.37 313 *i* PKIKP **PKiKP** **04 36 23.0 -0.2**
ZEI pmax pmax
comp=Z,9.0nm,0.9s
GOF Gofitskoye 115.47 316 ⇑ *e* PKiKP PKiKP 04 36 09.7 -13
S51A Beattyville 115.71 52 P **PKPdf** **04 36 23.2 -0.5**
baz=279
S51A P **PKPdf** **04 36 23.2 -0.5**
baz=279
ACSO Alum Creek Sta 115.74 50 PKiKP **PKPdf** **04 36 23.4 -0.3**
baz=281
W52A Murphy 115.82 55 **PKPdf** **04 36 23.7 -0.4**
LPSR Galich'ya Gora 115.83 325 *i* PKIKP **PKiKP** **04 36 21.6 -1.9**
LPSR pmax pmax
comp=Z,30nm,1.2s
TKL Tuckaleechee C 115.86 55 PKP **PKPdf** **04 36 23.6 -0.5**
comp=Z,4.9nm,0.7s,baz=139,slow=2.9,SNR=8.9
TKL Tuckaleechee C 115.86 55 P **PKPdf** **04 36 24.1 0.0**
baz=278
KBZ Khabaz 115.88 314 PKP **PKiKP** **04 36 24.8 +0.9**
comp=Z,3.5nm,0.7s,baz=115,slow=3.6,SNR=6.3
KBZ PKKPbc **PKKPbc** **04 46 55.9 -0.6**
comp=Z,3.5nm,0.9s,baz=244,slow=3.5,SNR=4.5
KBZ SKKP 04 50 56.1
comp=Z,1.0nm,0.5s,baz=169,slow=6.5,SNR=3.9
KBZ Khabaz 115.88 314 ⇑ *i* PKIKP **PKPdf** **04 36 23.5 -0.3**
TZTN Tazewell 115.92 54 PKiKP **PKPdf** **04 36 23.8 -0.4**
baz=279
AKH Akhalkalaki 115.95 312 ⇑ P **PKiKP** **04 36 24.6 +0.3**
KIV Kislovodsk 115.98 315 *i* PKIKP **PKiKP** **04 36 24.7 +0.5**
KIV *e* 04 37 29.9
KIV *e* PS **PS** **04 47 10.9 +0.3**
KIV *e* SS SS 04 53 28.6 +0.1
KIV pmax pmax
comp=Z,10.0nm,1.0s
V52A Sevierville 115.98 54 P **PKPdf** **04 36 23.5 -0.8**
baz=278
VORR Voronezh 115.99 324 ⇓ *i* PKIKP **PKPdf** **04 36 24.6 +0.8**
VORR pmax pmax
comp=Z,33nm,1.5s
OBN Obninsk 116.16 328 PKP **PKPdf** **04 36 23.9 -0.1**
comp=Z,3.5nm,0.4s,baz=194,slow=3.8,SNR=4.9
OBN PKKPbc **PKKPbc** **04 46 54.2 -1.6**
comp=Z,3.7nm,0.4s,baz=301,slow=22,SNR=3.4
OBN Obninsk 116.16 328 *i* PKIKP **PKPdf** **04 36 23.9 -0.1**
OBN *e* 04 36 35.7
OBN *e* 04 37 27.7
OBN *e* 04 43 02.6
OBN pmax pmax
comp=Z,10.0nm,0.6s
VSR Storozhevoye 116.17 323 *i* PKIKP **PKPdf** **04 36 22.8 -1.4**
VSR pmax pmax
comp=Z,30nm,1.3s
VSR MLR MLR
comp=Z,5µm,27.0s
VORD Divnogorie 116.18 323 *e* PKIKP **PKPdf** **04 36 22.4 -1.8**
VORD pmax pmax
comp=Z,10.0nm,0.7s
RAYN Ar Rayn 116.36 292 **PKPdf** **04 36 24.6 -0.8**
RAYN Ar Rayn 116.36 292 PKIKP **PKPdf** **04 36 24.6 -0.8**
GOGA Godfrey 116.41 57 PKiKP **PKPdf** **04 36 24.5 -0.7**
baz=277
P52A Corning 116.49 50 PKiKP **PKPdf** **04 36 24.3 -0.9**
baz=281
Q52A Bidwell 116.52 51 P **PKPdf** **04 36 24.5 -0.8**
baz=281
Q52A P **PKPdf** **04 36 24.5 -0.8**
baz=281
TIGA Tifton 116.53 59 PKiKP **PKPdf** **04 36 24.4 -1.0**
baz=276
V53A Saluda 116.64 55 P **PKPdf** **04 36 25.6 0.0**
baz=279
V53A P **PKPdf** **04 36 25.6 0.0**
baz=279
O53A New Philadelph 117.06 49 PKiKP **PKPdf** **04 36 25.5 -0.7**
baz=282
P53A Whipple 117.08 50 P **PKPdf** **04 36 26.0 -0.3**
baz=282
P53A P **PKPdf** **04 36 26.0 -0.3**
baz=282
M53A WI Miller and 117.20 48 PKiKP **PKPdf** **04 36 25.3 -1.2**
baz=283
ERPA Erie 117.54 47 PKiKP **PKPdf** **04 36 26.4 -0.7**
baz=284
PAULI Pauline 117.57 55 P **PKPdf** **04 36 27.4 0.0**
baz=279
Q54A Coxs Mills 117.61 51 P **PKPdf** **04 36 27.0 -0.3**
baz=282
Q54A P **PKPdf** **04 36 27.0 -0.3**
baz=282
GURO Guroymak-BITLI 117.63 309 PKPdf **PKiKP** **04 36 27.9 +0.2**
656A Willston 117.65 61 P **PKPdf** **04 36 27.4 -0.3**
baz=276
O54A Avella 117.70 49 P **PKPdf** **04 36 27.1 -0.4**
baz=283
O54A P **PKPdf** **04 36 27.1 -0.4**
baz=283
FINES FINESS Array B 117.71 337 PKP **PKPdf** **04 36 26.2 -0.6**
comp=Z,4.8nm,0.7s,baz=106,slow=3.6,SNR=23
FINES PKKPbc **PKKPbc** **04 46 48.5 -2.0**
comp=Z,1.6nm,0.6s,baz=187,slow=2.7,SNR=8.8
V55A Taylorsville 117.89 54 P **PKPdf** **04 36 27.7 -0.3**
baz=280
V55A P **PKPdf** **04 36 27.7 -0.3**
baz=280
KMSC Kings Mountain 117.91 55 P **PKiKP** **04 36 28.1 +0.1**
baz=279
KMSC Kings Mountain 117.91 55 PKiKP **PKPdf** **04 36 27.7 -0.3**
baz=279
BLA Blacksburg 118.28 52 P **PKPdf** **04 36 28.5 -0.2**
baz=281
BLA Blacksburg 118.28 52 PKiKP **PKPdf** **04 36 28.3 -0.5**
baz=281
ICESG Greenland Ices 118.28 8 *i* P **PKPdf** **04 36 27.7 -0.5**
R55A Marlinton 118.30 51 P **PKPdf** **04 36 28.6 -0.2**
baz=282
R55A P **PKPdf** **04 36 28.6 -0.2**
baz=282
M55A Ridgway 118.59 47 P **PKiKP** **04 36 29.4 +0.2**
baz=285
M55A P **PKiKP** **04 36 29.4 +0.2**
baz=285
DWPF Disney Wildern 118.74 63 PKiKP **PKPdf** **04 36 29.4 -0.4**
baz=276
MARD Mardin 118.84 308 **PKPdf** **04 36 29.8 -0.1**
W57A Gilead 118.99 55 P **PKPdf** **04 36 30.1 0.0**
baz=280
W57A P **PKPdf** **04 36 30.1 0.0**
baz=280
ATAH Atahualpa 119.17 103 PKP **PKiKP** **04 36 31.8 +0.1**
comp=Z,5.2nm,0.6s,baz=170,slow=3.7,SNR=5.2
VSU Vasula 119.21 334 ⇑ *i* PKIKP **PKPdf** **04 36 29.3 -0.5**
VSU MLR MLR
comp=Z,17µm,21.0s
VSU Vasula 119.21 334 *eP* **PKiKP** **04 36 30.2 +0.3**
T57A Hurt 119.23 52 P **PKPdf** **04 36 30.1 -0.4**
baz=282
T57A P **PKPdf** **04 36 30.1 -0.4**
baz=282
ANN Anapa 119.37 317 *i* PKIKP **PKPdf** **04 36 27.1 -3.4**
ANN *e* 04 36 41.8

ANN *e* 04 43 16.4
ANN pmax pmax
comp=Z,31nm,0.8s
SSPA Standing Stone 119.44 48 PKPdf **PKPdf** **04 36 30.1 -0.7**
SSPA Standing Stone 119.44 48 P **PKPdf** **04 36 30.3 -0.5**
baz=285
SSPA Standing Stone 119.44 48 PKiKP **PKPdf** **04 36 30.2 -0.7**
baz=285
DY2G Dye2 119.49 12 *i* P **PKPdf** **04 36 28.2 -2.2**
DY2G IAMs_20 IAMs_20 05 26 34.5
comp=Z,5µm,20.1s
RAF Rauma 119.59 338 *eP* **PKiKP** **04 36 30.6 +0.1**
X58A Rowland 119.63 55 P **PKiKP** **04 36 31.6 +0.2**
baz=280
X58A P **PKiKP** **04 36 31.6 +0.2**
baz=280
P57A Homestead Farm 119.63 49 P **PKPdf** **04 36 31.1 -0.1**
baz=284
P57A P **PKPdf** **04 36 31.1 -0.1**
baz=284
M57A Sunshine Farm, 119.81 47 P **PKPdf** **04 36 30.9 -0.7**
baz=286
M57A P **PKPdf** **04 36 30.9 -0.7**
baz=286
WCNY West Carthage 120.08 44 P **PKiKP** **04 36 32.1 +0.1**
baz=288
N58A Sunbury 120.25 48 P **PKPdf** **04 36 31.4 -0.9**
baz=286
N58A P **PKPdf** **04 36 31.4 -0.9**
baz=286
MTSE Matsula 120.29 336 *eP* **PKPdf** **04 36 31.7 -0.2**
BINY Binghamton 120.39 46 P **PKPdf** **04 36 32.1 -0.5**
baz=287
BINY Binghamton 120.39 46 PKiKP **PKPdf** **04 36 32.3 -0.4**
baz=287
CBN Corbin Frederi 120.42 51 PKiKP **PKPdf** **04 36 32.3 -0.4**
baz=284
J58A Remsen 120.53 44 P **PKPdf** **04 36 32.4 -0.5**
baz=288
J58A P **PKPdf** **04 36 32.4 -0.5**
baz=288
BMNY Brushton-Moira 120.58 43 P **PKPdf** **04 36 32.9 +0.1**
baz=290
LONY Lake Ozonia 120.60 43 PKiKP **PKPdf** **04 36 32.1 -0.8**
baz=290
OTAV Otavalo 120.64 95 *eP* **PKiKP** **04 36 34.7 +0.1**
CNNC Cliffs of the 120.67 54 PKiKP **PKPdf** **04 36 32.3 -1.0**
baz=282
SCHQ Schefferville 120.68 30 PKP **PKiKP** **04 36 33.1 +0.2**
comp=Z,4.6nm,0.8s,baz=63,slow=5.8,SNR=4.3
SCHQ PKKPbc **PKKPab** **04 46 37.9 -0.8**
comp=Z,1.6nm,0.6s,baz=149,slow=5.1,SNR=5.1
GO02 Mina Guanaco 120.69 126 PKPdf **PKPdf** **04 36 33.1 -1.0**
KSPA Keystone Colle 120.73 47 P **PKPdf** **04 36 33.3 0.0**
baz=287
AAL Aland 120.81 338 *eP* **PKPdf** **04 36 32.2 -0.6**
MNK Minsk 120.88 330 *i* P **Pdif** **04 33 05.4 +6.5**
MNK *i* 04 38 10.6
MNK *i* PPP PPP 04 40 44.5
MNK *i* SSS SSS 04 59 02.2
MNK pmax pmax
comp=Z,13nm,1.1s
MNK pmax pmax
comp=N,7.0nm,0.8s
MNK pmax pmax
comp=E,2.0nm,0.9s
MNK MLR MLR
comp=E,3µm,24.0s
MNK MLR MLR
comp=Z,11µm,21.0s
MNK MLR MLR
comp=N,15nm,17.0s
MNK Minsk 120.88 330 *i* P **Pdif** **04 33 05.4 +6.5**
comp=E,2.0nm,0.8s
MNK *i* P **Pdif** **04 33 05.4 +6.5**
comp=N,7.0nm,0.8s
MNK *i* P **Pdif** **04 33 05.4 +6.5**
comp=Z,13nm,1.1s,baz=58
MNK *i* PKP **pPKPdf** **04 36 41.8 -1.7**
MNK *i* pPKP **sPKPdf** **04 36 57.0 +10**
MNK *i* PP PP 04 38 10.7 +8.9
MNK *i* PPP PPP 04 40 44.6
MNK *i* SKS **SKSdf** **04 43 49.4 +6.7**
MNK *i* PS **PS** **04 48 02.6 +8.6**
MNK *i* SS **SS** **04 54 39.4 +8.6**
MNK *i* SSS SSS 04 59 02.2
MNK *i* LR LR 05 26 50.6
MNK *i* LRM MLR 05 29 01.6
comp=E,3µm,24.3s
MNK *i* LRM MLR 05 29 58.4
comp=Z,11µm,21.1s
MNK *i* LRM MLR 05 30 07.4
comp=N,15nm,17.2s
IDID Didziasalis 121.00 331 *eP* **PKiKP** **04 36 34.7 +1.2**
J59A Piesco 121.04 44 P **PKiKP** **04 36 34.0 0.0**
baz=289
J59A P **PKiKP** **04 36 34.0 0.0**
baz=289
NCB Newcomb 121.06 44 P **PKPdf** **04 36 33.5 -0.3**
baz=290
NACGM Naroch 121.20 331 ⇑ *e* PKP **PKPdf** **04 36 33.3 -0.5**
baz=57
IIGN Ignalina 121.22 331 *eP* **PKiKP** **04 36 35.2 +1.3**
SIM Simferopol' 121.54 318 *i* PKIKP **PKPdf** **04 36 34.1 -0.6**
SIM PPP PPP 04 40 43.0
SIM pmax pmax
comp=Z,32nm,1.1s
PB15 IPOC Station P 121.68 124 **PKPdf** **04 36 34.3 -1.6**
VSVD Vaisvydziai 121.91 333 *eP* **PKiKP** **04 36 36.3 +1.1**
PB07 IPOC Station P 122.00 122 **PKPdf** **04 36 35.6 -0.9**
AKASG Malin Array Be 122.11 326 PKP **PKPdf** **04 36 35.0 -0.6**
comp=Z,6.2nm,0.5s,baz=39,slow=2.3,SNR=46
AKASG PP **PP** **04 38 06.9 -3.4**
comp=Z,1.5nm,0.6s,baz=46,slow=5.1,SNR=5.1
AKASG PKKPbc **PKKPab** **04 46 32.5 0.0**
comp=Z,1.0nm,0.5s,baz=254,slow=4.5,SNR=11
AKBB Malin Array Si 122.11 326 *c iP* PKIKP **PKPdf** **04 36 34.9 -0.7**
PABE Paberze 122.18 332 *eP* **PKiKP** **04 36 36.0 +0.3**
PAL Palisades 122.23 47 PKiKP **PKPdf** **04 36 35.9 -0.2**
baz=288
LVC Limon Verde 122.42 124 PKP **PKPdf** **04 36 37.4 -0.1**
comp=Z,2.5nm,0.3s,baz=236,slow=2.0,SNR=4.6
LVC Limon Verde 122.42 124 *eP* **PKPdf** **04 36 37.4 -0.1**
LBNH Lisbon 122.52 43 PKiKP **PKPdf** **04 36 36.6 -0.1**
baz=292
L61B Northampton 122.64 45 PKiKP **PKPdf** **04 36 36.9 0.0**
baz=290
KMBO Kilima Mbogo 122.67 263 PKP **PKiKP** **04 36 38.7 +0.4**
comp=Z,9.0nm,0.9s,baz=49,slow=3.0,SNR=15
KMBO Kilima Mbogo 122.67 263 PKPdf **PKiKP** **04 36 38.9 +0.6**
KMBO Kilima Mbogo 122.67 263 *d* iPKIKP **PKiKP** **04 36 38.4 +0.1**
ASF Jabal al Asfar 122.99 303 PKP **PKiKP** **04 36 38.5 +0.2**
comp=Z,19nm,0.9s,baz=134,slow=0.8,SNR=21
ASF PKKPbc **PKKPbc** **04 46 30.1 0.0**
comp=Z,2.2nm,0.7s,baz=188,slow=4.3,SNR=3.8
HFS Hagfors 123.01 341 PKP **PKPdf** **04 36 36.3 -0.8**
comp=Z,5.9nm,0.6s,baz=90,slow=4.4,SNR=15
NB2 NORSAR Subarra 123.06 343 PKPdf **PKPdf** **04 36 36.4 -0.8**
baz=39,slow=1.9
NB2 NORSAR Subarra 123.06 343 PKPdf **PKPdf** **04 36 36.4 -0.8**
comp=Z,67nm,1.7s,baz=39,slow=1.9
NOA NORSAR Array B 123.06 343 PKP **PKPdf** **04 36 36.5 -0.7**
comp=Z,9.5nm,1.0s,baz=39,slow=2.0,SNR=14
BOSA Boshof 123.09 228 PKP **PKPdf** **04 36 38.0 -0.4**
comp=Z,20nm,0.5s,baz=137,slow=2.0,SNR=72
BOSA Boshof 123.09 228 PKPdf **PKPdf** **04 36 37.6 -0.8**
D62A Allapoint, All 123.22 38 PKPdf **PKPdf** **04 36 37.2 -0.7**
HRV Adam Dziewonsk 123.39 44 PKiKP **PKPdf** **04 36 36.8 -1.5**
baz=291
SUW Suwalki 123.44 331 *e* PKP **PKiKP** **04 36 38.5 +0.2**
SUW *e* L L 05 31 40.2
comp=Z,5µm,22.6s
SUW Suwalki 123.44 331 *eP* **PKiKP** **04 36 39.0 +0.7**
IVI Ivigtut 123.48 16 *i* P **PKPdf** **04 36 36.7 -1.2**
IVI IAMs_20 IAMs_20 05 23 21.3
comp=Z,7µm,23.4s
BR131 Keskin Array S 123.64 312 *c iP* PKIKP **PKPdf** **04 36 38.1 -1.0**
BRTR Keskin Array B 123.64 312 PKP **PKPdf** **04 36 38.9 -0.2**
comp=Z,8.4nm,0.8s,baz=131,slow=3.4,SNR=36
BRTR PKKPbc **PKKPbc** **04 46 28.4 +0.5**
comp=Z,3.7nm,0.8s,baz=219,slow=4.6,SNR=16
BRTR SKKPbc SKKPbc 04 50 20.9 +4.6
comp=Z,6.2nm,1.1s,baz=255,slow=5.5,SNR=13
PB16 IPOC Station P 123.75 119 PKPdf **PKPdf** **04 36 39.3 -1.2**
SORM Soroca 123.83 323 ⇑ P **PKPdf** **04 36 39.0 0.0**
PKME Peaks-Kenny Pk 123.84 41 PKiKP **PKPdf** **04 36 38.3 -0.8**

baz=295
SUR Sutherland 123.92 221 PKP **PKPdf 04 36 40.1 +0.1**
comp=Z,17nm,0.6s,baz=138,slow=1.6,SNR=18
KIS Kishinev 124.08 322 *e*P **PKPdf 04 36 39.0 -0.5**
KIS Kishinev 124.08 322 *e*PP PP 04 38 21.0 -2.7
KIS *e*L L 05 25 51.0
KIS LRM MLR 05 34 38.0
comp=Z,800nm,22.0s
KIS Kishinev 124.08 322 *e*PKIKP **PKPdf 04 36 39.0 -0.5**
KIS *e* 04 38 21.0
MILM Milestii Mici 124.12 322 *e*PKP **PKPdf 04 36 39.0 -0.6**
MILM Milestii Mici 124.12 322 *e*PP PP 04 38 21.0 -3.0
MILM *e*L L 05 25 46.0
MILM LQM 05 30 02.0
comp=Z,2μm,21.0s
MILM LRM MLR 05 34 30.0
comp=Z,2μm,22.0s
MILM Milestii Mici 124.12 322 *e*PKIKP **PKPdf 04 36 39.0 -0.6**
MILM *i* 04 36 50.0
MILM *e* 04 38 21.0
ANTO Ankara 124.21 313 **PKPdf 04 36 39.7 -0.4**
ANTO Ankara 124.21 313 PKIKP **PKPdf 04 36 39.7 -0.4**
NRS Narsarsuaq 124.25 15 *i*P **PKPdf 04 36 37.5 -1.9**
HELC Santa Helena 124.37 88 *e*P **PKPdf 04 36 38.8 -2.7**
GUY2C Guyana, Caldas 124.42 90 *e*P **PKPdf 04 36 41.6 -0.1**
MATP Matopo 124.66 238 PKP **PKPdf 04 36 41.2 -0.4**
comp=Z,28nm,0.9s,baz=89,slow=2.0,SNR=32
MATP PKKPbc **PKKPab 04 46 24.1 +0.5**
comp=Z,9.3nm,1.1s,baz=293,slow=6.4,SNR=6.4
KONO Kongsberg 124.67 343 ⇑*i*PKIKP **PKiKP 04 36 40.5 -0.1**
KONO pmax pmax
comp=Z,67nm,2.5s
KONO MLR MLR
comp=Z,3μm,21.0s
LBTB Lobatse 124.78 231 PKP **PKPdf 04 36 41.5 -0.1**
comp=Z,16nm,0.7s,baz=145,slow=3.3,SNR=27
TLCR 124.89 320 ⇓P **PKiKP 04 36 42.1 +0.7**
EIL Elat 125.11 300 PKP **PKPdf 04 36 42.0 0.0**
comp=Z,40nm,0.9s,baz=134,slow=1.1,SNR=24
EIL SKKPbc SKKPbc 04 50 07.8 -2.8
comp=Z,7.3nm,1.0s,baz=261,slow=20,SNR=4.5
TPGR Topolog 125.29 320 ⇑P **PKPdf 04 36 42.1 +0.2**
CFR Carcaliu 125.33 320 ⇑P **PKiKP 04 36 42.9 +0.6**
ROSC El Rosal 125.41 90 PKP **PKPdf 04 36 42.3 -1.3**
comp=Z,47nm,0.9s,baz=281,slow=5.2,SNR=11
ROSC El Rosal 125.41 90 *e*P **PKPdf 04 36 41.6 -1.9**
LVV L'vov 125.42 327 *e*PKIKP **PKPdf 04 36 41.4 -0.6**
LVV *e* 04 38 30.5
TIRR Tirgusor 125.47 319 ⇑P **PKiKP 04 36 43.2 +0.6**
MACC Macarena, Meta 125.50 94 *e*P **PKPdf 04 36 39.7 -3.5**
MFTR Murfatlar 125.58 319 ⇑P **PKiKP 04 36 43.6 +0.7**
TESR Tescani 125.63 322 ⇑P **PKiKP 04 36 43.1 +0.2**
MANR Mangalia 125.63 319 ⇑P **PKiKP 04 36 43.9 +1.0**
HARR Harsova 125.67 320 ⇑P **PKiKP 04 36 43.6 +0.6**
BIZ Bicaz 125.75 323 ⇑P **PKiKP 04 36 44.0 +0.9**
LPAZ La Paz 125.78 117 PKP **PKiKP 04 36 44.8 -0.1**
comp=Z,18nm,1.0s,baz=346,slow=1.0,SNR=36
LPAZ SKKPbc SKKPbc 04 50 06.5 -1.5
comp=Z,2.2nm,0.9s,baz=3.5,slow=3.3,SNR=5.5
LPAZ La Paz 125.78 117 *e*P **PKPdf 04 36 43.6 -0.9**
LPAZ La Paz 125.78 117 *e*P **PKPdf 04 36 44.6 +0.2**
VRI Vrincioaia 125.89 322 ⇓P **PKiKP 04 36 43.4 0.0**
VRI ⇑P **PKiKP 04 36 43.5 0.0**
BEL Belsk 125.91 330 *e*PKP **PKiKP 04 36 43.8 +0.6**
BEL *e*L L 05 33 10.9
comp=Z,5μm,21.8s
BURAR Bucovina Array 125.93 324 ⇑P **PKPdf 04 36 43.3 +0.1**
PLOR Plostina 125.94 322 ⇑P **PKPdf 04 36 43.4 +0.2**
PSN Preselentsi 125.95 319 P **PKiKP 04 36 44.1 +0.5**
SMRC Santa Marta, M 126.05 83 *e*P **PKPdf 04 36 39.7 -4.5**
MLR Muntele Rosu 126.55 321 ⇑P **PKPdf 04 36 44.4 -0.1**
MLR Muntele Rosu 126.55 321 PKP **PKPdf 04 36 44.7 +0.2**
comp=Z,20nm,1.0s,baz=18,slow=2.5,SNR=26
MLR Muntele Rosu 126.55 321 PKPdf **PKPdf 04 36 44.3 -0.1**
GKP Gorka Klasztor 126.64 333 *e*PKP **PKiKP 04 36 45.0 +0.3**
GKP *e*L L 05 33 10.9
comp=Z,9μm,21.3s
PRD Provadia 126.68 318 P **PKiKP 04 36 45.4 +0.3**
BARC Barichara 126.73 88 *e*P **PKPdf 04 36 43.6 -2.3**
KOLS Kolonicke sedl 126.87 327 *e*PKIKP **PKiKP 04 36 46.4 +1.1**
KOLS Kolonicke sedl 126.87 327 *e*PKP **PKiKP 04 36 46.4 +1.1**
UZH Uzhgorod 127.03 326 *e*PKIKP **PKPdf 04 36 44.6 -0.5**
UZH *e* 04 36 55.0
LSZ Lusaka 127.12 243 PKP **PKiKP 04 36 46.7 -0.2**
comp=Z,27nm,1.1s,baz=139,slow=1.9,SNR=25
LSZ Lusaka 127.12 243 **PKPdf 04 36 45.0 -1.4**
VOIR 127.12 322 ⇓P **PKPdf 04 36 45.7 +0.2**
CRVS Cervenica-Dubn 127.32 327 *e*PKIKP **PKiKP 04 36 46.3 0.0**
CRVS Cervenica-Dubn 127.32 327 *e*PKP **PKiKP 04 36 46.2 0.0**
ARR Arges 127.41 322 ⇑P **PKiKP 04 36 47.5 +0.9**
PTGC Puerto Gaitan, 127.49 91 *e*P **PKPdf 04 36 46.5 -0.6**
JMB Yambol 127.54 318 P **PKPdf 04 36 46.2 -0.1**
SZH Strazhica 127.60 319 P **PKiKP 04 36 46.7 -0.3**
NIE Niedzica 127.63 328 *e*PKP **PKiKP 04 36 47.4 +0.5**
NIE *e*L L 05 30 38.8
comp=Z,2μm,24.4s
ITQB Itaqui 127.68 138 *e*P **PKPdf 04 36 47.1 +0.1**
KULA Kula-Manisa 127.69 312 P **PKPdf 04 36 46.6 -0.2**
DRGR 127.81 324 ⇓P **PKiKP 04 36 47.3 0.0**
LTVH Ltavrtes, Hu 127.95 325 PKP **PKiKP 04 36 49.8 +2.3**
LANS Liptovska Anna 128.23 328 *e*PKIKP **PKiKP 04 36 49.4 +1.3**
LANS Liptovska Anna 128.23 328 *e*PKP **PKiKP 04 36 49.4 +1.3**
DIM Dimitrovgrad 128.42 318 P **PKPdf 04 36 48.1 +0.1**
OKC Ostrava-Krasne 128.47 330 AMS AMS 05 36 30.0
comp=Z,3μm,19.3s
GZR Gura Zlata 128.52 323 ⇑P **PKiKP 04 36 48.8 -0.1**
ENEZ Enez 128.58 316 P **PKPdf 04 36 47.3 -1.0**
ALN Alexandroupoli 128.59 316 P **PKPdf 04 36 46.9 -1.4**
KDZ Kurdzhali 128.68 317 P **PKPdf 04 36 48.3 -0.2**
KSP Ksiaz 128.71 332 *e*PKP **PKiKP 04 36 49.1 +0.2**
KSP *e*L L 05 32 43.5
comp=Z,7μm,23.3s
PSZ Piszkesteto 128.75 327 ⇑P **PKPdf 04 36 48.4 -0.1**
PSZ Piszkesteto 128.75 327 PKP **PKiKP 04 36 49.4 +0.2**
MORC Moravsky Berou 128.81 330 ⇑P **PKiKP 04 36 49.0 -0.3**
MORC Moravsky Berou 128.81 330 *e*PKP **PKiKP 04 36 48.9 -0.3**
EZN Ezine 128.84 315 P **PKPdf 04 36 48.1 -0.7**
JAWL J.Aulia 128.88 282 *i*P **Pdif 04 33 43.0 +7.7**
JAWL *i* 04 33 45.4
baz=345,slow=9.3
JAWL *i*S SKiKP 04 40 48.8 +25
MAUC Maruska 128.93 329 *e*PKP **PKiKP 04 36 49.7 +0.2**
MAUC *ex* x 04 37 01.1
MAUC AMS AMS 05 31 00.0
comp=Z,5μm,23.2s
OSTC Ostas 128.94 331 *e*PKP **PKiKP 04 36 49.2 -0.2**
OSTC *ex* x 04 36 59.6
OSTC AMS AMS 05 31 40.0
comp=Z,7μm,23.3s
MPEP Malo Peshtene 128.97 320 P **PKPdf 04 36 49.3 +0.3**
KRLC Kraliky 128.99 331 *e*PKIKP **PKiKP 04 36 49.4 -0.2**
KRLC *e* 04 36 59.2
KRLC MLR MLR
comp=Z,4μm,21.5s
KRLC Kraliky 128.99 331 *e*PKPDF **PKiKP 04 36 49.4 -0.2**
KRLC *ep*PKP **pPKPdf 04 36 59.2 -0.1**
KRLC AMS AMS 05 34 10.0
comp=Z,4μm,21.5s
CHVC Chvalec 128.99 332 *e*PKPDF **PKPdf 04 36 49.2 +0.3**
CHVC *ex* x 04 37 00.8
CHVC AMS AMS 05 33 20.0
comp=Z,6μm,22.4s
HERR Herculane 129.01 322 ⇑P **PKiKP 04 36 49.6 -0.1**
DPC Dobruska-Polom 129.02 331 *e*PKIKP **PKiKP 04 36 49.5 -0.1**
DPC *e* 04 36 59.2
DPC MLR MLR
comp=Z,6μm,22.5s
DPC Dobruska-Polom 129.02 331 *e*PKPDF **PKiKP 04 36 49.5 -0.1**
DPC *ep*PKP **pPKPdf 04 36 59.2 -0.1**
DPC AMS AMS 05 32 30.0
comp=Z,6μm,22.5s
UPC Upice 129.06 332 *e*PKIKP **PKiKP 04 36 49.6 -0.1**
UPC MLR MLR
comp=Z,7μm,22.9s
UPC Upice 129.06 332 *e*PKPDF **PKiKP 04 36 49.6 -0.1**
UPC AMS AMS 05 31 50.0
comp=Z,7μm,22.9s
BZS Buzias 129.09 324 ⇑P **PKiKP 04 36 50.0 +0.1**
UNIS Unistalda (Bra 129.09 139 *e*P **PKiKP 04 36 51.1 +0.6**
PRK Paraskevi 129.12 314 P **PKiKP 04 36 49.8 -0.3**
SMTH Samothraki Isl 129.12 316 P **PKPdf 04 36 48.4 -1.0**
RZN Rozhen 129.13 318 P **PKPdf 04 36 49.1 -0.5**
KOLL Kolacno 129.13 328 *e*PKP **PKiKP 04 36 50.3 +0.5**

MBAR Mbarara 129.16 262 PKP **PKiKP 04 36 51.1 0.0**
comp=Z,11nm,0.9s,baz=106,slow=5.4,SNR=9.4
MBAR Mbarara 129.16 262 ⇑*i*PKIKP **PKiKP 04 36 51.4 +0.3**
CPUP Villa Florida 129.32 135 PKP **PKiKP 04 36 50.7 -0.2**
comp=Z,31nm,1.0s,baz=250,slow=1.4,SNR=15
CPUP SKP 04 40 11.0
comp=Z,4.4nm,1.0s,baz=236,slow=3.6,SNR=3.0
CPUP Villa Florida 129.32 135 PKPdf **PKPdf 04 36 49.1 -1.1**
JAVC Velka Javorina 129.33 329 *e*PKP **PKiKP 04 36 51.0 +0.7**
SDV Santo Domingo 129.45 86 PKP **PKPdf 04 36 50.9 0.0**
comp=Z,51nm,0.8s,baz=239,slow=1.7,SNR=24
SDV SKP 04 40 15.0
comp=Z,11nm,0.5s,baz=145,slow=11,SNR=5.6
SDV Santo Domingo 129.45 86 *e*P **PKPdf 04 36 49.3 -1.6**
SDV Santo Domingo 129.45 86 *e*P **PKPdf 04 36 51.0 0.0**
MDVR Moldovita 129.49 323 ⇑P **PKiKP 04 36 50.9 +0.1**
BLKB Belogradchik 129.51 321 ⇑P **PKiKP 04 36 50.9 +0.1**
KAVA Kavala 129.58 317 P **PKPdf 04 36 49.3 -0.9**
VRAC Vranov 129.58 330 ⇑P **PKiKP 04 36 51.3 +0.5**
VRAC Vranov 129.58 330 PKP **PKiKP 04 36 51.2 +0.5**
comp=Z,9.1nm,1.0s,baz=61,slow=2.0,SNR=26
VRAC Vranov 129.58 330 *e*PKP **PKiKP 04 36 50.6 -0.2**
LIA Limnos Island 129.61 315 P **PKPdf 04 36 49.0 -1.3**
THAS Thassos island 129.62 316 P **PKPdf 04 36 49.4 -0.9**
VTS Vitosha 129.66 319 ⇑P **PKPdf 04 36 50.5 -0.1**
VTS Vitosha 129.66 319 P **PKPdf 04 36 50.3 -0.2**
SMOL Smolenice 129.68 329 *e*PKIKP **PKiKP 04 36 51.8 +0.8**
SMOL Smolenice 129.68 329 *e*PKP **PKiKP 04 36 51.8 +0.8**
PVCC Panska Ves 129.72 332 *e*PKIKP **PKiKP 04 36 51.0 0.0**
PVCC *e* 04 37 03.0
PVCC MLR MLR
comp=Z,6μm,20.0s
PVCC Panska Ves 129.72 332 *e*PKPDF **PKiKP 04 36 51.0 0.0**
PVCC *ep*PKP **sPKPdf 04 37 03.0 -1.2**
PVCC AMS AMS 05 37 30.0
comp=Z,6μm,20.0s
BRG Berggiesshubel 129.76 333 *e*PKP **PKiKP 04 36 50.8 -0.3**
BRG Amp 04 36 52.4
comp=Z,84nm,1.5s
BRG *ex* x 04 37 02.7
BRG Amp 04 37 04.7
comp=Z,33nm,1.1s
BRG *ex* x 04 37 16.3
BRG Amp 04 37 18.1
comp=Z,39nm,1.5s
BRG *ex* x 04 40 14.0
BRG Amp 04 40 16.9
comp=Z,54nm,1.9s
BRG Berggiesshubel 129.76 333 *e*PKIKP **PKiKP 04 36 50.7 -0.3**
BRG *e* 04 37 02.7
BRG pmax pmax
comp=Z,84nm,1.5s
BRG MLR MLR
comp=N,4μm,22.9s
BRG MLR MLR
comp=E,3μm,22.2s
BRG MLR MLR
comp=Z,8μm,22.8s
MMB Musomiste 129.83 318 P **PKPdf 04 36 50.3 -0.4**
KRUC Moravsky 129.84 330 *e*PKP **PKPdf 04 36 50.6 +0.1**
MODS Modra-Piesok 129.84 329 *e*PKIKP **PKiKP 04 36 51.2 -0.1**
MODS Modra-Piesok 129.84 329 *e*PKP **PKiKP 04 36 51.2 -0.1**
NVR Nevrokopi 129.85 318 P **PKPdf 04 36 50.0 -0.8**
CLL Collm 129.87 334 ⇑*i*PKIKP **PKPdf 04 36 50.1 -0.3**
CLL *i* 04 37 01.1
CLL pmax pmax
comp=Z,38nm,1.2s
CLL MLR MLR
comp=Z,5μm,21.2s
CLL Collm 129.87 334 ⇑*i*PKPdf **PKPdf 04 36 50.1 -0.3**
comp=Z,38nm,1.2s
CLL *i* pPKPdf **pPKPdf 04 37 01.1 +0.3**
CLL *e*PP PP 04 39 05.0 +3.5
CLL *ex* x 04 40 13.0
CLL *e*SKPdf **SKPdf 04 40 24.0 +0.5**
CLL *i* x x 04 40 30.7
comp=Z,80nm,1.8s
CLL *e*PPPP 04 43 51.0
CLL *e*SS SS 04 56 12.0 -11
CLL *e*(SSS) 05 01 48.0
CLL LmV 05 37 00.0
comp=Z,5μm,21.2s
ETMB Extrema 129.93 111 *e*P **PKPdf 04 36 50.5 -1.2**
CSKK Cskako 129.96 327 PKP **PKiKP 04 36 51.5 -0.1**
ZST Bratislava 130.05 329 *e*PKIKP **PKiKP 04 36 52.0 +0.3**
ZST Bratislava 130.05 329 *e*PKP **PKiKP 04 36 52.0 +0.3**
BOVS Bovan 130.10 321 ⇑P **PKPdf 04 36 51.3 +0.2**
PRU Pruhonice 130.11 332 *e*PKIKP **PKPdf 04 36 51.2 +0.2**
PRU *e* 04 37 03.9
PRU MLR MLR
comp=Z,6μm,21.5s
PRU Pruhonice 130.11 332 *e*PKPDF **PKPdf 04 36 51.2 +0.2**
PRU *ep*PKP **sPKPdf 04 37 03.9 -1.0**
PRU AMS AMS 05 35 30.0
comp=Z,6μm,21.5s
KKB Krupnik 130.12 319 P **PKiKP 04 36 51.9 -0.2**
TREC Trest 130.13 331 *e*PKIKP **PKiKP 04 36 52.2 +0.3**
TREC *e* 04 37 03.7
TREC MLR MLR
comp=Z,6μm,21.6s
TREC Trest 130.13 331 *e*PKPDF **PKiKP 04 36 52.2 +0.3**
TREC *ep*PKP **sPKPdf 04 37 03.7 -1.3**
TREC AMS AMS 05 34 30.0
comp=Z,6μm,21.6s
SRS Serrai 130.14 318 P **PKPdf 04 36 49.3 -2.0**
OUR Ouranopolis 130.24 316 P **PKPdf 04 36 50.1 -1.4**
FRGS Fruska Gora 130.40 324 ⇑P **PKiKP 04 36 52.5 0.0**
SOH Sokhos 130.44 317 P **PKPdf 04 36 50.3 -1.6**
MORH Mrgy, Hungar 130.45 326 ⇑P **PKiKP 04 36 52.5 0.0**
MORH Mrgy, Hungar 130.45 326 PKP **PKPdf 04 36 51.9 +0.2**
MPLH Magyarpolny 130.47 327 PKP **PKiKP 04 36 52.5 0.0**
KNT Kendrikon 130.58 318 P **PKPdf 04 36 50.3 -1.9**
PAIG Paliouri 130.63 316 P **PKPdf 04 36 50.7 -1.5**
SOP Sopron 130.66 328 PKP **PKiKP 04 36 54.0 +1.1**
HORT Hortiatis 130.72 317 P **PKPdf 04 36 51.2 -1.3**
RONA Rosalia, Austr 130.78 329 *i*P **PKiKP 04 36 53.1 -0.1**
comp=Z,36nm,1.4s,SNR=14
RONA *e*P **sPKPdf 04 37 05.8 -0.5**
comp=Z,20nm,1.0s
RONA *e*PP **PP 04 39 09.5 +1.8**
comp=Z,501nm,3.9s
RONA *e*S **SKPab 04 40 17.3 +3.1**
comp=Z,438nm,3.9s
KOVH Kovagotottos 130.83 326 PKP **PKPdf 04 36 52.7 +0.3**
CONA Conrad Observa 130.85 329 *i*P **PKiKP 04 36 53.1 -0.3**
comp=Z,46nm,1.4s,SNR=20
CONA *e*P **sPKPdf 04 37 05.6 -1.0**
comp=Z,14nm,0.9s
CONA *e*P **PP 04 39 12.0 +3.7**
comp=Z,482nm,3.9s
CONA *e*S **SKPab 04 40 17.3 +2.8**
comp=Z,513nm,4.2s
NKC Novy Kostel 130.89 333 *e*PKIKP **PKiKP 04 36 53.7 +0.3**
NKC MLR MLR
comp=Z,6μm,22.3s
NKC Novy Kostel 130.89 333 *e*PKPDF **PKiKP 04 36 53.7 +0.3**
NKC AMS AMS 05 34 30.0
comp=Z,6μm,22.3s
KYMI Kymi, Euboea I 130.92 314 P **PKPdf 04 36 51.5 -1.3**
GRG Griva 131.01 318 P **PKPdf 04 36 51.8 -1.2**
CKRC Cesky Krumlov 131.02 331 *e*PKPDF **PKiKP 04 36 53.8 +0.1**
CKRC *ex* x 04 37 04.8
KHC Kasperske Hory 131.16 332 *e*PKIKP **PKPdf 04 36 52.8 -0.2**
KHC *e* 04 37 03.7
KHC MLR MLR
comp=Z,9μm,22.6s
KHC Kasperske Hory 131.16 332 *e*PKPDF **PKPdf 04 36 52.8 -0.2**
KHC *ep*PKP **pPKPdf 04 37 03.7 +0.3**
KHC *ex* x 04 37 10.9
KHC *e*PKS **PKSdf 04 40 35.0 +5.6**
KHC AMS AMS 05 33 50.0
comp=Z,9μm,22.6s
XOR Xorichti 131.22 316 P **PKPdf 04 36 52.0 -1.4**
NEO Neokhori 131.23 316 P **PKPdf 04 36 51.9 -1.6**
GERES GERESS Array B 131.30 331 PKP **PKiKP 04 36 54.0 -0.3**
comp=Z,7.9nm,0.9s,baz=201,slow=2.3,SNR=43
GERES SKP 04 40 18.2
comp=Z,1.9nm,0.8s,baz=117,slow=1.8,SNR=4.5
GERES SKKPbc SKKPbc 04 49 44.4 -5.8
comp=Z,0.6nm,0.6s,baz=221,slow=5.3,SNR=3.9
GERES GERESS Array B 131.30 331 PKIKP **PKiKP 04 36 54.0 -0.3**
PTL Penteli 131.33 314 P **PKPdf 04 36 52.6 -1.1**
LIT Litokhoron 131.36 317 P **PKPdf 04 36 52.5 -1.2**
VLY Voula,Athens 131.47 314 P **PKPdf 04 36 52.6 -1.3**

ARSA Arzberg 131.47 329 *e*P **PKiKP 04 36 54.2 -0.5**
comp=Z,19nm,1.6s
ARSA *e*P **PP 04 39 15.5 +3.3**
comp=Z,322nm,3.4s
ARSA *e*S **SKPab 04 40 19.5 +2.3**
comp=Z,685nm,3.8s
KOGS Kog 131.61 327 *i*PKPdf **PKPdf 04 36 53.8 -0.1**
KOGS *i*SKPbc **SKPab 04 40 19.0 +1.4**
VILL Villia 131.68 314 P **PKPdf 04 36 52.4 -2.0**
LKR Lokris 131.68 315 P **PKPdf 04 36 52.0 -2.3**
IDI Anoyia 131.69 310 ⇑P **PKPdf 04 36 54.7 +0.2**
IDI Anoyia 131.69 310 PKP **PKiKP 04 36 56.3 +0.7**
comp=Z,18nm,0.8s,baz=73,slow=5.7,SNR=6.9
IDI SKP 04 40 23.5
comp=Z,5.9nm,0.8s,baz=60,slow=3.8,SNR=3.1
IDI Anoyia 131.69 310 P **PKPdf 04 36 53.8 -0.7**
MOA Molln 131.71 330 *i*P **PKPdf 04 36 54.4 +0.3**
comp=Z,23nm,1.4s,SNR=7.0
MOA *e*P **PP 04 39 16.0 +2.4**
comp=Z,133nm,2.9s
MOA *e*S **SKPab 04 40 20.4 +2.3**
comp=Z,934nm,4.5s
KZN Kozani 131.75 318 P **PKPdf 04 36 51.0 -3.5**
EKA Eskdalemuir Ar 131.75 348 PKP **PKiKP 04 36 54.4 -0.5**
comp=Z,1.2nm,0.5s,baz=8.6,slow=2.0,SNR=12
FNA Florina 131.77 318 P **PKPdf 04 36 53.3 -1.2**
PHP Peshkopia 131.92 320 P **PKPdf 04 36 53.8 -0.9**
THL Klokotos Trika 131.94 317 P **PKPdf 04 36 53.2 -1.5**
LTK Loutraki 131.98 314 P **PKPdf 04 36 53.3 -1.6**
BAUV El Baul 132.01 86 PKPdf **PKPdf 04 36 55.0 -0.5**
SIV San Ignacio 132.02 121 PKP **PKPdf 04 36 55.1 -0.5**
comp=Z,16nm,1.1s,baz=233,slow=2.4,SNR=14
EPID Epidavros 132.05 314 P **PKPdf 04 36 53.4 -1.7**
PERS Pernice 132.09 328 *i*PKPdf **PKPdf 04 36 54.5 -0.4**
SOKA Soboth 132.10 328 *i*P **PKPdf 04 36 55.2 +0.3**
comp=Z,26nm,1.2s,SNR=9.5
SOKA *e*S **SKPab 04 40 20.5 +0.6**
comp=Z,892nm,4.3s
MAKR Makrakomi, Fth 132.12 316 P **PKPdf 04 36 54.3 -0.9**
BIOA Bad Ischl, Aus 132.12 330 *i*P **PKPdf 04 36 55.2 +0.3**
comp=Z,34nm,1.5s,SNR=6.3
KRND KRANIDI 132.13 313 P **PKPdf 04 36 53.2 -2.0**
KPRO Kipourio 132.19 317 P **PKPdf 04 36 54.5 -0.8**
ITAB Concordia 132.24 139 *e*P **PKiKP 04 36 57.7 +0.9**
KBN Korca 132.24 318 P **PKPdf 04 36 54.1 -1.3**
IMMV Iera Moni Meta 132.31 311 P **PKPdf 04 36 55.4 -0.2**
EVR Evrytania 132.39 316 P **PKPdf 04 36 54.9 -0.9**
SERG Sergoula 132.45 315 P **PKPdf 04 36 53.9 -1.9**
OBKA Obir 132.46 328 *e*P **PKPdf 04 36 55.8 +0.1**
comp=Z,19nm,2.0s
OBKA *e*P **PP 04 39 20.8 +2.1**
comp=Z,384nm,3.4s
OBKA *e*S **SKPab 04 40 22.9 +1.5**
comp=Z,499nm,4.0s
GUR Goura 132.46 314 P **PKPdf 04 36 54.7 -1.2**
GVDS Gavdos 132.47 310 P **PKPdf 04 36 54.9 -1.0**
GVD Gavdhos 132.47 310 P **PKPdf 04 36 55.4 -0.5**
EFP Efpalio 132.55 315 P **PKPdf 04 36 55.3 -0.6**
KLV Kalavryta, Ach 132.55 315 P **PKPdf 04 36 55.3 -0.7**
LAKA Lakka 132.58 315 P **PKPdf 04 36 55.8 -0.2**
LSK Leskovik 132.60 318 P **PKPdf 04 36 55.6 -0.5**
KTHA Kythira Island 132.67 312 P **PKPdf 04 36 55.3 -1.0**
KBA Koelnbreinsper 132.69 330 *i*P **PKPdf 04 36 56.0 -0.2**
comp=Z,15nm,1.4s,SNR=6.8
KBA *e*P **PP 04 39 23.3 +3.2**
comp=Z,253nm,4.0s
PVO Paravola 132.72 316 P **PKPdf 04 36 56.4 +0.2**
BOJS Bojanci 132.75 327 *i*PKPdf **PKPdf 04 36 56.3 +0.2**
LJU Ljubljana 132.78 328 *e*PP PP 04 39 19.4 -1.2
LJU *i*SKPbc **SKPab 04 40 24.0 +1.3**
LJU *i* 04 40 41.3
MYKA Terra Mystica 132.85 329 *e*P **PKPdf 04 36 56.0 -0.3**
comp=Z,9.3nm,1.0s
MYKA *e*P **PP 04 39 23.5 +2.5**
comp=Z,450nm,3.5s
RLS Riolos of Patr 133.02 315 P **PKPdf 04 36 56.4 -0.4**
IGT Igoumenitsa 133.09 317 P **PKPdf 04 36 56.2 -0.7**
ITM Ithomi 133.10 314 P **PKPdf 04 36 55.7 -1.3**
BTNL Ternell 133.20 338 *d*PKiKP **PKiKP 04 36 57.6 -0.4**
BTNL *ds*PKP 04 37 08.8
MEM Membach 133.23 338 *d*PKiKP **PKiKP 04 36 57.6 -0.4**
MEM *ds*PKP 04 37 08.9
LKD2 Lefkada island 133.24 316 P **PKPdf 04 36 56.8 -0.5**
EVGI Lefkada island 133.32 316 P **PKPdf 04 36 56.9 -0.5**
CELP Cerrillos 133.33 73 **PKPdf 04 36 57.8 -0.2**
ABTA Abfaltersbach 133.33 330 *i*P **PKPdf 04 36 57.2 -0.1**
comp=Z,17nm,0.9s,SNR=9.2
PYL 133.36 313 P **PKPdf 04 36 56.3 -1.2**
WATA Walderalm 133.37 331 *i*P **PKPdf 04 36 57.7 +0.3**
comp=Z,28nm,1.4s,SNR=8.1
WTTA Wattenberg 133.40 331 *i*P **PKPdf 04 36 58.1 +0.6**
comp=Z,27nm,0.9s,SNR=12
BHOU Houvegnez 133.44 338 *d*PKiKP **PKPdf 04 36 57.8 +0.5**
FSK Fiskardo 133.46 316 P **PKPdf 04 36 57.2 -0.4**
MOTA Moosalm 133.59 331 *i*P **PKPdf 04 36 58.2 +0.3**
comp=Z,13nm,0.8s,SNR=7.8
VBST Vila Bela da S 133.60 120 *e*P **PKPdf 04 36 59.1 +0.6**
SQTA Sankt Quirin 133.63 331 *i*P **PKPdf 04 36 58.3 +0.4**
comp=Z,27nm,1.4s,SNR=8.9
BCLA Clavier 133.65 338 *d*PKiKP **PKiKP 04 36 58.4 -0.4**
RETA Reutte 133.65 332 *i*P **PKPdf 04 36 58.4 +0.6**
comp=Z,19nm,1.3s,SNR=7.5
SJG San Juan 133.73 73 PKP **PKPdf 04 36 59.2 +0.5**
comp=Z,27nm,0.8s,baz=343,slow=1.2,SNR=11
SJG SKP 04 40 28.2
comp=Z,9.1nm,0.8s,baz=87,slow=22,SNR=5.7
SJG San Juan 133.73 73 **PKPdf 04 36 58.9 +0.3**
SJG San Juan 133.73 73 *e*P **PKPdf 04 36 58.9 +0.3**
BGES Gesves 133.75 338 *d*PKiKP **PKiKP 04 36 58.7 -0.4**
RCHB Rochefort 133.89 338 *d*PKiKP **PKiKP 04 36 58.9 -0.5**
RCHB *ds*PKP 04 37 10.5
BMRD Maredsous 133.94 339 *d*PKiKP **PKiKP 04 37 00.1 +0.6**
BMRD *ds*PKP 04 37 10.7
WLF Walferdange 133.94 337 *d*PKiKP **PKiKP 04 36 59.6 +0.1**
FETA Feichten 134.00 331 *i*P **PKPdf 04 36 58.2 -0.4**
comp=Z,23nm,1.3s,SNR=7.2
AQDB Aquidauana 134.03 130 *e*P **PKPdf 04 36 59.0 -0.2**
BFO Black Forest 134.10 334 PKPdf **PKPdf 04 36 58.7 +0.1**
BFO Black Forest 134.10 334 PKiKP **PKiKP 04 36 58.7 +0.1**
VILB Vilhena 134.14 118 *e*P **PKPdf 04 37 00.0 +0.4**
TSUM Tsumeb 134.15 232 PKP **PKPdf 04 36 59.8 +0.1**
comp=Z,19nm,1.0s,baz=125,slow=3.5,SNR=16
TSUM Tsumeb 134.15 232 **PKPdf 04 36 59.5 -0.2**
DOU Dourbes 134.17 339 *d*PKiKP **PKiKP 04 36 59.5 -0.4**
DAVA Damuels 134.20 332 *i*P **PKPdf 04 36 58.8 -0.2**
comp=Z,12nm,0.7s,SNR=7.0
DAVOX Davos/Dischmat 134.57 332 PKP **PKiKP 04 37 00.5 -0.7**
comp=Z,11nm,0.9s,baz=172,slow=0.2,SNR=15
DAVOX SKP 04 40 28.9
comp=Z,11nm,1.1s,baz=214,slow=3.6,SNR=4.7
DAVOX SKKPbc SKKPbc 04 49 27.4 -11
comp=Z,3.5nm,0.9s,baz=353,slow=12,SNR=3.8
ECH Echery 134.69 335 **PKPdf 04 37 00.1 +0.4**
ECH Echery 134.69 335 PKiKP **PKPdf 04 37 00.1 +0.4**
TEOL Teolo 134.72 329 **PKPdf 04 37 00.1 +0.3**
TIP Timpagrande 135.63 319 ⇓P **PKPdf 04 37 01.0 -0.8**
ZCCA Zocca 135.78 329 **PKPdf 04 37 00.3 -1.6**
PCMB Pacaembu 136.59 134 *e*P **PKPdf 04 37 04.6 +0.5**
BNI Bardonecchia 137.35 333 PKPdf **PKPdf 04 37 04.8 -0.1**
BNI Bardonecchia 137.35 333 PKiKP **PKPdf 04 37 04.8 -0.1**
VAE Valguarnera 138.11 318 PKP **PKPdf 04 37 06.4 0.0**
comp=Z,5.5nm,0.4s,baz=11,slow=10,SNR=4.4
SSB Saint Sauveur 138.11 335 PKPdf **PKPdf 04 37 05.7 -0.5**
SSB Saint Sauveur 138.11 335 PKiKP **PKPdf 04 37 05.7 -0.5**
FDF Fort de France 138.78 78 **PKPdf 04 37 06.5 -1.7**
FDF Fort de France 138.78 78 PKiKP **PKPdf 04 37 06.5 -1.7**
KEST Kesra 142.42 320 PKhKP PKPpre 04 37 10.9
comp=Z,11nm,0.8s,baz=226,slow=1.7,SNR=9.8
KEST Kesra 142.42 320 PKPdf **PKPdf 04 37 12.0 -2.3**
MAHO Mahon 142.43 330 PKP **PKPdf 04 37 06.8 -7.3**
BDFB Brasilia 142.75 130 PKhKP PKPpre 04 37 11.2
comp=Z,39nm,0.9s,baz=247,slow=2.7,SNR=42
CMAH Djebel Manchou 143.03 323 P 04 37 11.2
ABSA Djebel Ababsia 143.23 322 P 04 37 12.8
CKFL Kef-Lekhel 143.60 323 P 04 37 13.6
MALB Monte Alegre 143.74 105 *e*P PKPbc 04 37 15.1 +0.4
CASM Ain Smara 143.83 323 P 04 37 14.0
DFRA Djebel Bou Aff 144.00 324 P 04 37 15.6
ALF01 Guarapari-ES 144.11 145 *e*P PKPbc 04 37 16.6 +1.0
PEXB Peixe 144.63 125 *e*P **PKPab 04 37 17.3 0.0**
PBRG Braganca 145.20 343 *e*PKP **PKPbc 04 37 18.5 0.0**
SJMB Sao Joao De Ma 145.32 142 *e*P **PKPab 04 37 19.6 0.0**
RIB01 Linhares ES 145.32 144 *e*P **PKPdf 04 37 19.8 0.0**

Code	Station	Δ°	AZ°	Op	ISC	Time	Res
UCM	Universidad Co	145.40	338	PKP	PKPbc	04 37 17.8	-1.4
BSFB	Barra de Sao F	145.42	142	eP	PKPbc	04 37 19.6	-0.2
PGAV	Gavieira, Arco	145.46	345	ePKP	PKPab	04 37 19.7	+0.1
PGAV	Gavieira, Arco	145.46	345	eLR	LR	05 31 16.5	
	comp=Z,2µm,20.0s						
PCAB	Cabril	145.64	345	ePKP	PKPbc	04 37 20.0	+0.1
JANB	Januaria	145.85	134	eP	PKPbc	04 37 21.5	+0.1
MVO	Moncorvo	145.87	343	ePKP	PKPbc	04 37 20.5	-0.2
MVO	Moncorvo	145.87	343	eLR	LR	05 32 17.9	
	comp=Z,3µm,20.0s						
POLO	Lamas de Olo	145.89	344	ePKP	PKPab	04 37 21.2	-0.1
PVRL	Vila Real	145.96	344	ePKP	PKPab	04 37 21.6	+0.1
ESDC	Sonseca Array	146.22	338	PKPbc	PKPbc	04 37 21.7	-0.1
	comp=Z,43nm,1.2s,baz=12,slow=2.6,SNR=108						
MCPB	Macapa, AP	146.28	104	eP	PKPdf	04 37 22.1	+0.5
PRPB	Parauapebas	146.30	115	eP	PKPdf	04 37 22.2	-0.5
PAB	San Pablo	146.47	339		PKPbc	04 37 22.0	-0.6
PAB	San Pablo	146.47	339	PKP2	PKPbc	04 37 22.0	-0.6
PAB	San Pablo	146.47	339	P	PKPbc	04 37 22.6	0.0
PVIS	Viseu	146.53	344	ePKP	PKPbc	04 37 22.2	-0.5
NAN01	Guarapari, ES	146.62	142	eP	PKPbc	04 37 23.5	0.0
MTE	Manteigas	146.73	343	ePKP	PKPab	04 37 23.9	-0.5
MTE	Manteigas	146.73	343	eLR	LR	05 32 40.5	
	comp=Z,3µm,18.0s						
CART	Cartagena	146.78	333	PKP	PKPdf	04 37 19.7	-2.0
CART	Cartagena	146.78	333	P	PKPdf	04 37 22.2	+0.5
MDP	Montagnes des	146.86	94	PKPbc	PKPbc	04 37 24.0	-0.4
	comp=Z,130nm,1.1s,baz=259,slow=4.1,SNR=40						
SMTB	Santa Maria do	146.97	121	eP	PKPbc	04 37 24.4	-0.3
SDBA	SAO DESIDERIO	147.12	129	eP	PKPdf	04 37 23.5	+0.5
COI	Coimbra	147.14	344	ePKP	PKPbc	04 37 24.9	+0.5
PCBR	Castelo Branco	147.22	343	ePKP	PKPdf	04 37 23.4	+1.0
PCAS	Casmilo, Conde	147.31	344	ePKP	PKPbc	04 37 25.1	+0.2
ABR01	Abrolhos, BA	147.37	144	eP	PKPbc	04 37 24.7	-0.9
PMRV	Marv??o	147.58	342	ePKP	PKPbc	04 37 25.9	+0.2
PMRV	Marv??o	147.58	342	eLR	LR	05 31 29.2	
	comp=Z,2µm,20.0s						
H07S1	FLORES T-PHASE	147.71	17	ePKP	PKPbc	04 37 25.8	-0.2
GUA01	Guaratinga, BA	147.78	141	eP	PKPdf	04 37 25.1	+1.2
PSBE	So Bento	147.90	344	ePKP	PKPdf	04 37 24.9	+1.3
PMTG	Montargil	148.16	343	ePKP	PKPdf	04 37 23.9	0.0
PESTR	Estremoz	148.16	342	ePKP	PKPdf	04 37 23.4	-0.6
PESTR	Estremoz	148.16	342		PKPdf	04 37 22.8	-1.2
PESTR				PKPbc	PKPbc	04 37 27.9	+0.6
PESTR	Estremoz	148.16	342	P	PKPbc	04 37 27.6	+0.4
PMAFR	Mafra	148.55	345	ePKP	PKPbc	04 37 28.7	+0.5
EVO	Evora	148.59	343	PKP	PKPdf	04 37 25.9	+1.2
EVO	Evora	148.59	343	ePKP	PKPbc	04 37 28.8	+0.5
PACT	Alcochete	148.61	344	ePKP	PKPbc	04 37 29.1	+0.8
PMST	Lisbon--Monsan	148.73	344	ePKP	PKPbc	04 37 28.6	-0.1
LIS	Lisbon	148.74	344	ePKPdf	PKPdf	04 37 25.4	+0.4
LIS				IAMs_20	IAMs_20	05 49 02.0	
	comp=Z,5µm,11.2s						
LIS	Lisbon	148.74	344	ePKIKP	PKPdf	04 37 25.3	+0.4
SRBC	Serra Branca	148.85	13	ePKP	PKPdf	04 37 29.7	+0.7
CMC01	Camacan, BA	148.88	140	eP	PKPdf	04 37 26.2	+0.5
PBEJ	Beja	149.01	342	ePKP	PKPdf	04 37 26.8	+1.4
PCED	Cedros	149.09	14	ePKP	PKPbc	04 37 30.0	+0.4
ROSA	Rosais	149.11	13	ePKP	PKPbc	04 37 28.7	-1.0
PNCL	Nicolau / Gran	149.13	343	ePKP	PKPdf	04 37 26.0	+0.5
PICO	Pico	149.27	14	ePKP	PKPdf	04 37 22.7	-3.2
PAGU	Agualva, Azore	149.29	12	ePKP	PKPbc	04 37 30.4	+0.3
MESJ	Messejana	149.29	342	ePKPdf	PKPdf	04 37 26.2	+0.4
MESJ				IAMs_20	IAMs_20	05 39 03.0	
	comp=Z,4µm,31.0s						
MESJ	Messejana	149.29	342	ePKP	PKPbc	04 37 30.3	+0.2
MESJ	Messejana	149.29	342	ePKHKP	PKPpre	04 37 26.2	
PCAN	Candelaria	149.29	14	ePKP	PKPdf	04 37 23.2	-2.6
PPNO	Prainha do Nor	149.34	14	ePKP	PKPdf	04 37 24.8	-1.2
TMAB	Tom-Au,PA,Br	149.38	110	eP	PKPdf	04 37 27.6	+1.0
ADH	Angra Heroismo	149.39	12	ePKP	PKiKP	04 37 31.4	-0.1
PID	Ribeirinha	149.40	13	ePKP	PKPdf	04 37 26.4	+0.4
CHAS	Isla Isabel II	149.41	332	PKP	PKPdf	04 37 24.8	-1.3
PCVE	Castro Verde	149.43	342	ePKP	PKPdf	04 37 26.8	+0.7
WMELI	Melilla	149.54	333	PKP	PKPdf	04 37 24.9	-1.4
PVAQ	Vaqueiros	149.54	341	ePKP	PKPdf	04 37 26.8	+0.6
PVAQ	Vaqueiros	149.54	341	eLR	LR	05 34 21.8	
	comp=Z,4µm,20.0s						
PVAQ	Vaqueiros	149.54	341	PKPdf	PKPdf	04 37 24.4	-1.8
PVAQ				PKPbc	PKPbc	04 37 29.8	-1.0
PTEO	Sao Teotonio	149.72	343	ePKP	PKPdf	04 37 28.0	+1.5
PBDV	Barranco-do-Ve	149.76	342	ePKP	PKPdf	04 37 27.4	+0.8
SFS	San Fernando	149.88	338	PKP	PKPdf	04 37 25.7	-1.1
MORF	Marmelete	149.92	343	ePKPdf	PKPdf	04 37 27.1	+0.2
MORF				IAMs_20	IAMs_20	05 47 08.1	
	comp=E,4µm,25.4s						
MORF	Marmelete	149.92	343	ePKP	PKPdf	04 37 27.1	+0.2
MORF	Marmelete	149.92	343	ePKHKP	PKPpre	04 37 27.1	
GDU01	Guandu, BA	150.05	138	eP	PKPdf	04 37 29.6	+1.9
CEU	Ceuta	150.06	337	PKP	PKPdf	04 37 24.1	-3.0
PFVI	Vila Bisbo	150.13	343	ePKP	PKPdf	04 37 27.6	+0.4
JBK	JBK	150.16	331	P	PKPdf	04 37 29.0	+1.4
PVLZ	Peæn de	150.25	334	PKP	PKPdf	04 37 24.0	-3.4
PSET	Sete Cidades	150.48	10	ePKP	PKPdf	04 37 21.9	-5.9
PCALD	Caldeiras da R	150.55	10	ePKP	PKPbc	04 37 31.7	-1.5
GRON	Grota Negra	150.57	10	ePKP	PKPdf	04 37 30.0	+2.1
CMLA	Cha da Macela	150.57	10	ePKP	PKPdf	04 37 28.1	+0.2
BART	Pico Bartolome	150.62	9	ePKP	PKiKP	04 37 34.0	-0.2
FIGM	Figuig	151.24	327	P	PKPdf	04 37 30.0	+0.7
PSMA	Santa Maria	151.39	10	ePKP	PKPdf	04 37 25.8	-3.3
PSMN	Pico do Norte,	151.39	9	ePKP	PKPdf	04 37 29.4	+0.3
NBPN	Ponto Novo - B	151.63	133	eP	PKPdf	04 37 28.1	-2.1
IFR	Ifrane	152.02	334	PKP	PKPdf	04 37 30.2	-0.2
MDT	Midelt	152.38	332	PKP	PKPdf	04 37 31.6	+0.7
	comp=E,6.9nm,1.0s,baz=73,slow=1.9,SNR=11						
MDT				PKPbc	PKiKP	04 37 37.9	-0.1
	comp=E,36nm,1.0s,baz=62,slow=2.7,SNR=26						
MDT				PKPab	pPKPbc	04 37 48.1	0.0
	comp=E,68nm,0.9s,baz=110,slow=3.2,SNR=32						
MDT	Midelt	152.38	332	P	PKPdf	04 37 32.4	+1.5
ZHG	ZHG	152.71	336	P	PKPdf	04 37 33.0	+1.7
ROSB	Rosrio	152.82	114	eP	PKPdf	04 37 31.6	-0.4
AVE	Averroes	153.14	337	PKP	PKPdf	04 37 31.5	-0.3
NBLA	Lagarto - SE	153.22	137	eP	PKPdf	04 37 32.1	-0.3
TZRR	Tazzarine	154.52	331	P	PKPdf	04 37 35.1	+1.1
NBMA	Muriti-CE	154.97	129	eP	PKPdf	04 37 35.5	+0.4
NBAN	Anadia - AL	155.20	137	eP	PKPdf	04 37 36.5	+1.2
NBPB	Pedra_Branca-C	155.42	125	eP	PKPdf	04 37 36.5	+0.9
PMOZ	Porto Moniz, M	155.93	355	eLR	LR	05 32 01.3	
	comp=E,4µm,22.0s						
NBMO	Morrinhos-CE	156.24	119	eP	PKPdf	04 37 36.8	+0.1
NBCA	Caruaru-PE	156.42	135	eP	PKPdf	04 37 37.0	+0.1
NBRF	Rio Formoso -	156.69	138	eP	PKPdf	04 37 37.0	-0.2
RCBR	Riachuelo	158.13	131	PKP	PKPdf	04 37 39.4	+0.3
	comp=E,20nm,1.0s,baz=296,slow=2.4,SNR=7.5						
RCBR				PKPab	PKPab	04 38 11.7	-1.1
	comp=E,27nm,0.9s,baz=346,slow=4.7,SNR=6.3						
RCBR	Riachuelo	158.13	131	PKPdf	PKPdf	04 37 37.7	-1.4
RCBR	Riachuelo	158.13	131	eP	PKPdf	04 37 39.5	+0.3
TORD	Torodi Ar. Bea	158.79	284	PKP	PKPdf	04 37 39.0	-0.8
	comp=E,17nm,0.8s,baz=37,slow=1.4,SNR=53						
TORD				PKPab	PKPab	04 38 15.1	-0.5
	comp=E,44nm,1.0s,baz=71,slow=3.7,SNR=19						
TORD	Torodi Ar. Bea	158.79	284		PKPdf	04 37 38.4	-1.4
TORD				PKPab	PKPab	04 38 15.0	-0.7
KIC	Kosan Boka	165.24	262	eP	PKPdf	04 37 45.7	-0.7
	comp=E,54nm,1.1s						
DBIC	Dimbokro	165.40	263	PKP	PKPdf	04 37 45.7	-0.9
	comp=E,24nm,1.1s,baz=108,slow=1.2,SNR=5.4						
DBIC				PKPab	PKPab	04 38 44.4	-0.2
	comp=E,7.9nm,0.8s,baz=95,slow=7.7,SNR=4.0						
LIC	Lamto	165.49	261	eP	PKPdf	04 37 46.3	-0.3
	comp=E,36nm,1.0s						
TIC	Toumodi	165.56	263	eP	PKPdf	04 37 41.1	-5.6

EAF 10 04:29:37.3±1.2, 11.°34N×39.°60E, h0km±10km

AAE 10 04:29:41.5±1.3, 11.°15N×39.°61E, h0km±21km, Ethiopia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DESE	Dese	0.05	140	eP	Pg	04 29 41.7	-0.7
DESE				i Sg	Sg	04 29 43.8	+0.8
DESE	Dese	0.05	140	eP	Pg	04 29 41.7	-0.7
DESE				i Sg	Sg	04 29 43.8	+0.8
DESE	Dese	0.05	140	eP	Pg	04 29 41.5	-0.9
DESE				i Sg	Sg	04 29 43.6	+0.6
DESE	Dese	0.05	140	eP	Pg	04 29 41.5	-0.9
DESE				i Sg	Sg	04 29 43.7	+0.7
DESE	Dese	0.05	140	eP	Pg	04 29 41.5	-0.9
DESE				i Sg	Sg	04 29 43.6	+0.6
DESE	Dese	0.05	140	eP	Pg	04 29 41.7	-0.7
DESE				i Sg	Sg	04 29 43.8	+0.8
DESE	Dese	0.05	140	eP	Pg	04 29 41.5	-0.9
DESE				i Sg	Sg	04 29 43.7	+0.7
DESE	Dese	0.05	140	eP	Pg	04 29 41.9	-0.5
DESE				i Sg	Sg	04 29 43.8	+0.8
TEND	Ethiopian Broa	1.51	65	eP	Pn	04 30 02.2	-7.7
TEND				eS	Sg	04 30 22.7	-7.4
TEND	Ethiopian Broa	1.51	65	eP	Pn	04 30 02.2	-7.7
TEND				eS	Sg	04 30 22.7	-7.4
ANKE	Ethiopia-Afar	1.56	175	eP	Pn	04 30 08.6	-2.2
ANKE				eS	Sg	04 30 31.2	-0.4
ANKE	Ethiopia-Afar	1.56	175	eP	Pn	04 30 08.6	-2.2
ANKE				eS	Sg	04 30 31.2	-0.4
ANKE	Ethiopia-Afar	1.56	175	eP	Pn	04 30 08.6	-2.2
ANKE				eS	Sg	04 30 31.2	-0.4
ANKE	Ethiopia-Afar	1.56	175	eP	Pn	04 30 07.9	-2.9
ANKE				eS	Sg	04 30 29.7	-1.9
AAE	Adis Abeba	2.27	201	eP	Pn	04 30 21.5	+0.9
AAE				eS	Sn	04 30 49.2	-0.2
AAE				i Sg	Sb	04 30 52.6	+0.3
AAE	Adis Abeba	2.27	201	eP	Pn	04 30 19.0	-1.5
AAE				i Sg	Sb	04 30 52.0	-0.3
AAE	Adis Abeba	2.27	201	eP	Pn	04 30 20.6	0.0
AAE				eS	Sn	04 30 49.2	-0.2
AAE	Adis Abeba	2.27	201	eP	Pn	04 30 18.7	-1.8
AAE				i Sg	Sb	04 30 52.2	-0.1
FURI	Furi	2.42	202	eP	Pn	04 30 20.5	-2.2
FURI				i Sg	Sb	04 30 57.7	+1.0
FURI	Furi	2.42	202	eP	Pn	04 30 20.5	-2.2
FURI				i Sg	Sb	04 30 57.7	+1.0
FURI	Furi	2.42	202	eP	Pb	04 30 24.8	-1.4
FURI				i Sg	Sb	04 30 57.8	+1.0
FURI	Furi	2.42	202	eP	Pg	04 30 30.9	+2.9
FURI				i Sg	Sb	04 30 57.1	+0.3
FURI	Furi	2.42	202	eP	Pn	04 30 19.9	-2.7
FURI				i Sg	Sb	04 30 57.8	+1.0
FURI	Furi	2.42	202	eP	Pn	04 30 20.5	-2.2
FURI				i Sg	Sb	04 30 57.7	+1.0
FURI	Furi	2.42	202	eP	Pn	04 30 21.3	-1.3
FURI				i Sg	Sb	04 30 57.1	+0.3
FURI	Furi	2.42	202	eP	Pn	04 30 20.5	-2.2
FURI				i Sg	Sb	04 30 57.7	+1.0
ATD	Arta Tunnel	3.20	83	eP	Pn	04 30 31.3	-1.9
ATD				eS	Sn	04 31 12.8	+0.7
ATD	Arta Tunnel	3.20	83	eP	Pn	04 30 31.3	-1.9
ATD				eS	Sn	04 31 09.7	-2.4

INET 10 04:33:00.8±1.1, 12.°84N×87.°03W, h1km±2km, MW4.9
UCR 10 04:33:01.8±2.0, 12.°85N×87.°10W, h13km±7km, ML4.6, mb4.8(NEIC)
NEIC 10 04:33:02.4, 12.°82N×86.°90W, h17km, Moment Tensor Solution. Moment tensor: Scale 10^16 Nm; Mrr 0.20; Mθθ -1.84; Mφφ 1.64; Mrθ -0.94; Mθφ 0.04; Mφr -0.70; Fault plane solution: M0 2.10000×10^16 NP1: φs 227.18000°, δ 88.32000°, λ 33.99000°. NP2: φs 136.04000°, δ 56.02000°, λ 177.97000°. Principal axes: T 1.9643, Plg25.0000°, Azm97.0000°; N 0.2565, Plg56.0000°, Azm230.0000°; P -2.2209, Plg22.0000°, Azm356.0000°;
NEIC 10 04:33:02.4±2.2, 12.°82N±0.°07×86.°90W±0.°06, h10km±1km, mb4.8/220, Mwr4.8/28, Md5.1(SNET) Error ellipse: s-maj=13.2km s-min=7.1km az=220.0
SNET 10 04:33:03.0±1.2, 12.°91N×87.°20W, h6km±9km, ML4.7
IDC 10 04:33:05.8±1.5, 12.°84N×86.°95W, h49km±18km, mb4.1/17, mbtmp4.4/20, ML3.5/3, MS4.8/8, Error ellipse: s-maj=26.6km s-min=9.5km az=49.0
GCG 10 04:33:06.7±2.9, 12.°35N×87.°33W, h116km±391km, MD4.8
ISC 10 04:33:00.3±1.1, 12.°87N±0.°03×87.°02W±0.°03, h5km±7km, n420, σ1§40/354, mb4.8/105, MS5.0/5, 1C-2D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	San Cristobal	0.17	190	Pg	Pg	04 33 04.6	+0.8
CRIN	San Cristobal	0.17	190	eP	Pg	04 33 04.6	+0.8
TELN	Telica	0.32	145	eP	Pg	04 33 07.4	+0.8
CNGN	Cerro Negro	0.48	139	Pg	Pb	04 33 10.7	-0.6
CNGN	Cerro Negro	0.48	139	eP	Pb	04 33 10.9	-0.4
MOMN	Momotombo	0.66	134	eP	Pb	04 33 13.9	-0.4
COPN	Copaltepe	0.80	149	eP	Pg	04 33 15.8	0.0
CNCH	Conchagua	0.89	297	eP	Pg	04 33 16.6	-0.9
CNCH				eS	Sg	04 33 28.4	-0.6
CNCH				IAML		04 33 40.7	
	comp=Z,107µm,0.5s						
CNCH	Conchagua	0.89	297	eP	Pg	04 33 16.6	-0.9
CNCH				eS	Sg	04 33 28.4	-0.6
CNCH				IAML		04 33 40.7	
	comp=Z,107µm,0.5s						
APYN	Apoyeque	0.91	134	eP	Pg	04 33 17.8	0.0
LCND	La Caada	0.95	297	eP	Pg	04 33 17.6	-1.0
LCND				eS	Sg	04 33 29.8	-1.3
LCND				IAML		04 33 36.1	
	comp=Z,50µm,0.5s						
LCND	La Caada	0.95	297	eP	Pg	04 33 17.6	-1.0
LCND				eS	Sg	04 33 29.8	-1.3
LCND				IAML		04 33 36.1	
	comp=Z,50µm,0.5s						
HUEN		0.98	122	eP	Pb	04 33 19.6	-0.2
HUEN				eS	Sn	04 33 34.8	-0.2
TISN	Laguna Tiscapa	1.03	134	eP	Pg	04 33 20.1	0.0
MGAN	Managua	1.04	133	eP	Pg	04 33 20.3	-0.1
MATN	Matagalpa	1.07	87	Pg	Pg	04 33 20.5	-0.4
MATN	Matagalpa	1.07	87	eP	Pg	04 33 20.4	-0.5
WILN	Americas 2	1.08	131	eP	Pg	04 33 21.0	0.0
CRUN	El Crucero	1.13	141	eP	Pg	04 33 21.8	-0.2
TGUH	Tegucigalpa,Un	1.21	348	Pn	Pg	04 33 23.3	-0.3
TGUH	Tegucigalpa,Un	1.21	348	eP	Pg	04 33 23.2	-0.3
TGUH				eS	Sb	04 33 40.1	+0.4
TGUH	Tegucigalpa,Un	1.21	348	eP	Pg	04 33 23.2	-0.3
TGUH				eS	Sb	04 33 40.1	+0.4
TGUH	Tegucigalpa,Un	1.21	348	eP	Pb	04 33 23.7	-0.1
MASN	Masaya	1.22	136	eP	Pg	04 33 23.1	-0.7
VSM	San Miguel	1.34	295	eP	Pn	04 33 24.4	-1.5
VSM	San Miguel	1.34	295	eP	Pn	04 33 24.4	-1.5
LCY	Lacayo	1.36	294	eP	Pn	04 33 24.5	-1.5
LCY				eS	Sb	04 33 41.4	-2.6
LCY	Lacayo	1.36	294	eP	Pn	04 33 24.5	-1.5
LCY				eS	Sb	04 33 41.4	-2.6
BOAB	BOACO BROADBAN	1.39	107		Pn	04 33 25.1	-1.3
BOAB	BOACO BROADBAN	1.39	107	eP	Pn	04 33 25.8	-0.5
PACA	Pacayal	1.40	295	eP	Pn	04 33 26.1	-0.5
PACA	Pacayal	1.40	295	eP	Pn	04 33 26.1	-0.5
PACA	Pacayal	1.40	295	eP	Pn	04 33 26.2	-0.5
COEB	Comit de Eme	1.60	293	eP	Pn	04 33 28.5	-0.8
COEB				IAML		04 33 54.2	
	comp=Z,12µm,0.5s						
COEB	Comit de Eme	1.60	293	eP	Pn	04 33 28.5	-0.8
COEB				IAML		04 33 54.2	
	comp=Z,12µm,0.5s						
COEB	Comit de Eme	1.60	293	eP	Pn	04 33 28.6	-0.8
PQSS	Presa 15 de Se	1.68	297	eP	Pn	04 33 29.6	-0.7
PQSS	Presa 15 de Se	1.68	297	eP	Pn	04 33 29.6	-0.7
SCLA	Alcaldia de Sa	1.86	297	eP	Pn	04 33 32.0	-0.9
SCLA				eS	Sn	04 33 55.4	-1.3
SCLA				IAML		04 34 03.8	
	comp=Z,2µm,0.6s						
SCLA	Alcaldia de Sa	1.86	297	eP	Pn	04 33 32.0	-0.9
SCLA				eS	Sn	04 33 55.4	-1.3
SCLA				IAML		04 34 03.8	
	comp=Z,2µm,0.6s						
CONN	Concepcion	1.88	133	eP	Pn	04 33 33.1	-0.1
COEG	Centro de Oper	1.96	293	eP	Pn	04 33 33.9	-0.4
COEG				IAML		04 33 40.8	
	comp=Z,7µm,0.7s						
COEG	Centro de Oper	1.96	293	eP	Pn	04 33 33.9	-0.4
COEG				IAML		04 33 40.8	
	comp=Z,7µm,0.7s						
ACON	Acoyapa	2.01	116	Pn	Pn	04 33 33.5	-1.5
ACON	Acoyapa	2.01	116	eP	Pn	04 33 33.8	-1.2
PAVA	Las Pavas	2.05	294	eP	Pn	04 33 35.3	-0.2
PAVA				IAML		04 34 11.9	
	comp=Z,5µm,0.4s						
PAVA	Las Pavas	2.05	294	eP	Pn	04 33 35.3	-0.2
PAVA				IAML		04 34 11.9	
	comp=Z,5µm,0.4s						
PAVA	Las Pavas	2.05	294	eP	Pn	04 33 35.7	+0.1
SJTE	Alcalda de S	2.07	291	eP	Pn	04 33 35.5	-0.4
SJTE				eS	Sn	04 34 01.3	-0.8
SJTE	Alcalda de S	2.07	291	eP	Pn	04 33 35.5	-0.4
SJTE				eS	Sn	04 34 01.3	-0.8
LFRS	El Faro	2.12	291	eP	Pn	04 33 36.6	0.0
LFRS	El Faro	2.12	291	eP	Pn	04 33 36.6	0.0
LBRS	Las Brisas	2.15	294	eP	Pn	04 33 36.8	-0.2
LBRS	Las Brisas	2.15	294	eP	Pn	04 33 36.8	-0.2
LFU	La Fuente	2.22	293	eP	Pn	04 33 38.1	+0.2
LFU	La Fuente	2.22	293	eP	Pn	04 33 38.1	+0.2
SNET	Serv Nac Est T	2.30	291	Pn	Pn	04 33 39.2	+0.2
SNET	Serv Nac Est T	2.30	291	eP	Pn	04 33 39.2	+0.2
SNET				IAML		04 34 12.0	
	comp=Z,4µm,0.4s						
SNET	Serv Nac Est T	2.30	291	eP	Pn	04 33 39.2	+0.2
SNET				IAML		04 34 12.0	
	comp=Z,4µm,0.4s						
SNET	Serv Nac Est T	2.30	291	eP	Pn	04 33 40.2	+1.2
LALI	Alcalda de L	2.32	286	eP	Pn	04 33 39.4	+0.2
LALI	Alcalda de L	2.32	286	eP	Pn	04 33 39.4	+0.2
LALI	Alcalda de L	2.32	286	eP	Pn	04 33 39.5	+0.3
BOQS	Boqueron	2.36	292	eP	Pn	04 33 40.8	+0.8
BOQS	Boqueron	2.36	292	eP	Pn	04 33 40.8	+0.8
BUAI	Buenos Aires	2.58	140⇑	eP	Pn	04 33 43.2	+0.4
GBS3	Finca Las Img	2.58	143	eP	Pn	04 33 42.5	-0.6
GBS3				eS	Sn	04 34 14.2	-0.4
BUEV	Buena Vista	2.59	142	eP	Pn	04 33 42.8	-0.3
LAPC	Finca la Perla	2.60	143	eP	Pn	04 33 42.4	-0.7
GPS2	Hotel Rincn d	2.66	142	eP	Pn	04 33 43.7	-0.3
GPS2				eS	Sn	04 34 16.3	-0.4
ESPN	Las Esperanzas	2.74	104	Pn	Pn	04 33 45.0	+0.1
LIM1	Limonal	2.77	141	eP	Pn	04 33 45.2	-0.2
GUAB	Guayabo de Bag	2.77	141	eP	Pn	04 33 45.6	+0.1
GUAB				eS	Sn	04 34 21.1	+1.8
HORNC	Hornillas	2.80	140	eP	Pn	04 33 46.7	+0.8
HORNC				eS	Sn	04 34 20.5	+0.4
ESQI	Esquipulas	2.81	307	Pn	Pb	04 33 49.2	-1.9
COLC	Colonia	2.82	141⇓	eP	Pn	04 33 46.6	+0.5
COLC				eS	Sb	04 34 23.8	-2.4
CUI	Cuipilapa	2.85	140⇓	eP	Pn	04 35 47.2	+0.7
CUI				eS	Sn	04 34 23.2	+1.9
ORTG	Ortega, Santa	2.92	148	Pn	Pn	04 33 47.6	+0.1
ORTG	Ortega, Santa	2.92	148	eP	Pn	04 33 48.0	+0.4
PTEN	Parque Tenorio	2.92	137	eP	Pn	04 33 47.7	+0.1
ACAL	Aguas Claras	2.95	139	eP	Pn	04 33 48.7	+0.7
GUAI	GUAI	2.98	150	eP	Pn	04 33 49.0	+0.8
GUAI				eS	Sn	04 34 26.2	+1.9
SAJU	San Juanillo,	3.07	155	eP	Pn	04 33 49.7	+0.2
DUNO	Dulce Nombre,	3.15	151	Pn	Pn	04 33 50.9	+0.3
JTS	Las Juntas de	3.27	141	P	Pn	04 33 53.1	+0.8
	comp=Z,33nm,0.3s,baz=28,slow=8.2,SNR=41						
JTS				S	Sn	04 34 31.8	+0.3
	comp=Z,168nm,0.3s,baz=23,slow=3.9,SNR=3.8						
	comp=Z,250nm,0.3s						
JTS	Las Juntas de	3.27	141	Pn	Pn	04 33 51.8	-0.5
JTS	Las Juntas de	3.27	141	eP	Pn	04 33 52.3	+0.1
CEDE	Laguna Cedeo	3.28	136	eP	Pn	04 33 53.1	+0.6
CASO	Castillo	3.30	137	eP	Pn	04 33 53.0	+0.3
FORC	Fortuna	3.32	136	eP	Pn	04 33 53.4	+0.5
INDI	Punta indio, G	3.33	153	eP	Pn	04 33 54.1	+0.9
MRL	Marmol	3.39	311	eP	Pb	04 33 59.6	-1.5
MRL				eS	Sb	04 34 43.4	+0.6
NBG	Las Nubes	3.66	298	eP	Pn	04 34 03.1	-2.5
NBG				eS	Sb	04 34 52.9	+2.5
LAFE	Finca La Fe, P	3.68	146	eP	Pn	04 33 59.0	+1.1
SRA1	San Ramn	3.72	138	eP	Pn	04 33 59.8	+1.2
PCG	Pacaya	3.80	294	eP	Pn	04 34 03.9	+4.1
FUG	Fuego 3	4.03	293	eP	Pn	04 33 58.3	-4.6
FUG				eS	Sn	04 34 53.1	+2.5
CVTR	Volcan Turrial	4.27	131	Pn	Pn	04 34 06.0	-0.4
RIMA	Rio Macho	4.37	135	Pn	Pn	04 34 08.0	+0.4
RIMA	Rio Macho	4.37	135	eP	Pn	04 34 09.5	+1.9
BATAN	Batan	4.51	127	Pn	Pn	04 34 09.3	0.0
CDM	Cerro de Muert	4.59	136	eP	Pn	04 34 12.0	+1.2
PEZE	Perez Zeledon,	4.77	136	Pn	Pn	04 34 13.2	+0.2
PEZE	Perez Zeledon,	4.77	136	eP	Pn	04 34 14.5	+1.5
STG3	Santiaguito 3,	4.78	293	eP	Pn	04 34 16.4	+3.1
STG3				eS	Sn	04 35 11.6	+2.4
RTAL	Retalhuleu	4.83	290	Pn	Pn	04 34 15.1	+1.3
PETF	Flores	4.87	326	Pn	Pn	04 34 15.7	+1.4
HUEH	Huehuetenango	4.98	300	Pn	Pn	04 34 19.7	+3.7
SRBA	San Rafael, Bu	5.10	135	Pn	Pn	04 34 17.4	-0.1
SRBA	San Rafael, Bu	5.10	135	eP	Pn	04 34 18.4	+0.9
DRK0	Durika	5.16	134	Pn	Pn	04 34 18.4	0.0
EDBA	Buenos Aires	5.21	135	eP	Pn	04 34 22.0	+3.1
PRVC	Isla de Provid	5.53	84	Pn	Pn	04 34 22.9	-0.5
BRU2	Volcan	5.87	133	Pn	Pn	04 34 29.4	+1.2
BRU2	Volcan	5.87	133	eP	Pn	04 34 31.0	+2.8
CDITO	Canoas	5.90	136	Pn	Pn	04 34 29.9	+1.5
BCIP	Isla Barro Col	7.95	117	Pn	Pn	04 34 55.6	-1.1
BCIP	Isla Barro Col	7.95	117	eP	Pn	04 34 54.1	-2.6
CACAO	El Cacao, Vera	8.18	132	eP	Pn	04 35 04.6	+4.9
AZU	Azuero	8.34	127	eP	Pn	04 35 04.6	+2.7
CMIG	Matias Romero	8.68	300	P	Pn	04 35 08.8	+2.2
	comp=Z,1.1nm,0.3s,baz=93,slow=9.6,SNR=28						
CMIG				S	Sn	04 36 47.0	+2.0
	comp=Z,19nm,0.9s,baz=118,slow=21,SNR=1.4						
CMIG				LR	LR	04 38 34.1	
	comp=Z,2µm,18.8s,baz=130,slow=38						
	comp=Z,25nm,0.9s						
SOR	Soroa	10.58	21	Pn	Pn	04 35 32.7	0.0
SJCC	San Jacinto, C	11.98	103	Pn	Pn	04 35 50.1	-1.9
SJCC	San Jacinto, C	11.98	103	eP	Pn	04 35 53.6	+1.7
DBBC	Dabeiba	12.13	118	eP	Pn	04 35 54.6	+0.6
CBOC	Ciudad Bolivar	12.90	122	eP	Pn	04 36 13.8	+9.2
PLMC	San Jos del P	13.23	126	eP	Pn	04 36 09.9	+0.9
GTBY	Guantanamo Bay	13.40	57	Pn	Pn	04 36 12.4	+1.1
LL6C	La Loma 6 Bece	13.84	102	eP	P	04 36 32.0	+6.2
PTBC	PUERTO BERRIO,	13.89	116	eP	P	04 36 22.4	-3.9
NORC	Norcasia	14.01	120	eP	P	04 36 26.3	-1.6
OCAC	Ocana	14.23	108	Pn	Pn	04 36 25.2	+2.4
OCAC	Ocana	14.23	108	eP	P	04 36 31.1	+0.7
POPC	Popayan, Colom	14.50	134	eP	Pn	04 36 29.2	+2.6
SPBC	San Pablo de B	14.65	118	eP	P	04 36 34.9	0.0
ORTC	Ortega, Tolima	14.65	126	eP	P	04 36 35.9	+1.0
SOTA	Rioblanco	14.83	135	eP	P	04 36 34.9	-2.5
ROSC	El Rosal	14.86	121	P	Pn	04 36 34.2	+2.6
	comp=Z,0.6nm,0.3s,baz=298,slow=16,SNR=9.9						
ROSC				LR	LR	04 42 23.1	
	comp=Z,1µm,19.6s,baz=332,slow=38						
	comp=Z,3.2nm,0.4s						
ROSC	El Rosal	14.86	121	P	P	04 36 35.5	-2.1
PRAC	Prado	15.05	126	eP	P	04 36 39.7	+0.3
TULM	Tulcn-Chalpat	15.15	142	IAmb	IAmb	04 37 04.0	
	comp=Z,34nm,0.9s						
OTAV	Otavalo	15.16	145		Pn	04 36 33.5	-2.1
RUSC	La Rusia	15.39	115	eP	P	04 36 45.5	+1.9
CHIC	Chingaza	15.47	121	eP	P	04 36 43.6	-0.8
SLOR	San Lorenzo -	15.94	147		Pn	04 36 47.7	+1.7
SDDR	Presa de Saban	16.30	66		Pn	04 36 48.6	-1.5
PORT	Chimborazo Vol	16.43	150	Pn	Pn	04 36 50.0	-2.3
PORT				IAmb	IAmb	04 37 16.8	
	comp=Z,103nm,1.3s						
SDV	Santo Domingo	16.57	102	LR	LR	04 43 30.1	
	comp=Z,2µm,20.8s,baz=298,slow=38						
SDV	Santo Domingo	16.57	102		Pn	04 36 50.4	-3.4
SDV				IAmb	IAmb	04 37 04.2	
	comp=Z,130nm,1.3s						
BRAL	Brewton	18.21	360		P	04 37 15.2	+1.0
BRAL				IAmb	IAmb	04 37 17.8	
	comp=Z,47nm,0.7s						
352A	Blakely	18.62	6	P	Pn	04 37 19.8	+0.9
352A				IAmb	IAmb	04 37 23.5	
	comp=Z,102nm,1.4s						
TIGA	Tifton	18.75	9	P	Pn	04 37 22.6	+2.0
TIGA				IAmb	IAmb	04 37 24.9	
	comp=Z,86nm,1.2s						
TIGA	Tifton	18.75	9	P	P	04 37 22.7	+2.2
	baz=190						
344A	Westbrook Farm	18.81	350	P	Pn	04 37 25.1	+3.9
344A				IAmb	IAmb	04 37 26.4	
	comp=Z,113nm,1.3s						
HKT	Hockley	18.86	336	P	Pn	04 37 23.6	+1.8
HKT				IAmb	IAmb	04 37 40.0	
	comp=Z,70nm,1.5s						
342A	Flagon Creek P	19.05	346	P	Pn	04 37 26.6	+2.4
342A				IAmb	IAmb	04 37 28.6	
	comp=Z,60nm,1.1s						
833A	Chaparral WMA,	19.23	325	IAmb	IAmb	04 37 32.0	
	comp=Z,66nm,1.2s						
833A	Chaparral WMA,	19.23	325	P	Pn	04 37 26.8	+0.5
	baz=141,SNR=11						
VBMS	Vicksburg	19.52	351	P	Pn	04 37 31.1	+1.3
VBMS	Vicksburg	19.52	351	P	Pn	04 37 32.3	+2.5
	baz=170						

154A **Montrose** 19.98 10 P Pn 04 37 34.6 -0.6
154A IAmb IAmb 04 37 39.0
comp=Z,46nm,1.1s
NATX **Nacogdoches** 20.07 341 P Pn 04 37 38.0 +1.6
NATX **Nacogdoches** 20.07 341 P Pn 04 37 38.1 +1.8
baz=158
LRAL **Lakeview Retre** 20.07 0 IAmb IAmb 04 37 43.8
comp=Z,41nm,0.9s
LRAL **Lakeview Retre** 20.07 0 P Pn 04 37 37.9 +1.5
baz=180
Z47A **Carrollton** 20.26 357 IAmb IAmb 04 37 44.5
comp=Z,44nm,1.0s
435B **Jarrell** 20.32 333 P Pn 04 37 39.3 -0.1
435B **Jarrell** 20.32 333 P Pn 04 37 40.4 +1.1
baz=149
GOGA **Godfrey** 20.70 8 P Pn 04 37 44.4 +0.6
baz=189
SJG **San Juan** 20.77 73 LR LR 04 45 51.1
comp=Z,2µm,20.3s,baz=278,slow=37
Y49A **Blount Mountai** 20.90 1 IAmb IAmb 04 37 54.4
comp=Z,77nm,1.5s
Z41A **Richland Creek** 20.97 346 IAmb IAmb 04 37 57.0
comp=Z,39nm,0.9s
Z41A **Richland Creek** 20.97 346 P Pn 04 37 47.4 +0.5
baz=164
NHSC **New Hope** 21.09 16 P **P** **04 37 48.5 +2.9**
baz=198
JCT **Junction City** 21.14 328 P **P** **04 37 48.4 +2.2**
baz=143
CCAR **Cane Creek** 21.39 349 IAmb IAmb 04 38 00.7
comp=Z,88nm,1.3s
WLAR **White Oak Lake** 21.45 346 IAmb IAmb 04 37 56.6
comp=Z,42nm,1.1s
X48A **Hartselle** 21.49 360 IAmb IAmb 04 38 01.1
comp=Z,30nm,0.9s
FPAL **Fort Paine** 21.61 3 P **P** **04 37 54.0 +2.7**
FPAL IAmb IAmb 04 38 00.2
comp=Z,47nm,1.2s
ATAH **Atahualpa** 21.64 156 P **P** **04 37 52.5 +0.4**
comp=Z,8.8nm,1.0s,baz=115,slow=3.6,SNR=4.2
ATAH LR LR 04 45 14.9
comp=Z,2µm,20.2s,baz=325,slow=34
comp=Z,8.8nm,1.0s
OXF **Oxford** 21.66 355 P **P** **04 37 54.7 +3.0**
baz=173
X40A **Basin Creek Fa** 22.16 347 P **P** **04 37 59.2 +2.0**
baz=165
SWET **Sewanee** 22.27 2 IAmb IAmb 04 38 03.6
comp=Z,27nm,1.0s
W45A **Hickory Valley** 22.28 355 P **P** **04 38 00.3 +1.9**
W45A IAmb IAmb 04 38 06.0
comp=Z,45nm,0.9s
W50A **Signal Mountai** 22.29 4 IAmb IAmb 04 38 03.2
comp=Z,22nm,0.8s
BG3 **Lake Jocassee** 22.34 9 IAmb IAmb 04 38 12.3
comp=Z,40nm,1.2s
UALR **University of** 22.34 348 P **P** **04 38 01.0 +1.9**
MIAR **Mount Ida** 22.39 346 P **P** **04 38 01.1 +1.6**
baz=163,SNR=6.5
Z35A **Perchaven, San** 22.41 337 IAmb IAmb 04 38 09.4
comp=Z,30nm,0.7s
TX32 **Lajitas Array** 22.53 319 IAmb IAmb 04 38 08.6
comp=Z,39nm,1.2s
TXAR **Lajitas Array** 22.53 319 P **P** **04 38 01.4 +0.1**
comp=Z,2.4nm,0.7s,baz=140,slow=6.8,SNR=18
comp=Z,2.4nm,0.7s
TXAR **Lajitas Array** 22.53 319 P **P** **04 38 02.3 +1.1**
CPCT **Cooper Cave** 22.59 5 IAmb IAmb 04 38 06.8
comp=Z,24nm,0.9s
W41B **Gary Mavity, V** 22.70 349 P **P** **04 38 04.7 +1.8**
baz=166
V48A **Smith Brothers** 22.77 0 IAmb IAmb 04 38 07.5
comp=Z,48nm,1.1s
ABTX **Abilene, Hawle** 22.81 332 P **P** **04 38 05.6 +1.5**
ABTX IAmb IAmb 04 38 18.7
comp=Z,26nm,1.1s
ABTX **Abilene, Hawle** 22.81 332 P **P** **04 38 06.1 +1.9**
baz=147
WHAR **Wooly Hollow** 22.83 349 IAmb IAmb 04 38 07.6
comp=Z,29nm,1.1s
TKL **Tuckaleechee C** 22.88 7 P **P** **04 38 06.7 +1.9**
comp=Z,39nm,1.1s,baz=186,slow=7.1,SNR=12
comp=Z,39nm,1.1s
X37A **Clayton** 22.91 342 IAmb IAmb 04 38 08.4
comp=Z,53nm,1.0s
V51A **Loudon** 22.96 6 IAmb IAmb 04 38 10.3
comp=Z,52nm,1.1s
W39A **Magazine** 23.06 346 P **P** **04 38 08.1 +1.4**
W39A IAmb IAmb 04 38 24.6
comp=Z,26nm,1.2s
W39A **Magazine** 23.06 346 P **P** **04 38 08.3 +1.7**
baz=163,SNR=5.9
V52A **Serverville** 23.08 7 IAmb IAmb 04 38 18.2
comp=Z,54nm,1.4s
WVT **Waverly** 23.17 358 P **P** **04 38 09.1 +1.2**
WVT IAmb IAmb 04 38 10.4
comp=Z,29nm,1.2s
WVT **Waverly** 23.17 358 P **P** **04 38 09.6 +1.8**
baz=178
FCAR **Ozark Folk Cen** 23.38 350 IAmb IAmb 04 38 11.8
comp=Z,19nm,0.9s
LCAR **Lake Charles** 23.40 352 IAmb IAmb 04 38 12.1
comp=Z,29nm,1.1s
U49A **Red Boiling Sp** 23.57 3 IAmb IAmb 04 38 15.0
comp=Z,26nm,0.8s
TZTN **Tazewell** 23.78 7 P **P** **04 38 15.5 +1.6**
TZTN IAmb IAmb 04 38 22.6
comp=Z,69nm,1.4s
TZTN **Tazewell** 23.78 7 P **P** **04 38 15.8 +1.9**
baz=188,SNR=5.6
V58A **Windy Hill, Pi** 23.91 16 IAmb IAmb 04 38 18.6
comp=Z,28nm,0.9s
U40A **Yellville** 23.97 348 P **P** **04 38 16.6 +0.9**
baz=166
PBMO **Poplar Bluff** 24.00 353 IAmb IAmb 04 38 31.7
comp=Z,24nm,0.9s
T45A **Paducah** 24.09 357 P **P** **04 38 18.1 +1.2**
T50A **Nancy** 24.13 4 IAmb IAmb 04 38 20.2
comp=Z,16nm,0.8s
HHAR **Hobbs** 24.13 346 IAmb IAmb 04 38 20.6
comp=Z,20nm,1.1s
WMOK **Wichita Mounta** 24.24 336 P **P** **04 38 19.4 +1.1**
baz=151,SNR=6.8
TUL1 **Leonard** 24.27 342 P **P** **04 38 20.1 +1.6**
baz=159,SNR=29
S44A **Carbondale** 24.80 356 IAmb IAmb 04 38 25.4
comp=Z,24nm,0.9s
SIUC **Southern Illin** 24.82 356 P **P** **04 38 23.9 +0.5**
SIUC IAmb IAmb 04 38 25.6
comp=Z,31nm,1.1s
S51A **Beattyville** 24.86 6 IAmb IAmb 04 38 27.2
comp=Z,37nm,0.9s
T57A **Hurt** 25.02 15 IAmb IAmb 04 38 29.4
comp=Z,29nm,1.2s
MNTX **Cornudas Mount** 25.22 321 IAmb IAmb 04 38 32.8
comp=Z,41nm,1.4s
MNTX **Cornudas Mount** 25.22 321 P **P** **04 38 28.2 +1.0**
baz=134,SNR=11
S39A **Bolivar** 25.35 348 IAmb IAmb 04 38 29.6
comp=Z,16nm,0.8s
CCM **Cathedral Cave** 25.36 352 P **P** **04 38 27.6 -0.8**
CCM IAmb IAmb 04 38 30.5
comp=Z,30nm,1.1s
CCM **Cathedral Cave** 25.36 352 P **P** **04 38 29.2 +0.8**
baz=170
R49A **Shelbyville** 25.37 3 IAmb IAmb 04 38 31.2
comp=Z,41nm,1.2s
T35A **Sooner Cattle** 25.41 342 IAmb IAmb 04 38 32.0
comp=Z,23nm,0.9s
MSTX **Muleshoe** 25.43 328 IAmb IAmb 04 38 37.7
comp=Z,21nm,0.9s
MSTX **Muleshoe** 25.43 328 P **P** **04 38 29.9 +0.7**
baz=142
AMTX **Amarillo** 25.63 331 IAmb IAmb 04 38 36.8
comp=Z,32nm,1.3s
AMTX **Amarillo** 25.63 331 P **P** **04 38 32.2 +1.3**
baz=145
Q44A **Meyer Farm, Va** 25.99 356 IAmb IAmb 04 38 35.9
comp=Z,26nm,0.8s
R55A **Marlinton** 26.05 12 IAmb IAmb 04 38 38.6
comp=Z,30nm,1.2s
Q51A **Peebles** 26.25 6 P **P** **04 38 38.1 +1.6**
P49A **Miami Univ. Ec** 26.64 4 P **P** **04 38 41.3 +1.3**
baz=185,SNR=6.3
P51A **Williamsport** 26.74 7 IAmb IAmb 04 38 43.9
comp=Z,26nm,0.9s
P53A **Whipple** 26.98 10 IAmb IAmb 04 38 46.7
comp=Z,34nm,1.1s

P52A **Corning** 27.01 8 IAmb IAmb 04 38 46.4
comp=Z,34nm,0.9s
P52A **Corning** 27.01 8 P **P** **04 38 45.2 +1.9**
baz=190,SNR=6.3
P38A **Dawn** 27.26 349 IAmb IAmb 04 38 46.6
comp=Z,20nm,0.8s
121A **Cookes Peak, D** 27.29 319 P **P** **04 38 47.7 +1.6**
baz=131
O49A **Covington** 27.32 4 IAmb IAmb 04 38 48.5
comp=Z,30nm,0.9s
O48B **Farmland** 27.33 3 P **P** **04 38 47.5 +1.4**
baz=184
SFIN **Lafayette** 27.40 360 P **P** **04 38 47.9 +1.1**
baz=180
ACSO **Alum Creek Sta** 27.49 7 P **P** **04 38 48.5 +1.0**
ACSO **Alum Creek Sta** 27.49 7 P **P** **04 38 49.7 +2.2**
baz=188,SNR=7.1
HDIL **Hopedale** 27.65 356 P **P** **04 38 50.3 +1.3**
baz=175
O53A **New Philadelph** 27.75 10 IAmb IAmb 04 38 53.2
comp=Z,24nm,0.9s
O53A **New Philadelph** 27.75 10 P **P** **04 38 51.9 +2.0**
baz=192,SNR=6.4
N49A **Columbus Grove** 28.06 5 P **P** **04 38 54.1 +1.5**
ANMO **Albuquerque** 28.16 325 P **P** **04 38 54.6 +0.7**
comp=Z,2.9nm,0.9s,baz=163,slow=10.0,SNR=3.4
comp=Z,2.9nm,0.9s
ANMO **Albuquerque** 28.16 325 P **P** **04 38 55.1 +1.3**
ANMO **Albuquerque** 28.16 325 P **P** **04 38 55.6 +1.8**
baz=137
N51A **Ashland** 28.24 7 IAmb IAmb 04 38 56.9
comp=Z,26nm,1.0s
N53A **Lisbon** 28.35 10 IAmb IAmb 04 38 58.3
comp=Z,30nm,1.1s
SSPA **Standing Stone** 28.80 15 P **P** **04 39 01.6 +2.3**
baz=198
M53A **WI Miller and** 29.00 10 IAmb IAmb 04 39 04.1
comp=Z,24nm,0.9s
M53A **WI Miller and** 29.00 10 P **P** **04 39 03.0 +2.0**
baz=192
L40A **Anamosa** 29.31 354 IAmb IAmb 04 39 05.0
comp=Z,15nm,1.0s
AAM **Ann Arbor** 29.47 5 P **P** **04 39 07.2 +2.0**
baz=186
KSCO **Kaye Shedlock'** 29.48 335 P **P** **04 39 07.7 +2.2**
baz=148
SDCO **Great Sand Dun** 29.76 330 P **P** **04 39 09.8 +1.6**
baz=142
ERPA **Erie** 29.78 11 P **P** **04 39 09.9 +2.0**
baz=194
JFWS **Jewell Farm** 30.07 355 P **P** **04 39 11.0 +0.5**
baz=174
BINY **Binghamton** 30.76 16 P **P** **04 39 18.5 +1.9**
baz=201
OGNE **Ogallala** 30.91 338 P **P** **04 39 20.3 +2.2**
baz=150
MVCO **Mesa Verde** 30.93 325 P **P** **04 39 20.1 +1.6**
baz=136
I42A **Draeger Farm,** 30.95 357 IAmb IAmb 04 39 19.8
comp=Z,19nm,1.1s
WUAZ **Wupatki** 31.49 320 IAmb IAmb 04 39 30.0
comp=Z,12nm,1.0s
WUAZ **Wupatki** 31.49 320 P **P** **04 39 25.6 +2.2**
baz=30
GLMI **Grayling** 31.91 3 P **P** **04 39 27.8 +1.0**
baz=184
PDMCI **Parker Dam,Lak** 32.58 316 P **P** **04 39 33.6 +0.9**
baz=124
SPMN **Marine on St.** 32.62 352 P **P** **04 39 33.0 +0.1**
SPMN IAmb IAmb 04 39 33.6
comp=Z,12nm,0.8s
SPMN **Marine on St.** 32.62 352 P **P** **04 39 33.0 +0.1**
baz=169
O20A **White River Ci** 32.96 329 IAmb IAmb 04 39 42.5
comp=Z,9.1nm,0.9s
O20A **White River Ci** 32.96 329 P **P** **04 39 38.1 +1.8**
baz=140
COWI **Conover** 33.17 357 IAmb IAmb 04 39 38.7
comp=Z,10nm,0.8s
LONY **Lake Ozonia** 33.38 16 P **P** **04 39 41.6 +2.0**
baz=202,SNR=5.8
E43A **Lone Tree Farm** 33.40 0 IAmb IAmb 04 39 50.5
comp=Z,25nm,1.4s
P18A **Preston Nutter** 33.62 327 P **P** **04 39 44.9 +2.8**
P18A IAmb IAmb 04 39 48.7
comp=Z,12nm,1.2s
P17A **Butcher Ranch,** 33.78 326 IAmb IAmb 04 39 49.8
comp=Z,11nm,1.1s
E38A **The Farm, Brul** 33.84 354 IAmb IAmb 04 39 44.5
comp=Z,22nm,0.9s
GMRC **Granite Mounta** 33.88 315 P **P** **04 39 46.3 +2.0**
baz=123
K22A **Casper** 34.15 334 P **P** **04 39 48.1 +1.6**
baz=144
RSSD **Black Hills** 34.40 338 P **P** **04 39 50.9 +2.1**
baz=150
GSC **Goldstone, Bar** 34.95 315 P **P** **04 39 54.6 +1.1**
baz=122
EYMN **Ely** 35.17 355 P **P** **04 39 55.2 +0.1**
baz=172
DUG **Dugway, Tooele** 35.43 325 P **P** **04 39 58.7 +1.1**
baz=133
TPNV **Topopah Spring** 35.49 318 P **P** **04 39 59.6 +1.4**
TPNV IAmb IAmb 04 40 05.2
comp=Z,10nm,1.0s
TPNV **Topopah Spring** 35.49 318 P **P** **04 40 00.1 +1.9**
baz=125
S11A **Rachel** 35.57 319 IAmb IAmb 04 40 06.1
comp=Z,17nm,0.9s
PDAR **Pinedale Array** 35.61 331 P **P** **04 39 59.4 +0.1**
comp=Z,0.5nm,0.6s,baz=146,slow=6.6,SNR=3.1
comp=Z,0.5nm,0.6s
HWUT **Hardware Ranch** 35.74 328 IAmb IAmb 04 40 09.0
comp=Z,10nm,0.9s
MPMC **Manual Prospec** 35.83 315 P **P** **04 40 02.1 +1.0**
baz=122
R11A **Troy Canyon, C** 35.89 320 P **P** **04 40 02.9 +1.3**
baz=127
BGU **Big Grassy Mou** 36.05 326 IAmb IAmb 04 40 09.5
comp=Z,12nm,1.2s
AGMN **Agassiz Nation** 36.08 350 IAmb IAmb 04 40 09.5
comp=Z,14nm,1.1s
AGMN **Agassiz Nation** 36.08 350 P **P** **04 40 03.0 +0.1**
baz=165
MDND **Maddock** 36.42 346 P **P** **04 40 06.3 +0.4**
baz=159
SNOW **Snow King Moun** 36.71 331 P **P** **04 40 10.1 +1.5**
SNOW IAmb IAmb 04 40 20.6
comp=Z,23nm,1.2s
TPH **Tonopah** 36.77 318 IAmb IAmb 04 40 15.7
comp=Z,30nm,1.2s
TPAW **Teton Pass** 36.82 330 IAmb IAmb 04 40 15.1
comp=Z,14nm,1.1s
RLMT **Red Lodge** 37.31 334 P **P** **04 40 14.2 +0.4**
baz=142
H17A **Grant Village** 37.33 332 P **P** **04 40 15.6 +1.7**
baz=140
LAO **LASA Array** 37.39 338 IAmb IAmb 04 40 18.7
comp=Z,24nm,1.4s
LAO **LASA Array** 37.39 338 P **P** **04 40 15.2 +1.0**
baz=148
NVAR **Mina Array Bea** 37.67 318 P **P** **04 40 18.4 +1.6**
comp=Z,4.7nm,0.8s,baz=127,slow=7.7,SNR=12
comp=Z,4.7nm,0.8s
KVN **Kaiserville** 37.89 319 P **P** **04 40 19.7 +1.0**
ULM **Lac du Bonnet** 37.97 351 P **P** **04 40 17.6 -1.4**
comp=Z,5.2nm,0.8s,baz=164,slow=9.4,SNR=4.0
comp=Z,5.2nm,0.8s
BMN **Battle Mountai** 38.16 322 IAmb IAmb 04 40 27.4
comp=Z,15nm,1.1s
DGMT **Dagmar** 38.26 341 P **P** **04 40 22.8 +1.3**
baz=152
SIV **San Ignacio** 38.48 137 P **P** **04 40 21.4 -2.3**
comp=Z,8.0nm,1.1s,baz=324,slow=12,SNR=14
comp=Z,8.0nm,1.1s
HLID **Hailey** 38.61 328 P **P** **04 40 24.7 0.0**
baz=134
BOZ **Bozeman (W)** 38.73 332 P **P** **04 40 26.9 +1.3**
baz=140,SNR=9.7
WVOR **Wild Horse Val** 40.22 323 IAmb IAmb 04 40 43.9
comp=Z,17nm,1.1s
MSO **Missoula** 40.72 332 P **P** **04 40 42.5 +0.4**
baz=137
L04D **Klamath Falls** 42.31 320 P **P** **04 40 55.1 -0.2**
baz=123
NEW **Newport** 43.25 331 P **P** **04 41 03.8 +1.1**
baz=134
I04A **Tendick Farm,** 43.25 322 P **P** **04 41 03.4 +0.7**
baz=124
I04A **Tendick Farm,** 43.25 322 S **P** **04 41 03.5 +0.7**
baz=255
G05D **Wamic, OR** 43.46 325 P **P** **04 41 05.8 +1.3**
baz=127
E07A **Sunnyside** 43.48 327 IAmb IAmb 04 41 10.2
comp=Z,23nm,1.2s
H04A **Detroit Lake** 43.63 323 P **P** **04 41 06.5 +0.7**
H04A IAmb IAmb 04 41 11.0
comp=Z,8.5nm,0.8s
I03D **Drain, OR** 43.76 322 P **P** **04 41 07.8 +1.0**
baz=123
B08A **Colville Reser** 44.39 329 P **P** **04 41 12.4 +0.5**
G03D **McMinnville, O** 44.56 323 P **P** **04 41 16.2 +3.0**
baz=125
SCHQ **Schefferville** 44.76 16 P **P** **04 41 12.8 -1.8**
comp=Z,6.6nm,0.8s,baz=222,slow=5.7,SNR=9.3
comp=Z,6.6nm,0.8s
SCHQ **Schefferville** 44.76 16 P **P** **04 41 15.1 +0.4**
SCHQ IAmb IAmb 04 41 27.3
comp=Z,22nm,1.2s
B06A **Marblemount** 45.58 328 IAmb IAmb 04 41 26.4
comp=Z,20nm,1.0s
D03D **Eldon** 45.82 326 P **P** **04 41 25.5 +2.3**
baz=127
NLWA **Neilton Lookou** 46.16 326 IAmb IAmb 04 41 32.0
comp=Z,15nm,1.1s
YKA **Yellowknife Ar** 53.32 344 P **P** **04 42 20.2 0.0**
comp=Z,12nm,1.0s,baz=136,slow=7.8,SNR=50
comp=Z,12nm,1.0s
YKA **Yellowknife Ar** 53.32 344 P **P** **04 42 19.8 -0.4**
T35M **Bob Quinn** 54.95 333 P **P** **04 42 33.1 +0.9**
baz=125
CRAG **Craig** 55.46 330 P **P** **04 42 36.7 +0.9**
baz=121
PLCA **Paso Flores** 55.47 165 P **P** **04 42 35.6 -0.6**
comp=Z,10nm,1.1s,baz=337,slow=8.7,SNR=3.8
comp=Z,10nm,1.1s
PLCA **Paso Flores** 55.47 165 P **P** **04 42 36.8 +0.7**
PLCA IAmb IAmb 04 42 41.4
comp=Z,14nm,1.1s
DLBC **Dease Lake** 55.71 334 P **P** **04 42 38.7 +1.0**
comp=Z,18nm,1.1s,baz=118,slow=6.3
comp=Z,18nm,1.1s
DLBC **Dease Lake** 55.71 334 P **P** **04 42 38.9 +1.1**
baz=126
MMPY **Sheldon Lake,** 58.72 338 P **P** **04 43 00.0 +1.1**
baz=127
O30N **Mendenhall** 59.58 335 P **P** **04 43 04.6 -0.2**
baz=121
M31M **Drury Creek, Y** 59.66 336 P **P** **04 43 05.9 +0.5**
baz=124
COYC **Coyhaique** 59.72 168 P **P** **04 43 05.0 -0.8**
N31M **Braeburn, Yuko** 59.82 335 P **P** **04 43 07.6 +1.1**
baz=122
HYT **Haines Junctio** 60.20 334 P **P** **04 43 09.6 +0.3**
baz=120
N30M **Aishikik Lake** 60.35 335 P **P** **04 43 10.6 +0.4**
baz=121
M30M **Minto, Yukon** 60.81 336 P **P** **04 43 13.3 +0.1**
baz=121
C36M **Paulatuk** 61.12 346 P **P** **04 43 14.7 -0.4**
baz=138
YUK8 **Steele Glacier** 61.39 334 P **P** **04 43 18.2 +0.8**
baz=118
YUK3 **Moose Creek** 61.91 334 P **P** **04 43 21.4 +0.5**
baz=117
RES **Resolute Bay** 61.96 358 P **P** **04 43 20.7 -0.1**
RES IAmb IAmb 04 43 26.7
comp=Z,11nm,1.0s
DAWY **Dawson** 62.58 337 P **P** **04 43 24.2 -0.9**
baz=120
EPYK **Eagle Plains** 62.82 340 P **P** **04 43 26.8 +0.1**
baz=123
INK **Inuvik** 62.94 342 P **P** **04 43 27.1 -0.3**
INK **Inuvik** 62.94 342 P **P** **04 43 27.6 +0.2**
baz=127
BCAR **Beaver Creek A** 63.05 335 P **P** **04 43 28.3 -0.1**
L27K **Beaver Creek,** 63.06 335 IAmb IAmb 04 43 34.1
comp=Z,16nm,1.4s
L27K **Beaver Creek,** 63.06 335 P **P** **04 43 28.5 0.0**
baz=117
A36M **Sachs Harbour** 63.34 348 P **P** **04 43 30.2 +0.2**
baz=137
K27K **Chicken** 63.60 336 IAmb IAmb 04 43 37.7
comp=Z,8.8nm,1.5s
K27K **Chicken** 63.60 336 P **P** **04 43 32.3 +0.4**
baz=117
N25K **Chitina, Valde** 63.62 333 P **P** **04 43 32.5 +0.3**
baz=113
ICESG **Greenland Ices** 63.66 17 *i* P **P** **04 43 31.8 -0.9**
ICESG IAmb IAmb 04 43 42.4
comp=Z,8.1nm,0.8s
L26K **Log Cabin Wild** 63.67 335 P **P** **04 43 32.8 +0.3**
baz=115
SCRK **Sand Creek** 64.33 336 P **P** **04 43 37.8 +0.9**
baz=115
J26L **Joseph Creek** 64.39 336 IAmb IAmb 04 43 43.2
comp=Z,13nm,1.2s
J26L **Joseph Creek** 64.39 336 P **P** **04 43 38.8 +1.6**
baz=116
PAX **Paxson** 64.53 334 P **P** **04 43 39.7 +1.5**
baz=113
RIDG **Independent Ri** 64.58 335 P **P** **04 43 39.1 +0.6**
baz=114
J25K **Salcha River,** 65.15 336 IAmb IAmb 04 43 49.9
comp=Z,10.0nm,1.4s
J25K **Salcha River,** 65.15 336 P **P** **04 43 42.4 +0.3**
baz=114
WAT6 **Susitna Watana** 65.36 334 P **P** **04 43 44.1 +0.4**
baz=111
HDA **Harding Lake** 65.70 336 IAmb IAmb 04 43 51.5
comp=Z,15nm,1.3s
HDA **Harding Lake** 65.70 336 P **P** **04 43 45.6 0.0**
baz=112
IL31 65.81 336 P **P** **04 43 46.5 +0.2**
IL31 IAmb IAmb 04 43 51.5
comp=Z,15nm,1.4s
ILAR **Eielson Array** 65.81 336 P **P** **04 43 46.3 0.0**
comp=Z,3.3nm,1.0s,baz=155,slow=4.7,SNR=11
comp=Z,3.3nm,1.0s
SUMG **Summit** 66.08 14 P **P** **04 43 49.2 +0.7**
SUMG **Summit** 66.08 14 *i* P **P** **04 43 49.0 +0.6**
SUMG IAmb IAmb 04 43 52.8
comp=Z,20nm,1.1s
SUA **Susitna One** 66.33 332 P **P** **04 43 46.4 -3.5**
baz=107
H24K **Noodor Dome** 66.60 337 IAmb IAmb 04 43 52.9
comp=Z,9.1nm,1.5s
H24K **Noodor Dome** 66.60 337 P **P** **04 43 51.7 +0.3**
baz=112
TRF **Thorofare Moun** 66.75 334 IAmb IAmb 04 43 58.6
comp=Z,8.6nm,1.0s
TRF **Thorofare Moun** 66.75 334 P **P** **04 43 52.0 -0.6**
baz=108
I23K **Minto, Yukon-K** 66.93 336 P **P** **04 43 53.8 +0.3**
baz=110
BPAW **Bear Paw Mtn.** 67.24 335 IAmb IAmb 04 44 01.2
comp=Z,5.0nm,0.9s
BPAW **Bear Paw Mtn.** 67.24 335 P **P** **04 43 55.5 -0.1**
baz=108
MLY **Manley** 67.44 336 P **P** **04 43 56.6 -0.2**
baz=109,SNR=5.8
CHIR **Chirikof Islan** 67.45 325 P **P** **04 43 56.5 -0.5**
baz=100
CAST **Castle Rocks** 67.50 334 P **P** **04 43 56.5 -0.8**
baz=107
M20K **Styx River** 67.54 332 P **P** **04 43 57.7 +0.1**
baz=105
COLD **Coldfoot** 67.97 338 IAmb IAmb 04 44 06.5
comp=Z,7.8nm,1.2s
I21K **Tanana** 67.98 336 P **P** **04 43 59.8 -0.4**
baz=108
L20K **Farewell, AK** 68.04 333 P **P** **04 43 59.8 -0.8**
baz=105
TOLK **Toolik Lake Re** 68.25 340 P **P** **04 44 01.4 -0.4**
baz=111
K20K **Telida** 68.35 333 P **P** **04 44 03.7 +1.2**
baz=105
J20K **Nowinta River** 68.59 334 P **P** **04 44 03.6 -0.4**
baz=105
O17K **Koliganek Bris** 68.96 329 P **P** **04 44 07.5 +1.2**
baz=101
CHNA **Chernabura Isl** 69.54 324 P **P** **04 44 10.2 +0.1**
baz=97
DBG **Daneborg** 71.49 15 *e* P P 04 44 14.6 -7.0
DAG **Danmarks Havn** 72.65 13 *i* P **P** **04 44 26.1 -2.4**
DAG IAmb IAmb 04 44 28.6

comp=Z,3.4nm,0.8s
ESDC Sonseca Array 76.60 52 P **P 04 44 52.0 -0.2**
comp=Z,2.5nm,0.9s,baz=285,slow=5.7,SNR=8.2
comp=Z,2.5nm,0.9s
ESDC Sonseca Array 76.60 52 P **P 04 44 52.8 +0.5**
DBIC Dimbokro 80.93 85 P **P 04 45 14.6 -1.9**
comp=Z,12nm,1.0s,baz=219,slow=7.1,SNR=3.4
comp=Z,12nm,1.0s
DBIC Dimbokro 80.93 85 IAmb IAmb 04 45 15.9
comp=Z,34nm,1.2s
ARCES ARCESS Array B 85.65 19 P **P 04 45 39.9 +0.1**
comp=Z,1.7nm,0.9s,baz=290,slow=5.6,SNR=1.5
ARCES LR LR 05 24 29.7
comp=Z,4µm,21.8s,baz=50,slow=36
comp=Z,1.7nm,0.9s
TORD Torodi Ar. Bea 85.91 78 P **P 04 45 40.3 -1.8**
comp=Z,1.5nm,0.9s,baz=285,slow=5.7,SNR=2.6
comp=Z,1.5nm,0.9s
FINES FINESS Array B 89.41 26 LR LR 05 26 39.6
comp=Z,1µm,20.4s,baz=46,slow=36
AKASG Malin Array Be 95.94 35 P **P 04 46 30.2 +1.8**
OBN Obninsk 97.40 29 LR LR 05 30 38.0
comp=Z,445nm,19.7s,baz=56,slow=35
WMQ Urumqi 123.38 5 *eP* **PKiKP 04 52 00.7 +1.5**
HHC Hu-ho-hao-te 123.85 343 *eP* **PKPdf 04 51 57.0 -3.0**
XAN Xi'an 130.95 342 *e*PKP **PKPdf 04 52 10.2 -3.5**
XAN pPKP sPKPdf 04 52 17.2 +1.0
WRA Warramunga Arr 139.79 254 PKhKP PKPpre 04 52 22.2
comp=Z,0.7nm,0.6s,baz=91,slow=3.0,SNR=4.8
WRA PKP **PKPdf 04 52 28.5 -1.9**
comp=Z,1.8nm,0.7s,baz=91,slow=2.8,SNR=13
WRA Warramunga Arr 139.79 254 PKPdf **PKPdf 04 52 31.1 +0.7**
ASAR Alice Springs 139.81 249 PKhKP PKPpre 04 52 21.7
comp=Z,0.3nm,0.6s,baz=211,slow=37,SNR=2.4
ASAR PKP **PKPdf 04 52 28.1 -2.3**
comp=Z,1.0nm,0.7s,baz=107,slow=1.3,SNR=6.5
ASAR Alice Springs 139.81 249 PKPdf **PKPdf 04 52 29.8 -0.6**
PZH PanZhiHua 139.95 348 PKP **PKPdf 04 52 30.5 -0.2**

*IDC **10** 04:54:49.9±2.1,8.°10S×119.°98E, h0km, mb3.3/2, mbtmp3.4/4, ML3.1/2, Error ellipse: s-maj=102.8km s-min=25.1km az=60.0*
*DJA **10** 04:54:52.8±0.8,8.°5S±4.°×12.°0E±.°, h12km±8km, M3.2/8, MLv3.2/8*
ISC 10 04:54:49.8±0.9, 7.°92S±0.°06×120.°19E±0.°06, h10km, n11, σ2.°9 19/11, Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EDFI	**Ende, Flores**	**1.70**	**119**	P	**Pg**	**04 55 22.4**	**-0.1**
BSSI	**Bau Bau, Buton**	**1.79**	**10**	P	**Pb**	**04 55 22.9**	**+0.2**
WBSI	**Waikabubak, Su**	**1.88**	**205**	P	**Pg**	**04 55 25.3**	**-0.7**
MMRI	**Maumere**	**2.15**	**109**	P	**Pg**	**04 55 28.7**	**-2.4**
PLAI	**Plampang**	**2.55**	**249**	P	**Pb**	**04 55 34.0**	**-1.7**
BKSI	**Bulukumba**	**2.58**	**359**	P	**Pb**	**04 55 34.2**	**-2.0**
KAPI	**Kappang**	**2.92**	**351**	Pn	**Pb**	**04 55 39.6**	**-2.3**
	4.9nm,0.3s,baz=174,slow=16,SNR=25						
KAPI				Sn	**Sn**	**04 56 08.6**	**-2.8**
	2.2nm,0.3s,baz=176,slow=11,SNR=2.1						
	8.6nm,0.3s						
BNSI	**Bone**	**3.50**	**359**	P	**Pn**	**04 55 46.9**	**+2.7**
WRA	**Warramunga Arr**	**18.19**	**133**	P	**P**	**04 59 03.5**	**+0.6**
	baz=304,slow=12,SNR=1.8						
	0.8nm,1.0s						
ASAR	**Alice Springs**	**20.45**	**142**	P	Pn	04 59 29.5	-0.3
	0.4nm,0.5s,baz=314,slow=9.1,SNR=5.1						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**64.05**	**332**	P	**P**	**05 05 26.0**	**+2.2**
	0.3nm,0.6s,baz=146,slow=7.3,SNR=4.3						
	0.3nm,0.6s						

*IDC **10** 04:57:22.8±2.0, 17.°59S×178.°91W, h563km±17km, mb3.3/8, mbtmp4.2/9, Error ellipse: s-maj=47.4km s-min=19.4km az=140.0*
ISC 10 04:57:20.4±1.3, 17.°6S±0.°3×178.°8W±0.°2, h539km, n11, σ0.°76/11, mb3.8/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.00**	**267**	P	P	04 58 38.8	+4.2
	22nm,0.8s,baz=103,slow=4.2,SNR=22						
STKA	**Stephens Creek**	**38.45**	**241**	P	**P**	**05 03 56.5**	**+0.2**
	1.2nm,0.4s,baz=60,slow=8.1,SNR=3.4						
	1.2nm,0.4s						
WRA	**Warramunga Arr**	**44.32**	**259**	P	**P**	**05 04 42.1**	**-0.8**
	1.8nm,0.8s,baz=95,slow=7.5,SNR=16						
	1.8nm,0.8s						
ASAR	**Alice Springs**	**44.52**	**254**	P	**P**	**05 04 44.2**	**-0.1**
	14nm,0.7s,baz=88,slow=8.2,SNR=133						
ASAR				PcP	**PcP**	**05 06 15.5**	**-0.6**
	0.7nm,0.6s,baz=99,slow=4.3,SNR=4.5						
	14nm,0.7s						
MJAR	**Matsushiro Arr**	**67.43**	**324**	P	**P**	**05 07 22.2**	**-0.2**
	1.6nm,0.6s,baz=137,slow=8.9,SNR=4.5						
	1.6nm,0.6s						
PETK	**Petropavlovsk-**	**73.28**	**345**	P	**P**	**05 07 57.1**	**+0.4**
	1.8nm,0.7s,baz=106,slow=8.5,SNR=3.6						
	1.8nm,0.7s						
ILAR	**Eielson Array**	**85.66**	**13**	P	**P**	**05 09 00.8**	**-0.9**
	0.2nm,0.4s,baz=224,slow=5.2,SNR=5.8						
	0.2nm,0.4s						
TXAR	**Lajitas Array**	**86.14**	**58**	P	**P**	**05 09 05.4**	**+0.5**
	0.3nm,0.7s,baz=233,slow=4.8,SNR=4.4						
	0.3nm,0.7s						
CMAR	**Chiang Mai Arr**	**88.42**	**290**	P	**P**	**05 09 17.1**	**+1.4**
	2.4nm,0.3s,baz=125,slow=2.5,SNR=4.9						
	2.4nm,0.3s						
BRTR	**Keskin Array B**	**144.29**	**315**	PKP	**PKPdf**	**05 15 55.0**	**-0.6**
	1.6nm,0.8s,baz=116,slow=2.9,SNR=8.6						
GERES	**GERESS Array B**	**147.21**	**345**	PKPbc	**PKPbc**	**05 16 03.3**	**0.0**
	1.0nm,0.6s,baz=0.0,slow=1.3,SNR=8.7						

*JMA **10** 05:23:28.0±0.3, 26.°2N±0.°8×12.°8E±.°, h23km±3km, MD3.7/11, MV4.1/11, NEAR OKINAWAJIMA ISLAND*
*IDC **10** 05:23:27.8±3.5, 26.°22N×128.°16E, h23km±25km, mb3.6/9, mbtmp3.8/9, Error ellipse: s-maj=42.9km s-min=17.2km az=74.0*
ISC 10 05:23:26.2±1.3, 26.°19N±0.°05×128.°49E±0.°04, h20km±5km, n23, σ1.°07/28, mb3.8/9, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNTH	**Nagotoyohara**	**0.54**	**308**	P	**Pb**	**05 23 36.7**	**-0.3**
JNTH				S	**Sg**	**05 23 43.3**	**-1.0**
JJT3	**Tamagusuku3**	**0.64**	**266**	P	**Pb**	**05 23 38.9**	**+0.2**
JJT3				S	**Sb**	**05 23 47.4**	**+0.3**
JJT3	**Tamagusuku3**	**0.64**	**266**	A	A	05 23 38.9	
	comp=E,12nm,0.8s,comp=E,14nm,2.8s						
JOW	**Kunigami**	**0.67**	**343**	Pg	**Pb**	**05 23 40.0**	**+0.7**
	2µm,0.3s,baz=118,slow=24,SNR=4470						
JOW				Lg	Lg	05 23 48.8	
	927nm,0.3s,baz=124,slow=26,SNR=15						
JOW	**Kunigami**	**0.67**	**343**	P	**Pb**	**05 23 40.0**	**+0.7**
JOW				S	**Sg**	**05 23 48.2**	**-0.5**
JOW	**Kunigami**	**0.67**	**343**	A	A	05 23 40.0	
	comp=E,6.0nm,1.0s,comp=E,6.0nm,0.7s						
JYRO	**Yoronjima**	**0.84**	**358**	P	**Pg**	**05 23 42.7**	**+0.1**
JYRO				S	**Sb**	**05 23 53.3**	**+0.3**
JIH	**Iheya**	**0.97**	**331**	P	**Pb**	**05 23 44.6**	**+0.2**
JIH				S	**Sb**	**05 23 56.4**	**-0.3**
JIH	**Iheya**	**0.97**	**331**	A	A	05 23 44.6	
	comp=E,3.0nm,1.0s,comp=E,4.0nm,1.2s						
JOKE	**Okinoerabujima**	**1.17**	**3**	P	**Pn**	**05 23 47.9**	**+0.3**
JOKE				S	**Sb**	**05 24 02.5**	**-0.2**
JAGN	**Aguni-jima**	**1.19**	**290**	P	**Pn**	**05 23 47.5**	**-0.3**
JAGN				S	**Sb**	**05 24 02.3**	**-0.8**
JAGN	**Aguni-jima**	**1.19**	**290**	A	A	05 23 47.5	
	comp=E,5.0nm,1.3s,comp=E,4.0nm,0.9s						
JMZ	**Minamidaito 2**	**2.48**	**98**	P	**Pn**	**05 24 05.1**	**-0.5**
JMZ				S	**Sn**	**05 24 33.4**	**-2.0**
JKDJ	**Kitadaitoujima**	**2.54**	**95**	P	**Pn**	**05 24 06.0**	**-0.3**
JKDJ				S	**Sn**	**05 24 34.8**	**-1.9**
SONM	**Songino Array**	**27.72**	**327**	P	**P**	**05 29 14.7**	**+1.3**
	1.0nm,0.5s,baz=138,slow=11,SNR=6.6						
	1.0nm,0.5s						
MKAR	**Makanchi Array**	**41.74**	**312**	P	**P**	**05 31 13.0**	**-1.0**
	1.3nm,0.6s,baz=99,slow=10,SNR=20						
	1.3nm,0.6s						
ZALV	**Zalesovo Beam**	**42.42**	**323**	P	**P**	**05 31 17.7**	**-1.7**
	1.0nm,0.5s,baz=117,slow=10.0,SNR=4.4						
	1.0nm,0.5s						
KURBB	**Kurchatov Arra**	**45.05**	**316**	P	**P**	**05 31 40.0**	**-0.6**
	0.6nm,0.4s,baz=104,slow=9.1,SNR=6.0						
	0.6nm,0.4s						
WRA	**Warramunga Arr**	**46.20**	**172**	P	**P**	**05 31 51.2**	**+1.2**
	0.6nm,0.8s,baz=354,slow=8.4,SNR=5.8						
	0.6nm,0.8s						
ASAR	**Alice Springs**	**49.83**	**174**	P	**P**	**05 32 20.2**	**+2.1**
	0.4nm,0.7s,baz=2.6,slow=12,SNR=6.6						
	0.4nm,0.7s						
FINES	**FINESS Array B**	**73.02**	**331**	P	**P**	**05 34 54.4**	**-0.1**
	1.6nm,0.7s,baz=70,slow=6.3,SNR=7.2						
	1.6nm,0.7s						
AKASG	**Malin Array Be**	**75.72**	**320**	P	**P**	**05 35 09.3**	**-1.1**
	0.4nm,0.4s,baz=53,slow=5.5,SNR=4.6						
	0.4nm,0.4s						
YKA	**Yellowknife Ar**	**78.47**	**25**	P	**P**	**05 35 27.3**	**+1.7**
	0.1nm,0.5s,baz=310,slow=6.1,SNR=2.3						
	0.1nm,0.5s						

*INET **10** 05:25:01.7±0.6, 12.°84N×87.°05W, h5km±4km, MW3.5*
*UCR **10** 05:25:02.6±1.3, 12.°86N×87.°12W, h13km±7km, ML3.6, MW4.1*
*SNET **10** 05:25:03.6±0.9, 12.°94N×87.°19W, h4km±8km, ML3.6*
ISC 10 05:25:01.0±1.1, 12.°90N±0.°05×87.°06W±0.°04, h11km±10km, n43, σ0.°77/62, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**0.20**	**179**	*e*P	**Pg**	**05 25 05.9**	**+0.5**
CRIN				*e*S	**Sg**	**05 25 08.5**	**+0.3**
TELN	**Telica**	**0.37**	**144**	*e*P	**Pg**	**05 25 08.6**	**+0.2**
TEL3	**Telica 3**	**0.39**	**148**	*e*P	**Pg**	**05 25 06.1**	**-2.6**
CNGN	**Cerro Negro**	**0.53**	**139**	*e*P	**Pg**	**05 25 11.6**	**+0.3**
CNGN				*e*S	**Sg**	**05 25 18.8**	**+0.4**
MOMN	**Momotombo**	**0.70**	**134**	*e*P	**Pg**	**05 25 14.7**	**+0.1**
CNCH	**Conchagua**	**0.84**	**296**	*e*P	**Pb**	**05 25 17.7**	**-0.1**
CNCH				*e*S	**Sb**	**05 25 29.1**	**-0.2**
CNCH				IAML		05 25 36.0	
	comp=Z,15µm,0.4s						
CNCH	**Conchagua**	**0.84**	**296**	*e*P	**Pb**	**05 25 17.7**	**-0.1**
CNCH				*e*S	**Sb**	**05 25 29.1**	**-0.2**
CNCH				IAML		05 25 36.0	
	comp=Z,15µm,0.4s						
COPN	**Copaltepe**	**0.85**	**148**	*e*P	**Pg**	**05 25 15.9**	**-1.4**
LCND	**La Caada**	**0.91**	**296**	*e*P	**Pb**	**05 25 18.6**	**-0.2**
LCND				*e*S	**Sb**	**05 25 31.1**	**+0.1**
LCND				IAML		05 25 35.2	
	comp=Z,5µm,0.4s						
LCND	**La Caada**	**0.91**	**296**	*e*P	**Pb**	**05 25 18.6**	**-0.2**
LCND				*e*S	**Sb**	**05 25 31.1**	**+0.1**
LCND				IAML		05 25 35.2	
	comp=Z,5µm,0.4s						
APYN	**Apoyeque**	**0.96**	**134**	*e*P	**Pg**	**05 25 18.7**	**-0.7**
HUEN		**1.03**	**123**	*e*P	**Pg**	**05 25 20.5**	**-0.3**
TISN	**Laguna Tiscapa**	**1.08**	**134**	*e*P	**Pg**	**05 25 20.9**	**-0.8**
MGAN	**Managua**	**1.09**	**134**	*e*P	**Pg**	**05 25 21.0**	**-1.0**
MGAN				*e*S	**Sg**	**05 25 21.1**	**-0.8**
MATN	**Matagalpa**	**1.10**	**88**	*e*P	**Pg**	**05 25 21.1**	**-1.1**
WILN	**Americas 2**	**1.12**	**131**	*e*P	**Pg**	**05 25 21.8**	**-0.8**
TGUH	**Tegucigalpa,Un**	**1.17**	**350**	*e*P	**Pn**	**05 25 24.3**	**+0.9**
TGUH				*e*S	**Sn**	**05 25 39.7**	**+0.2**
TGUH	**Tegucigalpa,Un**	**1.17**	**350**	*e*P	**Pn**	**05 25 24.3**	**+0.9**
TGUH				*e*S	**Sn**	**05 25 39.7**	**+0.2**
TGUH	**Tegucigalpa,Un**	**1.17**	**350**	*e*P	**Pn**	**05 25 24.3**	**+0.9**
VSM	**San Miguel**	**1.30**	**294**	*e*P	**Pg**	**05 25 25.1**	**-0.8**
VSM				*e*S	**Sb**	**05 25 42.3**	**-0.1**
VSM	**San Miguel**	**1.30**	**294**	*e*P	**Pg**	**05 25 25.1**	**-0.8**
VSM				*e*S	**Sb**	**05 25 42.3**	**-0.1**
PACA	**Pacayal**	**1.36**	**295**	*e*P	**Pb**	**05 25 26.5**	**-0.1**
PACA				*e*S	**Sb**	**05 25 44.0**	**0.0**
PACA	**Pacayal**	**1.36**	**295**	*e*P	**Pb**	**05 25 26.5**	**-0.1**
PACA				*e*S	**Sb**	**05 25 44.0**	**0.0**
PACA	**Pacayal**	**1.36**	**295**	*e*P	**Pb**	**05 25 26.4**	**-0.1**
COEB	**Comit de Eme**	**1.55**	**293**	*e*P	**Pn**	**05 25 29.1**	**+0.4**
COEB				*e*S	**Sb**	**05 25 49.6**	**-0.1**
COEB				IAML		05 25 53.7	
	comp=Z,1µm,0.4s						
COEB	**Comit de Eme**	**1.55**	**293**	*e*P	**Pn**	**05 25 29.1**	**+0.4**
COEB				*e*S	**Sb**	**05 25 49.6**	**-0.1**
COEB				IAML		05 25 53.7	
	comp=Z,1µm,0.4s						
PQSS	**Presa 15 de Se**	**1.63**	**296**	*e*P	**Pn**	**05 25 30.1**	**+0.4**
PQSS	**Presa 15 de Se**	**1.63**	**296**	*e*P	**Pn**	**05 25 30.1**	**+0.4**
SCLA	**Alcaldia de Sa**	**1.81**	**296**	*e*P	**Pb**	**05 25 34.0**	**-0.3**
SCLA				*e*S	**Sb**	**05 25 57.2**	**+0.1**
SCLA				IAML		05 26 06.2	
	comp=Z,72nm,0.4s						
SCLA	**Alcaldia de Sa**	**1.81**	**296**	*e*P	**Pb**	**05 25 34.0**	**-0.3**
SCLA				*e*S	**Sb**	**05 25 57.2**	**+0.1**
SCLA				IAML		05 26 06.2	
	comp=Z,72nm,0.4s						
COEG	**Centro de Oper**	**1.92**	**292**	*e*P	**Pn**	**05 25 34.9**	**+1.2**
COEG				IAML		05 26 04.1	
	comp=Z,402nm,0.4s						
COEG	**Centro de Oper**	**1.92**	**292**	*e*P	**Pn**	**05 25 34.9**	**+1.2**
COEG				IAML		05 26 04.1	
	comp=Z,402nm,0.4s						
PAVA	**Las Pavas**	**2.00**	**294**	*e*P	**Pb**	**05 25 36.8**	**-0.8**
PAVA				*e*S	**Sb**	**05 26 01.6**	**-0.9**
PAVA				IAML		05 26 09.9	
	comp=Z,335nm,0.6s						
PAVA	**Las Pavas**	**2.00**	**294**	*e*P	**Pb**	**05 25 36.8**	**-0.8**
PAVA				*e*S	**Sb**	**05 26 01.6**	**-0.9**
PAVA				IAML		05 26 09.9	
	comp=Z,335nm,0.6s						
PAVA	**Las Pavas**	**2.00**	**294**	*e*P	**Pb**	**05 25 37.6**	**0.0**
SJTE	**Alcalda de S**	**2.03**	**291**	*e*P	**Pn**	**05 25 36.4**	**+1.2**
SJTE	**Alcalda de S**	**2.03**	**291**	*e*P	**Pn**	**05 25 36.4**	**+1.2**
ACON	**Acoyapa**	**2.06**	**117**	*e*P	**Pn**	**05 25 37.7**	**+2.1**
ACON	**Acoyapa**	**2.06**	**117**	*e*P	**Pn**	**05 25 36.5**	**+0.9**
CUI	**Cuipilapa**	**2.90**	**140**	*e*P	**Pn**	**05 25 47.8**	**+0.5**
ORTG	**Ortega, Santa**	**2.97**	**148**	*e*P	**Pn**	**05 25 48.9**	**+0.7**
SAJU	**San Juanillo,**	**3.11**	**155**	*e*P	**Pn**	**05 25 50.3**	**+0.3**
JTS	**Las Juntas de**	**3.31**	**141**	*e*P	**Pn**	**05 25 53.9**	**+0.9**

*IDC **10** 05:47:29.6±1.1, 28.°37N×87.°24E, h0km, mb3.7/6, mbtmp3.7/8, ML4.0/2, Error ellipse: s-maj=45.5km s-min=18.6km az=55.0*
*DMN **10** 05:47:29.0±0.2, 28.°41N×87.°58E, h2km, Ml4.6/11, Error ellipse: s-maj=3.5km s-min=1.5km az=35.0*
ISC 10 05:47:30.1±2.0, 28.°37N±0.°07×87.°50E±0.°05, h3km±13km, n20, σ0.°97/31, mb3.8/6, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TAPN	**Taplejung**	**1.03**	**170**	*e*Pg	**Pg**	**05 47 49.2**	**-0.6**
TAPN				*e*Sg	**Sg**	**05 48 03.6**	**+0.4**
	2µm,0.3s						
JIRN	**Jiri**	**1.35**	**239**	*e*Pg	**Pn**	**05 47 56.0**	**-0.2**
JIRN				*e*Sg	**Sn**	**05 48 14.7**	**-0.2**
	3µm,0.3s						
GUN	**Gumba**	**1.50**	**253**	*e*Pg	**Pb**	**05 47 58.9**	**+0.1**
GUN				*e*Sg	**Sg**	**05 48 18.8**	**+0.4**
	4µm,0.7s						
ODAN	**Odare**	**1.50**	**184**	*e*Pg	**Pn**	**05 47 57.8**	**-0.4**
ODAN				*e*Sg	**Sg**	**05 48 18.3**	**-0.1**
	596nm,0.4s						
RAMN	**Ramite**	**1.62**	**210**	*e*Pg	**Pb**	**05 48 00.6**	**-0.2**
RAMN				*e*Sg	**Sg**	**05 48 22.2**	**0.0**
	1µm,0.5s						
PKI	**Pulchoki**	**2.01**	**247**	*e*Pg	**Pg**	**05 48 08.4**	**-0.3**
PKI				*e*Sg	**Sg**	**05 48 35.1**	**+0.3**
	2µm,0.6s						
PKIN	**Phulchoki**	**2.02**	**248**	*e*Pg	**Pg**	**05 48 08.5**	**-0.3**
PKIN				*e*Sg	**Sg**	**05 48 35.3**	**+0.3**
	2µm,0.5s						
KKN	**Kakani**	**2.04**	**254**	*e*Pg	**Pb**	**05 48 08.3**	**+0.3**
KKN				*e*Sg	**Sg**	**05 48 36.3**	**+0.5**
	317nm,0.2s						
DMN	**Daman**	**2.25**	**251**	*e*Pg	**Pb**	**05 48 12.5**	**+1.0**
DMN				*e*Sg	**Sg**	**05 48 42.1**	**-0.2**
	2µm,0.6s						
GKN	**Gorkha**	**2.55**	**263**	*e*Pg	**Pg**	**05 48 18.2**	**-0.8**
GKN				*e*Sg	**Sg**	**05 48 51.7**	**-0.4**
	2µm,0.3s						
KOLN	**Koldanda**	**3.50**	**261**	*e*Pn	**Pn**	**05 48 27.2**	**+1.6**
KOLN	**Koldanda**	**3.50**	**261**	*e*Pg	**Pb**	**05 48 34.9**	**+2.1**
KOLN				*e*Sg	**Sg**	**05 49 21.3**	**-1.2**
	152nm,0.5s						
CMAR	**Chiang Mai Arr**	**14.40**	**131**	Pn	**Pn**	**05 50 55.6**	**+0.7**
	0.7nm,0.3s,baz=308,slow=12,SNR=4.6						
	2.2nm,0.3s						
MKAR	**Makanchi Array**	**18.84**	**349**	P	**P**	**05 51 50.1**	**-1.0**
	0.1nm,0.3s,baz=172,slow=12,SNR=5.7						
	0.7nm,0.8s						
KURBB	**Kurchatov Arra**	**23.25**	**345**	P	**P**	**05 52 38.8**	**+0.4**
	1.7nm,0.8s,baz=164,slow=9.7,SNR=10						
	1.7nm,0.8s						
SONM	**Songino Array**	**24.36**	**32**	P	**P**	**05 52 50.0**	**+0.6**
	0.6nm,0.4s,baz=213,slow=10,SNR=3.6						
	0.6nm,0.4s						
AKASG	**Malin Array Be**	**48.74**	**314**	P	**P**	**05 56 13.7**	**-2.2**
	0.3nm,0.4s,baz=73,slow=7.0,SNR=5.1						
	0.3nm,0.4s						
GERES	**GERESS Array B**	**58.85**	**312**	P	**P**	**05 57 29.1**	**-1.0**
	0.3nm,0.2s,baz=103,slow=4.3,SNR=4.8						
	0.3nm,0.2s						
WRA	**Warramunga Arr**	**65.99**	**131**	P	**P**	**05 58 20.4**	**+2.2**
	0.7nm,0.8s,baz=326,slow=6.4,SNR=7.3						
	0.7nm,0.8s						
ASAR	**Alice Springs**	**68.38**	**134**	P	**P**	**05 58 33.6**	**+0.4**
	0.8nm,0.7s,baz=320,slow=5.7,SNR=8.4						
	0.8nm,0.7s						

VAO 10 05:54:23.1±1.1, 10.°81S×75.°86W, h10km, mb4.1, Central Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OTAV	**Otavalo**	**11.28**	**347**	*e*P	Pn	05 57 04.7	-0.1
MACA	**Manacapuru-AM**	**16.86**	**64**	*e*P	Pn	05 58 18.9	-0.6
PDRB	**Porto dos Gac**	**18.78**	**94**	*e*P	Pn	05 58 43.3	0.0
BOAV	**Boa Vista**	**20.13**	**50**	*e*P	P	05 58 58.1	+0.6
NPGB	**Novo Progresso**	**20.59**	**81**	*e*P	P	05 59 03.4	+0.8
ITTB	**Itaituba**	**20.94**	**74**	*e*P	P	05 59 06.5	+0.2
MALB	**Monte Alegre**	**23.22**	**69**	*e*P	P	05 59 29.8	-0.7
MCPB	**Macapa, AP**	**25.84**	**68**	*e*P	P	05 59 54.1	-0.9

*INET **10** 06:00:59.9±0.7, 12.°75N×87.°13W, h6km±5km, MW3.7*
*NEIC **10** 06:01:00.3±1.1, 12.°91N±0.°03×86.°93W±0.°06, h10km±2km, mb4.0/2, Md4.0(SNET), Error ellipse: s-maj=10.9km s-min=3.2km az=243.0*
*UCR **10** 06:01:00.8±2.1, 12.°86N×87.°13W, h14km±11km, ML3.9, MW4.1, mb4.0(NEIC)*
*SNET **10** 06:01:02.4±0.8, 12.°90N×87.°20W, h12km±9km, ML3.8*
*SSS **10** 06:01:02.4, 12.°90N×87.°20W, h12km, ML3.8*
ISC 10 06:00:58.9±1.0, 12.°90N±0.°04×87.°10W±0.°03, h10km±8km, n54, σ0.°89/70, 1C, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**0.20**	**166**		**Pg**	**06 01 03.7**	**+0.4**
CRIN	**San Cristobal**	**0.20**	**166**	*e*P	**Pg**	**06 01 03.4**	**+0.2**
CRIN				*e*S	**Sg**	**06 01 06.6**	**+0.4**
CNGN	**Cerro Negro**	**0.56**	**135**		**Pg**	**06 01 09.9**	**+0.1**
CNGN	**Cerro Negro**	**0.56**	**135**	*e*P	**Pg**	**06 01 09.7**	**-0.1**
CNGN				*e*S	**Sg**	**06 01 17.5**	**+0.3**
CNCH	**Conchagua**	**0.81**	**298**	*e*P	**Pn**	**06 01 15.9**	**-0.7**
CNCH				*e*S	**Sn**	**06 01 27.6**	**-1.1**
CNCH				IAML		06 01 36.9	
	comp=Z,7µm,0.5s						
CNCH	**Conchagua**	**0.81**	**298**	*e*P	**Pn**	**06 01 15.9**	**-0.7**
CNCH				*e*S	**Sn**	**06 01 27.6**	**-1.1**
CNCH				IAML		06 01 36.9	
	comp=Z,7µm,0.5s						
COPN	**Copaltepe**	**0.87**	**145**	*e*P	**Pg**	**06 01 14.2**	**-1.5**
LCND	**La Caada**	**0.87**	**298**	*e*P	**Pn**	**06 01 16.9**	**-0.4**
LCND				*e*S	**Sb**	**06 01 28.2**	**+0.3**
LCND				IAML		06 01 34.6	
	comp=Z,2µm,0.5s						
LCND	**La Caada**	**0.87**	**298**	*e*P	**Pn**	**06 01 16.9**	**-0.4**
LCND				*e*S	**Sb**	**06 01 28.2**	**+0.3**
LCND				IAML		06 01 34.6	
	comp=Z,2µm,0.5s						
APYN	**Apoyeque**	**0.99**	**132**	*e*P	**Pg**	**06 01 16.6**	**-1.3**
HUEN		**1.06**	**122**	*e*P	**Pg**	**06 01 19.1**	**-0.3**
HUEN				*e*S	**Sg**	**06 01 33.9**	**+0.7**
MATN	**Matagalpa**	**1.15**	**88**		**Pg**	**06 01 20.0**	**-1.0**
TGUH	**Tegucigalpa,Un**	**1.16**	**352**		**Pn**	**06 01 23.0**	**+1.6**
TGUH	**Tegucigalpa,Un**	**1.16**	**352**	*e*P	**Pn**	**06 01 23.0**	**+1.6**
TGUH				*e*S	**Sn**	**06 01 38.4**	**+0.9**
TGUH	**Tegucigalpa,Un**	**1.16**	**352**	*e*P	**Pn**	**06 01 23.0**	**+1.6**
TGUH				*e*S	**Sn**	**06 01 38.4**	**+0.9**
CRUN	**El Crucero**	**1.20**	**139**	*e*P	**Pn**	**06 01 20.7**	**-1.2**
VSM	**San Miguel**	**1.26**	**295**	*e*P	**Pn**	**06 01 23.8**	**+0.8**
VSM	**San Miguel**	**1.26**	**295**	*e*P	**Pn**	**06 01 23.8**	**+0.8**
PACA	**Pacayal**	**1.32**	**296**	*e*P	**Pg**	**06 01 24.8**	**+0.5**
PACA				*e*S	**Sn**	**06 01 41.9**	**+0.5**
PACA	**Pacayal**	**1.32**	**296**	*e*P	**Pg**	**06 01 24.8**	**+0.5**
PACA				*e*S	**Sn**	**06 01 41.9**	**+0.5**
BOAB	**BOACO BROADBAN**	**1.47**	**108**		**Pn**	**06 01 25.0**	**-0.6**
BOAB	**BOACO BROADBAN**	**1.47**	**108**	*e*P	**Pn**	**06 01 25.1**	**-0.5**
COEB	**Comit de Eme**	**1.52**

AOPR	**Arecibo Observ**	**2.09 243**	Pn	**Pn**	**06 01 36.3**	**+0.2**
AOPR	**Arecibo Observ**	**2.09 243**	*e*P	**Pn**	**06 01 37.2**	**+1.1**
AOPR			*e*S	**Sn**	**06 02 02.2**	**+1.3**
CELP	**Cerrillos**	**2.09 235**	Pn	**Pn**	**06 01 36.2**	**+0.1**
OBIP	**Obispado Ponce**	**2.13 234**	Pn	**Pn**	**06 01 37.6**	**+1.0**
BPA	**Boggy Peak**	**3.58 128**	*e*P	**Pn**	**06 01 56.2**	**-0.4**
BPA			*e*S	**Sn**	**06 02 37.8**	**+0.1**
ANBD	**Bethesda, Anti**	**3.65 127**	*e*P	**Pn**	**06 01 57.8**	**+0.3**
ANBD			*e*S	**Sn**	**06 02 38.1**	**-1.2**

*MDD **10** 06:09:42.5±0.3, 42°.17N×2°.94E, h14km±3km, mb_Lg2.9/14, Error ellipse: s-maj=2.7km s-min=2.1km az=139.0*
*LDG **10** 06:09:42.5±0.1, 42°.18N×2°.87E, h4km, Md2.8/1, Ml2.9/24, Error ellipse: s-maj=1.5km s-min=1.0km az=141.0*
*MRB **10** 06:09:43.0±0.3, 42°.18N×2°.86E, h5km±2km, ML2.5/26, Error ellipse: s-maj=1.0km s-min=0.6km az=96.0*

ISC 10 06:09:41.6±0.9, 42°22N±0'.02×2°90E±0'.02, h17km±7km, n82, σ1§34/149, Pyrenees

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CBEU	**Beuda**	**0.17**	**281**	P		**Pb**	**06 09 46.2**	**-0.2**
CBEU				S		**Sg**	**06 09 48.7**	**-0.4**
	2μm,0.1s							
CPAL	**Palau Saverder**	**0.21**	**66**	P		**Pb**	**06 09 48.0**	**+0.9**
CPAL				S		**Sb**	**06 09 51.8**	**+1.0**
EJON	**La Jonquera**	**0.23**	**358**	Pg		**Pb**	**06 09 48.3**	**+1.0**
EJON	**La Jonquera**	**0.23**	**358**	Pg		**Pb**	**06 09 48.3**	**+1.0**
EJON				Sg		**Sb**	**06 09 51.5**	**+0.4**
EJON				*i* Vmb_Lg			06 09 53.2	
SJAF	**Saint Jean de**	**0.26**	**357**	P		**Pb**	**06 09 48.9**	**+1.0**
SJAF				S		**Sb**	**06 09 53.3**	**+1.2**
	137nm,0.1s							
CCAS	**Cassa de la Se**	**0.34**	**179**	P		**Pg**	**06 09 48.6**	**-0.1**
CCAS				S		**Sg**	**06 09 52.9**	**-0.7**
	115nm,0.2s							
FILF	**Fillols**	**0.42**	**323**	P		**Pn**	**06 09 52.4**	**-0.5**
FILF				S		**Sn**	**06 09 59.3**	**-1.0**
	109nm,0.1s							
CBRU	**Bruguera**	**0.54**	**277**	P		**Pb**	**06 09 52.7**	**+0.1**
CBRU				S		**Sb**	**06 10 00.1**	**-0.1**
	53nm,0.3s							
CFON	**Fontmartina**	**0.58**	**217**	P		**Pg**	**06 09 52.8**	**-0.3**
CFON				S		**Sg**	**06 10 00.1**	**-0.7**
	257nm,0.2s							
CORI	**Orista**	**0.68**	**249**	P		**Pg**	**06 09 54.9**	**-0.1**
CORI				S		**Sg**	**06 10 03.5**	**-0.5**
	87nm,0.1s							
CLLI	**Llivia**	**0.73**	**291**	P		**Pb**	**06 09 56.3**	**+0.3**
CLLI				S		**Sn**	**06 10 06.7**	**-1.4**
	77nm,0.1s							
FNEB	**Nbias**	**0.90**	**320**	P		**Pn**	**06 10 00.1**	**+0.6**
FNEB				S		**Sn**	**06 10 12.5**	**+0.4**
	84nm,0.3s							
FBR	**Fabra**	**0.99**	**216**	P		**Pb**	**06 10 00.3**	**-0.1**
FBR				S		**Sb**	**06 10 13.1**	**0.0**
	201nm,0.1s							
ARBS	**La Rabassa**	**1.03**	**283**	P		**Pn**	**06 10 01.8**	**+0.4**
ARBS				S		**Sn**	**06 10 16.3**	**+0.7**
	101nm,0.2s							
PAND	**Andorre**	**1.05**	**287**	P		**Pn**	**06 10 02.0**	**+0.4**
PAND				S		**Sn**	**06 10 16.6**	**+0.7**
	90nm,0.1s							
EMIR	**Miracle**	**1.07**	**254**	Pg		**Pg**	**06 10 02.3**	**0.0**
EMIR	**Miracle**	**1.07**	**254**	Pg		**Pg**	**06 10 02.3**	**0.0**
EMIR				Sg		**Sn**	**06 10 17.1**	**+0.7**
EMIR				*i* Vmb_Lg			06 10 17.4	
CORG	**Organya**	**1.18**	**271**	P		**Pg**	**06 10 04.1**	**-0.2**
CORG				S		**Sn**	**06 10 20.0**	**+1.1**
CGAR	**Garraf**	**1.19**	**219**	P		Pn	06 10 03.9	-5.4
CGAR				S		Sn	06 10 19.3	-10
	97nm,0.3s							
MTLF	**Montolieu**	**1.23**	**336**	*e*Pn		**Pg**	**06 10 05.1**	**-0.2**
MTLF	**Montolieu**	**1.23**	**336**	*e*Pg		**Pg**	**06 10 05.8**	**+0.5**
MTLF				*e*Sg		**Sn**	**06 10 22.1**	**+2.0**
	75nm,0.2s							
MTLF	**Montolieu**	**1.23**	**336**	Pg		**Pg**	**06 10 05.8**	**+0.5**
CEST	**Esterri de Car**	**1.27**	**288**	P		**Pg**	**06 10 05.9**	**-0.3**
CEST				S		**Sg**	**06 10 23.1**	**+0.2**
	61nm,0.3s							
CSOR	**Sort**	**1.32**	**277**	P		**Pg**	**06 10 06.9**	**-0.2**
CSOR				S		**Sg**	**06 10 24.8**	**+0.5**
	61nm,0.4s							
MLS	**Moulis**	**1.52**	**299**	P		**Pg**	**06 10 10.6**	**-0.3**
MLS				S		**Sg**	**06 10 30.7**	**0.0**
	48nm,0.5s							
CTRE	**Tremp**	**1.58**	**274**	P		**Pb**	**06 10 11.0**	**+0.6**
CTRE				S		**Sg**	**06 10 32.4**	**-0.2**
	22nm,0.3s							
CARA	**Val d'Aran**	**1.61**	**288**	P		**Pg**	**06 10 12.1**	**-0.6**
CARA				S		**Sg**	**06 10 33.3**	**-0.4**
	94nm,0.2s							
EPOB	**Poblet**	**1.62**	**238**	P		**Pb**	**06 10 11.3**	**+0.3**
EPOB				S		**Sb**	**06 10 32.1**	**+1.0**
	36nm,0.3s							
EPOB	**Poblet**	**1.62**	**238**	Pg		**Pb**	**06 10 11.3**	**+0.3**
EPOB				Sn		**Sn**	**06 10 29.8**	**-0.1**
EPOB				Sg		**Sb**	**06 10 32.2**	**+1.0**
EPOB				*i* Vmb_Lg			06 10 35.2	
CAVN	**Les Avellanes**	**1.64**	**259**	P		**Pb**	**06 10 11.7**	**+0.4**
CAVN				S		**Sb**	**06 10 33.0**	**+1.4**
	52nm,0.2s							
LASF	**Ste Croix**	**1.98**	**20**	*e*Pn		**Pn**	**06 10 15.4**	**+1.0**
LASF	**Ste Croix**	**1.98**	**20**	*e*Pg		**Pg**	**06 10 20.0**	**+0.4**
LASF				*e*Sg		**Sg**	**06 10 45.9**	**+0.5**
	6.9nm,0.2s							
ECHI	**Chisagues Biel**	**2.05**	**283**	P		**Pb**	**06 10 17.8**	**-0.7**
ECHI				S		**Sb**	**06 10 43.7**	**0.0**
	14nm,0.3s							
ECHI	**Chisagues Biel**	**2.05**	**283**	Pn		**Pb**	**06 10 17.3**	**-1.1**
ECHI				Pg		**Pg**	**06 10 19.7**	**-1.3**
ECHI				Sg		**Sg**	**06 10 47.0**	**-0.6**
ECHI				*i* Vmb_Lg			06 10 50.6	
EPF	**Esparros**	**2.05**	**294**	*e*Pn		**Pn**	**06 10 16.1**	**+0.7**
EPF	**Esparros**	**2.05**	**294**	*e*Pg		**Pg**	**06 10 20.6**	**-0.4**
EPF				*e*Sg		**Sg**	**06 10 46.4**	**-1.3**
	24nm,0.3s							
ERTA	**Horta de San J**	**2.30**	**238**	P		**Pn**	**06 10 20.8**	**+2.1**
ERTA				S		**Sn**	**06 10 49.2**	**+2.5**
	21nm,0.3s							
ERTA	**Horta de San J**	**2.30**	**238**	Pn		**Pn**	**06 10 20.3**	**+1.6**
ERTA				Sg		**Sb**	**06 10 52.4**	**+1.5**
ERTA				*i* Vmb_Lg			06 10 57.0	
CMAS	**Mas de Barbera**	**2.45**	**233**	P		**Pn**	**06 10 22.4**	**+1.6**
CMAS				S		**Sn**	**06 10 52.3**	**+1.9**
	25nm,0.2s							
ETOS	**Mallorca**	**2.45**	**182**	Pn		**Pn**	**06 10 20.4**	**-0.5**
ETOS				Sn		**Sn**	**06 10 47.5**	**-2.9**
ETOS				*i* Vmb_Lg			06 10 51.7	
ESAC	**San Caprasio**	**2.56**	**260**	Pn		**Pn**	**06 10 21.4**	**-1.0**
ESAC				Pg		**Pb**	**06 10 28.8**	**+1.6**
ESAC				Sg		**Sb**	**06 11 00.8**	**+2.5**
ESAC				*i* Vmb_Lg			06 11 04.4	
SMRF	**Simiane la Rot**	**2.63**	**47**	*e*Pn		**Pn**	**06 10 24.8**	**+1.5**
SMRF	**Simiane la Rot**	**2.63**	**47**	*e*Pg		**Pg**	**06 10 32.3**	**+0.3**
SMRF				*e*Sn		**Sn**	**06 10 55.4**	**+0.6**
	7.6nm,0.3s							
SMRF				*e*Sg		**Sg**	**06 11 06.4**	**+0.3**
	7.6nm,0.3s							
ETSF	**Etsaut**	**2.64**	**286**	*e*Pn		**Pn**	**06 10 24.5**	**+1.0**
ETSF	**Etsaut**	**2.64**	**286**	*e*Pg		**Pg**	**06 10 31.2**	**-1.1**
ETSF				*e*Sg		**Sg**	**06 11 04.8**	**-1.7**
	33nm,0.3s							
CAF	**Calviac**	**2.77**	**348**	*e*Pn		**Pn**	**06 10 26.6**	**+1.4**
CAF	**Calviac**	**2.77**	**348**	*e*Pg		**Pg**	**06 10 34.7**	**0.0**
CAF				*e*Sn		**Sn**	**06 10 59.0**	**+0.8**
	13nm,0.2s							
CAF				*e*Sg		**Sg**	**06 11 10.2**	**-0.4**
	20nm,0.3s							
ATE	**Arette**	**2.79**	**289**	S		**Sb**	**06 11 01.8**	**-3.1**
	16nm,0.5s							
LMR	**La Mourre**	**2.88**	**66**	*e*Pn		**Pn**	**06 10 28.3**	**+1.6**
LMR	**La Mourre**	**2.88**	**66**	*e*Pg		**Pg**	**06 10 36.1**	**-0.7**
LMR				*e*Sn		**Sn**	**06 11 01.3**	**+0.4**
	2.3nm,0.2s							
VIVF	**Saint-Julien-l**	**2.93**	**26**	*e*Pn		**Pn**	**06 10 29.2**	**+1.8**
VIVF	**Saint-Julien-l**	**2.93**	**26**	*e*Pg		**Pg**	**06 10 36.9**	**-0.9**
VIVF				*e*Sn		**Sn**	**06 11 02.7**	**+0.5**
VIVF				*e*Sg		**Sg**	**06 11 15.8**	**0.0**
	4.5nm,0.2s							
LFF	**La Frestale**	**3.13**	**331**	*e*Pn		**Pn**	**06 10 31.5**	**+1.3**
LFF	**La Frestale**	**3.13**	**331**	*e*Pg		**Pg**	**06 10 40.3**	**-1.4**
LFF				*e*Sn		**Sn**	**06 11 07.3**	**+0.1**
LFF				*e*Sg		**Sg**	**06 11 19.8**	**-2.5**
	18nm,0.3s							
EMOS	**Mosqueruela**	**3.15**	**235**	P		**Pn**	**06 10 32.7**	**+2.2**
EMOS				S		**Sn**	**06 11 09.6**	**+1.8**
	7.5nm,0.5s							
EMOS	**Mosqueruela**	**3.15**	**235**	Pn		**Pn**	**06 10 30.7**	**+0.2**
EMOS				Sn		**Sn**	**06 11 09.0**	**+1.2**
EMOS				Sg		**Sg**	**06 11 20.3**	**-2.4**
EMOS				*i* Vmb_Lg			06 11 26.0	
SJPF	**Ste Jean**	**3.17**	**288**	*e*Pn		**Pn**	**06 10 32.0**	**+1.3**
SJPF	**Ste Jean**	**3.17**	**288**	*e*Pg		**Pg**	**06 10 41.0**	**-1.3**
SJPF				*e*Sn		**Sn**	**06 11 07.6**	**-0.5**
SJPF				*e*Sg		**Sg**	**06 11 21.6**	**-1.8**
	16nm,0.3s							
EORO	**Oroz-Betelu**	**3.18**	**284**	Pn		**Pn**	**06 10 31.2**	**+0.3**
EORO				Pg		**Pg**	**06 10 39.8**	**-2.7**
EORO				Sg		**Sg**	**06 11 23.1**	**-0.6**
EORO				*i* Vmb_Lg			06 11 30.0	
RJF	**Les Rejaudoux**	**3.24**	**342**	*e*Pn		**Pn**	**06 10 33.0**	**+1.4**
RJF	**Les Rejaudoux**	**3.24**	**342**	*e*Pg		**Pg**	**06 10 42.4**	**-1.3**
RJF				*e*Sn		**Sn**	**06 11 09.6**	**-0.2**
RJF				*e*Sg		**Sg**	**06 11 24.4**	**-1.2**
	6.7nm,0.2s							
EIBI	**Ibiza**	**3.41**	**201**	Pn		**Pn**	**06 10 33.7**	**-0.3**
EIBI				Sn		**Sn**	**06 11 10.6**	**-3.3**
EIBI				*i* Vmb_Lg			06 11 13.4	
ORIF	**Oris-en-Rattie**	**3.46**	**38**	*e*Pg		**Pg**	**06 10 47.4**	**-0.4**
SBF	**Sospel**	**3.71**	**62**	*e*Pn		**Pn**	**06 10 39.4**	**+1.3**
SBF				*e*Sn		**Sn**	**06 11 21.2**	**-0.2**
	4.6nm,0.2s							
MBDF	**Montbardon**	**3.77**	**47**	*e*Sn		**Sn**	**06 11 23.1**	**0.0**
	1.9nm,0.2s							
ETOR	**Torete**	**3.98**	**251**	Pn		**Pn**	**06 10 42.9**	**+1.1**
ETOR				Sn		**Sn**	**06 11 28.7**	**+0.6**
ETOR				Sg		**Sb**	**06 11 43.0**	**+4.0**
ETOR				*i* Vmb_Lg			06 11 53.6	
TCF	**Toulx Ste Croi**	**4.09**	**353**	*e*Pn		**Pn**	**06 10 44.2**	**+0.8**
TCF	**Toulx Ste Croi**	**4.09**	**353**	*e*Pg		**Pg**	**06 10 59.2**	**-0.8**
TCF				*e*Sg		**Sg**	**06 11 51.7**	**-1.3**
	5.9nm,0.4s							
BGF	**Bois d'Agland**	**4.33**	**360**	*e*Pg		**Pg**	**06 11 02.9**	**-1.7**
BGF				*e*Sg		**Sg**	**06 11 56.6**	**-4.1**
	8.6nm,0.4s							
SMF	**Signal de Mont**	**4.47**	**8**	*e*Pn		**Pn**	**06 10 49.9**	**+1.3**
SMF	**Signal de Mont**	**4.47**	**8**	*e*Pg		**Pg**	**06 11 06.3**	**-0.9**
SMF				*e*Sg		**Sg**	**06 12 03.8**	**-1.3**
	3.2nm,0.3s							
PGF	**Pioggiola**	**4.53**	**84**	*e*Pn		**Pn**	**06 10 50.5**	**+1.0**
PGF				*e*Sn		**Sn**	**06 11 35.7**	**-6.1**
	0.3nm,0.2s							
AVF	**Avril sur Loir**	**4.58**	**4**	*e*Pn		**Pn**	**06 10 51.3**	**+1.3**
AVF	**Avril sur Loir**	**4.58**	**4**	*e*Pg		**Pg**	**06 11 08.5**	**-0.7**
AVF				*e*Sn		**Sn**	**06 11 41.9**	**-0.9**
AVF				*e*Sg		**Sg**	**06 12 07.3**	**-1.2**
	1.0nm,0.3s							
SSF	**Saint Saulge**	**4.86**	**5**	*e*Pn		**Pn**	**06 10 54.2**	**+0.3**
SSF	**Saint Saulge**	**4.86**	**5**	*e*Pg		**Pg**	**06 11 13.2**	**-1.4**
SSF				*e*Sn		**Sn**	**06 11 49.2**	**-0.5**
SSF				*e*Sg		**Sg**	**06 12 17.2**	**-0.2**
	2.2nm,0.3s							
MFF	**Saint Martin d**	**4.89**	**335**	*e*Pg		**Pg**	**06 11 13.3**	**-1.9**
CABF	**La Chapelle**	**4.95**	**26**	*e*Pn		**Pn**	**06 10 56.4**	**+1.2**
CABF	**La Chapelle**	**4.95**	**26**	*e*Pg		**Pg**	**06 11 14.1**	**-2.2**
LOR	**Lormes**	**5.09**	**7**	*e*Sg		**Sg**	**06 12 23.2**	**-1.7**
	0.6nm,0.2s							
HINF	**Hinteralfeld**	**6.25**	**25**	*e*Pn		**Pn**	**06 11 13.5**	**+0.4**
HAU	**Haudompre**	**6.28**	**22**	*e*Pn		**Pn**	**06 11 14.1**	**+0.8**

IDC 10 06:17:24.7±2.6, 54°.12N×86°.38E, h0km, mbtmp3.0/2, ML2.6/2, Error ellipse: s-maj=20.1km s-min=12.9km az=58.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.93**	**260**	*i*			06 22 10.0	
	baz=81,slow=311,SNR=1.1							
ZALV	**Zalesovo Beam**	**0.94**	**260**	Pg		Pg	06 17 41.2	-1.4
	0.8nm,0.3s,baz=78,slow=17,SNR=9.0							
ZALV				Lg		Lg	06 17 56.1	
	1.8nm,0.3s,baz=77,slow=28,SNR=14							
ZALV				Rg		Rg	06 18 02.4	
	29nm,1.1s,baz=77,slow=29,SNR=12							
KURBB	**Kurchatov Arra**	**5.95**	**237**	Pn		Pn	06 18 55.3	+1.4
	0.1nm,0.3s,baz=55,slow=14,SNR=6.9							
KURBB				Lg		Lg	06 20 34.2	
	baz=54,slow=33,SNR=2.0							
	1.1nm,0.5s							
MKAR	**Makanchi Array**	**7.79**	**201**	Pn		Pn	06 19 19.9	+0.6
	0.1nm,0.3s,baz=22,slow=13,SNR=5.4							
	0.3nm,0.3s							

*TRN **10** 06:19:33.7, 18°.44N×64°.65W, h136km, M3.7(RSPR)*
*NEIC **10** 06:19:35.5±1.1, 18°.3N±0°.2×64°.68W±0°.08, h139km±7km, Error ellipse: s-maj=31.9km s-min=7.6km az=194.0*
*RSPR **10** 06:19:37.6, 18°.27N×64°.71W, h129km, MD3.7/16*

ISC 10 06:19:34.3±1.5, 18°37N±0'.10×64°65W±0°.03, h145km±7km, n82, σ1§06/114, 20C-8D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SJVI	**Gifft Hill Sch**	**0.12**	**251**	*e*P		**Pn**	**06 19 54.8**	**+1.0**
SJVI	**Gifft Hill Sch**	**0.12**	**251**	*e*S		**Sn**	**06 20 07.9**	**-0.7**
SJVI	**Gifft Hill Sch**	**0.12**	**251**			**Sn**	**06 19 54.8**	**+1.0**
SJVI						**Sn**	**06 20 07.9**	**-0.7**
STVI	**Saint Thomas**	**0.29**	**266**	*e*P		**Pn**	**06 19 55.2**	**+1.0**
STVI	**Saint Thomas**	**0.29**	**266**			**Pn**	**06 19 55.2**	**+1.0**
STVI						**Sn**	**06 20 08.8**	**-0.4**
STVI	**Saint Thomas**	**0.29**	**266**	*e*P		**Pn**	**06 19 55.2**	**+1.0**
STVI				*e*S		**Sn**	**06 20 08.8**	**-0.4**
CUPR	**Culebra, Puert**	**0.60**	**264**	*e*P		**Pn**	**06 19 56.4**	**+0.8**
CUPR	**Culebra, Puert**	**0.60**	**264**	*e*S		**Sn**	**06 20 11.1**	**-0.6**
CUPR	**Culebra, Puert**	**0.60**	**264**			**Pn**	**06 19 56.4**	**+0.8**
CUPR	**Culebra, Puert**	**0.60**	**264**			**Sn**	**06 20 11.1**	**-0.6**
CUPR	**Culebra, Puert**	**0.60**	**264**	IAML			06 20 07.3	
	comp=N,45nm,0.7s							
CDVI	**St. Croix**	**0.62**	**190**	*e*P		**Pn**	**06 19 56.2**	**+0.4**
CDVI	**St. Croix**	**0.62**	**190**			**Pn**	**06 19 56.2**	**+0.4**
CDVI						**Sn**	**06 20 11.0**	**-1.1**
CDVI	**St. Croix**	**0.62**	**190**	*e*P		**Pn**	**06 19 56.1**	**+0.4**
CDVI				*e*S		**Sn**	**06 20 10.8**	**-1.3**
MTP	**Monte Pirata**	**0.90**	**253**	*e*P		**Pn**	**06 19 58.3**	**+0.6**
MTP	**Monte Pirata**	**0.90**	**253**			**Pn**	**06 19 58.3**	**+0.6**
MTP						**Sn**	**06 20 14.2**	**-1.3**
MTP	**Monte Pirata**	**0.90**	**253**	IAML			06 20 17.1	
	comp=E,966nm,0.2s							
MTP	**Monte Pirata**	**0.90**	**253**	*e*P		**Pn**	**06 19 58.3**	**+0.6**
MTP				*e*S		**Sn**	**06 20 14.2**	**-1.3**
CBYP	**Canovanas**	**1.15**	**265**	*e*P		**Pn**	**06 20 00.6**	**+0.6**
CBYP	**Canovanas**	**1.15**	**265**			**Pn**	**06 20 00.6**	**+0.6**
CBYP						**Sn**	**06 20 18.4**	**-1.1**
CBYP	**Canovanas**	**1.15**	**265**	*e*P		**Pn**	**06 20 00.6**	**+0.6**
CBYP				*e*S		**Sn**	**06 20 18.4**	**-1.1**
PDPR	**Patillas Dam,**	**1.35**	**255**			**Pn**	**06 20 02.0**	**+0.1**
GCPR	**Guaynabo City**	**1.36**	**268**	*e*P		**Pn**	**06 20 02.3**	**+0.3**
GCPR	**Guaynabo City**	**1.36**	**268**	*e*S		**Sn**	**06 20 22.4**	**-0.8**
GCPR	**Guaynabo City**	**1.36**	**268**			**Pn**	**06 20 02.3**	**+0.3**
GCPR						**Sn**	**06 20 22.4**	**-0.8**
IGPR	**InterUniversit**	**1.44**	**254**	*e*P		**Pn**	**06 20 03.5**	**+0.7**
IGPR	**InterUniversit**	**1.44**	**254**	*e*S		**Sn**	**06 20 23.1**	**-1.4**
SJG	**San Juan**	**1.45**	**260**	IAML			06 20 25.0	
	comp=E,544nm,0.7s							
SJG				IAML			06 20 25.7	
	comp=E,314nm,0.7s							
SJG	**San Juan**	**1.45**	**260**			**Pn**	**06 20 03.4**	**+0.5**
SJG	**San Juan**	**1.45**	**260**	*e*P		**Pn**	**06 20 03.7**	**+0.8**
SJG				*e*S		**Sn**	**06 20 24.6**	**-0.1**
SMRT	**St. Maarten**	**1.53**	**102**	*e*S		**Sn**	**06 20 26.1**	**-0.3**
SMRT	**St. Maarten**	**1.53**	**102**			**Sn**	**06 20 26.1**	**-0.3**
SMRT	**St. Maarten**	**1.53**	**102**	*e*S		**Sn**	**06 20 26.1**	**-0.3**
EMPR	**Esperanza - Ma**	**1.78**	**274**	*e*P		**Pn**	**06 20 07.3**	**+0.8**
EMPR	**Esperanza - Ma**	**1.78**	**274**	*e*S		**Sn**	**06 20 31.6**	**+0.3**
EMPR	**Esperanza - Ma**	**1.78**	**274**			**Pn**	**06 20 07.3**	**+0.8**
EMPR						**Sn**	**06 20 31.6**	**+0.3**
ICMP	**Isla Caja de M**	**1.84**	**255**	*e*P		**Pn**	**06 20 11.3**	**+4.1**
ICMP	**Isla Caja de M**	**1.84**	**255**			**Pn**	**06 20 11.3**	**+4.1**
CELP	**Cerrillos**	**1.85**	**261**	*e*P		**Pn**	**06 20 08.2**	**+0.8**
CELP	**Cerrillos**	**1.85**	**261**			**Pn**	**06 20 08.2**	**+0.8**
CELP						**Sn**	**06 20 32.4**	**-0.4**
CELP	**Cerrillos**	**1.85**	**261**	*e*P		**Pn**	**06 20 08.2**	**+0.8**
CELP				*e*S		**Sn**	**06 20 32.4**	**-0.4**
OBIP	**Obispado Ponce**	**1.88**	**260**	*e*P		**Pn**	**06 20 08.5**	**+0.7**
OBIP	**Obispado Ponce**	**1.88**	**260**			**Pn**	**06 20 08.5**	**+0.7**
OBIP						**Sn**	**06 20 32.9**	**-0.5**
OBIP	**Obispado Ponce**	**1.88**	**260**	*e*P		**Pn**	**06 20 08.5**	**+0.7**
OBIP				*e*S		**Sn**	**06 20 32.9**	**-0.5**
AOPR	**Arecibo Observ**	**2.00**	**270**	*e*P		**Pn**	**06 20 09.8**	**+0.7**
AOPR	**Arecibo Observ**	**2.00**	**270**			**Pn**	**06 20 09.8**	**+0.7**
AOPR						**Sn**	**06 20 34.7**	**-1.1**
AOPR	**Arecibo Observ**	**2.00**	**270**	*e*P		**Pn**	**06 20 09.7**	**+0.7**
AOPR				*e*S		**Sn**	**06 20 34.9**	**-0.9**
SKI	**Saint Kitts**	**2.10**	**119**	*e*P		**Pn**	**06 20 11.4**	**+1.1**
SKI				*e*S		**Sn**	**06 20 38.7**	**+0.8**
SKOC	**St. Kitts, UWI**	**2.12**	**120**	*e*P		**Pn**	**06 20 09.8**	**-0.7**
SKOC				*e*S		**Sn**	**06 20 39.5**	**+1.1**
GBPR	**Guanica, Bosqu**	**2.15**	**260**	*e*P		**Pn**	**06 20 11.6**	**+0.7**
GBPR	**Guanica, Bosqu**	**2.15**	**260**	*e*P		**Pn**	**06 20 11.6**	**+0.7**
GBPR				*e*S		**Sn**	**06 20 37.6**	**-1.4**
MLPR	**Magueyes Islan**	**2.31**	**260**	*e*P		**Pn**	**06 20 13.2**	**+0.4**
MLPR	**Magueyes Islan**	**2.31**	**260**	*e*S		**Sn**	**06 20 41.2**	**-1.2**
MLPR	**Magueyes Islan**	**2.31**	**260**			**Pn**	**06 20 13.2**	**+0.4**
MLPR						**Sn**	**06 20 41.2**	**-1.2**
LSP	**Las Mesas**	**2.32**	**266**	*e*P		**Pn**	**06 20 14.0**	**+1.0**
LSP	**Las Mesas**	**2.32**	**266**	*e*P		**Pn**	**06 20 14.0**	**+1.0**
AGPR	**Aguadilla, PR**	**2.33**	**273**	*e*P		**Pn**	**06 20 14.1**	**+0.9**
AGPR	**Aguadilla, PR**	**2.33**	**273**			**Pn**	**06 20 14.1**	**+0.9**
AGPR						**Sn**	**06 20 41.7**	**-1.3**
AGPR	**Aguadilla, PR**	**2.33**	**273**	*e*P		**Pn**	**06 20 14.1**	**+0.9**
AGPR				*e*S		**Sn**	**06 20 41.7**	**-1.3**
CRPR	**Cabo Rojo, PR**	**2.36**	**262**	*e*P		**Pn**	**06 20 14.0**	**+0.5**
CRPR	**Cabo Rojo, PR**	**2.36**	**262**			**Pn**	**06 20 14.0**	**+0.5**
CRPR						**Sn**	**06 20 42.4**	**-1.2**
CRPR	**Cabo Rojo, PR**	**2.36**	**262**	*e*P		**Pn**	**06 20 14.0**	**+0.5**
CRPR				*e*S		**Sn**	**06 20 42.4**	**-1.2**
IDE	**Isla Desecheo**	**2.68**	**271**	*e*P		**Pn**	**06 20 18.1**	**+0.7**
IDE	**Isla Desecheo**	**2.68**	**271**	*e*P		**Pn**	**06 20 18.1**	**+0.7**
IDE				*e*S		**Sn**	**06 20 49.2**	**-1.4**
ANWB	**Willy Bob**	**2.82**	**104**	*e*P		**Pn**	**06 20 19.0**	**-0.1**
ANWB				*e*S		**Sn**	**06 20 52.0**	**-1.7**
MBFL	**Flemmings, Mon**	**2.83**	**124**	*e*P		**Pn**	**06 20 20.6**	**+1.2**
MBFL				*e*S		**Sn**	**06 20 54.2**	**+0.1**
MLYT	**Lee's Yard**	**2.87**	**125**	*e*P		**Pn**	**06 20 20.5**	**+0.7**
MLYT				*e*S		**Sn**	**06 20 55.4**	**+0.5**
ANDO	**Antigua, Disas**	**2.97**	**114**	*e*P		**Pn**	**06 20 21.4**	**+0.3**
ANDO				*e*S		**Sn**	**06 20 55.1**	**-2.1**
BPA	**Boggy Peak**	**2.97**	**116**	*e*P		**Pn**	**06 20 21.2**	**0.0**
BPA				*e*S		**Sn**	**06 20 55.4**	**-2.0**
ANBD	**Bethesda, Anti**	**3.05**	**115**	*e*P		**Pn**	**06 20 22.1**	**0.0**
ANBD				*e*S		**Sn**	**06 20 56.8**	**-2.2**
GDHS	**Morne Mazeau,**	**3.46**	**127**			**Pn**	**06 20 27.9**	**+0.4**
ABD	**La Joyeuse, An**	**3.56**	**121**	*e*P		**Pn**	**06 20 29.7**	**+1.0**
ABD				*e*S		**Sn**	**06 21 09.4**	**-1.4**
**CBE

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.26**	**262**	*e*PN	**Pn**	**06 30 25.9**	**+0.2**
KUR				*i* S	**Sn**	**06 31 05.3**	**+2.1**
KUR				pmax	pmax		
	comp=N,202nm,0.5s						
KUR				pmax	pmax		
	comp=Z,513nm,0.5s						
KUR				pmax	pmax		
	comp=E,127nm,0.3s						
KUR				smax	smax		
	comp=N,4μm,1.8s						
KUR				smax	smax		
	comp=E,2μm,1.5s						
KUR				smax	smax		
	comp=N,564nm,0.6s						
KUR				smax	smax		
	comp=E,1μm,0.6s						
KUR	**Kuril'sk**	**3.26**	**262**	*e*P	**Pn**	**06 30 25.9**	**+0.2**
KUR				AMB	AMB	06 30 29.1	
	comp=E,350nm,0.6s						
KUR				*i* S	**Sn**	**06 31 05.3**	**+2.1**
KUR				A	A	06 31 13.5	
	comp=E,560nm,0.6s						
KUR				A	A	06 31 13.5	
	comp=E,1μm,0.6s						
SHO	**Shikotan**	**4.43**	**246**	*e*PN	**Pn**	**06 30 39.9**	**-1.8**
SHO				pmax	pmax		
	comp=Z,102nm,0.4s						
SHO				pmax	pmax		
	comp=E,71nm,0.3s						
SHO				pmax	pmax		
	comp=N,43nm,0.4s						
SHO	**Shikotan**	**4.43**	**246**	*e*P	**Pn**	**06 30 40.2**	**-1.5**
SHO				AMB	AMB	06 30 46.2	
	comp=N,100nm,0.4s						
SHO				*e*S	**Sn**	**06 31 30.6**	**-1.4**
SHO				A	A	06 31 47.9	
	comp=N,270nm,0.6s						
SHO				A	A	06 31 47.9	
	comp=N,320nm,0.6s						
YUK	**Yuzh-Kuril'sk**	**4.99**	**252**	*e*P	**Pn**	**06 30 48.8**	**-0.6**
YUK				AMB	AMB	06 30 49.3	
	comp=N,30nm,0.2s						
YUK				*e*S	**Sn**	**06 31 46.4**	**+0.6**
YUK				A	A	06 31 54.0	
	comp=N,320nm,0.7s						
YUK				A	A	06 31 54.0	
	comp=N,430nm,0.7s						
GLVR	**Golovnino**	**5.34**	**250**	*e*S	**Sn**	**06 31 53.0**	**-1.4**
NEM2	**Nemuro 2**	**5.37**	**245**	*e*P	**Pn**	**06 30 52.5**	**-2.1**
NEM2				*e*S	**Sn**	**06 31 52.2**	**-2.8**
NMR	**Nemuro--Hokkai**	**5.37**	**246**	*e*PN	**Pn**	**06 30 52.1**	**-2.5**
NMR	**Nemuro--Hokkai**	**5.37**	**246**	*e*P	**Pn**	**06 30 52.9**	**-1.8**
NMR				*e*S	**Sn**	**06 31 53.5**	**-1.7**
RUSJ	**Misakicho**	**5.38**	**254**	*e*PN	**Pn**	**06 30 55.1**	**+0.4**
RUSJ				*e*S	**Sn**	**06 31 57.6**	**+2.3**
SKR	**Severo-Kuril's**	**5.47**	**25**	*e*PN	**Pn**	**06 30 55.5**	**-0.5**
SKR				pmax	pmax		
	comp=Z,144nm,0.6s						
SKR				pmax	pmax		
	comp=Z,100nm,6.8s						
SKR				MLR	MLR		
	comp=Z,400nm,14.0s						
SKR				MLR	MLR		
	comp=E,400nm,12.0s						
SKR				MLR	MLR		
	comp=N,400nm,13.0s						
SKR	**Severo-Kuril's**	**5.47**	**25**	*e*P	**Pn**	**06 30 54.3**	**-1.7**
SKR				AMB	AMB	06 30 57.1	
	comp=N,150nm,0.6s						
SKR				*e*S	**Sn**	**06 31 55.0**	**-2.6**
SKR				A	A	06 31 59.3	
	comp=N,160nm,0.7s						
SKR				A	A	06 31 59.3	
	comp=N,240nm,0.7s						
JRA	**Rausu**	**5.52**	**253**	*e*P	**Pn**	**06 30 58.1**	**+1.4**
JNK	**Nakash**	**5.93**	**251**	*e*P	**Pn**	**06 31 02.3**	**0.0**
AKK	**Akkeshi**	**6.11**	**246**	*e*P	**Pn**	**06 31 04.1**	**-0.7**
AKK				*e*S	**Sn**	**06 32 13.5**	**+0.1**
JAK	**Akkeshi**	**6.21**	**246**	*e*P	**Pn**	**06 31 04.5**	**-1.7**
JTKR	**Abashiri--Toko**	**6.33**	**256**	*e*P	**Pn**	**06 31 08.2**	**+0.4**
PAU	**Pauzhetka**	**6.37**	**25**	*e*P	**Pn**	**06 31 07.0**	**-1.3**
PAU				AMB	AMB	06 31 11.9	
	comp=N,60nm,0.4s						
PAU				*e*S	**Sn**	**06 32 16.6**	**-3.1**
PAU				A	A	06 32 20.5	
	comp=N,220nm,0.4s						
PAU				A	A	06 32 20.5	
	comp=N,280nm,0.4s						
JAR	**Ashorobuto**	**6.68**	**251**	*e*P	**Pn**	**06 31 12.5**	**-0.1**
YSS	**Yuzh-Sakhalins**	**6.80**	**283**	Pn	**Pn**	**06 31 15.2**	**+1.0**
YSS	**Yuzh-Sakhalins**	**6.80**	**283**	*e*PN	**Pn**	**06 31 16.9**	**+2.7**
YSS				pmax	pmax		
	comp=Z,70nm,0.5s						
YSS				MLR	MLR		
	comp=Z,1μm,17.0s						
YSS				MLR	MLR		
	comp=N,300nm,16.0s						
YSS				MLR	MLR		
	comp=E,700nm,16.0s						
YSS	**Yuzh-Sakhalins**	**6.80**	**283**	*e*P	**Pn**	**06 31 16.8**	**+2.6**
YSS				AMB	AMB	06 31 21.1	
	comp=E,60nm,0.6s						
YSS				*e*S	**Sn**	**06 32 32.1**	**+1.8**
YSS				A	A	06 32 41.0	
	comp=E,20nm,0.4s						
YSS				A	A	06 32 41.0	
	comp=E,20nm,0.4s						
JOB	**Onbets**	**6.81**	**248**	*e*P	**Pn**	**06 31 13.2**	**-1.2**
JOB				*e*S	**Sn**	**06 32 28.5**	**-2.2**
JKK2	**Kamakawa 2**	**7.15**	**258**	*e*P	**Pn**	**06 31 20.1**	**+0.9**
JCH	**Churui**	**7.26**	**247**	*e*P	**Pn**	**06 31 19.6**	**-0.9**
JCH				*e*S	**Sn**	**06 32 38.8**	**-2.8**
JAB	**Ashibetsu**	**7.64**	**256**	*e*P	**Pn**	**06 31 27.7**	**+1.9**
ERM	**Erimo**	**7.69**	**244**	Pn	**Pn**	**06 31 27.3**	**+0.8**
ERM	**Erimo**	**7.69**	**244**	*ce*PN	**Pn**	**06 31 26.2**	**-0.3**
JNBK	**Urakawa-nobuka**	**7.81**	**247**	P	**Pn**	**06 31 26.4**	**-1.7**
PEA0B	**Petropavlovsk-**	**8.08**	**23**	Pn	**Pn**	**06 31 31.4**	**-0.3**
PEA0B	**Petropavlovsk-**	**8.08**	**23**	*ce*PN	**Pn**	**06 31 30.6**	**-1.2**
PETK	**Petropavlovsk-**	**8.08**	**23**	Pn	**Pn**	**06 31 28.9**	**-2.8**
	comp=E,1.3nm,0.3s,baz=198,slow=17,SNR=14 comp=E,1.0nm,0.8s						
PETK	**Petropavlovsk-**	**8.08**	**23**	Pn	**Pn**	**06 31 30.4**	**-1.3**
PETK	**Petropavlovsk-**	**8.08**	**23**	PN	**Pn**	**06 31 30.4**	**-1.3**
TYV	**Tymovskoe**	**8.25**	**311**	*e*PN	**Pn**	**06 31 35.1**	**+0.9**
TYV				pmax	pmax		
	comp=Z,12nm,0.7s						
TYV				pmax	pmax		
	comp=Z,100nm,1.4s						
TYV	**Tymovskoe**	**8.25**	**311**	*e*P	**Pn**	**06 31 35.1**	**+0.9**
TYV				AMB	AMB	06 31 35.5	
	comp=Z,100nm,1.0s						
TYV				AMB	AMB	06 31 35.8	
	comp=Z,10.0nm,0.5s						
TYV				*e*S	**Sn**	**06 33 07.3**	**+1.3**
TYV				A	A	06 33 14.8	
	comp=Z,20nm,0.5s						
TYV				A	A	06 33 14.8	
	comp=Z,10.0nm,0.5s						
PET	**Petropavlovsk**	**8.29**	**27**	*e*S	**Sn**	**06 33 03.9**	**-2.9**
JANG	**Nango**	**9.65**	**240**	*e*P	Pn	06 31 49.3	-4.0
JANG				*e*S	Sn	06 33 30.8	-10
NKL	**Nikolayevsk**	**10.61**	**318**	*e*P	**Pn**	**06 32 06.9**	**+0.6**
NKL				AMB	AMB	06 32 07.9	
	comp=Z,40nm,0.7s						
MJAR	**Matsushiro Arr**	**14.14**	**234**	Pn	Pn	06 32 50.4	-4.3
	comp=Z,0.1nm,0.3s,baz=42,slow=11,SNR=5.6						
MJAR	**Matsushiro Arr**	**14.14**	**234**		**Pn**	**06 32 52.5**	**-2.1**
MJAR	**Matsushiro Arr**	**14.14**	**234**	P	**Pn**	**06 32 52.5**	**-2.1**
KLR	**Kul'dur**	**14.39**	**291**	Pn	**Pn**	**06 32 58.7**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=99,slow=14,SNR=6.5						
KLR	**Kul'dur**	**14.39**	**291**	*de*P	**Pn**	**06 32 59.0**	**+1.0**
KLR				pmax	pmax		
	comp=Z,30nm,1.7s						
KLR				MLR	MLR		
	comp=Z,507nm,16.0s						
KLR	**Kul'dur**	**14.39**	**291**	*e*P	**Pn**	**06 32 58.0**	**0.0**
USA0B	**Ussuriysk Arra**	**14.56**	**271**	Pn	**Pn**	**06 32 58.4**	**-1.9**
USA0B	**Ussuriysk Arra**	**14.56**	**271**	⇑*e*P	**Pn**	**06 32 58.5**	**-1.7**
USRK	**Ussuriysk Ar.**	**14.56**	**271**	Pn	**Pn**	**06 32 58.1**	**-2.1**
	comp=Z,0.3nm,0.3s,baz=77,slow=16,SNR=3.3						
USRK				LR	LR	06 38 12.5	
	comp=Z,531nm,21.1s,baz=6.4,slow=36 comp=Z,3.9nm,0.7s						
USRK	**Ussuriysk Ar.**	**14.56**	**271**	Pn	**Pn**	**06 32 58.6**	**-1.6**
USRK	**Ussuriysk Ar.**	**14.56**	**271**	P	**Pn**	**06 32 58.6**	**-1.6**
MDJ	**Mudanjiang**	**16.14**	**274**	P	**Pn**	**06 33 21.1**	**+0.2**
ZEA	**Zeya**	**18.04**	**305**	*e*P	**P**	**06 33 45.4**	**+1.0**
ZEA				pmax	pmax		
	comp=Z,20nm,0.7s						
ZEA				MLR	MLR		
	comp=Z,200nm,18.0s						
ZEA	**Zeya**	**18.04**	**305**	*e*P	**P**	**06 33 45.4**	**+1.0**
ZEA				AMB	AMB	06 33 48.6	
	comp=Z,20nm,0.7s						
KSRS	**Korea Array**	**20.07**	**254**	P	**P**	**06 34 07.4**	**+0.5**
	comp=Z,4.0nm,0.9s,baz=66,slow=11,SNR=11						
KSRS				LR	LR	06 40 30.0	
	comp=Z,241nm,21.0s,baz=355,slow=33 comp=Z,4.0nm,0.9s						
KSRS	**Korea Array**	**20.07**	**254**	*e*P	Pn	06 34 09.8	+0.9
KSRS				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KSRS	**Korea Array**	**20.07**	**254**	*e*P	Pn	06 34 09.8	+0.9
KS19	**Wonju Array Si**	**20.09**	**254**	P	**P**	**06 34 07.2**	**+0.1**
KSAR	**Wonju Array Be**	**20.11**	**254**	P	**P**	**06 34 06.4**	**-0.8**
KSAR	**Wonju Array Be**	**20.11**	**254**	P	**P**	**06 34 06.4**	**-0.8**
KSCHJ	**Chungju**	**20.36**	**253**	P	**P**	**06 34 09.8**	**-0.1**
YAK	**Yakutsk**	**20.89**	**329**	*d* i P	Pn	06 34 21.3	+3.1
YAK				pmax	pmax		
	comp=Z,37nm,0.7s						
YAK				pmax	pmax		
	comp=N,15nm,1.1s						
YAK				pmax	pmax		
	comp=E,17nm,1.1s						
BILL	**Bilibino**	**23.43**	**13**	P	**P**	**06 34 42.7**	**+0.5**
BILL	**Bilibino**	**23.43**	**13**	*e*P	**P**	**06 34 41.4**	**-0.7**
BILL				*e**PP	**pP**	**06 34 52.8**	**+1.3**
BILL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BILL	**Bilibino**	**23.43**	**13**	*e*P	**P**	**06 34 43.3**	**+1.2**
H11N2	**WAKE ISLAND Hy**	**28.60**	**151**	T	T	07 05 49.0	
	baz=342,SNR=598						
H11N1	**WAKE ISLAND Hy**	**28.62**	**151**	T	T	07 05 48.6	
	baz=342						
H11N3	**WAKE ISLAND Hy**	**28.62**	**151**	T	T	07 05 52.8	
	baz=342						
H11S1	**WAKE ISLAND Hy**	**29.67**	**152**	T	T	07 07 12.9	
	baz=337,slow=76,SNR=481						
H11S3	**WAKE ISLAND Hy**	**29.68**	**152**	T	T	07 07 13.4	
	baz=337,slow=76,SNR=513						
H11S2	**WAKE ISLAND Hy**	**29.69**	**152**	T	T	07 07 09.1	
	baz=337,slow=76,SNR=397						
ULN	**Ulaanbaatar**	**30.78**	**291**	⇑*e*P	**P**	**06 35 49.7**	**+1.0**
ULN				pmax	pmax		
	comp=Z,3.0nm,1.3s						
ULN	**Ulaanbaatar**	**30.78**	**291**	*e*P	**P**	**06 35 49.7**	**+1.0**
SONM	**Songino Array**	**31.22**	**291**	P	**P**	**06 35 52.1**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=60,slow=8.7,SNR=4.0 comp=Z,0.4nm,0.4s						
SONM	**Songino Array**	**31.22**	**291**	IAmb	IAmb	06 35 56.0	
	comp=Z,2.0nm,1.2s						
SONM	**Songino Array**	**31.22**	**291**	P	**P**	**06 35 52.1**	**-0.4**
SONM				pmax	pmax		
	comp=Z,2.0nm,1.2s						
TTA	**Tatalina**	**33.45**	**41**	P	**P**	**06 36 12.1**	**+0.3**
TTA				IAmb	IAmb	06 36 38.6	
	comp=Z,6.1nm,1.2s						
TTA	**Tatalina**	**33.45**	**41**	P	**P**	**06 36 12.1**	**+0.3**
TTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
IMAR	**Indian Mountai**	**34.81**	**35**	P	**P**	**06 36 23.9**	**+0.4**
XAN	**Xi'an**	**34.98**	**266**	P	**P**	**06 36 25.5**	**+0.2**
XAN				pP	pP	06 36 33.2	-2.5
XAN				pmax	pmax		
	comp=Z,9.0nm,1.2s						
KDAK	**Kodiak Island**	**35.07**	**50**	P	**P**	**06 36 25.7**	**-0.1**
	comp=Z,5.9nm,0.7s,baz=299,slow=10,SNR=4.7 comp=Z,5.9nm,0.7s						
KDAK	**Kodiak Island**	**35.07**	**50**	P	**P**	**06 36 25.7**	**-0.1**
KDAK				pmax	pmax		
	comp=Z,17nm,1.1s						
H21K	**Melozitna Rive**	**35.16**	**36**	P	**P**	**06 36 26.4**	**0.0**
H21K				IAmb	IAmb	06 36 28.2	
	comp=Z,4.4nm,0.9s						
KTH	**Kantishna Hill**	**35.79**	**40**	P	**P**	**06 36 32.5**	**+0.5**
KTH				IAmb	IAmb	06 36 34.1	
	comp=Z,9.8nm,1.0s						
MLY	**Manley**	**35.96**	**37**	P	**P**	**06 36 34.0**	**+0.6**
SML	**Sawmill**	**36.99**	**43**	P	**P**	**06 36 42.6**	**+0.4**
MDM	**Murphy Dome**	**37.02**	**37**	P	**P**	**06 36 43.0**	**+0.6**
MDM				IAmb	IAmb	06 36 44.1	
	comp=Z,3.8nm,0.8s						
WRH	**Wood River Hil**	**37.06**	**38**	P	**P**	**06 36 43.7**	**+0.9**
WRH				IAmb	IAmb	06 36 48.3	
	comp=Z,3.1nm,0.8s						
COLA	**College**	**37.18**	**38**	*ce*P	**P**	**06 36 44.8**	**+1.1**
COLA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
H24K	**Noodor Dome**	**37.20**	**36**	P	**P**	**06 36 43.3**	**-0.6**
LZH	**Lanzhou**	**37.46**	**273**	*e*P	**P**	**06 36 47.6**	**+1.0**
LZH				pP	pP	06 36 55.3	-1.7
LZH				pmax	pmax		
	comp=Z,20nm,1.6s						
HDA	**Harding Lake**	**37.56**	**38**	P	**P**	**06 36 47.0**	**0.0**
HDA				IAmb	IAmb	06 36 48.3	
	comp=Z,2.9nm,0.8s						
ILAR	**Eielson Array**	**37.59**	**38**	P	**P**	**06 36 46.8**	**-0.5**
	comp=Z,1.2nm,0.8s,baz=264,slow=6.7,SNR=11 comp=Z,1.2nm,0.8s						
ILAR	**Eielson Array**	**37.59**	**38**	*e*P	**P**	**06 36 50.7**	**+3.5**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
J25K	**Salcha River,**	**38.24**	**38**	P	**P**	**06 36 52.7**	**-0.1**
GTA	**Gaotai**	**38.66**	**280**	*e*P	**P**	**06 36 57.2**	**+0.5**
GTA				pP	pP	06 37 03.6	-3.5
GTA				sP	pwP	06 37 09.4	-2.2
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
K27K	**Chicken**	**39.70**	**39**	P	**P**	**06 37 05.9**	**+0.9**
K27K				IAmb	IAmb	06 37 07.0	
	comp=Z,5.1nm,0.9s						
BCAR	**Beaver Creek A**	**39.93**	**40**	P	**P**	**06 37 07.2**	**+0.3**
EPYK	**Eagle Plains**	**41.72**	**35**	P	**P**	**06 37 22.1**	**+0.5**
EPYK				IAmb	IAmb	06 37 24.1	
	comp=Z,6.7nm,1.1s						
ZALV	**Zalesovo Beam**	**42.80**	**306**	P	**P**	**06 37 30.2**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=81,slow=8.9,SNR=1.8						
ZALV				PcP	**PcP**	**06 39 20.7**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=67,slow=4.8,SNR=2.0 comp=Z,0.4nm,0.4s						
MK31	**Makanchi Array**	**46.97**	**298**	P	**P**	**06 38 02.0**	**-1.7**
MK31	**Makanchi Array**	**46.97**	**298**	*ce*P	**P**	**06 38 02.4**	**-1.4**
MKAR	**Makanchi Array**	**46.97**	**298**	P	**P**	**06 38 02.2**	**-1.6**
	comp=Z,1.5nm,0.7s,baz=70,slow=5.8,SNR=12						
MKAR				PcP	**PcP**	**06 39 35.9**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=92,slow=2.5,SNR=2.1 comp=Z,1.5nm,0.7s						
MKAR	**Makanchi Array**	**46.97**	**298**	P	**P**	**06 38 02.0**	**-1.7**
KURK	**Kurchatov**	**47.51**	**304**	⇓*e*P	**P**	**06 38 06.8**	**-1.0**
KURK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
KURK	**Kurchatov**	**47.51**	**304**	*e*P	**P**	**06 38 06.8**	**-1.0**
CMAR	**Chiang Mai Arr**	**51.69**	**256**	P	**P**	**06 38 40.7**	**+0.6**
	comp=Z,1.5nm,0.3s,baz=35,slow=6.9,SNR=1.4 comp=Z,1.5nm,0.3s						
YKA	**Yellowknife Ar**	**51.97**	**36**	P	**P**	**06 38 42.2**	**+0.7**
	comp=Z,1.6nm,0.9s,baz=297,slow=7.0,SNR=11 comp=Z,1.6nm,0.9s						
YKA	**Yellowknife Ar**	**51.97**	**36**	*e*P	**P**	**06 38 42.4**	**+0.8**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KDJ	**Kajisay**	**52.41**	**295**	P	**P**	**06 38 44.8**	**-0.6**
KDJ				IAmb	IAmb	06 38 48.1	
	comp=Z,3.0nm,0.8s						
KDJ	**Kajisay**	**52.41**	**295**	P	**P**	**06 38 44.8**	**-0.6**
KDJ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BOOM	**Boomskoye usch**	**53.01**	**296**	P	**P**	**06 38 49.0**	**-0.8**
BOOM				IAmb	IAmb	06 38 52.3	
	comp=Z,3.1nm,0.7s						
BOOM	**Boomskoye usch**	**53.01**	**296**	P	**P**	**06 38 49.0**	**-0.8**
BOOM				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AAK	**Ala-Archa**	**53.84**	**297**	⇓*e*P	**P**	**06 38 56.3**	**+0.4**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AAK	**Ala-Archa**	**53.84**	**297**	*e*P	**P**	**06 38 56.3**	**+0.4**
KSH	**Kashi**	**54.59**	**293**	P	P	06 39 07.8	+6.5
KSH				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ARU	**Arti**	**55.40**	**318**	*c i*P	**P**	**06 39 04.9**	**-1.9**
ARU				S	**S**	**06 46 47.5**	**-0.6**
ARU				SS	**SS**	**06 50 30.2**	**-2.2**
ARU				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ARU	**Arti**	**55.40**	**318**	*e*P	**P**	**06 39 05.9**	**-0.9**
KK31	**Karatay Array**	**56.05**	**299**	P	**P**	**06 39 11.0**	**-0.7**
KK31	**Karatay Array**	**56.05**	**299**	P	**P**	**06 39 11.0**	**-0.7**
KK31				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KKAR	**Karatay Array**	**56.05**	**299**	P	**P**	**06 39 10.5**	**-1.2**
KKAR	**Karatay Array**	**56.05**	**299**	P	**P**	**06 39 10.5**	**-1.2**
BTK	**Batken**	**57.57**	**296**	P	**P**	**06 39 21.6**	**-1.0**
BTK	**Batken**	**57.57**	**296**	P	**P**	**06 39 21.6**	**-1.0**
BTK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
PINE	**Pine Mountain**	**58.49**	**58**	P	**P**	**06 39 30.4**	**+1.3**
GAR	**Garm**	**58.50**	**295**	P	**P**	**06 39 28.7**	**-0.4**
AKTO	**Aktyubinsk**	**59.01**	**312**	LR	LR	07 07 33.4	
	comp=Z,275nm,18.4s,baz=53,slow=39						
CHGR	**Chuyangaron**	**59.43**	**295**	P	**P**	**06 39 34.6**	**-1.0**
CHGR	**Chuyangaron**	**59.43**	**295**	P	**P**	**06 39 34.6**	**-1.0**
CHGR				pmax	pmax		
	comp=Z,26nm,0.9s						
MOD	**Modoc Plateau**	**59.97**	**59**	P	**P**	**06 39 40.9**	**+1.6**
MOD				IAmb	IAmb	06 39 41.9	
	comp=Z,2.5nm,0.8s						
J08A	**Circle Bar Ran**	**60.20**	**57**	P	**P**	**06 39 40.9**	**0.0**
J08A				IAmb	IAmb	06 39 43.5	
	comp=Z,3.8nm,1.2s						
PLID	**Pearl Lake**	**60.60**	**54**	P	**P**	**06 39 44.5**	**+0.8**
WVOR	**Wild Horse Val**	**60.65**	**58**	P	**P**	**06 39 43.7**	**-0.3**
WVOR				IAmb	IAmb	06 39 46.6	
	comp=Z,3.2nm,0.8s						
WVOR	**Wild Horse Val**	**60.65**	**58**	P	**P**	**06 39 43.7**	**-0.3**
WVOR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SUMG	**Summit**	**61.68**	**4**	P	**P**	**06 39 51.3**	**+0.5**
SUMG	**Summit**	**61.68**	**4**	P	**P**	**06 39 51.3**	**+0.5**
SUMG				pmax	pmax		
	comp=Z,13nm,1.1s						
SUMG	**Summit**	**61.68**	**4**	*i* P	**P**	**06 39 51.0**	**+0.2**
PAHR	**Pah Rah Range**	**61.85**	**61**	P	**P**	**06 39 52.8**	**+0.7**
PAHR				IAmb	IAmb	06 39 54.6	
	comp=Z,3.8nm,1.0s						
KBL	**Kabul**	**61.98**	**292**	P	**P**	**06 39 52.0**	**-1.1**
KBL	**Kabul**	**61.98**	**292**	P	**P**	**06 39 52.0**	**-1.1**
KBL				pmax	pmax		
	comp=Z,14nm,1.3s						
LRM	**Limekiln Ridge**	**62.15**	**52**	P	**P**	**06 39 55.6**	**+1.5**
EGMT	**Eagleton**	**62.24**	**49**	P	**P**	**06 39 55.5**	**+1.0**
EGMT				IAmb	IAmb	06 39 56.2	
	comp=Z,6.1nm,1.0s						
HLID	**Hailey**	**62.44**	**55**	P	**P**	**06 39 56.7**	**+0.7**
HLID				IAmb	IAmb	06 39 58.6	
	comp=Z,2.7nm,1.0s						
BOZ	**Bozeman (W)**	**62.74**	**52**	P	**P**	**06 39 58.9**	**+0.9**
BOZ				IAmb	IAmb	06 40 00.1	
	comp=Z,3.2nm,0.8s						
BOZ	**Bozeman (W)**	**62.74**	**52**	P	**P**	**06 39 58.9**	**+0.9**
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
RYN	**Ryan**	**63.04**	**61**	P	**P**	**06 40 01.2**	**+1.1**
NVAR	**Mina Array Bea**	**63.30**	**62**	P	**P**	**06 40 03.3**	**+1.4**
	comp=Z,3.3nm,0.7s,baz=296,slow=6.8,SNR=29 comp=Z,3.3nm,0.7s						
NVAR	**Mina Array Bea**	**63.30**	**62**	P	**P**	**06 40 03.0**	**+1.2**
ILULI	**Ilulissat**	**63.99**	**9**	*i* P	P	06 39 59.4	-6.3
FINES	**FINESS Array B**	**64.70**	**335**	P	**P**	**06 40 08.9**	**-1.4**
	comp=Z,3.7nm,0.7s,baz=39,slow=9.0,SNR=11 comp=Z,3.7nm,0.7s						
FINES	**FINESS Array B**	**64.70**	**335**	*e*P	**P**	**06 40 09.7**	**-0.7**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.7s						
R11A	**Troy Canyon, C**	**65.01**	**60**	P	**P**	**06 40 13.8**	**+0.7**
R11A				IAmb	IAmb	06 40 15.4	
	comp=Z,3.8nm,1.0s						
DUG	**Dugway, Tooele**	**65.48**	**57**	P	**P**	**06 40 17.2**	**+1.2**
DUG				IAmb	IAmb	06 40 18.7	
	comp=Z,5.8nm,0.9s						
DUG	**Dugway, Tooele**	**65.48**	**57**	P	**P**	**06 40 17.2**	**+1.2**
DUG				pmax	pmax		
	comp=Z,6.0nm,1.0s						
PDAR	**Pinedale Array**	**65.69**	**53**	P	**P**	**06 40 18.6**	**+1.1**
	comp=Z,1.9nm,0.8s,baz=303,slow=1.8,SNR=13 comp=Z,1.9nm,0.8s						
OBN	**Obninsk**	**65.83**	**325**	*e*P	**P**	**06 40 17.3**	**-0.5**
OBN				*e**PP	**sP**	**06 40 32.2**	**-1.1**
OBN				*e*		06 40 50.3	
OBN				*e*		06 42 40.9	
OBN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
OBN	**Obninsk**	**65.83**	**325**	*e*P	**P**	**06 40 17.3**	**-0.5**
GEYT	**Alibeck**	**66.69**	**301**	P	**P**	**06 40 23.8**	**+0.1**
	comp=Z,5.2nm,0.8s,baz=97,slow=10,SNR=4.5 comp=Z,5.2nm,0.8s						
GEYT				LR	LR	07 12 56.7	
	comp=Z,229nm,18.2s,baz=317,slow=39						
GEYT	**Alibeck**	**66.69**	**301**	IAmb	IAmb	06 40 26.2	
	comp=Z,4.0nm,0.8s						
MTPU	**Mount Pierson**	**67.25**	**58**	P	**P**	**06 40 29.0**	**+1.3**
MTPU				IAmb	IAmb	06 40 30.6	
	comp=Z,3.0nm,0.8s						
WRAB	**Tennant Creek**	**67.45**	**198**	⇓*e*P	**P**	**06 40 33.2**	**+4.7**
WRAB				pmax	pmax		
	comp=Z,4.0nm,1.0s						
WRA	**Warramunga Arr**	**67.46**	**198**	P	**P**	**06 40 29.0**	**+0.5**
	comp=Z,1.0nm,1.2s,baz=15,slow=6.8,SNR=2.6 comp=Z,1.0nm,1.2s						
SRU	**San Rafael Swe**	**67.53**	**57**	P	**P**	**06 40 30.0**	**+0.8**
SRU				IAmb	IAmb	06 40 31.5	
	comp=Z,5.9nm,0.9s						
SRU

comp=Z,2.1nm,1.0s,baz=108,slow=4.0,SNR=6.8
comp=Z,2.1nm,1.0s

BRTR	**Keskin Array B**	**78.76**	**316**	P	**P**	**06 41 35.1**	**-0.4**
BRTR	**Keskin Array B**	**78.76**	**316**	*eP*	**P**	**06 41 36.0**	**+0.6**
BRTR				pmax	pmax		

comp=Z,2.0nm,1.0s

GERES	**GERESS Array B**	**79.10**	**334**	P	**P**	**06 41 37.3**	**+0.2**

comp=Z,0.4nm,0.3s,baz=46,slow=5.6,SNR=5.2
comp=Z,0.4nm,0.3s

H03N2	**Juan Fernandez**	**139.21**	**91**	T	T	09 24 34.4	

baz=308,slow=77,SNR=7.8

H03N3	**Juan Fernandez**	**139.22**	**91**	T	T	09 24 33.3	

baz=308,slow=77,SNR=9.4

H03N1	**Juan Fernandez**	**139.22**	**91**	T	T	09 24 29.9	

baz=308,slow=77,SNR=11

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*IDC **10** 06:34:01.9±1.2, 12.°70N×144.°71E, h66km±10km, mb3.6/9, mbtmp3.9/9, Error ellipse: s-maj=35.1km s-min=16.0km az=100.0*

ISC 10 06:33:58.3±0.9, 12.°6N±0.°1×144.°7E±0.°2, h35km, n17, σ1§54/12, mb3.8/9, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.05**	**11**	P	**Pn**	**06 34 17.5**	**+1.0**

812nm,0.5s,baz=21,slow=7.5,SNR=117

GUMO				S	**Sn**	**06 34 32.5**	**+2.5**

1µm,0.4s,baz=274,slow=23,SNR=14

H11S3	**WAKE ISLAND Hy**	**22.02**	**72**	T	T	07 01 00.4	

baz=253,slow=74,SNR=1.9

H11S1	**WAKE ISLAND Hy**	**22.04**	**72**	T	T	07 01 00.8	

baz=253

H11S2	**WAKE ISLAND Hy**	**22.04**	**72**	T	T	07 01 01.4	

baz=253,slow=74,SNR=3.8

H11N1	**WAKE ISLAND Hy**	**22.50**	**69**	T	T	07 01 52.3	

baz=256,slow=75,SNR=4.9

H11N2	**WAKE ISLAND Hy**	**22.51**	**69**	T	T	07 01 56.9	

baz=256

H11N3	**WAKE ISLAND Hy**	**22.52**	**69**	T	T	07 01 56.9	

baz=256,slow=75,SNR=3.5

MJAR	**Matsushiro Arr**	**24.58**	**347**	P	**P**	**06 39 14.5**	**-0.7**

1.2nm,0.4s,baz=162,slow=9.0,SNR=4.8
1.2nm,0.4s

WRA	**Warramunga Arr**	**33.85**	**198**	P	**P**	**06 40 39.3**	**+1.7**

4.4nm,0.9s,baz=19,slow=9.8,SNR=26
4.4nm,0.9s

ASAR	**Alice Springs**	**37.50**	**196**	P	**P**	**06 41 11.1**	**+2.1**

0.4nm,0.5s,baz=24,slow=11,SNR=9.2
0.4nm,0.5s

SONM	**Songino Array**	**47.46**	**326**	P	**P**	**06 42 29.9**	**+0.1**

0.3nm,0.5s,baz=116,slow=6.6,SNR=2.4
0.3nm,0.5s

MKAR	**Makanchi Array**	**62.09**	**316**	P	**P**	**06 44 15.5**	**-0.2**

0.2nm,0.4s,baz=98,slow=7.9,SNR=3.9
0.2nm,0.4s

ILAR	**Eielson Array**	**69.59**	**25**	P	**P**	**06 45 01.6**	**-2.0**

0.6nm,0.6s,baz=267,slow=6.1,SNR=6.6
0.6nm,0.6s

YKA	**Yellowknife Ar**	**83.87**	**27**	P	**P**	**06 46 23.6**	**-0.6**

0.5nm,0.5s,baz=285,slow=4.9,SNR=12
0.5nm,0.5s

NVAR	**Mina Array Bea**	**87.73**	**51**	P	**P**	**06 46 44.0**	**-0.2**

0.4nm,0.7s,baz=285,slow=5.3,SNR=2.8
0.4nm,0.7s

FINES	**FINESS Array B**	**92.01**	**335**	P	**P**	**06 47 01.9**	**-1.5**

5.5nm,1.2s,baz=64,slow=6.3,SNR=1.6
5.5nm,1.2s

LPAZ	**La Paz**	**148.05**	**101**	PKPbc	**PKPbc**	**06 53 41.9**	**-0.1**

1.3nm,0.8s,baz=273,slow=2.5,SNR=5.9

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*SKHL **10** 06:43:27.9±0.2, 43.°40N×146.°80E, h60km±3km, mb4.2/2*
*JMA **10** 06:43:27.9±0.2, 43.°4N±0.°8×14.°7E±.°, h72km±1km, MV3.5/40, E OFF HOKKAIDO*

ISC 10 06:43:27.0±2.1, 43.°43N±0.°08×146.°74E±0.°08, h69km±13km, n17, σ0§61/31, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHO	**Shikotan**	**0.45**	**8**	*i* P	**Pn**	**06 43 39.6**	**+0.3**
SHO				AMB	AMB	06 43 39.9	

100nm,0.3s

SHO				*i* S	**Sn**	**06 43 48.3**	**+0.1**
SHO				A	A	06 43 49.4	

1µm,0.3s

SHO				A	A	06 43 49.4	

990nm,0.3s

NEM2	**Nemuro 2**	**0.73**	**265**	*i* P	**Pn**	**06 43 42.6**	**+0.4**
NEM2				*eS*	**Sn**	**06 43 53.5**	**+0.1**
NMR	**Nemuro--Hokkai**	**0.74**	**266**	*i* P	**Pn**	**06 43 42.6**	**+0.3**
NMR				*i* S	**Sn**	**06 43 53.2**	**-0.4**
YUK	**Yuzh-Kuril'sk**	**0.88**	**314**	*eP*	**Pn**	**06 43 43.6**	**-0.4**
YUK				AMB	AMB	06 43 44.1	

150nm,0.2s

YUK				*eS*	**Sn**	**06 43 55.5**	**-1.0**
YUK				A	A	06 43 56.6	

2µm,0.5s

YUK				A	A	06 43 56.6	

1µm,0.5s

GLVR	**Golovnino**	**0.94**	**290**	*eS*	**Sn**	**06 43 57.9**	**+0.1**
JKHN	**Kushirohamanak**	**1.21**	**254**	P	**Pn**	**06 43 48.7**	**+0.6**
JKHN				*eS*	**Sn**	**06 44 03.9**	**+0.1**
JRA	**Rausu**	**1.28**	**294**	*eP*	**Pn**	**06 43 49.5**	**+0.5**
JRA				*eS*	**Sn**	**06 44 05.7**	**+0.2**
JNSB	**Nemuroshibetsu**	**1.31**	**286**	*eP*	**Pn**	**06 43 49.9**	**+0.5**
JNSB				*eS*	**Sn**	**06 44 06.2**	**0.0**
AKK	**Akkeshi**	**1.45**	**254**	*eP*	**Pn**	**06 43 51.3**	**+0.1**
AKK				*eS*	**Sn**	**06 44 08.3**	**-1.2**
JNK	**Nakash**	**1.48**	**277**	*eP*	**Pn**	**06 43 51.5**	**-0.1**
JNK				*eS*	**Sn**	**06 44 08.9**	**-1.3**
JAK	**Akkeshi**	**1.56**	**255**	*eP*	**Pn**	**06 43 52.8**	**+0.1**
JAK				*eS*	**Sn**	**06 44 11.3**	**-0.8**
KUR	**Kuril'sk**	**1.98**	**24**	*eS*	**Sn**	**06 44 21.4**	**-0.7**
KUR				A	A	06 44 22.8	

50nm,0.2s

KUR				A	A	06 44 22.8	

120nm,0.2s

JTKR	**Abashiri--Toko**	**2.12**	**286**	*eP*	**Pn**	**06 44 00.8**	**+0.5**
JTKR				*eS*	**Sn**	**06 44 25.9**	**+0.3**
JAR	**Ashorobuto**	**2.17**	**268**	*eP*	**Pn**	**06 44 01.5**	**+0.6**
JAR				*eS*	**Sn**	**06 44 26.4**	**-0.4**
JOB	**Onbets**	**2.19**	**257**	*eP*	**Pn**	**06 44 01.8**	**+0.6**
JOB				*eS*	**Sn**	**06 44 27.0**	**-0.3**
JMP	**Maruseppu**	**2.52**	**284**	*eP*	**Pn**	**06 44 06.5**	**+0.8**
JCH	**Churui**	**2.61**	**253**	*eP*	**Pn**	**06 44 07.2**	**+0.4**
JCH				*eS*	**Sn**	**06 44 36.4**	**-1.0**

IDC 10 06:44:46.1±3.3, 53.°79N×88.°16E, h0km, mbtmp2.8/2, ML2.6/2, Error ellipse: s-maj=26.3km s-min=17.3km az=55.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.98**	**276**	*i*		06 57 20.0	

0.4nm,0.9s,baz=92,slow=316,SNR=28

ZALV	**Zalesovo Beam**	**1.98**	**276**	Pg	Pn	06 45 21.5	+0.6

1.5nm,0.3s,baz=90,slow=13,SNR=15

ZALV				Lg	Lg	06 45 48.4	

3.7nm,0.3s,baz=96,slow=22,SNR=26

KURBB	**Kurchatov Arra**	**6.71**	**246**	Pn	Pn	06 46 26.3	+0.5

0.1nm,0.3s,baz=62,slow=14,SNR=6.5

KURBB				Sn	Sn	06 47 43.5	+0.5

baz=58,slow=19,SNR=2.5

KURBB				Lg	Lg	06 48 18.2	

baz=65,slow=33,SNR=5.9
0.5nm,0.3s

MKAR	**Makanchi Array**	**7.95**	**211**	Pn	Pn	06 46 44.1	+1.3

0.1nm,0.3s,baz=27,slow=14,SNR=2.3

MKAR				Sn	Sn	06 48 12.8	-0.6

0.1nm,0.3s,baz=32,slow=26,SNR=5.5
0.2nm,0.4s

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*NNC **10** 06:48:54.6±6.3, 53.°46N×88.°06E, h0km, mb3.3, mpv2.9, Error ellipse: s-maj=53.4km s-min=29.8km az=107.0, Suspected Mining explosion.*
*IDC **10** 06:48:54.8±2.9, 53.°76N×88.°08E, h0km, mbtmp3.2/2, ML3.0/2, Error ellipse: s-maj=24.3km s-min=16.2km az=55.0*

ISC 10 06:48:55.3±4.1, 53.°8N±0.°2×87.°9E±0.°2, h0km, n7, σ1§33/8, 4C-1D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.81**	**275**	*i*		07 01 30.0	

0.6nm,1.1s,baz=92,slow=315,SNR=6.5

ZAA0	**Zalesovo Array**	**1.81**	**275**	⇓Pn	**Pg**	**06 49 29.3**	**-0.7**

1.7nm,0.9s,baz=110,slow=16

ZAA0				⇑Lg	Lg	06 49 57.3	

6.5nm,0.8s,baz=101,slow=24

ZALV	**Zalesovo Beam**	**1.81**	**275**	Pg	**Pb**	**06 49 29.2**	**0.0**

2.8nm,0.3s,baz=92,slow=14,SNR=22

ZALV				Lg	Lg	06 49 56.6	

5.8nm,0.3s,baz=93,slow=30,SNR=20

KURK	**Kurchatov**	**6.48**	**245**	⇑Lg	Lg	06 52 20.7	

4.0nm,1.1s

KURBB	**Kurchatov Arra**	**6.58**	**245**	Pn	**Pn**	**06 50 34.7**	**+1.5**

0.3nm,0.3s,baz=62,slow=14,SNR=8.4

KURBB				Sn	**Sn**	**06 51 50.0**	**+1.3**

baz=61,slow=25,SNR=1.5

KURBB				Lg	Lg	06 52 25.3	

baz=61,slow=31,SNR=5.3
1.5nm,0.3s

KURBB	**Kurchatov Arra**	**6.58**	**245**	⇑Pn	**Pn**	**06 50 32.1**	**-1.0**

1.7nm,0.3s

KURBB				⇑Sn	**Sn**	**06 51 49.1**	**+0.4**

1.8nm,0.5s

MKAR	**Makanchi Array**	**7.90**	**209**	Pn	**Pn**	**06 50 52.2**	**+0.9**

0.2nm,0.3s,baz=32,slow=13,SNR=7.4

MKAR				Sn	**Sn**	**06 52 19.8**	**-1.5**

0.1nm,0.3s,baz=31,slow=33,SNR=2.3

MKAR				Lg	Lg	06 53 03.1	

baz=23,slow=30
0.3nm,0.3s

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*SFS **10** 06:57:52.0, 42.°18N×2.°94E, h10km, ML3.7, ORDIS (GIRONA)*
*MDD **10** 06:57:52.7±0.3, 42.°18N×2.°94E, h10km, mb_Lg3.7/24, Error ellipse: s-maj=2.4km s-min=1.8km az=95.0*
*MRB **10** 06:57:52.6±0.3, 42.°18N×2.°87E, h10km±2km, ML3.6/30, Error ellipse: s-maj=1.1km s-min=0.6km az=83.0*
*STR **10** 06:57:52.9±0.9, 42.°N±.°×±.°, h5km±5km, MLv3.5/19, preliminary*
*LDG **10** 06:57:53.1±0.1, 42.°19N×2.°84E, h10km, Md3.4/5, Ml3.6/68, Error ellipse: s-maj=1.8km s-min=1.3km az=147.0*
*GEN **10** 06:58:35.0, 43.°82N×6.°30E, h21km±19km, Ml1.3*

ISC 10 06:57:51.2±0.8, 42.°23N±0.°02×2.°92E±0.°02, h17km±5km, n162, σ1§69/273, 2C-3D, Pyrenees

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBEU	**Beuda**	**0.18**	**280**	P	**Pg**	**06 57 56.1**	**+0.4**
CBEU				S	**Sg**	**06 57 58.8**	**0.0**

19µm,0.2s

CPAL	**Palau Saverder**	**0.20**	**65**	P	**Pb**	**06 57 57.7**	**+1.3**
CPAL				S	**Sb**	**06 58 01.4**	**+1.4**

2µm,0.1s

EJON	**La Jonquera**	**0.22**	**355**	Pg	**Pb**	**06 57 58.2**	**+1.3**
EJON				Sg	**Sb**	**06 58 02.0**	**+1.4**
EJON	**La Jonquera**	**0.22**	**355**	Pg	**Pb**	**06 57 58.2**	**+1.3**
EJON				Sg	**Sb**	**06 58 02.0**	**+1.4**
EJON				*i* Vmb_Lg		06 58 02.9	
SJAF	**Saint Jean de**	**0.26**	**355**	P	**Pb**	**06 57 58.5**	**+1.0**
SJAF				S	**Sb**	**06 58 03.0**	**+1.3**

990nm,0.2s

SJAF	**Saint Jean de**	**0.26**	**355**	⇓Pg	**Pb**	**06 57 58.8**	**+1.3**
SJAF				Sg	**Sb**	**06 58 03.0**	**+1.3**
CCAS	**Cassa de la Se**	**0.34**	**181**	P	**Pg**	**06 57 58.5**	**+0.1**
CCAS				S	**Sg**	**06 58 02.8**	**-0.4**

1µm,0.2s

FILF	**Fillols**	**0.42**	**322**	P	**Pb**	**06 58 02.2**	**+1.9**
FILF				S	**Sb**	**06 58 09.1**	**+2.6**

1µm,0.2s

FILF	**Fillols**	**0.42**	**322**	⇓Pg	**Pb**	**06 58 02.3**	**+1.9**
FILF				Sg	**Sb**	**06 58 08.7**	**+2.2**
CBRU	**Bruguera**	**0.55**	**276**	P	**Pg**	**06 58 02.6**	**+0.5**
CBRU				S	**Sg**	**06 58 09.9**	**+0.4**

738nm,0.3s

CFON	**Fontmartina**	**0.59**	**218**	P	**Pg**	**06 58 02.7**	**-0.1**
CFON				S	**Sg**	**06 58 10.0**	**-0.6**

4µm,0.2s

CORI	**Orista**	**0.69**	**249**	P	**Pg**	**06 58 04.9**	**+0.1**
CORI				S	**Sg**	**06 58 13.3**	**-0.6**

944nm,0.1s

CLLI	**Llivia**	**0.74**	**290**	P	**Pg**	**06 58 06.0**	**+0.3**
CLLI				S	**Sb**	**06 58 16.2**	**+0.5**

1µm,0.1s

FNEB	**Nbias**	**0.90**	**319**	P	**Pb**	**06 58 09.5**	**+1.0**
FNEB				S	**Sb**	**06 58 21.5**	**+1.3**

925nm,0.3s

FNEB	**Nbias**	**0.90**	**319**	⇓Pg	**Pn**	**06 58 09.8**	**+0.6**
FNEB				Sg	**Sn**	**06 58 22.4**	**+0.5**
FBR	**Fabra**	**1.00**	**216**	P	**Pb**	**06 58 10.1**	**0.0**
FBR				S	**Sb**	**06 58 22.8**	**-0.2**

3µm,0.2s

ARBS	**La Rabassa**	**1.04**	**283**	P	**Pb**	**06 58 11.5**	**+0.6**
ARBS				S	**Sg**	**06 58 25.3**	**+0.4**

2µm,0.3s

PAND	**Andorre**	**1.06**	**287**	P	**Pb**	**06 58 11.5**	**+0.3**
PAND				S	**Sb**	**06 58 25.6**	**+0.8**

1µm,0.2s

PAND	**Andorre**	**1.06**	**287**	⇑Pg	**Pb**	**06 58 11.8**	**+0.6**
EMIR	**Miracle**	**1.08**	**254**	Pg	**Pb**	**06 58 12.1**	**+0.6**
EMIR	**Miracle**	**1.08**	**254**	Pg	**Pb**	**06 58 12.1**	**+0.6**
EMIR				Sg	**Sn**	**06 58 27.0**	**+0.7**
EMIR				*i* Vmb_Lg		06 58 27.1	
CORG	**Organya**	**1.19**	**271**	P	**Pn**	**06 58 13.4**	**+0.3**
CORG				S	**Sb**	**06 58 28.9**	**+0.5**

270nm,0.1s

CGAR	**Garraf**	**1.20**	**219**	P	Pn	06 58 13.0	-6.1
CGAR				S	Sn	06 58 28.7	-11

1µm,0.3s

MTLF	**Montolieu**	**1.23**	**335**	*ePn*	**Pb**	**06 58 15.0**	**+1.0**
MTLF	**Montolieu**	**1.23**	**335**	*ePg*	**Pg**	**06 58 15.8**	**+0.9**
MTLF				*eSg*	**Sg**	**06 58 32.0**	**+1.1**

946nm,0.2s

MTLF	**Montolieu**	**1.23**	**335**	Pg	**Pg**	**06 58 15.8**	**+0.9**
CEST	**Esterri de Car**	**1.28**	**287**	P	**Pb**	**06 58 15.6**	**+0.6**
CEST				S	**Sn**	**06 58 32.5**	**+1.0**

944nm,0.3s

CSOR	**Sort**	**1.33**	**277**	P	**Pn**	**06 58 16.0**	**+0.9**
CSOR				S	**Sn**	**06 58 33.8**	**+1.3**

839nm,0.4s

MLS	**Moulis**	**1.53**	**299**	S	**Sb**	**06 58 39.7**	**+1.4**

667nm,0.5s

MLS	**Moulis**	**1.53**	**299**	Pn	**Pg**	**06 58 20.7**	**+0.1**
MLS				Sn	**Sg**	**06 58 40.9**	**+0.3**
CTRE	**Tremp**	**1.59**	**274**	P	**Pb**	**06 58 20.2**	**0.0**
CTRE				S	**Sb**	**06 58 40.6**	**+0.5**

403nm,0.3s

CARA	**Val d'Aran**	**1.62**	**288**	S	**Sb**	**06 58 41.8**	**+0.7**

1µm,0.3s

EPOB	**Poblet**	**1.63**	**238**	P	**Pn**	**06 58 20.0**	**+0.8**
EPOB				S	**Sn**	**06 58 41.1**	**+1.2**

439nm,0.3s

EPOB	**Poblet**	**1.63**	**238**	Pn	**Pn**	**06 58 20.1**	**+0.9**
EPOB				Sg	**Sg**	**06 58 42.9**	**-0.8**
EPOB				*i* Vmb_Lg		06 58 43.2	
CAVN	**Les Avellanes**	**1.65**	**259**	P	**Pn**	**06 58 20.8**	**+1.4**
CAVN				S	**Sn**	**06 58 41.5**	**+1.3**

749nm,0.3s

LASF	**Ste Croix**	**1.97**	**20**	*ePn*	**Pn**	**06 58 25.3**	**+1.4**
LASF	**Ste Croix**	**1.97**	**20**	*ePg*	**Pg**	**06 58 30.0**	**+0.9**
LASF				*eSn*	**Sn**	**06 58 48.9**	**+0.6**

31nm,0.2s

LASF				*eSg*	**Sg**	**06 58 56.4**	**+1.7**

118nm,0.2s

FMON	**Montouss**	**2.02**	**295**	S	**Sn**	**06 58 51.7**	**+2.2**

223nm,0.5s

ECHI	**Chisagues Biel**	**2.06**	**283**	P	**Pn**	**06 58 26.9**	**+1.7**
ECHI				S	**Sn**	**06 58 52.7**	**+2.1**

258nm,0.3s

ECHI	**Chisagues Biel**	**2.06**	**283**	Pn	**Pb**	**06 58 27.9**	**-0.4**
ECHI				Pg	**Pg**	**06 58 31.2**	**+0.4**
ECHI				Sg	**Sg**	**06 58 57.4**	**-0.1**
ECHI				*i* Vmb_Lg		06 58 59.2	
EPF	**Esparros**	**2.06**	**294**	*eP*	**Pb**	**06 58 27.6**	**-0.6**
EPF	**Esparros**	**2.06**	**294**	*ePg*	**Pg**	**06 58 30.8**	**0.0**
EPF				*eSn*	**Sn**	**06 58 49.3**	**-1.2**

36nm,0.2s

EPF				*eSg*	**Sg**	**06 58 57.0**	**-0.6**

270nm,0.2s

VIEF	**Viey**	**2.23**	**288**	Pn	**Pb**	**06 58 30.6**	**-0.6**
ERTA	**Horta de San J**	**2.31**	**238**	P	**Pn**	**06 58 30.1**	**+1.5**
ERTA				S	**Sn**	**06 58 58.1**	**+1.4**

254nm,0.3s

ERTA	**Horta de San J**	**2.31**	**238**	Pn	**Pn**	**06 58 29.7**	**+1.1**
ERTA				Sg	**Sg**	**06 59 04.9**	**-0.7**
ERTA				*i* Vmb_Lg		06 59 07.2	
PYLO	**Lourdes**	**2.35**	**293**	P	**Pn**	**06 58 31.1**	**+2.0**
PYLO				S	**Sn**	**06 58 59.9**	**+2.3**

254nm,0.4s

CFAR	**Far de la Bany**	**2.38**	**226**	S	**Sn**	**06 58 58.5**	**+0.3**
ETOS	**Mallorca**	**2.46**	**182**	Pn	**Pn**	**06 58 30.4**	**-0.1**
ETOS				Sn	**Sn**	**06 58 58.2**	**-2.1**
ETOS				*i* Vmb_Lg		06 59 00.1	
CMAS	**Mas de Barbera**	**2.46**	**233**	P	**Pn**	**06 58 31.6**	**+1.0**
CMAS				S	**Sn**	**06 59 01.2**	**+0.9**

305nm,0.2s

ASEAF	**Site Antares,**	**2.47**	**76**	P	**Pn**	**06 58 30.7**	**+0.3**
ASEAF	**Site Antares,**	**2.47**	**76**	Pn	**Pn**	**06 58 30.7**	**+0.3**
MONQ	**Montcuq**	**2.48**	**330**	Pn	**Pn**	**06 58 32.6**	**+1.8**
ARTF	**Artigues**	**2.52**	**56**	Pn	**Pn**	**06 58 33.7**	**+2.3**
MAHO	**Mahon**	**2.54**	**156**	P	**Pn**	**06 58 31.7**	**+0.1**
MAHO				S	**Sn**	**06 58 59.1**	**-3.2**
RUSF	**Rustrel**	**2.54**	**47**	Pn	**Pn**	**06 58 35.1**	**+3.3**
ESAC	**San Caprasio**	**2.57**	**260**	Pn	**Pn**	**06 58 33.7**	**+1.5**
ESAC				Pg	**Pg**	**06 58 41.1**	**+0.6**
ESAC				Sg	**Sg**	**06 59 14.6**	**+0.7**
ESAC				*i* Vmb_Lg		06 59 25.8	
BSTF	**la Bastide-des**	**2.59**	**50**	Pn	**Pn**	**06 58 35.0**	**+2.6**
SMRF	**Simiane la Rot**	**2.62**	**47**	*ePn*	**Pn**	**06 58 34.4**	**+1.6**
SMRF	**Simiane la Rot**	**2.62**	**47**	*eP*	**Pb**	**06 58 36.9**	**-0.8**
SMRF	**Simiane la Rot**	**2.62**	**47**	*ePg*	**Pg**	**06 58 42.8**	**+1.4**
SMRF				*eSn*	**Sn**	**06 59 05.3**	**+1.1**

23nm,0.2s

SMRF				*eSg*	**Sg**	**06 59 17.4**	**+2.1**

75nm,0.3s

ETSF	**Etsaut**	**2.65**	**286**	*eP*	**Pn**	**06 58 35.7**	**+2.4**
ETSF	**Etsaut**	**2.65**	**286**	*ePg*	**Pg**	**06 58 41.2**	**-0.8**
ETSF				*eSn*	**Sn**	**06 59 03.4**	**-1.7**

32nm,0.2s

ETSF				*eSg*	**Sg**	**06 59 14.8**	**-1.6**

494nm,0.4s

CAF	**Calviac**	**2.77**	**347**	*ePn*	**Pn**	**06 58 36.6**	**+1.8**
CAF	**Calviac**	**2.77**	**347**	*ePg*	**Pg**	**06 58 44.5**	**+0.3**
CAF				*eSn*	**Sn**	**06 59 08.9**	**+1.0**

116nm,0.2s

CAF				*eSg*	**Sg**	**06 59 20.2**	**+0.1**

116nm,0.2s

ATE	**Arette**	**2.80**	**289**	S	**Sn**	**06 59 10.0**	**+1.3**

246nm,0.5s

BLAF	**les Blancs**	**2.87**	**52**	Pn	**Pn**	**06 58 39.0**	**+2.8**
LMR	**La Mourre**	**2.87**	**66**	*ePn*	**Pn**	**06 58 37.1**	**+0.9**
LMR	**La Mourre**	**2.87**	**66**	*eP*	**Pb**	**06 58 40.7**	**-1.2**
LMR				*eSn*	**Sn**	**06 59 10.5**	**+0.2**

50nm,0.2s

LMR				*eSg*	**Sg**	**06 59 24.7**	**+1.4**

38nm,0.3s

ECOL	**Islas Columbre**	**2.87**	**217**	Pn	**Pn**	**06 58 36.0**	**-0.2**
ECOL				Sn	**Sn**	**06 59 09.9**	**-0.5**
ECOL				Sg	**Sg**	**06 59 22.2**	**-1.2**
VIVF	**Saint-Julien-l**	**2.92**	**25**	*ePn*	**Pn**	**06 58 38.9**	**+1.9**
VIVF	**Saint-Julien-l**	**2.92**	**25**	*eP*	**Pb**	**06 58 41.3**	**-1.6**
VIVF	**Saint-Julien-l**	**2.92**	**25**	*ePg*	**Pg**	**06 58 47.8**	**+0.6**
VIVF				*eSn*	**Sn**	**06 59 12.6**	**+0.9**

34nm,0.2s

VIVF				*eSg*	**Sg**	**06 59 26.6**	**+1.5**

62nm,0.2s

TRIGF	**Trigance**	**2.98**	**58**	Pn	**Pn**	**06 58 39.9**	**+2.1**
LBL	**Lubilhac**	**3.01**	**4**	⇑Pn	**Pn**

ELAN	**Lanestosa**	**4.78**	**284**	Pn		**Pn**	**06 59 04.7**	**+2.2**
ELAN				*i* Vmb_Lg			07 00 27.5	
SSF	**Saint Saulge**	**4.85**	**5**	*e*Pn		**Pn**	**06 59 05.9**	**+2.5**
SSF	**Saint Saulge**	**4.85**	**5**	*e*Pg		**Pg**	**06 59 22.6**	**-1.5**
SSF				*e*Sn		**Sn**	**06 59 58.1**	**-1.1**
	4.3nm,0.3s							
SSF				*e*Sg		**Sg**	**07 00 26.7**	**-0.2**
	29nm,0.5s							
MFF	**Saint Martin d**	**4.89**	**334**	*e*Pn		**Pn**	**06 59 05.6**	**+1.6**
MFF	**Saint Martin d**	**4.89**	**334**	*e*Pg		**Pg**	**06 59 23.0**	**-1.8**
MFF				*e*Sn		**Sn**	**06 59 59.1**	**-1.1**
	43nm,0.6s							
MFF				*e*Sg		**Sg**	**07 00 26.9**	**-1.3**
	43nm,0.6s							
CABF	**La Chapelle**	**4.94**	**26**	*e*Pn		**Pn**	**06 59 05.8**	**+1.1**
CABF	**La Chapelle**	**4.94**	**26**	*e*Pg		**Pg**	**06 59 24.6**	**-1.1**
CABF				*e*Sn		**Sn**	**07 00 00.1**	**-1.3**
	4.3nm,0.2s							
CABF				*e*Sg		**Sg**	**07 00 29.6**	**0.0**
	54nm,0.9s							
ETOB	**Tobarra**	**4.94**	**225**	Pn		**Pn**	**06 59 06.4**	**+1.6**
ETOB				Sn		**Sn**	**06 59 59.5**	**-2.0**
ETOB				*i* Vmb_Lg			07 00 31.9	
UCM	**Universidad Co**	**5.02**	**250**	P		**Pn**	**06 59 06.3**	**+0.5**
UCM				S		**Sn**	**07 00 07.8**	**+4.3**
HYF	**Humbligny**	**5.04**	**358**	*e*P		Pn	06 59 11.3	+5.2
HYF				*e*Sg		**Sg**	**07 00 32.2**	**-0.8**
LOR	**Lormes**	**5.09**	**7**	*e*Pn		**Pn**	**06 59 07.8**	**+1.1**
LOR	**Lormes**	**5.09**	**7**	*e*Pg		**Pg**	**06 59 27.2**	**-1.3**
	baz=184							
LOR				*e*Sg		**Sg**	**07 00 33.8**	**-0.5**
	18nm,0.3s,baz=187							
GUD	**Guadarrama**	**5.54**	**256**	Pn		**Pn**	**06 59 14.1**	**+1.0**
GUD				*i* Vmb_Lg			07 00 21.3	
EARI	**Arriondas**	**6.08**	**283**	Pn		**Pn**	**06 59 21.9**	**+1.6**
EARI				*i* Vmb_Lg			07 00 44.0	
PAB	**San Pablo**	**6.12**	**246**	Pn		**Pn**	**06 59 20.9**	**-0.1**
PAB				*i* Vmb_Lg			07 01 08.4	
SFTF	**Sexfontaines**	**6.16**	**13**	*e*Pn		**Pn**	**06 59 23.4**	**+2.0**
SFTF	**Sexfontaines**	**6.16**	**13**	*e*Pg		**Pg**	**06 59 47.2**	**-1.9**
	baz=182							
SFTF				*e*Sn		**Sn**	**07 00 28.8**	**-2.7**
	6.8nm,0.4s							
SFTF				*e*Sg		**Sg**	**07 01 07.3**	**-1.6**
	3.5nm,0.2s,baz=202							
HINF	**Hinteralfeld**	**6.25**	**25**	*e*Pn		**Pn**	**06 59 23.7**	**+1.1**
HINF	**Hinteralfeld**	**6.25**	**25**	*e*Pg		**Pg**	**06 59 48.7**	**-2.0**
HINF				*e*Sn		**Sn**	**07 00 32.5**	**-1.1**
HINF				*e*Sg		**Sg**	**07 01 10.2**	**-1.3**
	3.9nm,0.3s							
HAU	**Haudompre**	**6.27**	**22**	*e*Pn		**Pn**	**06 59 24.3**	**+1.4**
HAU	**Haudompre**	**6.27**	**22**	*e*Pg		**Pg**	**06 59 49.1**	**-2.0**
HAU				*e*Sn		**Sn**	**07 00 31.7**	**-2.4**
HAU				*e*Sg		**Sg**	**07 01 10.8**	**-1.4**
	10nm,0.3s							
SAVF	**Savonnieres en**	**6.58**	**13**	*e*Pn		**Pn**	**06 59 28.3**	**+1.2**
SAVF				*e*Sn		**Sn**	**07 00 40.2**	**-1.4**
	7.2nm,0.3s							
PAGF	**Fort de Pagny**	**6.63**	**16**	*e*Pn		**Pn**	**06 59 28.8**	**+1.0**
PAGF	**Fort de Pagny**	**6.63**	**16**	*e*Pg		**Pg**	**06 59 56.1**	**-1.9**
	baz=196							
PAGF				*e*Sn		**Sn**	**07 00 43.0**	**0.0**
PAGF				*e*Sg		**Sg**	**07 01 22.8**	**-1.0**
	5.5nm,0.3s,baz=198							
GRR	**Gorron**	**6.71**	**338**	*e*Pn		**Pn**	**06 59 29.8**	**+0.9**
GRR				*e*Sn		**Sn**	**07 00 41.4**	**-3.6**
	9.1nm,0.3s							
GRR				*e*Sg		**Sg**	**07 01 23.8**	**-2.6**
	13nm,0.4s							
LDF	**La Druitiere**	**6.72**	**342**	*e*Pn		**Pn**	**06 59 29.4**	**+0.4**
LDF	**La Druitiere**	**6.72**	**342**	*e*Pg		**Pg**	**06 59 56.9**	**-2.8**
LDF				*e*Sn		**Sn**	**07 00 41.5**	**-3.6**
	4.4nm,0.3s							
LDF				*e*Sg		**Sg**	**07 01 24.9**	**-1.6**
	5.4nm,0.3s							
CDF	**Champ du Feu**	**6.91**	**25**	*e*Pn		**Pn**	**06 59 32.7**	**+1.0**
CDF				*e*Sn		**Sn**	**07 00 46.8**	**-3.1**
CDF				*e*Sg		**Sg**	**07 01 31.5**	**-1.2**
	2.4nm,0.3s							
FLN	**La Foliniere**	**6.96**	**341**	*e*Pn		**Pn**	**06 59 33.6**	**+1.3**
	baz=169							
FLN				*e*Sn		**Sn**	**07 00 47.9**	**-3.1**
	9.8nm,0.4s							
FLN				*e*Sg		**Sg**	**07 01 31.7**	**-2.6**
	7.6nm,0.3s,baz=162							
EPLA	**Plasencia**	**7.12**	**255**	Pn		**Pn**	**06 59 35.0**	**+0.3**
EPLA				*i* Vmb_Lg			07 01 19.9	
QUIF	**Quistinic**	**7.13**	**325**	*e*Pn		**Pn**	**06 59 36.1**	**+1.4**
QUIF				*e*Sn		**Sn**	**07 00 50.7**	**-4.6**
	13nm,0.4s							
QUIF				*e*Sg		**Sg**	**07 01 36.4**	**-3.5**
	5.9nm,0.3s							
SGMF	**Saint Gilles**	**7.16**	**329**	*e*Pn		**Pn**	**06 59 35.5**	**+0.5**
SGMF				*e*Sn		**Sn**	**07 00 51.9**	**-4.0**
	15nm,0.6s							
SGMF				*e*Sg		**Sg**	**07 01 36.9**	**-3.8**
	8.7nm,0.5s							
ECAL	**Calabor**	**7.19**	**271**	Pn		**Pn**	**06 59 36.5**	**+0.9**
ECAL				*i* Vmb_Lg			07 02 06.2	
PBRG	**Braganca**	**7.20**	**270**	*e*Pn		**Pn**	**06 59 35.5**	**-0.3**
PBRG				A		A	07 01 48.9	
	5.8nm,0.5s							
ROSF	**Rostrenen**	**7.51**	**327**	*e*Pn		**Pn**	**06 59 40.6**	**+0.8**
ROSF				*e*Sn		**Sn**	**07 00 59.5**	**-5.0**
	9.4nm,0.3s							
ROSF				*e*Sg			07 01 47.6	
	8.6nm,0.4s							
MVO	**Moncorvo**	**7.52**	**265**	*e*Pn		**Pn**	**06 59 40.6**	**+0.5**
MVO				A		A	07 02 10.6	
	10nm,0.5s							
BAIF	**Baives**	**7.88**	**6**	*e*Pn		**Pn**	**06 59 46.7**	**+1.7**
GIVF	**Givet**	**7.99**	**9**	*e*P		Pn	06 59 52.8	+6.4
POLO	**Lamas de Olo**	**8.05**	**268**	*e*Pn		**Pn**	**06 59 48.1**	**+0.7**
PCBR	**Castelo Branco**	**8.21**	**257**	*e*Pn		**Pn**	**06 59 49.4**	**-0.1**
PVIS	**Viseu**	**8.26**	**263**	*e*Pn		**Pn**	**06 59 50.4**	**+0.2**
PMRV	**Marv??o**	**8.30**	**254**	*e*Pn		**Pn**	**06 59 51.0**	**+0.2**
PESTR	**Estremoz**	**8.67**	**251**	*e*Pn		**Pn**	**06 59 55.4**	**-0.5**
EMAZ	**Mazaricos**	**8.80**	**279**	Pn		**Pn**	**06 59 58.0**	**+0.3**
EMAZ				*i* Vmb_Lg			07 02 26.5	

*INET **10** 07:09:50.6±2.3, 12.°86N×87.°12W, h6km±15km, MW3.2*
*SNET **10** 07:09:53.6±1.1, 12.°80N×87.°20W, h15km±14km, ML2.8*
ISC 10 07:09:51.0±1.9, **12.°9N**±0.°1×**87.°04W**±0.°07, **h11**km±13km, **n10**, σ0°**78**/19, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.19**	**182**	*e*P	**Pg**	**07 09 55.4**	**+0.3**
CRIN				*e*S	**Sg**	**07 09 58.0**	**+0.2**
COPN	**Copaltepe**	**0.83**	**148**	*e*P	**Pb**	**07 10 05.8**	**-1.7**
LCND	**La Caada**	**0.92**	**297**	*e*P	**Pb**	**07 10 08.4**	**-0.7**
LCND				*e*S	**Sb**	**07 10 21.3**	**-0.2**
LCND				IAML		07 10 26.5	
	comp=Z,784nm,0.4s						
APYN	**Apoyeque**	**0.94**	**134**	*e*P	**Pb**	**07 10 09.0**	**-0.4**
APYN				*e*S	**Sn**	**07 10 25.3**	**+1.5**
BOAB	**BOACO BROADBAN**	**1.41**	**108**	*e*P	**Pn**	**07 10 16.2**	**-0.6**
BOAB				*e*S	**Sn**	**07 10 35.9**	**+0.4**
BOAB				*e*S	**Sb**	**07 10 36.1**	**+0.6**
COEB	**Comit de Eme**	**1.57**	**293**	*e*P	**Pn**	**07 10 18.9**	**-0.1**
COEB				*e*S	**Sn**	**07 10 39.3**	**-0.1**
COEB				IAML		07 10 43.7	
	comp=Z,180nm,0.4s						
PQSS	**Presa 15 de Se**	**1.65**	**297**	*e*P	**Pn**	**07 10 20.4**	**+0.4**
SCLA	**Alcaldia de Sa**	**1.83**	**296**	*e*P	**Pb**	**07 10 24.1**	**-0.5**
SCLA				*e*S	**Sb**	**07 10 47.0**	**-0.6**
SCLA				IAML		07 10 53.9	
	comp=Z,26nm,0.5s						
COEG	**Centro de Oper**	**1.93**	**292**	*e*P	**Pn**	**07 10 24.7**	**+0.8**
COEG				*e*S	**Sn**	**07 10 48.3**	**0.0**
COEG				IAML		07 10 54.0	
	comp=Z,154nm,0.5s						
SJTE	**Alcalda de S**	**2.04**	**291**	*e*P	**Pn**	**07 10 26.4**	**+0.9**
SJTE				*e*S	**Sn**	**07 10 51.3**	**+0.2**

NNC 10 07:21:54.6±0.2, **50.°01N**×**78.°74E**, **h0**km, **mb3.5**, **mpv3.2**, **20C-9D**, **Error ellipse: s-maj=2.7km s-min=1.3km az=70.0**, **Suspected Mining explosion.**, **Eastern Kazakhstan**

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

KUR07	**Kurchatov Arra**	**0.59**	**346**	⇑P		Pg	07 22 06.2	+0.2	
KUR07				⇑S		Sg	07 22 15.1	+1.4	
KUR06	**Kurchatov Arra**	**0.61**	**347**	⇑P		Pg	07 22 06.5	+0.2	
KUR06				⇑S		Sg	07 22 15.4	+1.2	
KUR14	**Kurchatov Arra**	**0.62**	**351**	⇑P		Pg	07 22 06.4	0.0	
KUR14				⇓S		Sg	07 22 15.3	+0.9	
KUR15	**Kurchatov Arra**	**0.62**	**349**	⇑P		Pg	07 22 06.6	+0.1	
KUR15				⇑S		Sg	07 22 15.5	+0.9	
KURBB	**Kurchatov Arra**	**0.63**	**348**	⇑P		Pg	07 22 06.8	+0.1	
	18nm,0.3s								
KURBB				⇓S		Sg	07 22 16.1	+1.3	
	61nm,0.5s								
KUR16	**Kurchatov Arra**	**0.64**	**346**	⇑P		Pg	07 22 07.1	+0.3	
KUR16				⇑S		Sg	07 22 15.6	+0.4	
KUR05	**Kurchatov Arra**	**0.65**	**348**	⇓P		Pg	07 22 07.1	+0.1	
KUR05				⇑S		Sg	07 22 16.5	+1.0	
KUR17	**Kurchatov Arra**	**0.65**	**344**	⇓P		Pg	07 22 07.1	+0.1	
KUR17				⇑S		Sg	07 22 15.8	+0.3	
KUR04	**Kurchatov Arra**	**0.67**	**349**	⇑P		Pg	07 22 07.6	+0.2	
KUR04				⇑S		Sg	07 22 16.9	+0.9	
KURK	**Kurchatov**	**0.71**	**354**	⇓P		Pg	07 22 08.2	-0.1	
	8.7nm,0.4s								
KURK				⇑S		Sg	07 22 18.5	+1.0	
	56nm,0.9s								
SEM	**Semipalatinsk**	**1.05**	**67**	P		Pg	07 22 14.4	-0.3	
	4.8nm,0.1s								
SEM				S		Sb	07 22 29.6	-0.5	
	22nm,0.1s								
MAKZ	**Makanchi**	**3.86**	**145**	⇑Pn		Pn	07 22 55.4	+0.2	
	0.7nm,0.7s								
MAKZ				⇑Pg		Pb	07 23 04.6	+1.1	
	2.6nm,0.7s								
MAKZ				⇓Lg		Lg	07 23 57.1		
	4.2nm,0.4s								
BRZS	**Berezniki**	**3.91**	**272**	Pg		Pg	07 23 07.0	-2.5	
	1.7nm,0.3s								
BRZS				Lg		Lg	07 23 59.6		
	3.3nm,0.2s								
MK31	**Makanchi Array**	**3.99**	**142**	⇑Pn		Pn	07 22 58.2	+1.3	
	0.1nm,0.1s,baz=322,slow=9.9,SNR=47								
MK31				⇑Pg		Pb	07 23 07.5	+1.8	
	1.5nm,0.5s,baz=325,slow=14,SNR=12								
MK31				⇓Lg		Lg	07 24 01.5		
	3.9nm,0.4s,baz=319,slow=28,SNR=16								
OTUK	**Ortayu**	**4.56**	**250**	⇑Pn		Pn	07 23 05.5	+0.6	
	0.7nm,0.2s								
OTUK				⇓Pg		Pb	07 23 16.8	+1.3	
	0.7nm,0.3s								
OTUK				⇓Lg		Lg	07 24 19.6		
	5.4nm,0.9s								
KAPS	**Kapalarasan**	**4.74**	**175**	Pg		Pb	07 23 21.1	+2.5	
	1.4nm,0.3s								
KAPS				Lg		Lg	07 24 23.9		
	7.3nm,0.5s								
ZSN	**Zaisan**	**4.79**	**120**	Pg		Pg	07 23 25.5	-0.8	
	5.6nm,0.4s								
ZSN				Lg		Lg	07 24 32.7		
	6.0nm,0.3s								
TDK	**Taldyqorghan**	**5.01**	**183**	Pg		Pg	07 23 31.2	+0.6	
	57nm,0.3s								
TDK				Lg		Lg	07 24 41.1		
	25nm,0.1s								
KTBS	**Karatobe**	**6.45**	**193**	Pg		Pg	07 23 54.3	-3.9	
	2.0nm,0.4s								
KTBS				Lg		Lg	07 25 20.7		
	7.7nm,0.5s								
KRBS	**Karabastau**	**6.65**	**200**	Pg		Pg	07 23 56.7	-5.2	
	0.6nm,0.6s								
KRBS				Lg		Lg	07 25 24.9		
	1.5nm,0.5s								

*IDC **10** 07:26:37.4±1.1, 15.°44S×173.°32W, h0km, mb4.0/8, mbtmp4.1/9, ML4.1/1, Error ellipse: s-maj=49.9km s-min=17.3km az=137.0*
*NEIC **10** 07:26:37.6±1.5, 15.°67S±0.°07×172.°95W±0.°10, h10km±1km, mb4.4/11, Error ellipse: s-maj=16.1km s-min=11.3km az=110.0*
*NOU **10** 07:27:02.9, 14.°15S×172.°12W, h20km, MLv3.3/4, Samoa Islands*
ISC 10 07:26:39.8±0.6, **15.°55S**±0.°08×**172.°9W**±0.°1, **h29**km, **n31**, σ1°**91**/24, **mb4.2**/11, **Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.97**	**34**	Pn	**Pb**	**07 27 12.4**	**-2.6**
	63nm,0.3s,baz=234,slow=7.8,SNR=76						
AFI				Sn	**Sn**	**07 27 33.5**	**-1.6**
	158nm,0.3s,baz=305,slow=16,SNR=12						
	144nm,0.3s						
AFI	**Afiamalu**	**1.97**	**34**	P	**Pb**	**07 27 12.5**	**-2.6**
NIUE	**Niue**	**4.52**	**141**	Pn	**Pn**	**07 27 45.0**	**-1.3**
KNTN	**Kanton**	**12.75**	**5**	Pn	**Pn**	**07 29 39.1**	**-0.2**
PINNC	**Pines Island,**	**19.83**	**246**	P	**P**	**07 31 06.9**	**-1.5**
PINNC				IAmb	IAmb	07 31 11.7	
	comp=Z,47nm,1.3s						
DZM	**Mont Dzumac**	**20.57**	**249**	P	**P**	**07 31 16.3**	**-0.3**
	comp=Z,2.7nm,0.7s,baz=14,slow=11,SNR=1.5						
	comp=Z,2.7nm,0.7s						
DZM	**Mont Dzumac**	**20.57**	**249**	IAmb	IAmb	07 31 44.6	
	comp=Z,12nm,1.2s						
URZ	**Urewera**	**24.27**	**199**	P	**P**	**07 31 57.3**	**+2.8**
	comp=Z,12nm,0.8s,baz=3.4,slow=19,SNR=1.6						
	comp=Z,12nm,0.8s						
JOHN	**Johnston Islan**	**32.25**	**6**	P	**P**	**07 33 06.6**	**+0.6**
ODZ	**Otahua Downs**	**32.51**	**202**	P	**P**	**07 33 06.6**	**-1.4**
H11S2	**WAKE ISLAND Hy**	**39.34**	**329**	T	T	08 15 53.7	
	baz=144,slow=76,SNR=8.4						
H11S3	**WAKE ISLAND Hy**	**39.35**	**329**	T	T	08 15 52.0	
	baz=144,slow=76,SNR=7.7						
H11S1	**WAKE ISLAND Hy**	**39.35**	**329**	T	T	08 15 53.7	
	baz=144,slow=76,SNR=3.7						
H11N3	**WAKE ISLAND Hy**	**40.28**	**330**	T	T	08 16 59.6	
	baz=149,slow=76,SNR=6.9						
H11N1	**WAKE ISLAND Hy**	**40.28**	**330**	T	T	08 17 04.0	
	baz=149,slow=76,SNR=5.2						
H11N2	**WAKE ISLAND Hy**	**40.29**	**330**	T	T	08 17 00.8	
	baz=149,slow=76,SNR=6.9						
COEN	**Coen**	**42.44**	**266**	P	**P**	**07 34 31.8**	**-0.7**
COEN				IAmb	IAmb	07 34 50.3	
	comp=Z,12nm,1.4s						
STKA	**Stephens Creek**	**44.37**	**240**	P	**P**	**07 34 46.1**	**-1.7**
	comp=Z,1.8nm,0.5s,baz=114,slow=12,SNR=5.6						
	comp=Z,1.8nm,0.5s						
STKA	**Stephens Creek**	**44.37**	**240**	IAmb	IAmb	07 34 53.8	
	comp=Z,3.3nm,1.4s						
WR0	**Warramunga Arr**	**50.07**	**257**	P	**P**	**07 35 32.3**	**-0.2**
WR0				IAmb	IAmb	07 35 35.4	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**50.26**	**257**	P	**P**	**07 35 32.6**	**-1.3**
	comp=Z,0.5nm,0.5s,baz=90,slow=7.6,SNR=18						
	comp=Z,0.5nm,0.5s						
AS31	**Alice Springs**	**50.51**	**252**	P	**P**	**07 35 35.4**	**-0.4**
AS31				IAmb	IAmb	07 35 36.3	
	comp=Z,1.3nm,0.5s						
ASAR	**Alice Springs**	**50.51**	**252**	P	**P**	**07 35 34.9**	**-0.9**
	comp=Z,4.9nm,0.6s,baz=86,slow=7.8,SNR=93						
	comp=Z,4.9nm,0.6s						
CASY	**Casey**	**70.47**	**205**	P	**P**	**07 37 50.1**	**-1.2**
CASY				IAmb	IAmb	07 37 51.9	
	comp=Z,8.6nm,1.2s						
PETK	**Petropavlovsk-**	**72.92**	**342**	P	**P**	**07 38 08.4**	**+2.3**
	comp=Z,0.9nm,0.4s,baz=96,slow=8.9,SNR=1.7						
	comp=Z,0.9nm,0.4s						
NVAR	**Mina Array Bea**	**74.13**	**42**	P	**P**	**07 38 17.9**	**+4.0**
	comp=Z,0.8nm,0.9s,baz=220,slow=9.9,SNR=4.5						
	comp=Z,0.8nm,0.9s						
QSPA	**South Pole Qui**	**74.49**	**180**	P	**P**	**07 38 17.8**	**+2.3**
ILAR	**Eielson Array**	**82.50**	**11**	P	**P**	**07 39 01.7**	**+2.4**
	comp=Z,0.4nm,0.6s,baz=227,slow=7.0,SNR=9.5						
	comp=Z,0.4nm,0.6s						
ARCES	**ARCESS Array B**	**124.82**	**352**	PKP	**PKiKP**	**07 45 38.1**	**+1.5**
	comp=Z,2.4nm,0.9s,baz=62,slow=2.3,SNR=4.6						
GERES	**GERESS Array B**	**146.36**	**352**	PKPbc	**PKPbc**	**07 46 16.9**	**-1.1**
	comp=Z,3.4nm,0.7s,baz=107,slow=1.0,SNR=3.0						
BRTR	**Keskin Array B**	**146.57**	**321**	PKPbc	**PKiKP**	**07 46 20.7**	**-1.2**
	comp=Z,1.8nm,1.0s,baz=114,slow=3.1,SNR=5.2						

*INET **10** 07:28:34.4±1.2, 12.°77N×87.°10W, h7km±4km, MW3.5*
*SNET **10** 07:28:35.1±0.7, 12.°69N×87.°21W, h8km±7km, ML3.4*
ISC 10 07:28:32.0±1.4, **12.°96N**±0.°07×**87.°03W**±0.°05, **h5**km±11km, **n14**, σ0°**81**/26, **Near coast of Nicaragua**

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

CRIN	**San Cristobal**	**0.26**	**185**	*e*P		**Pg**	**07 28 37.8**	**+0.7**	
CRIN				*e*S		**Sg**	**07 28 40.8**	**+0.2**	
CNGN	**Cerro Negro**	**0.56**	**145**	*e*P		**Pb**	**07 28 44.5**	**+0.2**	
CNGN				*e*S		**Sb**	**07 28 51.7**	**-0.8**	
COPN	**Copaltepe**	**0.88**	**151**	*e*P		**Pg**	**07 28 48.7**	**-0.3**	
LCND	**La Caada**	**0.91**	**293**	*e*P		**Pn**	**07 28 51.6**	**+0.2**	
LCND				*e*S		**Sn**	**07 29 04.7**	**-0.2**	
LCND				IAML			07 29 12.1		
	comp=Z,1μm,0.4s								
APYN	**Apoyeque**	**0.98**	**137**	*e*P		**Pn**	**07 28 51.8**	**-0.6**	
APYN				*e*S		**Sg**	**07 29 03.1**	**-0.4**	
HUEN		**1.04**	**126**	*e*P		**Pn**	**07 28 53.2**	**0.0**	
HUEN				*e*S		**Sn**	**07 29 08.4**	**+0.4**	
CRUN	**El Crucero**	**1.20**	**144**	*e*P		**Pb**	**07 28 55.0**	**-0.3**	
CRUN				*e*S		**Sg**	**07 29 10.1**	**-0.6**	
BOAB	**BOACO BROADBAN**	**1.42**	**111**	*e*P		**Pg**	**07 28 59.3**	**0.0**	
BOAB				*e*S		**Sn**	**07 29 19.8**	**+2.3**	
COEB	**Comit de Eme**	**1.56**	**290**	*e*P		**Pg**	**07 29 02.0**	**+0.2**	
COEB				IAML			07 29 04.9		
	comp=Z,518nm,0.4s								
COEB				*e*S		**Sg**	**07 29 23.8**	**+1.6**	
PQSS	**Presa 15 de Se**	**1.63**	**294**	*e*P		**Pg**	**07 29 03.5**	**+0.2**	
SCLA	**Alcaldia de Sa**	**1.81**	**294**	*e*P		**Pg**	**07 29 06.6**	**-0.1**	
SCLA				*e*S		**Sg**	**07 29 31.1**	**+0.8**	
COEG	**Centro de Oper**	**1.92**	**290**	*e*P		**Pb**	**07 29 07.3**	**-0.2**	
COEG				*e*S		**Sb**	**07 29 32.0**	**+0.2**	
COEG				IAML			07 29 40.1		
	comp=Z,273nm,0.6s								
PAVA	**Las Pavas**	**2.00**	**292**	*e*P		**Pb**	**07 29 08.6**	**-0.4**	
PAVA				IAML			07 29 12.8		
	comp=Z,221nm,0.5s								
PAVA				*e*S		**Sg**	**07 29 35.0**	**-1.4**	
SJTE	**Alcalda de S**	**2.03**	**289**	*e*P		**Pb**	**07 29 08.6**	**-0.8**	
SJTE				*e*S		**Sb**	**07 29 34.4**	**-0.7**	

IDC 10 07:31:27.7±3.3, **54.°13N**×**87.°22E**, **h0**km, **mbtmp2.5**/2, **ML2.1**/2, **Error ellipse: s-maj=28.8km s-min=20.3km az=55.0**, **Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.43**	**264**	*i*		07 40 20.0	
	baz=81,slow=315,SNR=2.8						
ZALV	**Zalesovo Beam**	**1.43**	**264**	Pg	Pn	07 31 52.9	-1.9
	1.2nm,0.3s,baz=81,slow=14,SNR=6.7						
ZALV				Lg	Lg	07 32 14.2	
	1.2nm,0.3s,baz=83,slow=25,SNR=1.9						
KURBB	**Kurchatov Arra**	**6.37**	**240**	Pn	Pn	07 33 03.7	+1.0
	baz=53,slow=13,SNR=2.2						
KURBB				Lg	Lg	07 34 46.4	
	baz=52,slow=29						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**7.99**	**205**	Pn	Pn	07 33 26.3	+1.3
	baz=26,slow=14,SNR=1.6						
	0.1nm,0.3s						

*IDC **10** 07:35:25.7±2.0, 6.°36N×126.°83E, h123km±14km, mb3.7/11, mbtmp4.1/12, Error ellipse: s-maj=50.9km s-min=11.6km az=59.0*
*MAN **10** 07:35:26.5, 6.°47N×126.°81E, h77km, mb4.6, ML3.5, MS3.4*
*NEIC **10** 07:35:27.1±1.3, 6.°3N±0.°1×126.°6E±0.°2, h127km±3km, mb4.4/16, Error ellipse: s-maj=26.8km s-min=11.8km az=54.0*
ISC 10 07:35:23.5±0.6, **6.°30N**±0.°07×**126.°84E**±0.°09, **h100**km, **n34**, σ1°**50**/41, **mb4.4**/18, **1C-1D**, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.47**	**301**	P	**Pn**	**07 35 52.1**	**+2.7**
	3μm,0.4s,baz=94,slow=2.6,SNR=37						
DAV				S	**Sn**	**07 36 13.0**	**+4.0**
	898nm,0.4s,baz=72,slow=19,SNR=28						
DAV	**Davao City (W)**	**1.47**	**301**		**Pn**	**07 35 51.6**	**+2.2**
KCP	**Kidapawan**	**1.88**	**292**	⇓*i*P	**Pn**	**07 35 55.7**	**+1.2**
KCP				*i* S	**Sn**	**07 36 19.9**	**+1.7**
GSPH	**General Santos**	**1.90**	**264**	⇑*i*P	**Pn**	**07 35 55.0**	**+0.1**
GSPH				*i* S	**Sn**	**07 36 18.0**	**-0.8**
TOLI2	**Tolitoli**	**7.95**	**230**	Pn	**Pn**	**07 37 16.8**	**+0.5**
SIJI	**Sorong**	**8.38**	**148**	P	**Pn**	**07 37 25.3**	**+3.1**
	5.9nm,0.4s,baz=330,slow=18,SNR=4.3						
SIJI				S	**Sn**	**07 38 54.8**	**-0.5**
	5.2nm,0.4s,baz=37,slow=20,SNR=1.6						
KNRA	**Kununurra**	**21.92**	**175**	P	**P**	**07 40 10.7**	**+1.8**
KNRA				IAmb	IAmb	07 40 22.1	
	comp=Z,30nm,1.4s						

STKA	**Stephens Creek**	**39.96**	**247**	P		P	07 50 56.0	-1.9
	0.7nm,0.3s,baz=83,slow=12,SNR=3.0								
	0.7nm,0.3s								
ASAR	**Alice Springs**	**47.30**	**258**	P		P	07 51 57.6	+0.4
	0.4nm,0.4s,baz=93,slow=7.9,SNR=8.3								
	0.4nm,0.4s								
WRA	**Warramunga Arr**	**47.61**	**263**	P		P	07 52 00.1	+0.5
	0.7nm,0.5s,baz=98,slow=6.9,SNR=14								
	0.7nm,0.5s								

INET ***10*** *07:44:46.6±0.3, 12°.82N×87°.07W, h4km±3km, MW3.6*
UCR ***10*** *07:44:48.1±0.9, 12°.89N×87°.11W, h6km±6km, ML3.7*
SNET ***10*** *07:44:48.2±0.8, 12°.90N×87°.15W, h3km±5km, ML3.7*

ISC 10 07:44:46.4±1.3, 12°.85N±0°.05×87°.08W±0°.04, h0km±12km, n28, σ0s49/51, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.85**	**300**	*eP*		**Pg**		**07 45 03.4**	**+0.7**
CNCH				*eS*		**Sb**		**07 45 15.9**	**-0.3**
CNCH	**Conchagua**	**0.85**	**300**	*eP*		**Pg**		**07 45 03.4**	**+0.7**
CNCH				*eS*		**Sb**		**07 45 15.9**	**-0.3**
LCND	**La Caada**	**0.91**	**300**	*eP*		**Pg**		**07 45 04.1**	**+0.2**
LCND				*eS*		**Sb**		**07 45 17.6**	**-0.3**
LCND					IAML			07 45 20.9	
	comp=Z,3μm,0.3s								
LCND	**La Caada**	**0.91**	**300**	*eP*		**Pg**		**07 45 04.1**	**+0.2**
LCND				*eS*		**Sb**		**07 45 17.6**	**-0.3**
LCND					IAML			07 45 20.9	
	comp=Z,3μm,0.3s								
APYN	**Apoyeque**	**0.94**	**130**	*eP*		**Pg**		**07 45 04.1**	**-0.3**
HUEN		**1.02**	**120**	*eP*		**Pg**		**07 45 05.5**	**-0.5**
HUEN				*eS*		**Sg**		**07 45 20.3**	**+1.1**
TGUH	**Tegucigalpa,Un**	**1.22**	**351**	*eP*		**Pg**		**07 45 09.6**	**-0.2**
TGUH				*eS*		**Sg**		**07 45 26.0**	**+0.3**
TGUH	**Tegucigalpa,Un**	**1.22**	**351**	*eP*		**Pg**		**07 45 09.6**	**-0.2**
TGUH				*eS*		**Sg**		**07 45 26.0**	**+0.3**
VSM	**San Miguel**	**1.30**	**297**	*eP*		**Pg**		**07 45 10.8**	**-0.6**
VSM				*eS*		**Sb**		**07 45 29.1**	**-0.1**
VSM	**San Miguel**	**1.30**	**297**	*eP*		**Pg**		**07 45 10.8**	**-0.6**
VSM				*eS*		**Sb**		**07 45 29.1**	**-0.1**
LCY	**Lacayo**	**1.31**	**296**	*eP*		**Pg**		**07 45 11.1**	**-0.5**
LCY				*eS*		**Sb**		**07 45 29.2**	**-0.3**
LCY	**Lacayo**	**1.31**	**296**	*eP*		**Pg**		**07 45 11.1**	**-0.5**
LCY				*eS*		**Sb**		**07 45 29.2**	**-0.3**
PACA	**Pacayal**	**1.36**	**297**	*eP*		**Pg**		**07 45 11.8**	**-0.7**
PACA				*eS*		**Sg**		**07 45 30.3**	**+0.1**
PACA					IAML			07 45 38.0	
	comp=Z,6μm,0.5s								
PACA	**Pacayal**	**1.36**	**297**	*eP*		**Pg**		**07 45 11.8**	**-0.7**
PACA				*eS*		**Sg**		**07 45 30.3**	**+0.1**
PACA					IAML			07 45 38.0	
	comp=Z,6μm,0.5s								
COEB	**Comit de Eme**	**1.55**	**295**	*eP*		**Pn**		**07 45 14.8**	**-0.7**
COEB				*eS*		**Sn**		**07 45 36.1**	**-0.3**
COEB					IAML			07 45 38.6	
	comp=Z,457nm,0.5s								
COEB	**Comit de Eme**	**1.55**	**295**	*eP*		**Pn**		**07 45 14.8**	**-0.7**
COEB				*eS*		**Sn**		**07 45 36.1**	**-0.3**
COEB					IAML			07 45 38.6	
	comp=Z,457nm,0.5s								
PQSS	**Presa 15 de Se**	**1.64**	**298**	*eP*		**Pn**		**07 45 15.8**	**-0.7**
PQSS	**Presa 15 de Se**	**1.64**	**298**	*eP*		**Pn**		**07 45 15.8**	**-0.7**
SCLA	**Alcaldia de Sa**	**1.82**	**298**	*eP*		**Pn**		**07 45 19.3**	**+0.3**
SCLA				*eS*		**Sb**		**07 45 43.3**	**-0.6**
SCLA	**Alcaldia de Sa**	**1.82**	**298**	*eP*		**Pn**		**07 45 19.3**	**+0.3**
SCLA				*eS*		**Sb**		**07 45 43.3**	**-0.6**
COEG	**Centro de Oper**	**1.91**	**294**	*eP*		**Pn**		**07 45 20.8**	**+0.4**
COEG					IAML			07 45 50.6	
	comp=Z,295nm,0.4s								
COEG	**Centro de Oper**	**1.91**	**294**	*eP*		**Pn**		**07 45 20.8**	**+0.4**
COEG					IAML			07 45 50.6	
	comp=Z,295nm,0.4s								
PAVA	**Las Pavas**	**2.00**	**296**	*eP*		**Pn**		**07 45 22.0**	**+0.3**
PAVA				*eS*		**Sn**		**07 45 47.7**	**+0.2**
PAVA	**Las Pavas**	**2.00**	**296**	*eP*		**Pn**		**07 45 22.0**	**+0.3**
PAVA				*eS*		**Sn**		**07 45 47.7**	**+0.2**
SJTE	**Alcalda de S**	**2.02**	**292**	*eP*		**Pn**		**07 45 22.2**	**+0.3**
SJTE				*eS*		**Sn**		**07 45 48.4**	**+0.4**
SJTE	**Alcalda de S**	**2.02**	**292**	*eP*		**Pn**		**07 45 22.2**	**+0.3**
SJTE				*eS*		**Sn**		**07 45 48.4**	**+0.4**
SNET	**Serv Nac Est T**	**2.25**	**292**	*eP*		**Pn**		**07 45 25.8**	**+0.7**
SNET				*eS*		**Sn**		**07 45 54.1**	**+0.5**
SNET	**Serv Nac Est T**	**2.25**	**292**	*eP*		**Pn**		**07 45 25.8**	**+0.7**
SNET				*eS*		**Sn**		**07 45 54.1**	**+0.5**

IDC ***10*** *07:49:51.6±1.1, 39°.07N×142°.55E, h0km, mb3.5/5, mbtmp3.5/6, ML2.5/1, Error ellipse: s-maj=39.5km s-min=23.5km az=104.0*
JMA ***10*** *07:49:55.9±0.1, 39°.2N±0°.2×142°.4E±0°.6, h32km±1km, MV3.9/40, E OFF IWATE PREF*

ISC 10 07:49:54.5±1.5, 39°.17N±0°.04×142°.44E±0°.07, h18km±4km, n22, σ0s65/25, mb3.6/5, 4D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.61**	**261**	*i*	P		**Pn**	**07 50 07.6**	**-0.6**
OFUJ					S		**Sb**	**07 50 15.8**	**+1.1**
MIYJ	**Miyakonagasawa**	**0.63**	**310**	⇓	*i*P		**Pb**	**07 50 07.5**	**+0.6**
MIYJ				⇓	S		**Sg**	**07 50 15.3**	**0.0**
JKMT	**Kesennumamotoy**	**0.83**	**245**	*i*	P		**Pn**	**07 50 11.1**	**-0.3**
JKMT					S		**Sg**	**07 50 21.9**	**0.0**
JTH	**Tanohata**	**0.88**	**330**	*eP*			**Pb**	**07 50 11.4**	**+0.1**
JTH				*eS*			**Sb**	**07 50 22.4**	**-0.4**
JOM	**Ohasama**	**0.94**	**289**	*i*	P		**Pb**	**07 50 12.5**	**+0.3**
JOM					S		**Sb**	**07 50 24.7**	**+0.3**
JMK	**Ichinoseki**	**0.97**	**257**	*i*	P		**Pg**	**07 50 13.2**	**-0.2**
JMK					S		**Sb**	**07 50 25.8**	**+0.5**
JIO	**Ouri**	**1.11**	**230**	*i*	P		**Pn**	**07 50 14.9**	**-0.3**
JIO					S		**Sb**	**07 50 28.7**	**-0.7**
JKZ	**Kuzumaki**	**1.18**	**314**	*i*	P		**Pn**	**07 50 16.3**	**+0.1**
JKZ					S		**Sb**	**07 50 30.8**	**-0.5**
JANG	**Nango**	**1.39**	**330**	⇓	P		**Pn**	**07 50 19.0**	**0.0**
JANG				⇓	*e*S		**Sn**	**07 50 36.1**	**-0.9**
JRG	**Rokugo**	**1.42**	**280**	*i*	P		**Pb**	**07 50 20.2**	**-0.2**
MJAR	**Matsushiro Arr**	**4.26**	**233**	Pn			**Pn**	**07 50 59.5**	**+1.1**
	0.3nm,0.3s,baz=52,slow=12,SNR=28								
	10nm,0.8s								
H11N2	**WAKE ISLAND Hy**	**28.64**	**126**	T			T	08 26 15.3	
	baz=318,slow=75,SNR=230								
H11N1	**WAKE ISLAND Hy**	**28.65**	**126**	T			T	08 26 12.7	
	baz=318,slow=75,SNR=215								
H11N3	**WAKE ISLAND Hy**	**28.66**	**126**	T			T	08 26 13.3	
	baz=318,slow=75,SNR=160								
H11S1	**WAKE ISLAND Hy**	**29.43**	**127**	T			T	08 27 11.2	
	baz=319,slow=76,SNR=32								
H11S3	**WAKE ISLAND Hy**	**29.43**	**128**	T			T	08 27 11.2	
	baz=319,slow=76,SNR=35								
H11S2	**WAKE ISLAND Hy**	**29.45**	**127**	T			T	08 27 11.2	
	baz=319,slow=76,SNR=27								
MKAR	**Makanchi Array**	**43.70**	**300**	P			**P**	**07 57 58.2**	**-0.2**
	0.1nm,0.5s,baz=78,slow=8.0,SNR=1.4								
	0.1nm,0.5s								
ILAR	**Eielson Array**	**47.26**	**33**	P			**P**	**07 58 26.7**	**+0.5**
	0.4nm,0.7s,baz=270,slow=6.1,SNR=6.4								
	0.4nm,0.7s								
WRA	**Warramunga Arr**	**59.29**	**189**	P			**P**	**07 59 54.1**	**-0.9**
	0.6nm,0.6s,baz=6.0,slow=7.1,SNR=10								
	0.6nm,0.6s								
ARCES	**ARCESS Array B**	**62.28**	**339**	P			**P**	**08 00 16.1**	**+1.2**
	2.2nm,0.9s,baz=11,slow=10,SNR=1.8								
	2.2nm,0.9s								
ASAR	**Alice Springs**	**63.02**	**189**	P			**P**	**08 00 19.5**	**-0.8**
	0.3nm,0.8s,baz=16,slow=11,SNR=2.2								
	0.3nm,0.8s								

IDC 10 08:04:18.5±43.0, 16°.26S×174°.06W, h0km, mb4.1/3, mbtmp4.1/3, Error ellipse: s-maj=824.0km s-min=171.8km az=79.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**43.06**	**241**	P			P	08 12 21.1	+0.8
	1.2nm,0.5s,baz=87,slow=11,SNR=5.7								
	1.2nm,0.5s								
WRA	**Warramunga Arr**	**49.04**	**258**	P			P	08 13 07.2	-0.5
	0.5nm,0.5s,baz=97,slow=7.3,SNR=14								
	0.5nm,0.5s								
ASAR	**Alice Springs**	**49.25**	**253**	P			P	08 13 08.8	-0.5
	5.8nm,0.6s,baz=88,slow=8.2,SNR=95								
	5.8nm,0.6s								

IDC ***10*** *08:04:37.5±0.5, 33°.35N×116°.52W, h0km, mb4.7/28, mbtmp4.7/35, ML4.4/7, MS4.5/68, Error ellipse: s-maj=10.7km s-min=5.9km az=86.0*
BJI ***10*** *08:04:37.0±0.0, 33°.33N×117°.02W, h6km, mb5.1/16, mB5.5/12, Ms5.1/11, Ms7 4.7/12*
MOS ***10*** *08:04:37.4±1.1, 33°.40N×116°.45W, h13km, mb5.3/27, MS4.8/7, Error ellipse: s-maj=8.3km s-min=5.9km az=115.9*
ANF ***10*** *08:04:37.8±0.2, 33°.44N×116°.47W, h13km±1km, ML5.8/47, Error ellipse: s-maj=1.9km s-min=1.6km az=39.0*
PAS ***10*** *08:04:38.7±1.5, 33°.432N±0°.009×116°.44W±0°.01, h12km±2km, Mwr5.2/6, mb5.1/77(NEIC), ML5.5/60(NEIC), Ms_20 4.7/229(NEIC), Mwr5.1/98(NEIC), Mww5.2(NEIC), Error ellipse: s-maj=1.3km s-min=1.2km az=99.0*
NEIC ***10*** *08:04:38.4±1.5, 33°.427N±0°.009×116°.45W±0°.01, h14km±1km, Error ellipse: s-maj=1.4km s-min=1.3km az=136.0*
NEIC ***10*** *08:04:38.7, 33°.43N×116°.44W, h11km, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr=6.04; Mθθ=5.19; Mϕϕ=5.80; Mrθ=1.98; Mrϕ=-2.97; Mθϕ=2.39; Fault plane solution: M₀6.99000×10¹⁶ NP1:ϕs302.00000°, δ64.00000°, λ=-174.00000°. NP2:ϕs209.00000°, δ85.00000°, λ=-26.00000°. Principal axes: T 8.6338, Plg8.0000°, Azm257.0000°; N -1.8328, Plg42.0000°, Azm355.0000°; P -6.8010, Plg47.0000°, Azm158.0000°;*
NEIC ***10*** *08:04:38.7, 33°.43N×116°.44W, h15km, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr=0.31; Mθθ=-5.05; Mϕϕ=4.74; Mrθ=0.95; Mrϕ=-2.80; Mθϕ=2.25; Fault plane solution: M₀6.15000×10¹⁶ NP1:ϕs299.35000°, δ66.71000°, λ=176.16000°. NP2:ϕs30.87000°, δ86.47000°, λ=23.34000°. Principal axes: T 6.1435, Plg19.0000°, Azm258.0000°; N 0.0115, Plg66.0000°, Azm39.0000°; P -6.1550, Plg14.0000°, Azm163.0000°;*
ECX ***10*** *08:04:39.0±0.7, 33°.43N×116°.44W, h20km±3km, MD5.0, ML5.2, Fault plane solution: NP1:ϕs31.00000°, δ85.00000°, λ=38.00000°.*
GCMT ***10*** *08:04:41.7±0.2, 33°.51N±0°.01×116°.48W±0°.01, h25km, MW5.3/139, Moment Tensor Solution. s85,c107; s139,c240; Duration: 1s0 Moment tensor: Scale 10¹⁷ Nm; Mrr=0.10±.02; Mθθ=0.78±.02; Mϕϕ=0.87±.02; Mrθ=0.37±.04; Mrϕ=0.44±.01; Mθϕ=0.18±.04; Best double couple: M₀1.02500×10¹⁷ NP1:ϕs303.00000°, δ70.00000°, λ=-167.00000°. NP2:ϕs209.00000°, δ78.00000°, λ=-20.00000°. Principal axes: T 0.9950, Plg5.0000°, Azm257.0000°; N 0.0610, Plg66.0000°, Azm359.0000°; P -1.0560, Plg23.0000°, Azm165.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***10*** *08:04:42, 33°.44N×116°.45W, h18km, Moment Tensor Solution. Duration: 8s0 Moment tensor: Scale 10¹⁶Nm; Mrr=0.44; Mθθ=6.44; Mϕϕ6.88; Mrθ=1.60; Mrϕ=-3.20; Mθϕ=1.99; Fault plane solution: M₀7.83000×10¹⁶ NP1: ϕs303.00000°, δ71.00000°, λ=-176.00000°. NP2: ϕs212.00000°, δ87.00000°, λ=-19.00000°. Principal axes: T 7.9179, Plg11.0000°, Azm259.0000°; N -0.1871, Plg71.0000°, Azm22.0000°; P -7.7309, Plg16.0000°, Azm166.0000°;*

ISC 10 08:04:38.2±0.6, 33°.42N±0°.01×116°.45W±0°.01, h3km±3km, n842, σ1s81/777, mb5.1/89, MS4.7/186, 62C-126D, Fault plane solution: NP1:ϕs209.93980°, δ89.49998°, λ=13.34692°. NP2:ϕs300.05844°, δ76.65360°, λ=-179.48610°. Principal axes: T Plg9.0361°, Azm255.7807°; N Plg76.6439°, Azm27.8332°; P Plg9.7528°, Azm164.2143°; Southern California

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FRD	**Ford Ranch, An**	**0.15**	**299**			**Pg**		**08 04 42.3**	**+1.3**
FRD						**Sg**		**08 04 44.9**	**+1.9**
FRD	**Ford Ranch, An**	**0.15**	**299**			**Pg**		**08 04 42.3**	**+1.3**
FRD						**Sg**		**08 04 44.8**	**+1.7**
BORC	**Borrego Spring**	**0.16**	**170**			**Pg**		**08 04 42.5**	**+1.3**
BORC						**Sg**		**08 04 45.5**	**+2.2**
I57US	**PINON FLAT INF**	**0.18**	**359**	Pg		**Pg**		**08 04 42.0**	**+0.2**
	baz=188,slow=24								
I57US				*i*				08 05 40.0	
	0.1nm,0.7s,baz=251,slow=314,SNR=2.6								
SNDA	**J Saunders Pla**	**0.19**	**313**			**Pg**		**08 04 43.0**	**+1.1**
SNDA						**Sg**		**08 04 46.1**	**+1.8**
XPFO	**Pion Flat**	**0.19**	**359**			**Pg**		**08 04 42.5**	**+0.7**
XPFO						**Sg**		**08 04 45.4**	**+1.0**
PFO	**Pinyon Flats O**	**0.19**	**358**	Pg		**Pg**		**08 04 42.7**	**+0.8**
	17μm,0.3s,baz=169,slow=14								
PFO				Lg		Lg		08 04 45.4	
	baz=107,slow=14								
PFO	**Pinyon Flats O**	**0.19**	**358**			**Pg**		**08 04 42.4**	**+0.6**
PFO				Sg		**Sg**		**08 04 45.2**	**+0.8**
PFO	**Pinyon Flats O**	**0.19**	**358**	P		**Pg**		**08 04 42.6**	**+0.7**
	baz=174,SNR=1000								
BZNA	**Buzz No.'s Pla**	**0.19**	**291**			**Pg**		**08 04 43.2**	**+1.2**
BZNA						**Sg**		**08 04 46.1**	**+1.6**
DNR	**Dunn Ranch,Anz**	**0.21**	**314**			**Pg**		**08 04 43.4**	**+1.1**
DNR						**Sg**		**08 04 46.8**	**+1.8**
MATG	**Mataguay Scout**	**0.28**	**217**			**Pg**		**08 04 44.7**	**+1.2**
MATG						**Sg**		**08 04 49.0**	**+1.8**
MATG	**Mataguay Scout**	**0.28**	**217**	⇑	*i*P	**Pg**		**08 04 44.7**	**+1.2**
MATG					*e*S	**Sg**		**08 04 48.9**	**+1.8**
CRY	**Cary Ranch**	**0.28**	**301**			**Pg**		**08 04 44.5**	**+0.9**
CRY						**Sg**		**08 04 48.2**	**+1.0**
SLH	**Sleepy Hollow**	**0.28**	**144**			**Sg**		**08 04 49.4**	**+2.1**
SLH	**Sleepy Hollow**	**0.28**	**144**	⇓	*i*P	**Pg**		**08 04 44.7**	**+1.1**
SLH					*e*S	**Sg**		**08 04 49.3**	**+2.0**
GVDA	**Garner Valley**	**0.31**	**323**			**Pg**		**08 04 44.6**	**+0.4**
GVDA						**Sg**		**08 04 48.7**	**+0.5**
PLM	**Palomar**	**0.35**	**259**			**Pg**		**08 04 46.0**	**+1.0**
PLM						**Sg**		**08 04 51.0**	**+1.4**
PLM	**Palomar**	**0.35**	**259**	P		**Pg**		**08 04 46.0**	**+1.0**
PLM								08 04 51.0	
SALN	**Salton City**	**0.41**	**110**			**Pg**		**08 04 46.9**	**+0.8**
SALN						**Sb**		**08 04 53.3**	**-1.5**
CTCC	**Cactus City**	**0.45**	**59**			**Pg**		**08 04 47.3**	**+0.5**
CTCC						**Sg**		**08 04 53.8**	**+1.2**
POB	**Polly Butte**	**0.47**	**304**			**Pg**		**08 04 47.7**	**+0.4**
POB						**Sg**		**08 04 54.0**	**+0.5**
EW2	**E Wide Canyon**	**0.52**	**4**			**Pg**		**08 04 48.3**	**+0.2**
EW2						**Sg**		**08 04 55.3**	**+0.5**
DGR	**Domenigoni Val**	**0.52**	**296**			**Pg**		**08 04 48.4**	**+0.3**
DGR						**Sg**		**08 04 55.3**	**+0.4**
DEVC	**Devers**	**0.52**	**348**			**Pg**		**08 04 48.5**	**+0.3**
DEVC						**Sg**		**08 04 55.6**	**+0.6**
BACC	**Bachelor Mtn.**	**0.53**	**291**			**Pg**		**08 04 48.6**	**+0.3**
BACC						**Sg**		**08 04 55.6**	**+0.4**
MONP2	**Monument Peak**	**0.53**	**178**			**Pg**		**08 04 49.0**	**+0.7**
MONP2						**Sg**		**08 04 56.5**	**+1.3**
MONP2	**Monument Peak**	**0.53**	**178**	P		**Pg**		**08 04 49.0**	**+0.7**
	baz=359,SNR=1000								
MONP2				S		**Sg**		**08 04 56.8**	**+1.6**
	baz=359								
MONP2	**Monument Peak**	**0.53**	**178**	⇓	*i*P	**Pg**		**08 04 49.0**	**+0.7**
MONP2					IAML			08 04 58.6	
	comp=E,80μm,1.6s								
MONP2				⇓	*e*			08 04 58.6	
MONP2					*e*			08 05 02.7	
MONP2					IAML			08 05 02.7	
	comp=N,62μm,0.8s								
HMTC	**Hemet**	**0.54**	**302**			**Pg**		**08 04 48.8**	**+0.2**
HMTC						**Sg**		**08 04 56.1**	**+0.5**
CTW	**Cottonwood Mou**	**0.55**	**62**			**Pg**		**08 04 48.9**	**+0.2**
CTW						**Sg**		**08 04 55.9**	**+0.1**
DPP	**Dos Picos Cty**	**0.59**	**224**			**Pg**		**08 04 49.8**	**+0.3**
DPP						**Sg**		**08 04 57.7**	**+0.6**
ERRC	**Elmore Ranch**	**0.61**	**120**			**Pg**		**08 04 50.7**	**+0.9**
ERRC						**Sb**		**08 05 00.4**	**+0.1**
EML	**El Monte Cty P**	**0.63**	**212**			**Pg**		**08 04 50.4**	**+0.2**
EML						**Sg**		**08 04 59.0**	**+0.7**
EML	**El Monte Cty P**	**0.63**	**212**	⇑	*i*P	**Pg**		**08 04 50.3**	**+0.2**
EML					*e*S	**Sg**		**08 04 58.8**	**+0.6**
BLAC	**Blackrock camp**	**0.65**	**4**			**Pg**		**08 04 50.6**	**0.0**
BLAC						**Sg**		**08 04 59.2**	**+0.2**
MURC	**Murrieta**	**0.65**	**286**			**Pg**		**08 04 50.7**	**+0.1**
MURC						**Sg**		**08 04 59.2**	**+0.3**
MURC	**Murrieta**	**0.65**	**286**	P		**Pg**		**08 04 50.6**	**0.0**
	baz=104,SNR=1000								
MURC				S		**Sg**		**08 04 59.5**	**+0.5**
	baz=104								
BBSC	**Beaumont Base**	**0.67**	**318**			**Pg**		**08 04 51.2**	**+0.3**
BBSC						**Sg**		**08 04 60.0**	**+0.4**
CRR	**Carrizo Plain**	**0.67**	**143**			**Pg**		**08 04 51.5**	**+0.5**
CRR						**Sb**		**08 05 01.3**	**-0.8**
FRK	**Frink**	**0.68**	**92**			**Pg**		**08 04 51.1**	**-0.1**
BELC	**Belle Mtn. Jos**	**0.69**	**33**			**Pg**		**08 04 51.3**	**-0.1**
BELC						**Sg**		**08 05 00.4**	**0.0**
BELC	**Belle Mtn. Jos**	**0.69**	**33**	P		**Pg**		**08 04 51.2**	**-0.1**
	baz=213,SNR=1000								
BELC				S		**Sg**		**08 05 01.0**	**+0.7**
	baz=213								
HAY	**Hayfield**	**0.70**	**66**			**Pg**		**08 04 52.2**	**+0.7**
HAY						**Sb**		**08 05 02.0**	**-1.1**
SUP	**Superstition M**	**0.70**	**131**			**Pg**		**08 04 51.6**	**0.0**
SUP						**Sg**		**08 05 02.0**	**+1.3**
GORC	**Green Oak Ranc**	**0.71**	**248**			**Pg**		**08 04 51.7**	**0.0**
GORC						**Sg**		**08 05 01.2**	**+0.3**
SWSC	**Sam W. Stewart**	**0.72**	**131**			**Pg**		**08 04 51.9**	**-0.1**
SWSC						**Sg**		**08 05 02.1**	**+0.8**
SWSC	**Sam W. Stewart**	**0.72**	**131**	P		**Pg**		**08 04 51.9**	**-0.1**
	baz=313,SNR=1000								
SWSC				S		**Sg**		**08 05 02.2**	**+0.8**
	baz=313								
SWSC	**Sam W. Stewart**	**0.72**	**131**	⇓	*i*P	**Pg**		**08 04 51.9**	**-0.1**
TPC	**Twentynine Pal**	**0.76**	**26**			**Pg**		**08 04 52.3**	**-0.4**
BAR	**Barrett**	**0.76**	**194**	Pg		**Pg**		**08 04 53.0**	**+0.2**
BAR	**Barrett**	**0.76**	**194**			**Sg**		**08 05 03.4**	**+0.7**
BAR	**Barrett**	**0.76**	**194**	IAML				08 05 04.3	
	comp=N,144μm,0.3s								
BAR				IAML				08 05 04.4	
	comp=E,268μm,0.9s								
BAR	**Barrett**	**0.76**	**194**	⇓	*i*P	**Pg**		**08 04 52.8**	**0.0**
BAR					*e*S	**Sg**		**08 05 03.3**	**+0.7**
BAR					IAML			08 05 04.2	
	comp=E,208μm,0.2s								
BAR				⇑	*e*			08 05 04.2	
BAR					*e*			08 05 04.3	
BAR					IAML			08 05 04.3	
	comp=N,144μm,0.1s								
109C	**Camp Elliot, M**	**0.77**	**226**			**Pg**		**08 04 52.9**	**0.0**
109C	**Camp Elliot, M**	**0.77**	**226**	P		**Pg**		**08 04 52.9**	**0.0**
	baz=46,SNR=1000								
109C				S		**Sg**		**08 05 03.1**	**+0.3**
	baz=46								
CPE	**Camp Elliot**	**0.77**	**226**			**Pg**		**08 04 52.8**	**0.0**
CPE						**Sg**		**08 05 03.0**	**+0.3**
SDRC	**San Diego Road**	**0.80**	**211**			**Pg**		**08 04 53.4**	**-0.1**
SDRC						**Sg**		**08 05 03.9**	**+0.1**
SDRC	**San Diego Road**	**0.80**	**211**	⇑	*i*P	**Pg**		**08 04 53.4**	**-0.1**
SDRC					*e*			08 04 57.5	
SDRC					IAML			08 05 07.5	
	comp=E,140μm,0.6s								
SDRC					*e*			08 05 07.6	
SDRC					IAML			08 05 07.6	
	comp=N,177μm,0.8s								
IKP	**In-Ko-Pah, Jac**	**0.82**	**160**			**Pg**		**08 04 54.1**	**+0.2**
IKP						**Sg**		**08 05 05.4**	**+0.8**
IKP	**In-Ko-Pah, Jac**	**0.82**	**160**	P		**Pg**		**08 04 54.1**	**+0.2**
	baz=341,SNR=1000								
IKP				S		**Sg**		**08 05 05.6**	**+1.0**
	baz=341								
IKP	**In-Ko-Pah, Jac**	**0.82**	**160**	⇓	*i*P	**Pg**		**08 04 54.1**	**+0.2**
WEMD	**Westmorland, C**	**0.82**	**118**			**Pg**		**08 04 53.6**	**-0.3**
WEMD						**Sb**		**08 05 06.2**	**-0.4**
WEMD	**Westmorland, C**	**0.82**	**118**	⇓	*i*P	**Pg**		**08 04 53.6**	**-0.3**
CFT	**Crafton Hills**	**0.82**	**318**			**Pg**		**08 04 54.0**	**+0.1**
CFT						**Sg**		**08 05 05.2**	**+0.6**
COK2	**Cook Ranch 2**	**0.83**	**133**			**Pg**		**08 04 53.7**	**-0.4**
COK2						**Sb**		**08 05 07.1**	**+0.3**
ELS	**Elsinore Mount**	**0.85**	**286**	Pg		**Pg**		**08 04 54.1**	**-0.3**
ELS	**Elsinore Mount**	**0.85**	**286**			**Sg**		**08 05 05.0**	**-0.4**
ELS	**Elsinore Mount**	**0.85**	**286**	IAML				08 05 05.6	
	comp=N,121μm,0.7s								
ELS				IAML				08 05 05.7	
	comp=E,95μm,0.6s								
SME	**Santa Rosa Min**	**0.85**	**298**			**Pg**		**08 04 54.1**	**-0.4**
TKX	**Tecate**	**0.86**	**189**			**Pg**		**08 04 54.8**	**+0.1**
TKX	**Tecate**	**0.86**	**189**			**Sg**		**08 05 06.1**	**+0.3**
TKX	**Tecate**	**0.86**	**189**	IAML				08 05 06.8	
	comp=E,198μm,0.4s								
TKX				IAML				08 05 07.2	
	comp=N,105μm,0.3s								
TKX	**Tecate**

CPBX IAML 08 05 42.0
comp=N,107µm,0.6s
YUCAX Ej. Yucatɲ 1.40 125 ⇓iP Pn 08 05 01.7 -2.9
EMSC East Mesa 1.41 119 ⇓iP Pn 08 05 01.8 -2.9
HEC Hector,Ludlow 1.41 4 P Pn 08 05 02.9 -1.9
baz=184,SNR=1000
HEC S Sn 08 05 23.1 -0.8
baz=184
GLA Glamis 1.41 105 Pn 08 05 02.2 -2.6
GLA IAML 08 05 32.6
comp=E,58µm,0.7s
GLA Glamis 1.41 105 P Pn 08 05 02.2 -2.6
GLA Glamis 1.41 105 P Pn 08 05 02.0 -2.8
baz=286,SNR=810
GLA S Sb 08 05 23.2 -0.4
baz=286
GLA Glamis 1.41 105 ⇓iP Pn 08 05 01.8 -2.9
CTLX Tlaxcala, TLX 1.45 130 ⇓iP Pn 08 05 03.0 -2.3
MBIG Mexicali 1.46 134 ⇓iP Pn 08 05 02.6 -2.8
GMRC Granite Mounta 1.51 26 P Pn 08 05 04.0 -2.2
baz=206,SNR=1000
GMRC S Sn 08 05 25.2 -1.3
baz=206
RRX Edison Barstow 1.52 343 P Pn 08 05 05.0 -1.3
baz=162,SNR=1000
RRX S Sb 08 05 26.5 -0.2
baz=162
ALAMX Rancho Alamar 1.54 156 ⇓iP Pn 08 05 04.5 -2.1
CCX Cicese 1.56 187 Pn 08 05 06.0 -0.8
CCX IAML 08 05 28.9
comp=N,61µm,1.4s
CCX IAML 08 05 29.6
comp=E,52µm,0.9s
CCX Cicese 1.56 187 ⇓iP Pn 08 05 05.9 -0.9
FMP Fort Macarthur 1.57 281 P Pn 08 05 04.9 -1.9
baz=100,SNR=1000
FMP S Sb 08 05 27.4 -0.6
baz=100
GUVIX Guadalupe Vict 1.61 134 Pn 08 05 04.3 -3.2
GUVIX IAML 08 05 51.0
comp=N,44µm,0.9s
GUVIX IAML 08 06 00.5
comp=E,52µm,1.0s
GUVIX Guadalupe Vict 1.61 134 ⇓iP Pn 08 05 04.4 -3.0
PASC Pasadena Art C 1.63 298 Pn 08 05 07.2 -0.6
PASC IAML 08 05 31.1
comp=E,42µm,1.0s
PASC IAML 08 05 32.5
comp=N,71µm,1.0s
BLYC Blythe 1.64 78 Pn 08 05 05.3 -2.6
CIS Catalina Islan 1.64 270 P Pn 08 05 05.6 -2.4
baz=88,SNR=1000
CIS S Sn 08 05 28.8 -0.8
baz=88
SLRCX San Luis Rio C 1.75 123 ⇓iP Pn 08 05 06.9 -2.5
RITX Riito Sonora 1.77 135 ⇓iP Pn 08 05 06.9 -2.8
DECC Green Verdugo 1.77 298 P Pn 08 05 07.8 -1.9
baz=117,SNR=1000
DECC S Sn 08 05 32.2 -0.7
baz=117
SCI2 San Clemente I 1.81 256 P Pn 08 05 08.7 -1.5
baz=75,SNR=746
YMD Yuma Desert 1.82 118 ⇓iP Pn 08 05 07.3 -3.1
GSC Goldstone, Bar 1.90 351 Pn 08 05 10.4 -1.2
GSC IAML 08 05 43.4
comp=N,30µm,1.1s
GSC IAML 08 05 45.6
comp=E,47µm,1.3s
GSC Goldstone, Bar 1.90 351 P Pn 08 05 10.4 -1.2
GSC Goldstone, Bar 1.90 351 P Pn 08 05 10.0 -1.5
baz=171,SNR=1000
EDW2 Edwards Air F2 1.94 319 P Pn 08 05 10.3 -1.8
baz=138,SNR=1000
NEE2 Needles Airpor 2.03 48 P Pn 08 05 10.9 -2.3
baz=229,SNR=1000
TUQ Turquoise Moun 2.06 12 P Pn 08 05 11.7 -2.0
baz=192,SNR=1000
TUQ Sb Sb 08 05 43.0 +0.7
baz=192
SVX San Vicente 2.10 175 ⇓iP Pn 08 05 13.6 -0.5
PDMCI Parker Dam,Lak 2.11 65 P Pn 08 05 12.1 -2.3
baz=246,SNR=1000
PDMCI Sb Sb 08 05 44.3 +0.6
baz=246
CCAC Calif City Air 2.16 324 Pn 08 05 14.0 -1.1
OSI Osito Audit: C 2.23 303 P Pn 08 05 14.6 -1.5
baz=121,SNR=989
ECBX El Chinero 2.28 148 ⇓iP Pn 08 05 14.0 -2.6
LRMC Laurel Mtn Rad 2.29 334 P Pn 08 05 15.5 -1.5
baz=153,SNR=1000
113A Mohawk Valley, 2.34 105 Pn 08 05 15.0 -2.6
SHOC Shoshone, Teco 2.48 3 P Pn 08 05 17.8 -1.7
baz=183,SNR=492
SPIG San Pedro Mart 2.51 160 ⇓iP Pn 08 05 18.6 -1.6
QSM Queen of Sheba 2.56 352 Pn Pn 08 05 18.6 -2.0
SNCC San Nicolas Is 2.58 267 Pn 08 05 19.0 -1.8
SNCC San Nicolas Is 2.58 267 P Pn 08 05 19.0 -1.8
baz=85,SNR=86
ARVC Arvin 2.60 311 P Pn 08 05 19.8 -1.3
baz=130,SNR=508
W13A Hualapai Mount 2.70 51 Pn Pn 08 05 20.4 -2.4
SCZ2 Santa Cruz Isl 2.72 283 P Pn 08 05 20.3 -2.4
baz=101,SNR=122
SFX San Felipe 2.74 150 Pn Pn 08 05 21.1 -1.9
SFX San Felipe 2.74 150 ⇓eP Pn 08 05 20.6 -2.4
GWY Greenwater Val 2.76 356 Pn Pn 08 05 21.9 -1.6
MPMC Manual Prospec 2.77 342 P Pn 08 05 22.0 -1.6
baz=161,SNR=1000
ISA Isabella, Lake 2.79 324 Pn Pn 08 05 22.5 -1.3
ISA IAML 08 06 09.6
comp=E,18µm,1.0s
ISA IAML 08 06 18.8
comp=N,13µm,1.4s
ISA Isabella, Lake 2.79 324 P Pn 08 05 22.5 -1.3
ISA Isabella, Lake 2.79 324 P Pn 08 05 22.2 -1.6
baz=142,SNR=953
BCW Bitter Crk WRg 2.88 302 Pn 08 05 24.6 -0.5
SBC Santa Barbara 2.90 291 P Pn 08 05 23.7 -1.4
baz=109,SNR=50
Y14A Wickenburg 2.92 79 Pn 08 05 23.4 -2.2
FURC Furnace Creek, 3.06 354 P Pn 08 05 25.9 -1.4
baz=173,SNR=332
PKM Mcpherson Peak 3.15 299 P Pn 08 05 27.3 -1.5
baz=116,SNR=265
VES Vestal, Richgr 3.25 319 P Pn 08 05 28.3 -1.7
baz=137,SNR=218
SHPR Sheep Range 3.25 19 Pn Pn 08 05 29.2 -1.0
CWC Cottonwood Cre 3.29 336 P Pn 08 05 29.4 -1.5
baz=155
214A Organ Pipe Nat 3.40 115 Pn Pn 08 05 29.2 -2.9
214A Organ Pipe Nat 3.40 115 P Pn 08 05 29.4 -2.7
baz=297,SNR=91
214A Organ Pipe Nat 3.40 115 ⇓eP Pn 08 05 29.4 -2.7
SMMC Simmler 3.49 304 P Pn 08 05 32.1 -1.2
baz=122,SNR=194
TPNV Topopah Spring 3.52 3 Pn 08 05 33.6 -0.4
TPNV IAML 08 06 34.0
comp=N,9µm,1.5s
TPNV IAML 08 06 38.2
comp=N,8µm,1.4s
TPNV Topopah Spring 3.52 3 P Pn 08 05 33.6 -0.4
TPNV Topopah Spring 3.52 3 P Pn 08 05 33.2 -0.7
baz=182,SNR=485
GRAC Grapevine Rang 3.64 348 Pn 08 05 34.8 -0.8
GRAC IAML 08 06 46.4
comp=E,12µm,1.2s
GRAC Grapevine Rang 3.64 348 P Pn 08 05 35.0 -0.5
baz=168,SNR=972
VOG Valley Oaks Go 3.77 321 P Pn 08 05 36.3 -0.8
baz=139,SNR=38
PAGB Antelope Grade 3.89 307 Pn 08 05 38.1 -0.8
TIN Tinemaha, Big 3.91 339 P Pn 08 05 38.5 -0.7
baz=157,SNR=289
LCH Last Change Ra 3.92 346 Pn 08 05 38.6 -0.8
PRN Pahroc Range 4.14 16 Pn 08 05 41.8 -0.6
S11A Rachel 4.25 8 Pn 08 05 43.2 -0.7
X16A Lo Mia Camp, P 4.28 75 Pn Pn 08 05 42.8 -1.6
LCMT Little Creek M 4.44 35 Pn 08 05 45.4 -1.2
PMPB Monarch Peak 4.54 309 Pn 08 05 47.2 -0.5
U15A North Rim 4.54 48 Pn Pn 08 05 47.2 -0.9
LAPR La Primavera 4.56 129 eP Pn 08 05 45.5 -2.5
MLAC Mammoth, Mammo 4.63 336 P Pn 08 05 49.0 -0.2
baz=154,SNR=65
OMMB Old Mammoth Mi 4.67 334 Pn Pn 08 05 49.6 -0.3
WUAZ Wupatki 4.68 62 Pn Pn 08 05 49.9 0.0
baz=149
WUAZ IAML 08 07 28.5
comp=E,4µm,1.0s
WUAZ IAML 08 07 34.3
comp=E,3µm,2.4s
WUAZ Wupatki 4.68 62 P Pn 08 05 49.2 -0.8
baz=245,SNR=849
MDPB Devils Postpil 4.72 334 Pn 08 05 50.8 +0.3
CCUT Cedar City 4.83 31 Pn Pn 08 05 50.7 -1.3
TUC Tucson 4.89 102 Pn Pn 08 05 50.5 -2.2
TUC Tucson 4.89 102 P Pn 08 05 50.5 -2.2
TUC Tucson 4.89 102 P Pn 08 05 50.8 -2.0
baz=285
BBGB Big Mountain B 4.91 311 Pn 08 05 52.5 -0.4
R11A Troy Canyon, C 4.97 8 Pn Pn 08 05 52.6 -1.2
R11A IAML 08 07 28.1
comp=E,3µm,1.8s
R11A Troy Canyon, C 4.97 8 P Pn 08 05 53.0 -0.8
baz=188,SNR=132
SZCU Shurtz Canyon 4.99 32 Pn 08 05 53.4 -0.7
LHV Little Huntoon 5.10 341 Pn 08 05 55.6 +0.2
BAHB Baha de los 5.10 150 eP Pn 08 05 54.9 -0.7
NV11 Mina Array Sit 5.19 345 Pn 08 05 56.4 -0.4
NV11 IAML 08 07 37.5
comp=E,3µm,1.6s
NVAR Mina Array Bea 5.22 344 Pn Pn 08 05 58.1 +0.8
comp=E,18nm,0.3s,baz=168,slow=16,SNR=172
NVAR Pg Pg 08 06 14.5 -3.6
comp=E,95nm,0.3s,baz=167,slow=7.9,SNR=61
NVAR Lg Lg 08 07 25.0
comp=E,35nm,0.3s,baz=145,slow=20,SNR=1.1
NVAR LR LR 08 08 15.2
comp=E,4µm,20.8s,baz=166,slow=42
comp=E,81nm,0.6s
NVAR Mina Array Bea 5.22 344 Pn 08 05 56.2 -1.1
PKCU Pink Cliffs 5.25 39 Pn 08 05 57.1 -0.6
SAO San Andreas Ge 5.28 311 Pn Pn 08 05 57.6 -0.4
SAO San Andreas Ge 5.28 311 P Pn 08 05 57.6 -0.4
Q09A Carvers 5.43 354 Pn 08 06 00.3 +0.1
RYN Ryan 5.46 343 Pn 08 06 00.3 -0.3
X18A Snowflake 5.51 77 Pn 08 06 00.3 -1.0
PSUT Pine Spring 5.52 22 Pn 08 06 01.0 -0.4
CMB Columbia Colle 5.61 326 Pn Pn 08 06 02.0 -0.5
CMB Columbia Colle 5.61 326 P Pn 08 06 02.0 -0.5
MTPU Mount Pierson 5.77 36 Pn 08 06 05.9 +0.9
KVN Kaiserville 5.77 347 Pn Pn 08 06 04.5 -0.3
KVN Kaiserville 5.77 347 P Pn 08 06 04.6 -0.3
W18A Petrified Fore 5.81 71 Pn 08 06 04.7 -0.8
W18A Petrified Fore 5.81 71 P Pn 08 06 04.8 -0.6
baz=255,SNR=127
YERR Yerington 5.99 339 Pn 08 06 08.6 +0.7
TCRU Three Creeks R 6.11 31 Pn 08 06 09.7 +0.1
121A Cookes Peak, D 7.33 95 P Pn 08 06 25.5 -0.9
baz=279,SNR=85
DUG Dugway, Tooele 7.36 22 P Pn 08 06 26.6 0.0
baz=204,SNR=40
ELK Elko 7.37 7 Pn Pn 08 06 27.7 +0.8
comp=E,4.8nm,0.3s,baz=197,slow=12,SNR=57
ELK Lg Lg 08 08 31.6
comp=E,9.6nm,0.3s,baz=254,slow=21,SNR=3.7
comp=E,18nm,0.5s
MVCO Mesa Verde 7.52 58 P Pn 08 06 28.6 -0.3
baz=242,SNR=257
HOPS Hopland Field 7.71 318 Pn 08 06 30.6 -0.8
PV10 Paradox Valley 7.78 48 Pn 08 06 31.7 -0.9
Y22D IRIS PASSCAL I 7.96 83 Pn 08 06 34.4 -0.6
Y22D IRIS PASSCAL I 7.96 83 P Pn 08 06 34.8 -0.1
baz=268,SNR=24
PV15 Paradox Valley 8.12 51 Pn 08 06 36.9 -0.3
BNM Barren Site 8.21 82 Pn Pn 08 06 37.5 -0.9
ANMO Albuquerque 8.42 77 Pn Pn 08 06 41.6 +0.4
comp=E,1.6nm,0.3s,baz=263,slow=12,SNR=99
ANMO Pg Pg 08 07 12.5 -6.9
comp=E,4.2nm,0.3s,baz=269,slow=11,SNR=5.0
ANMO Lg Lg 08 09 06.1
comp=E,2.3nm,0.3s,baz=184,slow=22,SNR=3.1
ANMO LR LR 08 09 58.1
comp=E,5µm,21.9s,baz=266,slow=38
comp=E,16nm,0.7s
ANMO Albuquerque 8.42 77 Pn Pn 08 06 41.0 -0.2
ANMO Albuquerque 8.42 77 ceP Pn 08 06 41.5 +0.3
ANMO Albuquerque 8.42 77 P Pn 08 06 41.0 -0.2
baz=262
S22A 4UR Ranch, Cre 8.94 58 P Pn 08 06 49.2 +0.7
baz=244,SNR=94
O20A White River Ci 9.39 42 P Pn 08 06 55.2 +0.7
baz=227,SNR=44
MNTX Cornudas Mount 9.50 97 P Pn 08 06 54.2 -1.6
baz=284,SNR=39
SMCO Snowmass 9.56 50 Pn Pn 08 06 56.9 -0.1
YBH Yreka Blue Hor 9.66 331 Pn Pn 08 07 02.9 +4.7
comp=E,0.5nm,0.3s,baz=140,slow=9.2,SNR=16
YBH Lg Lg 08 09 43.2
comp=E,0.7nm,0.3s,baz=83,slow=20,SNR=6.3
SDCO Great Sand Dun 9.90 61 Pn 08 07 02.2 +0.5
SDCO Great Sand Dun 9.90 61 P Pn 08 07 02.4 +0.7
baz=247,SNR=43
L04D Klamath Falls 9.92 334 P Pn 08 07 04.4 +2.6
baz=150,SNR=29
K04D Chiloquin, OR 10.09 337 P Pn 08 07 07.6 +3.6
baz=154,SNR=41
HLID Hailey 10.25 8 P Pn 08 07 08.8 +2.5
baz=190,SNR=73
L02F Cave Junction 10.35 329 P Pn 08 07 09.1 +1.6
baz=145
T25A Trinidad 10.52 66 Pn Pn 08 07 10.7 +0.7
T25A Trinidad 10.52 66 P Pn 08 07 10.7 +0.7
baz=253,SNR=24
J05D Fort Rock, OR 10.54 341 P Pn 08 07 14.0 +3.9
baz=158,SNR=110
Q24A Divide 10.67 56 P Pn 08 07 14.3 +2.0
baz=242,SNR=12
LPIG La Paz 10.73 148 Pn Pn 08 07 12.3 -0.5
comp=E,2.1nm,0.3s,baz=181,slow=2.3,SNR=12
LPIG Lg Lg 08 10 17.5
comp=E,1.3nm,0.3s,baz=331,slow=19,SNR=1.8
LPIG LR LR 08 11 06.9
comp=E,3µm,20.8s,baz=336,slow=36
comp=E,82nm,0.9s
J04D Umpqua Nationa 10.76 337 P Pn 08 07 13.5 +0.2
baz=154,SNR=34
ISCO Idaho Springs 10.78 51 P Pn 08 07 14.4 +0.7
baz=237,SNR=16
BW06 Boulder Array 10.79 28 P Pn 08 07 16.1 +2.4
baz=212,SNR=8.4
PDAR Pinedale Array 10.79 28 Pn Pn 08 07 17.4 +3.7
comp=E,0.5nm,0.3s,baz=211,slow=11,SNR=24
PDAR Lg Lg 08 10 20.7
comp=E,0.3nm,0.3s,baz=216,slow=28,SNR=3.3
PDAR LR LR 08 11 24.3
comp=E,1µm,18.8s,baz=225,slow=37
comp=E,2.9nm,0.6s
K02D Willamette Mer 10.86 331 P Pn 08 07 17.9 +3.3
baz=146,SNR=12
RWWY Rawlins 11.03 39 Pn 08 07 17.5 +0.4
N23A Red Feather La 11.21 45 P Pn 08 07 21.8 +2.2
baz=232,SNR=8.2
I04A Tendick Farm, 11.35 338 P Pn 08 07 25.7 +4.4
baz=154,SNR=114
J01E Myrtle Point 11.36 331 P Pn 08 07 23.8 +2.5
baz=146,SNR=8.9
MSTX Muleshoe 11.41 83 P Pn 08 07 23.0 +0.9
baz=271,SNR=22
I05D Terrebonn M, OR 11.54 342 P Pn 08 07 28.7 +4.8
baz=159,SNR=65
I03D Drain, OR 11.59 334 P Pn 08 07 26.7 +2.3
baz=150,SNR=9.8
TX32 Lajitas Array 11.66 107 Pn 08 07 25.7 +0.2
TXAR Lajitas Array 11.66 107 Pn Pn 08 07 25.9 +0.4
comp=E,0.9nm,0.3s,baz=289,slow=14,SNR=63
TXAR Lg Lg 08 10 45.3
comp=E,0.3nm,0.3s,baz=266,slow=23,SNR=4.7
TXAR LR LR 08 12 07.0
comp=E,4µm,19.2s,baz=289,slow=38
comp=E,4.1nm,0.6s
TXAR Lajitas Array 11.66 107 Pn Pn 08 07 25.6 0.0
TXAR Lajitas Array 11.66 107 P Pn 08 07 25.6 0.0
H17A Grant Village 11.87 21 P Pn 08 07 31.6 +3.1
baz=204,SNR=6.0
K22A Casper 12.08 37 Pn 08 07 31.8 +0.5
K22A Casper 12.08 37 P Pn 08 07 31.5 +0.2
baz=223,SNR=17
H04D Lebanon 12.11 338 P Pn 08 07 35.5 +4.0
baz=154,SNR=21
I02E Swisshome, OR 12.12 334 P Pn 08 07 32.5 +0.8
baz=149
AMTX Amarillo 12.32 79 P Pn 08 07 35.1 +0.4
baz=267
G05D Wamic, OR 12.39 344 P Pn 08 07 39.7 +4.3
baz=161,SNR=67
KSCO Kaye Shedlock' 12.47 60 P Pn 08 07 38.1 +1.4
baz=248
BOZ Bozeman (W) 12.71 16 P Pn 08 07 43.7 +3.8
baz=198,SNR=22
G03D McMinnville, O 12.89 338 P Pn 08 07 45.9 +3.6
baz=154,SNR=9.4
RLMT Red Lodge 12.93 23 P Pn 08 07 45.9 +2.9
baz=208
MSO Missoula 13.53 7 P Pn 08 07 54.7 +3.7
baz=189,SNR=48
OGNE Ogallala 13.72 53 P Pn 08 07 54.3 +0.6
baz=241,SNR=8.4
ABTX Abilene, Hawle 14.13 89 P Pn 08 07 59.7 +0.5
baz=278
RSSD Black Hills 14.40 39 Pn Pn 08 08 02.4 -0.7
RSSD Black Hills 14.40 39 P Pn 08 08 02.4 -0.7
RSSD Black Hills 14.40 39 P Pn 08 08 02.1 -1.0
baz=226
JCT Junction City 14.44 97 P Pn 08 08 02.6 -0.9
baz=286,SNR=14
JCT S S 08 11 04.1 -0.3
baz=286
CBKS Cedar Bluff 14.53 64 P Pn 08 08 02.5 -2.3
baz=253
WMOK Wichita Mounta 14.71 80 Pn 08 08 07.2 +0.1
WMOK Wichita Mounta 14.71 80 P Pn 08 08 07.2 +0.1
WMOK Wichita Mounta 14.71 80 P Pn 08 08 07.2 +0.1
baz=270,SNR=9.2
NEW Newport 14.84 358 Pn P 08 08 11.7 -3.2
comp=E,0.3nm,0.3s,baz=178,slow=14,SNR=38
NEW Lg Lg 08 12 27.2
comp=E,0.1nm,0.3s,baz=82,slow=22,SNR=3.1
comp=E,55nm,0.9s
NEW Newport 14.84 358 P Pn 08 08 09.9 +1.1
baz=178,SNR=85
D03D Eldon 14.96 342 P Pn 08 08 11.5 +1.0
baz=158,SNR=17
NLWA Neilton Lookou 15.04 340 P P 08 08 14.3 -2.8
LAO LASA Array 15.37 27 P Pn 08 08 15.8 -0.2
baz=214,SNR=16
833A Chaparral WMA, 15.50 105 P Pn 08 08 15.8 -1.8
baz=294,SNR=40
833A S S 08 11 25.3 -0.8
baz=294
WHTX Lake Whitney, 16.05 90 P Pn 08 08 24.9 0.0
baz=280,SNR=8.5
WHTX S S 08 11 34.7 -2.6
baz=280
435B Jarrell 16.20 94 P Pn 08 08 25.4 -1.4
baz=284
435B S S 08 11 38.6 -1.8
baz=284
CLRS Cowichan Lake 16.42 342 P P 08 08 31.6 -0.8
BGNE Belgrade 16.56 56 P Pn 08 08 31.4 0.0
BGNE IAmb IAmb 08 08 37.9
comp=Z,143nm,1.1s
BGNE Belgrade 16.56 56 P Pn 08 08 31.4 0.0
baz=247,SNR=18
K31A O'Neill 16.67 51 P 08 08 33.5 -1.7
N33A J Bar K, Exete 16.81 59 P Pn 08 08 34.0 -0.5
N33A IAmb IAmb 08 08 39.6
comp=Z,116nm,1.0s
KSU1 Kansas State U 16.96 65 P Pn 08 08 36.6 +0.1
baz=257
TUL1 Leonard 17.18 76 P Pn 08 08 38.3 -0.8
baz=268,SNR=30
TUL1 S S 08 11 59.6 -0.6
baz=268
237A Washetta, Mont 17.43 89 Pn 08 08 42.4 0.0
SUSD Miller 17.46 46 P Pn 08 08 42.0 -0.7
baz=237
X37A Clayton 17.52 80 Pn 08 08 43.3 -0.1
DGMT Dagmar 17.62 28 P Pn 08 08 44.6 0.0
baz=216,SNR=19
LLLB Lillooet 17.63 349 P P 08 08 46.1 +0.3
E28A Huff 17.80 38 P Pn 08 08 46.3 -0.5
E28A IAmb IAmb 08 08 53.6
comp=Z,224nm,1.5s
HKT Hockley 17.88 96 P P 08 08 48.5 0.0
HKT IAmb IAmb 08 08 55.0
comp=Z,211nm,1.6s
HKT Hockley 17.88 96 ⇓eP P 08 08 49.0 +0.4
L34A Svendsen Farm, 18.00 56 P 08 08 49.5 -0.5
N35A Tabor 18.15 60 Pn 08 08 50.7 -0.5
NATX Nacogdoches 18.43 89 P Pn 08 08 54.4 -0.3
baz=281
ECSD EROS Data Cent 18.57 51 P P 08 08 55.6 -0.6
baz=243,SNR=30
W39A Magazine 18.80 78 P P 08 08 58.2 -0.6
W39A Magazine 18.80 78 P P 08 08 58.2 -0.6
baz=271,SNR=27
MIAR Mount Ida 19.00 80 P Pn 08 09 01.9 +0.3
baz=273,SNR=50
MIAR S S 08 12 37.0 -0.3
baz=273
MDND Maddock 19.20 36 P P 08 09 02.8 -0.3
baz=227
S39A Bolivar 19.28 71 P P 08 09 03.7 -0.3
U40A Yellville 19.57 75 P Pn 08 09 07.5 -1.0
baz=268,SNR=23
X40A Basin Creek Fa 19.61 80 P P 08 09 07.8 +0.1
X40A Basin Creek Fa 19.61 80 P P 08 09 06.9 -0.8
baz=274,SNR=19
Z41A Richland Creek 19.75 84 P Pn 08 09 10.6 -0.1
baz=277,SNR=5.6
F33A 5 Mile Ranch, 19.80 45 P P 08 09 09.8 +0.1
WHAR Wooly Hollow 20.03 78 P P 08 09 11.7 -0.5
WHAR IAmb IAmb 08 09 23.4
comp=Z,198nm,1.4s
W41B Gary Mavity, V 20.06 78 P P 08 09 12.4 -0.2
W41B IAmb IAmb 08 09 25.6
comp=Z,137nm,1.4s
W41B Gary Mavity, V 20.06 78 P P 08 09 11.8 -0.8
baz=272,SNR=38
R40A Maddies Statio 20.17 69 P P 08 09 12.4 -1.3
R40A IAmb IAmb 08 09 26.5
comp=Z,87nm,1.1s
SCIA State Center 20.20 58 P P 08 09 14.4 +0.3
baz=253
P40A Paris 20.52 66 P P 08 09 18.0 +0.5
P40A IAmb IAmb 08 09 33.1
comp=Z,119nm,1.6s
BBB Bella Bella 20.56 339 P Pn 08 09 21.0 +1.0
comp=Z,44nm,0.9s,baz=147,slow=7.5,SNR=14
BBB LR LR 08 18 14.1
comp=Z,1µm,18.3s,baz=166,slow=40
UNM Universidad Na 20.85 128 IAMs_20 IAMs_20 08 17 19.9
comp=Z,5µm,19.0s
LCAR Lake Charles 20.94 76 P P 08 09 20.6 -1.5
LCAR IAmb IAmb 08 09 30.7
comp=Z,143nm,1.3s
CCM Cathedral Cave 20.95 70 P P 08 09 21.5 -0.7
baz=265
AGMN Agassiz Nation 21.43 40 P P 08 09 27.6 +0.3
AGMN Agassiz Nation 21.43 40 P P 08 09 26.8 -0.5
baz=234,SNR=117
F36A Milaca 21.50 48 P P 08 09 28.6 +0.5
F36A IAmb IAmb 08 09 37.4
comp=Z,58nm,1.1s
PBMO Poplar Bluff 21.53 74 P P 08 09 27.9 -0.5
PBMO IAmb IAmb 08 09 35.4
comp=Z,108nm,1.1s
SPMN Marine on St. 21.68 50 P P 08 09 29.8 -0.1
baz=245,SNR=36
SPMN S Sn 08 13 37.8 -1.2
baz=245
VBMS Vicksburg 21.81 86 IAMs_20 IAMs_20 08 18 31.1
comp=Z,2µm,18.0s
VBMS Vicksburg 21.81 86 P P 08 09 31.6 +0.1
baz=280,SNR=10
Y45A Yeager Farm, C 22.39 81 P P 08 09 35.0 -2.6
OXF Oxford 22.43 80 P P 08 09 38.2 0.0
baz=275,SNR=20
JFWS Jewell Farm 22.60 58 IAMs_20 IAMs_20 08 17 53.6
comp=Z,2µm,21.0s
JFWS Jewell Farm 22.60 58 P P 08 09 37.0 -2.9
baz=254,SNR=17
JFWS S S 08 13 50.0 +1.9
baz=254
ULM Lac du Bonnet 22.63 36 P P 08 09 41.3 +1.2
comp=Z,56nm,0.8s,baz=236,slow=9.5,SNR=30
ULM Lg Lg 08 16 28.8
comp=Z,0.2nm,0.3s,baz=328,slow=17,SNR=3.7
ULM LR LR 08 18 52.4

comp=Z,3µm,18.2s,baz=230,slow=38
comp=Z,56nm,0.8s
ULM Lac du Bonnet 22.63 36 P **P** **08 09 38.4 -1.7**
ULM IAmb IAmb 08 09 45.8
comp=Z,75nm,0.9s
ULM Lac du Bonnet 22.63 36 P **P** **08 09 38.4 -1.7**
ULM pmax pmax
comp=Z,75nm,1.0s
I40A Norwalk 22.63 55 P **P** **08 09 39.7 -0.5**
HDIL Hopedale 22.77 64 P **P** **08 09 40.2 -1.5**
baz=260,SNR=13
WVT Waverly 23.63 75 IAMs_20 IAMs_20 08 19 08.1
comp=Z,2µm,18.0s
WVT Waverly 23.63 75 P **P** **08 09 48.7 -1.8**
baz=272
Z47A Carrollton 23.69 83 P **P** **08 09 50.1 -1.0**
EYMN Ely 23.71 45 P **P** **08 09 48.0 -3.2**
baz=241
EYMN S **S** **08 14 11.8 +5.0**
baz=241
M44A Midewin, Midew 23.85 62 P **P** **08 09 51.6 -1.0**
L44A Lake County Fo 24.10 60 P **P** **08 09 53.0 -2.0**
baz=258
L44A S **S** **08 14 21.2 +8.0**
baz=258
COWI Conover 24.38 51 IAMs_20 IAMs_20 08 19 39.8
comp=Z,2µm,18.0s
SFIN Lafayette 24.41 65 P **P** **08 09 56.9 -0.9**
baz=263,SNR=11
SFIN S **S** **08 14 24.4 +6.3**
baz=263
LRAL Lakeview Retre 24.61 83 P **P** **08 09 59.2 -0.5**
LRAL IAmb IAmb 08 10 06.8
comp=Z,91nm,1.4s
LRAL IAMs_20 IAMs_20 08 20 13.0
comp=Z,3µm,21.0s
LRAL Lakeview Retre 24.61 83 P **P** **08 09 58.6 -1.1**
baz=279,SNR=16
LRAL S **S** **08 14 30.2 +8.7**
baz=279
H43A Windswept, Lux 24.76 55 P **P** **08 10 00.6 -0.4**
H43A IAmb IAmb 08 10 05.3
comp=Z,65nm,1.1s
BRAL Brewton 24.92 87 P **P** **08 10 02.2 -0.3**
baz=283,SNR=9.0
CRAG Craig 24.92 337 P **P** **08 10 01.4 -0.8**
baz=145
L46A Eue Claire 25.25 61 P **P** **08 10 04.6 -0.8**
CMIG Matias Romero 25.31 125 P **P** **08 10 06.9 +0.8**
comp=Z,15nm,0.9s,baz=322,slow=9.1,SNR=30
CMIG LR LR 08 20 29.0
comp=Z,2µm,18.7s,baz=260,slow=38
comp=Z,15nm,0.9s
T35M Bob Quinn 25.39 342 P **P** **08 10 06.9 +0.4**
baz=152,SNR=19
WRAK Wrangell Islan 25.48 339 P **P** **08 10 07.4 +0.1**
baz=148,SNR=26
N47A Urbana 25.53 64 P **P** **08 10 06.3 -1.7**
N47A IAmb IAmb 08 10 12.4
comp=Z,56nm,1.0s
W50A Signal Mountai 25.73 77 P **P** **08 10 08.6 -1.3**
W50A IAmb IAmb 08 10 14.6
comp=Z,34nm,1.0s
O48B Farmland 25.87 66 P **P** **08 10 09.8 -1.2**
baz=265,SNR=9.8
E43A Lone Tree Farm 25.87 51 P **P** **08 10 10.0 -1.1**
E43A IAmb IAmb 08 10 32.2
comp=Z,53nm,1.6s
P49A Miami Univ. Ec 26.15 67 P **P** **08 10 13.1 -0.6**
baz=266,SNR=6.1
CPCT Cooper Cave 26.35 77 P **P** **08 10 14.9 -0.6**
CPCT IAmb IAmb 08 10 24.2
comp=Z,49nm,1.1s
V51A Loudon 26.46 76 P **P** **08 10 15.1 -1.4**
V51A IAmb IAmb 08 10 21.5
comp=Z,39nm,0.9s
O49A Covington 26.49 66 P **P** **08 10 14.8 -1.8**
O49A IAmb IAmb 08 10 21.3
comp=Z,68nm,1.1s
DLBC Dease Lake 26.64 344 P **P** **08 10 19.3 +1.4**
comp=Z,35nm,1.0s,baz=164,slow=8.1,SNR=8.4
DLBC LR LR 08 21 16.8
comp=Z,2µm,18.1s,baz=166,slow=37
comp=Z,35nm,1.0s
DLBC Dease Lake 26.64 344 P **P** **08 10 18.9 +1.0**
baz=154,SNR=25
SIT Sitka 26.93 337 P **P** **08 10 19.3 -1.2**
baz=143,SNR=6.8
TKL Tuckaleechee C 26.94 76 P **P** **08 10 21.4 +0.6**
comp=Z,14nm,0.9s,baz=264,slow=6.0,SNR=16
TKL Lg Lg 08 18 44.9
comp=Z,0.1nm,0.3s,baz=17,slow=20,SNR=1.9
TKL LR LR 08 21 59.7
comp=Z,609nm,18.0s,baz=266,slow=39
comp=Z,14nm,0.9s
GLMI Grayling 27.02 56 IAMs_20 IAMs_20 08 20 54.8
comp=Z,2µm,18.0s
GLMI Grayling 27.02 56 P **P** **08 10 19.5 -2.0**
baz=256
TZTN Tazewell 27.06 74 IAMs_20 IAMs_20 08 21 06.0
comp=Z,3µm,19.0s
TZTN Tazewell 27.06 74 P **P** **08 10 20.1 -1.9**
baz=273,SNR=7.0
AAM Ann Arbor 27.23 61 IAMs_20 IAMs_20 08 20 59.2
comp=Z,2µm,18.0s
AAM Ann Arbor 27.23 61 P **P** **08 10 21.3 -2.0**
baz=262
GOGA Godfrey 27.47 81 P **P** **08 10 24.6 -0.9**
baz=279,SNR=14
ACSO Alum Creek Sta 27.52 66 P **P** **08 10 25.6 -0.4**
baz=266,SNR=11
TIGA Tifton 27.75 85 P **P** **08 10 25.7 -2.4**
baz=283
P52A Corning 28.15 67 P **P** **08 10 30.3 -1.3**
baz=268,SNR=6.4
P33M Teslin, Yukon 28.88 343 IAMs_20 IAMs_20 08 22 38.5
comp=Z,3µm,20.0s
P33M Teslin, Yukon 28.88 343 P **P** **08 10 38.5 +0.6**
baz=151,SNR=12
O53A New Philadelph 28.88 66 P **P** **08 10 37.1 -1.0**
baz=268,SNR=12
SKAG Skagway 28.90 340 P **P** **08 10 37.4 -0.6**
baz=146
KMSC Kings Mountain 28.98 77 P **P** **08 10 38.0 -1.0**
KMSC Kings Mountain 28.98 77 P **P** **08 10 35.9 -3.1**
baz=277,SNR=18
V55A Taylorsville 29.00 75 P **P** **08 10 38.0 -1.2**
YKA Yellowknife Ar 29.11 2 P **P** **08 10 40.6 +0.8**
comp=Z,6.9nm,0.9s,baz=184,slow=8.2,SNR=22
comp=Z,6.9nm,0.9s
TGTN Hyland Airport 29.14 348 P **P** **08 10 38.9 -1.2**
baz=159
PLBC Pleasant Camp 29.20 339 P **P** **08 10 41.7 +1.0**
baz=144,SNR=6.5
M53A WI Miller and 29.35 64 P **P** **08 10 40.8 -1.5**
baz=266,SNR=11
BLA Blacksburg 29.53 72 IAMs_20 IAMs_20 08 22 58.2
comp=Z,2µm,20.0s
BLA Blacksburg 29.53 72 P **P** **08 10 41.6 -2.3**
baz=274,SNR=10
WHY Whitehorse 29.79 342 P **P** **08 10 44.2 -1.8**
baz=148,SNR=15
MCWV Mont Chateau 29.91 67 P **P** **08 10 47.3 0.0**
baz=270
ERPA Erie 29.92 62 IAMs_20 IAMs_20 08 22 32.3
comp=Z,2µm,18.0s
ERPA Erie 29.92 62 P **P** **08 10 46.1 -1.2**
baz=265
WRGLY Wrigley 30.15 354 P **P** **08 10 49.1 +0.1**
baz=168,SNR=8.3
O30N Mendenhall 30.20 341 P **P** **08 10 47.7 -1.9**
baz=146,SNR=7.7
NHSC New Hope 30.24 80 IAMs_20 IAMs_20 08 23 15.1
comp=Z,3µm,20.0s
NHSC New Hope 30.24 80 P **P** **08 10 48.5 -1.7**
baz=281,SNR=5.9
PNL Peninsula 30.32 337 P **P** **08 10 47.1 -3.5**
baz=140
DWPF Disney Wildern 30.46 91 P **P** **08 10 47.6 -4.5**
baz=289
HYT Haines Junctio 30.64 340 P **P** **08 10 53.0 -0.6**
baz=144,SNR=7.3
MMPY Sheldon Lake, 30.69 347 P **P** **08 10 53.7 -0.3**
baz=155,SNR=26
N31M Braeburn, Yuko 30.72 342 IAMs_20 IAMs_20 08 22 57.2
comp=Z,3µm,20.0s
N31M Braeburn, Yuko 30.72 342 P **P** **08 10 53.0 -1.2**
baz=147,SNR=7.7

FARO Faro, Yukon 30.77 345 P **P** **08 10 54.7 +0.1**
baz=152,SNR=26
SADO Sadowa 30.84 57 P **P** **08 10 56.0 +0.7**
comp=Z,5.1nm,0.6s,baz=301,slow=8.7,SNR=4.3
SADO LR LR 08 22 21.7
comp=Z,1µm,19.4s,baz=276,slow=34
comp=Z,5.1nm,0.6s
SADO Sadowa 30.84 57 P **P** **08 10 55.1 -0.2**
SADO IAmb IAmb 08 11 00.6
comp=Z,23nm,1.2s
PINM Pinnacle 30.92 337 P **P** **08 10 56.2 +0.1**
baz=139
WVNY West Valley, N 30.96 62 P **P** **08 10 55.5 -1.1**
M31M Drury Creek, Y 30.99 344 P **P** **08 10 54.0 -2.6**
baz=150,SNR=19
YUK6 Outpost Mounta 30.99 339 P **P** **08 10 56.2 -0.7**
baz=143
N30M Aishikik Lake 31.05 341 P **P** **08 10 54.8 -2.3**
baz=145,SNR=15
YUK4 Talbot Arm 31.39 340 P **P** **08 10 57.4 -3.0**
baz=143,SNR=16
SSPA Standing Stone 31.43 65 P **P** **08 10 58.4 -2.2**
baz=269
MESA MESA 31.56 336 P **P** **08 11 01.7 -0.1**
baz=136
YUK8 Steele Glacier 31.68 339 P **P** **08 11 00.0 -2.9**
baz=141,SNR=14
CNNC Cliffs of the 31.76 76 IAMs_20 IAMs_20 08 23 52.4
comp=Z,2µm,22.0s
CNNC Cliffs of the 31.76 76 P **P** **08 11 00.5 -3.1**
baz=278
SNH Sunshine Point 31.87 335 IAMs_20 IAMs_20 08 25 55.6
comp=Z,2µm,19.0s
CBN Corbin Frederi 31.88 70 P **P** **08 11 02.1 -2.5**
baz=274
M30M Minto, Yukon 31.90 342 P **P** **08 11 03.1 -1.4**
baz=147,SNR=15
CTG Chitna Glacier 31.93 337 P **P** **08 11 04.1 -0.9**
baz=138,SNR=6.8
BGLC Bering Glacier 31.98 335 P **P** **08 11 03.9 -1.3**
baz=135
WAX Waxell Ridge 32.06 335 IAMs_20 IAMs_20 08 25 59.8
comp=Z,2µm,18.0s
YUK3 Moose Creek 32.27 339 P **P** **08 11 06.2 -1.8**
baz=140,SNR=9.7
HMT Hamilton 32.48 334 IAMs_20 IAMs_20 08 23 14.9
comp=Z,1µm,19.0s
Q23K Middleton Isla 32.67 332 P **P** **08 11 08.6 -2.7**
baz=130
MCARA McCarthy VSAT 32.80 337 P **P** **08 11 10.9 -1.4**
baz=136,SNR=9.7
BVCY Beaver Creek 32.89 339 P **P** **08 11 10.9 -2.3**
baz=140,SNR=10
BINY Binghamton 32.89 63 IAMs_20 IAMs_20 08 24 23.1
comp=Z,1µm,18.0s
BINY Binghamton 32.89 63 P **P** **08 11 11.1 -2.4**
baz=268,SNR=14
BMRM Bremner River 33.04 335 IAMs_20 IAMs_20 08 22 34.7
comp=Z,1µm,21.0s
BMRM Bremner River 33.04 335 P **P** **08 11 14.0 -0.7**
baz=134,SNR=9.6
M27K Edge Creek, AK 33.15 339 IAMs_20 IAMs_20 08 23 21.6
comp=Z,1µm,19.0s
M27K Edge Creek, AK 33.15 339 P **P** **08 11 12.5 -3.2**
baz=139,SNR=19
EYAK Cordova Ski Ar 33.17 334 P **P** **08 11 13.0 -2.7**
baz=132,SNR=11
HIN Hinchinbrook I 33.35 333 IAMs_20 IAMs_20 08 22 25.0
comp=Z,2µm,19.0s
N25K Chitina, Valde 33.48 336 P **P** **08 11 15.5 -3.0**
baz=134,SNR=13
M26K Nabesna, AK 33.53 338 P **P** **08 11 16.6 -2.2**
baz=137,SNR=22
FID Port Fidalgo 33.58 334 IAMs_20 IAMs_20 08 22 33.6
comp=Z,1µm,20.0s
L27K Beaver Creek, 33.67 339 IAMs_20 IAMs_20 08 24 46.3
comp=Z,1µm,19.0s
L27K Beaver Creek, 33.67 339 P **P** **08 11 18.6 -1.5**
baz=140,SNR=18
DAWY Dawson 33.79 342 P **P** **08 11 19.1 -2.0**
baz=144,SNR=58
KLU Klutina 33.87 335 IAMs_20 IAMs_20 08 23 11.5
comp=Z,1µm,21.0s
KLU Klutina 33.87 335 P **P** **08 11 18.6 -3.2**
baz=132,SNR=13
GLI Glacier Island 33.89 333 IAMs_20 IAMs_20 08 22 32.1
comp=Z,1µm,22.0s
GLI Glacier Island 33.89 333 P **P** **08 11 18.3 -3.7**
baz=130,SNR=7.8
LONY Lake Ozonia 34.05 58 IAMs_20 IAMs_20 08 24 42.7
comp=Z,2µm,20.0s
LONY Lake Ozonia 34.05 58 P **P** **08 11 20.1 -3.4**
baz=265,SNR=9.7
L26K Log Cabin Wild 34.10 338 IAMs_20 IAMs_20 08 23 59.7
comp=Z,1µm,20.0s
L26K Log Cabin Wild 34.10 338 P **P** **08 11 20.3 -3.5**
baz=138,SNR=26
HARP HAARP 34.23 337 P **P** **08 11 21.8 -3.1**
baz=134,SNR=12
SEW Seward 34.33 331 P **P** **08 11 22.4 -3.3**
baz=126,SNR=8.3
M24K Tolsona, Glenn 34.37 336 IAMs_20 IAMs_20 08 23 29.9
comp=Z,1µm,19.0s
M24K Tolsona, Glenn 34.37 336 P **P** **08 11 23.9 -2.3**
baz=133,SNR=5.3
KDAK Kodiak Island 34.44 326 P **P** 08 11 31.3 +4.7
comp=Z,21nm,0.9s,baz=125,slow=7.6,SNR=9.3
KDAK LR LR 08 22 53.5
comp=Z,1µm,21.3s,baz=151,slow=32
KDAK Kodiak Island 34.44 326 IAMs_20 IAMs_20 08 22 30.7
comp=Z,1µm,21.0s
KDAK Kodiak Island 34.44 326 P **P** **08 11 26.3 -0.3**
baz=119
PAL Palisades 34.44 65 IAMs_20 IAMs_20 08 25 30.2
comp=Z,2µm,19.0s
PAL Palisades 34.44 65 P **P** **08 11 25.0 -2.0**
baz=271
MATN Matagalpa 34.48 119 P **P** **08 11 25.3 -2.4**
K27K Chicken 34.49 340 P **P** **08 11 25.6 -1.4**
baz=140
OHAK Old Harbor 34.50 325 P **P** **08 11 25.0 -2.2**
baz=118
SCM Sheep Creek Mo 34.60 335 IAMs_20 IAMs_20 08 23 31.8
comp=Z,1µm,21.0s
SCM Sheep Creek Mo 34.60 335 P **P** **08 11 25.8 -2.3**
baz=131,SNR=13
I29M Ogilvie Camp, 34.60 344 P **P** **08 11 26.4 -1.7**
baz=147,SNR=44
TRY Troy 34.62 62 IAMs_20 IAMs_20 08 25 16.9
comp=Z,2µm,18.0s
SII Sitkinak Islan 34.64 323 P **P** **08 11 27.8 -0.7**
baz=116
BRSE Bradley Lake S 34.65 330 P **P** **08 11 27.0 -1.6**
baz=124
O22K Cooper Landing 34.66 331 IAMs_20 IAMs_20 08 23 28.5
comp=Z,1µm,20.0s
O22K Cooper Landing 34.66 331 P **P** **08 11 27.1 -1.5**
baz=126
M23K Glacier View 34.71 334 P **P** **08 11 27.0 -2.1**
baz=130,SNR=11
BRLK Bradley Lake 34.72 330 IAMs_20 IAMs_20 08 23 17.2
comp=Z,2µm,20.0s
PAX Paxson 34.73 337 P **P** **08 11 27.0 -2.3**
baz=135,SNR=15
CNPM China Poot 34.74 329 IAMs_20 IAMs_20 08 23 16.7
comp=Z,1µm,20.0s
KNK Knik Glacier 34.74 333 IAMs_20 IAMs_20 08 23 46.6
comp=Z,1µm,19.0s
KNK Knik Glacier 34.74 333 P **P** **08 11 28.1 -1.2**
baz=129,SNR=18
Q20K Shuyak Island 34.76 327 P **P** **08 11 27.0 -2.5**
baz=121
SML Sawmill 34.94 334 IAMs_20 IAMs_20 08 23 29.0
comp=Z,1µm,20.0s
SML Sawmill 34.94 334 P **P** **08 11 30.5 -0.6**
baz=130,SNR=15
HOM Homer 34.98 329 IAMs_20 IAMs_20 08 23 26.2
comp=Z,1µm,20.0s
HOM Homer 34.98 329 P **P** **08 11 30.5 -0.9**
baz=123
SCRK Sand Creek 35.00 339 P **P** **08 11 31.3 -0.4**
SCRK IAMs_20 IAMs_20 08 26 34.5
comp=Z,1µm,18.0s
SCRK Sand Creek 35.00 339 P **P** **08 11 28.8 -2.8**
baz=138,SNR=60
RC01 Rabbit Creek A 35.03 332 IAMs_20 IAMs_20 08 23 52.3
comp=Z,1µm,19.0s
RC01 Rabbit Creek A 35.03 332 P **P** **08 11 29.5 -2.3**
baz=127,SNR=13
CHIR Chirikof Islan 35.07 322 IAMs_20 IAMs_20 08 23 20.4
comp=Z,1µm,19.0s
RIDG Independent Ri 35.09 338 IAMs_20 IAMs_20 08 24 29.8
comp=Z,1µm,20.0s
RIDG Independent Ri 35.09 338 P **P** **08 11 30.9 -1.4**
baz=136,SNR=20
PMR Palmer 35.10 333 P **P** **08 11 31.0 -1.4**
baz=128,SNR=16
EPYK Eagle Plains 35.12 346 IAMs_20 IAMs_20 08 27 57.5
comp=Z,1µm,19.0s
EPYK Eagle Plains 35.12 346 P **P** **08 11 31.2 -1.3**
baz=150,SNR=31
GHO Glory Hole Cre 35.14 334 IAMs_20 IAMs_20 08 23 32.2
comp=Z,1µm,20.0s
WAT6 Susitna Watana 35.23 335 P **P** **08 11 30.9 -2.8**
baz=131,SNR=18
FIS Fire Island 35.25 332 IAMs_20 IAMs_20 08 23 20.0
comp=Z,2µm,22.0s
J26L Joseph Creek 35.27 340 IAMs_20 IAMs_20 08 25 00.6
comp=Z,1µm,18.0s
J26L Joseph Creek 35.27 340 P **P** **08 11 31.4 -2.5**
baz=139,SNR=30
VT1 Waterbury 35.34 59 IAMs_20 IAMs_20 08 25 22.8
comp=Z,2µm,19.0s
L61B Northampton 35.35 62 P **P** **08 11 32.2 -2.6**
baz=270,SNR=7.0
CAPN Captain Cook N 35.40 331 IAMs_20 IAMs_20 08 23 51.1
comp=Z,1µm,20.0s
K24K Donnelly Dome 35.42 338 P **P** **08 11 34.0 -1.2**
baz=135
DHY Denali Highway 35.44 336 P **P** **08 11 34.7 -0.8**
baz=132
Q19K Cape Douglas, 35.49 327 IAMs_20 IAMs_20 08 23 38.4
comp=Z,1µm,20.0s
Q19K Cape Douglas, 35.49 327 P **P** **08 11 35.4 -0.4**
baz=120
M22K Willow 35.58 333 P **P** **08 11 36.8 +0.3**
baz=127
O20K Slope Mountain 35.63 329 P **P** **08 11 33.0 -4.0**
baz=122,SNR=6.1
SUA Susitna One 35.64 332 IAMs_20 IAMs_20 08 24 13.5
comp=Z,1µm,19.0s
SUA Susitna One 35.64 332 P **P** **08 11 35.1 -2.1**
baz=126,SNR=24
HNH Hanover 35.65 60 IAMs_20 IAMs_20 08 25 36.1
comp=Z,2µm,20.0s
WAT1 Susitna Watana 35.68 335 P **P** **08 11 34.6 -2.8**
baz=130
J25K Salcha River, 35.88 339 IAMs_20 IAMs_20 08 25 05.7
comp=Z,1µm,19.0s
J25K Salcha River, 35.88 339 P **P** **08 11 36.8 -2.3**
baz=136,SNR=23
LBNH Lisbon 35.93 59 P **P** **08 11 38.6 -1.2**
baz=268,SNR=9.1
CUT Chulitna 36.03 334 P **P** **08 11 38.5 -1.9**
baz=128
SPCR Spurr Chakacha 36.07 331 P **P** **08 11 40.5 -0.3**
baz=124,SNR=7.0
RND Reindeer 36.16 336 IAMs_20 IAMs_20 08 24 25.2
comp=Z,1µm,20.0s
HRV Adam Dziewonsk 36.18 62 IAMs_20 IAMs_20 08 26 14.0
comp=Z,2µm,21.0s
HRV Adam Dziewonsk 36.18 62 P **P** **08 11 40.5 -1.4**
baz=271
HDA Harding Lake 36.22 338 P **P** **08 11 40.4 -1.6**
baz=134,SNR=12
C36M Paulatuk 36.23 355 P **P** **08 11 41.2 -0.8**
baz=169
SKT Skwentna 36.25 333 IAMs_20 IAMs_20 08 24 43.6
comp=Z,1µm,19.0s
SKT Skwentna 36.25 333 P **P** **08 11 39.7 -2.5**
baz=126,SNR=14
INK Inuvik 36.28 349 P **P** **08 11 46.5 +4.1**
comp=Z,31nm,1.0s,baz=147,slow=9.4,SNR=28
INK LR LR 08 27 31.3
comp=Z,2µm,18.1s,baz=156,slow=38
INK Inuvik 36.28 349 P **P** **08 11 40.1 -2.3**
baz=156,SNR=23
MCK McKinley 36.40 336 IAMs_20 IAMs_20 08 25 55.5
comp=Z,1µm,18.0s
MCK McKinley 36.40 336 P **P** **08 11 42.0 -1.6**
baz=131,SNR=20
O19K Port Alsworth 36.42 329 IAMs_20 IAMs_20 08 24 21.0
comp=Z,1µm,20.0s
O19K Port Alsworth 36.42 329 P **P** **08 11 42.7 -1.0**
baz=120
P18K Big Mountain, 36.42 327 P **P** **08 11 40.9 -2.9**
baz=118
ILAR Eielson Array 36.45 339 P **P** **08 11 44.8 +0.8**
comp=Z,17nm,0.8s,baz=152,slow=7.2,SNR=62
ILAR LR LR 08 26 53.4
comp=Z,839nm,18.8s,baz=148,slow=37
comp=Z,17nm,0.8s
WRH Wood River Hil 36.62 338 IAMs_20 IAMs_20 08 26 27.3
comp=Z,1µm,22.0s
O18K Koktuh Hills 36.64 328 P **P** **08 11 43.6 -2.0**
baz=119
CCB Clear Creek Bu 36.65 338 P **P** **08 11 44.5 -1.1**
CCB IAmb IAmb 08 11 53.6
comp=Z,16nm,0.9s
CCB IAMs_20 IAMs_20 08 26 41.0
comp=Z,1µm,20.0s
TRF Thorofare Moun 36.69 335 IAMs_20 IAMs_20 08 24 39.0
comp=Z,1µm,21.0s
TRF Thorofare Moun 36.69 335 P **P** **08 11 45.1 -1.1**
baz=129,SNR=20
N19K Bonanza Creek 36.80 330 IAMs_20 IAMs_20 08 24 34.1
comp=Z,1µm,19.0s
N19K Bonanza Creek 36.80 330 P **P** **08 11 46.5 -0.6**
baz=121,SNR=13
M20K Styx River 36.82 332 IAMs_20 IAMs_20 08 24 49.6
comp=Z,1µm,20.0s
M20K Styx River 36.82 332 P **P** **08 11 43.3 -3.9**
baz=124
COLA College 36.82 338 ℿ *eP* **P** **08 11 48.5 +1.5**
COLA pmax pmax
comp=Z,10.0nm,1.0s
COLA College 36.82 338 P **P** **08 11 42.8 -4.2**
baz=133
TCOL CIGO, UAF Yank 36.82 338 IAMs_20 IAMs_20 08 26 45.6
comp=Z,986nm,20.0s
TCOL CIGO, UAF Yank 36.82 338 P **P** **08 11 46.1 -1.0**
baz=133,SNR=12
CHNA Chernabura Isl 36.85 319 P **P** **08 11 46.0 -1.4**
baz=108
POKR Poker Plat Res 36.86 339 IAMs_20 IAMs_20 08 27 33.6
comp=Z,958nm,20.0s
POKR Poker Plat Res 36.86 339 P **P** **08 11 45.0 -2.5**
baz=134,SNR=13
BWN Browne 36.87 337 IAMs_20 IAMs_20 08 25 10.4
comp=Z,1µm,21.0s
P17K Kvichak River 36.89 327 P **P** **08 11 45.1 -2.6**
baz=116
JTS Las Juntas de 36.96 121 LR LR 08 28 25.7
comp=Z,1µm,18.9s,baz=10,slow=39
JTS Las Juntas de 36.96 121 IAMs_20 IAMs_20 08 26 27.7
comp=Z,2µm,22.0s
JTS Las Juntas de 36.96 121 ⇓ *eP* **P** **08 11 49.7 +0.9**
KTH Kantishna Hill 36.97 335 IAMs_20 IAMs_20 08 24 45.6
comp=Z,1µm,20.0s
MDM Murphy Dome 37.00 338 IAMs_20 IAMs_20 08 27 00.2
comp=Z,881nm,18.0s
NEA2 Nenana 37.02 337 P **P** **08 11 48.6 -0.1**
NEA2 Nenana 37.02 337 P **P** **08 11 46.6 -2.1**
baz=132,SNR=33
PPLA Purkeypile 37.03 334 P **P** **08 11 49.4 +0.3**
PPLA Purkeypile 37.03 334 P **P** **08 11 47.6 -1.5**
baz=126,SNR=19
CAST Castle Rocks 37.31 334 IAMs_20 IAMs_20 08 24 54.4
comp=Z,1µm,20.0s
CAST Castle Rocks 37.31 334 P **P** **08 11 50.1 -1.2**
baz=126,SNR=17
M19K Big River Lodg 37.33 331 P **P** **08 11 48.9 -2.6**
baz=122
N18K Kilae Creek 37.33 329 IAMs_20 IAMs_20 08 24 49.2
comp=Z,1µm,20.0s
N18K Kilae Creek 37.33 329 P **P** **08 11 50.7 -0.9**
baz=119,SNR=14
BPAW Bear Paw Mtn. 37.34 336 P **P** **08 11 50.9 -0.6**
BPAW IAMs_20 IAMs_20 08 26 13.2
comp=Z,1µm,18.0s
BPAW Bear Paw Mtn. 37.34 336 P **P** **08 11 50.4 -1.1**
baz=129,SNR=51
L20K Farewell, AK 37.44 332 P **P** **08 11 50.4 -2.1**
baz=123,SNR=21
O17K Koliganek Bris 37.44 327 P **P** **08 11 50.4 -2.0**
baz=116

I23K **Minto, Yukon-K** 37.48 338 IAMs_20 IAMs_20 08 27 14.9
comp=Z,947nm,18.0s
I23K **Minto, Yukon-K** 37.48 338 P **P** **08 11 52.3 -0.3**
baz=132,SNR=22
SDPT **Sand Point** 37.49 319 P **P** **08 11 52.3 -0.5**
baz=107
H24K **Noodor Dome** 37.50 339 IAMs_20 IAMs_20 08 28 31.4
comp=Z,1µm,19.0s
H24K **Noodor Dome** 37.50 339 P **P** **08 11 50.7 -2.2**
baz=134,SNR=29
L19K **White Mountain** 37.66 332 IAMs_20 IAMs_20 08 25 16.9
comp=Z,995nm,19.0s
L19K **White Mountain** 37.66 332 P **P** **08 11 53.6 -0.7**
baz=122,SNR=15
CHUM **Lake Minchumin** 37.67 335 P **P** **08 11 53.0 -1.3**
baz=127,SNR=30
O16K **Kokwok River B** 37.82 327 P **P** **08 11 54.1 -1.6**
baz=115,SNR=6.8
PKME **Peaks-Kenny Pk** 37.84 58 IAMs_20 IAMs_20 08 25 54.9
comp=Z,2µm,18.0s
PKME **Peaks-Kenny Pk** 37.84 58 P **P** **08 11 54.4 -1.6**
baz=269,SNR=7.2
MLY **Manley** 37.84 337 P **P** **08 11 54.3 -1.5**
baz=130,SNR=27
H23K **Yukon River** 37.99 339 IAMs_20 IAMs_20 08 27 41.4
comp=Z,1µm,19.0s
H23K **Yukon River** 37.99 339 P **P** **08 11 55.7 -1.3**
baz=132,SNR=32
K20K **Telida** 38.00 333 IAMs_20 IAMs_20 08 25 50.8
comp=Z,857nm,19.0s
K20K **Telida** 38.00 333 P **P** **08 11 55.8 -1.4**
baz=124,SNR=71
I21K **Tanana** 38.35 337 IAMs_20 IAMs_20 08 26 05.9
comp=Z,1µm,20.0s
I21K **Tanana** 38.35 337 P **P** **08 11 58.9 -1.1**
baz=128,SNR=56
J20K **Nowinta River** 38.49 335 IAMs_20 IAMs_20 08 25 42.8
comp=Z,1µm,20.0s
N16K **Nishlik Lake** 38.51 328 P **P** **08 12 01.2 -0.2**
baz=115,SNR=12
TTA **Tatalina** 38.51 332 P **P** **08 12 01.0 -0.6**
baz=121,SNR=21
KIP **Kipapa** 38.55 263 IAMs_20 IAMs_20 08 23 17.7
comp=Z,1µm,18.0s
A36M **Sachs Harbour** 38.91 356 IAMs_20 IAMs_20 08 29 48.6
comp=Z,2µm,19.0s
A36M **Sachs Harbour** 38.91 356 P **P** **08 12 03.1 -1.5**
baz=168,SNR=13
H21K **Melozitna Rive** 38.91 337 P **P** **08 12 02.6 -2.2**
baz=128,SNR=72
FALS **False Pass** 38.99 318 P **P** **08 12 03.6 -1.8**
baz=104
COLD **Coldfoot** 39.13 340 P **P** **08 12 05.6 -0.9**
baz=133,SNR=9.5
IMAR **Indian Mountai** 39.42 337 P **P** **08 12 08.6 -0.4**
GCSA **Galena City Sc** 39.80 334 P **P** **08 12 10.6 -1.5**
baz=122,SNR=18
TOLK **Toolik Lake Re** 39.94 342 IAMs_20 IAMs_20 08 28 03.0
comp=Z,1µm,21.0s
TOLK **Toolik Lake Re** 39.94 342 P **P** **08 12 12.3 -1.0**
baz=135,SNR=31
SCHQ **Schefferville** 40.48 43 P **P** **08 12 20.3 +2.3**
comp=Z,41nm,1.1s,baz=277,slow=8.2,SNR=17
SCHQ LR LR 08 28 54.0
comp=Z,1µm,21.0s,baz=262,slow=36
comp=Z,41nm,1.1s
UNV **Unalaska Valle** 40.55 316 P **P** **08 12 15.7 -2.8**
baz=100
NIKH **Nikolski High** 41.83 314 P **P** **08 12 25.2 -3.8**
baz=96
FRB **Frobisher Bay** 42.24 29 LR LR 08 30 45.7
comp=Z,667nm,21.4s,baz=247,slow=37
SDDR **Presa de Saban** 42.67 98 IAMs_20 IAMs_20 08 32 29.7
comp=Z,722nm,19.0s
RES **Resolute Bay** 42.67 8 P **P** **08 12 36.4 +0.8**
comp=Z,8.2nm,0.9s,baz=190,slow=11,SNR=17
comp=Z,8.2nm,0.9s
RES **Resolute Bay** 42.67 8 P **P** **08 12 36.0 +0.3**
RES IAmb IAmb 08 12 42.6
comp=Z,34nm,1.1s
RES **Resolute Bay** 42.67 8 P **P** **08 12 36.0 +0.3**
RES pmax pmax
comp=Z,34nm,1.1s
ANM **Nome** 42.96 331 IAMs_20 IAMs_20 08 28 42.0
comp=Z,990nm,19.0s
ANM **Nome** 42.96 331 P **P** **08 12 36.0 -2.1**
baz=112
SPIA **Saint Paul Isl** 43.21 320 P P 08 12 35.2 -5.0
baz=100
A21K **Barrow** 43.54 342 IAMs_20 IAMs_20 08 30 53.1
comp=Z,1µm,20.0s
A21K **Barrow** 43.54 342 P **P** **08 12 40.1 -2.6**
baz=128
RDOG **Red Dog Mine** 43.56 337 P **P** **08 12 42.9 -0.1**
RDOG IAmb IAmb 08 12 44.1
comp=Z,41nm,0.9s
RDOG IAMs_20 IAMs_20 08 29 05.8
comp=Z,889nm,20.0s
RDOG **Red Dog Mine** 43.56 337 P **P** **08 12 42.4 -0.6**
baz=118,SNR=13
TNA **Tin City** 44.34 332 P **P** **08 12 48.9 -0.3**
baz=111
GAMB **Gambell** 45.34 329 IAMs_20 IAMs_20 08 29 49.9
comp=Z,667nm,20.0s
GAMB **Gambell** 45.34 329 P **P** **08 12 56.2 -1.0**
baz=105
DBBC **Dabeiba** 45.55 116 *e*P **P** **08 12 59.1 -0.5**
UREC **San Jos de Ur** 45.59 115 *e*P **P** **08 12 58.2 -1.7**
CRJC **Cerrejon, Guaj** 45.65 109 *e*P **P** **08 13 02.0 +1.7**
CBOC **Ciudad Bolivar** 46.46 117 *e*P **P** **08 13 07.8 +1.0**
HELC **Santa Helena** 46.60 116 *e*P **P** **08 13 11.7 +3.5**
PLMC **San Jos del P** 46.89 118 *e*P **P** **08 13 12.6 +2.5**
OCAC **Ocana** 46.99 112 *e*P **P** **08 13 09.7 -1.2**
PTBC **PUERTO BERRIO,** 47.19 115 *e*P **P** **08 13 11.7 -0.7**
SJG **San Juan** 47.35 96 LR LR 08 35 42.1
comp=Z,438nm,21.0s,baz=280,slow=39
SJG **San Juan** 47.35 96 IAMs_20 IAMs_20 08 35 19.8
comp=Z,691nm,21.0s
GUY2C **Guyana, Caldas** 47.36 117 *e*P **P** **08 13 14.6 +0.3**
BRRC **Barranca, Sant** 47.39 114 *e*P P 08 13 07.8 -6.1
YOTC **Yotoco, Valle** 47.47 119 *e*P P 08 13 08.8 -5.9
NORC **Norcasia** 47.51 116 *e*P **P** **08 13 13.6 -1.3**
TAOE **Nuku Hiva Isla** 47.70 212 *e*LR LR 08 26 09.5
comp=Z,676nm,26.7s
BARC **Barichara** 48.12 114 *e*P **P** **08 13 22.3 +2.4**
POPC **Popayan, Colom** 48.22 121 *e*P **P** **08 13 20.3 -0.3**
ORTC **Ortega, Tolima** 48.33 118 *e*P P 08 13 12.6 -8.6
ROSC **El Rosal** 48.39 117 P **P** **08 13 23.2 +1.0**
comp=Z,3.5nm,0.4s,baz=18,slow=4.9,SNR=6.1
ROSC LR LR 08 36 43.9
comp=Z,425nm,18.4s,baz=347,slow=40
comp=Z,3.5nm,0.4s
ROSC **El Rosal** 48.39 117 *e*P **P** **08 13 22.3 +0.1**
OTAV **Otavalo** 48.60 125 *e*P P 08 13 16.5 -7.3
RUSC **La Rusia** 48.65 114 *e*P **P** **08 13 23.2 -1.0**
SDV **Santo Domingo** 48.69 109 LR LR 08 37 05.2
comp=Z,491nm,18.4s,baz=282,slow=40
SDV **Santo Domingo** 48.69 109 IAMs_20 IAMs_20 08 37 12.5
comp=Z,661nm,18.0s
PRAC **Prado** 48.72 118 *e*P **P** **08 13 23.2 -1.1**
CHIC **Chingaza** 48.97 116 *e*P **P** **08 13 29.0 +2.4**
GARC **Garzon, Huila** 49.31 120 *e*P **P** **08 13 30.0 +0.9**
SFJD **Kangerlussuaq** 50.30 28 P P 08 13 39.8 +4.2
comp=Z,20nm,0.8s,baz=257,slow=5.8,SNR=4.9
SFJD **Kangerlussuaq** 50.30 28 IAMs_20 IAMs_20 08 31 48.9
comp=Z,1µm,21.0s
SFJD **Kangerlussuaq** 50.30 28 *i* P **P** **08 13 35.5 -0.1**
SFJD IAmb IAmb 08 13 42.6
comp=Z,60nm,1.4s
ILULI **Ilulissat** 50.46 25 IAMs_20 IAMs_20 08 32 25.9
comp=Z,637nm,19.0s
DY2G **Dye2** 51.98 29 *i* P **P** **08 13 50.7 +2.2**
DY2G IAmb IAmb 08 13 53.4
comp=Z,49nm,1.2s
SHEM **Shemya Is, Ala** 52.14 314 LR LR 08 35 31.1
comp=Z,183nm,18.1s,baz=104,slow=36
MPOM **Morne Pois Mar** 53.58 97 IAMs_20 IAMs_20 08 39 16.6
comp=Z,497nm,19.0s
ATAH **Atahualpa** 54.14 131 LR LR 08 35 02.2
comp=Z,368nm,19.5s,baz=327,slow=34
ICESG **Greenland Ices** 54.53 25 *i* P **P** **08 14 08.0 +0.6**
ICESG IAmb IAmb 08 14 14.6
comp=Z,38nm,0.8s
BILL **Bilibino** 54.74 333 IAMs_20 IAMs_20 08 36 16.5
comp=Z,483nm,19.0s
BILL **Bilibino** 54.74 333 *e*P **P** **08 14 08.9 +0.4**
BILL *e* 08 15 11.3
e 08 16 06.3
BILL pmax pmax
comp=Z,14nm,0.8s
SUMG **Summit** 54.89 21 P **P** **08 14 10.2 +0.2**
SUMG IAmb IAmb 08 14 17.6
comp=Z,28nm,0.9s
SUMG IAMs_20 IAMs_20 08 38 06.9
comp=Z,740nm,18.0s
SUMG **Summit** 54.89 21 P **P** **08 14 10.2 +0.2**
SUMG pmax pmax
comp=Z,28nm,0.9s
SUMG MLR MLR
comp=Z,700nm,18.0s
SUMG **Summit** 54.89 21 *i* P **P** **08 14 10.4 +0.4**
SUMG IAmb IAmb 08 14 17.2
comp=Z,33nm,1.0s
PMOR **Pomariorio Ree** 56.74 217 *e*T T 09 14 21.6
comp=Z,5.1nm,0.2s
NOR **Nord** 58.57 10 *i* P **P** **08 14 39.7 +4.1**
NOR IAmb IAmb 08 14 42.9
comp=Z,38nm,1.8s
NNA **Nana** 58.85 133 LR LR 08 36 28.4
comp=Z,407nm,19.9s,baz=330,slow=32
DAG **Danmarks Havn** 59.51 15 *i* P **P** **08 14 41.3 -0.8**
DAG IAmb IAmb 08 14 48.3
comp=Z,15nm,0.8s
PPT **Papeete** 59.76 217 LR LR 08 33 22.4
comp=Z,275nm,22.0s,baz=22,slow=29
PPT2 **Papeete2** 59.78 217 *e*LR LR 08 31 41.4
comp=Z,647nm,26.2s
DBG **Daneborg** 59.81 18 *e*P **P** **08 14 45.6 +1.3**
SCO **Scoresbysund** 60.38 23 IAMs_20 IAMs_20 08 45 36.0
comp=Z,557nm,19.0s
SEY **Seymchan** 61.33 329 LR LR 08 40 10.9
comp=Z,574nm,19.9s,baz=76,slow=35
PEA0B **Petropavlovsk-** 61.71 317 ‖ *i* P **P** **08 14 57.2 -0.4**
PETK **Petropavlovsk-** 61.71 317 P **P** **08 14 57.2 -0.3**
comp=Z,15nm,0.9s,baz=96,slow=9.1,SNR=18
PETK LR LR 08 38 33.9
comp=Z,143nm,21.6s,baz=84,slow=33
comp=Z,15nm,0.9s
PETK **Petropavlovsk-** 61.71 317 P **P** **08 14 56.5 -1.0**
PETK **Petropavlovsk-** 61.71 317 P **P** **08 14 56.5 -1.0**
MA2 **Magadan** 63.17 325 P **P** **08 15 11.0 +3.8**
comp=Z,27nm,0.9s,baz=62,slow=8.3,SNR=5.4
MA2 LR LR 08 42 05.3
comp=Z,326nm,19.2s,baz=57,slow=36
JMIC **Jan Mayen** 64.31 20 LR LR 08 44 42.6
comp=Z,293nm,18.1s,baz=306,slow=37
TBI **Tutuai** 64.63 214 *e*LR LR 08 33 59.6
comp=Z,527nm,30.2s
SPITS **Spitsbergen Ar** 65.21 10 P **P** **08 15 23.1 +2.7**
comp=Z,18nm,1.0s,baz=330,slow=9.8,SNR=5.8
SPITS LR LR 08 42 52.8
comp=Z,854nm,18.8s,baz=288,slow=35
MDP **Montagnes des** 65.41 101 LR LR 08 48 58.1
comp=Z,156nm,18.3s,baz=293,slow=41
TIXI **Tiksi** 65.83 342 P **P** **08 15 26.7 +2.3**
comp=Z,13nm,1.0s,baz=270,slow=22,SNR=21
TIXI LR LR 08 45 50.6
comp=Z,555nm,18.4s,baz=1.0,slow=38
TIXI **Tiksi** 65.83 342 P **P** **08 15 23.5 -0.9**
TIXI **Tiksi** 65.83 342 ‖ *e*P **P** **08 15 23.4 -0.9**
TIXI pmax pmax
comp=Z,5.0nm,1.1s
LPAZ **La Paz** 67.59 129 P **P** **08 15 36.0 -1.0**
comp=Z,1.7nm,0.6s,baz=298,slow=6.0,SNR=11
LPAZ LR LR 08 42 35.2
comp=Z,264nm,20.0s,baz=327,slow=34
comp=Z,1.7nm,0.6s
LPAZ **La Paz** 67.59 129 P **P** **08 15 34.6 -2.4**
LPAZ **La Paz** 67.59 129 P **P** **08 15 34.7 -2.4**
LPAZ pmax pmax
comp=Z,4.0nm,0.9s
PB16 **IPOC Station P** 68.23 132 P **P** **08 15 38.0 -3.0**
PB16 IAmb IAmb 08 16 02.5
comp=Z,17nm,1.3s
RAR **Rarotonga** 68.25 224 LR LR 08 36 55.7
comp=Z,211nm,21.5s,baz=66,slow=28
PB11 **IPOC Station P** 69.21 133 P **P** **08 15 44.8 -1.8**
PB11 IAmb IAmb 08 15 47.7
comp=Z,17nm,0.9s
PB01 **IPOC Station P** 70.28 134 P **P** **08 15 51.7 -1.4**
PB01 IAmb IAmb 08 16 22.3
comp=Z,21nm,1.0s
AFI **Afiamalu** 70.67 238 LR LR 08 39 02.2
comp=Z,279nm,21.6s,baz=40,slow=29
YAK **Yakutsk** 71.10 333 LR LR 08 47 12.5
comp=Z,498nm,19.9s,baz=87,slow=36
YAK **Yakutsk** 71.10 333 IAMs_20 IAMs_20 08 46 50.7
comp=Z,593nm,20.0s
YAK **Yakutsk** 71.10 333 *e*P **P** **08 16 01.1 +3.7**
YAK *e**PP **pP** **08 16 04.3 +5.4**
YAK *e* 08 16 19.2
YAK *e* 08 18 38.7
YAK *e*S **S** **08 25 18.6 +4.2**
YAK *e* 08 26 05.1
YAK *e*SS **SS** **08 29 53.5 +6.8**
YAK pmax pmax
comp=Z,18nm,0.6s
YAK pmax pmax
comp=N,7.0nm,1.0s
YAK pmax pmax
comp=E,7.0nm,1.0s
YAK pmax pmax
comp=Z,40nm,1.6s
YAK pmax pmax
comp=N,18nm,1.8s
YAK pmax pmax
comp=E,13nm,1.6s
YAK smax smax
comp=N,35nm,2.4s
YAK smax smax
comp=E,23nm,2.0s
YAK MLR MLR
comp=Z,399nm,19.0s
YAK MLR MLR
comp=N,118nm,18.0s
YAK MLR MLR
comp=E,261nm,19.0s
LVC **Limon Verde** 71.81 134 LR LR 08 42 06.7
comp=E,241nm,21.4s,baz=321,slow=31
SIV **San Ignacio** 72.13 124 LR LR 08 45 59.3
comp=E,386nm,21.6s,baz=333,slow=34
YSS **Yuzh-Sakhalins** 73.02 315 ‖ *e*P **P** **08 16 06.8 -2.4**
YSS pmax pmax
comp=Z,41nm,1.3s
ARCES **ARCESS Array B** 73.65 13 P **P** **08 16 12.5 -0.1**
comp=Z,10nm,1.0s,baz=42,slow=13,SNR=3.9
ARCES LR LR 08 48 56.0
comp=Z,439nm,21.3s,baz=324,slow=36
comp=Z,10nm,1.0s
ASAJ **Asahikawa** 74.58 313 LR LR 08 46 34.8
comp=Z,93nm,19.3s,baz=146,slow=34
EKA **Eskdalemuir Ar** 74.87 33 P **P** **08 16 20.3 +0.4**
comp=Z,8.0nm,0.9s,baz=310,slow=4.6,SNR=17
comp=Z,8.0nm,0.9s
NRIK **Noril'sk** 76.03 351 P **P** **08 16 26.1 -0.2**
comp=Z,27nm,1.0s,baz=60,slow=4.6,SNR=6.0
comp=Z,27nm,1.0s
NRIK **Noril'sk** 76.03 351 P **P** **08 16 25.5 -0.9**
NRIK IAmb IAmb 08 16 35.3
comp=Z,28nm,1.0s
NRIK **Noril'sk** 76.03 351 *c**e*P **P** **08 16 25.6 -0.8**
NRIK pmax pmax
comp=Z,9.0nm,1.1s
LVZ **Lovozero** 76.68 11 ‖ *e*P **P** **08 16 29.6 -0.5**
NB2 **NORSAR Subarra** 76.69 23 P P 08 16 34.9 +4.6
comp=Z,2.0nm,0.9s,baz=315,slow=5.9
NOA **NORSAR Array B** 76.69 23 P **P** **08 16 31.2 +0.8**
comp=Z,3.5nm,0.9s,baz=318,slow=5.8,SNR=7.2
NOA LR LR 08 51 46.2
comp=Z,307nm,18.5s,baz=300,slow=37
comp=Z,3.5nm,0.9s
APA **Apatity** 76.78 11 ⇑ *i* P **P** **08 16 29.7 -0.9**
APA *i* 08 16 37.2
APA MLR MLR
comp=Z,700nm,17.0s
KONO **Kongsberg** 77.15 25 ‖ *e*P **P** **08 16 33.8 +0.9**
KONO pmax pmax
comp=Z,42nm,1.6s
ZEA **Zeya** 77.24 327 *e*P **P** **08 16 33.2 -0.3**
ZEA pmax pmax
comp=Z,20nm,1.3s
ZEA MLR MLR
comp=Z,200nm,14.0s
KLR **Kul'dur** 77.85 321 P **P** **08 16 36.4 -0.6**
comp=Z,2.4nm,0.8s,baz=48,slow=4.3,SNR=5.2
KLR LR LR 08 50 34.6
comp=Z,202nm,19.0s,baz=50,slow=35
comp=Z,2.4nm,0.8s
KLR **Kul'dur** 77.85 321 *c* *i* P **P** **08 16 35.8 -1.2**
KLR pmax pmax
comp=Z,12nm,1.8s
HFS **Hagfors** 78.18 23 P **P** **08 16 38.4 -0.2**
comp=Z,3.9nm,0.9s,baz=182,slow=8.5,SNR=3.2
HFS LR LR 08 50 26.8
comp=Z,385nm,19.4s,baz=305,slow=35
comp=Z,3.9nm,0.9s
ZON **Zonda** 78.79 140 P **P** **08 16 40.0 -2.3**
ZON IAmb IAmb 08 17 10.8
comp=Z,19nm,1.2s
ZON **Zonda** 78.79 140 P **P** **08 16 40.0 -2.3**
ZON pmax pmax
comp=Z,19nm,1.2s
MSVF **Nonsavu** 80.53 242 LR LR 08 46 20.4
comp=Z,244nm,18.1s,baz=16,slow=31
FINES **FINESS Array B** 80.69 17 P **P** **08 16 51.9 -0.3**
comp=Z,5.2nm,0.9s,baz=183,slow=36,SNR=2.0
FINES LR LR 08 51 17.9
comp=Z,365nm,18.9s,baz=335,slow=35
comp=Z,5.2nm,0.9s
USA0B **Ussuriysk Arra** 80.80 317 P **P** **08 16 51.2 -2.0**
USA0B IAmb IAmb 08 16 58.0
comp=Z,20nm,0.9s
USA0B **Ussuriysk Arra** 80.80 317 *de*P **P** **08 16 51.9 -1.3**
USRK **Ussuriysk Ar.** 80.80 317 P **P** **08 16 52.6 -0.6**
comp=Z,16nm,0.8s,baz=36,slow=4.3,SNR=12
comp=Z,16nm,0.8s
USRK **Ussuriysk Ar.** 80.80 317 P **P** **08 16 51.7 -1.5**
USRK **Ussuriysk Ar.** 80.80 317 P **P** **08 16 51.7 -1.5**
MEF **Metsahovi** 81.30 19 *e*P **P** **08 16 56.1 +0.6**
MAJO **Matsushiro** 81.56 308 P **P** **08 16 55.8 -1.6**
MAJO IAmb IAmb 08 17 06.1
comp=Z,16nm,0.8s
MAJO **Matsushiro** 81.56 308 P **P** **08 16 55.8 -1.6**
MAJO pmax pmax
comp=Z,16nm,0.9s
MJAR **Matsushiro Arr** 81.56 308 P **P** **08 16 56.1 -1.3**
comp=Z,4.5nm,0.8s,baz=50,slow=4.7,SNR=12
comp=Z,4.5nm,0.8s
MJAR **Matsushiro Arr** 81.56 308 P **P** **08 16 55.2 -2.2**
MJAR **Matsushiro Arr** 81.56 308 P **P** **08 16 55.2 -2.2**
MJAR pmax pmax
comp=Z,10.0nm,1.1s
MJB9 **Matsu-Tunnel** 81.56 308 P **P** **08 16 55.8 -1.6**
MJB9 IAmb IAmb 08 17 06.1
comp=Z,16nm,0.9s
CPUP **Villa Florida** 81.76 129 LR LR 08 52 34.4
comp=Z,136nm,19.6s,baz=332,slow=35
BMRD **Maredsous** 81.80 34 *d*PcP **PcP** **08 17 03.5 -0.6**
DOU **Dourbes** 81.86 34 *d*P **P** **08 16 56.8 -1.8**
DOU *d*PcP **sP** **08 17 03.0 +2.4**
BGES **Gesves** 81.89 33 *d*PcP **PcP** **08 17 03.8 -0.7**
BCLA **Clavier** 81.96 33 *d*PcP **PcP** **08 17 04.0 -0.8**
MEM **Membach** 82.15 33 *d*PcP **PcP** **08 17 05.7 0.0**
BTNL **Ternell** 82.22 33 *d*PcP **PcP** **08 17 03.7 -2.3**
BHOU **Houvegnez** 82.33 33 *d*PcP **PcP** **08 17 06.8 +0.3**
BNX **BinXian** 82.34 321 ‖ **P** **08 17 00.9 -0.4**
BNX S **S** **08 27 19.0 +1.0**
BNX pmax pmax
comp=Z,16nm,1.0s
BNX pmax pmax
comp=Z,130nm,7.9s
BNX LR LR
comp=Z,220nm,17.1s
BNX LR LR
comp=Z,160nm,20.0s
BNX LR LR
comp=Z,180nm,21.4s
JHJ **Hachijo jima 2** 82.47 305 LR LR 08 49 09.6
comp=Z,172nm,19.6s,baz=68,slow=32
WLF **Walferdange** 82.88 33 *d*PcP **PcP** **08 17 09.3 +0.5**
HIA **Hailar** 83.72 327 IAMs_20 IAMs_20 08 58 56.6
comp=Z,416nm,19.0s
PAB **San Pablo** 84.01 46 IAMs_20 IAMs_20 08 48 23.1
comp=Z,444nm,22.0s
KLMR **Klimovskoe** 84.02 12 *e*P **P** **08 17 13.4 +3.7**
KLMR *e*S **S** **08 27 37.7 +3.3**
KLMR pmax pmax
comp=Z,43nm,1.2s
KLMR **Klimovskoe** 84.02 12 *e*P **P** **08 17 13.4 +3.7**
KLMR AMP 08 17 17.2
comp=Z,43nm,1.2s
KLMR *e*S **S** **08 27 37.7 +3.3**
KLMR *e*S **S** **08 27 37.7 +3.3**
ESDC **Sonseca Array** 84.16 46 P **P** **08 17 15.0 +4.1**
comp=Z,6.2nm,1.1s,baz=312,slow=5.0,SNR=19
ESDC LR LR 08 52 05.8
comp=Z,301nm,18.2s,baz=304,slow=34
PRGR **Permogore** 84.16 8 *e*P P 08 17 14.7 +4.3
JCJ **Chichijima** 84.18 299 LR LR 08 55 08.8
comp=Z,140nm,18.0s,baz=58,slow=36
ECH **Echery** 84.38 34 IAMs_20 IAMs_20 08 50 51.0
comp=Z,510nm,21.0s
CLL **Collm** 84.65 29 *e*P **P** **08 17 17.0 +3.9**
CLL pmax pmax
comp=Z,8.0nm,0.9s
CLL **Collm** 84.65 29 *e*pP **P** **08 17 17.0 +3.9**
comp=Z,8.0nm,0.9s
CLL *e*S **S** **08 27 48.0 +6.9**
CLL *e*SS **SS** **08 33 18.0 +7.1**
CLL LMH 08 52 00.0
comp=N,900nm,21.0s
CLL LMH 08 52 00.0
comp=E,900nm,20.0s
CN2 **Changchun** 84.67 320 *e*P **P** **08 17 09.5 -3.8**
CN2 *e*PP **PP** **08 20 26.2 -2.2**
CN2 SKS **SKSac** **08 27 30.8 -7.6**
CN2 *e*SS **SS** **08 33 08.1 -3.6**
CN2 LR LR
comp=E,220nm,16.0s
CN2 LR LR
comp=E,190nm,16.0s
CN2 LR LR
comp=E,210nm,17.0s
PLCA **Paso Flores** 85.07 147 P **P** **08 17 15.4 +0.3**
comp=Z,2.9nm,0.9s,baz=8.1,slow=6.3,SNR=3.2
PLCA LR LR 08 49 19.6
comp=E,144nm,18.1s,baz=338,slow=32
comp=E,2.9nm,0.9s
PLCA **Paso Flores** 85.07 147 IAmb IAmb 08 17 23.4
comp=Z,20nm,1.3s
PLCA **Paso Flores** 85.07 147 P **P** **08 17 15.5 +0.3**
PLCA pmax pmax
comp=Z,20nm,1.3s
SSB **Saint Sauveur** 85.17 37 IAMs_20 IAMs_20 08 51 47.2
comp=Z,523nm,21.0s
PABE **Paberze** 85.17 21 *e*P **P** **08 17 16.0 +0.4**
RCBR **Riachuelo** 85.33 100 LR LR 08 58 29.4
comp=Z,277nm,20.2s,baz=88,slow=38
BRG **Berggiesshubel** 85.37 29 *e*P P 08 17 22.2 +5.5
BRG Amp 08 17 25.1
comp=Z,17nm,1.0s
BRG **Berggiesshubel** 85.37 29 S S 08 27 58.0 +10
BRG **Berggiesshubel** 85.37 29 *e*P P 08 17 22.1 +5.4
BRG pmax pmax
comp=Z,17nm,1.0s
ISAL **Salakas** 85.76 20 *e*P **P** **08 17 18.9 +0.4**
IIGN **Ignalina** 85.97 20 *e*P **P** **08 17 20.0 +0.4**
IDID **Didziasalis** 86.16 20 *e*P **P** **08 17 21.0 +0.5**
NACGM **Naroch** 86.52 20 ‖ *e*P P 08 17 26.8 +4.4
baz=330
DAVOX **Davos/Dischmat** 86.69 34 P P 08 17 28.1 +4.5
comp=Z,2.0nm,0.4s,baz=311,slow=11,SNR=5.6
DAVOX LR LR 08 57 32.6
comp=Z,700nm,18.0s,baz=306,slow=37
GERES **GERESS Array B** 86.83 30 P **P** **08 17 25.2 +1.1**
comp=Z,1.2nm,0.7s,baz=316,slow=3.7,SNR=11
comp=Z,1.2nm,0.7s
MNK **Minsk** 87.19 20 *i* P **P** **08 17 23.2 -2.3**
MNK *i* 08 20 46.7
MNK *i* PPP PPP 08 22 41.4
MNK *i* S **SKSac** **08 27 49.9 -3.8**
MNK *i* SS **SS** **08 33 48.3 +0.5**
MNK *i* SSS SSS 08 37 21.2
MNK pmax pmax
comp=N,2.0nm,0.9s
MNK pmax pmax
comp=Z,25nm,1.0s
MNK pmax pmax
comp=E,5.0nm,0.9s
MNK MLR MLR

	comp=N,92nm,22.0s								
MNK					MLR	MLR			
	comp=E,109nm,20.0s								
MNK					MLR	MLR			
	comp=E,6μm,26.0s								
MNK	**Minsk**	**87.19**	**20**	*i* P		**P**	**08 17 23.2**	**-2.3**	
	comp=E,5.0nm,0.9s								
MNK				*i* P		**P**	**08 17 23.2**	**-2.3**	
	comp=N,1.0nm,0.9s								
MNK				*i* P		**P**	**08 17 23.2**	**-2.3**	
	comp=Z,25nm,1.0s,baz=330								
MNK				*i* PP		**PP**	**08 20 46.8**	**-1.6**	
MNK				*i* PPP		PPP	08 22 41.4		
MNK				*i* S		**SKSac**	**08 27 50.0**	**-3.8**	
MNK				*i* SS		**SS**	**08 33 48.3**	**+0.5**	
MNK				*i* SSS		SSS	08 37 21.3		
MNK				*i* LR		LR	08 55 22.7		
MNK				*i* LRM		MLR	08 56 24.1		
	comp=N,92nm,21.7s								
MNK				*i* LRM		MLR	08 56 35.6		
	comp=E,109nm,20.4s								
MNK				*i* LRM		MLR	08 56 54.7		
	comp=Z,6μm,25.6s								
CART	**Cartagena**	**87.28**	**46**	IAMs_20		IAMs_20	09 02 35.6		
	comp=Z,268nm,21.0s								
KSRS	**Korea Array**	**87.47**	**314**	P		**P**	**08 17 22.9**	**-4.3**	
	comp=Z,0.7nm,0.6s,baz=54,slow=21,SNR=3.0								
IRK	**Irkutsk**	**87.56**	**336**	*e*P		**P**	**08 17 27.9**	**+0.5**	
IRK				pmax		pmax			
	comp=Z,233nm,2.1s								
KIRV	**Kirov**	**87.58**	**7**	P		**P**	**08 17 31.4**	**+4.0**	
	comp=Z,16nm,0.8s,baz=356,slow=6.5,SNR=10								
KIRV	**Kirov**	**87.58**	**7**	⇑*e*P		**P**	**08 17 26.0**	**-1.3**	
VRAC	**Vranov**	**87.66**	**29**	P		**P**	**08 17 31.5**	**+3.6**	
	comp=Z,1.9nm,0.4s,baz=213,slow=5.5,SNR=4.0								
MDT	**Midelt**	**88.07**	**51**	LR		LR	08 56 25.4		
	comp=Z,322nm,18.3s,baz=334,slow=35								
OBN	**Obninsk**	**88.82**	**15**	LR		LR	08 58 37.7		
	comp=Z,83nm,18.3s,baz=356,slow=36								
OBN	**Obninsk**	**88.82**	**15**	*e*P		**P**	**08 17 34.6**	**+1.3**	
OBN				*e*			08 21 01.1		
OBN				*e*PPP		PPP	08 22 57.0		
OBN				pmax		pmax			
	comp=Z,7.0nm,0.4s								
MOY	**Mondy**	**89.12**	**338**	*e*P		P	08 17 40.1	+5.1	
MOY				pmax		pmax			
	comp=Z,55nm,2.1s								
XLT	**XiLinHaoTe**	**89.37**	**325**	*e*P		P	08 17 41.3	+5.0	
XLT	**XiLinHaoTe**	**89.37**	**325**	SKS		**SKSac**	**08 28 13.5**	**+6.0**	
XLT	**XiLinHaoTe**	**89.37**	**325**	S		**S**	**08 28 29.5**	**+2.3**	
XLT				pmax		pmax			
	comp=Z,12nm,1.2s								
XLT				pmax		pmax			
	comp=Z,140nm,4.6s								
XLT				LR		LR			
	comp=N,22nm,21.1s								
XLT				LR		LR			
	comp=E,360nm,18.1s								
XLT				LR		LR			
	comp=Z,180nm,16.0s								
ZAK	**Zakamensk**	**89.46**	**336**	*e*P		**P**	**08 17 36.7**	**+0.1**	
ZAK				pmax		pmax			
	comp=Z,15nm,1.4s								
GUMO	**Guam**	**89.70**	**286**	LR		LR	08 49 36.9		
	comp=Z,128nm,21.7s,baz=66,slow=30								
HNR	**Honiara**	**89.85**	**259**	LR		LR	08 53 23.5		
	comp=Z,432nm,18.3s,baz=40,slow=33								
ULN	**Ulaanbaatar**	**90.18**	**332**	IAMs_20		IAMs_20	08 59 42.3		
	comp=Z,355nm,19.0s								
ULN	**Ulaanbaatar**	**90.18**	**332**	⇓*e*P		**P**	**08 17 40.1**	**0.0**	
ULN				pmax		pmax			
	comp=Z,8.0nm,2.1s								
UZH	**Uzhgorod**	**90.39**	**26**	*e*P		**P**	**08 17 40.1**	**-0.7**	
UZH				*e*			08 17 41.6		
ARU	**Arti**	**90.40**	**3**	P		P	08 17 45.0	+4.3	
	comp=Z,2.7nm,0.3s,baz=355,slow=6.1,SNR=11								
ARU				LR		LR	09 04 02.5		
	comp=Z,228nm,18.0s,baz=0.0,slow=39								
ARU	**Arti**	**90.40**	**3**	P		**P**	**08 17 38.4**	**-2.3**	
ARU				IAMs_20		IAMs_20	08 58 29.2		
	comp=Z,382nm,20.0s								
ARU	**Arti**	**90.40**	**3***c*	*i* P		**P**	**08 17 40.9**	**+0.2**	
ARU							08 21 16.6		
ARU				S		**SKSac**	**08 28 12.3**	**-0.5**	
ARU				SS		**SS**	**08 34 38.9**	**+4.6**	
ARU				pmax		pmax			
	comp=Z,6.0nm,1.2s								
ARU				MLR		MLR			
	comp=Z,463nm,23.0s								
SONM	**Songino Array**	**90.46**	**333**	P		**P**	**08 17 41.5**	**+0.1**	
	comp=Z,0.3nm,0.3s,baz=341,slow=3.1,SNR=4.2								
	comp=Z,0.3nm,0.3s								
AKASG	**Malin Array Be**	**90.92**	**21**	P		**P**	**08 17 44.9**	**+1.6**	
	comp=Z,7.8nm,0.9s,baz=332,slow=3.6,SNR=19								
AKASG				LR		LR	08 57 03.9		
	comp=Z,415nm,20.5s,baz=322,slow=35								
	comp=Z,7.8nm,0.9s								
AKBB	**Malin Array Si**	**90.92**	**21**	⇑*e*P		**P**	**08 17 43.0**	**-0.2**	
AKBB				pmax		pmax			
	comp=Z,11nm,0.9s								
ZALV	**Zalesovo Beam**	**91.06**	**348**	P		P	08 17 48.1	+4.3	
	comp=Z,6.3nm,0.8s,baz=7.5,slow=3.6,SNR=12								
ZALV				LR		LR	09 01 44.9		
	comp=Z,224nm,21.9s,baz=27,slow=38								
ZALV	**Zalesovo Beam**	**91.06**	**348**	P		**P**	**08 17 41.8**	**-2.0**	
ZALV	**Zalesovo Beam**	**91.06**	**348**	P		**P**	**08 17 41.8**	**-2.0**	
KNGR	**Kungurtug, Tuv**	**91.11**	**339**	⇑*e*P		**P**	**08 17 43.6**	**-0.7**	
VSL	**Villasalto**	**91.81**	**39**	IAMs_20		IAMs_20	08 57 37.9		
	comp=Z,319nm,19.0s								
DZM	**Mont Dzumac**	**91.82**	**245**	*e*LR		LR	08 46 30.9		
	comp=Z,331nm,33.4s								
BELG	**Belogornoye**	**93.42**	**10**	P		**P**	**08 17 58.2**	**+3.5**	
	comp=Z,24nm,1.0s,baz=244,slow=2.3,SNR=6.6								
BELG				LR		LR	09 00 56.0		
	comp=Z,453nm,20.7s,baz=335,slow=36								
BELG	**Belogornoye**	**93.42**	**10**	⇓*e*P		**P**	**08 17 54.7**	**0.0**	
BELG				pmax		pmax			
	comp=Z,5.0nm,0.9s								
KRVT	**Keravat (AS076**	**93.62**	**267**	LR		LR	08 53 52.5		
	comp=Z,525nm,19.5s,baz=189,slow=32								
BRVK	**Borovoye**	**93.68**	**356**	IAMs_20		IAMs_20	09 06 27.9		
	comp=Z,368nm,18.0s								
HHC	**Hu-ho-hao-te**	**93.85**	**326**	*e*P		P	08 17 50.6	-6.6	
HHC				pmax		pmax			
	comp=Z,44nm,0.9s								
HHC				pmax		pmax			
	comp=Z,170nm,4.6s								
HHC				LR		LR			
	comp=N,490nm,16.5s								
HHC				LR		LR			
	comp=E,350nm,15.9s								
HHC				LR		LR			
	comp=Z,520nm,15.9s								
JOW	**Kunigami**	**94.18**	**306**	LR		LR	08 56 49.3		
	comp=Z,199nm,19.3s,baz=34,slow=33								
URZ	**Urewera**	**94.30**	**226**	LR		LR	08 52 27.9		
	comp=Z,160nm,20.2s,baz=31,slow=30								
MLR	**Muntele Rosu**	**94.38**	**25**	LR		LR	09 02 14.4		
	comp=Z,502nm,19.0s,baz=305,slow=37								
KEST	**Kesra**	**94.55**	**41**	P		**P**	**08 18 02.0**	**+1.6**	
	comp=Z,2.9nm,0.7s,baz=292,slow=6.8,SNR=2.2								
KEST				LR		LR	08 58 02.3		
	comp=Z,255nm,20.0s,baz=300,slow=34								
	comp=Z,2.9nm,0.7s								
HNS	**HongShan**	**94.94**	**321**	⇑P		P	08 18 09.1	+7.1	
HNS	**HongShan**	**94.94**	**321**	*e*S		**S**	**08 29 22.2**	**+4.9**	
HNS				pmax		pmax			
	comp=Z,7.0nm,0.7s								
HNS				LR		LR			
	comp=N,210nm,16.9s								
HNS				LR		LR			
	comp=E,310nm,17.7s								
HNS				LR		LR			
	comp=Z,240nm,17.7s								
KURK	**Kurchatov**	**95.17**	**350**	P		**P**	**08 18 00.5**	**-2.3**	
KURK				IAmb		IAmb	08 18 10.6		
	comp=Z,8.9nm,1.1s								
KURK				IAMs_20		IAMs_20	09 06 21.5		
	comp=Z,396nm,19.0s								
KURK	**Kurchatov**	**95.17**	**350**	⇑*e*P		**P**	**08 18 02.1**	**-0.7**	
KURK				pmax		pmax			
	comp=Z,7.0nm,1.0s								
KURBB	**Kurchatov Arra**	**95.28**	**350**	P		**P**	**08 18 03.1**	**-0.2**	
	comp=Z,4.0nm,0.9s,baz=13,slow=4.2,SNR=5.7								
KURBB				LR		LR	09 06 53.5		
	comp=Z,242nm,18.4s,baz=337,slow=39								
	comp=Z,4.0nm,0.9s								

VAE	**Valguarnera**	**95.92**	**37**	LR		LR	08 59 48.1		
	comp=Z,344nm,19.0s,baz=24,slow=34								
AKTO	**Aktyubinsk**	**96.36**	**4**	LR		LR	09 08 07.3		
	comp=Z,273nm,18.7s,baz=354,slow=40								
NJ2	**Nanjing**	**96.59**	**315**	*e*P		**P**	**08 18 10.6**	**+1.0**	
NJ2				pmax		pmax			
	comp=Z,11nm,0.5s								
MK31	**Makanchi Array**	**98.38**	**347**	⇓*e*P		Pdif	08 18 17.4	-0.1	
MKAR	**Makanchi Array**	**98.38**	**347**	P		**P**	**08 18 16.0**	**-1.5**	
	comp=Z,0.4nm,0.9s,baz=103,slow=14,SNR=2.7								
MKAR				LR		LR	09 07 19.5		
	comp=Z,172nm,20.2s,baz=3.0,slow=38								
	comp=Z,0.4nm,0.9s								
MAKZ	**Makanchi**	**98.43**	**347**	IAMs_20		IAMs_20	09 03 15.7		
	comp=Z,320nm,22.0s								
ANN	**Anapa**	**98.61**	**18**	*e*P		**P**	**08 18 14.4**	**-4.1**	
ANN				*e*S		**SKSac**	**08 28 52.2**	**-5.3**	
ANN				*e*SSS		SSS	08 40 18.1		
ANN				pmax		pmax			
	comp=Z,41nm,1.5s								
ANN				MLR		MLR			
	comp=Z,409nm,16.0s								
WMQ	**Urumqi**	**100.03**	**343**	*e*P		**Pdif**	**08 18 25.4**	**+0.4**	
WMQ				LR		LR			
	comp=Z,370nm,23.9s								
KIV	**Kislovodsk**	**100.67**	**15**	IAMs_20		IAMs_20	09 02 57.1		
	comp=Z,325nm,21.0s								
KIV	**Kislovodsk**	**100.67**	**15**	*e*P		**Pdif**	**08 18 26.0**	**-1.9**	
KIV				pmax		pmax			
	comp=Z,5.0nm,1.0s								
KIV				MLR		MLR			
	comp=Z,273nm,20.0s								
SSLB	**Suanglung**	**101.12**	**308**	IAMs_20		IAMs_20	08 56 13.8		
	comp=Z,261nm,20.0s								
IDI	**Anoyia**	**102.65**	**32**	IAMs_20		IAMs_20	09 07 52.4		
	comp=Z,263nm,19.0s								
GNI	**Garni**	**104.76**	**15**	IAMs_20		IAMs_20	09 09 56.2		
	comp=Z,330nm,20.0s								
GOMU	**GeÉrMu**	**104.83**	**334**	Pdif		**Pdif**	**08 18 48.1**	**+1.2**	
GOMU				PP		**PP**	**08 23 06.1**	**+0.6**	
GOMU				SS		SS	08 38 00.3	+1.5	
GOMU				AMB		AMB			
	comp=Z,80nm,5.5s								
GOMU				LR		LR			
	comp=Z,180nm,18.8s								
GOMU				LR		LR			
	comp=Z,170nm,16.6s								
GOMU				LR		LR			
	comp=Z,110nm,17.6s								
CD2	**Chengdu**	**105.59**	**325**	Pdif		**Pdif**	**08 18 48.4**	**-1.5**	
CSS	**Mathiatis**	**106.31**	**26**	IAMs_20		IAMs_20	09 10 41.9		
	comp=Z,246nm,19.0s								
PZH	**PanZhiHua**	**110.22**	**324**	PKP		**PKiKP**	**08 23 09.4**	**-2.7**	
WRA	**Warramunga Arr**	**116.41**	**263**	PKP		**PKPdf**	**08 23 23.1**	**-0.7**	
	comp=Z,0.8nm,1.0s,baz=59,slow=2.0,SNR=2.5								
ASAR	**Alice Springs**	**118.47**	**259**	PKP		**PKPdf**	**08 23 26.4**	**-1.3**	
	comp=Z,0.6nm,0.9s,baz=11,slow=14,SNR=4.1								
SBUM	**Sibu**	**121.91**	**298**	IAMs_20		IAMs_20	09 04 04.8		
	comp=Z,278nm,22.0s								
MAW	**Mawson**	**145.78**	**180**	PKPbc		**PKPab**	**08 24 17.5**	**-0.5**	
	comp=Z,6.9nm,0.9s,baz=184,slow=10,SNR=4.1								
BOSA	**Boshof**	**146.96**	**92**	PKPbc		**PKPbc**	**08 24 22.4**	**-0.2**	
	comp=Z,3.7nm,0.8s,baz=297,slow=4.5,SNR=2.9								

MAN 10 08:06:19.2, 5.12N×126.51E, h32km, mb4.5, ML3.3, MS3.2, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KCP	**Kidapawan**	**2.35**	**323**	⇓*e*P	Pn	08 07 00.1	+6.9
KCP				*i* S		08 07 24.3	

*IDC **10** 08:24:39.4±0.5, 1.18N×126.30E, h0km, mb4.3/18, mbtmp4.3/19, ML3.5/1, MS3.5/3, Error ellipse: s-maj=25.6km s-min=9.7km az=72.0*
*DJA **10** 08:24:43.7±0.2, 1.1N±3.3×12.6E±.1, h10km, M4.4/16, mB5.2/4, mb4.6/15, MLv4.3/16, Mw(mB)4.6/4*
*NEIC **10** 08:24:46.4±1.5, 1.26N±0.08×126.41E±0.08, h45km±5km, mb4.5/21, Error ellipse: s-maj=14.3km s-min=7.9km az=221.0*

ISC 10 08:24:46.4±0.4, 1.29N±0.05×126.43E±0.07, h47km, n82, σ1s09/82, mb4.3/25, 1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.07**	**119**		**Pn**	**08 25 04.1**	**-0.9**
TNTI	**Ternate**	**1.07**	**119**	P	**Pn**	**08 25 04.1**	**-0.9**
TNTI	**Ternate**	**1.07**	**119**	P	**Pn**	**08 25 04.3**	**-0.8**
LBMI	**Labuha**	**2.19**	**151**	P	**Pn**	**08 25 20.2**	**-0.3**
SGSI	**Sangihe**	**2.54**	**339**	P	**Pn**	**08 25 23.9**	**-1.4**
KMSI	**Cibinong**	**2.55**	**254**	P	**Pn**	**08 25 25.0**	**-0.3**
SANI	**Sanana**	**3.34**	**188**	P	**Pn**	**08 25 36.6**	**+0.3**
SANI	**Sanana**	**3.34**	**188**	P	**Pn**	**08 25 36.7**	**+0.4**
MRSI	**Marisa**	**4.56**	**260**	P	**Pn**	**08 25 52.8**	**-0.1**
AAI	**Ambon**	**5.25**	**160**	P	**Pn**	**08 26 02.5**	**+0.1**
	0.3nm55nm,0.4s						
APSI	**Ampana**	**5.25**	**245**	P	**Pn**	**08 26 03.1**	**+0.6**
	0.7nm2μm164nm,0.5s						
SWI	**Song**	**5.28**	**114**	P	**Pn**	**08 26 04.0**	**+1.1**
	0.2nm3μm18nm,0.8s						
SIJI	**Sorong**	**5.29**	**114**	Pn	**Pn**	**08 26 02.8**	**-0.3**
	1.5nm,0.3s,baz=236,slow=22,SNR=4.3						
SIJI				LR	LR	08 28 32.4	
	comp=Z,170nm,22.0s,baz=318,slow=43						
	13nm,0.5s						
TOLI2	**Tolitoli**	**5.65**	**268**	Pn	**Pn**	**08 26 06.9**	**-1.0**
TOLI2	**Tolitoli**	**5.65**	**268**	P	**Pn**	**08 26 07.7**	**-0.2**
DAV	**Davao City (W)**	**5.80**	**352**	LR	LR	08 28 32.8	
	comp=Z,142nm,19.4s,baz=158,slow=40						
KCP	**Kidapawan**	**5.84**	**347**	⇓*e*P	**Pn**	**08 26 11.3**	**+0.7**
KCP				*i* S	**Sn**	**08 27 20.9**	**+4.6**
MPSI	**Mapaga**	**6.60**	**262**	P	**Pn**	**08 26 21.5**	**+0.6**
	0.1nm534nm26nm,0.8s						
FAKI	**Fak Fak**	**7.17**	**126**		**Pn**	**08 26 30.3**	**+1.6**
FAKI	**Fak Fak**	**7.17**	**126**	P	**Pn**	**08 26 29.1**	**+0.4**
	0.1nm31nm,0.9s						
FAKI	**Fak Fak**	**7.17**	**126**	P	**Pn**	**08 26 30.7**	**+2.0**
TTSI	**Tana Toraja**	**7.88**	**237**	P	**Pn**	**08 26 39.0**	**+0.4**
	0.4nm2μm61nm,0.6s						
SPSI	**Sidrap Palu**	**8.46**	**232**	P	**Pn**	**08 26 47.6**	**+1.2**
	24nm,0.5s						
BNSI	**Bone**	**8.48**	**228**	P	**Pn**	**08 26 48.8**	**+2.1**
	30nm,0.9s						
MYLDM	**Lahad Datu**	**8.81**	**296**	Pn	**Pn**	**08 26 52.7**	**+1.4**
BKSI	**Bulukumba**	**9.10**	**224**	P	**Pn**	**08 26 55.5**	**+0.3**
	24nm,1.0s						
BSSI	**Bau Bau, Buton**	**9.47**	**219**	P	**Pn**	**08 27 02.4**	**+2.1**
	39nm,0.8s						
BAKI	**Biak**	**9.99**	**104**	P	**Pn**	**08 27 08.5**	**+1.1**
EDFI	**Ende, Flores**	**11.03**	**205**	P	**Pn**	**08 27 22.9**	**+1.1**
	5.3nm,0.7s						
MTN	**Manton Dam**	**14.80**	**162**	Pn	**Pn**	**08 28 12.7**	**-0.1**
KNRA	**Kununurra**	**17.02**	**172**	P	**Pn**	**08 28 41.0**	**-0.2**
KNRA				IAmb	IAmb	08 28 47.3	
	comp=Z,36nm,1.0s						
KNRA	**Kununurra**	**17.02**	**172**	P	**Pn**	**08 28 41.6**	**+0.4**
PCJI	**Pacitan**	**17.89**	**238**	P	**P**	**08 28 53.1**	**+0.9**
TWG	**Pinlang**	**22.03**	**347**	P	**P**	**08 29 36.1**	**-0.9**
TWG				IAmb	IAmb	08 29 40.0	
	comp=Z,31nm,1.2s						
WB0	**Warramunga Arr**	**22.34**	**160**	P	**P**	**08 29 39.3**	**-1.2**
WB0				IAmb	IAmb	08 29 46.8	
	comp=Z,18nm,0.8s						
COEN	**Coen**	**22.47**	**133**	P	**P**	**08 29 42.0**	**+0.1**
WRAB	**Tennant Creek**	**22.48**	**160**	P	**P**	**08 29 41.2**	**-0.7**
WRAB				IAmb	IAmb	08 29 46.8	
	comp=Z,21nm,0.8s						
WRAB	**Tennant Creek**	**22.48**	**160**	P	**P**	**08 29 41.4**	**-0.6**
WRA	**Warramunga Arr**	**22.48**	**160**	P	**P**	**08 29 41.1**	**-0.9**
	comp=Z,12nm,0.6s,baz=338,slow=11,SNR=112						
WRA				PcP	**PcP**	**08 33 35.6**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=328,slow=1.8,SNR=1.7						
WRA				S	**S**	**08 33 46.0**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=345,slow=17,SNR=4.0						
	comp=Z,12nm,0.6s						
WRA	**Warramunga Arr**	**22.48**	**160**	P	**P**	**08 29 40.4**	**-1.6**
TPUB	**Ta-pu**	**22.59**	**346**	P	**P**	**08 29 41.6**	**-1.5**
MBWA	**Marble Bar**	**23.25**	**196**	P	**P**	**08 29 48.6**	**-1.3**
MBWA				IAmb	IAmb	08 30 13.0	
	comp=Z,24nm,1.2s						
QIS	**Mount Isa**	**25.26**	**150**	P	**P**	**08 30 10.2**	**+1.8**
JOW	**Kunigami**	**25.46**	**4**	P	**P**	**08 30 11.8**	**+1.7**
	comp=Z,6.6nm,0.6s,baz=172,slow=6.5,SNR=3.7						
	comp=Z,6.6nm,0.6s						
JOW	**Kunigami**	**25.46**	**4**	IAmb		IAmb	08 30 17.6		
	comp=Z,38nm,1.4s								
AS31	**Alice Springs**	**25.85**	**164**	P		**P**	**08 30 13.3**	**-0.5**	
ASAR	**Alice Springs**	**25.85**	**164**	P		**P**	**08 30 13.6**	**-0.2**	
	comp=Z,2.5nm,0.5s,baz=346,slow=7.5,SNR=35								
ASAR				PcP		**PcP**	**08 33 43.1**	**+0.7**	
	comp=Z,0.5nm,0.5s,baz=351,slow=2.3,SNR=3.2								
ASAR				S		**S**	**08 34 42.4**	**+1.9**	
	comp=Z,0.5nm,0.8s,baz=350,slow=22,SNR=2.3								
	comp=Z,2.5nm,0.5s								
WRKA	**Warakurna**	**26.23**	**176**	P		**P**	**08 30 18.8**	**+1.6**	
RPSI	**Rantau Prapat**	**27.52**	**273**	P		**P**	**08 30 27.4**	**-1.6**	
PSI	**Prapat**	**27.53**	**274**	P		**P**	**08 30 27.4**	**-1.7**	
	comp=Z,3.6nm,0.5s,baz=129,slow=1.6,SNR=3.8								
	comp=Z,3.6nm,0.5s								
OOD	**Oodnadatta**	**30.26**	**164**	P		**P**	**08 30 52.5**	**-0.5**	
MORW	**Morawa**	**31.78**	**197**	P		**P**	**08 31 05.7**	**-0.8**	
MORW				IAmb		IAmb	08 31 17.7		
	comp=Z,16nm,1.3s								
CMAR	**Chiang Mai Arr**	**31.91**	**304**	P		**P**	**08 31 07.0**	**-0.8**	
	comp=Z,1.2nm,0.3s,baz=131,slow=5.1,SNR=1.1								
	comp=Z,1.2nm,0.3s								
FORT	**Forrest**	**31.93**	**177**	P		**P**	**08 31 07.5**	**-0.2**	
BBOO	**Buckleboo**	**35.12**	**166**	P		**P**	**08 31 35.0**	**-0.4**	
STKA	**Stephens Creek**	**35.98**	**158**	P		**P**	**08 31 43.0**	**+0.1**	
	comp=Z,2.9nm,0.6s,baz=332,slow=9.3,SNR=6.7								
	comp=Z,2.9nm,0.6s								
STKA	**Stephens Creek**	**35.98**	**158**	IAmb		IAmb	08 31 49.1		
	comp=Z,1.4nm,1.0s								
KSRS	**Korea Array**	**36.02**	**2**	P		**P**	**08 31 43.8**	**+0.7**	
	comp=Z,1.1nm,0.4s,baz=179,slow=7.2,SNR=5.5								
	comp=Z,1.1nm,0.4s								
MJAR	**Matsushiro Arr**	**36.73**	**16**	P		**P**	**08 31 48.6**	**-0.7**	
	comp=Z,0.7nm,0.4s,baz=174,slow=11,SNR=5.4								
	comp=Z,0.7nm,0.4s								
JMM	**Marumori**	**38.73**	**18**	P		**P**	**08 32 06.7**	**+0.7**	
BJT	**Baijiatuan**	**39.66**	**348**	P		**P**	**08 32 13.6**	**-0.3**	
BJT				IAmb		IAmb	08 32 28.3		
	comp=Z,3.2nm,0.8s								
KLR	**Kul'dur**	**47.98**	**5**	P		**P**	**08 33 21.1**	**+0.6**	
	comp=Z,1.7nm,0.5s,baz=211,slow=5.7,SNR=8.1								
	comp=Z,1.7nm,0.5s								
MK31	**Makanchi Array**	**59.39**	**326**	P		**P**	**08 34 43.4**	**-0.7**	
MK31				IAmb		IAmb	08 34 43.9		
	comp=Z,1.2nm,0.8s								
MKAR	**Makanchi Array**	**59.39**	**326**	P		**P**	**08 34 43.3**	**-0.8**	
	comp=Z,1.5nm,0.3s,baz=122,slow=7.6,SNR=24								
MKAR				PcP		**PcP**	**08 35 31.4**	**-0.2**	
	comp=Z,1.6nm,0.8s,baz=144,slow=3.7,SNR=4.0								
	comp=Z,1.5nm,0.3s								
MKAR	**Makanchi Array**	**59.39**	**326**	P		**P**	**08 34 43.0**	**-1.2**	
ZALV	**Zalesovo Beam**	**62.62**	**334**	P		**P**	**08 35 04.7**	**-1.2**	
	comp=Z,0.8nm,0.4s,baz=126,slow=7.3,SNR=3.9								
	comp=Z,0.8nm,0.4s								
KURK	**Kurchatov**	**63.63**	**328**	P		**P**	**08 35 12.0**	**-0.6**	
KKAR	**Karatay Array**	**64.81**	**318**	P		**P**	**08 35 20.7**	**+0.1**	
TIXI	**Tiksi**	**70.27**	**1**	P		**P**	**08 35 54.3**	**-0.1**	
	comp=Z,1.8nm,0.5s,baz=271,slow=24,SNR=4.4								
	comp=Z,1.8nm,0.5s								
TIXI	**Tiksi**	**70.27**	**1**	IAmb		IAmb	08 35 54.7		
	comp=Z,2.4nm,0.6s								
GEYT	**Alibeck**	**72.19**	**309**	LR		LR	09 11 54.4		
	comp=Z,318nm,19.8s,baz=11,slow=39								
NRIK	**Noril'sk**	**72.72**	**347**	P		**P**	**08 36 09.0**	**-0.2**	
	comp=Z,2.9nm,0.5s,baz=19,slow=5.2,SNR=3.8								
	comp=Z,2.9nm,0.5s								
NRIK	**Noril'sk**	**72.72**	**347**	IAmb		IAmb	08 36 10.1		
	comp=Z,3.8nm,0.6s								
ABKAR	**Akbulak array**	**73.84**	**321**	P		**P**	**08 36 15.9**	**-0.3**	
ABKAR	**Akbulak array**	**73.84**	**321**	P		**P**	**08 36 15.4**	**-0.9**	
VNDA	**Vanda**	**81.06**	**173**	P		**P**	**08 36 56.2**	**+0.2**	
	comp=Z,0.8nm,0.5s,baz=310,slow=7.1,SNR=3.6								
	comp=Z,0.8nm,0.5s								
KBZ	**Khabaz**	**84.43**	**314**	P		**P**	**08 37 13.9**	**-0.3**	
	comp=Z,1.3nm,0.5s,baz=160,slow=3.0,SNR=3.7								
	comp=Z,1.3nm,0.5s								
ILAR	**Eielson Array**	**87.42**	**25**	P		**P**	**08 37 27.8**	**-0.8**	
	comp=Z,0.4nm,0.5s,baz=249,slow=4.4,SNR=8.0								
	comp=Z,0.4nm,0.5s								
ARCES	**ARCESS Array B**	**92.62**	**340**	P		**P**	**08 37 51.7**	**-1.1**	
	comp=Z,2.2nm,

IKP	**In-Ko-Pah, Jac**	**0.82**	**159**	⇓*eP*		**Pb**	**08 34 12.9**	**-0.1**
IKP				*eS*		**Sb**	**08 34 23.9**	**-0.1**
ELS	**Elsinore Mount**	**0.84**	**286**	Pg		**Pg**	**08 34 12.4**	**-0.6**
TKX	**Tecate**	**0.86**	**188**			**Pg**	**08 34 13.1**	**-0.3**
TKX	**Tecate**	**0.86**	**188**	*eP*		**Pg**	**08 34 13.1**	**-0.3**
TKX				*eS*		**Sg**	**08 34 24.2**	**-0.4**
BC3	**Big Chuckawall**	**0.87**	**74**	P		**Pg**	**08 34 13.0**	**-0.6**
	baz=255,SNR=179							
BC3				S		**Sg**	**08 34 24.8**	**-0.3**
	baz=255							
RMX	**La Rumorosa**	**0.88**	**158**			**Pn**	**08 34 14.7**	**-0.1**
RMX				IAML			08 34 28.2	
	comp=E,630nm,0.2s							
RMX				IAML			08 34 28.7	
	comp=N,407nm,0.2s							
RMX	**La Rumorosa**	**0.88**	**158**	*eP*		**Pn**	**08 34 14.9**	**0.0**
RMX				IAML			08 34 28.3	
	comp=E,642nm,0.2s							
YUH	**Yuha Desert**	**0.89**	**150**			**Pb**	**08 34 13.6**	**-0.4**
YUH				IAML			08 34 26.6	
	comp=N,418nm,0.1s							
YUH				IAML			08 34 27.1	
	comp=E,476nm,0.1s							
YUH2	**Yuha Desert**	**0.90**	**149**	*eP*		**Pb**	**08 34 13.6**	**-0.5**
YUH2				*eS*		**Sb**	**08 34 25.2**	**-0.7**
WESC	**Westside Schoo**	**0.90**	**137**	*eP*		**Pb**	**08 34 13.5**	**-0.7**
OLP	**Otay Lakes Par**	**0.90**	**206**	*eP*		**Pb**	**08 34 13.7**	**-0.5**
RSBC	**Riverside Bore**	**0.91**	**308**			**Pb**	**08 34 13.9**	**-0.4**
BBRC	**Big Bear Solar**	**0.92**	**336**	P		**Pb**	**08 34 14.2**	**-0.5**
	baz=155,SNR=33							
BBRC				S		**Sg**	**08 34 26.2**	**-0.5**
	baz=155							
TJIG	**Tijuana**	**1.00**	**190**	*eP*		**Pb**	**08 34 15.4**	**-0.5**
DREC	**Desert Rsrch C**	**1.05**	**126**	*eP*		**Pb**	**08 34 15.6**	**-1.1**
DREC				*eS*		**Sg**	**08 34 30.7**	**+0.1**
CBX	**Cerro Bola**	**1.12**	**189**	Pn		**Pb**	**08 34 17.6**	**-0.3**
CBX				IAML			08 34 33.8	
	comp=E,432nm,0.2s							
CBX				IAML			08 34 34.4	
	comp=N,260nm,0.2s							
CBX	**Cerro Bola**	**1.12**	**189**	*eP*		**Pb**	**08 34 17.6**	**-0.3**
CBX				*eS*		**Sb**	**08 34 32.2**	**-0.3**
BFSC	**Mount Baldy Ra**	**1.29**	**310**	P		**Pn**	**08 34 19.9**	**-0.6**
	baz=128,SNR=44							
BFSC				S		**Sb**	**08 34 37.0**	**-0.3**
	baz=128							
IRM	**Iron Mountain**	**1.32**	**56**	P		**Pn**	**08 34 19.7**	**-1.2**
	baz=237,SNR=49							
IRM				Sb		**Sn**	**08 34 38.4**	**+0.1**
	baz=237							
CPBX	**Cerro Prieto**	**1.39**	**135**	⇑*e*		**Sg**	**08 34 47.8**	**+6.2**
CPBX				IAML			08 34 47.8	
	comp=N,553nm,0.3s							
CPBX				IAML			08 34 50.4	
	comp=E,721nm,0.3s							
CPBX				⇑*e*			08 34 50.4	
HEC	**Hector,Ludlow**	**1.41**	**4**	Pg		**Pb**	**08 34 22.7**	**-0.2**
	baz=184							
GLA	**Glamis**	**1.42**	**105**	P		**Pn**	**08 34 20.7**	**-1.5**
	baz=286,SNR=7.6							
GMRC	**Granite Mounta**	**1.51**	**26**	P		**Pn**	**08 34 22.7**	**-0.9**
	baz=206,SNR=19							
GMRC				Sb		**Sb**	**08 34 44.0**	**+0.1**
	baz=206							
RRX	**Edison Barstow**	**1.52**	**343**	Pg		**Pb**	**08 34 25.2**	**+0.5**
	baz=163							
ALAMX	**Rancho Alamar**	**1.55**	**156**	*eP*		**Pn**	**08 34 23.2**	**-0.7**
ALAMX				*eS*		**Sn**	**08 34 43.3**	**-0.5**
FMP	**Fort Macarthur**	**1.56**	**281**	Pb		**Pn**	**08 34 24.6**	**+0.6**
	baz=100							
CCX	**Cicese**	**1.56**	**186**			**Pn**	**08 34 24.5**	**+0.4**
CCX				IAML			08 34 47.1	
	comp=E,177nm,0.3s							
CCX				IAML			08 34 47.9	
	comp=N,166nm,0.4s							
PASC	**Pasadena Art C**	**1.62**	**298**			**Pn**	**08 34 25.6**	**+0.7**
CIS	**Catalina Islan**	**1.64**	**270**	P		**Pn**	**08 34 24.7**	**-0.5**
	baz=88,SNR=7.7							
BLYC	**Blythe**	**1.65**	**78**			**Pn**	**08 34 24.0**	**-1.3**
DECC	**Green Verdugo**	**1.77**	**299**	Pb		**Pb**	**08 34 28.5**	**-0.5**
	baz=117							
DECC				Sb		**Sb**	**08 34 51.4**	**+0.3**
	baz=117							
SCI2	**San Clemente I**	**1.80**	**256**	P		**Pn**	**08 34 27.4**	**-0.1**
	baz=75							
SCI2				S		**Sn**	**08 34 49.9**	**-0.3**
	baz=75							
GSC	**Goldstone, Bar**	**1.90**	**351**	Pg		**Pb**	**08 34 31.9**	**+0.7**
	baz=171							
EDW2	**Edwards Air Fo**	**1.93**	**319**	Pg		**Pb**	**08 34 32.3**	**+0.5**
	baz=138							
EDW2				Sb		**Sb**	**08 34 56.5**	**+0.7**
	baz=138							
NEE2	**Needles Airpor**	**2.03**	**48**	Pg		**Pb**	**08 34 34.5**	**+1.0**
	baz=229							
TUQ	**Turquoise Moun**	**2.06**	**12**	Pg		**Pb**	**08 34 35.0**	**+1.0**
	baz=192							
PDMCI	**Parker Dam,Lak**	**2.12**	**65**	P		**Pn**	**08 34 31.2**	**-0.6**
	baz=246							
ECBX	**El Chinero**	**2.28**	**148**	*eP*		**Pn**	**08 34 34.1**	**+0.1**
W13A	**Hualapai Mount**	**2.71**	**51**			**Pn**	**08 34 39.8**	**-0.4**
GWY	**Greenwater Val**	**2.76**	**357**			**Pn**	**08 34 40.6**	**-0.2**
Y14A	**Wickenburg**	**2.93**	**79**			**Pn**	**08 34 42.5**	**-0.4**
LCH	**Last Change Ra**	**3.92**	**346**			**Pn**	**08 34 57.5**	**+0.7**
X16A	**Lo Mia Camp, P**	**4.29**	**75**	Pn		**Pn**	**08 35 02.0**	**+0.1**
LCMT	**Little Creek M**	**4.45**	**35**			**Pn**	**08 35 04.3**	**+0.4**
U15A	**North Rim**	**4.55**	**48**	Pn		**Pn**	**08 35 06.2**	**+0.7**
WUAZ	**Wupatki**	**4.69**	**62**			**Pn**	**08 35 08.3**	**+1.0**
WUAZ				IAML			08 36 31.0	
	comp=N,8.6nm,0.5s							
WUAZ				IAML			08 36 33.4	
	comp=N,7.1nm,0.5s							
X18A	**Snowflake**	**5.52**	**77**			**Pn**	**08 35 19.4**	**+0.6**

ANF ***10*** *08:39:39.0±0.2,36˚27N×89˚53W, h7km, ML3.2/13, Error ellipse: s-maj=3.0km s-min=2.2km az=73.0*
IASPEI ***10*** *08:39:39.1±0.8,36˚28N±0˚02×89˚54W±0˚02, h14km±5km, Error ellipse: s-maj=3.2km s-min=2.5km az=91.8, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
SLM ***10*** *08:39:39.4±0.6,36˚274N±0˚007×89˚545W±0˚009, h7km±1km, Md2.9/40, mb_Lg2.6/67(NEIC), Error ellipse: s-maj=1.1km s-min=1.0km az=223.0*
NEIC ***10*** *08:39:40.0±0.7,36˚273N±0˚007×89˚54W±0˚01, h7km±2km, Error ellipse: s-maj=1.1km s-min=1.0km az=63.0*

ISC 10 08:39:39.8±0.9,36˚27N±0˚02×89˚53W±0˚02, h12km±5km, n120, σ0˚78/113, New Madrid region, Missouri

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WYBT	**Wynnburg**	**0.08**	**21**				**Pg**	**08 39 41.8**	**-0.7**
WYBT							**Sg**	**08 39 43.9**	**-0.5**
MIST	**Miston**	**0.10**	**165**				**Pg**	**08 39 42.1**	**-0.6**
MIST							**Sg**	**08 39 44.4**	**-0.3**
PPLM	**Point Pleasant**	**0.14**	**343**				**Pg**	**08 39 42.7**	**-0.5**
PPLM							**Sg**	**08 39 45.2**	**-0.4**
LNXT	**Lenox**	**0.17**	**168**				**Pg**	**08 39 43.4**	**-0.3**
LNXT							**Sg**	**08 39 46.6**	**+0.2**
POBM	**Portage Bay**	**0.17**	**323**				**Pg**	**08 39 43.2**	**-0.5**
POBM							**Sg**	**08 39 46.1**	**-0.3**
PENMO	**Penman**	**0.20**	**337**				**Pg**	**08 39 43.6**	**-0.5**
PENMO							**Sg**	**08 39 47.1**	**0.0**
PVMO	**Portageville**	**0.20**	**317**	Pg			**Pg**	**08 39 43.5**	**-0.6**
GLST	**Glass**	**0.20**	**90**				**Pg**	**08 39 44.0**	**-0.2**
GLST							**Sg**	**08 39 47.4**	**+0.3**
FLPT	**Flippin**	**0.22**	**51**				**Pg**	**08 39 44.2**	**-0.3**
WADM	**Wardell**	**0.23**	**295**				**Pg**	**08 39 44.2**	**-0.5**
PGVM	**Portageville**	**0.25**	**320**				**Pg**	**08 39 44.5**	**-0.6**
PGVM							**Sg**	**08 39 48.2**	**-0.3**
WALK	**Watson Lake**	**0.27**	**359**				**Pg**	**08 39 44.9**	**-0.5**
WALK							**Sg**	**08 39 49.3**	**+0.1**
BRGM	**Braggadocio**	**0.27**	**256**				**Pg**	**08 39 44.9**	**-0.5**
BRGM							**Sg**	**08 39 49.0**	**-0.2**
CWPT	**Cottonwood Poi**	**0.27**	**196**				**Pg**	**08 39 45.1**	**-0.3**
MARMO	**Marston**	**0.28**	**337**				**Pg**	**08 39 45.1**	**-0.5**
MARMO							**Sg**	**08 39 49.6**	**+0.1**
FPST	**Four Points**	**0.30**	**168**				**Pg**	**08 39 45.7**	**-0.3**
FPST							**Sg**	**08 39 50.5**	**+0.5**
RELT	**Roellen**	**0.30**	**141**				**Pg**	**08 39 45.9**	**0.0**
NMEM	**New Madrid Sch**	**0.31**	**352**				**Pg**	**08 39 45.6**	**-0.5**
NMEM							**Sg**	**08 39 50.6**	**+0.3**
PEBM	**Pemiscott Bayo**	**0.31**	**240**				**Pg**	**08 39 45.7**	**-0.4**
PEBM							**Sg**	**08 39 50.3**	**0.0**
NMMO	**New Madrid**	**0.32**	**357**				**Pg**	**08 39 45.8**	**-0.5**
CATM	**Catron**	**0.35**	**345**				**Pg**	**08 39 46.5**	**-0.5**
SJMO	**Saint John's B**	**0.36**	**7**				**Pg**	**08 39 46.5**	**-0.5**
SJMO							**Sg**	**08 39 52.1**	**+0.1**
HICK	**Hickman**	**0.37**	**42**				**Pg**	**08 39 46.7**	**-0.5**
TOPM	**Tallapoosa**	**0.38**	**312**				**Pg**	**08 39 46.8**	**-0.7**
HALT	**Halls**	**0.39**	**156**				**Pg**	**08 39 47.4**	**-0.2**
CHNM	**Channel**	**0.39**	**235**				**Pg**	**08 39 47.2**	**-0.4**
EDIT	**Edith**	**0.41**	**182**				**Pg**	**08 39 47.7**	**-0.2**
KEWM	**Kewanee**	**0.43**	**354**				**Pg**	**08 39 47.7**	**-0.6**
PARMO	**Parma**	**0.43**	**336**				**Pg**	**08 39 47.7**	**-0.6**
HENM	**Henderson Moun**	**0.45**	**6**				**Pg**	**08 39 48.0**	**-0.7**
COKM	**Charter Oak**	**0.47**	**341**				**Pg**	**08 39 48.4**	**-0.6**
EPRM	**East Prairie**	**0.47**	**18**				**Pg**	**08 39 48.4**	**-0.7**
MLDM	**Malden**	**0.47**	**319**				**Pg**	**08 39 48.4**	**-0.7**
GNAR	**Gosnell**	**0.50**	**232**				**Pg**	**08 39 49.3**	**-0.3**
MATM	**Matthews**	**0.51**	**354**				**Pg**	**08 39 49.1**	**-0.7**
DWDM	**Dogwood**	**0.53**	**4**				**Pg**	**08 39 49.5**	**-0.6**
BETM	**Bethany**	**0.54**	**309**				**Pg**	**08 39 49.6**	**-0.8**
UTMT	**University of**	**0.55**	**82**	Pg			**Pg**	**08 39 50.2**	**-0.3**
BRNM	**Bernie**	**0.59**	**321**				**Pg**	**08 39 50.6**	**-0.7**
CHRM	**Charleston**	**0.60**	**13**				**Pg**	**08 39 50.7**	**-0.8**
DLAR	**Dell**	**0.60**	**220**				**Pg**	**08 39 51.1**	**-0.4**
FMKY	**Fulgham**	**0.64**	**52**				**Pg**	**08 39 51.8**	**-0.5**
LVAR	**Leachville**	**0.66**	**238**				**Pg**	**08 39 52.5**	**-0.1**
GUAMO	**Guam**	**0.67**	**338**				**Pg**	**08 39 51.9**	**-0.9**
PBMO	**Poplar Bluff**	**0.88**	**305**				**Pg**	**08 39 55.5**	**-1.3**
PBMO	**Poplar Bluff**	**0.88**	**305**	P			**Pg**	**08 39 55.6**	**-1.3**
	baz=125,SNR=8.2								
PBMO				S			**Sg**	**08 40 07.1**	**-1.3**
	baz=125								
LPAR	**Lepanto**	**0.91**	**223**				**Pg**	**08 39 56.5**	**-0.9**
T45B	**Paducah**	**1.03**	**44**	P			**Pg**	**08 39 58.4**	**-1.4**
	baz=224,SNR=43								
T45B				S			**Sg**	**08 40 12.1**	**-1.0**
	baz=224								
T45A	**Paducah**	**1.03**	**43**	Pg			**Pg**	**08 39 58.6**	**-1.2**
EBZ	**Ebenezer Churc**	**1.14**	**172**				**Pg**	**08 40 00.4**	**-1.3**
W45A	**Hickory Valley**	**1.15**	**166**				**Pg**	**08 40 00.6**	**-1.3**
W45A	**Hickory Valley**	**1.15**	**166**	P			**Pg**	**08 40 00.3**	**-1.5**
	baz=346,SNR=62								
W45A				S			**Sg**	**08 40 16.1**	**-0.7**
	baz=346								
HBAR	**Harrisburg**	**1.16**	**232**				**Pg**	**08 40 01.0**	**-1.1**
MET	**Memphis--Engin**	**1.19**	**196**	Pg			**Pg**	**08 40 00.7**	**-2.0**
LCAR	**Lake Charles**	**1.33**	**262**				**Pn**	**08 40 03.2**	**-1.0**
WVT	**Waverly**	**1.39**	**95**				**Pn**	**08 40 04.3**	**-0.7**
WVT	**Waverly**	**1.39**	**95**	P			**Pn**	**08 40 04.4**	**-0.6**
	baz=276,SNR=88								
S44A	**Carondale**	**1.44**	**9**				**Pn**	**08 40 05.4**	**-0.3**
S44A	**Carbondale**	**1.44**	**9**	P			**Pn**	**08 40 05.2**	**-0.5**
	baz=189,SNR=92								
SIUC	**Southern Illin**	**1.47**	**10**				**Pn**	**08 40 05.9**	**-0.2**
PLAL	**Pickwick Lake**	**1.75**	**137**				**Pn**	**08 40 10.1**	**+0.1**
OXF	**Oxford**	**1.76**	**177**				**Pn**	**08 40 10.7**	**+0.6**
OXF	**Oxford**	**1.76**	**177**	P			**Pn**	**08 40 10.5**	**+0.4**
	baz=356,SNR=49								
OXF				S			**Sb**	**08 40 34.2**	**+0.2**
	baz=356								
PWLA	**Pickwick Lake**	**1.76**	**137**				**Pn**	**08 40 09.7**	**-0.4**
FVM	**French Village**	**1.85**	**338**				**Pn**	**08 40 12.2**	**+0.8**
FVM	**French Village**	**1.85**	**338**	P			**Pn**	**08 40 12.0**	**+0.5**
	baz=157,SNR=56								
FVM				S			**Sn**	**08 40 36.2**	**+1.4**
	baz=157								
T47A	**Sharon Grove**	**2.08**	**69**				**Pn**	**08 40 15.7**	**+1.1**
T47A	**Sharon Grove**	**2.08**	**69**	P			**Pn**	**08 40 15.2**	**+0.6**
	baz=251,SNR=26								
FCAR	**Ozark Folk Cen**	**2.13**	**261**				**Pn**	**08 40 16.7**	**+1.4**
CCM	**Cathedral Cave**	**2.25**	**323**				**Pn**	**08 40 17.6**	**+0.8**
CCM	**Cathedral Cave**	**2.25**	**323**	P			**Pn**	**08 40 17.2**	**+0.4**
	baz=142,SNR=28								
V48A	**Smith Brothers**	**2.26**	**103**				**Pn**	**08 40 18.4**	**+1.3**
MGMO	**Mountain Grove**	**2.37**	**293**				**Pn**	**08 40 20.3**	**+1.8**
Y45A	**Yeager Farm, C**	**2.40**	**180**	P			**Pn**	**08 40 19.1**	**+0.2**
	baz=360,SNR=14								
WHAR	**Wooly Hollow**	**2.44**	**247**			IAmb_Lg		08 41 02.2	
	comp=Z,32nm,0.9s								
W41B	**Gary Mavity, V**	**2.46**	**244**		Pn		**Pn**	**08 40 21.4**	**+1.6**
W41B	**Gary Mavity, V**	**2.46**	**244**		P		**Pn**	**08 40 19.6**	**-0.2**
	baz=63,SNR=7.0								
CLTN	**Cedars of Leba**	**2.60**	**93**		Pn		**Pn**	**08 40 22.6**	**+0.9**
Q44A	**Meyer Farm, Va**	**2.66**	**9**		Pn		**Pn**	**08 40 23.8**	**+1.2**
U40A	**Yellville**	**2.68**	**273**				**Pn**	**08 40 23.6**	**+0.7**
U40A	**Yellville**	**2.68**	**273**		P		**Pn**	**08 40 22.8**	**-0.1**
	baz=91,SNR=29								
U40A					P		**Pn**	**08 40 22.8**	**-0.1**
	baz=91,SNR=29								
X48A	**Hartselle**	**2.73**	**131**				**Pn**	**08 40 23.8**	**+0.4**
R40A	**Maddies Statio**	**2.97**	**314**				**Pn**	**08 40 27.7**	**+0.9**
CCAR	**Cane Creek**	**2.98**	**219**				**Pn**	**08 40 28.0**	**+1.1**
CCAR						IAmb_Lg		08 41 19.4	
	comp=E,14nm,0.8s								
U49A	**Red Boiling Sp**	**3.04**	**84**		Pn		**Pn**	**08 40 29.1**	**+1.3**
U49A	**Red Boiling Sp**	**3.04**	**84**		P		**Pn**	**08 40 27.7**	**-0.1**
	baz=267								
SWET	**Sewanee**	**3.11**	**109**				**Pn**	**08 40 29.9**	**+1.1**
X40A	**Basin Creek Fa**	**3.23**	**238**		Pn		**Pn**	**08 40 31.4**	**+1.0**
S39A	**Bolivar**	**3.35**	**296**		Pn		**Pn**	**08 40 33.4**	**+1.4**
S39A						IAmb_Lg		08 41 31.5	
	comp=Z,15nm,0.8s								
P43A	**Skaggs, Pawnee**	**3.37**	**0**			IAmb_Lg		08 41 30.2	
	comp=Z,16nm,1.0s								
Y49A	**Blount Mountai**	**3.51**	**132**		Pn		**Pn**	**08 40 34.4**	**+0.1**
HHAR	**Hobbs**	**3.56**	**271**				**Pn**	**08 40 34.6**	**-0.3**
FPAL	**Fort Paine**	**3.64**	**117**			IAmb_Lg		08 41 40.2	
	comp=Z,14nm,0.8s								
MIAR	**Mount Ida**	**3.72**	**244**		Pn		**Pn**	**08 40 38.1**	**+1.0**
MIAR						IAmb_Lg		08 41 47.0	
	comp=Z,18nm,0.9s								
BLO	**Bloomington**	**3.75**	**39**			IAmb_Lg		08 41 47.0	
	comp=Z,12nm,0.8s								
P40A	**Paris**	**3.81**	**329**			IAmb_Lg		08 41 42.5	
	comp=Z,18nm,0.8s								
P46A	**Rosedale**	**3.81**	**28**			IAmb_Lg		08 41 43.0	
	comp=Z,12nm,0.8s								
LRAL	**Lakeview Retre**	**3.84**	**146**				**Pn**	**08 40 38.3**	**-0.5**
LRAL						IAmb_Lg		08 41 51.5	
	comp=Z,14nm,0.9s								
T50A	**Nancy**	**3.85**	**77**			IAmb_Lg		08 41 48.3	
	comp=Z,15nm,0.7s								
143A	**Socs Landing,**	**3.88**	**204**			IAmb_Lg		08 41 47.5	
	comp=Z,11nm,0.8s								
O44A	**Mansfield**	**3.97**	**12**			IAmb_Lg		08 41 52.0	
	comp=Z,12nm,0.8s								
Z41A	**Richland Creek**	**4.03**	**223**			IAmb_Lg		08 41 51.6	
	comp=Z,11nm,0.8s								
V51A	**Loudon**	**4.23**	**95**			IAmb_Lg		08 41 51.6	
	comp=Z,10.0nm,0.8s								
P48A	**Milroy**	**4.55**	**44**			IAmb_Lg		08 42 11.1	
	comp=Z,10nm,0.8s								
P38A	**Dawn**	**4.60**	**318**			IAmb_Lg		08 42 09.6	
	comp=Z,11nm,0.7s								
TKL	**Tuckaleechee C**	**4.71**	**96**			IAmb_Lg		08 42 05.6	
	comp=Z,11nm,0.8s								
W52A	**Murphy**	**4.71**	**103**			IAmb_Lg		08 42 19.7	
	comp=Z,16nm,1.1s								
V52A	**Sevierville**	**4.83**	**93**			IAmb_Lg		08 42 23.1	
	comp=Z,8.8nm,0.8s								
P49A	**Miami Univ. Ec**	**5.01**	**48**			IAmb_Lg		08 42 16.1	
	comp=Z,8.6nm,0.7s								
TUL1	**Leonard**	**5.08**	**268**			IAmb_Lg		08 42 24.8	
	comp=Z,13nm,1.1s								
152A	**Waverly Hall**	**5.36**	**131**			IAmb_Lg		08 42 30.4	
	comp=Z,9.7nm,1.1s								
V53A	**Saluda**	**5.48**	**94**			IAmb_Lg		08 42 36.2	
	comp=Z,7.4nm,0.8s								
BG3	**Lake Jocassee**	**5.53**	**101**			IAmb_Lg		08 42 50.2	
	comp=Z,9.6nm,1.0s								
Q51A	**Peebles**	**5.63**	**59**			IAmb_Lg		08 42 44.1	
	comp=Z,11nm,0.8s								
L42A	**Oliver, Polo**	**5.73**	**359**			IAmb_Lg		08 42 47.3	
	comp=Z,11nm,0.9s								
L40A	**Anamosa**	**5.93**	**348**			IAmb_Lg		08 42 47.4	
	comp=Z,11nm,0.8s								
N49A	**Columbus Grove**	**6.25**	**40**			IAmb_Lg		08 43 03.0	
	comp=Z,7.9nm,0.8s								
Q52A	**Bidwell**	**6.36**	**63**			IAmb_Lg		08 43 00.9	
	comp=Z,8.1nm,0.8s								
R53A	**Hurricane**	**6.38**	**69**			IAmb_Lg		08 43 05.2	
	comp=Z,11nm,0.8s								
O53A	**New Philadelph**	**7.66**	**56**			IAmb_Lg		08 43 40.5	
	comp=Z,6.6nm,0.8s								

ANF ***10*** *08:46:45.0±0.1,33˚46N×116˚46W, h15km, ML2.8/24, Error ellipse: s-maj=1.3km s-min=1.1km az=66.0*
NEIC ***10*** *08:46:45.9±0.8,33˚439N±0˚008×116˚48W±0˚03, h17km±4km, Error ellipse: s-maj=3.7km s-min=1.2km az=86.0*
PAS ***10*** *08:46:46.3±1.2,33˚46N±0˚01×116˚46W±0˚02, h12km±2km, ML3.1, ML3.0/24(NEIC), Error ellipse: s-maj=2.6km s-min=1.9km az=83.0*
ECX ***10*** *08:46:47.1±0.4,33˚42N×116˚48W, h15km±2km, MD2.9, ML3.2*

ISC 10 08:46:45.5±0.8,33˚44N±0˚02×116˚46W±0˚02, h14km±7km, n58, σ0˚48/85, 1C-6D, Southern California

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PFO	**Pinyon Flats O**	**0.17**	**1**	Pg			**Pg**	**08 46 49.8**	**-0.1**
PFO				IAML				08 46 52.6	
	5μm,0.1s								
PFO	**Pinyon Flats O**	**0.17**	**1**	P			**Pg**	**08 46 49.7**	**-0.1**
	baz=182,SNR=222								
PFO				S			**Sg**	**08 46 52.4**	**-0.2**
	baz=182								
MATG	**Mataguay Scout**	**0.29**	**213**	⇓*eP*			**Pb**	**08 46 52.4**	**-0.1**
MATG				*eS*			**Sb**	**08 46 56.8**	**-0.4**
SLH	**Sleepy Hollow**	**0.30**	**145**	⇓*iP*			**Pb**	**08 46 52.8**	**+0.1**
SLH				*eS*			**Sb**	**08 46 57.6**	**0.0**
MONP2	**Monument Peak**	**0.55**	**176**	P			**Pb**	**08 46 57.0**	**0.0**
	baz=356,SNR=114								
MONP2				S			**Sg**	**08 47 04.5**	**+0.8**
	baz=356								
MONP2	**Monument Peak**	**0.55**	**176**	⇓*eP*			**Pb**	**08 46 57.0**	**0.0**
MONP2				*eS*			**Sg**	**08 47 04.2**	**+0.4**
MURC	**Murrieta**	**0.63**	**285**	P			**Pg**	**08 46 57.8**	**-0.1**
	baz=103,SNR=106								
MURC				S			**Sg**	**08 47 06.4**	**0.0**
	baz=103								
EML	**El Monte Cty P**	**0.64**	**210**	*eP*			**Pg**	**08 46 58.1**	**+0.1**
EML				*eS*			**Sg**	**08 47 06.5**	**+0.2**
BELC	**Belle Mtn. Jos**	**0.68**	**35**	P			**Pg**	**08 46 58.6**	**-0.3**
	baz=216,SNR=64								
BELC				S			**Sg**	**08 47 07.4**	**-0.5**
	baz=216								
SWSC	**Sam W. Stewart**	**0.74**	**131**	P			**Pg**	**08 46 59.8**	**-0.2**
	baz=313,SNR=29								
SWSC				S			**Sg**	**08 47 10.2**	**+0.5**
	baz=313								
SWSC	**Sam W. Stewart**	**0.74**	**131**	*eP*			**Pg**	**08 47 00.2**	**+0.2**
SWSC				*eS*			**Sg**	**08 47 10.3**	**+0.5**
109C	**Camp Elliot, M**	**0.77**	**225**				**Pg**	**08 47 00.5**	**0.0**
109C	**Camp Elliot, M**	**0.77**	**225**	P			**Pg**	**08 47 00.5**	**0.0**
	baz=43,SNR=32								
109C				S			**Sg**	**08 47 10.4**	**-0.2**
	baz=43								
BAR	**Barrett**	**0.78**	**193**				**Pg**	**08 47 00.7**	**0.0**
BAR				IAML				08 47 11.4	
	comp=E,788nm,0.1s								
BAR	**Barrett**	**0.78**	**193**	⇓*eP*			**Pg**	**08 47 00.7**	**0.0**
BAR				*eS*			**Sg**	**08 47 11.0**	**+0.1**
BAR				*e*				08 47 11.4	
BAR				IAML				08 47 11.4	
	comp=E,744nm,0.1s								
BAR				IAML				08 47 11.7	
	comp=N,953nm,0.1s								
BAR				⇑*e*				08 47 11.7	
SDRC	**San Diego Road**	**0.81**	**210**	*eP*			**Pg**	**08 47 01.0**	**-0.2**
SDRC				*eS*			**Sg**	**08 47 11.6**	**-0.3**
ELS	**Elsinore Mount**	**0.83**	**285**				**Pg**	**08 47 01.1**	**-0.6**
IKP	**In-Ko-Pah, Jac**	**0.84**	**159**	P			**Pg**	**08 47 02.0**	**+0.1**
	baz=340,SNR=50								
IKP				S			**Sg**	**08 47 13.3**	**+0.4**
	baz=340				

EDW2					Sb	**Sb**	**08 47 44.9**	**+0.7**
	baz=138							
NEE2	**Needles Airpor**	**2.02**	**49**	Pg	**Pb**	**08 47 23.0**	**+0.9**	
	baz=230							
TUQ	**Turquoise Moun**	**2.04**	**12**	Pg	**Pb**	**08 47 23.5**	**+1.0**	
	baz=193							
OSI	**Osito Audit: C**	**2.21**	**303**	Sb	**Sb**	**08 47 53.8**	**+1.1**	
	baz=121							
GWY	**Greenwater Val**	**2.75**	**357**	Pn	**Pn**	**08 47 28.8**	**-0.5**	
Y14A	**Wickenburg**	**2.92**	**79**		**Pn**	**08 47 31.4**	**-0.4**	
LCH	**Last Change Ra**	**3.91**	**346**		**Pn**	**08 47 45.8**	**+0.5**	
X16A	**Lo Mia Camp, P**	**4.29**	**75**	Pn	**Pn**	**08 47 50.5**	**-0.1**	
U15A	**North Rim**	**4.54**	**48**		**Pn**	**08 47 55.0**	**+0.9**	

*IDC **10** 08:52:03.7±2.1,4.7°79N×124.4°40E,h0km,mb3.4/3, mbtmp3.4/3,Error ellipse: s-maj=195.1km s-min=28.6km az=64.0*

ISC 10 08:52:03.3±1.5,5.6°6N±0.2°×126.4°4E±0.2°,h10km,n5,σ1§52/7, mb3.4/3,1C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**1.54**	**290**	*i*P			**Pb**	**08 52 32.5**	**+0.6**
GSPH				*i*S			**Sn**	**08 52 49.7**	**-1.3**
KCP	**Kidapawan**	**1.94**	**318**	*e*P			**Pg**	**08 52 41.6**	**+1.0**
KCP				*i*S			**Sb**	**08 53 03.6**	**+0.4**
WRA	**Warramunga Arr**	**26.51**	**163**	P			**P**	**08 57 43.0**	**+1.8**
	0.3nm,0.6s,baz=338,slow=10,SNR=8.7 0.3nm,0.6s								
ASAR	**Alice Springs**	**29.95**	**166**	P			**P**	**08 58 11.8**	**-0.1**
	0.3nm,0.5s,baz=341,slow=7.7,SNR=7.7 0.3nm,0.5s								
MKAR	**Makanchi Array**	**55.88**	**325**	P			**P**	**09 01 39.6**	**-1.7**
	0.2nm,0.5s,baz=120,slow=8.5,SNR=3.2 0.2nm,0.5s								

IDC 10 08:57:21.0±2.1,1.7°7N×126.4°2E,h0km,mb3.4/4, mbtmp3.4/4,Error ellipse: s-maj=173.8km s-min=26.9km az=65.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.94**	**161**	P			P	09 02 27.9	+0.9
	0.3nm,0.5s,baz=338,slow=11,SNR=9.3 0.3nm,0.5s								
ASAR	**Alice Springs**	**26.31**	**164**	P			P	09 02 59.2	+0.6
	0.3nm,0.5s,baz=351,slow=7.1,SNR=7.9 0.3nm,0.5s								
STKA	**Stephens Creek**	**36.43**	**158**	P			P	09 04 25.5	-2.0
	1.8nm,0.9s,baz=325,slow=16,SNR=1.6 1.8nm,0.9s								
MKAR	**Makanchi Array**	**58.99**	**326**	P			P	09 07 22.6	+0.1
	0.1nm,0.4s,baz=116,slow=8.8,SNR=2.1 0.1nm,0.4s								

*IDC **10** 09:16:10.5±1.1,36.°19S×17.°80W,h0km,mb3.9/3, mbtmp3.9/3,MS4.4/2,Error ellipse: s-maj=46.3km s-min=33.9km az=117.0*

*NEIC **10** 09:16:12.0±0.9,36.°24S±0.°05×17.°6W±0.°2,h10km±1km, mb4.8/17,Error ellipse: s-maj=28.6km s-min=6.2km az=104.0*

ISC 10 09:16:11.7±0.8,36.°2S±0.°1×17.°7W±0.°2,h10km,n37, σ0§47/24,mb4.8/9,Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
H09W1	**TRISTAN DA CUN**	**4.42**	**104**	T			T	09 21 43.5	
	SNR=118								
H09N1	**TRISTAN DA CUN**	**4.43**	**103**	T			T	09 21 45.6	
	SNR=31								
H10S2	**ASCENSION HYDR**	**27.24**	**7**	T			T	09 50 39.6	
	baz=185,slow=74,SNR=17								
H10S3	**ASCENSION HYDR**	**27.25**	**7**	T			T	09 50 39.0	
	baz=35,slow=74,SNR=18								
H10N1	**ASCENSION HYDR**	**28.36**	**7**	T			T	09 51 59.3	
	baz=189								
H10N3	**ASCENSION HYDR**	**28.36**	**7**	T			T	09 52 06.2	
	baz=189								
H10N2	**ASCENSION HYDR**	**28.37**	**7**	T			T	09 52 06.7	
	baz=189								
VNA1	**Neumayer--Stat**	**34.90**	**175**	P			**P**	**09 23 03.8**	**+0.8**
VNA2	**Neumayer--Watz**	**35.24**	**174**	P			**P**	**09 23 05.8**	**-0.2**
	baz=347,slow=8.8								
VNA3	**Neumayer Olymp**	**35.38**	**176**	P			**P**	**09 23 06.8**	**-0.4**
SNAA	**Sanae**	**36.40**	**172**	P			**P**	**09 23 15.8**	**-0.2**
SNAA	**Sanae**	**36.40**	**172**	P			**P**	**09 23 15.2**	**-0.7**
TROLL	**Troll, Antarti**	**37.39**	**170**	P			**P**	**09 23 25.0**	**+0.6**
USHA	**Ushuaia**	**39.13**	**225**	LR			LR	09 37 51.8	
	comp=Z,353nm,21.9s,baz=134,slow=33								
MG05	**Puerto Natales**	**41.38**	**230**	P			**P**	**09 23 58.6**	**+0.8**
BELA	**Belgrano 2**	**42.43**	**185**	P			**P**	**09 24 05.7**	**-0.4**
MT03	**Universidad Ad**	**42.98**	**258**	P			**P**	**09 24 11.3**	**+0.1**
BO01	**Tunca**	**43.15**	**256**	P			**P**	**09 24 12.1**	**-0.3**
BO01				IAmb			IAmb	09 24 20.4	
	comp=Z,30nm,1.4s								
MT01	**Popeta**	**43.44**	**257**	P			**P**	**09 24 14.9**	**0.0**
MT01				IAmb			IAmb	09 24 18.1	
	comp=Z,18nm,0.9s								
PB08	**IPOC Station P**	**47.55**	**275**	P			**P**	**09 24 47.7**	**-0.2**
PB08				IAmb			IAmb	09 24 55.9	
	comp=Z,11nm,1.2s								
GO01	**Chusmiza**	**47.82**	**276**	P			**P**	**09 24 49.8**	**-0.4**
PB11	**IPOC Station P**	**48.15**	**275**	P			**P**	**09 24 51.7**	**-0.7**
PB16	**IPOC Station P**	**48.77**	**277**	P			**P**	**09 24 57.7**	**0.0**
PB16				IAmb			IAmb	09 25 08.3	
	comp=Z,12nm,1.4s								
LPAZ	**La Paz**	**48.78**	**280**	P			**P**	**09 24 57.5**	**-0.3**
	comp=Z,0.9nm,0.8s,baz=90,slow=8.8,SNR=4.0 comp=Z,0.9nm,0.8s								
LPAZ	**La Paz**	**48.78**	**280**	P			**P**	**09 24 58.1**	**+0.3**
TOA0	**Torodi Ar. Sit**	**52.37**	**24**	P			**P**	**09 25 23.4**	**-0.7**
TOA0				IAmb			IAmb	09 25 40.0	
	comp=Z,8.5nm,1.2s								
TORD	**Torodi Ar. Bea**	**52.37**	**24**	P			**P**	**09 25 24.8**	**+0.7**
	comp=Z,2.7nm,1.0s,baz=192,slow=6.1,SNR=6.3 comp=Z,2.7nm,1.0s								
TORD	**Torodi Ar. Bea**	**52.37**	**24**	P			**P**	**09 25 24.2**	**+0.1**
QSPA	**South Pole Qui**	**54.07**	**180**	P			**P**	**09 25 35.9**	**-0.4**
QSPA				IAmb			IAmb	09 25 39.0	
	comp=Z,18nm,1.4s								
VNDA	**Vanda**	**66.57**	**180**	P			**P**	**09 27 01.8**	**+0.4**
	comp=Z,1.5nm,1.1s,baz=194,slow=4.2,SNR=4.1 comp=Z,1.5nm,1.1s								
VNDA	**Vanda**	**66.57**	**180**	IAmb			IAmb	09 27 02.8	
	comp=Z,10nm,1.6s								
MMAI	**Mount Meron Ar**	**84.88**	**42**	LR			LR	10 04 37.2	
	comp=Z,275nm,20.8s,baz=44,slow=34								
H01W2	**Cape Leeuwin H**	**96.25**	**142**	T			T	11 17 18.2	
	baz=219,slow=75,SNR=36								
H01W3	**Cape Leeuwin H**	**96.27**	**142**	T			T	11 17 19.1	
	baz=219,slow=75,SNR=41								
H01W1	**Cape Leeuwin H**	**96.27**	**142**	T			T	11 17 19.6	
	baz=219,slow=75,SNR=33								
YKA	**Yellowknife Ar**	**124.45**	**326**	PKP			**PKiKP**	**09 35 10.4**	**0.0**
	comp=Z,1.1nm,0.9s,baz=94,slow=2.1,SNR=7.2								
KLR	**Kul'dur**	**154.24**	**50**	PKPab			**PKPab**	**09 36 25.6**	**+0.1**
	comp=Z,1.4nm,0.9s,baz=310,slow=5.8,SNR=4.3								

*MOS **10** 09:26:50.3±1.0,7.°37S×13.°48W,h10km,mb5.7/89, MS5.1/35,Error ellipse: s-maj=7.1km s-min=4.2km az=66.0*

*IDC **10** 09:26:50.1±0.3,7.°41S×13.°55W,h0km,mb5.1/37, mbtmp5.0/37,MS5.0/67,Error ellipse: s-maj=12.7km s-min=9.3km az=138.0*

*NEIC **10** 09:26:53.2,7.°44S×13.°62W,h9km,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr0.26; Mθθ-1.39; Mφφ 1.13; Mrθ-0.18; Mθφ 1.44; Mφr0.80; Fault plane solution: Mo2.09000×10¹⁷ NP1:φs70.53000°, δ66.42000°, λ6.53000°. NP2:φs337.91000°, δ84.02000°, λ156.29000°. Principal axes: T 2.0299, Plg21.0000°, Azm292.0000°; N 0.1116, Plg66.0000°, Azm145.0000°; P -2.1415, Plg12.0000°, Azm26.0000°;*

*NEIC **10** 09:26:53.1±1.5,7.°46S±0.°07×13.°60W±0.°06,h10km±1km, mb5.9/605,Ms_20 5.3/345,Mwb5.5/25,Mww5.5 Error ellipse: s-maj=13.5km s-min=8.7km az=148.0*

*NEIC **10** 09:26:55,7.°46S×13.°58W,h12km,Moment Tensor Solution. Duration: 4§0 Moment tensor: Scale 10¹⁷Nm; Mrr-0.16; Mθθ-0.94; Mφφ 1.10; Mrθ-0.25; Mθφ 1.96; Mφr0.37;*

Fault plane solution: Mo2.26000×10¹⁷ NP1:φs76.00000°, δ79.00000°, λ-4.00000°. NP2:φs167.00000°, δ85.00000°, λ-168.00000°. Principal axes: T 2.3070, Plg4.0000°, Azm301.0000°; N -0.0923, Plg78.0000°, Azm190.0000°; P -2.2147, Plg11.0000°, Azm32.0000°;

*GCMT **10** 09:26:56.1±0.1,7.29S±0.01×13.46W±0.01,h17km, MW5.6/160,Moment Tensor Solution. s128,c225; s160,c326; Duration: 1§5 Moment tensor: Scale 10¹⁷ Nm; Mrr-0.44±.04; Mθθ-1.13±.03; Mφφ 1.57±.04; Mrθ-0.21±.09; Mθφ 2.67±.03; Mφr0.02±.09; Best double couple: Mo3.00000×10¹⁷ NP1:φs167.00000°, δ86.00000°, λ-178.00000°. NP2:φs76.00000°, δ88.00000°, λ-4.00000°. Principal axes: T 3.2140, Plg1.0000°, Azm122.0000°; N -0.4250, Plg85.0000°, Azm229.0000°; P -2.7870, Plg5.0000°, Azm32.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 09:26:51.8±0.2,7.°41S±0.°04×13.°54W±0.°04,h10km,n1537, σ1§36/1437,mb5.8/460,MS5.2/272,77C-23D,Ascension Island region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ASCN	**Ascension**	**0.97**	**238**				**Pg**	**09 27 08.3**	**-2.2**
I50GB	**ASCENSION ISLA**	**0.98**	**238**	Pn			**Pg**	**09 27 08.6**	**-2.2**
	baz=39,slow=48								
H10N2	**ASCENSION HYDR**	**1.03**	**246**	Pn			**Pb**	**09 27 10.1**	**-1.5**
H10N2				T			T	09 28 11.2	
	baz=76								
H10N1	**ASCENSION HYDR**	**1.03**	**245**	Pn			**Pb**	**09 27 10.1**	**-1.5**
H10N1				T			T	09 28 14.7	
	baz=76,slow=74								
H10N3	**ASCENSION HYDR**	**1.05**	**246**	Pn			**Pb**	**09 27 10.4**	**-1.5**
H10N3				T			T	09 28 17.6	
	baz=76,slow=74								
H10S2	**ASCENSION HYDR**	**1.89**	**215**	Pn			**Pn**	**09 27 21.6**	**-2.3**
H10S2				T			T	09 29 22.9	
	baz=201,slow=74								
H10S3	**ASCENSION HYDR**	**1.89**	**216**	Pn			**Pn**	**09 27 21.7**	**-2.3**
H10S3				T			T	09 29 24.3	
	baz=19,slow=74								
SHEL	**Horse Pasture**	**11.41**	**139**				**Pn**	**09 29 34.3**	**-0.8**
SHEL	**Horse Pasture**	**11.41**	**139**	P			**Pn**	**09 29 34.3**	**-0.8**
LIC	**Lamto**	**15.99**	**32**	*e*P			**Pn**	**09 30 36.2**	**-0.8**
	207nm,1.2s								
KIC	**Kosan Boka**	**16.25**	**33**	*e*P			**Pn**	**09 30 38.3**	**-2.1**
	148nm,1.0s								
TIC	**Toumodi**	**16.34**	**32**	*e*P			**Pn**	**09 30 38.5**	**-3.1**
	258nm,1.0s								
DBIC	**Dimbokro**	**16.45**	**32**	Pn			**Pn**	**09 30 39.6**	**-3.4**
	0.3nm,0.3s,baz=218,slow=11,SNR=15								
DBIC					Sn		**Sn**	**09 33 41.9**	**-3.8**
	0.2nm,0.3s,baz=218,slow=6.2,SNR=1.6								
DBIC					LR		LR	09 35 37.5	
	comp=Z,7µm,19.9s,baz=216,slow=32								
DBIC	**Dimbokro**	**16.45**	**32**	Pn			**Pn**	**09 30 42.5**	**-0.4**
DBIC	**Dimbokro**	**16.45**	**32**	P			**Pn**	**09 30 42.5**	**-0.4**
DBIC				pmax			pmax		
	comp=Z,85nm,1.1s								
MBO	**M'Bour**	**21.93**	**351**	P			**P**	**09 31 46.1**	**+0.6**
MBO				IAmb			IAmb	09 31 48.9	
	comp=Z,462nm,1.1s								
RCBR	**Riachuelo**	**22.27**	**273**	P			**P**	**09 31 48.4**	**-1.1**
	comp=Z,104nm,0.8s,baz=246,slow=9.1,SNR=32								
RCBR					S		**S**	**09 35 53.1**	**-1.7**
	comp=Z,3.8nm,0.4s,baz=335,slow=21,SNR=1.5								
RCBR					LR		LR	09 38 13.5	
	comp=Z,4µm,20.7s,baz=236,slow=31 comp=Z,104nm,0.8s								
RCBR	**Riachuelo**	**22.27**	**273**	P			**P**	**09 31 49.5**	**+0.1**
RCBR	**Riachuelo**	**22.27**	**273**	P			**P**	**09 31 49.5**	**+0.1**
RCBR				pmax			pmax		
	comp=Z,137nm,0.9s								
RCBR				MLR			MLR		
	comp=Z,4µm,19.0s								
SACV	**Santiago Islan**	**24.38**	**336**	P			**P**	**09 32 10.9**	**+0.4**
SACV				IAmb			IAmb	09 32 12.4	
	comp=Z,374nm,1.6s								
TOA0	**Torodi Ar. Sit**	**25.42**	**37**	P			**P**	**09 32 19.6**	**-0.3**
TOA0				IAmb			IAmb	09 32 23.3	
	comp=Z,181nm,1.2s								
TORD	**Torodi Ar. Bea**	**25.42**	**37**	P			**P**	**09 32 18.3**	**-1.6**
	comp=Z,126nm,1.1s,baz=215,slow=11,SNR=41								
TORD					S		**S**	**09 36 43.8**	**-3.1**
	comp=Z,2.0nm,1.1s,baz=324,slow=5.7,SNR=0.7								
TORD					LR		LR	09 40 48.2	
	comp=Z,4µm,21.8s,baz=196,slow=33 comp=Z,126nm,1.1s								
TORD	**Torodi Ar. Bea**	**25.42**	**37**	P			**P**	**09 32 18.8**	**-1.1**
TORD				IAmb			IAmb	09 32 23.3	
	comp=Z,189nm,1.3s								
TRIS	**Tristan da Cun**	**29.54**	**178**	P			**P**	**09 32 56.3**	**-0.4**
TSUM	**Tsumeb**	**32.41**	**114**	P			**P**	**09 33 22.0**	**-0.3**
	comp=Z,12nm,1.1s,baz=274,slow=11,SNR=8.2								
TSUM					LR		LR	09 43 49.3	
	comp=Z,7µm,21.1s,baz=314,slow=31 comp=Z,12nm,1.1s								
TSUM	**Tsumeb**	**32.41**	**114**	P			**P**	**09 33 23.0**	**+0.6**
TSUM	**Tsumeb**	**32.41**	**114**	IAMs_20		IAMs_20		09 43 36.8	
	comp=Z,7µm,21.0s								
BDFB	**Brasilia**	**34.72**	**253**	P			**P**	**09 33 42.6**	**+0.1**
	comp=Z,20nm,0.9s,baz=64,slow=9.7,SNR=20								
BDFB					LR		LR	09 45 03.2	
	comp=Z,2µm,20.7s,baz=85,slow=32 comp=Z,20nm,0.9s								
BDFB	**Brasilia**	**34.72**	**253**	P			**P**	**09 33 42.1**	**-0.4**
MACI	**Morro de la Ar**	**35.57**	**355**	P			**P**	**09 33 49.3**	**-0.4**
MACI				IAmb			IAmb	09 34 06.7	
	comp=Z,99nm,1.0s								
TTIG	**Tnine Tigouga,**	**38.06**	**7**	P			**P**	**09 34 14.0**	**+3.2**
ZGR	**Zagora**	**38.08**	**11**	P			**P**	**09 34 15.0**	**+4.0**
OUZM	**OUZ**	**38.65**	**9**	P			**P**	**09 34 17.0**	**+1.1**
OUK	**Oukaimeden**	**38.78**	**8**	P			**P**	**09 34 20.0**	**+2.8**
GOLM	**Goulmima**	**39.75**	**11**	P			**P**	**09 34 28.0**	**+3.0**
PMAR	**Madeira**	**40.04**	**356**	*e*P			**P**	**09 34 28.7**	**+1.2**
	comp=Z,241nm,1.3s								
PMOZ	**Porto Moniz, M**	**40.16**	**355**	*e*P			**P**	**09 34 29.6**	**+1.2**
	comp=Z,219nm,1.4s								
PMOZ				*e*S			**S**	**09 40 38.3**	**+3.1**
PMOZ	**Porto Moniz, M**	**40.16**	**355**	P			**P**	**09 34 28.0**	**-0.3**
PMPS	**Porto Santo**	**40.33**	**356**	*e*P			**P**	**09 34 31.1**	**+1.5**
	comp=Z,274nm,1.8s								
PMPST	**Porto Santo, M**	**40.35**	**356**	*e*P			**P**	**09 34 30.8**	**+1.0**
	comp=Z,290nm,1.5s								
SUR	**Sutherland**	**40.44**	**133**	P			**P**	**09 34 30.2**	**-0.7**
	comp=Z,19nm,1.0s,baz=307,slow=11,SNR=5.6								
SUR					LR		LR	09 48 01.8	
	comp=Z,4µm,19.4s,baz=294,slow=31 comp=Z,19nm,1.0s								
SUR	**Sutherland**	**40.44**	**133**	P			**P**	**09 34 31.1**	**+0.3**
SUR	**Sutherland**	**40.44**	**133**	IAMs_20		IAMs_20		09 47 51.7	
	comp=Z,5µm,20.0s								
MDT	**Midelt**	**40.90**	**12**	LR			LR	09 51 11.2	
	comp=Z,2µm,19.9s,baz=202,slow=36								
MDT	**Midelt**	**40.90**	**12**	P			**P**	**09 34 36.5**	**+2.1**
AVE	**Averroes**	**40.90**	**8**	P			**P**	**09 34 35.2**	**+0.8**
AVE				IAMs_20		IAMs_20		09 50 55.5	
	comp=Z,3µm,18.0s								
AVE	**Averroes**	**40.90**	**8**	P			**P**	**09 34 36.7**	**+2.3**
MDP	**Montagnes des**	**40.95**	**287**	LR			LR	09 48 45.5	
	comp=Z,697nm,21.8s,baz=106,slow=32								
FIGM	**Figuig**	**41.03**	**16**	P			**P**	**09 34 37.2**	**+1.6**
LBTB	**Lobatse**	**41.25**	**120**	P			**P**	**09 34 37.1**	**-0.5**
	comp=Z,9.8nm,1.1s,baz=280,slow=8.7,SNR=11								
LBTB					LR		LR	09 49 30.1	
	comp=Z,6µm,19.5s,baz=282,slow=33 comp=Z,9.8nm,1.1s								
LBTB	**Lobatse**	**41.25**	**120**	P			**P**	**09 34 37.9**	**+0.3**
LBTB	**Lobatse**	**41.25**	**120**	P			**P**	**09 34 37.9**	**+0.3**
LBTB				pmax			pmax		
	comp=Z,213nm,1.9s								
LSZ	**Lusaka**	**41.59**	**105**	LR			LR	09 49 09.1	
	comp=Z,4µm,21.0s,baz=289,slow=32								
LSZ	**Lusaka**	**41.59**	**105**	P			**P**	**09 34 40.5**	**0.0**
LSZ	**Lusaka**	**41.59**	**105**	IAMs_20		IAMs_20		09 48 57.1	
	comp=Z,4µm,20.0s								
LSZ	**Lusaka**	**41.59**	**105**	P			**P**	**09 34 40.5**	**0.0**
LSZ				pmax			pmax		
	comp=Z,36nm,1.3s								
TDRA	**Tendrara**	**41.69**	**15**	P			**P**	**09 34 43.0**	**+1.9**
LCRM	**LCR**	**41.69**	**11**	P			**P**	**09 34 43.1**	**+2.1**
BOSA	**Boshof**	**42.21**	**125**	P			**P**	**09 34 45.0**	**-0.4**
	comp=Z,37nm,1.1s,baz=288,slow=7.0,SNR=19								
BOSA					LR		LR	09 49 17.5	
	comp=Z,4µm,20.6s,baz=289,slow=32 comp=Z,37nm,1.1s								
BOSA	**Boshof**	**42.21**	**125**	P			**P**	**09 34 45.7**	**+0.3**
BOSA	**Boshof**	**42.21**	**125**	P			**P**	**09 34 45.0**	**-0.4**
MATP	**Matopo**	**42.66**	**112**	LR			LR	09 50 36.3	
	comp=Z,4µm,19.1s,baz=257,slow=33								
AKLM	**AKL**	**42.69**	**12**	P			**P**	**09 34 51.0**	**+2.0**
JBK	**JBK**	**42.80**	**13**	P			**P**	**09 34 51.3**	**+1.2**
CHEFC	**Chefchaouen**	**42.99**	**10**	P			**P**	**09 34 54.0**	**+2.4**
PLTB	**Pedras Altas**	**44.47**	**232**	P			**P**	**09 35 02.3**	**-1.2**
PFVI	**Vila Bisbo**	**44.53**	**5**	*e*P			**P**	**09 35 04.5**	**+0.7**
	comp=Z,112nm,1.9s								
PFVI	**Vila Bisbo**	**44.53**	**5**	P			**P**	**09 35 03.7**	**-0.1**
PFVI				IAmb			IAmb	09 35 05.8	
	comp=Z,146nm,1.5s								
MBAR	**Mbarara**	**44.65**	**83**	LR			LR	09 52 11.9	
	comp=Z,4µm,18.2s,baz=240,slow=34								
MBAR	**Mbarara**	**44.65**	**83**	P			**P**	**09 35 06.9**	**+1.5**
MBAR	**Mbarara**	**44.65**	**83**	*i*P			**P**	**09 35 07.8**	**+2.4**
MBAR				pmax			pmax		
	comp=Z,117nm,1.6s								
MBAR				MLR			MLR		
	comp=Z,465nm,16.0s								
MORF	**Marmelete**	**44.72**	**6**	*e*P			**P**	**09 35 06.3**	**+1.0**
MORF				IAmb			IAmb	09 35 07.3	
	comp=Z,132nm,1.3s								
MORF				*e*S			**S**	**09 41 44.6**	**+2.4**
MORF	**Marmelete**	**44.72**	**6**	*e*P			**P**	**09 35 06.5**	**+1.2**
	comp=Z,113nm,1.3s								
MORF				*e*S			**S**	**09 41 48.7**	**+6.5**
MORF	**Marmelete**	**44.72**	**6**	*e*P			**P**	**09 35 06.3**	**+1.0**
MORF				*e*S			**S**	**09 41 44.5**	**+2.4**
PBDV	**Barranco-do-Ve**	**44.73**	**6**	*e*P			**P**	**09 35 06.5**	**+1.1**
	comp=Z,105nm,1.4s								
PBDV				*e*S			**S**	**09 41 49.9**	**+7.6**
PVAQ	**Vaqueiros**	**44.91**	**7**	*e*P			**P**	**09 35 07.6**	**+0.8**
	comp=Z,59nm,1.6s								
PVAQ				*e*S			**S**	**09 41 49.7**	**+4.8**
PTEO	**Sao Teotonio**	**44.95**	**5**	*e*P			**P**	**09 35 08.1**	**+1.0**
	comp=Z,264nm,1.6s								
PCVE	**Castro Verde**	**45.10**	**6**	*e*P			**P**	**09 35 10.0**	**+1.7**
	comp=Z,61nm,1.7s								
MESJ	**Messejana**	**45.29**	**6**	*e*P			**P**	**09 35 10.8**	**+0.9**
MESJ				IAmb			IAmb	09 35 12.9	
	comp=Z,38nm,1.4s								
MESJ				*e*S			**S**	**09 41 52.6**	**+2.2**
MESJ	**Messejana**	**45.29**	**6**	*e*P			**P**	**09 35 10.7**	**+0.9**
	comp=Z,59nm,1.7s								
MESJ	**Messejana**	**45.29**	**6**	*e*P			**P**	**09 35 10.7**	**+0.9**
MESJ				*e*S			**S**	**09 41 52.5**	**+2.2**
PBEJ	**Beja**	**45.51**	**6**	*e*P			**P**	**09 35 12.3**	**+0.7**
	comp=Z,56nm,1.9s								
PNCL	**Nicolau / Gran**	**45.53**	**6**	*e*P			**P**	**09 35 12.9**	**+1.2**
	comp=Z,98nm,1.9s								
PNCL				*e*S			**S**	**09 42 00.3**	**+6.6**
CPUP	**Villa Florida**	**45.65**	**240**	P			**P**	**09 35 12.8**	**-0.2**
	comp=Z,8.2nm,0.7s,baz=95,slow=6.9,SNR=15								
CPUP					PcP		**PcP**	**09 36 50.4**	**-0.8**
	comp=Z,2.9nm,0.9s,baz=90,slow=3.0,SNR=3.0								
CPUP					LR		LR	09 51 05.0	
	comp=Z,968nm,19.2s,baz=80,slow=32 comp=Z,8.2nm,0.7s								
CPUP	**Villa Florida**	**45.65**	**240**	P			**P**	**09 35 13.9**	**+0.9**
CPUP	**Villa Florida**	**45.65**	**240**	P			**P**	**09 35 13.9**	**+0.9**
CPUP				pmax			pmax		
	comp=Z,81nm,2.0s								
PBAR	**Barrancos**	**45.75**	**7**	*e*S			**S**	**09 42 04.8**	**+7.8**
EVO	**Evora**	**46.00**	**6**	*e*P			**P**	**09 35 16.3**	**+0.9**
	comp=Z,83nm,1.7s								
LIS	**Lisbon**	**46.07**	**5**	*e*P			**P**	**09 35 17.0**	**+1.0**
LIS				IAmb			IAmb	09 35 18.0	
	comp=Z,142nm,1.0s								
LIS	**Lisbon**	**46.07**	**5**	*e*P			**P**	**09 35 16.9**	**+1.0**
ITQB	**Itaqui**	**46.09**	**236**	P			**P**	**09 35 16.3**	**-0.1**
CART	**Cartagena**	**46.27**	**14**	P			**P**	**09 35 18.2**	**+0.7**
CART				IAmb			IAmb	09 35 19.1	
	comp=Z,60nm,0.8s								
CART	**Cartagena**	**46.27**	**14**	P			**P**	**09 35 18.5**	**+0.9**
PMAFR	**Mafra**	**46.30**	**5**	*e*P			**P**	**09 35 19.5**	**+1.7**
PMAFR				*e*S			**S**	**09 42 09.7**	**+4.8**
CMLA	**Cha da Macela**	**46.31**	**347**	P			**P**	**09 35 17.8**	**-0.1**
CMLA				IAmb			IAmb	09 35 22.4	
	comp=Z,118nm,1.0s								
CMLA	**Cha da Macela**	**46.31**	**347**	P			**P**	**09 35 17.8**	**-0.1**
CMLA				pmax			pmax		
	comp=Z,118nm,1.0s								
PESTR	**Estremoz**	**46.37**	**6**	*e*P			**P**	**09 35 19.5**	**+1.1**
	comp=Z,51nm,1.6s								
PESTR				*e*S			**S**	**09 42 11.2**	**+5.3**
PESTR	**Estremoz**	**46.37**	**6**	P			**P**	**09 35 19.3**	**+0.9**
PSBE	**So Bento**	**46.90**	**5**	*e*S			**S**	**09 42 20.2**	**+6.8**
PMRV	**Marv??o**	**46.95**	**7**	*e*P			**P**	**09 35 23.8

KMBO **Kilima Mbogo** 51.00 85⇑ *e*P P **09 35 57.1 +2.4**
CLTB **Caltabellotta** 51.26 27 P P **09 35 57.8 +1.7**
VSL **Villasalto** 51.27 23 P P **09 35 57.0 +1.0**
VSL IAmb IAmb 09 36 45.9
comp=Z,137nm,0.6s
GCMP **Grenada, Carri** 51.54 292 *e*P P 09 35 48.8 -10
KIBK **Kibwezi** 51.61 87 P P **09 35 60.0 +0.8**
KIBK IAMs_20 IAMs_20 09 55 22.6
comp=Z,2µm,18.0s
GRGR **Grenville** 51.63 292 P P **09 35 58.8 -0.4**
GRGR **Grenville** 51.63 292 *e*P P 09 35 48.8 -10
H05S1 **Guadeloupe/Mar** 51.69 295 T T 10 31 31.9
SNR=33
MPOM **Morne Pois Mar** 51.72 295 P P **09 35 59.7 0.0**
MPOM IAmb IAmb 09 36 02.1
comp=Z,133nm,0.9s
MPOM **Morne Pois Mar** 51.72 295 *e*P P **09 35 58.1 -1.6**
VAE **Valguarnera** 51.73 28 LR LR 09 57 30.4
comp=Z,3µm,18.0s,baz=171,slow=36
BIM **Bigot** 51.94 295 P P **09 36 00.8 -0.6**
BIM IAmb IAmb 09 36 04.1
comp=Z,191nm,1.2s
FDF **Fort de France** 52.09 295 P P **09 36 03.1 +0.5**
FDF IAmb IAmb 09 36 06.3
comp=Z,221nm,1.3s
FDF **Fort de France** 52.09 295 P P **09 36 03.1 +0.5**
FDF pmax pmax
comp=Z,221nm,1.3s
FDF **Fort de France** 52.09 295 *e*P P **09 36 02.8 +0.2**
DSLB **Salisbury** 52.59 296 *e*P P 09 36 11.8 +5.5
H05N1 **Guadeloupe/Mar** 52.60 297 T T 10 32 29.7
SNR=5.2
GDSD **La Dsirade Is** 52.61 297 P P **09 36 07.0 +0.6**
GDSD IAmb IAmb 09 36 08.5
comp=Z,159nm,1.0s
MAGL **Barre de l'ile** 52.66 296 *e*P P 09 35 58.1 -8.6
TDBA **Terre de Bas,** 52.94 296 P P **09 36 07.7 -1.1**
TDBA **Terre de Bas,** 52.94 296 *e*P P **09 36 07.4 -1.4**
ABD **La Joyeuse, An** 53.05 297 *e*P P 09 36 01.1 -8.5
CEL **Celeste** 53.06 29 P P **09 36 09.2 -0.3**
CEL IAMs_20 IAMs_20 09 58 44.9
comp=Z,2µm,20.0s
GDHS **Morne Mazeau,** 53.21 297 P P **09 36 10.3 -0.6**
ANBD **Bethesda, Anti** 53.51 297 *e*P P 09 36 07.4 -5.6
ANWB **Willy Bob** 53.77 298 P P **09 36 14.1 -0.8**
ANWB IAmb IAmb 09 36 17.0
comp=Z,182nm,1.3s
ANWB **Willy Bob** 53.77 298 *e*P P **09 36 12.1 -2.8**
LPAZ **La Paz** 54.02 255 P P **09 36 17.6 +0.1**
comp=Z,9.7nm,0.6s,baz=85,slow=5.3,SNR=46
LPAZ LR LR 09 59 43.4
comp=Z,942nm,19.4s,baz=89,slow=36
comp=Z,9.7nm,0.6s
LPAZ **La Paz** 54.02 255 P P **09 36 16.9 -0.6**
LPAZ **La Paz** 54.02 255⇑ *e*P P **09 36 17.7 +0.1**
TIP **Timpagrande** 54.20 29 ⇑P P **09 36 17.4 -0.4**
TIP **Timpagrande** 54.20 29 P P **09 36 18.4 +0.7**
MRA **San Martin** 54.36 235 *i*P P **09 36 19.1 -0.1**
CUC **Castrocucco** 54.40 28 P P **09 36 19.1 -0.1**
AF01 **San Pedro de A** 54.64 247 P P **09 36 20.3 -1.3**
CASP **Castiglione de** 54.68 22 P P **09 36 21.3 +0.1**
CASP IAmb IAmb 09 36 22.5
comp=Z,77nm,0.9s
PAOL **Paolisi** 54.69 26 P P **09 36 22.2 +0.9**
LATE **Laterza** 54.88 23 P P **09 36 23.3 +0.6**
LATE IAmb IAmb 09 36 24.6
comp=Z,169nm,1.2s
SSB **Saint Sauveur** 54.91 16 P P **09 36 23.3 +0.5**
SSB IAmb IAmb 09 36 24.8
comp=Z,124nm,1.8s
SSB **Saint Sauveur** 54.91 16 IAMs_20 IAMs_20 09 59 28.4
comp=Z,2µm,20.0s
SSB **Saint Sauveur** 54.91 16 P P **09 36 23.3 +0.5**
SSB pmax pmax
comp=Z,124nm,1.8s
SSB MLR MLR
comp=Z,2µm,20.0s
GVD **Gavdhos** 55.02 38 P P **09 36 24.3 +0.5**
GVDS **Gavdos** 55.03 38 P P **09 36 23.8 0.0**
GO01 **Chusmiza** 55.24 251 P P **09 36 25.3 -0.9**
PB08 **IPOC Station P** 55.24 251 P P **09 36 25.3 -0.8**
LVC **Limon Verde** 55.27 248 LR LR 10 00 04.3
comp=Z,703nm,18.4s,baz=92,slow=36
AQU **L'Aquila** 55.30 24 P P **09 36 26.9 +1.3**
AQU IAmb IAmb 09 36 30.5
comp=Z,113nm,1.1s
AQU **L'Aquila** 55.30 24 P P **09 36 26.9 +1.3**
AQU pmax pmax
comp=Z,113nm,1.1s
AQU MLR MLR
comp=Z,3µm,20.0s
BNI **Bardonecchia** 55.30 17 P P **09 36 26.8 +1.0**
BNI **Bardonecchia** 55.30 17 P P **09 36 26.8 +1.0**
BNI pmax pmax
comp=Z,49nm,1.1s
KTHR **Kythira** 55.35 36 P P **09 36 27.1 +1.0**
ITM **Ithomi** 55.39 34 P P **09 36 27.1 +0.7**
BIRV **Birongo** 55.42 288 P P **09 36 26.4 -0.7**
BIRV IAmb IAmb 09 36 30.1
comp=Z,113nm,1.1s
PB16 **IPOC Station P** 55.44 253 P P **09 36 27.6 -0.2**
OSSC **Osservatorio P** 55.46 22 P P **09 36 27.2 +0.5**
OSSC IAmb IAmb 09 36 35.4
comp=Z,97nm,1.4s
PB09 **IPOC Station P** 55.48 249 P P **09 36 27.6 0.0**
MSSA **Maissana** 55.54 20 P P **09 36 27.4 0.0**
MSSA IAmb IAmb 09 36 29.2
comp=Z,139nm,1.4s
FSK **Fiskardo** 55.57 32 P P **09 36 28.6 +1.0**
NRCA **Norcia** 55.58 24 P P **09 36 27.8 0.0**
VLI **Veliai** 55.63 35 P P **09 36 29.6 +1.5**
PB01 **IPOC Station P** 55.64 250 P P **09 36 27.3 -1.3**
PB11 **IPOC Station P** 55.68 251 P P **09 36 28.3 -0.7**
VLC **Villacollemand** 55.70 21 P P **09 36 28.1 -0.4**
VLC IAMs_20 IAMs_20 09 59 51.5
comp=Z,2µm,20.0s
IDI **Anoyia** 55.81 38 ⇓P P **09 36 29.4 -0.1**
IDI **Anoyia** 55.81 38 LR LR 10 00 32.8
comp=Z,940nm,21.9s,baz=237,slow=36
IDI **Anoyia** 55.81 38 P P **09 36 30.6 +1.1**
IDI **Anoyia** 55.81 38 P P **09 36 30.2 +0.7**
IDI IAmb IAmb 09 36 36.0
comp=Z,101nm,1.1s
PB15 **IPOC Station P** 55.85 247 P P **09 36 29.7 -0.6**
PB06 **IPOC Station P** 55.89 248 P P **09 36 29.4 -1.0**
PB02 **IPOC Station P** 56.04 249 P P **09 36 32.2 +0.7**
PB02 IAmb IAmb 09 36 33.4
comp=Z,94nm,1.2s
AC02 **Maricunga** 56.06 243 P P **09 36 33.0 +0.9**
PB07 **IPOC Station P** 56.07 249 P P **09 36 32.4 +0.5**
PB07 IAmb IAmb 09 36 33.4
comp=Z,243nm,1.9s
ZCCA **Zocca** 56.08 21 P P **09 36 32.0 +0.7**
KLV **Kalavryta, Ach** 56.13 34 P P **09 36 33.2 +1.5**
GUR **Goura** 56.16 34 P P **09 36 32.8 +0.8**
TA02 **Huaiquique** 56.17 251 P P **09 36 32.2 -0.1**
TA02 IAmb IAmb 09 36 33.1
comp=Z,177nm,1.7s
LAKA **Lakka** 56.17 33 P P **09 36 33.8 +1.8**
PRMA **PARMA** 56.20 20 P P **09 36 32.6 +0.6**
PRMA IAmb IAmb 09 36 33.1
comp=Z,79nm,0.9s
GO02 **Mina Guanaco** 56.22 245 P P **09 36 32.9 -0.1**
GO02 IAmb IAmb 09 36 35.2
comp=Z,116nm,0.9s
AP01 **Chacalluta** 56.24 253 P P **09 36 32.4 -0.3**
PATCX **Punta Patache** 56.24 250 P P **09 36 32.9 0.0**
PATCX IAmb IAmb 09 36 34.6
comp=Z,102nm,1.2s
PB12 **IPOC Station P** 56.24 253 P P **09 36 31.9 -1.0**
PB12 IAmb IAmb 09 36 33.4
comp=Z,172nm,1.3s
TA01 **Diego Aracena** 56.24 250 P P **09 36 32.5 -0.3**
IGT **Igoumenitsa** 56.25 31 P P **09 36 33.0 +0.5**
EFP **Efpalio** 56.27 33 P P **09 36 33.7 +1.1**
SRN **Sarande** 56.34 31 P P **09 36 37.7 +4.6**
SERG **Sergoula** 56.34 33 P P **09 36 34.7 +1.5**
PB04 **IPOC Station P** 56.38 248 P P **09 36 33.7 -0.3**
PB04 IAmb IAmb 09 36 35.7
comp=Z,68nm,1.0s
EVR **Evrytania** 56.57 33 P P **09 36 36.3 +1.4**
ZON **Zonda** 56.59 237 P P **09 36 35.5 +0.3**
ZON **Zonda** 56.59 237 P P **09 36 35.5 +0.3**
ZON pmax pmax
comp=Z,88nm,1.8s
ACDV **Cuesta del Vie** 56.67 239 *i*P P **09 36 36.9 +1.0**
SENIN **Lac Senin/Sane** 56.67 17 P P **09 36 35.4 -0.2**
BAUV **El Baul** 56.69 286 P P **09 36 36.4 +0.3**
ACCO **Cerro Coronel** 56.71 238 *i*P P **09 36 37.1 +0.7**
STVI **Saint Thomas** 56.82 297 P P **09 36 37.5 +0.7**
STVI IAmb IAmb 09 36 38.7
comp=Z,102nm,1.1s
LSK **Leskovik** 56.85 31 P P **09 36 37.9 +1.1**
VILL **Villia** 56.86 34 P P **09 36 37.3 +0.4**
PB14 **IPOC Station P** 56.88 246 P P **09 36 36.4 -1.3**
VLY **Voula,Athens** 56.91 35 P P **09 36 37.6 +0.4**
CLF **Chambon-Foret** 56.93 13 P P **09 36 37.9 +0.8**
CLF IAmb IAmb 09 36 39.1
comp=Z,128nm,1.2s
ASAL **Salagasta** 56.95 236 *i*P P **09 36 38.5 +0.7**
AROD **Rodeo** 56.97 239 *i*P P **09 36 39.7 +1.4**
ATHU **Athens Univers** 56.98 35 P P **09 36 38.1 +0.3**
SALO **Salr** 57.02 20 P P **09 36 37.3 -0.6**
LKR **Lokris** 57.03 34 P P **09 36 37.3 -0.7**
AAGR **Agrelo** 57.06 235 *i*P P **09 36 39.8 +1.2**
ATAL **Atalanti** 57.07 34 P P **09 36 38.8 +0.5**
PTL **Penteli** 57.09 35 P P **09 36 39.2 +0.7**
ARCO **CERRO ARCO** 57.09 236 *i*P P **09 36 39.7 +0.8**
KPRO **Kipourio** 57.09 32 P P **09 36 40.3 +1.7**
DION **Dionisos Attik** 57.15 35 P P **09 36 39.6 +0.7**
THL **Klokotos Trika** 57.15 32 P P **09 36 39.3 +0.4**
RTLS **Leoncito** 57.16 237 *i*P P **09 36 41.1 +1.5**
GO03 **Copiap** 57.16 242 P P **09 36 37.9 -1.4**
TEOL **Teolo** 57.20 21 P P **09 36 38.3 -0.8**
AC06 **Mina Casimiro** 57.23 242 P P **09 36 39.9 +0.2**
MTP **Monte Pirata** 57.25 297 P P **09 36 40.3 +0.3**
MTP IAmb IAmb 09 36 41.8
comp=Z,97nm,1.2s
AC01 **Pan de Azucar** 57.26 244 P P **09 36 39.8 -0.2**
EFI **East Falkland** 57.28 211⇑ *e*P P **09 36 39.8 +0.2**
EFI pmax pmax
comp=Z,129nm,1.3s
EFI MLR MLR
comp=Z,556nm,15.0s
AUSP **Uspallata** 57.33 236 *i*P P **09 36 41.9 +1.2**
TIR **Tirane** 57.38 29 IAMs_20 IAMs_20 10 02 19.3
comp=Z,2µm,18.0s
KARP **Karpathos** 57.38 39 P P **09 36 40.8 +0.1**
KARP IAmb IAmb 09 36 51.7
comp=Z,131nm,1.0s
TUE **Stuetta** 57.39 19 P P **09 36 39.9 -0.8**
CO01 **Juntas del Tor** 57.46 239 P P **09 36 42.2 +0.6**
CBYP **Canovanas** 57.58 297 P P **09 36 42.0 -0.4**
KYMI **Kymi, Euboea I** 57.63 34 P P **09 36 42.8 +0.5**
PDPR **Patillas Dam,** 57.64 297 P P **09 36 42.7 0.0**
XOR **Xorichti** 57.64 33 P P **09 36 42.5 +0.1**
DRME **Dracevica, Mon** 57.70 28 *e*P P **09 36 44.1 +1.4**
FNA **Florina** 57.71 31 P P **09 36 43.4 +0.5**
FNA **Florina** 57.71 31 P P **09 36 43.4 +0.5**
FNA **Florina** 57.71 31 P P **09 36 43.4 +0.5**
FNA pmax pmax
comp=Z,27nm,1.2s
CTI **Castel Tesino** 57.78 21 P P **09 36 43.2 -0.2**
CTI **Castel Tesino** 57.78 21 P P **09 36 43.2 -0.2**
CTI pmax pmax
comp=Z,48nm,1.0s
SJG **San Juan** 57.78 297 LR LR 09 55 52.5
comp=Z,1µm,21.6s,baz=96,slow=30
SJG **San Juan** 57.78 297 P P **09 36 43.2 -0.5**
SJG **San Juan** 57.78 297 P P **09 36 43.2 -0.5**
SJG pmax pmax
comp=Z,27nm,0.8s
SJG **San Juan** 57.78 297 *e*P P **09 36 42.7 -1.0**
LIT **Litokhoron** 57.79 32 P P **09 36 43.6 +0.2**
LIT **Litokhoron** 57.79 32 P P **09 36 43.6 +0.2**
LIT **Litokhoron** 57.79 32 P P **09 36 43.6 +0.2**
LIT pmax pmax
comp=Z,26nm,0.7s
GCPR **Guaynabo City** 57.80 297 P P **09 36 43.5 -0.3**
GCPR IAmb IAmb 09 36 45.5
comp=Z,72nm,0.9s
LCO **Las Campanas** 57.80 240 P P **09 36 43.8 -0.3**
LCO **Las Campanas** 57.80 240 P P **09 36 43.8 -0.3**
LCO pmax pmax
comp=Z,116nm,1.8s
DAVOX **Davos/Dischmat** 57.84 19 LR LR 10 02 01.0
comp=Z,3µm,18.3s,baz=224,slow=36
PDG **Podgorica** 57.92 28 ⇑P P **09 36 44.7 +0.5**
PDG **Podgorica** 57.92 28 P P **09 36 45.1 +0.8**
PDG **Podgorica** 57.92 28 *e*P P **09 36 44.1 -0.1**
ICMP **Isla Caja de M** 58.04 296 P P **09 36 45.8 +0.3**
ICMP IAmb IAmb 09 36 47.3
comp=Z,167nm,1.4s
GO04 **Tololo Observa** 58.09 239 P P **09 36 46.5 +0.3**
ORCD **Orcadas** 58.10 197 P P **09 36 45.2 0.0**
CO03 **El Pedregal** 58.13 238 P P **09 36 46.3 +0.1**
CELP **Cerrillos** 58.15 297 P P **09 36 46.0 -0.3**
CELP IAmb IAmb 09 36 47.9
comp=Z,170nm,1.4s
OBIP **Obispado Ponce** 58.16 296 P P **09 36 47.0 +0.6**
OBIP IAmb IAmb 09 36 48.1
comp=Z,156nm,1.4s
SKDS **Skadanscina** 58.22 22⇑ *i*P P **09 36 46.6 +0.3**
TRI **Trieste** 58.26 22 P P **09 36 46.8 +0.2**
TRI IAmb IAmb 09 36 48.4
comp=Z,285nm,2.0s
TRI **Trieste** 58.26 22 P P **09 36 46.8 +0.2**
TRI pmax pmax
comp=Z,285nm,2.0s
DAVA **Damuels** 58.28 19 *i*P P **09 36 46.4 -0.5**
comp=Z,98nm,1.1s,SNR=27
ECH **Echery** 58.32 16 P P **09 36 46.5 -0.4**
ECH IAMs_20 IAMs_20 10 02 14.6
comp=Z,2µm,19.0s
ECH **Echery** 58.32 16 P P **09 36 46.5 -0.4**
ECH pmax pmax
comp=Z,55nm,1.4s
ECH MLR MLR
comp=Z,2µm,19.0s
FETA **Feichten** 58.32 19 *i*P P **09 36 46.8 -0.4**
comp=Z,79nm,1.2s,SNR=32
STAL **STALIGIAL** 58.34 21 P P **09 36 47.4 +0.2**
GRG **Griva** 58.37 31 P P **09 36 49.7 +2.2**
VA03 **San Esteban** 58.40 236 P P **09 36 48.1 0.0**
AOPR **Arecibo Observ** 58.41 297 P P **09 36 48.4 +0.2**
AOPR IAmb IAmb 09 36 49.4
comp=Z,180nm,1.1s
MGRS **Mrkonjic Grad** 58.52 25 *e*P P **09 36 48.5 0.0**
MLPR **Magueyes Islan** 58.53 296 P P **09 36 49.1 +0.2**
MLPR IAmb IAmb 09 36 50.5
comp=Z,115nm,1.2s
CEY **Cerknica** 58.53 23⇑ *i*P P **09 36 48.8 +0.3**
SMG **Samos** 58.59 37 P P **09 36 49.2 +0.1**
PEL **Peldehue** 58.59 236 P P **09 36 49.9 +0.6**
PEL **Peldehue** 58.59 236 P P **09 36 49.9 +0.6**
PEL pmax pmax
comp=Z,39nm,0.7s
CRPR **Cabo Rojo, PR** 58.60 296 P P **09 36 49.2 -0.2**
SQTA **Sankt Quirin** 58.66 20 *i*P P **09 36 49.0 -0.5**
comp=Z,154nm,1.3s,SNR=38
BOJS **Bojanci** 58.66 23 *i*P P **09 36 50.2 +0.8**
BOJS *i*S S **09 44 56.5 +2.6**
ABTA **Abfaltersbach** 58.69 21 *i*P P **09 36 50.2 +0.5**
comp=Z,41nm,0.7s,SNR=25
MT05 **Renca** 58.69 235 P P **09 36 50.0 0.0**
MT05 IAmb IAmb 09 36 51.5
comp=Z,44nm,0.8s
BO04 **La Punta** 58.72 235 P P **09 36 50.4 +0.3**
MOTA **Moosalm** 58.73 19 *i*P P **09 36 49.3 -0.7**
comp=Z,83nm,1.1s,SNR=26
RETA **Reutte** 58.74 19 *i*P P **09 36 49.4 -0.7**
comp=Z,41nm,0.9s,SNR=20
BFO **Black Forest** 58.75 17 P P **09 36 49.7 -0.3**
BFO IAmb IAmb 09 36 50.9
comp=Z,82nm,1.3s
BFO IAMs_20 IAMs_20 10 02 16.1
comp=Z,2µm,18.0s
BFO **Black Forest** 58.75 17 P P **09 36 49.7 -0.3**
BFO pmax pmax
comp=Z,82nm,1.3s
BFO MLR MLR
comp=Z,2µm,18.0s
OUR **Ouranopolis** 58.76 33 P P **09 36 51.0 +0.9**
SOH **Sokhos** 58.77 32 P P **09 36 50.8 +0.5**
BLY **Banja Luka** 58.83 25⇑ *i*P P **09 36 50.9 +0.3**
LJU **Ljubljana** 58.83 23 *e*P P **09 36 51.2 +0.7**
LJU **Ljubljana** 58.83 23 *i*P P **09 36 51.3 +0.7**
LJU *i*S S **09 44 58.7 +2.6**
WTTA **Wattenberg** 58.84 20 *i*P P **09 36 50.6 -0.2**
comp=Z,136nm,1.0s,SNR=30
WATA **Walderalm** 58.88 20 *i*P P **09 36 50.8 -0.3**
comp=Z,92nm,1.3s,SNR=12
SJES **Sjenica** 58.90 28⇑ *i*P P **09 36 51.9 +0.7**
MT09 **Talagante** 58.98 235 P P **09 36 52.3 +0.2**
MT02 **Curacav** 58.99 236 P P **09 36 52.5 +0.5**
MYKA **Terra Mystica** 58.99 22 *i*P P **09 36 52.4 +0.6**
comp=Z,24nm,1.0s,SNR=8.8
CRES **Cresnjev** 59.01 23⇑ *i*P P **09 36 52.2 +0.4**
SIGR **SIGRI** 59.02 35 P P **09 36 52.9 +0.9**
BBLS **Lazići** 59.10 27 *e*P P **09 36 53.2 +0.6**
SRS **Serrai** 59.10 32 P P **09 36 53.1 +0.5**
KOKK **Kokkinochori,** 59.11 33 P P **09 36 53.0 +0.4**
LIA **Limnos Island** 59.11 34 P P **09 36 53.0 +0.4**
ATD **Arta Tunnel** 59.16 72 LR LR 10 01 27.5
comp=Z,993nm,19.9s,baz=246,slow=35
SDV **Santo Domingo** 59.16 285 LR LR 10 00 05.7
comp=Z,1µm,20.8s,baz=108,slow=34
BO01 **Tunca** 59.20 234 P P **09 36 53.6 +0.2**
MT01 **Popeta** 59.21 235 P P **09 36 53.7 +0.2**
OBKA **Obir** 59.23 22 *i*P P **09 36 54.0 +0.6**
comp=Z,37nm,1.2s,SNR=13
KBA **Koelnbreinsper** 59.27 21 *i*P P **09 36 53.9 +0.1**
comp=Z,27nm,1.0s,SNR=12
PRK **Paraskevi** 59.28 35 P P **09 36 55.8 +2.0**
THAS **Thassos island** 59.35 33 P P **09 36 54.9 +0.7**
KKB **Krupnik** 59.38 31 P P **09 36 55.9 +1.4**
WLF **Walferdange** 59.38 15 *b*P P **09 36 54.6 +0.3**
STU **Stuttgart** 59.40 17 P P **09 36 54.7 +0.3**
STU **Stuttgart** 59.40 17 P P **09 36 54.7 +0.3**
STU pmax pmax
comp=Z,30nm,0.8s
STU MLR MLR
comp=Z,1µm,20.0s
DOU **Dourbes** 59.41 13 *d*P P **09 36 54.1 -0.4**
comp=Z,22nm,1.2s
EIL **Elat** 59.41 49 LR LR 10 01 04.4
comp=Z,1µm,21.3s,baz=240,slow=35
NVR **Nevrokopi** 59.41 32 P P **09 36 55.4 +0.7**
KAVA **Kavala** 59.51 33 P P **09 36 55.4 +0.1**
MMB **Musomiste** 59.51 32 P P **09 36 56.9 +1.5**
DIVS **Divibare** 59.55 27⇑ *i*P P **09 36 56.4 +0.7**
SOKA **Soboth** 59.55 22 *i*P P **09 36 56.2 +0.6**
comp=Z,42nm,0.9s,SNR=30
SWN1 **Swindon** 59.55 8 *e*P P **09 36 56.0 +0.5**
SWN1 IAmb IAmb 09 36 56.7
comp=Z,299nm,1.2s
PTGC **Puerto Gaitan,** 59.60 279 *e*P P **09 36 55.3 -1.3**
RCHB **Rochefort** 59.61 14 *d*P P **09 36 55.7 -0.1**
comp=Z,15nm,1.0s
RSBS **Rosebush, Pemb** 59.61 6 *e*P P **09 36 55.1 -0.7**
RSBS IAmb IAmb 09 36 56.1
comp=Z,33nm,0.9s
BMRD **Maredsous** 59.64 13 *d*P P **09 36 55.7 -0.3**
comp=Z,13nm,1.0s
TAMC **Tame, Arauca** 59.72 282 *e*P P **09 36 58.1 +0.8**
SNF **Seneffe** 59.72 13 *d*P P **09 36 57.3 +0.7**
MONM **Monmouth** 59.73 8⇑ *e*P P **09 36 56.4 -0.2**
VOI **Vohitsoka** 59.77 111 P P **09 36 56.6 -1.1**
VOI IAMs_20 IAMs_20 09 59 40.0
comp=Z,2µm,20.0s
ML02 **Panimavida** 59.77 233 IAmb IAmb 09 36 58.6
comp=Z,44nm,0.8s
BGES **Gesves** 59.79 14 *d*P P **09 36 56.7 -0.4**
comp=Z,20nm,0.9s
KOGS **Kog** 59.83 23 *i*P P **09 36 58.2 +0.8**
IWEX **Carrickbyrne,** 59.83 5 *e*P P **09 36 57.3 0.0**
MCH1 **Michaelchurch** 59.86 8⇑ *e*P P **09 36 57.0 -0.6**
MCH1 IAmb IAmb 09 36 57.7
comp=Z,54nm,0.9s
BIOA **Bad Ischl, Aus** 59.90 21 *i*P P **09 36 57.0 -0.9**
comp=Z,14nm,0.6s,SNR=9.3
BHOU **Houvegnez** 59.98 14 *b*P P **09 36 58.5 +0.1**
VTS **Vitosha** 60.00 31 ⇑P P **09 36 59.5 +0.5**
VTS **Vitosha** 60.00 31 P P **09 36 58.3 -0.6**
VTS **Vitosha** 60.00 31 P P **09 36 58.3 -0.6**
VTS pmax pmax
comp=Z,11nm,0.8s
VTS **Vitosha** 60.00 31 P P **09 36 59.5 +0.5**
GO05 **Huala** 60.01 234 P P **09 36 59.2 +0.1**
ABPO **Ambohimpanom** 60.01 108 IAMs_20 IAMs_20 10 00 39.6
comp=Z,3µm,20.0s
BEHE **Becsehely** 60.06 24 *e*P P **09 36 57.3 -1.7**
BEHE **Becsehely** 60.06 24 P P **09 36 59.7 +0.7**
RZN **Rozhen** 60.10 32 P P **09 37 00.3 +0.6**
RDO **Rodhopi** 60.17 33 P P **09 37 00.2 +0.3**
RDO **Rodhopi** 60.17 33 P P **09 36 59.9 0.0**
ARSA **Arzberg** 60.21 22 *i*P P **09 37 00.4 +0.3**
comp=Z,27nm,0.9s,SNR=11
MEM **Membach** 60.22 14 *d*P P **09 37 00.4 +0.4**
comp=Z,22nm,1.0s
ENEZ **Enez** 60.22 34 P P **09 37 00.7 +0.4**
BTNL **Ternell** 60.23 14 *b*P P **09 37 00.6 +0.4**
comp=Z,31nm,1.3s
MOA **Molln** 60.25 21 *i*P P **09 36 59.8 -0.6**
comp=Z,48nm,1.0s,SNR=24
ALN **Alexandroupoli** 60.27 34 P P **09 37 00.8 +0.2**
KOVH **Kovagototos** 60.29 25 P P **09 37 01.3 +0.7**
FRGS **Fruska Gora** 60.29 27 ⇑P P **09 37 01.2 +0.5**
FRGS **Fruska Gora** 60.29 27⇑ *i*P P **09 37 01.5 +0.8**
BEBN **Eben Emael** 60.31 14 *d*P P **09 37 00.8 +0.2**
HLM1 **Long Mynd** 60.39 7⇑ *e*P P **09 37 00.6 -0.5**
HLM1 IAmb IAmb 09 37 01.8
comp=Z,76nm,1.1s
PLCA **Paso Flores** 60.42 227 P P **09 37 01.2 -0.6**
comp=Z,5.2nm,0.8s,baz=75,slow=5.3,SNR=10
PLCA LR LR 09 58 14.0
comp=Z,430nm,21.7s,baz=82,slow=31
comp=Z,5.2nm,0.8s
PGB **Panagyurishte** 60.43 31 P P **09 37 01.6 -0.1**
BLKB **Belogradchik** 60.46 30 ⇓P P **09 37 02.4 +0.5**
BALB **Balikesir** 60.47 36 P P **09 37 02.7 +0.7**
BALB IAmb IAmb 09 37 10.7
comp=Z,130nm,1.7s
ELMS **Elmsett, Ipswi** 60.56 10 *e*P P **09 37 02.2 -0.1**
ELMS IAmb IAmb 09 37 03.0
comp=Z,84nm,1.0s
MORH **Mrgy, Hungar** 60.62 25 ⇑P P **09 37 03.1 +0.3**
MORH **Mrgy, Hungar** 60.62 25⇑ *i*P P **09 37 01.9 -0.9**
MORH **Mrgy, Hungar** 60.62 25 P P **09 37 03.4 +0.5**
GHAJ **Ghor Haditha** 60.69 48 IAMs_20 IAMs_20 10 03 44.3
comp=Z,2µm,18.0s
FOEL **Foel Wylfa** 60.71 7⇑ *e*P P **09 37 02.9 -0.5**
FOEL IAmb IAmb 09 37 04.0
comp=Z,50nm,1.0s
DSB **Dublin** 60.73 5 P P **09 37 03.6 +0.1**
DIM **Dimitrovgrad** 60.79 33 P P **09 37 04.7 +0.6**
MPEP **Malo Peshtene** 60.79 30 P P **09 37 05.0 +0.9**
GRFO **Grafenberg** 60.83 18 P P **09 37 04.3 +0.1**
GRFO IAMs_20 IAMs_20 10 03 25.1
comp=Z,2µm,19.0s
GRFO **Grafenberg** 60.83 18 P P **09 37 04.3 +0.1**
GRFO pmax pmax
comp=Z,40nm,1.0s
GRFO MLR MLR
comp=Z,2µm,19.0s
GRA1 **Grafenberg Arr** 60.83 18 IAMs_20 IAMs_20 10 03 34.1
comp=Z,2µm,19.0s
YLL **Llanberis** 60.84 6 *e*P P **09 37 02.9 -1.3**
RUSC **La Rusia** 60.86 281 *e*P P **09 37 02.0 -3.7**
MDVR **Moldovita** 60.87 28 ⇑P P **09 37 04.5 -0.2**
RONA **Rosalia, Austr** 60.88 23 *i*P P **09 37 05.5 +0.8**
comp=Z,125nm,1.4s,SNR=50
DR12 **Loma Pena Alta** 60.89 296 P P **09 37 05.8 +0.5**
GEC2 **GERESS Array S** 60.90 20 P P **09 37 04.7 -0.2**
GEC2 IAmb IAmb 09 37 05.9
comp=Z,57nm,1.0s
GERES **GERESS Array B** 60.90 20 P P **09 37 04.4 -0.5**
comp=Z,33nm,1.0s,baz=207,slow=8.4,SNR=120
GERES PP **PP 09 39 16.4 -2.8**
comp=Z,2.9nm,0.8s,baz=206,slow=11,SNR=3.4
GERES LR LR 10 03 46.0
comp=Z,2µm,20.1s,baz=223,slow=36
comp=Z,33nm,1.0s
GERES **GERESS Array B** 60.90 20 P P **09 37 04.5 -0.4**
CONA **Conrad Observa** 60.91 22 *i*P P **09 37 05.4 +0.5**
comp=Z,66nm,1.3s,SNR=24
MACC **Macarena, Meta** 60.92 277 *e*P P **09 37 05.9 +0.3**
MPLH **Magyarpolny** 60.93 24 P P **09 37 05.8 +0.8**
WLF1 **Llynfaes** 60.97 6 *e*P P **09 37 04.9 -0.2**
WLF1 IAmb IAmb 09 37 05.8
comp=Z,126nm,0.9s

SOP	**Sopron**	**60.97**	**23**	P		**P**		**09 37 05.9**	**+0.7**
WPS	**Cemaes, Angles**	**61.06**	**6**	*e*P		**P**		**09 37 05.2**	**-0.4**
WPS				IAmb		IAmb		09 37 06.5	
	comp=Z,163nm,2.0s								
WME	**Myndd Eilian**	**61.08**	**6**⇑	*e*P		**P**		**09 37 05.5**	**-0.3**
CKRC	**Cesky Krumlov**	**61.09**	**21**	*e*P		**P**		**09 37 05.6**	**-0.5**
CKRC				*e*S		**S**		**09 45 16.6**	**-8.5**
KHC	**Kasperske Hory**	**61.10**	**20**	P		**P**		**09 37 05.8**	**-0.4**
KHC	**Kasperske Hory**	**61.10**	**20***c*	*i*P		**P**		**09 37 05.7**	**-0.5**
KHC				pmax		pmax			
	comp=Z,83nm,1.3s								
KHC				MLR		MLR			
	comp=Z,1µm,16.0s								
KHC	**Kasperske Hory**	**61.10**	**20**	*e*P		**P**		**09 37 05.4**	**-0.8**
KHC				*e*S		**S**		**09 45 25.4**	**+0.1**
KHC				AMS		AMS		10 03 10.0	
	comp=Z,2µm,18.9s								
WACR	**West Acre**	**61.11**	**10**	*e*P		**P**		**09 37 05.6**	**-0.4**
WACR				IAmb		IAmb		09 37 06.6	
	comp=Z,213nm,0.9s								
URIC	**Uribia, Colomb**	**61.16**	**288**	P		**P**		**09 37 07.3**	**+0.1**
CHIC	**Chingaza**	**61.24**	**279**	*e*P		**P**		**09 37 12.6**	**+4.3**
EDRB	**Edirne**	**61.31**	**33**	P		**P**		**09 37 07.1**	**-0.5**
CSKK	**Cskako**	**61.38**	**24**	P		**P**		**09 37 09.0**	**+1.0**
LBWR	**Ladybower, Pea**	**61.40**	**8**	*e*P		**P**		**09 37 07.1**	**-0.9**
LBWR				IAmb		IAmb		09 37 08.9	
	comp=Z,70nm,1.0s								
LR03	**Panguipulli**	**61.44**	**229**	P		**P**		**09 37 08.2**	**-0.5**
BZS	**Buzias**	**61.46**	**27**	⇑P		**P**		**09 37 09.3**	**+0.7**
ILTH	**Belurgan, Co L**	**61.51**	**5**	*e*P		**P**		**09 37 08.3**	**-0.4**
PTLC	**Puerto Leguiza**	**61.55**	**274**	*e*P		**P**		**09 37 06.8**	**-3.0**
OCAC	**Ocana**	**61.59**	**283**	*e*P		**P**		**09 37 07.8**	**-2.5**
ZST	**Bratislava**	**61.60**	**23**	*e*P		**P**		**09 37 10.1**	**+0.6**
ZST				pmax		pmax			
	comp=Z,128nm,1.1s								
ZST	**Bratislava**	**61.60**	**23**	*e*P		**P**		**09 37 10.0**	**+0.6**
ZST				*e*PP		**PP**		**09 39 26.7**	**+1.5**
NKC	**Novy Kostel**	**61.69**	**19**	AMS		AMS		10 04 00.0	
	comp=Z,2µm,17.4s								
SRO2	**Moca**	**61.75**	**24**	*e*P		**P**		**09 37 10.7**	**+0.2**
SRO2				pmax		pmax			
	comp=Z,30nm,0.8s								
SRO2	**Moca**	**61.75**	**24**	*e*P		**P**		**09 37 10.6**	**+0.1**
SRO	**Srobarova**	**61.76**	**24**	*e*P		**P**		**09 37 11.7**	**+1.1**
SRO				pmax		pmax			
	comp=Z,64nm,1.4s								
SRO	**Srobarova**	**61.76**	**24**	*e*P		**P**		**09 37 11.6**	**+1.0**
SPBC	**San Pablo de B**	**61.77**	**280**	*e*P		**P**		**09 37 10.7**	**-0.8**
WIM	**Isle of Man**	**61.78**	**6**⇑	*e*P		**P**		**09 37 10.4**	**-0.2**
BUD	**Budapest**	**61.78**	**24**	P		**P**		**09 37 10.8**	**+0.1**
MODS	**Modra-Piesok**	**61.81**	**23**	*e*P		**P**		**09 37 11.4**	**+0.5**
MODS				pmax		pmax			
	comp=Z,127nm,1.5s								
MODS	**Modra-Piesok**	**61.81**	**23**	*e*P		**P**		**09 37 11.4**	**+0.5**
GZR	**Gura Zlata**	**61.83**	**28**	⇑P		**P**		**09 37 11.5**	**+0.3**
CRJC	**Cerrejon, Guaj**	**61.83**	**287**	*e*P		**P**		**09 37 08.8**	**-3.1**
SZH	**Strazhica**	**61.85**	**32**	P		**P**		**09 37 11.4**	**+0.1**
ROSC	**El Rosal**	**61.86**	**279**	P		**P**		**09 37 13.5**	**+1.1**
	comp=Z,45nm,0.9s,baz=70,slow=4.4,SNR=37								
ROSC				LR		LR		10 02 27.2	
	comp=Z,4µm,19.2s,baz=134,slow=35								
	comp=Z,45nm,0.9s								
ROSC	**El Rosal**	**61.86**	**279**	P		**P**		**09 37 13.7**	**+1.3**
ROSC	**El Rosal**	**61.86**	**279**	*e*P		**P**		**09 37 11.7**	**-0.8**
LL03	**Petrohue**	**61.88**	**227**	IAmb		IAmb		09 37 16.1	
	comp=Z,51nm,0.8s								
LL6C	**La Loma 6 Bece**	**61.89**	**285**	*e*P		**P**		**09 37 08.8**	**-3.3**
IOMK	**Kirk Michael**	**61.90**	**6**⇑	*e*P		**P**		**09 37 11.2**	**-0.2**
IOMK				IAmb		IAmb		09 37 11.7	
	comp=Z,93nm,1.0s								
TREC	**Trest**	**61.91**	**21**	AMS		AMS		10 02 50.0	
	comp=Z,2µm,19.8s								
HPK	**Haverah Park**	**61.96**	**8**	*e*P		**P**		**09 37 11.2**	**-0.6**
HPK				IAmb		IAmb		09 37 12.9	
	comp=Z,155nm,1.1s								
SIRR	**Siria**	**61.97**	**27**	⇑P		**P**		**09 37 11.8**	**-0.3**
SMOL	**Smolenice**	**61.98**	**23**	*e*P		**P**		**09 37 12.5**	**+0.4**
SMOL				pmax		pmax			
	comp=Z,29nm,1.6s								
SMOL	**Smolenice**	**61.98**	**23**	*e*P		**P**		**09 37 12.5**	**+0.4**
KRUC	**Moravsky**	**62.04**	**22**	*e*P		**P**		**09 37 11.8**	**-0.7**
LL02	**Futaleuf**	**62.07**	**225**	P		**P**		**09 37 12.4**	**-0.4**
ASF	**Jabal al Asfar**	**62.11**	**48**	LR		LR		10 05 43.8	
	comp=Z,1µm,18.4s,baz=270,slow=38								
BORA	**Eskisehir**	**62.15**	**37**	P		**P**		**09 37 13.3**	**-0.2**
BORA				IAmb		IAmb		09 37 27.6	
	comp=Z,61nm,1.3s								
PRU	**Pruhonice**	**62.16**	**20**	*e*P		**P**		**09 37 12.7**	**-0.6**
PRU				*e*S		**S**		**09 45 37.0**	**-1.7**
PRU				MLR		MLR			
	comp=Z,1µm,16.1s								
PRU	**Pruhonice**	**62.16**	**20**	*e*P		**P**		**09 37 12.7**	**-0.6**
PRU				*e*S		**S**		**09 45 37.0**	**-1.7**
PRU				AMS		AMS		10 04 50.0	
	comp=Z,1µm,16.1s								
PRAC	**Prado**	**62.21**	**278**	*e*P		**P**		**09 37 16.5**	**+2.1**
VRAC	**Vranov**	**62.32**	**22**	⇑P		**P**		**09 37 14.1**	**-0.2**
VRAC	**Vranov**	**62.32**	**22**	LR		LR		10 04 58.9	
	comp=Z,2µm,18.4s,baz=216,slow=37								
VRAC	**Vranov**	**62.32**	**22**	*e*P		**P**		**09 37 13.9**	**-0.4**
PTBC	**PUERTO BERRIO,**	**62.33**	**281**	*e*P		**P**		**09 37 10.7**	**-4.4**
LOT	**Lotru**	**62.34**	**29**	⇑P		**P**		**09 37 15.1**	**+0.4**
JAVC	**Velka Javorina**	**62.36**	**23**	*e*P		**P**		**09 37 15.4**	**+0.8**
KOLL	**Kolacno**	**62.41**	**23**	*e*P		**P**		**09 37 15.6**	**+0.7**
IDGL	**Inch Island, C**	**62.46**	**4**	*e*P		**P**		**09 37 15.0**	**-0.1**
IDGL				IAmb		IAmb		09 37 15.9	
	comp=Z,79nm,1.0s								
NNA	**Nana**	**62.46**	**260**	LR		LR		10 04 06.8	
	comp=Z,950nm,19.5s,baz=78,slow=36								
NNA	**Nana**	**62.46**	**260***c*	*e*P		**P**		**09 37 17.0**	**+1.0**
NNA				pmax		pmax			
	comp=Z,49nm,1.7s								
GAL1	**Galloway**	**62.49**	**6**⇑	*e*P		**P**		**09 37 15.0**	**-0.3**
GAL1				IAmb		IAmb		09 37 16.1	
	comp=Z,54nm,0.9s								
PSZ	**Piszkesteto**	**62.49**	**25**	⇑P		**P**		**09 37 16.2**	**+0.6**
PSZ	**Piszkesteto**	**62.49**	**25**	P		**P**		**09 37 16.0**	**+0.4**
PSZ				IAmb		IAmb		09 37 17.3	
	comp=Z,71nm,1.1s								
PSZ				IAMs_20		IAMs_20		10 05 26.3	
	comp=Z,2µm,18.0s								
PSZ	**Piszkesteto**	**62.49**	**25**	P		**P**		**09 37 16.0**	**+0.4**
PSZ				pmax		pmax			
	comp=Z,71nm,1.1s								
PSZ				MLR		MLR			
	comp=Z,2µm,18.0s								
PSZ	**Piszkesteto**	**62.49**	**25**	P		**P**		**09 37 15.8**	**+0.3**
GDLE	**Glaisdale, N Y**	**62.52**	**8**	*e*P		**P**		**09 37 15.2**	**-0.4**
NORC	**Norcasia**	**62.54**	**280**	*e*P		**P**		**09 37 14.5**	**-2.0**
CLGH	**Cloghs, Cushen**	**62.57**	**5**	*e*P		**P**		**09 37 15.1**	**-0.8**
BETC	**Betania**	**62.58**	**277**	*e*P		**P**		**09 37 16.5**	**-0.3**
ORTC	**Ortega, Tolima**	**62.60**	**278**	*e*P		**P**		**09 37 15.5**	**-1.4**
FLOC	**Florencia**	**62.60**	**276**‖	*e*P		**P**		**09 37 17.4**	**+0.4**
PVCC	**Panska Ves**	**62.63**	**20**	*e*P		**P**		**09 37 16.3**	**-0.1**
PVCC				MLR		MLR			
	comp=Z,1µm,16.8s								
PVCC	**Panska Ves**	**62.63**	**20**	*e*P		**P**		**09 37 16.3**	**-0.1**
PVCC				AMS		AMS		10 05 00.0	
	comp=Z,1µm,16.8s								
SDDR	**Presa de Saban**	**62.66**	**296**	P		**P**		**09 37 18.2**	**+1.0**
SDDR				IAmb		IAmb		09 37 19.5	
	comp=Z,60nm,1.1s								
SDDR	**Presa de Saban**	**62.66**	**296**	*e*P		**P**		**09 37 17.4**	**+0.2**
BRG	**Berggiesshubel**	**62.72**	**19**	*e*P		**P**		**09 37 15.1**	**-1.9**
BRG				Amp				09 37 18.0	
	comp=Z,35nm,1.2s								
BRG				PP		**PP**		**09 39 33.4**	**-1.8**
BRG				Amp				09 39 36.8	
	comp=Z,95nm,2.3s								
BRG	**Berggiesshubel**	**62.72**	**19**	SS		SS		09 49 41.0	-10
BRG				Amp				10 05 23.0	
	comp=E,1.0nm,15.9s								
BRG				Amp				10 05 26.0	
	comp=Z,2.0nm,16.4s								
BRG				Amp				10 05 29.0	
	comp=N,1.2nm,18.3s								
BRG	**Berggiesshubel**	**62.72**	**19**	*e*P		**P**		**09 37 15.1**	**-1.9**
BRG								09 39 33.3	
BRG				S		**S**		**09 45 50.0**	**+4.4**
BRG				pmax		pmax			
	comp=Z,35nm,1.2s								
BRG				pmax		pmax			
	comp=Z,95nm,2.3s								
BRG				pmax		pmax			
	comp=E,1µm,15.9s								
BRG				MLR		MLR			
	comp=Z,2µm,16.4s								
BRG				MLR		MLR			
	comp=N,1µm,18.3s								
EDMD	**Edmundbyers**	**62.77**	**8**	*e*P		**P**		**09 37 17.1**	**-0.1**
EDMD				IAmb		IAmb		09 37 18.1	
	comp=Z,132nm,1.1s								
NEWG	**New Galloway**	**62.78**	**6**⇑	*e*P		**P**		**09 37 17.0**	**-0.2**
NEWG				IAmb		IAmb		09 37 18.1	
	comp=Z,84nm,0.9s								
CLL	**Collm**	**62.80**	**18**	P		**P**		**09 37 17.2**	**-0.2**
CLL				IAMs_20		IAMs_20		10 05 01.2	
	comp=Z,2µm,18.0s								
CLL	**Collm**	**62.80**	**18**	P		**P**		**09 37 17.3**	**-0.2**
CLL				pmax		pmax			
	comp=Z,54nm,1.6s								
CLL				MLR		MLR			
	comp=Z,2µm,18.0s								
CLL	**Collm**	**62.80**	**18**	*i*P		**P**		**09 37 17.0**	**-0.4**
	comp=Z,46nm,1.5s								
CLL				*i*x		x		09 37 24.5	
CLL				*e*PP		**PP**		**09 39 36.0**	**+0.2**
CLL				*e*PPP		PPP		09 41 06.0	
CLL				*e*S		**S**		**09 45 48.0**	**+1.5**
CLL				*e*PS		**PnS**		**09 46 10.0**	**+7.9**
CLL				*e*SS		**SS**		**09 49 46.0**	**-5.8**
CLL				*e*SSS		SSS		09 52 42.0	
CLL				Lm		MLR		10 04 00.0	
	comp=N,1µm,20.4s								
CLL				Lm		MLR		10 04 00.0	
	comp=E,1µm,19.2s								
CLL				Lm		MLR		10 04 00.0	
	comp=Z,2µm,19.6s								
MAUC	**Maruska**	**62.83**	**22**	*e*P		**P**		**09 37 18.0**	**+0.2**
MAUC				AMS		AMS		10 04 40.0	
	comp=Z,6µm,18.9s								
DRGR		**62.84**	**27**	⇑P		**P**		**09 37 18.3**	**+0.3**
ANIL	**Santa Ana**	**62.86**	**279**	*e*P		**P**		**09 37 17.4**	**-1.5**
VOIR		**62.95**	**30**	⇑P		**P**		**09 37 17.7**	**-0.9**
GUY2C	**Guyana, Caldas**	**62.95**	**280**	*e*P		**P**		**09 37 19.4**	**-0.5**
MDUB	**Mudurnu**	**62.96**	**37**	P		**P**		**09 37 19.0**	**+0.1**
MDUB				IAmb		IAmb		09 37 30.1	
	comp=Z,116nm,1.0s								
KRLC	**Kraliky**	**63.02**	**21**	AMS		AMS		10 03 00.0	
	comp=Z,1µm,21.3s								
MORC	**Moravsky Berou**	**63.06**	**22**	⇑P		**P**		**09 37 19.7**	**+0.4**
MORC	**Moravsky Berou**	**63.06**	**22**	P		**P**		**09 37 19.2**	**-0.1**
MORC				IAmb		IAmb		09 37 20.7	
	comp=Z,57nm,1.1s								
MORC	**Moravsky Berou**	**63.06**	**22**	P		**P**		**09 37 19.2**	**-0.1**
MORC				pmax		pmax			
	comp=Z,57nm,1.1s								
MORC	**Moravsky Berou**	**63.06**	**22**	*e*P		**P**		**09 37 19.4**	**+0.1**
DPC	**Dobruska-Polom**	**63.09**	**21**	*e*P		**P**		**09 37 19.0**	**-0.5**
DPC				*e*S		**S**		**09 45 52.4**	**+2.0**
DPC				MLR		MLR			
	comp=Z,2µm,17.7s								
DPC	**Dobruska-Polom**	**63.09**	**21**	*e*P		**P**		**09 37 19.0**	**-0.5**
DPC				*e*S		**S**		**09 45 52.4**	**+2.0**
DPC				AMS		AMS		10 05 10.0	
	comp=Z,2µm,17.7s								
ESK	**Eskdalemuir**	**63.09**	**7**	*e*P		**P**		**09 37 19.1**	**-0.2**
ESK				IAmb		IAmb		09 37 19.5	
	comp=Z,56nm,1.1s								
ESK	**Eskdalemuir**	**63.09**	**7**	P		**P**		**09 37 19.5**	**+0.2**
ESK				IAmb		IAmb		09 37 20.4	
	comp=Z,90nm,1.3s								
ESK	**Eskdalemuir**	**63.09**	**7**	P		**P**		**09 37 19.5**	**+0.2**
ESK				pmax		pmax			
	comp=Z,90nm,1.3s								
MARP	**Paez Belalcaza**	**63.11**	**277**	*e*P		**P**		**09 37 18.4**	**-2.3**
UPC	**Upice**	**63.11**	**21**	*e*P		**P**		**09 37 19.1**	**-0.5**
UPC				*e*S		**S**		**09 45 52.4**	**+1.8**
UPC				MLR		MLR			
	comp=Z,2µm,19.9s								
UPC	**Upice**	**63.11**	**21**	*e*P		**P**		**09 37 19.1**	**-0.5**
UPC				*e*S		**S**		**09 45 52.4**	**+1.8**
UPC				AMS		AMS		10 04 50.0	
	comp=Z,2µm,19.9s								
SMRC	**Santa Marta, M**	**63.14**	**286**	*e*P		**P**		**09 37 19.4**	**-1.1**
KECS	**Kecovo**	**63.18**	**25**	*e*P		**P**		**09 37 21.1**	**+1.0**
KECS	**Kecovo**	**63.18**	**25**	*e*P		**P**		**09 37 21.1**	**+1.0**
CHVC	**Chvalec**	**63.19**	**21**	*e*P		**P**		**09 37 19.7**	**-0.5**
CHVC				AMS		AMS		10 04 50.0	
	comp=Z,2µm,17.6s								
OSTC	**Ostas**	**63.22**	**21**	*e*P		**P**		**09 37 20.3**	**0.0**
OSTC				AMS		AMS		10 04 50.0	
	comp=Z,2µm,19.3s								
VNA1	**Neumayer--Stat**	**63.26**	**178**	P		**P**		**09 37 21.1**	**+0.9**
LANS	**Liptovska Anna**	**63.29**	**24**	*e*P		**P**		**09 37 21.9**	**+1.0**
LANS				pmax		pmax			
	comp=Z,14nm,0.9s								
LANS	**Liptovska Anna**	**63.29**	**24**	*e*P		**P**		**09 37 21.9**	**+1.0**
HELC	**Santa Helena**	**63.30**	**281**	*e*P		**P**		**09 37 21.3**	**-0.7**
OKC	**Ostrava-Krasne**	**63.34**	**22**	*e*P		**P**		**09 37 20.8**	**-0.3**
OKC				MLR		MLR			
	comp=Z,2µm,19.4s								
OKC	**Ostrava-Krasne**	**63.34**	**22**	*e*P		**P**		**09 37 20.8**	**-0.3**
OKC				AMS		AMS		10 04 50.0	
	comp=Z,2µm,19.4s								
MLR	**Muntele Rosu**	**63.43**	**30**	LR		LR		10 05 57.2	
	comp=Z,2µm,20.1s,baz=230,slow=37								
MLR	**Muntele Rosu**	**63.43**	**30**	P		**P**		**09 37 21.7**	**-0.2**
MLR				IAmb		IAmb		09 37 25.7	
	comp=Z,56nm,1.2s								
MLR	**Muntele Rosu**	**63.43**	**30**	P		**P**		**09 37 21.7**	**-0.2**
MLR				pmax		pmax			
	comp=Z,56nm,1.2s								
PGBU	**Glenifferbraes**	**63.44**	**6**	*e*P		**P**		**09 37 21.3**	**-0.3**
PGBU				IAmb		IAmb		09 37 21.9	
	comp=Z,93nm,1.2s								
PCON	**Cinco Dias**	**63.46**	**276**	*e*P		**P**		**09 37 22.2**	**-1.1**
KSP	**Ksiaz**	**63.49**	**21**	*e*P		**P**		**09 37 22.2**	**+0.2**
KSP				*e*L		L		10 05 30.8	
	comp=Z,1µm,19.5s								
EBL	**Broad Law**	**63.56**	**7**	*e*P		**P**		**09 37 22.2**	**-0.2**
ANTO	**Ankara**	**63.56**	**38**	P		**P**		**09 37 24.1**	**+1.2**
ANTO				IAmb		IAmb		09 37 32.3	
	comp=Z,72nm,1.3s								
ANTO	**Ankara**	**63.56**	**38**	P		**P**		**09 37 24.1**	**+1.2**
ANTO				pmax		pmax			
	comp=Z,73nm,1.3s								
VNA2	**Neumayer--Watz**	**63.56**	**178**	P		**P**		**09 37 22.5**	**+0.2**
	baz=351,slow=7.0								
UREC	**San Jos de Ur**	**63.62**	**282**	*e*P		**P**		**09 37 19.4**	**-4.4**
SOTA	**Rioblanco**	**63.64**	**276**	*e*P		**P**		**09 37 24.2**	**-0.2**
YOTC	**Yotoco, Valle**	**63.69**	**278**	*e*P		**P**		**09 37 21.3**	**-3.0**
CBOC	**Ciudad Bolivar**	**63.71**	**280**	*e*P		**P**		**09 37 22.2**	**-2.2**
ESY	**Stoneypath**	**63.75**	**7**‖	*e*P		**P**		**09 37 23.5**	**-0.2**
SJCC	**San Jacinto, C**	**63.75**	**285**	P		**P**		**09 37 25.4**	**+0.8**
SJCC				IAmb		IAmb		09 37 27.2	
	comp=Z,98nm,1.3s								
SJCC	**San Jacinto, C**	**63.75**	**285**	*e*P		**P**		**09 37 24.2**	**-0.4**
POPC	**Popayan, Colom**	**63.77**	**276**	*e*P		**P**		**09 37 25.1**	**+0.2**
PLMC	**San Jos del P**	**63.79**	**279**	*e*P		**P**		**09 37 26.1**	**+1.2**
COVR	**Voineasa-Covas**	**63.81**	**30**	⇑P		**P**		**09 37 23.3**	**-1.0**
VNA3	**Neumayer Olymp**	**63.81**	**179**	P		**P**		**09 37 23.6**	**-0.3**
EAB	**Aberfoyle**	**63.83**	**6**‖	*e*P		**P**		**09 37 23.8**	**-0.4**
NIE	**Niedzica**	**63.84**	**24**	*e*P		**P**		**09 37 25.4**	**+1.0**
NIE				*e*L		L		10 07 37.1	
	comp=Z,1µm,17.3s								
CRUC	**La Cruz**	**63.88**	**275**	*e*P		**P**		**09 37 26.1**	**+0.2**
CRVS	**Cervenica-Dubn**	**63.91**	**25**	*e*P		**P**		**09 37 25.6**	**+0.7**
CRVS				pmax		pmax			
	comp=Z,159nm,1.3s								
CRVS	**Cervenica-Dubn**	**63.91**	**25**	*e*P		**P**		**09 37 25.6**	**+0.7**
TIRR	**Tirgusor**	**63.98**	**32**	IAmb		IAmb		09 37 36.2	
	comp=Z,126nm,1.6s								
TIRR				IAMs_20		IAMs_20		10 05 42.0	
	comp=Z,2µm,19.0s								
BRTR	**Keskin Array B**	**64.00**	**39**	P		**P**		**09 37 26.2**	**+0.3**
	comp=Z,10nm,1.0s,baz=212,slow=5.8,SNR=47								
BRTR				PP		**PP**		**09 39 45.8**	**-1.0**
	comp=Z,1.9nm,0.8s,baz=218,slow=9.1,SNR=2.8								
	comp=Z,10nm,1.0s								
BRTR	**Keskin Array B**	**64.00**	**39**	*i*P		**P**		**09 37 26.7**	**+0.8**
BRTR				pmax		pmax			
	comp=Z,19nm,1.1s								
BR131	**Keskin Array S**	**64.00**	**39**	P		**P**		**09 37 26.0**	**+0.2**
BR131				IAmb		IAmb		09 37 38.0	
	comp=Z,77nm,1.4s								
BR131	**Keskin Array S**	**64.00**	**39***c*	*i*P		**P**		**09 37 26.7**	**+0.8**
PLOR	**Plostina**	**64.03**	**30**	⇑P		**P**		**09 37 24.9**	**-0.9**
UZH	**Uzhgorod**	**64.05**	**26**	*e*P		**P**		**09 37 25.6**	**-0.2**
UZH				*i*				09 37 32.9	
UZH				*e*				09 39 46.5	
UZH				*e*S		**S**		**09 45 59.6**	**-2.7**
UZH				*i*				09 46 28.1	
UZH				*e*				09 47 21.9	
UZH				MLR		MLR			
	comp=Z,130nm,18.0s								
VRI	**Vrincioaia**	**64.08**	**30**	⇑P		**P**		**09 37 25.4**	**-0.7**
INVG	**Invergeldie, C**	**64.09**	**6**	*e*P		**P**		**09 37 25.2**	**-0.7**
INVG				IAmb		IAmb		09 37 26.5	
	comp=Z,47nm,1.2s								
DBBC	**Dabeiba**	**64.13**	**281**	*e*P		**P**		**09 37 27.1**	**-0.1**
GCUF	**Volcan Galeras**	**64.22**	**275**	*e*P		**P**		**09 37 28.0**	**-0.2**
TPGR	**Topolog**	**64.25**	**32**	⇑P		**P**		**09 37 26.6**	**-0.7**
KOLS	**Kolonicke sedl**	**64.28**	**25**	*e*P		**P**		**09 37 28.8**	**+1.5**
KOLS				pmax		pmax			
	comp=Z,21nm,1.0s								
KOLS	**Kolonicke sedl**	**64.28**	**25**	*e*P		**P**		**09 37 28.8**	**+1.5**
ATAH	**Atahualpa**	**64.28**	**266**	LR		LR		10 05 29.9	
	comp=Z,2µm,18.4s,baz=100,slow=36								
CFR	**Carcaliu**	**64.32**	**31**	⇑P		**P**		**09 37 27.6**	**0.0**
TESR	**Tescani**	**64.50**	**30**	⇑P		**P**		**09 37 28.2**	**-0.6**
BIZ	**Bicaz**	**64.53**	**29**	⇑P		**P**		**09 37 28.5**	**-0.5**
SNAA	**Sanae**	**64.54**	**176**	P		**P**		**09 37 29.1**	**+0.3**
SNAA	**Sanae**	**64.54**	**176**	P		**P**		**09 37 29.1**	**+0.3**
	comp=Z,20nm,0.9s,baz=341,slow=5.7,SNR=53								
SNAA				LR		LR		09 58 40.0	
	comp=Z,1µm,20.3s,baz=344,slow=30								
	comp=Z,20nm,0.9s								
SNAA	**Sanae**	**64.54**	**176**	P		**P**		**09 37 29.3**	**+0.5**
SNAA	**Sanae**	**64.54**	**176**	P		**P**		**09 37 29.3**	**+0.5**
SNAA				pmax		pmax			
	comp=Z,29nm,1.0s								
TULM	**Tulcn-Chalpat**	**64.58**	**274**	IAmb		IAmb		09 37 32.8	
	comp=Z,109nm,1.5s								
TULM	**Tulcn-Chalpat**	**64.58**	**274**	*e*P		**P**		**09 37 30.9**	**+0.3**
BURAR	**Bucovina Array**	**64.60**	**28**	⇓P		**P**		**09 37 28.8**	**-0.8**
BURAR	**Bucovina Array**	**64.60**	**28**	P		**P**		**09 37 30.3**	**+0.7**
BUR08	**Bucovina Ar. S**	**64.61**	**28**	P		**P**		**09 37 29.3**	**-0.4**
BOSC	**San Juan Bosco**	**64.78**	**270**	P		**P**		**09 37 31.4**	**-0.2**
BOSC				IAmb		IAmb		09 37 33.4	
	comp=Z,84nm,1.0s								
ILGA	**Ilgaz**	**64.83**	**38**	P		**P**		**09 37 32.1**	**+0.7**
ILGA				IAmb		IAmb		09 37 35.6	
	comp=Z,68nm,1.0s								
KPL	**Plockton**	**64.85**	**5**⇑	*e*P		**P**		**09 37 30.5**	**-0.3**
KPL				IAmb		IAmb		09 37 31.6	
	comp=Z,93nm,0.9s								
BNN	**Bunyan**	**64.91**	**41**	P		**P**		**09 37 32.5**	**+0.7**
GO09	**Cerro Castillo**	**65.01**	**216**	P		**P**		**09 37 33.2**	**+1.1**
GO09				IAmb		IAmb		09 37 37.5	
	comp=Z,118nm,1.4s								
KAC	**Achnashellach**	**65.04**	**5**⇑	*e*P		**P**		**09 37 31.8**	**-0.3**
SLOR	**San Lorenzo -**	**65.08**	**273**	P		**P**		**09 37 32.8**	**-1.1**
OTAV	**Otavalo**	**65.17**	**274**	P		**P**		**09 37 33.3**	**-1.1**
OTAV				IAmb		IAmb		09 37 36.6	
	comp=Z,90nm,1.8s								
OTAV	**Otavalo**	**65.17**	**274**	IAMs_20		IAMs_20		10 04 06.0	
	comp=Z,2µm,19.0s								
OTAV	**Otavalo**	**65.17**	**274**	P		**P**		**09 37 33.3**	**-1.1**
OTAV				pmax		pmax			
	comp=Z,90nm,1.8s								
OTAV	**Otavalo**	**65.17**	**274**	*e*P		**P**		**09 37 34.8**	**+0.4**
PORT	**Chimborazo Vol**	**65.26**	**272**	P		**P**		**09 37 35.2**	**0.0**
PORT				IA

comp=Z,1µm,22.3s
SUW Suwalki 68.55 22 IAMs_20 IAMs_20 10 08 27.5
comp=Z,1µm,20.0s
SUW Suwalki 68.55 22 *e*P **P** **09 37 54.7 +0.2**
KOPT Kop Dagi 68.58 42 IAmb IAmb 09 38 08.0
comp=Z,81nm,1.8s
HAL Halifax 68.60 324 P **P** **09 37 55.7 +0.6**
HAL Halifax 68.60 324 P **P** **09 37 55.7 +0.6**
HAL pmax pmax
comp=Z,243nm,1.0s
MSEY Mahe Island 68.63 92 IAMs_20 IAMs_20 10 03 17.6
comp=Z,2µm,21.0s
AKASG Malin Array Be 68.65 28 P **P** **09 37 54.4 -0.8**
comp=Z,18nm,0.8s,baz=230,slow=6.6,SNR=122
AKASG LR LR 10 09 34.1
comp=Z,682nm,20.1s,baz=240,slow=37
comp=Z,18nm,0.8s
AKBB Malin Array Si 68.65 28 IAmb IAmb 09 38 21.0
comp=Z,68nm,0.8s
AKBB Malin Array Si 68.65 28*c i*P **P** **09 37 54.3 -0.9**
AKBB pmax pmax
comp=Z,112nm,1.3s
CACAO El Cacao, Vera 68.72 281 *e*P **P** **09 37 55.0 -1.4**
GURO Guroymak-BITLI 68.89 44 P **P** **09 37 58.0 +0.8**
ODD1 Odda 69.00 11 *e*P **P** **09 37 57.8 +0.5**
ODD1 IAmb IAmb 09 37 58.5
comp=Z,62nm,0.9s
BER Bergen 69.21 10 *e*P **P** **09 37 58.7 +0.2**
BER IAmb IAmb 09 37 59.4
comp=Z,86nm,1.0s
ANN Anapa 69.23 36 *e*P **P** **09 37 57.3 -1.6**
ANN *e**PP **pP** **09 38 00.6 -0.5**
ANN *e*PPP PPP 09 42 06.6
ANN *e*S **S** **09 47 03.0 -2.1**
ANN *e*SS **SS** **09 51 26.1 -5.9**
ANN pmax pmax
comp=Z,40nm,0.9s
ASK Askoy 69.28 10 *e*P **P** **09 37 59.3 +0.3**
ASK IAmb IAmb 09 37 59.9
comp=Z,149nm,1.1s
KONO Kongsberg 69.34 12⇑ *e*P **P** **09 37 58.9 -0.5**
KONO pmax pmax
comp=Z,60nm,1.9s
KONO MLR MLR
comp=Z,833nm,17.0s
SUE Sulen 69.75 9 *e*P **P** **09 38 01.2 -0.6**
SOC Sochi 69.93 38 *e*P **P** **09 38 02.7 -0.6**
SOC *e**PP **pP** **09 38 05.6 +0.1**
SOC *e*PPP PPP 09 42 18.2
SOC *e*S **S** **09 47 10.8 -2.7**
SOC *e*SS **SS** **09 51 38.3 -4.6**
SOC pmax pmax
comp=Z,43nm,1.0s
PABE Paberze 69.99 22 P **P** **09 38 03.3 -0.1**
PABE IAmb IAmb 09 38 04.4
comp=Z,129nm,1.2s
PABE Paberze 69.99 22 *e*P **P** **09 38 03.6 +0.3**
LMN Caledonia Moun 70.00 325 P **P** **09 38 04.5 +0.8**
LMN IAmb IAmb 09 38 05.5
comp=Z,128nm,0.8s
SKAR Skarslia 70.03 11 *e*P **P** **09 38 04.1 +0.5**
SKAR IAmb IAmb 09 38 05.0
comp=Z,50nm,1.0s
HYA Hoyanger 70.09 10 *e*P **P** **09 38 04.6 +0.7**
HYA IAmb IAmb 09 38 05.1
comp=Z,48nm,1.0s
SMAI San Martin Ant 70.16 199 P **P** **09 38 05.3 +1.0**
FOO Floro 70.31 9 *e*P **P** **09 38 05.6 +0.3**
VSVD Vaisvydziai 70.34 21 *e*P **P** **09 38 05.4 -0.1**
NACGM Naroch 70.60 23⇓ *e*P **P** **09 38 07.0 -0.2**
baz=223
HFS Hagfors 70.71 14 LR LR 10 08 23.3
comp=Z,1µm,21.8s,baz=212,slow=35
IIGN Ignalina 70.72 23 *e*P **P** **09 38 08.4 +0.5**
NC602 NORSAR Array S 70.75 13 P **P** **09 38 07.7 -0.3**
NC602 IAmb IAmb 09 38 09.2
comp=Z,80nm,1.2s
NC602 NORSAR Array S 70.75 13 *e*P **P** **09 38 07.4 -0.6**
MNK Minsk 70.75 24 *i* P P 09 38 02.8 -5.3
MNK *i* 09 38 23.5
MNK *i* PPP PPP 09 42 21.8
MNK *i* S **S** **09 47 18.0 -4.6**
MNK *i* 09 48 06.3
MNK *i* SS **SS** **09 51 50.9 -4.2**
MNK pmax pmax
comp=N,6.0nm,0.8s
MNK pmax pmax
comp=Z,62nm,0.9s
MNK pmax pmax
comp=E,4.0nm,1.1s
MNK MLR MLR
comp=E,120nm,15.0s
MNK MLR MLR
comp=N,16nm,12.0s
MNK MLR MLR
comp=Z,4µm,17.0s
MNK Minsk 70.75 24 *i* P P 09 38 02.9 -5.2
comp=E,4.0nm,1.1s
MNK *i* P P 09 38 02.9 -5.2
comp=N,6.0nm,0.8s
MNK *i* P P 09 38 02.9 -5.2
comp=Z,62nm,0.9s,baz=44
MNK *i* PcP **PcP** **09 38 23.5 -5.4**
MNK *i* PP **PP** **09 40 39.3 -5.7**
MNK *i* PPP PPP 09 42 21.9
MNK *i* S **S** **09 47 18.0 -4.6**
MNK *i* SS **SS** **09 51 50.9 -4.2**
MNK *i* SSS SSS 09 55 09.6
MNK *i* LQ LQ 10 04 40.7
MNK *i* LR LR 10 09 18.5
MNK *i* LRM MLR 10 11 38.2
comp=E,120nm,14.9s
MNK *i* LRM MLR 10 11 39.8
comp=N,16nm,12.2s
MNK *i* LRM MLR 10 11 45.7
comp=Z,4µm,16.9s
GGN Saint George 70.79 323 P **P** **09 38 09.0 +0.5**
ISAL Salakas 70.84 23 *e*P **P** **09 38 09.4 +0.7**
NBO00 NORSAR Array S 70.85 12 P **P** **09 38 08.9 +0.3**
NBO00 IAmb IAmb 09 38 09.5
comp=Z,69nm,1.1s
IDID Didziasalis 70.89 23 *e*P **P** **09 38 09.7 +0.7**
EMMW East Machias 70.94 322 IAmb IAmb 09 38 10.9
comp=Z,43nm,0.8s
EMMW IAMs_20 IAMs_20 10 03 22.4
comp=Z,2µm,20.0s
NB2 NORSAR Subarra 70.95 12 P **P** **09 38 09.1 -0.2**
baz=205,slow=6.5
NB2 NORSAR Subarra 70.95 12 P **P** **09 38 09.1 -0.2**
comp=Z,56nm,1.1s,baz=205,slow=6.5
NOA NORSAR Array B 70.95 12 P **P** **09 38 09.2 0.0**
comp=Z,21nm,0.9s,baz=207,slow=6.2,SNR=39
NOA LR LR 10 11 16.3
comp=Z,884nm,18.7s,baz=210,slow=38
comp=Z,21nm,0.9s
NB201 NORSAR Array S 70.98 12 IAmb IAmb 09 38 10.9
comp=Z,101nm,1.3s
NC204 NORSAR Array S 71.07 12 IAmb IAmb 09 38 11.7
comp=Z,124nm,1.1s
NC405 NORSAR Array S 71.12 13 P **P** **09 38 10.3 0.0**
NC405 IAmb IAmb 09 38 11.8
comp=Z,72nm,1.1s
NC303 NORSAR Array S 71.15 12 IAmb IAmb 09 38 12.0
comp=Z,60nm,1.0s
AKN Aaknes 71.18 10 *e*P **P** **09 38 11.3 +0.7**
AKN IAmb IAmb 09 38 12.0
comp=Z,50nm,1.0s
G65A Princeton 71.26 323 P **P** **09 38 12.5 +1.1**
baz=122,SNR=7.9
G65A P **P** **09 38 12.5 +1.1**
baz=122,SNR=7.9
BELA Belgrano 2 71.28 185 P **P** **09 38 11.8 +0.8**
DRK0 Durika 71.40 282 P **P** **09 38 12.2 -1.0**
DRK0 IAmb IAmb 09 38 15.9
comp=Z,65nm,0.9s
DOMB Dombas 71.43 11 *e*P **P** **09 38 12.8 +0.7**
DOMB IAmb IAmb 09 38 13.9
comp=Z,62nm,1.2s
GNI Garni 71.49 43 P **P** **09 38 14.0 +0.8**
GNI IAmb IAmb 09 38 23.2
comp=Z,195nm,1.8s
GNI Garni 71.49 43 P **P** **09 38 14.0 +0.8**
GNI pmax pmax
comp=Z,195nm,1.8s
GNI MLR MLR
comp=Z,500nm,21.0s
GNI Garni 71.49 43 P **P** **09 38 13.8 +0.6**
SRBA San Rafael, Bu 71.50 282 P **P** **09 38 13.2 -0.5**
BATG Bathurst New B 71.52 325 P **P** **09 38 14.0 +1.1**
MOL Molde 71.64 10 *e*P **P** **09 38 13.9 +0.6**
MOL IAmb IAmb 09 38 15.1
comp=Z,70nm,1.2s
L64A Middleborough 71.68 319 P **P** **09 38 14.2 +0.3**
L64A IAmb IAmb 09 38 16.3
comp=Z,96nm,1.0s
L64A Middleborough 71.68 319 P **P** **09 38 15.2 +1.2**
baz=119,SNR=7.5
L64A P **P** **09 38 15.2 +1.2**
baz=119,SNR=7.5
ONI Oni 71.78 41 P **P** **09 38 14.6 -0.1**
ONI Oni 71.78 41 P **P** **09 38 14.6 -0.1**
ONI pmax pmax
comp=Z,62nm,1.6s
KIV Kislovodsk 71.97 39 P **P** **09 38 16.3 +0.4**
KIV Kislovodsk 71.97 39 *e*P **P** **09 38 16.1 +0.2**
KIV *e*S **S** **09 47 37.7 +0.3**
KIV *e*SS **SS** **09 52 15.1 +0.7**
KIV pmax pmax
comp=Z,25nm,1.0s
KIV MLR MLR
comp=Z,183nm,18.0s
KIV Kislovodsk 71.97 39 *i* P **P** **09 38 16.1 +0.2**
SNR=15
KBZ Khabaz 71.99 39 P **P** **09 38 16.1 +0.4**
comp=Z,12nm,0.9s,baz=236,slow=5.6,SNR=16
comp=Z,12nm,0.9s
KBZ Khabaz 71.99 39*c i*P **P** **09 38 16.2 +0.4**
KBZ MLR MLR
comp=Z,282nm,19.0s
CVTR Volcan Turrial 72.04 283 IAmb IAmb 09 38 19.5
comp=Z,44nm,0.8s
F64A Sherman 72.08 323 P **P** **09 38 17.8 +1.5**
F64A Sherman 72.08 323 P **P** **09 38 17.8 +1.5**
baz=122,SNR=57
F64A P **P** **09 38 17.8 +1.5**
baz=122,SNR=57
BCX Boston College 72.08 319 P **P** **09 38 16.8 +0.4**
BCX IAmb IAmb 09 38 18.7
comp=Z,96nm,1.2s
MZR Muzera 72.12 63 P **P** **09 38 18.0 +0.9**
BRYW Bryant College 72.13 318 P **P** **09 38 16.7 -0.1**
BRYW IAmb IAmb 09 38 18.3
comp=Z,66nm,0.9s
BRYW IAMs_20 IAMs_20 10 02 10.8
comp=Z,2µm,21.0s
ZEI Tsey 72.17 41 *e*P **P** **09 38 15.9 -1.3**
ZEI pmax pmax
comp=Z,12nm,1.2s
BORG Borgarnes 72.20 356 P **P** **09 38 18.1 +1.5**
BORG Borgarnes 72.20 356 P **P** **09 38 18.2 +1.5**
BORG pmax pmax
comp=Z,58nm,1.1s
WES Weston 72.20 319 P **P** **09 38 17.5 +0.3**
WES IAmb IAmb 09 38 18.6
comp=Z,99nm,1.1s
WES IAMs_20 IAMs_20 10 02 03.9
comp=Z,2µm,22.0s
WES Weston 72.20 319 P **P** **09 38 17.5 +0.3**
WES pmax pmax
comp=Z,99nm,1.1s
WVL Waterville 72.21 321 P **P** **09 38 17.8 +0.7**
baz=120,SNR=5.2
M63A Gales Ferry 72.23 318 P **P** **09 38 17.9 +0.6**
M63A Gales Ferry 72.23 318 P **P** **09 38 18.3 +1.0**
baz=118,SNR=16
M63A P **P** **09 38 18.3 +1.0**
baz=118,SNR=16
UNH University of 72.25 320 P **P** **09 38 19.1 +1.7**
baz=119,SNR=24
PQI Presque Isle 72.31 324 P **P** **09 38 18.8 +1.1**
PKME Peaks-Kenny Pk 72.34 322 P **P** **09 38 18.6 +0.7**
PKME IAmb IAmb 09 38 19.5
comp=Z,46nm,0.8s
PKME IAMs_20 IAMs_20 10 02 28.4
comp=Z,2µm,20.0s
PKME Peaks-Kenny Pk 72.34 322 P **P** **09 38 18.9 +1.1**
baz=121,SNR=9.0
AAL Aland 72.41 17 *e*P **P** **09 38 17.9 -0.1**
MTSE Matsula 72.42 19 *e*P **P** **09 38 18.3 +0.3**
HRV Adam Dziewonsk 72.42 319 P **P** **09 38 19.8 +1.4**
HRV IAmb IAmb 09 38 20.8
comp=Z,176nm,1.1s
HRV Adam Dziewonsk 72.42 319 IAMs_20 IAMs_20 10 01 21.5
comp=Z,1µm,22.0s
HRV Adam Dziewonsk 72.42 319 P **P** **09 38 19.8 +1.4**
HRV pmax pmax
comp=Z,176nm,1.1s
HRV Adam Dziewonsk 72.42 319 P **P** **09 38 19.8 +1.4**
baz=118,SNR=18
E63A Oxbow 72.42 324 P **P** **09 38 19.5 +1.2**
baz=122,SNR=26
E63A P **P** **09 38 19.5 +1.2**
baz=122,SNR=26
F63A Nahmakanta, Br 72.45 323 P **P** **09 38 20.0 +1.4**
baz=121,SNR=33
F63A P **P** **09 38 20.0 +1.4**
baz=121,SNR=33
UCCT U. Connecticut 72.53 318 P **P** **09 38 20.2 +1.1**
UCCT IAmb IAmb 09 38 21.4
comp=Z,135nm,1.2s
I63A Otisfield 72.53 321 IAmb IAmb 09 40 02.4
comp=Z,122nm,1.7s
I63A Otisfield 72.53 321 P **P** **09 38 20.3 +1.2**
baz=119
I63A P **P** **09 38 20.3 +1.2**
baz=119
GOF Gofitskoye 72.74 38⇑ *e*P **P** **09 38 19.2 -1.1**
NRS Narsarsuaq 72.77 344 P **P** **09 38 21.0 +0.9**
NRS IAmb IAmb 09 38 22.0
comp=Z,124nm,1.0s
NRS Narsarsuaq 72.77 344 P **P** **09 38 21.0 +0.9**
NRS pmax pmax
comp=Z,124nm,1.0s
NRS Narsarsuaq 72.77 344 *i* P **P** **09 38 19.9 -0.2**
NRS IAmb IAmb 09 38 21.6
comp=Z,122nm,1.0s
YLE Yale 72.78 317 IAmb IAmb 09 38 22.6
comp=Z,242nm,1.7s
YLE IAMs_20 IAMs_20 10 02 58.0
comp=Z,2µm,20.0s
QUA2 Belchertown 72.83 318 P **P** **09 38 22.2 +1.3**
QUA2 IAmb IAmb 09 38 23.3
comp=Z,136nm,1.0s
QUA2 IAMs_20 IAMs_20 10 02 32.5
comp=Z,2µm,22.0s
I62A Tamworth 72.92 320 P **P** **09 38 23.1 +1.6**
I62A Tamworth 72.92 320 P **P** **09 38 22.9 +1.5**
baz=119,SNR=26
I62A P **P** **09 38 22.9 +1.5**
baz=119,SNR=26
FFD Franklin Falls 72.93 320 P **P** **09 38 22.9 +1.4**
FFD IAmb IAmb 09 38 24.1
comp=Z,154nm,1.1s
K62A Royalston 72.93 319 IAmb IAmb 09 38 24.1
comp=Z,124nm,1.1s
K62A Royalston 72.93 319 P **P** **09 38 23.0 +1.5**
baz=118,SNR=16
K62A P **P** **09 38 23.0 +1.5**
baz=118,SNR=16
WSPT Westport, CT 72.98 317 P **P** **09 38 23.0 +1.2**
WSPT IAMs_20 IAMs_20 10 03 53.5
comp=Z,2µm,20.0s
F62A Pittston Farm, 73.07 323 P **P** **09 38 23.3 +1.1**
baz=120,SNR=13
F62A P **P** **09 38 23.3 +1.1**
baz=120,SNR=13
G62A West of Eustis 73.07 322 P **P** **09 38 23.1 +0.8**
G62A IAmb IAmb 09 38 24.2
comp=Z,96nm,1.2s
G62A West of Eustis 73.07 322 P **P** **09 38 22.9 +0.6**
baz=120,SNR=8.6
G62A P **P** **09 38 22.9 +0.6**
baz=120,SNR=8.6
V61A Roper 73.09 311 P **P** **09 38 23.1 +0.5**
L61B Northampton 73.13 318 P **P** **09 38 23.2 +0.5**
L61B IAmb IAmb 09 38 25.1
comp=Z,249nm,1.7s
L61B IAMs_20 IAMs_20 10 02 53.3
comp=Z,2µm,22.0s
L61B Northampton 73.13 318 P **P** **09 38 23.4 +0.8**
baz=117,SNR=11
D62A Allapoint, All 73.13 324 P **P** **09 38 23.5 +1.0**
D62A IAmb IAmb 09 38 24.6
comp=Z,182nm,1.1s
D62A Allapoint, All 73.13 324 P **P** **09 38 23.6 +1.0**
baz=122,SNR=28
D62A P **P** **09 38 23.6 +1.0**
baz=122,SNR=28
H62A Milan 73.15 321 P **P** **09 38 23.9 +1.3**
H62A IAmb IAmb 09 38 25.3
comp=Z,167nm,0.9s
H62A Milan 73.15 321 P **P** **09 38 24.1 +1.3**
baz=119,SNR=25
H62A P **P** **09 38 24.1 +1.3**
baz=119,SNR=25
VSU Vasula 73.22 21*c i*P **P** **09 38 22.5 -0.3**
VSU pmax pmax
comp=Z,206nm,1.0s
VSU MLR MLR
comp=Z,4µm,18.0s
VSU Vasula 73.22 21 *e*P **P** **09 38 22.8 0.0**
FOR Fordham 73.23 316 P **P** **09 38 24.5 +1.2**
baz=116,SNR=7.2
JTS Las Juntas de 73.25 283 LR LR 10 09 38.7
comp=Z,764nm,20.1s,baz=174,slow=35
JTS Las Juntas de 73.25 283 P **P** **09 38 24.0 0.0**
JTS Las Juntas de 73.25 283⇑ *e*P **P** **09 38 23.6 -0.4**
JTS pmax pmax
comp=Z,14nm,1.1s
JTS MLR MLR
comp=Z,327nm,16.0s
CPNY Central Park 73.25 316 P **P** **09 38 23.6 +0.2**
CPNY IAmb IAmb 09 38 25.7
comp=Z,147nm,1.4s
061Z Ochoppi 73.25 300 P **P** **09 38 24.6 +0.9**
061Z IAmb IAmb 09 38 27.0
comp=Z,146nm,1.0s
PAL Palisades 73.30 317 P **P** **09 38 23.7 0.0**
PAL IAmb IAmb 09 38 26.0
comp=Z,146nm,1.3s
PAL IAMs_20 IAMs_20 10 03 21.0
comp=Z,2µm,22.0s
PAL Palisades 73.30 317 P **P** **09 38 23.7 0.0**
PAL pmax pmax
comp=Z,146nm,1.3s
PAL Palisades 73.30 317 P **P** **09 38 24.9 +1.1**
baz=116,SNR=7.1
KSCT Kent School, K 73.33 317 P **P** **09 38 24.4 +0.5**
KSCT IAmb IAmb 09 38 25.7
comp=Z,64nm,1.0s
P61A Hammonton 73.35 315 P **P** **09 38 25.6 +1.6**
HNH Hanover 73.45 320 IAmb IAmb 09 38 27.2
comp=Z,155nm,1.1s
J61A Chester 73.45 319 P **P** **09 38 26.1 +1.6**
J61A IAmb IAmb 09 38 27.2
comp=Z,151nm,1.1s
J61A Chester 73.45 319 P **P** **09 38 26.2 +1.6**
baz=118,SNR=22
J61A P **P** **09 38 26.2 +1.6**
baz=118,SNR=22
LBNH Lisbon 73.47 320 P **P** **09 38 26.2 +1.5**
LBNH IAmb IAmb 09 38 27.3
comp=Z,112nm,1.1s
LBNH Lisbon 73.47 320 P **P** **09 38 26.2 +1.5**
LBNH pmax pmax
comp=Z,112nm,1.1s
LBNH Lisbon 73.47 320 P **P** **09 38 26.2 +1.5**
baz=118,SNR=12
BRNY Black Rk. Fore 73.55 317 P **P** **09 38 26.5 +1.3**
baz=116,SNR=23
IVI Ivigtut 73.56 343 P **P** **09 38 25.5 +0.7**
IVI IAmb IAmb 09 38 26.6
comp=Z,80nm,1.0s
IVI Ivigtut 73.56 343 *i* P **P** **09 38 24.5 -0.3**
IVI IAmb IAmb 09 38 26.3
comp=Z,95nm,1.1s
PANJ Princeton 73.58 316 P **P** **09 38 26.7 +1.3**
baz=115,SNR=27
TRNY Table Rock, Ra 73.58 317 P **P** **09 38 26.0 +0.6**
TRNY IAmb IAmb 09 38 27.8
comp=Z,206nm,1.4s
GROC Groznyy 73.59 41 *e*P **P** **09 38 26.4 +1.0**
GROC *e* 09 38 43.1
GROC *e*S **SKiKP** **09 47 56.7 +0.6**
GROC pmax pmax
comp=Z,41nm,1.2s
RAF Rauma 73.61 17 *e*P **P** **09 38 25.7 +0.6**
BRNJ Basking Ridge 73.62 316 IAmb IAmb 09 38 28.1
comp=Z,193nm,1.5s
BRNJ Basking Ridge 73.62 316 P **P** **09 38 26.7 +1.2**
baz=115,SNR=8.7
Y60A Bolivia 73.68 309 P **P** **09 38 27.2 +1.1**
Y60A Bolivia 73.68 309 P **P** **09 38 27.6 +1.5**
baz=111,SNR=16
Y60A P **P** **09 38 27.6 +1.5**
baz=111,SNR=16
VORD Divnogorie 73.76 32 *e*P **P** **09 38 25.0 -1.2**
VORD pmax pmax
comp=Z,60nm,1.1s
MEF Metsahovi 73.77 19 *e*P **P** **09 38 26.1 +0.1**
ACON Acoyapa 73.78 285 IAmb IAmb 09 38 28.9
comp=Z,176nm,1.4s
NPNY Mohonk Preserv 73.79 317 P **P** **09 38 27.6 +1.0**
baz=116,SNR=6.6
ODNJ Ogdensburg 73.81 316 P **P** **09 38 27.1 +0.3**
ODNJ IAmb IAmb 09 38 29.0
comp=Z,186nm,1.6s
ODNJ Ogdensburg 73.81 316 P **P** **09 38 27.7 +1.0**
baz=116,SNR=15
TUPA Temple Univers 73.83 315 P **P** **09 38 28.3 +1.5**
baz=115,SNR=8.0
VSR Storozhevoye 73.84 31 *e*P **P** **09 38 25.7 -0.9**
VSR pmax pmax
comp=Z,40nm,0.6s
CNNC Cliffs of the 73.88 310 IAmb IAmb 09 38 29.4
comp=Z,166nm,1.1s
CNNC Cliffs of the 73.88 310 P **P** **09 38 28.3 +1.1**
baz=112
TRY Troy 73.90 318 P **P** **09 38 28.6 +1.4**
TRY IAmb IAmb 09 38 29.8
comp=Z,240nm,1.4s
GEDE Greenville 74.00 315 P **P** **09 38 28.9 +1.0**
baz=114,SNR=18
MCVT Middlebury Col 74.02 320 P **P** **09 38 29.3 +1.4**
baz=118,SNR=21
WUPA West Chester U 74.02 315 P **P** **09 38 29.1 +1.1**
VT1 Waterbury 74.04 320 IAmb IAmb 09 38 30.5
comp=Z,89nm,1.1s
VT1 IAMs_20 IAMs_20 10 04 13.2
comp=Z,2µm,20.0s
LMQ La Malbaie 74.12 324 P **P** **09 38 29.2 +0.8**
LMQ IAmb IAmb 09 38 30.2
comp=Z,148nm,0.9s
VORR Voronezh 74.12 31⇑ *i*P **P** **09 38 27.9 -0.4**
VORR pmax pmax
comp=Z,69nm,1.6s
LUPA Lehigh Univers 74.14 316 P **P** **09 38 29.1 +0.4**
LUPA IAmb IAmb 09 38 31.0
comp=Z,120nm,1.2s
Y59A Loris 74.19 308 P **P** **09 38 30.4 +1.4**
baz=111,SNR=14
Y59A P **P** **09 38 30.4 +1.4**
baz=111,SNR=14
ACCN Adirondack Com 74.19 319 P **P** **09 38 30.1 +1.1**
ACCN IAmb IAmb 09 38 31.2
comp=Z,98nm,1.0s
ACCN Adirondack Com 74.19 319 P **P** **09 38 30.0 +1.1**
baz=117,SNR=21
ASUD Al Ashush, Dub 74.20 62 P **P** **09 38 29.9 +0.6**
U59A Littleton 74.21 311 IAmb IAmb 09 38 31.6
comp=Z,223nm,1.1s
U59A Littleton 74.21 311 P **P** **09 38 30.4 +1.3**
baz=112,SNR=45
U59A P **P** **09 38 30.4 +1.3**
baz=112,SNR=45
SOR Soroa 74.24 296 P **P** **09 38 30.7 +1.1**
SOR IAmb IAmb 09 38 32.5
comp=Z,114nm,1.3s
SOR Soroa 74.24 296 P **P** **09 38 30.7 +1.1**
SOR pmax pmax
comp=Z,114nm,1.3s
NSS Namsos 74.25 11 *e*P **P** **09 38 29.3 +0.6**
T59A Double "B" Far 74.26 312 P **P** **09 38 30.8 +1.3**
T59A IAmb IAmb 09 38 31.8
comp=Z,194nm,1.1s
T59A Double "B" Far 74.26 312 P **P** **09 38 30.8 +1.3**
baz=112,SNR=52

T59A P P 09 38 30.8 +1.3
baz=112,SNR=52
BOAB BOACO BROADBAN 74.35 285 P P 09 38 30.6 +0.2
BOAB IAmb IAmb 09 38 32.3
comp=Z,243nm,1.5s
BOAB IAMs_20 IAMs_20 10 08 04.5
comp=Z,1μm,20.0s
DWPF Disney Wildern 74.36 302 P P 09 38 30.5 +0.3
DWPF IAmb IAmb 09 38 32.6
comp=Z,142nm,1.0s
DWPF Disney Wildern 74.36 302 P P 09 38 31.9 +1.7
baz=108,SNR=8.6
HCNY Howe Caverns 74.37 318 P P 09 38 31.1 +1.2
baz=116,SNR=11
ALNE Al Ain 74.41 63 *i* P P 09 38 31.6 +1.0
SNR=5.9
FAQ Al Faqa, Dubai 74.46 62 P P 09 38 31.5 +0.6
LPSR Galich'ya Gora 74.52 30 *e*P P 09 38 29.5 -1.1
LPSR pmax pmax
comp=Z,80nm,1.8s
MVL Millersville 74.57 315 P P 09 38 31.4 +0.2
MVL IAmb IAmb 09 38 33.5
comp=Z,114nm,1.2s
L59A Walton 74.58 317 P P 09 38 32.5 +1.2
baz=115,SNR=34
L59A P P 09 38 32.5 +1.2
baz=115,SNR=34
NAZ Nazwa, Dubai 74.59 62 P P 09 38 32.0 +0.4
CBN Corbin Frederi 74.60 313 IAmb IAmb 09 38 33.5
comp=Z,161nm,1.4s
CBN Corbin Frederi 74.60 313 P P 09 38 32.3 +1.0
baz=113
MAK Makhachkala 74.60 42 *e*P P 09 38 26.7 -4.6
MAK *e*PPP PPP 09 42 59.5
MAK *e*S **SKiKP 09 48 00.1 +2.4**
MAK pmax pmax
comp=Z,383nm,1.6s
MATN Matagalpa 74.69 286 P P 09 38 32.2 -0.3
X58A Rowland 74.74 309 P P 09 38 33.1 +0.9
X58A Rowland 74.74 309 P P 09 38 33.6 +1.3
baz=110,SNR=27
X58A P P 09 38 33.6 +1.3
baz=110,SNR=27
JSRW J. Sargeant Re 74.78 312 P P 09 38 33.4 +0.9
Y58A Scranton 74.78 308 P P 09 38 32.8 +0.3
Y58A IAmb IAmb 09 38 34.9
comp=Z,143nm,1.1s
Y58A Scranton 74.78 308 P P 09 38 33.9 +1.4
baz=110,SNR=6.9
Y58A P P 09 38 33.9 +1.4
baz=110,SNR=6.9
J59A Piesco 74.78 319 P P 09 38 33.5 +1.1
J59A Piesco 74.78 319 P P 09 38 33.3 +1.0
baz=116,SNR=61
J59A P P 09 38 33.3 +1.0
baz=116,SNR=61
FRNY Flat Rock 74.80 320 P P 09 38 33.3 +0.9
FRNY IAmb IAmb 09 38 34.5
comp=Z,104nm,1.1s
FRNY Flat Rock 74.80 320 P P 09 38 33.4 +1.0
baz=117,SNR=30
KSPA Keystone Colle 74.81 317 P P 09 38 33.8 +1.2
KSPA IAmb IAmb 09 38 35.0
comp=Z,209nm,1.2s
KSPA Keystone Colle 74.81 317 P P 09 38 33.7 +1.2
baz=115,SNR=29
NCB Newcomb 74.82 319 P P 09 38 33.8 +1.2
NCB IAmb IAmb 09 38 34.8
comp=Z,66nm,0.9s
NCB Newcomb 74.82 319 P P 09 38 33.8 +1.2
baz=116,SNR=22
ASHO Ashiyiah 74.85 62 *i* P P 09 38 33.9 +0.7
SNR=6.7
R58B Mineral 74.88 312 P P 09 38 34.1 +1.2
R58B IAmb IAmb 09 38 35.2
comp=Z,158nm,1.2s
R58B Mineral 74.88 312 P P 09 38 34.2 +1.2
baz=112,SNR=35
R58B P P 09 38 34.2 +1.2
baz=112,SNR=35
OBN Obninsk 74.90 27 P P 09 38 31.9 -0.8
comp=Z,2.7nm,0.3s,baz=46,slow=9.2,SNR=12
OBN LR LR 10 11 45.8
comp=Z,205nm,21.7s,baz=232,slow=36
comp=Z,2.7nm,0.3s
OBN Obninsk 74.90 27 P P 09 38 32.1 -0.6
OBN Obninsk 74.90 27 *e*P P 09 38 31.9 -0.8
OBN *e* 09 38 47.6
OBN *e* 09 41 20.3
OBN *e*PPP PPP 09 43 06.0
OBN *e*S S **09 48 05.7 -4.1**
OBN *e*SS **SS 09 52 54.9 -3.5**
OBN pmax pmax
comp=Z,81nm,1.7s
OBN MLR MLR
comp=Z,613nm,17.0s
NHSC New Hope 74.91 307 P P 09 38 34.6 +1.4
NHSC IAMs_20 IAMs_20 10 03 26.5
comp=Z,2μm,22.0s
NHSC New Hope 74.91 307 P P 09 38 34.8 +1.5
baz=110,SNR=15
PAGS Pennsylvania G 74.93 315 P P 09 38 34.0 +0.8
PAGS IAmb IAmb 09 38 35.4
comp=Z,155nm,1.3s
HATD Hatta, Dubai 74.95 62 *i* P P 09 38 34.5 +0.7
SNR=11
V58A Windy Hill, Pi 75.01 310 P P 09 38 35.1 +1.3
V58A IAmb IAmb 09 38 36.3
comp=Z,164nm,1.1s
V58A Windy Hill, Pi 75.01 310 P P 09 38 35.1 +1.3
baz=111,SNR=38
V58A P P 09 38 35.1 +1.3
baz=111,SNR=38
UOSS Minazif 75.05 62 P P 09 38 34.5 +0.2
UOSS Minazif 75.05 62 *i* P P 09 38 34.5 +0.2
SNR=7.6
MSFE Esma-Masafi 75.12 61 P P 09 38 35.4 +0.7
SOHO SOHO 75.12 63 *i* P P 09 38 35.3 +0.6
SNR=11
MNTQ Montreal, Queb 75.12 321 P P 09 38 34.7 +0.5
N58A Sunbury 75.17 316 P P 09 38 35.6 +1.0
N58A IAmb IAmb 09 38 36.8
comp=Z,174nm,1.2s
N58A Sunbury 75.17 316 P P 09 38 35.7 +1.0
baz=114,SNR=28
N58A P P 09 38 35.7 +1.0
baz=114,SNR=28
VRH Novokhopyorsk 75.17 32 *e*P P 09 38 33.5 -0.9
VRH pmax pmax
comp=Z,20nm,0.8s
BINY Binghamton 75.22 317 P P 09 38 36.4 +1.5
BINY IAmb IAmb 09 38 37.5
comp=Z,191nm,1.2s
BINY IAMs_20 IAMs_20 10 04 19.8
comp=Z,2μm,20.0s
BINY Binghamton 75.22 317 P P 09 38 36.3 +1.4
baz=115,SNR=25
FINES FINESS Array B 75.24 18 P P 09 38 34.5 -0.1
comp=Z,49nm,0.8s,baz=205,slow=4.0,SNR=100
FINES LR LR 10 13 41.9
comp=Z,2μm,18.9s,baz=226,slow=37
comp=Z,49nm,0.8s
FINES FINESS Array B 75.24 18 P P 09 38 34.8 +0.2
FIA1 FINESS Array S 75.24 18 P P 09 38 34.5 0.0
FIA1 IAmb IAmb 09 38 35.8
comp=Z,132nm,1.2s
J58A Remsen 75.25 318 P P 09 38 36.0 +0.9
J58A IAmb IAmb 09 38 37.4
comp=Z,104nm,1.1s
J58A Remsen 75.25 318 P P 09 38 35.5 +0.4
baz=116,SNR=16
J58A P P 09 38 35.5 +0.4
baz=116,SNR=16
LONY Lake Ozonia 75.34 320 P P 09 38 36.5 +0.9
LONY IAmb IAmb 09 38 37.7
comp=Z,88nm,1.1s
LONY IAMs_20 IAMs_20 10 08 46.8
comp=Z,2μm,19.0s
Y57A Sumter 75.38 308 IAmb IAmb 09 38 38.5
comp=Z,95nm,1.0s
Y57A Sumter 75.38 308 P P 09 38 37.2 +1.2
baz=110,SNR=8.2
Y57A P P 09 38 37.2 +1.2
baz=110,SNR=8.2
BMNY Brushton-Moira 75.39 320 P P 09 38 36.9 +1.1
baz=116,SNR=36

BANOM Banah 75.39 61 P P 09 38 36.1 -0.2
PUL Pulkovo 75.45 21⇑ *e*P P 09 38 36.3 +0.5
PUL pmax pmax
comp=Z,94nm,1.0s
PUL MLR MLR
comp=Z,1μm,16.0s
W57A Gilead 75.45 309 P P 09 38 37.4 +1.1
W57A IAmb IAmb 09 38 38.6
comp=Z,156nm,1.4s
W57A Gilead 75.45 309 P P 09 38 37.5 +1.1
baz=110,SNR=27
W57A P P 09 38 37.5 +1.1
baz=110,SNR=27
LATQ La Tuque 75.49 323 P P 09 38 36.8 +0.5
T57A Hurt 75.54 311 P P 09 38 38.0 +1.2
T57A IAmb IAmb 09 38 39.2
comp=Z,134nm,1.2s
T57A Hurt 75.54 311 P P 09 38 38.1 +1.2
baz=111,SNR=42
T57A P P 09 38 38.1 +1.2
baz=111,SNR=42
P57A Homestead Farm 75.55 314 P P 09 38 38.5 +1.6
P57A IAmb IAmb 09 38 39.6
comp=Z,203nm,1.2s
P57A Homestead Farm 75.55 314 P P 09 38 38.5 +1.6
baz=113,SNR=42
P57A P P 09 38 38.5 +1.6
baz=113,SNR=42
S57A Dark Hollow, R 75.59 312 P P 09 38 37.6 +0.5
S57A IAmb IAmb 09 38 39.8
comp=Z,147nm,1.3s
S57A Dark Hollow, R 75.59 312 P P 09 38 38.6 +1.4
baz=112,SNR=26
S57A P P 09 38 38.6 +1.4
baz=112,SNR=26
456A Hilliard 75.64 304 P P 09 38 39.1 +1.6
456A IAmb IAmb 09 38 40.3
comp=Z,142nm,1.0s
456A Hilliard 75.64 304 P P 09 38 39.4 +1.8
baz=108,SNR=8.4
BIRD Birdtown, Kers 75.64 308 IAmb IAmb 09 38 40.0
comp=Z,121nm,1.1s
BIRD Birdtown, Kers 75.64 308 P P 09 38 38.9 +1.4
baz=110,SNR=34
M57A Sunshine Farm, 75.65 316 IAmb IAmb 09 38 39.9
comp=Z,205nm,1.8s
M57A Sunshine Farm, 75.65 316 P P 09 38 38.6 +1.2
baz=114,SNR=10
M57A P P 09 38 38.6 +1.2
baz=114,SNR=10
656A Willston 75.66 303 P P 09 38 38.7 +1.0
656A Willston 75.66 303 P P 09 38 39.4 +1.8
baz=107,SNR=25
WCNY West Carthage 75.75 319 P P 09 38 39.1 +1.1
baz=115,SNR=22
MOS Moscow 75.75 27 *e*P P 09 38 36.5 -1.1
MOS pmax pmax
comp=Z,133nm,1.4s
MOS pmax pmax
comp=Z,300nm,2.2s
MOS MLR MLR
comp=Z,700nm,17.0s
K57A Scipio Center 75.80 317 P P 09 38 39.1 +0.8
K57A Scipio Center 75.80 317 P P 09 38 39.1 +0.8
baz=114,SNR=7.4
SSPA Standing Stone 75.90 315 P P 09 38 39.9 +1.0
SSPA Standing Stone 75.90 315 P P 09 38 40.0 +1.2
baz=113,SNR=37
HAW Hawthe Fire 76.13 307 P P 09 38 41.7 +1.4
baz=109,SNR=20
JSC Jenkinsville 76.15 308 P P 09 38 42.0 +1.6
JSC IAmb IAmb 09 38 43.0
comp=Z,163nm,1.2s
JSC Jenkinsville 76.15 308 P P 09 38 42.0 +1.6
JSC pmax pmax
comp=Z,163nm,1.2s
JSC Jenkinsville 76.15 308 P P 09 38 41.9 +1.6
baz=109,SNR=49
U56A King 76.16 310 IAmb IAmb 09 38 43.3
comp=Z,176nm,1.1s
U56A King 76.16 310 P P 09 38 42.2 +1.7
baz=110,SNR=28
U56A P P 09 38 42.2 +1.7
baz=110,SNR=28
MOR8 Moi Rana 76.19 11 *e*P P 09 38 41.1 +1.1
MOR8 IAmb IAmb 09 38 42.3
comp=Z,88nm,1.3s
MOR8 *e*S S **09 48 26.8 +3.0**
SCHQ Schefferville 76.21 331 P P 09 38 40.2 -0.1
comp=Z,41nm,0.9s,baz=125,slow=5.0,SNR=34
SCHQ LR LR 10 08 37.6
comp=Z,1μm,18.1s,baz=132,slow=33
comp=Z,41nm,0.9s
SCHQ Schefferville 76.21 331 P P 09 38 41.1 +0.8
SCHQ IAmb IAmb 09 38 42.5
comp=Z,91nm,1.2s
KONS Konsvik 76.23 11 *e*P P 09 38 41.3 +1.2
KONS IAmb IAmb 09 38 41.7
comp=Z,83nm,1.2s
J56A Wolcott 76.25 318 P P 09 38 42.0 +1.2
baz=114,SNR=20
J56A P P 09 38 42.0 +1.2
baz=114,SNR=20
L56A Greenwood 76.27 317 P P 09 38 41.8 +0.9
L56A IAmb IAmb 09 38 43.0
comp=Z,181nm,1.2s
L56A Greenwood 76.27 317 P P 09 38 41.9 +1.0
baz=114,SNR=27
L56A P P 09 38 41.9 +1.0
baz=114,SNR=27
255A Hazlehurst 76.37 305 P P 09 38 43.1 +1.4
baz=108,SNR=6.2
KMSC Kings Mountain 76.49 309 P P 09 38 43.6 +1.3
KMSC IAmb IAmb 09 38 45.0
comp=Z,141nm,1.0s
KMSC Kings Mountain 76.49 309 P P 09 38 43.7 +1.4
baz=109,SNR=46
SOEG Soedalen 76.49 353 *i* P P 09 38 41.8 +0.2
SOEG IAmb IAmb 09 38 43.9
comp=Z,12nm,0.8s
BLA Blacksburg 76.49 311 IAMs_20 IAMs_20 10 05 42.3
comp=Z,2μm,20.0s
BLA Blacksburg 76.49 311 P P 09 38 44.1 +1.7
baz=110,SNR=46
PECO Prince Edward 76.61 318 P P 09 38 43.5 +0.7
PECO IAmb IAmb 09 38 44.3
comp=Z,70nm,0.8s
V55A Taylorsville 76.63 309 P P 09 38 45.0 +1.9
baz=110,SNR=53
V55A P P 09 38 45.0 +1.9
baz=110,SNR=53
R55A Marlinton 76.64 312 IAmb IAmb 09 38 56.3
comp=Z,78nm,1.1s
R55A Marlinton 76.64 312 P P 09 38 45.1 +1.9
baz=111,SNR=15
R55A P P 09 38 45.1 +1.9
baz=111,SNR=15
MMNY Mt. Morris Dam 76.74 317 P P 09 38 44.3 +0.8
MMNY IAmb IAmb 09 38 45.5
comp=Z,174nm,1.4s
PAULI Pauline 76.75 308 IAmb IAmb 09 38 46.5
comp=Z,135nm,1.3s
PAULI Pauline 76.75 308 P P 09 38 45.4 +1.6
baz=109,SNR=25
WSAR Wadi Sarin 76.76 64 LR LR 10 12 34.6
comp=Z,597nm,19.6s,baz=260,slow=36
PAYG Puerto Ayora 76.77 271 IAMs_20 IAMs_20 10 11 53.5
comp=Z,2μm,18.0s
M55A Ridgway 76.84 316 P P 09 38 45.0 +0.8
M55A IAmb IAmb 09 38 46.2
comp=Z,100nm,1.2s
M55A Ridgway 76.84 316 P P 09 38 45.0 +0.8
baz=112,SNR=20
M55A P P 09 38 45.0 +0.8
baz=112,SNR=20
J55A Hilton 76.89 317 IAmb IAmb 09 38 46.3
comp=Z,151nm,1.4s
J55A Hilton 76.89 317 P P 09 38 45.2 +0.9
baz=114,SNR=8.6
J55A P P 09 38 45.2 +0.9
baz=114,SNR=8.6
HODGE Hodges 76.92 308 IAmb IAmb 09 38 47.5
comp=Z,149nm,1.3s
HODGE Hodges 76.92 308 P P 09 38 46.3 +1.6
baz=109,SNR=47
MCWV Mont Chateau 76.93 313 P P 09 38 45.8 +1.0
baz=111

WVNY West Valley, N 77.08 316 P P 09 38 46.5 +1.0
WVNY IAmb IAmb 09 38 47.8
comp=Z,201nm,1.2s
WVNY West Valley, N 77.08 316 P P 09 38 46.6 +1.0
baz=113,SNR=25
154A Montrose 77.09 306 P P 09 38 46.5 +0.8
154A IAmb IAmb 09 38 48.7
comp=Z,180nm,1.1s
154A Montrose 77.09 306 P P 09 38 47.6 +1.9
baz=108,SNR=23
TIGA Tifton 77.14 304 P P 09 38 47.7 +1.7
baz=107,SNR=17
DELO Deloro Mine 77.26 319 P P 09 38 47.3 +0.8
DELO IAmb IAmb 09 38 48.3
comp=Z,165nm,1.1s
MEDO Medina 77.28 317 IAmb IAmb 09 38 48.4
comp=Z,155nm,1.4s
U54A Nelsons Funny 77.31 310 P P 09 38 48.1 +1.1
baz=109,SNR=58
U54A P P 09 38 48.1 +1.1
baz=109,SNR=58
S54A Dingess, Beckl 77.35 311 P P 09 38 48.2 +1.0
S54A Dingess, Beckl 77.35 311 P P 09 38 48.4 +1.2
baz=110,SNR=53
S54A P P 09 38 48.4 +1.2
baz=110,SNR=53
Q54A Coxs Mills 77.41 313 P P 09 38 48.4 +0.9
Q54A Coxs Mills 77.41 313 P P 09 38 48.8 +1.4
baz=110,SNR=38
Q54A P P 09 38 48.8 +1.4
baz=110,SNR=38
FAUS Fauske 77.42 11 *e*P P 09 38 47.4 +0.6
FAUS IAmb IAmb 09 38 48.4
comp=Z,85nm,1.1s
FAUS *e*S S **09 48 41.3 +4.2**
DY2G Dye2 77.44 347 *i* P P 09 38 47.7 +0.5
DY2G IAmb IAmb 09 38 49.3
comp=Z,447nm,1.7s
J54A Appleton 77.44 317 IAmb IAmb 09 38 48.7
comp=Z,47nm,0.8s
J54A Appleton 77.44 317 P P 09 38 48.0 +0.5
baz=113,SNR=5.7
J54A P P 09 38 48.0 +0.5
baz=113,SNR=5.7
553A Crawfordville 77.47 303 P P 09 38 50.1 +2.2
baz=106,SNR=17
O54A Avella 77.50 314 P P 09 38 48.5 +0.5
O54A IAmb IAmb 09 38 50.3
comp=Z,241nm,1.4s
O54A Avella 77.50 314 P P 09 38 49.1 +1.2
baz=111,SNR=26
O54A P P 09 38 49.1 +1.2
baz=111,SNR=26
GOGA Godfrey 77.62 306 IAmb IAmb 09 38 51.4
comp=Z,85nm,1.4s
GOGA Godfrey 77.62 306 IAMs_20 IAMs_20 10 05 09.2
comp=Z,2μm,22.0s
GOGA Godfrey 77.62 306 P P 09 38 50.2 +1.6
baz=108,SNR=24
BG3 Lake Jocassee 77.68 308 P P 09 38 50.9 +1.9
CASEE Lake Jocassee 77.68 308 P P 09 38 50.8 +1.8
baz=108,SNR=59
V53A Saluda 77.80 309 IAmb IAmb 09 38 52.3
comp=Z,144nm,1.1s
V53A Saluda 77.80 309 P P 09 38 51.0 +1.2
baz=108,SNR=81
V53A P P 09 38 51.0 +1.2
baz=108,SNR=81
ALLY Alegheny Colle 77.86 315 P P 09 38 51.0 +1.1
ALLY Alegheny Colle 77.86 315 P P 09 38 51.0 +1.1
baz=112,SNR=11
STEI Steigen 77.89 11 *e*P P 09 38 50.0 +0.6
STEI IAmb IAmb 09 38 50.9
comp=Z,106nm,1.5s
ERPA Erie 77.93 316 P P 09 38 51.0 +0.8
baz=112,SNR=7.8
SCO Scoresbysund 77.94 357 *i* P P 09 38 50.6 +1.0
SCO IAmb IAmb 09 38 51.7
comp=Z,33nm,1.0s
P53A Whipple 77.99 313 P P 09 38 51.7 +1.1
baz=110,SNR=38
P53A P P 09 38 51.7 +1.1
baz=110,SNR=38
R53A Hurricane 78.01 312 P P 09 38 52.1 +1.2
R53A IAmb IAmb 09 38 52.6
comp=Z,81nm,0.8s
R53A Hurricane 78.01 312 P P 09 38 52.0 +1.2
baz=110,SNR=27
R53A P P 09 38 52.0 +1.2
baz=110,SNR=27
MAW Mawson 78.01 158 P P 09 38 50.3 +0.1
comp=Z,7.5nm,0.9s,baz=274,slow=7.9,SNR=7.0
MAW LR LR 10 07 45.3
comp=Z,775nm,18.1s,baz=292,slow=32
comp=Z,7.5nm,0.9s
MAW Mawson 78.01 158 P P 09 38 51.7 +1.5
N53A Lisbon 78.05 314 P P 09 38 52.1 +1.1
N53A Lisbon 78.05 314 P P 09 38 52.3 +1.3
baz=111,SNR=30
N53A P P 09 38 52.3 +1.3
baz=111,SNR=30
O53A New Philadelph 78.12 314 P P 09 38 52.2 +0.8
O53A IAMs_20 IAMs_20 10 05 25.5
comp=Z,2μm,22.0s
M53A WI Miller and 78.16 315 IAMs_20 IAMs_20 10 08 21.5
comp=Z,1μm,19.0s
Y52A Lilburn 78.23 307 P P 09 38 53.6 +1.5
Y52A Lilburn 78.23 307 P P 09 38 53.4 +1.3
baz=107,SNR=60
Y52A P P 09 38 53.4 +1.3
baz=107,SNR=60
352A Blakely 78.24 304 P P 09 38 54.0 +1.8
baz=106,SNR=47
SADO Sadowa 78.36 319 LR LR 10 06 11.8
comp=Z,2μm,21.9s,baz=130,slow=30
SADO Sadowa 78.36 319 P P 09 38 53.0 +0.5
SADO IAmb IAmb 09 38 54.2
comp=Z,88nm,0.9s
152A Waverly Hall 78.41 305 IAmb IAmb 09 38 55.8
comp=Z,122nm,1.2s
152A Waverly Hall 78.41 305 P P 09 38 54.5 +1.4
baz=107,SNR=16
Q52A Bidwell 78.45 312 P P 09 38 54.4 +1.1
baz=110,SNR=108
Q52A P P 09 38 54.4 +1.1
baz=110,SNR=108
V52A Sevierville 78.46 309 P P 09 38 54.5 +1.1
V52A IAmb IAmb 09 38 55.7
comp=Z,158nm,1.2s
V52A Sevierville 78.46 309 P P 09 38 54.2 +0.9
baz=108,SNR=37
ICESG Greenland Ices 78.46 351 *i* P P 09 38 52.0 -1.1
ICESG IAmb IAmb 09 38 53.9
comp=Z,72nm,1.2s
W52A Murphy 78.49 308 P P 09 38 54.9 +1.3
baz=108,SNR=90
O52A Adamsville 78.53 313 P P 09 38 54.8 +1.1
O52A Adamsville 78.53 313 P P 09 38 55.0 +1.4
baz=110,SNR=97
O52A P P 09 38 55.0 +1.4
baz=110,SNR=97
TKL Tuckaleechee C 78.54 309 LR LR 10 06 12.6
comp=Z,2μm,21.2s,baz=115,slow=30
TKL Tuckaleechee C 78.54 309 IAmb IAmb 09 38 56.0
comp=Z,163nm,1.1s
TKL Tuckaleechee C 78.54 309 P P 09 38 54.8 +1.0
baz=108,SNR=64
P52A Corning 78.58 313 P P 09 38 55.0 +1.1
VLDQ Val d'Or 78.63 322 P P 09 38 55.7 +1.7
VLDQ IAmb IAmb 09 38 56.7
comp=Z,132nm,1.2s
TZTN Tazewell 78.64 309 IAmb IAmb 09 38 56.9
comp=Z,115nm,1.1s
TZTN IAMs_20 IAMs_20 10 06 08.2
comp=Z,1μm,22.0s
TZTN Tazewell 78.64 309 P P 09 38 55.7 +1.4
baz=108,SNR=26
M52A Chesterland 78.67 315 P P 09 38 54.9 +0.4
M52A Chesterland 78.67 315 P P 09 38 55.4 +0.9
baz=111,SNR=18
M52A P P 09 38 55.4 +0.9
baz=111,SNR=18
451A Vernon 78.68 303 P P 09 38 56.2 +1.5
baz=106,SNR=23
SFJD Kangerlussuaq 78.87 346 LR LR 10 09 03.7
comp=Z,556nm,18.3s,baz=148,slow=32
SFJD Kangerlussuaq 78.87 346 P P 09 38 55.3 +0.5

SFJD Kangerlussuaq 78.87 346 P P 09 38 55.3 +0.5
SFJD pmax pmax
comp=Z,36nm,0.8s
SFJD Kangerlussuaq 78.87 346 *i* P **P 09 38 53.3 -1.6**
SFJD IAmb IAmb 09 38 58.1
comp=Z,70nm,1.2s
BELG Belogornoye 78.94 33 P P 09 38 55.2 -0.4
comp=Z,52nm,0.9s,baz=53,slow=2.7,SNR=20
BELG LR LR 10 15 14.2
comp=Z,442nm,21.2s,baz=278,slow=37
comp=Z,52nm,0.9s
Z51A Franklin 78.96 306 P P 09 38 56.6 +0.5
Z51A IAmb IAmb 09 38 58.7
comp=Z,168nm,1.3s
Z51A Franklin 78.96 306 P P 09 38 57.4 +1.2
baz=107,SNR=18
S51A Beattyville 79.01 311 P P 09 38 57.6 +1.3
S51A Beattyville 79.01 311 P P 09 38 57.7 +1.3
baz=108,SNR=81
S51A P **P 09 38 57.7 +1.3**
baz=108,SNR=81
V51A Loudon 79.03 309 P P 09 38 57.8 +1.4
baz=108,SNR=98
CPCT Cooper Cave 79.06 308 P P 09 38 57.6 +0.9
X51A Calhoun 79.06 307 P P 09 38 58.0 +1.3
X51A Calhoun 79.06 307 P P 09 38 58.0 +1.3
baz=107,SNR=28
X51A P **P 09 38 58.0 +1.3**
baz=107,SNR=28
N51A Ashland 79.18 314 P P 09 38 57.6 +0.4
N51A Ashland 79.18 314 P P 09 38 58.1 +0.8
baz=110,SNR=56
N51A P **P 09 38 58.1 +0.8**
baz=110,SNR=56
P51A Williamsport 79.20 312 P P 09 38 57.9 +0.6
P51A IAmb IAmb 09 38 59.3
comp=Z,140nm,1.2s
P51A Williamsport 79.20 312 P P 09 38 58.1 +0.8
baz=109,SNR=20
P51A P **P 09 38 58.1 +0.8**
baz=109,SNR=20
Q51A Peebles 79.27 312 P P 09 38 58.5 +0.8
Q51A IAmb IAmb 09 38 59.7
comp=Z,181nm,0.9s
Q51A Peebles 79.27 312 P P 09 38 58.7 +1.0
baz=109,SNR=41
Q51A P **P 09 38 58.7 +1.0**
baz=109,SNR=41
ACSO Alum Creek Sta 79.39 313 P P 09 38 59.3 +1.0
baz=109,SNR=62
250A Grady 79.48 304 P P 09 39 00.0 +1.0
250A Grady 79.48 304 P P 09 39 00.5 +1.5
baz=106,SNR=44
W50A Signal Mountai 79.60 308 IAmb IAmb 09 39 01.7
comp=Z,87nm,1.1s
W50A Signal Mountai 79.60 308 P P 09 39 00.4 +0.7
baz=107,SNR=31
KLMR Klimovskoe 79.63 23 *e*P **P 09 38 57.5 -1.6**
KLMR *e* 09 41 57.5
KLMR pmax pmax
comp=Z,103nm,1.2s
KLMR MLR MLR
comp=Z,1μm,19.0s
KLMR Klimovskoe 79.63 23 *e*P **P 09 38 57.5 -1.6**
KLMR AMP 09 38 59.8
comp=Z,103nm,1.2s
KLMR *e*PP **PP 09 41 57.5 -2.5**
KLMR LQ LQ 10 07 26.0
KLMR LQ LQ 10 07 26.0
KLMR LR LR 10 11 27.8
KLMR AMP 10 15 52.8
comp=Z,1μm,18.6s
FPAL Fort Paine 79.65 307 P P 09 39 00.7 +0.8
FPAL IAmb IAmb 09 39 01.9
comp=Z,241nm,1.9s
R50A Paris 79.76 311 IAmb IAmb 09 39 02.7
comp=Z,181nm,1.2s
R50A Paris 79.76 311 P P 09 39 01.3 +0.9
baz=108,SNR=41
R50A P **P 09 39 01.3 +0.9**
baz=108,SNR=41
T50A Nancy 79.77 310 P P 09 39 01.2 +0.7
T50A IAmb IAmb 09 39 02.8
comp=Z,202nm,1.1s
T50A Nancy 79.77 310 P P 09 39 01.6 +1.1
baz=108
T50A P **P 09 39 01.6 +1.1**
baz=108
M50A Fremont 79.82 314 P P 09 39 01.4 +0.8
M50A IAmb IAmb 09 39 02.5
comp=Z,179nm,1.0s
M50A Fremont 79.82 314 P P 09 39 01.5 +0.8
baz=109,SNR=20
M50A P **P 09 39 01.5 +0.8**
baz=109,SNR=20
BRAL Brewton 79.91 303 IAMs_20 IAMs_20 10 11 47.9
comp=Z,985nm,19.0s
K50A Casco 79.98 316 P P 09 39 01.9 +0.5
K50A IAmb IAmb 09 39 03.1
comp=Z,134nm,1.2s
K50A Casco 79.98 316 P P 09 39 02.0 +0.5
baz=110,SNR=6.2
K50A P **P 09 39 02.0 +0.5**
baz=110,SNR=6.2
TRO Tromso 80.04 11 *e*P **P 09 39 01.7 +0.5**
SWET Sewanee 80.09 308 IAmb IAmb 09 39 04.0
comp=Z,158nm,1.0s
Y49A Blount Mountai 80.10 306 P P 09 39 03.0 +0.7
Y49A IAmb IAmb 09 39 04.2
comp=Z,95nm,1.1s
Y49A Blount Mountai 80.10 306 P P 09 39 03.1 +0.7
baz=106,SNR=41
JETT Jettan, Norway 80.27 11 *e*P **P 09 39 03.2 +0.7**
GEYT Alibeck 80.30 50 P P 09 39 03.8 +0.4
comp=Z,11nm,0.8s,baz=245,slow=3.1,SNR=10
comp=Z,11nm,0.8s
GEYT Alibeck 80.30 50 P P 09 39 04.0 +0.5
U49A Red Boiling Sp 80.34 309 P P 09 39 04.4 +0.8
U49A IAmb IAmb 09 39 05.5
comp=Z,162nm,1.1s
U49A Red Boiling Sp 80.34 309 P P 09 39 04.4 +0.8
baz=107,SNR=56
LRAL Lakeview Retre 80.35 305 P P 09 39 04.5 +0.8
LRAL IAmb IAmb 09 39 05.6
comp=Z,149nm,1.2s
LRAL IAMs_20 IAMs_20 10 09 01.6
comp=Z,1μm,20.0s
LRAL Lakeview Retre 80.35 305 P P 09 39 04.3 +0.6
baz=106,SNR=63
O49A Covington 80.36 313 P P 09 39 04.0 +0.4
baz=108,SNR=47
O49A P **P 09 39 04.0 +0.4**
baz=108,SNR=47
R49A Shelbyville 80.40 311 P P 09 39 04.4 +0.5
R49A IAmb IAmb 09 39 05.7
comp=Z,251nm,1.4s
R49A Shelbyville 80.40 311 P P 09 39 04.4 +0.5
baz=108,SNR=50
R49A P **P 09 39 04.4 +0.5**
baz=108,SNR=50
KTK1 Kautokeino 80.41 13 *e*P **P 09 39 03.5 +0.3**
KTK1 IAmb IAmb 09 39 04.6
comp=Z,105nm,1.0s
P49A Miami Univ. Ec 80.44 312 P P 09 39 04.5 +0.5
P49A IAmb IAmb 09 39 05.7
comp=Z,183nm,1.1s
P49A Miami Univ. Ec 80.44 312 P P 09 39 04.5 +0.5
baz=108,SNR=44
N49A Columbus Grove 80.48 314 P P 09 39 04.3 0.0
N49A IAmb IAmb 09 39 05.7
comp=Z,116nm,1.1s
N49A Columbus Grove 80.48 314 P P 09 39 04.8 +0.5
baz=108,SNR=14
N49A P **P 09 39 04.8 +0.5**
baz=108,SNR=14
I49A Point Hope 80.52 317 P P 09 39 03.7 -0.7
I49A Point Hope 80.52 317 P P 09 39 04.5 +0.1
baz=110,SNR=7.9
I49A P **P 09 39 04.5 +0.1**
baz=110,SNR=7.9
AAM Ann Arbor 80.55 315 IAmb IAmb 09 39 06.3
comp=Z,226nm,1.8s
AAM IAMs_20 IAMs_20 10 06 42.7
comp=Z,1μm,22.0s
AAM Ann Arbor 80.55 315 P P 09 39 04.9 +0.4
baz=109
CLTN Cedars of Leba 80.65 308 P P 09 39 05.8 +0.6
CLTN IAmb IAmb 09 39 06.9
comp=Z,140nm,1.1s
ILULI Ilulissat 80.74 347 *i* P **P 09 39 04.3 -0.6**
X48A Hartselle 80.77 307 IAmb IAmb 09 39 07.8
comp=Z,187nm,1.1s
X48A Hartselle 80.77 307 P P 09 39 06.6 +0.7
baz=106
P48A Milroy 80.94 312 P P 09 39 06.8 +0.1
P48A IAmb IAmb 09 39 08.1
comp=Z,246nm,1.2s
P48A Milroy 80.94 312 P P 09 39 06.8 +0.1
baz=108,SNR=48
P48A P **P 09 39 06.8 +0.1**
baz=108,SNR=48
V48A Smith Brothers 80.94 308 IAmb IAmb 09 39 08.5
comp=Z,200nm,1.1s
V48A Smith Brothers 80.94 308 P P 09 39 07.2 +0.4
baz=106,SNR=85
O48B Farmland 80.98 313 P P 09 39 07.1 +0.2
baz=108,SNR=32
L48A N Adams 80.98 314 IAmb IAmb 09 39 08.2
comp=Z,296nm,1.8s
L48A N Adams 80.98 314 P P 09 39 07.1 +0.2
baz=108,SNR=18
L48A P **P 09 39 07.1 +0.2**
baz=108,SNR=18
Z47A Carrollton 81.26 305 P P 09 39 09.4 +0.9
baz=105,SNR=48
ARA0 ARCESS Array S 81.32 13 *e*P **P 09 39 08.0 -0.1**
ARCES ARCESS Array B 81.32 13 P P 09 39 08.1 0.0
comp=Z,36nm,0.8s,baz=215,slow=4.7,SNR=120
ARCES LR LR 10 16 36.1
comp=Z,880nm,19.6s,baz=229,slow=37
comp=Z,36nm,0.8s
ARCES ARCESS Array B 81.32 13 P P 09 39 08.1 0.0
ARCES IAmb IAmb 09 39 09.3
comp=Z,88nm,1.1s
ARCES ARCESS Array B 81.32 13 P P 09 39 08.1 0.0
ARCES pmax pmax
comp=Z,87nm,1.2s
SUMG Summit 81.44 353 P P 09 39 10.2 +1.0
SUMG Summit 81.44 353 P P 09 39 10.2 +1.0
SUMG pmax pmax
comp=Z,66nm,1.1s
SUMG Summit 81.44 353 *i* P **P 09 39 09.5 +0.3**
SUMG IAmb IAmb 09 39 10.8
comp=Z,64nm,1.1s
T47A Sharon Grove 81.50 309 IAmb IAmb 09 39 11.2
comp=Z,242nm,1.4s
T47A Sharon Grove 81.50 309 P P 09 39 10.0 +0.2
baz=106,SNR=49
N47A Urbana 81.56 313 P P 09 39 10.1 +0.1
baz=108,SNR=36
N47A P **P 09 39 10.1 +0.1**
baz=108,SNR=36
J47A Sunmer 81.66 316 IAmb IAmb 09 39 12.5
comp=Z,116nm,1.9s
J47A Sumner 81.66 316 P P 09 39 10.2 -0.3
baz=108
J47A P **P 09 39 10.2 -0.3**
baz=108
BLO Bloomington 81.67 311 P P 09 39 10.4 -0.2
BLO IAmb IAmb 09 39 12.0
comp=Z,211nm,1.3s
BLO Bloomington 81.67 311 P P 09 39 10.4 -0.2
BLO pmax pmax
comp=Z,211nm,1.3s
DBG Daneborg 81.68 358 *i* P **P 09 39 11.1 +1.2**
DBG IAmb IAmb 09 39 12.5
comp=Z,34nm,1.1s
PLAL Pickwick Lake 81.72 307 IAmb IAmb 09 39 12.3
comp=Z,153nm,1.2s
PLAL IAMs_20 IAMs_20 10 07 58.9
comp=Z,2μm,21.0s
HAMF Hammerfest 81.81 12 *e*P **P 09 39 10.7 +0.1**
KEV Kevo 81.83 13 P P 09 39 11.1 +0.3
KEV IAmb IAmb 09 39 12.2
comp=Z,87nm,1.0s
KEV IAMs_20 IAMs_20 10 16 39.1
comp=Z,1μm,21.0s
KEV Kevo 81.83 13 P P 09 39 11.1 +0.3
KEV pmax pmax
comp=Z,87nm,1.0s
KEV MLR MLR
comp=Z,1μm,21.0s
WVT Waverly 81.83 308 P P 09 39 11.4 -0.1
WVT Waverly 81.83 308 IAMs_20 IAMs_20 10 07 40.7
comp=Z,2μm,22.0s
WVT Waverly 81.83 308 P P 09 39 11.4 -0.1
WVT pmax pmax
comp=Z,204nm,1.1s
WVT Waverly 81.83 308 P P 09 39 11.2 -0.3
baz=105,SNR=157
APA Apatity 81.86 16 *i* P **P 09 39 11.1 +0.1**
APA pmax pmax
comp=Z,33μm,0.7s
APA MLR MLR
comp=Z,1μm,28.0s
146A Union 81.93 304 P P 09 39 13.3 +1.2
baz=104,SNR=19
346A Big Creek Wild 81.97 303 P P 09 39 13.5 +1.2
346A Big Creek Wild 81.97 303 P P 09 39 13.6 +1.2
baz=104,SNR=11
GLMI Grayling 82.02 317 P P 09 39 12.4 +0.1
GLMI IAmb IAmb 09 39 13.4
comp=Z,70nm,1.0s
GLMI IAMs_20 IAMs_20 10 08 29.7
comp=Z,2μm,21.0s
GLMI Grayling 82.02 317 P P 09 39 11.8 -0.5
baz=109
FRB Frobisher Bay 82.06 338 LR LR 10 08 37.3
comp=Z,438nm,20.6s,baz=154,slow=31
P46A Rosedale 82.30 312 P P 09 39 13.6 -0.3
baz=106,SNR=29
E46A Sault Ste Mari 82.31 319 P P 09 39 13.2 -0.6
E46A IAmb IAmb 09 39 14.3
comp=Z,222nm,1.9s
E46A Sault Ste Mari 82.31 319 P P 09 39 13.3 -0.6
baz=109,SNR=18
L46A Eue Claire 82.32 314 IAmb IAmb 09 39 15.0
comp=Z,162nm,1.4s
L46A Eue Claire 82.32 314 P P 09 39 14.0 0.0
baz=107,SNR=7.9
L46A P **P 09 39 14.0 0.0**
baz=107,SNR=7.9
SFIN Lafayette 82.43 312 P P 09 39 14.2 -0.4
SFIN IAmb IAmb 09 39 15.3
comp=Z,94nm,1.1s
SFIN Lafayette 82.43 312 P P 09 39 14.1 -0.5
baz=106,SNR=22
LVZ Lovozero 82.44 17 P P 09 39 14.0 -0.1
LVZ Lovozero 82.44 17 *c* P **P 09 39 14.5 +0.4**
LVZ pmax pmax
comp=Z,223nm,1.0s
LVZ MLR MLR
comp=Z,683nm,19.0s
PRGR Permogore 82.52 24 *e*P **P 09 39 14.5 0.0**
Y45A Yeager Farm, C 82.62 305 P P 09 39 16.3 +0.7
Y45A Yeager Farm, C 82.62 305 P P 09 39 16.4 +0.7
baz=104,SNR=46
W45A Hickory Valley 82.65 307 P P 09 39 15.8 -0.1
baz=104,SNR=58
OXF Oxford 82.67 306 P P 09 39 15.7 -0.2
OXF IAMs_20 IAMs_20 10 09 07.0
comp=Z,1μm,20.0s
OXF Oxford 82.67 306 P P 09 39 15.7 -0.2
OXF pmax pmax
comp=Z,226nm,1.1s
OXF Oxford 82.67 306 P P 09 39 15.7 -0.2
baz=104,SNR=53
T45A Paducah 82.69 309 IAmb IAmb 09 39 16.9
comp=Z,120nm,0.8s
T45B Paducah 82.69 309 P P 09 39 15.9 -0.2
baz=105,SNR=8.2
KIRV Kirov 82.70 28 P P 09 39 15.4 -0.1
comp=Z,16nm,0.7s,baz=276,slow=4.5,SNR=17
KIRV LR LR 10 18 37.0
comp=Z,540nm,18.5s,baz=247,slow=38
comp=Z,16nm,0.7s
KIRV Kirov 82.70 28 *i* P **P 09 39 14.1 -1.4**
QSPA South Pole Qui 82.70 180 LR LR 10 10 41.2
comp=Z,1μm,18.0s,baz=208,slow=32
QSPA South Pole Qui 82.70 180 P P 09 39 16.3 +0.6
QSPA IAmb IAmb 09 39 18.1
comp=Z,59nm,1.0s
G45A Suttons Bay 82.79 317 IAmb IAmb 09 39 17.2
comp=Z,146nm,1.6s
G45A Suttons Bay 82.79 317 P P 09 39 16.2 -0.2
baz=108,SNR=6.3
G45A P **P 09 39 16.2 -0.2**
baz=108,SNR=6.3
I45A Fountain 82.88 316 IAmb IAmb 09 39 17.8
comp=Z,98nm,1.1s
I45A Fountain 82.88 316 P P 09 39 16.7 -0.2
baz=108
I45A P **P 09 39 16.7 -0.2**
baz=108
HALT Halls 82.96 308 P P 09 39 17.1 -0.4
HICK Hickman 83.03 308 P P 09 39 17.6 -0.2
VBMS Vicksburg 83.03 304 P P 09 39 18.5 +0.7
VBMS IAMs_20 IAMs_20 10 14 03.5
comp=Z,990nm,19.0s
VBMS Vicksburg 83.03 304 P P 09 39 18.8 +1.0
baz=103,SNR=18
344A Westbrook Farm 83.03 303 P P 09 39 19.6 +1.7
baz=103,SNR=34
LNXT Lenox 83.12 308 P P 09 39 17.8 -0.5
S44A Carbondale 83.34 309 P P 09 39 19.1 -0.2
S44A Carbondale 83.34 309 P P 09 39 19.2 -0.2
baz=105,SNR=33
O44A Mansfield 83.38 312 IAmb IAmb 09 39 19.9
comp=Z,125nm,1.1s
O44A Mansfield 83.38 312 P P 09 39 19.0 -0.5
baz=106,SNR=15
M44A Midewin, Midew 83.40 313 P P 09 39 19.0 -0.6
M44A IAmb IAmb 09 39 20.1
comp=Z,153nm,1.3s
M44A Midewin, Midew 83.40 313 P P 09 39 19.1 -0.5
baz=106,SNR=9.7
Q44A Meyer Farm, Va 83.46 311 IAmb IAmb 09 39 20.3
comp=Z,131nm,1.2s
Q44A Meyer Farm, Va 83.46 311 P P 09 39 19.4 -0.6
baz=105,SNR=17
PARMO Parma 83.47 308 P P 09 39 19.8 -0.2
GNAR Gosnell 83.50 307 P P 09 39 20.6 +0.4
L44A Lake County Fo 83.52 314 IAmb IAmb 09 39 21.1
comp=Z,117nm,1.1s
L44A Lake County Fo 83.52 314 P P 09 39 20.0 -0.2
baz=106
143A Socs Landing, 83.87 304 P P 09 39 23.1 +0.9
143A Socs Landing, 83.87 304 P P 09 39 23.2 +1.0
baz=103,SNR=48
HBAR Harrisburg 83.91 307 P P 09 39 22.9 +0.6
CMIG Matias Romero 83.96 288 LR LR 10 16 07.3
comp=Z,224nm,21.4s,baz=106,slow=35
K43A Burlington 83.97 314 P P 09 39 22.2 -0.3
K43A IAmb IAmb 09 39 23.3
comp=Z,141nm,1.2s
K43A Burlington 83.97 314 P P 09 39 22.2 -0.3
baz=108,SNR=13
PBMO Poplar Bluff 84.02 308 IAmb IAmb 09 39 23.6
comp=Z,149nm,1.4s
PBMO Poplar Bluff 84.02 308 P P 09 39 22.3 -0.6
baz=104,SNR=28
P43A Skaggs, Pawnee 84.03 311 P P 09 39 22.1 -0.7
P43A IAmb IAmb 09 39 23.2
comp=Z,103nm,1.1s
P43A Skaggs, Pawnee 84.03 311 P P 09 39 22.1 -0.7
baz=105,SNR=17
H43A Windswept, Lux 84.06 316 IAmb IAmb 09 39 24.1
comp=Z,75nm,1.2s
H43A Windswept, Lux 84.06 316 P P 09 39 22.8 -0.2
baz=106,SNR=8.3
E43A Lone Tree Farm 84.09 318 P P 09 39 22.9 -0.1
E43A IAmb IAmb 09 39 24.0
comp=Z,82nm,0.9s
E43A Lone Tree Farm 84.09 318 P P 09 39 22.9 -0.1
baz=107,SNR=42
HDIL Hopedale 84.09 312 P P 09 39 22.8 -0.4
baz=105,SNR=25
DAG Danmarks Havn 84.10 359 *i* P **P 09 39 21.5 -1.0**
DAG IAmb IAmb 09 39 24.2
comp=Z,79nm,1.5s
AKTO Aktyubinsk 84.14 38 P P 09 39 23.4 +0.3
comp=Z,18nm,0.9s,baz=242,slow=6.0,SNR=35
AKTO LR LR 10 21 35.7
comp=Z,690nm,18.9s,baz=245,slow=39
comp=Z,18nm,0.9s
FVM French Village 84.31 309 P P 09 39 24.3 0.0
FVM French Village 84.31 309 P P 09 39 24.3 0.0
FVM pmax pmax
comp=Z,245nm,1.1s
FVM French Village 84.31 309 P P 09 39 24.3 0.0
baz=104,SNR=81
SLM Saint Louis 84.32 310 P P 09 39 24.3 -0.1
baz=104,SNR=9.0
342B Flagon Creek P 84.35 303 P P 09 39 25.6 +1.0
baz=102,SNR=16
LCAR Lake Charles 84.42 307 P P 09 39 25.0 0.0
CCAR Cane Creek 84.44 305 P P 09 39 26.0 +0.9
UPNV Upernavik 84.55 348 *i* P **P 09 39 24.8 0.0**
UPNV IAmb IAmb 09 39 26.3
comp=Z,129nm,1.3s
F42A Maple Grove Fa 84.67 317 IAmb IAmb 09 39 26.5
comp=Z,47nm,1.1s
F42A Maple Grove Fa 84.67 317 P P 09 39 26.1 +0.1
baz=106
I42A Draeger Farm, 84.69 315 P P 09 39 26.1 -0.1
I42A Draeger Farm, 84.69 315 P P 09 39 25.8 -0.3
baz=106,SNR=19
L42A Oliver, Polo 84.74 313 IAmb IAmb 09 39 27.2
comp=Z,107nm,1.0s
L42A Oliver, Polo 84.74 313 P P 09 39 25.9 -0.5
baz=105,SNR=22
441A DeRidder 84.94 302 P P 09 39 28.0 +0.3
441A IAmb IAmb 09 39 30.3
comp=Z,106nm,1.1s
441A DeRidder 84.94 302 P P 09 39 28.9 +1.3
baz=102,SNR=6.5
CCM Cathedral Cave 84.95 309 P P 09 39 27.6 0.0
CCM Cathedral Cave 84.95 309 P P 09 39 27.6 0.0
CCM pmax pmax
comp=Z,361nm,1.3s
CCM Cathedral Cave 84.95 309 P P 09 39 27.7 0.0
baz=104,SNR=120
ABKAR Akbulak array 84.95 39 P P 09 39 27.2 -0.1
UALR University of 85.08 306 P P 09 39 28.4 +0.1
W41B Gary Mavity, V 85.09 306 P P 09 39 28.6 +0.2
W41B Gary Mavity, V 85.09 306 P P 09 39 28.6 +0.2
baz=103,SNR=49
Z41A Richland Creek 85.14 304 P P 09 39 29.1 +0.6
Z41A Richland Creek 85.14 304 P P 09 39 29.2 +0.6
baz=102,SNR=16
Z41A P **P 09 39 29.2 +0.6**
baz=102,SNR=16
FCAR Ozark Folk Cen 85.15 307 P P 09 39 28.1 -0.5
FCAR IAmb IAmb 09 39 29.4
comp=Z,62nm,1.2s
WHAR Wooly Hollow 85.15 306 P P 09 39 28.5 -0.2
WHAR IAmb IAmb 09 39 29.9
comp=Z,146nm,1.3s
D41A Chassel 85.32 318 IAmb IAmb 09 39 30.6
comp=Z,137nm,1.3s
D41A Chassel 85.32 318 P P 09 39 29.3 +0.1
baz=106,SNR=9.5
JFWS Jewell Farm 85.38 314 P P 09 39 29.5 -0.1
JFWS Jewell Farm 85.38 314 P P 09 39 29.5 -0.1
JFWS pmax pmax
comp=Z,181nm,1.4s
JFWS Jewell Farm 85.38 314 P P 09 39 29.6 -0.1
baz=105,SNR=27
X40A Basin Creek Fa 85.42 305 P P 09 39 30.1 +0.2
X40A IAmb IAmb 09 39 31.6
comp=Z,124nm,1.2s
X40A IAMs_20 IAMs_20 10 13 48.8
comp=Z,931nm,19.0s
X40A Basin Creek Fa 85.42 305 P P 09 39 30.2 +0.2
baz=102,SNR=57
X40A P **P 09 39 30.2 +0.2**
baz=102,SNR=57
COWI Conover 85.44 317 P P 09 39 29.4 -0.4
COWI IAMs_20 IAMs_20 10 10 24.1
comp=Z,2μm,21.0s
WLAR White Oak Lake 85.48 305 P P 09 39 31.2 +0.9
R40A Maddies Statio 85.79 309 P P 09 39 32.0 +0.3
baz=103,SNR=90
U40A Yellville 85.83 307 IAmb IAmb 09 39 33.2
comp=Z,100nm,1.2s
U40A IAMs_20 IAMs_20 10 10 54.6
comp=Z,1μm,20.0s
U40A Yellville 85.83 307 P P 09 39 31.9 -0.1
baz=102,SNR=36
U40A P **P 09 39 31.9 -0.1**
baz=102,SNR=36

L40A Anamosa 85.87 313 P P 09 39 31.7 -0.4
L40A IAmb IAmb 09 39 32.9
comp=Z,95nm,1.1s
L40A Anamosa 85.87 313 P P 09 39 31.8 -0.4
baz=104,SNR=27
I40A Norwalk 85.89 315 P P 09 39 32.2 +0.1
baz=104,SNR=21
P40A Paris 85.90 311 IAmb IAmb 09 39 34.2
comp=Z,110nm,1.2s
P40A Paris 85.90 311 P P 09 39 32.2 -0.1
baz=103,SNR=25
G40A Rib Lake 85.94 316 P P 09 39 31.9 -0.4
G40A IAmb IAmb 09 39 33.3
comp=Z,130nm,1.9s
G40A Rib Lake 85.94 316 P P 09 39 31.5 -0.9
baz=105,SNR=12
MIAR Mount Ida 86.03 305 P P 09 39 33.4 +0.4
MIAR IAmb IAmb 09 39 34.6
comp=Z,63nm,1.1s
MIAR Mount Ida 86.03 305 P P 09 39 33.4 +0.4
MIAR pmax pmax
comp=Z,63nm,1.2s
MIAR Mount Ida 86.03 305 P P 09 39 33.3 +0.2
baz=102,SNR=26
W39A Magazine 86.33 306 IAMs_20 IAMs_20 10 11 19.8
comp=Z,1μm,20.0s
W39A Magazine 86.33 306 P P 09 39 35.3 +0.8
baz=102,SNR=83
NATX Nacogdoches 86.38 303 P P 09 39 35.3 +0.4
NATX IAMs_20 IAMs_20 10 14 48.2
comp=Z,831nm,18.0s
NATX Nacogdoches 86.38 303 P P 09 39 35.2 +0.4
baz=101,SNR=19
ARU Arti 86.40 32 P P 09 39 34.5 +0.1
comp=Z,11nm,0.8s,baz=250,slow=4.0,SNR=18
ARU LR LR 10 21 19.0
comp=Z,695nm,18.1s,baz=254,slow=38
comp=Z,11nm,0.8s
ARU Arti 86.40 32 P P 09 39 34.7 +0.4
ARU IAMs_20 IAMs_20 10 21 24.0
comp=Z,919nm,18.0s
ARU Arti 86.40 32 *c i*P **P 09 39 34.6 +0.3**
ARU 09 42 50.8
ARU S S 09 50 00.6 -10
ARU pmax pmax
comp=Z,49nm,1.7s
ARU MLR MLR
comp=Z,869nm,18.0s
S39A Bolivar 86.48 309 P P 09 39 35.1 0.0
S39A IAmb IAmb 09 39 36.2
comp=Z,127nm,1.0s
S39A Bolivar 86.48 309 P P 09 39 35.2 0.0
baz=102,SNR=81
HHAR Hobbs 86.67 307 P P 09 39 36.2 +0.1
Z38A Mt. Pleasant 86.93 304 IAmb IAmb 09 39 39.0
comp=Z,67nm,1.2s
Z38A Mt. Pleasant 86.93 304 P P 09 39 37.3 -0.2
baz=101,SNR=5.8
SPB2 Spitsbergen Ar 87.03 6 IAmb IAmb 09 39 39.0
comp=Z,70nm,1.4s
SPA0 Spitsbergen Ar 87.03 6 *e*P **P 09 39 38.0 +1.0**
SPITS Spitsbergen Ar 87.03 6 LR LR 10 18 15.0
comp=Z,229nm,19.7s,baz=168,slow=35
SPITS Spitsbergen Ar 87.03 6 P P 09 39 37.6 +0.6
SPITS pmax pmax
comp=Z,62nm,1.3s
HKT Hockley 87.04 301 P P 09 39 38.5 +0.6
HKT IAmb IAmb 09 39 40.2
comp=Z,80nm,1.4s
HKT Hockley 87.04 301 *c i*P **P 09 39 38.9 +1.0**
HKT pmax pmax
comp=Z,74nm,1.5s
HKT Hockley 87.04 301 P P 09 39 39.0 +1.0
baz=100
P38A Dawn 87.04 310 P P 09 39 37.9 +0.1
P38A Dawn 87.04 310 P P 09 39 38.0 +0.1
baz=102,SNR=55
U38A Gravette 87.06 307 P P 09 39 38.2 +0.2
baz=102,SNR=75
N38A Joes South For 87.06 312 P P 09 39 38.2 +0.2
N38A Joes South For 87.06 312 P P 09 39 38.2 +0.2
baz=102,SNR=34
K38A Parkersburg 87.12 313 IAmb IAmb 09 39 38.9
comp=Z,141nm,1.2s
K38A Parkersburg 87.12 313 P P 09 39 37.8 -0.4
baz=103,SNR=12
E38A The Farm, Brul 87.19 318 P P 09 39 37.8 -0.6
E38A IAmb IAmb 09 39 39.0
comp=Z,75nm,1.2s
E38A The Farm, Brul 87.19 318 P P 09 39 37.7 -0.6
baz=104,SNR=12
SCIA State Center 87.29 313 P P 09 39 39.6 +0.6
baz=102,SNR=6.3
237A Washetta, Mont 87.38 303 P P 09 39 40.5 +0.8
237A Washetta, Mont 87.38 303 P P 09 39 40.4 +0.8
baz=100,SNR=11
EYMN Ely 87.47 319 P P 09 39 39.5 -0.3
EYMN IAmb IAmb 09 39 40.5
comp=Z,66nm,1.4s
EYMN Ely 87.47 319 IAMs_20 IAMs_20 10 11 31.7
comp=Z,2μm,22.0s
EYMN Ely 87.47 319 P P 09 39 39.2 -0.6
baz=104,SNR=7.3
X37A Clayton 87.49 305 IAmb IAmb 09 39 42.1
comp=Z,108nm,1.2s
X37A Clayton 87.49 305 P P 09 39 40.7 +0.5
baz=101,SNR=35
SVE Sverdlovsk 87.61 32 *e*P **P 09 39 40.9 +0.7**
SPMN Marine on St. 87.72 316 IAmb IAmb 09 39 41.8
comp=Z,124nm,1.4s
SPMN Marine on St. 87.72 316 P P 09 39 40.6 -0.4
baz=103,SNR=13
I37A Lemond, Waseca 87.87 315 P P 09 39 41.8 0.0
I37B Waseca 87.87 315 P P 09 39 41.7 -0.1
baz=102,SNR=28
TUL1 Leonard 88.07 306 P 09 39 43.1 +0.2
TUL1 IAMs_20 IAMs_20 10 12 34.0
comp=Z,1μm,21.0s
TUL1 Leonard 88.07 306 P P 09 39 43.3 +0.4
baz=101,SNR=40
KBL Kabul 88.08 55 P P 09 39 42.9 -0.4
KBL Kabul 88.08 55 P P 09 39 42.9 -0.4
KBL pmax pmax
comp=Z,44nm,1.7s
F36A Milaca 88.35 316 P P 09 39 43.5 -0.5
F36A IAmb IAmb 09 39 44.8
comp=Z,102nm,1.1s
F36A Milaca 88.35 316 P P 09 39 43.6 -0.5
baz=102,SNR=58
735A Kenedy 88.55 299 P P 09 39 45.6 +0.3
735A Kenedy 88.55 299 P P 09 39 45.9 +0.6
baz=99,SNR=12
435B Jarrell 88.67 301 P P 09 39 47.1 +1.2
baz=100,SNR=9.7
WHTX Lake Whitney, 88.76 302 P P 09 39 46.5 +0.2
WHTX IAmb IAmb 09 39 48.0
comp=Z,120nm,1.4s
WHTX Lake Whitney, 88.76 302 P P 09 39 46.9 +0.7
baz=100
Z35A Perchaven, San 88.81 304 P P 09 39 46.2 -0.3
Z35A Perchaven, San 88.81 304 P P 09 39 46.2 -0.3
baz=100,SNR=12
T35A Sooner Cattle 88.82 307 P 09 39 47.2 +0.7
T35B Sooner Cattle 88.82 307 P P 09 39 47.2 +0.7
baz=100,SNR=64
N35A Tabor 88.87 311 P P 09 39 46.9 +0.3
N35A Tabor 88.87 311 P P 09 39 47.0 +0.5
baz=101,SNR=33
CHGR Chuyangaron 88.91 51 P P 09 39 47.5 +0.6
CHGR IAmb IAmb 09 39 56.0
comp=Z,60nm,0.9s
CHGR Chuyangaron 88.91 51 P P 09 39 47.5 +0.6
CHGR pmax pmax
comp=Z,60nm,0.9s
NOR Nord 88.92 360 *i*P **P 09 39 45.0 -1.0**
NOR IAmb IAmb 09 39 48.1
comp=Z,189nm,2.4s
B35A Bob, Littlefor 89.02 319 P P 09 39 47.1 0.0
B35A Bob, Littlefor 89.02 319 P P 09 39 47.2 0.0
baz=102,SNR=33
KSU1 Kansas State U 89.28 309 P P 09 39 48.6 0.0
baz=100
OKCFA Oklahoma City 89.32 306 P P 09 39 49.6 +0.8
baz=100,SNR=7.3
X34A Smith Ranch, M 89.49 305 P 09 39 49.9 +0.2
X34A IAmb IAmb 09 39 51.4
comp=Z,116nm,1.0s
L34A Svendsen Farm, 89.61 312 IAmb IAmb 09 39 51.3
comp=Z,120nm,1.1s
L34A Svendsen Farm, 89.61 312 P P 09 39 50.5 +0.4
baz=100,SNR=6.3
833A Chaparral WMA, 89.85 298 P P 09 39 51.8 +0.3
833A IAmb IAmb 09 39 53.6
comp=Z,78nm,1.1s
833A Chaparral WMA, 89.85 298 P P 09 39 52.4 +1.0
baz=98,SNR=19
GAR Garm 89.86 51 P P 09 39 52.9 +1.4
GAR IAmb IAmb 09 40 00.9
comp=Z,126nm,1.5s
ECSD EROS Data Cent 90.09 314 P P 09 39 52.6 +0.3
ECSD IAmb IAmb 09 39 53.8
comp=Z,132nm,1.2s
ECSD EROS Data Cent 90.09 314 P P 09 39 52.6 +0.3
baz=100,SNR=66
IUG luzhnay 90.17 48 *e*P **P 09 39 52.6 -0.2**
IUG luzhnay 90.17 48 *e*P **P 09 39 52.6 -0.2**
baz=48
BRLS Boroldav 90.18 47 *e*P **P 09 39 50.9 -1.8**
BRLS Boroldav 90.18 47 *e*P **P 09 39 51.0 -1.8**
baz=47
N33A J Bar K, Exete 90.20 311 P P 09 39 53.5 +0.6
N33A IAmb IAmb 09 39 54.4
comp=Z,92nm,1.0s
N33B J Bar K, Exete 90.20 311 P P 09 39 53.6 +0.8
baz=100
F33A 5 Mile Ranch, 90.24 316 P P 09 39 52.9 0.0
F33A IAmb IAmb 09 39 54.1
comp=Z,83nm,1.6s
F33A 5 Mile Ranch, 90.24 316 P P 09 39 53.0 0.0
baz=100,SNR=11
WMOK Wichita Mounta 90.29 305 IAmb IAmb 09 39 55.1
comp=Z,78nm,1.1s
WMOK Wichita Mounta 90.29 305 IAMs_20 IAMs_20 10 15 25.6
comp=Z,839nm,19.0s
WMOK Wichita Mounta 90.29 305 P P 09 39 53.9 +0.5
baz=99,SNR=26
AGMN Agassiz Nation 90.40 319 P P 09 39 53.6 +0.1
AGMN IAmb IAmb 09 39 55.0
comp=Z,139nm,1.6s
AGMN Agassiz Nation 90.40 319 P P 09 39 53.6 +0.1
baz=101,SNR=24
JCT Junction City 90.51 301 P P 09 39 55.2 +0.6
JCT Junction City 90.51 301 P P 09 39 55.2 +0.6
JCT Junction City 90.51 301 P P 09 39 55.5 +0.9
baz=98,SNR=34
KK31 Karatay Array 90.68 47 P P 09 39 55.6 +0.6
KK31 Karatay Array 90.68 47 P P 09 39 55.6 +0.6
KK31 pmax pmax
comp=Z,13nm,1.2s
KKAR Karatay Array 90.68 47 P P 09 39 55.1 +0.1
KKAR Karatay Array 90.68 47 P P 09 39 55.1 +0.1
ABTX Abilene, Hawle 90.69 303 P P 09 39 55.5 +0.5
ABTX IAmb IAmb 09 39 57.6
comp=Z,124nm,1.2s
ABTX Abilene, Hawle 90.69 303 P P 09 39 56.8 +1.5
baz=98,SNR=19
U32A Winter Ranch, 90.71 306 P P 09 39 56.5 +1.1
baz=99
ULM Lac du Bonnet 90.77 320 P P 09 39 54.3 -0.9
comp=Z,14nm,0.9s,baz=94,slow=4.6,SNR=16
ULM LR LR 10 16 20.4
comp=Z,2μm,18.9s,baz=102,slow=33
comp=Z,14nm,0.9s
R32A Long Quarter, 90.79 308 P P 09 39 56.4 +0.7
R32A IAmb IAmb 09 39 56.9
comp=Z,44nm,0.9s
R32A Long Quarter, 90.79 308 P P 09 39 56.5 +0.7
baz=99,SNR=14
BGNE Belgrade 90.83 311 P P 09 39 56.3 +0.5
BGNE Belgrade 90.83 311 P P 09 39 56.5 +0.8
baz=99,SNR=7.3
PCHI Peechi 91.22 80 *e*P **P 09 39 55.8 -2.3**
PCHI *e*S **S 09 51 04.3 +7.0**
FCC Fort Churchill 91.41 329 P P 09 39 58.3 +0.3
FCC IAmb IAmb 09 39 59.5
comp=Z,81nm,1.1s
FCC Fort Churchill 91.41 329 P P 09 39 58.3 +0.3
FCC pmax pmax
comp=Z,81nm,1.1s
K31A O'Neill 91.46 313 P P 09 39 59.4 +0.8
K31A O'Neill 91.46 313 P P 09 39 59.3 +0.6
baz=99,SNR=17
CBKS Cedar Bluff 91.64 309 P P 09 40 00.7 +1.1
baz=98,SNR=9.7
SUSD Miller 91.87 314 P P 09 40 01.4 +0.8
SUSD IAmb IAmb 09 40 02.0
comp=Z,69nm,0.8s
BRVK Borovoye 92.16 37 P P 09 40 02.0 +0.4
BRVK Borovoye 92.16 37 IAMs_20 IAMs_20 10 26 35.7
comp=Z,776nm,18.0s
BRVK Borovoye 92.16 37 P P 09 40 02.0 +0.4
BRVK pmax pmax
comp=Z,18nm,1.2s
AMTX Amarillo 92.67 305 P P 09 40 04.7 +0.2
AMTX IAmb IAmb 09 40 06.2
comp=Z,46nm,1.1s
AMTX IAMs_20 IAMs_20 10 16 03.8
comp=Z,840nm,20.0s
AMTX Amarillo 92.67 305 P P 09 40 05.0 +0.4
baz=97,SNR=15
MDND Maddock 92.80 318 P P 09 40 05.2 +0.4
baz=98,SNR=9.9
BRZS Berezniki 93.19 40 *e*P **P 09 40 05.7 -0.8**
BRZS Berezniki 93.19 40 *e*P **P 09 40 05.7 -0.8**
baz=40
E28A Huff 93.38 316 P P 09 40 07.8 +0.4
E28A Huff 93.38 316 P P 09 40 07.2 -0.3
baz=97,SNR=13
MSTX Muleshoe 93.46 304 P P 09 40 09.2 +1.0
MSTX Muleshoe 93.46 304 P P 09 40 09.3 +1.0
baz=97,SNR=48
BTLS Baital 93.48 45 *e*P **P 09 40 07.5 -0.4**
BTLS Baital 93.48 45 *e*P **P 09 40 07.6 -0.4**
baz=45
AAK Ala-Archa 93.52 48 P P 09 40 08.7 +0.3
comp=Z,4.1nm,0.7s,baz=242,slow=6.0,SNR=7.9
comp=Z,4.1nm,0.7s
AAK Ala-Archa 93.52 48 P P 09 40 09.1 +0.7
AAK Ala-Archa 93.52 48 *c i*P **P 09 40 08.8 +0.4**
AAK pmax pmax
comp=Z,14nm,1.0s
AAK MLR MLR
comp=Z,418nm,18.0s
OGNE Ogallala 93.67 311 P P 09 40 09.7 +0.7
OGNE IAMs_20 IAMs_20 10 14 32.0
comp=Z,1μm,21.0s
OGNE Ogallala 93.67 311 P P 09 40 10.0 +1.0
baz=97,SNR=13
TX31 Lajitas Ar. Si 93.70 299 P P 09 40 10.1 +0.7
TX31 Lajitas Ar. Si 93.70 299 P P 09 40 10.1 +0.7
baz=96,SNR=21
TX32 Lajitas Array 93.70 299 P P 09 40 09.9 +0.5
TX32 IAmb IAmb 09 40 11.6
comp=Z,48nm,1.2s
TXAR Lajitas Array 93.70 299 P P 09 40 09.8 +0.4
comp=Z,16nm,0.9s,baz=117,slow=7.2,SNR=99
TXAR PP **PP 09 43 58.3 +3.7**
comp=Z,1.2nm,1.0s,baz=104,slow=5.3,SNR=3.4
TXAR LR LR 10 23 14.0
comp=Z,156nm,18.6s,baz=59,slow=36
comp=Z,16nm,0.9s
TXAR Lajitas Array 93.70 299 P P 09 40 10.1 +0.7
KSCO Kaye Shedlock' 93.91 309 P P 09 40 11.1 +0.9
baz=96,SNR=13
HYBB Hyderabad (bro 94.16 73 *e*PKiKP **PKiKP 09 44 57.4 +1.4**
HYBB *e*SKSac **SKSac 09 50 46.4 -1.2**
KSH Kashi 94.28 51 P P 09 40 11.1 -0.8
KSH pP pP 09 40 14.0 -0.1
KSH sP pwP 09 40 18.9 +0.3
KSH PP **PP 09 43 55.7 -3.3**
KSH SKS **SKSac 09 50 40.1 -7.4**
KSH pmax pmax
comp=Z,8.0nm,1.0s
KSH LR LR
comp=Z,810nm,17.2s
KSH LR LR
comp=Z,780nm,20.6s
KSH LR LR
comp=Z,820nm,19.6s
EUNU Eureka 94.33 350 IAmb IAmb 09 40 13.8
comp=Z,47nm,1.1s
RES Resolute Bay 94.82 345 LR LR 10 14 41.0
comp=Z,304nm,21.7s,baz=88,slow=30
RES Resolute Bay 94.82 345 IAmb IAmb 09 40 16.2
comp=Z,47nm,1.1s
SBA Scott Base 94.87 180 P P 09 40 15.5 +1.8
SBA Scott Base 94.87 180 P P 09 40 15.5 +1.8
SBA pmax pmax
comp=Z,20nm,1.2s
PALK Pallekele 95.10 83 LR LR 10 17 43.9
comp=Z,785nm,21.4s,baz=9.2,slow=32
T25A Trinidad 95.11 307 P P 09 40 16.5 +0.6
T25A IAmb IAmb 09 40 18.3
comp=Z,75nm,1.7s
VNDA Vanda 95.16 179 P P 09 40 15.4 +0.4
comp=Z,3.5nm,1.0s,baz=225,slow=4.1,SNR=11
VNDA LR LR 10 17 47.9
comp=Z,1μm,19.5s,baz=182,slow=32
comp=Z,3.5nm,1.0s
VNDA Vanda 95.16 179 P P 09 40 16.2 +1.2
TNSS Tian-Shan 95.35 47 *e*P **P 09 40 15.8 -1.3**
TNSS Tian-Shan 95.35 47 *e*P **P 09 40 15.9 -1.2**
baz=47
MNTX Cornudas Mount 95.41 301 P P 09 40 16.7 -0.5
MNTX Cornudas Mount 95.41 301 P P 09 40 16.6 -0.5
baz=95,SNR=9.3
MDOK Medeo 95.44 47 *e*P **P 09 40 15.6 -1.6**
MDOK Medeo 95.44 47 *e*P **P 09 40 15.6 -1.6**
baz=47
RSSD Black Hills 95.46 314 P P 09 40 17.7 +0.4
RSSD Black Hills 95.46 314 P P 09 40 17.7 +0.4
RSSD pmax pmax
comp=Z,18nm,1.1s
RSSD Black Hills 95.46 314 P P 09 40 17.9 +0.6
baz=95,SNR=7.6
Q24A Divide 95.86 308 P P 09 40 19.9 +0.5
Q24A IAmb IAmb 09 40 21.8
comp=Z,62nm,1.1s
DGMT Dagmar 95.93 318 P P 09 40 19.8 +0.7
DGMT IAmb IAmb 09 40 21.1
comp=Z,57nm,1.2s
DGMT Dagmar 95.93 318 IAMs_20 IAMs_20 10 17 50.6
comp=Z,1μm,20.0s
DGMT Dagmar 95.93 318 P P 09 40 20.0 +0.9
baz=94,SNR=7.1
SDCO Great Sand Dun 96.03 307 P P 09 40 21.2 +1.1
SDCO IAmb IAmb 09 40 22.6
comp=Z,51nm,1.1s
SDCO IAMs_20 IAMs_20 10 16 46.7
comp=Z,1μm,22.0s
SDCO Great Sand Dun 96.03 307 P P 09 40 20.3 +0.1
baz=95,SNR=108
PHWY Pilot Hill 96.28 311 P P 09 40 22.1 +0.9
PHWY IAMs_20 IAMs_20 10 16 41.1
comp=Z,770nm,20.0s
ISCO Idaho Springs 96.28 309 P P 09 40 22.1 +0.8
ISCO Idaho Springs 96.28 309 P P 09 40 22.1 +0.8
ISCO pmax pmax
comp=Z,23nm,1.2s
ISCO Idaho Springs 96.28 309 P P 09 40 22.6 +1.4
baz=94,SNR=16
KIDD KIDD Seismic O 96.37 301 P P 09 40 22.6 +1.0
baz=95,SNR=5.6
SATY Saty 96.42 47 *e*P **P 09 40 20.3 -1.3**
SATY Saty 96.42 47 *e*P **P 09 40 20.4 -1.3**
baz=48
ANMO Albuquerque 96.58 304 LR LR 10 20 05.7
comp=Z,793nm,18.5s,baz=90,slow=33
ANMO Albuquerque 96.58 304 P P 09 40 23.1 +0.5
ANMO Albuquerque 96.58 304 IAMs_20 IAMs_20 10 18 41.3
comp=Z,1μm,20.0s
ANMO Albuquerque 96.58 304 *c i*P **P 09 40 23.5 +0.9**
ANMO pmax pmax
comp=Z,13nm,1.1s
ANMO Albuquerque 96.58 304 P P 09 40 23.6 +0.9
baz=94,SNR=15
N23A Red Feather La 96.61 310 P P 09 40 23.6 +0.9
N23A IAmb IAmb 09 40 24.9
comp=Z,38nm,1.5s
KPKS Kokpek 96.65 47 *e*P **P 09 40 20.7 -1.9**
KPKS Kokpek 96.65 47 *e*P **P 09 40 20.8 -1.9**
baz=47
BNM Barren Site 96.66 304 P P 09 40 24.0 +1.0
Y22D IRIS PASSCAL I 96.90 303 IAMs_20 IAMs_20 10 20 35.7
comp=Z,746nm,19.0s
KURBB Kurchatov Arra 96.98 40 P P 09 40 23.4 -0.4
comp=Z,1.9nm,1.0s,baz=271,slow=5.5,SNR=11
KURBB PP **PP 09 44 21.1 +1.6**
comp=Z,0.8nm,0.8s,baz=279,slow=7.8,SNR=4.9
KURBB LR LR 10 29 16.4
comp=Z,417nm,18.4s,baz=252,slow=39
comp=Z,1.9nm,1.0s
KURK Kurchatov 97.05 40 P Pdif 09 40 24.8 +0.7
KURK IAmb IAmb 09 40 37.7
comp=Z,33nm,1.9s
KURK Kurchatov 97.05 40⇑ *e*P Pdif 09 40 25.3 +1.2
KURK pmax pmax
comp=Z,6.0nm,0.8s
S22A 4UR Ranch, Cre 97.08 307 IAmb IAmb 09 40 27.4
comp=Z,25nm,1.2s
K22A Casper 97.16 312 P Pdif 09 40 25.4 +0.2
K22A IAmb IAmb 09 40 26.3
comp=Z,27nm,1.4s
K22A Casper 97.16 312 P P 09 40 24.6 -0.4
baz=94,SNR=5.4
LAO LASA Array 97.18 316 P Pdif 09 40 25.3 +0.4
LAO IAmb IAmb 09 40 26.5
comp=Z,27nm,1.4s
LAO IAMs_20 IAMs_20 10 19 51.8
comp=Z,888nm,20.0s
LAO LASA Array 97.18 316 P Pdif 09 40 25.1 +0.1
baz=93,SNR=5.8
SHLS Shalkode 97.20 47 *e*P **Pdif 09 40 25.5 +0.3**
SHLS Shalkode 97.20 47 *e*P **Pdif 09 40 25.6 +0.4**
baz=47
SMCO Snowmass 97.29 309 P Pdif 09 40 26.8 +0.7
SMCO IAmb IAmb 09 40 29.4
comp=Z,23nm,1.2s
121A Cookes Peak, D 97.51 302 P Pdif 09 40 27.5 +0.6
121A Cookes Peak, D 97.51 302 P Pdif 09 40 28.0 +1.0
baz=94,SNR=10
O20A White River Ci 98.32 309 P Pdif 09 40 30.9 +0.5
MVCO Mesa Verde 98.38 306 P Pdif 09 40 31.8 +1.0
MVCO IAmb IAmb 09 40 33.2
comp=Z,26nm,1.4s
PV13 Radium Mtn., P 98.68 307 P Pdif 09 40 33.3 +1.2
PV13 IAmb IAmb 09 40 34.3
comp=Z,24nm,1.1s
RLMT Red Lodge 99.24 314 Pdif 09 40 34.8 +0.4
RLMT IAMs_20 IAMs_20 10 18 03.4
comp=Z,1μm,22.0s
MKAR Makanchi Array 99.34 44 P Pdif 09 40 34.0 -0.6
comp=Z,0.8nm,0.8s,baz=308,slow=4.0,SNR=4.0
MKAR LR LR 10 31 27.6
comp=Z,454nm,18.7s,baz=268,slow=39
comp=Z,0.8nm,0.8s
MKAR Makanchi Array 99.34 44 *i*P **Pdif 09 40 35.5 +1.0**
MKAR pmax pmax
comp=Z,1.0nm,0.8s
RDMU Red Mountain 99.35 310 P Pdif 09 40 35.4 +0.4
PDAR Pinedale Array 99.40 312 P Pdif 09 40 34.2 -0.9
comp=Z,1.6nm,1.0s,baz=86,slow=6.1,SNR=6.4
PDAR PP **PP 09 44 38.1 -0.4**
comp=Z,2.0nm,1.0s,baz=91,slow=5.9,SNR=3.8
PDAR LR LR 10 19 15.1
comp=Z,1μm,21.4s,baz=100,slow=32
comp=Z,1.6nm,1.0s
PDAR Pinedale Array 99.40 312 Pdif 09 40 34.4 -0.8
BW06 Boulder Array 99.40 312 IAMs_20 IAMs_20 10 18 41.7
comp=Z,1μm,21.0s
EGMT Eagleton 99.62 317 P Pdif 09 40 36.1 +0.3
EGMT IAMs_20 IAMs_20 10 23 49.3
comp=Z,1μm,19.0s
WUAZ Wupatki 100.63 305 IAMs_20 IAMs_20 10 21 00.5
comp=Z,890nm,21.0s
NRIK Noril'sk 100.81 21 P Pdif 09 40 40.8 +0.3
comp=Z,0.9nm,0.3s,baz=257,slow=1.6,SNR=3.6
NRIK Noril'sk 100.81 21⇓ *e*P **Pdif 09 40 41.7 +1.2**
NRIK pmax pmax
comp=Z,6.0nm,1.3s
NRIK MLR MLR
comp=Z,759nm,21.0s
HWUT Hardware Ranch 100.88 311 IAMs_20 IAMs_20 10 19 17.8
comp=Z,1μm,22.0s
BOZ Bozeman (W) 100.91 315 IAMs_20 IAMs_20 10 21 25.6
comp=Z,971nm,20.0s
YKA Yellowknife Ar 101.65 332 P Pdif 09 40 44.2 -0.1
comp=Z,1.9nm,0.9s,baz=86,slow=5.5,SNR=13
YKA Yellowknife Ar 101.65 332 *i*P **Pdif 09 40 45.2 +0.8**

YKA pmax pmax
comp=Z,2.0nm,0.9s
ELK Elko 103.66 310 Pdif **Pdif** **09 40 54.8 +0.7**
ELK Elko 103.66 310 P **Pdif** **09 40 54.8 +0.7**
C36M Paulatuk 104.08 340 IAms_20 IAms_20 10 23 17.4
comp=Z,682nm,19.0s
TPNV Topopah Spring 104.57 306 IAms_20 IAms_20 10 22 58.8
comp=Z,754nm,20.0s
BMO Blue Mountains 104.95 314 IAms_20 IAms_20 10 24 29.5
comp=Z,944nm,19.0s
WVOR Wild Horse Val 106.11 312 IAms_20 IAms_20 10 24 13.2
comp=Z,1μm,20.0s
NVAR Mina Array Bea 106.13 308 Pdiff **Pdif** **09 41 05.3 +0.2**
comp=Z,1.3nm,1.0s,baz=89,slow=5.2,SNR=7.9
NVAR PKiKP **PKiKP** **09 45 17.5 +0.3**
comp=Z,0.7nm,0.9s,baz=90,slow=2.1,SNR=2.8
PASC Pasadena Art C 106.24 303 IAms_20 IAms_20 10 28 08.0
comp=Z,788nm,19.0s
HAWA Hanford 106.36 316 IAms_20 IAms_20 10 30 16.7
comp=Z,886nm,18.0s
MOD Modoc Plateau 107.39 311 IAms_20 IAms_20 10 24 36.1
comp=Z,680nm,20.0s
CMB Columbia Colle 107.80 307 IAms_20 IAms_20 10 25 00.1
comp=Z,729nm,21.0s
SAO San Andreas Ge 108.74 306 IAms_20 IAms_20 10 25 12.2
comp=Z,696nm,20.0s
L04D Klamath Falls 108.83 312 IAms_20 IAms_20 10 25 13.4
comp=Z,1μm,20.0s
H04D Lebanon 108.84 314 IAms_20 IAms_20 10 25 54.3
comp=Z,767nm,20.0s
GOMU GeErMu 109.14 54 Pdif **Pdif** **09 41 19.2 +0.4**
GOMU PP **PP** **09 45 51.6 +0.3**
GOMU AMB AMB
comp=Z,34nm,4.2s
GOMU LR LR
comp=Z,170nm,17.4s
GOMU LR LR
comp=Z,140nm,17.2s
GOMU LR LR
comp=Z,140nm,16.4s
YBH Yreka Blue Hor 109.20 312 IAms_20 IAms_20 10 24 02.9
comp=Z,884nm,22.0s
COR Corvallis 109.23 315 IAms_20 IAms_20 10 26 06.7
comp=Z,768nm,20.0s
EPYK Eagle Plains 109.64 339 IAms_20 IAms_20 10 27 34.4
comp=Z,791nm,19.0s
I02E Swisshome, OR 109.69 314 IAms_20 IAms_20 10 25 38.8
comp=Z,856nm,21.0s
MCCM Marconi Confer 109.75 308 IAms_20 IAms_20 10 25 16.7
comp=Z,949nm,20.0s
JCC Jacoby Creek, 110.30 311 IAms_20 IAms_20 10 25 11.3
comp=Z,843nm,21.0s
M31M Drury Creek, Y 110.59 335 IAms_20 IAms_20 10 32 08.6
comp=Z,837nm,18.0s
I29M Ogilvie Camp, 110.70 338 IAms_20 IAms_20 10 29 08.4
comp=Z,826nm,18.0s
J29M Klondike Camp 111.11 338 IAms_20 IAms_20 10 29 48.3
comp=Z,934nm,19.0s
N31M Braeburn, Yuko 111.49 334 IAms_20 IAms_20 10 28 52.5
comp=Z,898nm,19.0s
TIXI Tiksi 111.74 12 PP **PP** **09 46 09.1 +0.8**
comp=Z,0.4nm,0.3s,baz=270,slow=23,SNR=3.9
WRAK Wrangell Islan 111.85 328 IAms_20 IAms_20 10 26 51.2
comp=Z,824nm,22.0s
J26L Joseph Creek 113.06 339 IAms_20 IAms_20 10 30 42.7
comp=Z,680nm,18.0s
L27K Beaver Creek, 113.20 337 IAms_20 IAms_20 10 32 38.7
comp=Z,808nm,18.0s
M27K Edge Creek, AK 113.60 336 IAms_20 IAms_20 10 33 32.1
comp=Z,852nm,18.0s
J25K Salcha River, 113.63 339 IAms_20 IAms_20 10 30 08.8
comp=Z,791nm,19.0s
H24K Noodor Dome 113.71 341 IAms_20 IAms_20 10 29 52.0
comp=Z,641nm,20.0s
L26K Log Cabin Wild 113.81 337 IAms_20 IAms_20 10 32 06.6
comp=Z,700nm,18.0s
BCPM Bancas Point 113.88 334 IAms_20 IAms_20 10 31 46.7
comp=Z,884nm,19.0s
RIDG Independent Ri 113.95 339 IAms_20 IAms_20 10 31 19.5
comp=Z,826nm,18.0s
POKR Poker Plat Res 114.02 341 IAms_20 IAms_20 10 30 43.2
comp=Z,616nm,18.0s
LOGN Logan Glacier 114.04 335 IAms_20 IAms_20 10 30 26.8
comp=Z,743nm,20.0s
ILAR Eielson Array 114.05 340 PKP PKPdf 09 45 30.3 -0.7
comp=Z,1.1nm,0.8s,baz=277,slow=1.1,SNR=9.2
CTGM Chitina Glacie 114.10 335 IAms_20 IAms_20 10 29 17.6
comp=Z,684nm,21.0s
HDA Harding Lake 114.30 340 IAms_20 IAms_20 10 30 31.5
comp=Z,845nm,19.0s
COLA College 114.31 340 IAms_20 IAms_20 10 30 52.0
comp=Z,564nm,18.0s
COLA College 114.31 340 ⇑iPKIKP PKPdf 09 45 33.4 +2.0
TCOL CIGO, UAF Yank 114.32 340 IAms_20 IAms_20 10 30 52.0
comp=Z,609nm,18.0s
MDM Murphy Dome 114.38 341 IAms_20 IAms_20 10 31 03.7
comp=Z,691nm,19.0s
GRNC Granite Creek 114.40 335 IAms_20 IAms_20 10 30 39.4
comp=Z,762nm,20.0s
BKNI Bangkinang 114.40 93 IAms_20 IAms_20 10 28 07.8
comp=Z,946nm,22.0s
CCB Clear Creek Bu 114.44 340 IAms_20 IAms_20 10 30 28.3
comp=Z,613nm,18.0s
MCARA McCarthy VSAT 114.58 336 IAms_20 IAms_20 10 37 07.1
comp=Z,683nm,18.0s
KULM Kulim 114.60 88 IAms_20 IAms_20 10 29 26.3
comp=Z,746nm,20.0s
I23K Minto, Yukon-K 114.63 341 IAms_20 IAms_20 10 30 29.2
comp=Z,636nm,20.0s
WRH Wood River Hil 114.65 340 IAms_20 IAms_20 10 30 43.7
comp=Z,718nm,19.0s
ISLE Juniper Island 114.72 335 IAms_20 IAms_20 10 31 56.7
comp=Z,712nm,19.0s
TGL Tana Glacier 114.84 335 IAms_20 IAms_20 10 32 13.0
comp=Z,690nm,20.0s
GLB Gilahina Butte 114.86 336 IAms_20 IAms_20 10 35 44.6
comp=Z,654nm,18.0s
NEA2 Nenana 114.89 341 IAms_20 IAms_20 10 30 35.3
comp=Z,543nm,19.0s
WAX Waxell Ridge 115.01 335 IAms_20 IAms_20 10 30 58.6
comp=Z,858nm,20.0s
N25K Chitina, Valde 115.09 337 IAms_20 IAms_20 10 35 48.4
comp=Z,775nm,18.0s
MLY Manley 115.15 341 IAms_20 IAms_20 10 30 46.9
comp=Z,545nm,20.0s
DHY Denali Highway 115.27 339 IAms_20 IAms_20 10 32 10.4
comp=Z,705nm,19.0s
BWN Browne 115.30 340 IAms_20 IAms_20 10 31 19.5
comp=Z,758nm,18.0s
SONM Songino Array 115.35 40 PKP **PKiKP** **09 45 33.7 -0.5**
comp=Z,1.6nm,1.0s,baz=276,slow=2.8,SNR=6.0
SONM PP **PP** **09 46 33.7 -1.2**
comp=Z,0.6nm,0.8s,baz=236,slow=1.6,SNR=3.6
SONM Songino Array 115.35 40 PKiKP **PKiKP** **09 45 33.9 -0.3**
MCK McKinley 115.40 340 IAms_20 IAms_20 10 31 23.7
comp=Z,864nm,20.0s
I21K Tanana 115.43 342 **PKPdf** **09 45 34.2 +0.6**
I21K IAms_20 IAms_20 10 31 08.4
comp=Z,575nm,21.0s
ULN Ulaanbaatar 115.76 40 IAms_20 IAms_20 10 41 14.1
comp=Z,729nm,18.0s
ULN Ulaanbaatar 115.76 40 ⇓iPKIKP **PKPdf** **09 45 35.1 +0.1**
BPAW Bear Paw Mtn. 115.85 341 IAms_20 IAms_20 10 34 08.5
comp=Z,610nm,18.0s
PZH PanZhiHua 115.87 64 PKP PKPdf 09 45 26.2 -10
PZH AMB AMB
comp=Z,80nm,5.6s
PZH LR LR
comp=N,190nm,20.0s
PZH LR LR
comp=E,270nm,19.0s
PZH LR LR
comp=Z,340nm,19.6s
SCM Sheep Creek Mo 116.01 338 IAms_20 IAms_20 10 33 17.8
comp=Z,820nm,19.0s
KTH Kantishna Hill 116.19 340 IAms_20 IAms_20 10 31 50.6
comp=Z,753nm,18.0s
FID Port Fidalgo 116.33 336 IAms_20 IAms_20 10 32 27.8
comp=Z,607nm,18.0s
LZH Lanzhou 116.40 53 *e*PKP **PKiKP** **09 45 42.7 +6.1**
LZH sPKP 09 45 49.2
LZH PP **PP** **09 46 48.3 +5.5**
LZH Lanzhou 116.40 53 SS SS 10 03 03.4 +16
LZH AMB AMB
comp=Z,170nm,8.7s
LZH LR LR
comp=N,280nm,18.2s
LZH LR LR
comp=E,290nm,18.0s
LZH LR LR
comp=Z,410nm,19.8s
SML Sawmill 116.40 338 IAms_20 IAms_20 10 33 30.1
comp=Z,712nm,19.0s
GLI Glacier Island 116.49 337 IAms_20 IAms_20 10 34 40.6
comp=Z,588nm,20.0s
GHO Glory Hole Cre 116.64 338 IAms_20 IAms_20 10 33 39.6
comp=Z,646nm,19.0s
CAST Castle Rocks 116.67 341 IAms_20 IAms_20 10 31 56.2
comp=Z,716nm,20.0s
J20K Nowinta River 116.80 342 PKPdf **PKiKP** **09 45 36.9 +0.6**
J20K IAms_20 IAms_20 10 31 58.6
comp=Z,718nm,20.0s
M22K Willow 117.09 338 IAms_20 IAms_20 10 33 54.5
comp=Z,530nm,20.0s
CD2 Chengdu 117.15 59 PKP **PKiKP** **09 45 38.3 +0.3**
K20K Telida 117.36 341 IAms_20 IAms_20 10 32 02.4
comp=Z,608nm,21.0s
RC01 Rabbit Creek A 117.38 338 **PKiKP** **09 45 38.0 +0.5**
MYKOM Kota Tinggi 117.38 92 IAms_20 IAms_20 10 29 31.7
comp=Z,794nm,21.0s
SKT Skwentna 117.45 339 **PKiKP** **09 45 37.8 +0.2**
SKT IAms_20 IAms_20 10 33 29.9
comp=Z,719nm,18.0s
PMBI Palembang 117.59 97 IAms_20 IAms_20 10 30 52.3
comp=Z,718nm,20.0s
M20K Styx River 118.08 340 IAms_20 IAms_20 10 34 01.4
comp=Z,831nm,19.0s
L19K White Mountain 118.45 341 IAms_20 IAms_20 10 33 21.2
comp=Z,638nm,19.0s
BILL Bilibino 119.46 0 PKPdf **PKiKP** **09 45 42.0 +0.6**
BILL Bilibino 119.46 0 *i* PKIKP **PKiKP** **09 45 41.8 +0.4**
BILL *e* 09 47 04.5
BILL *e*PPP PPP 09 49 35.7
BILL *e* 09 52 37.3
BILL *e*SS SS 10 03 25.3 +0.7
BILL *e*SSS SSS 10 07 49.9
BILL pmax pmax
comp=Z,7.0nm,1.4s
ANM Nome 119.55 346 IAms_20 IAms_20 10 35 52.9
comp=Z,483nm,19.0s
HHC Hu-ho-hao-te 121.07 46 *e*PKP **PKPdf** **09 45 42.1 -3.2**
HIA Hailar 122.83 35 IAms_20 IAms_20 10 44 34.6
comp=Z,754nm,19.0s
XLT XiLinHaoTe 123.07 42 *e*PKP **PKiKP** **09 45 49.4 +0.1**
XLT PP **PP** **09 47 27.9 -0.3**
XLT SS SS 10 04 15.0 +2.2
XLT AMB AMB
comp=Z,190nm,8.4s
XLT LR LR
comp=Z,470nm,21.9s
XLT LR LR
comp=Z,360nm,20.2s
SEY Seymchan 123.64 8 ⇓*i* PKIKP **PKiKP** **09 45 50.3 +0.6**
KSM Kuching 123.74 93 IAms_20 IAms_20 10 33 00.2
comp=Z,747nm,21.0s
QIZ Qiongzhong 123.90 72 PKP **PKiKP** **09 45 53.9 +2.4**
QIZ PP **PP** **09 47 40.6 +5.9**
QIZ SS SS 10 04 24.6 -0.4
QIZ LR LR
comp=Z,290nm,15.7s
QIZ LR LR
comp=Z,280nm,16.2s
QIZ LR LR
comp=Z,210nm,14.3s
ZEA Zeya 124.03 27 *e*PKIKP **PKPdf** **09 45 49.6 -0.9**
ZEA pmax pmax
comp=Z,10.0nm,0.6s
TAOE Nuku Hiva Isla 124.40 254 *e*LR LR 10 24 41.7
comp=Z,377nm,22.6s
HNS HongShan 124.50 49 *e*PKP **PKiKP** **09 45 55.3 +3.1**
HNS *e*PP **PP** **09 47 44.1 +6.2**
HNS LR LR
comp=Z,270nm,18.2s
HNS LR LR
comp=Z,330nm,17.7s
HNS LR LR
comp=Z,320nm,18.4s
BJT Baijiatuan 124.65 46 IAms_20 IAms_20 10 47 27.1
comp=Z,447nm,18.0s
SBUM Sibu 125.76 92 IAms_20 IAms_20 10 42 40.7
comp=Z,565nm,18.0s
WHN Wuhan 126.17 58 ⇓PKP **PKiKP** **09 45 56.6 +0.9**
TBI Tubuai 127.18 233 *e*LR LR 10 25 52.4
comp=Z,627nm,27.8s
CN2 Changchun 129.07 38 *e*PKP **PKPdf** **09 45 57.4 -3.0**
CN2 *e*PP **PP** **09 48 09.3 +1.6**
CN2 SKS **SKSdf** **09 53 07.6 -4.7**
CN2 LR LR
comp=Z,310nm,18.0s
CN2 LR LR
comp=Z,480nm,18.0s
CN2 LR LR
comp=Z,660nm,20.0s
BNX BinXian 129.11 35 ⇓PKP **PKPdf** **09 45 59.8 -0.6**
KLR Kul'dur 129.14 29 PKP **PKPdf** **09 46 00.0 -0.4**
comp=Z,3.6nm,0.9s,baz=295,slow=3.3,SNR=13
KLR Kul'dur 129.14 29*c* *i* PKIKP **PKPdf** **09 45 59.9 -0.5**
NJ2 Nanjing 129.45 54 *e*PKP **PKPdf** **09 46 01.3 -0.2**
NJ2 LR LR
comp=Z,250nm,16.2s
NJ2 LR LR
comp=Z,350nm,16.7s
NJ2 LR LR
comp=Z,830nm,21.6s
PPT2 Papeete2 129.97 240 *e*LR LR 10 27 11.8
comp=Z,354nm,23.8s
MDJ Mudanjiang 131.02 35 IAms_20 IAms_20 10 50 40.3
comp=Z,511nm,18.0s
MDJ Mudanjiang 131.02 35 PKP **PKPdf** **09 46 04.5 +0.4**
KAPI Kappang 131.78 103 IAms_20 IAms_20 10 35 44.7
comp=Z,535nm,21.0s
MYLDM Lahad Datu 132.29 90 IAms_20 IAms_20 10 37 32.9
comp=Z,681nm,20.0s
INCN Inchon 133.12 44 IAms_20 IAms_20 10 53 12.9
comp=Z,560nm,18.0s
PEA0B Petropavlovsk- 133.88 7 ⇓*e*PKIKP **PKPdf** **09 46 07.5 -1.7**
PETK Petropavlovsk- 133.88 7 PKP **PKPdf** **09 46 08.2 -1.0**
comp=Z,0.8nm,0.5s,baz=106,slow=3.7,SNR=3.7
PETK Petropavlovsk- 133.88 7 **PKPdf** **09 46 09.0 -0.3**
KSAR Wonju Array Be 134.00 44 PKPdf **PKPdf** **09 46 09.5 -0.4**
KSAR Wonju Array Be 134.00 44 PKiKP **PKPdf** **09 46 09.5 -0.4**
KSRS Korea Array 134.02 44 PKP **PKPdf** **09 46 10.2 +0.3**
comp=Z,0.4nm,0.3s,baz=289,slow=3.7,SNR=2.4
TOLI2 Tolitoli 134.04 96 IAms_20 IAms_20 10 42 30.2
comp=Z,666nm,20.0s
ASAR Alice Springs 135.66 135 PKhKP PKPpre 09 46 02.7
comp=Z,0.7nm,0.7s,baz=233,slow=2.6,SNR=5.1
ASAR PP **PP** **09 48 52.8 +2.4**
comp=Z,1.7nm,1.1s,baz=214,slow=8.8,SNR=4.2
YSS Yuzh-Sakhalins 135.68 23 IAms_20 IAms_20 10 50 23.1
comp=Z,482nm,20.0s
YSS Yuzh-Sakhalins 135.68 23 ⇑*e*PKIKP **PKPdf** **09 46 13.5 +0.7**
WRA Warramunga Arr 138.31 131 PKhKP PKPpre 09 46 13.9
comp=Z,1.7nm,1.0s,baz=235,slow=2.8,SNR=5.1
WRA PP **PP** **09 49 05.9 -1.2**
comp=Z,0.8nm,1.1s,baz=244,slow=7.0,SNR=2.2
MAJO Matsushiro 141.21 37 IAms_20 IAms_20 10 55 51.5
comp=Z,485nm,20.0s
MJAR Matsushiro Arr 141.22 37 PKhKP PKPpre 09 46 16.7
comp=Z,0.5nm,0.3s,baz=44,slow=1.5,SNR=1.9
MJAR Matsushiro Arr 141.22 37 PKPdf **PKPdf** **09 46 22.9 -0.4**
MJAR Matsushiro Arr 141.22 37 PKiKP **PKPdf** **09 46 22.9 -0.4**
SIJI Sorong 143.94 102 PKP PKPbc 09 46 27.1 +0.5
comp=Z,2.7nm,0.3s,baz=304,slow=2.9,SNR=6.7
EIDS Eidsvold 144.14 156 PKPbc 09 46 27.5 +0.8
FAKI Fak Fak 144.35 106 PKPdf **PKPdf** **09 46 28.7 -0.8**
COEN Coen 148.61 133 **PKPbc** **09 46 39.7 -0.5**
DZM Mont Dzumac 150.70 180 *e*LR LR 10 36 42.0
comp=Z,690nm,33.1s

*IDC **10** 09:33:16.5±2.0, 3.°84N×123.°28E, h553km±24km, mb3.0/6, mbtmp4.0/6, Error ellipse: s-maj=133.9km s-min=12.8km az=65.0*
*NEIC **10** 09:33:16.3±1.1, 3.°69N±0.°06×122.°9E±0.°2, h545km±14km, mb4.0/12, Error ellipse: s-maj=30.9km s-min=6.4km az=80.0*
ISC 10 09:33:16.0±0.8, 3.°6N±0.°1×122.°9E±0.°2, h545km, n22, σ0s86/23, mb3.8/11, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOLI2	**Tolitoli**	**3.25**	**220**	P	**P**	**09 34 33.5**	**+1.3**
MYLDM	**Lahad Datu**	**4.60**	**290**	P	**P**	**09 34 42.7**	**+0.5**
TNTI	**Ternate**	**5.34**	**122**	P	**P**	**09 34 48.0**	**-0.4**
BKB	**Balikpapan**	**7.68**	**231**	P	**P**	**09 35 09.4**	**-1.1**
KNRA	**Kununurra**	**20.06**	**163**	P	**P**	**09 37 13.4**	**+0.4**
WB0	**Warramunga Arr**	**25.88**	**154**	P	**P**	**09 38 04.5**	**-0.4**
WB0				IAmb	IAmb	09 38 26.0	
comp=Z,13nm,1.5s							
WRAB	**Tennant Creek**	**26.01**	**155**	P	**P**	**09 38 05.9**	**-0.1**
WRA	**Warramunga Arr**	**26.01**	**155**	P	**P**	**09 38 05.7**	**-0.4**
comp=Z,1.3nm,0.3s,baz=334,slow=9.7,SNR=55							
WRA				ScP	**ScP**	**09 44 02.6**	**-1.7**
comp=Z,0.5nm,0.9s,baz=340,slow=3.1,SNR=2.4							
comp=Z,1.3nm,0.3s							
WRA	**Warramunga Arr**	**26.01**	**155**	P	**P**	**09 38 04.3**	**-1.7**
WB2	**Warramunga Arr**	**26.02**	**155**	P	**P**	**09 38 05.8**	**-0.2**
WB2				IAmb	IAmb	09 38 07.1	
comp=Z,5.3nm,1.1s							
WR0	**Warramunga Arr**	**26.11**	**154**	P	**P**	**09 38 06.7**	**-0.2**
WR0				IAmb	IAmb	09 38 46.8	
comp=Z,13nm,1.4s							
AS31	**Alice Springs**	**29.20**	**159**	P	**P**	**09 38 34.7**	**+0.8**
ASAR	**Alice Springs**	**29.20**	**159**	P	**P**	**09 38 34.4**	**+0.5**
comp=Z,1.0nm,0.3s,baz=340,slow=7.4,SNR=45							
ASAR				ScP	**ScP**	**09 44 12.7**	**-1.5**
comp=Z,0.2nm,0.8s,baz=338,slow=4.0,SNR=1.5							
comp=Z,1.0nm,0.3s							
BBOO	**Buckleboo**	**38.35**	**162**	P	**P**	**09 39 51.4**	**+0.8**
STKA	**Stephens Creek**	**39.56**	**155**	P	**P**	**09 40 00.3**	**-0.1**
comp=Z,2.7nm,0.8s,baz=322,slow=11,SNR=4.9							
comp=Z,2.7nm,0.8s							
STKA	**Stephens Creek**	**39.56**	**155**	P	**P**	**09 40 00.4**	**0.0**
STKA				IAmb	IAmb	09 40 11.2	
comp=Z,2.2nm,1.4s							
SONM	**Songino Array**	**46.26**	**345**	P	**P**	**09 40 52.3**	**-0.3**
comp=Z,0.2nm,0.3s,baz=165,slow=6.0,SNR=1.7							
comp=Z,0.2nm,0.3s							
MK31	**Makanchi Array**	**55.48**	**327**	P	**P**	**09 41 60.0**	**+0.5**
MK31				IAmb	IAmb	09 42 40.7	
comp=Z,5.5nm,1.1s							
MKAR	**Makanchi Array**	**55.48**	**327**	P	**P**	**09 41 59.8**	**+0.3**
comp=Z,1.0nm,0.3s,baz=122,slow=7.6,SNR=12							
comp=Z,1.0nm,0.3s							
KURBB	**Kurchatov Arra**	**59.77**	**329**	P	**P**	**09 42 28.0**	**-0.5**
comp=Z,0.6nm,0.5s,baz=122,slow=7.1,SNR=2.0							
comp=Z,0.6nm,0.5s							
KURK	**Kurchatov**	**59.78**	**329**	P	**P**	**09 42 28.0**	**-0.6**
KURK	**Kurchatov**	**59.78**	**329**	IAmb	IAmb	09 42 49.7	
comp=Z,7.7nm,1.4s							

*NNC **10** 09:37:27.4±2.7, 54.°36N×86.°49E, h0km, mb3.4, mpv3.2, Error ellipse: s-maj=62.9km s-min=15.3km az=165.0, Suspected Mining explosion.*
*IDC **10** 09:37:29.1±2.5, 54.°04N×86.°52E, h0km, mbtmp3.6/2, ML3.0/2, Error ellipse: s-maj=20.3km s-min=12.0km az=59.0*
ISC 10 09:37:29.4±4.4, 54.°1N±0.°2×86.°4E±0.°2, h0km, n8, σ1s18/9, 3C-2D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.95**	**261**	*i*		09 43 40.0	
baz=85,slow=312,SNR=4.0							
ZAA0	**Zalesovo Array**	**0.95**	**261**	⇑P	**Pb**	**09 37 47.6**	**-1.2**
0.8nm,0.3s							
ZAA0				⇓S	**Sb**	**09 38 02.5**	**+0.6**
2.6nm,0.3s							
ZALV	**Zalesovo Beam**	**0.95**	**261**	Pg	**Pg**	**09 37 47.2**	**-0.4**
5.2nm,0.3s,baz=84,slow=17,SNR=30							
ZALV				Lg	Lg	09 38 02.9	
8.7nm,0.3s,baz=84,slow=29,SNR=15							
KURK	**Kurchatov**	**5.85**	**238**	⇓Pn	**Pn**	**09 38 59.0**	**+1.7**
4.5nm,1.1s							
KURBB	**Kurchatov Arra**	**5.95**	**237**	Pn	**Pn**	**09 38 59.8**	**+1.1**
0.1nm,0.3s,baz=56,slow=14,SNR=5.9							
KURBB				Lg	Lg	09 40 38.8	
0.1nm,0.3s,baz=63,slow=30,SNR=4.1							
3.8nm,0.3s							
KURBB	**Kurchatov Arra**	**5.95**	**237**	⇑Pn	**Pn**	**09 38 59.8**	**+1.1**
4.9nm,0.3s							
MK31	**Makanchi Array**	**7.77**	**201**	⇑Pn	**Pn**	**09 39 24.7**	**+0.9**
0.6nm,0.4s,baz=26,slow=14,SNR=40							
MKAR	**Makanchi Array**	**7.77**	**201**	Pn	**Pn**	**09 39 24.0**	**+0.3**
0.6nm,0.3s,baz=26,slow=14,SNR=23							
MKAR				Sn	**Sn**	**09 40 52.0**	**-0.5**
0.2nm,0.3s,baz=23,slow=26,SNR=1.7							
MKAR				Lg	Lg	09 41 33.1	
0.2nm,0.3s,baz=25,slow=29,SNR=4.3							
0.8nm,0.3s							

IDC 10 09:55:13.7±3.1, 53.°50N×87.°55E, h0km, mbtmp2.8/2, ML2.3/2, Error ellipse: s-maj=26.3km s-min=14.3km az=65.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.69**	**287**	*i*		10 04 15.0	
0.2nm,1.1s,baz=102,slow=308,SNR=4.9							
ZALV	**Zalesovo Beam**	**1.69**	**287**	Pg	Pn	09 55 43.6	-0.8
1.1nm,0.3s,baz=105,slow=17,SNR=13							
ZALV				Lg	Lg	09 56 07.2	
2.1nm,0.3s,baz=108,slow=28,SNR=10							
KURBB	**Kurchatov Arra**	**6.26**	**246**	Pn	Pn	09 56 48.1	+0.8
baz=63,slow=14,SNR=4.7							
KURBB				Lg	Lg	09 58 34.1	
baz=59,slow=30,SNR=5.1							
0.6nm,0.6s							
MKAR	**Makanchi Array**	**7.51**	**209**	Pn	Pn	09 57 05.7	+1.2
0.1nm,0.3s,baz=28,slow=12,SNR=4.7							
MKAR				Sn	Sn	09 58 29.9	-0.4
0.1nm,0.3s,baz=23,slow=22,SNR=3.1							
MKAR				Lg	Lg	09 59 11.7	
0.1nm,0.3s,baz=29,slow=27,SNR=6.5							
0.4nm,0.6s							

*UCR **10** 09:55:23.8±1.1, 12.°76N×87.°07W, h10km, ML3.7*
*SNET **10** 09:55:23.9±1.1, 12.°76N×87.°08W, h10km, ML3.8*
*INET **10** 09:55:24.4±1.4, 12.°69N×87.°13W, h5km±3km, MW3.6*
ISC 10 09:55:24.0±0.9, 12.°81N±0.°05×87.°05W±0.°04, h13km±7km, n27, σ0s82/41, 2D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.11**	**179**	*e*P	**Pg**	**09 55 27.1**	**-0.1**
CRIN				*e*S	**Sg**	**09 55 30.4**	**+0.8**
CNGN	**Cerro Negro**	**0.46**	**132**	*e*P	**Pb**	**09 55 33.6**	**-0.5**
CNGN				*e*S	**Sb**	**09 55 41.3**	**+0.5**
COPN	**Copaltepe**	**0.77**	**144**	*e*P	**Pg**	**09 55 38.0**	**-1.1**
COPN				*e*S	**Sb**	**09 55 49.3**	**-0.4**
CNCH	**Conchagua**	**0.89**	**301**	*e*P	**Pg**	**09 55 40.0**	**-1.3**
CNCH				*e*S	**Sb**	**09 55 54.4**	**+1.2**
CNCH	**Conchagua**	**0.89**	**301**	*e*P	**Pg**	**09 55 40.0**	**-1.3**
CNCH				*e*S	**Sb**	**09 55 54.4**	**+1.2**
APYN	**Apoyeque**	**0.89**	**130**	*e*P	**Pg**	**09 55 40.5**	**-0.8**
APYN				*e*S	**Sb**	**09 55 52.9**	**-0.3**
LCND	**La Caada**	**0.95**	**301**	*e*P	**Pg**	**09 55 41.0**	**-1.5**
LCND				*e*S	**Sg**	**09 55 54.9**	**-0.1**
LCND				IAML		09 55 58.0	
comp=Z,3μm,0.6s							
LCND	**La Caada**	**0.95**	**301**	*e*P	**Pg**	**09 55 41.0**	**-1.5**
LCND				*e*S	**Sg**	**09 55 54.9**	**-0.1**
LCND				IAML		09 55 58.0	
comp=Z,3μm,0.6s							
HUEN		**0.98**	**119**	*e*P	**Pb**	**09 55 42.9**	**+0.1**
HUEN				*e*S	**Sn**	**09 55 58.5**	**+1.3**
CRUN	**El Crucero**	**1.10**	**138**	*e*P	**Pg**	**09 55 44.4**	**+0.9**
TGUH	**Tegucigalpa,Un**	**1.26**	**350**	⇓*i*P	**Pn**	**09 55 47.3**	**-0.1**
TGUH				*e*S	**Sb**	**09 56 04.9**	**+1.1**
TGUH	**Tegucigalpa,Un**	**1.26**	**350**	⇓*i*P	**Pn**	**09 55 47.3**	**-0.1**
TGUH				*e*S	**Sb**	**09 56 04.9**	**+1.1**
RANC	**El Ranchito**	**1.35**	**297**	*e*P	**Pn**	**09 55 47.9**	**-0.8**
RANC				*e*S	**Sn**	**09 56 07.3**	**+0.7**
RANC	**El Ranchito**	**1.35**	**297**	*e*P	**Pn**	**09 55 47.9**	**-0.8**
RANC				*e*S	**Sn**	**09 56 07.3**	**+0.7**
BOAB	**BOACO BROADBAN**	**1.40**	**105**	*e*P	**Pn**	**09 55 49.1**	**-0.1**
BOAB				*e*S	**Sg**	**09 56 09.5**	**+0.3**
COEB	**Comit de Eme**	**1.59**	**296**	*e*P	**Pn**	**09 55 51.8**	**-0.3**
COEB				IAML		09 56 17.8	
comp=Z,1μm,0.5s							
COEB	**Comit de Eme**	**1.59**	**296**	*e*P	**Pn**	**09 55 51.8**	**-0.3**
COEB				IAML		09 56 17.8	
comp=Z,1μm,0.5s							
PQSS	**Presa 15 de Se**	**1.68**	**299**	*e*P	**Pn**	**09 55 53.1**	**0.0**

PQSS	**Presa 15 de Se**	**1.68**	**299**	*eP*	**Pn**	**09 55 53.1 0.0**
SCLA	**Alcaldia de Sa**	**1.86**	**299**	*eP*	**Pn**	**09 55 55.5 -0.1**
SCLA	**Alcaldia de Sa**	**1.86**	**299**	*eP*	**Pn**	**09 55 55.5 -0.1**
CONN	**Concepcion**	**1.87**	**131**	*eP*	**Pn**	**09 55 56.0 +0.3**
COEG	**Centro de Oper**	**1.95**	**295**	*eP*	**Pn**	**09 55 57.3 +0.4**
COEG	**Centro de Oper**	**1.95**	**295**	*eP*	**Pn**	**09 55 57.3 +0.4**
ACON	**Acoyapa**	**2.02**	**114**	*eP*	**Pn**	**09 55 57.2 -0.5**
PAVA	**Las Pavas**	**2.04**	**296**	*eP*	**Pn**	**09 55 59.4 +1.2**
PAVA	**Las Pavas**	**2.04**	**296**	*eP*	**Pn**	**09 55 59.4 +1.2**

*IDC **10** 10:00:16.2±1.7, 6°96S×128°64E, h0km, mb3.9/1, mbtmp3.7/4, ML3.7/3, MS4.5/1, Error ellipse: s-maj=59.9km s-min=28.9km az=78.0*
*NEIC **10** 10:00:23.6±2.5, 6°71S±0°08×129°4E±0°1, h134km±15km, mb4.3/6, Error ellipse: s-maj=19.4km s-min=9.7km az=106.0*
ISC 10 10:00:23.4±0.8, 6°72S±0°06×129°4E±0°1, h150km, n21, σ2s24/21, mb4.2/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.28**	**124**	Pn	**Pn**	**10 01 02.4**	**+0.5**
FAKI	**Fak Fak**	**4.74**	**37**	Pn	**Pn**	**10 01 33.6**	**+0.2**
SIJI	**Sorong**	**6.11**	**18**	Pn	**Pn**	**10 01 54.6**	**+2.9**
	1.5nm,0.3s,baz=206,slow=15,SNR=8.5						
SIJI				Sn	**Sn**	**10 02 56.0**	**-4.7**
	3.0nm,0.3s,baz=190,slow=18,SNR=7.4						
	7.1nm,0.3s						
MTN	**Manton Dam**	**6.33**	**164**	Pn	**Pn**	**10 01 56.5**	**+2.0**
MMRI	**Maumere**	**7.33**	**254**	Pn	**Pn**	**10 02 07.4**	**-0.5**
WB0	**Warramunga Arr**	**13.86**	**160**	Pn	**Pn**	**10 03 32.8**	**-0.8**
WRAB	**Tennant Creek**	**13.99**	**160**	Pn	**Pn**	**10 03 35.6**	**+0.2**
WRA	**Warramunga Arr**	**14.00**	**160**	Pn	**Pn**	**10 03 35.6**	**+0.2**
	0.5nm,0.3s,baz=336,slow=12,SNR=12						
WRA				Sn	Sn	10 05 58.8	-12
	1.2nm,0.3s,baz=330,slow=22,SNR=11						
	0.4nm,0.3s						
WRA	**Warramunga Arr**	**14.00**	**160**		**Pn**	**10 03 34.9**	**-0.5**
WB2	**Warramunga Arr**	**14.00**	**160**	Pn	**Pn**	**10 03 35.5**	**0.0**
WR0	**Warramunga Arr**	**14.00**	**160**	Pn	**Pn**	**10 03 37.3**	**+0.8**
COEN	**Coen**	**15.35**	**119**		**P**	**10 03 53.9**	**+0.2**
COEN				IAmb	IAmb	10 04 35.3	
	comp=Z,11nm,1.1s						
AS31	**Alice Springs**	**17.40**	**166**	P	**P**	**10 04 15.5**	**-0.8**
ASAR	**Alice Springs**	**17.40**	**166**	P	**Pn**	**10 04 20.8**	**+3.6**
	comp=Z,0.2nm,0.3s,baz=344,slow=9.6,SNR=15						
ASAR				S	**S**	**10 07 24.2**	**-5.8**
	comp=Z,0.5nm,0.5s,baz=340,slow=23,SNR=4.9						
	comp=Z,0.2nm,0.3s						
ASAR	**Alice Springs**	**17.40**	**166**		**P**	**10 04 16.3**	**0.0**
PSA00	**Pilbara Seismi**	**17.41**	**211**	P	**P**	**10 04 16.8**	**+0.5**
PSA00				IAmb	IAmb	10 04 20.5	
	comp=Z,26nm,1.3s						
MAJO	**Matsushiro**	**43.82**	**10**	P	**P**	**10 08 15.4**	**+0.8**
MAJO				IAmb	IAmb	10 08 55.2	
	comp=Z,8.8nm,1.3s						
MJB9	**Matsu-Tunnel**	**43.83**	**10**	P	**P**	**10 08 16.6**	**+2.0**
MJB9				IAmb	IAmb	10 08 45.2	
	comp=Z,3.4nm,0.5s						
LSA	**Lhasa**	**51.57**	**317**	P	**P**	**10 09 16.2**	**+1.2**
SONM	**Songino Array**	**57.98**	**342**	LR	LR	10 38 54.8	
	comp=Z,425nm,19.4s,baz=294,slow=40						
MKAR	**Makanchi Array**	**67.66**	**327**	P	P	10 11 14.0	+10
	comp=Z,0.5nm,0.4s,baz=132,slow=6.9,SNR=7.7						
	comp=Z,0.5nm,0.4s						

TAP 10 10:04:09.1, 24°26N×121°67E, h6km, ML1.3, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.08**	**50**	*eP*	Pg	10 04 11.8	+0.8
	baz=57						
ETL	**Fush Village**	**0.11**	**205**	P	Pg	10 04 12.1	+0.6
	baz=201						
ETL				S	Sg	10 04 14.1	+1.0
	baz=201						
NACB	**Ninganchiao**	**0.11**	**220**	*eP*	Pg	10 04 11.8	+0.3
	baz=210						
NACB				*eS*	Sg	10 04 14.0	+1.0
	baz=210						
ENA	**Nanau**	**0.18**	**20**	*eP*	Pg	10 04 13.0	+0.3
	baz=23						
ETLH	**Xiulin Townshi**	**0.18**	**254**	P	Pg	10 04 13.3	+0.5
	baz=253						
ETLH				*eS*	Sg	10 04 16.3	+1.1
	baz=253						
TWD	**Chiawan**	**0.19**	**202**	*eP*	Pg	10 04 13.7	+0.8
	baz=198						
TWD				*eS*	Sg	10 04 17.2	+1.8
	baz=198						
LATG	**Datong**	**0.31**	**334**	*eP*	Pg	10 04 15.7	+0.5
	baz=336						
LATG				*eS*	Sb	10 04 21.1	-1.4
	baz=336						
NNSB	**Datong**	**0.31**	**303**	P	Pg	10 04 16.0	+0.7
	baz=304						
NNSB				S	Sg	10 04 20.8	+1.3
	baz=304						
ETM	**Tongmen**	**0.34**	**210**	*eP*	Pb	10 04 16.7	-0.8
	baz=206						
ETM				*eS*	Sg	10 04 21.3	+1.2
	baz=206						
NDS	**Dongshan**	**0.38**	**6**	P	Pg	10 04 17.0	+0.5
	baz=10.0						
NDS				*eS*	Sb	10 04 23.2	-1.1
	baz=10.0						
WHF	**Hehuan Shan**	**0.39**	**253**	*eP*	Pg	10 04 17.4	+0.6
	baz=251						
WHF				*eS*	Sb	10 04 23.8	-1.4
	baz=251						
FUSS	**Fushou**	**0.39**	**269**	*eP*	Pg	10 04 17.6	+0.8
	baz=266						
FUSS				*eS*	Sg	10 04 22.9	+0.9
	baz=266						
ENTT	**Nioudou**	**0.39**	**346**	*eP*	Pg	10 04 17.4	+0.7
	baz=348						
YHNB	**Yeheng**	**0.49**	**327**	P	Pb	10 04 19.7	-0.6
	baz=328						
CHGB	**Renai**	**0.50**	**247**	*eP*	Pb	10 04 20.1	-0.4
	baz=233						
CHGB				*eS*	Sb	10 04 27.5	-0.6
	baz=233						
FUSB	**Fushanzhiwuyua**	**0.51**	**351**	*eP*	Pb	10 04 20.2	-0.3
	baz=355						
FUSB				*eS*	Sb	10 04 28.7	+0.5
	baz=355						
NSK	**Sanguang**	**0.51**	**325**	*eP*	Pb	10 04 19.9	-0.6
	baz=329						
NSK				*eS*	Sb	10 04 28.1	0.0
	baz=329						
NWLT	**Wulai**	**0.54**	**343**	*eP*	Pb	10 04 20.7	-0.4
	baz=345						
OWD	**Renai**	**0.55**	**236**	*eP*	Pg	10 04 20.1	+0.4
	baz=222						
OWD				*eS*	Sg	10 04 28.0	+1.2
	baz=222						
WUSB	**Renai**	**0.57**	**243**	*eP*	Pb	10 04 21.3	-0.4
	baz=229						
WUSB				*eS*	Sb	10 04 30.0	-0.1
	baz=229						

IDC 10 10:05:21.1±4.7, 21°48N×121°97E, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=346.7km s-min=29.9km az=60.0, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**40.80**	**318**	P	P	10 13 04.1	-0.2
	0.1nm,0.5s,baz=110,slow=8.3,SNR=1.7						
	0.1nm,0.5s						
WRA	**Warramunga Arr**	**42.90**	**163**	P	P	10 13 21.4	-0.2
	0.3nm,0.6s,baz=345,slow=9.1,SNR=6.1						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**46.35**	**165**	P	P	10 13 49.2	0.0
	0.3nm,0.6s,baz=341,slow=6.4,SNR=5.2						
	0.3nm,0.6s						

INET 10 10:12:26.0±2.0, 12°67N×87°08W, h1km±5km, MW3.8, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**0.04**	**42**	*eP*	Pg	10 12 28.2	+1.4
CNGN	**Cerro Negro**	**0.41**	**115**	*eP*	Pg	10 12 34.3	+0.5
CNGN				*eS*	Sb	10 12 42.1	-0.7
COPN	**Copaltepe**	**0.68**	**136**	*eP*	Pg	10 12 39.1	0.0
APYN	**Apoyeque**	**0.83**	**121**	*eP*	Pg	10 12 42.0	0.0
HUEN		**0.94**	**110**	*eP*	Pg	10 12 44.6	+0.5
HUEN				*eS*	Sn	10 12 59.7	-0.9
CRUN	**El Crucero**	**1.02**	**132**	*eP*	Pb	10 12 46.9	+0.3
CONN	**Concepcion**	**1.80**	**128**	*eP*	Pn	10 12 58.1	-0.1
ACON	**Acoyapa**	**1.99**	**110**	*eP*	Pn	10 13 00.6	-0.2

*IDC **10** 10:12:47.6±1.8, 12°99N×86°82W, h0km, mb3.1/2, mbtmp3.2/3, ML3.4/1, Error ellipse: s-maj=106.6km s-min=24.1km az=57.0*
*SNET **10** 10:12:48.7±0.7, 12°76N×87°11W, h17km±9km, ML3.8*
*UCR **10** 10:12:48.7±0.6, 12°77N×87°10W, h19km±7km, ML3.8*
ISC 10 10:12:49.2±0.9, 12°83N±0°06×87°11W±0°07, h13km, n14, σ0s72/21, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNCH	**Conchagua**	**0.83**	**302**	*eP*	**Pg**	**10 13 04.5**	**-0.8**
CNCH				*eS*	**Sb**	**10 13 17.5**	**+0.8**
CNCH	**Conchagua**	**0.83**	**302**	*eP*	**Pg**	**10 13 04.5**	**-0.8**
CNCH				*eS*	**Sb**	**10 13 17.5**	**+0.8**
LCND	**La Caada**	**0.90**	**302**	*eP*	**Pg**	**10 13 05.8**	**-0.7**
LCND				*eS*	**Sb**	**10 13 18.8**	**+0.3**
LCND				IAML		10 13 21.6	
	comp=Z,3μm,0.5s						
LCND	**La Caada**	**0.90**	**302**	*eP*	**Pg**	**10 13 05.8**	**-0.7**
LCND				*eS*	**Sb**	**10 13 18.8**	**+0.3**
LCND				IAML		10 13 21.6	
	comp=Z,3μm,0.5s						
TGUH	**Tegucigalpa,Un**	**1.23**	**353**	*eP*	**Pn**	**10 13 11.5**	**-0.7**
TGUH				*eS*	**Sg**	**10 13 29.1**	**+0.1**
TGUH	**Tegucigalpa,Un**	**1.23**	**353**	*eP*	**Pn**	**10 13 11.5**	**-0.7**
TGUH				*eS*	**Sg**	**10 13 29.1**	**+0.1**
COEB	**Comit de Eme**	**1.53**	**296**	*eP*	**Pn**	**10 13 15.4**	**-0.9**
COEB	**Comit de Eme**	**1.53**	**296**	*eP*	**Pn**	**10 13 15.4**	**-0.9**
COEG	**Centro de Oper**	**1.89**	**295**	*eP*	**Pn**	**10 13 21.0**	**-0.3**
COEG	**Centro de Oper**	**1.89**	**295**	*eP*	**Pn**	**10 13 21.0**	**-0.3**
JTS	**Las Juntas de**	**3.29**	**140**	Pn	**Pn**	**10 13 39.5**	**-1.0**
	comp=Z,4.3nm,0.3s,baz=9.3,slow=16,SNR=6.6						
JTS				Sn	**Sn**	**10 14 20.6**	**+1.0**
	comp=Z,5.9nm,0.3s,baz=328,slow=16,SNR=3.6						
	comp=Z,10nm,0.4s						
TXAR	**Lajitas Array**	**22.50**	**319**	P	**P**	**10 17 49.3**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=135,slow=9.0,SNR=4.2						
	comp=Z,0.2nm,0.5s						
YKA	**Yellowknife Ar**	**53.34**	**345**	P	**P**	**10 22 07.9**	**+0.1**
	comp=Z,0.6nm,0.9s,baz=139,slow=6.3,SNR=5.4						
	comp=Z,0.6nm,0.9s						
WRA	**Warramunga Arr**	**139.69**	**254**	PKP	**PKPdf**	**10 32 18.4**	**+0.6**
	comp=Z,0.3nm,1.0s,baz=78,slow=3.5,SNR=1.5						

IDC 10 10:36:49.6±1.2, 27°62N×140°06E, h0km, mb3.8/4, mbtmp3.7/4, Error ellipse: s-maj=71.3km s-min=31.1km az=98.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**47.60**	**187**	P	P	10 45 27.3	-0.2
	0.3nm,0.4s,baz=5.6,slow=7.7,SNR=8.7						
	0.3nm,0.4s						
YKA	**Yellowknife Ar**	**72.57**	**28**	P	P	10 48 18.4	0.0
	0.3nm,0.6s,baz=299,slow=5.7,SNR=4.1						
	0.3nm,0.6s						
FINES	**FINESS Array B**	**76.63**	**333**	P	P	10 48 42.1	+0.1
	1.5nm,0.8s,baz=57,slow=5.1,SNR=4.5						
	1.5nm,0.8s						
TXAR	**Lajitas Array**	**96.79**	**52**	P	P	10 50 22.6	-0.2
	0.1nm,0.6s,baz=318,slow=6.1,SNR=2.5						
	0.1nm,0.6s						

*IDC **10** 10:40:02.6±3.1, 53°71N×90°87E, h0km, mbtmp3.6/3, ML2.7/3, Error ellipse: s-maj=27.1km s-min=22.9km az=55.0*
*NNC **10** 10:40:08.0±1.8, 53°50N×90°55E, h0km, mb3.9, mpv3.8, Error ellipse: s-maj=14.7km s-min=11.5km az=77.0, Suspected Mining explosion.*
ISC 10 10:40:04.4±4.1, 53°7N±0°1×90°7E±0°2, h0km, n13, σ1s60/12, 7C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**3.49**	**277**	*i*		11 01 40.0	
	0.2nm,1.0s,baz=91,slow=316,SNR=19						
ZAA0	**Zalesovo Array**	**3.49**	**277**	⇑Pn	**Pn**	**10 41 02.8**	**+2.9**
	3.3nm,0.7s						
ZAA0				⇓Lg	Lg	10 41 56.1	
	15nm,0.8s						
ZALV	**Zalesovo Beam**	**3.49**	**277**	Pn	**Pn**	**10 41 00.5**	**+0.6**
	0.3nm,0.3s,baz=91,slow=13,SNR=16						
ZALV				Pg	**Pb**	**10 41 04.8**	**-2.2**
	1.8nm,0.3s,baz=96,slow=16,SNR=25						
ZALV				Lg	Lg	10 41 55.5	
	2.6nm,0.3s,baz=92,slow=26,SNR=5.1						
	9.7nm,0.6s						
SEM	**Semipalatinsk**	**7.23**	**247**	Pg	Pg	10 43 13.2	+50
	2.7nm,0.1s						
SEM				Lg	Lg	10 43 54.1	
	24nm,0.1s						
ZSN	**Zaisan**	**7.26**	**213**	Pg	Pg	10 43 12.2	+49
	4.2nm,0.4s						
ZSN				Lg	Lg	10 43 52.6	
	14nm,0.9s						
KURK	**Kurchatov**	**7.99**	**253**	⇑Pn	**Pn**	**10 42 02.9**	**+1.3**
	4.6nm,0.7s						
KURK				⇑Sn	**Sn**	**10 43 34.7**	**+1.9**
	15nm,0.8s						
KURK				⇓Lg	Lg	10 44 18.5	
	41nm,0.8s						
KURBB	**Kurchatov Arra**	**8.09**	**253**	Pn	**Pn**	**10 42 02.4**	**-0.6**
	0.2nm,0.3s,baz=64,slow=14,SNR=16						
KURBB				Sn	**Sn**	**10 43 34.4**	**-0.6**
	0.1nm,0.3s,baz=64,slow=25,SNR=3.4						
KURBB				Lg	Lg	10 44 22.8	
	0.2nm,0.3s,baz=70,slow=35,SNR=13						
	3.9nm,0.6s						
MK31	**Makanchi Array**	**8.75**	**221**	⇑Pn	**Pn**	**10 42 12.8**	**+0.7**
	1.1nm,0.7s,baz=41,slow=13,SNR=12						
MK31				⇑Lg	Lg	10 44 38.9	
	26nm,1.2s,baz=39,slow=31,SNR=6.2						
MKAR	**Makanchi Array**	**8.75**	**221**	Pn	**Pn**	**10 42 11.8**	**-0.4**
	0.3nm,0.3s,baz=42,slow=14,SNR=18						
MKAR				Sn	**Sn**	**10 43 51.5**	**+0.1**
	0.3nm,0.3s,baz=30,slow=24,SNR=3.6						
MKAR				Lg	Lg	10 44 40.9	
	0.2nm,0.3s,baz=34,slow=31,SNR=3.8						
	1.1nm,0.5s						
MAKZ	**Makanchi**	**8.86**	**223**	⇑Pn	**Pn**	**10 42 15.0**	**+1.4**
	1.0nm,0.5s						
MAKZ				⇓Sn	**Sn**	**10 43 55.2**	**+1.0**
	6.0nm,0.7s						
MAKZ				⇑Lg	Lg	10 44 45.1	
	19nm,1.1s						
SONM	**Songino Array**	**11.53**	**114**	Lg	Lg	10 45 54.5	
	0.3nm,0.3s,baz=295,slow=27,SNR=8.7						
BRZS	**Berezniki**	**11.74**	**259**	Pg		10 44 40.6	
	1.8nm,0.3s						
BRZS				Lg	Lg	10 46 23.1	
	5.5nm,0.6s						
ARXS	**Arharly**	**12.69**	**227**	Pg		10 44 50.5	
	0.8nm,0.3s						
ARXS				Lg	Lg	10 46 40.2	
	3.6nm,0.9s						

*NEIC **10** 10:40:25.7±1.2, 52°1N±0°3×178°7E±0°1, h90km±24km, mb3.9/10, ML2.9(AEIC), Error ellipse: s-maj=42.3km s-min=9.4km az=184.0*
*AEIC **10** 10:40:26±0.8, 51°8N±0°2×178°63E±0°09, h98km±8km, Error ellipse: s-maj=35.3km s-min=8.4km az=181.0*
ISC 10 10:40:24.9±1.7, 51°8N±0°3×178°65E±0°07, h113km, n29, σ0s90/34, mb3.8/4, Rat Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GASW	**Gareloi Southw**	**1.55**	**89**		**Pn**	**10 40 52.0**	**-0.5**
GASW					**Sn**	**10 41 12.7**	**-0.7**
GALA	**Gareloi Lava P**	**1.60**	**90**		**Pn**	**10 40 52.9**	**-0.2**
TASE	**Tanaga Southea**	**2.06**	**87**		**Pn**	**10 40 58.5**	**-0.2**
TAFP	**Tanaga Falls P**	**2.10**	**85**		**Pn**	**10 40 58.7**	**-0.5**
TAFP					**Sn**	**10 41 24.6**	**-0.8**
TAPA	**Tanaga Point A**	**2.20**	**88**		**Pn**	**10 41 00.3**	**-0.2**
TAPA					**Sn**	**10 41 27.6**	**-0.3**
KIMD	**Kanaga Island**	**2.56**	**89**		**Pn**	**10 41 05.0**	**-0.2**
KIMD					**Sn**	**10 41 36.5**	**+0.5**
KICM	**Kanaga Island**	**2.58**	**85**		**Pn**	**10 41 05.5**	**+0.1**
KIKV	**Kanaga Island**	**2.60**	**86**		**Pn**	**10 41 05.5**	**-0.1**
KIWB	**Kanaga Island**	**2.61**	**87**		**Pn**	**10 41 05.7**	**-0.1**
ADK	**Adak**	**2.90**	**86**		**Pn**	**10 41 09.2**	**-0.3**
SMY	**Shemya**	**2.95**	**291**	Pn	**Pn**	**10 41 09.1**	**-1.1**
GSCK	**Great Sitkin C**	**3.23**	**84**		**Pn**	**10 41 13.9**	**0.0**
GSTD	**Great Sitkin T**	**3.24**	**83**		**Pn**	**10 41 14.0**	**-0.2**
GSMY	**Great Sitkin M**	**3.29**	**83**		**Pn**	**10 41 14.7**	**0.0**
GSMY					**Sn**	**10 41 53.9**	**+0.6**
GSTR	**Great Sitkin T**	**3.29**	**82**	Pn	**Pn**	**10 41 15.0**	**+0.2**
UNV	**Unalaska Vale**	**9.23**	**71**	Pn	**Pn**	**10 42 35.1**	**+0.2**
PETK	**Petropavlovsk-**	**12.84**	**284**	Pn	**Pn**	**10 43 23.9**	**+0.8**
OHAK	**Old Harbor**	**17.11**	**60**		**Pn**	**10 44 16.5**	**-0.3**
KDAK	**Kodiak Island**	**17.56**	**59**		**P**	**10 44 21.5**	**-0.2**
KDAK				IAmb	IAmb	10 44 51.8	
	comp=Z,24nm,1.4s						
CNPM	**China Poot**	**18.55**	**54**	P	**P**	**10 44 31.8**	**-0.7**
SKT	**Skwentna**	**19.05**	**46**	P	**P**	**10 44 36.9**	**-1.1**
SKT				IAmb	IAmb	10 45 15.4	
	comp=Z,6.9nm,1.4s						
GLB	**Gilahina Butte**	**22.50**	**50**	P	**P**	**10 45 15.8**	**+1.1**
GLB				IAmb	IAmb	10 45 18.3	
	comp=Z,11nm,1.4s						
DOT	**Dot Lake**	**22.81**	**44**	P	**P**	**10 45 18.4**	**+0.6**
TGL	**Tana Glacier**	**22.89**	**52**	P	**P**	**10 45 16.8**	**-1.8**
TGL				IAmb	IAmb	10 45 53.0	
	comp=Z,14nm,1.3s						
SCRK	**Sand Creek**	**22.92**	**43**	P	**P**	**10 45 17.7**	**-1.3**
J26L	**Joseph Creek**	**23.24**	**42**	P	**P**	**10 45 23.4**	**+1.6**
J26L				IAmb	IAmb	10 45 59.8	
	comp=Z,2.9nm,1.2s						
L27K	**Beaver Creek,**	**23.67**	**46**	P	**P**	**10 45 28.2**	**+2.4**
L27K				IAmb	IAmb	10 45 32.1	
	comp=Z,3.4nm,1.4s						
BCAR	**Beaver Creek A**	**23.69**	**46**	P	**P**	**10 45 28.1**	**+2.1**
BMAR	**Burnt Mountain**	**23.80**	**35**	P	**P**	**10 45 26.8**	**-0.1**

*IDC **10** 10:45:00.6±0.6, 17°70S×172°81W, h0km, mb4.5/17, mbtmp4.5/18, ML3.3/1, Error ellipse: s-maj=22.2km s-min=14.3km az=141.0*
*NEIC **10** 10:45:01.7±1.7, 17°74S±0°07×172°62W±0°08, h10km±1km, mb4.8/149, Error ellipse: s-maj=13.1km s-min=11.6km az=220.0*
ISC 10 10:45:02.8±0.4, 17°82S±0°08×172°66W±0°09, h21km, n220, σ0s95/221, mb4.8/88, 1D, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**2.88**	**116**	Pn	Pn	10 45 43.3	-4.3
AFI	**Afiamalu**	**3.98**	**12**	Pn	Pn	10 45 55.9	-6.9
	11nm,0.3s,baz=217,slow=18,SNR=13						
AFI				Sn	Sn	10 46 37.6	-11
	35nm,0.3s,baz=42,slow=20,SNR=6.8						
MSVF	**Nonsavu**	**8.85**	**269**	Pn	Pn	10 47 15.8	+6.2
	0.7nm,0.3s,baz=96,slow=19,SNR=12						
MSVF	**Nonsavu**	**8.85**	**269**	Pn	**Pn**	**10 47 12.7**	**+3.0**
DZM	**Mont Dzumac**	**20.09**	**254**	P	**P**	**10 49 35.1**	**-0.2**
	0.1nm,0.3s,baz=91,slow=18,SNR=3.1						
	5.6nm,0.8s						
URZ	**Urewera**	**22.24**	**202**	P	**P**	**10 50 01.0**	**+2.8**
	35nm,0.6s,baz=7.1,slow=7.0,SNR=13						
URZ				S	**S**	**10 53 58.8**	**-3.3**
	16nm,1.0s,baz=301,slow=19,SNR=2.0						
	35nm,0.6s						
URZ	**Urewera**	**22.24**	**202**	P	**P**	**10 49 58.0**	**-0.3**
URZ				IAmb	IAmb	10 50 03.1	
	comp=Z,55nm,0.9s						
RPZ	**Rata Peaks**	**29.25**	**205**	P	P	10 51 10.9	+7.5
	comp=Z,14nm,0.5s,baz=27,slow=10.0,SNR=3.2						
EIDS	**Eidsvold**	**34.46**	**251**	P	**P**	**10 51 46.9**	**-2.4**
CTA	**Charters Tower**	**38.85**	**260**	P	**P**	**10 52 24.9**	**-1.9**
	comp=Z,4.5nm,0.5s,baz=95,slow=13,SNR=16						
	comp=Z,4.5nm,0.5s						
CTAO	**Charters Tower**	**38.85**	**260**	P	**P**	**10 52 25.1**	**-1.8**
TOO	**Toolangi**	**41.53**	**233**	P	**P**	**10 52 48.5**	**-0.5**
TOO				IAmb	IAmb	10 52 50.7	
	comp=Z,31nm,1.4s						
TAU	**Tasmania Unive**	**42.07**	**225**	P	**P**	**10 52 53.4**	**+0.3**
COEN	**Coen**	**42.58**	**269**	P	**P**	**10 52 56.5**	**-1.2**
STKA	**Stephens Creek**	**43.49**	**242**	P	**P**	**10 53 05.0**	**+0.1**
	comp=Z,3.0nm,0.5s,baz=34,slow=11,SNR=2.9						
	comp=Z,3.0nm,0.5s						
BBOO	**Buckleboo**	**48.25**	**242**	P	**P**	**10 53 42.2**	**-0.3**
WR0	**Warramunga Arr**	**49.83**	**259**	P	**P**	**10 53 53.6**	**-1.2**
WB0	**Warramunga Arr**	**49.99**	**259**	P	**P**	**10 53 54.5**	**-1.5**
WB0				IAmb	IAmb	10 53 55.6	
	comp=Z,7.6nm,0.6s						
WB2	**Warramunga Arr**	**50.01**	**259**	P	**P**	**10 53 54.7**	**-1.4**
WB2				IAmb	IAmb	10 53 55.2	
	comp=Z,7.7nm,0.6s						
WRAB	**Tennant Creek**	**50.01**	**259**	P	**P**	**10 53 54.5**	**-1.6**
WRAB				IAmb	IAmb	10 53 57.1	
	comp=Z,7.1nm,0.7s						
WRA	**Warramunga Arr**	**50.02**	**259**	P	**P**	**10 53 54.8**	**-1.5**
	comp=Z,5.4nm,0.5s,baz=98,slow=7.0,SNR=105						
	comp=Z,5.4nm,0.5s						
WRA	**Warramunga Arr**	**50.02**	**259**	P	**P**	**10 53 54.7**	**-1.5**
AS31	**Alice Springs**	**50.07**	**254**	P	**P**	**10 53 55.8**	**-0.9**
AS31				IAmb	IAmb	10 53 57.1	
	comp=Z,7.3nm,0.6s						
ASAR	**Alice Springs**	**50.08**	**254**	P	**P**	**10 53 55.5**	**-1.2**
	comp=Z,26nm,0.7s,baz=89,slow=8.6,SNR=528						
ASAR				PcP	**PcP**	**10 55 17.2**	**+0.9**
	comp=Z,3.6nm,0.9s,baz=92,slow=5.7,SNR=4.8						
	comp=Z,26nm,0.7s						
FORT	**Forrest**	**54.99**	**245**	P	**P**	**10 54 31.9**	**-1.0**
KNRA	**Kununurra**	**55.94**	**263**	P	**P**	**10 54 37.9**	**-2.0**
SIJI	**Sorong**	**57.57**	**281**	P	**P**	**10 54 51.5**	**-0.1**
	comp=Z,8.3nm,0.6s,baz=168,slow=19,SNR=6.4						
	comp=Z,8.3nm,0

comp=Z,10nm,0.9s
NVAR Mina Array Bea 75.66 41 P P 10 56 47.7 +0.8
comp=Z,6.1nm,0.8s,baz=228,slow=9.4,SNR=42
comp=Z,6.1nm,0.8s
NVAR Mina Array Bea 75.66 41 P P 10 56 46.2 -0.6
NV11 Mina Array Sit 75.75 41 P P 10 56 45.8 -1.5
NV11 IAmb IAmb 10 56 49.8
comp=Z,8.6nm,1.0s
PAHR Pah Rah Range 75.77 40 P P 10 56 48.2 +0.8
PAHR IAmb IAmb 10 56 49.3
comp=Z,6.9nm,1.0s
TPH Tonopah 76.13 42 P P 10 56 50.6 +1.0
KVN Kaiserville 76.16 41 P P 10 56 50.0 +0.4
KVN IAmb IAmb 10 56 51.4
comp=Z,6.7nm,1.0s
J04D Umpqua Nationa 76.43 35 P P 10 56 51.3 +0.2
SHPR Sheep Range 76.57 44 P P 10 56 52.8 +0.8
MOD Modoc Plateau 76.59 37 P P 10 56 52.9 +0.9
MOD IAmb IAmb 10 56 53.8
comp=Z,6.8nm,0.9s
Y14A Wickenburg 76.64 48 P P 10 56 51.9 -0.5
W13A Hualapai Mount 76.66 46 P P 10 56 53.3 +0.7
K05A Summer Lake 76.78 36 P P 10 56 52.9 -0.2
K05A IAmb IAmb 10 56 55.2
comp=Z,12nm,0.9s
PRN Pahroc Range 77.15 44 P P 10 56 55.0 -0.3
TUC Tucson 77.38 50 P P 10 56 56.0 -0.6
TUC IAmb IAmb 10 56 59.0
comp=Z,6.8nm,0.9s
PINE Pine Mountain 77.43 36 P P 10 56 57.1 +0.3
PINE IAmb IAmb 10 56 59.0
comp=Z,12nm,0.9s
BMN Battle Mountai 77.53 40 P P 10 56 57.6 +0.3
BMN IAmb IAmb 10 56 59.1
comp=Z,5.3nm,0.8s
WVOR Wild Horse Val 77.89 38 P P 10 56 60.0 +0.7
WVOR IAmb IAmb 10 57 01.1
comp=Z,7.6nm,1.0s
X16A Lo Mia Camp, P 78.00 48 P P 10 56 59.3 -0.8
X16A IAmb IAmb 10 57 02.5
comp=Z,5.0nm,0.9s
KSM Kuching 78.11 275 P P 10 57 00.7 -0.3
CCUT Cedar City 78.35 44 P P 10 57 01.7 -0.4
KSRS Korea Array 78.37 316 P P 10 57 03.6 +1.8
comp=Z,4.0nm,1.0s,baz=133,slow=6.2,SNR=14
comp=Z,4.0nm,1.0s
KSAR Wonju Array Be 78.39 316 P P 10 57 01.8 -0.2
I07A Izee 78.42 36 P P 10 57 02.3 +0.2
I07A IAmb IAmb 10 57 04.0
comp=Z,5.4nm,0.9s
U15A North Rim 78.46 46 P P 10 57 02.0 -0.7
J08A Circle Bar Ran 78.55 37 P P 10 57 02.3 -0.6
J08A IAmb IAmb 10 57 04.7
comp=Z,6.5nm,1.0s
PSUT Pine Spring 78.57 43 P P 10 57 01.7 -1.6
WUAZ Wupatki 78.61 47 P P 10 57 02.9 -0.6
ELK Elko 78.93 41 P P 10 57 05.2 0.0
X18A Snowflake 79.11 48 P P 10 57 06.3 0.0
G08A Pilot Rock 79.48 35 P P 10 57 08.2 +0.2
G08A IAmb IAmb 10 57 09.6
comp=Z,7.9nm,0.9s
MVU Marysvale 79.63 44 P P 10 57 10.8 +1.7
MSU Marysvale 79.66 44 P P 10 57 10.6 +1.4
MFID Camas Ranch 80.13 38 P P 10 57 12.2 +0.7
BMO Blue Mountains 80.13 36 P P 10 57 12.1 +0.6
DUG Dugway, Tooele 80.16 42 P P 10 57 11.9 +0.2
D08A Wollman Farm, 80.61 34 P P 10 57 13.0 -0.8
D08A IAmb IAmb 10 57 15.6
comp=Z,8.5nm,0.9s
TMUT Trail Mountain 80.72 44 P P 10 57 13.0 -2.0
TMUT IAmb IAmb 10 57 17.5
comp=Z,5.9nm,0.9s
F10A Beach Ranch, E 80.86 36 P P 10 57 15.5 +0.1
F10A IAmb IAmb 10 57 16.5
comp=Z,8.1nm,0.8s
SUA Susitna One 80.93 10 P P 10 57 15.1 -0.3
SUA IAmb IAmb 10 57 17.0
comp=Z,10nm,0.7s
PLID Pearl Lake 81.02 37 P P 10 57 15.8 -0.6
HVU Hansel Valley 81.05 41 P P 10 57 16.1 -0.4
HLID Hailey 81.05 39 P P 10 57 16.8 +0.3
HLID IAmb IAmb 10 57 18.6
comp=Z,6.0nm,0.9s
SRU San Rafael Swe 81.07 44 P P 10 57 17.3 +0.6
MNTX Cornudas Mount 81.11 53 P P 10 57 17.9 +1.0
B08A Colville Reser 81.21 33 P P 10 57 16.1 -1.0
M22K Willow 81.31 11 P P 10 57 17.3 +0.1
BNM Barren Site 81.32 50 P P 10 57 18.0 -0.2
TX31 Lajitas Ar. Si 81.38 56 P P 10 57 19.7 +1.2
TX31 IAmb IAmb 10 57 20.6
comp=Z,13nm,1.1s
TX32 Lajitas Array 81.38 56 P P 10 57 18.0 -0.5
TXAR Lajitas Array 81.38 56 P P 10 57 19.4 +1.0
comp=Z,2.0nm,1.0s,baz=221,slow=6.6,SNR=17
comp=Z,2.0nm,1.0s
TXAR Lajitas Array 81.38 56 P P 10 57 19.1 +0.6
C09A Chrisman Ranch 81.41 34 P P 10 57 18.4 +0.2
C09A IAmb IAmb 10 57 19.6
comp=Z,5.9nm,0.8s
BELA Belgrano 2 81.52 172 P P 10 57 19.1 +0.8
BELA IAmb IAmb 10 57 20.1
comp=Z,6.4nm,1.0s
P18A Preston Nutter 81.52 44 P P 10 57 19.9 +0.6
TTA Tatalina 81.54 8 P P 10 57 19.7 +1.2
TTA IAmb IAmb 10 57 21.0
comp=Z,10nm,1.2s
GHO Glory Hole Cre 81.55 11 P P 10 57 19.1 +0.5
DIV Divide 81.58 13 P P 10 57 18.7 -0.1
PV13 Radium Mtn., P 81.73 46 P P 10 57 21.5 +1.2
PV23 Carpenter Ridg 81.75 45 P P 10 57 21.7 +1.2
PV23 IAmb IAmb 10 57 22.6
comp=Z,6.6nm,0.8s
PV11 David Mesa, Pa 81.76 46 IAmb IAmb 10 57 23.3
comp=Z,6.6nm,1.1s
ANMO Albuquerque 81.82 49 P P 10 57 20.7 -0.2
SCM Sheep Creek Mo 81.91 12 P P 10 57 20.8 +0.3
VRDI Verde Repeater 82.18 14 P P 10 57 22.1 +0.1
VRDI IAmb IAmb 10 57 23.4
comp=Z,7.8nm,1.0s
K20K Telida 82.21 8 P P 10 57 22.4 +0.4
K20K IAmb IAmb 10 57 23.5
comp=Z,8.7nm,1.0s
N25K Chitina, Valde 82.26 13 P P 10 57 21.8 -0.6
N25K IAmb IAmb 10 57 23.9
comp=Z,8.6nm,0.8s
GLB Gilahina Butte 82.29 14 P P 10 57 22.6 +0.1
GLB IAmb IAmb 10 57 23.8
comp=Z,5.5nm,0.8s
CAST Castle Rocks 82.56 9 P P 10 57 22.9 -0.9
CAST IAmb IAmb 10 57 25.0
comp=Z,4.2nm,0.8s
SKAG Skagway 82.80 18 P P 10 57 24.1 -1.0
SKAG IAmb IAmb 10 57 30.8
comp=Z,11nm,1.1s
KTH Kantishna Hill 82.86 10 P P 10 57 24.9 -0.6
KTH IAmb IAmb 10 57 26.9
comp=Z,6.6nm,0.9s
TRF Thorofare Moun 82.87 10 P P 10 57 25.7 +0.1
S22A 4UR Ranch, Cre 82.89 47 P P 10 57 26.0 -0.5
S22A IAmb IAmb 10 57 29.1
comp=Z,9.3nm,0.9s
KLR Kul'dur 82.92 327 P P 10 57 27.6 +1.7
comp=Z,1.3nm,0.8s,baz=129,slow=6.5,SNR=4.8
comp=Z,1.3nm,0.8s
J20K Nowinta River 82.98 8 P P 10 57 26.8 +0.9
RND Reindeer 83.07 11 P P 10 57 26.9 +0.4
REDW Red Top Meadow 83.10 40 P P 10 57 27.2 -0.2
REDW IAmb IAmb 10 57 29.4
comp=Z,8.2nm,1.1s
TPAW Teton Pass 83.11 40 P P 10 57 27.8 +0.3
TPAW IAmb IAmb 10 57 40.1
comp=Z,12nm,1.4s
SNOW Snow King Moun 83.22 40 P P 10 57 27.6 -0.4
SNOW IAmb IAmb 10 57 30.1
comp=Z,6.3nm,0.9s
M26K Nabesna, AK 83.32 13 P P 10 57 28.1 +0.3
MCK McKinley 83.36 10 P P 10 57 28.4 +0.4
LOHW Long Hollow 83.39 40 P P 10 57 28.1 -0.7
LOHW IAmb IAmb 10 57 30.8
comp=Z,5.1nm,1.1s
SMCO Snowmass 83.49 45 P P 10 57 30.0 +0.3
SMCO IAmb IAmb 10 57 31.9
comp=Z,9.7nm,1.1s
M27K Edge Creek, AK 83.53 14 P P 10 57 30.1 +1.1

QLMT Earthquake Lak 83.54 39 P P 10 57 29.5 0.0
FLWY Flagg Ranch 83.58 40 P P 10 57 29.5 -0.3
FLWY IAmb IAmb 10 57 32.1
comp=Z,11nm,1.0s
BW06 Boulder Array 83.60 41 P P 10 57 29.9 0.0
BW06 IAmb IAmb 10 57 31.2
comp=Z,4.8nm,1.1s
PD31 Pinedale Array 83.60 41 P P 10 57 29.9 0.0
PDAR Pinedale Array 83.60 41 P P 10 57 30.2 +0.3
comp=Z,2.8nm,0.9s,baz=240,slow=3.0,SNR=15
comp=Z,2.8nm,0.9s
PDAR Pinedale Array 83.60 41 P P 10 57 29.3 -0.6
L26K Log Cabin Wild 83.80 13 P P 10 57 30.6 +0.4
L26K IAmb IAmb 10 57 32.1
comp=Z,6.0nm,0.9s
SDCO Great Sand Dun 83.82 47 P P 10 57 30.6 -0.6
SDCO IAmb IAmb 10 57 33.3
comp=Z,4.9nm,1.1s
WHY Whitehorse 83.91 18 P P 10 57 30.9 -0.1
WHY IAmb IAmb 10 57 52.0
comp=Z,14nm,1.5s
MSTX Muleshoe 84.09 52 P P 10 57 31.4 -1.1
NEA2 Nenana 84.13 10 P P 10 57 31.1 -0.7
NEA2 IAmb IAmb 10 57 33.5
comp=Z,6.7nm,0.9s
BCAR Beaver Creek A 84.17 14 P P 10 57 32.3 +0.1
DOT Dot Lake 84.20 12 P P 10 57 32.8 +0.6
I21K Tanana 84.24 9 IAmb IAmb 10 57 33.8
comp=Z,7.5nm,1.1s
MLY Manley 84.28 9 P P 10 57 32.7 0.0
MLY IAmb IAmb 10 57 33.4
comp=Z,8.2nm,1.0s
T25A Trinidad 84.31 48 P P 10 57 33.0 -0.7
T25A IAmb IAmb 10 57 41.8
comp=Z,8.8nm,1.5s
HDA Harding Lake 84.33 11 P P 10 57 32.8 -0.1
HRY Holter Researc 84.33 37 P P 10 57 33.3 -0.2
N31M Braeburn, Yuko 84.33 17 P P 10 57 33.0 0.0
CCB Clear Creek Bu 84.40 10 P P 10 57 32.7 -0.4
SCRK Sand Creek 84.51 12 P P 10 57 33.9 -0.1
SCRK IAmb IAmb 10 57 35.4
comp=Z,6.8nm,0.9s
H21K Melozitna Rive 84.57 8 P P 10 57 33.9 -0.2
TCOL CIGO, UAF Yank 84.60 10 P P 10 57 34.5 +0.3
COLA College 84.60 10 P P 10 57 34.3 +0.1
I23K Minto, Yukon-K 84.60 10 P P 10 57 34.5 +0.3
I23K IAmb IAmb 10 57 35.4
comp=Z,10nm,1.1s
MDM Murphy Dome 84.61 10 P P 10 57 33.8 -0.5
IL31 84.67 11 P P 10 57 33.6 -0.9
IL31 IAmb IAmb 10 57 35.1
comp=Z,5.5nm,0.8s
ILAR Eielson Array 84.67 11 P P 10 57 34.4 -0.2
comp=Z,3.5nm,0.7s,baz=226,slow=6.1,SNR=31
comp=Z,3.5nm,0.7s
ILAR Eielson Array 84.67 11 P P 10 57 33.3 -1.3
IMAR Indian Mountai 84.76 8 P P 10 57 34.7 -0.3
J25K Salcha River, 84.81 11 P P 10 57 35.0 -0.4
J25K IAmb IAmb 10 57 36.8
comp=Z,7.9nm,0.8s
M30M Minto, Yukon 84.96 16 P P 10 57 35.0 -1.2
M30M IAmb IAmb 10 57 37.7
comp=Z,5.3nm,0.8s
N23A Red Feather La 85.01 44 P P 10 57 35.7 -1.5
N23A IAmb IAmb 10 57 38.6
comp=Z,12nm,1.4s
J26L Joseph Creek 85.06 12 P P 10 57 36.4 -0.3
GCMT Greycliff 85.11 39 P P 10 57 36.9 -0.5
AMTX Amarillo 85.30 51 P P 10 57 38.7 +0.1
AMTX IAmb IAmb 10 57 40.3
comp=Z,10nm,1.0s
M31M Drury Creek, Y 85.30 17 P P 10 57 38.4 +0.5
H24K Noodor Dome 85.48 10 P P 10 57 38.2 -0.5
DAWY Dawson 85.58 14 P P 10 57 39.4 +0.2
BILL Bilibino 86.99 352 P P 10 57 46.1 +0.1
BMAR Burnt Mountain 87.49 10 P P 10 57 49.3 +0.8
EPYK Eagle Plains 88.14 14 P P 10 57 51.7 +0.1
EPYK IAmb IAmb 10 57 52.9
comp=Z,8.5nm,1.1s
VNA3 Neumayer Olymp 90.39 175 P P 10 58 02.5 +0.2
SNAA Sanae 90.47 177 P P 10 58 03.4 +0.7
SNAA Sanae 90.47 177 P P 10 58 01.4 -1.3
SNAA IAmb IAmb 10 58 05.1
comp=Z,6.6nm,1.2s
VNA2 Neumayer--Watz 90.90 175 P P 10 58 04.7 +0.1
baz=204,slow=2.3
YKA Yellowknife Ar 92.03 23 P P 10 58 09.9 +0.1
comp=Z,2.1nm,0.9s,baz=233,slow=4.2,SNR=19
comp=Z,2.1nm,0.9s
YKA Yellowknife Ar 92.03 23 P P 10 58 08.6 -1.2
MGMO Mountain Grove 93.21 52 P P 10 58 14.7 -1.3
CMAR Chiang Mai Arp 94.03 288 P P 10 58 22.1 +2.0
comp=Z,0.9nm,0.3s,baz=64,slow=2.1,SNR=4.9
comp=Z,0.9nm,0.3s
ARCES ARCESS Array B 127.09 352 PKP PKPdf 11 04 04.8 -0.1
comp=Z,3.3nm,0.7s,baz=354,slow=3.6,SNR=6.4
FINES FINESS Array B 134.44 348 PKP PKiKP 11 04 20.5 +0.1
comp=Z,3.3nm,1.0s,baz=91,slow=6.1,SNR=4.2
KMBO Kilima Mbogo 145.04 240 PKP PKPdf 11 04 41.8 +1.8
comp=Z,7.0nm,0.9s,baz=52,slow=5.1,SNR=7.0
CLL Colln 146.29 354 *j* PKPbc **PKPab 11 04 42.6 +0.1**
comp=Z,52nm,0.9s
CLL *i* x x 11 04 53.6
OSTC Ostas 146.58 350 *e*PKP **PKiKP 11 04 44.8 -0.8**
DPC Dobruska-Polom 146.76 349 *e*PKP **PKiKP 11 04 45.3 -0.7**
PVCC Panska Ves 146.86 352 *e*PKP **PKiKP 11 04 45.4 -0.7**
KRLC Kraliky 146.94 349 *e*PKP **PKiKP 11 04 45.6 -0.8**
MORC Moravsky Berou 147.08 348 *e*PKP **PKiKP 11 04 46.0 -0.7**
PRU Pruhonice 147.39 351 *e*PKP **PKPab 11 04 46.6 -0.3**
NKC Novy Kostel 147.41 354 *e*PKP **PKPab 11 04 46.7 -0.3**
VRAC Vranov 147.71 349 *e*PKP **PKPab 11 04 47.8 -0.4**
JAVC Velka Javorina 147.92 347 *e*PKP **PKPab 11 04 49.4 +0.3**
KRUC Moravsky 147.98 349 *e*PKP **PKiKP 11 04 48.1 -0.4**
KHC Kasperske Hory 148.36 352 *e*PKP **PKiKP 11 04 49.3 0.0**
KHC *ex* x 11 04 59.0
BRTR Keskin Array B 148.46 319 PKPbc **PKiKP 11 04 50.0 0.0**
comp=Z,3.6nm,0.8s,baz=115,slow=2.2,SNR=19
BRTR Keskin Array B 148.46 319 PKPdf **PKPdf 11 04 41.6 -3.2**
CKRC Cesky Krumlov 148.56 351 *e*PKP **PKiKP 11 04 49.7 0.0**
GERES GERESS Array B 148.62 352 PKPbc **PKiKP 11 04 50.0 +0.1**
comp=Z,5.2nm,0.9s,baz=333,slow=1.5,SNR=25
GERES GERESS Array B 148.62 352 PKPdf **PKPdf 11 04 44.1 -0.7**
GERES **PKPbc 11 04 48.7 +0.2**
GERES PKPab **pPKPbc 11 04 53.4 -0.5**
CONA Conrad Observa 149.17 349 *i* P **PKiKP 11 04 51.6 +0.5**
comp=Z,11nm,0.9s,SNR=7.4
RONA Rosalia, Austr 149.31 348 *i* P **PKiKP 11 04 51.8 +0.5**
comp=Z,10nm,1.0s,SNR=7.1
MOA Molln 149.52 351 *e*P **PKiKP 11 04 52.2 +0.5**
comp=Z,6.4nm,1.1s
RETA Reutte 150.28 355 *i* P **PKiKP 11 04 54.3 +0.9**
comp=Z,13nm,1.2s,SNR=5.6
WATA Walderalm 150.36 354 *e*P **PKiKP 11 04 54.2 +0.5**
comp=Z,12nm,0.9s
MOTA Moosalm 150.39 355 *i* P **PKiKP 11 04 54.4 +0.7**
comp=Z,15nm,0.8s,SNR=5.2
KBA Koelnbreinsper 150.40 352 *e*P **PKiKP 11 04 54.0 +0.3**
comp=Z,7.0nm,0.9s
WTTA Wattenberg 150.42 354 *i* P **PKiKP 11 04 54.6 +0.8**
comp=Z,16nm,0.7s,SNR=7.7
SQTA Sankt Quirin 150.51 355 *e*P **PKiKP 11 04 54.8 +0.8**
comp=Z,13nm,0.9s
SOKA Soboth 150.53 349 *i* P **PKiKP 11 04 54.3 +0.4**
comp=Z,13nm,1.0s,SNR=5.8
DAVA Damuels 150.54 356 *i* P **PKiKP 11 04 55.1 +1.1**
comp=Z,13nm,0.8s,SNR=5.0
FETA Feichten 150.75 355 *i* P **PKiKP 11 04 55.6 +1.1**
comp=Z,11nm,0.9s,SNR=5.7
OBKA Obir 150.77 350 *e*P **PKiKP 11 04 54.5 +0.1**
comp=Z,5.0nm,0.8s
ABTA Abfaltersbach 150.84 353 *i* P **PKiKP 11 04 54.7 +0.1**
comp=Z,23nm,0.9s,SNR=9.9
CRNS Crni Vrh 151.24 350 *i* PKPbc **PKiKP 11 04 55.5 +0.1**
BOJS Bojanci 151.62 348 *i* PKPbc **PKiKP 11 04 56.9 +0.8**
ESDC Sonseca Array 156.12 22 PKPab **PKPab 11 05 24.5 +1.0**
comp=Z,0.5nm,0.6s,baz=319,slow=4.1,SNR=5.0
ESDC Sonseca Array 156.12 22 PKPdf **PKPdf 11 04 54.8 -1.3**
ESDC **PKPab 11 05 22.4 -1.1**
TORD Torodi Ar. Bea 172.85 130 PKP **PKPdf 11 05 11.2 -0.2**
comp=Z,3.2nm,1.3s,baz=206,slow=1.0,SNR=4.3
TORD PKPab **PKPab 11 06 38.6 +1.1**
comp=Z,3.2nm,1.0s,baz=242,slow=4.5,SNR=8.5
TORD Torodi Ar. Bea 172.85 130 PKPdf 11 05 08.7 -2.7
TORD PKPab **PKPab 11 06 36.7 -0.9**

BJI ***10*** *10:52:34.8±0.0, 16°.75S×173°.43W, h45km, mb4.7/21, mB5.3/17, Ms4.8/2, Ms7 4.6/2*
NEIC ***10*** *10:52:36.0±1.4, 16°.88S±0°.07×173°.53W±0°.09, h40km±4km, mb5.2/369, Error ellipse: s-maj=12.4km s-min=10.7km az=77.0*
MOS ***10*** *10:52:35.0±1.2, 16°.87S×173°.50W, h44km, mb5.4/41, Error ellipse: s-maj=10.0km s-min=7.1km az=57.0*
IDC ***10*** *10:52:40.2±0.6, 16°.84S×173°.55W, h80km±5km, mb4.7/24, mbtmp5.0/25, MS3.9/12, Error ellipse: s-maj=13.5km s-min=10.9km az=134.0*
NOU ***10*** *10:52:41.1, 16°.72S×173°.13W, h124km, mb5.3/72, Tonga Islands*
GCMT ***10*** *10:52:43.0±0.2, 16°.79S±0°.02×173°.21W±0°.02, h96km±2km, MW5.0/107, Moment Tensor Solution. s34,c41; s107,c133; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-2.76±.13; Mθθ 0.09±.17; Mϕϕ 2.67±.16; Mrθ-0.86±.10; Mθϕ-2.28±.12; Mϕr 1.55±.09; Best double couple: M☐3.81600×10¹⁶ NP1:ϕs328.00000°, δ31.00000°, λ-92.00000°. NP2:ϕs151.00000°, δ59.00000°, λ-89.00000°. Principal axes: T 4.4360, Plg14.0000°, Azm240.0000°; N -1.2370, Plg1.0000°, Azm330.0000°; P -3.1960, Plg76.0000°, Azm65.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 10 10:52:38.3±0.4, 16°.88S±0°.04×173°.52W±0°.05, h67km±3km, h67km:pP-P,n1085,σ1§25/1048,mb5.2/232,121C-218D, Fault plane solution: NP1:ϕs309.22998°, δ21.44724°, λ-140.90982°. NP2:ϕs182.13564°, δ76.67029°, λ-73.04301°. Principal axes: T Plg29.6774°, Azm258.4045°; N Plg16.4869°, Azm358.1144°; P Plg55.2020°, Azm113.3202°; **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.40**	**30**	P	**Pn**	**10 53 27.3**	**-1.7**
	2μm,0.3s,baz=234,slow=15,SNR=389			S			
AFI					**Sn**	**10 54 02.4**	**-5.8**
	4μm,0.4s,baz=57,slow=23,SNR=14			LR	LR	10 54 40.5	
AFI							
	comp=Z,1μm,21.1s,baz=262,slow=36						
AFI	**Afiamalu**	**3.40**	**30**	P	**Pn**	**10 53 28.0**	**-1.1**
NIUE	**Niue**	**4.05**	**123**	P	Pn	10 53 31.3	-6.6
	baz=3.9,SNR=231						
NIUE	**Niue**	**4.05**	**123**	Pn	**Pn**	**10 53 36.0**	**-1.9**
LKBA	**Tubou, Lakemba**	**5.23**	**254**	P	Pn	10 54 02.6	+8.6
TAVE	**Taveuni**	**6.12**	**271**	P	Pn	10 54 15.5	+9.3
MSVF	**Nonsavu**	**8.10**	**263**	P	Pn	10 54 42.6	+9.3
	528nm,0.8s,baz=102,slow=17,SNR=341						
MSVF				LR	LR	10 57 35.6	
	comp=Z,1μm,20.0s,baz=96,slow=37						
MSVF	**Nonsavu**	**8.10**	**263**	P	Pn	10 54 42.7	+9.4
FUNA	**Funafuti**	**10.93**	**319**	Pn	**Pn**	**10 55 10.4**	**-1.5**
RAR	**Rarotonga**	**13.69**	**110**	P	**Pn**	**10 55 47.1**	**-2.3**
	97nm,0.7s,baz=282,slow=11,SNR=13						
RAR	**Rarotonga**	**13.69**	**110**	Pn	**Pn**	**10 55 46.3**	**-3.1**
RAR	**Rarotonga**	**13.69**	**110**	P	**Pn**	**10 55 46.3**	**-3.1**
RAR	**Rarotonga**	**13.69**	**110**	P	Pn	10 55 47.9	-1.5
RTV	**Rentapao**	**17.27**	**264**	P	**P**	**10 56 40.3**	**+4.7**
DVP	**Devils Point**	**17.49**	**265**	P	**P**	**10 56 42.2**	**+4.1**
MARNC	**Mare, Loyalty**	**18.02**	**252**		**P**	**10 56 42.8**	**-1.1**
MARNC	**Mare, Loyalty**	**18.02**	**252**	P	**Pn**	**10 56 44.8**	**+0.7**
PINNC	**Pines Island,**	**18.80**	**249**	P	**P**	**10 56 51.5**	**-0.9**
PINNC				IAmb	IAmb	10 57 03.1	
	comp=Z,112nm,0.9s						
PINNC	**Pines Island,**	**18.80**	**249**	P	**Pn**	**10 56 54.3**	**+0.7**
DZM	**Mont Dzumac**	**19.58**	**252**	*e*P	**P**	**10 57 01.3**	**+0.2**
	comp=Z,182nm,1.4s						
DZM				*e*LR	LR	11 01 26.4	
	comp=Z,2μm,27.4s						
DZM	**Mont Dzumac**	**19.58**	**252**	P	**P**	**10 57 01.0**	**-0.1**
	comp=Z,16nm,0.5s,baz=76,slow=19,SNR=28						
DZM				LR	LR	11 03 42.1	
	comp=Z,406nm,21.6s,baz=60,slow=34						
DZM	**Mont Dzumac**	**19.58**	**252**	P	**P**	**10 57 00.4**	**-0.8**
DZM	**Mont Dzumac**	**19.58**	**252**	P	**Pn**	**10 57 02.2**	**-0.8**
NOUC	**Port Laguerre**	**19.71**	**252**	P	**Pn**	**10 57 04.9**	**+0.4**
KOUNC	**Koumac, New Ca**	**21.33**	**257**	P	**P**	**10 57 19.6**	**-0.3**
KOUNC	**Koumac, New Ca**	**21.33**	**257**	P	**P**	**10 57 20.4**	**+0.4**
OUZ	**Omahuta**	**21.58**	**210**	P	**P**	**10 57 23.3**	**+0.8**
OUZ				IAmb	IAmb	10 57 27.8	
	comp=Z,144nm,0.9s						
OUZ	**Omahuta**	**21.58**	**210**	P	**P**	**10 57 23.5**	**+1.0**
TGRZ	**Tauranga**	**22.63**	**201**	P	**P**	**10 57 37.1**	**+3.3**
OPRZ	**Ohinepanea**	**22.64**	**201**	P	**P**	**10 57 36.9**	**+3.1**
MARZ	**Manawahe**	**22.72**	**200**	P	**P**	**10 57 37.8**	**+3.1**
MWZ	**Matawai**	**22.77**	**198**	P	**P**	**10 57 35.7**	**+0.5**
MWZ				S	**S**	**11 01 33.5**	**-5.6**
EDRZ	**Edgecumbe**	**22.81**	**200**	P	**P**	**10 57 37.9**	**+2.2**
URZ	**Urewera**	**22.83**	**199**	P	**P**	**10 57 35.5**	**-0.2**
	comp=Z,186nm,0.4s,baz=45,slow=4.2,SNR=140						
URZ				S	**S**	**11 01 34.4**	**-5.5**
	comp=Z,12nm,0.5s,baz=354,slow=18,SNR=2.0						
URZ	**Urewera**	**22.83**	**199**	P	**P**	**10 57 35.7**	**-0.1**
URZ	**Urewera**	**22.83**	**199**	P	**P**	**10 57 34.8**	**-1.0**
URZ				S	**S**	**11 01 36.2**	**-3.8**
URZ	**Urewera**	**22.83**	**199**	P	**P**	**10 57 35.0**	**-0.8**
LIRZ	**Lichensteins R**	**22.84**	**201**	P	**P**	**10 57 39.0**	**+3.1**
KMRZ	**Kaimai**	**22.85**	**202**	P	**P**	**10 57 39.1**	**+3.0**
PPT2	**Papeete2**	**22.88**	**95**	*e*LR	LR	11 03 18.9	
	comp=Z,1μm,30.5s						
PPT2	**Papeete2**	**22.88**	**95**	*e*T	T	11 21 05.8	
	comp=Z,5.9nm,0.3s						
PPT	**Papeete**	**22.88**	**95**	LR	LR	11 04 18.2	
	comp=Z,159nm,20.5s,baz=288,slow=30						
KARZ	**Kaharoa**	**22.90**	**201**	P	**P**	**10 57 38.5**	**+2.0**
TOZ	**Tahuroa Road**	**22.91**	**203**	P	**P**	**10 57 38.5**	**+1.9**
MKRZ	**Makatiti**	**22.93**	**201**	P	**P**	**10 57 41.8**	**+4.9**
OMRZ	**Omania**	**22.93**	**201**	P	**P**	**10 57 38.8**	**+1.9**
NGRZ	**Ngongotaha**	**22.99**	**201**	P	**P**	**10 57 37.3**	**-0.2**
TARZ	**Mount Tarawera**	**23.01**	**200**	P	**P**	**10 57 40.7**	**+3.1**
RIGZ	**Rimuhau**	**23.04**	**198**	P	**P**	**10 57 43.4**	**+2.5**
UTU	**Utuhina**	**23.06**	**201**	P	**P**	**10 57 42.1**	**+4.0**
RRRZ	**Republican Roa**	**23.10**	**200**	P	**P**	**10 57 40.4**	**+1.9**
MUGZ	**Murupara**	**23.14**	**200**	P	**P**	**10 57 38.9**	**+0.1**
MUGZ				S	**S**	**11 01 42.1**	**-3.0**
HSRZ	**Hossack Road**	**23.16**	**201**	P	**P**	**10 57 42.7**	**+3.6**
RTZ	**Ruatahuna**	**23.20**	**199**	P	**P**	**10 57 41.9**	**+2.4**
PRGZ	**Paritu Road**	**23.21**	**197**	P	**P**	**10 57 42.0**	**+2.4**
PRGZ				S	**S**	**11 01 46.9**	**+0.6**
HRRZ	**Handcock Road**	**23.22**	**201**	P	**P**	**10 57 41.4**	**+1.7**
PRRZ	**Plateau Road**	**23.28**	**200**	P	**P**	**10 57 40.5**	**+0.3**
ALRZ	**Allen Road**	**23.36**	**200**	P	**P**	**10 57 42.6**	**+1.7**
KNZ	**Kokohu**	**23.36**	**198**	P	**P**	**10 57 42.9**	**+2.0**
KNZ				S	**S**	**11 01 50.5**	**+1.9**
WPRZ	**Whakapapatarin**	**23.38**	**201**	P	**P**	**10 57 43.9**	**+2.8**
MHGZ	**Mahia Peninsul**	**23.42**	**197**	P	**P**	**10 57 44.1**	**+2.6**
TLZ	**Tolley Road**	**23.43**	**202**	P	**P**	**10 57 44.2**	**+2.6**
RAHZ	**Arahi**	**23.44**	**199**	P	**P**	**10 57 43.8**	**+2.1**
RAHZ				S	**S**	**11 01 54.9**	**+5.0**
MTHZ	**Maungataniwha**	**23.46**	**199**	P	**P**	**10 57 44.5**	**+2.6**
TBI	**Tubuai**	**23.47**	**110**	*e*LR	LR	11 03 29.2	
	comp=Z,792nm,34.0s						
TBI	**Tubuai**	**23.47**	**110**	*e*T	T	11 21 46.5	
	comp=Z,13nm,0.3s						
NMHZ	**Naumai**	**23.69**	**199**	P	**P**	**10 57 46.0**	**+1.9**
WATZ	**Wairara**	**23.69**	**201**	P	**P**	**10 57 45.8**	**+1.8**
ARHZ	**Aropaoanui**	**23.79**	**198**	P	**P**	**10 57 46.9**	**+2.1**
RATZ	**Rangitukua**	**23.82**	**201**	P	**P**	**10 57 46.2**	**+1.0**
HIZ	**Hauiti**	**23.84**	**203**	P	**P**	**10 57 47.9**	**+2.6**
HIZ	**Hauiti**	**23.84**	**203**	P	**P**	**10 57 48.0**	**+2.7**
BKZ	**Black Stump Fm**	**23.85**	**199**	P	**P**	**10 57 45.5**	**0.0**
BKZ	**Black Stump Fm**	**23.85**	**199**	P	**P**	**10 57 45.5**	**0.0**
RITZ	**Rihia Road**	**23.89**	**201**	P	**P**	**10 57 46.8**	**+1.0**
MCHZ	**McNeill Hill**	**24.04**	**199**	P	**P**	**10 57 48.5**	**+1.4**
TMVZ	**Te Maari**	**24.07**	**201**	P	**P**	**10 57 49.6**	**+2.0**
ETVZ	**East Tongariro**	**24.09**	**201**	P	**P**	**10 57 49.7**	**+2.0**
WTVZ	**West Tongariro**	**24.11**	**201**	P	**P**	**10 57 49.2**	**+1.3**
KWHZ	**Kaweka Forest**	**24.11**	**199**	P	**P**	**10 57 51.4**	**+3.6**
NNVZ	**North Ngauruho**	**24.11**	**201**	P	**P**	**10 57 49.5**	**+1.6**
OTVZ	**Oturere**	**24.12**	**201**	P	**P**	**10 57 49.6**	**+1.5**
**C

VRZ Vera Road 24.41 202 P **P** 10 57 52.5 +2.1
PXZ Pawanui 24.53 198 P **P** 10 57 54.1 +2.5
XMAS Kiritimati 24.60 42 P **P** 10 57 52.3 -0.1
XMAS IAmb IAmb 10 57 53.6
comp=Z,81nm,0.8s
XMAS Kiritimati 24.60 42 P P 10 57 45.2 -7.2
PNHZ Pukenui 24.63 199 P **P** 10 57 55.7 +3.2
WPHZ Waipukurau 24.69 199 P **P** 10 57 55.0 +2.0
PMOR Pomariorio Ree 24.70 89 *eT* T 11 23 28.4
comp=Z,5.1nm,0.2s
PKE Pukeiti 24.76 204 P **P** 10 57 57.5 +3.8
NEZ North Egmont 24.79 203 P **P** 10 57 58.0 +4.0
PRHZ Porangahau 24.82 198 P **P** 10 57 51.0 -3.2
TSZ Takapari Road 24.84 199 P **P** 10 57 54.9 +0.6
LREZ Lake Rotokare 24.84 203 P **P** 10 57 56.7 +2.3
KHEZ Kahui Hut 24.84 204 P **P** 10 57 57.5 +3.0
NBEZ Newall Road No 24.87 204 P **P** 10 57 59.3 +4.6
WAZ Wanganui 24.89 201 P **P** 10 57 56.2 +1.3
NMEZ Namu Road 24.99 204 P **P** 10 58 01.0 +5.3
ANWZ Angora Road 25.04 198 P **P** 10 58 01.0 +4.8
BFZ Birch Farm 25.32 198 P **P** 10 58 04.4 +5.7
MRZ Mangatainoka R 25.50 200 P **P** 10 58 02.0 +1.6
HOWZ Holdsworth Sta 25.74 199 P **P** 10 58 08.1 +5.6
OGWZ Otaki Gorge 25.78 200 P **P** 10 58 04.5 +1.6
TMWZ Te Maipa 25.81 199 P **P** 10 58 06.6 +3.4
KIW Kapiti Island 25.90 200 P **P** 10 58 05.9 +1.8
MTW Mount Morrison 25.98 199 P **P** 10 58 06.9 +2.2
SNZO South Karori 26.38 200 P **P** 10 58 07.7 -0.5
QRZ Quartz Range 26.73 204 P **P** 10 58 12.6 +1.1
HNR Honiara 26.86 283 P **P** 10 58 12.0 -0.9
comp=Z,86nm,0.5s,baz=204,slow=10.0,SNR=4.5
comp=Z,86nm,0.5s
HNR Honiara 26.86 283 IAmb IAmb 10 58 17.0
comp=Z,91nm,0.5s
HNR Honiara 26.86 283 P **P** 10 58 12.0 -0.9
HNR pmax pmax
comp=Z,91nm,0.5s
THZ Tophouse 27.40 202 P **P** 10 58 17.9 +0.3
KHZ Kahutara 27.75 201 P **P** 10 58 19.9 -0.6
KHZ Kahutara 27.75 201 P **P** 10 58 20.6 0.0
RPZ Rata Peaks 29.77 203 P **P** 10 58 40.6 +2.0
comp=Z,52nm,0.5s,baz=14,slow=3.7,SNR=16
comp=Z,52nm,0.5s
RPZ Rata Peaks 29.77 203 P **P** 10 58 40.5 +1.9
ODZ Otahua Downs 31.07 202 P **P** 10 58 50.0 +0.1
TAOE Nuku Hiva Isla 33.45 80 *e*LR LR 10 59 07.2
comp=Z,433nm,31.7s
TAOE Nuku Hiva Isla 33.45 80 *eT* T 11 34 03.6
comp=Z,79nm,0.2s
EIDS Eidsvold 34.00 250 P **P** 10 59 15.1 -0.7
baz=34,SNR=11
EIDS Eidsvold 34.00 250 P **P** 10 59 14.9 -1.0
EIDS IAmb IAmb 10 59 16.4
comp=Z,15nm,0.6s
EIDS Eidsvold 34.00 250 P **P** 10 59 14.8 -1.1
RK1H Rockhampton Ha 34.34 253 P **P** 10 59 19.3 +0.5
comp=Z,15nm,0.7s
ARMA Armidale 34.50 241 P **P** 10 59 20.2 0.0
baz=35,SNR=123
ARMA Armidale 34.50 241 P **P** 10 59 20.3 0.0
ARMA Armidale 34.50 241 P **P** 10 59 20.5 +0.2
MGCD Mangrove Creek 35.72 236 P **P** 10 59 30.5 -0.1
baz=36,SNR=16
MGCD Mangrove Creek 35.72 236 P **P** 10 59 30.8 +0.2
KRVT Keravat (AS076 36.02 286 P **P** 10 59 32.4 -1.0
comp=Z,21nm,0.6s,baz=82,slow=19,SNR=2.1
comp=Z,21nm,0.6s
RMQ Roma 36.22 248 P **P** 10 59 34.7 -0.3
baz=36,SNR=13
RMQ Roma 36.22 248 P **P** 10 59 34.9 -0.1
CNB Canberra Magne 37.77 234 P **P** 10 59 47.7 -0.4
baz=38,SNR=23
CNB Canberra Magne 37.77 234 P **P** 10 59 47.9 -0.2
CAN Canberra 38.05 234 P **P** 10 59 50.3 -0.2
CAN Canberra 38.05 234 P **P** 10 59 50.3 -0.2
CAN pmax pmax
comp=Z,18nm,0.7s
CAN Canberra 38.05 234 P **P** 10 59 50.1 -0.4
CAN Canberra 38.05 234 P **P** 10 59 50.0 -0.5
CAN sP **pP** 11 00 06.8 0.0
CTA Charters Tower 38.22 259 P **P** 10 59 51.0 -1.0
CTAO Charters Tower 38.22 259 P **P** 10 59 50.9 -1.2
CTAO Charters Tower 38.22 259 P **P** 10 59 50.9 -1.2
CTAO pmax pmax
comp=Z,23nm,0.9s
CTAO Charters Tower 38.22 259 P **P** 10 59 51.1 -1.0
CTAO Charters Tower 38.22 259 P **P** 10 59 51.1 -1.0
CTAO pP **pP** 11 00 02.4 -5.8
CTAO sP **pwP** 11 00 07.0 -1.2
CMSA Cobar Meteorol 39.72 241 P **P** 11 00 03.7 -0.7
baz=40,SNR=98
CMSA Cobar Meteorol 39.72 241 P **P** 11 00 03.7 -0.7
MTSU Mount Surprise 40.17 262 P **P** 11 00 07.4 -0.9
baz=40,SNR=19
H11S2 WAKE ISLAND Hy 40.18 330 T T 11 42 48.7
baz=145,slow=76,SNR=24
H11S3 WAKE ISLAND Hy 40.19 330 T T 11 42 51.5
baz=145,slow=76,SNR=23
H11S1 WAKE ISLAND Hy 40.20 330 T T 11 42 50.3
baz=145,slow=76,SNR=20
QLP Quilpie 40.26 249 P **P** 11 00 07.9 -1.0
baz=40,SNR=34
QLP Quilpie 40.26 249 P **P** 11 00 07.9 -1.0
HMH Humu'ula Sheep 40.36 27 P **P** 11 00 12.1 +2.0
POHA Pohakuloa 40.47 27 P **P** 11 00 11.7 +0.8
HPAH Hawaii Prepara 40.65 26 P **P** 11 00 13.8 +1.7
MHA Mahukona 40.70 26 P **P** 11 00 14.6 +2.2
MHA Mahukona 40.70 26 P **P** 11 00 14.6 +2.2
KIP Kipapa 40.99 22 P **P** 11 00 16.8 +2.0
KIP Kipapa 40.99 22 P **P** 11 00 16.8 +2.0
KIP pmax pmax
comp=Z,201nm,1.3s
H11N3 WAKE ISLAND Hy 41.14 331 T T 11 43 55.3
baz=145,slow=76,SNR=48
H11N1 WAKE ISLAND Hy 41.15 331 T T 11 43 54.5
baz=145,slow=76,SNR=50
H11N2 WAKE ISLAND Hy 41.16 331 T T 11 43 52.2
baz=145,slow=76,SNR=47
TOO Toolangi 41.45 232 P **P** 11 00 18.0 -0.6
baz=42,SNR=24
TOO Toolangi 41.45 232 P **P** 11 00 18.2 -0.5
TOO IAmb IAmb 11 00 18.8
comp=Z,32nm,0.7s
TOO Toolangi 41.45 232 P **P** 11 00 18.2 -0.5
TOO pmax pmax
comp=Z,32nm,0.7s
TOO Toolangi 41.45 232 P **P** 11 00 18.2 -0.5
COEN Coen 41.79 268 P **P** 11 00 21.8 +0.1
baz=42,SNR=22
COEN Coen 41.79 268 P **P** 11 00 21.9 +0.2
COEN Coen 41.79 268 P **P** 11 00 22.0 +0.4
TAU Tasmania Unive 42.16 224 P **P** 11 00 24.2 -0.1
BRAT Ballarat 42.63 233 P **P** 11 00 28.6 +0.5
STKA Stephens Creek 43.21 241 P **P** 11 00 32.7 -0.2
comp=Z,41nm,0.4s,baz=78,slow=10,SNR=146
comp=Z,41nm,0.4s
STKA Stephens Creek 43.21 241 P **P** 11 00 32.8 -0.2
baz=43,SNR=140
STKA Stephens Creek 43.21 241 P **P** 11 00 32.8 -0.2
STKA Stephens Creek 43.21 241 P **P** 11 00 32.8 -0.2
STKA pmax pmax
comp=Z,18nm,1.1s
STKA Stephens Creek 43.21 241 P **P** 11 00 32.9 -0.1
INKA Innaminka 43.45 247 P **P** 11 00 35.1 +0.2
ARPS Mount Arapiles 44.03 234 P **P** 11 00 38.8 -0.6
baz=44,SNR=23
ARPS Mount Arapiles 44.03 234 P **P** 11 00 38.6 -0.8
QIS Mount Isa 44.43 258 P **P** 11 00 41.4 -1.6
baz=44,SNR=12
QIS Mount Isa 44.43 258 P **P** 11 00 41.9 -1.1
HTT Hallett 45.69 240 P **P** 11 00 52.4 -0.4
baz=46,SNR=23
HTT Hallett 45.69 240 P **P** 11 00 52.3 -0.4
LCRK Leigh Creek 45.90 244 P **P** 11 00 53.7 -0.7
TWOA Tennyson Woods 46.24 237 P **P** 11 00 57.1 +0.1
NAPP Napperby 46.29 240 P **P** 11 00 57.9 +0.5
WHYH Whyalla 46.75 240 P **P** 11 01 01.3 +0.3
GENI Genyem 47.66 282 P **P** 11 01 10.1 +1.8
comp=Z,120nm,1.0s
OOD Oodnadatta 47.93 248 P **P** 11 01 10.5 +0.2
BBOO Buckleboo 47.98 241 P **P** 11 01 10.0 -0.7
baz=48,SNR=52
BBOO Buckleboo 47.98 241 P **P** 11 01 09.8 -0.8
BBOO Buckleboo 47.98 241 P **P** 11 01 10.0 -0.7

WR0 Warramunga Arr 49.22 258 P **P** 11 01 19.1 -1.3
SMPI Sarmi 49.23 282 P **P** 11 01 21.3 +0.9
comp=Z,19nm,1.0s
WB0 Warramunga Arr 49.38 258 P **P** 11 01 20.1 -1.5
WB0 IAmb IAmb 11 01 21.0
comp=Z,21nm,0.8s
WB2 Warramunga Ar 49.40 258 P **P** 11 01 20.3 -1.4
WRAB Tennant Creek 49.40 258 P **P** 11 01 20.5 -1.2
WRAB IAmb IAmb 11 01 21.2
comp=Z,24nm,0.6s
WRAB Tennant Creek 49.40 258 P **P** 11 01 20.5 -1.2
WRAB pmax pmax
comp=Z,24nm,0.6s
WRAB Tennant Creek 49.40 258 P **P** 11 01 20.3 -1.4
WRAB Tennant Creek 49.40 258 P **P** 11 01 20.4 -1.2
WRAB pP pP 11 01 31.5 -7.2
WRA Warramunga Arr 49.41 258 P **P** 11 01 20.6 -1.2
comp=Z,17nm,0.5s,baz=96,slow=7.1,SNR=732
WRA PcP **PcP** 11 02 43.5 +0.1
comp=Z,1.1nm,0.4s,baz=90,slow=3.8,SNR=1.3
WRA S **S** 11 08 16.9 -7.3
comp=Z,0.5nm,0.9s,baz=95,slow=14,SNR=1.8
WRA LR LR 11 22 19.8
comp=Z,366nm,18.3s,baz=100,slow=36
comp=Z,17nm,0.5s
WRA Warramunga Arr 49.41 258 P **P** 11 01 20.0 -1.8
MULG Mulgathing 49.47 244 P **P** 11 01 21.2 -0.9
AS31 Alice Springs 49.56 253 P **P** 11 01 21.8 -1.1
ASAR Alice Springs 49.56 253 P **P** 11 01 22.5 -0.4
comp=Z,250nm,0.5s,baz=87,slow=8.7,SNR=4009
ASAR S **S** 11 08 19.4 -6.9
comp=Z,2.5nm,0.9s,baz=88,slow=16,SNR=13
ASAR LR LR 11 22 16.4
comp=Z,245nm,21.5s,baz=48,slow=36
ASAR Alice Springs 49.56 253 P **P** 11 01 22.1 -0.8
KDU Kakadu 52.26 267 P **P** 11 01 42.7 -0.6
baz=52,SNR=13
KDU Kakadu 52.26 267 P **P** 11 01 43.1 -0.1
MTN Manton Dam 53.51 266 P **P** 11 01 51.5 -0.9
baz=54,SNR=16
MTN Manton Dam 53.51 266 P **P** 11 01 51.9 -0.5
MTN Manton Dam 53.51 266 P **P** 11 01 51.8 -0.7
WRKA Warakurna 54.60 251 P **P** 11 01 59.5 -0.8
baz=55,SNR=93
WRKA Warakurna 54.60 251 P **P** 11 01 59.5 -0.8
FORT Forrest 54.66 244 P **P** 11 01 59.6 -1.0
baz=55,SNR=17
FORT Forrest 54.66 244 P **P** 11 01 59.4 -1.2
FORT IAmb IAmb 11 02 00.3
comp=Z,29nm,0.8s
FORT Forrest 54.66 244 P **P** 11 01 59.6 -1.0
FAKI Fak Fak 55.01 278 P **P** 11 02 04.3 +0.9
KNRA Kununurra 55.25 262 P **P** 11 02 04.2 -0.8
baz=55,SNR=33
KNRA Kununurra 55.25 262 P **P** 11 02 04.2 -0.8
KNRA Kununurra 55.25 262 P **P** 11 02 04.3 -0.7
SIJI Sorong 56.60 280 P **P** 11 02 15.3 +0.5
comp=Z,38nm,0.6s,baz=99,slow=8.6,SNR=12
SIJI pP **sP** 11 02 36.7 -2.6
comp=Z,50nm,1.0s,baz=87,slow=8.0,SNR=5.6
comp=Z,38nm,0.6s
SWI Sorong 56.61 280 P **P** 11 02 15.7 +0.9
comp=Z,3nm,0.8s
DRV Dumont d'Urvil 58.17 200 P **P** 11 02 25.9 +1.0
AAI Ambon 58.62 276 P **P** 11 02 30.0 +1.0
RPN Rapa Nui 59.83 112 LR LR 11 21 25.1
comp=Z,47nm,21.2s,baz=235,slow=29
SOEI Soe 60.76 268 P **P** 11 02 45.4 +1.6
SOEI Soe 60.76 268 P **P** 11 02 44.9 +1.1
comp=Z,2μmcomp=Z,191nm,0.8s
SOEI Soe 60.76 268 P **P** 11 02 45.6 +1.8
TNTI Ternate 60.82 281 P **P** 11 02 45.2 +1.2
TNTI IAmb IAmb 11 03 09.7
comp=Z,33nm,1.3s
SBA Scott Base 61.77 185 P **P** 11 02 52.4 +3.0
SBA IAmb IAmb 11 03 14.6
comp=Z,16nm,1.0s
SBA Scott Base 61.77 185 P **P** 11 02 52.4 +3.0
SBA pmax pmax
comp=Z,16nm,1.0s
SBA Scott Base 61.77 185 P **P** 11 02 52.2 +2.7
VNDA Vanda 61.90 186 P **P** 11 02 52.2 +1.9
comp=Z,2.0nm,0.8s,baz=9.8,slow=5.9,SNR=13
comp=Z,2.0nm,0.8s
VNDA Vanda 61.90 186 P **P** 11 02 51.5 +1.1
VNDA IAmb IAmb 11 03 15.3
comp=Z,36nm,1.9s
VNDA Vanda 61.90 186 P **P** 11 02 52.2 +1.9
PSA00 Pilbara Seismi 62.68 254 P **P** 11 02 55.8 -0.8
PSA00 Pilbara Seismi 62.68 254 P **P** 11 02 55.9 -0.6
MBWA Marble Bar 62.85 255 P **P** 11 02 56.8 -0.9
MBWA IAmb IAmb 11 02 57.5
comp=Z,23nm,0.8s
MBWA Marble Bar 62.85 255 P **P** 11 02 57.0 -0.6
KLBR Kellerberrin 63.46 243 P **P** 11 03 01.1 -0.4
EDFI Ende, Flores 63.47 269 P **P** 11 03 02.0 +0.1
comp=Z,560nmcomp=Z,6.4nm,0.8s
NWAO Narrogin (SRO) 63.80 241 P **P** 11 03 04.2 +0.4
RKGY Rocky Gully 63.92 239 P **P** 11 03 05.4 +0.9
baz=64,SNR=5.6
BLDU Ballidu 64.43 244 P **P** 11 03 07.4 -0.4
baz=64,SNR=15
BLDU Ballidu 64.43 244 P **P** 11 03 07.5 -0.4
MORW Morawa 65.16 245 P **P** 11 03 12.4 -0.3
baz=65,SNR=4.2
WBSI Waikabubak, Su 65.45 267 P **P** 11 03 14.6 -0.2
comp=Z,84nm,0.8s
CCD Concordia, Ant 67.01 195 P **P** 11 03 25.5 +1.3
TOLI2 Tolitoli 67.15 279 P **P** 11 03 25.9 +0.3
TOLI2 Tolitoli 67.15 279 P **P** 11 03 26.0 +0.4
PLAI Plampang 67.19 267 P **P** 11 03 25.7 -0.2
comp=Z,67nm,0.8s
PLAI Plampang 67.19 267 P **P** 11 03 26.4 +0.5
GIRL Giralia 67.66 252 P **P** 11 03 29.8 +1.1
baz=68,SNR=11
GIRL Giralia 67.66 252 P **P** 11 03 29.8 +1.1
MPSI Mapaga 67.74 277 P **P** 11 03 29.8 +0.4
comp=Z,513nmcomp=Z,27nm,0.9s
KIWB Kanaga Island 68.52 358 P **P** 11 03 34.0 +0.7
ADK Adak 68.53 358 P **P** 11 03 33.9 +0.5
GSTR Great Sitkin T 68.72 358 P **P** 11 03 35.2 +0.5
CASY Casey 69.02 205 P **P** 11 03 36.3 -0.2
CASY Casey 69.02 205 P **P** 11 03 37.1 +0.6
MJAR Matsushiro Arr 70.00 320 P **P** 11 03 42.2 -0.7
comp=Z,0.9nm,0.5s,baz=154,slow=6.5,SNR=5.4
MJAR LR LR 11 30 06.8
comp=Z,41nm,18.9s,baz=123,slow=32
comp=Z,0.9nm,0.5s
MJAR Matsushiro Arr 70.00 320 P **P** 11 03 43.0 +0.1
MJAR Matsushiro Arr 70.00 320 P **P** 11 03 43.0 +0.1
MJAR pmax pmax
comp=Z,3.0nm,1.1s
UNV Unalaska Valle 70.70 4 P **P** 11 03 46.5 -0.2
SNCC San Nicolas Is 71.69 46 P **P** 11 03 53.0 -0.2
baz=234
SCZ2 Santa Cruz Isl 72.05 45 P **P** 11 03 56.0 +0.6
baz=234
SBC Santa Barbara 72.25 44 P **P** 11 03 57.1 +0.5
baz=234
CNBA Chernabura Isl 72.40 8 P **P** 11 03 57.4 +0.5
CHNA Chernabura Isl 72.41 8 P **P** 11 03 58.0 +1.0
baz=194
PKM Mcpherson Peak 72.45 44 P **P** 11 03 58.7 +0.8
baz=234,SNR=5.5
SAO San Andreas Ge 72.51 42 P **P** 11 03 58.6 +0.6
SAO IAmb IAmb 11 03 60.0
comp=Z,38nm,1.1s
SAO San Andreas Ge 72.51 42 P **P** 11 03 58.6 +0.6
SAO pmax pmax
comp=Z,38nm,1.1s
CIS Catalina Islan 72.54 46 P **P** 11 03 57.9 -0.5
baz=235
SMMC Simmler 72.58 44 P **P** 11 03 59.2 +0.6
baz=234
PMPB Monarch Peak 72.59 42 P **P** 11 03 60.0 +1.3
PMPB IAmb IAmb 11 04 00.7
comp=Z,18nm,0.8s
BBGB Big Mountain B 72.65 42 P **P** 11 03 59.5 +0.5
PAGB Antelope Grade 72.66 43 P **P** 11 03 59.3 +0.3
PAGB IAmb IAmb 11 04 01.0
comp=Z,33nm,1.1s
BCW Bitter Crk WRg 72.75 44 P **P** 11 04 00.3 +0.7
BCW IAmb IAmb 11 04 01.2
comp=Z,26nm,1.0s
SDPT Sand Point 72.79 8 P **P** 11 03 59.8 +0.5

SDPT Sand Point 72.79 8 P **P** 11 04 01.9 +2.7
baz=193
FMP Fort Macarthur 72.80 46 P **P** 11 03 59.8 0.0
baz=235
DECC Green Verdugo 73.08 45 P **P** 11 04 01.4 -0.1
baz=235
PASC Pasadena Art C 73.13 45 P **P** 11 04 02.3 +0.5
PASC IAmb IAmb 11 04 03.0
comp=Z,22nm,0.9s
CBX Cerro Bola 73.16 48 P **P** 11 04 02.9 +0.7
109C Camp Elliot, M 73.16 47 P **P** 11 04 02.0 0.0
baz=236
QSPA South Pole Qui 73.17 180 P **P** 11 04 02.2 +0.5
QSPA IAmb IAmb 11 04 27.9
comp=Z,21nm,0.9s
KMPM Mount Pierce 73.18 37 P **P** 11 04 03.8 +1.7
KMPM IAmb IAmb 11 04 04.4
comp=Z,54nm,1.3s
ARVC Arvin 73.24 44 P **P** 11 04 02.8 +0.4
baz=235,SNR=5.7
KMRM Mail Ridge 73.30 38 P **P** 11 04 03.6 +0.9
TKX Tecate 73.34 48 P **P** 11 04 03.4 +0.3
BAR Barrett 73.35 47 P **P** 11 04 03.2 +0.1
ELS Elsinore Mount 73.36 46 P **P** 11 04 03.3 0.0
VES Vestal, Richgr 73.49 44 P **P** 11 04 04.1 +0.3
baz=234,SNR=17
MURC Murrieta 73.49 46 P **P** 11 04 04.2 +0.2
baz=236,SNR=7.8
BFSC Mount Baldy Ra 73.53 46 P **P** 11 04 04.3 -0.1
baz=236,SNR=14
VOG Valley Oaks Go 73.57 43 P **P** 11 04 04.4 0.0
baz=234
MONP2 Monument Peak 73.64 47 P **P** 11 04 05.5 +0.3
baz=237,SNR=20
PET Petropavlovsk 73.65 343⇑ *i*P **P** 11 04 04.9 +0.5
PET pmax pmax
comp=Z,32nm,1.3s
EDW2 Edwards Air Fo 73.67 45 P **P** 11 04 05.4 +0.4
baz=235,SNR=19
KHMM Horse Mountain 73.70 37 P **P** 11 04 06.4 +1.2
KHMM IAmb IAmb 11 04 07.6
comp=Z,29nm,1.2s
RMX La Rumorosa 73.73 48 P **P** 11 04 06.0 +0.5
IKP In-Ko-Pah, Jac 73.73 48 P **P** 11 04 05.9 +0.4
baz=237,SNR=12
ISA Isabella, Lake 73.79 44 P **P** 11 04 06.2 +0.5
ISA IAmb IAmb 11 04 07.5
comp=Z,35nm,1.1s
ISA Isabella, Lake 73.79 44 P **P** 11 04 06.2 +0.5
ISA pmax pmax
comp=Z,35nm,1.1s
ISA Isabella, Lake 73.79 44 P **P** 11 04 06.3 +0.6
baz=235,SNR=22
CCAC Calif City Air 73.80 45 P **P** 11 04 06.0 +0.2
CCAC IAmb IAmb 11 04 07.6
comp=Z,29nm,1.1s
SPIA Saint Paul Isl 73.83 2 P **P** 11 04 06.3 +1.0
baz=183
YUH Yuha Desert 73.86 48 P **P** 11 04 06.3 +0.2
CMB Columbia Colle 73.95 41 P **P** 11 04 06.2 -0.4
CMB IAmb IAmb 11 04 08.1
comp=Z,25nm,1.1s
CMB Columbia Colle 73.95 41 P **P** 11 04 06.2 -0.4
CMB pmax pmax
comp=Z,25nm,1.1s
PEA0B Petropavlovsk- 74.00 342 P **P** 11 04 06.2 -0.3
PEA0B IAmb IAmb 11 04 08.4
comp=Z,55nm,1.5s
PEA0B Petropavlovsk- 74.00 342⇑ *e*P **P** 11 04 05.8 -0.7
PETK Petropavlovsk- 74.00 342 P **P** 11 04 06.9 +0.4
comp=Z,8.8nm,0.7s,baz=132,slow=8.7,SNR=17
comp=Z,8.8nm,0.7s
PETK Petropavlovsk- 74.00 342 P **P** 11 04 06.5 0.0
PETK Petropavlovsk- 74.00 342 P **P** 11 04 06.5 0.0
PFO Pinyon Flats O 74.01 47 P **P** 11 04 07.4 +0.2
PFO Pinyon Flats O 74.01 47 P **P** 11 04 07.4 +0.2
PFO pmax pmax
comp=Z,147nm,0.2s
PFO Pinyon Flats O 74.01 47 P **P** 11 04 07.3 +0.2
baz=237,SNR=12
TPFO Pinon Flats 74.01 47 P **P** 11 04 07.3 +0.1
baz=237,SNR=12
BBRC Big Bear Solar 74.05 46 P **P** 11 04 07.9 +0.4
baz=236
SWSC Sam W. Stewart 74.11 48 P **P** 11 04 07.7 +0.2
baz=237
ORV Oroville 74.19 39 P **P** 11 04 08.3 +0.4
ORV Oroville 74.19 39 P **P** 11 04 08.3 +0.4
ORV pmax pmax
comp=Z,16nm,1.1s
LRMC Laurel Mtn Rad 74.21 45 P **P** 11 04 08.6 +0.3
baz=235,SNR=7.9
KBO Bosley Butte 74.29 36 P **P** 11 04 09.2 +0.6
RRX Edison Barstow 74.34 45 P **P** 11 04 09.0 +0.1
baz=236
UGM Wanagama 74.36 266 P **P** 11 04 09.6 +0.1
CWC Cottonwood Cre 74.50 44 P **P** 11 04 10.2 +0.2
baz=235
MDPB Devils Postpil 74.54 42 IAmb IAmb 11 04 11.9
comp=Z,25nm,1.1s
BELC Belle Mtn. Jos 74.55 47 P **P** 11 04 10.6 +0.4
baz=237,SNR=22
OMMB Old Mammoth Mi 74.58 42 P **P** 11 04 10.7 +0.1
OMMB IAmb IAmb 11 04 12.3
comp=Z,31nm,1.5s
L02F Cave Junction 74.60 36 P **P** 11 04 11.3 +1.1
baz=229,SNR=10
MPMC Manual Prospec 74.67 44 P **P** 11 04 11.7 +0.6
baz=235,SNR=57
MLAC Mammoth, Mammo 74.69 42 P **P** 11 04 11.4 +0.2
baz=234
GSC Goldstone, Bar 74.71 45 IAmb IAmb 11 04 12.4
comp=Z,25nm,1.0s
GSC Goldstone, Bar 74.71 45 P **P** 11 04 11.4 +0.3
baz=236,SNR=21
BC3 Big Chuckawall 74.74 47 P **P** 11 04 11.8 +0.5
baz=237,SNR=10.0
TIN Tinemaha, Big 74.75 43 P **P** 11 04 12.2 +0.8
baz=234,SNR=9.1
HEC Hector,Ludlow 74.77 46 P **P** 11 04 11.6 +0.2
baz=236,SNR=58
YBH Yreka Blue Hor 74.84 37 IAmb IAmb 11 04 13.9
comp=Z,35nm,1.1s
GLA Glamis 74.86 48 P **P** 11 04 12.1 +0.1
baz=238
K02D Willamette Mer 74.92 36 P **P** 11 04 13.1 +0.9
baz=229,SNR=7.2
SII Sitkinak Islan 74.94 11 P **P** 11 04 12.3 +0.4
baz=199
QSM Queen of Sheba 75.03 45 IAmb IAmb 11 04 14.3
comp=Z,38nm,0.9s
BEKR Beckworth 75.07 40 P **P** 11 04 13.4 +0.2
BEKR IAmb IAmb 11 04 14.9
comp=Z,26nm,1.1s
PNTR Pine Nut 75.07 41 P **P** 11 04 13.9 +0.6
PNTR IAmb IAmb 11 04 15.1
comp=Z,44nm,1.0s
J01E Myrtle Point 75.08 35 P **P** 11 04 13.9 +0.9
baz=229
VCNR Virginia City 75.17 40 P **P** 11 04 14.2 +0.4
VCNR IAmb IAmb 11 04 15.6
comp=Z,28nm,1.1s
GMRC Granite Mounta 75.21 46 P **P** 11 04 14.2 +0.2
baz=237,SNR=18
IRM Iron Mountain 75.22 47 P **P** 11 04 14.6 +0.5
baz=237,SNR=12
YERR Yerington 75.24 41 P **P** 11 04 14.2 0.0
YERR IAmb IAmb 11 04 15.8
comp=Z,35nm,1.1s
HUMO Hull Mountain 75.27 36 P **P** 11 04 15.3 +1.2
HUMO IAmb IAmb 11 04 16.4
comp=Z,39nm,1.4s
LHV Little Huntoon 75.27 42 P **P** 11 04 15.2 +1.1
LHV IAmb IAmb 11 04 16.3
comp=Z,35nm,1.1s
GRAC Grapevine Rang 75.28 43 P **P** 11 04 15.2 +0.8
baz=235,SNR=13
FURC Furnace Creek, 75.32 44 P **P** 11 04 14.9 +0.5
baz=236,SNR=11
TUQ Turquoise Moun 75.38 45 P **P** 11 04 15.6 +0.5
baz=236,SNR=6.4
L04D Klamath Falls 75.39 37 P **P** 11 04 15.6 +0.7
L04D IAmb IAmb 11 04 16.8
comp=Z,39nm,1.1s
L04D Klamath Falls 75.39 37 P **P** 11 04 15.7 +0.8
baz=230,SNR=19

SHOC **Shoshone, Teco** 75.40 45 P P 11 04 15.3 +0.3
baz=236,SNR=11
BLYC **Blythe** 75.44 48 P P 11 04 15.4 +0.1
RYN **Ryan** 75.48 42 P P 11 04 15.9 +0.3
RYN IAmb IAmb 11 04 17.2
comp=Z,26nm,1.0s
NVAR **Mina Array Bea** 75.50 42 P P 11 04 16.3 +0.5
comp=Z,25nm,0.9s,baz=227,slow=9.4,SNR=120
comp=Z,25nm,0.9s
NVAR **Mina Array Bea** 75.50 42 P P 11 04 15.7 -0.1
PAHR **Pah Rah Range** 75.58 40 P P 11 04 16.7 +0.6
PAHR IAmb IAmb 11 04 17.8
comp=Z,30nm,1.2s
NV11 **Mina Array Sit** 75.60 42 P P 11 04 16.8 +0.6
NV11 IAmb IAmb 11 04 18.0
comp=Z,47nm,1.1s
OHAK **Old Harbor** 75.73 11 P P 11 04 16.3 0.0
baz=200
214A **Organ Pipe Nat** 75.75 50 P P 11 04 17.9 +0.8
214A IAmb IAmb 11 04 18.8
comp=Z,32nm,1.4s
214A **Organ Pipe Nat** 75.75 50 P P 11 04 17.1 0.0
baz=239
I02E **Swisshome, OR** 75.75 35 P P 11 04 17.6 +0.8
baz=229
I03D **Drain, OR** 75.75 35 P P 11 04 17.6 +0.8
baz=229,SNR=5.8
NEE2 **Needles Airpor** 75.92 47 P P 11 04 18.2 +0.2
baz=238
K04D **Chiloquin, OR** 75.96 37 P P 11 04 18.8 +0.7
baz=231
KVN **Kaiserville** 75.99 41 P P 11 04 18.8 +0.3
KVN IAmb IAmb 11 04 20.0
comp=Z,26nm,1.0s
KVN **Kaiserville** 75.99 41 P P 11 04 18.8 +0.3
KVN pmax pmax
comp=Z,26nm,1.0s
TPNV **Topopah Spring** 76.00 44 P P 11 04 19.1 +0.6
TPNV IAmb IAmb 11 04 20.2
comp=Z,22nm,0.9s
TPNV **Topopah Spring** 76.00 44 P P 11 04 19.2 +0.6
TPNV pmax pmax
comp=Z,22nm,0.9s
TPNV **Topopah Spring** 76.00 44 P P 11 04 19.1 +0.6
baz=236,SNR=12
PDMCI **Parker Dam,Lak** 76.01 47 P P 11 04 19.0 +0.5
baz=238,SNR=10
J04D **Umpqua Nationa** 76.15 36 P P 11 04 20.1 +0.8
baz=230,SNR=13
BUCK **Buck Mountain** 76.28 35 IAmb IAmb 11 04 21.9
comp=Z,57nm,1.4s
I04A **Tendick Farm,** 76.33 35 P P 11 04 20.5 +0.3
baz=230,SNR=9.5
MOD **Modoc Plateau** 76.35 38 P P 11 04 20.6 +0.1
MOD IAmb IAmb 11 04 22.1
comp=Z,29nm,0.9s
KDAK **Kodiak Island** 76.39 11 P P 11 04 20.3 +0.3
KDAK IAmb IAmb 11 04 21.0
comp=Z,25nm,0.7s
KDAK **Kodiak Island** 76.39 11 P P 11 04 20.3 +0.3
KDAK pmax pmax
comp=Z,25nm,0.7s
KDAK **Kodiak Island** 76.39 11 P P 11 04 20.4 +0.3
baz=201
Q09A **Carvers** 76.45 42 IAmb IAmb 11 04 22.8
comp=Z,33nm,1.0s
SHPR **Sheep Range** 76.48 45 IAmb IAmb 11 04 23.1
comp=Z,23nm,1.0s
K05A **Summer Lake** 76.52 37 P P 11 04 22.1 +0.7
W13A **Hualapai Mount** 76.60 47 P P 11 04 22.4 +0.2
Y14A **Wickenburg** 76.62 48 P P 11 04 22.2 +0.2
Y14A IAmb IAmb 11 04 23.4
comp=Z,20nm,0.8s
H04D **Lebanon** 76.62 35 P P 11 04 22.9 +1.2
H04D **Lebanon** 76.62 35 P P 11 04 22.5 +0.8
baz=230,SNR=5.8
J05D **Fort Rock, OR** 76.67 36 P P 11 04 23.1 +0.9
baz=231,SNR=31
P16K **Nushagak River** 76.70 8 P P 11 04 21.3 -0.5
baz=195
S11A **Rachel** 76.72 44 P P 11 04 23.2 +0.6
S11A IAmb IAmb 11 04 24.1
comp=Z,30nm,0.8s
G03D **McMinnville, O** 76.79 34 P P 11 04 22.6 0.0
baz=229
H04A **Detroit Lake** 77.03 35 P P 11 04 24.6 +0.6
H04A IAmb IAmb 11 04 25.3
comp=Z,28nm,1.0s
PRN **Pahroc Range** 77.05 44 IAmb IAmb 11 04 26.5
comp=Z,49nm,1.2s
P17K **Kvichak River** 77.08 9 P P 11 04 23.9 0.0
baz=197,SNR=9.2
KSRS **Korea Array** 77.14 316 P P 11 04 26.2 +1.5
comp=Z,2.0nm,0.9s,baz=122,slow=6.4,SNR=7.8
KSRS pP pP 11 04 46.0 +3.4
comp=Z,2.1nm,1.0s,baz=120,slow=7.3,SNR=3.4
comp=Z,2.0nm,0.9s
KSAR **Wonju Array Be** 77.16 316 P P 11 04 25.8 +0.9
KSAR **Wonju Array Be** 77.16 316 P P 11 04 25.8 +0.9
PINE **Pine Mountain** 77.16 36 P P 11 04 26.0 +1.0
Q20K **Shuyak Island** 77.20 11 P P 11 04 24.9 +0.3
baz=201
KSM **Kuching** 77.21 275 P P 11 04 26.0 +0.3
KSM IAmb IAmb 11 04 27.9
comp=Z,29nm,1.0s
R11A **Troy Canyon, C** 77.21 43 P P 11 04 25.5 +0.1
R11A IAmb IAmb 11 04 26.9
comp=Z,19nm,1.1s
R11A **Troy Canyon, C** 77.21 43 P P 11 04 25.6 +0.1
baz=236,SNR=24
O16K **Kokwok River B** 77.23 8 P P 11 04 24.1 -0.7
baz=195
I05D **Terrebonne, OR** 77.28 36 P P 11 04 26.1 +0.6
baz=231,SNR=10
Q19K **Cape Douglas,** 77.28 10 P P 11 04 25.1 0.0
baz=199
BMN **Battle Mountai** 77.34 41 IAmb IAmb 11 04 27.6
comp=Z,24nm,0.8s
TUC **Tucson** 77.41 50 P P 11 04 26.6 +0.1
TUC **Tucson** 77.41 50 P P 11 04 26.6 +0.1
TUC pmax pmax
comp=Z,14nm,0.9s
LEM **Lembang** 77.43 267 P P 11 04 27.9 +0.8
comp=Z,42nm,0.7s,baz=125,slow=12,SNR=10
comp=Z,42nm,0.7s
P18K **Big Mountain,** 77.46 9 P P 11 04 26.2 +0.2
P18K **Big Mountain,** 77.46 9 P P 11 04 25.8 -0.3
baz=198,SNR=7.4
O17K **Koliganek Bris** 77.54 8 P P 11 04 26.6 +0.1
baz=196
WVOR **Wild Horse Val** 77.66 38 P P 11 04 27.9 +0.2
WVOR IAmb IAmb 11 04 29.4
comp=Z,33nm,1.1s
WVOR **Wild Horse Val** 77.66 38 P P 11 04 27.9 +0.2
WVOR pmax pmax
comp=Z,33nm,1.1s
F04A **Amboy** 77.71 34 P P 11 04 28.4 +0.7
G05D **Wamic, OR** 77.86 35 P P 11 04 28.3 -0.4
baz=231
O18K **Koktuh Hills** 77.90 9 P P 11 04 28.4 -0.2
baz=198
NLWA **Neilton Lookou** 77.91 32 IAmb IAmb 11 04 30.9
comp=Z,23nm,1.0s
X16A **Lo Mia Camp, P** 77.98 48 P P 11 04 30.7 +0.9
X16A IAmb IAmb 11 04 31.7
comp=Z,20nm,0.8s
N16K **Nishlik Lake** 78.00 7 P P 11 04 29.3 +0.2
baz=194
LCMT **Little Creek M** 78.05 45 IAmb IAmb 11 04 31.9
comp=Z,19nm,0.9s
I07A **Izee** 78.15 37 P P 11 04 31.0 +0.6
I07A IAmb IAmb 11 04 32.1
comp=Z,24nm,1.0s
CCUT **Cedar City** 78.26 45 P P 11 04 32.4 +1.0
CCUT IAmb IAmb 11 04 33.4
comp=Z,32nm,1.1s
CNPM **China Poot** 78.28 11 IAmb IAmb 11 04 31.8
comp=Z,22nm,0.8s
J08A **Circle Bar Ran** 78.31 38 P P 11 04 31.8 +0.5
J08A IAmb IAmb 11 04 32.9
comp=Z,40nm,1.1s
HOM **Homer** 78.32 11 P P 11 04 30.8 -0.1
baz=201
O19K **Port Alsworth** 78.37 10 P P 11 04 31.1 +0.1
O19K **Port Alsworth** 78.37 10 P P 11 04 31.0 -0.1
baz=199,SNR=7.1
U15A **North Rim** 78.40 46 IAmb IAmb 11 04 34.3
comp=Z,34nm,1.1s
D03D **Eldon** 78.40 32 P P 11 04 32.2 +0.6
baz=229,SNR=5.5
PSUT **Pine Spring** 78.45 44 P P 11 04 33.0 +0.6
PSUT IAmb IAmb 11 04 33.8
comp=Z,28nm,0.7s
SZCU **Shurtz Canyon** 78.47 45 IAmb IAmb 11 04 34.4
comp=Z,29nm,1.0s
USRK **Ussuriysk Ar.** 78.50 323 LR LR 11 33 15.5
comp=Z,60nm,20.9s,baz=136,slow=31
O20K **Slope Mountain** 78.54 11 P P 11 04 31.9 -0.3
baz=200
BRLK **Bradley Lake** 78.56 11 P P 11 04 32.7 +0.5
BRLK IAmb IAmb 11 04 33.3
comp=Z,17nm,0.7s
BRSE **Bradley Lake S** 78.57 12 P P 11 04 32.2 0.0
baz=202
WUAZ **Wupatki** 78.58 47 P P 11 04 33.5 +0.5
WUAZ IAmb IAmb 11 04 35.0
comp=Z,45nm,1.6s
WUAZ **Wupatki** 78.58 47 P P 11 04 33.8 +0.7
baz=240
N18K **Kilae Creek** 78.59 9 P P 11 04 32.3 0.0
N18K **Kilae Creek** 78.59 9 P P 11 04 31.9 -0.4
baz=197
CLRS **Cowichan Lake** 78.74 31 P P 11 04 33.3 0.0
D05A **Enumclaw** 78.75 33 IAmb IAmb 11 04 35.6
comp=Z,51nm,1.2s
ELK **Elko** 78.77 41 LR LR 11 36 39.0
comp=Z,81nm,18.0s,baz=266,slow=34
ELK **Elko** 78.77 41 IAmb IAmb 11 04 35.4
comp=Z,25nm,0.9s
PKCU **Pink Cliffs** 78.91 45 P P 11 04 36.6 +1.5
N19K **Bonanza Creek** 78.93 9 IAmb IAmb 11 04 34.9
comp=Z,14nm,0.7s
N19K **Bonanza Creek** 78.93 9 P P 11 04 34.0 -0.3
baz=198,SNR=6.7
PGC **Sidney** 78.96 31 IAmb IAmb 11 04 36.1
comp=Z,26nm,0.8s
CBB **Campbell River** 78.97 29 IAmb IAmb 11 04 36.4
comp=Z,35nm,1.2s
F07A **Phinny Hill Vi** 79.03 35 IAmb IAmb 11 04 36.5
comp=Z,16nm,0.8s
SVW2 **Sparrevohn** 79.03 9 P P 11 04 34.7 0.0
X18A **Snowflake** 79.11 49 P P 11 04 36.3 +0.3
SEW **Seward** 79.16 12 IAmb IAmb 11 04 36.1
comp=Z,18nm,0.7s
SEW **Seward** 79.16 12 P P 11 04 35.2 -0.2
baz=193
G08A **Pilot Rock** 79.19 36 IAmb IAmb 11 04 37.6
comp=Z,32nm,0.9s
Q23K **Middleton Isla** 79.20 14 P P 11 04 36.0 +0.4
baz=206
MTPU **Mount Pierson** 79.31 45 IAmb IAmb 11 04 39.3
comp=Z,24nm,0.8s
TCRU **Three Creeks R** 79.43 44 IAmb IAmb 11 04 39.9
comp=Z,32nm,0.9s
E07A **Sunnyside** 79.48 34 P P 11 04 37.9 +0.4
E07A IAmb IAmb 11 04 39.1
comp=Z,29nm,0.9s
W18A **Petrified Fore** 79.55 48 P P 11 04 38.9 +0.5
baz=241
HAWA **Hanford** 79.55 35 IAmb IAmb 11 04 39.0
comp=Z,19nm,0.8s
MSU **Marysvale** 79.56 44 P P 11 04 39.6 +1.2
MSU **Marysvale** 79.56 44 P P 11 04 39.6 +1.2
CRAG **Craig** 79.75 22 P P 11 04 40.9 +2.2
baz=219
121A **Cookes Peak, D** 79.75 51 P P 11 04 40.2 +0.7
baz=242
121A **Cookes Peak, D** 79.75 51 P P 11 04 40.2 +0.7
baz=242
BMO **Blue Mountains** 79.87 37 P P 11 04 39.9 +0.1
BMO IAmb IAmb 11 04 41.0
comp=Z,22nm,1.0s
BMO **Blue Mountains** 79.87 37 P P 11 04 39.9 +0.1
BMO pmax pmax
comp=Z,22nm,1.0s
E08A **Dider Farm, El** 79.87 35 P P 11 04 40.1 +0.5
E08A IAmb IAmb 11 04 41.1
comp=Z,56nm,1.5s
MFID **Camas Ranch** 79.91 39 IAmb IAmb 11 04 41.4
comp=Z,24nm,0.9s
M19K **Big River Lodg** 79.98 9 P P 11 04 39.8 -0.1
M19K **Big River Lodg** 79.98 9 P P 11 04 39.2 -0.7
baz=199
RC01 **Rabbit Creek A** 80.01 11 P P 11 04 39.8 -0.2
baz=203
DUG **Dugway, Tooele** 80.02 43 P P 11 04 41.0 +0.2
baz=238,SNR=13
MDJ **Mudanjiang** 80.13 323 P P 11 04 40.7 -0.3
MDJ pmax pmax
comp=Z,5.0nm,0.4s
MDJ pmax pmax
comp=Z,51nm,3.5s
M20K **Styx River** 80.16 10 P P 11 04 40.9 0.0
M20K **Styx River** 80.16 10 P P 11 04 40.3 -0.6
baz=200,SNR=5.4
SUA **Susitna One** 80.17 11 P P 11 04 40.8 -0.2
SUA **Susitna One** 80.17 11 P P 11 04 40.8 -0.2
baz=202,SNR=7.9
L19K **White Mountain** 80.17 9 P P 11 04 40.5 -0.5
baz=198
SIT **Sitka** 80.25 20 P P 11 04 40.2 -1.1
baz=217
D08A **Wollman Farm,** 80.29 34 P P 11 04 42.4 +0.5
D08A IAmb IAmb 11 04 43.5
comp=Z,36nm,0.9s
EYAK **Cordova Ski Ar** 80.34 14 P P 11 04 41.6 -0.2
baz=207
GLI **Glacier Island** 80.35 13 P P 11 04 41.5 -0.4
baz=206
KIDD **KIDD Seismic O** 80.37 53 P P 11 04 43.4 +0.6
baz=243
NLU **North Lily Min** 80.38 43 P P 11 04 42.6 -0.1
E09A **Wood Farm, Sta** 80.39 35 P P 11 04 42.6 +0.2
E09A IAmb IAmb 11 04 43.5
comp=Z,24nm,0.9s
GAMB **Gambell** 80.41 1 P P 11 04 41.4 -0.7
baz=182
SMAI **San Martin Ant** 80.43 159 IAmb IAmb 11 04 44.3
comp=Z,54nm,1.4s
SKT **Skwentna** 80.51 10 P P 11 04 42.4 -0.3
SKT **Skwentna** 80.51 10 P P 11 04 41.5 -1.3
baz=201
M22K **Willow** 80.55 11 P P 11 04 43.1 +0.2
M22K IAmb IAmb 11 04 43.6
comp=Z,38nm,0.8s
M22K **Willow** 80.55 11 P P 11 04 42.6 -0.3
baz=203
KNK **Knik Glacier** 80.56 12 P P 11 04 43.0 0.0
KNK IAmb IAmb 11 04 43.9
comp=Z,22nm,0.7s
KNK **Knik Glacier** 80.56 12 P P 11 04 43.0 0.0
baz=204,SNR=8.3
PMR **Palmer** 80.59 12 IAmb IAmb 11 04 44.2
comp=Z,41nm,1.5s
PMR **Palmer** 80.59 12 P P 11 04 42.9 -0.2
baz=204,SNR=7.5
L20K **Farewell, AK** 80.60 9 P P 11 04 43.0 -0.2
baz=199,SNR=8.9
TMUT **Trail Mountain** 80.61 44 P P 11 04 44.2 0.0
TMUT IAmb IAmb 11 04 46.3
comp=Z,36nm,0.8s
MPU **Maple Canyon** 80.70 43 P P 11 04 44.6 +0.1
TTA **Tatalina** 80.73 8 P P 11 04 44.8 +0.8
TTA **Tatalina** 80.73 8 P P 11 04 44.8 +0.8
TTA pmax pmax
comp=Z,29nm,1.4s
TTA **Tatalina** 80.73 8 P P 11 04 44.8 +0.8
baz=197,SNR=8.9
PLID **Pearl Lake** 80.76 37 P P 11 04 44.7 -0.1
WRAK **Wrangell Islan** 80.76 22 P P 11 04 44.6 +0.5
baz=220
GHO **Glory Hole Cre** 80.79 12 P P 11 04 44.4 +0.1
HLID **Hailey** 80.84 39 P P 11 04 45.8 +0.7
HLID IAmb IAmb 11 04 46.9
comp=Z,28nm,0.9s
HLID **Hailey** 80.84 39 P P 11 04 45.8 +0.7
baz=236,SNR=58
DIV **Divide** 80.86 13 P P 11 04 44.7 0.0
B08A **Colville Reser** 80.87 33 P P 11 04 44.4 -0.7
B08A IAmb IAmb 11 04 45.7
comp=Z,22nm,0.9s
HVU **Hansel Valley** 80.89 41 P P 11 04 45.7 +0.3
HVU IAmb IAmb 11 04 46.8
comp=Z,25nm,1.1s
HVU **Hansel Valley** 80.89 41 P P 11 04 45.7 +0.3
HVU pmax pmax
comp=Z,25nm,1.1s
MESA **MESA** 80.92 15 P P 11 04 45.5 +0.3
baz=210
SML **Sawmill** 80.94 12 P P 11 04 44.5 -0.6
baz=204
NJ2 **Nanjing** 80.97 307 *e*P P 11 04 45.8 0.0
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
SRU **San Rafael Swe** 80.97 45 IAmb IAmb 11 04 47.5
comp=Z,20nm,0.8s
BMRM **Bremner River** 80.98 14 P P 11 04 45.0 -0.3
BMRM IAmb IAmb 11 04 46.4
comp=Z,22nm,0.9s
BMRM **Bremner River** 80.98 14 P P 11 04 45.4 +0.1
baz=208,SNR=7.6
Y22A **Socorro** 81.00 51 P P 11 04 47.1 +0.9
baz=243
P17A **Butcher Ranch,** 81.01 44 P P 11 04 47.0 +0.8
P17A IAmb IAmb 11 04 48.1
comp=Z,26nm,1.1s
LLLB **Lillooet** 81.02 30 IAmb IAmb 11 04 47.0
comp=Z,27nm,1.1s
M23K **Glacier View** 81.05 12 P P 11 04 45.1 -0.5
baz=205
C09A **Chrisman Ranch** 81.09 34 P P 11 04 46.4 +0.2
C09A IAmb IAmb 11 04 47.3
comp=Z,22nm,0.8s
CUT **Chulitna** 81.13 11 P P 11 04 45.9 -0.1
CUT **Chulitna** 81.13 11 P P 11 04 45.8 -0.2
baz=202,SNR=10
KLU **Klutina** 81.15 13 P P 11 04 46.4 +0.1
KLU **Klutina** 81.15 13 P P 11 04 45.7 -0.5
baz=207
SCM **Sheep Creek Mo** 81.17 12 P P 11 04 46.4 +0.1
SCM **Sheep Creek Mo** 81.17 12 P P 11 04 46.4 +0.1
SCM pmax pmax
comp=Z,42nm,0.9s
SCM **Sheep Creek Mo** 81.17 12 P P 11 04 46.4 +0.1
baz=205,SNR=12
PNL **Peninsula** 81.17 17 P P 11 04 46.9 +0.6
baz=213
MNTX **Cornudas Mount** 81.20 53 P P 11 04 47.6 +0.5
MNTX IAmb IAmb 11 04 48.3
comp=Z,16nm,0.8s
MNTX **Cornudas Mount** 81.20 53 P P 11 04 47.4 +0.3
baz=244
MNTX **Cornudas Mount** 81.20 53 P P 11 04 47.7 +0.5
baz=244
PPLA **Purkeypile** 81.26 10 P P 11 04 47.9 +1.1
baz=201
PINM **Pinnacle** 81.30 16 P P 11 04 48.2 +1.2
baz=212
BNM **Barren Site** 81.35 50 P P 11 04 49.0 +0.8
K20K **Telida** 81.41 9 P P 11 04 47.8 +0.3
K20K **Telida** 81.41 9 P P 11 04 47.9 +0.3
baz=199,SNR=7.5
MVCO **Mesa Verde** 81.43 47 P P 11 04 48.7 +0.2
MVCO **Mesa Verde** 81.43 47 P P 11 04 48.5 0.0
baz=241
GRNC **Granite Creek** 81.45 15 P P 11 04 48.2 +0.2
VRDI **Verde Repeater** 81.47 14 P P 11 04 48.2 +0.1
TX31 **Lajitas Ar. Si** 81.53 56 P P 11 04 49.3 +0.3
TX31 **Lajitas Ar. Si** 81.53 56 P P 11 04 49.3 +0.3
baz=245
TX32 **Lajitas Array** 81.53 56 P P 11 04 49.3 +0.3
TX32 IAmb IAmb 11 04 51.1
comp=Z,33nm,1.3s
TXAR **Lajitas Array** 81.53 56 P P 11 04 49.6 +0.6
comp=Z,10nm,1.0s,baz=218,slow=6.9,SNR=78
comp=Z,10nm,1.0s
N25K **Chitina, Valde** 81.54 14 IAmb IAmb 11 04 49.4
comp=Z,18nm,0.8s
N25K **Chitina, Valde** 81.54 14 P P 11 04 48.5 +0.2
baz=208,SNR=13
PV10 **Paradox Valley** 81.62 46 P P 11 04 49.5 0.0
M24K **Tolsona, Glenn** 81.65 13 P P 11 04 49.6 +0.8
M24K IAmb IAmb 11 04 50.5
comp=Z,34nm,0.9s
M24K **Tolsona, Glenn** 81.65 13 P P 11 04 49.5 +0.7
baz=206,SNR=6.5
PV13 **Radium Mtn., P** 81.66 46 IAmb IAmb 11 04 51.3
comp=Z,51nm,1.4s
PV23 **Carpenter Ridg** 81.67 46 P P 11 04 50.2 +0.4
KLR **Kul'dur** 81.70 327 P P 11 04 50.6 +1.3
comp=Z,2.1nm,1.0s,baz=110,slow=4.4,SNR=4.7
comp=Z,2.1nm,1.0s
KLR **Kul'dur** 81.70 327 ⇑*i*P P 11 04 50.3 +1.0
KLR pmax pmax
comp=Z,10.0nm,2.5s
MCARA **McCarthy VSAT** 81.71 14 P P 11 04 49.6 +0.5
MCARA **McCarthy VSAT** 81.71 14 P P 11 04 49.1 0.0
baz=209
LOGN **Logan Glacier** 81.72 15 P P 11 04 49.9 +0.5
CTG **Chitna Glacier** 81.76 15 P P 11 04 49.8 +0.2
baz=211,SNR=6.2
BARN **Barnard Glacie** 81.76 15 P P 11 04 49.8 +0.2
BARN IAmb IAmb 11 04 50.8
comp=Z,22nm,0.8s
CTGM **Chitina Glacie** 81.76 15 IAmb IAmb 11 04 50.7
comp=Z,17nm,0.8s
WAT6 **Susitna Watana** 81.76 12 P P 11 04 49.5 -0.1
baz=205,SNR=13
CAST **Castle Rocks** 81.77 10 P P 11 04 47.9 -1.5
baz=201,SNR=6.8
WAT1 **Susitna Watana** 81.83 11 P P 11 04 49.3 -0.4
baz=204
ANMO **Albuquerque** 81.84 50 P P 11 04 51.0 +0.3
ANMO IAmb IAmb 11 04 51.8
comp=Z,13nm,0.6s
ANMO **Albuquerque** 81.84 50 *d*iP P 11 04 51.2 +0.6
ANMO pmax pmax
comp=Z,30nm,1.7s
ANMO **Albuquerque** 81.84 50 P P 11 04 51.0 +0.3
baz=243
ANMO **Albuquerque** 81.84 50 P P 11 04 51.4 +0.8
baz=243
PLBC **Pleasant Camp** 81.86 18 P P 11 04 50.5 +0.6
baz=216,SNR=7.4
T35M **Bob Quinn** 81.94 22 P P 11 04 51.2 +0.7
baz=221
PV15 **Paradox Valley** 81.98 46 P P 11 04 51.7 +0.3
PV15 IAmb IAmb 11 04 52.8
comp=Z,26nm,0.9s
NEW **Newport** 81.99 34 P P 11 04 50.5 -0.4
baz=234,SNR=10
BNX **BinXian** 82.04 323 ⇓P P 11 04 51.8 +0.6
BNX pmax pmax
comp=Z,6.0nm,1.3s
BNX pmax pmax
comp=Z,54nm,6.6s
KTH **Kantishna Hill** 82.08 10 P P 11 04 50.6 -0.5
TRF **Thorofare Moun** 82.09 10 IAmb IAmb 11 04 52.9
comp=Z,26nm,0.8s
TRF **Thorofare Moun** 82.09 10 P P 11 04 50.8 -0.5
baz=202,SNR=18
HARP **HAARP** 82.13 13 P P 11 04 51.3 0.0
baz=207
CHUM **Lake Minchumin** 82.17 9 P P 11 04 50.7 -0.8
baz=200,SNR=11
SKAG **Skagway** 82.18 19 P P 11 04 52.0 +0.4
baz=217
J20K **Nowinta River** 82.18 8 P P 11 04 52.0 +0.5
J20K **Nowinta River** 82.18 8 P P 11 04 52.0 +0.5
baz=199,SNR=12
DHY **Denali Highway** 82.28 12 P P 11 04 51.8 -0.5
baz=205
TNA **Tin City** 82.30 2 P P 11 04 50.8 -1.3
baz=185
RND **Reindeer** 82.31 11 P P 11 04 52.4 +0.1
RND IAmb IAmb 11 04 53.4
comp=Z,20nm,0.6s
RND **Reindeer** 82.31 11 P P 11 04 52.4 +0.1
RND pmax pmax
comp=Z,21nm,0.6s
RDMU **Red Mountain** 82.34 44 P P 11 04 53.4 +0.2
RDMU IAmb IAmb 11 04 54.4
comp=Z,41nm,1.5s
GCSA **Galena City Sc** 82.37 7 P P 11 04 52.8 +0.4
baz=196
YUK8 **Steele Glacier** 82.43 16 P P 11 04 53.5 +0.3
baz=212,SNR=10
ECR **Eagle Creek** 82.44 41 P P 11 04 53.3 -0.4
AHID **Auburn Hatcher** 82.46 41 IAmb IAmb 11 04 55.1
comp=Z,32nm,1.2s
YUK6 **Outpost Mounta** 82.52 16 P P 11 04 53.5 -0.1

baz=214
BELA Belgrano 2 82.55 172 P P 11 04 53.0 -0.5
PAX Paxson 82.57 13 P P 11 04 53.2 -0.4
baz=207,SNR=8.1
BPAW Bear Paw Mtn. 82.58 10 P P 11 04 52.0 -1.7
baz=202
MCK McKinley 82.59 11 P P 11 04 53.6 -0.1
MCK McKinley 82.59 11 P P 11 04 53.6 -0.1
MCK pmax pmax
comp=Z,35nm,0.8s
MCK McKinley 82.59 11 P P 11 04 53.6 -0.1
baz=204,SNR=20
M26K Nabesna, AK 82.61 14 IAmb IAmb 11 04 55.1
comp=Z,19nm,1.1s
M26K Nabesna, AK 82.61 14 P P 11 04 54.0 +0.2
baz=209,SNR=18
HYT Haines Junctio 82.66 17 P P 11 04 54.8 +0.6
HYT Haines Junctio 82.66 17 P P 11 04 54.8 +0.6
baz=214,SNR=7.9
YUK3 Moose Creek 82.67 15 P P 11 04 54.5 +0.1
baz=212,SNR=11
YUK4 Talbot Arm 82.78 16 P P 11 04 55.6 +0.7
baz=214,SNR=8.7
M27K Edge Creek, AK 82.83 14 P P 11 04 55.7 +0.6
M27K IAmb IAmb 11 04 56.8
comp=Z,20nm,0.9s
M27K Edge Creek, AK 82.83 14 P P 11 04 55.5 +0.4
baz=210,SNR=10.0
S22A 4UR Ranch, Cre 82.85 47 P P 11 04 56.7 +0.6
S22A 4UR Ranch, Cre 82.85 47 P P 11 04 57.0 +0.9
baz=242,SNR=75
BWN Browne 82.91 10 P P 11 04 54.9 -0.4
BWN IAmb IAmb 11 04 55.6
comp=Z,21nm,0.7s
MENT Mentasta 82.92 13 P P 11 04 55.3 -0.1
REDW Red Top Meadow 82.92 41 P P 11 04 56.5 +0.3
REDW IAmb IAmb 11 04 57.7
comp=Z,39nm,1.1s
TPAW Teton Pass 82.93 41 IAmb IAmb 11 04 57.8
comp=Z,27nm,0.9s
MSO Missoula 82.93 37 IAmb IAmb 11 04 56.7
comp=Z,27nm,1.3s
MSO Missoula 82.93 37 P P 11 04 55.3 -0.6
baz=236,SNR=7.1
O20A White River Ci 83.01 45 P P 11 04 56.7 0.0
O20A IAmb IAmb 11 04 58.1
comp=Z,24nm,1.0s
O20A White River Ci 83.01 45 P P 11 04 56.8 +0.2
baz=241,SNR=12
O30N Mendenhall 83.01 17 P P 11 04 56.5 +0.5
baz=216,SNR=9.8
SNOW Snow King Moun 83.04 41 P P 11 04 55.8 -0.9
L26K Log Cabin Wild 83.07 13 P P 11 04 56.3 +0.1
L26K Log Cabin Wild 83.07 13 P P 11 04 56.7 +0.4
baz=209,SNR=9.2
DLBC Dease Lake 83.11 21 P P 11 04 56.8 +0.2
DLBC Dease Lake 83.11 21 P P 11 04 56.8 +0.2
baz=222,SNR=7.4
BVCY Beaver Creek 83.12 15 P P 11 04 56.9 +0.4
baz=211,SNR=11
MOOW Moose Ponds 83.19 40 P P 11 04 57.0 -0.5
LOHW Long Hollow 83.21 41 P P 11 04 57.7 +0.1
LOHW IAmb IAmb 11 04 59.0
comp=Z,25nm,1.2s
K24K Donnelly Dome 83.25 12 P P 11 04 57.4 +0.3
baz=207,SNR=12
WHY Whitehorse 83.27 18 P P 11 04 57.8 +0.4
baz=217,SNR=5.4
N30M Aishikik Lake 83.29 17 P P 11 04 57.5 +0.1
baz=215
QLMT Earthquake Lak 83.33 39 P P 11 04 59.2 +1.0
NEA2 Nenana 83.36 10 P P 11 04 57.2 -0.5
NEA2 Nenana 83.36 10 P P 11 04 56.7 -0.9
baz=204,SNR=9.7
RIDG Independent Ri 83.39 12 P P 11 04 57.8 0.0
baz=208,SNR=8.3
FLWY Flagg Ranch 83.39 40 P P 11 04 59.4 +0.9
SMCO Snowmass 83.42 46 P P 11 04 59.4 +0.4
SMCO IAmb IAmb 11 05 00.6
comp=Z,20nm,0.9s
WRH Wood River Hil 83.42 11 IAmb IAmb 11 04 58.4
comp=Z,21nm,0.7s
YPP Pitchstone Pla 83.42 40 P P 11 04 59.1 +0.3
I21K Tanana 83.44 9 P P 11 04 58.2 +0.3
I21K Tanana 83.44 9 P P 11 04 58.0 0.0
baz=201,SNR=7.6
BW06 Boulder Array 83.44 42 P P 11 04 58.5 -0.3
BW06 IAmb IAmb 11 04 59.6
comp=Z,21nm,0.8s
BW06 Boulder Array 83.44 42 P P 11 04 58.7 -0.1
baz=240,SNR=26
PD31 Pinedale Array 83.44 42 P P 11 04 58.5 -0.3
PD31 IAmb IAmb 11 04 59.7
comp=Z,19nm,0.8s
PDAR Pinedale Array 83.44 42 P P 11 04 58.5 -0.3
comp=Z,19nm,0.8s,baz=213,slow=3.1,SNR=106
comp=Z,19nm,0.8s
L27K Beaver Creek, 83.45 14 P P 11 04 58.3 +0.2
L27K Beaver Creek, 83.45 14 P P 11 04 58.4 +0.3
baz=210,SNR=6.5
BCAR Beaver Creek A 83.46 14 P P 11 04 58.3 +0.1
DOT Dot Lake 83.47 13 P P 11 04 58.3 +0.1
DOT IAmb IAmb 11 04 59.2
comp=Z,16nm,0.7s
MLY Manley 83.49 10 P P 11 04 57.8 -0.5
baz=202,SNR=16
YHL Hebgen Lake 83.49 39 P P 11 04 59.3 +0.1
YFT Old Faithful 83.50 40 IAmb IAmb 11 05 01.8
comp=Z,20nm,0.9s
YMR Madison River 83.53 40 P P 11 05 00.4 +1.2
YMR IAmb IAmb 11 05 01.3
comp=Z,28nm,0.8s
P33M Teslin, Yukon 83.55 19 P P 11 04 58.8 0.0
P33M Teslin, Yukon 83.55 19 P P 11 04 58.9 +0.2
baz=219,SNR=6.2
HDA Harding Lake 83.57 11 IAmb IAmb 11 04 59.1
comp=Z,19nm,0.6s
HDA Harding Lake 83.57 11 P P 11 04 58.5 -0.2
baz=206,SNR=35
BOZ Bozeman (W) 83.61 39 P P 11 04 59.9 +0.3
BOZ IAmb IAmb 11 05 01.1
comp=Z,25nm,0.8s
BOZ Bozeman (W) 83.61 39 P P 11 04 59.9 +0.3
BOZ pmax pmax
comp=Z,25nm,0.9s
BOZ Bozeman (W) 83.61 39 P P 11 04 59.9 +0.3
baz=238,SNR=49
H17A Grant Village 83.63 40 IAmb IAmb 11 05 02.3
comp=Z,23nm,0.9s
H17A Grant Village 83.63 40 P P 11 05 01.4 +1.6
baz=239,SNR=22
CCB Clear Creek Bu 83.63 11 P P 11 04 58.6 -0.3
N31M Braeburn, Yuko 83.68 17 P P 11 05 00.3 +0.9
N31M IAmb IAmb 11 05 00.9
comp=Z,21nm,0.9s
N31M Braeburn, Yuko 83.68 17 P P 11 04 59.4 +0.1
baz=216,SNR=9.1
YNR Norris Junctio 83.73 40 IAmb IAmb 11 05 03.6
comp=Z,16nm,0.9s
H21K Melozitna Rive 83.77 8 P P 11 05 00.3 +0.6
H21K IAmb IAmb 11 05 01.7
comp=Z,34nm,1.4s
H21K Melozitna Rive 83.77 8 P P 11 05 00.3 +0.6
baz=200,SNR=12
SCRK Sand Creek 83.78 13 P P 11 05 00.1 +0.2
SCRK Sand Creek 83.78 13 P P 11 05 00.2 +0.2
baz=208,SNR=14
SDCO Great Sand Dun 83.79 48 P P 11 05 01.0 +0.2
SDCO IAmb IAmb 11 05 02.1
comp=Z,25nm,1.3s
SDCO Great Sand Dun 83.79 48 P P 11 05 00.7 -0.1
baz=243
SDCO Great Sand Dun 83.79 48 P P 11 05 01.1 +0.2
baz=243,SNR=22
I23K Minto, Yukon-K 83.82 10 P P 11 04 59.8 -0.2
I23K IAmb IAmb 11 05 00.9
comp=Z,46nm,1.6s
I23K Minto, Yukon-K 83.82 10 P P 11 04 59.7 -0.2
baz=203,SNR=14
TCOL CIGO, UAF Yank 83.83 11 P P 11 04 59.9 -0.1
TCOL CIGO, UAF Yank 83.83 11 P P 11 04 59.7 -0.3
baz=205,SNR=11
COLA College 83.83 11 P P 11 04 59.9 0.0
COLA College 83.83 11*d* iP P 11 04 59.8 -0.2
COLA pmax pmax
comp=Z,20nm,0.7s
COLA College 83.83 11 P P 11 04 59.4 -0.6
baz=205
MDM Murphy Dome 83.84 11 P P 11 04 59.7 -0.4
MDM IAmb IAmb 11 05 01.1
comp=Z,19nm,1.0s
IL31 83.91 11 P P 11 05 00.2 -0.2
ILAR Eielson Array 83.91 11 P P 11 05 00.1 -0.3
comp=Z,6.7nm,0.5s,baz=208,slow=5.6,SNR=133
comp=Z,6.7nm,0.5s
SEY Seymchan 83.91 345 P P 11 05 00.8 +0.4
comp=Z,23nm,0.8s,baz=145,slow=6.4,SNR=50
comp=Z,23nm,0.8s
SEY Seymchan 83.91 345*d* iP P 11 05 01.0 +0.6
SEY pmax pmax
comp=Z,27nm,0.9s
J25K Salcha River, 84.06 12 P P 11 05 01.3 0.0
J25K IAmb IAmb 11 05 02.3
comp=Z,14nm,0.6s
J25K Salcha River, 84.06 12 P P 11 05 01.3 0.0
baz=207,SNR=37
HRY Holter Researc 84.09 38 P P 11 05 02.1 +0.2
POKR Poker Plat Res 84.13 11 P P 11 05 01.4 -0.2
baz=205,SNR=7.2
MSTX Muleshoe 84.15 52 P P 11 05 02.7 +0.2
MSTX Muleshoe 84.15 52 P P 11 05 03.0 +0.5
baz=245
MSTX Muleshoe 84.15 52 P P 11 05 02.7 +0.2
baz=245,SNR=16
WALA Waterton Lakes 84.19 35 P P 11 05 02.3 -0.1
WALA IAmb IAmb 11 05 03.4
comp=Z,16nm,0.9s
K27K Chicken 84.23 13 P P 11 05 03.1 +1.1
K27K Chicken 84.23 13 P P 11 05 02.7 +0.7
baz=210
M30M Minto, Yukon 84.29 16 P P 11 05 02.8 +0.3
M30M IAmb IAmb 11 05 03.6
comp=Z,13nm,0.8s
M30M Minto, Yukon 84.29 16 P P 11 05 02.4 -0.1
baz=215,SNR=14
T25A Trinidad 84.30 49 P P 11 05 03.5 +0.2
T25A Trinidad 84.30 49 P P 11 05 03.2 -0.1
baz=244,SNR=14
J26L Joseph Creek 84.33 13 IAmb IAmb 11 05 04.5
comp=Z,34nm,1.4s
J26L Joseph Creek 84.33 13 P P 11 05 03.1 +0.4
baz=209,SNR=33
H23K Yukon River 84.42 10 P P 11 05 03.0 -0.1
H23K IAmb IAmb 11 05 04.0
comp=Z,36nm,1.8s
H23K Yukon River 84.42 10 P P 11 05 02.4 -0.7
baz=203,SNR=7.9
RWWY Rawlins 84.44 44 P P 11 05 03.8 -0.2
833A Chaparral WMA, 84.57 58 IAmb IAmb 11 05 05.8
comp=Z,14nm,0.8s
833A Chaparral WMA, 84.57 58 P P 11 05 05.0 +0.4
baz=248
833A Chaparral WMA, 84.57 58 P P 11 05 04.7 +0.2
baz=248,SNR=5.1
Q24A Divide 84.58 47 IAmb IAmb 11 05 06.5
comp=Z,20nm,1.2s
Q24A Divide 84.58 47 P P 11 05 04.9 +0.1
baz=243,SNR=8.8
ISCO Idaho Springs 84.64 46 P P 11 05 05.2 +0.2
ISCO Idaho Springs 84.64 46 P P 11 05 05.3 +0.2
ISCO pmax pmax
comp=Z,3.0nm,0.9s
ISCO Idaho Springs 84.64 46 P P 11 05 05.1 0.0
baz=243
ISCO Idaho Springs 84.64 46 P P 11 05 05.3 +0.2
baz=243
M31M Drury Creek, Y 84.65 17 P P 11 05 03.9 -0.3
M31M Drury Creek, Y 84.65 17 P P 11 05 04.2 -0.1
baz=217,SNR=11
H24K Noodor Dome 84.71 10 P P 11 05 03.8 -0.7
H24K Noodor Dome 84.71 10 P P 11 05 03.3 -1.2
baz=205
USHA Ushuaia 84.76 146 P P 11 05 06.1 +1.0
comp=Z,17nm,0.7s,baz=291,slow=4.9,SNR=5.3
comp=Z,17nm,0.7s
RLMT Red Lodge 84.80 40 P P 11 05 05.9 +0.2
RLMT IAmb IAmb 11 05 07.3
comp=Z,20nm,1.1s
RLMT Red Lodge 84.80 40 P P 11 05 05.8 +0.2
baz=240
DAWY Dawson 84.88 14 P P 11 05 05.9 +0.6
DAWY IAmb IAmb 11 05 06.9
comp=Z,19nm,0.8s
DAWY Dawson 84.88 14 P P 11 05 06.0 +0.6
baz=213,SNR=30
GCMT Greycliff 84.89 39 P P 11 05 06.8 +0.8
N23A Red Feather La 84.91 45 P P 11 05 06.3 -0.1
N23A IAmb IAmb 11 05 09.9
comp=Z,14nm,1.1s
N23A Red Feather La 84.91 45 P P 11 05 06.5 +0.1
baz=243,SNR=9.7
FARO Faro, Yukon 84.97 18 P P 11 05 06.0 +0.1
baz=218,SNR=9.4
JCT Junction City 85.06 56 P P 11 05 06.0 -1.1
JCT Junction City 85.06 56 P P 11 05 06.0 -1.1
JCT pmax pmax
comp=Z,10.0nm,0.8s
JCT Junction City 85.06 56 P P 11 05 06.9 -0.2
baz=247
JCT Junction City 85.06 56 P P 11 05 06.6 -0.5
baz=247
K22A Casper 85.34 43 P P 11 05 08.5 +0.1
K22A IAmb IAmb 11 05 09.3
comp=Z,25nm,1.5s
K22A Casper 85.34 43 P P 11 05 08.2 -0.1
baz=242
K22A Casper 85.34 43 P P 11 05 07.9 -0.5
baz=242
AMTX Amarillo 85.35 52 P P 11 05 08.6 +0.1
AMTX Amarillo 85.35 52 P P 11 05 08.6 +0.1
baz=246
AMTX Amarillo 85.35 52 P P 11 05 08.3 -0.2
baz=246
PHWY Pilot Hill 85.43 45 P P 11 05 08.9 -0.1
J29M Klondike Camp 85.48 15 P P 11 05 08.8 +0.4
baz=214
COLD Coldfoot 85.62 9 P P 11 05 09.5 +0.6
baz=202
COYC Coyhaique 85.86 136 P P 11 05 11.2 +0.3
MMPY Sheldon Lake, 85.89 18 P P 11 05 11.1 +0.6
baz=220,SNR=19
BILL Bilibino 85.96 353 P P 11 05 11.1 +0.5
BILL Bilibino 85.96 353*c* iP P 11 05 10.8 +0.2
BILL *e* 11 05 33.2
BILL *e* 11 08 29.7
BILL *e*PPP PPP 11 10 25.6
BILL pmax pmax
comp=Z,33nm,1.3s
BILL MLR MLR
comp=Z,23nm,16.0s
TGTN Hyland Airport 86.00 20 P P 11 05 11.7 +0.6
baz=223
ABTX Abilene, Hawle 86.01 54 P P 11 05 12.1 +0.3
ABTX Abilene, Hawle 86.01 54 P P 11 05 11.7 0.0
baz=247
ABTX Abilene, Hawle 86.01 54 P P 11 05 12.0 +0.2
baz=247,SNR=26
I29M Ogilvie Camp, 86.22 14 IAmb IAmb 11 05 13.1
comp=Z,15nm,0.9s
I29M Ogilvie Camp, 86.22 14 P P 11 05 11.9 -0.1
baz=214,SNR=16
HNS HongShan 86.34 311 ⇑P P 11 05 17.5 +4.3
MAW Mawson 86.36 199 P P 11 05 13.8 +1.0
comp=Z,4.7nm,0.6s,baz=130,slow=7.2,SNR=7.3
comp=Z,4.7nm,0.6s
BMAR Burnt Mountain 86.72 11 P P 11 05 15.2 +0.8
LL02 Futaleuf 86.83 134 P P 11 05 16.1 +0.5
LL02 IAmb IAmb 11 05 17.7
comp=Z,13nm,0.8s
435B Jarrell 86.94 57 P P 11 05 17.1 +0.8
baz=248
435B Jarrell 86.94 57 P P 11 05 16.4 0.0
baz=248
TOLK Toolik Lake Re 87.02 9 P P 11 05 16.2 +0.3
TOLK IAmb IAmb 11 05 17.5
comp=Z,32nm,1.6s
TOLK Toolik Lake Re 87.02 9 P P 11 05 15.9 0.0
baz=203
LAO LASA Array 87.42 39 P P 11 05 18.7 +0.3
baz=242
LAO LASA Array 87.42 39 P P 11 05 18.9 +0.6
baz=242
EPYK Eagle Plains 87.43 14 P P 11 05 18.0 +0.1
EPYK IAmb IAmb 11 05 19.1
comp=Z,11nm,0.8s
EPYK Eagle Plains 87.43 14 P P 11 05 18.0 +0.1
baz=215,SNR=9.7
WMOK Wichita Mounta 87.49 53 P P 11 05 19.2 +0.3
baz=248
WHTX Lake Whitney, 87.49 56 P P 11 05 19.5 +0.6
WHTX Lake Whitney, 87.49 56 P P 11 05 19.1 +0.2
baz=248
WHTX Lake Whitney, 87.49 56 P P 11 05 18.6 -0.3
baz=248
RSSD Black Hills 87.62 42 P P 11 05 19.0 -0.6
RSSD Black Hills 87.62 42 P P 11 05 19.0 -0.6
RSSD pmax pmax
comp=Z,9.0nm,0.9s
RSSD Black Hills 87.62 42 P P 11 05 18.9 -0.6
baz=244
RSSD Black Hills 87.62 42 P P 11 05 18.6 -1.0
baz=244
U32A Winter Ranch, 87.95 51 IAmb IAmb 11 05 22.6
comp=Z,19nm,0.9s
HKT Hockley 88.06 58 P P 11 05 21.8 +0.3
HKT Hockley 88.06 58*d* iP P 11 05 22.2 +0.6
HKT pmax pmax
comp=Z,22nm,1.9s
HKT Hockley 88.06 58 P P 11 05 22.6 +1.0
baz=249
XLT XiLinHaoTe 88.13 317 *e*P P 11 05 23.0 +1.2
XLT pP pP 11 05 36.8 -3.2
XLT sP sP 11 05 41.6 -5.6
XLT pmax pmax
comp=Z,7.0nm,1.1s
XLT pmax pmax
comp=Z,210nm,4.5s
Z35A Perchaven, San 88.14 54 P P 11 05 22.1 +0.1
baz=248
X34A Smith Ranch, M 88.16 53 IAmb IAmb 11 05 24.1
comp=Z,19nm,1.2s
CBKS Cedar Bluff 88.35 49 P P 11 05 22.3 -0.7
baz=247
PLCA Paso Flores 88.60 132 P P 11 05 24.8 +0.5
comp=Z,4.0nm,0.7s,baz=222,slow=6.1,SNR=8.9
comp=Z,4.0nm,0.7s
A21K Barrow 88.75 5 IAmb IAmb 11 05 25.0
comp=Z,13nm,0.9s
A21K Barrow 88.75 5 P P 11 05 23.9 0.0
baz=196
237A Washetta, Mont 88.80 56 P P 11 05 25.8 +0.6
baz=249
R32A Long Quarter, 88.94 49 P P 11 05 25.8 +0.1
XAN Xi'an 89.40 306 P P 11 05 30.9 +2.9
XAN pP pP 11 05 43.4 -3.0
XAN pmax pmax
comp=Z,7.0nm,1.2s
DGMT Dagmar 89.45 39 P P 11 05 28.2 +0.4
baz=244
DGMT Dagmar 89.45 39 P P 11 05 28.2 +0.4
baz=244
NATX Nacogdoches 89.63 57 P P 11 05 29.9 +0.9
baz=250
INK Inuvik 89.73 14 P P 11 05 28.9 +0.3
INK IAmb IAmb 11 05 29.5
comp=Z,8.8nm,0.8s
INK Inuvik 89.73 14 P P 11 05 28.9 +0.3
INK pmax pmax
comp=Z,9.0nm,0.8s
INK Inuvik 89.73 14 P P 11 05 28.1 -0.5
baz=218
HHC Hu-ho-hao-te 89.95 313 *e*P P 11 05 32.2 +1.7
HHC pmax pmax
comp=Z,28nm,0.7s
HHC pmax pmax
comp=Z,190nm,5.8s
X37A Clayton 90.05 54 IAmb IAmb 11 06 07.6
comp=Z,37nm,1.9s
BO01 Tunca 90.47 126 P P 11 05 33.1 +0.1
BO01 IAmb IAmb 11 05 34.8
comp=Z,15nm,0.9s
TROLL Troll, Antarti 91.29 179 P P 11 05 36.6 +0.4
LMEL Las Melosas 91.34 126 P P 11 05 38.1 +0.7
LMEL IAmb IAmb 11 05 41.6
comp=Z,14nm,0.9s
VNA3 Neumayer Olymp 91.40 175 P P 11 05 36.8 +0.2
VNA3 Neumayer Olymp 91.40 175 pP pP 11 05 47.8 -7.0
MIAR Mount Ida 91.43 54 IAmb IAmb 11 05 38.5
comp=Z,10nm,1.1s
MIAR Mount Ida 91.43 54 P P 11 05 37.3 0.0
baz=250
MIAR Mount Ida 91.43 54 P P 11 05 36.8 -0.5
baz=250
SNAA Sanae 91.44 177 P P 11 05 37.0 +0.1
SNAA Sanae 91.44 177⇑ *i*P P 11 05 36.9 +0.1
SNAA pmax pmax
comp=Z,3.0nm,0.8s
U38A Gravette 91.44 52 P P 11 05 37.2 -0.2
baz=250
W39A Magazine 91.48 54 P P 11 05 37.4 -0.2
W39A IAmb IAmb 11 05 39.5
comp=Z,12nm,1.2s
W39A Magazine 91.48 54 P P 11 05 37.6 +0.1
baz=250
YKA Yellowknife Ar 91.50 23 P P 11 05 36.7 -0.3
comp=Z,2.4nm,0.8s,baz=234,slow=4.5,SNR=20
YKA pP **pwP** 11 05 58.5 +1.3
comp=Z,3.8nm,1.2s,baz=232,slow=4.5,SNR=3.6
YKA PP **PP** 11 09 12.1 -3.8
comp=Z,1.0nm,1.0s,baz=236,slow=8.4,SNR=7.1
comp=Z,2.4nm,0.8s
Z41A Richland Creek 91.61 56 P P 11 05 38.2 0.0
baz=251
EFI East Falkland 91.74 146⇓ *e*P P 11 05 37.8 -0.7
EFI pmax pmax
comp=Z,195nm,2.2s
VNA2 Neumayer--Watz 91.89 175 P P 11 05 39.4 +0.6
baz=178,slow=4.1
VNA2 Neumayer--Watz 91.89 175 pP pP 11 05 52.3 -5.0
MDND Maddock 91.99 40 P P 11 05 39.8 +0.2
baz=247
X40A Basin Creek Fa 91.99 55 P P 11 05 39.8 -0.1
baz=251
VNA1 Neumayer--Stat 92.09 175 P P 11 05 40.4 +0.6
ECSD EROS Data Cent 92.38 45 IAmb IAmb 11 05 43.2
comp=Z,10nm,1.2s
ECSD EROS Data Cent 92.38 45 P P 11 05 40.6 -1.0
baz=249
ECSD EROS Data Cent 92.38 45 P P 11 05 40.4 -1.1
baz=249
ORCD Orcadas 92.48 157 P P 11 05 41.4 -0.3
ORCD IAmb IAmb 11 05 43.0
comp=Z,24nm,1.5s
CD2 Chengdu 92.48 301 P P 11 05 43.0 +0.6
U40A Yellville 92.58 53 P P 11 05 42.5 -0.1
U40A IAmb IAmb 11 05 43.3
comp=Z,6.8nm,0.9s
U40A Yellville 92.58 53 P P 11 05 42.4 -0.2
baz=251
U40A P P 11 05 42.4 -0.2
baz=251
U40A Yellville 92.58 53 P P 11 05 42.2 -0.5
baz=251,SNR=5.9
S39A Bolivar 92.66 51 IAmb IAmb 11 05 43.7
comp=Z,22nm,1.7s
S39A Bolivar 92.66 51 P P 11 05 42.7 -0.2
baz=251
W41B Gary Mavity, V 92.66 54 IAmb IAmb 11 05 44.5
comp=Z,18nm,1.1s
W41B Gary Mavity, V 92.66 54 P P 11 05 43.7 +0.7
baz=251
W41B Gary Mavity, V 92.66 54 P P 11 05 43.5 +0.5
baz=251,SNR=9.6
WHAR Wooly Hollow 92.67 54 P P 11 05 42.9 -0.1
LCO Las Campanas 92.68 121 P P 11 05 43.7 0.0
LCO Las Campanas 92.68 121 P P 11 05 43.7 0.0
LCO pmax pmax
comp=Z,31nm,1.0s
C36M Paulatuk 92.81 16 P P 11 05 42.8 0.0
baz=227
ATAH Atahualpa 92.82 98 LR LR 11 37 14.6
comp=Z,66nm,20.8s,baz=241,slow=29
PZH PanZhiHua 92.83 297 P P 11 05 44.5 +0.3
PZH pmax pmax
comp=Z,10.0nm,0.6s
PZH pmax pmax
comp=Z,120nm,7.1s
CMAR Chiang Mai Arr 92.97 288 P P 11 05 46.8 +2.0
comp=Z,2.5nm,0.7s,baz=101,slow=2.6,SNR=13
comp=Z,2.5nm,0.7s

CMAR **Chiang Mai Arr** 92.97 288 P **P** 11 05 43.2 -1.6
CMAR **Chiang Mai Arr** 92.97 288 *i* P **P** 11 05 47.0 +2.2
CMAR pmax pmax
comp=Z,3.0nm,0.8s
FCAR Ozark Folk Cen 92.99 54 IAmb IAmb 11 05 45.3
comp=Z,18nm,1.5s
P38A Dawn 93.14 50 P **P** 11 05 45.0 -0.2
baz=251
MGMO Mountain Grove 93.28 52 P **P** 11 05 46.0 +0.1
R40A Maddies Statio 93.64 51 IAmb IAmb 11 05 48.1
comp=Z,16nm,1.0s
R40A Maddies Statio 93.64 51 P **P** 11 05 47.1 -0.3
baz=251
LCAR Lake Charles 93.79 54 P **P** 11 05 47.7 -0.5
LCAR IAmb IAmb 11 05 48.9
comp=Z,13nm,1.1s
P40A Paris 94.19 50 IAmb IAmb 11 05 50.3
comp=Z,6.8nm,0.9s
P40A Paris 94.19 50 P **P** 11 05 49.2 -0.7
baz=252
CCM Cathedral Cave 94.33 52 P **P** 11 05 49.7 -0.9
CCM Cathedral Cave 94.33 52 P **P** 11 05 49.7 -0.9
CCM pmax pmax
comp=Z,6.0nm,1.0s
CCM Cathedral Cave 94.33 52 P **P** 11 05 49.7 -0.9
baz=252
CCM Cathedral Cave 94.33 52 P **P** 11 05 49.9 -0.7
baz=252
A36M Sachs Harbour 94.36 13 P **P** 11 05 48.8 -1.2
baz=226
AGMN Agassiz Nation 94.48 41 P **P** 11 05 49.8 -1.3
AGMN Agassiz Nation 94.48 41 P **P** 11 05 50.2 -0.9
baz=250
AGMN Agassiz Nation 94.48 41 P **P** 11 05 49.6 -1.5
baz=250
FVM French Village 94.93 52 IAmb IAmb 11 05 54.0
comp=Z,13nm,1.1s
ULM Lac du Bonnet 95.15 39 P **P** 11 05 52.7 -1.4
comp=Z,4.5nm,0.8s,baz=223,slow=4.2,SNR=4.9
ULM LR LR 11 40 22.4
comp=Z,164nm,19.5s,baz=288,slow=30
comp=Z,4.5nm,0.8s
F36A Milaca 95.18 44 IAmb IAmb 11 05 55.6
comp=Z,16nm,1.6s
SPMN Marine on St. 95.45 44 P **P** 11 05 54.9 -0.7
SPMN Marine on St. 95.45 44 P **P** 11 05 55.2 -0.4
baz=252
L40A Anamosa 95.57 48 P **P** 11 05 56.0 -0.2
L40A Anamosa 95.57 48 P **P** 11 05 55.9 -0.4
baz=252
P43A Skaggs, Pawnee 96.09 51 P **P** 11 05 58.0 -0.7
WVT Waverly 96.38 54 P **P** 11 05 59.1 -1.0
baz=254
TIXI Tiksi 96.39 344 P **P** 11 05 59.2 -0.1
TIXI Tiksi 96.39 344 ⇑ *i* P **P** 11 05 59.4 +0.1
TIXI pmax pmax
comp=Z,6.0nm,1.5s
JFWS Jewell Farm 96.51 47 P **P** 11 05 59.3 -1.2
JFWS IAmb IAmb 11 06 00.7
comp=Z,14nm,1.1s
JFWS Jewell Farm 96.51 47 P **P** 11 05 59.3 -1.2
JFWS pmax pmax
comp=Z,14nm,1.1s
JFWS Jewell Farm 96.51 47 P **P** 11 05 59.1 -1.3
baz=253
I40A Norwalk 96.54 46 IAmb IAmb 11 06 01.1
comp=Z,16nm,1.3s
352A Blakely 97.46 59 IAmb IAmb 11 06 07.3
comp=Z,2nm,1.0s
U49A Red Boiling Sp 98.08 54 P **P** 11 06 07.5 -0.2
U49A IAmb IAmb 11 06 10.5
comp=Z,11nm,1.2s
U49A Red Boiling Sp 98.08 54 P **P** 11 06 07.4 -0.2
baz=255
COWI Conover 98.17 44 P **P** 11 06 07.6 -0.3
baz=254
GOGA Godfrey 99.14 58 P **Pdif** 11 06 13.6 +1.0
baz=256
LPAZ La Paz 99.41 110 P **Pdif** 11 06 14.6 -0.3
comp=Z,1.1nm,0.9s,baz=292,slow=2.5,SNR=3.1
comp=Z,1.1nm,0.9s
LPAZ La Paz 99.41 110 IAmb IAmb 11 06 42.6
comp=Z,13nm,1.9s
LPAZ La Paz 99.41 110 P **Pdif** 11 06 14.6 -0.3
LPAZ pmax pmax
comp=Z,13nm,1.9s
GOMU GeErMu 101.08 305 Pdif **Pdif** 11 06 17.1 -4.5
GOMU AMB AMB
comp=Z,58nm,6.8s
RES Resolute Bay 103.18 16 Pdiff **Pdif** 11 06 30.1 +0.5
comp=Z,1.4nm,0.8s,baz=247,slow=8.4,SNR=5.7
L61B Northampton 109.11 50 P **PKiKP** 11 11 01.5 +0.9
baz=264
LBNH Lisbon 109.81 48 P **PKiKP** 11 11 03.7 +1.9
baz=266
HRV Adam Dziewonsk 109.94 50 P **PKiKP** 11 11 03.6 +1.5
baz=265
ZALV Zalesovo Beam 110.32 322 PKiKP **PKiKP** 11 11 01.9 -0.6
comp=Z,1.3nm,0.6s,baz=54,slow=1.8,SNR=4.2
MK31 Makanchi Array 111.78 314 *c i* PKIKP **PKiKP** 11 11 05.1 -0.4
MKAR Makanchi Array 111.78 314 PKiKP **PKiKP** 11 11 05.2 -0.3
comp=Z,2.0nm,0.5s,baz=135,slow=0.7,SNR=20
MKAR pPKiKP **pPKiKP** 11 11 29.7 +5.2
comp=Z,1.7nm,0.7s,baz=96,slow=0.4,SNR=6.6
MKAR PKKPbc **PKKPbc** 11 21 59.1 -1.0
comp=Z,0.3nm,0.5s,baz=279,slow=4.6,SNR=3.6
KURK Kurchatov 114.17 318 ⇑ *i* PKIKP PKPdf 11 11 09.6 -0.3
KSH Kashi 116.26 306 PKP **PKiKP** 11 11 16.3 +1.8
BRVK Borovoye 119.03 322 **PKiKP** 11 11 19.5 +0.2
BRVK Borovoye 119.03 322 PKiKP **PKiKP** 11 11 19.5 +0.2
ARU Arti 124.53 328 PKP **PKiKP** 11 11 29.9 0.0
comp=Z,6.3nm,0.5s,baz=80,slow=6.1,SNR=9.2
ARU Arti 124.53 328 **PKiKP** 11 11 30.0 0.0
ARU Arti 124.53 328 *c i* PKIKP **PKiKP** 11 11 30.0 0.0
ARU pmax pmax
comp=Z,10.0nm,1.7s
ARCES ARCESS Array B 126.05 352 PKP **PKPdf** 11 11 32.3 +0.1
comp=Z,8.5nm,0.8s,baz=0.0,slow=3.6,SNR=17
AKTO Aktyubinsk 127.07 321 PKP **PKiKP** 11 11 35.0 -0.2
comp=Z,1.0nm,0.5s,baz=51,slow=6.5,SNR=5.8
KIRV Kirov 127.81 333 *c i* PKIKP **PKiKP** 11 11 36.3 -0.1
KLMR Klimovskoe 130.14 340 *e* PKIKP **PKPdf** 11 11 38.4 -1.8
KLMR pmax pmax
comp=Z,13nm,1.2s
KLMR Klimovskoe 130.14 340 *e* PKPdf **PKPdf** 11 11 38.5 -1.8
KLMR AMP 11 11 41.7
comp=Z,13nm,1.2s
BOSA Boshof 131.26 202 PKP **PKiKP** 11 11 44.4 -0.2
comp=Z,3.8nm,1.0s,baz=177,slow=2.0,SNR=4.3
BELG Belogornoye 132.06 327 *c i* PKIKP **PKPdf** 11 11 44.4 +0.3
comp=Z,11nm,0.8s,baz=119,slow=4.5,SNR=3.7
BELG Belogornoye 132.06 327 *c i* PKIKP **PKiKP** 11 11 45.0 -0.1
FINES FINESS Array B 133.36 347 PKP **PKiKP** 11 11 46.9 -0.6
comp=Z,5.4nm,0.8s,baz=62,slow=3.3,SNR=4.3
OBN Obninsk 135.41 336 *e* PKIKP **PKiKP** 11 11 51.5 -0.4
OBN *e* 11 14 24.7
OBN pmax pmax
comp=Z,8.0nm,0.9s
NOA NORSAR Array B 135.77 357 PKP **PKPdf** 11 11 51.0 +0.1
comp=Z,1.6nm,0.9s,baz=14,slow=4.1,SNR=3.5
MNK Minsk 138.97 341 *i* PKIKP **PKPdf** 11 11 53.1 -3.8
MNK *i* SS SS 11 33 00.6 +0.9
MNK *i* SSS SSS 11 38 11.3
MNK pmax pmax
comp=Z,20nm,0.7s
MNK pmax pmax
comp=E,8.0nm,0.9s
MNK pmax pmax
comp=N,8.0nm,0.9s
MNK MLR MLR
comp=E,61nm,23.0s
MNK MLR MLR
comp=Z,4μm,25.0s
MNK MLR MLR
comp=N,13nm,16.0s
KIV Kislovodsk 139.25 319 *e* PKIKP **PKiKP** 11 11 59.4 -0.8
KIV pmax pmax
comp=Z,4.0nm,1.0s
AKASG Malin Array Be 141.65 337 PKhKP PKPpre 11 11 55.8
comp=Z,1nm,0.6s,baz=29,slow=3.3,SNR=8.0
AKASG Malin Array Be 141.65 337 **PKPdf** 11 12 01.8 -0.1
AKASG Malin Array Be 141.65 337 PKIKP **PKPdf** 11 12 01.8 -0.1
AKBB Malin Array Si 141.65 337 ‖ *e* PKIKP **PKPdf** 11 12 01.4 -0.5
LVV L'vov 144.21 340 *e* PKIKP **PKPab** 11 12 04.4 0.0
KMBO Kilima Mbogo 144.77 242 PKP **PKPdf** 11 12 09.6 +0.7
comp=Z,4.9nm,0.7s,baz=79,slow=5.2,SNR=8.4

KSP Ksiaz 145.22 349 *e* PKP **PKPdf** 11 12 08.8 +0.6
CLL Collm 145.26 353 **PKPbc** 11 12 07.7 -0.4
CLL Collm 145.26 353 ‖ *i* PKIKP **PKPdf** 11 12 08.2 0.0
CLL pmax pmax
comp=Z,52nm,1.2s
CLL Collm 145.26 353 ‖ *i* PKPbc **PKPdf** 11 12 08.2 0.0
comp=Z,52nm,1.2s
CLL *e* PKiKP **PKiKP** 11 12 13.0 +0.8
CLL *e* pPKPbc pPKPab 11 12 19.0 -7.7
CLL *e* (sPKiKP) 11 12 33.0
VASR Vaslui 145.46 334 ⇑ P **PKPab** 11 12 09.6 +0.5
CHVC Chvalec 145.51 349 *e* PKP **PKPab** 11 12 09.6 +0.4
CHVC *ex* x 11 12 34.9
OSTC Ostas 145.51 349 *e* PKP **PKPab** 11 12 09.8 +0.6
KOLS Kolonicke sedl 145.54 342 *e* PKIKP **PKPab** 11 12 10.8 +1.5
KOLS Kolonicke sedl 145.54 342 *e* PKP **PKPab** 11 12 10.8 +1.5
BRG Berggiesshubel 145.57 352 *e* PKP **PKPab** 11 12 09.6 +0.2
BRG Amp 11 12 10.7
comp=Z,35nm,1.1s
BRG pPKP **sPKPdf** 11 12 35.4 +0.6
BRG Amp 11 12 37.7
comp=Z,22nm,1.2s
BRG Berggiesshubel 145.57 352 *e* PKIKP **PKPab** 11 12 09.5 +0.2
BRG pmax pmax
comp=Z,35nm,1.2s
BRG pmax pmax
comp=Z,22nm,1.2s
UPC Upice 145.59 349 *e* PKP2 **PKPab** 11 12 09.8 +0.3
UPC Upice 145.59 349 *e* PKP **PKPab** 11 12 09.8 +0.3
NIE Niedzica 145.66 344 *e* PKP **PKPab** 11 12 10.8 +0.9
BUR08 Bucovina Ar. S 145.67 337 PKPbc **PKPab** 11 12 10.6 +0.6
DPC Dobruska-Polom 145.69 349 *e* PKP2 **PKPab** 11 12 10.0 +0.1
DPC Dobruska-Polom 145.69 349 *e* PKP **PKPab** 11 12 10.0 +0.1
DPC *ex* x 11 12 35.5
BURAR Bucovina Array 145.69 337 ⇑ P **PKPab** 11 12 11.0 +0.9
BURAR Bucovina Array 145.69 337 PKPbc **PKPab** 11 12 10.8 +0.7
BURAR Bucovina Array 145.69 337 ⇑ PKP2 **PKPab** 11 12 11.0 +0.9
UZH Uzhgorod 145.80 341 *e* PKP2 **PKPab** 11 12 10.0 -0.3
PVCC Panska Ves 145.81 351 *e* PKP2 **PKPab** 11 12 10.6 +0.3
PVCC Panska Ves 145.81 351 *e* PKP **PKPab** 11 12 10.6 +0.3
KRLC Kraliky 145.86 348 *e* PKP2 **PKPab** 11 12 10.4 -0.2
KRLC Kraliky 145.86 348 *e* PKP **PKPab** 11 12 10.4 -0.2
KRLC *ex* x 11 12 37.0
BIZ Bicaz 145.91 336 ⇑ P **PKPab** 11 12 11.3 +0.5
MORC Moravsky Berou 145.99 347 ⇑ P **PKPab** 11 12 11.0 0.0
MORC Moravsky Berou 145.99 347 PKPbc **PKPab** 11 12 10.4 0.0
MORC Moravsky Berou 145.99 347 ⇑ PKP2 **PKPab** 11 12 11.0 0.0
MORC Moravsky Berou 145.99 347 *e* PKP **PKPab** 11 12 11.1 0.0
TESR Tescani 146.04 335 ⇑ P **PKPab** 11 12 11.1 -0.2
GHRR 146.09 334 ⇑ P **PKPab** 11 12 11.9 +0.5
LANS Liptovska Anna 146.13 345 *e* PKP2 **PKPab** 11 12 12.6 +1.0
LANS Liptovska Anna 146.13 345 *e* PKP **PKPab** 11 12 12.6 +1.0
LANS *e* 11 12 38.5
BEBN Eben Emael 146.16 1 *d* PKP **PKPbc** 11 12 11.0 +0.2
MAUC Maruska 146.32 347 *e* PKP **PKPab** 11 12 12.6 +0.3
MAUC *ex* x 11 12 38.6
PRU Pruhonice 146.34 351 *e* PKP2 **PKPab** 11 12 12.1 -0.2
PRU Pruhonice 146.34 351 *e* PKP **PKPab** 11 12 12.1 -0.2
PRU *ex* x 11 12 36.4
MEM Membach 146.35 1 *d* PKPab **PKPab** 11 12 11.9 -0.4
MEM *d* PKiKP **PKiKP** 11 12 14.1 -0.4
MEM *d* pPKP **pPKPdf** 11 12 24.3 -4.9
BTNL Ternell 146.38 0 *d* PKP **PKPbc** 11 12 11.8 +0.2
NKC Novy Kostel 146.39 353 *e* PKP2 **PKPab** 11 12 12.3 -0.2
NKC Novy Kostel 146.39 353 *e* PKP **PKPab** 11 12 12.3 -0.2
SNF Seneffe 146.41 3 *d* PKP **PKPbc** 11 12 11.5 -0.1
ARCR ARCALIA 146.45 338 ⇑ P **PKPab** 11 12 13.1 +0.3
CFR Carcaliu 146.45 332 ⇑ P **PKPdf** 11 12 11.0 +0.6
CFR Carcaliu 146.45 332 ⇑ PKP2 **PKPdf** 11 12 11.0 +0.6
KECS Kecovo 146.47 343 *e* PKP2 **PKiKP** 11 12 13.8 -1.0
KECS Kecovo 146.47 343 *e* PKP **PKiKP** 11 12 13.8 -1.0
VRI Vrincioaia 146.53 334 ⇑ P **PKPab** 11 12 12.7 -0.5
VRI Vrincioaia 146.53 334 ⇑ PKP2 **PKPab** 11 12 12.7 -0.5
BGES Gesves 146.56 2 *d* PKP **PKPbc** 11 12 12.3 +0.1
TPGR Topolog 146.57 331 ⇑ P **PKPab** 11 12 13.1 -0.3
PLOR Plostina 146.57 334 ⇑ P **PKPbc** 11 12 12.4 +0.1
PLOR Plostina 146.57 334 ⇑ PKP2 **PKPbc** 11 12 12.4 +0.1
BHOU Houvegnez 146.61 1 *d* PKPab **PKPab** 11 12 13.0 -0.4
VRAC Vranov 146.63 348 ⇑ P **PKPbc** 11 12 12.6 +0.3
VRAC Vranov 146.63 348 ⇑ PKP2 **PKPbc** 11 12 12.6 +0.3
VRAC Vranov 146.63 348 *e* PKP **PKPab** 11 12 12.8 -0.7
BMRD Maredsous 146.63 2 *d* PKPab **PKPbc** 11 12 12.6 +0.4
COVR Voineasa-Covas 146.76 335 ⇑ P **PKPbc** 11 12 13.3 +0.5
RCHB Rochefort 146.79 1 *d* PKP **PKPbc** 11 12 13.0 +0.3
JAVC Velka Javorina 146.83 346 *e* PKP **PKPab** 11 12 14.7 +0.4
DOU Dourbes 146.84 2 *d* PKP **PKPab** 11 12 13.4 -0.8
KRUC Moravsky 146.91 348 *e* PKP **PKPbc** 11 12 13.6 +0.5
HARR Harsova 146.92 331 ⇓ P **PKPab** 11 12 14.3 -0.4
HARR Harsova 146.92 331 ⇓ PKP2 **PKPab** 11 12 14.3 -0.4
DOPR Dopca 146.99 335 ⇑ P **PKPab** 11 12 14.5 -0.5
PSZ Piszkesteto 147.15 343 ⇑ P **PKPbc** 11 12 14.4 +0.5
PSZ Piszkesteto 147.15 343 PKPbc **PKPbc** 11 12 13.9 0.0
PSZ Piszkesteto 147.15 343 ⇑ PKP2 **PKPbc** 11 12 14.4 +0.5
SMOL Smolenice 147.21 347 *e* PKP2 **PKPab** 11 12 15.4 -0.3
SMOL Smolenice 147.21 347 *e* PKP **PKPab** 11 12 15.4 -0.3
BR131 Keskin Array S 147.22 319 PKPbc **PKPbc** 11 12 14.4 -0.1
BR131 Keskin Array S 147.22 319 ‖ *e* PKIKP **PKPdf** 11 12 12.7 +0.6
BRTR Keskin Array B 147.22 319 PKPbc **PKPbc** 11 12 15.1 +0.6
comp=Z,7.7nm,0.8s,baz=128,slow=1.6,SNR=28
BRTR pPKPbc **pPKPab** 11 12 36.1 +1.2
comp=Z,1.9nm,0.6s,baz=126,slow=31,SNR=3.6
BRTR Keskin Array B 147.22 319 PKPbc **PKPbc** 11 12 15.0 +0.5
DRGR 147.28 339 ⇓ P **PKPdf** 11 12 12.8 +0.9
DRGR 147.28 339 ⇓ PKIKP **PKPdf** 11 12 12.8 +0.9
WLF Walferdange 147.30 0 PKPbc **PKPbc** 11 12 14.8 +0.7
WLF Walferdange 147.30 0 PKP2 **PKPbc** 11 12 14.9 +0.7
WLF Walferdange 147.30 0 *d* PKPab **PKPab** 11 12 15.4 -0.6
KHC Kasperske Hory 147.32 351 *e* PKIKP **PKPdf** 11 12 12.7 +0.8
KHC Kasperske Hory 147.32 351 *e* PKP **PKPdf** 11 12 12.7 +0.8
KHC *ex* x 11 12 39.0
MODS Modra-Piesok 147.37 347 *e* PKP2 **PKPab** 11 12 15.8 -0.6
MODS Modra-Piesok 147.37 347 *e* PKP **PKPab** 11 12 15.8 -0.6
MODS *e* 11 12 40.8
CKRC Cesky Krumlov 147.51 350 *e* PKP **PKPbc** 11 12 15.5 +0.7
CKRC *ex* x 11 12 40.9
VOIR 147.56 335 ⇑ P **PKPbc** 11 12 16.1 +0.9
VOIR 147.56 335 ⇑ PKP2 **PKPbc** 11 12 16.1 +0.9
GERES GERESS Array B 147.58 351 PKPbc **PKPbc** 11 12 15.6 +0.5
comp=Z,7.6nm,0.9s,baz=29,slow=2.2,SNR=34
GERES pPKPbc **pPKPab** 11 12 37.0 +1.1
comp=Z,4.5nm,0.9s,baz=29,slow=2.2,SNR=2.2
CSKK Cskako 148.09 345 PKP **PKiKP** 11 12 17.8 -0.4
CONA Conrad Observa 148.09 348 *i* P **PKiKP** 11 12 17.4 -0.8
comp=Z,25nm,1.1s,SNR=12
CONA *i* S **pPKPab** 11 12 43.2 +5.3
comp=Z,36nm,1.1s
SIRR Siria 148.09 340 ⇑ P **PKPbc** 11 12 15.0 -1.4
RONA Rosalia, Austr 148.22 347 *i* P **PKiKP** 11 12 17.7 -0.8
comp=Z,26nm,0.9s,SNR=11
RONA *i* S **pPKPab** 11 12 43.4 +5.1
comp=Z,33nm,1.0s
PRD Provadia 148.31 330 P **PKiKP** 11 12 17.9 -0.8
RAZG Razgrad 148.44 332 ⇑ P **PKPbc** 11 12 17.6 +0.2
MPLH Magyarpolny 148.44 346 PKP **PKiKP** 11 12 18.0 -0.8
MOA Molln 148.46 350 *i* P **PKPbc** 11 12 17.9 +0.5
comp=Z,10nm,0.8s,SNR=5.2
MOA *i* S **pPKPab** 11 12 44.0 +4.7
comp=Z,15nm,1.0s
GZR Gura Zlata 148.47 338 ⇑ P **PKPbc** 11 12 17.4 -0.1
GZR Gura Zlata 148.47 338 ⇑ PKIKP **PKPbc** 11 12 17.4 -0.1
BFO Black Forest 148.60 358 **PKPbc** 11 12 18.2 +0.5
BFO Black Forest 148.60 358 PKP2 **PKPbc** 11 12 18.2 +0.5
BZS Buzias 148.68 339 ⇑ P **PKPbc** 11 12 18.3 +0.3
BZS Buzias 148.68 339 ⇑ PKP2 **PKPbc** 11 12 18.3 +0.3
BIOA Bazlschl, Aus 148.72 351 *i* P **PKPbc** 11 12 18.3 +0.2
comp=Z,4.6nm,0.5s
BIOA *i* S **pPKPab** 11 12 43.9 +3.6
comp=Z,23nm,1.3s
ARSA Arzberg 148.81 348 *i* P **PKPbc** 11 12 18.7 +0.4
comp=Z,8.2nm,0.8s
ARSA *i* S **pPKPab** 11 12 44.4 +3.7
comp=Z,16nm,1.1s
SZH Strazhica 148.94 332 P **PKPbc** 11 12 19.2 +0.5
HERR Herculane 149.04 338 ⇑ P **PKPbc** 11 12 19.3 +0.4
MORH Mrgy, Hungar 149.05 343 ⇑ P **PKPbc** 11 12 18.7 -0.1
MORH Mrgy, Hungar 149.05 343 PKP **PKPbc** 11 12 19.0 +0.2
DJES Djerdap 149.19 337 ⇑ P **PKPbc** 11 12 19.4 +0.2
RETA Reutte 149.28 354 *i* P **PKPbc** 11 12 19.9 +0.4
comp=Z,21nm,1.0s,SNR=8.6
RETA *i* S **pPKPab** 11 12 45.7 +3.1
comp=Z,28nm,1.2s
KOVH Kovagotottos 149.31 344 PKP **PKPbc** 11 12 19.9 +0.4

WATA Walderalm 149.34 353 *i* P **PKPbc** 11 12 20.0 +0.2
comp=Z,14nm,0.6s
WATA *i* S **pPKPab** 11 12 45.8 +2.8
comp=Z,27nm,1.2s
KBA Koelnbreinsper 149.36 351 *i* P **PKPbc** 11 12 19.7 -0.2
comp=Z,11nm,0.8s
KBA *i* S **pPKPab** 11 12 45.5 +2.4
comp=Z,13nm,1.2s
MDVR Moldovita 149.38 338 ⇑ P **PKPbc** 11 12 19.8 0.0
MOTA Moosalm 149.38 354 *i* P **PKPbc** 11 12 20.1 +0.2
comp=Z,40nm,1.2s,SNR=10
MOTA *i* S **pPKPab** 11 12 45.9 +2.7
comp=Z,47nm,1.2s
WTTA Wattenberg 149.41 353 *i* P **PKPbc** 11 12 20.4 +0.4
comp=Z,26nm,0.6s,SNR=14
WTTA *i* S **pPKPab** 11 12 46.4 +3.1
comp=Z,26nm,0.9s
SOKA Soboth 149.45 348 *i* P **PKPbc** 11 12 19.9 -0.1
comp=Z,17nm,0.9s,SNR=7.7
SOKA *i* S **pPKPab** 11 12 45.7 +2.3
comp=Z,39nm,1.5s
SQTA Sankt Quirin 149.50 354 *i* P **PKPbc** 11 12 20.5 +0.4
comp=Z,19nm,0.7s,SNR=8.9
SQTA *i* S **pPKPab** 11 12 46.4 +2.8
comp=Z,44nm,1.3s
DAVA Damuels 149.55 355 *i* P **PKiKP** 11 12 20.9 -0.4
comp=Z,40nm,1.0s,SNR=11
DAVA *e* S **pPKPab** 11 12 46.6 +2.7
comp=Z,35nm,1.1s
FRGS Fruska Gora 149.67 341 ⇑ P **PKiKP** 11 12 21.0 -0.5
OBKA Obir 149.71 349 *i* S pPKPab 11 12 46.1 +1.7
comp=Z,16nm,1.6s
FETA Feichten 149.74 354 *i* P **PKiKP** 11 12 21.3 -0.5
comp=Z,36nm,1.0s,SNR=12
FETA *i* S **pPKPab** 11 12 47.2 +2.6
comp=Z,42nm,1.2s
MYKA Terra Mystica 149.75 350 *i* P **PKPbc** 11 12 20.4 -0.3
comp=Z,14nm,0.7s,SNR=6.3
MYKA *i* S **pPKPab** 11 12 46.0 +1.5
comp=Z,21nm,1.3s
ABTA Abfaltersbach 149.80 352 *i* P **PKPbc** 11 12 20.8 -0.1
comp=Z,58nm,1.1s,SNR=20
ABTA *i* S **pPKPab** 11 12 46.6 +1.8
comp=Z,41nm,1.1s
MPEP Malo Peshtene 149.81 335 P **PKiKP** 11 12 21.6 -0.2
BLKB Belogradchik 150.01 336 ⇑ P **PKPbc** 11 12 21.7 +0.3
LJU Ljubljana 150.16 349 *i* PKPbc **PKPbc** 11 12 21.9 +0.2
LJU epPKPbc **pPKPab** 11 12 47.5 +1.4
STAL STALIGIAL 150.25 351 **PKPbc** 11 12 20.6 -1.3
PGB Panagyurishte 150.29 333 P **PKiKP** 11 12 23.0 +0.1
GBRS Gornja Briga 150.60 348 *i* PKPbc **PKiKP** 11 12 23.1 -0.3
GBRS *i* pPKPbc **pPKPab** 11 12 48.8 +0.8
CTI Castel Tesino 150.60 353 **PKPbc** 11 12 22.4 -0.4
CTI Castel Tesino 150.60 353 PKIKP **PKPbc** 11 12 22.4 -0.4
VTS Vitosha 150.63 334 ⇑ P **PKiKP** 11 12 23.7 0.0
VTS Vitosha 150.63 334 ⇑ PKIKP **PKiKP** 11 12 23.7 0.0
VTS Vitosha 150.63 334 P **PKiKP** 11 12 23.9 +0.2
RZN Rozhen 150.73 331 P **PKPbc** 11 12 23.4 0.0
SALO Salr 151.15 354 **PKPbc** 11 12 24.2 +0.1
MMB Musomiste 151.26 332 P **PKPbc** 11 12 24.5 +0.1
KKB Krupnik 151.31 334 P **PKiKP** 11 12 25.0 0.0
BNI Bardonecchia 151.92 360 **PKPdf** 11 12 19.6 +0.1
BNI PKPbc **PKiKP** 11 12 26.9 +0.7
BNI PKPab **PKPab** 11 12 36.9 +1.7
BNI Bardonecchia 151.92 360 PKIKP **PKiKP** 11 12 27.0 +0.7
BNI 11 12 36.9
PGAV Gavieira, Arco 151.98 24 *e* PKPbc **PKiKP** 11 12 26.9 +0.4
PCAB Cabril 152.29 24 *e* PKPbc **PKiKP** 11 12 27.3 +0.3
PDG Podgorica 152.29 339 ⇑ P **PKPbc** 11 12 26.5 -0.2
PDG Podgorica 152.29 339 PKPbc **PKPbc** 11 12 26.7 0.0
PDG **PKPab** 11 12 37.2 +0.6
POLO Lamas de Olo 152.67 24 *e* PKPbc **PKiKP** 11 12 28.2 +0.3
PBRG Braganca 152.69 22 *e* PKPbc **PKiKP** 11 12 27.9 0.0
PBRG Braganca 152.69 22 *e* PKPab **PKPab** 11 12 38.5 0.0
PVRL Vila Real 152.78 24 *e* PKPbc **PKiKP** 11 12 28.2 +0.1
FNA Florina 152.93 335 PKPdf **PKPdf** 11 12 19.4 -1.5
FNA **PKPbc** 11 12 27.8 -0.5
FNA PKPab **PKPab** 11 12 39.9 +0.4
FNA Florina 152.93 335 PKIKP **PKPbc** 11 12 27.8 -0.5
FNA 11 12 39.9
MVO Moncorvo 153.14 23 *e* PKPbc **PKiKP** 11 12 29.4 +0.5
PVIS Viseu 153.19 25 *e* PKPbc **PKiKP** 11 12 29.2 +0.2
PVIS Viseu 153.19 25 *e* PKPab **PKPab** 11 12 41.0 +0.4
PCAS Casmilo, Conde 153.50 26 *e* PKPbc **PKiKP** 11 12 30.1 +0.5
MTE Manteigas 153.60 25 *e* PKPbc **PKiKP** 11 12 30.4 +0.6
MTE Manteigas 153.60 25 **PKiKP** 11 12 30.3 +0.4
PSBE So Bento 153.81 28 *e* PKPbc **PKiKP** 11 12 31.1 +0.9
PCBR Castelo Branco 154.10 25 *e* PKPbc **PKiKP** 11 12 31.4 +0.6
PMRV Marv??o 154.49 26 *e* PKPab **PKPab** 11 12 46.2 +0.1
ESDC Sonseca Array 155.54 20 PKP **PKPdf** 11 12 24.9 +0.3
comp=Z,0.3nm,0.6s,baz=292,slow=2.3,SNR=5.0
ESDC PKPbc PKPbc 11 12 33.8
comp=Z,1.4nm,0.7s,baz=346,slow=2.5,SNR=9.8
ESDC PKPab **PKPab** 11 12 50.3 -0.3
comp=Z,1.6nm,0.7s,baz=329,slow=4.8,SNR=6.4
ESDC Sonseca Array 155.54 20 **PKPdf** 11 12 23.6 -1.0
ESDC **PKPab** 11 12 51.3 +0.7
KEST Kesra 161.06 353 PKP **PKPdf** 11 12 30.7 -0.7
comp=Z,1.4nm,0.4s,baz=32,slow=8.9,SNR=3.6
KEST PKPab **PKPab** 11 13 12.6 -1.9
comp=Z,2.9nm,0.5s,baz=357,slow=4.9,SNR=4.6
KEST Kesra 161.06 353 PKPab **PKPab** 11 13 14.9 +0.3
DBIC Dimbokro 164.97 131 PKP2 **PKPab** 11 13 30.9 -1.4
comp=Z,6.3nm,0.9s,baz=247,slow=2.3,SNR=4.6
DBIC Dimbokro 164.97 131 PKPab **PKPab** 11 13 31.0 -1.4
TOA0 Torodi Ar. Sit 174.07 128 PKPdf **PKPdf** 11 12 39.9 -1.2
TOA0 PKPab **PKPab** 11 14 12.6 0.0
TORD Torodi Ar. Bea 174.07 128 PKP **PKPdf** 11 12 40.0 -1.1
comp=Z,4.7nm,0.8s,baz=288,slow=0.5,SNR=19
TORD PKPab **PKPab** 11 14 12.5 -0.1
comp=Z,13nm,0.8s,baz=259,slow=3.8,SNR=31
TORD Torodi Ar. Bea 174.07 128 **PKPdf** 11 12 40.4 -0.7
TORD **PKPab** 11 14 12.6 -0.1

IDC ***10*** *10:57:50.5±1.8, 18°.07S×66°.74W, h267km±22km, mb3.1/2, mbtmp3.5/4 Error ellipse: s-maj=60.8km s-min=26.0km az=86.0*
SCB ***10*** *10:57:57.1±4.3, 18°.47S×66°.98W, h32km±36km, ML2.7/5, MW3.3, Error ellipse: s-maj=28.9km s-min=16.2km az=1.0*
ISC 10 10:57:51.0±1.1, 18°.18S±0°.05×67°.1W±0°.1, h280km, n17,
α2813/23, Central Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BBOE	**La Paz, Chanca**	**1.58**	**329**	P	**Pn**	**10 58 35.6**	**+2.1**
BBOD	**La Paz, Gloria**	**2.08**	**317**	P	**Pn**	**10 58 39.4**	**+2.0**
LPAZ	**La Paz**	**2.11**	**333**	P	**Pn**	**10 58 38.8**	**+1.1**
	10nm,0.3s,baz=150,slow=5.7,SNR=121						
LPAZ				S	**S**	**10 59 14.0**	**-0.8**
	7.8nm,0.7s,baz=221,slow=20,SNR=20						
LPAZ	**La Paz**	**2.11**	**333**	P	**Pn**	**10 58 38.9**	**+1.1**
LPAZ				S	**S**	**10 59 11.9**	**-2.9**
LPAZ				IAML		10 59 15.0	
	4.9nm,0.3s						
PB16	**IPOC Station P**	**2.26**	**266**	P	**Pn**	**10 58 41.2**	**+2.2**
PB16				IAML		10 59 33.7	
	7.3nm,1.8s						
PB08	**IPOC Station P**	**2.73**	**224**	P	**Pn**	**10 58 44.8**	**+1.7**
PB11	**IPOC Station P**	**2.86**	**236**	P	**Pn**	**10 58 46.2**	**+2.1**
PB11				S	**S**	**10 59 24.0**	**-2.4**
PB11				IAML		10 59 30.5	
	51nm,0.2s						
MOCB	**Mochara**	**3.36**	**156**	P	**Pn**	**10 58 51.4**	**+1.7**
PB01	**IPOC Station P**	**3.61**	**218**	P	**Pn**	**10 58 54.3**	**+2.3**
PB01				S	**S**	**10 59 38.2**	**-2.4**
PB01				IAML		10 59 42.8	
	37nm,0.2s						
PB02	**IPOC Station P**	**4.07**	**219**	P	**Pn**	**10 58 59.3**	**+2.3**
PB02				S	**S**	**10 59 46.6**	**-3.2**
PB02				IAML		10 59 50.3	
	50nm,0.3s						
PB09	**IPOC Station P**	**4.11**	**209**	P	**Pn**	**10 59 00.3**	**+2.7**

0.3nm,0.6s,baz=127,slow=4.9,SNR=4.3
0.3nm,0.6s

*IDC **10** 11:01:52.8±1.0,20.°45N×120.°39E, h0km, mb3.9/6, mbtmp3.9/7, ML3.5/1, Error ellipse: s-maj=37.8km s-min=19.3km az=76.0*
*NEIC **10** 11:01:52.6±2.4,20.°60N±0.°09×120.°0E±0.°1, h10km±1km, mb4.1/14, Error ellipse: s-maj=16.8km s-min=15.3km az=255.0*
*TAP **10** 11:01:56.0,21.°18N×120.°86E, h172km, ML3.3, C*

ISC 10 11:01:52.7±1.8, 20.°62N±0.°06×120.°21E±0.°07, h14km±10km, n59, σ1°99/67, mb4.0/14, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TSEB	**Hengchuen, Pin**	**1.43**	**27**	*i*	S	**Sg**	**11 02 39.9**	**+1.0**
	baz=358							
TWKBT	**Hengchun**	**1.44**	**23**	*i*	P	**Pg**	**11 02 21.3**	**+1.0**
	baz=355							
HEN	**Hengchun**	**1.47**	**20**	*e*	S	**Sg**	**11 02 39.5**	**-0.5**
	baz=353							
SMST	**Manzhou Townsh**	**1.52**	**23**		P	**Pg**	**11 02 22.2**	**+0.3**
	baz=350							
SMST					S	**Sg**	**11 02 40.7**	**-0.9**
	baz=350							
SLIU	**Shizi**	**1.69**	**19**		P	**Pb**	**11 02 22.8**	**-0.7**
	baz=357							
SLIU					*e*S	**Sn**	**11 02 43.6**	**+0.4**
	baz=357							
TWP	**Hsiaoliuchiu**	**1.73**	**5**	*e*	S	**Sg**	**11 02 47.9**	**-0.4**
	baz=339							
WLCH	**Liuqiu**	**1.73**	**5**	*e*	P	**Pg**	**11 02 26.0**	**0.0**
	baz=339							
WLCH					*e*S	**Sg**	**11 02 48.1**	**-0.5**
	baz=339							
SCZT	**Fangliau**	**1.79**	**12**		P	**Pn**	**11 02 24.5**	**+1.3**
	baz=344							
SCZT					S	**Sn**	**11 02 46.2**	**+0.5**
	baz=344							
TAWH	**Dawu Township**	**1.83**	**20**	*e*	P	**Pn**	**11 02 24.0**	**+0.3**
	baz=6.0							
TAWH					*e*S	**Sn**	**11 02 46.2**	**-0.5**
	baz=6.0							
TAW	**Tawu**	**1.85**	**20**		P	**Pn**	**11 02 24.7**	**+0.7**
	baz=7.0							
TAW					*e*S	**Sn**	**11 02 45.1**	**-2.1**
	baz=7.0							
EAST	**Anshuo**	**1.86**	**19**	*e*	P	**Pn**	**11 02 24.7**	**+0.5**
	baz=5.0							
LYUB	**Lan-yu**	**1.89**	**43**	*e*	P	**Pn**	**11 02 23.0**	**-1.4**
	baz=39							
LYUB					*e*S	**Sn**	**11 02 42.9**	**-5.2**
	baz=39							
SSPT	**Xinbi**	**1.89**	**10**	*e*	P	**Pn**	**11 02 25.9**	**+1.4**
	baz=348							
MASBT	**Mashibuluo**	**2.03**	**11**	*e*	P	**Pn**	**11 02 27.6**	**+1.2**
	baz=346							
ECL	**Taimali**	**2.09**	**19**	*e*	P	**Pn**	**11 02 25.9**	**-1.4**
	baz=7.0							
TSMG	**Majia**	**2.12**	**11**	*e*	P	**Pn**	**11 02 27.9**	**+0.2**
	baz=345							
TWM1	**Shoushan**	**2.21**	**5**	*e*	P	**Pn**	**11 02 29.4**	**+0.4**
	baz=347							
TWG	**Pinlang**	**2.34**	**20**			**Pn**	**11 02 31.2**	**+0.5**
TWGBT	**Beinan**	**2.34**	**20**	*e*	P	**Pn**	**11 02 28.0**	**-2.7**
	baz=14							
SHHT	**Tainan City**	**2.40**	**3**	*e*	P	**Pn**	**11 02 31.4**	**-0.1**
	baz=339							
TSCK	**Chigu Township**	**2.52**	**357**	*e*	P	**Pn**	**11 02 33.7**	**+0.5**
	baz=340							
TSCK					*e*S	**Sn**	**11 03 03.9**	**+0.1**
	baz=340							
STYH	**Taoyuan**	**2.60**	**12**	*e*	P	**Pn**	**11 02 32.6**	**-1.7**
	baz=3.0							
TPUB	**Ta-pu**	**2.70**	**8**		Pn	**Pn**	**11 02 37.4**	**+1.6**
FULB	**Fuli**	**2.76**	**21**	*e*	P	**Pn**	**11 02 32.7**	**-3.9**
	baz=8.0							
EYUL	**Yuli**	**2.91**	**21**	*e*	P	**Pn**	**11 02 34.5**	**-4.1**
	baz=11							
ALS	**Alishan**	**2.93**	**11**	*e*	P	**Pn**	**11 02 36.8**	**-2.4**
	baz=352							
YULB	**Yu-li**	**2.94**	**20**			**Pn**	**11 02 41.3**	**+2.2**
YULB	**Yu-li**	**2.94**	**20**	*e*	P	**Pn**	**11 02 34.8**	**-4.3**
	baz=12							
SSLB	**Suanglung**	**3.23**	**12**		Pn	**Pn**	**11 02 45.2**	**+2.1**
VWDT	**VWDT**	**3.24**	**15**	*e*	P	**Pn**	**11 02 38.8**	**-4.4**
	baz=6.0							
NACB	**Ninganchiao**	**3.77**	**20**		Pn	**Pn**	**11 02 50.6**	**+0.2**
YHNB	**Yeheng**	**4.18**	**15**		Pn	**Pn**	**11 02 58.8**	**+2.7**
KNMB	**Chin-men Tao**	**4.18**	**337**		Pn	**Pn**	**11 02 54.5**	**-1.6**
TATO	**Taipei**	**4.50**	**15**		Pn	**Pn**	**11 03 00.7**	**+0.3**
YOJ	**Yonaguni jima**	**4.62**	**34**		Pn	**Pn**	**11 03 04.9**	**+2.8**
ENH	**Enshi**	**13.64**	**317**		Pn	**Pn**	**11 05 04.8**	**-1.0**
KSRS	**Korea Array**	**18.07**	**20**		P	**P**	**11 06 06.1**	**+2.4**
	0.2nm,0.3s,baz=199,slow=12,SNR=5.2							
	1.2nm,0.7s							
TOLI2	**Tolitoli**	**19.39**	**178**		P	**P**	**11 06 17.2**	**-1.2**
TOLI2					IAmb	IAmb	11 06 19.2	
	comp=Z,6.4nm,0.8s							
MAJO	**Matsushiro**	**22.34**	**41**		P	**P**	**11 06 51.0**	**+0.8**
MAJO					IAmb	IAmb	11 07 10.1	
	comp=Z,5.1nm,1.0s							
MJB9	**Matsu-Tunnel**	**22.34**	**41**		P	**P**	**11 06 51.0**	**+0.8**
MJB9					IAmb	IAmb	11 07 16.3	
	comp=Z,4.2nm,0.9s							
MJAR	**Matsushiro Arr**	**22.34**	**41**		P	**P**	**11 06 54.0**	**+3.8**
	comp=Z,2.0nm,0.8s,baz=228,slow=9.0,SNR=5.8							
	comp=Z,2.0nm,0.8s							
MJAR	**Matsushiro Arr**	**22.34**	**41**		P	**P**	**11 06 51.0**	**+0.9**
MKAR	**Makanchi Array**	**40.35**	**319**		P	**P**	**11 09 34.7**	**+4.7**
	comp=Z,0.5nm,0.6s,baz=114,slow=9.4,SNR=6.3							
	comp=Z,0.5nm,0.6s							
PSA00	**Pilbara Seismi**	**41.93**	**181**		P	**P**	**11 09 43.2**	**+0.1**
PSA00					IAmb	IAmb	11 10 12.6	
	comp=Z,7.8nm,1.5s							
WB0	**Warramunga Arr**	**42.47**	**160**		P	**P**	**11 09 46.7**	**-0.8**
WB0					IAmb	IAmb	11 10 14.6	
	comp=Z,10nm,1.4s							
WRA	**Warramunga Arr**	**42.62**	**160**		P	**P**	**11 09 48.9**	**+0.2**
	comp=Z,2.4nm,0.9s,baz=342,slow=9.1,SNR=7.4							
	comp=Z,2.4nm,0.9s							
WB2	**Warramunga Arr**	**42.62**	**160**		P	**P**	**11 09 49.0**	**+0.2**
WR0	**Warramunga Arr**	**42.70**	**160**		P	**P**	**11 09 49.9**	**+0.6**
WR0					IAmb	IAmb	11 09 58.1	
	comp=Z,3.3nm,0.8s							
ZAA0	**Zalesovo Array**	**42.80**	**330**		P	**P**	**11 09 49.5**	**-0.3**
ZAA0					IAmb	IAmb	11 09 54.4	
	comp=Z,3.3nm,0.7s							
ZALV	**Zalesovo Beam**	**42.80**	**330**		P	**P**	**11 09 53.9**	**+4.1**
	comp=Z,2.2nm,0.6s,baz=126,slow=7.5,SNR=8.8							
	comp=Z,2.2nm,0.6s							
ZALV	**Zalesovo Beam**	**42.80**	**330**		P	**P**	**11 09 48.6**	**-1.3**
BOOM	**Boomskoye usch**	**42.97**	**311**		P	**P**	**11 09 50.1**	**-1.5**
BOOM					IAmb	IAmb	11 09 59.2	
	comp=Z,4.6nm,1.2s							
AS31	**Alice Springs**	**45.99**	**162**		P	**P**	**11 10 16.4**	**+0.6**
ASAR	**Alice Springs**	**45.99**	**162**		P	**P**	**11 10 16.8**	**+1.1**
	comp=Z,0.9nm,0.5s,baz=343,slow=6.9,SNR=14							
	comp=Z,0.9nm,0.5s							
AB31	**Akbulak array**	**55.33**	**316**		P	**P**	**11 11 23.9**	**-2.1**
	comp=Z,0.4nm,0.3s,baz=169,slow=12,SNR=27							
ABKAR	**Akbulak array**	**55.33**	**316**		P	**P**	**11 11 24.9**	**-1.1**
TTA	**Tatalina**	**69.04**	**29**		P	**P**	**11 13 01.1**	**+3.3**
BMAR	**Burnt Mountain**	**73.14**	**24**		P	**P**	**11 13 22.9**	**+0.4**
YKA	**Yellowknife Ar**	**86.60**	**22**		P	**P**	**11 14 36.6**	**+1.2**
	comp=Z,0.9nm,0.9s,baz=309,slow=4.7,SNR=7.9							
	comp=Z,0.9nm,0.9s							

*SNET **10** 11:03:15.4±1.6, 12.°77N×87.°06W, h10km, ML3.7*
*INET **10** 11:03:15.5±0.2, 12.°76N×87.°01W, h2km±1km, MW4.8*
*UCR **10** 11:03:15.2±1.6, 12.°76N×87.°05W, h10km, ML3.7*

ISC 10 11:03:14.3±1.5, 12.°83N±0.°09×87.°01W±0.°07, h3km±15km, n15, σ0°53/23, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
COPN	**Copaltepe**	**0.77**	**147**	*e*	P	**Pg**	**11 03 28.7**	**-0.3**
COPN					*e*S	**Sb**	**11 03 40.4**	**-0.8**
APYN	**Apoyeque**	**0.88**	**132**	*e*	P	**Pg**	**11 03 31.7**	**+0.5**
APYN					*e*S	**Sb**	**11 03 44.1**	**-0.3**
CNCH	**Conchagua**	**0.91**	**299**	*e*	P	**Pg**	**11 03 31.5**	**-0.4**
CNCH					*e*S	**Sb**	**11 03 46.0**	**+0.4**
CNCH	**Conchagua**	**0.91**	**299**	*e*	P	**Pg**	**11 03 31.5**	**-0.4**
CNCH					*e*S	**Sb**	**11 03 46.0**	**+0.4**
LCND	**La Caada**	**0.98**	**299**	*e*	P	**Pg**	**11 03 32.4**	**-0.7**
LCND					*e*S	**Sg**	**11 03 46.1**	**+0.4**
LCND					IAML		11 03 49.2	
	comp=Z,2μm,0.7s							
LCND	**La Caada**	**0.98**	**299**	*e*	P	**Pg**	**11 03 32.4**	**-0.7**
LCND					*e*S	**Sg**	**11 03 46.1**	**+0.4**
LCND					IAML		11 03 49.2	
	comp=Z,2μm,0.7s							
CRUN	**El Crucero**	**1.09**	**140**	*e*	P	**Pg**	**11 03 35.4**	**+0.1**
TGUH	**Tegucigalpa,Un**	**1.24**	**348**	*e*	P	**Pn**	**11 03 38.6**	**-0.2**
TGUH	**Tegucigalpa,Un**	**1.24**	**348**	*e*	P	**Pn**	**11 03 38.6**	**-0.2**
COEB	**Comit de Eme**	**1.62**	**294**	*e*	P	**Pn**	**11 03 43.2**	**-0.7**
COEB	**Comit de Eme**	**1.62**	**294**	*e*	P	**Pn**	**11 03 43.2**	**-0.7**
PQSS	**Presa 15 de Se**	**1.70**	**298**	*e*	P	**Pn**	**11 03 44.8**	**-0.1**
PQSS					*e*S	**Sb**	**11 04 08.4**	**+0.4**
PQSS	**Presa 15 de Se**	**1.70**	**298**	*e*	P	**Pn**	**11 03 44.8**	**-0.1**
PQSS					*e*S	**Sb**	**11 04 08.4**	**+0.4**
COEG	**Centro de Oper**	**1.98**	**294**	*e*	P	**Pn**	**11 03 49.6**	**+0.7**
COEG	**Centro de Oper**	**1.98**	**294**	*e*	P	**Pn**	**11 03 49.6**	**+0.7**

*ANF **10** 11:14:10.7±0.1, 33.°45N×116.°43W, h14km±1km, ML3.4/28, Error ellipse: s-maj=1.1km s-min=0.9km az=2.0*
*NEIC **10** 11:14:11.5±1.3, 33.°45N±0.°02×116.°42W±0.°02, h11km±8km, Error ellipse: s-maj=2.7km s-min=1.7km az=217.0*
*PAS **10** 11:14:12.0±1.3, 33.°46N±0.°02×116.°42W±0.°02, h11km±7km, ML3.5/239, ML3.2/58(NEIC), Error ellipse: s-maj=2.6km s-min=1.7km az=219.0*
*ECX **10** 11:14:12.2±0.7, 33.°46N×116.°44W, h20km±2km, MD3.0, ML3.2*
*NCEDC **10** 11:14:12.1, 33.°46N×116.°42W, h10km*

ISC 10 11:14:11.0±0.9, 33.°45N±0.°01×116.°40W±0.°02, h13km±6km, n100, σ0°77/139, 11C-9D, Southern California

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PFO	**Pinyon Flats O**	**0.17**	**343**			**Pg**	**11 14 15.3**	**+0.1**
PFO					IAML		11 14 18.1	
	6μm,0.2s							
PFO	**Pinyon Flats O**	**0.17**	**343**		P	**Pg**	**11 14 15.3**	**+0.1**
	baz=168,SNR=1000							
PFO					S	**Sg**	**11 14 17.8**	**-0.3**
	baz=168							
SLH	**Sleepy Hollow**	**0.28**	**154**	⇑*i*	P	**Pb**	**11 14 18.2**	**+0.3**
SLH					*e*S	**Sb**	**11 14 22.8**	**+0.3**
GVDA	**Garner Valley**	**0.32**	**314**			**Pg**	**11 14 17.7**	**0.0**
GVDA						**Sg**	**11 14 21.9**	**-0.2**
MATG	**Mataguay Scout**	**0.32**	**221**	⇓*i*	P	**Pb**	**11 14 18.4**	**-0.3**
MATG					*e*S	**Sb**	**11 14 23.1**	**-0.8**
JUEM	**Julian Eagle M**	**0.40**	**205**	⇓*i*	P	**Pb**	**11 14 19.9**	**-0.2**
MONP2	**Monument Peak**	**0.55**	**182**		P	**Pb**	**11 14 22.6**	**-0.1**
MONP2	baz=0.1,SNR=243							
					S	**Sb**	**11 14 29.9**	**-0.7**
	baz=0.1							
MONP2	**Monument Peak**	**0.55**	**182**	⇓*i*	P	**Pb**	**11 14 22.7**	**0.0**
BELC	**Belle Mtn. Jos**	**0.65**	**31**		P	**Pb**	**11 14 24.0**	**-0.3**
	baz=213,SNR=702							
BELC					S	**Sb**	**11 14 32.6**	**-0.7**
	baz=213							
CRR	**Carrizo Plain**	**0.66**	**147**	*e*	P	**Pb**	**11 14 24.9**	**+0.5**
EML	**El Monte Cty P**	**0.67**	**214**	⇓*i*	P	**Pg**	**11 14 24.1**	**+0.1**
EML					*e*S	**Sg**	**11 14 32.7**	**-0.1**
EML					IAML		11 14 33.6	
	comp=N,803nm,0.1s							
EML				*e*			11 14 33.6	
EML				⇑*e*			11 14 33.7	
EML					IAML		11 14 33.7	
	comp=E,1μm,0.4s							
MURC	**Murrieta**	**0.68**	**283**		P	**Pg**	**11 14 24.1**	**-0.2**
	baz=102,SNR=288							
MURC					S	**Sg**	**11 14 32.6**	**-0.8**
	baz=102							
SUP	**Superstition M**	**0.69**	**135**			**Pb**	**11 14 25.0**	**+0.2**
SUP						**Sb**	**11 14 35.1**	**+0.9**
SWSC	**Sam W. Stewart**	**0.71**	**135**		P	**Pb**	**11 14 25.3**	**+0.1**
	baz=315,SNR=365							
SWSC					S	**Sb**	**11 14 35.5**	**+0.7**
	baz=315							
SWSC	**Sam W. Stewart**	**0.71**	**135**	⇑*i*	P	**Pb**	**11 14 25.3**	**+0.1**
SWSC					*e*S	**Sb**	**11 14 35.6**	**+0.8**
BAR	**Barrett**	**0.80**	**197**			**Pb**	**11 14 26.6**	**-0.1**
BAR	**Barrett**	**0.80**	**197**	⇓*i*	P	**Pb**	**11 14 26.6**	**-0.1**
BAR					*e*S	**Sg**	**11 14 37.0**	**+0.1**
109C	**Camp Elliot, M**	**0.81**	**227**			**Pg**	**11 14 26.6**	**-0.2**
109C	**Camp Elliot, M**	**0.81**	**227**		P	**Pg**	**11 14 26.6**	**-0.2**
	baz=45,SNR=83							
109C					S	**Sg**	**11 14 37.2**	**-0.2**
	baz=45							
BC3	**Big Chuckawall**	**0.82**	**75**		P	**Pb**	**11 14 27.2**	**0.0**
	baz=257,SNR=319							
BC3					S	**Sb**	**11 14 38.5**	**+0.4**
	baz=257							
IKP	**In-Ko-Pah, Jac**	**0.83**	**163**		P	**Pb**	**11 14 27.7**	**+0.3**
	baz=342,SNR=283							
IKP					S	**Sb**	**11 14 38.8**	**+0.4**
	baz=342							
IKP	**In-Ko-Pah, Jac**	**0.83**	**163**	⇑*i*	P	**Pb**	**11 14 27.7**	**+0.3**
IKP					*e*S	**Sb**	**11 14 38.8**	**+0.4**
SDRC	**San Diego Road**	**0.84**	**213**	⇓*i*	P	**Pg**	**11 14 26.9**	**-0.4**
SDRC					*e*S	**Sg**	**11 14 38.0**	**-0.3**
SDRC				⇑*e*			11 14 38.6	
SDRC					IAML		11 14 38.6	
	comp=E,1μm,0.2s							
SDRC					IAML		11 14 38.6	
	comp=N,835nm,0.3s							
SDRC				⇓*e*			11 14 38.6	
RMX	**La Rumorosa**	**0.88**	**162**			**Pn**	**11 14 29.2**	**-0.1**
RMX					IAML		11 14 43.2	
	comp=N,949nm,0.2s							
RMX	**La Rumorosa**	**0.88**	**162**	⇑*e*	P	**Pn**	**11 14 29.2**	**-0.1**
RMX				*i*	S	**Sn**	**11 14 42.6**	**+0.6**
ELS	**Elsinore Mount**	**0.88**	**284**			**Pg**	**11 14 27.4**	**-0.7**
ELS					IAML		11 14 39.4	
	comp=N,584nm,0.2s							
YUH	**Yuha Desert**	**0.89**	**153**			**Pb**	**11 14 28.1**	**-0.2**
YUH					IAML		11 14 42.1	
	comp=E,669nm,0.2s							
YUH					IAML		11 14 42.2	
	comp=N,694nm,0.1s							
YUH2	**Yuha Desert**	**0.89**	**153**	⇑*e*	P	**Pb**	**11 14 28.1**	**-0.2**
YUH2					*e*S	**Sb**	**11 14 40.9**	**+0.8**
TKX	**Tecate**	**0.89**	**191**			**Pg**	**11 14 28.2**	**-0.1**
TKX	**Tecate**	**0.89**	**191**	*i*	P	**Pb**	**11 14 28.4**	**0.0**
TKX					*e*S	**Sg**	**11 14 39.9**	**-0.1**
BBRC	**Big Bear Solar**	**0.92**	**332**		P	**Pg**	**11 14 28.7**	**-0.3**
	baz=152,SNR=90							
BBRC					S	**Sg**	**11 14 40.4**	**-0.7**
	baz=152							
RSBC	**Riverside Bore**	**0.94**	**304**			**Pg**	**11 14 28.5**	**-0.6**
OLP	**Otay Lakes Par**	**0.95**	**208**	*e*	P	**Pg**	**11 14 28.9**	**-0.5**
TJX	**Tijuana**	**1.08**	**211**			**Pb**	**11 14 31.5**	**-0.1**
UABX	**UABC, Campus M**	**1.14**	**135**		Pn	**Pb**	**11 14 32.3**	**-0.3**
CBX	**Cerro Bola**	**1.15**	**191**		Pn	**Pn**	**11 14 32.9**	**-0.1**
CBX					IAML		11 14 50.0	
	comp=E,617nm,0.2s							
CBX					IAML		11 14 51.4	
	comp=N,472nm,0.5s							
CBX	**Cerro Bola**	**1.15**	**191**	*e*	P	**Pn**	**11 14 32.8**	**-0.1**
CBX					*e*S	**Sb**	**11 14 47.5**	**-0.3**
CBX					IAML		11 14 50.0	
	comp=E,624nm,0.2s							
CBX				⇑*e*			11 14 50.0	
CBX					IAML		11 14 51.4	
	comp=N,424nm,0.3s							
CBX				⇑*e*			11 14 51.4	
IRM	**Iron Mountain**	**1.26**	**55**		P	**Pn**	**11 14 33.7**	**-0.7**
	baz=237,SNR=69							
IRM					S	**Sg**	**11 14 52.0**	**+0.2**
	baz=237							
BFSC	**Mount Baldy Ra**	**1.31**	**307**		P	**Pn**	**11 14 34.7**	**-0.5**
	baz=127,SNR=104							
BFSC					S	**Sb**	**11 14 51.5**	**-1.0**
	baz=127							
GLA	**Glamis**	**1.37**	**106**			**Pn**	**11 14 35.2**	**-0.8**
GLA					IAML		11 14 54.0	
	comp=E,277nm,0.5s							
GLA	**Glamis**	**1.37**	**106**		P	**Pn**	**11 14 35.0**	**-1.0**
	baz=288,SNR=26							
GLA					S	**Sn**	**11 14 53.5**	**-0.5**
	baz=288							
CPBX	**Cerro Prieto**	**1.38**	**138**	*e*	P	**Pn**	**11 14 35.0**	**-0.9**
CPBX				⇓*e*			11 15 07.2	
CPBX					IAML		11 15 07.2	
	comp=E,1μm,0.4s							
CPBX					IAML		11 15 13.6	
	comp=N,1μm,0.5s							
CPBX				⇑*e*			11 15 13.6	
EMSC	**East Mesa**	**1.38**	**120**	*e*	P	**Pn**	**11 14 35.7**	**-0.2**
HEC	**Hector,Ludlow**	**1.38**	**2**		P	**Pn**	**11 14 35.7**	**-0.4**
	baz=183,SNR=207							
HEC					S	**Sn**	**11 14 54.2**	**-0.1**
	baz=183							
GMRC	**Granite Mounta**	**1.47**	**24**		P	**Pn**	**11 14 36.8**	**-0.5**
	baz=206,SNR=65							
GMRC					Sb	**Sg**	**11 14 58.0**	**-0.5**
	baz=206							
RRX	**Edison Barstow**	**1.51**	**341**		P	**Pn**	**11 14 37.4**	**-0.4**
	baz=161,SNR=14							
RRX					Sb	**Sg**	**11 14 58.9**	**-0.8**
	baz=161							
ALAMX	**Rancho Alamar**	**1.55**	**158**	⇑*e*	P	**Pn**	**11 14 38.0**	**-0.3**
ALAMX					*e*S	**Sb**	**11 14 59.5**	**+0.5**
ALAMX					IAML		11 15 01.4	
	comp=E,522nm,0.2s							
ALAMX				⇓*e*			11 15 01.4	
CCX	**Cicese**	**1.59**	**188**			**Pb**	**11 14 39.7**	**-0.5**
CCX					IAML		11 15 01.7	
	comp=E,395nm,0.4s							
CCX					IAML		11 15 04.3	
	comp=N,283nm,0.4s							
BLYC	**Blythe**	**1.59**	**78**			**Pn**	**11 14 38.3**	**-0.6**
BLYC					IAML		11 15 03.7	
	comp=N,201nm,0.4s							
BLYC					IAML		11 15 04.9	
	comp=E,280nm,0.4s							
FMP	**Fort Macarthur**	**1.60**	**280**		Pb	**Pn**	**11 14 39.7**	**+0.7**
	baz=99							
FMP					Sb	**Sb**	**11 15 00.6**	**-0.1**
	baz=99							
PASC	**Pasadena Art C**	**1.66**	**296**			**Pn**	**11 14 40.5**	**+0.7**
CIS	**Catalina Islan**	**1.69**	**269**		P	**Pn**	**11 14 39.7**	**-0.6**
	baz=87,SNR=19							
CIS					S	**Sn**	**11 15 01.4**	**-0.3**
	baz=87							
DECC	**Green Verdugo**	**1.80**	**297**		Pb	**Pb**	**11 14 43.2**	**-0.7**
	baz=116							
DECC					Sb	**Sb**	**11 15 06.3**	**-0.1**
	baz=116							
SCI2	**San Clemente I**	**1.86**	**256**		P	**Pn**	**11 14 42.4**	**-0.2**
	baz=74,SNR=8.2							
SCI2					S	**Sn**	**11 15 05.7**	**-0.2**
	baz=74							
GSC	**Goldstone, Bar**	**1.88**	**350**			**Pn**	**11 14 42.9**	**-0.1**
GSC					IAML		11 15 13.2	
	comp=E,240nm,0.4s							
GSC					IAML		11 15 13.8	
	comp=N,163nm,0.7s							
GSC	**Goldstone, Bar**	**1.88**	**350**		P	**Pn**	**11 14 42.5**	**-0.5**
	baz=170,SNR=34							
GSC					Sb	**Sb**	**11 15 09.9**	**+1.0**
	baz=170							
EDW2	**Edwards Air Fo**	**1.95**	**318**		Pb	**Pb**	**11 14 46.8**	**+0.3**
	baz=137,SNR=55							
EDW2					Sb	**Sb**	**11 15 11.0**	**+0.3**
	baz=137							
NEE2	**Needles Airpor**	**1.98**	**48**		Pb	**Pg**	**11 14 48.3**	**-0.7**
	baz=229,SNR=7.5							
NEE2					Sb	**Sg**	**11 15 13.7**	**-1.0**
	baz=229							
TUQ	**Turquoise Moun**	**2.02**	**11**		Pb	**Pg**	**11 14 48.9**	**-1.0**
	baz=192,SNR=18							
TUQ					Sb	**Sg**	**11 15 14.5**	**-1.7**
	baz=192							
OSI	**Osito Audit: C**	**2.26**	**302**		Pb	**Pb**	**11 14 51.2**	**-0.4**
	baz=120							
OSI					Sb	**Sb**	**11 15 20.0**	**+0.4**
	baz=120							
LRMC	**Laurel Mtn Rad**	**2.29**	**333**		Pg	**Pg**	**11 14 54.4**	**-0.5**
	baz=152							
LRMC					Sb	**Sb**	**11 15 21.4**	**+0.8**
	baz=152							
113A	**Mohawk Valley,**	**2.31**	**106**		Pn	**Pn**	**11 14 48.9**	**+0.1**
QSM	**Queen of Sheba**	**2.54**	**351**			**Pn**	**11 14 52.1**	**0.0**
ARVC	**Arvin**	**2.62**	**310**		Sb	**Sb**	**11 15 31.4**	**+1.4**
	baz=129							
SNCC	**San Nicolas Is**	**2.62**	**267**		Pn	**Pn**	**11 14 53.5**	**+0.4**
SNCC					IAML		11 15 35.5	
	comp=E,64nm,1.2s							
W13A	**Hualapai Mount**	**2.66**	**51**			**Pn**	**11 14 54.0**	**+0.3**
SFX	**San Felipe**	**2.73**	**151**		Pn	**Pn**	**11 14 54.4**	**-0.2**
GWY	**Greenwater Val**	**2.74**	**355**			**Pn**	**11 14 54.9**	**0.0**
ISA	**Isabella, Lake**	**2.80**	**323**		Pn	**Pn**	**11 14 55.5**	**-0.1**
ISA	**Isabella, Lake**	**2.80**	**323**		Sb	**Sb**	**11 15 36.5**	**+1.4**
	baz=142							
BCW	**Bitter Crk WRg**	**2.91**	**302**		Pn	**Pn**	**11 14 59.5**	**+2.3**
BCW					IAML		11 15 45.4	
	comp=N,114nm,0.7s							
BCW					IAML		11 15 49.2	
	comp=E,110nm,0.8s							
SHPR	**Sheep Range**	**3.22**	**18**			**Pn**	**11 15 01.7**	**+0.3**
214A	**Organ Pipe Nat**	**3.37**	**115**		Pn	**Pn**	**11 15 02.9**	**-0.5**
TPNV	**Topopah Spring**	**3.50**	**2**			**Pn**	**11 15 05.6**	**+0.3**
TPNV					IAML		11 16 03.5	
	comp=E,41nm,0.5s							
TPNV					IAML		11 16 05.9	
	comp=E,46nm,0.4s							
TPNV	**Topopah Spring**	**3.50**	**2**		P	**Pn**	**11 15 06.1**	**+0.8**
	baz=182,SNR=8.1							
GRAC	**Grapevine Rang**	**3.63**	**348**		Pn	**Pn**	**11

HUEN		**1.00 117**	*eP*	**Pn**	**11 21 57.5**	**-0.2**
HUEN			*eS*	**Sn**	**11 22 12.2**	**+0.5**
CRUN	**El Crucero**	**1.11 137**	*eP*	**Pg**	**11 21 59.6**	**+0.4**
TGUH	**Tegucigalpa,Un**	**1.26 351** ⇓	*iP*	**Pn**	**11 22 01.5**	**0.0**
TGUH			*eS*	**Sb**	**11 22 18.1**	**0.0**
TGUH	**Tegucigalpa,Un**	**1.26 351** ⇓	*iP*	**Pn**	**11 22 01.5**	**0.0**
TGUH			*eS*	**Sb**	**11 22 18.1**	**0.0**
TGUH	**Tegucigalpa,Un**	**1.26 351**	*eP*	**Pn**	**11 22 01.6**	**0.0**
PACA	**Pacayal**	**1.38 299**	*eP*	**Pn**	**11 22 03.1**	**-0.1**
PACA	**Pacayal**	**1.38 299**	*eP*	**Pn**	**11 22 03.1**	**-0.1**
COEB	**Comit de Eme**	**1.58 296**	*eP*	**Pn**	**11 22 06.1**	**+0.4**
COEB	**Comit de Eme**	**1.58 296**	*eP*	**Pn**	**11 22 06.1**	**+0.4**
PQSS	**Presa 15 de Se**	**1.66 300**	*eP*	**Pn**	**11 22 06.9**	**+0.1**
PQSS	**Presa 15 de Se**	**1.66 300**	*eP*	**Pn**	**11 22 06.9**	**+0.1**
SCLA	**Alcaldia de Sa**	**1.84 299**	*eP*	**Pn**	**11 22 09.7**	**+0.4**
SCLA	**Alcaldia de Sa**	**1.84 299**	*eP*	**Pn**	**11 22 09.7**	**+0.4**
COEG	**Centro de Oper**	**1.94 295**	*eP*	**Pn**	**11 22 11.4**	**+0.7**
COEG	**Centro de Oper**	**1.94 295**	*eP*	**Pn**	**11 22 11.4**	**+0.7**

*IDC **10** 11:45:27.5±1.5, 13°.06N×86°.82W, h0km, mb3.6/4, mbtmp3.6/6, ML3.3/2, Error ellipse: s-maj=47.7km s-min=21.4km az=48.0*
*INET **10** 11:45:28.2±1.5, 12°.81N×87°.07W, h1km±2km, ML3.2, MW3.5*
*SNET **10** 11:45:29.1±0.7, 12°.85N×87°.10W, h12km±11km, ML3.8*
*UCR **10** 11:45:29.5±0.9, 12°.87N×87°.10W, h16km±7km, ML3.8, MW4.1*

ISC 10 11:45:27.8±1.2**, 12°.91N**±0°.05×**87°.02W**±0°.05**, h2**km±9km**, n38**, σ1°.915/50**, mb3.6/4**, 4C**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CNGN	**Cerro Negro**	**0.51**	**142**	*eP*		**Pg**	**11 45 38.7**	**+1.1**
CNGN					IAML		11 46 27.6	
	comp=Z,2μm,1.1s							
COPN	**Copaltepe**	**0.84**	**150**	*eP*		**Pg**	**11 45 43.3**	**-0.5**
COPN					*eS*	**Sg**	**11 45 55.3**	**+0.7**
COPN					IAML		11 45 57.1	
	comp=Z,2μm,0.6s							
CNCH	**Conchagua**	**0.87**	**295** ⇑	*iP*		**Pg**	**11 45 44.4**	**-0.1**
CNCH					*eS*	**Sg**	**11 45 56.8**	**+0.9**
CNCH	**Conchagua**	**0.87**	**295** ⇑	*iP*		**Pg**	**11 45 44.4**	**-0.1**
CNCH					*eS*	**Sg**	**11 45 56.8**	**+0.9**
LCND	**La Caada**	**0.94**	**295** ⇑	*eP*		**Pg**	**11 45 45.3**	**-0.4**
LCND					*eS*	**Sg**	**11 45 58.5**	**+0.6**
LCND					IAML		11 46 06.7	
	comp=Z,3μm,0.5s							
LCND	**La Caada**	**0.94**	**295** ⇑	*eP*		**Pg**	**11 45 45.3**	**-0.4**
LCND					*eS*	**Sg**	**11 45 58.5**	**+0.6**
LCND					IAML		11 46 06.7	
	comp=Z,3μm,0.5s							
APYN	**Apoyeque**	**0.94**	**136**	*eP*		**Pg**	**11 45 45.9**	**+0.2**
APYN					*eS*	**Sn**	**11 46 01.1**	**-0.9**
APYN					IAML		11 46 02.4	
	comp=Z,81μm,0.8s							
HUEN		**1.00**	**124**	*eP*		**Pb**	**11 45 47.2**	**-0.7**
HUEN					*eS*	**Sg**	**11 46 02.1**	**+2.1**
HUEN					IAML		11 46 08.2	
	comp=Z,21nm,0.3s							
CRUN	**El Crucero**	**1.16**	**142**	*eP*		**Pb**	**11 45 48.8**	**-1.8**
CRUN					IAML		11 46 45.2	
	comp=Z,2μm,0.5s							
TGUH	**Tegucigalpa,Un**	**1.17**	**348**	*eP*		**Pn**	**11 45 50.8**	**-0.5**
TGUH					*eS*	**Sb**	**11 46 07.0**	**+0.6**
TGUH	**Tegucigalpa,Un**	**1.17**	**348**	*eP*		**Pn**	**11 45 50.8**	**-0.5**
TGUH					*eS*	**Sb**	**11 46 07.0**	**+0.6**
PACA	**Pacayal**	**1.39**	**294**	*eP*		**Pn**	**11 45 53.2**	**-1.0**
PACA	**Pacayal**	**1.39**	**294**	*eP*		**Pn**	**11 45 53.2**	**-1.0**
BOAB	**BOACO BROADBAN**	**1.40**	**109**	*eP*		**Pn**	**11 45 53.1**	**-1.2**
BOAB					*eS*	**Sn**	**11 46 13.0**	**-0.3**
COEB	**Comit de Eme**	**1.58**	**292**	*eP*		**Pn**	**11 45 56.0**	**-1.0**
COEB					IAML		11 46 19.4	
	comp=Z,1μm,0.5s							
COEB	**Comit de Eme**	**1.58**	**292**	*eP*		**Pn**	**11 45 56.0**	**-1.0**
COEB					IAML		11 46 19.4	
	comp=Z,1μm,0.5s							
PQSS	**Presa 15 de Se**	**1.66**	**296**	*eP*		**Pn**	**11 45 56.8**	**-1.1**
PQSS	**Presa 15 de Se**	**1.66**	**296**	*eP*		**Pn**	**11 45 56.8**	**-1.1**
SCLA	**Alcaldia de Sa**	**1.84**	**296**	*eP*		**Pn**	**11 46 00.5**	**0.0**
SCLA	**Alcaldia de Sa**	**1.84**	**296**	*eP*		**Pn**	**11 46 00.5**	**0.0**
CONN	**Concepcion**	**1.91**	**134**	*eP*		**Pn**	**11 46 01.1**	**-0.3**
CONN					IAML		11 47 04.7	
	comp=Z,202nm,0.8s							
COEG	**Centro de Oper**	**1.94**	**292**	*eP*		**Pn**	**11 46 01.2**	**-0.7**
COEG	**Centro de Oper**	**1.94**	**292**	*eP*		**Pn**	**11 46 01.2**	**-0.7**
SJTE	**Alcalda de S**	**2.06**	**290**	*eP*		**Pn**	**11 46 02.7**	**-0.7**
SJTE	**Alcalda de S**	**2.06**	**290**	*eP*		**Pn**	**11 46 02.7**	**-0.7**
VMAR	**Armenia, Volca**	**2.79**	**138**	*eP*		**Pn**	**11 46 14.3**	**+0.7**
COLC	**Colonia**	**2.85**	**141**	*eP*		**Pn**	**11 46 14.4**	**0.0**
CUI	**Cuipilapa**	**2.88**	**141**	*eP*		**Pn**	**11 46 14.8**	**0.0**
ORTG	**Ortega, Santa**	**2.96**	**149**	*eP*		**Pn**	**11 46 16.0**	**+0.1**
SAJU	**San Juanillo,**	**3.10**	**155**	*eP*		**Pn**	**11 46 17.5**	**-0.3**
JTS	**Las Juntas de**	**3.30**	**142**	Pn		**Pn**	**11 46 20.4**	**-0.1**
	comp=Z,9.3nm,0.3s,baz=22,slow=19,SNR=34							
JTS					Sn	**Sn**	**11 47 02.4**	**+2.1**
	comp=Z,5.3nm,0.3s,baz=356,slow=22,SNR=1.6							
	comp=Z,20nm,0.3s							
JTS	**Las Juntas de**	**3.30**	**142**	*eP*		**Pn**	**11 46 20.4**	**-0.1**
LAFE	**Finca La Fe, P**	**3.71**	**146**	*eP*		**Pn**	**11 46 23.2**	**-3.0**
CMIG	**Matias Romero**	**8.66**	**300**	Pn		**Pn**	**11 47 35.3**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=28,slow=21,SNR=1.6							
CMIG					Sn	**Sn**	**11 49 16.8**	**+4.3**
	comp=Z,0.3nm,0.3s,baz=24,slow=22,SNR=2.5							
	comp=Z,1.0nm,0.2s							
TXAR	**Lajitas Array**	**22.50**	**319**	P		**P**	**11 50 29.0**	**+0.1**
	comp=Z,0.4nm,0.8s,baz=142,slow=11,SNR=4.7							
	comp=Z,0.4nm,0.8s							
NVAR	**Mina Array Bea**	**37.64**	**318**	P		**P**	**11 52 44.9**	**+0.3**
	comp=Z,0.5nm,0.9s,baz=115,slow=8.1,SNR=2.7							
	comp=Z,0.5nm,0.9s							
SCHQ	**Schefferville**	**44.72**	**16**	P		**P**	**11 53 41.2**	**-1.1**
	comp=Z,1.9nm,0.6s,baz=234,slow=9.3,SNR=4.1							
	comp=Z,1.9nm,0.6s							
YKA	**Yellowknife Ar**	**53.28**	**344**	P		**P**	**11 54 46.7**	**-1.1**
	comp=Z,1.1nm,0.8s,baz=138,slow=7.7,SNR=18							
	comp=Z,1.1nm,0.8s							

*IDC **10** 12:02:43.4±1.1, 30°.64N×140°.55E, h68km±11km, mb3.4/11, mbtmp3.6/15, Error ellipse: s-maj=28.0km s-min=7.8km az=74.0*
*JMA **10** 12:02:47.1±0.3, 31°.N±2°.×14°.1E±°, h96km, MV3.5/26, NEAR TORISHIMA IS*

ISC 10 12:02:45.9±0.7**, 30°.68N**±0°.08×**140°.5E**±0°.2**, h100**km**, n29**, σ1°.88/23**, mb3.6/11**, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	**1.90**	**340**	P		**Pn**	**12 03 17.8**	**+0.6**
JAOM					S	**Sn**	**12 03 41.1**	**+0.1**
JHCJ	**Hachijojimakas**	**2.47**	**346**	P		**Pn**	**12 03 23.6**	**-1.0**
JHCJ					S	**Sn**	**12 03 52.0**	**-2.2**
JHJ2	**Mitsune**	**2.50**	**346**	P		**Pn**	**12 03 24.9**	**-0.1**
JHJ2					S	**Sn**	**12 03 53.6**	**-1.4**
JHJ	**Hachijo jima 2**	**2.52**	**346**	P		**Pn**	**12 03 24.1**	**-1.1**
	24nm,0.3s,baz=197,slow=19,SNR=10							
JHJ					S	**Sn**	**12 03 52.5**	**-2.8**
	157nm,0.5s,baz=100,slow=20,SNR=15							
JCJ	**Chichijima**	**3.85**	**157**	P		**Pn**	**12 03 40.4**	**-2.7**
	19nm,0.3s,baz=295,slow=21,SNR=1.9							
JCJ					S	**Sn**	**12 04 23.9**	**-3.4**
	68nm,0.3s,baz=270,slow=20,SNR=6.0							
TTO1	**TONANKAI O.B.S**	**4.33**	**314**	*eP*		Pn	12 03 53.0	+3.8
JOD2	**Odawara 2**	**4.73**	**346**	P		**Pn**	**12 03 55.7**	**+0.7**
JOD2					S	**Sn**	**12 04 47.8**	**-0.8**
JIE	**Ise**	**4.91**	**320**	*eP*		Pn	12 04 01.7	+4.3
JKN2	**Miekihoku**	**5.05**	**316**	*eP*		Pn	12 04 03.4	+4.1
JHO	**Hitachi**	**5.92**	**0**	P		**Pn**	**12 04 08.4**	**-2.6**
MJAR	**Matsushiro Arr**	**6.16**	**342**	P		**Pn**	**12 04 12.2**	**-2.2**
	0.5nm,0.5s,baz=176,slow=15,SNR=1.7							
KLR	**Kul'dur**	**19.69**	**343**	P		**Pn**	**12 07 06.2**	**-3.2**
	0.4nm,0.5s,baz=146,slow=14,SNR=2.5							
H11N2	**WAKE ISLAND Hy**	**26.17**	**108**	T		T	12 35 59.9	
	baz=306,slow=74							
H11N1	**WAKE ISLAND Hy**	**26.17**	**108**	T		T	12 35 59.2	
	baz=306,slow=74							
H11N3	**WAKE ISLAND Hy**	**26.18**	**108**	T		T	12 35 56.6	
	baz=306,slow=74							
H11S3	**WAKE ISLAND Hy**	**26.63**	**111**	T		T	12 36 38.1	
	baz=306							
H11S1	**WAKE ISLAND Hy**	**26.63**	**111**	T		T	12 36 38.1	
	baz=306							
H11S2	**WAKE ISLAND Hy**	**26.64**	**111**	T		T	12 36 38.1	
	baz=306							
MKAR	**Makanchi Array**	**47.12**	**307**	P		P	12 11 10.7	+2.8
	0.3nm,0.6s,baz=97,slow=8.8,SNR=3.1							
	0.3nm,0.6s							
WRA	**Warramunga Arr**	**50.68**	**188**	P		**P**	**12 11 35.4**	**+0.2**
	0.3nm,0.5s,baz=5.9,slow=7.6,SNR=8.4							
	0.3nm,0.5s							
ASAR	**Alice Springs**	**54.41**	**187**	P		**P**	**12 12 02.4**	**-0.3**
	0.1nm,0.3s,baz=2.7,slow=5.7,SNR=7.9							
	0.1nm,0.3s							
ILAR	**Eielson Array**	**55.31**	**30**	P		**P**	**12 12 08.8**	**0.0**
	0.7nm,0.8s,baz=272,slow=6.4,SNR=4.6							
	0.7nm,0.8s							
ARCES	**ARCESS Array B**	**69.69**	**340**	P		**P**	**12 13 45.6**	**+1.2**
	7.1nm,1.2s,baz=64,slow=13,SNR=1.5							
	7.1nm,1.2s							
YKA	**Yellowknife Ar**	**69.70**	**29**	P		**P**	**12 13 45.0**	**+0.5**
	0.4nm,0.9s,baz=300,slow=4.9,SNR=3.7							
	0.4nm,0.9s							
FINES	**FINESS Array B**	**74.11**	**333**	P		P	12 14 13.4	+2.5
	0.8nm,0.7s,baz=64,slow=3.2,SNR=1.1							
	0.8nm,0.7s							
NVAR	**Mina Array Bea**	**79.44**	**52**	P		**P**	**12 14 43.7**	**+2.1**
	0.5nm,0.7s,baz=316,slow=6.3,SNR=3.9							
	0.5nm,0.7s							
NOA	**NORSAR Array B**	**79.76**	**338**	P		**P**	**12 14 44.7**	**+2.1**
	0.8nm,0.8s,baz=54,slow=6.0,SNR=1.6							
	0.8nm,0.8s							
BRTR	**Keskin Array B**	**82.52**	**312**	P		**P**	**12 14 58.0**	**+0.2**
	0.5nm,0.6s,baz=67,slow=15,SNR=2.2							
	0.5nm,0.6s							
TXAR	**Lajitas Array**	**94.59**	**52**	P		P	12 15 58.2	+2.4
	0.5nm,0.8s,baz=305,slow=4.0,SNR=6.5							
	0.5nm,0.8s							

*BJI **10** 12:06:59.8±0.0, 38°.48N×144°.34E, h10km, mb5.0/83, mB5.1/53, Ms4.6/83, Ms7 4.5/79*
*MOS **10** 12:07:01.9±0.9, 38°.52N×144°.54E, h33km, mb5.5/108, Error ellipse: s-maj=5.2km s-min=3.4km az=108.8*
*IDC **10** 12:07:02.0±2.9, 38°.35N×144°.66E, h28km±19km, mb4.9/48, mbtmp5.1/55, ML4.6/6, MS4.2/67, Error ellipse: s-maj=9.9km s-min=7.3km az=90.0*
*NIED **10** 12:07:03.8, 38°.44N×144°.40E, h46km, MW4.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^16^Nm; Mrr-0.20; Mθθ-1.19; Mϕϕ1.39; Mrθ-0.11; Mθϕ0.77; Mϕr-1.48; Fault plane solution: M0 1.98000×10^16^ NP1: ϕs247.00000°, δ51.00000°, λ5.00000°. NP2:ϕs154.00000°, δ86.00000°, λ141.00000°.*
*GCMT **10** 12:07:03.8±0.2, 38°.47N±0°.02×144°.58E±0°.02, h30km, MW5.0/108, Moment Tensor Solution. s65,c87; s108,c183; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr-4.22±.14; Mθθ0.19±.10; Mϕϕ4.03±.10; Mrθ0.32±.15; Mθϕ1.28±.06; Mϕr-1.90±.12; Best double couple: M0 4.73200×10^16^ NP1:ϕs208.00000°, δ35.00000°, λ-72.00000°. NP2:ϕs6.00000°, δ57.00000°, λ-102.00000°. Principal axes: T 4.7550, Plg11.0000°, Azm105.0000°; N -0.0440, Plg10.0000°, Azm13.0000°; P -4.7100, Plg75.0000°, Azm242.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **10** 12:07:03.8±1.4, 38°.37N±0°.06×144°.58E±0°.09, h35km±1km, mb5.2/476, Mww5.0 Error ellipse: s-maj=12.4km s-min=8.8km az=296.0*
*JMA **10** 12:07:03.8±0.2, 38°.4N±0°.8×14°.4E±°, h46km, MD5.1/37, MW5.0/37, FAR E OFF NORTH HONSHU*
JMA Felt I J1 at FAR E OFF NORTH HONSHU .
*NEIC **10** 12:07:04, 38°.50N×144°.66E, h30km, Moment Tensor Solution. Duration: 4s0 Moment tensor: Scale 10^16^Nm; Mrr-2.98; Mθθ-0.00; Mϕϕ2.98; Mrθ-0.29; Mθϕ1.56; Mϕr-2.74; Fault plane solution: M0 4.35000×10^16^ NP1: ϕs218.00000°, δ27.00000°, λ-65.00000°. NP2:ϕs11.00000°, δ65.00000°, λ-102.00000°. Principal axes: T 4.5828, Plg19.0000°, Azm110.0000°; N -0.5123, Plg11.0000°, Azm16.0000°; P -4.0705, Plg67.0000°, Azm258.0000°;*

ISC 10 12:07:02.3±0.3**, 38°.38N**×0°.03×**144°.69E**±0°.03**, h31**km±1km**, **h31**km**:**pP-P, n1492**, σ1**°.940**/1471**, mb5.3**/419**, **MS4.4**/93**, **112C-293D**, **Fault plane solution: NP1:**ϕs353.30740°**, δ55.28247°, λ-98.73109°. **NP2:**ϕs188.39854°, δ35.66454°, λ-77.64289°. **Principal axes:** T Plg9.8905°, Azm89.5625°; N Plg7.1676°, Azm358.3062°; P Plg77.7428°, Azm232.9370°; **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.47**	**287**	*iP*		**Pn**	**12 07 39.6**	**-0.7**
OFUJ					*eS*	**Sn**	**12 08 06.2**	**-3.2**
OFUJ	**Ofunato**	**2.47**	**287**	A		A	12 07 39.6	
	comp=E,8.0nm,0.5s,comp=E,11nm,0.6s							
JIKH	**Ishinomakikobu**	**2.54**	**269**	*iP*		**Pn**	**12 07 40.1**	**-1.2**
JIKH					S	**Sn**	**12 08 07.6**	**-3.6**
JIKH	**Ishinomakikobu**	**2.54**	**269**	A		A	12 07 40.1	
	comp=E,14nm,0.5s,comp=E,13nm,0.5s							
MIYJ	**Miyakonagasawa**	**2.54**	**299**	*iP*		**Pn**	**12 07 40.5**	**-0.9**
MIYJ					S	**Sn**	**12 08 07.9**	**-3.3**
MIYJ	**Miyakonagasawa**	**2.54**	**299**	A		A	12 07 40.5	
	comp=E,9.0nm,3.4s,comp=E,22nm,0.8s							
JKMT	**Kesennumamotoy**	**2.56**	**281**	*iP*		**Pn**	**12 07 40.7**	**-0.9**
JKMT					*eS*	**Sn**	**12 08 08.0**	**-3.7**
JKMT	**Kesennumamotoy**	**2.56**	**281**	A		A	12 07 40.7	
	comp=E,6.0nm,1.4s,comp=E,7.0nm,1.0s							
JIO	**Ouri**	**2.63**	**273**	A		A	12 07 41.8	
	comp=E,18nm,0.5s,comp=E,24nm,0.9s							
JTH	**Tanohata**	**2.69**	**306**	A		A	12 07 42.9	
	comp=E,11nm,2.3s,comp=E,12nm,2.3s							
JMK	**Ichinoseki**	**2.78**	**283**	*iP*		**Pn**	**12 07 44.1**	**-0.5**
JMK					S	**Sn**	**12 08 14.0**	**-3.0**
JMK	**Ichinoseki**	**2.78**	**283**	A		A	12 07 44.1	
	comp=E,7.0nm,0.8s,comp=E,14nm,0.6s							
JOM	**Ohasama**	**2.87**	**293**	*iP*		**Pn**	**12 07 45.5**	**-0.4**
JOM					*eS*	**Sn**	**12 08 16.6**	**-2.7**
JOM	**Ohasama**	**2.87**	**293**	A		A	12 07 45.5	
	comp=E,13nm,0.3s,comp=E,12nm,0.5s							
JKEN	**Kujiedanarisaw**	**2.95**	**309**	A		A	12 07 46.5	
	comp=E,23nm,0.6s,comp=E,24nm,0.5s							
JOFO	**Osakifurukawao**	**2.98**	**275**	A		A	12 07 46.7	
	comp=E,77nm,0.9s,comp=E,133nm,0.6s							
JKZ	**Kuzumaki**	**3.07**	**303**	A		A	12 07 48.0	
	comp=E,8.0nm,0.9s,comp=E,14nm,0.6s							
JMST	**Minamisoumatoc**	**3.07**	**259**	A		A	12 07 48.2	
	comp=E,13nm,0.4s,comp=E,21nm,0.6s							
JMM	**Marumori**	**3.12**	**262**			**Pn**	**12 07 48.3**	**-1.0**
JMM	**Marumori**	**3.12**	**262**	A		A	12 07 48.9	
	comp=E,16nm,1.3s,comp=E,30nm,1.1s							
JANG	**Nango**	**3.17**	**310**	*iP*		**Pn**	**12 07 48.7**	**-1.3**
JANG					*eS*	**Sn**	**12 08 22.8**	**-3.9**
JANG	**Nango**	**3.17**	**310**	A		A	12 07 48.7	
	comp=E,6.0nm,1.6s,comp=E,8.0nm,1.2s							
JOU	**Okura**	**3.17**	**271**	A		A	12 07 49.4	
	comp=E,45nm,0.5s,comp=E,54nm,0.5s							
JFK	**Kawauchi**	**3.19**	**253**	A		A	12 07 50.0	
	comp=E,19nm,0.5s,comp=E,11nm,0.9s							
JSZI	**Iwateshizukuis**	**3.21**	**296**	A		A	12 07 50.0	
	comp=E,32nm,2.2s,comp=E,31nm,1.7s							
JRG	**Rokugo**	**3.33**	**289**	A		A	12 07 51.5	
	comp=E,17nm,0.5s,comp=E,13nm,0.8s							
ONAJ	**Iwakimizuishiy**	**3.34**	**249**	A		A	12 07 52.4	
	comp=E,54nm,0.3s,comp=E,28nm,0.6s							
JYK	**Kaneyama**	**3.44**	**280**	*iP*		**Pn**	**12 07 53.4**	**-0.3**
JYK					*eS*	**Sn**	**12 08 30.6**	**-2.7**
JYK	**Kaneyama**	**3.44**	**280**	A		A	12 07 53.4	
	comp=E,10.0nm,2.9s,comp=E,10.0nm,0.7s							
JFFD	**Fukushimafurud**	**3.52**	**250**	A		A	12 07 54.9	
	comp=E,11nm,0.5s,comp=E,8.0nm,0.8s							
JFT	**Otama**	**3.55**	**257**	*iP*		**Pn**	**12 07 55.0**	**-0.2**
JFT					S	**Sn**	**12 08 33.7**	**-2.5**
JFT	**Otama**	**3.55**	**257**	A		A	12 07 55.0	
	comp=E,50nm,0.6s,comp=E,71nm,0.8s							
JYAR	**Yonezawaarcadi**	**3.62**	**264**	A		A	12 07 55.9	
	comp=E,24nm,1.0s,comp=E,25nm,0.9s							
JAH	**Hinai**	**3.63**	**301**	A		A	12 07 56.0	
	comp=E,13nm,1.3s,comp=E,12nm,0.9s							
JYS	**Shirataka**	**3.64**	**269**	A		A	12 07 56.2	
	comp=E,17nm,0.7s,comp=E,16nm,0.7s							
JARK	**Aomorirokkasho**	**3.67**	**317**	A		A	12 07 57.0	
	comp=E,15nm,2.1s,comp=E,31nm,0.9s							
JYW	**Yuwa**	**3.68**	**290**	A		A	12 07 56.7	
	comp=E,20nm,1.2s,comp=E,22nm,1.9s							
JTM	**Tenmabayashi**	**3.69**	**312**	Pn		**Pn**	**12 07 56.6**	**-0.6**
JTM	**Tenmabayashi**	**3.69**	**312**	A		A	12 07 57.2	
	comp=E,15nm,1.5s,comp=E,9.0nm,1.4s							
JHO	**Hitachi**	**3.72**	**243**	A		A	12 07 58.0	
	comp=E,6.0nm,0.4s,comp=E,6.0nm,7.3s							
JYYZ	**Yamagatayuza**	**3.78**	**281**	A		A	12 07 58.0	
	comp=E,15nm,1.3s,comp=E,17nm,1.3s							
ERM	**Erimo**	**3.82**	**343**	Pn		**Pn**	**12 07 58.0**	**-0.9**
ERM	**Erimo**	**3.82**	**343**	P		**Pn**	**12 07 58.0**	**-0.9**
ERM	**Erimo**	**3.82**	**343**	P		**Pn**	**12 07 58.9**	**0.0**
JEM	**Erimo**	**3.82**	**343**	A		A	12 08 00.2	
	comp=E,5.0nm,4.0s,comp=E,8.0nm,0.9s							
JHYU	**Hitachinakayam**	**3.85**	**239**	A		A	12 07 60.0	
	comp=E,10.0nm,0.6s,comp=E,13nm,0.6s							
JAHD	**Aomorihigashid**	**3.87**	**319**	A		A	12 07 59.9	
	comp=E,22nm,0.9s,comp=E,22nm,0.5s							
JYA	**Atsumi**	**3.91**	**275**	A		A	12 07 59.9	
	comp=E,12nm,0.6s,comp=E,10.0nm,0.7s							
JNTW	**Noshirotokiwa**	**3.99**	**300**	A		A	12 08 01.1	
	comp=E,38nm,1.7s,comp=E,35nm,1.7s							
JSB	**Shiboa**	**4.04**	**251**	A		A	12 08 02.2	
	comp=E,23nm,1.5s,comp=E,21nm,0.8s							
JHHS	**Hirosakihyakuz**	**4.05**	**305**	A		A	12 08 02.0	
	comp=E,20nm,1.6s,comp=E,15nm,6.1s							
JTHR	**Tokachihiroo**	**4.05**	**345**	A		A	12 08 03.5	
	comp=E,8.0nm,0.8s,comp=E,11nm,0.7s							
JFY	**Yanaizu**	**4.06**	**258**	A		A	12 08 02.4	
	comp=E,8.0nm,0.8s,comp=E,8.0nm,0.8s							
JOT	**Ohata**	**4.11**	**318**	*iP*		**Pn**	**12 08 02.0**	**-0.9**
JOT					S	**Sn**	**12 08 45.3**	**-4.5**
JOT	**Ohata**	**4.11**	**318**	A		A	12 08 02.0	
	comp=E,6.0nm,1.2s,comp=E,6.0nm,2.1s							
JIHU	**Itakohorinouch**	**4.11**	**235**	A		A	12 08 03.8	
	comp=E,21nm,4.4s,comp=E,18nm,2.3s							
JNBK	**Urakawa-nobuka**	**4.17**	**340**	A		A	12 08 05.0	
	comp=E,14nm,0.6s,comp=E,13nm,1.0s							
JYT	**Yasato**	**4.18**	**240**	Pn		**Pn**	**12 08 02.1**	**-1.8**
JYT	**Yasato**	**4.18**	**240**	A		A	12 08 04.5	
	comp=E,21nm,0.5s,comp=E,15nm,0.5s							
JIW	**Iwasaki**	**4.25**	**303**	A		A	12 08 04.8	
	comp=E,6.0nm,0.8s,comp=E,9.0nm,1.6s							
JSI2	**Shiura 2**	**4.25**	**310**	A		A	12 08 05.0	
	comp=E,13nm,1.2s,comp=E,23nm,0.8s							
JCH	**Churui**	**4.35**	**347**	*iP*		**Pn**	**12 08 05.2**	**-1.1**
JCH					*eS*	**Sn**	**12 08 51.3**	**-4.6**
JSMT	**Sammumatsuo**	**4.36**	**232**	A		A	12 08 07.3	
	comp=E,13nm,0.8s,comp=E,10.0nm,0.8s							
JSR	**Shiriuchi**	**4.55**	**315**	A		A	12 08 09.2	
	comp=E,4.0nm,0.8s,comp=E,5.0nm,0.9s							
JOB	**Onbets**	**4.57**	**352**	A		A	12 08 11.2	
	comp=E,6.0nm,0.7s,comp=E,6.0nm,1.5s							
JAG	**Ashikaga**	**4.61**	**247**	A		A	12 08 10.2	
	comp=E,4.0nm,2.2s,comp=E,8.0nm,1.7s							
JKT	**Katashina**	**4.61**	**251**	A		A	12 08 10.2	
	comp=E,6.0nm,0.4s,comp=E,4.0nm,0.5s							
JOG3	**Oga3**	**4.63**	**291**	A		A	12 08 02.5	
	comp=E,10.0nm,1.9s,comp=E,9.0nm,1.5s							
JCN	**Nagara**	**4.66**	**232**	A		A	12 08 11.6	
	comp=E,14nm,2.6s,comp=E,11nm,3.5s							
JIAM	**Iburiatsuma**	**4.74**	**334**	A		A	12 08 12.7	
	comp=E,25nm,1.0s,comp=E,20nm,0.8s							
BSO1	**Boso 1**	**4.77**	**220**	P		**Pn**	**12 08 10.5**	**-1.1**
BSO1					*eS*	**Sn**	**12 09 02.7**	**-2.8**
TOK	**Tokyo**	**4.78**	**237**	A		A	12 08 13.1	
	comp=E,15nm,1.3s,comp=E,19nm,0.7s							
JIZZ	**Izumozaki**	**4.80**	**262**	A		A	12 08 12.7	
	comp=E,11nm,1.9s,comp=E,10.0nm,4.2s							
JAR	**Ashorobuto**	**4.96**	**352**	A		A	12 08 16.8	
	comp=E,11nm

JHJ **Hachijo jima 2** 6.59 219 Pn **Pn** **12 08 34.5 -2.6**
comp=E,98nm,0.3s,baz=71,slow=22,SNR=59
JHJ Sn **Sn** **12 09 43.3 -7.9**
comp=E,352nm,0.3s,baz=61,slow=23,SNR=15
JHJ LR LR 12 11 49.1
comp=E,577nm,19.9s,baz=70,slow=44
comp=E,198nm,0.3s
INU Inuyama 6.86 246 Pn **Pn** **12 08 39.8 -0.8**
INU Inuyama 6.86 246 P **Pn** **12 08 41.1 +0.4**
KUR Kuril'sk 7.25 18⇓ *e*P **Pn** **12 08 45.7 -0.3**
YSS Yuzh-Sakhalins 8.69 351 Pn **Pn** **12 09 05.6 -0.2**
YSS Yuzh-Sakhalins 8.69 351 *e*P **Pn** **12 09 05.3 -0.4**
YSS *e*S **Sn** **12 10 37.0 -5.6**
YSS pmax pmax
comp=Z,200nm,3.0s
YSS pmax pmax
comp=Z,120nm,0.7s
YSS smax smax
comp=N,120nm,0.9s
YSS MLR MLR
comp=Z,1μm,18.0s
YSS MLR MLR
comp=E,1μm,19.0s
YSS Yuzh-Sakhalins 8.69 351 P **Pn** **12 09 06.3 +0.6**
TEY Ternei 8.99 320⇑ *i*P **Pn** **12 09 10.4 +0.5**
TEY *e* 12 10 49.0
TEY pmax pmax
comp=E,320nm,0.6s
TEY pmax pmax
comp=N,220nm,0.6s
TEY pmax pmax
comp=E,220nm,0.6s
TEY pmax pmax
comp=N,200nm,2.0s
TEY pmax pmax
comp=E,200nm,2.0s
TEY pmax pmax
comp=Z,200nm,2.0s
TEY pmax pmax
comp=Z,100nm,4.3s
JHS Saijyo 9.89 254 **Pn** **12 09 22.0 -0.4**
VLA Vladivostok 10.81 300*c i*P **Pn** **12 09 35.9 +1.1**
USA0B Ussuriysk Arra 11.18 305 **Pn** **12 09 40.4 +0.4**
USA0B Ussuriysk Arra 11.18 305*c i*P **Pn** **12 09 40.6 +0.7**
USRK Ussuriysk Ar. 11.18 305 Pn **Pn** **12 09 40.3 +0.4**
comp=Z,11nm,0.3s,baz=116,slow=14,SNR=121
USRK Sn **Sn** **12 11 44.5 +0.7**
comp=Z,1.0nm,0.3s,baz=119,slow=22,SNR=2.4
USRK LR LR 12 13 56.8
comp=Z,3μm,18.1s,baz=101,slow=37
comp=Z,120nm,0.6s
USRK Ussuriysk Ar. 11.18 305 Pn **Pn** **12 09 40.6 +0.7**
USRK Ussuriysk Ar. 11.18 305 P **Pn** **12 09 40.6 +0.7**
JCJ Chichijima 11.45 191 Pn **Pn** **12 09 39.8 -3.9**
comp=Z,21nm,0.3s,baz=318,slow=14,SNR=6.4
JCJ Sn Sn 12 11 38.0 -12
comp=Z,78nm,0.3s,baz=48,slow=22,SNR=11
JCJ LR LR 12 15 26.0
comp=Z,305nm,18.5s,baz=22,slow=44
JCJ Chichijima 11.45 191 Pn **Pn** **12 09 40.2 -3.5**
JNU Nakatsue 12.38 249 Pn **Pn** **12 09 54.8 -1.7**
baz=180,slow=20
JNU Nakatsue 12.38 249 **Pn** **12 09 52.8 -3.7**
TYV Tymovskoe 12.57 354 *e*P **Pn** **12 09 56.7 -2.1**
TYV *e*S **Sn** **12 12 18.0 +0.5**
TYV pmax pmax
comp=Z,100nm,2.1s
TYV pmax pmax
comp=Z,9.0nm,1.5s
TYV smax smax
comp=N,300nm,3.1s
TYV smax smax
comp=E,200nm,3.1s
JTU Tsushima 12.90 257 **Pn** **12 10 02.2 -1.2**
MDJ Mudanjiang 12.91 304 **Pn** **12 10 03.4 -0.2**
MDJ Mudanjiang 12.91 304 P **Pn** **12 10 03.7 +0.1**
MDJ pP P 12 10 08.7 -5.2
MDJ S **Sn** **12 12 27.3 +1.2**
MDJ SS **SnSn** **12 12 40.1 +1.9**
MDJ pmax pmax
comp=E,170nm,1.2s
MDJ pmax pmax
comp=E,620nm,3.9s
MDJ LR LR
comp=E,1μm,20.1s
MDJ LR LR
comp=E,2μm,17.2s
MDJ LR LR
comp=E,4μm,17.2s
MDJ Mudanjiang 12.91 304 P **Pn** **12 10 04.6 +1.0**
SEHB SEOHWA 12.91 275 **Pn** **12 10 02.9 -0.8**
KSRS Korea Array 13.28 271 Pn **Pn** **12 10 08.9 +0.4**
comp=E,3.4nm,0.3s,baz=80,slow=14,SNR=31
KSRS Sn **Sn** **12 12 41.6 +6.6**
baz=84,slow=26
KSRS LR LR 12 15 09.2
comp=E,2μm,18.1s,baz=85,slow=37
comp=E,19nm,0.5s
KSRS Korea Array 13.28 271 P **Pn** **12 10 09.0 +0.4**
KSAR Wonju Array Be 13.31 271 **Pn** **12 10 08.6 -0.4**
KSAR Wonju Array Be 13.31 271 P **Pn** **12 10 08.6 -0.4**
KS19 Wonju Array Si 13.31 271 **Pn** **12 10 09.8 +0.6**
KSCHJ Chungju 13.34 269 **Pn** **12 10 09.5 +0.1**
GRNR Gornyy 13.71 337⇑ *i*P **Pn** **12 10 13.4 -1.0**
GRNR *e*S **Sn** **12 12 47.7 +2.3**
GRNR pmax pmax
comp=E,20nm,1.0s
GRNR pmax pmax
comp=N,30nm,1.1s
GRNR pmax pmax
comp=Z,30nm,1.0s
GRNR smax smax
comp=E,8.0nm,0.5s
GRNR MLR MLR
comp=N,340nm,14.0s
GRNR MLR MLR
comp=Z,590nm,15.0s
GRNR MLR MLR
comp=E,380nm,14.0s
TJN Taejon 13.93 267 **Pn** **12 10 17.1 -0.3**
TJN Taejon 13.93 267*c i*P **Pn** **12 10 16.8 -0.7**
NAWB Namwon 14.15 263 **Pn** **12 10 19.9 -0.7**
INCN Inchon 14.29 272 Pn **Pn** **12 10 22.0 -0.4**
INCN Inchon 14.29 272 P **Pn** **12 10 22.0 -0.4**
KLR Kul'dur 14.29 324 Pn **Pn** **12 10 20.9 -1.5**
comp=E,1.7nm,0.3s,baz=133,slow=13,SNR=57
KLR Sn **Sn** **12 12 59.8 0.0**
baz=112,slow=19
comp=E,29nm,0.9s
KLR Kul'dur 14.29 324*c i*P **Pn** **12 10 20.3 -2.1**
KLR pmax pmax
comp=Z,75nm,1.4s
SKR Severo-Kuril's 14.73 30 *e*P **Pn** **12 10 25.1 -3.2**
SKR *e*S Sn 12 13 01.2 -9.1
SKR pmax pmax
comp=Z,28nm,1.1s
SKR smax smax
comp=E,35nm,0.9s
SKR smax smax
comp=N,23nm,0.5s
SKR MLR MLR
comp=Z,700nm,15.0s
SKR MLR MLR
comp=E,500nm,16.0s
SKR MLR MLR
comp=N,300nm,13.0s
BNX BinXian 14.78 305 ⇓P **Pn** **12 10 27.3 -1.7**
BNX S **Sn** **12 13 08.4 -3.3**
BNX pmax pmax
comp=N,35nm,0.9s
BNX LR LR
comp=N,910nm,17.1s
BNX LR LR
comp=N,2μm,17.3s
BNX LR LR
comp=N,2μm,16.8s
OKH Okha 15.22 356*de*P Pn 12 10 22.0 -13
OKH MLR MLR
comp=E,1μm,17.0s
OKH MLR MLR
comp=N,1μm,18.0s
OKH MLR MLR
comp=Z,800nm,17.0s
CN2 Changchun 15.48 297 *e*P **Pn** **12 10 34.8 -3.5**
CN2 *e*PP **PnPn** **12 10 47.2 +0.7**
CN2 *e*S **Sn** **12 13 25.8 -2.8**
CN2 pmax pmax
comp=Z,20nm,0.9s
CN2 LR LR
comp=Z,460nm,16.0s
CN2 LR LR
comp=Z,1μm,16.0s
CN2 LR LR
comp=Z,1μm,18.0s
SNY Shenyang 16.51 289 ⇓P **Pn** **12 10 50.3 -1.2**
SNY pmax pmax
comp=Z,29nm,0.9s
SNY LR LR
comp=Z,610nm,12.5s
SNY LR LR
comp=Z,1μm,14.7s
SNY LR LR
comp=Z,3μm,18.0s
PEA0B Petropavlovsk- 17.26 27 Pn **P** **12 11 02.0 0.0**
PEA0B Petropavlovsk- 17.26 27⇓ *e*P **P** **12 11 01.8 -0.3**
PETK Petropavlovsk- 17.26 27 P **Pn** **12 11 01.4 +0.5**
comp=Z,11nm,0.8s,baz=198,slow=12,SNR=14
PETK S **S** **12 14 18.0 -2.0**
comp=Z,1.0nm,0.5s,baz=236,slow=26,SNR=1.4
PETK PcP **PcP** **12 15 41.6 -1.0**
comp=Z,2.7nm,0.8s,baz=174,slow=4.3,SNR=3.2
PETK Petropavlovsk- 17.26 27 **Pn** **12 10 59.1 -1.7**
PET Petropavlovsk 17.55 29 Pn **Pn** **12 11 04.5 +0.2**
PET Petropavlovsk 17.55 29 *e*P **Pn** **12 11 02.2 -2.1**
PET *e*S **Sn** **12 14 10.7 -7.9**
PET pmax pmax
comp=Z,45nm,1.2s
PET pmax pmax
comp=Z,200nm,16.5s
PET MLR MLR
comp=Z,800nm,17.0s
PET MLR MLR
comp=Z,700nm,19.0s
PET Petropavlovsk 17.55 29 P **P** **12 11 06.4 +1.2**
JOW Kunigami 17.97 235 P **Pn** **12 11 09.4 -0.3**
comp=Z,4.2nm,0.3s,baz=47,slow=8.1,SNR=30
JOW S **Sn** **12 14 31.9 +2.8**
comp=Z,7.8nm,0.8s,baz=290,slow=14,SNR=1.9
JOW LR LR 12 17 56.9
comp=Z,385nm,21.5s,baz=46,slow=36
comp=Z,68nm,0.7s
JOW Kunigami 17.97 235 **P** **12 11 10.4 +0.3**
JOW Kunigami 17.97 235 P **P** **12 11 10.5 +0.5**
DL2 Dalian 18.02 279 P **Pn** **12 11 09.8 -0.5**
DL2 S **Sn** **12 14 30.2 -0.1**
DL2 pmax pmax
comp=Z,150nm,1.0s
DL2 pmax pmax
comp=Z,610nm,4.1s
DL2 LR LR
comp=Z,610nm,11.9s
DL2 LR LR
comp=Z,1μm,19.7s
DL2 LR LR
comp=Z,1μm,17.1s
ZEA Zeya 19.47 328 *e*P **P** **12 11 26.3 -0.1**
ZEA *e* 12 15 02.9
ZEA pmax pmax
comp=E,40nm,0.8s
ZEA pmax pmax
comp=N,70nm,0.6s
ZEA pmax pmax
comp=Z,180nm,0.6s
ZEA pmax pmax
comp=E,300nm,8.3s
ZEA pmax pmax
comp=N,200nm,4.6s
ZEA pmax pmax
comp=Z,400nm,7.8s
ZEA MLR MLR
comp=E,200nm,14.0s
ZEA MLR MLR
comp=N,200nm,12.0s
ZEA MLR MLR
comp=Z,300nm,15.0s
SSE Sheshan 20.61 256 P **P** **12 11 38.6 -0.3**
SSE S **S** **12 15 28.9 +1.3**
SSE pmax pmax
comp=Z,12nm,0.7s
SSE pmax pmax
comp=Z,57nm,3.5s
SSE LR LR
comp=Z,420nm,19.2s
SSE LR LR
comp=Z,390nm,20.9s
HIA Hailar 20.94 309 P **P** **12 11 41.9 -0.5**
HIA Hailar 20.94 309 P **P** **12 11 41.9 -0.5**
HIA pmax pmax
comp=Z,83nm,1.2s
JMJ Miyako jima 2 21.30 236 P **P** **12 11 46.9 +0.6**
MA2 Magadan 21.57 8 P **P** **12 11 49.7 +0.7**
comp=Z,31nm,0.6s,baz=192,slow=8.7,SNR=14
MA2 S **S** **12 15 48.1 +1.9**
comp=Z,14nm,1.0s,baz=174,slow=22,SNR=1.5
comp=Z,31nm,0.6s
MA2 Magadan 21.57 8 P **P** **12 11 49.1 +0.1**
MA2 Magadan 21.57 8⇓ *e*P **P** **12 11 50.9 +1.9**
MA2 pmax pmax
comp=Z,119nm,1.5s
MA2 Magadan 21.57 8 P **P** **12 11 51.5 +2.5**
NJ2 Nanjing 22.00 261⇑ *i*P **P** **12 11 53.9 +0.1**
NJ2 pP **pP** **12 11 55.8 -4.7**
NJ2 S **S** **12 15 57.6 +2.8**
NJ2 sS **pS** **12 16 03.4 -0.5**
NJ2 pmax pmax
comp=Z,18nm,0.8s
NJ2 LR LR
comp=Z,410nm,15.2s
NJ2 LR LR
comp=Z,1μm,15.9s
NJ2 LR LR
comp=Z,2μm,17.7s
TIA Tai'an 22.01 273 ⇓P **P** **12 11 52.6 -1.4**
TIA S **S** **12 15 48.1 -7.0**
TIA pmax pmax
comp=Z,17nm,0.8s
TIA pmax pmax
comp=Z,48nm,3.5s
TIA LR LR
comp=Z,760nm,13.5s
TIA LR LR
comp=Z,250nm,19.3s
TIA LR LR
comp=Z,660nm,23.5s
BJI Beijing 22.12 283 P **P** **12 11 55.8 +0.7**
BJI S **S** **12 15 49.3 -7.8**
BJI pmax pmax
comp=Z,46nm,0.8s
BJI pmax pmax
comp=Z,240nm,3.6s
BJI LR LR
comp=Z,500nm,13.2s
BJI LR LR
comp=Z,680nm,13.9s
BJI LR LR
comp=Z,820nm,12.7s
BJT Baijiatuau 22.13 283 P **P** **12 11 53.8 -1.4**
BJT Baijiatuau 22.13 283 P **P** **12 11 53.8 -1.4**
BJT pmax pmax
comp=Z,38nm,0.8s
XLT XiLinHaoTe 22.18 294 *e*P **P** **12 11 55.2 -0.6**
XLT pP pP 12 12 03.0 +0.4
XLT sP sP 12 12 06.3 +0.4
XLT PcP **PcP** **12 15 53.0 +1.3**
XLT S **S** **12 16 00.7 +2.3**
XLT sS pS 12 16 06.2 -0.2
XLT pmax pmax
comp=Z,55nm,0.9s
XLT pmax pmax
comp=Z,480nm,3.8s
XLT LR LR
comp=Z,860nm,16.4s
XLT LR LR
comp=Z,930nm,17.3s
YOJ Yonaguni jima 23.05 239 P **P** **12 12 03.4 -1.6**
YOJ Yonaguni jima 23.05 239 P **P** **12 12 03.4 -1.6**
YOJ pmax pmax
comp=Z,292nm,1.6s
HNS HongShan 23.64 277 ⇑P **P** **12 12 08.5 -2.2**
HNS pP **pP** **12 12 16.8 -1.0**
HNS S **S** **12 16 20.0 -3.3**
HNS sS **pS** **12 16 29.4 -0.9**
HNS pmax pmax
comp=Z,53nm,0.8s
HNS LR LR
comp=Z,380nm,15.6s
HNS LR LR
comp=Z,1μm,17.6s
HNS LR LR
comp=Z,1μm,16.9s
YHNB Yeheng 24.04 242 P **P** **12 12 13.3 -1.4**
YHNB Yeheng 24.04 242 P **P** **12 12 13.2 -1.4**
NACB Ninganchiao 24.21 241 P **P** **12 12 14.8 -1.4**
GUMO Guam 24.69 180 LR LR 12 21 18.9
comp=Z,255nm,19.8s,baz=26,slow=35
SSLB Suanglung 24.90 241 P **P** **12 12 21.3 -1.2**
SSLB IAmb IAmb 12 12 32.7
comp=Z,102nm,1.5s
SSLB Suanglung 24.90 241 P **P** **12 12 24.6 +2.1**
YULB Yu-li 24.93 240 P **P** **12 12 21.2 -1.5**
SEY Seymchan 25.03 8 P **P** **12 12 24.9 +1.7**
comp=Z,94nm,0.7s,baz=187,slow=7.8,SNR=303
SEY S **S** **12 16 49.5 +4.4**
comp=Z,1.6nm,0.8s,baz=229,slow=23,SNR=1.1
comp=Z,94nm,0.7s
SEY Seymchan 25.03 8*d i*P **P** **12 12 25.1 +1.9**
SEY pmax pmax
comp=Z,97nm,0.7s
TIY Taiyuan 25.35 279 *e*P **P** **12 12 28.3 +1.8**
TIY pP **sP** **12 12 36.5 -0.4**
TIY S **S** **12 16 52.7 +1.8**
TIY pmax pmax
comp=Z,34nm,0.5s
TIY LR LR
comp=Z,650nm,14.1s
TIY LR LR
comp=Z,860nm,15.1s
TIY LR LR
comp=Z,1μm,15.8s
YAK Yakutsk 25.42 343 P **P** **12 12 27.2 +0.4**
comp=Z,88nm,0.6s,baz=132,slow=1.8,SNR=31
YAK S **S** **12 16 57.9 +6.6**
comp=Z,3.5nm,0.3s,baz=144,slow=17,SNR=1.1
comp=Z,88nm,0.6s
YAK Yakutsk 25.42 343 P **P** **12 12 27.2 +0.4**
YAK Yakutsk 25.42 343 *e*P **P** **12 12 26.8 0.0**
YAK *e**PP **pP** **12 12 35.1 +1.0**
YAK *e* 12 13 03.6
YAK *e*S **S** **12 16 54.7 +3.3**
YAK *e**SS **sS** **12 17 07.4 +4.1**
YAK *e*SS **SnSn** **12 17 48.4 +3.5**
YAK *e*SSS SSS 12 18 02.9
YAK pmax pmax
comp=Z,171nm,0.8s
YAK pmax pmax
comp=N,50nm,0.9s
YAK pmax pmax
comp=E,24nm,1.0s
YAK pmax pmax
comp=Z,50nm,1.1s
YAK pmax pmax
comp=N,69nm,1.1s
YAK pmax pmax
comp=E,37nm,1.1s
YAK smax smax
comp=N,305nm,2.5s
YAK smax smax
comp=E,316nm,2.6s
YAK MLR MLR
comp=Z,194nm,16.0s
YAK MLR MLR
comp=N,179nm,18.0s
YAK MLR MLR
comp=E,28nm,16.0s
TPUB Ta-pu 25.45 241 P **P** **12 12 27.0 -0.4**
TPUB IAmb IAmb 12 12 52.1
comp=Z,68nm,0.9s
TPUB Ta-pu 25.45 241 P **P** **12 12 27.4 0.0**
TWG Pinlang 25.47 239 P **P** **12 12 27.2 -0.4**
TWG IAmb IAmb 12 12 50.2
comp=Z,62nm,0.8s
HHC Hu-ho-hao-te 25.56 286 *e*P **P** **12 12 29.6 +1.2**
HHC S **S** **12 16 53.2 -1.0**
HHC sS sS 12 17 05.6 -0.3
HHC pmax pmax
comp=Z,68nm,1.0s
HHC pmax pmax
comp=Z,410nm,5.0s
HHC LR LR
comp=Z,860nm,12.7s
HHC LR LR
comp=Z,2μm,13.0s
HHC LR LR
comp=Z,4μm,13.6s
CIT Chita 25.60 312 *e*P **P** **12 12 29.6 +0.9**
CIT *e* 12 12 46.0
CIT *e* 12 13 02.6
CIT *e* 12 13 23.0
CIT *e*S **S** **12 16 57.6 +3.0**
CIT pmax pmax
comp=Z,281nm,2.1s
QZH Quanzhou 25.84 246 *e*P **P** **12 12 32.4 +1.5**
QZH pP **sP** **12 12 40.2 -1.1**
QZH S **S** **12 17 03.4 +4.8**
QZH LR LR
comp=Z,590nm,18.2s
QZH LR LR
comp=Z,450nm,18.2s
QZH LR LR
comp=Z,600nm,16.8s
LYN LuoYang 26.12 272 ⇓P **P** **12 12 33.9 +0.4**
LYN sP pP 12 12 39.5 -1.2
LYN S **S** **12 17 04.0 +1.0**
LYN SS **SnSn** **12 18 08.3 +5.8**
LYN pmax pmax
comp=Z,60nm,0.9s
LYN pmax pmax
comp=Z,740nm,6.8s
LYN LR LR
comp=Z,650nm,15.7s
LYN LR LR
comp=Z,1μm,15.7s
LYN LR LR
comp=Z,980nm,15.5s
BTO Baotou 26.75 286 *e*P **P** **12 12 41.2 +2.0**
H11N2 WAKE ISLAND Hy 26.75 128 T T 12 40 33.9
baz=319,slow=74,SNR=100
H11N1 WAKE ISLAND Hy 26.76 128 T T 12 40 32.7
baz=319,slow=74,SNR=73
H11N3 WAKE ISLAND Hy 26.77 128 T T 12 40 28.9
baz=319,slow=74,SNR=71
H11S1 WAKE ISLAND Hy 27.56 130 T T 12 41 03.1
baz=202,slow=74,SNR=10
H11S3 WAKE ISLAND Hy 27.56 130 T T 12 41 29.1
baz=202,slow=74,SNR=9.7
H11S2 WAKE ISLAND Hy 27.57 130 T T 12 41 25.4
baz=202,slow=74,SNR=10
BOD Bodaibo 27.87 324 *e*P **P** **12 12 49.2 +0.3**
BOD pmax pmax
comp=Z,253nm,0.8s
ULN Ulaanbaatar 28.81 301 P **P** **12 12 58.2 +0.6**
ULN Ulaanbaatar 28.81 301*d i*P **P** **12 12 58.4 +0.7**
ULN pmax pmax
comp=Z,60nm,1.4s
ULN Ulaanbaatar 28.81 301 P **P** **12 12 58.6 +0.9**
ULN x x 12 13 05.8
ULN pP **sP** **12 13 08.6 +0.5**
ULN sP **pwP** **12 13 12.8 +0.1**
XAN Xi'an 29.07 273 P **P** **12 12 59.5 -0.4**
XAN pP pP 12 13 06.6 -0.6
XAN S **S** **12 17 50.6 +1.1**
XAN PcS **PcS** **12 19 48.0 -2.4**
XAN pmax pmax
comp=Z,49nm,1.0s
XAN pmax pmax
comp=Z,440nm,7.3s
XAN LR LR
comp=Z,730nm,16.1s
XAN LR LR
comp=Z,770nm,18.0s
XAN LR LR
comp=Z,590nm,19.6s
SONM Songino Array 29.25 301 P **P** **12 13 02.4 +0.9**
comp=Z,8.4nm,0.7s,baz=95,slow=9.1,SNR=44
SONM S **S** **12 17 53.8 +1.5**
comp=Z,0.4nm,0.3s,baz=204,slow=17,SNR=1.3
SONM LR LR 12 25 19.2
comp=Z,1μm,18.4s,baz=104,slow=38

comp=Z,8.4nm,0.7s
SONM Songino Array 29.25 301 P **P** **12 13 01.6 +0.1**
ENH Enshi 30.04 265 P **P** **12 13 08.4 -0.1**
ENH Enshi 30.04 265 P **P** **12 13 08.6 +0.1**
ENH x x 12 13 13.2
ENH pP **pP** **12 13 17.0 +1.2**
ENH sP **pwP** **12 13 22.2 -1.6**
IRK Irkutsk 31.18 310 *e*P **P** **12 13 18.2 -0.2**
IRK pmax pmax
comp=Z,47nm,1.2s
ZAK Zakamensk 31.53 306 *e*P **P** **12 13 21.5 -0.1**
ZAK pmax pmax
comp=Z,19nm,1.1s
BILL Bilibino 32.03 15 P **P** **12 13 26.2 +0.6**
BILL IAmb IAmb 12 13 27.1
comp=Z,32nm,0.8s
BILL Bilibino 32.03 15 *c i*P **P** **12 13 25.9 +0.3**
BILL *e* 12 14 31.5
BILL *e*PPP PPP 12 14 40.9
BILL *i* 12 16 14.8
BILL pmax pmax
comp=Z,76nm,1.7s
BILL MLR MLR
comp=Z,138nm,21.0s
BILL Bilibino 32.03 15 P **P** **12 13 26.1 +0.5**
BILL x x 12 13 31.9
BILL sP **pwP** **12 13 39.8 -0.8**
LZH Lanzhou 32.42 279 ⇓P **P** **12 13 30.3 +0.7**
LZH pP pP 12 13 37.4 +0.4
LZH sP sP 12 13 41.2 +1.1
LZH S **S** **12 18 41.4 -0.8**
LZH sS sS 12 18 55.8 +1.9
LZH pmax pmax
comp=Z,81nm,1.3s
LZH pmax pmax
comp=Z,330nm,5.1s
LZH LR LR
comp=Z,570nm,13.0s
LZH LR LR
comp=Z,880nm,12.6s
LZH LR LR
comp=Z,1μm,14.8s
MOY Mondy 33.11 308 *e*P **P** **12 13 35.6 +0.2**
MOY pmax pmax
comp=Z,26nm,1.6s
GYA Guiyang 34.01 261 ⇑ *i*P **P** **12 13 43.6 +0.1**
GYA pP sP 12 13 52.8 -1.1
GYA S **S** **12 19 03.2 -3.7**
GYA pmax pmax
comp=Z,63nm,0.9s
GYA LR LR
comp=Z,420nm,15.0s
GYA LR LR
comp=Z,600nm,22.1s
GYA LR LR
comp=Z,810nm,19.2s
CD2 Chengdu 34.27 270 P **P** **12 13 45.9 +0.2**
CD2 pP pP 12 13 51.4 -1.7
CD2 PP **PnPn** **12 14 55.3 -5.0**
CD2 S **S** **12 19 06.6 -4.2**
CD2 sS pS 12 19 16.0 -2.6
CD2 pmax pmax
comp=Z,70nm,0.9s
CD2 LR LR
comp=Z,720nm,17.1s
CD2 LR LR
comp=Z,910nm,17.1s
TIXI Tiksi 34.31 351 P **P** **12 13 45.2 -0.2**
TIXI IAmb IAmb 12 13 59.9
comp=Z,26nm,0.8s
TIXI Tiksi 34.31 351 *d i*P **P** **12 13 45.1 -0.4**
TIXI pmax pmax
comp=Z,19nm,0.8s
TIXI Tiksi 34.31 351 P **P** **12 13 45.3 -0.2**
TIXI x x 12 13 50.9
TIXI sP **pwP** **12 13 58.7 -1.8**
GTA Gaotai 34.67 286 ⇓P **P** **12 13 50.4 +1.2**
GTA pP pP 12 13 57.0 +0.5
GTA sP sP 12 14 01.3 +1.7
GTA PcP **PcP** **12 16 23.8 +1.1**
GTA S **S** **12 19 18.0 +1.0**
GTA pmax pmax
comp=Z,25nm,1.0s
GTA pmax pmax
comp=Z,170nm,5.5s
GTA LR LR
comp=Z,630nm,18.2s
GTA LR LR
comp=Z,2μm,18.5s
GTA LR LR
comp=Z,2μm,18.2s
SPIA Saint Paul Isl 34.82 42 P **P** **12 13 49.9 -0.1**
baz=257
NIKH Nikolski High 34.93 50 P **P** **12 13 52.2 +1.2**
baz=264
KNGR Kungurtug, Tuv 35.22 306 ⇑ *i*P **P** **12 13 54.7 +1.0**
KNGR pmax pmax
comp=Z,32nm,1.1s
DAV Davao City (W) 35.65 214 LR LR 12 28 59.7
comp=Z,157nm,18.6s,baz=67,slow=37
QIZ Qiongzhong 35.85 247 P **P** **12 14 00.8 +1.5**
QIZ PP **PP** **12 15 20.7 -0.3**
QIZ S **S** **12 19 38.5 +3.4**
QIZ pmax pmax
comp=Z,120nm,5.5s
QIZ LR LR
comp=Z,550nm,20.7s
QIZ LR LR
comp=Z,400nm,19.1s
QIZ LR LR
comp=Z,310nm,25.5s
GAMB Gambell 36.22 31 P **P** **12 14 02.8 +0.9**
baz=247
UNV Unalaska Valle 36.41 49 P **P** **12 14 04.4 +0.8**
baz=265
KMI Kunming 37.73 262 ⇓P **P** **12 14 15.7 +0.2**
KMI pP pP 12 14 22.1 -0.9
KMI S **S** **12 20 05.8 +1.7**
KMI SS **SnSn** **12 22 36.1 -9.0**
KMI pmax pmax
comp=Z,46nm,1.1s
KMI pmax pmax
comp=Z,100nm,5.4s
KMI LR LR
comp=Z,430nm,19.8s
KMI LR LR
comp=Z,790nm,17.4s
KMI LR LR
comp=Z,930nm,17.8s
KMI Kunming 37.73 262 P **P** **12 14 16.4 +0.9**
KMI x x 12 14 35.2
PZH PanZhiHua 37.82 265 ⇓P **P** **12 14 16.5 +0.3**
PZH pP **pP** **12 14 23.8 +0.2**
PZH S **S** **12 20 04.1 -1.2**
PZH pmax pmax
comp=Z,100nm,0.7s
PZH pmax pmax
comp=Z,130nm,7.3s
PZH LR LR
comp=Z,1μm,18.8s
PZH LR LR
comp=Z,2μm,17.8s
PZH LR LR
comp=Z,2μm,18.6s
FALS False Pass 38.29 47 P **P** **12 14 19.3 -0.2**
baz=267
TNA Tin City 38.41 30 P **P** **12 14 21.0 +0.6**
baz=249
ANM Nome 39.09 32 P **P** **12 14 27.2 +1.0**
baz=253
GOMU GeErMu 39.36 283 P **P** **12 14 29.9 +0.6**
GOMU pP pP 12 14 34.4 -2.3
GOMU sP sP 12 14 35.7 -4.1
GOMU S S 12 20 19.7 -9.1
GOMU sS pS 12 20 34.9 -1.7
GOMU pmax pmax
comp=Z,46nm,0.7s
GOMU pmax pmax
comp=Z,210nm,4.6s
GOMU LR LR
comp=Z,350nm,18.0s
GOMU LR LR
comp=Z,260nm,17.5s
GOMU LR LR
comp=Z,270nm,16.3s

SDPT Sand Point 40.00 47 P **P** **12 14 34.7 +0.9**
baz=268
CHNA Chernabura Isl 40.50 47 P **P** **12 14 38.3 +0.3**
baz=270
SMPI Sarmi 40.55 189 P **P** **12 14 40.1 +1.3**
comp=Z,43nm,1.3s
TNTI Ternate 40.67 207 P **P** **12 14 40.0 +0.2**
TNTI Ternate 40.67 207 P **P** **12 14 42.5 +2.7**
comp=Z,26nm,1.5s
TNTI Ternate 40.67 207 P **P** **12 14 41.4 +1.6**
MYLDM Lahad Datu 40.73 222 P **P** **12 14 42.0 +1.7**
SWI Sorong 40.97 201 P **P** **12 14 42.8 +0.6**
comp=Z,30nm,1.0s
SIJI Sorong 40.97 201 P **P** **12 14 42.1 -0.2**
comp=Z,18nm,0.8s,baz=7.0,slow=13
SIJI LR LR 12 29 34.5
comp=Z,71nm,19.8s,baz=49,slow=33
comp=Z,18nm,0.8s
GENI Genyem 40.98 187 P **P** **12 14 43.1 +0.7**
comp=Z,80nm,1.1s
GENI Genyem 40.98 187 P **P** **12 14 44.2 +1.8**
comp=Z,81nm,1.1s
RDOG Red Dog Mine 41.13 27 P **P** **12 14 41.4 -1.7**
baz=251
N16K Nishlik Lake 41.26 39 P **P** **12 14 46.1 +1.8**
baz=264,SNR=12
O16K Kokwok River B 41.51 40 P **P** **12 14 46.7 +0.4**
baz=266
P16K Nushagak River 41.52 41 P **P** **12 14 47.1 +0.7**
baz=266
LBMI Labuha 41.93 206 P **P** **12 14 51.4 +1.2**
comp=Z,743nmcomp=Z,46nm,1.1s
O17K Koliganek Bris 42.03 40 P **P** **12 14 51.1 +0.5**
baz=266
P17K Kvichak River 42.33 41 P **P** **12 14 53.5 +0.5**
baz=268
WMQ Urumqi 42.57 296 *e*P **P** **12 14 56.3 +1.0**
WMQ sP sP 12 15 07.9 +2.1
WMQ pmax pmax
comp=Z,45nm,1.1s
WMQ pmax pmax
comp=Z,150nm,3.7s
WMQ LR LR
comp=Z,370nm,18.1s
WMQ LR LR
comp=Z,580nm,16.3s
WMQ LR LR
comp=Z,360nm,19.9s
GCSA Galena City Sc 42.69 33 P **P** **12 14 55.5 -0.3**
baz=261
N18K Kilae Creek 42.69 39 P **P** **12 14 56.8 +0.8**
N18K Kilae Creek 42.69 39 P **P** **12 14 57.7 +1.7**
baz=266,SNR=10
CHIR Chirikof Islan 42.75 46 P **P** **12 14 56.4 0.0**
baz=272
TTA Tatalina 42.83 35 P **P** **12 14 58.7 +1.6**
TTA Tatalina 42.83 35 P **P** **12 14 58.7 +1.6**
TTA pmax pmax
comp=Z,28nm,1.5s
TTA Tatalina 42.83 35 P **P** **12 14 56.3 -0.8**
baz=264
SVW2 Sparrevohn 42.87 38 P **P** **12 14 59.0 +1.6**
ZAA0 Zalesovo Array 42.95 311 P **P** **12 14 58.3 +0.1**
ZAA0 IAmb IAmb 12 15 10.6
comp=Z,38nm,0.8s
ZAA0 PcP **PcP** **12 16 48.5 +0.3**
ZALV Zalesovo Beam 42.95 311 P **P** **12 14 58.5 +0.4**
comp=Z,19nm,0.5s,baz=88,slow=7.9,SNR=87
ZALV PcP **PcP** **12 16 48.3 +0.1**
comp=Z,12nm,0.5s,baz=88,slow=3.8,SNR=8.0
ZALV LR LR 12 33 55.4
comp=Z,930nm,18.2s,baz=80,slow=38
comp=Z,19nm,0.5s
ZALV Zalesovo Beam 42.95 311 P **P** **12 14 57.9 -0.3**
P18K Big Mountain, 42.96 41 P **P** **12 14 59.9 +1.7**
P18K IAmb IAmb 12 15 06.2
comp=Z,78nm,1.2s
P18K Big Mountain, 42.96 41 P **P** **12 14 58.2 +0.1**
baz=268
O18K Koktuh Hills 42.99 40 P **P** **12 15 00.4 +2.1**
O18K IAmb IAmb 12 15 16.2
comp=Z,37nm,0.8s
O18K Koktuh Hills 42.99 40 P **P** **12 14 57.9 -0.5**
baz=268
KRVT Keravat (AS076 43.01 169 P **P** **12 14 59.3 +0.4**
comp=Z,61nm,1.1s,baz=277,slow=8.1,SNR=4.0
comp=Z,61nm,1.1s
TOLI2 Tolitoli 43.09 216 P **P** **12 14 59.0 -0.6**
TOLI2 Tolitoli 43.09 216 P **P** **12 15 00.0 +0.4**
MRSI Marisa 43.12 214 P **P** **12 15 00.2 +0.3**
comp=Z,1μmcomp=Z,116nm,1.0s
NRIK Noril'sk 43.16 334 P **P** **12 14 59.6 0.0**
comp=Z,16nm,0.8s,baz=110,slow=9.6,SNR=26
NRIK LR LR 12 34 12.4
comp=Z,682nm,20.7s,baz=102,slow=38
comp=Z,16nm,0.8s
NRIK Noril'sk 43.16 334 P **P** **12 14 59.6 0.0**
NRIK IAmb IAmb 12 15 01.0
comp=Z,46nm,1.2s
NRIK Noril'sk 43.16 334 P **P** **12 14 59.6 0.0**
NRIK pmax pmax
comp=Z,46nm,1.3s
L19K White Mountain 43.29 37 P **P** **12 15 01.6 +0.8**
L19K White Mountain 43.29 37 P **P** **12 15 01.1 +0.3**
baz=266
N19K Bonanza Creek 43.39 39 P **P** **12 15 02.9 +1.2**
N19K Bonanza Creek 43.39 39 P **P** **12 15 00.8 -0.8**
baz=268
O19K Port Alsworth 43.44 39 P **P** **12 15 03.7 +1.7**
O19K IAmb IAmb 12 15 19.3
comp=Z,34nm,0.8s
O19K Port Alsworth 43.44 39 P **P** **12 15 03.1 +1.2**
baz=268
M19K Big River Lodg 43.49 37 P **P** **12 15 01.9 -0.5**
baz=266
SII Sitkinak Islan 43.53 45 P **P** **12 15 02.6 -0.1**
baz=272
K20K Telida 43.75 35 P **P** **12 15 06.0 +1.5**
K20K Telida 43.75 35 P **P** **12 15 04.9 +0.5**
baz=265,SNR=6.2
ZSN Zaisan 43.76 302 *d i*P **P** **12 15 05.6 +0.8**
ZSN pmax pmax
comp=Z,20nm,0.7s
ZSN Zaisan 43.76 302 ⇓ *i*P **P** **12 15 05.6 +0.8**
comp=Z,20nm,0.7s,baz=302
L20K Farewell, AK 43.77 36 P **P** **12 15 05.5 +0.8**
baz=266
Q19K Cape Douglas, 43.77 41 P **P** **12 15 03.6 -1.1**
baz=270
SANI Sanana 43.78 208 P **P** **12 15 04.9 -0.3**
comp=Z,935nmcomp=Z,122nm,1.0s
SANI Sanana 43.78 208 P **P** **12 15 04.6 -0.6**
J20K Nowinta River 43.79 34 P **P** **12 15 05.3 +0.6**
J20K Nowinta River 43.79 34 P **P** **12 15 06.3 +1.5**
baz=264,SNR=7.5
OHAK Old Harbor 43.99 44 P **P** **12 15 05.9 -0.5**
baz=272
MSAI Masohi 44.01 203 P **P** **12 15 10.1 +3.1**
comp=Z,626nmcomp=Z,7.6nm,0.8s
M20K Styx River 44.09 37 P **P** **12 15 09.1 +1.8**
M20K Styx River 44.09 37 P **P** **12 15 06.0 -1.3**
baz=268
CHTO Chiang Mai 44.14 257 P **P** **12 15 08.6 +0.5**
CHTO Chiang Mai 44.14 257 P **P** **12 15 08.6 +0.5**
CHTO pmax pmax
comp=Z,15nm,0.8s
CHTO Chiang Mai 44.14 257 P **P** **12 15 09.1 +1.0**
CHTO Chiang Mai 44.14 257 P **P** **12 15 08.9 +0.8**
CHTO x x 12 15 16.4
CHTO pP **sP** **12 15 19.4 +0.7**
CHTO sP **pwP** **12 15 23.1 -0.2**
IMAR Indian Mountai 44.16 31 P **P** **12 15 08.6 +0.8**
MPSI Mapaga 44.19 217 P **P** **12 15 09.0 +0.6**
comp=Z,21nm,1.1s
A21K Barrow 44.20 23 P **P** **12 15 09.2 +1.3**
A21K Barrow 44.20 23 P **P** **12 15 09.3 +1.3**
baz=255,SNR=25
RSO Redoubt South 44.23 39 P **P** **12 15 08.6 +0.1**
O20K Slope Mountain 44.29 40 P **P** **12 15 09.3 +0.4**
baz=270
CM31 Chiang Mai Arr 44.35 257 P **P** **12 15 10.9 +1.1**
CM31 PcP **PcP** **12 16 54.7 +1.2**
CMAR Chiang Mai Arr 44.35 257 P **P** **12 15 10.7 +0.9**
comp=Z,7.3nm,0.7s,baz=44,slow=7.2,SNR=50
CMAR PcP **PcP** **12 16 53.9 +0.3**
comp=Z,5.7nm,0.9s,baz=18,slow=3.3,SNR=9.6

CMAR LR LR 12 35 38.8
comp=Z,254nm,19.4s,baz=0.0,slow=39
comp=Z,7.3nm,0.7s
CMAR Chiang Mai Arr 44.35 257 P **P** **12 15 09.4 -0.4**
CMAR PcP **PcP** **12 16 54.5 +1.0**
KDAK Kodiak Island 44.35 43 P **P** **12 15 09.8 +0.5**
KDAK Kodiak Island 44.35 43 P **P** **12 15 09.8 +0.5**
KDAK pmax pmax
comp=Z,73nm,0.9s
KDAK Kodiak Island 44.35 43 P **P** **12 15 09.6 +0.2**
baz=272
KDAK Kodiak Island 44.35 43 P **P** **12 15 09.7 +0.5**
KDAK x x 12 15 15.4
KDAK pP **sP** **12 15 21.4 +1.4**
KDAK sP **pwP** **12 15 26.1 +1.9**
Q20K Shuyak Island 44.43 42 P **P** **12 15 09.1 -0.8**
baz=272
APSI Ampana 44.49 214 P **P** **12 15 11.7 +0.8**
comp=Z,681nmcomp=Z,61nm,0.7s
N20K Mount Spurr 44.51 38 P **P** **12 15 10.7 +0.1**
baz=269
SPCR Spurr Chakacha 44.51 38 P **P** **12 15 10.7 +0.1**
baz=269
H21K Melozitna Rive 44.51 32 P **P** **12 15 11.9 +1.4**
H21K Melozitna Rive 44.51 32 P **P** **12 15 12.0 +1.4**
baz=264,SNR=9.3
AAI Ambon 44.56 204 P **P** **12 15 12.3 +0.9**
comp=Z,1μmcomp=Z,144nm,0.8s
CHUM Lake Minchumin 44.57 34 P **P** **12 15 12.8 +1.8**
baz=266,SNR=7.4
PPLA Purkeypile 44.57 36 P **P** **12 15 13.1 +1.9**
PPLA IAmb IAmb 12 15 19.9
comp=Z,38nm,1.3s
PPLA Purkeypile 44.57 36 P **P** **12 15 12.2 +1.0**
baz=268
SPU Mount Spurr 44.58 38 P **P** **12 15 13.1 +1.9**
CAST Castle Rocks 44.64 35 P **P** **12 15 13.7 +2.1**
CAST Castle Rocks 44.64 35 P **P** **12 15 13.3 +1.6**
baz=267,SNR=8.2
LSA Lhasa 44.67 276 P **P** **12 15 13.4 +0.6**
LSA pmax pmax
comp=Z,2.0nm,0.2s
HOM Homer 44.79 40 P **P** **12 15 13.7 +1.0**
baz=271
I21K Tanana 44.81 32 P **P** **12 15 14.8 +2.0**
I21K Tanana 44.81 32 P **P** **12 15 14.3 +1.5**
baz=265,SNR=7.8
BNDI Bandanaira 44.83 201 P **P** **12 15 13.9 +0.3**
SKT Skwentna 44.84 37 P **P** **12 15 13.9 +0.7**
baz=269
CNPM China Poot 45.00 40 P **P** **12 15 16.6 +2.1**
CNPM IAmb IAmb 12 15 22.1
comp=Z,39nm,1.1s
BPAW Bear Paw Mtn. 45.17 34 P **P** **12 15 16.9 +1.1**
BPAW Bear Paw Mtn. 45.17 34 P **P** **12 15 17.0 +1.2**
baz=267
BRLK Bradley Lake 45.17 40 P **P** **12 15 17.4 +1.6**
KTH Kantishna Hill 45.17 35 P **P** **12 15 17.7 +1.8**
KTH IAmb IAmb 12 15 24.7
comp=Z,32nm,1.1s
SUA Susitna One 45.21 38 P **P** **12 15 18.5 +2.2**
SUA Susitna One 45.21 38 P **P** **12 15 17.1 +0.8**
baz=270
BRSE Bradley Lake S 45.24 40 P **P** **12 15 16.4 -0.1**
baz=272
MLY Manley 45.32 33 P **P** **12 15 18.8 +1.7**
MLY Manley 45.32 33 P **P** **12 15 18.6 +1.6**
baz=267,SNR=15
CUT Chulitna 45.44 36 P **P** **12 15 18.0 +0.1**
baz=270
TRF Thorofare Moun 45.45 35 P **P** **12 15 19.3 +1.1**
TRF Thorofare Moun 45.45 35 P **P** **12 15 17.7 -0.5**
baz=269
M22K Willow 45.51 37 P **P** **12 15 19.9 +1.5**
M22K IAmb IAmb 12 16 57.8
comp=Z,25nm,0.8s
M22K Willow 45.51 37 P **P** **12 15 19.2 +0.8**
baz=270
MK31 Makanchi Array 45.62 302 P **P** **12 15 19.8 +0.1**
MK31 IAmb IAmb 12 15 21.0
comp=Z,39nm,0.8s
MK31 Makanchi Array 45.62 302 *d i*P **P** **12 15 19.9 +0.3**
MKAR Makanchi Array 45.62 302 P **P** **12 15 19.9 +0.3**
comp=Z,37nm,0.8s,baz=84,slow=9.3,SNR=314
MKAR PcP **PcP** **12 16 56.9 -0.6**
comp=Z,3.2nm,0.8s,baz=85,slow=6.4,SNR=1.6
MKAR LR LR 12 35 08.1
comp=Z,691nm,20.0s,baz=68,slow=37
comp=Z,37nm,0.8s
MKAR Makanchi Array 45.62 302 P **P** **12 15 20.0 +0.3**
RC01 Rabbit Creek A 45.71 38 P **P** **12 15 21.0 +0.9**
RC01 IAmb IAmb 12 15 34.9
comp=Z,26nm,1.0s
RC01 Rabbit Creek A 45.71 38 P **P** **12 15 20.2 +0.1**
baz=272
COLD Coldfoot 45.71 30 P **P** **12 15 21.5 +1.5**
COLD Coldfoot 45.71 30 P **P** **12 15 20.5 +0.5**
baz=265
O22K Cooper Landing 45.73 39 P **P** **12 15 20.2 -0.1**
baz=272
MAKZ Makanchi 45.83 302 P **P** **12 15 21.7 +0.4**
MAKZ IAmb IAmb 12 15 22.7
comp=Z,36nm,0.9s
MAKZ Makanchi 45.83 302 P **P** **12 15 21.7 +0.4**
MAKZ pmax pmax
comp=Z,36nm,0.9s
MAKZ Makanchi 45.83 302 P **P** **12 15 21.6 +0.4**
MAKZ pP **sP** **12 15 32.3 +0.5**
BWN Browne 45.84 34 P **P** **12 15 22.5 +1.4**
H23K Yukon River 45.87 32 P **P** **12 15 23.0 +1.6**
H23K IAmb IAmb 12 15 30.0
comp=Z,26nm,1.1s
H23K Yukon River 45.87 32 P **P** **12 15 23.2 +1.9**
baz=267,SNR=16
SEW Seward 45.88 40 P **P** **12 15 22.2 +0.8**
SEW IAmb IAmb 12 15 29.1
comp=Z,39nm,1.1s
SEW Seward 45.88 40 P **P** **12 15 21.7 +0.3**
baz=273
I23K Minto, Yukon-K 45.91 32 P **P** **12 15 23.2 +1.5**
I23K PcP **PcP** **12 16 59.1 +1.0**
I23K Minto, Yukon-K 45.91 32 P **P** **12 15 23.1 +1.5**
baz=268,SNR=8.1
PMR Palmer 45.99 37 P **P** **12 15 23.0 +0.8**
PMR Palmer 45.99 37 P **P** **12 15 23.0 +0.8**
PMR pmax pmax
comp=Z,20nm,1.0s
PMR Palmer 45.99 37 P **P** **12 15 22.5 +0.3**
baz=272,SNR=6.6
SHL Shillong 46.02 270 P **P** **12 15 22.7 -0.5**
SHL IAmb IAmb 12 15 45.8
comp=Z,30nm,0.8s
SHL Shillong 46.02 270 P **P** **12 15 22.7 -0.5**
SHL pmax pmax
comp=Z,30nm,0.8s
NEA2 Nenana 46.02 33 P **P** **12 15 24.0 +1.5**
NEA2 IAmb IAmb 12 15 30.6
comp=Z,35nm,1.2s
NEA2 Nenana 46.02 33 P **P** **12 15 23.6 +1.1**
baz=269,SNR=13
MCK McKinley 46.06 34 P **P** **12 15 24.0 +1.1**
MCK PcP **PcP** **12 16 58.7 -0.1**
MCK McKinley 46.06 34 P **P** **12 15 24.0 +1.1**
MCK 12 16 58.7
MCK pmax pmax
comp=Z,14nm,0.9s
MCK McKinley 46.06 34 P **P** **12 15 21.3 -1.5**
baz=270
GHO Glory Hole Cre 46.08 37 P **P** **12 15 23.6 +0.5**
GHO IAmb IAmb 12 15 38.2
comp=Z,29nm,0.8s
TOLK Toolik Lake Re 46.08 28 P **P** **12 15 24.5 +1.6**
TOLK IAmb IAmb 12 17 01.0
comp=Z,18nm,0.8s
TOLK Toolik Lake Re 46.08 28 PcP **PcP** **12 17 00.4 +1.7**
TOLK Toolik Lake Re 46.08 28 P **P** **12 15 24.3 +1.3**
baz=264,SNR=11
RND Reindeer 46.10 35 P **P** **12 15 23.0 -0.2**
RND IAmb IAmb 12 15 31.0
comp=Z,32nm,1.2s
RND Reindeer 46.10 35 P **P** **12 15 23.0 -0.2**
RND pmax pmax
comp=Z,32nm,1.2s
SEM Semipalatinsk 46.20 307 *e*P **P** **12 15 22.2 -2.2**
SEM Semipalatinsk 46.20 307 *e*P **P** **12 15 22.3 -2.2**
baz=307

WAT1 Susitna Watana 46.24 36 P P 12 15 24.2 -0.1
baz=271
KNK Knik Glacier 46.31 38 P P 12 15 25.7 +0.8
KNK PcP PcP 12 17 01.0 +1.3
KNK Knik Glacier 46.31 38 P P 12 15 24.8 0.0
baz=272
SML Sawmill 46.36 37 P P 12 15 26.1 +0.9
SML lAmb lAmb 12 15 32.9
comp=Z,39nm,1.0s
SML Sawmill 46.36 37 P P 12 15 26.0 +0.8
baz=272,SNR=8.3
MDM Murphy Dome 46.39 33 P P 12 15 26.8 +1.4
MDM lAmb lAmb 12 15 33.5
comp=Z,33nm,1.0s
WRH Wood River Hil 46.44 33 P P 12 15 26.8 +1.0
WRH PcP PcP 12 16 60.0 0.0
WRH lAmb lAmb 12 17 00.9
comp=Z,20nm,0.8s
SBUM Sibu 46.47 228 P P 12 15 26.2 -0.4
TCOL CIGO, UAF Yank 46.54 33 P P 12 15 25.6 -0.9
baz=270
COLA College 46.55 33 P P 12 15 27.4 +0.8
COLA College 46.55 33 *de*P P 12 15 27.7 +1.1
COLA pmax pmax
comp=Z,23nm,2.1s
COLA College 46.55 33 P P 12 15 26.0 -0.6
baz=270
H24K Noodor Dome 46.55 32 P P 12 15 27.2 +0.4
H24K PcP PcP 12 17 01.8 +1.3
H24K Noodor Dome 46.55 32 P P 12 15 28.4 +1.7
baz=269,SNR=15
CCB Clear Creek Bu 46.56 33 P P 12 15 27.7 +0.9
CCB PcP PcP 12 17 00.4 0.0
WAT6 Susitna Watana 46.62 36 P P 12 15 27.6 +0.2
baz=272,SNR=8.3
M23K Glacier View 46.65 37 P P 12 15 27.7 +0.2
baz=272
POKR Poker Plat Res 46.73 33 P P 12 15 28.8 +0.8
POKR lAmb lAmb 12 15 36.3
comp=Z,45nm,1.0s
POKR Poker Plat Res 46.73 33 P P 12 15 29.2 +1.2
baz=270,SNR=6.7
DHY Denali Highway 46.77 35 P P 12 15 29.5 +0.9
DHY PcP PcP 12 17 02.5 +1.0
DHY Denali Highway 46.77 35 P P 12 15 28.8 +0.2
baz=272
SCM Sheep Creek Mo 46.84 37 P P 12 15 30.0 +1.0
SCM lAmb lAmb 12 15 44.4
comp=Z,25nm,0.8s
SCM Sheep Creek Mo 46.84 37 P P 12 15 30.0 +1.0
SCM pmax pmax
comp=Z,25nm,0.8s
SCM Sheep Creek Mo 46.84 37 P P 12 15 29.9 +0.9
baz=273,SNR=6.3
HDA Harding Lake 46.94 34 P P 12 15 29.4 -0.3
baz=271,SNR=13
IL31 46.96 33 P P 12 15 29.9 +0.1
ILAR Eielson Array 46.96 33 P P 12 15 30.1 +0.2
comp=Z,7.3nm,0.7s,baz=263,slow=6.7,SNR=73
ILAR PcP PcP 12 17 00.8 -1.1
comp=Z,2.8nm,0.8s,baz=257,slow=3.8,SNR=1.4
comp=Z,7.3nm,0.7s
GLI Glacier Island 47.00 38 P P 12 15 30.2 0.0
baz=274
KURK Kurchatov 47.16 308 P P 12 15 32.0 +0.4
KURK Kurchatov 47.16 308 *d* iP P 12 15 31.6 0.0
KURK Kurchatov 47.16 308 P P 12 15 31.8 +0.2
KURK pP sP 12 15 43.1 +0.9
KURBB Kurchatov Arra 47.24 307 P P 12 15 32.4 +0.2
comp=Z,76nm,0.6s,baz=81,slow=8.1,SNR=535
KURBB PcP PcP 12 17 03.0 0.0
comp=Z,4.1nm,0.8s,baz=79,slow=7.1,SNR=1.6
KURBB LR LR 12 36 12.7
comp=Z,435nm,18.5s,baz=50,slow=37
comp=Z,76nm,0.6s
KURBB Kurchatov Arra 47.24 307 P P 12 15 31.3 -0.9
M24K Tolsona, Glenn 47.37 37 lAmb lAmb 12 15 41.6
comp=Z,38nm,0.9s
M24K Tolsona, Glenn 47.37 37 P P 12 15 33.7 +0.6
baz=274
K24K Donnelly Dome 47.46 34 P P 12 15 33.7 -0.2
baz=272,SNR=6.2
Q23K Middleton Isla 47.49 40 P P 12 15 34.4 +0.4
baz=276
KLU Klutina 47.53 38 lAmb lAmb 12 15 42.4
comp=Z,29nm,0.9s
KLU Klutina 47.53 38 P P 12 15 35.7 +1.2
baz=274,SNR=8.1
PMG Port Moresby 47.59 177 P P 12 15 34.9 -0.4
comp=Z,19nm,1.0s,baz=297,slow=4.5,SNR=3.2
PMG LR LR 12 32 57.0
comp=Z,67nm,21.9s,baz=352,slow=33
comp=Z,19nm,1.0s
PMG Port Moresby 47.59 177 lAmb lAmb 12 16 43.7
comp=Z,25nm,0.9s
PMG Port Moresby 47.59 177⇑ *e*P P 12 15 38.2 +3.0
PMG pmax pmax
comp=Z,51nm,2.5s
J25K Salcha River, 47.61 33 P P 12 15 34.8 -0.2
J25K Salcha River, 47.61 33 P P 12 15 33.5 -1.5
baz=272
DIV Divide 47.63 38 P P 12 15 36.8 +1.6
DIV lAmb lAmb 12 15 50.9
comp=Z,32nm,0.8s
PAX Paxson 47.64 35 lAmb lAmb 12 17 06.3
comp=Z,18nm,0.8s
PAX Paxson 47.64 35 P P 12 15 34.8 -0.5
baz=273
EYAK Cordova Ski Ar 47.69 39 P P 12 15 37.1 +1.6
EYAK lAmb lAmb 12 15 43.7
comp=Z,34nm,1.1s
EYAK Cordova Ski Ar 47.69 39 P P 12 15 34.9 -0.7
baz=275
MTKI Muara Teweh, K 47.79 222 P P 12 15 37.7 +0.8
comp=Z,57nm,0.7s
HARP HAARP 47.82 36 P P 12 15 35.4 -1.2
baz=274
RIDG Independent Ri 47.88 34 lAmb lAmb 12 17 06.9
comp=Z,18nm,1.0s
RIDG Independent Ri 47.88 34 P P 12 15 36.8 -0.3
baz=273
BMAR Burnt Mountain 47.89 29 P P 12 15 38.2 +1.1
SPSI Sidrap Palu 48.04 214 P P 12 15 40.5 +1.7
comp=Z,28nm,0.8s
N25K Chitina, Valde 48.15 37 P P 12 15 38.3 -1.0
baz=275
BMRM Bremner River 48.21 38 P P 12 15 41.4 +1.8
BMRM PcP PcP 12 17 07.2 +0.7
BMRM lAmb lAmb 12 17 08.3
comp=Z,20nm,0.7s
BMRM Bremner River 48.21 38 P P 12 15 40.2 +0.6
baz=276
DOT Dot Lake 48.23 35 P P 12 15 40.4 +0.6
DOT PcP PcP 12 17 07.5 +1.0
SCRK Sand Creek 48.25 34 P P 12 15 40.8 +0.8
SCRK lAmb lAmb 12 15 47.3
comp=Z,23nm,1.3s
SCRK Sand Creek 48.25 34 P P 12 15 40.4 +0.4
baz=274,SNR=25
BNSI Bone 48.28 214 P P 12 15 43.5 +2.9
comp=Z,39nm,0.8s
KSM Kuching 48.38 229 P P 12 15 42.6 +1.1
KSM lAmb lAmb 12 15 43.6
comp=Z,37nm,0.9s
KSM Kuching 48.38 229 P P 12 15 42.4 +1.0
J26L Joseph Creek 48.40 33 P P 12 15 41.8 +0.7
J26L Joseph Creek 48.40 33 P P 12 15 41.5 +0.4
baz=274,SNR=9.5
TAPN Taplejung 48.44 275 *e*P P 12 15 42.9 +0.7
MENT Mentasta 48.44 35 lAmb lAmb 12 15 50.0
comp=Z,24nm,1.1s
SHLS Shalkode 48.52 298 *d* iP P 12 15 40.3 -2.1
SHLS pmax pmax
comp=Z,18nm,0.8s
SHLS Shalkode 48.52 298 ⇓ iP P 12 15 40.3 -2.1
comp=Z,18nm,0.8s,baz=297
GLB Gilahina Butte 48.54 37 lAmb lAmb 12 15 50.5
comp=Z,40nm,1.4s
L26K Log Cabin Wild 48.60 35 lAmb lAmb 12 15 51.1
comp=Z,26nm,0.9s
L26K Log Cabin Wild 48.60 35 P P 12 15 44.3 +1.6
baz=275,SNR=21
TDK Taldyqorghan 48.70 300 *e*P P 12 15 43.3 -0.3
TDK Taldyqorghan 48.70 300 *e*P P 12 15 43.4 -0.3
baz=300
VRDI Verde Repeater 48.74 38 lAmb lAmb 12 15 52.0
comp=Z,31nm,1.0s
M26K Nabesna, AK 48.82 36 P P 12 15 46.1 +1.7
M26K lAmb lAmb 12 15 52.9
comp=Z,30nm,1.1s
M26K Nabesna, AK 48.82 36 P P 12 15 46.0 +1.7
baz=276,SNR=15
UZB Uzynbulak 48.83 298 *e*P P 12 15 43.3 -1.5
UZB Uzynbulak 48.83 298 *e*P P 12 15 43.4 -1.5
baz=298
STKI Sintang 48.84 227 P P 12 15 46.0 +1.1
comp=Z,52nm,1.0s
ODAN Odare 48.92 274 *e*P P 12 15 46.5 +0.7
MCARA McCarthy VSAT 48.92 37 P P 12 15 46.5 +1.4
MCARA lAmb lAmb 12 16 01.6
comp=Z,37nm,0.8s
MCARA McCarthy VSAT 48.92 37 P P 12 15 46.7 +1.6
baz=277,SNR=7.1
BGLC Bering Glacier 48.95 39 P P 12 15 45.7 +0.5
baz=276
KPKS Kokpek 48.97 298 *d* iP P 12 15 46.2 +0.4
KPKS pmax pmax
comp=Z,27nm,1.1s
KPKS Kokpek 48.97 298 ⇓ iP P 12 15 46.2 +0.4
comp=Z,27nm,1.1s,baz=298
KAPI Kappang 48.98 214 P P 12 15 45.9 -0.1
comp=Z,9.3nm,0.5s,baz=22,slow=13,SNR=6.8
KAPI PcP PcP 12 17 09.7 0.0
comp=Z,8.2nm,0.7s,baz=80,slow=2.3,SNR=3.8
comp=Z,9.3nm,0.5s
KAPI Kappang 48.98 214 P P 12 15 46.8 +0.8
KAPI lAmb lAmb 12 16 09.6
comp=Z,40nm,1.1s
KAPI Kappang 48.98 214 P P 12 15 46.8 +0.8
KAPI pmax pmax
comp=Z,40nm,1.1s
KAPI Kappang 48.98 214 P P 12 15 47.1 +1.1
KAPI Kappang 48.98 214 P P 12 15 46.6 +0.6
KAPI pP pwP 12 15 58.9 -2.3
KAPI x x 12 17 09.6
K27K Chicken 49.08 34 lAmb lAmb 12 16 19.6
comp=Z,24nm,1.1s
K27K Chicken 49.08 34 P P 12 15 47.2 +0.9
baz=275
TGL Tana Glacier 49.09 38 lAmb lAmb 12 15 55.4
comp=Z,60nm,1.4s
ZHN Zhinishke 49.23 298 *e*P P 12 15 46.7 -1.2
ZHN Zhinishke 49.23 298 *e*P P 12 15 46.7 -1.2
baz=298
SATY Saty 49.29 298 *d* iP P 12 15 48.7 +0.4
SATY pmax pmax
comp=Z,18nm,0.9s
SATY Saty 49.29 298 ⇓ iP P 12 15 48.7 +0.4
comp=Z,18nm,0.9s,baz=298
L27K Beaver Creek, 49.29 35 lAmb lAmb 12 16 26.4
comp=Z,20nm,1.0s
L27K Beaver Creek, 49.29 35 P P 12 15 49.4 +1.5
baz=276,SNR=12
BCAR Beaver Creek A 49.31 35 P P 12 15 49.4 +1.3
M27K Edge Creek, AK 49.35 36 P P 12 15 50.3 +1.8
M27K lAmb lAmb 12 16 24.3
comp=Z,23nm,1.2s
M27K Edge Creek, AK 49.35 36 P P 12 15 49.9 +1.4
baz=277,SNR=6.6
ISLE Juniper Island 49.35 38 P P 12 15 50.1 +1.6
ISLE lAmb lAmb 12 15 56.7
comp=Z,36nm,1.1s
JIRN Jiri 49.48 276 *e*P P 12 15 51.1 +0.9
comp=Z,62nm,0.9s
RAMN Ramite 49.49 275 *e*P P 12 15 50.8 +0.6
comp=Z,88nm,0.5s
GUN Gumba 49.60 276 *e*P P 12 15 52.0 +0.8
comp=Z,76nm,0.5s
BARN Barnard Glacie 49.62 38 lAmb lAmb 12 16 14.6
comp=Z,26nm,1.1s
GRNC Granite Creek 49.62 38 lAmb lAmb 12 16 06.4
comp=Z,32nm,0.8s
HNR Honiara 49.65 160 LR LR 12 34 34.9
comp=Z,139nm,21.9s,baz=356,slow=33
YAH Yahtse 49.68 39 lAmb lAmb 12 16 07.5
comp=Z,39nm,0.8s
CTG Chitna Glacier 49.79 38 P P 12 15 52.4 +0.5
baz=279,SNR=7.0
CTGM Chitina Glacie 49.79 38 lAmb lAmb 12 16 07.6
comp=Z,23nm,0.9s
BBKI Banjar Baru 49.96 220 P P 12 15 53.6 +0.1
comp=Z,14µmcomp=Z,78nm,0.9s
CHKK Chushkaly 50.02 299 ⇓ *i* P P 12 15 48.4 -5.3
CHKK Chushkaly 50.02 299 ⇓ *i* P P 12 15 48.5 -5.2
baz=299
YUK3 Moose Creek 50.09 37 P P 12 15 53.8 -0.4
baz=279,SNR=8.5
KKN Kakani 50.13 276 *e*P P 12 15 55.5 +0.5
PKI Pulchoki 50.13 276 *e*P P 12 15 55.3 +0.1
PKIN Phulchoki 50.14 276 *e*P P 12 15 55.2 +0.1
MDOK Medeo 50.20 298 *e*P P 12 15 55.3 +0.1
MDOK Medeo 50.20 298 *e*P P 12 15 55.4 +0.1
baz=298
DAWY Dawson 50.25 34 P P 12 15 56.5 +1.3
DAWY Dawson 50.25 34 P P 12 15 55.7 +0.5
baz=278
AAA Ala-Ata 50.27 298 *e*P P 12 15 55.8 +0.1
AAA Alma-Ata 50.27 298 *e*P P 12 15 55.9 +0.1
baz=298
TNSS Tian-Shan 50.31 298 *e*P P 12 15 56.6 +0.2
TNSS Tian-Shan 50.31 298 *e*P P 12 15 56.7 +0.3
baz=298
DMN Daman 50.35 276 *e*P P 12 15 57.3 +0.6
KDJ Kajisay 50.44 297 P P 12 15 57.8 +0.6
KDJ lAmb lAmb 12 15 59.0
comp=Z,27nm,0.8s
KDJ Kajisay 50.44 297 P P 12 15 57.8 +0.6
KDJ pmax pmax
comp=Z,27nm,0.8s
KUU Kurty 50.45 299 *d* iP P 12 15 56.8 -0.2
KUU pmax pmax
comp=Z,33nm,0.7s
KUU Kurty 50.45 299 ⇓ *i* P P 12 15 56.8 -0.2
comp=Z,33nm,0.7s,baz=299
PINM Pinnacle 50.46 39 P P 12 15 56.5 -0.4
baz=280
YUK8 Steele Glacier 50.49 37 P P 12 15 56.2 -1.1
baz=280
GKN Gorkha 50.53 277 *e*P P 12 15 58.6 +0.6
comp=Z,336nm,1.1s
I29M Ogilvie Camp, 50.55 32 P P 12 15 58.6 +1.2
I29M lAmb lAmb 12 15 59.8
comp=Z,36nm,1.2s
I29M Ogilvie Camp, 50.55 32 P P 12 15 58.4 +1.0
baz=278,SNR=22
PNL Peninsula 50.96 39 P P 12 16 01.6 +1.0
baz=281
YUK4 Talbot Arm 51.01 37 P P 12 16 01.2 0.0
baz=280,SNR=5.8
BRZS Berezniki 51.03 308 *d* iP P 12 16 01.1 -0.2
BRZS pmax pmax
comp=Z,16nm,0.5s
BRZS Berezniki 51.03 308 ⇓ iP P 12 16 01.1 -0.2
comp=Z,16nm,0.5s,baz=308
DANN Dangsing 51.05 278 *e*P P 12 16 03.1 +1.0
comp=Z,616nm,0.8s
EPYK Eagle Plains 51.06 31 P P 12 16 02.9 +1.6
EPYK lAmb lAmb 12 16 04.0
comp=Z,48nm,1.1s
EPYK Eagle Plains 51.06 31 P P 12 16 02.8 +1.6
baz=278,SNR=22
ULHL Ulahol 51.06 297 P P 12 16 02.5 +0.6
SNR=11
BOOM Boomskoye usch 51.19 298 P P 12 16 03.8 +1.0
BOOM Boomskoye usch 51.19 298 P P 12 16 03.8 +1.0
BOOM pmax pmax
comp=Z,49nm,0.9s
YUK6 Outpost Mounta 51.22 38 P P 12 16 02.5 -0.3
baz=281
TKM2 Tokmak 2 51.28 298 P P 12 16 04.6 +1.1
SNR=66
KOLN Koldanda 51.45 277 *e*P P 12 16 05.6 +0.7
SOEI Soe 51.54 206 P P 12 16 19.1 +14
EDFI Ende, Flores 51.56 210 P P 12 16 04.8 -0.8
comp=Z,551nmcomp=Z,47nm,1.0s
BTLS Baital 51.63 301 *d* iP P 12 16 05.3 -0.5
BTLS pmax pmax
comp=Z,13nm,1.1s
BTLS Baital 51.63 301 ⇓ iP P 12 16 05.4 -0.5
comp=Z,13nm,1.1s,baz=301
M30M Minto, Yukon 51.65 35 P P 12 16 07.7 +1.9
M30M Minto, Yukon 51.65 35 P P 12 16 05.8 0.0
baz=281,SNR=8.8
BRVK Borovoye 51.65 312 P P 12 16 06.6 +0.7
BRVK lAmb lAmb 12 16 07.5
comp=Z,44nm,0.8s
BRVK Borovoye 51.65 312 *d* iP P 12 16 06.2 +0.4
BRVK pmax pmax
comp=Z,44nm,0.8s
BRVK Borovoye 51.65 312 P P 12 16 06.4 +0.5
BRVK x x 12 16 30.6
HYT Haines Junctio 51.66 38 P P 12 16 08.0 +2.1
HYT Haines Junctio 51.66 38 P P 12 16 06.3 +0.4
baz=282,SNR=33
N30M Aishikik Lake 51.73 37 P P 12 16 06.5 +0.1
baz=282
KULM Kulim 51.74 242 P P 12 16 07.6 +0.7
SGDS Sogindy 51.77 299 *e*P P 12 16 06.4 -0.5
SGDS pmax pmax
comp=Z,33nm,2.1s
SGDS Sogindy 51.77 299 *e*P P 12 16 06.5 -0.5
comp=Z,33nm,2.1s,baz=299
KBK Karagaybulak 51.82 298 P P 12 16 08.3 +0.8
SNR=22
USP Ospenovka 51.92 299 P P 12 16 08.6 +0.6
SNR=12
INK Inuvik 51.99 28 P P 12 16 09.4 +1.3
INK lAmb lAmb 12 16 10.2
comp=Z,47nm,1.4s
INK Inuvik 51.99 28 P P 12 16 09.4 +1.3
INK pmax pmax
comp=Z,47nm,1.4s
INK Inuvik 51.99 28 P P 12 16 08.2 +0.1
baz=279,SNR=10
IPM Ipoh 52.06 241 P P 12 16 09.0 -0.4
IPM lAmb lAmb 12 16 10.5
comp=Z,22nm,0.8s
IPM Ipoh 52.06 241 P P 12 16 09.6 +0.2
KDU Kakadu 52.07 195 P P 12 16 08.9 -0.3
COEN Coen 52.08 182 P P 12 16 10.0 +0.6
COEN lAmb lAmb 12 16 10.7
comp=Z,24nm,1.1s
COEN Coen 52.08 182 P P 12 16 09.9 +0.6
AAK Ala-Archa 52.14 298 P P 12 16 10.1 +0.2
comp=Z,7.5nm,0.6s,baz=134,slow=5.1,SNR=2.3
AAK LR LR 12 40 24.0
comp=Z,365nm,18.1s,baz=93,slow=38
comp=Z,7.5nm,0.6s
AAK Ala-Archa 52.14 298 P P 12 16 09.9 +0.1
AAK Ala-Archa 52.14 298 *d* iP P 12 16 10.2 +0.4
AAK pmax pmax
comp=Z,10.0nm,0.7s
AAK Ala-Archa 52.14 298 P P 12 16 10.3 +0.4
AAK Ala-Archa 52.14 298 P P 12 16 10.3 +0.4
AAK sP pwP 12 16 24.7 -0.6
MYKOM Kota Tinggi 52.16 236 P P 12 16 09.7 -0.3
MYKOM lAmb lAmb 12 16 12.3
comp=Z,73nm,1.8s
BATI Baumata 52.17 207 P P 12 16 09.9 -0.1
comp=Z,24nm,0.6s,baz=270,slow=3.0,SNR=2.1
comp=Z,24nm,0.6s
KSH Kashi 52.23 294 P P 12 16 15.4 +4.9
KSH pP sP 12 16 22.0 +0.9
KSH pmax pmax
comp=Z,39nm,0.7s
KSH LR LR
comp=Z,470nm,15.8s
KSH LR LR
comp=Z,240nm,15.8s
KSH LR LR
comp=Z,430nm,18.2s
N31M Braeburn, Yuko 52.34 37 P P 12 16 13.1 +2.1
N31M lAmb lAmb 12 16 14.1
comp=Z,28nm,0.9s
N31M Braeburn, Yuko 52.34 37 P P 12 16 13.0 +2.1
baz=283,SNR=10
O30N Mendenhall 52.35 38 P P 12 16 11.0 0.0
baz=283
MTN Manton Dam 52.51 197 P P 12 16 12.2 -0.3
MTN Manton Dam 52.51 197 P P 12 16 12.4 -0.1
PLBC Pleasant Camp 52.51 39 P P 12 16 14.0 +1.9
baz=284,SNR=5.6
EKS2 Erkin-Say 52.62 299 P P 12 16 13.9 +0.5
SNR=13
M31M Drury Creek, Y 52.82 36 P P 12 16 16.2 +1.7
M31M lAmb lAmb 12 16 22.8
comp=Z,38nm,1.5s
M31M Drury Creek, Y 52.82 36 P P 12 16 16.1 +1.6
baz=283,SNR=11
AML Almayashu 52.87 298 P P 12 16 16.7 +1.1
SNR=18
AML Almayashu 52.87 298 *i* P P 12 16 16.6 +1.1
SNR=18
WHY Whitehorse 52.95 37 P P 12 16 17.4 +1.9
WHY Whitehorse 52.95 37 P P 12 16 17.4 +1.9
baz=284,SNR=7.7
SKAG Skagway 53.03 39 P P 12 16 18.3 +2.4
SKAG lAmb lAmb 12 16 24.9
comp=Z,32nm,1.4s
SKAG Skagway 53.03 39 P P 12 16 17.3 +1.4
baz=284
FARO Faro, Yukon 53.29 35 P P 12 16 19.3 +1.4
baz=284,SNR=14
BESE Bessie Mountai 53.49 40 P P 12 16 21.2 +1.7
BESE lAmb lAmb 12 16 29.0
comp=Z,28nm,1.2s
SIT Sitka 53.66 42 P P 12 16 20.9 +0.3
baz=286
SRBI Singaraja 53.77 217 P P 12 16 23.1 +1.3
comp=Z,143nm,1.3s
JIS Juneau Island 53.81 40 lAmb lAmb 12 16 30.7
comp=Z,38nm,1.2s
A36M Sachs Harbour 54.03 23 P P 12 16 24.0 +0.9
A36M lAmb lAmb 12 16 26.5
comp=Z,17nm,0.8s
A36M Sachs Harbour 54.03 23 P P 12 16 22.9 -0.1
baz=284
P33M Teslin, Yukon 54.06 38 P P 12 16 25.5 +1.9
P33M lAmb lAmb 12 16 32.4
comp=Z,36nm,1.2s
P33M Teslin, Yukon 54.06 38 P P 12 16 25.5 +1.9
baz=286,SNR=16
MMPY Sheldon Lake, 54.13 35 P P 12 16 26.0 +1.9
baz=285,SNR=13
DZA Taraz 54.22 300 *e*P P 12 16 24.9 0.0
DZA Taraz 54.22 300 *e*P P 12 16 25.0 0.0
baz=300
KK31 Karatay Array 54.70 300 lAmb lAmb 12 16 29.6
comp=Z,67nm,1.6s
KK31 Karatay Array 54.70 300 *i* P P 12 16 28.3 -0.1
KKAR Karatay Array 54.70 300 P P 12 16 28.1 -0.3
KKAR lAmb lAmb 12 16 29.6
comp=Z,67nm,1.6s
KKAR Karatay Array 54.70 300 P P 12 16 28.1 -0.3
KKAR pmax pmax
comp=Z,67nm,1.6s
PSI Prapat 54.72 241 P P 12 16 29.4 +0.4
comp=Z,15nm,0.9s,baz=105,slow=1.8,SNR=7.6
PSI PcP PcP 12 17 31.5 +0.1
comp=Z,19nm,0.9s,baz=316,slow=4.4,SNR=6.0
PSI LR LR 12 41 06.2
comp=Z,145nm,19.7s,baz=30,slow=37
comp=Z,15nm,0.9s
BKNI Bangkinang 55.10 237 P P 12 16 32.9 +1.3
BKNI Bangkinang 55.10 237 P P 12 16 33.8 +2.2
comp=Z,126nm,1.1s
BKNI Bangkinang 55.10 237 P P 12 16 33.8 +2.2
comp=Z,125nm,1.1s
C36M Paulatuk 55.11 26 P P 12 16 32.0 +1.1
C36M lAmb lAmb 12 16 32.2
comp=Z,18nm,0.8s
C36M Paulatuk 55.11 26 P P 12 16 31.7 +0.7
baz=287,SNR=7.0
DRK Karamyk 55.22 296 P P 12 16 33.2 +0.6
SMRI Semarang 55.29 223 P P 12 16 33.8 +0.8
CRAG Craig 55.31 43 P P 12 16 33.4 +0.8
baz=289
IUG Iuzhnay 55.39 299 *e*P P 12 16 32.5 -1.1
IUG Iuzhnay 55.39 299 *e*P P 12 16 32.5 -1.1
baz=299
PWJI Pagerwojo 55.40 221 P P 12 16 33.0 -0.7
comp=Z,123nm,0.8s
WRAK Wrangell Islan 55.42 42 P P 12 16 34.3 +0.9
baz=289
BTK Batken 55.67 297 P P 12 16 35.8 +0.2
BTK Batken 55.67 297 P P 12 16 35.8 +0.2
BTK pmax pmax
comp=Z,95nm,2.0s

TGTN **Hyland Airport** 55.80 35 P P 12 16 35.9 -0.2
baz=288
KNRA **Kununurra** 55.81 199 P P 12 16 36.6 +0.1
KNRA **Kununurra** 55.81 199 P P 12 16 36.7 +0.2
SVE **Sverdlovsk** 55.86 319 *ce*P P 12 16 37.4 +0.8
SVE pmax pmax
comp=Z,70nm,1.1s
SVE MLR MLR
comp=Z,782nm,18.0s
DLBC **Dease Lake** 55.95 39 LR LR 12 41 45.1
comp=Z,76nm,20.0s,baz=290,slow=37
DLBC **Dease Lake** 55.95 39 P P 12 16 39.5 +2.2
DLBC IAmb IAmb 12 16 47.5
comp=Z,76nm,1.9s
DLBC **Dease Lake** 55.95 39 P P 12 16 39.5 +2.2
baz=289,SNR=8.2
MTSU **Mount Surprise** 56.21 180 P P 12 16 39.7 +0.2
T35M **Bob Quinn** 56.33 41 P P 12 16 42.4 +2.5
baz=290,SNR=8.0
LEM **Lemban** 56.66 226 P P 12 16 42.9 0.0
comp=Z,84nm,0.8s,baz=90,slow=7.2,SNR=14
LEM LR LR 12 42 37.8
comp=Z,83nm,18.3s,baz=337,slow=38
comp=Z,84nm,0.8s
GSI **Gunungsitoli** 56.72 241 P P 12 16 44.6 +1.3
comp=Z,56nm,1.5s
GSI **Gunungsitoli** 56.72 241 P P 12 16 44.4 +1.1
ARU **Arti** 57.07 319 P P 12 16 45.7 +0.5
comp=Z,36nm,0.7s,baz=62,slow=3.8,SNR=54
ARU LR LR 12 43 56.0
comp=Z,461nm,18.1s,baz=68,slow=39
comp=Z,36nm,0.7s
ARU **Arti** 57.07 319 P P 12 16 45.7 +0.5
ARU **Arti** 57.07 319 *d* *i*P P 12 16 45.6 +0.5
ARU 12 17 38.4
ARU 12 18 52.2
ARU S S 12 24 42.6 +4.9
ARU SS SS 12 28 21.9 -4.1
ARU pmax pmax
comp=Z,84nm,1.3s
ARU MLR MLR
comp=Z,469nm,16.0s
ARU **Arti** 57.07 319 P P 12 16 45.6 +0.5
ARU sP pwP 12 17 00.1 -0.4
WRGLY **Wrigley** 57.33 33 P P 12 16 48.1 +1.2
baz=291
CHGR **Chuyangaron** 57.43 296 P P 12 16 48.3 +0.2
CHGR **Chuyangaron** 57.43 296 P P 12 16 48.3 +0.2
CHGR pmax pmax
comp=Z,138nm,0.8s
CTA **Charters Tower** 58.17 178 P P 12 16 52.7 -0.5
comp=Z,4.6nm,0.7s,baz=9.9,slow=8.7,SNR=9.0
CTA LR LR 12 39 04.9
comp=Z,109nm,21.9s,baz=54,slow=33
comp=Z,4.6nm,0.7s
CTA **Charters Tower** 58.17 178 P P 12 16 52.7 -0.5
CTAO **Charters Tower** 58.17 178 P P 12 16 52.6 -0.7
CTAO **Charters Tower** 58.17 178 P P 12 16 52.6 -0.7
CTAO **Charters Tower** 58.17 178 P P 12 16 52.8 -0.5
CTAO **Charters Tower** 58.17 178 P P 12 16 52.7 -0.5
EUNU **Eureka** 58.46 9 P P 12 16 55.3 +0.6
ALE **Alert** 58.60 4 P P 12 16 56.0 +0.4
ALE sP pwP 12 17 10.0 -0.8
WB0 **Warramunga Arr** 58.64 191 P P 12 16 55.7 -0.8
WR0 **Warramunga Arr** 58.81 191 P P 12 16 56.8 -0.9
WRAB **Tennant Creek** 58.81 191 P P 12 16 56.5 -1.2
WRAB **Tennant Creek** 58.81 191 *d* *i*P P 12 16 56.8 -0.9
WRAB pmax pmax
comp=Z,53nm,0.7s
WRAB **Tennant Creek** 58.81 191 P P 12 16 56.8 -0.9
WRAB **Tennant Creek** 58.81 191 P P 12 16 56.8 -0.9
QIS **Mount Isa** 58.82 186 P P 12 16 57.3 -0.5
WB2 **Warramunga Arr** 58.82 191 P P 12 16 57.0 -0.8
WRA **Warramunga Arr** 58.82 191 P P 12 16 56.5 -1.2
comp=Z,43nm,0.7s,baz=12,slow=7.3,SNR=173
WRA pP sP 12 17 10.3 +1.7
comp=Z,15nm,0.6s,baz=11,slow=7.3,SNR=10
WRA PcP PcP 12 17 47.2 +0.2
comp=Z,7.6nm,0.6s,baz=5.2,slow=4.5,SNR=6.6
comp=Z,43nm,0.7s
WRA **Warramunga Arr** 58.82 191 P P 12 16 56.3 -1.5
AB31 **Akbulak array** 59.05 310 *i* P P 12 16 57.6 -1.6
ABKAR **Akbulak array** 59.05 310 P P 12 16 59.4 +0.2
KBL **Kabul** 59.35 292 P P 12 17 01.4 -0.4
KBL IAmb IAmb 12 17 20.2
comp=Z,22nm,0.8s
KBL **Kabul** 59.35 292 P P 12 17 01.4 -0.4
KBL pmax pmax
comp=Z,22nm,0.8s
SPITS **Spitsbergen Ar** 59.70 349 P P 12 17 02.8 -0.4
comp=Z,14nm,1.0s,baz=340,slow=4.4,SNR=4.5
comp=Z,14nm,1.0s
SPITS **Spitsbergen Ar** 59.70 349 P P 12 17 03.9 +0.6
SPITS pmax pmax
comp=Z,70nm,1.7s
AKTO **Aktyubinsk** 59.70 312 P P 12 17 03.4 -0.3
comp=Z,23nm,0.8s,baz=72,slow=6.7,SNR=47
AKTO LR LR 12 44 41.7
comp=Z,349nm,19.6s,baz=66,slow=38
comp=Z,23nm,0.8s
KBS **Kingsbay** 59.77 351 P P 12 17 05.1 +1.4
KBS IAmb IAmb 12 17 05.6
comp=Z,22nm,0.9s
KBS **Kingsbay** 59.77 351 P P 12 17 05.1 +1.4
KBS pmax pmax
comp=Z,22nm,1.0s
NOR **Nord** 59.86 357 *i* P P 12 17 02.9 -1.4
NOR IAmb IAmb 12 17 04.6
comp=Z,12nm,1.0s
RES **Resolute Bay** 60.64 15 P P 12 17 09.9 +0.2
RES IAmb IAmb 12 17 11.1
comp=Z,24nm,0.8s
RES **Resolute Bay** 60.64 15 P P 12 17 09.9 +0.2
RES pmax pmax
comp=Z,24nm,0.9s
KIRV **Kirov** 60.74 323 P P 12 17 10.8 +0.3
comp=Z,64nm,0.7s,baz=42,slow=3.2,SNR=24
comp=Z,64nm,0.7s
KIRV **Kirov** 60.74 323 ⇓ *i*P P 12 17 10.0 -0.5
HYBB **Hyderabad (bro** 60.83 270 *e*P P 12 17 12.1 +0.3
HYBB *es*P pwP 12 17 26.8 -0.5
HYBB *e*S S 12 25 28.0 +0.5
HYBB *e*ScS SKKSac 12 27 00.0 -0.8
PRGR **Permogore** 61.05 327 *e*P P 12 17 12.9 +0.3
YKA **Yellowknife Ar** 61.33 31 P P 12 17 14.8 +0.3
comp=Z,9.2nm,0.7s,baz=303,slow=6.5,SNR=26
YKA PKPPKP P'P'df 12 46 29.6 -5.3
comp=Z,0.6nm,0.8s,baz=115,slow=2.1,SNR=7.0
YKA PKP2bc 12 46 38.0
comp=Z,0.1nm,0.3s,baz=99,slow=3.8,SNR=4.4
comp=Z,9.2nm,0.7s
KOUNC **Koumac, New Ca** 61.44 159 P P 12 17 16.3 +0.7
KOUNC **Koumac, New Ca** 61.44 159 P P 12 17 17.6 +1.9
RK1H **Rockhampton Ha** 61.68 174 P P 12 17 17.5 +0.3
LVZ **Lovozero** 61.94 336 *de*P P 12 17 18.2 -0.5
LVZ pmax pmax
comp=Z,42nm,0.9s
LVZ **Lovozero** 61.94 336 P P 12 17 18.1 -0.5
LVZ sP pwP 12 17 32.7 -1.4
APA **Apatity** 62.52 336 ⇓ *i*P P 12 17 21.7 -0.7
APA pmax pmax
comp=Z,24nm,0.7s
APA MLR MLR
comp=Z,400nm,20.0s
AS31 **Alice Springs** 62.54 191 P P 12 17 22.7 -0.4
ASAR **Alice Springs** 62.54 191 P P 12 17 22.6 -0.6
comp=Z,14nm,0.7s,baz=14,slow=8.0,SNR=142
ASAR LR LR 12 43 04.9
comp=Z,112nm,20.7s,baz=11,slow=35
ASAR PKP2bc 12 46 34.5
comp=Z,2.8nm,1.0s,baz=196,slow=2.5,SNR=10
ASAR PKP2ab 12 46 43.5
comp=Z,1.6nm,1.0s,baz=182,slow=3.5,SNR=4.7
comp=Z,14nm,0.7s
KEV **Kevo** 63.09 340 P P 12 17 26.5 +0.3
KEV sP pwP 12 17 40.6 -1.1
KEV x x 12 17 49.1
TULEG **Thule** 63.41 8 P P 12 17 27.9 -0.3
TULEG IAmb IAmb 12 17 28.9
comp=Z,18nm,0.8s
TULEG **Thule** 63.41 8 *i* P P 12 17 27.2 -1.0
TULEG IAmb IAmb 12 17 28.1
comp=Z,19nm,0.8s
NOUC **Port Laguerre** 63.49 158 P P 12 17 31.5 +2.1
NOUC **Port Laguerre** 63.49 158 P P 12 17 31.4 +2.1
NOUC x x 12 17 37.3
NOUC sP pwP 12 17 45.2 +0.5
DZM **Mont Dzumac** 63.50 157 *e*LR LR 12 35 52.0
comp=Z,323nm,22.6s
DZM **Mont Dzumac** 63.50 157 P P 12 17 31.0 +1.4
comp=Z,33nm,0.9s,baz=32,slow=8.5,SNR=13
DZM LR LR 12 43 50.1
comp=Z,212nm,19.4s,baz=28,slow=35
comp=Z,33nm,0.9s
DZM **Mont Dzumac** 63.50 157 P P 12 17 30.4 +0.8
DZM **Mont Dzumac** 63.50 157 P P 12 17 31.7 +2.2
DZM **Mont Dzumac** 63.50 157 P P 12 17 31.8 +2.2
DZM x x 12 17 38.3
DZM sP pwP 12 17 45.7 +0.8
ARCES **ARCESS Array B** 63.64 340 P P 12 17 30.2 +0.3
comp=Z,12nm,1.0s,baz=45,slow=8.7,SNR=13
comp=Z,12nm,1.0s
ARCES **ARCESS Array B** 63.64 340 P P 12 17 30.5 +0.6
ARCES **ARCESS Array B** 63.64 340 P P 12 17 30.5 +0.6
ARCES pmax pmax
comp=Z,107nm,2.0s
MBWA **Marble Bar** 63.69 206 P P 12 17 30.2 -0.5
MBWA IAmb IAmb 12 17 31.1
comp=Z,25nm,0.8s
MBWA **Marble Bar** 63.69 206 P P 12 17 30.1 -0.5
MBWA pP pP 12 17 39.7 +1.1
MBWA sP pwP 12 17 44.2 -1.9
EIDS **Eidsvold** 63.70 174 P P 12 17 30.7 0.0
EIDS IAmb IAmb 12 17 32.4
comp=Z,21nm,0.9s
EIDS **Eidsvold** 63.70 174 P P 12 17 31.3 +0.6
NLWA **Neilton Lookou** 63.88 49 P P 12 17 32.9 +1.0
NLWA IAmb IAmb 12 17 48.6
comp=Z,30nm,0.8s
MSVF **Nonsavu** 63.99 144 LR LR 12 42 12.9
comp=Z,172nm,19.5s,baz=350,slow=33
KLMR **Klimovskoe** 64.00 328 *eP* P 12 17 30.7 -1.6
KLMR *e* 12 19 52.0
KLMR pmax pmax
comp=Z,45nm,1.4s
KLMR **Klimovskoe** 64.00 328 *eP* P 12 17 30.7 -1.6
KLMR AMP 12 17 34.3
comp=Z,45nm,1.4s
KLMR *e*PP PP 12 19 52.1 -0.7
PSA00 **Pilbara Seismi** 64.03 206 P P 12 17 32.8 -0.2
PSA00 IAmb IAmb 12 17 33.3
comp=Z,34nm,1.0s
PSA00 **Pilbara Seismi** 64.03 206 P P 12 17 32.4 -0.6
PSA00 IAmb IAmb 12 17 33.3
comp=Z,16nm,1.0s
PSA00 **Pilbara Seismi** 64.03 206 P P 12 17 32.5 -0.5
WISH **Wishkah** 64.07 49 P P 12 17 35.0 +2.0
D03D **Eldon** 64.27 49 P P 12 17 34.9 +0.5
baz=300,SNR=8.8
HRA **Herat** 64.34 295 P P 12 17 35.7 +0.4
HRA IAmb IAmb 12 17 37.1
comp=Z,50nm,1.2s
BELG **Belogornoye** 64.58 318 P P 12 17 36.4 +0.1
comp=Z,70nm,0.9s,baz=43,slow=1.1,SNR=18
comp=Z,70nm,0.9s
BELG **Belogornoye** 64.58 318 *d* *i*P P 12 17 36.5 +0.3
BELG pmax pmax
comp=Z,15nm,1.0s
QLP **Quilpie** 64.62 180 P P 12 17 36.5 -0.2
RMQ **Roma** 64.64 176 P P 12 17 37.9 +1.1
DAG **Danmarks Havn** 64.64 356 *i* P P 12 17 35.0 -1.3
DAG IAmb IAmb 12 17 37.0
comp=Z,30nm,1.0s
HEF **Hetta** 64.89 339 *eP* P 12 17 38.0 0.0
WRKA **Warakurna** 64.93 196 P P 12 17 38.3 -0.5
D05A **Enumclaw** 65.09 49 P P 12 17 42.0 +2.3
D05A IAmb IAmb 12 17 48.9
comp=Z,36nm,1.1s
PALK **Pallekele** 65.19 259 P P 12 17 39.6 -1.2
comp=Z,15nm,0.8s,baz=24,slow=5.8,SNR=5.7
PALK LR LR 12 50 12.8
comp=Z,181nm,18.0s,baz=152,slow=40
comp=Z,15nm,0.8s
KIF **Kilpisjarvi** 65.24 341 *eP* P 12 17 40.2 -0.1
GEYT **Alibeck** 65.44 300 P P 12 17 42.6 +0.3
comp=Z,24nm,0.8s,baz=64,slow=3.4,SNR=18
comp=Z,24nm,0.8s
GYA0B **ALIBECK ARRAY** 65.44 300 P P 12 17 42.5 +0.3
GYA0B IAmb IAmb 12 17 43.5
comp=Z,27nm,0.8s
F04A **Amboy** 65.47 50 P P 12 17 43.4 +1.2
F04A IAmb IAmb 12 17 58.3
comp=Z,26nm,0.8s
I02E **Swisshome, OR** 65.52 52 P P 12 17 42.6 +0.1
baz=300
LTY **Liberty** 65.83 48 P P 12 17 45.8 +1.2
LTY IAmb IAmb 12 17 52.8
comp=Z,47nm,1.6s
INKA **Innaminka** 65.88 184 P P 12 17 45.0 +0.2
I03D **Drain, OR** 66.04 52 P P 12 17 46.5 +0.7
baz=301
B08A **Colville Reser** 66.04 47 P P 12 17 47.0 +1.1
B08A IAmb IAmb 12 17 54.1
comp=Z,42nm,1.6s
AFI **Afiamalu** 66.07 133 LR LR 12 42 15.4
comp=Z,191nm,19.8s,baz=30,slow=32
H04A **Detroit Lake** 66.25 51 P P 12 17 49.0 +1.7
H04A IAmb IAmb 12 17 55.8
comp=Z,25nm,1.0s
K02D **Willamette Mer** 66.35 54 P P 12 17 48.8 +0.8
baz=301,SNR=5.7
OOD **Oodnadatta** 66.37 189 P P 12 17 47.8 -0.2
G05D **Wamic, OR** 66.49 50 P P 12 17 48.7 -0.1
baz=301
I04A **Tendick Farm,** 66.57 52 P P 12 17 49.4 0.0
baz=301
KSXB **Camp Six Broad** 66.66 54 P P 12 17 52.2 +2.1
KSXB IAmb IAmb 12 17 59.0
comp=Z,19nm,1.1s
E07A **Sunnyside** 66.67 48 P P 12 17 51.7 +1.7
E07A IAmb IAmb 12 17 58.6
comp=Z,29nm,1.2s
L02F **Cave Junction** 66.71 54 P P 12 17 50.8 +0.5
baz=301
HUMO **Hull Mountain** 66.84 53 P P 12 17 53.3 +2.2
C09A **Chrisman Ranch** 66.94 47 P P 12 17 52.6 +1.0
C09A IAmb IAmb 12 17 59.7
comp=Z,20nm,0.9s
I05D **Terrebonne, OR** 66.94 51 P P 12 17 51.8 +0.1
baz=302
HAWA **Hanford** 66.95 48 P P 12 17 52.9 +1.2
HAWA IAmb IAmb 12 18 00.2
comp=Z,20nm,1.2s
D08A **Wollman Farm,** 66.96 48 IAmb IAmb 12 17 59.8
comp=Z,16nm,1.0s
F07A **Phinny Hill Vi** 66.98 49 IAmb IAmb 12 18 00.5
comp=Z,22nm,1.0s
J04D **Umpqua Nationa** 67.04 52 IAmb IAmb 12 18 01.4
comp=Z,39nm,1.2s
J04D **Umpqua Nationa** 67.04 52 P P 12 17 52.2 -0.4
baz=302
DBG **Daneborg** 67.14 356 *i* P P 12 17 51.6 -0.9
DBG IAmb IAmb 12 17 53.0
comp=Z,14nm,1.1s
KHMM **Horse Mountain** 67.25 55 P P 12 17 56.5 +2.6
KHMM IAmb IAmb 12 18 03.1
comp=Z,20nm,1.0s
NEW **Newport** 67.34 46 LR LR 12 44 09.1
comp=Z,82nm,20.7s,baz=294,slow=33
NEW **Newport** 67.34 46 P P 12 17 55.6 +1.4
NEW IAmb IAmb 12 18 02.3
comp=Z,20nm,1.1s
NEW **Newport** 67.34 46 P P 12 17 55.6 +1.4
NEW pmax pmax
comp=Z,20nm,1.1s
NEW **Newport** 67.34 46 P P 12 17 55.3 +1.0
baz=303,SNR=12
YBH **Yreka Blue Hor** 67.46 54 LR LR 12 45 14.3
comp=Z,69nm,18.3s,baz=293,slow=34
YBH **Yreka Blue Hor** 67.46 54 P P 12 17 57.4 +2.3
YBH IAmb IAmb 12 18 04.2
comp=Z,26nm,1.4s
YBH **Yreka Blue Hor** 67.46 54 P P 12 17 57.4 +2.3
YBH pmax pmax
comp=Z,26nm,1.4s
L04D **Klamath Falls** 67.46 53 P P 12 17 57.2 +2.1
L04D IAmb IAmb 12 18 03.9
comp=Z,34nm,1.1s
L04D **Klamath Falls** 67.46 53 P P 12 17 55.7 +0.6
baz=302,SNR=8.3
PINE **Pine Mountain** 67.48 51 IAmb IAmb 12 18 12.0
comp=Z,26nm,0.8s
J05D **Fort Rock, OR** 67.56 52 P P 12 17 56.5 +0.6
baz=302,SNR=9.3
K04D **Chiloquin, OR** 67.59 53 P P 12 17 55.8 -0.2
baz=302
E09A **Wood Farm, Sta** 67.70 48 IAmb IAmb 12 18 04.8
comp=Z,26nm,1.1s
MOS **Moscow** 67.70 324 *eP* P 12 17 55.4 -0.8
MOS *e* 12 18 22.4
MOS pmax pmax
comp=Z,90nm,1.6s
K05A **Summer Lake** 68.07 52 P P 12 18 00.9 +1.8
VRH **Novokhopyorsk** 68.31 319 *eP* P 12 17 59.5 -0.6
VRH pmax pmax
comp=Z,50nm,1.0s
F10A **Beach Ranch, E** 68.53 48 P P 12 18 02.4 +0.6
OBN **Obninsk** 68.56 324 P P 12 18 00.7 -0.9
comp=Z,5.9nm,0.5s,baz=51,slow=1.7,SNR=11
OBN LR LR 12 50 51.8
comp=Z,60nm,18.1s,baz=132,slow=38
comp=Z,5.9nm,0.5s
OBN **Obninsk** 68.56 324 *d* *i*P P 12 18 01.6 0.0
OBN *e* 12 18 28.2
OBN *e* 12 20 31.3
OBN *e*PPP PPP 12 22 13.4
OBN pmax pmax
comp=Z,78nm,1.4s
OBN MLR MLR
comp=Z,257nm,17.0s
WALA **Waterton Lakes** 68.68 44 IAmb IAmb 12 18 10.9
comp=Z,19nm,0.9s
LCRK **Leigh Creek** 68.74 186 P P 12 18 03.3 +0.4
ARMA **Armidale** 68.75 174 P P 12 18 04.1 +1.0
ARMA IAmb IAmb 12 18 05.3
comp=Z,49nm,1.2s
ARMA **Armidale** 68.75 174 P P 12 18 04.2 +1.0
FIA1 **FINESS Array S** 68.81 333 P P 12 18 03.3 +0.2
FINES **FINESS Array B** 68.82 333 P P 12 18 03.2 +0.1
comp=Z,23nm,0.6s,baz=48,slow=8.2,SNR=86
FINES PcP PcP 12 18 26.4 -1.2
comp=Z,15nm,0.6s,baz=54,slow=5.7,SNR=8.8
FINES LR LR 12 50 30.1
comp=Z,356nm,20.9s,baz=44,slow=38
comp=Z,23nm,0.6s
MOD **Modoc Plateau** 68.89 53 P P 12 18 05.9 +1.8
LPSR **Galich'ya Gora** 68.92 321 *eP* P 12 18 03.5 -0.4
LPSR pmax pmax
comp=Z,50nm,0.9s
BMO **Blue Mountains** 69.10 49 P P 12 18 06.7 +1.4
BMO IAmb IAmb 12 18 13.7
comp=Z,31nm,1.6s
BMO **Blue Mountains** 69.10 49 P P 12 18 06.7 +1.4
BMO pmax pmax
comp=Z,31nm,1.6s
J08A **Circle Bar Ran** 69.22 51 P P 12 18 08.2 +2.1
J08A IAmb IAmb 12 18 14.9
comp=Z,34nm,1.3s
SUMG **Summit** 69.32 1 P P 12 18 07.5 +0.9
SUMG **Summit** 69.32 1 P P 12 18 07.5 +0.9
SUMG pmax pmax
comp=Z,32nm,0.7s
SUMG **Summit** 69.32 1 *i* P P 12 18 07.5 +0.9
SUMG IAmb IAmb 12 18 07.7
comp=Z,33nm,0.8s
VORR **Voronezh** 69.32 320 *eP* P 12 18 07.0 +0.6
VORR pmax pmax
comp=Z,60nm,0.4s
ORV **Oroville** 69.40 55 P P 12 18 08.4 +1.2
ORV IAmb IAmb 12 18 15.1
comp=Z,27nm,1.4s
ORV **Oroville** 69.40 55 P P 12 18 08.4 +1.2
ORV pmax pmax
comp=Z,27nm,1.5s
CMSA **Cobar Meteorol** 69.56 179 P P 12 18 08.6 +0.6
VSR **Storozhevoye** 69.61 320 *eP* P 12 18 07.6 -0.6
VSR pmax pmax
comp=Z,70nm,1.2s
WVOR **Wild Horse Val** 69.63 52 IAmb IAmb 12 18 24.9
comp=Z,31nm,1.4s
PLID **Pearl Lake** 69.73 48 IAmb IAmb 12 18 17.4
comp=Z,36nm,1.6s
MSO **Missoula** 69.93 46 P P 12 18 11.1 +0.6
baz=305,SNR=8.4
STKA **Stephens Creek** 69.96 183 P P 12 18 10.0 -0.4
comp=Z,6.9nm,0.8s,baz=356,slow=8.9,SNR=13
STKA LR LR 12 48 00.6
comp=Z,119nm,20.7s,baz=23,slow=35
comp=Z,6.9nm,0.8s
STKA **Stephens Creek** 69.96 183 P P 12 18 10.7 +0.3
STKA **Stephens Creek** 69.96 183 P P 12 18 10.7 +0.3
STKA pmax pmax
comp=Z,15nm,1.9s
STKA **Stephens Creek** 69.96 183 P P 12 18 10.3 -0.1
BEKR **Beckworth** 69.97 55 P P 12 18 11.8 +0.9
BEKR IAmb IAmb 12 18 19.1
comp=Z,21nm,1.2s
MEF **Metsahovi** 70.26 333 *eP* P 12 18 12.8 +0.8
FORT **Forrest** 70.53 195 P P 12 18 13.9 -0.1
GROC **Groznyy** 70.56 310 *eP* P 12 18 14.4 +0.2
GROC *e* 12 18 34.9
GROC pmax pmax
comp=Z,18nm,0.5s
VSU **Vasula** 70.59 331 *d* *i*P P 12 18 14.5 +0.4
VSU pmax pmax
comp=Z,68nm,0.8s
VSU **Vasula** 70.59 331 *eP* P 12 18 14.8 +0.7
RAF **Rauma** 70.61 334 *eP* P 12 18 14.9 +0.8
PAHR **Pah Rah Range** 70.68 54 P P 12 18 16.8 +1.6
PAHR IAmb IAmb 12 18 23.6
comp=Z,33nm,1.3s
MFID **Camas Ranch** 70.78 50 P P 12 18 16.4 +0.7
PNTR **Pine Nut** 70.89 55 IAmb IAmb 12 18 25.4
comp=Z,46nm,1.7s
CMB **Columbia Colle** 70.97 56 P P 12 18 18.5 +1.7
CMB IAmb IAmb 12 18 33.0
comp=Z,27nm,1.3s
CMB **Columbia Colle** 70.97 56 P P 12 18 18.5 +1.7
CMB pmax pmax
comp=Z,27nm,1.3s
GOF **Gofitskoye** 71.11 313 ⇓ *i*P P 12 18 18.6 +1.0
GOF pmax pmax
comp=Z,169nm,0.8s
YERR **Yerington** 71.18 55 P P 12 18 19.5 +1.2
YERR IAmb IAmb 12 18 26.9
comp=Z,42nm,1.4s
LRM **Limekiln Ridge** 71.36 46 P P 12 18 20.4 +1.1
WHYH **Whyalla** 71.36 186 P P 12 18 20.3 +1.4
comp=Z,20nm,1.1s
NAPP **Napperby** 71.46 186 P P 12 18 20.1 +0.6
MTSE **Matsula** 71.52 332 *eP* P 12 18 20.1 +0.4
HLID **Hailey** 71.54 49 P P 12 18 21.7 +1.2
baz=306,SNR=12
FCC **Fort Churchill** 71.62 28 P P 12 18 20.5 +0.2
FCC IAmb IAmb 12 18 21.5
comp=Z,35nm,1.2s
FCC **Fort Churchill** 71.62 28 P P 12 18 20.5 +0.2
FCC pmax pmax
comp=Z,35nm,1.2s
BMN **Battle Mountai** 71.64 53 IAmb IAmb 12 18 29.8
comp=Z,39nm,1.4s
HTT **Hallett** 71.65 185 P P 12 18 21.0 +0.3
AAL **Aland** 71.83 334 *eP* P 12 18 21.9 +0.3
KVN **Kaiserville** 71.87 54 P P 12 18 23.9 +1.4
KVN IAmb IAmb 12 18 31.1
comp=Z,35nm,1.3s
KVN **Kaiserville** 71.87 54 P P 12 18 23.9 +1.4
KVN pmax pmax
comp=Z,35nm,1.3s
ZEI **Tsey** 71.93 310 *eP* P 12 18 21.6 -1.2
ZEI pmax pmax
comp=Z,19nm,0.6s
BOZ **Bozeman (W)** 71.95 46 P P 12 18 23.8 +1.0
BOZ **Bozeman (W)** 71.95 46 P P 12 18 23.8 +1.0
BOZ pmax pmax
comp=Z,15nm,1.0s
BOZ **Bozeman (W)** 71.95 46 P P 12 18 23.8 +1.0
baz=307,SNR=25
KIV **Kislovodsk** 71.97 312 ⇑P P 12 18 23.9 +1.1
KIV **Kislovodsk** 71.97 312 P P 12 18 23.4 +0.6
KIV **Kislovodsk** 71.97 312 *eP* P 12 18 23.9 +1.1
KIV pmax pmax
comp=Z,136nm,1.0s
KIV **Kislovodsk** 71.97 312 *i* P P 12 18 23.9 +1.1
SNR=20
KIV **Kislovodsk** 71.97 312 P P 12 18 24.0 +1.1

KIV x x 12 18 30.7
KBZ Khabaz 71.98 312 P **P** **12 18 23.8 +1.1**
comp=Z,58nm,0.8s,baz=65,slow=4.0,SNR=96
KBZ LR LR 12 55 27.8
comp=Z,275nm,18.1s,baz=46,slow=40
comp=Z,58nm,0.8s
KBZ Khabaz 71.98 312 *d iP* **P** **12 18 23.6 +0.9**
KBZ pmax pmax
comp=Z,80nm,0.9s
LHV Little Huntoon 72.07 55 IAmb IAmb 12 18 32.7
comp=Z,52nm,1.3s
NVAR Mina Array Bea 72.09 55 P **P** **12 18 25.4 +1.5**
comp=Z,7.3nm,0.8s,baz=288,slow=6.0,SNR=52
NVAR LR LR 12 43 38.0
comp=Z,56nm,19.5s,baz=304,slow=30
comp=Z,7.3nm,0.8s
NVAR Mina Array Bea 72.09 55 P **P** **12 18 25.3 +1.4**
OMMB Old Mammoth Mi 72.11 56 P **P** **12 18 26.0 +1.9**
NV11 Mina Array Sit 72.19 55 P **P** **12 18 25.5 +1.1**
MLAC Mammoth, Mammo 72.21 56 P **P** **12 18 24.9 +0.3**
baz=305
MORW Morawa 72.25 206 IAmb IAmb 12 18 25.0
comp=Z,20nm,1.0s
MORW Morawa 72.25 206 P **P** **12 18 24.2 -0.2**
ONI Oni 72.32 311 IAmb IAmb 12 18 27.5
comp=Z,41nm,1.0s
QLMT Earthquake Lak 72.52 46 P **P** **12 18 28.1 +1.8**
VOG Valley Oaks Go 72.60 57 P **P** **12 18 27.4 +0.8**
baz=305
ELK Elko 72.69 52 LR LR 12 47 58.4
comp=Z,64nm,18.3s,baz=300,slow=34
ELK Elko 72.69 52 P **P** **12 18 28.7 +1.3**
ELK Elko 72.69 52 P **P** **12 18 28.7 +1.3**
ELK pmax pmax
comp=Z,23nm,1.6s
IDID Didziasalis 72.74 328 *eP* **P** **12 18 28.0 +0.9**
SMMC Simmler 72.76 58 P **P** **12 18 28.7 +1.0**
baz=305
ICESG Greenland Ices 72.80 2 *i P* **P** **12 18 28.4 +0.7**
ICESG IAmb IAmb 12 18 29.0
comp=Z,53nm,0.9s
MNK Minsk 72.81 327 *i* P **P** **12 18 28.7 +1.1**
MNK *i* 12 18 45.8
MNK *i* 12 21 10.3
MNK *i* PPP PPP 12 22 54.7
MNK *i* S **S** **12 27 54.2 +3.1**
MNK *i* 12 28 36.1
MNK *i* SS **SS** **12 32 35.7 +5.3**
MNK pmax pmax
comp=E,5.0nm,0.7s
MNK pmax pmax
comp=Z,51nm,1.0s
MNK pmax pmax
comp=N,8.0nm,0.9s
MNK MLR MLR
comp=E,26nm,17.0s
MNK MLR MLR
comp=Z,6µm,22.0s
MNK MLR MLR
comp=N,19nm,21.0s
ISAL Salakas 72.82 329 *eP* **P** **12 18 28.3 +0.8**
IIGH Ignalina 72.93 328 *eP* **P** **12 18 29.1 +0.9**
GCMT Greycliff 72.93 45 P **P** **12 18 30.3 +1.7**
GNI Garni 72.96 308 LR LR 12 53 50.0
comp=N,317nm,18.8s,baz=76,slow=38
GNI Garni 72.96 308 ⇑ *iP* **P** **12 18 30.9 +2.0**
GNI pmax pmax
comp=Z,42nm,1.1s
AKH Akhalkalaki 72.99 309 ⇓P **P** **12 18 30.5 +1.4**
NACGM Naroch 73.00 328 ⇓ *eP* **P** **12 18 28.4 -0.3**
baz=47
WSAR Wadi Sarin 73.01 286 LR LR 12 56 26.1
comp=Z,101nm,18.2s,baz=118,slow=41
CHVG Ch'k'valeri 73.05 311 ⇑P **P** **12 18 30.2 +0.9**
VES Vestal, Richgr 73.07 58 P **P** **12 18 30.1 +0.7**
baz=305
PKM Mcpherson Peak 73.13 59 P **P** **12 18 29.9 -0.1**
baz=305
LCH Last Change Ra 73.21 56 P **P** **12 18 31.3 +0.9**
YPP Pitchstone Pla 73.22 47 P **P** **12 18 32.5 +1.9**
BANOM Banah 73.22 290 *i P* **P** **12 18 30.6 +0.1**
SNR=11
SHME Shamm 73.27 290 *i P* **P** **12 18 31.0 +0.3**
SNR=16
H17A Grant Village 73.27 46 P **P** **12 18 32.8 +2.0**
H17A IAmb IAmb 12 18 41.0
comp=Z,32nm,1.1s
H17A Grant Village 73.27 46 P **P** **12 18 30.6 -0.2**
baz=308,SNR=15
BCW Bitter Crk WRg 73.37 59 IAmb IAmb 12 18 40.4
comp=Z,62nm,1.3s
CWC Cottonwood Cre 73.39 57 P **P** **12 18 32.1 +0.6**
baz=306
FLWY Flagg Ranch 73.39 47 P **P** **12 18 32.8 +1.3**
FLWY IAmb IAmb 12 18 41.1
comp=Z,45nm,1.5s
GRAC Grapevine Rang 73.53 56 IAmb IAmb 12 18 48.5
comp=Z,70nm,1.7s
GRAC Grapevine Rang 73.53 56 P **P** **12 18 33.8 +1.6**
baz=306,SNR=8.9
RLMT Red Lodge 73.56 45 P **P** **12 18 34.0 +1.5**
baz=308,SNR=5.8
MOOW Moose Ponds 73.57 47 P **P** **12 18 34.4 +1.9**
MOOW IAmb IAmb 12 18 41.6
comp=Z,23nm,1.1s
ISA Isabella, Lake 73.58 57 P **P** **12 18 33.0 +0.5**
baz=306
TPAW Teton Pass 73.61 47 IAmb IAmb 12 18 41.9
comp=Z,31nm,1.2s
MSFE Esma-Masafi 73.65 290 *i P* **P** **12 18 33.5 +0.5**
SNR=13
ARVC Arvin 73.65 58 P **P** **12 18 33.6 +0.7**
baz=306
NC303 NORSAR Array S 73.73 338 P **P** **12 18 32.8 -0.1**
NC303 IAmb IAmb 12 18 34.8
comp=Z,82nm,1.8s
PABE Paberze 73.74 329 P **P** **12 18 33.7 +0.7**
PABE Paberze 73.74 329 *eP* **P** **12 18 33.8 +0.9**
REDW Red Top Meadow 73.74 47 P **P** **12 18 35.6 +2.0**
REDW IAmb IAmb 12 18 42.4
comp=Z,28nm,1.1s
SCZ2 Santa Cruz Isl 73.77 59 P **P** **12 18 33.7 +0.1**
baz=306
UOSS Minazif 73.85 289 P **P** **12 18 34.2 0.0**
UOSS IAmb IAmb 12 18 35.1
comp=Z,31nm,0.8s
UOSS Minazif 73.85 289 *i P* **P** **12 18 34.3 +0.1**
SNR=9.2
NC204 NORSAR Array S 73.86 339 P **P** **12 18 33.8 +0.1**
R11A Troy Canyon, C 73.88 54 IAmb IAmb 12 18 43.0
comp=Z,39nm,1.6s
R11A Troy Canyon, C 73.88 54 P **P** **12 18 35.7 +1.3**
baz=306,SNR=23
NB201 NORSAR Array S 73.89 338 P **P** **12 18 34.0 +0.1**
HFS Hagfors 73.91 337 P **P** **12 18 34.1 +0.2**
comp=Z,17nm,0.8s,baz=64,slow=6.8,SNR=20
HFS LR LR 12 57 02.2
comp=Z,77nm,18.5s,baz=42,slow=41
comp=Z,17nm,0.8s
SOC Sochi 73.91 313 *eP* **P** **12 18 32.3 -1.9**
SOC *eP* PPP PPP 12 23 04.3
SOC *eS* **S** **12 28 05.6 +1.7**
SOC pmax pmax
comp=Z,52nm,1.3s
SOC MLR MLR
comp=Z,639nm,25.0s
NB2 NORSAR Subarra 73.92 338 P **P** **12 18 33.7 -0.4**
baz=39,slow=6.2
NB2 NORSAR Subarra 73.92 338 P **P** **12 18 33.7 -0.4**
comp=Z,24nm,1.0s,baz=39,slow=6.2
NOA NORSAR Array B 73.92 338 P **P** **12 18 34.0 -0.1**
comp=Z,7.8nm,0.7s,baz=38,slow=5.8,SNR=30
NOA PP **PP** **12 21 19.4 +0.9**
comp=Z,0.5nm,0.7s,baz=38,slow=7.4,SNR=2.1
comp=Z,7.8nm,0.7s
NOA NORSAR Array B 73.92 338 P **P** **12 18 34.0 -0.1**
BGU Big Grassy Mou 73.93 50 P **P** **12 18 35.6 +1.0**
BATM Batumi 73.95 311 ⇑P **P** **12 18 34.7 +0.1**
AHID Auburn Hatcher 73.96 48 P **P** **12 18 36.1 +1.3**
HATD Hatta, Dubai 73.97 289 *i P* **P** **12 18 35.3 +0.3**
SNR=12
MPMC Manual Prospec 74.00 57 P **P** **12 18 36.5 +1.3**
baz=306,SNR=14
KLBR Kellerberrin 74.00 204 P **P** **12 18 34.6 -0.1**
OSI Osito Audit: C 74.02 58 P **P** **12 18 34.5 -0.6**
baz=306
NBO00 NORSAR Array S 74.06 339 IAmb IAmb 12 19 03.4
comp=Z,42nm,1.0s
SOHO SOHO 74.07 288 *i P* **P** **12 18 35.5 0.0**
SNR=13
ASHO Ashiyiah 74.11 289 *i P* **P** **12 18 36.1 +0.3**
SNR=12
DGMT Dagmar 74.15 40 P **P** **12 18 35.5 -0.1**
baz=310
FURC Furnace Creek, 74.17 56 P **P** **12 18 37.3 +1.5**
baz=306,SNR=5.9
S11A Rachel 74.19 54 P **P** **12 18 37.9 +1.7**
S11A IAmb IAmb 12 19 13.5
comp=Z,28nm,1.1s
LRMC Laurel Mtn Rad 74.21 57 P **P** **12 18 36.6 +0.3**
baz=306
NAZ Nazwa, Dubai 74.23 289 P **P** **12 18 36.4 0.0**
LAO LASA Array 74.24 43 P **P** **12 18 37.5 +1.3**
LAO IAmb IAmb 12 18 44.6
comp=Z,48nm,1.4s
LAO LASA Array 74.24 43 P **P** **12 18 37.2 +1.0**
baz=310
LAO LASA Array 74.24 43 P **P** **12 18 36.3 +0.1**
baz=310
SNCC San Nicolas Is 74.27 60 P **P** **12 18 36.8 +0.3**
baz=306
TPNV Topopah Spring 74.28 55 P **P** **12 18 37.8 +1.1**
TPNV IAmb IAmb 12 18 45.2
comp=Z,86nm,2.0s
TPNV Topopah Spring 74.28 55 P **P** **12 18 37.8 +1.1**
TPNV pmax pmax
comp=Z,86nm,2.0s
TPNV Topopah Spring 74.28 55 P **P** **12 18 37.9 +1.1**
baz=306,SNR=7.7
SFJD Kangerlussuaq 74.30 6 LR LR 12 52 31.1
comp=Z,136nm,21.9s,baz=348,slow=37
EDW2 Edwards Air Fo 74.35 58 P **P** **12 18 37.4 +0.4**
baz=306,SNR=8.3
FAQ Al Faqa, Dubai 74.42 289 *i P* **P** **12 18 37.5 0.0**
SNR=16
ANN Anapa 74.44 315 *eP* **P** **12 18 37.2 -0.1**
ANN *eS* **S** **12 28 13.2 +3.4**
ANN pmax pmax
comp=Z,56nm,0.9s
GWY Greenwater Val 74.46 56 P **P** **12 18 39.0 +1.3**
GWY IAmb IAmb 12 18 46.1
comp=Z,51nm,1.4s
QSM Queen of Sheba 74.46 56 IAmb IAmb 12 18 46.7
comp=Z,71nm,1.4s
DUG Dugway, Tooele 74.50 51 IAmb IAmb 12 18 46.6
comp=Z,34nm,1.2s
DUG Dugway, Tooele 74.50 51 P **P** **12 18 38.3 +0.4**
baz=307,SNR=17
ASUD Al Ashush, Dub 74.68 289 *i P* **P** **12 18 39.7 +0.6**
SNR=9.2
ALNE Al Ain 74.70 289 *i P* **P** **12 18 39.4 +0.3**
SNR=19
PRN Pahroc Range 74.78 54 P **P** **12 18 40.7 +1.1**
PRN IAmb IAmb 12 18 48.4
comp=Z,32nm,1.4s
AKASG Malin Array Be 74.80 323 P **P** **12 18 39.2 -0.1**
comp=Z,8.2nm,0.5s,baz=39,slow=6.2,SNR=73
AKASG PP **PP** **12 21 25.3 -0.9**
comp=Z,1.9nm,0.4s,baz=46,slow=9.5,SNR=3.4
AKASG LR LR 12 54 45.4
comp=Z,416nm,18.9s,baz=44,slow=38
comp=Z,8.2nm,0.5s
AKASG Malin Array Be 74.80 323 P **P** **12 18 39.4 +0.2**
AKASG Malin Array Be 74.80 323 P **P** **12 18 39.4 +0.2**
AKASG pmax pmax
comp=Z,12nm,1.0s
AKBB Malin Array Si 74.80 323 P **P** **12 18 39.0 -0.2**
AKBB IAmb IAmb 12 18 40.3
comp=Z,39nm,0.9s
AKBB Malin Array Si 74.80 323 P **P** **12 18 39.0 -0.2**
AKBB pmax pmax
comp=Z,39nm,0.9s
ARPS Mount Arapiles 74.82 182 P **P** **12 18 39.6 +0.3**
FMP Fort Macarthur 74.84 59 P **P** **12 18 40.1 +0.3**
baz=306
FRB Frobisher Bay 74.84 15 LR LR 12 55 30.9
comp=Z,146nm,19.5s,baz=5.0,slow=39
BW06 Boulder Array 74.86 47 P **P** **12 18 40.9 +0.8**
BW06 Boulder Array 74.86 47 P **P** **12 18 40.9 +0.8**
baz=309,SNR=8.9
PD31 Pinedale Array 74.86 47 P **P** **12 18 40.7 +0.6**
PDAR Pinedale Array 74.86 47 P **P** **12 18 40.8 +0.7**
comp=Z,5.8nm,0.7s,baz=271,slow=2.4,SNR=48
comp=Z,5.8nm,0.7s
PDAR Pinedale Array 74.86 47 P **P** **12 18 40.5 +0.4**
GSC Goldstone, Bar 74.89 57 P **P** **12 18 41.1 +0.9**
baz=307,SNR=5.9
CIS Catalina Islan 74.94 59 P **P** **12 18 40.8 +0.3**
baz=306
BFSC Mount Baldy Ra 74.95 58 P **P** **12 18 41.5 +0.8**
baz=306,SNR=5.8
JLU Jordanelle 75.08 50 P **P** **12 18 42.4 +1.0**
JLU IAmb IAmb 12 18 50.1
comp=Z,23nm,1.2s
SCI2 San Clemente I 75.09 60 P **P** **12 18 41.5 +0.2**
baz=306
SUW Suwalki 75.13 329 *eP* **P** **12 18 41.7 +0.7**
DY2G Dye2 75.14 5 *i P* **P** **12 18 41.7 +0.5**
DY2G IAmb IAmb 12 18 42.4
comp=Z,139nm,1.7s
SHPR Sheep Range 75.25 55 P **P** **12 18 43.1 +0.8**
SHPR IAmb IAmb 12 18 51.2
comp=Z,26nm,1.2s
MPU Maple Canyon 75.33 50 IAmb IAmb 12 18 51.3
comp=Z,26nm,1.2s
TUQ Turquoise Moun 75.39 56 P **P** **12 18 44.5 +1.3**
baz=307,SNR=12
BBRC Big Bear Solar 75.43 58 P **P** **12 18 43.8 +0.3**
baz=307
ELS Elsinore Mount 75.46 59 P **P** **12 18 44.8 +1.3**
ELS IAmb IAmb 12 18 51.8
comp=Z,71nm,1.9s
KTUT Trabzon 75.48 311 ⇑P **P** **12 18 43.9 +0.5**
HEC Hector,Ludlow 75.48 57 P **P** **12 18 44.5 +0.9**
baz=307
TOO Toolangi 75.58 179 P **P** **12 18 44.4 +0.7**
GURO Guroymak-BITLI 75.60 308 IAmb IAmb 12 18 46.8
comp=Z,38nm,0.9s
MURC Murrieta 75.64 59 P **P** **12 18 44.7 +0.2**
baz=307
KOPT Kop Dagi 75.64 310 IAmb IAmb 12 18 47.6
comp=Z,26nm,1.0s
CCUT Cedar City 75.76 53 P **P** **12 18 46.1 +0.7**
CCUT IAmb IAmb 12 18 54.2
comp=Z,30nm,1.2s
SZCU Shurtz Canyon 75.91 53 P **P** **12 18 47.2 +1.0**
GMRC Granite Mounta 75.95 57 P **P** **12 18 47.5 +1.1**
baz=307,SNR=12
TMUT Trail Mountain 76.03 51 P **P** **12 18 48.4 +1.4**
109C Camp Elliot, M 76.12 59 P **P** **12 18 47.7 +0.5**
baz=307
PFO Pinyon Flats O 76.13 58 LR LR 12 45 24.4
comp=Z,177nm,21.7s,baz=289,slow=30
PFO Pinyon Flats O 76.13 58 P **P** **12 18 48.2 +0.8**
PFO Pinyon Flats O 76.13 58 P **P** **12 18 48.2 +0.8**
PFO pmax pmax
comp=Z,27nm,1.5s
PFO Pinyon Flats O 76.13 58 P **P** **12 18 47.9 +0.5**
baz=307
TPFO Pinon Flats 76.13 58 P **P** **12 18 47.9 +0.5**
baz=307
SIM Simferopol' 76.16 317 *eP* **P** **12 18 47.1 -0.1**
SIM *e* 12 18 59.8
SIM pmax pmax
comp=Z,51nm,0.9s
LCMT Little Creek M 76.17 54 P **P** **12 18 49.3 +1.7**
LCMT IAmb IAmb 12 18 56.5
comp=Z,24nm,1.1s
BELC Belle Mtn. Jos 76.20 58 P **P** **12 18 48.3 +0.5**
baz=307,SNR=5.8
MTPU Mount Pierson 76.20 52 IAmb IAmb 12 18 57.2
comp=Z,28nm,1.3s
P17A Butcher Ranch, 76.20 50 P **P** **12 18 49.3 +1.5**
P17A IAmb IAmb 12 18 56.4
comp=Z,41nm,1.1s
RDMU Red Mountain 76.22 49 IAmb IAmb 12 18 57.1
comp=Z,52nm,1.1s
P18A Preston Nutter 76.41 50 P **P** **12 18 50.6 +1.5**
P18A IAmb IAmb 12 21 10.4
comp=Z,13nm,0.6s
BAR Barrett 76.54 59 IAmb IAmb 12 18 57.8
comp=Z,42nm,1.8s
SRU San Rafael Swe 76.56 51 P **P** **12 18 51.1 +1.3**
SRU IAmb IAmb 12 18 58.1
comp=Z,32nm,1.0s
SRU San Rafael Swe 76.56 51 P **P** **12 18 51.1 +1.3**
SRU pmax pmax
comp=Z,32nm,1.0s
MONP2 Monument Peak 76.58 59 P **P** **12 18 50.8 +0.8**
baz=307
BORG Borgarnes 76.62 354 P **P** **12 18 51.3 +1.9**
BORG IAmb IAmb 12 18 52.4
comp=Z,26nm,0.9s
BORG Borgarnes 76.62 354 P **P** **12 18 51.3 +1.9**
BORG pmax pmax
comp=Z,26nm,1.0s
NEE2 Needles Airpor 76.64 56 P **P** **12 18 50.9 +0.8**
baz=308
K22A Casper 76.66 46 IAmb IAmb 12 18 58.3
comp=Z,36nm,1.1s
K22A Casper 76.66 46 P **P** **12 18 50.7 +0.4**
baz=310
K22A Casper 76.66 46 P **P** **12 18 50.9 +0.6**
baz=310,SNR=9.2
IRM Iron Mountain 76.67 57 P **P** **12 18 51.3 +1.0**
baz=308,SNR=6.4
CBX Cerro Bola 76.77 59 P **P** **12 18 52.2 +1.2**
BC3 Big Chuckawall 76.77 58 P **P** **12 18 51.9 +0.9**
baz=308,SNR=5.3
MDND Maddock 76.86 39 P **P** **12 18 51.7 +0.6**
baz=314
RWWY Rawlins 76.89 47 IAmb IAmb 12 18 59.7
comp=Z,16nm,0.9s
W13A Hualapai Mount 76.92 56 P **P** **12 18 52.7 +0.7**
ULM Lac du Bonnet 76.93 35 P **P** **12 18 51.4 0.0**
comp=Z,9.0nm,0.9s,baz=306,slow=5.9,SNR=11
ULM LR LR 12 54 06.7
comp=Z,24nm,21.9s,baz=302,slow=37
comp=Z,9.0nm,0.9s
ULM Lac du Bonnet 76.93 35 P **P** **12 18 51.5 0.0**
ULM IAmb IAmb 12 18 58.7
comp=Z,23nm,1.1s
ULM Lac du Bonnet 76.93 35 P **P** **12 18 51.5 0.0**
ULM pmax pmax
comp=Z,23nm,1.2s
IKP In-Ko-Pah, Jac 76.94 59 P **P** **12 18 52.9 +0.9**
baz=307
SWSC Sam W. Stewart 76.97 58 P **P** **12 18 52.6 +0.6**
baz=308
SORM Soroca 76.97 322 ⇑P **P** **12 18 51.2 -0.5**
MZR Muzera 77.00 289 *i P* **P** **12 18 52.2 -0.1**
SNR=17
RSSD Black Hills 77.08 44 P **P** **12 18 52.8 +0.1**
RSSD Black Hills 77.08 44 P **P** **12 18 52.8 +0.1**
RSSD pmax pmax
comp=Z,14nm,1.1s
RSSD Black Hills 77.08 44 P **P** **12 18 52.3 -0.4**
baz=312
RSSD Black Hills 77.08 44 P **P** **12 18 52.8 +0.1**
baz=312
U15A North Rim 77.13 54 IAmb IAmb 12 19 02.1
comp=Z,22nm,1.1s
MARD Mardin 77.14 307 P **P** **12 18 54.1 +1.0**
PDMCI Parker Dam,Lak 77.24 56 P **P** **12 18 54.5 +1.0**
baz=308,SNR=5.7
O20A White River Ci 77.28 49 P **P** **12 18 54.1 +0.2**
O20A IAmb IAmb 12 19 02.0
comp=Z,22nm,1.1s
O20A White River Ci 77.28 49 P **P** **12 18 54.6 +0.7**
baz=310,SNR=10
BLYC Blythe 77.33 57 P **P** **12 18 54.7 +0.7**
BLYC IAmb IAmb 12 19 10.1
comp=Z,29nm,1.3s
GLA Glamis 77.55 58 P **P** **12 18 55.4 0.0**
baz=308
LVV L'vov 77.79 325 *eP* **P** **12 18 56.1 -0.2**
LVV *e* 12 21 59.2
LVV *e* PPP PPP 12 23 49.3
LVV *eS* **S** **12 28 47.4 +0.9**
LVV MLR MLR
comp=N,100nm,16.0s
LVV MLR MLR
comp=E,200nm,16.0s
LVV MLR MLR
comp=Z,400nm,18.0s
PV23 Carpenter Ridg 77.89 50 P **P** **12 18 58.9 +1.4**
PV23 IAmb IAmb 12 19 06.0
comp=Z,53nm,1.2s
N23A Red Feather La 78.13 47 P **P** **12 19 00.0 +1.3**
N23A IAmb IAmb 12 19 07.4
comp=Z,32nm,1.1s
N23A Red Feather La 78.13 47 P **P** **12 19 00.2 +1.5**
baz=311,SNR=13
BZK Bozkurt 78.19 315 ⇑P **P** **12 18 58.3 -0.3**
Y14A Wickenburg 78.21 56 P **P** **12 19 00.3 +1.3**
WUAZ Wupatki 78.28 54 P **P** **12 19 00.5 +1.0**
WUAZ IAmb IAmb 12 19 08.2
comp=Z,26nm,1.1s
WUAZ Wupatki 78.28 54 P **P** **12 19 01.0 +1.5**
baz=309,SNR=10.0
PV15 Paradox Valley 78.28 50 IAmb IAmb 12 19 07.9
comp=Z,51nm,1.6s
AGMN Agassiz Nation 78.33 36 P **P** **12 18 59.2 -0.1**
AGMN Agassiz Nation 78.33 36 P **P** **12 18 59.0 -0.3**
baz=316
AGMN Agassiz Nation 78.33 36 P **P** **12 18 59.1 -0.1**
baz=316,SNR=9.0
113A Mohawk Valley, 78.43 57 P **P** **12 19 01.6 +1.5**
SMCO Snowmass 78.65 49 P **P** **12 19 01.9 +0.2**
TLCR 78.78 320 ⇑P **P** **12 19 02.3 +0.5**
BUR08 Bucovina Ar. S 78.82 323 P **P** **12 19 02.4 +0.2**
BURAR Bucovina Array 78.83 323 ⇑P **P** **12 19 02.6 +0.4**
BURAR Bucovina Array 78.83 323 P **P** **12 19 02.5 +0.2**
BURAR IAmb IAmb 12 19 04.2
comp=Z,18nm,0.9s
BIZ Bicaz 78.89 322 ⇑P **P** **12 19 03.4 +0.9**
RAR Rarotonga 78.90 128 LR LR 12 48 58.0
comp=Z,214nm,19.2s,baz=276,slow=32
X16A Lo Mia Camp, P 78.92 55 P **P** **12 19 04.2 +1.1**
TESR Tescani 78.93 322 ⇓P **P** **12 19 03.1 +0.5**
ILGA Ilgaz 78.95 314 P **P** **12 19 03.4 +0.3**
MVCO Mesa Verde 79.00 51 P **P** **12 19 04.1 +0.6**
MVCO IAmb IAmb 12 19 12.0
comp=Z,26nm,1.1s
MVCO Mesa Verde 79.00 51 P **P** **12 19 04.6 +1.1**
baz=310,SNR=11
ISCO Idaho Springs 79.04 48 P **P** **12 19 03.9 +0.2**
ISCO IAmb IAmb 12 19 13.3
comp=Z,35nm,1.8s
ISCO Idaho Springs 79.04 48 P **P** **12 19 03.9 +0.2**
ISCO pmax pmax
comp=Z,35nm,1.8s
ISCO Idaho Springs 79.04 48 P **P** **12 19 04.0 +0.2**
baz=311
ISCO Idaho Springs 79.04 48 P **P** **12 19 04.9 +1.2**
baz=311,SNR=6.0
CFR Carcaliu 79.13 320 ⇑P **P** **12 19 04.0 +0.3**
TPGR Topolog 79.21 320 ⇑P **P** **12 19 04.5 +0.2**
KOLS Kolonicke sedl 79.23 325 *eP* **P** **12 19 05.0 +0.8**
KOLS pmax pmax
comp=Z,17nm,0.9s
KOLS Kolonicke sedl 79.23 325 *eP* **P** **12 19 05.0 +0.8**
B35A Bob, Littlefor 79.27 35 P **P** **12 19 04.4 -0.1**
B35A IAmb IAmb 12 19 05.4
comp=Z,18nm,0.8s
B35A Bob, Littlefor 79.27 35 P **P** **12 19 04.4 -0.1**
baz=317
VRI Vrincioaia 79.35 321 ⇑P **P** **12 19 05.7 +0.8**
PLOR Plostina 79.40 321 ⇑P **P** **12 19 05.8 +0.5**
UZH Uzhgorod 79.44 325 *eP* **P** **12 19 06.2 +0.8**
UZH *e* 12 19 10.0
UZH *e* 12 19 20.6
SUSD Miller 79.54 41 P **P** **12 19 05.9 -0.1**
baz=314
W18A Petrified Fore 79.56 53 P **P** **12 19 06.7 +0.1**
baz=310
214A Organ Pipe Nat 79.57 58 P **P** **12 19 07.4 +1.0**
214A IAmb IAmb 12 19 14.9
comp=Z,29nm,1.4s
214A Organ Pipe Nat 79.57 58 P **P** **12 19 05.8 -0.6**
baz=309
HARR Harsova 79.58 320 ⇑P **P** **12 19 06.1 -0.1**
CRVS Cervenica-Dubn 79.61 326 *eP* **P** **12 19 07.3 +1.0**
CRVS pmax pmax
comp=Z,58nm,1.8s
CRVS Cervenica-Dubn 79.61 326 *eP* **P** **12 19 07.3 +1.0**
TLBR Topalu 79.62 319 ⇑P **P** **12 19 06.9 +0.5**
COVR Voineasa-Covas 79.62 321 ⇑P **P** **12 19 06.2 -0.3**

S22A 4UR Ranch, Cre 79.66 50 P **P** **12 19 07.8 +0.6**
baz=311,SNR=12
NIE Niedzica 79.73 327 *e*P **P** **12 19 08.2 +1.3**
NIE *e*L L 12 56 36.3
comp=Z,132nm,23.2s
Q24A Divide 79.86 48 P **P** **12 19 08.0 -0.3**
baz=312
BR131 Keskin Array S 79.87 313 P **P** **12 19 08.4 +0.2**
BR131 IAmb IAmb 12 19 09.8
comp=Z,59nm,1.6s
BR131 Keskin Array S 79.87 313 *d* P **P** **12 19 08.3 +0.2**
BRTR Keskin Array B 79.87 313 P **P** **12 19 08.6 +0.5**
comp=Z,5.4nm,0.8s,baz=92,slow=3.7,SNR=31
BRTR PP **PP** **12 22 07.3 -1.9**
comp=Z,1.2nm,0.8s,baz=64,slow=5.6,SNR=2.9
BRTR LR LR 12 59 45.9
comp=Z,214nm,19.9s,baz=49,slow=40
comp=Z,5.4nm,0.8s
BRTR Keskin Array B 79.87 313 P **P** **12 19 08.2 +0.1**
F33A 5 Mile Ranch, 79.89 38 IAmb IAmb 12 19 15.4
comp=Z,33nm,1.1s
F33A 5 Mile Ranch, 79.89 38 P **P** **12 19 07.9 0.0**
baz=316
DOPR Dopca 79.94 322 ⇑P **P** **12 19 09.3 +1.1**
MLR Muntele Rosu 80.00 321 LR LR 12 58 15.6
comp=Z,312nm,18.4s,baz=51,slow=38
ICOR Ion Corvin 80.05 319 ⇑P **P** **12 19 09.7 +1.0**
IVI Ivigtut 80.21 6 *i* P **P** **12 19 08.4 -0.9**
IVI IAmb IAmb 12 19 09.5
comp=Z,9.7nm,0.8s
ANTO Ankara 80.26 314 P **P** **12 19 09.2 -0.9**
ANTO IAmb IAmb 12 19 12.0
comp=Z,35nm,0.8s
ANTO Ankara 80.26 314 P **P** **12 19 09.2 -0.9**
ANTO pmax pmax
comp=Z,35nm,0.8s
LANS Liptovska Anna 80.29 327 *e*P **P** **12 19 11.5 +1.5**
LANS pmax pmax
comp=Z,12nm,1.0s
LANS Liptovska Anna 80.29 327 *e*P **P** **12 19 11.5 +1.5**
KSP Ksiaz 80.29 330 *e*P **P** **12 19 10.8 +0.8**
KSP *e*L L 12 56 54.9
comp=Z,155nm,22.4s
OGNE Ogallala 80.31 45 P **P** **12 19 10.5 +0.2**
OGNE IAmb IAmb 12 19 18.2
comp=Z,44nm,1.2s
OGNE Ogallala 80.31 45 P **P** **12 19 10.7 +0.3**
baz=313
OGNE Ogallala 80.31 45 P **P** **12 19 10.8 +0.5**
baz=313,SNR=6.7
OKC Ostrava-Krasne 80.32 328 *e*P **P** **12 19 10.9 +0.8**
OKC Ostrava-Krasne 80.32 328 *e*P **P** **12 19 10.9 +0.8**
SDCO Great Sand Dun 80.46 49 P **P** **12 19 12.5 +1.1**
baz=312
SDCO Great Sand Dun 80.46 49 P **P** **12 19 12.6 +1.1**
baz=312,SNR=7.4
VOIR 80.48 322 ⇑P **P** **12 19 11.4 +0.2**
OSTC Ostas 80.55 330 *e*P **P** **12 19 12.4 +1.0**
OSTC *ex* x 12 19 19.4
EYMN Ely 80.58 34 P **P** **12 19 11.5 -0.1**
baz=319
CHVC Chvalec 80.58 330 *e*P **P** **12 19 12.5 +0.9**
CHVC *ex* x 12 19 26.6
DRGR 80.61 324 ⇑P **P** **12 19 12.2 +0.4**
MORC Moravsky Berou 80.62 328 ⇑P **P** **12 19 12.5 +0.7**
MORC Moravsky Berou 80.62 328 P **P** **12 19 12.4 +0.7**
MORC IAmb IAmb 12 19 13.6
comp=Z,21nm,0.9s
MORC Moravsky Berou 80.62 328 P **P** **12 19 12.4 +0.7**
MORC pmax pmax
comp=Z,21nm,0.9s
MORC Moravsky Berou 80.62 328 *e*P **P** **12 19 12.4 +0.7**
DPC Dobruska-Polom 80.67 329 *e*P **P** **12 19 12.3 +0.3**
DPC *e* 12 19 27.1
DPC Dobruska-Polom 80.67 329 *e*P **P** **12 19 12.3 +0.3**
DPC *ex* x 12 19 27.1
TUC Tucson 80.68 56 P **P** **12 19 12.9 +0.4**
TUC Tucson 80.68 56 P **P** **12 19 12.9 +0.4**
TUC pmax pmax
comp=Z,15nm,1.2s
TUC Tucson 80.68 56 P **P** **12 19 13.0 +0.5**
baz=310
MDUB Mudurnu 80.75 315 P **P** **12 19 13.2 +0.5**
MAUC Maruska 80.81 328 *e*P **P** **12 19 13.2 +0.4**
MAUC *ex* x 12 19 19.9
K31A O'Neill 80.92 42 P **P** **12 19 14.1 +0.5**
K31A O'Neill 80.92 42 P **P** **12 19 14.0 +0.5**
baz=315
PSZ Piszkesteto 81.04 326 ⇓P **P** **12 19 14.9 +0.8**
PSZ Piszkesteto 81.04 326 IAmb IAmb 12 19 16.2
comp=Z,37nm,1.0s
PSZ Piszkesteto 81.04 326 P **P** **12 19 14.9 +0.8**
KOLL Kolacno 81.18 327 *e*P **P** **12 19 15.9 +1.2**
BRG Berggiesshubel 81.18 331 *e*P **P** **12 19 15.1 +0.4**
BRG Amp 12 19 16.8
comp=Z,16nm,1.0s
BRG *ex* x 12 19 29.2
BRG Amp 12 19 30.0
comp=Z,8.1nm,0.8s
BRG Berggiesshubel 81.18 331 *e*P **P** **12 19 15.1 +0.4**
BRG *e* 12 19 29.2
BRG pmax pmax
comp=Z,16nm,1.0s
CLL Collm 81.19 332 IAmb IAmb 12 19 15.9
comp=Z,42nm,1.0s
CLL Collm 81.19 332 ⇓*i*P **P** **12 19 14.6 -0.1**
CLL *i* 12 19 22.3
CLL *i* 12 19 29.1
CLL pmax pmax
comp=Z,42nm,1.0s
CLL Collm 81.19 332 LmV 13 00 00.0
comp=Z,200nm,18.0s
CLL Collm 81.19 332 ⇓*i*P **P** **12 19 14.6 -0.1**
comp=Z,42nm,1.0s
CLL Collm 81.19 332 *i* PcP **PcP** **12 19 22.3 +1.4**
CLL Collm 81.19 332 *i* sP sP 12 19 29.1 +3.4
CLL Collm 81.19 332 *e*PP PP 12 22 16.0 -3.5
CLL Collm 81.19 332 *e*S **S** **12 29 24.0 +1.6**
CLL Collm 81.19 332 *e*(SS) 12 35 18.0
KAC Achnashellach 81.20 344 *e*P **P** **12 19 15.4 +0.8**
F36A Milaca 81.20 37 P **P** **12 19 14.8 -0.1**
ECSD EROS Data Cent 81.23 40 IAmb IAmb 12 19 22.6
comp=Z,20nm,1.0s
ECSD EROS Data Cent 81.23 40 P **P** **12 19 15.3 +0.1**
baz=316
ECSD EROS Data Cent 81.23 40 P **P** **12 19 15.2 +0.1**
baz=316,SNR=13
JAVC Velka Javorina 81.27 328 *e*P **P** **12 19 16.8 +1.5**
KSCO Kaye Shedlock' 81.28 47 P **P** **12 19 16.0 +0.4**
baz=313
VRAC Vranov 81.37 329 ⇑P **P** **12 19 16.6 +0.8**
VRAC Vranov 81.37 329 LR LR 12 58 34.4
comp=Z,259nm,19.4s,baz=26,slow=38
VRAC Vranov 81.37 329 *e*P **P** **12 19 16.7 +0.9**
KPL Plockton 81.42 344 *e*P **P** **12 19 16.2 +0.4**
KPL IAmb IAmb 12 19 16.9
comp=Z,47nm,1.2s
T25A Trinidad 81.51 49 P **P** **12 19 17.9 +0.9**
baz=312,SNR=11
E38A The Farm, Brul 81.56 35 P **P** **12 19 16.9 +0.2**
E38A IAmb IAmb 12 19 31.9
comp=Z,22nm,0.9s
E38A The Farm, Brul 81.56 35 P **P** **12 19 16.7 -0.1**
baz=319
BORA Eskisehir 81.57 315 P **P** **12 19 17.4 +0.3**
SZH Strazhica 81.60 320 P **P** **12 19 17.5 +0.4**
GZR Gura Zlata 81.61 323 ⇑P **P** **12 19 17.1 0.0**
SMOL Smolenice 81.64 328 *e*P **P** **12 19 18.8 +1.6**
SMOL pmax pmax
comp=Z,16nm,0.9s
SMOL Smolenice 81.64 328 *e*P **P** **12 19 18.8 +1.6**
KRUC Moravsky 81.64 329 *e*P **P** **12 19 17.8 +0.6**
PRU Pruhonice 81.66 330 *e*P **P** **12 19 17.9 +0.7**
PRU *e* 12 19 32.0
PRU Pruhonice 81.66 330 *e*P **P** **12 19 17.9 +0.7**
PRU *e*pP **pwP** **12 19 32.0 -0.9**
ANMO Albuquerque 81.72 52 LR LR 12 51 18.8
comp=Z,72nm,20.1s,baz=314,slow=32
ANMO Albuquerque 81.72 52 P **P** **12 19 19.5 +1.3**
ANMO Albuquerque 81.72 52 *d* P **P** **12 19 19.4 +1.3**
ANMO pmax pmax
comp=Z,20nm,1.3s
ANMO Albuquerque 81.72 52 P **P** **12 19 20.0 +1.8**
baz=312,SNR=18

ANMO Albuquerque 81.72 52 P **P** **12 19 18.7 +0.6**
baz=312
SRO Srobarova 81.81 327 *e*P **P** **12 19 19.5 +1.5**
SRO pmax pmax
comp=Z,36nm,1.0s
SRO Srobarova 81.81 327 *e*P **P** **12 19 19.5 +1.5**
SRO2 Moca 81.81 327 *e*P **P** **12 19 18.4 +0.3**
SRO2 Moca 81.81 327 *e*P **P** **12 19 18.4 +0.3**
MODS Modra-Piesok 81.81 328 *e*P **P** **12 19 19.5 +1.4**
MODS pmax pmax
comp=Z,51nm,1.0s
MODS Modra-Piesok 81.81 328 *e*P **P** **12 19 19.5 +1.4**
URZ Urewera 81.89 155 LR LR 12 54 28.9
comp=Z,147nm,18.3s,baz=31,slow=35
INVG Invergeldie, C 81.90 343 *e*P **P** **12 19 18.9 +0.5**
INVG IAmb IAmb 12 19 19.6
comp=Z,14nm,0.9s
BZS Buzias 81.99 324 ⇑P **P** **12 19 19.3 +0.2**
SPMN Marine on St. 82.01 37 P **P** **12 19 18.9 -0.3**
baz=318
ZST Bratislava 82.03 328 *e*P **P** **12 19 20.5 +1.3**
ZST pmax pmax
comp=Z,49nm,1.2s
ZST Bratislava 82.03 328 *e*P **P** **12 19 20.5 +1.3**
ESY Stoneypath 82.03 342 *e*P **P** **12 19 19.3 +0.2**
Y22A Socorro 82.07 53 P **P** **12 19 21.4 +1.5**
baz=311,SNR=7.3
BGNE Belgrade 82.09 43 P **P** **12 19 19.5 -0.3**
baz=315
HERR Herculane 82.16 323 ⇑P **P** **12 19 20.2 +0.2**
EAB Aberfoyle 82.19 343 *e*P **P** **12 19 20.6 +0.7**
NKC Novy Kostel 82.26 331 *e*P **P** **12 19 20.6 +0.1**
NKC Novy Kostel 82.26 331 *e*P **P** **12 19 20.6 +0.1**
DJES Djerdap 82.27 322 ⇑P **P** **12 19 20.1 -0.5**
PUNG Punghina 82.36 322 ⇑P **P** **12 19 21.5 +0.5**
PMOR Pomariorio Ree 82.38 116 *e*T T 13 49 00.0
comp=Z,1.8nm,0.2s
121A Cookes Peak, D 82.47 54 P **P** **12 19 23.7 +1.7**
baz=311,SNR=9.7
121A Cookes Peak, D 82.47 54 P **P** **12 19 23.3 +1.2**
baz=311,SNR=9.7
RAYN Ar Rayn 82.52 294 P **P** **12 19 22.3 0.0**
RAYN IAmb IAmb 12 19 23.7
comp=Z,17nm,1.0s
RAYN Ar Rayn 82.52 294 P **P** **12 19 22.3 0.0**
RAYN pmax pmax
comp=Z,17nm,1.0s
RAYN Ar Rayn 82.52 294 *i* P **P** **12 19 22.5 +0.2**
SNR=18
MDVR Moldovita 82.57 323 ⇓P **P** **12 19 22.3 +0.1**
I37B Waseca 82.62 38 P **P** **12 19 23.1 +0.7**
baz=318
MPLH Magyarpolny 82.64 327 P **P** **12 19 23.2 +0.7**
MPEP Malo Peshtene 82.64 321 P **P** **12 19 23.3 +0.8**
SOP Sopron 82.65 328 P **P** **12 19 23.6 +1.1**
CKRC Cesky Krumlov 82.68 329 *e*P **P** **12 19 22.9 +0.2**
CKRC *ex* x 12 19 37.6
EKA Eskdalemuir Ar 82.69 342 LR LR 13 02 31.2
comp=Z,107nm,18.4s,baz=1.5,slow=40
ESK Eskdalemuir 82.72 342 *e*P **P** **12 19 22.6 0.0**
ESK Eskdalemuir 82.72 342 P **P** **12 19 23.0 +0.3**
ESK IAmb IAmb 12 19 35.4
comp=Z,65nm,1.9s
ESK Eskdalemuir 82.72 342 P **P** **12 19 23.0 +0.3**
ESK pmax pmax
comp=Z,65nm,1.9s
KHC Kasperske Hory 82.72 330 P **P** **12 19 23.3 +0.4**
KHC IAmb IAmb 12 19 24.6
comp=Z,21nm,0.8s
KHC Kasperske Hory 82.72 330 *e*P **P** **12 19 23.4 +0.5**
KHC *e* 12 19 37.1
KHC Kasperske Hory 82.72 330 *e*P **P** **12 19 23.4 +0.5**
KHC *e*pP **pwP** **12 19 37.1 -1.5**
RONA Rosalia, Austr 82.75 328 *e*P **P** **12 19 24.2 +1.1**
comp=Z,39nm,0.9s,SNR=19
RONA *i* S **sP** **12 19 38.5 +4.4**
comp=Z,20nm,0.8s
CONA Conrad Observa 82.75 328 *i* P **P** **12 19 24.1 +1.0**
comp=Z,26nm,1.0s,SNR=16
CONA *i* S **sP** **12 19 38.4 +4.2**
comp=Z,12nm,0.9s
EDMD Edmundbyers 82.85 341 *e*P **P** **12 19 22.9 -0.6**
MORH Mrgy, Hungar 82.89 326 ⇑P **P** **12 19 23.3 -0.4**
MORH Mrgy, Hungar 82.89 326 P **P** **12 19 23.3 -0.4**
GEC2 GERESS Array S 82.90 330 P **P** **12 19 24.4 +0.5**
GERES GERESS Array B 82.90 330 P **P** **12 19 24.0 +0.1**
comp=Z,6.1nm,0.8s,baz=35,slow=4.9,SNR=38
comp=Z,6.1nm,0.8s
GERES GERESS Array B 82.90 330 P **P** **12 19 23.8 -0.1**
PPT Papeete 82.95 119 LR LR 12 47 23.6
comp=Z,180nm,20.9s,baz=310,slow=29
BLKB Belogradchik 82.97 322 ⇑P **P** **12 19 24.0 -0.3**
PPT2 Papeete2 82.97 119 *e*LR LR 12 44 49.7
comp=Z,446nm,22.5s
PGB Panagyurishte 83.02 320 P **P** **12 19 25.6 +1.0**
COWI Conover 83.03 34 P **P** **12 19 24.0 -0.5**
COWI IAmb IAmb 12 19 31.7
comp=Z,22nm,1.4s
COWI Conover 83.03 34 P **P** **12 19 23.9 -0.7**
baz=320
CBKS Cedar Bluff 83.05 45 P **P** **12 19 24.2 -0.6**
baz=315
GRA1 Grafenberg Arr 83.17 332 P **P** **12 19 26.1 +0.9**
GRF Grafenberg Arr 83.17 332 P **P** **12 19 26.1 +0.9**
GRF pmax pmax
comp=Z,37nm,0.8s
GRFO Grafenberg 83.17 332 P **P** **12 19 26.2 +1.1**
GRFO Grafenberg 83.17 332 P **P** **12 19 26.2 +1.1**
GRFO pmax pmax
comp=Z,34nm,0.8s
FRGS Fruska Gora 83.17 324 ⇑P **P** **12 19 25.5 +0.2**
G40A Rib Lake 83.19 36 P **P** **12 19 25.4 +0.1**
G40A IAmb IAmb 12 19 26.4
comp=Z,16nm,1.1s
G40A Rib Lake 83.19 36 P **P** **12 19 25.5 +0.1**
baz=320,SNR=7.2
KOVH Kovagotottos 83.23 326 P **P** **12 19 25.4 -0.1**
ALN Alexandroupoli 83.25 318 IAmb IAmb 12 19 27.3
comp=Z,29nm,1.2s
CSS Mathiatis 83.25 310 P **P** **12 19 25.1 -0.8**
MMAI Mount Meron Ar 83.27 307 LR LR 13 00 09.8
comp=Z,240nm,20.8s,baz=218,slow=38
SCHQ Scherfville 83.30 18 P **P** **12 19 24.7 -1.1**
comp=Z,9.0nm,0.8s,baz=336,slow=6.1,SNR=8.8
SCHQ LR LR 12 59 07.4
comp=Z,78nm,20.3s,baz=302,slow=38
comp=Z,9.0nm,0.8s
RDO Rodhopi 83.33 318 P **P** **12 19 26.4 +0.3**
RDO IAmb IAmb 12 19 28.1
comp=Z,39nm,1.0s
BOVS Bovan 83.43 322 P **P** **12 19 26.3 -0.3**
ARSA Arzberg 83.43 328 *i* P **P** **12 19 27.1 +0.6**
comp=Z,12nm,0.8s,SNR=5.9
VTS Vitosha 83.43 321 ⇑P **P** **12 19 27.8 +0.9**
VTS Vitosha 83.43 321 P **P** **12 19 27.4 +0.6**
VTS IAmb IAmb 12 19 28.9
comp=Z,31nm,0.8s
VTS Vitosha 83.43 321 P **P** **12 19 27.4 +0.6**
VTS pmax pmax
comp=Z,31nm,0.8s
VTS Vitosha 83.43 321 P **P** **12 19 27.1 +0.3**
MOA Molln 83.47 329 *i* P **P** **12 19 27.4 +0.6**
comp=Z,14nm,0.9s,SNR=5.6
KULA Kula-Manisa 83.52 315 P **P** **12 19 25.4 -1.9**
HPK Haverah Park 83.55 341 *e*P **P** **12 19 27.8 +0.8**
HPK IAmb IAmb 12 19 29.4
comp=Z,34nm,0.8s
CLGH Cloghs, Cushen 83.61 344 *e*P **P** **12 19 28.2 +0.9**
CLGH IAmb IAmb 12 19 28.9
comp=Z,52nm,1.1s
E43A Lone Tree Farm 83.75 33 P **P** **12 19 28.3 +0.1**
E43A IAmb IAmb 12 20 49.8
comp=Z,14nm,0.7s
E43A Lone Tree Farm 83.75 33 P **P** **12 19 28.5 +0.3**
baz=322,SNR=8.5
N35A Tabor 83.80 42 P **P** **12 19 28.4 -0.2**
N35A Tabor 83.80 42 P **P** **12 19 29.2 +0.6**
baz=317
SMTH Samothraki Isl 83.82 318 P **P** **12 19 28.7 0.0**
BIOA Bad Ischl, Aus 83.85 329 *i* P **P** **12 19 29.3 +0.6**
comp=Z,31nm,1.0s,SNR=9.2
BIOA *i* S **sP** **12 19 43.7 +4.0**
comp=Z,22nm,1.2s
DIVS Divibare 83.89 323 IAmb IAmb 12 19 30.4
comp=Z,24nm,1.1s

IDGL Inch Island, C 83.92 344 *e*P **P** **12 19 29.3 +0.5**
MMB Musomiste 83.94 320 P **P** **12 19 30.0 +0.7**
TAOE Nuku Hiva Isla 84.01 106 *e*LR LR 12 45 14.3
comp=Z,303nm,22.6s
KKB Krupnik 84.06 320 P **P** **12 19 30.7 +0.8**
LBWR Ladybower, Pea 84.08 341 *e*P **P** **12 19 30.3 +0.6**
LBWR IAmb IAmb 12 19 31.3
comp=Z,176nm,1.3s
PERS Pernice 84.09 328 *i* P **P** **12 19 30.1 +0.2**
SOKA Soboth 84.09 328 *i* P **P** **12 19 30.3 +0.3**
comp=Z,37nm,1.0s,SNR=22
SOKA *i* S **sP** **12 19 44.5 +3.5**
comp=Z,29nm,1.1s
THAS Thassos island 84.15 318 P **P** **12 19 30.8 +0.5**
BEBN Eben Emael 84.19 335 *dx* x 12 19 45.3
BTNL Ternell 84.22 335 *d*P **P** **12 19 30.8 +0.2**
comp=Z,15nm,1.0s
BTNL *dx* x 12 19 45.4
MEM Membach 84.24 335 *b*P **P** **12 19 31.1 +0.5**
SCIA State Center 84.28 39 P **P** **12 19 30.1 -0.9**
baz=318
PRK Paraskevi 84.31 317 P **P** **12 19 32.4 +1.2**
OBKA Obir 84.42 328 *e*P **P** **12 19 31.6 -0.2**
comp=Z,13nm,0.8s,SNR=5.3
BHOU Houvegnez 84.46 335 *d*P **P** **12 19 32.5 +0.7**
comp=Z,8.9nm,1.1s
BHOU *dx* x 12 19 46.7
KBA Koelnbreinsper 84.46 329 *e*P **P** **12 19 32.1 0.0**
comp=Z,19nm,0.9s,SNR=6.5
MNTX Cornudas Mount 84.55 54 IAmb IAmb 12 19 34.6
comp=Z,21nm,1.3s
MNTX Cornudas Mount 84.55 54 P **P** **12 19 33.5 +0.9**
baz=312,SNR=18
MNTX Cornudas Mount 84.55 54 P **P** **12 19 33.4 +0.8**
baz=312,SNR=18
KSU1 Kansas State U 84.56 43 P **P** **12 19 31.7 -0.8**
baz=316
CWF Charnwood Fore 84.57 340 *e*P **P** **12 19 32.6 +0.4**
AKAS Kas 84.58 313 P **P** **12 19 32.9 +0.1**
BCLA Clavier 84.63 335 *d*P **P** **12 19 32.6 +0.1**
comp=Z,11nm,1.1s
BCLA *dx* x 12 19 47.6
MSTX Muleshoe 84.63 50 P **P** **12 19 33.3 +0.2**
baz=313
AMTX Amarillo 84.66 49 P **P** **12 19 34.3 +1.2**
AMTX Amarillo 84.66 49 P **P** **12 19 34.5 +1.3**
baz=314,SNR=13
AMTX Amarillo 84.66 49 P **P** **12 19 33.6 +0.4**
baz=314
MYKA Terra Mystica 84.70 329 *e*P **P** **12 19 32.6 -0.5**
comp=Z,10nm,0.6s,SNR=7.3
I42A Draeger Farm, 84.84 36 P **P** **12 19 33.7 0.0**
baz=321
RCHB Rochefort 84.88 335 *d*P **P** **12 19 34.1 +0.3**
comp=Z,13nm,1.0s
RCHB *dp*P **pP** **12 19 41.4 -0.5**
RCHB *dx* x 12 19 49.1
SNF Seneffe 84.89 336 *d*P **P** **12 19 34.2 +0.3**
comp=Z,21nm,0.8s
E46A Sault Ste Mari 84.89 32 P **P** **12 19 33.8 -0.2**
baz=324
H43A Windswept, Lux 84.91 35 P **P** **12 19 34.8 +0.7**
H43A IAmb IAmb 12 19 35.5
comp=Z,19nm,0.8s
H43A Windswept, Lux 84.91 35 P **P** **12 19 34.3 +0.3**
baz=322
BMRD Maredsous 84.91 336 *d*P **P** **12 19 34.4 +0.4**
comp=Z,18nm,1.0s
BMRD *dx* x 12 19 48.4
FOEL Foel Wylfa 84.92 341 *e*P **P** **12 19 35.3 +1.2**
FOEL IAmb IAmb 12 19 35.8
comp=Z,96nm,0.9s
WATA Walderalm 84.96 330 *i* P **P** **12 19 34.7 +0.2**
comp=Z,23nm,1.0s,SNR=5.8
JFWS Jewell Farm 84.96 37 P **P** **12 19 34.2 -0.2**
baz=320
JFWS Jewell Farm 84.96 37 P **P** **12 19 34.2 -0.2**
baz=320
WTTA Wattenberg 84.99 330 *i* P **P** **12 19 34.9 +0.1**
comp=Z,16nm,0.9s,SNR=5.5
CHOS Chios island 85.05 316 P **P** **12 19 35.0 0.0**
ABTA Abfaltersbach 85.07 329 *e*P **P** **12 19 34.1 -0.9**
comp=Z,20nm,1.0s,SNR=6.7
ABTA *i* S **sP** **12 19 48.5 +2.5**
comp=Z,11nm,0.9s
N38A Joes South For 85.09 40 P **P** **12 19 35.9 +0.7**
N38A Joes South For 85.09 40 P **P** **12 19 35.6 +0.5**
baz=318
JAVS Javornik 85.12 328 *i* P **P** **12 19 34.5 -0.8**
RPZ Rata Peaks 85.13 161 P **P** **12 19 35.1 +0.2**
comp=Z,15nm,0.9s,baz=16,slow=6.8,SNR=2.3
RPZ LR LR 12 52 43.9
comp=Z,141nm,21.1s,baz=341,slow=32
comp=Z,15nm,0.9s
MOTA Moosalm 85.14 330 *i* P **P** **12 19 35.6 +0.2**
comp=Z,34nm,0.9s,SNR=16
MOTA *i* S **sP** **12 19 49.9 +3.4**
comp=Z,21nm,0.9s
L40A Anamosa 85.14 38 P **P** **12 19 35.5 +0.2**
L40A IAmb IAmb 12 20 32.5
comp=Z,18nm,0.8s
L40A Anamosa 85.14 38 P **P** **12 19 35.4 +0.1**
baz=319,SNR=5.9
DOU Dourbes 85.14 336 *b*P **P** **12 19 35.5 +0.4**
RETA Reutte 85.15 331 *i* P **P** **12 19 35.9 +0.5**
comp=Z,45nm,0.8s,SNR=22
RETA *i* S **sP** **12 19 50.1 +3.7**
comp=Z,30nm,0.9s
HLM1 Long Mynd 85.18 341 *e*P **P** **12 19 35.7 +0.4**
HLM1 IAmb IAmb 12 19 36.7
comp=Z,37nm,1.2s
SQTA Sankt Quirin 85.20 330 *i* P **P** **12 19 36.0 +0.3**
comp=Z,15nm,0.7s,SNR=6.1
SQTA *i* S **sP** **12 19 50.3 +3.6**
comp=Z,9.8nm,0.6s
BODT Bodrum 85.30 315 P **P** **12 19 36.4 +0.2**
BFO Black Forest 85.36 332 P **P** **12 19 36.4 +0.1**
BFO Black Forest 85.36 332 P **P** **12 19 36.4 +0.1**
BFO pmax pmax
comp=Z,52nm,1.1s
DSB Dublin 85.36 343 P **P** **12 19 36.4 +0.2**
DSB IAmb IAmb 12 19 38.6
comp=Z,18nm,1.1s
STAL STALIGIAL 85.38 329 P **P** **12 19 35.7 -0.8**
STAL IAmb IAmb 12 19 36.3
comp=Z,22nm,0.7s
DAT Datca 85.39 314 P **P** **12 19 37.2 +0.4**
PHP Peshkopia 85.51 322 P **P** **12 19 37.2 0.0**
PDG Podgorica 85.51 323 ⇑P **P** **12 19 37.5 +0.4**
PDG Podgorica 85.51 323 P **P** **12 19 37.1 0.0**
FETA Feichten 85.55 330 *i* P **P** **12 19 37.8 +0.3**
comp=Z,31nm,1.0s,SNR=14
FETA *i* S **sP** **12 19 52.2 +3.7**
comp=Z,16nm,0.8s
DAVA Damuels 85.65 331 *i* P **P** **12 19 38.3 +0.3**
comp=Z,57nm,1.0s,SNR=17
DAVA *i* S **sP** **12 19 52.6 +3.6**
comp=Z,27nm,0.8s
STRD Stroud 85.66 340 *e*P **P** **12 19 38.6 +0.9**
STRD IAmb IAmb 12 19 39.2
comp=Z,109nm,0.9s
LIT Litokhoron 85.67 319 P **P** **12 19 37.9 -0.1**
MCH1 Michaelchurch 85.68 341 *e*P **P** **12 19 38.1 +0.3**
MCH1 IAmb IAmb 12 19 39.2
comp=Z,42nm,0.8s
FNA Florina 85.73 320 P **P** **12 19 37.7 -0.6**
FNA IAmb IAmb 12 19 39.1
comp=Z,19nm,1.0s
FNA Florina 85.73 320 P **P** **12 19 37.7 -0.6**
FNA pmax pmax
comp=Z,19nm,1.0s
MONM Monmouth 85.78 340 *e*P **P** **12 19 39.2 +0.9**
MONM IAmb IAmb 12 19 39.7
comp=Z,52nm,1.0s
EIL Elat 85.79 305 LR LR 13 02 36.9
comp=Z,207nm,19.0s,baz=86,slow=39
P38A Dawn 85.81 41 IAmb IAmb 12 20 23.7
comp=Z,69nm,0.3s
P38A Dawn 85.81 41 P **P** **12 19 39.2 +0.5**
baz=318,SNR=5.2
XOR Xorichti 85.86 318 P **P** **12 19 38.0 -1.0**
ECH Echery 85.88 333 P **P** **12 19 39.0 +0.1**
ECH Echery 85.88 333 P **P** **12 19 39.0 +0.1**
ECH pmax pmax
comp=Z,30nm,0.9s
L42A Oliver, Polo 85.94 37 IAmb IAmb 12 19 46.2

	comp=Z,17nm,1.0s								
L42A	**Oliver, Polo**	85.94	37	P	P	12 19 38.7	-0.5		
	baz=320								
CTI	**Castel Tesino**	85.98	329	P	P	12 19 39.0	-0.6		
CTI				IAmb	IAmb	12 19 39.6			
	comp=Z,17nm,0.9s								
CTI	**Castel Tesino**	85.98	329	P	P	12 19 39.0	-0.6		
CTI				pmax	pmax				
	comp=Z,17nm,0.9s								
K43A	**Burlington**	86.02	36	P	P	12 19 39.8	+0.1		
	baz=321								
DAVOX	**Davos/Dischmat**	86.07	331	LR	LR	13 03 51.9			
	comp=Z,155nm,18.0s,baz=82,slow=40								
VLDQ	**Val d'Or**	86.08	27	IAmb	IAmb	12 19 39.9			
	comp=Z,31nm,1.1s								
KBN	**Korca**	86.14	321	P	P	12 19 40.6	+0.2		
KBN	**Korca**	86.14	321	P	P	12 19 40.6	+0.2		
KBN				pmax	pmax				
	comp=Z,45nm,0.9s								
RSBS	**Rosebush, Pemb**	86.17	342	eP	P	12 19 40.3	+0.1		
RSBS				IAmb	IAmb	12 19 42.1			
	comp=Z,28nm,1.1s								
T35A	**Sooner Cattle**	86.19	45		P	12 19 41.2	+0.5		
LPIG	**La Paz**	86.26	62	LR	LR	12 55 51.6			
	comp=Z,127nm,18.1s,baz=216,slow=34								
WMOK	**Wichita Mounta**	86.47	48	P	P	12 19 42.5	+0.4		
WMOK				IAmb	IAmb	12 19 43.6			
	comp=Z,12nm,0.9s								
WMOK	**Wichita Mounta**	86.47	48	P	P	12 19 42.5	+0.4		
WMOK				pmax	pmax				
	comp=Z,12nm,0.9s								
WMOK	**Wichita Mounta**	86.47	48	P	P	12 19 41.6	-0.5		
	baz=315,SNR=8.2								
WMOK	**Wichita Mounta**	86.47	48	P	P	12 19 42.3	+0.2		
	baz=315,SNR=8.2								
TUE	**Stuetta**	86.53	331	P	P	12 19 42.2	-0.2		
TEOL	**Teolo**	86.54	329	IAmb	IAmb	12 19 43.0			
	comp=Z,24nm,0.9s								
LSK	**Leskovik**	86.59	321	P	P	12 19 43.4	+0.7		
P40A	**Paris**	86.64	40	P	P	12 19 43.0	+0.2		
	baz=319,SNR=9.8								
FNO	**Franklin**	86.89	46		P	12 19 44.9	+0.8		
TBI	**Tubuai**	87.03	123	eLR	LR	12 46 44.0			
	comp=Z,263nm,25.0s								
X34A	**Smith Ranch, M**	87.11	47		P	12 19 45.7	+0.5		
X34A				IAmb	IAmb	12 19 53.5			
	comp=Z,18nm,1.0s								
M44A	**Midewin, Midew**	87.18	37	P	P	12 19 46.0	+0.6		
M44A	**Midewin, Midew**	87.18	37	P	P	12 19 45.8	+0.4		
	baz=321								
HDIL	**Hopedale**	87.23	38	P	P	12 19 45.9	+0.2		
	baz=321								
TX31	**Lajitas Ar. Si**	87.23	54	P	P	12 19 46.8	+0.8		
TX31	**Lajitas Ar. Si**	87.23	54	P	P	12 19 46.7	+0.7		
	baz=313								
TX32	**Lajitas Array**	87.23	54	P	P	12 19 46.9	+0.9		
TX32				IAmb	IAmb	12 19 55.0			
	comp=Z,20nm,1.2s								
TXAR	**Lajitas Array**	87.23	54	P	P	12 19 46.4	+0.4		
	comp=Z,5.6nm,0.9s,baz=297,slow=3.0,SNR=37								
TXAR				LR	LR	12 55 58.0			
	comp=Z,107nm,18.4s,baz=304,slow=34								
	comp=Z,5.6nm,0.9s								
TUL1	**Leonard**	87.32	45	P	P	12 19 45.8	-0.3		
	baz=317								
KEK	**Kerkira**	87.33	321	P	P	12 19 45.6	-0.5		
S39A	**Bolivar**	87.35	42	P	P	12 19 46.2	-0.1		
	baz=318,SNR=6.7								
KLV	**Kalavryta, Ach**	87.38	318	P	P	12 19 45.1	-1.4		
SENIN	**Lac Senin/Sane**	87.39	332	P	P	12 19 46.7	+0.1		
SENIN				IAmb	IAmb	12 19 47.8			
	comp=Z,11nm,0.8s								
ABTX	**Abilene, Hawle**	87.45	50	P	P	12 19 46.3	-0.6		
	baz=315								
R40A	**Maddies Statio**	87.46	41	P	P	12 19 46.7	-0.1		
R40A				IAmb	IAmb	12 20 13.3			
	comp=Z,12nm,0.7s								
R40A	**Maddies Statio**	87.46	41	P	P	12 19 46.8	+0.1		
	baz=319,SNR=5.9								
NYDR	**Nydri-Lefkada**	87.63	320	P	P	12 19 47.2	-0.4		
CLF	**Chambon-Foret**	87.70	336	P	P	12 19 48.5	+0.8		
U38A	**Gravette**	87.71	44	IAmb	IAmb	12 19 49.2			
	comp=Z,33nm,1.6s								
P43A	**Skaggs, Pawnee**	87.82	39	IAmb	IAmb	12 20 14.8			
	comp=Z,18nm,0.8s								
IDI	**Anoyia**	87.94	315	⇑P	P	12 19 48.7	-0.5		
IDI	**Anoyia**	87.94	315	P	P	12 19 48.2	-1.1		
IDI				IAmb	IAmb	12 19 52.8			
	comp=Z,22nm,1.0s								
NRCA	**Norcia**	87.98	327	P	P	12 19 49.8	+0.5		
JSA	**Saint Aubin**	88.00	339	eP	P	12 19 49.2	+0.1		
JSA				IAmb	IAmb	12 19 51.1			
	comp=Z,36nm,1.1s								
HHAR	**Hobbs**	88.07	44	IAmb	IAmb	12 20 06.2			
	comp=Z,12nm,0.8s								
HHAR	**Hobbs**	88.07	44	P	P	12 19 49.5	-0.3		
	baz=318								
CCM	**Cathedral Cave**	88.16	41	P	P	12 19 50.2	0.0		
CCM	**Cathedral Cave**	88.16	41	P	P	12 19 50.2	0.0		
CCM				pmax	pmax				
	comp=Z,25nm,0.7s								
CCM	**Cathedral Cave**	88.16	41	P	P	12 19 50.5	+0.3		
	baz=320,SNR=16								
CCM	**Cathedral Cave**	88.16	41	P	P	12 19 50.1	0.0		
	baz=320								
SADO	**Sadowa**	88.27	30	LR	LR	12 59 25.7			
	comp=Z,53nm,22.0s,baz=345,slow=36								
MGMO	**Mountain Grove**	88.31	42	IAmb	IAmb	12 19 51.8			
	comp=Z,19nm,1.1s								
L48A	**N Adams**	88.39	34	P	P	12 19 51.6	+0.4		
	baz=324								
L48A				P	P	12 19 51.6	+0.4		
	baz=324								
SFIN	**Lafayette**	88.42	37	P	P	12 19 51.3	0.0		
SFIN	**Lafayette**	88.42	37	P	P	12 19 50.6	-0.7		
	baz=322								
X37A	**Clayton**	88.52	46	IAmb	IAmb	12 20 01.0			
	comp=Z,13nm,0.8s								
X37A	**Clayton**	88.52	46	P	P	12 19 52.0	+0.1		
	baz=317								
U40A	**Yellville**	88.60	43	P	P	12 19 52.2	0.0		
U40A				IAmb	IAmb	12 19 53.3			
	comp=Z,25nm,1.1s								
U40A	**Yellville**	88.60	43	P	P	12 19 52.3	0.0		
	baz=319,SNR=15								
U40A				P	P	12 19 52.3	0.0		
	baz=319,SNR=15								
U40A	**Yellville**	88.60	43	P	P	12 19 52.0	-0.2		
	baz=319,SNR=15								
FVM	**French Village**	88.64	40	P	P	12 19 53.0	+0.7		
FVM				IAmb	IAmb	12 20 07.5			
	comp=Z,13nm,0.6s								
FVM	**French Village**	88.64	40	P	P	12 19 53.1	+0.7		
FVM				pmax	pmax				
	comp=Z,13nm,0.6s								
FVM	**French Village**	88.64	40	P	P	12 19 52.9	+0.5		
	baz=320								
Q44A	**Meyer Farm, Va**	88.64	39	P	P	12 19 52.8	+0.4		
N47A	**Urbana**	88.67	36	P	P	12 19 52.7	+0.2		
N47A	**Urbana**	88.67	36	P	P	12 19 52.5	0.0		
	baz=323								
N47A				P	P	12 19 52.5	0.0		
	baz=323								
BNI	**Bardonecchia**	88.74	332	IAmb	IAmb	12 20 00.9			
	comp=Z,13nm,1.4s								
JCT	**Junction City**	88.86	51	P	P	12 19 50.6	-3.0		
	baz=315,SNR=6.2								
JCT	**Junction City**	88.86	51	P	P	12 19 50.4	-3.2		
	baz=315,SNR=6.2								
LMQ	**La Malbaie**	88.92	23	P	P	12 19 53.8	+0.2		
W39A	**Magazine**	88.96	44	P	P	12 19 54.3	+0.4		
W39A				IAmb	IAmb	12 20 00.2			
	comp=Z,11nm,0.7s								
W39A	**Magazine**	88.96	44	P	P	12 19 54.1	+0.2		
	baz=318								
W39A	**Magazine**	88.96	44	P	P	12 19 53.2	-0.7		
	baz=318								
P46A	**Rosedale**	88.96	37	P	P	12 19 54.1	+0.2		
	baz=322								
DELO	**Deloro Mine**	89.07	29	IAmb	IAmb	12 19 55.3			
	comp=Z,18nm,0.9s								
ROSF	**Rostrenen**	89.09	339	eP	P	12 19 54.1	-0.2		
WHTX	**Lake Whitney,**	89.20	49	P	P	12 19 54.3	-0.8		
	baz=316								
TIP	**Timpagrande**	89.23	322	P	P	12 19 55.3	0.0		
N49A	**Columbus Grove**	89.33	35	P	P	12 19 56.0	+0.5		
	baz=324								
N49A				P	P	12 19 56.0	+0.5		
	baz=324								
FCAR	**Ozark Folk Cen**	89.34	43	P	P	12 19 55.6	-0.1		
FCAR				IAmb	IAmb	12 19 56.6			
	comp=Z,19nm,1.2s								
O48B	**Farmland**	89.42	36	P	P	12 19 56.3	+0.3		
	baz=323								
O48B	**Farmland**	89.42	36	P	P	12 19 55.3	-0.7		
	baz=323								
S44A	**Carbondale**	89.45	40	P	P	12 19 56.4	+0.2		
	baz=321,SNR=5.9								
SIUC	**Southern Illin**	89.46	40	P	P	12 19 57.1	+0.9		
MIAR	**Mount Ida**	89.55	45	P	P	12 19 54.1	-2.6		
	baz=318,SNR=12								
MIAR	**Mount Ida**	89.55	45	P	P	12 19 54.3	-2.5		
	baz=318,SNR=12								
PBMO	**Poplar Bluff**	89.56	41	P	P	12 19 57.4	+0.7		
PBMO	**Poplar Bluff**	89.56	41	P	P	12 19 57.0	+0.3		
	baz=320,SNR=12								
D62A	**Allapoint, All**	89.73	22	P	P	12 19 57.3	0.0		
	baz=334								
D62A				P	P	12 19 57.3	0.0		
	baz=334								
W41B	**Gary Mavity, V**	89.81	43	P	P	12 19 56.0	-2.0		
	baz=319								
O49A	**Covington**	89.85	35	P	P	12 19 58.7	+0.6		
O49A				IAmb	IAmb	12 20 09.2			
	comp=Z,13nm,0.7s								
BMNY	**Brushton-Moira**	89.93	27	P	P	12 19 58.0	-0.3		
	baz=330								
X40A	**Basin Creek Fa**	90.00	44	P	P	12 19 59.2	+0.4		
X40A	**Basin Creek Fa**	90.00	44	P	P	12 19 58.4	-0.5		
	baz=319								
LONY	**Lake Ozonia**	90.10	27	P	P	12 19 58.0	-1.1		
	baz=330								
P49A	**Miami Univ. Ec**	90.20	36	P	P	12 19 59.2	-0.5		
	baz=324								
BATG	**Bathurst New B**	90.41	20	IAmb	IAmb	12 20 02.1			
	comp=Z,23nm,0.9s								
ACSO	**Alum Creek Sta**	90.42	34	P	P	12 20 01.4	+0.7		
ACSO	**Alum Creek Sta**	90.42	34	P	P	12 20 00.4	-0.3		
	baz=325								
M53A	**WI Miller and**	90.43	32	P	P	12 20 01.1	+0.4		
M53A	**WI Miller and**	90.43	32	P	P	12 19 59.8	-0.9		
	baz=326								
WLAR	**White Oak Lake**	90.45	45	P	P	12 20 02.0	+1.1		
F62A	**Pittston Farm,**	90.51	23	P	P	12 20 00.9	-0.1		
	baz=334								
F62A				P	P	12 20 00.9	-0.1		
	baz=334								
J57A	**Williamstown**	90.62	28	IAmb	IAmb	12 20 02.9			
	comp=Z,24nm,1.1s								
833A	**Chaparral WMA,**	90.63	52	P	P	12 20 02.1	+0.2		
	baz=315								
NCB	**Newcomb**	90.79	27	IAmb	IAmb	12 20 03.6			
	comp=Z,19nm,1.0s								
NCB	**Newcomb**	90.79	27	P	P	12 20 02.3	-0.1		
	baz=331								
J58A	**Remsen**	90.93	28	P	P	12 20 03.3	+0.2		
J58A				IAmb	IAmb	12 20 04.2			
	comp=Z,19nm,1.0s								
O52A	**Adamsville**	91.02	34	P	P	12 20 04.6	+1.1		
O52A				IAmb	IAmb	12 20 05.3			
	comp=Z,12nm,0.6s								
O52A	**Adamsville**	91.02	34	P	P	12 20 04.2	+0.7		
	baz=325								
O52A				P	P	12 20 04.2	+0.7		
	baz=325								
J59A	**Piesco**	91.13	27	P	P	12 20 04.2	+0.2		
	baz=330								
J59A				P	P	12 20 04.2	+0.2		
	baz=330								
O53A	**New Philadelph**	91.18	33	P	P	12 20 04.5	+0.3		
O53A				IAmb	IAmb	12 20 05.7			
	comp=Z,15nm,0.8s								
O53A	**New Philadelph**	91.18	33	P	P	12 20 03.9	-0.4		
	baz=326,SNR=5.4								
M55A	**Ridgway**	91.19	31	P	P	12 20 04.5	+0.2		
Q51A	**Peebles**	91.24	35	IAmb	IAmb	12 20 12.2			
	comp=Z,12nm,0.8s								
P52A	**Corning**	91.29	34	P	P	12 20 01.8	-3.0		
	baz=325								
PKME	**Peaks-Kenny Pk**	91.29	23	P	P	12 20 04.7	+0.1		
	baz=334								
H62A	**Milan**	91.31	25	P	P	12 20 05.9	+1.2		
H62A	**Milan**	91.31	25	P	P	12 20 05.2	+0.4		
	baz=333								
H62A				P	P	12 20 05.2	+0.4		
	baz=333								
LBNH	**Lisbon**	91.35	25	P	P	12 20 04.4	-0.6		
	baz=332								
WVT	**Waverly**	91.39	40	P	P	12 20 04.1	-1.1		
	baz=322								
HKT	**Hockley**	91.63	49⇑	eP	P	12 20 06.3	-0.1		
HKT				pmax	pmax				
	comp=Z,12nm,1.4s								
BINY	**Binghamton**	91.67	29	P	P	12 20 04.4	-2.0		
	baz=329								
VAE	**Valguarnera**	91.70	323	LR	LR	13 06 01.7			
	comp=Z,106nm,18.6s,baz=146,slow=39								
OXF	**Oxford**	91.82	42	P	P	12 20 06.5	-0.8		
	baz=321								
ATD	**Arta Tunnel**	92.03	286	LR	LR	13 06 30.9			
	comp=Z,77nm,18.2s,baz=18,slow=39								
U49A	**Red Boiling Sp**	92.10	38	P	P	12 20 09.2	+0.6		
U49A				IAmb	IAmb	12 20 09.8			
	comp=Z,8.9nm,0.8s								
SSPA	**Standing Stone**	92.25	31	P	P	12 20 08.7	-0.5		
	baz=328								
L61B	**Northampton**	92.66	27	P	P	12 20 10.6	-0.5		
	baz=332								
HRV	**Adam Dziewonsk**	93.01	26	P	P	12 20 12.0	-0.6		
	baz=332								
SWET	**Sewanee**	93.06	39	IAmb	IAmb	12 20 13.7			
	comp=Z,12nm,0.9s								
TZTN	**Tazewell**	93.15	37	P	P	12 20 13.3	-0.1		
	baz=324								
TKL	**Tuckaleechee C**	93.76	38	LR	LR	13 06 35.4			
	comp=Z,41nm,19.7s,baz=318,slow=38								
KMSC	**Kings Mountain**	95.33	36	P	P	12 20 23.0	-0.4		
	baz=326								
KEST	**Kesra**	95.47	325	P	P	12 20 24.2	0.0		
	comp=Z,4.2nm,0.9s,baz=294,slow=8.9,SNR=4.0								
KEST				LR	LR	13 09 00.1			
	comp=Z,228nm,19.0s,baz=349,slow=39								
	comp=Z,4.2nm,0.9s								
GOGA	**Godfrey**	95.72	39	P	P	12 20 24.3	-0.9		
	baz=324								
ESDC	**Sonseca Array**	97.17	336	P	P	12 20 31.2	-0.6		
	comp=Z,1.9nm,0.9s,baz=9.7,slow=3.2,SNR=12								
ESDC				LR	LR	13 10 45.3			
	comp=Z,113nm,18.7s,baz=16,slow=39								
	comp=Z,1.9nm,0.9s								
TORD	**Torodi Ar. Bea**	118.14	318	PKP	PKPdf	12 25 45.7	-1.0		
	comp=Z,2.1nm,0.5s,baz=23,slow=1.7,SNR=18								
TORD				PP	PP	12 26 58.4	-2.6		
	comp=Z,2.6nm,0.8s,baz=29,slow=6.7,SNR=5.4								
MAW	**Mawson**	121.89	207	PKP	PKPdf	12 25 52.0	-0.1		
	comp=Z,3.9nm,0.9s,baz=332,slow=5.4,SNR=3.6								
MAW	**Mawson**	121.89	207		PKiKP	12 25 53.0	+0.7		
DBIC	**Dimbokro**	126.99	321	PKP	PKPdf	12 26 02.9	-0.8		
	comp=Z,5.1nm,0.7s,baz=45,slow=4.7,SNR=7.7								
DBIC	**Dimbokro**	126.99	321		PKPdf	12 26 03.1	-0.6		
DBIC	**Dimbokro**	126.99	321	PKIKP	PKPdf	12 26 03.1	-0.6		
BOSC	**San Juan Bosco**	127.30	59	PKPdf	PKPdf	12 26 04.6	+0.1		
TROLL	**Troll, Antarti**	141.31	198	PKPdf	PKPdf	12 26 22.1	-6.7		
SAML	**Samuel**	141.44	48		PKPdf	12 26 29.0	-1.6		
SAML	**Samuel**	141.44	48	PKIKP	PKPdf	12 26 29.0	-1.6		
SNAA	**Sanae**	142.78	196	PP	PP	12 29 40.8	+0.1		
LPAZ	**La Paz**	143.77	62	PKhKP	PKPpre	12 26 32.6			
	comp=Z,3.9nm,0.7s,baz=351,slow=4.5,SNR=15								
PB16	**IPOC Station P**	144.17	66	PKPdf	PKPdf	12 26 35.4	-0.6		
VNA2	**Neumayer--Watz**	144.32	195	PP	PP	12 29 48.8	-1.0		
VNA3	**Neumayer Olymp**	144.51	194	PP	PP	12 29 49.3	-1.7		
VNA1	**Neumayer--Stat**	144.71	195	PP	PP	12 29 49.9	-2.3		
PB11	**IPOC Station P**	144.98	68		PKPdf	12 26 37.1	+0.2		
PATCX	**Punta Patache**	145.27	70		PKPdf	12 26 37.5	+0.3		
SMAI	**San Martin Ant**	145.44	160		PKPab	12 26 36.4	+0.2		
PB08	**IPOC Station P**	145.59	68	PKPbc	PKPab	12 26 39.4	+0.6		
PB07	**IPOC Station P**	146.02	71		PKPab	12 26 40.1	0.0		
PB04	**IPOC Station P**	146.19	72		PKPab	12 26 40.6	-0.1		
PB06	**IPOC Station P**	146.84	72	PKPbc	PKPab	12 26 42.6	-0.6		
LVC	**Limon Verde**	147.27	71		PKPbc	12 26 42.8	-0.5		
LVC	**Limon Verde**	147.27	71	PKP2	PKPbc	12 26 42.8	-0.5		
RCBR	**Riachuelo**	147.59	1	PKPbc	PKPbc	12 26 44.3	+0.3		
RCBR	**Riachuelo**	147.59	1	PKP2	PKPbc	12 26 44.3	+0.3		
GO02	**Mina Guanaco**	148.20	76		PKPbc	12 26 46.1	+0.4		
LCO	**Las Campanas**	149.26	83		PKPbc	12 26 48.2	-0.1		
LCO	**Las Campanas**	149.26	83	PKP2	PKPbc	12 26 48.2	-0.1		
MT02	**Curacav**	150.62	91		PKPbc	12 26 50.9	-0.2		
MT01	**Popeta**	150.74	92		PKPbc	12 26 51.5	+0.1		
VA03	**San Esteban**	150.91	90		PKPbc	12 26 52.2	+0.3		
VA03				PKPab	PKPab	12 26 59.6	+0.3		
MT05	**Renca**	150.98	91	PKPdf	PKPdf	12 26 45.3	-0.9		
MT05					PKPbc	12 26 52.0	0.0		
MT05				PKPab	PKPab	12 26 59.8	+0.2		
MT03	**Universidad Ad**	151.19	91	PKPdf	PKPdf	12 26 44.7	-2.0		
MT03					PKiKP	12 26 53.2	+0.1		
MT03				PKPab	PKPab	12 27 00.1	-0.4		
AY01	**Puyuhuapi**	151.53	114	PKPdf	PKPdf	12 26 47.2	+0.6		
AY01					pPKPbc	12 27 01.2	0.0		
COYC	**Coyhaique**	151.92	117	PKPdf	PKPdf	12 26 46.4	-0.7		
COYC					PKiKP	12 26 54.4	+0.4		
COYC				PKPab	pPKPbc	12 27 02.5	+0.4		
ZON	**Zonda**	151.92	86		PKiKP	12 26 54.9	+0.3		
ZON	**Zonda**	151.92	86	PKIKP	PKiKP	12 26 54.9	+0.3		
PLCA	**Paso Flores**	152.83	106	PKPbc	PKiKP	12 26 56.6	+0.4		
	comp=Z,2.2nm,0.7s,baz=281,slow=6.7,SNR=3.4								
BDFB	**Brasilia**	154.73	30	PKP	PKPdf	12 26 51.3	-1.0		
	comp=Z,1.6nm,0.4s,baz=245,slow=4.4,SNR=2.2								
BDFB				PKPbc	pPKPdf	12 27 00.4	-0.4		
	comp=Z,1.6nm,0.4s,baz=314,slow=2.0,SNR=4.4								
BDFB				PKPab	PKPab	12 27 14.4	-1.3		
	comp=Z,2.2nm,0.5s,baz=309,slow=3.8,SNR=5.6								
BDFB	**Brasilia**	154.73	30		PKPdf	12 26 50.1	-2.1		
BDFB				PKPab	PKPab	12 27 15.7	0.0		
ORCD	**Orcadas**	156.85	168	PKPdf	PKPdf	12 26 53.9	+0.4		
ORCD				PKPab	PKPab	12 27 23.8	+0.4		

NEIC ***10*** *12:09:54.4±1.7,22.69°S±0.06×66.27°W±0.08,h217km±5km, mb4.7/203,Md4.7(SJA) Error ellipse: s-maj=10.9km s-min=9.2km az=77.0*

IDC ***10*** *12:09:55.3±1.0,22.61°S×66.26°W,h223km±7km, mb4.1/10, mbtmp4.6/18,Error ellipse: s-maj=15.8km s-min=11.7km az=25.0*

VAO ***10*** *12:09:55.4±0.3,22.66°S×66.38°W,h240km, mb4.5*

SJA ***10*** *12:09:56.2±1.9,22.73°S×66.45°W, h225km, ML4.6, MW4.3*

GUC ***10*** *12:09:56.4±0.7,22.70°S×66.68°W,h259km±9km, ML4.9*

ISC 10 12:09:54.9±0.5,22.66S±0.03×66.42W±0.04,h230km±5km, n377,σ1ş40/406,mb4.6/92,16C,Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
YJA	**Yavi**	0.97	60	eP		Pn		12 10 32.6	+4.5
YJA				eS		S		12 10 55.3	+1.2
YJA				IAML				12 10 57.3	
	comp=Z,696nm,0.6s								
HJA	**Humahuaca**	1.08	120	eP		Pn		12 10 30.2	+1.5
HJA				IAML				12 11 00.5	
	comp=Z,289nm,0.5s								
AF01	**San Pedro de A**	1.65	260			Pn		12 10 34.9	+2.1
AF01	**San Pedro de A**	1.65	260	⇑P		Pn		12 10 34.9	+2.1
SLA	**San Lorenzo**	2.22	158	eP		Pn		12 10 39.7	+1.7
SLA				IAML				12 11 37.4	
	comp=Z,126nm,0.6s								
LVC	**Limon Verde**	2.30	271	P		Pn		12 10 40.2	+1.2
	comp=Z,1μm,0.3s,baz=88,slow=6.2,SNR=3344								
LVC				S		S		12 11 13.7	+0.3
	comp=Z,511nm,0.3s,baz=162,slow=20,SNR=24								
LVC	**Limon Verde**	2.30	271	⇑P		Pn		12 10 40.2	+1.2
LVC				S		S		12 11 13.7	+0.3
LVC	**Limon Verde**	2.30	271	eP		Pn		12 10 40.3	+1.2
LVC				eS		S		12 11 14.6	+1.2
LVC				IAML				12 11 19.8	
	comp=Z,315nm,0.7s								
LVC	**Limon Verde**	2.30	271	eP		Pn		12 10 40.4	+1.4
PB09	**IPOC Station P**	2.75	288			Pn		12 10 45.2	+1.6
PB09	**IPOC Station P**	2.75	288	⇑P		Pn		12 10 45.2	+1.6
PB09				S		S		12 11 22.2	+0.5
PB09				IAML				12 11 29.5	
	comp=E,1μm,0.6s								
PB09	**IPOC Station P**	2.75	288	eP		Pn		12 10 45.2	+1.6
PB09				eS		S		12 11 22.4	+0.7
PB09				IAML				12 11 23.6	
	comp=Z,1μm,0.6s								
PB15	**IPOC Station P**	2.86	258			Pn		12 10 45.6	+0.8
PB15	**IPOC Station P**	2.86	258	⇑P		Pn		12 10 45.6	+0.8
PB15				S		S		12 11 23.9	0.0
PB15	**IPOC Station P**	2.86	258	eP		Pn		12 10 45.7	+0.8
PB15				eS		S		12 11 24.2	+0.2
PB15				IAML				12 11 28.7	
	comp=Z,10μm,0.2s								
PB06	**IPOC Station P**	2.91	269			Pn		12 10 46.0	+0.6
PB06	**IPOC Station P**	2.91	269	⇑P		Pn		12 10 45.9	+0.6
PB06				S		S		12 11 23.9	-0.9
PB06				IAML				12 11 30.9	
	comp=N,2μm,0.4s					

TA01 IAML 12 11 51.5
comp=Z,495nm,0.3s
PB14 IPOC Station P 4.14 241 Pn **Pn** 12 10 59.9 0.0
PB14 IPOC Station P 4.14 241 ⇑*i*P **Pn** 12 10 59.9 0.0
PB14 *i* S **S** 12 11 48.0 -3.0
PB14 IPOC Station P 4.14 241 *e*P **Pn** 12 10 59.8 0.0
PB14 *e*S **S** 12 11 48.5 -2.5
PB14 IAML 12 11 52.5
comp=Z,2µm,0.3s
PB11 IPOC Station P 4.17 313 **Pn** 12 11 00.3 +0.2
PB11 IPOC Station P 4.17 313 ⇑*i*P **Pn** 12 11 00.3 +0.2
PB11 *i* S **S** 12 11 49.1 -2.4
PB11 IPOC Station P 4.17 313 *e*P **Pn** 12 11 00.3 +0.2
PB11 *e*P **Pn** 12 11 00.4 +0.3
PB11 *e*S **S** 12 11 49.5 -2.1
PB11 *e*S S 12 11 50.5 -1.1
PB11 IAML 12 11 53.4
comp=Z,1µm,0.2s
TA02 Huaiquique 4.19 304 **Pn** 12 11 00.1 -0.1
TA02 Huaiquique 4.19 304 *e*P **Pn** 12 11 00.1 -0.1
TA02 *i* S **S** 12 11 48.2 -3.4
TA02 Huaiquique 4.19 304 *e*P **Pn** 12 10 59.8 -0.3
TA02 *e*P **Pn** 12 11 00.3 +0.1
TA02 *e*S **S** 12 11 50.9 -0.8
TA02 IAML 12 11 53.1
comp=Z,1µm,0.1s
AC02 Maricunga 4.83 210 Pn **Pn** 12 11 08.7 +0.3
AC02 Maricunga 4.83 210 *e*P **Pn** 12 11 08.8 +0.3
AC02 *e*S **S** 12 12 03.9 -2.6
AC02 IAML 12 12 28.5
comp=Z,113nm,0.5s
AC01 Pan de Azucar 5.15 227 Pn **Pn** 12 11 11.0 -1.0
AC01 Pan de Azucar 5.15 227 *e*P **Pn** 12 11 10.9 -1.0
AC01 *e*S **S** 12 12 08.5 -4.5
AC01 IAML 12 12 11.1
comp=Z,345nm,0.2s
PB16 IPOC Station P 5.18 326 Pn **Pn** 12 11 14.3 +1.3
PB16 IPOC Station P 5.18 326 *e*P **Pn** 12 11 14.2 +1.3
PB16 *e*P **Pn** 12 11 14.6 +1.6
PB16 *e*S **S** 12 12 13.7 -1.1
PB16 IAML 12 12 18.1
comp=Z,388nm,0.9s
PB12 IPOC Station P 5.44 317 ⇑*i*P **Pn** 12 11 14.2 -1.5
PB12 *i* S **S** 12 12 14.3 -5.5
AP01 Chacalluta 5.63 319 **Pn** 12 11 18.0 0.0
AC06 Mina Casimiro 5.88 217 Pn **Pn** 12 11 20.2 -0.9
GO03 Copiap 6.00 214 **Pn** 12 11 21.3 -1.5
LPAZ La Paz 6.54 345 P **Pn** 12 11 31.6 +1.4
comp=Z,94nm,0.4s,baz=154,slow=7.1,SNR=382
LPAZ S **S** 12 12 45.9 -0.2
comp=Z,30nm,0.6s,baz=252,slow=19,SNR=4.8
LPAZ La Paz 6.54 345 *e*P **Pn** 12 11 31.7 +1.4
AC04 Llanos de Chal 6.94 216 Pn **Pn** 12 11 33.9 -0.6
LCO Las Campanas 7.40 210 Pn **Pn** 12 11 39.5 -1.3
CO01 Juntas del Tor 8.00 204 **Pn** 12 11 46.9 -1.4
SIV San Ignacio 8.34 38 P **Pn** 12 11 51.6 -1.0
comp=Z,15nm,0.4s,baz=217,slow=13,SNR=55
SIV S **S** 12 13 19.6 -7.6
comp=Z,3.5nm,0.5s,baz=269,slow=15,SNR=0.8
GO04 Tololo Observa 8.45 207 Pn **Pn** 12 11 52.9 -1.2
CO03 El Pedregal 8.99 204 **Pn** 12 11 59.3 -1.6
CPUP Villa Florida 9.05 116 P **Pn** 12 12 00.2 -1.4
comp=Z,4.6nm,0.8s,baz=276,slow=9.6,SNR=6.2
CPUP Villa Florida 9.05 116 Pn **Pn** 12 11 58.6 -3.0
CPUP Villa Florida 9.05 116 *e*P **Pn** 12 12 00.1 -1.4
CO02 Combarbal 9.44 205 Pn **Pn** 12 12 05.1 -1.5
ANTJ Antonio Joao (9.67 88 *e*P **Pn** 12 12 10.6 +1.1
PTLB Pontes e Lacer 9.94 45 *e*P **Pn** 12 12 12.4 -0.6
VBST Vila Bela da S 10.11 38 *e*P **Pn** 12 12 15.3 +0.1
AQDB Aquidauana 10.21 80 *e*P **Pn** 12 12 17.2 +0.7
VA03 San Esteban 10.71 199 Pn **Pn** 12 12 21.8 -0.9
POCN Pocone 10.93 58 *e*P **Pn** 12 12 25.4 -0.1
ROC1 El Roble 11.05 201 Pn **Pn** 12 12 25.1 -2.1
ITQB Itaqui 11.23 130 *e*P **Pn** 12 12 28.9 -0.4
VILB Vilhena 11.32 33 *e*P **Pn** 12 12 30.9 +0.2
VILB *e*S **S** 12 14 36.8 +0.6
MT02 Curacav 11.35 200 Pn **Pn** 12 12 30.4 -0.3
PTET Porto Estrela 11.36 52 *e*P **Pn** 12 12 30.9 -0.2
MCR1 Marechal Candi 11.50 101 *e*P **Pn** 12 12 33.1 +0.3
LMEL Las Melosas 11.63 196 **Pn** 12 12 34.3 -0.1
MT09 Talagante 11.78 199 Pn **Pn** 12 12 35.5 -0.8
BO04 La Punta 11.87 197 **Pn** 12 12 37.2 -0.2
MT01 Popeta 11.94 200 Pn **Pn** 12 12 37.9 -0.3
PP1B Ponte de Pedra 11.95 67 *e*P **Pn** 12 12 37.4 -1.1
UNIS Unistalda (Bra 12.04 124 *e*P **Pn** 12 12 39.4 -0.1
SALV Santo Antonio 12.15 58 *e*P **Pn** 12 12 40.5 -0.5
CRSM Crissiumal (Br 12.21 116 *e*P **Pn** 12 12 39.1 -2.4
BO01 Tunca 12.38 198 Pn **Pn** 12 12 43.1 -0.5
RODS Rosario do Sul 12.63 130 *e*P **Pn** 12 12 48.0 +1.2
TRCB Terra Rica 12.73 93 **Pn** 12 12 46.3 -1.9
TRCB Terra Rica 12.73 93 *e*P **Pn** 12 12 48.2 +0.1
ETMB Extrema 12.77 1 *e*P **Pn** 12 12 49.1 +0.3
NBRS Nobres 13.06 52 *e*P **Pn** 12 12 52.7 +0.3
GO05 Huala 13.21 200 Pn **Pn** 12 12 53.8 -0.2
PTGB Pitanga 13.31 102 *e*P **Pn** 12 12 56.1 +0.6
ALGR Alto Alegre (B 13.53 120 *e*P **Pn** 12 12 57.6 -0.4
ITAB Concordia 13.74 112 Pn **Pn** 12 12 58.7 -1.8
ITAB Concordia 13.74 112 *e*P **Pn** 12 13 00.7 +0.2
CPSB Cacapava Do Su 13.94 126 *e*P **Pn** 12 13 02.0 -0.9
SAML Samuel 13.98 13 **Pn** 12 13 03.9 +0.2
PCMB Pacaembu 14.09 89 *e*P **Pn** 12 13 04.3 -0.7
PDRB Porto dos Gac 14.36 42 *e*P **P** 12 13 09.0 0.0
NNA Nana 14.54 315 P **P** 12 13 11.6 +0.6
comp=Z,12nm,0.3s,baz=156,slow=12,SNR=9.7
NNA S **S** 12 15 47.3 -4.1
comp=Z,5.4nm,0.3s,baz=242,slow=15,SNR=1.8
NNA Nana 14.54 315 **P** 12 13 11.8 +0.9
PLTB Pedras Altas 14.56 131 **Pn** 12 13 09.6 -0.9
PLTB Pedras Altas 14.56 131 *e*P **Pn** 12 13 09.3 -1.3
DVLD Doverlandia 14.70 68 *e*P **Pn** 12 13 12.1 -0.4
ITRB Iturama 15.27 82 *e*P **Pn** 12 13 19.2 0.0
ARAG Araguaiana, MT 15.43 196 *e*P **Pn** 12 13 21.1 -0.2
CNLB Canela 15.48 119 *e*P **P** 12 13 20.8 +0.5
CLDB Colider 15.51 43 *e*P **P** 12 13 21.6 -0.1
FRTB Fartura 15.54 96 *e*P **Pn** 12 13 22.4 -0.2
CZSB Cruzeiro do Su 16.03 337 *e*P **P** 12 13 27.4 0.0
TIJ01 Guaruva-PR 16.14 103 *e*P **P** 12 13 28.6 -0.1
TER01 Tubaro-SC 16.65 114 *e*P **P** 12 13 33.7 -0.5
BB19B Bebedouro 16.69 88 *e*P **P** 12 13 35.0 +0.3
RCLB Rio Claro- Sao 17.46 93 *e*P **P** 12 13 43.0 0.0
PET01 Itanhaem-SP 17.64 99 *e*P **P** 12 13 45.3 +0.3
IPMB Ipameri, GO 17.70 78 *e*P **P** 12 13 45.7 0.0
SNDB Serra Nova Dou 17.91 56 *e*P **P** 12 13 47.8 -0.2
VAO Valinhos 17.94 95 *e*P **P** 12 13 48.2 -0.1
PLCA Paso Flores 18.35 190 P **P** 12 13 53.1 +0.5
comp=Z,4.7nm,0.6s,baz=11,slow=12,SNR=8.5
PLCA Paso Flores 18.35 190 P **P** 12 13 51.6 -0.9
TBTG Tabatinga, AM 18.67 349 *e*P **P** 12 13 56.9 +0.7
BDFB Brasilia 18.73 71 P **P** 12 13 57.3 +0.4
comp=Z,32nm,0.6s,baz=251,slow=12,SNR=40
BDFB Brasilia 18.73 71 P **P** 12 13 55.5 -1.4
BDFB Brasilia 18.73 71 *e*P **P** 12 13 57.0 +0.1
NPGB Novo Progresso 18.83 36 *e*P **P** 12 13 56.2 -1.7
LL04 Puerto Octay 18.88 194 P **P** 12 13 58.5 +0.3
LL04 IAmb IAmb 12 14 10.1
comp=Z,18nm,1.1s
PARB Paraibuna 19.16 96 *e*P **P** 12 14 01.3 -0.2
ATAH Atahualpa 19.27 321 P **Pn** 12 14 05.8 -1.1
comp=Z,7.4nm,0.6s,baz=167,slow=2.5,SNR=5.1
SLP01 Ubatuba-SP 19.59 96 *e*P **P** 12 14 06.2 +0.1
BSCB Bom Sucesso 20.17 89 *e*P **P** 12 14 12.0 -0.3
PEXB Peixe 20.21 62 *e*P **P** 12 14 11.9 -0.8
ESAR Angra dos Reis 20.26 95 *e*P **P** 12 14 13.1 0.0
MAN01 Angra dos Reis 20.71 95 *e*P **P** 12 14 17.6 -0.4
ITTB Itaituba 20.92 31 *e*P **P** 12 14 18.9 -1.3
VAS01 Vassouras-RJ 21.24 93 *e*P **P** 12 14 23.5 +0.1
DIAM Diamantina, MG 21.74 83 *e*P **P** 12 14 27.7 -0.8
JANB Januaria 22.23 74 *e*P **P** 12 14 31.6 -1.3
DUB01 Friburgo-RJ 22.24 93 *e*P **P** 12 14 32.9 -0.1
BOSC San Juan Bosco 22.65 327 P **P** 12 14 38.2 +1.3
SMTB Santa Maria do 22.69 56 *e*P **P** 12 14 36.2 -0.9
SDBA SAO DESIDERIO 22.88 67 *e*P **P** 12 14 38.0 -0.9
PRPB Parauapebas 22.92 47 *e*P **P** 12 14 37.6 -1.5
CAM01 Campos-RJ 22.93 93 *e*P **P** 12 14 38.9 -0.3
MALB Monte Alegre 23.82 31 *e*P **P** 12 14 47.1 -0.2
SJMB Sao Joao De Ma 23.93 85 *e*P **P** 12 14 47.3 -1.0
ALF01 Guarapari-ES 23.97 90 *e*P **P** 12 14 47.8 -0.8
BSFB Barra de Sao F 24.21 86 *e*P **P** 12 14 50.1 -0.7
AY02 Valle Explorad 24.39 191 P **P** 12 14 50.7 -1.4
RIB01 Linhares ES 24.52 87 *e*P **P** 12 14 52.7 -1.0
NAN01 Guarapari, ES 25.12 84 *e*P **P** 12 14 58.3 -0.7

BOAV Boa Vista 25.56 14 *e*P **P** 12 15 02.6 -0.4
OTAV Otavalo 25.60 331 P **P** 12 15 04.8 +0.9
OTAV Otavalo 25.60 331 *e*P **P** 12 15 03.4 -0.4
FLOC Florencia 25.72 338 *e*P **P** 12 15 05.2 +0.7
TULM Tulcn-Chalpat 25.74 333 P **P** 12 15 06.8 +1.6
TULM IAmb IAmb 12 15 16.4
comp=Z,11nm,0.8s
GUA01 Guaratinga, BA 25.77 81 *e*P **P** 12 15 04.3 -0.6
MCPB Macapa, AP 26.21 34 *e*P **P** 12 15 08.2 -0.6
CMC01 Camacan, BA 26.42 79 *e*P **P** 12 15 09.4 -1.4
POPC Popayan, Colom 26.97 337 *e*P **P** 12 15 17.4 +1.6
GDU01 Guandu, BA 26.97 75 *e*P **P** 12 15 14.1 -1.6
NBPN Ponto Novo - B 27.67 69 *e*P **P** 12 15 20.4 -1.5
ORTC Ortega, Tolima 27.78 341 *e*P **P** 12 15 24.2 +1.3
CHIC Chingaza 28.05 344 *e*P **P** 12 15 26.1 +0.5
PLMC San Jos del P 29.04 339 *e*P **P** 12 15 32.8 -1.3
GUY2C Guyana, Caldas 29.06 341 *e*P **P** 12 15 33.8 -0.9
RUSC La Rusia 29.12 346 *e*P **P** 12 15 35.7 +0.5
SPBC San Pablo de B 29.12 344 *e*P **P** 12 15 33.8 -1.0
NORC Norcasia 29.24 343 *e*P **P** 12 15 34.7 -1.1
NBLA Lagarto - SE 29.70 72 *e*P **P** 12 15 38.0 -1.8
PTBC PUERTO BERRIO, 30.07 344 *e*P **P** 12 15 39.5 -3.5
NBMA Muriti-CE 30.65 65 *e*P **P** 12 15 47.4 -0.9
NBPB Pedra_Branca-C 31.00 61 *e*P **P** 12 15 50.3 -1.0
DSPA Despedida 31.28 182 P **P** 12 15 51.4 -1.8
BAUV El Baul 31.45 357 P **P** 12 15 54.5 -0.6
BAUV IAmb IAmb 12 15 55.3
comp=Z,18nm,0.8s
UREC San Jos de Ur 31.51 343 *e*P **P** 12 15 53.9 -1.8
NBAN Anadia - AL 31.63 71 *e*P **P** 12 15 55.1 -1.7
NBCA Caruaru-PE 32.54 69 *e*P **P** 12 16 03.7 -1.1
BIRV Birongo 32.93 0 P **P** 12 16 07.3 -0.7
BIRV IAmb IAmb 12 16 08.8
comp=Z,21nm,1.0s
SJCC San Jacinto, C 33.47 344 P **P** 12 16 11.7 -1.0
SJCC IAmb IAmb 12 16 14.8
comp=Z,12nm,0.6s
SJCC San Jacinto, C 33.47 344 *e*P **P** 12 16 10.2 -2.5
RCBR Riachuelo 33.87 65 P **P** 12 16 15.2 -1.0
RCBR IAmb IAmb 12 16 16.8
comp=Z,18nm,0.8s
RCBR Riachuelo 33.87 65 *e*P **P** 12 16 16.3 +0.1
CRJC Cerrejon, Guaj 34.07 349 *e*P **P** 12 16 14.1 -3.8
TOSP Speyside 34.24 10 P **P** 12 16 18.8 -0.4
BCIP Isla Barro Col 34.25 336 P **P** 12 16 19.8 +0.4
BCIP IAmb IAmb 12 16 22.6
comp=Z,13nm,0.8s
GRGR Grenville 34.89 8 P **P** 12 16 24.6 -0.3
DRK0 Durika 35.75 331 P **P** 12 16 34.2 +1.8
SRBA San Rafael, Bu 35.78 331 P **P** 12 16 32.5 0.0
SRBA IAmb IAmb 12 16 36.5
comp=Z,27nm,1.4s
RIMA Rio Macho 36.48 330 P **P** 12 16 40.9 +2.4
FDF Fort de France 37.52 8 P **P** 12 16 46.7 -0.4
SVN Savane Anatole 37.62 8 P **P** 12 16 47.4 -0.6
DLPL La Plaine 38.10 8 P **P** 12 16 51.9 0.0
MATN Matagalpa 40.20 330 P **P** 12 17 09.9 +0.5
MATN IAmb IAmb 12 17 37.1
comp=Z,12nm,0.6s
MLPR Magueyes Islan 40.39 359 P **P** 12 17 11.3 +0.6
MLPR IAmb IAmb 12 17 29.9
comp=Z,18nm,1.1s
CELP Cerrillos 40.49 360 P **P** 12 17 11.4 -0.2
CELP IAmb IAmb 12 17 12.3
comp=Z,19nm,1.1s
SMRT St. Maarten 40.59 5 P **P** 12 17 10.4 -2.1
SMRT IAmb IAmb 12 17 20.0
comp=Z,42nm,1.2s
CUPR Culebra, Puert 40.73 2 P **P** 12 17 13.3 -0.3
ORCD Orcadas 40.94 164 P **P** 12 17 15.2 +0.4
ORCD IAmb IAmb 12 17 16.3
comp=Z,27nm,1.1s
PETF Flores 45.53 328 P **P** 12 17 53.2 +1.3
PETF IAmb IAmb 12 17 54.6
comp=Z,30nm,1.2s
SOR Soroa 47.98 339 P **P** 12 18 11.6 +0.8
553A Crawfordville 55.32 341 P **P** 12 19 06.2 +1.3
352A Blakely 56.68 341 P **P** 12 19 15.0 +0.6
250A Grady 57.55 340 P **P** 12 19 21.2 +0.6
250A IAmb IAmb 12 19 21.7
comp=Z,13nm,0.8s
152A Waverly Hall 57.73 342 P **P** 12 19 21.6 -0.2
GOGA Godfrey 58.08 343 P **P** 12 19 24.8 +0.6
346A Big Creek Wild 58.10 337 P **P** 12 19 24.8 +0.4
X58A Rowland 58.21 347 P **P** 12 19 26.1 +1.0
X58A IAmb IAmb 12 19 26.6
comp=Z,16nm,0.9s
VNA3 Neumayer Olymp 58.24 161 PKPdf **PKiKP** 12 26 32.3 -3.8
VNA3 Neumayer Olymp 58.24 161 P **P** 12 19 26.4 +1.4
JSC Jenkinsville 58.36 346 P **P** 12 19 27.1 +1.0
JSC IAmb IAmb 12 19 27.9
comp=Z,15nm,1.2s
VNA1 Neumayer--Stat 58.43 161 PKPdf **PKiKP** 12 26 33.3 -2.9
VNA1 Neumayer--Stat 58.43 161 P **P** 12 19 27.9 +1.8
Z51A Franklin 58.47 342 P **P** 12 19 27.2 +0.3
Z51A IAmb IAmb 12 19 27.5
comp=Z,9.9nm,0.4s
BIRD Birdtown, Kers 58.53 346 P **P** 12 19 28.5 +1.2
BIRD IAmb IAmb 12 19 29.0
comp=Z,14nm,0.9s
HODGE Hodges 58.55 345 P **P** 12 19 28.1 +0.6
HODGE IAmb IAmb 12 19 29.9
comp=Z,14nm,1.4s
Y52A Lilburn 58.67 343 P **P** 12 19 28.6 +0.3
LRAL Lakeview Retre 58.76 340 P **P** 12 19 29.2 +0.3
LRAL IAmb IAmb 12 19 29.4
comp=Z,12nm,0.5s
VNA2 Neumayer--Watz 58.80 161 PKPdf **PKiKP** 12 26 31.8 -4.9
baz=123,slow=2.2
VNA2 Neumayer--Watz 58.80 161 P **P** 12 19 30.1 +1.4
baz=288,slow=9.5
W57A Gilead 58.92 347 P **P** 12 19 30.5 +0.6
W57A IAmb IAmb 12 19 31.5
comp=Z,12nm,0.8s
PAULI Pauline 59.01 345 P **P** 12 19 31.5 +0.9
PAULI IAmb IAmb 12 19 32.0
comp=Z,14nm,0.6s
KMSC Kings Mountain 59.20 346 P **P** 12 19 32.9 +1.0
KMSC IAmb IAmb 12 19 33.3
comp=Z,15nm,0.6s
Z47A Carrollton 59.26 339 P **P** 12 19 32.8 +0.4
Z47A IAmb IAmb 12 19 33.2
comp=Z,18nm,0.7s
Y49A Blount Mountai 59.34 341 P **P** 12 19 33.1 +0.2
Y49A IAmb IAmb 12 19 33.7
comp=Z,21nm,1.2s
V58A Windy Hill, Pi 59.37 348 P **P** 12 19 33.8 +0.8
V58A IAmb IAmb 12 19 33.9
comp=Z,8.5nm,0.8s
BG3 Lake Jocassee 59.44 344 P **P** 12 19 34.4 +0.9
BG3 IAmb IAmb 12 19 34.9
comp=Z,11nm,0.6s
X51A Calhoun 59.55 342 P **P** 12 19 34.8 +0.5
FPAL Fort Paine 59.74 342 P **P** 12 19 36.0 +0.4
FPAL IAmb IAmb 12 19 36.5
comp=Z,14nm,0.6s
W52A Murphy 59.79 343 P **P** 12 19 36.9 +0.9
W52A IAmb IAmb 12 19 37.4
comp=Z,15nm,1.1s
833A Chaparral WMA, 59.84 326 P **P** 12 19 37.9 +1.5
V53A Saluda 60.05 345 P **P** 12 19 38.5 +0.7
V53A IAmb IAmb 12 19 39.2
comp=Z,13nm,0.6s
W50A Signal Mountai 60.27 342 P **P** 12 19 38.8 -0.4
W50A IAmb IAmb 12 19 40.5
comp=Z,14nm,0.7s
TKL Tuckaleechee C 60.28 344 P **P** 12 19 39.6 +0.4
TKL IAmb IAmb 12 19 40.3
comp=Z,14nm,0.8s
CPCT Cooper Cave 60.29 343 P **P** 12 19 39.6 +0.4
CPCT IAmb IAmb 12 19 40.5
comp=Z,9.8nm,0.7s
V52A Sevierville 60.41 344 P **P** 12 19 40.4 +0.2
V52A IAmb IAmb 12 19 41.3
comp=Z,17nm,0.8s
SNAA Sanae 60.44 161 PKPdf PKiKP 12 26 26.8 -12
SNAA Sanae 60.44 161 P **P** 12 19 41.1 +1.2
SNAA Sanae 60.44 161 P **P** 12 19 41.5 +1.5
V51A Loudon 60.57 343 IAmb IAmb 12 19 42.2
comp=Z,9.0nm,0.9s
PLAL Pickwick Lake 60.90 340 IAmb IAmb 12 19 44.1
comp=Z,16nm,1.1s
OXF Oxford 60.91 338 P **P** 12 19 43.5 0.0

TZTN Tazewell 61.07 344 IAmb IAmb 12 19 45.6
comp=Z,12nm,0.9s
V48A Smith Brothers 61.21 341 IAmb IAmb 12 19 46.6
comp=Z,17nm,0.8s
CLTN Cedars of Leba 61.39 342 IAmb IAmb 12 19 47.7
comp=Z,14nm,0.8s
WLAR White Oak Lake 61.53 335 P **P** 12 19 49.5 +1.8
U49A Red Boiling Sp 61.63 342 P **P** 12 19 48.5 +0.2
S54A Dingess, Beckl 61.75 347 P **P** 12 19 50.0 +0.9
JCT Junction City 61.80 327 IAmb IAmb 12 19 51.4
comp=Z,14nm,0.8s
T50A Nancy 61.85 343 IAmb IAmb 12 20 10.1
comp=Z,13nm,1.1s
WVT Waverly 61.88 340 P **P** 12 19 49.9 0.0
TROLL Troll, Antarti 62.15 161 P **P** 12 19 53.0 +1.5
T47A Sharon Grove 62.45 341 P **P** 12 19 54.1 +0.4
T47A IAmb IAmb 12 19 54.6
comp=Z,18nm,0.8s
MIAR Mount Ida 62.47 335 IAmb IAmb 12 19 58.3
comp=Z,20nm,1.0s
W41B Gary Mavity, V 62.52 336 IAmb IAmb 12 20 05.3
comp=Z,19nm,1.4s
WHAR Wooly Hollow 62.64 336 P **P** 12 19 55.5 +0.5
TXAR Lajitas Array 62.91 324 P **P** 12 19 58.4 +1.3
comp=Z,1.7nm,0.5s,baz=149,slow=8.2,SNR=9.0
comp=Z,1.7nm,0.5s
LCAR Lake Charles 62.92 338 P **P** 12 19 57.1 +0.3
LCAR IAmb IAmb 12 19 59.4
comp=Z,14nm,1.3s
Q52A Bidwell 63.07 346 IAmb IAmb 12 19 59.1
comp=Z,15nm,0.8s
X37A Clayton 63.23 333 **P** 12 19 59.4 +0.5
HHAR Hobbs 64.14 335 P **P** 12 20 04.6 -0.2
P49A Miami Univ. Ec 64.19 344 IAmb IAmb 12 20 05.6
comp=Z,21nm,0.9s
MGMO Mountain Grove 64.29 337 IAmb IAmb 12 20 07.1
comp=Z,7.3nm,0.8s
P48A Milroy 64.30 344 P **P** 12 20 05.1 -0.7
P48A IAmb IAmb 12 20 05.7
comp=Z,15nm,0.7s
FVM French Village 64.41 339 P **P** 12 20 06.3 -0.2
ACSO Alum Creek Sta 64.44 346 P **P** 12 20 07.2 +0.6
ACSO IAmb IAmb 12 20 07.8
comp=Z,28nm,0.8s
BINY Binghamton 65.14 352 P **P** 12 20 12.5 +1.4
S39A Bolivar 65.15 337 P **P** 12 20 12.0 +0.7
S39A IAmb IAmb 12 20 12.7
comp=Z,20nm,0.7s
N49A Columbus Grove 65.38 345 IAmb IAmb 12 20 13.7
comp=Z,32nm,0.7s
L48A N Adams 66.41 345 P **P** 12 20 19.5 +0.3
L48A IAmb IAmb 12 20 19.9
comp=Z,27nm,0.6s
DBIC Dimbokro 66.88 72 P **P** 12 20 22.0 -0.8
comp=Z,4.2nm,0.3s,baz=244,slow=7.4,SNR=12
comp=Z,4.2nm,0.3s
DBIC Dimbokro 66.88 72 IAmb IAmb 12 20 46.2
comp=Z,29nm,1.4s
QSPA South Pole Qui 67.54 180 P **P** 12 20 28.3 +2.0
DELO Deloro Mine 67.63 351 IAmb IAmb 12 20 28.3
comp=Z,12nm,0.7s
K43A Burlington 68.11 343 P **P** 12 20 30.3 +0.4
BNM Barren Site 68.22 325 P **P** 12 20 33.2 +2.1
L40A Anamosa 68.36 340 P **P** 12 20 31.6 +0.2
CBKS Cedar Bluff 68.66 333 P **P** 12 20 34.9 +1.5
JFWS Jewell Farm 68.84 341 P **P** 12 20 34.6 +0.1
JFWS IAmb IAmb 12 20 35.6
comp=Z,23nm,0.6s
TUC Tucson 69.18 321 P **P** 12 20 37.4 +0.5
I42A Draeger Farm, 69.37 343 P **P** 12 20 37.5 -0.1
I42A IAmb IAmb 12 20 38.5
comp=Z,19nm,0.5s
E46A Sault Ste Mari 70.59 347 P **P** 12 20 45.3 +0.3
E46A IAmb IAmb 12 20 46.1
comp=Z,27nm,0.8s
Q24A Divide 71.22 329 IAmb IAmb 12 20 52.2
comp=Z,9.9nm,0.8s
WUAZ Wupatki 71.83 323 P **P** 12 20 54.8 +1.9
WUAZ IAmb IAmb 12 20 56.4
comp=Z,10.0nm,0.8s
D41A Chassel 72.22 344 P **P** 12 20 55.5 +0.8
SMCO Snowmass 72.27 328 IAmb IAmb 12 20 58.9
comp=Z,6.5nm,0.7s
SRU San Rafael Swe 74.01 326 IAmb IAmb 12 21 08.5
comp=Z,14nm,0.7s
ELS Elsinore Mount 74.12 318 P **P** 12 21 08.3 +2.1
SZCU Shurtz Canyon 74.29 323 P **P** 12 21 09.8 +2.5
P17A Butcher Ranch, 74.39 326 IAmb IAmb 12 21 10.9
comp=Z,12nm,0.9s
CCUT Cedar City 74.41 323 P **P** 12 21 11.1 +3.1
CCUT IAmb IAmb 12 21 12.0
comp=Z,12nm,0.8s
MSU Marysvale 74.45 324 P **P** 12 21 10.6 +2.4
MVU Marysvale 74.46 324 P **P** 12 21 10.4 +2.1
RDMU Red Mountain 74.62 327 P **P** 12 21 11.2 +2.1
RDMU IAmb IAmb 12 21 11.9
comp=Z,8.3nm,0.7s
B35A Bob, Littlefor 74.81 342 IAmb IAmb 12 21 11.1
comp=Z,11nm,0.7s
GSC Goldstone, Bar 74.85 319 P **P** 12 21 12.3 +1.9
GSC IAmb IAmb 12 21 13.9
comp=Z,17nm,1.4s
PRN Pahroc Range 75.26 322 P **P** 12 21 15.4 +2.6
GWY Greenwater Val 75.36 320 IAmb IAmb 12 21 16.4
comp=Z,11nm,0.7s
PSUT Pine Spring 75.38 323 P **P** 12 21 16.2 +2.7
PSUT IAmb IAmb 12 21 16.9
comp=Z,7.3nm,0.7s
AGMN Agassiz Nation 75.40 340 IAmb IAmb 12 21 14.7
comp=Z,7.4nm,0.8s
E28A Huff 75.57 336 P **P** 12 21 14.9 +0.8
E28A IAmb IAmb 12 21 16.4
comp=Z,18nm,0.8s
TOA0 Torodi Ar. Sit 75.59 69 P **P** 12 21 14.3 -0.6
TOA0 IAmb IAmb 12 21 16.9
comp=Z,9.3nm,0.5s
TORD Torodi Ar. Bea 75.59 69 P **P** 12 21 14.2 -0.7
comp=Z,8.5nm,0.4s,baz=260,slow=6.1,SNR=121
comp=Z,8.5nm,0.4s
TORD Torodi Ar. Bea 75.59 69 P **P** 12 21 14.2 -0.7
TORD IAmb IAmb 12 21 16.9
comp=Z,5.5nm,0.5s
JLU Jordanelle 75.60 326 IAmb IAmb 12 21 17.8
comp=Z,7.8nm,0.6s
DUG Dugway, Tooele 76.01 325 P **P** 12 21 18.5 +1.5
ISA Isabella, Lake 76.10 319 P **P** 12 21 19.7 +2.2
ISA IAmb IAmb 12 21 20.9
comp=Z,8.2nm,0.8s
PDAR Pinedale Array 76.28 329 P **P** 12 21 19.9 +1.4
comp=Z,1.6nm,0.5s,baz=122,slow=7.2,SNR=8.3
comp=Z,1.6nm,0.5s
PDAR Pinedale Array 76.28 329 P **P** 12 21 19.3 +0.8
AHID Auburn Hatcher 77.02 328 P **P** 12 21 23.8 +1.1
AHID IAmb IAmb 12 21 25.3
comp=Z,14nm,0.9s
ULM Lac du Bonnet 77.13 341 P **P** 12 21 23.4 +0.6
comp=Z,9.8nm,0.5s,baz=158,slow=6.4,SNR=15
comp=Z,9.8nm,0.5s
ULM Lac du Bonnet 77.13 341 IAmb IAmb 12 21 24.1
comp=Z,12nm,0.6s
SCHQ Schefferville 77.18 360 P **P** 12 21 23.2 +0.3
comp=Z,5.3nm,0.6s,baz=195,slow=4.5,SNR=6.7
comp=Z,5.3nm,0.6s
TSUM Tsumeb 77.50 106 P **P** 12 21 25.8 -0.1
ELK Elko 77.70 324 P **P** 12 21 28.3 +1.8
OMMB Old Mammoth Mi 77.70 320 P **P** 12 21 28.6 +1.9
OMMB IAmb IAmb 12 21 29.7
comp=Z,8.7nm,0.7s
NV11 Mina Array Sit 77.75 321 P **P** 12 21 27.7 +1.0
FLWY Flagg Ranch 77.82 329 IAmb IAmb 12 21 29.9
comp=Z,7.0nm,0.6s
NVAR Mina Array Bea 77.83 321 P **P** 12 21 29.6 +2.3
comp=Z,2.5nm,0.7s,baz=157,slow=5.5,SNR=12
comp=Z,2.5nm,0.7s
NVAR Mina Array Bea 77.83 321 P **P** 12 21 29.3 +2.0
RLMT Red Lodge 77.94 331 P **P** 12 21 29.4 +1.8
RLMT IAmb IAmb 12 21 30.0
comp=Z,6.5nm,0.6s
KVN Kaiserville 78.13 321 P **P** 12 21 30.6 +1.7
KVN IAmb IAmb 12 21 31.7
comp=Z,13nm,0.8s
YMR Madison River 78.38 329 IAmb IAmb 12 21 33.6
comp=Z,7.4nm,0.7s
YHL Hebgen Lake 78.62 329 P **P** 12 21 33.9 +2.3
YHL IAmb IAmb 12 21 34.5
comp=Z,7.6nm,0.6s

GCMT	**Greycliff**	**78.63**	**331**	P	**P**	**12 21 32.7**	**+1.4**
YERR	**Yerington**	**78.75**	**321**	P	**P**	**12 21 34.4**	**+2.2**
YERR				IAmb	IAmb	12 21 35.5	
	comp=Z,10.0nm,0.6s						
PNTR	**Pine Nut**	**79.03**	**321**	P	**P**	**12 21 36.2**	**+2.4**
HLID	**Hailey**	**79.26**	**327**	P	**P**	**12 21 37.4**	**+2.5**
HLID				IAmb	IAmb	12 21 38.4	
	comp=Z,11nm,0.8s						
PAHR	**Pah Rah Range**	**79.31**	**321**	P	**P**	**12 21 37.4**	**+2.2**
PAHR				IAmb	IAmb	12 21 38.6	
	comp=Z,19nm,0.8s						
MFID	**Camas Ranch**	**79.88**	**326**	P	**P**	**12 21 40.0**	**+1.9**
BEKR	**Beckworth**	**79.98**	**321**	P	**P**	**12 21 41.1**	**+2.3**
HRY	**Holter Researc**	**80.31**	**330**	P	**P**	**12 21 42.7**	**+2.3**
ORV	**Oroville**	**80.45**	**320**	P	**P**	**12 21 43.6**	**+2.5**
ORV				IAmb	IAmb	12 21 44.3	
	comp=Z,10nm,1.0s						
BOSA	**Boshof**	**80.87**	**117**	P	**P**	**12 21 43.8**	**-0.1**
	comp=Z,1.7nm,0.4s,baz=248,slow=3.2,SNR=4.7						
	comp=Z,1.7nm,0.4s						
BOSA	**Boshof**	**80.87**	**117**	IAmb	IAmb	12 21 50.5	
	comp=Z,15nm,1.2s						
PLID	**Pearl Lake**	**81.14**	**327**	P	**P**	**12 21 46.8**	**+1.8**
PLID				IAmb	IAmb	12 21 47.7	
	comp=Z,14nm,1.1s						
J08A	**Circle Bar Ran**	**81.24**	**324**	IAmb	IAmb	12 21 48.0	
	comp=Z,8.5nm,0.6s						
BMO	**Blue Mountains**	**81.65**	**326**	P	**P**	**12 21 48.1**	**+0.7**
K05A	**Summer Lake**	**82.15**	**323**	P	**P**	**12 21 51.5**	**+1.2**
K05A				IAmb	IAmb	12 21 53.4	
	comp=Z,14nm,0.7s						
F10A	**Beach Ranch, E**	**82.38**	**327**	P	**P**	**12 21 52.9**	**+1.7**
YBH	**Yreka Blue Hor**	**82.55**	**321**	P	**P**	**12 21 52.5**	**+0.4**
PINE	**Pine Mountain**	**82.87**	**324**	P	**P**	**12 21 55.8**	**+1.9**
PINE				IAmb	IAmb	12 21 56.6	
	comp=Z,7.7nm,0.8s						
HUMO	**Hull Mountain**	**83.24**	**322**	P	**P**	**12 21 56.9**	**+1.3**
FCC	**Fort Churchill**	**84.29**	**346**	P	**P**	**12 22 01.5**	**+1.1**
FCC				IAmb	IAmb	12 22 02.4	
	comp=Z,17nm,0.8s						
LTY	**Liberty**	**85.00**	**326**	P	**P**	**12 22 05.9**	**+1.6**
ESDC	**Sonseca Array**	**85.06**	**43**	P	**P**	**12 22 06.3**	**+1.4**
	comp=Z,1.0nm,0.8s,baz=254,slow=3.7,SNR=4.5						
	comp=Z,1.0nm,0.8s						
YKA	**Yellowknife Ar**	**93.06**	**340**	P	**P**	**12 22 42.9**	**+1.0**
	comp=Z,3.0nm,0.7s,baz=130,slow=4.6,SNR=46						
	comp=Z,3.0nm,0.7s						
YKA	**Yellowknife Ar**	**93.06**	**340**	P	**P**	**12 22 41.8**	**-0.1**
ASAR	**Alice Springs**	**129.89**	**205**	PKP	**PKiKP**	**12 28 38.5**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=126,slow=1.6,SNR=24						
ASAR				SKPbc	SKPbc	12 31 38.5	+0.1
	comp=Z,1.3nm,0.9s,baz=134,slow=4.9,SNR=7.9						
WRA	**Warramunga Arr**	**133.05**	**207**	PKhKP	PKPpre	12 28 25.9	
	comp=Z,0.6nm,1.1s,baz=139,slow=3.2,SNR=1.8						
WRA				PKP	**PKiKP**	**12 28 44.9**	**-0.1**
	comp=Z,0.8nm,0.4s,baz=157,slow=1.6,SNR=22						
WRA				SKPbc	**SKPab**	**12 31 51.0**	**-0.8**
	comp=Z,1.1nm,0.7s,baz=151,slow=3.3,SNR=10						
WRA	**Warramunga Arr**	**133.05**	**207**	PKPdf	**PKPdf**	**12 28 44.2**	**+0.4**
PETK	**Petropavlovsk-**	**134.86**	**324**	PKP	**PKiKP**	**12 28 47.1**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=90,slow=1.5,SNR=1.9						
PETK				SKPbc	**SKPbc**	**12 31 55.0**	**+0.3**
	comp=Z,1.2nm,0.8s,baz=6.7,slow=2.5,SNR=4.0						
PETK	**Petropavlovsk-**	**134.86**	**324**		**PKPdf**	**12 28 46.5**	**+0.5**
KURBB	**Kurchatov Arra**	**140.99**	**36**	PKP	**PKPdf**	**12 28 58.4**	**+1.0**
	comp=Z,0.5nm,0.3s,baz=304,slow=2.4,SNR=2.1						
ZALV	**Zalesovo Beam**	**141.97**	**27**	PKhKP	PKPpre	12 28 56.3	
	comp=Z,2.0nm,0.5s,baz=306,slow=4.6,SNR=4.5						
ZALV				PKP	**PKPdf**	**12 29 00.2**	**+1.2**
	comp=Z,2.1nm,0.5s,baz=283,slow=2.7,SNR=9.8						
ZALV				SKPbc	**SKiKP**	**12 32 16.2**	**0.0**
	comp=Z,0.6nm,0.4s,baz=321,slow=4.0,SNR=3.7						
MKAR	**Makanchi Array**	**145.16**	**39**	PKPbc	**PKPab**	**12 29 06.2**	**+0.9**
	comp=Z,6.0nm,0.8s,baz=306,slow=2.9,SNR=30						
MKAR				SKPbc	**SKiKP**	**12 32 24.2**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=256,slow=2.4,SNR=3.6						
MKAR	**Makanchi Array**	**145.16**	**39**	PKPbc	**PKPab**	**12 29 06.0**	**+0.6**
WMQ	**Urumqi**	**149.98**	**39**	*eP*	**PKPdf**	**12 29 13.3**	**+0.3**
SONM	**Songino Array**	**154.23**	**11**	PKP	**PKPdf**	**12 29 20.2**	**+0.9**
	comp=Z,0.8nm,0.5s,baz=294,slow=2.0,SNR=3.9						
SONM				PKPbc	**PKiKP**	**12 29 28.9**	**+1.2**
	comp=Z,1.6nm,0.7s,baz=277,slow=1.2,SNR=6.1						
SONM				PKPab	**PKPab**	**12 29 43.7**	**+1.3**
	comp=Z,0.4nm,0.5s,baz=327,slow=3.8,SNR=4.6						
SONM	**Songino Array**	**154.23**	**11**		**PKPdf**	**12 29 19.1**	**-0.2**
SONM				PKPbc	**PKiKP**	**12 29 28.7**	**+1.0**
SONM				PKPab	**PKPab**	**12 29 41.1**	**-1.4**
MJAR	**Matsushiro Arr**	**154.59**	**309**	PKPbc	**PKiKP**	**12 29 30.1**	**+1.4**
	comp=Z,0.7nm,0.4s,baz=95,slow=2.3,SNR=4.1						
MJAR				PKPab	**PKPab**	**12 29 45.3**	**+1.0**
	comp=Z,1.3nm,0.5s,baz=56,slow=3.2,SNR=4.6						
MJAR	**Matsushiro Arr**	**154.59**	**309**	PKPdf	**PKPdf**	**12 29 17.4**	**-2.6**
MJAR					**PKPbc**	**12 29 28.6**	**-0.1**
MJAR				PKPab	**PKPab**	**12 29 43.3**	**-1.1**
HHC	**Hu-ho-hao-te**	**161.79**	**5**	*eP*	**PKPdf**	**12 29 28.6**	**-0.1**
LZH	**Lanzhou**	**164.17**	**30**	*e*PKP	**PKPdf**	**12 29 34.7**	**+3.5**
PZH	**PanZhiHua**	**168.57**	**68**	PKP	**PKPdf**	**12 29 32.8**	**-2.0**
NJ2	**Nanjing**	**169.54**	**335**	*eP*	**PKPdf**	**12 29 33.0**	**-2.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						

*IDC **10** 12:14:21.3±3.1,4°.53S×102°.03E, h0km, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=141.9km s-min=23.0km az=55.0*

*DJA **10** 12:14:32.7±1.2,4°S±19°×10°3E±1°5, h35km±9km, M3.8/5, MLv3.8/5*

ISC 10 12:14:27.4±1.2, 4°.4S±0°.2×102°.2E±0°.1, h37km, n12, σ0s95/11, mb3.7/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MNAI	**Manna**	**0.79**	**85**	P		**Pn**	**12 14 43.3**	**+1.2**
MNAI				S		**Sn**	**12 14 52.3**	**-0.5**
LWLI	**Liwa**	**1.98**	**107**	P		Pn	12 15 02.6	+4.2
LWLI				S		**Sn**	**12 15 20.6**	**-1.4**
KASI	**Kota Agung**	**2.56**	**115**	P		**Pn**	**12 15 07.9**	**+1.5**
H01W3	**Cape Leeuwin H**	**32.26**	**161**	T		T	12 54 46.7	
	baz=336							
H01W2	**Cape Leeuwin H**	**32.28**	**161**	T		T	12 54 42.1	
	baz=336							
H01W1	**Cape Leeuwin H**	**32.28**	**161**	T		T	12 54 41.7	
	baz=336							
WRA	**Warramunga Arr**	**34.92**	**119**	P		**P**	**12 21 15.3**	**-0.7**
	0.7nm,0.7s,baz=300,slow=8.8,SNR=8.2							
	0.7nm,0.7s							
ASAR	**Alice Springs**	**36.09**	**125**	P		**P**	**12 21 25.8**	**-0.2**
	0.4nm,0.6s,baz=303,slow=7.9,SNR=4.6							
ASAR				PcP		**PcP**	**12 23 51.7**	**0.0**
	0.2nm,0.8s,baz=316,slow=2.6,SNR=1.5							
	0.4nm,0.6s							
SONM	**Songino Array**	**52.18**	**4**	P		**P**	**12 23 35.0**	**+0.5**
	0.8nm,0.9s,baz=190,slow=7.3,SNR=2.7							
	0.8nm,0.9s							
MKAR	**Makanchi Array**	**53.96**	**343**	P		**P**	**12 23 47.1**	**-0.4**
	0.6nm,0.6s,baz=145,slow=8.7,SNR=5.0							
	0.6nm,0.6s							
ZALV	**Zalesovo Beam**	**59.96**	**348**	P		**P**	**12 24 29.3**	**-0.6**
	0.7nm,0.4s,baz=163,slow=5.6,SNR=2.5							
	0.7nm,0.4s							
TXAR	**Lajitas Array**	**145.19**	**42**	PKPbc		**PKPab**	**12 34 01.5**	**-0.2**
	0.3nm,0.5s,baz=288,slow=0.9,SNR=5.0							

VIE 10 12:18:17.4±0.2, 49°.07N×16°.53E, h0km, mb0.3/1, ml1.5/2, Error ellipse: s-maj=2.5km s-min=1.3km az=138.0 19 km SSW of Brno Suspected Mining explosion., Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KRUC	**Moravsky**	**0.09**	**264**	*e*PG		Pg	12 18 19.0	-0.1
KRUC				*e*SG		Sg	12 18 20.5	+0.2
VRAC	**Vranov**	**0.24**	**9**	*e*PG		Pg	12 18 20.4	-1.6
VRAC				*e*SG		Sg	12 18 23.0	-2.1
JAVC	**Velka Javorina**	**0.78**	**105**	*e*PG		Pn	12 18 34.9	-0.8
MORC	**Moravsky Berou**	**0.97**	**43**	*e*PG		Pg	12 18 35.9	0.0
CONA	**Conrad Observa**	**1.23**	**202**	*e*Pg		Pb	12 18 41.2	-0.3
	1.1nm,0.1s							
CONA				*e*Sg		Sb	12 18 58.4	+0.5
	1.4nm,0.3s							

KRSC 10 12:31:15.7±0.8, 55°.29N×162°.46E, h42km±21km, ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MKZ	**Mys Kozlova**	**0.85**	**210**	*e*P		Pn	12 31 31.9	+0.8
MKZ				*e*S		Sn	12 31 44.3	+1.9
KBTR	**Krutoberegovo**	**0.94**	**12**	*e*P		Pn	12 31 32.4	0.0
KBTR				*e*S		Sn	12 31 45.3	+0.6
KBG	**Krutoberegovo**	**0.97**	**8**	*e*P		Pn	12 31 34.2	+1.3
KBG				*e*S		Sn	12 31 49.8	+4.3
BZGR	**Bezymyannyi-Gr**	**1.19**	**304**	*e*P		Pn	12 31 36.9	+0.9
BZGR				*e*S		Sn	12 31 52.2	+1.1
BZWR	**Bezymyannyi-We**	**1.30**	**302**	*e*P		Pn	12 31 38.8	+1.3
TUMR	**Tumrok**	**1.32**	**271**	*e*P		Pn	12 31 39.0	+1.2
TUMR				*e*S		Sn	12 31 56.8	+2.5
KMNR	**Kamenistaya**	**1.35**	**291**	*e*P		Pn	12 31 39.3	+1.2
KMNR				*e*S		Sn	12 31 56.8	+2.0
KRSR	**Krestovskiy**	**1.42**	**312**	*e*P		Pn	12 31 39.7	+0.7
KPT	**Kopyto**	**1.44**	**299**	*e*P		Pn	12 31 41.2	+1.9
KLY	**Klyuchi**	**1.45**	**316**	*e*P		Pn	12 31 39.0	-0.3
KLY				*e*S		Sn	12 31 57.6	+0.6
KOZ	**Kozyrevsk**	**1.66**	**299**	*e*P		Pn	12 31 43.6	+1.4
BKI	**Bering**	**2.01**	**91**	*e*P		Pn	12 31 48.8	+1.8
BKI				*e*S		Sn	12 32 12.9	+2.0
KII	**Karymskiy**	**2.16**	**236**	*e*P		Pn	12 31 52.2	+3.1
ESO	**Esso**	**2.23**	**288**	*e*P		Pn	12 31 50.9	+0.8
SPN	**Mys Shipunski**	**2.62**	**214**	*e*P		Pn	12 31 57.0	+1.5
SPN				*e*S		Sn	12 32 28.1	+2.1
NLC	**Nalytchevo**	**2.80**	**222**	*e*P		Pn	12 32 02.5	+4.6
SDLR	**Sedlovina**	**2.91**	**228**	*e*P		Pn	12 32 02.2	+2.7
KRX	**Arik**	**2.96**	**231**	*e*P		Pn	12 32 03.9	+3.7
SMAR	**Somma**	**2.96**	**228**	*e*P		Pn	12 32 03.4	+3.2
AVH	**Avacha**	**2.98**	**229**	*e*P		Pn	12 32 04.0	+3.5
UGLR	**Uglovaya**	**2.98**	**227**	*e*P		Pn	12 32 03.6	+3.1
KOK	**Koryaka**	**3.01**	**230**	*e*P		Pn	12 32 04.7	+3.9
GNL	**Ganaly**	**3.08**	**241**	*e*P		Pn	12 32 04.2	+2.3
DALK	**Dalny**	**3.14**	**225**	*e*P		Pn	12 32 05.8	+3.2
DALK				*e*S		Sn	12 32 43.1	+4.3
PET	**Petropavlovsk**	**3.19**	**226**	*e*P		Pn	12 32 07.4	+4.2
PET				*e*S		Sn	12 32 44.9	+4.9
KRMR	**Karymshinskiy**	**3.55**	**228**	*e*P		Pn	12 32 13.3	+5.1
RUS	**Russkaya**	**3.70**	**221**	*e*P		Pn	12 32 14.2	+4.0
ASAK	**Asacha**	**3.97**	**225**	*e*P		Pn	12 32 18.6	+4.5

*NIED **10** 12:51:19.3, 37°.91N×142°.43E, h38km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr0.15; Mθθ-0.51; Mφφ0.35; Mrθ-0.46; Mθφ-0.36; Mφr-0.81; Fault plane solution: M0 1.09000×10¹⁵ NP1: φs112.00000°, δ31.00000°, λ171.00000°. NP2: φs210.00000°, δ85.00000°, λ60.00000°.*

*JMA **10** 12:51:19.3±0.2, 37°.9N±0°.5×14°2E±°, h38km±2km, MD4.2/38, MV4.2/38, SE OFF MIYAGI PREF*

*NEIC **10** 12:51:20.1±2.0, 37°.80N±0°.07×142°.6E±0°.1, h35km±2km, mb4.2/9, Error ellipse: s-maj=15.6km s-min=10.0km az=121.0*

*IDC **10** 12:51:23.5±2.4, 37°.66N×142°.50E, h68km±22km, mb3.5/13, mbtmp3.8/18, MS3.3/9, Error ellipse: s-maj=19.6km s-min=14.0km az=93.0*

ISC 10 12:51:20.5±0.6, 37°.88N±0°.04×142°.45E±0°.07, h35km, n71, σ1s28/63, mb3.8/16, MS3.5/4, 3D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JIKH	**Ishinomakikobu**	**0.89**	**299**	*i* P		**Pn**	**12 51 35.1**	**-1.4**
JIO	**Ouri**	**1.04**	**304**	*i* P		**Pn**	**12 51 37.5**	**-1.1**
JIO				S		**Sn**	**12 51 50.0**	**-1.9**
JKMT	**Kesennumamotoy**	**1.21**	**321**	⇓*i* P		**Pn**	**12 51 39.8**	**-1.1**
JKMT				⇓*e*S		**Sn**	**12 51 53.9**	**-2.1**
JMST	**Minamisoumatoc**	**1.25**	**263**	*i* P		**Pn**	**12 51 40.4**	**-1.0**
JMST				*e*S		**Sn**	**12 51 55.4**	**-1.7**
JMST	**Minamisoumatoc**	**1.25**	**263**	A		A	12 51 40.4	
	comp=E,4.0nm,1.3s,comp=E,5.0nm,0.6s							
JMM	**Marumori**	**1.31**	**270**			**Pn**	**12 51 41.5**	**-0.8**
JMM	**Marumori**	**1.31**	**270**	*i* P		**Pn**	**12 51 41.5**	**-0.8**
JMM				*e*S		**Sn**	**12 51 57.1**	**-1.5**
JFK	**Kawauchi**	**1.35**	**248**	*i* P		**Pn**	**12 51 42.0**	**-0.9**
JFK				*e*S		**Sn**	**12 51 58.4**	**-1.3**
JOFO	**Osakifurukawao**	**1.41**	**301**	A		A	12 51 42.8	
	comp=E,19nm,2.8s,comp=E,13nm,2.2s							
JMK	**Ichinoseki**	**1.44**	**318**	*i* P		**Pn**	**12 51 43.3**	**-0.8**
JOU	**Okura**	**1.49**	**290**	*i* P		**Pn**	**12 51 44.6**	**-0.2**
JOU	**Okura**	**1.49**	**290**	A		A	12 51 44.6	
	comp=E,6.0nm,0.8s,comp=E,6.0nm,1.0s							
ONAJ	**Iwakimizuishiy**	**1.53**	**240**	A		A	12 51 44.9	
	comp=E,9.0nm,0.3s,comp=E,5.0nm,0.3s							
JFT	**Otama**	**1.72**	**259**	*i* P		**Pn**	**12 51 48.2**	**+0.4**
JFT				*e*S		**Sn**	**12 52 09.0**	**+0.4**
JYAR	**Yonezawaarcadi**	**1.83**	**272**	A		A	12 51 49.0	
	comp=E,7.0nm,1.1s,comp=E,8.0nm,0.9s							
JOM	**Ohasama**	**1.83**	**331**	⇓*i* P		**Pn**	**12 51 48.9**	**-0.6**
JYS	**Shirataka**	**1.92**	**281**	P		**Pn**	**12 51 50.9**	**+0.2**
JYK	**Kaneyama**	**1.94**	**303**	P		**Pn**	**12 51 51.2**	**+0.2**
JRG	**Rokugo**	**2.08**	**317**	P		**Pn**	**12 51 53.1**	**+0.2**
JYT	**Yasato**	**2.44**	**228**			**Pn**	**12 51 57.8**	**-0.1**
JANG	**Nango**	**2.59**	**344**	*e*P		**Pn**	**12 51 59.5**	**-0.5**
JTM	**Tenmabayashi**	**3.10**	**340**			**Pn**	**12 52 08.5**	**+1.7**
JSD	**Sado**	**3.32**	**274**			**Pn**	**12 52 11.7**	**+1.8**
MJAR	**Matsushiro Arr**	**3.64**	**250**	P		**Pn**	**12 52 15.9**	**+1.5**
	10nm,0.7s,baz=69,slow=13,SNR=25							
MJAR				S		**Sn**	**12 52 58.8**	**+2.6**
	6.3nm,0.4s,baz=76,slow=16,SNR=2.1							
MJAR				LR		LR	12 53 54.5	
	comp=Z,310nm,18.9s,baz=87,slow=42							
MJAR	**Matsushiro Arr**	**3.64**	**250**			**Pn**	**12 52 16.1**	**+1.7**
MAJO	**Matsushiro**	**3.64**	**250**			**Pn**	**12 52 16.5**	**+2.1**
MJB	**Matsu-Tunnel**	**3.64**	**250**			**Pn**	**12 52 16.3**	**+1.9**
ERM	**Erimo**	**4.17**	**7**	Pn		**Pn**	**12 52 21.2**	**-0.4**
JGF	**Kuroka**	**4.68**	**242**			**Pn**	**12 52 29.0**	**+0.3**
JEW	**Eniwo**	**5.01**	**352**	Pn		**Pn**	**12 52 33.6**	**+0.4**
INU	**Inuyama**	**5.05**	**242**			**Pn**	**12 52 32.5**	**-1.2**
JHJ2	**Mitsune**	**5.22**	**205**	Pn		**Pn**	**12 52 35.0**	**-1.1**
JHJ	**Hachijo jima 2**	**5.22**	**205**	P		**Pn**	**12 52 36.9**	**+0.8**
	27nm,0.3s,baz=54,slow=18,SNR=17							
JHJ				S		**Sn**	**12 53 34.0**	**-1.1**
	79nm,0.4s,baz=34,slow=23,SNR=6.9							
USRK	**Ussuriysk Ar.**	**10.11**	**312**	P		Pn	12 53 48.8	+5.7
	7.7nm,0.6s,baz=125,slow=14,SNR=9.1							
USRK				LR		LR	12 57 25.2	
	comp=Z,118nm,18.6s,baz=126,slow=35							
KSRS	**Korea Array**	**11.53**	**272**	P		**Pn**	**12 54 05.4**	**+2.9**
	3.4nm,0.9s,baz=84,slow=14,SNR=8.3							
KSRS				LR		LR	12 58 17.9	
	comp=Z,88nm,18.7s,baz=90,slow=36							
KLR	**Kul'dur**	**13.73**	**329**	P		**P**	**12 54 38.5**	**-2.1**
	1.8nm,0.7s,baz=134,slow=14,SNR=4.9							
KLR				LR		LR	12 59 50.9	
	comp=Z,124nm,18.3s,baz=174,slow=36							
PETK	**Petropavlovsk-**	**18.54**	**30**	LR		LR	13 03 08.6	
	comp=Z,36nm,21.4s,baz=216,slow=38							
SEY	**Seymchan**	**25.81**	**10**	P		**P**	**12 56 50.2**	**+2.2**
	1.8nm,0.6s,baz=198,slow=9.8,SNR=6.9							
	1.8nm,0.6s							
H11N2	**WAKE ISLAND Hy**	**27.90**	**124**	T		T	13 26 25.2	
	baz=316,slow=75,SNR=111							
H11N1	**WAKE ISLAND Hy**	**27.91**	**124**	T		T	13 26 23.1	
	baz=316,slow=75,SNR=105							
H11N3	**WAKE ISLAND Hy**	**27.92**	**124**	T		T	13 26 28.4	
	baz=316,slow=75,SNR=82							
SONM	**Songino Array**	**28.02**	**302**	P		**P**	**12 57 09.5**	**+1.2**
	2.4nm,0.8s,baz=115,slow=9.2,SNR=14							
SONM				LR		LR	13 08 41.9	
	comp=Z,35nm,18.7s,baz=166,slow=37							
	2.4nm,0.8s							
SONM	**Songino Array**	**28.02**	**302**	IAmb		IAmb	12 57 10.6	
	comp=Z,2.2nm,0.9s							
H11S1	**WAKE ISLAND Hy**	**28.65**	**126**	T		T	13 27 14.0	
	baz=317,slow=76,SNR=46							
H11S3	**WAKE ISLAND Hy**	**28.65**	**126**	T		T	13 27 15.9	
	baz=317,slow=76,SNR=56							
H11S2	**WAKE ISLAND Hy**	**28.67**	**126**	T		T	13 27 17.1	
	baz=317,slow=76,SNR=40							
ZAA0	**Zalesovo Array**	**41.96**	**312**	P		**P**	**12 59 07.4**	**-0.4**
ZAA0				IAmb		IAmb	12 59 09.7	
	comp=Z,5.4nm,1.1s							
ZALV	**Zalesovo Beam**	**41.96**	**312**	P		**P**	**12 59 08.1**	**+0.3**
	comp=Z,3.1nm,0.7s,baz=89,slow=7.6,SNR=10							
ZALV				PcP		**PcP**	**13 01 02.9**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=114,slow=3.6,SNR=2.2							
	comp=Z,3.1nm,0.7s							
ZALV	**Zalesovo Beam**	**41.96**	**312**	P		**P**	**12 59 07.4**	**-0.4**
CMAR	**Chiang Mai Arr**	**42.51**	**255**	P		**P**	**12 59 13.3**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=40,slow=7.1,SNR=4.3							
	comp=Z,0.5nm,0.5s							
MK31	**Makanchi Array**	**44.38**	**302**	P		**P**	**12 59 27.3**	**-0.1**
MKAR	**Makanchi Array**	**44.38**	**302**	P		**P**	**12 59 28.1**	**+0.7**
	comp=Z,1.1nm,0.6s,baz=88,slow=9.7,SNR=12							
	comp=Z,1.1nm,0.6s							
MKAR	**Makanchi Array**	**44.38**	**302**	P		**P**	**12 59 27.3**	**-0.1**
KURK	**Kurchatov**	**46.07**	**308**	P		**P**	**12 59 41.3**	**+0.6**
ILAR	**Eielson Array**	**48.34**	**33**	P		**P**	**12 59 58.5**	**+0.3**
	comp=Z,0.3nm,0.7s,baz=264,slow=6.1,SNR=2.9							
	comp=Z,0.3nm,0.7s							
ILAR	**Eielson Array**	**48.34**	**33**	P		**P**	**12 59 57.7**	**-0.5**
ARU	**Arti**	**56.28**	**318**	LR		LR	13 26 28.9	
	comp=Z,46nm,18.1s,baz=120,slow=37							
WR0	**Warramunga Arr**	**58.01**	**189**	P		**P**	**13 01 09.1**	**-0.7**
WR0				IAmb		IAmb	13 01 14.3	
	comp=Z,8.7nm,1.4s							
WB2	**Warramunga Arr**	**58.02**	**189**	P		**P**	**13 01 09.0**	**-0.8**
WRA	**Warramunga Arr**	**58.02**	**189**	P		**P**	**13 01 06.1**	**-3.7**
	comp=Z,0.7nm,0.9s,baz=358,slow=6.7,SNR=2.4							
	comp=Z,0.7nm,0.9s							
ABKAR	**Akbulak array**	**58.03**	**310**	P		**P**	**13 01 10.1**	**+0.4**
ASAR	**Alice Springs**	**61.74**	**189**	P		**P**	**13 01 34.2**	**-1.2**
	comp=Z,0.3nm,0.6s,baz=26,slow=7.2,SNR=2.8							
	comp=Z,0.3nm,0.6s							
YKA	**Yellowknife Ar**	**62.66**	**31**	P		**P**	**13 01 41.9**	**+0.7**
	comp=Z,0.1nm,0.7s,baz=308,slow=7.4,SNR=2.5							
	comp=Z,0.1nm,0.7s							
PSA00	**Pilbara Seismi**	**62.84**	**204**	P		**P**	**13 01 41.1**	**-1.7**
PSA00				IAmb		IAmb	13 01 45.2	
	comp=Z,5.7nm,1.3s							
GEYT	**Alibeck**	**64.15**	**299**	LR		LR	13 34 29.0	
	comp=Z,46nm,18.3s,baz=176,slow=40							
FINES	**FINESS Array B**	**68.45**	**332**	P		**P**	**13 02 19.6**	**+1.1**
	comp=Z,3.0nm,0.9s,baz=30,slow=8.8,SNR=6.0							
	comp=Z,3.0nm,0.9s							
NOA	**NORSAR Array B**	**73.72**	**338**	P		**P**	**13 02 51.1**	**+0.6**
	comp=Z,0.5nm,0.5s,baz=39,slow=6.1,SNR=2.3							
NOA				LR		LR	13 39 16.5	
	comp=Z,17nm,18.1s,baz=300,slow=39							
	comp=Z,0.5nm,0.5s							
AKASG	**Malin Array Be**	**74.13**	**323**	P		**P**	**13 02 53.2**	**+0.2**
	comp=Z,1.3nm,0.6s,baz=43,slow=6.3,SNR=8.3							
	comp=Z,1.3nm,0.6s							
AKASG	**Malin Array Be**	**74.13**	**323**	IAmb		IAmb	13 03 22.2	
	comp=Z,1.6nm,1.2s							
PDAR	**Pinedale Array**	**76.48**	**46**	P		**P**	**13 03 07.9**	**+0.9**
	comp=Z,0.2nm,0.4s,baz=318,slow=1.2,SNR=1.4							
	comp=Z,0.2nm,0.4s							
PDAR	**Pinedale Array**	**76.48**	**46**	P		**P**	**13 03 06.8**	**-0.3**

*IDC **10** 12:53:26.2±0.6, 56°.10S×26°.49W, h0km, mb4.5/9, mbtmp4.4/10, ML4.1/1, MS3.6/6, Error ellipse: s-maj=27.6km s-min=16.8km az=73.0*

*NEIC **10** 12:53:27.9±1.4, 56°.1S±0°.1×26°.4W±0°.2, h10km±1km, mb4.9/39, Error ellipse: s-maj=20.0km s-min=16.4km az=52.0*

ISC 10 12:53:31.6±0.5, 56°.20S±0°.08×26°.54W±0°.10, h35km, n70, σ1s28/67, mb4.8/22, MS3.7/5, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res

	comp=Z,26nm,1.5s						
H10N1	**ASCENSION HYDR**	**49.16**	**16**	T	T	13 55 52.5	
	baz=197,slow=75						
H10N3	**ASCENSION HYDR**	**49.16**	**16**	T	T	13 56 18.2	
	baz=197,slow=75						
H10N2	**ASCENSION HYDR**	**49.18**	**16**	T	T	13 56 19.7	
	baz=197,slow=75						
PB16	**IPOC Station P**	**49.63**	**302**	P	**P**	**13 02 19.2**	**-0.9**
PB16				IAmb	IAmb	13 03 04.6	
	comp=Z,15nm,1.8s						
LPAZ	**La Paz**	**50.76**	**305**	P	**P**	**13 02 28.8**	**+0.1**
LPAZ				PcP	**PcP**	**13 03 46.0**	**+0.5**
	comp=Z,9.1nm,0.8s,baz=158,slow=5.1,SNR=25						
	comp=Z,2.0nm,0.5s,baz=192,slow=4.7,SNR=1.7						
	comp=Z,9.1nm,0.8s						
LPAZ	**La Paz**	**50.76**	**305**	P	**P**	**13 02 28.5**	**-0.3**
LPAZ				IAmb	IAmb	13 02 29.7	
	comp=Z,8.3nm,0.8s						
SAML	**Samuel**	**55.16**	**314**	P	**P**	**13 03 00.2**	**-0.3**
COHC	**Cochancay**	**68.05**	**301**	P	**P**	**13 04 27.9**	**+0.4**
TOA0	**Torodi Ar. Sit**	**73.01**	**29**	P	**P**	**13 04 56.5**	**-1.0**
TOA0				IAmb	IAmb	13 07 35.4	
	comp=Z,22nm,1.8s						
TORD	**Torodi Ar. Bea**	**73.01**	**29**	P	**P**	**13 04 58.2**	**+0.6**
	comp=Z,2.6nm,0.5s,baz=202,slow=6.4,SNR=33						
	comp=Z,2.6nm,0.5s						
TORD	**Torodi Ar. Bea**	**73.01**	**29**	P	**P**	**13 04 58.5**	**+0.9**
TORD				IAmb	IAmb	13 05 30.3	
	comp=Z,16nm,1.9s						
BIRV	**Birongo**	**74.16**	**319**	P	**P**	**13 05 05.0**	**+0.6**
STKA	**Stephens Creek**	**91.69**	**170**	P	**P**	**13 06 36.6**	**+1.5**
	comp=Z,0.7nm,0.4s,baz=354,slow=19,SNR=3.1						
	comp=Z,0.7nm,0.4s						
ASAR	**Alice Springs**	**98.74**	**162**	P	**P**	**13 07 06.7**	**-0.7**
	comp=Z,0.4nm,0.6s,baz=180,slow=4.4,SNR=11						
	comp=Z,0.4nm,0.6s						
WRA	**Warramunga Arr**	**102.45**	**162**	P	**Pdif**	**13 07 23.2**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=193,slow=4.5,SNR=4.9						
PDAR	**Pinedale Array**	**120.73**	**302**	PKP	**PKPdf**	**13 12 17.9**	**-1.3**
	comp=Z,0.3nm,0.4s,baz=101,slow=8.3,SNR=2.7						
NVAR	**Mina Array Bea**	**121.79**	**293**	PKP	**PKPdf**	**13 12 19.9**	**-1.4**
	comp=Z,0.3nm,0.5s,baz=145,slow=3.6,SNR=3.7						
NVAR	**Mina Array Bea**	**121.79**	**293**	PKPdf	**PKiKP**	**13 12 21.6**	**+0.1**
FINES	**FINESS Array B**	**124.35**	**28**	PKP	**PKPdf**	**13 12 24.6**	**-0.5**
	comp=Z,1.3nm,0.5s,baz=118,slow=1.8,SNR=15						
FINES	**FINESS Array B**	**124.35**	**28**	PKPdf	**PKPdf**	**13 12 25.1**	**-0.1**
ARCES	**ARCESS Array B**	**130.95**	**22**	PKP	**PKPdf**	**13 12 36.4**	**-1.1**
	comp=Z,1.3nm,0.6s,baz=199,slow=2.1,SNR=12						
ARCES	**ARCESS Array B**	**130.95**	**22**	PKPdf	**PKPdf**	**13 12 37.8**	**+0.2**
YKA	**Yellowknife Ar**	**136.52**	**318**	PKP	**PKPdf**	**13 12 47.5**	**-0.7**
	comp=Z,1.0nm,0.6s,baz=120,slow=2.8,SNR=20						
SONM	**Songino Array**	**150.38**	**86**	PKPbc	**PKPbc**	**13 13 18.2**	**-0.1**
	comp=Z,1.8nm,0.6s,baz=230,slow=2.5,SNR=8.3						
ILAR	**Eielson Array**	**150.49**	**311**	PKPbc	**PKPbc**	**13 13 17.5**	**-0.4**
	comp=Z,4.0nm,0.7s,baz=143,slow=3.7,SNR=48						

*IDC **10** 13:07:58.7±8.5, **12°.83N×96°.83E, h0km, mb3.6**/4,*
mbtmp3.6**/4, **MS3.6**/1, **Error ellipse: s-maj=598.3km
s-min=24.1km az=58.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.00**	**343**	P	P	13 15 01.6	+0.1
	0.4nm,0.7s,baz=147,slow=8.6,SNR=2.0						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**40.54**	**342**	P	P	13 15 39.2	-0.3
	0.3nm,0.3s,baz=156,slow=7.8,SNR=3.0						
	0.3nm,0.3s						
WRA	**Warramunga Arr**	**49.23**	**131**	P	P	13 16 49.3	0.0
	0.9nm,0.7s,baz=308,slow=8.4,SNR=7.5						
	0.9nm,0.7s						
ASAR	**Alice Springs**	**51.29**	**135**	P	P	13 17 04.7	-0.2
	0.6nm,0.8s,baz=312,slow=7.5,SNR=6.8						
	0.6nm,0.8s						
EIL	**Elat**	**59.41**	**297**	LR	LR	13 47 09.0	
	comp=Z,57nm,20.8s,baz=298,slow=40						

*INET **10** 13:15:24.8±0.7, 12°.83N×87°.07W, h1km±3km, MW3.5*
*SNET **10** 13:15:24.8±1.3, 12°.80N×87°.12W, h0km±11km, ML4.0*
*UCR **10** 13:15:24.9±1.5, 12°.79N×87°.11W, h0km±3km, ML4.0,*
MW4.1, mb4.2(NEIC)
*NEIC **10** 13:15:25.4±1.2, 12°.94N±0°.03×86°.88W±0°.06, h5km±12km,*
Md4.2(SNET), Error ellipse: s-maj=8.7km s-min=2.9km
az=69.0
ISC 10 13:15:24.7±1.3, 12°.89N±0°.03×87°.04W±0°.03, h2km±11km,
n73, σ0°.81/87, 1C-2D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.19**	**185**		**Pg**	**13 15 29.0**	**+0.7**
CRIN	**San Cristobal**	**0.19**	**185**	*eP*	**Pg**	**13 15 28.9**	**+0.7**
CRIN				*eS*	**Sg**	13 15 31.7	+1.0
TELN	**Telica**	**0.34**	**145**	*eP*	**Pb**	**13 15 32.5**	**-1.0**
TEL3	**Telica 3**	**0.36**	**149**	*eP*	**Pb**	**13 15 32.6**	**-1.2**
CNGN	**Cerro Negro**	**0.51**	**140**		**Pb**	**13 15 35.3**	**-1.0**
CNGN	**Cerro Negro**	**0.51**	**140**	*eP*	**Pb**	**13 15 35.3**	**-1.0**
MOMN	**Momotombo**	**0.68**	**135**	*eP*	**Pg**	**13 15 38.4**	**+0.7**
COPN	**Copaltepe**	**0.82**	**148**	*eP*	**Pg**	**13 15 39.6**	**-0.9**
CNCH	**Conchagua**	**0.87**	**297**	*eP*	**Pg**	**13 15 41.5**	**+0.1**
CNCH				*eS*	**Sn**	13 15 56.6	-0.7
CNCH				IAML		13 16 02.9	
	comp=Z,11μm,0.5s						
CNCH	**Conchagua**	**0.87**	**297**	*eP*	**Pg**	**13 15 41.5**	**+0.1**
CNCH				*eS*	**Sn**	**13 15 56.6**	**-0.7**
CNCH				IAML		13 16 02.9	
	comp=Z,11μm,0.5s						
APYN	**Apoyeque**	**0.93**	**134**	*eP*	**Pg**	**13 15 42.6**	**0.0**
LCND	**La Caada**	**0.93**	**297**	*eP*	**Pg**	**13 15 42.6**	**0.0**
LCND				*eS*	**Sb**	**13 15 56.5**	**+0.1**
LCND				IAML		13 15 58.4	
	comp=Z,4μm,0.3s						
LCND	**La Caada**	**0.93**	**297**	*eP*	**Pg**	**13 15 42.6**	**0.0**
LCND				*eS*	**Sb**	**13 15 56.5**	**+0.1**
LCND				IAML		13 15 58.4	
	comp=Z,4μm,0.3s						
HUEN		**1.00**	**123**	*eP*	**Pg**	**13 15 44.3**	**+0.4**
MATN	**Matagalpa**	**1.08**	**88**	Pn	**Pg**	**13 15 45.2**	**-0.2**
MATN	**Matagalpa**	**1.08**	**88**	*eP*	**Pg**	**13 15 45.2**	**-0.2**
WILN	**Americas 2**	**1.10**	**131**	*eP*	**Pg**	**13 15 45.4**	**-0.3**
TGUH	**Tegucigalpa,Un**	**1.19**	**349**	Pn	**Pg**	**13 15 48.5**	**+1.1**
TGUH	**Tegucigalpa,Un**	**1.19**	**349**	‖ *iP*	**Pg**	**13 15 48.5**	**+1.1**
TGUH	**Tegucigalpa,Un**	**1.19**	**349**	‖ *iP*	**Pg**	**13 15 48.5**	**+1.1**
TGUH	**Tegucigalpa,Un**	**1.19**	**349**	*eP*	**Pg**	**13 15 48.5**	**+1.1**
VSM	**San Miguel**	**1.32**	**294**	*eP*	**Pg**	**13 15 49.4**	**-0.7**
VSM	**San Miguel**	**1.32**	**294**	*eP*	**Pg**	**13 15 49.4**	**-0.7**
LCY	**Lacayo**	**1.34**	**294**	*eP*	**Pg**	**13 15 49.9**	**-0.4**
LCY	**Lacayo**	**1.34**	**294**	*eP*	**Pg**	**13 15 49.9**	**-0.4**
PACA	**Pacayal**	**1.38**	**295**	*eP*	**Pg**	**13 15 50.5**	**-0.7**
PACA				*eS*	**Sn**	**13 16 10.2**	**+0.2**
PACA	**Pacayal**	**1.38**	**295**	*eP*	**Pg**	**13 15 50.5**	**-0.7**
PACA				*eS*	**Sn**	**13 16 10.2**	**+0.2**
PACA	**Pacayal**	**1.38**	**295**	*eP*	**Pg**	**13 15 50.4**	**-0.8**
BOAB	**BOACO BROADBAN**	**1.41**	**108**		**Pn**	**13 15 50.3**	**-0.9**
BOAB	**BOACO BROADBAN**	**1.41**	**108**	*eP*	**Pn**	**13 15 50.3**	**-0.9**
CAHU	**Cacacuatique**	**1.44**	**308**	*eP*	**Pn**	**13 15 51.3**	**-0.7**
CAHU				*eS*	**Sn**	**13 16 13.3**	**+1.7**
CAHU	**Cacacuatique**	**1.44**	**308**	*eP*	**Pn**	**13 15 51.3**	**-0.7**
CAHU				*eS*	**Sn**	**13 16 13.3**	**+1.7**
COEB	**Comit de Eme**	**1.58**	**293**	*eP*	**Pn**	**13 15 53.5**	**-0.2**
COEB				*eS*	**Sn**	**13 16 15.2**	**+0.4**
COEB				IAML		13 16 17.2	
	comp=Z,1μm,0.5s						
COEB	**Comit de Eme**	**1.58**	**293**	*eP*	**Pn**	**13 15 53.5**	**-0.2**
COEB				*eS*	**Sn**	**13 16 15.2**	**+0.4**
COEB				IAML		13 16 17.2	
	comp=Z,1μm,0.5s						
SNVI	**San Vicente**	**1.90**	**293**	*eP*	**Pn**	**13 15 58.2**	**0.0**
SNVI	**San Vicente**	**1.90**	**293**	*eP*	**Pn**	**13 15 58.2**	**0.0**
CONN	**Concepcion**	**1.90**	**134**	*eP*	**Pn**	**13 15 57.4**	**-0.7**
COEG	**Centro de Oper**	**1.94**	**292**	*eP*	**Pn**	**13 15 59.6**	**+0.9**
COEG				*eS*	**Sn**	**13 16 24.6**	**+1.0**
COEG	**Centro de Oper**	**1.94**	**292**	*eP*	**Pn**	**13 15 59.6**	**+0.9**
COEG				*eS*	**Sn**	**13 16 24.6**	**+1.0**
PAVA	**Las Pavas**	**2.03**	**294**	*eP*	**Pn**	**13 15 59.4**	**-0.6**
ACON	**Acoyapa**	**2.03**	**116**		**Pn**	**13 15 58.5**	**-1.4**
ACON	**Acoyapa**	**2.03**	**116**	*eP*	**Pn**	**13 16 00.8**	**+0.9**
SNET	**Serv Nac Est T**	**2.28**	**291**		**Pn**	**13 16 04.9**	**+1.5**
HZTE	**Horizontes, Gu**	**2.58**	**147**		**Pn**	**13 16 06.8**	**-0.6**
HZTE	**Horizontes, Gu**	**2.58**	**147**	*eP*	**Pn**	**13 16 07.1**	**-0.3**
HZTE	**Horizontes, Gu**	**2.58**	**147**	*eP*	**Pn**	**13 16 06.6**	**-0.8**
BUAI	**Buenos Aires**	**2.60**	**140**	*eP*	**Pn**	**13 16 07.9**	**+0.2**
GBS3	**Finca Las Img**	**2.60**	**143**	*eP*	**Pn**	**13 16 06.6**	**-1.2**
GB1A	**Borinquen Arri**	**2.61**	**142**	*eP*	**Pn**	**13 16 07.1**	**-0.8**
BUEV	**Buena Vista**	**2.62**	**142**	*eP*	**Pn**	**13 16 07.7**	**-0.4**
LAPC	**Finca la Perla**	**2.63**	**143**	*eP*	**Pn**	**13 16 07.3**	**-0.7**
ESQI	**Esquipulas**	**2.79**	**307**		**Pb**	**13 16 14.0**	**-1.3**
COLC	**Colonia**	**2.84**	**141**	*eP*	**Pn**	**13 16 11.5**	**+0.4**
CUI	**Cuipilapa**	**2.88**	**140**	*eP*	**Pn**	**13 16 11.8**	**+0.2**
ORTG	**Ortega, Santa**	**2.95**	**148**		**Pn**	**13 16 12.3**	**-0.3**
PTEN	**Parque Tenorio**	**2.95**	**137**	*eP*	**Pn**	**13 16 13.1**	**+0.5**
ACAL	**Aguas Claras**	**2.97**	**139**	*eP*	**Pn**	**13 16 13.3**	**+0.3**
GUAI	**GUAI**	**3.00**	**150**	‖ *eP*	**Pn**	**13 16 13.1**	**-0.1**
GUAI				*eS*	**Sn**	**13 16 51.3**	**+1.6**
PLVR	**Palo Verde**	**3.02**	**147**	*eP*	**Pn**	**13 16 13.2**	**-0.4**
NICO	**Nicoya**	**3.15**	**150**	*eP*	**Pn**	**13 16 15.6**	**+0.4**
DUNO	**Dulce Nombre,**	**3.17**	**151**		**Pn**	**13 16 15.6**	**0.0**
DUNO	**Dulce Nombre,**	**3.17**	**151**	*eP*	**Pn**	**13 16 16.5**	**+0.9**
DUNO	**Dulce Nombre,**	**3.17**	**151**	*eP*	**Pn**	**13 16 15.9**	**+0.3**
JTS	**Las Juntas de**	**3.29**	**141**		**Pn**	**13 16 16.6**	**-0.6**
JTS	**Las Juntas de**	**3.29**	**141**	*eP*	**Pn**	**13 16 17.3**	**+0.1**
JTS	**Las Juntas de**	**3.29**	**141**	*eP*	**Pn**	**13 16 17.0**	**-0.2**
INDI	**Punta indio, G**	**3.36**	**153**	*eP*	**Pn**	**13 16 19.5**	**+1.4**
RIMA	**Rio Macho**	**4.39**	**135**		**Pn**	**13 16 30.9**	**-1.7**
RIMA	**Rio Macho**	**4.39**	**135**	*eP*	**Pn**	**13 16 33.8**	**+1.3**
CDM	**Cerro de Muert**	**4.61**	**136**	*eP*	**Pn**	**13 16 37.1**	**+1.3**
PEZE	**Perez Zeledon,**	**4.79**	**136**		**Pn**	**13 16 38.8**	**+0.8**
SRBA	**San Rafael, Bu**	**5.12**	**135**		**Pn**	**13 16 42.5**	**+0.1**
DRK0	**Durika**	**5.18**	**134**		**Pn**	**13 16 42.9**	**-0.4**

*IDC **10** 13:19:41.9±1.4, 12°.99N×86°.96W, h0km, mb3.8/8,*
mbtmp3.8/10, ML3.4/2, MS3.4/9, Error ellipse:
s-maj=43.3km s-min=19.2km az=42.0
*SNET **10** 13:19:43.2±2.6, 12°.94N×87°.12W, h0km±47km, ML3.7*
*NEIC **10** 13:19:43.5±2.1, 12°.95N±0°.07×86°.91W±0°.06, h3km±3km,*
mb4.3/17, Error ellipse: s-maj=12.0km s-min=5.4km
az=221.0
*UCR **10** 13:19:46.0±2.7, 12°.99N×87°.05W, h40km, ML3.7, MW4.3,*
mb4.3(NEIC)
ISC 10 13:19:44.0±0.6, 12°.97N±0°.05×87°.02W±0°.05, h13km, n96,
σ1°.49/89, mb4.2/16, MS3.3/7, 2D, Near coast of
Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.27**	**187**		**Pg**	**13 19 47.3**	**-2.5**
CNGN	**Cerro Negro**	**0.56**	**147**		**Pg**	**13 19 53.6**	**-1.5**
CNCH	**Conchagua**	**0.85**	**291**	*i* P	**Pg**	**13 19 58.5**	**-2.1**
CNCH	**Conchagua**	**0.85**	**291**	*i* P	**Pg**	**13 19 58.5**	**-2.1**
LCND	**La Caada**	**0.92**	**292**	IAML		13 20 16.8	
	comp=Z,3μm,0.4s						
LCND	**La Caada**	**0.92**	**292**	IAML		13 20 16.8	
	comp=Z,3μm,0.4s						
MATN	**Matagalpa**	**1.06**	**92**		**Pb**	**13 20 02.1**	**-2.2**
TGUH	**Tegucigalpa,Un**	**1.11**	**347**		**Pb**	**13 20 04.6**	**-0.6**
TGUH	**Tegucigalpa,Un**	**1.11**	**347**	‖ *iP*	**Pb**	**13 20 04.6**	**-0.6**
TGUH	**Tegucigalpa,Un**	**1.11**	**347**	‖ *iP*	**Pb**	**13 20 04.6**	**-0.6**
VSM	**San Miguel**	**1.31**	**290**	*i* P	**Pn**	**13 20 06.5**	**-1.7**
VSM	**San Miguel**	**1.31**	**290**	*i* P	**Pn**	**13 20 06.5**	**-1.7**
LCY	**Lacayo**	**1.32**	**290**	*eP*	**Pn**	**13 20 06.5**	**-1.8**
LCY	**Lacayo**	**1.32**	**290**	*eP*	**Pn**	**13 20 06.5**	**-1.8**
PACA	**Pacayal**	**1.37**	**291**	*eP*	**Pn**	**13 20 06.7**	**-2.2**
PACA	**Pacayal**	**1.37**	**291**	*eP*	**Pn**	**13 20 06.7**	**-2.2**
CAHU	**Cacacuatique**	**1.41**	**304**	*eP*	**Pn**	**13 20 08.4**	**-1.2**
CAHU	**Cacacuatique**	**1.41**	**304**	*eP*	**Pn**	**13 20 08.4**	**-1.2**
BOAB	**BOACO BROADBAN**	**1.42**	**111**		**Pn**	**13 20 07.9**	**-1.6**
COEB	**Comit de Eme**	**1.56**	**290**	*eP*	**Pn**	**13 20 11.1**	**-0.6**
COEB				*eS*	**Sn**	**13 20 31.5**	**-0.4**
COEB	**Comit de Eme**	**1.56**	**290**	*eP*	**Pn**	**13 20 11.1**	**-0.6**
COEB				*eS*	**Sn**	**13 20 31.5**	**-0.4**
PQSS	**Presa 15 de Se**	**1.64**	**293**	*eS*	**Sn**	**13 20 35.3**	**+1.8**
PQSS	**Presa 15 de Se**	**1.64**	**293**	*eS*	**Sn**	**13 20 35.3**	**+1.8**
PAVA	**Las Pavas**	**2.01**	**292**	IAML		13 20 22.0	
	comp=Z,540nm,0.4s						
PAVA	**Las Pavas**	**2.01**	**292**	IAML		13 20 22.0	
	comp=Z,540nm,0.4s						
ACON	**Acoyapa**	**2.06**	**119**		**Pn**	**13 20 15.7**	**-2.6**
SNET	**Serv Nac Est T**	**2.27**	**288**	Pn	**Pn**	**13 20 23.7**	**+2.4**
UEES	**Universidad Ev**	**2.29**	**289**	IAML		13 20 57.7	
	comp=Z,694nm,0.5s						
UEES	**Universidad Ev**	**2.29**	**289**	IAML		13 20 57.7	
	comp=Z,694nm,0.5s						
BOQS	**Boqueron**	**2.33**	**289**	*eP*	**Pn**	**13 20 24.6**	**+2.3**
BOQS	**Boqueron**	**2.33**	**289**	*eP*	**Pn**	**13 20 24.6**	**+2.3**
HZTE	**Horizontes, Gu**	**2.64**	**148**		**Pn**	**13 20 25.5**	**+0.1**
HZTE	**Horizontes, Gu**	**2.64**	**148**	*eP*	**Pn**	**13 20 25.5**	**-0.8**
BUAI	**Buenos Aires**	**2.66**	**141**	*eP*	**Pn**	**13 20 27.2**	**+0.6**
GBS3	**Finca Las Img**	**2.66**	**145**	*eP*	**Pn**	**13 20 26.8**	**+0.2**
LAPC	**Finca la Perla**	**2.68**	**145**	*eP*	**Pn**	**13 20 26.2**	**-0.8**
GPS2	**Hotel Rincn d**	**2.74**	**143**	*eP*	**Pn**	**13 20 28.8**	**+1.0**
ESQI	**Esquipulas**	**2.76**	**305**	Pn	**Pn**	**13 20 30.7**	**+2.6**
ESPN	**Las Esperanzas**	**2.76**	**106**	Pn	**Pn**	**13 20 29.0**	**+0.9**
VMAR	**Armenia, Volca**	**2.84**	**139**	*eP*	**Pn**	**13 20 29.4**	**+0.2**
HORNC	**Hornillas**	**2.88**	**141**	*eP*	**Pn**	**13 20 28.2**	**-1.5**
COLC	**Colonia**	**2.90**	**142**	*eP*	**Pn**	**13 20 31.2**	**+1.3**
CUI	**Cuipilapa**	**2.93**	**142**	*eP*	**Pn**	**13 20 30.3**	**-0.1**
PTEN	**Parque Tenorio**	**3.00**	**138**	*eP*	**Pn**	**13 20 33.1**	**+1.8**
ORTG	**Ortega, Santa**	**3.01**	**149**		**Pn**	**13 20 31.3**	**-0.2**
ACAL	**Aguas Claras**	**3.03**	**140**	*eP*	**Pn**	**13 20 31.4**	**-0.4**
GUAI	**GUAI**	**3.06**	**151**	*eP*	**Pn**	**13 20 31.8**	**-0.4**
GUAI				*eS*	**Sn**	**13 21 09.3**	**+0.6**
SAJU	**San Juanillo,**	**3.16**	**156**	*eP*	**Pn**	**13 20 33.2**	**-0.2**
DUNO	**Dulce Nombre,**	**3.24**	**152**	Pn	**Pn**	**13 20 34.7**	**+0.1**
JTS	**Las Juntas de**	**3.34**	**143**	Pn	**Pn**	**13 20 35.0**	**-1.0**
	comp=Z,12nm,0.3s,baz=15,slow=20,SNR=14						
JTS				Sn	**Sn**	**13 21 17.6**	**+1.9**
	comp=Z,4.7nm,0.3s,baz=344,slow=18,SNR=1.4						
JTS				LR	LR	13 21 59.1	
	comp=Z,240nm,19.1s,baz=44,slow=41						
	comp=Z,22nm,0.4s						
JTS	**Las Juntas de**	**3.34**	**143**	*eP*	**Pn**	**13 20 35.3**	**-0.8**
CEDE	**Laguna Cedeo**	**3.35**	**137**	*eP*	**Pn**	**13 20 39.0**	**+2.8**
INDI	**Punta indio, G**	**3.42**	**154**	*eP*	**Pn**	**13 20 39.3**	**+2.2**
LAFE	**Finca La Fe, P**	**3.76**	**147**	*eP*	**Pn**	**13 20 41.1**	**-0.7**
RIMA	**Rio Macho**	**4.44**	**136**		**Pn**	**13 20 51.7**	**+0.4**
RIMA	**Rio Macho**	**4.44**	**136**	*eP*	**Pn**	**13 20 52.2**	**+0.9**
CDM	**Cerro de Muert**	**4.66**	**136**	*eP*	**Pn**	**13 20 56.0**	**+1.5**
PETF	**Flores**	**4.79**	**325**	Pn	**Pn**	**13 20 59.4**	**+3.5**
RTAL	**Retalhuleu**	**4.80**	**289**	Pn	**Pn**	**13 21 00.1**	**+4.0**
PEZE	**Perez Zeledon,**	**4.84**	**137**		**Pn**	**13 20 55.6**	**-1.2**
SRBA	**San Rafael, Bu**	**5.17**	**136**		**Pn**	**13 21 02.8**	**+1.6**
SRBA	**San Rafael, Bu**	**5.17**	**136**	*eP*	**Pn**	**13 21 04.2**	**+3.0**
DRK0	**Durika**	**5.22**	**135**		**Pn**	**13 21 01.6**	**-0.4**
CMIG	**Matias Romero**	**8.63**	**299**	Pn	**Pn**	**13 21 48.7**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=116,slow=13,SNR=2.9						
CMIG				Sn	**Sn**	**13 23 28.7**	**+2.6**
	baz=126,slow=18						
	comp=Z,1.9nm,0.7s						
SDV	**Santo Domingo**	**16.59**	**103**	LR	LR	13 30 32.4	
	comp=Z,73nm,21.8s,baz=124,slow=39						
833A	**Chaparral WMA,**	**19.14**	**325**	P	**P**	**13 24 08.0**	**+0.9**
833A				IAmb	IAmb	13 24 11.9	
	comp=Z,14nm,0.9s						
SJG	**San Juan**	**20.74**	**73**	LR	LR	13 32 29.4	
	comp=Z,125nm,19.0s,baz=254,slow=37						
ATAH	**Atahualpa**	**21.73**	**156**	LR	LR	13 31 57.1	
	comp=Z,105nm,20.6s,baz=339,slow=34						
TXAR	**Lajitas Array**	**22.45**	**319**	P	**P**	**13 24 42.9**	**-0.2**
	comp=Z,1.6nm,0.8s,baz=137,slow=9.7,SNR=14						
	comp=Z,1.6nm,0.8s						
TX31	**Lajitas Ar. Si**	**22.45**	**319**	P	**P**	**13 24 43.1**	**+0.1**
TX31				IAmb	IAmb	13 24 58.4	
	comp=Z,10nm,1.1s						
TX32	**Lajitas Array**	**22.45**	**319**	P	**P**	**13 24 43.4**	**+0.3**
TKL	**Tuckaleechee C**	**22.78**	**7**	P	**P**	**13 24 46.2**	**-0.1**
	comp=Z,5.9nm,1.1s,baz=100,slow=6.1,SNR=2.9						
	comp=Z,5.9nm,1.1s						
TKL	**Tuckaleechee C**	**22.78**	**7**	P	**P**	**13 24 45.8**	**-0.6**
CLTN	**Cedars of Leba**	**23.03**	**1**	P	**P**	**13 24 46.8**	**-2.1**
CLTN				IAmb	IAmb	13 24 52.3	
	comp=Z,7.5nm,0.9s						
FCAR	**Ozark Folk Cen**	**23.28**	**349**	P	**P**	**13 24 52.2**	**+0.8**
U49A	**Red Boiling Sp**	**23.47**	**3**	P	**P**	**13 24 54.8**	**+1.4**
T47A	**Sharon Grove**	**23.91**	**360**	P	**P**	**13 24 58.8**	**+1.1**
T47A				IAmb	IAmb	13 24 60.0	
	comp=Z,12nm,0.8s						
WMOK	**Wichita Mounta**	**24.15**	**336**	P	**P**	**13 25 00.1**	**+0.1**
WMOK				IAmb	IAmb	13 25 04.1	
	comp=Z,10.0nm,1.1s						
TUL1	**Leonard**	**24.17**	**342**	P	**P**	**13 25 00.8**	**+0.7**
LPIG	**La Paz**	**24.66**	**300**	LR	LR	13 35 31.1	
	comp=Z,88nm,20.7s,baz=196,slow=38						
MNTX	**Cornudas Mount**	**25.15**	**321**	P	**P**	**13 25 09.1**	**0.0**
MNTX				IAmb	IAmb	13 25 09.9	
	comp=Z,8.3nm,1.4s						
S39A	**Bolivar**	**25.25**	**348**	P	**P**	**13 25 09.7**	**-0.2**
S39A				IAmb	IAmb	13 25 11.4	
	comp=Z,4.4nm,0.8s						
Q51A	**Peebles**	**26.15**	**6**	P	**P**	**13 25 19.4**	**+1.4**
N49A	**Columbus Grove**	**27.95**	**5**	P	**P**	**13 25 35.2**	**+1.0**
ANMO	**Albuquerque**	**28.08**	**324**	P	**P**	**13 25 37.5**	**+1.9**
	comp=Z,0.7nm,0.5s,baz=143,slow=8.5,SNR=3.7						
ANMO				LR	LR	13 37 46.6	
	comp=Z,41nm,18.8s,baz=138,slow=39						
	comp=Z,0.7nm,0.5s						
X16A	**Lo Mia Camp, P**	**30.77**	**318**	P	**P**	**13 26 00.4**	**+0.9**
X16A				IAmb	IAmb	13 26 05.5	
	comp=Z,3.9nm,1.2s						
PDAR	**Pinedale Array**	**35.52**	**331**	P	**P**	**13 26 40.5**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=125,slow=12,SNR=1.8						
	comp=Z,0.3nm,0.4s						
REDW	**Red Top Meadow**	**36.59**	**330**	P	**P**	**13 26 50.3**	**+0.2**
REDW				IAmb	IAmb	13 26 52.0	
	comp=Z,6.2nm,0.9s						
NVAR	**Mina Array Bea**	**37.60**	**318**	P	**P**	**13 26 58.9**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=128,slow=8.7,SNR=8.5						
NVAR				LR	LR	13 45 07.4	
	comp=Z,94nm,18.2s,baz=122,slow=41						
	comp=Z,1.0nm,0.8s						
NVAR	**Mina Array Bea**	**37.60**	**318**	P	**P**	**13 26 59.6**	**+0.9**
LRM	**Limekiln Ridge**	**39.19**	**332**	P	**P**	**13 27 13.7**	**+1.6**
YBH	**Yreka Blue Hor**	**42.23**	**319**	LR	LR	13 46 36.3	
	comp=Z,53nm,18.4s,baz=164,slow=38						
BBB	**Bella Bella**	**51.09**	**329**	LR	LR	13 54 24.3	
	comp=Z,40nm,18.4s,baz=216,slow=41						
YKA	**Yellowknife Ar**	**53.22**	**344**	P	**P**	**13 29 01.4**	**-0.5**
	comp=Z,2.6nm,0.8s,baz=138,slow=7.7,SNR=38						
	comp=Z,2.6nm,0.8s						
ILAR	**Eielson Array**	**65.72**	**336**	P	**P**	**13 30 27.0**	**-1.2**
	comp=Z,0.8nm,0.9s,baz=134,slow=5.2,SNR=5.0						
	comp=Z,0.8nm,0.9s						
ESDC	**Sonseca Array**	**76.54**	**52**	P	**P**	**13 31 34.3**	**-0.1**
	comp=Z,0.7nm,0.8s,baz=266,slow

19nm,0.8s,baz=334,slow=20,SNR=5.0
ASAR LR LR 13 38 22.4
comp=Z,156nm,19.9s,baz=20,slow=40
ASAR ScP **ScP** **13 38 44.9 -3.5**
2.6nm,0.5s,baz=353,slow=1.8,SNR=4.8
ASAR Alice Springs 17.09 166 P **P** **13 30 51.5 +0.9**
PSA00 Pilbara Seismi 17.12 212 P **P** **13 30 50.8 -0.1**
PSA00 Pilbara Seismi 17.12 212 P **P** **13 30 50.6 -0.3**
PSA00 IAmb IAmb 13 30 53.4
comp=Z,20nm,0.6s
PMG Port Moresby 17.77 99 P **P** **13 30 58.7 +0.7**
comp=Z,30nm,0.8s,baz=253,slow=14,SNR=2.7
PMG S **S** **13 34 11.1 -3.9**
comp=Z,8.6nm,0.5s,baz=164,slow=22,SNR=6.1
WRKA Warakurna 17.92 183 P **P** **13 31 01.3 +1.6**
baz=18,SNR=298
PCJI Pacitan 18.06 265 P **P** **13 31 01.9 +0.7**
comp=Z,117nm,0.9s
PBKI Pangkalan Bun 18.14 283 P **P** **13 31 04.9 +2.7**
comp=Z,2µmcomp=Z,270nm,1.1s
MTSU Mount Surprise 18.27 128 P **P** **13 31 05.6 +2.1**
baz=18,SNR=49
WOJI Wonogiri, Jawa 18.30 266 P **P** **13 31 05.1 +1.2**
comp=Z,77nm,0.8s
STKI Sintang 19.19 291 P **P** **13 31 15.5 +2.0**
SBUM Sibu 19.54 298 P **P** **13 31 20.2 +2.9**
SBUM IAmb IAmb 13 31 21.7
comp=Z,38nm,0.9s
KSM Kuching 20.81 293 P **P** **13 31 31.7 +0.7**
KSM IAmb IAmb 13 31 36.6
comp=Z,37nm,0.9s
CTA Charters Tower 20.89 130 P **P** **13 31 33.6 +1.8**
comp=Z,28nm,0.8s,baz=314,slow=11,SNR=34
CTA S **S** **13 35 20.0 +3.4**
comp=Z,1.8nm,0.5s,baz=229,slow=19,SNR=1.6
comp=Z,28nm,0.8s
CTAO Charters Tower 20.89 130 P **P** **13 31 33.6 +1.8**
CTAO IAmb IAmb 13 31 36.7
comp=Z,31nm,0.8s
GIRL Giralia 21.28 222 P **P** **13 31 37.3 +1.4**
baz=21,SNR=8.7
GIRL Giralia 21.28 222 P **P** **13 31 36.7 +0.8**
LEM Lembang 21.59 269 P **P** **13 31 38.8 -0.7**
comp=Z,52nm,0.7s,baz=341,slow=1.6,SNR=12
comp=Z,52nm,0.7s
LEM Lembang 21.59 269 P **P** **13 31 39.1 -0.4**
comp=Z,40nm,0.8s
CNJI Cibinong 22.06 268 P **P** **13 31 42.7 -1.5**
comp=Z,222nm,0.9s
CBJI Citeko 22.36 270 P **P** **13 31 44.7 -2.5**
comp=Z,127nm,0.8s
DBJI Dramaga 22.46 270 P **P** **13 31 47.6 -0.5**
comp=Z,17µmcomp=Z,34nm,0.5s
SKJI Sukabumi 22.63 269 P **P** **13 31 47.8 -2.0**
comp=Z,69nm,0.6s
FORT Forrest 23.64 183 P **P** **13 32 01.1 +2.3**
baz=24,SNR=25
FORT Forrest 23.64 183 P **P** **13 32 00.6 +1.8**
PPBI Pangkal Pinang 23.65 281 P **P** **13 31 59.8 +0.7**
comp=Z,6µmcomp=Z,51nm,0.8s
QLP Quilpie 24.04 146 P **P** **13 32 03.5 +1.0**
baz=24,SNR=41
MORW Morawa 25.25 208 P **P** **13 32 13.6 +0.1**
baz=25,SNR=8.5
MORW Morawa 25.25 208 P **P** **13 32 13.5 0.0**
MORW IAmb IAmb 13 32 18.5
comp=Z,21nm,1.4s
BLDU Ballidu 26.28 205 P **P** **13 32 23.0 +0.3**
baz=26,SNR=9.1
BBOO Buckleboo 26.38 167 P **P** **13 32 24.2 +0.6**
baz=26,SNR=11
BBOO Buckleboo 26.38 167 P **P** **13 32 24.0 +0.4**
BBOO IAmb IAmb 13 32 34.8
comp=Z,24nm,0.8s
MYKOM Kota Tinggi 26.93 288 P **P** **13 32 31.0 +2.3**
MYKOM IAmb IAmb 13 32 32.3
comp=Z,20nm,0.7s
STKA Stephens Creek 27.21 157 P **P** **13 32 31.6 +0.5**
comp=Z,2.7nm,0.5s,baz=333,slow=9.7,SNR=12
comp=Z,2.7nm,0.5s
STKA Stephens Creek 27.21 157 P **P** **13 32 31.9 +0.8**
baz=27,SNR=8.6
STKA Stephens Creek 27.21 157 P **P** **13 32 32.1 +1.0**
EIDS Eidsvold 27.61 134 P **P** **13 32 35.0 +0.3**
HTT Hallett 27.71 163 P **P** **13 32 38.1 +2.6**
baz=28,SNR=7.2
NWAO Narrogin (SRO) 28.11 202 P **P** **13 32 39.6 +0.6**
NWAO IAmb IAmb 13 32 41.1
comp=Z,13nm,0.9s
CMSA Cobar Meteorol 28.75 150 P **P** **13 32 46.1 +1.4**
baz=29,SNR=22
PPI Padang Panjang 29.62 282 P **P** **13 32 52.2 -0.4**
ARMA Armidale 31.26 141 P **P** **13 33 08.5 +1.5**
ARMA IAmb IAmb 13 33 09.8
comp=Z,17nm,1.2s
ARPS Mount Arapiles 31.70 161 P **P** **13 33 12.2 +1.5**
baz=32,SNR=22
PSI Prapat 31.91 287 P **P** **13 33 12.8 -0.1**
comp=Z,50nm,0.8s,baz=134,slow=5.7,SNR=31
comp=Z,50nm,0.8s
YHNB Yeheng 32.47 346 P **P** **13 33 16.0 -1.6**
YHNB IAmb IAmb 13 33 17.0
comp=Z,12nm,0.8s
GSI Gunungsitoli 32.78 283 P **P** **13 33 20.2 -0.2**
GSI Gunungsitoli 32.78 283 P **P** **13 33 18.3 -2.1**
comp=Z,34nm,0.6s
JOW Kunigami 33.69 358 LR LR 13 47 59.3
comp=Z,34nm,19.1s,baz=24,slow=37
TOO Toolangi 33.74 157 P **P** **13 33 29.2 +0.7**
baz=34,SNR=7.0
TOO Toolangi 33.74 157 P **P** **13 33 30.2 +1.8**
TOO IAmb IAmb 13 33 32.0
comp=Z,22nm,1.4s
CMAR Chiang Mai Arr 39.28 311 P **P** **13 34 16.1 +0.5**
comp=Z,10.0nm,0.8s,baz=142,slow=7.4,SNR=52
CMAR PcP **PcP** **13 36 22.1 +0.5**
comp=Z,3.0nm,0.9s,baz=170,slow=2.6,SNR=11
comp=Z,10.0nm,0.8s
CHTO Chiang Mai 39.49 311 P **P** **13 34 17.6 +0.2**
CHTO IAmb IAmb 13 34 18.7
comp=Z,19nm,0.8s
NJ2 Nanjing 40.15 346 *e*P **P** **13 34 27.3 +4.7**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
PZH PanZhiHua 42.78 322 P **P** **13 34 43.7 -0.6**
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,80nm,6.0s
MJAR Matsushiro Arr 44.15 10 P **P** **13 34 53.1 -1.7**
comp=Z,3.6nm,0.9s,baz=187,slow=9.3,SNR=8.8
comp=Z,3.6nm,0.9s
KSRS Korea Array 44.29 358 P **P** **13 34 55.9 0.0**
comp=Z,1.2nm,0.6s,baz=175,slow=8.8,SNR=7.2
comp=Z,1.2nm,0.6s
XAN Xi'an 45.22 336 P **P** **13 35 02.5 -1.0**
XAN pP pwP 13 35 41.2 -0.7
XAN sP sP 13 35 59.4 +7.6
XAN pmax pmax
comp=Z,5.0nm,0.8s
PALK Pallekele 50.57 285 P **P** **13 35 43.6 -1.4**
comp=Z,7.2nm,0.7s,baz=221,slow=9.3,SNR=1.9
comp=Z,7.2nm,0.7s
WHZ Wether Hill Ro 51.02 146 P **P** **13 35 48.2 +0.4**
RPZ Rata Peaks 51.59 142 P **P** **13 35 53.5 +1.3**
comp=Z,11nm,0.6s,baz=282,slow=3.3,SNR=6.0
comp=Z,11nm,0.6s
RPZ Rata Peaks 51.59 142 P **P** **13 35 53.1 +0.9**
SONM Songino Array 58.29 342 P **P** **13 36 40.5 +0.3**
comp=Z,1.9nm,0.6s,baz=160,slow=6.0,SNR=12
SONM PcP **PcP** **13 37 29.1 -0.6**
comp=Z,0.4nm,0.4s,baz=160,slow=5.1,SNR=3.9
comp=Z,1.9nm,0.6s
SONM Songino Array 58.29 342 P **P** **13 36 40.5 +0.3**
CASY Casey 60.56 189 P **P** **13 36 55.5 +0.1**
PETK Petropavlovsk- 64.57 18 P **P** **13 37 22.4 +0.2**
comp=Z,3.7nm,0.7s,baz=197,slow=9.3,SNR=8.5
PETK PcP **PcP** **13 37 54.7 -0.2**
comp=Z,1.1nm,0.5s,baz=222,slow=1.9,SNR=2.1
comp=Z,3.7nm,0.7s
MK31 Makanchi Array 67.92 327 P **P** **13 37 43.9 +0.2**
MK31 IAmb IAmb 13 37 45.2
comp=Z,7.9nm,0.6s
MKAR Makanchi Array 67.92 327 P **P** **13 37 43.9 +0.2**
comp=Z,14nm,0.6s,baz=123,slow=7.8,SNR=146
MKAR PcP **PcP** **13 38 08.9 -0.1**
comp=Z,4.9nm,0.6s,baz=132,slow=4.4,SNR=4.6
comp=Z,14nm,0.6s
MAKZ Makanchi 68.10 327 P **P** **13 37 44.9 +0.1**
MAKZ IAmb IAmb 13 37 46.2
comp=Z,9.6nm,0.6s
ZAA0 Zalesovo Array 71.34 334 P **P** **13 38 04.3 -0.1**
ZAA0 IAmb IAmb 13 38 05.3
comp=Z,8.4nm,0.8s
ZALV Zalesovo Beam 71.34 334 P **P** **13 38 03.7 -0.8**
comp=Z,6.5nm,0.6s,baz=121,slow=4.7,SNR=28
comp=Z,6.5nm,0.6s
ZALV Zalesovo Beam 71.34 334 P **P** **13 38 03.3 -1.2**
KURBB Kurchatov Arra 72.22 329 P **P** **13 38 09.7 0.0**
comp=Z,6.3nm,0.4s,baz=126,slow=4.8,SNR=46
comp=Z,6.3nm,0.4s
KURK Kurchatov 72.23 329 P **P** **13 38 09.8 0.0**
KURK IAmb IAmb 13 38 10.8
comp=Z,11nm,0.9s
VNDA Vanda 72.48 173 P **P** **13 38 11.0 +0.1**
comp=Z,1.0nm,0.6s,baz=314,slow=6.9,SNR=11
comp=Z,1.0nm,0.6s
VNDA Vanda 72.48 173 P **P** **13 38 11.2 +0.3**
KK31 Karatay Array 72.96 319 P **P** **13 38 14.0 -0.3**
KKAR Karatay Array 72.96 319 P **P** **13 38 14.6 +0.2**
KKAR Karatay Array 72.96 319 P **P** **13 38 14.2 -0.1**
KKAR IAmb IAmb 13 38 15.4
comp=Z,6.6nm,1.3s
SBA Scott Base 73.37 172 P **P** **13 38 17.1 +0.9**
MAW Mawson 74.68 201 P **P** **13 38 24.3 +0.4**
comp=Z,4.4nm,0.6s,baz=96,slow=6.4,SNR=9.7
comp=Z,4.4nm,0.6s
MAW Mawson 74.68 201 P **P** **13 38 24.7 +0.9**
WSAR Wadi Sarin 75.32 296 P **P** **13 38 28.8 +0.3**
comp=Z,10nm,0.5s,baz=155,slow=5.9,SNR=24
comp=Z,10nm,0.5s
SOCY Socotra 77.32 284 P **P** **13 38 39.1 -0.9**
BRVK Borovoye 77.84 328 P **P** **13 38 41.4 -0.6**
BRVK IAmb IAmb 13 38 42.8
comp=Z,9.6nm,0.9s
TIXI Tiksi 78.53 360 P **P** **13 38 45.1 -0.2**
TIXI IAmb IAmb 13 38 45.8
comp=Z,5.7nm,0.6s
OPO Ambohidratompo 80.40 252 P **P** **13 38 56.2 -0.6**
comp=Z,5.1nm,0.8s,baz=33,slow=5.7,SNR=4.0
comp=Z,5.1nm,0.8s
NRIK Noril'sk 81.45 346 P **P** **13 38 59.9 -1.2**
comp=Z,22nm,1.1s,baz=132,slow=4.6,SNR=13
comp=Z,22nm,1.1s
ABKAR Akbulak array 82.15 322 P **P** **13 39 04.6 -0.6**
ABKAR Akbulak array 82.15 322 P **P** **13 39 05.0 -0.2**
ABKAR IAmb IAmb 13 39 07.2
comp=Z,7.9nm,0.7s
QSPA South Pole Qui 82.93 180 P **P** **13 39 08.8 -0.3**
comp=Z,4.1nm,0.6s,baz=306,slow=0.7,SNR=28
comp=Z,4.1nm,0.6s
QSPA South Pole Qui 82.93 180 P **P** **13 39 08.3 -0.8**
QSPA IAmb IAmb 13 39 09.6
comp=Z,5.0nm,0.8s
AKTO Aktyubinsk 83.72 322 P **P** **13 39 12.7 -0.6**
comp=Z,5.1nm,0.5s,baz=95,slow=7.1,SNR=17
comp=Z,5.1nm,0.5s
ARU Arti 85.41 328 P **P** **13 39 21.4 -0.2**
comp=Z,10nm,0.5s,baz=137,slow=2.5,SNR=20
comp=Z,10nm,0.5s
ARU Arti 85.41 328 P **P** **13 39 21.0 -0.5**
ARU IAmb IAmb 13 39 22.0
comp=Z,13nm,0.7s
K20K Telida 90.28 26 P **P** **13 39 44.6 -0.1**
ILAR Eielson Array 93.66 25 P **P** **13 39 58.5 -1.7**
comp=Z,0.9nm,0.8s,baz=285,slow=4.8,SNR=8.0
comp=Z,0.9nm,0.8s
SNAA Sanae 95.47 194 P **P** **13 40 08.6 0.0**
comp=Z,1.0nm,0.6s,baz=205,slow=6.5,SNR=9.7
comp=Z,1.0nm,0.6s
SNAA Sanae 95.47 194 P **P** **13 40 09.2 +0.6**
SNAA IAmb IAmb 13 40 10.5
comp=Z,4.2nm,1.3s
ARCES ARCESS Array B 101.40 340 P **Pdif** **13 40 33.8 -1.3**
comp=Z,1.3nm,0.7s,baz=89,slow=7.7,SNR=8.3
AKASG Malin Array Be 101.84 320 P **Pdif** **13 40 35.6 -1.8**
comp=Z,0.4nm,0.4s,baz=70,slow=2.6,SNR=4.0
YKA Yellowknife Ar 108.07 26 PKiKP **PKiKP** **13 45 09.6 -1.3**
comp=Z,0.3nm,0.7s,baz=299,slow=1.2,SNR=5.2
YKA PKKPbc **PKKPbc** **13 56 22.0 -3.9**
comp=Z,0.4nm,0.6s,baz=112,slow=3.5,SNR=5.6
GERES GERESS Array B 112.05 320 PKiKP **PKiKP** **13 45 17.0 -1.9**
comp=Z,0.3nm,0.4s,baz=94,slow=2.9,SNR=3.5
TXAR Lajitas Array 125.50 59 PKP **PKPdf** **13 45 45.4 +0.1**
comp=Z,0.5nm,0.4s,baz=197,slow=3.2,SNR=12
TORD Torodi Ar. Bea 128.20 281 PKP **PKPdf** **13 45 50.3 -0.4**
comp=Z,1.9nm,0.6s,baz=74,slow=2.0,SNR=10
PLCA Paso Flores 129.05 161 PKP **PKPdf** **13 45 51.9 +0.1**
comp=Z,3.1nm,0.7s,baz=246,slow=2.6,SNR=5.1
PLCA Paso Flores 129.05 161 **PKPdf** **13 45 53.3 +1.4**
DBIC Dimbokro 134.56 272 PKP **PKPdf** **13 46 03.4 +0.6**
comp=Z,3.0nm,0.4s,baz=20,slow=2.5,SNR=4.2
CPUP Villa Florida 146.19 169 PKPbc **PKPdf** **13 46 24.9 +1.5**
comp=Z,11nm,0.8s,baz=226,slow=0.8,SNR=9.5
CPUP Villa Florida 146.19 169 **PKPdf** **13 46 25.0 +1.6**
LPAZ La Paz 151.06 143 PKP **PKPdf** **13 46 32.7 +0.4**
comp=Z,2.9nm,0.5s,baz=84,slow=1.6,SNR=6.0
LPAZ PKPbc **PKPbc** **13 46 38.6 +0.4**
comp=Z,4.1nm,0.4s,baz=10,slow=2.1,SNR=29
LPAZ La Paz 151.06 143 **PKPbc** **13 46 39.5 +1.3**

*IDC **10** 13:39:20.7±5.5, 36°.61N×71°.29E, h81km±47km, mb3.2/6, mbtmp3.6/11, ML3.3/5, Error ellipse: s-maj=35.5km s-min=25.8km az=20.0*
*NNC **10** 13:39:27.3±3.6, 37°.11N×71°.11E, h145km±68km, mb2.8, mpv3.6, Error ellipse: s-maj=32.5km s-min=21.6km az=14.0*
ISC 10 13:39:23.3±1.0, 36°.89N±0°.09×71°.01E±0°.09, h100km, n16, σ2s01/22, mb3.3/6, 1C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.22**	**357**	P		**Pn**	**13 40 53.8 +1.2**
	0.7nm,0.2s,baz=187,slow=15,SNR=28						
KK31				S		**Sn**	**13 42 03.0 +0.8**
	8.4nm,0.5s,baz=189,slow=29,SNR=6.4						
AAK	**Ala-Archa**	**6.34**	**24**	P		**Pn**	**13 40 55.1 +0.8**
	2.3nm,0.3s,baz=192,slow=4.0,SNR=4.5						
AAK				S		**Sn**	**13 42 06.2 +0.9**
	11nm,0.6s,baz=162,slow=22,SNR=8.3						
	4.4nm,0.3s						
CHMS	**Chumysh**	**6.75**	**24**	⇑P		**Pn**	**13 41 00.6 +0.9**
	2.9nm,0.3s						
CHMS				⇓S		**Sn**	**13 42 14.5 -0.6**
	16nm,1.1s						
TKM2	**Tokmak 2**	**6.98**	**29**	⇓P		**Pn**	**13 41 04.3 +1.2**
	3.9nm,0.7s						
TKM2				⇓S		**Sn**	**13 42 19.7 -1.3**
	8.2nm,1.0s						
MK31	**Makanchi Array**	**12.98**	**37**	P		**Pn**	**13 42 26.3 +2.5**
	0.4nm,0.4s,baz=211,slow=8.3,SNR=5.8						
MKAR	**Makanchi Array**	**12.98**	**37**	P		**Pn**	**13 42 22.0 -1.8**
	0.1nm,0.3s,baz=216,slow=12,SNR=4.9						
	1.0nm,0.8s						
AB31	**Akbulak array**	**14.75**	**330**	P		**Pn**	**13 42 46.0 -0.6**
	0.2nm,0.3s,baz=160,slow=11,SNR=14						
AB31				⇓S		**Sn**	**13 45 27.3 -1.9**
	0.2nm,0.3s,baz=154,slow=23,SNR=4.3						
KURBB	**Kurchatov Arra**	**14.76**	**19**	P		**Pn**	**13 42 47.7 +0.9**
	baz=204,slow=11,SNR=2.3						
	0.2nm,0.4s						
AKTO	**Aktyubinsk**	**16.45**	**329**	P		**P**	**13 43 10.6 +1.7**
	0.1nm,0.3s,baz=146,slow=9.0,SNR=2.3						
AKTO				S		**Sn**	**13 46 04.4 -5.9**
	0.3nm,0.3s,baz=32,slow=15,SNR=1.4						
	0.4nm,0.3s						
ZALV	**Zalesovo Beam**	**19.56**	**25**	P		**P**	**13 43 43.2 +0.2**
	0.6nm,0.3s,baz=216,slow=9.8,SNR=7.9						
	1.7nm,0.3s						
SONM	**Songino Array**	**28.11**	**56**	P		**P**	**13 45 05.6 -0.1**
	0.3nm,0.4s,baz=254,slow=8.9,SNR=2.0						
	0.3nm,0.4s						
ARCES	**ARCESS Array B**	**40.79**	**337**	P		**P**	**13 46 56.3 +2.0**
	0.6nm,0.5s,baz=108,slow=8.6,SNR=5.5						
	0.6nm,0.5s						
TORD	**Torodi Ar. Bea**	**65.73**	**268**	P		**P**	**13 49 58.6 +0.9**
	0.3nm,0.6s,baz=58,slow=7.2,SNR=2.1						
	0.3nm,0.6s						
YKA	**Yellowknife Ar**	**80.86**	**3**	P		**P**	**13 51 26.8 +1.0**
	0.1nm,0.5s,baz=353,slow=5.6,SNR=2.4						
	0.1nm,0.5s						
WRA	**Warramunga Arr**	**82.19**	**122**	P		**P**	**13 51 31.1 -2.3**
	0.4nm,1.0s,baz=329,slow=4.8,SNR=1.7						
	0.4nm,1.0s						
ASAR	**Alice Springs**	**84.47**	**125**	P		**P**	**13 51 42.5 -2.5**
	0.3nm,0.7s,baz=311,slow=5.3,SNR=6.5						
	0.3nm,0.7s						

*IDC **10** 13:54:20.8±1.8, 5°.38N×126°.32E, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=160.3km s-min=19.5km az=68.0*
ISC 10 13:54:20.5±1.3, 5°.71N±0°.09×126°.84E±0°.09, h10km, n8, σ1s03/11, mb3.4/3, 2C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**1.19**	**289**	⇓*e*P		**Pb**	**13 54 42.1 -0.9**
DAV	**Davao City (W)**	**1.84**	**317**	Pn		**Pb**	**13 54 53.7 -0.5**
	2.6nm,0.3s,baz=81,slow=18,SNR=1.2						
DAV				Sn		**Sg**	**13 55 20.3 +0.7**
	26nm,0.3s,baz=244,slow=20,SNR=1.6						
GSPH	**General Santos**	**1.92**	**281**	⇑*i*P		**Pb**	**13 54 54.4 -1.2**
GSPH				*i* S		**Sn**	**13 55 16.9 -0.6**
KCP	**Kidapawan**	**2.16**	**307**	⇑*i*P		**Pg**	**13 55 02.0 +0.1**
KCP				*i* S		**Sg**	**13 55 30.9 +0.9**
GLSP	**General Luna,**	**4.11**	**350**	⇓*e*P		**Pb**	**13 55 31.4 -1.5**
WRA	**Warramunga Arr**	**26.54**	**164**	P		**P**	**13 59 59.7 +1.0**
	0.6nm,1.1s,baz=343,slow=10,SNR=4.7						
	0.6nm,1.1s						
ASAR	**Alice Springs**	**30.00**	**167**	P		**P**	**14 00 29.3 -0.3**
	0.6nm,1.0s,baz=344,slow=6.9,SNR=4.2						
	0.6nm,1.0s						
MKAR	**Makanchi Array**	**56.01**	**324**	P		**P**	**14 04 00.4 +1.1**
	0.2nm,0.5s,baz=115,slow=7.9,SNR=2.1						
	0.2nm,0.5s						

IDC 10 13:57:16.2±1.8, 2°.77N×126°.38E, h0km, mb3.3/3, mbtmp3.4/4, ML3.3/1, Error ellipse: s-maj=88.4km s-min=27.2km az=59.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.08**	**126**	Pn		Pn	13 58 46.4 -1.0
	0.7nm,0.3s,baz=58,slow=9.5,SNR=2.6						
SIJI				Sn		Sn	13 59 45.4 -12
	0.8nm,0.3s,baz=159,slow=23,SNR=2.7						
	2.0nm,0.3s						
WRA	**Warramunga Arr**	**23.89**	**161**	P		P	14 02 31.7 0.0
	0.8nm,0.8s,baz=338,slow=10,SNR=4.9						
	0.8nm,0.8s						
ASAR	**Alice Springs**	**27.28**	**165**	P		P	14 03 03.1 +0.5
	0.3nm,0.9s,baz=348,slow=8.8,SNR=1.5						
	0.3nm,0.9s						
MKAR	**Makanchi Array**	**58.14**	**326**	P		P	14 07 11.6 -0.2
	0.3nm,0.5s,baz=114,slow=7.9,SNR=3.0						
	0.3nm,0.5s						

*IDC **10** 14:11:39.4±1.0, 27°.99N×142°.95E, h0km, mb3.7/5, mbtmp3.7/5, MS2.9/5, Error ellipse: s-maj=51.6km s-min=17.0km az=119.0*
*JMA **10** 14:11:42.7±0.1, 28°.2N±0°.7×14°2E±°, h66km, MV3.6/10, NEAR CHICHIJIMA ISLAND*
ISC 10 14:11:43.0±0.9, 28°.16N±0°.05×142°.6E±0°.2, h25km, n22, σ0s85/16, mb3.7/6, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.11**	**197**	P		**Pb**	**14 12 03.1 -0.4**
CBIJ				S		**Sb**	**14 12 17.9 +0.4**
JCJ	**Chichijima**	**1.11**	**197**	Pn		**Pn**	**14 12 02.7 -0.3**
	31nm,0.3s,baz=348,slow=19,SNR=13						
JCJ				Sn		**Sb**	**14 12 18.0 +0.5**
	186nm,0.3s,baz=100,slow=22,SNR=12						
JHH2	**Haha-jima-NKT2**	**1.56**	**192**	P		**Pn**	**14 12 09.2 0.0**
JHH2				S		**Sb**	**14 12 29.5 -0.9**
JHJ	**Hachijo jima 2**	**5.49**	**335**	LR		LR	14 15 05.6
	comp=Z,120nm,19.3s,baz=152,slow=36						
JMKN	**Mikurajimanish**	**6.25**	**337**	P		**Pn**	**14 13 12.5 -1.2**
BSO1	**Boso 1**	**6.61**	**349**	P		**Pn**	**14 13 17.6 -0.6**
BSO3	**Boso 3**	**6.85**	**346**	P		**Pn**	**14 13 21.5 -0.1**
BSO4	**Boso 4**	**7.07**	**345**	P		**Pn**	**14 13 24.6 -0.2**
TTO1	**TONANKAI O.B.S**	**7.36**	**319**	P		**Pn**	**14 13 28.2 -0.4**
JOW	**Kunigami**	**12.74**	**267**	LR		LR	14 19 19.9
	comp=Z,49nm,18.8s,baz=316,slow=35						
KSRS	**Korea Array**	**15.38**	**311**	LR		LR	14 21 09.9
	comp=Z,54nm,18.6s,baz=35,slow=36						
H11N2	**WAKE ISLAND Hy**	**23.75**	**105**	T		T	14 41 17.3
	baz=297,slow=75						
H11N1	**WAKE ISLAND Hy**	**23.75**	**105**	T		T	14 41 18.8
	baz=297,slow=75						
H11N3	**WAKE ISLAND Hy**	**23.77**	**105**	T		T	14 41 19.0
	baz=297,slow=75						
DAV	**Davao City (W)**	**26.42**	**221**	LR		LR	14 26 24.2
	comp=Z,17nm,20.6s,baz=160,slow=33						
CMAR	**Chiang Mai Arr**	**41.01**	**266**	LR		LR	14 36 40.3
	comp=Z,20nm,18.9s,baz=155,slow=36						
WRA	**Warramunga Arr**	**48.47**	**190**	P		**P**	**14 20 23.3 -0.4**
	2.0nm,0.7s,baz=13,slow=8.5,SNR=13						
	2.0nm,0.7s						
ASAR	**Alice Springs**	**52.19**	**190**	P		**P**	**14 20 51.2 -0.7**
	0.2nm,0.4s,baz=3.0,slow=6.4,SNR=4.3						
	0.2nm,0.4s						
YKA	**Yellowknife Ar**	**71.06**	**29**	P		**P**	**14 22 58.7 +0.1**
	0.4nm,0.8s,baz=294,slow=6.6,SNR=4.9						
	0.4nm,0.8s						
FINES	**FINESS Array B**	**77.14**	**334**	P		**P**	**14 23 36.4 +2.2**
	0.7nm,0.6s,baz=46,slow=5.5,SNR=4.0						
	0.7nm,0.6s						
NVAR	**Mina Array Bea**	**79.61**	**52**	P		**P**	**14 23 48.1 -0.5**
	0.3nm,0.6s,baz=304,slow=7.3,SNR=2.5						
	0.3nm,0.6s						
NB2	**NORSAR Subarra**	**82.74**	**338**	P		P	14 23 58.7 -5.9
	comp=Z,0.8nm,0.5s,baz=43,slow=5.6						

*IDC **10** 14:12:54.8±0.5, 35°.34N×136°.92E, h302km±5km, mb3.6/23, mbtmp4.2/28, Error ellipse: s-maj=10.0km s-min=8.1km az=85.0*
*JMA **10** 14:12:55.3±0.1, 35°.4N±0°.6×136°.9E±0°.6, h306km±1km, MV4.0/37, SW GIFU PREF*
*NEIC **10** 14:12:55.2±1.6, 35°.35N±0°.07×136°.92E±0°.08, h304km±6km, mb4.2/47, Error ellipse: s-maj=10.7km s-min=9.4km az=151.0*
*NIED **10** 14:12:55.3, 35°.41N×136°.87E, h306km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr0.07; Mθθ-0.69; Mφφ0.62; Mrθ-1.46; Mrφ-0.38; Mθφ0.88; Fault plane solution: M₀1.86000×10¹⁵ NP1:φs32.00000°, δ24.00000°, λ3.00000°. NP2:φs300.00000°, δ89.00000°, λ114.00000°.*
ISC 10 14:12:54.9±0.5, 35°.34N±0°.05×136°.88E±0°.05, h304km±5km, n139, σ0s75/148, mb4.1/49, 13D, Western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JICN	**Ichinomiyachia**	**0.05**	**215**	P		**Pn**	**14 13 04.3 +0.8**
JICN				S		S	**14 14 04.5 +0.5**
INU	**Inuyama**	**0.12**	**86**			**Pn**	**14 13 33.8 +0.5**
JYTA	**Yamagatataniai**	**0.28**	**336**	⇓P		**Pn**	**14 13 34.3 +0.8**
JYTA				⇓S		**S**	**14 14 04.4 +0.3**
JGF	**Kuroka**	**0.47**	**56**			**Pn**	**14 13 34.1 +0.2**
JIE	**Ise**	**0.96**	**188**	⇓P		**Pn**	**14 13 36.7 +1.1**
JIE				⇓S		**S**	**14 14 08.6 +0.6**
JKG	**Kaga**	**1.03**	**335**	P		**Pn**	**14 13 36.2 +0.4**
JKG				S		**S**	**14 14 08.3 0.0**
JWT	**Wachi**	**1.21**	**268**	⇓P		**Pn**	**14 13 37.6 +0.9**
JWT				⇓S		**S**	**14 14 10.1 +0.1**
JYN	**Shimob**	**1.37**	**83**	P		**Pn**	**14 13 38.2 +0.5**
JYN				S		**S**	**14 14 11.3 -0.5**
JFNN	**Fujinakano**	**1.49**	**95**	P		**Pn**	**14 13 39.4 +1.0**
JWY	**Kouya**	**1.54**	**224**	⇓P		**Pn**	**14 13 39.9 +1.0**
TK02	**Tokai 2**	**1.57**	**152**	⇓P		**Pn**	**14 13 40.2 +1.5**
MAJO	**Matsushiro**	**1.61**	**42**	Pn		**Pn**	**14 13 38.9 -0.3**
MAT	**Matsushiro**	**1.61**	**42**	P		**Pn**	**14 13 39.5 +0.3**
MAT				S		**S**	**14 14 13.7 -0.8**
MJAR	**Matsushiro Arr**	**1.61**	**42**	P		**Pn**	**14 13 38.8 -0.4**
	262nm,0.4s,baz=220,slow=6.5,SNR=592						
MJAR				S		**S**	**14 14 13.7 -0.8**
	4.6nm,0.3s,baz=150,slow=4.1,SNR=0.5						
MJAR	**Matsushiro Arr**	**1.61**	**42**			**Pn**	**14 13 38.4 -0.8**
MJB9	**Matsu-Tunnel**	**1.61**	**41**	Pn		**Pn**	**14 13 38.9 -0.3**
TTO1	**TONANKAI O.B.S**	**1.72**	**183**	⇓P		**Pn**	**14 13 41.4 +1.7**
**JR

JTNC	Tanabenakahech	1.84	215	⇓P		Pn	14 13 41.8	+0.8	
JSZ	Suzu	2.14	10	P		Pn	14 13 43.2	+0.2	
JAG	Ashikaga	2.36	62	P		Pn	14 13 44.9	0.0	
JHG	Hegura jima	2.50	1	P		Pn	14 13 46.8	+0.6	
JAI	Aioi	2.53	233	⇓P		Pn	14 13 47.2	+0.7	
JYT	Yasato	2.84	71			Pn	14 13 47.5	-1.8	
JSD	Sado	2.91	22	Pn		Pn	14 13 49.8	-0.1	
JMN	Monobe	2.95	238	Pn		Pn	14 13 51.0	+0.5	
JOI	OKI	3.10	289	⇓P		Pn	14 13 52.3	+0.5	
JHS	Saijyo	3.10	265	Pn		Pn	14 13 53.0	+1.1	
JHS	Saijyo	3.10	265	⇓P		Pn	14 13 52.6	+0.7	
JHJ	Hachijo jima 2	3.27	132	P		Pn	14 13 54.0	+0.3	
	26nm,0.3s,baz=253,slow=20,SNR=5.3								
JHJ				S		S	14 14 41.4	+0.7	
	159nm,0.4s,baz=77,slow=23,SNR=7.3								
JHJ2	Mitsune	3.30	132	Pn		Pn	14 13 54.0	0.0	
JMM	Marumori	4.04	50			Pn	14 14 01.0	-0.7	
JNU	Nakatsue	5.44	248	P		Pn	14 14 18.4	+0.6	
	baz=53,slow=20								
JTU	Tsushima	6.20	265	Pn		Pn	14 14 26.5	-0.2	
JTM	Tenmabayashi	6.36	30	Pn		Pn	14 14 28.4	-0.2	
KSCHJ	Chungju	7.37	285	Pn		Pn	14 14 41.1	+0.4	
KSRS	Korea Array	7.52	289	P		Pn	14 14 43.5	+0.9	
	3.4nm,0.7s,baz=105,slow=13,SNR=12								
KSAR	Wonju Array Be	7.55	289	Pn		Pn	14 14 43.1	+0.1	
ERM	Erimo	8.28	34	Pn		Pn	14 14 49.5	-2.3	
JEW	Eniwo	8.29	24	Pn		Pn	14 14 51.2	-0.8	
JCJ	Chichijima	9.39	150	S		S	14 16 39.3	-13	
	56nm,0.7s,baz=270,slow=20,SNR=1.9								
USRK	Ussuriysk Ar.	9.61	338	P		Pn	14 15 08.1	0.0	
	2.3nm,0.5s,baz=144,slow=9.7,SNR=3.4								
JKA	Kamikawa-asahi	9.81	25	Pn		Pn	14 15 08.7	-1.8	
JOW	Kunigami	11.23	223	P		Pn	14 15 28.3	+0.1	
	5.9nm,0.4s,baz=353,slow=8.8,SNR=13								
JOW	Kunigami	11.23	223	P		Pn	14 15 28.1	-0.1	
YSS	Yuzh-Sakhalins	12.41	19			Pn	14 15 41.1	-1.1	
KLR	Kul'dur	14.38	346	P		P	14 16 03.1	-1.6	
	5.6nm,0.5s,baz=138,slow=10.0,SNR=21								
YHNB	Yeheng	17.10	236	P		P	14 16 34.0	-0.8	
SSLB	Suanglung	17.98	234	P		P	14 16 42.9	-1.4	
SSLB				IAmb	IAmb		14 16 46.6		
	comp=Z,21nm,1.0s								
PEA0B	Petropavlovsk-	23.06	33	P		P	14 17 34.8	+0.8	
PEA0B				IAmb	IAmb		14 17 35.8		
	comp=Z,17nm,1.1s								
PETK	Petropavlovsk-	23.06	33	P		P	14 17 33.6	-0.3	
	comp=Z,7.0nm,0.7s,baz=231,slow=5.9,SNR=28								
	comp=Z,7.0nm,0.7s								
PETK	Petropavlovsk-	23.06	33	P		P	14 17 34.0	+0.1	
PET	Petropavlovsk	23.43	34	P		P	14 17 38.1	+0.8	
PET				IAmb	IAmb		14 17 38.8		
	comp=Z,8.8nm,0.9s								
ENH	Enshi	23.53	265	P		P	14 17 38.4	-0.3	
SONM	Songino Array	25.81	308	P		P	14 17 59.5	+0.5	
	comp=Z,2.4nm,0.6s,baz=93,slow=5.9,SNR=12								
	comp=Z,2.4nm,0.6s								
SONM	Songino Array	25.81	308	P		P	14 17 59.0	0.0	
SEY	Seymchan	29.26	14	P		P	14 18 29.2	+0.1	
	comp=Z,2.2nm,0.5s,baz=206,slow=8.7,SNR=15								
	comp=Z,2.2nm,0.5s								
TIXI	Tiksi	36.62	356	P		P	14 19 31.9	-0.5	
	comp=Z,6.6nm,0.6s,baz=87,slow=22,SNR=47								
	comp=Z,6.6nm,0.6s								
TIXI	Tiksi	36.62	356	P		P	14 19 31.5	-0.8	
TIXI				IAmb	IAmb		14 19 33.0		
	comp=Z,8.0nm,0.7s								
BILL	Bilibino	36.73	18	P		P	14 19 34.5	+1.2	
BILL				IAmb	IAmb		14 19 35.3		
	comp=Z,15nm,1.1s								
ADK	Adak	36.77	49	P		P	14 19 33.8	-0.1	
TOLI2	Tolitoli	37.21	207	P		P	14 19 36.4	-1.6	
TOLI2				IAmb	IAmb		14 19 39.3		
	comp=Z,8.0nm,0.8s								
CMAR	Chiang Mai Arr	37.51	253	P		P	14 19 40.5	0.0	
	comp=Z,0.8nm,0.5s,baz=42,slow=8.1,SNR=4.8								
	comp=Z,0.8nm,0.5s								
FAKI	Fak Fak	38.30	187	P		P	14 19 46.8	-0.3	
ZALV	Zalesovo Beam	40.39	314	P		P	14 20 04.4	+0.7	
	comp=Z,0.8nm,0.5s,baz=97,slow=6.5,SNR=3.4								
	comp=Z,0.8nm,0.5s								
KSM	Kuching	41.78	222	P		P	14 20 15.4	-0.1	
KSM				IAmb	IAmb		14 20 17.8		
	comp=Z,9.6nm,0.8s								
MK31	Makanchi Array	41.93	303	P		P	14 20 17.3	+0.9	
MKAR	Makanchi Array	41.93	303	P		P	14 20 17.2	+0.8	
	comp=Z,1.2nm,0.4s,baz=91,slow=10.0,SNR=10								
MKAR				ScP		ScP	14 25 26.1	-0.2	
	comp=Z,0.7nm,0.7s,baz=84,slow=5.4,SNR=5.3								
	comp=Z,1.2nm,0.4s								
MKAR	Makanchi Array	41.93	303	P		P	14 20 16.9	+0.5	
TAPN	Taplejung	42.38	273	*e*P		P	14 20 20.4	-0.2	
	comp=Z,11nm,0.4s								
NRIK	Noril'sk	43.32	337	P		P	14 20 27.2	+0.1	
	comp=Z,3.5nm,0.3s,baz=109,slow=5.5,SNR=5.1								
	comp=Z,3.5nm,0.3s								
RAMN	Ramite	43.45	273	*e*P		P	14 20 28.8	-0.2	
JIRN	Jiri	43.50	274	*e*P		P	14 20 29.9	+0.3	
GUN	Gumba	43.66	275	*e*P		P	14 20 31.6	+0.8	
	comp=Z,8.9nm,0.4s								
KURK	Kurchatov	44.11	309	P		P	14 20 33.8	+0.2	
PKI	Pulchoki	44.17	275	*e*Pg		P	14 20 34.6	-0.2	
KURBB	Kurchatov Arra	44.18	309	P		P	14 20 34.3	+0.2	
	comp=Z,0.5nm,0.2s,baz=97,slow=8.9,SNR=1.9								
	comp=Z,0.5nm,0.2s								
GKN	Gorkha	44.63	276	*e*P		P	14 20 38.7	+0.5	
	comp=Z,9.3nm,0.3s								
DANN	Dangsing	45.21	277	*e*P		P	14 20 43.3	+0.4	
	comp=Z,20nm,0.4s								
MTN	Manton Dam	48.23	188	P		P	14 21 04.8	-0.9	
MTN				IAmb	IAmb		14 21 05.6		
	comp=Z,16nm,0.6s								
COEN	Coen	49.39	172	P		P	14 21 14.2	-0.4	
COEN				IAmb	IAmb		14 21 32.8		
	comp=Z,18nm,1.2s								
J20K	Nowinta River	49.75	32	P		P	14 21 18.2	+1.5	
J20K				IAmb	IAmb		14 21 19.3		
	comp=Z,6.3nm,0.8s								
KDAK	Kodiak Island	50.79	41	P		P	14 21 24.4	-0.1	
KDAK				IAmb	IAmb		14 21 44.3		
	comp=Z,23nm,1.3s								
KKAR	Karatay Array	50.79	300	P		P	14 21 25.8	+0.9	
MLY	Manley	51.21	31	P		P	14 21 28.6	+0.9	
KNRA	Kununurra	51.32	190	P		P	14 21 28.4	-0.4	
KNRA				IAmb	IAmb		14 21 29.4		
	comp=Z,31nm,1.4s								
SUA	Susitna One	51.39	36	P		P	14 21 29.0	-0.1	
SUA				IAmb	IAmb		14 21 33.3		
	comp=Z,15nm,1.3s								
TOLK	Toolik Lake Re	51.64	27	P		P	14 21 32.4	+1.7	
H23K	Yukon River	51.69	30	P		P	14 21 32.3	+1.2	
H23K				IAmb	IAmb		14 21 34.1		
	comp=Z,6.5nm,0.8s								
MDM	Murphy Dome	52.28	31	P		P	14 21 36.4	+1.0	
MDM				IAmb	IAmb		14 21 37.7		
	comp=Z,11nm,0.8s								
IL31		52.87	31	P		P	14 21 39.8	+0.2	
ILAR	Eielson Array	52.87	31	P		P	14 21 39.5	-0.2	
	comp=Z,1.3nm,0.7s,baz=277,slow=7.5,SNR=14								
	comp=Z,1.3nm,0.7s								
ILAR	Eielson Array	52.87	31	P		P	14 21 40.3	+0.6	
BMAR	Burnt Mountain	53.57	28	P		P	14 21 46.6	+1.9	
WB0	Warramunga Arr	54.85	183	P		P	14 21 53.9	-0.6	
WB0				IAmb	IAmb		14 21 58.3		
	comp=Z,8.2nm,1.0s								
M26K	Nabesna, AK	54.91	34	P		P	14 21 55.1	+0.7	
WB2	Warramunga Arr	55.03	183	P		P	14 21 55.2	-0.5	
WB2				IAmb	IAmb		14 21 55.8		
	comp=Z,5.1nm,0.8s								
WRA	Warramunga Arr	55.03	183	P		P	14 21 55.1	-0.6	
	comp=Z,4.4nm,0.3s,baz=360,slow=7.6,SNR=75								
	comp=Z,4.4nm,0.3s								
WRA	Warramunga Arr	55.03	183	P		P	14 21 54.9	-0.9	
K27K	Chicken	55.04	32	P		P	14 21 56.1	+0.8	
WR0	Warramunga Arr	55.04	183	P		P	14 21 55.4	-0.4	
L27K	Beaver Creek,	55.32	33	P		P	14 21 58.7	+1.4	
L27K				IAmb	IAmb		14 21 59.9		
	comp=Z,6.2nm,1.2s								
BCAR	Beaver Creek A	55.34	33	P		P	14 21 58.6	+1.1	
ABKAR	Akbulak array	56.21	310	P		P	14 22 04.2	+0.5	
ABKAR	Akbulak array	56.21	310	P		P	14 22 04.0	+0.3	
EPYK	Eagle Plains	56.79	29	P		P	14 22 08.9	+1.2	
INK	Inuvik	57.54	26	P		P	14 22 12.8	+0.1	
INK				IAmb	IAmb		14 22 14.8		
	comp=Z,9.4nm,1.5s								
HYT	Haines Junctio	57.82	35	P		P	14 22 16.0	+1.0	
HYT				IAmb	IAmb		14 22 18.3		
	comp=Z,5.1nm,1.0s								
AS31	Alice Springs	58.75	183	P		P	14 22 21.3	-0.4	
ASAR	Alice Springs	58.75	183	P		P	14 22 21.5	-0.2	
	comp=Z,2.0nm,0.7s,baz=13,slow=12,SNR=24								
	comp=Z,2.0nm,0.7s								
ASAR	Alice Springs	58.75	183	P		P	14 22 21.1	-0.6	
PSA00	Pilbara Seismi	58.86	199	P		P	14 22 21.4	-0.9	
PSA00				IAmb	IAmb		14 22 35.7		
	comp=Z,4.7nm,1.2s								
A36M	Sachs Harbour	59.17	21	P		P	14 22 23.9	0.0	
CRAG	Craig	61.75	40	P		P	14 22 42.6	+1.2	
CRAG				IAmb	IAmb		14 22 49.6		
	comp=Z,14nm,1.5s								
EUNU	Eureka	62.38	8	P		P	14 22 45.4	+0.1	
EUNU				IAmb	IAmb		14 22 46.4		
	comp=Z,4.6nm,0.7s								
KEV	Kevo	63.70	339	P		P	14 22 53.8	-0.2	
ARCES	ARCESS Array B	64.26	339	P		P	14 22 57.9	+0.2	
	comp=Z,1.5nm,0.5s,baz=56,slow=8.0,SNR=18								
	comp=Z,1.5nm,0.5s								
ARCES	ARCESS Array B	64.26	339	P		P	14 22 57.6	-0.1	
RES	Resolute Bay	65.12	13	P		P	14 23 02.9	-0.1	
RES				IAmb	IAmb		14 23 04.2		
	comp=Z,5.4nm,0.9s								
STKA	Stephens Creek	67.01	176	P		P	14 23 15.8	+0.2	
	comp=Z,1.2nm,0.6s,baz=337,slow=14,SNR=1.4								
	comp=Z,1.2nm,0.6s								
YKA	Yellowknife Ar	67.08	29	P		P	14 23 15.7	0.0	
	comp=Z,1.4nm,0.6s,baz=300,slow=6.2,SNR=20								
	comp=Z,1.4nm,0.6s								
YKA	Yellowknife Ar	67.08	29	P		P	14 23 16.1	+0.5	
FIA1	FINESS Array S	68.56	331	P		P	14 23 24.9	+0.1	
FINES	FINESS Array B	68.56	331	P		P	14 23 24.8	-0.1	
	comp=Z,4.2nm,0.5s,baz=73,slow=5.6,SNR=56								
	comp=Z,4.2nm,0.5s								
FINES	FINESS Array B	68.56	331	P		P	14 23 24.3	-0.5	
NLWA	Neilton Lookou	70.54	45	P		P	14 23 38.8	+1.6	
SUMG	Summit	72.33	359	*i* P		P	14 23 48.0	+0.2	
AKASG	Malin Array Be	73.33	321	P		P	14 23 53.7	+0.1	
	comp=Z,0.2nm,0.3s,baz=72,slow=12,SNR=5.2								
	comp=Z,0.2nm,0.3s								
NC204	NORSAR Array S	74.25	336	P		P	14 23 58.7	0.0	
NOA	NORSAR Array B	74.27	336	P		P	14 23 58.7	-0.2	
	comp=Z,1.8nm,0.7s,baz=55,slow=7.3,SNR=7.3								
	comp=Z,1.8nm,0.7s								
ICESG	Greenland Ices	75.85	359	*i* P		P	14 24 07.3	-0.7	
NVAR	Mina Array Bea	78.92	51	P		P	14 24 25.8	+0.3	
	comp=Z,1.6nm,0.8s,baz=285,slow=4.6,SNR=8.7								
	comp=Z,1.6nm,0.8s								
PDAR	Pinedale Array	81.44	43	P		P	14 24 38.6	-0.1	
	comp=Z,1.4nm,0.7s,baz=322,slow=1.9,SNR=10								
	comp=Z,1.4nm,0.7s								
PDAR	Pinedale Array	81.44	43	P		P	14 24 38.9	+0.2	
GERES	GERESS Array B	82.14	326	P		P	14 24 42.2	+0.1	
	comp=Z,0.3nm,0.5s,baz=27,slow=6.6,SNR=2.3								
	comp=Z,0.3nm,0.5s								
ULM	Lac du Bonnet	82.89	31	P		P	14 24 45.8	+0.1	
	comp=Z,2.5nm,0.7s,baz=315,slow=7.1,SNR=3.6								
	comp=Z,2.5nm,0.7s								
TXAR	Lajitas Array	94.04	50	P		P	14 25 39.8	+0.6	
	comp=Z,1.6nm,0.7s,baz=294,slow=2.9,SNR=19								
	comp=Z,1.6nm,0.7s								
LPAZ	La Paz	150.70	56	PKPbc		PKPbc	14 32 12.3	-0.2	
	comp=Z,1.4nm,0.7s,baz=270,slow=5.3,SNR=3.7								

NDI ***10*** *14:21:06.9±2.8, 22°.65N×93°.86E, h30km, ML3.8, mb4.3(NEIC)*
NEIC ***10*** *14:21:08.7±1.5, 22°.70N±0°.10×93°.8E±0°.1, h41km±8km, mb4.3/19, Error ellipse: s-maj=18.0km s-min=10.3km az=45.0*
IDC ***10*** *14:21:08.3±3.2, 22°.71N×93°.83E, h47km±31km, mb3.6/14, mbtmp3.8/15, ML3.6/1, MS3.2/5, Error ellipse: s-maj=34.2km s-min=13.1km az=57.0*

ISC 10 14:21:07.4±0.6, 22.70N±0°.07×93.76E±0°.07, h35km, n62, σ1s90/74, mb4.1/22, MS3.2/4, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
					Op	ISC	h	m	s	ISC
BELO	BELONIA	2.20	285	*e*P		Pn	14 21	45.1	+3.7	
KOHI	KOHIMA	3.02	6	*e*P		Pn	14 21	53.1	+0.1	
SHL	Shillong	3.33	329	Pn		Pn	14 21	59.2	+2.1	
MOKO	MOKOCHONG	3.67	11	*e*P		Pn	14 22	03.4	+1.6	
GUWA	GUWAHATI	3.95	332	*e*P		Pn	14 22	06.3	+0.7	
TEZP	TEZPUR	3.99	348	*e*P		Pn	14 22	06.5	+0.4	
TEZP				*e*S		Sn	14 22	51.9	+0.1	
TURI	Tura	4.22	313	*e*P		Pn	14 22	08.6	-0.7	
TURI				*e*S		Sn	14 22	57.1	-0.3	
TURI				IAML			14 22	59.5		
	comp=E,419nm,0.3s									
TURI				IAML			14 23	01.2		
	comp=N,222nm,0.3s									
DHUB	DHUBRI	4.76	315	*e*P		Pn	14 22	17.8	+1.1	
DHUB				*e*S		Sn	14 23	09.9	-0.8	
DHUB				IAML			14 23	13.2		
	comp=E,120nm,0.1s									
CHTO	Chiang Mai	6.21	128			Pn	14 22	37.4	+0.8	
CMAR	Chiang Mai Arr	6.44	130	P		Pn	14 22	39.4	-0.4	
	comp=E,0.4nm,0.3s,baz=307,slow=13,SNR=3.1									
CMAR				S		Sn	14 23	52.6	+0.5	
	comp=E,1.5nm,0.3s,baz=324,slow=18,SNR=1.4									
CMAR				LR		LR	14 25	51.3		
	comp=E,47nm,21.1s,baz=185,slow=44									
	comp=E,1.7nm,0.5s									
GTK	Tadong	6.56	316	*e*P		Pn	14 22	43.1	+1.5	
GTK				*e*S		Sn	14 23	53.5	-1.7	
GTK				*e*S		Sn	14 23	54.0	-1.1	
TAPN	Taplejung	7.17	311	*e*Pn		Pn	14 22	51.3	+1.1	
TAPN				*e*Sn		Sn	14 24	11.0	+0.4	
	comp=E,163nm,0.7s									
LSA	Lhasa	7.35	342	Pn		Pn	14 22	55.0	+2.3	
RAMN	Ramite	7.75	304	*e*Pn		Pn	14 22	59.6	+1.5	
RAMN				*e*Sn		Sn	14 24	26.1	+1.3	
JIRN	Jiri	8.45	307	*e*Pn		Pn	14 23	08.4	+0.7	
JIRN				*e*Sn		Sn	14 24	42.0	0.0	
	comp=E,44nm,0.4s									
GUN	Gumba	8.81	308	*e*Pn		Pn	14 23	14.1	+1.4	
GUN				*e*Sn		Sn	14 24	50.9	-0.1	
PKI	Pulchoki	8.98	304	*e*Pn		Pn	14 23	15.7	+0.7	
PKI				*e*Sn		Sn	14 24	55.3	+0.2	
	comp=E,17nm,0.3s									
PKIN	Phulchoki	8.99	304	*e*Pn		Pn	14 23	15.7	+0.6	
PKIN				*e*Sn		Sn	14 24	55.4	0.0	
	comp=E,39nm,0.6s									
DMN	Daman	9.23	304	*e*Pn		Pn	14 23	19.2	+0.8	
DMN				*e*Sn		Sn	14 25	01.9	+0.7	
	comp=E,30nm,0.5s									
GKN	Gorkha	9.79	304	*e*Pn		Pn	14 23	26.7	+0.8	
GKN				*e*Sn		Sn	14 25	14.3	-0.4	
DANN	Dangsing	10.63	304	*e*Pn		Pn	14 23	38.2	+0.6	
DANN				*e*Sn		Sn	14 25	34.0	-1.6	
	comp=E,34nm,0.6s									
DRK	Karamyk	25.06	317	P		P	14 26	29.4	+0.5	
DRK				IAmb	IAmb		14 26	32.0		
	comp=Z,10nm,0.6s									
GAR	Garm	25.75	314	P		P	14 26	34.9	-0.1	
GAR				IAmb	IAmb		14 26	37.0		
	comp=Z,27nm,1.3s									
MK31	Makanchi Array	25.76	342	P		P	14 26	34.5	-0.3	
MKAR	Makanchi Array	25.76	342	P		P	14 26	34.9	0.0	
	comp=Z,2.3nm,0.7s,baz=153,slow=9.1,SNR=16									
	comp=Z,2.3nm,0.7s									
SONM	Songino Array	27.04	19	P		P	14 26	47.1	+0.6	
	comp=Z,6.6nm,0.5s,baz=194,slow=6.7,SNR=4.1									
	comp=Z,0.6nm,0.5s									
KURBB	Kurchatov Arra	30.30	341	P		P	14 27	14.9	-0.4	
	comp=Z,0.8nm,0.7s,baz=154,slow=7.8,SNR=4.4									
	comp=Z,0.8nm,0.7s									
KURK	Kurchatov	30.36	341	P		P	14 27	15.5	-0.3	
ZAA0	Zalesovo Array	31.93	350	P		P	14 27	28.4	-1.2	
ZAA0				IAmb	IAmb		14 27	31.9		
	comp=Z,2.0nm,0.7s									
ZALV	Zalesovo Beam	31.93	350	P		P	14 27	30.1	+0.5	
	comp=Z,1.1nm,0.5s,baz=179,slow=7.7,SNR=5.1									
	comp=Z,1.1nm,0.5s									
ZALV	Zalesovo Beam	31.93	350	P		P	14 27	30.3	+0.8	
WSAR	Wadi Sarin	32.30	278	LR		LR	14 41	55.6		
	comp=Z,69nm,19.5s,baz=164,slow=38									
KSRS	Korea Array	32.81	56	LR		LR	14 43	49.1		
	comp=Z,32nm,18.6s,baz=0.0,slow=42									
ABKAR	Akbulak array	37.57	323	P		P	14 28	19.1	+0.7	
ABKAR				IAmb	IAmb		14 28	20.2		
	comp=Z,2.0nm,0.7s									
MJAR	Matsushiro Arr	40.68	60	LR		LR	14 48	10.2		
	comp=Z,27nm,21.2s,baz=239,slow=40									
TIXI	Tiksi	52.90	13	P		P	14 30	17.5	-2.0	
	comp=Z,0.7nm,0.3s,baz=106,slow=14,SNR=8.0									
	comp=Z,0.7nm,0.3s									
TIXI	Tiksi	52.90	13	P		P	14 30	18.7	-0.9	
TIXI				IAmb	IAmb		14 30	20.2		
	comp=Z,2.5nm,1.1s									
AKASG	Malin Array Be	56.73	317	P		P	14 30	46.5	-1.1	
	comp=Z,0.4nm,0.4s,baz=74,slow=5.3,SNR=8.8									
	comp=Z,0.4nm,0.4s									
AKASG	Malin Array Be	56.73	317	P		P	14 30	46.5	-1.1	
AKASG				IAmb	IAmb		14 30	47.5		
	comp=Z,3.5nm,1.5s									
AKBB	Malin Array Si	56.73	317			P	14 30	46.7	-0.9	
AKBB				IAmb	IAmb		14 30	47.7		
	comp=Z,3.3nm,0.6s									
WB0	Warramunga Arr	57.93	134	P		P	14 30	55.5	-0.9	
WRA	Warramunga Arr	58.02	134	P		P	14 30	55.8	-1.3	
	comp=Z,0.6nm,0.6s,baz=321,slow=7.4,SNR=11									
	comp=Z,0.6nm,0.6s									
WB2	Warramunga Arr	58.02	134	P		P	14 30	57.5	+0.4	
WR0	Warramunga Arr	58.16	134	P		P	14 30	58.0	-0.1	
WR0				IAmb	IAmb		14 31	18.5		
	comp=Z,7.0nm,1.2s									
BURAR	Bucovina Array	59.26	313	P		P	14 31	06.2	+0.6	
BURAR				IAmb	IAmb		14 31	06.6		
	comp=Z,1.0nm,0.6s									
FINES	FINESS Array B	59.67	329	P		P	14 31	07.1	-0.9	
	comp=Z,1.1nm,0.7s,baz=115,slow=9.3,SNR=1.7									
	comp=Z,1.1nm,0.7s									
FINES	FINESS Array B	59.67	329	P		P	14 31	07.8	-0.1	
ASAR	Alice Springs	60.39	137	P		P	14 31	13.0	-0.5	
	comp=Z,0.5nm,0.5s,baz=319,slow=7.0,SNR=12									
ASAR				PcP		PcP	14 31	57.6	-0.7	
	comp=Z,0.6nm,0.7s,baz=320,slow=4.3,SNR=4.0									
	comp=Z,0.5nm,0.5s									
ARCES	ARCESS Array B	61.34	338	P		P	14 31	19.3	+0.1	
	comp=Z,0.5nm,0.5s,baz=93,slow=7.3,SNR=6.1									
	comp=Z,0.5nm,0.5s									
ARCES	ARCESS Array B	61.34	338	P		P	14 31	19.4	+0.1	
NOA	NORSAR Array B	66.83	328	P		P	14 31	54.3	-1.1	
	comp=Z,0.2nm,0.4s,baz=86,slow=6.7,SNR=1.7									
	comp=Z,0.2nm,0.4s									
GERES	GERESS Array B	66.83	315	P		P	14 31	55.9	+0.1	
	comp=Z,1.8nm,0.5s,baz=68,slow=4.6,SNR=15									
	comp=Z,1.8nm,0.5s									
GERES	GERESS Array B	66.83	315	P		P	14 31	56.8	+1.0	
EUNU	Eureka	77.45	0	P		P	14 32	59.3	+0.5	
TOLK	Toolik Lake Re	78.16	20	P		P	14 33	02.5	-0.4	
TOLK				IAmb	IAmb		14 33	04.3		
	comp=Z,5.4nm,1.3s									
BMAR	Burnt Mountain	80.39	19	P		P	14 33	15.3	+0.3	
ILAR	Eielson Array	81.22	22	P		P	14 33	18.9	-0.6	
	comp=Z,0.4nm,0.7s,baz=304,slow=4.7,SNR=4.6									
	comp=Z,0.4nm,0.7s									
BCAR	Beaver Creek A	84.05	22	P		P	14 33	34.9	+0.6	
MDT	Midelt	84.61	303	LR		LR	15 17	54.2		
	comp=Z,31nm,18.2s,baz=90,slow=40									
TORD	Torodi Ar. Bea	86.88	283	P		P	14 33	49.7	+0.5	
	comp=Z,0.6nm,0.7s,baz=74,slow=6.0,SNR=4.6									
	comp=Z,0.6nm,0.7s									
TORD	Torodi Ar. Bea	86.88	283	P		P	14 33	49.3	+0.1

ETM				S		Sn	14 44 22.7	-1.2	
	baz=245								
NNSB	**Datong**	**1.35**	**270**	*i* P		Pn	14 44 06.5	-0.1	
	baz=269								
NNSB				S		Sn	14 44 24.0	-0.5	
	baz=269								
NNS	**Nan Shan**	**1.36**	**271**	*e*P		Pn	14 44 06.6	0.0	
	baz=269								
NNS				S		Sn	14 44 24.0	-0.8	
	baz=269								
TATO	**Taipei**	**1.37**	**294**	*i* P		Pn	14 44 06.5	-0.1	
	baz=292								
TATO				*e*S		Sn	14 44 23.4	-1.3	
	baz=292								
YHNB	**Yeheng**	**1.38**	**280**	P		Pn	14 44 07.0	+0.2	
	baz=279								
YHNB				S		Sn	14 44 24.6	-0.5	
	baz=279								
YM01	**YM01**	**1.38**	**302**	P		Pn	14 44 07.0	+0.2	
	baz=293								
YM01				*e*S		Sn	14 44 24.8	-0.2	
	baz=293								
NSK	**Sanguang**	**1.40**	**281**	*i* P		Pn	14 44 07.5	+0.5	
	baz=279								
NSK				S		Sn	14 44 25.3	-0.1	
	baz=279								
TEGC	**Jichi Village**	**1.41**	**240**	*i* P		Pn	14 44 06.8	-0.2	
	baz=235								
TEGC				*e*S		Sn	14 44 25.0	-0.5	
	baz=235								
ESL	**Shilin**	**1.45**	**245**	P		Pn	14 44 06.9	-0.6	
	baz=239								
ESL				S		Sn	14 44 25.4	-0.9	
	baz=239								
TWS1	**Kuangyinshan**	**1.48**	**297**	*e*P		Pn	14 44 08.2	+0.3	
	baz=289								
TWS1				*e*S		Sn	14 44 27.3	+0.2	
	baz=289								
WHF	**Hehuan Shan**	**1.49**	**260**	*e*P		Pn	14 44 08.4	-0.1	
	baz=251								
WHF				*e*S		Sn	14 44 27.4	-0.6	
	baz=251								
FUSS	**Fushou**	**1.49**	**264**	*e*P		Pn	14 44 08.6	+0.2	
	baz=268								
FUSS				*e*S		Sn	14 44 27.1	-0.7	
	baz=268								
EGFH	**Guangfu**	**1.52**	**241**	*e*P		Pn	14 44 07.9	-0.5	
	baz=234								
EGFH				*e*S		Sn	14 44 27.1	-0.9	
	baz=234								
TDCB	**Techi**	**1.57**	**264**	*e*P		Pn	14 44 09.9	+0.6	
	baz=262								
TDCB				*e*S		Sn	14 44 28.9	-0.6	
	baz=262								
CHGB	**Renai**	**1.59**	**257**	*e*P		Pn	14 44 09.6	0.0	
	baz=250								
NFF	**Wufeng Townshi**	**1.61**	**278**	*e*P		Pn	14 44 10.2	+0.5	
	baz=285								
NFF				*e*S		Sn	14 44 29.9	-0.3	
	baz=285								
HGSD	**Ruisui**	**1.62**	**235**	*e*P		Pn	14 44 09.3	-0.4	
	baz=229								
OWD	**Renai**	**1.62**	**254**	*e*P		Pn	14 44 09.6	-0.2	
	baz=252								
OWD				*e*S		Sn	14 44 29.5	-0.9	
	baz=252								
WUSB	**Renai**	**1.66**	**255**	*e*P		Pn	14 44 10.6	+0.2	
	baz=249								
WUSB				*e*S		Sn	14 44 31.0	-0.4	
	baz=249								
JTJ	**Tarama**	**1.68**	**82**	S		Sn	14 44 31.7	-0.1	
EHY	**Hungye**	**1.69**	**237**	*e*P		Pn	14 44 10.1	-0.6	
	baz=244								
EHY				*e*S		Sn	14 44 30.3	-1.6	
	baz=244								
NSTT	**Nanjuang**	**1.71**	**277**	*e*P		Pn	14 44 11.7	+0.7	
	baz=276								
NSTT				*e*S		Sn	14 44 32.7	+0.2	
	baz=276								
VWDT	**VWDT**	**1.71**	**247**	*e*P		Pn	14 44 11.2	+0.3	
	baz=239								
VWDT				*e*S		Sn	14 44 32.0	-0.5	
	baz=239								
WHP	**Taichung City**	**1.76**	**266**	*e*P		Pn	14 44 13.0	+1.3	
	baz=264								
WHP				*e*S		Sn	14 44 34.4	+0.7	
	baz=264								
YULB	**Yu-li**	**1.77**	**235**	*e*P		Pn	14 44 11.2	-0.5	
	baz=243								
YULB				*e*S		Sn	14 44 33.1	-0.7	
	baz=243								
EYUL	**Yuli**	**1.78**	**233**	*e*P		Pn	14 44 11.8	0.0	
	baz=227								
WCS	**Beigang Elemen**	**1.82**	**259**	*e*P		Pn	14 44 13.2	+0.8	
	baz=255								
WCS				*e*S		Sn	14 44 36.0	+0.9	
	baz=255								
SSLB	**Suanglung**	**1.86**	**250**	*e*P		Pn	14 44 13.1	+0.2	
	baz=252								
SSLB				*e*S		Sn	14 44 36.4	+0.4	
	baz=252								
SMLT	**Sun Moon Lake**	**1.88**	**254**	*e*P		Pn	14 44 13.8	+0.5	
	baz=250								
SMLT				*e*S		Sn	14 44 37.7	+1.2	
	baz=250								
FULB	**Fuli**	**1.89**	**230**	*e*P		Pn	14 44 12.6	-0.7	
	baz=222								
FULB				*e*S		Sn	14 44 38.5	+1.8	
	baz=222								
CHKT	**Chengkung**	**1.91**	**227**	*e*P		Pn	14 44 12.6	-0.9	
	baz=221								
CHKT				*e*S		Sn	14 44 35.4	-1.7	
	baz=221								
TYC	**Yuchr**	**1.91**	**255**	*e*P		Pn	14 44 14.0	+0.5	
	baz=250								
TYC				*e*S		Sn	14 44 36.9	-0.1	
	baz=250								
YUS	**Yu-Shan**	**1.99**	**242**	*e*P		Pn	14 44 15.5	+0.5	
	baz=234								
EDH	**Donghe**	**2.04**	**225**	*e*P		Pn	14 44 14.2	-1.0	
	baz=220								
EDH				*e*S		Sn	14 44 38.2	-1.9	
	baz=220								
WJS	**Zhushan**	**2.05**	**253**	*e*P		Pn	14 44 17.1	+1.8	
	baz=250								
WJS				*e*S		Sn	14 44 42.4	+2.0	
	baz=250								
WNT	**Mingjian**	**2.07**	**255**	*e*P		Pn	14 44 17.3	+1.7	
	baz=254								
WNT				*e*S		Sn	14 44 43.1	+2.3	
	baz=254								
ELDTW	**Lidau**	**2.10**	**234**	*e*P		Pn	14 44 15.6	-0.5	
	baz=233								
ELDTW				*e*S		Sn	14 44 40.7	-1.0	
	baz=233								
ALS	**Alishan**	**2.10**	**245**	*e*P		Pn	14 44 17.0	+0.7	
	baz=237								
ALS				*e*S		Sn	14 44 43.0	+1.0	
	baz=237								
JIRB	**Irabujima**	**2.13**	**79**	*e*S		Sn	14 44 41.6	-0.7	
JIKM	**Ikemajima**	**2.22**	**77**	*e*S		Sn	14 44 44.1	-0.3	
WDLH	**Douliu**	**2.25**	**252**	*e*P		Pn	14 44 19.6	+1.6	
	baz=241								
WDLH				*e*S		Sn	14 44 46.4	+1.2	
	baz=241								
JMJ2	**Miyako jima3**	**2.26**	**81**	S		Sn	14 44 44.7	-0.6	
STYH	**Taoyuan**	**2.29**	**237**	*e*P		Pn	14 44 19.3	+0.8	
	baz=236								
STYH				*e*S		Sn	14 44 46.5	+0.5	
	baz=236								
TWGBT	**Beinan**	**2.29**	**226**	*e*P		Pn	14 44 17.9	-0.7	
	baz=233								
TWGBT				*e*S		Sn	14 44 44.7	-1.4	
	baz=233								
TWG	**Pinlang**	**2.29**	**226**	*e*P		Pn	14 44 18.0	-0.6	
	baz=233								
TWG				*e*S		Sn	14 44 44.9	-1.3	
	baz=233								
JOGS	**Gusukube**	**2.33**	**81**	*e*S		Sn	14 44 46.6	-0.5	
WRL	**Guolierlin Hig**	**2.33**	**258**	*e*P		Pn	14 44 19.5	+0.3	
	baz=256								
WRL				*e*S		Sn	14 44 47.3	+0.2	
	baz=256								
TPUB	**Ta-pu**	**2.34**	**242**	*e*P		Pn	14 44 20.8	+1.6	
	baz=240								
TPUB				*e*S		Sn	14 44 49.4	+2.2	
	baz=240								
WTP	**Ta-pu**	**2.38**	**241**	*e*P		Pn	14 44 21.0	+1.2	
	baz=239								
WTP				*e*S		Sn	14 44 49.6	+1.4	
	baz=239								
CHN1	**Nanshi**	**2.47**	**241**	*e*P		Pn	14 44 23.0	+1.9	
	baz=239								
CHN1				*e*S		Sn	14 44 52.3	+1.8	
	baz=239								
SNST	**Tainan City**	**2.48**	**242**	*e*P		Pn	14 44 22.7	+1.6	
	baz=240								
SNST				*e*S		Sn	14 44 52.0	+1.4	
	baz=240								
SGST	**Jiashian**	**2.48**	**238**	*e*P		Pn	14 44 21.6	+0.4	
	baz=242								
SGST				*e*S		Sn	14 44 53.1	+2.3	
	baz=242								
WSL	**Shuilin Townsh**	**2.58**	**250**	*e*P		Pn	14 44 23.1	+0.8	
	baz=260								
WSL				*e*S		Sn	14 44 54.6	+1.6	
	baz=260								
MASBT	**Mashibuluo**	**2.73**	**229**	*e*P		Pn	14 44 25.1	+0.6	
	baz=225								
MASBT				*e*S		Sn	14 44 58.4	+1.7	
	baz=225								
PHUB	**P'eng-hu**	**3.15**	**254**	*e*P		Pn	14 44 28.8	-1.3	
	baz=262								
PHUB				*e*S		Sn	14 45 05.1	-1.6	
	baz=262								
VWUC	**VWUC**	**3.16**	**281**	*e*P		Pn	14 44 29.5	-0.7	
	baz=272								
VWUC				*e*S		Sn	14 45 04.7	-2.3	
	baz=272								

*IDC **10** 14:47:43.5±4.3, 20.°65S×177.°88W, h553km±30km, mb3.0/6, mbtmp3.9/7, Error ellipse: s-maj=78.9km s-min=28.0km az=138.0*

ISC 10 14:47:43.8±2.5, 20.°6S±0.°3×178.°0W±0.°3, h550km, n8, σ0§48/7, mb3.6/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.76**	**307**	P	**P**	**14 49 12.0**	**+0.1**
	6.8nm,0.5s,baz=127,slow=23,SNR=15						
CTA	**Charters Tower**	**33.53**	**265**	P	**P**	**14 53 38.2**	**-0.3**
	1.0nm,0.4s,baz=100,slow=11,SNR=2.3						
	1.0nm,0.4s						
STKA	**Stephens Creek**	**37.77**	**244**	P	**P**	**14 54 14.0**	**+0.5**
	0.6nm,0.4s,baz=64,slow=18,SNR=3.1						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**44.54**	**257**	P	**P**	**14 55 07.0**	**-0.3**
	1.4nm,0.6s,baz=97,slow=7.6,SNR=30						
	1.4nm,0.6s						
WRA	**Warramunga Arr**	**44.63**	**262**	P	**P**	**14 55 07.5**	**-0.6**
	0.6nm,0.4s,baz=97,slow=7.7,SNR=22						
	0.6nm,0.4s						
SIJI	**Sorong**	**53.32**	**285**	P	**P**	**14 56 12.7**	**+0.4**
	3.1nm,0.4s,baz=143,slow=7.0,SNR=6.0						
	3.1nm,0.4s						
ILAR	**Eielson Array**	**88.44**	**13**	P	**P**	**14 59 37.1**	**-0.1**
	0.2nm,0.6s,baz=202,slow=6.6,SNR=2.2						
	0.2nm,0.6s						
AKASG	**Malin Array Be**	**143.16**	**331**	PKP	PKPab	15 06 13.1	0.0
	0.6nm,0.4s,baz=30,slow=4.0,SNR=8.0						

*IDC **10** 14:48:47.6±1.2, 7.°36S×13.°24W, h0km, mb3.9/8, mbtmp3.8/8, MS3.6/4, Error ellipse: s-maj=61.6km s-min=27.6km az=110.0*

*NEIC **10** 14:48:48.7±1.4, 7.°55S±0.°1×13.°59W±0.°06, h10km±1km, mb4.4/8, Error ellipse: s-maj=23.5km s-min=4.9km az=157.0*

ISC 10 14:48:48.1±0.6, 7.°5S±0.°1×13.°55W±0.°10, h10km, n22, σ1§16/19, mb4.0/11, MS3.6/4, Ascension Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASCN	**Ascension**	**0.91**	**242**		**Pg**	**14 49 05.1**	**-0.4**
ASCN				Sg	**Sg**	**14 49 16.7**	**-0.6**
RCBR	**Riachuelo**	**22.26**	**273**	LR	LR	15 01 57.2	
	comp=Z,284nm,18.1s,baz=243,slow=35						
TOA0	**Torodi Ar. Sit**	**25.50**	**37**	P	**P**	**14 54 17.7**	**+0.8**
TOA0				IAmb	IAmb	14 54 31.3	
	comp=Z,12nm,1.2s						
TORD	**Torodi Ar. Bea**	**25.50**	**37**	P	**P**	**14 54 15.0**	**-1.9**
	comp=Z,2.0nm,0.6s,baz=216,slow=12,SNR=12						
TORD				LR	LR	15 03 59.7	
	comp=Z,68nm,19.0s,baz=216,slow=36						
	comp=Z,2.0nm,0.6s						
TORD	**Torodi Ar. Bea**	**25.50**	**37**	P	**P**	**14 54 17.0**	**+0.1**
LBTB	**Lobatse**	**41.21**	**120**	P	**P**	**14 56 33.6**	**0.0**
LBTB				IAmb	IAmb	14 56 39.8	
	comp=Z,8.6nm,1.2s						
BOSA	**Boshof**	**42.17**	**125**	P	**P**	**14 56 40.2**	**-1.1**
BOSA				IAmb	IAmb	14 56 51.3	
	comp=Z,10nm,1.4s						
CPUP	**Villa Florida**	**45.59**	**240**	LR	LR	15 15 39.7	
	comp=Z,105nm,18.1s,baz=88,slow=35						
GERES	**GERESS Array B**	**61.00**	**20**	P	**P**	**14 59 02.2**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=173,slow=8.9,SNR=4.3						
	comp=Z,0.4nm,0.5s						
GERES	**GERESS Array B**	**61.00**	**20**	P	**P**	**14 59 01.4**	**-0.4**
MMAI	**Mount Meron Ar**	**61.53**	**46**	LR	LR	15 27 36.3	
	comp=Z,30nm,18.4s,baz=40,slow=38						
BRTR	**Keskin Array B**	**64.09**	**39**	P	**P**	**14 59 22.6**	**0.0**
	comp=Z,0.6nm,0.8s,baz=186,slow=5.2,SNR=3.6						
	comp=Z,0.6nm,0.8s						
BRTR	**Keskin Array B**	**64.09**	**39**	P	**P**	**14 59 23.6**	**+0.9**
SNAA	**Sanae**	**64.44**	**176**	P	**P**	**14 59 26.3**	**+1.9**
	comp=Z,1.3nm,0.9s,baz=335,slow=8.2,SNR=4.1						
	comp=Z,1.3nm,0.9s						
SNAA	**Sanae**	**64.44**	**176**	P	**P**	**14 59 25.5**	**+1.1**
SNAA				IAmb	IAmb	14 59 37.8	
	comp=Z,4.4nm,1.2s						
AKASG	**Malin Array Be**	**68.74**	**28**	P	**P**	**14 59 50.8**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=231,slow=6.7,SNR=6.1						
	comp=Z,0.1nm,0.3s						
FINES	**FINESS Array B**	**75.34**	**18**	P	**P**	**15 00 31.2**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=196,slow=3.4,SNR=4.6						
	comp=Z,0.6nm,0.5s						
ARCES	**ARCESS Array B**	**81.42**	**13**	P	**P**	**15 01 04.0**	**-0.8**
	comp=Z,1.7nm,0.8s,baz=197,slow=2.8,SNR=5.3						
	comp=Z,1.7nm,0.8s						
QSPA	**South Pole Qui**	**82.61**	**180**	P	**P**	**15 01 11.9**	**+0.4**
TXAR	**Lajitas Array**	**93.73**	**299**	P	**P**	**15 02 08.1**	**+2.3**
	comp=Z,0.5nm,1.0s,baz=122,slow=8.6,SNR=3.3						
	comp=Z,0.5nm,1.0s						
VNDA	**Vanda**	**95.06**	**179**	P	**P**	**15 02 09.5**	**-1.4**
ASAR	**Alice Springs**	**135.61**	**135**	PKhKP	PKPpre	15 08 02.8	
	comp=Z,0.7nm,1.1s,baz=237,slow=2.6,SNR=2.5						

*NOU **10** 14:49:48.5, 10.°90S×163.°73E, h26km, mb4.4/10, Solomon Islands*

*NEIC **10** 14:49:49.2±1.9, 10.°98S±0.°10×163.°6E±0.°1, h42km±8km, mb4.4/18, Error ellipse: s-maj=17.5km s-min=13.4km az=68.0*

*IDC **10** 14:49:51.6±3.2, 11.°16S×163.°42E, h58km±26km, mb3.7/7, mbtmp4.1/10, ML4.3/3, MS3.4/14, Error ellipse: s-maj=24.1km s-min=19.3km az=68.0*

ISC 10 14:49:48.5±0.6, 11.°09S±0.°07×163.°58E±0.°08, h31km, n55, σ1§45/46, mb4.2/14, MS3.5/8, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**3.93**	**294**	P	**Pn**	**14 50 47.4**	**+0.6**
	67nm,0.3s,baz=284,slow=0.9,SNR=22						
HNR				S	**Sn**	**14 51 32.7**	**+0.8**
	264nm,0.4s,baz=86,slow=23,SNR=4.4						
HNR				LR	LR	14 52 27.5	
	comp=Z,646nm,19.0s,baz=108,slow=41						
	400nm,0.6s						
HNR	**Honiara**	**3.93**	**294**		**Pn**	**14 50 47.1**	**+0.3**
HNR	**Honiara**	**3.93**	**294**	P	**Pn**	**14 50 47.9**	**+1.1**
KOUNC	**Koumac, New Ca**	**9.43**	**176**	Pn	**Pn**	**14 52 03.9**	**+1.7**
KOUNC	**Koumac, New Ca**	**9.43**	**176**	P	**Pn**	**14 52 05.6**	**+3.4**
MARNC	**Mare, Loyalty**	**11.18**	**158**	Pn	**Pn**	**14 52 26.7**	**+0.5**
DZM	**Mont Dzumac**	**11.26**	**166**	P	**Pn**	**14 52 29.7**	**+2.3**
	1.5nm,0.3s,baz=26,slow=23,SNR=18						
DZM				S	**Sn**	**14 54 29.3**	**-2.9**
	3.0nm,0.4s,baz=123,slow=18,SNR=2.0						
DZM				LR	LR	14 56 09.4	
	comp=Z,74nm,18.9s,baz=3.0,slow=34						
	3.2nm,0.3s						
DZM	**Mont Dzumac**	**11.26**	**166**		**Pn**	**14 52 29.2**	**+1.8**
DZM	**Mont Dzumac**	**11.26**	**166**	P	**Pn**	**14 52 29.2**	**+1.8**

KRVT	**Keravat (AS076**	**13.28**	**300**	LR	LR	14 58 29.5			
	comp=Z,174nm,19.6s,baz=268,slow=39								
TARA	**Tarawa**	**15.47**	**38**	P	**Pn**	**14 53 26.0**	**+1.4**		
TARA				IAmb	IAmb	14 53 30.5			
	comp=Z,59nm,1.1s								
MSVF	**Nonsavu**	**15.49**	**117**	LR	LR	14 58 29.2			
	comp=Z,108nm,18.1s,baz=265,slow=33								
PMG	**Port Moresby**	**16.24**	**274**	LR	LR	14 59 32.1			
	comp=Z,219nm,19.1s,baz=116,slow=36								
EIDS	**Eidsvold**	**18.48**	**218**	P	**Pn**	**14 54 04.3**	**+2.0**		
CTA	**Charters Tower**	**18.91**	**240**	P	**Pn**	**14 54 07.5**	**-0.2**		
	comp=Z,0.3nm,0.3s,baz=61,slow=10,SNR=9.1								
CTA				LR	LR	15 00 27.6			
	comp=Z,90nm,19.9s,baz=66,slow=34								
	comp=Z,9.4nm,1.0s								
CTA	**Charters Tower**	**18.91**	**240**	P	**Pn**	**14 54 09.3**	**+1.7**		
CTAO	**Charters Tower**	**18.91**	**240**	P	**Pn**	**14 54 08.9**	**+1.3**		
CTAO				IAmb	IAmb	14 54 22.7			
	comp=Z,14nm,1.1s								
CTAO	**Charters Tower**	**18.91**	**240**	P	**Pn**	**14 54 09.4**	**+1.8**		
MTSU	**Mount Surprise**	**19.90**	**247**	P	**Pn**	**14 54 21.5**	**+2.1**		
COEN	**Coen**	**20.12**	**260**	P	**Pn**	**14 54 21.1**	**-0.9**		
COEN				IAmb	IAmb	14 54 22.9			
	comp=Z,27nm,1.1s								
COEN	**Coen**	**20.12**	**260**	P	**Pn**	**14 54 22.3**	**+0.3**		
ARMA	**Armidale**	**22.20**	**208**	P	**P**	**14 54 44.3**	**+1.8**		
ARMA				IAmb	IAmb	14 54 45.6			
	comp=Z,18nm,1.3s								
STKA	**Stephens Creek**	**28.97**	**221**	P	**P**	**14 55 44.3**	**-1.1**		
	comp=Z,2.0nm,0.7s,baz=30,slow=8.1,SNR=1.8								
STKA				LR	LR	15 06 47.8			
	comp=Z,123nm,18.2s,baz=26,slow=35								
	comp=Z,2.0nm,0.7s								
STKA	**Stephens Creek**	**28.97**	**221**	P	**P**	**14 55 45.1**	**-0.2**		
WR0	**Warramunga Arr**	**29.29**	**249**	P	**P**	**14 55 46.8**	**-1.5**		
WR0				IAmb	IAmb	14 56 11.4			
	comp=Z,6.5nm,1.1s								
WB0	**Warramunga Arr**	**29.38**	**249**	P	**P**	**14 55 48.1**	**-1.1**		
WB0				IAmb	IAmb	14 55 58.5			
	comp=Z,22nm,1.4s								
WB2	**Warramunga Arr**	**29.46**	**249**	P	**P**	**14 55 49.4**	**-0.5**		
WB2				IAmb	IAmb	14 55 50.1			
	comp=Z,11nm,1.4s								
WRA	**Warramunga Arr**	**29.47**	**249**	P	**P**	**14 55 48.0**	**-2.0**		
	comp=Z,3.0nm,0.9s,baz=80,slow=8.8,SNR=9.3								
WRA				PcP	**PcP**	**14 58 55.7**	**+0.4**		
	comp=Z,0.2nm,0.5s,baz=77,slow=3.9,SNR=1.3								
WRA				LR	LR	15 07 22.0			
	comp=Z,140nm,20.1s,baz=16,slow=36								
	comp=Z,3.0nm,0.9s								
H11S2	**WAKE ISLAND Hy**	**29.56**	**6**	T	T	15 26 54.2			
	baz=188,slow=76								
H11S3	**WAKE ISLAND Hy**	**29.56**	**6**	T	T	15 26 59.7			
	baz=188,slow=76								
H11S1	**WAKE ISLAND Hy**	**29.57**	**6**	T	T	15 26 58.4			
	baz=188,slow=76								
GUMO	**Guam**	**30.75**	**322**	LR	LR	15 07 12.7			
	comp=Z,51nm,21.4s,baz=134,slow=34								
H11N1	**WAKE ISLAND Hy**	**30.79**	**6**	T	T	15 28 30.6			
	baz=188,slow=76								
H11N3	**WAKE ISLAND Hy**	**30.79**	**6**	T	T	15 28 32.8			
	baz=188,slow=76								
H11N2	**WAKE ISLAND Hy**	**30.80**	**6**	T	T	15 28 24.5			
	baz=188,slow=76								
AS31	**Alice Springs**	**30.88**	**242**	P	**P**	**14 56 01.2**	**-1.2**		
ASAR	**Alice Springs**	**30.88**	**242**	P	**P**	**14 56 00.6**	**-1.8**		
	comp=Z,3.2nm,0.6s,baz=62,slow=10,SNR=60								
ASAR				PcP	**PcP**	**14 58 58.4**	**-0.5**		
	comp=Z,0.6nm,1.0s,baz=71,slow=2.4,SNR=4.4								
ASAR				LR	LR	15 08 23.4			
	comp=Z,107nm,18.4s,baz=68,slow=36								
	comp=Z,3.2nm,0.6s								
ASAR	**Alice Springs**	**30.88**	**242**	P	**P**	**14 56 01.1**	**-1.3**		
TOO	**Toolangi**	**30.97**	**209**	P	**P**	**14 56 02.9**	**-0.1**		
TOO				IAmb	IAmb	14 56 22.5			
	comp=Z,18nm,1.1s								
BBOO	**Buckleboo**	**33.26**	**225**	P	**P**	**14 56 23.5**	**+0.3**		
SIJI	**Sorong**	**33.66**	**285**	LR	LR	15 12 18.2			
	comp=Z,64nm,18.1s,baz=65,slow=40								
KNRA	**Kununurra**	**34.15**	**258**	P	**P**	**14 56 29.2**	**-1.9**		
DAV	**Davao City (W)**	**41.90**	**294**	LR	LR	15 13 49.5			
	comp=Z,15nm,20.3s,baz=224,slow=34								
PSA00	**Pilbara Seismi**	**43.11**	**250**	P	**P**	**14 57 45.2**	**-1.0**		
MBWA	**Marble Bar**	**43.17**	**251**	P	**P**	**14 57 45.7**	**-1.0**		
VNDA	**Vanda**	**66.42**	**180**	P	**P**	**15 00 33.5**	**-0.7**		
VNDA				IAmb	IAmb	15 00 42.8			
	comp=Z,2.8nm,1.3s								
SONM	**Songino Array**	**77.46**	**325**	P	**P**	**15 01 41.4**	**+0.4**		
	comp=Z,0.2nm,0.3s,baz=148,slow=6.6,SNR=1.4								
	comp=Z,0.2nm,0.3s								
SONM	**Songino Array**	**77.46**	**325**	P	**P**	**15 01 38.4**	**-2.5**		
IMAR	**Indian Mountai**	**83.05**	**16**	P	**P**	**15 02 10.9**	**+0.4**		
ILAR	**Eielson Array**	**84.24**	**19**	P	**P**	**15 02 16.4**	**-0.3**		
	comp=Z,0.4nm,0.7s,baz=252,slow=5.0,SNR=6.5								
ILAR				LR	LR	15 38 45.7			
	comp=Z,27nm,18.8s,baz=266,slow=35								
	comp=Z,0.4nm,0.7s								
BCAR	**Beaver Creek A**	**84.92**	**22**	P	**P**	**15 02 20.7**	**+0.5**		
NVAR	**Mina Array Bea**	**87.69**	**50**	P	**P**	**15 02 35.4**	**+0.8**		
	comp=Z,0.4nm,0.6s,baz=200,slow=3.9,SNR=4.6								
	comp=Z,0.4nm,0.6s								
MKAR	**Makanchi Array**	**92.10**	**317**	P	**P**	**15 02 53.5**	**-1.3**		
	comp=Z,0.2nm,0.5s,baz=104,slow=9.4,SNR=2.8								
	comp=Z,0.2nm,0.5s								
YKA	**Yellowknife Ar**	**96.00**	**28**	LR	LR	15 44 29.3			
	comp=Z,31nm,18.8s,baz=146,slow=34								
SNAA	**Sanae**	**96.92**	**184**		**P**	**15 03 16.7**	**+0.1**		
SNAA				IAmb	IAmb	15 03 29.5			
	comp=Z,2.3nm,1.2s								

*IDC **10** 14:49:56.6±1.0, 7.°61S×13.°22W, h0km, mb4.1/12, mbtmp4.1/12, MS3.6/1, Error ellipse: s-maj=42.6km s-min=19.4km az=131.0*

*NEIC **10** 14:49:59.1±1.2, 7.°62S±0.°04×13.°2W±0.°2, h10km±1km, mb4.8/20, Error ellipse: s-maj=36.6km s-min=6.8km az=265.0*

**ISC 10 14:49:58.5±0.6, 7.°6S±0.°1×13.°3W±

comp=Z,8.5nm,1.2s
BRTR Keskin Array B 63.99 39 P **P** 15 00 32.3 -0.2
comp=Z,0.5nm,0.4s,baz=225,slow=5.5,SNR=5.9
comp=Z,0.5nm,0.4s
SNAA Sanae 64.32 176 P **P** 15 00 34.0 0.0
comp=Z,1.8nm,0.9s,baz=3.7,slow=5.0,SNR=3.5
comp=Z,1.8nm,0.9s
SNAA Sanae 64.32 176 P **P** 15 00 33.1 -0.9
SNAA IAmb IAmb 15 00 36.8
comp=Z,8.3nm,1.4s
BURAR Bucovina Array 64.66 28 P **P** 15 00 37.3 +0.7
AKASG Malin Array Be 68.70 27 P **P** 15 01 01.1 -1.1
comp=Z,3.7nm,0.8s,baz=230,slow=7.0,SNR=11
comp=Z,3.7nm,0.8s
AKASG Malin Array Be 68.70 27 P **P** 15 01 01.4 -0.8
AKASG IAmb IAmb 15 01 03.1
comp=Z,10.0nm,1.4s
AKBB Malin Array Si 68.70 27 P **P** 15 01 02.1 -0.1
NOA NORSAR Array B 71.09 12 P **P** 15 01 17.1 +0.3
comp=Z,1.3nm,1.0s,baz=206,slow=6.1,SNR=3.7
comp=Z,1.3nm,1.0s
FINES FINESS Array B 75.35 18 P **P** 15 01 41.6 -0.2
comp=Z,5.8nm,1.0s,baz=206,slow=8.8,SNR=7.2
comp=Z,5.8nm,1.0s
FINES FINESS Array B 75.35 18 P **P** 15 01 41.2 -0.7
TRQ Mont Tremblant 76.36 321 P **P** 15 01 47.2 -0.9
O52A Adamsville 78.86 313 P **P** 15 02 02.5 +0.3
ARCES ARCESS Array B 81.46 13 P **P** 15 02 15.2 -0.3
comp=Z,1.7nm,0.8s,baz=208,slow=3.1,SNR=8.4
comp=Z,1.7nm,0.8s
ARCES ARCESS Array B 81.46 13 P **P** 15 02 16.1 +0.6
WVT Waverly 82.17 308 P **P** 15 02 19.9 0.0
WVT IAmb IAmb 15 02 20.8
comp=Z,13nm,1.3s
QSPA South Pole Qui 82.50 180 P **P** 15 02 21.9 +0.6
QSPA IAmb IAmb 15 02 35.7
comp=Z,10.0nm,1.1s
ABKAR Akbulak array 84.94 39 P **P** 15 02 34.4 +0.4
CCM Cathedral Cave 85.29 309 P **P** 15 02 35.9 -0.1
R40A Maddies Statio 86.13 309 P **P** 15 02 40.9 +0.8
R40A IAmb IAmb 15 02 41.9
comp=Z,12nm,1.4s
TXAR Lajitas Array 94.03 299 P **P** 15 03 17.0 -0.6
comp=Z,0.7nm,1.0s,baz=101,slow=4.7,SNR=5.1
comp=Z,0.7nm,1.0s
VNDA Vanda 94.95 179 P **P** 15 03 20.9 +0.2
ASAR Alice Springs 135.33 135 PKhKP PKPpre 15 09 11.8
comp=Z,0.4nm,0.9s,baz=208,slow=1.6,SNR=2.2

IDC 10 14:52:57.0±4.3, 11°44'N×141°17'E, h10km±40km, mb3.1/4, mbtmp3.6/5, Error ellipse: s-maj=47.5km s-min=23.7km az=113.0, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**4.20**	**59**	P		Pn	14 53 59.3	+0.3
	28nm,0.6s,baz=240,slow=5.3,SNR=4.2						
GUMO				S		Sn	14 54 47.6	+0.5
	51nm,1.0s,baz=180,slow=20,SNR=1.9						
ASAR	**Alice Springs**	**35.61**	**191**	P		P	14 59 44.0	-0.2
	0.3nm,0.7s,baz=21,slow=12,SNR=4.4						
	0.3nm,0.7s						
SONM	**Songino Array**	**46.51**	**328**	P		P	15 01 13.2	-0.2
	0.4nm,0.6s,baz=139,slow=6.8,SNR=1.6						
	0.4nm,0.6s						
ILAR	**Eielson Array**	**72.05**	**25**	P		P	15 04 08.3	-0.5
	0.3nm,0.4s,baz=242,slow=6.0,SNR=8.3						
	0.3nm,0.4s						
YKA	**Yellowknife Ar**	**86.41**	**27**	P		P	15 05 27.7	+0.9
	0.2nm,0.4s,baz=289,slow=4.8,SNR=5.0						
	0.2nm,0.4s						

MAN 10 15:19:22.6, 15°72N×121°11E, h32km, mb4.0, ML2.8, MS2.4, 4D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BALP	**Baler**	**0.45**	**87**	↓*e*P		Pn	15 19 33.6	+1.5
BALP				*e*S			15 20 02.8	
SMPP	**San Manuel, Pa**	**0.59**	**316**	↓*e*P		Pn	15 19 35.1	+0.9
MACP	**Maragondon, Ca**	**1.50**	**195**	↓*e*P		Pn	15 19 47.7	+1.1
MACP				*e*S			15 20 44.9	
LUBP	**Lubang**	**2.14**	**203**	↓*e*P		Pn	15 19 47.9	+7.5
LUBP				*e*S			15 19 59.9	

*IDC **10** 15:30:41.0±8.7, 36°.49'N×71°.79'E, h200km±59km, mb3.1/2, mbtmp3.5/6, Error ellipse: s-maj=163.0km s-min=47.0km az=90.0*
ISC 10 15:30:39.2±2.6, 36°60'N±0°.10×71°1'E±0°.3, h200km, n10, σ1§69/11, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**6.59**	**23**	P		**Pn**	**15 32 14.8**	**+0.6**
	2.2nm,0.4s,baz=207,slow=11,SNR=1.6						
AAK				S		**Sn**	**15 33 27.3**	**-2.3**
	2.6nm,0.4s,baz=238,slow=13,SNR=8.0						
MKAR	**Makanchi Array**	**13.19**	**36**	P		**Pn**	**15 33 39.5**	**+0.6**
	1.2nm,1.0s,baz=211,slow=11,SNR=6.7						
DANN	**Dangsing**	**13.51**	**124**	*e*P		**Pn**	**15 33 42.6**	**-0.7**
GKN	**Gorkha**	**14.32**	**123**	*e*P		**Pn**	**15 33 52.5**	**-0.8**
KURBB	**Kurchatov Arra**	**15.02**	**19**	P		**P**	**15 34 03.3**	**+1.3**
	0.2nm,0.5s,baz=210,slow=10,SNR=2.3						
JIRN	**Jiri**	**15.60**	**121**	*e*P		**P**	**15 34 10.2**	**+1.1**
TAPN	**Taplejung**	**16.85**	**118**	*e*P		**Pn**	**15 34 27.1**	**+3.0**
ZALV	**Zalesovo Beam**	**19.81**	**25**	P		**P**	**15 34 54.9**	**+0.6**
	0.9nm,0.5s,baz=220,slow=11,SNR=5.6						
WRA	**Warramunga Arr**	**82.00**	**122**	P		**P**	**15 42 36.0**	**-1.1**
	0.2nm,0.5s,baz=327,slow=4.9,SNR=5.3						
	0.2nm,0.5s						
ASAR	**Alice Springs**	**84.27**	**125**	P		**P**	**15 42 47.0**	**-1.6**
	0.4nm,0.7s,baz=312,slow=5.1,SNR=10						
	0.4nm,0.7s						

IDC 10 15:32:43.3±9.2, 10°.99S×165°.95E, h199km±82km, mb3.1/4, mbtmp3.8/5, Error ellipse: s-maj=68.4km s-min=39.8km az=10.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.03**	**178**	P		Pn	15 35 16.3	+0.3
	4.1nm,0.3s,baz=323,slow=20,SNR=51						
DZM				S		Sn	15 37 18.5	-0.5
	3.9nm,0.4s,baz=151,slow=23,SNR=14						
CTA	**Charters Tower**	**21.00**	**242**	P		P	15 37 12.0	+0.5
	1.5nm,0.7s,baz=92,slow=9.5,SNR=1.6						
	1.5nm,0.7s						
WRA	**Warramunga Arr**	**31.69**	**250**	P		P	15 38 48.4	0.0
	0.5nm,0.6s,baz=84,slow=9.2,SNR=12						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**33.00**	**243**	P		P	15 38 59.5	-0.4
	0.6nm,0.8s,baz=64,slow=10,SNR=9.2						
ASAR				PcP		PcP	15 41 39.3	+0.3
	0.3nm,0.6s,baz=90,slow=3.1,SNR=4.2						
	0.6nm,0.8s						
MKAR	**Makanchi Array**	**93.62**	**317**	P		P	15 45 36.1	-0.9
	0.2nm,0.6s,baz=88,slow=5.7,SNR=2.8						
	0.2nm,0.6s						

KRSC 10 15:33:40.8±1.5, 51°.01N×158°.00E, h41km±20km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDTR	**Khodutka, Kamc**	**0.80**	**3**	*e*P		Pn	15 33 56.6	+1.0
KDTR				*e*S		Sn	15 34 07.3	+0.9
PAU	**Pauzhetka**	**0.88**	**302**	*e*P		Pn	15 33 58.1	+1.4
PAU				*e*S		Sn	15 34 09.8	+1.5
SKR	**Severo-Kuril's**	**1.24**	**255**	*e*P		Pn	15 34 02.4	+0.8
SKR				*e*S		Sn	15 34 17.5	+0.4
ASAK	**Asacha**	**1.38**	**357**	*e*P		Pn	15 34 05.0	+1.4
ASAK				*e*S		Sn	15 34 21.8	+1.2
RUS	**Russkaya**	**1.46**	**12**	*e*P		Pn	15 34 05.5	+0.9
RUS				*e*S		Sn	15 34 23.5	+1.0
MTVR	**Mutnovka**	**1.48**	**4**	*e*P		Pn	15 34 06.5	+1.4
MTVR				*e*S		Sn	15 34 24.6	+1.4
MIPR	**Malaya Ipel'ka**	**1.49**	**329**	*e*P		Pn	15 34 07.0	+2.0
MIPR				*e*S		Sn	15 34 25.7	+2.5
GRL	**Gorelyy**	**1.54**	**2**	*e*P		Pn	15 34 07.7	+1.8
GRL				*e*S		Sn	15 34 26.4	+1.6
KRMR	**Karymshinskiy**	**1.82**	**2**	*e*P		Pn	15 34 13.1	+3.5
KRMR				*e*S		Sn	15 34 35.9	+4.4
APC	**Apacha**	**1.99**	**345**	*e*P		Pn	15 34 14.1	+2.2
PET	**Petropavlovsk**	**2.06**	**11**	*e*P		Pn	15 34 14.7	+1.9
PET				*e*S		Sn	15 34 39.0	+1.8
DALK	**Dalny**	**2.08**	**13**	*e*P		Pn	15 34 14.7	+1.6
DALK				*e*S		Sn	15 34 39.5	+1.8
UGLR	**Uglovaya**	**2.26**	**13**	*e*P		Pn	15 34 18.0	+2.3
AVH	**Avacha**	**2.30**	**11**	*e*P		Pn	15 34 19.9	+3.6
SMAR	**Somma**	**2.31**	**12**	*e*P		Pn	15 34 19.4	+2.9
NLC	**Nalytchevo**	**2.32**	**20**	*e*S		Sn	15 34 44.0	+0.4
KOK	**Koryaka**	**2.32**	**9**	*e*P		Pn	15 34 19.5	+3.0
SDLR	**Sedlovina**	**2.33**	**13**	*e*P		Pn	15 34 18.5	+1.7
KRER	**Koryakskii**	**2.34**	**11**	*e*P		Pn	15 34 20.4	+3.4
KRER				*e*S		Sn	15 34 49.6	+5.0
KRX	**Arik**	**2.39**	**9**	*e*P		Pn	15 34 20.3	+2.8
KRX				*e*S		Sn	15 34 50.6	+5.0
SPN	**Mys Shipunski**	**2.43**	**30**	*e*P		Pn	15 34 20.0	+2.0
SPN				*e*S		Sn	15 34 50.1	+3.6
GNL	**Ganaly**	**2.69**	**359**	*e*P		Pn	15 34 24.4	+2.8
KII	**Karymskiy**	**3.16**	**16**	*e*P		Pn	15 34 32.6	+4.6
TUMR	**Tumrok**	**4.47**	**16**	*e*P		Pn	15 34 50.4	+4.3

*IDC **10** 15:40:33.3±1.8, 5°.43S×146°.94E, h176km±21km, mb3.3/6, mbtmp3.9/10, Error ellipse: s-maj=37.8km s-min=10.6km az=111.0*
ISC 10 15:40:35.1±0.8, 5°45S±0°.08×147°1E±0°.1, h195km, n29, σ1§48/31, mb3.6/6, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.93**	**179**	P		**Pn**	**15 41 35.2**	**-0.7**
	9.0nm,0.3s,baz=30,slow=11,SNR=48						
PMG				S		**Sn**	**15 42 20.0**	**-3.6**
	64nm,0.4s,baz=37,slow=20,SNR=23						
PMG	**Port Moresby**	**3.93**	**179**	P		**Pn**	**15 41 35.2**	**-0.7**
PMG	**Port Moresby**	**3.93**	**179**	P		**Pn**	**15 41 35.1**	**-0.7**
KRVT	**Keravat (AS076**	**5.04**	**77**	P		**Pn**	**15 41 50.0**	**0.0**
	24nm,0.6s,baz=140,slow=17,SNR=5.8						
COEN	**Coen**	**9.29**	**204**	P		**Pn**	**15 42 47.2**	**+1.9**
MTSU	**Mount Surprise**	**12.89**	**192**	P		**Pn**	**15 43 34.5**	**+3.0**
CTA	**Charters Tower**	**14.57**	**183**	P		**Pn**	**15 43 53.3**	**+0.9**
	3.3nm,0.8s,baz=22,slow=12,SNR=6.9						
CTA	**Charters Tower**	**14.57**	**183**	P		**Pn**	**15 43 54.7**	**+2.4**
CTAO	**Charters Tower**	**14.57**	**183**	P		**Pn**	**15 43 54.8**	**+2.4**
KDU	**Kakadu**	**16.12**	**243**	P		**P**	**15 44 11.4**	**+0.6**
QIS	**Mount Isa**	**16.68**	**205**	P		**P**	**15 44 18.4**	**+1.4**
MTN	**Manton Dam**	**17.38**	**244**	P		**P**	**15 44 23.9**	**-0.7**
WRAB	**Tennant Creek**	**19.00**	**220**	P		**P**	**15 44 42.8**	**+0.6**
WRA	**Warramunga Arr**	**19.01**	**220**	P		**P**	**15 44 42.4**	**0.0**
	3.8nm,0.3s,baz=46,slow=12,SNR=69						
WRA				S		**S**	**15 48 05.2**	**-2.7**
	0.9nm,1.0s,baz=41,slow=21,SNR=3.7						
KNRA	**Kununurra**	**20.67**	**239**	P		**P**	**15 45 00.9**	**+0.8**
	16nm,1.5s						
RMQ	**Roma**	**20.98**	**176**	P		**P**	**15 45 04.6**	**+1.3**
	5.4nm,0.6s						
ASAR	**Alice Springs**	**22.12**	**214**	P		**P**	**15 45 15.2**	**+0.1**
	4.6nm,0.8s,baz=49,slow=8.4,SNR=60						
ASAR				S		**S**	**15 49 06.7**	**+2.1**
	1.5nm,0.8s,baz=34,slow=20,SNR=8.0						
	4.6nm,0.8s						
INKA	**Inminka**	**22.97**	**195**	P		**P**	**15 45 23.5**	**+0.8**
OOD	**Oodnadatta**	**24.73**	**205**	P		**P**	**15 45 39.4**	**+0.8**
LCRK	**Leigh Creek**	**26.23**	**198**	P		**P**	**15 45 52.3**	**+0.1**
WRKA	**Warakurna**	**26.54**	**221**	P		**P**	**15 45 55.1**	**0.0**
STKA	**Stephens Creek**	**26.79**	**190**	P		**P**	**15 45 56.6**	**-0.5**
	1.3nm,0.9s,baz=11,slow=10,SNR=1.1						
	1.3nm,0.9s						
STKA	**Stephens Creek**	**26.79**	**190**	P		**P**	**15 45 57.4**	**+0.2**
MULG	**Mulgathing**	**27.58**	**205**	P		**P**	**15 46 04.3**	**0.0**
SONM	**Songino Array**	**63.98**	**331**	P		**P**	**15 50 47.9**	**+0.1**
	0.5nm,0.7s,baz=167,slow=7.3,SNR=4.2						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	**77.14**	**320**	P		**P**	**15 52 07.0**	**-0.2**
	0.2nm,0.4s,baz=99,slow=6.3,SNR=2.4						
	0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**78.60**	**328**	P		**P**	**15 52 13.0**	**-2.1**
	0.7nm,0.5s,baz=104,slow=6.3,SNR=3.7						
	0.7nm,0.5s						
ILAR	**Eielson Array**	**84.94**	**23**	P		**P**	**15 52 47.8**	**-0.2**
	0.2nm,0.5s,baz=262,slow=5.2,SNR=2.4						
	0.2nm,0.5s						
TORD	**Torodi Ar. Bea**	**145.04**	**285**	PKP		PKPbc	15 59 49.7	-0.4
	0.6nm,0.5s,baz=77,slow=3.4,SNR=4.5						

IDC 10 15:48:15.0±2.3, 0°.27N×126°.26E, h0km, mb3.0/3, mbtmp3.1/3, MS3.4/1, Error ellipse: s-maj=219.2km s-min=29.1km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.59**	**159**	P		P	15 53 06.0	-0.6
	0.3nm,0.8s,baz=337,slow=11,SNR=1.6						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**24.93**	**163**	P		P	15 53 40.6	+0.5
	0.3nm,0.9s,baz=350,slow=16,SNR=2.5						
	0.3nm,0.9s						
HNR	**Honiara**	**34.89**	**107**	LR		LR	16 10 44.2	
	comp=Z,60nm,18.3s,baz=244,slow=39						
MKAR	**Makanchi Array**	**60.14**	**327**	P		P	15 58 24.4	-0.1
	0.2nm,0.6s,baz=119,slow=7.3,SNR=3.8						
	0.2nm,0.6s						

*IDC **10** 16:20:46.1±1.7, 24°.45S×179°.87E, h497km±17km, mb3.1/6, mbtmp4.1/9, Error ellipse: s-maj=24.1km s-min=20.7km az=161.0*
ISC 10 16:20:46.1±0.9, 24°52S±0°.10×180°0E±0°.1, h500km, n15, σ0§88/18, mb3.6/6, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**6.98**	**345**	P		**P**	**16 22 31.9**	**-0.5**
	2.0nm,0.3s,baz=276,slow=24,SNR=12						
DZM	**Mont Dzumac**	**12.66**	**278**	P		**P**	**16 23 32.6**	**+0.8**
	9.3nm,0.7s,baz=86,slow=16,SNR=8.9						
URZ	**Urewera**	**13.91**	**189**	P		**P**	**16 23 45.3**	**+0.6**
	14nm,0.8s,baz=41,slow=16,SNR=2.6						
URZ				S		**S**	**16 26 10.4**	**-1.6**
	15nm,1.1s,baz=243,slow=12,SNR=1.8						
STKA	**Stephens Creek**	**34.47**	**249**	P		**P**	**16 26 51.8**	**+0.2**
	2.3nm,0.6s,baz=96,slow=11,SNR=7.5						
	2.3nm,0.6s						
ASAR	**Alice Springs**	**41.90**	**261**	P		**P**	**16 27 51.7**	**-0.7**
	1.0nm,0.6s,baz=92,slow=7.2,SNR=37						
ASAR				ScP		**ScP**	**16 32 40.0**	**+0.8**
	0.4nm,0.7s,baz=116,slow=4.7,SNR=5.0						
	1.0nm,0.6s						
WRA	**Warramunga Arr**	**42.33**	**267**	P		**P**	**16 27 54.6**	**-1.2**
	2.6nm,0.5s,baz=98,slow=7.9,SNR=20						
WRA				ScP		**ScP**	**16 32 42.0**	**+1.0**
	1.1nm,0.8s,baz=99,slow=3.5,SNR=6.4						
	2.6nm,0.5s						
VNDA	**Vanda**	**53.76**	**185**	P		**P**	**16 29 21.6**	**+1.2**
	0.3nm,0.5s,baz=296,slow=14,SNR=1.3						
	0.3nm,0.5s						
MAW	**Mawson**	**77.16**	**200**	P		**P**	**16 31 47.9**	**+0.5**
	0.9nm,0.5s,baz=153,slow=4.5,SNR=1.6						
	0.9nm,0.5s						
TROLL	**Troll, Antarti**	**83.72**	**181**	P		**P**	**16 32 21.3**	**-0.4**
SNAA	**Sanae**	**84.05**	**179**	P		**P**	**16 32 22.4**	**-0.9**
VNA3	**Neumayer Olymp**	**84.26**	**177**	P		**P**	**16 32 23.6**	**-0.6**
VNA2	**Neumayer--Watz**	**84.68**	**178**	P		**P**	**16 32 26.0**	**-0.3**
	baz=297,slow=2.1						
TXAR	**Lajitas Array**	**90.79**	**58**	P		**P**	**16 32 56.1**	**+0.3**
	0.8nm,0.8s,baz=214,slow=7.0,SNR=10						
	0.8nm,0.8s						
ARCES	**ARCESS Array B**	**132.48**	**348**	PKP		**PKPdf**	**16 39 01.8**	**-0.8**
	1.4nm,0.9s,baz=63,slow=0.5,SNR=3.8						
TORD	**Torodi Ar. Bea**	**168.57**	**189**	PKPab		**PKPab**	**16 41 08.3**	**-0.5**
	0.4nm,0.6s,baz=195,slow=3.8,SNR=1.9						

*IDC **10** 16:53:14.6±12.0, 44°.33N×140°.08E, h244km±59km, mb3.1/3, mbtmp3.7/4, Error ellipse: s-maj=240.1km s-min=87.9km az=154.0*
*JMA **10** 16:53:15.9±0.5, 44°N±1°×14°0E±°, h264km±3km, MV3.0/29, NW OFF SHAKOTAN PEN*
ISC 10 16:53:15.8±1.0, 44°09N±0°.08×140°02E±0°.07, h272km±11km, n17, σ1§31/25, mb3.7/3, Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JISS	**Ishikarishitsu**	**1.30**	**128**	*e*P		**Pn**	**16 53 55.5**	**+0.6**
JEW	**Eniwo**	**1.63**	**140**	*e*P		**Pn**	**16 53 58.2**	**+1.0**
JWK2	**Keihoku**	**1.81**	**47**	*e*P		**Pn**	**16 53 58.4**	**-0.1**
JKK2	**Kamakawa 2**	**1.98**	**95**	*e*P		**Pn**	**16 54 00.6**	**+0.7**
JKK2				*e*S		**S**	**16 54 35.0**	**+0.1**
JOSM	**Okushiri--Mats**	**2.05**	**191**	*e*P		**Pn**	**16 54 00.8**	**+0.3**
JOSM				*e*S		**S**	**16 54 35.4**	**-0.7**
JOMM	**Oshimamatsumae**	**2.57**	**180**	P		**Pn**	**16 54 05.9**	**+0.5**
JOMM				*e*S		**S**	**16 54 44.0**	**-0.7**
JNBK	**Urakawa-nobuka**	**2.70**	**131**	*e*P		**Pn**	**16 54 07.8**	**+1.2**
JNBK				*e*S		**S**	**16 54 47.7**	**+0.7**
JOT	**Ohata**	**2.81**	**164**	*e*P		**Pn**	**16 54 08.9**	**+1.2**
JAR	**Ashorobuto**	**2.83**	**105**	P		**Pn**	**16 54 08.8**	**+0.9**
JAR				*e*S		**S**	**16 54 50.7**	**+1.3**
JCH	**Churui**	**2.85**	**120**	*e*P		**Pn**	**16 54 07.9**	**-0.2**
JCH				*e*S		**S**	**16 54 47.1**	**-2.5**
JAK	**Akkeshi**	**3.57**	**106**	*e*P		**Pn**	**16 54 16.6**	**+0.9**
JAK				*e*S		**S**	**16 55 02.1**	**-1.3**
JANG	**Nango**	**3.88**	**163**	*e*P		**Pn**	**16 54 18.9**	**-0.4**
JANG				*e*S		**S**	**16 55 08.6**	**-1.3**
NEM2	**Nemuro 2**	**4.21**	**98**	*e*S		**S**	**16 55 12.9**	**-3.6**
USRK	**Ussuriysk Ar.**	**5.78**	**274**	P		**Pn**	**16 54 40.1**	**-1.5**
	3.6nm,0.6s,baz=84,slow=14,SNR=9.0						
ZALV	**Zalesovo Beam**	**36.64**	**306**	P		**P**	**16 59 56.7**	**+0.3**
	0.9nm,0.3s,baz=89,slow=8.1,SNR=3.6						
	0.9nm,0.3s						
MKAR	**Makanchi Array**	**39.81**	**295**	P		**P**	**17 00 23.4**	**+0.5**
	0.1nm,0.4s,baz=87,slow=7.8,SNR=2.2						
	0.1nm,0.4s						
FINES	**FINESS Array B**	**62.12**	**330**	P		**P**	**17 03 08.1**	**+0.3**
	0.9nm,0.4s,baz=52,slow=7.7,SNR=11						
	0.9nm,0.4s						

*ISN **10** 17:03:08.3±1.5, 34°.28N×45°.68E, h6km±9km, ML3.3*
*TEH **10** 17:03:10.4, 34°.22N×45°.68E, h12km, ML3.4*
*DSN **10** 17:03:19.4±0.8, 33°.43N×46°.15E, h10km, Error ellipse: s-maj=22.3km s-min=8.1km az=42.0*
ISC 10 17:03:09.7±0.9, 34°17N±0°.03×45°60E±0°.04, h10km, n48, σ1§24/54, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGHG	**Ghaleghazi**	**0.82**	**79**	*e*Pg		**Pg**	**17 03 25.9**	**+0.4**
IGHG				*e*			17 03 26.5	
	comp=Z,37μm,0.2s						
IGHG				*e*Sg		**Sb**	**17 03 37.7**	**+0.4**
IDHR	**Dehrash**	**0.83**	**51**	*e*Pg		**Pg**	**17 03 25.0**	**-0.9**
IDHR				*e*Sg		**Sg**	**17 03 36.3**	**-0.5**
IDHR				*e*			17 03 37.9	
	comp=Z,22μm,0.3s						
IBDR	**Badra**	**1.09**	**165**	*e*Pg		**Pn**	**17 03 32.0**	**+0.9**
IBDR				*e*Sg		**Sn**	**17 03 47.0**	**+0.7**
IBDR				AML		AML	17 03 52.7	
	comp=E,838nm,0.6s						
IBDR				AML		AML	17 03 59.6	
	comp=N,481nm,0.6s						
KCHF	**Cheshme Sefid,**	**1.20**	**85**	*e*Pg		**Pb**	**17 03 32.3**	**-0.3**
KCHF				*e*			17 03 53.5	
	comp=Z,10μm,0.4s						
KER	**Kermanshah**	**1.28**	**80**	*e*Pg		**Pn**	**17 03 34.0**	**+0.1**
KER				*e*			17 03 55.4	
	comp=Z,6μm,0.6s						
ILIN	**Lien**	**1.35**	**56**	*e*Pg		**Pn**	**17 03 34.1**	**-0.7**
ILIN				*e*			17 03 37.3	
	comp=Z,8μm,0.3s						
IKOM	**Komasi**	**1.58**	**89**	*e*Pg		**Pb**	**17 03 39.8**	**+0.6**
IKOM				*e*			17 04 07.0	
	comp=Z,9μm,0.6s						
IKRK	**Kirkuk**	**1.60**	**320**	*e*Pn		**Pn**	**17 03 38.0**	**-0.2**
IKRK				*e*Sn		**Sb**	**17 04 01.0**	**+1.2**
IBZA	**Bozab**	**1.89**	**80**	*e*Pg		**Pb**	**17 03 44.4**	**-0.1**
IBZA				*e*Sg		**Sg**	**17 04 10.5**	**-0.1**
IKFM	**Kafar-mosalman**	**1.98**	**108**	*e*Pn		**Pb**	**17 03 45.6**	**-0.2**
IKFM				*e*			17 04 22.6	
	comp=Z,7μm,0.5s						
DHL1	**Dehloran**	**2.05**	**136**	*e*Pg		**Pg**	**17 03 48.4**	**-0.6**
IDOB	**Doab**	**2.17**	**99**	*e*Pn		**Pn**	**17 03 47.6**	**+1.4**
IDOB				*e*			17 04 27.0	
	comp=Z,2μm,0.4s						
RAFI	**Al-Rafai**	**2.48**	**170**	*e*Pn		**Pn**	**17 03 52.0**	**+1.8**
RAFI				*e*Sn		**Sb**	**17 04 25.0**	**0.0**
HSAM	**Samen**	**2.49**	**88**	*e*Pn		**Pn**	**17 03 51.9**	**+1.4**
MAHB	**Mahabad**	**2.59**	**2**	*e*Pn		**Pn**	**17 03 53.7**	**+1.9**
HAGD	**Aghdareh**	**2.99**	**77**	*e*Pn		**Pn**	**17 03 59.0**	**+1.5**
HAGD				*e*			17 04 09.0	
	comp=Z,784nm,0.3s						
IAZR	**Azarshahr**	**3.51**	**5**	*e*Pn		**Pn**	**17 04 05.9**	**+1.3**
ZNJK	**Zanjan**	**3.54**	**44**	*e*Pn		**Pn**	**17 04 06.5**	**+1.5**
QABG	**Abgarm-Qazvin**	**3.61**	**64**	*e*Pn		**Pn**	**17 04 06.6**	**+0.6**
KHMZ	**Khomeyn**	**3.65**	**96**	*e*Pn		**Pn**	**17 04 07.6**	**+1.2**
IBST	**Bostanabad**	**3.67**	**16**	*e*Pn		**Pn**	**17 04 08.3**	**+1.5**
IBST				*e*			17 05 09.4	
	comp=Z,421nm,0.5s						
ASAO	**Ashtian**	**3.68**	**83**	*e*Pn		**Pn**	**17 04 08.7**	**+1.8**
IRAZ	**Razeghan**	**3.77**	**70**	*e*Pn		**Pn**	**17 04 09.8**	**+1.7**
AMIS	**Naft Sefid**	**3.98**	**128**	*e*Pn		**Pn**	**17 04 12.5**	**+1.6**
ITBZ	**Tabriz**	**4.08**	**6**	*e*Pn		**Pn**	**17 04 13.0**	**+0.7**

257A				IAML		17 12 40.7
	comp=E,578nm,0.6s					
DWPF	**Disney Wildern**	**2.48**	**220**		**Pn**	**17 11 29.6 +0.3**
DWPF				IAmb_Lg		17 12 10.8
	comp=Z,65nm,0.8s					
DWPF				IAML		17 12 19.1
	comp=Z,382nm,0.6s					
656A	**Willston**	**2.62**	**256**		**Pn**	**17 11 31.6 +0.4**
656A					**Pb**	**17 11 36.0 +0.5**
656A				IAML		17 12 26.0
	comp=E,506nm,0.5s					
060A	**Indiantown**	**3.05**	**193**		**Pn**	**17 11 36.7 -0.4**
060A				Pg	**Pg**	**17 11 44.8 -1.2**
255A	**Hazlehurst**	**3.10**	**308**		**Pn**	**17 11 38.8 +1.0**
NHSC	**New Hope**	**3.11**	**351**		**Pn**	**17 11 38.2 +0.3**
TIGA	**Tifton**	**3.70**	**293**		**Pn**	**17 11 45.2 -0.9**
Y58A	**Scranton**	**3.87**	**359**		**Pn**	**17 11 48.8 +0.4**
154A	**Montrose**	**3.95**	**312**		**Pn**	**17 11 50.5 +1.1**
Y59A	**Loris**	**4.00**	**9**		**Pn**	**17 11 50.4 +0.2**
Y60A	**Bolivia**	**4.14**	**16**	Pn	**Pn**	**17 11 52.8 +0.7**
553A	**Crawfordville**	**4.17**	**273**		**Pn**	**17 11 53.9 +1.4**
553A				IAmb_Lg		17 13 04.6
	comp=Z,44nm,0.9s					
061Z	**Ochoppi**	**4.30**	**196**	Pn	**Pn**	**17 11 54.1 -0.1**
JSC	**Jenkinsville**	**4.47**	**342**		**Pn**	**17 11 55.5 -1.1**
X58A	**Rowland**	**4.52**	**3**	Pn	**Pn**	**17 11 58.0 +0.6**
BIRD	**Birdtown, Kers**	**4.66**	**351**		**Pn**	**17 11 59.9 +0.6**
GOGA	**Godfrey**	**4.71**	**317**		**Pn**	**17 12 00.4 +0.5**
GOGA				IAmb_Lg		17 13 24.3
	comp=Z,39nm,1.2s					
HODGE	**Hodges**	**4.76**	**333**		**Pn**	**17 12 01.1 +0.5**
352A	**Blakely**	**4.80**	**289**		**Pn**	**17 12 01.6 +0.5**
352A				IAmb_Lg		17 13 31.7
	comp=Z,36nm,1.1s					
152A	**Waverly Hall**	**5.10**	**302**		**Pn**	**17 12 05.0 -0.3**
W57A	**Gilead**	**5.12**	**357**		**Pn**	**17 12 05.8 +0.2**
W57A				IAmb_Lg		17 13 42.6
	comp=Z,24nm,1.1s					
PAULI	**Pauline**	**5.13**	**339**		**Pn**	**17 12 06.5 +0.8**
PAULI				IAmb_Lg		17 13 42.8
	comp=Z,29nm,0.7s					
KMSC	**Kings Mountain**	**5.30**	**345**	Pn	**Pn**	**17 12 07.3 -0.8**
451A	**Vernon**	**5.33**	**278**	Pn	**Pn**	**17 12 09.1 +0.6**
Y52A	**Lilburn**	**5.38**	**317**		**Pn**	**17 12 10.4 +1.3**
Y52A				IAmb_Lg		17 13 52.6
	comp=Z,24nm,0.8s					
BG3	**Lake Jocassee**	**5.69**	**331**		**Pn**	**17 12 14.2 +0.8**
Z51A	**Franklin**	**5.76**	**306**	Pn	**Pn**	**17 12 13.7 -0.7**
Z51A				IAmb_Lg		17 14 05.2
	comp=Z,18nm,0.8s					
V58A	**Windy Hill, Pi**	**5.77**	**4**	Pn	**Pn**	**17 12 14.3 -0.2**
V55A	**Taylorsville**	**5.96**	**347**		**Pn**	**17 12 17.1 -0.1**
W52A	**Murphy**	**6.23**	**325**	Pn	**Pn**	**17 12 21.5 +0.7**
W52A				IAmb_Lg		17 14 20.4
	comp=Z,15nm,0.9s					
V53A	**Saluda**	**6.24**	**335**		**Pn**	**17 12 21.8 +0.8**
V53A				IAmb_Lg		17 14 02.1
	comp=Z,16nm,0.7s					
U56A	**King**	**6.34**	**354**		**Pn**	**17 12 23.0 +0.7**
U56A				IAmb_Lg		17 14 20.1
	comp=Z,22nm,1.0s					
X51A	**Calhoun**	**6.34**	**317**	Pn	**Pn**	**17 12 23.2 +0.9**
TKL	**Tuckaleechee C**	**6.62**	**329**	Pn	**Pn**	**17 12 27.3 +1.1**
	comp=Z,1.1nm,0.3s,baz=175,slow=11,SNR=10.0					
TKL				Pg	**Pg**	**17 12 52.4 -2.0**
	comp=Z,0.4nm,0.3s,baz=136,slow=14,SNR=2.5					
TKL				Sn	**Sn**	**17 13 41.0 -1.3**
	comp=Z,0.8nm,0.3s,baz=97,slow=19,SNR=2.3					
TKL				Lg	Lg	17 14 11.2
	comp=Z,1.8nm,0.3s,baz=237,slow=7.2,SNR=2.7					
	comp=Z,3.5nm,0.4s					
TKL	**Tuckaleechee C**	**6.62**	**329**		**Pn**	**17 12 27.2 +1.1**
V52A	**Sevierville**	**6.70**	**331**	Pn	**Pn**	**17 12 27.5 +0.3**
U54A	**Nelsons Funny**	**6.74**	**345**	Pn	**Pn**	**17 12 28.1 +0.3**
U54A				IAmb_Lg		17 14 34.4
	comp=Z,18nm,0.7s					
FPAL	**Fort Paine**	**6.78**	**313**	Pn	**Pn**	**17 12 29.1 +0.7**
FPAL				IAmb_Lg		17 14 33.4
	comp=Z,26nm,1.1s					
CPCT	**Cooper Cave**	**6.81**	**324**		**Pn**	**17 12 30.2 +1.4**
CPCT				IAmb_Lg		17 14 42.9
	comp=Z,16nm,0.8s					
Y49A	**Blount Mountai**	**6.92**	**305**		**Pn**	**17 12 31.3 +0.9**
Y49A				IAmb_Lg		17 14 44.6
	comp=Z,23nm,1.0s					
T57A	**Hurt**	**6.96**	**2**		**Pn**	**17 12 31.3 +0.4**
LRAL	**Lakeview Retre**	**6.98**	**297**	Pn	**Pn**	**17 12 31.8 +0.7**
V51A	**Loudon**	**7.00**	**327**	Pn	**Pn**	**17 12 30.9 -0.5**
V51A				IAmb_Lg		17 14 45.5
	comp=Z,26nm,1.1s					
W50A	**Signal Mountai**	**7.05**	**319**	Pn	**Pn**	**17 12 34.0 +1.8**
W50A				IAmb_Lg		17 14 51.1
	comp=Z,13nm,0.8s					
T59A	**Double "B" Far**	**7.14**	**13**	Pn	**Pn**	**17 12 32.5 -0.8**
TZTN	**Tazewell**	**7.29**	**334**	Pn	**Pn**	**17 12 35.8 +0.4**
SWET	**Sewanee**	**7.43**	**316**	IAmb_Lg		17 15 00.8
	comp=Z,25nn,1.2s					
S57A	**Dark Hollow, R**	**7.74**	**4**		**Pn**	**17 12 41.1 -0.4**
JSRW	**J. Sargeant Re**	**7.79**	**10**		**Pn**	**17 12 41.5 -0.7**
SOR	**Soroa**	**7.82**	**204**	Pn	**Pn**	**17 12 41.9 -0.8**
Z47A	**Carrollton**	**7.87**	**296**	IAmb_Lg		17 15 15.3
	comp=Z,19nm,1.0s					
R58B	**Mineral**	**8.05**	**10**	Pn	**Pn**	**17 12 46.1 +0.3**
T50A	**Nancy**	**8.23**	**329**	Pn	**Pn**	**17 12 48.7 +0.5**
R55A	**Marlinton**	**8.25**	**357**	Pn	**Pn**	**17 12 49.4 +0.8**
R55A				IAmb_Lg		17 15 33.0
	comp=Z,14nm,0.8s					
CLTN	**Cedars of Leba**	**8.27**	**319**	IAmb_Lg		17 15 20.1
	comp=Z,19nm,1.1s					
U49A	**Red Boiling Sp**	**8.28**	**323**		**Pn**	**17 12 49.5 +0.6**
S51A	**Beattyville**	**8.28**	**338**		**Pn**	**17 12 49.1 +0.1**
V48A	**Smith Brothers**	**8.32**	**315**	Pn	**Pn**	**17 12 50.5 +1.0**
CBN	**Corbin Frederi**	**8.37**	**12**	IAmb_Lg		17 15 10.7
	comp=Z,14nm,0.8s					
R53A	**Hurricane**	**8.51**	**347**	Pn	**Pn**	**17 12 51.5 -0.6**
Q56A	**Snyder Ridge,**	**9.00**	**2**	Pn	**Pn**	**17 12 58.4 -0.4**
R50A	**Paris**	**9.11**	**336**	IAmb_Lg		17 15 57.1
	comp=Z,12nm,1.1s					
Q52A	**Bidwell**	**9.18**	**347**	Pn	**Pn**	**17 13 01.0 -0.3**
Q52A				IAmb_Lg		17 15 54.9
	comp=Z,14nm,0.9s					
WVT	**Waverly**	**9.19**	**314**	Pn	**Pn**	**17 13 02.5 +1.0**
WVT				IAmb_Lg		17 16 01.6
	comp=Z,12nm,1.1s					
Y45A	**Yeager Farm, C**	**9.26**	**297**	Pn	**Pn**	**17 13 01.9 -0.5**
T47A	**Sharon Grove**	**9.34**	**320**	Pn	**Pn**	**17 13 04.3 +0.8**
T47A				IAmb_Lg		17 15 55.9
	comp=Z,12nm,0.9s					
OXF	**Oxford**	**9.42**	**301**	Pn	**Pn**	**17 13 04.4 -0.2**
OXF				IAmb_Lg		17 16 04.5
	comp=Z,13nm,0.8s					
R49A	**Shelbyville**	**9.44**	**332**	IAmb_Lg		17 16 10.8
	comp=Z,17nm,1.2s					
Q51A	**Peebles**	**9.49**	**342**	Pn	**Pn**	**17 13 05.1 -0.5**
P57A	**Homestead Farm**	**9.53**	**8**		**Pn**	**17 13 05.5 -0.6**
P53A	**Whipple**	**9.55**	**352**	Pn	**Pn**	**17 13 06.1 -0.2**
P51A	**Williamsport**	**9.85**	**344**	IAmb_Lg		17 16 10.5
	comp=Z,14nm,0.9s					
Q53A	**New Philadelph**	**10.29**	**353**	Pn	**Pn**	**17 13 16.7 +0.3**
P49A	**Miami Univ. Ec**	**10.37**	**338**	Pn	**Pn**	**17 13 18.3 +0.7**
SSPA	**Standing Stone**	**10.68**	**7**	Pn	**Pn**	**17 13 21.8 0.0**
GRTK	**Grand Turk**	**11.41**	**136**	Pn	**Pn**	**17 13 32.1 +0.2**
N49A	**Columbus Grove**	**11.49**	**342**		**Pn**	**17 13 31.7 -1.2**
FCAR	**Ozark Folk Cen**	**12.02**	**302**	Pn	**Pn**	**17 13 40.8 +0.7**
TX31	**Lajitas Ar. Si**	**20.90**	**274**	P	**P**	**17 15 32.0 +0.3**
TX31				IAmb	IAmb	17 15 38.4
	comp=Z,4.4nm,1.0s					
TX32	**Lajitas Array**	**20.90**	**274**	P	**P**	**17 15 32.4 +0.6**
TX32				IAmb	IAmb	17 15 38.4
	comp=Z,1.8nm,1.1s					
TXAR	**Lajitas Array**	**20.90**	**274**	P	Pn	17 15 34.3 +0.1
	comp=Z,0.8nm,0.8s,baz=85,slow=11,SNR=8.8					
	comp=Z,0.8nm,0.8s					
ULM	**Lac du Bonnet**	**23.62**	**333**	P	**P**	**17 16 00.6 +0.4**
	comp=Z,1.2nm,0.4s,baz=139,slow=9.3,SNR=3.7					
	comp=Z,1.2nm,0.4s					
ULM	**Lac du Bonnet**	**23.62**	**333**	IAmb	IAmb	17 16 16.1
	comp=Z,1.6nm,0.7s					
FINES	**FINESS Array B**	**71.10**	**29**	P	**P**	**17 22 09.0 +1.5**
	comp=Z,0.9nm,0.7s,baz=296,slow=7.6,SNR=1.5					
	comp=Z,0.9nm,0.7s					
BRTR	**Keskin Array B**	**86.97**	**45**	P	**P**	**17 23 36.8 +1.8**
	comp=Z,0.3nm,0.6s,baz=282,slow=5.8,SNR=2.2					
	comp=Z,0.3nm,0.6s					

WR0	**Warramunga Arr**	**147.57**	**280**		**PKPbc**	**17 30 33.4 -1.0**
WRA	**Warramunga Arr**	**147.73**	**280**	PKPbc	**PKPbc**	**17 30 35.1 +0.3**
	comp=Z,1.1nm,0.9s,baz=71,slow=3.7,SNR=4.7					
WRA	**Warramunga Arr**	**147.73**	**280**		**PKPdf**	**17 30 32.1 0.0**
ASAR	**Alice Springs**	**149.50**	**274**	PKPbc	**PKPbc**	**17 30 39.2 -0.2**
	comp=Z,0.6nm,0.9s,baz=87,slow=2.8,SNR=8.3					
ASAR	**Alice Springs**	**149.50**	**274**		**PKPbc**	**17 30 37.5 -1.9**

IDC 10 17:11:12.2±2.1, 2°30N×125°29E, h0km, mb3.2/3, mbtmp3.2/3, MS3.5/1, Error ellipse: s-maj=182.7km s-min=28.4km az=64.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.82**	**159**	P	P	17 16 26.2	-0.9
	0.9nm,0.9s,baz=337,slow=10,SNR=8.4						
	0.9nm,0.9s						
ASAR	**Alice Springs**	**27.14**	**162**	P	P	17 16 58.4	+1.1
	0.2nm,0.6s,baz=345,slow=11,SNR=2.0						
	0.2nm,0.6s						
CTA	**Charters Tower**	**30.30**	**138**	LR	LR	17 30 51.3	
	comp=Z,87nm,21.3s,baz=83,slow=39						
MKAR	**Makanchi Array**	**57.92**	**326**	P	P	17 21 06.2	-0.1
	0.2nm,0.7s,baz=122,slow=5.2,SNR=1.6						
	0.2nm,0.7s						

*IDC **10** 17:16:24.2±1.3, 3°.97S×129°.67E, h0km, mb3.6/4, mbtmp3.7/5, ML3.6/1, MS3.1/5, Error ellipse: s-maj=43.1km s-min=22.9km az=63.0*
*DJA **10** 17:16:26.2±0.9, 4°.5±5°×13°.0E±°, h21km±10km, M3.9/11, mb4.4/3, mB5.1/1, MLv3.7/11, Mw(mB)4.4/1*
ISC 10 17:16:24.5±0.7, 4°.01S±0°.05×129°.74E±0°.05, h10km, n24, σ1°.91/25, mb3.7/3, MS3.2/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.54**	**162**	P	**Pb**	**17 16 35.9**	**-0.1**
MSAI	**Masohi**	**1.04**	**309**	P	**Pg**	**17 16 44.4**	**-0.2**
MSAI				S	**Sg**	**17 16 57.9**	**-0.3**
AAI	**Ambon**	**1.58**	**282**	P	**Pn**	**17 16 51.8**	**-0.7**
FAKI	**Fak Fak**	**2.73**	**67**	P	**Pn**	**17 17 08.6**	**+0.2**
FAKI	**Fak Fak**	**2.73**	**67**	P	**Pn**	**17 17 09.1**	**+0.7**
SIJI	**Sorong**	**3.47**	**26**	Pn	**Pn**	**17 17 19.2**	**+0.6**
	5.6nm,0.3s,baz=233,slow=23,SNR=15						
SIJI				Sn	**Sn**	**17 17 56.8**	**-3.0**
	2.8nm,0.3s,baz=262,slow=22,SNR=1.9						
	14nm,0.3s						
SWI	**Sorong**	**3.47**	**26**	P	**Pn**	**17 17 18.3**	**-0.3**
SWI				S	**Sn**	**17 17 58.5**	**-1.3**
LBMI	**Labuha**	**4.03**	**326**	P	**Pn**	**17 17 27.3**	**+1.0**
LBMI				S	**Sn**	**17 18 12.5**	**-1.0**
SANI	**Sanana**	**4.22**	**297**	P	**Pn**	**17 17 28.8**	**-0.2**
SANI				S	**Sn**	**17 18 16.9**	**-1.5**
SANI	**Sanana**	**4.22**	**297**	P	**Pn**	**17 17 30.2**	**+1.2**
KMSI	**Cibinong**	**7.34**	**308**	P	**Pn**	**17 18 11.8**	**0.0**
MTN	**Manton Dam**	**8.89**	**171**	P	**Pn**	**17 18 35.0**	**+1.9**
KDU	**Kakadu**	**9.04**	**163**	P	**Pn**	**17 18 34.4**	**-0.7**
KAPI	**Kappang**	**10.01**	**264**	LR	LR	17 23 03.9	
	comp=Z,34nm,18.0s,baz=327,slow=40						
KNRA	**Kununurra**	**11.64**	**185**	P	**Pn**	**17 19 11.9**	**+1.1**
DAV	**Davao City (W)**	**11.76**	**339**	LR	LR	17 24 03.6	
	comp=Z,35nm,20.1s,baz=134,slow=39						
WRA	**Warramunga Arr**	**16.46**	**165**	Pn	**Pn**	**17 20 13.8**	**-1.9**
	0.1nm,0.3s,baz=344,slow=13,SNR=6.7						
WRA				Sn	Sn	17 23 06.0	-13
	baz=341,slow=22,SNR=2.3						
ASAR	**Alice Springs**	**19.95**	**169**	P	**P**	**17 20 57.5**	**+0.5**
	2.8nm,0.6s,baz=355,slow=10,SNR=36						
ASAR				S	**S**	**17 24 35.2**	**-6.4**
	0.7nm,1.0s,baz=349,slow=24,SNR=2.6						
	2.8nm,0.6s						
LEM	**Lembang**	**22.20**	**262**	LR	LR	17 32 09.6	
	comp=Z,83nm,18.7s,baz=327,slow=43						
CTA	**Charters Tower**	**22.68**	**136**	P	**P**	**17 21 29.5**	**+3.1**
	3.5nm,0.9s,baz=298,slow=11,SNR=4.3						
	3.5nm,0.9s						
CMAR	**Chiang Mai Arr**	**37.67**	**307**	P	**P**	**17 23 41.5**	**+1.2**
	0.5nm,0.6s,baz=120,slow=7.6,SNR=4.1						
	0.5nm,0.6s						
JHJ	**Hachijo jima 2**	**38.13**	**14**	LR	LR	17 36 05.4	
	comp=Z,20nm,20.7s,baz=304,slow=31						
URZ	**Urewera**	**54.92**	**135**	LR	LR	17 52 19.7	
	comp=Z,77nm,18.3s,baz=31,slow=39						
MKAR	**Makanchi Array**	**65.60**	**326**	P	**P**	**17 27 09.2**	**+0.5**
	0.3nm,0.6s,baz=112,slow=8.4,SNR=4.8						
	0.3nm,0.6s						

IDC 10 17:24:49.7±2.0, 52°.89N×159°.03E, h166km±42km, mb3.0/2, mbtmp3.4/2, MS2.9/1, Error ellipse: s-maj=116.5km s-min=70.8km az=110.0, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**0.83**	**286**	P	Pn	17 25 14.4	-0.3
	28nm,0.4s,baz=101,slow=5.5,SNR=214						
PETK				S	Sn	17 25 34.8	+0.8
	7.8nm,0.8s,baz=334,slow=16,SNR=6.5						
MJAR	**Matsushiro Arr**	**21.92**	**230**	LR	LR	17 39 26.8	
	comp=Z,32nm,19.2s,baz=218,slow=40						
ILAR	**Eielson Array**	**29.41**	**45**	P	P	17 30 37.0	-0.2
	0.3nm,0.6s,baz=268,slow=6.1,SNR=4.4						
	0.3nm,0.6s						
TXAR	**Lajitas Array**	**71.31**	**66**	P	P	17 35 51.6	+0.3
	0.2nm,0.5s,baz=296,slow=5.5,SNR=4.6						
	0.2nm,0.5s						

*NIED **10** 17:30:10.8, 26°.87N×130°.23E, h66km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr-1.33; Mθθ1.30; Mφφ0.03; Mrθ0.51; Mθφ2.70; Mφr-2.14; Fault plane solution: M₀3.72000×10¹⁴ NP1: φs269.00000°, δ53.00000°, λ-23.00000°. NP2:φs13.00000°, δ72.00000°, λ-140.00000°.*
JMA 10 17:30:10.8±0.1, 26°.9N±0°.4×130°.2E±0°.4, h66km±4km, MV4.2/25, NEAR MINAMI-DAITOJIMA IS, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKDJ	**Kitadaitoujima**	**1.32**	**134**	P	Pn	17 30 33.5	+0.2
JKDJ				*e*S	Sn	17 30 50.5	+0.4
JMZ	**Minamidaito 2**	**1.37**	**139**	P	Pn	17 30 34.3	+0.4
JMZ				S	Sn	17 30 51.2	0.0
JZK	**Kikaishima**	**1.46**	**351**	P	Pn	17 30 36.0	+0.9
JZK				S	Sn	17 30 54.6	+1.2
JTK	**Tokunoshima**	**1.46**	**309**	P	Pn	17 30 35.6	+0.5
JTK				S	Sn	17 30 53.9	+0.5
JOKE	**Okinoerabujima**	**1.56**	**289**	*i* P	Pn	17 30 37.2	+0.8
JOKE				S	Sn	17 30 55.6	-0.2
JYRO	**Yoronjima**	**1.60**	**276**	*i* P	Pn	17 30 37.5	+0.6
JYRO				*e*S	Sn	17 30 56.4	-0.3
JAM	**Amami Oshima**	**1.63**	**340**	P	Pn	17 30 37.9	+0.5
JAM				*e*S	Sn	17 30 57.2	-0.3
JAMN	**Amaminishikomi**	**1.66**	**326**	*i* P	Pn	17 30 38.0	+0.3
JAMN				*e*S	Sn	17 30 58.6	+0.5
JOW	**Kunigami**	**1.75**	**269**	P	Pn	17 30 39.8	+0.9
JOW				S	Sn	17 31 00.9	+0.6
JNTH	**Nagotoyohara**	**2.01**	**260**	*i* P	Pn	17 30 43.0	+0.5
JNTH				S	Sn	17 31 05.8	-0.7
JIH	**Iheya**	**2.03**	**275**	P	Pn	17 30 43.6	+0.9
JIH				S	Sn	17 31 07.9	+0.9
JJT3	**Tamagusuku3**	**2.31**	**252**	P	Pn	17 30 47.3	+0.8
JJT3				S	Sn	17 31 14.5	+0.7
JTAJ	**Takarajima**	**2.45**	**338**	P	Pn	17 30 48.8	+0.3
JTAJ				S	Sn	17 31 17.0	-0.3
JAGN	**Aguni-jima**	**2.69**	**265**	P	Pn	17 30 52.5	+0.9
JAGN				S	Sn	17 31 22.9	-0.2
JNN	**Nakanoshima**	**2.98**	**354**	P	Pn	17 30 56.1	+0.5
JNN				S	Sn	17 31 29.6	-0.6
JKE	**Kume jima 2**	**3.13**	**261**	P	Pn	17 30 57.9	+0.2
JKE				S	Sn	17 31 34.1	+0.2
JYAK	**Yakushimahirau**	**3.37**	**4**	P	Pn	17 31 02.0	+1.1
JYAK				S	Sn	17 31 38.7	-0.9
JMTN	**Minamitane**	**3.56**	**9**	*e*P	Pn	17 31 04.0	+0.3
JMTN				S	Sn	17 31 43.1	-1.5
JKC	**Kuchinoerabu**	**3.58**	**360**	P	Pn	17 31 04.9	+1.0
JKC				S	Sn	17 31 44.1	-0.8
JTN	**Tanegashima 3**	**3.83**	**10**	P	Pn	17 31 07.8	+0.6
JTN				S	Sn	17 31 50.3	-0.7

*IDC **10** 17:32:15.1±0.6, 15°.46S×173°.10W, h0km, mb4.5/15, mbtmp4.5/16, ML4.6/1, MS3.8/32, Error ellipse: s-maj=24.5km s-min=13.9km az=132.0*
*NOU **10** 17:32:15.9, 15°.56S×172°.74W, h0km, MLv5.2/6, Samoa Islands Region*
*NEIC **10** 17:32:17.3±1.8, 15°.52S±0°.05×172°.82W±0°.07, h22km±4km, mb4.8/91, Error ellipse: s-maj=9.8km s-min=7.6km az=92.0*
ISC 10 17:32:18.2±0.3, 15°.59S±0°.04×172°.77W±0°.06, h29km, n220, σ2°.19/176, mb4.8/65, MS4.0/34, 1D, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.93**	**30**	Pn	**Pn**	**17 32 48.4**	**-0.6**
	236nm,0.3s,baz=199,slow=3.5,SNR=426						
AFI				Sn	**Sn**	**17 33 08.6**	**-3.8**
	2µm,0.3s,baz=204,slow=22,SNR=42						
	792nm,0.3s						
AFI	**Afiamalu**	**1.93**	**30**	P	**Pn**	**17 32 48.5**	**-0.6**
NIUE	**Niue**	**4.40**	**142**	Pn	**Pn**	**17 33 23.6**	**+0.5**
NIUE				Sn	**Sn**	**17 34 08.7**	**-4.7**
NIUE	**Niue**	**4.40**	**142**	P	**Pn**	**17 33 24.1**	**+1.0**
MSVF	**Nonsavu**	**9.06**	**255**	Pn	Pn	17 34 34.1	+7.0
	1.2nm,0.3s,baz=111,slow=12,SNR=34						
MSVF				LR	LR	17 37 33.6	
	comp=Z,1µm,21.6s,baz=93,slow=36						
MSVF	**Nonsavu**	**9.06**	**255**		Pn	17 34 33.9	+6.8
RAR	**Rarotonga**	**13.54**	**116**	Pn	**Pn**	**17 35 27.7**	**-0.6**
	2.9nm,0.3s,baz=173,slow=21,SNR=2.6						
RAR				Sn	Sn	17 37 44.2	-14
	1.8nm,0.3s,baz=200,slow=14,SNR=1.1						
RAR				LR	LR	17 39 29.6	
	comp=Z,165nm,20.3s,baz=284,slow=31						
RAR	**Rarotonga**	**13.54**	**116**	Pn	**Pn**	**17 35 25.7**	**-2.6**
DZM	**Mont Dzumac**	**20.70**	**249**	*e*P	Pn	17 36 59.5	+0.8
	162nm,1.3s						
DZM				*e*LR	LR	17 41 40.4	
	comp=Z,1µm,26.8s						
DZM	**Mont Dzumac**	**20.70**	**249**	P	**P**	**17 36 57.3**	**+1.0**
	37nm,1.0s,baz=75,slow=15,SNR=13						
DZM				LR	LR	17 44 17.9	
	comp=Z,160nm,18.5s,baz=58,slow=35						
DZM	**Mont Dzumac**	**20.70**	**249**	P	Pn	17 36 58.3	-0.5
DZM				IAmb	IAmb	17 37 02.1	
	comp=Z,69nm,1.1s						
PPT	**Papeete**	**22.31**	**98**	LR	LR	17 44 01.0	
	comp=Z,101nm,18.3s,baz=298,slow=31						
PPT2	**Papeete2**	**22.31**	**98**	*e*LR	LR	17 43 00.4	
	comp=Z,155nm,20.5s						
OUZ	**Omahuta**	**23.06**	**210**	P	**P**	**17 37 21.8**	**+0.6**
OUZ				IAmb	IAmb	17 37 25.3	
	comp=Z,60nm,1.1s						
TBI	**Tubuai**	**23.27**	**113**	*e*LR	LR	17 43 16.8	
	comp=Z,627nm,27.8s						
TBI	**Tubuai**	**23.27**	**113**	*e*T	T	18 01 35.8	
	comp=Z,11nm,0.3s						
WMGZ	**Waiomatatini S**	**23.48**	**198**	P	**P**	**17 37 30.1**	**+4.7**
HAZ	**Te Kaha**	**23.61**	**199**	P	**P**	**17 37 28.8**	**+2.1**
PKGZ	**Pakihiroa**	**23.64**	**198**	P	**P**	**17 37 29.9**	**+2.8**
PKGZ				S	**S**	**17 41 40.2**	**+0.2**
PUZ	**Puketiti**	**23.76**	**198**	P	**P**	**17 37 29.3**	**+1.2**
PUZ				S	**S**	**17 41 40.2**	**-1.6**
RUGZ	**Raukumara Rang**	**23.83**	**199**	P	**P**	**17 37 31.5**	**+2.5**
TWGZ	**Tauwhareparae**	**23.94**	**198**	P	**P**	**17 37 34.4**	**+4.6**
OPRZ	**Ohinepanea**	**24.09**	**201**	P	**P**	**17 37 35.1**	**+3.8**
CNGZ	**Carnagh Statio**	**24.15**	**198**	P	**P**	**17 37 35.6**	**+3.8**
TKGZ	**Te Karaka**	**24.22**	**198**	P	**P**	**17 37 35.5**	**+3.1**
MWZ	**Matawai**	**24.22**	**199**	P	**P**	**17 37 35.0**	**+2.5**
URZ	**Urewera**	**24.28**	**200**	P	**P**	**17 37 35.0**	**+2.1**
	comp=Z,48nm,0.6s,baz=47,slow=3.2,SNR=31						
URZ				S	**S**	**17 41 49.3**	**-0.8**
	comp=Z,6.2nm,0.9s,baz=193,slow=20,SNR=1.0						
	comp=Z,48nm,0.6s						
URZ	**Urewera**	**24.28**	**200**	P	**P**	**17 37 33.0**	**0.0**
URZ	**Urewera**	**24.28**	**200**	P	**P**	**17 37 34.8**	**+1.8**
URZ				S	**S**	**17 41 46.0**	**-4.1**
KARZ	**Kaharoa**	**24.36**	**201**	P	**P**	**17 37 39.2**	**+5.4**
OMRZ	**Omania**	**24.39**	**201**	P	**P**	**17 37 37.5**	**+3.5**
RIGZ	**Rimuhau**	**24.49**	**198**	P	**P**	**17 37 38.1**	**+3.2**
RIGZ				S	**S**	**17 42 01.0**	**+7.5**
UTU	**Utuhina**	**24.52**	**201**	P	**P**	**17 37 40.3**	**+5.1**
MUGZ	**Murupara**	**24.59**	**200**	P	**P**	**17 37 38.6**	**+2.8**
HSRZ	**Hossack Road**	**24.62**	**201**	P	**P**	**17 37 41.4**	**+5.3**
PRGZ	**Paritu Road**	**24.65**	**198**	P	**P**	**17 37 40.4**	**+4.0**
HRRZ	**Handcock Road**	**24.68**	**201**	P	**P**	**17 37 41.4**	**+4.7**
PRRZ	**Plateau Road**	**24.74**	**201**	P	**P**	**17

	comp=Z,14nm,0.6s,baz=86,slow=8.1,SNR=260							
ASAR					LR	LR	18 01 02.2	
	comp=Z,281nm,21.5s,baz=104,slow=34							
	comp=Z,14nm,0.6s							
ASAR	**Alice Springs**	**50.63**	**252**	P	**P**	**17 41 13.3**	**-1.8**	
GUMO	**Guam**	**50.95**	**302**	LR	LR	18 00 25.8		
	comp=Z,22nm,19.7s,baz=110,slow=33							
MTN	**Manton Dam**	**54.33**	**265**	P	**P**	**17 41 40.4**	**-2.1**	
FORT	**Forrest**	**55.88**	**243**	P	**P**	**17 41 51.7**	**-1.8**	
KNRA	**Kununurra**	**56.14**	**261**	P	**P**	**17 41 54.6**	**-1.0**	
SIJI	**Sorong**	**57.09**	**279**	P	**P**	**17 42 01.8**	**-0.6**	
	comp=Z,6.9nm,0.7s,baz=50,slow=6.8,SNR=5.6							
SIJI					LR	LR	18 05 44.4	
	comp=Z,80nm,21.4s,baz=80,slow=35							
	comp=Z,6.9nm,0.7s							
SOEI	**Soe**	**61.53**	**267**	P	**P**	**17 42 33.5**	**+0.2**	
BATI	**Baumata**	**62.02**	**267**	LR	LR	18 07 10.4		
	comp=Z,101nm,20.2s,baz=134,slow=34							
SBA	**Scott Base**	**63.11**	**185**	P	**P**	**17 42 45.9**	**+3.3**	
SBA				IAmb	IAmb	17 42 47.0		
	comp=Z,13nm,0.8s							
VNDA	**Vanda**	**63.25**	**186**	P	**P**	**17 42 46.2**	**+2.6**	
	comp=Z,5.4nm,0.9s,baz=14,slow=6.3,SNR=23							
VNDA					LR	LR	18 05 31.1	
	comp=Z,42nm,21.7s,baz=167,slow=32							
	comp=Z,5.4nm,0.9s							
VNDA	**Vanda**	**63.25**	**186**	P	**P**	**17 42 44.4**	**+0.8**	
VNDA				IAmb	IAmb	17 42 46.6		
	comp=Z,7.3nm,0.9s							
PSA00	**Pilbara Seismi**	**63.74**	**253**	P	**P**	**17 42 46.7**	**-1.0**	
PSA00	**Pilbara Seismi**	**63.74**	**253**	P	**P**	**17 42 46.7**	**-1.0**	
PSA00				IAmb	IAmb	17 43 20.5		
	comp=Z,13nm,1.4s							
MBWA	**Marble Bar**	**63.90**	**254**	P	**P**	**17 42 50.7**	**+1.9**	
DAV	**Davao City (W)**	**65.08**	**286**	LR	LR	18 09 50.1		
	comp=Z,34nm,18.7s,baz=110,slow=35							
MORW	**Morawa**	**66.36**	**245**	P	**P**	**17 43 03.5**	**-1.2**	
KAPI	**Kappang**	**66.99**	**271**	LR	LR	18 10 58.9		
	comp=Z,59nm,18.8s,baz=82,slow=35							
MJAR	**Matsushiro Arr**	**69.48**	**320**	P	**P**	**17 43 24.1**	**0.0**	
	comp=Z,3.1nm,1.0s,baz=148,slow=6.5,SNR=8.6							
	comp=Z,3.1nm,1.0s							
MJAR	**Matsushiro Arr**	**69.48**	**320**	P	**P**	**17 43 21.6**	**-2.5**	
JSD	**Sado**	**70.39**	**321**	P	**P**	**17 43 28.1**	**-1.5**	
JSD				IAmb	IAmb	17 43 31.8		
	comp=Z,26nm,1.3s							
CASY	**Casey**	**70.49**	**205**	P	**P**	**17 43 29.4**	**-0.4**	
CASY				IAmb	IAmb	17 43 31.6		
	comp=Z,11nm,1.0s							
MCCM	**Marconi Confer**	**71.02**	**40**	P	**P**	**17 43 32.1**	**-1.3**	
SAO	**San Andreas Ge**	**71.06**	**42**	P	**P**	**17 43 34.6**	**+0.8**	
SAO				IAmb	IAmb	17 43 43.9		
	comp=Z,24nm,1.4s							
MYLDM	**Lahad Datu**	**71.09**	**281**	P	**P**	**17 43 33.2**	**-1.1**	
MYLDM				IAmb	IAmb	17 43 38.1		
	comp=Z,25nm,1.3s							
PFO	**Pinyon Flats O**	**72.60**	**47**	LR	LR	18 08 44.3		
	comp=Z,87nm,18.5s,baz=226,slow=30							
LPIG	**La Paz**	**72.62**	**58**	LR	LR	18 06 56.1		
	comp=Z,105nm,21.4s,baz=220,slow=29							
PETK	**Petropavlovsk-**	**73.00**	**342**	P	**P**	**17 43 45.5**	**+0.5**	
	comp=Z,2.2nm,0.9s,baz=159,slow=13,SNR=4.0							
	comp=Z,2.2nm,0.9s							
YBH	**Yreka Blue Hor**	**73.38**	**37**	LR	LR	18 09 05.2		
	comp=Z,92nm,20.3s,baz=226,slow=30							
QSM	**Queen of Sheba**	**73.61**	**44**	P	**P**	**17 43 49.2**	**+0.2**	
QSM				IAmb	IAmb	17 44 12.7		
	comp=Z,5.8nm,0.8s							
GWY	**Greenwater Val**	**73.87**	**44**	P	**P**	**17 43 49.8**	**-0.9**	
NVAR	**Mina Array Bea**	**74.06**	**42**	P	**P**	**17 43 54.0**	**+2.2**	
	comp=Z,3.8nm,0.9s,baz=228,slow=9.3,SNR=16							
NVAR					LR	LR	18 09 10.1	
	comp=Z,138nm,21.4s,baz=269,slow=30							
	comp=Z,3.8nm,0.9s							
NVAR	**Mina Array Bea**	**74.06**	**42**	P	**P**	**17 43 51.3**	**-0.5**	
NV11	**Mina Array Sit**	**74.16**	**42**	P	**P**	**17 43 52.4**	**+0.1**	
NV11				IAmb	IAmb	17 43 55.3		
	comp=Z,7.9nm,1.1s							
QSPA	**South Pole Qui**	**74.45**	**180**	P	**P**	**17 43 55.2**	**+1.6**	
QSPA				IAmb	IAmb	17 43 56.5		
	comp=Z,19nm,1.1s							
KVN	**Kaiserville**	**74.55**	**41**	P	**P**	**17 43 54.8**	**+0.2**	
KVN				IAmb	IAmb	17 43 57.5		
	comp=Z,6.4nm,1.1s							
TPH	**Tonopah**	**74.56**	**42**	P	**P**	**17 43 54.2**	**-0.5**	
KDAK	**Kodiak Island**	**74.99**	**11**	LR	LR	18 09 39.5		
	comp=Z,93nm,21.9s,baz=243,slow=30							
KDAK	**Kodiak Island**	**74.99**	**11**	P	**P**	**17 43 56.8**	**+0.4**	
KDAK				IAmb	IAmb	17 43 58.7		
	comp=Z,14nm,1.1s							
SHPR	**Sheep Range**	**75.06**	**45**	P	**P**	**17 43 57.7**	**+0.1**	
SHPR				IAmb	IAmb	17 44 00.8		
	comp=Z,7.7nm,1.3s							
PINE	**Pine Mountain**	**75.69**	**36**	P	**P**	**17 44 01.8**	**+0.7**	
PINE				IAmb	IAmb	17 44 04.6		
	comp=Z,11nm,1.1s							
R11A	**Troy Canyon, C**	**75.78**	**43**	P	**P**	**17 44 01.5**	**-0.2**	
BMN	**Battle Mountai**	**75.90**	**40**	P	**P**	**17 44 02.2**	**-0.1**	
SBUM	**Sibu**	**76.25**	**276**	P	**P**	**17 44 03.5**	**-1.3**	
KSAR	**Wonju Array Be**	**76.74**	**315**	P	**P**	**17 44 05.4**	**-1.6**	
U15A	**North Rim**	**76.99**	**46**	IAmb	IAmb	17 44 12.9		
	comp=Z,21nm,1.7s							
PSUT	**Pine Spring**	**77.02**	**44**	P	**P**	**17 44 08.2**	**-0.7**	
PSUT				IAmb	IAmb	17 44 11.6		
	comp=Z,4.6nm,0.7s							
ELK	**Elko**	**77.32**	**41**	LR	LR	18 11 10.6		
	comp=Z,104nm,21.0s,baz=241,slow=30							
ELK	**Elko**	**77.32**	**41**	P	**P**	**17 44 10.1**	**-0.4**	
G08A	**Pilot Rock**	**77.73**	**36**	P	**P**	**17 44 11.2**	**-1.3**	
G08A				IAmb	IAmb	17 44 16.0		
	comp=Z,9.7nm,1.2s							
BBB	**Bella Bella**	**77.78**	**26**	LR	LR	18 09 47.8		
	comp=Z,49nm,20.5s,baz=265,slow=29							
KSM	**Kuching**	**77.81**	**275**	P	**P**	**17 44 12.5**	**-1.0**	
KSM				IAmb	IAmb	17 44 15.3		
	comp=Z,14nm,1.1s							
BMO	**Blue Mountains**	**78.41**	**37**	P	**P**	**17 44 16.1**	**-0.1**	
MFID	**Camas Ranch**	**78.45**	**39**	P	**P**	**17 44 16.6**	**+0.1**	
MFID				IAmb	IAmb	17 44 19.2		
	comp=Z,6.6nm,1.1s							
DUG	**Dugway, Tooele**	**78.58**	**43**	P	**P**	**17 44 16.7**	**-0.7**	
D08A	**Wollman Farm,**	**78.82**	**34**	P	**P**	**17 44 17.7**	**-0.7**	
D08A				IAmb	IAmb	17 44 21.2		
	comp=Z,16nm,1.2s							
F10A	**Beach Ranch, E**	**79.11**	**36**	P	**P**	**17 44 19.4**	**-0.7**	
F10A				IAmb	IAmb	17 44 34.5		
	comp=Z,9.0nm,1.1s							
HLID	**Hailey**	**79.39**	**39**	P	**P**	**17 44 20.8**	**-1.0**	
B08A	**Colville Reser**	**79.40**	**33**	P	**P**	**17 44 20.4**	**-1.1**	
B08A				IAmb	IAmb	17 44 23.6		
	comp=Z,7.7nm,1.1s							
SRU	**San Rafael Swe**	**79.55**	**44**	P	**P**	**17 44 22.1**	**-0.6**	
SRU				IAmb	IAmb	17 44 25.7		
	comp=Z,6.7nm,1.0s							
MNTX	**Cornudas Mount**	**79.85**	**53**	P	**P**	**17 44 24.8**	**+0.5**	
MNTX				IAmb	IAmb	17 44 35.5		
	comp=Z,12nm,1.6s							
TX31	**Lajitas Ar. Si**	**80.21**	**56**	IAmb	IAmb	17 44 30.4		
	comp=Z,18nm,1.1s							
TXAR	**Lajitas Array**	**80.21**	**56**	P	**P**	**17 44 28.5**	**+2.1**	
	comp=Z,2.7nm,1.0s,baz=229,slow=5.8,SNR=21							
TXAR					LR	LR	18 11 47.9	
	comp=Z,72nm,20.6s,baz=214,slow=30							
	comp=Z,2.7nm,1.0s							
TXAR	**Lajitas Array**	**80.21**	**56**	P	**P**	**17 44 27.2**	**+0.7**	
PV13	**Radium Mtn., P**	**80.25**	**46**	P	**P**	**17 44 25.4**	**-1.3**	
PV13				IAmb	IAmb	17 44 29.6		
	comp=Z,7.0nm,1.1s							
PV23	**Carpenter Ridg**	**80.26**	**46**	IAmb	IAmb	17 44 30.2		
	comp=Z,11nm,0.9s							
ANMO	**Albuquerque**	**80.46**	**50**	LR	LR	18 11 59.7		
	comp=Z,79nm,19.8s,baz=264,slow=30							
ANMO	**Albuquerque**	**80.46**	**50**	P	**P**	**17 44 27.2**	**-0.6**	
NEW	**Newport**	**80.52**	**34**	LR	LR	18 12 09.2		
	comp=Z,78nm,21.1s,baz=216,slow=30							
MCMT	**McKenzie Canyo**	**81.02**	**39**	P	**P**	**17 44 30.4**	**-0.2**	
S22A	**4UR Ranch, Cre**	**81.45**	**47**	IAmb	IAmb	17 44 36.6		
	comp=Z,7.8nm,1.1s							
DLMT	**Dillon**	**81.46**	**38**	P	**P**	**17 44 32.3**	**-0.5**	
BNX	**BinXian**	**81.46**	**322**	∥P	**P**	**17 44 33.6**	**+1.0**	
BNX				pmax	pmax			
	comp=Z,9.0nm,0.9s							
BNX				pmax	pmax			
	comp=Z,84nm,3.6s							
MSO	**Missoula**	**81.47**	**36**	P	**P**	**17 44 32.4**	**-0.4**	
REDW	**Red Top Meadow**	**81.48**	**41**	P	**P**	**17 44 32.3**	**-0.8**	
REDW				IAmb	IAmb	17 44 44.5		
	comp=Z,21nm,1.8s							
DLBC	**Dease Lake**	**81.66**	**21**	LR	LR	18 13 51.4		
	comp=Z,42nm,19.4s,baz=278,slow=31							
PD31	**Pinedale Array**	**82.00**	**42**	P	**P**	**17 44 34.1**	**-1.8**	
PDAR	**Pinedale Array**	**82.00**	**42**	P	**P**	**17 44 37.3**	**+1.5**	
	comp=Z,1.0nm,0.7s,baz=219,slow=3.8,SNR=9.6							
PDAR					LR	LR	18 15 12.4	
	comp=Z,86nm,19.2s,baz=274,slow=31							
	comp=Z,1.0nm,0.7s							
PDAR	**Pinedale Array**	**82.00**	**42**	P	**P**	**17 44 35.2**	**-0.6**	
SMCO	**Snowmass**	**82.00**	**46**	IAmb	IAmb	17 44 39.9		
	comp=Z,12nm,1.4s							
WRH	**Wood River Hil**	**82.03**	**11**	P	**P**	**17 44 34.9**	**-0.2**	
WRH				IAmb	IAmb	17 44 49.8		
	comp=Z,16nm,1.1s							
BOZ	**Bozeman (W)**	**82.16**	**38**	P	**P**	**17 44 36.2**	**-0.3**	
BOZ				IAmb	IAmb	17 45 00.7		
	comp=Z,14nm,1.5s							
CCB	**Clear Creek Bu**	**82.24**	**11**	IAmb	IAmb	17 44 50.2		
	comp=Z,9.5nm,0.9s							
SDCO	**Great Sand Dun**	**82.39**	**48**	P	**P**	**17 44 37.6**	**-0.5**	
ILAR	**Eielson Array**	**82.51**	**11**	P	**P**	**17 44 39.2**	**+1.5**	
	comp=Z,0.5nm,0.7s,baz=221,slow=6.2,SNR=4.2							
	comp=Z,0.5nm,0.7s							
HRY	**Holter Researc**	**82.63**	**37**	P	**P**	**17 44 38.9**	**0.0**	
T25A	**Trinidad**	**82.91**	**48**	P	**P**	**17 44 40.4**	**-0.3**	
T25A				IAmb	IAmb	17 44 54.0		
	comp=Z,5.7nm,0.8s							
RLMT	**Red Lodge**	**83.35**	**40**	IAmb	IAmb	17 44 45.9		
	comp=Z,11nm,1.2s							
CMIG	**Matias Romero**	**83.37**	**70**	LR	LR	18 12 42.9		
	comp=Z,66nm,20.3s,baz=207,slow=29							
N23A	**Red Feather La**	**83.49**	**45**	IAmb	IAmb	17 45 05.3		
	comp=Z,9.4nm,1.2s							
BELA	**Belgrano 2**	**83.72**	**172**	IAmb	IAmb	17 44 45.5		
	comp=Z,5.9nm,1.1s							
BJI	**Beijing**	**86.04**	**313**	P	**P**	**17 44 57.8**	**+1.6**	
BJI				pmax	pmax			
	comp=Z,9.0nm,1.1s							
XLT	**XiLinHaoTe**	**87.68**	**317**	*e*P	**P**	**17 45 06.0**	**+1.8**	
XLT				pP	pwP	17 45 18.2	+1.0	
XLT				sP	sP	17 45 20.9	+5.6	
XLT	**XiLinHaoTe**	**87.68**	**317**	S	**S**	**17 55 52.3**	**+7.8**	
MAW	**Mawson**	**87.81**	**198**	P	**P**	**17 45 05.5**	**+1.2**	
	comp=Z,9.6nm,1.0s,baz=109,slow=4.0,SNR=7.4							
	comp=Z,9.6nm,1.0s							
MAW	**Mawson**	**87.81**	**198**	P	**P**	**17 45 05.3**	**+1.0**	
MAW				IAmb	IAmb	17 45 16.5		
	comp=Z,2.9nm,0.4s							
INK	**Inuvik**	**88.31**	**14**	LR	LR	18 17 17.0		
	comp=Z,60nm,21.8s,baz=218,slow=31							
XAN	**Xi'an**	**89.24**	**306**	P	**P**	**17 45 13.5**	**+1.7**	
XAN				pP	pwP	17 45 23.7	-1.1	
XAN				sP	sP	17 45 28.2	+5.4	
XAN				pmax	pmax			
	comp=Z,7.0nm,1.1s							
HHC	**Hu-ho-hao-te**	**89.60**	**313**	*e*P	**P**	**17 45 15.3**	**+1.9**	
HHC				pmax	pmax			
	comp=Z,35nm,0.8s							
HHC				pmax	pmax			
	comp=Z,170nm,5.1s							
HHC				pmax	pmax			
	comp=Z,360nm,14.0s							
HHC				LR	LR			
	comp=E,750nm,13.3s							
HHC				LR	LR			
	comp=Z,830nm,13.3s							
YKA	**Yellowknife Ar**	**90.03**	**23**	P	**P**	**17 45 16.5**	**+1.8**	
	comp=Z,0.8nm,0.8s,baz=226,slow=4.1,SNR=5.3							
	comp=Z,0.8nm,0.8s							
TROLL	**Troll, Antarti**	**92.56**	**179**	P	**P**	**17 45 28.6**	**+2.0**	
VNA3	**Neumayer Olymp**	**92.61**	**175**	P	**P**	**17 45 26.6**	**-0.2**	
VNA3	**Neumayer Olymp**	**92.61**	**175**	pP	pP	17 45 35.7	+0.7	
VNA3	**Neumayer Olymp**	**92.61**	**175**	sP	sP	17 45 42.2	+4.1	
SNAA	**Sanae**	**92.68**	**177**	P	**P**	**17 45 27.1**	**0.0**	
PZH	**PanZhiHua**	**92.90**	**297**	P	**P**	**17 45 29.5**	**+0.4**	
PZH				pmax	pmax			
	comp=Z,10.0nm,1.0s							
PZH				pmax	pmax			
	comp=Z,100nm,6.5s							
VNA2	**Neumayer--Watz**	**93.11**	**175**	P	**P**	**17 45 29.2**	**+0.1**	
	baz=174,slow=2.0							
VNA2	**Neumayer--Watz**	**93.11**	**175**	pP	pP	17 45 39.2	+1.9	
VNA2	**Neumayer--Watz**	**93.11**	**175**	sP	sP	17 45 43.9	+3.6	
CMAR	**Chiang Mai Arr**	**93.25**	**288**	P	**P**	**17 45 32.0**	**+1.3**	
	comp=Z,1.4nm,0.9s,baz=96,slow=3.2,SNR=6.7							
	comp=Z,1.4nm,0.9s							
BOSC	**San Juan Bosco**	**93.27**	**94**	P	**P**	**17 45 32.1**	**+1.0**	
VNA1	**Neumayer--Stat**	**93.31**	**175**	P	**P**	**17 45 30.1**	**+0.2**	
VNA1	**Neumayer--Stat**	**93.31**	**175**	pP	pP	17 45 38.5	+0.3	
VNA1	**Neumayer--Stat**	**93.31**	**175**	sP	sP	17 45 44.9	+3.7	
ULM	**Lac du Bonnet**	**93.70**	**39**	LR	LR	18 20 15.3		
	comp=Z,121nm,20.4s,baz=268,slow=31							
LZH	**Lanzhou**	**93.83**	**306**	*e*P	**P**	**17 45 31.4**	**-1.8**	
LZH				pP	PcP	17 45 35.7	+2.0	
LZH				pmax	pmax			
	comp=Z,16nm,1.4s							
GTA	**Gaotai**	**97.78**	**309**	*e*P	Pdif	17 45 52.1	+1.0	
GTA				pP	pwP	17 46 02.8	-1.3	
GTA				sP	sP	17 46 07.5	+5.4	
GTA				pmax	pmax			
	comp=Z,2.0nm,1.0s							
TKL	**Tukaleechee C**	**98.12**	**55**	LR	LR	18 23 01.8		
	comp=Z,76nm,19.3s,baz=252,slow=31							
FINES	**FINESS Array B**	**132.26**	**348**	PKP	**PKiKP**	**17 51 32.2**	**+2.1**	
	comp=Z,1.5nm,0.9s,baz=182,slow=29,SNR=3.3							
DPC	**Dobruska-Polom**	**144.56**	**350**	*e*PKP	**PKPab**	**17 51 50.0**	**-0.4**	
KIBK	**Kibwezi**	**144.70**	**242**	PKPdf	**PKPdf**	**17 51 53.2**	**-0.1**	
CRVS	**Cervenica-Dubn**	**144.79**	**344**	*e*PKP	**PKPdf**	**17 51 52.9**	**+0.6**	
MORC	**Moravsky Berou**	**144.89**	**348**	*e*PKP	**PKPdf**	**17 51 52.3**	**-0.2**	
MAUC	**Maruska**	**145.22**	**348**	*e*PKP	**PKPdf**	**17 51 53.9**	**+0.8**	
VRAC	**Vranov**	**145.51**	**349**	*e*PKP	**PKPab**	**17 51 54.1**	**+0.2**	
JAVC	**Velka Javorina**	**145.74**	**348**	*e*PKP	**PKiKP**	**17 51 56.4**	**-1.7**	
KRUC	**Moravsky**	**145.79**	**349**	*e*PKP	**PKPab**	**17 51 55.6**	**+0.7**	
BNN	**Bunyan**	**145.84**	**318**	PKPdf	**PKPab**	**17 51 56.5**	**+0.9**	
KMBO	**Kilima Mbogo**	**146.00**	**243**	PKPbc	**PKPab**	**17 51 58.0**	**+0.9**	
	comp=Z,4.0nm,0.8s,baz=50,slow=4.1,SNR=8.2							
KHC	**Kasperske Hory**	**146.15**	**353**	*e*PKP	**PKPab**	**17 51 55.6**	**-0.7**	
KHC				*ex*	x	17 52 15.0		
MODS	**Modra-Piesok**	**146.28**	**348**	*e*PKP	**PKiKP**	**17 51 58.5**	**-0.7**	
GERES	**GERESS Array B**	**146.41**	**352**	PKPbc	**PKPab**	**17 51 57.3**	**-0.1**	
	comp=Z,0.2nm,0.4s,baz=252,slow=2.7,SNR=4.2							
BR131	**Keskin Array S**	**146.69**	**321**	PKPdf	**PKPab**	**17 51 58.4**	**-0.5**	
BRTR	**Keskin Array B**	**146.69**	**321**	PKPbc	**PKPab**	**17 51 58.6**	**-0.2**	
	comp=Z,6.9nm,1.0s,baz=116,slow=2.1,SNR=27							
BRTR	**Keskin Array B**	**146.69**	**321**	PKPdf	**PKPbc**	**17 51 57.5**	**-0.2**	
RONA	**Rosalia, Austr**	**147.12**	**349**	*e*P	**PKiKP**	**17 52 00.4**	**-0.6**	
	comp=Z,4.1nm,1.0s							
BIOA	**Bad Ischl, Aus**	**147.56**	**352**	*e*P	**PKPab**	**17 52 01.2**	**-0.6**	
	comp=Z,1.3nm,0.4s							
KBA	**Koelnbreinsper**	**148.19**	**352**	*e*P	**PKiKP**	**17 52 02.5**	**-0.9**	
	comp=Z,2.8nm,0.9s							
SOKA	**Soboth**	**148.33**	**350**	*i* P	**PKiKP**	**17 52 02.8**	**-0.7**	
	comp=Z,3.5nm,1.0s							
ABTA	**Abfaltersbach**	**148.62**	**353**	*e*P	**PKiKP**	**17 52 03.5**	**-0.7**	
	comp=Z,0.9nm,0.5s							

MAN 10 17:43:50.6, 16°.38N×120°.80E, h27km, mb3.8, ML2.6, MS2.1, Luzon

MAN 10 17:44:18.6, 11°.27N×122°.70E, h33km, mb3.8, ML2.5, MS2.1, Panay

MAN 10 17:50:53.5, 16°.54N×120°.85E, h31km, mb4.1, ML2.9, MS2.5, 5D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPP	**San Manuel, Pa**	**0.42**	**202**	∥*e*P	Pb	17 51 02.9	+0.3
SAMP	**Sagada Mountai**	**0.54**	**6**	∥*e*P	Pg	17 51 05.6	-3.2
SAMP				*e*S	Sg	17 51 11.4	-6.8
BOLP	**Bolinao**	**0.91**	**260**	∥*e*P	Pb	17 51 10.9	-2.8
BOLP				*e*S	Sn	17 51 29.9	+2.0
CAUP	**Cauayan**	**1.02**	**67**	∥*e*P	Pb	17 51 11.6	-3.1
CAUP				*e*S	Sb	17 51 13.8	-14
BALP	**Baler**	**1.06**	**138**	∥*e*P	Pg	17 51 12.3	+0.2
BALP				*e*S	Sg	17 51 22.9	-0.8

IDC 10 17:54:23.4±3.1, 10°.52N×127°.43E, h0km, mb3.6/3, **mbtmp3.6**/3, **Error ellipse: s-maj=270.5km s-min=28.3km az=69.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**34.56**	**169**	P	P	18 01 13.9	-0.1
	0.3nm,0.9s,baz=354,slow=7.1,SNR=8.7						
	0.3nm,0.9s						
MKAR	**Makanchi Array**	**52.52**	**322**	P	P	18 03 38.5	-0.1
	0.6nm,0.6s,baz=113,slow=8.2,SNR=10						
	0.6nm,0.6s						
FINES	**FINESS Array B**	**86.21**	**332**	P	P	18 07 06.6	0.0
	0.8nm,0.8s,baz=66,slow=4.8,SNR=4.9						
	0.8nm,0.8s						

IDC ***10*** *18:11:45.7±0.5, 45°.99N×152°.31E, h0km, mb4.0/20, mbtmp4.0/26, ML3.4/6, MS3.8/17, Error ellipse: s-maj=15.1km s-min=12.6km az=124.0*

SKHL ***10*** *18:11:48.4±0.4, 45°.60N×152°.80E, h53km±3km, mb5.1/6, mbv5.3/2, msh5.2/2*

MOS ***10*** *18:11:49.2±1.2, 45°.81N×152°.40E, h40km, mb4.5/18, MS3.8/7, Error ellipse: s-maj=7.0km s-min=5.9km az=72.7*

JMA ***10*** *18:11:50.1±0.8, 46°.N±4°×15°.2E±°, h30km, MV4.9/17, KURILE ISLANDS REGION*

NEIC ***10*** *18:11:50.9±2.2, 45°.84N±0°.08×152°.4E±0°.1, h39km±6km, mb4.6/88, Error ellipse: s-maj=13.4km s-min=9.6km az=136.0*

NIED ***10*** *18:11:50.1, 46°.19N×152°.20E, h30km, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr=3.37; Mθθ=5.82; Mϕϕ=2.45; Mrθ=1.88; Mθϕ=0.58; Mϕr=1.99; Fault plane solution: M₀5.73000×10¹⁵ NP1: ϕs=233.00000°, δ46.00000°, λ=144.00000°. NP2: ϕs=116.00000°, δ65.00000°, λ=50.00000°.*

ISC 10 18:11:50.1±0.6, 45°.78N±0°.05×152°.42E±0°.04, h35km±2km, h33km:pP-P, n291, σ1ϑ77/304, mb4.5/90, MS4.0/20, 15C-10D, Fault plane solution: NP1:ϕs138.90897°, δ33.62187°, λ-19.77339°. **NP2:**ϕs245.57442°, δ79.20355°, λ-122.03595°. **Principal axes:** T Plg27.1524°, Azm0.5064°; N Plg31.4035°, Azm252.2598°; P Plg46.1595°, Azm122.7873°; **East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.25**	**262**	*e*PN	**Pn**	**18 12 40.9**	**+2.3**
KUR				*e*S	**Sn**	**18 13 18.5**	**+2.5**
KUR				pmax	pmax		
	comp=Z,379nm,0.5s						
KUR				pmax	pmax		
	comp=N,122nm,0.4s						
KUR				pmax	pmax		
	comp=E,74nm,0.3s						
KUR				smax	smax		
	comp=N,2μm,0.6s						
KUR				smax	smax		
	comp=E,851nm,0.8s						
KUR	**Kuril'sk**	**3.25**	**262**	*e*P	**Pn**	**18 12 40.3**	**+1.7**
KUR				AMB	AMB	18 12 43.7	
	comp=E,380nm,0.4s						
KUR				*e*S	**Sn**	**18 13 18.0**	**+2.0**
KUR				A	A	18 13 25.3	
	comp=E,2μm,0.8s						
KUR				A	A	18 13 25.3	
	comp=E,850nm,0.8s						
SHO	**Shikotan**	**4.41**	**246**	*e*PN	**Pn**	**18 12 54.4**	**-0.2**
SHO				*e*S	**Sn**	**18 13 45.4**	**+0.7**
SHO				pmax	pmax		
	comp=E,87nm,0.4s						
SHO				pmax	pmax		
	comp=Z,129nm,0.4s						
SHO				pmax	pmax		
	comp=N,51nm,0.2s						
SHO				smax	smax		
	comp=N,317nm,1.2s						
SHO				smax	smax		
	comp=E,385nm,0.8s						
SHO				smax	smax		
	comp=E,275nm,0.7s						
SHO				smax	smax		
	comp=N,152nm,0.3s						
SHO	**Shikotan**	**4.41**	**246**	*e*P	**Pn**	**18 12 54.7**	**+0.1**
SHO				AMB	AMB	18 12 58.3	
	comp=N,130nm,0.4s						
SHO				*e*S	**Sn**	**18 13 44.7**	**0.0**
SHO				A	A	18 13 50.1	
	comp=N,300nm,2.0s						
SHO				A	A	18 13 50.1	
	comp=N,400nm,2.0s						
SHO				A	A	18 13 55.0	
	comp=N,250nm,0.6s						
SHO				A	A	18 13 55.0	
	comp=N,510nm,0.6s						
YUK	**Yuzh-Kuril'sk**	**4.98**	**252**	*e*PN	**Pn**	**18 13 04.6**	**+2.3**
YUK				S	**Sn**	**18 14 01.3**	**+2.7**
YUK				pmax	pmax		
	comp=N,104nm,0.5s						
YUK				pmax	pmax		
	comp=Z,353nm,0.5s						
YUK				pmax	pmax		
	comp=E,79nm,0.3s						
YUK				pmax	pmax		
	comp=Z,540nm,1.0s						
YUK				smax	sm

AKK **Akkeshi** 6.09 246 *e*P **Pn** 18 13 18.5 +0.9
AKK *e*S **Sn** 18 14 25.9 -0.2
JAK **Akkeshi** 6.20 246 *e*P **Pn** 18 13 18.9 -0.1
JTKR **Abashiri--Toko** 6.32 256 *e*P **Pn** 18 13 22.9 +2.2
PAU **Pauzhetka** 6.39 25 *e*P **Pn** 18 13 22.9 +1.2
PAU AMB AMB 18 13 25.2
comp=N,20nm,0.4s
PAU *e*S **Sn** 18 14 31.6 -1.7
JAR **Ashorobuto** 6.66 251 *e*P **Pn** 18 13 27.2 +1.7
JAR *e*S **Sn** 18 14 40.5 +0.4
YSS **Yuzh-Sakhalins** 6.79 283 Pn **Pn** 18 13 27.7 +0.5
YSS **Yuzh-Sakhalins** 6.79 283 *e*PN **Pn** 18 13 30.4 +3.2
YSS *e*S **Sn** 18 14 46.2 +2.9
YSS pmax pmax
comp=Z,60nm,0.8s
YSS MLR MLR
comp=Z,1μm,13.0s
YSS **Yuzh-Sakhalins** 6.79 283 *e*P **Pn** 18 13 30.6 +3.4
YSS AMB AMB 18 13 35.3
comp=Z,60nm,0.8s
JOB **Onbets** 6.80 248 *e*P **Pn** 18 13 28.3 +1.0
JKK2 **Kamakawa 2** 7.14 258 *e*P **Pn** 18 13 34.6 +2.6
JKA **Kamikawa-asahi** 7.17 260 Pn **Pn** 18 13 33.8 +1.4
ASAJ **Asahikawa** 7.17 260 LR LR 18 16 20.7
comp=Z,706nm,19.5s,baz=24,slow=39
ASAJ **Asahikawa** 7.17 260 PN **Pn** 18 13 33.8 +1.4
JCH **Churui** 7.24 247 *e*P **Pn** 18 13 33.5 +0.1
JCH *e*S **Sn** 18 14 50.8 -3.5
JAB **Ashibetsu** 7.62 256 *e*P **Pn** 18 13 42.1 +3.5
ERM **Erimo** 7.68 244 Pn **Pn** 18 13 40.5 +1.2
ERM **Erimo** 7.68 244 *ce*PN **Pn** 18 13 42.3 +2.9
UGL **Uglegorsk** 7.76 299 *e*P **Pn** 18 13 44.5 +4.0
UGL AMB AMB 18 13 46.9
comp=Z,20nm,0.4s
JNBK **Urakawa-nobuka** 7.80 247 *e*P **Pn** 18 13 40.8 -0.2
PEA0B **Petropavlovsk-** 8.10 23 **Pn** 18 13 44.8 -0.4
PEA0B **Petropavlovsk-** 8.10 23⇑ *i*PN **Pn** 18 13 45.8 +0.7
PETK **Petropavlovsk-** 8.10 23 Pn **Pn** 18 13 43.8 -1.4
comp=Z,0.9nm,0.3s,baz=190,slow=16,SNR=17
PETK Sn **Sn** **18 15 08.4 -6.9**
comp=Z,1.3nm,0.3s,baz=72,slow=42,SNR=0.5
comp=Z,6.9nm,0.8s
PETK **Petropavlovsk-** 8.10 23 **Pn** 18 13 44.5 -0.6
PETK **Petropavlovsk-** 8.10 23 PN **Pn** 18 13 44.5 -0.6
TYV **Tymovskoe** 8.26 312 *e*PN **Pn** 18 13 47.4 +0.1
TYV pmax pmax
comp=Z,600nm,3.4s
TYV pmax pmax
comp=Z,25nm,1.7s
TYV **Tymovskoe** 8.26 312 *e*P **Pn** 18 13 50.3 +3.0
TYV AMB AMB 18 13 52.8
TYV *e*S **Sn** **18 15 21.2 +1.9**
TYV A A 18 15 23.8
comp=Z,10.0nm,0.7s
TYV A A 18 15 23.8
comp=Z,10.0nm,0.7s
PET **Petropavlovsk** 8.31 27 **Pn** 18 13 47.3 -0.6
PET **Petropavlovsk** 8.31 27⇑ *e*PN **Pn** 18 13 50.7 +2.7
PET **Petropavlovsk** 8.31 27 *e*P **Pn** 18 13 50.6 +2.6
PET AMB AMB 18 13 56.5
comp=Z,30nm,0.8s
JEW **Eniwo** 8.40 253 Pn **Pn** 18 13 50.9 +1.6
JANG **Nango** 9.63 240 *e*P **Pn** 18 14 03.8 -2.4
JANG *e*S Sn 18 15 44.3 -8.9
JTM **Tenmabayashi** 9.66 243 Pn **Pn** 18 14 04.7 -2.0
JTH **Tanohata** 9.70 237 *e*P **Pn** 18 14 05.5 -1.7
JTH *e*S Sn 18 15 46.0 -8.8
NKL **Nikolayevsk** 10.61 318 *e*P **Pn** 18 14 22.5 +3.0
NKL AMB AMB 18 14 25.2
comp=Z,30nm,0.6s
JMM **Marumori** 11.73 232 Pn **Pn** 18 14 32.7 -2.2
GRNR **Gornyy** 11.77 301⇑ *i*PN **Pn** 18 14 37.7 +2.3
GRNR pmax pmax
comp=Z,1.0nm,0.3s
GRNR **Gornyy** 11.77 301 *e*P **Pn** 18 14 37.7 +2.3
GRNR AMB AMB 18 14 38.6
JSD **Sado** 13.07 239 Pn **Pn** 18 14 51.0 -2.1
MA2 **Magadan** 13.86 356 Pn **Pn** 18 15 03.4 -0.4
comp=Z,0.1nm,0.3s,baz=297,slow=18,SNR=1.5
MA2 LR LR 18 20 29.1
comp=Z,270nm,19.3s,baz=176,slow=38
comp=Z,6.4nm,0.8s
MJAR **Matsushiro Arr** 14.12 234 Pn **Pn** 18 15 05.7 -1.9
baz=44,slow=14,SNR=7.8
MJAR Sn **Sn** **18 17 40.7 -2.2**
baz=306,slow=40,SNR=1.5
MJAR LR LR 18 22 03.3
comp=Z,94nm,18.6s,baz=55,slow=44
comp=Z,2.2nm,0.9s
MJB9 **Matsu-Tunnel** 14.12 234 **Pn** 18 15 06.8 -0.7
KLR **Kul'dur** 14.39 291 Pn **Pn** 18 15 07.8 -3.3
comp=Z,0.1nm,0.3s,baz=60,slow=22,SNR=1.4
KLR LR LR 18 20 56.9
comp=Z,620nm,18.9s,baz=80,slow=39
comp=Z,0.3nm,0.3s
KLR **Kul'dur** 14.39 291 *ce*P **Pn** 18 15 13.5 +2.4
KLR pmax pmax
comp=Z,22nm,1.3s
KLR MLR MLR
comp=Z,602nm,16.0s
KLR **Kul'dur** 14.39 291 *e*P **Pn** 18 15 12.1 +1.0
USA0B **Ussuriysk Arra** 14.55 271 Pn **Pn** 18 15 14.2 +0.9
USA0B **Ussuriysk Arra** 14.55 271⇓ *e*P **Pn** 18 15 13.4 +0.1
USRK **Ussuriysk Ar.** 14.55 271 Pn **Pn** 18 15 10.0 -3.3
comp=Z,0.2nm,0.3s,baz=126,slow=18,SNR=1.9
USRK LR LR 18 20 56.3
comp=Z,480nm,18.2s,baz=64,slow=38
comp=Z,7.7nm,1.0s
USRK **Ussuriysk Ar.** 14.55 271 Pn **Pn** 18 15 13.2 -0.1
USRK **Ussuriysk Ar.** 14.55 271 P **Pn** 18 15 13.2 -0.1
JGF **Kuroka** 15.27 234 Pn **Pn** 18 15 23.6 +0.5
SHEM **Shemya Is, Ala** 15.73 56 LR LR 18 21 35.2
comp=Z,69nm,19.0s,baz=274,slow=38
JHJ **Hachijo jima 2** 15.95 222 LR LR 18 25 43.3
comp=Z,76nm,18.0s,baz=98,slow=52
MDJ **Mudanjiang** 16.13 274 Pn **Pn** 18 15 34.3 +0.3
MDJ **Mudanjiang** 16.13 274 P **P** 18 15 36.6 -0.4
MDJ pmax pmax
comp=Z,17nm,1.2s
MDJ pmax pmax
comp=Z,140nm,3.5s
MDJ LR LR
comp=N,360nm,14.7s
MDJ LR LR
comp=E,500nm,16.2s
MDJ LR LR
comp=Z,670nm,17.7s
SEY **Seymchan** 17.19 360 Pn **Pn** 18 15 45.4 -1.8
comp=Z,0.1nm,0.3s,baz=190,slow=17,SNR=1.6
SEY LR LR 18 22 45.2
comp=Z,234nm,18.4s,baz=182,slow=39
comp=Z,0.5nm,0.4s
SEY **Seymchan** 17.19 360⇑ *e*P **P** 18 15 50.1 +1.6
SEY pmax pmax
comp=Z,6.0nm,1.4s
BNX **BinXian** 17.44 279 ⇑P **Pn** 18 15 48.9 -1.6
BNX pP **pP** **18 15 56.3 -3.3**
BNX sP **pwP** **18 16 03.0 -0.8**
BNX S **Sn** **18 19 01.0 -2.5**
BNX pmax pmax
comp=Z,4.0nm,0.8s
BNX pmax pmax
comp=Z,48nm,4.9s
BNX LR LR
comp=N,160nm,14.5s
BNX LR LR
comp=E,370nm,16.2s
BNX LR LR
comp=Z,430nm,17.7s
ZEA **Zeya** 18.04 305 *e*P **P** 18 15 58.8 +0.8
ZEA pmax pmax
comp=E,10.0nm,1.5s
ZEA pmax pmax
comp=N,10.0nm,1.0s
ZEA pmax pmax
comp=Z,10.0nm,1.2s
ZEA MLR MLR
comp=E,100nm,16.0s
ZEA MLR MLR
comp=N,100nm,12.0s
ZEA MLR MLR
comp=Z,200nm,16.0s
ZEA **Zeya** 18.04 305 *e*P **P** 18 16 00.3 +2.3
ZEA AMB AMB 18 16 03.9
comp=Z,40nm,0.8s

JHS **Saijyo** 18.18 240 P **Pn** 18 15 58.6 -1.1
CN2 **Changchun** 19.22 274 *e*P **P** 18 16 09.9 -1.1
CN2 *e*PP **PnPn** 18 16 27.3 +2.1
CN2 *e*S **Sn** 18 19 36.6 -10
CN2 *es*S S 18 19 51.5 +4.8
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 LR LR
comp=N,340nm,16.0s
CN2 LR LR
comp=E,270nm,16.0s
CN2 LR LR
comp=Z,470nm,18.0s
KSRS **Korea Array** 20.06 254 P **P** 18 16 21.2 +1.0
comp=Z,3.8nm,0.9s,baz=62,slow=11,SNR=10.0
KSRS LR LR 18 23 19.9
comp=Z,211nm,20.3s,baz=55,slow=35
comp=Z,3.8nm,0.9s
KSAR **Wonju Array Be** 20.09 254 **P** 18 16 18.8 -1.8
KSAR **Wonju Array Be** 20.09 254 P **P** 18 16 18.8 -1.8
KSCHJ **Chungju** 20.34 253 P **P** 18 16 19.6 -3.6
JCJ **Chichijima** 20.35 207 P **P** 18 16 18.3 -5.2
JNU **Nakatsue** 20.82 240 P **P** 18 16 24.6 -3.9
YAK **Yakutsk** 20.90 329 P **P** 18 16 27.4 -1.7
comp=Z,2.8nm,0.3s,baz=111,slow=4.6,SNR=6.5
YAK LR LR 18 24 27.7
comp=Z,190nm,19.3s,baz=90,slow=37
comp=Z,2.8nm,0.3s
YAK **Yakutsk** 20.90 329 **P** 18 16 28.3 -0.8
YAK **Yakutsk** 20.90 329 *e*P Pn 18 16 34.2 +2.5
YAK *e* 18 16 54.9
YAK *e*S **S** **18 20 23.8 +3.9**
YAK *e**SS pS 18 20 42.2 +8.6
YAK *e*SS **SnSn** **18 20 47.1 +5.8**
YAK *e* 18 27 57.5
YAK pmax pmax
comp=Z,40nm,0.9s
YAK pmax pmax
comp=N,13nm,0.9s
YAK pmax pmax
comp=E,16nm,1.0s
YAK pmax pmax
comp=Z,12nm,1.3s
YAK pmax pmax
comp=N,18nm,1.3s
YAK pmax pmax
comp=E,10.0nm,1.4s
YAK smax smax
comp=N,27nm,1.6s
YAK smax smax
comp=E,16nm,1.5s
SNY **Shenyang** 21.14 270 ⇓P **P** 18 16 35.7 +3.9
SNY S **S** 18 20 28.8 +3.9
SNY pmax pmax
comp=Z,19nm,0.9s
SNY LR LR
comp=N,260nm,14.7s
SNY LR LR
comp=E,380nm,21.5s
SNY LR LR
comp=Z,500nm,15.2s
BILL **Bilibino** 23.45 13 *e*P **P** 18 16 56.9 +1.0
BILL *e**PP **sP** 18 17 07.5 +0.3
BILL *e* 18 17 25.9
BILL *e* 18 20 40.1
BILL pmax pmax
comp=Z,11nm,2.7s
BILL MLR MLR
comp=Z,162nm,18.0s
BILL **Bilibino** 23.45 13 *e*P **P** 18 16 56.9 +1.0
XLT **XiLinHaoTe** 25.70 279 *e*P **P** 18 17 17.8 +0.8
XLT pP pwP 18 17 29.6 -1.0
XLT sP sP 18 17 34.1 +5.4
XLT pmax pmax
comp=Z,14nm,1.1s
XLT pmax pmax
comp=Z,110nm,5.1s
TIXI **Tiksi** 28.27 344 LR LR 18 29 07.9
comp=Z,173nm,20.5s,baz=180,slow=37
H11N2 **WAKE ISLAND Hy** 28.59 151 T T 18 48 03.6
baz=339,slow=75,SNR=396
H11N1 **WAKE ISLAND Hy** 28.61 151 T T 18 48 03.0
baz=339,slow=75,SNR=203
H11N3 **WAKE ISLAND Hy** 28.61 151 T T 18 48 05.7
baz=339,slow=75,SNR=272
NJ2 **Nanjing** 29.26 254 *e*P **P** 18 17 47.6 -1.2
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
H11S1 **WAKE ISLAND Hy** 29.66 152 T T 18 49 35.6
baz=339,slow=76,SNR=184
H11S3 **WAKE ISLAND Hy** 29.67 152 T T 18 49 31.7
baz=339,slow=76,SNR=197
H11S2 **WAKE ISLAND Hy** 29.68 152 T T 18 49 32.3
baz=339,slow=76,SNR=176
HHC **Hu-ho-hao-te** 29.90 275 *e*P **P** 18 17 55.9 +1.4
HHC pmax pmax
comp=Z,58nm,0.8s
HHC pmax pmax
comp=Z,120nm,5.1s
HHC LR LR
comp=N,280nm,15.2s
HHC LR LR
comp=E,750nm,15.9s
HHC LR LR
comp=Z,860nm,15.9s
ULN **Ulaanbaatar** 30.78 291⇑ *e*P **P** 18 18 02.9 +0.6
ULN pmax pmax
comp=Z,4.0nm,1.4s
ULN **Ulaanbaatar** 30.78 291 *e*P **P** 18 18 02.9 +0.6
SONM **Songino Array** 31.22 291 P **P** 18 18 05.4 -0.7
comp=Z,0.3nm,0.5s,baz=108,slow=4.8,SNR=4.0
SONM LR LR 18 31 32.2
comp=Z,260nm,19.2s,baz=77,slow=38
comp=Z,0.3nm,0.5s
SONM **Songino Array** 31.22 291 P **P** 18 18 05.4 -0.7
SONM pmax pmax
comp=Z,5.0nm,1.6s
XAN **Xi'an** 34.96 266 P P 18 18 44.9 +6.0
XAN pP pwP 18 18 57.2 +5.0
XAN pmax pmax
comp=Z,9.0nm,1.2s
XAN LR LR
comp=N,190nm,15.8s
XAN LR LR
comp=E,170nm,13.1s
XAN LR LR
comp=Z,230nm,12.8s
A21K **Barrow** 35.09 26 P **P** 18 18 39.8 +0.3
A21K IAmb IAmb 18 18 48.9
comp=Z,5.9nm,0.8s
KDAK **Kodiak Island** 35.09 50 P **P** 18 18 38.8 -0.8
KDAK **Kodiak Island** 35.09 50 P **P** 18 18 38.8 -0.8
KDAK pmax pmax
comp=Z,29nm,1.4s
CNPM **China Poot** 35.68 47 P **P** 18 18 45.2 +0.5
KNGR **Kungurtug, Tuv** 36.21 298⇓ *e*P **P** 18 18 49.1 -0.3
TOLK **Toolik Lake Re** 36.82 31 P **P** 18 18 54.7 +0.3
TOLK IAmb IAmb 18 18 55.8
comp=Z,12nm,1.5s
COLA **College** 37.20 38⇑ *e*P **P** 18 18 58.3 +0.8
COLA pmax pmax
comp=Z,6.0nm,1.0s
LZH **Lanzhou** 37.45 273 ⇓P **P** 18 19 02.1 +1.9
LZH sP pwP 18 19 21.3 +7.5
LZH pmax pmax
comp=Z,14nm,1.2s
LZH pmax pmax
comp=Z,29nm,1.3s
LZH pmax pmax
comp=Z,150nm,5.4s
LZH LR LR
comp=N,240nm,13.4s
LZH LR LR
comp=E,210nm,13.2s
LZH LR LR
comp=Z,260nm,15.6s
ILAR **Eielson Array** 37.61 38 P **P** 18 19 00.7 -0.3
comp=Z,0.9nm,0.8s,baz=257,slow=6.7,SNR=8.2
comp=Z,0.9nm,0.8s
BMAR **Burnt Mountain** 38.59 33 P **P** 18 19 09.9 +0.6
GTA **Gaotai** 38.66 280 *e*P **P** 18 19 12.1 +1.8
GTA pP pwP 18 19 35.7 +12
GTA sP sP 18 19 49.6 +27
GTA pmax pmax
comp=Z,3.0nm,1.0s
GTA pmax pmax
comp=Z,49nm,4.7s
GTA LR LR
comp=N,140nm,16.4s
GTA LR LR
comp=E,120nm,17.4s
GTA LR LR
comp=Z,210nm,16.0s
SCRK **Sand Creek** 38.89 39 P **P** 18 19 11.9 0.0
NRIK **Noril'sk** 39.35 330 LR LR 18 36 07.6
comp=Z,82nm,18.3s,baz=340,slow=37
L27K **Beaver Creek,** 39.93 40 P **P** 18 19 21.6 +1.1
L27K IAmb IAmb 18 19 40.5
comp=Z,12nm,1.6s
BCAR **Beaver Creek A** 39.95 40 P **P** 18 19 21.6 +0.9
BARN **Barnard Glacie** 40.27 43 P **P** 18 19 24.4 +0.9
BARN IAmb IAmb 18 19 26.1
comp=Z,16nm,1.4s
M30M **Minto, Yukon** 42.29 41 P **P** 18 19 39.8 -0.2
HYT **Haines Junctio** 42.31 43 P **P** 18 19 38.8 -1.4
ZALV **Zalesovo Beam** 42.80 306 LR LR 18 38 38.8
comp=Z,377nm,18.5s,baz=72,slow=38
GOMU **GeErMu** 43.68 278 P **P** 18 19 53.1 +1.2
GOMU pP pP 18 19 57.0 -3.9
GOMU sP sP 18 19 59.4 -4.4
GOMU PP PP 18 21 25.1 -8.6
GOMU PcP **PcP** **18 21 44.7 +6.1**
GOMU S S 18 26 06.4 -13
GOMU sS pS 18 26 15.0 -16
GOMU SS SS 18 28 19.1 -76
GOMU pmax pmax
comp=Z,7.0nm,1.0s
GOMU pmax pmax
comp=Z,64nm,7.2s
GOMU LR LR
comp=N,130nm,16.5s
GOMU LR LR
comp=E,160nm,17.5s
GOMU LR LR
comp=Z,120nm,15.1s
KMI **Kunming** 44.60 260 ⇓P **P** 18 20 00.7 +1.5
KMI pP pwP 18 20 13.5 +1.0
KMI sP sP 18 20 18.8 +7.8
KMI pmax pmax
comp=Z,3.0nm,0.9s
WMQ **Urumqi** 44.84 292 *e*P **P** 18 20 01.9 +1.2
WMQ LR LR
comp=E,300nm,24.9s
WMQ LR LR
comp=Z,85nm,24.9s
C36M **Paulatuk** 45.90 29 P **P** 18 20 08.0 -0.7
C36M IAmb IAmb 18 20 32.3
comp=Z,15nm,1.4s
MK31 **Makanchi Array** 46.97 298 P **P** 18 20 16.3 -1.1
MK31 **Makanchi Array** 46.97 298⇑ *i*P **P** 18 20 16.5 -0.9
MKAR **Makanchi Array** 46.97 298 P **P** 18 20 15.6 -1.9
comp=Z,1.0nm,0.8s,baz=72,slow=5.1,SNR=8.0
MKAR PcP **PcP** **18 21 49.8 +0.3**
comp=Z,0.6nm,0.9s,baz=90,slow=3.8,SNR=1.8
MKAR LR LR 18 41 00.4
comp=Z,338nm,19.1s,baz=70,slow=38
comp=Z,1.0nm,0.8s
MKAR **Makanchi Array** 46.97 298 P **P** 18 20 15.4 -2.1
MKAR **Makanchi Array** 46.97 298 *i*P **P** 18 20 17.8 +0.4
MKAR pmax pmax
comp=Z,1.0nm,0.7s
MKAR **Makanchi Array** 46.97 298 *e*P **P** 18 20 17.8 +0.4
MAKZ **Makanchi** 47.16 298 P **P** 18 20 17.5 -1.4
MAKZ **Makanchi** 47.16 298 P **P** 18 20 17.5 -1.4
MAKZ pmax pmax
comp=Z,5.0nm,1.5s
KURK **Kurchatov** 47.51 304 P **P** 18 20 19.5 -2.0
KURK **Kurchatov** 47.51 304⇑ *i*P **P** 18 20 20.3 -1.2
KURK pmax pmax
comp=Z,2.0nm,0.8s
KURK **Kurchatov** 47.51 304 *e*P **P** 18 20 20.3 -1.2
RUBB **Prince Rupert** 48.02 50 P **P** 18 20 25.2 -0.2
KHLH **Kahului Airpor** 48.41 103 P **P** 18 20 29.3 +0.4
SIJI **Sorong** 50.07 208 P **P** 18 20 44.4 +2.8
comp=Z,2.4nm,0.5s,baz=20,slow=6.3,SNR=3.8
comp=Z,2.4nm,0.5s
EUNU **Eureka** 50.17 11 P **P** 18 20 39.5 -2.2
EUNU IAmb IAmb 18 20 50.1
comp=Z,9.4nm,1.4s
CMAR **Chiang Mai Arr** 51.68 256 P **P** 18 20 54.6 +0.9
comp=Z,1.4nm,0.8s,baz=37,slow=6.8,SNR=9.5
comp=Z,1.4nm,0.8s
YKA **Yellowknife Ar** 51.99 36 P **P** 18 20 55.0 -0.4
comp=Z,1.4nm,1.0s,baz=300,slow=7.3,SNR=5.9
comp=Z,1.4nm,1.0s
YKA **Yellowknife Ar** 51.99 36 *i*P **P** 18 20 56.0 +0.6
YKA pmax pmax
comp=Z,1.0nm,1.0s
KDJ **Kajisay** 52.41 295 P P 18 20 54.2 -4.9
KDJ **Kajisay** 52.41 295 P P 18 20 54.2 -4.9
KDJ pmax pmax
comp=Z,2.0nm,0.8s
BOOM **Boomskoye usch** 53.01 296 P **P** 18 21 02.6 -0.9
BOOM **Boomskoye usch** 53.01 296 P **P** 18 21 02.6 -0.9
BOOM pmax pmax
comp=Z,3.0nm,0.9s
TAPN **Taplejung** 53.68 273 *e*P **P** 18 21 11.2 +2.4
AAK **Ala-Archa** 53.84 297⇑ *e*P **P** 18 21 10.1 +0.5
AAK pmax pmax
comp=Z,8.0nm,1.7s
AAK **Ala-Archa** 53.84 297 *e*P **P** 18 21 10.1 +0.5
JIRN **Jiri** 54.55 275 *e*P **P** 18 21 17.0 +1.8
KSH **Kashi** 54.58 293 P P 18 21 20.5 +5.5
KSH sP pwP 18 21 36.3 +5.9
KSH pmax pmax
comp=Z,3.0nm,1.1s
GUN **Gumba** 54.61 275 *e*P **P** 18 21 17.6 +2.0
RAMN **Ramite** 54.70 274 *e*P **P** 18 21 17.2 +1.0
PKI **Pulchoki** 55.15 275 *e*P **P** 18 21 20.7 +1.2
PKIN **Phulchoki** 55.15 275 *e*P **P** 18 21 20.5 +1.1
DMN **Daman** 55.34 275 *e*P **P** 18 21 22.3 +1.6
ARU **Arti** 55.41 318 LR LR 18 47 05.0
comp=Z,76nm,18.4s,baz=66,slow=38
ARU **Arti** 55.41 318 *di*P **P** 18 21 19.2 -1.3
ARU *PP **sP** 18 21 31.8 -0.5
ARU S **S** 18 29 00.3 -2.1
ARU pmax pmax
comp=Z,7.0nm,1.6s
ARU MLR MLR
comp=Z,142nm,15.0s
ARU **Arti** 55.41 318 *e*P **P** 18 21 19.5 -1.0
GKN **Gorkha** 55.42 276 *e*P **P** 18 21 22.7 +1.5
comp=Z,32nm,1.1s
DANN **Dangsing** 55.82 277 *e*P **P** 18 21 26.0 +1.8
GAR **Garm** 58.49 295 P **P** 18 21 42.7 -0.1
ARCES **ARCESS Array B** 58.61 341 P **P** 18 21 41.9 -1.1
comp=Z,2.4nm,0.9s,baz=41,slow=3.9,SNR=3.7
comp=Z,2.4nm,0.9s
ARCES **ARCESS Array B** 58.61 341 P **P** 18 21 41.8 -1.2
ARCES IAmb IAmb 18 22 08.1
comp=Z,5.9nm,1.4s
ABKAR **Akbulak array** 58.68 310 P **P** 18 21 43.2 -0.6
ABKAR **Akbulak array** 58.68 310 P **P** 18 21 42.6 -1.2
ABKAR IAmb IAmb 18 21 45.5
comp=Z,4.7nm,1.4s
AKTO **Aktyubinsk** 59.02 312 LR LR 18 49 38.3
comp=Z,311nm,18.5s,baz=47,slow=39
CHGR **Chuyangaron** 59.43 295 P **P** 18 21 48.6 -0.7
CHGR **Chuyangaron** 59.43 295 P **P** 18 21 48.6 -0.7
CHGR pmax pmax
comp=Z,15nm,0.7s
PLID **Pearl Lake** 60.62 54 P **P** 18 21 56.9 -0.6
PLID IAmb IAmb 18 22 00.2
comp=Z,7.4nm,1.0s
MSO **Missoula** 60.73 52 P **P** 18 21 56.8 -1.3
MSO IAmb IAmb 18 22 00.8
comp=Z,8.7nm,1.2s
KBL **Kabul** 61.98 292 P **P** 18 22 05.1 -1.7
KBL IAmb IAmb 18 22 07.4
comp=Z,7.4nm,1.1s
KBL **Kabul** 61.98 292 P **P** 18 22 05.1 -1.7
KBL pmax pmax
comp=Z,7.0nm,1.1s
LRM **Limekiln Ridge** 62.17 52 P **P** 18 22 08.6 +0.6
CMB **Columbia Colle** 62.27 63 P **P** 18 22 08.1 -0.4
CMB IAmb IAmb 18 22 11.5
comp=Z,3.9nm,1.0s
CMB **Columbia Colle** 62.27 63 P **P** 18 22 08.1 -0.4
CMB pmax pmax
comp=Z,4.0nm,1.0s
BMN **Battle Mountai** 62.73 59 P **P** 18 22 12.8 +1.1

BMN IAmb IAmb 18 22 14.9
comp=Z,3.4nm,0.9s
BMN Battle Mountai 62.73 59 P **P** **18 22 12.8 +1.1**
BMN pmax pmax
comp=Z,3.0nm,0.9s
BOZ Bozeman (W) 62.76 52 P **P** **18 22 10.7 -1.1**
BOZ IAmb IAmb 18 22 14.8
comp=Z,12nm,1.6s
BOZ Bozeman (W) 62.76 52 P **P** **18 22 10.7 -1.1**
BOZ pmax pmax
comp=Z,12nm,1.6s
KVN Kaiserville 63.05 61 P **P** **18 22 14.4 +0.5**
KVN IAmb IAmb 18 22 17.0
comp=Z,4.3nm,1.0s
KVN Kaiserville 63.05 61 P **P** **18 22 14.4 +0.5**
KVN pmax pmax
comp=Z,4.0nm,1.0s
RYN Ryan 63.05 61 P **P** **18 22 13.3 -0.6**
RYN IAmb IAmb 18 22 16.9
comp=Z,3.3nm,0.8s
LHV Little Huntoon 63.30 62 P **P** **18 22 16.2 +0.9**
LHV IAmb IAmb 18 22 19.1
comp=Z,9.0nm,1.0s
NVAR Mina Array Bea 63.31 62 P **P** **18 22 16.2 +0.5**
comp=Z,2.0nm,0.8s,baz=288,slow=6.9,SNR=11
comp=Z,2.0nm,0.8s
NVAR Mina Array Bea 63.31 62 P **P** **18 22 15.7 0.0**
TPH Tonopah 64.20 61 P **P** **18 22 22.4 +0.9**
TPH Tonopah 64.20 61 P **P** **18 22 22.4 +0.9**
TPH pmax pmax
comp=Z,19nm,0.9s
TPAW Teton Pass 64.46 53 P **P** **18 22 24.5 +1.2**
LCH Last Change Ra 64.47 62 P **P** **18 22 24.3 +1.1**
LCH IAmb IAmb 18 22 25.6
comp=Z,5.3nm,1.3s
HVU Hansel Valley 64.51 56 P **P** **18 22 23.8 +0.4**
HVU IAmb IAmb 18 22 25.8
comp=Z,5.8nm,1.3s
HVU Hansel Valley 64.51 56 P **P** **18 22 23.8 +0.4**
HVU pmax pmax
comp=Z,6.0nm,1.3s
LOHW Long Hollow 64.58 53 P **P** **18 22 22.6 -1.4**
LOHW IAmb IAmb 18 22 27.5
comp=Z,13nm,1.5s
FIA1 FINESS Array S 64.71 335 P **P** **18 22 23.1 -1.0**
FINES FINESS Array B 64.71 335 P **P** **18 22 23.1 -1.1**
comp=Z,1.2nm,0.4s,baz=26,slow=7.5,SNR=20
comp=Z,1.2nm,0.4s
FINES FINESS Array B 64.71 335 P **P** **18 22 22.8 -1.4**
FINES FINESS Array B 64.71 335 *i* P **P** **18 22 24.0 -0.2**
FINES pmax pmax
comp=Z,1.0nm,0.4s
R11A Troy Canyon, C 65.02 60 P **P** **18 22 28.0 +1.2**
DUG Dugway, Tooele 65.50 57 P **P** **18 22 30.4 +0.5**
DUG IAmb IAmb 18 22 33.0
comp=Z,5.5nm,1.0s
DUG Dugway, Tooele 65.50 57 P **P** **18 22 30.4 +0.5**
DUG pmax pmax
comp=Z,6.0nm,1.0s
BW06 Boulder Array 65.71 53 P **P** **18 22 31.6 +0.3**
BW06 IAmb IAmb 18 22 33.9
comp=Z,3.3nm,0.9s
PD31 Pinedale Array 65.71 53 P **P** **18 22 31.7 +0.4**
PDAR Pinedale Array 65.71 53 P **P** **18 22 30.8 -0.5**
comp=Z,1.8nm,0.9s,baz=300,slow=2.9,SNR=11
comp=Z,1.8nm,0.9s
PDAR Pinedale Array 65.71 53 P **P** **18 22 32.1 +0.8**
GWY Greenwater Val 65.74 63 P **P** **18 22 31.1 -0.4**
GWY IAmb IAmb 18 22 34.2
comp=Z,4.5nm,1.0s
QSM Queen of Sheba 65.75 63 P **P** **18 22 31.5 +0.1**
QSM IAmb IAmb 18 22 49.2
comp=Z,7.0nm,1.3s
OBN Obninsk 65.84 325 *e*P **P** **18 22 31.8 +0.2**
OBN *e**PP **pwP** **18 22 45.9 +0.9**
OBN *e* 18 23 01.3
OBN *e* 18 24 58.0
OBN pmax pmax
comp=Z,3.0nm,0.8s
OBN MLR MLR
comp=Z,110nm,15.0s
OBN Obninsk 65.84 325 *e*P **P** **18 22 31.8 +0.2**
PSUT Pine Spring 65.95 59 P **P** **18 22 31.5 -1.4**
PSUT IAmb IAmb 18 22 49.3
comp=Z,2.8nm,0.7s
HEL Helsinki 66.05 334 P P 18 22 28.5 -4.4
HEL pmax pmax
comp=Z,3.0nm,1.0s
NLU North Lily Min 66.09 57 P **P** **18 22 34.3 +0.6**
NLU IAmb IAmb 18 22 37.1
comp=Z,4.4nm,1.0s
MPU Maple Canyon 66.31 57 P **P** **18 22 34.7 -0.4**
MPU IAmb IAmb 18 22 38.0
comp=Z,4.2nm,0.9s
SHPR Sheep Range 66.46 61 P **P** **18 22 35.9 -0.2**
GYA0B ALIBECK ARRAY 66.69 301 P **P** **18 22 38.0 +0.5**
GYA0B IAmb IAmb 18 22 55.9
comp=Z,4.8nm,0.7s
CCUT Cedar City 66.88 60 P **P** **18 22 40.4 +1.5**
CCUT IAmb IAmb 18 22 42.0
comp=Z,6.0nm,1.4s
RDMU Red Mountain 67.14 55 P **P** **18 22 41.4 +1.0**
P17A Butcher Ranch, 67.18 56 P **P** **18 22 41.1 +0.4**
P17A IAmb IAmb 18 22 43.6
comp=Z,3.8nm,0.9s
P18A Preston Nutter 67.37 56 P **P** **18 22 42.6 +0.6**
P18A IAmb IAmb 18 22 45.0
comp=Z,6.5nm,1.3s
WRAB Tennant Creek 67.43 198↓ *e*P **P** **18 22 43.7 +1.6**
WRAB pmax pmax
comp=Z,26nm,2.3s
WB2 Warramunga Arr 67.44 198 P **P** **18 22 41.7 -0.4**
WRA Warramunga Arr 67.44 198 P **P** **18 22 43.3 +1.2**
comp=Z,1.4nm,0.7s,baz=18,slow=7.1,SNR=7.6
comp=Z,1.4nm,0.7s
WRA Warramunga Arr 67.44 198 P **P** **18 22 41.9 -0.3**
WRA Warramunga Arr 67.44 198 *i* P **P** **18 22 42.7 +0.6**
WRA pmax pmax
comp=Z,2.0nm,0.7s
K22A Casper 67.47 52 P **P** **18 22 43.7 +1.3**
K22A IAmb IAmb 18 22 45.0
comp=Z,12nm,1.4s
SRU San Rafael Swe 67.55 57 P **P** **18 22 43.5 +0.5**
SRU IAmb IAmb 18 22 45.7
comp=Z,5.5nm,1.0s
SRU San Rafael Swe 67.55 57 P **P** **18 22 43.5 +0.5**
SRU pmax pmax
comp=Z,6.0nm,1.0s
RSSD Black Hills 67.82 49 P **P** **18 22 45.5 +0.8**
RSSD IAmb IAmb 18 22 46.9
comp=Z,10.0nm,1.3s
RSSD Black Hills 67.82 49 P **P** **18 22 45.5 +0.8**
RSSD pmax pmax
comp=Z,10.0nm,1.3s
NC405 NORSAR Array S 68.81 341 P **P** **18 22 48.7 -1.6**
NB201 NORSAR Array S 68.96 341 P **P** **18 22 51.1 -0.2**
N23A Red Feather La 68.97 53 P **P** **18 22 51.7 -0.3**
N23A IAmb IAmb 18 22 55.5
comp=Z,4.8nm,1.1s
NB2 NORSAR Subarra 68.99 341 P **P** **18 22 51.7 +0.2**
comp=Z,1.1nm,0.4s,baz=29,slow=6.5
NB2 NORSAR Subarra 68.99 341 P **P** **18 22 51.4 -0.1**
comp=Z,0.8nm,0.5s,baz=29,slow=6.5
NOA NORSAR Array B 68.99 341 P **P** **18 22 51.6 +0.2**
comp=Z,0.8nm,0.6s,baz=29,slow=6.6,SNR=6.7
comp=Z,0.8nm,0.6s
PV11 David Mesa, Pa 69.05 56 P **P** **18 22 52.2 -0.2**
PV13 Radium Mtn., P 69.17 56 P **P** **18 22 52.9 -0.4**
PV13 IAmb IAmb 18 22 56.6
comp=Z,14nm,1.5s
NAO01 NORSAR Array S 69.24 341 P **P** **18 22 53.3 +0.3**
MVCO Mesa Verde 70.00 57 P **P** **18 22 58.8 +0.4**
MVCO IAmb IAmb 18 23 27.1
comp=Z,5.3nm,1.1s
X16A Lo Mia Camp, P 70.12 61 P **P** **18 22 58.2 -0.9**
X16A IAmb IAmb 18 23 02.9
comp=Z,6.2nm,1.4s
S22A 4UR Ranch, Cre 70.61 56 P **P** **18 23 02.8 +0.7**
S22A IAmb IAmb 18 23 05.5
comp=Z,8.3nm,1.6s
OGNE Ogallala 71.08 50 P **P** **18 23 05.6 +0.9**
KIV Kislovodsk 71.13 314 *e*P **P** **18 23 06.3 +1.3**
KIV pmax pmax
comp=Z,6.0nm,1.1s
KIV MLR MLR
comp=Z,83nm,18.0s
KIV Kislovodsk 71.13 314 *e*P **P** **18 23 06.3 +1.3**
ASAR Alice Springs 71.14 198 P **P** **18 23 07.1 +2.1**
comp=Z,1.5nm,0.7s,baz=14,slow=5.8,SNR=16
comp=Z,1.5nm,0.7s
ASAR Alice Springs 71.14 198 P **P** **18 23 05.7 +0.7**
ASAR Alice Springs 71.14 198 P **P** **18 23 05.7 +0.7**
KBZ Khabaz 71.19 314 P **P** **18 23 05.7 +0.5**
comp=Z,4.3nm,0.9s,baz=90,slow=2.6,SNR=6.8
comp=Z,4.3nm,0.9s
KBZ Khabaz 71.19 314↑ *e*P **P** **18 23 06.2 +1.0**
KBZ pmax pmax
comp=Z,7.0nm,1.0s
KBZ Khabaz 71.19 314 *e*P **P** **18 23 06.2 +1.0**
K31A O'Neill 71.62 47 P **P** **18 23 08.5 +0.6**
F36A Milaca 71.84 42 P **P** **18 23 08.1 -1.0**
ECSD EROS Data Cent 71.91 45 P **P** **18 23 09.6 0.0**
ECSD IAmb IAmb 18 23 11.3
comp=Z,8.0nm,1.1s
AKASG Malin Array Be 72.08 326 P **P** **18 23 10.2 -0.3**
comp=Z,0.9nm,0.4s,baz=37,slow=6.3,SNR=8.3
comp=Z,0.9nm,0.4s
AKASG Malin Array Be 72.08 326 *i* P **P** **18 23 09.8 -0.7**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKBB Malin Array Si 72.08 326 P **P** **18 23 09.8 -0.7**
AKBB IAmb IAmb 18 23 15.0
comp=Z,9.1nm,1.3s
AKBB Malin Array Si 72.08 326↑ *e*P **P** **18 23 10.8 +0.3**
AKBB pmax pmax
comp=Z,7.0nm,1.3s
ANMO Albuquerque 72.76 58↓ *e*P **P** **18 23 15.7 +0.7**
ANMO pmax pmax
comp=Z,9.0nm,3.0s
ANN Anapa 73.07 318 *e*P **P** **18 23 13.9 -2.5**
ANN *e*S **S** **18 32 35.7 -5.4**
ANN pmax pmax
comp=Z,23nm,1.6s
ANN MLR MLR
comp=N,774nm,14.0s
ANN MLR MLR
comp=Z,545nm,15.0s
I37A Lemond, Waseca 73.27 43 P **P** **18 23 18.3 +0.6**
LANS Liptovska Anna 76.96 330 *e*P **P** **18 23 41.7 +2.8**
LANS pmax pmax
comp=Z,5.0nm,1.3s
LANS Liptovska Anna 76.96 330 *e*P **P** **18 23 41.7 +2.8**
DPC Dobruska-Polom 76.97 333 *e*P **P** **18 23 39.7 +0.8**
DPC Dobruska-Polom 76.97 333 *e*P **P** **18 23 39.7 +0.8**
SMOL Smolenice 78.20 331 *e*P **P** **18 23 48.0 +2.3**
SMOL Smolenice 78.20 331 *e*P **P** **18 23 48.0 +2.3**
MODS Modra-Piesok 78.37 331 *e*P **P** **18 23 48.8 +2.1**
MODS Modra-Piesok 78.37 331 *e*P **P** **18 23 48.8 +2.1**
TXAR Lajitas Array 78.39 60 P **P** **18 23 48.2 +0.9**
comp=Z,3.0nm,0.8s,baz=296,slow=4.4,SNR=35
comp=Z,3.0nm,0.8s
TXAR Lajitas Array 78.39 60 P **P** **18 23 47.6 +0.3**
TXAR Lajitas Array 78.39 60 P **P** **18 23 47.6 +0.3**
BR131 Keskin Array S 78.77 316↓ *i* P **P** **18 23 50.2 +1.0**
BRTR Keskin Array B 78.77 316 P **P** **18 23 49.1 -0.1**
comp=Z,1.5nm,1.0s,baz=111,slow=2.8,SNR=6.3
comp=Z,1.5nm,1.0s
BRTR Keskin Array B 78.77 316 *i* P **P** **18 23 50.5 +1.3**
BRTR pmax pmax
comp=Z,2.0nm,1.0s
KHC Kasperske Hory 78.90 334↑ *e*P **P** **18 23 50.5 +0.9**
KHC pmax pmax
comp=Z,11nm,1.5s
KHC Kasperske Hory 78.90 334 *e*P **P** **18 23 51.1 +1.5**
GERES GERESS Array B 79.12 334 P **P** **18 23 50.8 -0.1**
comp=Z,0.4nm,0.5s,baz=207,slow=2.4,SNR=4.8
comp=Z,0.4nm,0.5s
RAO Raoul Island 79.39 154 P **P** **18 23 54.9 +2.7**
comp=Z,1µm,0.4s,baz=20,slow=14,SNR=5.9
RAO Raoul Island 79.39 154 P **P** **18 23 54.3 +2.1**
RAO Raoul Island 79.39 154 P **P** **18 23 54.3 +2.1**
RAO pmax pmax
comp=Z,1µm,0.5s
VTS Vitosha 81.06 325 P **P** **18 24 01.6 0.0**
VTS Vitosha 81.06 325 P **P** **18 24 01.6 0.0**
VTS pmax pmax
comp=Z,3.0nm,0.8s
H03N2 Juan Fernandez 139.22 91 T T 21 07 01.9
baz=307,slow=77,SNR=9.1
H03N1 Juan Fernandez 139.23 91 T T 21 07 03.2
baz=307,slow=77,SNR=9.0
H03N3 Juan Fernandez 139.23 91 T T 21 06 59.8
baz=307,slow=77,SNR=8.9
PLCA Paso Flores 148.59 96 PKPbc **PKiKP** **18 31 34.4 -0.1**
comp=Z,2.9nm,0.8s,baz=260,slow=5.1,SNR=4.2
SNAA Sanae 151.49 196 PKP **PKiKP** **18 31 39.6 +0.2**
VNA2 Neumayer--Watz 152.94 194 PKP **PKiKP** **18 31 43.1 +0.7**
baz=12,slow=1.4
VNA3 Neumayer Olymp 153.04 193 PKP **PKiKP** **18 31 43.1 +0.5**
VNA1 Neumayer--Stat 153.33 194 PKP **PKPbc** **18 31 43.3 +0.3**

*NEIC **10** 18:18:03.6±2.2,5.°21S±0.°07×151.°51E±0.°08,h109^{km}±6^{km}, mb4.2/21 Error ellipse: s-maj=11.9km s-min=10.6km az=108.0*
*IDC **10** 18:18:04.0±0.7,5.°20S×151.°44E,h115^{km}±6^{km},mb3.7/8, mbtmp4.1/11,MS3.0/1,Error ellipse: s-maj=26.8km s-min=10.0km az=125.0*
ISC 10 18:18:04.9±0.5,5.°25S±0.°07×151.°52E±0.°08,h129^{km},n60, σ1^{s}78/65,mb4.1/19,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.06**	**28**	P	**Pn**	**18 18 26.0**	**-2.3**
	1µm,0.4s,baz=298,slow=1.1,SNR=794						
KRVT				S	**Sn**	**18 18 43.5**	**-2.5**
	655nm,0.4s,baz=197,slow=23,SNR=8.0						
RABL	**Rabaul**	**1.23**	**31**		**Pn**	**18 18 27.7**	**-2.3**
RABL	**Rabaul**	**1.23**	**31**	P	**Pn**	**18 18 27.7**	**-2.3**
MANU	**Manus Island**	**5.23**	**307**		**Pn**	**18 19 20.0**	**-1.1**
PMG	**Port Moresby**	**5.98**	**226**	P	**Pn**	**18 19 30.3**	**-0.9**
	40nm,0.6s,baz=48,slow=8.3,SNR=21						
PMG				S	**Sn**	**18 20 37.3**	**-1.2**
	302nm,0.8s,baz=8.4,slow=22,SNR=26						
PMG	**Port Moresby**	**5.98**	**226**		**Pn**	**18 19 29.5**	**-1.7**
PMG	**Port Moresby**	**5.98**	**226**	P	**Pn**	**18 19 31.4**	**+0.3**
PMG	**Port Moresby**	**5.98**	**226**	P	**Pn**	**18 19 31.5**	**+0.3**
HNR	**Honiara**	**9.33**	**117**	P	**Pn**	**18 20 16.3**	**0.0**
	31nm,0.5s,baz=270,slow=19,SNR=1.1						
HNR	**Honiara**	**9.33**	**117**		**Pn**	**18 20 15.5**	**-0.8**
COEN	**Coen**	**11.94**	**223**	Pn	**Pn**	**18 20 48.0**	**-3.0**
COEN	**Coen**	**11.94**	**223**	P	**Pn**	**18 20 51.3**	**+0.2**
	17nm,1.8s						
MTSU	**Mount Surprise**	**14.62**	**208**	P	**P**	**18 21 29.5**	**+1.1**
CTA	**Charters Tower**	**15.62**	**199**	P	**Pn**	**18 21 38.5**	**+0.4**
	2.9nm,0.5s,baz=20,slow=12,SNR=10						
CTA	**Charters Tower**	**15.62**	**199**	P	**P**	**18 21 42.4**	**+2.9**
CTAO	**Charters Tower**	**15.62**	**199**	P	**P**	**18 21 40.5**	**+1.0**
CTAO	**Charters Tower**	**15.62**	**199**	P	**P**	**18 21 42.0**	**+2.5**
GUMO	**Guam**	**19.85**	**341**	LR	LR	18 28 53.1	
	comp=Z,43nm,21.7s,baz=10.0,slow=33						
EIDS	**Eidsvold**	**20.01**	**181**	P	**P**	**18 22 28.5**	**+0.9**
KDU	**Kakadu**	**20.21**	**247**	P	**P**	**18 22 30.4**	**+0.7**
MTN	**Manton Dam**	**21.49**	**248**	P	**P**	**18 22 42.2**	**-1.4**
MTN				IAmb	IAmb	18 23 08.3	
	comp=Z,23nm,1.1s						
MTN	**Manton Dam**	**21.49**	**248**	P	**P**	**18 22 44.9**	**+1.3**
	comp=Z,17nm,1.1s						
WB0	**Warramunga Arr**	**22.05**	**228**	P	**P**	**18 22 48.6**	**-0.9**
WB0				IAmb	IAmb	18 23 14.6	
	comp=Z,11nm,1.1s						
WR0	**Warramunga Arr**	**22.07**	**227**	P	**P**	**18 22 49.2**	**-0.4**
WR0				IAmb	IAmb	18 22 58.7	
	comp=Z,8.5nm,1.1s						
WRAB	**Tennant Creek**	**22.19**	**227**	P	**P**	**18 22 51.7**	**+0.9**
WRAB				IAmb	IAmb	18 23 16.2	
	comp=Z,8.2nm,0.8s						
WRAB	**Tennant Creek**	**22.19**	**227**	P	**P**	**18 22 50.8**	**0.0**
WB2	**Warramunga Arr**	**22.19**	**227**	P	**P**	**18 22 50.3**	**-0.6**
WB2				IAmb	IAmb	18 23 16.3	
	comp=Z,16nm,1.3s						
WRA	**Warramunga Arr**	**22.20**	**227**	P	**P**	**18 22 50.5**	**-0.4**
	comp=Z,2.3nm,0.4s,baz=52,slow=10,SNR=18						
WRA				pP	**pP**	**18 23 10.7**	**-4.4**
	comp=Z,3.5nm,0.7s,baz=51,slow=10,SNR=6.7						
WRA				ScP	**ScP**	**18 30 11.9**	**+3.3**
	comp=Z,0.7nm,0.9s,baz=49,slow=3.0,SNR=5.5						
	comp=Z,2.3nm,0.4s						
INKA	**Innaminka**	**24.61**	**203**	P	**P**	**18 23 16.8**	**+3.6**
KNRA	**Kununurra**	**24.64**	**243**	P	**P**	**18 23 14.0**	**+0.4**
KNRA	**Kununurra**	**24.64**	**243**	P	**P**	**18 23 14.8**	**+1.2**
AS31	**Alice Springs**	**24.97**	**221**	P	**P**	**18 23 16.2**	**-0.4**
ASAR	**Alice Springs**	**24.97**	**221**	P	**P**	**18 23 16.7**	**0.0**
	comp=Z,2.3nm,0.5s,baz=57,slow=8.5,SNR=36						
ASAR				pP	**pP**	**18 23 39.9**	**-4.3**
	comp=Z,1.8nm,0.6s,baz=57,slow=8.7,SNR=5.0						
ASAR				S	**S**	**18 27 24.9**	**-6.2**
	comp=Z,0.8nm,0.9s,baz=83,slow=7.3,SNR=5.1						
ASAR				ScP	**ScP**	**18 30 19.2**	**+3.2**
	comp=Z,0.3nm,0.8s,baz=46,slow=2.7,SNR=2.9						
	comp=Z,2.3nm,0.5s						
ASAR	**Alice Springs**	**24.97**	**221**	P	**P**	**18 23 16.0**	**-0.6**
LCRK	**Leigh Creek**	**28.03**	**205**	P	**P**	**18 23 45.5**	**+1.6**
	comp=Z,18nm,2.5s						
WRKA	**Warakurna**	**29.73**	**226**	P	**P**	**18 23 59.2**	**0.0**
PEA0B	**Petropavlovsk-**	**58.37**	**4**	P	**P**	**18 27 45.3**	**-1.2**
PETK	**Petropavlovsk-**	**58.37**	**4**	P	**P**	**18 27 45.9**	**-0.6**
	comp=Z,0.6nm,0.4s,baz=147,slow=5.6,SNR=4.4						
	comp=Z,0.6nm,0.4s						
SONM	**Songino Array**	**66.03**	**328**	P	**P**	**18 28 39.0**	**+1.1**
	comp=Z,1.1nm,0.7s,baz=145,slow=3.9,SNR=7.0						
	comp=Z,1.1nm,0.7s						
SONM	**Songino Array**	**66.03**	**328**	IAmb	IAmb	18 28 40.7	
	comp=Z,1.1nm,0.7s						
L19K	**White Mountain**	**78.65**	**23**	P	**P**	**18 29 53.6**	**+1.3**
M19K	**Big River Lodg**	**78.67**	**23**	P	**P**	**18 29 53.2**	**+0.8**
M19K				IAmb	IAmb	18 30 04.4	
	comp=Z,8.9nm,1.4s						
CNPM	**China Poot**	**78.67**	**26**	P	**P**	**18 29 53.1**	**+0.7**
MKAR	**Makanchi Array**	**79.83**	**319**	P	**P**	**18 29 59.4**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=93,slow=7.9,SNR=5.3						
	comp=Z,0.5nm,0.7s						
SUA	**Susitna One**	**79.88**	**24**	P	**P**	**18 29 59.6**	**+0.4**
ZALV	**Zalesovo Beam**	**80.82**	**327**	P	**P**	**18 30 03.5**	**-0.7**
	comp=Z,0.8nm,0.5s,baz=120,slow=7.2,SNR=5.2						
	comp=Z,0.8nm,0.5s						
MLY	**Manley**	**81.76**	**21**	P	**P**	**18 30 08.9**	**0.0**
MLY				IAmb	IAmb	18 30 10.0	
	comp=Z,1.6nm,0.6s						
CCB	**Clear Creek Bu**	**82.64**	**22**	P	**P**	**18 30 13.7**	**+0.2**
CCB				IAmb	IAmb	18 30 14.7	
	comp=Z,1.7nm,0.7s						
ILAR	**Eielson Array**	**83.05**	**22**	P	**P**	**18 30 15.2**	**-0.5**
	comp=Z,1.4nm,0.7s,baz=253,slow=4.9,SNR=12						
	comp=Z,1.4nm,0.7s						
ILAR	**Eielson Array**	**83.05**	**22**	P	**P**	**18 30 14.6**	**-1.0**
J25K	**Salcha River,**	**83.56**	**23**	P	**P**	**18 30 18.4**	**+0.1**
J25K				IAmb	IAmb	18 30 20.0	
	comp=Z,3.4nm,0.8s						
M27K	**Edge Creek, AK**	**84.02**	**25**	P	**P**	**18 30 22.3**	**+1.5**
TOLK	**Toolik Lake Re**	**84.04**	**18**	P	**P**	**18 30 21.3**	**+0.6**
TOLK				IAmb	IAmb	18 30 34.0	
	comp=Z,6.7nm,1.4s						
BCAR	**Beaver Creek A**	**84.34**	**25**	P	**P**	**18 30 23.9**	**+1.6**
NVAR	**Mina Array Bea**	**93.36**	**52**	P	**P**	**18 31 07.7**	**+1.8**
	comp=Z,0.9nm,0.6s,baz=255,slow=6.2,SNR=5.7						
	comp=Z,0.9nm,0.6s						
NVAR	**Mina Array Bea**	**93.36**	**52**	P	**P**	**18 31 07.3**	**+1.3**
PDAR	**Pinedale Array**	**100.09**	**48**	P	**Pdif**	**18 31 36.4**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=224,slow=3.8,SNR=2.2						
GERES	**GERESS Array B**	**123.76**	**328**	PKP	**PKPdf**	**18 36 48.3**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=84,slow=6.8,SNR=4.9						
TORD	**Torodi Ar. Bea**	**149.23**	**287**	PKPbc	**PKPbc**	**18 37 39.4**	**0.0**
	comp=Z,1.8nm,0.7s,baz=102,slow=3.1,SNR=8.9						
TORD	**Torodi Ar. Bea**	**149.23**	**287**		**PKPbc**	**18 37 39.5**	**+0.2**

IDC 10 18:20:51.3±3.5,16.°21N×121.°08E,h0^{km},mb3.2/3, mbtmp3.2/3,Error ellipse: s-maj=331.4km s-min=30.1km az=61.0,Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**38.22**	**160**	P	P	18 28 12.5	-0.6
	0.2nm,0.3s,baz=340,slow=9.0,SNR=4.5						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**41.57**	**162**	P	P	18 28 41.4	+0.4
	0.1nm,0.4s,baz=334,slow=8.3,SNR=1.0						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**44.27**	**322**	P	P	18 29 02.5	-0.1
	0.1nm,0.3s,baz=109,slow=7.8,SNR=2.3						
	0.1nm,0.3s						

*IDC **10** 18:22:40.1±1.0,16.°90S×177.°29W,h0^{km},mb4.1/13, mbtmp4.1/15,ML4.9/2,Error ellipse: s-maj=41.2km s-min=15.6km az=153.0*
*NEIC **10** 18:22:41.3±1.8,17.°0S±0.°1×177.°22W±0.°07,h10^{km}±1km, mb4.4/8,Error ellipse: s-maj=20.4km s-min=11.3km az=177.0*
ISC 10 18:22:41.2±0.5,17.°0S±0.°1×177.°23W±0.°07,h10^{km},n60, σ0^{s}90/60,mb4.2/15,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.56**	**260**	Pn	**Pn**	**18 23 50.2**	**-0.2**
	6.7nm,0.3s,baz=85,slow=23,SNR=31						
MSVF				Sn	**Sn**	**18 24 42.5**	**-1.0**
	8.2nm,0.3s,baz=8.1,slow=23,SNR=8.5						
	21nm,0.5s						
MSVF	**Nonsavu**	**4.56**	**260**		**Pn**	**18 23 50.4**	**0.0**
AFI	**Afiamalu**	**6.10**	**60**	Pn	**Pn**	**18 24 11.6**	**0.0**
	4.5nm,0.3s,baz=354,slow=1.2,SNR=6.2						
	50nm,0.8s						
NIUE	**Niue**	**7.25**	**108**	Pn	**Pn**	**18 24 26.1**	**-1.2**
DZM	**Mont Dzumac**	**16.18**	**249**	Pn	**P**	**18 26 34.8**	**+2.6**
	0.1nm,0.3s,baz=114,slow=20.7,SNR=1.7						
DZM	**Mont Dzumac**	**16.18**	**249**	P	**P**	**18 26 31.6**	**-0.5**
DZM				IAmb	IAmb	18 26 56.9	
	comp=Z,27nm,1.3s						
MLZ	**Mavora Lakes**	**30.82**	**200**	P	**P**	**18 28 58.9**	**+1.7**
CTA	**Charters Tower**	**34.71**	**259**	P	**P**	**18 29 31.9**	**+0.3**
	comp=Z,10.0nm,1.0s,baz=99,slow=11,SNR=7.9						
	comp=Z,10.0nm,1.0s						
CTAO	**Charters Tower**	**34.71**	**259**	P	**P**	**18 29 30.0**	**-1.6**
STKA	**Stephens Creek**	**40.04**	**241**	P	**P**	**18 30 16.6**	**-0.1**
	comp=Z,4.6nm,0.8s,baz=160,slow=22,SNR=5.2						
	comp=Z,4.6nm,0.8s						
STKA	**Stephens Creek**	**40.04**	**241**	P	**P**	**18 30 16.0**	**-0.7**
WRA	**Warramunga Arr**	**45.90**	**259**	P	**P**	**18 31 03.6**	**-0.8**
	comp=Z,0.7nm,0.8s,baz=90,slow=9.5,SNR=3.7						
WRA				PcP	**PcP**	**18 32 43.1**	**+1.6**
	comp=Z,1.0nm,0.8s,baz=89,slow=3.9,SNR=3.0						
	comp=Z,0.7nm,0.8s						
AS31	**Alice Springs**	**46.12**	**253**	P	**P**	**18 31 05.5**	**-0.6**
AS31				IAmb	IAmb	18 31 16.7	
	comp=Z,5.9nm,1.5s						
ASAR	**Alice Springs**	**46.12**	**253**	P	**P**	**18 31 05.8**	**-0.3**
	comp=Z,3.7nm,0.8s,baz=85,slow=8.0,SNR=31						
ASAR				PcP	**PcP**	**18 32 44.0**	**+1.7**
	comp=Z,0.6nm,0.7s,baz=98,slow=4.0,SNR=1.2						
	comp=Z,3.7nm,0.8s						
ASAR	**Alice Springs**	**46.12**	**253**	P	**P**	**18 31 05.1**	**-1.0**
SIJI	**Sorong**	**53.14**	**282**	P	**P**	**18 32 00.3**	**+0.6**
	comp=Z,16nm,0.9s,baz=69,slow=5.9,SNR=7.4						
	comp=Z,16nm,0.9s						
VNDA	**Vanda**	**61.43**	**185**	P	**P**	**18 32 56.4**	**-0.9**
VNDA				IAmb	IAmb	18 33 18.2	
	comp=Z,5.6nm,1.4s						
MJAR	**Matsushiro Arr**	**67.88**	**322**	P	**P**	**18 33 38.9**	**-1.1**
	comp=Z,2.5nm,0.9s,baz=148,slow=6.0,SNR=7.2						
	comp=Z,2.5nm,0.9s						
MJAR	**Matsushiro Arr**	**67.88**	**322**	P	**P**	**18 33 38.0**	**-2.0**
MJAR				IAmb	IAmb	18 33 42.4	
	comp=Z,2.0nm,0.9s						
PETK	**Petropavlovsk-**	**73.11**	**345**	P	**P**	**18 34 11.6**	**+0.1**
	comp=Z,1.6nm,0.9s,baz=152,slow=6.5,SNR=2.7						
	comp=Z,1.6nm,0.9s						
KSRS	**Korea Array**	**74.79**	**318**	P	**P**	**18 34 22.4**	**+0.7**
	comp=Z,2.1nm,0.9s,baz=135,slow=7.6,SNR=6.6						
	comp=Z,2.1nm,0.9s						
NVAR	**Mina Array Bea**	**78.01**	**43**	P	**P**	**18 34 41.1**	**+0.8**
	comp=Z,0.5nm,0.7s,baz=224,slow=6.3,SNR=2.1						
	comp=Z,0.5nm,0.7s						
H02S1	**DAWSON INLET T**	**79.84**	**25**	T	T	20 02 11.4	
TXAR	**Lajitas Array**	**84.57**	**57**	P	**P**	**18 35 15.5**	**+0.3**
	comp=Z,0.8nm,0.9s,baz=207,slow=5.7,SNR=6.7						

	baz=250								
H03S3	**Juan Fernandez**	**87.37**	**124**	T		T		20 12 23.4	
	baz=250								
SONM	**Songino Array**	**93.61**	**319**	P		**P**		**18 35 58.2**	**+0.4**
	comp=Z,0.2nm,0.4s,baz=100,slow=6.0,SNR=2.2								
	comp=Z,0.2nm,0.4s								
MKAR	**Makanchi Array**	**109.32**	**314**	PKiKP		**PKiKP**		**18 41 11.6**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=99,slow=1.9,SNR=3.4								
MKAR	**Makanchi Array**	**109.32**	**314**			**PKiKP**		**18 41 10.9**	**-0.9**
AKASG	**Malin Array Be**	**140.28**	**334**	PKhKP		PKPpre		18 41 55.0	
	comp=Z,0.2nm,0.3s,baz=5.7,slow=0.9,SNR=2.3								
AKASG				PKP		**PKiKP**		**18 42 12.0**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=44,slow=2.7,SNR=2.2								
CLL	**Collm**	**144.82**	**349**	*i* PKPdf		**PKPdf**		**18 42 18.7**	**+0.3**
CLL				*e*PKiKP		**PKiKP**		**18 42 23.0**	**+0.9**
CLL				*ex*		x		18 42 28.0	
BRTR	**Keskin Array B**	**144.93**	**316**	PKP		**PKPab**		**18 42 18.3**	**0.0**
	comp=Z,7.2nm,0.9s,baz=87,slow=2.4,SNR=33								
DPC	**Dobruska-Polom**	**145.00**	**345**	*e*PKP		**PKPbc**		**18 42 17.5**	**-0.6**
KRLC	**Kraliky**	**145.14**	**344**	*e*PKP		**PKPdf**		**18 42 19.4**	**+0.4**
MORC	**Moravsky Berou**	**145.20**	**343**	*e*PKP		**PKPbc**		**18 42 17.7**	**-1.0**
PRU	**Pruhonice**	**145.76**	**346**	*e*PKP		**PKPbc**		**18 42 20.5**	**+0.1**
VRAC	**Vranov**	**145.89**	**344**	*e*PKP		**PKPbc**		**18 42 21.0**	**+0.1**
NKC	**Novy Kostel**	**145.96**	**349**	*e*PKP		**PKPab**		**18 42 22.1**	**+0.5**
JAVC	**Velka Javorina**	**146.00**	**342**	*e*PKP		**PKPab**		**18 42 23.4**	**+1.6**
KRUC	**Moravsky**	**146.17**	**344**	*e*PKP		**PKPbc**		**18 42 21.8**	**+0.1**
KHC	**Kasperske Hory**	**146.78**	**347**	*e*PKP		**PKPab**		**18 42 25.0**	**+0.2**
CKRC	**Cesky Krumlov**	**146.91**	**346**	*e*PKP		**PKPbc**		**18 42 23.8**	**-0.1**
GERES	**GERESS Array B**	**147.03**	**347**	PKPbc		**PKPbc**		**18 42 24.6**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=25,slow=3.5,SNR=7.0								
GERES	**GERESS Array B**	**147.03**	**347**			**PKPbc**		**18 42 24.0**	**-0.4**
CONA	**Conrad Observa**	**147.35**	**344**	*e*P		**PKiKP**		**18 42 28.9**	**+1.3**
	comp=Z,9.2nm,1.2s								
RONA	**Rosalia, Austr**	**147.44**	**343**	*e*P		**PKiKP**		**18 42 28.8**	**+1.1**
	comp=Z,6.9nm,1.2s								
ARSA	**Arzberg**	**148.06**	**343**	*e*P		**PKiKP**		**18 42 29.1**	**+0.1**
	comp=Z,3.5nm,0.8s								
BIOA	**Bad Ischl, Aus**	**148.13**	**346**	*e*P		**PKPab**		**18 42 30.3**	**+0.2**
	comp=Z,6.9nm,1.1s								
SOKA	**Soboth**	**148.72**	**344**	*e*P		**PKiKP**		**18 42 30.5**	**0.0**
	comp=Z,6.6nm,1.4s								
RETA	**Reutte**	**148.91**	**349**	*e*P		**PKiKP**		**18 42 31.3**	**+0.5**
	comp=Z,7.5nm,1.1s								
WTTA	**Wattenberg**	**148.96**	**348**	*e*P		**PKiKP**		**18 42 31.6**	**+0.5**
	comp=Z,5.2nm,0.7s								
MOTA	**Moosalm**	**148.98**	**349**	*e*P		**PKPab**		**18 42 32.6**	**-1.2**
	comp=Z,8.3nm,1.2s								
OBKA	**Obir**	**149.00**	**344**	*i* P		**PKiKP**		**18 42 32.1**	**+1.1**
	comp=Z,5.2nm,1.1s								
SQTA	**Sankt Quirin**	**149.08**	**349**	*e*P		**PKiKP**		**18 42 32.0**	**+0.8**
	comp=Z,4.3nm,1.4s								
DAVA	**Damuels**	**149.25**	**351**	*e*P		**PKiKP**		**18 42 32.3**	**+0.7**
	comp=Z,6.7nm,0.9s								
ABTA	**Abfaltersbach**	**149.27**	**347**	*e*P		**PKiKP**		**18 42 31.7**	**+0.1**
	comp=Z,5.6nm,1.0s								
FETA	**Feichten**	**149.36**	**349**	*e*P		**PKiKP**		**18 42 32.2**	**+0.4**
	comp=Z,7.2nm,1.2s								

*IDC **10** 18:29:20.8±1.4, 16°.23S×177°.57W, h0km, mb3.8/5, mbtmp3.7/6, ML4.7/1, Error ellipse: s-maj=68.4km s-min=22.1km az=153.0*

ISC 10 18:29:22.3±1.2, 16°.2S±0°.4×177°.6W±0°.2, h10km, n9, σ0°90/9, mb3.9/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.45**	**249**	Pn			**Pn**	**18 30 30.5**	**+0.5**
	1.4nm,0.3s,baz=137,slow=16,SNR=5.9								
	3.0nm,0.5s								
HNR	**Honiara**	**22.91**	**284**	P			**P**	**18 34 26.2**	**-0.4**
	62nm,0.5s,baz=183,slow=11,SNR=4.4								
STKA	**Stephens Creek**	**40.16**	**240**	P			**P**	**18 36 58.2**	**-0.6**
	2.6nm,0.8s,baz=68,slow=9.7,SNR=1.8								
	2.6nm,0.8s								
ASAR	**Alice Springs**	**46.04**	**253**	P			**P**	**18 37 46.5**	**-0.1**
	1.7nm,0.9s,baz=86,slow=8.7,SNR=10								
	1.7nm,0.9s								
NVAR	**Mina Array Bea**	**77.65**	**44**	P			**P**	**18 41 17.8**	**-1.5**
	0.2nm,0.3s,baz=286,slow=3.7,SNR=2.1								
	0.2nm,0.3s								
ILAR	**Eielson Array**	**84.05**	**13**	P			**P**	**18 41 53.4**	**+0.7**
	0.7nm,1.0s,baz=224,slow=6.3,SNR=4.4								
	0.7nm,1.0s								
TXAR	**Lajitas Array**	**84.41**	**57**	P			**P**	**18 41 56.6**	**+1.1**
	0.2nm,0.7s,baz=256,slow=3.6,SNR=3.0								
	0.2nm,0.7s								
BRTR	**Keskin Array B**	**144.11**	**317**	PKP			**PKPdf**	**18 48 58.8**	**0.0**
	0.7nm,0.8s,baz=17,slow=1.5,SNR=6.0								
GERES	**GERESS Array B**	**146.16**	**347**	PKPbc			**PKPab**	**18 49 03.7**	**+0.2**
	0.2nm,0.6s,baz=46,slow=2.8,SNR=1.9								

*NEIC **10** 18:29:50.8, 16°.52S×177°.22W, h11km, Moment Tensor Solution. Moment tensor: Scale 10^17^Nm; Mrr=0.27; Mθθ=-3.18; Mφφ3.45; Mrθ1.16; Mrφ1.98; Mθφ0.06; Fault plane solution: M0=4.04000×10^17^ NP1:φs=331.49000°, δ74.86000°, λ=-171.83000°. NP2:φs=239.34000°, δ82.11000°, λ=-15.29000°. Principal axes: T 4.0274, Plg5.0000°, Azm286.0000°; N 0.0227, Plg73.0000°, Azm33.0000°; P -4.0501, Plg16.0000°, Azm195.0000°;*

*NEIC **10** 18:29:50.8±2.5, 16°.48S±0°.06×177°.21W±0°.06, h10km±1km, mb5.7/139, Ms_20 5.5/403, Mwb5.7/32, Mww5.8 Error ellipse: s-maj=10.9km s-min=10.0km az=138.0*

*IDC **10** 18:29:52.6±0.4, 16°.72S×177°.30W, h0km, mb5.1/38, mbtmp5.1/41, ML3.5/2, MS5.7/15, Error ellipse: s-maj=14.0km s-min=10.7km az=153.0*

*NOU **10** 18:29:52.7, 17°.04S×176°.89W, h0km, ML5.7/76, Fiji Islands Region*

*NEIC **10** 18:29:57, 16°.52S×177°.13W, h12km, Moment Tensor Solution. Duration: 14s0 Moment tensor: Scale 10^17^Nm; Mrr=2.46; Mθθ=3.27; Mφφ5.73; Mrθ1.13; Mθφ2.64; Mrφ0.33; Fault plane solution: M0=5.76000×10^17^ NP1: φs=333.00000°, δ68.00000°, λ=-163.00000°. NP2: φs=236.00000°, δ74.00000°, λ=-22.00000°. Principal axes: T 6.4913, Plg4.0000°, Azm286.0000°; N -1.9951, Plg63.0000°, Azm23.0000°; P -4.4963, Plg27.0000°, Azm194.0000°;*

*GCMT **10** 18:29:58.8±0.1, 16°.65S×177°.20W, h16km, MW5.8/163, Moment Tensor Solution. s150,c299; s163,c476; Duration: 18s9 Moment tensor: Scale 10^17^Nm; Mrr=0.39±.04; Mθθ=-5.34±.04; Mφφ5.73±.04; Mrθ1.18±.12; Mθφ2.49±.04; Mrφ1.00±.12; Best double couple: M=6.26000×10^17^ NP1:φs=327.00000°, δ76.00000°, λ=180.00000°. NP2:φs=57.00000°, δ90.00000°, λ=14.00000°. Principal axes: T 6.4850, Plg10.0000°, Azm283.0000°; N -0.4450, Plg76.0000°, Azm59.0000°; P -6.0350, Plg10.0000°, Azm191.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*MOS **10** 18:29:58.6±1.9, 16°.79S×177°.81W, h33km, mb5.6/36, MS5.4/33 Error ellipse: s-maj=9.7km s-min=9.0km az=39.9*

ISC 10 18:29:52.8±0.4, 16°.77S±0°.04×177°.07W±0°.03, h9km±2km, h9km:pP-P, n1225, σ2s40/1074, mb5.6/190, MS5.5/265, 61C-71D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.76**	**258**	Pn			**Pn**	**18 31 02.1**	**-2.7**
	100nm,0.5s,baz=80,slow=22,SNR=71								
MSVF				Sn			**Sn**	**18 31 53.6**	**-6.6**
	33nm,0.3s,baz=338,slow=22,SNR=9.9								
MSVF				LR			LR	18 32 37.9	
	comp=Z,99μm,19.4s,baz=64,slow=36								
MSVF	**Nonsavu**	**4.76**	**258**	Pn			**Pn**	**18 31 01.4**	**-3.5**
MSVF				Sn			**Sn**	**18 31 53.2**	**-7.0**
MSVF	**Nonsavu**	**4.76**	**258**	*e*P			**Pn**	**18 31 03.4**	**-1.4**
AFI	**Afiamalu**	**5.85**	**62**	Pn			**Pn**	**18 31 18.4**	**-1.4**
	21nm,0.3s,baz=3.0,slow=4.4,SNR=11								
AFI	**Afiamalu**	**5.85**	**62**	Pn			**Pn**	**18 31 17.6**	**-2.2**
AFI	**Afiamalu**	**5.85**	**62**	P			**Pn**	**18 31 17.6**	**-2.2**
AFI	**Afiamalu**	**5.85**	**62**	P			**Pn**	**18 31 18.6**	**-1.2**
NIUE	**Niue**	**7.18**	**110**	P			**Pn**	**18 31 39.7**	**+1.7**
	baz=7.3,SNR=3.1								
NIUE	**Niue**	**7.18**	**110**	Pn			**Pn**	**18 31 37.4**	**-0.7**
NIUE	**Niue**	**7.18**	**110**	P			**Pn**	**18 31 36.9**	**-1.1**
FUNA	**Funafuti**	**8.97**	**336**	Pn			Pn	18 31 54.5	-8.1
FUNA	**Funafuti**	**8.97**	**336**	P			Pn	18 32 08.1	+5.5
	145nm,1.4s								

RAO	**Raoul Island**	**12.45**	**183**	LR			LR	18 36 45.9	
	comp=Z,37μm,21.4s,baz=19,slow=33								
DZM	**Mont Dzumac**	**16.41**	**249**	*e*Pn			**Pn**	**18 33 44.4**	**+0.8**
	473nm,1.6s								
DZM				*e*LR			LR	18 37 34.0	
	comp=Z,14μm,29.6s								
DZM	**Mont Dzumac**	**16.41**	**249**	Pn			**Pn**	**18 33 44.2**	**+0.5**
	0.2nm,0.3s,baz=72,slow=13,SNR=12								
	35nm,1.1s								
DZM	**Mont Dzumac**	**16.41**	**249**				**Pn**	**18 33 41.2**	**-2.5**
DZM	**Mont Dzumac**	**16.41**	**249**	P			**P**	**18 33 46.0**	**-0.5**
	229nm,1.8s								
NOUC	**Port Laguerre**	**16.55**	**249**	P			**P**	**18 33 47.1**	**-0.7**
RAR	**Rarotonga**	**16.94**	**108**	Pn			**P**	**18 33 54.7**	**+2.5**
	1.7nm,0.3s,baz=245,slow=9.5,SNR=3.5								
	94nm,1.1s								
RAR	**Rarotonga**	**16.94**	**108**	P			**Pn**	**18 33 46.0**	**-4.2**
RAR	**Rarotonga**	**16.94**	**108**	P			**Pn**	**18 33 46.0**	**-4.2**
RAR				pmax			pmax		
	comp=Z,346nm,1.5s								
OUZ	**Omahuta**	**20.17**	**203**				**P**	**18 34 23.0**	**-4.7**
OUZ				IAmb			IAmb	18 34 38.3	
	comp=Z,858nm,1.8s								
OUZ				IAMs_20			IAMs_20	18 40 17.9	
	comp=Z,18μm,20.0s								
TARA	**Tarawa**	**20.54**	**330**	P			**P**	**18 34 24.8**	**-7.0**
TARA				IAmb			IAmb	18 34 40.4	
	comp=Z,297nm,1.1s								
TARA	**Tarawa**	**20.54**	**330**	P			Pn	18 34 36.0	+2.0
	comp=Z,239nm,1.3s								
URZ	**Urewera**	**22.01**	**192**	P			**P**	**18 34 47.1**	**-0.3**
	comp=Z,99nm,1.0s,baz=333,slow=1.8,SNR=17								
URZ				LR			LR	18 41 52.8	
	comp=Z,24μm,19.2s,baz=34,slow=33								
	comp=Z,99nm,1.0s								
URZ	**Urewera**	**22.01**	**192**	P			**P**	**18 34 44.4**	**-3.1**
URZ				IAMs_20			IAMs_20	18 41 40.7	
	comp=Z,28μm,21.0s								
HIZ	**Hauiti**	**22.79**	**197**	P			**P**	**18 34 53.0**	**-2.7**
BKZ	**Black Stump Fm**	**23.01**	**193**	P			**P**	**18 34 57.6**	**-0.5**
BKZ				IAMs_20			IAMs_20	18 43 26.8	
	comp=Z,23μm,18.0s								
HNR	**Honiara**	**23.52**	**285**	P			**P**	**18 35 01.8**	**-1.7**
	comp=Z,101nm,0.5s,baz=116,slow=4.7,SNR=3.5								
HNR				LR			LR	18 42 43.1	
	comp=Z,28μm,19.6s,baz=108,slow=33								
	comp=Z,101nm,0.5s								
HNR	**Honiara**	**23.52**	**285**	P			**P**	**18 34 59.0**	**-4.5**
HNR	**Honiara**	**23.52**	**285**	IAMs_20			IAMs_20	18 42 22.3	
	comp=Z,26μm,20.0s								
HNR	**Honiara**	**23.52**	**285**	P			**P**	**18 34 59.0**	**-4.5**
HNR				pmax			pmax		
	comp=Z,548nm,1.3s								
HNR				MLR			MLR		
	comp=Z,26μm,20.0s								
BFZ	**Birch Farm**	**24.52**	**192**	P			**P**	**18 35 10.7**	**-1.9**
BFZ				IAmb			IAmb	18 35 15.2	
	comp=Z,190nm,1.4s								
MSWZ	**Moikau Station**	**25.43**	**194**	P			**P**	**18 35 19.1**	**-1.9**
SNZO	**South Karori**	**25.46**	**195**	P			**P**	**18 35 20.6**	**-0.5**
SNZO				IAmb			IAmb	18 35 26.6	
	comp=Z,301nm,1.7s								
BHW	**Baring Head**	**25.51**	**194**	P			**P**	**18 35 20.8**	**-0.8**
PLWZ	**Palliser**	**25.58**	**193**	P			**P**	**18 35 21.2**	**-1.1**
QRZ	**Quartz Range**	**25.60**	**198**	P			**P**	**18 35 21.2**	**-1.2**
NNZ	**Nelson**	**25.72**	**197**	P			**P**	**18 35 22.0**	**-1.4**
NNZ				IAmb			IAmb	18 35 29.0	
	comp=Z,110nm,1.0s								
TUWZ	**Tuamarina**	**25.76**	**196**	P			**P**	**18 35 22.2**	**-1.7**
CMWZ	**Cape Campbell**	**26.00**	**195**	P			**P**	**18 35 24.5**	**-1.5**
BSWZ	**Blackbirch Sta**	**26.05**	**196**	P			**P**	**18 35 25.9**	**-0.5**
PAE	**Paea**	**26.27**	**96**	*e*T			T	19 02 53.8	
	comp=Z,6.2nm,0.2s								
PPT2	**Papeete2**	**26.27**	**96**	*e*P			**P**	**18 35 31.7**	**+2.8**
	comp=Z,1μm,23.2s								
PPT2				*e*LR			LR	18 42 06.3	
	comp=Z,29μm,27.0s								
PPT	**Papeete**	**26.27**	**96**	P			**P**	**18 35 32.0**	**+3.2**
	comp=Z,66nm,0.7s,baz=39,slow=23,SNR=2.5								
	comp=Z,66nm,0.7s								
PPTF	**Pamatai, Papee**	**26.29**	**96**	P			**P**	**18 35 28.1**	**-0.9**
THZ	**Tophouse**	**26.35**	**197**	P			**P**	**18 35 28.9**	**-0.4**
THZ				IAmb			IAmb	18 35 35.7	
	comp=Z,223nm,1.6s								
TVO	**Taravao**	**26.58**	**96**	*e*T			T	19 03 14.2	
	comp=Z,5.9nm,0.3s								
TBI	**Tubuai**	**26.72**	**109**	*e*P			**P**	**18 35 37.3**	**+4.5**
	comp=Z,1μm,25.5s								
TBI				*e*LR			LR	18 42 15.6	
	comp=Z,36μm,28.8s								
KHZ	**Kahutara**	**26.79**	**196**	P			**P**	**18 35 33.9**	**+0.7**
KHZ				IAmb			IAmb	18 35 48.9	
	comp=Z,208nm,1.8s								
XMAS	**Kiritimati**	**26.93**	**48**	P			**P**	**18 35 33.0**	**-1.7**
LTZ	**Lake Taylor**	**27.48**	**197**	P			**P**	**18 35 38.4**	**-1.0**
LTZ				IAmb			IAmb	18 36 08.0	
	comp=Z,199nm,1.6s								
OXZ	**Oxford**	**28.04**	**197**	P			**P**	**18 35 43.6**	**-0.8**
OXZ				IAmb			IAmb	18 35 50.1	
	comp=Z,123nm,1.1s								
PMOR	**Pomariorio Ree**	**28.11**	**91**	*e*T			T	19 05 09.9	
	comp=Z,7.9nm,0.2s								
MQZ	**McQueen's Vall**	**28.23**	**196**	P			**P**	**18 35 44.5**	**-1.5**
MQZ				IAmb			IAmb	18 36 32.5	
	comp=Z,291nm,1.6s								
MQZ				IAMs_20			IAMs_20	18 46 48.5	
	comp=Z,14μm,18.0s								
RPZ	**Rata Peaks**	**28.68**	**198**	P			**P**	**18 35 50.9**	**+0.8**
	comp=Z,14nm,1.0s,baz=123,slow=15,SNR=1.7								
	comp=Z,14nm,1.0s								
RPZ	**Rata Peaks**	**28.68**	**198**	P			**P**	**18 35 49.8**	**-0.4**
RPZ				IAmb			IAmb	18 35 58.6	
	comp=Z,199nm,1.5s								
RPZ	**Rata Peaks**	**28.68**	**198**	P			**P**	**18 35 49.1**	**-1.0**
FOZ	**Fox Glacier**	**28.91**	**200**	P			**P**	**18 35 48.0**	**-4.0**
FOZ				IAMs_20			IAMs_20	18 47 23.0	
	comp=Z,15μm,19.0s								
LBZ	**Lake Benmore**	**29.56**	**199**	P			**P**	**18 35 57.2**	**-0.7**
LBZ				IAmb			IAmb	18 36 22.2	
	comp=Z,162nm,1.7s								
LBZ				IAMs_20			IAMs_20	18 47 08.3	
	comp=Z,11μm,20.0s								
KWAJ	**Kwajalein Atol**	**29.58**	**328**	P			P	18 35 53.4	-4.9
KWAJ				IAmb			IAmb	18 36 03.5	
	comp=Z,166nm,1.1s								
KWAJ	**Kwajalein Atol**	**29.58**	**328**	P			P	18 35 53.4	-4.9
KWAJ				pmax			pmax		
	comp=Z,166nm,1.1s								
KWAJ				MLR			MLR		
	comp=Z,8μm,20.0s								
ODZ	**Otahua Downs**	**30.02**	**198**	P			**P**	**18 36 00.5**	**-1.5**
ODZ				IAmb			IAmb	18 36 50.4	
	comp=Z,134nm,1.9s								
WKZ	**Wanaka**	**30.32**	**200**	P			**P**	**18 36 04.1**	**-0.6**
WKZ				IAmb			IAmb	18 36 28.5	
	comp=Z,197nm,1.5s								
WKZ				IAMs_20			IAMs_20	18 48 53.4	
	comp=Z,15μm,18.0s								
EIDS	**Eidsvold**	**30.86**	**249**	P			**P**	**18 36 09.8**	**+0.1**
	baz=31,SNR=20								
EIDS	**Eidsvold**	**30.86**	**249**	P			**P**	**18 36 07.0**	**-2.6**
EIDS	**Eidsvold**	**30.86**	**249**	P			**P**	**18 36 09.7**	**+0.1**
MLZ	**Mavora Lakes**	**31.09**	**200**	P			**P**	**18 36 10.2**	**-1.3**
MLZ				IAmb			IAmb	18 36 41.0	
	comp=Z,176nm,1.5s								
MLZ				IAMs_20			IAMs_20	18 48 07.8	
	comp=Z,11μm,22.0s								
RK1H	**Rockhampton Ha**	**31.12**	**252**	P			**P**	**18 36 12.9**	**+1.0**
	comp=Z,23nm,1.1s								
DCZ	**Deep Cove**	**31.51**	**201**	P			**P**	**18 36 13.8**	**-1.3**
DCZ				IAmb			IAmb	18 36 42.8	
	comp=Z,226nm,1.9s								
DCZ				IAMs_20			IAMs_20	18 48 42.8	
	comp=Z,12μm,21.0s								
ARMA	**Armidale**	**31.61**	**239**	P			**P**	**18 36 17.6**	**+1.2**
	baz=32,SNR=11								
ARMA	**Armidale**	**31.61**	**239**	P			**P**	**18 36 15.2**	**-1.2**
ARMA	**Armidale**	**31.61**	**239**	P			**P**	**18 36 17.8**	**+1.4**
WHZ	**Wether Hill Ro**	**31.61**	**200**	P			**P**	**18 36 15.8**	**-0.3**
WHZ				IAmb			IAmb	18 36 21.9	
	comp=Z,160nm,1.3s								
WHZ				IAMs_20			IAMs_20	18 49 07.6	
	comp=Z,9μm,19.0s								
PYZ	**Puysegur Point**	**32.28**	**201**	IAMs_20			IAMs_20	18 48 34.3	
	comp=Z,12μm,21.0s								
RABL	**Rabaul**	**32.67**	**289**	P			**P**	**18 36 22.2**	**-3.5**

RABL	**Rabaul**	**32.67**	**289**	P			**P**	**18 36 28.6**	**+3.0**
	comp=Z,67nm,1.1s								
KRVT	**Keravat (AS076**	**32.74**	**289**	P			**P**	**18 36 24.4**	**-1.8**
	comp=Z,106nm,0.9s,baz=219,slow=3.1,SNR=19								
KRVT				LR			LR	18 48 26.0	
	comp=Z,16μm,19.9s,baz=264,slow=34								
	comp=Z,106nm,0.9s								
RMQ	**Roma**	**33.11**	**247**	P			**P**	**18 36 30.6**	**+1.2**
	baz=33,SNR=27								
RMQ	**Roma**	**33.11**	**247**	P			**P**	**18 36 30.7**	**+1.2**
PATS	**Pohnpei**	**33.81**	**312**	P			**P**	**18 36 32.1**	**-3.4**
PATS				IAMs_20			IAMs_20	18 47 08.3	
	comp=Z,9μm,18.0s								
JOHN	**Johnston Islan**	**34.11**	**13**	IAMs_20			IAMs_20	18 47 54.4	
	comp=Z,9μm,20.0s								
CTA	**Charters Tower**	**34.91**	**259**	P			**P**	**18 36 44.9**	**-0.2**
	comp=Z,147nm,1.0s,baz=87,slow=10,SNR=47								
CTA				LR			LR	18 49 23.1	
	comp=Z,10μm,18.1s,baz=84,slow=34								
	comp=Z,147nm,1.0s								
CTA	**Charters Tower**	**34.91**	**259**	P			**P**	**18 36 47.3**	**+2.2**
CTAO	**Charters Tower**	**34.91**	**259**	P			**P**	**18 36 44.1**	**-1.0**
CTAO	**Charters Tower**	**34.91**	**259**	IAMs_20			IAMs_20	18 49 01.7	
	comp=Z,10μm,19.0s								
CTAO	**Charters Tower**	**34.91**	**259**	P			**P**	**18 36 44.1**	**-1.0**
CTAO				pmax			pmax		
	comp=Z,234nm,1.1s								
CTAO				MLR			MLR		
	comp=Z,10μm,19.0s								
CTAO	**Charters Tower**	**34.91**	**259**	P			**P**	**18 36 46.1**	**+1.0**
CNB	**Canberra Magne**	**35.13**	**232**	P			**P**	**18 36 47.5**	**+0.6**
CAN	**Canberra**	**35.40**	**232**	P			**P**	**18 36 47.5**	**-1.8**
CAN	**Canberra**	**35.40**	**232**	P			**P**	**18 36 47.5**	**-1.8**
CAN				pmax			pmax		
	comp=Z,59nm,1.5s								
CAN				MLR			MLR		
	comp=Z,4μm,21.0s								
PMG	**Port Moresby**	**35.56**	**277**	P			**P**	**18 36 50.2**	**-0.5**
	comp=Z,36nm,0.9s,baz=73,slow=10,SNR=13								
	comp=Z,36nm,0.9s								
PMG	**Port Moresby**	**35.56**	**277**	P			**P**	**18 36 46.5**	**-4.2**
PMG				IAmb			IAmb	18 36 53.7	
	comp=Z,168nm,1.6s								
PMG	**Port Moresby**	**35.56**	**277**	*ce*P			**P**	**18 36 50.7**	**0.0**
PMG				pmax			pmax		
	comp=Z,267nm,2.5s								
PMG	**Port Moresby**	**35.56**	**277**	P			**P**	**18 36 53.5**	**+2.8**
PMG	**Port Moresby**	**35.56**	**277**	P			**P**	**18 36 53.7**	**+3.0**
TAOE	**Nuku Hiva Isla**	**36.80**	**82**	*e*T			T	19 15 57.8	
	comp=Z,128nm,0.2s								
TAOE	**Nuku Hiva Isla**	**36.80**	**82**	P			**P**	**18 37 02.1**	**+0.6**
TAOE				IAmb			IAmb	18 37 06.3	
	comp=Z,305nm,1.7s								
MTSU	**Mount Surprise**	**36.81**	**262**	P			**P**	**18 37 01.4**	**-0.1**
	baz=37,SNR=30								
MTSU	**Mount Surprise**	**36.81**	**262**	P			**P**	**18 37 03.6**	**+2.1**
CMSA	**Cobar Meteorol**	**36.82**	**240**	P			**P**	**18 37 01.8**	**+0.4**
	baz=37,SNR=33								
CMSA	**Cobar Meteorol**	**36.82**	**240**	P			**P**	**18 37 02.1**	**+0.7**
QLP	**Quilpie**	**37.13**	**248**	P			**P**	**18 37 04.0**	**-0.1**
	baz=37,SNR=35								
QLP	**Quilpie**	**37.13**	**248**	P			**P**	**18 37 05.5**	**+1.4**
MANU	**Manus Island**	**37.91**	**289**	P			**P**	**18 37 08.1**	**-2.7**
MANU				IAmb			IAmb	18 37 16.0	
	comp=Z,162nm,1.4s								
COEN	**Coen**	**38.39**	**269**	P			**P**	**18 37 14.9**	**0.0**
	baz=38,SNR=7.7								
COEN	**Coen**	**38.39**	**269**	P			**P**	**18 37 12.6**	**-2.3**
COEN	**Coen**	**38.39**	**269**	P			**P**	**18 37 17.1**	**+2.2**
TOO	**Toolangi**	**38.87**	**230**	P			**P**	**18 37 19.4**	**+0.7**
	baz=39,SNR=7.2								
TOO	**Toolangi**	**38.87**	**230**	P			**P**	**18 37 18.3**	**-0.4**
TOO	**Toolangi**	**38.87**	**230**	P			**P**	**18 37 18.3**	**-0.4**
TOO				pmax			pmax		
	comp=Z,95nm,1.2s								
TOO	**Toolangi**	**38.87**	**230**	P			**P**	**18 37 19.2**

BBOO Buckleboo 45.07 240 P **P** 18 38 05.8 -3.6
BBOO IAmb IAmb 18 38 13.9
comp=Z,85nm,1.1s
BBOO Buckleboo 45.07 240 P **P** **18 38 11.6 +2.2**
SMPI Sarmi 45.89 284 P **P** **18 38 16.3 +0.2**
comp=Z,2µmcomp=Z,93nm,1.4s
WR0 Warramunga Arr 45.91 258 P **P** **18 38 12.2 -4.0**
WB0 Warramunga Arr 46.06 259 P **P** **18 38 14.1 -3.4**
WB0 IAmb IAmb 18 38 20.5
comp=Z,182nm,1.8s
WB2 Warramunga Arr 46.09 258 P **P** **18 38 16.1 -1.6**
baz=46
WB2 Warramunga Arr 46.09 258 P **P** **18 38 13.1 -4.6**
WRAB Tennant Creek 46.09 258 P P 18 38 12.8 -4.8
WRAB IAmb IAmb 18 38 20.9
comp=Z,149nm,1.8s
WRAB Tennant Creek 46.09 258 IAMs_20 IAMs_20 18 56 42.0
comp=Z,4µm,18.0s
WRAB Tennant Creek 46.09 258*ce*P **P** **18 38 17.4 -0.3**
WRAB pmax pmax
comp=Z,84nm,1.7s
WRAB Tennant Creek 46.09 258 P **P** **18 38 19.9 +2.2**
WRA Warramunga Arr 46.10 258 P **P** **18 38 15.9 -1.9**
comp=Z,15nm,1.0s,baz=94,slow=8.0,SNR=32
WRA PcP **PcP** **18 39 54.8 +0.8**
comp=Z,18nm,1.0s,baz=89,slow=4.0,SNR=9.7
comp=Z,15nm,1.0s
WRA Warramunga Arr 46.10 258 P P 18 38 12.6 -5.2
WRA Warramunga Arr 46.10 258 P P 18 38 12.6 -5.2
WRA pmax pmax
comp=Z,11nm,1.7s
AS31 Alice Springs 46.33 253 P **P** **18 38 15.7 -3.8**
ASAR Alice Springs 46.33 253 P **P** **18 38 18.9 -0.7**
comp=Z,67nm,1.0s,baz=85,slow=8.2,SNR=72
ASAR PcP **PcP** **18 39 55.4 +0.5**
comp=Z,13nm,1.0s,baz=116,slow=2.7,SNR=4.7
ASAR LR LR 18 56 55.3
comp=Z,12µm,18.2s,baz=98,slow=35
comp=Z,67nm,1.0s
ASAR Alice Springs 46.33 253 P **P** **18 38 15.3 -4.3**
ASAR Alice Springs 46.33 253 P **P** **18 38 15.3 -4.3**
MULG Mulgathing 46.45 244 P **P** **18 38 22.1 +1.8**
GUMO Guam 48.20 306 P **P** **18 38 33.0 -1.1**
comp=Z,84nm,0.9s,baz=77,slow=2.5,SNR=3.8
comp=Z,84nm,0.9s
GUMO Guam 48.20 306 P P 18 38 25.8 -8.3
GUMO Guam 48.20 306 P P 18 38 25.8 -8.3
GUMO pmax pmax
comp=Z,366nm,1.5s
GUMO MLR MLR
comp=Z,2µm,20.0s
SRPI Serui, Papua 48.23 283 P **P** **18 38 36.6 +2.2**
comp=Z,2µmcomp=Z,69nm,1.4s
BAKI Biak 48.60 284 P **P** **18 38 38.7 +1.5**
comp=Z,3µmcomp=Z,120nm,1.8s
KDU Kakadu 48.87 268 P **P** **18 38 38.7 -0.6**
baz=49,SNR=8.3
KDU Kakadu 48.87 268 P **P** **18 38 39.1 -0.2**
MTN Manton Dam 50.12 267 P **P** **18 38 47.8 -1.0**
baz=50,SNR=9.1
MTN Manton Dam 50.12 267 P P 18 38 42.7 -6.2
MTN Manton Dam 50.12 267 P **P** **18 38 48.4 -0.5**
WRKA Warakurna 51.41 251 P **P** **18 38 57.9 -0.6**
baz=51,SNR=28
WRKA Warakurna 51.41 251 P **P** **18 39 00.0 +1.4**
FAKI Fak Fak 51.63 280 P P 18 38 53.9 -6.3
FAKI IAMs_20 IAMs_20 18 59 07.7
comp=Z,5µm,21.0s
FAKI Fak Fak 51.63 280 P **P** **18 38 59.2 -1.1**
comp=Z,2µmcomp=Z,3µmcomp=Z,132nm,1.8s
FAKI Fak Fak 51.63 280 P **P** **18 39 00.7 +0.4**
FORT Forrest 51.65 244 P P 18 38 54.9 -5.3
FORT IAmb IAmb 18 39 12.5
comp=Z,81nm,0.9s
FORT Forrest 51.65 244 P **P** **18 39 01.0 +0.8**
KNRA Kununurra 51.88 263 P **P** **18 39 01.0 -1.1**
baz=52,SNR=4.6
KNRA Kununurra 51.88 263 P **P** **18 38 57.5 -4.6**
KNRA IAmb IAmb 18 39 05.7
comp=Z,97nm,1.1s
KNRA Kununurra 51.88 263 P **P** **18 39 04.1 +2.0**
SIJI Sorong 53.24 282 LR LR 19 00 41.3
comp=Z,5µm,20.7s,baz=134,slow=35
SWI Sorong 53.25 282 P **P** **18 39 12.0 -0.2**
comp=Z,2µmcomp=Z,2µmcomp=Z,274nm,1.0s
BNDI Bandanaira 53.35 277 P **P** **18 39 15.4 +2.4**
AAI Ambon 55.23 277 P **P** **18 39 26.1 -0.6**
comp=Z,4µmcomp=Z,226nm,1.5s
LBMI Labuha 56.85 280 P **P** **18 39 38.7 +0.3**
comp=Z,1µmcomp=Z,1µmcomp=Z,117nm,1.3s
SOEI Soe 57.35 269 P **P** **18 39 38.7 -3.3**
SOEI Soe 57.35 269 P **P** **18 39 43.1 +1.0**
comp=Z,4µmcomp=Z,434nm,0.9s
SOEI Soe 57.35 269 P **P** **18 39 44.4 +2.3**
TNTI Ternate 57.46 282 P **P** **18 39 38.7 -4.0**
TNTI Ternate 57.46 282 P **P** **18 39 42.7 0.0**
comp=Z,3µmcomp=Z,108nm,1.4s
TNTI Ternate 57.46 282 P **P** **18 39 46.0 +3.3**
SANI Sanana 57.83 278 P **P** **18 39 44.4 -0.9**
comp=Z,2µmcomp=Z,136nm,1.3s
SANI Sanana 57.83 278 P **P** **18 39 45.7 +0.4**
BATI Baumata 57.83 268 P **P** **18 39 47.6 +2.3**
comp=Z,1µmcomp=Z,84nm,1.0s
JCJ Chichijima 58.86 317 P P 18 39 47.2 -4.9
PSA00 Pilbara Seismi 59.44 255 P **P** **18 39 52.1 -4.3**
PSA00 Pilbara Seismi 59.44 255 P **P** **18 39 52.4 -4.0**
PSA00 IAmb IAmb 18 40 04.2
comp=Z,167nm,2.0s
MMRI Maumere 59.57 270 P P 18 39 52.1 -5.3
MMRI Maumere 59.57 270 P **P** **18 39 57.6 +0.2**
comp=Z,2µmcomp=Z,153nm,2.1s
MMRI Maumere 59.57 270 P **P** **18 40 00.4 +3.0**
MBWA Marble Bar 59.59 255 P **P** **18 39 53.1 -4.3**
MBWA IAmb IAmb 18 41 04.7
comp=Z,99nm,1.6s
EDFI Ende, Flores 60.06 269 P **P** **18 39 59.5 -1.4**
comp=Z,2µmcomp=Z,869nmcomp=Z,57nm,1.7s
BBSI Bau Bau 60.07 273 P **P** **18 40 02.9 +2.0**
comp=Z,148nmcomp=Z,11nm,1.4s
SGSI Sangihe 60.21 284 P **P** **18 40 03.4 +1.6**
comp=Z,1µmcomp=Z,107nm,1.6s
KLBR Kellerberrin 60.48 243 P **P** **18 40 02.9 -0.5**
baz=60,SNR=7.9
KLBR Kellerberrin 60.48 243 P **P** **18 40 04.7 +1.3**
comp=Z,74nm,1.0s
KMSI Cibinong 60.58 280 P **P** **18 40 07.1 +2.8**
comp=Z,152nm,1.1s
NWAO Narrogin (SRO) 60.87 241 P **P** **18 40 03.3 -2.8**
NWAO IAmb IAmb 18 40 29.6
comp=Z,57nm,1.4s
NWAO Narrogin (SRO) 60.87 241 IAMs_20 IAMs_20 19 05 43.4
comp=Z,4µm,18.0s
NWAO Narrogin (SRO) 60.87 241 P **P** **18 40 03.3 -2.8**
NWAO pmax pmax
comp=Z,57nm,1.4s
NWAO MLR MLR
comp=Z,4µm,18.0s
BLDU Ballidu 61.42 244 P **P** **18 40 11.2 +1.4**
DAV Davao City (W) 61.45 288 P **P** **18 40 10.4 +0.2**
comp=Z,74nm,0.4s,baz=54,slow=7.0,SNR=6.8
comp=Z,74nm,0.4s
DAV Davao City (W) 61.45 288 IAmb IAmb 18 40 15.9
comp=Z,126nm,0.5s
SBA Scott Base 61.63 184 P **P** **18 40 11.5 +1.1**
SBA Scott Base 61.63 184 P **P** **18 40 11.5 +1.1**
SBA pmax pmax
comp=Z,36nm,1.3s
VNDA Vanda 61.68 185 P **P** **18 40 12.5 +1.8**
comp=Z,0.8nm,0.6s,baz=307,slow=7.1,SNR=6.7
VNDA Vanda 61.68 185 P **P** **18 40 12.2 +1.5**
VNDA Vanda 61.68 185 P **P** **18 40 12.3 +1.5**
VNDA pmax pmax
comp=Z,22nm,1.4s
MUN Mundaring 61.78 242 P **P** **18 40 13.5 +1.3**
MORW Morawa 62.11 246 P **P** **18 40 13.4 -1.1**
MORW IAmb IAmb 18 40 34.7
comp=Z,90nm,1.7s
APSI Ampana 62.30 278 P **P** **18 40 14.8 -1.2**
comp=Z,2µmcomp=Z,170nm,1.4s
BKSI Bulukumba 62.46 273 P **P** **18 40 15.9 -1.1**
comp=Z,956nmcomp=Z,64nm,2.0s
MRSI Marisa 62.47 280 P **P** **18 40 15.3 -1.8**
comp=Z,989nmcomp=Z,47nm,1.0s
BNSI Bone 62.73 274 P **P** **18 40 20.4 +1.5**
comp=Z,2µmcomp=Z,132nm,1.4s
KAPI Kappang 62.90 273 P **P** **18 40 16.4 -3.6**
KAPI pmax pmax
comp=Z,102nm,1.2s
KAPI MLR MLR
comp=Z,1µm,18.0s
KAPI Kappang 62.90 273 P **P** **18 40 22.4 +2.4**
SPSI Sidrap Palu 63.18 274 P **P** **18 40 19.3 -2.5**
comp=Z,731nmcomp=Z,47nm,1.1s
TTSI Tana Toraja 63.40 275 P **P** **18 40 24.7 +1.4**
comp=Z,700nmcomp=Z,38nm,1.2s
TOLI2 Tolitoli 63.77 280 P **P** **18 40 21.6 -4.2**
TOLI2 Tolitoli 63.77 280 P **P** **18 40 27.4 +1.7**
PLAI Plampang 63.80 268 P **P** **18 40 26.9 +1.0**
comp=Z,2µmcomp=Z,150nm,1.0s
PLAI Plampang 63.80 268 P **P** **18 40 29.0 +3.1**
MPSI Mapaga 64.36 279 P **P** **18 40 29.2 -0.4**
comp=Z,1µmcomp=Z,1µmcomp=Z,56nm,1.7s
GIRL Giralia 64.45 253 P **P** **18 40 28.1 -2.0**
JHJ2 Mitsune 64.47 321 P **P** **18 40 26.3 -3.6**
JHJ2 Mitsune 64.47 321 P **P** **18 40 33.1 +3.2**
JHJ Hachijo jima 2 64.49 321 P **P** **18 40 30.5 +0.5**
comp=Z,112nm,0.9s,baz=122,slow=7.5,SNR=4.8
comp=Z,112nm,0.9s
JYT Yasato 66.41 323 P P 18 40 37.0 -5.4
SRBI Singaraja 66.44 268 P **P** **18 40 45.6 +2.5**
comp=Z,2µmcomp=Z,78nm,2.3s
JMM Marumori 67.23 325 P **P** **18 40 44.7 -2.9**
JMM IAmb IAmb 18 40 53.9
comp=Z,67nm,1.3s
ABJI Asem Bagus 67.45 268 P **P** **18 40 46.1 -3.4**
JGF Kuroka 67.65 321 P **P** **18 40 46.7 -3.7**
JGF IAmb IAmb 18 40 55.0
comp=Z,33nm,1.0s
INU Inuyama 67.69 321 P **P** **18 40 46.8 -3.7**
INU Inuyama 67.69 321 P **P** **18 40 53.7 +3.2**
CASY Casey 67.70 205 P **P** **18 40 48.8 -1.4**
CASY IAmb IAmb 18 40 56.3
comp=Z,78nm,1.1s
CASY Casey 67.70 205 IAMs_20 IAMs_20 19 06 05.4
comp=Z,3µm,20.0s
MJAR Matsushiro Arr 67.78 322 P **P** **18 40 50.9 -0.3**
comp=Z,18nm,0.8s,baz=142,slow=6.2,SNR=21
comp=Z,18nm,0.8s
MJAR Matsushiro Arr 67.78 322 P P 18 40 45.6 -5.6
MJAR IAmb IAmb 18 40 57.2
comp=Z,43nm,1.2s
MJB9 Matsu-Tunnel 67.78 322 P P 18 40 46.0 -5.2
MJB9 IAmb IAmb 18 40 54.3
comp=Z,34nm,1.0s
KMMI Kalianget 67.89 269 P **P** **18 40 55.2 +2.9**
comp=Z,88nm,1.0s
BBKI Banjar Baru 68.03 273 P **P** **18 40 56.0 +2.8**
comp=Z,5µmcomp=Z,127nm,2.2s
BLJI Banyuglugur 68.07 268 P **P** **18 40 57.0 +3.5**
GMJI Gumukmas 68.08 268 P **P** **18 40 55.6 +2.1**
comp=Z,103nm,1.0s
KIWB Kanaga Island 68.33 360 P **P** **18 40 49.9 -4.4**
ADK Adak 68.36 0 P **P** **18 40 49.8 -4.6**
ADK Adak 68.36 0 P **P** **18 40 49.8 -4.6**
ADK pmax pmax
comp=Z,111nm,1.5s
ADK MLR MLR
comp=Z,6µm,22.0s
ADK Adak 68.36 0 P **P** **18 40 58.9 +4.5**
JOW Kunigami 68.50 308 P **P** **18 40 56.3 +0.4**
comp=Z,19nm,0.9s,baz=131,slow=7.2,SNR=7.4
comp=Z,19nm,0.9s
JOW Kunigami 68.50 308 P P 18 40 50.4 -5.5
JOW IAmb IAmb 18 40 59.8
comp=Z,88nm,1.3s
JOW Kunigami 68.50 308 P **P** **18 40 59.8 +3.9**
GSTR Great Sitkin T 68.58 1 P **P** **18 40 51.9 -4.0**
MTKI Muara Teweh, K 68.72 276 P P 18 41 02.4 +4.9
ERM Erimo 69.06 329 IAMs_20 IAMs_20 19 05 05.4
comp=Z,3µm,21.0s
JSU Suzuyama 69.56 314 P **P** **18 40 58.4 -3.9**
PWJI Pagerwojo 69.71 267 P **P** **18 41 07.4 +3.7**
comp=Z,3µmcomp=Z,90nm,1.8s
NIKH Nikolski High 69.82 5 P **P** **18 41 01.0 -2.4**
baz=189
JHS Saijyo 69.89 318 P **P** **18 41 00.1 -4.3**
PCJI Pacitan 70.27 267 P **P** **18 41 10.2 +3.1**
comp=Z,219nm,1.0s
WOJI Wonogiri, Jawa 70.60 267 P **P** **18 41 13.6 +4.4**
JKA Kamikawa-asahi 70.91 330 P **P** **18 41 05.7 -4.7**
JKA IAmb IAmb 18 41 16.6
comp=Z,47nm,1.0s
ASAJ Asahikawa 70.91 330 P **P** **18 41 05.7 -4.6**
ASAJ pmax pmax
comp=Z,47nm,1.0s
UNV Unalaska Valle 70.91 7 P **P** **18 41 05.4 -4.7**
UNV IAmb IAmb 18 41 14.1
comp=Z,37nm,1.0s
UNV Unalaska Valle 70.91 7 P **P** **18 41 07.5 -2.6**
baz=191
SKR Severo-Kuril's 71.18 342*c i* P **P** **18 41 16.4 +4.6**
SKR *e* 18 41 29.6
SKR pmax pmax
comp=Z,400nm,3.6s
SKR MLR MLR
comp=Z,500nm,18.0s
SMRI Semarang 71.27 268 P **P** **18 41 08.8 -4.4**
SMRI Semarang 71.27 268 P P 18 41 18.0 +4.7
comp=Z,131nm,1.4s
SMRI Semarang 71.27 268 P P 18 41 18.1 +4.8
comp=Z,131nm,1.4s
PBKI Pangkalan Bun 71.28 273 P **P** **18 41 15.0 +1.7**
comp=Z,2µmcomp=Z,71nm,1.0s
YOJ Yonaguni jima 71.37 304 P **P** **18 41 08.8 -4.7**
YOJ Yonaguni jima 71.37 304 P **P** **18 41 08.8 -4.7**
YOJ pmax pmax
comp=Z,178nm,1.1s
TWG Pinlang 72.16 301 P P 18 41 13.3 -5.1
TWG IAmb IAmb 18 41 39.0
comp=Z,50nm,1.1s
YULB Yu-li 72.24 302 P P 18 41 11.7 -7.2
YULB IAmb IAmb 18 41 23.6
comp=Z,133nm,1.8s
STKI Sintang 72.28 276 P **P** **18 41 20.6 +1.3**
comp=Z,35nm,1.7s
FALS False Pass 72.29 8 P **P** **18 41 15.8 -2.6**
baz=194
SBUM Sibu 72.30 278 P P 18 41 14.4 -5.0
NACB Ninganchiao 72.37 303 P P 18 41 14.4 -5.2
PET Petropavlovsk 72.61 345 *e*P **P** **18 41 20.2 -0.1**
PET *e*S **S** **18 50 41.1 -4.0**
PET *e*SS **SS** **18 55 27.1 +2.3**
PET pmax pmax
comp=Z,40nm,1.3s
PET MLR MLR
comp=Z,1µm,18.0s
PET MLR MLR
comp=Z,1µm,18.0s
SSLB Suanglung 72.70 302 P **P** **18 41 17.8 -3.8**
SSLB Suanglung 72.70 302 P **P** **18 41 24.4 +2.8**
TPUB Ta-pu 72.74 302 P P 18 41 16.0 -5.9
TPUB Ta-pu 72.74 302 P **P** **18 41 24.9 +3.0**
YHNB Yeheng 72.77 303 P **P** **18 41 25.4 +3.3**
CNBA Chernabura Isl 72.85 10 P **P** **18 41 18.6 -3.1**
CNBA IAmb IAmb 18 43 17.7
comp=Z,88nm,1.4s
CNBA IAMs_20 IAMs_20 19 07 43.7
comp=Z,4µm,20.0s
CHNA Chernabura Isl 72.86 10 P **P** **18 41 19.1 -2.6**
baz=198
PEA0B Petropavlovsk- 72.92 344 P P 18 41 16.6 -5.6
PEA0B IAmb IAmb 18 41 29.1
comp=Z,90nm,1.2s
PEA0B Petropavlovsk- 72.92 344*de*P **P** **18 41 21.7 -0.5**
PETK Petropavlovsk- 72.92 344 P **P** **18 41 22.2 -0.1**
comp=Z,15nm,0.8s,baz=137,slow=7.3,SNR=4.9
comp=Z,15nm,0.8s
PETK Petropavlovsk- 72.92 344 P P 18 41 17.4 -4.8
PETK Petropavlovsk- 72.92 344 P P 18 41 17.5 -4.8
YSS Yuzh-Sakhalins 72.99 332 P P 18 41 15.9 -6.8
YSS IAmb IAmb 18 41 30.2
comp=Z,70nm,1.1s
YSS IAMs_20 IAMs_20 19 06 38.5
comp=Z,3µm,22.0s
YSS Yuzh-Sakhalins 72.99 332 *e*P **P** **18 41 25.8 +3.1**
YSS *e*S **S** **18 50 50.3 +0.6**
YSS pmax pmax
comp=Z,50nm,1.1s
YSS pmax pmax
comp=Z,600nm,8.8s
YSS smax smax
comp=N,600nm,12.0s
YSS Yuzh-Sakhalins 72.99 332 P **P** **18 41 27.4 +4.7**
SDPT Sand Point 73.20 10 P P 18 41 19.0 -4.8
SDPT IAmb IAmb 18 41 30.3
comp=Z,63nm,1.0s
SDPT Sand Point 73.20 10 P **P** **18 41 20.6 -3.2**
baz=197
QSPA South Pole Qui 73.28 180 P **P** **18 41 24.6 +0.1**
QSPA IAmb IAmb 18 41 32.7
comp=Z,61nm,1.1s
QSPA South Pole Qui 73.28 180 IAMs_20 IAMs_20 19 07 18.7
comp=Z,4µm,22.0s
KSM Kuching 73.81 277 P **P** **18 41 30.5 +2.1**
SPIA Saint Paul Isl 73.89 4 P **P** **18 41 25.3 -2.5**
baz=187
NAWB Namwon 73.90 316 P **P** **18 41 26.0 -2.4**
LEM Lembang 74.03 268 P **P** **18 41 30.0 +0.1**
comp=Z,2µmcomp=Z,81nm,2.1s
SNCC San Nicolas Is 74.08 47 P **P** **18 41 26.7 -2.8**
baz=237
SCZ2 Santa Cruz Isl 74.41 47 P **P** **18 41 28.5 -2.9**
baz=237
TJN Taejon 74.47 316*c i* P **P** **18 41 34.0 +2.3**
TJN Taejon 74.47 316 P **P** **18 41 36.1 +4.4**
CHIR Chirikof Islan 74.55 12 P **P** **18 41 29.6 -2.1**
baz=202
SBC Santa Barbara 74.60 46 P **P** **18 41 30.4 -2.1**
baz=237
SCI2 San Clemente I 74.63 48 P **P** **18 41 30.6 -2.1**
baz=238
KSRS Korea Array 74.72 317 P **P** **18 41 33.7 +0.6**
comp=Z,26nm,0.9s,baz=130,slow=6.3,SNR=39
comp=Z,26nm,0.9s
PKM Mcpherson Peak 74.77 46 P **P** **18 41 30.5 -3.2**
baz=237
CBJI Citeko 74.88 268 P **P** **18 41 37.5 +2.9**
comp=Z,91nm,1.0s
SMMC Simmler 74.88 45 P **P** **18 41 33.3 -0.9**
baz=237
DBJI Dramaga 74.94 268 P **P** **18 41 37.3 +2.3**
comp=Z,132nm,2.0s
CIS Catalina Islan 74.95 48 P **P** **18 41 32.2 -2.4**
baz=238
HOPS Hopland Field 74.98 41 IAMs_20 IAMs_20 19 10 56.1
comp=Z,3µm,18.0s
QZH Quanzhou 75.14 302 P **P** **18 41 38.1 +2.3**
QZH S **S** **18 51 20.4 +5.5**
QZH LR LR
comp=Z,610nm,17.1s
QZH LR LR
comp=Z,710nm,17.2s
QZH LR LR
comp=Z,1µm,21.5s
FMP Fort Macarthur 75.20 48 P **P** **18 41 34.5 -1.5**
baz=238
OSI Osito Audit: C 75.38 47 P **P** **18 41 34.9 -2.2**
baz=238
DECC Green Verdugo 75.46 47 P **P** **18 41 35.4 -2.2**
baz=238
JCC Jacoby Creek, 75.50 39 IAMs_20 IAMs_20 19 07 07.4
comp=Z,3µm,21.0s
SII Sitkinak Islan 75.53 13 IAMs_20 IAMs_20 19 07 27.7
comp=Z,4µm,20.0s
SII Sitkinak Islan 75.53 13 P **P** **18 41 35.1 -2.4**
baz=203
INCN Inchon 75.58 317 P **P** **18 41 41.7 +3.6**
comp=Z,57nm,2.0s
ARVC Arvin 75.58 46 P **P** **18 41 36.1 -2.1**
baz=237
109C Camp Elliot, M 75.62 49 P **P** **18 41 36.3 -2.1**
baz=239
VLA Vladivostok 75.78 324*de*P **P** **18 41 42.6 +3.5**
VLA pmax pmax
comp=Z,98nm,1.3s
VES Vestal, Richgr 75.79 45 P **P** **18 41 37.1 -2.3**
baz=237
TKX Tecate 75.81 49 P P 18 41 34.9 -4.7
TKX IAmb IAmb 18 43 44.0
comp=Z,34nm,0.6s
VOG Valley Oaks Go 75.85 45 P **P** **18 41 38.3 -1.4**
baz=237
MURC Murrieta 75.92 48 P **P** **18 41 37.6 -2.5**
baz=239
BFSC Mount Baldy Ra 75.92 47 P **P** **18 41 38.0 -2.3**
baz=238
SSE Sheshan 76.01 309 P **P** **18 41 36.8 -3.9**
SSE S **S** **18 51 19.6 -4.7**
SSE pmax pmax
comp=Z,12nm,0.7s
SSE pmax pmax
comp=Z,61nm,5.2s
SSE LR LR
comp=N,170nm,18.4s
SSE LR LR
comp=E,400nm,16.3s
EDW2 Edwards Air Fo 76.03 47 P **P** **18 41 37.6 -3.2**
baz=238
TYV Tymovskoe 76.03 335 *e*P **P** **18 41 39.6 -0.8**
TYV *e*S **S** **18 51 21.0 -2.7**
TYV pmax pmax
comp=Z,13nm,1.5s
TYV pmax pmax
comp=Z,200nm,2.7s
TYV smax smax
comp=N,100nm,2.8s
TYV smax smax
comp=E,200nm,2.8s
R17K Ugashik Creek 76.10 11 P **P** **18 41 38.7 -1.9**
baz=201
MONP2 Monument Peak 76.11 49 P **P** **18 41 38.7 -2.8**
baz=240
ISA Isabella, Lake 76.11 46 P **P** **18 41 39.4 -1.9**
baz=238
IKP In-Ko-Pah, Jac 76.22 49 P **P** **18 41 40.4 -1.6**
baz=240
OHAK Old Harbor 76.34 13 P **P** **18 41 40.0 -1.9**
baz=204
USA0B Ussuriysk Arra 76.41 325*i e*P **P** **18 41 45.0 +2.3**
USRK Ussuriysk Ar. 76.41 325 P **P** **18 41 43.9 +1.2**
comp=E,29nm,0.9s,baz=138,slow=3.9,SNR=13
comp=E,29nm,0.9s
PFO Pinyon Flats O 76.45 48 P **P** **18 41 46.3 +3.0**
comp=E,0.6nm,0.3s,baz=234,slow=3.7,SNR=5.2
comp=E,0.6nm,0.3s
PFO Pinyon Flats O 76.45 48 P **P** **18 41 40.4 -3.0**
PFO Pinyon Flats O 76.45 48 IAMs_20 IAMs_20 19 07 01.2
comp=Z,2µm,20.0s
PFO Pinyon Flats O 76.45 48 P **P** **18 41 40.4 -3.0**
PFO pmax pmax
comp=Z,43nm,0.3s
PFO MLR MLR
comp=Z,2µm,20.0s
PFO Pinyon Flats O 76.45 48 P **P** **18 41 42.1 -1.3**
baz=239
TPFO Pinon Flats 76.45 48 P **P** **18 41 42.3 -1.0**
baz=239
BBRC Big Bear Solar 76.46 48 P **P** **18 41 43.1 -0.4**
baz=239
LRMC Laurel Mtn Rad 76.56 46 P **P** **18 41 41.6 -2.3**
baz=238
L02F Cave Junction 76.57 38 P **P** **18 41 41.6 -2.0**
baz=233
SWSC Sam W. Stewart 76.59 49 P **P** **18 41 42.2 -1.8**
baz=240
RRX Edison Barstow 76.72 47 P **P** **18 41 44.6 -0.1**
baz=239
CWC Cottonwood Cre 76.80 45 P **P** **18 41 44.0 -1.3**
baz=238
YBH Yreka Blue Hor 76.84 39 P **P** **18 41 47.3 +2.0**
comp=Z,7.6nm,0.8s,baz=193,slow=3.4,SNR=14
comp=Z,7.6nm,0.8s
YBH Yreka Blue Hor 76.84 39 IAMs_20 IAMs_20 19 07 49.9
comp=Z,2µm,20.0s
K02D Willamette Mer 76.86 37 P **P** **18 41 43.6 -1.8**
baz=232
MLAC Mammoth, Mammo 76.94 44 P **P** **18 41 44.1 -2.1**
baz=237
BELC Belle Mtn. Jos 76.98 48 P **P** **18 41 43.8 -2.5**
baz=240
J01E Myrtle Point 77.00 37 IAMs_20 IAMs_20 19 09 01.7
comp=Z,3µm,20.0s
J01E Myrtle Point 77.00 37 P **P** **18 41 44.0 -2.0**
baz=232
MPMC Manual Prospec 77.00 46 P **P** **18 41 44.1 -2.4**
baz=238
KDAK Kodiak Island 77.01 13 P **P** **18 41 46.2 +0.5**
comp=Z,32nm,0.9s,baz=225,slow=2.1,SNR=15

KDAK LR LR 19 08 35.4
comp=Z,4µm,21.8s,baz=237,slow=30
comp=Z,32nm,0.9s
KDAK Kodiak Island 77.01 13 P P 18 41 43.1 -2.6
baz=204
P16K Nushagak River 77.13 10 P P 18 41 44.4 -2.0
baz=199,SNR=9.1
HEC Hector,Ludlow 77.16 47 P P 18 41 44.9 -2.3
baz=239
BC3 Big Chuckawall 77.20 49 P P 18 41 44.2 -3.3
baz=240
HUMO Hull Mountain 77.22 38 IAMs_20 IAMs_20 19 09 01.9
comp=Z,2µm,20.0s
GLA Glamis 77.35 50 P P 18 41 45.4 -2.9
baz=240
KASI Kota Agung 77.37 268 P P 18 41 49.9 +1.1
comp=Z,128nm,1.0s
L04D Klamath Falls 77.38 38 IAMs_20 IAMs_20 19 08 39.0
comp=Z,2µm,20.0s
L04D Klamath Falls 77.38 38 P P 18 41 45.8 -2.5
baz=234
P17K Kvichak River 77.56 11 P P 18 41 46.9 -1.9
baz=200,SNR=12
GRAC Grapevine Rang 77.58 45 P P 18 41 46.4 -3.2
baz=238
GMRC Granite Mounta 77.62 48 P P 18 41 47.9 -2.0
baz=240
I02E Swisshome, OR 77.63 36 P P 18 41 47.2 -2.3
baz=232
FURC Furnace Creek, 77.65 46 P P 18 41 47.4 -2.4
baz=238
O16K Kokwok River B 77.65 10 P P 18 41 47.2 -2.1
baz=199,SNR=13
I03D Drain, OR 77.66 37 P P 18 41 47.6 -2.1
baz=232
IRM Iron Mountain 77.67 48 P P 18 41 47.5 -2.6
baz=240
NVAR Mina Array Bea 77.73 43 P P 18 41 52.6 +2.1
comp=Z,8.5nm,0.9s,baz=230,slow=9.0,SNR=19
comp=Z,8.5nm,0.9s
SHOC Shoshone, Teco 77.76 46 P P 18 41 47.6 -2.9
baz=239
TUQ Turquoise Moun 77.76 47 P P 18 41 48.4 -2.3
baz=239
Q20K Shuyak Island 77.80 13 P P 18 41 47.7 -2.4
baz=204,SNR=6.6
Q19K Cape Douglas, 77.84 12 P P 18 41 48.1 -2.3
baz=203
LWLI Liwa 77.93 268 P P 18 41 53.0 +0.9
comp=Z,1µmcomp=Z,71nm,1.1s
K04D Chiloquin, OR 77.95 38 P P 18 41 49.7 -1.8
baz=234
P18K Big Mountain, 77.96 11 P 18 41 48.4 -2.7
P18K IAMs_20 IAMs_20 19 10 51.7
comp=Z,3µm,20.0s
P18K Big Mountain, 77.96 11 P P 18 41 49.0 -2.1
baz=202
O17K Koliganek Bris 77.99 10 P P 18 41 49.5 -1.6
baz=200
MDJ Mudanjiang 78.01 324 P P 18 41 54.3 +2.7
MDJ S S 18 51 50.2 +4.7
MDJ pmax pmax
comp=Z,39nm,1.5s
MDJ pmax pmax
comp=Z,460nm,3.6s
MDJ LR LR
comp=Z,760nm,16.1s
MDJ LR LR
comp=Z,1µm,16.9s
MDJ LR LR
comp=Z,2µm,20.6s
MDJ Mudanjiang 78.01 324 P P 18 41 55.5 +3.9
comp=Z,60nm,1.6s
J04D Umpqua Nationa 78.10 38 P P 18 41 50.4 -2.0
baz=234
NJ2 Nanjing 78.22 309 *e*P P 18 41 55.8 +2.7
NJ2 pP **pwP** 18 41 57.9 -0.4
NJ2 sP **PcP** 18 41 59.7 -2.8
NJ2 S S 18 51 55.4 +7.2
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
NJ2 LR LR
comp=Z,940nm,17.2s
NJ2 LR LR
comp=Z,860nm,15.7s
NJ2 LR LR
comp=Z,1µm,17.6s
COR Corvallis 78.23 36 IAMs_20 IAMs_20 19 09 49.2
comp=Z,3µm,20.0s
I04A Tendick Farm, 78.26 37 P P 18 41 51.5 -1.6
baz=233
214A Organ Pipe Nat 78.31 51 P P 18 41 52.8 -0.9
baz=242
TPNV Topopah Spring 78.32 46 P P 18 41 52.5 -1.3
baz=239
NEE2 Needles Airpor 78.35 48 P P 18 41 53.0 -0.8
baz=240
N16K Nishlik Lake 78.38 9 P P 18 41 52.4 -0.9
baz=198
O18K Koktuh Hills 78.39 11 P P 18 41 50.3 -3.2
O18K IAmb IAmb 18 42 02.1
comp=Z,90nm,1.1s
O18K IAMs_20 IAMs_20 19 13 10.1
comp=Z,2µm,19.0s
O18K Koktuh Hills 78.39 11 P P 18 41 52.5 -1.0
baz=202,SNR=25
MOD Modoc Plateau 78.40 40 IAMs_20 IAMs_20 19 11 20.3
comp=Z,2µm,19.0s
PDMCI Parker Dam,Lak 78.46 49 P P 18 41 54.0 -0.4
baz=241
H04D Lebanon 78.51 36 IAMs_20 IAMs_20 19 10 18.8
comp=Z,3µm,20.0s
H04D Lebanon 78.51 36 P P 18 41 53.5 -1.0
baz=233
NKL Nikolayevsk 78.57 336 *e*P P 18 41 55.2 +0.7
NKL *e*S S 18 51 52.7 +1.6
NKL pmax pmax
comp=N,12nm,0.8s
NKL pmax pmax
comp=E,3.0nm,0.8s
NKL pmax pmax
comp=Z,24nm,1.6s
NKL smax smax
comp=E,8.0nm,3.1s
NKL smax smax
comp=N,1.0nm,2.1s
NKL MLR MLR
comp=E,100nm,14.0s
GRNR Gornyy 78.63 332⇓ *i*P P 18 41 57.3 +2.3
GRNR pmax pmax
comp=E,6.0nm,1.4s
GRNR pmax pmax
comp=N,8.0nm,1.3s
GRNR pmax pmax
comp=Z,30nm,1.0s
GRNR MLR MLR
comp=E,450nm,15.0s
J05D Fort Rock, OR 78.64 38 P P 18 41 52.6 -2.8
baz=234
O19K Port Alsworth 78.88 11 IAMs_20 IAMs_20 19 13 25.0
comp=Z,2µm,19.0s
HOM Homer 78.92 13 IAMs_20 IAMs_20 19 11 49.2
comp=Z,3µm,20.0s
HOM Homer 78.92 13 P P 18 41 54.0 -2.3
baz=205
N18K Kilae Creek 79.05 10 IAMs_20 IAMs_20 19 15 02.3
comp=Z,2µm,19.0s
N18K Kilae Creek 79.05 10 P P 18 41 55.0 -2.1
baz=201,SNR=5.2
O20K Slope Mountain 79.11 12 P P 18 41 55.6 -1.9
baz=204
BRSE Bradley Lake S 79.19 13 P P 18 41 56.8 -1.0
baz=206,SNR=18
I05D Terrebonne, OR 79.20 37 P P 18 41 56.9 -1.4
baz=234
N19K Bonanza Creek 79.42 11 P P 18 41 54.7 -4.5
N19K IAmb IAmb 18 42 05.7
comp=Z,77nm,1.5s
N19K IAMs_20 IAMs_20 19 14 55.3
comp=Z,3µm,19.0s
N19K Bonanza Creek 79.42 11 P P 18 41 56.9 -2.3
baz=202
R11A Troy Canyon, C 79.49 45 P P 18 41 58.0 -2.2
baz=239,SNR=11
H02S1 DAWSON INLET T 79.56 25 T T 20 09 13.7
SNR=85
DL2 Dalian 79.66 316⇑ *i*P P 18 42 06.8 +6.0
DL2 pmax pmax
comp=Z,65nm,1.4s
DL2 pmax pmax
comp=Z,610nm,5.9s
DL2 LR LR
comp=Z,900nm,22.7s
DL2 LR LR
comp=Z,760nm,17.2s
DL2 LR LR
comp=Z,780nm,21.5s
NLWA Neilton Lookou 79.66 34 IAMs_20 IAMs_20 19 13 24.7
comp=Z,2µm,18.0s
WVOR Wild Horse Val 79.72 40 IAMs_20 IAMs_20 19 12 13.3
comp=Z,3µm,19.0s
G05D Wamic, OR 79.75 36 P P 18 42 00.6 -0.7
baz=234
KLR Kul'dur 79.80 329 P P 18 42 02.7 +1.3
comp=Z,4.9nm,0.8s,baz=96,slow=2.6,SNR=8.3
comp=Z,4.9nm,0.8s
KLR Kul'dur 79.80 329⇓ *e*P P 18 42 02.9 +1.5
KLR pmax pmax
comp=Z,40nm,1.5s
SEW Seward 79.81 14 P P 18 42 00.2 -0.9
baz=207,SNR=5.3
CN2 Changchun 79.92 322 *e*P P 18 42 03.5 +1.4
CN2 *e*PP PP 18 45 06.2 +2.2
CN2 *e*S S 18 52 07.0 +1.1
CN2 *e*SS SS 18 57 20.4 +4.5
CN2 pmax pmax
comp=Z,50nm,1.1s
CN2 pmax pmax
comp=Z,640nm,3.0s
CN2 LR LR
comp=Z,770nm,16.0s
CN2 LR LR
comp=Z,620nm,16.0s
CN2 LR LR
comp=Z,1µm,18.0s
BNX BinXian 79.92 324 ⇓P P 18 42 03.7 +1.6
BNX PcP PcP 18 42 11.8 +2.2
BNX PP PP 18 45 07.3 +3.3
BNX S S 18 52 10.8 +5.0
BNX SS SS 18 57 22.2 +6.3
BNX pmax pmax
comp=Z,43nm,1.0s
BNX pmax pmax
comp=Z,540nm,7.4s
BNX LR LR
comp=Z,950nm,18.5s
BNX LR LR
comp=Z,520nm,14.4s
BNX LR LR
comp=Z,2µm,18.7s
SNY Shenyang 79.95 319 ⇑P P 18 42 05.5 +3.1
SNY S S 18 52 14.0 +7.7
SNY SS SS 18 57 18.7 +2.2
SNY pmax pmax
comp=Z,66nm,1.1s
SNY LR LR
comp=Z,1µm,16.1s
SNY LR LR
comp=Z,710nm,16.8s
SNY LR LR
comp=Z,890nm,17.5s
Q23K Middleton Isla 79.95 15 IAMs_20 IAMs_20 19 11 22.9
comp=Z,2µm,20.0s
Q23K Middleton Isla 79.95 15 P P 18 42 00.9 -1.0
baz=210
TUC Tucson 80.00 52 IAMs_20 IAMs_20 19 10 02.6
comp=Z,2µm,20.0s
TUC Tucson 80.00 52 P P 18 42 01.7 -1.3
baz=243
CAPN Captain Cook N 80.03 13 P P 18 42 01.5 -0.9
baz=205
O22K Cooper Landing 80.08 13 IAMs_20 IAMs_20 19 11 22.0
comp=Z,3µm,20.0s
O22K Cooper Landing 80.08 13 P P 18 42 01.5 -1.1
baz=207
D03D Eldon 80.17 34 P P 18 42 01.9 -1.5
baz=232
QIZ Qiongzhong 80.17 293 IAMs_20 IAMs_20 19 11 19.0
comp=Z,2µm,22.0s
QIZ Qiongzhong 80.17 293 P P 18 42 02.6 -1.5
QIZ S S 18 52 07.8 -1.8
QIZ LR LR
comp=Z,640nm,19.1s
QIZ LR LR
comp=Z,1µm,25.5s
QIZ LR LR
comp=Z,2µm,23.1s
N20K Mount Spurr 80.21 12 P P 18 42 02.5 -1.0
baz=204
SPCR Spurr Chakacha 80.21 12 P P 18 42 02.4 -1.0
baz=204
GAMB Gambell 80.40 2 IAMs_20 IAMs_20 19 09 59.3
comp=Z,3µm,22.0s
GAMB Gambell 80.40 2 P P 18 42 02.6 -1.6
baz=185
MA2 Magadan 80.45 344 P P 18 42 05.7 +1.0
comp=Z,10nm,0.9s,baz=131,slow=11,SNR=2.6
comp=Z,10nm,0.9s
MA2 Magadan 80.45 344 IAMs_20 IAMs_20 19 11 56.8
comp=Z,2µm,21.0s
MA2 Magadan 80.45 344⇑ *e*P P 18 42 07.5 +2.8
MA2 pmax pmax
comp=Z,61nm,1.5s
M19K Big River Lodg 80.45 11 IAMs_20 IAMs_20 19 16 30.5
comp=Z,2µm,18.0s
M19K Big River Lodg 80.45 11 P P 18 42 04.0 -0.6
baz=202
FIS Fire Island 80.57 13 IAMs_20 IAMs_20 19 10 09.9
comp=Z,3µm,22.0s
RC01 Rabbit Creek A 80.63 13 IAMs_20 IAMs_20 19 12 21.3
comp=Z,2µm,20.0s
RC01 Rabbit Creek A 80.63 13 P P 18 42 04.0 -1.6
baz=207
L19K White Mountain 80.63 10 P P 18 42 02.8 -2.9
L19K IAMs_20 IAMs_20 19 11 05.2
comp=Z,2µm,21.0s
L19K White Mountain 80.63 10 P P 18 42 04.3 -1.3
baz=202
M20K Styx River 80.66 11 IAMs_20 IAMs_20 19 15 54.1
comp=Z,3µm,19.0s
M20K Styx River 80.66 11 P P 18 42 04.1 -1.8
baz=203
SUA Susitna One 80.75 12 P P 18 42 04.1 -2.3
baz=206,SNR=11
HIN Hinchinbrook I 80.76 15 IAMs_20 IAMs_20 19 10 53.0
comp=Z,3µm,20.0s
U15A North Rim 80.81 48 P P 18 42 04.3 -3.3
CRAG Craig 80.97 24 P P 18 42 04.9 -2.6
baz=222
WHN Wuhan 80.98 306 ⇑P P 18 42 11.2 +3.1
WHN S S 18 52 19.7 +2.2
WHN pmax pmax
comp=Z,100nm,1.1s
WHN LR LR
comp=Z,2µm,13.2s
WHN LR LR
comp=Z,1µm,14.5s
WHN LR LR
comp=Z,3µm,25.2s
GLI Glacier Island 81.04 14 IAMs_20 IAMs_20 19 11 34.4
comp=Z,3µm,20.0s
GLI Glacier Island 81.04 14 P P 18 42 04.8 -3.0
baz=209
WUAZ Wupatki 81.04 49 P P 18 42 06.2 -2.4
baz=242
SKT Skwentna 81.06 12 IAMs_20 IAMs_20 19 10 58.7
comp=Z,3µm,21.0s
SKT Skwentna 81.06 12 P P 18 42 04.9 -3.0
baz=205
FID Port Fidalgo 81.07 15 IAMs_20 IAMs_20 19 10 52.1
comp=Z,3µm,20.0s
EYAK Cordova Ski Ar 81.08 15 P P 18 42 06.0 -2.0
baz=210
L20K Farewell, AK 81.08 11 P P 18 42 04.8 -3.2
baz=203,SNR=6.8
CNSH ChangSha 81.11 303 ⇑P P 18 42 10.8 +1.9
CNSH S S 18 52 25.0 +6.0
CNSH LR LR
comp=Z,1µm,13.4s
CNSH LR LR
comp=Z,630nm,14.1s
CNSH LR LR
comp=Z,750nm,16.0s
M22K Willow 81.14 13 P P 18 42 06.3 -1.9
baz=206
TTA Tatalina 81.14 10 P P 18 42 04.1 -4.3
TTA Tatalina 81.14 10 P P 18 42 04.1 -4.3
TTA pmax pmax
comp=Z,53nm,1.2s
TTA Tatalina 81.14 10 P P 18 42 06.1 -2.3
baz=201,SNR=11
KNK Knik Glacier 81.20 13 IAMs_20 IAMs_20 19 11 34.5
comp=Z,2µm,21.0s
KNK Knik Glacier 81.20 13 P P 18 42 06.6 -2.1
baz=208
PMR Palmer 81.21 13 P P 18 42 07.7 -0.9
baz=207
SIT Sitka 81.36 22 P P 18 42 08.6 -0.9
baz=220
HAWA Hanford 81.44 36 IAMs_20 IAMs_20 19 11 43.1
comp=Z,3µm,20.0s
SML Sawmill 81.58 13 IAMs_20 IAMs_20 19 12 17.5
comp=Z,2µm,20.0s
SML Sawmill 81.58 13 P P 18 42 08.6 -2.0
baz=208
ANM Nome 81.58 5 P P 18 42 09.2 -1.3
baz=192
M23K Glacier View 81.70 14 P P 18 42 09.3 -2.0
baz=208
CUT Chulitna 81.70 12 P P 18 42 09.0 -2.2
baz=206
BMRM Bremner River 81.73 15 IAMs_20 IAMs_20 19 10 49.7
comp=Z,3µm,21.0s
BMRM Bremner River 81.73 15 P P 18 42 09.3 -2.2
baz=212,SNR=7.2
MESA MESA 81.77 17 P P 18 42 09.0 -2.9
baz=214
PPLA Purkeypile 81.77 11 P P 18 42 09.6 -2.2
baz=204
SCM Sheep Creek Mo 81.82 14 IAMs_20 IAMs_20 19 10 49.1
comp=Z,2µm,21.0s
SCM Sheep Creek Mo 81.82 14 P P 18 42 10.7 -1.4
baz=209,SNR=7.0
KLU Klutina 81.85 15 IAMs_20 IAMs_20 19 11 50.0
comp=Z,3µm,20.0s
KLU Klutina 81.85 15 P P 18 42 10.8 -1.4
baz=210
K20K Telida 81.86 10 IAMs_20 IAMs_20 19 11 53.7
comp=Z,2µm,21.0s
K20K Telida 81.86 10 P P 18 42 10.9 -1.2
baz=202,SNR=21
BMO Blue Mountains 81.86 38 IAMs_20 IAMs_20 19 11 54.7
comp=Z,2µm,20.0s
WRAK Wrangell Islan 81.97 23 P P 18 42 11.8 -0.9
baz=223
MFID Camas Ranch 81.99 40 IAMs_20 IAMs_20 19 11 00.3
comp=Z,2µm,21.0s
W18A Petrified Fore 82.05 50 P P 18 42 12.9 -1.1
baz=243
GULI GuiLin 82.07 299 ⇑P P 18 42 13.7 -0.3
GULI S S 18 52 34.9 +5.8
GULI pmax pmax
comp=Z,30nm,1.3s
GULI LR LR
comp=Z,600nm,22.8s
GULI LR LR
comp=Z,770nm,18.5s
GULI LR LR
comp=Z,2µm,22.8s
PNL Peninsula 82.08 18 P P 18 42 13.1 -0.3
baz=216
PINM Pinnacle 82.18 18 P P 18 42 12.9 -1.0
baz=216
VRDI Verde Repeater 82.24 16 IAMs_20 IAMs_20 19 11 16.4
comp=Z,3µm,20.0s
CAST Castle Rocks 82.27 11 P P 18 42 09.7 -4.6
CAST IAMs_20 IAMs_20 19 17 48.6
comp=Z,3µm,19.0s
CAST Castle Rocks 82.27 11 P P 18 42 12.4 -1.9
baz=204,SNR=12
N25K Chitina, Valde 82.28 15 IAMs_20 IAMs_20 19 11 42.2
comp=Z,3µm,20.0s
N25K Chitina, Valde 82.28 15 P P 18 42 12.6 -1.8
baz=212,SNR=9.0
DUG Dugway, Tooele 82.28 44 P P 18 42 13.7 -1.3
baz=241
BKNI Bangkinang 82.33 273 IAMs_20 IAMs_20 19 19 20.0
comp=Z,2µm,20.0s
BKNI Bangkinang 82.33 273 P P 18 42 18.2 +2.5
comp=Z,2µmcomp=Z,63nm,0.5s
M24K Tolsona, Glenn 82.33 14 IAMs_20 IAMs_20 19 13 24.5
comp=Z,2µm,20.0s
M24K Tolsona, Glenn 82.33 14 P P 18 42 13.2 -1.5
baz=210
GLB Gilahina Butte 82.33 15 IAMs_20 IAMs_20 19 11 09.7
comp=Z,3µm,21.0s
121A Cookes Peak, D 82.37 53 P P 18 42 18.2 +2.4
baz=245
121A Cooks Peak, D 82.37 53 P P 18 42 12.9 -2.9
baz=245
TNA Tin City 82.38 4 P P 18 42 13.2 -1.5
baz=189
WAT6 Susitna Watana 82.39 13 P P 18 42 14.1 -1.0
baz=208,SNR=18
WAT1 Susitna Watana 82.44 13 P P 18 42 13.8 -1.3
baz=208
MCARA McCarthy VSAT 82.49 16 IAMs_20 IAMs_20 19 11 54.8
comp=Z,3µm,21.0s
MCARA McCarthy VSAT 82.49 16 P P 18 42 13.8 -1.6
baz=213
CTG Chitna Glacier 82.59 17 P P 18 42 13.8 -2.4
baz=214,SNR=6.6
CTGM Chitina Glacie 82.59 17 IAMs_20 IAMs_20 19 11 04.6
comp=Z,3µm,21.0s
J20K Nowinta River 82.61 10 IAMs_20 IAMs_20 19 14 20.5
comp=Z,2µm,20.0s
J20K Nowinta River 82.61 10 P P 18 42 14.4 -1.6
baz=202,SNR=13
KTH Kantishna Hill 82.61 11 P P 18 42 12.5 -3.6
KTH IAMs_20 IAMs_20 19 11 48.6
comp=Z,3µm,22.0s
TRF Thorofare Moun 82.64 12 P P 18 42 13.1 -3.3
TRF IAmb IAmb 18 42 20.1
comp=Z,35nm,0.9s
TRF Thorofare Moun 82.64 12 P P 18 42 14.8 -1.6
baz=206,SNR=26
CHUM Lake Minchumin 82.65 11 P P 18 42 14.3 -1.9
baz=204,SNR=11
GCSA Galena City Sc 82.72 9 P P 18 42 13.8 -2.7
baz=200
PLID Pearl Lake 82.77 39 IAMs_20 IAMs_20 19 11 54.8
comp=Z,3µm,22.0s
HARP HAARP 82.82 14 P P 18 42 14.4 -2.8
baz=211
PLBC Pleasant Camp 82.86 20 P P 18 42 15.4 -1.9
baz=219,SNR=5.3
DHY Denali Highway 82.91 13 P P 18 42 14.1 -3.7
DHY Denali Highway 82.91 13 P P 18 42 16.3 -1.5
baz=209
HLID Hailey 82.94 41 P P 18 42 17.1 -1.3
baz=239,SNR=16
SEY Seymchan 82.97 346 P P 18 42 17.9 0.0
comp=Z,15nm,0.9s,baz=116,slow=5.6,SNR=9.6
comp=Z,15nm,0.9s
SEY Seymchan 82.97 346 *d* iP P 18 42 17.5 -0.4
SEY pmax pmax
comp=Z,43nm,1.3s
EPT El Paso 83.04 54 IAMs_20 IAMs_20 19 12 39.5
comp=Z,2µm,19.0s
BPAW Bear Paw Mtn. 83.09 11 P P 18 42 15.7 -2.9
BPAW IAMs_20 IAMs_20 19 17 11.4
comp=Z,2µm,19.0s
BPAW Bear Paw Mtn. 83.09 11 P P 18 42 17.5 -1.1
baz=205,SNR=6.5
BELA Belgrano 2 83.12 173 P P 18 42 17.0 -1.7
BELA IAmb IAmb 18 42 29.2
comp=Z,51nm,1.2s
MCK McKinley 83.16 12 P P 18 42 15.9 -3.0
MCK IAmb IAmb 18 42 30.1
comp=Z,104nm,1.6s
MCK McKinley 83.16 12 P P 18 42 15.9 -3.0
MCK pmax pmax
comp=Z,104nm,1.6s
MCK MLR MLR
comp=Z,4µm,20.0s
MCK McKinley 83.16 12 P P 18 42 17.2 -1.7
baz=207,SNR=17
T35M Bob Quinn 83.17 24 P P 18 42 17.1 -2.0
baz=225
SKAG Skagway 83.20 20 P P 18 42 17.5 -1.6
baz=220
PAX Paxson 83.24 14 P P 18 42 16.8 -2.7
baz=211,SNR=7.7

YUK8	**Steele Glacier**	**83.29**	**17**	P	**P**	**18 42 17.1**	**-2.9**
	baz=216,SNR=8.9						
M26K	**Nabesna, AK**	**83.35**	**15**	IAMs_20	IAMs_20	19 11 33.7	
	comp=Z,3μm,21.0s						
M26K	**Nabesna, AK**	**83.35**	**15**	P	**P**	**18 42 17.1**	**-2.8**
	baz=213,SNR=24						
YUK6	**Outpost Mounta**	**83.42**	**18**	P	**P**	**18 42 18.3**	**-2.3**
	baz=217						
YUK3	**Moose Creek**	**83.50**	**17**	P	**P**	**18 42 18.2**	**-2.7**
	baz=215,SNR=20						
IPM	**Ipoh**	**83.55**	**277**	P	**P**	**18 42 25.1**	**+3.0**
	comp=Z,42nm,1.2s						
HYT	**Haines Junctio**	**83.58**	**18**	P	**P**	**18 42 17.8**	**-3.5**
HYT	**Haines Junctio**	**83.58**	**18**	P	**P**	**18 42 18.7**	**-2.5**
	baz=218						
Y22A	**Socorro**	**83.59**	**52**	P	**P**	**18 42 25.0**	**+3.0**
	baz=245						
M27K	**Edge Creek, AK**	**83.60**	**16**	IAMs_20	IAMs_20	19 13 53.3	
	comp=Z,3μm,19.0s						
M27K	**Edge Creek, AK**	**83.60**	**16**	P	**P**	**18 42 19.2**	**-2.2**
	baz=214,SNR=17						
YUK4	**Talbot Arm**	**83.66**	**18**	P	**P**	**18 42 20.7**	**-1.1**
	baz=217						
Y22D	**IRIS PASSCAL I**	**83.68**	**52**	P	**P**	**18 42 20.2**	**-2.2**
	baz=245						
HNS	**HongShan**	**83.71**	**312**	⇑P	**P**	**18 42 25.6**	**+3.3**
HNS				S	**S**	**18 52 53.5**	**+8.2**
HNS				pmax	pmax		
	comp=Z,27nm,1.2s						
HNS				pmax	pmax		
	comp=Z,260nm,4.4s						
HNS				LR	LR		
	comp=Z,470nm,20.0s						
HNS				LR	LR		
	comp=Z,1μm,18.3s						
HNS				LR	LR		
	comp=Z,1μm,20.2s						
L26K	**Log Cabin Wild**	**83.79**	**15**	P	**P**	**18 42 19.1**	**-3.1**
	baz=212						
NEW	**Newport**	**83.85**	**36**	P	**P**	**18 42 24.1**	**+1.2**
	comp=Z,5.3nm,0.9s,baz=234,slow=5.2,SNR=7.5						
	comp=Z,5.3nm,0.9s						
NEW	**Newport**	**83.85**	**36**	P	**P**	**18 42 19.0**	**-3.8**
NEW	**Newport**	**83.85**	**36**	IAMs_20	IAMs_20	19 13 04.8	
	comp=Z,2μm,20.0s						
NEW	**Newport**	**83.85**	**36**	P	**P**	**18 42 19.0**	**-3.8**
NEW				pmax	pmax		
	comp=Z,45nm,1.9s						
NEW				MLR	MLR		
	comp=Z,2μm,20.0s						
NEW	**Newport**	**83.85**	**36**	P	**P**	**18 42 21.5**	**-1.3**
	baz=237						
MVCO	**Mesa Verde**	**83.88**	**48**	P	**P**	**18 42 20.9**	**-2.6**
	baz=244						
MNTX	**Cornudas Mount**	**83.88**	**54**	P	**P**	**18 42 25.8**	**+2.4**
	baz=246						
MNTX	**Cornudas Mount**	**83.88**	**54**	P	**P**	**18 42 21.3**	**-2.1**
	baz=246						
BJI	**Beijing**	**83.89**	**315**	P	**P**	**18 42 25.7**	**+2.6**
BJI				S	**S**	**18 52 50.7**	**+3.7**
BJI				SS	**SS**	**18 58 17.3**	**+2.1**
BJI				pmax	pmax		
	comp=Z,37nm,1.8s						
BJI				pmax	pmax		
	comp=Z,420nm,3.6s						
BJI				LR	LR		
	comp=Z,460nm,18.5s						
BJI				LR	LR		
	comp=Z,720nm,18.4s						
BJI				LR	LR		
	comp=Z,1μm,18.5s						
K24K	**Donnelly Dome**	**83.90**	**13**	P	**P**	**18 42 21.0**	**-1.7**
	baz=210						
I21K	**Tanana**	**83.90**	**10**	IAMs_20	IAMs_20	19 14 40.7	
	comp=Z,2μm,20.0s						
I21K	**Tanana**	**83.90**	**10**	P	**P**	**18 42 21.1**	**-1.5**
	baz=204						
NEA2	**Nenana**	**83.91**	**12**	P	**P**	**18 42 18.8**	**-3.9**
NEA2	**Nenana**	**83.91**	**12**	P	**P**	**18 42 20.5**	**-2.2**
	baz=207,SNR=6.1						
BVCY	**Beaver Creek**	**83.92**	**16**	P	**P**	**18 42 20.4**	**-2.4**
	baz=215						
O30N	**Mendenhall**	**83.97**	**19**	P	**P**	**18 42 20.5**	**-2.6**
	baz=219,SNR=14						
MLY	**Manley**	**83.99**	**11**	IAMs_20	IAMs_20	19 18 14.9	
	comp=Z,2μm,19.0s						
MLY	**Manley**	**83.99**	**11**	P	**P**	**18 42 21.3**	**-1.8**
	baz=206,SNR=5.2						
WRH	**Wood River Hil**	**83.99**	**12**	P	**P**	**18 42 19.6**	**-3.5**
WRH				IAmb	IAmb	18 42 38.6	
	comp=Z,84nm,1.4s						
RIDG	**Independent Ri**	**84.05**	**14**	IAMs_20	IAMs_20	19 13 22.0	
	comp=Z,3μm,20.0s						
RIDG	**Independent Ri**	**84.05**	**14**	P	**P**	**18 42 22.4**	**-1.1**
	baz=211,SNR=15						
LYN	**LuoYang**	**84.11**	**309**	*e*P	**P**	**18 42 26.6**	**+2.2**
LYN				SKS	**S**	**18 52 43.4**	**-6.1**
LYN				S	**SKKSac**	**18 52 56.6**	**+3.2**
LYN				SS	**SS**	**18 58 17.6**	**-1.2**
LYN				pmax	pmax		
	comp=Z,470nm,5.3s						
LYN				LR	LR		
	comp=Z,1μm,16.7s						
LYN				LR	LR		
	comp=Z,1μm,17.5s						
LYN				LR	LR		
	comp=Z,2μm,17.7s						
HDA	**Harding Lake**	**84.17**	**13**	P	**P**	**18 42 19.7**	**-4.3**
HDA				IAmb	IAmb	18 42 28.2	
	comp=Z,27nm,0.9s						
HDA				IAMs_20	IAMs_20	19 12 55.1	
	comp=Z,2μm,21.0s						
HDA	**Harding Lake**	**84.17**	**13**	P	**P**	**18 42 22.6**	**-1.4**
	baz=209,SNR=22						
H21K	**Melozitna Rive**	**84.20**	**10**	IAMs_20	IAMs_20	19 15 48.5	
	comp=Z,2μm,20.0s						
H21K	**Melozitna Rive**	**84.20**	**10**	P	**P**	**18 42 21.8**	**-2.4**
	baz=204						
L27K	**Beaver Creek,**	**84.20**	**15**	IAMs_20	IAMs_20	19 13 04.2	
	comp=Z,3μm,21.0s						
L27K	**Beaver Creek,**	**84.20**	**15**	P	**P**	**18 42 23.3**	**-1.0**
	baz=214,SNR=10						
N30M	**Aishikik Lake**	**84.20**	**18**	P	**P**	**18 42 23.3**	**-1.0**
	baz=218						
CCB	**Clear Creek Bu**	**84.21**	**12**	P	**P**	**18 42 21.0**	**-3.2**
CCB				IAmb	IAmb	18 42 27.3	
	comp=Z,29nm,0.8s						
BCAR	**Beaver Creek A**	**84.22**	**15**	P	P	18 42 19.5	-4.9
WHY	**Whitehorse**	**84.26**	**19**	P	**P**	**18 42 23.6**	**-1.1**
	baz=220,SNR=6.0						
DLBC	**Dease Lake**	**84.29**	**23**	LR	LR	19 13 04.5	
	comp=Z,7μm,20.2s,baz=241,slow=31						
DLBC	**Dease Lake**	**84.29**	**23**	P	**P**	**18 42 24.5**	**-0.4**
	baz=225						
TX31	**Lajitas Ar. Si**	**84.31**	**57**	P	**P**	**18 42 28.1**	**+2.4**
	baz=248						
TXAR	**Lajitas Array**	**84.31**	**57**	P	**P**	**18 42 28.1**	**+2.4**
	comp=Z,8.0nm,1.0s,baz=227,slow=4.8,SNR=38						
	comp=Z,8.0nm,1.0s						
TXAR	**Lajitas Array**	**84.31**	**57**	P	**P**	**18 42 23.7**	**-2.0**
TXAR	**Lajitas Array**	**84.31**	**57**	P	**P**	**18 42 23.7**	**-2.0**
PV07	**Paradox Valley**	**84.31**	**47**	P	P	18 42 20.1	-5.6
PV07				IAmb	IAmb	18 42 27.9	
	comp=Z,51nm,1.5s						
I23K	**Minto, Yukon-K**	**84.35**	**11**	IAMs_20	IAMs_20	19 13 24.5	
	comp=Z,3μm,21.0s						
I23K	**Minto, Yukon-K**	**84.35**	**11**	P	**P**	**18 42 24.6**	**-0.3**
	baz=207						
IMAR	**Indian Mountai**	**84.35**	**9**	P	P	18 42 19.6	-5.3
ANMO	**Albuquerque**	**84.39**	**51**	*c i* P	**P**	**18 42 27.5**	**+1.4**
ANMO				pmax	pmax		
	comp=Z,41nm,1.5s						
ANMO	**Albuquerque**	**84.39**	**51**	P	**P**	**18 42 28.1**	**+1.9**
	baz=245						
ANMO	**Albuquerque**	**84.39**	**51**	P	**P**	**18 42 24.7**	**-1.4**
	baz=245						
TCOL	**CIGO, UAF Yank**	**84.39**	**12**	P	**P**	**18 42 24.2**	**-1.0**
	baz=208						
COLA	**College**	**84.40**	**12**	*d i* P	**P**	**18 42 25.0**	**-0.1**
COLA				pmax	pmax		
	comp=Z,43nm,0.8s						
COLA	**College**	**84.40**	**12**	P	**P**	**18 42 24.2**	**-0.9**
	baz=208						
MDM	**Murphy Dome**	**84.40**	**12**	P	P	18 42 20.5	-4.8
SCRK	**Sand Creek**	**84.45**	**14**	IAMs_20	IAMs_20	19 12 21.5	
	comp=Z,3μm,22.0s						
SCRK	**Sand Creek**	**84.45**	**14**	P	**P**	**18 42 24.8**	**-0.8**
	baz=212,SNR=26						
IL31		**84.50**	**13**	P	**P**	**18 42 21.0**	**-4.6**
IL31				IAmb	IAmb	18 42 38.0	
	comp=Z,63nm,1.2s						
ILAR	**Eielson Array**	**84.50**	**13**	P	**P**	**18 42 25.6**	**-0.1**
	comp=Z,18nm,0.9s,baz=228,slow=6.3,SNR=31						
	comp=Z,18nm,0.9s						
ILAR	**Eielson Array**	**84.50**	**13**	P	**P**	**18 42 24.2**	**-1.5**
ILAR	**Eielson Array**	**84.50**	**13**	P	**P**	**18 42 24.2**	**-1.5**
UNM	**Universidad Na**	**84.53**	**68**	IAMs_20	IAMs_20	19 11 56.2	
	comp=Z,2μm,20.0s						
P33M	**Teslin, Yukon**	**84.60**	**20**	P	**P**	**18 42 25.0**	**-1.4**
	baz=222						
N31M	**Braeburn, Yuko**	**84.62**	**19**	P	**P**	**18 42 25.5**	**-0.9**
	baz=220,SNR=5.8						
J25K	**Salcha River,**	**84.69**	**13**	P	P	18 42 21.8	-4.9
J25K				IAmb	IAmb	18 42 38.8	
	comp=Z,47nm,1.2s						
J25K	**Salcha River,**	**84.69**	**13**	P	**P**	**18 42 25.8**	**-0.9**
	baz=211,SNR=25						
POKR	**Poker Plat Res**	**84.70**	**12**	P	P	18 42 20.9	-5.8
POKR				IAmb	IAmb	18 42 30.0	
	comp=Z,33nm,0.8s						
POKR	**Poker Plat Res**	**84.70**	**12**	P	**P**	**18 42 25.3**	**-1.4**
	baz=209,SNR=9.7						
ZEA	**Zeya**	**84.83**	**330**	*e*P	**P**	**18 42 28.4**	**+0.8**
ZEA				*e*S	**S**	**18 52 56.2**	**+0.4**
ZEA				pmax	pmax		
	comp=N,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ZEA				pmax	pmax		
	comp=E,100nm,3.2s						
ZEA				pmax	pmax		
	comp=N,100nm,4.8s						
ZEA				pmax	pmax		
	comp=Z,300nm,4.0s						
ZEA				pmax	pmax		
	comp=E,100nm,4.6s						
ZEA				pmax	pmax		
	comp=Z,300nm,6.9s						
ZEA				smax	smax		
	comp=N,300nm,11.0s						
ZEA				smax	smax		
	comp=E,300nm,18.0s						
MSO	**Missoula**	**84.91**	**38**	IAMs_20	IAMs_20	19 13 10.2	
	comp=Z,2μm,20.0s						
MSO	**Missoula**	**84.91**	**38**	P	**P**	**18 42 26.4**	**-2.0**
	baz=239						
H23K	**Yukon River**	**84.92**	**11**	IAMs_20	IAMs_20	19 16 26.7	
	comp=Z,2μm,20.0s						
H23K	**Yukon River**	**84.92**	**11**	P	**P**	**18 42 25.8**	**-2.1**
	baz=207						
K27K	**Chicken**	**84.95**	**15**	IAMs_20	IAMs_20	19 12 25.6	
	comp=Z,3μm,22.0s						
K27K	**Chicken**	**84.95**	**15**	P	**P**	**18 42 27.0**	**-0.9**
	baz=214						
J26L	**Joseph Creek**	**85.00**	**14**	IAMs_20	IAMs_20	19 13 51.0	
	comp=Z,3μm,20.0s						
J26L	**Joseph Creek**	**85.00**	**14**	P	**P**	**18 42 26.9**	**-1.4**
	baz=212,SNR=35						
M30M	**Minto, Yukon**	**85.17**	**17**	P	P	18 42 23.9	-5.3
M30M	**Minto, Yukon**	**85.17**	**17**	P	**P**	**18 42 28.1**	**-1.0**
	baz=219,SNR=24						
RDOG	**Red Dog Mine**	**85.22**	**5**	P	**P**	**18 42 26.8**	**-2.4**
	baz=194						
H24K	**Noodor Dome**	**85.25**	**12**	P	**P**	**18 42 27.0**	**-2.5**
	baz=208						
S22A	**4UR Ranch, Cre**	**85.30**	**48**	P	**P**	**18 42 28.1**	**-2.7**
	baz=245						
O20A	**White River Ci**	**85.35**	**46**	P	**P**	**18 42 28.7**	**-2.1**
	baz=244						
MAW	**Mawson**	**85.35**	**199**	P	**P**	**18 42 30.9**	**+0.8**
	comp=Z,8.7nm,1.1s,baz=143,slow=13,SNR=4.5						
MAW				LR	LR	19 18 33.7	
	comp=Z,4μm,18.4s,baz=104,slow=34						
	comp=Z,8.7nm,1.1s						
BILL	**Bilibino**	**85.44**	**354**	*c i* P	**P**	**18 42 30.4**	**+0.1**
BILL				*e*		18 45 49.3	
BILL				*e*S	**S**	**18 52 56.5**	**-4.8**
BILL				*e*SS	**SS**	**18 58 38.7**	**+1.7**
BILL				*e*SSS	SSS	19 02 09.4	
BILL				pmax	pmax		
	comp=Z,129nm,2.8s						
TIY	**Taiyuan**	**85.47**	**311**	⇑P	**P**	**18 42 35.2**	**+3.9**
TIY				S	**S**	**18 53 03.1**	**0.0**
TIY				LR	LR		
	comp=Z,800nm,17.9s						
TIY				LR	LR		
	comp=Z,450nm,17.9s						
TIY				LR	LR		
	comp=Z,990nm,26.8s						
GYA	**Guiyang**	**85.59**	**299**	⇑P	**P**	**18 42 35.6**	**+3.4**
GYA				PP	**PP**	**18 45 53.2**	**+2.0**
GYA				S	**S**	**18 53 12.1**	**+7.3**
GYA				SS	**SS**	**18 58 43.9**	**+2.7**
GYA				pmax	pmax		
	comp=Z,26nm,1.0s						
GYA				pmax	pmax		
	comp=Z,160nm,3.5s						
GYA				LR	LR		
	comp=Z,380nm,18.0s						
GYA				LR	LR		
	comp=Z,510nm,18.0s						
GYA				LR	LR		
	comp=Z,860nm,18.3s						
M31M	**Drury Creek, Y**	**85.59**	**19**	P	**P**	**18 42 30.2**	**-1.0**
	baz=221						
DAWY	**Dawson**	**85.65**	**16**	P	**P**	**18 42 30.6**	**-0.9**
	baz=216,SNR=7.6						
BW06	**Boulder Array**	**85.65**	**43**	P	**P**	**18 42 30.8**	**-1.5**
	baz=243						
PDAR	**Pinedale Array**	**85.66**	**43**	P	**P**	**18 42 33.5**	**+1.2**
	comp=Z,8.5nm,1.0s,baz=220,slow=3.9,SNR=24						
	comp=Z,8.5nm,1.0s						
BOZ	**Bozeman (W)**	**85.68**	**40**	IAMs_20	IAMs_20	19 13 51.0	
	comp=Z,2μm,20.0s						
BOZ	**Bozeman (W)**	**85.68**	**40**	P	**P**	**18 42 30.7**	**-1.6**
	baz=241,SNR=20						
XLT	**XiLinHaoTe**	**85.75**	**318**	*e*P	**P**	**18 42 35.2**	**+2.6**
XLT				pP	pwP	18 42 38.9	+1.1
XLT				sP	sP	18 42 43.3	+7.7
XLT				SKS	**SKSac**	**18 52 53.4**	**-5.1**
XLT				S	**ScS**	**18 53 13.2**	**-1.9**
XLT				pmax	pmax		
	comp=Z,26nm,1.2s						
XLT				pmax	pmax		
	comp=Z,600nm,3.9s						
XLT				LR	LR		
	comp=Z,100nm,16.4s						
XLT				LR	LR		
	comp=Z,780nm,19.4s						
XLT				LR	LR		
	comp=Z,1μm,21.9s						
GSI	**Gunungsitoli**	**85.92**	**273**	P	**P**	**18 42 37.4**	**+3.4**
	comp=Z,84nm,2.3s						
FARO	**Faro, Yukon**	**85.94**	**19**	P	**P**	**18 42 32.1**	**-0.9**
	baz=222						
COLD	**Coldfoot**	**86.07**	**10**	P	**P**	**18 42 31.4**	**-2.1**
	baz=206						
HIA	**Hailar**	**86.19**	**324**	IAMs_20	IAMs_20	19 17 46.3	
	comp=Z,2μm,20.0s						
HIA	**Hailar**	**86.19**	**324**	*de*P	**P**	**18 42 37.0**	**+2.4**
HIA				pmax	pmax		
	comp=Z,62nm,1.3s						
SDCO	**Great Sand Dun**	**86.26**	**49**	P	**P**	**18 42 37.8**	**+2.3**
	baz=246						
SDCO	**Great Sand Dun**	**86.26**	**49**	P	**P**	**18 42 33.9**	**-1.6**
	baz=246						
J29M	**Klondike Camp**	**86.27**	**16**	IAMs_20	IAMs_20	19 13 34.9	
	comp=Z,3μm,21.0s						
XAN	**Xi'an**	**86.59**	**307**	P	**P**	**18 42 39.2**	**+2.3**
XAN				pP	pwP	18 42 43.5	+1.3
XAN				S	**S**	**18 53 17.9**	**+3.7**
XAN				SS	**SS**	**18 58 58.6**	**+3.1**
XAN				pmax	pmax		
	comp=Z,41nm,1.6s						
XAN				pmax	pmax		
	comp=Z,610nm,6.3s						
XAN				LR	LR		
	comp=Z,880nm,19.9s						
XAN				LR	LR		
	comp=Z,900nm,19.0s						
XAN				LR	LR		
	comp=Z,2μm,20.6s						
RWWY	**Rawlins**	**86.73**	**45**	IAMs_20	IAMs_20	19 22 37.7	
	comp=Z,2μm,18.0s						
MSTX	**Muleshoe**	**86.79**	**53**	P	**P**	**18 42 36.1**	**-1.9**
	baz=248						
T25A	**Trinidad**	**86.81**	**50**	P	**P**	**18 42 36.6**	**-1.6**
	baz=247						
MMPY	**Sheldon Lake,**	**86.88**	**19**	P	**P**	**18 42 36.3**	**-1.3**
	baz=224,SNR=12						
RLMT	**Red Lodge**	**86.92**	**41**	IAMs_20	IAMs_20	19 14 13.1	
	comp=Z,2μm,21.0s						
RLMT	**Red Lodge**	**86.92**	**41**	P	**P**	**18 42 35.4**	**-3.1**
	baz=243						
I29M	**Ogilvie Camp,**	**86.98**	**15**	IAMs_20	IAMs_20	19 13 27.4	
	comp=Z,3μm,22.0s						
I29M	**Ogilvie Camp,**	**86.98**	**15**	P	**P**	**18 42 35.9**	**-2.1**
	baz=217						
Q24A	**Divide**	**87.01**	**48**	P	**P**	**18 42 36.8**	**-2.4**
	baz=246						
ISCO	**Idaho Springs**	**87.03**	**47**	P	**P**	**18 42 37.2**	**-2.1**
	baz=246						
TGTN	**Hyland Airport**	**87.09**	**21**	P	**P**	**18 42 37.2**	**-1.5**
	baz=226						
N23A	**Red Feather La**	**87.26**	**46**	P	**P**	**18 42 37.3**	**-3.0**
	baz=245						
H03S2	**Juan Fernandez**	**87.36**	**124**	T	T	20 19 31.9	
	baz=250						
H03S1	**Juan Fernandez**	**87.38**	**124**	T	T	20 19 39.5	
	baz=250						
H03S3	**Juan Fernandez**	**87.38**	**124**	T	T	20 19 27.8	
	baz=250						
HHC	**Hu-ho-hao-te**	**87.40**	**314**	*e*P	**P**	**18 42 43.9**	**+3.1**
HHC				SKS	**SKSac**	**18 53 10.1**	**+1.2**
HHC				S	**S**	**18 53 21.5**	**-0.3**
HHC				pmax	pmax		
	comp=Z,74nm,1.1s						
HHC				pmax	pmax		
	comp=Z,930nm,6.3s						
HHC				LR	LR		
	comp=Z,1μm,17.8s						
HHC				LR	LR		
	comp=Z,2μm,17.8s						
HHC				LR	LR		
	comp=Z,3μm,18.4s						
833A	**Chaparral WMA,**	**87.43**	**60**	P	**P**	**18 42 43.4**	**+2.4**
	baz=250						
833A	**Chaparral WMA,**	**87.43**	**60**	P	**P**	**18 42 39.6**	**-1.4**
	baz=250						
TOLK	**Toolik Lake Re**	**87.45**	**10**	IAMs_20	IAMs_20	19 16 47.4	
	comp=Z,2μm,20.0s						
TOLK	**Toolik Lake Re**	**87.45**	**10**	P	**P**	**18 42 39.5**	**-0.8**
	baz=206						
K22A	**Casper**	**87.61**	**44**	P	**P**	**18 42 39.6**	**-2.2**
	baz=245						
JCT	**Junction City**	**87.85**	**57**	P	**P**	**18 42 45.6**	**+2.6**
	baz=250						
JCT	**Junction City**	**87.85**	**57**	P	**P**	**18 42 41.3**	**-1.8**
	baz=250						
EGMT	**Eagleton**	**87.97**	**38**	IAMs_20	IAMs_20	19 16 24.3	
	comp=Z,2μm,19.0s						
EGMT	**Eagleton**	**87.97**	**38**	P	**P**	**18 42 40.7**	**-2.6**
	baz=242						
AMTX	**Amarillo**	**87.97**	**53**	IAMs_20	IAMs_20	19 16 07.9	
	comp=Z,2μm,19.0s						
AMTX	**Amarillo**	**87.97**	**53**	P	**P**	**18 42 40.6**	**-3.1**
	baz=248						
EPYK	**Eagle Plains**	**88.18**	**15**	IAMs_20	IAMs_20	19 14 47.2	
	comp=Z,3μm,21.0s						
EPYK	**Eagle Plains**	**88.18**	**15**	P	**P**	**18 42 42.0**	**-1.8**
	baz=219						
BTO	**Baotou**	**88.37**	**313**	*e*P	**P**	**18 42 49.6**	**+4.2**
KMI	**Kunming**	**88.46**	**297**	⇓P	**P**	**18 42 43.5**	**-2.8**
KMI				pP	PcP	18 42 47.2	-0.8
KMI				sP	pP	18 42 48.6	0.0
KMI	**Kunming**	**88.46**	**297**	S	**S**	**18 53 24.9**	**-7.9**
KMI	**Kunming**	**88.46**	**297**	SS	SS	18 59 10.6	-13
KMI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KMI				pmax	pmax		
	comp=Z,190nm,3.5s						
KMI				LR	LR		
	comp=N,940nm,21.7s						
KMI				LR	LR		
	comp=E,2μm,20.5s						
KMI				LR	LR		
	comp=Z,2μm,22.0s						
ABTX	**Abilene, Hawle**	**88.74**	**55**	P	**P**	**18 42 50.0**	**+2.8**
	baz=250						
ABTX	**Abilene, Hawle**	**88.74**	**55**	P	**P**	**18 42 45.4**	**-1.8**
	baz=250						
KSCO	**Kaye Shedlock'**	**88.83**	**49**	P	**P**	**18 42 46.5**	**-1.2**
	baz=248						
A21K	**Barrow**	**88.99**	**6**	IAMs_20	IAMs_20	19 17 25.6	
	comp=Z,3μm,20.0s						
A21K	**Barrow**	**88.99**	**6**	P	**P**	**18 42 45.3**	**-2.1**
	baz=200						
YAK	**Yakutsk**	**89.01**	**338**	P	**P**	**18 42 48.5**	**+0.8**
	comp=Z,9.1nm,0.8s,baz=26,slow=1.4,SNR=9.5						
	comp=Z,9.1nm,0.8s						
YAK	**Yakutsk**	**89.01**	**338**	*e*P	**P**	**18 42 47.5**	**-0.2**
YAK				*e**PP	**pwP**	**18 42 58.9**	**+6.6**
YAK				*e*PPP	PPP	18 48 23.2	
YAK				*e*S	**SKSac**	**18 53 13.3**	**-3.9**
YAK				*e**SS	**S**	**18 53 33.3**	**-2.6**
YAK				*e*SS	**SS**	**18 59 34.3**	**+5.0**
YAK				*e*SSS	SSS	19 03 05.6	
YAK				pmax	pmax		
	comp=Z,27nm,1.1s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,130nm,2.7s						
YAK				pmax	pmax		
	comp=N,95nm,2.7s						
YAK				pmax	pmax		
	comp=E,55nm,2.8s						
YAK				smax	smax		
	comp=N,100nm,2.7s						
YAK				smax	smax		
	comp=E,30nm,2.8s						
LAO	**LASA Array**	**89.52**	**41**	IAMs_20	IAMs_20	19 14 59.8	
	comp=Z,2μm,22.0s						
LAO	**LASA Array**	**89.52**	**41**	P	**P**	**18 42 53.6**	**+3.0**
	baz=245						
LAO	**LASA Array**	**89.52**	**41**	P	**P**	**18 42 49.3**	**-1.3**
	baz=245						
CD2	**Chengdu**	**89.53**	**302**	P	**P**	**18 42 54.4**	**+3.4**
CD2				SKS	**SKSac**	**18 53 21.1**	**-0.8**
CD2				S	**ScS**	**18 53 50.0**	**+3.1**
CD2				SS	**SS**	**18 59 40.5**	**+2.0**
CD2				pmax	pmax		
	comp=Z,30nm,0.6s						
CD2				LR	LR		
	comp=Z,90nm,19.9s						
CD2				LR	LR		
	comp=Z,740nm,12.9s						
CD2				LR	LR		
	comp=Z,1μm,20.8s						
CMAR	**Chiang Mai Arr**	**89.71**	**289**	P	**P**	**18 42 53.1**	**+1.1**
	comp=Z,4.7nm,0.9s,baz=97,slow=2.3,SNR=13						
	comp=Z,4.7nm,0.9s						
435B	**Jarrell**	**89.75**	**58**	P	**P**	**18 42 49.1**	**-2.8**
	baz=251						
PZH	**PanZhiHua**	**89.76**	**298**	P	**P**	**18 42 53.5**	**+1.2**
PZH				pP	**sP**	**18 42 55.8**	**+0.4**
PZH				PP	**PP**	**18 46 29.1**	**+4.4**
PZH				SKS	**SKSac**	**18 53 23.3**	**-0.3**
PZH				S	**S**	**18 53 45.8**	**+1.1**
PZH				pmax	pmax		
	comp=Z,40nm,1.1s						
PZH				pmax	pmax		
	comp=Z,330nm,3.5s						
PZH				LR	LR		
	comp=Z,670nm,20.0s						
PZH				LR	LR		
	comp=Z,860nm,19.0s						
PZH				LR	LR		
	comp=Z,1μm,23.0s						
CHTO	**Chiang Mai**	**89.82**	**290**	P	**P**	**18 42 55.7**	**+3.1**
RSSD	**Black Hills**	**89.87**	**44**	P	**P**	**18 42 54.1**	**+1.6**
	baz=247						
RSSD	**Black Hills**	**89.87**	**44**	P	**P**	**18 42 50.4**	**-2.1**
	baz=247						
OGNE	**Ogallala**	**89.99**	**47**	P	**P**	**18 42 49.5**	**-3.5**
	baz=248						
WMOK	**Wichita Mounta**	**90.15**	**54**	P	**P**	**18 42 50.4**	**-3.4**
	baz=250						
WHTX	**Lake Whitney,**	**90.26**	**57**	P	**P**	**18 42 50.4**	**-3.9**

baz=251
INK Inuvik 90.46 15 P **P** **18 42 55.8 +1.5**
comp=Z,4.8nm,0.7s,baz=213,slow=7.0,SNR=5.3
comp=Z,4.8nm,0.7s
INK Inuvik 90.46 15 P **P** **18 42 50.1 -4.3**
baz=222
CBKS Cedar Bluff 90.86 50 P **P** **18 42 53.5 -3.5**
baz=249
HKT Hockley 90.91 59*c* iP **P** **18 42 59.8 +2.5**
HKT pmax pmax
comp=Z,52nm,2.7s
HKT Hockley 90.91 59 S **S** **18 54 01.2 +6.5**
baz=252
PLCA Paso Flores 91.18 133 P **P** **18 43 01.1 +2.4**
comp=Z,2.1nm,0.7s,baz=230,slow=5.3,SNR=3.9
comp=Z,2.1nm,0.7s
LZH Lanzhou 91.22 307 ⇑P **P** **18 43 02.9 +4.0**
LZH sP pwP 18 43 06.5 +2.3
LZH PP **PP** **18 46 38.3 +2.1**
LZH SKS **SKSac** **18 53 33.3 +1.6**
LZH S **ScS** **18 53 59.7 -1.2**
LZH SS **SS** **19 00 01.7 -1.2**
LZH pmax pmax
comp=Z,36nm,1.5s
LZH pmax pmax
comp=Z,380nm,9.0s
LZH LR LR
comp=Z,770nm,17.1s
LZH LR LR
comp=Z,1μm,17.0s
LZH LR LR
comp=Z,1μm,19.3s
TROLL Troll, Antarti 91.44 180 P **P** **18 42 56.4 -2.9**
DGMT Dagmar 91.51 40 IAMs_20 IAMs_20 19 17 13.1
comp=Z,3μm,21.0s
DGMT Dagmar 91.51 40 P **P** **18 43 02.8 +3.0**
baz=247
DGMT Dagmar 91.51 40 P **P** **18 42 57.4 -2.4**
baz=247
SNAA Sanae 91.69 178 P **P** **18 42 59.1 -1.3**
SNAA Sanae 91.69 178 P **P** **18 43 59.1 -1.3**
SNAA IAMs_20 IAMs_20 19 22 57.3
comp=Z,1μm,19.0s
SNAA Sanae 91.69 178*ce*P **P** **18 43 04.6 +4.2**
SNAA pmax pmax
comp=Z,16nm,1.3s
VNA3 Neumayer Olymp 91.78 176 P **P** **18 43 00.9 +0.1**
SNET Serv Nac Est T 91.85 76 IAMs_20 IAMs_20 19 14 04.5
comp=Z,2μm,21.0s
VNA2 Neumayer--Watz 92.23 177 P **P** **18 43 03.6 +0.7**
baz=197,slow=4.2
NATX Nacogdoches 92.43 58 P **P** **18 43 02.3 -2.2**
baz=252
VNA1 Neumayer--Stat 92.46 176 P **P** **18 43 04.9 +1.1**
NVL N'lazarevskaya 92.47 183⇓*i*P **P** **18 43 07.1 +3.2**
NVL *e*S **SKSac** **18 53 32.3 -5.0**
NVL pmax pmax
comp=Z,22nm,1.1s
NVL MLR MLR
comp=Z,2μm,18.0s
YKA Yellowknife Ar 92.77 24 P **P** **18 43 06.7 +1.4**
comp=Z,7.3nm,1.1s,baz=238,slow=4.1,SNR=12
YKA LR LR 19 17 19.9
comp=Z,5μm,21.5s,baz=306,slow=31
comp=Z,7.3nm,1.1s
TUL1 Leonard 92.84 53 IAMs_20 IAMs_20 19 17 53.9
comp=Z,1μm,20.0s
TUL1 Leonard 92.84 53 P **P** **18 43 03.0 -3.2**
baz=252
BGNE Belgrade 92.90 48 P **P** **18 43 03.9 -2.5**
baz=250
ULN Ulaanbaatar 93.13 319*c* iP **P** **18 43 10.1 +2.6**
ULN pmax pmax
comp=Z,16nm,1.1s
KSU1 Kansas State U 93.25 50 P **P** **18 43 05.8 -2.2**
baz=251
SUSD Miller 93.37 45 P **P** **18 43 04.3 -4.2**
baz=250
SONM Songino Array 93.53 319 P **P** **18 43 10.0 +0.7**
comp=Z,1.9nm,0.8s,baz=97,slow=2.8,SNR=13
SONM PP **PP** **18 46 52.4 -1.7**
comp=Z,2.2nm,1.0s,baz=116,slow=6.8,SNR=6.1
comp=Z,1.9nm,0.8s
C36M Paulatuk 93.65 16 IAMs_20 IAMs_20 19 24 28.9
comp=Z,2μm,19.0s
C36M Paulatuk 93.65 16 P **P** **18 43 06.2 -2.9**
baz=230
TGUH Tegucigalpa,Un 93.78 77 IAMs_20 IAMs_20 19 15 02.7
comp=Z,2μm,22.0s
MDND Maddock 94.13 41 P **P** **18 43 09.2 -2.7**
baz=250
MIAR Mount Ida 94.15 55 P **P** **18 43 14.5 +2.3**
baz=253
W39A Magazine 94.18 55 IAMs_20 IAMs_20 19 20 23.5
comp=Z,2μm,20.0s
W39A Magazine 94.18 55 P **P** **18 43 14.7 +2.3**
baz=253
W39A Magazine 94.18 55 P **P** **18 43 11.0 -1.4**
baz=253
Z41A Richland Creek 94.38 57 P **P** **18 43 10.4 -2.9**
baz=253
ORTG Ortega, Santa 94.46 81 P **P** **18 43 11.6 -2.7**
ORTG IAmb IAmb 18 43 20.0
comp=Z,33nm,1.5s
X40A Basin Creek Fa 94.72 56 P **P** **18 43 12.0 -2.8**
baz=253
ECSD EROS Data Cent 94.73 46 IAMs_20 IAMs_20 19 20 56.5
comp=Z,2μm,19.0s
ECSD EROS Data Cent 94.73 46 P **P** **18 43 12.6 -2.1**
baz=252
JTS Las Juntas de 94.92 81 LR LR 19 15 42.2
comp=Z,2μm,21.0s,baz=307,slow=29
JTS Las Juntas de 94.92 81 IAMs_20 IAMs_20 19 15 07.4
comp=Z,3μm,22.0s
A36M Sachs Harbour 95.07 14 IAMs_20 IAMs_20 19 21 30.2
comp=Z,2μm,20.0s
A36M Sachs Harbour 95.07 14 P **P** **18 43 14.3 -1.3**
baz=229
U40A Yellville 95.24 54 IAMs_20 IAMs_20 19 19 45.6
comp=Z,1μm,20.0s
U40A Yellville 95.24 54 P **P** **18 43 19.1 +1.8**
baz=253
U40A P **P** **18 43 19.1 +1.8**
baz=253
U40A Yellville 95.24 54 P **P** **18 43 14.0 -3.3**
baz=253
S39A Bolivar 95.27 52 P **P** **18 43 19.2 +1.9**
baz=253
GTA Gaotai 95.30 309*e*P **P** **18 43 20.5 +2.9**
GTA pP pwP 18 43 24.4 +1.5
GTA sP sP 18 43 27.9 +7.2
GTA SKS **SKSac** **18 53 57.3 +3.3**
GTA S **ScS** **18 54 38.8 +4.1**
GTA SS **SS** **19 00 59.5 -1.7**
GTA pmax pmax
comp=Z,5.0nm,1.0s
GTA pmax pmax
comp=Z,120nm,4.4s
GTA LR LR
comp=Z,660nm,18.2s
GTA LR LR
comp=Z,610nm,19.6s
GTA LR LR
comp=Z,970nm,19.3s
W41B Gary Mavity, V 95.38 55 P **P** **18 43 20.2 +2.4**
baz=254
W41B Gary Mavity, V 95.38 55 P **P** **18 43 15.3 -2.5**
baz=254
TIXI Tiksi 95.39 345 P **P** **18 43 17.7 +0.7**
comp=Z,2.2nm,0.8s,baz=90,slow=23,SNR=12
TIXI PP **PP** **18 47 07.1 -0.7**
comp=Z,1.2nm,0.9s,baz=269,slow=23,SNR=3.5
comp=Z,2.2nm,0.8s
TIXI Tiksi 95.39 345 P **P** **18 43 13.7 -3.3**
TIXI IAMs_20 IAMs_20 19 20 13.4
comp=Z,2μm,21.0s
TIXI Tiksi 95.39 345*d* iP **P** **18 43 17.8 +0.7**
TIXI pmax pmax
comp=Z,19nm,2.4s
VBMS Vicksburg 95.93 58 P **P** **18 43 18.5 -1.9**
baz=254
ATAH Atahualpa 96.20 99 LR LR 19 17 01.9
comp=Z,3μm,21.5s,baz=242,slow=29
ZAK Zakamensk 96.32 321*e*P **P** **18 43 23.2 +1.2**
ZAK pmax pmax
comp=Z,7.0nm,1.3s
ZAK pmax pmax
comp=Z,7.0nm,1.6s
SCIA State Center 96.56 48 P **P** **18 43 20.6 -2.5**
baz=254
AGMN Agassiz Nation 96.65 42 IAMs_20 IAMs_20 19 21 41.4
comp=Z,2μm,20.0s
AGMN Agassiz Nation 96.65 42 P **P** **18 43 20.9 -2.5**
baz=253
CCM Cathedral Cave 96.95 52 IAMs_20 IAMs_20 19 21 11.6
comp=Z,1μm,19.0s
CCM Cathedral Cave 96.95 52 P **P** **18 43 22.2 -2.7**
baz=254
ULM Lac du Bonnet 97.23 40 P Pdif 18 43 27.8 +1.8
comp=Z,2.7nm,0.6s,baz=297,slow=6.9,SNR=1.8
comp=Z,2.7nm,0.6s
OXF Oxford 97.44 56 IAMs_20 IAMs_20 19 22 10.2
comp=Z,1μm,19.0s
F36A Milaca 97.47 44 P Pdif 18 43 28.8 +1.6
baz=254
GOMU GeErMu 98.23 305 P Pdif 18 43 34.4 +3.1
GOMU pP pwP 18 43 45.0 +8.5
GOMU sP sP 18 43 47.2 +13
GOMU S **S** **18 54 54.6 -5.1**
GOMU sS sS 18 55 07.4 +3.9
GOMU SS **SS** **19 01 39.4 -3.8**
GOMU pmax pmax
comp=Z,6.0nm,1.6s
GOMU pmax pmax
comp=Z,53nm,3.9s
GOMU LR LR
comp=Z,250nm,18.4s
GOMU LR LR
comp=Z,550nm,19.2s
GOMU LR LR
comp=Z,650nm,22.3s
OTAV Otavalo 98.33 92 IAMs_20 IAMs_20 19 18 03.9
comp=Z,1μm,22.0s
JFWS Jewell Farm 98.95 48 IAMs_20 IAMs_20 19 21 21.6
comp=Z,1μm,21.0s
JFWS Jewell Farm 98.95 48 P **P** **18 43 32.9 -0.9**
baz=256
HDIL Hopedale 99.06 50 P **Pdif** **18 43 32.2 -2.2**
baz=256
WVT Waverly 99.10 55 IAMs_20 IAMs_20 19 23 12.8
comp=Z,1μm,20.0s
WVT Waverly 99.10 55 P **Pdif** **18 43 32.6 -2.1**
baz=256
EYMN Ely 99.36 43 IAMs_20 IAMs_20 19 23 19.4
comp=Z,2μm,21.0s
EYMN Ely 99.36 43 P **Pdif** **18 43 32.8 -2.8**
baz=256
LVC Limon Verde 99.57 117 LR LR 19 18 22.4
comp=Z,3μm,21.8s,baz=255,slow=29
KNGR Kungurtug, Tuv 99.92 320⇑*e*P **Pdif** **18 43 41.5 +3.4**
L44A Lake County Fo 100.45 49 IAMs_20 IAMs_20 19 24 39.6
comp=Z,1μm,20.0s
COWI Conover 100.48 45 IAMs_20 IAMs_20 19 24 11.6
comp=Z,1μm,20.0s
SFIN Lafayette 100.65 51 P **Pdif** **18 43 38.3 -3.1**
baz=257
GOGA Godfrey 101.98 59 P **Pdif** **18 43 43.8 -3.7**
baz=258
O48B Farmland 102.07 51 P **Pdif** **18 43 45.8 -2.1**
baz=258
P49A Miami Univ. Ec 102.26 52 IAMs_20 IAMs_20 19 24 15.9
comp=Z,2μm,20.0s
P49A Miami Univ. Ec 102.26 52 P **Pdif** **18 43 44.9 -3.7**
baz=259
TZTN Tazewell 102.56 55 IAMs_20 IAMs_20 19 25 00.5
comp=Z,1μm,19.0s
TZTN Tazewell 102.56 55 P **Pdif** **18 43 47.7 -2.4**
baz=259
LPAZ La Paz 102.63 111 P **Pdif** **18 43 54.3 +2.7**
comp=Z,0.5nm,0.5s,baz=249,slow=7.1,SNR=1.6
LPAZ PP **PP** **18 48 08.4 +3.6**
comp=Z,1.6nm,0.9s,baz=254,slow=6.0,SNR=8.2
GLMI Grayling 103.34 47 IAMs_20 IAMs_20 19 30 06.5
comp=Z,1μm,19.0s
AAM Ann Arbor 103.57 50 IAMs_20 IAMs_20 19 26 51.2
comp=Z,1μm,20.0s
ACSO Alum Creek Sta 103.70 52 IAMs_20 IAMs_20 19 25 02.0
comp=Z,2μm,20.0s
PALK Pallekele 103.73 274 IAMs_20 IAMs_20 19 26 32.3
comp=Z,1μm,20.0s
RES Resolute Bay 103.99 16 Pdiff **Pdif** **18 43 56.8 +1.2**
comp=Z,2.2nm,1.1s,baz=304,slow=3.6,SNR=4.1
P52A Corning 104.24 53 IAMs_20 IAMs_20 19 26 06.4
comp=Z,1μm,20.0s
O53A New Philadelph 105.04 52 IAMs_20 IAMs_20 19 25 43.5
comp=Z,1μm,20.0s
M53A WI Miller and 105.62 51 IAMs_20 IAMs_20 19 26 32.8
comp=Z,2μm,20.0s
M53A WI Miller and 105.62 51 P **PKiKP** **18 48 15.3 -1.5**
baz=262
MCWV Mont Chateau 105.98 53 IAMs_20 IAMs_20 19 27 18.6
comp=Z,2μm,20.0s
MCWV Mont Chateau 105.98 53 P **PKiKP** **18 48 15.1 -2.4**
baz=262
SSPA Standing Stone 107.60 52 IAMs_20 IAMs_20 19 27 05.4
comp=Z,1μm,20.0s
CBN Corbin Frederi 107.69 55 IAMs_20 IAMs_20 19 28 13.1
comp=Z,1μm,18.0s
ZALV Zalesovo Beam 108.13 322 Pdiff **Pdif** **18 44 15.2 +0.8**
comp=Z,0.5nm,0.6s,baz=90,slow=2.9,SNR=2.2
ZALV PKiKP **PKiKP** **18 48 21.4 +0.3**
comp=Z,1.8nm,0.7s,baz=104,slow=0.8,SNR=7.4
BINY Binghamton 109.20 51 IAMs_20 IAMs_20 19 30 04.3
comp=Z,2μm,20.0s
MKAR Makanchi Array 109.26 314 Pdiff **Pdif** **18 44 20.6 +0.9**
comp=Z,0.9nm,0.9s,baz=98,slow=6.0,SNR=2.8
MKAR PKiKP **PKiKP** **18 48 23.0 -0.4**
comp=Z,4.9nm,1.0s,baz=77,slow=1.2,SNR=13
MKAR PKKPbc **PKKPbc** **18 59 31.6 +0.8**
comp=Z,1.0nm,1.0s,baz=298,slow=6.2,SNR=5.3
ALE Alert 109.69 7 IAMs_20 IAMs_20 19 30 41.9
comp=Z,2μm,20.0s
SAML Samuel 109.81 106 IAMs_20 IAMs_20 19 26 15.9
comp=Z,2μm,20.0s
LONY Lake Ozonia 110.41 48 IAMs_20 IAMs_20 19 30 04.8
comp=Z,1μm,20.0s
TULEG Thule 110.43 14 IAMs_20 IAMs_20 19 36 25.1
comp=Z,1μm,18.0s
PAL Palisades 110.64 52 IAMs_20 IAMs_20 19 29 36.9
comp=Z,2μm,20.0s
TRY Troy 110.95 50 IAMs_20 IAMs_20 19 29 30.6
comp=Z,1μm,21.0s
WSPT Westport, CT 111.09 52 IAMs_20 IAMs_20 19 29 59.8
comp=Z,2μm,20.0s
YLE Yale 111.40 52 IAMs_20 IAMs_20 19 30 28.1
comp=Z,2μm,20.0s
L61B Northampton 111.66 50 IAMs_20 IAMs_20 19 32 38.5
comp=Z,1μm,20.0s
VT1 Waterbury 111.70 48 IAMs_20 IAMs_20 19 30 43.2
comp=Z,1μm,20.0s
KURK Kurchatov 111.83 318*c* iPKIKP **PKiKP** **18 48 28.7 +0.6**
QUA2 Belchertown 111.89 51 IAMs_20 IAMs_20 19 35 09.7
comp=Z,2μm,19.0s
HNH Hanover 112.01 49 IAMs_20 IAMs_20 19 45 35.5
comp=Z,1μm,18.0s
LBNH Lisbon 112.29 49 IAMs_20 IAMs_20 19 35 24.7
comp=Z,1μm,20.0s
FFD Franklin Falls 112.46 49 IAMs_20 IAMs_20 19 29 54.5
comp=Z,2μm,21.0s
BRYW Bryant College 112.48 51 IAMs_20 IAMs_20 19 32 58.4
comp=Z,2μm,20.0s
HRV Adam Dziewonsk 112.49 50 IAMs_20 IAMs_20 19 30 34.4
comp=Z,1μm,19.0s
WES Weston 112.66 51 IAMs_20 IAMs_20 19 33 27.0
comp=Z,1μm,19.0s
KSH Kashi 113.44 306 PKP **PKiKP** **18 48 37.0 +5.2**
KSH SS SS 19 05 17.8 +7.6
KSH LR LR
comp=Z,520nm,19.3s
KSH LR LR
comp=Z,290nm,17.2s
KSH LR LR
comp=Z,630nm,18.2s
PKME Peaks-Kenny Pk 114.18 47 IAMs_20 IAMs_20 19 38 25.5
comp=Z,1μm,19.0s
AAK Ala-Archa 114.65 310⇓*i*PKIKP **PKiKP** **18 48 36.6 +2.6**
ABD La Joyeuse, An 118.54 80 IAMs_20 IAMs_20 19 30 06.1
comp=Z,1μm,22.0s
FOMA Nahampoana Res 120.30 227 IAMs_20 IAMs_20 19 32 13.8
comp=Z,1μm,20.0s
SVE Sverdlovsk 121.39 327 *i* PKIKP **PKiKP** **18 48 48.8 +2.4**
SVE pmax pmax
comp=Z,30nm,1.3s
SVE MLR MLR
comp=Z,951nm,20.0s
ARU Arti 122.61 327 IAMs_20 IAMs_20 19 39 33.0
comp=Z,1μm,21.0s
ARU Arti 122.61 327 *i* PKIKP **PKiKP** **18 48 50.7 +1.9**
ARU 18 50 26.0
ARU PPP PPP 18 53 01.4
ARU 18 56 02.5
MSEY Mahe Island 123.88 252 IAMs_20 IAMs_20 19 37 50.9
comp=Z,1μm,20.0s
KEV Kevo 124.98 350 IAMs_20 IAMs_20 19 39 21.8
comp=Z,1μm,21.0s
LVZ Lovozero 125.02 346 IAMs_20 IAMs_20 19 41 36.8
comp=Z,1μm,19.0s
ARCES ARCESS Array B 125.42 350 PKP **PKiKP** **18 48 54.7 +0.6**
comp=Z,14nm,1.0s,baz=66,slow=2.9,SNR=12
APA Apatity 125.57 346⇓*i*PKIKP **PKiKP** **18 48 55.8 +1.4**
APA pmax pmax
comp=Z,14nm,1.1s
APA MLR MLR
comp=Z,2μm,25.0s
PRGR Permogore 126.03 336*e*PKIKP **PKiKP** **18 48 57.1 +1.7**
PRGR *e* 18 50 52.3
KIRV Kirov 126.14 332*c i*PKIKP **PKiKP** **18 48 57.7 +2.0**
GEYT Alibeck 127.45 305 PKP **PKiKP** **18 49 00.4 +1.3**
comp=Z,15nm,1.0s,baz=204,slow=3.3,SNR=14
KLMR Klimovskoe 128.80 338*e*PKIKP **PKiKP** **18 49 01.0 0.0**
KLMR pmax pmax
comp=Z,42nm,1.2s
KLMR Klimovskoe 128.80 338*e*PKPdf **PKiKP** **18 49 01.1 0.0**
KLMR AMP 18 49 05.9
comp=Z,42nm,1.2s
BELG Belogornoye 130.09 326*ce*PKIKP **PKiKP** **18 49 05.4 +1.6**
FINES FINESS Array B 132.44 345 PKP **PKiKP** **18 49 08.3 -0.1**
comp=Z,12nm,1.1s,baz=72,slow=6.2,SNR=9.7
MOS Moscow 133.00 334 *i* PKIKP **PKPdf** **18 49 08.5 0.0**
MOS *e* 18 51 34.3
VRH Novokhopyorsk 133.84 327*e*PKIKP **PKiKP** **18 49 12.6 +1.1**
VRH pmax pmax
comp=Z,10.0nm,0.8s
OBN Obninsk 133.87 334 IAMs_20 IAMs_20 19 46 20.1
comp=Z,1μm,22.0s
OBN Obninsk 133.87 334*d i*PKIKP **PKiKP** **18 49 12.9 +1.5**
OBN *e* 18 51 39.7
OBN *e*SS SS 19 09 22.5 -3.9
OBN pmax pmax
comp=Z,20nm,1.2s
MAK Makhachkala 134.08 314*e*P **Pdif** **18 45 59.4 -11**
MAK *e*PPP PPP 18 54 32.9
MAK *e* 18 56 16.2
MAK pmax pmax
comp=Z,133nm,1.0s
LPSR Galich'ya Gora 134.43 330*e*PKIKP **PKiKP** **18 49 15.5 +2.9**
LPSR pmax pmax
comp=Z,10.0nm,0.9s
VSU Vasula 134.80 343⇑*e*PKIKP **PKPdf** **18 49 11.6 -0.2**
VORR Voronezh 134.85 329*e*PKIKP **PKiKP** **18 49 15.4 +1.9**
VORR pmax pmax
comp=Z,20nm,2.5s
VSR Storozhevoye 135.15 328*e*PKIKP **PKiKP** **18 49 14.9 +0.8**
VSR pmax pmax
comp=Z,20nm,1.4s
GROC Groznyy 135.16 315*e*PKIKP **PKiKP** **18 49 14.3 -0.1**
GROC pmax pmax
comp=Z,32nm,1.1s
VORD Divnogorie 135.23 328*e*PKIKP **PKiKP** **18 49 15.2 +0.9**
VORD pmax pmax
comp=Z,20nm,1.2s
NB2 NORSAR Subarra 135.39 354 PKP **PKiKP** **18 49 16.1 +1.7**
baz=16,slow=3.2
NB2 NORSAR Subarra 135.39 354 PKP **PKiKP** **18 49 16.1 +1.7**
comp=Z,90nm,3.3s,baz=16,slow=3.2
NOA NORSAR Array B 135.39 354 PKP **PKiKP** **18 49 13.9 -0.5**
comp=Z,0.3nm,0.7s,baz=7.3,slow=3.5,SNR=5.8
RCBR Riachuelo 135.53 117 IAMs_20 IAMs_20 19 43 02.3
comp=Z,1μm,19.0s
GOF Gofitskoye 136.19 319⇑*e*PKIKP **PKiKP** **18 49 19.7 +3.2**
GOF pmax pmax
comp=Z,23nm,0.9s
ZEI Tsey 136.60 315 *i* PKIKP **PKPdf** **18 49 13.4 -2.5**
ZEI pmax pmax
comp=Z,13nm,1.1s
KBZ Khabaz 136.87 317 PKhKP PKPpre 18 49 13.3
comp=Z,1.2nm,0.6s,baz=163,slow=6.8,SNR=3.6
KBZ Khabaz 136.87 317⇓*i*PKIKP **PKiKP** **18 49 20.4 +2.5**
KIV Kislovodsk 136.91 317 IAMs_20 IAMs_20 19 53 22.3
comp=Z,905nm,20.0s
KIV Kislovodsk 136.91 317*e*PKIKP **PKPdf** **18 49 14.2 -2.1**
KIV *e* 18 51 56.3
KIV *e*SS SS 19 09 57.9 -6.4
KIV *e*SSS SSS 19 15 05.0
KIV pmax pmax
comp=Z,15nm,1.1s
KONO Kongsberg 136.91 355 IAMs_20 IAMs_20 19 42 08.2
comp=Z,825nm,22.0s
GNI Garni 137.01 311*c i*PKIKP **PKiKP** **18 49 22.5 +4.0**
AKH Akhalkalaki 137.43 314 ⇑P **PKiKP** **18 49 20.7 +1.3**
MNK Minsk 137.69 339 *i* PKHKP PKPpre 18 49 11.1
MNK *i* 18 56 26.6
MNK *i*SS SS 19 10 06.2 -5.8
MNK *i*SSS SSS 19 15 12.5
MNK pmax pmax
comp=N,8.0nm,0.9s
MNK pmax pmax
comp=Z,13nm,0.9s
MNK pmax pmax
comp=E,2.0nm,0.8s
MNK MLR MLR
comp=N,11nm,16.0s
MNK MLR MLR
comp=E,91nm,18.0s
MNK MLR MLR
comp=Z,10μm,26.0s
NACGM Naroch 137.74 340⇓*e*PKP **PKiKP** **18 49 21.0 +1.7**
baz=35
SOC Sochi 138.99 318*e*PKIKP **PKPdf** **18 49 20.0 0.0**
SOC *e* 18 52 10.9
SOC *e*PPP PPP 18 55 16.3
SOC *e* 18 56 25.4
SOC *e*SS SS 19 10 29.0 +0.4
SOC *e*SSS SSS 19 15 32.3
LSZ Lusaka 139.56 219 IAMs_20 IAMs_20 19 51 30.7
comp=Z,1μm,20.0s
RAYN Ar Rayn 139.58 287 PKPdf **PKPdf** **18 49 15.9 -5.9**
RAYN Ar Rayn 139.58 287 IAMs_20 IAMs_20 19 59 51.8
comp=Z,832nm,19.0s
RAYN Ar Rayn 139.58 287 ⇑PKIKP **PKiKP** **18 49 23.7 -0.4**
SUW Suwalki 139.64 342 IAMs_20 IAMs_20 19 58 38.4
comp=Z,709nm,20.0s
ANN Anapa 139.77 321 *i* PKIKP **PKiKP** **18 49 23.8 +0.1**
ANN pmax pmax
comp=Z,27nm,1.1s
ANN MLR MLR
comp=N,366nm,19.0s
ANN MLR MLR
comp=Z,816nm,19.0s
ANN MLR MLR
comp=E,265nm,20.0s
AKASG Malin Array Be 140.13 334 PKhKP PKPpre 18 49 15.2
comp=E,1.0nm,0.6s,baz=32,slow=4.7,SNR=6.5
AKASG PKP **PKPdf** **18 49 22.6 +0.8**
comp=E,9.7nm,1.0s,baz=34,slow=2.3,SNR=10
AKASG Malin Array Be 140.13 334 **PKPdf** **18 49 14.8 -7.1**
AKASG Malin Array Be 140.13 334 **PKPdf** **18 49 22.6 +0.8**
AKASG Malin Array Be 140.13 334 PKHKP PKPpre 18 49 14.8
AKBB Malin Array Si 140.13 334⇑*e*PKIKP **PKPdf** **18 49 20.6 -1.2**
AKBB *i* 18 49 25.8
KIBK Kibwezi 140.47 245 IAMs_20 IAMs_20 19 45 40.0
comp=Z,970nm,20.0s
ATD Arta Tunnel 140.99 268 IAMs_20 IAMs_20 19 48 57.4
comp=Z,946nm,21.0s
RGN Rugen 141.45 350 IAMs_20 IAMs_20 19 54 16.2
comp=Z,1μm,20.0s
KMBO Kilima Mbogo 141.76 246 PKP **PKPdf** **18 49 26.3 +0.1**
comp=Z,1.5nm,0.8s,baz=33,slow=4.8,SNR=2.6
KMBO Kilima Mbogo 141.76 246 IAMs_20 IAMs_20 19 42 21.2
comp=Z,1μm,22.0s
LVV L'vov 142.88 337*e*PKIKP **PKiKP** **18 49 32.0 +2.0**
LVV MLR MLR
comp=E,400nm,24.0s
LVV MLR MLR
comp=N,900nm,23.0s
LVV MLR MLR
comp=Z,1μm,24.0s
KIS Kishinev 143.03 330*e*PKP **PKiKP** **18 49 29.0 -1.4**
KIS Kishinev 143.03 330*e*PP PP 18 52 36.0 -0.4
KIS *e*L L 19 41 33.0

KIS				LRM	MLR	19 54 18.0		
	comp=Z,500nm,20.5s							
KIS	**Kishinev**	**143.03**	**330**	*e*PKIKP	**PKiKP**	**18 49 29.0**	**-1.4**	
KIS				*e*		18 52 36.0		
KIS				MLR	MLR			
	comp=Z,500nm,20.5s							
KIS				MLR	MLR			
	comp=N,600nm,20.0s							
MILM	**Milestii Mici**	**143.09**	**330**	*e*PKP	**PKPdf**	**18 49 26.0**	**-1.3**	
MILM				*e*L	L	19 38 08.0		
MILM				LRM	MLR	19 54 22.0		
	comp=N,1μm,19.5s							
MILM	**Milestii Mici**	**143.09**	**330**	*e*PKIKP	**PKPdf**	**18 49 26.0**	**-1.3**	
MILM				MLR	MLR			
	comp=N,1μm,19.5s							
MILM				MLR	MLR			
	comp=Z,1μm,19.5s							
SBD1	**Bryn Du**	**143.62**	**6**	*e*P	**PKiKP**	**18 49 32.7**	**+1.3**	
HLM1	**Long Mynd**	**144.04**	**6**	*e*P	PKPbc	18 49 26.9	+0.3	
BURAR	**Bucovina Array**	**144.19**	**334**	⇓P	**PKPdf**	**18 49 30.9**	**+1.5**	
BURAR	**Bucovina Array**	**144.19**	**334**	⇓PKIKP	**PKPdf**	**18 49 30.9**	**+1.5**	
VLDR	**Vladesti**	**144.22**	**329**	⇑P	**PKiKP**	**18 49 31.5**	**-1.4**	
KOLS	**Kolonicke sedl**	**144.26**	**338**	*e*PKIKP	**PKPdf**	**18 49 30.9**	**+1.6**	
KOLS	**Kolonicke sedl**	**144.26**	**338**	*e*PKP	**PKPdf**	**18 49 30.9**	**+1.6**	
TLCR		**144.32**	**328**	⇓P	**PKiKP**	**18 49 31.8**	**-1.2**	
TLCR		**144.32**	**328**	⇓PKIKP	**PKiKP**	**18 49 31.8**	**-1.2**	
FURI	**Furi**	**144.32**	**262**	IAMs_20	IAMs_20	19 52 52.2		
	comp=Z,963nm,20.0s							
BIZ	**Bicaz**	**144.33**	**332**	⇓P	**PKiKP**	**18 49 31.7**	**-1.4**	
KSP	**Ksiaz**	**144.36**	**345**	*e*PKP	**PKPdf**	**18 49 30.5**	**+1.1**	
KSP				*e*L	L	19 45 52.5		
	comp=Z,1μm,26.6s							
RSBS	**Rosebush, Pemb**	**144.38**	**8**	*e*P	**PKPdf**	**18 49 29.4**	**+0.1**	
GHRR		**144.38**	**330**	⇓P	**PKiKP**	**18 49 33.4**	**+0.2**	
TESR	**Tescani**	**144.40**	**331**	⇓P	**PKiKP**	**18 49 32.0**	**-1.3**	
UZH	**Uzhgorod**	**144.51**	**338**	*e*PKHKP	PKPpre	18 49 26.5		
UZH				*e*		18 49 32.3		
UZH				*i*		18 49 42.4		
NIE	**Niedzica**	**144.52**	**340**	*e*PKP	**PKiKP**	**18 49 31.6**	**-1.8**	
NIE				*e*L	L	19 46 55.1		
	comp=Z,1μm,26.1s							
MCH1	**Michaelchurch**	**144.54**	**6**	*e*P	PKPbc	18 49 28.8	+0.6	
CRVS	**Cervenica-Dubn**	**144.57**	**339**	*e*PKIKP	**PKPdf**	**18 49 31.6**	**+1.7**	
CRVS	**Cervenica-Dubn**	**144.57**	**339**	*e*PKP	**PKPdf**	**18 49 31.6**	**+1.7**	
SCHL	**Schela**	**144.59**	**329**	⇓P	**PKiKP**	**18 49 36.1**	**+2.5**	
CLL	**Collm**	**144.62**	**349**	IAMs_20	IAMs_20	19 59 53.0		
	comp=Z,944nm,20.0s							
CLL	**Collm**	**144.62**	**349**	*e*PKPdf	**PKPab**	**18 49 28.0**	**-0.3**	
CLL				*i* PKiKP	**PKPdf**	**18 49 30.6**	**+0.8**	
CLL				*i* sPKiKP	**sPKPdf**	**18 49 34.1**	**+0.9**	
	comp=Z,61nm,1.3s							
CLL				*e*PSKS		19 03 00.0		
OSTC	**Ostas**	**144.65**	**345**	*e*PKP	**PKPdf**	**18 49 31.2**	**+1.3**	
OSTC				AMS	AMS	19 45 30.0		
	comp=Z,900nm,21.0s							
CHVC	**Chvalec**	**144.66**	**346**	*e*PKP	**PKPdf**	**18 49 30.1**	**+0.1**	
CHVC				AMS	AMS	19 45 30.0		
	comp=Z,1μm,23.1s							
CFR	**Carcaliu**	**144.67**	**329**	⇑P	**PKPdf**	**18 49 31.6**	**+1.5**	
CFR	**Carcaliu**	**144.67**	**329**	⇑PKIKP	**PKPdf**	**18 49 31.6**	**+1.5**	
MONM	**Monmouth**	**144.72**	**6**	*e*P	**PKPdf**	**18 49 29.5**	**-0.4**	
UPC	**Upice**	**144.74**	**345**	*e*PKIKP	**PKPdf**	**18 49 31.6**	**+1.5**	
UPC				MLR	MLR			
	comp=Z,1μm,24.8s							
UPC	**Upice**	**144.74**	**345**	*e*PKP	**PKPdf**	**18 49 31.6**	**+1.5**	
UPC				AMS	AMS	19 45 30.0		
	comp=Z,1μm,24.8s							
TPGR	**Topolog**	**144.75**	**328**	⇑P	**PKPdf**	**18 49 31.0**	**+0.7**	
OKC	**Ostrava-Krasne**	**144.79**	**343**	*e*PKIKP	**PKPdf**	**18 49 30.5**	**+0.3**	
OKC				MLR	MLR			
	comp=Z,1μm,21.2s							
OKC	**Ostrava-Krasne**	**144.79**	**343**	*e*PKP	**PKPdf**	**18 49 30.5**	**+0.3**	
OKC				AMS	AMS	19 51 30.0		
	comp=Z,1μm,21.2s							
DPC	**Dobruska-Polom**	**144.81**	**345**	*e*PKIKP	**PKPdf**	**18 49 30.6**	**+0.3**	
DPC				MLR	MLR			
	comp=Z,1μm,26.6s							
DPC	**Dobruska-Polom**	**144.81**	**345**	*e*PKP	**PKPdf**	**18 49 30.6**	**+0.3**	
DPC				AMS	AMS	19 46 00.0		
	comp=Z,1μm,26.6s							
BMR	**Baia Mare**	**144.84**	**336**	⇓P	**PKPdf**	**18 49 32.1**	**+1.8**	
BMR	**Baia Mare**	**144.84**	**336**	⇓PKIKP	**PKPdf**	**18 49 32.1**	**+1.8**	
VRI	**Vrincioaia**	**144.85**	**331**	⇓P	**PKPdf**	**18 49 31.3**	**+0.9**	
VRI	**Vrincioaia**	**144.85**	**331**	⇓PKIKP	**PKPdf**	**18 49 31.3**	**+0.9**	
BRG	**Berggiesshubel**	**144.85**	**348**	*e*PKP	**PKPdf**	**18 49 31.8**	**+1.6**	
BRG				Amp		18 49 34.5		
	comp=Z,119nm,2.2s							
BRG				*ex*	x	18 49 39.9		
BRG				Amp		18 49 40.8		
	comp=Z,55nm,1.9s							
BRG				*ex*	x	18 49 53.5		
BRG				Amp		18 49 55.3		
	comp=Z,27nm,1.7s							
BRG	**Berggiesshubel**	**144.85**	**348**	*e*PKIKP	**PKPdf**	**18 49 31.8**	**+1.6**	
BRG				*e*		18 49 39.9		
BRG				pmax	pmax			
	comp=Z,119nm,2.3s							
BR131	**Keskin Array S**	**144.86**	**317**	*de*PKIKP	**PKPdf**	**18 49 30.8**	**0.0**	
BRTR	**Keskin Array B**	**144.86**	**317**	PKP	**PKPdf**	**18 49 30.9**	**+0.1**	
	comp=Z,77nm,1.0s,baz=106,slow=2.5,SNR=75							
BRTR				PP	**PP**	**18 52 51.2**	**+3.1**	
	comp=Z,2.3nm,1.1s,baz=77,slow=6.2,SNR=3.6							
BRTR	**Keskin Array B**	**144.86**	**317**	PKPdf	**PKPab**	**18 49 29.6**	**-0.2**	
BRTR	**Keskin Array B**	**144.86**	**317**	PKIKP	**PKPab**	**18 49 29.6**	**-0.2**	
PLOR	**Plostina**	**144.90**	**331**	⇓P	**PKPdf**	**18 49 30.2**	**-0.4**	
PLOR				⇑P	**pPKPdf**	**18 49 31.5**	**-1.6**	
PLOR	**Plostina**	**144.90**	**331**	⇓PKIKP	**PKPdf**	**18 49 30.2**	**-0.4**	
KRLC	**Kraliky**	**144.95**	**344**	*e*PKIKP	**PKPdf**	**18 49 30.6**	**+0.1**	
KRLC				MLR	MLR			
	comp=Z,1μm,19.4s							
KRLC	**Kraliky**	**144.95**	**344**	*e*PKP	**PKPdf**	**18 49 30.6**	**+0.1**	
KRLC				AMS	AMS	19 53 30.0		
	comp=Z,1μm,19.4s							
ARCR	**ARCALIA**	**144.96**	**334**	⇑P	**PKPdf**	**18 49 32.3**	**+1.8**	
LANS	**Liptovska Anna**	**145.01**	**341**	*e*PKIKP	**PKiKP**	**18 49 33.4**	**-1.1**	
LANS	**Liptovska Anna**	**145.01**	**341**	*e*PKP	**PKiKP**	**18 49 33.4**	**-1.1**	
MORC	**Moravsky Berou**	**145.02**	**343**	⇓P	**PKPbc**	**18 49 29.4**	**-0.5**	
MORC	**Moravsky Berou**	**145.02**	**343**	⇓PKHKP	PKPpre	18 49 29.4		
MORC	**Moravsky Berou**	**145.02**	**343**	*e*PKP	**PKPdf**	**18 49 30.7**	**+0.1**	
PVCC	**Panska Ves**	**145.05**	**347**	*e*PKIKP	**PKPdf**	**18 49 32.0**	**+1.4**	
PVCC				MLR	MLR			
	comp=Z,1μm,24.3s							
PVCC	**Panska Ves**	**145.05**	**347**	*e*PKP	**PKPdf**	**18 49 32.0**	**+1.4**	
PVCC				AMS	AMS	19 44 20.0		
	comp=Z,1μm,24.3s							
GRER		**145.09**	**330**	⇓P	**PKiKP**	**18 49 35.1**	**+0.4**	
COVR	**Voineasa-Covas**	**145.11**	**331**	⇑P	**PKiKP**	**18 49 32.9**	**-1.9**	
HARR	**Harsova**	**145.11**	**328**	⇓P	**PKiKP**	**18 49 33.9**	**-0.8**	
HARR	**Harsova**	**145.11**	**328**	⇓PKIKP	**PKiKP**	**18 49 33.9**	**-0.8**	
SWN1	**Swindon**	**145.14**	**5**	*e*P	**PKiKP**	**18 49 33.1**	**-1.4**	
MFTR	**Murfatlar**	**145.22**	**327**	⇓P	**PKiKP**	**18 49 34.8**	**-0.2**	
KECS	**Kecovo**	**145.26**	**339**	*e*PKIKP	**PKPdf**	**18 49 32.9**	**+1.9**	
KECS	**Kecovo**	**145.26**	**339**	*e*PKP	**PKPdf**	**18 49 32.9**	**+1.9**	
MAUC	**Maruska**	**145.31**	**343**	*e*PKP	**PKiKP**	**18 49 33.1**	**-2.0**	
MAUC				AMS	AMS	19 51 30.0		
	comp=Z,2μm,21.5s							
HTL	**Hartland**	**145.35**	**8**	*e*P	**PKPdf**	**18 49 31.7**	**+0.6**	
NEHR	**Nehoiu**	**145.38**	**331**	⇓P	**PKiKP**	**18 49 34.6**	**-0.8**	
MANR	**Mangalia**	**145.38**	**327**	⇑P	**PKiKP**	**18 49 34.1**	**-1.2**	
WOL	**Wolverton**	**145.38**	**5**	*e*P	**PKPab**	**18 49 32.3**	**+1.2**	
DOPR	**Dopca**	**145.39**	**332**	⇑P	**PKiKP**	**18 49 33.5**	**-1.8**	
AMRR	**Amara**	**145.47**	**329**	⇓P	**PKiKP**	**18 49 34.9**	**-0.6**	
AMRR	**Amara**	**145.47**	**329**	⇓PKIKP	**PKiKP**	**18 49 34.9**	**-0.6**	
MESR	**Meseseni**	**145.48**	**336**	⇓P	**PKiKP**	**18 49 33.7**	**-1.7**	
ISR	**Istrita**	**145.49**	**330**	⇓P	**PKiKP**	**18 49 34.7**	**-0.9**	
ISR	**Istrita**	**145.49**	**330**	⇓PKIKP	**PKiKP**	**18 49 34.7**	**-0.9**	
PRU	**Pruhonice**	**145.56**	**347**	*e*PKP2	**PKPab**	**18 49 32.6**	**+0.7**	
PRU				MLR	MLR			
	comp=Z,2μm,29.8s							
PRU	**Pruhonice**	**145.56**	**347**	*e*PKP	**PKPab**	**18 49 32.6**	**+0.7**	
PRU				AMS	AMS	19 45 10.0		
	comp=Z,2μm,29.8s							
CJR	**Cluj-Napoca**	**145.57**	**335**	⇑P	**PKiKP**	**18 49 34.9**	**-0.8**	
CJR	**Cluj-Napoca**	**145.57**	**335**	⇑PKIKP	**PKiKP**	**18 49 34.9**	**-0.8**	
ICOR	**Ion Corvin**	**145.58**	**328**	⇑P	**PKiKP**	**18 49 36.3**	**+0.6**	
ELSH	**Elham, Standar**	**145.68**	**2**	*e*P	**PKPab**	**18 49 33.5**	**+1.3**	
PSN	**Preselentsi**	**145.69**	**327**	P	**PKiKP**	**18 49 37.5**	**+1.5**	
LTVH	**Ltavrtes, Hu**	**145.69**	**337**	⇓P	**PKiKP**	**18 49 35.0**	**-0.8**	
LTVH	**Ltavrtes, Hu**	**145.69**	**337**	PKP	**PKiKP**	**18 49 36.4**	**+0.6**	
VRAC	**Vranov**	**145.70**	**344**	⇓P	**PKPab**	**18 49 34.0**	**+1.6**	
VRAC	**Vranov**	**145.70**	**344**	⇓PKP2	**PKPab**	**18 49 34.0**	**+1.6**	
VRAC	**Vranov**	**145.70**	**344**	*e*PKP	**PKPab**	**18 49 33.4**	**+1.0**	
NKC	**Novy Kostel**	**145.75**	**349**	*e*PKP2	**PKPab**	**18 49 33.8**	**+1.2**	
NKC				MLR	MLR			
	comp=Z,2μm,28.0s							
NKC	**Novy Kostel**	**145.75**	**349**	*e*PKP	**PKPab**	**18 49 33.8**	**+1.2**	
NKC				AMS	AMS	19 43 20.0		
	comp=Z,2μm,28.0s							
JAVC	**Velka Javorina**	**145.81**	**343**	*e*PKP	**PKiKP**	**18 49 34.9**	**-1.2**	
LEHL	**Lehliu**	**145.82**	**329**	⇓P	**PKiKP**	**18 49 35.8**	**-0.4**	
KOLL	**Kolacno**	**145.85**	**342**	*e*PKP	**PKiKP**	**18 49 35.2**	**-0.9**	
DRGR		**145.87**	**336**	⇓P	**PKPab**	**18 49 34.3**	**+1.1**	
DRGR		**145.87**	**336**	⇓PKP2	**PKPab**	**18 49 34.3**	**+1.1**	
HMNX	**Herstmonceux**	**145.92**	**3**	*e*P	**PKPab**	**18 49 34.5**	**+1.4**	
VOIR		**145.95**	**332**	⇓P	**PKiKP**	**18 49 36.2**	**-0.4**	
VOIR		**145.95**	**332**	⇓PKP2	**PKiKP**	**18 49 36.2**	**-0.4**	
SULR		**145.95**	**330**	⇓P	**PKPab**	**18 49 34.9**	**+1.4**	
PSZ	**Piszkesteto**	**145.95**	**339**	⇓P	**PKPab**	**18 49 34.9**	**+1.4**	
PSZ	**Piszkesteto**	**145.95**	**339**	⇓PKP2	**PKPab**	**18 49 34.9**	**+1.4**	
PSZ	**Piszkesteto**	**145.95**	**339**	PKP	**PKiKP**	**18 49 36.0**	**-0.4**	
DYA	**Yadsworthy**	**145.97**	**8**	*e*P	**PKPab**	**18 49 34.1**	**+0.8**	
KRUC	**Moravsky**	**145.98**	**344**	*e*PKP	**PKPab**	**18 49 33.7**	**+0.3**	
BORR	**Bors**	**145.98**	**337**	⇓P	**PKPab**	**18 49 35.7**	**-0.8**	
TREC	**Trest**	**145.99**	**345**	*e*PKP2	**PKPab**	**18 49 34.6**	**+1.1**	
TREC				MLR	MLR			
	comp=Z,1μm,24.7s							
TREC	**Trest**	**145.99**	**345**	*e*PKP	**PKPab**	**18 49 34.6**	**+1.1**	
TREC				AMS	AMS	19 46 20.0		
	comp=Z,1μm,24.7s							
CCA1	**Carnmenellis**	**146.03**	**9**	*e*P	**PKPab**	**18 49 33.7**	**+0.2**	
BHL	**Bhannes**	**146.05**	**306**	*e*P	**PKiKP**	**18 49 37.1**	**-0.1**	
SHBL	**Chebaa**	**146.18**	**305**	*e*P	**PKiKP**	**18 49 37.6**	**+0.1**	
SMOL	**Smolenice**	**146.19**	**343**	*e*PKP2	**PKiKP**	**18 49 36.9**	**0.0**	
SMOL	**Smolenice**	**146.19**	**343**	*e*PKP	**PKiKP**	**18 49 36.9**	**0.0**	
MODS	**Modra-Piesok**	**146.36**	**343**	*e*PKP2	**PKiKP**	**18 49 37.5**	**+0.3**	
MODS	**Modra-Piesok**	**146.36**	**343**	*e*PKP	**PKiKP**	**18 49 37.5**	**+0.3**	
GRA1	**Grafenberg Arr**	**146.48**	**350**	IAMs_20	IAMs_20	19 59 05.3		
	comp=Z,1μm,20.0s							
GRFO	**Grafenberg**	**146.48**	**350**	IAMs_20	IAMs_20	19 59 06.3		
	comp=Z,1μm,20.0s							
DEV	**Deva**	**146.53**	**334**	⇑P	**PKiKP**	**18 49 36.8**	**-0.8**	
DEV	**Deva**	**146.53**	**334**	⇑PKP2	**PKiKP**	**18 49 36.8**	**-0.8**	
SRO	**Srobarova**	**146.56**	**341**	*e*PKP2	**PKiKP**	**18 49 37.7**	**+0.1**	
SRO	**Srobarova**	**146.56**	**341**	*e*PKP	**PKiKP**	**18 49 37.7**	**+0.1**	
ZST	**Bratislava**	**146.57**	**343**	*e*PKP2	**PKiKP**	**18 49 38.1**	**+0.5**	
ZST	**Bratislava**	**146.57**	**343**	*e*PKP	**PKiKP**	**18 49 38.1**	**+0.5**	
SRO2	**Moca**	**146.58**	**341**	*e*PKP2	**PKiKP**	**18 49 37.5**	**-0.1**	
SRO2	**Moca**	**146.58**	**341**	*e*PKP	**PKiKP**	**18 49 37.5**	**-0.1**	
KHC	**Kasperske Hory**	**146.58**	**347**	*e*PKP2	**PKPab**	**18 49 36.5**	**+0.7**	
KHC				MLR	MLR			
	comp=Z,1μm,28.6s							
KHC	**Kasperske Hory**	**146.58**	**347**	*e*PKP	**PKPab**	**18 49 36.5**	**+0.7**	
KHC				*ex*	x	18 49 50.0		
KHC				AMS	AMS	19 44 50.0		
	comp=Z,1μm,28.6s							
BUD	**Budapest**	**146.62**	**340**	PKP	**PKiKP**	**18 49 38.5**	**+0.8**	
RAZG	**Razgrad**	**146.63**	**328**	⇓P	**PKiKP**	**18 49 38.2**	**+0.2**	
HUMR	**Humele**	**146.67**	**331**	⇓P	**PKPab**	**18 49 36.4**	**+0.1**	
CKRC	**Cesky Krumlov**	**146.71**	**346**	*e*PKP	**PKPab**	**18 49 36.5**	**+0.2**	
SIRR	**Siria**	**146.71**	**336**	⇓P	**PKPab**	**18 49 36.9**	**+0.6**	
GERES	**GERESS Array B**	**146.82**	**347**	PKPbc	**PKPab**	**18 49 36.6**	**-0.3**	
	comp=Z,8.2nm,1.0s,baz=291,slow=1.1,SNR=43							
COPA	**Copaceanca**	**146.85**	**330**	⇓P	**PKiKP**	**18 49 38.0**	**-0.4**	
GZR	**Gura Zlata**	**146.97**	**334**	⇑P	**PKPab**	**18 49 37.5**	**0.0**	
GZR	**Gura Zlata**	**146.97**	**334**	⇑PKIKP	**PKPab**	**18 49 37.5**	**0.0**	
GHAJ	**Ghor Haditha**	**147.01**	**302**	IAMs_20	IAMs_20	20 06 59.2		
	comp=Z,610nm,18.0s							
SZH	**Strazhica**	**147.14**	**328**	P	**PKiKP**	**18 49 43.2**	**+4.2**	
CONA	**Conrad Observa**	**147.16**	**344**	*e*P	**PKPab**	**18 49 38.0**	**-0.1**	
	comp=Z,92nm,1.3s,SNR=54							
SOP	**Sopron**	**147.19**	**343**	PKP	**PKiKP**	**18 49 40.6**	**+1.7**	
RONA	**Rosalia, Austr**	**147.25**	**343**	*e*P	**PKPab**	**18 49 38.4**	**-0.1**	
	comp=Z,79nm,1.2s,SNR=36							
BZS	**Buzias**	**147.27**	**335**	⇑P	**PKPbc**	**18 49 37.5**	**+0.7**	
BZS	**Buzias**	**147.27**	**335**	⇑PKIKP	**PKPbc**	**18 49 37.5**	**+0.7**	
VLAD	**Vladila**	**147.34**	**331**	⇓P	**PKPab**	**18 49 39.1**	**+0.2**	
MPLH	**Magyarpolny**	**147.37**	**341**	PKP	**PKiKP**	**18 49 39.2**	**-0.1**	
SRE	**Strehaia**	**147.37**	**333**	⇓P	**PKiKP**	**18 49 40.3**	**+0.9**	
SRE	**Strehaia**	**147.37**	**333**	⇓PKP2	**PKiKP**	**18 49 40.3**	**+0.9**	
JSA	**Saint Aubin**	**147.40**	**6**	*e*P	**PKPbc**	**18 49 37.4**	**+0.3**	
HERR	**Herculane**	**147.54**	**334**	⇓P	**PKPbc**	**18 49 38.5**	**+0.9**	
MOA	**Molln**	**147.63**	**346**	*e*P	**PKPab**	**18 49 40.3**	**+0.4**	
	comp=Z,59nm,1.1s,SNR=21							
BANR	**Banloc**	**147.65**	**336**	⇑P	**PKPab**	**18 49 41.2**	**+1.1**	
DJES	**Djerdap**	**147.67**	**333**	⇑P	**PKPbc**	**18 49 38.4**	**+0.4**	
MORH	**Mrgy, Hungar**	**147.86**	**339**	⇓P	**PKiKP**	**18 49 39.5**	**-0.8**	
MORH	**Mrgy, Hungar**	**147.86**	**339**	*e*P	**PKPbc**	**18 49 38.0**	**-0.4**	
ARSA	**Arzberg**	**147.87**	**344**	*e*P	**PKPbc**	**18 49 39.3**	**+0.8**	
	comp=Z,44nm,1.4s,SNR=14							
MDVR	**Moldovita**	**147.91**	**334**	⇑P	**PKiKP**	**18 49 40.5**	**-0.1**	
BIOA	**Bad Ischl, Aus**	**147.93**	**346**	*i* P	**PKiKP**	**18 49 40.8**	**+0.2**	
	comp=Z,36nm,1.1s,SNR=24							
KOVH	**Kovagotottos**	**148.15**	**340**	PKP	**PKPab**	**18 49 41.6**	**-0.4**	
BEHE	**Becsehely**	**148.23**	**342**	*e*P	**PKiKP**	**18 49 41.2**	**+0.1**	
BEHE	**Becsehely**	**148.23**	**342**	PKP	**PKiKP**	**18 49 46.7**	**+4.4**	
FRGS	**Fruska Gora**	**148.35**	**337**	⇑P	**PKiKP**	**18 49 41.1**	**-0.4**	
FRGS	**Fruska Gora**	**148.35**	**337**	*e*P	**PKPbc**	**18 49 38.7**	**-1.1**	
KOGS	**Kog**	**148.40**	**342**	*i* PKPbc	**PKPab**	**18 49 42.5**	**-0.5**	
BLKB	**Belogradchik**	**148.43**	**332**	⇓P	**PKPdf**	**18 49 37.7**	**+1.1**	
SOKA	**Soboth**	**148.53**	**344**	*e*P	**PKiKP**	**18 49 41.4**	**-0.4**	
	comp=Z,50nm,1.2s,SNR=22							
KBA	**Koelnbreinsper**	**148.57**	**346**	*e*P	**PKiKP**	**18 49 41.4**	**-0.6**	
	comp=Z,38nm,1.3s,SNR=11							
RETA	**Reutte**	**148.70**	**350**	*e*P	**PKPbc**	**18 49 40.6**	**-0.1**	
	comp=Z,50nm,1.2s,SNR=9.5							
WATA	**Walderalm**	**148.70**	**349**	*e*P	**PKPbc**	**18 49 40.4**	**-0.4**	
	comp=Z,38nm,1.0s							
KULA	**Kula-Manisa**	**148.74**	**319**	P	**PKPab**	**18 49 43.8**	**-1.0**	
ALN	**Alexandroupoli**	**148.75**	**325**	P	**PKiKP**	**18 49 43.3**	**+0.9**	
WTTA	**Wattenberg**	**148.75**	**349**	*e*P	**PKPbc**	**18 49 41.0**	**+0.1**	
	comp=Z,43nm,1.1s							
MOTA	**Moosalm**	**148.77**	**349**	*i* P	**PKPbc**	**18 49 40.2**	**-0.8**	
	comp=Z,69nm,1.3s,SNR=20							
OBKA	**Obir**	**148.81**	**344**	*e*P	**PKiKP**	**18 49 42.4**	**0.0**	
	comp=Z,32nm,1.1s							
BOVS	**Bovan**	**148.84**	**333**	⇑P	**PKPbc**	**18 49 39.4**	**-1.6**	
RDO	**Rodhopi**	**148.86**	**326**	P	**PKPbc**	**18 49 41.8**	**+0.6**	
SQTA	**Sankt Quirin**	**148.88**	**349**	*i* P	**PKPbc**	**18 49 40.6**	**-0.6**	
	comp=Z,39nm,1.1s,SNR=12							
MYKA	**Terra Mystica**	**148.93**	**346**	*e*P	**PKPbc**	**18 49 41.9**	**+0.6**	
	comp=Z,42nm,1.5s,SNR=14							
VTS	**Vitosha**	**148.94**	**330**	⇑P	**PKPbc**	**18 49 40.6**	**-1.0**	
VTS	**Vitosha**	**148.94**	**330**		**PKPbc**	**18 49 40.3**	**-1.3**	
VTS	**Vitosha**	**148.94**	**330**	⇑PKIKP	**PKPbc**	**18 49 40.6**	**-1.0**	
VTS	**Vitosha**	**148.94**	**330**	P	**PKPab**	**18 49 44.6**	**-0.9**	
DAVA	**Damuels**	**149.03**	**351**	*e*P	**PKPbc**	**18 49 41.6**	**-0.1**	
	comp=Z,44nm,1.1s,SNR=15							
MOZS	**Mozjanca**	**149.04**	**344**	*i* PKPbc	**PKiKP**	**18 49 44.0**	**+1.2**	
ABTA	**Abfaltersbach**	**149.07**	**347**	*i* P	**PKPbc**	**18 49 40.2**	**-1.4**	
	comp=Z,54nm,1.2s,SNR=14							
FETA	**Feichten**	**149.15**	**350**	*e*P	**PKPbc**	**18 49 40.8**	**-1.2**	
	comp=Z,72nm,1.1s,SNR=20							
DIVS	**Divibare**	**149.17**	**336**	IAMs_20	IAMs_20	19 55 56.9		
	comp=Z,1μm,21.0s							
DIVS	**Divibare**	**149.17**	**336**	*e*P	**PKPbc**	**18 49 40.5**	**-1.5**	
CRES	**Cresnjev**	**149.20**	**343**	*e*P	**PKPdf**	**18 49 38.6**	**+0.9**	
LJU	**Ljubljana**	**149.25**	**344**	*e*P	**PKPbc**	**18 49 40.4**	**-1.6**	
LJU	**Ljubljana**	**149.25**	**344**	*i* PKPdf	**PKPbc**	**18 49 40.6**	**-1.5**	
LJU				*e*PKPbc	**PKiKP**	**18 49 42.5**	**-0.7**	
SMTH	**Samothraki Isl**	**149.33**	**325**	P	**PKPbc**	**18 49 42.0**	**-0.4**	
MMB	**Musomiste**	**149.48**	**328**	P	**PKiKP**	**18 49 43.8**	**-0.1**	
STAL	**STALIGIAL**	**149.49**	**347**	PKPdf	**PKPdf**	**18 49 33.0**	**-5.2**	
STAL					**pPKPdf**	**18 49 40.0**	**-0.8**	
KAVA	**Kavala**	**149.51**	**327**	P	**PKPbc**	**18 49 42.5**	**-0.3**	
CEY	**Cerknica**	**149.56**	**344**	*e*P	**PKPbc**	**18 49 40.7**	**-2.2**	
NVR	**Nevrokopi**	**149.59**	**328**	P	**PKPbc**	**18 49 42.2**	**-0.9**	
KKB	**Krupnik**	**149.59**	**329**	P	**PKPbc**	**18 49 45.0**	**+0.9**	
BBLS	**Lazići**	**149.60**	**336**	*e*P	**PKPbc**	**18 49 43.0**	**-0.1**	
BLY	**Banja Luka**	**149.63**	**340**	*e*P	**PKPbc**	**18 49 41.4**	**-1.6**	
THAS	**Thassos island**	**149.68**	**326**	P	**PKPbc**	**18 49 42.3**	**-0.9**	
PRK	**Paraskevi**	**149.74**	**322**	P	**PKiKP**	**18 49 45.4**	**+1.0**	
RUDO	**Rudo**	**149.82**	**336**	*e*P	**PKPdf**	**18 49 37.1**	**-1.7**	
SKDS	**Skadanscina**	**149.85**	**344**	*e*P	**PKPdf**	**18 49 39.6**	**+0.8**	
SJES	**Sjenica**	**149.88**	**335**	*e*P	**PKPbc**	**18 49 41.8**	**-2.0**	
SRS	**Serrai**	**149.90**	**328**	P	**PKPbc**	**18 49 42.4**	**-1.4**	
KOKK	**Kokkinochori,**	**149.91**	**327**	P	**PKPbc**	**18 49 42.6**	**-1.2**	
TUE	**Stuetta**	**149.91**	**351**		**PKPbc**	**18 49 41.8**	**-2.1**	
CTI	**Castel Tesino**	**149.92**	**348**	PKPdf	**PKPdf**	**18 49 35.8**	**-3.2**	
CTI					**pPKPdf**	**18 49 41.2**	**-0.3**	
CTI	**Castel Tesino**	**149.92**	**348**	PKIKP	**PKPdf**	**18 49 35.8**	**-3.2**	
CTI						18 49 41.2		
LIA	**Limnos Island**	**149.92**	**324**	P	**PKPbc**	**18 49 43.1**	**-0.7**	
MGRS	**Mrkonjic Grad**	**149.96**	**340**	*e*P	**PKPbc**	**18 49 43.5**	**-0.4**	
SIGR	**SIGRI**	**150.00**	**323**	P	**PKiKP**	**18 49 46.7**	**+1.7**	
PLE	**Pljevlja**	**150.06**	**336**	*e*PKP	**PKiKP**	**18 49 47.1**	**+2.0**	
IVA	**Berane**	**150.23**	**334**	*e*PKP	**PKiKP**	**18 49 47.4**	**+1.9**	
SRKY	**Kupres RS**	**150.24**	**339**	*e*P	**PKiKP**	**18 49 45.5**	**0.0**	
OUR	**Ouranopolis**	**150.26**	**326**	P	**PKiKP**	**18 49 46.2**	**+0.7**	
SENIN	**Lac Senin/Sane**	**150.27**	**354**		**PKPdf**	**18 49 41

KUR pmax pmax
comp=Z,117nm,0.4s
KUR pmax pmax
comp=N,55nm,0.2s
KUR smax smax
comp=N,331nm,0.4s
KUR smax smax
comp=E,221nm,0.2s
KUR Kuril'sk 2.39 224 *i* P **Pn 18 38 23.0 +0.1**
KUR AMB AMB 18 38 24.8
comp=E,150nm,0.3s
KUR *e*S **Sn 18 38 58.0 +2.1**
KUR A A 18 39 01.0
comp=E,360nm,0.6s
KUR A A 18 39 01.0
comp=E,110nm,0.6s
SHO Shikotan 3.91 219 *d i* PN **Pn 18 38 39.3 -1.7**
SHO *i* S **Sn 18 39 24.5 -4.0**
SHO pmax pmax
comp=Z,234nm,0.3s
SHO pmax pmax
comp=N,100nm,0.2s
SHO pmax pmax
comp=E,173nm,0.2s
SHO smax smax
comp=N,470nm,0.2s
SHO smax smax
comp=E,556nm,0.2s
SHO Shikotan 3.91 219 *i* P **Pn 18 38 39.0 -2.0**
SHO AMB AMB 18 38 40.0
comp=E,170nm,0.3s
SHO *i* S **Sn 18 39 25.2 -3.3**
SHO A A 18 39 26.8
comp=E,340nm,0.2s
SHO A A 18 39 26.8
comp=E,340nm,0.2s
YUK Yuzh-Kuril'sk 4.24 228 *d i* PN **Pn 18 38 45.8 +0.7**
YUK Yuzh-Kuril'sk 4.24 228 *e*P **Pn 18 38 45.6 +0.5**
YUK AMB AMB 18 38 46.2
comp=E,250nm,0.3s
YUK *i* S **Sn 18 39 37.6 +1.7**
YUK A A 18 39 38.3
comp=E,260nm,0.3s
YUK A A 18 39 38.3
comp=E,180nm,0.3s
RUSJ Misakicho 4.51 232 *e*PN **Pn 18 38 50.1 +1.5**
RUSJ S **Sn 18 39 46.9 +4.8**
GLVR Golovnino 4.63 227 ⇓ *i* PN **Pn 18 38 50.2 +0.2**
GLVR *i* S **Sn 18 39 45.1 +0.5**
GLVR pmax pmax
comp=Z,1μm,0.3s
GLVR pmax pmax
comp=N,55nm,0.1s
GLVR smax smax
comp=E,743nm,0.2s
GLVR smax smax
comp=N,906nm,0.3s
GLVR Golovnino 4.63 227 *i* P **Pn 18 38 50.5 +0.5**
GLVR AMB AMB 18 38 50.9
comp=N,120nm,0.3s
GLVR *i* S **Sn 18 39 45.5 +0.9**
GLVR A A 18 39 46.9
comp=N,910nm,0.4s
GLVR A A 18 39 46.9
comp=N,740nm,0.4s
JRA Rausu 4.69 231 *e*P **Pn 18 38 51.5 +0.6**
NEM2 Nemuro 2 4.80 223 *e*P **Pn 18 38 50.0 -2.1**
NEM2 *e*S **Sn 18 39 43.2 -5.3**
NMR Nemuro--Hokkai 4.80 223 ⇑ *i* PN **Pn 18 38 49.9 -2.3**
NMR *e*S **Sn 18 39 43.7 -4.9**
NMR Nemuro--Hokkai 4.80 223 *i* P **Pn 18 38 49.9 -2.3**
YSS Yuzh-Sakhalins 5.10 272 **Pn 18 38 56.3 +0.3**
YSS Yuzh-Sakhalins 5.10 272 *e*PN **Pn 18 38 56.7 +0.7**
YSS pmax pmax
comp=Z,60nm,0.8s
YSS Yuzh-Sakhalins 5.10 272 *e*P **Pn 18 38 57.4 +1.4**
YSS AMB AMB 18 38 58.0
comp=Z,50nm,0.6s
JNK Nakash 5.15 231 *e*P **Pn 18 38 56.5 -0.1**
JTKR Abashiri--Toko 5.35 238 *e*P **Pn 18 39 00.4 +1.1**
SKR Severo-Kuril's 5.38 44 ⇑ *i* PN **Pn 18 38 58.8 -0.7**
SKR *e*S **Sn 18 39 59.5 -2.5**
SKR pmax pmax
comp=Z,131nm,0.4s
SKR smax smax
comp=N,105nm,0.8s
SKR smax smax
comp=E,64nm,0.3s
SKR MLR MLR
comp=Z,100nm,18.0s
SKR Severo-Kuril's 5.38 44 *i* P **Pn 18 38 58.9 -0.6**
SKR AMB AMB 18 38 59.5
comp=Z,130nm,0.4s
SKR *e*S **Sn 18 39 58.3 -3.7**
SKR A A 18 40 03.8
comp=Z,130nm,0.2s
SKR A A 18 40 03.8
comp=Z,150nm,0.2s
AKK Akkeshi 5.49 226 *i* P **Pn 18 38 59.2 -1.8**
JAK Akkeshi 5.58 226 *e*P **Pn 18 39 00.2 -2.0**
JAK *e*S **Sn 18 40 00.9 -5.8**
UGL Uglegorsk 5.85 294 *e*P **Pn 18 39 07.4 +1.8**
JAR Ashorobuto 5.85 233 *e*P **Pn 18 39 06.1 +0.3**
JAR *e*S **Sn 18 40 11.9 -1.2**
JKA Kamikawa-asahi 6.06 245 **Pn 18 39 10.1 +1.7**
ASAJ Asahikawa 6.06 245 PN **Pn 18 39 10.1 +1.7**
JOB Onbets 6.08 230 *e*P **Pn 18 39 07.8 -0.9**
JOB *e*S **Sn 18 40 13.4 -5.1**
JKK2 Kamakawa 2 6.10 242 *e*P **Pn 18 39 10.4 +1.5**
PAU Pauzhetka 6.24 41 *e*P **Pn 18 39 09.1 -1.5**
PAU AMB AMB 18 39 10.4
comp=Z,340nm,0.5s
PAU *e*S **Sn 18 40 19.6 -2.3**
PAU A A 18 40 23.3
comp=Z,130nm,0.3s
PAU A A 18 40 23.3
comp=Z,160nm,0.3s
TYV Tymovskoe 6.32 311 *e*P **Pn 18 39 14.8 +3.2**
JCH Churui 6.54 231 *e*P **Pn 18 39 12.8 -1.8**
JCH *e*S **Sn 18 40 22.3 -6.8**
JAB Ashibetsu 6.62 241 *e*P **Pn 18 39 17.2 +1.5**
ERM Erimo 7.07 228 **Pn 18 39 20.1 -1.5**
ERM Erimo 7.07 228 *e i* PN **Pn 18 39 20.2 -1.3**
JNBK Urakawa-nobuka 7.09 231 *e*P **Pn 18 39 19.0 -2.8**
JEW Eniwo 7.46 240 **Pn 18 39 26.6 -0.1**
PEA0B Petropavlovsk- 7.80 35 **Pn 18 39 29.9 -1.1**
PEA0B Petropavlovsk- 7.80 35 PN **Pn 18 39 29.9 -1.1**
PETK Petropavlovsk- 7.80 35 P **Pn 18 39 29.6 -1.3**
comp=Z,220nm,0.5s,baz=188,slow=12,SNR=126
PETK S Sn 18 41 10.7 +12
comp=Z,0.9nm,0.5s,baz=215,slow=17,SNR=1.0
PETK Petropavlovsk- 7.80 35 **Pn 18 39 28.9 -2.0**
PET Petropavlovsk 8.13 39 **Pn 18 39 33.3 -1.9**
PET Petropavlovsk 8.13 39 *e*PN **Pn 18 39 33.6 -1.7**
PET *e*S **Sn 18 41 01.6 -5.1**
PET pmax pmax
comp=Z,19nm,0.5s
PET Petropavlovsk 8.13 39 *e*P **Pn 18 39 33.8 -1.5**
PET AMB AMB 18 39 34.8
comp=Z,70nm,0.4s
PET *e*S **Sn 18 41 05.0 -1.7**
NKL Nikolayevsk 8.70 319 *e*P **Pn 18 39 45.2 +2.6**
NKL AMB AMB 18 39 47.3
comp=Z,30nm,0.6s
JTM Tenmabayashi 9.04 230 Pn **Pn 18 39 42.6 -4.6**
JANG Nango 9.12 227 *e*P **Pn 18 39 43.5 -4.8**
JTH Tanohata 9.29 224 *e*P **Pn** 18 39 45.3 -5.1
JTH *e*S Sn 18 41 18.8 -16
TEY Ternei 9.67 263 ⇑ *e*PN **Pn 18 40 00.0 +4.7**
TEY *e* 18 41 36.4
TEY pmax pmax
comp=E,10.0nm,0.5s
TEY pmax pmax
comp=Z,20nm,0.5s
TEY Ternei 9.67 263 *e*P **Pn 18 39 56.5 +1.2**
JMM Marumori 11.45 221 **Pn 18 40 14.6 -3.7**
KBG Krutoberegovo 12.09 35 *e*P **Pn 18 40 24.7 -1.5**
KBG AMB AMB 18 40 25.5
comp=Z,40nm,0.6s
KLR Kul'dur 12.54 287 P **Pn 18 40 32.2 +0.1**
comp=Z,1.9nm,0.6s,baz=90,slow=13,SNR=7.3
KLR Kul'dur 12.54 287 ⇓ *i* PN **Pn 18 40 33.6 +1.5**
KLR pmax pmax
comp=Z,8.0nm,1.0s

KLR Kul'dur 12.54 287 *e*P **Pn 18 40 33.6 +1.5**
USA0B Ussuriysk Arra 13.06 264 P **Pn 18 40 39.4 +0.8**
USA0B Ussuriysk Arra 13.06 264 *ce*PN **Pn 18 40 39.6 +1.0**
USRK Ussuriysk Ar. 13.06 264 P **Pn 18 40 38.7 +0.1**
comp=Z,11nm,0.6s,baz=71,slow=12,SNR=19
USRK Ussuriysk Ar. 13.06 264 P **Pn 18 40 39.5 +0.9**
USRK Ussuriysk Ar. 13.06 264 PN **Pn 18 40 39.5 +0.9**
VLA Vladivostok 13.51 260 ⇓ *e*P **Pn 18 40 44.4 +0.1**
VLA Vladivostok 13.51 260 *e*P **Pn 18 40 44.4 +0.1**
MJA0 Matsu Arr-Jizo 13.71 225 *e*P **Pn 18 40 46.3 -0.5**
MJA0 pmax pmax
comp=Z,3.0nm,0.4s
MAJO Matsushiro 13.73 225 P **Pn 18 40 46.0 -1.0**
MAJO Matsushiro 13.73 225 P **Pn 18 40 46.1 -1.0**
MJAR Matsushiro Arr 13.73 225 P **Pn 18 40 46.4 -0.7**
comp=Z,3.6nm,0.5s,baz=28,slow=13,SNR=23
MDJ Mudanjiang 14.57 268 P **Pn 18 40 55.4 -1.9**
JGF Kuroka 14.89 225 P **Pn 18 41 01.3 -0.1**
INU Inuyama 15.26 225 P **Pn 18 41 05.8 -0.1**
SEY Seymchan 16.04 4 P **P 18 41 13.9 -0.6**
comp=Z,1.0nm,0.6s,baz=177,slow=11,SNR=6.3
SEY Seymchan 16.04 4 P **P 18 41 14.0 -0.6**
SEY Seymchan 16.04 4 *e*P **P 18 41 14.0 -0.6**
ZEA Zeya 16.09 303 *e*P **Pn 18 41 15.6 -0.2**
ZEA pmax pmax
comp=E,10.0nm,1.4s
ZEA pmax pmax
comp=N,10.0nm,1.0s
ZEA pmax pmax
comp=Z,10.0nm,1.3s
ZEA Zeya 16.09 303 *e*P **Pn 18 41 16.8 +1.0**
ZEA AMB AMB 18 41 18.2
comp=Z,10.0nm,0.8s
CN2 Changchun 17.66 269 *e*P **P 18 41 27.5 -5.0**
CN2 *es*P *s*P 18 42 23.5 -5.0
CN2 *e*S S 18 44 34.4 -11
CN2 pmax pmax
comp=Z,10.0nm,0.7s
SEHB SEOHWA 18.30 250 P **P 18 41 40.2 +0.5**
KSRS Korea Array 19.00 248 P **P 18 41 48.0 +0.9**
comp=Z,11nm,0.8s,baz=53,slow=11,SNR=11
KS19 Wonju Array Si 19.00 248 P **P 18 41 46.9 -0.3**
YAK Yakutsk 19.09 330 P **P 18 41 47.8 0.0**
comp=Z,4.0nm,0.5s,baz=341,slow=3.1,SNR=8.3
YAK Yakutsk 19.09 330 P **P 18 41 47.2 -0.6**
YAK Yakutsk 19.09 330 ⇓ *e*P **Pn 18 41 50.2 -0.7**
YAK pmax pmax
comp=Z,9.0nm,0.6s
YAK Yakutsk 19.09 330 *e*P **Pn 18 41 50.2 -0.7**
PYAG Pyongyang 19.50 255 P **P 18 41 49.4 -3.1**
SUJ Sinuiju 19.81 259 P **P 18 41 57.2 +1.4**
SUJ pP **Pn 18 42 01.0 +1.1**
SUJ AmB
comp=Z,781nm,2.9s
SUJ AMS AMS
comp=N,667nm,13.7s
SUJ AMS AMS
comp=E,133nm,2.7s
SUJ AMS AMS
comp=Z,121nm,2.5s
JTU Tsushima 20.01 239 P **P 18 41 59.3 +1.3**
TIXI Tiksi 26.71 345 P **P 18 42 59.3 -1.7**
comp=Z,0.6nm,0.3s,baz=273,slow=24,SNR=10
comp=Z,0.6nm,0.3s
TIXI Tiksi 26.71 345 IAmb IAmb 18 43 29.0
comp=Z,8.1nm,1.2s
TIXI Tiksi 26.71 345 ⇑ *e*P **P 18 42 59.4 -1.6**
TIXI pmax pmax
comp=Z,3.0nm,1.9s
H11N2 WAKE ISLAND Hy 30.41 148 T T 19 15 13.7
baz=336,slow=76,SNR=16
H11N1 WAKE ISLAND Hy 30.42 148 T T 19 15 18.6
baz=336,slow=76,SNR=12
H11N3 WAKE ISLAND Hy 30.43 148 T T 19 15 28.8
baz=336,slow=76,SNR=12
H11S1 WAKE ISLAND Hy 31.46 149 T T 19 16 20.6
baz=336,slow=76,SNR=38
H11S3 WAKE ISLAND Hy 31.47 149 T T 19 16 38.8
baz=336,slow=76,SNR=13
H11S2 WAKE ISLAND Hy 31.48 149 T T 19 16 33.1
baz=336,slow=76,SNR=11
CAST Castle Rocks 35.37 41 P **P 18 44 17.3 +0.5**
I21K Tanana 35.45 38 P **P 18 44 18.3 +0.9**
I21K IAmb IAmb 18 44 36.6
comp=Z,10nm,1.5s
BPAW Bear Paw Mtn. 35.85 40 P **P 18 44 21.0 +0.1**
BPAW IAmb IAmb 18 44 22.6
comp=Z,7.5nm,1.4s
MLY Manley 35.97 38 P **P 18 44 22.9 +1.0**
MLY IAmb IAmb 18 44 38.3
comp=Z,7.2nm,1.4s
CNPM China Poot 35.99 48 P **P 18 44 22.1 0.0**
SUA Susitna One 36.06 44 P **P 18 44 22.5 -0.3**
SUA IAmb IAmb 18 44 47.3
comp=Z,14nm,1.4s
TOLK Toolik Lake Re 36.61 32 P **P 18 44 27.8 +0.5**
WRH Wood River Hil 37.11 39 P **P 18 44 32.6 +1.1**
WRH IAmb IAmb 18 44 33.1
comp=Z,13nm,1.4s
SML Sawmill 37.18 44 P **P 18 44 32.5 +0.4**
SML IAmb IAmb 18 44 33.5
comp=Z,4.8nm,0.8s
CCB Clear Creek Bu 37.23 39 P **P 18 44 33.1 +0.7**
CCB IAmb IAmb 18 44 41.2
comp=Z,7.1nm,1.2s
POKR Poker Plat Res 37.37 38 P **P 18 44 32.8 -0.9**
POKR IAmb IAmb 18 44 41.6
comp=Z,8.3nm,0.9s
DHY Denali Highway 37.51 42 P **P 18 44 35.3 +0.2**
DHY IAmb IAmb 18 45 10.8
comp=Z,7.8nm,1.3s
HDA Harding Lake 37.61 39 P **P 18 44 35.5 -0.1**
HDA IAmb IAmb 18 44 39.2
comp=Z,12nm,1.4s
ILAR Eielson Array 37.62 39 P **P 18 44 35.9 +0.2**
comp=Z,2.1nm,0.9s,baz=278,slow=7.5,SNR=4.7
comp=Z,2.1nm,0.9s
ILAR Eielson Array 37.62 39 *e*P **P 18 44 36.3 +0.6**
ILAR pmax pmax
comp=Z,1.0nm,0.6s
SCM Sheep Creek Mo 37.65 44 P **P 18 44 36.5 +0.3**
SCM IAmb IAmb 18 45 09.2
comp=Z,16nm,1.4s
SCM Sheep Creek Mo 37.65 44 P **P 18 44 36.5 +0.3**
SCM pmax pmax
comp=Z,16nm,1.4s
J25K Salcha River, 38.28 39 P **P 18 44 41.6 +0.3**
J25K IAmb IAmb 18 45 06.8
comp=Z,8.8nm,1.4s
BMAR Burnt Mountain 38.45 34 P **P 18 44 43.7 +0.9**
RIDG Independent Ri 38.58 40 P **P 18 44 43.8 -0.1**
RIDG IAmb IAmb 18 44 46.2
comp=Z,12nm,1.4s
SCRK Sand Creek 38.94 40 P **P 18 44 46.4 -0.5**
VRDI Verde Repeater 39.58 44 P **P 18 44 51.8 -0.5**
VRDI IAmb IAmb 18 44 55.6
comp=Z,11nm,1.4s
L27K Beaver Creek, 40.02 41 P **P 18 44 57.3 +1.6**
L27K IAmb IAmb 18 44 58.1
comp=Z,3.4nm,0.5s
BCAR Beaver Creek A 40.04 41 P **P 18 44 57.4 +1.5**
M27K Edge Creek, AK 40.12 42 P **P 18 44 57.9 +1.3**
M27K IAmb IAmb 18 45 36.1
comp=Z,9.5nm,1.3s
ZALV Zalesovo Beam 40.85 305 PcP **PcP 18 46 59.5 +0.3**
comp=Z,0.6nm,0.6s,baz=69,slow=4.8,SNR=2.2
M30M Minto, Yukon 42.38 41 P **P 18 45 15.2 +0.2**
INK Inuvik 42.52 32 P **P 18 45 16.3 +0.4**
comp=Z,1.1nm,0.3s,baz=301,slow=12,SNR=6.3
comp=Z,1.1nm,0.3s
MK31 Makanchi Array 45.06 296 P **P 18 45 35.5 -0.9**
MK31 Makanchi Array 45.06 296 P **P 18 45 35.5 -0.9**
MK31 pmax pmax
comp=Z,1.0nm,0.6s
MKAR Makanchi Array 45.06 296 P **P 18 45 35.4 -1.0**
comp=Z,0.9nm,0.5s,baz=65,slow=7.5,SNR=17
MKAR pP **pP 18 46 18.6 +0.5**
comp=Z,1.7nm,1.0s,baz=70,slow=7.1,SNR=1.1
MKAR ScP **ScP 18 50 46.5 -0.5**
comp=Z,0.6nm,0.8s,baz=69,slow=4.8,SNR=2.4
comp=Z,0.9nm,0.5s
MAKZ Makanchi 45.24 296 P **P 18 45 37.0 -0.9**
MAKZ Makanchi 45.24 296 P **P 18 45 37.0 -0.9**
MAKZ pmax pmax
comp=Z,1.0nm,0.8s

KURK Kurchatov 45.57 302 P **P 18 45 39.1 -1.2**
KURK Kurchatov 45.57 302 ⇓ *e*P **P 18 45 38.9 -1.4**
KURK pmax pmax
comp=Z,2.0nm,0.7s
C36M Paulatuk 45.61 30 P **P 18 45 40.2 -0.2**
C36M IAmb IAmb 18 46 07.6
comp=Z,10nm,1.2s
CMAR Chiang Mai Arr 50.50 254 P **P 18 46 19.5 +1.0**
comp=Z,1.0nm,0.9s,baz=40,slow=7.7,SNR=4.6
comp=Z,1.0nm,0.9s
KDJ Kajisay 50.52 293 P **P 18 46 16.9 -1.7**
KDJ Kajisay 50.52 293 P **P 18 46 16.9 -1.7**
KDJ pmax pmax
comp=Z,1.0nm,0.6s
BBB Bella Bella 50.56 52 P **P 18 46 19.3 +0.8**
comp=Z,2.1nm,0.6s,baz=200,slow=14,SNR=4.7
comp=Z,2.1nm,0.6s
BBB Bella Bella 50.56 52 IAmb IAmb 18 46 34.4
comp=Z,14nm,1.1s
KRVT Keravat (AS076 51.09 178 P **P 18 46 23.7 +0.9**
comp=Z,11nm,0.7s,baz=315,slow=14,SNR=2.8
comp=Z,11nm,0.7s
RES Resolute Bay 51.25 18 P **P 18 46 23.2 -0.1**
comp=Z,1.3nm,0.8s,baz=296,slow=11,SNR=5.8
comp=Z,1.3nm,0.8s
RES Resolute Bay 51.25 18 IAmb IAmb 18 46 23.7
comp=Z,1.9nm,0.9s
RES Resolute Bay 51.25 18 P **P 18 46 23.2 -0.1**
RES pmax pmax
comp=Z,2.0nm,0.9s
YKA Yellowknife Ar 51.92 36 P **P 18 46 28.8 +0.3**
comp=Z,1.5nm,0.6s,baz=301,slow=7.0,SNR=7.7
comp=Z,1.5nm,0.6s
YKA Yellowknife Ar 51.92 36 *e*P **P 18 46 29.1 +0.7**
YKA pmax pmax
comp=Z,2.0nm,0.6s
TAPN Taplejung 52.10 271 *e*P **P 18 46 31.6 +1.0**
JIRN Jiri 52.94 272 *e*P **P 18 46 37.5 +0.6**
GUN Gumba 53.00 273 *e*P **P 18 46 37.6 +0.3**
RAMN Ramite 53.11 271 *e*P **P 18 46 38.2 +0.2**
DMN Daman 53.72 273 *e*P **P 18 46 42.7 +0.3**
GKN Gorkha 53.79 274 *e*P **P 18 46 43.1 +0.3**
KKAR Karatay Array 54.13 297 P **P 18 46 42.2 -2.7**
KKAR Karatay Array 54.13 297 P **P 18 46 42.2 -2.7**
DANN Dangsing 54.17 275 *e*P **P 18 46 46.7 +1.0**
PMG Port Moresby 56.20 184 P **P 18 47 00.7 +0.9**
comp=Z,11nm,0.9s,baz=133,slow=20,SNR=2.1
comp=Z,11nm,0.9s
PMG Port Moresby 56.20 184 P **P 18 47 00.7 +0.9**
PMG pmax pmax
comp=Z,23nm,1.1s
ABKAR Akbulak array 56.74 308 P **P 18 47 02.3 -1.0**
ABKAR Akbulak array 56.74 308 P **P 18 47 02.2 -1.1**
HNR Honiara 56.82 168 P **P 18 47 07.4 +3.2**
comp=Z,98nm,0.4s,baz=201,slow=22,SNR=7.0
HNR Honiara 56.82 168 P **P 18 47 08.8 +4.6**
I02E Swisshome, OR 57.29 59 P **P 18 47 08.7 +1.5**
PINE Pine Mountain 59.17 57 P **P 18 47 22.9 +2.3**
PINE IAmb IAmb 18 47 23.2
comp=Z,5.5nm,0.9s
L04D Klamath Falls 59.32 60 P **P 18 47 22.3 +0.8**
YBH Yreka Blue Hor 59.38 60 P **P 18 47 23.3 +1.4**
comp=Z,1.3nm,0.6s,baz=34,slow=9.6,SNR=5.2
comp=Z,1.3nm,0.6s
YBH Yreka Blue Hor 59.38 60 IAmb IAmb 18 47 29.8
comp=Z,6.0nm,1.4s
YBH Yreka Blue Hor 59.38 60 P **P 18 47 23.3 +1.4**
YBH pmax pmax
comp=Z,6.0nm,1.5s
K05A Summer Lake 59.84 58 P **P 18 47 26.8 +1.6**
K05A IAmb IAmb 18 47 58.2
comp=Z,11nm,1.3s
COEN Coen 60.98 188 P **P 18 47 34.3 +1.5**
PLID Pearl Lake 61.16 54 P **P 18 47 34.9 +0.7**
MTN Manton Dam 61.95 201 P **P 18 47 40.2 +0.9**
LRM Limekiln Ridge 62.63 51 P **P 18 47 45.4 +1.5**
FINES FINESS Array B 62.97 333 P **P 18 47 43.8 -1.7**
comp=Z,1.9nm,0.9s,baz=64,slow=6.3,SNR=2.1
FINES pP **pP 18 48 30.9 +0.9**
comp=Z,1.6nm,0.7s,baz=350,slow=4.6,SNR=3.0
comp=Z,1.9nm,0.9s
BOZ Bozeman (W) 63.21 51 P **P 18 47 48.6 +1.0**
BOZ IAmb IAmb 18 47 49.5
comp=Z,3.4nm,0.6s
BOZ Bozeman (W) 63.21 51 P **P 18 47 48.6 +1.0**
BOZ pmax pmax
comp=Z,3.0nm,0.6s
BMN Battle Mountai 63.43 58 P **P 18 47 50.0 +0.9**
BMN IAmb IAmb 18 47 51.0
comp=Z,2.1nm,0.6s
BMN Battle Mountai 63.43 58 P **P 18 47 50.0 +0.9**
BMN pmax pmax
comp=Z,2.0nm,0.6s
KVN Kaiserville 63.80 60 P **P 18 47 52.2 +0.6**
KVN IAmb IAmb 18 47 53.4
comp=Z,3.0nm,0.8s
KVN Kaiserville 63.80 60 P **P 18 47 52.2 +0.6**
KVN pmax pmax
comp=Z,3.0nm,0.8s
OBN Obninsk 63.98 324 *e*P **P 18 47 52.7 +0.5**
OBN *e* 18 48 26.0
OBN *e**PP **pP 18 48 38.6 +1.8**
OBN *e**SP **sP 18 49 00.5 +2.7**
OBN pmax pmax
comp=Z,3.0nm,0.9s
OBN Obninsk 63.98 324 *e*P **P 18 47 52.7 +0.5**
NVAR Mina Array Bea 64.08 61 P **P 18 47 54.3 +0.8**
comp=Z,1.9nm,0.5s,baz=292,slow=7.1,SNR=12
comp=Z,1.9nm,0.5s
ELK Elko 64.37 57 P **P 18 47 56.1 +0.7**
comp=Z,0.6nm,0.5s,baz=273,slow=7.3,SNR=2.4
comp=Z,0.6nm,0.5s
KNRA Kununurra 65.28 203 P **P 18 48 01.2 +0.2**
R11A Troy Canyon, C 65.75 59 P **P 18 48 03.6 -0.6**
DUG Dugway, Tooele 66.12 56 P **P 18 48 07.3 +0.8**
DUG IAmb IAmb 18 48 08.4
comp=Z,7.7nm,1.4s
DUG Dugway, Tooele 66.12 56 P **P 18 48 07.3 +0.8**
DUG pmax pmax
comp=Z,8.0nm,1.5s
PD31 Pinedale Array 66.20 52 P **P 18 48 08.1 +1.0**
PD31 IAmb IAmb 18 48 08.6
comp=Z,2.3nm,0.6s
PDAR Pinedale Array 66.20 52 P **P 18 48 08.0 +0.8**
comp=Z,2.1nm,0.6s,baz=297,slow=1.0,SNR=16
comp=Z,2.1nm,0.6s
PDAR Pinedale Array 66.20 52 P **P 18 48 07.7 +0.6**
GWY Greenwater Val 66.53 62 P **P 18 48 10.1 +0.9**
GWY IAmb IAmb 18 48 10.7
comp=Z,3.1nm,0.7s
NOA NORSAR Array B 67.35 340 P **P 18 48 10.7 -3.1**
comp=Z,0.2nm,0.4s,baz=341,slow=6.9,SNR=4.1
NOA pP **pP 18 49 00.1 +1.4**
comp=Z,2.1nm,1.0s,baz=29,slow=6.5,SNR=5.2
NOA NORSAR Array B 67.35 340 *e*P **P 18 48 12.3 -1.4**
MSU Marysvale 67.62 57 P **P 18 48 17.4 +1.3**
MSU Marysvale 67.62 57 P **P 18 48 17.4 +1.3**
RDMU Red Mountain 67.69 54 P **P 18 48 17.9 +1.4**
RDMU IAmb IAmb 18 48 18.4
comp=Z,5.2nm,0.7s
MTPU Mount Pierson 67.94 58 P **P 18 48 19.9 +1.7**
WB0 Warramunga Arr 67.95 196 P **P 18 48 18.3 +0.5**
P18A Preston Nutter 67.96 55 P **P 18 48 19.6 +1.3**
P18A IAmb IAmb 18 48 47.5
comp=Z,7.1nm,1.4s
WR0 Warramunga Arr 68.11 196 P **P 18 48 19.1 +0.2**
WB2 Warramunga Arr 68.13 196 P **P 18 48 19.1 +0.1**
WB2 IAmb IAmb 18 48 28.3
comp=Z,7.8nm,1.1s
WRA Warramunga Arr 68.13 196 P **P 18 48 19.1 +0.1**
comp=Z,1.5nm,0.4s,baz=14,slow=6.7,SNR=35
comp=Z,1.5nm,0.4s
WRA Warramunga Arr 68.13 196 P **P 18 48 18.7 -0.3**
WRA Warramunga Arr 68.13 196 *e*P **P 18 48 19.5 +0.5**
WRA pmax pmax
comp=Z,2.0nm,0.4s
SRU San Rafael Swe 68.16 56 P **P 18 48 20.2 +0.9**
SRU IAmb IAmb 18 48 20.9
comp=Z,5.6nm,1.0s
SRU San Rafael Swe 68.16 56 P **P 18 48 20.2 +0.9**
SRU pmax pmax
comp=Z,6.0nm,1.0s
PV11 David Mesa, Pa 69.65 55 P **P 18 48 29.4 +0.8**
PV11 IAmb IAmb 18 48 32.4
comp=Z,5.1nm,1.0s
PV13 Radium Mtn., P 69.78 56 P **P 18 48 30.5 +1.1**

PV13					IAmb	IAmb	18 48 31.0	
	comp=Z,5.1nm,0.6s							
AKASG	**Malin Array Be**	**70.23**	**325**		P	**P**	**18 48 30.8**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=34,slow=5.6,SNR=2.3							
	comp=Z,0.2nm,0.3s							
AKASG	**Malin Array Be**	**70.23**	**325**		IAmb	IAmb	18 49 10.0	
	comp=Z,1.2nm,1.2s							
AS31	**Alice Springs**	**71.84**	**196**		P	**P**	**18 48 43.0**	**+1.5**
ASAR	**Alice Springs**	**71.84**	**196**		P	**P**	**18 48 43.1**	**+1.6**
	comp=Z,3.1nm,0.5s,baz=10,slow=5.8,SNR=103							
	comp=Z,3.1nm,0.5s							
ASAR	**Alice Springs**	**71.84**	**196**		P	**P**	**18 48 42.7**	**+1.2**
EIDS	**Eidsvold**	**72.01**	**179**		P	**P**	**18 48 44.3**	**+1.9**
EIDS					IAmb	IAmb	18 49 05.2	
	comp=Z,14nm,1.4s							
BRTR	**Keskin Array B**	**76.84**	**315**	*e*P		**P**	**18 49 08.1**	**-2.4**
STKA	**Stephens Creek**	**78.87**	**187**	P		**P**	**18 49 21.9**	**+0.5**
	comp=Z,2.6nm,0.6s,baz=354,slow=6.8,SNR=8.1							
	comp=Z,2.6nm,0.6s							
STKA	**Stephens Creek**	**78.87**	**187**	*e*P		**P**	**18 49 23.2**	**+1.9**
STKA					pmax	pmax		
	comp=Z,3.0nm,0.6s							
TX31	**Lajitas Ar. Si**	**79.10**	**59**	P		**P**	**18 49 23.9**	**+0.8**
TX32	**Lajitas Array**	**79.10**	**59**	P		**P**	**18 49 23.9**	**+0.8**
TX32					IAmb	IAmb	18 49 24.5	
	comp=Z,3.7nm,0.6s							
TXAR	**Lajitas Array**	**79.10**	**59**	P		**P**	**18 49 23.8**	**+0.7**
	comp=Z,3.2nm,0.5s,baz=297,slow=4.0,SNR=48							
	comp=Z,3.2nm,0.5s							
U40A	**Yellville**	**79.65**	**47**	P		**P**	**18 49 25.8**	**0.0**
U40A					IAmb	IAmb	18 49 26.4	
	comp=Z,6.2nm,0.7s							
TIR	**Tirane**	**81.61**	**325**	⇑P		**P**	**18 49 38.2**	**+2.1**
TIR	**Tirane**	**81.61**	**325**	⇑P		**P**	**18 49 38.2**	**+2.1**
GHAJ	**Ghor Haditha**	**82.39**	**308**	P		**P**	**18 49 39.4**	**-0.9**
APE	**Apeiranthos**	**82.77**	**318**	⇓P		P	18 49 49.1	+6.8
APE	**Apeiranthos**	**82.77**	**318**	⇓PKIKP		P	18 49 49.1	+6.8
SERG	**Sergoula**	**83.19**	**322**	P		P	18 49 52.2	+7.8
PVO	**Paravola**	**83.24**	**322**	P		P	18 49 51.3	+6.7
KARP	**Karpathos**	**83.26**	**317**	P		P	18 49 50.0	+5.2
SANT	**Santorini**	**83.38**	**318**	⇑P		P	18 49 50.8	+5.4
KLV	**Kalavryta, Ach**	**83.46**	**321**	P		P	18 49 51.6	+5.8
KRND	**KRANIDI**	**83.58**	**320**	P		**P**	**18 49 50.4**	**+4.1**
VLI	**Veliai**	**84.22**	**320**	P		**P**	**18 49 54.1**	**+4.5**
IDI	**Anoyia**	**84.53**	**318**	⇓P		**P**	**18 49 51.8**	**+0.5**
TIP	**Timpagrande**	**84.69**	**325**	⇑P		**P**	**18 49 49.4**	**-2.6**
MAW	**Mawson**	**131.37**	**211**	PKP		**PKPdf**	**18 56 27.4**	**-0.3**
	comp=Z,1.6nm,0.9s,baz=248,slow=3.9,SNR=3.9							
PLCA	**Paso Flores**	**150.21**	**93**	PKPbc		**PKiKP**	**18 57 08.5**	**+0.3**
	comp=Z,7.0nm,0.7s,baz=202,slow=1.0,SNR=15							
PLCA	**Paso Flores**	**150.21**	**93**			**PKiKP**	**18 57 08.2**	**-0.1**
PLCA	**Paso Flores**	**150.21**	**93**	PKIKP		**PKiKP**	**18 57 08.2**	**-0.1**

*IDC **10** 18:49:00.5±1.2, 6°.04S×148°.83E, h0km, mb3.8/4, mbtmp3.8/7, ML3.6/2, Error ellipse: s-maj=54.8km s-min=19.7km az=122.0*
*NEIC **10** 18:49:07.0±1.0, 6°.6S±0°.3×149°.4E±0°.3, h57km±13km, mb4.1/8, Error ellipse: s-maj=63.1km s-min=8.0km az=133.0*
ISC 10 18:49:05.6±0.7, 6°.4S±0°.2×149°.3E±0°.2, h50km, n21, σ1§01/24, mb4.2/5, New Britain region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.45**	**53**		Pn	**Pn**	**18 49 56.6**	**-0.3**
	0.9nm,0.3s,baz=249,slow=8.6,SNR=1.2							
KRVT					Sn	**Sn**	**18 50 35.6**	**-1.0**
	3.7nm,0.3s,baz=100,slow=23,SNR=3.5							
	5.0nm,0.5s							
RABL	**Rabaul**	**3.63**	**53**			**Pn**	**18 50 00.6**	**+1.2**
PMG	**Port Moresby**	**3.64**	**214**		Pn	**Pn**	**18 49 59.9**	**+0.4**
	22nm,0.4s,baz=37,slow=10,SNR=29							
PMG					Sn	**Sn**	**18 50 40.9**	**-0.4**
	27nm,0.3s,baz=341,slow=24,SNR=11							
PMG	**Port Moresby**	**3.64**	**214**			**Pn**	**18 50 00.4**	**+0.9**
PMG					Sn	**Sn**	**18 50 40.9**	**-0.4**
COEN	**Coen**	**9.61**	**218**		Pn	**Pn**	**18 51 21.4**	**+0.1**
MTN	**Manton Dam**	**18.97**	**249**		P	**Pn**	**18 53 24.4**	**+0.3**
WB0	**Warramunga Arr**	**19.63**	**226**		P	**Pn**	**18 53 31.2**	**-0.7**
WB0					IAmb	IAmb	18 53 47.4	
	comp=Z,6.1nm,0.9s							
WR0	**Warramunga Arr**	**19.65**	**225**		P	**P**	**18 53 31.1**	**+0.7**
WR0					IAmb	IAmb	18 53 39.1	
	comp=Z,8.1nm,1.1s							
WB2	**Warramunga Arr**	**19.77**	**226**		P	**P**	**18 53 32.1**	**+0.3**
WB2					IAmb	IAmb	18 53 33.6	
	comp=Z,4.7nm,0.6s							
WRA	**Warramunga Arr**	**19.78**	**226**		P	**Pn**	**18 53 32.9**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=51,slow=11,SNR=23							
	comp=Z,2.1nm,0.6s							
WRA	**Warramunga Arr**	**19.78**	**226**		P	**P**	**18 53 31.9**	**+0.1**
KNRA	**Kununurra**	**22.10**	**244**		P	**P**	**18 53 57.1**	**+0.2**
KNRA					IAmb	IAmb	18 54 22.0	
	comp=Z,31nm,1.4s							
AS31	**Alice Springs**	**22.64**	**219**		P	**P**	**18 54 02.1**	**-0.6**
ASAR	**Alice Springs**	**22.65**	**219**		P	**P**	**18 54 03.0**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=54,slow=9.4,SNR=13							
	comp=Z,0.5nm,0.8s							
ASAR	**Alice Springs**	**22.65**	**219**		P	**P**	**18 54 02.4**	**-0.3**
PEA0B	**Petropavlovsk-**	**59.70**	**6**		P	**P**	**18 59 07.0**	**+2.1**
PETK	**Petropavlovsk-**	**59.70**	**6**		P	**P**	**18 59 06.4**	**+1.5**
	comp=Z,0.9nm,0.5s,baz=155,slow=6.2,SNR=7.0							
	comp=Z,0.9nm,0.5s							
MKAR	**Makanchi Array**	**79.23**	**320**		P	**P**	**19 01 02.8**	**-2.8**
	comp=Z,4.3nm,0.8s,baz=129,slow=7.5,SNR=3.8							
	comp=Z,4.3nm,0.8s							
ILAR	**Eielson Array**	**84.97**	**23**		P	**P**	**19 01 35.9**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=240,slow=7.2,SNR=2.0							
	comp=Z,0.2nm,0.5s							
TORD	**Torodi Ar. Bea**	**147.35**	**284**	PKPbc		**PKPbc**	**19 08 45.6**	**+0.7**
	comp=Z,1.5nm,0.8s,baz=58,slow=3.0,SNR=7.6							
TORD	**Torodi Ar. Bea**	**147.35**	**284**			**PKPdf**	**19 08 42.2**	**-0.2**

*IDC **10** 18:52:02.8±0.3, 16°.51N×120°.98E, h0km, mb5.0/53, mbtmp5.0/55, ML4.2/2, MS4.8/4, Error ellipse: s-maj=11.5km s-min=7.2km az=80.0*
*MAN **10** 18:52:04.9, 16°.49N×120°.87E, h6km, mb5.6, ML4.6, MS4.9*
MAN INTENSITY V - AMBAGAUIO NUEVA VIZCAYA; INTENSITY IV - BAMBANG BAYOMBONG KAYAPA & ARITAO NUEVA VIZCAYA; LAMUT IFUGAO; INTENSITY II - SAGADA MOUNTAIN PROVINCE; SAN JACINTO PANGASINAN; BAGUIO CITY; INTENSITY I - MANAOAG PANGASINAN.
*MOS **10** 18:52:06.2±0.9, 16°.54N×121°.03E, h33km, mb5.4/57, Error ellipse: s-maj=7.0km s-min=3.8km az=117.0*
*NEIC **10** 18:52:08.5±2.1, 16°.55N±0°.06×121°.01E±0°.08, h37km±5km, mb5.1/240, Error ellipse: s-maj=11.2km s-min=8.9km az=83.0*
*BJI **10** 18:52:08.6±0.0, 16°.57N×121°.15E, h50km, mb4.7/72, mB5.1/46, ML4.4/1, Ms4.5/52, Ms7 4.3/52*
*DJA **10** 18:52:13.6±0.4, 17°N±2°×12°1E±°, h83km±4km, M4.9/73, mb5.0/73, mB5.3/20, MLv5.0/1, Mw(mB)4.7/20, MwMwp6.0/6, Mwp6.1/6*
ISC 10 18:52:07.5±0.3, 16°.51N±0°.03×120°.94E±0°.03, h29km±2km, h29km:pP-P, n915, σ1§43/896, mb5.1/262, MS4.5/21, 50C-67D, Luzon

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SMPP	**San Manuel, Pa**	**0.44**	**214**	⇓*e*P		**Pb**	**18 52 13.5**	**-3.4**
SAMP	**Sagada Mountai**	**0.56**	**357**	⇓*e*P		**Pb**	**18 52 16.1**	**-2.9**
CAUP	**Cauayan**	**0.95**	**63**	⇓*e*P		**Pn**	**18 52 24.0**	**-0.9**
BALP	**Baler**	**0.98**	**141**	⇓*e*P		**Pn**	**18 52 22.2**	**-3.2**
BOLP	**Bolinao**	**0.99**	**262**	⇓*e*P		**Pn**	**18 52 24.2**	**-1.2**
BOLP				*e*	S	**Sn**	**18 52 39.8**	**+1.3**
SIPP	**Brgy, Tapao**	**1.47**	**342**	⇑*i*P		**Pn**	**18 52 31.2**	**-0.9**
SIPP				*i*	S	Sb	18 53 02.9	+10
PALP	**Palanan**	**1.53**	**69**	⇓*e*P		**Pn**	**18 52 31.3**	**-1.5**
QVP	**Quezon City--P**	**1.88**	**178**	⇓*e*P		**Pn**	**18 52 37.3**	**-0.4**
QVP				*e*	S	**Sn**	**18 52 54.0**	**-6.5**
SGCP	**Gonzaga**	**2.02**	**31**	⇓*e*P		**Pn**	**18 52 40.2**	**+0.6**
MACP	**Maragondon, Ca**	**2.25**	**185**	⇓*e*P		**Pn**	**18 52 42.9**	**+0.1**
MACP				*e*	S	Sn	18 52 56.9	-13
TGY	**Tagaytay City**	**2.40**	**180**	Pg		Lg	**18 52 46.9**	**+2.0**
	412nm,0.3s,baz=351,slow=2.4,SNR=39							
TGY					Lg	Lg	18 53 18.2	
	1µm,0.3s,baz=181,slow=24,SNR=21							
TGY	**Tagaytay City**	**2.40**	**180**	⇓*e*P		**Pn**	**18 52 46.3**	**+1.4**
TGY				*e*	S	**Sb**	**18 53 19.5**	**+0.3**
JCNP	**Jose Panganiba**	**2.79**	**142**	⇓*e*P		**Pn**	**18 52 50.8**	**+0.6**
JCNP				*e*	S	**Sn**	**18 53 25.8**	**+2.9**
LUBP	**Lubang**	**2.84**	**194**	⇓*e*P		**Pn**	**18 52 50.5**	**-0.5**
LUBP				*e*	S	Sn	18 53 13.1	-11
GQP	**Guinayangan**	**2.97**	**150**	⇓*e*P		**Pn**	**18 52 53.2**	**+0.5**
GQP				*e*	S	**Sn**	**18 53 31.8**	**+4.3**
PGP	**Puerto Galera**	**3.00**	**180**	⇓*e*P		**Pn**	**18 52 53.1**	**0.0**
BOAC	**Boac**	**3.16**	**164**	⇓*e*P		**Pn**	**18 52 56.8**	**+1.4**
BOAC				*e*	S	**Sb**	**18 53 38.2**	**-2.9**
SCSP	**San Jose Seism**	**3.78**	**138**	⇓*e*P		**Pn**	**18 53 04.8**	**+1.0**
SJMP	**San Jose**	**4.03**	**177**	⇓*e*P		**Pn**	**18 53 09.1**	**+1.8**
PVCP	**Virac**	**4.25**	**133**	⇓*e*P		**Pn**	**18 53 09.9**	**-0.4**
PVCP				*e*	S	**Sn**	**18 54 04.8**	**+5.8**
RCP	**Roxas**	**5.23**	**160**	⇑*e*P		**Pn**	**18 53 26.3**	**+2.6**
JAP	**San Jose, Anti**	**5.82**	**170**	⇓*e*P		**Pn**	18 53 37.5	+5.6
TWG	**Pinlang**	**6.28**	**1**			**Pn**	**18 53 38.3**	**+0.1**
TPUB	**Ta-pu**	**6.76**	**358**			**Pn**	**18 53 45.3**	**+0.5**
TPUB	**Ta-pu**	**6.76**	**358**	P		**Pn**	**18 53 46.7**	**+1.9**
LLP	**Lapu-Lapu**	**6.83**	**154**	*e*P		**Pn**	**18 53 45.8**	**0.0**
YULB	**Yu-li**	**6.85**	**3**			**Pn**	**18 53 46.8**	**+0.7**
SSLB	**Suanglung**	**7.24**	**0**	Pn		**Pn**	**18 53 52.4**	**+1.0**
SSLB	**Suanglung**	**7.24**	**0**	P		**Pn**	**18 53 53.5**	**+2.1**
TBP	**Tagbilaran**	**7.36**	**157**	⇓*e*P		**Pn**	**18 53 55.0**	**+2.0**
NACB	**Ninganchiao**	**7.65**	**5**			**Pn**	**18 53 57.6**	**+0.6**
YHNB	**Yeheng**	**8.12**	**3**			**Pn**	**18 54 05.1**	**+1.5**
YHNB	**Yeheng**	**8.12**	**3**	P		**Pn**	**18 54 07.1**	**+3.5**
YOJ	**Yonaguni jima**	**8.14**	**13**	Pn		**Pn**	**18 54 05.0**	**+1.2**
YOJ	**Yonaguni jima**	**8.14**	**13**	P		**Pn**	**18 54 05.0**	**+1.2**
YOJ	**Yonaguni jima**	**8.14**	**13**	P		**Pn**	**18 54 05.9**	**+2.1**
KNMB	**Chin-men Tao**	**8.26**	**344**	Pn		**Pn**	**18 54 06.5**	**+1.1**
TATO	**Taipei**	**8.44**	**3**			**Pn**	**18 54 08.9**	**+1.2**
QZH	**Quanzhou**	**8.67**	**346**	⇑*i*P		Pn	18 54 15.5	+4.5
QZH				*e*	S	**Sn**	**18 55 48.9**	**+1.1**
QZH					LR	LR		
	comp=N,750nm,14.9s							
QZH					LR	LR		
	comp=E,840nm,17.9s							
QZH					LR	LR		
	comp=Z,1µm,16.0s							
CTBH	**Cotabato--PC H**	**9.79**	**160**	⇓*e*P		**Pn**	**18 54 29.3**	**+2.9**
KCP	**Kidapawan**	**10.28**	**156**	⇓*e*P		Pn	18 54 39.0	+5.7
DAV	**Davao City (W)**	**10.43**	**154**	Pn		**Pn**	**18 54 33.3**	**-1.9**
	9.6nm,0.3s,baz=233,slow=13,SNR=1.1							
	82nm,0.4s							
DAV	**Davao City (W)**	**10.43**	**154**	Pn		**Pn**	**18 54 38.0**	**+2.9**
QIZ	**Qiongzhong**	**10.86**	**285**	Pn		**Pn**	**18 54 41.0**	**0.0**
QIZ						**Sn**	**18 56 39.4**	**-2.4**
QIZ	**Qiongzhong**	**10.86**	**285**	P		**Pn**	**18 54 41.1**	**0.0**
QIZ				S		**Sn**	**18 56 39.6**	**-2.1**
QIZ					LR	LR		
	comp=N,900nm,13.5s							
QIZ					LR	LR		
	comp=E,1µm,23.9s							
QIZ					LR	LR		
	comp=Z,1µm,18.4s							
MYLDM	**Lahad Datu**	**11.52**	**192**	Pn		**Pn**	**18 54 53.9**	**+3.8**
JOW	**Kunigami**	**12.32**	**32**	Pn		**Pn**	**18 55 00.1**	**-0.9**
	comp=Z,1.4nm,0.3s,baz=222,slow=12,SNR=6.2							
	comp=Z,15nm,0.8s							
JOW	**Kunigami**	**12.32**	**32**			**Pn**	**18 54 59.8**	**-1.3**
JOW	**Kunigami**	**12.32**	**32**	P		**Pn**	**18 55 02.4**	**+1.4**
GULI	**GuiLin**	**13.18**	**313**	P		**Pn**	**18 55 13.0**	**+0.2**
SGSI	**Sangihe**	**13.52**	**160**	P		**P**	**18 55 23.5**	**-2.8**
	comp=Z,63nm,0.9s							
CNSH	**ChangSha**	**13.77**	**329**	⇓P		**Pn**	**18 55 24.1**	**+3.4**
CNSH				S		**Sn**	**18 57 54.4**	**+1.7**
CNSH					LR	LR		
	comp=Z,1µm,13.7s							
CNSH					LR	LR		
	comp=Z,650nm,13.3s							
CNSH					LR	LR		
	comp=Z,750nm,15.9s							
TOLI2	**Tolitoli**	**15.31**	**181**	P		**Pn**	**18 55 42.5**	**+0.8**
TOLI2	**Tolitoli**	**15.31**	**181**	P		**P**	**18 55 45.8**	**-0.3**
NJ2	**Nanjing**	**15.59**	**353**	⇓P		**P**	**18 55 47.3**	**-1.8**
NJ2					pmax	pmax		
	comp=Z,12nm,0.8s							
NJ2					LR	LR		
	comp=Z,890nm,17.8s							
NJ2					LR	LR		
	comp=Z,680nm,14.0s							
NJ2					LR	LR		
	comp=Z,1µm,17.7s							
MRSI	**Marisa**	**15.97**	**176**	P		**P**	**18 55 56.5**	**+3.0**
	comp=Z,711nmcomp=Z,54nm,0.8s							
MPSI	**Mapaga**	**16.11**	**184**	P		**P**	**18 55 56.3**	**+1.3**
	comp=Z,41nm,1.3s							
KMSI	**Cibinong**	**16.12**	**169**	P		**P**	**18 55 58.5**	**+3.3**
	comp=Z,83nm,0.9s							
SBUM	**Sibu**	**16.40**	**212**	Pn		**Pn**	**18 55 55.9**	**+0.2**
GYA	**Guiyang**	**16.55**	**309**	⇓P		**P**	**18 56 01.6**	**+1.6**
GYA				S		**S**	**18 59 10.4**	**-1.4**
GYA					pmax	pmax		
	comp=Z,24nm,1.0s							
GYA					LR	LR		
	comp=Z,820nm,18.9s							
GYA					LR	LR		
	comp=Z,520nm,22.3s							
GYA					LR	LR		
	comp=Z,1µm,16.4s							
TNTI	**Ternate**	**16.88**	**157**	P		**Pn**	**18 56 01.3**	**-0.5**
TNTI	**Ternate**	**16.88**	**157**	P		**Pn**	**18 56 01.1**	**-0.6**
TNTI	**Ternate**	**16.88**	**157**	P		**P**	**18 56 03.6**	**0.0**
ENH	**Enshi**	**17.24**	**325**			**Pn**	**18 56 06.8**	**+0.5**
JSU	**Suzuyama**	**17.26**	**28**			**Pn**	**18 56 04.9**	**-1.5**
APSI	**Ampana**	**17.33**	**178**	P		**P**	**18 56 14.4**	**+5.8**
	comp=Z,822nmcomp=Z,90nm,1.2s							
LBMI	**Labuha**	**18.23**	**159**	P		**P**	**18 56 22.8**	**+4.2**
	comp=Z,53nm,0.9s							
KSM	**Kuching**	**18.25**	**216**	P		**P**	**18 56 18.9**	**+0.1**
KSM	**Kuching**	**18.25**	**216**	P		**Pn**	**18 56 20.4**	**+1.7**
MTKI	**Muara Teweh, K**	**18.34**	**200**	P		**Pn**	**18 56 24.8**	**+4.9**
	comp=Z,26nm,0.7s							
STKI	**Sintang**	**18.82**	**211**	P		**Pn**	**18 56 27.5**	**+1.8**
	comp=Z,1µmcomp=Z,24nm,1.2s							
KMI	**Kunming**	**19.03**	**300**	⇑P		**Pn**	**18 56 31.8**	**+3.4**
KMI				pP		sP	18 56 39.3	-0.5
KMI					pmax	pmax		
	comp=Z,41nm,0.9s							
KMI					pmax	pmax		
	comp=Z,650nm,8.3s							
KMI					LR	LR		
	comp=Z,750nm,16.9s							
KMI					LR	LR		
	comp=Z,710nm,15.3s							
KMI					LR	LR		
	comp=Z,830nm,18.2s							
SANI	**Sanana**	**19.11**	**164**	P		**Pn**	**18 56 29.6**	**+0.4**
	comp=Z,82nm,0.9s							
SANI	**Sanana**	**19.11**	**164**	P		**Pn**	**18 56 29.5**	**+0.4**
TTSI	**Tana Toraja**	**19.47**	**183**	P		**Pn**	**18 56 37.2**	**+3.8**
	comp=Z,647nmcomp=Z,50nm,1.1s							
JTU	**Tsushima**	**19.48**	**21**			**P**	**18 56 31.9**	**-0.2**
JTU					IAmb	IAmb	18 56 39.1	
	comp=Z,115nm,0.8s							
LYN	**LuoYang**	**19.50**	**339**	*e*P		**Pn**	**18 56 35.1**	**+1.3**
LYN				S		**S**	**19 00 07.7**	**-3.4**
LYN				sS		sS	19 00 24.1	-0.2
LYN					pmax	pmax		
	comp=Z,40nm,0.9s							
LYN					pmax	pmax		
	comp=Z,680nm,9.0s							
LYN					LR	LR		
	comp=Z,900nm,17.9s							
LYN					LR	LR		
	comp=Z,930nm,20.6s							
LYN					LR	LR		
	comp=Z,870nm,18.8s							
NAWB	**Namwon**	**19.69**	**16**	P		**P**	**18 56 34.0**	**-0.4**
TIA	**Tai'an**	**19.91**	**351**	P		**Pn**	**18 56 39.0**	**+0.4**
TIA					pmax	pmax		
	comp=Z,24nm,0.8s							
TIA					pmax	pmax		
	comp=Z,110nm,4.4s							
TIA					LR	LR		
	comp=Z,900nm,23.5s							
TIA					LR	LR		
	comp=Z,500nm,12.8s							
TIA					LR	LR		
	comp=Z,650nm,14.2s							
SWI	**Sorong**	**20.05**	**148**	P		Pn	18 56 39.8	-0.5
	comp=Z,2µmcomp=Z,44nm,0.6s							
SIJI	**Sorong**	**20.05**	**148**	P		**P**	**18 56 38.2**	**-0.4**
	comp=Z,27nm,1.0s,baz=344,slow=12,SNR=11							
	comp=Z,27nm,1.0s							
SPSI	**Sidrap Palu**	**20.38**	**183**	P		Pn	18 56 44.9	+0.7
	comp=Z,43nm,1.2s							
PZH	**PanZhiHua**	**20.41**	**302**	P		Pn	18 56 46.1	+1.4
PZH				pP		sP	18 56 54.7	-0.1
PZH				PP		**PnPn**	**18 57 06.2**	**+6.1**
PZH				S		**S**	**19 00 28.6**	**-1.3**
PZH				sS		sS	19 00 40.9	-2.2
PZH					pmax	pmax		
	comp=Z,50nm,1.1s							
PZH					pmax	pmax		
	comp=Z,330nm,6.7s							
PZH					LR	LR		
	comp=Z,1µm,18.2s							
PZH					LR	LR		
	comp=Z,2µm,17.8s							
PZH					LR	LR		
	comp=Z,2µm,18.6s							
XAN	**Xi'an**	**20.53**	**330**	P		Pn	18 56 45.7	-0.2
XAN				pP		sP	18 56 56.7	+0.8
XAN				S		**S**	**19 00 33.4**	**+1.6**
XAN					pmax	pmax		
	comp=Z,86nm,1.1s							
XAN					pmax	pmax		
	comp=Z,670nm,7.7s							
XAN					LR	LR		
	comp=Z,470nm,15.3s							
XAN					LR	LR		
	comp=Z,700nm,17.3s							
XAN					LR	LR		
	comp=Z,860nm,17.2s							
TJN	**Taejon**	**20.59**	**15**	P		**P**	**18 56 43.1**	**-1.1**
TJN	**Taejon**	**20.59**	**15**	*c* P		**P**	**18 56 44.0**	**-0.2**
TJN	**Taejon**	**20.59**	**15**	P		**P**	**18 56 44.5**	**+0.3**
BBKI	**Banjar Baru**	**20.74**	**197**	P		Pn	18 56 48.7	+0.2
	comp=Z,63nm,0.9s							
BNSI	**Bone**	**20.80**	**182**	P		Pn	18 56 49.7	+0.6
	comp=Z,86nm,1.3s							
CM31	**Chiang Mai Arr**	**21.07**	**279**	P		**P**	**18 56 51.0**	**+1.5**
CMAR	**Chiang Mai Arr**	**21.07**	**279**	P		**P**	**18 56 49.3**	**-0.3**
	comp=Z,11nm,0.7s,baz=85,slow=8.9,SNR=53							
CMAR				PcP		**PcP**	**19 00 56.3**	**+0.6**
	comp=Z,1.2nm,0.7s,baz=105,slow=1.1,SNR=5.3							
CMAR					LR	LR	19 04 21.8	
	comp=Z,523nm,19.5s,baz=95,slow=35							
	comp=Z,11nm,0.7s							
CMAR	**Chiang Mai Arr**	**21.07**	**279**	P		**P**	**18 56 51.2**	**+1.7**
CMAR	**Chiang Mai Arr**	**21.07**	**279**	P		**P**	**18 56 51.2**	**+1.7**
CHTO	**Chiang Mai**	**21.08**	**280**	P		**P**	**18 56 51.2**	**+1.5**
CHTO	**Chiang Mai**	**21.08**	**280**	P		**P**	**18 56 51.2**	**+1.5**
CHTO					pmax	pmax		
	comp=Z,19nm,0.8s							
CHTO	**Chiang Mai**	**21.08**	**280**	P		**P**	**18 56 51.3**	**+1.6**
PBKI	**Pangkalan Bun**	**21.18**	**206**	P		**P**	**18 56 53.4**	**+2.7**
KSCHJ	**Chungju**	**21.22**	**16**	P		**P**	**18 56 50.2**	**-0.7**
CD2	**Chengdu**	**21.24**	**316**	P		**P**	**18 56 53.8**	**+2.5**
CD2				sP		sP	18 57 10.5	+6.9
CD2				sS		Sn	19 01 05.8	+12
CD2					pmax	pmax		
	comp=Z,190nm,0.9s							
CD2					LR	LR		
	comp=Z,90nm,11.4s							
CD2					LR	LR		
	comp=Z,790nm,15.2s							
CD2					LR	LR		
	comp=Z,910nm,18.0s							
MSAI	**Masohi**	**21.25**	**157**	P		**P**	**18 56 56.2**	**+4.7**
	comp=Z,380nmcomp=Z,18nm,0.8s							
AAI	**Ambon**	**21.32**	**160**	P		**P**	**18 56 55.9**	**+3.7**
	comp=Z,31µmcomp=Z,2µmcomp=Z,168nm,1.2s							
JHS	**Saijyo**	**21.39**	**28**	P		**P**	**18 56 52.9**	**0.0**
JHS				IAmb		IAmb	18 56 56.0	
	comp=Z,47nm,0.8s							
KAPI	**Kappang**	**21.42**	**183**	P		**P**	**18 56 53.4**	**+0.1**
	comp=Z,14nm,0.3s,baz=344,slow=5.6,SNR=11							
	comp=Z,14nm,0.3s							
KAPI	**Kappang**	**21.42**	**183**	P		**P**	**18 56 52.9**	**-0.4**
KAPI				IAmb		IAmb	18 57 02.6	
	comp=Z,230nm,1.6s							
KAPI	**Kappang**	**21.42**	**183**	P		**P**	**18 56 52.9**	**-0.4**
KAPI				pmax		pmax		
	comp=Z,230nm,1.7s							
KAPI	**Kappang**	**21.42**	**183**	P		**P**	**18 56 54.8**	**+1.5**
INCN	**Inchon**	**21.48**	**12**	P		**P**	**18 56 53.6**	**-0.2**
INCN	**Inchon**	**21.48**	**12**	P		**P**	**18 56 53.7**	**-0.2**
INCN					pmax	pmax		
	comp=Z,29nm,0.8s							
INCN	**Inchon**	**21.48**	**12**	P		**P**	**18 56 54.2**	**+0.4**
HNS	**HongShan**	**21.52**	**346**	⇓P		**P**	**18 56 56.9**	**+2.7**
HNS					pmax	pmax		
	comp=Z,36nm,1.0s							
BKSI	**Bulukumba**	**21.71**	**182**	P		**P**	**18 56 59.6**	**+3.2**
	comp=Z,35nm,0.9s							
KSAR	**Wonju Array Be**	**21.73**	**15**	P		**P**	**18 56 55.5**	**-1.0**
KSAR	**Wonju Array Be**	**21.73**	**15**	P		**P**	**18 56 55.5**	**-1.0**
KSRS	**Korea Array**	**21.75**	**15**	P		**P**	**18 56 56.5**	**-0.2**
	comp=Z,43nm,1.0s,baz=195,slow=10,SNR=91							
KSRS				PcP		**PcP**	**19 00 56.6**	**0.0**
	comp=Z,1.9nm,0.9s,baz=199,slow=2.0,SNR=3.7

BJI sP sP 18 57 38.5 +8.1
BJI pmax pmax
comp=Z,54nm,0.9s
BJI pmax pmax
comp=Z,460nm,3.9s
BJI LR LR
comp=Z,760nm,17.1s
BJI LR LR
comp=Z,580nm,17.8s
BJI LR LR
comp=Z,500nm,20.3s
JGF Kuroka 24.00 35 P **P 18 57 17.3 -2.4**
LZH Lanzhou 24.72 325 ⇑P **P 18 57 29.1 +2.6**
LZH sP sP 18 57 47.8 +8.5
LZH PP **PnPn 18 58 08.5 +9.5**
LZH sS sS 19 02 01.9 +0.3
LZH pmax pmax
comp=Z,140nm,1.2s
LZH pmax pmax
comp=Z,390nm,4.8s
LZH LR LR
comp=Z,770nm,12.5s
LZH LR LR
comp=Z,670nm,12.3s
LZH LR LR
comp=Z,940nm,14.6s
JMBI JAMBI 24.84 225 P **P 18 57 30.9 +3.4**
comp=Z,92nm,0.8s
MMRI Maumere 25.02 177 P **P 18 57 26.2 -3.0**
MMRI lAmb lAmb 18 57 49.7
comp=Z,158nm,1.7s
EDFI Ende, Flores 25.11 178 P **P 18 57 32.8 +2.7**
comp=Z,34nm,0.7s
MJAR Matsushiro Arr 25.15 34 P **P 18 57 29.4 -0.9**
comp=Z,4.5nm,0.8s,baz=201,slow=7.6,SNR=12
MJAR PcP **PcP 19 01 03.8 -0.1**
comp=Z,1.8nm,0.8s,baz=233,slow=4.2,SNR=4.2
comp=Z,4.5nm,0.8s
MJAR Matsushiro Arr 25.15 34 P **P 18 57 28.3 -2.0**
MJAR Matsushiro Arr 25.15 34 P **P 18 57 28.3 -2.0**
MJAR pmax pmax
comp=Z,5.0nm,0.9s
MJB9 Matsu-Tunnel 25.15 34 P **P 18 57 27.8 -2.5**
MJA0 Matsu Arr-Jizo 25.18 34 *e*P **P 18 57 28.8 -1.7**
MJA0 pmax pmax
comp=Z,5.0nm,0.8s
BKNI Bangkinang 25.37 233 P **P 18 57 32.4 0.0**
BKNI Bangkinang 25.37 233 P **P 18 57 33.3 +0.9**
comp=Z,2µmcomp=Z,220nm,1.0s
BKNI Bangkinang 25.37 233 P **P 18 57 33.4 +1.0**
SMPI Sarmi 25.42 135 P **P 18 57 35.6 +2.8**
comp=Z,24nm,1.5s
TSI Tuntungan 25.50 242 P **P 18 57 36.3 +2.7**
comp=Z,109nm,0.9s
HHC Hu-ho-hao-te 25.57 343 *e*P **P 18 57 36.7 +2.6**
HHC pmax pmax
comp=Z,61nm,1.1s
HHC pmax pmax
comp=Z,490nm,5.1s
HHC LR LR
comp=Z,710nm,17.1s
HHC LR LR
comp=Z,2µm,16.5s
HHC LR LR
comp=Z,3µm,15.9s
PSI Prapat 25.58 240 P **P 18 57 34.7 +0.3**
comp=Z,51nm,1.0s,baz=42,slow=5.7,SNR=24
comp=Z,51nm,1.0s
GMJI Gumukmas 25.72 197 P **P 18 57 36.7 +1.2**
comp=Z,35nm,1.5s
JYT Yasato 26.04 37 P **P 18 57 35.5 -2.8**
KCSI Kotacane, Aceh 26.17 243 P **P 18 57 38.5 -1.2**
comp=Z,48nm,1.0s
JSD Sado 26.31 32 P **P 18 57 37.2 -3.4**
SOEI Soe 26.31 173 P **P 18 57 41.6 +0.6**
SOEI lAmb lAmb 18 58 07.4
comp=Z,50nm,0.9s
SOEI Soe 26.31 173 P **P 18 57 44.0 +3.0**
comp=Z,39µmcomp=Z,60nm,1.3s
PPI Padang Panjang 26.36 232 P **P 18 57 42.5 +1.1**
LEM Lembang 26.67 211 P **P 18 57 44.3 -0.1**
comp=Z,27nm,1.0s,baz=37,slow=15,SNR=2.3
comp=Z,27nm,1.0s
BATI Baumata 26.69 174 P **P 18 57 44.3 0.0**
comp=Z,49nm,0.6s,baz=341,slow=2.2,SNR=9.4
BATI PcP **PcP 19 01 09.1 +1.4**
comp=Z,22nm,0.7s,baz=234,slow=5.4,SNR=2.6
comp=Z,49nm,0.6s
BATI Baumata 26.69 174 P **P 18 57 45.4 +1.1**
MNAI Manna 27.32 222 P **P 18 57 48.7 -1.3**
CN2 Changchun 27.47 7 *e*P **P 18 57 48.9 -2.1**
CN2 *es*P sP 18 58 10.8 +7.0
CN2 *e*S **S 19 02 23.1 -6.8**
CN2 *es*S sS 19 02 48.2 +3.4
CN2 pmax pmax
comp=Z,10.0nm,1.0s
GSI Gunungsitoli 27.53 239 P **P 18 57 50.0 -1.9**
GSI lAmb lAmb 18 57 52.4
comp=Z,68nm,0.9s
GSI Gunungsitoli 27.53 239 P **P 18 57 51.0 -0.9**
comp=Z,86nm,0.8s
GSI Gunungsitoli 27.53 239 P **P 18 57 51.8 -0.1**
JMM Marumori 27.53 36 P **P 18 57 48.1 -3.6**
JMM lAmb lAmb 18 57 53.7
comp=Z,33nm,0.8s
XLT XiLinHaoTe 27.61 352⇓ *i*P **P 18 57 57.0 +4.6**
XLT pP sP 18 58 07.6 +2.6
XLT sP pP 18 58 12.5 +11
XLT S **S 19 02 33.6 +1.3**
XLT sS sS 19 02 55.9 +8.8
XLT pmax pmax
comp=Z,67nm,1.1s
XLT pmax pmax
comp=Z,260nm,6.0s
XLT LR LR
comp=Z,100nm,16.8s
XLT LR LR
comp=Z,780nm,18.9s
XLT LR LR
comp=Z,1µm,22.3s
SISI Saibi 27.92 233 P **P 18 57 55.1 -0.2**
comp=Z,55nm,0.9s
SHL Shillong 28.52 293 P **P 18 58 00.6 -0.3**
SHL Shillong 28.52 293 P **P 18 58 00.6 -0.3**
SHL pmax pmax
comp=Z,17nm,0.8s
MDJ Mudanjiang 28.95 13 P **P 18 58 02.3 -2.0**
MDJ lAmb lAmb 18 58 10.7
comp=Z,32nm,0.8s
MDJ Mudanjiang 28.95 13 P **P 18 58 04.7 +0.4**
MDJ pmax pmax
comp=Z,45nm,0.9s
MDJ pmax pmax
comp=Z,160nm,3.6s
MDJ Mudanjiang 28.95 13 P **P 18 58 04.9 +0.6**
MDJ Mudanjiang 28.95 13 P **P 18 58 04.7 +0.4**
MDJ x x 18 58 09.1
MDJ pP **sP 18 58 16.1 -0.9**
USA0B Ussuriysk Arra 29.14 16 P **P 18 58 03.8 -2.1**
USA0B Ussuriysk Arra 29.14 16 P **P 18 58 03.8 -2.1**
USA0B pmax pmax
comp=Z,20nm,0.9s
USRK Ussuriysk Ar. 29.14 16 P **P 18 58 06.1 +0.1**
comp=Z,11nm,0.8s,baz=195,slow=11,SNR=9.6
comp=Z,11nm,0.8s
USRK Ussuriysk Ar. 29.14 16 P **P 18 58 03.5 -2.4**
USRK Ussuriysk Ar. 29.14 16 P **P 18 58 03.5 -2.4**
GTA Gaotai 29.33 325 ⇑P **P 18 58 09.4 +1.6**
GTA pP sP 18 58 23.6 +2.9
GTA sP pP 18 58 31.8 +15
GTA PcP **PcP 19 01 15.1 +1.1**
GTA pmax pmax
comp=Z,10.0nm,1.2s
BNX BinXian 29.64 9⇓ **P P 18 58 10.6 +0.3**
BNX pmax pmax
comp=Z,22nm,1.2s
BNX pmax pmax
comp=Z,120nm,5.9s
JTM Tenmabayashi 29.81 32 P P 18 58 05.9 -6.0
LSA Lhasa 30.28 301 P **P 18 58 17.6 +0.8**
LSA Lhasa 30.28 301 P **P 18 58 17.6 +0.8**
LSA pmax pmax
comp=Z,15nm,0.9s
LSA Lhasa 30.28 301 P **P 18 58 18.7 +1.9**
GOMU GeErMu 30.37 315 P **P 18 58 19.3 +1.9**
GOMU pmax pmax
comp=Z,8.0nm,1.0s
GOMU pmax pmax
comp=Z,92nm,4.9s
GOMU LR LR
comp=Z,880nm,16.7s
GOMU LR LR
comp=Z,380nm,13.1s
GOMU LR LR
comp=Z,280nm,15.5s
MTN Manton Dam 30.86 160 P **P 18 58 20.5 -0.9**
JEW Eniwo 31.55 30 P **P 18 58 24.6 -2.6**
HIA Hailar 32.68 359 *d* iP **P 18 58 37.7 +0.5**
HIA pmax pmax
comp=Z,15nm,1.0s
ODAN Odare 32.74 294 *e*P **P 18 58 39.4 +1.2**
comp=Z,27nm,0.8s
KNRA Kununurra 32.91 166 P **P 18 58 38.5 -0.8**
KNRA Kununurra 32.91 166 P **P 18 58 38.8 -0.5**
ULN Ulaanbaatar 33.29 343 P **P 18 58 42.1 -0.5**
ULN lAmb lAmb 18 58 44.9
comp=Z,22nm,1.2s
ULN Ulaanbaatar 33.29 343 P **P 18 58 42.1 -0.5**
ULN pmax pmax
comp=Z,22nm,1.2s
ULN Ulaanbaatar 33.29 343 P **P 18 58 44.0 +1.3**
ULN pP **sP 18 58 55.1 -0.3**
ULN sP pP 18 58 59.2 +7.5
RAMN Ramite 33.45 294 *e*P **P 18 58 45.8 +1.4**
comp=Z,83nm,0.7s
SONM Songino Array 33.45 342 P **P 18 58 44.8 +0.8**
comp=Z,8.3nm,0.8s,baz=164,slow=10.0,SNR=49
SONM PcP **PcP 19 01 23.8 -1.1**
comp=Z,2.6nm,0.9s,baz=161,slow=3.9,SNR=6.2
SONM ScP **ScP 19 05 09.4 +1.9**
comp=Z,0.3nm,0.5s,baz=156,slow=4.3,SNR=2.0
comp=Z,8.3nm,0.8s
SONM Songino Array 33.45 342 P **P 18 58 42.9 -1.2**
SONM lAmb lAmb 18 58 46.0
comp=Z,28nm,1.5s
SONM Songino Array 33.45 342 *e*P **P 18 58 45.0 +1.0**
SONM pmax pmax
comp=Z,11nm,0.9s
KLR Kul'dur 33.80 13 P **P 18 58 47.4 +0.5**
comp=Z,35nm,0.8s,baz=216,slow=6.8,SNR=115
KLR PcP **PcP 19 01 24.6 -1.0**
comp=Z,1.9nm,0.6s,baz=316,slow=2.5,SNR=4.5
comp=Z,35nm,0.8s
KLR Kul'dur 33.80 13 *c iP* **P 18 58 47.1 +0.2**
KLR pmax pmax
comp=Z,44nm,0.9s
JIRN Jiri 33.94 295 *e*P **P 18 58 50.2 +1.3**
comp=Z,60nm,0.7s
GUN Gumba 34.27 295 *e*P **P 18 58 52.9 +1.3**
comp=Z,109nm,0.9s
PKI Pulchoki 34.61 295 *e*P **P 18 58 55.1 +0.5**
comp=Z,51nm,1.0s
PKIN Phulchoki 34.62 295 *e*P **P 18 58 55.0 +0.4**
comp=Z,34nm,0.8s
KKN Kakani 34.76 295 *e*P **P 18 58 56.5 +0.7**
comp=Z,30nm,1.1s
DMN Daman 34.88 295 *e*P **P 18 58 57.6 +0.8**
YSS Yuzh-Sakhalins 35.33 26 P **P 18 58 58.2 -1.9**
YSS lAmb lAmb 18 59 02.1
comp=Z,44nm,1.1s
YSS Yuzh-Sakhalins 35.33 26 *d iP* **P 18 59 00.6 +0.5**
YSS pmax pmax
comp=Z,57nm,1.7s
GKN Gorkha 35.36 295 *e*P **P 18 59 01.3 +0.4**
comp=Z,81nm,0.9s
DANN Dangsing 36.19 296 *e*P **P 18 59 08.6 +0.5**
comp=Z,98nm,0.8s
KOLN Koldanda 36.22 295 *e*P **P 18 59 09.0 +0.7**
PMG Port Moresby 36.56 133 P **P 18 59 11.0 0.0**
PMG lAmb lAmb 18 59 19.0
comp=Z,26nm,1.0s
PMG Port Moresby 36.56 133⇑ *e*P **P 18 59 11.9 +0.9**
PMG pmax pmax
comp=Z,19nm,0.9s
ZAK Zakamensk 36.66 341 *e*P **P 18 59 10.0 -1.6**
ZAK pmax pmax
comp=Z,9.0nm,1.2s
ZAK pmax pmax
comp=Z,4.0nm,1.1s
RABL Rabaul 37.10 121 P **P 18 59 14.7 -1.0**
RABL Rabaul 37.10 121 P **P 18 59 16.2 +0.5**
COCO West Island 37.17 221 P **P 18 59 16.2 +0.1**
COCO West Island 37.17 221 P **P 18 59 16.2 +0.1**
COCO pmax pmax
comp=Z,532nm,1.8s
COEN Coen 37.41 143 P **P 18 59 17.6 -0.6**
MBWA Marble Bar 37.46 182 P **P 18 59 16.8 -1.7**
MBWA lAmb lAmb 18 59 23.4
comp=Z,36nm,1.2s
ZEA Zeya 37.47 6 *e*P **P 18 59 19.2 +0.9**
ZEA pmax pmax
comp=Z,10.0nm,1.0s
PSA00 Pilbara Seismi 37.87 182 P **P 18 59 19.4 -2.6**
PSA00 lAmb lAmb 18 59 26.9
comp=Z,30nm,1.1s
PSA00 Pilbara Seismi 37.87 182 P **P 18 59 19.6 -2.4**
PSA00 lAmb lAmb 18 59 23.9
comp=Z,12nm,1.1s
IRK Irkutsk 38.02 343 *e*P **P 18 59 22.8 -0.2**
IRK pmax pmax
comp=Z,27nm,1.6s
WB0 Warramunga Arr 38.40 159 P **P 18 59 23.8 -2.7**
WB0 lAmb lAmb 18 59 30.0
comp=Z,33nm,1.1s
MOY Mondy 38.50 340 *e*P **P 18 59 28.5 +1.3**
MOY pmax pmax
comp=Z,21nm,1.5s
WRAB Tennant Creek 38.54 159 P P 18 59 23.2 -4.5
WRAB Tennant Creek 38.54 159 *d iP* **P 18 59 26.6 -1.1**
WRAB pmax pmax
comp=Z,40nm,1.0s
WRAB Tennant Creek 38.54 159 P **P 18 59 26.8 -0.9**
WRAB Tennant Creek 38.54 159 P **P 18 59 26.8 -0.9**
WRA Warramunga Arr 38.55 160 P **P 18 59 26.8 -1.0**
comp=Z,21nm,0.8s,baz=338,slow=9.3,SNR=51
WRA PcP **PcP 19 01 39.7 -0.5**
comp=Z,2.0nm,0.7s,baz=346,slow=3.6,SNR=4.8
comp=Z,21nm,0.8s
WRA Warramunga Arr 38.55 160 P **P 18 59 24.2 -3.6**
WRA Warramunga Arr 38.55 160 P **P 18 59 24.2 -3.6**
WRA pmax pmax
comp=Z,1.0nm,1.1s
WB2 Warramunga Arr 38.55 160 P **P 18 59 25.5 -2.3**
WB2 lAmb lAmb 18 59 30.0
comp=Z,42nm,1.1s
WR0 Warramunga Arr 38.63 159 P **P 18 59 25.9 -2.6**
WR0 lAmb lAmb 18 59 30.6
comp=Z,36nm,1.1s
KNGR Kungurtug, Tuv 38.87 336⇓ *e*P **P 18 59 31.7 +1.4**
WMQ Urumqi 39.14 321 *e*P **P 18 59 33.8 +1.2**
WMQ LR LR
comp=Z,880nm,29.1s
WMQ LR LR
comp=Z,500nm,27.1s
WMQ LR LR
comp=Z,570nm,28.8s
PALK Pallekele 40.36 262 P **P 18 59 42.3 -0.8**
PALK Pallekele 40.36 262 P **P 18 59 42.3 -0.8**
PALK pmax pmax
comp=Z,136nm,1.9s
QIS Mount Isa 41.15 153 P **P 18 59 49.6 +0.2**
MTSU Mount Surprise 41.42 145 P **P 18 59 52.5 +0.8**
AS31 Alice Springs 41.90 162 P **P 18 59 54.5 -1.0**
ASAR Alice Springs 41.90 162 P **P 18 59 54.5 -1.0**
comp=Z,17nm,0.8s,baz=340,slow=7.0,SNR=204
ASAR PcP **PcP 19 01 50.4 -0.5**
comp=Z,1.2nm,0.7s,baz=341,slow=2.5,SNR=2.1
comp=Z,17nm,0.8s
ASAR Alice Springs 41.90 162 P **P 18 59 54.6 -0.9**
WRKA Warakurna 41.92 170 P **P 18 59 54.9 -0.8**
ZSN Zaisan 42.80 324 *e*P **P 19 00 02.3 -0.3**
ZSN Zaisan 42.80 324 *e*P **P 19 00 02.4 -0.3**
baz=324
MK31 Makanchi Array 43.95 322 P **P 19 00 12.0 +0.1**
MK31 Makanchi Array 43.95 322 P **P 19 00 12.0 +0.1**
MK31 pmax pmax
comp=Z,16nm,0.9s
MKAR Makanchi Array 43.95 322 P **P 19 00 12.9 +0.9**
comp=Z,15nm,0.8s,baz=119,slow=8.6,SNR=106
MKAR PcP **PcP 19 01 57.6 +0.1**
comp=Z,7.6nm,0.8s,baz=103,slow=4.2,SNR=11
comp=Z,15nm,0.8s
MKAR Makanchi Array 43.95 322 P **P 19 00 12.4 +0.5**
MKAR Makanchi Array 43.95 322 *e*P **P 19 00 13.1 +1.2**
MKAR pmax pmax
comp=Z,15nm,0.8s
CTA Charters Tower 44.06 145 P **P 19 00 13.7 +0.6**
comp=Z,15nm,0.8s,baz=317,slow=9.8,SNR=15
comp=Z,15nm,0.8s
CTA Charters Tower 44.06 145 P **P 19 00 14.0 +0.9**
CTAO Charters Tower 44.06 145 P **P 19 00 12.6 -0.5**
CTAO lAmb lAmb 19 00 16.4
comp=Z,34nm,1.2s
CTAO Charters Tower 44.06 145 P **P 19 00 12.6 -0.5**
CTAO pmax pmax
comp=Z,34nm,1.2s
CTAO Charters Tower 44.06 145 P **P 19 00 14.2 +1.1**
CTAO Charters Tower 44.06 145 P **P 19 00 14.1 +1.1**
CTAO pP **sP 19 00 25.6 -0.1**
SHLS Shalkode 44.07 316 *e*P **P 19 00 11.6 -1.5**
SHLS pmax pmax
comp=Z,16nm,1.1s
SHLS Shalkode 44.07 316 *e*P **P 19 00 11.6 -1.5**
comp=Z,16nm,1.1s,baz=316
PDGK Podgornoye 44.12 316 P **P 19 00 14.4 +0.9**
MAKZ Makanchi 44.14 322 P **P 19 00 13.9 +0.5**
MAKZ Makanchi 44.14 322 P **P 19 00 13.9 +0.5**
MAKZ pmax pmax
comp=Z,15nm,1.0s
MAKZ Makanchi 44.14 322 P **P 19 00 14.6 +1.1**
MAKZ x x 19 00 23.1
MAKZ pP **sP 19 00 25.9 -0.6**
MAKZ PP **PcP 19 01 58.3 +0.2**
SKR Severo-Kuril's 44.21 32 *d* **P 19 00 14.4 +0.5**
UZB Uzynbulak 44.36 316 *e*P **P 19 00 15.0 -0.5**
UZB Uzynbulak 44.36 316 *e*P **P 19 00 15.1 -0.5**
baz=316
PRZ Przheval'sk 44.52 315 P **P 19 00 16.7 -0.1**
PRZ lAmb lAmb 19 00 20.6
comp=Z,40nm,1.1s
PRZ PcP **PcP 19 01 59.6 -0.2**
PRZ Przheval'sk 44.52 315 P **P 19 00 16.7 -0.1**
PRZ 19 01 59.6
PRZ pmax pmax
comp=Z,40nm,1.1s
KPKS Kokpek 44.72 316 *e*P **P 19 00 17.9 -0.3**
KPKS pmax pmax
comp=Z,10.0nm,0.8s
KPKS Kokpek 44.72 316 *e*P **P 19 00 17.9 -0.3**
comp=Z,10nm,0.8s,baz=316
SATY Saty 44.74 315 *e*P **P 19 00 19.0 +0.5**
SATY pmax pmax
comp=Z,7.0nm,0.5s
SATY Saty 44.74 315 *e*P **P 19 00 19.1 +0.5**
comp=Z,6.8nm,0.5s,baz=315
ZHN Zhinishke 44.77 315 *e*P **P 19 00 16.8 -1.8**
ZHN Zhinishke 44.77 315 *e*P **P 19 00 16.9 -1.8**
baz=315
KDJ Kajisay 45.24 314 P **P 19 00 22.1 -0.4**
KDJ lAmb lAmb 19 00 25.4
comp=Z,20nm,1.0s
KDJ PcP **PcP 19 02 01.4 -0.9**
KDJ Kajisay 45.24 314 P **P 19 00 22.1 -0.4**
KDJ 19 02 01.4
KDJ pmax pmax
comp=Z,19nm,1.0s
KSH Kashi 45.25 310 P **P 19 00 26.5 +3.9**
KSH pP sP 19 00 36.0 +0.5
KSH pmax pmax
comp=Z,21nm,0.8s
KSH LR LR
comp=Z,390nm,14.8s
KSH LR LR
comp=Z,320nm,16.5s
KSH LR LR
comp=Z,420nm,15.8s
TDK Taldyqorghan 45.52 318 *e*P **P 19 00 25.3 +0.8**
TDK pmax pmax
comp=Z,19nm,0.5s
TDK Taldyqorghan 45.52 318 *e*P **P 19 00 25.3 +0.8**
comp=Z,19nm,0.5s,baz=318
MORW Morawa 45.56 186 P **P 19 00 24.1 -0.8**
MORW lAmb lAmb 19 00 26.3
comp=Z,16nm,0.9s
MDOK Medeo 45.70 315 *e*P **P 19 00 26.1 0.0**
MDOK Medeo 45.70 315 *e*P **P 19 00 26.1 0.0**
baz=315
TNSS Tian-Shan 45.72 315 *e*P **P 19 00 27.7 +1.1**
TNSS Tian-Shan 45.72 315 *e*P **P 19 00 27.8 +1.1**
baz=315
AAA Alma-Ata 45.81 315 *e*P **P 19 00 27.1 +0.2**
AAA Alma-Ata 45.81 315 *e*P **P 19 00 27.1 +0.2**
baz=315
YAK Yakutsk 45.88 6 P **P 19 00 26.6 -0.4**
comp=Z,17nm,0.8s,baz=210,slow=2.4,SNR=25
comp=Z,17nm,0.8s
YAK Yakutsk 45.88 6 **P 19 00 26.0 -1.0**
YAK Yakutsk 45.88 6 *e*P **P 19 00 25.9 -1.1**
YAK *e* 19 02 13.5
YAK *e*PPP PPP 19 02 55.9
YAK *e*S **S 19 07 10.9 +1.6**
YAK *e*SS **pS 19 07 20.3 +0.2**
YAK *e*SSS SSS 19 11 29.3
YAK pmax pmax
comp=Z,47nm,1.1s
YAK pmax pmax
comp=N,22nm,1.3s
YAK pmax pmax
comp=E,8.0nm,1.4s
YAK pmax pmax
comp=Z,75nm,3.0s
YAK pmax pmax
comp=N,69nm,3.3s
YAK pmax pmax
comp=E,50nm,3.2s
YAK smax smax
comp=N,61nm,3.9s
YAK smax smax
comp=E,58nm,4.1s
YAK MLR MLR
comp=Z,527nm,18.0s
YAK MLR MLR
comp=N,350nm,17.0s
YAK MLR MLR
comp=E,319nm,17.0s
YAK Yakutsk 45.88 6 P **P 19 00 26.7 -0.3**
YAK x x 19 00 30.8
ULHL Ulahol 45.93 313 P **P 19 00 29.9 +1.8**
SNR=39
CHKK Chushkaly 46.00 316 *e*P **P 19 00 27.2 -1.1**
CHKK Chushkaly 46.00 316 *e*P **P 19 00 27.2 -1.1**
baz=316
BOOM Boomskoye usch 46.22 314 P **P 19 00 30.0 -0.3**
BOOM lAmb lAmb 19 00 36.4
comp=Z,14nm,1.0s
BOOM Boomskoye usch 46.22 314 P **P 19 00 30.0 -0.3**
BOOM pmax pmax
comp=Z,14nm,1.0s
OOD Oodnadatta 46.31 162 P **P 19 00 29.9 -0.9**
KUU Kurty 46.45 316 *e*P **P 19 00 31.8 0.0**
KUU pmax pmax
comp=Z,54nm,0.8s
KUU Kurty 46.45 316 *e*P **P 19 00 31.9 0.0**
comp=Z,54nm,0.8s,baz=316
PEA0B Petropavlovsk- 46.47 30 P **P 19 00 31.0 -0.8**
PEA0B Petropavlovsk- 46.47 30 *c iP* **P 19 00 32.6 +0.8**
PETK Petropavlovsk- 46.47 30 P **P 19 00 31.4 -0.5**
comp=Z,37nm,0.8s,baz=215,slow=9.0,SNR=83
comp=Z,37nm,0.8s
PETK Petropavlovsk- 46.47 30 P **P 19 00 29.6 -2.2**
PETK Petropavlovsk- 46.47 30 P **P 19 00 29.6 -2.2**
TKM2 Tokmak 2 46.61 314 P **P 19 00 35.0 +1.7**
SNR=14
TKM2 Tokmak 2 46.61 314 *i* P **P 19 00 34.0 +0.6**
TKM2 pmax pmax
comp=Z,10.0nm,0.6s
ZAA0 Zalesovo Array 46.69 331 P **P 19 00 31.8 -1.7**
ZAA0 PcP **PcP 19 02 05.5 -1.4**
ZALV Zalesovo Beam 46.69 331 P **P 19 00 33.1 -0.4**
comp=Z,6.6nm,0.8s,baz=125,slow=6.8,SNR=26
ZALV PcP **PcP 19 02 05.8 -1.0**
comp=Z,2.3nm,0.6s,baz=110,slow=4.4,SNR=5.4
comp=Z,6.6nm,0.8s
ZALV Zalesovo Beam 46.69 331 P **P 19 00 32.5 -1.0**
ZALV PcP **PcP 19 02 05.3 -1.5**
ZALV Zalesovo Beam 46.69 331 *e*P **P 19 00 34.0 +0.5**
ZALV pmax pmax

comp=Z,9.0nm,0.9s
PET Petropavlovsk 46.88 30 P **P 19 00 34.3 -0.7**
PET Petropavlovsk 46.88 30*ce*P **P 19 00 34.7 -0.3**
PET pmax pmax
comp=Z,49nm,1.0s
PET Petropavlovsk 46.88 30 P **P 19 00 35.2 +0.2**
PET Petropavlovsk 46.88 30 P **P 19 00 35.5 +0.6**
KBK Karagaybulak 46.97 313 P **P 19 00 38.3 +2.1**
SNR=23
UCH Uchtor 47.13 313 P **P 19 00 40.1 +2.4**
SNR=25
CHMS Chumysh 47.22 314 P **P 19 00 39.4 +1.5**
SNR=14
AAK Ala-Archa 47.28 313 P **P 19 00 39.5 +0.9**
comp=Z,4.8nm,0.5s,baz=84,slow=5.9,SNR=8.0
comp=Z,4.8nm,0.5s
AAK Ala-Archa 47.28 313*ce*P **P 19 00 40.1 +1.6**
AAK pmax pmax
comp=Z,10.0nm,1.0s
SGDS Sogindy 47.45 314 *e*P **P 19 00 39.0 -0.7**
SGDS Sogindy 47.45 314 *e*P **P 19 00 39.1 -0.7**
baz=314
USP Ospenovka 47.48 314 P **P 19 00 41.5 +1.5**
SNR=15
FORT Forrest 47.52 172 P **P 19 00 38.7 -1.5**
AML Almayashu 47.68 312 P **P 19 00 44.4 +2.4**
SNR=15
EKS2 Erkin-Say 47.79 313 P **P 19 00 44.4 +1.9**
SNR=14
KLBR Kellerberrin 47.93 184 P **P 19 00 42.3 -1.1**
INKA Innaminka 48.00 156 P **P 19 00 44.4 +0.4**
KURK Kurchatov 48.01 325 P **P 19 00 44.1 +0.3**
KURK Kurchatov 48.01 325*c i*P **P 19 00 44.7 +0.9**
KURK pmax pmax
comp=Z,51nm,0.8s
KURK Kurchatov 48.01 325 P **P 19 00 44.8 +0.9**
KURBB Kurchatov Arra 48.02 325 P **P 19 00 44.8 +0.9**
comp=Z,28nm,0.8s,baz=121,slow=8.3,SNR=18.2
KURBB PcP **PcP 19 02 11.4 -0.2**
comp=Z,4.0nm,0.8s,baz=120,slow=3.5,SNR=3.4
comp=Z,28nm,0.8s
KURBB Kurchatov Arra 48.02 325 P **P 19 00 44.3 +0.4**
MA2 Magadan 48.19 20 P **P 19 00 44.5 -0.6**
comp=Z,23nm,1.0s,baz=196,slow=7.6,SNR=4.4
comp=Z,23nm,1.0s
MA2 Magadan 48.19 20*d i*P **P 19 00 44.4 -0.7**
MA2 pmax pmax
comp=Z,38nm,1.2s
MULG Mulgathing 48.21 165 P **P 19 00 44.5 -1.1**
DRK Karamyk 48.35 308 P **P 19 00 47.1 +0.1**
DRK IAmb IAmb 19 00 49.8
comp=Z,23nm,0.8s
BTLS Baital 48.40 316 *e*P **P 19 00 46.8 -0.1**
BTLS pmax pmax
comp=Z,7.0nm,0.6s
BTLS Baital 48.40 316 *e*P **P 19 00 46.9 -0.1**
comp=Z,6.6nm,0.6s,baz=316
QLP Quilpie 48.45 152 P **P 19 00 47.5 0.0**
RK1H Rockhampton Ha 49.07 143 P **P 19 00 52.8 +0.5**
BTK Batken 49.22 309 P **P 19 00 54.3 +0.8**
BTK IAmb IAmb 19 00 56.6
comp=Z,17nm,1.1s
BTK Batken 49.22 309 P **P 19 00 54.3 +0.8**
BTK pmax pmax
comp=Z,17nm,1.1s
LCRK Leigh Creek 49.56 160 P **P 19 00 55.2 -0.8**
KBL Kabul 49.60 301 P **P 19 00 55.9 -0.7**
KBL IAmb IAmb 19 00 58.8
comp=Z,13nm,0.8s
KBL Kabul 49.60 301 P **P 19 00 55.9 -0.7**
KBL pmax pmax
comp=Z,13nm,0.8s
CHGR Chuyangaron 50.18 307 P **P 19 01 00.7 -0.1**
CHGR Chuyangaron 50.18 307 P **P 19 01 00.7 -0.1**
CHGR pmax pmax
comp=Z,55nm,0.8s
KK31 Karatay Array 50.21 313 IAmb IAmb 19 01 02.9
comp=Z,23nm,0.8s
KK31 Karatay Array 50.21 313 *i* P **P 19 01 01.6 +0.7**
KKAR Karatay Array 50.21 313 P **P 19 01 01.1 +0.2**
KKAR Karatay Array 50.21 313 P **P 19 01 01.6 +0.7**
KKAR IAmb IAmb 19 01 02.9
comp=Z,23nm,0.8s
KKAR Karatay Array 50.21 313 P **P 19 01 01.1 +0.2**
IUG luzhnay 50.30 311 *e*P **P 19 01 01.9 +0.2**
IUG luzhnay 50.30 311 *e*P **P 19 01 02.0 +0.2**
baz=311
RMQ Roma 50.58 147 P **P 19 01 03.1 -0.6**
OTUK Ortayu 50.64 320 P **P 19 01 04.6 +0.5**
EIDS Eidsvold 50.94 144 P **P 19 01 05.7 -0.8**
EIDS IAmb IAmb 19 01 08.0
comp=Z,14nm,0.9s
EIDS Eidsvold 50.94 144 P **P 19 01 06.3 -0.2**
BRZS Berezniki 51.10 322 *e*P **P 19 01 07.1 -0.3**
BRZS Berezniki 51.10 322 *e*P **P 19 01 07.2 -0.3**
baz=322
BBOO Buckleboo 51.13 164 P **P 19 01 06.8 -1.0**
SEY Seymchan 51.27 18 P **P 19 01 09.2 +0.7**
comp=Z,18nm,0.7s,baz=222,slow=6.4,SNR=56
comp=Z,18nm,0.7s
SEY Seymchan 51.27 18*c i*P **P 19 01 09.5 +1.0**
SEY pmax pmax
comp=Z,21nm,0.8s
STKA Stephens Creek 52.03 158 P **P 19 01 13.6 -1.0**
comp=Z,14nm,0.8s,baz=334,slow=7.6,SNR=9.0
comp=Z,14nm,0.8s
STKA Stephens Creek 52.03 158 P **P 19 01 13.6 -1.0**
STKA Stephens Creek 52.03 158 P **P 19 01 13.6 -1.0**
STKA pmax pmax
comp=Z,3.0nm,0.9s
STKA Stephens Creek 52.03 158 P **P 19 01 13.5 -1.0**
NAPP Napperby 52.08 162 P **P 19 01 14.4 -0.5**
HTT Hallett 52.55 161 P **P 19 01 17.7 -0.7**
CMSA Cobar Meteorol 53.36 154 P **P 19 01 24.8 +0.4**
DGAR Diego Garcia 53.53 247*ce*P **P 19 01 28.4 +2.4**
DGAR pmax pmax
comp=Z,151nm,2.5s
BRVK Borovoye 53.68 325*c i*P **P 19 01 27.4 +0.9**
BRVK pmax pmax
comp=Z,27nm,1.0s
BRVK Borovoye 53.68 325 P **P 19 01 27.6 +1.1**
BRVK x x 19 01 35.0
BRVK pP **sP 19 01 39.7 +0.1**
TWOA Tennyson Woods 53.93 162 P **P 19 01 28.2 -0.3**
HRA Herat 55.18 301 P **P 19 01 37.2 -0.8**
HRA IAmb IAmb 19 01 40.0
comp=Z,24nm,1.5s
HRA PcP **PcP 19 02 38.5 -0.4**
TIXI Tiksi 55.33 3 P **P 19 01 37.1 -1.0**
comp=Z,9.7nm,0.9s,baz=97,slow=21,SNR=51
comp=Z,9.7nm,0.9s
TIXI Tiksi 55.33 3 P **P 19 01 37.1 -1.0**
TIXI IAmb IAmb 19 01 38.6
comp=Z,20nm,1.1s
TIXI Tiksi 55.33 3*c i*P **P 19 01 37.2 -1.0**
TIXI pmax pmax
comp=Z,33nm,1.7s
TIXI Tiksi 55.33 3 P **P 19 01 37.6 -0.5**
TIXI pP **sP 19 01 50.5 -0.6**
NRIK Noril'sk 56.74 346 P **P 19 01 47.9 -0.4**
comp=Z,56nm,0.9s,baz=134,slow=7.0,SNR=53
NRIK PKKP **PKKPdf 19 23 24.8 +2.7**
comp=Z,2.7nm,0.5s,baz=96,slow=4.6,SNR=3.8
comp=Z,56nm,0.9s
NRIK Noril'sk 56.74 346 *e*P **P 19 01 48.7 +0.4**
NRIK pmax pmax
comp=Z,56nm,0.9s
CAN Canberra 58.02 153 P **P 19 01 57.3 -0.5**
CNB Canberra Magne 58.17 153 P **P 19 01 58.7 -0.2**
WSAR Wadi Sarin 58.61 287 P **P 19 02 01.0 -1.3**
comp=Z,3.0nm,0.6s,baz=170,slow=5.0,SNR=4.3
comp=Z,3.0nm,0.6s
GEYT Alibeck 58.71 305 P **P 19 02 03.5 +0.7**
comp=Z,18nm,0.9s,baz=238,slow=17,SNR=20
comp=Z,18nm,0.9s
GEYT Alibeck 58.71 305 IAmb IAmb 19 02 05.7
comp=Z,24nm,1.1s
AB31 Akbulak array 58.79 318 *i* P **P 19 02 03.5 +0.5**
DZM Mont Dzumac 58.80 129 P **P 19 02 03.3 -0.3**
comp=Z,9.2nm,0.9s,baz=243,slow=10,SNR=6.4
comp=Z,9.2nm,0.9s
DZM Mont Dzumac 58.80 129 IAmb IAmb 19 02 07.5
comp=Z,37nm,1.5s
BILL Bilibino 58.98 18 P **P 19 02 03.8 -0.2**
BILL IAmb IAmb 19 02 05.2
comp=Z,21nm,0.8s
BILL Bilibino 58.98 18*d i*P **P 19 02 03.9 -0.1**
BILL *e**PP sP 19 02 18.4 +1.2
BILL *e* 19 02 52.9
BILL *e* 19 04 15.3
BILL *e*PPP PPP 19 05 35.8
BILL pmax pmax
comp=Z,46nm,1.7s
BILL MLR MLR
comp=Z,626nm,17.0s
BILL Bilibino 58.98 18 P **P 19 02 04.2 +0.2**
SVE Sverdlovsk 60.18 327*de*P **P 19 02 13.2 +0.7**
SVE pmax pmax
comp=Z,79nm,0.9s
AKTO Aktyubinsk 60.24 319 P **P 19 02 13.4 +0.4**
comp=Z,28nm,0.8s,baz=94,slow=8.7,SNR=30
comp=Z,28nm,0.8s
AKTO Aktyubinsk 60.24 319 P **P 19 02 12.8 -0.2**
ARU Arti 61.19 326 P **P 19 02 19.3 -0.1**
comp=Z,35nm,0.7s,baz=123,slow=1.3,SNR=34
comp=Z,35nm,0.7s
ARU Arti 61.19 326 P **P 19 02 18.4 -1.0**
ARU Arti 61.19 326*c i*P **P 19 02 19.3 -0.1**
ARU *e**PP sP 19 02 34.0 +1.4
ARU 19 03 02.4
ARU 19 04 31.6
ARU S **S 19 10 35.8 -1.2**
ARU 19 11 58.2
ARU pmax pmax
comp=Z,47nm,0.8s
ARU Arti 61.19 326 P **P 19 02 19.6 +0.2**
ARU sP **sP 19 02 36.3 +3.8**
NIKH Nikolski High 65.08 39 P **P 19 02 44.4 -0.8**
baz=264
KIRV Kirov 66.43 327 P **P 19 02 54.0 +0.2**
comp=Z,62nm,0.8s,baz=210,slow=0.8,SNR=22
comp=Z,62nm,0.8s
KIRV Kirov 66.43 327*c i*P **P 19 02 53.8 0.0**
BELG Belogornoye 66.92 320 P **P 19 02 56.1 -1.0**
comp=Z,94nm,0.9s,baz=130,slow=0.9,SNR=19
comp=Z,94nm,0.9s
BELG Belogornoye 66.92 320*c i*P **P 19 02 57.1 0.0**
BELG pmax pmax
comp=Z,20nm,1.0s
TNA Tin City 67.30 25 P **P 19 02 58.9 -0.4**
baz=260
GROC Groznyy 68.13 310 *e*P **P 19 03 06.0 +1.1**
GROC *e**PP **sP 19 03 16.5 -1.6**
GROC *e**SP pP 19 03 22.2 +7.7
GROC *e* 19 03 30.2
GROC pmax pmax
comp=Z,28nm,0.9s
PRGR Permogore 68.63 330 *e*P **P 19 03 07.4 -0.3**
ZEI Tsey 69.54 310 *e*P **P 19 03 13.9 -0.1**
ZEI pmax pmax
comp=Z,29nm,1.4s
ONI Oni 69.88 310 IAmb IAmb 19 03 18.9
comp=Z,22nm,1.1s
SDPT Sand Point 70.10 37 P **P 19 03 16.9 0.0**
baz=270
KBZ Khabaz 70.20 311 P **P 19 03 18.4 +0.6**
comp=Z,14nm,1.0s,baz=88,slow=5.4,SNR=9.4
comp=Z,14nm,1.0s
KBZ Khabaz 70.20 311 *e*P **P 19 03 18.8 +1.1**
KBZ pmax pmax
comp=Z,14nm,1.0s
KVAR Kislovodsk Arr 70.33 311 P **P 19 03 20.1 +1.3**
comp=Z,7.5nm,0.8s,baz=89,slow=22,SNR=5.7
comp=Z,7.5nm,0.8s
KIV Kislovodsk 70.34 311 P **P 19 03 18.7 0.0**
KIV IAmb IAmb 19 03 20.7
comp=Z,28nm,0.9s
KIV Kislovodsk 70.34 311 *e*P **P 19 03 19.4 +0.7**
KIV pmax pmax
comp=Z,36nm,1.1s
KIV Kislovodsk 70.34 311 P **P 19 03 19.7 +1.0**
KIV x x 19 03 28.9
RAYN Ar Rayn 70.52 290 P **P 19 03 20.3 +0.1**
RAYN IAmb IAmb 19 03 22.4
comp=Z,28nm,1.0s
RAYN Ar Rayn 70.52 290 P **P 19 03 20.3 +0.1**
RAYN pmax pmax
comp=Z,28nm,1.0s
RAYN Ar Rayn 70.52 290 P **P 19 03 20.9 +0.8**
RAYN x x 19 03 29.9
VRH Novokhopyorsk 70.58 319 *e*P **P 19 03 19.7 -0.2**
VRH pmax pmax
comp=Z,50nm,0.8s
CHNA Chernabura Isl 70.62 37 P **P 19 03 18.5 -1.5**
baz=271
N16K Nishlik Lake 71.00 31 P **P 19 03 22.2 -0.2**
baz=270,SNR=5.5
O16K Kokwok River B 71.35 32 P **P 19 03 24.5 +0.1**
baz=271
KLMR Klimovskoe 71.56 329 *e*P **P 19 03 22.3 -3.3**
KLMR pmax pmax
comp=Z,49nm,1.2s
KLMR Klimovskoe 71.56 329 *e*P **P 19 03 22.3 -3.3**
KLMR AMP 19 03 26.6
comp=Z,49nm,1.2s
KLMR LQ LQ 19 31 19.1
KLMR LQ LQ 19 31 19.1
KLMR LR LR 19 36 01.2
O17K Koliganek Bris 71.85 32 P **P 19 03 27.3 -0.1**
baz=272
GCSA Galena City Sc 71.87 27 P **P 19 03 27.6 +0.2**
baz=270
A21K Barrow 72.06 20 IAmb IAmb 19 03 30.4
comp=Z,26nm,0.9s
A21K Barrow 72.06 20 P **P 19 03 28.8 +0.3**
baz=268
VORR Voronezh 72.12 320⇓ *i*P **P 19 03 29.8 +0.6**
VORR pmax pmax
comp=Z,51nm,1.5s
VSR Storozhevoye 72.18 319 *e*P **P 19 03 28.7 -0.9**
VSR pmax pmax
comp=Z,30nm,0.9s
P17K Kvichak River 72.20 32 P **P 19 03 29.7 +0.1**
baz=272
LPSR Galich'ya Gora 72.23 321 *e*P **P 19 03 29.8 -0.1**
LPSR pmax pmax
comp=Z,50nm,0.9s
TTA Tatalina 72.28 28 P **P 19 03 28.9 -1.2**
TTA Tatalina 72.28 28 P **P 19 03 28.9 -1.2**
TTA pmax pmax
comp=Z,11nm,1.1s
TTA Tatalina 72.28 28 P **P 19 03 30.6 +0.5**
baz=272
N18K Kilae Creek 72.42 31 P **P 19 03 30.8 -0.1**
baz=272
MOS Moscow 72.77 324 *e*P **P 19 03 32.4 -0.6**
MOS *e* 19 03 49.5
MOS pmax pmax
comp=Z,35nm,0.9s
O18K Koktuh Hills 72.80 32 P **P 19 03 33.8 +0.6**
baz=273,SNR=12
P18K Big Mountain, 72.82 32 P **P 19 03 33.0 -0.2**
baz=273
CHIR Chirikof Islan 72.84 36 P **P 19 03 33.1 -0.3**
baz=274
L19K White Mountain 72.85 29 P **P 19 03 33.6 +0.2**
L19K White Mountain 72.85 29 P **P 19 03 34.2 +0.8**
baz=273,SNR=8.5
J20K Nowinta River 73.07 27 IAmb IAmb 19 03 36.7
comp=Z,11nm,0.8s
J20K Nowinta River 73.07 27 P **P 19 03 35.0 +0.3**
baz=273,SNR=11
M19K Big River Lodg 73.08 30 P **P 19 03 35.3 +0.5**
baz=273
N19K Bonanza Creek 73.10 31 P **P 19 03 34.0 -1.0**
N19K IAmb IAmb 19 03 36.7
comp=Z,15nm,1.1s
N19K Bonanza Creek 73.10 31 P **P 19 03 35.5 +0.5**
baz=274,SNR=5.4
K20K Telida 73.15 28 P **P 19 03 36.1 +0.9**
baz=273,SNR=7.7
O19K Port Alsworth 73.22 31 P **P 19 03 36.2 +0.6**
baz=274
L20K Farewell, AK 73.29 29 P **P 19 03 36.3 +0.3**
baz=274
OBN Obninsk 73.42 323 P **P 19 03 36.4 -0.4**
comp=Z,2.3nm,0.4s,baz=64,slow=16,SNR=7.3
comp=Z,2.3nm,0.4s
OBN Obninsk 73.42 323*d i*P **P 19 03 37.0 +0.1**
OBN *e* 19 03 46.3
OBN *e**PP **PcP 19 03 51.3 -1.7**
OBN *e* 19 03 54.0
OBN *e* 19 06 21.5
OBN *e*PPP PPP 19 08 08.3
OBN pmax pmax
comp=Z,48nm,1.7s
OBN MLR MLR
comp=Z,334nm,22.0s
LVZ Lovozero 73.44 337⇓ *e*P **P 19 03 37.2 +0.4**
LVZ pmax pmax
comp=Z,44nm,1.3s
H21K Melozitna Rive 73.56 26 IAmb IAmb 19 03 39.6
comp=Z,20nm,0.9s
H21K Melozitna Rive 73.56 26 P **P 19 03 38.3 +0.8**
baz=274,SNR=25
Q19K Cape Douglas, 73.66 33 P **P 19 03 37.4 -0.9**
baz=275
M20K Styx River 73.68 29 P **P 19 03 38.2 -0.2**
baz=274,SNR=6.1
CHUM Lake Minchumin 73.89 27 P **P 19 03 39.4 -0.1**
baz=275
I21K Tanana 73.94 26 IAmb IAmb 19 03 41.8
comp=Z,18nm,0.9s
I21K Tanana 73.94 26 P **P 19 03 40.5 +0.8**
baz=274,SNR=20
RSO Redoubt South 73.98 31 P **P 19 03 39.2 -1.2**
ANN Anapa 74.00 313 *e*P **P 19 03 39.2 -1.3**
ANN *e**PP **sP 19 03 53.4 -0.4**
ANN *e* 19 06 27.5
ANN *e*S **SKiKP 19 13 09.2 +2.2**
ANN pmax pmax
comp=Z,66nm,1.3s
OHAK Old Harbor 74.01 34 IAmb IAmb 19 03 41.0
comp=Z,31nm,1.0s
OHAK Old Harbor 74.01 34 P **P 19 03 40.1 -0.2**
baz=276
PPLA Purkeypile 74.03 28 P **P 19 03 40.1 -0.4**
baz=275
CAST Castle Rocks 74.03 28 IAmb IAmb 19 03 41.9
comp=Z,25nm,0.8s
CAST Castle Rocks 74.03 28 P **P 19 03 40.8 +0.4**
baz=275,SNR=32
N20K Mount Spurr 74.18 30 P **P 19 03 40.8 -0.5**
baz=275
SPCR Spurr Chakacha 74.18 30 P **P 19 03 41.0 -0.3**
baz=275
KDAK Kodiak Island 74.33 34 P **P 19 03 41.6 -0.5**
comp=Z,8.0nm,0.5s,baz=276,slow=3.4,SNR=14
comp=Z,8.0nm,0.5s
KDAK Kodiak Island 74.33 34 P **P 19 03 41.5 -0.7**
KDAK IAmb IAmb 19 03 42.7
comp=Z,20nm,1.0s
KDAK Kodiak Island 74.33 34 P **P 19 03 41.5 -0.7**
KDAK pmax pmax
comp=Z,20nm,1.0s
KDAK Kodiak Island 74.33 34 P **P 19 03 41.5 -0.7**
baz=276
Q20K Shuyak Island 74.34 33 P **P 19 03 41.5 -0.7**
baz=276
SKT Skwentna 74.42 29 P **P 19 03 42.0 -0.7**
baz=276,SNR=5.2
BPAW Bear Paw Mtn. 74.46 27 IAmb IAmb 19 03 44.4
comp=Z,27nm,1.0s
BPAW Bear Paw Mtn. 74.46 27 P **P 19 03 43.2 +0.4**
baz=276,SNR=26
MLY Manley 74.47 26 IAmb IAmb 19 03 44.6
comp=Z,23nm,0.8s
MLY Manley 74.47 26 P **P 19 03 43.5 +0.5**
baz=276,SNR=33
COLD Coldfoot 74.48 24 P **P 19 03 43.2 +0.4**
COLD IAmb IAmb 19 03 44.8
comp=Z,11nm,0.8s
COLD Coldfoot 74.48 24 P **P 19 03 43.5 +0.6**
baz=276,SNR=7.9
KTH Kantishna Hill 74.54 28 IAmb IAmb 19 03 50.1
comp=Z,13nm,1.0s
TOLK Toolik Lake Re 74.57 22 P **P 19 03 43.7 +0.2**
TOLK IAmb IAmb 19 03 45.2
comp=Z,12nm,0.8s
TOLK Toolik Lake Re 74.57 22 P **P 19 03 43.8 +0.2**
baz=276,SNR=11
CNPM China Poot 74.83 32 IAmb IAmb 19 03 50.9
comp=Z,14nm,0.9s
TRF Thorofare Moun 74.83 28 P **P 19 03 44.6 -0.6**
TRF Thorofare Moun 74.83 28 P **P 19 03 44.3 -1.0**
baz=276
SUA Susitna One 74.85 30 IAmb IAmb 19 03 45.6
comp=Z,19nm,1.0s
SUA Susitna One 74.85 30 P **P 19 03 44.4 -0.8**
baz=277,SNR=11
H23K Yukon River 74.89 25 IAmb IAmb 19 03 47.5
comp=Z,24nm,0.9s
H23K Yukon River 74.89 25 P **P 19 03 45.7 +0.4**
baz=276,SNR=26
CUT Chulitna 74.97 29 P **P 19 03 45.9 +0.2**
baz=277
BRLK Bradley Lake 74.98 32 IAmb IAmb 19 03 52.5
comp=Z,15nm,0.9s
I23K Minto, Yukon-K 75.04 26 P **P 19 03 45.8 -0.3**
I23K IAmb IAmb 19 03 48.8
comp=Z,11nm,0.8s
I23K Minto, Yukon-K 75.04 26 P **P 19 03 46.2 +0.1**
baz=277,SNR=15
BRSE Bradley Lake S 75.06 32 P **P 19 03 46.2 -0.2**
baz=277
BWN Browne 75.11 27 IAmb IAmb 19 03 53.4
comp=Z,25nm,0.8s
NEA2 Nenana 75.23 26 IAmb IAmb 19 03 48.9
comp=Z,20nm,0.8s
NEA2 Nenana 75.23 26 P **P 19 03 47.3 0.0**
baz=277,SNR=24
RC01 Rabbit Creek A 75.38 30 P **P 19 03 46.9 -1.2**
baz=278
MCK McKinley 75.40 27 IAmb IAmb 19 03 49.6
comp=Z,26nm,0.9s
MCK McKinley 75.40 27 P **P 19 03 48.0 -0.3**
baz=278,SNR=10
RND Reindeer 75.48 28 IAmb IAmb 19 03 49.3
comp=Z,23nm,0.9s
MDM Murphy Dome 75.54 26 P **P 19 03 48.1 -1.0**
MDM IAmb IAmb 19 03 51.1
comp=Z,25nm,1.2s
H24K Noodor Dome 75.56 25 IAmb IAmb 19 03 51.2
comp=Z,14nm,0.8s
H24K Noodor Dome 75.56 25 P **P 19 03 49.2 0.0**
baz=278,SNR=17
PMR Palmer 75.60 30 IAmb IAmb 19 03 49.6
comp=Z,14nm,1.0s
PMR Palmer 75.60 30 P **P 19 03 48.6 -0.8**
baz=278
GHO Glory Hole Cre 75.67 29 IAmb IAmb 19 03 58.0
comp=Z,12nm,0.8s
WAT1 Susitna Watana 75.70 28 P **P 19 03 49.0 -1.1**
baz=278
COLA College 75.71 26*de*P **P 19 03 49.8 -0.2**
COLA pmax pmax
comp=Z,13nm,0.9s
CCB Clear Creek Bu 75.76 26 P **P 19 03 49.4 -0.9**
POKR Poker Plat Res 75.85 26 IAmb IAmb 19 03 52.5
comp=Z,14nm,0.9s
POKR Poker Plat Res 75.85 26 P **P 19 03 50.3 -0.5**
baz=279
BKZ Black Stump Fm 75.87 139 P **P 19 03 50.5 -0.8**
BKZ IAmb IAmb 19 03 52.4
comp=Z,30nm,0.8s
KNK Knik Glacier 75.95 30 IAmb IAmb 19 03 54.9
comp=Z,26nm,1.2s
KNK Knik Glacier 75.95 30 P **P 19 03 50.9 -0.6**
baz=279
SML Sawmill 75.95 29 IAmb IAmb 19 03 52.2
comp=Z,18nm,1.0s
SML Sawmill 75.95 29 P **P 19 03 51.1 -0.4**
baz=279,SNR=9.2
WAT6 Susitna Watana 76.10 28 P **P 19 03 52.2 -0.3**
baz=279,SNR=16
IL31 76.14 26 P **P 19 03 50.8 -1.6**
ILAR Eielson Array 76.14 26 P **P 19 03 51.3 -1.2**
comp=Z,4.7nm,0.9s,baz=292,slow=5.9,SNR=32
comp=Z,4.7nm,0.9s
ILAR Eielson Array 76.14 26 *e*P **P 19 03 54.2 +1.8**
ILAR pmax pmax
comp=Z,4.0nm,0.9s
HDA Harding Lake 76.17 27 P **P 19 03 52.3 -0.3**
baz=279,SNR=8.8
DHY Denali Highway 76.19 28 IAmb IAmb 19 03 59.0
comp=Z,12nm,0.8s
DHY Denali Highway 76.19 28 P **P 19 03 52.5 -0.5**

baz=279
PUL Pulkovo 76.20 329 ⇓ *e*P **P** **19 03 53.9 +1.0**
PUL pmax pmax
comp=Z,38nm,0.7s
M23K Glacier View 76.23 29 P **P** **19 03 52.8 -0.3**
baz=279,SNR=6.3
SIM Simferopol' 76.31 313 *e*P **P** **19 03 53.6 -0.2**
SIM *e* 19 04 05.5
SIM *e**PP **PcP** **19 04 08.0 +2.3**
SIM pmax pmax
comp=Z,72nm,0.8s
SCM Sheep Creek Mo 76.42 29 P **P** **19 03 52.9 -1.3**
SCM lAmb lAmb 19 03 55.1
comp=Z,30nm,0.9s
SCM Sheep Creek Mo 76.42 29 P **P** **19 03 52.9 -1.3**
SCM pmax pmax
comp=Z,30nm,0.9s
SCM Sheep Creek Mo 76.42 29 P **P** **19 03 53.7 -0.5**
baz=280,SNR=13
ARA0 ARCESS Array S 76.56 339 *e*P **P** **19 03 54.9 +0.2**
ARCES ARCESS Array B 76.56 339 P **P** **19 03 54.7 0.0**
comp=Z,9.2nm,0.9s,baz=74,slow=7.5,SNR=14
comp=Z,9.2nm,0.9s
ARCES ARCESS Array B 76.56 339 *e*P **P** **19 03 55.8 +1.1**
ARCES pmax pmax
comp=Z,9.0nm,0.9s
GLI Glacier Island 76.69 30 P **P** **19 03 55.1 -0.5**
baz=280
K24K Donnelly Dome 76.78 27 P **P** **19 03 55.9 -0.3**
baz=280,SNR=6.8
J25K Salcha River, 76.81 26 P **P** **19 03 55.7 -0.6**
baz=280,SNR=10
SPB2 Spitsbergen Ar 76.90 348 P **P** **19 03 54.4 -2.1**
SPA0 Spitsbergen Ar 76.90 348 *e*P **P** **19 03 57.6 +1.1**
M24K Tolsona, Glenn 76.90 29 P **P** **19 03 57.2 +0.2**
baz=280,SNR=5.5
PAX Paxson 77.07 28 P **P** **19 03 57.7 -0.1**
baz=281,SNR=9.0
KLU Kluting 77.14 29 P **P** **19 03 58.1 -0.1**
baz=281,SNR=7.1
RIDG Independent Ri 77.19 27 P **P** **19 03 56.4 -2.2**
RIDG lAmb lAmb 19 04 03.7
comp=Z,33nm,1.1s
RIDG Independent Ri 77.19 27 P **P** **19 03 58.1 -0.4**
baz=281,SNR=28
DIV Divide 77.28 30 lAmb lAmb 19 04 03.6
comp=Z,16nm,1.0s
HARP HAARP 77.32 28 P **P** **19 03 59.2 +0.1**
baz=281
EYAK Cordova Ski Ar 77.40 30 P **P** **19 03 59.5 -0.1**
baz=281
KTK1 Kautokeino 77.45 339 *e*P **P** **19 04 01.2 +1.4**
SCRK Sand Creek 77.52 27 P **P** **19 03 59.9 -0.5**
baz=282,SNR=13
DOT Dot Lake 77.56 27 lAmb lAmb 19 04 01.7
comp=Z,12nm,0.8s
J26L Joseph Creek 77.59 26 P **P** **19 03 59.3 -1.5**
J26L lAmb lAmb 19 04 04.2
comp=Z,10nm,0.8s
J26L Joseph Creek 77.59 26 P **P** **19 04 00.3 -0.5**
baz=282,SNR=15
BR131 Keskin Array S 77.60 308 ⇓ *i*P **P** **19 04 01.6 +0.2**
BRTR Keskin Array B 77.60 308 P **P** **19 04 01.2 -0.2**
comp=Z,2.8nm,0.8s,baz=126,slow=1.7,SNR=6.7
comp=Z,2.8nm,0.8s
N25K Chitina, Valde 77.73 29 P **P** **19 04 01.5 -0.2**
baz=282,SNR=5.3
BMRM Bremner River 77.86 30 lAmb lAmb 19 04 03.4
comp=Z,14nm,1.1s
BMRM Bremner River 77.86 30 P **P** **19 04 02.5 +0.2**
baz=282
FIA1 FINESS Array S 77.95 331 lAmb lAmb 19 04 03.8
comp=Z,17nm,0.8s
FINES FINESS Array B 77.95 331 P **P** **19 04 03.0 +0.3**
comp=Z,9.5nm,0.7s,baz=92,slow=6.1,SNR=21
comp=Z,9.5nm,0.7s
L26K Log Cabin Wild 78.00 28 P **P** **19 04 02.1 -0.9**
L26K Log Cabin Wild 78.00 28 P **P** **19 04 03.4 +0.4**
baz=283
GLB Gilahina Butte 78.14 29 lAmb lAmb 19 04 07.8
comp=Z,17nm,1.1s
VSU Vasula 78.27 328 *c i*P **P** **19 04 04.6 +0.1**
VSU pmax pmax
comp=Z,156nm,0.9s
VSU Vasula 78.27 328 *e*P **P** **19 04 05.2 +0.7**
JETT Jettan, Norway 78.29 339 *e*P **P** **19 04 05.3 +0.8**
M26K Nabesna, AK 78.30 28 lAmb lAmb 19 04 06.0
comp=Z,16nm,0.8s
M26K Nabesna, AK 78.30 28 P **P** **19 04 04.8 +0.1**
baz=283,SNR=14
K27K Chicken 78.33 27 P **P** **19 04 05.3 +0.5**
baz=284
VRDI Verde Repeater 78.35 29 P **P** **19 04 04.1 -1.1**
VRDI lAmb lAmb 19 04 07.7
comp=Z,29nm,1.6s
AKASG Malin Array Be 78.48 320 P **P** **19 04 05.4 -0.5**
comp=Z,9.7nm,0.8s,baz=54,slow=4.7,SNR=64
comp=Z,9.7nm,0.8s
AKASG Malin Array Be 78.48 320 lAmb lAmb 19 04 06.5
comp=Z,14nm,0.8s
AKASG Malin Array Be 78.48 320 *e*P **P** **19 04 05.3 -0.5**
AKASG pmax pmax
comp=Z,16nm,0.8s
AKBB Malin Array Si 78.48 320 lAmb lAmb 19 04 06.3
comp=Z,23nm,0.8s
AKBB Malin Array Si 78.48 320 *c i*P **P** **19 04 05.1 -0.7**
AKBB pmax pmax
comp=Z,27nm,0.9s
MNK Minsk 78.48 324 *i*P **P** **19 04 05.7 -0.1**
MNK *i**PP **sP** **19 04 20.1 +1.1**
MNK *i* 19 07 03.7
MNK *i*S **S** **19 13 59.1 -0.9**
MNK *i**SS **ScS** **19 14 23.9 -0.6**
MNK *i*SS **SS** **19 19 04.5 +1.5**
MNK pmax pmax
comp=Z,37nm,1.0s
MNK pmax pmax
comp=E,4.0nm,1.0s
MNK pmax pmax
comp=N,3.0nm,1.0s
MNK MLR MLR
comp=Z,15μm,23.0s
MNK MLR MLR
comp=E,54nm,18.0s
MNK MLR MLR
comp=N,17nm,16.0s
MCARA McCarthy VSAT 78.52 29 P **P** **19 04 06.8 +0.9**
baz=283
L27K Beaver Creek, 78.67 27 lAmb lAmb 19 04 08.6
comp=Z,11nm,0.8s
L27K Beaver Creek, 78.67 27 P **P** **19 04 07.5 +0.8**
baz=284,SNR=18
BCAR Beaver Creek A 78.69 27 P **P** **19 04 06.9 +0.1**
M27K Edge Creek, AK 78.82 28 P **P** **19 04 07.9 +0.2**
baz=284,SNR=5.9
IDID Didziasalis 78.95 324 *e*P **P** **19 04 09.3 +1.0**
NACGM Naroch 79.02 324 ⇑ *e*P **P** **19 04 09.9 +1.2**
baz=77
MEF Metsahovi 79.03 330 *e*P **P** **19 04 08.9 +0.3**
IIGN Ignalina 79.23 325 *e*P **P** **19 04 10.7 +0.9**
ISAL Salakas 79.23 325 *e*P **P** **19 04 10.7 +0.9**
BARN Barnard Glacie 79.24 29 lAmb lAmb 19 04 11.5
comp=Z,16nm,0.8s
BVCY Beaver Creek 79.26 28 P **P** **19 04 10.7 +0.7**
baz=285
CTG Chitna Glacier 79.41 29 P **P** **19 04 11.5 +0.6**
baz=285,SNR=11
CTGM Chitina Glacie 79.42 29 lAmb lAmb 19 04 12.6
comp=Z,25nm,0.8s
DAWY Dawson 79.46 26 lAmb lAmb 19 04 12.4
comp=Z,14nm,0.9s
DAWY Dawson 79.46 26 P **P** **19 04 11.1 +0.1**
baz=286,SNR=8.3
I29M Ogilvie Camp, 79.55 25 P **P** **19 04 10.1 -1.4**
I29M Ogilvie Camp, 79.55 25 P **P** **19 04 11.6 +0.2**
baz=287,SNR=10
SORM Soroca 79.59 317 ⇑ P **P** **19 04 11.5 -0.4**
LOGN Logan Glacier 79.61 30 lAmb lAmb 19 04 19.2
comp=Z,16nm,0.9s
YUK3 Moose Creek 79.61 29 P **P** **19 04 12.3 +0.2**
baz=285,SNR=5.3
MTSE Matsula 79.69 328 *e*P **P** **19 04 12.9 +0.6**
EPYK Eagle Plains 79.87 24 lAmb lAmb 19 04 13.9
comp=Z,12nm,0.8s
EPYK Eagle Plains 79.87 24 P **P** **19 04 12.9 -0.3**
baz=288
NOR Nord 79.91 354 *i*P **P** **19 04 12.7 -0.4**
NOR lAmb lAmb 19 04 19.4
comp=Z,6.3nm,0.9s
TLCR 79.94 314 ⇑ P **P** **19 04 14.4 +0.5**
JURR Jurilovca 80.00 314 ⇑ P **P** **19 04 15.2 +1.0**
YUK8 Steele Glacier 80.07 29 P **P** **19 04 14.1 -0.6**
baz=286
RAF Rauma 80.08 331 *e*P **P** **19 04 15.0 +0.7**
PINM Pinnacle 80.16 30 P **P** **19 04 14.9 0.0**
baz=286
TPGR Topolog 80.29 314 ⇑ P **P** **19 04 16.0 +0.1**
VLDR Vladesti 80.29 315 ⇑ P **P** **19 04 16.6 +0.8**
VSVD Vaisvydziai 80.34 326 *e*P **P** **19 04 16.4 +0.6**
INK Inuvik 80.40 21 P **P** **19 04 15.3 -0.6**
comp=Z,10nm,0.9s,baz=282,slow=3.1,SNR=8.1
comp=Z,10nm,0.9s
INK Inuvik 80.40 21 lAmb lAmb 19 04 16.7
comp=Z,13nm,0.9s
INK Inuvik 80.40 21 P **P** **19 04 15.7 -0.3**
baz=290
CFR Carcaliu 80.41 314 ⇓ P **P** **19 04 16.7 +0.3**
PABE Paberze 80.44 325 P **P** **19 04 16.2 -0.2**
PABE Paberze 80.44 325 *e*P **P** **19 04 17.0 +0.6**
BCPM Bancas Point 80.50 30 lAmb lAmb 19 04 33.8
comp=Z,33nm,0.9s
YUK4 Talbot Arm 80.57 29 P **P** **19 04 17.0 -0.3**
baz=287
STEI Steigen 80.59 338 *e*P **P** **19 04 16.7 -0.2**
PNL Peninsula 80.70 30 P **P** **19 04 17.6 -0.2**
baz=287
FAUS Fauske 80.77 338 *e*P **P** **19 04 16.4 -1.6**
YUK6 Outpost Mounta 80.82 29 P **P** **19 04 18.8 +0.1**
baz=287
ICOR Ion Corvin 80.90 313 ⇓ P **P** **19 04 20.0 +0.9**
PANC Panciu 80.92 315 ⇓ P **P** **19 04 20.5 +1.3**
M30M Minto, Yukon 81.02 27 lAmb lAmb 19 04 25.6
comp=Z,20nm,1.2s
M30M Minto, Yukon 81.02 27 P **P** **19 04 20.1 +0.6**
baz=288
TESR Tescani 81.10 316 ⇑ P **P** **19 04 20.5 +0.3**
AAL Aland 81.16 330 *e*P **P** **19 04 19.7 -0.5**
VRI Vrincioaia 81.21 315 ⇑ P **P** **19 04 21.6 +0.9**
N30M Aishikik Lake 81.25 28 P **P** **19 04 21.1 +0.4**
baz=288
HYT Haines Junctio 81.25 29 P **P** **19 04 20.4 -0.4**
baz=288,SNR=7.4
PLOR Plostina 81.26 315 ⇑ P **P** **19 04 22.2 +1.1**
SUW Suwalki 81.28 324 *e*P **P** **19 04 20.7 -0.2**
SUW *e*L L 19 45 06.7
comp=Z,2μm,24.1s
SUW Suwalki 81.28 324 *e*P **P** **19 04 20.9 0.0**
BIZ Bicaz 81.35 316 ⇑ P **P** **19 04 22.2 +0.7**
MOR8 Moi Rana 81.52 337 *e*P **P** **19 04 20.7 -1.3**
COVR Voineasa-Covas 81.56 315 ⇓ P **P** **19 04 23.4 +0.7**
NEHR Nehoiu 81.61 315 ⇑ P **P** **19 04 23.9 +1.0**
BURAR Bucovina Array 81.76 317 ⇑ P **P** **19 04 24.6 +0.9**
BURAR Bucovina Array 81.76 317 P **P** **19 04 23.3 -0.5**
N31M Braeburn, Yuko 81.83 28 lAmb lAmb 19 04 29.7
comp=Z,24nm,1.3s
N31M Braeburn, Yuko 81.83 28 P **P** **19 04 23.7 -0.1**
baz=289
MLR Muntele Rosu 81.83 315 P **P** **19 04 23.9 -0.3**
comp=Z,16nm,0.8s,baz=96,slow=10,SNR=18
comp=Z,16nm,0.8s
O30N Mendenhall 81.93 29 P **P** **19 04 24.6 +0.3**
baz=289,SNR=5.6
RAZG Razgrad 81.94 313 ⇓ P **P** **19 04 25.3 +0.7**
DOPR Dopca 82.08 316 ⇑ P **P** **19 04 26.2 +0.8**
M31M Drury Creek, Y 82.20 27 P **P** **19 04 25.6 -0.1**
baz=290
PLBC Pleasant Camp 82.23 30 P **P** **19 04 26.4 +0.6**
baz=289
VOIR 82.45 315 ⇑ P **P** **19 04 27.2 -0.2**
ARCR ARCALIA 82.47 317 ⇓ P **P** **19 04 28.8 +1.4**
WHY Whitehorse 82.52 29 P **P** **19 04 28.1 +0.5**
baz=290
FARO Faro, Yukon 82.65 27 P **P** **19 04 28.3 +0.3**
baz=291
SKAG Skagway 82.73 30 lAmb lAmb 19 04 30.3
comp=Z,16nm,1.0s
SKAG Skagway 82.73 30 P **P** **19 04 29.3 +0.9**
baz=290
HUMR Humele 82.75 314 ⇓ P **P** **19 04 28.9 0.0**
CJR Cluj-Napoca 83.07 317 ⇑ P **P** **19 04 31.8 +1.2**
C36M Paulatuk 83.09 19 P **P** **19 04 27.9 -2.1**
C36M lAmb lAmb 19 04 34.1
comp=Z,11nm,0.7s
C36M Paulatuk 83.09 19 P **P** **19 04 29.5 -0.6**
baz=299
NSS Namsos 83.11 336 *e*P **P** **19 04 29.6 -0.7**
KOLS Kolonicke sedl 83.28 319 *e*P **P** **19 04 32.4 +0.9**
KOLS pmax pmax
comp=Z,12nm,0.7s
KOLS Kolonicke sedl 83.28 319 *e*P **P** **19 04 32.4 +0.9**
RDO Rodhopi 83.28 311 lAmb lAmb 19 04 32.3
comp=Z,12nm,1.0s
VLAD Vladila 83.29 314 ⇑ P **P** **19 04 31.8 +0.2**
LOT Lotru 83.32 315 ⇑ P **P** **19 04 32.3 +0.4**
UZH Uzhgorod 83.35 319 ⇑ *i*P **P** **19 04 32.4 +0.5**
UZH *i* 19 04 38.9
UZH *e* 19 04 46.1
MMPY Sheldon Lake, 83.40 26 P **P** **19 04 32.1 +0.1**
baz=293
P32M Atlin 83.45 30 P **P** **19 04 32.5 +0.3**
baz=291
SIT Sitka 83.56 32 P **P** **19 04 32.9 +0.1**
baz=290
P33M Teslin, Yukon 83.64 29 P **P** **19 04 32.8 -0.4**
baz=292
DEV Deva 83.77 316 ⇑ P **P** **19 04 35.6 +1.5**
CRVS Cervenica-Dubn 83.80 319 *e*P **P** **19 04 35.3 +1.1**
CRVS pmax pmax
comp=Z,29nm,1.0s
CRVS Cervenica-Dubn 83.80 319 *e*P **P** **19 04 35.3 +1.1**
DAG Danmarks Havn 83.88 351 *i*P **P** **19 04 32.0 -2.0**
DAG lAmb lAmb 19 04 34.0
comp=Z,26nm,0.9s
GZR Gura Zlata 84.00 315 ⇑ P **P** **19 04 35.6 +0.2**
THAS Thassos island 84.03 310 P **P** **19 04 35.1 -0.4**
HFS Hagfors 84.13 331 P **P** **19 04 35.5 -0.2**
comp=Z,13nm,0.6s,baz=94,slow=4.6,SNR=45
HFS LR LR 19 42 38.7
comp=Z,1μm,21.1s,baz=24,slow=36
comp=Z,13nm,0.6s
PUNG Punghina 84.23 314 ⇓ P **P** **19 04 36.9 +0.5**
KMBO Kilima Mbogo 84.26 267 P **P** **19 04 37.9 +0.4**
comp=Z,5.5nm,1.0s,baz=46,slow=6.1,SNR=6.6
comp=Z,5.5nm,1.0s
KMBO Kilima Mbogo 84.26 267 P **P** **19 04 37.2 -0.3**
KMBO lAmb lAmb 19 04 40.3
comp=Z,16nm,1.3s
KMBO Kilima Mbogo 84.26 267 P **P** **19 04 37.2 -0.3**
KMBO pmax pmax
comp=Z,15nm,1.3s
TBLU Trondheim 84.34 335 *e*P **P** **19 04 36.1 -0.5**
NIE Niedzica 84.36 320 *e*P **P** **19 04 38.3 +1.2**
SIRR Siria 84.48 317 ⇑ P **P** **19 04 38.3 +0.5**
VTS Vitosha 84.51 313 ⇓ P **P** **19 04 38.7 +0.6**
BLKB Belogradchik 84.60 314 ⇓ P **P** **19 04 39.1 +0.6**
SANT Santorini 84.67 306 ⇓ P **P** **19 04 37.9 -1.0**
BZS Buzias 84.71 316 ⇓ P **P** **19 04 38.7 -0.1**
NC303 NORSAR Array S 84.73 333 P **P** **19 04 38.4 -0.3**
LODK Lodwar 84.80 272 P **P** **19 04 39.2 -0.8**
NC602 NORSAR Array S 84.86 332 *e*P **P** **19 04 38.8 -0.6**
NB2 NORSAR Subarra 84.88 333 P **P** **19 04 38.6 -0.9**
baz=64,slow=4.6
NB2 NORSAR Subarra 84.88 333 P **P** **19 04 38.6 -0.9**
comp=Z,38nm,1.1s,baz=64,slow=4.6
NOA NORSAR Array B 84.88 333 P **P** **19 04 38.8 -0.7**
comp=Z,17nm,0.9s,baz=64,slow=4.9,SNR=53
comp=Z,17nm,0.9s
NOA NORSAR Array B 84.88 333 *e*P **P** **19 04 38.8 -0.7**
NOA pmax pmax
comp=Z,16nm,0.9s
MDVR Moldovita 84.91 315 ⇑ P **P** **19 04 40.5 +0.5**
LANS Liptovska Anna 84.96 320 *e*P **P** **19 04 41.4 +1.3**
LANS pmax pmax
comp=Z,5.0nm,0.8s
LANS Liptovska Anna 84.96 320 *e*P **P** **19 04 41.4 +1.3**
NC204 NORSAR Array S 84.98 333 P **P** **19 04 39.4 -0.6**
PSZ Piszkesteto 85.10 318 ⇓ P **P** **19 04 41.6 +0.7**
TGTN Hyland Airport 85.14 27 P **P** **19 04 41.3 +0.5**
baz=296
BOVS Bovan 85.27 314 ⇓ P **P** **19 04 41.5 -0.2**
CRAG Craig 85.28 33 P **P** **19 04 41.7 +0.2**
baz=292
WRAK Wrangell Islan 85.32 32 P **P** **19 04 42.3 +0.6**
baz=293
DOMB Dombas 85.37 334 *e*P **P** **19 04 41.6 -0.3**
IDI Anoyia 85.42 305 ⇓ P **P** **19 04 42.5 -0.3**
IDI Anoyia 85.42 305 P **P** **19 04 42.1 -0.7**
comp=Z,19nm,1.1s,baz=41,slow=9.3,SNR=12
comp=Z,19nm,1.1s
IDI Anoyia 85.42 305 lAmb lAmb 19 04 45.6
comp=Z,15nm,0.9s
BSD Bornholm Skovb 85.46 326 *e*P **P** **19 04 42.3 -0.1**
DEL Delary 85.48 328 *e*P **P** **19 04 42.4 -0.1**
OKC Ostrava-Krasne 85.54 321 *e*P **P** **19 04 43.4 +0.5**
OKC Ostrava-Krasne 85.54 321 *e*P **P** **19 04 43.4 +0.5**
OSL Oslo 85.57 332 *e*P **P** **19 04 43.0 +0.2**
DLBC Dease Lake 85.66 30 lAmb lAmb 19 04 48.9
comp=Z,10nm,1.1s
DLBC Dease Lake 85.66 30 P **P** **19 04 44.2 +0.7**
baz=295
LIT Litokhoron 85.81 310 lAmb lAmb 19 04 44.9
comp=Z,22nm,1.2s
KOLL Kolacno 85.82 319 *e*P **P** **19 04 45.6 +1.3**
ATAL Atalanti 85.84 309 P **P** **19 04 42.5 -2.2**
MAUC Maruska 85.90 320 *e*P **P** **19 04 44.8 0.0**
MORC Moravsky Berou 85.93 321 ⇓ P **P** **19 04 45.8 +0.9**
MORC Moravsky Berou 85.93 321 lAmb lAmb 19 04 46.5
comp=Z,14nm,0.9s
MORC Moravsky Berou 85.93 321 *e*P **P** **19 04 45.3 +0.4**
FRGS Fruska Gora 86.06 316 ⇓ P **P** **19 04 46.1 +0.4**
DBG Daneborg 86.07 350 *i*P **P** **19 04 41.7 -3.4**
DBG lAmb lAmb 19 04 45.3
comp=Z,7.8nm,1.0s
IMMV Iera Moni Meta 86.08 306 P **P** **19 04 46.3 +0.4**
EPID Epidavros 86.10 308 P **P** **19 04 43.5 -2.5**
SRO2 Moca 86.10 319 *e*P **P** **19 04 45.4 -0.3**
SRO2 pmax pmax
comp=Z,23nm,0.8s
SRO2 Moca 86.10 319 *e*P **P** **19 04 45.4 -0.3**
SRO Srobarova 86.14 319 *e*P **P** **19 04 46.8 +0.9**
SRO pmax pmax
comp=Z,22nm,0.9s
SRO Srobarova 86.14 319 *e*P **P** **19 04 46.8 +0.9**
KRND KRANIDI 86.14 308 P **P** **19 04 44.1 -2.1**
T35M Bob Quinn 86.16 31 P **P** **19 04 45.6 -0.3**
baz=294
AKN Aaknes 86.17 335 *e*P **P** **19 04 46.3 +0.5**
JAVC Velka Javorina 86.17 320 *e*P **P** **19 04 47.8 +1.6**
KONO Kongsberg 86.21 332 P **P** **19 04 45.3 -0.7**
KONO Kongsberg 86.21 332 P **P** **19 04 45.3 -0.7**
KONO pmax pmax
comp=Z,18nm,0.8s
KONO Kongsberg 86.21 332 *e*P **P** **19 04 45.4 -0.7**
RES Resolute Bay 86.23 9 P **P** **19 04 45.4 -0.5**
comp=Z,11nm,0.7s,baz=309,slow=6.0,SNR=47
comp=Z,11nm,0.7s
RES Resolute Bay 86.23 9 lAmb lAmb 19 04 46.9
comp=Z,12nm,0.8s
KRLC Kraliky 86.28 321 *e*P **P** **19 04 46.8 +0.1**
KRLC Kraliky 86.28 321 *e*P **P** **19 04 46.8 +0.1**
KSP Ksiaz 86.29 322 *e*P **P** **19 04 47.2 +0.6**
KSP *e*L L 19 45 51.7
comp=Z,1μm,26.6s
DIVS Divibare 86.29 315 lAmb lAmb 19 04 47.8
comp=Z,11nm,1.0s
SKAR Skarslia 86.32 333 *e*P **P** **19 04 47.3 +0.7**
FNA Florina 86.40 311 lAmb lAmb 19 04 46.9
comp=Z,12nm,0.9s
OSTC Ostas 86.44 322 *e*P **P** **19 04 48.3 +0.9**
SMOL Smolenice 86.45 320 *e*P **P** **19 04 48.1 +0.6**
SMOL Smolenice 86.45 320 *e*P **P** **19 04 48.1 +0.6**
DPC Dobruska-Polom 86.45 322 *e*P **P** **19 04 47.6 +0.1**
DPC Dobruska-Polom 86.45 322 *e*P **P** **19 04 47.6 +0.1**
MORH Mrgy, Hungar 86.48 317 ⇑ P **P** **19 04 47.9 +0.3**
VLI Veliai 86.51 307 P **P** **19 04 45.9 -2.1**
CHVC Chvalec 86.53 322 *e*P **P** **19 04 48.3 +0.5**
KTHA Kythira Island 86.56 307 P **P** **19 04 47.6 -0.7**
UPC Upice 86.58 322 *e*P **P** **19 04 47.7 -0.4**
UPC Upice 86.58 322 *e*P **P** **19 04 47.7 -0.4**
GUR Goura 86.58 308 P **P** **19 04 46.9 -1.6**
MODS Modra-Piesok 86.59 320 *e*P **P** **19 04 49.1 +0.9**
MODS pmax pmax
comp=Z,22nm,1.2s
MODS Modra-Piesok 86.59 320 *e*P **P** **19 04 49.1 +0.9**
VRAC Vranov 86.67 321 ⇑ P **P** **19 04 49.5 +0.9**
VRAC Vranov 86.67 321 P **P** **19 04 49.2 +0.6**
comp=Z,18nm,0.8s,baz=81,slow=3.8,SNR=24
comp=Z,18nm,0.8s
VRAC Vranov 86.67 321 *e*P **P** **19 04 49.2 +0.6**
KLV Kalavryta, Ach 86.69 309 P **P** **19 04 47.1 -1.9**
ZST Bratislava 86.76 319 *e*P **P** **19 04 49.7 +0.7**
ZST Bratislava 86.76 319 *e*P **P** **19 04 49.7 +0.7**
PHP Peshkopia 86.78 312 P **P** **19 04 49.0 -0.3**
KRUC Moravsky 86.88 320 *e*P **P** **19 04 49.9 +0.3**
TULEG Thule 86.95 2 *i*P **P** **19 04 51.3 +1.9**
TULEG lAmb lAmb 19 04 53.2
comp=Z,8.1nm,0.8s
PVO Paravola 86.98 309 P **P** **19 04 49.4 -0.9**
ITM Ithomi 87.14 308 P **P** **19 04 49.9 -1.2**
ITM Ithomi 87.14 308 P **P** **19 04 49.3 -1.8**
PDG Podgorica 87.36 313 ⇑ P **P** **19 04 52.0 0.0**
PYL PYLOS 87.36 308 P **P** **19 04 50.4 -1.8**
ODD1 Odda 87.42 333 *e*P **P** **19 04 52.0 0.0**
PVCC Panska Ves 87.42 322 *e*P **P** **19 04 52.2 0.0**
PVCC Panska Ves 87.42 322 *e*P **P** **19 04 52.2 0.0**
CONA Conrad Observa 87.64 319 *i*P **P** **19 04 53.8 +0.4**
comp=Z,10nm,1.2s,SNR=7.2
PRU Pruhonice 87.65 322 *e*P **P** **19 04 53.0 -0.3**
PRU Pruhonice 87.65 322 *e*P **P** **19 04 53.0 -0.3**
BRG Berggiesshubel 87.66 323 *e*P **P** **19 04 53.7 +0.5**
BRG Amp 19 04 54.5
comp=Z,8.6nm,0.8s
BRG Berggiesshubel 87.66 323 *e*P **P** **19 04 53.7 +0.5**
BRG pmax pmax
comp=Z,9.0nm,0.9s
BLS5 Blasjo 87.73 332 *e*P **P** **19 04 53.4 -0.1**
CLL Collm 88.02 323 lAmb lAmb 19 04 55.7
comp=Z,8.4nm,0.8s
CLL Collm 88.02 323 ⇓ *i*P **P** **19 04 55.0 0.0**
CLL pmax pmax
comp=Z,10.0nm,0.9s
CLL Collm 88.02 323 ⇓ *i*P **P** **19 04 55.0 0.0**
comp=Z,10.0nm,0.9s
CLL *e*PS **PS** **19 16 42.0 -0.7**
CLL *e*PPS PPS 19 17 12.0
CLL *e*SS SS 19 21 48.0 +24
CLL *e*(SSSS) 19 28 36.0
ARSA Arzberg 88.10 319 *i*P **P** **19 04 55.7 +0.2**
comp=Z,5.0nm,0.8s
CKRC Cesky Krumlov 88.25 321 *e*P **P** **19 04 56.1 -0.1**
KHC Kasperske Hory 88.57 321 *c i*P **P** **19 04 57.6 -0.1**
KHC pmax pmax
comp=Z,10.0nm,0.9s
KHC Kasperske Hory 88.57 321 *e*P **P** **19 04 55.9 -1.8**
GEC2 GERESS Array S 88.61 321 lAmb lAmb 19 04 59.1
comp=Z,7.7nm,0.8s
GERES GERESS Array B 88.61 321 P **P** **19 04 57.9 -0.1**
comp=Z,4.8nm,0.8s,baz=72,slow=4.3,SNR=30
comp=Z,4.8nm,0.8s
GERES GERESS Array B 88.61 321 *e*P **P** **19 04 58.3 +0.3**
GERES pmax pmax
comp=Z,5.0nm,0.8s
SOKA Soboth 88.63 319 *i*P **P** **19 04 58.1 -0.1**
comp=Z,7.7nm,0.9s
MOA Molln 88.66 320 *i*P **P** **19 04 58.6 +0.5**
comp=Z,18nm,0.9s,SNR=11
CRES Cresnjev 88.69 318 *i*P **P** **19 04 58.4 0.0**
NKC Novy Kostel 88.79 322 *e*P **P** **19 04 58.2 -0.5**
NKC Novy Kostel 88.79 322 *e*P **P** **19 04 58.2 -0.5**
OBKA Obir 89.01 318 *e*P **P** **19 04 59.7 -0.2**
comp=Z,10.0nm,1.0s,SNR=5.7
BIOA Bad Ischl, Aus 89.11 320 *i*P **P** **19 05 00.4 +0.1**
comp=Z,12nm,1.1s
CRNS Crni Vrh 89.36 318 *i*P **P** **19 05 01.2 -0.2**
KBA Koelnbreinsper 89.54 319 *i*P **P** **19 05 01.9 -0.5**
comp=Z,9.8nm,0.7s,SNR=8.6
SUMG Summit 90.06 354 lAmb lAmb 19 05 10.2
comp=Z,18nm,1.0s
SUMG Summit 90.06 354 *i*P **P** **19 05 05.2 +0.5**
SUMG lAmb lAmb 19 05 09.6
comp=Z,22nm,1.1s
YKA Yellowknife Ar 90.10 23 P **P** **19 05 04.2 -0.3**
comp=Z,4.1nm,0.8s,baz=316,slow=3.6,SNR=6.2
comp=Z,4.1nm,0.8s
ABTA Abfaltersbach 90.19 319 *i*P **P** **19 05 04.4 -1.0**
comp=Z,12nm,0.8s,SNR=10

TIP	**Timpagrande**	**90.28**	**311**	⇑P		**P**		**19 05 06.2**	**+0.3**
TIP	**Timpagrande**	**90.28**	**311**	IAmb		IAmb		19 05 07.1	
	comp=Z,9.7nm,0.9s								
WTTA	**Wattenberg**	**90.52**	**320**	*i* P		**P**		**19 05 06.9**	**-0.2**
	comp=Z,27nm,0.7s,SNR=14								
WATA	**Walderalm**	**90.53**	**320**	*i* P		**P**		**19 05 06.5**	**-0.6**
	comp=Z,15nm,1.0s,SNR=8.4								
SQTA	**Sankt Quirin**	**90.80**	**320**	*i* P		**P**		**19 05 08.0**	**-0.3**
	comp=Z,19nm,0.8s,SNR=14								
MOTA	**Moosalm**	**90.81**	**320**	*i* P		**P**		**19 05 07.8**	**-0.6**
	comp=Z,24nm,1.0s,SNR=6.6								
RETA	**Reutte**	**90.96**	**320**	*i* P		**P**		**19 05 08.7**	**-0.3**
	comp=Z,5.1nm,0.8s								
CTI	**Castel Tesino**	**91.03**	**319**	P		**P**		**19 05 08.4**	**-1.0**
CTI				IAmb		IAmb		19 05 09.8	
	comp=Z,8.8nm,0.8s								
CTI	**Castel Tesino**	**91.03**	**319**	P		**P**		**19 05 08.4**	**-1.0**
CTI				pmax		pmax			
	comp=Z,9.0nm,0.8s								
FETA	**Feichten**	**91.19**	**320**	*i* P		**P**		**19 05 10.1**	**-0.1**
	comp=Z,23nm,1.0s,SNR=12								
NRCA	**Norcia**	**91.41**	**316**	IAmb		IAmb		19 05 12.2	
	comp=Z,13nm,1.0s								
DAVA	**Damuels**	**91.59**	**321**	*i* P		**P**		**19 05 11.9**	**-0.1**
	comp=Z,12nm,1.1s,SNR=7.1								
MURB	**Monte Urbino**	**91.63**	**316**	P		**P**		**19 05 10.8**	**-1.4**
DAVOX	**Davos/Dischmat**	**91.81**	**320**	P		**P**		**19 05 13.5**	**+0.4**
	comp=Z,17nm,1.0s,baz=95,slow=3.3,SNR=15								
	comp=Z,17nm,1.0s								
WLF	**Walferdange**	**92.67**	**324**	IAmb		IAmb		19 05 18.2	
	comp=Z,11nm,1.0s								
WLF	**Walferdange**	**92.67**	**324**	*dx*		**P**		**19 05 17.4**	**+0.7**
BMRD	**Maredsous**	**93.13**	**325**	*d*PcP		**P**		**19 05 17.8**	**-1.1**
SOEG	**Soedalen**	**93.16**	**350**	*i* P		**P**		**19 05 18.6**	**0.0**
SOEG				IAmb		IAmb		19 05 22.9	
	comp=Z,26nm,1.2s								
DOU	**Dourbes**	**93.33**	**325**	*dx*		**P**		**19 05 19.7**	**0.0**
PPT	**Papeete**	**94.39**	**107**	LR		LR		19 46 22.0	
	comp=Z,190nm,18.0s,baz=294,slow=34								
BNI	**Bardonecchia**	**94.59**	**320**	P		**P**		**19 05 24.7**	**-1.2**
BNI				IAmb		IAmb		19 05 26.6	
	comp=Z,6.3nm,0.8s								
BNI	**Bardonecchia**	**94.59**	**320**	P		**P**		**19 05 24.7**	**-1.2**
BNI				pmax		pmax			
	comp=Z,6.0nm,0.8s								
LSZ	**Lusaka**	**96.80**	**256**	LR		LR		19 45 44.0	
	comp=Z,1μm,18.7s,baz=162,slow=33								
RLMT	**Red Lodge**	**103.60**	**34**	P		**Pdif**		**19 06 03.7**	**-2.7**
	baz=311								
MVO	**Moncorvo**	**105.09**	**322**	*e*LR		LR		19 42 03.4	
	comp=Z,2μm,20.0s								
PGAV	**Gavieira, Arco**	**105.31**	**323**	*e*LR		LR		19 41 26.6	
	comp=Z,2μm,22.0s								
MTE	**Manteigas**	**105.87**	**322**	*e*LR		LR		19 42 19.0	
	comp=Z,2μm,20.0s								
TPFO	**Pinon Flats**	**106.01**	**47**	P		**PKiKP**		**19 10 28.1**	**-1.3**
	baz=303								
PMRV	**Marv??o**	**106.38**	**321**	*e*LR		LR		19 42 39.7	
	comp=Z,2μm,22.0s								
PVAQ	**Vaqueiros**	**107.84**	**319**	*e*LR		LR		19 43 25.9	
	comp=Z,3μm,22.0s								
WUAZ	**Wupatki**	**108.36**	**43**	P		**PKiKP**		**19 10 31.6**	**-2.2**
	baz=307								
214A	**Organ Pipe Nat**	**109.47**	**47**	P		**PKiKP**		**19 10 33.5**	**-2.3**
	baz=305								
TORD	**Torodi Ar. Bea**	**113.12**	**292**	PKiKP		**PKiKP**		**19 10 42.4**	**-0.7**
	comp=Z,2.3nm,0.9s,baz=31,slow=1.9,SNR=8.0								
TORD				PP		**PP**		**19 11 27.4**	**-5.0**
	comp=Z,1.7nm,1.0s,baz=72,slow=6.6,SNR=4.8								
TORD				PKKPbc		**PKKPbc**		**19 21 28.9**	**+0.2**
	comp=Z,0.6nm,0.8s,baz=52,slow=2.4,SNR=2.7								
PMOZ	**Porto Moniz, M**	**116.69**	**321**	*e*LR		LR		19 43 40.7	
	comp=Z,579nm,20.0s								
S39A	**Bolivar**	**117.19**	**30**	PKPdf		**PKPdf**		**19 10 48.9**	**-1.4**
TX31	**Lajitas Ar. Si**	**117.30**	**44**			**PKPdf**		**19 10 49.5**	**-1.4**
TX32	**Lajitas Array**	**117.30**	**44**			**PKPdf**		**19 10 49.0**	**-1.9**
TXAR	**Lajitas Array**	**117.30**	**44**	PKP		**PKPdf**		**19 10 50.5**	**-0.4**
	comp=Z,1.3nm,0.8s,baz=294,slow=0.7,SNR=14								
VNA2	**Neumayer--Watz**	**117.54**	**197**	P		**Pdif**		**19 07 15.6**	**+8.2**
	baz=92,slow=1.0								
VNA2	**Neumayer--Watz**	**117.54**	**197**	PKPdf		**PKPdf**		**19 10 49.9**	**0.0**
PKME	**Peaks-Kenny Pk**	**117.82**	**8**	P		**PKPdf**		**19 10 50.4**	**-0.9**
	baz=349								
VNA1	**Neumayer--Stat**	**117.93**	**197**	P		**Pdif**		**19 07 10.0**	**+0.9**
VNA1	**Neumayer--Stat**	**117.93**	**197**	PKPdf		**PKPdf**		**19 10 50.7**	**+0.1**
VNA1	**Neumayer--Stat**	**117.93**	**197**	SKKPbc		SKKPbc		19 24 53.5	-6.9
VNA3	**Neumayer Olymp**	**117.99**	**196**	PKPdf		**PKPdf**		**19 10 50.5**	**-0.3**
U40A	**Yellville**	**118.48**	**31**	PKPdf		**PKPdf**		**19 10 50.5**	**-2.3**
U40A	**Yellville**	**118.48**	**31**	P		**PKPdf**		**19 10 52.0**	**-0.9**
	baz=323								
ERPA	**Erie**	**118.55**	**18**	P		**PKPdf**		**19 10 51.4**	**-1.4**
	baz=337								
W39A	**Magazine**	**118.92**	**32**	P		**PKPdf**		**19 10 52.7**	**-1.1**
	baz=322								
JCT	**Junction City**	**119.00**	**40**			**PKPdf**		**19 10 53.1**	**-1.0**
JCT	**Junction City**	**119.00**	**40**	PKIKP		**PKPdf**		**19 10 53.1**	**-1.0**
JCT	**Junction City**	**119.00**	**40**	P		**PKPdf**		**19 10 53.2**	**-0.9**
	baz=314								
P49A	**Miami Univ. Ec**	**119.31**	**23**	P		**PKPdf**		**19 10 53.3**	**-1.0**
	baz=332								
WHTX	**Lake Whitney,**	**119.33**	**37**	P		**PKPdf**		**19 10 53.6**	**-1.0**
	baz=317								
BINY	**Binghamton**	**119.53**	**14**	P		**PKPdf**		**19 10 54.5**	**-0.2**
	baz=341								
MIAR	**Mount Ida**	**119.54**	**33**	P		**PKPdf**		**19 10 54.1**	**-0.9**
	baz=322								
X40A	**Basin Creek Fa**	**119.96**	**32**	P		**PKPdf**		**19 10 54.0**	**-1.8**
	baz=322								
SSPA	**Standing Stone**	**120.51**	**17**	P		**PKPdf**		**19 10 55.3**	**-1.4**
	baz=339								
WVT	**Waverly**	**120.99**	**27**	PKPdf		**PKPdf**		**19 10 56.1**	**-1.6**
WVT	**Waverly**	**120.99**	**27**	PKIKP		**PKPdf**		**19 10 56.1**	**-1.6**
WVT	**Waverly**	**120.99**	**27**	P		**PKPdf**		**19 10 56.8**	**-0.9**
	baz=328								
PAL	**Palisades**	**121.14**	**13**	P		**PKPdf**		**19 10 57.1**	**-0.7**
	baz=343								
OXF	**Oxford**	**121.62**	**29**	P		**PKPdf**		**19 10 58.3**	**-0.7**
	baz=325								
DBIC	**Dimbokro**	**121.65**	**289**	PKP		**PKPdf**		**19 10 59.0**	**-0.5**
	comp=Z,6.0nm,0.8s,baz=80,slow=6.1,SNR=4.6								
KIC	**Kosan Boka**	**121.67**	**288**	*e*PKP2		**PKPdf**		**19 10 59.5**	**-0.1**
	comp=Z,6.6nm,0.3s								
TIC	**Toumodi**	**121.81**	**289**	*e*PKP2		**PKPdf**		**19 10 59.6**	**-0.2**
	comp=Z,1.1nm,0.2s								
PLAL	**Pickwick Lake**	**121.84**	**28**			**PKPdf**		**19 10 57.2**	**-2.2**
LIC	**Lamto**	**121.98**	**288**	*i*PKP2		**PKPdf**		**19 11 00.5**	**+0.4**
	comp=Z,3.2nm,0.3s								
TZTN	**Tazewell**	**122.38**	**23**	P		**PKPdf**		**19 10 59.6**	**-0.8**
	baz=332								
TKL	**Tuckaleechee C**	**123.07**	**24**	PKP		**PKPdf**		**19 11 01.1**	**-0.6**
	comp=Z,3.8nm,0.7s,baz=0.0,slow=1.0,SNR=2.8								
LRAL	**Lakeview Retre**	**123.96**	**28**	P		**PKPdf**		**19 11 02.7**	**-0.8**
	baz=327								
KMSC	**Kings Mountain**	**124.45**	**22**	P		**PKPdf**		**19 11 03.8**	**-0.5**
	baz=334								
GOGA	**Godfrey**	**125.16**	**25**	P		**PKPdf**		**19 11 04.8**	**-1.0**
	baz=331								
BRAL	**Brewton**	**125.49**	**30**	P		**PKPdf**		**19 11 04.6**	**-1.8**
	baz=327								
CMIG	**Matias Romero**	**131.41**	**48**	PKP		**PKPdf**		**19 11 17.9**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=340,slow=4.8,SNR=3.8								
AZU	**Azuero**	**148.00**	**43**	*e*P		**PKPab**		**19 11 56.4**	**+2.6**
COYC	**Coyhaique**	**149.04**	**162**			**PKiKP**		**19 11 54.0**	**-0.2**
CAPC	**Capurgana**	**149.15**	**37**	*e*P		**PKPbc**		**19 11 53.5**	**-0.7**
SJCC	**San Jacinto, C**	**149.29**	**32**	*e*P		**PKPbc**		**19 11 53.5**	**-1.1**
CRJC	**Cerrejon, Guaj**	**149.42**	**27**	*e*P		**PKPbc**		**19 11 54.4**	**-0.5**
URJC	**San Jos de Ur**	**150.90**	**35**	*e*P		**PKPbc**		**19 11 58.3**	**-0.1**
DBBC	**Dabeiba**	**151.11**	**37**	*e*P		**PKPbc**		**19 11 57.3**	**-1.7**
OCAC	**Ocana**	**151.65**	**31**	*e*P		**PKiKP**		**19 12 01.2**	**+0.5**
CBOC	**Ciudad Bolivar**	**152.15**	**38**	*e*P		**PKPbc**		**19 11 59.3**	**-2.2**
PTBC	**PUERTO BERRIO**	**152.49**	**35**	*e*P		**PKPbc**		**19 12 01.2**	**-0.9**
PLMC	**San Jos del P**	**152.74**	**40**	*e*P		**PKiKP**		**19 12 04.1**	**+1.2**
GUY2C	**Guyana, Caldas**	**153.05**	**38**	*e*P		**PKPbc**		**19 12 03.1**	**-0.7**
NORC	**Norcasia**	**153.06**	**37**	*e*P		**PKPbc**		**19 12 01.2**	**-2.2**
YOTC	**Yotoco, Valle**	**153.42**	**41**	*e*P		**PKPbc**		**19 12 01.2**	**-3.1**
SPBC	**San Pablo de B**	**153.44**	**35**	*e*P		**PKPbc**		**19 12 03.1**	**-1.1**
ANIL	**Santa Ana**	**153.61**	**39**	*e*P		**PKPbc**		**19 12 02.2**	**-2.7**
PLCA	**Paso Flores**	**153.90**	**160**	PKPbc		**PKPbc**		**19 12 04.5**	**+0.1**
	comp=Z,5.3nm,0.7s,baz=220,slow=3.1,SNR=14								
TAMC	**Tame, Arauca**	**153.95**	**30**	*e*P		**PKPdf**		**19 11 57.3**	**0.0**
ROSC	**El Rosal**	**153.96**	**37**	PKPbc		**PKiKP**		**19 12 06.2**	**+0.3**
	comp=Z,11nm,0.4s,baz=52,slow=8.3,SNR=4.8								
ORTC	**Ortega, Tolima**	**154.16**	**40**	*e*P		**PKPbc**		**19 12 06.0**	**+0.3**
VILC	**Villavicencio,**	**154.91**	**36**	*e*P		**PKPbc**		**19 12 06.0**	**-1.4**
PTLC	**Puerto Leguiza**	**157.29**	**45**	*e*P		**PKPdf**		**19 12 08.0**	**+6.2**
LPAZ	**La Paz**	**171.29**	**90**	PKP		**PKPdf**		**19 12 15.0**	**+0.1**
	comp=Z,2.1nm,0.8s,baz=44,slow=7.8,SNR=7.9								
LPAZ				PKPab		**PKPab**		**19 13 33.6**	**-1.5**
	comp=Z,0.5nm,0.3s,baz=337,slow=8.3,SNR=2.4								
LPAZ	**La Paz**	**171.29**	**90**			**PKPdf**		**19 12 15.9**	**+1.0**

*GII **10** 18:56:41.7±0.0,41°.97N×40°.21E, h5km, mb5.0/4, MD5.0/4, Mm5.2/4*
*NEIC **10** 18:57:00.8±2.4, 39°.07N±0°.04×40°.86E±0°.05, h10km±1km, mb4.3/23, ML4.4(ISK), Error ellipse: s-maj=7.2km s-min=6.5km az=37.0*
*MOS **10** 18:57:00.7±1.7, 38°.99N×40°.64E, h14km, mb4.4/5, Error ellipse: s-maj=7.0km s-min=4.6km az=96.5*
*ISK **10** 18:57:01.3, 39°.03N×40°.74E, h5km, ML4.4/30*
*IDC **10** 18:57:01.1±0.7, 38°.99N×40°.72E, h0km, mb3.9/16, mbtmp3.8/27, ML3.5/10, MS3.7/12, Error ellipse: s-maj=13.2km s-min=8.8km az=152.0*
*IASPEI **10** 18:57:01.9±0.9, 39°.00N±0°.02×40°.74E±0°.02, h11km±6km, mb4.0/35, MS3.7/7, Error ellipse: s-maj=3.3km s-min=3.1km az=51.4, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
*DDA **10** 18:57:01.6±0.0, 39°.01N×40°.71E, h13km±2km, MW4.5*
*AZER **10** 18:57:04.2±1.2, 38°.25N×40°.23E, h5km, Error ellipse: s-maj=18.0km s-min=10.3km az=178.0*

ISC 10 18:57:01.3±0.9, 38°.98N±0°.01×40°.74E±0°.01, h5km±6km, n249, σ2°17/303, mb4.0/35, MS3.7/7, 6C-4D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	ISC
BNGB	**Bingl**	**0.05**	**280**	PG	**Pg**	**18 57 03.8**	**+1.1**
SLHN	**Bingol, Solhan**	**0.23**	**97**	P	**Pg**	**18 57 06.9**	**+1.2**
SLHN				S	**Sg**	**18 57 11.1**	**+2.3**
YEDI	**Yedisu-Bingol**	**0.48**	**342**	PG	**Pg**	**18 57 10.2**	**-0.4**
YEDI				SG	**Sg**	**18 57 17.1**	**+0.3**
VRTB	**Varto-Mus**	**0.59**	**72**	PG	**Pg**	**18 57 13.1**	**+0.5**
VRTB	**Varto-Mus**	**0.59**	**72**	P	**Pg**	**18 57 13.2**	**+0.5**
VRTB				S	**Sb**	**18 57 23.3**	**+0.6**
HANI	**Diyarbakir_Han**	**0.63**	**205**	P	**Pg**	**18 57 14.0**	**+0.6**
HANI				S	**Sb**	**18 57 24.7**	**+0.8**
ECAT	**Cat-ERZURUM**	**0.65**	**16**	P	**Pg**	**18 57 13.5**	**-0.3**
ECAT				S	**Sg**	**18 57 23.0**	**+0.7**
MUSM	**Mu-Merkez**	**0.66**	**113**	P	**Pg**	**18 57 14.1**	**+0.2**
MUSM				S	**Sg**	**18 57 23.3**	**+0.8**
KOVA	**Elazig, Kovanc**	**0.77**	**249**	P	**Pg**	**18 57 16.3**	**+0.2**
KOVA				S	**Sb**	**18 57 28.7**	**+0.5**
SVAN	**Silvan-Diyarba**	**0.91**	**156**	PG	**Pb**	**18 57 19.7**	**+0.1**
SVAN				SG	**Sn**	**18 57 33.4**	**-0.8**
SVAN	**Silvan-Diyarba**	**0.91**	**156**	P	**Pb**	**18 57 20.0**	**+0.4**
SVAN				S	**Sn**	**18 57 33.5**	**-0.8**
ERZN	**Erzincan**	**0.99**	**308**	PG	**Pg**	**18 57 19.8**	**-0.6**
ERZM	**Erzurum**	**1.04**	**28**	PG	**Pg**	**18 57 21.0**	**-0.3**
ERZM	**Erzurum**	**1.04**	**28**	P	**Pg**	**18 57 21.0**	**-0.3**
ERZM				S	**Sb**	**18 57 36.3**	**+0.3**
KOPT	**Kop Dagi**	**1.05**	**350**		**Pg**	**18 57 19.8**	**-1.7**
KOPT	**Kop Dagi**	**1.05**	**350**	P	**Pg**	**18 57 22.2**	**-0.3**
KOPT				S	**Sn**	**18 57 38.9**	**+0.8**
EMRE	**Erzurum,Aziziy**	**1.06**	**10**	P	**Pg**	**18 57 21.5**	**-0.2**
EMRE				S	**Sn**	**18 57 42.3**	**+3.9**
EKAR	**Karacoban**	**1.07**	**75**	P	**Pn**	**18 57 23.1**	**-0.1**
EKAR				S	**Sn**	**18 57 41.2**	**+2.6**
EUZM	**Uzumlu**	**1.08**	**312**	P	**Pg**	**18 57 21.2**	**-0.9**
EUZM				S	**Sg**	**18 57 36.1**	**-0.1**
GURO	**Guroymak-BITLI**	**1.10**	**113**	PN	**Pg**	**18 57 21.6**	**-0.8**
GURO	**Guroymak-BITLI**	**1.10**	**113**		**Pg**	**18 57 21.5**	**-1.0**
GURO				Sn	**Sg**	**18 57 35.8**	**-0.9**
DYBB	**Diyarbakir**	**1.13**	**205**	PN	**Pn**	**18 57 24.4**	**+0.5**
DYBB				SN	**Sn**	**18 57 40.8**	**+1.0**
DIYA	**Diyarbakir**	**1.16**	**205**	P	**Pn**	**18 57 24.9**	**+0.6**
DIYA				S	**Sn**	**18 57 41.9**	**+1.3**
BTMN	**Batman**	**1.17**	**159**	P	**Pn**	**18 57 25.1**	**+0.7**
BTMN				S	**Sn**	**18 57 41.8**	**+1.0**
BLIS	**Bitlis-Merkez**	**1.22**	**117**	P	**Pn**	**18 57 23.6**	**-1.1**
BLIS				S	**Sn**	**18 57 42.2**	**+0.1**
SVRC	**Sivrice-ELAZID**	**1.27**	**242**	PN	**Pn**	**18 57 24.9**	**-1.0**
BAYB	**BAYBURT**	**1.33**	**344**	P	**Pn**	**18 57 25.7**	**-1.0**
BAYB				S	**Sn**	**18 57 47.6**	**+2.7**
KOPR	**Koprukoy-ERZUR**	**1.33**	**40**	PN	**Pn**	**18 57 26.2**	**-0.5**
HOMI	**Horasan**	**1.39**	**40**	P	**Pn**	**18 57 27.2**	**-0.5**
HOMI				S	**Sn**	**18 57 49.1**	**+2.5**
MLAZ	**Malazgirt-MUS**	**1.42**	**83**	PN	**Pn**	**18 57 27.5**	**-0.4**
ELZG	**Elazig**	**1.45**	**251**	P	**Pn**	**18 57 27.3**	**-1.2**
ELZG				S	**Sg**	**18 57 52.1**	**+4.0**
MAZI	**Mazidag**	**1.54**	**189**	PN	**Pb**	**18 57 30.5**	**+0.1**
ADCV	**BITLIS_Adilcev**	**1.56**	**96**	P	**Pn**	**18 57 30.0**	**+0.1**
ADCV				S	**Sg**	**18 57 53.5**	**+2.1**
EATA	**Eleskirt**	**1.62**	**57**	P	**Pn**	**18 57 31.0**	**+0.2**
EATA				S	**Sg**	**18 57 56.2**	**+2.9**
KELT	**Kelkit**	**1.63**	**316**	P	**Pn**	**18 57 31.5**	**+0.6**
KELT				S	**Sg**	**18 57 54.4**	**+0.6**
MIDY	**Mardin/Midyat-**	**1.66**	**162**	P	**Pb**	**18 57 32.8**	**+0.4**
MIDY				S	**Sg**	**18 57 55.9**	**+1.3**
MARD	**Mardin**	**1.67**	**179**		**Pn**	**18 57 31.9**	**+0.6**
MARD				Sn	**Sb**	**18 57 54.3**	**+0.4**
MARD	**Mardin**	**1.67**	**179**	P	**Pb**	**18 57 32.4**	**-0.2**
MARD				S	**Sb**	**18 57 54.2**	**+0.4**
ILIC	**ilic-Erzincan**	**1.75**	**286**	PN	**Pn**	**18 57 32.8**	**+0.4**
PERV	**Siirt/Pervari-**	**1.75**	**126**	P	**Pb**	**18 57 34.7**	**+0.7**
PERV				S	**Sg**	**18 58 01.4**	**+3.7**
KEMA	**Kemaliye**	**1.77**	**280**	P	**Pn**	**18 57 32.7**	**0.0**
KEMA				S	**Sg**	**18 57 58.3**	**+0.1**
REFA	**Refahiye_ERZN**	**1.78**	**302**	P	**Pb**	**18 57 34.3**	**-0.2**
REFA				S	**Sg**	**18 57 58.6**	**0.0**
AGRB	**Hanur-Agry**	**1.85**	**71**	PN	**Pn**	**18 57 34.6**	**+0.7**
ARPR	**Arapgir-MALATY**	**1.87**	**274**	PN	**Pn**	**18 57 34.7**	**+0.5**
GEVA	**Gevas**	**1.94**	**110**		**Pn**	**18 57 35.7**	**+0.6**
GEVA	**Gevas**	**1.94**	**110**	P	**Pb**	**18 57 36.6**	**-0.6**
GEVA				S	**Sg**	**18 58 07.2**	**+3.6**
ALUC	**Giresun/Alucra**	**2.04**	**312**	P	**Pn**	**18 57 37.8**	**+1.3**
ALUC				S	**Sg**	**18 58 07.1**	**+0.3**
DDEM	**Demirkent**	**2.06**	**22**	P	**Pn**	**18 57 37.5**	**+0.8**
DDEM				S	**Sg**	**18 58 06.5**	**-1.0**
KOTA	**Agri, Merkez-K**	**2.08**	**66**	P	**Pb**	**18 57 39.4**	**-0.2**
KOTA				S	**Sg**	**18 58 09.9**	**+1.7**
MACK	**Trabzon**	**2.09**	**339**	P	**Pn**	**18 57 38.0**	**+0.9**
MACK				S	**Sg**	**18 58 13.9**	**+5.3**
VANB	**Van**	**2.11**	**100**	PN	**Pb**	**18 57 38.9**	**-1.2**
CHOM	**Cayeli-Rize**	**2.11**	**0**	PN	**Pn**	**18 57 37.7**	**+0.4**
KTUT	**Trabzon**	**2.13**	**340**	PN	**Pn**	**18 57 38.1**	**+0.5**
TVAN	**Van**	**2.13**	**101**	P	**Pb**	**18 57 39.5**	**-1.1**
TVAN				S	**Sg**	**18 58 16.7**	**+6.7**
URFA	**Urfa**	**2.16**	**225**	PN	**Pn**	**18 57 35.9**	**-2.1**
DBAD	**Bademkaya**	**2.16**	**20**	P	**Pn**	**18 57 38.8**	**+0.7**
DBAD				S	**Sb**	**18 58 08.3**	**+0.2**
SANL	**SANLIURFA_Merk**	**2.27**	**218**	P	**Pb**	**18 57 41.7**	**-1.2**
SANL				S	**Sb**	**18 58 13.3**	**+2.0**
DAGI	**Agillar**	**2.28**	**23**	P	**Pn**	**18 57 40.6**	**+0.9**
DAGI				S	**Sg**	**18 58 17.1**	**+2.6**
AKCD	**Akcadag**	**2.31**	**254**	P	**Pn**	**18 57 41.8**	**+1.6**
AKCD				S	**Sg**	**18 58 21.4**	**+5.9**
SUSE	**Susehri**	**2.31**	**303**	P	**Pb**	**18 57 42.1**	**-1.5**
SUSE				S	**Sb**	**18 58 13.3**	**+0.9**
DYDN	**Diyadin**	**2.36**	**75**	P	**Pb**	**18 57 44.4**	**0.0**
DYDN				S	**Sg**	**18 58 15.9**	**-1.2**
KARS	**Kars**	**2.44**	**47**	PN	**Pn**	**18 57 42.5**	**+0.6**
KARS	**Kars**	**2.44**	**47**		**Pn**	**18 57 41.8**	**-0.1**
KARS	**Kars**	**2.44**	**47**	P	**Pn**	**18 57 41.8**	**-0.1**
ATAB	**Bozova**	**2.45**	**233**	P	**Pn**	**18 57 43.2**	**+1.2**
ATAB				S	**Sg**	**18 58 19.8**	**-0.1**
DBOC	**Borcka**	**2.46**	**16**	P	**Pn**	**18 57 43.0**	**+0.8**
DBOC				S	**Sb**	**18 58 15.4**	**-1.4**
CUZAR	**Zara_SIVAS**	**2.47**	**292**	P	**Pn**	**18 57 43.5**	**+1.2**
CUZAR				S	**Sg**	**18 58 20.9**	**+0.3**
ESPY	**Espiye-Giresun**	**2.47**	**322**	PN	**Pn**	**18 57 43.5**	**+0.6**
CLDR	**Caldiran**	**2.48**	**85**	PN	**Pb**	**18 57 43.5**	**+0.9**
CLDR	**Caldiran**	**2.48**	**85**	P	**Pb**	**18 57 44.6**	**-1.9**
CLDR				S	**Sg**	**18 58 24.0**	**+3.0**
OZAP	**Van, Ozalp-Mer**	**2.56**	**96**	P	**Pb**	**18 57 47.4**	**-0.5**
OZAP				S	**Sg**	**18 58 24.7**	**+1.0**
DARE	**Darende-Malaty**	**2.58**	**262**	PN	**Pn**	**18 57 44.7**	**+0.9**
SURC	**SANLIURFA_SURC**	**2.69**	**219**	P	**Pn**	**18 57 47.0**	**+1.7**
SURC				S	**Sb**	**18 58 25.8**	**+2.5**
BATM	**Batumi**	**2.72**	**15**	PN	**Pn**	**18 57 46.4**	**+0.8**
CUGUR	**Gurin_SVAS**	**2.72**	**266**	P	**Pb**	**18 57 49.4**	**-1.1**
CUGUR				S	**Sg**	**18 58 31.2**	**+2.5**
IGDI	**IGDIR**	**2.73**	**70**	P	**Pb**	**18 57 48.6**	**-2.2**
IGDI				S	**Sg**	**18 58 28.4**	**-0.8**
HAKT	**HAKKARI**	**2.74**	**120**	P	**Pb**	**18 57 49.4**	**-1.5**
HAKT				S	**Sg**	**18 58 30.6**	**+1.4**
EAK	**Akyaka**	**2.79**	**52**	P	**Pb**	**18 57 50.1**	**-1.6**
CUKT	**Cukurca**	**2.85**	**127**	PN	**Pn**	**18 57 49.3**	**+1.7**
CUKT	**Cukurca**	**2.85**	**127**	P	**Pn**	**18 57 50.3**	**+2.7**
CUKT				S	**Sg**	**18 58 35.9**	**+3.0**
TASB	**TASBURUN-IGDIR**	**2.89**	**69**	PN	**Pn**	**18 57 49.2**	**+1.2**
ELBS	**KAHRAMANMARAS**	**2.90**	**258**	P	**Pn**	**18 57 50.5**	**+2.3**
ELBS				S	**Sg**	**18 58 39.0**	**+4.6**
EPOS	**Posof**	**2.94**	**31**	P	**Pn**	**18 57 50.5**	**+1.6**
EPOS				S	**Sg**	**18 58 43.8**	**+7.9**
RSDY	**Resadiye-TOKAT**	**2.99**	**299**	PN	**Pn**	**18 57 50.7**	**+1.3**
SVSK	**Karacayir**	**3.04**	**289**	PN	**Pn**	**18 57 51.3**	**+1.2**
YOYA	**Hakkari_Yksek**	**3.12**	**115**	P	**Pb**	**18 57 54.7**	**-2.8**
YOYA				S	**Sg**	**18 58 49.6**	**+8.0**
AKH	**Akhalkalaki**	**3.21**	**40**	PN	**Pn**	**18 57 53.4**	**+0.8**
HYR	**Heyderabad**	**3.27**	**76**	P	**Pg**	**18 58 04.0**	**-0.1**
	SNR=12						
HYR				S	**Sg**	**18 58 53.3**	**+6.8**
GNI	**Garni**	**3.31**	**68**	Pn	**Pn**	**18 57 56.6**	**+2.7**
	17nm,0.5s,baz=246,slow=10.0,SNR=4.2						
GNI				Lg	Lg	18 58 52.5	
	4.9nm,0.3s,baz=77,slow=21,SNR=1.6						
GNI	**Garni**	**3.31**	**68**	PN	**Pn**	**18 57 55.2**	**+1.3**
GNI	**Garni**	**3.31**	**68**	Pn	**Pn**	**18 57 54.5**	**+0.6**
GNI	**Garni**	**3.31**	**68**	*e*P	**Pb**	**18 57 57.6**	**-3.0**
SARI	**SarD1z-Kayseri**	**3.43**	**262**	PN	**Pn**	**18 57 56.5**	**+0.9**
TOKT	**Tokat**	**3.50**	**294**	PN	**Pn**	**18 57 57.8**	**+1.3**
TOKA	**Tokat**	**3.55**	**293**		**Pn**	**18 57 57.4**	**+0.3**
NAX	**Nakhchivan**	**3.71**	**86**	P	**Pb**	**18 58 09.1**	**+1.8**
	SNR=43						
NAX				S	**Sg**	**18 59 00.5**	**+0.1**
SBZ	**Shahbuz**	**3.77**	**82**	P	**Pb**

EIL	**Elat**	**10.45**	**209**	Pn	**Pn**	**18 59 34.1**	**+2.3**
	comp=Z,0.1nm,0.3s,baz=334,slow=21,SNR=1.6						
EIL				Sn	**Sn**	**19 01 34.4**	**+5.2**
	comp=Z,0.5nm,0.3s,baz=19,slow=9.6,SNR=4.4						
EIL				Lg	Lg	19 02 38.7	
	comp=Z,0.9nm,0.3s,baz=306,slow=18,SNR=4.4						
EIL				LR	LR	19 04 14.3	
	comp=Z,531nm,18.2s,baz=32,slow=42						
	comp=Z,1.2nm,0.5s						
EIL	**Elat**	**10.45**	**209**	Pn	Pn	18 59 46.8	+15
RDO	**Rodhopi**	**11.85**	**285**		**Pn**	**18 59 50.5**	**-0.3**
MLR	**Muntele Rosu**	**12.74**	**305**	Pn	**Pn**	**19 00 07.0**	**+3.9**
	comp=Z,0.2nm,0.3s,baz=143,slow=20,SNR=1.4						
MLR				LR	LR	19 05 31.9	
	comp=Z,323nm,21.9s,baz=146,slow=40						
	comp=Z,0.7nm,0.3s						
IDI	**Anoyia**	**13.17**	**259**	LR	LR	19 06 31.3	
	comp=Z,171nm,21.1s,baz=52,slow=43						
VTS	**Vitosha**	**13.75**	**291**	Pn	**Pn**	**19 00 13.5**	**-3.5**
VTS	**Vitosha**	**13.75**	**291**	P	**Pn**	**19 00 13.5**	**-3.5**
LIT	**Litokhoron**	**14.13**	**280**		**Pn**	**19 00 21.4**	**-0.7**
LIT	**Litokhoron**	**14.13**	**280**	P	**Pn**	**19 00 21.4**	**-0.7**
BURAR	**Bucovina Array**	**14.20**	**312**	Pn	**Pn**	**19 00 20.4**	**-2.7**
BUR08	**Bucovina Ar. S**	**14.22**	**313**	Pn	Pn	19 00 17.7	-5.8
BELG	**Belogornoye**	**14.24**	**17**	Pn	**Pn**	**19 00 23.7**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=96,slow=15,SNR=2.3						
BELG				LR	LR	19 06 42.4	
	comp=Z,214nm,20.4s,baz=139,slow=41						
	comp=Z,10nm,0.9s						
BELG	**Belogornoye**	**14.24**	**17**↓	*eP*	**Pn**	**19 00 23.6**	**+0.2**
BELG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AKASG	**Malin Array Be**	**14.26**	**329**	Pn	**Pn**	**19 00 22.1**	**-1.6**
	comp=Z,0.6nm,0.3s,baz=135,slow=12,SNR=9.0						
	comp=Z,1.0nm,0.7s						
AKASG	**Malin Array Be**	**14.26**	**329**	Pn	**Pn**	**19 00 20.8**	**-3.0**
AKASG	**Malin Array Be**	**14.26**	**329**	*i* P	**Pn**	**19 00 25.2**	**+1.4**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKBB	**Malin Array Si**	**14.26**	**329**		**Pn**	**19 00 21.6**	**-2.2**
AKBB	**Malin Array Si**	**14.26**	**329**↓	*eP*	**Pn**	**19 00 24.1**	**+0.3**
AKBB				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ITM	**Ithomi**	**14.93**	**269**	P	**Pn**	**19 00 30.6**	**-2.4**
ITM				IAmb	IAmb	19 00 43.1	
	comp=Z,22nm,1.6s						
RAYN	**Ar Rayn**	**15.94**	**164**	P	**Pn**	**19 00 46.7**	**+0.3**
RAYN	**Ar Rayn**	**15.94**	**164**	P	**Pn**	**19 00 46.7**	**+0.3**
RAYN				pmax	pmax		
	comp=Z,15nm,1.5s						
DIVS	**Divibare**	**16.34**	**295**	P	**Pn**	**19 00 50.1**	**-1.4**
OBN	**Obninsk**	**16.38**	**351**↑	*eP*	**Pn**	**19 00 51.9**	**+0.1**
OBN				pmax	pmax		
	comp=Z,27nm,1.4s						
OBN				MLR	MLR		
	comp=Z,132nm,12.0s						
AKTO	**Aktyubinsk**	**16.74**	**41**	Pn	**Pn**	**19 00 54.6**	**-1.9**
	comp=Z,0.2nm,0.3s,baz=242,slow=11,SNR=6.4						
	comp=Z,0.9nm,0.6s						
MOS	**Moscow**	**16.89**	**354**	*eP*	**Pn**	**19 00 56.3**	**-2.0**
MNK	**Minsk**	**17.80**	**335**	*i* P	**Pn**	**19 01 06.9**	**-2.7**
MNK				*i* S	**Sn**	**19 04 25.5**	**-2.7**
MNK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MNK				pmax	pmax		
	comp=N,10.0nm,1.0s						
MNK				pmax	pmax		
	comp=E,2.0nm,1.2s						
MNK				MLR	MLR		
	comp=N,20nm,17.0s						
MNK				MLR	MLR		
	comp=Z,7μm,22.0s						
MNK				MLR	MLR		
	comp=E,23nm,18.0s						
HRA	**Herat**	**17.84**	**98**	P	**Pn**	**19 01 07.7**	**-2.8**
NACGM	**Naroch**	**18.50**	**334**↑	*eP*	**Pn**	**19 01 22.0**	**+3.8**
	baz=143						
UOSS	**Minazif**	**19.15**	**132**	P	**Pn**	**19 01 26.3**	**0.0**
UOSS				IAmb	IAmb	19 01 34.0	
	comp=Z,16nm,0.8s						
SUW	**Suwalki**	**19.20**	**327**	P	**P**	**19 01 23.4**	**-2.5**
SUW	**Suwalki**	**19.20**	**327**	P	**P**	**19 01 23.4**	**-2.5**
SUW				pmax	pmax		
	comp=Z,26nm,1.0s						
RONA	**Rosalia, Austr**	**19.73**	**304**	*eP*	**Pn**	**19 01 35.4**	**+2.2**
	comp=Z,9.5nm,1.4s						
CONA	**Conrad Observa**	**20.08**	**305**	*eP*	Pn	19 01 39.2	+1.8
	comp=Z,12nm,1.3s						
VRAC	**Vranov**	**20.08**	**309**	P	**P**	**19 01 34.6**	**-0.9**
	comp=Z,1.7nm,0.5s,baz=235,slow=21,SNR=2.0						
VRAC				LR	LR	19 09 46.5	
	comp=Z,218nm,20.6s,baz=170,slow=38						
	comp=Z,1.7nm,0.5s						
ARSA	**Arzberg**	**20.11**	**302**	*eP*	Pn	19 01 39.1	+1.4
	comp=Z,3.6nm,0.9s						
KIRV	**Kirov**	**20.40**	**13**	P	**P**	**19 01 38.2**	**-0.6**
	comp=Z,11nm,0.8s,baz=204,slow=21,SNR=7.3						
KIRV				LR	LR	19 10 09.3	
	comp=Z,258nm,20.8s,baz=183,slow=39						
	comp=Z,11nm,0.8s						
AQU	**L'Aquila**	**20.97**	**288**	P	**P**	**19 01 43.2**	**-2.1**
AQU				IAmb	IAmb	19 02 11.9	
	comp=Z,26nm,1.4s						
AQU	**L'Aquila**	**20.97**	**288**	P	**P**	**19 01 43.2**	**-2.1**
AQU				pmax	pmax		
	comp=Z,26nm,1.4s						
ARU	**Arti**	**21.07**	**28**	P	**P**	**19 01 44.9**	**-1.2**
	comp=Z,4.2nm,0.6s,baz=230,slow=12,SNR=1.6						
	comp=Z,4.2nm,0.6s						
ARU	**Arti**	**21.07**	**28**	P	**P**	**19 01 43.1**	**-3.0**
ARU	**Arti**	**21.07**	**28***c*	*i*P	**P**	**19 01 49.2**	**+3.1**
ARU						19 02 07.3	
ARU				S	Sn	19 05 46.1	-0.8
ARU				SS	**SnSn**	**19 06 07.7**	**+6.0**
ARU				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MOA	**Molln**	**21.09**	**303**	*eP*	**P**	**19 01 50.0**	**+3.5**
	comp=Z,2.9nm,0.4s						
NRCA	**Norcia**	**21.19**	**289**	P	**P**	**19 01 46.6**	**-1.1**
NRCA				IAmb	IAmb	19 02 13.8	
	comp=Z,15nm,1.3s						
BIOA	**Bad Ischl, Aus**	**21.46**	**303**	*eP*	**P**	**19 01 52.0**	**+1.5**
	comp=Z,6.6nm,1.2s						
KBA	**Koelnbreinsper**	**21.52**	**301**	*eP*	**P**	**19 01 53.3**	**+2.1**
	comp=Z,6.3nm,0.8s						
GEC2	**GERESS Array S**	**21.73**	**306**	P	**P**	**19 01 52.0**	**-1.3**
GERES	**GERESS Array B**	**21.73**	**306**	P	**P**	**19 01 54.2**	**+0.8**
	comp=Z,1.1nm,0.7s,baz=108,slow=8.6,SNR=11						
	comp=Z,1.1nm,0.7s						
GERES	**GERESS Array B**	**21.73**	**306**	P	**P**	**19 01 51.4**	**-2.0**
STAL	**STALIGIAL**	**21.79**	**299**	P	**P**	**19 01 52.1**	**-1.9**
STAL				IAmb	IAmb	19 02 07.4	
	comp=Z,18nm,1.5s						
KHC	**Kasperske Hory**	**21.89**	**306**	P	**P**	**19 01 52.6**	**-2.4**
KHC	**Kasperske Hory**	**21.89**	**306**↑	*eP*	**P**	**19 01 57.2**	**+2.1**
KHC				pmax	pmax		
	comp=Z,14nm,2.1s						
KLMR	**Klimovskoe**	**21.91**	**358**	*eP*	**P**	**19 01 55.1**	**0.0**
KLMR				pmax	pmax		
	comp=Z,43nm,1.3s						
KLMR	**Klimovskoe**	**21.91**	**358**	*eP*	**P**	**19 01 55.2**	**+0.1**
KLMR				AMP		19 02 01.3	
	comp=Z,43nm,1.3s						
CHGR	**Chuyangaron**	**22.11**	**82**	P	**P**	**19 01 55.2**	**-2.4**
CHGR	**Chuyangaron**	**22.11**	**82**	P	**P**	**19 01 55.2**	**-2.4**
CHGR				pmax	pmax		
	comp=Z,17nm,0.8s						
TEOL	**Teolo**	**22.39**	**296**	P	**P**	**19 01 59.2**	**-1.2**
TEOL				IAmb	IAmb	19 02 13.7	
	comp=Z,10nm,0.8s						
CTI	**Castel Tesino**	**22.49**	**298**	P	**P**	**19 02 00.6**	**-1.0**
CTI				IAmb	IAmb	19 02 30.5	
	comp=Z,6.1nm,1.0s						
CTI	**Castel Tesino**	**22.49**	**298**	P	**P**	**19 02 00.6**	**-1.0**
CTI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
WTTA	**Wattenberg**	**22.69**	**301**	*eP*	**P**	**19 02 05.8**	**+1.9**
	comp=Z,3.9nm,0.8s						
WATA	**Walderalm**	**22.75**	**301**	*eP*	**P**	**19 02 07.1**	**+2.7**
	comp=Z,5.6nm,1.1s						
KKAR	**Karatay Array**	**22.77**	**70**	P	**P**	**19 02 02.0**	**-2.5**
KKAR				IAmb	IAmb	19 02 20.8	
	comp=Z,8.1nm,0.9s						
KKAR	**Karatay Array**	**22.77**	**70**	P	**P**	**19 02 02.0**	**-2.5**
KKAR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CASP	**Castiglione de**	**22.84**	**289**	P	**P**	**19 02 03.5**	**-1.7**
PRGR	**Permogore**	**22.88**	**6**	*eP*	**P**	**19 02 04.6**	**-0.8**
CLL	**Collm**	**22.96**	**312**	P	**P**	**19 02 05.7**	**-0.8**
CLL				IAmb	IAmb	19 02 09.7	
	comp=Z,6.7nm,1.1s						
CLL	**Collm**	**22.96**	**312**	*eP*	**P**	**19 02 07.0**	**+0.6**
CLL				*e*		19 02 14.0	
CLL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
CLL	**Collm**	**22.96**	**312**	*eP*	**P**	**19 02 07.0**	**+0.6**
	comp=Z,6.0nm,1.1s						
CLL				*ex*	x	19 02 14.0	
CLL				*eS*	**S**	**19 06 22.0**	**+4.9**
MOTA	**Moosalm**	**23.07**	**301**	*eP*	**P**	**19 02 09.3**	**+1.6**
	comp=Z,5.4nm,0.8s						
FETA	**Feichten**	**23.26**	**300**	*eP*	**P**	**19 02 11.2**	**+1.4**
	comp=Z,2.3nm,0.6s						
RETA	**Reutte**	**23.32**	**301**	*eP*	**P**	**19 02 08.3**	**-1.9**
	comp=Z,8.6nm,1.4s						
GRA1	**Grafenberg Arr**	**23.52**	**307**	P	**P**	**19 02 10.8**	**-1.4**
GRA1				IAmb	IAmb	19 02 17.5	
	comp=Z,8.9nm,0.8s						
GRF	**Grafenberg Arr**	**23.52**	**307**	P	**P**	**19 02 10.8**	**-1.4**
GRF				pmax	pmax		
	comp=Z,9.0nm,0.8s						
GRFO	**Grafenberg**	**23.52**	**307**	P	**P**	**19 02 10.3**	**-1.9**
GRFO				IAmb	IAmb	19 02 17.4	
	comp=Z,8.2nm,0.8s						
GRFO	**Grafenberg**	**23.52**	**307**	P	**P**	**19 02 10.3**	**-1.9**
GRFO				pmax	pmax		
	comp=Z,8.0nm,0.8s						
FIA0	**FINESS Array S**	**24.25**	**343**	P	**P**	**19 02 14.9**	**-3.9**
FIA0	**FINESS Array S**	**24.25**	**343**	P	**P**	**19 02 15.0**	**-3.9**
FINES	**FINESS Array B**	**24.25**	**343**	P	**P**	**19 02 19.4**	**+0.5**
	comp=Z,4.0nm,0.8s,baz=130,slow=10,SNR=11						
FINES				LR	LR	19 12 57.2	
	comp=Z,235nm,18.1s,baz=110,slow=39						
	comp=Z,4.0nm,0.8s						
FINES	**FINESS Array B**	**24.25**	**343**	P	**P**	**19 02 16.5**	**-2.4**
KEST	**Kesra**	**25.10**	**272**	P	**P**	**19 02 28.4**	**+1.4**
	comp=Z,4.2nm,0.7s,baz=69,slow=8.6,SNR=6.0						
	comp=Z,4.2nm,0.7s						
KEST	**Kesra**	**25.10**	**272**	P	**P**	**19 02 25.1**	**-1.9**
BNI	**Bardonecchia**	**25.89**	**295**	P	**P**	**19 02 32.3**	**-1.9**
BNI				IAmb	IAmb	19 02 44.0	
	comp=Z,9.6nm,1.3s						
BNI	**Bardonecchia**	**25.89**	**295**	P	**P**	**19 02 32.3**	**-1.9**
BNI				pmax	pmax		
	comp=Z,10.0nm,1.3s						
HFS	**Hagfors**	**27.14**	**330**	P	**P**	**19 02 46.3**	**+1.2**
	comp=Z,2.2nm,0.7s,baz=122,slow=13,SNR=2.2						
	comp=Z,2.2nm,0.7s						
NOA	**NORSAR Array B**	**28.67**	**330**	P	**P**	**19 02 58.6**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=146,slow=6.9,SNR=3.3						
NOA				LR	LR	19 16 49.2	
	comp=Z,96nm,18.7s,baz=325,slow=42						
	comp=Z,0.5nm,0.7s						
MKAR	**Makanchi Array**	**31.13**	**62**	P	**P**	**19 03 21.8**	**+1.0**
	comp=Z,1.3nm,0.8s,baz=283,slow=7.2,SNR=2.5						
	comp=Z,1.3nm,0.8s						
ARCES	**ARCESS Array B**	**31.68**	**350**	P	**P**	**19 03 25.4**	**+0.1**
	comp=Z,2.1nm,0.8s,baz=166,slow=8.0,SNR=2.9						
	comp=Z,2.1nm,0.8s						
EKA	**Eskdalemuir Ar**	**33.37**	**314**	LR	LR	19 20 59.9	
	comp=Z,179nm,18.1s,baz=176,slow=43						
ESDC	**Sonseca Array**	**34.31**	**286**	P	**P**	**19 03 48.5**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=66,slow=8.8,SNR=5.2						
	comp=Z,0.5nm,0.5s						
WMQ	**Urumqi**	**35.18**	**67**	*eP*	**P**	**19 03 56.4**	**+0.2**
WMQ				LR	LR		
	comp=N,900nm,29.5s						
WMQ				LR	LR		
	comp=E,330nm,19.3s						
WMQ				LR	LR		
	comp=Z,730nm,24.3s						
KMBO	**Kilima Mbogo**	**40.04**	**185**	*i* P	**P**	**19 04 38.7**	**+1.0**
KMBO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
PALK	**Pallekele**	**47.82**	**121**	LR	LR	19 26 18.6	
	comp=Z,539nm,21.8s,baz=221,slow=37						
HHC	**Hu-ho-hao-tc**	**52.96**	**64**	*eP*	**P**	**19 06 16.7**	**-2.1**
HHC				pmax	pmax		
	comp=Z,27nm,0.8s						
HHC				pmax	pmax		
	comp=Z,380nm,8.3s						
TIXI	**Tiksi**	**52.96**	**23**	P	**P**	**19 06 18.9**	**+0.7**
	comp=Z,1.2nm,0.7s,baz=269,slow=22,SNR=3.7						
	comp=Z,1.2nm,0.7s						
CMAR	**Chiang Mai Arr**	**54.06**	**95**	P	**P**	**19 06 27.8**	**+0.8**
	comp=Z,0.2nm,0.5s,baz=288,slow=9.4,SNR=1.9						
	comp=Z,0.2nm,0.5s						
SEY	**Seymchan**	**64.81**	**28**	P	**P**	**19 07 41.6**	**+0.9**
	comp=Z,7.0nm,0.8s,baz=284,slow=5.0,SNR=20						
	comp=Z,7.0nm,0.8s						
KSRS	**Korea Array**	**65.80**	**61**	P	**P**	**19 07 47.8**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=347,slow=5.0,SNR=2.9						
	comp=Z,0.5nm,0.4s						
YKA	**Yellowknife Ar**	**76.94**	**349**	P	**P**	**19 08 55.1**	**+0.8**
	comp=Z,0.8nm,0.7s,baz=13,slow=6.5,SNR=4.8						
	comp=Z,0.8nm,0.7s						

*NOU **10** 19:11:06.8, 38.93S×174.78E, h241km, MLv4.1/8, North Island, New Zealand*
*WEL **10** 19:11:12.4±0.8, 39.5S±5.1×17.5E±1.1°, h193km±7km, M3.0/36, ML2.5/10, MLv3.0/36, Error ellipse: s-maj=0.0km s-min=0.0km az=97.2*
ISC 10 19:11:06.5±1.8, 39.01S±0.06×174.81E±0.06, h233km±10km, n104, σ1§80/116, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VRZ	**Vera Road**	**0.12**	**197**	P	**Pn**	**19 11 38.1**	**+1.5**
HIZ	**Hauiti**	**0.49**	**4**	P	**Pn**	**19 11 39.2**	**+1.6**
HIZ	**Hauiti**	**0.49**	**4**	P	**Pn**	**19 11 39.1**	**+1.6**
TWVZ	**Taurewa**	**0.50**	**98**	P	**Pn**	**19 11 39.0**	**+1.5**
PKVZ	**Pokaka**	**0.51**	**124**	P	**Pn**	**19 11 39.2**	**+1.7**
LREZ	**Lake Rotokare**	**0.55**	**214**	P	**Pn**	**19 11 39.9**	**+2.3**
PREZ	**Palmer Road**	**0.60**	**236**	P	**Pn**	**19 11 40.3**	**+2.5**
NEZ	**North Egmont**	**0.61**	**244**	P	**Pn**	**19 11 40.4**	**+2.4**
WTVZ	**West Tongariro**	**0.62**	**100**	P	**Pn**	**19 11 39.7**	**+1.7**
FWVZ	**Far West T-bar**	**0.63**	**113**	P	**Pn**	**19 11 39.9**	**+1.7**
MTVZ	**Mangateitei**	**0.64**	**126**	P	**Pn**	**19 11 39.8**	**+1.8**
NGZ	**Nguaruhoe**	**0.64**	**106**	P	**Pn**	**19 11 39.9**	**+1.7**
NNVZ	**North Ngauruho**	**0.64**	**102**	P	**Pn**	**19 11 39.9**	**+1.8**
TRVZ	**Turoa**	**0.65**	**117**	P	**Pn**	**19 11 40.1**	**+1.8**
KRVZ	**Karewarewa**	**0.66**	**98**	P	**Pn**	**19 11 40.0**	**+1.8**
PKE	**Pukeiti**	**0.67**	**253**	P	**Pn**	**19 11 40.5**	**+2.4**
KHEZ	**Kahui Hut**	**0.68**	**245**	P	**Pn**	**19 11 40.4**	**+2.2**
NTVZ	**North Tongarir**	**0.68**	**98**	P	**Pn**	**19 11 40.2**	**+1.9**
OTVZ	**Oturere**	**0.69**	**104**	P	**Pn**	**19 11 40.4**	**+2.1**
WNVZ	**Wahianoa**	**0.69**	**118**	P	**Pn**	**19 11 40.2**	**+1.9**
TMVZ	**Te Maari**	**0.71**	**99**	P	**Pn**	**19 11 40.5**	**+2.1**
TUVZ	**Tukino**	**0.71**	**112**	P	**Pn**	**19 11 40.6**	**+2.2**
ETVZ	**East Tongariro**	**0.72**	**101**	P	**Pn**	**19 11 40.4**	**+2.0**
WAZ	**Wanganui**	**0.76**	**170**	P	**Pn**	**19 11 40.7**	**+2.2**
RATZ	**Rangitukua**	**0.77**	**80**	P	**Pn**	**19 11 39.0**	**+0.4**
NMEZ	**Namu Road**	**0.83**	**240**	P	**Pn**	**19 11 41.1**	**+2.4**
MOVZ	**Moawhango**	**0.84**	**119**	P	**Pn**	**19 11 40.4**	**+1.5**
MOVZ				S	S	**19 11 59.9**	**-4.3**
BHHZ	**Black Hill Sta**	**1.09**	**117**	P	**Pn**	**19 11 41.8**	**+1.5**
BHHZ				S	S	**19 12 03.5**	**-3.3**
BKZ	**Black Stump Fm**	**1.32**	**97**	P	**Pn**	**19 11 43.4**	**+1.4**
BKZ				S	S	**19 12 07.0**	**-2.5**
BKZ	**Black Stump Fm**	**1.32**	**97**	P	**Pn**	**19 11 43.7**	**+1.8**
KRHZ	**Kereru**	**1.37**	**118**	P	**Pn**	**19 11 44.1**	**+1.9**
KRHZ				S	S	**19 12 07.9**	**-2.2**
TSZ	**Takapari Road**	**1.38**	**140**	P	**Pn**	**19 11 44.3**	**+2.0**
TSZ				S	S	**19 12 08.4**	**-1.9**
PNHZ	**Pukenui**	**1.41**	**130**	P	**Pn**	**19 11 44.4**	**+1.9**
PNHZ				S	S	**19 12 09.3**	**-1.5**
MCHZ	**McNeill Hill**	**1.53**	**107**	P	**Pn**	**19 11 46.0**	**+2.5**
MCHZ				S	S	**19 12 12.4**	**+0.1**
NMHZ	**Naumai**	**1.56**	**94**	P	**Pn**	**19 11 46.3**	**+2.5**
NMHZ				S	S	**19 12 14.2**	**+1.3**
POWZ	**Post Office Ro**	**1.57**	**152**	P	**Pn**	**19 11 45.5**	**+1.8**
POWZ				S	S	**19 12 11.1**	**-1.9**
MTHZ	**Maungataniwha**	**1.59**	**85**	P	**Pn**	**19 11 45.5**	**+1.5**
MTHZ				S	S	**19 12 11.5**	**-1.8**
WPHZ	**Waipukurau**	**1.65**	**130**	P	**Pn**	**19 11 46.4**	**+2.0**
WPHZ				S	S	**19 12 12.4**	**-1.7**
DVHZ	**Dannevirke**	**1.67**	**141**	P	**Pn**	**19 11 45.8**	**+1.3**
DVHZ				S	S	**19 12 11.9**	**-2.4**
ARHZ	**Aropaoanui**	**1.72**	**99**	P	**Pn**	**19 11 47.2**	**+2.2**
RTZ	**Ruatahuna**	**1.74**	**78**	P	**Pn**	**19 11 46.8**	**+1.4**
MRZ	**Mangatainoka R**	**1.76**	**160**	P	**Pn**	**19 11 46.9**	**+1.6**
RAHZ	**Arahi**	**1.78**	**88**	P	**Pn**	**19 11 47.6**	**+2.0**
KAHZ	**Kahuranaki**	**1.79**	**117**	P	**Pn**	**19 11 48.0**	**+2.3**
PRWZ	**Pori Road**	**1.79**	**150**	P	**Pn**	**19 11 47.6**	**+2.0**
OGWZ	**Otaki Gorge**	**1.83**	**171**	P	**Pn**	**19 11 48.0**	**+2.0**
KIW	**Kapiti Island**	**1.85**	**178**	P	**Pn**	**19 11 47.9**	**+1.7**
CKHZ	**Cape Kidnapper**	**1.88**	**111**	P	**Pn**	**19 11 48.7**	**+2.3**
PXZ	**Pawanui**	**1.89**	**123**	P	**Pn**	**19 11 48.5**	**+2.0**
PRHZ	**Porangahau**	**1.89**	**132**	P	**Pn**	**19 11 48.6**	**+2.0**
DUWZ	**D'Urville Isla**	**1.92**	**200**	P	**Pn**	**19 11 48.7**	**+1.9**
MKAZ	**Moumakai**	**1.92**	**9**	P	**Pn**	**19 11 48.0**	**+1.1**
URZ	**Urewera**	**1.95**	**68**	P	**Pn**	**19 11 48.3**	**+1.2**
URZ	**Urewera**	**1.95**	**68**	P	**Pn**	**19 11 47.7**	**+0.6**
HOWZ	**Holdsworth Sta**	**1.97**	**164**	P	**Pn**	**19 11 48.7**	**+1.5**
CAW	**Cannon Point**	**2.11**	**175**	P	**Pn**	**19 11 50.3**	**+1.7**
MTW	**Mount Morrison**	**2.21**	**166**	P	**Pn**	**19 11 51.1**	**+1.5**
MWZ	**Matawai**	**2.23**	**73**	P	**Pn**	**19 11 51.3**	**+1.4**
KNZ	**Kokohu**	**2.23**	**91**	P	**Pn**	**19 11 51.6**	**+1.8**
TCW	**Tory Channel**	**2.24**	**190**	P	**Pn**	**19 11 51.9**	**+2.0**
TMWZ	**Te Maipa**	**2.26**	**159**	P	**Pn**	**19 11 51.5**	**+1.4**
WEL	**Wellington**	**2.28**	**181**	P	**Pn**	**19 11 51.8**	**+1.6**
SNZO	**South Karori**	**2.30**	**182**	P	**Pn**	**19 11 51.9**	**+1.5**
RIGZ	**Rimuhau**	**2.33**	**84**	P	**Pn**	**19 11 52.8**	**+2.0**
BHW	**Baring Head**	**2.40**	**179**	P	**Pn**	**19 11 52.9**	**+1.5**
MHGZ	**Mahia Peninsul**	**2.42**	**94**	P	**Pn**	**19 11 53.8**	**+2.1**
PAWZ	**Paruwai Farm**	**2.42**	**169**	P	**Pn**	**19 11 53.2**	**+1.5**
MSWZ	**Moikau Station**	**2.43**	**172**	P	**Pn**	**19 11 53.3**	**+1.5**
NNZ	**Nelson**	**2.46**	**206**	P	**Pn**	**19 11 53.8**	**+1.7**
TKNZ	**Takaka Hill**	**2.47**	**214**	P	**Pn**	**19 11 53.5**	**+1.3**
RUGZ	**Raukumara Rang**	**2.48**	**66**	P	**Pn**	**19 11 53.1**	**+0.6**
TUWZ	**Tuamarina**	**2.51**	**195**	P	**Pn**	**19 11 54.4**	**+1.9**
QRZ	**Quartz Range**	**2.52**	**223**	P	**Pn**	**19 11 54.1**	**+1.4**
QRZ	**Quartz Range**	**2.52**	**223**	P	**Pn**	**19 11 54.2**	**+1.4**
PLWZ	**Palliser**	**2.58**	**173**	P	**Pn**	**19 11 54.8**	**+1.3**
HAZ	**Te Kaha**	**2.65**	**63**	P	**Pn**	**19 11 54.8**	**+0.7**
CMWZ	**Cape Campbell**	**2.78**	**189**	P	**Pn**	**19 11 58.1**	**+2.6**
BSWZ	**Blackbirch Sta**	**2.80**	**194**	P	**Pn**	**19 11 57.9**	**+2.2**
PKGZ	**Pakihiroa**	**2.80**	**68**	P	**Pn**	**19 11 57.3**	**+1.4**
MRNZ	**Matariki Terra**	**2.86**	**213**	P	**Pn**	**19 11 57.6**	**+1.3**
PUZ	**Puketiti**	**2.86**	**72**	P	**Pn**	**19 11 58.4**	**+1.9**
WMGZ	**Waiomatatini S**	**3.07**	**68**	P	**Pn**	**19 12 00.2**	**+1.5**
THZ	**Tophouse**	**3.11**	**207**	P	**Pn**	**19 12 00.7**	**+1.5**
KHZ	**Kahutara**	**3.54**	**195**	P	**Pn**	**19 12 05.7**	**+1.7**
KHZ	**Kahutara**	**3.54**	**195**	P	**Pn**	**19 12 05.5**	**+1.5**
DSZ	**Denniston Nort**	**3.57**	**219**	P	**Pn**	**19 12 05.8**	**+1.3**
GVZ	**Greta Valley S**	**4.18**	**198**	P	**Pn**	**19 12 13.3**	**+1.6**
LTZ	**Lake Taylor**	**4.23**	**206**	P	**Pn**	**19 12 13.9**	**+1.6**
AMCZ	**Amberley**	**4.47**	**201**	P	**Pn**	**19 12 19.5**	**+1.3**
OXZ	**Oxford**	**4.79**	**205**	P	**Pn**	**19 12 19.9**	**+0.8**
OKCZ	**Okains Bay**	**4.89**	**195**	P	**Pn**	**19 12 21.6**	**+1.2**
MQZ	**McQueen's Vall**	**4.97**	**198**	P	**Pn**	**19 12 21.8**	**+0.5**
AKCZ	**Akaroa Harbour**	**5.07**	**196**	P	**Pn**	**19 12 23.1**	**+0.6**
WVZ	**Waitaha Valley**	**5.10**	**216**	P	**Pn**	**19 12 24.5**	**+1.6**
RACZ	**Rakaia**	**5.13**	**202**	P	**Pn**	**19 12 24.0**	**+0.8**
WACZ	**Wakanui South**	**5.41**	**203**	P	**Pn**	**19 12 28.0**	**+1.2**
RPZ	**Rata Peaks**	**5.49**	**210**	P	**Pn**	**19 12 28.7**	**+0.9**
RPZ	**Rata Peaks**	**5.49**	**210**	P	**Pn**	**19 12 28.5**	**+0.7**
ARCZ	**Arundel**	**5.64**	**208**	P	**Pn**	**19 12 30.3**	**+0.6**
FOZ	**Fox Glacier**	**5.88**	**218**	P	**Pn**	**19 12 33.6**	**+0.9**
TMZ	**Timaru**	**6.08**	**207**	P	**Pn**	**19 12 36.5**	**+1.3**
LBZ	**Lake Benmore**	**6.39**	**211**	P	**Pn**	**19 12 39.8

AFI	**Afiamalu**	**6.06**	**62**			**Pn**	**19 26 06.6**	**-2.1**
RAO	**Raoul Island**	**12.35**	**183**	LR		LR	19 31 29.9	
	comp=Z,3μm,19.7s,baz=338,slow=33							
DZM	**Mont Dzumac**	**16.20**	**249**	*e*LR		LR	19 31 58.0	
	comp=Z,3μm,26.6s							
DZM	**Mont Dzumac**	**16.20**	**249**	LR		LR	19 33 36.6	
	comp=Z,2μm,21.3s,baz=72,slow=33							
RAR	**Rarotonga**	**17.11**	**107**	LR		LR	19 33 16.2	
	comp=Z,1μm,19.9s,baz=276,slow=30							
URZ	**Urewera**	**21.88**	**192**	LR		LR	19 36 18.1	
	comp=Z,1μm,19.8s,baz=31,slow=32							
HNR	**Honiara**	**23.36**	**286**	LR		LR	19 37 28.7	
	comp=Z,1μm,20.3s,baz=106,slow=33							
PPT2	**Papeete2**	**26.46**	**96**	*e*LR		LR	19 36 28.4	
	comp=Z,2μm,26.5s							
PPT	**Papeete**	**26.46**	**96**	LR		LR	19 37 54.7	
	comp=Z,436nm,19.0s,baz=291,slow=30							
TBI	**Tubuai**	**26.88**	**108**	*e*LR		LR	19 36 44.9	
	comp=Z,2μm,27.8s							
ARMA	**Armidale**	**31.40**	**239**	P		**P**	**19 30 58.9**	**-1.5**
ARMA				IAmb		IAmb	19 31 07.6	
	comp=Z,19nm,1.4s							
KRVT	**Keravat (AS076**	**32.58**	**289**	LR		LR	19 42 51.0	
	comp=Z,788nm,20.7s,baz=251,slow=34							
CTA	**Charters Tower**	**34.69**	**259**	P		**P**	**19 31 30.1**	**+1.0**
	comp=Z,8.7nm,0.9s,baz=93,slow=9.5,SNR=8.0							
CTA				LR		LR	19 43 19.4	
	comp=Z,824nm,20.4s,baz=80,slow=32							
	comp=Z,8.7nm,0.9s							
CTAO	**Charters Tower**	**34.69**	**259**	P		**P**	**19 31 29.9**	**+0.7**
TAOE	**Nuku Hiva Isla**	**37.01**	**82**	*e*LR		LR	19 41 24.0	
	comp=Z,1μm,25.7s							
TAOE	**Nuku Hiva Isla**	**37.01**	**82**	*e*T		T	20 10 45.0	
	comp=Z,44nm,0.2s							
H11N3	**WAKE ISLAND Hy**	**39.53**	**336**	T		T	20 13 40.5	
	baz=160							
H11N1	**WAKE ISLAND Hy**	**39.53**	**336**	T		T	20 13 39.7	
	baz=160							
H11N2	**WAKE ISLAND Hy**	**39.55**	**336**	T		T	20 13 46.6	
	baz=160							
STKA	**Stephens Creek**	**40.08**	**240**	P		**P**	**19 32 16.3**	**+1.6**
	comp=Z,12nm,1.1s,baz=96,slow=13,SNR=6.1							
STKA				LR		LR	19 47 32.6	
	comp=Z,274nm,18.3s,baz=59,slow=34							
	comp=Z,12nm,1.1s							
STKA	**Stephens Creek**	**40.08**	**240**	P		**P**	**19 32 14.3**	**-0.4**
WB2	**Warramunga Arr**	**45.88**	**258**	P		**P**	**19 33 00.0**	**-1.9**
WB2				IAmb		IAmb	19 33 39.0	
	comp=Z,19nm,1.7s							
WRA	**Warramunga Arr**	**45.89**	**258**	P		**P**	**19 33 02.4**	**+0.4**
	comp=Z,1.8nm,1.2s,baz=96,slow=7.6,SNR=4.7							
WRA				LR		LR	19 51 43.9	
	comp=Z,189nm,18.4s,baz=8.5,slow=35							
	comp=Z,1.8nm,1.2s							
WRA	**Warramunga Arr**	**45.89**	**258**	P		**P**	**19 32 59.8**	**-2.2**
AS31	**Alice Springs**	**46.12**	**253**	P		**P**	**19 33 01.8**	**-2.0**
ASAR	**Alice Springs**	**46.12**	**253**	P		**P**	**19 33 04.0**	**+0.2**
	comp=Z,5.1nm,0.7s,baz=86,slow=8.1,SNR=35							
ASAR				PcP		**PcP**	**19 34 40.6**	**+0.6**
	comp=Z,1.0nm,0.8s,baz=104,slow=3.9,SNR=1.8							
ASAR				LR		LR	19 51 13.0	
	comp=Z,980nm,19.6s,baz=96,slow=34							
	comp=Z,5.1nm,0.7s							
ASAR	**Alice Springs**	**46.12**	**253**	P		**P**	**19 33 02.1**	**-1.6**
KNRA	**Kununurra**	**51.68**	**263**	P		**P**	**19 33 43.2**	**-3.3**
SIJI	**Sorong**	**53.06**	**282**	LR		LR	19 55 37.4	
	comp=Z,276nm,20.0s,baz=105,slow=35							
SOEI	**Soe**	**57.16**	**269**	P		**P**	**19 34 23.6**	**-3.0**
BATI	**Baumata**	**57.63**	**268**	LR		LR	19 57 24.8	
	comp=Z,282nm,20.8s,baz=146,slow=34							
DAV	**Davao City (W)**	**61.29**	**288**	LR		LR	19 59 30.6	
	comp=Z,28nm,20.1s,baz=128,slow=34							
KAPI	**Kappang**	**62.71**	**273**	LR		LR	20 00 30.6	
	comp=Z,89nm,19.4s,baz=64,slow=34							
RPN	**Rapa Nui**	**63.18**	**112**	LR		LR	19 57 46.5	
	comp=Z,108nm,19.7s,baz=276,slow=31							
ASAJ	**Asahikawa**	**70.89**	**331**	LR		LR	20 02 19.2	
	comp=Z,147nm,19.8s,baz=146,slow=32							
PETK	**Petropavlovsk-**	**72.95**	**345**	P		**P**	**19 36 07.5**	**-0.8**
	comp=Z,0.9nm,0.8s,baz=141,slow=9.3,SNR=1.3							
	comp=Z,0.9nm,0.8s							
QSPA	**South Pole Qui**	**73.19**	**180**	P		**P**	**19 36 09.4**	**-0.5**
LEM	**Lembang**	**73.83**	**268**	LR		LR	20 08 10.2	
	comp=Z,159nm,21.1s,baz=158,slow=35							
KSRS	**Korea Array**	**74.65**	**318**	P		**P**	**19 36 19.4**	**+0.9**
	comp=Z,1.2nm,0.9s,baz=142,slow=6.2,SNR=1.6							
KSRS				LR		LR	20 03 58.3	
	comp=Z,51nm,20.2s,baz=165,slow=32							
	comp=Z,1.2nm,0.9s							
LPIG	**La Paz**	**76.98**	**60**	LR		LR	20 04 21.7	
	comp=Z,131nm,18.6s,baz=232,slow=31							
YBH	**Yreka Blue Hor**	**77.03**	**39**	P		**P**	**19 36 32.3**	**0.0**
	comp=Z,1.7nm,0.8s,baz=144,slow=11,SNR=4.3							
	comp=Z,1.7nm,0.8s							
KDAK	**Kodiak Island**	**77.14**	**13**	LR		LR	20 03 21.4	
	comp=Z,273nm,21.9s,baz=208,slow=30							
NVAR	**Mina Array Bea**	**77.92**	**43**	P		**P**	**19 36 36.1**	**-1.4**
	comp=Z,0.8nm,0.8s,baz=228,slow=9.1,SNR=3.0							
	comp=Z,0.8nm,0.8s							
H02S1	**DAWSON INLET T**	**79.72**	**26**	T		T	21 04 01.4	
	SNR=6.3							
BBB	**Bella Bella**	**80.89**	**28**	LR		LR	20 05 40.0	
	comp=Z,96nm,19.0s,baz=236,slow=30							
G08A	**Pilot Rock**	**81.33**	**37**	P		**P**	**19 36 55.6**	**-0.1**
G08A				IAmb		IAmb	19 36 59.1	
	comp=Z,16nm,1.7s							
SCM	**Sheep Creek Mo**	**81.95**	**14**	P		**P**	**19 36 58.5**	**-0.1**
SCM				IAmb		IAmb	19 37 07.8	
	comp=Z,8.8nm,1.0s							
HLID	**Hailey**	**83.14**	**41**	P		**P**	**19 37 04.8**	**-0.5**
SRU	**San Rafael Swe**	**83.52**	**46**	P		**P**	**19 37 07.2**	**-0.2**
SRU				IAmb		IAmb	19 37 12.2	
	comp=Z,6.6nm,1.3s							
MNTX	**Cornudas Mount**	**84.09**	**55**	P		**P**	**19 37 10.1**	**-0.2**
WRH	**Wood River Hil**	**84.12**	**12**	P		**P**	**19 37 09.3**	**-0.3**
WRH				IAmb		IAmb	19 37 15.7	
	comp=Z,12nm,1.4s							
DOT	**Dot Lake**	**84.29**	**14**	P		**P**	**19 37 10.6**	**0.0**
DOT				IAmb		IAmb	19 37 12.8	
	comp=Z,12nm,1.6s							
CCB	**Clear Creek Bu**	**84.33**	**12**	P		**P**	**19 37 10.4**	**-0.3**
CCB				IAmb		IAmb	19 37 16.7	
	comp=Z,8.8nm,1.3s							
DLBC	**Dease Lake**	**84.45**	**23**	LR		LR	20 08 20.6	
	comp=Z,246nm,19.1s,baz=264,slow=31							
MDM	**Murphy Dome**	**84.52**	**12**	P		**P**	**19 37 12.2**	**+0.5**
TX31	**Lajitas Ar. Si**	**84.52**	**57**	P		**P**	**19 37 12.9**	**+0.3**
TX32	**Lajitas Array**	**84.52**	**57**	P		**P**	**19 37 12.8**	**+0.2**
TX32				IAmb		IAmb	19 37 18.6	
	comp=Z,6.2nm,1.3s							
TXAR	**Lajitas Array**	**84.53**	**57**	P		**P**	**19 37 13.3**	**+0.7**
	comp=Z,2.9nm,1.2s,baz=208,slow=5.0,SNR=8.2							
	comp=Z,2.9nm,1.2s							
ANMO	**Albuquerque**	**84.60**	**51**	P		**P**	**19 37 13.4**	**+0.3**
	comp=Z,0.9nm,0.8s,baz=252,slow=6.4,SNR=1.9							
	comp=Z,0.9nm,0.8s							
ILAR	**Eielson Array**	**84.63**	**13**	P		**P**	**19 37 11.8**	**-0.4**
	comp=Z,2.2nm,0.9s,baz=230,slow=6.0,SNR=13							
ILAR				LR		LR	20 08 13.7	
	comp=Z,121nm,20.7s,baz=220,slow=31							
	comp=Z,2.2nm,0.9s							
MCMT	**McKenzie Canyo**	**84.75**	**40**	P		**P**	**19 37 13.3**	**-0.3**
J25K	**Salcha River,**	**84.82**	**13**	P		**P**	**19 37 12.3**	**-1.0**
J25K				IAmb		IAmb	19 37 49.4	
	comp=Z,8.2nm,1.4s							
J26L	**Joseph Creek**	**85.13**	**14**	P		**P**	**19 37 15.7**	**+0.8**
J26L				IAmb		IAmb	19 37 30.6	
	comp=Z,6.9nm,1.2s							
MAW	**Mawson**	**85.20**	**199**	LR		LR	20 15 19.6	
	comp=Z,202nm,18.2s,baz=164,slow=36							
S22A	**4UR Ranch, Cre**	**85.51**	**49**	P		**P**	**19 37 18.1**	**+0.4**
S22A				IAmb		IAmb	19 37 35.0	
	comp=Z,9.3nm,1.5s							
PDAR	**Pinedale Array**	**85.85**	**43**	P		**P**	**19 37 19.2**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=263,slow=5.0,SNR=2.1							
	comp=Z,0.2nm,0.4s							
BOZ	**Bozeman (W)**	**85.87**	**40**	P		**P**	**19 37 18.8**	**-0.3**
BOZ				IAmb		IAmb	19 37 23.9	
	comp=Z,5.6nm,1.2s							
XAN	**Xi'an**	**86.49**	**307**	P		**P**	**19 37 25.1**	**+2.8**
XAN				pP		pwP	19 37 29.1	+1.0
XAN				pmax		pmax		
	comp=Z,4.0nm,1.2s							
HHC	**Hu-ho-hao-te**	**87.32**	**314**	*e*P		**P**	**19 37 27.0**	**+0.8**
HHC				pmax		pmax		
	comp=Z,22nm,0.9s							
HHC				pmax		pmax		
	comp=Z,360nm,5.6s							
H03S2	**Juan Fernandez**	**87.48**	**124**	T		T	21 14 11.3	
	baz=250							
H03S1	**Juan Fernandez**	**87.49**	**124**	T		T	21 14 19.9	
	baz=250							
H03S3	**Juan Fernandez**	**87.50**	**124**	T		T	21 14 19.3	
	baz=250							
H03N2	**Juan Fernandez**	**87.60**	**124**	T		T	21 14 17.3	
	baz=250							
H03N3	**Juan Fernandez**	**87.60**	**124**	T		T	21 14 15.5	
	baz=250							
H03N1	**Juan Fernandez**	**87.62**	**124**	T		T	21 14 14.8	
	baz=250							
CMIG	**Matias Romero**	**87.88**	**72**	LR		LR	20 07 29.1	
	comp=Z,200nm,21.2s,baz=299,slow=29							
CMAR	**Chiang Mai Arr**	**89.55**	**289**	LR		LR	20 17 42.7	
	comp=Z,50nm,18.3s,baz=290,slow=36							
PZH	**PanZhiHua**	**89.62**	**298**	P		**P**	**19 37 40.0**	**+2.5**
PZH				pmax		pmax		
	comp=Z,10.0nm,1.0s							
PZH				pmax		pmax		
	comp=Z,100nm,6.1s							
LZH	**Lanzhou**	**91.11**	**307**	*e*P		**P**	**19 37 47.3**	**+3.0**
LZH				sP		pwP	19 37 55.9	+5.8
LZH				pmax		pmax		
	comp=Z,17nm,1.4s							
SNAA	**Sanae**	**91.61**	**178**	LR		LR	20 13 26.5	
	comp=Z,154nm,21.9s,baz=169,slow=32							
VNA3	**Neumayer Olymp**	**91.71**	**176**	P		**P**	**19 37 47.1**	**+0.8**
VNA3	**Neumayer Olymp**	**91.71**	**176**	PKiKP		**PKiKP**	**19 42 40.0**	**+2.7**
VNA2	**Neumayer--Watz**	**92.16**	**177**	P		**P**	**19 37 49.6**	**+1.3**
	baz=189,slow=1.9							
YKA	**Yellowknife Ar**	**92.94**	**24**	LR		LR	20 11 55.8	
	comp=Z,190nm,20.4s,baz=110,slow=31							
JTS	**Las Juntas de**	**95.13**	**81**	LR		LR	20 11 19.7	
	comp=Z,285nm,21.8s,baz=104,slow=30							
ATAH	**Atahualpa**	**96.38**	**99**	LR		LR	20 11 35.8	
	comp=Z,249nm,21.4s,baz=304,slow=29							
CLL	**Collm**	**144.66**	**349**	*e*PKPdf		**PKiKP**	**19 44 18.0**	**-1.5**
OSTC	**Ostas**	**144.68**	**345**	*e*PKP		**PKPab**	**19 44 11.1**	**-3.4**
BRTR	**Keskin Array B**	**144.79**	**317**	PKP		**PKPdf**	**19 44 16.3**	**-0.3**
	comp=Z,4.4nm,0.9s,baz=92,slow=1.8,SNR=24							
BRTR	**Keskin Array B**	**144.79**	**317**	PKPdf		**PKPab**	**19 44 15.5**	**0.0**
DPC	**Dobruska-Polom**	**144.84**	**345**	*e*PKP		**PKPdf**	**19 44 16.3**	**+0.1**
KRLC	**Kraliky**	**144.98**	**344**	*e*PKP		**PKPbc**	**19 44 16.0**	**+0.3**
MAUC	**Maruska**	**145.33**	**343**	*e*PKP		**PKPab**	**19 44 17.1**	**+0.1**
PRU	**Pruhonice**	**145.60**	**346**	*e*PKP		**PKPab**	**19 44 18.5**	**+0.6**
MODS	**Modra-Piesok**	**146.39**	**342**	*e*PKP		**PKPdf**	**19 44 17.2**	**-1.7**
KHC	**Kasperske Hory**	**146.62**	**347**	*e*PKP		**PKPab**	**19 44 21.5**	**-0.3**
KHC				*e*pPKP		sPKPab	19 44 25.0	-0.3
CKRC	**Cesky Krumlov**	**146.75**	**346**	*e*PKP		**PKPbc**	**19 44 21.8**	**+0.6**
GERES	**GERESS Array B**	**146.86**	**347**	PKPbc		**PKPbc**	**19 44 22.1**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=43,slow=2.4,SNR=6.0							
GERES	**GERESS Array B**	**146.86**	**347**			**PKPdf**	**19 44 18.6**	**-1.2**
CONA	**Conrad Observa**	**147.19**	**344**	*e*P		**PKPab**	**19 44 24.1**	**0.0**
	comp=Z,10nm,1.8s							
RONA	**Rosalia, Austr**	**147.28**	**343**	*e*P		**PKPab**	**19 44 24.2**	**-0.3**
	comp=Z,5.1nm,1.3s							
BIOA	**Bad Ischl, Aus**	**147.97**	**346**	*e*P		**PKPab**	**19 44 28.1**	**+1.0**
	comp=Z,2.7nm,0.5s							
SOKA	**Soboth**	**148.56**	**344**	*i* P		**PKPab**	**19 44 30.1**	**+0.4**
	comp=Z,5.3nm,1.3s							
WTTA	**Wattenberg**	**148.80**	**348**	*i* P		**PKiKP**	**19 44 29.6**	**+1.2**
	comp=Z,7.6nm,1.0s							
MOTA	**Moosalm**	**148.82**	**349**	*i* P		**PKiKP**	**19 44 28.9**	**+0.5**
	comp=Z,7.1nm,1.3s							
DAVA	**Damuels**	**149.09**	**350**	*e*P		**PKiKP**	**19 44 28.6**	**-0.3**
	comp=Z,5.1nm,1.1s							
ABTA	**Abfaltersbach**	**149.11**	**347**	*i* P		**PKiKP**	**19 44 28.9**	**0.0**
	comp=Z,5.1nm,1.5s							
FETA	**Feichten**	**149.20**	**349**	*i* P		**PKPdf**	**19 44 25.7**	**+2.0**
	comp=Z,3.2nm,1.0s							

MAN 10 19:25:13.5, 13°.65N×120°.29E, h11km, mb3.8, ML2.6, MS2.1, Mindoro

*SNET **10** 19:27:05.9±0.7, 13°.14N×91°.64W, h34km±579km, ML4.0*
*UCR **10** 19:27:05.9±0.7, 13°.14N×91°.64W, h35km±569km, ML3.8, mb4.2(NEIC)*
*IDC **10** 19:27:08.1±1.6, 13°.67N×90°.84W, h0km, mb3.8/6, mbtmp3.8/9, ML3.8/3, Error ellipse: s-maj=85.5km s-min=15.5km az=42.0*
*NEIC **10** 19:27:10.0±2.1, 13°.37N±0°.07×91°.40W±0°.07, h19km±3km, mb4.2/14, Error ellipse: s-maj=14.3km s-min=4.2km az=223.0*
*GCG **10** 19:27:18.9±0.5, 13°.84N×91°.20W, h32km±5km, MD4.3*

ISC 10 19:27:09.6±0.8, 13°.32N±0°.06×91°.31W±0°.04, h28km, n64, σ1°78/72, mb4.1/12, 1C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**1.21**	**22**	*e*P		**Pb**		**19 27 32.9**	**+0.9**
RTAL	**Retalhuleu**	**1.25**	**343**			**Pb**		**19 27 31.6**	**-1.1**
RTAL						**Sb**		**19 27 46.9**	**-1.5**
STG3	**Santiaguito 3,**	**1.40**	**350**	*e*P		**Pb**		**19 27 34.7**	**-0.6**
NBG	**Las Nubes**	**1.57**	**37**	*e*P		**Pb**		**19 27 39.0**	**+0.8**
NBG				*e*		**S**		**19 27 55.0**	**-0.4**
NBG				*e*S		**S**		**19 27 55.0**	**-0.4**
NUBE	**Las Nubes**	**1.60**	**69**	*e*P		**Pb**		**19 27 36.7**	**-1.9**
NUBE	**Las Nubes**	**1.60**	**69**	*e*P		**Pb**		**19 27 36.7**	**-1.9**
SLOZ	**Alcaldia de Sa**	**1.64**	**65**	*e*P		**Pb**		**19 27 37.6**	**-1.7**
SLOZ				IAML				19 28 08.9	
	comp=Z,553nm,0.5s								
CEVE	**Cerro Verde**	**1.72**	**73**	*e*P		**Pb**		**19 27 38.9**	**-1.8**
CEVE				IAML				19 28 10.5	
	comp=Z,1μm,0.5s								
CEVE	**Cerro Verde**	**1.72**	**73**	*e*P		**Pb**		**19 27 38.9**	**-1.8**
CEVE				IAML				19 28 10.5	
	comp=Z,1μm,0.5s								
CEDA	**San Andres**	**1.93**	**75**	*e*S		**Sb**		**19 28 09.1**	**+1.4**
CEDA				IAML				19 28 22.5	
	comp=Z,1μm,0.6s								
CEDA	**San Andres**	**1.93**	**75**	*e*S		**Sb**		**19 28 09.1**	**+1.4**
CEDA				IAML				19 28 22.5	
	comp=Z,1μm,0.6s								
LALI	**Alcalda de L**	**1.94**	**85**	*e*S		**Sb**		**19 28 08.4**	**+0.2**
LALI	**Alcalda de L**	**1.94**	**85**	*e*S		**Sb**		**19 28 08.4**	**+0.2**
HUEH	**Huehuetenango**	**1.99**	**355**			**Pn**		**19 27 41.6**	**-0.1**
SNET	**Serv Nac Est T**	**2.06**	**80**			**Pb**		**19 27 43.8**	**-2.6**
SJTE	**Alcalda de S**	**2.26**	**82**	*e*P		**Pn**		**19 27 45.9**	**+0.6**
SJTE				*e*S		**Sb**		**19 28 17.3**	**-0.1**
SJTE	**Alcalda de S**	**2.26**	**82**	*e*P		**Pn**		**19 27 45.9**	**+0.6**
SJTE				*e*S		**Sb**		**19 28 17.3**	**-0.1**
ESQI	**Esquipulas**	**2.27**	**57**			**Pb**		**19 27 47.5**	**-2.7**
PAVA	**Las Pavas**	**2.34**	**80**	*e*P		**Pn**		**19 27 47.2**	**+0.8**
PAVA	**Las Pavas**	**2.34**	**80**	*e*P		**Pn**		**19 27 47.2**	**+0.8**
MRL	**Marmol**	**2.35**	**42**	*e*P		**Pb**		**19 27 50.4**	**-1.1**
SCLA	**Alcaldia de Sa**	**2.54**	**81**	*e*P		**Pb**		**19 27 50.8**	**-3.8**
SCLA				*e*S		**Sb**		**19 28 25.1**	**-0.4**
SCLA	**Alcaldia de Sa**	**2.54**	**81**	*e*P		**Pb**		**19 27 50.8**	**-3.8**
SCLA				*e*S		**Sb**		**19 28 25.1**	**-0.4**
PCIG		**3.00**	**322**			**Pn**		**19 27 55.2**	**-0.2**
CCIG	**Comitan**	**3.05**	**345**	Pn		**Pb**		**19 27 59.2**	**-4.1**
PETF	**Flores**	**3.83**	**21**			**Pn**		**19 28 09.9**	**+3.0**
TGUH	**Tegucigalpa,Un**	**3.99**	**79**			**Pn**		**19 28 10.2**	**+1.1**
CNGN	**Cerro Negro**	**4.57**	**100**	Pn		**Pn**		**19 28 17.4**	**+0.3**
CMIG	**Matias Romero**	**5.09**	**318**	Pn		**Pn**		**19 28 24.7**	**+0.6**
	comp=Z,1.0nm,0.3s,baz=133,slow=10.0,SNR=11								
CMIG				Sn		**Sb**		**19 29 34.7**	**-4.1**
	comp=Z,4.2nm,0.3s,baz=138,slow=4.3,SNR=4.7								
	comp=Z,3.7nm,0.5s								
MATN	**Matagalpa**	**5.26**	**94**			**Pn**		**19 28 26.4**	**-0.2**
BOAB	**BOACO BROADBAN**	**5.57**	**98**			**Pn**		**19 28 30.8**	**0.0**
HZTE	**Horizontes, Gu**	**6.17**	**114**	Pn		**Pn**		**19 28 41.6**	**+2.7**
ORTG	**Ortega, Santa**	**6.44**	**117**			**Pn**		**19 28 44.8**	**+2.0**
DUNO	**Dulce Nombre,**	**6.55**	**119**			**Pn**		**19 28 46.3**	**+2.1**
JTS	**Las Juntas de**	**6.92**	**115**	Pn		**Pn**		**19 28 47.5**	**-1.7**
	comp=Z,1.0nm,0.3s,baz=302,slow=14,SNR=1.6								
JTS				Pg		**Pb**		**19 29 08.1**	**-1.0**
	comp=Z,1.2nm,0.3s,baz=42,slow=11,SNR=8.7								
JTS				Sn		**Sn**		**19 30 00.9**	**-6.2**
	comp=Z,0.5nm,0.3s,baz=358,slow=22,SNR=1.0								
JTS				Lg		Lg		19 30 42.2	
	comp=Z,1.5nm,0.3s,baz=13,slow=21,SNR=1.8								
	comp=Z,3.2nm,0.4s								
JTS	**Las Juntas de**	**6.92**	**115**			**Pn**		**19 28 49.6**	**+0.4**
RIMA	**Rio Macho**	**8.11**	**115**			**Pn**		**19 29 06.9**	**+1.1**
SRBA	**San Rafael, Bu**	**8.79**	**117**			**Pn**		**19 29 17.1**	**+2.0**
RGM0	**Gandoca**	**9.30**	**113**	Pn		**Pn**		**19 29 24.7**	**+2.7**
H06E1	**SOCORRO T-PHAS**	**9.61**	**289**	T		T		19 51 42.5	
	SNR=11								

TX31	**Lajitas Ar. Si**	**19.63**	**326**	P		**Pn**	**19 31 37.3**	**-0.3**
TX31				IAmb		IAmb	19 31 49.5	
	comp=Z,13nm,1.1s							
TX32	**Lajitas Array**	**19.63**	**326**	P		**P**	**19 31 34.7**	**-1.5**
TXAR	**Lajitas Array**	**19.63**	**326**	P		**Pn**	**19 31 39.6**	**+1.9**
	comp=Z,0.3nm,0.3s,baz=155,slow=13,SNR=30							
	comp=Z,2.2nm,0.6s							
TXAR	**Lajitas Array**	**19.63**	**326**	P		**Pn**	**19 31 36.3**	**-1.4**
152A	**Waverly Hall**	**20.18**	**16**	P		Pn	19 31 43.5	-0.6
152A				IAmb		IAmb	19 31 50.2	
	comp=Z,8.9nm,1.1s							
MNTX	**Cornudas Mount**	**22.39**	**327**	P		**P**	**19 32 06.1**	**+0.1**
MNTX				IAmb		IAmb	19 32 10.8	
	comp=Z,7.6nm,0.8s							
AOPR	**Arecibo Observ**	**24.14**	**75**	P		**P**	**19 32 25.5**	**+2.0**
S39A	**Bolivar**	**24.33**	**356**	P		**P**	**19 32 24.8**	**-0.3**
S39A				IAmb		IAmb	19 32 29.8	
	comp=Z,6.4nm,1.1s							
121A	**Cookes Peak, D**	**24.34**	**324**	P		**P**	**19 32 26.8**	**+1.4**
CCM	**Cathedral Cave**	**24.63**	**0**	P		**P**	**19 32 27.4**	**-0.4**
CCM				IAmb		IAmb	19 32 29.0	
	comp=Z,15nm,1.4s							
BNM	**Barren Site**	**24.97**	**329**	P		**P**	**19 32 31.3**	**+0.2**
ANMO	**Albuquerque**	**25.52**	**330**	P		**P**	**19 32 38.4**	**+2.3**
	comp=Z,1.1nm,0.7s,baz=131,slow=11,SNR=3.5							
	comp=Z,1.1nm,0.7s							
S22A	**4UR Ranch, Cre**	**27.98**	**333**	P		**P**	**19 32 57.9**	**-0.4**
MTPU	**Mount Pierson**	**30.83**	**327**	P		**P**	**19 33 22.2**	**-1.6**
MTPU				IAmb		IAmb	19 33 31.5	
	comp=Z,7.3nm,1.4s							
PDAR	**Pinedale Array**	**33.31**	**335**	P		**P**	**19 33 46.7**	**+1.4**
	comp=Z,0.2nm,0.4s,baz=96,slow=9.2,SNR=1.7							
	comp=Z,0.2nm,0.4s							
NVAR	**Mina Array Bea**	**34.61**	**321**	P		P	19 34 00.4	+3.7
	comp=Z,2.7nm,0.7s,baz=138,slow=8.3,SNR=17							
	comp=Z,2.7nm,0.7s							
NVAR	**Mina Array Bea**	**34.61**	**321**	P		**P**	**19 33 57.3**	**+0.6**
KVN	**Kaiserville**	**34.89**	**322**	P		**P**	**19 33 59.4**	**+0.4**
KVN				IAmb		IAmb	19 34 04.3	
	comp=Z,2.9nm,1.1s							
J08A	**Circle Bar Ran**	**37.97**	**327**	P		**P**	**19 34 26.1**	**+1.0**
F10A	**Beach Ranch, E**	**39.22**	**331**	P		**P**	**19 34 36.2**	**+0.6**
F10A				IAmb		IAmb	19 34 41.9	
	comp=Z,4.4nm,1.1s							
SIV	**San Ignacio**	**41.74**	**133**	P		**P**	**19 34 58.1**	**+1.4**
	comp=Z,0.8nm,0.3s,baz=259,slow=11,SNR=3.5							
	comp=Z,0.8nm,0.3s							
YKA	**Yellowknife Ar**	**51.84**	**346**	P		**P**	**19 36 15.2**	**+0.2**
	comp=Z,1.1nm,0.7s,baz=136,slow=8.9,SNR=7.0							
YKA				PcP		**PcP**	**19 37 28.8**	**+1.1**
	comp=Z,1.0nm,0.7s,baz=144,slow=4.1,SNR=5.0							
	comp=Z,1.1nm,0.7s							
ILAR	**Eielson Array**	**63.72**	**337**	P		**P**	**19 37 40.1**	**+1.6**
	comp=Z,0.4nm,0.6s,baz=177,slow=5.2,SNR=6.2							
	comp=Z,0.4nm,0.6s							
CMAR	**Chiang Mai Arr**	**146.84**	**342**	PKPbc		**PKiKP**	**19 46 52.3**	**-0.6**
	comp=Z,1.1nm,0.4s,baz=342,slow=3.9,SNR=12							

*DDA **10** 19:28:41.5±

mbtmp4.0/7, ML3.5/2, Error ellipse: s-maj=29.8km s-min=21.7km az=140.0

ISC 10 20:02:00.3±0.9, 9°.71S±0°.09×150°.50E±0°.08, h10km, n8, σ1§11/10, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.31**	**275**	Pn	**Pn**	**20 02 51.3**	**-0.9**
	8.3nm,0.4s,baz=145,slow=4.6,SNR=8.5						
PMG				Sn	**Sn**	**20 03 33.9**	**+2.2**
	1.5nm,0.3s,baz=54,slow=20,SNR=0.9						
KRVT	**Keravat (AS076**	**5.58**	**16**	Pn	**Pn**	**20 03 24.1**	**+0.7**
	38nm,0.5s,baz=16,slow=13,SNR=3.8						
KRVT				Sn	**Sn**	**20 04 27.4**	**-0.3**
	12nm,0.3s,baz=18,slow=22,SNR=1.7						
HNR	**Honiara**	**9.32**	**89**	Pn	**Pn**	**20 04 15.1**	**+0.2**
	51nm,0.6s,baz=263,slow=8.1,SNR=3.6						
CTA	**Charters Tower**	**11.10**	**201**	Pn	**Pn**	**20 04 39.9**	**+0.6**
	0.2nm,0.3s,baz=17,slow=18,SNR=2.4						
	2.7nm,0.7s						
WRA	**Warramunga Arr**	**18.62**	**235**	P	**Pn**	**20 06 18.2**	**-0.3**
	0.1nm,0.3s,baz=62,slow=11,SNR=5.5						
	1.2nm,0.7s						
SIJI	**Sorong**	**21.05**	**294**	P	**P**	**20 06 44.1**	**-0.6**
	5.5nm,0.9s,baz=127,slow=8.8,SNR=5.0						
	5.5nm,0.9s						
ASAR	**Alice Springs**	**21.07**	**227**	P	**P**	**20 06 44.8**	**-0.1**
	1.2nm,0.7s,baz=64,slow=10,SNR=12						
	1.2nm,0.7s						
TORD	**Torodi Ar. Bea**	**149.25**	**279**	PKPbc	**PKiKP**	**20 21 50.4**	**-1.2**
	0.9nm,0.6s,baz=64,slow=2.7,SNR=7.0						

MAN 10 20:03:44.4, 6°.08N×124°.43E, h1km, mb4.1, ML2.9, MS2.6, Mindanao

TRN 10 20:20:48.9, 17°.88N×62°.53W, h13km, MD3.5, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMRT	**St. Maarten**	**0.54**	**289**	*eP*	Pn	20 21 02.6	+0.2
SMRT				*eS*	Sn	20 21 10.5	-0.8
SEUS	**St. Eustatius**	**0.57**	**228**	*eP*	Pn	20 21 02.6	-0.1
SEUS				*eS*	Sn	20 21 12.1	+0.1
SKI	**Saint Kitts**	**0.57**	**200**	*eP*	Pn	20 21 03.1	+0.4
SKI				*eS*	Sn	20 21 12.4	+0.3
SKOC	**St. Kitts, UWI**	**0.61**	**198**	*eP*	Pn	20 21 03.1	+0.8
SKOC				*eS*	Sn	20 21 13.0	0.0
ANWB	**Willy Bob**	**0.74**	**106**	*eP*	Pn	20 21 06.4	+1.4
ANWB				*eS*	Sn	20 21 17.2	+1.0
BPA	**Boggy Peak**	**1.05**	**142**	*eP*	Pn	20 21 11.6	+2.3
BPA				*eS*	Sn	20 21 25.6	+1.8
ANBD	**Bethesda, Anti**	**1.10**	**138**	*eP*	Pg	20 21 12.2	+2.0
ANBD				*eS*	Sn	20 21 28.2	+3.1
MBFL	**Flemmings, Mon**	**1.16**	**165**	*eP*	Pg	20 21 13.0	+1.6
MBFL				*eS*	Sn	20 21 30.4	+3.7
MLYT	**Lee's Yard**	**1.19**	**164**	*eP*	Pg	20 21 13.2	+1.2
MLYT				*eS*	Sg	20 21 30.6	+3.2
ABD	**La Joyeuse, An**	**1.71**	**144**	*eP*	Pb	20 21 20.5	+0.3
ABD	**La Joyeuse, An**	**1.71**	**144**	*e*	Pg	20 21 31.1	+9.3
ABD				*eS*	Sg	20 21 44.2	+0.1
CBE	**Ff, Capester**	**2.00**	**154**	*eP*	Pb	20 21 23.9	-1.3
CBE				*eS*	Sb	20 21 50.4	+0.3
TBG	**Guadaloupe-3**	**2.18**	**157**	*e*	Pg	20 21 30.8	-0.1
MAGL	**Barre de l'Ile**	**2.26**	**148**	*eP*	Pb	20 21 28.5	-1.0
MAGL				*eS*	Sb	20 21 57.4	-0.1
DSLB	**Salisbury**	**2.65**	**156**	*e*	Pb	20 21 36.9	+0.6

IDC 10 20:31:24.0±6.2, 18°.73S×175°.04W, h0km, mb3.5/2, mbtmp3.5/2, Error ellipse: s-maj=405.1km s-min=73.5km az=153.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**47.63**	**260**	P	P	20 40 02.5	+0.2
	0.6nm,0.7s,baz=96,slow=7.6,SNR=4.8						
	0.6nm,0.7s						
ASAR	**Alice Springs**	**47.66**	**255**	P	P	20 40 02.0	-0.4
	0.3nm,0.6s,baz=92,slow=8.9,SNR=5.0						
	0.3nm,0.6s						
FINES	**FINESS Array B**	**134.80**	**346**	PKP	PKPdf	20 50 43.8	-0.5
	3.2nm,1.1s,baz=42,slow=3.1,SNR=4.4						

MAN 10 20:50:32.9, 13°.73N×120°.71E, h10km, mb3.8, ML2.5, MS2.0, Mindoro

*INET **10** 20:57:24.4±0.6, 12°.91N×87°.02W, h1km±1km, MW4.1*
*IDC **10** 20:57:25.6±1.4, 12°.92N×86°.98W, h0km, mb3.9/10, mbtmp3.9/12, ML3.6/2, MS3.6/3, Error ellipse: s-maj=37.0km s-min=20.5km az=47.0*
*NEIC **10** 20:57:26.1±1.5, 12°.93N±0°.05×86°.95W±0°.06, h5km±6km, mb4.2/9, Error ellipse: s-maj=10.8km s-min=3.3km az=48.0*
*SNET **10** 20:57:27.0±1.3, 12°.92N×87°.09W, h0km±11km, ML4.0*
*UCR **10** 20:57:27.1±1.5, 12°.96N×87°.07W, h0km±5km, ML4.0, mb4.2(NEIC)*

ISC 10 20:57:26.1±1.1, 12°.94N±0°.03×87°.00W±0°.03, h4km±8km, n86, σ1§30/96, mb4.2/13, MS3.6/3, Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**0.24**	**192**		**Pg**	**20 57 31.5**	**+0.7**
CRIN	**San Cristobal**	**0.24**	**192**	*eP*	**Pg**	**20 57 31.7**	**+0.9**
CRIN				*eS*	**Sg**	**20 57 34.9**	**+1.0**
TELN	**Telica**	**0.37**	**153**	*eP*	**Pb**	**20 57 34.5**	**-0.8**
TEL3	**Telica 3**	**0.39**	**157**	*eP*	**Pg**	**20 57 34.5**	**+0.8**
CNGN	**Cerro Negro**	**0.52**	**146**		**Pg**	**20 57 35.6**	**-0.6**
CNGN	**Cerro Negro**	**0.52**	**146**	*eP*	**Pg**	**20 57 37.0**	**+0.9**
BRAN	**Las Pilas**	**0.67**	**109**	*eP*	**Pn**	**20 57 44.9**	**+2.5**
MOMN	**Momotombo**	**0.69**	**139**	*eP*	**Pg**	**20 57 39.9**	**+0.5**
COPN	**Copaltepe**	**0.85**	**152**	*eP*	**Pg**	**20 57 42.1**	**-0.4**
CNCH	**Conchagua**	**0.88**	**293**	*i P*	**Pg**	**20 57 43.2**	**+0.2**
CNCH				*eS*	**Sb**	**20 57 56.6**	**+0.4**
CNCH				*eS*	**Sn**	**20 57 57.6**	**-1.1**
CNCH	**Conchagua**	**0.88**	**293**	*i P*	**Pg**	**20 57 43.2**	**+0.2**
CNCH				*eS*	**Sb**	**20 57 56.6**	**+0.4**
CNCH				*eS*	**Sn**	**20 57 57.6**	**-1.1**
APYN	**Apoyeque**	**0.94**	**138**	*eP*	**Pg**	**20 57 44.1**	**-0.2**
LCND	**La Caada**	**0.94**	**293**	*i P*	**Pg**	**20 57 44.1**	**-0.1**
LCND				*eS*	**Sb**	**20 57 57.3**	**-0.7**
LCND				IAML		20 58 02.8	
	comp=Z,5μm,0.3s						
LCND	**La Caada**	**0.94**	**293**	*i P*	**Pg**	**20 57 44.1**	**-0.1**
LCND				*eS*	**Sb**	**20 57 57.3**	**-0.7**
LCND				IAML		20 58 02.8	
	comp=Z,5μm,0.3s						
RCON	**San Juan de Ri**	**0.99**	**56**	*eP*	**Pn**	**20 57 49.8**	**+2.9**
HUEN		**1.00**	**126**	*eP*	**Pg**	**20 57 45.6**	**+0.2**
MATN	**Matagalpa**	**1.05**	**90**		**Pg**	**20 57 45.2**	**-1.1**
MATN	**Matagalpa**	**1.05**	**90**	*eP*	**Pg**	**20 57 45.5**	**-0.7**
MGAN	**Managua**	**1.07**	**137**	*eP*	**Pg**	**20 57 46.4**	**-0.3**
MGAN				*eP*	**Pb**	**20 57 46.9**	**-0.3**
WILN	**Americas 2**	**1.10**	**134**	*eP*	**Pg**	**20 57 47.1**	**-0.2**
TGUH	**Tegucigalpa,Un**	**1.15**	**347**		**Pg**	**20 57 48.5**	**+0.3**
TGUH	**Tegucigalpa,Un**	**1.15**	**347**	*i P*	**Pb**	**20 57 48.8**	**+0.1**
TGUH	**Tegucigalpa,Un**	**1.15**	**347**	*i P*	**Pb**	**20 57 48.8**	**+0.1**
TGUH	**Tegucigalpa,Un**	**1.15**	**347**	*eP*	**Pg**	**20 57 48.5**	**+0.3**
CRUN	**El Crucero**	**1.17**	**144**	*eP*	Pg	20 57 39.4	-9.1
VSM	**San Miguel**	**1.33**	**292**	*eP*	**Pg**	**20 57 50.9**	**-0.8**
VSM	**San Miguel**	**1.33**	**292**	*eP*	**Pg**	**20 57 50.9**	**-0.8**
LCY	**Lacayo**	**1.35**	**291**	*eP*	**Pg**	**20 57 51.6**	**-0.4**
LCY	**Lacayo**	**1.35**	**291**	*eP*	**Pg**	**20 57 51.6**	**-0.4**
BOAB	**BOACO BROADBAN**	**1.39**	**110**		**Pn**	**20 57 51.3**	**-1.0**
BOAB	**BOACO BROADBAN**	**1.39**	**110**	*eP*	**Pn**	**20 57 51.5**	**-0.8**
BOAB				*eS*	**Sg**	**20 58 10.6**	**-0.1**
PACA	**Pacayal**	**1.39**	**293**	*eP*	**Sg**	**20 57 51.6**	**-1.3**
PACA				*eS*	**Sb**	**20 58 10.8**	**-0.2**
PACA				*eS*	**Sn**	**20 58 11.8**	**+0.4**
PACA	**Pacayal**	**1.39**	**293**	*eP*	**Pg**	**20 57 51.6**	**-1.3**
PACA				*eS*	**Sb**	**20 58 10.8**	**-0.2**
PACA				*eS*	**Sn**	**20 58 11.8**	**+0.4**
PACA	**Pacayal**	**1.39**	**293**	*eP*	**Pg**	**20 57 52.1**	**-0.8**
COEB	**Comit de Eme**	**1.59**	**291**	*eP*	**Pn**	**20 57 55.0**	**-0.2**
COEB				*eS*	**Sg**	**20 58 17.5**	**+0.2**
COEB				IAML		20 58 21.1	
	comp=Z,2μm,0.5s						
COEB	**Comit de Eme**	**1.59**	**291**	*eP*	**Pn**	**20 57 55.0**	**-0.2**
COEB				*eS*	**Sg**	**20 58 17.5**	**+0.2**
COEB				IAML		20 58 21.1	
	comp=Z,2μm,0.5s						
SCLA	**Alcaldia de Sa**	**1.85**	**295**	*eS*	**Sg**	**20 58 25.5**	**0.0**
SCLA	**Alcaldia de Sa**	**1.85**	**295**	*eS*	**Sg**	**20 58 25.5**	**0.0**
CONN	**Concepcion**	**1.91**	**135**	*eP*	**Pn**	**20 57 59.5**	**-0.1**
COEG	**Centro de Oper**	**1.95**	**291**	*eP*	**Pn**	**20 58 01.1**	**+0.9**
COEG				*eS*	**Sb**	**20 58 27.4**	**+0.2**
COEG	**Centro de Oper**	**1.95**	**291**	*eP*	**Pn**	**20 58 01.1**	**+0.9**
COEG				*eS*	**Sb**	**20 58 27.4**	**+0.2**
ACON	**Acoyapa**	**2.03**	**118**		**Pn**	**20 57 59.6**	**-1.4**
ACON	**Acoyapa**	**2.03**	**118**	*eP*	**Pn**	**20 58 02.1**	**+1.0**
ACON	**Acoyapa**	**2.03**	**118**	*eP*	**Pn**	**20 58 01.8**	**+0.7**
ACON				*eS*	**Sb**	**20 58 29.0**	**-0.1**
SNET	**Serv Nac Est T**	**2.30**	**289**	Pn	**Pn**	**20 58 03.8**	**-1.1**
HZTE	**Horizontes, Gu**	**2.60**	**148**		**Pn**	**20 58 08.4**	**-0.6**
HZTE	**Horizontes, Gu**	**2.60**	**148**	*eP*	**Pn**	**20 58 11.3**	**+2.3**
ESPN	**Las Esperanzas**	**2.74**	**105**	Pn	**Pn**	**20 58 09.5**	**-1.3**
ESQI	**Esquipulas**	**2.79**	**306**	Pn	**Pn**	**20 58 12.0**	**+0.3**
ORTG	**Ortega, Santa**	**2.97**	**149**	Pn	**Pn**	**20 58 14.4**	**+0.2**
DUNO	**Dulce Nombre,**	**3.20**	**152**		**Pn**	**20 58 16.6**	**-0.6**
JTS	**Las Juntas de**	**3.31**	**142**	Pn	**Pn**	**20 58 19.0**	**+0.3**
	comp=Z,8.0nm,0.3s,baz=40,slow=16,SNR=18						
JTS				Sn	**Sn**	**20 59 00.1**	**+1.6**
	comp=Z,10nm,0.3s,baz=349,slow=21,SNR=2.1						
	comp=Z,19nm,0.3s						
JTS	**Las Juntas de**	**3.31**	**142**	Pn	**Pn**	**20 58 18.1**	**-0.6**
JTS	**Las Juntas de**	**3.31**	**142**	*eP*	**Pn**	**20 58 22.3**	**+3.6**
HDC	**Heredia**	**4.06**	**136**	Pn	**Pn**	**20 58 28.4**	**-0.8**
CVTR	**Volcan Turrial**	**4.30**	**132**		**Pn**	**20 58 28.5**	**-4.2**
RIMA	**Rio Macho**	**4.40**	**135**		**Pn**	**20 58 31.0**	**-2.9**
PEZE	**Perez Zeledon,**	**4.80**	**137**	Pn	Pn	20 58 34.6	-4.8
RTAL	**Retalhuleu**	**4.83**	**290**	Pn	Pn	20 58 34.0	-5.7
HUEH	**Huehuetenango**	**4.97**	**299**	Pn	Pn	20 58 36.4	-5.4
SRBA	**San Rafael, Bu**	**5.13**	**135**		**Pn**	**20 58 46.1**	**+2.2**
CMIG	**Matias Romero**	**8.66**	**299**	Pn	**Pn**	**20 59 31.2**	**-1.2**
	comp=Z,0.5nm,0.3s,baz=135,slow=8.6,SNR=2.9						
CMIG				Sn	**Sn**	**21 01 16.7**	**+6.1**
	comp=Z,0.3nm,0.3s,baz=94,slow=14,SNR=1.6						
	comp=Z,1.0nm,0.3s						
SJG	**San Juan**	**20.73**	**73**	LR	LR	21 10 13.7	
	comp=Z,148nm,20.8s,baz=266,slow=37						
TX32	**Lajitas Array**	**22.49**	**319**	P	**P**	**21 02 25.9**	**-1.0**
TXAR	**Lajitas Array**	**22.49**	**319**	P	**P**	**21 02 27.3**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=142,slow=9.3,SNR=7.9						
	comp=Z,0.4nm,0.5s						
TXAR	**Lajitas Array**	**22.49**	**319**	P	**P**	**21 02 25.9**	**-0.9**
TX31	**Lajitas Ar. Si**	**22.49**	**319**	P	**P**	**21 02 26.4**	**-0.5**
TX31				IAmb	IAmb	21 02 30.9	
	comp=Z,13nm,1.4s						
TKL	**Tuckaleechee C**	**22.81**	**7**	P	**P**	**21 02 32.3**	**+2.2**
	comp=Z,2.5nm,0.7s,baz=196,slow=11,SNR=4.5						
	comp=Z,2.5nm,0.7s						
TKL	**Tuckaleechee C**	**22.81**	**7**	IAmb	IAmb	21 02 41.9	
	comp=Z,12nm,1.4s						
WMOK	**Wichita Mounta**	**24.19**	**336**	P	**P**	**21 02 42.9**	**-0.9**
WMOK				IAmb	IAmb	21 02 47.9	
	comp=Z,5.7nm,1.1s						
LPIG	**La Paz**	**24.69**	**300**	LR	LR	21 11 50.3	
	comp=Z,194nm,20.3s,baz=77,slow=35						
S39A	**Bolivar**	**25.29**	**348**		**P**	**21 02 53.8**	**0.0**
CCM	**Cathedral Cave**	**25.30**	**352**	P	**P**	**21 02 53.1**	**-0.7**
CCM				IAmb	IAmb	21 02 56.2	
	comp=Z,6.3nm,1.1s						
SADO	**Sadowa**	**32.43**	**10**	P	**P**	**21 03 58.5**	**+1.2**
	comp=Z,2.0nm,0.4s,baz=218,slow=8.3,SNR=3.3						
	comp=Z,2.0nm,0.4s						
SADO	**Sadowa**	**32.43**	**10**	IAmb	IAmb	21 04 00.2	
	comp=Z,14nm,1.4s						
NVAR	**Mina Array Bea**	**37.63**	**318**	P	**P**	**21 04 44.0**	**+1.5**
	comp=Z,0.3nm,0.3s,baz=123,slow=6.7,SNR=3.7						
	comp=Z,0.3nm,0.3s						
NVAR	**Mina Array Bea**	**37.63**	**318**	P	**P**	**21 04 40.7**	**-1.8**
SCHQ	**Schefferville**	**44.69**	**16**	P	**P**	**21 05 38.7**	**-1.4**
	comp=Z,1.9nm,0.6s,baz=211,slow=12,SNR=2.5						
	comp=Z,1.9nm,0.6s						
FRB	**Frobisher Bay**	**52.37**	**10**	P	**P**	**21 06 38.7**	**-0.4**
	comp=Z,1.4nm,0.4s,baz=225,slow=12,SNR=4.1						
	comp=Z,1.4nm,0.4s						
YKA	**Yellowknife Ar**	**53.26**	**344**	P	**P**	**21 06 45.9**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=145,slow=7.6,SNR=7.0						
	comp=Z,1.5nm,0.7s						
DLBC	**Dease Lake**	**55.66**	**334**	P	**P**	**21 07 03.8**	**+0.4**
	comp=Z,2.5nm,0.7s,baz=149,slow=6.9,SNR=7.3						
	comp=Z,2.5nm,0.7s						
RES	**Resolute Bay**	**61.90**	**358**	P	**P**	**21 07 46.0**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=175,slow=11,SNR=6.9						
	comp=Z,1.0nm,0.6s						
RES	**Resolute Bay**	**61.90**	**358**	IAmb	IAmb	21 07 48.4	
	comp=Z,1.2nm,0.7s						
ESDC	**Sonseca Array**	**76.55**	**52**	P	**P**	**21 09 17.8**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=263,slow=4.3,SNR=3.8						
ESDC				LR	LR	21 38 30.9	
	comp=Z,30nm,19.2s,baz=267,slow=32						
	comp=Z,0.6nm,0.8s						
ESDC	**Sonseca Array**	**76.55**	**52**	IAmb	IAmb	21 09 20.3	
	comp=Z,1.2nm,1.4s						
ASAR	**Alice Springs**	**139.85**	**249**	PKP	**PKPdf**	**21 16 55.1**	**-1.4**
	comp=Z,0.3nm,0.6s,baz=83,slow=1.8,SNR=5.4						

MAN 10 20:59:54.4, 9°.45N×126°.13E, h28km, mb3.7, ML2.4, MS1.9, Mindanao

*IDC **10** 21:01:50.3±0.8, 29°.10S×61°.22E, h0km, mb3.9/8, mbtmp3.9/9, ML4.5/1, MS3.7/8, Error ellipse: s-maj=30.5km s-min=22.4km az=4.0*
*NEIC **10** 21:01:52.0±1.3, 29°.14S±0°.10×61°.1E±0°.1, h10km±1km, mb4.6/21, Error ellipse: s-maj=18.2km s-min=15.6km az=239.0*

ISC 10 21:01:51.5±0.5, 29°.1S±0°.1×61°.18E±0°.09, h10km, n49, σ1§12/36, mb4.3/14, MS3.6/8, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RER	**Riviere de l'E**	**9.34**	**327**	Pn	**Pn**	**21 04 03.5**	**-2.7**
FOMA	**Nahampoana Res**	**13.32**	**285**		**Pn**	**21 04 58.4**	**-2.2**
VOI	**Vohitsoka**	**14.84**	**296**	Pn	**Pn**	**21 05 21.4**	**-0.3**
ABPO	**Ambohimpanom**	**16.23**	**305**	Pn	**Pn**	**21 05 39.5**	**-0.3**
ABPO				IAmb	IAmb	21 06 03.0	
	comp=Z,30nm,1.5s						
OPO	**Ambohidratompo**	**16.55**	**306**	Pn	**Pn**	**21 05 43.4**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=128,slow=14,SNR=13						
OPO				Sn	Sn	21 08 32.3	-16
	comp=Z,0.1nm,0.3s,baz=285,slow=23,SNR=2.4						
	comp=Z,5.1nm,0.5s						
H08S1	**Diego Carcia H**	**23.87**	**29**	T	T	21 31 49.9	
	baz=204,slow=75,SNR=9.6						
H08S2	**Diego Garcia H**	**23.88**	**29**	T	T	21 31 49.8	
	baz=204,slow=75,SNR=6.1						
H08S3	**Diego Garcia H**	**23.89**	**29**	T	T	21 31 50.9	
	baz=204,slow=75,SNR=11						
BOSA	**Boshof**	**31.39**	**262**	P	**P**	**21 08 13.7**	**+0.8**
	comp=Z,5.0nm,0.9s,baz=71,slow=6.5,SNR=3.8						
BOSA				LR	LR	21 20 20.8	
	comp=Z,95nm,18.3s,baz=162,slow=35						
	comp=Z,5.0nm,0.9s						
BOSA	**Boshof**	**31.39**	**262**	P	**P**	**21 08 12.9**	**0.0**
BOSA				IAmb	IAmb	21 08 27.2	
	comp=Z,22nm,1.5s						
LBTB	**Lobatse**	**31.88**	**269**	P	**P**	**21 08 16.4**	**-0.7**
LBTB				IAmb	IAmb	21 08 33.3	
	comp=Z,5.1nm,1.1s						
KMBO	**Kilima Mbogo**	**36.00**	**316**	LR	LR	21 22 54.5	
	comp=Z,89nm,18.6s,baz=93,slow=35						
MBAR	**Mbarara**	**40.60**	**309**	LR	LR	21 24 47.9	
	comp=Z,74nm,18.4s,baz=164,slow=34						
LODK	**Lodwar**	**40.76**	**318**	P	**P**	**21 09 32.8**	**-0.3**
TSUM	**Tsumeb**	**40.79**	**274**	LR	LR	21 24 09.6	
	comp=Z,89nm,20.5s,baz=132,slow=33						
SOCY	**Socotra**	**41.66**	**349**	P	**P**	**21 09 43.0**	**+2.7**
ATD	**Arta Tunnel**	**44.13**	**334**	LR	LR	21 26 06.1	
	comp=Z,87nm,19.4s,baz=26,slow=33						
H01W2	**Cape Leeuwin H**	**44.84**	**112**	T	T	21 57 42.7	
	baz=261,slow=75,SNR=20						
H01W3	**Cape Leeuwin H**	**44.84**	**111**	T	T	21 57 52.5	
	baz=261,slow=75,SNR=15						
H01W1	**Cape Leeuwin H**	**44.85**	**112**	T	T	21 58 03.0	
	baz=261,slow=75,SNR=15						
MBWA	**Marble Bar**	**53.14**	**96**	P	**P**	**21 11 07.9**	**-1.8**
SNAA	**Sanae**	**54.51**	**200**	P	**P**	**21 11 19.5**	**+0.4**
	comp=Z,1.5nm,1.2s,baz=130,slow=7.9,SNR=1.8						
	comp=Z,1.5nm,1.2s						
SNAA	**Sanae**	**54.51**	**200**	P	**P**	**21 11 19.4**	**+0.2**
	comp=Z,4.4nm,1.3s						
CMAR	**Chiang Mai Arr**	**59.72**	**42**	P	**P**	**21 11 56.7**	**0.0**
	comp=Z,0.2nm,0.4s,baz=215,slow=7.7,SNR=2.0						
	comp=Z,0.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**59.72**	**42**	P	**P**	**21 11 58.2**	**+1.6**
QSPA	**South Pole Qui**	**61.03**	**180**	P	**P**	**21 12 04.7**	**-0.4**
BBOO	**Buckleboo**	**63.04**	**114**	P	**P**	**21 12 18.2**	**-0.9**
ASAR	**Alice Springs**	**64.43**	**104**	P	**P**	**21 12 28.6**	**+0.2**
	comp=Z,1.0nm,0.8s,baz=246,slow=6.3,SNR=8.6						
	comp=Z,1.0nm,0.8s						
ASAR	**Alice Springs**	**64.43**	**104**	P	**P**	**21 12 27.1**	**-1.3**
SBA	**Scott Base**	**64.94**	**167**	P	**P**	**21 12 31.8**	**+1.0**
WRA	**Warramunga Arr**	**66.25**	**100**	P	**P**	**21 12 40.2**	**0.0**
	comp=Z,1.4nm,1.0s,baz=247,slow=5.8,SNR=5.4						
	comp=Z,1.4nm,1.0s						
WRA	**Warramunga Arr**	**66.25**	**100**	P	**P**	**21 12 40.3**	**+0.1**
WB2	**Warramunga Arr**	**66.26**	**100**	P	**P**	**21 12 37.7**	**-2.6**
WB2				IAmb	IAmb	21 12 58.2	
	comp=Z,11nm,1.4s						
WB0	**Warramunga Arr**	**66.37**	**100**	P	**P**	**21 12 40.2**	**-0.8**
WB0				IAmb	IAmb	21 12 59.8	
	comp=Z,9.4nm,1.3s						
WR0	**Warramunga Arr**	**66.42**	**100**	P	**P**	**21 12 41.0**	**-0.3**
WR0				IAmb	IAmb	21 13 09.6	
	comp=Z,5.4nm,1.2s						
STKA	**Stephens Creek**	**67.76**	**115**	P	**P**	**21 12 49.3**	**-0.3**
TOO	**Toolangi**	**68.72**	**122**	P	**P**	**21 12 56.3**	**+0.7**
GNI	**Garni**	**70.60**	**347**	LR	LR	21 41 46.5	
	comp=Z,43nm,20.2s,baz=168,slow=34						
TOA0	**Torodi Ar. Sit**	**71.14**	**298**	P	**P**	**21 13 10.4**	**-0.3**
TORD	**Torodi Ar. Bea**	**71.14**	**298**	P	**P**	**21 13 10.9**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=100,slow=4.8,SNR=4.8						
	comp=Z,0.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**71.14**	**298**	P	**P**	**21 13 10.7**	**0.0**
TORD				IAmb	IAmb	21 13 31.1	
	comp=Z,5.5nm,1.4s						
KDJ	**Kajisay**	**72.42**	**12**	P	**P**	**21 13 18.2**	**+0.2**
AAK	**Ala-Archa**	**72.45**	**10**	LR	LR	21 43 36.1	
	comp=Z,53nm,19.3s,baz=218,slow=35						
IDI	**Anoyia**	**72.64**	**330**	P	**P**	**21 13 19.3**	**0.0**
IDI				IAmb	IAmb	21 13 27.3	
	comp=Z,9.3nm,1.3s						
PRZ	**Przheval'sk**	**73.00**	**13**	P	**P**	**21 13 21.6**	**+0.2**
PRZ				IAmb	IAmb	21 13 25.0	
	comp=Z,5.4nm,1.0s						
KBZ	**Khabaz**	**74.42**	**346**	LR	LR	21 44 37.1	
	comp=Z,49nm,19.8s,baz=160,slow=34						
MKAR	**Makanchi Array**	**77.94**	**15**	P	**P**	**21 13 49.8**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=180,slow=5.8,SNR=5.8						
	comp=Z,0.6nm,0.8s						
ZALV	**Zalesovo Beam**	**85.23**	**14**	P	**P**	**21 14 28.2**	**+0.4**
	comp=Z,0.7nm,0.5s,baz=197,slow=4.5,SNR=2.9						
	comp=Z,0.7nm,0.5s						
TXAR	**Lajitas Array**	**166.77**	**275**	PKP	**PKPdf**	**21 21 59.1**	**+1.3**
	comp=Z,0.2nm,0.6s,baz=164,slow=5.1,SNR=4.5						

*PDG **10** 21:03:54.5±0.2, 43°.06N×17°.97E, h10km, MD2.8/1, ML2.7/14, Error ellipse: s-maj=0.3km s-min=0.3km az=0.0*
*PRU **10** 21:03:55.9±0.0, 43°.33N×18°.88E, h10km*
*BEO **10** 21:03:55.0±0.3, 43°.10N×17°.88E, h5km±2km, ML2.7/9*
*RHSSO **10** 21:03:55.5±0.2, 43°.08N×17°.98E, h3km±2km, ML2.9/21*

ISC 10 21:03:55.1±1.0, 43°.05N±0°.02×17°.97E±0°.01, h7km±8km, n105, σ1§36/192, 25C-12D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STON	**Ston**	**0.27**	**227**	*eP*	**Pg**	**21 04 00.5**	**+0.1**
STON				*eS*	**Sg**	**21 04 05.5**	**+1.6**
STON	**Ston**	**0.27**	**227**	*i P*	**Pg**	**21 04 00.4**	**+0.1**
STON				*eS*	**Sg**	**21 04 05.3**	**+1.4**
STON	**Ston**	**0.27**	**227**	*eP*	**Pg**	**21 04 00.3**	**-0.1**
STON				Sg	**Sg**	**21 04 04.6**	**+0.7**
DBRK	**Dubrovnik**	**0.41**	**161**	*eP*	**Pg**	**21 04 03.0**	**0.0**
DBRK				Sg	**

DIVS					*e*Sn		**Sn**	**21 04 50.3**	**+0.5**
MORI	**Morici**		**1.83**	**297**	*e*Pn		**Pn**	**21 04 27.4**	**+0.5**
MORI					Sn		**Sg**	**21 04 53.5**	**-0.5**
BLJ	**Bijeljina**		**1.97**	**28**	*e*Pn		**Pn**	**21 04 28.8**	**0.0**
BLJ					*e*Sn		**Sn**	**21 04 52.6**	**-1.1**
A052A	**Srbac**		**2.08**	**351**	*e*Pn		**Pn**	**21 04 31.0**	**+0.7**
A052A					*e*Sn		**Sn**	**21 04 56.4**	**+0.1**
A051A	**Mrakovica**		**2.10**	**339**	⇑*i*Pn		**Pn**	**21 04 30.6**	**-0.1**
A051A					*e*Sn		**Sn**	**21 04 57.3**	**+0.2**
TRUS	**Trudelj**		**2.12**	**56**	*e*Pn		**Pn**	**21 04 30.7**	**-0.3**
TRUS					*e*Sn		**Sn**	**21 04 58.5**	**+0.9**
GRUS	**Gruza**		**2.17**	**66**	*e*Pn		**Pn**	**21 04 31.8**	**+0.2**
UDBI	**Udbina**		**2.17**	**314**	*e*Pn		**Pb**	**21 04 33.8**	**-0.9**
UDBI					Sn		**Sb**	**21 05 02.0**	**+0.2**
TIR	**Tirane**		**2.21**	**140**	⇑P		**Pn**	**21 04 32.6**	**+0.4**
TIR					⇑S		**Sn**	**21 04 59.7**	**0.0**
DUGI	**Dugi Otok**		**2.31**	**295**	*e*Pn		**Pn**	**21 04 34.2**	**+0.7**
DUGI					Sn		**Sb**	**21 05 04.9**	**-0.9**
SELS	**Selova**		**2.31**	**85**	*e*Pn		**Pn**	**21 04 34.4**	**+0.8**
A252A	**Venje**		**2.38**	**358**	*e*Pn		**Pn**	**21 04 35.2**	**+0.7**
A252A					Sn		**Sb**	**21 05 07.0**	**-0.9**
VIRC	**Vir**		**2.45**	**301**	*e*Pn		**Pb**	**21 04 37.4**	**-2.0**
VIRC					Sn		**Sb**	**21 05 08.5**	**-1.2**
PLIT	**Plitvice**		**2.49**	**318**	*e*Pn		**Pn**	**21 04 37.5**	**+1.5**
PLIT					Sn		**Sb**	**21 05 09.5**	**-1.4**
FRGS	**Fruska Gora**		**2.49**	**32**	*e*Pn		**Pn**	**21 04 35.1**	**-0.9**
FRGS	**Fruska Gora**		**2.49**	**32**	⇑P		**Pb**	**21 04 39.6**	**-0.5**
FRGS	**Fruska Gora**		**2.49**	**32**	*e*Pn		**Pn**	**21 04 36.6**	**+0.6**
MATE	**Matera**		**2.58**	**202**	⇑P		**Pn**	**21 04 36.3**	**-0.9**
MATE					⇓S		**Sn**	**21 05 08.0**	**-0.8**
NVLJ	**Novalja**		**2.70**	**305**	*e*Pn		**Pn**	**21 04 40.9**	**+2.0**
NVLJ					Sn		**Sb**	**21 05 14.7**	**-2.3**
MOSL	**Moslavina**		**2.70**	**342**	*e*Pn		**Pn**	**21 04 40.1**	**+1.2**
MOSL					Sn		**Sn**	**21 05 13.4**	**+1.5**
BOVS	**Bovan**		**2.79**	**77**	⇑P		**Pn**	**21 04 42.6**	**+2.5**
BOVS					⇑S		**Sb**	**21 05 17.4**	**-2.1**
BARS	**Barje**		**2.84**	**93**	*e*Pn		**Pn**	**21 04 42.7**	**+1.9**
BARS					*e*Sn		**Sn**	**21 05 17.7**	**+2.5**
RABC	**Rab**		**2.86**	**308**	*e*Pn		**Pn**	**21 04 41.9**	**+0.9**
RABC					Sn		**Sn**	**21 05 18.2**	**+2.6**
A250A	**Rusevo Krmpots**		**3.00**	**314**	*e*Pn		**Pn**	**21 04 44.5**	**+1.6**
A250A					Sn		**Sb**	**21 05 22.5**	**-3.0**
PRVS	**Prvonek**		**3.08**	**99**	*e*Pn		**Pn**	**21 04 45.7**	**+1.6**
PRVS					*e*Sn		**Sn**	**21 05 23.3**	**+2.2**
OZLJ	**Ozalj**		**3.13**	**326**	*e*Pn		**Pn**	**21 04 45.9**	**+1.2**
OZLJ					Sn		**Sn**	**21 05 25.1**	**+2.9**
BOJS	**Bojanci**		**3.13**	**322**	*i* Pn		**Pn**	**21 04 46.5**	**+1.8**
PTJ	**Puntijarka**		**3.19**	**334**	*e*Pn		**Pn**	**21 04 46.4**	**+0.7**
PTJ					Sn		**Sb**	**21 05 26.5**	**+2.4**
MORH	**Mrgy, Hungar**		**3.20**	**8**	⇑P		**Pb**	**21 04 49.9**	**-2.2**
MORH	**Mrgy, Hungar**		**3.20**	**8**	*e*Pn		**Pn**	**21 04 45.5**	**-0.2**
MORH					*e*Sn		**Sn**	**21 05 24.7**	**+0.7**
ZAGS	**Zajecar**		**3.20**	**75**	*e*Pn		**Pn**	**21 04 45.9**	**+0.2**
MDVR	**Moldovita**		**3.21**	**56**	⇑P		**Pn**	**21 04 48.8**	**+2.8**
KALN	**Kalnik**		**3.26**	**341**	*e*Pn		**Pn**	**21 04 47.4**	**+0.7**
KALN					Sn		**Sn**	**21 05 27.3**	**+1.7**
CRES	**Cresnjev**		**3.30**	**328**	*e*Pn		**Pn**	**21 04 48.2**	**+1.0**
CRES					*e*Sn		**Sn**	**21 05 27.1**	**+0.4**
BOSS	**Bosilegrad**		**3.37**	**98**	*e*Pn		**Pn**	**21 04 49.7**	**+1.6**
SMRN	**Sveta Marina**		**3.39**	**307**	*e*Pn		**Pn**	**21 04 49.5**	**+1.2**
SMRN					Sn		**Sn**	**21 05 30.9**	**+2.2**
BEHE	**Becsehely**		**3.52**	**346**	⇑*i*Pn		**Pn**	**21 04 51.3**	**+1.2**
BEHE					*e*Sn		**Sn**	**21 05 32.6**	**+0.6**
BRJN	**Brijuni**		**3.56**	**303**	*e*Pn		**Pn**	**21 04 51.2**	**+0.5**
BRJN					Sn		**Sn**	**21 05 35.3**	**+2.3**
BZS	**Buzias**		**3.67**	**44**	⇓P		**Pn**	**21 04 55.8**	**+3.7**
CEY	**Cerknica**		**3.69**	**318**	*e*Pn		**Pn**	**21 04 52.5**	**+0.9**
CEY					*e*Sn		**Sn**	**21 05 35.9**	**+0.4**
SKDS	**Skadanscina**		**3.78**	**313**	*e*Pn		**Pn**	**21 04 54.6**	**+0.9**
SKDS					*e*Sn		**Sn**	**21 05 38.4**	**+0.1**
VTS	**Vitosha**		**3.90**	**95**	⇑P		**Pn**	**21 04 57.3**	**+1.8**
VTS					⇑S		**Sn**	**21 05 43.4**	**+1.8**
TIP	**Timpagrande**		**3.98**	**194**	⇑P		**Pn**	**21 04 55.7**	**-0.7**
SIRR	**Siria**		**4.16**	**38**	⇑P		**Pn**	**21 05 01.4**	**+2.5**
GZR	**Gura Zlata**		**4.17**	**54**	⇓P		**Pn**	**21 05 02.3**	**+3.1**
SOKA	**Soboth**		**4.18**	**331**	*i* Pn		**Pn**	**21 05 00.9**	**+1.6**
	2.5nm,0.4s								
SOKA					*e*Sn		**Sn**	**21 05 48.3**	**-0.1**
	6.2nm,1.0s								
OBKA	**Obir**		**4.23**	**326**	*e*Pn		**Pn**	**21 05 02.9**	**+3.0**
	1.1nm,0.4s								
OBKA					*i* Sn		**Sn**	**21 05 51.7**	**+2.1**
	4.7nm,0.4s								
OBKA	**Obir**		**4.23**	**326**	*e*Pn		**Pn**	**21 05 00.5**	**+0.6**
OBKA					*e*Sn		**Sn**	**21 05 48.5**	**-1.0**
ARSA	**Arzberg**		**4.54**	**338**	*i* Pn		**Pn**	**21 05 06.2**	**+2.0**
	2.2nm,0.5s								
ARSA					*e*Sn		**Sn**	**21 05 58.3**	**+1.2**
	3.3nm,0.6s								
ARSA	**Arzberg**		**4.54**	**338**	*e*Pn		**Pn**	**21 05 04.4**	**+0.2**
ARSA					*e*Sn		**Sn**	**21 05 55.6**	**-1.5**
RONA	**Rosalia, Austr**		**4.79**	**346**	*i* Pn		**Pn**	**21 05 10.2**	**+2.5**
	1.8nm,0.5s								
RONA					*i* Sn		**Sn**	**21 06 02.6**	**-0.9**
	2.2nm,0.5s								
DRGR			**5.03**	**40**	⇑P		**Pn**	**21 05 13.8**	**+2.8**
CONA	**Conrad Observa**		**5.09**	**344**	*i* Pn		**Pn**	**21 05 14.0**	**+2.2**
	0.9nm,0.3s								
CONA					*i* Sn		**Sn**	**21 06 09.9**	**-1.0**
	3.7nm,0.8s								
ABTA	**Abfaltersbach**		**5.35**	**316**	*i* Pn		**Pn**	**21 05 17.2**	**+1.8**
	1.3nm,0.3s								
MOA	**Molln**		**5.46**	**333**	*i* Pn		**Pn**	**21 05 19.3**	**+2.5**
	1.1nm,0.3s								
MOA					*e*Sn		**Sn**	**21 06 21.0**	**+1.3**
	3.5nm,0.5s								
WTTA	**Wattenberg**		**6.14**	**315**	*i* Pn		**Pn**	**21 05 29.2**	**+2.9**
	1.4nm,0.2s								
WATA	**Walderalm**		**6.22**	**316**	*e*Pn		**Pn**	**21 05 30.5**	**+3.1**
	1.6nm,0.5s								
MOTA	**Moosalm**		**6.47**	**314**	*e*Pn		**Pn**	**21 05 32.8**	**+1.9**
	1.7nm,0.6s								
MOTA					*i* Sn		**Sn**	**21 06 47.9**	**+3.0**
	1.3nm,0.4s								
KHC	**Kasperske Hory**		**6.80**	**335**	*e*PN		**Pn**	**21 05 34.0**	**-1.2**
KHC					*e*SN		**Sn**	**21 06 52.0**	**-0.8**

*IDC **10** 21:03:59.6±1.2, 58°.23N×152°.79W, h58^{km}±28^{km}, mb3.5/2, mbtmp3.5/4, ML3.4/2, Error ellipse: s-maj=46.5km s-min=29.3km az=137.0*

*NEIC **10** 21:03:59.9±1.2, 58°.27N±0°.02×153°.04W±0°.07, h56^{km}±6^{km}, Error ellipse: s-maj=5.2km s-min=3.3km az=71.0*

*AEIC **10** 21:04:00±1.2, 58°.28N±0°.03×153°.02W±0°.06, h53^{km}±6^{km}, ML3.3, ML3.5/90(NEIC), Error ellipse: s-maj=5.2km s-min=3.7km az=62.0*

ISC 10 21:04:00.1±0.9, 58°.28N±0°.04×153°.01W±0°.04, h60^{km}±8^{km}, n181, n0672/195, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
Q20K	**Shuyak Island**	**0.46**	**44**	P		**Pn**	**21 04 11.2**	**-0.5**
	baz=224							
Q20K				S		**Sn**	**21 04 19.2**	**-0.9**
	baz=224							
SYI	**Shuyak Island**	**0.46**	**45**			**Pn**	**21 04 11.2**	**-0.5**
SYI						**Sn**	**21 04 19.2**	**-0.9**
KDAK	**Kodiak Island**	**0.55**	**155**	P		**Pn**	**21 04 12.4**	**-0.1**
	1μm,0.3s,baz=1.6,slow=13							
KDAK				S		**Sn**	**21 04 21.7**	**+0.1**
	2μm,0.5s,baz=146,slow=22,SNR=20							
KDAK	**Kodiak Island**	**0.55**	**155**			**Pn**	**21 04 12.5**	**-0.1**
KDAK				Sn		**Sn**	**21 04 21.8**	**+0.1**
KDAK				IAML			21 04 24.4	
	6μm,0.7s							
KDAK				IAML			21 04 24.4	
	5μm,0.7s							
Q19K	**Cape Douglas,**	**0.73**	**333**			**Pn**	**21 04 14.2**	**-0.4**
Q19K				Sn		**Sn**	**21 04 24.9**	**-0.5**
Q19K	**Cape Douglas,**	**0.73**	**333**	P		**Pn**	**21 04 14.3**	**-0.4**
	baz=153							
Q19K				S		**Sn**	**21 04 26.4**	**+1.0**
	baz=153							
KAPH	**Katmai Pasha**	**0.77**	**295**			**Pn**	**21 04 15.0**	**-0.3**
KAPH						**Sn**	**21 04 25.8**	**-0.5**
OHAK	**Old Harbor**	**1.07**	**188**			**Pn**	**21 04 19.0**	**0.0**
OHAK				Sn		**Sn**	**21 04 33.3**	**+0.2**
OHAK				IAML			21 04 38.0	
	comp=N,753nm,0.3s							
OHAK	**Old Harbor**	**1.07**	**188**	P		**Pn**	**21 04 19.1**	**0.0**
	baz=7.8							
AUQ	**Augustine Qik'**	**1.10**	**349**			**Pn**	**21 04 19.5**	**+0.1**
AU22	**Augustine Moun**	**1.11**	**351**			**Pn**	**21 04 19.5**	**0.0**
AU22						**Sn**	**21 04 34.9**	**+1.0**
AUCH	**Augustine Cone**	**1.11**	**348**			**Pn**	**21 04 19.7**	**+0.1**
AU2	**Augustine Isla**	**1.11**	**350**			**Pn**	**21 04 19.8**	**+0.2**
AUH	**Augustine H**	**1.11**	**349**			**Pn**	**21 04 19.8**	**+0.2**
KCG	**Knife Ck. Glac**	**1.11**	**272**			**Pn**	**21 04 19.5**	**-0.1**
AUL	**Augustine Lava**	**1.12**	**349**			**Pn**	**21 04 20.0**	**+0.2**
OPT	**Oil Point**	**1.38**	**355**			**Pn**	**21 04 23.6**	**+0.4**
OPT	**Oil Point**	**1.38**	**355**	P		**Pn**	**21 04 23.6**	**+0.4**
	baz=175							
KELA	**Mount Kelaz**	**1.45**	**277**			**Pn**	**21 04 24.1**	**0.0**
CNPM	**China Poot**	**1.55**	**36**			**Pn**	**21 04 25.8**	**+0.3**
CNPM	**China Poot**	**1.55**	**36**	Sn		**Sn**	**21 04 46.7**	**+2.1**
CNPM				IAML			21 04 52.3	
	comp=N,480nm,0.7s							
CNPM				IAML			21 04 55.9	
	comp=E,440nm,0.6s							
HOM	**Homer**	**1.55**	**27**			**Pn**	**21 04 26.0**	**+0.6**
HOM				Sn		**Sn**	**21 04 46.6**	**+2.1**
HOM	**Homer**	**1.55**	**27**	P		**Pn**	**21 04 26.5**	**+1.1**
	baz=208							
HOM				S		**Sn**	**21 04 45.5**	**+0.9**
	baz=208							
P18K	**Big Mountain,**	**1.60**	**315**			**Pn**	**21 04 25.4**	**-0.7**
P18K	**Big Mountain,**	**1.60**	**315**	Sn		**Sn**	**21 04 44.9**	**-0.9**
P18K	**Big Mountain,**	**1.60**	**315**	P		**Pn**	**21 04 25.4**	**-0.7**
	baz=133							
P18K				S		**Sn**	**21 04 44.8**	**-1.0**
	baz=133							
IVE	**Iliamna Volcan**	**1.74**	**360**			**Pn**	**21 04 28.3**	**+0.2**
O20K	**Slope Mountain**	**1.82**	**6**			**Pn**	**21 04 29.5**	**+0.4**
O20K						**Sn**	**21 04 52.2**	**+1.1**
O20K	**Slope Mountain**	**1.82**	**6**	P		**Pn**	**21 04 29.5**	**+0.4**
	baz=186							
O20K				S		**Sn**	**21 04 52.2**	**+1.1**
	baz=186							
SII	**Sitkinak Islan**	**1.84**	**201**			**Pn**	**21 04 29.1**	**-0.2**
SII				IAML			21 05 05.3	
	comp=N,513nm,0.7s							
SII				IAML			21 05 07.4	
	comp=E,514nm,0.5s							
SII	**Sitkinak Islan**	**1.84**	**201**	P		**Pn**	**21 04 29.2**	**-0.2**
	baz=20							
BRLK	**Bradley Lake**	**1.85**	**36**			**Pn**	**21 04 29.1**	**-0.4**
BRLK				IAML			21 04 58.0	
	comp=E,378nm,0.6s							
BRLK				IAML			21 05 00.7	
	comp=N,365nm,0.3s							
BRSE	**Bradley Lake S**	**1.88**	**38**			**Pn**	**21 04 29.8**	**-0.1**
BRSE	**Bradley Lake S**	**1.88**	**38**	P		**Pn**	**21 04 29.8**	**-0.1**
	baz=220							
O18K	**Koktuh Hills**	**1.94**	**325**			**Pn**	**21 04 30.5**	**-0.3**
O18K						**Sn**	**21 04 53.3**	**-0.8**
O18K				IAML			21 04 54.1	
	comp=E,419nm,0.6s							
O18K				IAML			21 04 55.0	
	comp=N,318nm,0.9s							
O18K	**Koktuh Hills**	**1.94**	**325**	P		**Pn**	**21 04 30.4**	**-0.3**
	baz=144							
O18K				S		**Sn**	**21 04 53.6**	**-0.4**
	baz=144							
P17K	**Kvichak River**	**2.01**	**299**			**Pn**	**21 04 31.6**	**0.0**
P17K	**Kvichak River**	**2.01**	**299**	P		**Pn**	**21 04 31.6**	**0.0**
	baz=116							
O19K	**Port Alsworth**	**2.03**	**341**			**Pn**	**21 04 31.9**	**0.0**
O19K	**Port Alsworth**	**2.03**	**341**	P		**Pn**	**21 04 31.9**	**0.0**
	baz=160							
RED	**Redoubt Volcan**	**2.15**	**3**			**Pn**	**21 04 34.1**	**+0.5**
RSO	**Redoubt South**	**2.19**	**3**			**Pn**	**21 04 34.0**	**-0.2**
RDWB	**Redoubt West**	**2.21**	**2**			**Pn**	**21 04 34.7**	**+0.1**
NCT	**North Crescent**	**2.29**	**1**			**Pn**	**21 04 35.8**	**+0.3**
RDJH	**Redoubt Jeurge**	**2.32**	**3**			**Pn**	**21 04 36.7**	**+0.7**
DFR	**Drift River**	**2.32**	**4**			**Pn**	**21 04 36.4**	**+0.4**
O17K	**Koliganek Bris**	**2.59**	**307**			**Pn**	**21 04 39.2**	**-0.3**
O17K	**Koliganek Bris**	**2.59**	**307**	P		**Pn**	**21 04 39.2**	**-0.3**
	baz=124							
SEW	**Seward**	**2.59**	**44**			**Pn**	**21 04 39.0**	**-0.5**
N19K	**Bonanza Creek**	**2.65**	**344**			**Pn**	**21 04 40.4**	**0.0**
N19K	**Bonanza Creek**	**2.65**	**344**	P		**Pn**	**21 04 40.4**	**0.0**
	baz=163							
CAPN	**Captain Cook N**	**2.67**	**20**	Pn		**Pn**	**21 04 41.4**	**+0.8**
P16K	**Nushagak River**	**2.71**	**288**			**Pn**	**21 04 41.6**	**+0.5**
P16K	**Nushagak River**	**2.71**	**288**	P		**Pn**	**21 04 41.6**	**+0.5**
	baz=104							
O22K	**Cooper Landing**	**2.77**	**36**			**Pn**	**21 04 41.4**	**-0.7**
N18K	**Kilae Creek**	**2.82**	**330**			**Pn**	**21 04 42.1**	**-0.6**
N18K				IAML			21 05 30.4	
	comp=E,110nm,0.5s							
N18K	**Kilae Creek**	**2.82**	**330**	P		**Pn**	**21 04 42.5**	**-0.1**
	baz=148							
CHIR	**Chirikof Islan**	**2.85**	**211**	Pn		**Pn**	**21 04 42.0**	**-1.1**
CHIR				IAML			21 05 40.7	
	comp=E,121nm,1.3s							
CHIR				IAML			21 05 51.7	
	comp=N,136nm,1.8s							
O16K	**Kokwok River B**	**2.94**	**299**			**Pn**	**21 04 44.5**	**+0.1**
O16K	**Kokwok River B**	**2.94**	**299**	P		**Pn**	**21 04 44.5**	**+0.1**
	baz=114							
SPU	**Mount Spurr**	**2.95**	**9**			**Pn**	**21 04 44.7**	**+0.2**
SPCP	**Crater Peak Br**	**3.02**	**8**			**Pn**	**21 04 46.3**	**+0.7**
SVW2	**Sparrevohn**	**3.11**	**336**			**Pn**	**21 04 46.4**	**-0.2**
SVW2	**Sparrevohn**	**3.11**	**336**	IAML			21 05 35.1	
	comp=N,109nm,0.7s							
SVW2				IAML			21 05 41.2	
	comp=E,97nm,0.4s							
FIS	**Fire Island**	**3.20**	**25**	Pn		**Pn**	**21 04 45.8**	**-2.1**
RC01	**Rabbit Creek A**	**3.27**	**29**			**Pn**	**21 04 48.2**	**-0.6**
RC01				IAML			21 05 39.3	
	comp=E,113nm,0.4s							
RC01				IAML			21 05 44.7	
	comp=N,112nm,0.4s							
RC01	**Rabbit Creek A**	**3.27**	**29**	P		**Pn**	**21 04 48.7**	**-0.1**
	baz=212							
STLK	**Strandline Lak**	**3.28**	**10**			**Pn**	**21 04 49.3**	**+0.2**
SUA	**Susitna One**	**3.39**	**19**	Pn		**Pn**	**21 04 50.6**	**0.0**
SUA	**Susitna One**	**3.39**	**19**	P		**Pn**	**21 04 50.8**	**+0.2**
	baz=201							
M20K	**Styx River**	**3.61**	**359**			**Pn**	**21 04 53.2**	**-0.3**
N16K	**Nishlik Lake**	**3.67**	**309**			**Pn**	**21 04 54.7**	**+0.3**
N16K	**Nishlik Lake**	**3.67**	**309**	P		**Pn**	**21 04 54.7**	**+0.3**
	baz=124							
M22K	**Willow**	**3.77**	**21**			**Pn**	**21 04 55.5**	**-0.1**
SKT	**Skwentna**	**3.78**	**11**			**Pn**	**21 04 55.8**	**-0.1**
SKT	**Skwentna**	**3.78**	**11**	IAML			21 05 50.4	
	comp=E,91nm,0.5s							
SKT				IAML			21 05 52.2	
	comp=N,79nm,0.6s							
SKT	**Skwentna**	**3.78**	**11**	P		**Pn**	**21 04 55.8**	**-0.1**
	baz=192							
PMR	**Palmer**	**3.85**	**29**			**Pn**	**21 04 55.7**	**-1.0**
PMR				IAML			21 05 56.5	
	comp=E,51nm,0.5s							
PMR				IAML			21 05 56.7	
	comp=N,49nm,0.6s							
KNK	**Knik Glacier**	**3.89**	**34**	Pn		**Pn**	**21 04 57.0**	**-0.4**
KNK				IAML			21 05 56.8	
	comp=E,95nm,0.6s							
KNK				IAML			21 06 02.7	
	comp=N,77nm,0.8s							
KNK	**Knik Glacier**	**3.89**	**34**	P		**Pn**	**21 04 56.9**	**-0.4**
	baz=218							
HIN	**Hinchinbrook I**	**3.95**	**55**			**Pn**	**21 04 58.0**	**-0.2**
HIN				IAML			21 06 15.3	
	comp=N,59nm,1.0s							
HIN				IAML			21 06 23.1	
	comp=E,58nm,1.0s							
GLI	**Glacier Island**	**3.98**	**47**	Pn		**Pn**	**21 04 58.2**	**-0.3**
GLI	**Glacier Island**	**3.98**	**47**	P		**Pn**	**21 04 57.3**	**-1.2**
	baz=232							
L19K	**White Mountain**	**4.02**	**348**			**Pn**	**21 04 59.2**	**+0.1**
L19K	**White Mountain**	**4.02**	**348**	IAML			21 06 10.6	
	comp=N,44nm,0.9s							
L19K				IAML			21 06 14.7	
	comp=E,46nm,0.9s							
L19K	**White Mountain**	**4.02**	**348**	P		**Pn**	**21 04 59.2**	**+0.1**
	baz=166							
GHO	**Glory Hole Cre**	**4.06**	**29**			**Pn**	**21 04 59.0**	**-0.6**
GHO				IAML			21 06 01.6	
	comp=N,76nm,0.4s							
FID	**Port Fidalgo**	**4.15**	**51**	Pn		**Pn**	**21 04 58.7**	**-2.1**
FID				IAML			21 06 20.6	
	comp=E,40nm,0.8s							
L20K	**Farewell, AK**	**4.23**	**355**			**Pn**	**21 05 02.4**	**+0.4**
L20K	**Farewell, AK**	**4.23**	**355**	P		**Pn**	**21 05 02.4**	**+0.4**
	baz=174							
SML	**Sawmill**	**4.24**	**32**			**Pn**	**21 05 02.0**	**-0.1**
SML				IAML			21 06 11.8	
	comp=E,56nm,0.8s							
SML				IAML			21 06 14.1	
	comp=N,63nm,0.7s							
EYAK	**Cordova Ski Ar**	**4.35**	**55**	Pn		**Pn**	**21 05 02.2**	**-1.3**
SCM	**Sheep Creek Mo**	**4.56**	**36**			**Pn**	**21 05 06.4**	**-0.1**
SCM				IAML			21 06 18.7	
	comp=N,51nm,1.1s							
SCM				IAML			21 06 23.1	
	comp=E,49nm,1.2s							
SCM	**Sheep Creek Mo**	**4.56**	**36**	P		**Pn**	**21 05 06.5**	**-0.1**
	baz=221							
DIV	**Divide**	**4.65**	**49**	Pn		**Pn**	**21 05 07.6**	**-0.1**
PPLA	**Purkeypile**	**4.65**	**5**			**Pn**	**21 05 07.8**	**0.0**
PPLA	**Purkeypile**	**4.65**	**5**	P		**Pn**	**21 05 08.6**	**+0.8**
	baz=185							
KLU	**Klutina**	**4.81**	**45**			**Pn**	**21 05 09.8**	**-0.1**
KLU				IAML			21 06 27.3	
	comp=N,32nm,0.4s							
KLU	**Klutina**	**4.81**	**45**	P		**Pn**	**21 05 10.5**	**+0.6**
	baz=231							
TT01	**Tatalina**	**4.87**	**344**			**Pn**	**21 05 10.8**	**+0.2**
TTA	**Tatalina**	**4.89**	**344**			**Pn**	**21 05 10.7**	**-0.3**
TTA				IAML			21 06 48.8	
	comp=E,28nm,1.2s							
TTA	**Tatalina**	**4.89**	**344**	P		**Pn**	**21 05 11.0**	**-0.1**
	baz=161							
HMT	**Hamilton**	**4.94**	**62**	Pn		**Pn**	**21 05 11.5**	**-0.1**
HMT				IAML			21 07 10.5	
	comp=N,36nm,2.2s							
HMT				IAML			21 07 17.0	
	comp=E,62nm,2.2s							
CNBA	**Chernabura Isl**	**5.03**	**229**	Pn		**Pn**	**21 05 11.6**	**-1.2**
CNBA				IAML			21 06 09.0	
	comp=N,33nm,1.9s							
CNBA				IAML			21 06 29.6	
	comp=E,35nm,0.6s							
WAT6	**Susitna Watana**	**5.04**	**29**			**Pn**	**21 05 12.9**	**-0.3**
WAT6	**Susitna Watana**	**5.04**	**29**	P		**Pn**	**21 05 12.9**	**-0.3**
	baz=214							
SDPT	**Sand Point**	**5.04**	**238**	Pn		**Pn**	**21 05 13.8**	**+0.7**
SDPT				IAML			21 06 34.1	
	comp=N,44nm,1.2s							
BMRM	**Bremner River**	**5.05**	**54**	Pn		**Pn**	**21 05 12.7**	**-0.4**
BMRM				IAML			21 06 49.2	
	comp=N,27nm,1.0s							
SUCK	**Suckling Hills**	**5.08**	**65**	Pn		**Pn**	**21 05 13.3**	**-0.2**
K20K	**Telida**	**5.12**	**355**			**Pn**	**21 05 13.7**	**-0.4**
K20K	**Telida**	**5.12**	**355**	P		**Pn**	**21 05 14.3**	**+0.3**
	baz=174							
M24K	**Tolsona, Glenn**	**5.13**	**39**			**Pn**	**21 05 14.6**	**+0.2**
M24K				IAML			21 06 44.3	
	comp=N,38nm,0.9s							
CAST	**Castle Rocks**	**5.17**	**5**			**Pn**	**21 05 15.1**	**+0.3**
TRF	**Thorofare Moun**	**5.35**	**13**			**Pn**	**21 05 16.6**	**-0.8**
TRF				IAML			21 06 27.5	
	comp=E,39nm,0.5s							
TRF	**Thorofare Moun**	**5.35**	**13**	P		**Pn**	**21 05 17.7**	**+0.2**
	baz=196							
N25K	**Chitina, Valde**	**5.38**	**48**	Pn		**Pn**	**21 05 17.9**	**+0.1**
N25K	**Chitina, Valde**	**5.38**	**48**	P		**Pn**	**21 05 18.2**	**+0.4**
	baz=235							
KTH	**Kantishna Hill**	**5.39**	**10**			**Pn**	**21 05 18.2**	**+0.4**
KTH				IAML			21 06 36.4	
	comp=E,30nm,0.9s							
KTH				IAML			21 06 51.6	
	comp=N,36nm,1.1s							
RND	**Reindeer**	**5.53**	**20**			**Pn**	**21 05 19.4**	**-0.4**
DHY	**Denali Highway**	**5.55**	**28**			**Pn**	**21 05 19.9**	**-0.2**
DHY	**Denali Highway**	**5.55**	**28**	P		**Pn**	**21 05 20.1**	**0.0**
	baz=212							
SNH	**Sunshine Point**	**5.56**	**66**	Pn		**Pn**	**21 05 20.8**	**

n16,σ0^{s}**61/29, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRN	**Sarande**	**0.23**	**151**	P	**Pg**	**21 16 52.6**	**-0.1**
	baz=157						
SRN				S	**Sg**	**21 16 56.6**	**+0.4**
	baz=157						
SRN				AMP			
	comp=N,13nm,0.4s,baz=157						
KASA	**Kassiopi**	**0.34**	**170**	P	**Pg**	**21 16 54.4**	**-0.2**
KASA				S	**Sg**	**21 16 59.6**	**+0.2**
KASA				AML	AML	21 17 01.3	
	comp=E,4288μm,0.2s						
KASA				AML	AML	21 17 02.0	
	comp=N,3542μm,0.2s						
KEK	**Kerkira**	**0.37**	**187**	P	**Pg**	**21 16 54.9**	**-0.3**
KEK				S	**Sg**	**21 17 00.1**	**-0.2**
KEK				AML	AML	21 17 02.3	
	comp=N,5084μm,0.4s						
KEK				AML	AML	21 17 02.9	
	comp=E,3774μm,0.1s						
LSK	**Leskovik**	**0.57**	**83**	P	**Pg**	**21 16 58.0**	**-1.0**
	baz=84						
LSK				S	**Sg**	**21 17 06.8**	**+0.2**
	baz=84						
LSK				AMP			
	comp=N,2.4nm,0.9s,baz=84						
IGT	**Igoumenitsa**	**0.66**	**146**	P	**Pg**	**21 17 00.5**	**-0.1**
IGT				S	**Sb**	**21 17 10.3**	**+0.5**
IGT				AML	AML	21 17 15.2	
	comp=E,565μm,0.3s						
IGT				AML	AML	21 17 18.4	
	comp=N,602μm,0.3s						
IGT	**Igoumenitsa**	**0.66**	**146**	P	**Pg**	**21 17 00.4**	**-0.1**
	baz=148						
IGT				S	**Sb**	**21 17 10.2**	**+0.4**
	baz=148						
JAN	**Janina**	**0.88**	**119**	P	**Pn**	**21 17 05.1**	**-0.3**
JAN				S	**Sn**	**21 17 17.5**	**-0.4**
JAN				AML	AML	21 17 20.4	
	comp=N,651μm,0.3s						
JAN				AML	AML	21 17 24.2	
	comp=E,591μm,0.4s						
KBN	**Korca**	**0.89**	**53**	P	**Pg**	**21 17 03.8**	**-1.1**
	baz=52						
KBN				S	**Sn**	**21 17 18.9**	**+0.5**
	baz=52						
KBN				AMP			
	comp=N,0.8nm,0.9s,baz=52						
NEST	**Nestorio**	**0.97**	**70**	P	**Pb**	**21 17 06.4**	**+0.2**
NEST				S	**Sn**	**21 17 20.4**	**+0.1**
NEST				AML	AML	21 17 27.3	
	comp=N,402μm,0.7s						
NEST				AML	AML	21 17 27.5	
	comp=E,332μm,0.6s						
PENT	**Pentalofos**	**0.99**	**83**	P	**Pn**	**21 17 06.9**	**-0.2**
SCTE	**Santa Cesarea**	**1.06**	**270**	P	**Pb**	**21 17 07.5**	**-0.2**
SCTE				S	**Sb**	**21 17 21.3**	**-0.2**
SCTE				AML	AML	21 17 23.0	
	comp=E,437μm,0.3s						
SCTE				AML	AML	21 17 23.8	
	comp=N,473μm,0.3s						
KPRO	**Kipourio**	**1.17**	**96**	P	**Pg**	**21 17 10.1**	**+0.1**
TIR	**Tirane**	**1.26**	**0**	P	**Pg**	**21 17 11.9**	**-0.1**
	baz=0.0						
TIR				S	**Sg**	**21 17 30.7**	**+2.3**
	baz=0.0						
FNA	**Florina**	**1.36**	**58**	P	**Pb**	**21 17 12.9**	**+0.2**
FNA				S	**Sg**	**21 17 31.7**	**+0.3**
FNA				AML	AML	21 17 37.0	
	comp=E,285μm,0.8s						
FNA				AML	AML	21 17 39.5	
	comp=N,344μm,0.6s						
TSLK	**Tsoukalades, L**	**1.40**	**153**	P	**Pb**	**21 17 13.6**	**+0.2**
PHP	**Peshkopia**	**1.66**	**15**	P	**Pb**	**21 17 17.6**	**-0.3**
	baz=14						
PHP				S	**Sg**	**21 17 40.9**	**-0.2**
	baz=14						

GUC ***10*** *21:28:35.6±0.6, 20°.69S×71°.01W, h44km±3km, ML3.7*
IDC ***10*** *21:28:45.3±4.3, 20°.67S×70°.29W, h83km±33km, mb3.5/1, mbtmp3.6/3, MS2.2/1, Error ellipse: s-maj=118.5km s-min=31.1km az=105.0*

ISC 10 21:28:35.7±2.0, 20°.71S±0°.05×70°.97W±0°.10, h22km±12km, n22,σ1^{s}**48/23, 9C, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TA01	**Diego Aracena**	**0.75**	**79**	⇑*i* P	**Pb**	**21 28 49.5**	**-0.6**
TA01				*i* S	**Sb**	**21 29 00.2**	**+0.3**
TA01				IAML		21 29 01.7	
	comp=N,4μm,0.2s						
PATCX	**Punta Patache**	**0.77**	**99**	⇑*i* P	**Pb**	**21 28 50.0**	**-0.5**
PATCX				*i* S	**Sb**	**21 29 01.2**	**+0.7**
PATCX				IAML		21 29 02.7	
	comp=N,3μm,0.4s						
TA02	**Huaiquique**	**0.90**	**61**	*eP*	**Pn**	**21 28 51.8**	**-1.1**
TA02				*i* S	**Sb**	**21 29 03.8**	**-0.3**
TA02				IAML		21 29 05.5	
	comp=N,7μm,0.2s						
PB02	**IPOC Station P**	**1.17**	**122**	⇑*i* P	**Pn**	**21 28 56.2**	**-0.7**
PB02				*i* S	**Sn**	**21 29 11.3**	**-0.9**
PB02				IAML		21 29 17.1	
	comp=E,3μm,0.3s						
PB01	**IPOC Station P**	**1.42**	**104**	⇑*i* P	**Pn**	**21 28 59.8**	**-0.5**
PB01				*i* S	**Sn**	**21 29 18.7**	**+0.3**
PB01				IAML		21 29 20.5	
	comp=E,3μm,0.3s						
PB07	**IPOC Station P**	**1.43**	**135**	⇑*i* P	**Pn**	**21 28 59.5**	**-1.0**
PB07				IAML		21 29 18.9	
	comp=N,1μm,0.6s						
PB11	**IPOC Station P**	**1.55**	**53**	⇑*i* P	**Pn**	**21 29 01.1**	**-0.9**
PB11				*i* S	**Sn**	**21 29 20.8**	**-0.8**
PB11				IAML		21 29 22.1	
	comp=N,1μm,0.4s						
PB04	**IPOC Station P**	**1.79**	**155**	⇑*i* P	**Pn**	**21 29 04.0**	**-1.5**
PB08	**IPOC Station P**	**1.79**	**72**	⇑*i* P	**Pn**	**21 29 05.2**	**-0.4**
PB08				*i* S	**Sn**	**21 29 28.1**	**+0.2**
PB09	**IPOC Station P**	**1.94**	**124**	⇑*i* P	**Pn**	**21 29 08.1**	**+0.6**
PB09				*i* S	**Sn**	**21 29 32.9**	**+1.6**
PB09				IAML		21 29 38.7	
	comp=N,587nm,0.6s						
PB12	**IPOC Station P**	**2.17**	**16**	*eP*	**Pn**	**21 29 08.7**	**-1.9**
LVC	**Limon Verde**	**2.69**	**135**	LR	LR	21 29 49.7	
	comp=N,56nm,20.3s,baz=232,slow=28						
LPAZ	**La Paz**	**5.15**	**32**	P	**Pn**	**21 29 56.0**	**+3.9**
	comp=N,1.4nm,0.3s,baz=231,slow=6.5,SNR=13						
H03N1	**Juan Fernandez**	**14.52**	**207**	T	T	21 47 09.6	
	baz=34,slow=72,SNR=60						
H03N2	**Juan Fernandez**	**14.52**	**208**	T	T	21 47 12.1	
	baz=34,slow=72,SNR=62						
H03N3	**Juan Fernandez**	**14.53**	**207**	T	T	21 47 07.1	
	baz=34,slow=72,SNR=53						
PLCA	**Paso Flores**	**19.97**	**179**	P	**Pn**	**21 33 11.3**	**+3.0**
	comp=N,1.0nm,0.7s,baz=344,slow=15,SNR=1.7						
TORD	**Torodi Ar. Bea**	**78.91**	**71**	P	**P**	**21 40 36.8**	**-1.1**
	comp=N,0.5nm,0.5s,baz=245,slow=6.0,SNR=6.4						
	comp=N,0.5nm,0.5s						
H11S2	**WAKE ISLAND Hy**	**25.87**	**278**	T	T	00 06 51.0	
	baz=103,slow=75,SNR=25						
H11S1	**WAKE ISLAND Hy**	**25.88**	**278**	T	T	00 06 51.0	
	baz=103,slow=75,SNR=13						
H11S3	**WAKE ISLAND Hy**	**25.89**	**278**	T	T	00 06 51.6	
	baz=103,slow=75,SNR=14						
MKAR	**Makanchi Array**	**146.08**	**34**	PKPbc	**PKPab**	**21 48 13.8**	**-0.8**
	comp=N,0.8nm,0.8s,baz=312,slow=4.1,SNR=7.8						

IDC ***10*** *21:32:47.9±2.3, 40°.31N×48°.95E, h0km, mb3.3/4, mbtmp3.3/5, ML3.2/1, Error ellipse: s-maj=60.4km s-min=24.3km az=7.0*
MOS ***10*** *21:32:48.2±0.0, 40°.26N×49°.20E, h3km, MPVA3.8*
AZER ***10*** *21:32:51.7±0.1, 40°.10N×49°.11E, h22km, Error ellipse: s-maj=3.1km s-min=2.0km az=269.0*
DRS ***10*** *21:32:51.1±0.0, 39°.87N×49°.50E, h25km*
TEH ***10*** *21:32:52.9, 40°.13N×48°.98E, h25km, ML3.1*

ISC 10 21:32:53.5±0.9, 40°.12N±0°.02×49°.09E±0°.03, h30km±7km, n107,σ1^{s}**95/157, mb3.1/4, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALIB	**Äli-Bayra**	**0.17**	**203**	*ePg*	**Pb**	**21 32 57.9**	**-1.5**
ALIB	**Äli-Bayra**	**0.17**	**203**	P	**Pb**	**21 32 58.0**	**-1.5**
	SNR=115						
ALIB				S	**Sn**	**21 33 06.4**	**+2.3**
GBS	**Qobustan**	**0.43**	**345**	*ePg*	**Pb**	**21 33 01.0**	**-2.0**
GBS	**Qobustan**	**0.43**	**345**	P	**Pb**	**21 33 01.1**	**-1.8**
	SNR=104						
GBS				S	**Sn**	**21 33 13.0**	**+2.3**
GOBA	**Gobu**	**0.57**	**60**	*ePg*	**Pb**	**21 33 06.0**	**+1.0**
GOBA	**Gobu**	**0.57**	**60**	P	**Pb**	**21 33 05.7**	**+0.7**
	SNR=5.0						
GOBA				S	**Sb**	**21 33 14.3**	**+1.3**
SAAT	**Saatly**	**0.57**	**244**	*ePn*	**Pb**	**21 33 06.5**	**+1.4**
SAAT	**Saatly**	**0.57**	**244**	P	**Pb**	**21 33 05.4**	**+0.3**
	SNR=12						
SAAT				S	**Sn**	**21 33 19.4**	**+5.5**
KDMR	**Kurdemir**	**0.74**	**291**	*ePg*	**Pn**	**21 33 06.0**	**-1.9**
KDMR	**Kurdemir**	**0.74**	**291**	P	**Pn**	**21 33 06.1**	**-1.8**
	SNR=27						
KDMR				S	**Sn**	**21 33 19.8**	**+1.6**
ATGJ	**Altiaghaj**	**0.75**	**351**	*ePg*	**Pn**	**21 33 06.9**	**-1.3**
ATGJ	**Altiaghaj**	**0.75**	**351**	P	**Pn**	**21 33 07.0**	**-1.3**
	SNR=30						
ATGJ				S	**Sn**	**21 33 20.9**	**+2.2**
PQL	**Pirkuli**	**0.77**	**331**	*ePg*	**Pn**	**21 33 06.5**	**-2.0**
PQL	**Pirkuli**	**0.77**	**331**	P	**Pn**	**21 33 06.6**	**-2.0**
	SNR=253						
PQL				S	**Sn**	**21 33 19.0**	**-0.1**
NDR	**Nardaran**	**0.83**	**56**	*ePg*	**Pn**	**21 33 09.4**	**+0.3**
NDR	**Nardaran**	**0.83**	**56**	P	**Pn**	**21 33 09.4**	**+0.3**
NDR				S	**Sb**	**21 33 26.0**	**+5.9**
SIZA	**Siyzn**	**0.97**	**351**	*ePg*	**Pn**	**21 33 10.8**	**-0.4**
SIZA	**Siyzn**	**0.97**	**351**	P	**Pn**	**21 33 10.0**	**-1.1**
	SNR=56						
SIZA				S	**Sb**	**21 33 26.5**	**+2.1**
GLBA	**Clilabad**	**1.03**	**212**	*ePg*	**Pn**	**21 33 11.7**	**-0.1**
GLBA	**Clilabad**	**1.03**	**212**	P	**Pn**	**21 33 11.7**	**-0.1**
	SNR=44						
GLBA				S	**Sb**	**21 33 28.8**	**+3.0**
ZRD	**Zardab**	**1.09**	**279**	*ePg*	**Pn**	**21 33 12.0**	**-0.7**
ZRD	**Zardab**	**1.09**	**279**	P	**Pn**	**21 33 12.0**	**-0.7**
	SNR=8.5						
ZRD				S	**Sb**	**21 33 30.3**	**+2.7**
BLQ	**Beylaqan**	**1.24**	**252**	*ePn*	**Pn**	**21 33 14.1**	**-0.7**
BLQ	**Beylaqan**	**1.24**	**252**	P	**Pn**	**21 33 14.0**	**-0.7**
	SNR=17						
BLQ				S	**Sn**	**21 33 33.1**	**+2.6**
QBL	**Gabala**	**1.27**	**311**	*ePn*	**Pn**	**21 33 14.0**	**-1.2**
QBL	**Gabala**	**1.27**	**311**	Pn	**Pn**	**21 33 14.0**	**-1.2**
	SNR=176						
QBL				S	**Sn**	**21 33 33.3**	**+2.1**
XNQ	**Khinaliq**	**1.28**	**326**	*ePn*	**Pn**	**21 33 14.9**	**-0.6**
XNQ	**Khinaliq**	**1.28**	**326**	Pn	**Pn**	**21 33 15.0**	**-0.6**
	SNR=84						
XNQ				S	**Sn**	**21 33 33.9**	**+2.1**
QUBA	**Quba, Azerbaij**	**1.32**	**340**	Pn	**Pn**	**21 33 15.9**	**0.0**
	SNR=27						
QUBA				S	**Sn**	**21 33 34.6**	**+2.1**
YRD	**Yardimli**	**1.37**	**209**	*ePn*	**Pn**	**21 33 15.5**	**-1.2**
YRD	**Yardimli**	**1.37**	**209**	Pn	**Pn**	**21 33 15.5**	**-1.2**
	SNR=78						
YRD				S	**Sn**	**21 33 35.3**	**+1.4**
QUB	**Quba**	**1.38**	**336**	*ePn*	**Pn**	**21 33 15.8**	**-1.0**
LKRN	**Lenkeran, Azer**	**1.43**	**190**	*ePn*	**Pn**	**21 33 18.0**	**+0.7**
LKRN	**Lenkeran, Azer**	**1.43**	**190**	Pn	**Pn**	**21 33 17.4**	**+0.1**
	SNR=4.3						
LKRN				S	**Sn**	**21 33 37.3**	**+2.3**
BRDA	**Brd**	**1.47**	**276**	*ePn*	**Pn**	**21 33 18.4**	**+0.5**
BRDA	**Brd**	**1.47**	**276**	Pn	**Pn**	**21 33 18.5**	**+0.5**
	SNR=28						
BRDA				S	**Sn**	**21 33 39.9**	**+3.7**
QRD	**Qoradiz**	**1.51**	**245**	*ePn*	**Pn**	**21 33 17.9**	**-0.6**
QRD	**Qoradiz**	**1.51**	**245**	Pn	**Pn**	**21 33 18.0**	**-0.6**
	SNR=15						
QRD				S	**Sn**	**21 33 39.1**	**+1.9**
AGDM	**Agdam**	**1.52**	**270**	*ePn*	**Pn**	**21 33 18.2**	**-0.4**
AGDM	**Agdam**	**1.52**	**270**	Pn	**Pn**	**21 33 18.2**	**-0.4**
	SNR=7.5						
AGDM				S	**Sn**	**21 33 40.7**	**+3.2**
QSAR	**Qusar**	**1.53**	**336**	*ePn*	**Pn**	**21 33 18.5**	**-0.3**
QSAR	**Qusar**	**1.53**	**336**	Pn	**Pn**	**21 33 18.6**	**-0.3**
	SNR=19						
QSAR				S	**Sb**	**21 33 41.2**	**+0.9**
ASTR	**Astara**	**1.57**	**189**	*ePn*	**Pn**	**21 33 17.9**	**-1.4**
ASTR	**Astara**	**1.57**	**189**	Pn	**Pn**	**21 33 18.0**	**-1.4**
	SNR=12						
ASTR				S	**Sn**	**21 33 39.6**	**+0.9**
LRK	**Lerik**	**1.58**	**202**	*ePn*	**Pn**	**21 33 19.5**	**-0.1**
LRK	**Lerik**	**1.58**	**202**	Pn	**Pn**	**21 33 19.6**	**-0.1**
LRK				S	**Sn**	**21 33 42.0**	**+2.8**
GRMI	**Germi**	**1.60**	**216**	*ePg*	**Pn**	**21 33 19.1**	**-0.8**
GRMI				*e*		21 33 44.4	
	comp=Z,99nm,0.3s						
KSMR	**Kasumkent**	**1.66**	**334**	*ePg*	**Pn**	**21 33 20.4**	**-0.2**
KSMR				*eSg*	**Sn**	**21 33 43.3**	**+2.5**
MNGR	**Mingechevir, A**	**1.67**	**294**	*ePn*	**Pn**	**21 33 20.5**	**-0.1**
MNGR	**Mingechevir, A**	**1.67**	**294**	Pn	**Pn**	**21 33 20.5**	**-0.1**
	SNR=16						
MNGR				S	**Sn**	**21 33 44.1**	**+3.1**
AKT	**Akhty**	**1.71**	**323**	*ePg*	**Pn**	**21 33 21.3**	**-0.1**
AKT				*eSg*	**Sn**	**21 33 45.0**	**+2.8**
SEKA	**Sheki**	**1.81**	**308**	*ePn*	**Pn**	**21 33 21.9**	**-0.7**
SEKA	**Sheki**	**1.81**	**308**	Pn	**Pn**	**21 33 22.0**	**-0.7**
	SNR=68						
SEKA				S	**Sn**	**21 33 45.7**	**+1.2**
DRN	**Derbent**	**2.00**	**343**	*ePg*	**Pn**	**21 33 25.2**	**0.0**
DRN				*eSg*	**Sn**	**21 33 51.9**	**+2.8**
GANJ	**Ganja**	**2.18**	**285**	*ePn*	**Pn**	**21 33 26.4**	**-1.3**
GANJ	**Ganja**	**2.18**	**285**	Pn	**Pn**	**21 33 26.4**	**-1.3**
	SNR=19						
GANJ				S	**Sn**	**21 33 56.2**	**+2.5**
URKR	**Urkarakh**	**2.33**	**332**	*ePg*	**Pn**	**21 33 29.6**	**-0.2**
URKR				*eSg*	**Sn**	**21 34 00.1**	**+2.6**
ZKT	**Zaqatala**	**2.40**	**311**	*ePn*	**Pn**	**21 33 31.5**	**+0.8**
IHRS	**Heris**	**2.40**	**222**	*ePn*	**Pn**	**21 33 31.2**	**+0.3**
IHRS				*e*		21 34 07.9	
	comp=Z,2μm,0.4s						
ZKTA	**Zakatala**	**2.41**	**310**	Pn	**Pn**	**21 33 31.6**	**+0.7**
	SNR=31						
ZKTA				S	**Sn**	**21 34 02.8**	**+3.4**
TVRZ	**Varzaqan**	**2.48**	**230**	*ePn*	**Pn**	**21 33 32.2**	**+0.3**
TVRZ				*e*		21 33 43.1	
	comp=Z,1μm,0.4s						
KMKR	**Kumukh**	**2.51**	**324**	*ePn*	**Pn**	**21 33 33.0**	**+0.5**
KMKR				*eSn*	**Sn**	**21 34 05.4**	**+3.2**
ISRB	**Sarab**	**2.54**	**206**	*ePn*	**Pn**	**21 33 32.8**	**-0.1**
ISRB				*e*		21 33 43.7	
	comp=Z,475nm,0.4s						
SGKR	**Sergokala**	**2.58**	**336**	*ePn*	**Pn**	**21 33 33.7**	**+0.5**
SGKR				*eSn*	**Sn**	**21 34 07.1**	**+3.5**
GDB	**GEDABAY**	**2.62**	**284**	*ePn*	**Pn**	**21 33 32.5**	**-1.3**
GDB	**GEDABAY**	**2.62**	**284**	Pn	**Pn**	**21 33 32.6**	**-1.3**
	SNR=6.7						
GDB				S	**Sn**	**21 34 06.8**	**+2.1**
ORD	**Ordubad**	**2.67**	**245**	*ePn*	**Pn**	**21 33 34.6**	**+0.1**
ORD	**Ordubad**	**2.67**	**245**	Pn	**Pn**	**21 33 34.6**	**+0.1**
	SNR=5.1						
ORD				S	**Sn**	**21 34 08.0**	**+2.0**
SBZ	**Shahbuz**	**2.82**	**256**	*ePn*	**Pn**	**21 33 37.0**	**+0.4**
SBZ	**Shahbuz**	**2.82**	**256**	Pn	**Pn**	**21 33 37.1**	**+0.4**
	SNR=7.2						
SBZ				S	**Sn**	**21 34 12.6**	**+2.9**
NAX	**Nakhchivan**	**2.93**	**252**	*ePn*	**Pn**	**21 33 38.5**	**+0.4**
NAX	**Nakhchivan**	**2.93**	**252**	Pn	**Pn**	**21 33 38.6**	**+0.4**
	SNR=4.4						
NAX				S	**Sn**	**21 34 16.1**	**+3.7**
ARKR	**Arakani**	**2.94**	**328**	*ePn*	**Pn**	**21 33 39.1**	**+0.9**
ARKR				*eSn*	**Sn**	**21 34 17.0**	**+4.4**
IBST	**Bostanabad**	**2.96**	**216**	*ePn*	**Pn**	**21 33 39.0**	**+0.3**
IBST				*e*		21 33 49.3	
	comp=Z,309nm,0.4s						
IMRD	**Marand**	**2.98**	**243**	*ePn*	**Pn**	**21 33 39.2**	**+0.4**
IMRD				*e*		21 34 39.5	
	comp=Z,886nm,0.5s						
QZX	**Qazax, Azerbai**	**2.98**	**290**	*ePn*	**Pn**	**21 33 38.1**	**-0.7**
QZX	**Qazax, Azerbai**	**2.98**	**290**	Pn	**Pn**	**21 33 38.2**	**-0.7**
	SNR=6.1						
QZX				S	**Sn**	**21 34 16.2**	**+2.7**
XNZR	**Khunzakh**	**3.02**	**324**	*ePn*	**Pn**	**21 33 39.4**	**0.0**
XNZR				*eSn*	**Sn**	**21 34 19.0**	**+4.5**
LHJ2	**Lahijan - Gila**	**3.04**	**165**	*ePn*	Pn	21 33 36.5	-3.0
LHJ2				*e*		21 33 37.8	
	comp=Z,2μm,0.3s						
BUJR	**Buynaksk**	**3.09**	**332**	*ePn*	**Pn**	**21 33 41.2**	**+1.0**
BUJR				*eSn*	**Sn**	**21 34 18.7**	**+2.5**
UNCR	**Uncukul**	**3.12**	**327**	*ePn*	**Pn**	**21 33 41.4**	**+0.8**
UNCR				*eSn*	**Sn**	**21 34 21.0**	**+4.1**
KRNR	**Karanay**	**3.17**	**329**	*ePn*	**Pn**	**21 33 42.3**	**+0.9**
KRNR				*eSn*	**Sn**	**21 34 22.5**	**+4.3**
ISHB	**Shabestar**	**3.26**	**237**	*ePn*	**Pn**	**21 33 42.5**	**-0.3**
ISHB				*e*		21 34 01.1	
	comp=Z,205nm,0.4s						
GNI	**Garni**	**3.33**	**272**	*ePn*	**Pn**	**21 33 44.7**	**+0.9**
GNI				*eSn*	Sn	21 34 30.0	+7.6
BTLR	**Botlikh**	**3.34**	**321**	*ePn*	**Pn**	**21 33 44.3**	**+0.6**
BTLR				*eSn*	**Sn**	**21 34 25.0**	**+2.6**
DBC	**Dubki**	**3.36**	**330**	*ePn*	**Pn**	**21 33 44.3**	**+0.3**
DBC				*eSn*	**Sn**	**21 34 27.4**	**+4.5**
IAZR	**Azarshahr**	**3.44**	**226**	*ePn*	**Pn**	**21 33 46.6**	**+1.4**
JIR1	**Jirandeh**	**3.45**	**170**	*ePn*	**Pn**	**21 33 42.7**	**-2.6**
JIR1				*e*		21 34 29.1	
	comp=Z,533nm,0.2s						
DLMR	**Dylym**	**3.48**	**329**	*ePn*	**Pn**	**21 33 46.4**	**+0.8**
DLMR				*eSn*	**Sn**	**21 34 28.6**	**+2.8**
MAKU	**Maku**	**3.48**	**259**	*ePn*	**Pn**	**21 33 46.8**	**+1.0**
MAKU				*e*		21 34 05.9	
	comp=Z,99nm,0.4s						
DVE	**Vedeno**	**3.61**	**323**	*ePn*	**Pn**	**21 33 47.3**	**-0.1**
DVE				*eSn*	**Sn**	**21 34 32.2**	**+3.3**
QALM	**Alamut, Qazvin**	**3.88**	**161**	*ePn*	Pn	21 33 48.2	-3.1
QALM				*e*		21 34 37.8	
	comp=Z,452nm,0.4s						
GROC	**Groznyy**	**3.95**	**322**	*ePn*	**Pn**	**21 33 53.6**	**+1.6**
GROC				*eSn*	**Sn**	**21 34 41.7**	**+4.4**
GUDG	**Gudauri**	**4.19**	**306**	*ePn*	**Pn**	**21 33 55.4**	**-0.2**
GUDG				*i* Sn	**Sn**	**21 34 47.2**	**+3.6**
IPRN	**Peran**	**4.64**	**146**	*ePn*	**Pn**	**21 33 59.5**	**-2.1**
IPRN				*e*		21 34 54.5	
	comp=Z,1μm,0.4s						
ZEI	**Tsey**	**4.73**	**306**	*ePn*	**Pn**	**21 34 03.1**	**+0.2**
ZEI				*eSn*	**Sn**	**21 34 59.4**	**+2.6**
ONI	**Oni**	**4.91**	**302**	*ePn*	**Pn**	**21 34 05.2**	**-0.1**
ONI				*eSn*	**Sn**	**21 35 03.5**	**+2.4**
IFIR	**Firoozkooh**	**5.32**	**146**	*ePn*	**Pn**	**21 34 09.8**	**-1.4**
ISHM	**Shahmirzad**	**5.43**	**141**	*ePn*	**Pn**	**21 34 12.3**	**-0.4**
MRVT	**Maraveh tapeh**	**5.99**	**112**	*ePn*	**Pn**	**21 34 18.5**	**-1.6**
GEYT	**Alibeck**	**7.36**	**104**	Pn	**Pn**	**21 34 39.2**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=261,slow=17,SNR=2.5						
GEYT				Sn	**Sn**	**21 35 58.9**	**-2.5**
	comp=Z,0.4nm,0.3s,baz=236,slow=20,SNR=3.1						
	comp=Z,1.4nm,0.6s						
IEMG	**Emamgholi**	**7.94**	**107**	*ePn*	**Pn**	**21 34 45.3**	**-1.8**
IPAY	**Payeh**	**8.60**	**112**	*ePn*	**Pn**	**21 34 55.5**	**-0.7**
KURBB	**Kurchatov Arra**	**23.05**	**53**	P	**P**	**21 37 54.3**	**-1.8**
	comp=Z,0.2nm,0.6s,baz=258,slow=13,SNR=3.6						
	comp=Z,0.2nm,0.6s						
MKAR	**Makanchi Array**	**24.88**	**63**	P	**P**	**21 38 12.1**	**-1.4**
	comp=Z,0.3nm,0.6s,baz=264,slow=9.6,SNR=3.8						
	comp=Z,0.3nm,0.6s						
FINES	**FINESS Array B**	**25.58**	**334**	P	**P**	**21 38 16.5**	**-3.0**
	comp=Z,2.1nm,0.9s,baz=136,slow=9.6,SNR=8.8						
	comp=Z,2.1nm,0.9s						
ESDC	**Sonseca Array**	**40.20**	**287**	P	**P**	**21 40 24.4**	**-2.7**
	comp=Z,0.2nm,0.4s,baz=64,slow=7.8,SNR=4.8						
	comp=Z,0.2nm,0.4s						

IDC ***10*** *21:51:24.1±0.9, 24°.37N×125°.25E, h0km, mb3.9/12, mbtmp3.9/14, ML3.0/2, MS2.9/2, Error ellipse: s-maj=27.3km s-min=19.1km az=68.0*
NEIC ***10*** *21:51:27.4±1.5, 24°.29N±0°.08×125°.19E±0°.08, h14km±5km, mb4.2/33, Error ellipse: s-maj=13.1km s-min=7.8km az=138.0*
JMA ***10*** *21:51:28.7±0.2, 24°N±1°×125°.3E±0°.8, h42km±4km, MV3.9/11, NEAR MIYAKOJIMA ISLAND*
JMA Felt I J1 at NEAR MIYAKOJIMA ISLAND .
NIED ***10*** *21:51:28.7, 24°.30N×125°.30E, h42km, MW4.1, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}0.09; $M_{\theta\theta}$0.12; $M_{\phi\phi}$-0.21; $M_{r\theta}$-0.11; $M_{\theta\phi}$1.40; $M_{\phi r}$-0.29; Fault plane solution: $M_0$1.45000×10^{15} NP1: ϕ_s274.00000°, δ78.00000°, λ5.00000°. NP2:ϕ_s183.00000°, δ85.00000°, λ168.00000°.*

ISC 10 21:51:28.7±1.4, 24°.27N±0°.07×125°.27E±0°.05, h29km±9km, n81,σ1^{s}**04/81, mb4.2/28, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMJ2	**Miyako jima3**	**0.47**	**7**	*i* P	**Pb**	**21 51 38.6**	**0.0**
JMJ2				S	**Sb**	**21 51 45.7**	**+0.3**
JOGS	**Gusukube**	**0.50**	**15**	*i* P	**Pb**	**21 51 39.2**	**+0.1**
JOGS				S	**Sn**	**21 51 47.2**	**-0.4**
JIRB	**Irabujima**	**0.56**	**351**	*i* P	**Pb**	**21 51 39.7**	**-0.3**
JIRB				S	**Sb**	**21 51 48.3**	**+0.5**
JTJ	**Tarama**	**0.63**	**306**	*i* P	**Pb**	**21 51 41.2**	**0.0**
JTJ				S	**Sb**	**21 51 50.5**	**+0.7**
JIKM	**Ikemajima**	**0.65**	**358**	*i* P	**Pb**	**21 51 41.2**	**-0.3**
JIKM				S	**Sb**	**21 51 50.2**	**-0.1**
JISG	**Ishigakijimahi**	**0.93**	**290**	*i* P	**P

KURK	**Kurchatov**	**44.45**	**319**	P		**P**		**21 59 35.7**	**-1.3**
KURK				IAmb		IAmb		21 59 40.5	
	comp=Z,3.7nm,0.8s								
KURBB	**Kurchatov Arra**	**44.48**	**319**	P		**P**		**21 59 35.8**	**-1.5**
	comp=Z,2.7nm,0.8s,baz=108,slow=8.3,SNR=15								
	comp=Z,2.7nm,0.8s								
WB0	**Warramunga Arr**	**44.67**	**168**	P		**P**		**21 59 39.3**	**+0.2**
WB0				IAmb		IAmb		21 59 43.7	
	comp=Z,4.8nm,1.1s								
WRA	**Warramunga Arr**	**44.83**	**168**	P		**P**		**21 59 40.2**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=349,slow=8.8,SNR=5.0								
	comp=Z,0.6nm,0.6s								
WRA	**Warramunga Arr**	**44.83**	**168**	P		**P**		**21 59 41.0**	**+0.6**
WB2	**Warramunga Arr**	**44.83**	**168**	P		**P**		**21 59 41.6**	**+1.2**
WR0	**Warramunga Arr**	**44.88**	**168**	P		**P**		**21 59 40.6**	**-0.2**
PSA00	**Pilbara Seismi**	**45.87**	**187**	P		**P**		**21 59 48.0**	**-0.6**
AS31	**Alice Springs**	**48.38**	**169**	P		**P**		**22 00 08.6**	**+0.4**
AS31				IAmb		IAmb		22 00 37.3	
	comp=Z,2.2nm,1.4s								
ASAR	**Alice Springs**	**48.38**	**169**	P		**P**		**22 00 08.6**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=353,slow=7.6,SNR=5.5								
	comp=Z,0.4nm,0.6s								
KKAR	**Karatay Array**	**48.39**	**307**	P		**P**		**22 00 08.2**	**0.0**
BRVK	**Borovoye**	**50.06**	**320**	P		**P**		**22 00 20.4**	**-0.3**
BRVK				IAmb		IAmb		22 00 27.7	
	comp=Z,2.4nm,1.1s								
ABKAR	**Akbulak array**	**56.05**	**314**	P		**P**		**22 01 04.3**	**-0.6**
GEYT	**Alibeck**	**57.96**	**301**	P		**P**		**22 01 19.8**	**+1.1**
	comp=Z,1.8nm,0.7s,baz=78,slow=9.0,SNR=3.0								
	comp=Z,1.8nm,0.7s								
J20K	**Nowinta River**	**64.35**	**29**	P		**P**		**22 02 02.4**	**+0.9**
J20K				IAmb		IAmb		22 02 30.6	
	comp=Z,3.6nm,1.4s								
K20K	**Telida**	**64.43**	**30**	P		**P**		**22 02 02.5**	**+0.4**
K20K				IAmb		IAmb		22 02 10.5	
	comp=Z,2.0nm,0.9s								
IMAR	**Indian Mountai**	**64.44**	**27**	P		**P**		**22 02 02.8**	**+0.8**
H21K	**Melozitna Rive**	**64.84**	**27**	P		**P**		**22 02 07.0**	**+2.3**
H21K				IAmb		IAmb		22 02 30.1	
	comp=Z,2.7nm,1.1s								
I21K	**Tanana**	**65.22**	**27**	P		**P**		**22 02 09.8**	**+2.6**
I21K				IAmb		IAmb		22 02 13.1	
	comp=Z,3.3nm,1.1s								
MLY	**Manley**	**65.75**	**28**	P		**P**		**22 02 12.8**	**+2.1**
MLY				IAmb		IAmb		22 02 18.8	
	comp=Z,2.1nm,1.0s								
H23K	**Yukon River**	**66.17**	**27**	P		**P**		**22 02 16.3**	**+3.0**
H23K				IAmb		IAmb		22 02 21.8	
	comp=Z,2.7nm,0.8s								
MDM	**Murphy Dome**	**66.82**	**28**	P		**P**		**22 02 17.4**	**-0.1**
H24K	**Noodor Dome**	**66.85**	**27**	P		**P**		**22 02 17.4**	**-0.3**
H24K				IAmb		IAmb		22 02 21.9	
	comp=Z,3.7nm,1.4s								
BMAR	**Burnt Mountain**	**67.90**	**25**	P		**P**		**22 02 26.0**	**+1.7**
FIA1	**FINESS Array S**	**73.23**	**330**	P		**P**		**22 02 55.9**	**-0.9**
FINES	**FINESS Array B**	**73.23**	**330**	P		**P**		**22 02 55.9**	**-0.9**
	comp=Z,1.3nm,0.6s,baz=43,slow=5.6,SNR=10.0								
	comp=Z,1.3nm,0.6s								
FINES	**FINESS Array B**	**73.23**	**330**	P		**P**		**22 02 56.3**	**-0.5**
EUNU	**Eureka**	**74.48**	**5**	P		**P**		**22 03 05.3**	**+1.4**
EUNU				IAmb		IAmb		22 03 25.3	
	comp=Z,1.4nm,1.0s								
AKASG	**Malin Array Be**	**75.26**	**319**	P		**P**		**22 03 07.5**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=43,slow=5.6,SNR=1.8								
	comp=Z,0.2nm,0.3s								
BR131	**Keskin Array S**	**76.10**	**307**	P		**P**		**22 03 15.1**	**+1.0**
BRTR	**Keskin Array B**	**76.10**	**307**	P		**P**		**22 03 14.6**	**+0.5**
	comp=Z,2.1nm,0.9s,baz=86,slow=5.8,SNR=11								
	comp=Z,2.1nm,0.9s								
BRTR	**Keskin Array B**	**76.10**	**307**	P		**P**		**22 03 14.1**	**0.0**
BURAR	**Bucovina Array**	**78.86**	**317**	P		**P**		**22 03 30.5**	**+1.2**
NB2	**NORSAR Subarra**	**79.86**	**333**	P		**P**		**22 03 34.1**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=53,slow=6.2								
NOA	**NORSAR Array B**	**79.86**	**333**	P		**P**		**22 03 33.9**	**-0.5**
	comp=Z,0.7nm,0.8s,baz=54,slow=5.9,SNR=2.9								
	comp=Z,0.7nm,0.8s								
SUMG	**Summit**	**82.77**	**355**	P		**P**		**22 03 50.5**	**+0.4**
GERES	**GERESS Array B**	**85.11**	**322**	P		**P**		**22 04 02.5**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=46,slow=3.9,SNR=5.6								
	comp=Z,0.6nm,0.8s								
GERES	**GERESS Array B**	**85.11**	**322**	P		**P**		**22 04 02.2**	**0.0**

JMA 10 21:51:58.3±0.0, 35°.9N±0°.1×137°.6E±0°.1, h9km, MV0.5/20, WESTERN NAGANO PREF, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNT	**Takato**	**0.40**	**89**	P	Pg	21 52 06.1	-0.1
JNT				S	Sg	21 52 11.4	-0.1
JGN	**Niukaw**	**0.44**	**323**	P	Pg	21 52 07.0	+0.1
JGN				S	Sg	21 52 12.5	-0.3

MAN 10 22:08:20.8, 16°.50N×120°.59E, h32km, mb4.1, ML2.9, MS2.6, 3D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPP	**San Manuel, Pa**	**0.36**	**166**	*e*P	Pn	22 08 31.4	+2.4
SMPP				eS		22 08 43.2	
SAMP	**Sagada Mountai**	**0.65**	**27**	*e*P	Pn	22 08 33.9	+1.1
BALP	**Baler**	**1.21**	**128**	*e*P	Pn	22 08 40.8	0.0
BALP				eS		22 08 47.4	

*IPEC **10** 22:24:06.0±0.2, 50°.24N×19°.02E, h1km, ML2.2/5, Error ellipse: s-maj=2.2km s-min=1.0km az=12.0*
*IDC **10** 22:24:07.5±2.4, 50°.17N×18°.93E, h0km, mbtmp3.0/3, ML2.4/3, Error ellipse: s-maj=44.1km s-min=10.4km az=136.0*
*PRU **10** 22:24:07.3±0.0, 50°.19N×18°.92E, h0km*
ISC 10 22:24:05.4±0.8, 50°.23N±0°.04×18°.98E±0°.03, h0km, n33, σ1s 01/57, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.66**	**234**	*e*PG	**Pg**	**22 24 18.9**	**+0.8**
OKC				*e*SG	**Sg**	**22 24 26.7**	**+0.1**
	comp=Z,30nm,0.8s						
MORC	**Moravsky Berou**	**1.03**	**245**	*e*Pg	**Pb**	**22 24 26.2**	**+0.1**
	baz=64						
MORC				*e*Sg	**Sg**	**22 24 39.3**	**+0.8**
	30nm,0.4s,baz=64						
MORC	**Moravsky Berou**	**1.03**	**245**	*e*PG	**Pb**	**22 24 26.2**	**+0.1**
MORC				*e*SG	**Sg**	**22 24 39.3**	**+0.8**
ANAC	**Anensky vrch**	**1.04**	**262**	*e*Pg	**Pb**	**22 24 26.6**	**+0.3**
	baz=81						
ANAC				*e*Sg	**Sg**	**22 24 39.6**	**+0.8**
	49nm,0.4s,baz=81						
LANS	**Liptovska Anna**	**1.12**	**163**	*e*PG	**Pb**	**22 24 28.3**	**+0.6**
LANS				*e*SG	**Sb**	**22 24 43.6**	**+0.7**
LANS				*e*LG	Lg	22 24 47.1	
MAUC	**Maruska**	**1.14**	**221**	*e*PG	**Pg**	**22 24 27.6**	**+0.4**
MAUC				*e*SG	**Sg**	**22 24 43.0**	**+1.0**
	comp=Z,97nm,0.9s						
NIE	**Niedzica**	**1.18**	**133**	*e*Pg	**Pn**	**22 24 29.4**	**+0.2**
NIE				*e*Sg	**Sn**	**22 24 46.8**	**+0.9**
KRLC	**Kraliky**	**1.42**	**265**	*e*PG	**Pn**	**22 24 32.4**	**-0.2**
KRLC				*e*SG	**Sn**	**22 24 52.4**	**+0.4**
	comp=Z,21nm,0.5s						
JAVC	**Velka Javorina**	**1.61**	**212**	*e*Pn	**Pn**	**22 24 35.9**	**+0.7**
	baz=32						
JAVC	**Velka Javorina**	**1.61**	**212**	*e*PN	**Pn**	**22 24 35.9**	**+0.7**
DPC	**Dobruska-Polom**	**1.71**	**275**	*e*PG	**Pn**	**22 24 37.3**	**+0.8**
DPC				*e*SG	**Sg**	**22 25 01.8**	**+1.5**
	comp=Z,15nm,0.4s						
VRAC	**Vranov**	**1.80**	**240**	Pg	**Pb**	**22 24 39.3**	**+0.1**
	2.8nm,0.3s,baz=61,slow=14,SNR=22						
VRAC				Lg	Lg	22 25 03.3	
	3.4nm,0.3s,baz=140,slow=20,SNR=12						
VRAC	**Vranov**	**1.80**	**240**	*e*Pn	**Pn**	**22 24 38.5**	**+0.8**
	baz=58						
VRAC				*e*Sg	**Sg**	**22 25 03.3**	**+0.2**
	17nm,0.4s,baz=58						
VRAC	**Vranov**	**1.80**	**240**	*e*PN	**Pn**	**22 24 38.6**	**+0.8**
VRAC				*e*SG	**Sg**	**22 25 03.3**	**+0.2**
OSTC	**Ostas**	**1.80**	**282**	*e*PG	**Pn**	**22 24 38.3**	**+0.6**
OSTC				*e*SG	**Sg**	**22 25 04.1**	**+0.9**
	comp=Z,14nm,0.9s						
KSP	**Ksiaz**	**1.82**	**291**	*e*Pn	**Pb**	**22 24 39.2**	**-0.4**
KSP				*e*Pg	**Pg**	**22 24 41.1**	**+0.8**
KSP				*e*Sg	**Sg**	**22 25 05.9**	**+2.0**
CHVC	**Chvalec**	**1.91**	**282**	*e*PG	**Pn**	**22 24 40.1**	**+0.9**
CHVC				*e*SG	**Sg**	**22 25 07.5**	**+0.9**
	comp=Z,6.4nm,0.3s						
UPC	**Upice**	**1.92**	**280**	*e*PG	**Pb**	**22 24 41.4**	**+0.1**
UPC				*e*SG	**Sg**	**22 25 08.9**	**+1.8**
	comp=Z,6.4nm,0.4s						
KECS	**Kecovo**	**2.00**	**150**	*e*PN	**Pg**	**22 24 43.7**	**-0.1**
KRUC	**Moravsky**	**2.04**	**236**	*e*Pn	**Pn**	**22 24 41.5**	**+0.5**
	baz=54						
KRUC				*e*Sg	**Sg**	**22 25 10.7**	**-0.3**
	9.5nm,0.6s,baz=54						
KRUC	**Moravsky**	**2.04**	**236**	*e*PN	**Pn**	**22 24 41.6**	**+0.5**
KRUC				*e*SG	**Sg**	**22 25 10.7**	**-0.3**
CRVS	**Cervenica-Dubn**	**2.09**	**128**	*e*PN	**Pg**	**22 24 45.2**	**-0.3**
KOLS	**Kolonicke sedl**	**2.50**	**120**	*e*PG	**Pg**	**22 24 56.0**	**+2.6**
PVCC	**Panska Ves**	**2.84**	**278**	*e*PG	**Pb**	**22 24 57.8**	**+0.8**
PVCC				*e*SG	**Sg**	**22 25 37.2**	**+0.6**
	comp=Z,8.2nm,0.5s						
PRU	**Pruhonice**	**2.87**	**267**	*e*PG	**Pb**	**22 24 57.5**	**+0.1**
PRU				*e*SG	**Sg**	**22 25 37.3**	**-0.1**
	comp=Z,3.0nm,0.4s						
BRG	**Berggiesshubel**	**3.28**	**283**	Pg	**Pg**	**22 25 08.3**	**+0.1**
BRG				Sg	**Sg**	**22 25 51.8**	**+1.2**
BRG				Amp		22 25 54.0	
	comp=Z,3.7nm,0.5s						
CKRC	**Cesky Krumlov**	**3.35**	**247**	*e*SG	**Sg**	**22 25 52.1**	**-0.9**
KHC	**Kasperske Hory**	**3.67**	**255**	*e*PN	**Pn**	**22 25 03.9**	**+0.4**
KHC				*e*SG	**Sg**	**22 26 02.5**	**-0.9**
	comp=Z,7.4nm,0.8s						
GERES	**GERESS Array B**	**3.70**	**250**	Pn	**Pn**	**22 25 06.0**	**+2.0**
	comp=Z,0.2nm,0.3s,baz=71,slow=13,SNR=4.0						
GERES				Pg	**Pg**	**22 25 14.8**	**-1.5**
	comp=Z,0.6nm,0.3s,baz=70,slow=17,SNR=12						
GERES				Lg	Lg	22 26 02.1	
	comp=Z,1.2nm,0.3s,baz=63,slow=29,SNR=9.1						
	comp=Z,0.2nm,0.3s						
CLL	**Collm**	**3.94**	**288**	*e*Pg	**Pg**	**22 25 22.0**	**+1.0**
CLL				*e*Sg	**Sg**	**22 26 13.0**	**+0.9**
	comp=Z,6.0nm,0.9s						
NKC	**Novy Kostel**	**4.19**	**273**	*e*SG	**Sg**	**22 26 20.8**	**+0.8**
	comp=Z,8.7nm,1.0s						
FINES	**FINESS Array B**	**11.92**	**17**	Pn	**Pn**	**22 26 54.0**	**-2.5**
	comp=Z,0.1nm,0.3s,baz=200,slow=11,SNR=5.6						
	comp=Z,0.4nm,0.4s						
ARCES	**ARCESS Array B**	**19.62**	**7**	Pn	**P**	**22 28 32.7**	**-2.4**
	baz=184,slow=13,SNR=3.6						
	comp=Z,0.6nm,0.7s						

*IDC **10** 22:30:39.8±0.7, 37°.10S×95°.35W, h0km, mb4.3/9, mbtmp4.3/10, ML4.0/1, MS3.8/15, Error ellipse: s-maj=22.4km s-min=19.1km az=58.0*
*NEIC **10** 22:30:41.3±1.3, 37°.2S±0°.1×95°.3W±0°.1, h10km±1km, mb4.7/261, Error ellipse: s-maj=19.7km s-min=17.0km az=272.0*
ISC 10 22:30:41.6±0.4, 37°.12S±0°.07×95°.34W±0°.08, h14km, n316, σ0s 75/292, mb4.7/124, MS3.7/13, Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H03N2	**Juan Fernandez**	**13.89**	**80**	T	T	22 48 11.8	
	baz=249,slow=71,SNR=232						
H03N3	**Juan Fernandez**	**13.89**	**80**	T	T	22 48 19.6	
	baz=249,slow=71,SNR=200						
H03N1	**Juan Fernandez**	**13.91**	**80**	T	T	22 48 12.9	
	baz=249,slow=71,SNR=215						
RPN	**Rapa Nui**	**15.47**	**306**	LR	LR	22 38 26.7	
	comp=Z,491nm,18.2s,baz=117,slow=30						
LR04	**Corral**	**17.37**	**106**	Pn	**Pn**	**22 34 42.2**	**-1.2**
LR04				IAmb	IAmb	22 34 57.6	
	comp=Z,62nm,1.1s						
LL05	**Los Muermos**	**17.45**	**111**		**P**	**22 34 45.6**	**-0.1**
LL05				IAmb	IAmb	22 34 53.7	
	comp=Z,113nm,1.3s						
GO07	**Milladeo Hill,**	**17.61**	**117**		**Pn**	**22 34 46.6**	**+0.2**
LL07	**Hotel Espejo d**	**17.68**	**116**		**Pn**	**22 34 47.8**	**+0.5**
BI05	**Punta Hualpn**	**17.71**	**96**		**Pn**	**22 34 48.2**	**+0.5**
LL04	**Puerto Octay**	**18.20**	**109**	P	**P**	**22 34 54.1**	**+0.1**
LL03	**Petrohue**	**18.23**	**110**		**Pn**	**22 34 52.9**	**-1.2**
LL01	**San Ignacio de**	**18.37**	**114**	P	**P**	**22 34 54.8**	**-1.0**
AY01	**Puyuhuapi**	**18.63**	**120**	P	**Pn**	**22 35 00.6**	**+1.6**
LL02	**Futaleuf**	**18.92**	**116**	P	**Pn**	**22 35 03.1**	**+0.6**
AY02	**Valle Explorad**	**18.92**	**127**	P	**P**	**22 35 01.8**	**0.0**
GO05	**Huala**	**19.03**	**91**	P	**Pn**	**22 35 04.5**	**+0.6**
ML02	**Panimavida**	**19.28**	**93**	P	**Pn**	**22 35 07.3**	**+0.4**
ML02				IAmb	IAmb	22 35 17.8	
	comp=Z,58nm,1.4s						
COYC	**Coyhaique**	**19.35**	**123**	P	**P**	**22 35 06.1**	**-0.4**
PLCA	**Paso Flores**	**19.60**	**108**	P	**P**	**22 35 10.0**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=270,slow=11,SNR=7.4						
PLCA				LR	LR	22 40 48.0	
	comp=Z,379nm,19.1s,baz=211,slow=31						
	comp=Z,3.6nm,0.8s						
PLCA	**Paso Flores**	**19.60**	**108**	P	**Pn**	**22 35 11.2**	**+0.4**
VA05	**Santo Domingo**	**19.64**	**87**	P	**P**	**22 35 10.7**	**+0.9**
BO01	**Tunca**	**19.86**	**89**		**P**	**22 35 13.2**	**+1.0**
MT01	**Popeta**	**19.87**	**88**	P	**P**	**22 35 12.8**	**+0.5**
MT09	**Talagante**	**20.10**	**88**	P	**P**	**22 35 15.8**	**+0.8**
MT09				IAmb	IAmb	22 35 22.2	
	comp=Z,47nm,1.4s						
ROC1	**El Roble**	**20.32**	**86**	P	Pn	22 35 19.2	-0.3
BO04	**La Punta**	**20.34**	**89**	P	Pn	22 35 19.6	0.0
MT05	**Renca**	**20.41**	**87**	P	**P**	**22 35 18.2**	**-0.2**
MT05				IAmb	IAmb	22 35 26.7	
	comp=Z,94nm,1.5s						
PEL	**Peldehue**	**20.53**	**86**	P	**P**	**22 35 20.9**	**+1.3**
MT03	**Universidad Ad**	**20.57**	**87**	P	**P**	**22 35 20.6**	**+0.6**
MT03				IAmb	IAmb	22 35 35.5	
	comp=Z,37nm,1.2s						
LMEL	**Las Melosas**	**20.71**	**88**	P	**P**	**22 35 21.9**	**+0.2**
VA03	**San Esteban**	**20.76**	**85**	P	**P**	**22 35 22.4**	**+0.3**
CO02	**Combarbal**	**20.96**	**81**	P	**P**	**22 35 25.4**	**+1.1**
CO02				IAmb	IAmb	22 35 29.0	
	comp=Z,44nm,1.2s						
GO04	**Tololo Observa**	**21.54**	**78**	P	**P**	**22 35 30.9**	**+0.3**
GO04				IAmb	IAmb	22 35 55.3	
	comp=Z,41nm,1.1s						
LCO	**Las Campanas**	**22.13**	**76**	P	**P**	**22 35 37.8**	**+0.8**
ZON	**Zonda**	**22.67**	**84**	P	**P**	**22 35 43.1**	**+0.5**
AC02	**Maricunga**	**24.41**	**73**	P	**P**	**22 36 00.8**	**+0.6**
AC02				IAmb	IAmb	22 36 08.5	
	comp=Z,20nm,1.3s						
PB14	**IPOC Station P**	**24.68**	**67**	P	**P**	**22 36 02.7**	**+0.2**
PB14				IAmb	IAmb	22 36 04.4	
	comp=Z,28nm,1.3s						
GO02	**Mina Guanaco**	**24.97**	**69**	P	**P**	**22 36 05.9**	**+0.8**
GO02				IAmb	IAmb	22 36 26.0	
	comp=Z,21nm,1.4s						
PB10	**IPOC Station P**	**25.24**	**64**	P	**P**	**22 36 07.2**	**0.0**
PB10				IAmb	IAmb	22 36 12.8	
	comp=Z,23nm,1.1s						
LVC	**Limon Verde**	**26.98**	**65**	P	**P**	**22 36 24.1**	**+0.7**
	comp=Z,6.7nm,0.9s,baz=245,slow=4.5,SNR=4.5						
LVC				LR	LR	22 44 10.1	
	comp=Z,174nm,21.6s,baz=224,slow=30						
	comp=Z,6.7nm,0.9s						
LVC	**Limon Verde**	**26.98**	**65**	P	**P**	**22 36 23.4**	**0.0**
LVC	**Limon Verde**	**26.98**	**65**	*e*P	**P**	**22 36 21.4**	**-2.0**
PB11	**IPOC Station P**	**28.31**	**59**	P	**P**	**22 36 35.2**	**+0.2**
PB11				IAmb	IAmb	22 36 41.6	
	comp=Z,11nm,1.1s						
PB12	**IPOC Station P**	**28.64**	**57**	P	**P**	**22 36 38.0**	**0.0**
PB12				IAmb	IAmb	22 36 45.0	
	comp=Z,13nm,1.0s						
PB16	**IPOC Station P**	**29.39**	**57**	P	**P**	**22 36 45.4**	**+0.3**
PB16				IAmb	IAmb	22 36 47.6	
	comp=Z,15nm,1.5s						
NNA	**Nana**	**30.03**	**38**	LR	LR	22 45 37.6	
	comp=Z,109nm,20.1s,baz=193,slow=30						
LPAZ	**La Paz**	**31.77**	**57**	P	**P**	**22 37 07.3**	**+1.2**
	comp=Z,5.8nm,0.9s,baz=214,slow=6.9,SNR=18						
	comp=Z,5.8nm,0.9s						
LPAZ	**La Paz**	**31.77**	**57**	P	**P**	**22 37 06.6**	**+0.4**
LPAZ				IAmb	IAmb	22 37 08.1	
	comp=Z,11nm,1.1s						
LPAZ	**La Paz**	**31.77**	**57**	*e*P	**P**	**22 37 07.3**	**+1.2**
PMSA	**Palmer Station**	**33.32**	**156**	P	**P**	**22 37 20.7**	**+2.2**
	comp=Z,2.4nm,0.7s,baz=333,slow=11,SNR=6.6						
PMSA	**Palmer Station**	**33.32**	**156**	P	**P**	**22 37 19.1**	**+0.5**
PMSA	**Palmer Station**	**33.32**	**156**	*e*P	**P**	**22 37 21.1**	**+2.6**
ATAH	**Atahualpa**	**33.60**	**32**	LR	LR	22 47 46.7	
	comp=Z,86nm,18.1s,baz=211,slow=31						
CPUP	**Villa Florida**	**33.87**	**83**	LR	LR	22 49 30.6	
	comp=Z,114nm,18.6s,baz=212,slow=33						
SIV	**San Ignacio**	**36.88**	**64**	P	**P**	**22 37 49.9**	**0.0**
	comp=Z,2.4nm,1.0s,baz=248,slow=14,SNR=6.2						
SIV				PcP	**PcP**	**22 40 11.2**	**-0.3**
	comp=Z,2.5nm,1.0s,baz=242,slow=3.5,SNR=5.8						
SIV				LR	LR	22 50 33.3	
	comp=Z,126nm,20.5s,baz=152,slow=32						
	comp=Z,2.4nm,1.0s						
BOSC	**San Juan Bosco**	**37.18**	**29**	P	**P**	**22 37 52.3**	**-0.2**
COHC	**Cochancay**	**37.53**	**27**	P	**P**	**22 37 55.0**	**-0.2**
CNLB	**Canela**	**37.74**	**91**	*e*P	**P**	**22 37 55.9**	**-1.2**
ETMB	**Extrema**	**37.82**	**51**	*e*P	**P**	**22 37 57.4**	**-0.4**
AQDB	**Aquidauana**	**38.18**	**75**	*e*P	**P**	**22 38 00.1**	**-0.7**
PORT	**Chimborazo Vol**	**38.63**	**27**	P	**P**	**22 38 05.9**	**+0.7**
PORT				IAmb	IAmb	22 38 09.5	
	comp=Z,18nm,1.3s						
PTLB	**Pontes e Lacer**	**38.64**	**66**	*e*P	**P**	**22 38 04.7**	**0.0**
SLOR	**San Lorenzo -**	**39.41**	**27**	P	**P**	**22 38 12.3**	**+0.7**
POCN	**Pocone**	**39.67**	**70**	*e*P	**P**	**22 38 13.7**	**+0.4**
PTET	**Porto Estrela**	**40.13**	**68**	*e*P	**P**	**22 38 16.9**	**-0.3**
OTAV	**Otavalo**	**40.32**	**27**	P	**P**	**22 38 18.1**	**-1.1**
OTAV	**Otavalo**	**40.32**	**27**	*e*P	**P**	**22 38 21.1**	**+1.8**
SAML	**Samuel**	**40.41**	**54**	P	**P**	**22 38 19.4**	**0.0**
SALV	**Santo Antonio**	**40.90**	**70**	*e*P	**P**	**22 38 23.4**	**-0.1**
PCMB	**Pacaembu**	**41.03**	**80**	*e*P	**P**	**22 38 23.9**	**-0.6**
PDRB	**Porto dos Gac**	**42.93**	**64**	*e*P	**P**	**22 38 39.5**	**-0.7**
DVLD	**Doverlandia**	**43.13**	**74**	*e*P	**P**	**22 38 41.2**	**-0.5**
ARAG	**Araguaiana, MT**	**43.96**	**73**	*e*P	**P**	**22 38 48.1**	**-0.3**
CLDB	**Colider**	**44.10**	**64**	*e*P	**P**	**22 38 48.9**	**-0.7**
ROSC	**El Rosal**	**46.12**	**30**	LR	LR	22 56 24.7	
	comp=Z,73nm,20.2s,baz=190,slow=34						
ROSC	**El Rosal**	**46.12**	**30**	P	**P**	**22 39 06.6**	**+0.7**
ROSC				IAmb	IAmb	22 39 08.2	
	comp=Z,17nm,1.2s						
SNDB	**Serra Nova Dou**	**46.68**	**69**	*e*P	**P**	**22 39 09.7**	**-0.3**
BDFB	**Brasilia**	**46.92**	**76**	P	**P**	**22 39 11.5**	**-0.5**
	comp=Z,3.3nm,0.8s,baz=194,slow=17,SNR=4.0						
	comp=Z,3.3nm,0.8s						
BDFB	**Brasilia**	**46.92**	**76**	IAmb	IAmb	22 39 20.4	
	comp=Z,9.2nm,1.2s						
BDFB	**Brasilia**	**46.92**	**76**	*e*P	**P**	**22 39 10.8**	**-1.2**
NPGB	**Novo Progresso**	**47.06**	**61**	*e*P	**P**	**22 39 12.4**	**-0.7**
BELA	**Belgrano 2**	**47.94**	**166**	P	**P**	**22 39 19.2**	**+0.1**
JTS	**Las Juntas de**	**48.16**	**14**	LR	LR	22 54 16.3	
	comp=Z,47nm,20.4s,baz=229,slow=29						
BCIP	**Isla Barro Col**	**48.28**	**21**	P	**P**	**22 39 22.8**	**+0.5**
PEXB	**Peixe**	**48.85**	**72**	*e*P	**P**	**22 39 27.0**	**+0.1**
JANB	**Januaria**	**50.15**	**78**	*e*P	**P**	**22 39 36.5**	**-0.3**
BSFB	**Barra de Sao F**	**50.76**	**85**	*e*P	**P**	**22 39 41.6**	**+0.2**
MALB	**Monte Alegre**	**51.57**	**57**	*e*P	**P**	**22 39 46.9**	**-0.6**
BAUV	**El Baul**	**52.48**	**35**	P	**P**	**22 39 53.6**	**-0.6**
QSPA	**South Pole Qui**	**53.10**	**180**	P	**P**	**22 39 58.2**	**-0.2**
	comp=Z,2.9nm,0.8s,baz=131,slow=4.3,SNR=9.0						
	comp=Z,2.9nm,0.8s						
QSPA	**South Pole Qui**	**53.10**	**180**	P	**P**	**22 39 58.8**	**+0.4**
QSPA				IAmb	IAmb	22 40 04.9	
	comp=Z,13nm,1.3s						
CMC01	**Camacan, BA**	**53.74**	**82**	*e*P	**P**	**22 40 03.9**	**+0.3**
VNA3	**Neumayer Olymp**	**53.98**	**156**	P	**P**	**22 40 04.2**	**-0.4**
MCPB	**Macapa, AP**	**54.15**	**58**	*e*P	**P**	**22 40 06.1**	**-0.5**
TLIG	**Tlapa**	**54.47**	**356**	P	**P**	**22 40 09.5**	**+0.6**
TLIG				IAmb	IAmb	22 40 20.9	
	comp=Z,8.0nm,1.1s						
VNA1	**Neumayer--Stat**	**54.54**	**156**	P	**P**	**22 40 08.6**	**0.0**
VNA2	**Neumayer--Watz**	**54.77**	**156**	P	**P**	**22 40 10.0**	**-0.3**
	baz=137,slow=20						
SNAA	**Sanae**	**56.02**	**158**	P	**P**	**22 40 18.6**	**-0.7**
SNAA	**Sanae**	**56.02**	**158**	P	**P**	**22 40 18.8**	**-0.6**
SNAA				IAmb	IAmb	22 40 19.6	
	comp=Z,6.9nm,1.0s						
VNDA	**Vanda**	**56.77**	**195**	P	**P**	**22 40 25.3**	**+0.7**
TROLL	**Troll, Antarti**	**57.51**	**159**

JSC	**Jenkinsville**	**72.23**	**12**	P	**P**	**22 42 05.8**	**-0.2**			
ANMO	**Albuquerque**	**72.44**	**350**	P	**P**	**22 42 08.4**	**+0.9**			
ANMO				IAmb	IAmb	22 42 11.3				
	comp=Z,8.6nm,1.4s									
X18A	**Snowflake**	**72.57**	**347**	P	**P**	**22 42 09.6**	**+1.3**			
X18A				IAmb	IAmb	22 42 12.5				
	comp=Z,11nm,1.3s									
Y14A	**Wickenburg**	**72.58**	**345**	P	**P**	**22 42 08.2**	**0.0**			
Y14A				IAmb	IAmb	22 42 15.8				
	comp=Z,6.3nm,1.1s									
W52A	**Murphy**	**72.62**	**10**	P	**P**	**22 42 08.4**	**0.0**			
TUL1	**Leonard**	**72.66**	**360**	P	**P**	**22 42 08.5**	**-0.1**			
TUL1				IAmb	IAmb	22 42 11.7				
	comp=Z,5.2nm,1.0s									
BG3	**Lake Jocassee**	**72.67**	**11**	P	**P**	**22 42 09.2**	**+0.6**			
PAULI	**Pauline**	**72.67**	**12**	P	**P**	**22 42 08.7**	**+0.1**			
PAULI				IAmb	IAmb	22 42 09.7				
	comp=Z,14nm,1.2s									
BIRD	**Birdtown, Kers**	**72.73**	**13**	P	**P**	**22 42 09.4**	**+0.4**			
BIRD				IAmb	IAmb	22 42 11.1				
	comp=Z,15nm,1.3s									
X16A	**Lo Mia Camp, P**	**72.73**	**346**	P	**P**	**22 42 09.6**	**+0.3**			
BLYC	**Blythe**	**72.74**	**343**	P	**P**	**22 42 09.0**	**-0.1**			
BLYC				IAmb	IAmb	22 42 16.9				
	comp=Z,9.5nm,1.2s									
CPCT	**Cooper Cave**	**72.90**	**9**	P	**P**	**22 42 09.7**	**-0.2**			
CPCT				IAmb	IAmb	22 42 09.9				
	comp=Z,9.9nm,1.3s									
V48A	**Smith Brothers**	**72.92**	**7**	P	**P**	**22 42 09.9**	**-0.2**			
V48A				IAmb	IAmb	22 42 10.9				
	comp=Z,6.9nm,1.3s									
LCAR	**Lake Charles**	**72.92**	**4**	P	**P**	**22 42 09.6**	**-0.5**			
LCAR				IAmb	IAmb	22 42 16.0				
	comp=Z,9.1nm,1.3s									
KMSC	**Kings Mountain**	**73.06**	**12**	P	**P**	**22 42 11.3**	**+0.3**			
KMSC				IAmb	IAmb	22 42 13.9				
	comp=Z,14nm,1.3s									
W18A	**Petrified Fore**	**73.11**	**348**	P	**P**	**22 42 11.9**	**+0.5**			
W18A				IAmb	IAmb	22 42 15.3				
	comp=Z,6.2nm,0.9s									
U40A	**Yellville**	**73.14**	**2**	P	**P**	**22 42 12.7**	**+1.2**			
U40A				IAmb	IAmb	22 42 14.4				
	comp=Z,14nm,1.4s									
U38A	**Gravette**	**73.19**	**1**	P	**P**	**22 42 11.3**	**-0.4**			
U38A				IAmb	IAmb	22 42 11.8				
	comp=Z,12nm,1.3s									
TKL	**Tuckaleechee C**	**73.20**	**10**	P	**P**	**22 42 11.7**	**-0.1**			
TKL				IAmb	IAmb	22 42 24.5				
	comp=Z,8.3nm,1.2s									
V51A	**Loudon**	**73.27**	**9**	P	**P**	**22 42 12.6**	**+0.5**			
V51A				IAmb	IAmb	22 42 41.5				
	comp=Z,10nm,1.2s									
CLTN	**Cedars of Leba**	**73.32**	**8**	P	**P**	**22 42 13.3**	**+0.9**			
V53A	**Saluda**	**73.35**	**11**	IAmb	IAmb	22 42 19.7				
	comp=Z,13nm,1.2s									
SNCC	**San Nicolas Is**	**73.55**	**339**	P	**P**	**22 42 15.2**	**+1.2**			
PBMO	**Poplar Bluff**	**73.67**	**4**	P	**P**	**22 42 14.7**	**+0.2**			
T35A	**Sooner Cattle**	**73.67**	**359**	P	**P**	**22 42 14.9**	**+0.3**			
T35A				IAmb	IAmb	22 42 15.7				
	comp=Z,15nm,1.4s									
V55A	**Taylorsville**	**73.78**	**12**	P	**P**	**22 42 15.5**	**+0.3**			
V55A				IAmb	IAmb	22 42 21.3				
	comp=Z,11nm,1.4s									
WUAZ	**Wupatki**	**73.79**	**346**	P	**P**	**22 42 16.0**	**+0.5**			
WUAZ				IAmb	IAmb	22 42 43.5				
	comp=Z,8.1nm,1.2s									
U49A	**Red Boiling Sp**	**73.80**	**8**	P	**P**	**22 42 15.3**	**0.0**			
U49A				IAmb	IAmb	22 42 17.7				
	comp=Z,6.6nm,0.9s									
W13A	**Hualapai Mount**	**73.89**	**344**	P	**P**	**22 42 16.6**	**+0.4**			
MGMO	**Mountain Grove**	**73.96**	**3**	P	**P**	**22 42 16.7**	**+0.4**			
MGMO				IAmb	IAmb	22 42 23.1				
	comp=Z,19nm,1.5s									
TZTN	**Tazewell**	**74.10**	**10**	P	**P**	**22 42 17.1**	**0.0**			
T47A	**Sharon Grove**	**74.13**	**7**	P	**P**	**22 42 16.7**	**-0.5**			
T47A				IAmb	IAmb	22 42 19.2				
	comp=Z,13nm,1.4s									
T25A	**Trinidad**	**74.36**	**352**	P	**P**	**22 42 18.7**	**-0.1**			
T25A				IAmb	IAmb	22 42 27.1				
	comp=Z,17nm,1.5s									
U56A	**King**	**74.40**	**12**	P	**P**	**22 42 18.1**	**-0.8**			
U56A				IAmb	IAmb	22 42 18.7				
	comp=Z,7.5nm,1.0s									
T50A	**Nancy**	**74.41**	**9**	P	**P**	**22 42 18.6**	**-0.2**			
S39A	**Bolivar**	**74.46**	**2**	IAmb	IAmb	22 42 19.8				
	comp=Z,11nm,1.3s									
GSC	**Goldstone, Bar**	**74.77**	**342**	P	**P**	**22 42 22.2**	**+1.2**			
U15A	**North Rim**	**74.85**	**346**	P	**P**	**22 42 22.6**	**+0.9**			
FVM	**French Village**	**74.87**	**4**	P	**P**	**22 42 21.8**	**+0.3**			
FVM				IAmb	IAmb	22 42 27.5				
	comp=Z,15nm,1.5s									
CCM	**Cathedral Cave**	**74.90**	**3**	P	**P**	**22 42 21.5**	**-0.2**			
CCM				IAmb	IAmb	22 42 24.3				
	comp=Z,12nm,1.2s									
MVCO	**Mesa Verde**	**74.95**	**349**	P	**P**	**22 42 23.0**	**+0.7**			
MVCO				IAmb	IAmb	22 42 24.1				
	comp=Z,15nm,1.5s									
SDCO	**Great Sand Dun**	**75.08**	**352**	P	**P**	**22 42 23.9**	**+0.8**			
BCW	**Bitter Crk WRg**	**75.11**	**340**	P	**P**	**22 42 23.1**	**0.0**			
S51A	**Beattyville**	**75.17**	**10**	P	**P**	**22 42 23.2**	**-0.1**			
S51A				IAmb	IAmb	22 42 23.6				
	comp=Z,7.1nm,1.1s									
S22A	**4UR Ranch, Cre**	**75.25**	**351**	P	**P**	**22 42 24.4**	**+0.3**			
S22A				IAmb	IAmb	22 42 32.6				
	comp=Z,8.1nm,1.2s									
SHPR	**Sheep Range**	**75.53**	**344**	P	**P**	**22 42 26.5**	**+1.0**			
ISA	**Isabella, Lake**	**75.53**	**341**	P	**P**	**22 42 26.9**	**+1.5**			
ISA				IAmb	IAmb	22 42 30.3				
	comp=Z,9.6nm,1.5s									
GWY	**Greenwater Val**	**75.57**	**342**	P	**P**	**22 42 26.8**	**+1.0**			
GWY				IAmb	IAmb	22 42 47.7				
	comp=Z,5.4nm,0.7s									
R50A	**Paris**	**75.71**	**9**	P	**P**	**22 42 26.0**	**-0.3**			
R50A				IAmb	IAmb	22 42 28.4				
	comp=Z,6.0nm,1.0s									
PKCU	**Pink Cliffs**	**75.83**	**346**	P	**P**	**22 42 27.9**	**+0.4**			
PV13	**Radium Mtn., P**	**75.93**	**349**	P	**P**	**22 42 28.0**	**+0.1**			
PV13				IAmb	IAmb	22 42 29.5				
	comp=Z,13nm,1.4s									
KSCO	**Kaye Shedlock'**	**76.05**	**354**	P	**P**	**22 42 29.3**	**+0.9**			
PV15	**Paradox Valley**	**76.06**	**349**	P	**P**	**22 42 29.9**	**+1.2**			
PV15				IAmb	IAmb	22 42 35.3				
	comp=Z,9.6nm,1.4s									
PV11	**David Mesa, Pa**	**76.08**	**349**	P	**P**	**22 42 29.1**	**+0.5**			
PV11				IAmb	IAmb	22 42 33.1				
	comp=Z,6.2nm,1.0s									
SZCU	**Shurtz Canyon**	**76.13**	**346**	P	**P**	**22 42 29.7**	**+0.7**			
SZCU				IAmb	IAmb	22 42 34.6				
	comp=Z,8.4nm,0.9s									
CCUT	**Cedar City**	**76.14**	**345**	P	**P**	**22 42 29.5**	**+0.4**			
CCUT				IAmb	IAmb	22 42 37.1				
	comp=Z,6.6nm,1.2s									
PV10	**Paradox Valley**	**76.18**	**349**	P	**P**	**22 42 29.0**	**-0.3**			
PV10				IAmb	IAmb	22 42 40.6				
	comp=Z,6.2nm,0.9s									
TPNV	**Topopah Spring**	**76.20**	**343**	P	**P**	**22 42 29.9**	**+0.6**			
TPNV				IAmb	IAmb	22 42 37.3				
	comp=Z,4.3nm,0.8s									
Q24A	**Divide**	**76.25**	**352**	P	**P**	**22 42 30.1**	**+0.3**			
Q24A				IAmb	IAmb	22 42 46.1				
	comp=Z,4.6nm,0.8s									
P40A	**Paris**	**76.33**	**3**	P	**P**	**22 42 30.2**	**+0.4**			
P40A				IAmb	IAmb	22 42 35.7				
	comp=Z,9.6nm,1.1s									
PRN	**Pahroc Range**	**76.36**	**344**	P	**P**	**22 42 31.6**	**+1.3**			
PRN				IAmb	IAmb	22 42 35.6				
	comp=Z,6.9nm,1.2s									
P38A	**Dawn**	**76.39**	**1**	P	**P**	**22 42 29.8**	**-0.3**			
P38A				IAmb	IAmb	22 42 36.7				
	comp=Z,7.1nm,0.8s									
P43A	**Skaggs, Pawnee**	**76.57**	**5**	P	**P**	**22 42 30.3**	**-0.9**			
P43A				IAmb	IAmb	22 42 36.5				
	comp=Z,7.7nm,0.7s									
Q51A	**Peebles**	**76.57**	**10**	P	**P**	**22 42 31.5**	**+0.3**			
Q51A				IAmb	IAmb	22 42 31.5				
	comp=Z,12nm,1.0s									
Q52A	**Bidwell**	**76.66**	**10**	P	**P**	**22 42 31.7**	**0.0**			
SMCO	**Snowmass**	**76.67**	**351**	P	**P**	**22 42 32.6**	**+0.3**			
SMCO				IAmb	IAmb	22 42 41.8				
	comp=Z,7.1nm,1.2s									
P46A	**Rosedale**	**76.73**	**6**	P	**P**	**22 42 32.3**	**+0.3**			
P46A				IAmb	IAmb	22 42 33.5				
	comp=Z,4.9nm,0.7s									
S11A	**Rachel**	**76.75**	**343**	P	**P**	**22 42 33.0**	**+0.6**			
S11A				IAmb	IAmb	22 42 34.1				
	comp=Z,3.8nm,0.6s									
MVU	**Marysvale**	**76.84**	**346**	P	**P**	**22 42 33.5**	**+0.4**			
MSU	**Marysvale**	**76.84**	**347**	P	**P**	**22 42 33.7**	**+0.7**			
TCRU	**Three Creeks R**	**76.99**	**346**	P	**P**	**22 42 34.9**	**+1.0**			
TCRU				IAmb	IAmb	22 42 42.0				
	comp=Z,8.6nm,1.3s									
Q16A	**Castle Valley**	**77.06**	**347**	P	**P**	**22 42 34.7**	**+0.5**			
Q16A				IAmb	IAmb	22 42 37.1				
	comp=Z,5.9nm,1.1s									
P51A	**Williamsport**	**77.06**	**10**	P	**P**	**22 42 33.2**	**-0.7**			
SRU	**San Rafael Swe**	**77.14**	**348**	P	**P**	**22 42 34.4**	**-0.2**			
P52A	**Corning**	**77.34**	**10**	P	**P**	**22 42 34.7**	**-0.8**			
R11A	**Troy Canyon, C**	**77.39**	**344**	P	**P**	**22 42 36.1**	**0.0**			
TMUT	**Trail Mountain**	**77.43**	**347**	P	**P**	**22 42 37.0**	**+0.6**			
TMUT				IAmb	IAmb	22 42 40.5				
	comp=Z,12nm,1.4s									
HDIL	**Hopedale**	**77.50**	**5**	P	**P**	**22 42 37.3**	**+1.0**			
HDIL				IAmb	IAmb	22 42 59.0				
	comp=Z,7.2nm,0.8s									
TPH	**Tonopah**	**77.50**	**342**	P	**P**	**22 42 37.8**	**+1.1**			
P17A	**Butcher Ranch,**	**77.52**	**348**	P	**P**	**22 42 37.2**	**+0.4**			
O49A	**Covington**	**77.59**	**9**	P	**P**	**22 42 37.4**	**+0.5**			
P18A	**Preston Nutter**	**77.59**	**348**	P	**P**	**22 42 38.0**	**+0.6**			
O20A	**White River Ci**	**77.79**	**350**	P	**P**	**22 42 38.8**	**+0.5**			
O20A				IAmb	IAmb	22 42 42.1				
	comp=Z,7.9nm,1.2s									
O52A	**Adamsville**	**77.85**	**11**	P	**P**	**22 42 38.7**	**+0.3**			
O52A				IAmb	IAmb	22 42 40.8				
	comp=Z,9.0nm,1.0s									
P57A	**Homestead Farm**	**77.88**	**14**	P	**P**	**22 42 38.8**	**+0.3**			
P57A				IAmb	IAmb	22 42 40.7				
	comp=Z,14nm,1.4s									
LHV	**Little Huntoon**	**77.99**	**342**	P	**P**	**22 42 40.0**	**+0.9**			
LHV				IAmb	IAmb	22 42 51.5				
	comp=Z,5.5nm,0.9s									
NV11	**Mina Array Sit**	**78.07**	**342**	P	**P**	**22 42 40.4**	**+0.6**			
NV11				IAmb	IAmb	22 42 44.0				
	comp=Z,9.3nm,1.5s									
NVAR	**Mina Array Bea**	**78.11**	**342**	P	**P**	**22 42 41.5**	**+1.4**			
	comp=Z,1.6nm,0.7s,baz=176,slow=6.8,SNR=8.6									
	comp=Z,1.6nm,0.7s									
NVAR	**Mina Array Bea**	**78.11**	**342**	P	**P**	**22 42 40.1**	**0.0**			
MPU	**Maple Canyon**	**78.21**	**347**	P	**P**	**22 42 41.0**	**+0.4**			
NLU	**North Lily Min**	**78.23**	**347**	P	**P**	**22 42 41.6**	**+0.9**			
NLU				IAmb	IAmb	22 42 53.1				
	comp=Z,6.7nm,1.2s									
N23A	**Red Feather La**	**78.24**	**352**	P	**P**	**22 42 41.0**	**+0.1**			
N23A				IAmb	IAmb	22 42 48.6				
	comp=Z,5.5nm,1.0s									
RYN	**Ryan**	**78.35**	**342**	P	**P**	**22 42 41.9**	**+0.5**			
RYN				IAmb	IAmb	22 42 45.6				
	comp=Z,9.4nm,1.4s									
RDMU	**Red Mountain**	**78.41**	**349**	P	**P**	**22 42 42.1**	**+0.3**			
PHWY	**Pilot Hill**	**78.59**	**352**	P	**P**	**22 42 43.1**	**+0.3**			
DUG	**Dugway, Tooele**	**78.59**	**346**	P	**P**	**22 42 43.6**	**+1.0**			
DUG				IAmb	IAmb	22 42 44.9				
	comp=Z,8.4nm,1.3s									
KVN	**Kaiserville**	**78.64**	**342**	P	**P**	**22 42 44.2**	**+1.2**			
SCIA	**State Center**	**78.67**	**2**	P	**P**	**22 42 43.5**	**+0.7**			
N53A	**Lisbon**	**78.68**	**11**	P	**P**	**22 42 43.0**	**0.0**			
MVL	**Millersville**	**78.70**	**15**	P	**P**	**22 42 43.9**	**+0.9**			
MVL				IAmb	IAmb	22 43 00.6				
	comp=Z,14nm,1.4s									
L40A	**Anamosa**	**78.89**	**3**	P	**P**	**22 42 44.4**	**+0.4**			
L46A	**Eue Claire**	**79.19**	**7**	P	**P**	**22 42 45.5**	**-0.2**			
BGU	**Big Grassy Mou**	**79.34**	**346**	P	**P**	**22 42 46.9**	**+0.1**			
K31A	**O'Neill**	**79.42**	**357**	P	**P**	**22 42 47.8**	**+0.8**			
PAHR	**Pah Rah Range**	**79.58**	**341**	P	**P**	**22 42 48.4**	**+0.2**			
PAHR				IAmb	IAmb	22 43 07.1				
	comp=Z,9.8nm,1.4s									
HWUT	**Hardware Ranch**	**79.74**	**348**	P	**P**	**22 42 49.6**	**+0.7**			
BMN	**Battle Mountai**	**79.75**	**343**	P	**P**	**22 42 50.1**	**+1.1**			
AAM	**Ann Arbor**	**79.76**	**9**	P	**P**	**22 42 48.2**	**-0.6**			
AAM				IAmb	IAmb	22 42 48.4				
	comp=Z,8.8nm,0.7s									
BEKR	**Beckworth**	**79.99**	**341**	P	**P**	**22 42 50.6**	**+0.2**			
K22A	**Casper**	**80.04**	**352**	P	**P**	**22 42 51.0**	**+0.4**			
HVU	**Hansel Valley**	**80.12**	**347**	P	**P**	**22 42 51.4**	**+0.4**			
PAL	**Palisades**	**80.19**	**16**	P	**P**	**22 42 51.5**	**+0.3**			
K50A	**Casco**	**80.36**	**9**	P	**P**	**22 42 52.6**	**+0.7**			
WSPT	**Westport, CT**	**80.48**	**17**	P	**P**	**22 42 52.3**	**-0.3**			
ECSD	**EROS Data Cent**	**80.48**	**359**	IAmb	IAmb	22 42 59.2				
	comp=Z,11nm,1.3s									
J47A	**Sumner**	**80.55**	**8**	P	**P**	**22 42 53.8**	**+0.8**			
PD31	**Pinedale Array**	**80.56**	**349**	P	**P**	**22 42 53.6**	**+0.2**			
PDAR	**Pinedale Array**	**80.56**	**349**	P	**P**	**22 42 53.5**	**+0.2**			
	comp=Z,2.3nm,0.8s,baz=162,slow=6.2,SNR=16									
	comp=Z,2.3nm,0.8s									
YLE	**Yale**	**80.71**	**17**	P	**P**	**22 42 53.9**	**0.0**			
I40A	**Norwalk**	**80.75**	**3**	P	**P**	**22 42 53.6**	**-0.4**			
I40A				IAmb	IAmb	22 43 15.0				
	comp=Z,6.6nm,1.0s									
I37A	**Lemond, Waseca**	**80.77**	**1**	P	**P**	**22 42 54.4**	**+0.2**			
I42A	**Draeger Farm,**	**80.84**	**5**	P	**P**	**22 42 55.4**	**+0.8**			
I42A				IAmb	IAmb	22 42 56.9				
	comp=Z,12nm,1.1s									
RSSD	**Black Hills**	**81.25**	**354**	P	**P**	**22 42 57.6**	**+0.6**			
RSSD				IAmb	IAmb	22 43 00.8				
	comp=Z,6.1nm,0.9s									
REDW	**Red Top Meadow**	**81.34**	**349**	P	**P**	**22 42 58.3**	**+0.8**			
REDW				IAmb	IAmb	22 42 59.1				
	comp=Z,14nm,1.5s									
TPAW	**Teton Pass**	**81.48**	**349**	P	**P**	**22 42 59.2**	**+0.9**			
TPAW				IAmb	IAmb	22 42 59.9				
	comp=Z,6.6nm,1.0s									
LOHW	**Long Hollow**	**81.54**	**349**	P	**P**	**22 42 59.3**	**+0.7**			
MOD	**Modoc Plateau**	**81.89**	**341**	P	**P**	**22 43 01.1**	**+0.7**			
MOD				IAmb	IAmb	22 43 02.4				
	comp=Z,7.9nm,1.2s									
WVOR	**Wild Horse Val**	**81.98**	**343**	P	**P**	**22 43 01.7**	**+0.9**			
WVOR				IAmb	IAmb	22 43 05.0				
	comp=Z,8.9nm,1.2s									
SPMN	**Marine on St.**	**82.00**	**2**	P	**P**	**22 43 00.3**	**-0.4**			
SPMN				IAmb	IAmb	22 43 06.6				
	comp=Z,16nm,1.4s									
FLWY	**Flagg Ranch**	**82.02**	**349**	P	**P**	**22 43 01.1**	**0.0**			
FLWY				IAmb	IAmb	22 43 05.0				
	comp=Z,12nm,1.0s									
HLID	**Hailey**	**82.15**	**346**	P	**P**	**22 43 02.0**	**+0.3**			
HLID				IAmb	IAmb	22 43 03.8				
	comp=Z,4.6nm,0.9s									
F36A	**Milaca**	**82.62**	**1**	P	**P**	**22 43 03.9**	**0.0**			
F36A				IAmb	IAmb	22 43 10.7				
	comp=Z,7.6nm,1.2s									
J08A	**Circle Bar Ran**	**82.82**	**343**	P	**P**	**22 43 06.2**	**+1.0**			
J08A				IAmb	IAmb	22 43 13.1				
	comp=Z,6.6nm,1.0s									
RLMT	**Red Lodge**	**82.82**	**350**	P	**P**	**22 43 06.3**	**+1.0**			
RLMT				IAmb	IAmb	22 43 12.6				
	comp=Z,9.6nm,1.4s									
E28A	**Huff**	**83.45**	**356**	P	**P**	**22 43 08.8**	**+0.6**			
BOZ	**Bozeman (W)**	**83.64**	**349**	P	**P**	**22 43 09.9**	**+0.5**			
I07A	**Izee**	**83.74**	**343**	P	**P**	**22 43 10.5**	**+0.6**			
I07A				IAmb	IAmb	22 43 18.5				
	comp=Z,8.2nm,1.1s									
LRM	**Limekiln Ridge**	**83.99**	**348**	P	**P**	**22 43 11.7**	**+0.4**			
MDND	**Maddock**	**84.67**	**357**	P	**P**	**22 43 14.6**	**+0.2**			
G08A	**Pilot Rock**	**84.76**	**343**	P	**P**	**22 43 16.4**	**+1.4**			
G08A				IAmb	IAmb	22 43 22.5				
	comp=Z,7.0nm,1.1s									
F10A	**Beach Ranch, E**	**85.03**	**345**	P	**P**	**22 43 17.5**	**+1.2**			
F10A				IAmb	IAmb	22 43 19.7				
	comp=Z,5.6nm,1.1s									
ULM	**Lac du Bonnet**	**86.99**	**360**	P	**P**	**22 43 25.6**	**-0.3**			
	comp=Z,4.1nm,0.8s,baz=178,slow=4.0,SNR=3.5									
	comp=Z,4.1nm,0.8s									
ULM	**Lac du Bonnet**	**86.99**	**360**	IAmb	IAmb	22 43 32.1				
	comp=Z,11nm,1.2s									
STKA	**Stephens Creek**	**93.17**	**226**	LR	LR	23 18 31.3				
	comp=Z,54nm,18.0s,baz=199,slow=31									
DBIC	**Dimbokro**	**94.36**	**85**	LR	LR	23 22 00.7				
	comp=Z,50nm,18.8s,baz=178,slow=33									
CTA	**Charters Tower**	**98.76**	**237**	LR	LR	23 22 05.7				
	comp=Z,50nm,19.0s,baz=84,slow=31									
H01W1	**Cape Leeuwin H**	**103.28**	**205**	T	T	00 40 29.7				
	baz=154,slow=75,SNR=50									
H01W2	**Cape Leeuwin H**	**103.28**	**205**	T	T	00 40 29.8				
	baz=154,slow=75,SNR=80									
H01W3	**Cape Leeuwin H**	**103.30**	**205**	T	T	00 40 30.9				
	baz=154,slow=75,SNR=28									
CLL	**Collm**	**128.73**	**50**	*e*PKPdf	**PKiKP**	**22 49 50.0**	**+1.5**			
BRTR	**Keskin Array B**	**140.38**	**70**	PKP	**PKiKP**	**22 50 12.1**	**-0.7**			
	comp=Z,0.2nm,0.5s,baz=90,slow=1.7,SNR=2.9									
USRK	**Ussuriysk Ar.**	**143.82**	**296**	PKP	PKPbc	22 50 14.4	+0.7			
	comp=Z,1.9nm,0.8s,baz=149,slow=3.0,SNR=4.4									
KSRS	**Korea Array**	**145.80**	**284**	PKPbc	**PKPab**	**22 50 21.2**	**+0.6**			
	comp=Z,0.6nm,0.4s,baz=114,slow=3.1,SNR=1.9									
NRIK	**Noril'sk**	**147.68**	**358**	PKPbc	**PKPbc**	**22 50 24.7**	**+0.1**			
	comp=Z,3.3nm,0.5s,baz=343,slow=3.0,SNR=7.3									
KBZ	**Khabaz**	**147.79**	**65**	PKPbc	**PKPbc**	**22 50 25.2**	**-0.4**			
	comp=Z,7.9nm,1.1s,baz=255,slow=2.9,SNR=9.2									
XAN	**Xi'an**	**160.04**	**268**	*e*PKP	**PKPdf**	**22 50 36.4**	**-4.0**			
XAN				sPKP		22 50 51.0				
SONM	**Songino Array**	**160.79**	**311**	PKPab	**PKPab**	**22 51 24.3**	**+1.1**			
	comp=Z,0.4nm,0.5s,baz=87,slow=3.0,SNR=5.2									
SONM	**Songino Array**	**160.79**	**311**		**PKPab**	**22 51 23.9**	**+0.7**			
PZH	**PanZhiHua**	**162.06**	**239**	PKP	**PKPdf**	**22 50 42.0**	**-0.9**			
ZALV	**Zalesovo Beam**	**163.17**	**360**	PKP	**PKPdf**	**22 50 40.9**	**-2.0**			
	comp=Z,0.5nm,0.3s,baz=72,slow=0.5,SNR=3.6									
ZALV				PKPab	**PKPab**	**22 51 30.9**	**-2.1**			
	comp=Z,0.9nm,0.7s,baz=336,slow=3.2,SNR=2.1									
MKAR	**Makanchi Array**	**170.17**	**10**	PKP	**PKPdf**	**22 50 46.8**	**-1.7**			
	comp=Z,0.9nm,1.0s,baz=336,slow=2.7,SNR=4.7									
MKAR				PKPab	**PKPab**	**22 52 04.8**	**+0.6**			
	comp=Z,0.5nm,0.7s,baz=349,slow=2.5,SNR=4.0									
MKAR	**Makanchi Array**	**170.17**	**10**	PKPdf	**PKPdf**	**22 50 47.2**	**-1.4**			

UCR ***10*** *22:40:41.5±1.5, 13°.03N×86°.87W, h20km, ML3.7*
SNET ***10*** *22:40:41.6±1.7, 13°.35N×86°.87W, h8km±20km, ML3.7*
INET ***10*** *22:40:42.1±0.7, 12°.79N×87°.12W, h8km±3km, ML4.2*

ISC 10 22:40:35.0±3.6, 12°.8N±0°.2×86°.7W±0°.2, h14km±11km, n17, σ0s56/25, 1D, Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TELN	**Telica**	**0.21**	**222**	*e*P	P*g*	22 40 49.3	+8.5
TEL3	**Telica 3**	**0.25**	**219**	*e*P	P*g*	22 40 49.3	+8.0
CRIN	**San Cristobal**	**0.36**	**260**	*e*P	**Pn**	**22 40 45.8**	**-0.1**
CRIN				*e*S	**Sg**	**22 40 47.4**	**0.0**
CRIN				IAML		22 40 52.6	
	comp=Z,78μm,0.4s						
MOMN	**Momotombo**	**0.38**	**158**	*e*P	Pn	22 40 55.2	+9.1
MATN	**Matagalpa**	**0.76**	**77**	*e*P	Pn	22 41 02.7	+11
CNCH	**Conchagua**	**1.23**	**295**	*e*P	**Pg**	**22 40 58.6**	**-0.1**
CNCH				*e*S	**Sb**	**22 41 13.9**	**-0.1**
CNCH				IAML		22 41 18.7	
	comp=Z,6μm,0.5s						
CNCH	**Conchagua**	**1.23**	**295**	*e*P	**Pg**	**22 40 58.6**	**-0.1**
CNCH				*e*S	**Sb**	**22 41 13.9**	**-0.1**
CNCH				IAML		22 41 18.7	
	comp=Z,6μm,0.5s						
LCND	**La Caada**	**1.29**	**295**	*e*P	**Pb**	**22 40 59.6**	**+0.4**
LCND	**La Caada**	**1.29**	**295**	*e*P	**Pb**	**22 40 59.6**	**+0.4**
LCND				*e*S	**Sn**	**22 41 14.2**	**-1.6**
RANC	**El

baz=316,slow=76,SNR=5.1
H11S2 WAKE ISLAND Hy 27.13 124 T T 23 16 45.5
baz=316,slow=76,SNR=7.3
SONM Songino Array 29.53 305 P **P** **22 49 03.8 +2.8**
0.6nm,0.6s,baz=107,slow=7.7,SNR=3.7
0.6nm,0.6s
SONM Songino Array 29.53 305 P **P** **22 49 01.1 +0.1**
SONM IAmb IAmb 22 49 32.0
comp=Z,1.1nm,1.2s
TIXI Tiksi 36.32 352 P **P** **22 49 59.5 -0.2**
TIXI IAmb IAmb 22 50 06.3
comp=Z,4.6nm,1.1s
WMQ Urumqi 42.59 298 *e*P P 22 50 50.2 -2.2
MKAR Makanchi Array 45.87 303 P **P** **22 51 21.7 +3.2**
comp=Z,0.2nm,0.7s,baz=91,slow=9.3,SNR=3.2
comp=Z,0.2nm,0.7s
GAR Garm 56.45 297 P **P** **22 52 37.9 -0.3**
GAR IAmb IAmb 22 52 39.4
comp=Z,3.8nm,0.6s
WB2 Warramunga Arr 56.46 190 P **P** **22 52 36.6 -1.6**
WB2 IAmb IAmb 22 52 37.9
comp=Z,10nm,1.2s
WRA Warramunga Arr 56.47 190 P **P** **22 52 37.3 -0.9**
comp=Z,0.4nm,0.6s,baz=6.0,slow=7.3,SNR=2.6
comp=Z,0.4nm,0.6s
MFID Camas Ranch 73.05 48 P **P** **22 54 25.6 -0.8**
MFID IAmb IAmb 22 54 56.9
comp=Z,6.3nm,0.8s
NOA NORSAR Array B 75.55 338 P **P** **22 54 41.5 +1.0**
comp=Z,0.9nm,0.8s,baz=39,slow=5.9,SNR=3.4
comp=Z,0.9nm,0.8s
MLR Muntele Rosu 81.02 321 LR LR 23 35 46.1
comp=Z,45nm,18.4s,baz=58,slow=39

JMA 10 22:50:38.6±0.1, 39.5N±0.2×142.1E±0.6, h47km, MV1.2/31, E OFF IWATE PREF, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**0.23**	**286**	*i* P	Pn	22 50 46.7	-0.1
MIYJ				*es*	Sn	22 50 52.4	-0.2
JTH	**Tanohata**	**0.46**	**337**	*i* P	Pn	22 50 49.1	-0.2
JTH				*es*	Sn	22 50 56.5	-0.3
OFUJ	**Ofunato**	**0.55**	**218**	P	Pn	22 50 50.2	0.0
OFUJ				*es*	Sn	22 50 58.2	-0.4
JOM	**Ohasama**	**0.63**	**266**	P	Pn	22 50 51.4	+0.2
JOM				*es*	Sn	22 51 00.4	0.0
JKZ	**Kuzumaki**	**0.76**	**309**	P	Pn	22 50 53.1	+0.1
JKZ				*es*	Sn	22 51 03.4	-0.1
JMK	**Ichinoseki**	**0.88**	**231**	P	Pn	22 50 54.6	-0.1
JANG	**Nango**	**0.97**	**333**	P	Pn	22 50 55.5	-0.3
JIO	**Ouri**	**1.21**	**209**	*es*	Sn	22 51 14.2	-0.1
JIO	**Ouri**	**1.21**	**209**	*es*	Sn	22 51 14.2	-0.1
JAH	**Hinai**	**1.31**	**301**	S	Sn	22 51 18.4	+1.6

JMA 10 22:50:53.9±0.1, 38.8N±0.3×141.6E±0.8, h69km, MV0.8/15, NORTHERN MIYAGI PREF, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**0.29**	**5**	*es*	Sn	22 51 13.0	0.0
JMK	**Ichinoseki**	**0.37**	**297**	*e*P	Pn	22 51 05.3	-0.2
JMK				S	Sn	22 51 14.1	+0.2
JIO	**Ouri**	**0.40**	**215**	P	Pn	22 51 05.7	0.0
JOU	**Okura**	**0.87**	**242**	*es*	Sn	22 51 23.9	+0.6

KRSC 10 22:56:60.0±1.0, 54.79N×163.22E, h41km±21km, ML3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	**0.90**	**255**	*e*P	Pn	22 57 16.1	0.0
MKZ				*es*	Sn	22 57 28.4	+0.6
KBTR	**Krutoberegovo**	**1.44**	**351**	*e*P	Pn	22 57 24.6	+1.1
KBG	**Krutoberegovo**	**1.49**	**349**	*e*P	Pn	22 57 23.6	-0.6
BKI	**Bering**	**1.64**	**74**	*e*P	Pn	22 57 28.7	+2.5
BKI				*es*	Sn	22 57 50.0	+4.0
TUMR	**Tumrok**	**1.84**	**287**	*e*P	Pn	22 57 31.3	+2.2
TUMR				*es*	Sn	22 57 54.2	+3.1
BZGR	**Bezymyannyi-Gr**	**1.84**	**310**	*e*P	Pn	22 57 31.6	+2.4
BZWR	**Bezymyannyi-We**	**1.95**	**308**	*e*P	Pn	22 57 33.5	+2.9
KMNR	**Kamenistaya**	**1.96**	**301**	*e*P	Pn	22 57 33.0	+2.2
KMNR				*es*	Sn	22 57 57.5	+3.3
KIRR	**Kirishev**	**2.01**	**306**	*e*P	Pn	22 57 34.5	+3.0
SMKR	**Semkarok**	**2.05**	**332**	*e*P	Pn	22 57 33.8	+1.9
KLY	**Klyuchi**	**2.11**	**317**	*e*P	Pn	22 57 34.0	+1.3
BDR	**Baidarnaya**	**2.11**	**328**	*e*P	Pn	22 57 35.1	+2.3
BDR				*es*	Sn	22 58 00.9	+3.0
SRKR	**Sorokina**	**2.20**	**329**	*e*P	Pn	22 57 36.0	+2.0
KOZ	**Kozyrevsk**	**2.29**	**305**	*e*P	Pn	22 57 38.3	+3.1
KII	**Karymskiy**	**2.33**	**253**	*e*P	Pn	22 57 38.6	+2.8
SPN	**Mys Shipunski**	**2.54**	**229**	*e*P	Pn	22 57 40.7	+2.1
SPN				*es*	Sn	22 58 10.8	+2.5
NLC	**Nalytchevo**	**2.81**	**236**	*e*P	Pn	22 57 45.4	+3.1
NLC				*es*	Sn	22 58 18.9	+4.1
ESO	**Esso**	**2.82**	**296**	*e*P	Pn	22 57 44.5	+2.0
SDLR	**Sedlovina**	**2.97**	**241**	*e*P	Pn	22 57 48.2	+3.5
SDLR				*es*	Sn	22 58 23.2	+4.0
SMAR	**Somma**	**3.02**	**241**	*e*P	Pn	22 57 49.1	+3.6
SMAR				*es*	Sn	22 58 24.4	+3.9
KRER	**Koryakskii**	**3.03**	**242**	*e*P	Pn	22 57 49.5	+4.0
KRER				*es*	Sn	22 58 25.5	+4.9
UGLR	**Uglovaya**	**3.04**	**240**	*e*P	Pn	22 57 49.0	+3.4
UGLR				*es*	Sn	22 58 25.6	+4.8
KRX	**Arik**	**3.05**	**244**	*e*P	Pn	22 57 49.4	+3.6
KRX				*es*	Sn	22 58 25.4	+4.3
AVH	**Avacha**	**3.06**	**242**	*e*P	Pn	22 57 49.4	+3.6
AVH				*es*	Sn	22 58 26.1	+5.0
KOK	**Koryaka**	**3.09**	**243**	*e*P	Pn	22 57 49.7	+3.4
DALK	**Dalny**	**3.18**	**238**	*e*P	Pn	22 57 50.6	+3.3
DALK				*es*	Sn	22 58 26.6	+2.7
GNL	**Ganaly**	**3.29**	**253**	*e*P	Pn	22 57 52.6	+3.6
KRMR	**Karymshinskiy**	**3.60**	**239**	*e*P	Pn	22 57 58.2	+5.0
KRMR				*es*	Sn	22 58 39.8	+5.4
RUS	**Russkaya**	**3.67**	**232**	*e*P	Pn	22 57 57.7	+3.6
MTVR	**Mutnovka**	**3.79**	**234**	*e*P	Pn	22 58 00.0	+4.1
GRL	**Gorelyy**	**3.80**	**236**	*e*P	Pn	22 58 00.1	+4.1
ASAK	**Asacha**	**3.98**	**235**	*e*P	Pn	22 58 03.0	+4.5
KDTR	**Khodutka, Kamc**	**4.30**	**228**	*e*P	Pn	22 58 03.4	+0.7

MAN 10 23:09:32.5, 13.40N×121.60E, h24km, mb3.8, ML2.6, MS2.1, Mindoro

MOS ***10*** *23:11:16.8±1.0, 37.59N×71.97E, h117km, mb4.9/31, Error ellipse: s-maj=4.5km s-min=3.0km az=93.4*
BJI ***10*** *23:11:17.1±0.0, 37.48N×72.01E, h108km, mb4.6/39, mB4.6/21*
NEIC ***10*** *23:11:18.9±2.0, 37.56N±0.05×71.82E±0.08, h119km±5km, mb4.6/151, Mwr4.6/19, Error ellipse: s-maj=9.3km s-min=7.1km az=119.0*
IDC ***10*** *23:11:19.0±1.7, 37.53N×71.98E, h130km±16km, mb4.2/28, mbtmp4.6/32, MS3.3/12, Error ellipse: s-maj=10.9km s-min=8.5km az=26.0*
NEIC ***10*** *23:11:19, 37.61N×71.81E, h107km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=6.61; $M_{\theta\theta}$=0.21; $M_{\phi\phi}$=6.82; $M_{r\theta}$=5.68; $M_{r\phi}$=4.40; $M_{\theta\phi}$=1.26; Fault plane solution: M_0=9.91000×10^{15} NP1:ϑ,φ=358.41000°, δ=39.91000°, λ=-137.63000°. NP2:ϑ,φ=233.43000°, δ=64.38000°, λ=-58.29000°. Principal axes: T 9.8128, Plg14.0000°, Azm301.0000°; N 0.1956, Plg28.0000°, Azm38.0000°; P -10.0085, Plg58.0000°, Azm188.0000°;*
NNC ***10*** *23:11:27.1±3.6, 38.40N×71.91E, h154km±28km, mb3.9, mpv4.5 Error ellipse: s-maj=37.3km s-min=12.8km az=27.0*

ISC 10 23:11:17.2±0.3, 37.51N±0.03×71.90E±0.03, h111km±3km, h111km:pP-P,n627,σ1.953/651, mb4.7/178, 29C-60D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAR	**Garm**	**1.94**	**320**	Pn	**Pn**	**23 11 49.9**	**+0.4**
GAR				Sn	**Sn**	**23 12 13.3**	**-1.0**
DRK	**Karamyk**	**1.97**	**358**		**Pn**	**23 11 51.2**	**+1.1**
DRK					**Sn**	**23 12 16.8**	**+1.6**
CHGR	**Chuyangaron**	**2.45**	**299**	Pn	**Pn**	**23 11 55.5**	**-0.5**
CHGR				Sn	**Sn**	**23 12 24.0**	**-1.9**
CHGR	**Chuyangaron**	**2.45**	**299**	PN	**Pn**	**23 11 55.3**	**-0.7**
BTK	**Batken**	**2.68**	**342**	Pn	**Pn**	**23 12 00.2**	**+1.1**
BTK	**Batken**	**2.68**	**342**	PN	**Pn**	**23 12 00.2**	**+1.1**
KBL	**Kabul**	**3.76**	**219**	Pn	**Pn**	**23 12 15.5**	**+2.0**
KBL	**Kabul**	**3.76**	**219**	PN	**Pn**	**23 12 15.5**	**+2.0**
KSH	**Kashi**	**3.77**	**57**	P	**Pn**	**23 12 10.8**	**-2.7**
KSH				S	**Sn**	**23 12 49.8**	**-7.3**
KSH				*s*max	*s*max		
comp=N,4μm,0.5s							
KSH				*s*max	*s*max		
comp=E,3μm,0.5s							
CHCP	**Chirah Chowk**	**4.00**	**164**	P	**Pn**	**23 12 18.7**	**+2.1**
TAS	**Tashkent**	**4.31**	**333**	Pn	**Pn**	**23 12 20.9**	**+0.2**
TAS	**Tashkent**	**4.31**	**333**	PN	**Pn**	**23 12 20.9**	**+0.2**
AML	**Almayashu**	**4.82**	**16**	P	**Pn**	**23 12 28.2**	**+0.4**
SNR=360							
AML	**Almayashu**	**4.82**	**16**	PN	**Pn**	**23 12 28.0**	**+0.2**
AML	**Almayashu**	**4.82**	**16**	*i* P	**Pn**	**23 12 28.2**	**+0.4**
SNR=459							
IUG	**luzhnay**	**4.85**	**343**	*c i*PN	**Pn**	**23 12 28.0**	**0.0**
IUG	**luzhnay**	**4.85**	**343**	⇑*i*P	**Pn**	**23 12 28.1**	**0.0**
baz=343							
IUG				*es*	**Sn**	**23 13 20.3**	**-2.8**
baz=343							
CHM	**Chimkent**	**5.12**	**341**	*e*PN	**Pn**	**23 12 29.4**	**-2.1**
CHM	**Chimkent**	**5.12**	**341**	*e*P	**Pn**	**23 12 29.4**	**-2.1**
baz=340							
CHM				*es*	**Sn**	**23 13 26.6**	**-2.9**
baz=340							
UCH	**Uchtor**	**5.12**	**22**	P	**Pn**	**23 12 32.4**	**+0.4**
SNR=89							
UCH	**Uchtor**	**5.12**	**22**	PN	**Pn**	**23 12 32.3**	**+0.3**
EKS2	**Erkin-Say**	**5.34**	**15**	P	**Pn**	**23 12 35.5**	**+0.8**
SNR=108							
EKS2	**Erkin-Say**	**5.34**	**15**	PN	**Pn**	**23 12 35.2**	**+0.5**
JMU	**Jammu**	**5.38**	**152**	*e*P	**Pn**	**23 12 35.4**	**+0.3**
JMU				*es*	**Sn**	**23 13 32.4**	**-3.3**
DZA	**Taraz**	**5.39**	**356**	*e*PN	**Pn**	**23 12 34.5**	**-0.8**
DZA	**Taraz**	**5.39**	**356**	*e*P	**Pn**	**23 12 34.5**	**-0.8**
baz=356							
DZA				*es*	**Sn**	**23 13 34.4**	**-1.7**
baz=356							
AAK	**Ala-Archa**	**5.49**	**20**	P	**Pn**	**23 12 37.4**	**+0.7**
SNR=33							
AAK	**Ala-Archa**	**5.49**	**20**	P	**Pn**	**23 12 37.8**	**+1.0**
51nm,0.4s,baz=192,slow=8.2,SNR=48							
AAK				S	Sn	23 13 29.2	-9.5
87nm,0.5s,baz=211,slow=18,SNR=6.0							
AAK	**Ala-Archa**	**5.49**	**20**	Pn	**Pn**	**23 12 37.6**	**+0.8**
AAK	**Ala-Archa**	**5.49**	**20**	*i* P	**Pn**	**23 12 37.6**	**+0.8**
SNR=54							
KBK	**Karagaybulak**	**5.64**	**23**	P	**Pn**	**23 12 39.8**	**+1.0**
SNR=22							
KBK	**Karagaybulak**	**5.64**	**23**	PN	**Pn**	**23 12 40.1**	**+1.3**
KK31	**Karatay Array**	**5.69**	**350**	Pn	**Pn**	**23 12 39.2**	**0.0**
KK31	**Karatay Array**	**5.69**	**350**	PN	**Pn**	**23 12 39.2**	**0.0**
KK31	**Karatay Array**	**5.69**	**350**	⇑P	**Pn**	**23 12 39.1**	**-0.1**
57nm,0.4s,baz=183,slow=15,SNR=751							
KK31				S	Sn	23 13 33.9	-9.3
118nm,0.6s,baz=174,slow=18,SNR=4.9							
KKAR	**Karatay Array**	**5.69**	**350**	Pn	**Pn**	**23 12 39.0**	**-0.2**
KKAR	**Karatay Array**	**5.69**	**350**		**Pn**	**23 12 39.2**	**0.0**
KKAR	**Karatay Array**	**5.69**	**350**	PN	**Pn**	**23 12 39.2**	**0.0**
FRU1	**Bishkek**	**5.69**	**21**	Pn	**Pn**	**23 12 40.2**	**+0.9**
FRU1	**Bishkek**	**5.69**	**21**	PN	**Pn**	**23 12 40.2**	**+0.9**
ULHL	**Ulahol**	**5.79**	**34**	P	**Pn**	**23 12 41.2**	**+0.4**
SNR=24							
ULHL	**Ulahol**	**5.79**	**34**	PN	**Pn**	**23 12 41.8**	**+1.0**
BOOM	**Boomskoye usch**	**5.86**	**31**	Pn	**Pn**	**23 12 42.3**	**+0.6**
BOOM	**Boomskoye usch**	**5.86**	**31**	PN	**Pn**	**23 12 42.3**	**+0.6**
CHMS	**Chumysh**	**5.90**	**21**	P	**Pn**	**23 12 42.9**	**+0.8**
SNR=19							
THN	**Thein Dam**	**5.95**	**147**	*e*P	**Pn**	**23 12 43.4**	**+0.5**
THN				*es*	**Sn**	**23 13 47.9**	**-1.8**
USP	**Ospenovka**	**6.08**	**18**	P	**Pn**	**23 12 44.8**	**+0.2**
SNR=52							
USP	**Ospenovka**	**6.08**	**18**	PN	**Pn**	**23 12 44.5**	**-0.1**
TKM2	**Tokmak 2**	**6.10**	**26**	P	**Pn**	**23 12 45.5**	**+0.5**
SNR=61							
TKM2	**Tokmak 2**	**6.10**	**26**	PN	**Pn**	**23 12 45.2**	**+0.2**
TKM2	**Tokmak 2**	**6.10**	**26**	⇓P	**Pn**	**23 12 45.2**	**+0.2**
15nm,0.5s							
KDJ	**Kajisay**	**6.15**	**40**	Pn	**Pn**	**23 12 46.0**	**+0.4**
KDJ	**Kajisay**	**6.15**	**40**	PN	**Pn**	**23 12 46.0**	**+0.4**
SGDS	**Sogindy**	**6.29**	**18**	*ce*PN	**Pn**	**23 12 47.4**	**0.0**
SGDS				*p*max	*p*max		
comp=Z,15nm,0.5s							
SGDS	**Sogindy**	**6.29**	**18**	⇑*e*P	**Pn**	**23 12 47.5**	**0.0**
comp=Z,16nm,0.5s,baz=19							
SGDS				*es*	**Sn**	**23 13 55.5**	**-2.4**
baz=19							
TNSS	**Tian-Shan**	**6.73**	**33**	*e*PN	**Pn**	**23 12 53.9**	**+0.2**
TNSS	**Tian-Shan**	**6.73**	**33**	*e*P	**Pn**	**23 12 54.0**	**+0.2**
baz=35							
TNSS				*es*	**Sn**	**23 14 07.6**	**-1.6**
baz=35							
AAA	**Alma-Ata**	**6.86**	**32**	*e*PN	**Pn**	**23 12 55.5**	**+0.4**
AAA	**Alma-Ata**	**6.86**	**32**	*e*P	**Pn**	**23 12 55.6**	**+0.4**
baz=34							
MDOK	**Medeo**	**6.88**	**33**	*e*PN	**Pn**	**23 12 54.2**	**-1.3**
MDOK	**Medeo**	**6.88**	**33**	*e*P	**Pn**	**23 12 54.2**	**-1.3**
baz=34							
MDOK				*es*	**Sn**	**23 14 10.7**	**-1.6**
baz=34							
MDOK	**Medeo**	**6.88**	**33**	⇓P	**Pn**	**23 12 55.8**	**+0.3**
comp=Z,24nm,0.6s							
PRZ	**Przheval'sk**	**7.04**	**43**		**Pn**	**23 12 59.5**	**+1.8**
PRZ	**Przheval'sk**	**7.04**	**43**	PN	**Pn**	**23 12 59.5**	**+1.8**
BHK	**Bhakra**	**7.13**	**147**	*e*P	**Pn**	**23 12 59.0**	**+0.1**
BHK				*e*S	**Sn**	**23 13 13.3**	**-5.0**
KUU	**Kurty**	**7.21**	**26**	*e*PN	**Pn**	**23 12 58.6**	**-1.2**
KUU				*p*max	*p*max		
comp=Z,9.0nm,0.7s							
KUU	**Kurty**	**7.21**	**26**	*e*P	**Pn**	**23 12 58.6**	**-1.2**
comp=Z,9.1nm,0.7s,baz=28							
KUU				*es*	**Sn**	**23 14 18.3**	**-1.9**
baz=28							
CHKK	**Chushkaly**	**7.42**	**30**	*e*PN	**Pn**	**23 13 01.3**	**-1.4**
CHKK	**Chushkaly**	**7.42**	**30**	*e*P	**Pn**	**23 13 01.4**	**-1.4**
baz=31							
SATY	**Saty**	**7.44**	**40**	*e*PN	**Pn**	**23 13 02.6**	**-0.5**
SATY	**Saty**	**7.44**	**40**	*e*P	**Pn**	**23 13 02.6**	**-0.5**
baz=41							
ZHN	**Zhinishke**	**7.54**	**39**	*e*PN	**Pn**	**23 13 03.8**	**-0.6**
ZHN	**Zhinishke**	**7.54**	**39**	*e*P	**Pn**	**23 13 03.9**	**-0.6**
baz=41							
BTLS	**Baital**	**7.70**	**11**	*ce*PN	**Pn**	**23 13 05.6**	**-0.8**
BTLS				*p*max	*p*max		
comp=Z,7.0nm,0.5s							
BTLS	**Baital**	**7.70**	**11**	⇑*e*P	**Pn**	**23 13 05.7**	**-0.8**
comp=Z,6.9nm,0.5s,baz=12							
BTLS				*es*	**Sn**	**23 14 29.1**	**-2.8**
baz=12							
SMLA	**Simla**	**7.71**	**144**	*e*P	**Pn**	**23 13 06.1**	**-0.6**
SMLA				*es*	**Sn**	**23 14 25.2**	**-7.2**
SMLA				IAML		23 14 31.6	
comp=N,2μm,0.4s							
UZB	**Uzynbulak**	**7.83**	**42**	*e*PN	**Pn**	**23 13 08.9**	**+0.6**
UZB	**Uzynbulak**	**7.83**	**42**	*e*P	**Pn**	**23 13 08.9**	**+0.6**
baz=43							
KPKS	**Kokpek**	**7.88**	**39**	*e*PN	**Pn**	**23 13 09.1**	**+0.2**
KPKS	**Kokpek**	**7.88**	**39**	*e*P	**Pn**	**23 13 09.2**	**+0.2**
baz=40							
SHLS	**Shalkode**	**8.07**	**43**	*e*PN	**Pn**	**23 13 13.8**	**+2.2**
SHLS	**Shalkode**	**8.07**	**43**	*e*P	**Pn**	**23 13 13.8**	**+2.2**
baz=46							
PDGK	**Podgornoye**	**8.20**	**42**	PN	**Pn**	**23 13 12.6**	**-0.7**
PDGK	**Podgornoye**	**8.20**	**42**	⇓P	**Pn**	**23 13 12.6**	**-0.7**
comp=N,26nm,0.9s							
HRA	**Herat**	**8.43**	**251**	Pn	**Pn**	**23 13 15.4**	**-1.2**
TDK	**Taldyqorghan**	**8.94**	**31**	*e*PN	**Pn**	**23 13 22.5**	**-0.8**
TDK	**Taldyqorghan**	**8.94**	**31**	*e*P	**Pn**	**23 13 22.6**	**-0.8**
baz=32							
NDI	**New Delhi**	**9.86**	**152**	*e*P	**Pn**	**23 13 33.0**	**-2.9**
NDI				*e*P	**Pn**	**23 13 33.7**	**-2.2**
NDI				*e*S	Sn	23 15 14.4	-10
NDI				*e*S	**Sn**	**23 15 17.0**	**-7.8**
KHET	**Khetri**	**9.96**	**160**	*e*P	**Pn**	**23 13 34.3**	**-3.0**
KHET				*e*S	Sn	23 15 16.0	-11
KUDL	**Kundal**	**10.10**	**156**	*e*P	**Pn**	**23 13 36.4**	**-2.7**
SONA	**Sohna**	**10.21**	**153**	*e*P	**Pn**	**23 13 38.8**	**-1.7**
LGTI	**Lohaghat**	**10.63**	**137**	*e*P	**Pn**	**23 13 42.9**	**-3.4**
LGTI				*e*S	Sn	23 15 31.1	-12
OTUK	**Ortayu**	**10.73**	**2**	P	**Pn**	**23 13 45.2**	**-2.4**
OTUK	**Ortayu**	**10.73**	**2**	⇑P	**Pn**	**23 13 45.2**	**-2.4**
comp=N,9.8nm,0.7s							
GEYT	**Alibeck**	**10.93**	**276**	P	**Pn**	**23 13 46.2**	**-4.1**
comp=N,13nm,0.3s,baz=142,slow=15,SNR=68							
GEYT				S	Sn	23 15 41.2	-9.4
comp=N,54nm,0.5s,baz=274,slow=25,SNR=10							
GYA0B	**ALIBECK ARRAY**	**10.93**	**276**	Pn	**Pn**	**23 13 46.4**	**-3.9**
AJM	**Ajmer**	**11.24**	**167**	*e*P	**Pn**	**23 13 52.2**	**-2.4**
MAKZ	**Makanchi**	**11.91**	**36**		**Pn**	**23 14 02.4**	**-0.9**
MAKZ	**Makanchi**	**11.91**	**36**	P	**Pn**	**23 14 02.4**	**-0.9**
MAKZ	**Makanchi**	**11.91**	**36**	⇑P	**Pn**	**23 14 02.1**	**-1.3**
comp=N,13nm,0.9s							
MK31	**Makanchi Array**	**12.05**	**36**	Pn	**Pn**	**23 14 04.3**	**-0.8**
MK31	**Makanchi Array**	**12.05**	**36**	*d i*P	**Pn**	**23 14 04.6**	**-0.5**
MK31	**Makanchi Array**	**12.05**	**36**	P	**Pn**	**23 14 04.7**	**-0.5**
comp=N,2.2nm,0.5s,baz=223,slow=15,SNR=45							
MKAR	**Makanchi Array**	**12.05**	**36**	P	**Pn**	**23 14 04.6**	**-0.5**
comp=N,5.2nm,0.7s,baz=226,slow=16,SNR=42							
MKAR	**Makanchi Array**	**12.05**	**36**	Pn	**Pn**	**23 14 04.7**	**-0.4**
MKAR	**Makanchi Array**	**12.05**	**36**	P	**Pn**	**23 14 04.7**	**-0.4**
BRZS	**Berezniki**	**12.48**	**2**	*e*P	**Pn**	**23 14 08.1**	**-2.6**
BRZS	**Berezniki**	**12.48**	**2**	*e*P	**Pn**	**23 14 08.2**	**-2.6**
baz=2.5							
JHNI	**Jhansi**	**13.27**	**153**	*e*P	**Pn**	**23 14 17.9**	**-3.3**
JHNI				*e*S	Sn	23 16 34.3	-13
DANN	**Dangsing**	**13.50**	**129**	*e*P	**Pn**	23 14 19.6	-4.9
DANN				*e*S	Sn	23 16 36.1	-17
WMQ	**Urumqi**	**13.54**	**57**	*e*P	**P**	**23 14 28.0**	**-1.8**
KURBB	**Kurchatov Arra**	**13.94**	**18**	P	**Pn**	**23 14 25.9**	**-3.7**
comp=N,2.3nm,0.6s,baz=209,slow=12,SNR=13							
KURBB				S	**S**	**23 17 11.1**	**-5.9**
comp=N,2.0nm,0.7s,baz=201,slow=18,SNR=4.2							
KURBB	**Kurchatov Arra**	**13.94**	**18**	P	**Pn**	**23 14 26.5**	**-3.1**
KURBB	**Kurchatov Arra**	**13.94**	**18**	⇑P	**Pn**	**23 14 26.1**	**-3.6**
comp=N,7.5nm,0.6s							
KURK	**Kurchatov**	**14.05**	**18**		**Pn**	**23 14 28.0**	**-3.0**
KURK	**Kurchatov**	**14.05**	**18**	*de*P	**Pn**	**23 14 28.2**	**-2.8**
KURK				*p*max	*p*max		
comp=Z,4.0nm,0.7s							
GKN	**Gorkha**	**14.29**	**128**	*e*P	**Pn**	**23 14 29.8**	**-4.8**
AB31	**Akbulak array**	**14.59**	**327**	P	**Pn**	**23 14 34.9**	**-3.0**
AB31	**Akbulak array**	**14.59**	**327**	P	**Pn**	**23 14 34.9**	**-3.0**
comp=Z,30nm,0.7s,baz=142,slow=12,SNR=304							
AB31				⇑S	Sn	23 17 09.6	-9.2
comp=Z,50nm,0.7s,baz=147,slow=22,SNR=18							
ABKAR	**Akbulak array**	**14.59**	**327**	Pn	**Pn**	**23 14 35.4**	**-2.6**
ABKAR	**Akbulak array**	**14.59**	**327**	Pn	**Pn**	**23 14 35.5**	**-2.5**
ALBI	**Allahabad**	**14.80**	**142**	*e*P	**Pn**	**23 14 36.8**	**-4.0**
ALBI				*e*S	Sn	23 17 09.2	-15
DMN	**Daman**	**14.86**	**128**	*e*P	**Pn**	**23 14 37.2**	**-4.7**
BHPL	**Bhopal**	**14.99**	**160**	*e*P	**Pn**	**23 14 40.1**	**-3.2**
BHPL				IAmb	IAmb	23 14 47.2	
comp=Z,159nm,0.5s							
BHPL				*e*S	Sn	23 17 16.6	-12
BHPL				IAML		23 17 21.6	
comp=N,90nm,0.6s							
PKIN	**Phulchoki**	**15.07**	**127**	*e*P	**Pn**	**23 14 39.8**	**-4.7**
PKI	**Pulchoki**	**15.08**	**127**	*e*P	**Pn**	**23 14 40.1**	**-4.6**
GUN	**Gumba**	**15.15**	**125**	*e*P	**Pn**	**23 14 40.9**	**-4.7**
JIRN	**Jiri**	**15.52**	**125**	*e*P	**Pn**	**23 14 46.0**	**-4.3**
BRVK	**Borovoye**	**15.59**	**356**	Pn	**Pn**	**23 14 48.8**	**-1.7**
BRVK				IAmb	IAmb	23 14 53.5	
comp=Z,40nm,0.8s							
BRVK	**Borovoye**	**15.59**	**356**	*d i*P	**Pn**	**23 14 48.3**	**-2.2**
BRVK				*p*max	*p*max		
comp=Z,64nm,1.3s							
BRVK	**Borovoye**	**15.59**	**356**	⇓P	**Pn**	**23 14 48.2**	**-2.4**
comp=Z,28nm,0.8s							
JBP	**Jabalpur**	**15.89**	**152**	⇓*e*P	**Pn**	**23 14 52.9**	**-1.6**
JBP				*e*S	Sn	23 17 37.6	-13
RAMN	**Ramite**	**16.27**	**126**	*e*P	**Pn**	**23 14 54.8**	**-4.7**
AKTO	**Aktyubinsk**	**16.30**	**327**	P	**Pn**	**23 14 57.7**	**-1.6**
comp=Z,163nm,0.8s,baz=125,slow=13,SNR=66							
AKTO				S	Sn	23 17 47.6	-12
comp=Z,21nm,0.6s,baz=17,slow=17,SNR=6.1							
AKTO				LR	LR	23 22 15.2	
comp=Z,42nm,18.2s,baz=173,slow=40							
AKTO	**Aktyubinsk**	**16.30**	**327**	P	**Pn**	**23 14 57.6**	**-1.8**
AKTO	**Aktyubinsk**	**16.30**	**327**	⇓P	**Pn**	**23 14 57.6**	**-1.8**
comp=Z,114nm,0.6s							
TAPN	**Taplejung**	**16.73**	**123**	*e*P	**Pn**	**23 15 00.7**	**-4.5**
AKL	**Akola

SVE **Sverdlovsk** 20.73 342 eP P 23 15 48.5 -0.1
SVE eS S 23 19 32.8 -0.9
SVE pmax pmax
comp=Z,64nm,0.8s
NAX **Nakhchivan** 20.76 283 P Pn 23 15 51.3 -1.3
HYBB **Hyderabad (bro** 20.85 162 eP P 23 15 51.8 +1.6
HYBB esP sP 23 16 26.7 +0.4
HYBB eS S 23 19 40.3 +3.6
ARU **Arti** 20.93 339 P P 23 15 50.8 +0.1
comp=Z,28nm,0.7s,baz=150,slow=8.0,SNR=58
ARU S S 23 19 35.2 -2.3
comp=Z,5.0nm,0.7s,baz=174,slow=19,SNR=2.7
ARU LR LR 23 25 18.4
comp=Z,42nm,18.2s,baz=156,slow=40
comp=Z,28nm,0.7s
ARU **Arti** 20.93 339 P P 23 15 50.5 -0.2
ARU IAmb IAmb 23 15 51.7
comp=Z,44nm,0.9s
ARU **Arti** 20.93 339d iP P 23 15 50.4 -0.3
ARU 23 16 24.7
ARU S S 23 19 37.3 -0.3
ARU *SS sS 23 20 13.3 -0.9
ARU pmax pmax
comp=Z,86nm,1.2s
GNI **Garni** 21.30 286 P P 23 15 57.1 +2.2
comp=Z,55nm,0.7s,baz=44,slow=1.8,SNR=50
comp=Z,55nm,0.7s
GNI **Garni** 21.30 286 P P 23 15 56.6 +1.7
GNI **Garni** 21.30 286d iP P 23 15 57.4 +2.4
GNI pmax pmax
comp=Z,106nm,1.3s
GNI **Garni** 21.30 286 P P 23 15 57.7 +2.8
MZR **Muzera** 21.45 233 i P P 23 15 55.3 -1.3
SNR=7.3
GTA **Gaotai** 21.91 76 ⇓P P 23 16 04.0 +2.6
GTA pP pP 23 16 28.5 +4.8
GTA sP sP 23 16 41.0 +2.9
GTA pmax pmax
comp=Z,22nm,0.8s
GTA pmax pmax
comp=Z,81nm,5.5s
GTA LR LR
comp=Z,61nm,15.6s
GTA LR LR
comp=Z,160nm,16.4s
GTA LR LR
comp=Z,54nm,16.4s
ZEI **Tsey** 21.99 293 eP P 23 16 01.6 -0.8
ZEI pmax pmax
comp=Z,19nm,0.6s
AKH **Akhalkalaki** 22.23 289 ⇓P P 23 16 07.0 +2.1
AKH **Akhalkalaki** 22.23 289 P P 23 16 06.9 +2.1
ONI **Oni** 22.31 292 P P 23 16 06.2 +0.7
ONI IAmb IAmb 23 16 10.2
comp=Z,33nm,0.7s
ONI **Oni** 22.31 292 P P 23 16 06.2 +0.7
ONI pmax pmax
comp=Z,33nm,0.7s
KNGR **Kungurtug, Tuv** 22.45 46⇓eP P 23 16 09.8 +2.9
KARS **Kars** 22.55 287 P P 23 16 09.4 +1.3
KARS **Kars** 22.55 287 P P 23 16 09.4 +1.3
KARS pmax pmax
comp=Z,75nm,0.8s
BELG **Belogornoye** 22.58 319 P P 23 16 07.1 -0.9
comp=Z,114nm,0.9s,baz=68,slow=2.2,SNR=24
BELG S S 23 20 06.2 -1.0
comp=Z,9.4nm,0.7s,baz=163,slow=19,SNR=2.0
BELG LR LR 23 26 08.4
comp=Z,56nm,18.6s,baz=121,slow=39
comp=Z,114nm,0.9s
BELG **Belogornoye** 22.58 319d iP P 23 16 07.5 -0.5
BELG pmax pmax
comp=Z,24nm,0.9s
GEVA **Gevas** 22.74 281 P P 23 16 11.1 +1.1
GEVA IAmb IAmb 23 16 14.2
comp=Z,15nm,1.0s
KBZ **Khabaz** 22.81 295 P P 23 16 09.5 -0.9
comp=Z,8.8nm,0.8s,baz=118,slow=4.1,SNR=12
KBZ S S 23 20 12.4 +1.5
comp=Z,3.2nm,0.8s,baz=134,slow=19,SNR=1.8
comp=Z,8.8nm,0.8s
KBZ **Khabaz** 22.81 295deP P 23 16 09.9 -0.5
KBZ pmax pmax
comp=Z,15nm,1.0s
GOF **Gofitskoye** 22.88 298⇑eP P 23 16 12.1 +1.0
GOF pmax pmax
comp=Z,58nm,0.8s
KVAR **Kislovodsk Arr** 22.98 295 P P 23 16 12.7 +0.5
comp=Z,3.8nm,0.6s,baz=270,slow=23,SNR=3.8
KVAR S S 23 20 14.7 +0.7
comp=Z,10nm,1.0s,baz=184,slow=16,SNR=2.2
comp=Z,3.8nm,0.6s
KIV **Kislovodsk** 22.98 295 P P 23 16 12.3 0.0
KIV IAmb IAmb 23 16 31.5
comp=Z,23nm,0.8s
KIV **Kislovodsk** 22.98 295 eP P 23 16 11.7 -0.5
KIV eS S 23 20 12.7 -1.3
KIV pmax pmax
comp=Z,22nm,1.1s
KIV MLR MLR
comp=Z,32nm,14.0s
KIV **Kislovodsk** 22.98 295 i P P 23 16 13.4 +1.2
SNR=7.5
CHVG **Ch'k'valeri** 23.32 292 ⇓P P 23 16 17.9 +2.5
GURO **Guroymak-BITLI** 23.51 282 P P 23 16 18.9 +1.6
BATM **Batumi** 23.59 289 ⇑P P 23 16 19.8 +2.1
KOPT **Kop Dagi** 24.55 286 P P 23 16 28.3 +1.5
KOPT IAmb IAmb 23 16 36.6
comp=Z,16nm,1.0s
VRH **Novokhopyorsk** 25.34 312 eP P 23 16 33.1 -0.4
VRH pmax pmax
comp=Z,20nm,0.8s
LZH **Lanzhou** 25.55 83 ⇑P P 23 16 37.4 +1.6
LZH pP pP 23 17 01.8 +0.5
LZH sP sP 23 17 13.8 -1.0
LZH pmax pmax
comp=Z,21nm,1.1s
LZH pmax pmax
comp=Z,76nm,4.6s
LZH LR LR
comp=Z,110nm,12.3s
KIRV **Kirov** 25.66 332 P P 23 16 36.4 +0.1
comp=Z,40nm,0.7s,baz=124,slow=7.3,SNR=16
comp=Z,40nm,0.7s
KIRV **Kirov** 25.66 332d iP P 23 16 36.6 +0.3
ZAK **Zakamensk** 25.79 50 eP P 23 16 38.8 +1.2
ZAK pmax pmax
comp=Z,5.0nm,1.1s
RAYN **Ar Rayn** 26.57 246 P P 23 16 45.0 +0.2
RAYN **Ar Rayn** 26.57 246 P P 23 16 45.0 +0.2
RAYN pmax pmax
comp=Z,6.0nm,0.7s
RAYN **Ar Rayn** 26.57 246 i P P 23 16 44.8 0.0
SNR=7.7
ANN **Anapa** 26.81 297 eP P 23 16 44.9 -1.8
ANN e*PP pP 23 17 09.3 -2.6
ANN eS S 23 21 11.7 -2.9
ANN pmax pmax
comp=Z,23nm,0.7s
VSR **Storozhevoye** 26.86 311 eP P 23 16 47.2 0.0
VSR pmax pmax
comp=Z,10.0nm,0.7s
VORR **Voronezh** 26.98 312 eP P 23 16 48.8 +0.6
VORR pmax pmax
comp=Z,30nm,0.4s
SONM **Songino Array** 27.17 57 P P 23 16 50.3 +0.2
comp=Z,0.5nm,0.5s,baz=271,slow=9.8,SNR=7.5
comp=Z,0.5nm,0.5s
SONM **Songino Array** 27.17 57 IAmb IAmb 23 16 58.9
comp=Z,1.3nm,1.0s
LPSR **Galich'ya Gora** 27.45 314 eP P 23 16 52.6 +0.2
LPSR pmax pmax
comp=Z,20nm,1.4s
PZH **PanZhiHua** 27.47 105 P P 23 16 59.6 +6.6
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,100nm,5.1s
TOKA **Tokat** 27.59 287 P P 23 16 55.5 +1.6
TOKA IAmb IAmb 23 16 56.8
comp=Z,11nm,0.8s
ULN **Ulaanbaatar** 27.61 57⇑eP P 23 16 58.6 +4.5
ULN pmax pmax
comp=Z,2.0nm,0.8s
BNN **Bunyan** 28.26 284 P P 23 16 59.9 -0.1
BNN IAmb IAmb 23 17 15.1
comp=Z,12nm,1.0s
KMI **Kunming** 28.96 106 ⇓P P 23 17 08.5 +2.1
KMI pmax pmax
comp=Z,5.0nm,0.5s
PRGR **Permogore** 29.16 334 eP P 23 17 06.9 -0.6
PRGR e*SP sP 23 17 46.4 +0.3
MOS **Moscow** 29.35 319 eP P 23 17 06.8 -2.4
MOS e*PP pP 23 17 34.5 0.0
ILGA **Ilgaz** 29.61 289 P P 23 17 13.6 +1.5
OBN **Obninsk** 29.66 318 P P 23 17 12.4 +0.4
comp=Z,6.0nm,0.4s,baz=180,slow=1.0,SNR=6.6
comp=Z,6.0nm,0.4s
OBN **Obninsk** 29.66 318 P P 23 17 12.2 +0.3
OBN **Obninsk** 29.66 318d iP P 23 17 12.3 +0.4
OBN e*PP pP 23 17 39.9 +2.6
OBN e*SP sP 23 17 52.7 +2.1
OBN e 23 18 11.4
OBN pmax pmax
comp=Z,34nm,1.3s
BR131 **Keskin Array S** 29.83 286 P P 23 17 14.7 +0.8
BR131 IAmb IAmb 23 17 16.0
comp=Z,12nm,0.6s
BR131 **Keskin Array S** 29.83 286d iP P 23 17 15.0 +1.2
BRTR **Keskin Array B** 29.83 286 P P 23 17 15.1 +1.2
comp=Z,7.0nm,0.7s,baz=105,slow=8.6,SNR=64
comp=Z,7.0nm,0.7s
CHTO **Chiang Mai** 30.09 121 P P 23 17 18.9 +2.7
CHTO **Chiang Mai** 30.09 121 P P 23 17 18.9 +2.7
CHTO pmax pmax
comp=Z,2.0nm,0.7s
XAN **Xi'an** 30.11 85 P P 23 17 16.8 +0.5
XAN pP pP 23 17 42.5 +0.4
XAN pmax pmax
comp=Z,10.0nm,0.5s
CMAR **Chiang Mai Arr** 30.33 121 P P 23 17 18.7 +0.4
comp=Z,1.5nm,0.6s,baz=300,slow=9.0,SNR=2.2
comp=Z,1.5nm,0.6s
CMAR **Chiang Mai Arr** 30.33 121 i P P 23 17 23.8 +5.5
CMAR pmax pmax
comp=Z,1.0nm,0.5s
ANTO **Ankara** 30.45 287 P P 23 17 20.3 +1.0
ANTO IAmb IAmb 23 17 21.5
comp=Z,11nm,0.8s
ANTO **Ankara** 30.45 287 P P 23 17 20.3 +1.0
ANTO pmax pmax
comp=Z,11nm,0.9s
HHC **Hu-ho-hao-te** 30.74 71 eP P 23 17 24.6 +2.7
HHC pmax pmax
comp=Z,22nm,0.8s
HHC pmax pmax
comp=Z,150nm,5.3s
KLMR **Klimovskoe** 30.97 329 eP P 23 17 22.1 -1.3
KLMR pmax pmax
comp=Z,9.0nm,0.8s
KLMR **Klimovskoe** 30.97 329 eP P 23 17 22.2 -1.2
KLMR AMP 23 17 23.9
comp=Z,9.0nm,0.8s
GYA **Guiyang** 31.31 100 ⇓P P 23 17 28.0 +1.0
GYA pmax pmax
comp=Z,14nm,0.8s
MDUB **Mudurnu** 31.58 288 P P 23 17 30.8 +1.5
EIL **Elat** 31.60 267 P P 23 17 30.4 +1.0
comp=Z,8.9nm,0.9s,baz=83,slow=8.1,SNR=4.5
comp=Z,8.9nm,0.9s
PBA **Port Blair** 31.81 139 P P 23 17 33.2 +1.9
BORA **Eskisehir** 32.23 287 P P 23 17 35.9 +1.0
BORA IAmb IAmb 23 17 36.9
comp=Z,14nm,0.9s
AKASG **Malin Array Be** 32.89 307 P P 23 17 40.7 +0.3
comp=Z,13nm,0.5s,baz=78,slow=6.6,SNR=74
AKASG PP PnPn 23 18 53.5 +0.2
comp=Z,3.2nm,0.6s,baz=89,slow=11,SNR=2.4
comp=Z,13nm,0.5s
AKASG **Malin Array Be** 32.89 307 P P 23 17 41.5 +1.1
AKBB **Malin Array Si** 32.89 307 P P 23 17 40.2 -0.2
AKBB **Malin Array Si** 32.89 307d iP P 23 17 40.8 +0.4
AKBB pmax pmax
comp=Z,26nm,0.9s
KIS **Kishinev** 32.91 301 eP P 23 17 41.0 +0.4
comp=Z,46nm,0.5s
KIS **Kishinev** 32.91 301 eP P 23 17 41.0 +0.4
KIS pmax pmax
comp=Z,50nm,0.5s
MILM **Milestii Mici** 32.91 300 ⇓iP P 23 17 41.0 +0.4
comp=Z,40nm,0.8s
MILM epP pP 23 18 08.0 +1.7
MILM **Milestii Mici** 32.91 300 ePP PP 23 18 54.0 -3.0
MILM **Milestii Mici** 32.91 300 ⇓P P 23 17 41.3 +0.7
MILM **Milestii Mici** 32.91 300d iP P 23 17 41.0 +0.4
MILM e 23 18 08.0
MILM e 23 18 54.0
MILM pmax pmax
comp=Z,80nm,3.3s
NRIK **Noril'sk** 33.01 10 P P 23 17 41.2 0.0
comp=Z,8.2nm,0.6s,baz=201,slow=7.2,SNR=11
comp=Z,8.2nm,0.6s
NRIK **Noril'sk** 33.01 10 P P 23 17 42.0 +0.8
NRIK IAmb IAmb 23 17 42.8
comp=Z,10nm,0.7s
NRIK **Noril'sk** 33.01 10d iP P 23 17 41.9 +0.7
NRIK pmax pmax
comp=Z,11nm,0.8s
SORM **Soroca** 33.25 303 ⇑P P 23 17 43.8 +0.2
CFR **Carcaliu** 33.41 297 ⇑P P 23 17 45.7 +0.7
VLDR **Vladesti** 33.42 299 ⇓P P 23 17 46.6 +1.5
ICOR **Ion Corvin** 33.70 295 ⇓P P 23 17 49.6 +2.0
GHRR 33.88 299 ⇓P P 23 17 51.3 +2.2
ODBI **Odobesti** 34.14 298 ⇑P P 23 17 54.0 +2.7
MNK **Minsk** 34.31 314 iP P 23 17 52.5 -0.1
MNK i *PP pP 23 18 18.9 +0.5
MNK i 23 19 10.6
MNK i 23 20 31.6
MNK iS S 23 23 10.3 -1.2
MNK i *SS sS 23 23 57.1 +0.5
MNK i SS SnSn 23 25 32.7 -0.2
MNK pmax pmax
comp=N,9.0nm,0.9s
MNK pmax pmax
comp=Z,23nm,1.0s
MNK pmax pmax
comp=E,2.0nm,0.9s
MNK MLR MLR
comp=Z,9μm,24.0s
MNK MLR MLR
comp=E,12nm,18.0s
MNK MLR MLR
comp=N,18nm,18.0s
VRI **Vrincioaia** 34.37 299 ⇓P P 23 17 55.3 +2.0
TESR **Tescani** 34.40 300 ⇑P P 23 17 54.6 +1.1
PLOR **Plostina** 34.42 299 ⇑P P 23 17 55.9 +2.1
NEHR **Nehoiu** 34.69 298 ⇑P P 23 17 58.9 +2.8
COVR **Voineasa-Covas** 34.73 299 ⇓P P 23 17 58.3 +1.9
BIZ **Bicaz** 34.77 301 ⇑P P 23 17 57.8 +1.1
NACGM **Naroch** 35.01 314⇑eP P 23 17 59.6 +1.0
baz=100
IDID **Didziasalis** 35.11 315 eP P 23 18 00.7 +1.1
DOPR **Dopca** 35.30 299 ⇑P P 23 18 03.2 +1.9
BURAR **Bucovina Array** 35.36 302 ⇓P P 23 18 03.1 +1.2
BURAR **Bucovina Array** 35.36 302 IAmb IAmb 23 18 04.2
comp=Z,11nm,0.8s
BUR08 **Bucovina Ar. S** 35.37 302 P P 23 18 02.7 +0.7
BUR08 IAmb IAmb 23 18 04.0
comp=Z,8.9nm,0.9s
ALN **Alexandroupoli** 35.39 290 P P 23 18 02.6 +0.6
ALN IAmb IAmb 23 18 04.3
comp=Z,17nm,1.2s
ALN **Alexandroupoli** 35.39 290 P P 23 18 02.6 +0.6
ALN pmax pmax
comp=Z,17nm,1.2s
IIGN **Ignalina** 35.41 315 eP P 23 18 02.9 +0.8
ISAL **Salakas** 35.51 316 eP P 23 18 03.1 +0.2
HUMR **Humele** 35.69 296 ⇓P P 23 18 06.3 +1.7
RDO **Rodhopi** 35.72 291 P P 23 18 05.3 +0.4
RDO IAmb IAmb 23 18 07.1
comp=Z,8.4nm,0.9s
KARP **Karpathos** 35.75 281 P P 23 18 05.6 +0.3
VSU **Vasula** 35.85 320ceP P 23 18 05.9 +0.1
VSU pmax pmax
comp=Z,56nm,0.8s
VSU **Vasula** 35.85 320 eP P 23 18 06.2 +0.4
ARCR **ARCALIA** 35.96 301 ⇓P P 23 18 09.0 +2.1
LVV **L'vov** 36.15 305 eP P 23 18 09.3 +0.8
LVV e 23 19 31.0
LVV e 23 19 58.6
LVV pmax pmax
comp=Z,60nm,1.2s
LOT **Lotru** 36.46 298 ⇓P P 23 18 12.8 +1.4
BMR **Baia Mare** 36.52 302 ⇑P P 23 18 13.8 +2.1
PABE **Paberze** 36.70 315 P P 23 18 12.9 -0.2
PABE **Paberze** 36.70 315 eP P 23 18 14.3 +1.2
LVZ **Lovozero** 36.80 338 P P 23 18 14.0 +0.2
LVZ **Lovozero** 36.80 338deP P 23 18 13.8 0.0
LVZ pmax pmax
comp=Z,26nm,0.9s
SANT **Santorini** 36.85 283 P P 23 18 14.1 -0.6
NVR **Nevrokopi** 36.93 291 P P 23 18 16.8 +1.5
SUW **Suwalki** 36.96 312 P P 23 18 14.8 -0.5
SUW **Suwalki** 36.96 312 P P 23 18 14.8 -0.5
SUW pmax pmax
comp=Z,29nm,1.1s
SUW **Suwalki** 36.96 312 eP P 23 18 15.4 +0.1
FIA1 **FINESS Array S** 37.06 325 P P 23 18 16.0 0.0
FINES **FINESS Array B** 37.06 325 P P 23 18 16.5 +0.4
comp=Z,16nm,0.4s,baz=116,slow=9.2,SNR=208
FINES LR LR 23 34 06.7
comp=Z,51nm,18.2s,baz=114,slow=37
comp=Z,16nm,0.4s
FINES **FINESS Array B** 37.06 325 P P 23 18 16.0 0.0
DRGR 37.10 300 ⇓P P 23 18 18.5 +1.8
VTS **Vitosha** 37.18 293 ⇓P P 23 18 19.2 +1.6
VTS **Vitosha** 37.18 293 P P 23 18 18.6 +1.1
VTS IAmb IAmb 23 18 19.7
comp=Z,4.5nm,0.7s
VTS **Vitosha** 37.18 293 P P 23 18 18.6 +1.1
VTS pmax pmax
comp=Z,5.0nm,0.7s
UZH **Uzhgorod** 37.29 303 eP P 23 18 19.6 +1.4
UZH e 23 18 44.9
KOLS **Kolonicke sedl** 37.30 304 eP P 23 18 19.7 +1.4
KOLS pmax pmax
comp=Z,12nm,0.9s
KOLS **Kolonicke sedl** 37.30 304 eP P 23 18 19.7 +1.4
MTSE **Matsula** 37.40 320 eP P 23 18 19.7 +0.8
PLG **Polygyros** 37.43 290 P P 23 18 20.6 +1.1
BLKB **Belogradchik** 37.44 295 ⇓P P 23 18 21.2 +1.6
MEF **Metsahovi** 37.48 323 eP P 23 18 20.5 +0.9
LTVH **Ltavrtes, Hu** 37.61 301 P P 23 18 23.2 +2.4
KNT **Kendrikon** 37.68 291 P P 23 18 22.7 +1.1
CRVS **Cervenica-Dubn** 37.84 304 eP P 23 18 23.9 +1.1
CRVS pmax pmax
comp=Z,11nm,1.1s
CRVS **Cervenica-Dubn** 37.84 304 eP P 23 18 23.9 +1.1
PBUR **Paburge** 37.92 316 eP P 23 18 23.6 +0.3
BZS **Buzias** 37.95 299 ⇓P P 23 18 25.4 +1.6
MDVR **Moldovita** 37.98 297 ⇑P P 23 18 25.7 +1.6
IMMV **Iera Moni Meta** 38.26 282 P P 23 18 27.6 +1.1
KRND **KRANIDI** 38.35 285 P P 23 18 26.3 -1.0
KNDR **Palaiochora Ch** 38.56 282 P P 23 18 29.3 +0.3
NIE **Niedzica** 38.58 305 eP P 23 18 30.9 +1.9
NJ2 **Nanjing** 38.63 84 eP P 23 18 27.9 -1.7
NJ2 pmax pmax
comp=Z,11nm,0.5s
KTHA **Kythira Island** 38.74 283 P P 23 18 30.1 -0.4
KTHR **Kythira** 38.78 283 P P 23 18 30.5 -0.4
GUR **Goura** 38.83 286 P P 23 18 30.3 -1.0
FNA **Florina** 38.89 291 P P 23 18 32.4 +0.7
FNA **Florina** 38.89 291 P P 23 18 31.5 -0.2
FNA IAmb IAmb 23 18 33.1
comp=Z,7.6nm,0.8s
FNA **Florina** 38.89 291 P P 23 18 31.5 -0.2
FNA pmax pmax
comp=Z,8.0nm,0.8s
SERG **Sergoula** 38.92 287 P P 23 18 31.8 -0.2
PSZ **Piszkesteto** 38.93 302 P P 23 18 32.8 +0.8
PSZ IAmb IAmb 23 18 34.5
comp=Z,6.3nm,0.9s
PSZ **Piszkesteto** 38.93 302 P P 23 18 32.8 +0.8
PSZ pmax pmax
comp=Z,6.0nm,0.9s
PSZ **Piszkesteto** 38.93 302 P P 23 18 33.4 +1.3
RAF **Rauma** 38.94 324 eP P 23 18 32.5 +0.6
KLV **Kalavryta, Ach** 38.95 287 P P 23 18 32.0 -0.3
EVR **Evrytania** 38.98 288 P P 23 18 32.7 +0.1
LANS **Liptovska Anna** 39.14 304 eP P 23 18 35.8 +2.1
LANS pmax pmax
comp=Z,3.0nm,1.0s
LANS **Liptovska Anna** 39.14 304 eP P 23 18 35.8 +2.1
FRGS **Fruska Gora** 39.27 298 ⇓P P 23 18 35.9 +1.0
DIVS **Divibare** 39.29 296 P P 23 18 35.8 +0.7
DIVS IAmb IAmb 23 18 37.5
comp=Z,15nm,0.9s
ITM **Ithomi** 39.35 285 P P 23 18 35.5 -0.1
ITM IAmb IAmb 23 18 36.8
comp=Z,7.0nm,1.0s
LSK **Leskovik** 39.60 290 P P 23 18 38.8 +1.1
AAL **Aland** 39.61 322 eP P 23 18 37.4 -0.1
KOLL **Kolacno** 39.88 304 eP P 23 18 41.3 +1.5
MORH **Mrgy, Hungar** 39.95 300 P P 23 18 41.5 +1.1
SRO2 **Moca** 39.95 302 eP P 23 18 41.3 +0.9
SRO2 pmax pmax
comp=Z,20nm,0.9s
SRO2 **Moca** 39.95 302 eP P 23 18 41.3 +0.9
SRO **Srobarova** 40.00 302 eP P 23 18 43.1 +2.3
SRO pmax pmax
comp=Z,23nm,1.2s
SRO **Srobarova** 40.00 302 eP P 23 18 43.1 +2.3
CSKK **Cskako** 40.08 302 P P 23 18 43.1 +1.6
PDG **Podgorica** 40.11 294 P P 23 18 42.3 +0.5
PDG IAmb IAmb 23 18 44.3
comp=Z,9.0nm,0.9s
MAUC **Maruska** 40.20 305 eP P 23 18 43.8 +1.3
JAVC **Velka Javorina** 40.34 304 eP P 23 18 45.4 +1.7
KOVH **Kovagotottos** 40.34 300 P P 23 18 44.4 +0.7
MORC **Moravsky Berou** 40.35 306 P P 23 18 44.4 +0.6
MORC IAmb IAmb 23 18 46.0
comp=Z,10.0nm,0.9s
MORC **Moravsky Berou** 40.35 306 P P 23 18 44.4 +0.6
MORC pmax pmax
comp=Z,10.0nm,0.9s
MORC **Moravsky Berou** 40.35 306 eP P 23 18 44.9 +1.1
GKP **Gorka Klasztor** 40.45 311 eP P 23 18 45.2 +0.8
GKP **Gorka Klasztor** 40.45 311 eP P 23 18 45.4 +1.0
ARA0 **ARCESS Array S** 40.49 337 eP P 23 18 45.2 +0.6
ARCES **ARCESS Array B** 40.49 337 P P 23 18 45.2 +0.6
comp=Z,9.4nm,0.5s,baz=113,slow=8.1,SNR=137
ARCES LR LR 23 36 13.2
comp=Z,63nm,19.0s,baz=174,slow=37
comp=Z,9.4nm,0.5s
ARCES **ARCESS Array B** 40.49 337 P P 23 18 45.0 +0.4
ARCES IAmb IAmb 23 18 46.2
comp=Z,18nm,0.9s
SMOL **Smolenice** 40.53 304 eP P 23 18 46.7 +1.5
SMOL pmax pmax
comp=Z,4.0nm,1.0s
SMOL **Smolenice** 40.53 304 eP P 23 18 46.7 +1.5
MPLH **Magyarpolny** 40.59 302 P P 23 18 46.6 +1.0
MODS **Modra-Piesok** 40.64 303 eP P 23 18 47.5 +1.4
MODS pmax pmax
comp=Z,15nm,1.1s
MODS **Modra-Piesok** 40.64 303 eP P 23 18 47.5 +1.4
ZST **Bratislava** 40.77 303 eP P 23 18 48.8 +1.6
ZST pmax pmax
comp=Z,20nm,1.0s
ZST **Bratislava** 40.77 303 eP P 23 18 48.8 +1.6
KRLC **Kraliky** 40.83 306 eP P 23 18 48.4 +0.7
KRLC **Kraliky** 40.83 306 eP P 23 18 48.4 +0.7
KTK1 **Kautokeino** 40.99 336 eP P 23 18 48.9 +0.2
VRAC **Vranov** 41.01 305 ⇑P P 23 18 50.9 +1.8
VRAC **Vranov** 41.01 305 eP P 23 18 50.6 +1.5
KSP **Ksiaz** 41.09 307 eP P 23 18 50.7 +1.0
DPC **Dobruska-Polom** 41.10 306 eP P 23 18 50.8 +0.9
DPC **Dobruska-Polom** 41.10 306 eP P 23 18 50.8 +0.9
KRUC **Moravsky** 41.16 305 eP P 23 18 51.7 +1.4
OSTC **Ostas** 41.16 307 eP P 23 18 50.9 +0.6
SOP **Sopron** 41.19 302 P P 23 18 51.4 +0.8
CHVC **Chvalec** 41.26 307 eP P 23 18 52.0 +0.8
UPC **Upice** 41.29 307 eP P 23 18 52.7 +1.3
UPC **Upice** 41.29 307 eP P 23 18 52.7 +1.3
RONA **Rosalia, Austr** 41.37 302 i P P 23 18 53.2 +1.1
comp=Z,9.0nm,0.7s,SNR=8.0
HAMF **Hammerfest** 41.56 338 eP P 23 18 54.1 +0.9
CONA **Conrad Observa** 41.63 303 i P P 23 18 55.6 +1.3
comp=Z,20nm,0.9s,SNR=20
ARSA **Arzberg** 41.94 302 i P P 23 18 57.8 +1.0
comp=Z,6.7nm,0.8s,SNR=5.1
JETT **Jettan, Norway** 42.13 336 eP P 23 18 58.2 +0.2
PVCC **Panska Ves** 42.21 307 eP P 23 19 00.2 +1.3

PVCC **Panska Ves** 42.21 307 *e*P P **23 19 00.2 +1.3**
PRU **Pruhonice** 42.27 306 *e*P P **23 19 00.5 +1.1**
PRU **Pruhonice** 42.27 306 *e*P P **23 19 00.5 +1.1**
SOKA **Soboth** 42.36 301 *i* P P **23 19 01.4 +1.2**
comp=Z,14nm,0.8s,SNR=12
PDKS **Podkum** 42.48 300 *i* P P **23 19 02.5 +1.3**
PSI **Prapat** 42.52 138 P P **23 19 01.1 -0.8**
comp=Z,5.5nm,0.5s,baz=327,slow=8.1,SNR=7.5
comp=Z,5.5nm,0.5s
CKRC **Cesky Krumlov** 42.55 304 *e*P P **23 19 02.6 +0.9**
BRG **Berggiesshubel** 42.58 307 *i* P P **23 19 03.1 +1.3**
BRG Amp 23 19 04.0
comp=Z,24nm,1.0s
BRG **Berggiesshubel** 42.58 307 *i* P P **23 19 03.1 +1.3**
BRG pmax pmax
comp=Z,24nm,1.0s
TRO **Tromso** 42.64 336 *e*P P **23 19 02.5 +0.4**
MOA **Molln** 42.70 303 *i* P P **23 19 03.8 +0.8**
comp=Z,8.6nm,0.8s,SNR=8.0
OBKA **Obir** 42.71 301 *i* P P **23 19 04.5 +1.4**
comp=Z,14nm,1.1s,SNR=7.2
TIP **Timpagrande** 42.72 290 P P **23 19 03.4 +0.2**
YAK **Yakutsk** 42.73 36⇑ *e*P P **23 19 05.9 +3.1**
YAK pmax pmax
comp=Z,11nm,0.5s
HFS **Hagfors** 42.73 321 LR LR 23 39 42.0
comp=Z,31nm,21.9s,baz=66,slow=40
RGN **Rugen** 42.75 313 P P **23 19 03.9 +0.8**
LJU **Ljubljana** 42.80 300 *i* P P **23 19 05.3 +1.5**
SGRT **San Giovanni R** 42.81 294 P P **23 19 04.5 +0.5**
GEC2 **GERESS Array S** 42.95 305 P P **23 19 05.8 +0.8**
GERES **GERESS Array B** 42.95 305 P P **23 19 06.0 +1.0**
comp=Z,1.7nm,0.6s,baz=79,slow=8.3,SNR=20
GERES PP **PP 23 20 44.8 -1.8**
comp=Z,1.0nm,0.8s,baz=78,slow=6.2,SNR=4.3
comp=Z,1.7nm,0.6s
GERES **GERESS Array B** 42.95 305 P P **23 19 05.5 +0.5**
GERES **GERESS Array B** 42.95 305 P P **23 19 06.0 +1.0**
KHC **Kasperske Hory** 42.99 305 IAmb IAmb 23 19 07.5
comp=Z,9.1nm,0.7s
KHC **Kasperske Hory** 42.99 305*d* *i*P P **23 19 06.3 +1.0**
KHC pmax pmax
comp=Z,20nm,0.7s
KHC **Kasperske Hory** 42.99 305 *e*P P **23 19 05.6 +0.3**
KHC *ex* x 23 19 44.0
GSI **Gunungsitoli** 43.09 141 P P **23 19 07.8 +1.4**
GSI **Gunungsitoli** 43.09 141 P P **23 19 07.7 +1.3**
comp=Z,80nm,0.8s
CLL **Collm** 43.13 308 P P **23 19 06.7 +0.5**
CLL IAmb IAmb 23 19 07.9
comp=Z,12nm,0.8s
CLL **Collm** 43.13 308⇓ *i*P P **23 19 06.8 +0.5**
CLL pmax pmax
comp=Z,13nm,0.9s
CLL **Collm** 43.13 308⇓ *i*P P **23 19 06.8 +0.5**
comp=Z,13nm,0.9s
BIOA **Bad Ischl, Aus** 43.15 303 *i* P P **23 19 07.3 +0.7**
comp=Z,9.6nm,0.9s,SNR=5.9
CUC **Castrocucco** 43.20 291 P P **23 19 07.7 +0.7**
FAUS **Fauske** 43.25 332 *e*P P **23 19 07.6 +0.6**
MOR8 **Moi Rana** 43.30 330 *e*P P **23 19 07.3 -0.2**
MYKA **Terra Mystica** 43.31 301 *i* P P **23 19 08.9 +1.0**
comp=Z,7.1nm,1.0s
CADS **Cadrg** 43.31 301 *i* P P **23 19 08.7 +0.8**
TRI **Trieste** 43.39 300 P P **23 19 08.4 0.0**
TRI IAmb IAmb 23 19 09.7
comp=Z,9.9nm,0.6s
TRI **Trieste** 43.39 300 P P **23 19 08.4 0.0**
TRI pmax pmax
comp=Z,10.0nm,0.6s
STEI **Steigen** 43.40 333 *e*P P **23 19 09.1 +0.9**
KBA **Koelnbreinsper** 43.44 302 *i* P P **23 19 09.9 +0.8**
comp=Z,5.8nm,0.7s,SNR=6.6
NKC **Novy Kostel** 43.59 307 *e*P P **23 19 12.4 +2.4**
NKC **Novy Kostel** 43.59 307 *e*P P **23 19 12.4 +2.4**
NC602 **NORSAR Array S** 43.84 322 IAmb IAmb 23 19 12.2
comp=Z,20nm,0.9s
NC602 **NORSAR Array S** 43.84 322 *e*P P **23 19 11.5 -0.3**
KSRS **Korea Array** 43.88 72 P P **23 19 12.8 +0.4**
comp=Z,0.6nm,0.3s,baz=280,slow=7.4,SNR=4.3
comp=Z,0.6nm,0.3s
KONS **Konsvik** 43.89 330 *e*P P **23 19 12.6 +0.5**
SSLB **Suanglung** 43.90 94 P P **23 19 15.0 +2.2**
SSLB IAmb IAmb 23 19 15.1
comp=Z,18nm,1.0s
STAL **STALIGIAL** 44.01 301 P P **23 19 13.7 +0.2**
STAL IAmb IAmb 23 19 14.7
comp=Z,22nm,1.2s
NB2 **NORSAR Subarra** 44.02 322 P P **23 19 12.9 -0.4**
baz=93,slow=7.9
NB2 **NORSAR Subarra** 44.02 322 P P **23 19 12.9 -0.4**
comp=Z,14nm,0.6s,baz=93,slow=7.9
NOA **NORSAR Array B** 44.02 322 P P **23 19 13.1 -0.3**
comp=Z,18nm,0.7s,baz=93,slow=7.7,SNR=82
NOA PP **PcP 23 20 54.3 -2.6**
comp=Z,6.7nm,0.9s,baz=94,slow=10.0,SNR=6.6
NOA LR LR 23 40 11.6
comp=Z,28nm,18.2s,baz=205,slow=39
comp=Z,18nm,0.7s
NSS **Namsos** 44.03 327 *e*P P **23 19 12.4 -0.8**
ABTA **Abfaltersbach** 44.06 302 *i* P P **23 19 13.9 0.0**
comp=Z,7.0nm,1.0s
LOF **Lofoten** 44.07 333 *e*P P **23 19 13.6 0.0**
NC204 **NORSAR Array S** 44.25 323 P P **23 19 15.3 +0.1**
AQU **L'Aquila** 44.36 295 P P **23 19 16.3 0.0**
AQU IAmb IAmb 23 19 22.7
comp=Z,9.6nm,0.9s
AQU **L'Aquila** 44.36 295 P P **23 19 16.3 0.0**
AQU pmax pmax
comp=Z,10.0nm,0.9s
GRA1 **Grafenberg Arr** 44.44 306 P P **23 19 17.9 +1.1**
GRA1 IAmb IAmb 23 19 19.8
comp=Z,23nm,1.1s
GRF **Grafenberg Arr** 44.44 306 P P **23 19 17.9 +1.1**
GRF pmax pmax
comp=Z,23nm,1.1s
GRFO **Grafenberg** 44.44 306 P P **23 19 18.4 +1.5**
GRFO IAmb IAmb 23 19 19.7
comp=Z,22nm,1.1s
GRFO **Grafenberg** 44.44 306 P P **23 19 18.4 +1.5**
GRFO pmax pmax
comp=Z,22nm,1.1s
NRCA **Norcia** 44.45 296 IAmb IAmb 23 19 19.2
comp=Z,13nm,0.9s
WTTA **Wattenberg** 44.55 303 *i* P P **23 19 18.2 +0.2**
comp=Z,14nm,1.0s,SNR=7.3
TIXI **Tiksi** 44.57 22 P P **23 19 17.5 0.0**
TIXI IAmb IAmb 23 19 29.1
comp=Z,5.1nm,0.4s
TIXI **Tiksi** 44.57 22⇓ *i*P P **23 19 17.4 0.0**
TIXI pmax pmax
comp=Z,3.0nm,0.6s
WATA **Walderalm** 44.58 303 *i* P P **23 19 18.1 -0.1**
comp=Z,9.8nm,1.0s
KONO **Kongsberg** 44.76 320 P P **23 19 19.4 +0.2**
KONO **Kongsberg** 44.76 320 P P **23 19 19.4 +0.2**
KONO pmax pmax
comp=Z,22nm,0.7s
KONO **Kongsberg** 44.76 320 *e*P P **23 19 19.0 -0.2**
CTI **Castel Tesino** 44.77 301 IAmb IAmb 23 19 21.0
comp=Z,10nm,0.7s
SQTA **Sankt Quirin** 44.85 303 *i* P P **23 19 20.2 0.0**
comp=Z,6.7nm,0.6s,SNR=5.8
MOTA **Moosalm** 44.90 303 *i* P P **23 19 20.5 -0.1**
comp=Z,12nm,0.8s,SNR=7.7
TEOL **Teolo** 44.90 300 P P **23 19 20.9 +0.3**
RAFF **Raffo Rosso** 45.10 288 P P **23 19 22.8 +0.6**
RETA **Reutte** 45.10 303 *i* P P **23 19 22.4 +0.2**
comp=Z,4.0nm,0.6s
FETA **Feichten** 45.21 302 *i* P P **23 19 23.1 0.0**
comp=Z,4.5nm,0.6s
SKAR **Skarslia** 45.42 322 *e*P P **23 19 25.2 +0.7**
LATE **Laterza** 45.44 296 IAmb IAmb 23 19 26.9
comp=Z,24nm,1.0s
ZCCA **Zocca** 45.60 299 P P **23 19 27.4 +1.3**
ZCCA IAmb IAmb 23 19 39.1
comp=Z,9.5nm,1.0s
OSSC **Osservatorio P** 45.61 297 IAmb IAmb 23 19 28.5
comp=Z,15nm,0.9s
DAVA **Damuels** 45.73 303 *i* P P **23 19 27.5 +0.3**
comp=Z,29nm,0.5s,SNR=24
BKNI **Bangkinang** 45.73 137 P P **23 19 27.9 +0.5**
comp=Z,69nm,0.5s
DAVOX **Davos/Dischmat** 45.83 302 LR LR 23 42 54.4
comp=Z,27nm,19.2s,baz=241,slow=41
CLTB **Caltabellotta** 45.85 289 P P **23 19 27.2 -1.0**
CLTB IAmb IAmb 23 19 28.9
comp=Z,8.9nm,0.7s
SNART **Snartemo** 46.02 318 *e*P P **23 19 29.9 +0.8**
VLC **Villacollemand** 46.06 299 P P **23 19 30.3 +0.6**
VLC IAmb IAmb 23 19 32.5
comp=Z,17nm,0.8s
TUE **Stuetta** 46.25 302 P P **23 19 31.1 -0.3**
TUE IAmb IAmb 23 19 36.8
comp=Z,6.2nm,0.6s
ODD1 **Odda** 46.27 321 *e*P P **23 19 32.2 +1.1**
BFO **Black Forest** 46.55 305 P P **23 19 33.4 -0.1**
BFO IAmb IAmb 23 19 35.0
comp=Z,11nm,1.1s
BFO **Black Forest** 46.55 305 P P **23 19 33.4 -0.1**
BFO pmax pmax
comp=Z,11nm,1.1s
MSSA **Maissana** 46.63 299 IAmb IAmb 23 19 35.6
comp=Z,13nm,0.8s
BTNL **Ternell** 47.53 308 *d*P P **23 19 42.2 +1.1**
comp=Z,6.1nm,1.1s
MEM **Membach** 47.60 308 *d*P P **23 19 42.6 +1.0**
comp=Z,6.5nm,0.9s
BHOU **Houvegnez** 47.65 308 *d*P P **23 19 43.9 +1.9**
SENIN **Lac Senin/Sane** 47.66 302 IAmb IAmb 23 19 43.5
comp=Z,14nm,0.7s
WLF **Walferdange** 47.69 307 *d*P P **23 19 43.7 +1.4**
comp=Z,15nm,0.9s
KBS **Kingsbay** 47.79 347 *i* P P **23 19 41.8 -0.9**
BSTI **Sart Tilman** 47.88 308 *d*P P **23 19 45.0 +1.2**
BCLA **Clavier** 48.08 308 *d*P P **23 19 46.3 +1.0**
RCHB **Rochefort** 48.18 308 *d*P P **23 19 47.1 +1.1**
comp=Z,4.6nm,0.9s
BGES **Gesves** 48.23 308 *d*P P **23 19 47.1 +0.7**
BNI **Bardonecchia** 48.40 301 P P **23 19 48.5 +0.5**
BNI IAmb IAmb 23 19 50.1
comp=Z,12nm,1.1s
BNI **Bardonecchia** 48.40 301 P P **23 19 48.5 +0.5**
BNI pmax pmax
comp=Z,12nm,1.1s
BMRD **Maredsous** 48.44 308 *d*P P **23 19 49.7 +1.6**
comp=Z,9.5nm,1.0s
DOU **Dourbes** 48.59 308 *d*P P **23 19 50.1 +1.0**
comp=Z,5.8nm,1.1s
SNF **Seneffe** 48.70 308 *d*P P **23 19 51.0 +1.0**
KEST **Kesra** 49.41 288 P P **23 19 56.9 +1.2**
comp=Z,5.4nm,0.5s,baz=356,slow=1.0,SNR=25
comp=Z,5.4nm,0.5s
KEST **Kesra** 49.41 288 P P **23 19 56.5 +0.8**
KEST IAmb IAmb 23 19 57.4
comp=Z,5.8nm,0.6s
SSB **Saint Sauveur** 49.80 301 P P **23 19 57.6 -0.9**
SSB IAmb IAmb 23 19 59.7
comp=Z,8.9nm,0.6s
SSB **Saint Sauveur** 49.80 301 P P **23 19 57.6 -0.9**
SSB pmax pmax
comp=Z,9.0nm,0.6s
KMBO **Kilima Mbogo** 50.04 228 P P **23 20 01.3 +0.4**
comp=Z,2.3nm,0.6s,baz=16,slow=12,SNR=9.6
comp=Z,2.3nm,0.6s
KMBO **Kilima Mbogo** 50.04 228 P P **23 20 02.2 +1.3**
KMBO **Kilima Mbogo** 50.04 228 P P **23 20 02.2 +1.3**
KMBO pmax pmax
comp=Z,3.0nm,0.7s
KMBO **Kilima Mbogo** 50.04 228 P P **23 20 01.4 +0.4**
KIBK **Kibwezi** 50.56 226 P P **23 20 05.6 +0.9**
KIBK IAmb IAmb 23 20 06.5
comp=Z,6.9nm,0.7s
EDMD **Edmundbyers** 51.51 315 *e*P P **23 20 11.0 -0.2**
EDMD IAmb IAmb 23 20 14.4
comp=Z,63nm,1.7s
HPK **Haverah Park** 51.51 314 *e*P P **23 20 11.0 -0.1**
HPK IAmb IAmb 23 20 12.3
comp=Z,26nm,0.7s
MJAR **Matsushiro Arr** 51.92 70 P P **23 20 14.9 +0.4**
comp=Z,1.5nm,0.6s,baz=293,slow=8.0,SNR=4.4
comp=Z,1.5nm,0.6s
MJAR **Matsushiro Arr** 51.92 70 IAmb IAmb 23 20 15.5
comp=Z,1.4nm,1.0s
MJAR **Matsushiro Arr** 51.92 70 P P **23 20 14.9 +0.4**
MJAR pmax pmax
comp=Z,1.0nm,1.0s
EDI **Edinburgh** 51.95 316 *e*P P **23 20 14.4 +0.1**
EDI IAmb IAmb 23 20 16.0
comp=Z,48nm,1.6s
JMIC **Jan Mayen** 51.96 336 LR LR 23 40 59.3
comp=Z,25nm,20.8s,baz=84,slow=34
EKA **Eskdalemuir Ar** 52.07 316 LR LR 23 43 17.3
comp=Z,45nm,20.2s,baz=172,slow=37
NEWG **New Galloway** 52.72 315 *e*P P **23 20 19.9 -0.2**
NEWG IAmb IAmb 23 20 21.1
comp=Z,12nm,0.7s
KAC **Achnashellach** 52.74 319 *e*P P **23 20 20.1 0.0**
MCH1 **Michaelchurch** 52.80 311 *e*P P **23 20 20.8 +0.1**
MCH1 IAmb IAmb 23 20 21.4
comp=Z,22nm,0.8s
NOR **Nord** 52.94 349 *i* P P **23 20 21.1 -0.2**
NOR IAmb IAmb 23 20 21.8
comp=Z,1.1nm,0.6s
JQE **Queens East** 52.99 308 *e*P P **23 20 21.8 -0.3**
JSA **Saint Aubin** 53.08 308 *e*P P **23 20 22.6 -0.2**
JSA IAmb IAmb 23 20 23.7
comp=Z,20nm,1.0s
IOMK **Kirk Michael** 53.12 315 *e*P P **23 20 23.0 -0.1**
IOMK IAmb IAmb 23 20 24.1
comp=Z,29nm,0.9s
YLL **Llanberis** 53.18 313 *e*P P **23 20 22.8 -0.7**
WME **Myndd Eilian** 53.19 313 *e*P P **23 20 23.1 -0.5**
WIM **Isle of Man** 53.21 314 *e*P P **23 20 24.1 +0.3**
WPS **Cemaes, Angles** 53.30 313 *e*P P **23 20 24.7 +0.3**
YRC **Rhoscolyn** 53.39 313 *e*P P **23 20 24.8 -0.2**
RSBS **Rosebush, Pemb** 53.85 312 *e*P P **23 20 28.2 -0.2**
RSBS IAmb IAmb 23 20 29.0
comp=Z,5.9nm,0.7s
DAG **Danmarks Havn** 53.97 343 *i* P P **23 20 29.1 +0.2**
DAG IAmb IAmb 23 20 29.9
comp=Z,8.9nm,0.9s
ROSF **Rostrenen** 54.03 307 *e*P P **23 20 29.3 -0.4**
DAV **Davao City (W)** 57.20 108 LR LR 23 48 14.7
comp=Z,28nm,18.3s,baz=168,slow=39
BILL **Bilibino** 57.38 26⇓ *e*PP **pP 23 20 56.0 +2.6**
BILL *e**PP **pP 23 21 23.1 +1.7**
BILL *e**SP **sP 23 21 37.9 +3.7**
BILL *e* 23 21 48.3
BILL *e* 23 23 01.6
BILL pmax pmax
comp=Z,9.0nm,2.2s
ESBB **Sonseca Array** 57.63 298 IAmb IAmb 23 20 56.9
comp=Z,7.5nm,0.8s
ESDC **Sonseca Array** 57.63 298 P P **23 20 56.0 +0.4**
comp=Z,8.0nm,0.7s,baz=56,slow=7.2,SNR=62
comp=Z,8.0nm,0.7s
ESDC **Sonseca Array** 57.63 298 IAmb IAmb 23 20 56.9
comp=Z,5.9nm,0.9s
MVO **Moncorvo** 59.15 300 *e*P P **23 21 07.0 +0.8**
comp=Z,20nm,1.5s
PCAB **Cabril** 59.60 301 *e*P P **23 21 10.7 +1.4**
comp=Z,37nm,1.5s
PGAV **Gavieira, Arco** 59.66 302 *e*P P **23 21 10.6 +0.8**
MTE **Manteigas** 59.82 300 *e*P P **23 21 11.9 +1.0**
comp=Z,29nm,1.9s
PVIS **Viseu** 59.93 300 *e*P P **23 21 12.5 +0.9**
PMRV **Marv??o** 60.14 299 *e*P P **23 21 14.3 +1.3**
SUMG **Summit** 60.34 341 P P **23 21 15.3 +1.0**
SUMG IAmb IAmb 23 21 16.2
comp=Z,9.3nm,0.8s
SUMG **Summit** 60.34 341 P P **23 21 15.3 +1.0**
SUMG pmax pmax
comp=Z,9.0nm,0.8s
SUMG **Summit** 60.34 341 *i* P P **23 21 14.0 -0.3**
SUMG IAmb IAmb 23 21 16.0
comp=Z,8.3nm,0.8s
COI **Coimbra** 60.51 300 *e*P P **23 21 16.6 +1.2**
PESTR **Estremoz** 60.52 298 *e*P P **23 21 16.8 +1.2**
PSBE **So Bento** 61.08 299 *e*P P **23 21 20.3 +1.0**
PVAQ **Vaqueiros** 61.26 297 *e*P P **23 21 21.4 +0.8**
comp=Z,29nm,1.7s
MESJ **Messejana** 61.42 297 *e*P P **23 21 22.5 +0.9**
PBDV **Barranco-do-Ve** 61.48 297 *e*P P **23 21 23.4 +1.3**
comp=Z,50nm,1.7s
EUNU **Eureka** 62.05 356 P P **23 21 26.1 +0.7**
EUNU IAmb IAmb 23 21 28.0
comp=Z,4.7nm,1.1s
ICESG **Greenland Ices** 62.55 338 *i* P P **23 21 29.2 +0.1**
ICESG IAmb IAmb 23 21 30.0
comp=Z,5.2nm,0.6s
AVE **Averroes** 62.95 292 P P **23 21 31.9 -0.1**
TULEG **Thule** 63.56 350 *i* P P **23 21 38.6 +3.4**
TULEG IAmb IAmb 23 21 39.9
comp=Z,5.3nm,0.8s
VOI **Vohitsoka** 63.66 206 P P **23 21 36.7 0.0**
VOI IAmb IAmb 23 21 40.1
comp=Z,7.5nm,1.0s
TOA0 **Torodi Ar. Sit** 66.46 269 P P **23 21 54.3 -0.6**
TOA0 IAmb IAmb 23 21 55.0
comp=Z,9.2nm,0.6s
TORD **Torodi Ar. Bea** 66.46 269 P P **23 21 54.2 -0.8**
comp=Z,9.0nm,0.6s,baz=50,slow=5.9,SNR=163
comp=Z,9.0nm,0.6s
TORD **Torodi Ar. Bea** 66.46 269 P P **23 21 54.2 -0.8**
TORD IAmb IAmb 23 21 54.9
comp=Z,6.6nm,0.7s
SFJD **Kangerlussuaq** 67.08 339 LR LR 23 52 14.3
comp=Z,41nm,18.2s,baz=232,slow=37
RES **Resolute Bay** 67.74 356 P P **23 22 02.5 +0.4**
RES **Resolute Bay** 67.74 356 P P **23 22 02.5 +0.4**
RES pmax pmax
comp=Z,2.0nm,0.8s
TOLK **Toolik Lake Re** 69.76 15 P P **23 22 15.4 +0.6**
TOLK IAmb IAmb 23 22 16.2
comp=Z,5.6nm,0.6s
A36M **Sachs Harbour** 70.13 6 P P **23 22 16.0 -0.9**
PMOZ **Porto Moniz, M** 70.27 297 P P **23 22 18.1 -0.5**
IVI **Ivigtut** 70.27 334 P P **23 22 19.7 +1.7**
IVI IAmb IAmb 23 22 20.6
comp=Z,9.0nm,0.8s
IMAR **Indian Mountai** 70.99 18 P P **23 22 22.5 +0.2**
H21K **Melozitna Rive** 71.49 18 P P **23 22 26.4 +1.1**
BMAR **Burnt Mountain** 71.79 14 P P **23 22 27.8 +0.7**
I21K **Tanana** 72.08 18 P P **23 22 29.0 +0.3**
H23K **Yukon River** 72.12 17 P P **23 22 30.0 +0.9**
J20K **Nowinta River** 72.34 19 P P **23 22 31.6 +1.2**
H24K **Noodor Dome** 72.48 16 P P **23 22 32.4 +1.1**
MLY **Manley** 72.50 18 P P **23 22 33.1 +1.7**
INK **Inuvik** 72.79 10 P P **23 22 33.7 +0.8**
INK **Inuvik** 72.79 10 P P **23 22 33.7 +0.8**
INK pmax pmax
comp=Z,5.0nm,1.1s
C36M **Paulatuk** 72.80 6 P P **23 22 33.3 +0.4**
C36M IAmb IAmb 23 22 51.6
comp=Z,11nm,0.9s
K20K **Telida** 73.02 20 P P **23 22 35.6 +1.2**
MDM **Murphy Dome** 73.15 17 P P **23 22 35.9 +0.7**
POKR **Poker Plat Res** 73.19 16 P P **23 22 37.0 +1.6**
BPAW **Bear Paw Mtn.** 73.21 18 P P **23 22 35.6 0.0**
COLA **College** 73.31 17*de*P P **23 22 37.2 +1.2**
COLA pmax pmax
comp=Z,4.0nm,0.6s
CCB **Clear Creek Bu** 73.51 17 P P **23 22 37.8 +0.5**
ILAR **Eielson Array** 73.61 16 P P **23 22 37.2 -0.7**
comp=Z,1.2nm,0.8s,baz=324,slow=4.8,SNR=11
comp=Z,1.2nm,0.8s
ILAR **Eielson Array** 73.61 16 P P **23 22 37.8 -0.1**
ILAR **Eielson Array** 73.61 16 P P **23 22 37.8 -0.1**
L19K **White Mountain** 73.75 21 P P **23 22 39.6 +0.9**
PPLA **Purkeypile** 73.90 19 P P **23 22 40.3 +0.6**
PPLA IAmb IAmb 23 22 43.2
comp=Z,7.5nm,1.0s
TRF **Thorofare Moun** 73.92 18 P P **23 22 41.6 +1.7**
J25K **Salcha River,** 74.08 16 P P **23 22 41.6 +0.9**
PSA00 **Pilbara Seismi** 74.09 134 P P **23 22 41.7 +0.6**
J26L **Joseph Creek** 74.56 15 P P **23 22 44.0 +0.5**
SKT **Skwentna** 74.83 20 P P **23 22 45.0 +0.1**
SCRK **Sand Creek** 74.93 16 P P **23 22 46.0 +0.3**
DHY **Denali Highway** 74.95 17 P P **23 22 46.7 +0.8**
RIDG **Independent Ri** 74.95 16 P P **23 22 45.5 -0.2**
K27K **Chicken** 75.28 15 P P **23 22 48.0 +0.4**
SUA **Susitna One** 75.46 20 P P **23 22 49.1 +0.3**
SUA IAmb IAmb 23 23 02.5
comp=Z,7.9nm,1.0s
DBIC **Dimbokro** 75.47 267 P P **23 22 49.3 -0.1**
DBIC IAmb IAmb 23 23 03.0
comp=Z,13nm,1.1s
DBIC **Dimbokro** 75.47 267 P P **23 22 49.3 -0.1**
DBIC pmax pmax
comp=Z,13nm,1.1s
PAX **Paxson** 75.49 17 P P **23 22 49.0 +0.1**
PAX **Paxson** 75.49 17 P P **23 22 49.0 +0.1**
PAX pmax pmax
comp=Z,2.0nm,0.8s
O18K **Koktuh Hills** 75.51 22 P P **23 22 50.3 +1.4**
O18K IAmb IAmb 23 22 51.4
comp=Z,5.9nm,0.9s
SML **Sawmill** 75.80 18 P P **23 22 51.0 +0.4**
SML IAmb IAmb 23 22 51.5
comp=Z,8.1nm,1.0s
LBTB **Lobatse** 75.91 223 P P **23 22 50.9 -0.8**
LBTB **Lobatse** 75.91 223 P P **23 22 50.9 -0.8**
SCM **Sheep Creek Mo** 76.03 18 P P **23 22 52.4 +0.5**
SCM IAmb IAmb 23 22 53.2
comp=Z,4.9nm,0.8s
SCM **Sheep Creek Mo** 76.03 18 P P **23 22 52.4 +0.5**
SCM pmax pmax
comp=Z,5.0nm,0.8s
M24K **Tolsona, Glenn** 76.07 17 P P **23 22 52.9 +0.8**
M24K IAmb IAmb 23 22 57.9
comp=Z,14nm,1.1s
L27K **Beaver Creek,** 76.20 15 P P **23 22 54.0 +1.2**
BCAR **Beaver Creek A** 76.20 15 P P **23 22 53.9 +1.1**
M27K **Edge Creek, AK** 76.82 15 P P **23 22 57.9 +1.4**
GLI **Glacier Island** 76.91 18 P P **23 22 57.4 +0.6**
GLI IAmb IAmb 23 23 11.3
comp=Z,15nm,1.1s
MORW **Morawa** 78.08 141 P P **23 23 04.0 +0.3**
MORW IAmb IAmb 23 23 09.7
comp=Z,5.8nm,0.8s
LOGN **Logan Glacier** 78.38 16 P P **23 23 01.9 -3.3**
TABL **Table Mountain** 78.69 16 P P **23 23 07.3 +0.3**
TABL IAmb IAmb 23 23 12.8
comp=Z,9.1nm,1.2s
YKA **Yellowknife Ar** 80.20 3 P P **23 23 15.2 +0.4**
comp=Z,2.7nm,0.5s,baz=352,slow=5.5,SNR=16
comp=Z,2.7nm,0.5s
SCHQ **Schefferville** 81.45 337 P P **23 23 21.7 +0.1**
comp=Z,2.7nm,0.7s,baz=5.8,slow=3.1,SNR=5.5
comp=Z,2.7nm,0.7s
SCHQ **Schefferville** 81.45 337 P P **23 23 22.3 +0.7**
WRA **Warramunga Arr** 81.92 123 P P **23 23 23.0 -1.5**
comp=Z,1.0nm,0.7s,baz=326,slow=5.2,SNR=8.3
comp=Z,1.0nm,0.7s
WB2 **Warramunga Arr** 81.93 123 P P **23 23 23.2 -1.4**
WB2 IAmb IAmb 23 23 27.1
comp=Z,6.3nm,1.1s
SIT **Sitka** 83.02 15 P P **23 23 30.4 +0.7**
SIT IAmb IAmb 23 23 44.7
comp=Z,15nm,1.2s
SIT **Sitka** 83.02 15 P P **23 23 30.4 +0.7**
SIT pmax pmax
comp=Z,15nm,1.2s
FCC **Fort Churchill** 83.37 353 P P **23 23 32.1 +0.6**
FCC IAmb IAmb 23 23 33.0
comp=Z,4.6nm,0.8s
FCC **Fort Churchill** 83.37 353 P P **23 23 32.1 +0.6**
FCC pmax pmax
comp=Z,5.0nm,0.8s
ASAR **Alice Springs** 84.25 126 P P **23 23 34.5 -1.9**
comp=Z,0.3nm,0.7s,baz=314,slow=5.3,SNR=2.2

IDC **10** *23:12:41.5±2.5,5.˚66S×146.˚51E,h64km±25km, mb3.8/8, mbtmp4.2/13,ML4.1/4,MS3.2/4, Error ellipse: s-maj=22.2km s-min=17.2km az=89.0*
NEIC **10** *23:12:42.5±1.2,5.˚6S±0.˚1×146.˚5E±0.˚2,h70km±10km, mb4.2/11, Error ellipse: s-maj=22.3km s-min=15.8km az=76.0*

ISC 10 23:12:44.7±0.6,**5.74S**±0.˚07×**146.˚51E**±0.˚09,**h100**km,**n36,**
σ1§**49**/33,**mb4.1**/11,**Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.70**	**170**	P	**Pn**	**23 13 38.4**	**-1.5**
	52nm,0.3s,baz=84,slow=4.4,SNR=16						
PMG				S	**Sn**	**23 14 20.3**	**-2.2**
	71nm,0.6s,baz=332,slow=9.9,SNR=6.2						
PMG				LR	LR	23 15 34.9	
	comp=Z,156nm,21.4s,baz=32,slow=46						
PMG	**Port Moresby**	**3.70**	**170**		**Pn**	**23 13 39.3**	**-0.6**
KRVT	**Keravat (AS076**	**5.67**	**76**	P	**Pn**	**23 14 03.5**	**-3.2**
	5.9nm,0.3s,baz=349,slow=23,SNR=1.4						
	19nm,0.4s						

COEN	**Coen**	**8.80**	**202**	Pn	**Pn**	**23 14 48.0**	**-1.2**
CTA	**Charters Tower**	**14.26**	**181**	P	**Pn**	**23 16 02.6**	**+0.4**
	0.6nm,0.3s,baz=5.0,slow=14,SNR=6.5 1.8nm,0.4s						
CTAO	**Charters Tower**	**14.26**	**181**	Pn	**Pn**	**23 16 03.6**	**+1.4**
SIJI	**Sorong**	**15.97**	**287**	P	**P**	**23 16 22.4**	**-3.0**
	1.0nm,0.3s,baz=130,slow=17,SNR=8.2 14nm,0.6s						
MTN	**Manton Dam**	**16.73**	**244**		**P**	**23 16 32.9**	**-0.9**
MTN				IAmb	IAmb	23 16 50.6	
	comp=Z,40nm,1.2s						
WB0	**Warramunga Arr**	**18.26**	**219**	P	**Pn**	**23 16 51.6**	**-0.1**
WB0				IAmb	IAmb	23 16 56.2	
	comp=Z,8.3nm,1.2s						
WR0	**Warramunga Arr**	**18.31**	**218**	P	**Pn**	**23 16 51.8**	**-0.5**
WR0				IAmb	IAmb	23 17 07.8	
	comp=Z,13nm,1.3s						
WB2	**Warramunga Arr**	**18.41**	**219**	P	**Pn**	**23 16 52.5**	**-1.0**
WB2				IAmb	IAmb	23 17 02.2	
	comp=Z,11nm,1.3s						
WRA	**Warramunga Arr**	**18.42**	**219**	P	**P**	**23 16 51.3**	**-1.1**
	comp=Z,0.5nm,0.3s,baz=40,slow=12,SNR=14						
WRA				PcP	**PcP**	**23 21 21.1**	**+1.8**
	comp=Z,0.4nm,0.9s,baz=16,slow=1.7,SNR=5.7						
WRA				LR	LR	23 25 02.5	
	comp=Z,118nm,19.4s,baz=92,slow=40 comp=Z,1.1nm,0.5s						
EIDS	**Eidsvold**	**20.00**	**168**	P	Pn	23 17 11.1	-1.1
AS31	**Alice Springs**	**21.56**	**213**	P	**P**	**23 17 26.5**	**+0.1**
ASAR	**Alice Springs**	**21.56**	**213**	P	**P**	**23 17 25.5**	**-0.9**
	comp=Z,1.2nm,0.5s,baz=44,slow=9.3,SNR=23						
ASAR				PcP	**PcP**	**23 21 27.0**	**+2.0**
	comp=Z,0.4nm,0.7s,baz=57,slow=3.4,SNR=3.3 comp=Z,1.2nm,0.5s						
ASAR	**Alice Springs**	**21.56**	**213**	P	**P**	**23 17 27.5**	**+1.1**
BATI	**Baumata**	**23.05**	**257**	P	**P**	**23 17 42.5**	**+0.6**
	comp=Z,21nm,0.5s,baz=319,slow=2.5,SNR=3.7 comp=Z,21nm,0.5s						
STKA	**Stephens Creek**	**26.41**	**189**	P	**P**	**23 18 14.3**	**+2.2**
	comp=Z,0.6nm,0.4s,baz=350,slow=11,SNR=1.5 comp=Z,0.6nm,0.4s						
TOLI2	**Tolitoli**	**26.58**	**284**	P	**P**	**23 18 12.8**	**-1.0**
TOLI2				IAmb	IAmb	23 18 13.5	
	comp=Z,8.1nm,1.3s						
PSA00	**Pilbara Seismi**	**30.23**	**236**	P	**P**	**23 18 45.9**	**-0.3**
PSA00				IAmb	IAmb	23 19 00.6	
	comp=Z,23nm,1.4s						
H11S3	**WAKE ISLAND Hy**	**31.24**	**39**	T	T	23 51 16.2	
	baz=222						
H11S2	**WAKE ISLAND Hy**	**31.25**	**39**	T	T	23 51 25.5	
	baz=222						
H11S1	**WAKE ISLAND Hy**	**31.26**	**39**	T	T	23 51 18.1	
	baz=222						
MJAR	**Matsushiro Arr**	**42.77**	**350**	LR	LR	23 36 36.1	
	comp=Z,51nm,21.1s,baz=121,slow=34						
RPZ	**Rata Peaks**	**43.55**	**154**	P	**P**	**23 20 39.9**	**+1.2**
	comp=Z,6.6nm,0.6s,baz=347,slow=7.1,SNR=1.5 comp=Z,6.6nm,0.6s						
RPZ	**Rata Peaks**	**43.55**	**154**	P	**P**	**23 20 40.3**	**+1.7**
KHZ	**Kahutara**	**43.68**	**151**	P	**P**	**23 20 39.6**	**0.0**
LBZ	**Lake Benmore**	**43.72**	**155**	P	**P**	**23 20 42.4**	**+2.3**
CMAR	**Chiang Mai Arr**	**52.70**	**298**	P	**P**	**23 21 50.1**	**+0.6**
	comp=Z,0.7nm,0.4s,baz=123,slow=5.5,SNR=1.2 comp=Z,0.7nm,0.4s						
KLR	**Kul'dur**	**56.24**	**348**	LR	LR	23 44 15.7	
	comp=Z,30nm,21.3s,baz=356,slow=34						
SONM	**Songino Array**	**63.94**	**331**	P	**P**	**23 23 08.5**	**+1.1**
	comp=Z,0.3nm,0.4s,baz=145,slow=5.3,SNR=2.3 comp=Z,0.3nm,0.4s						
CASY	**Casey**	**65.38**	**195**	P	**P**	**23 23 17.6**	**+1.4**
CASY				IAmb	IAmb	23 23 29.5	
	comp=Z,7.6nm,1.2s						
ZALV	**Zalesovo Beam**	**78.54**	**328**	P	**P**	**23 24 34.1**	**-0.9**
	comp=Z,0.7nm,0.5s,baz=98,slow=7.9,SNR=2.7 comp=Z,0.7nm,0.5s						
IMAR	**Indian Mountai**	**83.42**	**21**	P	**P**	**23 25 02.1**	**+1.4**
ILAR	**Eielson Array**	**85.44**	**23**	P	**P**	**23 25 10.6**	**-0.3**
	comp=Z,1.6nm,0.7s,baz=252,slow=5.1,SNR=12 comp=Z,1.6nm,0.7s						
TORD	**Torodi Ar. Bea**	**144.56**	**285**	PKP	**PKPdf**	**23 32 09.4**	**-1.2**
	comp=Z,1.1nm,0.7s,baz=69,slow=3.9,SNR=12						

*INET **10** 23:19:17.1±0.5, 12°.84N×87°.06W, h13km±2km, MW3.5*
*SNET **10** 23:19:19.2±0.8, 13°.00N×87°.11W, h12km±8km, ML3.6*
*UCR **10** 23:19:19.3±0.8, 13°.01N×87°.10W, h16km±3km, ML3.5*

ISC 10 23:19:16.6±1.2, 12°.95N±0°.05×87°.02W±0°.05, h8km±10km, n28, σ0s48/40, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CRIN	**San Cristobal**	**0.25**	**188**	*eP*		**Pg**	**23 19 21.9**	**+0.3**
CRIN				*eS*		**Sg**	**23 19 24.6**	**-0.4**
TELN	**Telica**	**0.39**	**152**	*eP*		**Pg**	**23 19 24.4**	**+0.2**
TEL3	**Telica 3**	**0.41**	**156**	*eP*		**Pg**	**23 19 24.5**	**-0.2**
CNGN	**Cerro Negro**	**0.54**	**145**	*eP*		**Pg**	**23 19 27.4**	**+0.3**
MOMN	**Momotombo**	**0.71**	**139**	*eP*		**Pg**	**23 19 30.0**	**-0.3**
CNCH	**Conchagua**	**0.86**	**292**	*eP*		**Pg**	**23 19 33.2**	**+0.1**
CNCH				*eS*		**Sb**	**23 19 44.9**	**-0.6**
CNCH	**Conchagua**	**0.86**	**292**	*eP*		**Pg**	**23 19 33.2**	**+0.1**
CNCH				*eS*		**Sb**	**23 19 44.9**	**-0.6**
COPN	**Copaltepe**	**0.87**	**152**	*eP*		Pg	23 19 32.2	-1.1
LCND	**La Caada**	**0.92**	**293**	*eP*		**Pg**	**23 19 34.4**	**0.0**
LCND				*eS*		**Sg**	**23 19 46.3**	**-0.1**
LCND				IAML			23 19 51.1	
	comp=Z,2μm,0.4s							
LCND	**La Caada**	**0.92**	**293**	*eP*		**Pg**	**23 19 34.4**	**0.0**
LCND				*eS*		**Sg**	**23 19 46.3**	**-0.1**
LCND				IAML			23 19 51.1	
	comp=Z,2μm,0.4s							
TGUH	**Tegucigalpa,Un**	**1.13**	**347**	*eP*		**Pb**	**23 19 38.7**	**+0.3**
TGUH				*eS*		**Sb**	**23 19 52.8**	**-0.6**
TGUH	**Tegucigalpa,Un**	**1.13**	**347**	*eP*		**Pb**	**23 19 38.7**	**+0.3**
TGUH				*eS*		**Sb**	**23 19 52.8**	**-0.6**
VSM	**San Miguel**	**1.31**	**291**	*eP*		**Pn**	**23 19 41.0**	**-0.5**
VSM				*eS*		**Sg**	**23 19 58.8**	**-0.2**
VSM	**San Miguel**	**1.31**	**291**	*eP*		**Pn**	**23 19 41.0**	**-0.5**
VSM				*eS*		**Sg**	**23 19 58.8**	**-0.2**
LCY	**Lacayo**	**1.33**	**291**	*eP*		**Pn**	**23 19 41.0**	**-0.5**
LCY	**Lacayo**	**1.33**	**291**	*eP*		**Pn**	**23 19 41.0**	**-0.5**
PACA	**Pacayal**	**1.37**	**292**	*eP*		**Pn**	**23 19 42.0**	**-0.2**
PACA				IAML			23 20 16.7	
	comp=Z,7μm,0.5s							
PACA	**Pacayal**	**1.37**	**292**	*eP*		**Pn**	**23 19 42.0**	**-0.2**
PACA				IAML			23 20 16.7	
	comp=Z,7μm,0.5s							
COEB	**Comit de Eme**	**1.57**	**290**	*eP*		**Pn**	**23 19 45.4**	**+0.5**
COEB				*eS*		**Sn**	**23 20 05.3**	**-0.2**
COEB	**Comit de Eme**	**1.57**	**290**	*eP*		**Pn**	**23 19 45.4**	**+0.5**
COEB				*eS*		**Sn**	**23 20 05.3**	**-0.2**
SCLA	**Alcaldia de Sa**	**1.83**	**294**	*eP*		**Pn**	**23 19 48.8**	**+0.5**
SCLA				IAML			23 20 25.0	
	comp=Z,176nm,0.6s							
SCLA	**Alcaldia de Sa**	**1.83**	**294**	*eP*		**Pn**	**23 19 48.8**	**+0.5**
SCLA				IAML			23 20 25.0	
	comp=Z,176nm,0.6s							
COEG	**Centro de Oper**	**1.93**	**290**	*eP*		**Pn**	**23 19 50.5**	**+0.7**
COEG				IAML			23 20 22.5	
	comp=Z,439nm,0.5s							
COEG	**Centro de Oper**	**1.93**	**290**	*eP*		**Pn**	**23 19 50.5**	**+0.7**
COEG				IAML			23 20 22.5	
	comp=Z,439nm,0.5s							
PAVA	**Las Pavas**	**2.02**	**292**	*eP*		**Pn**	**23 19 52.2**	**+1.1**
PAVA				*eS*		**Sn**	**23 20 16.8**	**+0.3**
PAVA	**Las Pavas**	**2.02**	**292**	*eP*		**Pn**	**23 19 52.2**	**+1.1**
PAVA				*eS*		**Sn**	**23 20 16.8**	**+0.3**
SJTE	**Alcalda de S**	**2.05**	**289**	*eP*		**Pn**	**23 19 51.8**	**+0.4**
SJTE				IAML			23 20 24.6	
	comp=Z,176nm,0.3s							
SJTE	**Alcalda de S**	**2.05**	**289**	*eP*		**Pn**	**23 19 51.8**	**+0.4**
SJTE				IAML			23 20 24.6	
	comp=Z,176nm,0.3s							

DJA 10 23:19:23.4±0.3, 9°S±3°×11°9E±°, h104km±5km, M3.8/13, mb3.9/2, MLv3.7/13, MwMwp5.6/1, Mwp5.7/1, Flores region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WBSI	**Waikabubak, Su**	**0.67**	**171**	P		Pn	23 19 41.8	+0.8
WBSI				S		Sn	23 19 55.9	+1.8
PLAI	**Plampang**	**1.49**	**276**	P		Pn	23 19 50.5	+0.7
PLAI				S		Sn	23 20 11.1	+1.3
BASI	**Baing, Sumba**	**1.78**	**134**	P		Pn	23 19 54.2	+0.9
EDFI	**Ende, Flores**	**2.39**	**85**	P		Pn	23 20 01.6	+0.3
EDFI				S		Sn	23 20 29.9	-0.5
MMRI	**Maumere**	**2.94**	**84**	P		Pn	23 20 09.1	+0.6
BSSI	**Bau Bau, Buton**	**3.06**	**23**	P		Pn	23 20 10.2	+0.1
BSSI				S		Sn	23 20 46.0	-0.2
BKSI	**Bulukumba**	**3.73**	**13**	P		Pn	23 20 19.5	+0.5
DNP	**Denpasar**	**4.03**	**274**	P		Pn	23 20 24.3	+1.2
IGBI	**Denpasar**	**4.09**	**272**	P		Pn	23 20 23.6	-0.3
SRBI	**Singaraja**	**4.12**	**282**	P		Pn	23 20 24.3	0.0
BATI	**Baumata**	**4.49**	**106**	P		Pn	23 20 29.6	+0.3
GMJI	**Gumukmas**	**5.81**	**276**	P		Pn	23 20 45.0	-2.2

*NEIC **10** 23:19:56.5±1.9, 31°.04S±0°.08×179°.8W±0°.2, h341km±6km, mb4.0/20, Error ellipse: s-maj=20.8km s-min=10.0km az=107.0*
*IDC **10** 23:19:56.0±1.2, 31°.09S×179°.76W, h350km±11km, mb3.4/7, mbtmp4.2/11, Error ellipse: s-maj=22.8km s-min=14.7km az=119.0*
*WEL **10** 23:20:00.9±0.6, 32°.5S±8°×17°.9W±2°.0, h297km±8km, M4.6/30, mB5.0/21, ML5.2/25, MLv5.4/30, Mw(mB)4.3/21, Error ellipse: s-maj=0.0km s-min=0.0km az=110.4*

ISC 10 23:19:56.8±0.4, 31°.06S±0°.05×179°.68W±0°.09, h350km, n167, σ2s03/202, mb3.8/13, 1C, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GLKZ	**Green Lake**	**2.35**	**41**	P		**Pn**	**23 20 49.6**	**-1.1**
GLKZ				S		**S**	**23 21 29.9**	**-4.0**
RIZ	**Raoul Island**	**2.35**	**40**	P		**Pn**	**23 20 50.2**	**-0.5**
RIZ				S		**S**	**23 21 32.7**	**-1.4**
RAO	**Raoul Island**	**2.35**	**41**	P		**Pn**	**23 20 50.8**	**0.0**
	744nm,0.3s,baz=261,slow=19,SNR=5.1							
RAO				S		**S**	**23 21 29.9**	**-4.2**
	1μm,0.3s,baz=264,slow=11,SNR=12							
RAO	**Raoul Island**	**2.35**	**41**			**Pn**	**23 20 50.5**	**-0.2**
RAO					Sn	**S**	**23 21 32.6**	**-1.4**
MXZ	**Matakaoa Point**	**6.70**	**194**		Pn	**Pn**	**23 21 36.5**	**+1.0**
MXZ						**S**	**23 22 56.8**	**+1.0**
MXZ	**Matakaoa Point**	**6.70**	**194**	P		**Pn**	**23 21 38.2**	**+2.7**
MXZ				S		**S**	**23 22 53.6**	**-2.2**
KUZ	**Kuaotunu**	**6.84**	**213**	P		**Pn**	**23 21 42.0**	**+4.8**
WMGZ	**Waiomatatini S**	**6.93**	**193**	P		**Pn**	**23 21 39.1**	**+0.9**
WMGZ				S		**S**	**23 22 59.7**	**-0.9**
HAZ	**Te Kaha**	**7.01**	**197**	P		**Pn**	**23 21 39.9**	**+0.9**
HAZ				S		**S**	**23 23 00.4**	**-1.9**
PKGZ	**Pakihiroa**	**7.06**	**195**	P		**Pn**	**23 21 40.3**	**+0.5**
PKGZ				S		**S**	**23 22 59.6**	**-4.0**
PUZ	**Puketiti**	**7.20**	**193**	P		**Pn**	**23 21 40.0**	**-1.4**
PUZ				S		**S**	**23 23 03.1**	**-3.4**
RUGZ	**Raukumara Rang**	**7.23**	**197**	P		**Pn**	**23 21 41.9**	**+0.1**
TWGZ	**Tauwhareparae**	**7.36**	**195**	P		**Pn**	**23 21 44.3**	**+1.0**
OPRZ	**Ohinepanea**	**7.45**	**204**	P		**Pn**	**23 21 48.1**	**+3.8**
CNGZ	**Cannagh Statio**	**7.61**	**193**	P		**Pn**	**23 21 47.9**	**+1.8**
MWZ	**Matawai**	**7.62**	**197**	P		**Pn**	**23 21 45.0**	**-1.3**
EDRZ	**Edgecumbe**	**7.63**	**202**	P		**Pn**	**23 21 49.8**	**+3.3**
TKGZ	**Te Karaka**	**7.64**	**195**	P		**Pn**	**23 21 48.4**	**+1.9**
URZ	**Urewera**	**7.66**	**199**	P		**Pn**	**23 21 44.4**	**-2.3**
	11nm,0.3s,baz=64,slow=12,SNR=25							
URZ				S		**S**	**23 23 14.0**	**-2.3**
	203nm,0.5s,baz=4.2,slow=9.8,SNR=16							
URZ	**Urewera**	**7.66**	**199**		Pn	**Pn**	**23 21 45.7**	**-1.0**
URZ					Sn	**S**	**23 23 15.6**	**-0.7**
URZ	**Urewera**	**7.66**	**199**	P		**Pn**	**23 21 43.4**	**-3.3**
URZ				S		**S**	**23 23 13.6**	**-2.7**
OMRZ	**Omania**	**7.75**	**204**	P		**Pn**	**23 21 52.7**	**+4.8**
RAWZ	**Rawiri**	**7.80**	**197**	P		**Pn**	**23 21 50.8**	**+2.3**
RAGZ				S		**S**	**23 23 17.6**	**-2.0**
RIGZ	**Rimuhau**	**7.92**	**195**	P		**Pn**	**23 21 49.2**	**-0.7**
RIGZ				S		**S**	**23 23 18.7**	**-3.3**
MUGZ	**Murupara**	**7.96**	**201**	P		**Pn**	**23 21 48.9**	**-1.4**
MUGZ				S		**S**	**23 23 18.3**	**-4.6**
HSRZ	**Hossack Road**	**7.98**	**204**	P		**Pn**	**23 21 54.8**	**+4.3**
RTZ	**Ruatahuna**	**8.03**	**199**	P		**Pn**	**23 21 50.4**	**-0.7**
RTZ				S		**S**	**23 23 20.4**	**-4.1**
HRRZ	**Handcock Road**	**8.04**	**203**	P		**Pn**	**23 21 53.3**	**+2.1**
GRRZ	**Galatos Road**	**8.06**	**204**	P		**Pn**	**23 21 55.8**	**+4.3**
PRRZ	**Plateau Road**	**8.10**	**202**	P		**Pn**	**23 21 53.5**	**+1.6**
PRRZ				S		**S**	**23 23 24.5**	**-1.4**
PRGZ	**Paritu Road**	**8.10**	**194**	P		**Pn**	**23 21 54.5**	**+2.5**
PRGZ				S		**S**	**23 23 22.1**	**-3.8**
ALRZ	**Allen Road**	**8.17**	**203**	P		**P**	**23 21 55.3**	**-0.5**
WPRZ	**Whakapapatarin**	**8.20**	**204**	P		**P**	**23 21 56.2**	**+0.2**
KNZ	**Kokohu**	**8.24**	**195**	P		**Pn**	**23 21 50.9**	**-2.6**
KNZ				S		**S**	**23 23 24.4**	**-6.5**
TLZ	**Tolley Road**	**8.26**	**207**	P		**P**	**23 21 59.1**	**+2.4**
RAHZ	**Arahi**	**8.28**	**198**	P		**Pn**	**23 21 51.6**	**-2.5**
RAHZ				S		**S**	**23 23 27.7**	**-2.2**
MTHZ	**Maungataniwha**	**8.29**	**199**	P		**Pn**	**23 21 54.1**	**-0.1**
KUTZ	**Kaahu Road**	**8.29**	**205**	P		**P**	**23 21 57.8**	**+0.8**
MHGZ	**Mahia Peninsul**	**8.32**	**193**	P		**Pn**	**23 21 54.6**	**0.0**
MHGZ				S		**S**	**23 23 27.7**	**-3.0**
WATZ	**Wairara**	**8.51**	**205**	P		**P**	**23 21 59.0**	**-0.5**
NMHZ	**Naumai**	**8.53**	**199**	P		**Pn**	**23 21 55.1**	**-2.0**
NMHZ				S		**S**	**23 23 32.3**	**-3.0**
ARHZ	**Aropaoanui**	**8.63**	**197**	P		**Pn**	**23 21 55.8**	**-2.4**
ARHZ				S		**S**	**23 23 34.9**	**-2.6**
RATZ	**Rangitukua**	**8.64**	**204**	P		**P**	**23 22 00.9**	**-0.1**
BKZ	**Black Stump Fm**	**8.68**	**200**	P		**Pn**	**23 21 59.6**	**+0.7**
BKZ	**Black Stump Fm**	**8.68**	**200**	P		**Pn**	**23 21 56.7**	**-2.1**
BKZ				S		**S**	**23 23 34.4**	**-4.3**
HIZ	**Hauiti**	**8.69**	**210**	Pn		**P**	**23 22 00.8**	**-0.8**
MCHZ	**McNeill Hill**	**8.88**	**199**	P		**Pn**	**23 22 02.1**	**+0.9**
MCHZ				S		**S**	**23 23 39.8**	**-3.2**
NTVZ	**North Tongarir**	**8.88**	**204**	P		**Pn**	**23 22 01.8**	**+0.5**
NTVZ				S		**S**	**23 23 42.4**	**-0.8**
TMVZ	**Te Maari**	**8.89**	**204**	P		**Pn**	**23 22 02.3**	**+0.9**
KRVZ	**Karewarewa**	**8.89**	**204**	P		**Pn**	**23 22 01.8**	**+0.3**
ETVZ	**East Tongariro**	**8.90**	**204**	P		**Pn**	**23 22 02.4**	**+0.8**
WTVZ	**West Tongariro**	**8.93**	**204**	P		**Pn**	**23 22 02.2**	**+0.3**
NNVZ	**North Ngauruho**	**8.93**	**204**	P		**P**	**23 22 03.7**	**-0.6**
KWHZ	**Kaweka Forest**	**8.94**	**200**	P		**Pn**	**23 22 03.0**	**+1.1**
KWHZ				S		**S**	**23 23 40.9**	**-3.5**
OTVZ	**Oturere**	**8.94**	**204**	P		**Pn**	**23 22 02.9**	**+0.7**
SNVZ	**South Ngauruho**	**8.97**	**204**	P		**Pn**	**23 22 02.9**	**+0.4**
NGZ	**Ngauruhoe**	**8.98**	**204**	P		**Pn**	**23 22 02.6**	**+0.1**
CKHZ	**Cape Kidnapper**	**8.98**	**196**	P		**Pn**	**23 22 02.3**	**-0.1**
CKHZ				S		**S**	**23 23 41.6**	**-3.6**
TUVZ	**Tukino**	**9.04**	**204**	P		**Pn**	**23 22 02.6**	**-0.7**
FWVZ	**Far West T-bar**	**9.06**	**204**	P		**Pn**	**23 22 04.0**	**+0.4**
WHVZ	**Whangaehu Hut**	**9.08**	**204**	P		**Pn**	**23 22 03.7**	**-0.1**
TRVZ	**Turoa**	**9.11**	**204**	P		**Pn**	**23 22 04.3**	**+0.2**
BHHZ	**Black Hill Sta**	**9.11**	**201**	P		**Pn**	**23 22 02.5**	**-1.5**
MOVZ	**Moawhango**	**9.13**	**203**	P		**Pn**	**23 22 03.6**	**-0.7**
KRHZ	**Kereru**	**9.16**	**200**	P		**Pn**	**23 22 04.9**	**+0.4**
KAHZ	**Kahuranaki**	**9.16**	**197**	P		**Pn**	**23 22 01.5**	**-3.1**
PKVZ	**Pokaka**	**9.17**	**205**	P		**Pn**	**23 22 06.2**	**+1.5**
PXZ	**Pawanui**	**9.39**	**197**	P		**Pn**	**23 22 05.4**	**-1.9**
WPHZ	**Waipukurau**	**9.53**	**198**	P		**Pn**	**23 22 09.6**	**+0.7**
PRHZ	**Porangahau**	**9.67**	**197**	P		**Pn**	**23 22 08.8**	**-1.7**
ANWZ	**Angora Road**	**9.89**	**197**	P		**Pn**	**23 22 14.1**	**+0.8**
POWZ	**Post Office Ro**	**10.02**	**200**	P		**Pn**	**23 22 14.8**	**0.0**
PRWZ	**Pori Road**	**10.12**	**199**	P		**Pn**	**23 22 15.1**	**-0.8**
BFZ	**Birch Farm**	**10.16**	**198**			**Pn**	**23 22 16.4**	**-0.1**
CPWZ	**Castlepoint**	**10.38**	**198**	P		**Pn**	**23 22 18.5**	**-0.6**
MSWZ	**Moikau Station**	**11.12**	**200**	P		**Pn**	**23 22 26.7**	**-1.2**
SNZO	**South Karori**	**11.19**	**202**			**Pn**	**23 22 27.6**	**-1.2**
SNZO						**S**	**23 24 31.5**	**-2.4**
BHW	**Baring Head**	**11.23**	**202**		Pn	**Pn**	**23 22 27.0**	**-2.1**
PLWZ	**Palliser**	**11.26**	**200**			**Pn**	**23 22 27.8**	**-1.8**
TUWZ	**Tuamarina**	**11.56**	**205**	P		**Pn**	**23 22 31.1**	**-2.0**
NNZ	**Nelson**	**11.59**	**207**			**Pn**	**23 22 32.2**	**-1.2**
NNZ						**S**	**23 24 40.0**	**-2.6**
QRZ	**Quartz Range**	**11.61**	**211**			**Pn**	**23 22 32.6**	**-1.1**
QRZ						**S**	**23 24 43.1**	**-0.1**
CMWZ	**Cape Campbell**	**11.75**	**203**			**P**	**23 22 35.9**	**+0.5**
BSWZ	**Blackbirch Sta**	**11.83**	**204**			**Pn**	**23 22 35.7**	**-0.6**
THZ	**Tophouse**	**12.24**	**207**	P		**P**	**23 22 40.5**	**-0.4**
KHZ	**Kahutara**	**12.57**	**204**	P		**P**	**23 22 43.4**	**-1.1**
LTZ	**Lake Taylor**	**13.35**	**207**	P		**P**	**23 22 52.6**	**-0.5**
MSVF	**Nonsavu**	**13.42**	**351**	P		**P**	**23 22 53.9**	**-0.4**
	7.4nm,0.5s,baz=190,slow=4.9,SNR=12							
MSVF	**Nonsavu**	**13.42**	**351**	P		**P**	**23 22 53.8**	**-0.5**
OXZ	**Oxford**	**13.90**	**206**	P		**P**	**23 22 58.3**	**-0.9**
MQZ	**McQueen's Vall**	**14.01**	**204**	P		**P**	**23 22 59.5**	**-0.8**
PINNC	**Pines Island,**	**14.23**	**303**	P		**P**	**23 23 03.5**	**+0.4**
RPZ	**Rata Peaks**	**14.61**	**208**	P		**P**	**23 23 06.1**	**-0.9**
	9.4nm,0.5s,baz=39,slow=5.0,SNR=6.0							
RPZ				S		**S**	**23 25 39.0**	**-5.7**
	20nm,0.5s,baz=22,slow=13,SNR=10							
RPZ	**Rata Peaks**	**14.61**	**208**	P		**P**	**23 23 06.8**	**-0.2**
FQZ	**Fox Glacier**	**14.98**	**211**	P		**P**	**23 23 11.2**	**+0.2**
DZM	**Mont Dzumac**	**15.29**	**302**	P		**P**	**23 23 14.3**	**-0.4**
	5.1nm,0.6s,baz=172,slow=16,SNR=7.0							
DZM	**Mont Dzumac**	**15.29**	**302**	P		**P**	**23 23 14.0**	**-0.8**
DZM				IAmb		IAmb	23 23 32.8	
	comp=Z,10nm,1.0s							
LBZ	**Lake Benmore**	**15.52**	**208**	P		**P**	**23 23 16.5**	**-0.4**
LBZ				IAmb		IAmb	23 23 30.1	
	comp=Z,4.9nm,0.8s							
ODZ	**Otahua Downs**	**15.89**	**206**	P		**P**	**23 23 21.0**	**+0.1**
WKZ	**Wanaka**	**16.36**	**210**	P		**P**	**23 23 25.5**	**-0.5**
WKZ				IAmb		IAmb	23 23 43.4	
	comp=Z,8.9nm,0.7s							
WHZ	**Wether Hill Ro**	**17.67**	**210**	P		**P**	**23 23 38.9**	**-1.1**
KOUNC	**Koumac, New Ca**	**17.81**	**302**	P		**P**	**23 23 36.9**	**-4.9**
KOUNC				IAmb		IAmb	23 23 42.9	
	comp=Z,13nm,1.0s							
STKA	**Stephens Creek**	**32.93**	**258**	P		**P**	**23 25 59.9**	**+0.2**
	comp=Z,2.1nm,0.7s,baz=82,slow=12,SNR=4.0 comp=Z,2.1nm,0.7s							
STKA	**Stephens Creek**	**32.93**	**258**	P		**P**	**23 26 01.4**	**+1.7**
AS31	**Alice Springs**	**41.64**	**268**	P		**P**	**23 27 11.9**	**-0.4**
ASAR	**Alice Springs**	**41.64**	**268**	P		**P**	**23 27 10.9**	**-1.4**
	comp=Z,0.7nm,0.7s,baz=106,slow=7.4,SNR=7.1							
ASAR				PcP		**sP**	**23 29 00.7**	**+1.3**
	comp=Z,0.6nm,0.7s,baz=120,slow=5.4,SNR=2.6							
ASAR				ScP		**ScP**	**23 32 16.0**	**-1.9**
	comp=Z,0.3nm,0.6s,baz=111,slow=5.1,SNR=2.0 comp=Z,0.7nm,0.7s							
ASAR	**Alice Springs**	**41.64**	**268**	P		**P**	**23 27 11.7**	**-0.6**
WR0	**Warramunga Arr**	**42.51**	**274**	P		**P**	**23 27 17.4**	**-1.9**
WR0				IAmb		IAmb	23 27 34.7	
	comp=Z,6.3nm,1.1s							
WB2	**Warramunga Arr**	**42.68**	**274**	P		**P**	**23 27 20.2**	**-0.3**
WB2				IAmb		IAmb	23 27 31.3	
	comp=Z,8.9nm,1.1s							
WRA	**Warramunga Arr**	**42.69**	**274**	P		**P**	**23 27 18.8**	**-1.9**
	comp=Z,1.1nm,0.7s,baz=112,slow=8.1,SNR=5.5 comp=Z,1.1nm,0.7s							
WRA	**Warramunga Arr**	**42.69**	**274**	P		**P**	**23 27 20.1**	**-0.6**
WB0	**Warramunga Arr**	**42.72**	**274**	P		**P**	**23 27 19.3**	**-1.6**
SBA	**Scott Base**	**47.28**	**184**	P		**P**	**23 27 59.0**	**+3.4**
CASY	**Casey**	**53.89**	**208**	P		**P**	**23 28 44.5**	**0.0**
CASY				IAmb		IAmb	23 28 45.0	
	comp=Z,9.2nm,0.6s							
QSPA	**South Pole Qui**	**59.06**	**180**	P		**P**	**23 29 23.2**	**+2.3**
BELA	**Belgrano 2**	**69.33**	**173**	P		**P**	**23 30 28.1**	**+1.5**
BELA				IAmb		IAmb	23 30 28.8	
	comp=Z,2.1nm,0.7s

s-min=2.2km az=92.0

ISC 10 23:42:57.6±0.9, 33°45N±0.02×116°43W±0.02, h11km±6km, n58, σ0.78/84, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFO	**Pinyon Flats O**	**0.17**	**350**	Pg	**Pg**	**23 43 01.1**	**-0.3**
PFO				Sg	**Sg**	**23 43 03.9**	**-0.2**
PFO	**Pinyon Flats O**	**0.17**	**350**	P	**Pg**	**23 43 01.5**	**0.0**
	baz=169,SNR=924						
PFO				S	**Sg**	**23 43 03.9**	**-0.2**
	baz=169						
GVDA	**Garner Valley**	**0.30**	**317**		**Pg**	**23 43 03.8**	**0.0**
GVDA					**Sg**	**23 43 08.3**	**+0.4**
MONP2	**Monument Peak**	**0.55**	**180**	P	**Pg**	**23 43 08.8**	**+0.4**
	baz=360,SNR=39						
MONP2				S	**Sg**	**23 43 15.9**	**+0.2**
	baz=360						
BELC	**Belle Mtn. Jos**	**0.66**	**33**	P	**Pg**	**23 43 10.1**	**-0.3**
	baz=213,SNR=109						
BELC				S	**Sg**	**23 43 18.6**	**-0.5**
	baz=213						
MURC	**Murrieta**	**0.66**	**284**	P	**Pg**	**23 43 10.2**	**-0.2**
	baz=102,SNR=49						
MURC				S	**Sg**	**23 43 19.1**	**0.0**
	baz=102						
SWSC	**Sam W. Stewart**	**0.73**	**133**	P	**Pg**	**23 43 11.3**	**-0.3**
	baz=315,SNR=45						
SWSC				S	**Sb**	**23 43 21.8**	**-0.4**
	baz=315						
BAR	**Barrett**	**0.79**	**195**	Pg	**Pg**	**23 43 12.7**	**-0.2**
BAR				Sg	**Sg**	**23 43 23.0**	**-0.2**
109C	**Camp Elliot, M**	**0.80**	**226**	Sg	**Sg**	**23 43 23.2**	**-0.2**
109C	**Camp Elliot, M**	**0.80**	**226**	P	**Pg**	**23 43 12.7**	**-0.3**
	baz=45,SNR=18						
109C				S	**Sg**	**23 43 23.2**	**-0.2**
	baz=45						
BC3	**Big Chuckawall**	**0.84**	**75**	P	**Pg**	**23 43 13.3**	**-0.5**
	baz=257,SNR=48						
BC3				S	**Sg**	**23 43 24.6**	**-0.2**
	baz=257						
IKP	**In-Ko-Pah, Jac**	**0.84**	**161**	P	**Pg**	**23 43 13.7**	**0.0**
	baz=342,SNR=50						
IKP				S	**Sg**	**23 43 24.9**	**+0.2**
	baz=342						
ELS	**Elsinore Mount**	**0.86**	**284**	Pg	**Pg**	**23 43 13.5**	**-0.7**
ELS				Sg	**Sg**	**23 43 25.1**	**-0.3**
TKX	**Tecate**	**0.89**	**190**	Pg	**Pg**	**23 43 14.5**	**-0.2**
TKX				Sg	**Sg**	**23 43 25.9**	**-0.4**
RMX	**La Rumorosa**	**0.89**	**161**		**Pn**	**23 43 15.9**	**-0.3**
RMX				Sg	**Sb**	**23 43 28.3**	**+1.2**
YUH	**Yuha Desert**	**0.90**	**152**		**Pg**	**23 43 14.2**	**-0.8**
YUH				Sg	**Sg**	**23 43 26.7**	**0.0**
YUH				IAML		23 43 27.9	
	comp=N,216nm,0.1s						
YUH				IAML		23 43 28.1	
	comp=E,253nm,0.3s						
BBRC	**Big Bear Solar**	**0.91**	**333**	P	**Pg**	**23 43 14.8**	**-0.4**
	baz=153						
BBRC				S	**Sg**	**23 43 26.6**	**-0.5**
	baz=153						
RSBC	**Riverside Bore**	**0.92**	**305**		**Pg**	**23 43 15.3**	**+0.1**
TJX	**Tijuana**	**1.07**	**210**		**Pg**	**23 43 17.5**	**-0.7**
CBX	**Cerro Bola**	**1.15**	**190**		**Pg**	**23 43 18.9**	**-0.8**
CBX	**Cerro Bola**	**1.15**	**190**	IAML		23 43 35.6	
	comp=N,146nm,0.3s						
CBX				IAML		23 43 36.0	
	comp=E,170nm,0.2s						
IRM	**Iron Mountain**	**1.28**	**56**	Pg	**Pn**	**23 43 21.4**	**0.0**
	baz=237,SNR=12						
IRM				Sb	**Sb**	**23 43 37.9**	**-0.3**
	baz=237						
BFSC	**Mount Baldy Ra**	**1.29**	**308**	P	**Pn**	**23 43 20.8**	**-0.9**
	baz=127,SNR=28						
BFSC				S	**Sb**	**23 43 37.6**	**-1.1**
	baz=127						
HEC	**Hector,Ludlow**	**1.38**	**3**	Pg	**Pn**	**23 43 22.9**	**+0.1**
	baz=183,SNR=19						
HEC				Sb	**Sb**	**23 43 41.0**	**-0.2**
	baz=183						
GLA	**Glamis**	**1.40**	**106**		**Pn**	**23 43 21.3**	**-1.7**
GLA				IAML		23 43 40.2	
	comp=E,106nm,0.4s						
GLA	**Glamis**	**1.40**	**106**	P	**Pn**	**23 43 21.2**	**-1.8**
	baz=287						
GLA				S	**Sb**	**23 43 39.2**	**-2.4**
	baz=287						
GMRC	**Granite Mounta**	**1.48**	**25**	P	**Pn**	**23 43 22.9**	**-1.3**
	baz=206,SNR=19						
GMRC				Sb	**Sn**	**23 43 44.1**	**+0.5**
	baz=206						
RRX	**Edison Barstow**	**1.50**	**342**	Sb	**Sn**	**23 43 44.6**	**+0.6**
	baz=161						
CCX	**Cicese**	**1.59**	**187**	Pn	**Pn**	**23 43 26.1**	**+0.5**
CCX				IAML		23 43 47.8	
	comp=E,115nm,0.4s						
CCX				IAML		23 43 47.9	
	comp=N,80nm,0.4s						
BLYC	**Blythe**	**1.62**	**79**		**Pn**	**23 43 26.3**	**+0.3**
BLYC				IAML		23 43 49.8	
	comp=N,79nm,0.4s						
BLYC				IAML		23 43 51.0	
	comp=E,105nm,0.3s						
PASC	**Pasadena Art C**	**1.63**	**297**	Pn	**Pn**	**23 43 26.8**	**+0.5**
PASC				IAML		23 43 48.6	
	comp=E,140nm,0.4s						
PASC				IAML		23 43 49.9	
	comp=N,132nm,0.6s						
CIS	**Catalina Islan**	**1.66**	**269**	P	**Pn**	**23 43 26.0**	**-0.7**
	baz=88						
CIS				Sb	**Sb**	**23 43 49.0**	**-0.2**
	baz=88						
DECC	**Green Verdugo**	**1.78**	**297**	Pb	**Pn**	**23 43 29.2**	**+0.9**
	baz=116						
DECC				Sb	**Sb**	**23 43 52.3**	**-0.3**
	baz=116						
SCI2	**San Clemente I**	**1.84**	**256**	P	**Pn**	**23 43 28.7**	**-0.4**
	baz=74						
SCI2				S	**Sn**	**23 43 51.4**	**-0.9**
	baz=74						
GSC	**Goldstone, Bar**	**1.88**	**350**		**Pn**	**23 43 29.3**	**-0.4**
GSC				IAML		23 43 59.4	
	comp=E,72nm,0.4s						
GSC	**Goldstone, Bar**	**1.88**	**350**	Sb	**Sb**	**23 43 56.2**	**+0.8**
	baz=170						
EDW2	**Edwards Air Fo**	**1.93**	**318**	Pb	**Pb**	**23 43 32.7**	**-0.2**
	baz=137						
EDW2				Sb	**Sb**	**23 43 57.3**	**+0.3**
	baz=137						
NEE2	**Needles Airpor**	**2.00**	**48**	Sb	**Sb**	**23 43 59.9**	**+1.1**
	baz=229						
TUQ	**Turquoise Moun**	**2.03**	**12**	Pg	**Pb**	**23 43 35.4**	**+0.9**
	baz=192						
TUQ				Sb	**Sb**	**23 44 00.7**	**+0.9**
	baz=192						
PDMCI	**Parker Dam,Lak**	**2.08**	**65**	Sb	**Sb**	**23 44 02.1**	**+0.8**
	baz=247						
CCAC	**Calif City Air**	**2.15**	**323**		**Pb**	**23 43 37.4**	**+0.8**
113A	**Mohawk Valley,**	**2.33**	**106**		**Pg**	**23 43 42.4**	**+0.1**
QSM	**Queen of Sheba**	**2.54**	**352**		**Pn**	**23 43 38.4**	**-0.3**
W13A	**Hualapai Mount**	**2.67**	**51**		**Pn**	**23 43 40.9**	**+0.2**
GWY	**Greenwater Val**	**2.74**	**356**	Pn	**Pn**	**23 43 41.1**	**-0.5**
SFX	**San Felipe**	**2.75**	**151**	Pn	**Pn**	**23 43 43.2**	**+1.7**
ISA	**Isabella, Lake**	**2.78**	**323**		**Pb**	**23 43 48.4**	**+1.0**
BCW	**Bitter Crk WRg**	**2.89**	**302**		**Pn**	**23 43 44.5**	**+0.9**
BCW				IAML		23 44 32.7	
	comp=N,30nm,2.3s						
BCW				IAML		23 44 35.3	
	comp=E,32nm,0.8s						
Y14A	**Wickenburg**	**2.89**	**79**		**Pg**	**23 43 54.6**	**+1.5**
SHPR	**Sheep Range**	**3.22**	**18**		**Pg**	**23 43 58.0**	**-1.3**
214A	**Organ Pipe Nat**	**3.39**	**115**	Pn	**Pn**	**23 43 48.9**	**-1.5**
TPNV	**Topopah Spring**	**3.50**	**2**	Pn	**Pn**	**23 43 50.0**	**-2.0**
TPNV				IAML		23 44 47.3	
	comp=E,12nm,0.8s						
TPNV				IAML		23 44 55.4	
	comp=E,14nm,0.7s						
PAGB	**Antelope Grade**	**3.89**	**307**	Pn	**Pn**	**23 43 57.3**	**0.0**
LCH	**Last Change Ra**	**3.91**	**346**	Pn	**Pn**	**23 43 57.8**	**+0.2**
PRN	**Pahroc Range**	**4.11**	**15**	Pn	**Pn**	**23 44 00.8**	**+0.4**
PRN					**Pg**	**23 44 14.9**	**-1.3**
X16A	**Lo Mia Camp, P**	**4.26**	**75**	Pn	**Pn**	**23 44 02.4**	**-0.1**
LCMT	**Little Creek M**	**4.41**	**35**	Pn	**Pn**	**23 44 04.7**	**+0.1**
U15A	**North Rim**	**4.51**	**48**		**Pn**	**23 44 06.3**	**+0.1**

*NEIC **10** 23:54:38.5±1.9, 13°.1N±0°.1×144°.4E±0°.2, h78km±8km, mb4.5/7, Error ellipse: s-maj=36.3km s-min=9.0km az=119.0*

*IDC **10** 23:54:38.2±2.9, 13°.03N×144°.90E, h79km±38km, mb3.1/3, mbtmp3.4/3, Error ellipse: s-maj=231.3km s-min=26.6km az=109.0*

ISC 10 23:54:38.2±0.9, 13°.0N±0°.2×144°.5E±0°.2, h78km, n19, σ0.94/16, mb4.3/9, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.69**	**34**	P	**Pn**	**23 54 53.9**	**+0.4**
	886nm,0.4s,baz=163,slow=14,SNR=109						
GUMO				S	**Sn**	**23 55 04.7**	**-0.2**
	925nm,0.3s,baz=140,slow=23,SNR=14						
GUMO	**Guam**	**0.69**	**34**		**Pn**	**23 54 54.0**	**+0.4**
GUMO					**Sn**	**23 55 05.2**	**+0.2**
H11N1	**WAKE ISLAND Hy**	**22.50**	**70**	T	T	00 22 31.7	
	baz=255,slow=75						
H11N2	**WAKE ISLAND Hy**	**22.51**	**70**	T	T	00 22 27.5	
	baz=255						
H11N3	**WAKE ISLAND Hy**	**22.52**	**70**	T	T	00 22 29.1	
	baz=255,slow=75						
WB2	**Warramunga Arr**	**34.23**	**197**	P	**P**	**00 01 16.3**	**-0.4**
WB2				IAmb	IAmb	00 01 22.3	
	comp=Z,5.0nm,1.1s						
WRA	**Warramunga Arr**	**34.24**	**197**	P	**P**	**00 01 17.9**	**+1.1**
	comp=Z,0.5nm,0.9s,baz=20,slow=9.5,SNR=2.6						
	comp=Z,0.5nm,0.9s						
WRA	**Warramunga Arr**	**34.24**	**197**	P	**P**	**00 01 16.3**	**-0.4**
ASAR	**Alice Springs**	**37.90**	**196**	P	**P**	**00 01 48.8**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=21,slow=11,SNR=4.2						
	comp=Z,0.3nm,0.6s						
SMY	**Shemya**	**46.14**	**25**	P	**P**	**00 02 53.7**	**-1.0**
MK31	**Makanchi Array**	**61.64**	**316**	P	P	00 04 41.9	-6.0
MK31				IAmb	IAmb	00 04 42.6	
	comp=Z,1.9nm,0.8s						
ZAA0	**Zalesovo Array**	**61.87**	**325**	P	**P**	**00 04 50.5**	**+1.3**
ZAA0				IAmb	IAmb	00 04 50.9	
	comp=Z,5.4nm,0.5s						
ZALV	**Zalesovo Beam**	**61.87**	**325**	P	**P**	**00 04 50.2**	**+1.1**
	comp=Z,5.3nm,0.4s,baz=268,slow=9.3,SNR=22						
ZALV	**Zalesovo Beam**	**61.87**	**325**	P	**P**	**00 04 50.3**	**+1.1**
ZALV	**Zalesovo Beam**	**61.87**	**325**				
	comp=Z,5.3nm,0.4s						
PALK	**Pallekele**	**62.91**	**272**	P	**P**	**00 04 55.6**	**-1.3**
PALK				IAmb	IAmb	00 05 04.4	
	comp=Z,55nm,1.5s						
IMAR	**Indian Mountai**	**66.87**	**23**	P	**P**	**00 05 22.5**	**+0.9**
MLY	**Manley**	**67.74**	**25**	P	**P**	**00 05 27.3**	**0.0**
MLY				IAmb	IAmb	00 05 43.1	
	comp=Z,1.6nm,1.0s						
ILAR	**Eielson Array**	**69.25**	**25**	P	**P**	**00 05 35.3**	**-1.3**
	comp=Z,0.3nm,0.5s,baz=236,slow=6.4,SNR=3.4						
	comp=Z,0.3nm,0.5s						

*IDC **10** 23:56:17.0±1.3, 35°.00N×23°.83E, h0km, mb3.8/4, mbtmp3.7/6, ML3.1/2, Error ellipse: s-maj=40.6km s-min=16.6km az=156.0*

*ATH **10** 23:56:22.2, 34°.86N×24°.15E, h14km±1km, ML3.3/5, Error ellipse: s-maj=2.3km s-min=1.1km az=198.0*

*THE **10** 23:56:22.5, 34°.88N×24°.19E, h0km±2km, ML2.9/4, Error ellipse: s-maj=2.6km s-min=1.0km az=151.0*

ISC 10 23:56:20.5±0.9, 34°.74N±0°.06×24°.15E±0°.04, h24km±5km, n35, σ1.29/45, mb3.5/5, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.11**	**333**	P	**Pb**	**23 56 24.8**	**-0.2**
GVD				S	**Sb**	**23 56 27.2**	**-0.9**
GVD				AML	AML	23 56 28.6	
	comp=E,83437μm,0.3s						
GVD				AML	AML	23 56 28.6	
GVDS	**Gavdos**	**0.11**	**335**	P	**Pb**	**23 56 25.0**	**0.0**
GVDS				S	**Sb**	**23 56 28.4**	**+0.3**
	comp=E,46μm,0.1s						
TMBK	**Timbaki Herakl**	**0.60**	**57**	P	**Pb**	**23 56 32.9**	**+0.5**
TMBK				S	**Sb**	**23 56 40.7**	**+0.1**
TMBK				AML	AML	23 56 57.4	
	comp=N,23472μm,0.3s						
TMBK				AML	AML	23 56 57.6	
	comp=E,16965μm,0.3s						
KNDR	**Palaiochora Ch**	**0.62**	**322**	P	**Pb**	**23 56 32.7**	**0.0**
KNDR				S	**Sb**	**23 56 41.3**	**+0.4**
KNDR				AML	AML	23 56 47.8	
	comp=N,2936μm,0.4s						
KNDR				AML	AML	23 56 51.4	
	comp=E,3161μm,0.4s						
KNDR	**Palaiochora Ch**	**0.62**	**322**	P	**Pb**	**23 56 32.9**	**+0.3**
KNDR				S	**Sn**	**23 56 42.7**	**-0.2**
	comp=E,632nm,0.4s						
IMMV	**Iera Moni Meta**	**0.73**	**349**	P	**Pb**	**23 56 33.8**	**-0.7**
IMMV				S	**Sb**	**23 56 42.7**	**-1.3**
IMMV				AML	AML	23 56 50.2	
	comp=E,4637μm,0.4s						
IMMV				AML	AML	23 56 52.5	
	comp=N,6590μm,0.4s						
IMMV	**Iera Moni Meta**	**0.73**	**349**	P	**Pb**	**23 56 34.1**	**-0.4**
CHAN	**Chania**	**0.78**	**354**	P	**Pb**	**23 56 35.0**	**-0.3**
CHAN				S	**Sb**	**23 56 44.5**	**-0.9**
CHAN				AML	AML	23 56 50.9	
	comp=E,2435μm,0.3s						
CHAN				AML	AML	23 56 52.6	
	comp=N,2389μm,0.5s						
IDI	**Anoyia**	**0.82**	**48**	Pg	**Pb**	**23 56 35.5**	**-0.5**
	comp=N,33nm,0.3s,baz=245,slow=9.5,SNR=150						
IDI	**Anoyia**	**0.82**	**48**	P	**Pb**	**23 56 35.6**	**-0.5**
IDI	**Anoyia**	**0.82**	**48**	P	**Pb**	**23 56 35.5**	**-0.5**
IDI				S	**Sn**	**23 56 47.5**	**-0.5**
	comp=N,2μm,0.4s						
RODP	**Rodopos**	**0.87**	**339**	P	**Pn**	**23 56 37.6**	**+0.3**
RODP				S	**Sn**	**23 56 50.0**	**+0.7**
	comp=N,318nm,0.3s						
KSTL	**Kastelli Herak**	**0.94**	**53**	P	**Pn**	**23 56 41.3**	**+3.1**
KSTL	**Kastelli Herak**	**0.94**	**53**	P	**Pn**	**23 56 41.3**	**+3.1**
HRKL	**Herakleio**	**0.97**	**54**	P	**Pn**	**23 56 39.1**	**+0.5**
NPS	**Neapolis**	**1.31**	**66**	P	**Pb**	**23 56 45.5**	**+1.2**
NPS	**Neapolis**	**1.31**	**66**	P	**Pb**	**23 56 45.8**	**+1.4**
ANKY	**Antikythira Is**	**1.32**	**329**	P	**Pb**	**23 56 45.0**	**+0.6**
ANKY	**Antikythira Is**	**1.32**	**329**	P	**Pb**	**23 56 45.1**	**+0.6**
KTHA	**Kythira Island**	**1.75**	**330**	P	**Pb**	**23 56 51.8**	**0.0**
KTHA	**Kythira Island**	**1.75**	**330**	P	**Pb**	**23 56 52.1**	**+0.2**
KTHR	**Kythira**	**1.78**	**329**	P	**Pb**	**23 56 52.0**	**-0.4**
KTHR	**Kythira**	**1.78**	**329**	P	**Pb**	**23 56 52.1**	**-0.2**
THR5	**Thira Island,**	**1.94**	**30**	P	**Pn**	**23 56 53.6**	**+1.7**
THR3	**Thira Island,**	**1.95**	**31**	P	**Pb**	**23 56 54.0**	**-1.3**
VLI	**Veliai**	**2.20**	**334**	P	**Pn**	**23 56 57.8**	**+2.2**
BRTR	**Keskin Array B**	**9.05**	**54**	Pn	**Pn**	**23 58 31.5**	**+1.7**
	comp=N,0.1nm,0.3s,baz=242,slow=14,SNR=3.6						
	comp=N,0.2nm,0.3s						
EIL	**Elat**	**10.46**	**116**	Pn	**Pn**	**23 58 47.8**	**-1.1**
	comp=N,0.2nm,0.3s,baz=284,slow=16,SNR=2.6						
EIL				Sn	**Sn**	**00 00 41.4**	**-3.9**
	comp=N,0.2nm,0.3s,baz=327,slow=18,SNR=2.2						
AKASG	**Malin Array Be**	**16.37**	**12**	Pn	**Pn**	**00 00 09.3**	**+0.8**
	comp=N,0.3nm,0.3s,baz=204,slow=11,SNR=4.7						
KBZ	**Khabaz**	**17.04**	**53**	Pn	**P**	**00 00 20.1**	**+1.3**
	comp=N,0.2nm,0.3s,baz=212,slow=9.5,SNR=2.5						
	comp=N,1.2nm,0.5s						
HFS	**Hagfors**	**26.30**	**348**	P	**P**	**00 01 52.4**	**-1.6**
	comp=N,2.0nm,0.9s,baz=157,slow=7.8,SNR=1.8						
	comp=N,2.0nm,0.9s						
EKA	**Eskdalemuir Ar**	**27.91**	**326**	P	**P**	**00 02 10.1**	**+1.7**
	comp=N,0.2nm,0.5s,baz=122,slow=9.3,SNR=1.8						
TORD	**Torodi Ar. Bea**	**29.59**	**229**	P	**P**	**00 02 23.9**	**+0.2**
	comp=N,0.4nm,0.4s,baz=33,slow=8.9,SNR=12						
	comp=N,0.4nm,0.4s						
MKAR	**Makanchi Array**	**44.70**	**56**	P	**P**	**00 04 31.0**	**-0.5**
	comp=N,0.3nm,0.6s,baz=280,slow=6.2,SNR=5.5						
	comp=N,0.3nm,0.6s						
ZALV	**Zalesovo Beam**	**45.89**	**46**	P	**P**	**00 04 39.8**	**-1.0**
	comp=N,1.3nm,0.4s,baz=273,slow=8.2,SNR=5.7						
	comp=N,1.3nm,0.4s						

*IDC **10** 23:56:27.3±1.2, 34°.95N×23°.83E, h0km, mb4.1/9, mbtmp4.0/12, ML3.3/3, Error ellipse: s-maj=26.0km s-min=10.4km az=167.0*

*DDA **10** 23:56:28.0±0.0, 34°.82N×24°.07E, h9km±4km, MW3.7*

*ISK **10** 23:56:30.5, 34°.74N×24°.18E, h25km, ML3.6/13*

ISC 10 23:56:30.4±0.9, 34°.75N±0°.06×24°.19E±0°.04, h28km±6km, n59, σ2.55/68, mb3.8/10, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.12**	**317**	PG	**Pb**	**23 56 35.4**	**-0.2**
GVD				SG	**Sb**	**23 56 38.9**	**-0.3**
KNDR	**Palaiochora Ch**	**0.64**	**320**	PG	**Pn**	**23 56 44.4**	**+0.9**
KNDR				SG	**Sn**	**23 56 54.9**	**+2.3**
IMMV	**Iera Moni Meta**	**0.73**	**347**	PG	**Pn**	**23 56 45.7**	**+0.9**
IMMV				SG	**Sn**	**23 56 56.3**	**+1.3**
IDI	**Anoyia**	**0.79**	**47**	Pg	**Pn**	**23 56 46.4**	**+0.8**
	212nm,0.3s,baz=230,slow=13,SNR=48						
IDI				Lg	Lg	23 56 59.0	
	189nm,0.3s,baz=165,slow=20,SNR=9.5						
IDI	**Anoyia**	**0.79**	**47**	PG	**Pn**	**23 56 46.4**	**+0.8**
IDI	**Anoyia**	**0.79**	**47**	S	**Pn**	**23 56 46.6**	**+0.9**
RODP	**Rodopos**	**0.88**	**337**	PG	**Pn**	**23 56 47.8**	**+0.9**
HRKL	**Herakleio**	**0.94**	**53**	PG	**Pb**	**23 56 48.9**	**+0.9**
ZKR	**Zakros**	**1.71**	**77**	PN	**Pb**	**23 56 59.6**	**-1.5**
SANT	**Santorini**	**1.92**	**32**	PN	**Pb**	**23 57 02.8**	**-1.9**
SANT	**Santorini**	**1.92**	**32**	P	**Pb**	**23 57 04.2**	**-0.5**
SANT				S	Sb	23 57 38.1	+10
APE	**Apeiranthos**	**2.56**	**25**	P	**Pn**	**23 57 12.2**	**+2.2**
APE				S	**Sb**	**23 57 44.7**	**-1.9**
KARP	**Karpathos**	**2.56**	**71**	PN	**Pn**	**23 57 11.6**	**+1.6**
NIS1	**Nisyros Isl.**	**3.06**	**52**	PN	**Pn**	**23 57 18.7**	**+1.9**
DAT	**Datca**	**3.39**	**53**	PN	**Pn**	**23 57 23.7**	**+2.2**
BODT	**Bodrum**	**3.43**	**47**	P	**Pb**	**23 57 26.5**	**-3.8**
BODT				S	**Sb**	**23 58 08.2**	**-3.4**
BODT				*i* AML	AML	23 58 36.0	
	comp=N,22nm,1.2s						
BODT				*i* AML	AML	23 58 42.0	
	comp=E,18nm,1.4s						
BDRM	**Kayabasi**	**3.51**	**48**	P	**Pn**	**23 57 23.6**	**+0.6**
BDRM				*i* AML	AML	23 58 20.0	
	comp=N,18nm,0.6s						
BDRM				*i* AML	AML	23 58 28.0	
	comp=Z,9.7nm,0.9s						
BDRM				*i* AML	AML	23 58 40.0	
	comp=E,10nm,0.7s						
ARG	**Arkhangelos**	**3.53**	**64**	PN	**Pn**	**23 57 25.5**	**+2.2**
DDIM	**Aydin, Didim**	**3.66**	**42**	P	**Pn**	**23 57 26.1**	**+1.0**
DDIM				*i* AML	AML	23 58 43.0	
	comp=N,59nm,1.9s						
DDIM				*i* AML	AML	23 58 48.0	
	comp=E,39nm,1.0s						
DDIM				*i* AML	AML	23 58 52.0	
	comp=Z,42nm,1.8s						
GCAM	**G?zelcaml?**	**3.84**	**39**	P	**Pn**	**23 57 31.1**	**+3.6**
GCAM				*i* AML	AML	23 58 34.0	
	comp=Z,17nm,1.3s						
GCAM				*i* AML	AML	23 58 35.0	
	comp=N,18nm,0.8s						
GCAM				*i* AML	AML	23 58 46.0	
	comp=E,21nm,1.1s						
MLSB	**Milas**	**3.86**	**48**	P	**Pn**	**23 57 31.2**	**+3.4**
MLSB				*i* AML	AML	23 58 30.0	
	comp=E,3.5nm,0.9s						
MLSB				*i* AML	AML	23 58 35.0	
	comp=N,3.3nm,1.0s						
MLSB				*i* AML	AML	23 59 40.0	
	comp=Z,3.0nm,1.1s						
TURN	**Turunc**	**3.87**	**57**	PN	**Pn**	**23 57 30.4**	**+2.5**
TURN	**Turunc**	**3.87**	**57**	P	**Pn**	**23 57 30.4**	**+2.5**
TURN				S	**Sn**	**23 58 12.4**	**0.0**
TURN				*i* AML	AML	23 58 21.0	
	comp=E,20nm,0.5s						
TURN				*i* AML	AML	23 58 31.0	
	comp=Z,20nm,0.6s						
TURN				*i* AML	AML	23 58 34.0	
	comp=N,21nm,0.5s						
ZEYE	**Izmir, Urla-Ze**	**3.95**	**28**	P	**Pn**	**23 57 31.9**	**+2.9**
ZEYE				*i* AML	AML	23 58 49.0	
	comp=E,15nm,1.0s						
ZEYE				*i* AML	AML	23 58 54.0	
	comp=N,17nm,0.6s						
ZEYE				*i* AML	AML	23 59 09.0	
	comp=Z,14nm,1.2s						
YER	**Yerkesik**	**4.09**	**53**	P	**Pn**	**23 57 35.2**	**+4.2**
YER				*i* AML	AML	23 58 28.0	
	comp=E,3.6nm,0.5s						
YER				*i* AML	AML	23 58 29.0	
	comp=N,6.1nm,0.8s						
YER				*i* AML	AML	23 58 44.0	
	comp=Z,3.6nm,1.2s						
URLA	**Izmir**	**4.09**	**28**	P	**Pn**	**23 57 32.1**	**+1.1**
URLA				*i* AML	AML	23 58 40.0	
	comp=Z,21nm,1.0s						
URLA				*i* AML	AML	23 58 56.0	
	comp=E,33nm,0.8s						
URLA				*i* AML	AML	23 59 16.0	
	comp=N,32nm,1.1s						
AYDN	**Tasoluk**	**4.17**	**45**	P	**Pn**	**23 57 35.6**	**+3.5**
AYDN				*i* AML	AML	23 58 43.0	
	comp=Z,5.1nm,0.5s						
AYDN				*i* AML	AML	23 58 44.0	
	comp=N,12nm,0.6s						
AYDN				*i* AML	AML	23 59 11.0	
	comp=E,12nm,1.1s						
DALY	**Dalyan (Mula)**	**4.18**	**59**	PN	**Pn**	**23 57 35.0**	**+2.9**
MULA	**Mugla, Merkez-**	**4.18**	**52**	P	**Pn**	**23 57 35.8**	**+3.5**
MULA				*i* AML	AML	23 58 40.0	
	comp=E,17nm,0.8s						
MULA				*i* AML	AML	23 58 41.0	
	comp=N,13nm,0.9s						
MULA				*i* AML	AML	23 58 43.0	
	comp=Z,9.8nm,0.6s						
BLCB	**Balcova**	**4.29**	**32**	P	**Pn**	**23 57 37.0**	**+3.2**
BLCB				*i* AML	AML	23 58 53.0	
	comp=N,22nm,0.8s						
BLCB				*i* AML	AML	23 59 04.0	
	comp=E,22nm,0.9s						
BLCB				*i* AML	AML	23 59 44.0	
	comp=Z,13nm,1.1s						
AKAS	**Kas**	**4.66**	**70**	P	**Pn**	**23 57 41.6**	**+2.7**
AKAS				*i* AML	AML	23 58 38.0	
	comp=Z,18nm,0.5s						
AKAS				*i* AML	AML	23 58 43.0	
	comp=E,45nm,0.7s						
AKAS				*i* AML	AML	23 58 52.0	
	comp=N,68nm,0.5s						
TAVA	**DENIZLI_Tavas**	**4.69**	**53**	P	**Pn**	**23 57 43.2**	**+3.9**
TAVA				*i* AML	AML	23 59 00.0	
	comp=Z,4.6nm,0.8s						
TAVA				*i* AML	AML

comp=N,8.6nm,0.4s
FNA *i* AML AML 23 59 23.0
comp=Z,6.4nm,0.4s
VAE Valguarnera 8.37 292 Sn **Sn 23 59 54.5 -8.7**
0.3nm,0.3s,baz=276,slow=9.1,SNR=1.5
BRTR Keskin Array B 9.02 54 Pn **Pn 23 58 42.4 +3.5**
0.1nm,0.3s,baz=230,slow=17,SNR=9.8
1.8nm,0.8s
MMAI Mount Meron Ar 9.48 97 Sn **Sn 00 00 25.8 -5.0**
0.5nm,0.3s,baz=273,slow=24,SNR=1.1
EIL Elat 10.43 116 Pn **Pn 23 58 58.1 +0.2**
0.6nm,0.3s,baz=314,slow=5.9,SNR=7.1
EIL Sn **Sn 00 00 53.4 -0.5**
0.7nm,0.3s,baz=350,slow=21,SNR=2.5
ASF Jabal al Asfar 10.92 100 Pn **Pn 23 59 05.4 +0.6**
0.2nm,0.3s,baz=320,slow=17,SNR=2.2
ASF Sn **Sn 00 01 03.4 -2.8**
0.1nm,0.3s,baz=339,slow=14,SNR=1.5
CKRC Cesky Krumlov 15.85 335 *e*P **P 00 00 16.3 +1.4**
GERES GERESS Array B 16.09 334 Pn **Pn 00 00 14.1 -0.4**
0.1nm,0.3s,baz=151,slow=12,SNR=4.2
0.1nm,0.3s
KRLC Kraliky 16.25 343 *e*P **P 00 00 20.8 +1.5**
AKASG Malin Array Be 16.36 11 Pn **P 00 00 19.4 -1.1**
1.5nm,0.3s,baz=205,slow=10,SNR=17
KHC Kasperske Hory 16.37 335 *e*P **P 00 00 21.1 +0.4**
KBZ Khabaz 17.01 53 P **P 00 00 29.1 +1.4**
0.1nm,0.3s,baz=230,slow=8.9,SNR=6.2
6.0nm,1.1s
ESDC Sonseca Array 22.91 291 P **P 00 01 29.7 -2.3**
0.4nm,0.8s,baz=82,slow=9.2,SNR=3.4
BELG Belogornoye 24.31 36 P **P 00 01 45.7 +0.5**
4.5nm,0.5s,baz=150,slow=20,SNR=6.1
4.5nm,0.5s
HFS Hagfors 26.30 348 P **P 00 02 02.4 -0.8**
2.1nm,0.7s,baz=165,slow=13,SNR=6.1
2.1nm,0.7s
FINES FINESS Array B 26.74 2 P **P 00 02 06.2 -0.9**
2.2nm,1.0s,baz=162,slow=10,SNR=3.5
2.2nm,1.0s
NOA NORSAR Array B 27.60 346 P **P 00 02 14.5 -0.5**
0.9nm,0.8s,baz=152,slow=8.6,SNR=7.8
0.9nm,0.8s
EKA Eskdalemuir Ar 27.92 326 P **P 00 02 22.2 +4.3**
0.3nm,0.5s,baz=124,slow=9.4,SNR=3.8
TORD Torodi Ar. Bea 29.62 229 P **P 00 02 34.6 +1.3**
1.4nm,0.4s,baz=39,slow=8.2,SNR=25
1.4nm,0.4s
ARCES ARCESS Array B 34.85 1 P **P 00 03 17.3 -1.3**
0.7nm,0.6s,baz=173,slow=8.2,SNR=5.8
0.7nm,0.6s
MKAR Makanchi Array 44.67 56 P **P 00 04 41.8 +1.2**
2.8nm,0.8s,baz=278,slow=6.9,SNR=20
2.8nm,0.8s
SONM Songino Array 60.36 50 P **P 00 06 37.9 +1.0**
0.8nm,0.6s,baz=283,slow=7.2,SNR=6.7
0.8nm,0.6s

*IDC **10** 23:57:53.4±2.2,38.°72N×122.°98W,h0km,mbtmp3.4/5, ML3.2/5, Error ellipse: s-maj=26.9km s-min=14.0km az=50.0*
*NEIC **10** 23:57:56.0±2.3,38.°78N±0.°04×122.°78W±0.°07,h3km±6km, Error ellipse: s-maj=8.7km s-min=3.2km az=59.0*
*NCEDC **10** 23:57:55.2±2.2,38.°83N±0.°04×122.°80W±0.°06,h3km±5km, ML3.3/58, ML3.2/99(NEIC), Error ellipse: s-maj=8.4km s-min=3.5km az=59.0*

ISC 10 23:57:55.2±0.8,38.°73N±0.°03×122.°84W±0.°03,h10km,n87, σ1§48/86,Northern California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GDXM	**Geysers**	**0.08**	**25**	Pg	**Pg**	**23 57 56.0**	**-1.7**
GDXM				Sg	**Sg**	**23 57 56.7**	**-2.7**
GCRM	**Castle Rock Sp**	**0.10**	**68**		**Pg**	**23 57 57.1**	**-0.8**
GPMM	**Pine Mountain**	**0.14**	**323**		**Pg**	**23 57 57.9**	**-0.5**
GSGM	**Seigler Mounta**	**0.17**	**37**		**Pg**	**23 57 57.4**	**-1.4**
HOPS	**Hopland Field**	**0.32**	**325**	Pg	**Pg**	**23 58 00.8**	**-0.7**
HOPS				Sg	**Sg**	**23 58 05.2**	**-0.6**
FTR	**Fort Ross**	**0.33**	**230**		**Pb**	**23 58 04.0**	**+0.9**
MNRC	**McLaughlin Min**	**0.34**	**65**		**Pg**	**23 58 01.5**	**-0.5**
CVS	**Carmenet Viney**	**0.49**	**142**		**Pb**	**23 58 09.3**	**+0.1**
MCCM	**Marconi Confer**	**0.59**	**183**		**Sg**	**23 58 09.3**	**-5.0**
MCCM	**Marconi Confer**	**0.59**	**183**	Pg	**Pn**	**23 58 08.6**	**-0.9**
MCCM	**Marconi Confer**	**0.59**	**183**	IAML		23 58 22.1	
	comp=E,2μm,1.0s						
MCCM				IAML		23 58 23.7	
	comp=N,1μm,1.2s						
GNAM	**Navarro Ridge**	**0.77**	**307**		**Pb**	**23 58 10.8**	**+0.1**
HERB	**Hercules**	**0.85**	**148**		**Pn**	**23 58 13.2**	**0.0**
GASB	**Alder Springs**	**0.92**	**6**		**Pg**	**23 58 12.5**	**-0.5**
SUTB	**Sutter Butte**	**0.96**	**59**		**Pg**	**23 58 11.6**	**-2.0**
BRK	**Berkeley--Havi**	**0.97**	**152**		**Pn**	**23 58 15.2**	**+0.4**
BL67	**Building 67, L**	**0.97**	**152**		**Pn**	**23 58 15.3**	**+0.4**
VAK	**Adit at Lawren**	**0.97**	**151**		**Pn**	**23 58 14.9**	**0.0**
BKS	**Berkeley--Byer**	**0.98**	**151**		**Pb**	**23 58 14.4**	**+0.2**
FARB	**Farallon Islan**	**1.04**	**187**		**Pn**	**23 58 16.1**	**+0.3**
SMCB	**Saint Mary's C**	**1.06**	**147**		**Pn**	**23 58 16.8**	**+0.7**
BDM	**Black Diamond**	**1.09**	**135**		**Pb**	**23 58 15.8**	**-0.3**
KCPM	**Cahto Peak**	**1.11**	**329**		**Pg**	**23 58 15.8**	**-0.8**
KCPM				IAML		23 58 22.6	
	comp=N,791nm,0.6s						
KCPM				IAML		23 58 25.6	
	comp=E,911nm,0.5s						
KCPM					**Sn**	**23 58 34.1**	**+1.7**
KBSM	**Bell Springs**	**1.32**	**334**		**Pn**	**23 58 19.3**	**-0.5**
ORV	**Oroville**	**1.32**	**51**		**Pn**	**23 58 17.3**	**-2.5**
ORV	**Oroville**	**1.32**	**51**		**Pn**	**23 58 17.6**	**-2.1**
ORV				IAML		23 58 30.3	
	comp=E,60nm,0.6s						
ORV				IAML		23 58 49.7	
	comp=N,57nm,1.7s						
WENL	**Wente Vineyard**	**1.40**	**142**		**Pb**	**23 58 21.0**	**-0.4**
JRSC	**Jasper Ridge**	**1.41**	**160**		**Pn**	**23 58 20.9**	**0.0**
KMRM	**Mail Ridge**	**1.63**	**336**		**Pn**	**23 58 24.2**	**+0.2**
KMRM				IAML		23 58 29.7	
	comp=N,353nm,0.7s						
KMRM				IAML		23 58 30.2	
	comp=E,456nm,0.7s						
CMPM	**Mikes Peak**	**1.82**	**138**		**Pn**	**23 58 27.0**	**+0.4**
KMPM	**Mount Pierce**	**1.95**	**330**	Pg	**Pg**	**23 58 32.6**	**0.0**
KMPM				IAML		23 58 39.3	
	comp=E,212nm,0.9s						
KMPM				IAML		23 58 40.5	
	comp=N,223nm,0.7s						
GHS	**Gilroy Hot Spr**	**1.97**	**146**		**Pn**	**23 58 28.9**	**+0.2**
CMB	**Columbia Colle**	**2.05**	**109**		**Pn**	**23 58 29.7**	**-0.1**
CMB	**Columbia Colle**	**2.05**	**109**	Pn	**Pn**	**23 58 29.3**	**-0.5**
CMB	**Columbia Colle**	**2.05**	**109**	IAML		23 59 03.3	
	comp=N,111nm,1.1s						
HFEM	**San Felipe**	**2.09**	**147**		**Pn**	**23 58 30.3**	**+0.1**
EMB	**Emerald Bay**	**2.15**	**83**		**Pn**	**23 58 31.6**	**+0.3**
EMB				IAML		23 59 04.1	
	comp=N,219nm,0.8s						
EMB				IAML		23 59 08.0	
	comp=E,215nm,0.8s						
BEKR	**Beckworth**	**2.23**	**59**	IAML		23 59 06.9	
	comp=E,103nm,1.0s						
KHMM	**Horse Mountain**	**2.25**	**342**		**Pb**	**23 58 34.1**	**-1.8**
KHMM				IAML		23 58 50.1	
	comp=N,129nm,0.9s						
KHMM				IAML		23 58 55.3	
	comp=E,94nm,0.9s						
SAO	**San Andreas Ge**	**2.25**	**150**		**Pn**	**23 58 33.1**	**+0.6**
MPK	**Martis Peak**	**2.26**	**75**		**Pn**	**23 58 33.9**	**+1.1**
JCC	**Jacoby Creek,**	**2.27**	**337**		**Pn**	**23 58 34.0**	**+1.2**
JCC				IAML		23 59 33.2	
	comp=E,83nm,2.2s						
JCC				IAML		23 59 34.6	
	comp=N,103nm,1.8s						
VCNR	**Virginia City**	**2.55**	**76**		**Pn**	**23 58 37.3**	**+0.6**
VCNR				IAML		23 58 54.0	
	comp=N,97nm,0.8s						
VCNR				IAML		23 59 17.5	
	comp=E,124nm,1.1s						
BBGB	**Big Mountain B**	**2.58**	**146**		**Pn**	**23 58 38.9**	**+1.7**
BBGB				IAML		23 59 34.1	
	comp=E,156nm,0.8s						
KRPM	**Rodgers**	**2.59**	**340**		**Pn**	**23 58 37.7**	**+0.5**
KRPM				IAML		23 59 48.7	
	comp=E,70nm,2.5s						
KRPM				IAML		23 59 50.0	
	comp=N,83nm,1.6s						
YERR	**Yerington**	**2.82**	**84**	IAML		23 59 26.2	
	comp=N,145nm,0.7s						
PAHR	**Pah Rah Range**	**2.85**	**69**	IAML		23 59 37.4	
	comp=N,55nm,1.2s						
PMPB	**Monarch Peak**	**2.99**	**147**		**Pn**	**23 58 44.1**	**+1.4**
PMPB				IAML		23 59 43.6	
	comp=N,85nm,1.0s						
PMPB				IAML		23 59 45.1	
	comp=E,80nm,2.5s						
YBH	**Yreka Blue Hor**	**3.00**	**2**	Pn	**Pn**	**23 58 43.8**	**+1.0**
	comp=E,0.4nm,0.3s,baz=182,slow=9.0,SNR=9.5						
YBH				Lg	Lg	23 59 23.2	
	comp=E,0.7nm,0.3s,baz=142,slow=18,SNR=3.6						
YBH	**Yreka Blue Hor**	**3.00**	**2**		**Pn**	**23 58 44.3**	**+1.5**
MDPB	**Devils Postpil**	**3.16**	**109**		**Pn**	**23 58 46.9**	**+1.7**
MDPB				IAML		23 59 32.9	
	comp=E,57nm,1.1s						
MDPB				IAML		23 59 42.4	
	comp=N,76nm,0.8s						
KSXB	**Camp Six Broad**	**3.19**	**346**		**Pn**	**23 58 45.7**	**+0.1**
OMMB	**Old Mammoth Mi**	**3.23**	**109**		**Pn**	**23 58 47.8**	**+1.6**
OMMB				IAML		23 59 35.5	
	comp=N,40nm,0.7s						
OMMB				IAML		23 59 37.8	
	comp=E,45nm,1.3s						
RYN	**Ryan**	**3.38**	**90**		**Pn**	**23 58 48.6**	**+0.5**
RYN				IAML		23 59 44.1	
	comp=E,48nm,1.2s						
RYN				IAML		23 59 49.8	
	comp=N,38nm,1.2s						
LHV	**Little Huntoon**	**3.44**	**97**		**Pn**	**23 58 50.5**	**+1.8**
LHV				Pg	**Pg**	**23 58 59.3**	**-1.7**
LHV				IAML		23 59 45.0	
	comp=N,77nm,1.4s						
L04D	**Klamath Falls**	**3.50**	**6**		**Pn**	**23 58 50.6**	**+0.8**
L04D				IAML		00 00 09.9	
	comp=E,38nm,2.5s						
NVAR	**Mina Array Bea**	**3.57**	**93**	Pn	**Pn**	**23 58 51.8**	**+1.0**
	comp=E,1.9nm,0.3s,baz=269,slow=15,SNR=23						
NVAR				Lg	Lg	23 59 49.1	
	comp=E,1.7nm,0.3s,baz=272,slow=21,SNR=1.0						
	comp=E,2.6nm,0.4s						
NVAR	**Mina Array Bea**	**3.57**	**93**	Pg	**Pg**	**23 59 01.2**	**-2.3**
PAGB	**Antelope Grade**	**3.64**	**145**	IAML		00 00 19.1	
	comp=E,33nm,1.5s						
PAGB				IAML		00 00 37.1	
	comp=N,29nm,3.3s						
NV11	**Mina Array Sit**	**3.68**	**93**		**Pn**	**23 58 52.3**	**0.0**
NV11				Pg	**Pb**	**23 59 02.1**	**+1.6**
NV11				IAML		23 59 55.1	
	comp=E,36nm,1.7s						
NV11				IAML		00 00 08.7	
	comp=N,42nm,1.3s						
KVN	**Kaiserville**	**3.71**	**84**	Pn	**Pn**	**23 58 53.0**	**+0.2**
KVN				IAML		00 00 07.1	
	comp=E,24nm,2.0s						
MOD	**Modoc Plateau**	**3.71**	**31**		**Pn**	**23 58 52.5**	**-0.2**
MOD				Pg	**Pb**	**23 59 01.8**	**+0.9**
HUMO	**Hull Mountain**	**3.87**	**359**	Pn	**Pn**	**23 58 56.6**	**+1.9**
HUMO					**Pg**	**23 59 07.5**	**-1.8**
K05A	**Summer Lake**	**4.25**	**20**	Pn	**Pn**	**23 59 01.2**	**+1.1**
K05A				IAML		00 00 37.8	
	comp=N,17nm,1.8s						
KEBM	**Edson Butte**	**4.29**	**345**	Pn	**Pn**	**23 59 03.4**	**+2.8**
LCH	**Last Change Ra**	**4.37**	**108**		**Pn**	**23 59 04.5**	**+2.7**
LCH				IAML		00 00 31.6	
	comp=E,14nm,1.5s						
Q09A	**Carvers**	**4.42**	**87**		**Pn**	**23 59 03.7**	**+1.2**
TPH	**Tonopah**	**4.46**	**97**		**Pb**	**23 59 16.0**	**+2.3**
J01E	**Myrtle Point**	**4.50**	**350**	Pn	**Pn**	**23 59 04.0**	**+0.6**
ISA	**Isabella, Lake**	**4.64**	**130**	Pn	**Pn**	**23 59 07.4**	**+2.0**
ISA				IAML		00 00 16.3	
	comp=E,15nm,0.8s						
ISA				IAML		00 00 28.4	
	comp=N,11nm,1.1s						
BMN	**Battle Mountai**	**4.66**	**67**		**Pn**	**23 59 06.2**	**+0.5**
GRAC	**Grapevine Rang**	**4.67**	**110**	Pn	**Pn**	**23 59 04.7**	**-1.0**
BCW	**Bitter Crk WRg**	**4.68**	**143**	IAML		00 01 00.2	
	comp=N,30nm,1.5s						
CCAC	**Calif City Air**	**5.26**	**131**	Pn	**Pn**	**23 59 13.9**	**0.0**
QSM	**Queen of Sheba**	**5.50**	**118**		**Pn**	**23 59 19.4**	**+2.2**
TPNV	**Topopah Spring**	**5.51**	**107**	Pg	**Pg**	**23 59 39.5**	**-1.2**
GWY	**Greenwater Val**	**5.53**	**115**	Pn	**Pn**	**23 59 21.0**	**+3.4**
R11A	**Troy Canyon, C**	**5.70**	**92**	Pn	**Pn**	**23 59 22.6**	**+2.6**
ELK	**Elko**	**6.19**	**69**	Pn	**Pn**	**23 59 28.6**	**+1.8**
	comp=N,0.2nm,0.3s,baz=253,slow=12,SNR=9.9						
	comp=N,2.4nm,0.7s						
ELK	**Elko**	**6.19**	**69**	Pn	**Pn**	**23 59 28.2**	**+1.4**
PFO	**Pinyon Flats O**	**7.26**	**133**	Pn	**Pn**	**23 59 42.3**	**+0.9**
	comp=N,1.6nm,0.6s,baz=308,slow=12,SNR=1.7						
F07A	**Phinny Hill Vi**	**7.47**	**16**	Pn	**Pn**	**23 59 43.4**	**-0.8**
CCUT	**Cedar City**	**7.56**	**96**	Pn	**Pn**	**23 59 47.7**	**+2.1**
DUG	**Dugway, Tooele**	**7.89**	**76**	Pn	**Pn**	**23 59 49.1**	**-1.0**
MSU	**Marysvale**	**8.35**	**88**	Pn	**Pn**	**23 59 58.2**	**+1.8**
PDAR	**Pinedale Array**	**10.85**	**64**	Pn	Pn	00 00 35.1	+4.4
	baz=245,slow=14,SNR=9.8						
	comp=N,1.9nm,0.9s						
TXAR	**Lajitas Array**	**18.42**	**115**	P	**Pn**	**00 02 13.1**	**+2.4**
	comp=N,0.1nm,0.3s,baz=297,slow=10.0,SNR=5.7						
	comp=N,0.8nm,0.8s						

*TUL **11** 00:21:38.9±0.7,36.°13N±0.°02×97.°81W±0.°01,h8km±7km, ML2.5,mb_Lg2.2/8(NEIC), Error ellipse: s-maj=2.4km s-min=1.2km az=189.0*

NEIC 11 00:21:38.9±0.7,36.°15N±0.°02×97.°81W±0.°01,h8km±7km, Error ellipse: s-maj=2.5km s-min=1.2km az=188.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ADOK	**Arcadia Dam**	**0.61**	**144**	Pg	Pg	00 21 50.7	0.0
OKCFA	**Oklahoma City**	**0.79**	**158**	Pg	Pg	00 21 53.9	-0.1
OKCSW	**OKLAHOMA CITY**	**0.80**	**157**	Pg	Pg	00 21 54.0	-0.2
FNO	**Franklin**	**0.95**	**159**	Pg	Pg	00 21 56.7	-0.4
U32A	**Winter Ranch,**	**0.99**	**284**		Pg	00 21 57.8	-0.1
T35A	**Sooner Cattle**	**1.30**	**53**	Pn	Pn	00 22 03.2	-0.2
X34A	**Smith Ranch, M**	**1.54**	**181**		Pb	00 22 07.8	+0.1
WMOK	**Wichita Mounta**	**1.61**	**210**		Pn	00 22 07.9	+0.2
R32A	**Long Quarter,**	**2.38**	**343**		Pn	00 22 18.4	+0.1
R32A				IAmb_Lg		00 23 00.6	
	comp=Z,5.7nm,0.7s						
X37A	**Clayton**	**2.53**	**127**		Pn	00 22 21.3	+1.0
U38A	**Gravette**	**2.79**	**83**		Pg	00 22 31.6	-0.6
ABTX	**Abilene, Hawle**	**3.83**	**204**	IAmb_Lg		00 23 43.9	
	comp=Z,4.6nm,0.8s						
S39A	**Bolivar**	**3.92**	**65**		Pb	00 22 49.9	+1.7
S39A				IAmb_Lg		00 23 48.9	
	comp=Z,7.6nm,1.3s						
U40A	**Yellville**	**4.01**	**86**		Pb	00 22 51.1	+1.2
X40A	**Basin Creek Fa**	**4.39**	**111**	IAmb_Lg		00 24 03.2	
	comp=Z,6.2nm,0.9s						

*NEIC **11** 00:24:01.3±1.7,23.°7S±0.°1×179.°8W±0.°2,h521km±10km, mb4.5/30, Error ellipse: s-maj=20.8km s-min=18.4km az=94.0*
*IDC **11** 00:24:01.5±1.6,23.°67S×179.°95W,h512km±16km, mb3.7/12,mbtmp4.5/14, Error ellipse: s-maj=17.4km s-min=14.5km az=149.0*

ISC 11 00:24:00.0±0.6,23.°79S±0.°07×179.°80W±0.°10,h500km, n62,σ1§38/64,mb4.4/23,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**6.35**	**341**	P	**P**	**00 25 41.4**	**+1.4**
	7.9nm,0.3s,baz=279,slow=22,SNR=27						
MSVF				S	**S**	**00 27 01.8**	**+0.2**
	3.4nm,0.6s,baz=2.2,slow=22,SNR=1.2						
MSVF	**Nonsavu**	**6.35**	**341**		**P**	**00 25 41.0**	**+1.0**
MARNC	**Mare, Loyalty**	**11.47**	**279**	P	**P**	**00 26 34.6**	**+1.6**
PINNC	**Pines Island,**	**11.79**	**273**	P	**P**	**00 26 38.2**	**+1.8**
URZ	**Urewera**	**14.66**	**190**	P	**P**	**00 27 08.6**	**+2.1**
	3.9nm,0.4s,baz=301,slow=18,SNR=5.6						
URZ				S	**S**	**00 29 36.4**	**-3.8**
	12nm,1.0s,baz=300,slow=20,SNR=2.2						
HIZ	**Hauiti**	**15.37**	**196**	P	**P**	**00 27 17.7**	**+3.8**
BKZ	**Black Stump Fm**	**15.65**	**191**	P	**P**	**00 27 17.5**	**+0.6**
BKZ				IAmb	IAmb	00 27 25.2	
	comp=Z,14nm,1.2s						
BFZ	**Birch Farm**	**17.17**	**190**	P	**P**	**00 27 33.3**	**+0.8**
BFZ				IAmb	IAmb	00 27 43.1	
	comp=Z,20nm,0.9s						
MSWZ	**Moikau Station**	**18.06**	**192**	P	**P**	**00 27 40.3**	**-0.4**
QRZ	**Quartz Range**	**18.16**	**199**	P	**P**	**00 27 43.8**	**+2.1**
PLWZ	**Palliser**	**18.20**	**192**	P	**P**	**00 27 43.2**	**+1.1**
NNZ	**Nelson**	**18.29**	**197**	P	**P**	**00 27 43.4**	**+0.5**
NNZ				IAmb	IAmb	00 27 43.9	
	comp=Z,27nm,1.0s						
TUWZ	**Tuamarina**	**18.35**	**195**	P	**P**	**00 27 44.3**	**+1.0**
BSWZ	**Blackbirch Sta**	**18.64**	**195**	P	**P**	**00 27 47.8**	**+1.8**
THZ	**Tophouse**	**18.93**	**197**	P	**P**	**00 27 50.3**	**+1.5**
KHZ	**Kahutara**	**19.38**	**195**	P	**P**	**00 27 53.0**	**+0.3**
LTZ	**Lake Taylor**	**20.05**	**197**	P	**P**	**00 28 01.0**	**+2.1**
LTZ				IAmb	IAmb	00 28 02.4	
	comp=Z,15nm,0.6s						
OXZ	**Oxford**	**20.61**	**197**	P	**P**	**00 28 03.4**	**-0.6**
OXZ				IAmb	IAmb	00 28 06.4	
	comp=Z,13nm,0.6s						
LBZ	**Lake Benmore**	**22.12**	**199**	P	**P**	**00 28 17.2**	**-0.4**
LBZ				IAmb	IAmb	00 28 24.6	
	comp=Z,8.0nm,1.0s						
WKZ	**Wanaka**	**22.88**	**201**	P	**P**	**00 28 24.3**	**-0.2**
MLZ	**Mavora Lakes**	**23.66**	**202**	P	**P**	**00 28 32.5**	**+1.1**
DCZ	**Deep Cove**	**24.08**	**203**	P	**P**	**00 28 35.7**	**+0.6**
WHZ	**Wether Hill Ro**	**24.18**	**201**	P	**P**	**00 28 38.1**	**+2.2**
WHZ				IAmb	IAmb	00 28 57.5	
	comp=Z,11nm,0.9s						
ARMA	**Armidale**	**26.23**	**249**	P	**P**	**00 28 56.3**	**+1.8**
ARMA				IAmb	IAmb	00 28 57.9	
	comp=Z,7.7nm,0.8s						
EIDS	**Eidsvold**	**26.50**	**261**	P	**P**	**00 28 57.6**	**+0.7**
EIDS				IAmb	IAmb	00 28 58.8	
	comp=Z,9.9nm,0.6s						
CAN	**Canberra**	**29.35**	**240**	P	**P**	**00 29 23.1**	**+1.4**
CAN				IAmb	IAmb	00 29 41.3	
	comp=Z,16nm,1.1s						
CTA	**Charters Tower**	**31.66**	**270**	P	**P**	**00 29 42.0**	**+0.2**
	comp=Z,26nm,0.5s,baz=94,slow=10,SNR=62						
	comp=Z,26nm,0.5s						
CTAO	**Charters Tower**	**31.66**	**270**	P	**P**	**00 29 42.1**	**+0.2**
TOO	**Toolangi**	**32.66**	**237**	P	**P**	**00 29 51.2**	**+1.0**
TOO				IAmb	IAmb	00 30 01.5	
	comp=Z,9.3nm,1.1s						
PMG	**Port Moresby**	**34.63**	**289**	P	**P**	**00 30 05.9**	**-1.1**
	comp=Z,20nm,0.6s,baz=149,slow=6.4,SNR=5.9						
	comp=Z,20nm,0.6s						
PMG	**Port Moresby**	**34.63**	**289**	P	**P**	**00 30 05.6**	**-1.5**
STKA	**Stephens Creek**	**34.93**	**248**	P	**P**	**00 30 08.9**	**-0.5**
	comp=Z,5.2nm,0.8s,baz=108,slow=10,SNR=6.1						
	comp=Z,5.2nm,0.8s						
STKA	**Stephens Creek**	**34.93**	**248**	IAmb	IAmb	00 30 11.1	
	comp=Z,1.8nm,0.9s						
AS31	**Alice Springs**	**42.23**	**260**	P	**P**	**00 31 08.1**	**-0.8**
ASAR	**Alice Springs**	**42.23**	**260**	P	**P**	**00 31 08.6**	**-0.4**
	comp=Z,12nm,0.8s,baz=95,slow=8.1,SNR=73						
ASAR				ScP	**ScP**	**00 35 54.5**	**+0.1**
	comp=Z,2.5nm,0.8s,baz=118,slow=3.9,SNR=9.0						
	comp=Z,12nm,0.8s						
ASAR	**Alice Springs**	**42.23**	**260**	P	**P**	**00 31 08.4**	**-0.5**
WR0	**Warramunga Arr**	**42.41**	**266**	P	**P**	**00 31 09.2**	**-1.1**
WR0				IAmb	IAmb	00 31 10.6	
	comp=Z,11nm,1.1s						
WB2	**Warramunga Arr**	**42.58**	**266**	P	**P**	**00 31 10.8**	**-0.9**
WB2				IAmb	IAmb	00 31 12.0	
	comp=Z,15nm,0.7s						
WB0	**Warramunga Arr**	**42.59**	**266**	P	**P**	**00 31 10.8**	**-0.9**
WB0				IAmb	IAmb	00 31 12.0	
	comp=Z,15nm,0.7s						
WRA	**Warramunga Arr**	**42.59**	**266**	P	**P**	**00 31 10.8**	**-1.1**
	comp=Z,11nm,0.6s,baz=103,slow=8.5,SNR=60						
	comp=Z,11nm,0.6s						
WRA	**Warramunga Arr**	**42.59**	**266**	P	**P**	**00 31 10.7**	**-1.1**
FORT	**Forrest**	**46.52**	**249**	P	**P**	**00 31 41.4**	**-0.5**
SIJI	**Sorong**	**52.57**	**288**	P	**P**	**00 32 25.6**	**-1.3**
	comp=Z,25nm,0.7s,baz=105,slow=6.8,SNR=9.3						
	comp=Z,25nm,0.7s						
MBWA	**Marble Bar**	**55.57**	**260**	P	**P**	**00 32 47.4**	**-0.6**
MBWA				IAmb	IAmb	00 32 48.7	
	comp=Z,23nm,1.1s						
MORW	**Morawa**	**57.08**	**250**	P	**P**	**00 32 57.3**	**-1.0**
TOLI2	**Tolitoli**	**62.73**	**284**	P	**P**	**00 33 35.1**	**-1.0**
QSPA	**South Pole Qui**	**66.29**	**180**	P	**P**	**00 33 59.4**	**+1.4**
	comp=Z,2.8nm,0.6s,baz=350,slow=4.2,SNR=17						
	comp=Z,2.8nm,0.6s						
QSPA	**South Pole Qui**	**66.29**	**180**	P	**P**	**00 33 59.7**	**+1.7**
ADK	**Adak**	**75.40**	**2**	P	**P**	**00 34 50.5**	**-1.1**
ADK				IAmb	IAmb	00 35 06.5	
	comp=Z,23nm,1.1s						
NVAR	**Mina Array Bea**	**84.55**	**44**	P	**P**	**00 35 40.2**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=221,slow=10,SNR=5.1						
	comp=Z,0.4nm,0.5s						
SNAA	**Sanae**	**84.77**	**179**	P	**P**	**00 35 40.7**	**0.0**
CMAR	**Chiang Mai Arr**	**89.66**	**290**	P	**P**	**00 36 06.0**	**+1.4**
	comp=Z,1.1nm,0.3s,baz=143,slow=2.1,SNR=4.5						
	comp=Z,1.1nm,0.3s						
TXAR	**Lajitas Array**	**90.22**	**58**	P	**P**	**00 36 07.5**	**+0.4**
	comp=Z,1.2nm,0.8s,baz=213,slow=5.7,SNR=16						
	comp=Z,1.2nm,0.8s						
TXAR	**Lajitas Array**	**90.22**	**58**	P	**P**	**00 36 07.7**	**+0.5**
ILAR	**Eielson Array**	**91.88**	**13**	P	**P**	**00 36 12.5**	**-1.3**
	comp=Z,0.3nm,0.8s,baz=231,slow=5.4,SNR=2.7						
	comp=Z,0.3nm,0.8s						
PDAR	**Pinedale Array**	**92.49**	**44**	P	**P**	**00 36 18.2**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=214,slow=6.3,SNR=2.3						
	comp=Z,0.3nm,0.5s						
MKAR	**Makanchi Array**	**112.21**	**313**	PKiKP	**PKiKP**	**00 41 38.0**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=220,slow=1.3,SNR=2.0						
ARCES	**ARCESS Array B**	**138.40**	**342**	SKPbc	**SKPbc**	**00 45 12.5**	**-2.3**
	comp=Z,1.

0.2nm28nm,0.8s
MSAI Masohi 7.71 161 P **Pn** **00 29 19.8 -0.3**
0.3nm12nm,0.5s
TTSI Tana Toraja 9.65 224 P **Pn** **00 29 46.4 0.0**
33nm,0.7s
KAPI Kappang 11.19 217 Pn **Pn** **00 30 06.7 -0.6**
SAUI Saumlaki 12.85 158 Pn **Pn** **00 30 28.2 -1.3**
SOEI Soe 13.84 189 P **P** **00 30 49.6 +2.0**
SBUM Sibu 14.30 264 P **P** **00 30 52.3 -0.2**
BATI Batumata 14.39 191 P **Pn** **00 30 50.7 +1.2**
26nm,0.4s,baz=280,slow=17,SNR=2.7
PLAI Plampang 15.41 214 P **P** **00 31 04.1 -0.7**
58nm,0.9s
MTN Manton Dam 17.37 165 P **P** **00 31 24.1 -2.4**
MTN IAmb IAmb 00 31 27.8
comp=Z,72nm,1.5s
KNRA Kununurra 19.69 173 P **Pn** **00 31 53.0 -1.2**
KNRA IAmb IAmb 00 31 55.2
comp=Z,19nm,0.7s
UGM Wanagama 19.82 233 P **P** **00 31 53.5 +0.1**
YULB Yu-li 19.91 346 P **P** **00 31 50.8 -3.4**
YULB IAmb IAmb 00 32 09.8
comp=Z,42nm,1.5s
SSLB Suanglung 20.37 345 P **P** **00 31 58.3 -0.9**
GUMO Guam 20.52 61 LR LR 00 38 31.4
comp=Z,22nm,20.3s,baz=106,slow=32
LEM Lembang 21.67 240 LR LR 00 40 58.8
comp=Z,48nm,18.3s,baz=192,slow=38
WB0 Warramunga Arr 24.88 162 P **P** **00 32 44.2 +0.2**
WB0 IAmb IAmb 00 32 54.6
comp=Z,14nm,0.8s
WRA Warramunga Arr 25.03 162 P **P** **00 32 45.7 +0.3**
comp=Z,7.3nm,0.8s,baz=342,slow=10,SNR=17
comp=Z,7.3nm,0.8s
WRA Warramunga Arr 25.03 162 P **P** **00 32 46.0 +0.6**
WB2 Warramunga Arr 25.03 162 P **P** **00 32 45.8 +0.4**
WB2 IAmb IAmb 00 32 48.0
comp=Z,15nm,0.9s
WR0 Warramunga Arr 25.11 162 P **P** **00 32 46.5 +0.4**
PSA00 Pilbara Seismi 26.23 194 P **P** **00 32 57.1 +0.9**
PSA00 IAmb IAmb 00 33 02.7
comp=Z,23nm,1.1s
AS31 Alice Springs 28.45 166 P **P** **00 33 17.0 +0.9**
ASAR Alice Springs 28.45 166 P **P** **00 33 16.2 +0.1**
comp=Z,0.7nm,0.5s,baz=348,slow=7.6,SNR=11
ASAR PcP **PcP** **00 36 27.2 +1.2**
comp=Z,0.4nm,0.5s,baz=339,slow=2.3,SNR=2.0
comp=Z,0.7nm,0.5s
ASAR Alice Springs 28.45 166 P **P** **00 33 17.4 +1.4**
NJ2 Nanjing 28.80 347 *eP* **P** **00 33 17.6 -1.4**
NJ2 pmax pmax
comp=Z,5.0nm,0.5s
JMN Monobe 30.37 12 P **P** **00 33 32.1 -0.9**
CMAR Chiang Mai Arr 30.50 300 P **P** **00 33 33.0 -1.3**
comp=Z,1.5nm,0.3s,baz=118,slow=7.7,SNR=4.8
comp=Z,1.5nm,0.3s
KSCHJ Chungju 32.74 2 P **P** **00 33 52.9 -0.8**
KSCHJ IAmb IAmb 00 33 54.5
comp=Z,7.1nm,0.6s
KSRS Korea Array 33.31 2 P **P** **00 33 59.0 +0.3**
comp=Z,2.8nm,0.5s,baz=181,slow=9.9,SNR=14
KSRS PcP **PcP** **00 36 40.5 +1.9**
comp=Z,0.8nm,0.5s,baz=178,slow=2.9,SNR=4.2
KSRS LR LR 00 46 15.4
comp=Z,19nm,21.2s,baz=185,slow=34
comp=Z,2.8nm,0.5s
XAN Xi'an 34.05 333 ⇑P **P** **00 34 03.9 -1.3**
XAN pmax pmax
comp=Z,16nm,0.7s
XAN pmax pmax
comp=Z,79nm,5.5s
MJAR Matsushiro Arr 34.14 17 LR LR 00 51 07.5
comp=Z,15nm,18.9s,baz=204,slow=41
MORW Morawa 34.37 196 P **P** **00 34 08.4 +0.4**
FORT Forrest 34.62 178 P **P** **00 34 10.7 +0.6**
HNS HongShan 34.94 344 ⇓P **P** **00 34 12.7 0.0**
BJT Baijiatuau 37.04 347 P **P** **00 34 31.1 +0.4**
BJI Beijing 37.06 347 P **P** **00 34 30.6 -0.2**
BJI pmax pmax
comp=Z,17nm,0.6s
BBOO Buckleboo 37.73 167 P **P** **00 34 36.6 0.0**
EIDS Eidsvold 37.74 142 P **P** **00 34 37.5 +0.8**
EIDS IAmb IAmb 00 34 38.9
comp=Z,6.2nm,1.1s
NWAO Narrogin (SRO) 37.76 193 P **P** **00 34 37.1 +0.3**
STKA Stephens Creek 38.48 159 P **P** **00 34 44.2 +1.3**
comp=Z,2.8nm,0.6s,baz=344,slow=11,SNR=3.8
comp=Z,2.8nm,0.6s
STKA Stephens Creek 38.48 159 P **P** **00 34 43.8 +0.9**
JTM Tenmabayashi 38.91 18 P **P** **00 34 46.1 -0.2**
HHC Hu-ho-hao-te 39.05 342 *eP* P 00 34 51.3 +3.6
HHC pmax pmax
comp=Z,40nm,0.9s
HHC pmax pmax
comp=Z,120nm,6.1s
SHL Shillong 39.49 306 P **P** **00 34 51.5 -0.2**
USRK Ussuriysk Ar. 40.32 6 P **P** **00 34 59.1 +1.1**
comp=Z,3.9nm,0.8s,baz=184,slow=5.5,SNR=7.1
comp=Z,3.9nm,0.8s
USRK Ussuriysk Ar. 40.32 6 P **P** **00 34 59.6 +1.6**
XLT XiLinHaoTe 40.77 348 ⇓*i*P **P** **00 35 02.7 +0.8**
XLT sS sS 00 41 38.2 -5.7
XLT pmax pmax
comp=Z,18nm,0.5s
XLT pmax pmax
comp=Z,83nm,5.3s
XLT LR LR
comp=Z,150nm,16.2s
XLT LR LR
comp=Z,51nm,9.2s
ARMA Armidale 41.85 147 P **P** **00 35 11.7 +0.9**
ARMA IAmb IAmb 00 35 12.1
comp=Z,25nm,1.5s
ASAJ Asahikawa 42.41 17 LR LR 00 53 37.5
comp=Z,23nm,20.8s,baz=123,slow=37
KLR Kul'dur 45.28 5 LR LR 00 54 18.0
comp=Z,22nm,20.5s,baz=227,slow=36
ULN Ulaanbaatar 46.77 342 P **P** **00 35 50.8 +0.8**
DZM Mont Dzumac 46.92 125 P **P** **00 35 52.8 +1.4**
DZM IAmb IAmb 00 35 53.5
comp=Z,16nm,1.4s
SONM Songino Array 46.95 342 P **P** **00 35 50.8 -0.5**
comp=Z,1.9nm,0.5s,baz=155,slow=8.6,SNR=15
SONM LR LR 00 55 46.5
comp=Z,27nm,18.1s,baz=194,slow=36
comp=Z,1.9nm,0.5s
SONM Songino Array 46.95 342 P **P** **00 35 51.9 +0.6**
WMQ Urumqi 52.34 325 *eP* **P** **00 36 35.0 +2.8**
PEA0B Petropavlovsk- 55.28 22 P **P** **00 36 53.4 0.0**
PETK Petropavlovsk- 55.28 22 P **P** **00 36 53.8 +0.4**
comp=Z,2.5nm,0.7s,baz=207,slow=6.2,SNR=4.3
comp=Z,2.5nm,0.7s
PETK Petropavlovsk- 55.28 22 P **P** **00 36 54.2 +0.9**
MK31 Makanchi Array 57.17 325 P **P** **00 37 06.5 -0.5**
MKAR Makanchi Array 57.17 325 P **P** **00 37 06.4 -0.6**
comp=Z,1.4nm,0.4s,baz=117,slow=7.6,SNR=40
MKAR PcP **PcP** **00 38 01.4 +0.9**
comp=Z,0.8nm,0.6s,baz=134,slow=3.2,SNR=4.1
comp=Z,1.4nm,0.4s
MAKZ Makanchi 57.36 325 P **P** **00 37 08.0 -0.3**
MAKZ IAmb IAmb 00 37 09.6
comp=Z,2.1nm,0.6s
KDJ Kajisay 57.96 318 P **P** **00 37 12.7 -0.1**
ZAA0 Zalesovo Array 60.22 333 P **P** **00 37 27.0 -0.9**
ZAA0 IAmb IAmb 00 37 27.2
comp=Z,1.8nm,0.6s
ZALV Zalesovo Beam 60.22 333 P **P** **00 37 26.6 -1.3**
comp=Z,1.6nm,0.5s,baz=124,slow=5.7,SNR=7.2
comp=Z,1.6nm,0.5s
ZALV Zalesovo Beam 60.22 333 P **P** **00 37 26.8 -1.1**
KURK Kurchatov 61.36 328 P **P** **00 37 35.3 -0.4**
KURK IAmb IAmb 00 37 37.0
comp=Z,6.0nm,0.7s
GAR Garm 61.54 313 P **P** **00 37 37.6 +0.3**
GAR IAmb IAmb 00 37 39.8
comp=Z,6.7nm,0.8s
BRVK Borovoye 67.01 327 P **P** **00 38 12.7 +0.1**
BRVK IAmb IAmb 00 38 15.3
comp=Z,3.4nm,0.8s
NRIK Noril'sk 70.10 346 P **P** **00 38 32.7 +1.2**
comp=Z,5.2nm,0.6s,baz=120,slow=6.0,SNR=9.1
comp=Z,5.2nm,0.6s
NRIK Noril'sk 70.10 346 P **P** **00 38 32.5 +1.0**
NRIK IAmb IAmb 00 38 33.0
comp=Z,7.8nm,0.8s
ABKAR Akbulak array 71.76 321 P **P** **00 38 41.6 -0.4**
ARU Arti 74.56 328 P **P** **00 38 57.7 -0.6**
RAYN Ar Rayn 80.12 293 P **P** **00 39 30.1 0.0**
J20K Nowinta River 81.79 26 P **P** **00 39 39.4 +1.4**
KDAK Kodiak Island 81.80 32 P **P** **00 39 39.0 +0.7**
VOI Vohitsoka 81.92 247 P **P** **00 39 40.4 +0.7**
VOI IAmb IAmb 00 39 56.4
comp=Z,12nm,1.3s
FOMA Nahampoana Res 82.17 244 P **P** **00 39 41.8 +1.0**
IMAR Indian Mountai 82.20 24 P **P** **00 39 41.6 +1.4**
H21K Melozitna Rive 82.55 24 P **P** **00 39 43.5 +1.5**
H21K IAmb IAmb 00 39 44.8
comp=Z,6.8nm,1.5s
CNPM China Poot 82.66 31 P **P** **00 39 44.3 +1.6**
SKT Skwentna 82.72 28 P **P** **00 39 44.7 +1.7**
MLY Manley 83.34 25 P **P** **00 39 48.0 +1.9**
MLY IAmb IAmb 00 39 48.6
comp=Z,5.0nm,1.0s
H23K Yukon River 83.90 24 P **P** **00 39 50.2 +1.2**
H23K IAmb IAmb 00 39 51.8
comp=Z,5.8nm,1.0s
I23K Minto, Yukon-K 83.94 25 P **P** **00 39 50.6 +1.5**
I23K IAmb IAmb 00 39 51.7
comp=Z,5.4nm,1.0s
NEA2 Nenana 84.03 26 P **P** **00 39 50.4 +0.8**
NEA2 IAmb IAmb 00 39 52.5
comp=Z,4.1nm,1.0s
TOLK Toolik Lake Re 84.09 21 P **P** **00 39 51.1 +1.2**
TOLK IAmb IAmb 00 39 52.9
comp=Z,8.1nm,1.1s
SML Sawmill 84.22 28 P **P** **00 39 51.2 +0.5**
SML IAmb IAmb 00 39 52.1
comp=Z,11nm,1.2s
CCB Clear Creek Bu 84.57 26 P **P** **00 39 53.0 +0.7**
CCB IAmb IAmb 00 39 53.5
comp=Z,4.7nm,1.2s
H24K Noodor Dome 84.59 24 P **P** **00 39 54.1 +1.6**
H24K IAmb IAmb 00 39 56.7
comp=Z,4.9nm,1.3s
ILAR Eielson Array 84.97 25 P **P** **00 39 54.6 +0.3**
comp=Z,0.5nm,0.7s,baz=238,slow=6.1,SNR=4.6
comp=Z,0.5nm,0.7s
KLMR Klimovskoe 85.03 331 *eP* **P** **00 39 53.8 -0.9**
KLMR AMP 00 39 55.4
comp=Z,12nm,0.8s
BRTR Keskin Array B 89.64 310 P **P** **00 40 16.6 -1.0**
comp=Z,0.6nm,0.8s,baz=104,slow=5.2,SNR=5.0
comp=Z,0.6nm,0.8s
ARCES ARCESS Array B 90.10 340 P **P** **00 40 18.5 -0.4**
comp=Z,1.2nm,0.6s,baz=82,slow=5.7,SNR=15
comp=Z,1.2nm,0.6s
FINES FINESS Array B 91.46 332 P **P** **00 40 25.0 -0.4**
comp=Z,1.0nm,0.4s,baz=67,slow=3.6,SNR=9.9
comp=Z,1.0nm,0.4s
AKASG Malin Array Be 91.51 321 P **P** **00 40 23.9 -1.9**
comp=Z,0.3nm,0.2s,baz=50,slow=5.1,SNR=4.5
comp=Z,0.3nm,0.2s
NB2 NORSAR Subarra 98.42 334 P Pdif 00 40 56.2 -1.0
comp=Z,0.3nm,0.5s,baz=66,slow=4.6
NOA NORSAR Array B 98.42 334 P Pdif 00 40 56.3 -0.9
comp=Z,0.3nm,0.5s,baz=65,slow=4.6,SNR=3.8
NOA LR LR 01 31 39.6
comp=Z,10nm,18.4s,baz=115,slow=39
comp=Z,0.3nm,0.5s
TXAR Lajitas Array 121.64 52 PKP **PKiKP** **00 46 14.9 +1.4**
comp=Z,0.4nm,0.8s,baz=211,slow=1.5,SNR=4.2
TORD Torodi Ar. Bea 122.57 288 PKP **PKiKP** **00 46 15.9 +0.3**
comp=Z,0.6nm,0.7s,baz=62,slow=2.0,SNR=8.0

*IDC **11** 00:36:30.9±6.4,23.°03S×179.°82E,h582km±54km, mb2.9/4, mbtmp3.8/5, Error ellipse: s-maj=144.5km s-min=24.8km az=155.0*
*NEIC **11** 00:36:30.1±1.9,24.°1S±0.°2×179.°1E±0.°1, h475km±12km, mb4.2/16, Error ellipse: s-maj=22.2km s-min=18.0km az=190.0*
ISC 11 00:36:26.8±0.9,**23.°7S**±0.°1×**180.°0W**±0.°1,**h550**km,**n32,**
σ1**91**/28,**mb4.0**/11,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**5.87**	**162**	P	**P**	**00 38 03.9**	**-0.2**
MSVF	**Nonsavu**	**6.18**	**342**	P	**P**	**00 38 07.0**	**-0.2**
	2.5nm,0.4s,baz=153,slow=11,SNR=4.9						
MSVF	**Nonsavu**	**6.18**	**342**	P	**P**	**00 38 07.3**	**0.0**
PINNC	**Pines Island,**	**11.64**	**273**	P	**P**	**00 38 59.8**	**-1.8**
DZM	**Mont Dzumac**	**12.64**	**274**	P	P	00 39 07.4	-4.7
BHW	**Baring Head**	**18.23**	**193**	P	**P**	**00 40 06.8**	**+0.2**
QRZ	**Quartz Range**	**18.25**	**198**	P	**P**	**00 40 06.9**	**+0.1**
PLWZ	**Palliser**	**18.31**	**191**	P	**P**	**00 40 06.0**	**-1.3**
TUWZ	**Tuamarina**	**18.45**	**195**	P	**P**	**00 40 07.3**	**-1.3**
THZ	**Tophouse**	**19.02**	**197**	P	**P**	**00 40 13.4**	**-0.5**
THZ				IAmb	IAmb	00 40 13.4	
	comp=Z,6.8nm,0.8s						
LBZ	**Lake Benmore**	**22.20**	**199**	P	**P**	**00 40 43.5**	**+1.0**
ODZ	**Otahua Downs**	**22.68**	**197**	P	**P**	**00 40 48.9**	**+2.2**
WHZ	**Wether Hill Ro**	**24.26**	**201**	P	**P**	**00 41 01.3**	**+0.6**
WHZ				IAmb	IAmb	00 41 18.0	
	comp=Z,23nm,1.1s						
PPTF	**Pamatai, Papee**	**29.04**	**84**	P	P	00 41 58.3	+15
CTA	**Charters Tower**	**31.51**	**270**	P	**P**	**00 42 06.0**	**+1.6**
	comp=Z,1.6nm,0.3s,baz=103,slow=8.2,SNR=3.1						
	comp=Z,1.6nm,0.3s						
CTAO	**Charters Tower**	**31.51**	**270**	P	**P**	**00 42 05.7**	**+1.3**
TOO	**Toolangi**	**32.62**	**237**	P	**P**	**00 42 12.7**	**-0.9**
TOO				IAmb	IAmb	00 42 25.2	
	comp=Z,4.2nm,0.9s						
BBOO	**Buckleboo**	**39.58**	**247**	P	**P**	**00 43 11.3**	**+0.2**
BBOO				IAmb	IAmb	00 43 21.0	
	comp=Z,11nm,1.1s						
ASAR	**Alice Springs**	**42.11**	**260**	P	**P**	**00 43 32.4**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=98,slow=6.9,SNR=6.7						
	comp=Z,0.3nm,0.3s						
ASAR	**Alice Springs**	**42.11**	**260**	P	**P**	**00 43 32.2**	**+0.8**
WR0	**Warramunga Arr**	**42.27**	**266**	P	**P**	**00 43 32.8**	**+0.2**
WB2	**Warramunga Arr**	**42.45**	**266**	P	**P**	**00 43 34.4**	**+0.3**
WB2				IAmb	IAmb	00 43 49.2	
	comp=Z,5.1nm,1.1s						
WB0	**Warramunga Arr**	**42.45**	**266**	P	**P**	**00 43 34.6**	**+0.5**
WB0				IAmb	IAmb	00 43 36.8	
	comp=Z,4.4nm,0.9s						
WRA	**Warramunga Arr**	**42.46**	**266**	P	**P**	**00 43 34.5**	**+0.4**
	comp=Z,1.0nm,0.3s,baz=102,slow=8.1,SNR=28						
	comp=Z,1.0nm,0.3s						
WRA	**Warramunga Arr**	**42.46**	**266**	P	**P**	**00 43 34.7**	**+0.6**
KNRA	**Kununurra**	**48.73**	**270**	P	**P**	**00 44 22.8**	**+0.9**
KNRA				IAmb	IAmb	00 44 36.0	
	comp=Z,23nm,1.1s						
MORW	**Morawa**	**57.00**	**250**	P	**P**	**00 45 21.1**	**+0.5**
MORW				IAmb	IAmb	00 45 36.5	
	comp=Z,9.4nm,1.1s						
QSPA	**South Pole Qui**	**66.43**	**180**	P	P	00 46 29.4	+7.8
JNU	**Nakatsue**	**73.37**	**318**		pP	00 48 49.5	-7.0
TXAR	**Lajitas Array**	**90.27**	**58**	P	**P**	**00 48 30.2**	**+0.7**
	comp=Z,0.2nm,0.6s,baz=207,slow=7.7,SNR=3.4						
	comp=Z,0.2nm,0.6s						
ARCES	**ARCESS Array B**	**131.65**	**348**	PKP	**PKPdf**	**00 54 36.0**	**-0.6**
	comp=Z,1.6nm,1.0s,baz=356,slow=1.3,SNR=3.7						
BRTR	**Keskin Array B**	**147.46**	**308**	PKPbc	**PKPbc**	**00 55 08.1**	**-1.4**
	comp=Z,0.2nm,0.5s,baz=110,slow=2.1,SNR=1.6						

*IDC **11** 00:58:03.7±1.9,2.°89N×128.°74E, h0km, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=159.8km s-min=19.3km az=68.0*
*NEIC **11** 00:58:16.4±1.6,2.°43N±0.°08×128.°1E±0.°2, h92km±10km, mb4.1/12, Error ellipse: s-maj=25.4km s-min=3.3km az=117.0*
ISC 11 00:58:16.4±0.9,**2.°39N**±0.°10×**128.°1E**±0.°2,**h100**km,**n21,**
σ0**73**/22,**mb3.9**/11,**Halmahera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.77**	**204**	Pn	**Pn**	**00 58 45.8**	**-0.2**
TNTI				Sn	**Sn**	**00 59 08.8**	**+0.2**
MMRI	**Maumere**	**12.41**	**208**		**Pn**	**01 01 09.8**	**+0.1**
WB0	**Warramunga Arr**	**22.88**	**165**	P	**P**	**01 03 12.2**	**+0.5**
WB0				IAmb	IAmb	01 03 13.9	
	comp=Z,5.9nm,1.1s						
WRA	**Warramunga Arr**	**23.03**	**165**	P	**P**	**01 03 14.1**	**+0.9**
	comp=Z,0.8nm,0.4s,baz=345,slow=10.0,SNR=8.8						
	comp=Z,0.8nm,0.4s						
WRA	**Warramunga Arr**	**23.03**	**165**	P	**P**	**01 03 14.0**	**+0.8**
WB2	**Warramunga Arr**	**23.03**	**165**	P	**P**	**01 03 13.6**	**+0.4**
WB2				IAmb	IAmb	01 03 18.6	
	comp=Z,3.0nm,0.9s						
WR0	**Warramunga Arr**	**23.10**	**164**	P	**P**	**01 03 14.6**	**+0.8**
WR0				IAmb	IAmb	01 03 21.5	
	comp=Z,4.0nm,1.0s						
AS31	**Alice Springs**	**26.51**	**168**	P	**P**	**01 03 45.5**	**+0.7**
ASAR	**Alice Springs**	**26.52**	**168**	P	**P**	**01 03 45.9**	**+1.1**
	comp=Z,0.6nm,0.5s,baz=356,slow=7.9,SNR=16						
	comp=Z,0.6nm,0.5s						
ASAR	**Alice Springs**	**26.52**	**168**	P	**P**	**01 03 45.8**	**+1.0**
CTAO	**Charters Tower**	**28.58**	**142**	P	**P**	**01 04 02.6**	**-0.7**
CTAO				IAmb	IAmb	01 04 09.3	
	comp=Z,7.3nm,1.1s						
FORT	**Forrest**	**32.99**	**180**	P	**P**	**01 04 41.4**	**-0.5**
BBOO	**Buckleboo**	**35.82**	**168**	P	**P**	**01 05 05.8**	**-0.5**
BBOO				IAmb	IAmb	01 05 10.2	
	comp=Z,8.7nm,1.1s						
STKA	**Stephens Creek**	**36.42**	**160**	P	**P**	**01 05 11.8**	**+0.3**
	comp=Z,0.8nm,0.3s,baz=344,slow=7.4,SNR=3.6						
	comp=Z,0.8nm,0.3s						
STKA	**Stephens Creek**	**36.42**	**160**	P	**P**	**01 05 11.7**	**+0.3**
MKAR	**Makanchi Array**	**59.42**	**325**	P	**P**	**01 08 08.7**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=113,slow=6.3,SNR=5.0						
	comp=Z,0.4nm,0.5s						
MKAR	**Makanchi Array**	**59.42**	**325**	P	**P**	**01 08 08.6**	**0.0**
WKZ	**Wanaka**	**59.47**	**147**	P	**P**	**01 08 08.6**	**-0.4**
KURBB	**Kurchatov Arra**	**63.59**	**327**	P	**P**	**01 08 36.0**	**-0.6**
	comp=Z,0.6nm,0.5s,baz=128,slow=6.1,SNR=7.8						
	comp=Z,0.6nm,0.5s						
GHO	**Glory Hole Cre**	**84.58**	**28**	P	**P**	**01 10 40.1**	**+1.6**
SML	**Sawmill**	**84.86**	**28**	P	**P**	**01 10 39.2**	**-0.7**
SML				IAmb	IAmb	01 10 40.5	
	comp=Z,5.1nm,0.7s						

*IDC **11** 01:05:15.6±1.2,0.°59S×29.°41E,h0km, mb3.7/3, mbtmp3.8/6, ML3.8/3, MS3.2/3, Error ellipse: s-maj=26.0km s-min=14.5km az=177.0*
*NEIC **11** 01:05:16.9±1.8,0.°6S±0.°1×29.°44E±0.°07, h10km±2km, mb4.0/2, Error ellipse: s-maj=18.9km s-min=11.5km az=166.0*
*ECGS **11** 01:05:18.6,0.°65S±0.°08×29.°49E±0.°04, h30km±2km, ML3.9, Error ellipse: s-maj=14.1km s-min=7.0km az=9.0, smi:local/89d16f7a-4218-4d17-a3d9-4867c2e50aa1 Note: Depth/Latitude/Longitude errors are calculated from covariance matrix as 1D marginal (Lon/Lat errors as great circle degrees) while OriginUncertainty min/max horizontal errors are calculated from 2D error ellipsoid and are therefore seemingly higher compared to 1D errors. Error estimates can be reconstructed from the following original NonLinLoc error statistics line:STATISTICS ExpectX 54.8092 Y 98.3275 Z 29.6229 CovXX 22.7266 XY 10.0868 XZ -2.70108 YY 84.5809 YZ -15.7354 ZZ 8.55242 EllAz1 12.6661 Dip1 78.8001 Len1 4.3641 Az2 279.2 Dip2 0.685823 Len2 8.6356 Len3 1.775857e+01*
ISC 11 01:05:16.5±0.9,**0.°58S**±0.°06×**29.°42E**±0.°05,**h10**km,**n31,**
σ1**902**/33,**mb3.9**/4,**Zaire**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTSH	**Kitshanga**	**0.75**	**209**	*i*P	**Pb**	**01 05 32.4**	**+0.5**
KTSH	**Kitshanga**	**0.75**	**209**	*i*S	**Sb**	**01 05 42.7**	**+0.3**
RGB	**Rumangabo**	**0.77**	**184**	*i*P	**Pb**	**01 05 31.9**	**-0.2**
BUTK	**Butaka**	**0.96**	**181**	*i*P	**Pb**	**01 05 35.5**	**0.0**
SAHA	**Sahara**	**0.98**	**173**	*i*P	**Pg**	**01 05 35.2**	**-0.3**
SAHA	**Sahara**	**0.98**	**173**	*i*S	**Sg**	**01 05 47.9**	**-0.6**
RSY	**Rusayo**	**1.02**	**193**	*i*S	**Sn**	**01 05 51.5**	**-0.2**
RSY	**Rusayo**	**1.02**	**193**	*i*P	**Pn**	**01 05 37.4**	**+0.2**
GOM	**Goma**	**1.11**	**190**	*i*P	**Pn**	**01 05 38.4**	**0.0**
GOM	**Goma**	**1.11**	**190**	*i*S	**Sb**	**01 05 53.3**	**+0.6**
BOBN	**Bobandana**	**1.19**	**200**	*i*P	**Pb**	**01 05 39.6**	**+0.2**
MBAR	**Mbarara**	**1.32**	**91**	Pg	**Pn**	**01 05 41.4**	**+0.1**
	1μm,0.3s,baz=270,slow=20,SNR=2757						
MBAR				LR	LR	01 05 54.6	
	comp=Z,35nm,19.7s,baz=230,slow=29						
MBAR				Lg	Lg	01 05 57.4	
	2μm,0.3s,baz=0.0,slow=20,SNR=9.5						
MBAR	**Mbarara**	**1.32**	**91**	Pn	**Pn**	**01 05 41.2**	**-0.1**
MBAR				Sn	**Sb**	**01 05 58.0**	**-0.7**
MBAR	**Mbarara**	**1.32**	**91**	*i*P	**Pn**	**01 05 40.9**	**-0.3**
MBAR	**Mbarara**	**1.32**	**91**	*e*P	**Pn**	**01 05 41.4**	**+0.1**
MBAR				*e*S	**Sb**	**01 05 57.5**	**-1.2**
IDJ	**Idjwi**	**1.52**	**193**	*i*P	**Pn**	**01 05 43.9**	**-0.1**
LWI	**Lwiro**	**1.76**	**200**	*i*P	**Pn**	**01 05 47.6**	**+0.3**
BUJA	**Bujumbura/Buru**	**2.80**	**180**	*i*P	**Pn**	**01 06 01.8**	**+0.2**
TEBE	**Entebbe**	**3.12**	**78**	*e*P	**Pn**	**01 06 06.1**	**+0.2**
TEBE				*e*S	**Sb**	**01 06 49.3**	**-1.1**
LODK	**Lodwar**	**7.15**	**56**		**Pn**	**01 06 59.2**	**-2.1**
KMBO	**Kilima Mbogo**	**7.86**	**94**	Pn	**Pn**	**01 07 12.4**	**+1.2**
	0.8nm,0.3s,baz=260,slow=15,SNR=11						
KMBO				Sn	**Sn**	**01 08 43.8**	**+3.4**
	0.8nm,0.3s,baz=261,slow=19,SNR=1.9						
KMBO				Lg	Lg	01 09 19.1	
	2.1nm,0.3s,baz=253,slow=19,SNR=6.7						
KMBO				LR	LR	01 09 34.3	
	comp=Z,58nm,20.9s,baz=216,slow=33						
	1.9nm,0.3s						
KMBO	**Kilima Mbogo**	**7.86**	**94**		**Pn**	**01 07 12.8**	**+1.7**
KIBK	**Kibwezi**	**8.80**	**102**		**Pn**	**01 07 23.9**	**-0.2**
LSZ	**Lusaka**	**14.66**	**185**	Pn	**Pn**	**01 08 42.3**	**-2.0**
	0.3nm,0.3s,baz=1.3,slow=11,SNR=5.4						
LSZ				Lg	Lg	01 12 56.9	
	0.2nm,0.3s,baz=95,slow=8.6,SNR=5.2						
LSZ				LR	LR	01 14 30.6	
	comp=Z,104nm,19.1s,baz=140,slow=38						
	1.2nm,0.3s						
MATP	**Matopo**	**19.75**	**183**	P	**P**	**01 09 47.6**	**+0.7**
	0.1nm,0.3s,baz=11,slow=11,SNR=2.6						
	2.4nm,0.8s						
TSUM	**Tsumeb**	**21.85**	**211**	LR	LR	01 18 52.3	
	comp=Z,111nm,18.5s,baz=228,slow=37						
BOSA	**Boshof**	**28.16**	**188**	P	**P**	**01 11 10.2**	**+0.8**
	2.6nm,0.8s,baz=346,slow=8.3,SNR=3.2						
	2.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**30.68**	**297**	P	**P**	**01 11 31.9**	**+0.2**
	0.3nm,0.6s,baz=116,slow=6.8,SNR=4.3						
	0.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**30.68**	**297**	IAmb	IAmb	01 11 56.7	
	comp=Z,4.3nm,1.7s						
MK31	**Makanchi Array**	**65.96**	**37**	P	**P**	**01 16 02.3**	**-0.8**
MK31				IAmb	IAmb	01 16 04.9	
	comp=Z,0.8nm,0.9s						
MKAR	**Makanchi Array**	**65.96**	**37**	P	**P**	**01 16 04.0**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=246,slow=7.4,SNR=5.7						
	comp=Z,0.4nm,0.5s						

*IDC **11** 01:14:39.6±2.0,18.°53S×64.°57E, h0km, mb3.8/6, mbtmp3.8/6, MS3.6/3, Error ellipse: s-maj=76.2km s-min=27.4km az=40.0*
ISC 11 01:14:41.2±2.0,**18.°5S**±0.°4×**64.°6E**±0.°4,**h10**km,**n14,**
σ1**943**/6,**mb3.8**/6,**MS3.8**/3,**Mauritius-Reunion region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Garcia H**	**13.28**	**36**	T	T	01 30 23.2	
	baz=214,slow=75,SNR=80						
H08S2	**Diego Garcia H**	**13.29**	**36**	T	T	01 30 23.8	
	baz=214,slow=75,SNR=98						
H08S3	**Diego Garcia H**	**13.29**	**36**	T	T	01 30 24.7	
	baz=214,slow=75,SNR=158						
KMBO	**Kilima Mbogo**	**31.90**	**300**	LR	LR	01 31 16.4	
	comp=Z,99nm,18.6s,baz=217,slow=31						
H01W2	**Cape Leeuwin H**	**46.71**	**121**	T	T	02 12 56.3	
	baz=278,slow=75,SNR=20						
H01W3	**Cape Leeuwin H**	**46.71**	**121**	T	T	02 12 53.7	
	baz=278,slow=75,SNR=14						
H01W1	**Cape Leeuwin H**	**46.72**	**121**	T	T	02 12 55.3	
	baz=278,slow=75,SNR=22						
ASAR	**Alice Springs**	**64.34**	**108**	P	**P**	**01 25 17.6**	**0.0**
	0.4nm,0.6s,baz=270,slow=5.5,SNR=7.3						
ASAR				LR	LR	01 49 58.3	
	comp=Z,57nm,18.7s,baz=172,slow=33						
	0.4nm,0.6

0.5nm,0.4s
SONM Songino Array 75.94 28 P **P** **01 26 28.8 +0.5**
0.6nm,0.5s,baz=210,slow=6.1,SNR=4.5
0.6nm,0.5s
CTA Charters Tower 76.30 107 LR LR 01 57 37.7
comp=Z,55nm,18.2s,baz=92,slow=34

TUL ***11*** *01:17:18.5±1.0,36°.49N×098°.73W±0°.05,h7km±7km, ML3.5,mb_Lg3.1/80(NEIC),Error ellipse: s-maj=6.2km s-min=3.7km az=110.0*
ANF ***11*** *01:17:19.3±0.3,36°.45N×98°.72W,h7km,ML3.9/10,Error ellipse: s-maj=3.7km s-min=3.0km az=163.0*
NEIC ***11*** *01:17:19.2±0.9,36°.48N±0°.02×98°.72W±0°.02,h5km±6km, Error ellipse: s-maj=3.6km s-min=2.8km az=201.0*
ISC 11 01:17:18.8±1.1,36°.47N±0°.03×98°.72W±0°.04,h9km±10km, n69,σ0s92/54,Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
U32A	**Winter Ranch,**	**0.24**	**248**	Pg	**Pg**	**01 17 23.7**	**0.0**
U32A				Sg	**Sg**	**01 17 27.7**	**+0.7**
U32A	**Winter Ranch,**	**0.24**	**248**	P	**Pg**	**01 17 23.6**	**-0.1**
	baz=64,SNR=182						
U32A				S	**Sg**	**01 17 27.6**	**+0.6**
	baz=64						
OKCFA	**Oklahoma City**	**1.48**	**135**		**Pn**	**01 17 45.2**	**-0.3**
OKCFA	**Oklahoma City**	**1.48**	**135**	P	**Pn**	**01 17 45.5**	**0.0**
	baz=316,SNR=6.5						
OKCFA				S	**Sn**	**01 18 05.4**	**+0.5**
	baz=316						
OKCSW	**OKLAHOMA CITY**	**1.49**	**135**		**Pn**	**01 17 45.4**	**-0.3**
FNO	**Franklin**	**1.62**	**138**	Pn	**Pn**	**01 17 47.8**	**+0.3**
WMOK	**Wichita Mounta**	**1.73**	**182**		**Pn**	**01 17 48.9**	**-0.1**
WMOK	**Wichita Mounta**	**1.73**	**182**	P	**Pn**	**01 17 49.1**	**+0.1**
	baz=1.4,SNR=88						
WMOK				S	**Sb**	**01 18 13.5**	**+0.9**
	baz=1.4						
T35A	**Sooner Cattle**	**1.83**	**75**		**Pn**	**01 17 51.0**	**+0.5**
T35B	**Sooner Cattle**	**1.83**	**75**	P	**Pn**	**01 17 51.0**	**+0.6**
	baz=257,SNR=120						
T35B				S	**Sb**	**01 18 15.6**	**+0.1**
	baz=257						
R32A	**Long Quarter,**	**1.95**	**0**		**Pb**	**01 17 53.2**	**-1.3**
R32A	**Long Quarter,**	**1.95**	**0**	P	**Pn**	**01 17 52.9**	**+0.8**
	baz=180,SNR=101						
R32A				S	**Sb**	**01 18 18.7**	**-0.1**
	baz=180						
X34A	**Smith Ranch, M**	**2.00**	**158**		**Pb**	**01 17 54.4**	**-0.9**
X34A				IAmb_Lg		01 18 27.3	
	comp=Z,124nm,0.7s						
TUL1	**Leonard**	**2.44**	**102**		**Pn**	**01 17 59.8**	**+1.1**
TUL1				IAmb_Lg		01 18 36.4	
	comp=Z,67nm,0.8s						
TUL1	**Leonard**	**2.44**	**102**	P	**Pn**	**01 17 59.2**	**+0.4**
	baz=285,SNR=64						
TUL1				S	**Sb**	**01 18 33.1**	**+0.2**
	baz=285						
CBKS	**Cedar Bluff**	**2.47**	**341**	Pn	**Pb**	**01 18 01.3**	**-2.1**
CBKS	**Cedar Bluff**	**2.47**	**341**	S	**Sb**	**01 18 34.0**	**0.0**
	baz=161						
AMTX	**Amarillo**	**2.88**	**238**		**Pn**	**01 18 07.2**	**+2.3**
AMTX	**Amarillo**	**2.88**	**238**	S	**Sb**	**01 18 43.1**	**-2.7**
	baz=55						
KSU1	**Kansas State U**	**3.11**	**32**	IAmb_Lg		01 18 57.5	
	comp=Z,45nm,0.8s						
KSU1	**Kansas State U**	**3.11**	**32**	P	**Pn**	**01 18 09.2**	**+1.1**
	baz=213						
X37A	**Clayton**	**3.32**	**124**	Pn	**Pn**	**01 18 11.0**	**+0.2**
X37A				IAmb_Lg		01 19 08.4	
	comp=Z,61nm,0.8s						
X37A	**Clayton**	**3.32**	**124**	P	**Pn**	**01 18 11.2**	**+0.3**
	baz=306,SNR=8.7						
U38A	**Gravette**	**3.50**	**89**		**Pn**	**01 18 14.2**	**+0.9**
HHAR	**Hobbs**	**3.86**	**91**		**Pn**	**01 18 19.2**	**+0.8**
ABTX	**Abilene, Hawle**	**3.91**	**191**		**Pn**	**01 18 19.9**	**+0.8**
KSCO	**Kaye Shedlock'**	**4.00**	**311**		**Pn**	**01 18 21.2**	**+0.8**
KSCO				IAmb_Lg		01 19 27.0	
	comp=Z,47nm,0.7s						
MSTX	**Muleshoe**	**4.15**	**234**	IAmb_Lg		01 19 36.9	
	comp=Z,34nm,0.9s						
W39A	**Magazine**	**4.21**	**106**		**Pn**	**01 18 24.3**	**+1.2**
W39A				IAmb_Lg		01 19 38.4	
	comp=Z,59nm,0.8s						
N33A	**J Bar K, Exete**	**4.38**	**13**	IAmb_Lg		01 19 40.8	
	comp=Z,27nm,0.8s						
S39A	**Bolivar**	**4.49**	**73**	Pn	**Pn**	**01 18 27.4**	**+0.5**
S39A				IAmb_Lg		01 19 39.8	
	comp=Z,43nm,0.8s						
T25A	**Trinidad**	**4.61**	**280**		**Pn**	**01 18 28.7**	**-0.1**
T25A				IAmb_Lg		01 19 43.6	
	comp=Z,42nm,0.8s						
MIAR	**Mount Ida**	**4.62**	**113**		**Pn**	**01 18 29.1**	**+0.3**
U40A	**Yellville**	**4.74**	**90**		**Pn**	**01 18 30.3**	**0.0**
U40A				IAmb_Lg		01 19 58.4	
	comp=Z,37nm,0.8s						
U40A	**Yellville**	**4.74**	**90**	P	**Pn**	**01 18 30.8**	**+0.4**
	baz=273						
U40A				P	**Pn**	**01 18 30.8**	**+0.4**
	baz=273						
BGNE	**Belgrade**	**4.95**	**5**	IAmb_Lg		01 20 05.6	
	comp=Z,36nm,0.8s						
237A	**Washetta, Mont**	**5.07**	**151**	IAmb_Lg		01 20 09.2	
	comp=Z,26nm,0.9s						
OGNE	**Ogallala**	**5.16**	**331**	IAmb_Lg		01 20 09.0	
	comp=Z,40nm,0.8s						
P38A	**Dawn**	**5.17**	**51**	IAmb_Lg		01 20 05.6	
	comp=Z,27nm,0.8s						
X40A	**Basin Creek Fa**	**5.20**	**111**	Pn	**Pn**	**01 18 36.7**	**0.0**
X40A				IAmb_Lg		01 20 07.9	
	comp=Z,31nm,0.9s						
MGMO	**Mountain Grove**	**5.22**	**81**		**Pn**	**01 18 37.0**	**0.0**
WHAR	**Wooly Hollow**	**5.36**	**101**	Pn	**Pn**	**01 18 39.6**	**+0.8**
WHAR				IAmb_Lg		01 20 11.6	
	comp=Z,24nm,0.8s						
FCAR	**Ozark Folk Cen**	**5.37**	**94**	Pn	**Pn**	**01 18 39.8**	**+0.8**
FCAR				IAmb_Lg		01 20 13.7	
	comp=Z,27nm,0.7s						
W41B	**Gary Mavity, V**	**5.42**	**102**	Pn	**Pn**	**01 18 40.5**	**+0.8**
W41B				IAmb_Lg		01 20 11.9	
	comp=Z,28nm,0.8s						
R40A	**Maddies Statio**	**5.45**	**69**	Pn	**Pn**	**01 18 40.9**	**+0.8**
R40A				IAmb_Lg		01 20 14.3	
	comp=Z,30nm,0.8s						
UALR	**University of**	**5.46**	**106**	IAmb_Lg		01 20 23.0	
	comp=Z,28nm,0.8s						
SDCO	**Great Sand Dun**	**5.56**	**285**		**Pn**	**01 18 42.9**	**+0.8**
Q24A	**Divide**	**5.67**	**298**	IAmb_Lg		01 20 24.7	
	comp=Z,21nm,0.7s						
435B	**Jarrell**	**5.75**	**170**	IAmb_Lg		01 20 28.4	
	comp=Z,27nm,0.9s						
L34A	**Svendsen Farm,**	**5.78**	**18**	Pn	**Pn**	**01 18 44.7**	**-0.1**
JCT	**Junction City**	**6.04**	**189**	IAmb_Lg		01 20 39.3	
	comp=Z,21nm,0.8s						
P40A	**Paris**	**6.09**	**58**	Pn	**Pn**	**01 18 50.0**	**+1.0**
LCAR	**Lake Charles**	**6.13**	**92**	Pn	**Pn**	**01 18 49.7**	**+0.3**
LCAR				IAmb_Lg		01 20 32.2	
	comp=Z,18nm,0.9s						
K31A	**O'Neill**	**6.14**	**360**	IAmb_Lg		01 20 49.3	
	comp=Z,26nm,0.7s						
CCM	**Cathedral Cave**	**6.17**	**73**	Pn	**Pn**	**01 18 51.4**	**+1.3**
CCM				IAmb_Lg		01 20 41.9	
	comp=Z,24nm,0.8s						
CCAR	**Cane Creek**	**6.24**	**112**	IAmb_Lg		01 20 41.4	
	comp=Z,21nm,0.7s						
ANMO	**Albuquerque**	**6.47**	**259**	Pn	**Pn**	**01 18 56.7**	**+2.3**
PBMO	**Poplar Bluff**	**6.68**	**85**	IAmb_Lg		01 20 52.8	
	comp=Z,32nm,0.7s						
FVM	**French Village**	**6.79**	**75**	IAmb_Lg		01 20 54.8	
	comp=Z,21nm,0.8s						
BNM	**Barren Site**	**6.87**	**253**	Pn	**Pn**	**01 19 00.2**	**+0.4**
SCIA	**State Center**	**6.91**	**37**	IAmb_Lg		01 21 10.7	
	comp=Z,22nm,0.8s						
SLM	**Saint Louis**	**7.08**	**70**	IAmb_Lg		01 21 02.4	
	comp=Z,19nm,0.8s						
PHWY	**Pilot Hill**	**7.13**	**315**	Pn	**Pn**	**01 19 03.8**	**+0.3**
PHWY				IAmb_Lg		01 21 04.4	
	comp=Z,27nm,1.0s						
MNTX	**Cornudas Mount**	**7.29**	**231**	IAmb_Lg		01 21 19.6	
	comp=Z,15nm,1.0s						
SIUC	**Southern Illin**	**7.70**	**78**	IAmb_Lg		01 21 29.7	
	comp=Z,28nm,0.8s						
OXF	**Oxford**	**7.84**	**102**	IAmb_Lg		01 21 38.6	
	comp=Z,17nm,0.8s						
W45A	**Hickory Valley**	**7.86**	**97**	IAmb_Lg		01 21 36.4	
	comp=Z,20nm,0.7s						
K22A	**Casper**	**8.62**	**318**	IAmb_Lg		01 21 57.0	
	comp=Z,15nm,0.9s						
JFWS	**Jewell Farm**	**9.16**	**43**	IAmb_Lg		01 22 13.6	
	comp=Z,16nm,0.8s						

IDC ***11*** *01:25:30.5±2.4,37°.50N×143°.78E,h0km,mb3.6/3, mbtmp3.7/5,ML3.3/2,Error ellipse: s-maj=46.7km s-min=32.7km az=43.0*
JMA ***11*** *01:25:33.9±0.2,37°.8N±0°.6×143°.7E±0°.9,h52km,MV3.4/30, FAR E OFF FUKUSHIMA PREF*
ISC 11 01:25:34.0±1.3,37°.71N±0°.04×143°.74E±0°.09,h35km,n20, σ1s74/36,mb3.8/3,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**1.90**	**289**	*i* P	**Pn**	**01 26 03.6**	**-0.3**
JIKH				S	**Sn**	**01 26 25.3**	**-1.3**
JIO	**Ouri**	**2.03**	**292**	P	**Pn**	**01 26 05.5**	**-0.2**
JIO				S	**Sn**	**01 26 28.9**	**-0.9**
JKMT	**Kesennumamotoy**	**2.10**	**302**	P	**Pn**	**01 26 06.3**	**-0.4**
JKMT				S	**Sn**	**01 26 30.3**	**-1.3**
OFUJ	**Ofunato**	**2.13**	**311**	P	**Pn**	**01 26 06.7**	**-0.5**
OFUJ				S	**Sn**	**01 26 30.9**	**-1.5**
JMK	**Ichinoseki**	**2.34**	**303**	P	**Pn**	**01 26 09.9**	**-0.1**
JMK				S	**Sn**	**01 26 36.5**	**-1.1**
JOM	**Ohasama**	**2.61**	**313**	P	**Pn**	**01 26 13.9**	**+0.2**
JOM				S	**Sn**	**01 26 43.5**	**-0.7**
JFT	**Otama**	**2.71**	**267**	P	**Pn**	**01 26 15.7**	**+0.6**
JFT				S	**Sn**	**01 26 46.8**	**+0.1**
JYK	**Kaneyama**	**2.92**	**295**	P	**Pn**	**01 26 18.5**	**+0.5**
JANG	**Nango**	**3.18**	**328**	P	**Pn**	**01 26 21.2**	**-0.4**
JANG				S	**Sn**	**01 26 55.9**	**-2.4**
JAG	**Ashikaga**	**3.66**	**251**	P	**Pn**	**01 26 28.6**	**+0.4**
JAG				S	**Sn**	**01 27 09.1**	**-1.0**
BSO1	**Boso 1**	**3.78**	**217**	P	**Pn**	**01 26 28.5**	**-0.8**
BSO1				*e*S	**Sn**	**01 27 11.4**	**-0.8**
JOT	**Ohata**	**4.22**	**331**	*e*P	**Pn**	**01 26 36.1**	**+0.3**
JOT				*e*S	**Sn**	**01 27 21.2**	**-2.7**
JRY	**Ryogami san**	**4.23**	**248**	P	**Pn**	**01 26 36.1**	**+0.1**
JRY				S	**Sn**	**01 27 21.8**	**-2.5**
JOD2	**Odawara 2**	**4.47**	**238**	P	**Pn**	**01 26 40.2**	**+0.9**
JOD2				*e*S	**Sn**	**01 27 26.9**	**-3.3**
MJAR	**Matsushiro Arr**	**4.57**	**257**	Pn	**Pn**	**01 26 41.0**	**+0.2**
	0.3nm,0.3s,baz=73,slow=9.6,SNR=14						
MJAR				Sn	**Sn**	**01 27 34.7**	**+2.0**
	baz=88,slow=15,SNR=1.6						
	1.9nm,0.3s						
JCH	**Churui**	**4.91**	**357**	P	**Pn**	**01 26 44.5**	**-0.8**
JCH				S	**Sn**	**01 27 36.9**	**-4.1**
JHJ	**Hachijo jima 2**	**5.60**	**216**	Pn	**Pn**	**01 26 52.5**	**-2.3**
	10nm,0.3s,baz=83,slow=21,SNR=8.3						
JHJ				Sn	**Sn**	**01 27 53.0**	**-5.0**
	5.5nm,0.3s,baz=52,slow=19,SNR=1.9						
	53nm,0.8s						
MKAR	**Makanchi Array**	**45.34**	**302**	P	**P**	**01 33 51.1**	**+2.5**
	0.1nm,0.3s,baz=78,slow=7.8,SNR=1.9						
	0.1nm,0.3s						
WRA	**Warramunga Arr**	**58.02**	**190**	P	**P**	**01 35 23.6**	**+0.2**
	1.1nm,0.7s,baz=7.4,slow=6.9,SNR=6.9						
	1.1nm,0.7s						
ASAR	**Alice Springs**	**61.74**	**190**	P	**P**	**01 35 49.6**	**+0.7**
	0.6nm,0.8s,baz=14,slow=7.8,SNR=3.9						
	0.6nm,0.8s						

ANF ***11*** *01:40:29.8±0.1,33°.46N×116°.49W,h14km±1km,ML2.9/27, Error ellipse: s-maj=1.4km s-min=1.2km az=91.0*
PAS ***11*** *01:40:30.9±0.9,33°.46N±0°.01×116°.49W±0°.02,h11km, ML3.0/163,ML2.8/34(NEIC),Error ellipse: s-maj=2.1km s-min=1.6km az=56.0*
NEIC 11 01:40:30.3±0.7,33°.45N±0°.01×116°.49W±0°.02,h13km±4km, Error ellipse: s-maj=2.0km s-min=1.5km az=120.0, Southern California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PFO	**Pinyon Flats O**	**0.16**	**9**		Pg	01 40 34.3	-0.1
PFO				IAML		01 40 34.5	
	3μm,0.1s						
PFO				IAML		01 40 37.0	
	2μm,0.3s						
PFO	**Pinyon Flats O**	**0.16**	**9**	P	Pg	01 40 34.3	-0.1
	baz=189,SNR=388						
PFO				S	Sg	01 40 36.7	-0.4
	baz=189						
GVDA	**Garner Valley**	**0.27**	**325**		Pg	01 40 36.0	0.0
GVDA					Sg	01 40 39.8	-0.1
MONP2	**Monument Peak**	**0.56**	**174**	P	Pg	01 40 41.7	+0.3
	baz=354,SNR=58						
MONP2				S	Sg	01 40 49.1	+0.3
	baz=354						
MURC	**Murrieta**	**0.61**	**284**	P	Pg	01 40 42.2	-0.1
	baz=103,SNR=68						
MURC				S	Sg	01 40 50.5	+0.1
	baz=103						
BELC	**Belle Mtn. Jos**	**0.68**	**37**	P	Pg	01 40 43.5	-0.2
	baz=217,SNR=22						
BELC				S	Sg	01 40 52.4	-0.4
	baz=217						
SUP	**Superstition M**	**0.74**	**131**		Sg	01 40 54.8	+0.2
109C	**Camp Elliot, M**	**0.76**	**223**		Pg	01 40 45.0	-0.1
109C	**Camp Elliot, M**	**0.76**	**223**	P	Pg	01 40 44.9	-0.2
	baz=42,SNR=15						
109C				S	Sg	01 40 54.8	-0.4
	baz=42						
SWSC	**Sam W. Stewart**	**0.77**	**131**	P	Pb	01 40 45.5	0.0
	baz=312,SNR=22						
SWSC				S	Sg	01 40 55.4	+0.2
	baz=312						
BAR	**Barrett**	**0.78**	**191**		Pg	01 40 45.3	-0.2
ELS	**Elsinore Mount**	**0.81**	**284**	Pg	Pg	01 40 45.4	-0.6
IKP	**In-Ko-Pah, Jac**	**0.86**	**158**	P	Pg	01 40 47.0	0.0
	baz=339,SNR=73						
IKP				S	Sg	01 40 58.3	+0.1
	baz=339						
RSBC	**Riverside Bore**	**0.87**	**307**		Pg	01 40 46.8	-0.4
RSBC					Sg	01 40 57.6	-1.0
BBRC	**Big Bear Solar**	**0.89**	**336**	P	Pg	01 40 47.2	-0.3
	baz=156,SNR=6.8						
BBRC				S	Sg	01 40 58.7	-0.4
	baz=156						
TKX	**Tecate**	**0.89**	**187**		Pg	01 40 47.0	-0.4
BC3	**Big Chuckawall**	**0.89**	**76**	P	Pg	01 40 47.2	-0.3
	baz=258,SNR=82						
BC3				S	Sg	01 40 58.8	-0.3
	baz=258						
RMX	**La Rumorosa**	**0.91**	**158**		Pn	01 40 48.8	-0.2
RMX				IAML		01 41 02.3	
	comp=E,472nm,0.2s						
RMX				IAML		01 41 03.2	
	comp=N,264nm,0.2s						
YUH	**Yuha Desert**	**0.93**	**149**		Pb	01 40 48.2	-0.1
YUH				IAML		01 41 01.6	
	comp=E,200nm,0.2s						
TJX	**Tijuana**	**1.05**	**207**		Pb	01 40 50.4	0.0
TJX				IAML		01 41 04.4	
	comp=N,524nm,0.4s						
TJX				IAML		01 41 08.7	
	comp=E,538nm,0.8s						
CBX	**Cerro Bola**	**1.14**	**187**		Pb	01 40 51.5	-0.5
CBX	**Cerro Bola**	**1.14**	**187**	IAML		01 41 08.3	
	comp=E,218nm,0.2s						
CBX				IAML		01 41 08.4	
	comp=N,200nm,0.2s						
BFSC	**Mount Baldy Ra**	**1.25**	**309**	P	Pn	01 40 53.2	-0.4
	baz=128,SNR=17						
BFSC				S	Sb	01 41 09.1	-0.8
	baz=128						
IRM	**Iron Mountain**	**1.32**	**57**	Pn	Pn	01 40 53.4	-1.1
	baz=238						
IRM				Pg	Pb	01 40 55.0	0.0
	baz=238,SNR=46						
IRM				S	Sn	01 41 12.3	+0.3
	baz=238						
HEC	**Hector,Ludlow**	**1.38**	**5**	Pg	Pb	01 40 56.2	+0.2
	baz=185,SNR=31						
HEC				Sg	Sg	01 41 15.2	+0.3
	baz=185						
GLA	**Glamis**	**1.45**	**106**		Pn	01 40 56.4	+0.2
GLA				IAML		01 41 27.5	
	comp=E,97nm,0.7s						
GLA	**Glamis**	**1.45**	**106**	P	Pn	01 40 54.9	-1.3
	baz=287,SNR=9.3						
RRX	**Edison Barstow**	**1.48**	**344**	Pg	Pb	01 40 58.2	+0.4
	baz=163						
RRX				Sb	Sg	01 41 17.6	-0.5
	baz=163						
GMRC	**Granite Mounta**	**1.50**	**27**	Pn	Pn	01 40 56.2	-0.8
	baz=208						
GMRC				Pg	Pb	01 40 58.4	+0.3
	baz=208,SNR=16						
GMRC				Sb	Sb	01 41 17.2	+0.2
	baz=208						
PASC	**Pasadena Art C**	**1.58**	**297**		Pn	01 40 58.5	+0.4
PASC				IAML		01 41 20.6	
	comp=N,96nm,0.3s						
PASC				IAML		01 41 22.1	
	comp=E,87nm,0.3s						
CIS	**Catalina Islan**	**1.61**	**269**	Pn	Pn	01 40 57.9	-0.6
	baz=87,SNR=6.8						
CIS				Pb	Pb	01 40 59.0	-0.9
	baz=87						
BLYC	**Blythe**	**1.67**	**79**		Pn	01 40 59.1	-0.1
DECC	**Green Verdugo**	**1.73**	**298**	Pb	Pb	01 41 01.4	-0.6
	baz=117						
DECC				Sb	Sb	01 41 24.3	+0.7
	baz=117						
SCI2	**San Clemente I**	**1.79**	**255**	P	Pn	01 41 01.0	+0.1
	baz=74,SNR=5.3						
SCI2				S	Sn	01 41 23.1	-0.3
	baz=74						
GSC	**Goldstone, Bar**	**1.86**	**352**		Pn	01 41 02.8	+0.8
GSC				IAML		01 41 34.6	
	comp=E,71nm,0.4s						
GSC	**Goldstone, Bar**	**1.86**	**352**	Pg	Pb	01 41 04.8	+0.5
	baz=172,SNR=16						
GSC				Sb	Sg	01 41 29.1	-1.3
	baz=172						
EDW2	**Edwards Air Fo**	**1.90**	**319**	Pg	Pb	01 41 05.0	+0.2
	baz=138,SNR=13						
EDW2				Sb	Sb	01 41 29.2	+0.8
	baz=138						
NEE2	**Needles Airpor**	**2.03**	**49**	Pg	Pb	01 41 08.1	+1.0
	baz=230						
NEE2				Sb	Sb	01 41 33.5	+1.3
	baz=230						
TUQ	**Turquoise Moun**	**2.03**	**13**	Pg	Pb	01 41 07.8	+0.6
	baz=193						
TUQ				Sb	Sg	01 41 34.1	-1.6
	baz=193						
CCAC	**Calif City Air**	**2.12**	**324**	Pn	Pn	01 41 06.8	+1.4
OSI	**Osito Audit: C**	**2.19**	**303**	Sb	Sb	01 41 37.8	+1.0
	baz=121						
SHOC	**Shoshone, Teco**	**2.45**	**4**	Sb	Sg	01 41 46.8	-2.2
	baz=184						
QSM	**Queen of Sheba**	**2.53**	**353**	Pn	Pn	01 41 10.1	-1.0
ARVC	**Arvin**	**2.56**	**311**	Pb	Pb	01 41 16.6	+0.5
	baz=130						
ARVC				Sb	Sb	01 41 49.0	+1.6
	baz=130						
W13A	**Hualapai Mount**	**2.71**	**52**	Pn	Pn	01 41 13.7	-0.1
MPMC	**Manual Prospec**	**2.73**	**343**	Pg	Pb	01 41 20.6	+1.5
	baz=162,SNR=8.8						
MPMC				Sb	Sg	01 41 56.2	-1.9
	baz=162						
GWY	**Greenwater Val**	**2.73**	**357**	Pn	Pn	01 41 14.3	+0.3
ISA	**Isabella, Lake**	**2.75**	**324**	Pn	Pn	01 41 15.0	+0.8
ISA				IAML		01 41 58.8	
	comp=E,28nm,0.5s						
ISA	**Isabella, Lake**	**2.75**	**324**	Sb	Sg	01 41 56.6	-2.0
	baz=143						
Y14A	**Wickenburg**	**2.94**	**80**		Pn	01 41 16.7	-0.1
SHPR	**Sheep Range**	**3.24**	**19**	Pn	Pn	01 41 20.6	-0.3
LCH	**Last Change Ra**	**3.89**	**346**		Pn	01 41 30.6	+0.7
PRN	**Pahroc Range**	**4.12**	**16**	Pn	Pn	01 41 33.2	+0.2
X16A	**Lo Mia Camp, P**	**4.30**	**76**	Pn	Pn	01 41 35.4	-0.3
LCMT	**Little Creek M**	**4.43**	**36**	Pn	Pn	01 41 37.1	-0.3
U15A	**North Rim**	**4.55**	**48**	Pn	Pn	01 41 39.0	-0.2

IDC ***11*** *02:05:32.0±2.8,16°.11S×174°.85W,h295km±19km,mb3.3/3, mbtmp4.0/5,Error ellipse: s-maj=147.5km s-min=19.8km az=148.0*
ISC 11 02:05:31.9±2.3,15°.9S±0°.7×174°.8W±0°.4,h300km,n6, σ1s57/7,mb3.2/3,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.54**	**57**	P	**Pn**	**02 06 34.8**	**+1.5**
	14nm,0.3s,baz=96,slow=6.2,SNR=4.3						
AFI				S	**S**	**02 07 19.9**	**-2.5**
	29nm,0.3s,baz=38,slow=21,SNR=4.6						
MSVF	**Nonsavu**	**7.07**	**254**	P	**Pn**	**02 07 13.8**	**-0.4**
	15nm,0.8s,baz=109,slow=16,SNR=9.5						
WRA	**Warramunga Arr**	**48.40**	**257**	P	**P**	**02 13 44.1**	**-0.6**
	0.5nm,0.4s,baz=94,slow=6.6,SNR=17						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**48.66**	**252**	P	**P**	**02 13 46.4**	**-0.2**
	3.8nm,0.5s,baz=88,slow=7.7,SNR=54						
	3.8nm,0.5s						
ILAR	**Eielson Array**	**83.19**	**12**	P	**P**	**02 17 24.7**	**+0.4**
	0.2nm,0.5s,baz=220,slow=5.5,SNR=4.4						
	0.2nm,0.5s						
BRTR	**Keskin Array B**	**145.65**	**319**	PKPbc	**PKPab**	**02 24 37.5**	**+0.7**
	baz=65,slow=3.7,SNR=9.6						

TIR ***11*** *02:11:45.0,40°.10N×19°.86E,h17km±1km,Md2.3,Ml1.5*
ATH ***11*** *02:11:45.4,40°.08N×19°.76E,h28km±10km,ML1.3/1,Error ellipse: s-maj=11.7km s-min=2.8km az=221.0*
ISC 11 02:11:45.5±1.2,40°.10N±0°.05×19°.82E±0°.05,h10km,n9, σ0s53/12,Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KASA	**Kassiopi**	**0.36**	**166**	P	**Pg**	**02 11 52.6**	**-0.1**
KASA				S	**Sg**	**02 11 58.3**	**+0.8**
KEK	**Kerkira**	**0.38**	**182**	P	**Pg**	**02 11 53.3**	**+0.2**
KEK				S	**Sb**	**02 11 59.4**	**-1.0**
KEK				AML	AML	02 12 00.5	
	comp=N,111μm,0.3s						
KEK				AML	AML	02 12 00.8	
	comp=E,105μm,0.3s						
IGT	**Igoumenitsa**	**0.69**	**145**	P	**Pg**	**02 11 58.7**	**-0.2**
IGT				S	**Sg**	**02 12 08.3**	**+0.5**
IGT	**Igoumenitsa**	**0.69**	**145**	S	**Sg**	**02 12 08.5**	**+0.7**
	baz=147						
IGT	**Igoumenitsa**	**0.69**	**145**	P	**Pg**	**02 11 58.6**	**-0.2**
	baz=147						
NEST	**Nestorio**	**0.99**	**71**	P	**Pg**	**02 12 04.7**	**0.0**
SCTE	**Santa Cesarea**	**1.04**	**269**	S	**Sn**	**02 12 20.4**	**-0.3**
	baz=270						
SCTE	**Santa Cesarea**	**1.04**	**269**	P	**Pn**	**02 12 06.3**	**+0.2**
	baz=270						
FNA	**Florina**	**1.37**	**

SMKR			eS		Sn	02 40 13.4	+1.2
BDR	**Baidarnaya**	**2.04 352**	eP		Pn	02 39 48.8	+0.8
SDLR	**Sedlovina**	**2.10 234**	eP		Pn	02 39 49.6	+0.7
SDLR			eS		Sn	02 40 15.0	+1.1
SRKR	**Sorokina**	**2.13 352**	eP		Pn	02 39 49.9	+0.7
KRER	**Koryakskii**	**2.15 236**	eP		Pn	02 39 50.4	+0.8
SMAR	**Somma**	**2.15 234**	eP		Pn	02 39 50.1	+0.4
SMAR			eS		Sn	02 40 15.8	+0.6
KRX	**Arik**	**2.17 238**	eP		Pn	02 39 50.3	+0.5
UGLR	**Uglovaya**	**2.17 233**	eP		Pn	02 39 50.8	+0.9
UGLR			eS		Sn	02 40 17.3	+1.7
AVH	**Avacha**	**2.18 235**	eP		Pn	02 39 51.0	+1.1
ESO	**Esso**	**2.20 310**	eP		Pn	02 39 50.0	-0.2
KOK	**Koryaka**	**2.21 236**	eP		Pn	02 39 51.0	+0.6
DALK	**Dalny**	**2.32 230**	eP		Pn	02 39 52.5	+0.7
DALK			eS		Sn	02 40 19.2	+0.1
PET	**Petropavlovsk**	**2.37 231**	eP		Pn	02 39 53.4	+0.9
PET			eS		Sn	02 40 20.5	+0.2
GNL	**Ganaly**	**2.38 250**	eP		Pn	02 39 53.3	+0.6
BKI	**Bering**	**2.55 73**	eP		Pn	02 39 55.6	+0.7
BKI			eS		Sn	02 40 24.3	-0.3
KRMR	**Karymshinskiy**	**2.74 232**	eP		Pn	02 39 58.6	+1.1
KRMR			eS		Sn	02 40 31.5	+2.2
PETK	**Petropavlovsk-**	**2.78 240**	Pn		Pn	02 39 58.9	+0.8
	2.4nm,0.3s,baz=70,slow=18,SNR=17						
PETK			Sn		Sn	02 40 34.3	+3.9
	5.1nm,0.3s,baz=191,slow=3.9,SNR=11						
PETK			LR		LR	02 40 51.6	
	comp=Z,19nm,18.4s,baz=92,slow=35 4.9nm,0.3s						
RUS	**Russkaya**	**2.86 223**	eP		Pn	02 39 59.5	+0.4
RUS			eS		Sn	02 40 31.4	-0.8
GRL	**Gorelyy**	**2.95 229**	eP		Pn	02 40 02.2	+1.6
GRL			eS		Sn	02 40 37.7	+2.9
MTVR	**Mutnovka**	**2.96 227**	eP		Pn	02 40 01.7	+1.1
ASAK	**Asacha**	**3.15 228**	eP		Pn	02 40 04.9	+1.7
ASAK			eS		Sn	02 40 42.8	+3.3
APC	**Apacha**	**3.16 241**	eP		Pn	02 40 03.5	+0.3
KDTR	**Khodutka, Kamc**	**3.51 220**	eP		Pn	02 40 09.2	+1.1
MA2	**Magadan**	**7.80 315**	LR		LR	02 44 47.8	
	comp=Z,29nm,18.0s,baz=150,slow=46						
JHJ	**Hachijo jima 2**	**26.43 225**	LR		LR	02 57 26.3	
	comp=Z,24nm,18.7s,baz=114,slow=41						
H11N2	**WAKE ISLAND Hy 34.99 171**		T		T	03 23 13.6	
	baz=355,slow=76,SNR=92						
H11N3	**WAKE ISLAND Hy 35.00 171**		T		T	03 23 18.3	
	baz=355,slow=76,SNR=99						
H11N1	**WAKE ISLAND Hy 35.01 171**		T		T	03 23 14.9	
	baz=355,slow=76,SNR=125						
H11S1	**WAKE ISLAND Hy 36.18 172**		T		T	03 24 46.2	
	baz=353,slow=76,SNR=11						
H11S3	**WAKE ISLAND Hy 36.20 172**		T		T	03 24 46.0	
	baz=353,slow=76,SNR=8.4						
H11S2	**WAKE ISLAND Hy 36.20 172**		T		T	03 24 48.9	
	baz=353,slow=76,SNR=11						
FINES	**FINESS Array B**	**59.15 337**	P		**P**	**02 49 09.2**	**-2.5**
	0.6nm,0.4s,baz=22,slow=6.2,SNR=9.1 0.6nm,0.4s						
NOA	**NORSAR Array B**	**62.40 344**	P		**P**	**02 49 32.2**	**-1.7**
	0.2nm,0.3s,baz=19,slow=6.6,SNR=3.9 0.2nm,0.3s						

*BJI **11** 02:43:33.1±0.0, 17.˚58S×177.˚92W, h581km, mb4.6/28, mB4.9/16*

*IDC **11** 02:43:34.1±1.3, 17.˚96S×178.˚52W, h574km±15km, mb4.2/17, mbtmp5.1/19, Error ellipse: s-maj=14.4km s-min=8.3km az=140.0*

*NEIC **11** 02:43:34.8±1.6, 18.˚05S±0.˚10×178.˚4W±0.˚1, h579km±5km, mb4.8/328, Error ellipse: s-maj=16.1km s-min=12.4km az=128.0*

*NOU **11** 02:43:35.0, 17.˚99S×178.˚28W, h596km, mb5.3/79, Fiji Islands Region*

*GCMT **11** 02:43:36.8±0.5, 17.˚98S±0.˚05×178.˚25W±0.˚04, h586km±4km, MW5.3/51, Moment Tensor Solution. s51,c59; Duration: 1s1 Moment tensor: Scale 10^17^Nm; Mrr-0.16±.04; Mθθ 0.84±.07; Mφφ-0.68±.07; Mrθ 0.22±.09; Mθφ-0.16±.07; Mφr-0.74±.07; Best double couple: Mo1.09000×10^17^ NP1:φs58.00000°, δ50.00000°, λ-167.00000°. NP2:φs319.00000°, δ80.00000°, λ-41.00000°. Principal axes: T 0.9710, Plg20.0000°, Azm15.0000°; N 0.2380, Plg48.0000°, Azm128.0000°; P -1.2090, Plg35.0000°, Azm270.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 11 02:43:35.1±0.4, **18.˚09S**±0.˚04×**178.˚31W**±0.˚05, **h594**km±4km, **h592**km; **pP-P, n698,** σ1**526**/602, **mb4.8**/224, **161C-113D, Fault plane solution: NP1**:φs59.06063°, δ62.45937°, λ164.69270°. **NP2**:φs156.27338°, δ76.46256°, λ28.39782°. **Principal axes:** T Plg29.5031°, Azm20.6553°; N Plg58.7848°, Azm179.6842°; P Plg9.2899°, Azm285.3445°; **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LKBA	**Tubou, Lakemba**	**0.51**	**253**	P	**P**	**02 44 45.6**	**+0.8**
TAVE	**Taveuni**	**2.06**	**312**	P	**P**	**02 44 50.0**	**+0.9**
MSVF	**Nonsavu**	**3.49**	**275**	P	**P**	**02 44 57.5**	**+0.8**
	1µm,0.8s,baz=131,slow=5.2,SNR=883						
MSVF				S	**S**	**02 46 06.0**	**+2.7**
	88nm,0.8s,baz=24,slow=20,SNR=8.6						
MSVF	**Nonsavu**	**3.49**	**275**	P	**P**	**02 44 57.4**	**+0.6**
MSVF	**Nonsavu**	**3.49**	**275**	P	**P**	**02 44 57.9**	**+1.1**
AFI	**Afiamalu**	**7.53**	**57**	P	**P**	**02 45 28.2**	**-1.8**
	328nm,0.9s,baz=267,slow=3.2,SNR=17						
AFI				S	**S**	**02 46 59.7**	**-4.2**
	75nm,0.7s,baz=53,slow=21,SNR=1.7						
AFI	**Afiamalu**	**7.53**	**57**	P	**P**	**02 45 27.8**	**-2.1**
AFI	**Afiamalu**	**7.53**	**57**	P	**P**	**02 45 28.1**	**-1.8**
NIUE	**Niue**	**8.01**	**98**	P	**P**	**02 45 35.0**	**+0.8**
	baz=8.1,SNR=12						
NIUE	**Niue**	**8.01**	**98**	P	**P**	**02 45 34.1**	**-0.1**
NIUE	**Niue**	**8.01**	**98**	P	**P**	**02 45 35.2**	**+0.9**
RAO	**Raoul Island**	**11.12**	**178**	S	**S**	**02 48 05.3**	**-2.5**
	384nm,0.3s,baz=85,slow=22,SNR=1.8						
GLKZ	**Green Lake**	**11.13**	**178**	P	**P**	**02 46 01.1**	**-3.7**
GLKZ				S	**S**	**02 48 09.6**	**+1.7**
RTV	**Rentapao**	**12.63**	**269**	P	**P**	**02 46 19.7**	**-0.6**
DVP	**Devils Point**	**12.86**	**270**	P	**P**	**02 46 22.7**	**+0.1**
MARNC	**Mare, Loyalty**	**13.30**	**253**	P	**P**	**02 46 24.5**	**-2.5**
MARNC	**Mare, Loyalty**	**13.30**	**253**	P	**P**	**02 46 26.0**	**-1.0**
PINNC	**Pines Island,**	**14.10**	**249**	P	**P**	**02 46 34.1**	**-0.9**
DZM	**Mont Dzumac**	**14.86**	**252**	P	**P**	**02 46 41.5**	**-0.9**
	47nm,0.6s,baz=90,slow=18,SNR=51						
DZM	**Mont Dzumac**	**14.86**	**252**	P	**P**	**02 46 41.2**	**-1.1**
DZM	**Mont Dzumac**	**14.86**	**252**	P	**P**	**02 46 42.1**	**-0.2**
NOUC	**Port Laguerre**	**15.00**	**252**	P	**P**	**02 46 43.8**	**+0.3**
KNTN	**Kanton**	**16.53**	**24**	P	**P**	**02 46 56.3**	**-1.5**
KOUNC	**Koumac, New Ca**	**16.61**	**259**	P	**P**	**02 46 59.0**	**+0.6**
KOUNC	**Koumac, New Ca**	**16.61**	**259**	P	**P**	**02 46 59.3**	**+0.9**
OUZ	**Omahuta**	**18.52**	**201**	P	**P**	**02 47 17.2**	**+1.7**
OUZ				IAmb	IAmb	02 47 19.6	
	comp=Z,34nm,0.7s						
OUZ	**Omahuta**	**18.52**	**201**	P	**P**	**02 47 18.6**	**+3.0**
OUZ	**Omahuta**	**18.52**	**201**	P	**P**	**02 47 18.3**	**+2.8**
WCZ	**Waipu Caves**	**18.93**	**199**	P	**P**	**02 47 22.0**	**+2.7**
KUZ	**Kuaotunu**	**19.32**	**195**	P	**P**	**02 47 26.2**	**+3.5**
WIAZ	**Waiheke Island**	**19.51**	**196**	P	**P**	**02 47 27.2**	**+2.7**
MKAZ	**Moumakai**	**19.80**	**196**	P	**P**	**02 47 29.4**	**+2.3**
WMGZ	**Waiomatatini S**	**19.87**	**188**	P	**P**	**02 47 28.4**	**+0.7**
HAZ	**Te Kaha**	**19.89**	**189**	P	**P**	**02 47 27.9**	**0.0**
HAZ				S	**S**	**02 50 30.9**	**-5.4**
PKGZ	**Pakihiroa**	**19.98**	**188**	P	**P**	**02 47 29.7**	**+0.9**
PKGZ				S	**S**	**02 50 34.3**	**-3.4**
RUGZ	**Raukumara Rang**	**20.11**	**189**	P	**P**	**02 47 29.9**	**-0.2**
TGRZ	**Tauranga**	**20.14**	**193**	P	**P**	**02 47 34.7**	**+4.5**
TWGZ	**Tauwhareparae**	**20.28**	**188**	P	**P**	**02 47 32.2**	**+0.7**
TWGZ				S	**S**	**02 50 38.6**	**-3.9**
TOZ	**Tahuroa Road**	**20.31**	**194**	P	**P**	**02 47 34.7**	**+3.0**
URZ	**Urewera**	**20.49**	**190**	P	**P**	**02 47 32.0**	**-1.4**
	comp=Z,14nm,0.3s,baz=21,slow=4.2,SNR=12						
URZ				S	**S**	**02 50 39.1**	**-6.6**
	comp=Z,9.5nm,0.8s,baz=359,slow=22,SNR=2.1 comp=Z,14nm,0.3s						
RIGZ	**Rimuhau**	**20.83**	**189**	P	**P**	**02 47 37.5**	**+1.0**
PRGZ	**Paritu Road**	**21.02**	**188**	P	**P**	**02 47 35.2**	**-3.0**
MTHZ	**Maungataniwha**	**21.12**	**191**	P	**P**	**02 47 43.5**	**+4.5**
MTHZ				S	**S**	**02 50 52.4**	**-3.3**
KNZ	**Kokohu**	**21.15**	**189**	P	**P**	**02 47 40.5**	**+1.3**
KNZ				S	**S**	**02 50 50.3**	**-5.8**
HIZ	**Hauiti**	**21.21**	**195**	P	**P**	**02 47 41.6**	**+1.8**
BKZ	**Black Stump Fm**	**21.48**	**191**	P	**P**	**02 47 43.6**	**+1.3**
BKZ				IAmb	IAmb	02 47 54.3	
	comp=Z,16nm,0.6s						
BKZ	**Black Stump Fm**	**21.48**	**191**	P	**P**	**02 47 41.0**	**-1.4**
BKZ				S	**S**	**02 50 53.3**	**-8.2**
BKZ	**Black Stump Fm**	**21.48**	**191**	P	**P**	**02 47 41.5**	**-0.8**
VRZ	**Vera Road**	**21.81**	**195**	P	**P**	**02 47 47.0**	**+1.8**
BHHZ	**Black Hill Sta**	**21.88**	**192**	P	**P**	**02 47 44.2**	**-1.7**
KRHZ	**Kereru**	**21.97**	**191**	P	**P**	**02 47 49.4**	**+2.8**
XMAS	**Kiritimati**	**28.68**	**48**	P	**P**	**02 48 45.9**	**-0.1**
XMAS	**Kiritimati**	**28.68**	**48**	P	**P**	**02 48 44.0**	**-1.9**
XMAS	**Kiritimati**	**28.68**	**48**	P	**P**	**02 48 46.2**	**+0.3**
EIDS	**Eidsvold**	**29.30**	**250**	P	**P**	**02 48 50.4**	**-0.8**
	baz=29,SNR=38						
EIDS	**Eidsvold**	**29.30**	**250**	P	**P**	**02 48 50.0**	**-1.2**
EIDS	**Eidsvold**	**29.30**	**250**	P	**P**	**02 48 50.5**	**-0.7**
RK1H	**Rockhampton Ha**	**29.62**	**254**	P	**P**	**02 48 52.9**	**-1.1**
	comp=Z,54nm,0.8s						
ARMA	**Armidale**	**29.94**	**240**	P	**P**	**02 48 57.3**	**+0.6**
	baz=30,SNR=64						
ARMA	**Armidale**	**29.94**	**240**	P	**P**	**02 48 56.6**	**-0.2**
ARMA	**Armidale**	**29.94**	**240**	P	**P**	**02 48 57.5**	**+0.7**
MGCD	**Mangrove Creek**	**31.27**	**235**	P	**P**	**02 49 08.6**	**+0.6**
	baz=31,SNR=24						
MGCD	**Mangrove Creek**	**31.27**	**235**	P	**P**	**02 49 09.1**	**+1.1**
RMQ	**Roma**	**31.53**	**249**	P	**P**	**02 49 10.6**	**+0.2**
	baz=32,SNR=69						
CNB	**Canberra Magne**	**33.40**	**233**	P	**P**	**02 49 26.7**	**+0.8**
	baz=34,SNR=137						
CNB	**Canberra Magne**	**33.40**	**233**	P	**P**	**02 49 26.8**	**+0.8**
CTA	**Charters Tower**	**33.52**	**261**	P	**P**	**02 49 26.5**	**-0.6**
CTAO	**Charters Tower**	**33.52**	**261**	P	**P**	**02 49 25.6**	**-1.6**
CTAO	**Charters Tower**	**33.52**	**261**	P	**P**	**02 49 26.6**	**-0.6**
CTAO	**Charters Tower**	**33.52**	**261**	||P	**P**	**02 49 26.5**	**-0.6**
CTAO				ScP	**ScP**	**02 54 41.8**	**+2.7**
CAN	**Canberra**	**33.67**	**233**	P	**P**	**02 49 28.2**	**-0.1**
CAN	**Canberra**	**33.67**	**233**	P	**P**	**02 49 28.9**	**+0.6**
CAN	**Canberra**	**33.67**	**233**	P	**P**	**02 49 28.7**	**+0.4**
PMG	**Port Moresby**	**34.59**	**280**	P	**P**	**02 49 35.5**	**-0.6**
PMG	**Port Moresby**	**34.59**	**280**	P	**P**	**02 49 36.8**	**+0.6**
PMG	**Port Moresby**	**34.59**	**280**	P	**P**	**02 49 36.7**	**+0.6**
PMG	**Port Moresby**	**34.59**	**280**	P	**P**	**02 49 36.3**	**+0.2**
CMSA	**Cobar Meteorol**	**35.15**	**241**	P	**P**	**02 49 40.7**	**+0.1**
	baz=35,SNR=64						
CMSA	**Cobar Meteorol**	**35.15**	**241**	P	**P**	**02 49 41.0**	**+0.4**
MTSU	**Mount Surprise**	**35.49**	**264**	P	**P**	**02 49 42.8**	**-0.8**
	baz=35,SNR=60						
QLP	**Quilpie**	**35.56**	**249**	P	**P**	**02 49 43.4**	**-0.7**
	baz=36,SNR=34						
QLP	**Quilpie**	**35.56**	**249**	P	**P**	**02 49 43.9**	**-0.2**
JOHN	**Johnston Islan**	**35.66**	**15**	P	**P**	**02 49 44.1**	**-0.8**
JOHN	**Johnston Islan**	**35.66**	**15**	P	**P**	**02 49 44.7**	**-0.2**
GLAD	**Gladstone**	**36.79**	**225**	P	**P**	**02 49 53.8**	**-0.1**
	comp=Z,75nm,0.7s						
TOO	**Toolangi**	**37.13**	**231**	P	**P**	**02 49 57.4**	**+0.6**
	baz=37,SNR=19						
TOO	**Toolangi**	**37.13**	**231**	P	**P**	**02 49 56.7**	**-0.1**
TOO	**Toolangi**	**37.13**	**231**	P	**P**	**02 49 57.5**	**+0.7**
COEN	**Coen**	**37.20**	**271**	P	**P**	**02 49 57.7**	**0.0**
	baz=37,SNR=95						
COEN	**Coen**	**37.20**	**271**	P	**P**	**02 49 57.2**	**-0.5**
COEN	**Coen**	**37.20**	**271**	P	**P**	**02 49 57.7**	**0.0**
MANU	**Manus Island**	**37.26**	**291**	P	**P**	**02 49 57.7**	**-0.4**
MOO	**Moorlands**	**38.03**	**223**	P	**P**	**02 50 04.8**	**+0.8**
	baz=38,SNR=3.7						
MOO	**Moorlands**	**38.03**	**223**	P	**P**	**02 50 04.2**	**+0.2**
TAU	**Tasmania Unive**	**38.17**	**222**	P	**P**	**02 50 06.0**	**+0.9**
BRAT	**Ballarat**	**38.28**	**232**	P	**P**	**02 50 07.0**	**+0.9**
	comp=Z,97nm,0.9s						
STKA	**Stephens Creek**	**38.63**	**241**	P	**P**	**02 50 09.5**	**+0.4**
	comp=Z,112nm,0.8s,baz=89,slow=9.9,SNR=129 comp=Z,112nm,0.8s						
STKA	**Stephens Creek**	**38.63**	**241**	P	**P**	**02 50 09.4**	**+0.4**
	baz=39,SNR=92						
STKA	**Stephens Creek**	**38.63**	**241**	P	**P**	**02 50 08.9**	**-0.1**
STKA				IAmb	IAmb	02 50 10.5	
	comp=Z,33nm,1.0s						
STKA	**Stephens Creek**	**38.63**	**241**	P	**P**	**02 50 09.7**	**+0.7**
INKA	**Innaminka**	**38.77**	**248**	P	**P**	**02 50 10.8**	**+0.6**
ARPS	**Mount Arapiles**	**39.62**	**234**	P	**P**	**02 50 16.9**	**0.0**
	baz=40,SNR=18						
ARPS	**Mount Arapiles**	**39.62**	**234**	P	**P**	**02 50 17.2**	**+0.3**
QIS	**Mount Isa**	**39.72**	**259**	P	**P**	**02 50 16.7**	**-1.2**
	baz=40,SNR=11						
QIS	**Mount Isa**	**39.72**	**259**	P	**P**	**02 50 16.8**	**-1.2**
HTT	**Hallett**	**41.14**	**240**	P	**P**	**02 50 29.3**	**+0.2**
	baz=41,SNR=35						
HTT	**Hallett**	**41.14**	**240**	P	**P**	**02 50 29.8**	**+0.7**
LCRK	**Leigh Creek**	**41.27**	**244**	P	**P**	**02 50 30.2**	**+0.2**
NAPP	**Napperby**	**41.73**	**240**	P	**P**	**02 50 33.9**	**+0.2**
	comp=Z,123nm,1.1s						
TWOA	**Tennyson Woods**	**41.74**	**237**	P	**P**	**02 50 33.2**	**-0.5**
	comp=Z,62nm,0.8s						
OOD	**Oodadatta**	**43.24**	**248**	P	**P**	**02 50 45.8**	**+0.3**
BBOO	**Buckleboo**	**43.41**	**241**	P	**P**	**02 50 46.5**	**-0.2**
	baz=43,SNR=77						
BBOO	**Buckleboo**	**43.41**	**241**	P	**P**	**02 50 45.9**	**-0.9**
BBOO	**Buckleboo**	**43.41**	**241**	P	**P**	**02 50 46.5**	**-0.2**
KHLU	**Kahalu`u**	**43.43**	**32**	P	**P**	**02 50 47.4**	**+0.3**
GENI	**Genyem**	**43.51**	**286**	P	**P**	**02 50 48.3**	**+0.5**
	comp=Z,9µmcomp=Z,234nm,1.1s						
HUH	**Hualalai**	**43.54**	**32**	P	**P**	**02 50 46.6**	**-1.5**
HMH	**Humu'ula Sheep**	**43.65**	**32**	P	**P**	**02 50 49.6**	**+0.6**
POHA	**Pohakuloa**	**43.75**	**32**	P	**P**	**02 50 50.3**	**+0.5**
POHA	**Pohakuloa**	**43.75**	**32**	P	**P**	**02 50 50.3**	**+0.5**
HPAH	**Hawaii Prepara**	**43.90**	**31**	P	**P**	**02 50 50.8**	**0.0**
KIP	**Kipapa**	**44.01**	**28**	P	**P**	**02 50 52.3**	**+0.9**
WR0	**Warramunga Arr**	**44.51**	**260**	IAmb	IAmb	02 50 55.9	
	comp=Z,34nm,0.8s						
WRAB	**Tennant Creek**	**44.69**	**260**	P	**P**	**02 50 55.5**	**-1.4**
WRAB	**Tennant Creek**	**44.69**	**260**	P	**P**	**02 50 56.0**	**-0.8**
WRAB	**Tennant Creek**	**44.69**	**260**	P	**P**	**02 50 55.4**	**-1.4**
WRA	**Warramunga Arr**	**44.70**	**260**	P	**P**	**02 50 55.5**	**-1.4**
	comp=Z,72nm,0.7s,baz=96,slow=7.3,SNR=595						
WRA				PcP	**PcP**	**02 52 26.6**	**+0.3**
	comp=Z,1.7nm,0.7s,baz=89,slow=3.6,SNR=4.1						
WRA				ScP	**ScP**	**02 55 25.0**	**+2.3**
	comp=Z,2.6nm,1.0s,baz=87,slow=3.8,SNR=5.1						
WRA				S	**S**	**02 56 47.8**	**-3.7**
	comp=Z,1.5nm,0.8s,baz=100,slow=14,SNR=4.0 comp=Z,72nm,0.7s						
MULG	**Mulgathing**	**44.83**	**245**	P	**P**	**02 50 57.2**	**-0.5**
ASAR	**Alice Springs**	**44.84**	**254**	P	**P**	**02 50 57.8**	**-0.1**
	comp=Z,367nm,0.7s,baz=88,slow=8.5,SNR=3224						
ASAR				PcP	**PcP**	**02 52 26.5**	**-0.2**
	baz=92,slow=4.2,SNR=4.3						
ASAR				ScP	**ScP**	**02 55 25.6**	**+2.4**
	comp=Z,5.8nm,1.1s,baz=104,slow=4.3,SNR=5.8						
ASAR				S	**S**	**02 56 50.8**	**-2.7**
	comp=Z,1.8nm,0.7s,baz=90,slow=16,SNR=5.6						
ASAR	**Alice Springs**	**44.84**	**254**	P	**P**	**02 50 56.9**	**-1.0**
SMPI	**Sarmi**	**45.09**	**286**	P	**P**	**02 50 59.4**	**-0.5**
	comp=Z,75nm,0.8s						
KDU	**Kakadu**	**47.65**	**269**	P	**P**	**02 51 18.1**	**-1.1**
	baz=48,SNR=46						
KDU	**Kakadu**	**47.65**	**269**	P	**P**	**02 51 18.8**	**-0.4**
BAKI	**Biak**	**47.79**	**285**	P	**P**	**02 51 20.5**	**+0.3**
	comp=Z,2µmcomp=Z,208nm,0.9s						
GUMO	**Guam**	**48.06**	**308**	P	**P**	**02 51 21.6**	**-0.6**
MTN	**Manton Dam**	**48.89**	**269**	P	**P**	**02 51 27.3**	**-1.1**
	baz=49,SNR=22						
MTN	**Manton Dam**	**48.89**	**269**	P	**P**	**02 51 26.9**	**-1.5**
MTN	**Manton Dam**	**48.89**	**269**	P	**P**	**02 51 27.5**	**-0.9**
WRKA	**Warakurna**	**49.88**	**252**	P	**P**	**02 51 34.9**	**-0.7**
	baz=50,SNR=360						
WRKA	**Warakurna**	**49.88**	**252**	P	**P**	**02 51 35.0**	**-0.7**
FORT	**Forrest**	**50.02**	**245**	P	**P**	**02 51 35.3**	**-1.1**
	baz=50,SNR=78						
FORT	**Forrest**	**50.02**	**245**	P	**P**	**02 51 35.5**	**-0.9**
FORT	**Forrest**	**50.02**	**245**	P	**P**	**02 51 36.0**	**-0.4**
KNRA	**Kununurra**	**50.57**	**264**	P	**P**	**02 51 39.6**	**-1.0**
	baz=50,SNR=40						
KNRA	**Kununurra**	**50.57**	**264**	P	**P**	**02 51 39.6**	**-1.0**
KNRA	**Kununurra**	**50.57**	**264**	P	**P**	**02 51 40.1**	**-0.5**
FAKI	**Fak Fak**	**50.71**	**281**	P	**P**	**02 51 40.1**	**-1.6**
FAKI	**Fak Fak**	**50.71**	**281**	P	**P**	**02 51 42.3**	**+0.6**
	comp=Z,962nmcomp=Z,44nm,1.3s						
FAKI	**Fak Fak**	**50.71**	**281**	P	**P**	**02 51 41.3**	**-0.4**
SWI	**Sorong**	**52.38**	**283**	P	**P**	**02 51 53.0**	**-0.7**
	comp=Z,4µmcomp=Z,409nm,0.9s						
MSAI	**Masohi**	**53.67**	**279**	P	**P**	**02 52 02.7**	**-0.1**
	comp=Z,18nm,0.6s						
AAI	**Ambon**	**54.24**	**279**	P	**P**	**02 52 06.6**	**-0.3**
	comp=Z,2µmcomp=Z,137nm,0.5s						
DRV	**Dumont d'Urvil**	**55.52**	**199**	P	**P**	**02 52 15.6**	**+0.8**
LBMI	**Labuha**	**55.95**	**282**	P	**P**	**02 52 19.4**	**+0.6**
	comp=Z,90nm,0.9s						
SOEI	**Soe**	**56.17**	**270**	P	**P**	**02 52 21.1**	**+0.7**
	comp=Z,2µmcomp=Z,313nm,0.9s						
SOEI	**Soe**	**56.17**	**270**	P	**P**	**02 52 20.8**	**+0.4**
TNTI	**Ternate**	**56.60**	**283**	P	**P**	**02 52 22.4**	**-0.8**
TNTI	**Ternate**	**56.60**	**283**	P	**P**	**02 52 23.0**	**-0.2**
	comp=Z,116nm,0.9s						
BATI	**Baumata**	**56.63**	**270**	P	**P**	**02 52 23.6**	**+0.2**
SANI	**Sanana**	**56.87**	**280**	P	**P**	**02 52 23.8**	**-1.2**
	comp=Z,1µmcomp=Z,153nm,0.9s						
PSA00	**Pilbara Seismi**	**57.96**	**256**	P	**P**	**02 52 31.5**	**-0.8**
PSA00	**Pilbara Seismi**	**57.96**	**256**	P	**P**	**02 52 31.3**	**-1.0**
MBWA	**Marble Bar**	**58.13**	**256**	P	**P**	**02 52 32.6**	**-0.9**
MBWA				IAmb	IAmb	02 52 33.4	
	comp=Z,53nm,0.8s						
MBWA	**Marble Bar**	**58.13**	**256**	P	**P**	**02 52 32.7**	**-0.7**
MBWA	**Marble Bar**	**58.13**	**256**	P	**P**	**02 52 32.5**	**-0.9**
MMRI	**Maumere**	**58.40**	**271**	P	**P**	**02 52 35.7**	**+0.3**
	comp=Z,116nm,0.7s						
KLBR	**Kellerberrin**	**58.84**	**244**	P	**P**	**02 52 37.2**	**-0.9**
	baz=59,SNR=23						
KLBR	**Kellerberrin**	**58.84**	**244**	P	**P**	**02 52 37.9**	**-0.2**
EDFI	**Ende, Flores**	**58.89**	**271**	P	**P**	**02 52 37.6**	**-1.2**
	comp=Z,491nmcomp=Z,66nm,1.0s						
NWAO	**Narrogin (SRO)**	**59.21**	**242**	P	**P**	**02 52 39.7**	**-0.8**
NWAO	**Narrogin (SRO)**	**59.21**	**242**	P	**P**	**02 52 40.1**	**-0.4**
NWAO	**Narrogin (SRO)**	**59.21**	**242**	P	**P**	**02 52 40.0**	**-0.6**
RKGY	**Rocky Gully**	**59.37**	**240**	P	**P**	**02 52 42.0**	**+0.5**
	baz=59,SNR=5.8						
BLDU	**Ballidu**	**59.79**	**245**	P	**P**	**02 52 43.5**	**-0.9**
	baz=60,SNR=34						
BLDU	**Ballidu**	**59.79**	**245**	P	**P**	**02 52 43.5**	**-0.9**
MUN	**Mundaring**	**60.13**	**243**	P	**P**	**02 52 46.6**	**0.0**
	baz=60,SNR=8.4						
MUN	**Mundaring**	**60.13**	**243**	P	**P**	**02 52 45.9**	**-0.7**
SBA	**Scott Base**	**60.24**	**184**	P	**P**	**02 52 48.8**	**+2.2**
SBA	**Scott Base**	**60.24**	**184**	P	**P**	**02 52 49.4**	**+2.9**
SBA				pP	**pP**	**02 54 44.6**	**+3.3**
SBA				x	x	02 55 02.1	
VNDA	**Vanda**	**60.27**	**185**	P	**P**	**02 52 48.8**	**+2.0**
	comp=Z,2.7nm,0.8s,baz=348,slow=7.5,SNR=12 comp=Z,2.7nm,0.8s						
VNDA	**Vanda**	**60.27**	**185**	P	**P**	**02 52 48.5**	**+1.8**
VNDA	**Vanda**	**60.27**	**185**	P	**P**	**02 52 48.7**	**+2.0**
VNDA				pP	**pP**	**02 54 46.4**	**+4.8**
VNDA				x	x	02 55 00.0	
MORW	**Morawa**	**60.50**	**246**	P	**P**	**02 52 48.1**	**-1.0**
	baz=60,SNR=8.4						
MORW	**Morawa**	**60.50**	**246**	P	**P**	**02 52 48.1**	**-1.0**
MORW				IAmb	IAmb	02 52 49.1	
	comp=Z,30nm,0.8s						
MORW	**Morawa**	**60.50**	**246**	P	**P**	**02 52 48.7**	**-0.4**
WBSI	**Waikabubak, Su**	**60.84**	**269**	P	**P**	**02 52 51.4**	**-0.2**
	comp=Z,102nm,1.1s						
APSI	**Ampana**	**61.33**	**279**	P	**P**	**02 52 55.1**	**+0.3**
	comp=Z,895nmcomp=Z,114nm,1.2s						
MRSI	**Marisa**	**61.54**	**281**	P	**P**	**02 52 55.6**	**-0.5**
	comp=Z,69nm,0.9s						
BNSI	**Bone**	**61.66**	**275**	P	**P**	**02 52 56.8**

LWLI Liwa 76.72 269 P P 02 54 27.6 +0.5
comp=Z,6µmcomp=Z,48nm,0.5s
MDSI Maura Dua 76.76 270 P P 02 54 25.0 -2.1
comp=Z,899nmcomp=Z,26nm,0.9s
BCW Bitter Crk WRg 76.83 46 IAmb IAmb 02 54 29.9
comp=Z,47nm,0.8s
KMPM Mount Pierce 76.96 39 IAmb IAmb 02 54 30.4
comp=Z,39nm,0.9s
SII Sitkinak Islan 77.08 13 P P 02 54 27.9 +0.1
baz=204
SII Sitkinak Islan 77.08 13 P P 02 54 28.5 +0.6
CCX Cicese 77.16 50 P P 02 54 29.7 +0.9
CCX IAmb IAmb 02 54 31.4
comp=Z,40nm,1.2s
DECC Green Verdugo 77.21 47 P P 02 54 30.4 +1.3
baz=238
PASC Pasadena Art C 77.27 47 IAmb IAmb 02 54 31.3
comp=Z,25nm,0.8s
ARVC Arvin 77.34 46 P P 02 54 31.3 +1.6
baz=237
109C Camp Elliot, M 77.36 49 P P 02 54 31.6 +1.6
baz=239
KRPM Rodgers 77.47 39 IAmb IAmb 02 54 33.3
comp=Z,41nm,1.0s
KHMM Horse Mountain 77.47 39 IAmb IAmb 02 54 33.2
comp=Z,31nm,1.1s
VES Vestal, Richgr 77.55 46 P P 02 54 32.1 +1.3
baz=237,SNR=7.8
R17K Ugashik Creek 77.62 12 P P 02 54 30.3 -0.4
baz=201
MURC Murrieta 77.67 48 P P 02 54 32.9 +1.2
baz=238,SNR=7.5
BFSC Mount Baldy Ra 77.68 48 P P 02 54 32.8 +1.0
baz=238,SNR=9.8
EDW2 Edwards Air Fo 77.78 47 P P 02 54 33.6 +1.4
baz=238,SNR=32
MONP2 Monument Peak 77.86 49 P P 02 54 34.5 +1.6
baz=239,SNR=39
ISA Isabella, Lake 77.87 46 P P 02 54 33.4 +0.7
ISA IAmb IAmb 02 54 35.1
comp=Z,44nm,0.9s
ISA Isabella, Lake 77.87 46 P P 02 54 34.2 +1.5
baz=237,SNR=28
OHAK Old Harbor 77.88 14 IAmb IAmb 02 54 32.6
comp=Z,40nm,0.8s
OHAK Old Harbor 77.88 14 P P 02 54 32.2 +0.1
baz=204
CMB Columbia Colle 77.90 43 IAmb IAmb 02 54 34.9
comp=Z,32nm,0.9s
CCAC Calif City Air 77.91 47 IAmb IAmb 02 54 36.9
comp=Z,29nm,1.1s
RMX La Rumorosa 77.96 50 IAmb IAmb 02 54 35.9
comp=Z,39nm,0.8s
IKP In-Ko-Pah, Jac 77.96 50 P P 02 54 35.1 +1.8
baz=239,SNR=15
KSXB Camp Six Broad 77.97 38 IAmb IAmb 02 54 35.6
comp=Z,26nm,0.9s
NJ2 Nanjing 78.13 309 eP P 02 54 33.9 -0.2
NJ2 pmax pmax
comp=Z,17nm,0.8s
PFO Pinyon Flats O 78.20 49 P P 02 54 35.7 +1.1
comp=Z,8.2nm,0.8s,baz=266,slow=6.6,SNR=16
comp=Z,8.2nm,0.8s
PFO Pinyon Flats O 78.20 49 P P 02 54 35.9 +1.2
PFO Pinyon Flats O 78.20 49 P P 02 54 35.8 +1.2
baz=239,SNR=7.2
TPFO Pinon Flats 78.20 49 P P 02 54 35.8 +1.2
baz=239,SNR=7.6
LRMC Laurel Mtn Rad 78.32 47 P P 02 54 36.6 +1.4
baz=238
L02F Cave Junction 78.33 38 P P 02 54 36.4 +1.5
baz=232
SWSC Sam W. Stewart 78.33 50 P P 02 54 36.6 +1.4
baz=240,SNR=8.4
MDPB Devils Postpil 78.54 44 IAmb IAmb 02 54 38.7
comp=Z,39nm,0.9s
KDAK Kodiak Island 78.55 14 P P 02 54 35.0 -0.7
comp=Z,22nm,0.8s,baz=212,slow=5.6,SNR=12
comp=Z,22nm,0.8s
KDAK Kodiak Island 78.55 14 P P 02 54 36.1 +0.4
KDAK IAmb IAmb 02 54 37.6
comp=Z,30nm,0.8s
KDAK Kodiak Island 78.55 14 P P 02 54 35.7 0.0
baz=205
CWC Cottonwood Cre 78.56 46 P P 02 54 37.8 +1.3
baz=237
SLBS Sierra La Lagu 78.56 60 P P 02 54 37.7 +1.0
SLBS IAmb IAmb 02 54 39.4
comp=Z,25nm,0.8s
OMMB Old Mammoth Mi 78.58 44 IAmb IAmb 02 54 39.0
comp=Z,32nm,1.2s
YBH Yreka Blue Hor 78.60 39 P P 02 54 38.0 +1.4
comp=Z,29nm,0.8s,baz=187,slow=2.7,SNR=73
comp=Z,29nm,0.8s
YBH Yreka Blue Hor 78.60 39 IAmb IAmb 02 54 39.0
comp=Z,28nm,0.8s
K02D Willamette Mer 78.62 38 P P 02 54 37.9 +1.3
baz=232,SNR=6.2
P16K Nushagak River 78.63 11 P P 02 54 36.0 -0.1
baz=200,SNR=5.8
MLAC Mammoth, Mammo 78.70 44 P P 02 54 38.9 +1.6
baz=237
BELC Belle Mtn. Jos 78.73 49 P P 02 54 38.8 +1.4
baz=239,SNR=17
J01E Myrtle Point 78.75 37 P P 02 54 38.9 +1.8
baz=232
MPMC Manual Prospec 78.76 46 P P 02 54 39.0 +1.4
baz=238,SNR=19
TIN Tinemaha, Big 78.79 45 P P 02 54 39.3 +1.7
baz=237,SNR=6.1
GSC Goldstone, Bar 78.83 47 P P 02 54 39.2 +1.3
baz=238,SNR=8.1
HEC Hector,Ludlow 78.92 48 P P 02 54 39.6 +1.2
baz=239,SNR=14
BC3 Big Chuckawall 78.94 49 P P 02 54 40.1 +1.6
baz=240,SNR=12
BEKR Beckworth 78.96 42 IAmb IAmb 02 54 40.2
comp=Z,22nm,0.7s
HUMO Hull Mountain 78.98 38 IAmb IAmb 02 54 41.0
comp=Z,34nm,1.1s
P17K Kvichak River 79.06 11 P P 02 54 38.0 -0.3
baz=201,SNR=15
VCNR Virginia City 79.09 42 P P 02 54 40.1 +0.8
GLA Glamis 79.09 50 IAmb IAmb 02 54 42.2
comp=Z,31nm,0.9s
GLA Glamis 79.09 50 P P 02 54 41.5 +2.3
baz=240,SNR=6.8
L04D Klamath Falls 79.14 39 IAmb IAmb 02 54 41.4
comp=Z,44nm,0.8s
L04D Klamath Falls 79.14 39 P P 02 54 40.6 +1.2
baz=233,SNR=14
O16K Kokwok River B 79.14 10 P P 02 54 37.8 -1.0
baz=200,SNR=7.9
LHV Little Huntoon 79.26 44 IAmb IAmb 02 54 42.6
comp=Z,49nm,1.0s
GRAC Grapevine Rang 79.34 45 P P 02 54 42.0 +1.6
baz=238,SNR=8.3
Q20K Shuyak Island 79.35 13 P P 02 54 39.9 0.0
baz=205
GMRC Granite Mounta 79.37 48 P P 02 54 42.1 +1.3
baz=239,SNR=13
Q19K Cape Douglas, 79.37 13 P P 02 54 39.9 -0.2
baz=204
FURC Furnace Creek, 79.40 46 P P 02 54 42.2 +1.6
baz=238
I03D Drain, OR 79.42 37 P P 02 54 41.5 +0.9
baz=232
IRM Iron Mountain 79.42 49 P P 02 54 42.4 +1.5
baz=240,SNR=18
P18K Big Mountain, 79.48 12 IAmb IAmb 02 54 40.9
comp=Z,49nm,0.8s
P18K Big Mountain, 79.48 12 P P 02 54 40.2 -0.4
baz=202
NVAR Mina Array Bea 79.48 44 P P 02 54 42.6 +1.1
comp=Z,18nm,0.7s,baz=225,slow=8.8,SNR=118
comp=Z,18nm,0.7s
O17K Koliganek Bris 79.49 11 P P 02 54 39.9 -0.7
baz=201
PAHR Pah Rah Range 79.49 42 IAmb IAmb 02 54 43.6
comp=Z,39nm,1.2s
SHOC Shoshone, Teco 79.51 47 P P 02 54 42.8 +1.5
baz=239
NV11 Mina Array Sit 79.58 44 P P 02 54 42.3 +0.4
NV11 IAmb IAmb 02 54 44.1
comp=Z,33nm,1.0s
BLYC Blythe 79.66 49 IAmb IAmb 02 54 44.8
comp=Z,24nm,0.8s
J04D Umpqua Nationa 79.86 38 P P 02 54 44.5 +1.3
baz=233,SNR=16
N16K Nishlik Lake 79.87 10 P P 02 54 43.2 +0.5
baz=199,SNR=7.9
O18K Koktuh Hills 79.91 12 P P 02 54 42.6 -0.3
baz=202,SNR=20
KVN Kaiserville 79.96 43 IAmb IAmb 02 54 45.9
comp=Z,31nm,0.9s
I04A Tendick Farm, 80.02 38 P P 02 54 44.6 +0.8
baz=233,SNR=5.3
214A Organ Pipe Nat 80.05 52 IAmb IAmb 02 54 47.3
comp=Z,26nm,0.9s
214A Organ Pipe Nat 80.05 52 P P 02 54 46.1 +1.8
baz=242
TPNV Topopah Spring 80.07 46 P P 02 54 45.8 +1.3
baz=238,SNR=15
HSIG 80.11 55 P P 02 54 45.1 +0.5
MOD Modoc Plateau 80.16 40 IAmb IAmb 02 54 46.9
comp=Z,41nm,0.7s
PDMCI Parker Dam,Lak 80.21 49 P P 02 54 46.7 +1.7
baz=240,SNR=7.8
CN2 Changchun 80.22 322 eP P 02 54 45.3 +0.5
CN2 eS S 03 04 01.7 -0.4
CN2 pmax pmax
comp=Z,10.0nm,1.3s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=Z,200nm,10.0s
CN2 LR LR
comp=Z,100nm,10.0s
CN2 LR LR
comp=Z,100nm,10.0s
H04D Lebanon 80.27 37 P P 02 54 46.4 +1.4
baz=233
O19K Port Alsworth 80.40 12 P P 02 54 45.0 -0.3
baz=203
J05D Port Orford, OR 80.40 38 P P 02 54 47.6 +1.6
baz=234,SNR=42
CNPM China Poot 80.44 14 IAmb IAmb 02 54 46.3
comp=Z,24nm,0.8s
N18K Kilae Creek 80.55 11 P P 02 54 45.7 -0.5
baz=202,SNR=5.2
O20K Slope Mountain 80.64 13 P P 02 54 46.3 -0.4
baz=205
H04A Detroit Lake 80.68 37 IAmb IAmb 02 54 48.4
comp=Z,27nm,0.7s
BRLK Bradley Lake 80.73 14 IAmb IAmb 02 54 47.7
comp=Z,31nm,0.8s
BRSE Bradley Lake S 80.74 14 P P 02 54 47.1 0.0
baz=206,SNR=9.3
S11A Rachel 80.78 46 IAmb IAmb 02 54 50.3
comp=Z,44nm,1.0s
N19K Bonanza Creek 80.94 12 P P 02 54 47.5 -0.8
baz=203,SNR=5.8
I05D Terrebonne, OR 80.96 38 P P 02 54 49.9 +1.1
baz=234,SNR=7.8
PRN Pahroc Range 81.13 46 IAmb IAmb 02 54 52.6
comp=Z,45nm,0.9s
BKNI Bangkinang 81.22 273 P P 02 54 50.4 -0.3
DIB Dawson Inlet, 81.25 26 IAmb IAmb 02 54 52.9
comp=Z,21nm,1.0s
R11A Troy Canyon, C 81.25 45 P P 02 54 51.4 +0.8
baz=239,SNR=15
BMN Battle Mountai 81.27 43 IAmb IAmb 02 54 52.8
comp=Z,44nm,1.0s
HOOD Mount Hood Mea 81.36 37 IAmb IAmb 02 54 53.2
comp=Z,39nm,0.9s
NLWA Neilton Lookou 81.41 34 IAmb IAmb 02 54 53.1
comp=Z,42nm,1.1s
G05D Wamic, OR 81.51 37 P P 02 54 52.7 +1.2
baz=234
TUC Tucson 81.73 52 P P 02 54 54.3 +1.3
TUC IAmb IAmb 02 54 56.2
comp=Z,35nm,1.1s
TUC Tucson 81.73 52 P P 02 54 55.2 +2.2
baz=243
SPCR Spurr Chakacha 81.74 12 P P 02 54 51.1 -1.2
baz=205
I07A Izee 81.89 39 IAmb IAmb 02 54 55.8
comp=Z,44nm,0.9s
D03D Eldon 81.91 34 P P 02 54 54.6 +1.2
baz=232
M19K Big River Lodg 81.96 11 P P 02 54 53.1 -0.3
baz=203
BELA Belgrano 2 81.97 173 P P 02 54 53.1 -0.2
B04A Port Angeles 82.01 34 IAmb IAmb 02 54 56.2
comp=Z,54nm,1.4s
J08A Circle Bar Ran 82.09 40 IAmb IAmb 02 54 56.8
comp=Z,56nm,1.1s
L19K White Mountain 82.14 11 IAmb IAmb 02 54 56.1
comp=Z,26nm,1.1s
L19K White Mountain 82.14 11 P P 02 54 53.9 -0.4
baz=206,SNR=16
CLRS Cowichan Lake 82.16 33 IAmb IAmb 02 54 56.4
comp=Z,19nm,0.9s
RC01 Rabbit Creek A 82.17 14 IAmb IAmb 02 54 55.0
comp=Z,28nm,1.1s
RC01 Rabbit Creek A 82.17 14 P P 02 54 53.7 -0.7
baz=207,SNR=6.5
LCMT Little Creek M 82.18 47 IAmb IAmb 02 54 57.6
comp=Z,28nm,0.9s
M20K Styx River 82.18 12 P P 02 54 54.0 -0.6
baz=204
X16A Lo Mia Camp, P 82.22 50 IAmb IAmb 02 54 58.5
comp=Z,34nm,1.0s
SUA Susitna One 82.29 13 IAmb IAmb 02 54 55.4
comp=Z,31nm,0.8s
SUA Susitna One 82.29 13 P P 02 54 54.7 -0.4
baz=206,SNR=13
D05A Enumclaw 82.29 35 P P 02 54 56.5 +1.1
CBB Campbell River 82.31 31 IAmb IAmb 02 54 57.2
comp=Z,38nm,1.1s
HIN Hinchinbrook I 82.33 15 IAmb IAmb 02 54 55.8
comp=Z,42nm,1.4s
CCUT Cedar City 82.36 47 IAmb IAmb 02 54 59.0
comp=Z,24nm,0.9s
PGC Sidney 82.41 33 IAmb IAmb 02 54 57.6
comp=Z,23nm,0.9s
BBB Bella Bella 82.43 28 IAmb IAmb 02 54 57.4
comp=Z,28nm,0.9s
PSUT Pine Spring 82.52 46 IAmb IAmb 02 54 59.0
comp=Z,23nm,0.8s
SZCU Shurtz Canyon 82.58 47 IAmb IAmb 02 54 59.9
comp=Z,23nm,1.0s
L20K Farewell, AK 82.59 11 P P 02 54 56.1 -0.5
baz=203,SNR=16
SKT Skwentna 82.59 12 P P 02 54 55.6 -1.0
baz=206
GLI Glacier Island 82.60 15 P P 02 54 56.1 -0.5
baz=210,SNR=12
TTA Tatalina 82.63 10 P P 02 54 56.9 +0.1
TTA IAmb IAmb 02 54 58.0
comp=Z,26nm,1.1s
TTA Tatalina 82.63 10 P P 02 54 57.0 +0.2
baz=201,SNR=17
EYAK Cordova Ski Ar 82.65 16 P P 02 54 56.5 -0.3
baz=211
F07A Phinny Hill Vi 82.68 37 IAmb IAmb 02 54 59.2
comp=Z,23nm,0.8s
M22K Willow 82.68 13 P P 02 54 56.7 -0.2
baz=207,SNR=8.3
ELK Elko 82.72 43 IAmb IAmb 02 55 00.0
comp=Z,24nm,1.0s
KNK Knik Glacier 82.75 14 IAmb IAmb 02 54 57.9
comp=Z,23nm,0.7s
KNK Knik Glacier 82.75 14 P P 02 54 56.8 -0.5
baz=209,SNR=6.4
PMR Palmer 82.75 14 IAmb IAmb 02 54 57.6
comp=Z,48nm,1.4s
PMR Palmer 82.75 14 P P 02 54 56.7 -0.6
baz=208,SNR=8.1
WUAZ Wupatki 82.79 49 IAmb IAmb 02 55 01.6
comp=Z,33nm,1.1s
WUAZ Wupatki 82.79 49 P P 02 55 00.1 +1.8
baz=242
G08A Pilot Rock 82.89 38 IAmb IAmb 02 55 00.6
comp=Z,50nm,1.3s
SIT Sitka 83.01 22 P P 02 54 58.6 -0.1
baz=221
PKCU Pink Cliffs 83.04 47 IAmb IAmb 02 55 03.1
comp=Z,49nm,1.0s
LTY Liberty 83.06 35 IAmb IAmb 02 55 00.8
comp=Z,22nm,0.9s
E07A Sunnyside 83.10 36 IAmb IAmb 02 55 01.5
comp=Z,42nm,1.0s
SML Sawmill 83.12 14 P P 02 54 58.7 -0.6
baz=209
DIV Divide 83.14 15 IAmb IAmb 02 54 59.9
comp=Z,30nm,0.7s
KULM Kulim 83.16 278 P P 02 55 00.7 +0.2
HAWA Hanford 83.19 37 IAmb IAmb 02 55 01.9
comp=Z,40nm,0.9s
CUT Chulitna 83.23 13 P P 02 54 59.1 -0.6
baz=207,SNR=7.0
M23K Glacier View 83.25 14 P P 02 54 59.2 -0.7
baz=209
BMRM Bremner River 83.30 16 IAmb IAmb 02 55 00.9
comp=Z,43nm,1.2s
BMRM Bremner River 83.30 16 P P 02 54 60.0 -0.2
baz=212,SNR=8.7
B06A Marblemount 83.36 34 IAmb IAmb 02 55 01.9
comp=Z,21nm,1.1s
MESA MESA 83.36 17 P P 02 55 01.2 +0.5
baz=215,SNR=7.5
K20K Telida 83.36 11 IAmb IAmb 02 55 01.2
comp=Z,30nm,0.8s
K20K Telida 83.36 11 P P 02 55 00.1 -0.2
baz=203,SNR=28
SCM Sheep Creek Mo 83.38 14 P P 02 55 00.3 -0.2
baz=210,SNR=20
MTPU Mount Pierson 83.42 47 IAmb IAmb 02 55 04.8
comp=Z,26nm,1.0s
KLU Klutina 83.42 15 P P 02 55 00.5 -0.3
baz=211,SNR=6.1
HPIG 83.44 59 P P 02 55 02.6 +0.8
TCRU Three Creeks R 83.51 46 IAmb IAmb 02 55 04.8
comp=Z,24nm,1.1s
E08A Dider Farm, El 83.52 37 IAmb IAmb 02 55 03.0
comp=Z,19nm,0.7s
TGL Tana Glacier 83.60 17 IAmb IAmb 02 55 02.7
comp=Z,39nm,1.1s
ISLE Juniper Island 83.61 17 IAmb IAmb 02 55 02.7
comp=Z,36nm,1.0s
WRAK Wrangell Islan 83.64 24 IAmb IAmb 02 55 03.5
comp=Z,26nm,0.9s
WRAK Wrangell Islan 83.64 24 P P 02 55 02.7 +0.9
baz=224
PNL Peninsula 83.70 19 P P 02 55 02.2 +0.1
baz=217
MAW Mawson 83.72 200 P P 02 55 03.2 +1.1
comp=Z,8.4nm,0.7s,baz=144,slow=6.6,SNR=15
comp=Z,8.4nm,0.7s
MAW Mawson 83.72 200 P P 02 55 03.1 +0.9
baz=84,SNR=7.8
MFID Camas Ranch 83.75 41 IAmb IAmb 02 55 04.9
comp=Z,28nm,1.1s
CAST Castle Rocks 83.78 12 P P 02 55 00.7 -1.8
baz=205,SNR=27
PCA Pinnacle 83.79 18 IAmb IAmb 02 55 03.5
comp=Z,19nm,0.9s
PINM Pinnacle 83.79 18 P P 02 55 02.7 +0.1
baz=216
W18A Petrified Fore 83.79 50 P P 02 55 04.9 +1.6
baz=243
VRDI Verde Repeater 83.83 16 IAmb IAmb 02 55 03.7
comp=Z,25nm,1.0s
N25K Chitina, Valde 83.85 15 P P 02 55 02.8 0.0
baz=212,SNR=19
GRNC Granite Creek 83.88 17 IAmb IAmb 02 55 04.2
comp=Z,30nm,1.0s
M24K Tolsona, Glenn 83.89 15 P P 02 55 03.6 +0.5
baz=211,SNR=7.9
GLB Gilahina Butte 83.91 16 P P 02 55 03.4 +0.2
GLB IAmb IAmb 02 55 03.8
comp=Z,25nm,0.7s
D08A Wollman Farm, 83.92 36 IAmb IAmb 02 55 05.4
comp=Z,32nm,0.9s
WAT6 Susitna Watana 83.94 14 P P 02 55 03.0 -0.4
baz=209,SNR=24
WAT1 Susitna Watana 83.98 13 P P 02 55 03.0 -0.4
baz=208
LYN LuoYang 84.02 309 eP P 02 55 04.8 +0.6
LYN S S 03 04 43.2 +3.0
LYN pmax pmax
comp=Z,30nm,0.8s
LYN pmax pmax
comp=Z,170nm,5.0s
DUG Dugway, Tooele 84.04 44 P P 02 55 05.3 +0.9
baz=240,SNR=5.9
E09A Wood Farm, Sta 84.05 37 IAmb IAmb 02 55 05.8
comp=Z,35nm,1.3s
MCARA McCarthy VSAT 84.07 16 P P 02 55 03.9 0.0
baz=214,SNR=5.8
121A Cookes Peak, D 84.10 53 P P 02 55 06.9 +2.0
baz=244
J20K Nowinta River 84.11 10 IAmb IAmb 02 55 04.9
comp=Z,16nm,0.8s
J20K Nowinta River 84.11 10 P P 02 55 03.9 0.0
baz=203,SNR=17
KTH Kantishna Hill 84.13 12 IAmb IAmb 02 55 05.0
comp=Z,26nm,0.9s
LOGN Logan Glacier 84.16 17 IAmb IAmb 02 55 05.5
comp=Z,34nm,1.0s
CHUM Lake Minchumin 84.16 11 P P 02 55 03.1 -1.2
baz=205,SNR=6.6
TRF Thorofare Moun 84.17 12 P P 02 55 03.5 -1.0
baz=207,SNR=30
BARN Barnard Glacie 84.17 17 IAmb IAmb 02 55 05.7
comp=Z,32nm,0.9s
CTG Chitna Glacier 84.18 17 P P 02 55 04.5 -0.1
baz=215,SNR=5.0
CTGM Chitina Glacie 84.19 17 P P 02 55 04.7 +0.1
CTGM IAmb IAmb 02 55 05.6
comp=Z,33nm,1.0s
BESE Bessie Mountai 84.33 21 IAmb IAmb 02 55 07.0
comp=Z,29nm,1.0s
HARP HAARP 84.39 15 P P 02 55 05.5 +0.1
baz=212
ZAIG Zacatecas 84.40 64 P P 02 55 08.1 +1.3
LLLB Lillooet 84.42 32 IAmb IAmb 02 55 07.4
comp=Z,24nm,1.2s
B08A Colville Reser 84.43 35 IAmb IAmb 02 55 07.1
comp=Z,28nm,0.9s
DHY Denali Highway 84.45 14 P P 02 55 05.4 -0.5
baz=210
ENH Enshi 84.45 304 P P 02 55 06.7 +0.1
ENH IAmb IAmb 02 55 08.0
comp=Z,36nm,0.9s
PLBC Pleasant Camp 84.49 20 P P 02 55 06.7 +0.7
baz=220,SNR=19
BPAW Bear Paw Mtn. 84.61 12 P P 02 55 04.9 -1.6
baz=206,SNR=5.2
TMUT Trail Mountain 84.69 46 IAmb IAmb 02 55 10.3
comp=Z,16nm,0.8s
MCK McKinley 84.69 13 IAmb IAmb 02 55 07.2
comp=Z,36nm,1.1s
MCK McKinley 84.69 13 P P 02 55 06.5 -0.4
baz=208,SNR=11
C09A Chrisman Ranch 84.70 36 IAmb IAmb 02 55 08.9
comp=Z,27nm,0.9s
HLID Hailey 84.70 41 IAmb IAmb 02 55 09.9
comp=Z,20nm,0.8s
HLID Hailey 84.70 41 P P 02 55 09.1 +1.4
baz=239,SNR=44
PAX Paxson 84.80 14 P P 02 55 06.9 -0.6
baz=211,SNR=7.5
GSI Gunungsitoli 84.81 273 P P 02 55 08.8 +0.1
GSI Gunungsitoli 84.81 273 P P 02 55 09.5 +0.9
comp=Z,88nm,1.0s
SKAG Skagway 84.83 20 P P 02 55 08.9 +1.4
baz=221
T35M Bob Quinn 84.85 24 P P 02 55 08.9 +1.1
baz=225
YUK8 Steele Glacier 84.89 18 P P 02 55 08.5 +0.3
baz=217,SNR=15
M26K Nabesna, AK 84.93 16 IAmb IAmb 02 55 09.7
comp=Z,31nm,1.0s
M26K Nabesna, AK 84.93 16 P P 02 55 08.2 +0.1
baz=214,SNR=19
YUK6 Outpost Mounta 85.03 18 P P 02 55 08.6 -0.3
baz=218
SRU San Rafael Swe 85.07 46 IAmb IAmb 02 55 11.5
comp=Z,18nm,0.8s
YUK3 Moose Creek 85.09 17 P P 02 55 09.3 +0.2
baz=216,SNR=34
M27K Edge Creek, AK 85.18 16 IAmb IAmb 02 55 10.9
comp=Z,44nm,1.1s
M27K Edge Creek, AK 85.18 16 P P 02 55 09.8 +0.3
baz=215
HYT Haines Junctio 85.19 19 P P 02 55 10.0 +0.5
baz=219,SNR=11
SRIT Nakonsritamara 85.21 281 P P 02 55 11.1 +0.7
YUK4 Talbot Arm 85.26 18 P P 02 55 10.2 +0.3
baz=218
L26K Log Cabin Wild 85.36 15 IAmb IAmb 02 55 11.1
comp=Z,23nm,1.4s

L26K	Log Cabin Wild	85.36	15	P	P	02 55 10.0	-0.1	
	baz=213							
I21K	Tanana	85.41	11	P	P	02 55 10.0	-0.2	
I21K				IAmb	IAmb	02 55 10.9		
	comp=Z,37nm,1.4s							
I21K	Tanana	85.41	11	P	P	02 55 10.1	-0.2	
	baz=205,SNR=11							
K24K	Donnelly Dome	85.45	14	P	P	02 55 10.7	+0.2	
	baz=211,SNR=7.4							
P32M	Atlin	85.47	21	P	P	02 55 11.8	+1.0	
	baz=222							
MLY	Manley	85.50	11	P	P	02 55 09.5	-1.3	
	baz=206,SNR=13							
BVCY	Beaver Creek	85.50	16	P	P	02 55 11.3	+0.5	
	baz=216							
O30N	Mendenhall	85.59	19	P	P	02 55 11.7	+0.4	
	baz=220,SNR=15							
NEW	Newport	85.60	36	IAmb	IAmb	02 55 12.9		
	comp=Z,13nm,0.8s							
NEW	Newport	85.60	36	P	P	02 55 12.0	+0.4	
	baz=237,SNR=13							
MNTX	Cornudas Mount	85.60	55	IAmb	IAmb	02 55 14.1		
	comp=Z,10nm,0.7s							
MNTX	Cornudas Mount	85.60	55	P	P	02 55 13.6	+1.6	
	baz=246							
RIDG	Independent Ri	85.61	14	IAmb	IAmb	02 55 12.0		
	comp=Z,17nm,0.9s							
RIDG	Independent Ri	85.61	14	P	P	02 55 11.0	-0.3	
	baz=212							
MVCO	Mesa Verde	85.62	49	P	P	02 55 13.2	+0.9	
	baz=244							
H21K	Melozitna Rive	85.70	10	P	P	02 55 11.6	-0.1	
	baz=204,SNR=7.7							
HDA	Harding Lake	85.71	13	P	P	02 55 11.0	-0.7	
HDA				IAmb	IAmb	02 55 12.0		
	comp=Z,15nm,0.8s							
HDA	Harding Lake	85.71	13	P	P	02 55 11.1	-0.6	
	baz=210,SNR=9.3							
DOT	Dot Lake	85.72	15	IAmb	IAmb	02 55 12.5		
	comp=Z,17nm,0.9s							
CCB	Clear Creek Bu	85.74	13	IAmb	IAmb	02 55 11.8		
	comp=Z,44nm,1.3s							
L27K	Beaver Creek,	85.78	16	P	P	02 55 12.1	0.0	
	baz=215,SNR=6.4							
N30M	Aishikik Lake	85.82	18	P	P	02 55 12.3	-0.1	
	baz=219							
I23K	Minto, Yukon-K	85.87	12	P	P	02 55 11.5	-0.9	
	baz=208,SNR=5.7							
WHY	Whitehorse	85.89	20	IAmb	IAmb	02 55 14.3		
	comp=Z,18nm,1.1s							
WHY	Whitehorse	85.89	20	P	P	02 55 13.3	+0.5	
	baz=221,SNR=13							
MDM	Murphy Dome	85.92	12	IAmb	IAmb	02 55 12.7		
	comp=Z,23nm,1.0s							
TCOL	CIGO, UAF Yank	85.93	13	IAmb	IAmb	02 55 12.7		
	comp=Z,22nm,0.8s							
TCOL	CIGO, UAF Yank	85.93	13	P	P	02 55 12.1	-0.6	
	baz=209							
COLA	College	85.93	13	P	P	02 55 12.2	-0.5	
COLA				IAmb	IAmb	02 55 12.7		
	comp=Z,24nm,0.8s							
XLT	XiLinHaoTe	85.95	319	⇑*i*P	P	02 55 14.0	+0.5	
XLT				pmax	pmax			
	comp=Z,14nm,1.2s							
XLT				pmax	pmax			
	comp=Z,57nm,4.9s							
DLBC	Dease Lake	85.96	23	P	P	02 55 14.0	+0.9	
	baz=225,SNR=9.4							
TXAR	Lajitas Array	86.01	58	P	P	02 55 16.3	+2.2	
	comp=Z,24nm,0.7s,baz=220,slow=6.1,SNR=279							
	comp=Z,24nm,0.7s							
SCRK	Sand Creek	86.01	14	P	P	02 55 13.1	-0.2	
	baz=213							
IL31		86.04	13	P	P	02 55 12.1	-1.2	
IL31				IAmb	IAmb	02 55 13.4		
	comp=Z,13nm,0.8s							
ILAR	Eielson Array	86.04	13	P	P	02 55 12.2	-1.0	
	comp=Z,8.1nm,0.7s,baz=230,slow=5.6,SNR=26							
ILAR				PP	PP	02 58 40.4	-4.8	
	baz=222,slow=6.8,SNR=4.7							
	comp=Z,8.1nm,0.7s							
ANMO	Albuquerque	86.13	51	P	P	02 55 15.1	+0.4	
ANMO				IAmb	IAmb	02 55 16.8		
	comp=Z,14nm,0.9s							
ANMO	Albuquerque	86.13	51	P	P	02 55 15.8	+1.1	
	baz=245							
POKR	Poker Plat Res	86.23	13	IAmb	IAmb	02 55 14.0		
	comp=Z,14nm,0.7s							
POKR	Poker Plat Res	86.23	13	P	P	02 55 13.2	-1.0	
	baz=209,SNR=8.5							
J25K	Salcha River,	86.23	14	IAmb	IAmb	02 55 14.7		
	comp=Z,9.4nm,0.6s							
J25K	Salcha River,	86.23	14	P	P	02 55 14.1	-0.2	
	baz=211,SNR=11							
N31M	Braeburn, Yuko	86.24	19	IAmb	IAmb	02 55 15.8		
	comp=Z,26nm,1.0s							
N31M	Braeburn, Yuko	86.24	19	P	P	02 55 14.7	+0.4	
	baz=220,SNR=10.0							
P33M	Teslin, Yukon	86.24	21	P	P	02 55 15.0	+0.6	
	baz=223,SNR=6.4							
AHID	Auburn Hatcher	86.41	43	IAmb	IAmb	02 55 18.0		
	comp=Z,39nm,1.5s							
H23K	Yukon River	86.44	11	P	P	02 55 14.5	-0.7	
	baz=207							
XAN	Xi'an	86.45	307	⇑P	P	02 55 17.0	+1.0	
XAN				pP	pP	02 57 25.9	+2.4	
XAN				SKS	SKSac	03 04 45.6	-1.0	
XAN				S	S	03 05 05.9	+2.4	
XAN				pmax	pmax			
	comp=Z,120nm,1.4s							
XAN				pmax	pmax			
	comp=Z,120nm,6.5s							
K27K	Chicken	86.52	15	IAmb	IAmb	02 55 17.1		
	comp=Z,18nm,1.2s							
K27K	Chicken	86.52	15	P	P	02 55 16.2	+0.6	
	baz=214							
J26L	Joseph Creek	86.55	14	IAmb	IAmb	02 55 16.6		
	comp=Z,13nm,0.8s							
J26L	Joseph Creek	86.55	14	P	P	02 55 16.2	+0.4	
	baz=213,SNR=24							
BILL	Bilibino	86.62	354	P	P	02 55 16.2	+0.3	
MSO	Missoula	86.66	38	IAmb	IAmb	02 55 17.8		
	comp=Z,21nm,1.5s							
MSO	Missoula	86.66	38	P	P	02 55 16.8	0.0	
	baz=239,SNR=9.6							
DLMT	Dillon	86.73	40	IAmb	IAmb	02 55 19.3		
	comp=Z,18nm,0.8s							
H24K	Noodor Dome	86.77	12	P	P	02 55 15.1	-1.7	
	baz=209							
M30M	Minto, Yukon	86.78	18	IAmb	IAmb	02 55 17.9		
	comp=Z,23nm,0.8s							
M30M	Minto, Yukon	86.78	18	P	P	02 55 17.1	+0.2	
	baz=219,SNR=34							
TPAW	Teton Pass	86.85	42	IAmb	IAmb	02 55 20.3		
	comp=Z,24nm,1.1s							
S22A	4UR Ranch, Cre	87.05	49	IAmb	IAmb	02 55 21.4		
	comp=Z,16nm,1.1s							
S22A	4UR Ranch, Cre	87.05	49	P	P	02 55 20.3	+1.3	
	baz=245							
O20A	White River Ci	87.11	46	IAmb	IAmb	02 55 21.3		
	comp=Z,21nm,1.1s							
O20A	White River Ci	87.11	46	P	P	02 55 20.3	+1.2	
	baz=244							
MOOW	Moose Ponds	87.11	42	P	P	02 55 20.2	+1.1	
LOHW	Long Hollow	87.13	42	IAmb	IAmb	02 55 21.3		
	comp=Z,12nm,0.8s							
M31M	Drury Creek, Y	87.21	19	P	P	02 55 18.6	-0.3	
	baz=221,SNR=12							
DAWY	Dawson	87.23	16	IAmb	IAmb	02 55 20.1		
	comp=Z,22nm,1.2s							
DAWY	Dawson	87.23	16	P	P	02 55 19.0	0.0	
	baz=217,SNR=10							
YPP	Pitchstone Pla	87.32	42	P	P	02 55 21.4	+1.3	
YFT	Old Faithful	87.38	41	IAmb	IAmb	02 55 23.9		
	comp=Z,21nm,0.9s							
BW06	Boulder Array	87.41	43	IAmb	IAmb	02 55 22.1		
	comp=Z,17nm,0.8s							
BW06	Boulder Array	87.41	43	P	P	02 55 21.4	+0.8	
	baz=243							
PD31	Pinedale Array	87.42	43	IAmb	IAmb	02 55 22.1		
	comp=Z,16nm,0.8s							
PDAR	Pinedale Array	87.42	43	P	P	02 55 21.1	+0.6	
	comp=Z,12nm,0.6s,baz=221,slow=2.9,SNR=91							
PDAR				PP	PP	02 58 54.6	-2.2	
	comp=Z,1.1nm,0.7s,baz=256,slow=6.0,SNR=7.3							
	comp=Z,12nm,0.6s							
BOZ	Bozeman (W)	87.44	40	IAmb	IAmb	02 55 22.8		
	comp=Z,25nm,1.2s							
BOZ	Bozeman (W)	87.44	40	P	P	02 55 21.7	+1.1	
	baz=241,SNR=15							
HHC	Hu-ho-hao-te	87.47	314	*e*P	P	02 55 19.2	-1.5	
HHC				pmax	pmax			
	comp=Z,25nm,0.7s							
HHC				pmax	pmax			
	comp=Z,120nm,6.1s							
H17A	Grant Village	87.52	42	IAmb	IAmb	02 55 24.4		
	comp=Z,23nm,0.8s							
H17A	Grant Village	87.52	42	P	P	02 55 23.6	+2.6	
	baz=242,SNR=18							
FARO	Faro, Yukon	87.56	19	P	P	02 55 20.5	-0.1	
	baz=222							
SMCO	Snowmass	87.56	47	P	P	02 55 22.7	+1.1	
COLD	Coldfoot	87.57	11	IAmb	IAmb	02 55 21.6		
	comp=Z,16nm,0.9s							
COLD	Coldfoot	87.57	11	P	P	02 55 20.7	+0.3	
	baz=207							
WALA	Waterton Lakes	87.82	36	IAmb	IAmb	02 55 23.7		
	comp=Z,13nm,0.8s							
KMI	Kunming	88.00	297	⇑P	P	02 55 25.2	+1.5	
KMI				pmax	pmax			
	comp=Z,14nm,1.0s							
SDCO	Great Sand Dun	88.01	49	P	P	02 55 24.5	+1.0	
	baz=245							
MMPY	Sheldon Lake,	88.51	20	P	P	02 55 25.7	+0.7	
	baz=224,SNR=21							
MSTX	Muleshoe	88.52	54	P	P	02 55 26.8	+1.0	
	baz=247							
T25A	Trinidad	88.55	50	P	P	02 55 26.3	+0.3	
	baz=246							
I29M	Ogilvie Camp,	88.55	16	IAmb	IAmb	02 55 25.6		
	comp=Z,9.8nm,0.8s							
I29M	Ogilvie Camp,	88.55	16	P	P	02 55 24.7	-0.3	
	baz=218,SNR=10							
RLMT	Red Lodge	88.68	41	IAmb	IAmb	02 55 28.8		
	comp=Z,20nm,1.1s							
RLMT	Red Lodge	88.68	41	P	P	02 55 28.0	+1.6	
	baz=243,SNR=11							
TGTN	Hyland Airport	88.74	22	P	P	02 55 27.1	+1.0	
	baz=227							
ISCO	Idaho Springs	88.78	47	P	P	02 55 28.4	+1.3	
	baz=245							
TOLK	Toolik Lake Re	88.95	10	P	P	02 55 26.9	0.0	
	baz=207							
N23A	Red Feather La	89.01	46	P	P	02 55 29.6	+1.5	
	baz=245							
CM31	Chiang Mai Arr	89.04	290	P	P	02 55 28.6	+0.2	
CM31				IAmb	IAmb	02 55 30.3		
	comp=Z,16nm,1.0s							
CMAR	Chiang Mai Arr	89.04	290	P	P	02 55 29.0	+0.6	
	comp=Z,4.3nm,0.4s,baz=111,slow=2.9,SNR=33							
	comp=Z,4.3nm,0.4s							
833A	Chaparral WMA,	89.11	60	P	P	02 55 29.6	+1.1	
	baz=249							
CHTO	Chiang Mai	89.16	290	P	P	02 55 28.9	0.0	
CHTO				IAmb	IAmb	02 55 30.4		
	comp=Z,11nm,0.8s							
PZH	PanZhiHua	89.33	298	P	P	02 55 29.9	+0.2	
PZH				pmax	pmax			
	comp=Z,10.0nm,0.9s							
PZH				pmax	pmax			
	comp=Z,100nm,5.5s							
K22A	Casper	89.37	44	IAmb	IAmb	02 55 31.4		
	comp=Z,26nm,1.3s							
K22A	Casper	89.37	44	P	P	02 55 30.3	+0.7	
	baz=245							
JCT	Junction City	89.55	58	IAmb	IAmb	02 55 32.3		
	comp=Z,14nm,0.7s							
JCT	Junction City	89.55	58	P	P	02 55 31.5	+0.9	
	baz=249							
AMTX	Amarillo	89.70	53	IAmb	IAmb	02 55 32.9		
	comp=Z,19nm,0.9s							
TROLL	Troll, Antarti	90.13	180	P	P	02 55 33.2	+0.6	
SNAA	Sanae	90.42	179	P	P	02 55 34.0	+0.2	
SNAA	Sanae	90.42	179	P	P	02 55 34.1	+0.2	
ABTX	Abilene, Hawle	90.45	56	P	P	02 55 35.8	+1.1	
	baz=249							
VNA3	Neumayer Olymp	90.55	176	P	P	02 55 34.7	+0.3	
KSCO	Kaye Shedlock'	90.58	49	P	P	02 55 36.3	+1.1	
VNA2	Neumayer--Watz	90.99	177	P	P	02 55 37.1	+0.7	
LZH	Lanzhou	91.08	308	⇑P	P	02 55 38.7	+1.0	
LZH				pmax	pmax			
	comp=Z,17nm,1.4s							
VNA1	Neumayer--Stat	91.22	177	P	P	02 55 38.1	+0.7	
LAO	LASA Array	91.28	41	P	P	02 55 40.0	+1.7	
	baz=245							
435B	Jalil	91.44	58	P	P	02 55 41.0	+1.8	
	baz=250							
RSSD	Black Hills	91.63	44	P	P	02 55 40.0	0.0	
RSSD	Black Hills	91.63	44	P	P	02 55 40.8	+0.8	
	baz=246							
INK	Inuvik	92.03	15	P	P	02 55 40.2	-0.8	
	comp=Z,12nm,0.9s,baz=218,slow=3.8,SNR=8.3							
	comp=Z,12nm,0.9s							
INK	Inuvik	92.03	15	IAmb	IAmb	02 55 41.4		
	comp=Z,12nm,0.8s							
INK	Inuvik	92.03	15	P	P	02 55 40.7	-0.3	
	baz=222							
DGMT	Dagmar	93.27	40	P	P	02 55 48.5	+1.3	
	baz=246							
SONM	Songino Array	93.75	319	P	P	02 55 49.8	+0.3	
	comp=Z,0.3nm,0.3s,baz=38,slow=7.5,SNR=5.6							
YKA	Yellowknife Ar	94.45	25	P	P	02 55 52.1	-0.1	
	comp=Z,2.6nm,0.6s,baz=242,slow=4.1,SNR=10							
	comp=Z,2.6nm,0.6s							
BGNE	Belgrade	94.65	48	P	P	02 55 54.4	+0.7	
ECSD	EROS Data Cent	96.49	46	IAmb	IAmb	02 56 02.9		
	comp=Z,5.4nm,0.9s							
ECSD	EROS Data Cent	96.49	46	P	P	02 56 02.1	+0.2	
	baz=251							
S39A	Bolivar	97.00	53	P	P	02 56 05.9	+1.6	
S39A				IAmb	IAmb	02 56 06.9		
	comp=Z,4.3nm,0.7s							
ARCES	ARCESS Array B	126.51	350	PKP	PKPdf	03 01 30.8	-0.1	
	comp=Z,2.4nm,0.8s,baz=63,slow=0.5,SNR=7.3							
FINES	FINESS Array B	133.39	344	PKP	PKPdf	03 01 43.9	-0.2	
	comp=Z,1.3nm,0.7s,baz=139,slow=1.3,SNR=4.5							
NOA	NORSAR Array B	136.57	353	SKPbc	SKiKP	03 04 30.3	-2.2	
	baz=6.3,slow=4.0,SNR=3.4							
BNN	Bunyan	143.85	312		PKPbc	03 02 03.2	-0.2	
LODK	Lodwar	143.96	250		PKPbc	03 02 03.8	-0.6	
DSB	Dublin	144.35	8		PKPbc	03 02 03.7	-0.6	
BR131	Keskin Array S	144.98	315	PKPdf	PKPdf	03 02 05.8	-0.2	
BRTR	Keskin Array B	144.98	315	PKP	PKPbc	03 02 06.7	-0.2	
	comp=Z,5.5nm,1.0s,baz=123,slow=3.2,SNR=27							
BRTR	Keskin Array B	144.98	315	PKPdf	PKPdf	03 02 05.8	-0.2	
KOLS	Kolonicke sedl	145.01	336	*e*PKP	PKPab	03 02 07.4	-0.1	
KSP	Ksiaz	145.31	344	*e*PKP	PKPbc	03 02 07.7	+0.5	
NIE	Niedzica	145.33	339	*e*PKP	PKPab	03 02 08.2	-0.6	
CRVS	Cervenica-Dubn	145.34	337	*e*PKP	PKiKP	03 02 09.7	-0.7	
ANTO	Ankara	145.48	315	PKPbc	PKPbc	03 02 08.2	0.0	
OSTC	Ostas	145.59	344	*e*PKP	PKPbc	03 02 07.8	-0.3	
OSTC				*ex*	PKPab	03 02 10.6	+0.8	
CHVC	Chvalec	145.61	344	*e*PKP	PKPdf	03 02 06.6	0.0	
CLL	Collm	145.66	347		PKPbc	03 02 08.3	+0.1	
CLL	Collm	145.66	347	⇑*i*PKPbc	PKPbc	03 02 08.3	+0.1	
	comp=Z,16nm,0.8s							
CLL				*ex*	x	03 02 18.0		
CLL				*e*PPKiKP	pPKiKP	03 04 27.0	-0.8	
CLL				*ex*	x	03 04 40.0		
CLL				*e*SKPdf	SKPdf	03 04 47.0	+1.8	
UPC	Upice	145.69	344	*e*PKP	PKPbc	03 02 08.4	0.0	
DPC	Dobruska-Polom	145.75	343	*e*PKP	PKPbc	03 02 08.4	-0.2	
LANS	Liptovska Anna	145.84	339	*e*PKP	PKPab	03 02 10.2	-0.6	
BRG	Berggiesshubel	145.87	346	*e*PKP	PKPbc	03 02 09.0	+0.2	
BRG				Amp		03 02 11.4		
	comp=Z,7.6nm,0.8s							
BRG				*ex*	x	03 04 37.8		
BRG				Amp		03 04 38.8		
	comp=Z,6.0nm,1.2s							
KRLC	Kraliky	145.87	343	*e*PKP	PKPbc	03 02 08.6	-0.3	
MORC	Moravsky Berou	145.91	342	*e*PKP	PKPbc	03 02 09.2	+0.1	
MBAR	Mbarara	145.93	240	PKPbc	PKPbc	03 02 11.1	+0.7	
PVCC	Panska Ves	146.04	345	*e*PKP	PKPbc	03 02 09.6	+0.3	
MAUC	Maruska	146.19	341	*e*PKP	PKPbc	03 02 09.8	0.0	
PRU	Pruhonice	146.54	345	*e*PKP	PKPbc	03 02 10.5	-0.2	
PRU				*ex*	PKPab	03 02 13.5	0.0	
VRAC	Vranov	146.61	342	*e*PKP	PKPbc	03 02 10.9	-0.1	
VRAC				*e*		03 02 13.9		
JAVC	Velka Javorina	146.69	341	*e*PKP	PKiKP	03 02 12.5	-0.7	
KOLL	Kolacno	146.69	340	*e*PKP	PKiKP	03 02 12.2	-0.9	
NKC	Novy Kostel	146.79	347	*e*PKP	PKPbc	03 02 11.1	-0.3	
KRUC	Moravsky	146.89	342	*e*PKP	PKPbc	03 02 11.8	+0.1	
KRUC				*e*		03 02 15.0		
BORA	Eskisehir	147.01	317		PKPdf	03 02 10.6	+1.2	
MODS	Modra-Piesok	147.24	341	*e*PKP	PKPbc	03 02 13.2	+0.6	
MEM	Membach	147.37	355	*d*PKPbc	PKPbc	03 02 12.8	-0.1	
BTNL	Ternell	147.38	355	*d*PKPdf	PKPdf	03 02 09.6	+0.1	
BTNL				*d*PKPbc	PKPbc	03 02 12.8	-0.2	
BSTI	Sart Tilman	147.43	355	*d*PKP	PKPbc	03 02 13.5	+0.5	
KHC	Kasperske Hory	147.58	345	*e*PKP	PKPbc	03 02 13.7	+0.2	
KHC				*ex*	PKPab	03 02 18.3	+0.5	
BCLA	Clavier	147.62	356	*d*PKP	PKPab	03 02 16.9	-0.9	
BHOU	Houvegnez	147.63	355	*d*PKPbc	PKPbc	03 02 13.5	-0.1	
BHOU				*d*PKPab	PKPab	03 02 17.7	-0.2	
BGES	Gesves	147.67	356	*d*PKPab	PKPab	03 02 17.1	-1.0	
CKRC	Cesky Krumlov	147.68	344	*e*PKP	PKPbc	03 02 13.7	-0.1	
BMRD	Maredsous	147.77	356	*d*PKPbc	PKPbc	03 02 13.3	-0.6	
BMRD				*d*PKPab	PKPab	03 02 17.2	-1.2	
GERES	GERESS Array B	147.81	345	PKPbc	PKPbc	03 02 14.5	+0.3	
	comp=Z,3.0nm,0.6s,baz=31,slow=3.1,SNR=37							
GERES	GERESS Array B	147.81	345		PKPbc	03 02 14.1	-0.1	
RCHB	Rochefort	147.88	356	*d*PKPbc	PKPbc	03 02 14.1	-0.1	
DOU	Dourbes	147.99	356	*d*PKP	PKPbc	03 02 14.3	-0.1	
DOU				*d*PKPab	PKPab	03 02 18.6	-0.8	
CONA	Conrad Observa	148.06	342	*i* P	PKPbc	03 02 15.3	+0.4	
	comp=Z,5.1nm,1.1s							
RONA	Rosalia, Austr	148.14	341	*e*P	PKPbc	03 02 15.3	+0.3	
	comp=Z,2.6nm,0.7s							
WLF	Walferdange	148.30	354	*d*PKiKP	PKiKP	03 02 16.0	-0.5	
MOA	Molln	148.59	344	*e*P	PKPbc	03 02 16.0	0.0	
	comp=Z,3.7nm,1.1s							
ARSA	Arzberg	148.78	342	*i* P	PKPbc	03 02 16.2	-0.3	
	comp=Z,2.2nm,0.8s							
BIOA	Bad Ischl, Aus	148.90	344	*i* P	PKPbc	03 02 17.3	+0.5	
	comp=Z,5.9nm,1.3s							
BFO	Black Forest	149.36	351		PKPbc	03 02 17.6	-0.3	
SOKA	Soboth	149.44	342	*i* P	PKPbc	03 02 18.4	+0.2	
	comp=Z,4.0nm,1.3s							
KBA	Koelnbreinsper	149.54	344	*i* P	PKPbc	03 02 18.0	-0.6	
	comp=Z,2.7nm,0.7s							
WATA	Walderalm	149.72	347	*i* P	PKPbc	03 02 18.7	-0.3	
	comp=Z,3.3nm,0.6s							
RETA	Reutte	149.75	348	*i* P	PKPbc	03 02 18.8	-0.2	
	comp=Z,2.3nm,0.7s							
WTTA	Wattenberg	149.78	346	*i* P	PKPbc	03 02 19.0	-0.1	
	comp=Z,8.0nm,0.6s							
MOTA	Moosalm	149.82	347	*i* P	PKPbc	03 02 18.9	-0.3	
	comp=Z,6.7nm,0.9s							
MYKA	Terra Mystica	149.88	343	*i* P	PKPbc	03 02 18.3	-1.0	
	comp=Z,3.7nm,0.8s							
SQTA	Sankt Quirin	149.91	347	*i* P	PKPbc	03 02 19.3	-0.1	
	comp=Z,5.7nm,0.6s							
ABTA	Abfaltersbach	150.06	345	*i* P	PKPbc	03 02 19.2	-0.5	
	comp=Z,6.9nm,0.7s,SNR=7.7							
DAVA	Damuels	150.11	349	*i* P	PKPbc	03 02 19.9	0.0	
	comp=Z,8.1nm,0.9s							
FETA	Feichten	150.20	348	*i* P	PKPbc	03 02 19.9	-0.3	
	comp=Z,4.9nm,0.8s,SNR=4.8							
CRNS	Crni Vrh	150.21	342	*i* PKPbc	PKPbc	03 02 19.4	-0.6	
BOJS	Bojanci	150.42	340	*i* PKPbc	PKPbc	03 02 20.4	-0.1	
CTI	Castel Tesino	150.92	346		PKPbc	03 02 21.1	-0.6	
CTI					PKPab	03 02 31.2	-0.7	
PBRG	Braganca	155.29	15	*e*PKPab	PKPab	03 02 51.2	+0.7	
POLO	Lamas de Olo	155.41	17	*e*PKPab	PKPab	03 02 51.6	+0.5	
PVRL	Vila Real	155.52	17	*e*PKPab	PKPab	03 02 52.1	+0.6	
MVO	Moncorvo	155.81	16	*e*PKPab	PKPab	03 02 53.4	+0.6	
MTE	Manteigas	156.38	18	*e*PKPab	PKPab	03 02 55.7	+0.4	
PCAS	Casmilo, Conde	156.41	20	*e*PKPab	PKPab	03 02 55.7	+0.3	
PSBE	So Bento	156.79	21	*e*PKPab	PKPab	03 02 57.7	+0.6	
PESTR	Estremoz	157.77	19	*e*PKPab	PKPab	03 03 01.2	-0.1	
ESDC	Sonseca Array	157.94	12	PKPdf	PKPdf	03 02 25.5	+0.4	
ESDC					PKPab	03 03 01.8	-0.3	
PNCL	Nicolau / Gran	158.14	22	*e*PKPab	PKPab	03 03 03.2	+0.3	
TORD	Torodi Ar. Bea	175.09	180	PKPab	PKPab	03 04 16.8	-1.4	
	comp=Z,0.5nm,0.8s,baz=186,slow=2.7,SNR=4.7							

*JMA **11** 03:16:48.3±0.3,31°N±1°×14°0E±°, h202km±2km, MV4.0/57, NEAR TORISHIMA IS*
*IDC **11** 03:16:48.7±1.6,30.80N×139.72E, h152km±28km, mb3.4/3, mbtmp3.9/7, Error ellipse: s-maj=80.5km s-min=9.2km az=72.0*

ISC 11 03:16:49.9±0.9,31°01N±0.06×140°4E±0.1, h200km, n28, σ1s55/31, mb3.2/3, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHCJ	Hachijojimakas	2.11	347	*e*P	Pn	03 17 28.9	-0.7
JHJ2	Mitsune	2.15	347	P	Pn	03 17 29.5	-0.4
JHJ	Hachijo jima 2	2.16	347	P	Pn	03 17 29.5	-0.6
	264nm,0.2s,baz=247,slow=22,SNR=169						
JHJ				S	Sn	03 17 57.0	-4.6
	81nm,0.2s,baz=71,slow=22,SNR=2.3						
JMKN	Mikurajimanish	2.95	347	P	Pn	03 17 38.2	-0.7
JKO	Kozu shima	3.34	342	*e*P	Pn	03 17 43.5	0.0
BSO1	Boso 1	3.67	8	P	Pn	03 17 47.1	+0.2
TK02	Tokai 2	3.67	324	*e*P	Pn	03 17 47.0	-0

ML3.5/50, Error ellipse: s-maj=1.9km s-min=0.6km az=126.0
*LDG **11** 03:23:39.0±0.1, 38°.91N×15°.10E, h245km, Ml3.4/9, Error ellipse: s-maj=6.1km s-min=3.2km az=56.0*
*IDC **11** 03:23:40.8±1.0, 38°.91N×15°.15E, h257km±18km, mb3.1/7, mbtmp3.7/15, Error ellipse: s-maj=23.4km s-min=14.7km az=36.0*
ISC 11 03:23:39.7±0.6, **38°.90N**±0°.06×**15°.20E**±0°.05, **h241**km±6km, **n145**, σ**1**§**65**/169, **mb3.4**/6, **1C-27D**, **Sicily**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IST3	**Stromboli F**	**0.11**	**166**	P	**Pn**	**03 24 12.2**	**+1.3**
IST3				AML	AML		
	comp=N,1445μm,0.5s						
IST3				AML	AML		
	comp=E,785μm,0.4s						
IST3				AML	AML		
	comp=E,786μm,0.4s						
ISTR	**Stromboli Gino**	**0.12**	**182**	P	**Pn**	**03 24 11.9**	**+1.0**
LLI	**Lipari**	**0.50**	**203**	P	**Pn**	**03 24 12.6**	**+1.0**
VPL	**Vulcano Piano**	**0.55**	**198**	⇓P	**Pn**	**03 24 12.3**	**+0.5**
VPL				AML	AML		
	comp=N,1165μm,1.4s						
VPL				AML	AML		
	comp=E,1415μm,0.3s						
IFIL	**Filicudi I Eol**	**0.60**	**236**	P	**Pn**	**03 24 13.0**	**+1.0**
IFIL				AML	AML		
	comp=E,2190μm,0.3s						
IFIL				AML	AML		
	comp=N,719μm,0.3s						
JOPP	**Joppolo**	**0.61**	**119**	P	**Pn**	**03 24 12.1**	**0.0**
JOPP				S	**S**	**03 24 36.0**	**-1.3**
JOPP				AML	AML		
	comp=E,636μm,1.5s						
JOPP				AML	AML		
	comp=N,636μm,1.2s						
MILZ	**Milazzo**	**0.63**	**178**	P	**Pn**	**03 24 11.6**	**-0.4**
MILZ				S	**S**	**03 24 36.8**	**-0.6**
MILZ				AML	AML		
	comp=E,984μm,0.4s						
MILZ				AML	AML		
	comp=N,770μm,0.4s						
MILZ				AML	AML		
	comp=E,984μm,0.4s						
MILZ				AML	AML		
	comp=E,984μm,0.4s						
MILZ				AML	AML		
	comp=N,770μm,0.4s						
MSRU	**Castanea**	**0.68**	**159**	P	**Pn**	**03 24 11.8**	**-0.5**
MSRU				S	**S**	**03 24 36.5**	**-1.3**
MSRU				AML	AML		
	comp=N,963μm,0.4s						
MSRU				AML	AML		
	comp=E,1320μm,1.3s						
IACL	**Alicudi**	**0.75**	**241**	⇓P	**Pn**	**03 24 13.7**	**+1.2**
MPNC	**Port Mandanici**	**0.77**	**171**	⇓P	**Pn**	**03 24 12.3**	**-0.4**
MPNC				S	**S**	**03 24 37.1**	**-1.3**
MPNC				AML	AML		
	comp=E,618μm,0.5s						
MPNC				AML	AML		
	comp=N,712μm,1.6s						
MSCL	**Scilla**	**0.81**	**145**	P	**Pn**	**03 24 12.5**	**-0.4**
MSCL				S	**S**	**03 24 37.4**	**-1.6**
CEL	**Celeste**	**0.84**	**139**	P	**Pn**	**03 24 12.7**	**-0.4**
CEL				S	**S**	**03 24 37.3**	**-1.9**
CEL				AML	AML		
	comp=N,434μm,0.6s						
CEL				AML	AML		
	comp=E,748μm,0.4s						
CEL				AML	AML		
	comp=E,626μm,0.3s						
CEL				AML	AML		
	comp=N,539μm,0.6s						
CET2	**Cetraro**	**0.86**	**43**	P	**Pn**	**03 24 14.1**	**+1.1**
CET2				S	**S**	**03 24 39.4**	**+0.1**
CET2				AML	AML		
	comp=N,1011μm,1.3s						
CET2				AML	AML		
	comp=E,1265μm,0.8s						
CAR1	**CAROLEI**	**0.86**	**66**	⇓P	**Pn**	**03 24 13.7**	**+0.6**
CAR1				S	**S**	**03 24 38.5**	**-0.8**
CAR1				AML	AML		
	comp=N,2345μm,1.6s						
CAR1				AML	AML		
	comp=N,2345μm,1.6s						
CAR1				AML	AML		
	comp=N,2330μm,0.6s						
CAR1				AML	AML		
	comp=E,1515μm,1.2s						
CAR1				AML	AML		
	comp=E,1845μm,1.2s						
NOV	**Novara**	**0.87**	**183**	P	**Pn**	**03 24 13.6**	**+0.4**
NOV				AML	AML		
	comp=N,534μm,1.3s						
NOV				AML	AML		
	comp=E,664μm,1.4s						
GMB	**Gambarie**	**0.89**	**146**	⇓P	**Pn**	**03 24 13.1**	**-0.3**
GMB				S	**S**	**03 24 38.2**	**-1.5**
GMB				AML	AML		
	comp=E,3780μm,1.3s						
GMB				AML	AML		
	comp=N,2545μm,0.6s						
AIO	**Antillo**	**0.93**	**178**	P	**Pn**	**03 24 13.9**	**+0.4**
AIO				AML	AML		
	comp=E,332μm,0.6s						
AIO				AML	AML		
	comp=N,349μm,0.3s						
GRI	**Girifalco**	**0.96**	**94**	P	**Pn**	**03 24 14.4**	**+0.8**
GRI				S	**S**	**03 24 38.9**	**-1.2**
GRI				AML	AML		
	comp=E,999μm,0.3s						
GRI				AML	AML		
	comp=N,1030μm,0.4s						
GRI				AML	AML		
	comp=N,1029μm,0.4s						
GRI				AML	AML		
	comp=E,996μm,0.3s						
SPS2	**Spezzano della**	**0.97**	**66**	⇓P	**Pn**	**03 24 14.5**	**+0.8**
SPS2				S	**S**	**03 24 40.0**	**-0.3**
SPS2				AML	AML		
	comp=E,376μm,1.1s						
SPS2				AML	AML		
	comp=N,632μm,1.6s						
SPS2				AML	AML		
	comp=N,631μm,1.6s						
SPS2				AML	AML		
	comp=E,376μm,1.1s						
MTTG	**Motta San Giov**	**0.98**	**156**	⇓P	**Pn**	**03 24 13.8**	**0.0**
MTTG				S	**S**	**03 24 39.4**	**-1.0**
MTTG				AML	AML		
	comp=E,422μm,0.4s						
MTTG				AML	AML		
	comp=E,422μm,0.4s						
MTTG				AML	AML		
	comp=N,702μm,0.5s						
MSFR	**San Fratello**	**0.99**	**209**	P	**Pn**	**03 24 14.2**	**+0.3**
MSFR				AML	AML		
	comp=E,55μm,1.0s						
MSFR				AML	AML		
	comp=N,72μm,0.5s						
SOI	**Samo**	**1.07**	**141**	⇓P	**Pn**	**03 24 14.0**	**-0.2**
SOI				S	**S**	**03 24 38.8**	**-2.4**
SOI				AML	AML		
	comp=E,399μm,0.5s						
SOI				AML	AML		
	comp=N,515μm,0.8s						
PLAC	**Placanica**	**1.07**	**115**	P	**Pn**	**03 24 14.4**	**+0.1**
PLAC				S	**S**	**03 24 38.9**	**-2.4**
PLAC				AML	AML		
	comp=N,575μm,1.1s						
PLAC				AML	AML		
	comp=E,468μm,0.3s						
PLAC				AML	AML		
	comp=E,599μm,1.1s						
PLAC				AML	AML		
	comp=N,483μm,1.1s						
EPZF	**Pizzo Felice**	**1.11**	**194**	P	**Pn**	**03 24 15.7**	**+1.0**
EPZF				AML	AML		
	comp=E,834μm,0.6s						
EPZF				AML	AML		
	comp=N,611μm,0.7s						
CELI	**Celico**	**1.14**	**63**	P	**Pn**	**03 24 16.2**	**+1.5**
CELI				S	**S**	**03 24 43.0**	**+0.8**
CELI				AML	AML		
	comp=N,794μm,0.4s						
CELI				AML	AML		
	comp=E,912μm,0.5s						
TDS	**Terranova Siba**	**1.16**	**49**	P	**Pn**	**03 24 16.3**	**+1.6**
TDS				S	**S**	**03 24 43.2**	**+0.9**
TDS				AML	AML		
	comp=N,176μm,0.5s						
TDS				AML	AML		
	comp=E,242μm,1.4s						
BULG	**Bulgheria - Ca**	**1.18**	**7**	P	**Pn**	**03 24 17.5**	**+2.5**
CUC	**Castrocucco**	**1.19**	**24**	P	**Pn**	**03 24 16.8**	**+1.9**
CUC				AML	AML		
	comp=N,68μm,0.6s						
CUC				AML	AML		
	comp=E,85μm,1.6s						
CUC				AML	AML		
	comp=E,108μm,1.5s						
CUC				AML	AML		
	comp=N,69μm,0.6s						
CUC				AML	AML		
	comp=N,72μm,0.9s						
PLLN	**Pollina**	**1.23**	**223**	⇓P	**Pn**	**03 24 15.7**	**+0.4**
PLLN				AML	AML		
	comp=E,302μm,1.0s						
PLLN				AML	AML		
	comp=N,335μm,1.1s						
PLLN				AML	AML		
	comp=E,302μm,1.0s						
TIP	**Timpagrande**	**1.25**	**77**	⇓P	**Pn**	**03 24 16.5**	**+1.1**
TIP				S	**S**	**03 24 42.6**	**-0.8**
TIP				AML	AML		
	comp=N,196μm,0.6s						
TIP				AML	AML		
	comp=N,262μm,0.6s						
TIP				AML	AML		
	comp=E,264μm,0.5s						
TIP				AML	AML		
	comp=N,197μm,0.6s						
TIP				AML	AML		
	comp=E,295μm,0.5s						
MGR	**Morigerati**	**1.26**	**12**	P	**Pn**	**03 24 18.1**	**+2.7**
MGR				AML	AML		
	comp=E,96μm,1.0s						
MGR				AML	AML		
	comp=N,76μm,1.6s						
GALF	**Gagliano Caste**	**1.29**	**203**	P	**Pn**	**03 24 16.8**	**+1.1**
GALF				AML	AML		
	comp=E,315μm,0.4s						
GALF				AML	AML		
	comp=N,340μm,0.5s						
GIB	**Gibilmanna**	**1.29**	**226**	⇓P	**Pn**	**03 24 16.3**	**+0.4**
GIB				S	**S**	**03 24 44.5**	**+0.4**
GIB				AML	AML		
	comp=N,651μm,0.6s						
GIB				AML	AML		
	comp=E,389μm,1.3s						
ESML	**S. M. di Licod**	**1.31**	**191**	P	**Pn**	**03 24 16.4**	**+0.6**
ESML				AML	AML		
	comp=E,281μm,0.7s						
ESML				AML	AML		
	comp=N,220μm,1.1s						
CSLB	**Castelbuono**	**1.31**	**223**	⇓P	**Pn**	**03 24 16.2**	**+0.3**
CSLB				S	**S**	**03 24 44.6**	**+0.3**
CSLB				AML	AML		
	comp=E,48μm,0.5s						
CSLB				AML	AML		
	comp=N,85μm,0.5s						
PETRA	**Petralia Sopra**	**1.36**	**219**	⇓P	**Pn**	**03 24 17.1**	**+0.7**
PETRA				AML	AML		
	comp=E,170μm,0.6s						
PETRA				AML	AML		
	comp=N,213μm,0.6s						
SIRI	**Monte Sirino -**	**1.38**	**22**	P	**Pn**	**03 24 18.3**	**+2.0**
PIPA	**Pietrapaola**	**1.39**	**65**	P	**Pn**	**03 24 17.7**	**+1.4**
PIPA				AML	AML		
	comp=E,274μm,1.1s						
PIPA				AML	AML		
	comp=N,249μm,0.3s						
CAGR	**Agira**	**1.39**	**203**	⇓P	**Pn**	**03 24 18.2**	**+1.7**
CAGR				AML	AML		
	comp=N,1062μm,0.4s						
CAGR				AML	AML		
	comp=E,532μm,1.3s						
MTSN	**Montesano sull**	**1.43**	**17**	P	**Pn**	**03 24 19.0**	**+2.4**
LADO	**San Nicola del**	**1.44**	**74**	⇓P	**Pn**	**03 24 17.5**	**+0.8**
MCEL	**Monticello**	**1.50**	**18**	P	**Pn**	**03 24 19.9**	**+2.8**
SOLUN	**Solunto**	**1.54**	**239**	⇓P	**Pn**	**03 24 18.2**	**+0.7**
SOLUN				AML	AML		
	comp=E,72μm,1.3s						
SOLUN				AML	AML		
	comp=N,80μm,1.0s						
SOLUN				AML	AML		
	comp=E,72μm,1.3s						
SOLUN				AML	AML		
	comp=N,80μm,1.0s						
VAE	**Valguarnera**	**1.55**	**204**	P	**Pn**	**03 24 19.6**	**+1.9**
	comp=N,30nm,0.4s,baz=349,slow=9.2,SNR=22						
VAE				S	**S**	**03 24 50.4**	**+2.9**
	comp=N,26nm,0.5s,baz=16,slow=22,SNR=1.7						
HLNI	**Lentini**	**1.57**	**189**	⇓P	**Pn**	**03 24 17.5**	**-0.3**
HLNI				AML	AML		
	comp=N,228μm,0.6s						
HLNI				AML	AML		
	comp=E,186μm,1.6s						
HAGA	**Augusta**	**1.61**	**181**	⇓P	**Pn**	**03 24 17.6**	**-0.5**
HAGA				AML	AML		
	comp=E,284μm,0.5s						
HAGA				AML	AML		
	comp=N,274μm,0.7s						
ALJA	**Alia**	**1.62**	**225**	⇓P	**Pn**	**03 24 19.4**	**+1.2**
ALJA				S	**S**	**03 24 49.9**	**+1.6**
ALJA				AML	AML		
	comp=N,308μm,1.4s						
ALJA				AML	AML		
	comp=E,302μm,1.5s						
MPG	**Monte Pellegri**	**1.62**	**243**	P	**Pn**	**03 24 19.1**	**+0.9**
MPG				S	**S**	**03 24 48.9**	**+0.5**
MPG				AML	AML		
	comp=N,146μm,1.0s						
MPG				AML	AML		
	comp=E,157μm,1.4s						
AGST	**Augusta-Monte**	**1.64**	**179**	⇓P	**Pn**	**03 24 17.6**	**-0.7**
AGST				AML	AML		
	comp=E,210μm,1.1s						
AGST				AML	AML		
	comp=E,209μm,1.1s						
AGST				AML	AML		
	comp=N,246μm,0.4s						
CRAC	**Craco**	**1.75**	**33**	P	**Pn**	**03 24 21.4**	**+2.3**
CRAC				AML	AML		
	comp=N,426μm,0.7s						
CRAC				AML	AML		
	comp=E,388μm,0.9s						
SSY	**Sortino**	**1.75**	**183**	⇓P	**Pn**	**03 24 19.0**	**-0.4**
SSY				AML	AML		
	comp=E,366μm,0.9s						
SSY				AML	AML		
	comp=N,740μm,0.4s						
RAFF	**Raffo Rosso**	**1.80**	**202**	⇓P	**Pn**	**03 24 20.4**	**+0.7**
RAFF				AML	AML		
	comp=N,286μm,0.8s						
RAFF				AML	AML		
	comp=E,239μm,0.8s						
MEU	**Monte Lauro**	**1.81**	**187**	⇓P	**Pn**	**03 24 19.8**	**-0.1**
MEU				AML	AML		
	comp=E,367μm,0.4s						
MEU				AML	AML		
	comp=N,686μm,0.5s						
HAVL	**Avola**	**1.94**	**182**	⇓P	**Pn**	**03 24 20.6**	**-0.4**
HAVL				AML	AML		
	comp=N,626μm,0.3s						
HAVL				AML	AML		
	comp=E,360μm,0.5s						
MIGL	**Miglionico**	**1.95**	**29**	P	**Pn**	**03 24 22.4**	**+1.5**
MIGL				AML	AML		
	comp=E,249μm,0.4s						
MIGL				AML	AML		
	comp=N,250μm,1.0s						
HMDC	**Modica**	**1.97**	**190**	⇓P	**Pn**	**03 24 21.3**	**+0.1**
HMDC				AML	AML		
	comp=N,290μm,1.3s						
HMDC				AML	AML		
	comp=E,234μm,0.6s						
CLTA	**Licata**	**2.00**	**210**	⇓P	**Pn**	**03 24 22.3**	**+0.9**
CLTA				AML	AML		
	comp=E,456μm,0.3s						
CLTA				AML	AML		
	comp=N,884μm,0.7s						
FAVR	**Favara**	**2.03**	**217**	P	**Pn**	**03 24 23.2**	**+1.4**
FAVR				AML	AML		
	comp=E,127μm,1.0s						
FAVR				AML	AML		
	comp=N,136μm,1.4s						
HPAC	**Pachino**	**2.20**	**182**	⇓P	**Pn**	**03 24 23.3**	**-0.1**
HPAC				AML	AML		
	comp=E,294μm,0.3s						
HPAC				AML	AML		
	comp=N,356μm,0.8s						
NOCI	**Noci**	**2.37**	**37**	P	**Pn**	**03 24 25.6**	**+0.7**
NOCI				AML	AML		
	comp=N,116μm,1.6s						
NOCI				AML	AML		
	comp=E,90μm,0.3s						
SCTE	**Santa Cesarea**	**2.79**	**64**	P	**Pn**	**03 24 29.6**	**+0.4**
SCTE				AML	AML		
	comp=N,149μm,0.3s						
SCTE				AML	AML		
	comp=E,136μm,0.7s						
ROM9	**Roma**	**3.57**	**326**	S	**S**	**03 25 25.0**	**+0.9**
PP3	**Marolino**	**4.63**	**346**	⇑P	**Pn**	**03 24 53.6**	**+3.0**
KEST	**Kesra**	**5.63**	**238**	P	**Pn**	**03 25 05.1**	**+1.9**
	comp=E,9.5nm,0.8s,baz=350,slow=6.6,SNR=16						
PGF	**Pioggiola**	**5.95**	**310**	*e*Pn	**Pn**	**03 25 06.5**	**-0.6**
PGF				*e*Sn	**S**	**03 26 12.4**	**-4.4**
	comp=E,1.0nm,0.6s						
KOVH	**Kovagotottos**	**7.49**	**16**	P	**Pn**	**03 25 25.9**	**-0.5**
OBKA	**Obir**	**7.62**	**357**	*i* Pn	**Pn**	**03 25 30.7**	**+2.6**
	comp=E,4.2nm,0.6s,SNR=6.6						
SBF	**Sospel**	**7.65**	**313**	*e*P	**Pn**	**03 25 27.3**	**-1.3**
SBF				*e*Sn	**S**	**03 26 49.8**	**-6.2**
	comp=E,2.1nm,0.3s						
MORH	**Mrgy, Hungar**	**7.74**	**18**	P	**Pn**	**03 25 30.6**	**+1.1**
SOKA	**Soboth**	**7.77**	**359**	*e*Pn	**Pn**	**03 25 32.2**	**+2.2**
	comp=E,6.1nm,0.7s,SNR=6.5						
LMR	**La Mourre**	**7.91**	**307**	*e*P	**Pn**	**03 25 32.7**	**+1.0**
ABTA	**Abfaltersbach**	**8.08**	**347**	*i* Pn	**Pn**	**03 25 36.8**	**+2.8**
	comp=E,2.7nm,0.5s						
MPLH	**Magyarpolny**	**8.44**	**11**	P	**Pn**	**03 25 40.3**	**+1.9**
IDI	**Anoyia**	**8.54**	**112**	P	**Pn**	**03 25 41.2**	**+1.2**
	comp=E,5.9nm,0.6s,baz=280,slow=14,SNR=14						
MBDF	**Montbardon**	**8.57**	**315**	*e*P	**Pn**	**03 25 39.5**	**-0.7**
MBDF	**Montbardon**	**8.57**	**315**	*e*Pn	**Pn**	**03 25 41.5**	**+1.3**
FETA	**Feichten**	**8.75**	**339**	*e*Pn	Pn	03 25 47.7	+5.2
	comp=E,16nm,0.9s,SNR=14						
WTTA	**Wattenberg**	**8.75**	**344**	*e*Pn	Pn	03 25 48.4	+5.8
	comp=E,7.0nm,0.5s,SNR=7.5						
DAVOX	**Davos/Dischmat**	**8.79**	**335**	P	Pn	03 25 48.1	+5.1
	comp=E,0.5nm,1.5s,baz=148,slow=9.5,SNR=13						
SQTA	**Sankt Quirin**	**8.81**	**342**	*e*Pn	**Pn**	**03 25 48.0**	**+4.7**
	comp=E,13nm,0.5s,SNR=8.0						
SMRF	**Simiane la Rot**	**8.82**	**308**	*e*P	**Pn**	**03 25 43.0**	**-0.4**
RONA	**Rosalia, Austr**	**8.83**	**5**	*i* Pn	**Pn**	**03 25 45.7**	**+2.3**
	comp=E,2.7nm,0.9s						
WATA	**Walderalm**	**8.83**	**344**	*e*Pn	Pn	03 25 49.2	+5.6
	comp=E,11nm,0.5s,SNR=8.1						
BIOA	**Bad Ischl, Aus**	**8.86**	**353**	*e*Pn	**Pn**	**03 25 46.0**	**+2.3**
	comp=E,5.5nm,1.1s						
MOTA	**Moosalm**	**8.95**	**342**	*e*Pn	**Pn**	**03 25 48.8**	**+3.7**
	comp=E,5.8nm,0.8s						
MOA	**Molln**	**8.97**	**356**	*e*Pn	**Pn**	**03 25 47.8**	**+2.6**
	comp=E,6.9nm,1.1s,SNR=4.7						
CONA	**Conrad Observa**	**9.04**	**3**	*i* Pn	**Pn**	**03 25 48.4**	**+2.3**
	comp=E,4.0nm,1.0s						
LPG	**La Plagne**	**9.09**	**319**	*e*Pn	**Pn**	**03 25 48.7**	**+1.7**
LPL	**La Plagne**	**9.11**	**319**	*e*Pn	**Pn**	**03 25 48.8**	**+1.6**
RETA	**Reutte**	**9.17**	**341**	*i* Pn	**Pn**	**03 25 51.1**	**+3.3**
	comp=E,3.8nm,0.8s						
ORIF	**Oris-en-Rattie**	**9.18**	**314**	*e*P	**Pn**	**03 25 47.7**	**-0.3**
ORIF	**Oris-en-Rattie**	**9.18**	**314**	*e*Pn	**Pn**	**03 25 50.2**	**+2.2**
DAVA	**Damuels**	**9.24**	**337**	*i* Pn	**Pn**	**03 25 52.2**	**+3.5**
	comp=E,5.3nm,0.6s						
VIVF	**Saint-Julien-I**	**9.84**	**311**	*e*Pn	**Pn**	**03 25 58.0**	**+1.7**
CKRC	**Cesky Krumlov**	**9.94**	**357**	*e*P	**Pn**	**03 25 59.7**	**+2.3**
LASF	**Ste Croix**	**9.95**	**305**	*e*Pn	**Pn**	**03 25 57.9**	**+0.2**
GERES	**GERESS Array B**	**10.00**	**354**	P	**Pn**	**03 25 59.6**	**+1.3**
	comp=E,0.7nm,0.7s,baz=169,slow=15,SNR=8.1						
JAVC	**Velka Javorina**	**10.11**	**9**	*e*P	**Pn**	**03 26 02.3**	**+2.6**
KRUC	**Moravsky**	**10.19**	**4**	*e*P	**Pn**	**03 26 03.0**	**+2.3**
CABF	**La Chapelle**	**10.20**	**322**	*e*P	**Pn**	**03 26 00.6**	**-0.3**
CABF	**La Chapelle**	**10.20**	**322**	*e*Pn	**Pn**	**03 26 03.4**	**+2.5**
KHC	**Kasperske Hory**	**10.29**	**354**	*e*P	**Pn**	**03 26 03.4**	**+1.4**
VRAC	**Vranov**	**10.45**	**5**	P	**Pn**	**03 26 06.5**	**+2.6**
	comp=E,2.8nm,0.4s,baz=210,slow=12,SNR=7.5						
VRAC	**Vranov**	**10.45**	**5**	*e*P	**Pn**	**03 26 06.0**	**+2.1**
MTLF	**Montolieu**	**10.75**	**299**	*e*Pn	**Pn**	**03 26 10.3**	**+2.6**
MTLF				*e*Sn	**S**	**03 28 05.9**	**-2.2**
	comp=E,1.0nm,0.4s						
HINF	**Hinteralfeld**	**10.78**	**328**	*e*P	**Pn**	**03 26 07.7**	**-0.4**
HINF	**Hinteralfeld**	**10.78**	**328**	*e*Pn	**Pn**	**03 26 09.6**	**+1.5**
MORC	**Moravsky Berou**	**11.00**	**8**	*e*P	**Pn**	**03 26 12.8**	**+1.9**
CDF	**Champ du Feu**	**11.10**	**332**	*e*P	**Pn**	**03 26 11.8**	**-0.3**
CDF	**Champ du Feu**	**11.10**	**332**	*e*Pn	**Pn**	**03 26 14.7**	**+2.6**
HAU	**Haudompre**	**11.13**	**328**	*e*Pn	**Pn**	**03 26 14.4**	**+1.8**
SMF	**Signal de Mont**	**11.37**	**317**	*e*P	**Pn**	**03 26 15.1**	**-0.4**
DPC	**Dobruska-Polom**	**11.47**	**4**	*e*P	**P**	**03 26 21.2**	**+0.4**
CAF	**Calviac**	**11.48**	**306**	*e*Pn	**Pn**	**03 26 19.1**	**+2.1**
AVF	**Avril sur Loir**	**11.72**	**316**	*e*P	**Pn**	**03 26 19.6**	**-0.3**
LOR	**Lormes**	**11.76**	**319**	*e*Pn	**Pn**	**03 26 22.2**	**+1.8**
	baz=146						
LOR				*e*Sn	**S**	**03 28 28.2**	**-3.0**
	comp=E,1.0nm,0.4s						
SSF	**Saint Saulge**	**11.81**	**317**	*e*P	**Pn**	**03 26 20.9**	**-0.1**
SSF	**Saint Saulge**	**11.81**	**317**	*e*Pn	**P**	**03 26 23.4**	**-1.2**
PAGF	**Fort de Pagny**	**11.82**	**328**	*e*P	**Pn**	**03 26 21.2**	**0.0**
SFTF	**Sexfontaines**	**11.85**	**325**	*e*P	**Pn**	**03 26 20.2**	**-1.3**
	baz=142						
SFTF	**Sexfontaines**	**11.85**	**325**	*e*Pn	**P**	**03 26 24.7**	**-0.3**
SFTF				*e*Sn	**S**	**03 28 28.3**	**-4.9**
	comp=E,3.8nm,0.4s						
BGF	**Bois d'Agland**	**11.87**	**314**	*e*Pn	**P**	**03 26 24.8**	**-0.4**
BRG	**Berggiesshubel**	**12.00**	**356**	*e*P	**P**	**03 26 28.7**	**+2.0**
BRG				Amp		03 26 30.1	
	comp=Z,3.5nm,0.7s						
MEZF	**Maizieres J'vi**	**12.07**	**326**	*e*Pn	**P**	**03 26 27.3**	**-0.1**
	baz=146						
SAVF	**Savonnieres en**	**12.12**	**326**	*e*Pn	**Pn**	**03 26 26.0**	**+1.1**
	baz=148						
LFF	**La Frestale**	**12.34**	**304**	*e*Pn	**P**	**03 26 30.3**	**-0.1**
HYF	**Humbligny**	**12.40**	**316**	*e*Pn	**P**	**03 26 32.5**	**+1.3**
CLL	**Collm**	**12.50**	**354**	*e*P	**P**	**03 26 32.0**	**-0.2**
	comp=Z,6.0nm,1.0s						
SJPF	**Ste Jean**	**13.10**	**294**	*e*P	**P**	**03 26 38.8**	**-0.1**
MFF	**Saint Martin d**	**13.63**	**309**	*e*Pn	**P**	**03 26 47.0**	**+2.2**
MFF				*e*Sn	**S**	**03 29 14.6**	**+0.2**
	comp=Z,1.5nm,0.3s						
BRTR	**Keskin Array B**	**14.30**	**81**	P	**P**	**03 26 53.8**	**+1.3**
	comp=Z,1.2nm,0.8s,baz=269,slow=12,SNR=4.3						
LDF	**La Druitiere**	**14.69**	**316**	*e*P	**P**	**03 26 57.8**	**+1.4**
ESDC	**Sonseca Array**	**14.86**	**279**	P	**Pn**	**03 26 59.6**	**+1.0**
	comp=Z,0.5nm,0.7s,baz=92,slow=12,SNR=4.3						
GRR	**Gorron**	**14.97**	**314**	*e*P	**P**	**03 26 59.2**	**-0.4**
GRR				*e*Sn	S	03 29 34.1	-11
	comp=Z,0.5nm,0.2s						
FLN	**La Foliniere**	**14.98**	**316**	*e*P	**P**	**03 27 00.0**	**+0.4**
	baz=138						
AKASG	**Malin Array Be**	**15.40**	**35**	P	**P**	**03 27 03.9**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=233,slow=9.5,SNR=5.6						
ROSF	**Rostrenen**	**16.33**	**311**	*e*P	**P**	**03 27 15.5**	**+1.0**
EIL	**Elat**	**18.71**	**114**	P	**P**	**03 27 41.2**	**+0.6**
	comp=Z,3.1nm,0.7s,baz=9,6,slow=12,SNR=2.6						
EKA	**Eskdalemuir Ar**	**20.54**	**329**	P	**P**	**03 27 59.5**	**-0.3**
	comp=Z,0.5nm,0.4s,baz=144,slow=11,SNR=8.1						
	comp=Z,0.5nm,0.4s						
HFS	**Hagfors**	**21.27**	**358**	P	**P**	**03 28 07.3**	**0.0**
	comp=Z,1.7nm,0.7s,baz=166,slow=8.4,SNR=5.1						
	comp=Z,1.7nm,0.7s						
NOA	**NORSAR Array B**	**22.30**	**355**	P	**P**	**03 28 15.9**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=169,slow=8.9,SNR=2.2						
	comp=Z,0.5nm,0.7s						
FINES	**FINESS Array B**	**23.55**	**13**	P	**P**	**03 28 27.9**	**-0.3**
	comp=Z,5.9nm,0.8s,baz=200,slow=7.6,SNR=19						
	comp=Z,5.9nm,0.8s						
ARCES	**ARCESS Array B**	**31.19**	**7**	P	**P**	**03 29 34.5**	**-1.6**
	comp=Z,0.6nm,0.6s,baz=186,slow=8.5,SNR=5.5						

DDA ***11*** *03:24:43.6±0.0,35°.89N×29°.61E,h12km±1km,ML2.8*
ISK ***11*** *03:24:44.9,36°.08N×29°.68E,h5km,ML2.7/15*
IDC ***11*** *03:24:44.5±1.5,35°.93N×29°.74E,h0km,mb3.1/2,*
mbtmp3.1/5,ML3.1/3,Error ellipse: s-maj=32.5km
s-min=18.7km az=155.0

ISC 11 03:24:45.2±1.4,36°.01N±0°.04×29°.67E±0°.02,h1km±10km, n44,σ1§32/73,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKAS	**Kas**	**0.23**	**348**	**PG**	**Pg**	**03 24 48.4**	**-1.3**
AKAS	**Kas**	**0.23**	**348**	P	**Pg**	**03 24 48.4**	**-1.3**
AKAS				S	**Sg**	**03 24 50.7**	**-2.0**
DEMR	**Demre-Antalya**	**0.30**	**40**	PG	**Pg**	**03 24 50.4**	**-0.6**
ELL	**Elmali**	**0.77**	**15**	PG	**Pg**	**03 24 57.5**	**-2.4**
ELL				SG	**Sg**	**03 25 10.3**	**+0.4**
FETY	**Fethiye**	**0.79**	**323**	PG	**Pg**	**03 25 00.2**	**-0.1**
FETY				SG	**Sg**	**03 25 11.6**	**+1.2**
FETY	**Fethiye**	**0.79**	**323**	P	**Pg**	**03 24 59.7**	**-0.6**
FETY				S	**Sn**	**03 25 14.8**	**-1.1**
CAME	**Cameli-Denizli**	**0.98**	**343**	PG	**Pg**	**03 25 03.6**	**-0.4**
KORT	**Korkueli**	**1.14**	**29**	PG	**Pg**	**03 25 06.5**	**-0.5**
KORT	**Korkueli**	**1.14**	**29**	P	**Pg**	**03 25 07.0**	**+0.1**
KORT				S	**Sn**	**03 25 25.8**	**+1.0**
CAEL	**Denizli, Camel**	**1.15**	**346**	P	**Pg**	**03 25 07.1**	**-0.2**
CAEL				S	**Sn**	**03 25 28.4**	**+3.3**
CAEL				*i* AML	AML	03 25 32.0	
	comp=N,340nm,0.7s						
CAEL				*i* AML	AML	03 25 42.0	
	comp=Z,248nm,0.6s						
DALY	**Dalyan (Mula)**	**1.15**	**315**	PN	**Pg**	**03 25 07.4**	**+0.2**
DALY				SN	**Sb**	**03 25 23.7**	**+0.4**
ANTB	**Antalya**	**1.20**	**41**	PN	**Pg**	**03 25 07.9**	**-0.2**
GOLH	**Golhisar**	**1.23**	**356**	P	**Pn**	**03 25 08.7**	**-1.0**
GOLH				S	**Sn**	**03 25 28.5**	**+1.5**
GOLH				*i* AML	AML	03 25 31.0	
	comp=N,172nm,1.3s						
GOLH				*i* AML	AML	03 25 31.0	
	comp=E,182nm,0.4s						
ARG	**Arkhangelos**	**1.26**	**280**	PN	**Pb**	**03 25 10.2**	**+0.4**
TURN	**Turunc**	**1.38**	**304**	PN	**Pg**	**03 25 11.9**	**+0.2**
TURN	**Turunc**	**1.38**	**304**	P	**Pn**	**03 25 11.2**	**-0.4**
TURN				S	**Sg**	**03 25 31.1**	**+1.5**
APMY	**Acipayam-Deniz**	**1.49**	**349**	PN	**Pn**	**03 25 13.2**	**-0.1**
BUCA	**Burdur, Bucak-**	**1.50**	**28**	P	**Pn**	**03 25 11.9**	**-1.4**
BUCA				S	**Sg**	**03 25 35.5**	**+2.0**
TAVA	**DENIZLI_Tavas**	**1.58**	**338**	P	**Pn**	**03 25 14.6**	**+0.2**
TAVA				S	**Sg**	**03 25 37.5**	**+1.5**
TAVA				*i* AML	AML	03 25 43.0	
	comp=N,83nm,0.5s						
YER	**Yerkesik**	**1.58**	**316**	PN	**Pn**	**03 25 14.6**	**+0.1**
BCK	**Bucak**	**1.63**	**27**	PN	**Pn**	**03 25 15.1**	**-0.1**
MULA	**Mugla, Merkez-**	**1.65**	**319**	P	**Pb**	**03 25 16.3**	**-0.2**
MULA				S	**Sg**	**03 25 39.1**	**+0.8**
MULA				*i* AML	AML	03 25 43.0	
	comp=N,77nm,0.5s						
MULA				*i* AML	AML	03 25 44.0	
	comp=E,172nm,0.6s						
BRDR	**BURDUR-Merkez**	**1.72**	**11**	P	**Pb**	**03 25 17.4**	**-0.3**
BRDR				S	**Sg**	**03 25 43.0**	**+2.7**
BRDR				*i* AML	AML	03 25 47.0	
	comp=E,70nm,1.0s						
KEPZ	**Antalya-Kepez**	**1.80**	**60**	P	**Pb**	**03 25 18.3**	**-0.8**
KEPZ				S	**Sg**	**03 25 45.9**	**+2.8**
SUTC	**Sutluce-Ispart**	**1.82**	**36**	PN	**Pn**	**03 25 17.6**	**-0.2**
DAT	**Datca**	**1.83**	**294**	PN	**Pb**	**03 25 18.5**	**-1.1**
DAT	**Datca**	**1.83**	**294**	P	**Pn**	**03 25 17.9**	**-0.1**
DAT				S	**Sg**	**03 25 45.9**	**+1.8**
BASM	**Basmaki-Afyon**	**1.93**	**9**	PN	**Pn**	**03 25 19.2**	**-0.1**
BDRM	**Kayabasi**	**2.08**	**301**	P	**Pn**	**03 25 21.3**	**0.0**
BDRM				S	**Sb**	**03 25 50.4**	**+0.3**
BAGO	**Egridir - ISPA**	**2.17**	**24**	P	**Pb**	**03 25 24.3**	**-1.1**
BAGO				S	**Sg**	**03 25 58.1**	**+3.0**
AYDN	**Tasoluk**	**2.19**	**320**	P	**Pn**	**03 25 23.6**	**+0.8**
AYDN				S	**Sb**	**03 25 53.2**	**0.0**
AYDN				*i* AML	AML	03 25 57.0	
	comp=N,50nm,0.5s						
AYDN				*i* AML	AML	03 25 59.0	
	comp=E,61nm,0.9s						
SEDI	**Konya, Seydise**	**2.21**	**49**	P	**Pb**	**03 25 25.6**	**-0.5**
SEDI				S	**Sg**	**03 25 56.5**	**+0.1**
SEDI				*i* AML	AML	03 26 00.0	
	comp=E,44nm,0.6s						
KZIL	**AFYON_Kizioren**	**2.28**	**9**	P	**Pn**	**03 25 24.1**	**0.0**
KZIL				S	**Sn**	**03 25 54.3**	**+1.4**
PASA	**Karahalli, USA**	**2.34**	**357**	P	**Pn**	**03 25 24.9**	**-0.1**
PASA				S	**Sn**	**03 25 55.9**	**+1.5**
DDIM	**Aydin, Didim**	**2.43**	**307**	P	**Pn**	**03 25 26.1**	**+0.1**
DDIM				S	**Sb**	**03 25 59.9**	**-0.2**
DDIM				*i* AML	AML	03 26 13.0	
	comp=N,61nm,1.0s						
DDIM				*i* AML	AML	03 26 15.0	
	comp=E,77nm,1.4s						
DDIM				*i* AML	AML	03 26 18.0	
	comp=Z,61nm,0.7s						
GCAM	**G?zelcaml?**	**2.58**	**312**	P	**Pn**	**03 25 28.3**	**+0.1**
GCAM				S	**Sn**	**03 25 57.5**	**-2.7**
GCAM				*i* AML	AML	03 26 19.0	
	comp=E,41nm,1.1s						
GCAM				*i* AML	AML	03 26 20.0	
	comp=N,41nm,0.6s						
YVAC	**Isparta, Yalva**	**2.59**	**29**	P	**Pb**	**03 25 31.4**	**-1.1**
YVAC				S	**Sb**	**03 26 04.2**	**-0.6**
DOGA	**KONYA_Doganhis**	**2.64**	**37**	P	**Pb**	**03 25 32.2**	**-1.2**
DOGA				S	**Sb**	**03 26 06.9**	**+0.6**
USAK	**Uak-Merkez**	**2.75**	**349**	P	**Pn**	**03 25 30.0**	**-0.6**
USAK				S	**Sn**	**03 26 04.4**	**-0.1**
USAK				*i* AML	AML	03 27 13.0	
	comp=N,49nm,4.2s						
USAK				*i* AML	AML	03 27 13.0	
	comp=E,85nm,3.4s						
IDI	**Anoyia**	**3.96**	**261**	Pn	**Pn**	**03 25 46.8**	**-0.3**
	1.3nm,0.3s,baz=300,slow=17,SNR=10						
IDI				Sn	**Sn**	**03 26 35.8**	**+1.6**
	0.9nm,0.3s,baz=279,slow=8.1,SNR=3.9 3.3nm,0.3s						
BRTR	**Keskin Array B**	**4.86**	**39**	Pn	**Pn**	**03 26 01.5**	**+1.8**
	0.4nm,0.3s,baz=221,slow=16,SNR=16						
BRTR				Sn	**Sn**	**03 27 00.6**	**+3.9**
	0.3nm,0.3s,baz=209,slow=27,SNR=8.4 1.9nm,0.6s						
MMAI	**Mount Meron Ar**	**5.60**	**121**	Pn	**Pn**	**03 26 07.5**	**-2.2**
	1.1nm,0.3s,baz=128,slow=25,SNR=6.7						
MMAI				Sn	**Sn**	**03 27 14.7**	**0.0**
	0.7nm,0.3s,baz=74,slow=34,SNR=1.6 0.5nm,0.4s						
TORD	**Torodi Ar. Bea**	**33.91**	**235**	P	**P**	**03 31 30.0**	**+0.1**
	0.2nm,0.5s,baz=61,slow=7.1,SNR=1.3 0.2nm,0.5s						
MKAR	**Makanchi Array**	**40.23**	**58**	P	**P**	**03 32 21.6**	**-1.8**
	0.1nm,0.5s,baz=275,slow=6.5,SNR=1.5 0.1nm,0.5s						

KRSC 11 03:37:26.9±1.4,50°.99N×158°.39E,h49km±20km,ML3.8, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDTR	**Khodutka, Kamc**	**0.85**	**347**	*e*P	Pn	03 37 43.5	+0.9
KDTR				*e*S	Sn	03 37 54.4	+0.4
PAU	**Pauzhetka**	**1.10**	**296**	*e*P	Pn	03 37 46.6	+0.6
PAU				*e*S	Sn	03 38 00.3	+0.2
ASAK	**Asacha**	**1.43**	**348**	*e*P	Pn	03 37 52.1	+1.5
RUS	**Russkaya**	**1.45**	**3**	*e*P	Pn	03 37 51.9	+1.2
RUS				*e*S	Sn	03 38 09.7	+1.1
MTVR	**Mutnovka**	**1.50**	**355**	*e*P	Pn	03 37 53.2	+1.6
MTVR				*e*S	Sn	03 38 11.5	+1.4
GRL	**Gorelyy**	**1.58**	**353**	*e*P	Pn	03 37 54.6	+2.0
GRL				*e*S	Sn	03 38 14.2	+2.3
MIPR	**Malaya Ipel'ka**	**1.64**	**322**	*e*P	Pn	03 37 55.2	+1.8
KRMR	**Karymshinskiy**	**1.85**	**355**	*e*P	Pn	03 37 59.0	+2.8
KRMR				*e*S	Sn	03 38 21.8	+3.4
PET	**Petropavlovsk**	**2.05**	**4**	*e*P	Pn	03 38 01.7	+2.8
PET				*e*S	Sn	03 38 26.8	+3.6
DALK	**Dalny**	**2.06**	**6**	*e*P	Pn	03 38 01.1	+2.1
DALK				*e*S	Sn	03 38 25.4	+1.9
APC	**Apacha**	**2.08**	**339**	*e*P	Pn	03 38 01.6	+2.2
UGLR	**Uglovaya**	**2.24**	**7**	*e*P	Pn	03 38 04.9	+3.2
AVH	**Avacha**	**2.29**	**5**	*e*P	Pn	03 38 06.2	+3.9
SMAR	**Somma**	**2.29**	**6**	*e*P	Pn	03 38 05.6	+3.1
KOK	**Koryaka**	**2.31**	**4**	*e*P	Pn	03 38 06.0	+3.4
SDLR	**Sedlovina**	**2.31**	**7**	*e*P	Pn	03 38 04.8	+2.1
KRER	**Koryakskii**	**2.33**	**5**	*e*P	Pn	03 38 06.5	+3.5
SPN	**Mys Shipunski**	**2.34**	**25**	*e*P	Pn	03 38 05.9	+3.0
KRX	**Arik**	**2.38**	**4**	*e*P	Pn	03 38 06.6	+3.0
GNL	**Ganaly**	**2.73**	**354**	*e*P	Pn	03 38 11.2	+2.9
MKZ	**Mys Kozlova**	**4.11**	**28**	*e*P	Pn	03 38 29.5	+2.4
KBTR	**Krutoberegovo**	**5.86**	**25**	*e*P	Pn	03 38 54.4	+3.3

IDC ***11*** *03:58:49.0±4.4,4°.78S×105°.38E,h0km,mb4.0/3,*
mbtmp4.0/4,ML3.5/1,Error ellipse: s-maj=104.5km
s-min=63.1km az=49.0
DJA ***11*** *03:58:58.2±0.3,6°.5S×10°.5E±°,h10km,M3.8/11,*
MLv3.8/11

ISC 11 03:58:57.7±1.5,6°.17S±0°.09×105°.32E±0°.06,h11km±11km, n16,σ1§22/21,mb4.0/3,Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLSI	**Bandar Lampung**	**0.80**	**355**	P	**Pg**	**03 59 12.4**	**-0.8**
SBJI	**Serang**	**0.81**	**86**	P	**Pg**	**03 59 11.7**	**-1.7**
SBJI				S	**Sb**	**03 59 23.7**	**-1.0**
KASI	**Kota Agung**	**1.04**	**308**	P	**Pg**	**03 59 16.9**	**-0.8**
KASI				S	**Sb**	**03 59 31.6**	**+0.3**
TNG	**Tangerang**	**1.32**	**90**	P	**Pg**	**03 59 23.1**	**0.0**
KLI	**Kotabumi**	**1.38**	**341**	P	**Pn**	**03 59 22.7**	**-0.2**
DBJI	**Dramaga**	**1.47**	**105**	P	**Pn**	**03 59 23.4**	**-0.8**
DBJI				S	**Sb**	**03 59 44.4**	**+0.6**
SKJI	**Sukabumi**	**1.48**	**124**	P	**Pn**	**03 59 23.5**	**-0.8**
SKJI				S	**Sg**	**03 59 46.1**	**+0.6**
LWLI	**Liwa**	**1.70**	**312**	P	**Pn**	**03 59 28.1**	**+0.8**
MDSI	**Maura Dua**	**2.02**	**326**	P	**Pn**	**03 59 32.9**	**+1.2**
CNJI	**Cilinong**	**2.12**	**122**	P	**Pn**	**03 59 33.2**	**+0.1**
LEM	**Lembang**	**2.38**	**106**	Pn	**Pn**	**03 59 38.0**	**+1.3**
	6.3nm,0.3s,baz=315,slow=23,SNR=5.4						
LEM				Sn	**Sg**	**04 00 16.7**	**+2.6**
	6.0nm,0.3s,baz=1.8,slow=22,SNR=2.3 65nm,0.7s						
LEM	**Lembang**	**2.38**	**106**	P	**Pn**	**03 59 39.0**	**+2.3**
CMJI	**Cimerak**	**3.50**	**117**	P	**Pn**	**03 59 52.5**	**+0.5**
WRA	**Warramunga Arr**	**31.33**	**119**	P	**P**	**04 05 17.1**	**-1.3**
	1.4nm,0.7s,baz=296,slow=9.7,SNR=11 1.4nm,0.7s						
ASAR	**Alice Springs**	**32.53**	**125**	P	**P**	**04 05 28.1**	**-0.7**
	0.6nm,0.7s,baz=296,slow=8.5,SNR=6.8 0.6nm,0.7s						
STKA	**Stephens Creek**	**42.43**	**132**	P	**P**	**04 06 53.2**	**+0.5**
	3.2nm,0.5s,baz=319,slow=8.8,SNR=8.5 3.2nm,0.5s						

ISN ***11*** *04:02:50.7±0.3,36°.94N×44°.62E,h12km,ML2.9*
DDA ***11*** *04:02:52.3±0.0,37°.00N×44°.64E,h2km±3km,ML2.8*

ISC 11 04:02:55.0±1.3,37°.00N±0°.03×44°.41E±0°.07,h14km±12km, n12,σ2§06/23,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOVA	**Hakkari_Yksek**	**0.60**	**351**	P	**Pg**	**04 03 04.4**	**-2.5**
YOVA				S	**Sg**	**04 03 13.6**	**-1.3**
YOVA				*i* AML	AML	04 03 16.0	
	comp=E,276nm,0.5s						
CUKT	**Cukurca**	**0.69**	**292**	P	**Pn**	**04 03 08.6**	**-1.8**
CUKT				S	**Sn**	**04 03 20.5**	**-0.5**
CUKT				*i* AML	AML	04 03 22.0	
	comp=N,684nm,0.8s						
CUKT				*i* AML	AML	04 03 22.0	
	comp=E,1µm,0.8s						
CUKT				*i* AML	AML	04 03 24.0	
	comp=Z,398nm,0.7s						
HAKT	**HAKKARI**	**0.79**	**315**	P	**Pg**	**04 03 08.9**	**-1.6**
HAKT				S	**Sg**	**04 03 20.3**	**-0.6**
HAKT				*i* AML	AML	04 03 24.0	
	comp=N,304nm,0.4s						
HAKT				*i* AML	AML	04 03 24.0	
	comp=E,392nm,0.3s						
HAKT				*i* AML	AML	04 03 28.0	
	comp=Z,199nm,0.3s						
IKRK	**Kirkuk**	**1.59**	**182**	*e*Pg	**Pg**	**04 03 25.0**	**-0.7**
	baz=8.0						
IKRK				*e*Sg	**Sg**	**04 03 49.0**	**+2.6**
IKRK				AML	AML	04 03 58.5	
	comp=E,137nm,0.5s						
IKRK				AML	AML	04 03 58.6	
	comp=N,224nm,0.4s						
GEVA	**Gevas**	**1.69**	**321**	P	**Pg**	**04 03 27.6**	**0.0**
GEVA				S	**Sg**	**04 03 52.3**	**+2.7**
GEVA				*i* AML	AML	04 03 55.0	
	comp=N,60nm,0.4s						
OZAP	**Van, Ozalp-Mer**	**1.69**	**349**	P	**Pg**	**04 03 28.4**	**+0.8**
OZAP				S	**Sg**	**04 03 54.3**	**+4.7**
TVAN	**Van**	**1.72**	**333**	P	**Pg**	**04 03 28.0**	**-0.1**
TVAN				S	**Sg**	**04 03 53.9**	**+3.3**
TVAN				*i* AML	AML	04 04 02.0	
	comp=N,57nm,0.6s						
PERV	**Siirt/Pervari-**	**1.76**	**303**	P	**Pg**	**04 03 28.1**	**-0.8**
PERV				S	**Sg**	**04 03 53.7**	**+1.9**
PERV				*i* AML	AML	04 03 56.0	
	comp=N,295nm,0.6s						
PERV				*i* AML	AML	04 04 03.0	
	comp=N,218nm,0.4s						
PERV				*i* AML	AML	04 04 44.0	
	comp=N,70nm,2.4s						
ADCV	**BITLIS_Adilcev**	**2.25**	**324**	P	**Pb**	**04 03 34.5**	**-1.0**
SVAN	**Silvan-Diyarba**	**2.80**	**295**	P	**Pg**	**04 03 47.2**	**-1.5**
SVAN				S	**Sb**	**04 04 22.0**	**+3.0**
SVAN				*i* AML	AML	04 04 34.0	
	comp=N,33nm,1.0s						
SVAN				*i* AML	AML	04 04 40.0	
	comp=N,20nm,0.7s						
MUSM	**Mu-Merkez**	**2.87**	**308**	P	**Pb**	**04 03 46.7**	**+0.6**
MUSM				S	**Sb**	**04 04 21.6**	**+0.5**
MARD	**Mardin**	**2.92**	**277**	P	**Pg**	**04 03 50.4**	**-0.5**
MARD				S	**Sb**	**04 04 22.1**	**-0.3**
MARD				*i* AML	AML	04 04 35.0	
	comp=N,58nm,0.5s						
MARD				*i* AML	AML	04 04 38.0	
	comp=N,151nm,0.7s						
MARD				*i* AML	AML	04 04 38.0	
	comp=N,109nm,0.9s						

IDC ***11*** *04:08:07.7±3.8,18°.96N×146°.97E,h64km±35km,mb3.5/11,*
mbtmp3.8/13,ML3.4/2,Error ellipse: s-maj=36.4km
s-min=15.9km az=88.0

ISC 11 04:08:06.4±0.9,19°.01N±0°.08×147°.0E±0°.2,h50km,n17, σ1§05/16,mb3.8/11,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.78**	**201**	P	**Pn**	**04 09 31.5**	**+1.8**
	3.0nm,0.3s,baz=19,slow=21,SNR=1.8						
GUMO				S	**Sn**	**04 10 33.9**	**-0.8**
	15nm,0.3s,baz=302,slow=22,SNR=1.5 30nm,0.6s						
H11S3	**WAKE ISLAND Hy**	**18.62**	**88**	T	T	04 31 43.1	
	baz=275,slow=74,SNR=4.9						
H11S1	**WAKE ISLAND Hy**	**18.63**	**88**	T	T	04 31 45.9	
	baz=275,slow=74,SNR=6.5						
H11S2	**WAKE ISLAND Hy**	**18.63**	**88**	T	T	04 31 42.0	
	baz=275,slow=74,SNR=4.8						
MJAR	**Matsushiro Arr**	**19.11**	**338**	P	**P**	**04 12 27.1**	**+1.8**
	baz=161,slow=12,SNR=2.2 0.7nm,0.4s						
KSRS	**Korea Array**	**24.84**	**322**	P	**P**	**04 13 24.1**	**+0.1**
	1.3nm,0.8s,baz=140,slow=9.6,SNR=5.5 1.3nm,0.8s						
KLR	**Kul'dur**	**32.56**	**341**	P	**P**	**04 14 33.0**	**+0.3**
	2.9nm,0.8s,baz=143,slow=7.3,SNR=10 2.9nm,0.8s						
WRA	**Warramunga Arr**	**40.67**	**199**	P	**P**	**04 15 40.4**	**-1.6**
	0.9nm,0.8s,baz=19,slow=8.3,SNR=4.3						
WRA				PcP	**PcP**	**04 17 44.0**	**+0.9**
	0.6nm,0.9s,baz=17,slow=3.2,SNR=2.3 0.6nm,0.8s						
SONM	**Songino Array**	**43.70**	**321**	P	**P**	**04 16 06.0**	**-0.6**
	0.3nm,0.3s,baz=118,slow=11,SNR=1.7 0.3nm,0.3s						
ASAR	**Alice Springs**	**44.31**	**197**	P	**P**	**04 16 11.2**	**-0.5**
	0.4nm,0.7s,baz=14,slow=12,SNR=2.6 0.4nm,0.7s						
ZALV	**Zalesovo Beam**	**58.54**	**322**	P	**P**	**04 17 57.2**	**-0.5**
	0.7nm,0.4s,baz=113,slow=11,SNR=4.1 0.7nm,0.4s						
MKAR	**Makanchi Array**	**59.16**	**314**	P	**P**	**04 18 01.7**	**-0.5**

UPA ***11*** *04:12:52.9±0.7,7°.47N×78°.22W,h4km±4km,MW4.1*
RSNC ***11*** *04:12:54.1±1.1,7°.55N×78°.21W,h4km±6km,ML2.5*

ISC 11 04:12:49.6±1.1,7°.54N±0°.03×78°.21W±0°.02,h10km±11km, n26,σ1§13/45,1C-1D,Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTAC	**Punta Ardita,**	**0.56**	**134**	*e*P	**Pn**	**04 13 03.8**	**+0.2**
PTAC				*e*S	**Sn**	**04 13 12.1**	**-0.9**
PTAC	**Punta Ardita,**	**0.56**	**134**	*e*P	**Pn**	**04 13 03.8**	**+0.2**
PTAC				*e*S	**Sn**	**04 13 11.9**	**-1.0**
CAPC	**Capurgana**	**1.38**	**38**	*e*P	**Pb**	**04 13 15.3**	**-0.1**
CAPC				*e*S	**Sb**	**04 13 33.0**	**-0.2**
CAPC				*i*		04 13 33.2	
	comp=Z,195nm,0.2s						
SOLC	**Bahia Solano**	**1.53**	**149**	*e*P	**Pg**	**04 13 21.5**	**+2.5**
SOLC				*e*S	**Sg**	**04 13 40.6**	**+1.7**
SOLC				*i*		04 13 46.4	
	comp=Z,128nm,0.3s						
UPA	**Univ. de Panam**	**1.94**	**318**	*e*P	**Pg**	**04 13 26.4**	**-0.3**
UPA				*e*S	**Sg**	**04 13 53.7**	**+1.8**
UPA				*i*		04 14 00.9	
	comp=Z,25nm,0.6s						
UPA	**Univ. de Panam**	**1.94**	**318**	*e*P	**Pg**	**04 13 26.6**	**-0.2**
UPA				*e*S	**Sg**	**04 13 52.0**	**+0.1**
CHOR3	**La Chorrera**	**2.04**	**311**	*e*P	**Pb**	**04 13 27.6**	**+0.8**
CHOR3				*e*S	**Sg**	**04 13 54.7**	**-0.7**
DBBC	**Dabeiba**	**2.05**	**105**	*e*P	**Pg**	**04 13 28.2**	**-0.8**
DBBC				*i*		04 13 59.1	
	comp=Z,121nm,0.5s						
AZU	**Azuero**	**2.06**	**277**	*e*P	**Pg**	**04 13 28.1**	**-1.0**
AZU				*e*S	**Sg**	**04 13 54.6**	**-1.2**
AZU				*i*		04 14 03.4	
	comp=Z,74nm,0.4s						
AZU	**Azuero**	**2.06**	**277**	*e*P	**Pg**	**04 13 28.2**	**-0.8**
AZU				*e*S	**Sb**	**04 13 53.8**	**+1.1**
ZANG	**Zanguenga, Cho**	**2.16**	**311**	*e*P	**Pb**	**04 13 29.7**	**+1.0**
ZANG				*e*S	**Sg**	**04 13 58.8**	**-0.2**
CHIT3	**Chitre**	**2.22**	**281**	*e*P	**Pb**	**04 13 30.6**	**+0.7**
CHIT3				*e*S	**Sb**	**04 13 58.0**	**+0.6**
LCBC	**Los crdobas,**	**2.25**	**54**	*e*S	**Sg**	**04 14 01.7**	**-0.1**
LCBC				*i*		04 14 11.0	
	comp=Z,32nm,0.4s						
BCIP	**Isla Barro Col**	**2.28**	**315**	*e*P	**Pb**	**04 13 30.5**	**-0.3**
BCIP				*e*S	**Sb**	**04 13 58.9**	**-0.1**
BCIP				*i*		04 14 16.6	
	comp=Z,45nm,0.6s						
BCIP	**Isla Barro Col**	**2.28**	**315**	*e*P	**Pb**	**04 13 30.6**	**-0.3**
BCIP				*e*S	**Sb**	**04 14 00.8**	**+1.8**
CACAO	**El Cacao, Vera**	**2.63**	**266**	*e*P	**Pb**	**04 13 35.9**	**-1.0**
CACAO				*e*S	**Sn**	**04 14 06.2**	**+2.1**
CACAO				*i*		04 14 08.2	
	comp=Z,17nm,0.1s						
CACAO	**El Cacao, Vera**	**2.63**	**266**	*e*P	**Pb**	**04 13 35.9**	**-1.0**
CACAO				*e*S	**Sb**	**04 14 07.8**	**-1.5**
UREC	**San Jos de Ur**	**2.67**	**85**	*e*P	**Pb**	**04 13 36.7**	**-0.7**
UREC				*e*S	**Sb**	**04 14 09.8**	**-0.4**
UREC				*i*		04 14 22.0	
	comp=Z,14nm,0.7s						
UREC	**San Jos de Ur**	**2.67**	**85**	*e*P	**Pb**	**04 13 36.7**	**-0.7**
CBOC	**Ciudad Bolivar**	**2.75**	**127**	*e*P	**Pb**	**04 13 37.6**	**-1.4**
CBOC				*i*		04 14 24.0	
	comp=Z,8.3nm,0.6s						
HELC	**Santa Helena**	**2.98**	**117**	*e*P	**Pb**	**04 13 42.2**	**-0.9**
HELC				*i*		04 14 26.3	
	comp=Z,7.8nm,0.8s						
GMAL	**Guarumal, Vera**	**3.00**	**274**	*e*P	**Pb**	**04 13 41.4**	**-1.7**
GMAL				*e*S	**Sb**	**04 14 19.5**	**-0.4**
GMAL				*i*		04 14 23.6	
	comp=Z,40nm,0.3s						
GMAL	**Guarumal, Vera**	**3.00**	**274**	*e*P	**Pb**	**04 13 42.8**	**-0.4**
GMAL				*e*S	**Sb**	**04 14 19.1**	**-0.8**
PLMC	**San Jos del P**	**3.25**	**144**	*e*P	**Pn**	**04 13 41.3**	**+0.6**
PLMC				*i*		04 14 40.7	
	comp=Z,5.6nm,0.5s						
GUY2C	**Guyana, Caldas**	**3.65**	**129**	*e*P	**Pb**	**04 13 51.7**	**-2.8**
GUY2C				*e*S	**Sb**	**04 14 40.6**	**+1.6**
GUY2C				*i*		04 14 49.8	
	comp=Z,5.5nm,0.6s						
NORC	**Norcasia**	**3.86**	**120**	*e*P	**Pb**	**04 13 57.6**	**-0.2**
NORC				*i*		04 14 50.6	
	comp=Z,3.4nm,0.3s						
	0.6nm,0.7s,baz=79,slow=9.5,SNR=5.6 0.6nm,0.7s						
ILAR	**Eielson Array**	**62.80**	**26**	P	**P**	**04 18 26.7**	**+0.1**
	0.6nm,0.8s,baz=247,slow=7.4,SNR=5.9 0.6nm,0.8s						
YKA	**Yellowknife Ar**	**77.12**	**28**	P	**P**	**04 19 53.8**	**-0.6**
	0.9nm,0.8s,baz=304,slow=4.9,SNR=4.6 0.9nm,0.8s						
ARCES	**ARCESS Array B**	**82.58**	**342**	P	**P**	**04 20 24.4**	**+0.6**
	2.8nm,1.0s,baz=39,slow=7.8,SNR=4.2 2.8nm,1.0s						
FINES	**FINESS Array B**	**87.13**	**336**	P	**P**	**04 20 45.6**	**-1.1**
	0.4nm,0.5s,baz=72,slow=6.2,SNR=6.8 0.4nm,0.5s						
TORD	**Torodi Ar. Bea**	**133.23**	**311**	PKP	**PKPdf**	**04 27 18.3**	**+0.6**
	1.0nm,1.1s,baz=98,slow=1.3,SNR=2.4						

IDC ***11*** *04:52:25.6±0.8,3°.18N×126°.88E,h0km,mb3.8/7,*
mbtmp3.8/8,ML3.6/1,MS3.6/9,Error ellipse: s-maj=69.4km
s-min=16.4km az=68.0
DJA ***11*** *04:52:30.1±0.4,3°.3N±3°×12°.7E±°,h10km,M4.2/11,mb4.2/6,*
mB4.8/2,MLv4.2/11,Mw(mB)4.0/2,MwMwp4.5/1,Mwp4.9/1
NEIC ***11*** *04:52:33.3±1.6,3°.2N±0°.1×127°.21E±0°.05,h51km±10km,*
*mb4.3/15,Error

H11S1 **WAKE ISLAND Hy** 41.47 66 T T 05 44 32.7
baz=252
ULN **Ulaanbaatar** 47.69 342 P P **05 01 05.8 +0.8**
ULN IAmb IAmb 05 01 12.1
comp=Z,2.2nm,0.8s
SONM **Songino Array** 47.87 341 P P **05 01 06.2 -0.2**
comp=Z,0.4nm,0.5s,baz=157,slow=9.4,SNR=1.8
comp=Z,0.4nm,0.5s
MSVF **Nonsavu** 54.28 114 LR LR 05 22 52.6
comp=Z,100nm,21.2s,baz=342,slow=34
MK31 **Makanchi Array** 58.20 325 P P **05 02 21.9 -0.5**
MK31 IAmb IAmb 05 02 24.1
comp=Z,1.2nm,0.7s
MKAR **Makanchi Array** 58.20 325 P P **05 02 20.9 -1.5**
comp=Z,1.0nm,0.6s,baz=122,slow=8.7,SNR=10
MKAR LR LR 05 28 57.2
comp=Z,50nm,19.4s,baz=84,slow=38
comp=Z,1.0nm,0.6s
MAKZ **Makanchi** 58.38 325 P P **05 02 24.3 +0.6**
MAKZ IAmb IAmb 05 02 25.3
comp=Z,5.4nm,1.3s
ZAA0 **Zalesovo Array** 61.20 333 P P **05 02 43.4 +0.4**
ZAA0 IAmb IAmb 05 02 55.3
comp=Z,2.9nm,1.1s
ZALV **Zalesovo Beam** 61.20 333 P P 05 02 39.7 -3.2
comp=Z,0.6nm,0.5s,baz=133,slow=15,SNR=1.2
comp=Z,0.6nm,0.5s
ZALV **Zalesovo Beam** 61.20 333 P P **05 02 42.5 -0.4**
URZ **Urewera** 61.88 137 LR LR 05 30 40.6
comp=Z,78nm,18.2s,baz=32,slow=37
KURK **Kurchatov** 62.38 327 P P **05 02 50.3 -0.5**
KURK IAmb IAmb 05 03 10.3
comp=Z,3.8nm,0.9s
NRIK **Noril'sk** 70.97 346 P P **05 03 45.4 0.0**
NRIK IAmb IAmb 05 03 47.4
comp=Z,5.3nm,0.9s
ABKAR **Akbulak array** 72.80 321 P P **05 03 56.4 -0.3**
ABKAR IAmb IAmb 05 04 07.5
comp=Z,1.0nm,0.8s
ARU **Arti** 75.57 328 LR LR 05 37 43.0
comp=Z,30nm,20.4s,baz=112,slow=36
ARU **Arti** 75.57 328 P P **05 04 12.0 -0.8**
FINES **FINESS Array B** 92.45 332 LR LR 05 49 15.6
comp=Z,33nm,19.3s,baz=8.0,slow=37
AKASG **Malin Array Be** 92.54 321 LR LR 05 51 10.9
comp=Z,17nm,18.2s,baz=83,slow=38
HFS **Hagfors** 98.64 332 LR LR 05 56 15.2
comp=Z,35nm,18.2s,baz=79,slow=39
NOA **NORSAR Array B** 99.40 334 LR LR 05 55 00.1
comp=Z,24nm,21.7s,baz=80,slow=38
TORD **Torodi Ar. Bea** 123.53 288 PKP PKPdf **05 11 26.4 -0.1**
comp=Z,0.7nm,0.9s,baz=60,slow=1.9,SNR=3.0

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*NOU **11** 05:02:46.5, 17°.925×178°.06W, h622km, mb4.6/29, Fiji Islands Region*
*NEIC **11** 05:02:46.3±2.0, 18°.1S±0°.1×178°.3W±0°.1, h584km±6km, mb4.6/52, Error ellipse: s-maj=18.9km s-min=14.7km az=134.0*
*IDC **11** 05:02:48.0±0.8, 17°.99S×178°.40W, h610km±8km, mb3.7/21, mbtmp4.7/24, Error ellipse: s-maj=15.9km s-min=10.1km az=147.0*

ISC 11 05:02:46.8±0.4, **18°.00S**±0°.08×**178°.35W**±0°.06, **h600**km, **n290**,σ1**s27**/299, **mb4.6**/63, **19C-27D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LKBA	**Tubou, Lakemba**	0.50	242	P	P	**05 03 59.8**	**+2.6**
TAVE	**Taveuni**	1.96	311	P	P	**05 04 03.7**	**+2.7**
DGTI	**Dogotuki**	2.49	312	P	P	**05 04 05.2**	**+1.8**
MSVF	**Nonsavu**	3.44	274	P	P	**05 04 10.8**	**+2.2**
MSVF	229nm,0.9s,baz=131,slow=4.5,SNR=131			S	S	**05 05 18.6**	**+3.2**
MSVF	36nm,1.1s,baz=53,slow=20,SNR=10 **Nonsavu**	3.44	274	P	P	**05 04 11.0**	**+2.3**
MSVF	**Nonsavu**	3.44	274	P	P	**05 04 11.2**	**+2.5**
AFI	**Afiamalu**	7.51	58	P	P	**05 04 41.7**	**0.0**
AFI	25nm,0.5s,baz=145,slow=4.8,SNR=5.6			S	S	**05 06 14.9**	**-0.9**
DZM	28nm,0.8s,baz=227,slow=19,SNR=1.6 **Afiamalu**	7.51	58	P	P	**05 04 42.3**	**+0.6**
MARNC	**Mare, Loyalty**	13.29	253	P	P	**05 05 37.8**	**-0.7**
PINNC	**Pines Island,**	14.09	249	P	P	**05 05 46.9**	**+0.4**
DZM	**Mont Dzumac**	14.85	252	P	P	**05 05 53.5**	**-0.3**
DZM	6.3nm,0.6s,baz=90,slow=18,SNR=17			S	S	**05 08 24.8**	**-1.5**
DZM	7.7nm,1.1s,baz=7.6,slow=19,SNR=1.6 **Dzumac**	14.85	252	P	P	**05 05 54.5**	**+0.8**
NOUC	**Port Laguerre**	14.99	252	P	P	**05 05 57.6**	**+2.7**
KNTN	**Kanton**	16.47	24	P	P	**05 06 07.9**	**-0.7**
KOUNC	**Koumac, New Ca**	16.59	258	P	P	**05 06 12.2**	**+2.6**
KOUNC	05 06 16.9			IAmb	IAmb		
KOUNC	comp=Z,72nm,1.6s **Koumac, New Ca**	16.59	258	P	P	**05 06 11.8**	**+2.2**
URZ	**Urewera**	20.57	190	P	P	**05 06 44.9**	**-0.6**
	comp=Z,9.3nm,0.7s,baz=109,slow=17,SNR=4.4						
BKZ	comp=Z,9.3nm,0.7s **Black Stump Fm**	21.57	191	P	P	**05 06 53.4**	**-1.1**
QRZ	**Quartz Range**	24.07	197	P	P	**05 07 17.0**	**+0.4**
KHZ	**Kahutara**	25.30	194	P	P	**05 07 26.9**	**-0.5**
EIDS	**Eidsvold**	29.29	250	P	P	**05 08 02.5**	**0.0**
EIDS	baz=29,SNR=4.0 **Eidsvold**	29.29	250	P	P	**05 08 02.5**	**0.0**
EIDS	05 08 03.4			IAmb	IAmb		
EIDS	comp=Z,14nm,1.1s **Eidsvold**	29.29	250	P	P	**05 08 02.6**	**+0.1**
ARMA	**Armidale**	29.95	240	P	P	**05 08 09.4**	**+1.2**
ARMA	05 08 25.5			IAmb	IAmb		
RMQ	comp=Z,48nm,2.0s **Roma**	31.53	249	P	P	**05 08 23.0**	**+1.3**
CNB	**Canberra Magne**	33.42	232	P	P	**05 08 39.0**	**+1.5**
CTA	baz=33,SNR=7.8 **Charters Tower**	33.49	261	P	P	**05 08 38.0**	**-0.2**
	comp=Z,14nm,0.6s,baz=92,slow=9.8,SNR=22						
CTA	comp=Z,14nm,0.6s **Charters Tower**	33.49	261	P	P	**05 08 38.7**	**+0.4**
CTAO	**Charters Tower**	33.49	261	P	P	**05 08 38.5**	**+0.2**
CTAO	05 08 38.9			IAmb	IAmb		
CTAO	comp=Z,15nm,0.7s **Charters Tower**	33.49	261	P	P	**05 08 38.7**	**+0.4**
PMG	**Port Moresby**	34.53	280	P	P	**05 08 47.6**	**+0.6**
	comp=Z,92nm,0.8s,baz=83,slow=6.2,SNR=16						
PMG	comp=Z,92nm,0.8s **Port Moresby**	34.53	280	P	P	**05 08 48.0**	**+1.0**
PMG	**Port Moresby**	34.53	280	P	P	**05 08 47.5**	**+0.5**
PMG	**Port Moresby**	34.53	280	P	P	**05 08 47.6**	**+0.6**
CMSA	**Cobar Meteorol**	35.16	241	P	P	**05 08 53.2**	**+1.2**
CMSA	baz=35,SNR=6.3 **Cobar Meteorol**	35.16	241	P	P	**05 08 52.9**	**+0.9**
MTSU	**Mount Surprise**	35.46	264	P	P	**05 08 54.8**	**+0.2**
MTSU	baz=35,SNR=22 **Mount Surprise**	35.46	264	P	P	**05 08 54.9**	**+0.2**
QLP	**Quilpie**	35.56	249	P	P	**05 08 55.8**	**+0.5**
QLP	baz=36,SNR=3.9 **Quilpie**	35.56	249	P	P	**05 08 55.9**	**+0.5**
TOO	**Toolangi**	37.16	231	P	P	**05 09 09.9**	**+1.5**
COEN	baz=37,SNR=5.2 **Coen**	37.16	271	P	P	**05 09 09.6**	**+0.9**
	baz=37,SNR=105						
COEN	**Coen**	37.16	271	P	P	**05 09 09.3**	**+0.6**
COEN	**Coen**	37.16	271	P	P	**05 09 09.5**	**+0.9**
STKA	**Stephens Creek**	38.64	241	P	P	**05 09 21.1**	**+0.7**
STKA	comp=Z,14nm,0.8s,baz=93,slow=10,SNR=18			PcP	PcP	**05 11 17.1**	**+0.3**
STKA	comp=Z,1.9nm,0.4s,baz=23,slow=7.7,SNR=2.7 **Stephens Creek**	38.64	241	P	P	**05 09 21.6**	**+1.2**
STKA	baz=39,SNR=11 **Stephens Creek**	38.64	241	P	P	**05 09 21.4**	**+1.0**
STKA	**Stephens Creek**	38.64	241	P	P	**05 09 21.8**	**+1.4**
INKA	**Innaminka**	38.77	248	P	P	**05 09 22.7**	**+1.2**
QIS	**Mount Isa**	39.70	259	P	P	**05 09 28.8**	**-0.3**
QIS	baz=40,SNR=4.5 **Mount Isa**	39.70	259	P	P	**05 09 29.2**	**+0.1**
HTT	**Hallett**	41.15	240	P	P	**05 09 41.2**	**+0.8**
LCRK	baz=41,SNR=12 **Leigh Creek**	41.27	244	P	P	**05 09 42.1**	**+0.7**
WHYH	**Whyalla**	42.19	240	P	P	**05 09 49.9**	**+1.4**
OOD	comp=Z,24nm,0.8s **Oodnadatta**	43.24	248	P	P	**05 09 57.8**	**+1.0**
BBOO	**Buckleboo**	43.41	241	P	P	**05 09 58.6**	**+0.5**
BBOO	baz=43,SNR=31 **Buckleboo**	43.41	241	P	P	**05 09 58.6**	**+0.5**
BBOO	05 09 58.9			IAmb	IAmb		
	comp=Z,21nm,0.6s						

GENI	**Genyem**	43.45	286	P	P	**05 09 59.9 +1.3**
WB2	**Warramunga Arr**	44.66	260	P	P	**05 10 07.5 -0.4**
WRAB	**Tennant Creek**	44.66	260	P	P	**05 10 07.4 -0.5**
WRAB	05 10 08.2			IAmb	IAmb	
	comp=Z,54nm,1.2s					
WRAB	**Tennant Creek**	44.66	260	P	P	**05 10 07.3 -0.6**
WRA	**Warramunga Arr**	44.67	260	P	P	**05 10 07.3 -0.6**
	comp=Z,14nm,0.4s,baz=95,slow=7.4,SNR=294					
WRA				PcP	PcP	**05 11 37.2 -0.1**
	comp=Z,2.4nm,0.3s,baz=90,slow=3.8,SNR=8.5					
WRA				S	S	**05 15 56.8 -5.3**
	comp=Z,1.8nm,0.7s,baz=99,slow=13,SNR=5.6					
	comp=Z,14nm,0.4s					
WRA	**Warramunga Arr**	44.67	260	P	P	**05 10 07.2 -0.8**
AS31	**Alice Springs**	44.82	254	P	P	**05 10 09.3 +0.2**
AS31				IAmb	IAmb	05 10 09.9
	comp=Z,23nm,0.9s					
ASAR	**Alice Springs**	44.82	254	P	P	**05 10 09.2 +0.1**
	comp=Z,60nm,0.5s,baz=86,slow=8.7,SNR=899					
ASAR				PcP	PcP	**05 11 37.6 -0.2**
	comp=Z,6.4nm,0.4s,baz=104,slow=3.8,SNR=11					
ASAR				S	S	**05 16 00.3 -3.9**
	comp=Z,6.3nm,0.9s,baz=88,slow=15,SNR=26					
	comp=Z,60nm,0.5s					
ASAR	**Alice Springs**	44.82	254	P	P	**05 10 09.6 +0.5**
MULG	**Mulgathing**	44.83	245	P	P	**05 10 09.2 +0.2**
KDU	**Kakadu**	47.61	269	P	P	**05 10 30.0 -0.1**
	baz=48,SNR=7.3					
MTN	**Manton Dam**	48.85	268	P	P	**05 10 38.9 -0.5**
	baz=49,SNR=9.7					
MTN	**Manton Dam**	48.85	268	P	P	**05 10 38.9 -0.5**
WRKA	**Warakurna**	49.87	252	P	P	**05 10 46.9 +0.1**
	baz=50,SNR=65					
FORT	**Forrest**	50.02	245	P	P	**05 10 47.3 -0.4**
	baz=50,SNR=23					
FORT	**Forrest**	50.02	245	P	P	**05 10 47.3 -0.4**
KNRA	**Kununurra**	50.54	264	P	P	**05 10 51.3 -0.4**
	baz=50,SNR=17					
KNRA	**Kununurra**	50.54	264	P	P	**05 10 51.3 -0.4**
KNRA				IAmb	IAmb	05 10 52.2
	comp=Z,31nm,0.8s					
FAKI	**Fak Fak**	50.65	281	P	P	**05 10 52.5 0.0**
FAKI				IAmb	IAmb	05 11 06.3
	comp=Z,64nm,1.5s					
SWI	**Sorong**	52.32	283	P	P	**05 11 04.5 0.0**
	comp=Z,2μmcomp=Z,150nm,0.8s					
SOEI	**Soe**	56.13	270	P	P	**05 11 32.6 +1.3**
SOEI	**Soe**	56.13	270	P	P	**05 11 31.6 +0.3**
	comp=Z,102nm,1.0s					
TNTI	**Ternate**	56.54	283	P	P	**05 11 34.1 +0.1**
TNTI				IAmb	IAmb	05 11 35.0
	comp=Z,50nm,1.0s					
SANI	**Sanana**	56.81	280	P	P	**05 11 35.5 -0.4**
	comp=Z,610nmcomp=Z,59nm,0.9s					
PSA00	**Pilbara Seismi**	57.94	255	P	P	**05 11 42.7 -0.7**
MBWA	**Marble Bar**	58.11	256	P	P	**05 11 44.4 -0.2**
MBWA				IAmb	IAmb	05 11 45.0
	comp=Z,59nm,1.4s					
KLBR	**Kellerberrin**	58.84	244	P	P	**05 11 49.0 -0.3**
	baz=59,SNR=9.3					
EDFI	**Ende, Flores**	58.85	271	P	P	**05 11 48.4 -1.3**
	comp=Z,1μmcomp=Z,23nm,1.0s					
BLDU	**Ballidu**	59.80	245	P	P	**05 11 55.2 -0.4**
	baz=60,SNR=9.1					
MORW	**Morawa**	60.50	246	P	P	**05 12 00.2 -0.2**
MORW				IAmb	IAmb	05 13 53.8
	comp=Z,67nm,1.8s					
BNSI	**Bone**	61.61	275	P	P	**05 12 08.4 +0.6**
	comp=Z,27nm,1.1s					
TOLI2	**Tolitoli**	62.79	281	P	P	**05 12 15.3 -0.1**
TOLI2				IAmb	IAmb	05 12 16.0
	comp=Z,12nm,0.9s					
GIRL	**Giralia**	62.92	253	P	P	**05 12 17.3 +1.2**
	baz=63,SNR=3.8					
GIRL	**Giralia**	62.92	253	P	P	**05 12 17.4 +1.2**
MPSI	**Mapaga**	63.35	280	P	P	**05 12 18.2 -0.8**
	comp=Z,34nm,1.0s					
JHJ2	**Mitsune**	64.65	322	P	P	**05 12 27.1 +0.3**
CASY	**Casey**	66.08	205	P	P	**05 12 36.0 +0.8**
CASY				IAmb	IAmb	05 13 19.2
	comp=Z,64nm,1.9s					
JGF	**Kuroka**	67.84	322	P	P	**05 12 46.8 +0.3**
JGF				IAmb	IAmb	05 12 47.2
	comp=Z,21nm,1.4s					
MJAR	**Matsushiro Ar**	68.01	323	P	P	**05 12 46.6 -0.9**
	comp=Z,7.4nm,0.5s,baz=156,slow=6.3,SNR=26					
	comp=Z,7.4nm,0.5s					
MJB9	**Matsu-Tunnel**	68.02	323	P	P	**05 12 47.4 -0.1**
MJB9				IAmb	IAmb	05 12 47.6
	comp=Z,14nm,0.5s					
JSD	**Sado**	69.05	324	P	P	**05 12 54.2 +0.5**
JSD				IAmb	IAmb	05 12 54.6
	comp=Z,14nm,0.7s					
UGM	**Wanagama**	69.70	268	P	P	**05 12 58.1 -0.1**
JHS	**Saijyo**	70.00	319	P	P	**05 13 00.0 +0.5**
JHS				IAmb	IAmb	05 13 00.9
	comp=Z,28nm,0.8s					
SBUM	**Sibu**	71.28	279	P	P	**05 13 07.5 +0.2**
SBUM				IAmb	IAmb	05 13 08.5
	comp=Z,8.8nm,0.7s					
QSPA	**South Pole Qui**	72.06	180	P	P	**05 13 12.4 +1.2**
PEA0B	**Petropavlovsk-**	73.78	345	P	P	**05 13 20.5 -0.3**
PEA0B				IAmb	IAmb	05 15 04.5
	comp=Z,64nm,1.6s					
PETK	**Petropavlovsk-**	73.78	345	P	P	**05 13 20.4 -0.5**
	comp=Z,5.0nm,0.6s,baz=135,slow=7.8,SNR=16					
	comp=Z,5.0nm,0.6s					
KSRS	**Korea Array**	74.81	318	P	P	**05 13 27.6 +0.7**
	comp=Z,2.4nm,0.7s,baz=128,slow=6.3,SNR=9.9					
	comp=Z,2.4nm,0.7s					
KASI	**Kota Agung**	76.12	269	P	P	**05 13 34.3 -0.5**
	comp=Z,52nm,1.0s					
USRK	**Ussuriysk Ar.**	76.72	326	P	P	**05 13 37.9 +0.5**
	comp=Z,3.3nm,0.7s,baz=72,slow=9.3,SNR=4.5					
	comp=Z,3.3nm,0.7s					
MDSI	**Maura Dua**	76.72	270	P	P	**05 13 36.0 -2.1**
	comp=Z,8.8nm,0.8s					
NJ2	**Nanjing**	78.04	309	*e*P	P	**05 13 45.0 +0.2**
NJ2				pmax	pmax	
	comp=Z,24nm,0.5s					
PFO	**Pinyon Flats O**	78.17	49	P	P	**05 13 46.2 +0.6**
	comp=Z,1.6nm,0.8s,baz=226,slow=6.0,SNR=2.8					
	comp=Z,1.6nm,0.8s					
LPIG	**La Paz**	78.43	60	P	P	**05 13 47.9 +0.9**
	comp=Z,17nm,0.5s,baz=153,slow=4.5,SNR=1.4					
	comp=Z,17nm,0.5s					
PNTR	**Pine Nut**	78.97	43	P	P	**05 13 50.8 +1.0**
NVAR	**Mina Array Bea**	79.45	44	P	P	**05 13 53.4 +1.0**
	comp=Z,2.0nm,0.8s,baz=225,slow=8.9,SNR=13					
	comp=Z,2.0nm,0.8s					
NV11	**Mina Array Sit**	79.55	44	P	P	**05 13 52.9 +0.1**
BNX	**BinXian**	80.20	325	*e*P	P	**05 13 56.4 +0.6**
BNX				pmax	pmax	
	comp=Z,19nm,0.8s					
BNX				pmax	pmax	
	comp=Z,48nm,4.6s					
K05A	**Summer Lake**	80.23	39	P	P	**05 13 58.1 +1.7**
K05A				IAmb	IAmb	05 16 25.9
	comp=Z,37nm,1.9s					
H04A	**Detroit Lake**	80.63	37	P	P	**05 13 58.9 +0.8**
H04A				IAmb	IAmb	05 15 15.3
	comp=Z,25nm,1.5s					
M19K	**Big River Lodg**	81.88	11	P	P	**05 14 04.2 +0.1**
BELA	**Belgrano 2**	82.07	173	P	P	**05 14 05.0 0.0**
BELA				IAmb	IAmb	05 14 06.2
	comp=Z,8.9nm,0.8s					
U15A	**North Rim**	82.53	48	P	P	**05 14 09.9 +1.5**
ELK	**Elko**	82.68	43	P	P	**05 14 09.5 +0.5**
	comp=Z,1.5nm,0.9s,baz=180,slow=4.9,SNR=5.0					
	comp=Z,1.5nm,0.9s					
ELK	**Elko**	82.68	43	IAmb	IAmb	05 14 11.1
	comp=Z,5.6nm,1.4s					
K20K	**Telida**	83.28	11	P	P	**05 14 11.2 +0.1**
MAW	**Mawson**	83.80	200	P	P	**05 14 13.9 +0.2**
	comp=Z,3.4nm,0.6s,baz=132,slow=7.0,SNR=8.2					
	comp=Z,3.4nm,0.6s					
MAW	**Mawson**	83.80	200	P	P	**05 14 13.9 +0.2**
BJI	**Beijing**	83.89	315	P	P	**05 14 15.3 +0.7**
BJI				pmax	pmax	
	comp=Z,9.0nm,1.3s					
DHY	**Denali Highway**	84.37	14	P	P	**05 14 16.1 -0.6**
DHY				IAmb	IAmb	05 16 39.1
	comp=Z,17nm,1.9s					
GSI	**Gunungsitoli**	84.77	273	P	P	**05 14 20.2 +0.7**
GYA	**Guiyang**	85.13	300	⇑P	P	**05 14 22.0 +0.8**
GYA				pmax	pmax	
	comp=Z,11nm,0.9s					

XLT	**XiLinHaoTe**	85.85	319	⇑*i*P	P	**05 14 24.8 +0.7**
XLT				pmax	pmax	
	comp=Z,15nm,0.8s					
XLT				pmax	pmax	
	comp=Z,78nm,5.4s					
ILAR	**Eielson Array**	85.96	13	P	P	**05 14 22.9 -1.1**
	comp=Z,1.0nm,0.4s,baz=232,slow=5.4,SNR=11					
	comp=Z,1.0nm,0.4s					
TX32	**Lajitas Array**	85.99	58		P	**05 14 27.2 +2.0**
TX32				IAmb	IAmb	05 14 28.5
	comp=Z,7.9nm,1.2s					
TXAR	**Lajitas Array**	85.99	58	P	P	**05 14 27.0 +1.8**
	comp=Z,2.5nm,0.8s,baz=225,slow=5.9,SNR=23					
	comp=Z,2.5nm,0.8s					
TXAR	**Lajitas Array**	85.99	58	P	P	**05 14 27.2 +2.0**
ANMO	**Albuquerque**	86.11	52	P	P	**05 14 26.5 +0.8**
	comp=Z,0.9nm,0.9s,baz=208,slow=5.9,SNR=2.5					
	comp=Z,0.9nm,0.9s					
XAN	**Xi'an**	86.36	307	P	P	**05 14 27.4 +0.7**
XAN				pmax	pmax	
	comp=Z,30nm,1.1s					
J26L	**Joseph Creek**	86.47	14	P	P	**05 14 27.3 +0.7**
HHC	**Hu-ho-hao-te**	87.38	314	*e*P	P	**05 14 32.6 +1.2**
HHC				pmax	pmax	
	comp=Z,32nm,0.9s					
HHC				pmax	pmax	
	comp=Z,95nm,6.1s					
PDAR	**Pinedale Array**	87.38	43	P	P	**05 14 32.1 +0.6**
	comp=Z,1.2nm,0.8s,baz=221,slow=1.4,SNR=6.4					
	comp=Z,1.2nm,0.8s					
BMAR	**Burnt Mountain**	88.73	12	P	P	**05 14 37.6 +0.6**
CMAR	**Chiang Mai Arr**	88.97	290	P	P	**05 14 40.2 +1.0**
	comp=Z,7.3nm,0.9s,baz=111,slow=3.0,SNR=21					
	comp=Z,7.3nm,0.9s					
PZH	**PanZhiHua**	89.25	298	P	P	**05 14 41.7 +1.2**
PZH				pmax	pmax	
	comp=Z,10.0nm,1.2s					
PZH				pmax	pmax	
	comp=Z,100nm,5.6s					
SNAA	**Sanae**	90.51	179	P	P	**05 14 45.1 -0.3**
SNAA	**Sanae**	90.51	179	P	P	**05 14 45.6 +0.2**
SNAA				IAmb	IAmb	05 14 46.3
	comp=Z,8.4nm,1.3s					
VNA3	**Neumayer Olymp**	90.65	176	P	P	**05 14 46.5 +0.5**
LZH	**Lanzhou**	90.99	308	*e*P	P	**05 14 48.4 0.0**
LZH				pP	PcP	05 14 53.8 +4.8
LZH				pmax	pmax	
	comp=Z,16nm,1.4s					
VNA2	**Neumayer--Watz**	91.09	177	P	P	**05 14 48.5 +0.6**
VNA1	**Neumayer--Stat**	91.31	177	P	P	**05 14 49.7 +0.7**
SONM	**Songino Array**	93.66	319	P	P	**05 14 59.9 -0.4**
	comp=Z,0.7nm,0.6s,baz=137,slow=4.3,SNR=5.5					
	comp=Z,0.7nm,0.6s					
GTA	**Gaotai**	95.14	310	*e*P	P	**05 15 07.6 +0.4**
GTA				pmax	pmax	
	comp=Z,2.0nm,0.7s					
ZALV	**Zalesovo Beam**	108.34	322	PKiKP	PKiKP	**05 20 06.5 -1.1**
	comp=Z,0.9nm,0.5s,baz=27,slow=0.6,SNR=5.5					
MKAR	**Makanchi Array**	109.24	314	PKiKP	PKiKP	**05 20 08.4 -1.2**
	comp=Z,1.3nm,0.4s,baz=157,slow=0.6,SNR=22					
ABKAR	**Akbulak array**	124.04	318		PKiKP	**05 20 37.7 -0.5**
ARCES	**ARCESS Array B**	126.41	350	PKP	PKiKP	**05 20 41.4 -1.0**
	comp=Z,2.2nm,0.6s,baz=357,slow=1.8,SNR=16					
GEYT	**Alibeck**	127.14	304	PKP	PKiKP	**05 20 44.1 -0.7**
	comp=Z,1.4nm,0.4s,baz=52,slow=7.5,SNR=2.0					
KLMR	**Klimovskoe**	129.46	337	*e*PKPdf	PKPdf	**05 20 46.3 -1.5**
KLMR				AMP		05 20 49.3
	comp=Z,4.0nm,0.8s					
KLMR				*e*PP	PP	**05 23 12.7 +5.7**
FINES	**FINESS Array B**	133.29	344	PKhKP	PKPpre	05 20 45.9
	comp=Z,0.5nm,0.4s,baz=323,slow=2.9,SNR=7.2					
FINES				PKP	PKiKP	**05 20 55.3 -1.1**
	comp=Z,1.6nm,0.5s,baz=119,slow=4.3,SNR=11					
NB2	**NORSAR Subarra**	136.47	353	PKP	PKPpre	05 20 54.4
	comp=Z,0.3nm,0.5s,baz=16,slow=3.0					
NOA	**NORSAR Array B**	136.47	353	PKhKP	PKPpre	05 20 53.5
	comp=Z,0.7nm,0.7s,baz=23,slow=3.9,SNR=3.8					
HFS	**Hagfors**	137.03	351	PKhKP	PKPpre	05 20 51.1
	comp=Z,1.3nm,0.3s,baz=70,slow=4.9,SNR=15					
CHVG	**Ch'k'valeri**	137.85	315	⇑P	PKiKP	05 21 14.1 +7.8
AKASG	**Malin Array Be**	140.66	332	PKhKP	PKPpre	05 21 02.3
	comp=Z,1.1nm,0.3s,baz=34,slow=4.3,SNR=11					
AKASG				PKP	PKiKP	**05 21 09.2 -2.5**
	comp=Z,1.6nm,0.3s,baz=33,slow=3.3,SNR=7.8					
EKA	**Eskdalemuir Ar**	142.55	5	PKhKP	PKPpre	05 21 08.6
	comp=Z,0.5nm,0.3s,baz=344,slow=2.8,SNR=12					
SORM	**Soroca**	142.90	330	⇑P	PKPdf	**05 21 10.5 -2.5**
VASR	**Vaslui**	144.22	329	⇓P	PKPab	**05 21 15.6 0.0**
BURR	**Bucovina Ar. S**	144.70	332		PKiKP	**05 21 18.1 -2.2**
BURAR	**Bucovina Array**	144.72	332	⇑P	PKiKP	**05 21 18.4 -1.9**
BURAR	**Bucovina Array**	144.72	332		PKiKP	**05 21 18.1 -2.2**
GHRR		144.81	328	⇓P	PKiKP	**05 21 18.3 -2.1**
BIZ	**Bicaz**	144.81	331	⇑P	PKPab	**05 21 17.6 -0.3**
TESR	**Tescani**	144.86	330	⇓P	PKPab	**05 21 17.4 -0.8**
BR131	**Keskin Array S**	144.88	315		PKPbc	05 21 16.5 -1.2
BRTR	**Keskin Array B**	144.89	315	PKP	PKPab	**05 21 17.4 -1.3**
	comp=Z,6.0nm,0.4s,baz=134,slow=3.6,SNR=41					
BRTR	**Keskin Array B**	144.89	315		PKPab	**05 21 17.6 -1.1**
KOLS	**Kolonicke sedl**	144.91	336	*e*PKP	PKPab	**05 21 17.8 -0.4**
CFR	**Carcaliu**	145.04	327	⇑P	PKPab	**05 21 18.1 -0.8**
TPGR	**Topolog**	145.11	326	⇓P	PKPab	**05 21 18.3 -0.8**
KSP	**Ksiaz**	145.21	344	*e*PKP	PKPab	**05 21 18.7 -0.7**
NIE	**Niedzica**	145.23	339	*e*PKP	PKPab	**05 21 19.1 -0.4**
CRVS	**Cervenica-Dubn**	145.24	337	*e*PKP	PKPab	**05 21 18.7 -0.8**
VRI	**Vrincioaia**	145.28	329	⇓P	PKPab	**05 21 19.1 -0.7**
PLOR	**Plostina**	145.33	329	⇓P	PKPab	**05 21 19.2 -0.9**
ANTO	**Ankara**	145.38	316		PKPbc	**05 21 18.3 -0.7**
HARR	**Harsova**	145.48	326	⇓P	PKPab	**05 21 19.5 -1.1**
OSTC	**Ostas**	145.49	344	*e*PKP	PKPbc	**05 21 18.4 -0.5**
ARCR	**ARCALIA**	145.50	332	⇑P	PKPab	**05 21 19.9 -0.7**
CHVC	**Chvalec**	145.51	344	*e*PKP	PKPab	**05 21 18.7 -1.8**
CLL	**Collm**	145.56	347		PKPab	**05 21 19.2 -1.5**
CLL	**Collm**	145.56	347	⇓*i*PKPbc	PKPab	**05 21

KHC	Kasperske Hory	147.48	345		PKiKP	05	21	24.8 -1.1
KHC				PKPab	PKPab	05	21	29.5 +0.9
KHC	Kasperske Hory	147.48	345	*e*PKP	PKiKP	05	21	24.2 -1.7
KHC				*ex*	PKPab	05	21	28.1 -0.4
BHOU	Houvegnez	147.53	355	*d*PKPbc	PKiKP	05	21	25.1 -0.8
CKRC	Cesky Krumlov	147.58	344	*e*PKP	PKiKP	05	21	24.9 -1.2
CKRC				*ex*	PKPab	05	21	28.7 -0.2
BMRD	Maredsous	147.67	356	*d*PKPbc	PKiKP	05	21	24.8 -1.4
BMRD				*d*PKPab	PKPab	05	21	28.9 -0.3
GERES	GERESS Array B	147.71	345	PKPbc	PKiKP	05	21	25.1 -1.3
	comp=Z,5.9nm,0.5s,baz=33,slow=3.5,SNR=64							
RCHB	Rochefort	147.79	356	*d*PKP	PKPbc	05	21	24.4 -0.6
BZS	Buzias	147.84	333	⇑P	PKiKP	05	21	25.1 -1.6
DOU	Dourbes	147.89	356	*d*PKPbc	PKiKP	05	21	25.2 -1.4
EGYH	Egyhazaskeszo	147.96	340	PKP	PKiKP	05	21	26.9 0.0
CONA	Conrad Observa	147.97	342	*i* P	PKiKP	05	21	26.1 -0.9
	comp=Z,17nm,1.3s,SNR=10							
RONA	Rosalia, Austr	148.04	341	*i* P	PKiKP	05	21	26.2 -0.9
	comp=Z,14nm,1.0s,SNR=9.8							
HERR	Herculane	148.06	332	⇓P	PKiKP	05	21	25.8 -1.4
MPLH	Magyarpolny	148.10	339	PKP	PKiKP	05	21	26.5 -0.6
WLF	Walferdange	148.20	354	*d*PKPbc	PKiKP	05	21	26.8 -0.5
MDVR	Moldovita	148.45	332	⇓P	PKiKP	05	21	26.7 -1.4
MOA	Molln	148.49	344	*i* P	PKiKP	05	21	26.9 -1.1
	comp=Z,8.7nm,1.3s							
MORH	Mrgy, Hungar	148.53	337	⇓P	PKiKP	05	21	26.4 -1.6
MORH	Mrgy, Hungar	148.53	337	*e*P	PKiKP	05	21	26.5 -1.6
ARSA	Arzberg	148.68	342	*i* P	PKiKP	05	21	27.2 -1.2
	comp=Z,8.9nm,1.4s							
BIOA	Bad Ischl, Aus	148.80	344	*e*P	PKiKP	05	21	27.3 -1.3
	comp=Z,7.4nm,1.1s							
KOVH	Kovagotottos	148.84	338	PKP	PKiKP	05	21	27.7 -1.0
BLKB	Belogradchik	148.90	330	⇓P	PKiKP	05	21	28.0 -1.0
FRGS	Fruska Gora	148.96	335	⇑P	PKiKP	05	21	28.2 -0.9
FRGS	Fruska Gora	148.96	335	*e*P	PKPbc	05	21	26.5 -1.6
SOKA	Soboth	149.34	342	*e*P	PKiKP	05	21	28.6 -1.3
	comp=Z,9.0nm,1.1s,SNR=7.2							
BOVS	Bovan	149.34	331	⇓P	PKiKP	05	21	28.4 -1.5
VTS	Vitosha	149.36	328	⇓P	PKiKP	05	21	29.4 -0.7
KBA	Koelnbreinsper	149.44	344	*e*P	PKiKP	05	21	28.9 -1.3
	comp=Z,4.3nm,0.5s							
WATA	Walderalm	149.62	347	*i* P	PKiKP	05	21	29.5 -1.0
	comp=Z,6.1nm,0.6s							
OBKA	Obir	149.63	342	*i* P	PKiKP	05	21	28.9 -1.6
	comp=Z,4.1nm,0.9s							
RETA	Reutte	149.65	348	*i* P	PKiKP	05	21	29.8 -0.6
	comp=Z,3.7nm,0.6s							
WTTA	Wattenberg	149.68	346	*i* P	PKiKP	05	21	29.9 -0.7
	comp=Z,17nm,0.6s,SNR=8.4							
MOTA	Moosalm	149.72	347	*i* P	PKiKP	05	21	29.8 -1.0
	comp=Z,15nm,1.1s,SNR=6.1							
DIVS	Divibare	149.75	333	*e*P	PKiKP	05	21	29.7 -1.1
MYKA	Terra Mystica	149.78	343	*e*P	PKiKP	05	21	29.2 -1.5
	comp=Z,8.2nm,0.7s							
SQTA	Sankt Quirin	149.81	347	*i* P	PKiKP	05	21	30.1 -0.7
	comp=Z,11nm,0.6s,SNR=7.1							
ABTA	Abfaltersbach	149.96	345	*e*P	PKiKP	05	21	29.8 -1.3
	comp=Z,16nm,0.7s,SNR=9.0							
CRES	Cresnjev	149.97	341	*e*P	PKiKP	05	21	29.7 -1.4
DAVA	Damuels	150.01	349	*i* P	PKiKP	05	21	30.7 -0.6
	comp=Z,18nm,1.1s,SNR=5.0							
LJU	Ljubljana	150.06	342	*e*P	PKiKP	05	21	29.9 -1.4
CRNS	Crni Vrh	150.10	342	*i* PKPbc	PKiKP	05	21	30.3 -1.1
FETA	Feichten	150.10	347	*e*P	PKiKP	05	21	31.0 -0.5
	comp=Z,11nm,1.0s							
BBLS	Lazići	150.18	334	*e*P	PKiKP	05	21	30.5 -1.2
GBAS	Gorenja Brezov	150.18	342	*i* PKPbc	PKiKP	05	21	30.7 -0.8
BLY	Banja Luka	150.32	337	*e*P	PKPbc	05	21	28.4 -2.9
BOJS	Bojanci	150.32	340	*i* PKPbc	PKiKP	05	21	31.4 -0.4
CEY	Cerknica	150.37	342	*e*P	PKPbc	05	21	29.7 -1.8
RUDO	Rudo	150.40	333	*e*P	PKiKP	05	21	30.8 -1.3
SJES	Sjenica	150.42	332	*e*P	PKiKP	05	21	31.8 -0.4
DAVOX	Davos/Dischmat	150.50	348	PKPbc	PKiKP	05	21	32.0 -0.4
	comp=Z,14nm,0.6s,baz=63,slow=2.3,SNR=28							
MGRS	Mrkonjic Grad	150.64	337	*e*P	PKPab	05	21	42.1 +0.3
SKDS	Skadanscina	150.66	342	*e*P	PKPbc	05	21	28.4 -3.7
BRY	Bratogost	151.34	334	*e*P	PKiKP	05	21	32.9 -1.3
PDG	Podgorica	151.40	332	*e*P	PKiKP	05	21	32.9 -1.2
DRME	Dracevica, Mon	151.63	332	*e*P	PKiKP	05	21	33.7 -0.9
FNA	Florina	151.65	327		PKiKP	05	21	34.2 -0.6
STON	Ston	151.71	335	*e*P	PKPbc	05	21	31.6 -2.9
IDI	Anoyia	153.13	314	⇓P	PKiKP	05	21	38.6 +0.6
IDI	Anoyia	153.13	314	PKPbc	PKiKP	05	21	37.7 -0.3
	comp=Z,3.2nm,0.4s,baz=343,slow=5.0,SNR=8.9							
ESDC	Sonseca Array	157.86	12	PKPab	PKPab	05	22	12.2 -0.7
	comp=Z,0.2nm,0.4s,baz=336,slow=5.6,SNR=2.4							
TORD	Torodi Ar. Bea	175.18	180	PKP	PKPdf	05	21	48.2 -1.4
	comp=Z,2.1nm,1.0s,baz=236,slow=1.3,SNR=5.0							
TORD				PKPab	PKPab	05	23	29.9 +0.2
	comp=Z,0.5nm,0.8s,baz=214,slow=3.3,SNR=2.3							

WEL 11 05:36:30.3±0.7, 40°S±3°×17°5E±°, h13km±17km, M3.3/6, ML3.7/6, MLv3.3/6, Error ellipse: s-maj=0.0km s-min=0.0km az=66.0, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WAZ	Wanganui	0.44	17	P	Pb	05 36 39.8	-0.1
KIW	Kapiti Island	0.69	174	P	Pb	05 36 44.4	+0.3
KIW				S	Sb	05 36 53.7	+0.3
OGWZ	Otaki Gorge	0.69	157	P	Pb	05 36 44.5	+0.4
OGWZ				S	Sb	05 36 54.3	+0.7
MRZ	Mangatainoka R	0.75	130	P	Pb	05 36 45.6	+0.4
MRZ				S	Sb	05 36 56.2	+0.8
POWZ	Post Office Ro	0.76	107	P	Pb	05 36 45.5	+0.2
POWZ				S	Sb	05 36 55.4	0.0
LREZ	Lake Rotokare	0.79	336	P	Pb	05 36 45.6	-0.1
LREZ				S	Sb	05 36 57.2	+0.9
HOWZ	Holdsworth Sta	0.89	144	P	Pb	05 36 48.0	+0.4
HOWZ				S	Sb	05 37 00.2	+0.8
DUWZ	D'Urville Isla	0.93	227	P	Pb	05 36 47.6	-0.5
MTVZ	Mangateitei	0.94	32	P	Pb	05 36 46.9	-1.5
MTVZ				S	Sg	05 36 59.0	-1.7
CAW	Cannon Point	0.95	169	P	Pb	05 36 48.5	0.0
CAW				S	Sg	05 37 01.7	+0.8
PRWZ	Pori Road	0.96	114	P	Pn	05 36 49.0	-0.3
PRWZ				S	Sn	05 37 02.0	-0.8
PKVZ	Pokaka	0.98	25	P	Pb	05 36 47.2	-1.8
PREZ	Palmer Road	0.98	328	P	Pb	05 36 48.9	-0.1
TIWZ	Tintock	1.01	127	P	Pn	05 36 50.1	0.0
DVHZ	Dannevirke	1.04	97	P	Pb	05 36 50.1	+0.1
WNVZ	Wahianoa	1.04	35	P	Pb	05 36 48.4	-1.8
TRVZ	Turoa	1.04	33	P	Pb	05 36 48.4	-1.9
TRVZ				S	Sb	05 37 01.3	-2.5
MOVZ	Moawhango	1.05	43	P	Pb	05 36 48.2	-2.2
MOVZ				S	Sb	05 37 00.9	-3.1
VRZ	Vera Road	1.05	357	P	Pb	05 36 49.2	-1.1
VRZ				S	Sb	05 37 03.3	-0.7
NMEZ	Namu Road	1.05	316	P	Pb	05 36 50.0	-0.3
NEZ	North Egmont	1.06	328	P	Pb	05 36 50.0	-0.6
DRZ	Dome Shelter	1.07	33	P	Pb	05 36 50.0	-0.7
WHVZ	Whangaehu Hut	1.07	34	P	Pb	05 36 48.8	-2.0
KHEZ	Kahui Hut	1.08	325	P	Pb	05 36 50.4	-0.4
FWVZ	Far West T-bar	1.08	32	P	Pb	05 36 48.9	-2.0
PNHZ	Pukenui	1.09	76	P	Pb	05 36 49.8	-1.2
DREZ	Durham Road	1.10	334	P	Pb	05 36 50.6	-0.5
WEL	Wellington	1.11	182	P	Pb	05 36 50.8	-0.4
MTW	Mount Morrison	1.11	152	P	Pb	05 36 51.3	+0.1
TCW	Tory Channel	1.11	202	P	Pb	05 36 50.4	-0.9
TUVZ	Tukino	1.11	36	P	Pb	05 36 49.5	-1.9
NGZ	Ngauruhoe	1.17	31	P	Pb	05 36 50.3	-2.1
NBEZ	Newall Road No	1.17	321	P	Pn	05 36 51.9	-0.3
PKE	Pukeiti	1.18	327	P	Pn	05 36 52.0	-0.3
SNVZ	South Ngauruho	1.18	33	P	Pb	05 36 50.6	-1.9
BHHZ	Black Hill Sta	1.18	55	P	Pn	05 36 50.1	-2.3
TWVZ	Taurewa	1.20	23	P	Pn	05 36 50.3	-2.5
OTVZ	Oturere	1.21	33	P	Pn	05 36 51.0	-1.9
NNVZ	North Ngauruho	1.21	31	P	Pn	05 36 50.8	-2.2
WTVZ	West Tongariro	1.22	29	P	Pn	05 36 50.7	-2.3
BHW	Baring Head	1.23	178	P	Pn	05 36 52.7	-0.3
TMWZ	Te Maipa	1.23	139	P	Pn	05 36 52.7	-0.5
ETVZ	East Tongariro	1.25	34	P	Pn	05 36 51.5	-1.9
WPHZ	Waipukurau	1.25	85	P	Pb	05 36 53.8	+0.2
KRVZ	Karewarewa	1.25	31	P	Pn	05 36 51.9	-1.6
TMVZ	Te Maari	1.26	33	P	Pn	05 36 51.7	-1.9
NTVZ	North Tongariro	1.26	32	P	Pn	05 36 51.6	-2.1
MSWZ	Moikau Station	1.28	165	P	Pg	05 36 54.0	-0.1
CPWZ	Castlepoint	1.28	125	P	Pg	05 36 54.6	-0.3
PAWZ	Paruwai Farm	1.29	159	P	Pb	05 36 54.2	-0.1
ANWZ	Angora Road	1.29	103	P	Pn	05 36 53.5	-0.5
KRHZ	Kereru	1.31	66	P	Pn	05 36 53.5	-0.7

TRWZ	Traveller	1.39	152	P	Pb	05	36	55.8 -0.2
PRHZ	Porangahau	1.39	94	P	Pb	05	36	56.5 +0.4
TUWZ	Tuamarina	1.42	208	P	Pn	05	36	54.5 -1.1
PLWZ	Palliser	1.43	167	P	Pn	05	36	56.2 +0.3
RITZ	Rihia Road	1.44	34	P	Pn	05	36	55.4 -0.7
KWHZ	Kaweka Forest	1.45	59	P	Pn	05	36	55.8 -0.3
RATZ	Rangitukua	1.50	30	P	Pn	05	36	57.4 +0.5
MCHZ	McNeill Hill	1.62	64	P	Pn	05	36	58.7 +0.2
KAHZ	Kahuranaki	1.62	77	P	Pn	05	36	58.3 -0.3
WATZ	Wairara	1.63	26	P	Pn	05	36	58.7 0.0
BKZ	Black Stump Fm	1.64	52	P	Pn	05	36	58.1 -0.6
TKNZ	Takaka Hill	1.65	238	P	Pn	05	36	58.7 -0.3
HIZ	Hauiti	1.66	1	P	Pn	05	36	57.6 -1.5
BSWZ	Blackbirch Sta	1.69	205	P	Pn	05	36	60.0 +0.5
KUTZ	Kaahu Road	1.86	25	P	Pb	05	37	03.6 -0.4
NMHZ	Naumai	1.88	55	P	Pn	05	37	02.1 +0.1
ARHZ	Aropaoanui	1.91	62	P	Pn	05	37	02.3 -0.2
WPRZ	Whakapapatarin	1.96	33	P	Pn	05	37	04.0 +0.9
MRNZ	Matariki Terra	1.99	231	P	Pn	05	37	03.8 +0.3
ALRZ	Allen Road	2.00	37	P	Pn	05	37	04.1 +0.4
MTHZ	Maungataniwha	2.05	50	P	Pn	05	37	03.3 -1.1
PRRZ	Plateau Road	2.07	37	P	Pn	05	37	04.8 +0.1
HRRZ	Handcock Road	2.12	33	P	Pn	05	37	06.3 +1.0
MUGZ	Murupara	2.27	42	P	Pn	05	37	06.6 -0.9
KNZ	Kokohu	2.49	63	P	Pn	05	37	08.8 -1.6
TOZ	Tahuroa Road	2.50	12	P	Pn	05	37	08.5 -2.1
PRGZ	Paritu Road	2.68	63	P	Pn	05	37	11.3 -1.8
TGRZ	Tauranga	2.69	25	P	Pn	05	37	14.3 +1.1
RIGZ	Rimuhau	2.71	58	P	Pn	05	37	12.2 -1.3
MKAZ	Moumakai	3.08	5	P	Pn	05	37	16.9 -1.6
GVZ	Greta Valley S	3.09	205	P	Pn	05	37	17.7 -1.0
AWAZ	Awhitu Peninsu	3.11	357	P	Pn	05	37	18.0 -1.0
RUGZ	Rakumara Rang	3.13	46	P	Pn	05	37	17.5 -1.9
TWGZ	Tauwhareparae	3.17	52	P	Pn	05	37	18.7 -1.0
HAZ	Te Kaha	3.34	45	P	Pn	05	37	21.3 -0.8
WIAZ	Waiheke Island	3.39	4	P	Pn	05	37	21.4 -1.4
PKGZ	Pakihiroa	3.41	49	P	Pn	05	37	21.5 -1.7

IDC 11 05:37:33.5±3.0, 51°42S×139°15E, h0km, mb4.0/2, mbtmp3.9/3, ML3.7/1, MS3.5/5, Error ellipse: s-maj=158.5km s-min=43.1km az=97.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	19.61	6	P	Pn	05 42 03.9	-0.5
	0.1nm,0.3s,baz=172,slow=12,SNR=1.5 2.0nm,0.9s						
H01W1	Cape Leeuwin H	24.42	303	T	T	06 08 49.9	
	baz=139,slow=74,SNR=54						
H01W2	Cape Leeuwin H	24.43	303	T	T	06 08 50.5	
	baz=139,slow=74,SNR=47						
H01W3	Cape Leeuwin H	24.44	303	T	T	06 08 50.7	
	baz=139,slow=74,SNR=55						
ASAR	Alice Springs	28.00	350	P	P	05 43 25.8	-0.2
	0.7nm,0.7s,baz=166,slow=9.9,SNR=11						
ASAR				PcP	PcP	05 46 40.9	0.0
	0.3nm,0.8s,baz=169,slow=1.9,SNR=1.0 0.7nm,0.7s						
WRA	Warramunga Arr	31.64	351	P	P	05 43 58.0	-0.2
	3.3nm,0.9s,baz=172,slow=8.5,SNR=16 3.3nm,0.9s						
CTA	Charters Tower	31.76	13	LR	LR	05 56 06.6	
	comp=Z,64nm,18.7s,baz=152,slow=35						
DZM	Mont Dzumac	36.15	46	LR	LR	05 58 29.7	
	comp=Z,79nm,18.3s,baz=204,slow=35						
BATI	Baumata	43.00	337	LR	LR	06 03 58.3	
	comp=Z,106nm,20.1s,baz=121,slow=37						
KAPI	Kappang	48.99	334	LR	LR	06 09 12.0	
	comp=Z,39nm,18.4s,baz=286,slow=39						
H08S2	Diego Garcia H	69.57	284	T	T	07 04 56.5	
	baz=146						
H08S1	Diego Carcia H	69.59	284	T	T	07 04 57.8	
	baz=146						
H08S3	Diego Garcia H	69.59	284	T	T	07 05 00.7	
	baz=146						
CMAR	Chiang Mai Arr	77.96	321	LR	LR	06 25 07.3	
	comp=Z,12nm,19.0s,baz=225,slow=37						
ARCES	ARCESS Array B	144.90	326	PKP	PKPab	05 57 09.6	-0.5
	3.9nm,1.1s,baz=90,slow=3.6,SNR=5.5						
GERES	GERESS Array B	145.61	288	PKPbc	PKPdf	05 57 12.6	-0.3
	0.2nm,0.5s,baz=115,slow=4.7,SNR=3.9						

MOS ***11*** *05:46:04.7±0.8, 42°23N×143°83E, h48km, mb4.0/1, Error ellipse: s-maj=16.6km s-min=8.4km az=70.0*
NIED ***11*** *05:46:05.7, 42°34N×143°88E, h55km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr7.17; Mθθ-5.39; Mφφ-1.78; Mrθ1.81; Mrφ-1.65; Mθφ0.53; Fault plane solution: M₀6.86000×10¹⁴ NP1: φs248.00000°, δ37.00000°, λ88.00000°. NP2:φs70.00000°, δ53.00000°, λ91.00000°.*
JMA ***11*** *05:46:05.7±0.1, 42°3N±0°4×143°9E±0°6, h55km±2km, MV3.6/38, SE OFF TOKACHI*
JMA Felt I J1 at SE OFF TOKACHI .
IDC ***11*** *05:46:07.9±3.1, 42°29N×143°79E, h57km±28km, mb3.4/13, mbtmp3.7/16, ML2.7/3, MS2.6/2, Error ellipse: s-maj=20.4km s-min=18.2km az=137.0*
SKHL ***11*** *05:46:07.0±0.1, 42°30N×143°90E, h56km±6km, mb4.5/3*
ISC 11 05:46:06.3±1.0, 42°27N±0°06×143°95E±0°04, h44km±9km, n53, σ1s26/64, mb3.7/13, 14D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTHR	Tokachihiroo	0.49	273	⇓*e*P	Pn	05 46 16.7	-0.3
JTHR				⇓*e*S	Sn	05 46 24.0	-0.6
JCH	Churui	0.56	309	⇓*e*P	Pn	05 46 17.3	-0.7
JCH				⇓*e*S	Sn	05 46 24.9	-1.4
JOB	Onbets	0.64	352	⇓*e*P	Pn	05 46 18.3	-0.8
JOB				⇓*e*S	Sn	05 46 27.0	-1.1
JEM	Erimo	0.64	247	*e*P	Pn	05 46 18.9	-0.2
JNBK	Urakawa-nobuka	0.89	271	⇓*e*P	Pn	05 46 21.4	-1.0
JAK	Akkeshi	0.91	37	⇓*e*P	Pn	05 46 21.6	-1.1
JAK				⇓*e*S	Sn	05 46 33.8	-0.9
AKK	Akkeshi	0.99	41	*e*P	Pn	05 46 22.8	-1.0
JAR	Ashorobuto	1.04	353	⇓*e*P	Pn	05 46 23.3	-1.1
JAR				⇓*e*S	Sn	05 46 35.7	-2.1
JSHD	Hidakashinhida	1.11	278	*e*P	Pn	05 46 24.8	-0.6
JKHN	Kushirohamanak	1.21	47	*e*P	Pn	05 46 26.2	-0.5
JKHN				*e*S	Sn	05 46 40.9	-1.0
JBT2	Biratori 2	1.28	294	⇓*e*P	Pn	05 46 26.1	-1.7
JFR	Furan	1.34	312	*e*P	Pn	05 46 27.3	-1.3
JNK	Nakash	1.43	23	*e*P	Pn	05 46 28.4	-1.4
JNK				*e*S	Sn	05 46 44.5	-2.9
JIAM	Iburiatsuma	1.54	284	*e*P	Pn	05 46 32.8	+1.5
JTKR	Abashiri--Toko	1.70	359	⇓*e*P	Pn	05 46 33.2	-0.3
NMR	Nemuro--Hokkai	1.71	49	*e*PN	Pn	05 46 32.5	-1.0
NMR				*i* S	Sn	05 46 51.7	-2.5
NMR	Nemuro--Hokkai	1.71	49	*e*P	Pn	05 46 32.6	-1.0
NMR				*i* S	Sn	05 46 51.9	-2.3
JAB	Ashibetsu	1.77	315	*e*P	Pn	05 46 34.6	+0.1
JMP	Maruseppu	1.79	346	⇓*e*P	Pn	05 46 34.2	-0.6
GLVR	Golovnino	1.86	38	PN	Pn	05 46 37.4	+1.7
GLVR				*e*S	Sn	05 46 57.6	-0.5
GLVR				smax	smax		
	comp=N,1μm,0.3s						
GLVR				smax	smax		
	comp=E,2μm,0.3s						
GLVR	Golovnino	1.86	38	*e*P	Pn	05 46 36.4	+0.7
GLVR				*e*S	Sn	05 46 57.8	-0.3
GLVR				A	A	05 47 03.3	
	comp=E,750nm,0.5s						
GLVR				A	A	05 47 03.3	
	comp=E,980nm,0.5s						
RUSJ	Misakicho	2.06	27	*e*PN	Pn	05 46 38.2	-0.3
RUSJ				*e*S	Sn	05 47 06.2	+3.2
YUK	Yuzh-Kuril'sk	2.25	38	*e*PN	Pn	05 46 42.4	+1.4
YUK				*e*S	Sn	05 47 07.2	-0.4
YUK				pmax	pmax		
	comp=Z,157nm,0.1s						
YUK				smax	smax		
	comp=N,672nm,0.4s						
YUK				smax	smax		
	comp=E,2μm,0.4s						
YUK	Yuzh-Kuril'sk	2.25	38	*e*P	Pn	05 46 42.0	+1.0
YUK				AMB	AMB	05 46 46.0	
	comp=E,110nm,0.3s						
YUK				*e*S	Sn	05 47 07.2	-0.4
YUK				A	A	05 47 12.5	
	comp=E,700nm,0.5s						
YUK				A	A	05 47 12.5	
	comp=E,820nm,0.5s						
SHO	Shikotan	2.65	52	*e*PN	Pn	05 46 46.6	+0.1
SHO				*i* S	Sn	05 47 15.0	-2.3
SHO				pmax	pmax		
	comp=E,21nm,0.2s						
SHO				pmax	pmax		
	comp=Z,34nm,0.2s						
SHO				smax	smax		
	comp=E,517nm,0.3s						
SHO				smax	smax		
	comp=N,163nm,0.4s						
SHO	Shikotan	2.65	52	*e*P	Pn	05 46 46.6	+0.1
SHO				AMB	AMB	05 46 52.6	
	comp=N,50nm,0.3s						
SHO				*i* S	Sn	05 47 16.4	-0.9
SHO				A	A	05 47 19.8	
	comp=N,310nm,0.4s						
SHO				A	A	05 47 19.8	
	comp=N,380nm,0.4s						
KUR	Kuril'sk	4.10	42	*e*S	Sn	05 47 54.9	+1.8
KUR				A	A	05 48 05.1	
	comp=N,80nm,0.3s						
KUR				A	A	05 48 05.1	
	comp=N,40nm,0.3s						
YSS	Yuzh-Sakhalins	4.76	350	*e*PN	Pn	05 47 17.3	+1.8
YSS	Yuzh-Sakhalins	4.76	350	*e*P	Pn	05 47 16.5	+1.0
YSS				AMB	AMB	05 47 19.2	
	comp=N,20nm,0.4s						
MJAR	Matsushiro Arr	7.24	220	P	Pn	05 47 50.3	+0.6
	comp=N,0.1nm,0.3s,baz=41,slow=13,SNR=6.7						
MJAR				LR	LR	05 51 18.4	
	comp=N,51nm,20.3s,baz=11,slow=43 comp=N,1.7nm,0.6s						
KLR	Kul'dur	11.00	313	P	Pn	05 48 40.7	-0.2
	comp=N,0.1nm,0.3s,baz=56,slow=5.2,SNR=3.5 comp=N,2.2nm,0.9s						
KLR	Kul'dur	11.00	313	*e*P	Pn	05 48 43.2	+2.2
KSRS	Korea Array	13.22	254	LR	LR	05 53 19.1	
	comp=N,23nm,21.0s,baz=70,slow=33						
PETK	Petropavlovsk-	14.23	36	P	Pn	05 49 27.4	+2.5
	comp=N,0.2nm,0.3s,baz=182,slow=10,SNR=5.8 comp=N,1.2nm,0.5s						
SONM	Songino Array	26.92	295	P	P	05 51 43.1	-0.3
	comp=N,0.6nm,0.6s,baz=106,slow=3.1,SNR=2.2 comp=N,0.6nm,0.6s						
H11N2	WAKE ISLAND Hy	29.68	132	T	T	06 23 30.8	
	baz=325,slow=75,SNR=226						
H11N1	WAKE ISLAND Hy	29.70	132	T	T	06 23 33.9	
	baz=325,slow=75,SNR=247						
H11N3	WAKE ISLAND Hy	29.70	132	T	T	06 23 31.1	
	baz=325,slow=75,SNR=241						
H11S1	WAKE ISLAND Hy	30.57	134	T	T	06 24 38.8	
	baz=326,slow=76,SNR=272						
H11S3	WAKE ISLAND Hy	30.58	134	T	T	06 24 39.9	
	baz=326,slow=76,SNR=194						
H11S2	WAKE ISLAND Hy	30.59	134	T	T	06 24 39.7	
	baz=326,slow=76,SNR=157						
ZALV	Zalesovo Beam	40.04	308	P	P	05 53 36.7	-0.2
	comp=N,0.5nm,0.3s,baz=109,slow=7.9,SNR=2.3						
ZALV				PcP	PcP	05 55 40.9	-0.1
	comp=N,0.6nm,0.4s,baz=98,slow=3.1,SNR=4.0 comp=N,0.5nm,0.3s						
MKAR	Makanchi Array	43.20	298	P	P	05 54 02.3	-0.6
	comp=N,0.7nm,0.7s,baz=84,slow=9.7,SNR=6.2						
MKAR				PcP	PcP	05 55 51.8	+0.2
	comp=N,0.1nm,0.4s,baz=56,slow=5.7,SNR=2.7 comp=N,0.7nm,0.7s						
ILAR	Eielson Array	44.06	35	P	P	05 54 10.0	+0.5
	comp=N,0.4nm,0.6s,baz=274,slow=6.3,SNR=6.9 comp=N,0.4nm,0.6s						
INK	Inuvik	48.85	29	P	P	05 54 47.2	+0.2
	comp=N,2.0nm,0.9s,baz=297,

CHMS				⇑*e*S		**Sb**	**06 11 22.9**	**-0.7**
	baz=35								
CHMS	**Chumysh**	**0.94**	**333**	⇑P		**Pg**	**06 11 09.7**	**-0.3**
	8.5nm,0.2s								
CHMS				⇑S		**Sg**	**06 11 22.0**	**-0.2**
	35nm,0.2s								
KST	**Kastek**	**1.00**	**28**	*e*P		**Pg**	**06 11 10.9**	**-0.3**
	baz=27								
KST				*e*S		**Sb**	**06 11 25.1**	**-0.3**
	baz=27								
KST	**Kastek**	**1.00**	**28**	*e*P		**Pg**	**06 11 10.9**	**-0.3**
	8.0nm,0.1s								
KST				*e*S		**Sb**	**06 11 25.1**	**-0.3**
	64nm,0.2s								
KST	**Kastek**	**1.00**	**28**	P		**Pg**	**06 11 10.9**	**-0.3**
	8.0nm,0.1s								
KST				S		**Sb**	**06 11 25.1**	**-0.3**
	64nm,0.2s								
DGS	**Degeres**	**1.13**	**17**	*e*P		**Pb**	**06 11 13.4**	**-0.7**
	baz=16								
DGS				*e*S		**Sn**	**06 11 29.1**	**-1.5**
	baz=16								
DGS	**Degeres**	**1.13**	**17**	*e*P		**Pb**	**06 11 13.4**	**-0.7**
	9.7nm,0.2s								
DGS				*e*S		**Sn**	**06 11 29.1**	**-1.5**
	24nm,0.1s								
DGS	**Degeres**	**1.13**	**17**	P		**Pb**	**06 11 13.4**	**-0.7**
	9.7nm,0.2s								
DGS				S		**Sn**	**06 11 29.1**	**-1.5**
	31nm,0.2s								
AML	**Almayashu**	**1.21**	**269**	P		**Pb**	**06 11 14.0**	**-1.6**
	28nm,0.1s,SNR=166								
EKS2	**Erkin-Say**	**1.25**	**294**	⇓P		**Pn**	**06 11 15.4**	**-0.8**
	7.3nm,0.2s,SNR=11								
EKS2				⇓S		**Sn**	**06 11 33.3**	**-0.3**
	23nm,0.2s								
EKS2	**Erkin-Say**	**1.25**	**294**	⇑*i*P		**Pn**	**06 11 14.5**	**-1.7**
	baz=97								
EKS2				⇑*e*S		**Sb**	**06 11 31.7**	**-0.9**
	baz=97								
USP	**Ospenovka**	**1.26**	**331**	⇓P		**Pn**	**06 11 15.5**	**-0.9**
	21nm,0.1s,SNR=20								
USP	**Ospenovka**	**1.26**	**331**	⇑*i*P		**Pn**	**06 11 15.3**	**-1.0**
	baz=33								
USP				⇑*e*S		**Sg**	**06 11 32.7**	**+0.1**
	baz=33								
MTBS	**Maitube**	**1.27**	**40**	*e*P		**Pb**	**06 11 15.8**	**-0.6**
	baz=38								
MTBS				*e*S		**Sn**	**06 11 33.0**	**-0.8**
	baz=38								
MTBS	**Maitube**	**1.27**	**40**	*e*P		**Pb**	**06 11 15.8**	**-0.6**
	7.2nm,0.3s								
MTBS				*e*S		**Sn**	**06 11 33.0**	**-0.8**
	55nm,0.1s								
MTBS	**Maitube**	**1.27**	**40**	P		**Pb**	**06 11 15.8**	**-0.6**
	7.2nm,0.3s								
MTBS				S		**Sn**	**06 11 33.0**	**-0.8**
	55nm,0.2s								
KDJ	**Kajisay**	**1.38**	**91**	⇑*i*P		**Pn**	**06 11 16.5**	**-1.5**
	baz=88								
KDJ				⇑*e*S		**Sb**	**06 11 35.0**	**-1.3**
	baz=88								
SGDS	**Sogindy**	**1.39**	**339**	*e*P		**Pb**	**06 11 17.9**	**-0.6**
	18nm,0.1s								
SGDS				*e*S		**Sg**	**06 11 36.5**	**-0.2**
	23nm,0.2s								
SGDS	**Sogindy**	**1.39**	**339**	P		**Pb**	**06 11 17.9**	**-0.6**
	18nm,0.1s								
SGDS				S		**Sg**	**06 11 36.4**	**-0.2**
	23nm,0.2s								
TNSS	**Tian-Shan**	**1.48**	**53**	*e*P		**Pb**	**06 11 19.7**	**-0.5**
	baz=51								
TNSS				*e*S		**Sg**	**06 11 40.0**	**+0.3**
	baz=51								
TNSS	**Tian-Shan**	**1.48**	**53**	*e*P		**Pb**	**06 11 19.7**	**-0.5**
	18nm,0.2s								
TNSS				*e*S		**Sg**	**06 11 40.0**	**+0.3**
	15nm,0.1s								
TNSS	**Tian-Shan**	**1.48**	**53**	P		**Pb**	**06 11 19.7**	**-0.5**
	18nm,0.2s								
TNSS				S		**Sg**	**06 11 40.0**	**+0.3**
	14nm,0.4s								
KRBS	**Karabastau**	**1.56**	**9**	*e*P		**Pb**	**06 11 21.2**	**-0.1**
	baz=9.0								
KRBS				*e*S		**Sg**	**06 11 42.4**	**+0.4**
	baz=9.0								
KRBS	**Karabastau**	**1.56**	**9**	*e*P		**Pb**	**06 11 21.2**	**-0.1**
	18nm,0.3s								
KRBS				*e*S		**Sg**	**06 11 42.4**	**+0.4**
	47nm,0.2s								
KRBS	**Karabastau**	**1.56**	**9**	P		**Pb**	**06 11 21.2**	**-0.1**
	18nm,0.3s								
KRBS				S		**Sg**	**06 11 42.4**	**+0.4**
	47nm,0.4s								
AAA	**Alma-Ata**	**1.57**	**48**	*e*P		**Pg**	**06 11 21.8**	**-0.3**
	41nm,0.2s								
AAA				*e*S		**Sg**	**06 11 43.2**	**+0.7**
	77nm,0.2s								
AAA	**Alma-Ata**	**1.57**	**48**	P		**Pg**	**06 11 21.8**	**-0.3**
	41nm,0.2s								
AAA				S		**Sg**	**06 11 43.2**	**+0.7**
	77nm,0.2s								
MDOK	**Medeo**	**1.62**	**51**	*e*P		**Pb**	**06 11 22.0**	**-0.4**
	baz=50								
MDOK				*e*S		**Sg**	**06 11 43.7**	**-0.3**
	baz=50								
MDOK	**Medeo**	**1.62**	**51**	*e*P		**Pb**	**06 11 22.0**	**-0.4**
	13nm,0.2s								
MDOK				*e*S		**Sg**	**06 11 43.6**	**-0.3**
	21nm,0.5s								
MDOK	**Medeo**	**1.62**	**51**	Pg		**Pb**	**06 11 22.0**	**-0.4**
	13nm,0.2s								
MDOK				Lg		Lg	06 11 43.6		
	21nm,0.5s								
MRKS	**Merke**	**1.66**	**291**	*e*P		**Pg**	**06 11 27.0**	**+3.3**
	19nm,0.3s								
MRKS				*e*S		**Sg**	**06 11 49.8**	**+4.5**
	44nm,0.1s								
MRKS	**Merke**	**1.66**	**291**	P		**Pg**	**06 11 27.0**	**+3.3**
	19nm,0.3s								
MRKS				S		**Sg**	**06 11 49.8**	**+4.5**
	44nm,0.3s								
ANVS	**Anan'yevo**	**1.84**	**69**	⇓*i*P		**Pb**	**06 11 24.5**	**-1.7**
	baz=68								
ANVS				⇓*e*S		**Sb**	**06 11 48.8**	**-0.8**
	baz=68								
KTBS	**Karatobe**	**1.84**	**32**	*e*P		**Pb**	**06 11 26.2**	**0.0**
	15nm,0.3s								
KTBS				*e*S		**Sg**	**06 11 51.2**	**0.0**
	248nm,0.3s								
KTBS	**Karatobe**	**1.84**	**32**	P		**Pb**	**06 11 26.2**	**0.0**
	15nm,0.3s								
KTBS				S		**Sg**	**06 11 51.2**	**0.0**
	248nm,0.3s								
KUU	**Kurty**	**1.89**	**23**	*e*P		**Pb**	**06 11 26.7**	**-0.2**
	baz=22								
KUU				*e*S		**Sg**	**06 11 51.8**	**-0.7**
	baz=22								
KUU	**Kurty**	**1.89**	**23**	*e*P		**Pb**	**06 11 26.7**	**-0.2**
	17nm,0.3s								
KUU				*e*S		**Sg**	**06 11 51.8**	**-0.7**
	61nm,0.4s								
KUU	**Kurty**	**1.89**	**23**	P		**Pb**	**06 11 26.7**	**-0.2**
	17nm,0.3s								
KUU				S		**Sg**	**06 11 51.8**	**-0.7**
	61nm,0.4s								
CHKK	**Chushkaly**	**2.09**	**35**	*e*P		**Pb**	**06 11 30.6**	**+0.2**
	12nm,0.4s								
CHKK				*e*S		**Sg**	**06 11 58.4**	**-0.6**
	139nm,0.3s								
CHKK	**Chushkaly**	**2.09**	**35**	Pg		**Pb**	**06 11 30.5**	**+0.2**
	12nm,0.4s								
CHKK				Lg		Lg	06 11 58.4		
	139nm,0.3s								
PRZ	**Przheval'sk**	**2.30**	**81**	⇑*e*P		**Pn**	**06 11 30.6**	**-0.1**
	baz=79								
PRZ				⇑*i*S		**Sn**	**06 11 59.5**	**-0.1**
	baz=79								
SATY	**Saty**	**2.44**	**67**	*e*P		**Pb**	**06 11 37.1**	**+0.6**
	7.2nm,0.2s								
SATY				*e*S		**Sg**	**06 12 09.2**	**-1.3**
	38nm,0.2s								
SATY	**Saty**	**2.44**	**67**	Pg		**Pb**	**06 11 37.1**	**+0.6**
	7.2nm,0.2s								
SATY				Lg		Lg	06 12 09.2		
	38nm,0.2s								
KURS	**Kuram**	**2.48**	**57**	*e*P		**Pg**	**06 11 38.3**	**-1.1**
	11nm,0.1s								
KURS				*e*S		**Sg**	**06 12 11.7**	**+0.2**
	42nm,0.6s								
KURS	**Kuram**	**2.48**	**57**	Pg		**Pg**	**06 11 38.3**	**-1.1**
	11nm,0.4s								
KURS				Lg		Lg	06 12 11.7		
	42nm,0.6s								
ARK	**Arkit**	**2.53**	**263**	⇑*e*P		**Pn**	**06 11 33.6**	**-0.2**
	baz=64								
ARK				⇑*e*S		**Sn**	**06 12 04.7**	**-0.4**
	baz=64								
ARXS	**Arharly**	**2.75**	**41**	*e*P		**Pb**	**06 11 40.8**	**-0.8**
	10nm,0.4s								
ARXS				*e*S		**Sb**	**06 12 16.3**	**+0.6**
	43nm,0.5s								
ARXS	**Arharly**	**2.75**	**41**	Pg		**Pb**	**06 11 40.8**	**-0.8**
	10nm,0.4s								
ARXS				Lg		Lg	06 12 16.3		
	43nm,0.5s								
KPKS	**Kokpek**	**2.79**	**61**	*e*P		**Pb**	**06 11 43.2**	**+0.8**
	12nm,0.1s								
KPKS				*e*S		**Sg**	**06 12 20.3**	**-1.5**
	74nm,0.0s								
KPKS	**Kokpek**	**2.79**	**61**	Pg		**Pb**	**06 11 43.2**	**+0.8**
	12nm,0.3s								
KPKS				Lg		Lg	06 12 20.3		
	10nm,0.3s								
UZB	**Uzymbulak**	**2.90**	**69**	*e*P		**Pb**	**06 11 44.4**	**+0.1**
	7.4nm,0.1s								
UZB				*e*S		**Sb**	**06 12 21.8**	**+1.7**
	17nm,0.1s								
UZB	**Uzynbulak**	**2.90**	**69**	Pg		**Pb**	**06 11 44.4**	**+0.1**
	7.4nm,0.2s								
UZB				Lg		Lg	06 12 21.8		
	20nm,0.5s								
BTLS	**Baital**	**3.03**	**343**	*e*P		**Pb**	**06 11 47.0**	**+0.7**
	5.6nm,0.4s								
BTLS				*e*S		**Sg**	**06 12 26.7**	**-2.5**
	13nm,0.1s								
BTLS	**Baital**	**3.03**	**343**	Pg		**Pb**	**06 11 47.0**	**+0.7**
	5.6nm,0.4s								
BTLS				Lg		Lg	06 12 26.7		
	3.9nm,0.4s								
SHLS	**Shalkode**	**3.21**	**71**	*e*P		**Pg**	**06 11 55.6**	**+2.1**
	4.0nm,0.1s								
SHLS				*e*S		**Sg**	**06 12 41.0**	**+6.0**
	12nm,0.4s								
SHLS	**Shalkode**	**3.21**	**71**	Pg		**Pg**	**06 11 55.6**	**+2.1**
	4.1nm,0.2s								
SHLS				Lg		Lg	06 12 41.0		
	12nm,0.4s								
KK31	**Karatay Array**	**3.67**	**286**	Pn		**Pn**	**06 11 51.8**	**+2.4**
	0.5nm,0.2s,baz=105,slow=16,SNR=20								
KK31				⇑Lg		Lg	06 12 46.1		
	5.1nm,0.5s,baz=107,slow=29,SNR=8.1								
KKAR	**Karatay Array**	**3.67**	**286**	⇑*e*P		**Pn**	**06 11 49.7**	**+0.3**
	baz=87								
KKAR				⇑*e*S		**Sn**	**06 12 32.3**	**-0.9**
	baz=87								
MAKZ	**Makanchi**	**6.65**	**43**	⇓Pn		**Pn**	**06 12 32.6**	**+2.3**
	2.4nm,1.4s								
MAKZ				⇑Sn		**Sn**	**06 13 48.6**	**+2.2**
	0.9nm,0.6s								
MAKZ				⇓Lg		Lg	06 14 21.3		
	1.9nm,1.3s								
MK31	**Makanchi Array**	**6.80**	**45**	Pn		Pn	06 12 36.5	+4.1	
	0.7nm,0.6s,baz=222,slow=15,SNR=10								
MK31				⇑Sn		**Sn**	**06 13 52.9**	**+2.7**	
	0.3nm,0.3s,baz=226,slow=14,SNR=7.0								
MK31				⇓Lg		Lg	06 14 26.2		
	0.8nm,0.6s								
KURBB	**Kurchatov Arra**	**8.75**	**14**	⇓Lg		Lg	06 15 27.9		
	5.2nm,0.9s								
KURK	**Kurchatov**	**8.86**	**14**	⇓Lg		Lg	06 15 31.8		
	2.5nm,0.8s								

*IDC **11** 06:17:54.1±6.0,36˚14N×71˚62E,h140km±54km,mb3.3/6, mbtmp3.7/10,Error ellipse: s-maj=59.2km s-min=39.6km az=142.0*

ISC 11 06:17:59.4±1.7,36˚8N±0˚1×71˚3E±0˚1,h150km,n12, σ1s78/14,mb3.5/5,1C-1D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**6.36**	**22**	P	**Pn**	**06 19 32.0**	**+1.0**
	3.0nm,0.3s,baz=202,slow=18,SNR=4.0						
AAK				S	**Sn**	**06 20 41.4**	**-1.3**
	9.7nm,0.8s,baz=335,slow=23,SNR=2.6						
KK31	**Karatay Array**	**6.37**	**355**	⇑P	**Pn**	**06 19 31.9**	**+1.0**
	2.0nm,0.3s,baz=185,slow=14,SNR=66						
KK31				⇓S	**Sn**	**06 20 39.7**	**-3.0**
	3.5nm,0.4s,baz=186,slow=24,SNR=10						
MKAR	**Makanchi Array**	**12.93**	**36**	P	**Pn**	**06 20 57.5**	**-0.1**
	0.4nm,0.4s,baz=206,slow=8.0,SNR=5.6						
KURBB	**Kurchatov Arra**	**14.80**	**18**	P	**P**	**06 21 23.9**	**+0.7**
	1.7nm,0.7s,baz=205,slow=10,SNR=11						
AKTO	**Aktyubinsk**	**16.69**	**329**	P	**Pn**	**06 21 46.5**	**+2.2**
	0.6nm,0.3s,baz=134,slow=12,SNR=3.8						
ZALV	**Zalesovo Beam**	**19.57**	**24**	P	**Pn**	**06 22 15.8**	**-2.6**
	1.6nm,0.3s,baz=207,slow=10,SNR=11						
	1.6nm,0.3s						
AKASG	**Malin Array Be**	**32.99**	**308**	P	**P**	**06 24 20.6**	**+0.8**
	0.2nm,0.3s,baz=102,slow=10,SNR=4.7						
	0.2nm,0.3s						
FINES	**FINESS Array B**	**37.41**	**326**	P	**P**	**06 24 58.5**	**+1.0**
	0.9nm,0.6s,baz=126,slow=9.7,SNR=5.9						
	0.9nm,0.6s						
ARCES	**ARCESS Array B**	**41.01**	**337**	P	**P**	**06 25 28.1**	**+0.9**
	1.1nm,0.9s,baz=82,slow=8.7,SNR=3.9						
	1.1nm,0.9s						
NB2	**NORSAR Subarra**	**44.33**	**323**	P	**P**	**06 25 54.3**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=97,slow=7.9						
NOA	**NORSAR Array B**	**44.33**	**323**	P	**P**	**06 25 54.6**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=105,slow=7.1,SNR=4.5						
	comp=Z,0.4nm,0.4s						
TORD	**Torodi Ar. Bea**	**65.98**	**269**	P	**P**	**06 28 27.2**	**-2.7**
	comp=Z,0.3nm,0.4s,baz=56,slow=6.1,SNR=5.4						
	comp=Z,0.3nm,0.4s						

*MAN **11** 06:29:07.7,4˚91N×126˚67E,h41km,mb4.8,ML3.7,MS3.6*
*IDC **11** 06:29:08.7±1.7,5˚82N×126˚92E,h0km,mb3.9/5, mbtmp3.9/5,MS3.2/2,Error ellipse: s-maj=220.1km s-min=20.6km az=68.0*

ISC 11 06:29:10.0±0.9,5˚86N±0˚08×126˚93E±0˚08,h10km,n18, σ1s39/16,mb4.0/5,3C-4D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**1.23**	**282**	⇓*e*P	**Pg**	**06 29 32.3**	**-1.4**
MATI	**Mati**	**1.27**	**328**	⇓*e*P	**Pg**	**06 29 34.3**	**-0.1**
KCP	**Kidapawan**	**2.15**	**302**	⇓*i*P	**Pb**	**06 29 48.9**	**-0.3**
KCP				*i* S	**Sg**	**06 30 23.0**	**+3.7**
BUKP	**Musuan**	**2.73**	**317**	⇓*e*P	**Pb**	**06 29 59.1**	**+0.1**
CGP	**Cagayan de Oro**	**3.40**	**319**	⇑*e*P	Pg	06 30 27.1	+12
CGP				*e*S	**Sg**	**06 30 56.8**	**-2.5**
GLSP	**General Luna,**	**3.98**	**349**	⇑*e*P	**Pb**	**06 30 20.3**	**0.0**
MSLP	**Maasin**	**4.72**	**334**	⇑*i*P	**Pg**	**06 30 39.2**	**-1.1**
KAPI	**Kappang**	**12.96**	**214**	LR	LR	06 37 28.8	
	comp=Z,44nm,19.1s,baz=82,slow=39						
WRA	**Warramunga Arr**	**26.66**	**164**	P	**P**	**06 34 49.2**	**0.0**
	1.7nm,0.9s,baz=344,slow=10,SNR=9.9						
	1.7nm,0.9s						
ASAR	**Alice Springs**	**30.12**	**167**	P	**P**	**06 35 19.9**	**-0.2**
	0.3nm,0.5s,baz=351,slow=7.6,SNR=5.5						
ASAR				PcP	**PcP**	**06 38 22.0**	**+0.2**
	0.4nm,0.8s,baz=349,slow=2.8,SNR=2.6						
	0.3nm,0.5s						
H11N1	**WAKE ISLAND Hy**	**41.21**	**67**	T	T	07 21 22.3	
	baz=254,SNR=3.7						
H11N2	**WAKE ISLAND Hy**	**41.22**	**67**	T	T	07 21 26.7	
	baz=254						
H11N3	**WAKE ISLAND Hy**	**41.22**	**67**	T	T	07 21 26.8	
	baz=254						
MKAR	**Makanchi Array**	**55.94**	**324**	P	**P**	**06 38 48.6**	**+0.1**
	1.2nm,0.6s,baz=134,slow=6.7,SNR=16						
MKAR				PcP	**PcP**	**06 39 46.9**	**-0.1**
	0.7nm,0.7s,baz=111,slow=3.2,SNR=2.4						
	1.2nm,0.6s						
ZALV	**Zalesovo Beam**	**58.80**	**332**	P	**P**	**06 39 09.7**	**+1.3**
	0.7nm,0.5s,baz=115,slow=6.8,SNR=2.3						
	0.7nm,0.5s						
ARU	**Arti**	**73.26**	**327**	LR	LR	07 18 02.8	
	comp=Z,28nm,18.6s,baz=98,slow=40						
ARCES	**ARCESS Array B**	**88.53**	**340**	P	**P**	**06 42 02.6**	**0.0**
	1.2nm,0.7s,baz=74,slow=6.7,SNR=4.8						
	1.2nm,0.7s						

TORD	**Torodi Ar. Bea**	**122.42**	**290**	PKP		**PKiKP**	**06 48 07.0**	**+0.1**	
	0.3nm,0.8s,baz=41,slow=2.3,SNR=1.4								

*MDD **11** 06:36:15.1±0.7,35˚42N×3˚76W,h12km±4km,mb_Lg2.6/16, Error ellipse: s-maj=3.6km s-min=2.5km az=6.0*
*IGIL **11** 06:36:15.3,35˚42N×3˚76W,h8km,ML2.0*
*CNRM **11** 06:36:15.0,35˚51N×3˚79W,h25km,ml3.0*
*SFS **11** 06:36:15.0,35˚40N×3˚70W,h12km,ML2.6,ALBORAN SUR*
*INMG **11** 06:36:15.4±0.9,35˚31N×3˚74W,h31km,ML2.3,Error ellipse: s-maj=3.9km s-min=2.3km az=23.0*

ISC 11 06:36:14.1±1.1,35˚50N±0˚02×3˚77W±0˚02,h15km±9km, n64,σ1s34/108,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALE	**Palemas**	**0.31**	**206**	P	**Pn**	**06 36 26.2**	**+2.0**
PALE	**Palemas**	**0.31**	**206**	P	**Pn**	**06 36 26.2**	**+2.0**
PALE				S	**Sb**	**06 36 26.4**	**+0.1**
PVLZ	**Peæn de**	**0.54**	**233**	P	**Pb**	**06 36 25.3**	**0.0**
PVLZ				S	**Sg**	**06 36 32.5**	**+0.4**
GOG	**Mont Gurugu**	**0.69**	**113**	P	**Pn**	**06 36 29.0**	**-0.5**
GOG	**Mont Gurugu**	**0.69**	**113**	P	**Pn**	**06 36 29.0**	**-0.5**
GOG				S	**Sn**	**06 36 39.1**	**-0.8**
WMELI	**Melilla**	**0.69**	**105**	P	**Pg**	**06 36 27.5**	**-0.2**
WMELI				S	**Sg**	**06 36 36.5**	**-0.4**
EMEL	**Melilla**	**0.69**	**106**	Pg	**Pb**	**06 36 27.8**	**-0.2**
EMEL				Sg	**Sg**	**06 36 36.2**	**-0.7**
EALB	**Alboran**	**0.74**	**53**	Pg	**Pb**	**06 36 29.0**	**+0.2**
EALB				Sg	**Sb**	**06 36 39.3**	**+0.5**
EALB				*i* Vmb_Lg		06 36 42.3	
AKLM	**AKL**	**0.99**	**184**	P	**Pn**	**06 36 35.0**	**+1.5**
AKLM	**AKL**	**0.99**	**184**	P	**Pn**	**06 36 35.0**	**+1.5**
AKLM				S	**Sg**	**06 36 44.7**	**-1.5**
CHAS	**Isla Isabel II**	**1.14**	**106**	P	**Pb**	**06 36 34.2**	**-1.3**
CHAS				S	**Sb**	**06 36 48.2**	**-1.9**
TAF	**Taforalt**	**1.30**	**121**	P	**Pn**	**06 36 37.3**	**-0.6**
TAF				S	**Sg**	**06 36 56.6**	**+0.4**
SMIR	**Smir Dam**	**1.32**	**278**	P	**Pn**	**06 36 37.0**	**-1.1**
SMIR				S	**Sn**	**06 36 55.6**	**+0.1**
EMIJ	**Mijas**	**1.34**	**323**	Pn	**Pn**	**06 36 37.4**	**-0.9**
EMIJ				Sn	**Sn**	**06 36 56.1**	**+0.2**
EMIJ				*i* Vmb_Lg		06 37 00.4	
CHEFC	**Chefchaouen**	**1.34**	**254**	P	**Pg**	**06 36 41.0**	**+1.0**
CHEFC	**Chefchaouen**	**1.34**	**254**	P	**Pg**	**06 36 41.0**	**+1.0**
CHEFC				S	**Sb**	**06 36 56.0**	**0.0**
CEU	**Ceuta**	**1.36**	**288**	P	**Pn**	**06 36 37.1**	**-1.5**
CEU				S	**Sb**	**06 36 52.9**	**-3.7**
ECEU	**Ceuta**	**1.37**	**287**	Pn	**Pn**	**06 36 37.6**	**-1.1**
ECEU				Sn	**Sb**	**06 36 54.5**	**-2.2**
ECEU				*i* Vmb_Lg		06 36 56.5	
ELGU	**Los Guajares,**	**1.37**	**5**	Pn	**Pn**	**06 36 37.9**	**-0.9**
ELGU				Sn	**Sn**	**06 36 56.7**	**-0.1**
ELGU				*i* Vmb_Lg		06 37 00.3	
JBK	**JBK**	**1.52**	**139**	P	**Pb**	**06 36 42.0**	**-0.3**
JBK	**JBK**	**1.52**	**139**	P	**Pb**	**06 36 42.0**	**-0.3**
JBK				S	**Sn**	**06 36 59.3**	**-1.4**
EBER	**Berja**	**1.57**	**27**	Pn	**Pn**	**06 36 41.6**	**-0.1**
EBER				Sn	**Sn**	**06 37 01.1**	**-0.7**
EBER				*i* Vmb_Lg		06 37 07.2	
EGOR	**Sierra Gorda,**	**1.63**	**350**	Pn	**Pb**	**06 36 43.2**	**-0.9**
EGOR				Sn	**Sb**	**06 37 04.9**	**+0.3**
EGOR				*i* Vmb_Lg		06 37 08.0	
EQUE	**Quentar**	**1.73**	**9**	Pn	**Pb**	**06 36 44.8**	**-0.8**
EQUE				Sn	**Sb**	**06 37 07.0**	**-0.1**
EQUE				*i* Vmb_Lg		06 37 11.8	
SICH	**Sidi Chahed**	**1.89**	**223**	P	**Pn**	**06 36 47.0**	**+1.2**
SICH				S	**Sn**	**06 37 08.8**	**-0.6**
LCRM	**LCR**	**2.02**	**207**	P	**Pb**	**06 36 49.9**	**-0.7**
LCRM				S	**Sb**	**06 37 15.8**	**+0.2**
IFR	**Ifrane**	**2.27**	**210**	P	**Pb**	**06 36 55.5**	**+0.6**
IFR				S	**Sn**	**06 37 15.9**	**-3.2**
EQES	**Quesada**	**2.37**	**14**	Pn	**Pb**	**06 36 54.9**	**-1.6**
EQES				Sn	**Sb**	**06 37 24.9**	**-0.7**
EQES				*i* Vmb_Lg		06 37 26.9	
EADA	**Adamuz**	**2.74**	**347**	Pn	**Pn**	**06 36 59.8**	**+2.1**
EADA				Sn	**Sn**	**06 37 32.3**	**+1.8**
EADA				*i* Vmb_Lg		06 37 40.9	
MD31	**MD31**	**2.75**	**198**	P	**Pn**	**06 36 59.4**	**+1.6**
MD31				S	**Sn**	**06 37 30.7**	**-0.1**
MDT	**Midelt**	**2.77**	**195**	P	**Pn**	**06 36 59.9**	**+1.9**
MDT	**Midelt**	**2.77**	**195**	P	**Pn**	**06 36 59.9**	**+1.9**
MDT				S	**Sn**	**06 37 30.7**	**-0.5**
TDRA	**Tendrara**	**2.84**	**149**	P	**Pn**	**06 36 59.8**	**+0.6**
TDRA				S	**Sn**	**06 37 33.6**	**+0.3**
ECAB	**El Cabril**	**2.89**	**333**	Pn	**Pn**	**06 37 01.4**	**+1.7**
ECAB				Sn	**Sn**	**06 37 35.3**	**+1.0**
ECAB				*i* Vmb_Lg		06 37 45.5	
EMIN	**Mina Concepcio**	**3.25**	**315**	Pn	**Pn**	**06 37 05.7**	**+0.5**
EMIN				Sn	**Sn**	**06 37 42.5**	**-0.6**
EMIN				*i* Vmb_Lg		06 37 44.7	
ETOB	**Tobarra**	**3.61**	**29**	Pn	**Pn**	**06 37 11.7**	**+2.1**
ETOB				Sn	**Sn**	**06 37 53.7**	**+1.8**
ETOB				*i* Vmb_Lg		06 37 55.6	
EGRO	**El Granado**	**3.62**	**305**	Pn	**Pn**	**06 37 10.1**	**+0.5**
EGRO				Sn	**Sn**	**06 37 51.1**	**-0.9**
EGRO				*i* Vmb_Lg		06 37 52.6	
PVAQ	**Vaqueiros**	**3.71**	**302**	*e*Pn	**Pn**	**06 37 12.1**	**+1.2**
PVAQ				*e*Sn	**Sn**	**06 37 53.5**	**-0.8**
PVAQ				A	A	06 38 01.1	
	5.3nm,0.4s					

ISK 11 06:52:27.7, 39°.78N ± 44°.00E, h6km, ML3.0/12
DDA 11 06:52:27.4 ± 0.0, 39°.79N ± 44°.02E, h11km ± 1km, ML2.9
ISC 11 06:52:27.7 ± 0.9, 39°.79N ± 0°.02 × 44°.02E ± 0°.03, h9km ± 7km, n36, σ0s77/48, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGDI	**IGDIR**	**0.09**	**33**	P	**Pg**	**06 52 30.1**	**-0.1**
IGDI				*i* AML	AML	06 52 32.0	
	comp=N,1μm,0.2s						
IGDI				*i* AML	AML	06 52 32.0	
	comp=E,1μm,0.5s						
IGDI				S	**Sg**	**06 52 32.4**	**+0.5**
TASB	**TASBURUN-IGDIR**	**0.26**	**42**	PG	**Pb**	**06 52 33.6**	**-1.0**
TASB				SG	**Sb**	**06 52 38.0**	**-1.2**
DYDN	**Diyadin**	**0.35**	**225**	P	**Pg**	**06 52 34.8**	**-0.1**
DYDN				S	**Sb**	**06 52 40.7**	**-1.4**
DYDN				*i* AML	AML	06 52 42.0	
	comp=E,2μm,0.5s						
KOTA	**Agri, Merkez-K**	**0.62**	**271**	P	**Pg**	**06 52 39.6**	**-0.3**
CLDR	**Caldiran**	**0.65**	**187**	PG	**Pb**	**06 52 40.4**	**-1.1**
CLDR				SG	**Sb**	**06 52 49.9**	**-0.8**
CLDR	**Caldiran**	**0.65**	**187**	P	**Pg**	**06 52 39.8**	**-0.7**
GNI	**Garni**	**0.66**	**57**	PG	**Pb**	**06 52 40.9**	**-0.7**
GNI				SG	**Sb**	**06 52 51.2**	**+0.3**
DIGO	**Kars**	**0.79**	**322**	P	**Pg**	**06 52 42.8**	**-0.3**
AGRB	**Hanur-Agry**	**0.82**	**255**	PG	**Pb**	**06 52 43.6**	**-0.7**
AGRB				SG	**Sb**	**06 52 55.4**	**-0.1**
EAK	**Akyaka**	**0.94**	**341**	P	**Pn**	**06 52 46.8**	**-0.6**
EAK				S	**Sn**	**06 53 00.9**	**-0.1**
EAK				*i* AML	AML	06 53 04.0	
	comp=N,458nm,0.6s						
EAK				*i* AML	AML	06 53 09.0	
	comp=E,314nm,0.5s						
KARS	**Kars**	**1.10**	**320**	PN	**Pn**	**06 52 48.9**	**-0.5**
OZAP	**Van, Ozalp-Mer**	**1.13**	**181**	P	**Pn**	**06 52 50.4**	**+0.5**
OZAP				S	**Sn**	**06 53 06.2**	**+0.5**
OZAP				*i* AML	AML	06 53 17.0	
	comp=E,158nm,0.8s						
EATA	**Eleskirt**	**1.18**	**274**	P	**Pn**	**06 52 50.8**	**+0.2**
VANB	**Van**	**1.29**	**202**	PN	**Pg**	**06 52 53.9**	**+1.3**
MLAZ	**Malazgirt-MUS**	**1.31**	**241**	PN	**Pg**	**06 52 52.8**	**-0.1**
TVAN	**Van**	**1.35**	**201**	P	**Pg**	**06 52 54.2**	**+0.6**
ADCV	**BITLIS_Adilcev**	**1.41**	**226**	P	**Pg**	**06 52 55.1**	**+0.4**
BGD	**Bogdanovka**	**1.50**	**348**	P	**Pg**	**06 52 56.4**	**-0.2**
DMNI	**Dmanisi**	**1.54**	**5**	P	**Pb**	**06 52 56.3**	**-0.2**
DMNI				S	**Sg**	**06 53 18.2**	**+1.0**
HOMI	**Horasan**	**1.64**	**279**	P	**Pb**	**06 53 00.3**	**+1.1**
AKH	**Akhalkalaki**	**1.66**	**346**	PN	**Pb**	**06 52 58.4**	**-0.2**
AKDM	**Akdamar-Van**	**1.67**	**209**	PN	**Pb**	**06 52 58.0**	**-0.8**
KOPR	**Koprukoy-ERZUR**	**1.68**	**277**	PN	**Pb**	**06 52 58.0**	**-0.8**
TRLG	**Trialeti**	**1.75**	**2**	P	**Pb**	**06 53 00.1**	**+0.1**
TRLG				S	**Sg**	**06 53 24.2**	**+0.4**
BTNK	**Botanikuri**	**1.98**	**17**	P	**Pn**	**06 53 00.8**	**-0.7**
BTNK				S	**Sn**	**06 53 26.6**	**+0.2**
GURO	**Guroymak-BITLI**	**1.98**	**232**	PN	**Pb**	**06 53 02.4**	**-1.6**
ERZM	**Erzurum**	**2.04**	**274**	PN	**Pb**	**06 53 03.6**	**-1.6**
ERZM	**Erzurum**	**2.04**	**274**	P	**Pg**	**06 53 07.1**	**+0.2**
DAGI	**Agillar**	**2.05**	**309**	P	**Pb**	**06 53 05.4**	**+0.1**
ABS	**Abastumani**	**2.16**	**335**	P	**Pb**	**06 53 07.1**	**0.0**
PERV	**Siirt/Pervari-**	**2.17**	**212**	P	**Pb**	**06 53 05.9**	**-1.5**
MUSM	**Mu-Merkez**	**2.22**	**242**	P	**Pb**	**06 53 08.1**	**0.0**
MUSM				S	**Sb**	**06 53 36.2**	**+0.5**
MUSM				*i* AML	AML	06 53 42.0	
	comp=E,22nm,0.7s						
DDFL	**Dedoflistskaro**	**2.30**	**43**	P	**Pg**	**06 53 12.0**	**+0.2**
CUKT	**Cukurca**	**2.56**	**187**	PN	**Pn**	**06 53 10.8**	**+1.3**
LGD	**Lagodekhi**	**2.65**	**39**	P	**Pb**	**06 53 15.6**	**+0.3**
YEDI	**Yedisu-Bingol**	**2.71**	**264**	PN	**Pn**	**06 53 12.8**	**+1.3**

THE 11 07:26:03.1, 38°.05N ± 20°.18E, h2km ± 2km, ML2.6/12, Error ellipse: s-maj=2.3km s-min=1.1km az=19.0
ATH 11 07:26:03.9, 38°.11N ± 20°.25E, h20km ± 2km, ML2.4/2, Error ellipse: s-maj=4.1km s-min=2.5km az=74.0
ISC 11 07:26:03.8 ± 2.5, 38°.08N ± 0°.08 × 20°.2E ± 0°.1, h15km ± 6km, n23, σ0s65/41, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEF3	**Kipouria, Keph**	**0.16**	**43**	P	**Pb**	**07 26 08.3**	**-0.3**
KEF3				S	**Sg**	**07 26 11.2**	**+0.6**
DMLN	**Damoulianata-K**	**0.20**	**40**	P	**Pg**	**07 26 08.4**	**-0.1**
DMLN				S	**Sg**	**07 26 11.6**	**0.0**
DMLN	**Damoulianata-K**	**0.20**	**40**	P	**Pg**	**07 26 08.5**	**0.0**
DMLN				S	**Sg**	**07 26 11.7**	**0.0**
	4μm,0.2s						
LXRA	**Lixouri, Kepha**	**0.22**	**57**	P	**Pg**	**07 26 08.5**	**-0.1**
LXRA				S	**Sg**	**07 26 12.2**	**+0.2**
ARGA	**Argostoli. Kep**	**0.23**	**66**	P	**Pb**	**07 26 09.8**	**+0.1**
KEF4	**Livadi, Kephal**	**0.24**	**44**	P	**Pg**	**07 26 08.9**	**-0.3**
KEF4				S	**Sg**	**07 26 12.9**	**0.0**
KEF4	**Livadi, Kephal**	**0.24**	**44**	P	**Pg**	**07 26 08.9**	**-0.3**
KEF4				S	**Sg**	**07 26 12.8**	**0.0**
	19μm,0.1s						
PSDA	**Pessada-Kefalo**	**0.30**	**84**	P	**Pg**	**07 26 09.8**	**-0.3**
PSDA				S	**Sg**	**07 26 14.0**	**-0.3**
	240nm,0.2s						
VLS	**Valsamata**	**0.32**	**72**	P	**Pg**	**07 26 09.9**	**-0.5**
VLS				S	**Sg**	**07 26 14.4**	**-0.6**
VLS				AML	AML	07 26 14.5	
	comp=E,3525μm,0.2s						
VLS				AML	AML	07 26 15.1	
	comp=N,1784μm,0.2s						
VLS	**Valsamata**	**0.32**	**72**	P	**Pg**	**07 26 09.9**	**-0.5**
VLS				S	**Sg**	**07 26 14.3**	**-0.6**
	comp=N,1μm,0.2s						
FSK	**Fiskardo**	**0.47**	**36**	P	**Pg**	**07 26 13.0**	**-0.2**
FSK				S	**Sg**	**07 26 19.4**	**-0.1**
FSK				AML	AML	07 26 19.8	
	comp=E,2183μm,0.2s						
FSK				AML	AML	07 26 19.9	
	comp=N,677μm,0.2s						
FSK	**Fiskardo**	**0.47**	**36**	P	**Pg**	**07 26 12.9**	**-0.2**
FSK				S	**Sg**	**07 26 19.6**	**+0.1**
	comp=N,660nm,0.5s						
EVGI	**Lefkada island**	**0.64**	**33**	P	**Pg**	**07 26 15.1**	**-1.3**
EVGI	**Lefkada island**	**0.64**	**33**	P	**Pg**	**07 26 15.4**	**-1.0**
EVGI				S	**Sb**	**07 26 25.9**	**+0.4**
	comp=N,415nm,0.2s						
DRAG	**Dragano-Lefkad**	**0.67**	**26**	P	**Pg**	**07 26 16.0**	**-0.8**
DRAG				S	**Sb**	**07 26 26.1**	**-0.1**
	comp=N,6μm,0.4s						
NYDR	**Nydri-Lefkada**	**0.74**	**31**	P	**Pg**	**07 26 17.0**	**-1.2**
NYDR				S	**Sb**	**07 26 29.3**	**+1.0**
	comp=N,432nm,0.3s						
LKD2	**Lefkada island**	**0.79**	**26**	P	**Pg**	**07 26 18.4**	**-0.7**
LKD2	**Lefkada island**	**0.79**	**26**	P	**Pg**	**07 26 18.2**	**-1.0**
LKD2				S	**Sb**	**07 26 30.6**	**+0.8**
	comp=N,320nm,0.4s						
TSLK	**Tsoukalades, L**	**0.82**	**25**	P	**Pg**	**07 26 18.9**	**-0.8**
TSLK				S	**Sn**	**07 26 32.5**	**-0.2**
	comp=N,700nm,0.4s						
PVO	**Paravola**	**1.17**	**62**	P	**Pb**	**07 26 24.6**	**-1.0**
PVO				S	**Sn**	**07 26 42.8**	**+1.6**
	comp=N,255nm,0.5s						
IGT	**Igoumenitsa**	**1.45**	**4**	P	**Pn**	**07 26 30.1**	**+0.6**
SERG	**Sergoula**	**1.49**	**77**	P	**Pn**	**07 26 30.5**	**+0.4**
SERG				S	**Sg**	**07 26 51.5**	**-0.4**
	comp=N,55nm,0.4s						
KLV	**Kalavryta, Ach**	**1.53**	**91**	P	**Pb**	**07 26 31.4**	**-0.6**

IDC 11 07:27:02.5 ± 0.8, 37°.30N × 97°.86W, h0km, mb3.9/2, mbtmp3.6/7, ML3.7/4, Error ellipse: s-maj=11.6km s-min=9.9km az=162.0
ANF 11 07:27:02.8 ± 0.2, 37°.17N × 97°.74W, h8km, ML4.1/16, Error ellipse: s-maj=2.4km s-min=2.1km az=7.0
NEIC 11 07:27:02.4, 37°.19N × 97°.72W, h8km, Moment Tensor Solution. Moment tensor: Scale 10^{13}Nm; M_{rr}=6.87; $M_{\theta\theta}$=6.87; $M_{\phi\phi}$=0.00; $M_{r\theta}$=-1.21; $M_{\theta\phi}$=3.14; $M_{\phi r}$=-3.74; Fault plane solution: M_o=8.51000×10^{13} NP1:ϕ_s=270.00000°, δ=40.00000°, λ=-55.00000°. NP2:ϕ_s=48.00000°, δ=58.00000°, λ=-116.00000°. Principal axes: T 8.5156, Plg=10.0000°, Azm=156.0000°; N -0.0008, Plg=22.0000°, Azm=62.0000°; P -8.5148, Plg=66.0000°, Azm=268.0000°;
NEIC 11 07:27:03.0 ± 0.5, 37°.20N ± 0°.02 × 97°.73W ± 0°.02, h4km ± 4km Error ellipse: s-maj=2.9km s-min=1.7km az=166.0
ISC 11 07:27:02.0 ± 1.4, 37°.19N ± 0°.03 × 97°.74W ± 0°.03, h1km ± 10km, n107, σ0s74/91, Kansas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T35A	**Sooner Cattle**	**1.02**	**105**		**Pg**	**07 27 21.6**	**+0.1**
T35A				Sg	**Sg**	**07 27 34.5**	**-0.3**
T35B	**Sooner Cattle**	**1.02**	**105**	P	**Pg**	**07 27 21.5**	**0.0**
T35B	baz=287,SNR=266						
	baz=287			S	**Sg**	**07 27 35.0**	**+0.3**
U32A	**Winter Ranch,**	**1.30**	**232**		**Pn**	**07 27 26.5**	**-0.8**
U32A				Sg	**Sg**	**07 27 44.0**	**+0.3**
U32A	**Winter Ranch,**	**1.30**	**232**	P	**Pn**	**07 27 26.5**	**-0.8**
U32A	baz=50						
	baz=50			S	**Sg**	**07 27 44.3**	**+0.6**
R32A	**Long Quarter,**	**1.45**	**328**		**Pn**	**07 27 29.0**	**-0.4**
R32A	**Long Quarter,**	**1.45**	**328**	P	**Pn**	**07 27 28.9**	**-0.4**
	baz=147,SNR=236						
OK009	**Oakdale Elemen**	**1.63**	**171**		**Sg**	**07 27 55.3**	**+1.0**
OKCFA	**Oklahoma City**	**1.79**	**172**		**Pn**	**07 27 34.3**	**+0.2**
OKCFA	**Oklahoma City**	**1.79**	**172**	P	**Pn**	**07 27 34.2**	**+0.2**
OKCFA	baz=353,SNR=16						
	baz=353			S	**Sn**	**07 27 58.2**	**+0.8**
OKCSW	**OKLAHOMA CITY**	**1.80**	**172**		**Pn**	**07 27 34.3**	**+0.1**
FNO	**Franklin**	**1.95**	**172**		**Pn**	**07 27 36.7**	**+0.4**
FNO				IAmb_Lg		07 28 09.5	
	comp=Z,266nm,0.8s						
TUL1	**Leonard**	**2.02**	**129**		**Pn**	**07 27 37.4**	**+0.1**
TUL1				IAmb_Lg		07 28 10.8	
	comp=Z,372nm,1.0s						
TUL1	**Leonard**	**2.02**	**129**	P	**Pn**	**07 27 37.3**	**+0.1**
TUL1	baz=310,SNR=129						
	baz=310			S	**Sn**	**07 28 03.9**	**+0.7**
KSU1	**Kansas State U**	**2.10**	**25**	Pn	**Pn**	**07 27 38.9**	**+0.5**
KSU1				IAmb_Lg		07 28 10.8	
	comp=Z,289nm,0.9s						
KSU1	**Kansas State U**	**2.10**	**25**	P	**Pn**	**07 27 38.7**	**+0.4**
KSU1	baz=205,SNR=19						
	baz=205			S	**Sb**	**07 28 06.8**	**-0.7**
CBKS	**Cedar Bluff**	**2.26**	**316**		**Pn**	**07 27 42.1**	**+1.5**
CBKS	**Cedar Bluff**	**2.26**	**316**	S	**Sn**	**07 28 10.3**	**+1.2**
	baz=135						
X34A	**Smith Ranch, M**	**2.59**	**182**	Pg	**Pn**	**07 27 47.5**	**+2.4**
WMOK	**Wichita Mounta**	**2.59**	**199**		**Pn**	**07 27 44.8**	**-0.3**
WMOK	**Wichita Mounta**	**2.59**	**199**	P	**Pn**	**07 27 45.1**	**0.0**
	baz=19						
U38A	**Gravette**	**2.79**	**105**		**Pn**	**07 27 48.2**	**+0.3**
U38A				IAmb_Lg		07 28 30.4	
	comp=Z,120nm,0.8s						
U38A	**Gravette**	**2.79**	**105**	P	**Pn**	**07 27 48.1**	**+0.3**
	baz=287						
HHAR	**Hobbs**	**3.18**	**105**		**Pn**	**07 27 53.4**	**+0.2**
HHAR				IAmb_Lg		07 28 43.4	
	comp=Z,88nm,0.8s						
X37A	**Clayton**	**3.23**	**143**		**Pn**	**07 27 53.3**	**-0.5**
X37A				IAmb_Lg		07 28 48.5	
	comp=Z,133nm,0.8s						
X37A	**Clayton**	**3.23**	**143**	P	**Pn**	**07 27 54.0**	**+0.2**
	baz=324,SNR=43						
N33A	**J Bar K, Exete**	**3.55**	**4**		**Pn**	**07 27 58.8**	**+0.5**
N33A				IAmb_Lg		07 28 58.5	
	comp=Z,127nm,1.1s						
S39A	**Bolivar**	**3.55**	**81**		**Pn**	**07 27 57.7**	**-0.5**
S39A				IAmb_Lg		07 28 57.4	
	comp=Z,97nm,0.8s						
S39A	**Bolivar**	**3.55**	**81**	P	**Pn**	**07 27 57.9**	**-0.3**
	baz=263,SNR=32						
W39A	**Magazine**	**3.77**	**121**		**Pn**	**07 28 00.0**	**-1.2**
W39A				IAmb_Lg		07 29 08.8	
	comp=Z,189nm,0.8s						
Z35A	**Perchaven, San**	**3.87**	**174**		**Pn**	**07 28 02.9**	**+0.2**
Z35A				IAmb_Lg		07 29 12.7	
	comp=Z,92nm,0.9s						
Z35A	**Perchaven, San**	**3.87**	**174**	P	**Pn**	**07 28 02.9**	**+0.2**
	baz=354,SNR=9.3						
Z35A				S	**Sn**	**07 28 48.5**	**-0.4**
	baz=354						
AMTX	**Amarillo**	**3.94**	**235**		**Pn**	**07 28 04.2**	**+0.5**
U40A	**Yellville**	**4.01**	**101**	Pn	**Pn**	**07 28 04.8**	**+0.2**
U40A	**Yellville**	**4.01**	**101**	P	**Pn**	**07 28 04.6**	**0.0**
U40A	baz=284,SNR=34						
	baz=284,SNR=34			P	**Pn**	**07 28 04.6**	**0.0**
N35A	**Tabor**	**4.01**	**23**		**Pn**	**07 28 05.5**	**+0.9**
P38A	**Dawn**	**4.10**	**52**		**Pn**	**07 28 05.5**	**-0.2**
BGNE	**Belgrade**	**4.22**	**356**		**Pn**	**07 28 07.6**	**+0.1**
KSCO	**Kaye Shedlock'**	**4.26**	**297**		**Pn**	**07 28 08.1**	**-0.1**
KSCO				IAmb_Lg		07 29 22.0	
	comp=Z,102nm,0.9s						
KSCO	**Kaye Shedlock'**	**4.26**	**297**	P	**Pn**	**07 28 08.4**	**+0.2**
	baz=114,SNR=9.4						
MIAR	**Mount Ida**	**4.29**	**127**		**Pn**	**07 28 07.8**	**-0.6**
MIAR				IAmb_Lg		07 29 20.5	
	comp=Z,115nm,0.9s						
MIAR	**Mount Ida**	**4.29**	**127**	P	**Pn**	**07 28 08.3**	**-0.1**
	baz=310,SNR=22						
MGMO	**Mountain Grove**	**4.37**	**89**		**Pn**	**07 28 09.1**	**-0.4**
R40A	**Maddies Statio**	**4.47**	**74**		**Pn**	**07 28 11.5**	**+0.6**
R40A				IAmb_Lg		07 29 26.1	
	comp=Z,59nm,0.8s						
R40A	**Maddies Statio**	**4.47**	**74**	P	**Pn**	**07 28 10.9**	**0.0**
	baz=258,SNR=21						
Z38A	**Mt. Pleasant**	**4.52**	**149**		**Pn**	**07 28 11.8**	**+0.2**
Z38A				IAmb_Lg		07 29 32.2	
	comp=Z,158nm,0.8s						
FCAR	**Ozark Folk Cen**	**4.70**	**104**		**Pn**	**07 28 13.8**	**-0.3**
WHAR	**Wooly Hollow**	**4.80**	**112**		**Pn**	**07 28 16.3**	**+0.9**
X40A	**Basin Creek Fa**	**4.81**	**123**		**Pn**	**07 28 15.2**	**-0.3**
ABTX	**Abilene, Hawle**	**4.82**	**200**		**Pn**	**07 28 15.3**	**-0.4**
W41B	**Gary Mavity, V**	**4.88**	**113**		**Pn**	**07 28 15.3**	**-1.2**
W41B				IAmb_Lg		07 29 37.5	
	comp=Z,146nm,0.7s						
W41B	**Gary Mavity, V**	**4.88**	**113**	P	**Pn**	**07 28 16.4**	**0.0**
	baz=296						
L34A	**Svendsen Farm,**	**4.88**	**12**		**Pn**	**07 28 16.6**	**+0.1**
UALR	**University of**	**5.00**	**117**		**Pn**	**07 28 18.8**	**+0.7**
UALR				IAmb_Lg		07 29 53.7	
	comp=Z,96nm,0.8s						
OGNE	**Ogallala**	**5.02**	**320**	IAmb_Lg		07 29 41.8	
	comp=Z,116nm,0.8s						
N38A	**Joes South For**	**5.02**	**43**		**Pn**	**07 28 18.6**	**+0.1**
N38A				IAmb_Lg		07 29 42.0	
	comp=Z,56nm,0.7s						
P40A	**Paris**	**5.04**	**61**		**Pn**	**07 28 18.7**	**-0.1**
WLAR	**White Oak Lake**	**5.15**	**131**	IAmb_Lg		07 29 58.4	
	comp=Z,79nm,0.7s						
WHTX	**Lake Whitney,**	**5.19**	**177**		**Pn**	**07 28 19.5**	**-1.3**
MSTX	**Muleshoe**	**5.21**	**233**		**Pn**	**07 28 21.5**	**+0.3**
CCM	**Cathedral Cave**	**5.23**	**79**		**Pn**	**07 28 22.2**	**+1.0**
CCM				IAmb_Lg		07 29 56.0	
	comp=Z,49nm,0.9s						
T25A	**Trinidad**	**5.33**	**271**	Pn	**Pn**	**07 28 22.2**	**-0.7**
LCAR	**Lake Charles**	**5.41**	**100**		**Pn**	**07 28 22.0**	**-1.8**
LCAR				IAmb_Lg		07 29 53.8	
	comp=Z,82nm,0.9s						
237A	**Washetta, Mont**	**5.42**	**162**		**Pn**	**07 28 22.6**	**-1.3**
237A				IAmb_Lg		07 30 04.2	
	comp=Z,50nm,0.9s						
237A	**Washetta, Mont**	**5.42**	**162**	P	**Pn**	**07 28 23.4**	**-0.5**
	baz=344,SNR=7.5						
K31A	**O'Neill**	**5.48**	**352**		**Pn**	**07 28 25.4**	**+0.6**
Z41A	**Richland Creek**	**5.63**	**133**	IAmb_Lg		07 30 10.2	
	comp=Z,59nm,0.9s						
CCAR	**Cane Creek**	**5.86**	**122**		**Pn**	**07 28 29.2**	**-0.8**
CCAR				IAmb_Lg		07 30 18.3	
	comp=Z,68nm,0.8s						
FVM	**French Village**	**5.86**	**80**		**Pn**	**07 28 29.9**	**-0.1**
FVM				IAmb_Lg		07 30 14.8	
	comp=Z,43nm,0.8s						
PBMO	**Poplar Bluff**	**5.87**	**92**		**Pn**	**07 28 30.6**	**+0.5**
PBMO				IAmb_Lg		07 30 08.9	
	comp=Z,102nm,0.9s						
SLM	**Saint Louis**	**6.10**	**74**	IAmb_Lg		07 30 17.7	
	comp=Z,78nm,1.0s						
Q24A	**Divide**	**6.11**	**289**	IAmb_Lg		07 30 15.5	
	comp=Z,51nm,0.8s						
SDCO	**Great Sand Dun**	**6.20**	**277**		**Pn**	**07 28 34.2**	**-0.7**
SDCO				IAmb_Lg		07 30 23.9	
	comp=Z,45nm,1.1s						
435B	**Jarrell**	**6.39**	**179**		**Pn**	**07 28 36.0**	**-1.3**
435B				IAmb_Lg		07 30 33.0	
	comp=Z,74nm,0.7s						
N41A	**Harden Midland**	**6.41**	**55**	IAmb_Lg		07 30 28.1	
	comp=Z,66nm,1.0s						
ECSD	**EROS Data Cent**	**6.59**	**7**	Pn	**Pn**	**07 28 39.2**	**-0.8**
K38A	**Parkersburg**	**6.65**	**33**	IAmb_Lg		07 30 49.3	
	comp=Z,62nm,0.8s						
ISCO	**Idaho Springs**	**6.70**	**295**		**Pn**	**07 28 41.0**	**-0.9**
ISCO				IAmb_Lg		07 30 42.3	
	comp=Z,37nm,0.7s						
143A	**Socs Landing,**	**6.86**	**129**	IAmb_Lg		07 30 52.7	
	comp=Z,37nm,0.8s						
P43A	**Skaggs, Pawnee**	**6.90**	**67**	IAmb_Lg		07 30 42.6	
	comp=Z,83nm,0.8s						
JCT	**Junction City**	**6.91**	**195**		**Pn**	**07 28 44.0**	**-0.5**
JCT				IAmb_Lg		07 30 54.8	
	comp=Z,63nm,0.8s						
L40A	**Anamosa**	**7.00**	**44**	IAmb_Lg		07 30 56.1	
	comp=Z,36nm,0.9s						
Q44A	**Meyer Farm, Va**	**7.09**	**73**	IAmb_Lg		07 30 53.1	
	comp=Z,80nm,1.0s						
W45A	**Hickory Valley**	**7.21**	**104**	IAmb_Lg		07 31 02.9	
	comp=Z,68nm,0.7s						
OXF	**Oxford**	**7.27**	**109**		**Pn**	**07 28 49.5**	**+0.1**
OXF				IAmb_Lg		07 31 06.5	
	comp=Z,46nm,0.8s						
SUSD	**Miller**	**7.30**	**353**	IAmb_Lg		07 31 01.9	
	comp=Z,78nm,1.1s						
ANMO	**Albuquerque**	**7.41**	**255**	Pn	**Pn**	**07 28 52.9**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=71,slow=14,SNR=5.0						
ANMO				Lg	Lg	07 30 52.2	
	comp=Z,1.4nm,0.3s,baz=332,slow=22,SNR=4.5 comp=Z,0.6nm,0.4s						
Y45A	**Yeager Farm, C**	**7.46**	**114**	IAmb_Lg		07 31 19.0	
	comp=Z,45nm,0.8s						
I37A	**Lemond, Waseca**	**7.57**	**24**	IAmb_Lg		07 31 05.7	
	comp=Z,32nm,0.8s						
VBMS	**Vicksburg**	**7.74**	**128**	IAmb_Lg		07 31 29.4	
	comp=Z,34nm,1.1s						
O44A	**Mansfield**	**7.83**	**65**	IAmb_Lg		07 31 19.1	
	comp=Z,58nm,1.0s						
BNM	**Barren Site**	**7.84**	**250**		**Pn**	**07 28 58.1**	**+0.7**
L42A	**Oliver, Polo**	**7.87**	**50**	IAmb_Lg		07 31 20.9	
	comp=Z,30nm,0.7s						
WVT	**Waverly**	**8.03**	**95**		**Pn**	**07 28 60.0**	**+0.2**
JFWS	**Jewell Farm**	**8.10**	**43**	IAmb_Lg		07 31 39.4	
	comp=Z,41nm,0.8s						
735A	**Kenedy**	**8.31**	**180**	IAmb_Lg		07 31 48.5	
	comp=Z,58nm,1.1s						
MNTX	**Cornudas Mount**	**8.36**	**231**		**Pn**	**07 29 03.1**	**-1.2**
M44A	**Midewin, Midew**	**8.60**	**58**	IAmb_Lg		07 31 38.7	
	comp=Z,54nm,1.1s						
SPMN	**Marine on St.**	**8.84**	**23**	IAmb_Lg		07 31 50.6	
	comp=Z,25nm,1.0s						
833A	**Chaparral WMA,**	**8.95**	**189**	IAmb_Lg		07 31 58.7	
	comp=Z,31nm,1.1s						
TXAR	**Lajitas Array**	**9.27**	**214**	Pn	**Pn**	**07 29 16.1**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=40,slow=11,SNR=23						
TXAR				Lg	Lg	07 31 51.7	
	comp=Z,1.0nm,0.3s,baz=38,slow=29,SNR=6.5 comp=Z,0.6nm,0.5s						
KVTX	**Kingsville**	**9.62**	**181**	IAmb_Lg		07 32 04.0	
	comp=Z,31nm,0.9s						
E28A	**Huff**	**9.63**	**348**	IAmb_Lg		07 32 34.2	
	comp=Z,24nm,0.8s						
PDAR	**Pinedale Array**	**10.64**	**305**	Pn	**Pn**	**07 29 34.0**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=114,slow=15,SNR=4.0						
PDAR				Lg	Lg	07 32 30.8	
	comp=Z,0.4nm,0.3s,baz=114,slow=33,SNR=2.3 comp=Z,0.5nm,0.6s						
TKL	**Tuckaleechee C**	**11.36**	**94**	Pn	**Pn**	**07 29 46.4**	**+1.1**
	comp=Z,0.5nm,0.3s,baz=234,slow=9.9,SNR=9.5						
TKL				Sn	**Sn**	**07 31 52.2**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=106,slow=17,SNR=2.4						
TKL				Lg	Lg	07 32 56.0	
	comp=Z,1.0nm,0.3s,baz=12,slow=10,SNR=10 comp=Z,1.6nm,0.5s						
ULM	**Lac du Bonnet**	**13.12**	**5**	Pn	Pn	07 30 03.9	-5.5
	comp=Z,1.2nm,0.5s,baz=186,slow=9.2,SNR=1.4						
ULM				Sn	Sn	07 32 22.9	-13
	comp=Z,0.2nm,0.3s,baz=240,slow=8.1,SNR=1.7						
ILAR	**Eielson Array**	**39.85**	**330**	P	**P**	**07 34 36.8**	**0.0**
	comp=Z,1.1nm,0.6s,baz=111,slow=7.5,SNR=15 comp=Z,1.1nm,0.6s						
ARCES	**ARCESS Array B**	**65.83**	**19**	P	**P**	**07 37 49.5**	**+1.0**
	comp=Z,1.2nm,0.8s,baz=310,slow=7.0,SNR=3.7 comp=Z,1.2nm,0.8s						

INET 11 07:31:40.3 ± 1.4, 12°.94N × 87°.12W, h6km ± 6km, MW3.1
UCR 11 07:31:43.2 ± 1.2, 12°.94N × 87°.06W, h13km ± 6km, ML3.6
SNET 11 07:31:43.4 ± 1.3, 12°.94N × 87°.09W, h10km ± 11km, ML3.6
ISC 11 07:31:41.5 ± 1.1, 12°.92N ± 0°.04 × 87°.04W ± 0°.03, h8km ± 10km, n41, σ0s89/54, Near coast of Nicaragua

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

PAVA			IAML		07 32 50.2	
	comp=Z,377nm,0.4s					
SJTE	**Alcalda de S**	**2.04 290**	IAML		07 32 50.8	
	comp=Z,133nm,0.2s					
SJTE	**Alcalda de S**	**2.04 290**	IAML		07 32 50.8	
	comp=Z,133nm,0.2s					
ACON	**Acoyapa**	**2.05 117**	*e*P	**Pn**	**07 32 17.0**	**+0.7**
ACON	**Acoyapa**	**2.05 117**	*i* P	**Pn**	**07 32 17.0**	**+0.7**
ACON			eS	**Sn**	**07 32 44.7**	**+2.6**
LALI	**Alcalda de L**	**2.29 285**	IAML		07 32 53.8	
	comp=Z,145nm,0.4s					
LALI	**Alcalda de L**	**2.29 285**	IAML		07 32 53.8	
	comp=Z,145nm,0.4s					
JAYA	**Jayaque - finc**	**2.46 288**	*e*P	**Pn**	**07 32 23.1**	**+1.0**
JAYA			eS	**Sn**	**07 32 52.0**	**-0.4**
JAYA			IAML		07 33 00.8	
	comp=Z,433nm,0.3s					
JAYA	**Jayaque - finc**	**2.46 288**	*e*P	**Pn**	**07 32 23.1**	**+1.0**
JAYA			eS	**Sn**	**07 32 52.0**	**-0.4**
JAYA			IAML		07 33 00.8	
	comp=Z,433nm,0.3s					
HZTE	**Horizontes, Gu**	**2.60 147**	*e*P	**Pn**	**07 32 24.6**	**+0.7**
CUI	**Cuipilapa**	**2.90 141**	*e*P	**Pn**	**07 32 29.1**	**+1.1**

TAP 11 07:41:49.9, 24.17N×121.72E, h14km, ML3.5, 24D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ETL	**Fush Village**	**0.09**	**265**	*i* P		Pg	07 41 53.0	+0.1
	baz=265							
ETL				*i* S		Sg	07 41 55.3	+0.3
	baz=265							
NACB	**Ninganchiao**	**0.11**	**274**	⇓*i* P		Pg	07 41 53.3	+0.1
	baz=274							
NACB				*i* S		Sg	07 41 55.9	+0.5
	baz=274							
TWD	**Chiawan**	**0.14**	**232**	⇓*i* P		Pg	07 41 53.6	0.0
	baz=231							
TWD				S		Sg	07 41 56.5	+0.4
	baz=231							
EHP	**Heping Village**	**0.14**	**8**	⇓*i* P		Pg	07 41 53.7	0.0
	baz=11							
EHP				S		Sg	07 41 56.8	+0.6
	baz=11							
HWA	**Hwalien**	**0.21**	**209**	*e*P		Pb	07 41 55.7	0.0
	baz=207							
HWA				eS		Sb	07 42 01.9	+2.4
	baz=207							
ETLH	**Xiulin Townshi**	**0.22**	**281**	⇓*i* P		Pg	07 41 55.2	+0.3
	baz=281							
ETLH				eS		Sb	07 41 59.1	-0.6
	baz=281							
ENA	**Nanau**	**0.26**	**5**	⇓*i* P		Pg	07 41 55.6	+0.1
	baz=6.0							
ENA				eS		Sg	07 41 59.9	+0.6
	baz=6.0							
EWUT	**Wuta**	**0.28**	**11**	⇓*i* P		Pg	07 41 55.9	0.0
	baz=11							
EWUT				eS		Sg	07 42 00.4	+0.4
	baz=11							
ETM	**Tongmen**	**0.29**	**226**	P		Pg	07 41 56.2	+0.2
	baz=226							
ETM				eS		Sb	07 42 00.9	-0.7
	baz=226							
TEYL	**Yanliau Villag**	**0.32**	**200**	*e*P		Pb	07 41 57.1	-0.3
	baz=202							
TEYL				eS		Sb	07 42 04.0	+1.6
	baz=202							
NNSB	**Datong**	**0.40**	**311**	⇓*i* P		Pb	07 41 58.7	-0.2
	baz=311							
NNSB				eS		Sb	07 42 05.2	+0.2
	baz=311							
LATG	**Datong**	**0.41**	**335**	⇓*i* P		Pb	07 41 58.7	-0.4
	baz=335							
LATG				eS		Sb	07 42 05.0	-0.2
	baz=335							
WHF	**Hehuan Shan**	**0.41**	**267**	⇓*i* P		Pg	07 41 58.9	+0.5
	baz=267							
WHF				eS		Sb	07 42 05.2	-0.5
	baz=267							
NNS	**Nan Shan**	**0.42**	**311**	⇓*e*P		Pb	07 41 58.8	-0.4
	baz=311							
NNS				eS		Sb	07 42 05.7	+0.2
	baz=311							
ESL	**Shilin**	**0.44**	**217**	P		Pg	07 41 58.7	+0.1
	baz=216							
ESL				eS		Sb	07 42 05.6	-0.3
	baz=216							
FUSS	**Fushou**	**0.44**	**281**	⇓*i* P		Pb	07 41 59.6	-0.1
	baz=281							
FUSS				eS		Sb	07 42 06.8	+0.6
	baz=281							
TWC	**Suao**	**0.46**	**15**	P		Pg	07 41 59.2	+0.1
	baz=16							
TWC				eS		Sb	07 42 06.3	-0.2
	baz=16							
NDS	**Dongshan**	**0.47**	**360**	⇓P		Pg	07 41 59.6	+0.4
	baz=360							
NDS				eS		Sb	07 42 06.6	-0.1
	baz=360							
NDT	**Datong Townshi**	**0.47**	**337**	⇓*e*P		Pg	07 41 59.6	+0.2
	baz=337							
NDT				eS		Sb	07 42 07.3	+0.4
	baz=337							
TEGC	**Jichi Village**	**0.48**	**200**	*e*P		Pb	07 42 00.7	+0.5
	baz=199							
ENTT	**Nioudou**	**0.49**	**344**	⇓*i* P		Pb	07 42 00.3	-0.1
	baz=344							
ENTT				S		Sb	07 42 07.9	+0.4
	baz=344							
TWT	**Tachien**	**0.50**	**280**	P		Pb	07 42 01.2	+0.5
	baz=279							
TWT				eS		Sb	07 42 09.0	+1.0
	baz=279							
CHGB	**Renai**	**0.51**	**258**	⇓P		Pb	07 42 00.7	-0.1
	baz=258							
CHGB				eS		Sb	07 42 08.2	+0.1
	baz=258							
TDCB	**Techi**	**0.52**	**280**	⇓P		Pb	07 42 01.2	+0.3
	baz=280							
TDCB				eS		Sb	07 42 08.7	+0.3
	baz=280							
OWD	**Renai**	**0.54**	**247**	⇓*i* P		Pb	07 42 00.9	-0.3
	baz=247							
OWD				eS		Sb	07 42 09.4	+0.5
	baz=247							
TWE	**Neicheng**	**0.56**	**355**	P		Pb	07 42 01.4	0.0
	baz=357							
TWE				eS		Sb	07 42 09.3	0.0
	baz=357							
EGFH	**Guangfu**	**0.56**	**208**	*e*P		Pb	07 42 01.4	-0.2
	baz=208							
EGFH				eS		Sb	07 42 10.2	+0.8
	baz=208							
WUSB	**Renai**	**0.58**	**253**	⇓*i* P		Pb	07 42 02.0	+0.1
	baz=253							
WUSB				eS		Sb	07 42 10.8	+0.8
	baz=253							
YHNB	**Yeheng**	**0.59**	**328**	⇓*i* P		Pb	07 42 02.4	+0.3
	baz=328							
YHNB				eS		Sb	07 42 11.2	+0.7
	baz=328							
ILA	**Ilan**	**0.60**	**3**	*e*P		Pb	07 42 03.0	+0.8
	baz=3.0							
FUSB	**Fushanzhiwuyua**	**0.60**	**349**	⇓*i* P		Pb	07 42 02.5	+0.1
	baz=349							
FUSB				eS		Sb	07 42 10.9	+0.2
	baz=349							
NSK	**Sanguang**	**0.60**	**327**	⇓*i* P		Pb	07 42 02.6	+0.2
	baz=328							
NSK				eS		Sb	07 42 11.4	+0.6
	baz=328							
NWLT	**Wulai**	**0.64**	**342**	⇓P		Pb	07 42 03.1	+0.2
	baz=342							
NWLT				eS		Sb	07 42 12.0	+0.2
	baz=342							
VWDT	**VWDT**	**0.67**	**232**	P		Pb	07 42 03.4	0.0
	baz=232							
VWDT				eS		Sn	07 42 14.6	-0.7
	baz=232							
NTC	**Toucheng**	**0.69**	**8**	P		Pb	07 42 03.8	-0.1
	baz=8.0							
NTC				eS		Sb	07 42 13.2	-0.1
	baz=8.0							
WPL	**Puli Township**	**0.71**	**258**	*e*P		Pb	07 42 04.5	+0.3
	baz=258							
WPL				eS		Sb	07 42 14.6	+0.7
	baz=258							
WHP	**Taichung City**	**0.71**	**279**	*e*P		Pn	07 42 05.1	-0.7
	baz=279							
WHP				eS		Sn	07 42 15.9	-0.7
	baz=279							
NFF	**Wufeng Townshi**	**0.72**	**310**	*e*P		Pb	07 42 04.8	+0.5
	baz=310							
NFF				eS		Sb	07 42 13.8	-0.3
	baz=310							
HGSD	**Ruisui**	**0.72**	**202**	*e*P		Pb	07 42 04.5	+0.2
	baz=202							
HGSD				eS		Sn	07 42 17.1	+0.4
	baz=202							
DPDB	**Guoxing**	**0.73**	**260**	*e*P		Pb	07 42 05.2	+0.6
	baz=260							
DPDB				eS		Sb	07 42 15.3	+0.7
	baz=260							
WCS	**Beigang Elemen**	**0.74**	**262**	*e*P		Pb	07 42 05.2	+0.5
	baz=262							
WCS				eS		Sn	07 42 16.4	-0.8
	baz=262							
EHY	**Hungye**	**0.75**	**209**	*e*P		Pg	07 42 04.2	-0.4
	baz=208							
EHY				eS		Sb	07 42 15.9	+1.0
	baz=208							
SSLB	**Suanglung**	**0.79**	**242**	⇓P		Pb	07 42 05.7	+0.1
	baz=242							
SSLB				eS		Sb	07 42 16.7	+0.5
	baz=242							
SMLT	**Sun Moon Lake**	**0.80**	**250**	*e*P		Pb	07 42 05.8	0.0
	baz=249							
SMLT				eS		Sb	07 42 17.3	+0.8
	baz=249							
NSTT	**Nanjuang**	**0.80**	**305**	*e*P		Pn	07 42 06.7	-0.2
	baz=306							
NSTT				eS		Sn	07 42 17.6	-1.0
	baz=306							
TIPB	**Shuangxi**	**0.81**	**7**	*e*P		Pb	07 42 06.0	+0.1
	baz=7.0							
TIPB				eS		Sb	07 42 16.9	+0.2
	baz=7.0							
NHDH	**Xindian Distri**	**0.81**	**348**	*e*P		Pn	07 42 06.7	-0.3
	baz=348							
NHDH				eS		Sb	07 42 17.6	+0.9
	baz=348							
TWA	**Mucha**	**0.82**	**351**	*e*P		Pn	07 42 06.8	-0.4
	baz=352							
TYC	**Yuchr**	**0.83**	**252**	*e*P		Pb	07 42 06.5	+0.4
	baz=252							
TYC				eS		Sb	07 42 17.4	+0.2
	baz=252							
TATO	**Taipei**	**0.83**	**345**	*e*P		Pn	07 42 07.0	-0.3
	baz=346							
TATO				eS		Sn	07 42 18.8	-0.6
	baz=346							
YULB	**Yu-li**	**0.86**	**207**	*e*P		Pg	07 42 05.5	-1.2
	baz=207							
YULB				eS		Sn	07 42 19.1	-1.0
	baz=207							
TWB1	**Santiao Chiao**	**0.87**	**16**	*e*P		Pb	07 42 07.3	+0.4
	baz=17							
TWB1				eS		Sn	07 42 19.5	-0.9
	baz=17							
TWQ1	**Liyutan**	**0.88**	**282**	*e*P		Pn	07 42 08.8	+0.9
	baz=282							
TWQ1				eS		Sn	07 42 21.3	+0.7
	baz=282							
EYUL	**Yuli**	**0.89**	**204**	*e*P		Pb	07 42 07.7	+0.4
	baz=204							
TWF1	**Yuli**	**0.90**	**206**	*e*P		Pg	07 42 06.3	-1.1
	baz=205							
TWF1				eS		Sn	07 42 20.8	-0.2
	baz=205							
NWF	**Wu-fen Shan**	**0.90**	**4**	*e*P		Pn	07 42 08.2	-0.2
	baz=4.0							
WFSB	**Wu-fen Shan**	**0.90**	**4**	*e*P		Pn	07 42 08.0	-0.2
	baz=4.0							
WFSB				eS		Sb	07 42 20.1	+0.8
	baz=4.0							
NSY	**Sanyi**	**0.91**	**286**	*e*P		Pn	07 42 09.6	+1.3
	baz=286							
NMLH	**Miaoli**	**0.92**	**294**	*e*P		Pn	07 42 09.9	+1.4
	baz=294							
HSN	**Hsinchu**	**0.93**	**313**	*e*P		Pn	07 42 10.1	+1.4
	baz=316							
HSN				eS		Sn	07 42 23.9	+2.1
	baz=316							
NCUH	**Zhongli**	**0.93**	**329**	*e*P		Pn	07 42 09.7	+1.0
	baz=329							
NCU	**National Centr**	**0.94**	**329**	*e*P		Pn	07 42 10.1	+1.4
	baz=329							
SXI1	**Grass Mountain**	**0.94**	**9**	⇓*e*P		Pn	07 42 08.5	-0.3
	baz=9.0							
SXI1				eS		Sb	07 42 20.8	+0.5
	baz=9.0							
WWF	**Wufeng**	**0.94**	**263**	*e*P		Pn	07 42 10.4	+1.7
	baz=263							
WJS	**Zhushan**	**0.97**	**249**	*e*P		Pn	07 42 10.0	+0.9
	baz=249							
WJS				eS		Sn	07 42 24.3	+1.6
	baz=249							
TWS1	**Kuangyinshan**	**0.97**	**344**	*e*P		Pn	07 42 10.3	+1.1
	baz=344							
YUS	**Yu-Shan**	**0.97**	**226**	*e*P		Pg	07 42 08.6	-0.3
	baz=226							
TNOU	**National Taiwa**	**0.98**	**3**	*e*P		Pn	07 42 09.6	+0.3
	baz=3.0							
YM01	**YM01**	**0.98**	**352**	*e*P		Pn	07 42 10.2	+0.8
	baz=352							
FULB	**Fuli**	**1.04**	**202**	*e*P		Pb	07 42 09.8	+0.1
	baz=202							
ALS	**Alishan**	**1.06**	**232**	*e*P		Pb	07 42 10.4	+0.1
	baz=232							
ALS				eS		Sn	07 42 25.5	+0.1
	baz=232							
WCHH	**Zhanghua**	**1.06**	**266**	*e*P		Pg	07 42 12.1	+1.6
	baz=265							
WCHH				eS		Sn	07 42 28.7	+3.7
	baz=265							
CHKT	**Chengkung**	**1.11**	**197**	*e*P		Pb	07 42 10.6	-0.3
	baz=197							
CHKT				eS		Sn	07 42 26.7	+0.5
	baz=197							
WGK	**Gukeng**	**1.16**	**246**	*e*P		Pg	07 42 13.3	+0.9
	baz=245							
WGK				eS		Sn	07 42 30.9	+3.4
	baz=245							
ELDTW	**Lidau**	**1.17**	**214**	*e*P		Pb	07 42 10.9	-1.0
	baz=213							
WDLH	**Douliu**	**1.18**	**246**	*e*P		Pg	07 42 13.7	+1.1
	baz=246							
WDLH				eS		Sg	07 42 31.4	+3.3
	baz=246							
YOJ	**Yonaguni jima**	**1.22**	**76**	P		Pn	07 42 12.4	-0.1
	baz=76							
YOJ				eS		Sg	07 42 29.2	0.0
	baz=76							
EDH	**Donghe**	**1.25**	**198**	*e*P		Pn	07 42 11.7	-1.3
	baz=198							
EDH				eS		Sb	07 42 28.5	-0.7
	baz=198							
WCKO	**Fanlu**	**1.25**	**235**	*e*P		Pg	07 42 14.6	+0.5
	baz=235							
WCKO				eS		Sg	07 42 33.9	+3.5
	baz=235							
STYH	**Taoyuan**	**1.31**	**221**	*e*P		Pb	07 42 14.3	-0.1
	baz=221							
STYH				eS		Sg	07 42 32.0	-0.4
	baz=221							
TPUB	**Ta-pu**	**1.32**	**229**	*e*P		Pg	07 42 15.6	+0.3
	baz=229							
CHY	**Chiayi**	**1.36**	**241**	*e*P		Pg	07 42 16.8	+0.7
	baz=240							
WTP	**Ta-pu**	**1.36**	**228**	*e*P		Pg	07 42 16.1	-0.1
	baz=228							
TWK	**Hsinying**	**1.44**	**232**	*e*P		Pg	07 42 17.4	-0.2
	baz=231							
TWK				eS		Sg	07 42 38.2	+1.9
	baz=231							
SNST	**Tainan City**	**1.46**	**230**	*e*P		Pg	07 42 17.7	-0.4
	baz=230							
CHN1	**Nanshi**	**1.46**	**228**	*e*P		Pg	07 42 17.8	-0.3
	baz=228							
CHN1				eS		Sg	07 42 39.1	+1.9
	baz=228							
TWG	**Pinlang**	**1.47**	**204**	*e*P		Pn	07 42 15.5	-0.5
	baz=204							
SSD	**Sandimen**	**1.73**	**215**	*e*P		Pb	07 42 21.6	+0.1
	baz=215							
SSD				eS		Sg	07 42 45.4	-0.3
	baz=215							
WDGT	**Dungji**	**2.09**	**245**	*e*P		Pn	07 42 26.0	+1.5
	baz=244							

*RSPR **11** 07:46:25.2, 19.01N×63.63W, h130km±4km, MD3.1/4*
*TRN **11** 07:46:51.4, 17.49N×62.14W, h69km, MD3.1*
ISC 11 07:46:19.9±3.7, 19.5N±0.3×63.49W±0.06, h10km, n17, σ1978/19, 5C, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SJVI	**Gifft Hill Sch**	**1.69**	**226**	⇑*e*P		**Pn**	**07 46 50.2**	**+0.6**
SJVI	**Gifft Hill Sch**	**1.69**	**226**	*e*S		**Sn**	**07 47 10.5**	**-0.8**
STVI	**Saint Thomas**	**1.81**	**230**	⇑*e*P		**Pn**	**07 46 52.1**	**+1.0**
STVI	**Saint Thomas**	**1.81**	**230**	*e*S		**Sn**	**07 47 13.0**	**-1.1**
CUPR	**Culebra, Puert**	**2.08**	**235**	⇑*e*P		**Pn**	**07 46 55.8**	**+0.9**
CUPR	**Culebra, Puert**	**2.08**	**235**	*e*S		**Sn**	**07 47 18.9**	**-2.0**
MTP	**Monte Pirata**	**2.41**	**234**	⇑*e*P		**Pn**	**07 46 58.5**	**-1.0**
MTP	**Monte Pirata**	**2.41**	**234**	*e*S		**Sn**	**07 47 26.2**	**-2.9**
ANWB	**Willy Bob**	**2.45**	**138**	*e*P		Pn	07 46 51.9	-8.1
ANWB	**Willy Bob**	**2.45**	**138**	*e*P		**Pb**	**07 47 04.3**	**+0.1**
ANWB				eS		Pg	07 47 13.5	+6.5
CBYP	**Canovanas**	**2.56**	**241**	⇑*e*P		**Pn**	**07 47 02.0**	**+0.5**
CBYP	**Canovanas**	**2.56**	**241**	*e*S		**Sn**	**07 47 30.6**	**-2.2**
BPA	**Boggy Peak**	**2.91**	**147**	*e*P		**Pn**	**07 47 06.5**	**+0.1**
BPA				eS		**Pg**	**07 47 15.4**	**-0.4**
ANBD	**Bethesda, Anti**	**2.96**	**146**	*e*P		**Pn**	**07 47 06.0**	**-1.0**
ANBD				eS		**Pg**	**07 47 17.2**	**+0.6**
ABD	**La Joyeuse, An**	**3.58**	**148**	*e*P		**Pn**	**07 47 13.2**	**-2.3**
ABD				eS		**Pg**	**07 47 30.4**	**+1.8**
CBE	**Ff, Capester**	**3.88**	**152**	*e*S		**Pg**	**07 47 36.7**	**+2.4**
MAGL	**Barre de l'ile**	**4.13**	**149**	*e*S		**Pg**	**07 47 42.6**	**+3.5**

*IDC **11** 07:52:41.5±2.1, 0.99N×126.22E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=197.0km s-min=25.1km az=65.0*
*DJA **11** 07:52:49.6±0.4, 1.1N±5.5×12.6E±., h10km, M4.0/7, mb5.2/1, MLv3.4/7*
ISC 11 07:52:49.4±1.2, 0.9N±0.1×125.98E±0.06, h35km, n8, σ3.903/10, mb3.4/3, Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**1.40**	**96**	P		**Pn**	**07 53 15.7**	**+3.3**
KMSI	**Cibinong**	**2.03**	**260**	P		**Pn**	**07 53 23.5**	**+2.4**
KMSI				S		**Sn**	**07 53 48.0**	**+2.7**
LBMI	**Labuha**	**2.18**	**136**	P		**Pn**	**07 53 25.1**	**+2.0**
LBMI				S		**Sn**	**07 53 50.6**	**+1.7**
MRSI	**Marisa**	**4.06**	**264**	P		**Pn**	**07 53 50.8**	**+1.7**
GRJI	**Gresik**	**15.56**	**240**	P		**Pn**	**07 56 26.4**	**+0.1**
WRA	**Warramunga Arr**	**22.30**	**159**	P		**P**	**07 57 39.6**	**-4.4**
	0.4nm,0.4s,baz=338,slow=11,SNR=7.8 0.4nm,0.4s							
ASAR	**Alice Springs**	**25.63**	**163**	P		**P**	**07 58 13.4**	**-2.5**
	0.4nm,0.4s,baz=343,slow=12,SNR=18 0.4nm,0.4s							
MKAR	**Makanchi Array**	**59.44**	**327**	P		**P**	**08 02 46.6**	**-2.1**
	0.2nm,0.3s,baz=119,slow=7.3,SNR=6.6 0.2nm,0.3s							

WEL 11 08:10:07.3, 43.6S±0.9×172.6E±1.0, h5km, M2.2/5, ML2.4/6, MLv2.2/5, Error ellipse: s-maj=0.0km s-min=0.0km az=58.7, South Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OKCZ	**Okains Bay**	**0.36**	**118**	P		Pb	08 10 16.1	-0.2
OKCZ				S		Sb	08 10 22.2	-0.2
AMCZ	**Amberley**	**0.38**	**4**	P		Pb	08 10 17.2	+0.7
AMCZ				S		Sb	08 10 22.8	+0.2
AKCZ	**Akaroa Harbour**	**0.38**	**146**	P		Pb	08 10 16.3	-0.3
RACZ	**Rakaia**	**0.39**	**243**	P		Pb	08 10 17.1	+0.5
GVZ	**Greta Valley S**	**0.66**	**28**	P		Pn	08 10 22.4	-0.9
WACZ	**Wakanui South**	**0.68**	**235**	P		Pn	08 10 23.4	-0.2

*IDC **11** 08:18:46.6±1.3, 4.76N×125.47E, h0km, mb3.7/4, mbtmp3.7/4, MS3.3/2, Error ellipse: s-maj=67.4km s-min=23.4km az=77.0*
ISC 11 08:18:48.8±1.7, 5.7N±0.2×127.4E±0.2, h35km, n8, σ0.982/7, mb3.7/4, 1C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DDMP	**Don Marcelino,**	**1.69**	**285**	⇓*e*P		**Pn**	**08 19 16.6**	**+0.7**
GSPH	**General Santos**	**2.43**	**280**	*e*P		**Pn**	**08 19 26.8**	**+0.6**
KCP	**Kidapawan**	**2.62**	**301**	⇑*i*P		**Pn**	**08 19 28.8**	**+0.1**
KCP				*i* S		**Sn**	**08 19 58.3**	**-1.1**
WRA	**Warramunga Arr**	**26.36**	**165**	P		**P**	**08 24 21.8**	**-0.1**
	1.9nm,0.9s,baz=339,slow=10,SNR=7.2 1.9nm,0.9s							
ASAR	**Alice Springs**	**29.84**	**168**	P		**P**	**08 24 52.4**	**-0.6**
	0.5nm,0.9s,baz=346,slow=11,SNR=2.4							
ASAR				LR		LR	08 37 36.3	
	comp=Z,43nm,18.1s,baz=162,slow=38 0.5nm,0.9s							
MJAR	**Matsushiro Arr**	**32.30**	**16**	P		P	08 25 29.7	+15
	1.1nm,0.6s,baz=197,slow=8.8,SNR=5.1 1.1nm,0.6s							
MKAR	**Makanchi Array**	**56.34**	**324**	P		**P**	**08 28 27.0**	**+0.5**
	0.8nm,0.9s,baz=131,slow=8.0,SNR=5.7 0.8nm,0.9s							
AAK	**Ala-Archa**	**59.37**	**317**	LR		LR	08 55 54.0	
	comp=Z,25nm,18.8s,baz=246,slow=38							

IDC 11 08:20:03.7±5.1, 15.71S×171.23W, h602km±15km, mb2.9/4, mbtmp3.7/4, Error ellipse: s-maj=160.6km s-min=29.4km az=135.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AFI	**Afiamalu**	**1.87**	**343**	P		P	08 21 19.8	+1.9
	22nm,0.7s,baz=216,slow=8.7,SNR=2.0							
AFI				S		S	08 22 17.8	-0.3
	32nm,0.9s,baz=210,slow=20,SNR=2.0							
WRA	**Warramunga Arr**	**51.81**	**257**	P		P	08 28 17.6	0.0
	0.2nm,0.4s,baz=97,slow=7.0,SNR=5.4 0.2nm,0.4s							
ASAR	**Alice Springs**	**52.01**	**252**	P		P	08 28 18.6	-0.4
	0.8nm,0.7s,baz=83,slow=8.3,SNR=7.3 0.8nm,0.7s							
ILAR	**Eielson Array**	**82.36**	**10**	P		P	08 31 22.2	-1.0
	0.3nm,0.8s,baz=210,slow=5.2,SNR=2.5 0.3nm,0.8s							
SONM	**Songino Array**	**96.47**	**318**	P		P	08 32 31.0	+1.3
	0.6nm,0.5s,baz=119,slow=5.1,SNR=1.8 0.6nm,0.5s							

IDC 11 08:22:01.5±2.0, 6.42S×151.77E, h0km, mb3.5/3, mbtmp3.6/3, Error ellipse: s-maj=86.7km s-min=20.7km az=115.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KRVT	**Keravat (AS076**	**2.12**	**7**	Pg		Pb	08 22 40.4	-0.4
	46nm,0.3s,baz=182,slow=2.0,SNR=16							
KRVT				Sn		Sg	08 23 13.1	+3.5
	42nm,0.3s,baz=163,slow=14,SNR=7.7							
WRA	**Warramunga Arr**	**21.62**	**230**	P		P	08 26 54.0	+0.6
	1.1nm,0.8s,baz=54,slow=10,SNR=4.5 1.1nm,0.8s							
ASAR	**Alice Springs**	**24.27**	**223**	P		P	08 27 20.4	-0.3
	1.0nm,0.8s,baz=60,slow=9.0,SNR=7.3 1.0nm,0.8s							
ILAR	**Eielson Array**	**84.04**	**22**	P		P	08 34 33.6	-0.1
	0.6nm,0.7s,baz=241,slow=6.2,SNR=6.8 0.6nm,0.7s							
TORD	**Torodi Ar. Bea**	**149.79**	**285**	PKPbc		PKPbc	08 41 54.0	-0.6
	0.5nm,0.6s,baz=81,slow=1.9,SNR=3.0							

*DDA **11** 08:29:38.9±0.0, 39.17N×23.37E, h8km±3km

Tensor Solution. s8 Moment tensor: M_{rr}0.75; $M_{\theta\theta}$1.44; $M_{\phi\phi}$-2.20; $M_{r\theta}$-0.71; $M_{r\phi}$-0.19; $M_{\theta\phi}$0.30; Fault plane solution: NP1:ϕ_s224.00000°,δ64.00000°,λ160.00000°. NP2:ϕ_s323.00000°,δ72.00000°,λ28.00000°.

*ISK **11** 08:29:45.4,39°.25N×23°.75E,h12km,ML4.2/27*

*PDG **11** 08:29:45.5±0.4,39°.23N×23°.71E,h16km,ML3.7/14,Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*

*THE **11** 08:29:46.3,39°.23N×23°.74E,h12km±1km,ML4.1/20,Error ellipse: s-maj=1.1km s-min=0.6km az=67.0*

*NEIC **11** 08:29:46.5±2.4,39°.24N±0°.05×23°.79E±0°.06,h10km±6km, Error ellipse: s-maj=7.2km s-min=6.0km az=211.0*

*SOF **11** 08:29:46.5,39°.40N×23°.84E,h12km, MD3.8*

*TIR **11** 08:29:47.4,39°.30N×23°.68E,h63km±23km, Ml4.3*

ISC 11 08:29:45.8±0.8,39°.23N±0°.01×23°.72E±0°.02,h11km±5km, n327,σ0s97/369,mb4.0/13,MS3.2/16,32C-18D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ALNA	**Alonissos**	**0.14**	**125**	P	**Pg**	**08 29 49.3**	**+0.2**
ALNA				S	**Sg**	**08 29 51.6**	**+0.2**
ALNA				AML	AML	08 29 52.1	
ALNA				AML	AML	08 29 52.1	
NEO	**Neokhori**	**0.40**	**282**	P	**Pg**	**08 29 53.7**	**0.0**
NEO				S	**Sg**	**08 29 59.1**	**+0.1**
NEO				AML	AML	08 30 00.9	
	comp=E,91226µm,0.3s						
NEO				AML	AML	08 30 03.6	
	comp=N,94486µm,0.3s						
NEO	**Neokhori**	**0.40**	**282**	P	**Pg**	**08 29 53.8**	**0.0**
NEO				S	**Sg**	**08 29 59.7**	**+0.7**
	comp=N,47µm,0.3s						
XOR	**Xorichti**	**0.44**	**289**	P	**Pg**	**08 29 54.6**	**+0.1**
XOR				S	**Sg**	**08 30 00.7**	**+0.5**
XOR				AML	AML	08 30 01.9	
	comp=N,95165µm,0.2s						
XOR				AML	AML	08 30 02.1	
	comp=E,60790µm,0.3s						
XOR	**Xorichti**	**0.44**	**289**	P	**Pg**	**08 29 54.4**	**0.0**
XOR				S	**Sg**	**08 30 01.0**	**+0.8**
	comp=E,39µm,0.2s						
KYMI	**Kymi, Euboea I**	**0.66**	**154**	P	**Pb**	**08 29 59.1**	**-0.2**
KYMI				S	**Sb**	**08 30 08.4**	**-0.1**
KYMI				AML	AML	08 30 10.8	
	comp=E,52310µm,0.5s						
KYMI				AML	AML	08 30 11.1	
	comp=N,68979µm,0.6s						
KYMI	**Kymi, Euboea I**	**0.66**	**154**	P	**Pg**	**08 29 58.6**	**0.0**
KYMI				S	**Sb**	**08 30 08.6**	**+0.1**
PAIG	**Paliouri**	**0.70**	**357**	P	**Pb**	**08 30 00.2**	**+0.1**
PAIG				S	**Sb**	**08 30 09.8**	**+0.1**
PAIG				AML	AML	08 30 11.4	
	comp=N,15841µm,0.7s						
PAIG				AML	AML	08 30 12.7	
	comp=E,16030µm,0.5s						
PAIG	**Paliouri**	**0.70**	**357**	P	**Pb**	**08 30 00.2**	**+0.1**
PAIG				S	**Sn**	**08 30 11.2**	**-1.3**
	comp=E,8µm,0.7s						
SKY	**Skiros Island**	**0.73**	**118**	P	**Pg**	**08 30 00.2**	**+0.3**
SKY				S	**Sg**	**08 30 09.8**	**+0.3**
SKY				AML	AML	08 30 13.8	
	comp=E,75617µm,0.2s						
SKY				AML	AML	08 30 14.2	
	comp=N,77541µm,0.2s						
SKY	**Skiros Island**	**0.73**	**118**	P	**Pg**	**08 29 59.8**	**-0.2**
SKY				S	**Sb**	**08 30 10.9**	**+0.3**
	comp=N,33µm,0.3s						
LKR	**Lokris**	**0.81**	**225**	P	**Pg**	**08 30 00.7**	**-0.7**
LKR				S	**Sg**	**08 30 11.6**	**-0.3**
LKR				AML	AML	08 30 14.2	
	comp=N,71521µm,0.3s						
LKR				AML	AML	08 30 14.2	
	comp=E,68688µm,0.3s						
LKR	**Lokris**	**0.81**	**225**	P	**Pg**	**08 30 00.2**	**-1.2**
EFSA	**Agios Efstrati**	**1.03**	**72**	P	**Pb**	**08 30 05.5**	**-0.1**
VIL2	**Platees**	**1.07**	**200**	P	**Pg**	**08 30 06.5**	**+0.1**
VIL2				AML	AML	08 30 25.3	
	comp=N,34467µm,0.8s						
VIL2				AML	AML	08 30 26.8	
	comp=E,41500µm,0.6s						
VILL	**Villia**	**1.11**	**197**	P	**Pb**	**08 30 06.1**	**-0.9**
VILL				S	**Sg**	**08 30 22.0**	**+0.4**
	comp=E,20µm,0.7s						
LRSO	**Larissa Observ**	**1.12**	**294**	P	**Pb**	**08 30 07.2**	**0.0**
LRSO				AML	AML	08 30 28.0	
	comp=N,35518µm,0.7s						
LRSO				AML	AML	08 30 31.9	
	comp=E,29498µm,0.5s						
LRSO	**Larissa Observ**	**1.12**	**294**	P	**Pg**	**08 30 07.4**	**0.0**
LRSO				S	**Sn**	**08 30 23.6**	**+0.7**
	comp=E,17µm,0.6s						
OUR	**Ouranopolis**	**1.12**	**10**	P	**Pb**	**08 30 06.8**	**-0.4**
OUR				S	**Sb**	**08 30 21.8**	**-0.1**
OUR				AML	AML	08 30 25.4	
	comp=N,24664µm,0.5s						
OUR				AML	AML	08 30 25.8	
	comp=E,16810µm,0.3s						
OUR	**Ouranopolis**	**1.12**	**10**	P	**Pb**	**08 30 06.8**	**-0.4**
OUR				S	**Sb**	**08 30 21.6**	**-0.3**
	comp=E,10µm,0.4s						
OUR	**Ouranopolis**	**1.12**	**10**	PN	**Pb**	**08 30 06.9**	**-0.4**
OUR				SN	**Sn**	**08 30 22.7**	**-0.2**
DION	**Dionisos Attik**	**1.16**	**172**	P	**Pb**	**08 30 07.5**	**-0.4**
DION				AML	AML	08 30 24.9	
	comp=E,65240µm,0.5s						
DION				AML	AML	08 30 26.2	
	comp=N,70868µm,0.4s						
DION	**Dionisos Attik**	**1.16**	**172**	P	**Pb**	**08 30 07.7**	**-0.2**
DION				S	**Sg**	**08 30 23.1**	**0.0**
	comp=N,52µm,0.4s						
PLG	**Polygyros**	**1.17**	**349**	P	**Pb**	**08 30 07.2**	**-0.8**
PLG				AML	AML	08 30 24.2	
	comp=N,9335µm,0.7s						
PLG				AML	AML	08 30 24.2	
	comp=E,10704µm,0.7s						
PLG	**Polygyros**	**1.17**	**349**	P	**Pb**	**08 30 07.2**	**-0.8**
PLG				S	**Sb**	**08 30 22.4**	**-0.8**
	comp=E,5µm,0.7s						
PTL	**Penteli**	**1.18**	**175**	P	**Pb**	**08 30 08.0**	**-0.2**
PTL	**Penteli**	**1.18**	**175**	P	**Pb**	**08 30 08.0**	**-0.2**
PTL				S	**Sb**	**08 30 22.9**	**-0.6**
	comp=E,16µm,0.6s						
DLFA	**Delphi**	**1.22**	**232**	P	**Pn**	**08 30 08.2**	**-0.6**
ATH	**Athens Observa**	**1.25**	**180**	P	**Pn**	**08 30 08.9**	**-0.4**
ATH	**Athens Observa**	**1.25**	**180**	P	**Pn**	**08 30 09.2**	**0.0**
ATH				S	**Sb**	**08 30 25.2**	**-0.3**
	comp=E,13µm,0.5s						
TYRN	**Tyrnavos**	**1.25**	**293**	P	**Pn**	**08 30 09.0**	**-0.2**
TYRN				AML	AML	08 30 29.1	
	comp=E,14263µm,0.5s						
TYRN				AML	AML	08 30 33.3	
	comp=N,12563µm,0.8s						
TYRN	**Tyrnavos**	**1.25**	**293**	P	**Pn**	**08 30 09.0**	**-0.2**
TYRN				S	**Sg**	**08 30 27.2**	**+1.0**
	comp=N,5µm,0.6s						
MAKR	**Makrakomi, Fth**	**1.26**	**261**	P	**Pn**	**08 30 09.0**	**-0.3**
MAKR				AML	AML	08 30 29.5	
	comp=N,31319µm,0.8s						
MAKR				AML	AML	08 30 30.1	
	comp=E,15585µm,0.4s						
MAKR	**Makrakomi, Fth**	**1.26**	**261**	P	**Pn**	**08 30 09.0**	**-0.3**
MAKR				S	**Sg**	**08 30 28.2**	**+1.9**
ATHU	**Athens Univers**	**1.26**	**178**	P	**Pn**	**08 30 09.1**	**-0.2**
ATHU	**Athens Univers**	**1.26**	**178**	P	**Pn**	**08 30 09.1**	**-0.2**
ATHU				S	**Sb**	**08 30 25.1**	**-0.6**
	comp=E,5µm,0.5s						
LIT	**Litokhoron**	**1.29**	**313**	P	**Pn**	**08 30 09.2**	**-0.7**
LIT				S	**Sb**	**08 30 25.8**	**-1.0**
LIT				AML	AML	08 30 30.9	
	comp=E,10271µm,0.3s						
LIT				AML	AML	08 30 31.0	
	comp=N,14408µm,0.4s						
LIT	**Litokhoron**	**1.29**	**313**	P	**Pn**	**08 30 09.0**	**-0.8**
LIT				S	**Sg**	**08 30 27.6**	**+0.1**
	comp=N,6µm,0.3s						
LIT	**Litokhoron**	**1.29**	**313**		**Pn**	**08 30 09.2**	**-0.7**
LIA	**Limnos Island**	**1.31**	**59**	P	**Pn**	**08 30 09.3**	**-0.8**
LIA				AML	AML	08 30 32.2	
	comp=N,14746µm,0.5s						
LIA				AML	AML	08 30 32.2	
	comp=E,9062µm,0.6s						
LIA	**Limnos Island**	**1.31**	**59**	P	**Pn**	**08 30 09.2**	**-0.9**
LIA				S	**Sg**	**08 30 29.1**	**+1.0**
	comp=E,6µm,0.4s						
KARY	**Karystos**	**1.32**	**155**	P	**Pn**	**08 30 10.1**	**0.0**
KARY				S	**Sb**	**08 30 26.0**	**-1.4**
KARY	**Karystos**	**1.32**	**155**	P	**Pn**	**08 30 09.9**	**-0.2**
LTK	**Loutraki**	**1.34**	**207**	P	**Pn**	**08 30 10.3**	**-0.2**
LTK	**Loutraki**	**1.34**	**207**	P	**Pn**	**08 30 10.2**	**-0.2**
LTK				S	**Sg**	**08 30 29.5**	**+0.5**
	comp=E,9µm,0.7s						
THL	**Klokotos Trika**	**1.37**	**285**	P	**Pn**	**08 30 10.8**	**0.0**
THL				S	**Sn**	**08 30 29.1**	**+0.2**
THL				AML	AML	08 30 34.9	
	comp=E,5427µm,0.5s						
THL				AML	AML	08 30 36.4	
	comp=N,8652µm,0.7s						
THL	**Klokotos Trika**	**1.37**	**285**	P	**Pn**	**08 30 10.5**	**-0.3**
THL				S	**Sg**	**08 30 30.4**	**+0.5**
	comp=N,4µm,0.6s						
VLY	**Voula,Athens**	**1.37**	**178**	P	**Pn**	**08 30 10.9**	**0.0**
VLY				S	**Sb**	**08 30 27.4**	**-1.6**
VLY				AML	AML	08 30 32.6	
	comp=N,36958µm,0.5s						
VLY				AML	AML	08 30 33.7	
	comp=E,26885µm,0.6s						
VLY	**Voula,Athens**	**1.37**	**178**	P	**Pn**	**08 30 10.7**	**-0.2**
VLY				S	**Sn**	**08 30 29.1**	**+0.1**
	comp=E,16µm,0.7s						
THAL	**Thalero**	**1.45**	**215**	P	**Pn**	**08 30 12.0**	**0.0**
THAL	**Thalero**	**1.45**	**215**	P	**Pn**	**08 30 12.0**	**0.0**
THAL				S	**Sg**	**08 30 32.1**	**-0.4**
HORT	**Hortiatis**	**1.45**	**341**	P	**Pn**	**08 30 11.6**	**-0.5**
HORT				AML	AML	08 30 34.3	
	comp=N,4129µm,0.6s						
HORT				AML	AML	08 30 42.0	
	comp=E,5975µm,1.0s						
HORT	**Hortiatis**	**1.45**	**341**	P	**Pn**	**08 30 11.6**	**-0.5**
HORT				S	**Sn**	**08 30 29.7**	**-1.5**
	comp=E,3µm,0.8s						
HORT	**Hortiatis**	**1.45**	**341**	PN	**Pn**	**08 30 11.5**	**-0.5**
HORT				SN	**Sb**	**08 30 31.5**	**+0.1**
THE	**Thessaloniki**	**1.52**	**338**	P	**Pn**	**08 30 12.6**	**-0.3**
THE				AML	AML	08 30 34.5	
	comp=E,2102µm,0.7s						
THE				AML	AML	08 30 36.9	
	comp=N,1988µm,0.7s						
THE	**Thessaloniki**	**1.52**	**338**	P	**Pn**	**08 30 12.5**	**-0.4**
THE				S	**Sn**	**08 30 31.6**	**-1.1**
	comp=N,1µm,0.7s						
EVR	**Evrytania**	**1.52**	**259**	P	**Pn**	**08 30 13.5**	**+0.5**
EVR	**Evrytania**	**1.52**	**259**	P	**Pn**	**08 30 13.3**	**+0.2**
SERG	**Sergoula**	**1.54**	**239**	P	**Pn**	**08 30 13.3**	**+0.1**
SERG	**Sergoula**	**1.54**	**239**	P	**Pn**	**08 30 13.1**	**-0.1**
SERG				S	**Sn**	**08 30 32.3**	**-0.8**
TRIZ	**Trizonia**	**1.55**	**237**	P	**Pn**	**08 30 13.4**	**+0.1**
TRIZ	**Trizonia**	**1.55**	**237**	P	**Pn**	**08 30 13.3**	**0.0**
THAS	**Thassos island**	**1.58**	**29**	P	**Pn**	**08 30 12.4**	**-1.3**
THAS	**Thassos island**	**1.58**	**29**	P	**Pn**	**08 30 12.2**	**-1.5**
ALIK	**Aliki, Aigiali**	**1.59**	**233**	P	**Pb**	**08 30 14.6**	**-0.5**
KOKK	**Kokkinochori,**	**1.60**	**7**	P	**Pn**	**08 30 13.4**	**-0.7**
KOKK	**Kokkinochori,**	**1.60**	**7**	P	**Pn**	**08 30 13.4**	**-0.7**
SOH	**Sokhos**	**1.62**	**350**	P	**Pn**	**08 30 14.1**	**-0.2**
SOH	**Sokhos**	**1.62**	**350**	P	**Pn**	**08 30 14.1**	**-0.2**
EFP	**Efpalio**	**1.63**	**241**	P	**Pn**	**08 30 14.5**	**+0.1**
SIGR	**SIGRI**	**1.66**	**90**	P	**Pn**	**08 30 14.7**	**-0.1**
SIGR				AML	AML	08 30 45.1	
	comp=E,3839µm,0.6s						
SIGR				AML	AML	08 30 45.4	
	comp=N,4018µm,0.6s						
SIGR	**SIGRI**	**1.66**	**90**	P	**Pn**	**08 30 14.4**	**-0.4**
EPID	**Epidavros**	**1.68**	**197**	P	**Pn**	**08 30 14.9**	**-0.2**
GUR	**Goura**	**1.68**	**221**	P	**Pn**	**08 30 15.1**	**-0.2**
LAKA	**Lakka**	**1.68**	**235**	P	**Pn**	**08 30 15.3**	**+0.1**
KLV	**Kalavryta, Ach**	**1.71**	**227**	P	**Pn**	**08 30 15.5**	**-0.1**
KVLA	**Kavala**	**1.78**	**16**	P	**Pn**	**08 30 15.7**	**-0.8**
PVO	**Paravola**	**1.82**	**251**	P	**Pb**	**08 30 18.3**	**-0.8**
PVO				S	**Sn**	**08 30 40.0**	**-0.1**
KZN	**Kozani**	**1.85**	**306**	P	**Pn**	**08 30 17.5**	**-0.1**
SMTH	**Samothraki Isl**	**1.86**	**48**	P	**Pn**	**08 30 16.3**	**-1.4**
KAVA	**Kavala**	**1.87**	**19**	P	**Pn**	**08 30 16.6**	**-1.1**
GPNR	**Gulpinar-Canak**	**1.88**	**82**	PN	**Pn**	**08 30 18.4**	**+0.5**
KOCA	**Canakkale, Ayv**	**1.89**	**81**	P	**Pg**	**08 30 21.6**	**-0.5**
SRS	**Serrai**	**1.89**	**357**	P	**Pn**	**08 30 17.5**	**-0.6**
KRND	**KRANIDI**	**1.90**	**194**	P	**Pn**	**08 30 18.0**	**0.0**
KRND	**KRANIDI**	**1.90**	**194**	P	**Pn**	**08 30 17.9**	**-0.2**
BOZC	**Bozcaada**	**1.90**	**70**	PN	**Pn**	**08 30 17.8**	**-0.4**
BOZC	**Bozcaada**	**1.90**	**70**	P	**Pn**	**08 30 17.7**	**-0.4**
GADA	**Gvkgeada**	**1.93**	**59**	PN	**Pn**	**08 30 18.0**	**-0.6**
GOKA	**anakkale-Gk**	**1.94**	**60**	P	**Pg**	**08 30 23.0**	**0.0**
GOKA				S	**Sg**	**08 30 49.0**	**+0.8**
GOKA				*i* AML	AML	08 30 57.0	
	comp=N,2µm,0.4s						
KPRO	**Kipourio**	**1.96**	**292**	P	**Pn**	**08 30 19.5**	**+0.3**
KPRO	**Kipourio**	**1.96**	**292**	P	**Pn**	**08 30 19.2**	**+0.1**
PRK	**Paraskevi**	**1.98**	**89**	P	**Pn**	**08 30 20.2**	**+1.0**
CHOS	**Chios island**	**2.00**	**114**	P	**Pn**	**08 30 20.0**	**+0.3**
CHOS	**Chios island**	**2.00**	**114**	P	**Pn**	**08 30 19.9**	**+0.3**
CHOS	**Chios island**	**2.00**	**114**	PN	**Pn**	**08 30 20.8**	**+1.1**
GRG	**Griva**	**2.00**	**330**	P	**Pn**	**08 30 19.7**	**+0.1**
GRG				S	**Sn**	**08 30 44.5**	**-0.2**
GRG	**Griva**	**2.00**	**330**	PN	**Pn**	**08 30 20.3**	**+0.7**
KNT	**Kendrikon**	**2.04**	**342**	P	**Pn**	**08 30 20.2**	**+0.2**
KNT				S	**Sb**	**08 30 47.5**	**-0.6**
KNT	**Kendrikon**	**2.04**	**342**	PN	**Pn**	**08 30 20.5**	**+0.5**
ECEA	**Canakkale, Ece**	**2.06**	**66**	P	**Pn**	**08 30 20.9**	**+0.6**
ECEA				S	**Sg**	**08 30 51.0**	**-1.1**
ECEA				*i* AML	AML	08 30 57.0	
	comp=N,887nm,0.4s						
ECEA				*i* AML	AML	08 31 01.0	
	comp=N,770nm,1.0s						
EZN	**Ezine**	**2.10**	**73**	P	**Pn**	**08 30 20.8**	**-0.1**
EZN	**Ezine**	**2.10**	**73**	PN	**Pn**	**08 30 20.6**	**-0.3**
RLS	**Riolos of Patr**	**2.12**	**237**	P	**Pn**	**08 30 22.3**	**+1.2**
NVR	**Nevrokopi**	**2.12**	**3**	P	**Pn**	**08 30 20.6**	**-0.7**
BAYC	**CANAKKALE_Bayr**	**2.24**	**76**	P	**Pn**	**08 30 22.7**	**-0.2**
JAN	**Janina**	**2.27**	**282**	P	**Pn**	**08 30 24.6**	**+1.4**
AYVA	**Ayvalik**	**2.30**	**87**	P	**Pn**	**08 30 22.1**	**-1.6**
MMB	**Musomiste**	**2.36**	**0**	*i* P	**Pn**	**08 30 23.7**	**-0.8**
RDO	**Rodhopi**	**2.37**	**35**	P	**Pn**	**08 30 23.4**	**-1.1**
RDO	**Rodhopi**	**2.37**	**35**	PN	**Pn**	**08 30 23.5**	**-1.1**
RDO	**Rodhopi**	**2.37**	**35**		**Pn**	**08 30 23.6**	**-1.0**
CAVK	**Edirne/Enez-Ca**	**2.38**	**51**	P	**Pn**	**08 30 25.4**	**+0.7**
FNA	**Florina**	**2.38**	**312**	PN	**Pn**	**08 30 25.2**	**+0.4**
FNA	**Florina**	**2.38**	**312**		**Pn**	**08 30 24.5**	**-0.3**
ZEYE	**Izmir, Urla-Ze**	**2.39**	**114**	P	**Pn**	**08 30 23.6**	**-1.3**
ENEZ	**Enez**	**2.40**	**50**	PN	**Pn**	**08 30 25.8**	**+0.8**
FOCM	**Foa**	**2.40**	**101**	PN	**Pn**	**08 30 25.9**	**+0.9**
URLA	**Izmir**	**2.40**	**110**	PN	**Pn**	**08 30 25.5**	**+0.4**
URLA	**Izmir**	**2.40**	**110**	P	**Pn**	**08 30 25.5**	**+0.4**
CAND	**Candarli**	**2.41**	**95**	PN	**Pn**	**08 30 25.7**	**+0.5**
TSLK	**Tsoukalades, L**	**2.42**	**261**	P	**Pb**	**08 30 28.3**	**-1.1**
LKD2	**Lefkada island**	**2.43**	**261**	P	**Pb**	**08 30 28.5**	**-1.0**
ALN	**Alexandroupoli**	**2.44**	**46**	P	**Pn**	**08 30 24.3**	**-1.3**
ALN	**Alexandroupoli**	**2.44**	**46**	PN	**Pn**	**08 30 25.9**	**+0.3**
ALN	**Alexandroupoli**	**2.44**	**46**	Pn	**Pn**	**08 30 24.4**	**-1.2**
DKL	**Dikili**	**2.48**	**93**	PN	**Pn**	**08 30 26.7**	**+0.6**
ITM	**Ithomi**	**2.49**	**215**	P	**Pn**	**08 30 27.6**	**+1.3**
ITM	**Ithomi**	**2.49**	**215**	PN	**Pn**	**08 30 27.2**	**+1.0**
ITM	**Ithomi**	**2.49**	**215**	Pn	**Pn**	**08 30 27.5**	**+1.3**
RZN	**Rozhen**	**2.57**	**17**	*i* P	**Pn**	**08 30 27.3**	**-0.3**
VLI	**Veliai**	**2.58**	**194**	P	**Pn**	**08 30 27.4**	**-0.1**
LSK	**Leskovik**	**2.58**	**292**	P	**Pn**	**08 30 28.8**	**+1.2**
LSK	**Leskovik**	**2.58**	**292**	P	**Pn**	**08 30 29.0**	**+1.4**
	baz=291						
LSK				S	**Sn**	**08 31 00.8**	**+1.8**
	baz=291						
LSK				AMP			
	comp=E,4.9nm,0.7s,baz=291						
APE	**Apeiranthos**	**2.58**	**146**	⇑P	**Pn**	**08 30 27.6**	**0.0**
APE				⇑S	**Sn**	**08 31 01.1**	**+2.2**
APE	**Apeiranthos**	**2.58**	**146**	P	**Pn**	**08 30 27.6**	**0.0**
APE	**Apeiranthos**	**2.58**	**146**	PN	**Pn**	**08 30 27.8**	**+0.2**
ERIK	**Erikli-Kesan**	**2.58**	**55**	PN	**Pn**	**08 30 26.4**	**-1.1**
BUHA	**Balikesir, Bur**	**2.61**	**83**	P	**Pn**	**08 30 28.2**	**+0.3**
ZEDA	**zmir-Bergama**	**2.62**	**95**	P	**Pn**	**08 30 28.5**	**+0.5**
KBN	**Korca**	**2.66**	**303**		**Pn**	**08 30 30.4**	**+1.7**
KBN	**Korca**	**2.66**	**303**	P	**Pn**	**08 30 29.9**	**+1.3**
	baz=302						
KBN				S	**Sn**	**08 31 02.0**	**+1.2**
	baz=302						
KBN				AMP			
	comp=E,3.4nm,0.7s,baz=302						
KKB	**Krupnik**	**2.68**	**350**	*i* P	**Pn**	**08 30 28.8**	**-0.1**
PSDA	**Pessada-Kefalo**	**2.70**	**247**	P	**Pb**	**08 30 31.9**	**-2.2**
BLCB	**Balcova**	**2.73**	**107**	PN	**Pn**	**08 30 30.3**	**+0.8**
DGB	**zmir**	**2.74**	**114**	P	**Pn**	**08 30 29.1**	**-0.6**
KDZ	**Kurdzhali**	**2.74**	**28**	P	**Pn**	**08 30 28.5**	**-1.3**
KESN	**Edirne-Kesan**	**2.77**	**54**	P	**Pn**	**08 30 29.6**	**-0.9**
PYL	**PYLOS**	**2.80**	**215**	P	**Pn**	**08 30 32.4**	**+1.8**
SMG	**Samos**	**2.88**	**121**	P	**Pn**	**08 30 32.0**	**+0.4**
UKOP	**Uzunkopru-Edir**	**2.93**	**49**	PN	**Pn**	**08 30 32.2**	**-0.1**
SRN	**Sarande**	**2.95**	**284**	P	**Pn**	**08 30 35.2**	**+2.6**
	baz=283						
SRN				S	**Sn**	**08 31 10.1**	**+2.1**
	baz=283						
SRN				AMP			
	comp=N,1.7nm,0.5s,baz=283						
PLD	**Plovdiv**	**2.97**	**14**	PN	**Pn**	**08 30 33.6**	**+0.7**
PLD	**Plovdiv**	**2.97**	**14**	P	**Pn**	**08 30 33.4**	**+0.5**
KRBG	**Karabiga-Canak**	**2.99**	**66**	PN	**Pn**	**08 30 33.9**	**+0.8**
KTHA	**Kythira Island**	**3.01**	**190**	P	**Pn**	**08 30 33.4**	**0.0**
KTHR	**Kythira**	**3.02**	**191**	P	**Pn**	**08 30 33.9**	**+0.4**
SART	**Tekirdag**	**3.03**	**60**	P	**Pg**	**08 30 43.6**	**-0.3**
BALY	**Balya**	**3.06**	**79**	P	**Pn**	**08 30 34.7**	**+0.6**
KEK	**Kerkira**	**3.08**	**280**	Pn	**Pn**	**08 30 36.5**	**+2.2**
MAR6	**Marsite Statio**	**3.10**	**60**	PN	**Pn**	**08 30 35.4**	**+0.8**
STEP	**BALIKESIR_Sava**	**3.10**	**86**	P	**Pn**	**08 30 35.8**	**+1.0**
KNL	**Balıkesir**	**3.11**	**69**	P	**Pg**	**08 30 43.4**	**-2.0**
MAR3	**Marsite Statio**	**3.13**	**60**	PN	**Pn**	**08 30 35.8**	**+0.7**
DIM	**Dimitrovgrad**	**3.14**	**25**	P	**Pn**	**08 30 35.0**	**-0.2**
GZKV	**Gazikoy-Tekird**	**3.16**	**60**	PN	**Pn**	**08 30 36.2**	**+0.8**
SANT	**Santorini**	**3.16**	**154**	⇑P	**Pn**	**08 30 36.4**	**+0.8**
SANT				⇑S	**Sn**	**08 31 14.6**	**+1.3**
SANT	**Santorini**	**3.16**	**154**	Pn	**Pn**	**08 30 35.3**	**-0.3**
GONE	**Gonen-Balikesi**	**3.17**	**74**	PN	**Pn**	**08 30 36.5**	**+0.9**
BALB	**Balikesir**	**3.25**	**81**	PN	**Pn**	**08 30 37.8**	**+1.2**
BALB	**Balikesir**	**3.25**	**81**	Pn	**Pn**	**08 30 36.9**	**+0.3**
EDC	**Edincik**	**3.38**	**69**	PN	**Pn**	**08 30 39.4**	**+0.9**
VTS	**Vitosha**	**3.41**	**354**	⇑P	**Pn**	**08 30 39.3**	**+0.3**
VTS	**Vitosha**	**3.41**	**354**	Pn	**Pn**	**08 30 38.9**	**-0.1**
VTS	**Vitosha**	**3.41**	**354**	P	**Pn**	**08 30 39.1**	**+0.1**
VLO	**Vlora**	**3.48**	**292**		**Pn**	**08 30 42.1**	**+2.2**
EDRB	**Edirne**	**3.48**	**40**	PN	**Pn**	**08 30 41.2**	**+1.3**
PHP	**Peshkopia**	**3.51**	**315**	P	**Pn**	**08 30 40.6**	**+0.3**
	baz=316						
PHP				S	**Sn**	**08 31 24.1**	**+2.3**
	baz=316						
PHP				AMP			
	comp=N,1.8nm,1.3s,baz=316						
AYDN	**Tasoluk**	**3.62**	**114**	P	**Pn**	**08 30 41.8**	**-0.1**
KIRK	**Kırklareli**	**3.62**	**44**	P	**Pn**	**08 30 41.8**	**-0.1**
TIR	**Tirane**	**3.63**	**307**		**Pn**	**08 30 43.2**	**+1.2**
RODP	**Rodopos**	**3.66**	**180**	P	**Pn**	**08 30 42.2**	**-0.2**
DURS	**Dursunbey**	**3.70**	**83**	P	**Pn**	**08 30 44.0**	**+1.0**
KCTX	**Karacabey (Bur**	**3.72**	**72**	PN	**Pn**	**08 30 43.9**	**+0.7**
ARMN	**Kirklareli, Me**	**3.86**	**46**	P	**Pn**	**08 30 43.4**	**-1.7**
KULA	**Kula-Manisa**	**3.92**	**99**	P	**Pn**	**08 30 47.2**	**+1.2**
VIZE	**Kirklareli, Vi**	**3.92**	**52**	P	**Pn**	**08 30 45.6**	**-0.4**
SLVT	**Silivri**	**3.97**	**58**	PN	**Pn**	**08 30 48.2**	**+1.5**
IDI	**Anoyia**	**4.04**	**166**	⇑P	**Pn**	**08 30 48.4**	**+0.7**
IDI	**Anoyia**	**4.04**	**166**	Pn	**Pn**	**08 30 48.0**	**+0.3**
	comp=N,26nm,0.3s,baz=350,slow=12,SNR=142						
IDI				Sn	**Sn**	**08 31 32.8**	**-2.2**
	comp=N,7.4nm,0.3s,baz=331,slow=13,SNR=3.2						
IDI				Lg	Lg	08 31 44.3	
	comp=N,5.3nm,0.3s,baz=280,slow=12,SNR=4.2						
IDI				LR	LR	08 32 39.0	
	comp=N,323nm,19.2s,baz=272,slow=43 comp=N,175nm,0.6s						
IDI	**Anoyia**	**4.04**	**166**	Pn	**Pn**	**08 30 47.5**	**-0.2**
SCTE	**Santa Cesarea**	**4.14**	**283**		**Pn**	**08 30 50.9**	**+1.9**
CTYL	**Yalikoy Yolu**	**4.15**	**56**	PN	**Pn**	**08 30 50.3**	**+1.3**
USAK	**Uak-Merkez**	**4.16**	**95**	P	**Pn**	**08 30 49.5**	**+0.2**
CTKS	**Kestanelik-??a**	**4.17**	**60**	PN	**Pn**	**08 30 50.9**	**+1.5**
BCI	**Bajram Curri**	**4.19**	**320**	P	**Pn**	**08 30 51

RAFF	Raffo Rosso	7.64	258			Pn	08 31 38.4	+1.4
BR131	Keskin Array S	7.69	83			Pn	08 31 37.2	-0.6
BRTR	Keskin Array B	7.69	83	Pn		Pn	08 31 39.4	+1.6
	comp=N,0.5nm,0.3s,baz=258,slow=11,SNR=11							
BRTR				Sn		Sn	08 33 01.3	-3.6
	baz=273,slow=23							
BRTR				LR		LR	08 34 46.7	
	comp=N,188nm,19.3s,baz=278,slow=39							
	comp=N,1.3nm,0.4s							
BRTR	Keskin Array B	7.69	83	Pn		Pn	08 31 38.5	+0.7
BIZ	Bicaz	7.90	12	⇓P		Pn	08 31 41.5	+0.9
MORH	Mrgy, Hungar	7.92	333	⇓P		Pn	08 31 40.9	+0.1
MORH	Mrgy, Hungar	7.92	333	P		Pn	08 31 41.7	+0.8
KOVH	Kovagotottos	8.01	331	P		Pn	08 31 41.0	-1.1
BURAR	Bucovina Array	8.46	7	⇓P		Pn	08 31 49.2	+1.0
BUR08	Bucovina Ar. S	8.48	7			Pn	08 31 49.0	+0.3
NRCA	Norcia	8.79	298			Pn	08 31 53.6	+0.8
CSKK	Cskako	9.05	336	P		Pn	08 31 57.9	+1.5
MPLH	Magyarpolny	9.13	332	P		Pn	08 31 59.3	+1.9
SORM	Soroca	9.51	19	⇓P		Pn	08 32 02.3	-0.3
OBKA	Obir	9.91	320	*e*Pn		Pn	08 32 10.5	+2.3
	comp=N,2.7nm,0.6s							
ARSA	Arzberg	10.00	326	*e*Pn		Pn	08 32 10.6	+1.2
	comp=N,4.2nm,0.6s							
RONA	Rosalia, Austr	10.04	330	*e*Pn		Pn	08 32 10.2	+0.3
	comp=N,1.5nm,0.5s							
CONA	Conrad Observa	10.40	329	*e*Pn		Pn	08 32 14.9	0.0
	comp=N,0.4nm,0.3s							
MAUC	Maruska	10.98	339	AMS		AMS	08 38 00.0	
	comp=N,600nm,11.0s							
MOA	Molln	11.01	325	*i* Pn		Pn	08 32 23.7	+0.5
	comp=N,0.5nm,0.2s							
VRAC	Vranov	11.29	335	LR		LR	08 36 59.7	
	comp=N,102nm,21.8s,baz=156,slow=38							
OKC	Ostrava-Krasne	11.33	341	AMS		AMS	08 37 20.0	
	comp=N,300nm,14.0s							
TREC	Trest	11.66	332	AMS		AMS	08 38 00.0	
	comp=N,300nm,13.7s							
CKRC	Cesky Krumlov	11.73	328	*e*PN		Pn	08 32 37.7	+4.6
KRLC	Kraliky	11.91	338	AMS		AMS	08 38 50.0	
	comp=N,300nm,9.4s							
KEST	Kesra	11.94	258	Pn		Pn	08 32 34.1	-1.9
	comp=N,0.1nm,0.3s,baz=340,slow=13,SNR=2.7							
KEST				LR		LR	08 37 58.5	
	comp=N,106nm,21.0s,baz=290,slow=42							
	comp=N,3.1nm,0.8s							
GERES	GERESS Array B	12.01	326	Pn		Pn	08 32 36.8	-0.1
	comp=N,0.1nm,0.3s,baz=301,slow=36,SNR=1.7							
	comp=N,0.2nm,0.6s							
AKASG	Malin Array Be	12.11	17	LR		LR	08 37 30.8	
	comp=N,100nm,18.3s,baz=186,slow=38							
SQTA	Sankt Quirin	12.12	315	*e*Pn		Pn	08 32 39.7	+1.2
	comp=N,1.2nm,0.2s							
KHC	Kasperske Hory	12.28	327	*e*PN		Pn	08 32 44.8	+4.2
KHC				AMS		AMS	08 37 40.0	
	comp=N,200nm,13.5s							
DPC	Dobruska-Polom	12.29	337	AMS		AMS	08 38 10.0	
	comp=N,300nm,10.0s							
OSTC	Ostas	12.51	337	AMS		AMS	08 38 30.0	
	comp=N,200nm,10.6s							
UPC	Upice	12.53	337	AMS		AMS	08 38 20.0	
	comp=N,300nm,14.0s							
PRU	Pruhonice	12.58	332	AMS		AMS	08 38 40.0	
	comp=N,300nm,9.8s							
CHVC	Chvalec	12.59	337	AMS		AMS	08 38 30.0	
	comp=N,300nm,10.8s							
DAVOX	Davos/Dischmat	12.62	311	Pn		Pn	08 32 44.7	-0.8
	comp=N,0.1nm,0.3s,baz=162,slow=20,SNR=1.8							
DAVOX				Sn		Sn	08 34 55.5	-11
	comp=N,0.2nm,0.3s,baz=185,slow=8.0,SNR=1.2							
DAVOX				LR		LR	08 38 41.5	
	comp=N,219nm,18.5s,baz=102,slow=43							
	comp=N,1.1nm,0.6s							
KOPT	Kop Dagi	12.96	81			Pn	08 32 47.7	-2.4
PVCC	Panska Ves	13.02	333	AMS		AMS	08 38 50.0	
	comp=N,200nm,10.3s							
EIL	Elat	13.28	132	Pn		Pn	08 32 54.9	+0.6
	comp=N,0.2nm,0.3s,baz=23,slow=9.0,SNR=4.0							
EIL				LR		LR	08 40 36.0	
	comp=N,50nm,18.5s,baz=271,slow=49							
	comp=N,5.4nm,0.9s							
NKC	Novy Kostel	13.60	328	AMS		AMS	08 38 30.0	
	comp=N,300nm,14.4s							
KBZ	Khabaz	15.05	66	Pn		P	08 33 21.1	-2.6
	comp=N,0.1nm,0.3s,baz=263,slow=8.1,SNR=1.5							
	comp=N,0.6nm,0.4s							
GNI	Garni	16.21	80	Pn		P	08 33 37.0	+0.3
	comp=N,6.3nm,0.7s,baz=313,slow=19,SNR=1.7							
GNI				LR		LR	08 40 00.3	
	comp=N,132nm,19.6s,baz=292,slow=38							
BELG	Belogornoye	21.11	44	LR		LR	08 43 15.0	
	comp=N,33nm,20.2s,baz=116,slow=38							
ESDC	Sonseca Array	21.36	280	P		P	08 34 33.3	+0.2
	comp=N,3.7nm,1.0s,baz=76,slow=10,SNR=15							
	comp=N,3.7nm,1.0s							
ESDC	Sonseca Array	21.36	280	IAmb		IAmb	08 34 37.1	
	comp=Z,2.7nm,1.2s							
HFS	Hagfors	21.86	346	P		P	08 34 39.1	+0.9
	comp=Z,2.1nm,0.8s,baz=138,slow=16,SNR=2.6							
HFS				LR		LR	08 44 14.5	
	comp=Z,93nm,18.1s,baz=175,slow=40							
	comp=Z,2.1nm,0.8s							
FINES	FINESS Array B	22.29	3	LR		LR	08 44 44.6	
	comp=Z,35nm,18.4s,baz=218,slow=40							
NB2	NORSAR Subarra	23.18	344	P		P	08 34 52.5	+0.2
	comp=Z,18nm,2.0s,baz=154,slow=11							
NOA	NORSAR Array B	23.18	344	P		P	08 34 51.9	-0.3
	comp=Z,1.3nm,1.0s,baz=155,slow=11,SNR=2.8							
NOA				LR		LR	08 44 30.7	
	comp=Z,42nm,18.4s,baz=160,slow=38							
	comp=Z,1.3nm,1.0s							
EKA	Eskdalemuir Ar	24.11	321	P		P	08 35 00.8	-0.5
	comp=Z,4.2nm,0.9s,baz=118,slow=11,SNR=9.9							
EKA				LR		LR	08 45 22.9	
	comp=Z,104nm,18.5s,baz=131,slow=39							
	comp=Z,4.2nm,0.9s							
KIRV	Kirov	25.43	32	LR		LR	08 44 25.8	
	comp=Z,54nm,19.4s,baz=219,slow=35							
AKTO	Aktyubinsk	26.55	54	LR		LR	08 49 53.5	
	comp=Z,37nm,18.1s,baz=242,slow=45							
ARU	Arti	28.61	42	LR		LR	08 47 31.2	
	comp=Z,51nm,20.0s,baz=224,slow=37							
ARCES	ARCESS Array B	30.39	1	LR		LR	08 49 24.3	
	comp=Z,62nm,21.1s,baz=115,slow=39							
TORD	Torodi Ar. Bea	32.46	223	P		P	08 36 16.2	-0.1
	comp=Z,2.3nm,0.6s,baz=35,slow=9.1,SNR=20							
	comp=Z,2.3nm,0.6s							
TORD	Torodi Ar. Bea	32.46	223	IAmb		IAmb	08 36 23.1	
	comp=Z,5.0nm,1.3s							
WSAR	Wadi Sarin	33.59	108	LR		LR	08 51 25.2	
	comp=Z,47nm,18.1s,baz=193,slow=39							
DBIC	Dimbokro	41.39	226	P		P	08 37 31.3	-0.9
	comp=Z,6.3nm,0.8s,baz=56,slow=8.3,SNR=4.1							
	comp=Z,6.3nm,0.8s							
DBIC	Dimbokro	41.39	226	IAmb		IAmb	08 37 33.2	
	comp=Z,11nm,0.9s							
MK31	Makanchi Array	42.61	60	P		P	08 37 42.8	+0.8
MK31				IAmb		IAmb	08 37 48.1	
	comp=Z,4.0nm,1.3s							
MKAR	Makanchi Array	42.61	60	P		P	08 37 43.2	+1.3
	comp=Z,1.6nm,0.6s,baz=282,slow=6.6,SNR=23							
	comp=Z,1.6nm,0.6s							
MKAR	Makanchi Array	42.61	60	P		P	08 37 42.7	+0.8
ZALV	Zalesovo Beam	43.12	49	P		P	08 37 47.6	+1.8
	comp=Z,2.4nm,0.7s,baz=270,slow=9.1,SNR=8.8							
	comp=Z,2.4nm,0.7s							
ZALV	Zalesovo Beam	43.12	49	P		P	08 37 47.0	+1.2
NRIK	Noril'sk	44.73	27	P		P	08 38 00.8	+2.2
	comp=Z,1.7nm,0.4s,baz=342,slow=3.2,SNR=2.2							
	comp=Z,1.7nm,0.4s							
SONM	Songino Array	57.85	52	P		P	08 39 38.6	+1.1
	comp=Z,1.1nm,0.8s,baz=308,slow=7.1,SNR=6.9							
SONM				LR		LR	09 07 03.9	
	comp=Z,39nm,18.1s,baz=96,slow=39							
	comp=Z,1.1nm,0.8s							
SONM	Songino Array	57.85	52	IAmb		IAmb	08 39 43.2	
	comp=Z,4.5nm,1.4s							
LBTB	Lobatse	63.93	178	LR		LR	09 11 44.3	
	comp=Z,38nm,21.6s,baz=180,slow=39							
CMAR	Chiang Mai Arr	67.28	84	P		P	08 40 40.5	-0.2
	comp=Z,1.0nm,0.3s,baz=238,slow=12,SNR=1.5							
	comp=Z,1.0nm,0.3s							
BOSA	Boshof	67.50	179	LR		LR	09 12 55.4	
	comp=Z,54nm,18.1s,baz=188,slow=38							
MA2	Magadan	72.30	25	LR		LR	09 16 43.9	
	comp=Z,38nm,18.7s,baz=154,slow=39							
ILAR	Eielson Array	76.08	356	LR		LR	09 19 53.8	
	comp=Z,19nm,18.1s,baz=44,slow=40							
ULM	Lac du Bonnet	76.31	325	LR		LR	09 17 21.8	
	comp=Z,31nm,18.8s,baz=206,slow=38							
TXAR	Lajitas Array	96.02	316	P		P	08 43 14.1	+0.6
	comp=Z,0.7nm,1.1s,baz=95,slow=4.5,SNR=3.4							
	comp=Z,0.7nm,1.1s							

*IDC **11** 08:38:58.0±8.2, 49°.69N×155°.09E, h76km±55km, mb3.4/7, mbtmp3.7/8, ML3.4/1, MS3.3/1, Error ellipse: s-maj=58.6km s-min=38.9km az=18.0*
*MOS **11** 08:39:04.4±0.8, 49°.83N×157°.20E, h75km, mb4.1/1, Error ellipse: s-maj=17.0km s-min=4.0km az=81.5*
*KRSC **11** 08:39:06.8±2.3, 50°.16N×156°.94E, h99km±28km, ML4.4*
ISC 11 08:39:05.5±1.5, 49°.9N±0°.1×157°.02E±0°.08, h74km±13km, n76, σ1§75/94, mb3.7/7, 1C-1D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	0.95	323	*i*P	Pn	08 39 23.8	+0.3
SKR				*i* S	Sn	08 39 36.2	-0.7
SKR				pmax	pmax		
	comp=Z,317nm,0.3s						
SKR				smax	smax		
	comp=E,2μm,0.4s						
SKR				smax	smax		
	comp=N,3μm,0.8s						
SKR	Severo-Kuril's	0.95	323	*e*P	Pn	08 39 23.7	+0.3
SKR				*e*S	Sn	08 39 36.2	-0.7
PAU	Pauzhetka	1.54	355	PN	Pn	08 39 31.9	+0.8
PAU				S	Sn	08 39 50.9	+0.5
PAU	Pauzhetka	1.54	355	*e*P	Pn	08 39 31.9	+0.8
PAU				*e*S	Sn	08 39 50.9	+0.5
KDTR	Khodutka, Kamc	2.00	19	PN	Pn	08 39 38.6	+1.5
KDTR				S	Sn	08 40 02.3	+1.1
KDTR	Khodutka, Kamc	2.00	19	*e*P	Pn	08 39 38.6	+1.5
KDTR				*e*S	Sn	08 40 02.3	+1.1
MIPR	Malaya Ipel'ka	2.35	356	PN	Pn	08 39 42.0	+0.1
MIPR	Malaya Ipel'ka	2.35	356	*e*P	Pn	08 39 42.0	+0.1
ASAK	Asacha	2.52	12	PN	Pn	08 39 45.9	+1.7
ASAK	Asacha	2.52	12	*e*P	Pn	08 39 45.9	+1.7
MTVR	Mutnovka	2.66	16	PN	Pn	08 39 47.6	+1.4
MTVR				S	Sn	08 40 18.5	+1.1
MTVR	Mutnovka	2.66	16	*e*P	Pn	08 39 47.6	+1.4
MTVR				*e*S	Sn	08 40 18.5	+1.1
RUS	Russkaya	2.68	20	PN	Pn	08 39 47.3	+1.1
RUS				S	Sn	08 40 17.5	-0.1
RUS	Russkaya	2.68	20	*e*P	Pn	08 39 47.3	+1.1
RUS				*e*S	Sn	08 40 17.5	-0.1
GRL	Gorelyy	2.71	14	PN	Pn	08 39 48.7	+1.9
GRL	Gorelyy	2.71	14	*e*P	Pn	08 39 48.7	+1.9
KRMR	Karymshinskiy	2.98	13	PN	Pn	08 39 51.8	+1.4
KRMR				S	Sn	08 40 25.8	+0.7
KRMR	Karymshinskiy	2.98	13	*e*P	Pn	08 39 51.8	+1.4
KRMR				S	Sn	08 40 25.8	+0.7
APC	Apacha	3.00	2	PN	Pn	08 39 51.2	+0.6
APC	Apacha	3.00	2	*e*P	Pn	08 39 51.2	+0.6
PEA0B	Petropavlovsk-	3.21	7	*i* PN	Pn	08 39 53.7	+0.2
PETK	Petropavlovsk-	3.21	7	P	Pn	08 39 53.7	+0.1
	comp=N,14nm,0.3s,baz=185,slow=14,SNR=41						
PETK				S	Sn	08 40 38.4	+7.8
	comp=N,9.9nm,0.6s,baz=138,slow=50,SNR=1.0						
	comp=N,43nm,0.4s						
PET	Petropavlovsk	3.26	18	*i* PN	Pn	08 39 55.4	+1.3
PET				pmax	pmax		
	comp=Z,35nm,1.0s						
PET	Petropavlovsk	3.26	18	*e*P	Pn	08 39 55.5	+1.3
PET				*e*S	Sn	08 40 32.7	+0.9
DALK	Dalny	3.29	19	PN	Pn	08 39 56.0	+1.5
DALK				S	Sn	08 40 33.4	+0.9
DALK	Dalny	3.29	19	*e*P	Pn	08 39 56.0	+1.5
DALK				*e*S	Sn	08 40 33.4	+0.9
UGLR	Uglovaya	3.47	18	PN	Pn	08 39 59.2	+2.1
UGLR				S	Sn	08 40 35.7	-1.4
UGLR	Uglovaya	3.47	18	*e*P	Pn	08 39 59.2	+2.1
UGLR				*e*S	Sn	08 40 35.7	-1.4
AVH	Avacha	3.51	17	PN	Pn	08 39 59.9	+2.3
AVH	Avacha	3.51	17	*e*P	Pn	08 39 59.9	+2.3
KOK	Koryaka	3.51	16	PN	Pn	08 40 00.0	+2.3
KOK	Koryaka	3.51	16	*e*P	Pn	08 40 00.0	+2.3
SMAR	Somma	3.52	18	PN	Pn	08 39 59.7	+1.8
SMAR	Somma	3.52	18	*e*P	Pn	08 39 59.7	+1.8
KRER	Koryakskii	3.54	17	PN	Pn	08 40 00.1	+1.8
KRER	Koryakskii	3.54	17	*e*P	Pn	08 40 00.1	+1.8
SDLR	Sedlovina	3.55	18	PN	Pn	08 39 59.7	+1.5
SDLR				S	Sn	08 40 39.3	+0.3
SDLR	Sedlovina	3.55	18	*e*P	Pn	08 39 59.7	+1.5
SDLR				*e*S	Sn	08 40 39.3	+0.3
NLC	Nalytchevo	3.55	23	PN	Pn	08 39 58.6	+0.4
NLC				S	Sn	08 40 37.4	-1.5
NLC	Nalytchevo	3.55	23	*e*P	Pn	08 39 58.6	+0.4
NLC				*e*S	Sn	08 40 37.4	-1.5
KRX	Arik	3.58	16	PN	Pn	08 40 00.7	+2.0
KRX	Arik	3.58	16	*e*P	Pn	08 40 00.7	+2.0
SPN	Mys Shipunski	3.68	29	PN	Pn	08 40 02.0	+2.1
SPN				S	Sn	08 40 41.8	-0.3
SPN	Mys Shipunski	3.68	29	*e*P	Pn	08 40 02.0	+2.1
SPN				*e*S	Sn	08 40 41.8	-0.3
GNL	Ganaly	3.81	8	PN	Pn	08 40 02.6	+0.8
GNL	Ganaly	3.81	8	*e*P	Pn	08 40 02.6	+0.8
KII	Karymskiy	4.38	19	PN	Pn	08 40 11.6	+2.1
KII	Karymskiy	4.38	19	*e*P	Pn	08 40 11.6	+2.1
MKZ	Mys Kozlova	5.46	30	PN	Pn	08 40 24.6	+0.5
MKZ	Mys Kozlova	5.46	30	*e*P	Pn	08 40 24.6	+0.5
MKZ				*e*S	Sn	08 41 21.2	-4.3
TUMR	Tumrok	5.69	18	PN	Pn	08 40 28.9	+1.5
TUMR	Tumrok	5.69	18	*e*P	Pn	08 40 28.9	+1.5
KMNR	Kamenistaya	6.15	17	PN	Pn	08 40 36.6	+2.9
KMNR	Kamenistaya	6.15	17	*e*P	Pn	08 40 36.6	+2.9
KBTR	Krutoberegovo	7.19	27	PN	Pn	08 40 49.2	+1.4
KBTR	Krutoberegovo	7.19	27	*e*P	Pn	08 40 49.2	+1.4
KBTR				*e*S	Sn	08 42 03.3	-4.5
YSS	Yuzh-Sakhalins	9.94	258	*e*PN	Pn	08 41 25.8	+0.5
YSS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ERM	Erimo	12.46	236	*i* PN	Pn	08 41 57.7	-2.0
ERM				pmax	pmax		
	comp=Z,9.0nm,1.1s						
SEY	Seymchan	13.28	351	*i* PN	P	08 42 13.0	-4.7
KLR	Kul'dur	16.38	277	*i* P	P	08 42 54.4	+2.2
USA0B	Ussuriysk Arra	17.95	261	*i* P	Pn	08 43 13.4	+3.6
BILL	Bilibino	18.74	11	*ce*P	Pn	08 43 20.7	+1.6
BILL				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,176nm,20.0s						
HIA	Hailar	24.01	283	*i* P	P	08 44 17.7	+4.5
HIA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
H11N2	WAKE ISLAND Hy	31.15	162	T	T	09 19 14.7	
	baz=348,slow=76,SNR=5.5						
H11N1	WAKE ISLAND Hy	31.16	162	T	T	09 19 17.4	
	baz=348,slow=76,SNR=5.5						
H11N3	WAKE ISLAND Hy	31.16	162	T	T	09 19 17.3	
	baz=348,slow=76,SNR=7.5						
H11S1	WAKE ISLAND Hy	32.30	163	T	T	09 20 06.9	
	baz=347,slow=76,SNR=28						
H11S3	WAKE ISLAND Hy	32.31	163	T	T	09 19 58.1	
	baz=347,slow=76,SNR=38						
H11S2	WAKE ISLAND Hy	32.32	163	T	T	09 20 02.4	
	baz=347,slow=76,SNR=27						
ILAR	Eielson Array	32.44	42	P	P	08 45 27.2	-0.8
	comp=Z,0.4nm,0.6s,baz=265,slow=6.5,SNR=9.8						
	comp=Z,0.4nm,0.6s						
INK	Inuvik	37.56	35	P	P	08 46 11.1	-0.9
	comp=Z,1.2nm,0.5s,baz=274,slow=4.4,SNR=4.9						
	comp=Z,1.2nm,0.5s						
YKA	Yellowknife Ar	46.81	40	P	P	08 47 28.3	+1.1
	comp=Z,0.7nm,0.7s,baz=298,slow=6.8,SNR=3.1						
	comp=Z,0.7nm,0.7s						
RES	Resolute Bay	46.97	20	P	P	08 47 25.4	-2.9
	comp=Z,0.6nm,0.5s,baz=312,slow=3.9,SNR=5.3						
RES				LR	LR	09 09 27.6	
	comp=Z,27nm,18.2s,baz=74,slow=38						
	comp=Z,0.6nm,0.5s						
ARCES	ARCESS Array B	55.69	341	P	P	08 48 24.5	-9.0
	comp=Z,0.9nm,0.7s,baz=42,slow=7.8,SNR=7.5						
	comp=Z,0.9nm,0.7s						
NVAR	Mina Array Bea	58.70	66	P	P	08 48 57.0	+1.5
	comp=Z,0.4nm,0.7s,baz=269,slow=8.1,SNR=2.4						
	comp=Z,0.4nm,0.7s						
TXAR	Lajitas Array	73.70	64	P	P	08 50 31.3	-0.2
	comp=Z,0.2nm,0.5s,baz=300,slow=4.1,SNR=4.3						
	comp=Z,0.2nm,0.5s						

*KRNET **11** 08:49:57.6±0.1, 42°.40N×72°.43E, h14km, mb2.6*
*SOME **11** 08:49:58.0, 42°.50N×72°.43E, h0km*
*NNC **11** 08:50:00.8±1.4, 42°.65N×72°.40E, h0km, mb2.8, mpv3.2, Error ellipse: s-maj=29.7km s-min=5.8km az=179.0*
ISC 11 08:49:57.8±1.1, 42°.39N±0°.03×72°.47E±0°.02, h5km±12km, n32, σ1§49/61, 25C-10D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRKS	Merke	0.67	57	*e*P	Pn	08 50 14.3	+0.2
	37nm,0.1s						
MRKS				*e*S	Sn	08 50 25.1	+0.2
	43nm,0.2s						
MRKS	Merke	0.67	57	P	Pn	08 50 15.5	+1.5
	37nm,0.1s						
MRKS				S	Sn	08 50 25.1	+0.2
	43nm,0.2s						
ARK	Arkit	0.70	213	⇑*i*P	Pg	08 50 11.1	-0.1
	baz=10.0						
ARK				⇑*i*S	Sg	08 50 20.4	+0.2
	baz=10.0						
EKS2	Erkin-Say	1.01	74	⇓*i*P	Pb	08 50 17.2	-0.6
	baz=75						
EKS2				⇓*i*S	Sg	08 50 31.5	+1.3
	baz=75						
TRKS	Terek-Say	1.31	230	⇑*i*P	Pg	08 50 22.3	-0.6
	baz=25						
TRKS				⇑*i*S	Sg	08 50 40.6	+0.8
	baz=25						
ARLS	Aral	1.48	110	⇑*e*P	Pb	08 50 25.6	-0.2
	baz=10.0						
ARLS				⇑*i*S	Sg	08 50 46.4	+1.1
	baz=10.0						
AAK	Ala-Archa	1.52	80	⇑*i*P	Pb	08 50 26.4	-0.2
	baz=81						
AAK				⇑*i*S	Sg	08 50 47.5	+0.9
	baz=81						
UCH	Uchtor	1.53	95	⇑*i*P	Pb	08 50 26.7	-0.2
	baz=96						
UCH				⇑*i*S	Sg	08 50 48.0	+1.1
	baz=96						
KK31	Karatay Array	1.61	297	P	Pg	08 50 27.3	-1.3
	0.7nm,0.2s,baz=118,slow=16,SNR=30						
KK31				⇑S	Sg	08 50 48.1	-1.3
	2.1nm,0.3s,baz=133,slow=24,SNR=8.4						
KKAR	Karatay Array	1.61	297	⇑*i*P	Pb	08 50 26.9	-1.1
	baz=97						
KKAR				⇑*i*S	Sg	08 50 48.2	-1.2
	baz=97						
USP	Ospenovka	1.73	59	⇑*i*P	Pb	08 50 30.1	-0.1
	baz=60						
USP				⇑*i*S	Sg	08 50 54.0	+0.5
	baz=60						
CHMS	Chumysh	1.79	69	⇓*i*P	Pb	08 50 31.1	0.0
	baz=70						
CHMS				⇓*i*S	Sg	08 50 55.7	+0.4
	baz=70						
CHMS	Chumysh	1.79	69	⇓Pn	Pb	08 50 29.8	-1.3
	2.1nm,0.4s						
CHMS				⇓Sn	Sg	08 50 55.3	0.0
	13nm,0.5s						
IUG	Iuzhnay	1.82	263	*e*P	Pg	08 50 34.1	+1.4
	194nm,0.2s						
IUG				*e*S	Sg	08 50 59.3	+3.0
	37nm,0.1s						
IUG	Iuzhnay	1.82	263	P	Pg	08 50 34.1	+1.4
	194nm,0.2s						
IUG				S	Sg	08 50 59.3	+3.0
	36nm,0.2s						
KBK	Karagaybulak	1.85	81	⇑*i*P	Pb	08 50 32.3	0.0
	baz=81						
KBK				⇑*i*S	Sg	08 50 57.6	+0.3
	baz=81						
OHH	Osh	1.88	173	⇓*i*P	Pb	08 50 32.6	0.0
	baz=72						
OHH				⇓*i*S	Sg	08 50 58.6	+0.5
	baz=72						
SGDS	Sogindy	1.91	55	*e*P	Pb	08 50 32.9	-0.3
	4.9nm,0.2s						
SGDS				*e*S	Sb	08 50 57.7	+0.3
	18nm,0.1s						
SGDS	Sogindy	1.91	55	P	Pb	08 50 33.1	-0.1
	4.9nm,0.2s						
SGDS				S	Sg	08 50 58.8	-0.4
	20nm,0.2s						
TKM2	Tokmak 2	2.37	76	⇑*i*P	Pb	08 50 39.8	-1.3
	baz=76						
TKM2				⇑*i*S	Sb	08 51 10.8	+0.1
	baz=76						
TKM2	Tokmak 2	2.37	76	⇓Pn	Pb	08 50 40.7	-0.4
	0.9nm,0.3s						
TKM2				⇓Sn	Sg	08 51 12.5	-1.4
	3.4nm,0.3s						
BOOM	Boomskoye usch	2.57	87	⇑*i*P	Pb	08 50 42.5	-2.0
	baz=87						
BOOM				⇑*i*S	Sb	08 51 15.7	-0.8
	baz=87						
BTK	Batken	2.64	209	⇑*i*P	Pb	08 50 42.8	-2.8
	baz=8.0						
BTK				⇑*i*S	Sb	08 51 16.2	-2.1
	baz=8.0						
KST	Kastek	2.66	75	*e*P	Pb	08 50 46.0	0.0
	2

CBIJ **Chichi jima** 1.40 112 P **Pn** 09 07 25.6 -1.0
CBIJ S **Sn** 09 07 44.5 +0.7
JCJ **Chichijima** 1.40 112 Pn **Pn** 09 07 26.1 -0.4
75nm,0.3s,baz=29,slow=10,SNR=68
JCJ LR LR 09 07 27.0
comp=Z,19nm,20.5s,baz=259,slow=20
JCJ Sn **Sn** 09 07 44.1 +0.3
246nm,0.3s,baz=151,slow=23,SNR=35
JHH2 **Haha-jima-NKT2** 1.62 127 P **Pn** 09 07 29.4 -0.3
JHH2 eS **Sn** 09 07 50.7 +1.3
BSO3 **Boso 3** 7.16 359 eP **Pn** 09 08 43.8 -1.7
JRY **Ryogami san** 8.51 350 P **Pn** 09 09 04.3 -0.1
MJAR **Matsushiro Arr** 9.14 347 Pn **Pn** 09 09 15.3 +2.3
baz=166,slow=16,SNR=1.8
KLR **Kul'dur** 22.66 345 P **P** 09 12 01.0 -0.7
1.2nm,0.5s,baz=151,slow=17,SNR=5.1
1.2nm,0.5s
H11N2 **WAKE ISLAND Hy** 25.18 103 T T 09 37 45.0
baz=296,slow=74,SNR=6.8
H11N1 **WAKE ISLAND Hy** 25.18 103 T T 09 37 38.2
baz=296,SNR=3.9
H11N3 **WAKE ISLAND Hy** 25.20 103 T T 09 37 50.1
baz=296,slow=74,SNR=6.1
H11S3 **WAKE ISLAND Hy** 25.51 105 T T 09 37 59.7
baz=295,slow=74,SNR=7.3
H11S1 **WAKE ISLAND Hy** 25.51 105 T T 09 38 02.7
baz=295,slow=74,SNR=3.5
H11S2 **WAKE ISLAND Hy** 25.53 105 T T 09 38 03.1
baz=295
CMAR **Chiang Mai Arr** 39.37 266 LR LR 09 30 26.6
comp=Z,11nm,18.9s,baz=225,slow=36
WRA **Warramunga Arr** 47.69 188 P **P** 09 15 36.6 -0.3
1.0nm,0.7s,baz=8.1,slow=8.4,SNR=9.4
1.0nm,0.7s
ILAR **Eielson Array** 57.87 29 P **P** 09 16 51.0 -0.6
1.1nm,0.9s,baz=261,slow=5.7,SNR=7.7
1.1nm,0.9s
INK **Inuvik** 63.08 25 P **P** 09 17 26.7 -0.4
1.6nm,0.7s,baz=305,slow=5.5,SNR=4.4
1.6nm,0.7s
NVAR **Mina Array Bea** 81.20 51 P **P** 09 19 16.7 +0.4
0.4nm,0.6s,baz=304,slow=4.9,SNR=4.4
0.4nm,0.6s
ELK **Elko** 82.16 48 LR LR 09 54 30.0
comp=Z,49nm,18.2s,baz=165,slow=35
TXAR **Lajitas Array** 96.31 52 P **P** 09 20 29.8 +0.7
0.4nm,0.8s,baz=322,slow=3.8,SNR=4.7
0.4nm,0.8s
LPAZ **La Paz** 151.02 73 PKPbc **PKPbc** 09 26 54.5 +0.2
1.2nm,0.8s,baz=219,slow=4.0,SNR=5.0

ISK 11 09:19:59.6,37.20N×27.8E,h0km,ML1.6/7,Suspected Mining explosion.,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSB	**Milas**	**0.12**	**323**	PG	Pg	09 20 02.9	+0.9
MLSB				SG	Sg	09 20 05.2	+1.6
YER	**Yerkesik**	**0.34**	**101**	PG	Pg	09 20 06.7	+0.7
YER				SG	Sg	09 20 11.9	+1.5
BODT	**Bodrum**	**0.47**	**253**	PG	Pg	09 20 09.3	+0.7
BODT				SG	Sg	09 20 16.2	+1.6
TURN	**Turunc**	**0.52**	**144**	PG	Pg	09 20 10.2	+0.7
TURN				SG	Sb	09 20 17.9	-1.7
DAT	**Datca**	**0.52**	**207**	PG	Pg	09 20 10.3	+0.7
DAT				SG	Sg	09 20 17.9	+1.5
DALY	**Dalyan (Mula)**	**0.73**	**121**	PG	Pg	09 20 14.3	+0.7
AYDB	**Zeytinkoy-Aydi**	**0.75**	**1**	PG	Pg	09 20 14.5	+0.6

BUC 11 09:22:15.0±0.3,46.01N×22.81E,h5km±3km,ml2.0/13, 37C-17D,Error ellipse: s-maj=2.7km s-min=2.1km az=105.0,Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEV	**Deva**	**0.14**	**151**	⇑P	Pg	09 22 16.7	-1.1
DEV				⇓S	Sg	09 22 20.0	+0.3
DEV	**Deva**	**0.14**	**151**	⇑P	Pg	09 22 16.7	-1.1
DEV				⇓S	Sg	09 22 20.0	+0.3
GZR	**Gura Zlata**	**0.61**	**182**	⇑P	Pg	09 22 26.1	-0.7
GZR				⇑S	Sb	09 22 36.7	-0.5
GZR	**Gura Zlata**	**0.61**	**182**	⇑P	Pg	09 22 26.1	-0.7
GZR				⇑S	Sb	09 22 36.7	-0.5
DRGR		**0.79**	**355**	⇓P	Pb	09 22 30.9	-0.3
DRGR				⇓S	Sg	09 22 39.3	-1.0
DRGR		**0.79**	**355**	⇓P	Pb	09 22 30.9	-0.3
DRGR				⇓S	Sg	09 22 39.3	-1.0
SIRR	**Siria**	**0.84**	**288**	⇓P	Pg	09 22 30.4	-0.6
SIRR				⇑S	Sb	09 22 42.9	-0.7
SIRR	**Siria**	**0.84**	**288**	⇓P	Pg	09 22 30.4	-0.6
SIRR				⇑S	Sb	09 22 42.9	-0.7
LOT	**Lotru**	**0.88**	**129**	⇑P	Pg	09 22 30.8	-1.0
LOT				⇓S	Sg	09 22 43.3	+0.2
CJR	**Cluj-Napoca**	**0.89**	**38**	⇑P	Pg	09 22 32.6	+0.4
CJR				⇑S	Sb	09 22 45.2	-0.1
CJR	**Cluj-Napoca**	**0.89**	**38**	⇑P	Pg	09 22 32.6	+0.4
BZS	**Buzias**	**0.92**	**245**	⇑P	Pg	09 22 32.0	-0.6
BZS				⇓S	Sb	09 22 45.7	-0.2
BZS	**Buzias**	**0.92**	**245**	⇑P	Pg	09 22 32.0	-0.6
BZS				⇓S	Sb	09 22 45.7	-0.2
MDB	**Medias**	**1.10**	**82**	⇑S	Sn	09 22 52.3	-0.5
MDB	**Medias**	**1.10**	**82**	⇑S	Sn	09 22 52.3	-0.5
MESR	**Meseseni**	**1.15**	**5**	⇓P	Pn	09 22 37.8	+0.1
MESR				⇓S	Sn	09 22 53.3	-0.5
MESR	**Meseseni**	**1.15**	**5**	⇓P	Pn	09 22 37.8	+0.1
MESR				⇓S	Sn	09 22 53.3	-0.5
HERR	**Herculane**	**1.16**	**194**	⇑P	Pg	09 22 36.4	-0.8
HERR				⇑S	Sn	09 22 54.0	-0.1
HERR	**Herculane**	**1.16**	**194**	⇑P	Pg	09 22 36.4	-0.8
HERR				⇑S	Sn	09 22 54.0	-0.1
SRE	**Strehaia**	**1.38**	**168**	⇑S	Sn	09 23 02.2	+2.8
MDVR	**Moldovita**	**1.45**	**212**	⇑P	Pn	09 22 41.7	-0.1
MDVR				⇑S	Sg	09 23 02.2	+0.7
MDVR	**Moldovita**	**1.45**	**212**	⇑P	Pn	09 22 41.7	-0.1
MDVR				⇑S	Sg	09 23 02.2	+0.7
VOIR		**1.67**	**109**	⇑P	Pn	09 22 44.1	-1.0
VOIR				⇑S	Sn	09 23 06.1	-0.8
VOIR		**1.67**	**109**	⇑P	Pn	09 22 44.1	-1.0
VOIR				⇑S	Sn	09 23 06.1	-0.8
DOPR	**Dopca**	**1.80**	**90**	⇓S	Sb	09 23 11.2	-0.1
DOPR	**Dopca**	**1.80**	**90**	⇓S	Sb	09 23 11.2	-0.1
BURAR	**Bucovina Array**	**2.31**	**45**	⇑P	Pn	09 22 54.0	+0.3
BURAR				⇑S	Sb	09 23 25.4	-0.6
BURAR	**Bucovina Array**	**2.31**	**45**	⇑P	Pn	09 22 54.0	+0.3
BURAR				⇑S	Sb	09 23 25.4	-0.6
BLKB	**Belogradchik**	**2.39**	**182**	⇑P	Pn	09 22 54.3	-0.4
BLKB				⇑S	Sn	09 23 26.1	+1.7
BLKB	**Belogradchik**	**2.39**	**182**	⇑P	Pn	09 22 54.3	-0.4
BLKB				⇑S	Sn	09 23 26.1	+1.7

*NEIC **11** 09:25:20.6±1.6, 12.87N±0.05×87.01W±0.05,h10km±1km, mb4.5/187,Md4.8(SNET),Error ellipse: s-maj=10.3km s-min=6.1km az=212.0*
*INET **11** 09:25:20.0±1.3, 12.85N×87.01W,h0km±2km,MW4.1*
*IDC **11** 09:25:20.0±1.0, 12.93N×87.02W,h0km,mb4.2/12, mbtmp4.2/15,ML3.8/3,MS3.5/25,Error ellipse: s-maj=29.9km s-min=15.1km az=49.0*
*UCR **11** 09:25:21.6±1.9, 12.85N×87.11W,h16km±7km, ML4.7, MW4.7,mb4.5(NEIC)*
*SNET **11** 09:25:21.5±0.8, 12.82N×87.16W,h11km±5km,ML4.9*
*GCG **11** 09:25:29.1±3.1, 12.51N×87.52W,h120km±706km,MD4.6*

ISC 11 09:25:19.3±1.1,12.88N±0.03×87.03W±0.03,h2km±8km, n334,σ1§29/278,mb4.5/88,MS3.6/23,5D,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.18**	**185**		**Pg**	**09 25 23.8**	**+0.9**
CRIN	**San Cristobal**	**0.18**	**185**	⇓*i*P	**Pg**	**09 25 24.0**	**+1.1**
TELN	**Telica**	**0.34**	**144**	⇓*i*P	**Pb**	**09 25 27.7**	**-0.4**
TEL3	**Telica 3**	**0.36**	**149**	⇓*i*P	**Pb**	**09 25 27.5**	**-0.9**
CNGN	**Cerro Negro**	**0.50**	**139**		**Pb**	**09 25 30.2**	**-0.6**
CNGN	**Cerro Negro**	**0.50**	**139**	⇓*i*P	**Pb**	**09 25 30.2**	**-0.6**
MOMN	**Momotombo**	**0.67**	**134**	*i* P	**Pb**	**09 25 33.3**	**-0.5**
BRAN	**Las Pilas**	**0.69**	**103**	eP	**Pn**	**09 25 38.0**	**+2.0**
CNCH	**Conchagua**	**0.87**	**297**	eP	**Pg**	**09 25 36.5**	**+0.4**
CNCH				eS	**Sg**	**09 25 48.6**	**+1.2**
CNCH				IAML		09 25 59.6	
	comp=Z,39μm,0.5s						
CNCH	**Conchagua**	**0.87**	**297**	eP	**Pg**	**09 25 36.5**	**+0.4**
CNCH				eS	**Sg**	**09 25 48.6**	**+1.2**
CNCH				IAML		09 25 59.6	
	comp=Z,39μm,0.5s						
APYN	**Apoyeque**	**0.93**	**134**	eP	**Pg**	**09 25 37.1**	**0.0**
LCND	**La Caada**	**0.94**	**297**	eP	**Pg**	**09 25 37.4**	**+0.1**
LCND				eS	**Sg**	**09 25 50.0**	**+0.6**
LCND				IAML		09 25 55.6	
	comp=Z,19μm,0.4s						
LCND	**La Caada**	**0.94**	**297**	eP	**Pg**	**09 25 37.4**	**+0.1**
LCND				eS	**Sg**	**09 25 50.0**	**+0.6**
LCND				IAML		09 25 55.6	
	comp=Z,19μm,0.4s						
TISN	**Laguna Tiscapa**	**1.05**	**134**	eP	**Pg**	**09 25 39.6**	**+0.2**
MGAN	**Managua**	**1.06**	**133**	eP	**Pg**	**09 25 39.8**	**+0.1**
MATN	**Matagalpa**	**1.08**	**87**		**Pg**	**09 25 39.8**	**-0.3**
MATN				Sg	**Sb**	**09 25 55.2**	**-0.2**
MATN	**Matagalpa**	**1.08**	**87**	eP	**Pg**	**09 25 39.8**	**-0.3**
WILN	**Americas 2**	**1.09**	**131**	*i* P	**Pg**	**09 25 40.5**	**+0.2**
CRUN	**El Crucero**	**1.15**	**141**	eP	**Pg**	**09 25 40.8**	**-0.5**
TGUH	**Tegucigalpa,Un**	**1.19**	**349**		**Pn**	**09 25 43.4**	**+0.3**
TGUH					**Sn**	**09 26 00.4**	**+0.4**
TGUH	**Tegucigalpa,Un**	**1.19**	**349**	eP	**Pn**	**09 25 43.3**	**+0.3**
TGUH				eS	**Sn**	**09 26 00.3**	**+0.4**
TGUH	**Tegucigalpa,Un**	**1.19**	**349**	eP	**Pn**	**09 25 43.3**	**+0.3**
TGUH				eS	**Sn**	**09 26 00.3**	**+0.4**
TGUH	**Tegucigalpa,Un**	**1.19**	**349**	*i* P	**Pn**	**09 25 43.5**	**+0.5**
MASN	**Masaya**	**1.24**	**136**	eP	**Pg**	**09 25 42.4**	**-0.6**
VSM	**San Miguel**	**1.32**	**294**	eP	**Pg**	**09 25 44.1**	**-0.6**
VSM	**San Miguel**	**1.32**	**294**	eP	**Pg**	**09 25 44.1**	**-0.6**
LCY	**Lacayo**	**1.34**	**294**	eP	**Pg**	**09 25 44.1**	**-0.9**
LCY				eS	**Sg**	**09 26 01.9**	**-0.6**
LCY	**Lacayo**	**1.34**	**294**	eP	**Pg**	**09 25 44.1**	**-0.9**
LCY				eS	**Sg**	**09 26 01.9**	**-0.6**
PACA	**Pacayal**	**1.38**	**295**	eP	**Pn**	**09 25 45.0**	**-0.7**
PACA				eS	**Sg**	**09 26 03.0**	**-0.9**
PACA				IAML		09 26 12.3	
	comp=Z,59μm,0.5s						
PACA	**Pacayal**	**1.38**	**295**	eP	**Pn**	**09 25 45.0**	**-0.7**
PACA				eS	**Sg**	**09 26 03.0**	**-0.9**
PACA				IAML		09 26 12.3	
	comp=Z,59μm,0.5s						
PACA	**Pacayal**	**1.38**	**295**	eP	**Pn**	**09 25 45.1**	**-0.7**
BOAB	**BOACO BROADBAN**	**.40**	**108**		**Pn**	**09 25 45.3**	**-0.6**
BOAB	**BOACO BROADBAN**	**.40**	**108**	eP	**Pn**	**09 25 45.2**	**-0.7**
PQSS	**Presa 15 de Se**	**1.66**	**297**	eP	**Pn**	**09 25 48.6**	**-0.8**
PQSS	**Presa 15 de Se**	**1.66**	**297**	eP	**Pn**	**09 25 48.6**	**-0.8**
SCLA	**Alcaldia de Sa**	**1.84**	**296**	eP	**Pn**	**09 25 51.6**	**-0.3**
SCLA				eS	**Sn**	**09 26 15.9**	**+0.1**
SCLA	**Alcaldia de Sa**	**1.84**	**296**	eP	**Pn**	**09 25 51.6**	**-0.3**
SCLA				eS	**Sn**	**09 26 15.9**	**+0.1**
CONN	**Concepcion**	**1.90**	**133**	eP	**Pn**	**09 25 52.4**	**-0.3**
COEG	**Centro de Oper**	**1.94**	**292**	eP	**Pn**	**09 25 53.0**	**-0.3**
COEG	**Centro de Oper**	**1.94**	**292**	eP	**Pn**	**09 25 53.0**	**-0.3**
PAVA	**Las Pavas**	**2.03**	**294**	eP	**Pn**	**09 25 54.2**	**-0.4**
PAVA	**Las Pavas**	**2.03**	**294**	eP	**Pn**	**09 25 54.2**	**-0.4**
PAVA	**Las Pavas**	**2.03**	**294**	⇓*i*P	**Pn**	**09 25 54.3**	**-0.3**
ACON	**Acoyapa**	**2.03**	**116**	eP	**Pn**	**09 25 53.4**	**-1.1**
ACON	**Acoyapa**	**2.03**	**116**	eP	**Pn**	**09 25 53.3**	**-1.2**
ACON	**Acoyapa**	**2.03**	**116**	eP	**Pn**	**09 25 53.4**	**-1.2**
ACON				eS	**Sb**	**09 26 22.7**	**0.0**
SJTE	**Alcalda de S**	**2.05**	**291**	eP	**Pn**	**09 25 54.6**	**-0.3**
SJTE	**Alcalda de S**	**2.05**	**291**	eP	**Pn**	**09 25 54.6**	**-0.3**
SNET	**Serv Nac Est T**	**2.28**	**291**		**Pn**	**09 25 58.2**	**+0.1**
SNET	**Serv Nac Est T**	**2.28**	**291**	eP	**Pn**	**09 25 57.9**	**-0.2**
SNET	**Serv Nac Est T**	**2.28**	**291**	eP	**Pn**	**09 25 57.9**	**-0.2**
SNET	**Serv Nac Est T**	**2.28**	**291**	eP	**Pn**	**09 25 59.7**	**+1.7**
UEES	**Universidad Ev**	**2.30**	**291**	eP	**Pn**	**09 25 58.3**	**0.0**
UEES				eS	**Sn**	**09 26 26.6**	**-0.6**
UEES	**Universidad Ev**	**2.30**	**291**	eP	**Pn**	**09 25 58.3**	**0.0**
UEES				eS	**Sn**	**09 26 26.6**	**-0.6**
LALI	**Alcalda de L**	**2.31**	**285**	eP	**Pn**	**09 25 58.3**	**0.0**
LALI				eS	**Sn**	**09 26 26.0**	**-1.3**
LALI	**Alcalda de L**	**2.31**	**285**	eP	**Pn**	**09 25 58.3**	**0.0**
LALI				eS	**Sn**	**09 26 26.0**	**-1.3**
LALI	**Alcalda de L**	**2.31**	**285**	eP	**Pn**	**09 25 58.9**	**+0.6**
JAYA	**Jayaque - finc**	**2.47**	**288**	eP	**Pn**	**09 26 00.6**	**-0.2**
JAYA				eS	**Sn**	**09 26 29.8**	**-1.8**
JAYA				IAML		09 26 37.5	
	comp=Z,4μm,0.3s						
JAYA	**Jayaque - finc**	**2.47**	**288**	eP	**Pn**	**09 26 00.6**	**-0.2**
JAYA				eS	**Sn**	**09 26 29.8**	**-1.8**
JAYA				IAML		09 26 37.5	
	comp=Z,4μm,0.3s						
HZTE	**Horizontes, Gu**	**2.58**	**147**		**Pn**	**09 26 01.8**	**-0.2**
HZTE	**Horizontes, Gu**	**2.58**	**147**	eP	**Pb**	**09 26 04.4**	**-1.8**
HZTE	**Horizontes, Gu**	**2.58**	**147**	eP	**Pb**	**09 26 04.1**	**-2.1**
BUAI	**Buenos Aires**	**2.60**	**140**	eP	**Pn**	**09 26 03.0**	**+0.6**
GBS3	**Finca Las Img**	**2.60**	**143**	eP	**Pn**	**09 26 02.0**	**-0.4**
BUEV	**Buena Vista**	**2.61**	**142**	eP	**Pn**	**09 26 02.3**	**-0.6**
LAPC	**Finca La Perla**	**2.62**	**143**	eP	**Pn**	**09 26 02.1**	**-0.6**
GPS2	**Hotel Rincn d**	**2.68**	**142**	eP	**Pn**	**09 26 03.7**	**+0.2**
ESPN	**Las Esperanzas**	**2.76**	**104**		**Pn**	**09 26 04.5**	**0.0**
LIM1	**Limonal**	**2.79**	**141**	eP	**Pn**	**09 26 06.0**	**+1.1**
GUAB	**Guayabo de Bag**	**2.79**	**141**	eP	**Pn**	**09 26 05.5**	**+0.5**
ESQI	**Esquipulas**	**2.79**	**307**		**Pn**	**09 26 05.7**	**+0.6**
HORNC	**Hornillas**	**2.82**	**140**	eP	**Pn**	**09 26 05.9**	**+0.5**
COLC	**Colonia**	**2.84**	**141**	eP	**Pn**	**09 26 07.4**	**+1.7**
CUI	**Cuipilapa**	**2.87**	**140**	eP	**Pn**	**09 26 06.6**	**+0.5**
ORTG	**Ortega, Santa**	**2.94**	**148**	Pn	**Pn**	**09 26 07.7**	**+0.5**
ORTG	**Ortega, Santa**	**2.94**	**148**	eP	**Pn**	**09 26 07.6**	**+0.5**
ORTG	**Ortega, Santa**	**2.94**	**148**	eP	**Pn**	**09 26 07.6**	**+0.4**
PTEN	**Parque Tenorio**	**2.94**	**137**	eP	**Pn**	**09 26 08.4**	**+1.3**
ACAL	**Aguas Claras**	**2.97**	**139**	eP	**Pn**	**09 26 08.5**	**+0.9**
GUAI	**GUAI**	**3.00**	**150**	eP	**Pn**	**09 26 08.7**	**+0.9**
PLVR	**Palo Verde**	**3.01**	**147**	eP	**Pn**	**09 26 08.6**	**+0.4**
NICO	**Nicoya**	**3.14**	**150**	eP	**Pn**	**09 26 11.0**	**+1.1**
DUNO	**Dulce Nombre,**	**3.17**	**151**		**Pn**	**09 26 11.3**	**+1.0**
DUNO	**Dulce Nombre,**	**3.17**	**151**	eP	**Pn**	**09 26 11.2**	**+1.0**
DUNO	**Dulce Nombre,**	**3.17**	**151**	eP	**Pn**	**09 26 11.2**	**+1.0**
JTS	**Las Juntas de**	**3.29**	**141**	Pn	**Pn**	**09 26 12.2**	**+0.4**
	comp=Z,26nm,0.3s,baz=22,slow=16,SNR=70						
JTS				Sn	**Sn**	**09 26 54.9**	**+3.4**
	comp=Z,28nm,0.3s,baz=180,slow=19,SNR=6.0						
JTS				LR	LR	09 27 35.1	
	comp=Z,513nm,20.9s,baz=36,slow=41 comp=Z,80nm,0.4s						
JTS	**Las Juntas de**	**3.29**	**141**	Pn	**Pn**	**09 26 12.4**	**+0.6**
JTS	**Las Juntas de**	**3.29**	**141**	eP	**Pn**	**09 26 11.9**	**+0.1**
CEDE	**Laguna Cedeo**	**3.30**	**136**	eP	**Pn**	**09 26 12.8**	**+0.7**
CASO	**Castillo**	**3.32**	**137**	eP	**Pn**	**09 26 13.9**	**+1.6**
FORC	**Fortuna**	**3.34**	**136**	eP	**Pn**	**09 26 14.4**	**+1.9**
INDI	**Punta indio, G**	**3.35**	**153**	eP	**Pb**	**09 26 16.5**	**-2.9**
MRL	**Marmol**	**3.38**	**311**	eP	**Pb**	**09 26 20.0**	**0.0**
MRL				eS	**Sb**	**09 27 01.6**	**0.0**
NBG	**Las Nubes**	**3.64**	**298**	eP	**Pb**	**09 26 22.0**	**-2.5**
LAFE	**Finca La Fe, P**	**3.70**	**146**	eP	**Pn**	**09 26 18.5**	**+1.0**
SRA1	**San Ramn**	**3.74**	**138**	eP	**Pn**	**09 26 20.9**	**+2.8**
FUG	**Fuego 3**	**4.01**	**293**	eP	**Pn**	**09 26 25.6**	**+3.6**
FUG				eS	**Sn**	**09 27 13.6**	**+3.8**
HDC	**Heredia**	**4.05**	**135**		**Pn**	**09 26 24.0**	**+1.6**
OCM	**Ochomogo**	**4.23**	**134**	eP	**Pn**	**09 26 27.1**	**+2.1**
RIMA	**Rio Macho**	**4.39**	**135**		**Pn**	**09 26 28.4**	**+1.2**
STG3	**Santiaguito 3,**	**4.77**	**293**	eP	**Pn**	**09 26 35.9**	**+3.5**
STG3				eS	**Sn**	**09 27 29.6**	**+1.3**
PEZE	**Perez Zeledon,**	**4.79**	**136**	Pn	**Pn**	**09 26 32.4**	**-0.1**
RTAL	**Retalhuleu**	**4.81**	**290**	Pn	**Pn**	**09 26 34.6**	**+1.7**
PETF	**Flores**	**4.86**	**326**		**Pn**	**09 26 34.0**	**+0.6**
PETF	**Flores**	**4.86**	**326**	eP	**Pn**	**09 26 35.3**	**+1.9**
HUEH	**Huehuetenango**	**4.96**	**300**		**Pn**	**09 26 35.2**	**0.0**
SRBA	**San Rafael, Bu**	**5.12**	**135**		**Pn**	**09 26 37.8**	**+0.8**
PRVC	**Isla de Provid**	**5.55**	**84**	Pn	**Pn**	**09 26 42.1**	**-0.8**
CDITO	**Canoas**	**5.92**	**136**	Pn	**Pn**	**09 26 49.0**	**+1.0**
BCIP	**Isla Barro Col**	**7.97**	**117**	Pn	**Pn**	**09 27 15.6**	**-0.7**
CMIG	**Matias Romero**	**8.66**	**300**	Pn	**Pn**	**09 27 27.7**	**+2.0**
	comp=Z,0.9nm,0.3s,baz=106,slow=8.2,SNR=29						
CMIG				Sn	**Sn**	**09 29 06.8**	**+2.8**
	comp=Z,0.6nm,0.3s,baz=9.5,slow=18,SNR=1.6 comp=Z,9.4nm,0.5s						
MTDJ	**Mount Denham**	**10.58**	**59**	Pn	**Pn**	**09 27 53.3**	**+1.1**
SJCC	**San Jacinto, C**	**11.99**	**103**	Pn	**Pn**	**09 28 10.8**	**-0.6**
TLIG	**Tlapa**	**12.06**	**294**	Pn	**Pn**	**09 28 13.8**	**+1.3**
UNM	**Universidad Na**	**13.31**	**300**	Pn	**Pn**	**09 28 28.8**	**-0.8**
GTBY	**Guantanamo Bay**	**13.41**	**57**	Pn	**Pn**	**09 28 30.6**	**-0.1**
ROSC	**El Rosal**	**14.88**	**121**	Pn	**Pn**	**09 28 53.1**	**+1.9**
	comp=Z,4.1nm,0.3s,baz=223,slow=22,SNR=4.0						
ROSC				LR	LR	09 35 12.6	
	comp=Z,132nm,19.5s,baz=30,slow=40 comp=Z,7.7nm,0.3s						
ROSC	**El Rosal**	**14.88**	**121**		**Pn**	**09 28 50.3**	**-0.9**
TULM	**Tulcn-Chalpat**	**15.17**	**142**	P	**Pn**	**09 28 54.0**	**-1.2**
TULM				IAmb	IAmb	09 29 09.6	
	comp=Z,15nm,1.1s						
SDV	**Santo Domingo**	**16.59**	**102**	Pn	**Pn**	**09 29 11.4**	**-1.9**
COHC	**Cochancay**	**17.09**	**153**		**Pn**	**09 29 17.1**	**-2.4**
ZAIG	**Zacatecas**	**17.74**	**306**	P	**Pn**	**09 29 27.0**	**-0.9**
BRAL	**Brewton**	**18.20**	**360**	P	**Pn**	**09 29 32.4**	**-0.7**
BRAL				IAmb	IAmb	09 29 46.1	
	comp=Z,40nm,1.4s						
352A	**Blakely**	**18.61**	**6**	P	**P**	**09 29 37.6**	**-0.4**
HKT	**Hockley**	**18.84**	**336**		**Pn**	**09 29 41.5**	**+0.6**
250A	**Grady**	**19.02**	**2**	P	**Pn**	**09 29 43.0**	**-0.1**
342A	**Flagon Creek P**	**19.04**	**346**	P	**P**	**09 29 42.4**	**-0.3**
342A				IAmb	IAmb	09 29 54.9	
	comp=Z,13nm,0.6s						
833A	**Chaparral WMA,**	**19.21**	**325**	P	**P**	**09 29 44.6**	**0.0**
833A	**Chaparral WMA,** baz=141,SNR=13	**19.21**	**325**	P	**Pn**	**09 29 46.5**	**+1.0**
NATX	**Nacogdoches**	**20.05**	**341**	P	**P**	**09 29 53.5**	**-0.3**
NATX				IAmb	IAmb	09 30 01.6	
	comp=Z,19nm,0.8s						
NATX	**Nacogdoches** baz=158	**20.05**	**341**	P	Pn	09 29 57.2	+1.6
LRAL	**Lakeview Retre**	**20.06**	**0**		**P**	**09 29 53.9**	**0.0**
LRAL				IAmb	IAmb	09 30 02.5	
	comp=Z,19nm,0.8s						
LRAL	**Lakeview Retre** baz=180,SNR=10	**20.06**	**0**	P	Pn	09 29 57.3	+1.7
Z47A	**Carrollton**	**20.25**	**357**	P	**P**	**09 29 56.1**	**+0.3**
Z47A				IAmb	IAmb	09 30 03.7	
	comp=Z,15nm,0.8s						
435B	**Jarrell**	**20.30**	**333**	P	Pn	09 29 57.9	-0.6
435B				IAmb	IAmb	09 30 10.8	
	comp=Z,17nm,0.9s						
237A	**Washetta, Mont**	**20.67**	**338**	P	**P**	**09 30 00.2**	**-0.3**
237A				IAmb	IAmb	09 30 08.7	
	comp=Z,30nm,1.2s						
GOGA	**Godfrey**	**20.69**	**8**	P	**P**	**09 29 59.4**	**-1.3**
GOGA	**Godfrey** baz=190	**20.69**	**8**	P	Pn	09 30 03.8	+0.8
Z41A	**Richland Creek** baz=164	**20.96**	**346**	P	Pn	09 30 06.5	+0.4
Y45A	**Yeager Farm, C** comp=Z,29nm,1.1s	**21.01**	**354**	IAmb	IAmb	09 30 11.8	
JCT	**Junction City**	**21.12**	**328**	P	**P**	**09 30 04.6**	**-0.8**
JCT	**Junction City** baz=143	**21.12**	**328**	P	**P**	**09 30 06.1**	**+0.7**
WLAR	**White Oak Lake**	**21.44**	**346**	P	**P**	**09 30 08.6**	**-0.2**
WLAR				IAmb	IAmb	09 30 14.2	
	comp=Z,12nm,0.9s						
OXF	**Oxford** baz=174	**21.64**	**355**	P	**P**	**09 30 13.7**	**+2.7**
ATAH	**Atahualpa** comp=Z,2.4nm,0.7s,baz=3.7,slow=11,SNR=1.6	**21.66**	**156**	P	**P**	**09 30 14.9**	**+3.2**
ATAH				LR	LR	09 37 41.4	
	comp=Z,133nm,20.1s,baz=327,slow=34 comp=Z,2.4nm,0.7s						
PLAL	**Pickwick Lake**	**22.02**	**358**	P	**P**	**09 30 14.3**	**-0.8**
W45A	**Hickory Valley**	**22.26**	**355**	P	**P**	**09 30 17.6**	**0.0**
W45A				IAmb	IAmb	09 30 21.4	
	comp=Z,31nm,1.1s						
UALR	**University of**	**22.32**	**348**	P	**P**	**09 30 18.2**	**-0.1**
BG3	**Lake Jocassee**	**22.32**	**9**	P	**P**	**09 30 17.4**	**-0.9**
HPIG		**22.37**	**311**	P	**P**	**09 30 18.1**	**-1.0**
HPIG				IAmb	IAmb	09 30 21.9	
	comp=Z,8.7nm,0.7s						
MIAR	**Mount Ida**	**22.37**	**346**	P	**P**	**09 30 18.8**	**0.0**
MIAR	**Mount Ida** baz=163,SNR=7.1	**22.37**	**346**	P	**P**	**09 30 20.6**	**+1.8**
TXAR	**Lajitas Array** comp=Z,4.9nm,0.8s,baz=139,slow=10,SNR=42 comp=Z,4.9nm,0.8s	**22.51**	**319**	P	**P**	**09 30 21.1**	**+0.7**
TXAR	**Lajitas Array**	**22.51**	**319**	P	**P**	**09 30 20.4**	**0.0**
TX31	**Lajitas Ar. Si** comp=Z,18nm,0.9s	**22.51**	**

baz=190
P38A Dawn 27.25 349 IAmb IAmb 09 31 05.8
comp=Z,12nm,0.8s
121A Cookes Peak, D 27.27 319 P **P** **09 31 07.2 +1.9**
baz=131
ACSO Alum Creek Sta 27.48 7 P **P** **09 31 09.1 +2.2**
baz=188
HDIL Hopedale 27.64 356 P **P** **09 31 09.6 +1.2**
baz=175
O53A New Philadelph 27.74 10 P **P** **09 31 11.0 +1.7**
baz=192
N49A Columbus Grove 28.05 5 P **P** **09 31 12.1 +0.2**
ANMO Albuquerque 28.14 325 P **P** **09 31 15.0 +1.9**
comp=Z,2.0nm,0.8s,baz=145,slow=8.3,SNR=12
ANMO LR LR 09 43 29.6
comp=Z,52nm,20.3s,baz=100,slow=39
comp=Z,2.0nm,0.8s
ANMO Albuquerque 28.14 325 P **P** **09 31 12.9 -0.2**
ANMO Albuquerque 28.14 325 P **P** **09 31 14.6 +1.5**
baz=137
CBKS Cedar Bluff 28.18 339 P **P** **09 31 12.5 -0.7**
CBKS IAmb IAmb 09 31 39.8
comp=Z,6.9nm,0.7s
BBSR BB Station 28.20 43 P **P** **09 31 12.4 -1.0**
T25A Trinidad 28.73 330 P **P** **09 31 21.4 +3.0**
baz=143
SSPA Standing Stone 28.79 15 P **P** **09 31 21.3 +2.7**
baz=199
TUC Tucson 29.11 315 P **P** **09 31 23.7 +2.0**
TUC Tucson 29.11 315 P **P** **09 31 23.2 +1.5**
baz=126
N33A J Bar K, Exete 29.22 344 P **P** **09 31 20.5 -1.9**
SDCO Great Sand Dun 29.74 330 P **P** **09 31 29.2 +1.8**
baz=142,SNR=6.3
S22A 4UR Ranch, Cre 30.41 328 P **P** **09 31 34.9 +1.5**
baz=139
BINY Binghamton 30.75 16 P **P** **09 31 38.7 +2.8**
baz=201
X16A Lo Mia Camp, P 30.82 318 IAmb IAmb 09 31 39.1
comp=Z,4.5nm,0.7s
MVCO Mesa Verde 30.91 325 IAmb IAmb 09 31 39.7
comp=Z,5.0nm,1.0s
MVCO Mesa Verde 30.91 325 P **P** **09 31 38.9 +1.2**
baz=136
WUAZ Wupatki 31.47 320 IAmb IAmb 09 31 46.4
comp=Z,7.5nm,1.1s
WUAZ Wupatki 31.47 320 P **P** **09 31 44.3 +1.7**
baz=130
SMCO Snowmass 31.58 330 IAmb IAmb 09 31 46.1
comp=Z,4.5nm,1.1s
ECSD EROS Data Cent 31.83 347 P **P** **09 31 44.9 -0.6**
baz=162
PV11 David Mesa, Pa 31.91 326 IAmb IAmb 09 31 49.3
comp=Z,5.1nm,0.7s
SADO Sadowa 32.49 10 P **P** **09 31 52.6 +1.5**
comp=Z,4.3nm,0.7s,baz=197,slow=11,SNR=3.2
SADO LR LR 09 46 30.0
comp=Z,42nm,18.7s,baz=176,slow=39
comp=Z,4.3nm,0.7s
PDMCI Parker Dam,Lak 32.56 315 P **P** **09 31 53.2 +1.3**
baz=124
SPMN Marine on St. 32.61 352 IAmb IAmb 09 31 52.8
comp=Z,6.9nm,0.8s
SPMN Marine on St. 32.61 352 P **P** **09 31 51.9 -0.3**
baz=170
W13A Hualapai Mount 32.84 317 IAmb IAmb 09 31 57.0
comp=Z,3.5nm,0.8s
O20A White River Ci 32.94 329 IAmb IAmb 09 31 58.2
comp=Z,7.0nm,0.9s
O20A White River Ci 32.94 329 P **P** **09 31 57.1 +1.6**
baz=140,SNR=6.8
BC3 Big Chuckawall 33.12 313 P **P** **09 31 58.3 +1.3**
baz=122
F36A Milaca 33.33 352 IAmb IAmb 09 31 59.5
comp=Z,5.2nm,0.9s
LONY Lake Ozonia 33.38 16 P **P** **09 32 01.0 +2.0**
baz=202
SRU San Rafael Swe 33.39 326 IAmb IAmb 09 32 01.2
comp=Z,5.5nm,1.0s
P18A Preston Nutter 33.60 327 IAmb IAmb 09 32 03.4
comp=Z,4.6nm,1.0s
Q16A Castle Valley 33.61 325 IAmb IAmb 09 32 04.4
comp=Z,4.6nm,1.0s
P17A Butcher Ranch, 33.76 326 IAmb IAmb 09 32 04.5
comp=Z,8.2nm,0.9s
F33A 5 Mile Ranch, 33.77 348 IAmb IAmb 09 32 02.7
comp=Z,6.2nm,0.7s
PFO Pinyon Flats O 33.81 313 LR LR 09 46 35.2
comp=Z,93nm,18.7s,baz=147,slow=38
E38A The Farm, Brul 33.83 354 IAmb IAmb 09 32 03.7
comp=Z,7.8nm,0.8s
GMRC Granite Mounta 33.87 315 P **P** **09 32 05.4 +1.8**
baz=123
TCRU Three Creeks R 34.13 323 IAmb IAmb 09 32 08.2
comp=Z,5.4nm,0.9s
RSSD Black Hills 34.38 338 P **P** **09 32 07.6 -0.5**
RSSD IAmb IAmb 09 32 10.5
comp=Z,8.6nm,1.4s
RSSD Black Hills 34.38 338 P **P** **09 32 09.9 +1.9**
baz=150
LPAZ La Paz 34.49 147 LR LR 09 46 49.3
comp=Z,94nm,18.2s,baz=331,slow=37
MPU Maple Canyon 34.63 326 IAmb IAmb 09 32 12.2
comp=Z,8.5nm,1.0s
DUG Dugway, Tooele 35.41 325 IAmb IAmb 09 32 19.1
comp=Z,7.3nm,1.2s
DUG Dugway, Tooele 35.41 325 P **P** **09 32 18.2 +1.3**
baz=133
PDAR Pinedale Array 35.59 331 P **P** **09 32 18.9 +0.3**
comp=Z,1.5nm,1.0s,baz=141,slow=9.6,SNR=7.2
PDAR LR LR 09 51 16.9
comp=Z,42nm,18.3s,baz=148,slow=44
comp=Z,1.5nm,1.0s
PDAR Pinedale Array 35.59 331 P **P** **09 32 16.8 -1.7**
PKME Peaks-Kenny Pk 35.63 22 P **P** **09 32 21.1 +2.6**
baz=210
HWUT Hardware Ranch 35.73 328 IAmb IAmb 09 32 21.3
comp=Z,11nm,1.0s
MPMC Manual Prospec 35.81 315 P **P** **09 32 21.6 +1.2**
baz=122
R11A Troy Canyon, C 35.87 320 P **P** **09 32 22.3 +1.4**
baz=127,SNR=5.8
BGU Big Grassy Mou 36.03 326 IAmb IAmb 09 32 24.3
comp=Z,6.2nm,1.1s
AHID Auburn Hatcher 36.34 330 IAmb IAmb 09 32 26.4
comp=Z,7.1nm,0.9s
HVU Hansel Valley 36.48 327 IAmb IAmb 09 32 28.9
comp=Z,5.8nm,1.0s
LOHW Long Hollow 36.73 331 IAmb IAmb 09 32 30.2
comp=Z,7.9nm,1.1s
TPAW Teton Pass 36.80 330 IAmb IAmb 09 32 34.9
comp=Z,9.2nm,0.9s
FLWY Flagg Ranch 37.13 331 IAmb IAmb 09 32 33.8
comp=Z,6.5nm,0.9s
ELK Elko 37.16 324 P **P** **09 32 33.3 +1.4**
comp=Z,3.9nm,0.9s,baz=137,slow=6.8,SNR=13
comp=Z,3.9nm,0.9s
RLMT Red Lodge 37.30 334 IAmb IAmb 09 32 34.6
comp=Z,8.5nm,1.1s
RLMT Red Lodge 37.30 334 P **P** **09 32 33.9 +0.9**
baz=143
YFT Old Faithful 37.48 332 IAmb IAmb 09 32 37.8
comp=Z,11nm,1.2s
NVAR Mina Array Bea 37.65 318 P **P** **09 32 37.8 +1.6**
comp=Z,2.9nm,0.9s,baz=125,slow=7.5,SNR=18
NVAR LR LR 09 50 46.1
comp=Z,96nm,19.5s,baz=116,slow=41
comp=Z,2.9nm,0.9s
YMR Madison River 37.70 332 IAmb IAmb 09 32 39.5
comp=Z,9.8nm,1.0s
KVN Kaiserville 37.87 319 IAmb IAmb 09 32 39.9
comp=Z,4.7nm,0.8s
YHL Hebgen Lake 37.94 332 IAmb IAmb 09 32 42.1
comp=Z,7.4nm,1.1s
BMN Battle Mountai 38.14 322 IAmb IAmb 09 32 42.2
comp=Z,6.5nm,1.0s
SIV San Ignacio 38.50 137 LR LR 09 47 25.9
comp=Z,113nm,19.0s,baz=64,slow=34
HLID Hailey 38.59 328 P **P** **09 32 45.0 +1.1**
baz=134,SNR=6.9
BOZ Bozeman (W) 38.71 332 P **P** **09 32 45.6 +0.7**
baz=140,SNR=8.5
EGMT Eagleton 39.82 336 IAmb IAmb 09 32 56.0
comp=Z,17nm,1.3s
EGMT Eagleton 39.82 336 P **P** **09 32 55.3 +1.2**
baz=144
WVOR Wild Horse Val 40.20 323 IAmb IAmb 09 32 58.8
comp=Z,9.6nm,1.2s

PLID Pearl Lake 40.47 328 P **P** **09 32 59.1 -0.5**
MSO Missoula 40.70 332 IAmb IAmb 09 33 02.8
comp=Z,11nm,1.2s
MSO Missoula 40.70 332 P **P** **09 33 02.0 +0.6**
baz=138,SNR=8.4
F10A Beach Ranch, E 41.71 328 IAmb IAmb 09 33 12.4
comp=Z,5.9nm,0.9s
YBH Yreka Blue Hor 42.28 320 LR LR 09 53 34.3
comp=Z,108nm,20.1s,baz=146,slow=40
NEW Newport 43.23 331 LR LR 09 53 53.6
comp=Z,56nm,18.1s,baz=151,slow=40
B08A Colville Reser 44.37 329 P **P** **09 33 30.7 -0.5**
B08A IAmb IAmb 09 33 36.8
comp=Z,6.2nm,1.2s
SCHQ Schefferville 44.75 16 P **P** **09 33 34.5 +0.5**
comp=Z,4.6nm,0.7s,baz=248,slow=3.9,SNR=8.1
SCHQ LR LR 09 51 34.9
comp=Z,80nm,20.9s,baz=62,slow=35
comp=Z,4.6nm,0.7s
SCHQ Schefferville 44.75 16 P **P** **09 33 34.3 +0.3**
SCHQ IAmb IAmb 09 33 37.2
comp=Z,7.8nm,0.9s
YKA Yellowknife Ar 53.31 344 P **P** **09 34 39.2 -0.3**
comp=Z,7.0nm,0.9s,baz=136,slow=8.0,SNR=26
comp=Z,7.0nm,0.9s
YKA Yellowknife Ar 53.31 344 P **P** **09 34 37.1 -2.3**
DLBC Dease Lake 55.70 334 P **P** **09 34 58.1 +1.0**
baz=126,SNR=9.4
MMPY Sheldon Lake, 58.70 338 P **P** **09 35 18.6 +0.4**
baz=127,SNR=5.8
SFJD Kangerlussuaq 59.19 16 LR LR 10 02 05.6
comp=Z,46nm,18.2s,baz=222,slow=37
O30N Mendenhall 59.56 335 P **P** **09 35 23.9 -0.3**
baz=121
M30M Minto, Yukon 60.79 336 P **P** **09 35 31.8 -0.8**
baz=122
MESA MESA 61.84 332 P **P** **09 35 42.3 +2.4**
baz=115,SNR=7.9
RES Resolute Bay 61.95 358 P **P** **09 35 40.2 0.0**
I29M Ogilvie Camp, 62.81 338 P **P** **09 35 45.5 -0.7**
baz=121
L27K Beaver Creek, 63.05 335 P **P** **09 35 47.5 -0.3**
L27K IAmb IAmb 09 35 49.1
comp=Z,4.1nm,1.1s
L27K Beaver Creek, 63.05 335 P **P** **09 35 47.1 -0.7**
baz=117
K27K Chicken 63.58 336 P **P** **09 35 51.4 +0.2**
baz=117
J26L Joseph Creek 64.37 336 IAmb IAmb 09 36 02.1
comp=Z,4.3nm,1.1s
J26L Joseph Creek 64.37 336 P **P** **09 35 56.7 +0.1**
baz=116
RIDG Independent Ri 64.56 335 IAmb IAmb 09 35 59.2
comp=Z,4.0nm,1.0s
RIDG Independent Ri 64.56 335 P **P** **09 35 57.8 0.0**
baz=114
K24K Donnelly Dome 64.97 335 P **P** **09 36 00.5 +0.1**
baz=113
J25K Salcha River, 65.13 336 IAmb IAmb 09 36 02.3
comp=Z,2.2nm,0.7s
J25K Salcha River, 65.13 336 P **P** **09 36 01.3 -0.2**
baz=114
HDA Harding Lake 65.68 336 P **P** **09 36 04.7 -0.3**
baz=112
IL31 65.79 336 IAmb IAmb 09 36 06.1
comp=Z,8.1nm,1.5s
ILAR Eielson Array 65.79 336 P **P** **09 36 04.7 -1.0**
comp=Z,2.0nm,1.0s,baz=111,slow=5.4,SNR=13
comp=Z,2.0nm,1.0s
BMAR Burnt Mountain 66.02 339 P **P** **09 36 07.1 -0.1**
H24K Noodor Dome 66.58 337 P **P** **09 36 09.7 -1.1**
baz=112
NEA2 Nenana 66.60 335 IAmb IAmb 09 36 19.3
comp=Z,2.6nm,1.2s
NEA2 Nenana 66.60 335 P **P** **09 36 09.5 -1.3**
baz=110
TRF Thorofare Moun 66.73 334 P **P** **09 36 11.3 -0.6**
baz=109
I23K Minto, Yukon-K 66.91 336 P **P** **09 36 12.7 -0.1**
baz=110
BPAW Bear Paw Mtn. 67.23 335 IAmb IAmb 09 36 15.1
comp=Z,2.9nm,0.8s
BPAW Bear Paw Mtn. 67.23 335 P **P** **09 36 14.1 -0.8**
baz=108
MLY Manley 67.42 336 IAmb IAmb 09 36 16.4
comp=Z,3.3nm,0.7s
MLY Manley 67.42 336 P **P** **09 36 14.9 -1.3**
baz=109,SNR=6.1
TOLK Toolik Lake Re 68.23 340 P **P** **09 36 21.3 +0.1**
baz=111
JMIC Jan Mayen 74.17 20 LR LR 10 10 38.7
comp=Z,19nm,19.1s,baz=278,slow=37
ESDC Sonsee Array 76.51 52 P **P** **09 37 12.6 +0.8**
comp=Z,0.6nm,0.7s,baz=282,slow=5.1,SNR=4.2
ESDC LR LR 10 08 44.8
comp=Z,22nm,18.3s,baz=288,slow=34
comp=Z,0.6nm,0.7s
MDT Midelt 76.84 59 LR LR 10 08 03.9
comp=Z,49nm,18.4s,baz=174,slow=33
NOA NORSAR Array B 82.80 29 LR LR 10 14 55.2
comp=Z,21nm,18.7s,baz=90,slow=36
DAVOX Davos/Dischmat 85.40 43 LR LR 10 10 55.7
comp=Z,34nm,18.3s,baz=264,slow=32
ARCES ARCESS Array B 85.65 19 LR LR 10 16 22.5
comp=Z,22nm,18.0s,baz=288,slow=36
VRAC Vranov 89.02 40 LR LR 10 13 02.8
comp=Z,33nm,20.4s,baz=292,slow=32
MA2 Magadan 94.23 334 LR LR 10 25 32.1
comp=Z,28nm,18.9s,baz=174,slow=38
AKASG Malin Array Be 95.93 35 LR LR 10 22 46.1
comp=Z,18nm,18.1s,baz=226,slow=36
HHC Hu-ho-hao-te 123.83 343 *e*P **PKPdf** **09 44 14.3 -5.2**
KSH Kashi 125.52 16 PKP **PKiKP** **09 44 24.7 +1.6**
WRA Warramunga Arr 139.78 254 PKhKP PKPpre 09 44 42.0
comp=Z,1.1nm,0.3s,baz=90,slow=2.3,SNR=63
WRA PKP **PKPdf** **09 44 48.9 -0.9**
comp=Z,0.9nm,0.6s,baz=91,slow=2.3,SNR=14
WRA Warramunga Arr 139.78 254 PKPdf **PKPdf** **09 44 44.8 -5.0**
ASAR Alice Springs 139.80 249 PKhKP PKPpre 09 44 40.4
comp=Z,0.3nm,0.6s,baz=102,slow=2.8,SNR=6.2
ASAR PKP **PKPdf** **09 44 48.8 -1.1**
comp=Z,0.8nm,0.6s,baz=96,slow=2.0,SNR=12

*THE **11** 09:33:32.9,39˙.20N×23˙.70E,h11km±1km,ML2.5/9,Error ellipse: s-maj=1.4km s-min=0.6km az=30.0*
*ATH **11** 09:33:32.7,39˙.21N×23˙.71E,h11km±5km,ML2.7/3,Error ellipse: s-maj=5.6km s-min=0.9km az=34.0*
ISC 11 09:33:32.7±0.9,39˙.20N±0˙.03×23˙.71E±0˙.03,h11km±7km, n24,σ0°34/41,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALNA	**Alonissos**	**0.14**	**112**	P	**Pg**	**09 33 35.9**	**0.0**
ALNA				S	**Sg**	**09 33 38.0**	**-0.2**
ALNA				AML	AML	09 33 38.6	
	comp=N,11796μm,0.2s						
ALNA				AML	AML	09 33 38.7	
	comp=E,8658μm,0.4s						
NEO	**Neokhori**	**0.39**	**286**	P	**Pg**	**09 33 40.3**	**-0.2**
NEO				S	**Sg**	**09 33 46.1**	**+0.5**
NEO				AML	AML	09 33 47.4	
	comp=E,1438μm,0.2s						
NEO				AML	AML	09 33 48.4	
	comp=N,1136μm,0.2s						
NEO	**Neokhori**	**0.39**	**286**	P	**Pg**	**09 33 40.4**	**0.0**
NEO				S	**Sg**	**09 33 46.3**	**+0.7**
	comp=N,770nm,0.1s						
XOR	**Xorichti**	**0.43**	**293**	P	**Pg**	**09 33 41.1**	**0.0**
XOR				S	**Sg**	**09 33 47.5**	**+0.6**
XOR	**Xorichti**	**0.43**	**293**	P	**Pg**	**09 33 41.2**	**0.0**
XOR				S	**Sg**	**09 33 47.2**	**+0.2**
	comp=N,778nm,0.3s						
KYMI	**Kymi, Euboea I**	**0.64**	**151**	P	**Pg**	**09 33 45.3**	**+0.2**
KYMI				S	**Sb**	**09 33 54.9**	**+0.1**
KYMI	**Kymi, Euboea I**	**0.64**	**151**	P	**Pb**	**09 33 45.6**	**-0.3**
KYMI				S	**Sb**	**09 33 55.1**	**+0.3**
	comp=N,378nm,0.2s						
PAIG	**Paliouri**	**0.73**	**358**	P	**Pg**	**09 33 46.7**	**-0.1**
PAIG				S	**Sb**	**09 33 56.9**	**-0.4**
	comp=N,180nm,0.2s						
SKY	**Skiros Island**	**0.73**	**116**	P	**Pg**	**09 33 46.9**	**+0.1**
SKY				S	**Sg**	**09 33 56.3**	**-0.1**
SKY				AML	AML	09 33 58.0	
	comp=E,1855μm,0.2s						
SKY				AML	AML	09 34 00.7	
	comp=N,1737μm,0.2s						

SKY Skiros Island 0.73 116 P **Pg** **09 33 46.9 +0.1**
SKY S **Sb** **09 33 57.1 -0.3**
comp=N,1μm,0.2s
ATAL Atalanti 0.73 227 P **Pg** **09 33 47.2 +0.3**
LKR Lokris 0.78 225 P **Pg** **09 33 46.9 -0.8**
LKR Lokris 0.78 225 P **Pg** **09 33 47.0 -0.7**
LKR S **Sg** **09 33 58.1 +0.3**
comp=N,512nm,0.3s
VIL2 Platees 1.04 199 P **Pn** **09 33 53.3 +0.1**
VILL Villia 1.08 197 P **Pb** **09 33 52.9 -0.4**
VILL S **Sn** **09 34 09.2 +0.6**
comp=N,222nm,0.5s
DION Dionisos Attik 1.13 171 P **Pb** **09 33 54.4 +0.2**
DION S **Sg** **09 34 09.3 +0.1**
comp=N,870nm,0.3s
PTL Penteli 1.16 174 P **Pb** **09 33 54.7 +0.1**
PTL S **Sg** **09 34 10.1 +0.2**
ATHU Athens Univers 1.23 177 P **Pn** **09 33 55.9 +0.1**
MAKR Makrakomi, Fth 1.24 262 P **Pg** **09 33 56.5 0.0**
MAKR Makrakomi, Fth 1.24 262 P **Pn** **09 33 56.0 +0.1**
MAKR S **Sn** **09 34 13.0 +0.4**
KARY Karystos 1.30 154 P **Pn** **09 33 56.7 0.0**
VLY Voula,Athens 1.35 177 P **Pn** **09 33 57.1 -0.3**
VLY Voula,Athens 1.35 177 P **Pn** **09 33 57.0 -0.3**
VLY S **Sb** **09 34 14.6 -0.5**
comp=N,158nm,0.5s
THL Klokotos Trika 1.36 286 P **Pn** **09 33 57.2 -0.3**
THL S **Sb** **09 34 15.1 -0.4**

*DJA **11** 09:43:20.1±0.3,0˙.N±3˙×12˙.7E±˚,h10km,M3.4/7,MLv3.4/7 IDC **11** 09:43:46.0±2.3,2˙.49S×128˙.48E,h0km,mb3.2/2, mbtmp3.2/3,ML3.3/1,Error ellipse: s-maj=149.6km s-min=28.6km az=68.0*
ISC 11 09:43:18.5±1.1,0˙.01S±0˙.06×126˙.67E±0˙.06,h10km,n8, σ1°46/10,Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**1.04**	**127**	P	**Pn**	**09 43 40.4**	**+1.3**
LBMI				S	**Sn**	**09 43 54.4**	**+0.7**
TNTI	**Ternate**	**1.04**	**42**	P	**Pn**	**09 43 40.0**	**+0.8**
TNTI				S	**Sn**	**09 43 53.1**	**-0.7**
SANI	**Sanana**	**2.14**	**199**	P	**Pb**	**09 43 58.1**	**+0.7**
SANI				S	**Sn**	**09 44 19.3**	**-1.7**
KMSI	**Cibinong**	**2.75**	**282**	P	**Pn**	**09 44 04.3**	**+1.5**
SGSI	**Sangihe**	**3.84**	**343**	P	**Pn**	**09 44 18.2**	**+0.4**
WRA	**Warramunga Arr**	**21.19**	**160**	P	**P**	**09 48 02.2**	**-2.1**
	0.1nm,0.3s,baz=341,slow=12,SNR=7.6						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**24.54**	**164**	P	**P**	**09 48 37.4**	**-1.3**
	0.8nm,0.8s,baz=344,slow=11,SNR=7.0						
	0.8nm,0.8s						
MKAR	**Makanchi Array**	**60.60**	**327**				
	0.2nm,0.5s						

WEL 11 09:44:32.2±0.8,31˚S±11˚×18˚0W±3˚0,h319km±15km, M4.1/11,mB4.4/7,ML4.8/13,MLv4.6/11,Mw(mB)3.6/7, Error ellipse: s-maj=0.0km s-min=0.0km az=109.4, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.44**	**36**	S	S	09 46 04.2	-1.6
PKGZ	**Pakihiroa**	**6.91**	**196**	P	Pn	09 46 15.2	+2.5
PKGZ				S	S	09 47 35.1	+0.9
PUZ	**Puketiti**	**7.04**	**194**	P	Pn	09 46 14.7	+0.4
PUZ				S	S	09 47 39.8	+2.6
RUGZ	**Raukumara Rang**	**7.08**	**198**	P	Pn	09 46 14.0	-0.8
RUGZ				S	S	09 47 36.5	-1.6
TWGZ	**Tauwhareparae**	**7.21**	**196**	P	Pn	09 46 17.7	+1.4
TWGZ				S	S	09 47 43.1	+2.4
CNGZ	**Carnagh Statio**	**7.45**	**194**	P	Pn	09 46 20.4	+1.3
MWZ	**Matawai**	**7.47**	**198**	P	Pn	09 46 19.1	-0.4
MWZ				S	S	09 47 47.7	+1.2
TOZ	**Tahuroa Road**	**7.64**	**211**	P	Pn	09 46 23.1	+1.6
RIGZ	**Rimuhau**	**7.76**	**196**	P	Pn	09 46 23.3	+0.4
RIGZ				S	S	09 47 55.1	+2.2
MUGZ	**Murupara**	**7.82**	**202**	P	Pn	09 46 23.6	-0.1
MUGZ				S	S	09 47 56.2	+2.0
HRRZ	**Handcock Road**	**7.90**	**204**	P	Pn	09 46 27.0	+2.3
PRRZ	**Plateau Road**	**7.96**	**203**	P	Pn	09 46 26.7	+1.3
KNZ	**Kokohu**	**8.08**	**195**	P	Pn	09 46 27.4	+0.6
KNZ				S	S	09 47 59.7	-0.3
RAHZ	**Arahi**	**8.13**	**199**	P	Pn	09 46 26.9	-0.5
RAHZ				S	S	09 48 01.3	+0.1
MTHZ	**Maungataniwha**	**8.14**	**200**	P	Pn	09 46 26.9	-0.7
MTHZ				S	S	09 48 01.0	-0.4
MHGZ	**Mahia Peninsul**	**8.16**	**194**	P	P	09 46 30.0	-2.1
NMHZ	**Naumai**	**8.38**	**200**	P	Pn	09 46 29.7	-0.8
NMHZ				S	S	09 48 07.5	+0.7
BKZ	**Black Stump Fm**	**8.54**	**201**	P	Pn	09 46 30.5	-1.8
BKZ				S	S	09 48 09.6	-0.6
HIZ	**Hauiti**	**8.57**	**211**	P	Pn	09 46 36.6	-0.4
BHHZ	**Black Hill Sta**	**8.97**	**202**	P	Pn	09 46 34.9	-2.7
BHHZ				S	S	09 48 17.3	-2.5
WNVZ	**Wahianoa**	**8.98**	**205**	P	Pn	09 46 35.7	-2.1
KAHZ	**Kahuranaki**	**9.01**	**198**	P	Pn	09 46 36.4	-1.7
KAHZ				S	S	09 48 20.3	-0.4
VRZ	**Vera Road**	**9.13**	**209**	P	Pn	09 46 40.5	+1.0
MRZ	**Mangatainoka R**	**10.19**	**201**	P	Pn	09 46 48.2	-4.2
MRZ				S	S	09 48 41.8	-5.2

*TAP **11** 09:45:46.0,24˙.82N×122˙.45E,h15km,ML3.2,D JMA **11** 09:45:47.1±0.1,25˚N±1˚×122˙.5E±0˙.4,h40km±2km, MV2.8/9,NW OFF ISHIGAKIJIMA IS*
ISC 11 09:45:46.3±1.1,24˙.80N±0˙.03×122˙.46E±0˙.02,h23km±12km, n50,σ0°70/85,2C-1D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.48**	**295**	⇑*i*P	**Pb**	**09 45 55.8**	**-0.3**
	baz=294						
TWB1				*i* S	**Sb**	**09 46 01.6**	**-1.1**
	baz=294						
EGS		**0.48**	**275**	P	**Pb**	**09 45 55.6**	**-0.6**
	baz=261						
EGS				S	**Sb**	**09 46 03.2**	**+0.3**
	baz=261						
JYNG	**Yonagunijimaku**	**0.56**	**128**	P	**Pb**	**09 45 58.1**	**+0.5**
JYNG				*e*S	**Sb**	**09 46 05.6**	**+0.4**
NTC	**Toucheng**	**0.58**	**275**	P	**Pb**	**09 45 57.5**	**-0.3**
	baz=273						
TWC	**Suao**	**0.59**	**251**	P	**Pb**	**09 45 57.0**	**-1.1**
	baz=258						
TWC				S	**Sb**	**09 46 06.2**	**+0.3**
	baz=258						
TIPB	**Shuangxi**	**0.60**	**286**	P	**Pb**	**09 45 58.3**	**+0.1**
	baz=285						
YOJ	**Yonaguni jima**	**0.60**	**124**	⇓P	**Pn**	**09 45 58.9**	**-0.6**
	baz=115						
YOJ				S	**Sb**	**09 46 06.7**	**+0.3**
	baz=115						
YOJ	**Yonaguni jima**	**0.60**	**124**	P	**Pb**	**09 45 58.7**	**+0.4**
YOJ				S	**Sb**	**09 46 06.7**	**+0.3**
SXI1	**Grass Mountain**	**0.61**	**299**	⇑P	**Pb**	**09 45 58.6**	**+0.2**
	baz=297						
SXI1				S	**Sb**	**09 46 06.7**	**+0.1**
	baz=297						
NWF	**Wu-fen Shan**	**0.67**	**293**	P	**Pb**	**09 46 00.1**	**+0.6**
	baz=292						
NWF				S	**Sb**	**09 46 09.2**	**+0.7**
	baz=292						
WFSB	**Wu-fen Shan**	**0.67**	**293**	P	**Pn**	**09 46 00.1**	**-0.3**
	baz=292						
WFSB				S	**Sb**	**09 46 09.0**	**+0.7**
	baz=292						
NDS	**Dongshan**	**0.70**	**256**	P	**Pb**	**09 45 59.0**	**-0.8**
	baz=254						
NDS				S	**Sb**	**09 46 09.5**	**+0.4**
	baz=254						
TNOU	**National Taiwa**	**0.71**	**299**	P	**Pb**	**09 46 00.3**	**+0.2**
	baz=297						
TNOU				S	**Sb**	**09 46 09.9**	**+0.4**
	baz=297						
EWUT	**Wuta**	**0.72**	**240**	P	**Pb**	**09 45 59.9**	**-0.2**
	baz=247						
EWUT				S	**Sn**	**09 46 09.9**	**-1.3**
	baz=247						
TWE	**Neicheng**	**0.73**	**264**	P	**Pb**	**09 45 59.6**	**-0.7**
	baz=261						

TWE				S		Sb	09 46 10.0	+0.1	
	baz=261								
ENA	**Nanau**	**0.76**	**240**	P		Pb	09 46 00.6	-0.2	
	baz=246								
ENA				S		Sn	09 46 10.9	-1.3	
	baz=246								
FUSB	**Fushanzhiwuyua**	**0.80**	**267**	P		Pb	09 46 01.1	-0.4	
	baz=265								
FUSB				S		Sb	09 46 12.1	+0.1	
	baz=265								
ENTT	**Nioudou**	**0.83**	**259**	*e*P		Pn	09 46 02.5	-0.1	
	baz=243								
ENTT				*e*S		Sn	09 46 13.5	-0.7	
	baz=243								
NWLT	**Wulai**	**0.87**	**268**	P		Pn	09 46 02.9	-0.3	
	baz=267								
NWLT				S		Sb	09 46 13.6	-0.5	
	baz=267								
YM01	**YM01**	**0.88**	**293**	P		Pn	09 46 03.1	-0.2	
	baz=291								
YM01				S		Sb	09 46 14.7	+0.4	
	baz=291								
YM08	**YM08**	**0.88**	**296**	*e*P		Pb	09 46 03.5	+0.5	
	baz=294								
YM08				*e*S		Sb	09 46 14.4	+0.1	
	baz=294								
LATG	**Datong**	**0.89**	**253**	P		Pn	09 46 02.9	-0.6	
	baz=251								
LATG				S		Sb	09 46 14.6	-0.1	
	baz=251								
TWY	**Chenhua**	**0.91**	**301**	*e*P		Pb	09 46 05.1	+1.6	
	baz=300								
TWY				*e*S		Sn	09 46 16.0	-0.1	
	baz=300								
YHNB	**Yeheng**	**1.00**	**263**	P		Pn	09 46 04.8	-0.2	
	baz=261								
YHNB				S		Sn	09 46 19.7	+1.3	
	baz=261								
NACB	**Ninganchiao**	**1.01**	**232**	P		Pn	09 46 04.6	-0.4	
	baz=240								
NACB				S		Sb	09 46 17.9	-0.1	
	baz=240								
NSK	**Sanguang**	**1.01**	**263**	P		Pn	09 46 04.5	-0.7	
	baz=261								
NSK				*e*S		Sb	09 46 18.2	+0.1	
	baz=261								
NNSB	**Datong**	**1.05**	**249**	P		Pb	09 46 05.7	-0.3	
	baz=247								
NNSB				*e*S		Sb	09 46 19.2	-0.1	
	baz=247								
NNS	**Nan Shan**	**1.05**	**250**	*e*P		Pb	09 46 06.0	-0.1	
	baz=248								
NNS				*e*S		Sb	09 46 19.9	+0.5	
	baz=248								
TWD	**Chiawan**	**1.07**	**228**	*e*P		Pb	09 46 06.0	-0.2	
	baz=233								
ETLH	**Xiulin Townshi**	**1.07**	**237**	P		Pb	09 46 06.2	-0.1	
	baz=235								
ETM	**Tongmen**	**1.22**	**227**	*e*P		Pb	09 46 08.9	+0.2	
	baz=208								
ETM				*e*S		Sb	09 46 25.2	+1.3	
	baz=208								
NFF	**Wufeng Townshi**	**1.23**	**262**	*e*P		Pb	09 46 09.5	+0.5	
	baz=261								
FUSS	**Fushou**	**1.24**	**244**	P		Pb	09 46 09.4	+0.2	
	baz=242								
IRIF	**Iriomote-Funau**	**1.25**	**112**	P		Pn	09 46 08.2	-0.1	
IRIF				*e*S		Sn	09 46 23.5	-0.9	
WHF	**Hehuan Shan**	**1.27**	**239**	P		Pb	09 46 10.0	+0.2	
	baz=248								
WHF				*e*S		Sb	09 46 25.5	-0.5	
	baz=248								
TDCB	**Techi**	**1.31**	**245**	*e*P		Pb	09 46 10.9	+0.6	
	baz=244								
CHGB	**Renai**	**1.39**	**238**	*e*P		Pb	09 46 12.3	+0.6	
	baz=245								
CHGB				*e*S		Sb	09 46 30.0	+0.9	
	baz=245								
HATJ	**Hateruma jima**	**1.43**	**121**	P		Pn	09 46 11.1	+0.3	
HATJ				*e*S		Sn	09 46 26.5	-2.4	
OWD	**Renai**	**1.45**	**234**	*e*P		Pb	09 46 13.2	+0.6	
	baz=215								
WUSB	**Renai**	**1.47**	**237**	*e*P		Pb	09 46 13.4	+0.4	
	baz=243								
WUSB				S		Sb	09 46 32.3	+1.0	
	baz=243								
WHP	**Taichung City**	**1.48**	**250**	*e*P		Pb	09 46 13.9	+0.7	
	baz=248								
WHP				*e*S		Sb	09 46 32.4	+0.9	
	baz=248								
JKRS	**Kuro-shima**	**1.52**	**111**	P		Pn	09 46 12.4	+0.4	
JJ	**Ishigaki jima**	**1.59**	**106**	P		Pn	09 46 13.0	-0.1	
VWDT	**VWDT**	**1.59**	**229**	P		Pb	09 46 15.2	0.0	
	baz=214								
SSLB	**Suanglung**	**1.71**	**234**	P		Pb	09 46 18.0	+0.9	
	baz=243								
SSLB				*e*S		Sb	09 46 40.0	+1.9	
	baz=243								
TYC	**Yuchr**	**1.72**	**239**	*e*P		Pb	09 46 18.0	+0.8	
	baz=225								
YULB	**Yu-li**	**1.76**	**217**	P		Pn	09 46 16.3	+0.8	
	baz=216								
EYUL	**Yuli**	**1.79**	**216**	P		Pb	09 46 17.4	-1.0	
	baz=201								
EDH	**Donghe**	**2.11**	**210**	P		Pn	09 46 21.2	+1.0	
	baz=197								
EDH				*e*S		Sn	09 46 45.1	-0.6	
	baz=197								
TWGBT	**Beinan**	**2.35**	**213**	*e*S		Sn	09 46 51.9	+0.3	
	baz=212								

*DJA **11** 10:07:56.1±0.2,8˚S±2˚×11˚5E±˚, h212km±2km, M4.4/31, mb4.5/23, mB4.9/13, MLv4.7/31, Mw(mB)4.2/13*
*NEIC **11** 10:07:56±2.2, 7.96S±0.07˚×115.15E±0.06, h212km±5km, mb4.6/64, Error ellipse: s-maj=10.5km s-min=8.3km az=208.0*
*IDC **11** 10:07:57.5±1.2, 7.77S×115.22E, h223km±11km, mb4.2/30, mbtmp4.7/33, Error ellipse: s-maj=11.3km s-min=7.9km az=64.0*

ISC 11 10:07:56.1±0.5, 7.96S±0.04×115.20E±0.04, h216km±4km, n210, σ1§45/234, mb4.6/71, 1C-2D, Bali Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SRBI	**Singaraja**	**0.12**	**175**	P	**Pn**	**10 08 24.6**	**+0.3**
SRBI				S	**S**	**10 08 46.6**	**+0.1**
DNP	**Denpasar**	**0.71**	**179**	P	**Pn**	**10 08 26.3**	**+0.3**
DNP				S	**S**	**10 08 48.9**	**-0.5**
IGBI	**Denpasar**	**0.85**	**184**	P	**Pn**	**10 08 26.4**	**-0.3**
IGBI				S	**S**	**10 08 48.7**	**-1.9**
ABJI	**Asem Bagus**	**0.97**	**280**	P	**Pn**	**10 08 27.7**	**+0.3**
ABJI				S	**S**	**10 08 52.1**	**+0.5**
KMMI	**Kalianget**	**1.52**	**306**	P	**Pn**	**10 08 31.0**	**-0.4**
KMMI				S	**S**	**10 08 59.6**	**+0.8**
BLJI	**Banyuglugur**	**1.61**	**278**	P	**Pn**	**10 08 32.7**	**+0.6**
BLJI				S	**S**	**10 09 00.9**	**+0.9**
GMJI	**Gumukmas**	**1.77**	**260**	P	**Pn**	**10 08 33.3**	**-0.3**
GMJI				S	**S**	**10 09 01.4**	**-1.2**
PLAI	**Plampang**	**2.69**	**109**	P	**Pn**	**10 08 42.9**	**-0.2**
PLAI				S	**S**	**10 09 19.0**	**-0.6**
PLAI	**Plampang**	**2.69**	**109**	P	**Pn**	**10 08 43.8**	**+0.7**
GRJI	**Gresik**	**2.89**	**291**	P	**Pn**	**10 08 45.9**	**+0.5**
GRJI				S	**S**	**10 09 24.9**	**+1.3**
BWJI	**Bawean**	**3.28**	**310**	P	**Pn**	**10 08 50.3**	**+0.4**
BWJI				S	**S**	**10 09 32.8**	**+1.0**
PWJI	**Pagerwojo**	**3.37**	**269**	P	**Pn**	**10 08 50.4**	**-0.4**
PWJI				S	**S**	**10 09 32.0**	**-1.5**
TBJI	**Tambak Boyo**	**3.51**	**289**	P	**Pn**	**10 08 53.1**	**+0.5**
TBJI				S	**S**	**10 09 37.0**	**+0.3**
PCJI	**Pacitan**	**3.99**	**266**	P	**Pn**	**10 08 57.6**	**-0.8**
PCJI				S	**S**	**10 09 42.7**	**-4.4**
WOJI	**Wonogiri, Jawa**	**4.24**	**271**	P	**Pn**	**10 09 01.5**	**+0.1**
WOJI				S	**S**	**10 09 50.3**	**-2.3**
WBSI	**Waikabubak, Su**	**4.46**	**112**	P	**Pn**	**10 09 01.9**	**-2.4**
WBSI				S	**S**	**10 09 52.8**	**-5.0**
BBKI	**Banjar Baru**	**4.48**	**355**	P	**Pn**	**10 09 05.8**	**+1.3**
UGM	**Wanagama**	**4.63**	**270**	Pn	**Pn**	**10 09 06.5**	**+0.1**
UGM	**Wanagama**	**4.63**	**270**	P	**Pn**	**10 09 06.0**	**-0.4**
UGM				S	**S**	**10 10 00.1**	**-1.5**
SMRI	**Semarang**	**4.81**	**281**		**Pn**	**10 09 07.7**	**-0.8**
SMRI				Sn	**S**	**10 10 04.1**	**-1.4**
SMRI	**Semarang**	**4.81**	**281**	P	**Pn**	**10 09 08.7**	**+0.2**
SMRI	**Semarang**	**4.81**	**281**	P	Pn	10 09 15.3	+6.8
	85nm,0.9s						
YOGI	**Yogyakarta**	**4.86**	**271**	P	**Pn**	**10 09 09.8**	**+0.6**
KAPI	**Kappang**	**5.39**	**57**	P	**Pn**	**10 09 16.5**	**+0.7**
	52nm,0.5s,baz=236,slow=10,SNR=30						
KAPI				S	**S**	**10 10 15.5**	**-3.3**
	11nm,0.4s,baz=231,slow=19,SNR=1.1						
KAPI	**Kappang**	**5.39**	**57**		**Pn**	**10 09 17.5**	**+1.7**
KAPI	**Kappang**	**5.39**	**57**	P	**Pn**	**10 09 18.4**	**+2.6**
BKSI	**Bulukumba**	**5.55**	**62**	P	**Pn**	**10 09 19.4**	**+1.6**
	0.3nm999nm65nm,1.1s						
BSSI	**Bau Bau, Buton**	**5.55**	**71**	P	**Pn**	**10 09 18.8**	**+0.9**
	0.3nm96nm,0.9s						
BASI	**Baing, Sumba**	**5.76**	**113**	P	**Pn**	**10 09 19.5**	**-1.1**
	2.5nm8μm198nm,0.5s						
BNSI	**Bone**	**6.02**	**54**	P	**Pn**	**10 09 26.2**	**+2.3**
	0.4nm1μm67nm,1.3s						
SPSI	**Sidrap Palu**	**6.03**	**49**	P	**Pn**	**10 09 25.2**	**+1.1**
	0.3nm2μm91nm,1.2s						
KPJI	**Karang Pucung**	**6.25**	**275**	P	**Pn**	**10 09 27.5**	**+0.7**
	0.8nm113nm,0.8s						
EDFI	**Ende, Flores**	**6.47**	**97**	P	**Pn**	**10 09 27.7**	**-2.0**
CMJI	**Cimerak**	**6.69**	**271**	P	**Pn**	**10 09 31.1**	**-1.4**
	0.8nm3μm48nm,0.7s						
TTSI	**Tana Toraja**	**6.71**	**44**	P	**Pn**	**10 09 35.9**	**+3.2**
	0.8nm2μm185nm,1.3s						
BKB	**Balikpapan**	**6.87**	**14**		Pn	10 09 40.9	+6.1
BKB	**Balikpapan**	**6.87**	**14**	P	Pn	10 09 41.7	+6.9
LEM	**Lembang**	**7.61**	**278**	P	**Pn**	**10 09 45.1**	**+0.6**
	92nm,0.8s,baz=62,slow=11,SNR=13						
LEM				S	**S**	**10 11 09.2**	**-1.7**
	46nm,0.7s,baz=272,slow=23,SNR=1.3						
LEM	**Lembang**	**7.61**	**278**	P	**Pn**	**10 09 45.0**	**+0.6**
	0.2nm47nm,0.9s						
CNJI	**Cibinong**	**8.03**	**274**	P	**Pn**	**10 09 49.4**	**-0.3**
BATI	**Baumata**	**8.65**	**106**	P	**Pn**	**10 09 56.6**	**-1.2**
	49nm,0.3s,baz=282,slow=2.8,SNR=12						
BATI				S	**S**	**10 11 30.1**	**-5.3**
	54nm,0.3s,baz=222,slow=22,SNR=6.4						
BATI	**Baumata**	**8.65**	**106**	P	**Pn**	**10 09 56.8**	**-1.0**
	47nm,1.1s						
SOEI	**Soe**	**9.13**	**102**	Pn	**Pn**	**10 10 02.3**	**-1.9**
SOEI	**Soe**	**9.13**	**102**	P	**Pn**	**10 10 02.2**	**-1.9**
	57nm,0.8s						
XMIS	**Christmas Isla**	**9.75**	**254**	Pn	**Pn**	**10 10 08.7**	**-3.3**
KSM	**Kuching**	**10.57**	**332**	Pn	**Pn**	**10 10 23.3**	**+0.9**
KSM	**Kuching**	**10.57**	**332**	P	**P**	**10 10 32.3**	**+3.5**
TOLI2	**Tolitoli**	**10.59**	**32**	Pn	**Pn**	**10 10 23.8**	**+1.1**
TOLI2	**Tolitoli**	**10.59**	**32**	P	**P**	**10 10 27.3**	**-1.8**
MRSI	**Marisa**	**10.74**	**39**	P	**Pn**	**10 10 26.1**	**+1.4**
	46nm,0.9s						
SBUM	**Sibu**	**10.76**	**344**	Pn	**Pn**	**10 10 26.3**	**+1.4**
SANI	**Sanana**	**12.24**	**62**	P	**P**	**10 10 46.8**	**-0.6**
	40nm,1.2s						
MYLDM	**Lahad Datu**	**13.46**	**14**	P	**Pn**	**10 10 59.9**	**+1.0**
MBWA	**Marble Bar**	**13.83**	**162**		**Pn**	**10 11 02.9**	**-0.5**
MBWA	**Marble Bar**	**13.83**	**162**	P	**P**	**10 11 04.5**	**-0.5**
PSA00	**Pilbara Seismi**	**14.26**	**162**	Pn	**Pn**	**10 11 07.5**	**-1.1**
PSA00	**Pilbara Seismi**	**14.26**	**162**		**Pn**	**10 11 09.0**	**+0.4**
PSA00	**Pilbara Seismi**	**14.26**	**162**	P	**P**	**10 11 09.8**	**+0.1**
GIRL	**Giralia**	**14.63**	**184**	Pn	**Pn**	**10 11 11.8**	**-1.3**
GIRL	**Giralia**	**14.63**	**184**	P	**P**	**10 11 15.3**	**+1.5**
KRJI	**Kerinci**	**14.87**	**292**	P	**P**	**10 11 17.4**	**+0.7**
	18μm381nm,0.7s						
KNRA	**Kununurra**	**15.32**	**121**		**P**	**10 11 21.4**	**-0.1**
KNRA	**Kununurra**	**15.32**	**121**	P	**Pn**	**10 11 23.0**	**+1.4**
BKNI	**Bangkinang**	**16.34**	**300**	Pn	**Pn**	**10 11 34.4**	**+0.5**
MTN	**Manton Dam**	**16.40**	**109**		**Pn**	**10 11 34.8**	**+0.2**
PPI	**Padang Panjang**	**16.53**	**296**	P	**P**	**10 11 34.1**	**-0.8**
	33nm,1.2s						
SISI	**Saibi**	**17.35**	**292**	P	**P**	**10 11 43.1**	**-0.8**
	21nm,0.8s						
FAKI	**Fak Fak**	**17.69**	**74**	P	**P**	**10 11 46.9**	**-0.7**
FAKI					IAmb	IAmb	10 12 02.7
	comp=Z,35nm,1.3s						
PSI	**Prapat**	**19.44**	**303**	P	**P**	**10 12 06.9**	**+0.3**
	comp=Z,11nm,0.3s,baz=148,slow=9.3,SNR=17						
KULM	**Kulim**	**19.59**	**312**	P	**P**	**10 12 09.4**	**+1.2**
GSI	**Gunungsitoli**	**19.84**	**297**	P	**P**	**10 12 09.2**	**-1.6**
GSI					IAmb	IAmb	10 12 38.2
	comp=Z,30nm,1.2s						
KCSI	**Kotacane, Aceh**	**20.80**	**303**	P	**P**	**10 12 20.6**	**-0.4**
	comp=Z,1μmcomp=Z,55nm,1.1s						
MORW	**Morawa**	**21.01**	**178**	P	**P**	**10 12 24.0**	**+0.9**
MORW					IAmb	IAmb	10 12 28.1
	comp=Z,29nm,1.1s						
MORW	**Morawa**	**21.01**	**178**	P	**P**	**10 12 26.4**	**+3.3**
WB0	**Warramunga Arr**	**21.99**	**124**	P	**P**	**10 12 33.6**	**+0.7**
WB0					IAmb	IAmb	10 12 33.7
	comp=Z,16nm,1.4s						
WRA	**Warramunga Arr**	**22.03**	**125**	P	**P**	**10 12 34.4**	**+1.0**
	comp=Z,1.5nm,0.3s,baz=299,slow=12,SNR=87						
WRA					PcP	**PcP**	
	comp=Z,1.3nm,0.7s,baz=334,slow=2.0,SNR=3.1						
WRA					ScP	**ScP**	**10 19 40.2**	**+0.2**
	comp=Z,3.4nm,0.8s,baz=310,slow=1.7,SNR=6.5						
	comp=Z,1.5nm,0.3s						
WRA	**Warramunga Arr**	**22.03**	**125**	P	**P**	**10 12 33.6**	**+0.2**
WB2	**Warramunga Arr**	**22.04**	**125**	P	**P**	**10 12 34.5**	**+1.1**
WR0	**Warramunga Arr**	**22.21**	**124**	P	**P**	**10 12 36.2**	**+1.2**
BLDU	**Ballidu**	**22.58**	**177**	P	**P**	**10 12 41.3**	**+3.0**
AS31	**Alice Springs**	**23.78**	**133**	P	**P**	**10 12 51.1**	**+1.9**
ASAR	**Alice Springs**	**23.78**	**133**	P	**P**	**10 12 51.2**	**+2.0**
	comp=Z,3.1nm,0.3s,baz=303,slow=9.1,SNR=100						
ASAR					PcP	**PcP**	**10 16 28.0**	**+1.2**
	comp=Z,1.5nm,0.7s,baz=324,slow=2.5,SNR=7.2						
ASAR					ScP	**ScP**	**10 19 45.4**	**+0.7**
	comp=Z,5.1nm,0.7s,baz=328,slow=2.4,SNR=13						
	comp=Z,3.1nm,0.3s						
ASAR	**Alice Springs**	**23.78**	**133**	P	**P**	**10 12 51.1**	**+1.9**
NWAO	**Narrogin (SRO)**	**24.91**	**176**	P	**P**	**10 13 01.6**	**+2.2**
NWAO					IAmb	IAmb	10 13 17.3
	comp=Z,31nm,1.4s						
FORT	**Forrest**	**25.69**	**154**	P	**P**	**10 13 08.8**	**+2.4**
COEN	**Coen**	**28.09**	**105**	P	**P**	**10 13 28.4**	**+0.4**
COEN					IAmb	IAmb	10 13 39.3
	comp=Z,25nm,1.5s						
CMAR	**Chiang Mai Arr**	**30.77**	**329**	P	**P**	**10 13 52.9**	**+1.3**
	comp=Z,3.0nm,0.7s,baz=155,slow=7.2,SNR=16						
CMAR					PcP	**PcP**	**10 16 44.5**	**+0.9**
	comp=Z,1.3nm,0.5s,baz=177,slow=3.8,SNR=4.7						
	comp=Z,3.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**30.77**	**329**	P	**P**	**10 13 52.2**	**+0.6**
BBOO	**Buckleboo**	**31.39**	**145**	P	**P**	**10 13 58.3**	**+1.4**
BBOO					IAmb	IAmb	10 14 26.9
	comp=Z,24nm,1.5s						
NACB	**Ninganchiao**	**32.54**	**11**	P	**P**	**10 14 08.4**	**+1.5**
MANU	**Manus Island**	**32.56**	**81**	P	**P**	**10 14 08.1**	**+0.8**
YHNB	**Yeheng**	**32.99**	**10**	P	**P**	**10 14 10.7**	**-0.1**
STKA	**Stephens Creek**	**34.19**	**138**	P	**P**	**10 14 22.9**	**+1.7**
	comp=Z,1.8nm,0.3s,baz=291,slow=12,SNR=4.9						
STKA					ScP	**ScP**	**10 20 18.4**	**+0.9**
	comp=Z,4.2nm,0.7s,baz=301,slow=5.9,SNR=4.9						
	comp=Z,1.8nm,0.3s						
GYA	**Guiyang**	**35.20**	**347**	⇑P	**P**	**10 14 31.3**	**+1.3**
GYA					pmax	pmax	
	comp=Z,10.0nm,0.8s						
PZH	**PanZhiHua**	**36.66**	**340**	P	P	10 14 51.3	+8.9
PZH					pmax	pmax	
	comp=Z,10.0nm,0.9s						
PZH					pmax	pmax	
	comp=Z,100nm,4.8s						
CD2	**Chengdu**	**40.18**	**345**	P	**P**	**10 15 12.9**	**+1.4**
CD2					pmax	pmax	
	comp=Z,60nm,0.3s						
XAN	**Xi'an**	**42.19**	**352**	P	**P**	**10 15 28.0**	**+0.2**
XAN					pmax	pmax	
	comp=Z,14nm,1.0s						
LSA	**Lhasa**	**44.02**	**329**	P	**P**	**10 15 43.7**	**+0.7**
LSA					IAmb	IAmb	10 15 45.1
	comp=Z,36nm,1.2s						
LSA	**Lhasa**	**44.02**	**329**	P	**P**	**10 15 44.5**	**+1.5**
LSA					pmax	pmax	
	comp=Z,31nm,0.8s						
TAPN	**Taplejung**	**44.06**	**324**	*e*P	**P**	**10 15 43.4**	**+0.3**
JTU	**Tsushima**	**44.34**	**17**	P	**P**	**10 15 45.3**	**+0.4**
JTU					IAmb	IAmb	10 15 57.7
	comp=Z,25nm,1.5s						
RAMN	**Ramite**	**44.42**	**322**	*e*P	**P**	**10 15 46.0**	**0.0**
	comp=Z,14nm,0.2s						
LZH	**Lanzhou**	**45.10**	**347**	⇓P	**P**	**10 15 51.7**	**+0.6**
LZH					sP	sP	10 17 04.2	+2.4
LZH					pmax	pmax	
	comp=Z,20nm,1.3s						
JIRN	**Jiri**	**45.19**	**323**	*e*P	**P**	**10 15 52.1**	**-0.1**
	comp=Z,101nm,0.3s						
GUN	**Gumba**	**45.56**	**323**	*e*P	**P**	**10 15 54.9**	**-0.1**
	comp=Z,45nm,0.3s						
PKI	**Pulchoki**	**45.60**	**322**	*e*P	**P**	**10 15 54.6**	**-0.7**
PKIN	**Phulchoki**	**45.61**	**322**	*e*P	**P**	**10 15 54.7**	**-0.6**
	comp=Z,20nm,0.4s						
DMN	**Daman**	**45.81**	**322**	*e*P	**P**	**10 15 56.5**	**-0.4**
	comp=Z,22nm,0.2s						
JHS	**Saijyo**	**45.96**	**21**	IAmb	IAmb	10 15 59.4	
	comp=Z,16nm,0.9s						
GKN	**Gorkha**	**46.38**	**322**	*e*P	**P**	**10 16 00.6**	**-0.6**
	comp=Z,60nm,0.3s						
KSAR	**Wonju Array Be**	**46.70**	**14**	P	**P**	**10 16 02.9**	**-0.4**
KSRS	**Korea Array**	**46.72**	**14**	P	**P**	**10 16 03.5**	**+0.1**
	comp=Z,0.9nm,0.4s,baz=194,slow=8.2,SNR=8.5						
	comp=Z,0.9nm,0.4s						
DANN	**Dangsing**	**47.17**	**321**	*e*P	**P**	**10 16 06.8**	**-0.7**
PYUN	**Piuthan**	**47.48**	**320**	*e*P	**P**	**10 16 09.1**	**-0.7**
	comp=Z,37nm,0.6s						
INU	**Inuyama**	**47.74**	**24**	P	**P**	**10 16 11.0**	**-0.4**
JGF	**Kuroka**	**48.10**	**24**	P	**P**	**10 16 13.7**	**-0.5**
HHC	**Hu-ho-hao-te**	**48.68**	**356**	*e*P	**P**	**10 16 21.9**	**+3.3**
HHC				pmax	pmax		
	comp=Z,30nm,0.8s						
HHC				pmax	pmax		
	comp=Z,160nm,5.4s						
GTA	**Gaotai**	**49.24**	**344**	*e*P	**P**	**10 16 24.7**	**+1.8**
GTA				pP	PcP	10 17 46.4	+3.9
GTA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,91nm,5.5s						
GTA				LR	LR		
	comp=N,110nm,17.5s						
GTA				LR	LR		
	comp=E,340nm,19.3s						
GTA				LR	LR		
	comp=Z,41nm,17.1s						
MAJO	**Matsushiro**	**49.26**	**25**	P	**P**	**10 16 21.9**	**-1.0**
MJAR	**Matsushiro Arr**	**49.26**	**25**	P	**P**	**10 16 22.6**	**-0.4**
	comp=Z,10nm,0.8s,baz=198,slow=7.6,SNR=34						
	comp=Z,10nm,0.8s						
MJAR	**Matsushiro Arr**	**49.26**	**25**	P	**P**	**10 16 22.2**	**-0.7**
MJB9	**Matsu-Tunnel**	**49.26**	**25**	P	**P**	**10 16 22.1**	**-0.9**
MJB9					IAmb	IAmb	10 16 22.9
	comp=Z,9.7nm,0.6s						
JSD	**Sado**	**50.56**	**24**	P	**P**	**10 16 32.6**	**-0.1**
JSD					IAmb	IAmb	10 16 33.2
	comp=Z,16nm,0.7s						
JMM	**Marumori**	**51.47**	**26**	P	**P**	**10 16 39.6**	**+0.2**
JMM					IAmb	IAmb	10 16 40.2
	comp=Z,20nm,0.9s						
XLT	**XiLinHaoTe**	**51.62**	**1**	⇓*i*P	**P**	**10 16 43.9**	**+3.3**
XLT				sS	sS	10 25 16.9	+8.9
XLT	**XiLinHaoTe**	**51.62**	**1**	SS	**SS**	**10 27 23.1**	**-1.2**
XLT				pmax	pmax		
	comp=Z,14nm,0.7s						
XLT				pmax	pmax		
	comp=Z,66nm,3.8s						
XLT				LR	LR		
	comp=N,20nm,20.2s						
XLT				LR	LR		
	comp=E,320nm,19.1s						
XLT				LR	LR		
	comp=Z,80nm,12.0s						
JTM	**Tenmabayashi**	**54.04**	**24**	P	**P**	**10 16 57.8**	**-0.4**
USA0B	**Ussuriysk Arra**	**54.09**	**15**	P	**P**	**10 16 58.8**	**+0.3**
USA0B					IAmb	IAmb	10 16 59.4
	comp=Z,22nm,0.8s						
USRK	**Ussuriysk Ar.**	**54.09**	**15**	P	**P**	**10 16 58.4**	**-0.1**
	comp=Z,18nm,0.6s,baz=197,slow=3.8,SNR=49						
	comp=Z,18nm,0.6s						
SONM	**Songino Array**	**56.10**	**353**	P	**P**	**10 17 12.9**	**-0.1**
	comp=Z,3.4nm,0.6s,baz=168,slow=8.1,SNR=23						
SONM					ScP	**ScP**	**10 21 45.5**	**-1.2**
	comp=Z,0.7nm,0.7s,baz=151,slow=3.3,SNR=2.4						
	comp=Z,3.4nm,0.6s						
SONM	**Songino Array**	**56.10**	**353**	P	**P**	**10 17 13.0**	**+0.1**
WMQ	**Urumqi**	**57.25**	**337**	*e*P	**P**	**10 17 23.0**	**+1.9**
KLR	**Kul'dur**	**58.77**	**13**	P	**P**	**10 17 30.6**	**-0.8**
	comp=Z,3.6nm,0.3s,baz=195,slow=7.5,SNR=19						
	comp=Z,3.6nm,0.3s						
KSH	**Kashi**	**59.58**	**325**	P	**P**	**10 17 36.6**	**-0.7**
KSH					ScP	**ScP**	**10 22 02.2**	**-0.2**
KSH					pmax	pmax	
	comp=Z,38nm,0.8s						
KBL	**Kabul**	**60.74**	**317**		**P**	**10 17 43.9**	**-1.5**
KBL					IAmb	IAmb	10 17 44.7
	comp=Z,12nm,0.8s						
ULHL	**Ulahol**	**61.33**	**328**	P	**P**	**10 17 49.1**	**-0.1**
	SNR=5.9						
MKAR	**Makanchi Array**	**61.88**	**335**	P	**P**	**10 17 51.8**	**-0.8**
	comp=Z,9.8nm,0.4s,baz=149,slow=6.7,SNR=72						
MKAR					PcP	**PcP**	**10 18 31.2**	**0.0**
	comp=Z,1.1nm,0.6s,baz=137,slow=5.5,SNR=1.3						
	comp=Z,9.8nm,0.4s						
MKAR	**Makanchi Array**	**61.88**	**335**	P	**P**	**10 17 52.3**	**-0.3**
MAKZ	**Makanchi**	**62.02**	**335**	P	**P**	**10 17 53.5**	**0.0**
MAKZ					IAmb	IAmb	10 17 54.3
	comp=Z,10nm,1.1s						
TKM2	**Tokmak 2**	**62.15**	**328**	P	**P**	**10 17 54.1**	**-0.6**
	SNR=17						
UCH	**Uchtor**

comp=Z,2.6nm,0.8s
ARU Arti 79.15 332 P **P** 10 19 35.9 -0.7
comp=Z,1.7nm,0.3s,baz=229,slow=19
comp=Z,1.7nm,0.3s
ARU Arti 79.15 332 P **P** 10 19 35.7 -0.9
ARU IAmb IAmb 10 19 36.5
comp=Z,12nm,1.0s
NRIK Noril'sk 79.47 350 P **P** 10 19 37.1 -1.0
comp=Z,1.2nm,0.4s,baz=180,slow=6.0,SNR=5.0
comp=Z,1.2nm,0.4s
NRIK Noril'sk 79.47 350 P **P** 10 19 37.3 -0.8
TIXI Tiksi 79.96 4 P **P** 10 19 39.3 -1.3
comp=Z,2.6nm,0.5s,baz=271,slow=16,SNR=12
comp=Z,2.6nm,0.5s
TIXI Tiksi 79.96 4 P **P** 10 19 39.3 -1.3
TIXI IAmb IAmb 10 19 40.0
comp=Z,12nm,1.2s
GURO Guroymak-BITLI 81.98 311 P **P** 10 19 52.9 +0.7
GURO IAmb IAmb 10 19 53.8
comp=Z,12nm,0.9s
ONI Oni 82.17 315 P **P** 10 19 51.2 -1.8
MARD Mardin 82.59 309 P **P** 10 19 55.2 -0.1
MARD IAmb IAmb 10 19 56.4
comp=Z,10nm,0.6s
KBZ Khabaz 82.91 316 P **P** 10 19 57.0 +0.4
comp=Z,5.4nm,0.9s,baz=122,slow=2.5,SNR=8.3
comp=Z,5.4nm,0.9s
BELG Belogornoye 82.95 325 P **P** 10 19 55.9 -0.7
comp=Z,26nm,0.9s,baz=64,slow=0.3,SNR=10
comp=Z,26nm,0.9s
ASF Jabal al Asfar 84.41 303 P **P** 10 20 06.5 +1.8
comp=Z,32nm,0.8s,baz=17,slow=12,SNR=12
comp=Z,32nm,0.8s
KIRV Kirov 84.52 331 P **P** 10 20 03.5 -1.0
comp=Z,11nm,0.4s,baz=108,slow=3.2,SNR=5.5
comp=Z,11nm,0.4s
LSZ Lusaka 85.08 255 P **P** 10 20 07.9 -0.5
LSZ IAmb IAmb 10 20 10.4
comp=Z,8.1nm,0.8s
EIL Elat 85.51 301 P **P** 10 20 10.2 +0.1
comp=Z,8.5nm,0.8s,baz=171,slow=1.7,SNR=5.0
comp=Z,8.5nm,0.8s
BOSA Boshof 86.19 242 P **P** 10 20 15.2 +1.4
comp=Z,12nm,0.9s,baz=96,slow=2.6,SNR=14
comp=Z,12nm,0.9s
BR131 Keskin Array S 88.59 310 P **P** 10 20 24.4 -0.5
BR131 IAmb IAmb 10 20 25.3
comp=Z,14nm,0.9s
BRTR Keskin Array B 88.59 310 P **P** 10 20 24.6 -0.3
comp=Z,6.5nm,0.8s,baz=123,slow=6.1,SNR=38
comp=Z,6.5nm,0.8s
BRTR Keskin Array B 88.59 310 P **P** 10 20 24.2 -0.6
TROLL Troll, Antarti 89.31 197 P **P** 10 20 30.3 +2.7
SNAA Sanae 90.96 196 P **P** 10 20 37.3 +2.1
SNAA Sanae 90.96 196 PKKPdf PKKPdf 10 37 53.7 -3.0
SNAA Sanae 90.96 196 P **P** 10 20 37.9 +2.7
SNAA IAmb IAmb 10 20 38.5
comp=Z,3.2nm,0.6s
VNA2 Neumayer--Watz 92.61 196 P **P** 10 20 45.0 +2.2
baz=93,slow=2.1
VNA3 Neumayer Olymp 93.04 195 P **P** 10 20 46.7 +2.0
VNA3 Neumayer Olymp 93.04 195 PKKPdf PKKPdf 10 37 48.4 -4.5
AKASG Malin Array Be 93.55 321 P **P** 10 20 46.1 -1.2
comp=Z,1.7nm,0.8s,baz=68,slow=3.8,SNR=10
comp=Z,1.7nm,0.8s
AKASG Malin Array Be 93.55 321 P **P** 10 20 46.2 -1.2
AKASG IAmb IAmb 10 20 46.8
comp=Z,3.1nm,0.9s
MNK Minsk 94.86 324 *i* P **P** 10 20 49.8 -3.5
comp=E,4.0nm,1.2s
MNK *i* P **P** 10 20 49.8 -3.5
comp=Z,16nm,1.2s,baz=97
MNK *i* pP **pP** 10 21 43.8 -2.7
MNK *i* PP **PP** 10 24 41.6 -3.6
MNK *i* PPP PPP 10 26 44.2
MNK *i* S **SKSac** 10 31 03.5 -4.3
MNK *i* SS **SS** 10 38 15.3 -2.7
MNK *i* SSS SSS 10 42 00.3
MNK *i* LRM MLR 11 04 40.6
comp=E,14nm,18.5s
MNK *i* LRM MLR 11 04 47.0
comp=Z,4μm,22.4s
ARCES ARCESS Array B 97.29 339 P **P** 10 21 02.4 -1.7
comp=Z,1.4nm,0.8s,baz=90,slow=5.0,SNR=4.2
comp=Z,1.4nm,0.8s
TORD Torodi Ar. Bea 114.58 281 PKP PKPdf 10 26 11.3 -0.1
comp=Z,1.1nm,0.6s,baz=55,slow=2.6,SNR=11
YKA Yellowknife Ar 114.75 23 PKP PKPdf 10 26 10.1 -0.3
comp=Z,0.6nm,0.6s,baz=313,slow=0.8,SNR=2.8
NVAR Mina Array Bea 123.22 49 PKP **PKiKP** 10 26 28.9 +0.9
comp=Z,0.5nm,0.7s,baz=278,slow=2.5,SNR=4.4
TXAR Lajitas Array 137.77 55 PKhKP PKPpre 10 26 47.0
comp=Z,0.1nm,0.5s,baz=270,slow=1.8,SNR=2.8
CPUP Villa Florida 145.15 192 PKPbc **PKPab** 10 27 10.4 +1.7
comp=Z,2.6nm,0.5s,baz=157,slow=2.7,SNR=5.7
CPUP Villa Florida 145.15 192 **PKPbc** 10 27 06.9 -1.6
LVC Limon Verde 149.35 173 PKPbc **PKiKP** 10 27 22.3 +0.6
comp=Z,5.0nm,0.7s,baz=329,slow=5.3,SNR=5.3
LVC Limon Verde 149.35 173 **PKiKP** 10 27 23.6 +1.9
BDFB Brasilia 151.25 215 PKPbc **PKiKP** 10 27 26.3 +0.9
comp=Z,6.1nm,0.7s,baz=152,slow=1.9,SNR=7.9
LPAZ La Paz 155.68 172 PKPab **PKPab** 10 27 54.0 +1.2
comp=Z,1.0nm,0.6s,baz=227,slow=3.4,SNR=5.1

*MAN **11** 10:11:37.5,6˚.44N×124˚.99E,h375km,mb5.1,ML4.0, MS4.1*
*NEIC **11** 10:11:38.8±1.5,6˚.55N±0˚.07×124˚.82E±0˚.08,h373km±5km, mb4.5/114,Error ellipse: s-maj=12.3km s-min=9.7km az=116.0*
*DJA **11** 10:11:38.2±0.3,7˚N±3˚×12˚5E±˚,h346km±4km,M4.8/25, mB5.2/12,mb4.7/25,MLv5.0/10,Mw(mB)4.6/12*
*IDC **11** 10:11:39.2±0.9,6˚.53N×124˚.76E,h383km±9km,mb3.9/33, mbtmp4.7/35,Error ellipse: s-maj=13.2km s-min=8.6km az=78.0*

ISC 11 10:11:38.6±0.5,6˚53N±0˚04×124˚82E±0˚06,h377km±5km, n282,σ1°16/277,mb4.4/93,4C-8D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
GSPH	**General Santos**	**0.46**	**163**	*i* P		**Pn**	**10 12 25.4**	**-0.7**
KCP	**Kidapawan**	**0.55**	**30**	↓*i* P		**Pn**	**10 12 25.9**	**-0.2**
CTBH	**Cotabato--PC H**	**0.89**	**320**	↓*i* P		**Pn**	**10 12 26.6**	**-0.3**
DAV	**Davao City (W)**	**0.93**	**55**	P		**Pn**	**10 12 26.5**	**-0.5**
	208nm,0.3s,baz=30,slow=17,SNR=2.5							
DAV				S		**S**	**10 13 05.3**	**-0.7**
	268nm,0.3s,baz=102,slow=20,SNR=3.5							
DDMP	**Don Marcelino,**	**0.98**	**115**	↓*e*P		**Pn**	**10 12 25.8**	**-1.4**
DDMP				*e*S		**S**	**10 13 08.1**	**+1.8**
BUKP	**Musuan**	**1.36**	**10**	↑*e*P		**Pn**	**10 12 28.8**	**-0.1**
BUKP				*e*S		**S**	**10 13 03.2**	**-6.1**
MATI	**Mati**	**1.49**	**74**	↑*e*P		**Pn**	**10 12 28.0**	**-1.4**
CGP	**Cagayan de Oro**	**1.91**	**356**	↓*e*P		**Pn**	**10 12 32.0**	**+0.2**
SGSI	**Sangihe**	**2.92**	**166**	P		**Pn**	**10 12 37.1**	**-2.3**
TBP	**Tagbilaran**	**3.28**	**343**	↓*e*P		**Pn**	**10 12 42.4**	**-0.1**
TBP				*i* S		**S**	**10 13 31.4**	**-2.6**
KMSI	**Cibinong**	**5.98**	**188**	P		**Pn**	**10 13 10.4**	**+0.2**
	1.2nm4μm385nm,0.7s							
TNTI	**Ternate**	**6.26**	**156**	Pn		**Pn**	**10 13 12.2**	**-1.1**
TNTI	**Ternate**	**6.26**	**156**	P		**Pn**	**10 13 12.2**	**-1.1**
	1.6nm7μm308nm,1.0s							
MYLDM	**Lahad Datu**	**6.43**	**258**	Pn		**Pn**	**10 13 16.3**	**+1.1**
MRSI	**Marisa**	**6.66**	**206**	P		**Pn**	**10 13 18.3**	**+0.4**
	0.4nm1μm109nm,0.5s							
MRSI				S		**S**	**10 14 35.7**	**-3.1**
	0.4nm1μm109nm,0.5s							
TOLI2	**Tolitoli**	**6.72**	**217**	Pn		**Pn**	**10 13 18.0**	**-0.6**
LBMI	**Labuha**	**7.61**	**159**	P		**Pn**	**10 13 28.1**	**-0.6**
	2.7nm12μm416nm,0.6s							
MPSI	**Mapaga**	**7.87**	**219**	P		**Pn**	**10 13 30.5**	**-1.2**
	0.1nm12nm,0.8s							
APSI	**Ampana**	**8.04**	**203**	P		**Pn**	**10 13 33.6**	**-0.1**
	849nm68nm,0.7s							
SANI	**Sanana**	**8.60**	**172**	P		**Pn**	**10 13 36.2**	**-4.1**
SWI	**Sorong**	**9.76**	**139**	P		**P**	**10 13 54.3**	**0.0**
	60nm,0.7s							
SIJI	**Sorong**	**9.77**	**139**	P		**P**	**10 13 55.2**	**+0.7**
	25nm,0.5s,baz=320,slow=14,SNR=7.4							
SMKI	**Samarinda**	**10.28**	**228**	P		**P**	**10 14 02.7**	**+2.6**
MSAI	**Masohi**	**10.64**	**157**	P		**Pn**	**10 14 05.2**	**+1.1**
	342nm15nm,0.6s							
TTSI	**Tana Toraja**	**10.74**	**208**	P		**Pn**	**10 14 06.2**	**+0.8**
	44nm,0.7s							
BKB	**Balikpapan**	**11.06**	**226**	P		**P**	**10 14 07.2**	**-1.6**
BKB	**Balikpapan**	**11.06**	**226**	P		**Pn**	**10 14 10.2**	**+1.0**
	3μm261nm,0.9s							
SPSI	**Sidrap Palu**	**11.58**	**206**	P		**Pn**	**10 14 17.2**	**+2.0**
	57nm,0.9s							
BNSI	**Bone**	**11.83**	**204**	P		**Pn**	**10 14 20.1**	**+1.9**
	51nm,0.8s							
FAKI	**Fak Fak**	**11.97**	**141**			**P**	**10 14 17.7**	**-1.1**
FAKI	**Fak Fak**	**11.97**	**141**	P		**Pn**	**10 14 20.3**	**+0.6**
	39nm,0.7s							
KAPI	**Kappang**	**12.53**	**204**	P		**Pn**	**10 14 27.9**	**+1.5**
	15nm,0.5s,baz=2.7,slow=4.5,SNR=5.6							
KAPI	**Kappang**	**12.53**	**204**	P		**P**	**10 14 24.1**	**-0.9**
BKSI	**Bulukumba**	**12.67**	**202**	P		**Pn**	**10 14 29.1**	**+1.1**
	44nm,0.7s							
SBUM	**Sibu**	**13.19**	**253**	P		**P**	**10 14 32.7**	**+0.4**
BAKI	**Biak**	**13.63**	**124**	P		**Pn**	**10 14 41.6**	**+2.4**
KSM	**Kuching**	**15.32**	**251**			**P**	**10 14 55.7**	**+0.2**
KSM					IAmb	IAmb	10 14 57.3	
	comp=Z,21nm,0.9s							
SMPI	**Sarmi**	**16.25**	**121**	P		**Pn**	**10 15 07.9**	**-1.3**
	comp=Z,25nm,1.2s							
BATI	**Baumata**	**16.67**	**184**	P		**P**	**10 15 11.4**	**+1.3**
	comp=Z,17nm,0.4s,baz=286,slow=22,SNR=2.2							
BATI					S	**S**	**10 18 06.8**	**+1.4**
	comp=Z,12nm,0.3s,baz=266,slow=20,SNR=1.5							
YULB	**Yu-li**	**17.10**	**349**	P		**P**	**10 15 12.3**	**-2.3**
YULB					IAmb	IAmb	10 15 22.2	
	comp=Z,28nm,1.0s							
TPUB	**Ta-pu**	**17.15**	**347**	P		**P**	**10 15 15.6**	**+0.4**
GENI	**Genyem**	**17.81**	**120**	P		**P**	**10 15 23.9**	**+1.7**
	comp=Z,114nm,0.8s							
MTN	**Manton Dam**	**20.25**	**162**	P		**P**	**10 15 46.2**	**-0.8**
MTN					IAmb	IAmb	10 15 51.2	
	comp=Z,34nm,1.2s							
JOW	**Kunigami**	**20.46**	**9**	P		**P**	**10 15 50.0**	**+1.1**
	comp=Z,54nm,0.7s,baz=194,slow=8.5,SNR=22							
	comp=Z,54nm,0.7s							
JOW	**Kunigami**	**20.46**	**9**	P		**P**	**10 15 48.5**	**-0.3**
GUMO	**Guam**	**20.94**	**69**	P		**P**	**10 15 51.6**	**-1.7**
DSRI	**Dabo**	**21.36**	**252**	P		**P**	**10 15 57.8**	**+0.6**
NJ2	**Nanjing**	**25.99**	**348**	*e*P		**P**	**10 16 41.6**	**+2.9**
NJ2					pmax	pmax		
	comp=Z,9.0nm,0.6s							
PSI	**Prapat**	**26.07**	**263**	P		**P**	**10 16 40.5**	**+0.7**
	comp=Z,6.6nm,0.6s,baz=110,slow=7.2,SNR=4.0							
	comp=Z,6.6nm,0.6s							
KCSI	**Kotacane, Aceh**	**27.10**	**265**	P		**P**	**10 16 48.2**	**-0.6**
	comp=Z,33nm,0.9s							
COEN	**Coen**	**27.32**	**138**	P		**P**	**10 16 50.1**	**-0.5**
GSI	**Gunungsitoli**	**27.66**	**260**	P		**P**	**10 16 53.2**	**-0.5**
ENH	**Enshi**	**27.67**	**330**	P		**P**	**10 16 53.5**	**0.0**
ENH					IAmb	IAmb	10 16 55.3	
	comp=Z,23nm,0.8s							
CM31	**Chiang Mai Arr**	**27.86**	**298**	P		**P**	**10 16 55.4**	**0.0**
CMAR	**Chiang Mai Arr**	**27.86**	**298**	P		**P**	**10 16 56.4**	**+1.0**
	comp=Z,3.7nm,0.6s,baz=108,slow=7.1,SNR=17							
	comp=Z,3.7nm,0.6s							
CMAR	**Chiang Mai Arr**	**27.86**	**298**	P		**P**	**10 16 55.8**	**+0.4**
WRA	**Warramunga Arr**	**27.93**	**161**	S		**S**	**10 21 08.7**	**-3.1**
	comp=Z,1.1nm,0.6s,baz=340,slow=14,SNR=4.6							
WRA					ScP	**ScP**	**10 23 05.2**	**+0.1**
	comp=Z,1.0nm,0.6s,baz=345,slow=3.3,SNR=6.6							
CHTO	**Chiang Mai**	**27.99**	**298**	P		**P**	**10 16 57.0**	**+0.5**
WR0	**Warramunga Arr**	**28.01**	**160**	P		**P**	**10 16 55.6**	**-1.1**
KMI	**Kunming**	**28.07**	**314**	↓P		**P**	**10 16 59.1**	**+1.6**
KMI					pmax	pmax		
	comp=Z,19nm,1.0s							
JTU	**Tsushima**	**28.18**	**8**	P		**P**	**10 16 58.5**	**+0.5**
JTU					IAmb	IAmb	10 17 09.5	
	comp=Z,19nm,1.2s							
NAWB	**Namwon**	**28.85**	**4**	P		**P**	**10 17 04.5**	**+0.7**
JHS	**Saijyo**	**29.34**	**14**	P		**P**	**10 17 09.5**	**+1.2**
JHS					IAmb	IAmb	10 17 10.8	
	comp=Z,15nm,0.9s							
PZH	**PanZhiHua**	**29.62**	**315**	P		**P**	**10 17 11.5**	**+0.5**
PZH					pmax	pmax		
	comp=Z,10.0nm,1.2s							
PZH					pmax	pmax		
	comp=Z,110nm,5.7s							
LYN	**LuoYang**	**30.12**	**339**	↑P		**P**	**10 17 16.3**	**+1.2**
LYN					pmax	pmax		
	comp=Z,10.0nm,0.5s							
INU	**Inuyama**	**30.80**	**20**	P		**P**	**10 17 21.0**	**+0.1**
KSRS	**Korea Array**	**30.91**	**5**	P		**P**	**10 17 22.9**	**+1.0**
	comp=Z,4.0nm,0.6s,baz=177,slow=10.0,SNR=18							
	comp=Z,4.0nm,0.6s							
XAN	**Xi'an**	**31.08**	**334**	↓P		**P**	**10 17 23.8**	**+0.4**
XAN					pmax	pmax		
	comp=Z,38nm,0.9s							
XAN					pmax	pmax		
	comp=Z,110nm,4.0s							
JGF	**Kuroka**	**31.14**	**20**	P		**P**	**10 17 24.1**	**+0.1**
CD2	**Chengdu**	**31.27**	**323**	P		**P**	**10 17 25.7**	**+0.5**
CD2					pmax	pmax		
	comp=Z,20nm,0.3s							
AS31	**Alice Springs**	**31.30**	**164**	P		**P**	**10 17 25.6**	**+0.2**
ASAR	**Alice Springs**	**31.30**	**164**	P		**P**	**10 17 25.5**	**0.0**
	comp=Z,2.9nm,0.3s,baz=341,slow=7.2,SNR=24							
ASAR					PcP	**PcP**	**10 20 09.1**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=1.7,slow=3.2,SNR=2.3							
ASAR					S	**S**	**10 22 02.2**	**-2.0**
	comp=Z,1.1nm,0.7s,baz=344,slow=13,SNR=5.4							
ASAR					ScP	**ScP**	**10 23 15.5**	**-0.4**
	comp=Z,1.1nm,0.6s,baz=342,slow=2.8,SNR=6.5							
	comp=Z,2.9nm,0.3s							
ASAR	**Alice Springs**	**31.30**	**164**	P		**P**	**10 17 26.4**	**+1.0**
MAJO	**Matsushiro**	**32.28**	**20**	P		**P**	**10 17 33.5**	**-0.3**
MJAR	**Matsushiro Arr**	**32.28**	**20**	P		**P**	**10 17 33.7**	**-0.2**
	comp=Z,4.5nm,0.7s,baz=188,slow=8.7,SNR=7.5							
	comp=Z,4.5nm,0.7s							
MJAR	**Matsushiro Arr**	**32.28**	**20**	P		**P**	**10 17 33.7**	**-0.2**
MJB9	**Matsu-Tunnel**	**32.29**	**20**	P		**P**	**10 17 33.5**	**-0.4**
JSD	**Sado**	**33.65**	**19**	P		**P**	**10 17 45.5**	**0.0**
JSD					IAmb	IAmb	10 17 46.0	
	comp=Z,11nm,0.6s							
CTA	**Charters Tower**	**33.83**	**142**	P		**P**	**10 17 48.1**	**+0.8**
	comp=Z,4.9nm,0.7s,baz=19,slow=8.2,SNR=4.4							
	comp=Z,4.9nm,0.7s							
BJI	**Beijing**	**34.25**	**348**	P		**P**	**10 17 50.8**	**+0.2**
BJI					pmax	pmax		
	comp=Z,10.0nm,1.0s							
JMM	**Marumori**	**34.40**	**23**	P		**P**	**10 17 53.0**	**+1.1**
LZH	**Lanzhou**	**35.14**	**330**	↑P		**P**	**10 18 00.1**	**+1.7**
LZH					pP	PP	10 19 21.0	-6.9
LZH					pmax	pmax		
	comp=Z,44nm,1.3s							
LZH					pmax	pmax		
	comp=Z,140nm,5.2s							
HHC	**Hu-ho-hao-te**	**36.17**	**343**	*e*P		**P**	**10 18 07.4**	**+0.5**
HHC					pmax	pmax		
	comp=Z,14nm,0.8s							
HHC					pmax	pmax		
	comp=Z,120nm,5.5s							
USA0B	**Ussuriysk Arra**	**38.04**	**8**	P		**P**	**10 18 23.3**	**+1.1**
USA0B					IAmb	IAmb	10 18 24.1	
	comp=Z,32nm,1.4s							
USRK	**Ussuriysk Ar.**	**38.04**	**8**	P		**P**	**10 18 22.9**	**+0.6**
	comp=Z,11nm,0.8s,baz=203,slow=8.0,SNR=8.8							
	comp=Z,11nm,0.8s							
USRK	**Ussuriysk Ar.**	**38.04**	**8**	P		**P**	**10 18 23.3**	**+1.1**
MDJ	**Mudanjiang**	**38.16**	**6**	P		**P**	**10 18 22.3**	**-1.0**
MDJ					IAmb	IAmb	10 18 24.9	
	comp=Z,20nm,0.6s							
BNX	**BinXian**	**39.12**	**3**	↓P		**P**	**10 18 31.7**	**+0.6**
BNX					pmax	pmax		
	comp=Z,9.0nm,1.7s							
BNX					pmax	pmax		
	comp=Z,82nm,5.1s							
LSA	**Lhasa**	**39.18**	**310**	P		**P**	**10 18 32.1**	**-0.3**
LSA	**Lhasa**	**39.18**	**310**	P		**P**	**10 18 33.8**	**+1.4**
GTA	**Gaotai**	**39.73**	**329**	*e*P		**P**	**10 18 37.4**	**+1.0**
GTA					sP	PcP	10 20 34.7	+0.4
GTA					pmax	pmax		
	comp=Z,10.0nm,0.9s							
GOMU	**GeErMu**	**40.32**	**321**	P		**P**	**10 18 40.7**	**-0.8**
GOMU					pmax	pmax		
	comp=Z,3.0nm,0.5s							
GOMU					pmax	pmax		
	comp=Z,35nm,3.5s							
JKA	**Kamikawa-asahi**	**40.55**	**20**	P		**P**	**10 18 44.4**	**+1.7**
JKA					IAmb	IAmb	10 18 45.4	
	comp=Z,18nm,0.5s							
BBOO	**Buckleboo**	**40.56**	**165**	P		**P**	**10 18 43.5**	**+0.5**
BBOO					IAmb	IAmb	10 18 43.8	
	comp=Z,8.9nm,0.5s							
EIDS	**Eidsvold**	**40.72**	**142**	P		**P**	**10 18 44.3**	**-0.1**
TAPN	**Taplejung**	**40.85**	**305**	*e*P		**P**	**10 18 46.0**	**+0.2**
	comp=Z,37nm,0.5s							
STKA	**Stephens Creek**	**41.41**	**158**	P		**P**	**10 18 50.8**	**+0.9**
	comp=Z,2.2nm,0.4s,baz=356,slow=14,SNR=3.7							
STKA					ScP	**ScP**	**10 23 51.6**	**-1.6**
	comp=Z,1.2nm,0.3s,baz=344,slow=7.4,SNR=3.9							
	comp=Z,2.2nm,0.4s							
RAMN	**Ramite**	**41.60**	**304**	*e*P		**P**	**10 18 52.7**	**+0.9**
JIRN	**Jiri**	**42.21**	**304**	*e*P		**P**	**10 18 57.5**	**+0.7**
	comp=Z,53nm,0.5s							
GUN	**Gumba**	**42.56**	**305**	*e*P		**P**	**10 19 00.2**	**+0.6**
	comp=Z,79nm,0.5s							
PKI	**Pulchoki**	**42.82**	**304**	*e*P		**P**	**10 19 01.5**	**-0.1**
PKIN	**Phulchoki**	**42.83**	**304**	*e*P		**P**	**10 19 01.6**	**0.0**
	comp=Z,13nm,0.5s							
KLR	**Kul'dur**	**42.95**	**7**	P		**P**	**10 19 01.7**	**-0.2**
	comp=Z,2.7nm,0.6s,baz=223,slow=4.6,SNR=9.3							
KLR					PcP	**PcP**	**10 20 45.0**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=233,slow=5.1,SNR=3.0							
	comp=Z,2.7nm,0.6s							
SONM	**Songino Array**	**44.06**	**342**	P		**P**	**10 19 11.0**	**+0.2**
	comp=Z,1.8nm,0.6s,baz=156,slow=9.4,SNR=7.0							
SONM					PcP	**PcP**	**10 20 48.3**	**-0.3**
	comp=Z,1.4nm,0.8s,baz=164,slow=3.5,SNR=3.9							
SONM					ScP	**ScP**	**10 24 02.9**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=130,slow=2.3,SNR=1.8							
	comp=Z,1.8nm,0.6s							
SONM	**Songino Array**	**44.06**	**342**	P		**P**	**10 19 11.3**	**+0.5**
DANN	**Dangsing**	**44.46**	**304**	*e*P		**P**	**10 19 14.9**	**+0.4**
	comp=Z,99nm,0.6s							
ARMA	**Armidale**	**44.84**	**146**	P		**P**	**10 19 18.7**	**+1.6**
PYUN	**Piuthan**	**45.01**	**304**	*e*P		**P**	**10 19 19.3**	**+0.6**
	comp=Z,88nm,0.8s							
WMQ	**Urumqi**	**49.35**	**325**	*e*P		**P**	**10 19 53.4**	**+2.0**
PETK	**Petropavlovsk-**	**53.62**	**24**	P		**P**	**10 20 23.0**	**+0.7**
	comp=Z,7.3nm,0.9s,baz=213,slow=4.6,SNR=7.8							
PETK					PcP	**PcP**	**10 21 23.4**	**+0.1**
	comp=Z,1.7nm,0.5s,baz=229,slow=3.8,SNR=4.7							
	comp=Z,7.3nm,0.9s							
PETK	**Petropavlovsk-**	**53.62**	**24**	P		**P**	**10 20 22.7**	**+0.4**
MK31	**Makanchi Array**	**54.18**	**325**	P		**P**	**10 20 26.7**	**+0.2**
MK31					IAmb	IAmb	10 20 28.0	
	comp=Z,12nm,0.7s							
MKAR	**Makanchi Array**	**54.18**	**325**	P		**P**	**10 20 27.1**	**+0.6**
	comp=Z,15nm,0.5s,baz=121,slow=8.3,SNR=60							
MKAR					PcP	**PcP**	**10 21 25.0**	**-0.6**
	comp=Z,2.1nm,0.6s,baz=117,slow=4.2,SNR=4.5							
MKAR					ScP	**ScP**	**10 24 44.8**	**-2.2**
	comp=Z,0.7nm,0.6s,baz=117,slow=4.7,SNR=4.5							
	comp=Z,15nm,0.5s							
MKAR	**Makanchi Array**	**54.18**	**325**	P		**P**	**10 20 26.3**	**-0.3**
PRZ	**Przheval'sk**	**54.36**	**319**	P		**P**	**10 20 28.5**	**+0.5**
PRZ					IAmb	IAmb	10 20 30.6	
	comp=Z,22nm,0.8s							
MAKZ	**Makanchi**	**54.37**	**325**	P		**P**	**10 20 27.6**	**-0.2**
MAKZ					IAmb	IAmb	10 20 29.8	
	comp=Z,21nm,1.0s							
KSH	**Kashi**	**54.73**	**314**	P		**P**	**10 20 32.9**	**+2.2**
KSH					PcP	**PcP**	**10 21 29.4**	**+1.4**
KSH					pP	pP	10 21 53.3	+4.1
KSH					pmax	pmax		
	comp=Z,13nm,0.7s							
KDJ	**Kajisay**	**55.00**	**318**	IAmb		IAmb	10 20 34.5	
	comp=Z,17nm,0.6s							
YAK	**Yakutsk**	**55.50**	**3**	P		**P**	**10 20 35.9**	**+0.4**
	comp=Z,15nm,0.5s,baz=314,slow=1.7,SNR=7.7							
	comp=Z,15nm,0.5s							
ULHL	**Ulahol**	**55.68**	**318**	P		**P**	**10 20 38.6**	**+1.1**
	SNR=5.9							
TKM2	**Tokmak 2**	**56.40**	**318**	P		**P**	**10 20 43.1**	**+0.6**
	SNR=9.6							
UCH	**Uchtor**	**56.84**	**317**	P		**P**	**10 20 47.2**	**+1.4**
	SNR=14							
ZAA0	**Zalesovo Array**	**57.24**	**333**	P		**P**	**10 20 46.9**	**-0.9**
ZALV	**Zalesovo Beam**	**57.24**	**333**	P		**P**	**10 20 46.5**	**-1.3**
	comp=Z,1.9nm,0.3s,baz=133,slow=7.7,SNR=6.8							
	comp=Z,1.9nm,0.3s							
ZALV	**Zalesovo Beam**	**57.24**	**333**	P		**P**	**10 20 47.5**	**-0.4**
USP	**Ospenovka**	**57.27**	**318**	P		**P**	**10 20 49.1**	**+0.8**
	SNR=8.6							
AML	**Almayashu**	**57.36**	**317**	P		**P**	**10 20 50.2**	**+0.8**
	SNR=6.6							
EKS2	**Erkin-Say**	**57.51**	**317**	P		**P**	**10 20 51.1**	**+1.0**
	SNR=8.4							
KBL	**Kabul**	**58.32**	**307**	P		**P**	**10 20 55.8**	**-0.1**
KBL					IAmb	IAmb	10 20 56.8	
	comp=Z,14nm,0.7s							
KURK	**Kurchatov**	**58.37**	**327**	P		**P**	**10 20 55.5**	**-0.2**
KURK					IAmb	IAmb	10 20 57.3	
	comp=Z,24nm,1.1s							
BTK	**Batken**	**58.62**	**313**	P		**P**	**10 20 57.8**	**+0.1**
BTK					IAmb	IAmb	10 20 59.1	
	comp=Z,13nm,0.8s							
GAR	**Garm**	**58.64**	**312**	P		**P**	**10 20 57.8**	**-0.1**
SEY	**Seymchan**	**59.77**	**14**	P		**P**	**10 21 05.8**	**+0.8**
	comp=Z,3.6nm,0.6s,baz=288,slow=5.0,SNR=6.8							
	comp=Z,3.6nm,0.6s							
KK31	**Karatay Array**	**59.90**	**317**	P		**P**	**10 21 06.0**	**-0.2**
KK31					IAmb	IAmb	10 21 07.2	
	comp=Z,11nm,0.8s							
KKAR	**Karatay Array**	**59.90**	**317**	P		**P**	**10 21 05.9**	**-0.3**
KKAR	**Karatay Array**	**59.90**	**317**	P		**P**	**10 21 06.3**	**

KBZ	**Khabaz**	**79.68**	**313**	P		**P**	**10 23 06.9**	**+1.4**
	comp=Z,2.3nm,0.6s,baz=346,slow=4.0,SNR=6.3							
	comp=Z,2.3nm,0.6s							
L19K	**White Mountain**	**79.74**	**28**	IAmb		IAmb	10 23 08.1	
	comp=Z,8.8nm,0.8s							
L19K	**White Mountain**	**79.74**	**28**	P		**P**	**10 23 07.2**	**+1.8**
	baz=264,SNR=9.9							
N19K	**Bonanza Creek**	**79.79**	**29**	P		**P**	**10 23 07.4**	**+1.6**
	baz=265,SNR=7.8							
M19K	**Big River Lodg**	**79.93**	**28**	IAmb		IAmb	10 23 09.3	
	comp=Z,7.2nm,0.9s							
M19K	**Big River Lodg**	**79.93**	**28**	P		**P**	**10 23 08.1**	**+1.7**
	baz=265							
A21K	**Barrow**	**80.19**	**19**	P		**P**	**10 23 09.1**	**+1.5**
	baz=261,SNR=7.7							
K20K	**Telida**	**80.21**	**27**	IAmb		IAmb	10 23 10.7	
	comp=Z,8.6nm,1.0s							
K20K	**Telida**	**80.21**	**27**	P		**P**	**10 23 09.7**	**+1.8**
	baz=265,SNR=9.2							
L20K	**Farewell, AK**	**80.22**	**28**	P		**P**	**10 23 09.3**	**+1.3**
	baz=265							
J20K	**Nowinta River**	**80.25**	**26**	IAmb		IAmb	10 23 10.8	
	comp=Z,9.3nm,1.1s							
J20K	**Nowinta River**	**80.25**	**26**	P		**P**	**10 23 09.9**	**+1.9**
	baz=265,SNR=9.6							
GURO	**Guroymak-BITLI**	**80.33**	**308**	IAmb		IAmb	10 23 11.6	
	comp=Z,9.0nm,0.7s							
M20K	**Styx River**	**80.53**	**28**	IAmb		IAmb	10 23 11.9	
	comp=Z,9.0nm,0.8s							
M20K	**Styx River**	**80.53**	**28**	P		**P**	**10 23 11.6**	**+1.9**
	baz=266							
KDAK	**Kodiak Island**	**80.56**	**33**	P		**P**	**10 23 10.7**	**+0.9**
	comp=Z,7.7nm,0.7s,baz=279,slow=3.4,SNR=5.5							
	comp=Z,7.7nm,0.7s							
KDAK	**Kodiak Island**	**80.56**	**33**	P		**P**	**10 23 10.7**	**+0.9**
H21K	**Melozitna Rive**	**80.94**	**25**	P		**P**	**10 23 13.3**	**+1.7**
	baz=266,SNR=7.3							
PPLA	**Purkeypile**	**81.03**	**27**	P		**P**	**10 23 13.4**	**+1.0**
	baz=267							
CHUM	**Lake Minchumin**	**81.03**	**26**	P		**P**	**10 23 13.6**	**+1.5**
	baz=266,SNR=7.3							
CAST	**Castle Rocks**	**81.11**	**27**	IAmb		IAmb	10 23 14.7	
	baz=267,SNR=8.6							
CAST	**Castle Rocks**	**81.11**	**27**	P		**P**	**10 23 13.9**	**+1.3**
	baz=267,SNR=16							
I21K	**Tanana**	**81.25**	**25**	IAmb		IAmb	10 23 15.5	
	comp=Z,5.7nm,0.7s							
I21K	**Tanana**	**81.25**	**25**	P		**P**	**10 23 15.1**	**+1.8**
	baz=267,SNR=11							
SKT	**Skwentna**	**81.29**	**28**	P		**P**	**10 23 13.9**	**+0.3**
	baz=268,SNR=7.2							
BPAW	**Bear Paw Mtn.**	**81.62**	**26**	P		**P**	**10 23 16.4**	**+1.1**
	baz=268,SNR=17							
KTH	**Kantishna Hill**	**81.63**	**27**	IAmb		IAmb	10 23 17.9	
	comp=Z,13nm,1.2s							
SUA	**Susitna One**	**81.64**	**29**	P		**P**	**10 23 16.5**	**+0.9**
	baz=268,SNR=6.2							
MLY	**Manley**	**81.77**	**25**	IAmb		IAmb	10 23 18.4	
	comp=Z,16nm,1.3s							
MLY	**Manley**	**81.77**	**25**	P		**P**	**10 23 17.2**	**+1.2**
	baz=268,SNR=13							
TRF	**Thorofare Moun**	**81.91**	**27**	IAmb		IAmb	10 23 18.4	
	comp=Z,11nm,1.0s							
TRF	**Thorofare Moun**	**81.91**	**27**	P		**P**	**10 23 17.5**	**+0.6**
	baz=268,SNR=7.6							
M22K	**Willow**	**81.95**	**29**	P		**P**	**10 23 17.8**	**+0.9**
	baz=269,SNR=7.0							
KLMR	**Klimovskoe**	**82.04**	**330**	*e*P		**P**	**10 23 15.6**	**-1.8**
KLMR				AMP			10 23 18.1	
	comp=Z,20nm,1.2s							
RC01	**Rabbit Creek A**	**82.12**	**29**	P		**P**	**10 23 17.9**	**+0.1**
	baz=269							
SEW	**Seward**	**82.25**	**30**	P		**P**	**10 23 19.1**	**+0.6**
	baz=270							
H23K	**Yukon River**	**82.29**	**24**	IAmb		IAmb	10 23 21.5	
	comp=Z,10nm,0.9s							
H23K	**Yukon River**	**82.29**	**24**	P		**P**	**10 23 20.6**	**+1.9**
	baz=269,SNR=14							
I23K	**Minto, Yukon-K**	**82.36**	**25**	P		**P**	**10 23 20.4**	**+1.5**
	baz=269,SNR=22							
TOLK	**Toolik Lake Re**	**82.36**	**22**	IAmb		IAmb	10 23 21.1	
	comp=Z,6.3nm,0.6s							
TOLK	**Toolik Lake Re**	**82.36**	**22**	P		**P**	**10 23 20.7**	**+1.7**
	baz=268,SNR=9.6							
PMR	**Palmer**	**82.42**	**29**	P		**P**	**10 23 19.6**	**+0.3**
PMR	**Palmer**	**82.42**	**29**	P		**P**	**10 23 19.7**	**+0.4**
	baz=270							
NEA2	**Nenana**	**82.47**	**26**	IAmb		IAmb	10 23 22.3	
	comp=Z,14nm,1.1s							
NEA2	**Nenana**	**82.47**	**26**	P		**P**	**10 23 20.0**	**+0.4**
	baz=269,SNR=18							
MCK	**McKinley**	**82.52**	**27**	P		**P**	**10 23 20.4**	**+0.5**
	baz=270,SNR=17							
WAT1	**Susitna Watana**	**82.69**	**28**	P		**P**	**10 23 21.3**	**+0.5**
	baz=270							
KNK	**Knik Glacier**	**82.74**	**29**	P		**P**	**10 23 22.2**	**+1.2**
	baz=270							
SML	**Sawmill**	**82.80**	**29**	P		**P**	**10 23 22.2**	**+0.8**
	baz=270							
MDM	**Murphy Dome**	**82.83**	**25**	IAmb		IAmb	10 23 23.2	
	comp=Z,6.4nm,0.9s							
H24K	**Noodor Dome**	**82.98**	**24**	IAmb		IAmb	10 23 25.4	
	comp=Z,10nm,0.8s							
H24K	**Noodor Dome**	**82.98**	**24**	P		**P**	**10 23 23.9**	**+1.6**
	baz=270,SNR=18							
TCOL	**CIGO, UAF Yank**	**82.99**	**25**	P		**P**	**10 23 22.6**	**+0.4**
	baz=270							
COLA	**College**	**83.00**	**25**	P		**P**	**10 23 22.4**	**+0.2**
CCB	**Clear Creek Bu**	**83.02**	**26**	P		**P**	**10 23 23.0**	**+0.7**
CCB				IAmb		IAmb	10 23 23.9	
	comp=Z,12nm,1.1s							
WAT6	**Susitna Watana**	**83.07**	**28**	P		**P**	**10 23 23.6**	**+0.7**
	baz=271,SNR=13							
M23K	**Glacier View**	**83.09**	**29**	P		**P**	**10 23 23.2**	**+0.4**
	baz=271							
DHY	**Denali Highway**	**83.23**	**27**	P		**P**	**10 23 24.4**	**+0.7**
	baz=271							
HDA	**Harding Lake**	**83.39**	**26**	P		**P**	**10 23 24.0**	**-0.3**
	baz=271,SNR=17							
IL31		**83.41**	**26**	IAmb		IAmb	10 23 25.4	
	comp=Z,4.7nm,0.6s							
ILAR	**Eielson Array**	**83.41**	**26**	P		**P**	**10 23 23.9**	**-0.5**
	comp=Z,2.9nm,0.5s,baz=242,slow=4.8,SNR=48							
	comp=Z,2.9nm,0.5s							
M24K	**Tolsona, Glenn**	**83.81**	**28**	P		**P**	**10 23 27.8**	**+1.3**
	baz=272							
K24K	**Donnelly Dome**	**83.92**	**27**	P		**P**	**10 23 27.7**	**+0.7**
	baz=272,SNR=7.9							
KLU	**Klutina**	**83.96**	**29**	P		**P**	**10 23 28.7**	**+1.5**
	baz=272							
J25K	**Salcha River,**	**84.07**	**26**	IAmb		IAmb	10 23 28.2	
	comp=Z,4.2nm,0.7s							
J25K	**Salcha River,**	**84.07**	**26**	P		**P**	**10 23 27.6**	**-0.2**
	baz=273							
PAX	**Paxson**	**84.10**	**27**	P		**P**	**10 23 29.4**	**+1.4**
	baz=273,SNR=6.6							
RIDG	**Independent Ri**	**84.34**	**27**	P		**P**	**10 23 29.7**	**+0.6**
	baz=273							
DOT	**Dot Lake**	**84.69**	**27**	IAmb		IAmb	10 23 32.9	
	comp=Z,8.2nm,1.4s							
SCRK	**Sand Creek**	**84.71**	**26**	P		**P**	**10 23 32.0**	**+1.0**
	baz=274							
ASF	**Jabal al Asfar**	**84.81**	**302**	P		**P**	**10 23 33.0**	**+0.9**
	comp=Z,6.3nm,0.8s,baz=97,slow=8.1,SNR=6.3							
	comp=Z,6.3nm,0.8s							
J26L	**Joseph Creek**	**84.85**	**26**	P		**P**	**10 23 32.0**	**+0.4**
	baz=274							
K27K	**Chicken**	**85.54**	**26**	IAmb		IAmb	10 23 38.2	
	comp=Z,4.8nm,1.0s							
K27K	**Chicken**	**85.54**	**26**	P		**P**	**10 23 36.4**	**+1.4**
	baz=276							
L27K	**Beaver Creek,**	**85.75**	**27**	P		**P**	**10 23 36.9**	**+0.9**
	baz=276							
CTG	**Chitna Glacier**	**86.21**	**29**	P		**P**	**10 23 39.5**	**+1.1**
	baz=276							
CTGM	**Chitina Glacie**	**86.21**	**29**	IAmb		IAmb	10 23 40.9	
	comp=Z,9.0nm,1.0s							
BVCY	**Beaver Creek**	**86.27**	**28**	P		**P**	**10 23 39.5**	**+1.0**
	baz=277							
VNDA	**Vanda**	**86.43**	**172**	P		**P**	**10 23 39.0**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=327,slow=5.6,SNR=4.2							
	comp=Z,0.8nm,0.6s							
VNDA	**Vanda**	**86.43**	**172**	P		**P**	**10 23 39.3**	**+0.4**
DAWY	**Dawson**	**86.71**	**26**	P		**P**	**10 23 41.6**	**+0.9**
DAWY	**Dawson**	**86.71**	**26**	P		**P**	**10 23 41.1**	**+0.5**
	baz=278							
BR131	**Keskin Array S**	**86.78**	**309**	P		**P**	**10 23 40.9**	**-0.8**
BR131				IAmb		IAmb	10 23 42.5	
	comp=Z,4.5nm,0.8s							
BRTR	**Keskin Array B**	**86.78**	**309**	P		**P**	**10 23 40.1**	**-1.5**
	comp=Z,2.1nm,0.8s,baz=112,slow=5.2,SNR=10							
	comp=Z,2.1nm,0.8s							
YUK8	**Steele Glacier**	**86.92**	**29**	P		**P**	**10 23 43.0**	**+1.0**
	baz=278							
I29M	**Ogilvie Camp,**	**86.98**	**25**	P		**P**	**10 23 42.0**	**+0.2**
I29M				IAmb		IAmb	10 23 43.3	
	comp=Z,4.5nm,0.8s							
I29M	**Ogilvie Camp,**	**86.98**	**25**	P		**P**	**10 23 42.1**	**+0.2**
	baz=279							
ARCES	**ARCESS Array B**	**87.18**	**340**	P		**P**	**10 23 41.5**	**-1.1**
	comp=Z,2.4nm,0.5s,baz=80,slow=5.9,SNR=20							
	comp=Z,2.4nm,0.5s							
ARCES	**ARCESS Array B**	**87.18**	**340**	P		**P**	**10 23 41.5**	**-1.1**
ARCES				IAmb		IAmb	10 23 47.1	
	comp=Z,14nm,1.5s							
SBA	**Scott Base**	**87.36**	**172**	P		**P**	**10 23 44.7**	**+1.4**
HYT	**Haines Junctio**	**88.08**	**29**	P		**P**	**10 23 48.6**	**+1.3**
HYT	**Haines Junctio**	**88.08**	**29**	P		**P**	**10 23 48.2**	**+0.9**
	baz=280							
M30M	**Minto, Yukon**	**88.11**	**27**	P		**P**	**10 23 48.1**	**+0.9**
	baz=280							
N30M	**Aishikik Lake**	**88.17**	**28**	P		**P**	**10 23 48.3**	**+0.7**
	baz=280							
INK	**Inuvik**	**88.27**	**21**	P		**P**	**10 23 48.2**	**+0.5**
INK				IAmb		IAmb	10 24 11.8	
	comp=Z,6.2nm,1.2s							
FIA1	**FINESS Array S**	**88.48**	**332**	P		**P**	**10 23 47.2**	**-1.7**
FINES	**FINESS Array B**	**88.48**	**332**	P		**P**	**10 23 47.5**	**-1.4**
	comp=Z,2.6nm,0.6s,baz=62,slow=4.7,SNR=20							
	comp=Z,2.6nm,0.6s							
AKASG	**Malin Array Be**	**88.53**	**321**	P		**P**	**10 23 47.6**	**-1.8**
	comp=Z,2.3nm,0.9s,baz=56,slow=4.3,SNR=6.6							
	comp=Z,2.3nm,0.9s							
N31M	**Braeburn, Yuko**	**88.78**	**28**	IAmb		IAmb	10 23 52.4	
	comp=Z,4.0nm,0.8s							
N31M	**Braeburn, Yuko**	**88.78**	**28**	P		**P**	**10 23 51.2**	**+0.8**
	baz=281							
WHY	**Whitehorse**	**89.38**	**29**	P		**P**	**10 23 53.5**	**+0.2**
WHY				IAmb		IAmb	10 23 55.3	
	comp=Z,5.3nm,0.8s							
WHY	**Whitehorse**	**89.38**	**29**	P		**P**	**10 23 53.8**	**+0.5**
	baz=282							
FARO	**Faro, Yukon**	**89.75**	**27**	P		**P**	**10 23 55.8**	**+0.9**
	baz=284							
MMPY	**Sheldon Lake,**	**90.59**	**27**	P		**P**	**10 23 59.7**	**+0.9**
	baz=285							
MLR	**Muntele Rosu**	**91.57**	**316**	P		**P**	**10 24 01.7**	**-2.1**
	comp=Z,1.7nm,0.6s,baz=117,slow=4.5,SNR=3.4							
	comp=Z,1.7nm,0.6s							
NB2	**NORSAR Subarra**	**95.45**	**333**	P		**P**	**10 24 18.8**	**-2.3**
	comp=Z,1.7nm,0.7s,baz=66,slow=4.6							
NOA	**NORSAR Array B**	**95.45**	**333**	P		**P**	**10 24 19.2**	**-1.9**
	comp=Z,1.4nm,0.7s,baz=66,slow=4.5,SNR=9.4							
	comp=Z,1.4nm,0.7s							
ECSD	**EROS Data Cent**	**117.53**	**33**	P		**PKPdf**	**10 29 40.2**	**-0.3**
	baz=312							
TORD	**Torodi Ar. Bea**	**120.22**	**289**	PKP		**PKPdf**	**10 29 45.2**	**-1.2**
	comp=Z,1.4nm,0.7s,baz=45,slow=1.9,SNR=8.8							
TXAR	**Lajitas Array**	**121.33**	**50**	PKP		**PKiKP**	**10 29 48.9**	**+0.4**
	comp=Z,0.4nm,0.9s,baz=222,slow=1.7,SNR=4.3							
S39A	**Bolivar**	**123.45**	**36**			**PKPdf**	**10 29 52.0**	**0.0**
R40A	**Mandries Statio**	**123.64**	**35**			**PKPdf**	**10 29 52.4**	**+0.1**
U40A	**Yellville**	**124.62**	**37**			**PKPdf**	**10 29 54.4**	**+0.1**
U40A	**Yellville**	**124.62**	**37**	P		**PKiKP**	**10 29 54.7**	**0.0**
	baz=313							
VA02	**Isla de Pascua**	**124.65**	**118**			**PKPdf**	**10 29 54.5**	**0.0**
MIAR	**Mount Ida**	**125.38**	**39**	P		**PKiKP**	**10 29 56.7**	**+0.5**
	baz=311							
WVT	**Waverly**	**127.66**	**33**			**PKiKP**	**10 30 00.6**	**-0.1**
WVT	**Waverly**	**127.66**	**33**	P		**PKPdf**	**10 30 00.2**	**+0.1**
	baz=318							
PLCA	**Paso Flores**	**143.28**	**160**	PKP		**PKPdf**	**10 30 28.4**	**-0.5**
	comp=Z,2.1nm,0.7s,baz=304,slow=2.8,SNR=4.8							

*IDC **11** 10:19:05.7±4.3,38°.30N×20°.50E,h0km,mb3.9/4,*
mbtmp3.7/6,ML3.3/2,MS2.5/1,Error ellipse: s-maj=92.1km
s-min=21.5km az=48.0
*THE **11** 10:19:07.2,38°.14N×20°.37E,h15km,ML3.2/5,Error*
ellipse: s-maj=0.9km s-min=0.4km az=250.0
*ATH **11** 10:19:07.4,38°.15N×20°.37E,h15km,ML3.2/8,Error*
ellipse: s-maj=2.3km s-min=0.9km az=243.0
ISC 11 10:19:07.3±0.8,38°.16N±0°.03×20°.38E±0°.04,h16km±4km,
n51,σ0°56/69,mb4.0/4,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
KEF3	**Kipouria, Keph**	**0.05**	**336**	P		**Pg**	**10 19 10.2**	**-0.1**
KEF3				S		**Sg**	**10 19 12.1**	**-0.3**
KEF3	**Kipouria, Keph**	**0.05**	**336**	P		**Pg**	**10 19 10.2**	**-0.1**
KEF3				S		**Sg**	**10 19 12.0**	**-0.3**
LXRA	**Lixouri, Kepha**	**0.07**	**48**	P		**Pg**	**10 19 10.3**	**-0.1**
LXRA				S		**Sg**	**10 19 12.6**	**+0.1**
DMLN	**Damoulianata-K**	**0.08**	**359**	P		**Pg**	**10 19 10.3**	**-0.3**
DMLN				S		**Sg**	**10 19 12.4**	**-0.4**
DMLN	**Damoulianata-K**	**0.08**	**359**	P		**Pg**	**10 19 10.4**	**-0.3**
DMLN				S		**Sg**	**10 19 12.7**	**-0.1**
	43μm,0.1s							
ARGA	**Argostoli. Kep**	**0.08**	**76**	P		**Pg**	**10 19 11.4**	**+0.8**
ARGA				S		**Sg**	**10 19 13.3**	**+0.6**
KEF4	**Livadi, Kephal**	**0.11**	**21**	P		**Pg**	**10 19 10.7**	**-0.2**
KEF4				S		**Sg**	**10 19 13.2**	**0.0**
KEF4	**Livadi, Kephal**	**0.11**	**21**	P		**Pg**	**10 19 10.7**	**-0.2**
KEF4				S		**Sg**	**10 19 13.3**	**+0.1**
PSDA	**Pessada-Kefalo**	**0.17**	**104**	P		**Pg**	**10 19 11.5**	**-0.1**
PSDA				S		**Sg**	**10 19 14.5**	**+0.1**
PSDA	**Pessada-Kefalo**	**0.17**	**104**	P		**Pg**	**10 19 11.5**	**-0.1**
PSDA				S		**Sg**	**10 19 14.6**	**+0.1**
	5μm,0.2s							
VLS	**Valsamata**	**0.17**	**83**	P		**Pg**	**10 19 11.4**	**-0.3**
VLS				S		**Sg**	**10 19 14.3**	**-0.3**
VLS				AML		AML	10 19 14.6	
	comp=E,87022μm,0.2s							
VLS				AML		AML	10 19 14.7	
	comp=N,63618μm,0.2s							
VLS	**Valsamata**	**0.17**	**83**	P		**Pg**	**10 19 11.4**	**-0.3**
VLS				S		**Sg**	**10 19 14.6**	**0.0**
	comp=N,38μm,0.2s							
FSK	**Fiskardo**	**0.34**	**26**	P		**Pg**	**10 19 14.6**	**+0.2**
FSK				S		**Sg**	**10 19 19.7**	**+0.5**
FSK				AML		AML	10 19 20.8	
	comp=E,9169μm,0.2s							
FSK				AML		AML	10 19 24.4	
	comp=N,4626μm,0.4s							
FSK	**Fiskardo**	**0.34**	**26**	P		**Pg**	**10 19 14.6**	**+0.2**
FSK				S		**Sb**	**10 19 20.0**	**-0.1**
	comp=N,3μm,0.2s							
EVGI	**Lefkada island**	**0.51**	**25**	P		**Pg**	**10 19 17.2**	**-0.4**
EVGI	**Lefkada island**	**0.51**	**25**	P		**Pg**	**10 19 17.2**	**-0.4**
EVGI				S		**Sb**	**10 19 25.3**	**+0.1**
	comp=N,2μm,0.2s							
DRAG	**Dragano-Lefkad**	**0.55**	**16**	P		**Pg**	**10 19 17.8**	**-0.5**
DRAG	**Dragano-Lefkad**	**0.55**	**16**	P		**Pg**	**10 19 17.7**	**-0.5**
LTHK	**Lithakia**	**0.58**	**141**	P		**Pg**	**10 19 18.4**	**-0.3**
LTHK				S		**Sg**	**10 19 26.2**	**-0.2**
LTHK	**Lithakia**	**0.58**	**141**	P		**Pg**	**10 19 18.4**	**-0.3**
LTHK				S		**Sb**	**10 19 26.6**	**-0.3**
NYDR	**Nydri-Lefkada**	**0.61**	**24**	P		**Pg**	**10 19 18.8**	**-0.6**
NYDR	**Nydri-Lefkada**	**0.61**	**24**	P		**Pg**	**10 19 18.8**	**-0.6**
LKD2	**Lefkada island**	**0.67**	**19**	P		**Pb**	**10 19 21.1**	**+0.5**
LKD2				AML		AML	10 19 37.1	
	comp=E,1816μm,0.4s							
LKD2				AML		AML	10 19 38.4	
	comp=N,1922μm,0.3s							
LKD2	**Lefkada island**	**0.67**	**19**	P		**Pg**	**10 19 20.2**	**-0.3**
TSLK	**Tsoukalades, L**	**0.70**	**18**	P		**Pb**	**10 19 21.3**	**+0.1**
TSLK	**Tsoukalades, L**	**0.70**	**18**	P		**Pg**	**10 19 21.1**	**0.0**
RLS	**Riolos of Patr**	**0.87**	**96**	P		**Pb**	**10 19 23.5**	**-0.5**
RLS				AML		AML	10 19 41.4	
	comp=N,1845μm,0.4s							
RLS				AML		AML	10 19 44.4	
	comp=E,1934μm,0.6s							
RLS	**Riolos of Patr**	**0.87**	**96**	P		**Pb**	**10 19 23.3**	**-0.7**
PVO	**Paravola**	**1.01**	**63**	P		**Pb**	**10 19 26.4**	**-0.1**
PVO	**Paravola**	**1.01**	**63**	P		**Pb**	**10 19 26.3**	**-0.2**
EFP	**Efpalio**	**1.23**	**77**	P		**Pn**	**10 19 30.1**	**+0.2**
LAKA	**Lakka**	**1.27**	**86**	P		**Pn**	**10 19 30.2**	**-0.2**
LAKA				AML		AML	10 19 57.5	
	comp=N,3524μm,0.7s							
LAKA				AML		AML	10 19 57.8	
	comp=E,3950μm,0.7s							
SERG	**Sergoula**	**1.35**	**78**	P		**Pn**	**10 19 31.6**	**+0.1**
SERG				AML		AML	10 19 57.8	
	comp=E,1550μm,0.7s							
SERG				AML		AML	10 19 58.7	
	comp=N,2017μm,0.4s							
TRIZ	**Trizonia**	**1.35**	**81**	P		**Pn**	**10 19 31.1**	**-0.4**
IGT	**Igoumenitsa**	**1.38**	**359**	P		**Pb**	**10 19 33.1**	**+0.5**
KLV	**Kalavryta, Ach**	**1.41**	**94**	P		**Pb**	**10 19 33.1**	**-0.1**
KLV				AML		AML	10 20 05.1	
	comp=N,754μm,0.5s							
KLV				AML		AML	10 20 05.7	
	comp=E,628μm,0.7s							
GUR	**Goura**	**1.57**	**97**	P		**Pb**	**10 19 35.7**	**-0.4**
GUR				AML		AML	10 20 07.5	
	comp=N,2064μm,0.5s							
GUR				AML		AML	10 20 12.6	
	comp=E,1645μm,0.6s							
ITM	**Ithomi**	**1.57**	**128**	P		**Pb**	**10 19 36.0**	**0.0**
KEK	**Kerkira**	**1.62**	**344**	P		**Pn**	**10 19 35.6**	**+0.4**
PYL	**PYLOS**	**1.66**	**139**	P		**Pb**	**10 19 37.4**	**-0.2**
IDI	**Anoyia**	**4.62**	**127**	Pn		**Pn**	**10 20 17.8**	**+1.3**
	comp=E,0.2nm,0.3s,baz=306,slow=14,SNR=1.3							
IDI				Sn		**Sn**	**10 21 12.3**	**+2.5**
	comp=E,0.8nm,0.3s,baz=338,slow=23,SNR=7.1							
IDI				LR		LR	10 22 36.2	
	comp=E,56nm,20.7s,baz=254,slow=46							
	comp=E,1.0nm,0.4s							
VAE	**Valguarnera**	**4.77**	**264**	Sn		**Sn**	**10 21 13.8**	**+0.2**
	comp=E,2.8nm,0.3s,baz=332,slow=10,SNR=6.1							
SOKA	**Soboth**	**9.38**	**337**	*i* Pn		**Pn**	**10 21 21.1**	**-0.8**
	comp=E,2.8nm,0.4s							
OBKA	**Obir**	**9.39**	**335**	*e*Pn		**Pn**	**10 21 22.3**	**+0.3**
	comp=E,2.6nm,0.3s							
MOA	**Molln**	**10.67**	**337**	*i* Pn		**Pn**	**10 21 39.9**	**+0.5**
	comp=E,1.8nm,0.5s							
BIOA	**Bad Ischl, Aus**	**10.73**	**335**	*i* Pn		**Pn**	**10 21 40.2**	**0.0**
	comp=E,1.2nm,0.3s							
GERES	**GERESS Array B**	**11.73**	**338**	Pn		**Pn**	**10 21 52.8**	**-1.2**
	comp=E,0.2nm,0.3s,baz=151,slow=15,SNR=4.7							
	comp=E,0.5nm,0.5s							
HFS	**Hagfors**	**22.40**	**351**	P		**P**	**10 24 05.9**	**+1.0**
	comp=E,3.8nm,0.7s,baz=159,slow=12,SNR=4.8							
	comp=E,3.8nm,0.7s							
FINES	**FINESS Array B**	**23.58**	**7**	P		**P**	**10 24 17.5**	**+0.5**
	comp=E,3.4nm,0.8s,baz=171,slow=9.4,SNR=5.1							
	comp=E,3.4nm,0.8s							
MKAR	**Makanchi Array**	**45.41**	**58**	P		**P**	**10 27 23.8**	**-1.3**
	comp=E,0.5nm,0.5s,baz=273,slow=7.7,SNR=6.7							
	comp=E,0.5nm,0.5s							
ZALV	**Zalesovo Beam**	**45.79**	**48**	P		**P**	**10 27 27.1**	**-0.9**
	comp=E,1.1nm,0.5s,baz=289,slow=9.8,SNR=4.7							
	comp=E,1.1nm,0.5s							

*CNRM **11** 10:19:13.4,35°.50N×3°.77W,h22km,ml2.5*
*SFS **11** 10:19:14.0,35°.40N×3°.70W,h4km,ML2.3,ALBORAN*
SUR
*MDD **11** 10:19:14.3±0.5,35°.44N×3°.74W,h4km±5km,mb_Lg2.3/12,*
Error ellipse: s-maj=5.1km s-min=2.8km az=160.0
ISC 11 10:19:12.7±1.0,35°.50N±0°.02×3°.72W±0°.02,h14km±8km,
n35,σ1°54/56,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
PALE	**Palemas**	**0.34**	**213**	P		**Pg**	**10 19 20.0**	**+0.5**
PALE				S		**Sg**	**10 19 23.5**	**-0.7**
PVLZ	**Peæn de**	**0.58**	**236**	P		**Pg**	**10 19 24.6**	**+0.6**
PVLZ				S		**Sg**	**10 19 32.0**	**+0.3**
GOG	**Mont Gurugu**	**0.65**	**115**	P		**Pn**	**10 19 27.0**	**-0.6**
GOG				S		**Sb**	**10 19 34.9**	**0.0**
WMELI	**Melilla**	**0.65**	**106**	P		**Pn**	**10 19 27.6**	**+0.1**
WMELI				S		**Sn**	**10 19 36.3**	**-1.3**
EMEL	**Melilla**	**0.65**	**108**	Pg		**Pn**	**10 19 27.7**	**+0.2**
EMEL				Sg		**Sn**	**10 19 36.6**	**-1.1**
EALB	**Alboran**	**0.71**	**52**	Pg		**Pn**	**10 19 27.5**	**-0.8**
EALB				Sg		**Sn**	**10 19 38.6**	**-0.4**
EALB				*i* Vmb_Lg			10 19 39.1	
AKLM	**AKL**	**0.99**	**187**	P		**Pn**	**10 19 34.0**	**+1.7**
AKLM				S		**Sg**	**10 19 44.0**	**-0.9**
TAF	**Taforalt**	**1.27**	**122**	P		**Pb**	**10 19 36.5**	**0.0**
EMIJ	**Mijas**	**1.36**	**322**	Pn		**Pn**	**10 19 38.2**	**+0.9**
EMIJ				Sn		**Sn**	**10 19 56.4**	**+1.2**
EMIJ				*i* Vmb_Lg			10 19 59.5	
SMIR	**Smir Dam**	**1.37**	**278**	P		**Pn**	**10 19 36.0**	**-1.4**
ELGU	**Los Guajares,**	**1.37**	**3**	Pn		**Pn**	**10 19 37.4**	**-0.1**
ELGU				Sn		**Sb**	**10 19 54.8**	**-0.7**
ELGU				*i* Vmb_Lg			10 19 59.7	
CHEFC	**Chefchaouen**	**1.38**	**254**	P		**Pn**	**10 19 37.7**	**0.0**
CEU	**Ceuta**	**1.40**	**287**	P		**Pn**	**10 19 36.0**	**-1.8**
CEU				S		**Sn**	**10 19 51.0**	**-5.1**

IKRK	**Kirkuk**	**1.51**	**292**	*e*Pn	**Pn**	**10 31 14.8**	**+1.1**
IKRK				*e*Sn	**Sn**	**10 31 35.0**	**+1.4**
IKRK				AML	AML	10 31 39.4	
	comp=N,2μm,0.4s						
IKRK				AML	AML	10 31 43.2	
	comp=E,1μm,0.5s						
IBZA	**Bozab**	**1.53**	**104**	*e*Pg	**Pb**	**10 31 15.7**	**+0.6**
IBZA				*e*Sg	**Sg**	**10 31 37.5**	**+1.9**
IBZA				*e*		10 31 47.3	
	comp=Z,14μm,0.8s						
IBDR	**Badra**	**1.74**	**184**	*e*Pn	**Pb**	**10 31 19.0**	**+0.4**
IBDR				*e*Sn	**Sb**	**10 31 41.8**	**+1.2**
MAHB	**Mahabad**	**1.93**	**351**	*e*Pn	**Pb**	**10 31 21.3**	**-0.6**
IKFM	**Kafar-mosalman**	**1.99**	**131**	*e*Pn	**Pb**	**10 31 23.2**	**+0.5**
IKFM				*e*		10 31 26.7	
	comp=Z,18μm,0.3s						
IDOB	**Doab**	**2.05**	**121**	*e*Pn	**Pb**	**10 31 23.7**	**-0.2**
HSAM	**Samen**	**2.19**	**106**	*e*Pn	**Pb**	**10 31 26.2**	**-0.2**
HAGD	**Aghdareh**	**2.53**	**90**	*e*Pn	**Pb**	**10 31 30.5**	**-1.7**
HAGD				*e*		10 31 35.1	
	comp=Z,4μm,0.3s						
IHSH	**Hashtrud**	**2.63**	**21**	*e*Pn	**Pn**	**10 31 32.0**	**+2.6**
IHSH				*e*		10 31 36.6	
	comp=Z,3μm,0.5s						
ZNJK	**Zanjan**	**2.80**	**49**	*e*Pn	**Pb**	**10 31 34.7**	**-2.0**
IAZR	**Azarshahr**	**2.82**	**359**	*e*Pn	**Pn**	**10 31 34.5**	**+2.6**
IBST	**Bostanabad**	**2.92**	**13**	*e*Pn	**Pn**	**10 31 35.8**	**+2.6**
IBST				*e*		10 32 28.6	
	comp=Z,2μm,0.5s						
QABG	**Abgarm-Qazvin**	**3.00**	**73**	*e*Pn	**Pn**	**10 31 37.3**	**+2.9**
RAFI	**Al-Rafai**	**3.12**	**179**	*e*Pn	**Pn**	**10 31 38.0**	**+2.2**
RAFI				*e*Sn	**Sn**	**10 32 16.0**	**+2.8**
IRAZ	**Razeghan**	**3.22**	**79**	*e*Pn	**Pn**	**10 31 40.7**	**+3.4**
IRAZ				*e*		10 32 47.3	
	comp=Z,2μm,0.6s						
ISRB	**Sarab**	**3.23**	**23**	*e*Pn	**Pn**	**10 31 40.1**	**+2.5**
ASAO	**Ashtian**	**3.28**	**94**	*e*Pn	**Pb**	**10 31 42.2**	**-2.7**
ITBZ	**Tabriz**	**3.37**	**1**	*e*	**Pg**	**10 31 49.7**	**-1.3**
	comp=Z,2μm,0.4s						
KHMZ	**Khomeyn**	**3.41**	**108**	*e*Pn	**Pb**	**10 31 44.1**	**-3.1**
ISHB	**Shabestar**	**3.44**	**354**	*e*Pn	**Pn**	**10 31 41.7**	**+1.3**
ISHB				*e*		10 32 44.4	
	comp=Z,2μm,0.4s						
IHRS	**Heris**	**3.55**	**13**	*e*Pn	**Pn**	**10 31 44.5**	**+2.6**
IHRS				*e*		10 31 59.9	
	comp=Z,1μm,0.3s						
IMRD	**Marand**	**3.86**	**356**	*e*Pn	**Pn**	**10 31 49.2**	**+3.0**
IMRD				*e*		10 32 06.1	
	comp=Z,1μm,0.5s						
QALM	**Alamut, Qazvin**	**4.05**	**66**	*e*Pn	**Pn**	**10 31 51.3**	**+2.5**
ORD	**Ordubad**	**4.07**	**359**	P	**Pb**	**10 31 54.8**	**-3.4**
	SNR=5.0						
ORD				S	**Sg**	**10 32 57.4**	**+0.4**
IQOM	**Qom**	**4.12**	**89**	*e*Pn	**Pn**	**10 31 52.1**	**+2.3**
IQOM				*e*		10 33 13.7	
	comp=Z,784nm,0.8s						
AMIS	**Naft Sefid**	**4.17**	**139**	*e*Pn	**Pn**	**10 31 52.5**	**+2.2**
LRK	**Lerik**	**4.20**	**25**	P	**Pn**	**10 31 54.2**	**+3.4**
	SNR=5.9						
LRK				S	**Sg**	**10 32 57.3**	**-4.0**
GRMI	**Germi**	**4.21**	**20**	*e*Pn	**Pn**	**10 31 53.5**	**+2.6**
CHTH	**Charan**	**4.27**	**74**	*e*Pn	**Pn**	**10 31 54.9**	**+3.1**
ASTR	**Astara**	**4.30**	**30**	P	**Pn**	**10 31 54.7**	**+2.7**
	SNR=2.8						
ASTR				S	**Sb**	**10 32 58.8**	**+4.6**
GHVR	**GHOM**	**4.33**	**93**	*e*Pn	**Pn**	**10 31 55.5**	**+3.0**
YRD	**Yardimli**	**4.41**	**23**	P	**Pn**	**10 31 56.5**	**+2.7**
	SNR=9.2						
YRD				S	**Sg**	**10 33 04.8**	**-3.4**
SBZ	**Shahbuz**	**4.55**	**355**	P	Pb	10 32 02.1	-4.4
QAMS	**Qamsar**	**4.55**	**103**	*e*Pn	**Pn**	**10 31 59.5**	**+3.8**
QAMS				*e*		10 32 13.8	
	comp=Z,2μm,0.5s						
IPIR	**Pirpir**	**4.57**	**117**	*e*Pn	**Pn**	**10 31 58.1**	**+2.1**
IVRN	**Varamin**	**4.66**	**87**	*e*Pn	**Pn**	**10 32 00.1**	**+3.1**
GLBA	**Clilabad**	**4.76**	**22**	P	**Pn**	**10 32 02.2**	**+3.9**
	SNR=5.5						
GLBA				S	**Sb**	**10 33 11.2**	**+3.8**
IKLH	**Kolahrood**	**4.83**	**107**	*e*Pn	**Pn**	**10 32 01.8**	**+2.3**
DAMV	**Damavand**	**4.90**	**79**	*e*Pn	**Pn**	**10 32 05.2**	**+4.7**
IDMV	**Damavand**	**4.94**	**80**	*e*Pn	**Pn**	**10 32 04.1**	**+3.0**
KRSH	**Karshahi**	**5.10**	**98**	*e*Pn	**Pn**	**10 32 06.1**	**+3.0**
ISFB	**Sefidab**	**5.12**	**94**	*e*Pn	**Pn**	**10 32 04.9**	**+1.5**
IBRJ	**Brojen**	**5.25**	**123**	*e*Pn	**Pn**	**10 32 07.5**	**+2.2**
AGDM	**Agdam**	**5.31**	**9**	P	**Pn**	10 32 12.3	+6.4
AGDM				S	**Sb**	**10 33 30.0**	**+6.7**
IZEF	**Zefreh**	**5.57**	**109**	*e*Pn	**Pn**	**10 32 13.3**	**+3.6**
GANJ	**Ganja**	**5.79**	**2**	P	Pn	10 32 19.2	+6.7
GDB	**GEDABAY**	**5.86**	**358**	P	Pn	10 32 19.1	+5.5
	SNR=5.4						
GDB				S	**Sb**	**10 33 42.3**	**+3.0**
NASN	**Na'in**	**5.98**	**108**	*e*Pn	**Pn**	**10 32 19.4**	**+4.0**
KLNJ	**Kolanjah**	**6.03**	**128**	*e*Pn	**Pn**	**10 32 18.2**	**+2.1**
ANAR	**Anarak**	**6.58**	**102**	*e*Pn	**Pn**	**10 32 26.5**	**+3.0**
AHBU	**AHRAM**	**7.45**	**142**	*e*Pn	**Pn**	**10 32 39.0**	**+3.8**
TKDS	**Koohdasht(Taba**	**9.24**	**95**	*e*Pn	**Pn**	**10 33 02.5**	**+2.5**
RAYN	**Ar Rayn**	**11.30**	**183**	Pn	**Pn**	**10 33 25.7**	**-2.4**
SHME	**Shamm**	**12.35**	**133**	Pn	**Pn**	**10 33 41.2**	**-1.2**
BANOM	**Banah**	**12.54**	**132**	Pn	**Pn**	**10 33 43.3**	**-1.7**
BANOM				Sn	**Sn**	**10 35 57.6**	**-7.2**
MSFE	**Esma-Masafi**	**12.87**	**135**	Pn	**Pn**	**10 33 48.3**	**-1.4**
NAZ	**Nazwa, Dubai**	**12.87**	**137**	Pn	**Pn**	**10 33 49.2**	**-0.4**
ASUD	**Al Ashush, Dub**	**12.98**	**139**	Pn	**Pn**	**10 33 50.2**	**-0.8**
FAQ	**Al Faqa, Dubai**	**13.03**	**138**	Pn	**Pn**	**10 33 50.3**	**-1.4**
UOSS	**Minazif**	**13.21**	**136**	Pn	**Pn**	**10 33 52.5**	**-1.8**
HATD	**Hatta, Dubai**	**13.27**	**136**	Pn	**Pn**	**10 33 54.0**	**-1.0**
HATD				Sn	Sn	10 36 13.3	-9.4
ASHO	**Ashiyiah**	**13.34**	**137**	Pn	**Pn**	**10 33 54.7**	**-1.3**
MZR	**Muzera**	**13.47**	**149**	Pn	**Pn**	**10 33 56.0**	**-1.8**

*IDC **11** 10:35:16.6±1.9,5.˚78N×126.˚68E,h0km,mb3.7/3, mbtmp3.7/3,MS3.2/2,Error ellipse: s-maj=187.8km s-min=23.5km az=66.0*

ISC 11 10:35:17.6±1.4,5.˚9N±0.˚3×127.˚0E±0.˚2,h10km,n7,σ0°82/7, mb3.5/3,1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**1.80**	**309**	LR	LR	10 36 23.9	
	comp=Z,56nm,21.1s,baz=179,slow=40						
KCP	**Kidapawan**	**2.17**	**300**	*e*P	**Pb**	**10 35 57.3**	**+0.3**
KCP				*i* S	**Sb**	**10 36 23.7**	**-0.4**
GUMO	**Guam**	**19.18**	**65**	LR	LR	10 47 54.9	
	comp=Z,25nm,19.2s,baz=178,slow=39						
WRA	**Warramunga Arr**	**26.71**	**164**	P	**P**	**10 40 57.6**	**+0.4**
	0.8nm,0.7s,baz=341,slow=10,SNR=9.8						
	0.8nm,0.7s						
ASAR	**Alice Springs**	**30.18**	**167**	P	**P**	**10 41 28.6**	**+0.3**
	0.4nm,0.6s,baz=356,slow=8.1,SNR=5.1						
ASAR				PcP	**PcP**	**10 44 28.4**	**-1.1**
	0.3nm,0.6s,baz=350,slow=2.4,SNR=1.3						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**55.92**	**324**	P	**P**	**10 44 56.6**	**+0.7**
	1.0nm,0.6s,baz=115,slow=8.2,SNR=14						
MKAR				PcP	**PcP**	**10 45 53.8**	**-0.7**
	0.5nm,0.6s,baz=108,slow=4.0,SNR=3.7						
	1.0nm,0.6s						
VRAC	**Vranov**	**98.59**	**322**	LR	LR	11 35 35.2	
	comp=Z,32nm,18.3s,baz=332,slow=37						

*MOS **11** 10:46:02.7±0.8,44.˚69N×148.˚54E,h78km,mb4.9/51,Error ellipse: s-maj=6.6km s-min=4.7km az=94.8*

*SKHL **11** 10:46:03.2±0.2,44.˚60N×148.˚70E,h81km±4km,mb5.5/5, msha6.1/5*

*NIED **11** 10:46:04.0,44.˚75N×148.˚47E,h30km,MW4.2,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.21; $M_{\theta\theta}$-0.75; $M_{\phi\phi}$-0.46; $M_{r\theta}$-1.08; $M_{\theta\phi}$-0.47; $M_{\phi r}$-1.74; Fault plane solution: $M_0$2.34000×10^{15} NP1: ϕ_s64.00000°,δ16.00000°,λ118.00000°. NP2: ϕ_s215.00000°,δ76.00000°,λ82.00000°.*

*IDC **11** 10:46:04.8±2.5,44.˚79N×148.˚41E,h85km±22km,mb3.9/20, mbtmp4.2/25,MS2.9/10 Error ellipse: s-maj=15.8km s-min=12.3km az=144.0*

*JMA **11** 10:46:04.0±0.5,45.˚N±2.˚×14.˚8E±.˚,h30km,MV4.7/18,SE OFF ETOROFU*

*BJI **11** 10:46:04.7±0.0,44.˚67N×148.˚63E,h111km,mb4.7/42, mB4.7/20*

*NEIC **11** 10:46:06.5±1.2,44.˚79N±0.˚08×148.˚4E±0.˚1,h92km±7km,*

mb4.6/93,Error ellipse: s-maj=12.9km s-min=10.3km az=145.0

ISC 11 10:46:03.4±0.8,44.˚62N±0.˚05×148.˚59E±0.˚05,h75km±6km, n365,σ1°815/371,mb4.6/144,32C-19D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**0.80**	**320**	*i* PN	**Pn**	**10 46 19.7**	**-0.1**
KUR				*i* S	**Sn**	**10 46 31.5**	**-0.5**
KUR				pmax	pmax		
	comp=N,2μm,0.2s						
KUR				pmax	pmax		
	comp=E,1μm,0.2s						
KUR				pmax	pmax		
	comp=Z,11μm,0.2s						
KUR				smax	smax		
	comp=E,17μm,0.3s						
KUR				smax	smax		
	comp=N,13μm,0.2s						
KUR				smax	smax		
	comp=N,27μm,2.2s						
KUR	**Kuril'sk**	**0.80**	**320**	*i* P	**Pn**	**10 46 19.7**	**-0.1**
KUR				AMB	AMB	10 46 21.6	
	comp=N,5μm,0.4s						
KUR				*i* S	**Sn**	**10 46 31.6**	**-0.5**
KUR				A	A	10 46 32.7	
	comp=N,27μm,2.0s						
KUR				A	A	10 46 35.0	
	comp=N,15μm,0.5s						
KUR				A	A	10 46 35.0	
	comp=N,9μm,0.5s						
SHO	**Shikotan**	**1.47**	**240**	*e*PN	**Pn**	**10 46 27.4**	**-0.7**
SHO				*e*S	**Sn**	**10 46 45.0**	**-1.7**
SHO				smax	smax		
	comp=N,2μm,0.4s						
SHO				smax	smax		
	comp=E,2μm,0.2s						
SHO	**Shikotan**	**1.47**	**240**	*e*P	**Pn**	**10 46 27.4**	**-0.7**
SHO				AMB	AMB	10 46 27.9	
	comp=E,380nm,0.3s						
SHO				*e*S	**Sn**	**10 46 45.1**	**-1.7**
SHO				A	A	10 46 50.9	
	comp=E,410nm,0.3s						
SHO				A	A	10 46 50.9	
	comp=E,3μm,0.3s						
YUK	**Yuzh-Kuril'sk**	**2.04**	**254**	*e*PN	**Pn**	**10 46 35.8**	**+0.1**
YUK				*e*S	**Sn**	**10 47 00.9**	**+0.5**
YUK				pmax	pmax		
	comp=Z,872nm,0.2s						
YUK				smax	smax		
	comp=E,4μm,0.4s						
YUK				smax	smax		
	comp=N,4μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**2.04**	**254**	*e*P	**Pn**	**10 46 36.0**	**+0.3**
YUK				AMB	AMB	10 46 38.5	
	comp=N,820nm,0.2s						
YUK				*e*S	**Sn**	**10 47 00.6**	**+0.2**
YUK				A	A	10 47 02.9	
	comp=N,4μm,0.6s						
YUK				A	A	10 47 02.9	
	comp=N,4μm,0.6s						
GLVR	**Golovnino**	**2.38**	**249**	*e*PN	**Pn**	**10 46 40.3**	**+0.1**
GLVR				*e*S	**Sn**	**10 47 09.6**	**+1.2**
GLVR				smax	smax		
	comp=N,3μm,0.3s						
GLVR				smax	smax		
	comp=E,4μm,0.3s						
GLVR	**Golovnino**	**2.38**	**249**	*e*P	**Pn**	**10 46 40.5**	**+0.3**
GLVR				*e*S	**Sn**	**10 47 08.3**	**-0.1**
GLVR				A	A	10 47 12.8	
	comp=E,3μm,0.4s						
GLVR				A	A	10 47 12.8	
	comp=E,4μm,0.4s						
NEM2	**Nemuro 2**	**2.41**	**240**	P	**Pn**	**10 46 40.2**	**-0.4**
NEM2				*e*S	**Sn**	**10 47 06.5**	**-2.6**
NMR	**Nemuro--Hokkai**	**2.41**	**240**	*e*PN	**Pn**	**10 46 40.2**	**-0.4**
NMR				*e*S	**Sn**	**10 47 09.0**	**-0.3**
NMR	**Nemuro--Hokkai**	**2.41**	**240**	*e*P	**Pn**	**10 46 40.3**	**-0.4**
NMR				*e*S	**Sn**	**10 47 08.1**	**-1.2**
RUSJ	**Misakicho**	**2.45**	**259**	*e*PN	**Pn**	**10 46 42.1**	**+0.9**
RUSJ				*e*S	**Sn**	**10 47 12.2**	**+2.0**
JRA	**Rausu**	**2.58**	**256**	P	**Pn**	**10 46 44.3**	**+1.4**
JRA				*e*S	**Sn**	**10 47 14.4**	**+1.1**
JNK	**Nakash**	**2.97**	**251**	P	**Pn**	**10 46 49.4**	**+1.1**
JNK				*e*S	**Sn**	**10 47 23.3**	**+0.4**
AKK	**Akkeshi**	**3.15**	**241**	*e*P	**Pn**	**10 46 50.7**	**0.0**
AKK				*e*S	**Sn**	**10 47 26.1**	**-1.0**
JAK	**Akkeshi**	**3.25**	**241**	P	**Pn**	**10 46 52.0**	**-0.1**
JAK				*e*S	**Sn**	**10 47 27.7**	**-1.9**
JTKR	**Abashiri--Toko**	**3.42**	**261**	*e*P	**Pn**	**10 46 55.6**	**+1.2**
JAR	**Ashorobuto**	**3.72**	**251**	P	**Pn**	**10 47 00.1**	**+1.6**
JAR				*e*S	**Sn**	**10 47 42.0**	**+0.9**
JOB	**Onbets**	**3.85**	**245**	*e*P	**Pn**	**10 47 00.9**	**+0.8**
JOB				*e*S	**Sn**	**10 47 43.2**	**-0.9**
JKK2	**Kamakawa 2**	**4.26**	**262**	P	**Pn**	**10 47 07.9**	**+2.1**
JCH	**Churui**	**4.29**	**244**	*e*P	**Pn**	**10 47 06.3**	**+0.1**
JCH				*e*S	**Sn**	**10 47 53.6**	**-1.4**
JKA	**Kamikawa-asahi**	**4.33**	**265**		**Pn**	**10 47 08.5**	**+1.8**
JKA	**Kamikawa-asahi**	**4.33**	**265**	*e*P	**Pn**	**10 47 08.5**	**+1.8**
ASAJ	**Asahikawa**	**4.33**	**265**	LR	LR	10 48 56.6	
	comp=E,149nm,21.2s,baz=9.5,slow=41						
ASAJ	**Asahikawa**	**4.33**	**265**	PN	**Pn**	**10 47 08.5**	**+1.8**
YSS	**Yuzh-Sakhalins**	**4.70**	**302**		**Pn**	**10 47 12.6**	**+0.8**
YSS				Sn	**Sn**	**10 48 02.9**	**-2.1**
YSS	**Yuzh-Sakhalins**	**4.70**	**302**	*e*PN	**Pn**	**10 47 13.2**	**+1.4**
YSS				*e*S	**Sn**	**10 48 03.4**	**-1.6**
YSS				pmax	pmax		
	comp=Z,80nm,0.4s						
YSS				smax	smax		
	comp=N,110nm,0.8s						
YSS				smax	smax		
	comp=E,110nm,0.5s						
YSS	**Yuzh-Sakhalins**	**4.70**	**302**	*e*P	**Pn**	**10 47 12.7**	**+0.9**
YSS				AMB	AMB	10 47 13.9	
	comp=E,80nm,0.4s						
YSS				*e*S	**Sn**	**10 48 04.1**	**-0.9**
YSS				A	A	10 48 09.8	
	comp=E,110nm,0.8s						
YSS				A	A	10 48 09.8	
	comp=E,110nm,0.8s						
JAB	**Ashibetsu**	**4.72**	**259**	*e*P	**Pn**	**10 47 15.1**	**+3.0**
ERM	**Erimo**	**4.74**	**239**	Pn	**Pn**	**10 47 14.4**	**+2.0**
ERM	**Erimo**	**4.74**	**239**	*ce*PN	**Pn**	**10 47 14.0**	**+1.7**
ERM				pmax	pmax		
	comp=Z,34nm,0.5s						
JWK2	**Keihoku**	**4.80**	**281**	P	**Pn**	**10 47 16.3**	**+3.1**
JNBK	**Urakawa-nobuka**	**4.85**	**243**	*e*P	**Pn**	**10 47 13.7**	**-0.1**
JRBN	**Rebuntou**	**5.40**	**281**	*e*P	**Pn**	**10 47 23.6**	**+2.3**
JEW	**Eniwo**	**5.47**	**254**		**Pn**	**10 47 24.8**	**+2.5**
UGL	**Uglegorsk**	**6.32**	**317**	*e*P	**Pn**	**10 47 35.2**	**+1.4**
UGL				AMB	AMB	10 47 36.5	
	comp=Z,50nm,0.6s						
JANG	**Nango**	**6.73**	**233**	*e*P	**Pn**	**10 47 38.1**	**-1.4**
JANG				*e*S	**Sn**	**10 48 48.0**	**-6.7**
JTM	**Tenmabayashi**	**6.73**	**238**	Pn	**Pn**	**10 47 39.8**	**+0.2**
TYV	**Tymovskoe**	**7.42**	**329**	*e*PN	**Pn**	**10 47 52.0**	**+3.2**
TYV				*e*S	**Sn**	**10 49 12.9**	**+1.5**
TYV				pmax	pmax		
	comp=Z,48nm,0.6s						
TYV				pmax	pmax		
	comp=Z,100nm,1.8s						
TYV				smax	smax		
	comp=N,11nm,0.9s						
TYV				smax	smax		
	comp=E,6.0nm,0.9s						
TYV	**Tymovskoe**	**7.42**	**329**	*e*P	**Pn**	**10 47 50.9**	**+2.1**
TYV				AMB	AMB	10 47 52.3	
	comp=E,50nm,0.6s						
TYV				AMB	AMB	10 47 52.6	
	comp=E,100nm,2.0s						
TYV				*e*S	**Sn**	**10 49 11.3**	**-0.1**
TYV				A	A	10 49 13.1	
	comp=E,10.0nm,0.9s						
TYV				A	A	10 49 13.1	
	comp=E,10.0nm,0.9s						
SKR	**Severo-Kuril's**	**7.91**	**37**	*e*PN	**Pn**	**10 47 55.6**	**0.0**
SKR				pmax	pmax		
	comp=Z,42nm,0.4s						
SKR	**Severo-Kuril's**	**7.91**	**37**	*e*P	**Pn**	**10 47 55.9**	**+0.3**
SKR				AMB	AMB	10 47 58.3	
	comp=Z,40nm,0.4s						
SKR				*e*S	**Sn**	**10 49 20.3**	**-3.1**
SKR				A	A	10 49 30.3	
	comp=Z,30nm,0.4s						
SKR				A	A	10 49 30.3	
	comp=Z,20nm,0.4s						
PAU	**Pauzhetka**	**8.79**	**36**	*e*P	**Pn**	**10 48 07.2**	**-0.3**
PAU				AMB	AMB	10 48 08.2	
	comp=Z,20nm,0.4s						
PAU				*e*S	**Sn**	**10 49 42.5**	**-2.3**
PAU				A	A	10 49 46.7	
	comp=Z,30nm,0.3s						
PAU				A	A	10 49 46.7	
	comp=Z,30nm,0.3s						
JSD	**Sado**	**10.17**	**233**		**Pn**	**10 48 27.4**	**+0.9**
PEA0B	**Petropavlovsk-**	**10.39**	**32**	Pn	**Pn**	**10 48 29.5**	**+0.1**
PEA0B	**Petropavlovsk-**	**10.39**	**32**	PN	**Pn**	**10 48 29.5**	**+0.1**
PETK	**Petropavlovsk-**	**10.39**	**32**	P	**Pn**	**10 48 30.1**	**+0.7**
	comp=Z,3.4nm,0.5s,baz=203,slow=13,SNR=12						
PETK	**Petropavlovsk-**	**10.39**	**32**	Pn	**Pn**	**10 48 29.8**	**+0.3**
MJA0	**Matsu Arr-Jizo**	**11.26**	**228**	*e*PN	**Pn**	**10 48 43.0**	**+1.6**
MJA0				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MJAR	**Matsushiro Arr**	**11.28**	**228**	P	**Pn**	**10 48 41.8**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=12,slow=13,SNR=4.1						
USRK	**Ussuriysk Ar.**	**11.89**	**274**	P	**Pn**	**10 48 50.4**	**+0.6**
	comp=Z,3.1nm,0.5s,baz=80,slow=14,SNR=4.2						
USRK				LR	LR	10 53 17.9	
	comp=Z,44nm,20.5s,baz=34,slow=37						
VLA	**Vladivostok**	**12.15**	**269**	*i* PN	**Pn**	**10 48 53.3**	**-0.1**
VLA				pmax	pmax		
	comp=Z,27nm,0.8s						
VLA	**Vladivostok**	**12.15**	**269**	*e*P	**Pn**	**10 48 53.3**	**-0.1**
KLR	**Kul'dur**	**12.40**	**298**	P	**Pn**	**10 48 58.0**	**+1.2**
	comp=Z,4.6nm,0.9s,baz=109,slow=15,SNR=10						
KLR				LR	LR	10 53 51.3	
	comp=Z,47nm,19.7s,baz=69,slow=38						
KLR	**Kul'dur**	**12.40**	**298**	*ce*PN	**Pn**	**10 48 58.8**	**+2.0**
KLR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KLR	**Kul'dur**	**12.40**	**298**	*e*P	**Pn**	**10 48 56.7**	**-0.1**
BNX	**BinXian**	**14.98**	**282**	⇑P	**Pn**	**10 49 31.5**	**+0.7**
BNX				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BNX				pmax	pmax		
	comp=Z,80nm,4.9s						
MA2	**Magadan**	**15.04**	**4**	P	**P**	**10 49 33.4**	**-1.7**
	comp=Z,7.9nm,0.6s,baz=176,slow=14,SNR=4.4						
MA2				LR	LR	10 55 16.3	
	comp=Z,20nm,18.0s,baz=165,slow=37						
MA2	**Magadan**	**15.04**	**4**	*i* P	**Pn**	**10 49 32.4**	**+0.9**
MA2				pmax	pmax		
	comp=Z,11nm,0.7s						
ZEA	**Zeya**	**16.62**	**311**	*e*P	**P**	**10 49 54.7**	**+2.1**
KSRS	**Korea Array**	**17.13**	**252**	P	**Pn**	**10 49 56.7**	**-1.1**
	comp=Z,1.8nm,0.5s,baz=58,slow=11,SNR=10.0						
KSRS				LR	LR	10 56 39.0	
	comp=Z,20nm,18.7s,baz=50,slow=37						
KSRS	**Korea Array**	**17.13**	**252**	*e*P	**P**	**10 49 59.5**	**+1.1**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.5s						
SEY	**Seymchan**	**18.48**	**5**	P	**P**	**10 50 12.1**	**-0.9**
	comp=Z,8.5nm,0.8s,baz=188,slow=8.2,SNR=18						
SEY				LR	LR	10 57 07.8	
	comp=Z,39nm,20.6s,baz=54,slow=36						
SEY	**Seymchan**	**18.48**	**5**	*ce*P	**P**	**10 50 12.5**	**-0.5**
SEY				pmax	pmax		
	comp=Z,7.0nm,0.8s						
YAK	**Yakutsk**	**20.64**	**334**	LR	LR	10 58 19.6	
	comp=Z,52nm,21.4s,baz=89,slow=36						
YAK	**Yakutsk**	**20.64**	**334**	*ce*P	**P**	**10 50 36.2**	**-0.2**
YAK				pmax	pmax		
	comp=Z,13nm,0.8s						
YAK	**Yakutsk**	**20.64**	**334**	*e*P	**P**	**10 50 36.2**	**-0.2**
BJI	**Beijing**	**24.30**	**271**	P	**P**	**10 51 14.2**	**+0.6**
BJI				pmax	pmax		
	comp=Z,9.0nm,1.2s						
BILL	**Bilibino**	**25.24**	**16**	*ce*P	**P**	**10 51 20.8**	**-1.2**
BILL				*e*		10 51 58.0	
BILL				pmax	pmax		
	comp=Z,6.0nm,2.5s						
BILL				MLR	MLR		
	comp=Z,194nm,17.0s						
NJ2	**Nanjing**	**26.33**	**252**	*e*P	**P**	**10 51 30.1**	**-2.0**
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
HNS	**HongShan**	**26.43**	**266**	⇑P	**P**	**10 51 33.4**	**+0.5**
HHC	**Hu-ho-hao-te**	**27.30**	**275**	*e*P	**P**	**10 51 40.7**	**-0.2**
HHC				pmax	pmax		
	comp=Z,39nm,0.9s						
ULN	**Ulaanbaatar**	**28.66**	**291**	*ce*P	**P**	**10 51 53.7**	**+0.7**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ULN	**Ulaanbaatar**	**28.66**	**291**	*e*P	**P**	**10 51 53.7**	**+0.7**
TIXI	**Tiksi**	**28.73**	**347**	*i* P	**P**	**10 51 51.7**	**-1.5**
TIXI				pmax	pmax		
	comp=Z,13nm,3.7s						
SONM	**Songino Array**	**29.11**	**292**	P	**P**	**10 51 57.0**	**+0.1**
	comp=Z,1.3nm,0.4s,baz=72,slow=8.6,SNR=10						
SONM				LR	LR	11 03 48.6	
	comp=Z,52nm,19.8s,baz=66,slow=37						
	comp=Z,1.3nm,0.4s						
SONM	**Songino Array**	**29.11**	**292**	P	**P**	**10 51 57.2**	**+0.3**
SONM	**Songino Array**	**29.11**	**292**	*e*P	**P**	**10 51 57.1**	**+0.1**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**29.12**	**143**	T	T	11 22 48.3	
	baz=333,slow=76,SNR=2042						
H11N1	**WAKE ISLAND Hy**	**29.13**	**143**	T	T	11 22 48.0	
	baz=333,slow=

NEA2 **Nenana** 39.24 37 P P 10 53 24.9 +0.9
NEA2 IAmb IAmb 10 53 27.0
comp=Z,4.6nm,0.6s
SML **Sawmill** 39.69 42 P P 10 53 27.9 +0.1
SML IAmb IAmb 10 53 31.1
comp=Z,6.4nm,0.9s
SML **Sawmill** 39.69 42 P P 10 53 27.9 +0.1
SML pmax pmax
comp=Z,6.0nm,0.9s
H24K **Noodor Dome** 39.74 35 P P 10 53 28.8 +0.6
TCOL **CIGO, UAF Yank** 39.75 37 IAmb IAmb 10 53 31.4
comp=Z,7.1nm,0.7s
COLA **College** 39.76 37 P P 10 53 31.1 +2.8
COLA IAmb IAmb 10 53 31.4
comp=Z,7.0nm,0.7s
COLA **College** 39.76 37 P P 10 53 31.1 +2.8
COLA pmax pmax
comp=Z,7.0nm,0.7s
CCB **Clear Creek Bu** 39.78 37 P P 10 53 29.1 +0.6
DHY **Denali Highway** 40.04 40 P P 10 53 31.4 +0.5
ILAR **Eielson Array** 40.17 37 P P 10 53 32.4 +0.6
comp=Z,1.4nm,0.8s,baz=287,slow=11,SNR=14
comp=Z,1.4nm,0.8s
J25K **Salcha River,** 40.83 37 P P 10 53 38.4 +1.1
BMAR **Burnt Mountain** 41.05 33 P P 10 53 40.1 +1.1
RIDG **Independent Ri** 41.13 38 P P 10 53 40.0 +0.3
RIDG IAmb IAmb 10 53 57.5
comp=Z,12nm,1.8s
GOMU **GeErMu** 41.15 277 P P 10 53 41.0 +0.4
GOMU pmax pmax
comp=Z,10.0nm,0.7s
GOMU pmax pmax
comp=Z,78nm,4.8s
ZALV **Zalesovo Beam** 41.31 307 P P 10 53 40.8 -0.4
comp=Z,0.7nm,0.3s,baz=107,slow=8.3,SNR=3.9
ZALV PcP **PcP** 10 55 38.2 -0.1
comp=Z,1.1nm,0.5s,baz=106,slow=3.2,SNR=5.2
comp=Z,0.7nm,0.3s
ZALV **Zalesovo Beam** 41.31 307 eP P 10 53 43.8 +2.6
ZALV pmax pmax
comp=Z,1.0nm,0.4s
SCRK **Sand Creek** 41.48 38 P P 10 53 42.9 +0.2
PZH **PanZhiHua** 41.55 260 P P 10 53 44.8 +1.1
PZH pmax pmax
comp=Z,7.0nm,0.6s
PZH pmax pmax
comp=Z,100nm,4.5s
J26L **Joseph Creek** 41.62 37 P P 10 53 44.4 +0.6
M26K **Nabesna, AK** 42.12 40 P P 10 53 49.1 +1.3
K27K **Chicken** 42.31 38 IAmb IAmb 10 53 52.4
comp=Z,11nm,1.5s
L27K **Beaver Creek,** 42.55 39 P P 10 53 52.5 +1.2
L27K IAmb IAmb 10 53 58.6
comp=Z,17nm,1.7s
BCAR **Beaver Creek A** 42.57 39 P P 10 53 52.5 +1.0
M27K **Edge Creek, AK** 42.64 40 P P 10 53 52.8 +0.7
WMQ **Urumqi** 42.74 291 eP P 10 53 54.8 +1.7
HYT **Haines Junctio** 44.99 42 P P 10 54 12.7 +1.8
MK31 **Makanchi Array** 45.10 297 P P 10 54 10.9 -1.0
MK31 **Makanchi Array** 45.10 297 P P 10 54 10.9 -1.0
MK31 pmax pmax
comp=Z,2.0nm,0.8s
MKAR **Makanchi Array** 45.10 297 P P 10 54 11.2 -0.7
comp=Z,2.1nm,0.7s,baz=77,slow=8.7,SNR=24
MKAR PcP **PcP** 10 55 51.4 +0.1
comp=Z,0.6nm,0.6s,baz=72,slow=4.7,SNR=3.1
comp=Z,2.1nm,0.7s
MKAR **Makanchi Array** 45.10 297 P P 10 54 11.4 -0.5
INK **Inuvik** 45.13 31 P P 10 54 11.9 +0.1
INK IAmb IAmb 10 55 24.7
comp=Z,18nm,1.6s
INK **Inuvik** 45.13 31 P P 10 54 11.9 +0.1
INK pmax pmax
comp=Z,18nm,1.6s
MAKZ **Makanchi** 45.30 298 P P 10 54 13.2 -0.3
MAKZ **Makanchi** 45.30 298 P P 10 54 13.2 -0.3
MAKZ pmax pmax
comp=Z,3.0nm,0.6s
KURK **Kurchatov** 45.91 304 P P 10 54 17.2 -1.0
KURK IAmb IAmb 10 54 19.8
comp=Z,3.5nm,0.5s
KURK **Kurchatov** 45.91 304 ceP P 10 54 17.2 -1.0
KURK pmax pmax
comp=Z,3.0nm,0.8s
KURK **Kurchatov** 45.91 304 eP P 10 54 17.2 -1.0
M31M **Drury Creek, Y** 46.09 39 P P 10 54 21.0 +1.5
M31M IAmb IAmb 10 54 44.4
comp=Z,14nm,2.0s
C36M **Paulatuk** 48.23 28 P P 10 54 36.2 +0.3
CMAR **Chiang Mai Arr** 48.76 254 P P 10 54 40.9 +0.2
comp=Z,1.8nm,0.3s,baz=45,slow=7.8,SNR=2.1
comp=Z,1.8nm,0.3s
KDJ **Kajisay** 50.42 294 P P 10 54 53.5 +0.2
KDJ IAmb IAmb 10 54 54.0
comp=Z,3.9nm,0.9s
KDJ **Kajisay** 50.42 294 P P 10 54 53.5 +0.2
KDJ pmax pmax
comp=Z,4.0nm,1.0s
TAPN **Taplejung** 51.02 272 eP P 10 54 58.1 0.0
AAK **Ala-Archa** 51.92 296 i P P 10 55 04.0 -0.5
AAK pmax pmax
comp=Z,2.0nm,0.9s
AAK **Ala-Archa** 51.92 296 eP P 10 55 04.0 -0.5
JIRN **Jiri** 51.92 273 eP P 10 55 05.3 +0.3
comp=Z,20nm,0.3s
GUN **Gumba** 52.00 274 eP P 10 55 05.8 +0.3
comp=Z,28nm,0.3s
RAMN **Ramite** 52.05 272 eP P 10 55 05.9 +0.1
comp=Z,52nm,0.4s
KSH **Kashi** 52.51 292 P P 10 55 13.3 +4.5
KSH pmax pmax
comp=Z,5.0nm,0.5s
PKI **Pulchoki** 52.53 274 eP P 10 55 09.3 -0.1
PKIN **Phulchoki** 52.54 274 eP P 10 55 09.2 -0.2
comp=Z,9.5nm,0.4s
GKN **Gorkha** 52.83 274 eP P 10 55 11.6 +0.2
comp=Z,12nm,0.3s
DANN **Dangsing** 53.25 275 eP P 10 55 15.2 +0.6
RES **Resolute Bay** 53.84 17 P P 10 55 17.5 -0.4
RES IAmb IAmb 10 55 17.5
comp=Z,4.6nm,0.6s
RES **Resolute Bay** 53.84 17 P P 10 55 17.5 -0.4
RES pmax pmax
comp=Z,5.0nm,0.6s
PYUN **Piuthan** 53.94 276 eP P 10 55 19.5 -0.1
KK31 **Karatay Array** 54.22 298 P P 10 55 20.7 -0.5
KK31 **Karatay Array** 54.22 298 P P 10 55 20.7 -0.5
KK31 pmax pmax
comp=Z,2.0nm,0.7s
KKAR **Karatay Array** 54.22 298 P P 10 55 21.0 -0.2
KKAR **Karatay Array** 54.22 298 P P 10 55 20.7 -0.5
KKAR IAmb IAmb 10 55 21.8
comp=Z,2.1nm,0.7s
KKAR **Karatay Array** 54.22 298 P P 10 55 21.0 -0.2
ARU **Arti** 54.42 317 P P 10 55 21.5 -0.9
ARU IAmb IAmb 10 55 23.0
comp=Z,8.0nm,1.4s
ARU **Arti** 54.42 317 c iP P 10 55 22.3 -0.1
ARU *PP pP 10 55 43.3 +1.9
ARU 10 57 23.4
ARU S S 11 02 53.4 -1.5
ARU pmax pmax
comp=Z,6.0nm,1.4s
ARU **Arti** 54.42 317 eP P 10 55 22.3 -0.1
YKA **Yellowknife Ar** 54.50 34 P P 10 55 23.2 +0.3
comp=Z,1.3nm,0.7s,baz=302,slow=7.1,SNR=5.0
comp=Z,1.3nm,0.7s
ABKAR **Akbulak array** 57.33 309 P P 10 55 42.5 -0.8
ARCES **ARCESS Array B** 58.79 340 P P 10 55 50.4 -2.8
comp=Z,0.3nm,0.3s,baz=40,slow=7.1,SNR=9.8
comp=Z,0.3nm,0.3s
ARCES **ARCESS Array B** 58.79 340 P P 10 55 52.5 -0.7
ARCES **ARCESS Array B** 58.79 340 eP P 10 55 53.3 +0.1
ARCES pmax pmax
comp=Z,1.0nm,0.8s
KBL **Kabul** 59.87 290 P P 10 56 00.3 -1.1
KBL **Kabul** 59.87 290 P P 10 56 00.3 -1.1
KBL pmax pmax
comp=Z,15nm,0.6s
PINE **Pine Mountain** 61.41 56 P P 10 56 13.9 +2.1
PINE IAmb IAmb 10 56 14.6
comp=Z,5.8nm,0.8s
YBH **Yreka Blue Hor** 61.55 58 P P 10 56 14.8 +2.2
YBH **Yreka Blue Hor** 61.55 58 P P 10 56 14.8 +2.2
YBH pmax pmax
comp=Z,14nm,1.6s
BELG **Belogornoye** 61.97 317 i P P 10 56 14.4 -0.7
BELG pmax pmax
comp=Z,1.0nm,0.9s
K05A **Summer Lake** 62.06 57 P P 10 56 18.2 +2.0
WALA **Waterton Lakes** 62.23 47 P P 10 56 17.8 +0.7
WALA IAmb IAmb 10 56 24.4
comp=Z,14nm,1.7s
PLID **Pearl Lake** 63.49 52 P P 10 56 26.9 +1.3
PLID IAmb IAmb 10 58 00.1
comp=Z,14nm,1.9s
MSO **Missoula** 63.57 49 P P 10 56 27.3 +1.3
MSO IAmb IAmb 10 58 29.2
comp=Z,8.5nm,1.1s
HRA **Herat** 64.46 294 P P 10 56 32.2 +0.1
HRA IAmb IAmb 10 56 33.0
comp=Z,8.0nm,0.9s
FINES **FINESS Array B** 64.57 333 P P 10 56 29.6 -2.5
comp=Z,4.6nm,0.5s,baz=39,slow=7.9,SNR=28
comp=Z,4.6nm,0.5s
FINES **FINESS Array B** 64.57 333 eP P 10 56 29.2 -2.9
FINES pmax pmax
comp=Z,5.0nm,0.5s
FCC **Fort Churchill** 64.75 31 P P 10 56 33.5 +0.2
FCC **Fort Churchill** 64.75 31 P P 10 56 33.5 +0.2
FCC pmax pmax
comp=Z,23nm,2.0s
OBN **Obninsk** 65.22 324⇑ eP P 10 56 37.8 +1.4
OBN e 10 59 03.6
OBN eS sS 11 05 55.5 +10
OBN pmax pmax
comp=Z,4.0nm,0.9s
OBN **Obninsk** 65.22 324 eP P 10 56 37.6 +1.2
YERR **Yerington** 65.32 59 IAmb IAmb 10 58 31.9
comp=Z,14nm,1.7s
WRA **Warramunga Arr** 65.55 195 P P 10 56 39.2 +0.3
comp=Z,0.7nm,0.7s,baz=12,slow=6.9,SNR=6.7
comp=Z,0.7nm,0.7s
WRA **Warramunga Arr** 65.55 195 eP P 10 56 39.6 +0.7
WRA pmax pmax
comp=Z,1.0nm,0.5s
BOZ **Bozeman (W)** 65.59 49 P P 10 56 40.5 +1.3
BOZ IAmb IAmb 10 56 41.2
comp=Z,3.6nm,0.7s
BOZ **Bozeman (W)** 65.59 49 P P 10 56 40.5 +1.3
BOZ pmax pmax
comp=Z,4.0nm,0.7s
KVN **Kaiserville** 65.98 58 P P 10 56 43.5 +1.6
KVN **Kaiserville** 65.98 58 P P 10 56 43.5 +1.6
KVN pmax pmax
comp=Z,4.0nm,0.9s
LHV **Little Huntoon** 66.23 59 IAmb IAmb 10 56 46.1
comp=Z,5.6nm,1.0s
NVAR **Mina Array Bea** 66.24 59 P P 10 56 43.7 +0.1
comp=Z,1.5nm,0.7s,baz=292,slow=6.8,SNR=14
comp=Z,1.5nm,0.7s
PDAR **Pinedale Array** 68.56 51 P P 10 56 59.1 +0.9
comp=Z,1.1nm,0.7s,baz=251,slow=3.5,SNR=9.0
comp=Z,1.1nm,0.7s
NB2 **NORSAR Subarra** 69.16 339 P P 10 56 58.9 -2.5
comp=Z,1.3nm,0.4s,baz=31,slow=6.5
NOA **NORSAR Array B** 69.16 339 P P 10 56 59.1 -2.3
comp=Z,1.2nm,0.5s,baz=31,slow=6.6,SNR=20
comp=Z,1.2nm,0.5s
ASAR **Alice Springs** 69.27 194 P P 10 57 03.7 +1.4
comp=Z,0.5nm,0.5s,baz=11,slow=6.8,SNR=19
comp=Z,0.5nm,0.5s
ASAR **Alice Springs** 69.27 194 P P 10 57 04.2 +1.8
ASAR **Alice Springs** 69.27 194 P P 10 57 04.2 +1.8
NORES **NORESS Array B** 69.34 339 P P 10 57 00.6 -1.8
PABE **Paberze** 69.83 330 P P 10 57 05.0 -0.4
KIV **Kislovodsk** 69.95 312 eP P 10 57 06.7 +0.1
KIV pmax pmax
comp=Z,9.0nm,1.1s
KIV MLR MLR
comp=Z,27nm,17.0s
KIV **Kislovodsk** 69.95 312 eP P 10 57 06.7 +0.1
KBZ **Khabaz** 69.99 312 P P 10 57 07.1 +0.4
comp=Z,4.3nm,0.9s,baz=29,slow=4.7,SNR=6.1
KBZ LR LR 11 30 45.1
comp=Z,40nm,19.8s,baz=116,slow=38
comp=Z,4.3nm,0.9s
KBZ **Khabaz** 69.99 312 eP P 10 57 06.9 +0.2
KBZ pmax pmax
comp=Z,4.0nm,0.9s
KBZ **Khabaz** 69.99 312 eP P 10 57 06.9 +0.2
RDMU **Red Mountain** 70.01 52 IAmb IAmb 10 57 09.3
comp=Z,4.8nm,0.7s
ZEI **Tsey** 70.10 311 eP P 10 57 06.1 -1.5
ZEI pmax pmax
comp=Z,4.0nm,0.8s
SHA1 **Shidzhatmaz** 70.11 312 i P P 10 57 08.1 +0.3
AKASG **Malin Array Be** 71.49 324 P P 10 57 13.9 -1.7
comp=Z,1.3nm,0.4s,baz=38,slow=6.8,SNR=14
comp=Z,1.3nm,0.4s
AKBB **Malin Array Si** 71.49 324 P P 10 57 14.4 -1.2
AKBB **Malin Array Si** 71.49 324 ceP P 10 57 15.2 -0.4
SORM **Soroca** 73.81 323 ⇑P P 10 57 28.5 -0.9
SORM **Soroca** 73.81 323 ⇑P P 10 57 28.5 -0.9
BUR08 **Bucovina Ar. S** 75.53 324 IAmb IAmb 10 57 39.9
comp=Z,6.2nm,0.5s
BUR01 **Bucovina Ar. S** 75.54 324 ⇓P P 10 57 39.4 -0.3
BURAR **Bucovina Array** 75.54 324 P P 10 57 39.6 0.0
BURAR IAmb IAmb 10 57 40.3
comp=Z,5.1nm,0.8s
BURAR **Bucovina Array** 75.54 324 P P 10 57 39.6 0.0
BURAR pmax pmax
comp=Z,5.0nm,0.8s
BIZ **Bicaz** 75.70 323 ⇑P P 10 57 40.0 -0.4
TESR **Tescani** 75.80 323 ⇓P P 10 57 40.6 -0.4
CFR **Carcaliu** 76.18 321 ⇑P P 10 57 43.0 -0.2
CFR **Carcaliu** 76.18 321 ⇑P P 10 57 43.0 -0.2
TPGR **Topolog** 76.31 321 ⇑P P 10 57 43.4 -0.5
KSP **Ksiaz** 76.31 331 P P 10 57 43.3 -0.5
KSP pmax pmax
comp=Z,9.0nm,0.7s
SCHQ **Schefferville** 76.45 20 P P 10 57 44.8 +0.2
comp=Z,1.6nm,0.4s,baz=281,slow=5.5,SNR=6.4
comp=Z,1.6nm,0.4s
SCHQ **Schefferville** 76.45 20 P P 10 57 44.8 +0.2
LANS **Liptovska Anna** 76.58 328 eP P 10 57 46.3 +0.9
LANS pmax pmax
comp=Z,5.0nm,0.9s
LANS **Liptovska Anna** 76.58 328 eP P 10 57 46.3 +0.9
OSTC **Ostas** 76.58 331 eP P 10 57 50.0 +4.6
CHVC **Chvalec** 76.61 331 eP P 10 57 45.1 -0.5
HARR **Harsova** 76.65 321 ⇓P P 10 57 45.8 0.0
HARR **Harsova** 76.65 321 ⇓P P 10 57 45.8 0.0
UPC **Upice** 76.69 331 eP P 10 57 45.9 -0.1
UPC **Upice** 76.69 331 eP P 10 57 45.9 -0.1
DPC **Dobruska-Polom** 76.72 331 eP P 10 57 45.9 -0.3
DPC **Dobruska-Polom** 76.72 331 eP P 10 57 45.9 -0.3
MORC **Moravsky Berou** 76.77 330 ⇑P P 10 57 46.6 +0.1
MORC **Moravsky Berou** 76.77 330 P P 10 57 46.8 +0.3
MORC IAmb IAmb 10 57 47.4
comp=Z,6.5nm,0.8s
MORC **Moravsky Berou** 76.77 330 P P 10 57 46.8 +0.3
MORC pmax pmax
comp=Z,7.0nm,0.8s
MORC **Moravsky Berou** 76.77 330 eP P 10 57 46.4 -0.1
DOPR **Dopca** 76.77 323 ⇑P P 10 57 47.8 +1.3
KRLC **Kraliky** 76.79 330 eP P 10 57 46.6 0.0
KRLC **Kraliky** 76.79 330 eP P 10 57 46.6 0.0
ISR **Istrita** 76.94 322 ⇑P P 10 58 00.5 +13
CLL **Collm** 77.02 333 ⇓i P P 10 57 47.1 -0.7
CLL pmax pmax
comp=Z,17nm,0.8s
CLL **Collm** 77.02 333 ⇓i P P 10 57 47.1 -0.7
comp=Z,17nm,0.8s
BRG **Berggiesshubel** 77.08 332 eP P 10 57 47.7 -0.4
BRG Amp 10 57 49.6
comp=Z,3.1nm,0.8s
BRG **Berggiesshubel** 77.08 332 eP P 10 57 47.7 -0.4
BRG pmax pmax
comp=Z,3.0nm,0.8s
DRGR 77.23 325 ⇓P P 10 57 49.3 +0.1
DRGR 77.23 325 ⇓P P 10 57 49.3 +0.1
VOIR 77.34 323 ⇑P P 10 57 50.3 +0.5
VOIR 77.34 323 ⇑P P 10 57 50.3 +0.5
PSZ **Piszkesteto** 77.43 327 ⇑P P 10 57 50.6 +0.4
PSZ **Piszkesteto** 77.43 327 P P 10 57 50.0 -0.3
PSZ **Piszkesteto** 77.43 327 ⇑P P 10 57 50.6 +0.4
JAVC **Velka Javorina** 77.49 329 eP P 10 57 51.4 +0.9
VRAC **Vranov** 77.50 330 ⇓P P 10 57 51.0 +0.5
VRAC **Vranov** 77.50 330 ⇓P P 10 57 51.0 +0.5
VRAC **Vranov** 77.50 330 eP P 10 57 50.6 +0.1
ESK **Eskdalemuir** 77.61 344 P P 10 57 50.1 -0.9
ESK **Eskdalemuir** 77.61 344 P P 10 57 50.1 -0.9
ESK pmax pmax
comp=Z,70nm,2.0s
PRU **Pruhonice** 77.64 332 eP P 10 57 51.2 -0.1
PRU **Pruhonice** 77.64 332 eP P 10 57 51.2 -0.1
BR131 **Keskin Array S** 77.69 314 P P 10 57 51.9 -0.1
BR131 IAmb IAmb 10 57 52.8
comp=Z,6.0nm,0.8s
BR131 **Keskin Array S** 77.69 314 P P 10 57 51.9 -0.1
BR131 pmax pmax
comp=Z,6.0nm,0.8s
BRTR **Keskin Array B** 77.69 314 P P 10 57 51.9 -0.1
comp=Z,3.1nm,0.7s,baz=76,slow=3.7,SNR=16
comp=Z,3.1nm,0.7s
BRTR **Keskin Array B** 77.69 314 P P 10 57 52.0 +0.1
KRUC **Moravsky** 77.78 330 P P 10 57 52.5 +0.4
KRUC pmax pmax
comp=Z,13nm,1.0s
KRUC **Moravsky** 77.78 330 eP P 10 57 52.3 +0.2
SMOL **Smolenice** 77.86 329 eP P 10 57 53.3 +0.7
SMOL pmax pmax
comp=Z,3.0nm,0.9s
SMOL **Smolenice** 77.86 329 eP P 10 57 53.3 +0.7
MOX **Moxa** 78.03 334 P P 10 57 53.4 -0.1
MOX pmax pmax
comp=Z,6.0nm,0.8s
MODS **Modra-Piesok** 78.03 329 eP P 10 57 54.1 +0.6
MODS pmax pmax
comp=Z,16nm,1.0s
MODS **Modra-Piesok** 78.03 329 eP P 10 57 54.1 +0.6
NKC **Novy Kostel** 78.12 333 eP P 10 57 53.4 -0.6
NKC **Novy Kostel** 78.12 333 eP P 10 57 53.4 -0.6
ZST **Bratislava** 78.25 329 eP P 10 57 55.7 +1.0
ZST **Bratislava** 78.25 329 eP P 10 57 55.7 +1.0
GZR **Gura Zlata** 78.33 324 ⇓P P 10 57 54.9 -0.4
BZS **Buzias** 78.63 325 ⇑P P 10 57 56.9 +0.1
BZS **Buzias** 78.63 325 P P 10 57 56.5 -0.3
BZS pmax pmax
comp=Z,8.0nm,1.1s
KHC **Kasperske Hory** 78.69 332 eP P 10 57 56.8 -0.4
KHC **Kasperske Hory** 78.69 332 eP P 10 57 56.8 -0.4
CKRC **Cesky Krumlov** 78.71 331 eP P 10 57 56.0 -1.3
GEC2 **GERESS Array S** 78.90 332 P P 10 57 58.0 -0.4
GEC2 IAmb IAmb 10 57 58.6
comp=Z,3.7nm,0.6s
GERES **GERESS Array B** 78.90 332 P P 10 57 58.0 -0.4
comp=Z,2.4nm,0.4s,baz=42,slow=6.8,SNR=27
comp=Z,2.4nm,0.4s
GERES **GERESS Array B** 78.90 332 P P 10 57 58.2 -0.2
GERES **GERESS Array B** 78.90 332 eP P 10 57 57.9 -0.5
GERES pmax pmax
comp=Z,3.0nm,0.4s
WET **Wettzell** 78.92 332 P P 10 57 58.8 +0.4
WET pmax pmax
comp=Z,11nm,0.8s
CONA **Conrad Observa** 78.92 330 eP P 10 57 58.6 +0.1
comp=Z,6.6nm,0.6s,SNR=5.7
RONA **Rosalia, Austr** 78.96 329 i P P 10 57 59.0 +0.3
comp=Z,6.4nm,0.7s
GRF **Grafenberg Arr** 78.99 333 P P 10 57 59.2 +0.5
GRF pmax pmax
comp=Z,23nm,0.8s
GRFO **Grafenberg** 78.99 333 P P 10 57 58.6 -0.1
GRFO **Grafenberg** 78.99 333 P P 10 57 58.6 -0.1
GRFO pmax pmax
comp=Z,14nm,0.6s
MDVR **Moldovita** 79.27 325 ⇓P P 10 57 59.5 -0.9
MORH **Mrgy, Hungar** 79.32 327 ⇑P P 10 57 59.6 -0.9
MOA **Molln** 79.56 331 eP P 10 58 01.9 0.0
comp=Z,3.5nm,0.7s
ARSA **Arzberg** 79.62 330 i P P 10 58 02.2 -0.1
comp=Z,1.6nm,0.5s
BTNL **Ternell** 79.73 337 dP P 10 58 02.4 -0.4
FRGS **Fruska Gora** 79.74 326 ⇑P P 10 58 02.2 -0.7
BSTI **Sart Tilman** 79.89 337 dP P 10 58 03.8 +0.2
BIOA **Bad Ischl, Aus** 79.91 331 eP P 10 58 04.0 +0.1
comp=Z,8.0nm,1.2s
BCLA **Clavier** 80.11 337 dP P 10 58 04.4 -0.4
comp=Z,4.0nm,0.9s
BOVS **Bovan** 80.21 324 ⇓P P 10 58 04.3 -1.2
SOKA **Soboth** 80.28 330 i P P 10 58 05.5 -0.4
comp=Z,8.9nm,0.8s,SNR=6.0
BMRD **Maredsous** 80.36 337 dP P 10 58 05.9 -0.2
comp=Z,6.5nm,0.9s
VTS **Vitosha** 80.38 322 ⇑P P 10 58 06.8 +0.2
VTS **Vitosha** 80.38 322 IAmb IAmb 10 58 07.6
comp=Z,9.1nm,0.8s
VTS **Vitosha** 80.38 322 ⇑P P 10 58 06.8 +0.2
RDO **Rodhopi** 80.52 320 IAmb IAmb 10 58 08.1
comp=Z,8.9nm,0.8s
DIVS **Divibare** 80.54 325 IAmb IAmb 10 58 07.4
comp=Z,5.0nm,0.7s
KBA **Koelnbreinsper** 80.54 331 i P P 10 58 07.6 +0.2
comp=Z,13nm,0.8s,SNR=8.1
OBKA **Obir** 80.60 330 eP P 10 58 07.1 -0.6
comp=Z,4.0nm,0.6s
WATA **Walderalm** 80.92 332 i P P 10 58 09.3 -0.1
comp=Z,1.1nm,0.5s,SNR=7.7
WTTA **Wattenberg** 80.96 332 i P P 10 58 09.6 -0.1
comp=Z,13nm,0.9s,SNR=6.8
MOTA **Moosalm** 81.07 332 i P P 10 58 09.9 -0.3
comp=Z,13nm,0.9s,SNR=6.2
BFO **Black Forest** 81.09 334 P P 10 58 09.0 -1.1
BFO IAmb IAmb 10 58 10.5
comp=Z,5.0nm,0.8s
BFO **Black Forest** 81.09 334 P P 10 58 09.0 -1.1
BFO pmax pmax
comp=Z,5.0nm,0.8s
SQTA **Sankt Quirin** 81.14 332 i P P 10 58 10.3 -0.2
comp=Z,8.4nm,0.6s,SNR=5.4
TX32 **Lajitas Array** 81.31 57 IAmb IAmb 10 58 44.3
comp=Z,11nm,1.9s
TXAR **Lajitas Array** 81.31 57 P P 10 58 12.5 +0.8
comp=Z,1.2nm,0.5s,baz=293,slow=4.3,SNR=32
comp=Z,1.2nm,0.5s
CDF **Champ du Feu** 81.34 335 eP P 10 58 10.5 -1.0
CDF pmax pmax
comp=Z,6.0nm,0.9s
STAL **STALIGIAL** 81.47 331 IAmb IAmb 10 58 12.0
comp=Z,6.1nm,0.8s
FETA **Feichten** 81.48 332 eP P 10 58 12.3 -0.1
comp=Z,7.6nm,1.2s
DAVA **Damuels** 81.52 333 i P P 10 58 12.2 -0.4
comp=Z,7.4nm,0.7s
ECH **Echery** 81.55 335 IAmb IAmb 10 58 12.8
comp=Z,5.6nm,0.8s
HAU **Haudompre** 81.98 335 eP P 10 58 16.4 +1.6
HAU pmax pmax
comp=Z,2.0nm,0.5s
HINF **Hinteralfeld** 82.00 335 eP P 10 58 13.6 -1.4
HINF pmax pmax
comp=Z,2.0nm,0.7s
CTI **Castel Tesino** 82.02 331 IAmb IAmb 10 58 14.4
comp=Z,6.1nm,0.6s
PDG **Podgorica** 82.22 325 ⇓P P 10 58 15.4 -0.7
TUE **Stuetta** 82.42 333 P P 10 58 17.3 0.0
TUE IAmb IAmb 10 58 18.0
comp=Z,8.9nm,0.7s
FNA **Florina** 82.68 322 P P 10 58 17.9 -0.7
FNA IAmb IAmb 10 58 18.6
comp=Z,6.0nm,0.8s
FNA **Florina** 82.68 322 P P 10 58 17.9 -0.7
FNA pmax pmax
comp=Z,6.0nm,0.8s
MIAR **Mount Ida** 83.11 47 P P 10 58 21.9 +1.0
MIAR IAmb IAmb 10 58 39.7
comp=Z,19nm,1.9s
MIAR **Mount Ida** 83.11 47 P P 10 58 21.9 +1.0
MIAR pmax pmax
comp=Z,19nm,2.0s
LDF **La Druitiere** 83.21 340 eP P 10 58 20.1 -1.0
LDF pmax pmax
comp=Z,11nm,1.3s
LOR **Lormes** 83.37 337 eP P 10 58 21.0 -1.0
LOR pmax pmax
comp=Z,3.0nm,0.6s
GRR **Gorron** 83.58 340 eP P 10 58 22.4 -0.6
GRR pmax pmax
comp=Z,8.0nm,0.8s
SSF **Saint Saulge** 83.66 337 eP P 10 58 22.5 -1.0
SSF pmax pmax
comp=Z,3.0nm,0.8s
SMF **Signal de Mont** 83.94 336 eP P 10 58 25.2 +0.2

SMF				pmax	pmax			
	comp=Z,16nm,1.0s							
AVF	**Avril sur Loir**	**83.95**	**337**	*e*P	**P**	**10**	**58**	**24.2 -0.7**
AVF				pmax	pmax			
	comp=Z,7.0nm,0.8s							
LPL	**La Plagne**	**84.10**	**334**	*e*P	**P**	**10**	**58**	**25.7 -0.3**
LPL				pmax	pmax			
	comp=Z,6.0nm,0.7s							
SGMF	**Saint Gilles**	**84.11**	**341**	*e*P	**P**	**10**	**58**	**25.2 -0.5**
SGMF				pmax	pmax			
	comp=Z,11nm,0.8s							
LPG	**La Plagne**	**84.11**	**334**	*e*P	**P**	**10**	**58**	**25.8 -0.4**
LPG				pmax	pmax			
	comp=Z,9.0nm,0.7s							
ROSF	**Rostrenen**	**84.19**	**342**	*e*P	**P**	**10**	**58**	**25.7 -0.5**
ROSF				pmax	pmax			
	comp=Z,40nm,1.3s							
BNI	**Bardonecchia**	**84.53**	**334**	IAmb	IAmb	10	58	29.4
	comp=Z,4.4nm,0.8s							
MBDF	**Montbardon**	**84.79**	**334**	*e*P	**P**	**10**	**58**	**28.8 -0.7**
MBDF				pmax	pmax			
	comp=Z,3.0nm,0.4s							
ORIF	**Oris-en-Rattie**	**84.90**	**334**	*e*P	**P**	**10**	**58**	**30.3 +0.4**
ORIF				pmax	pmax			
	comp=Z,10.0nm,0.8s							
MFF	**Saint Martin d**	**85.06**	**339**	*e*P	**P**	**10**	**58**	**30.3 -0.3**
MFF				pmax	pmax			
	comp=Z,10.0nm,0.8s							
VIVF	**Saint-Julien-l**	**85.32**	**335**	*e*P	**P**	**10**	**58**	**31.7 -0.3**
VIVF				pmax	pmax			
	comp=Z,5.0nm,0.7s							
SBF	**Sospel**	**85.35**	**333**	*e*P	**P**	**10**	**58**	**31.4 -0.8**
SBF				pmax	pmax			
	comp=Z,6.0nm,0.6s							
ITM	**Ithomi**	**85.38**	**320**	IAmb	IAmb	10	58	52.0
	comp=Z,9.1nm,0.9s							
RJF	**Les Rejaudoux**	**85.82**	**337**	*e*P	**P**	**10**	**58**	**34.1 -0.3**
RJF				pmax	pmax			
	comp=Z,21nm,1.6s							
CAF	**Calviac**	**86.02**	**337**	*e*P	**P**	**10**	**58**	**35.6 +0.2**
CAF				pmax	pmax			
	comp=Z,5.0nm,0.7s							
LFF	**La Frestale**	**86.37**	**338**	*e*P	**P**	**10**	**58**	**37.2 +0.1**
LFF				pmax	pmax			
	comp=Z,15nm,0.9s							
ETSF	**Etsaut**	**88.61**	**338**	*e*P	**P**	**10**	**58**	**48.9 +0.9**
ETSF				pmax	pmax			
	comp=Z,15nm,1.4s							
ESDC	**Sonseca Array**	**92.53**	**339**	P	**P**	**10**	**59**	**05.8 -0.4**
	comp=Z,0.4nm,0.4s,baz=30,slow=3.8,SNR=4.8							
	comp=Z,0.4nm,0.4s							
TORD	**Torodi Ar. Bea**	**115.12**	**324**	PKP	**PKiKP**	**11**	**04**	**35.4 -0.9**
	comp=Z,0.4nm,0.7s,baz=9.3,slow=1.9,SNR=2.1							
VNA2	**Neumayer--Watz**	**151.11**	**196**	P	**PKiKP**	**11**	**05**	**47.6 +0.6**
	baz=238,slow=6.3							
VNA2	**Neumayer--Watz**	**151.11**	**196**	P	PKPab	11	06	10.0 +16
	baz=79,slow=1.1							

*IDC **11** 11:06:59.1±1.4, 19°.98N×121°.41E, h0km, mb3.4/3, mbtmp3.5/4, ML3.6/1, MS3.4/1, Error ellipse: s-maj=68.1km s-min=24.8km az=72.0*

MAN 11 11:07:17.0, 20°.00N×122°.88E, h1km, mb4.1, ML2.9, MS2.5, 3C-3D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGCP	**Gonzaga**	**1.91**	**204**	⇑*e*P	Pb	11 07 51.5	-0.3
SGCP				*e*S	Sn	11 07 54.4	-18
APYP	**Conner**	**2.63**	**216**	⇓*e*P	Pn	11 08 00.9	+1.9
CAUP	**Cauayan**	**3.20**	**198**	⇓*e*P	Pb	11 08 12.5	-0.9
CAUP				*e*S	Sb	11 08 55.0	+2.9
SAMP	**Sagada Mountai**	**3.45**	**213**	⇑*e*P	Pn	11 08 12.4	+2.2
SMPP	**San Manuel, Pa**	**4.36**	**209**	⇑*e*P	Pn	11 08 25.1	+2.5
SMPP				*e*S	Sn	11 09 15.2	+2.0
BALP	**Baler**	**4.41**	**197**	⇓*e*P	Pn	11 08 26.9	+4.2
BALP				*e*S	Sb	11 09 24.2	-2.7
KSRS	**Korea Array**	**17.94**	**13**	P	Pn	11 11 12.8	-12
	0.2nm,0.3s,baz=199,slow=12,SNR=8.3						
	1.1nm,0.5s						
WRA	**Warramunga Arr**	**41.25**	**164**	P	P	11 14 48.8	-11
	0.5nm,0.8s,baz=332,slow=10,SNR=4.6						
	0.5nm,0.8s						
MKAR	**Makanchi Array**	**42.46**	**319**	P	P	11 14 49.0	-22
	0.4nm,0.4s,baz=109,slow=9.2,SNR=5.7						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**44.71**	**166**	P	P	11 15 17.5	-10
	0.2nm,0.7s,baz=340,slow=6.5,SNR=4.1						
	0.2nm,0.7s						
HNR	**Honiara**	**46.76**	**125**	LR	LR	11 33 58.2	
	comp=Z,41nm,20.3s,baz=85,slow=34						

*IDC **11** 11:17:58.5±1.1, 34°.13N×136°.18E, h382km±14km, mb2.9/6, mbtmp3.6/8, Error ellipse: s-maj=26.1km s-min=16.8km az=61.0*

*JMA **11** 11:17:59.8±0.2, 34°.1±1°×136°.1E±1°.0, h380km±1km, MV2.7/30, SOUTHERN NARA PREF*

ISC 11 11:17:58.9±0.9, 34°.16N±0°.10×136°.12E±0°.08, h385km±7km, n24, σ9°.70/27, mb3.2/6, Western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKN2	**Miekihoku**	**0.15**	**59**	P	**Pn**	**11 18 47.0**	**+0.4**
JKN2				*e*S	**S**	**11 19 24.7**	**-0.4**
JNTK	**Naratenkawa**	**0.22**	**300**	*e*P	**Pn**	**11 18 47.2**	**+0.5**
JWY	**Kouya**	**0.44**	**278**	P	**Pn**	**11 18 47.7**	**+0.7**
JTNC	**Tanabenakahech**	**0.54**	**231**	P	**Pn**	**11 18 47.3**	**0.0**
JIE	**Ise**	**0.54**	**64**	P	**Pn**	**11 18 47.9**	**+0.7**
JWT	**Wachi**	**1.27**	**333**	P	**Pn**	**11 18 49.6**	**+0.2**
JWT				*e*S	**S**	**11 19 29.4**	**-0.8**
JAI	**Aioi**	**1.43**	**256**	P	**Pn**	**11 18 50.7**	**+0.4**
JYTA	**Yamagatataniai**	**1.52**	**19**	P	**Pn**	**11 18 51.1**	**+0.5**
JMN	**Monobe**	**1.91**	**258**	*e*P	**Pn**	**11 18 53.5**	**+0.5**
JKG	**Kaga**	**2.12**	**5**	P	**Pn**	**11 18 54.3**	**+0.1**
JHS	**Saijyo**	**2.61**	**290**	P	**Pn**	**11 18 58.3**	**+0.5**
JOD2	**Odawara 2**	**2.69**	**65**	*e*P	**Pn**	**11 18 59.9**	**+1.5**
MJAR	**Matsushiro Arr**	**2.93**	**35**	P	**Pn**	**11 18 59.9**	**-0.5**
	2.3nm,0.5s,baz=201,slow=8.7,SNR=5.8						
MJAR				S	**S**	**11 19 49.3**	**-0.7**
	0.4nm,0.5s,baz=300,slow=12,SNR=1.2						
JRY	**Ryogami san**	**2.94**	**50**	P	**Pn**	**11 19 01.7**	**+1.2**
JTO	**Tosashimizu**	**3.06**	**246**	P	**Pn**	**11 19 02.0**	**+0.5**
JGT2	**ShimaneMisato**	**3.11**	**288**	P	**Pn**	**11 19 02.3**	**+0.5**
JOI	**OKI**	**3.17**	**313**	*e*P	**Pn**	**11 19 03.4**	**+1.0**
KSRS	**Korea Array**	**7.42**	**299**	P	**Pn**	**11 19 47.3**	**+0.4**
	1.8nm,0.7s,baz=124,slow=11,SNR=8.0						
SONM	**Songino Array**	**26.08**	**311**	P	**P**	**11 22 59.8**	**+0.6**
	0.6nm,0.4s,baz=119,slow=9.4,SNR=4.7						
	0.6nm,0.4s						
MKAR	**Makanchi Array**	**42.06**	**304**	P	**P**	**11 25 15.0**	**+0.4**
	0.4nm,0.6s,baz=85,slow=8.9,SNR=4.2						
	0.4nm,0.6s						
WRA	**Warramunga Arr**	**53.83**	**182**	P	**P**	**11 26 43.5**	**-0.2**
	0.5nm,0.3s,baz=0.4,slow=7.6,SNR=12						
	0.5nm,0.3s						
ASAR	**Alice Springs**	**57.54**	**182**	P	**P**	**11 27 09.0**	**-0.8**
	0.3nm,0.6s,baz=1.8,slow=6.0,SNR=5.7						
	0.3nm,0.6s						
FINES	**FINESS Array B**	**69.29**	**331**	P	**P**	**11 28 24.5**	**-0.8**
	1.6nm,0.9s,baz=38,slow=7.0,SNR=1.6						
	1.6nm,0.9s						
NVAR	**Mina Array Bea**	**80.15**	**50**	P	**P**	**11 29 28.0**	**+0.3**
	0.2nm,0.5s,baz=295,slow=4.9,SNR=2.6						
	0.2nm,0.5s						

*ISK **11** 11:54:19.4, 35°.59N×31°.65E, h12km, ML2.6/15*

*DDA **11** 11:54:21.4±0.0, 35°.71N×31°.60E, h7km±7km, ML2.3*

*NIC **11** 11:54:21.0±0.0, 35°.77N×31°.89E, h13km±1km, Ml2.9/4*

ISC 11 11:54:20.7±1.2, 35°.65N±0°.03×31°.68E±0°.04, h16km±10km, n29, σ1°.29/40, Cyprus region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAZI	**Gazipasa**	**0.78**	**41**	PG	**Pb**	**11 54 36.3**	**+0.4**
GAZI				SG	**Sn**	**11 54 47.9**	**-0.6**
GAZI	**Gazipasa**	**0.78**	**41**	P	**Pb**	**11 54 36.6**	**+0.7**
GAZI				S	**Sn**	**11 54 48.6**	**+0.2**
AKMS	**Akamas**	**0.82**	**139**	S	**Sg**	**11 54 49.2**	**+1.5**
AKMS				AML	AML	11 54 54.6	
	1.7nm,0.3s						
AKMS				AML	AML	11 54 56.8	
	1.6nm,0.5s						
ALFC	**Alefka**	**0.90**	**123**	P	**Pg**	**11 54 36.7**	**-1.4**
ALFC				S	**Sg**	**11 54 49.7**	**-0.2**
ALFC				AML	AML	11 54 55.7	
	1.4nm,0.7s						
ALFC				AML	AML	11 54 55.7	
	1.4nm,0.7s						
ALFC				AML	AML	11 54 57.7	
	2.0nm,0.3s						
ALFC				AML	AML	11 54 57.7	
	2.0nm,0.3s						
AKDN	**Akdeniz- Kıbrı**	**1.11**	**108**	PN	**Pb**	**11 54 40.9**	**-0.6**
AKDN				SN	**Sb**	**11 54 57.0**	**+1.4**
LEF	**Lefka**	**1.12**	**118**	PN	**Pb**	**11 54 40.7**	**-1.0**
NATA	**Nata**	**1.13**	**140**	P	**Pn**	**11 54 42.2**	**+0.3**
NATA				S	**Sb**	**11 54 58.9**	**+2.5**
NATA				AML	AML	11 55 06.4	
	2.8nm,0.7s						
NATA				AML	AML	11 55 06.4	
	2.8nm,0.7s						
NATA				AML	AML	11 55 06.7	
	2.1nm,0.6s						
NATA				AML	AML	11 55 06.7	
	2.1nm,0.6s						
KEPZ	**Antalya-Kepez**	**1.25**	**357**	P	**Pn**	**11 54 43.2**	**-0.4**
KEPZ				S	**Sn**	**11 55 00.3**	**+0.1**
KEPZ				*i* AML	AML	11 55 01.0	
	comp=E,47nm,0.3s						
KEPZ				*i* AML	AML	11 55 02.0	
	comp=N,76nm,0.2s						
TEKE	**Tekeli-Mersin**	**1.26**	**67**	PN	**Pn**	**11 54 44.1**	**+0.4**
TEKE				SN	**Sg**	**11 55 02.1**	**+0.5**
AKUM	**Antalya-Kumluc**	**1.28**	**302**	P	**Pn**	**11 54 43.2**	**-0.7**
AKUM				S	**Sg**	**11 55 02.7**	**+0.7**
AKUM				*i* AML	AML	11 55 08.0	
	comp=N,71nm,0.5s						
SZAC	**Souni**	**1.33**	**132**	P	**Pn**	**11 54 45.2**	**+0.6**
SZAC				S	**Sn**	**11 55 02.8**	**+0.8**
SZAC				AML	AML	11 55 08.9	
	0.6nm,1.3s						
SZAC				AML	AML	11 55 08.9	
	0.6nm,1.3s						
SZAC				AML	AML	11 55 12.4	
	0.5nm,0.6s						
SZAC				AML	AML	11 55 12.4	
	0.5nm,0.6s						
BERE	**Bereket-Mersin**	**1.43**	**60**	PN	**Pn**	**11 54 46.9**	**+0.7**
BERE				SN	**Sb**	**11 55 06.3**	**+1.1**
HDMB	**Hadim**	**1.47**	**26**	PN	**Pb**	**11 54 47.5**	**-0.2**
CSS	**Mathiatis**	**1.51**	**116**	P	**Pn**	**11 54 46.7**	**-0.4**
ASGA	**Asgata**	**1.54**	**123**	S	**Sn**	**11 55 06.2**	**-1.1**
LFK	**Lefkose**	**1.56**	**103**	PN	**Pn**	**11 54 47.9**	**+0.1**
AKKU	**Akkuyu-Mersin**	**1.60**	**71**	PN	**Pn**	**11 54 48.8**	**+0.4**
TISA	**Tisan-Mersin**	**1.70**	**72**	PN	**Pn**	**11 54 50.3**	**+0.6**
MVOU	**Mavrovouni**	**1.71**	**111**	P	**Pn**	**11 54 48.7**	**-1.3**
KORT	**Korkueli**	**1.73**	**322**	PN	**Pn**	**11 54 50.3**	**+0.1**
SEYD	**Seydisehir-KON**	**1.76**	**4**	PN	**Pn**	**11 54 51.0**	**+0.3**
ELL	**Elmali**	**1.81**	**308**	PN	**Pn**	**11 54 52.1**	**+0.8**
KKBE	**Karaman, Kazim**	**1.87**	**33**	P	**Pb**	**11 54 55.0**	**+0.5**
KKBE				S	**Sn**	**11 55 09.7**	**-5.8**
SUTC	**Sutluce-Ispart**	**1.91**	**343**	PN	**Pn**	**11 54 53.3**	**+0.6**
EREN	**Erenkoy**	**2.03**	**93**	PN	**Pn**	**11 54 54.9**	**+0.6**
KIZK	**Mersin**	**2.16**	**67**	PN	**Pn**	**11 54 57.0**	**+0.9**
CAME	**Cameli-Denizli**	**2.32**	**305**	PN	**Pn**	**11 54 58.4**	**0.0**
KONT	**Konya--Tatoy**	**2.36**	**13**	PN	**Pn**	**11 54 59.6**	**+0.8**
APMY	**Acipayam-Deniz**	**2.64**	**314**	PN	**Pn**	**11 55 03.5**	**+0.7**

ROM 11 12:15:47.0±0.2, 44°.903N±0°.010×10°.57E±0°.01, h10km, ML1.8/6, Error ellipse: s-maj=1.1km s-min=1.0km az=5.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAVE	**Cavezzo**	**0.31**	**97**	P	Pn	12 15 56.3	-1.2
CAVE				S	Sb	12 16 02.4	+2.7
SALO	**Salr**	**0.72**	**358**	P	Pn	12 16 03.8	+0.6
SALO				S	Sn	12 16 15.1	+0.8
EQUI	**Equi**	**0.80**	**202**	P	Pn	12 16 04.7	+0.4
ROVR	**Rover Verones**	**0.82**	**25**	P	Pn	12 16 05.0	+0.2
ROVR				S	Sn	12 16 18.0	+0.9
ROVR				AML	AML		
	comp=N,59μm,1.1s						
ROVR				AML	AML		
	comp=E,19μm,0.3s						
ZOVE	**Zovencedo**	**0.85**	**49**	P	Pn	12 16 05.5	+0.5
MAGA	**Magasa**	**0.87**	**3**	P	Pn	12 16 05.7	+0.3
MAGA				S	Sn	12 16 18.8	+0.5
MAGA				AML	AML		
	comp=E,164μm,1.4s						
MAGA				AML	AML		
	comp=N,158μm,0.2s						
TEOL	**Teolo**	**0.90**	**59**	P	Pn	12 16 06.4	+0.7
MTCR	**Monte La Croce**	**0.93**	**161**	P	Pn	12 16 06.8	+0.7
MSSA	**Maissana**	**0.95**	**232**	P	Pn	12 16 06.3	-0.2
MDI	**Monti di Nese**	**1.06**	**326**	P	Pn	12 16 09.0	+1.0
MDI				AML	AML		
	comp=E,36μm,1.5s						
MDI				AML	AML		
	comp=N,31μm,0.4s						
DOSS	**Dosso del Somm**	**1.07**	**24**	P	Pn	12 16 08.3	+0.1
DOSS				AML	AML		
	comp=E,34μm,1.3s						
DOSS				AML	AML		
	comp=N,38μm,1.5s						
PCP	**Piancastagn**	**1.49**	**257**	P	Pg	12 16 16.4	+0.9
TRAV	**Traversella**	**2.09**	**288**	P	Pb	12 16 25.4	+0.5
TRAV				AML	AML		
	comp=N,15μm,0.6s						
TRAV				AML	AML		
	comp=E,20μm,0.2s						

*STR **11** 12:16:09.7±0.3, 46°.N±3°×±°, h11km±5km, MLv1.5/7, preliminary*

*ZUR **11** 12:16:09.7, 46°.26N×7°.40E, h9km, MLh1.6/19, Error ellipse: s-maj=1.5km s-min=0.7km az=251.0*

*LDG **11** 12:16:10.1±0.1, 46°.25N×7°.43E, h9km, Ml2.1/16, Error ellipse: s-maj=1.4km s-min=1.4km az=126.0*

GEN 11 12:16:10.3, 46°.20N×7°.47E, h9km±1km, MI1.3, 10C-3D, Switzerland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIOO	**Sion-Ophtalmol**	**0.06**	**297**	⇑Pg	Pg	12 16 11.6	-0.8
SIOO				Sg	Sg	12 16 12.9	-1.0
SIOM	**Sion-Mayennets**	**0.08**	**289**	⇑Pg	Pg	12 16 11.6	-1.0
SIOV	**Sion-Valere**	**0.08**	**294**	⇑Pg	Pg	12 16 11.5	-1.0
SIOV				Sg	Sg	12 16 12.4	-1.7
ESION	**College des Cr**	**0.09**	**286**	⇑Pg	Pg	12 16 11.7	-0.9
ESION				Sg	Sg	12 16 13.1	-1.2
VANNI	**Vissoie, Val d**	**0.09**	**86**	P	Pg	12 16 13.5	+0.7
VANNI				S	Sg	12 16 15.6	+0.9
SIEB	**Ecole de Borzu**	**0.10**	**28**	⇑Pg	Pg	12 16 12.4	-0.5
DIX	**Grande Dixence**	**0.13**	**198**	⇓Pg	Pg	12 16 14.0	+0.5
DIX				Sg	Sg	12 16 16.5	+0.8
DIX	**Grande Dixence**	**0.13**	**198**	P	Pg	12 16 14.0	+0.6
DIX				S	Sg	12 16 16.5	+0.9
DIX	**Grande Dixence**	**0.13**	**198**	Sg	Sg	12 16 16.5	+0.8
DIX	**Grande Dixence**	**0.13**	**198**	⇓Pg	Pg	12 16 14.0	+0.6
SENIN	**Lac Senin/Sane**	**0.20**	**324**	⇓Pg	Pg	12 16 12.8	-1.7
LKBD2	**Leukerbad 2**	**0.21**	**36**	⇑Pg	Pg	12 16 14.2	-0.5
LKBD	**Leukerbad**	**0.21**	**31**	⇑Pg	Pg	12 16 14.2	-0.6
GRYON	**Gryon**	**0.25**	**281**	⇑Pg	Pg	12 16 14.0	-1.4
GRYON				Sg	Sg	12 16 17.0	-1.9
EMBD	**Embd, Matterta**	**0.26**	**87**	Sg	Sg	12 16 19.9	+0.9
EMBD	**Embd, Matterta**	**0.26**	**87**	P	Pg	12 16 16.1	+0.6
EMBD				S	Sg	12 16 19.9	+0.9
EMBD	**Embd, Matterta**	**0.26**	**87**	Sg	Sg	12 16 19.9	+0.9
EMBD	**Embd, Matterta**	**0.26**	**87**	Pg	Pg	12 16 16.0	+0.6
SALAN	**Lac Salanfe**	**0.35**	**260**	⇑Pg	Pg	12 16 16.3	-0.9
SALAN	**Lac Salanfe**	**0.35**	**260**	P	Pg	12 16 16.3	-0.9
SALAN				S	Sg	12 16 20.7	-1.1
MMK	**Mattmark**	**0.38**	**114**	P	Pg	12 16 18.4	+0.6
MMK				S	Sg	12 16 23.9	+1.1
AIGLE	**Aigle**	**0.38**	**291**	Sg	Sg	12 16 20.2	-2.6
AIGLE	**Aigle**	**0.38**	**291**	Pg	Pg	12 16 16.4	-1.3
SIMPL	**Simplonpass**	**0.39**	**84**	⇑Pg	Pg	12 16 18.3	+0.3
SIMPL				Sg	Sg	12 16 23.9	+0.8
SIMPL	**Simplonpass**	**0.39**	**84**	P	Pg	12 16 18.3	+0.3
SIMPL				S	Sg	12 16 23.9	+0.8
SATI	**Passo dei Sala**	**0.43**	**139**	P	Pg	12 16 19.5	+0.7
MRGE	**Morge**	**0.52**	**213**	P	Pg	12 16 20.2	-0.2
MRGE				S	Sg	12 16 27.5	+0.3
TRAV	**Traversella**	**0.72**	**164**	P	Pg	12 16 24.4	+0.3
RSL	**Roselend**	**0.78**	**229**	P	Pg	12 16 24.7	-0.7
RSL				S	Sg	12 16 34.8	-0.7
RSL	**Roselend**	**0.78**	**229**	Pg	Pg	12 16 24.7	-0.6
RSL				Sg	Sg	12 16 34.6	-0.9
LPL	**La Plagne**	**0.86**	**217**	*e*Pg	Pg	12 16 26.8	0.0
LPL				*e*Sg	Sg	12 16 38.3	+0.3
	3.6nm,0.4s						
LPG	**La Plagne**	**0.86**	**215**	*e*Pg	Pb	12 16 27.6	0.0
LPG				*e*Sg	Sb	12 16 39.3	0.0
	11nm,0.3s						
FUSIO	**Fusio**	**0.87**	**73**	P	Pg	12 16 26.8	-0.2
FUSIO	**Fusio**	**0.87**	**73**	P	Pg	12 16 26.8	-0.2
FUSIO				AML	AML		
	comp=E,10μm,1.2s						
FUSIO				AML	AML		
	comp=N,11μm,1.1s						
FUSIO				AML	AML		
	comp=N,11μm,1.1s						
FUSIO				AML	AML		
	comp=E,10μm,1.2s						
FUSIO				AML	AML		
	comp=N,11μm,1.1s						
FUSIO				AML	AML		
	comp=E,10μm,1.2s						
VARE	**Varese**	**0.97**	**110**	S	Sg	12 16 41.4	-0.1
CABF	**La Chapelle**	**1.04**	**294**	*e*Pg	Pg	12 16 29.9	-0.3
CABF				*e*Sg	Sg	12 16 42.5	-1.2
	comp=E,4.1nm,0.2s						
RSP	**Reno Superiore**	**1.06**	**188**	P	Pn	12 16 32.0	+0.5
RSP				S	Sg	12 16 43.8	-0.8
BALST	**Balsthal**	**1.14**	**8**	P	Pb	12 16 31.3	-0.9
BALST				Pg	Pn	12 16 32.5	0.0
BALST	**Balsthal**	**1.14**	**8**	Sg	Sn	12 16 48.0	-0.3
CHMF	**Charmoille**	**1.19**	**332**	Pn	Pb	12 16 31.4	-1.5
CHMF				Pg	Pg	12 16 32.4	-0.6
CHMF				Sg	Sb	12 16 47.2	-1.2
RIVEL	**MONT RIVEL**	**1.20**	**298**	Pg	Pb	12 16 33.0	-0.2
RIVEL				Sg	Sg	12 16 49.1	+0.2
OGSM	**Saint Maurice**	**1.37**	**245**	Pg	Pb	12 16 35.9	-0.1
OGSM				Sg	Sg	12 16 55.8	+1.4
MBDF	**Montbardon**	**1.56**	**199**	*e*Pg	Pb	12 16 39.6	+0.3
MBDF				*e*Sg	Sg	12 17 00.7	+0.4
	comp=E,1.6nm,0.3s						
HINF	**Hinteralfeld**	**1.67**	**346**	*e*Pg	Pn	12 16 40.1	+0.5
HINF				*e*Sg	Sn	12 17 00.6	-0.6
	comp=E,6.9nm,0.3s						
ORIF	**Oris-en-Rattie**	**1.70**	**221**	*e*Pn	Pn	12 16 39.3	-0.8
ORIF	**Oris-en-Rattie**	**1.70**	**221**	*e*Pg	Pg	12 16 42.3	-0.6
ORIF				*e*Sg	Sg	12 17 05.0	+0.1
	comp=E,2.5nm,0.3s						
SLE	**Schleitheim**	**1.71**	**24**	Pn	Pb	12 16 42.1	+0.2
SLE	**Schleitheim**	**1.71**	**24**	Sn	Sb	12 17 03.8	+0.3
HAU	**Haudompre**	**1.96**	**337**	*e*Pn	Pn	12 16 42.1	-1.5
HAU	**Haudompre**	**1.96**	**337**	*e*Pg	Pb	12 16 45.2	-0.9
HAU				*e*Sn	Sn	12 17 05.2	-3.1
HAU				*e*Sg	Sb	12 17 08.8	-1.8
	comp=E,4.7nm,0.4s						
CDF	**Champ du Feu**	**2.21**	**357**	*e*Pn	Pn	12 16 45.6	-1.6
CDF	**Champ du Feu**	**2.21**	**357**	*e*Pg	Pb	12 16 50.5	0.0
CDF				*e*Sn	Sn	12 17 10.9	-3.8
CDF				*e*Sg	Sb	12 17 18.1	+0.1
	comp=E,1.0nm,0.3s						
VIVF	**Saint-Julien-l**	**2.38**	**237**	*e*Pg	Pb	12 16 54.1	+0.8
VIVF				*e*Sn	Sn	12 17 16.6	-2.1
VIVF				*e*Sg	Sg	12 17 25.0	-1.7
	comp=E,1.6nm,0.3s						
SMF	**Signal de Mont**	**2.54**	**281**	*e*Pn	Pn	12 16 50.0	-1.7
SMF	**Signal de Mont**	**2.54**	**281**	*e*Pg	Pb	12 16 55.5	-0.6
SMF				*e*Sg	Sb	12 17 29.1	+1.7
	comp=E,1.4nm,0.2s						
SFTF	**Sexfontaines**	**2.60**	**321**	*e*Sg	Sb	12 17 30.2	+1.3
	comp=E,8.0nm,0.6s						
PAGF	**Fort de Pagny**	**2.63**	**334**	*e*Pn	Pn	12 16 50.8	-2.1
	baz=147						
PAGF	**Fort de Pagny**	**2.63**	**334**	*e*P	Pn	12 16 52.9	0.0
PAGF	**Fort de Pagny**	**2.63**	**334**	*e*Pg	Pb	12 16 58.1	+0.5
LOR	**Lormes**	**2.70**	**295**	*e*Pn	Pn	12 16 51.4	-2.4
LOR	**Lormes**	**2.70**	**295**	*e*Pg	Pb	12 16 58.5	-0.2
	baz=114						
LOR				*e*Sn	Sn	12 17 24.1	-2.5
LOR				*e*Sg	Sb	12 17 33.0	+1.1
	comp=E,0.8nm,0.2s						
SSF	**Saint Saulge**	**2.86**	**289**	*e*Pn	Pn	12 16 54.8	-1.2
SSF	**Saint Saulge**	**2.86**	**289**	*e*Pg	Pb	12 17 03.2	+1.8
SSF				*e*Sg	Sb	12 17 38.3	+1.8
	comp=E,0.7nm,0.2s						
AVF	**Avril sur Loir**	**2.90**	**283**	*e*Pn	Pn	12 16 55.7	-0.8
AVF	**Avril sur Loir**	**2.90**	**283**	*e*Pg	Pb	12 17 03.8	+1.7
AVF				*e*Sn	Sn	12 17 29.1	-2.4
AVF				*e*Sg	Sg	12 17 41.3	-2.1
	comp=E,0.4nm,0.2s						

*IDC **11** 12:16:32.2±0.7, 8°.94N×126°.26E, h0km, mb4.0/12, mbtmp4.0/12, MS2.7/4, Error ellipse: s-maj=29.9km s-min=11.7km az=92.0*

*MAN **11** 12:16:40.4, 8°.97N×126°.43E, h27km, mb4.7, ML3.6, MS3.5*

*NEIC **11** 12:16:43.4±1.2, 8°.94N±0°.06×126°.3E±0°.2, h90km±8km, mb4.3/18, Error ellipse: s-maj=24.8km s-min=9.3km az=93.0*

**ISC 11 12:16:40.7±1.2, 8°.98N±0°.05×126°.49E±0°.07, h64km±11km, n65, σ1

WRA	**Warramunga Arr**	**29.76**	**165**	P		**P**	**12 22 40.0**	**-1.3**
	comp=Z,0.6nm,0.7s,baz=343,slow=9.4,SNR=4.9							
	comp=Z,0.6nm,0.7s							
WB2	**Warramunga Arr**	**29.76**	**165**	P		**P**	**12 22 39.7**	**-1.7**
WB2				IAmb		IAmb	12 22 42.8	
	comp=Z,5.1nm,0.9s							
WR0	**Warramunga Arr**	**29.82**	**165**	P		**P**	**12 22 41.3**	**-0.6**
AS31	**Alice Springs**	**33.24**	**168**	P		**P**	**12 23 11.5**	**-0.4**
ASAR	**Alice Springs**	**33.24**	**168**	P		**P**	**12 23 11.3**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=349,slow=6.9,SNR=15							
ASAR				PcP		**PcP**	**12 25 53.5**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=339,slow=2.9,SNR=7.2							
	comp=Z,0.6nm,0.7s							
ASAR	**Alice Springs**	**33.24**	**168**	P		**P**	**12 23 10.3**	**-1.7**
H11S3	**WAKE ISLAND Hy**	**40.09**	**72**	T		T	13 07 15.9	
	baz=262,slow=75,SNR=61							
H11S1	**WAKE ISLAND Hy**	**40.11**	**72**	T		T	13 07 13.0	
	baz=262,slow=75,SNR=63							
H11S2	**WAKE ISLAND Hy**	**40.11**	**72**	T		T	13 07 08.6	
	baz=262,slow=75,SNR=63							
KLR	**Kul'dur**	**40.37**	**5**	P		**P**	**12 24 12.9**	**+0.8**
	comp=Z,0.8nm,0.4s,baz=206,slow=17,SNR=2.9							
	comp=Z,0.8nm,0.4s							
H11N1	**WAKE ISLAND Hy**	**40.47**	**70**	T		T	13 07 50.9	
	baz=265,slow=74,SNR=24							
H11N2	**WAKE ISLAND Hy**	**40.48**	**70**	T		T	13 07 50.8	
	baz=265,slow=74,SNR=18							
H11N3	**WAKE ISLAND Hy**	**40.48**	**70**	T		T	13 07 51.8	
	baz=265,slow=74,SNR=29							
BBOO	**Buckleboo**	**42.54**	**168**	P		**P**	**12 24 29.7**	**-0.5**
STKA	**Stephens Creek**	**43.11**	**161**	P		**P**	**12 24 34.8**	**0.0**
	comp=Z,1.0nm,0.3s,baz=354,slow=9.4,SNR=3.9							
	comp=Z,1.0nm,0.3s							
STKA	**Stephens Creek**	**43.11**	**161**	P		**P**	**12 24 34.2**	**-0.6**
PETK	**Petropavlovsk-**	**50.72**	**24**	P		**P**	**12 25 35.4**	**+1.5**
	comp=Z,0.9nm,0.7s,baz=236,slow=2.7,SNR=4.1							
	comp=Z,0.9nm,0.7s							
PETK	**Petropavlovsk-**	**50.72**	**24**	P		**P**	**12 25 34.0**	**+0.1**
MK31	**Makanchi Array**	**53.19**	**323**	P		**P**	**12 25 51.3**	**-1.0**
MK31				IAmb		IAmb	12 25 52.9	
	comp=Z,2.2nm,1.1s							
MKAR	**Makanchi Array**	**53.19**	**323**	P		**P**	**12 25 52.0**	**-0.4**
	comp=Z,1.4nm,0.6s,baz=127,slow=8.0,SNR=15							
MKAR				PcP		**PcP**	**12 26 59.2**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=103,slow=4.2,SNR=4.7							
	comp=Z,1.4nm,0.6s							
MKAR	**Makanchi Array**	**53.19**	**323**	P		**P**	**12 25 50.5**	**-1.9**
MAKZ	**Makanchi**	**53.38**	**323**	P		**P**	**12 25 52.8**	**-1.0**
MAKZ				IAmb		IAmb	12 25 53.8	
	comp=Z,2.2nm,1.1s							
ZALV	**Zalesovo Beam**	**55.86**	**332**	P		**P**	**12 26 10.1**	**-1.5**
	comp=Z,0.6nm,0.3s,baz=112,slow=12,SNR=3.9							
	comp=Z,0.6nm,0.3s							
KURK	**Kurchatov**	**57.26**	**326**	P		**P**	**12 26 19.8**	**-1.7**
KURK				IAmb		IAmb	12 26 21.7	
	comp=Z,5.0nm,1.1s							
KURBB	**Kurchatov Arra**	**57.26**	**326**	P		**P**	**12 26 20.5**	**-1.1**
	comp=Z,1.1nm,0.3s,baz=124,slow=5.9,SNR=4.5							
	comp=Z,1.1nm,0.3s							
BKZ	**Black Stump Fm**	**66.66**	**140**	P		**P**	**12 27 24.8**	**0.0**
ABKAR	**Akbulak array**	**68.00**	**320**	P		**P**	**12 27 32.1**	**-1.0**
KDAK	**Kodiak Island**	**77.62**	**33**	P		**P**	**12 28 31.1**	**+1.2**
ILAR	**Eielson Array**	**80.50**	**26**	P		**P**	**12 28 48.0**	**+2.4**
	comp=Z,0.4nm,0.6s,baz=267,slow=4.3,SNR=3.7							
	comp=Z,0.4nm,0.6s							
BMAR	**Burnt Mountain**	**81.37**	**23**	P		**P**	**12 28 52.1**	**+1.9**
BCAR	**Beaver Creek A**	**82.85**	**27**	P		**P**	**12 28 57.1**	**-1.0**
ARCES	**ARCESS Array B**	**85.48**	**340**	P		**P**	**12 29 11.4**	**+0.2**
	comp=Z,1.3nm,0.8s,baz=11,slow=1.2,SNR=4.4							
	comp=Z,1.3nm,0.8s							
ARCES	**ARCESS Array B**	**85.48**	**340**	P		**P**	**12 29 10.7**	**-0.6**
FINES	**FINESS Array B**	**87.13**	**332**	P		**P**	**12 29 18.4**	**-1.0**
	comp=Z,1.7nm,0.8s,baz=90,slow=3.8,SNR=6.5							
	comp=Z,1.7nm,0.8s							
FINES	**FINESS Array B**	**87.13**	**332**	P		**P**	**12 29 18.0**	**-1.5**
VNDA	**Vanda**	**88.62**	**173**	P		**P**	**12 29 26.0**	**-0.2**
	comp=Z,0.9nm,0.7s,baz=313,slow=4.9,SNR=4.3							
	comp=Z,0.9nm,0.7s							
VNDA	**Vanda**	**88.62**	**173**	P		**P**	**12 29 26.6**	**+0.4**
VNDA				IAmb		IAmb	12 29 40.1	
	comp=Z,1.9nm,1.1s							
TORD	**Torodi Ar. Bea**	**120.94**	**291**	PKP		**PKPdf**	**12 35 26.5**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=28,slow=1.6,SNR=1.8							

MAN 11 12:36:50.1, 9.83N×123.14E, h24km, mb4.0, ML2.8, MS2.4, 1C-3D, Negros

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CNOP	**Candoni, Negro**	**0.49**	**270**	*eP*		Pb	12 37 00.8	+0.7
CNOP				*eS*			12 37 21.8	
TBP	**Tagbilaran**	**0.73**	**101**	*iP*		Pb	12 37 03.5	+0.5
TBP				*iS*			12 37 14.4	
GUIM	**Jordan**	**0.96**	**326**	*eP*		Pb	12 37 07.8	+0.2
PAGZ	**Pagadian**	**1.98**	**173**	*eP*		Pn	12 37 23.3	+1.2
PAGZ				*eS*			12 37 53.4	

MAN 11 12:39:11.1, 9.77N×123.17E, h45km, mb3.8, ML2.5, MS2.0, Negros

IDC 11 12:41:25.8±1.6, 26.27N×99.86E, h0km, mb3.4/2, mbtmp3.4/3, ML3.7/1, MS3.0/2, Error ellipse: s-maj=55.1km s-min=25.1km az=69.0, Yunnan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CMAR	**Chiang Mai Arr**	**7.82**	**186**	Pn		Pn	12 43 20.6	-0.4
	0.3nm,0.3s,baz=1.2,slow=12,SNR=6.7							
CMAR				Pg		Pg	12 43 49.5	-6.2
	0.5nm,0.3s,baz=356,slow=17,SNR=14							
CMAR				Lg		Lg	12 45 27.4	
	0.5nm,0.3s,baz=5.7,slow=30,SNR=3.1							
	0.8nm,0.5s							
MKAR	**Makanchi Array**	**24.77**	**330**	P		P	12 46 49.4	+0.2
	0.8nm,0.6s,baz=130,slow=9.8,SNR=8.9							
	0.8nm,0.6s							
KSRS	**Korea Array**	**26.22**	**58**	LR		LR	12 58 30.0	
	comp=Z,19nm,18.6s,baz=165,slow=39							
ARU	**Arti**	**42.20**	**327**	LR		LR	13 09 03.9	
	comp=Z,36nm,18.5s,baz=288,slow=39							
WRA	**Warramunga Arr**	**56.84**	**140**	P		P	12 51 12.1	-0.3
	0.2nm,0.5s,baz=340,slow=6.4,SNR=5.6							
	0.2nm,0.5s							

KRSC 11 13:15:16.5±1.4, 50.14N×159.21E, h48km±35km, ML3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KDTR	**Khodutka, Kamc**	**1.82**	**337**	*eP*		Pn	13 15 48.1	+2.8
KDTR				*eS*		Sn	13 16 09.9	+2.8
PAU	**Pauzhetka**	**2.02**	**312**	*eS*		Sn	13 16 13.3	+1.2
SKR	**Severo-Kuril's**	**2.05**	**287**	*eP*		Pn	13 15 48.8	+0.3
RUS	**Russkaya**	**2.34**	**350**	*eP*		Pn	13 15 55.4	+3.0
RUS				*eS*		Sn	13 16 22.9	+3.0
ASAK	**Asacha**	**2.39**	**340**	*eP*		Pn	13 15 56.4	+3.1
ASAK				*eS*		Sn	13 16 23.7	+2.3
MTVR	**Mutnovka**	**2.43**	**345**	*eP*		Pn	13 15 57.1	+3.2
MTVR				*eS*		Sn	13 16 25.6	+3.1
GRL	**Gorelyy**	**2.52**	**344**	*eP*		Pn	13 15 58.6	+3.6
GRL				*eS*		Sn	13 16 28.2	+3.7
MIPR	**Malaya Ipel'ka**	**2.64**	**325**	*eP*		Pn	13 16 00.0	+3.5
KRMR	**Karymshinskiy**	**2.78**	**346**	*eP*		Pn	13 16 02.1	+3.7
KRMR				*eS*		Sn	13 16 35.3	+4.6
PET	**Petropavlovsk**	**2.91**	**353**	*eP*		Pn	13 16 03.3	+3.0
DALK	**Dalny**	**2.91**	**355**	*eP*		Pn	13 16 03.1	+2.8
DALK				*eS*		Sn	13 16 36.8	+2.9
SPN	**Mys Shipunski**	**3.01**	**9**	*eP*		Pn	13 16 04.6	+3.0
UGLR	**Uglovaya**	**3.08**	**356**	*eP*		Pn	13 16 06.1	+3.3
SMAR	**Somma**	**3.14**	**356**	*eP*		Pn	13 16 07.6	+4.0
AVH	**Avacha**	**3.14**	**355**	*eP*		Pn	13 16 07.2	+3.6
SDLR	**Sedlovina**	**3.15**	**356**	*eP*		Pn	13 16 06.8	+3.1
KOK	**Koryaka**	**3.18**	**354**	*eP*		Pn	13 16 07.9	+3.9
KRER	**Koryakskii**	**3.18**	**355**	*eS*		Sn	13 16 45.2	+4.2
KRX	**Arik**	**3.24**	**354**	*eP*		Pn	13 16 08.5	+3.5
GNL	**Ganaly**	**3.65**	**348**	*eP*		Pn	13 16 14.8	+4.3
MKZ	**Mys Kozlova**	**4.69**	**18**	*eP*		Pn	13 16 28.0	+3.4
TUMR	**Tumrok**	**5.18**	**6**	*eP*		Pn	13 16 36.7	+5.1
KBTR	**Krutoberegovo**	**6.46**	**18**	*eP*		Pn	13 16 53.3	+4.4

*SJA **11** 13:44:55.2±0.7, 30.27S×71.69W, h18km±2km, ML4.1, MW4.0*
*GUC **11** 13:44:59.8±0.7, 30.36S×71.41W, h46km±2km, ML4.3*
*NEIC **11** 13:44:59.1±2.2, 30.25S±0.05×71.6W±0.1, h35km±2km, mb4.3/3, ML4.2(GUC), Error ellipse: s-maj=15.7km s-min=8.0km az=277.0*
*IDC **11** 13:45:00.1±1.1, 30.34S×71.36W, h45km±6km, mb3.9/3, mbtmp4.0/7, ML3.8/4, MS3.0/3, Error ellipse: s-maj=46.9km s-min=18.8km az=100.0*
ISC 11 13:44:59.2±0.7, 30.32S±0.02×71.61W±0.04, h44km±6km, n103, σ2.917/150, mb4.1/4, 4C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CO06	**Fray Jorge**	**0.35**	**183**			**Pn**	**13 45 09.0**	**+0.7**
CO06	**Fray Jorge**	**0.35**	**183**	*iP*		**Pn**	**13 45 08.9**	**+0.5**
CO06				*iS*		**Sn**	**13 45 16.0**	**+1.1**
CO06				IAML			13 45 16.8	
	comp=N,15μm,0.4s							
CO05	**La Serena**	**0.52**	**39**			**Pn**	**13 45 08.4**	**-1.9**
CO05	**La Serena**	**0.52**	**39**	*iP*		**Pn**	**13 45 09.9**	**-0.3**
CO05				*iS*		**Sn**	**13 45 17.6**	**-0.5**
CO05				IAML			13 45 20.7	
	comp=E,21μm,0.5s							
GO04	**Tololo Observa**	**0.72**	**79**			**Pn**	**13 45 11.6**	**-1.6**
GO04	**Tololo Observa**	**0.72**	**79**	*iP*		**Pn**	**13 45 11.6**	**-1.6**
GO04				*iS*		**Sn**	**13 45 20.9**	**-2.4**
GO04				IAML			13 45 22.6	
	comp=N,23μm,0.3s							
GO04	**Tololo Observa**	**0.72**	**79**	*eP*		**Pn**	**13 45 11.0**	**-2.2**
GO04				*eS*		**Sn**	**13 45 22.2**	**-1.1**
CO03	**El Pedregal**	**0.95**	**123**			**Pn**	**13 45 14.8**	**-1.5**
CO03	**El Pedregal**	**0.95**	**123**	*iP*		**Pn**	**13 45 14.8**	**-1.5**
CO03				*iS*		**Sn**	**13 45 25.7**	**-3.0**
CO03	**El Pedregal**	**0.95**	**123**	*eP*		**Pn**	**13 45 14.8**	**-1.5**
CO03				*eS*		**Sn**	**13 45 27.3**	**-1.4**
CO02	**Combarbal**	**1.03**	**149**			**Pn**	**13 45 16.9**	**-0.3**
CO02	**Combarbal**	**1.03**	**149**	*iP*		**Pn**	**13 45 16.9**	**-0.4**
CO02				*iS*		**Sn**	**13 45 29.6**	**-1.0**
CO02				IAML			13 45 31.8	
	comp=E,21μm,0.2s							
CO02	**Combarbal**	**1.03**	**149**	*eP*		**Pn**	**13 45 16.0**	**-1.3**
CO02				IAML			13 45 33.3	
	comp=Z,4μm,0.3s							
CO01	**Juntas del Tor**	**1.36**	**76**			**Pn**	**13 45 21.3**	**-0.6**
CO01	**Juntas del Tor**	**1.36**	**76**	*iP*		**Pn**	**13 45 21.4**	**-0.5**
CO01				*iS*		**Sn**	**13 45 36.2**	**-2.7**
CO01	**Juntas del Tor**	**1.36**	**76**	*eP*		Pn	13 45 15.8	-6.2
CO01				*eP*		**Pn**	**13 45 21.4**	**-0.5**
CO01				*eS*		**Sn**	**13 45 37.1**	**-1.8**
CO01				IAML			13 45 38.2	
	comp=Z,3μm,1.0s							
LCO	**Las Campanas**	**1.53**	**32**			**Pn**	**13 45 23.9**	**-0.3**
LCO	**Las Campanas**	**1.53**	**32**	*eP*		**Pn**	**13 45 23.7**	**-0.6**
LCO				*eS*		**Sn**	**13 45 42.8**	**-0.2**
LCO	**Las Campanas**	**1.53**	**32**	*eP*		**Pn**	**13 45 24.0**	**-0.3**
AROD	**Rodeo**	**1.86**	**86**	*eP*		**Pn**	**13 45 30.0**	**+1.1**
AROD				*eS*		**Sn**	**13 45 52.6**	**+1.3**
AC04	**Llanos de Chal**	**2.16**	**13**			**Pn**	**13 45 33.1**	**+0.4**
AC04	**Llanos de Chal**	**2.16**	**13**	*iP*		**Pn**	**13 45 33.1**	**+0.4**
AC04				*iS*		**Sn**	**13 45 57.9**	**-0.4**
AC04				IAML			13 46 08.5	
	comp=E,3μm,0.8s							
AC04	**Llanos de Chal**	**2.16**	**13**	*eP*		**Pn**	**13 45 33.0**	**+0.3**
AC04				*eS*		**Sn**	**13 46 07.0**	**+8.7**
AC04				IAML			13 46 08.0	
	comp=Z,1μm,0.5s							
ACDV	**Cuesta del Vie**	**2.16**	**87**	*eP*		**Pn**	**13 45 34.0**	**+1.1**
ACDV				*eS*		**Sn**	**13 45 56.3**	**-2.3**
ACDV				IAML			13 46 02.1	
	comp=Z,811nm,0.4s							
ACCO	**Cerro Coronel**	**2.22**	**98**	*eP*		**Pn**	**13 45 35.9**	**+2.1**
ACCO				*eS*		Sn	13 46 09.0	+8.8
VA06	**Catapilco**	**2.25**	**173**			**Pn**	**13 45 34.7**	**+0.8**
VA06	**Catapilco**	**2.25**	**173**	*iP*		**Pn**	**13 45 34.9**	**+0.9**
VA06				*iS*		**Sn**	**13 46 01.2**	**+0.7**
VA06				IAML			13 46 16.0	
	comp=E,2μm,0.5s							
RTLS	**Leoncito**	**2.48**	**127**	*eP*		**Pn**	**13 45 39.2**	**+1.9**
RTLS				*eS*		**Sn**	**13 46 13.3**	**+6.8**
RTLS				IAML			13 46 16.9	
	comp=Z,612nm,0.4s							
VA03	**San Esteban**	**2.60**	**160**			**Pn**	**13 45 40.1**	**+1.2**
VA03	**San Esteban**	**2.60**	**160**	*iP*		**Pn**	**13 45 40.0**	**+1.2**
VA03				IAML			13 46 17.7	
	comp=E,2μm,0.2s							
VA03	**San Esteban**	**2.60**	**160**	*eP*		**Pn**	**13 45 40.0**	**+1.2**
VA03				*eS*		**Sn**	**13 46 16.2**	**+6.9**
VA03				IAML			13 46 25.7	
	comp=Z,693nm,0.3s							
AUSP	**Uspallata**	**2.69**	**135**	*eP*		**Pn**	**13 45 37.3**	**-3.0**
AUSP				*eP*		**Pn**	**13 45 42.0**	**+1.8**
ROCH	**El Roble**	**2.69**	**169**	*eP*		**Pn**	**13 45 41.3**	**+1.0**
ROCH				*iS*		**Sn**	**13 46 13.0**	**+1.3**
ROCH				IAML			13 46 29.1	
	comp=N,1μm,0.6s							
VA01	**Torpederas**	**2.70**	**181**			**Pn**	**13 45 40.3**	**+0.3**
VA01	**Torpederas**	**2.70**	**181**	*eP*		**Pn**	**13 45 41.0**	**+1.0**
VA01				*eS*		**Sn**	**13 46 14.3**	**+2.9**
ROC1	**El Roble**	**2.70**	**169**			**Pn**	**13 45 41.4**	**+1.1**
ROC1	**El Roble**	**2.70**	**169**	*eP*		**Pn**	**13 45 36.3**	**-4.0**
ROC1				*eP*		**Pn**	**13 45 41.8**	**+1.5**
ROC1				*eP*		**Pn**	**13 45 42.0**	**+1.7**
ROC1				*eS*		**Sn**	**13 46 15.5**	**+3.7**
ZON	**Zonda**	**2.80**	**117**			**Pn**	**13 45 42.8**	**+1.2**
ZON	**Zonda**	**2.80**	**117**	*eP*		**Pn**	**13 45 45.0**	**+3.4**
RTLL	**Cerro Villicun**	**2.88**	**111**	*eP*		**Pn**	**13 45 41.8**	**-0.9**
RTLL				*eP*		**Pn**	**13 45 44.0**	**+1.4**
RTLL				*eS*		**Sn**	**13 46 20.2**	**+4.1**
PEL	**Peldehue**	**2.93**	**165**			**Pn**	**13 45 44.5**	**+1.2**
PEL	**Peldehue**	**2.93**	**165**	*iP*		**Pn**	**13 45 44.4**	**+1.1**
PEL				*iS*		**Sn**	**13 46 19.1**	**+1.9**
PEL				IAML			13 46 33.8	
	comp=N,647nm,0.6s							
PEL	**Peldehue**	**2.93**	**165**	*eP*		**Pn**	**13 45 44.8**	**+1.5**
PEL				*eP*		**Pn**	**13 45 45.0**	**+1.8**
PEL				*eS*		**Sn**	**13 46 19.8**	**+2.6**
MT02	**Curacav**	**2.96**	**172**			**Pn**	**13 45 44.6**	**+1.0**
MT02	**Curacav**	**2.96**	**172**	*eP*		**Pn**	**13 45 44.3**	**+0.7**
MT02				*iS*		**Sn**	**13 46 18.7**	**+0.8**
MT02				IAML			13 46 30.3	
	comp=N,406nm,0.5s							
MT02				IAML			13 46 30.6	
	comp=E,407nm,0.3s							
MT02	**Curacav**	**2.96**	**172**	*eP*		**Pn**	**13 45 44.0**	**+0.3**
MT02				*eP*		**Pn**	**13 45 44.7**	**+1.0**
MT02				*eS*		**Sn**	**13 46 12.3**	**-5.7**
MT02				IAML			13 46 33.9	
	comp=Z,426nm,0.5s							
GO03	**Copiap**	**2.97**	**24**			**Pn**	**13 45 44.3**	**+0.4**
GO03	**Copiap**	**2.97**	**24**	*iP*		**Pn**	**13 45 44.1**	**+0.2**
GO03				*eS*		**Sn**	**13 46 23.2**	**+4.8**
GO03				IAML			13 46 29.3	
	comp=N,2μm,0.5s							
GO03	**Copiap**	**2.97**	**24**	*eP*		**Pn**	**13 45 44.0**	**+0.1**
GO03				*eS*		**Sn**	**13 46 20.3**	**+1.9**
AC06	**Mina Casimiro**	**3.15**	**21**			**Pn**	**13 45 46.5**	**+0.2**
AC06	**Mina Casimiro**	**3.15**	**21**	*iP*		**Pn**	**13 45 46.6**	**+0.3**
AC06				IAML			13 46 43.0	
	comp=E,521nm,0.4s							
MT05	**Renca**	**3.15**	**167**			**Pn**	**13 45 46.8**	**+0.4**
MT05	**Renca**	**3.15**	**167**	*eP*		**Pn**	**13 45 47.7**	**+1.4**
MT05	**Renca**	**3.15**	**167**	*eP*		**Pn**	**13 45 47.8**	**+1.4**
MT05				*eS*		**Sn**	**13 46 26.8**	**+4.0**
MT05				IAML			13 46 43.7	
	comp=Z,630nm,1.0s							
FCH	**Farellones**	**3.21**	**160**	*eP*		**Pn**	**13 45 49.5**	**+2.1**
FCH				IAML			13 46 35.6	
	comp=E,432nm,0.3s							
ASAL	**Salagasta**	**3.28**	**134**	*eP*		**Pn**	**13 45 51.0**	**+2.8**
ASAL				*eS*		**Sn**	**13 46 30.8**	**+4.8**
MT03	**Universidad Ad**	**3.30**	**164**			**Pn**	**13 45 50.2**	**+1.7**
MT03	**Universidad Ad**	**3.30**	**164**	*eP*		**Pn**	**13 45 49.2**	**+0.8**
MT03				IAML			13 46 44.2	
	comp=E,1μm,0.6s							
MT03	**Universidad Ad**	**3.30**	**164**	*eP*		**Pn**	**13 45 50.4**	**+1.9**
MT03				*eP*		**Pn**	**13 45 51.0**	**+2.5**
MT03				*eS*		**Sn**	**13 46 32.3**	**+5.8**
MT03				IAML			13 46 48.6	
	comp=Z,587nm,0.8s							
VA05	**Santo Domingo**	**3.33**	**180**	IAML			13 46 52.2	
	comp=E,989nm,0.3s							
ARCO	**CERRO ARCO**	**3.40**	**138**	*eP*		**Pn**	**13 45 52.9**	**+3.0**
ARCO				*eP*		**Pn**	**13 45 53.0**	**+3.1**
ARCO				*eP*		**Pn**	**13 45 53.3**	**+3.4**
ARCO				*eS*		Sn	13 46 45.2	+16
ARCO				IAML			13 46 47.4	
	comp=Z,369nm,0.4s							
MT09	**Talagante**	**3.49**	**171**			**Pn**	**13 45 52.3**	**+1.2**
MT09	**Talagante**	**3.49**	**171**	*iP*		**Pn**	**13 45 52.3**	**+1.2**
MT09				*iS*		**Sn**	**13 46 31.8**	**+0.6**
MT09				IAML			13 46 54.4	
	comp=N,482nm,0.7s							
MT01	**Popeta**	**3.55**	**175**			**Pn**	**13 45 52.7**	**+1.0**
MT01	**Popeta**	**3.55**	**175**	*eP*		**Pn**	**13 45 52.5**	**+0.8**
MT01				*iS*		**Sn**	**13 46 31.3**	**-1.2**
MT01				IAML			13 46 50.7	
	comp=E,405nm,0.5s							
MT01	**Popeta**	**3.55**	**175**	*eP*		**Pn**	**13 45 53.0**	**+1.2**
MT01				*eS*		**Sn**	**13 46 36.3**	**+3.8**
MT01				IAML			13 46 43.3	
	comp=Z,372nm,0.7s							
AVFE	**Valle Fertil**	**3.61**	**96**	*eP*		**Pn**	**13 45 53.0**	**+0.4**
AVFE				*eP*		**Pn**	**13 45 53.3**	**+0.7**
AVFE				*eS*		**Sn**	**13 46 37.3**	**+3.3**
AVFE				IAML			13 46 44.8	
	comp=Z,408nm,0.5s							
AAGR	**Agrelo**	**3.64**	**140**	*eP*		**Pn**	**13 45 56.0**	**+2.9**
LMEL	**Las Melosas**	**3.72**	**162**			**Pn**	**13 45 56.6**	**+2.4**
LMEL	**Las Melosas**	**3.72**	**162**	*iP*		**Pn**	**13 45 56.4**	**+2.2**
LMEL				*iS*		**Sn**	**13 46 38.5**	**+1.7**
LMEL				IAML			13 46 47.7	
	comp=N,632nm,0.4s							
BO04	**La Punta**	**3.76**	**167**			**Pn**	**13 45 55.8**	**+1.2**
BO04	**La Punta**	**3.76**	**167**	*eP*		**Pn**	**13 45 55.9**	**+1.2**
BO04				*iS*		**Sn**	**13 46 38.0**	**+0.3**
BO01	**Tunca**	**4.09**	**174**	Pn		**Pn**	**13 45 40.0**	**+0.9**
BO01	**Tunca**	**4.09**	**174**	*eP*		**Pn**	**13 45 59.7**	**+0.6**
BO01	**Tunca**	**4.09**	**174**	*eP*		**Pn**	**13 45 55.8**	**-3.3**
AC02	**Maricunga**	**4.10**	**33**			**Pn**	**13 46 00.8**	**+1.0**
AC02	**Maricunga**	**4.10**	**33**	*eP*		**Pn**	**13 46 00.5**	**+0.7**
ACLC	**CERRO LA CRUZ**	**4.15**	**79**	IAML			13 47 12.9	
	comp=Z,176nm,0.7s							
AC01	**Pan de Azucar**	**4.25**	**12**	Pn		**Pn**	**13 45 60.0**	**-1.5**
AC01	**Pan de Azucar**	**4.25**	**12**	*iP*		**Pn**	**13 46 00.2**	**-1.3**
GO05	**Huala**	**4.69**	**183**			**Pn**	**13 46 06.3**	**-1.1**
GO02	**Mina Guanaco**	**5.44**	**20**			**Pn**	**13 46 16.6**	**-1.4**
PB14	**IPOC Station P**	**5.77**	**11**			**Pn**	**13 46 20.3**	**-2.3**
PB15	**IPOC Station P**	**7.34**	**16**			**Pn**	**13 46 42.0**	**-2.0**
LVC	**Limon Verde**	**8.05**	**18**	P		Pn	**13 46 52.6**	**-1.3**
	comp=Z,0.5nm,0.3s,baz=168,slow=8.0,SNR=8.1							
LVC				S		**Sn**	**13 48 27.7**	**+3.9**
	comp=Z,16nm,0.5s,baz=203,slow=14,SNR=2.1							
LVC				LR		LR	13 50 19.3	
	comp=Z,64nm,18.7s,baz=212,slow=40							
	comp=Z,1.9nm,0.3s							
LVC	**Limon Verde**	**8.05**	**18**	Pn		**Pn**	**13 46 51.5**	**-2.4**
PLCA	**Paso Flores**	**10.43**	**176**	P		**Pn**	**13 47 26.4**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=326,slow=14,SNR=1.7							
PLCA				LR		LR	13 51 33.3	
	comp=Z,129nm,21.7s,baz=236,slow=38							
	comp=Z,0.7nm,0.4s							
CPUP	**Villa Florida**	**13.19**	**76**	LR		LR	13 54 10.4	
	comp=Z,72nm,18.9s,baz=216,slow=42							
LPAZ	**La Paz**	**14.33**	**14**	P		**Pn**	**13 48 22.0**	**+2.1**
	comp=Z,0.4nm,0.3s,baz=177,slow=8.0,SNR=9.6							
	comp=Z,3.0nm,0.6s							
LPAZ	**La Paz**	**14.33**	**14**			**Pn**	**13 48 18.0**	**-1.9**
SIV	**San Ignacio**	**17.23**	**36**	P		**P**	**13 48 57.8**	**0.0**
	baz=212,slow=11,SNR=14							
	comp=Z,5.0nm,0.9s							
BDFB	**Brasilia**	**26.11**	**61**	P		**P**	**13 50 27.7**

mb4.3/7, Error ellipse: s-maj=26.0km s-min=13.5km az=96.0

ISC 11 14:56:48.5±0.5, 29°32S±0°09×61°0E±0°1, h10km, n47, σ1§55/30, mb4.1/15, MS3.5/14, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RER	**Riviere de l'E**	**9.42**	**328**	Pn	**Pn**	**14 59 01.8**	**-2.7**
FOMA	**Nahampoana Res**	**13.23**	**286**	Pn	**Pn**	**14 59 54.9**	**-1.6**
VOI	**Vohitsoka**	**14.80**	**297**		**Pn**	**15 00 18.4**	**+0.4**
OPO	**Ambohidratompo**	**16.55**	**307**	Pn	**Pn**	**15 00 41.3**	**+0.3**
	0.1nm,0.3s,baz=120,slow=12,SNR=7.0						
OPO				Sn	Sn	15 03 28.7	-16
	0.1nm,0.3s,baz=92,slow=22,SNR=1.7						
	2.9nm,0.6s						
H08S1	**Diego Carcia H**	**24.11**	**29**	T	T	15 26 46.3	
	baz=204,slow=76,SNR=10						
H08S2	**Diego Garcia H**	**24.11**	**29**	T	T	15 26 47.1	
	baz=204,slow=76,SNR=12						
H08S3	**Diego Garcia H**	**24.12**	**29**	T	T	15 26 48.5	
	baz=204,slow=76,SNR=27						
BOSA	**Boshof**	**31.23**	**262**	LR	LR	15 13 02.7	
	comp=Z,74nm,18.8s,baz=170,slow=31						
LBTB	**Lobatse**	**31.73**	**269**	LR	LR	15 13 10.6	
	comp=Z,62nm,19.2s,baz=135,slow=31						
KMBO	**Kilima Mbogo**	**36.04**	**317**	LR	LR	15 16 15.7	
	comp=Z,70nm,18.8s,baz=82,slow=32						
MAW	**Mawson**	**38.33**	**179**	P	**P**	**15 04 05.3**	**-3.8**
	1.1nm,0.6s,baz=356,slow=14,SNR=2.0						
MAW	**Mawson**	**38.33**	**179**	P	**P**	**15 04 05.4**	**-3.8**
MBAR	**Mbarara**	**40.61**	**309**	LR	LR	15 19 54.3	
	comp=Z,70nm,18.6s,baz=166,slow=34						
TSUM	**Tsumeb**	**40.66**	**274**	LR	LR	15 19 01.5	
	comp=Z,54nm,20.0s,baz=148,slow=33						
PALK	**Pallekele**	**41.02**	**31**	LR	LR	15 15 46.8	
	comp=Z,18nm,21.2s,baz=298,slow=28						
ATD	**Arta Tunnel**	**44.24**	**334**	LR	LR	15 19 39.9	
	comp=Z,68nm,21.0s,baz=33,slow=31						
H01W2	**Cape Leeuwin H**	**44.90**	**111**	T	T	15 52 42.8	
	baz=261,slow=75,SNR=31						
H01W3	**Cape Leeuwin H**	**44.90**	**111**	T	T	15 52 43.1	
	baz=261,slow=75,SNR=28						
H01W1	**Cape Leeuwin H**	**44.92**	**111**	T	T	15 52 44.1	
	baz=261,slow=75,SNR=31						
SNAA	**Sanae**	**54.28**	**200**	P	**P**	**15 06 15.7**	**+1.2**
	0.8nm,0.7s,baz=102,slow=9.1,SNR=5.0						
	0.8nm,0.7s						
SNAA	**Sanae**	**54.28**	**200**	P	**P**	**15 06 15.9**	**+1.4**
SNAA				IAmb	IAmb	15 06 31.0	
	comp=Z,7.5nm,1.4s						
CMAR	**Chiang Mai Arr**	**59.96**	**42**	P	**P**	**15 06 55.5**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=232,slow=7.4,SNR=2.5						
	comp=Z,0.3nm,0.4s						
QSPA	**South Pole Qui**	**60.84**	**180**	P	**P**	**15 07 02.3**	**+1.4**
	comp=Z,2.4nm,0.8s,baz=264,slow=0.9,SNR=8.7						
	comp=Z,2.4nm,0.8s						
QSPA	**South Pole Qui**	**60.84**	**180**	P	**P**	**15 07 01.6**	**+0.8**
EIL	**Elat**	**63.72**	**335**	LR	LR	15 31 38.7	
	comp=Z,51nm,18.7s,baz=88,slow=33						
VNDA	**Vanda**	**63.91**	**166**	P	**P**	**15 07 21.6**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=271,slow=8.8,SNR=5.2						
VNDA				LR	LR	15 31 56.1	
	comp=Z,76nm,19.6s,baz=238,slow=33						
	comp=Z,0.9nm,0.7s						
VNDA	**Vanda**	**63.91**	**166**	P	**P**	**15 07 19.4**	**-1.6**
VNDA				IAmb	IAmb	15 07 33.6	
	comp=Z,4.4nm,1.4s						
ASAR	**Alice Springs**	**64.52**	**104**	P	**P**	**15 07 26.1**	**0.0**
	comp=Z,1.0nm,0.8s,baz=243,slow=5.8,SNR=13						
	comp=Z,1.0nm,0.8s						
ASAR	**Alice Springs**	**64.52**	**104**	P	**P**	**15 07 25.4**	**-0.7**
SBA	**Scott Base**	**64.79**	**167**	P	**P**	**15 07 28.4**	**+1.6**
SBA				IAmb	IAmb	15 07 36.9	
	comp=Z,2.2nm,1.1s						
WRA	**Warramunga Arr**	**66.36**	**100**	P	**P**	**15 07 38.1**	**+0.2**
	comp=Z,0.9nm,0.8s,baz=248,slow=5.6,SNR=3.6						
	comp=Z,0.9nm,0.8s						
TORD	**Torodi Ar. Bea**	**71.10**	**298**	P	**P**	**15 08 08.4**	**+0.9**
	comp=Z,1.4nm,0.8s,baz=113,slow=5.4,SNR=7.0						
	comp=Z,1.4nm,0.8s						
IDI	**Anoyia**	**72.73**	**330**	LR	LR	15 37 34.9	
	comp=Z,13nm,19.7s,baz=88,slow=34						
BRTR	**Keskin Array B**	**73.27**	**338**	P	**P**	**15 08 20.3**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=160,slow=4.6,SNR=2.4						
BRTR				LR	LR	15 38 36.6	
	comp=Z,31nm,18.6s,baz=136,slow=34						
	comp=Z,0.4nm,0.6s						
KBZ	**Khabaz**	**74.57**	**346**	LR	LR	15 41 44.7	
	comp=Z,32nm,18.3s,baz=177,slow=36						
MK31	**Makanchi Array**	**78.16**	**15**	P	**P**	**15 08 45.4**	**-2.4**
MK31				IAmb	IAmb	15 08 57.2	
	comp=Z,1.1nm,0.8s						
MKAR	**Makanchi Array**	**78.16**	**15**	P	**P**	**15 08 48.0**	**+0.2**
	comp=Z,1.3nm,0.8s,baz=178,slow=3.6,SNR=11						
	comp=Z,1.3nm,0.8s						
MKAR	**Makanchi Array**	**78.16**	**15**	P	**P**	**15 08 47.5**	**-0.2**
ABKAR	**Akbulak array**	**78.23**	**359**	P	**P**	**15 08 47.9**	**-0.1**
ABKAR				IAmb	IAmb	15 08 52.3	
	comp=Z,3.0nm,1.1s						
ZALV	**Zalesovo Beam**	**85.45**	**14**	P	**P**	**15 09 26.0**	**+0.1**
	comp=Z,0.7nm,0.4s,baz=228,slow=3.8,SNR=5.3						
	comp=Z,0.7nm,0.4s						
ZALV	**Zalesovo Beam**	**85.45**	**14**	P	**P**	**15 09 25.5**	**-0.5**
SONM	**Songino Array**	**86.94**	**29**	P	**P**	**15 09 35.5**	**+1.9**
	comp=Z,0.3nm,0.3s,baz=204,slow=3.2,SNR=3.2						
SONM				LR	LR	15 47 32.9	
	comp=Z,26nm,18.4s,baz=170,slow=35						
	comp=Z,0.3nm,0.3s						
NOA	**NORSAR Array B**	**98.70**	**338**	LR	LR	15 54 37.6	
	comp=Z,12nm,19.5s,baz=350,slow=35						
ILAR	**Eielson Array**	**140.44**	**18**	PKP	**PKPdf**	**15 16 17.2**	**0.0**
	comp=Z,0.2nm,0.7s,baz=316,slow=2.5,SNR=2.7						
YKA	**Yellowknife Ar**	**146.70**	**356**	PKPbc	**PKPbc**	**15 16 29.8**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=352,slow=3.2,SNR=5.0						
ULM	**Lac du Bonnet**	**152.77**	**327**	PKPbc	**PKPbc**	**15 16 45.2**	**-0.2**
	comp=Z,3.3nm,0.7s,baz=145,slow=1.7,SNR=3.3						
TXAR	**Lajitas Array**	**166.64**	**274**	PKP	**PKPdf**	**15 16 56.6**	**+1.9**
	comp=Z,0.4nm,0.7s,baz=132,slow=1.9,SNR=5.8						

RSNC 11 15:24:19.4±1.2, 4°58N×75°99W, h16km±8km, ML1.7, Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLMC	**San Jos del P**	**0.43**	**318**	*eP*	Pg	15 24 27.2	-1.0
PLMC				*eS*	Sg	15 24 34.3	+0.1
GUY2C	**Guyana, Caldas**	**0.90**	**44**	*eP*	Pb	15 24 35.2	-1.7
GUY2C				*eS*	Sb	15 24 48.2	-0.6
CBOC	**Ciudad Bolivar**	**1.28**	**359**	*eP*	Pn	15 24 42.0	-0.8
PRAC	**Prado**	**1.40**	**128**	*eP*	Pn	15 24 42.7	-1.6
PRAC				*eS*	Sn	15 25 01.8	-0.7
PRAC				*i*		15 25 03.3	
	comp=Z,10nm,0.2s						

RSNC 11 15:24:31.0±1.0, 6°82N×73°13W, h148km±4km, ML2.3, 2D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.23**	**192**	*eP*	Pn	15 24 50.9	-0.6
BARC				*eS*	Sn	15 25 06.2	-0.8
BARC				*i*		15 25 08.3	
	comp=Z,32nm,0.2s						
BRRC	**Barranca, Sant**	**0.64**	**296**	*eP*	Pn	15 24 52.7	-0.2
BRRC				*eS*	Sn	15 25 09.2	-0.4
PAMC	**Pamplona, Colo**	**0.67**	**40**	*eP*	Pn	15 24 53.8	+0.1
PAMC				*eS*	Sn	15 25 10.8	-0.2
PAMC				*i*		15 25 13.2	
	comp=Z,28nm,0.5s						
RUSC	**La Rusia**	**0.92**	**177**	*eP*	Pn	15 24 55.2	-0.4
RUSC				*eS*	Sn	15 25 13.6	-0.6
RUSC				*i*		15 25 15.1	
	comp=Z,12nm,0.2s						
PTBC	**PUERTO BERRIO,**	**1.34**	**258**	*eP*	Pn	15 24 57.8	-1.0
PTBC				*eS*	Sn	15 25 19.0	-1.1
PTBC	**PUERTO BERRIO,**	**1.34**	**258**	*eP*	Pn	15 24 57.8	-1.1
PTBC				*eS*	Sn	15 25 19.0	-1.1
PTBC				*i*		15 25 26.2	
	comp=Z,37nm,0.3s						
TAMC	**Tame, Arauca**	**1.39**	**106**	*eP*	Pn	15 24 58.2	-1.1
TAMC				*eS*	Sn	15 25 20.9	+0.1
SPBC	**San Pablo de B**	**1.49**	**219**	*eP*	Pn	15 24 59.9	-0.6
SPBC				*eS*	Sn	15 25 23.1	+0.2
SPBC				*i*		15 25 25.3	
	comp=Z,42nm,0.1s						
NORC	**Norcasia**	**2.13**	**234**	*eP*	Pn	15 25 07.0	-0.6
NORC				*eS*	Sn	15 25 35.0	-0.8
NORC				*i*		15 25 39.6	
	comp=Z,13nm,0.2s						
CHIC	**Chingaza**	**2.26**	**195**	*eP*	Pn	15 25 08.6	-1.0
CHIC				*eS*	Sn	15 25 39.4	+0.3
CHIC				*i*		15 25 46.4	
	comp=Z,6.9nm,0.3s						
HELC	**Santa Helena**	**2.46**	**255**	*eP*	Pn	15 25 12.3	+0.3
HELC				*eS*	Sn	15 25 43.5	+0.1
HELC				*i*		15 25 49.2	
	comp=Z,11nm,0.3s						
UREC	**San Jos de Ur**	**2.56**	**291**	*eP*	Pn	15 25 11.8	-1.0
UREC				*eS*	Sn	15 25 43.0	-1.9
UREC				*i*		15 25 55.3	
	comp=Z,9.1nm,0.2s						
GUY2C	**Guyana, Caldas**	**2.73**	**235**	*eP*	Pn	15 25 15.1	-0.2
GUY2C				*eS*	Sn	15 25 49.7	+0.2
GUY2C				*i*		15 25 55.7	
	comp=Z,9.5nm,0.3s						
CBOC	**Ciudad Bolivar**	**3.02**	**252**	*eP*	Pn	15 25 18.8	+0.1
CBOC				*eS*	Sn	15 25 55.5	0.0
PRAC	**Prado**	**3.55**	**210**	*eP*	Pn	15 25 24.2	-1.2
PRAC				*eS*	Sn	15 26 07.0	-0.5
PRAC				*i*		15 26 10.8	
	comp=Z,5.7nm,0.4s						
SJCC	**San Jacinto, C**	**3.67**	**327**	*eP*	Pn	15 25 25.1	-1.9
SJCC				*eS*	Sn	15 26 06.9	-3.5
SJCC				*i*		15 26 10.9	
	comp=Z,5.0nm,0.5s						

IDC 11 15:36:37.4±0.6, 28°48N×139°93E, h384km±10km, mb3.4/16, mbtmp4.1/20, Error ellipse: s-maj=33.5km s-min=8.2km az=73.0

JMA 11 15:36:38.4±0.2, 29°N×140°E±°, h395km, MV3.8/31, W OFF OGASAWARA

ISC 11 15:36:37.9±0.6, 28°61N±0°07×140°3E±0°1, h400km, n39, σ1§29/51, mb3.8/22, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.25**	**131**	P	**Pn**	**15 37 35.6**	**0.0**
CBIJ				S	**S**	**15 38 20.4**	**-1.7**
JCJ	**Chichijima**	**2.25**	**131**	P	**Pn**	**15 37 35.6**	**0.0**
	259nm,0.4s,baz=279,slow=22,SNR=118						
JCJ				S	**S**	**15 38 21.4**	**-0.8**
	291nm,0.4s,baz=286,slow=22,SNR=17						
JHH2	**Haha-jima-NKT2**	**2.58**	**139**	P	**Pn**	**15 37 38.1**	**+0.2**
JHH2				*eS*	**S**	**15 38 24.8**	**-1.6**
JHJ	**Hachijo jima 2**	**4.52**	**355**	P	**Pn**	**15 37 56.2**	**+1.3**
	23nm,0.3s,baz=125,slow=22,SNR=15						
JHJ				S	**S**	**15 38 56.2**	**-1.3**
	95nm,0.5s,baz=91,slow=23,SNR=6.2						
BSO1	**Boso 1**	**6.06**	**5**	P	**Pn**	**15 38 12.9**	**+2.5**
JOD2	**Odawara 2**	**6.71**	**352**	P	**P**	**15 38 19.6**	**+0.7**
JHU	**Hanno**	**7.27**	**354**	*eP*	**Pn**	**15 38 24.6**	**0.0**
JHU				*eS*	**S**	**15 39 47.1**	**-4.7**
JRY	**Ryogami san**	**7.48**	**351**	P	**P**	**15 38 27.8**	**+0.4**
JAG	**Ashikaga**	**7.83**	**355**	P	**Pn**	**15 38 30.4**	**-0.4**
JHO	**Hitachi**	**7.99**	**2**	P	**Pn**	**15 38 33.5**	**+0.9**
JHO				*eS*	**S**	**15 40 03.4**	**-3.2**
MJAR	**Matsushiro Arr**	**8.10**	**348**	P	**Pn**	**15 38 33.8**	**-0.2**
	0.5nm,0.3s,baz=169,slow=11,SNR=2.9						
MJAR				S	**S**	**15 40 10.1**	**+1.0**
	1.1nm,0.6s,baz=116,slow=16,SNR=4.9						
JFK	**Kawauchi**	**8.75**	**3**	*eS*	**S**	**15 40 20.6**	**-2.2**
JHS	**Saijyo**	**8.82**	**318**	*eP*	**P**	**15 38 43.0**	**+0.7**
KSRS	**Korea Array**	**13.61**	**314**	P	**P**	**15 39 33.4**	**-1.7**
	0.4nm,0.6s,baz=119,slow=10,SNR=4.2						
USRK	**Ussuriysk Ar.**	**16.92**	**339**	P	**P**	**15 40 12.4**	**+1.6**
	8.0nm,0.6s,baz=152,slow=8.3,SNR=16						
KLR	**Kul'dur**	**21.61**	**345**	P	**P**	**15 40 58.3**	**+1.5**
	1.0nm,0.6s,baz=169,slow=9.4,SNR=6.5						
	1.0nm,0.6s						
SONM	**Songino Array**	**32.47**	**316**	P	**P**	**15 42 32.8**	**-0.1**
	1.0nm,0.7s,baz=130,slow=8.0,SNR=7.8						
	1.0nm,0.7s						
RAMN	**Ramite**	**47.20**	**281**	*eP*	**P**	**15 44 31.5**	**-1.4**
	5.2nm,0.4s						
ZALV	**Zalesovo Beam**	**47.25**	**318**	P	**P**	**15 44 31.8**	**-0.8**
	0.9nm,0.5s,baz=116,slow=11,SNR=4.2						
ZALV				PcP	**PcP**	**15 45 56.6**	**+0.3**
	0.7nm,0.4s,baz=112,slow=3.4,SNR=4.2						
	0.9nm,0.5s						
JIRN	**Jiri**	**47.37**	**282**	*eP*	**P**	**15 44 33.5**	**-0.9**
	11nm,0.3s						
GUN	**Gumba**	**47.57**	**283**	*eP*	**P**	**15 44 34.9**	**-1.0**
	11nm,0.5s						
MKAR	**Makanchi Array**	**48.22**	**309**	P	**P**	**15 44 39.3**	**-0.8**
	0.5nm,0.4s,baz=87,slow=9.8,SNR=14						
MKAR				PcP	**PcP**	**15 46 00.3**	**+0.2**
	0.9nm,0.5s,baz=75,slow=7.3,SNR=10						
MKAR				ScP	**ScP**	**15 49 16.6**	**+0.9**
	0.4nm,0.8s,baz=92,slow=4.1,SNR=2.5						
	0.5nm,0.4s						
WRA	**Warramunga Arr**	**48.61**	**187**	P	**P**	**15 44 42.6**	**-0.6**
	0.8nm,0.5s,baz=3.3,slow=7.6,SNR=14						
WRA				PcP	**PcP**	**15 46 01.4**	**-0.3**
	0.9nm,0.8s,baz=27,slow=4.4,SNR=6.8						
	0.8nm,0.5s						
DANN	**Dangsing**	**49.27**	**284**	*eP*	**P**	**15 44 47.9**	**-0.7**
	6.4nm,0.3s						
PYUN	**Piuthan**	**50.00**	**284**	*eP*	**P**	**15 44 52.7**	**-1.2**
	11nm,0.3s						
ASAR	**Alice Springs**	**52.33**	**187**	P	**P**	**15 45 10.4**	**-0.3**
	0.4nm,0.4s,baz=1.1,slow=5.6,SNR=31						
ASAR				PcP	**PcP**	**15 46 17.2**	**+1.6**
	0.8nm,0.8s,baz=15,slow=5.2,SNR=5.9						
	0.4nm,0.4s						
ARU	**Arti**	**62.20**	**322**	P	**P**	**15 46 18.6**	**+0.2**
	9.1nm,0.4s,baz=99,slow=2.9,SNR=15						
	9.1nm,0.4s						
AKTO	**Aktyubinsk**	**63.78**	**315**	P	**P**	**15 46 28.8**	**0.0**
	4.0nm,0.5s,baz=79,slow=14,SNR=14						
	4.0nm,0.5s						
BELG	**Belogornoye**	**69.43**	**319**	P	**P**	**15 47 04.3**	**+0.3**
	10nm,0.4s,baz=67,slow=1.2,SNR=5.2						
ARCES	**ARCESS Array B**	**71.56**	**340**	P	**P**	**15 47 18.1**	**+1.6**
	1.0nm,0.6s,baz=68,slow=7.3,SNR=11						
	1.0nm,0.6s						
KBZ	**Khabaz**	**75.75**	**312**	P	**P**	**15 47 41.1**	**+0.2**
	3.6nm,0.7s,baz=99,slow=5.0,SNR=9.0						
	3.6nm,0.7s						
FINES	**FINESS Array B**	**75.85**	**333**	P	**P**	**15 47 42.0**	**+0.9**
	3.1nm,0.3s,baz=71,slow=4.6,SNR=62						
	3.1nm,0.3s						
AKASG	**Malin Array Be**	**80.41**	**323**	P	**P**	**15 48 06.3**	**+0.2**
	0.8nm,0.4s,baz=46,slow=5.4,SNR=9.1						
	0.8nm,0.4s						
NB2	**NORSAR Subarra**	**81.58**	**338**	P	**P**	**15 48 12.7**	**+0.6**
	comp=Z,0.5nm,0.4s,baz=49,slow=4.6						
NOA	**NORSAR Array B**	**81.58**	**338**	P	**P**	**15 48 12.7**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=56,slow=6.1,SNR=6.0						
	comp=Z,0.6nm,0.5s						
BRTR	**Keskin Array B**	**83.75**	**312**	P	**P**	**15 48 24.1**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=105,slow=3.9,SNR=7.4						
	comp=Z,1.0nm,0.6s						
GERES	**GERESS Array B**	**89.35**	**328**	P	**P**	**15 48 50.0**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=96,slow=1.3,SNR=3.6						
	comp=Z,0.3nm,0.6s						
EKA	**Eskdalemuir Ar**	**90.73**	**340**	P	**P**	**15 48 57.0**	**+0.7**
	comp=Z,1.7nm,1.1s,baz=61,slow=3.3,SNR=4.5						
	comp=Z,1.7nm,1.1s						
TORD	**Torodi Ar. Bea**	**122.33**	**310**	PKP	**PKiKP**	**15 54 47.1**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=351,slow=0.3,SNR=1.7						

IDC 11 15:46:32.8±3.8, 6°55S×105°81E, h0km, mb3.6/4, mbtmp3.6/4, MS3.4/1, Error ellipse: s-maj=209.2km s-min=29.5km az=52.0

DJA 11 15:46:33.2±1.3, 7°S×3°×10°5E±°, h17km±11km, M3.9/10, mB5.6/1, MLv3.9/10, Mw(mB)5.1/1

ISC 11 15:46:36.9±1.1, 7°24S±0°09×105°31E±0°07, h35km, n22, σ1§25/17, mb3.4/4, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SBJI	**Serang**	**1.38**	**36**	P	**Pn**	**15 46 58.5**	**-1.1**
DBJI	**Dramaga**	**1.58**	**65**	P	**Pn**	**15 47 01.2**	**-1.3**
DBJI				S	**Sn**	**15 47 21.8**	**0.0**
TNG	**Tangerang**	**1.70**	**51**	P	**Pn**	**15 47 03.6**	**-0.5**
TNG				S	**Sn**	**15 47 27.0**	**+2.4**
CBJI	**Citeko**	**1.73**	**62**	P	**Pn**	**15 47 03.2**	**-1.3**
CNJI	**Cibinong**	**1.81**	**92**	P	**Pn**	**15 47 03.8**	**-1.7**
BLSI	**Bandar Lampung**	**1.86**	**358**	P	**Pn**	**15 47 05.7**	**-0.6**
KASI	**Kota Agung**	**1.89**	**335**	P	**Pn**	**15 47 06.8**	**+0.2**
LEM	**Lembang**	**2.33**	**80**	P	**Pn**	**15 47 13.1**	**+0.3**
LWLI	**Liwa**	**2.54**	**331**	P	**Pn**	**15 47 15.1**	**-0.6**
CMJI	**Cimerak**	**3.16**	**100**	P	**Pn**	**15 47 24.1**	**0.0**
PPBI	**Pangkal Pinang**	**5.11**	**9**	P	**Pn**	**15 47 51.5**	**+0.5**
H01W3	**Cape Leeuwin H**	**28.68**	**165**	T	T	16 22 47.7	
	baz=344,slow=76,SNR=56						
H01W1	**Cape Leeuwin H**	**28.70**	**165**	T	T	16 22 48.7	
	baz=344,slow=76,SNR=50						
H01W2	**Cape Leeuwin H**	**28.70**	**165**	T	T	16 22 49.0	
	baz=344,slow=76,SNR=68						
WRA	**Warramunga Arr**	**30.84**	**117**	P	**P**	**15 52 50.5**	**+0.5**
	0.5nm,0.7s,baz=296,slow=9.3,SNR=2.1						
	0.5nm,0.7s						
ASAR	**Alice Springs**	**31.93**	**124**	P	**P**	**15 53 00.1**	**+0.6**
	0.4nm,0.7s,baz=301,slow=8.2,SNR=7.8						
	0.4nm,0.7s						
H08S2	**Diego Garcia H**	**32.54**	**267**	T	T	16 27 14.9	
	baz=91,slow=76,SNR=120						
H08S3	**Diego Garcia H**	**32.55**	**267**	T	T	16 27 20.0	
	baz=91,slow=76,SNR=199						
H08S1	**Diego Garcia H**	**32.56**	**267**	T	T	16 27 16.3	
	baz=91,slow=76,SNR=51						
STKA	**Stephens Creek**	**41.74**	**131**	P	**P**	**15 54 24.1**	**+1.3**
	1.5nm,0.6s,baz=324,slow=9.1,SNR=5.6						
	1.5nm,0.6s						
AAK	**Ala-Archa**	**57.03**	**333**	LR	LR	16 26 26.4	
	comp=Z,30nm,19.1s,baz=190,slow=42						
MKAR	**Makanchi Array**	**57.56**	**341**	P	**P**	**15 56 20.8**	**-2.2**
	0.1nm,0.3s,baz=148,slow=8.1,SNR=2.7						
	0.1nm,0.3s						

IDC 11 15:51:12.5±1.4, 4°92S×151°03E, h183km±12km, mb3.1/3, mbtmp3.7/4, Error ellipse: s-maj=78.7km s-min=16.8km az=137.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.17**	**58**	P	Pn	15 51 41.6	-0.2
	113nm,0.4s,baz=31,slow=0.8,SNR=74						
KRVT				S	Sn	15 52 04.5	+0.1
	93nm,0.5s,baz=338,slow=22,SNR=11						
PMG	**Port Moresby**	**5.88**	**221**	P	Pn	15 52 38.7	+0.7
	20nm,0.5s,baz=38,slow=9.2,SNR=16						
PMG				S	Sn	15 53 47.1	+1.8
	22nm,0.4s,baz=314,slow=18,SNR=7.7						
WRA	**Warramunga Arr**	**22.06**	**226**	P	P	15 55 52.8	-0.1
	0.3nm,0.4s,baz=49,slow=10,SNR=8.0						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**24.89**	**220**	P	P	15 56 19.4	+0.6
	0.6nm,0.6s,baz=52,slow=9.2,SNR=16						
	0.6nm,0.6s						
STKA	**Stephens Creek**	**28.23**	**197**	P	P	15 56 47.1	-1.3
	1.5nm,0.7s,baz=15,slow=12,SNR=4.7						
	1.5nm,0.7s						

IDC 11 15:56:57.9±0.8, 41°44S×174°01E, h0km, mb3.8/5, mbtmp3.8/7, ML3.4/2, MS3.7/19, Error ellipse: s-maj=26.0km s-min=17.5km az=116.0

WEL 11 15:57:00, 41°61S×174°18E, h24km, ML4.5, Mw4.4, Moment Tensor Solution. s6 Moment tensor: Scale 10^{15} Nm; M_{rr}-1.92; $M_{\theta\theta}$0.68; $M_{\phi\phi}$1.24; $M_{r\theta}$-0.01; $M_{\theta\phi}$-3.62; $M_{\phi r}$2.96; Fault plane solution: $M_{\phi\phi}$4.92000×10^{15} NP1: ϕ_s278.00000°, δ46.00000°, λ-159.00000°. NP2: ϕ_s173.00000°, δ75.00000°, λ-46.00000°. Principal axes: T 529.1000, Plg18.0000°, Azm232.0000°; N -73.2400, Plg42.0000°, Azm338.0000°; P -455.8500, Plg42.0000°, Azm125.0000°;

NOU 11 15:57:00.8, 41°77S×174°43E, h30km, MLv5.0/9, Cook Strait, New Zealand

WEL 11 15:57:01.2±0.4, 42°S±4°×17°4E±°, h21km±3km, M4.5/17, ML4.8/17, MLv4.5/17, Error ellipse: s-maj=0.0km s-min=0.0km az=167.8

ISC 11 15:57:00.5±0.6, 41°65S±0°03×174°22E±0°03, h21km±1km, n171, σ1§36/169, mb3.7/4, MS3.7/18, Cook Strait

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMWZ	**Cape Campbell**	**0.10**	**183**	P	**Pb**	**15 57 07.0**	**-0.3**
CMWZ				S	**Sb**	**15 57 11.7**	**-0.4**
BSWZ	**Blackbirch Sta**	**0.27**	**255**	P	**Pb**	**15 57 08.3**	**+1.5**
BSWZ				S	**Sb**	**15 57 13.2**	**+1.9**
TUWZ	**Tuamarina**	**0.30**	**316**	P	**Pn**	**15 57 08.4**	**-1.3**
TUWZ				S	**Sn**	**15 57 13.5**	**-2.0**
TCW	**Tory Channel**	**0.44**	**5**	P	**Pn**	**15 57 10.5**	**-1.1**
SNZO	**South Karori**	**0.49**	**47**	P	**Pn**	**15 57 12.1**	**-0.2**
BHW	**Baring Head**	**0.54**	**64**	P	**Pn**	**15 57 13.0**	**+0.1**
WEL	**Wellington**	**0.55**	**49**	P	**Pn**	**15 57 13.0**	**0.0**
WEL				S	**Sn**	**15 57 22.2**	**+0.6**
NNZ	**Nelson**	**0.77**	**304**	P	**Pn**	**15 57 15.8**	**-0.2**
PLWZ	**Palliser**	**0.78**	**

WTVZ	West Tongariro	2.74	23	P	Pn	15 57 44.8	+1.5	
KAHZ	Kahuranaki	2.74	48	P	Pn	15 57 42.1	-1.1	
ETVZ	East Tongariro	2.75	25	P	Pn	15 57 44.9	+1.4	
KRVZ	Karewarewa	2.77	24	P	Pb	15 57 49.9	+0.5	
TMVZ	Te Maari	2.77	25	P	Pn	15 57 45.0	+1.3	
NTVZ	North Tongarir	2.78	24	P	Pn	15 57 45.2	+1.4	
KWHZ	Kaweka Forest	2.78	38	P	Pn	15 57 43.4	-0.4	
WACZ	Wakanui South	2.89	217	P	Pn	15 57 44.1	-1.1	
MCHZ	McNeill Hill	2.90	41	P	Pn	15 57 44.7	-0.6	
RITZ	Rihia Road	2.94	26	P	Pn	15 57 47.6	+1.5	
WVZ	Waitaha Valley	2.95	240	P	Pn	15 57 46.4	+0.3	
RATZ	Rangitukua	3.02	24	P	Pn	15 57 49.2	+2.1	
BKZ	Black Stump Fm	3.02	36	P	Pn	15 57 46.5	-0.7	
BKZ	Black Stump Fm	3.02	36	P	Pn	15 57 46.9	-0.3	
HATZ	Hinemaiaia	3.10	28	P	Pn	15 57 54.9	-0.1	
RPZ	Rata Peaks	3.12	227	Pn	Pn	15 57 47.5	-0.9	
	5.3nm,0.3s,baz=220,slow=1.5,SNR=19							
RPZ				Pg	Pb	15 57 55.1	-0.2	
	30nm,0.3s,baz=286,slow=20,SNR=25							
RPZ				Sn	Sn	15 58 21.8	-3.2	
	29nm,0.3s,baz=315,slow=20,SNR=15							
	13nm,0.3s							
RPZ	Rata Peaks	3.12	227	P	Pn	15 57 47.9	-0.6	
RPZ	Rata Peaks	3.12	227	P	Pn	15 57 48.1	-0.3	
WATZ	Wairara	3.15	22	P	Pn	15 57 50.8	+1.9	
HIZ	Hauiti	3.17	9	P	Pn	15 57 51.4	+2.3	
HIZ	Hauiti	3.17	9	P	Pn	15 57 51.4	+2.3	
ARHZ	Aropaoanui	3.19	43	P	Pn	15 57 48.1	-1.2	
ARCZ	Arundel	3.21	223	P	Pn	15 57 48.7	-0.9	
NMHZ	Naumai	3.22	39	P	Pn	15 57 49.1	-0.8	
MRHZ	Matea Rd	3.27	32	P	Pn	15 57 50.0	-0.6	
GCSZ	Gaunt Creek Bo	3.33	239	P	Pn	15 57 52.6	+1.3	
KUTZ	Kaahu Road	3.38	22	P	Pn	15 57 54.7	+2.6	
MTHZ	Maungataniwha	3.44	37	P	Pn	15 57 52.0	-0.8	
WPRZ	Whakapapatarin	3.46	26	P	Pn	15 57 53.3	+0.2	
TLZ	Tolley Road	3.46	17	P	Pn	15 57 54.8	+1.7	
TLZ				P	Pb	15 57 55.0	-6.1	
ALRZ	Allen Road	3.48	29	P	Pn	15 57 52.9	-0.6	
RAHZ	Arahi	3.50	40	P	Pn	15 57 52.1	-1.5	
PRRZ	Plateau Road	3.56	29	P	Pn	15 57 53.8	-0.6	
TMZ	Timaru	3.61	220	P	Pn	15 57 54.5	-0.7	
HRRZ	Handcock Road	3.62	27	P	Pn	15 57 55.4	+0.1	
HSRZ	Hossack Road	3.68	26	P	Pb	15 58 01.7	-3.1	
RTZ	Ruatahuna	3.69	36	P	Pn	15 57 55.4	-1.0	
KNZ	Kokohu	3.72	46	P	Pn	15 57 54.6	-2.0	
MUGZ	Murupara	3.72	33	P	Pn	15 57 55.4	-1.3	
FOZ	Fox Glacier	3.76	238	P	Pn	15 57 57.1	-0.1	
PRGZ	Paritu Road	3.90	47	P	Pn	15 57 57.1	-2.1	
RIGZ	Rimuhau	4.00	44	P	Pn	15 57 58.2	-2.3	
LBZ	Lake Benmore	4.03	226	P	Pn	15 58 00.3	-0.6	
TOZ	Tahuroa Road	4.03	15	P	Pn	15 58 02.3	+1.3	
URZ	Urewera	4.05	34	Pn	Pn	15 57 59.2	-1.9	
	2.5nm,0.3s,baz=217,slow=4.3,SNR=19							
URZ				Pg	Pb	15 58 09.9	-1.1	
	8.1nm,0.3s,baz=220,slow=8.0,SNR=16							
URZ				Sn	Sn	15 58 45.2	-2.6	
	17nm,0.3s,baz=208,slow=2.2,SNR=4.7							
URZ				LR	LR	15 59 53.5		
	comp=Z,451nm,20.8s,baz=211,slow=44							
	6.2nm,0.3s							
URZ	Urewera	4.05	34	P	Pn	15 57 59.4	-1.7	
TGRZ	Tauranga	4.22	23	P	Pn	15 58 04.4	+0.9	
ODZ	Otahua Downs	4.28	216	P	Pn	15 58 02.8	-1.6	
ODZ	Otahua Downs	4.28	216	P	Pn	15 58 03.3	-1.1	
CNGZ	Carnagh Station	4.40	45	P	Pn	15 58 04.4	-1.6	
TWGZ	Tauwhareparae	4.51	41	P	Pn	15 58 05.6	-2.0	
RUGZ	Raukumara Rang	4.54	37	P	Pn	15 58 06.1	-2.0	
AWAZ	Awhitu Peninsu	4.59	4	P	Pn	15 58 11.1	+2.5	
MKAZ	Moumaka	4.59	9	P	Pn	15 58 10.1	+1.5	
JCZ	Jackson Bay	4.67	237	P	Pn	15 58 10.0	+0.2	
WTAZ	Waiatarua	4.71	3	P	Pn	15 58 14.4	+4.1	
ETAZ	East Tamaki Re	4.72	7	P	Pn	15 58 12.6	+2.2	
HAZ	Te Kaha	4.76	36	P	Pn	15 58 09.2	-1.7	
PKGZ	Pakihiroa	4.79	40	P	Pn	15 58 09.5	-1.9	
HBAZ	Herne Bay Bore	4.81	5	P	Pn	15 58 16.9	+5.3	
RVAZ	Riverhead Bore	4.88	3	P	Pn	15 58 15.0	+2.4	
WIAZ	Waiheke Island	4.90	9	P	Pn	15 58 14.5	+1.7	
MBAZ	Motutapu North	4.90	6	P	Pn	15 58 15.1	+2.2	
WKZ	Wanaka	4.96	228	P	Pn	15 58 14.8	+1.1	
HHSZ	Highcliff Hill	4.98	211	P	Pn	15 58 12.9	-1.1	
KUZ	Kuaotunu	5.03	14	P	Pn	15 58 15.4	+0.7	
ABAZ	Army Bay	5.06	6	P	Pn	15 58 18.7	+3.6	
SYZ	Scrubby Hill	6.11	215	P	Pn	15 58 28.7	-0.7	
OUZ	Omahuta	6.43	355	P	Pn	15 58 38.1	+4.1	
CTZ	Chatham Island	7.07	110	P	Pn	15 58 41.9	-0.7	
DZM	Mont Dzumac	20.59	339	P	P	16 01 36.9	-1.3	
	3.3nm,0.8s,baz=60,slow=19,SNR=1.9							
DZM				LR	LR	16 08 01.5		
	comp=Z,113nm,20.5s,baz=201,slow=33							
	3.3nm,0.8s							
MSVF	Nonsavu	24.06	9	LR	LR	16 09 50.4		
	comp=Z,119nm,21.8s,baz=187,slow=32							
STKA	Stephens Creek	27.76	280	LR	LR	16 13 09.7		
	comp=Z,143nm,18.9s,baz=172,slow=35							
AFI	Afiamalu	30.20	28	LR	LR	16 14 50.8		
	comp=Z,62nm,18.3s,baz=5.5,slow=36							
CTA	Charters Tower	31.98	304	LR	LR	16 15 47.4		
	comp=Z,117nm,19.0s,baz=123,slow=36							
ASAR	Alice Springs	37.98	285	P	P	16 04 15.5	-1.4	
	0.4nm,0.4s,baz=124,slow=6.7,SNR=23							
ASAR				PcP	PcP	16 06 34.7	+2.3	
	0.1nm,0.6s,baz=128,slow=4.5,SNR=0.9							
ASAR				LR	LR	16 19 52.9		
	comp=Z,120nm,18.1s,baz=153,slow=36							
	0.4nm,0.4s							
PPT	Papeete	39.15	63	LR	LR	16 17 44.5		
	comp=Z,212nm,21.9s,baz=0.0,slow=32							
WRA	Warramunga Arr	40.05	290	P	P	16 04 32.8	-1.4	
	0.8nm,0.6s,baz=127,slow=8.2,SNR=6.5							
WRA				LR	LR	16 20 37.0		
	comp=Z,108nm,20.1s,baz=15,slow=36							
	0.8nm,0.6s							
QSPA	South Pole Qui	48.48	180	P	P	16 05 43.4	+2.0	
	3.8nm,1.1s,baz=28,slow=2.5,SNR=5.6							
	3.8nm,1.1s							
SIJI	Sorong	56.05	305	LR	LR	16 31 39.7		
	comp=Z,63nm,19.1s,baz=110,slow=37							
KAPI	Kappang	60.57	291	LR	LR	16 34 58.6		
	comp=Z,69nm,18.9s,baz=100,slow=38							
DAV	Davao City (W)	65.76	305	LR	LR	16 37 42.0		
	comp=Z,43nm,18.7s,baz=160,slow=37							
LEM	Lembang	68.06	281	LR	LR	16 36 43.6		
	comp=Z,68nm,21.4s,baz=160,slow=35							
PSI	Prapat	80.92	282	LR	LR	16 45 44.2		
	comp=Z,88nm,19.1s,baz=166,slow=36							
KSRS	Korea Array	89.36	325	P	P	16 09 55.0	0.0	
	0.6nm,0.9s,baz=154,slow=5.8,SNR=2.2							
	0.6nm,0.9s							
CMAR	Chiang Mai Arr	91.58	293	LR	LR	16 55 54.8		
	comp=Z,24nm,18.1s,baz=200,slow=39							
PETK	Petropavlovsk-	95.45	350	LR	LR	16 51 28.3		
	comp=Z,24nm,18.4s,baz=108,slow=34							
NNA	Nana	95.82	112	LR	LR	16 46 15.6		
	comp=Z,45nm,18.4s,baz=221,slow=31							
CPUP	Villa Florida	97.25	135	LR	LR	16 52 23.9		
	comp=Z,66nm,18.3s,baz=212,slow=34							
PALK	Pallekele	97.41	273	LR	LR	16 49 42.6		
	comp=Z,39nm,19.8s,baz=257,slow=32							
DBIC	Dimbokro	145.16	182	PKPbc	PKPdf	16 16 38.9	+2.1	
	2.6nm,0.7s,baz=233,slow=3.2,SNR=2.2							
ARCES	ARCESS Array B	147.67	340	PKPbc	PKPbc	16 16 41.8	-0.3	
	1.2nm,0.7s,baz=32,slow=3.5,SNR=1.6							
BRTR	Keskin Array B	150.22	280	PKPbc	PKPbc	16 16 49.8	0.0	
	0.1nm,0.3s,baz=141,slow=4.8,SNR=1.0							
BRTR				PKPab	PKPab	16 16 56.4	+0.5	
	1.6nm,0.9s,baz=131,slow=5.6,SNR=3.9							
TORD	Torodi Ar. Bea	150.87	195	PKPbc	PKPbc	16 16 51.6	-0.1	
	0.8nm,0.5s,baz=139,slow=2.1,SNR=9.9							
TORD				PKPab	sPKPbc	16 17 00.9	-0.6	
	3.4nm,0.8s,baz=155,slow=2.0,SNR=12							
FINES	FINESS Array B	152.43	327	PKPbc	PKPbc	16 16 53.8	-0.1	
	0.9nm,0.6s,baz=357,slow=27,SNR=3.7							
FINES				PKPab	pPKPbc	16 17 01.4	+0.3	
	3.2nm,0.9s,baz=172,slow=15,SNR=3.8							

*GUC **11** 16:16:12.0±0.4,24°.12S×67°.31W,h243km±6km, ML4.3*
*IDC **11** 16:16:13.7±1.3,23°.74S×66°.86W,h206km±13km, mb2.9/2, mbtmp3.7/7, Error ellipse: s-maj=21.7km s-min=16.8km az=142.0*
ISC 11 16:16:12.5±1.1, 23°.99S±0°.06×67°.0W±0°.1, h208km±12km, n23, σ1$58/36, 7C, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.11**	**289**	*i*	P	N	**Pn**	**16 17 46.1**	**-1.6**
KUR						*e*	**Sn**	**16 17 59.7**	**-2.3**
KUR						pmax	pmax		
	comp=Z,511nm,0.4s								
KUR						smax	smax		
	comp=N,6μm,0.4s								
KUR						smax	smax		
	comp=E,3μm,0.2s								
KUR	**Kuril'sk**	**1.11**	**289**	*i*	P	**Pn**	**16 17 46.2**	**-1.5**	
KUR					AMB	AMB	16 17 48.0		
	comp=E,510nm,0.4s								
KUR					*e*S	**Sn**	**16 17 59.7**	**-2.3**	
KUR					A	A	16 18 01.3		
	comp=E,6μm,0.4s								
KUR					A	A	16 18 01.3		
	comp=E,3μm,0.4s								
SHO	**Shikotan**	**2.08**	**242**	*e*	PN	**Pn**	**16 18 00.4**	**-0.4**	
SHO					*e*S	**Sn**	**16 18 24.8**	**-0.7**	
SHO					pmax	pmax			
	comp=E,73nm,0.2s								
SHO					pmax	pmax			
	comp=Z,107nm,0.2s								
SHO					pmax	pmax			
	comp=N,29nm,0.1s								
SHO					smax	smax			
	comp=N,486nm,0.5s								
SHO					smax	smax			
	comp=E,669nm,0.3s								
SHO	**Shikotan**	**2.08**	**242**	*e*	P	**Pn**	**16 18 00.4**	**-0.4**	
SHO					AMB	AMB	16 18 00.7		
	comp=E,90nm,0.3s								
SHO					*e*S	**Sn**	**16 18 24.8**	**-0.7**	
SHO					A	A	16 18 29.1		
	comp=E,490nm,0.4s								
SHO					A	A	16 18 29.1		
	comp=E,670nm,0.4s								
YUK	**Yuzh-Kuril'sk**	**2.64**	**252**	*e*	PN	**Pn**	**16 18 08.7**	**+0.2**	
YUK					*e*S	**Sn**	**16 18 39.7**	**+0.3**	
YUK					pmax	pmax			
	comp=Z,310nm,0.2s								
YUK					pmax	pmax			
	comp=E,251nm,0.5s								
YUK					pmax	pmax			
	comp=N,276nm,0.4s								
YUK					smax	smax			
	comp=E,1μm,0.5s								
YUK					smax	smax			
	comp=N,1μm,0.3s								
YUK	**Yuzh-Kuril'sk**	**2.64**	**252**	*e*	P	**Pn**	**16 18 08.6**	**+0.1**	
YUK					AMB	AMB	16 18 09.7		
	comp=N,280nm,0.3s								
YUK					*e*S	**Sn**	**16 18 39.1**	**-0.3**	
YUK					A	A	16 18 43.3		
	comp=N,790nm,0.5s								
YUK					A	A	16 18 43.3		
	comp=N,2μm,0.5s								
GLVR	**Golovnino**	**2.98**	**249**	*e*	PN	**Pn**	**16 18 14.3**	**+1.1**	
GLVR					*e*S	**Sn**	**16 18 49.6**	**+1.9**	
GLVR					smax	smax			
	comp=E,1μm,0.3s								
GLVR					smax	smax			
	comp=N,987nm,0.4s								
GLVR	**Golovnino**	**2.98**	**249**	*e*	P	**Pn**	**16 18 13.6**	**+0.4**	
GLVR					*e*S	**Sn**	**16 18 48.0**	**+0.3**	
GLVR					A	A	16 18 59.8		
	comp=N,990nm,0.4s								
GLVR					A	A	16 18 59.8		
	comp=N,1μm,0.4s								
NEM2	**Nemuro 2**	**3.02**	**241**	*e*	P	**Pn**	**16 18 12.0**	**-1.5**	
NEM2					*e*S	**Sn**	**16 18 46.9**	**-1.5**	
NMR	**Nemuro--Hokkai**	**3.02**	**241**	*e*	PN	**Pn**	**16 18 13.4**	**-0.3**	
NMR					*e*S	**Sn**	**16 18 49.4**	**+0.8**	
NMR	**Nemuro--Hokkai**	**3.02**	**241**	*e*	P	**Pn**	**16 18 12.7**	**-1.0**	
NMR					*e*S	**Sn**	**16 18 47.0**	**-1.6**	
RUSJ	**Misakicho**	**3.04**	**257**	*e*	PN	**Pn**	**16 18 15.4**	**+1.4**	
RUSJ					*e*S	**Sn**	**16 18 51.8**	**+2.7**	
JRA	**Rausu**	**3.18**	**254**	*e*	P	**Pn**	**16 18 16.7**	**+0.8**	
JRA					*e*S	**Sn**	**16 18 55.0**	**+2.6**	
JNK	**Nakash**	**3.58**	**250**	*e*	P	**Pn**	**16 18 21.7**	**+0.3**	
JNK					*e*S	**Sn**	**16 19 03.6**	**+1.3**	
AKK	**Akkeshi**	**3.76**	**242**	*e*	P	**Pn**	**16 18 23.4**	**-0.4**	
AKK					*e*S	**Sn**	**16 19 05.4**	**-1.3**	
JAK	**Akkeshi**	**3.86**	**242**	*e*	P	**Pn**	**16 18 24.2**	**-1.0**	
JAK					*e*S	**Sn**	**16 19 08.0**	**-1.2**	
JTKR	**Abashiri--Toko**	**4.01**	**259**	*e*	P	**Pn**	**16 18 27.6**	**+0.4**	
JAR	**Ashorobuto**	**4.33**	**250**	*e*	P	**Pn**	**16 18 32.6**	**+1.0**	
JOB	**Onbets**	**4.46**	**245**	*e*	P	**Pn**	**16 18 33.4**	**+0.1**	
JOB					*e*S	**Sn**	**16 19 23.9**	**0.0**	
JKK2	**Kamakawa 2**	**4.84**	**260**	*e*	P	**Pn**	**16 18 40.1**	**+1.4**	
JKA	**Kamikawa-asahi**	**4.89**	**263**		Pn	**Pn**	**16 18 39.3**	**0.0**	
JKA	**Kamikawa-asahi**	**4.89**	**263**	*e*	P	**Pn**	**16 18 39.3**	**0.0**	
ASAJ	**Asahikawa**	**4.90**	**263**		PN	**Pn**	**16 18 39.3**	**-0.1**	
JCH	**Churui**	**4.90**	**244**	*e*	P	**Pn**	**16 18 39.3**	**-0.2**	
JCH					*e*S	**Sn**	**16 19 33.7**	**-1.1**	
YSS	**Yuzh-Sakhalins**	**5.05**	**296**		P	**Pn**	**16 18 41.6**	**+0.2**	
YSS	**Yuzh-Sakhalins**	**5.05**	**296**	*e*	PN	**Pn**	**16 18 41.4**	**0.0**	
YSS					*e*S	**Sn**	**16 19 36.8**	**-1.6**	
YSS					pmax	pmax			
	comp=Z,10.0nm,0.8s								
YSS					smax	smax			
	comp=N,20nm,0.8s								
YSS	**Yuzh-Sakhalins**	**5.05**	**296**	*e*	P	**Pn**	**16 18 41.4**	**0.0**	
YSS					AMB	AMB	16 18 42.0		
	comp=N,10.0nm,0.5s								
ERM	**Erimo**	**5.35**	**240**			**Pn**	**16 18 46.4**	**+0.8**	
ERM	**Erimo**	**5.35**	**240**	*i*	PN	**Pn**	**16 18 47.1**	**+1.5**	
JNBK	**Urakawa-nobuka**	**5.46**	**244**	*e*	P	**Pn**	**16 18 46.8**	**-0.2**	
UGL	**Uglegorsk**	**6.51**	**313**	*e*	P	**Pn**	**16 19 01.8**	**+0.3**	
UGL					AMB	AMB	16 19 03.8		
	comp=N,30nm,0.4s								
JANG	**Nango**	**7.33**	**235**	*e*	P	**Pn**	**16 19 10.6**	**-2.1**	
JTM	**Tenmabayashi**	**7.34**	**239**		Pn	**Pn**	**16 19 12.3**	**-0.5**	
SKR	**Severo-Kuril's**	**7.37**	**36**	*i*	PN	**Pn**	**16 19 14.5**	**+1.3**	
SKR	**Severo-Kuril's**	**7.37**	**36**	*e*	P	**Pn**	**16 19 13.9**	**+0.7**	
SKR					AMB	AMB	16 19 15.6		
	comp=N,20nm,0.5s								
JTH	**Tanohata**	**7.43**	**231**	*e*	P	**Pn**	**16 19 11.6**	**-2.5**	
TYV	**Tymovskoe**	**7.48**	**325**	*e*	P	**Pn**	**16 19 14.7**	**0.0**	
TYV					AMB	AMB	16 19 17.9		
PAU	**Pauzhetka**	**8.25**	**34**	*e*	P	**Pn**	**16 19 26.9**	**+1.7**	
PAU					AMB	AMB	16 19 29.9		
	comp=N,20nm,0.6s								
PEA0B	**Petropavlovsk-**	**9.88**	**31**		Pn	**Pn**	**16 19 46.7**	**-0.8**	
PEA0B	**Petropavlovsk-**	**9.88**	**31**	*i*	PN	**Pn**	**16 19 48.4**	**+0.9**	
PETK	**Petropavlovsk-**	**9.88**	**31**		P	**Pn**	**16 19 48.1**	**+0.6**	
	comp=N,0.4nm,0.3s,baz=207,slow=16,SNR=11								
PETK					LR	LR	16 23 53.3		
	comp=N,15nm,20.1s,baz=166,slow=39								
	comp=N,1.4nm,0.4s								
PETK	**Petropavlovsk-**	**9.88**	**31**			**Pn**	**16 19 47.1**	**-0.4**	
MJA0	**Matsu Arr-Jizo**	**11.85**	**229**	*e*	PN	**Pn**	**16 20 13.2**	**-1.3**	
MJAR	**Matsushiro Arr**	**11.87**	**229**		P	**Pn**	**16 20 13.1**	**-1.7**	
	baz=26,slow=15,SNR=5.1								
	comp=N,0.6nm,0.7s								
KLR	**Kul'dur**	**12.76**	**296**		LR	LR	16 25 37.9		
	comp=N,45nm,19.9s,baz=218,slow=39								
JHJ2	**Mitsune**	**13.89**	**215**		Pn	**Pn**	**16 20 44.2**	**+1.9**	
MA2	**Magadan**	**14.73**	**3**		LR	LR	16 25 44.2		
	comp=N,44nm,20.4s,baz=203,slow=34								
SEY	**Seymchan**	**18.16**	**4**		P	**Pn**	**16 21 36.5**	**+0.3**	
	comp=N,1.0nm,0.3s,baz=190,slow=13,SNR=6.0								
	comp=N,1.0nm,0.7s								
SEY	**Seymchan**	**18.16**	**4**	*i*	P	**Pn**	**16 21 36.6**	**+0.4**	
SEY					pmax	pmax			
	comp=Z,6.0nm,1.6s								
SEY	**Seymchan**	**18.16**	**4**	*e*	P	**Pn**	**16 21 36.6**	**+0.4**	
YAK	**Yakutsk**	**20.64**	**333**	*i*	P	Pn	16 22 05.0	-0.6	
YAK					pmax	pmax			
	comp=Z,8.0nm,0.9s								
YAK	**Yakutsk**	**20.64**	**333**	*e*	P	Pn	16 22 05.0	-0.6	
H11N2	**WAKE ISLAND Hy**	**29.01**	**144**		T	T	16 54 10.0		
	baz=334,slow=76,SNR=49								
H11N1	**WAKE ISLAND Hy**	**29.02**	**144**		T	T	16 54 11.6		
	baz=334,slow=76,SNR=95								
H11N3	**WAKE ISLAND Hy**	**29.03**	**144**		T	T	16 54 11.2		
	baz=334,slow=76,SNR=63								
ULN	**Ulaanbaatar**	**29.07**	**291**	*i*	P	**P**	**16 23 26.5**	**+3.1**	
ULN					pmax	pmax			
	comp=Z,3.0nm,1.4s								
ULN	**Ulaanbaatar**	**29.07**	**291**	*e*	P	**P**	**16 23 26.5**	**+3.1**	
H11S1	**WAKE ISLAND Hy**	**30.03**	**146**		T	T	16 55 27.1		
	baz=335,slow=76,SNR=65								
H11S3	**WAKE ISLAND Hy**	**30.03**	**146**		T	T	16 55 29.3		
	baz=335,slow=76,SNR=47								
H11S2	**WAKE ISLAND Hy**	**30.05**	**146**		T	T	16 55 29.3		
	baz=335,slow=76,SNR=60								
J20K	**Nowinta River**	**36.47**	**38**		P	**P**	**16 24 26.4**	**-1.1**	
J20K					IAmb	IAmb	16 24 29.0		
	comp=Z,3.2nm,0.7s								
IMAR	**Indian Mountai**	**36.81**	**35**		P	**P**	**16 24 30.4**	**0.0**	
H21K	**Melozitna Rive**	**37.16**	**36**		P	**P**	**16 24 33.7**	**+0.3**	
KDAK	**Kodiak Island**	**37.31**	**49**		P	**P**	**16 24 34.2**	**-0.5**	
	comp=Z,2.4nm,0.5s,baz=292,slow=7.1,SNR=4.7								
	comp=Z,2.4nm,0.5s								
CAST	**Castle Rocks**	**37.35**	**39**		P	**P**	**16 24 35.9**	**+0.9**	
CAST					IAmb	IAmb	16 24 59.6		
	comp=Z,2.9nm,0.6s								
I21K	**Tanana**	**37.47**	**36**		P	**P**	**16 24 36.1**	**+0.2**	
I21K					IAmb	IAmb	16 24 38.0		
	comp=Z,2.8nm,0.8s								
H23K	**Yukon River**	**38.52**	**35**		P	**P**	**16 24 43.8**	**-1.1**	
H23K					IAmb	IAmb	16 24 46.6		
	comp=Z,3.6nm,0.8s								
NEA2	**Nenana**	**38.69**	**37**		P	**P**	**16 24 45.6**	**-0.6**	
NEA2					IAmb	IAmb	16 24 47.5		
	comp=Z,3.8nm,0.7s								
TOLK	**Toolik Lake Re**	**38.70**	**31**		P	**P**	**16 24 46.5**	**+0.1**	
NRIK	**Noril'sk**	**39.03**	**330**	*i*	P	**P**	**16 24 51.8**	**+2.8**	
NRIK					pmax	pmax			
	comp=N,2.0nm,0.8s								
WRH	**Wood River Hil**	**39.12**	**38**		P	**P**	**16 24 49.0**	**-0.8**	
H24K	**Noodor Dome**	**39.20**	**35**		P	**P**	**16 24 49.8**	**-0.8**	
COLA	**College**	**39.21**	**37**	*i*	P	**P**	**16 24 51.8**	**+1.2**	
COLA					pmax	pmax			
	comp=Z,4.0nm,1.0s								
CCB	**Clear Creek Bu**	**39.24**	**37**		P	**P**	**16 24 50.1**	**-0.6**	
SCM	**Sheep Creek Mo**	**39.59**	**42**		P	**P**	**16 24 52.7**	**-1.2**	
SCM					IAmb	IAmb	16 24 53.7		
	comp=Z,4.1nm,0.8s								
SCM	**Sheep Creek Mo**	**39.59**	**42**		P	**P**	**16 24 52.7**	**-1.2**	
SCM					pmax	pmax			
	comp=Z,4.0nm,0.8s								
HDA	**Harding Lake**	**39.61**	**38**		P	**P**	**16 24 53.2**	**-0.7**	
ILAR	**Eielson Array**	**39.63**	**37**		P	**P**	**16 24 53.9**	**-0.2**	
	comp=Z,1.6nm,0.8s,baz=272,slow=7.1,SNR=16								
	comp=Z,1.6nm,0.8s								
ILAR	**Eielson Array**	**39.63**	**37**		P	**P**	**16 24 53.4**	**-0.7**	
DOT	**Dot Lake**	**40.93**	**39**		P	**P**	**16 25 04.4**	**-0.5**	
DOT					IAmb	IAmb	16 25 05.5		
	comp=Z,4.8nm,1.2s								
SCRK	**Sand Creek**	**40.93**	**38**		P	**P**	**16 25 04.4**	**-0.6**	
M26K	**Nabesna, AK**	**41.55**	**40**		P	**P**	**16 25 11.1**	**+1.1**	
M26K					IAmb	IAmb	16 25 12.2		
	comp=Z,4.6nm,0.8s								
ZALV	**Zalesovo Beam**	**41.59**	**306**		PcP	**PcP**	**16 27 05.6**	**-0.8**	
	comp=Z,1.2nm,0.7s,baz=46,slow=4.3,SNR=4.4								
GOMU	**GeErMu**	**41.66**	**278**		P	**P**	**16 25 08.1**	**-3.5**	
GOMU					pmax	pmax			
	comp=Z,3.0nm,0.4s								
K27K	**Chicken**	**41.77**	**38**		P	**P**	**16 25 11.6**	**-0.1**	
K27K					IAmb	IAmb	16 25 13.2		
	comp=Z,6.2nm,1.0s								
L27K	**Beaver Creek,**	**42.00**	**39**		P	**P**	**16 25 14.8**	**+1.1**	
BCAR	**Beaver Creek A**	**42.02**	**39**		P	**P**	**16 25 14.8**	**+1.0**	
M27K	**Edge Creek, AK**	**42.08**	**40**		P	**P**	**16 25 14.9**	**+0.5**	
I29M	**Ogilvie Camp,**	**43.20**	**36**		P	**P**	**16 25 23.9**	**+0.6**	
I29M					IAmb	IAmb	16 25 24.6		
	comp=Z,3.7nm,0.8s								
HYT	**Haines Junctio**	**44.43**	**42**		P	**P**	**16 25 33.5**	**+0.2**	
INK	**Inuvik**	**44.61**	**31**		P	**P**	**16 25 34.4**	**-0.1**

comp=Z,2.1nm,0.8s,baz=39,slow=5.3,SNR=5.1
comp=Z,2.1nm,0.8s

OBN Obninsk 65.32 324 *e*P **P** 16 28 07.1 +3.0
OBN *e* 16 30 32.0
OBN pmax pmax
comp=Z,7.0nm,0.5s
OBN MLR MLR
comp=Z,21nm,17.0s
OBN Obninsk 65.32 324 *e*P **P** **16 28 07.1 +3.0**
NVAR Mina Array Bea 65.63 59 P **P** **16 28 07.5 +0.8**
comp=Z,0.8nm,0.5s,baz=286,slow=7.0,SNR=9.3
comp=Z,0.8nm,0.5s
WRA Warramunga Arr 65.96 195 P **P** **16 28 08.1 -0.5**
comp=Z,0.3nm,0.6s,baz=11,slow=6.7,SNR=1.8
comp=Z,0.3nm,0.6s
PDAR Pinedale Array 67.96 51 P **P** **16 28 21.5 0.0**
comp=Z,1.0nm,1.0s,baz=90,slow=0.9,SNR=4.1
comp=Z,1.0nm,1.0s
NOA NORSAR Array B 69.10 340 P **P** **16 28 25.8 -2.2**
comp=Z,0.1nm,0.5s,baz=31,slow=6.2,SNR=1.4
comp=Z,0.1nm,0.5s
ASAR Alice Springs 69.67 195 P **P** **16 28 32.7 +0.8**
comp=Z,0.3nm,0.8s,baz=9.6,slow=6.5,SNR=6.3
comp=Z,0.3nm,0.8s
KIV Kislovodsk 70.17 313 *e*P **P** **16 28 38.6 +3.6**
KIV pmax pmax
comp=Z,4.0nm,0.9s
AKASG Malin Array Be 71.58 325 P **P** **16 28 41.5 -1.8**
comp=Z,0.7nm,0.5s,baz=38,slow=6.3,SNR=2.5
comp=Z,0.7nm,0.5s
CLL Collm 77.02 334 *i* P **P** **16 29 13.6 -1.3**
CLL pmax pmax
comp=Z,3.0nm,0.5s
CLL Collm 77.02 334 *i* P **P** **16 29 13.6 -1.3**
comp=Z,3.0nm,0.5s
BRTR Keskin Array B 77.89 315 P **P** **16 29 18.8 -1.3**
comp=Z,0.3nm,0.5s,baz=343,slow=4.5,SNR=3.8
comp=Z,0.3nm,0.5s
BRTR Keskin Array B 77.89 315 *e*P **P** **16 29 21.0 +0.9**
KHC Kasperske Hory 78.71 332 *e*P **P** **16 29 22.9 -1.5**
KHC Kasperske Hory 78.71 332 *e*P **P** **16 29 22.9 -1.5**
GERES GERESS Array B 78.92 332 P **P** **16 29 23.9 -1.7**
comp=Z,0.4nm,0.5s,baz=44,slow=6.5,SNR=6.2
comp=Z,0.4nm,0.5s
TXAR Lajitas Array 80.70 58 P **P** **16 29 36.1 +0.5**
comp=Z,1.2nm,0.7s,baz=304,slow=4.6,SNR=16
comp=Z,1.2nm,0.7s
TORD Torodi Ar. Bea 115.22 325 PKP **PKiKP** **16 36 02.1 -1.6**
comp=Z,0.1nm,0.3s,baz=47,slow=3.7,SNR=1.4
H03N2 Juan Fernandez 141.38 90 T T 19 14 33.9
baz=305,slow=77,SNR=5.9
H03N1 Juan Fernandez 141.39 90 T T 19 14 35.3
baz=305,slow=77,SNR=5.0
H03N3 Juan Fernandez 141.39 90 T T 19 14 36.2
baz=305,slow=77,SNR=4.6
PLCA Paso Flores 150.64 96 PKPbc **PKiKP** **16 37 14.0 -0.3**
comp=Z,0.7nm,0.5s,baz=265,slow=3.1,SNR=6.1

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*IDC **11** 16:19:47.8±1.2,29.°62N×139.°98E,h148km±12km, mb3.7/19,mbtmp4.1/22,Error ellipse: s-maj=19.2km s-min=9.9km az=73.0*
*NIED **11** 16:19:48.0,29.°65N×140.°57E,h217km,MW4.0,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr=0.03; Mθθ 0.57; Mφφ -0.54; Mrθ -0.64; Mθφ -0.65; Mφr 0.28; Fault plane solution: M₀ 1.05000×10¹⁵ NP1: φs 344.00000°,δ 69.00000°,λ 20.00000°. NP2: φs 246.00000°,δ 71.00000°,λ 158.00000°.*
*JMA **11** 16:19:48.0±0.2,29.°7N±0.°8×140.°7E±0.°1,h217km±4km, MV4.3/37,NEAR TORISHIMA IS*
ISC 11 16:19:50.3±0.5,29.°73N±0.°05×140.°7E±0.°1,h200km,n41, σ 2s 38/47,mb3.8/18,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CBIJ	**Chichi jima**	**2.93**	**153**	P		**Pn**	**16 20 37.7**	**-1.4**
CBIJ				*e*S		**Sn**	**16 21 16.1**	**-1.2**
JCJ	**Chichijima**	**2.93**	**153**	P		**Pn**	**16 20 37.8**	**-1.4**
	144nm,0.3s,baz=28,slow=11,SNR=133							
JCJ				S		**Sn**	**16 21 15.5**	**-1.8**
	666nm,0.4s,baz=106,slow=23,SNR=30							
JHH2	**Haha-jima-NKT2**	**3.35**	**157**	P		**Pn**	**16 20 42.9**	**-1.2**
JHH2				S		**Sn**	**16 21 24.9**	**-1.4**
JHH2	**Haha-jima-NKT2**	**3.35**	**157**	A		A	16 20 42.9	
	comp=E,3.0nm,8.1s,comp=E,2.0nm,0.4s							
JHCJ	**Hachijojimakas**	**3.42**	**347**	P		**Pn**	**16 20 44.6**	**-0.3**
JHCJ				S		**Sn**	**16 21 27.8**	**-0.1**
JHJ2	**Mitsune**	**3.46**	**348**	P		**Pn**	**16 20 45.4**	**0.0**
JHJ	**Hachijo jima 2**	**3.47**	**347**	P		**Pn**	**16 20 45.1**	**-0.4**
	93nm,0.3s,baz=328,slow=14,SNR=30							
JHJ				S		**Sn**	**16 21 25.2**	**-3.7**
	110nm,0.4s,baz=86,slow=23,SNR=3.3							
JMKN	**Mikurajimanish**	**4.26**	**348**	P		**Pn**	**16 20 54.9**	**-0.3**
JMKN				*e*S		**Sn**	**16 21 44.4**	**-2.1**
JKO	**Kozu shima**	**4.64**	**344**	P		**Pn**	**16 21 00.1**	**0.0**
BSO1	**Boso 1**	**4.92**	**3**	P		**Pn**	**16 21 03.1**	**0.0**
JOD2	**Odawara 2**	**5.69**	**347**	P		**Pn**	**16 21 13.3**	**-0.1**
JTNC	**Tanabenakahech**	**5.95**	**315**	P		**Pn**	**16 21 15.2**	**-1.6**
JHU	**Hanno**	**6.22**	**349**	P		**Pn**	**16 21 19.6**	**-0.8**
JHU				*e*S		**Sn**	**16 22 24.9**	**-6.9**
JYT	**Yasato**	**6.50**	**356**	P		**Pn**	**16 21 22.1**	**-1.8**
JYT				*e*S		**Sn**	**16 22 31.1**	**-7.0**
MJAR	**Matsushiro Arr**	**7.11**	**344**	P		**Pn**	**16 21 30.0**	**-1.9**
	1.0nm,0.3s,baz=226,slow=1.9,SNR=17							
MJAR				S		Sn	16 22 42.9	-10
	2.1nm,0.5s,baz=142,slow=12,SNR=5.1							
JTO	**Tosashimizu**	**7.44**	**297**	*e*P		**Pn**	**16 21 34.3**	**-1.9**
KSRS	**Korea Array**	**13.14**	**309**	P		**P**	**16 22 48.8**	**-3.6**
	1.3nm,0.7s,baz=120,slow=13,SNR=7.4							
USRK	**Ussuriysk Ar.**	**16.02**	**337**	P		**Pn**	**16 23 24.6**	**-0.1**
	1.1nm,0.4s,baz=148,slow=9.6,SNR=7.9							
KLR	**Kul'dur**	**20.64**	**343**	P		**P**	**16 24 14.8**	**+0.5**
	6.5nm,0.5s,baz=161,slow=11,SNR=14							
	6.5nm,0.5s							
YAK	**Yakutsk**	**33.11**	**351**	P		**P**	**16 26 09.5**	**+2.5**
	3.1nm,0.5s,baz=125,slow=1.9,SNR=5.2							
	3.1nm,0.5s							
CMAR	**Chiang Mai Arr**	**39.54**	**263**	P		**P**	**16 27 00.8**	**-1.3**
	0.8nm,0.6s,baz=78,slow=4.9,SNR=6.0							
	0.8nm,0.6s							
TIXI	**Tiksi**	**42.47**	**354**	P		**P**	**16 27 28.1**	**+2.9**
	3.2nm,0.3s,baz=89,slow=21,SNR=15							
	3.2nm,0.3s							
ZALV	**Zalesovo Beam**	**46.66**	**318**	P		**P**	**16 27 57.2**	**-1.3**
	0.7nm,0.4s,baz=102,slow=6.6,SNR=3.0							
ZALV				PcP		**PcP**	**16 29 30.5**	**+1.7**
	1.7nm,0.7s,baz=112,slow=2.7,SNR=6.1							
	0.7nm,0.4s							
MKAR	**Makanchi Array**	**47.81**	**308**	P		**P**	**16 28 06.0**	**-1.6**
	0.2nm,0.5s,baz=85,slow=11,SNR=4.3							
MKAR				PcP		**PcP**	**16 29 34.6**	**+1.5**
	0.4nm,0.4s,baz=76,slow=3.4,SNR=6.2							
	0.2nm,0.5s							
NRIK	**Noril'sk**	**49.73**	**338**	P		**P**	**16 28 23.8**	**+2.0**
	3.6nm,0.5s,baz=125,slow=7.4,SNR=6.6							
	3.6nm,0.5s							
WRA	**Warramunga Arr**	**49.76**	**188**	P		**P**	**16 28 24.1**	**+1.5**
	0.5nm,0.3s,baz=5.2,slow=7.7,SNR=16							
	0.5nm,0.3s							
KDAK	**Kodiak Island**	**53.08**	**38**	P		P	16 28 53.1	+6.4
	6.3nm,1.0s,baz=270,slow=7.1,SNR=2.3							
	6.3nm,1.0s							
ASAR	**Alice Springs**	**53.49**	**188**	P		**P**	**16 28 51.9**	**+1.8**
	0.3nm,0.3s,baz=2.7,slow=5.6,SNR=14							
	0.3nm,0.3s							
ARCES	**ARCESS Array B**	**70.63**	**340**	P		**P**	**16 30 46.3**	**+2.7**
	3.3nm,0.6s,baz=67,slow=9.3,SNR=24							
	3.3nm,0.6s							
FINES	**FINESS Array B**	**75.02**	**333**	P		**P**	**16 31 11.1**	**+1.7**
	1.6nm,0.3s,baz=82,slow=4.7,SNR=32							
	1.6nm,0.3s							
KBZ	**Khabaz**	**75.27**	**312**	P		**P**	**16 31 12.0**	**+0.8**
	2.7nm,0.7s,baz=76,slow=7.7,SNR=5.6							
	2.7nm,0.7s							
AKASG	**Malin Array Be**	**79.73**	**323**	P		**P**	**16 31 36.6**	**+0.9**
	0.8nm,0.3s,baz=46,slow=5.1,SNR=5.8							
	0.8nm,0.3s							
NVAR	**Mina Array Bea**	**79.92**	**52**	P		P	16 31 44.2	+6.9
	0.2nm,0.3s,baz=288,slow=4.4,SNR=2.8							
	0.2nm,0.3s							
NB2	**NORSAR Subarra**	**80.69**	**338**	P		**P**	**16 31 42.7**	**+1.9**
	comp=Z,0.6nm,0.4s,baz=42,slow=5.3							
NOA	**NORSAR Array B**	**80.69**	**338**	P		**P**	**16 31 43.0**	**+2.3**
	comp=Z,1.3nm,0.8s,baz=54,slow=6.6,SNR=9.9							
	comp=Z,1.3nm,0.8s							
BRTR	**Keskin Array B**	**83.27**	**312**	P		**P**	**16 31 55.6**	**+0.8**
	comp=Z,1.8nm,0.7s,baz=101,slow=4.3,SNR=13							
	comp=Z,1.8nm,0.7s							
GERES	**GERESS Array B**	**88.59**	**328**	P		**P**	**16 32 21.8**	**+1.3**
	comp=Z,0.3nm,0.7s,baz=46,slow=5.6,SNR=4.9							
	comp=Z,0.3nm,0.7s							
TXAR	**Lajitas Array**	**95.06**	**52**	P		P	16 32 57.3	+6.5
	comp=Z,0.2nm,0.6s,baz=316,slow=2.5,SNR=2.3							
	comp=Z,0.2nm,0.6s							
TORD	**Torodi Ar. Bea**	**121.87**	**311**	PKP		**PKiKP**	**16 38 23.4**	**+1.9**
	comp=Z,0.2nm,0.4s,baz=2.0,slow=1.9,SNR=4.6							
LPAZ	**La Paz**	**150.38**	**70**	PKPbc		**PKPab**	**16 39 25.1**	**-1.3**
	comp=Z,1.1nm,0.6s,baz=315,slow=1.4,SNR=6.0							
PLCA	**Paso Flores**	**152.35**	**122**	PKPbc		**PKPab**	**16 39 27.8**	**-5.6**
	comp=Z,0.6nm,0.6s,baz=256,slow=3.1,SNR=4.3							

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*INET **11** 16:26:05.9±0.4,12.°80N×87.°00W,h2km±2km,MW3.3*
*UCR **11** 16:26:05.5±1.6,12.°82N×87.°09W,h6km±12km,ML4.3*
*SNET **11** 16:26:06.5±1.1,12.°84N×87.°14W,h7km,ML4.3*
ISC 11 16:26:05.5±1.0,12.°86N±0.°04×87.°06W±0.°03,h13km±9km, n54,σ 0s 82/65,2C-7D,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CRIN	**San Cristobal**	**0.15**	**177**	*e*P		**Pg**	**16 26 09.1**	**-0.3**
CRIN				*e*S		**Sg**	**16 26 11.9**	**0.0**
TELN	**Telica**	**0.33**	**138**	*e*P		**Pg**	**16 26 12.5**	**+0.1**
MOMN	**Momotombo**	**0.67**	**131**	*e*P		**Pg**	**16 26 18.2**	**-0.4**
MOMN				*e*S		**Sg**	**16 26 27.7**	**+0.2**
CNCH	**Conchagua**	**0.86**	**299**	*e*P		**Pg**	**16 26 21.3**	**-1.0**
CNCH				*e*S		**Sg**	**16 26 34.3**	**+0.7**
CNCH				IAML			16 26 43.5	
	comp=Z,16μm,0.4s							
CNCH	**Conchagua**	**0.86**	**299**	*e*P		**Pg**	**16 26 21.3**	**-1.0**
CNCH				*e*S		**Sg**	**16 26 34.3**	**+0.7**
CNCH				IAML			16 26 43.5	
	comp=Z,16μm,0.4s							
LCND	**La Caada**	**0.93**	**299**	*e*P		**Pg**	**16 26 22.2**	**-1.2**
LCND				*e*S		**Sg**	**16 26 36.2**	**+0.6**
LCND				IAML			16 26 38.0	
	comp=Z,8μm,0.5s							
LCND	**La Caada**	**0.93**	**299**	*e*P		**Pg**	**16 26 22.2**	**-1.2**
LCND				*e*S		**Sg**	**16 26 36.2**	**+0.6**
LCND				IAML			16 26 38.0	
	comp=Z,8μm,0.5s							
MGAN	**Managua**	**1.06**	**132**	*e*P		**Pg**	**16 26 24.6**	**-1.3**
MGAN				*e*S		**Sg**	**16 26 39.4**	**-0.3**
MATN	**Matagalpa**	**1.11**	**86**	*e*P		**Pg**	**16 26 25.2**	**-1.6**
TGUH	**Tegucigalpa,Un**	**1.21**	**350**	*i*P		**Pg**	**16 26 28.4**	**-0.4**
TGUH				*e*S		**Sg**	**16 26 45.2**	**+0.5**
TGUH	**Tegucigalpa,Un**	**1.21**	**350**	*i*P		**Pg**	**16 26 28.4**	**-0.4**
TGUH				*e*S		**Sg**	**16 26 45.2**	**+0.5**
CNRM	**Centro Naciona**	**1.25**	**300**	*e*P		**Pg**	**16 26 28.1**	**-1.4**
CNRM	**Centro Naciona**	**1.25**	**300**	*e*P		**Pg**	**16 26 28.1**	**-1.4**
VSM	**San Miguel**	**1.31**	**296**	*e*P		**Pn**	**16 26 29.1**	**-0.6**
VSM	**San Miguel**	**1.31**	**296**	*e*P		**Pn**	**16 26 29.1**	**-0.6**
RANC	**El Ranchito**	**1.33**	**296**	*e*P		**Pn**	**16 26 29.3**	**-0.5**
RANC	**El Ranchito**	**1.33**	**296**	*e*P		**Pn**	**16 26 29.3**	**-0.5**
LCY	**Lacayo**	**1.33**	**295**	*e*P		**Pn**	**16 26 29.4**	**-0.4**
LCY	**Lacayo**	**1.33**	**295**	*e*P		**Pn**	**16 26 29.4**	**-0.4**
PACA	**Pacayal**	**1.38**	**296**	*e*P		**Pn**	**16 26 30.1**	**-0.3**
PACA				*e*S		**Sb**	**16 26 48.6**	**0.0**
PACA	**Pacayal**	**1.38**	**296**	*e*P		**Pn**	**16 26 30.1**	**-0.3**
PACA				*e*S		**Sb**	**16 26 48.6**	**0.0**
SCLA	**Alcaldia de Sa**	**1.83**	**298**	*e*P		**Pn**	**16 26 37.6**	**+1.0**
SCLA	**Alcaldia de Sa**	**1.83**	**298**	*e*P		**Pn**	**16 26 37.6**	**+1.0**
CONN	**Concepcion**	**1.90**	**132**	*e*P		**Pn**	**16 26 37.2**	**-0.3**
COEG	**Centro de Oper**	**1.93**	**293**	*e*P		**Pn**	**16 26 38.5**	**+0.5**
COEG	**Centro de Oper**	**1.93**	**293**	*e*P		**Pn**	**16 26 38.5**	**+0.5**
PAVA	**Las Pavas**	**2.02**	**295**	*e*P		**Pn**	**16 26 40.4**	**+1.1**
PAVA	**Las Pavas**	**2.02**	**295**	*e*P		**Pn**	**16 26 40.4**	**+1.1**
ACON	**Acoyapa**	**2.04**	**115**	*e*P		**Pn**	**16 26 40.5**	**+1.0**
SJTE	**Alcalda de S**	**2.04**	**292**	*e*P		**Pn**	**16 26 40.2**	**+0.6**
SJTE	**Alcalda de S**	**2.04**	**292**	*e*P		**Pn**	**16 26 40.2**	**+0.6**
LALI	**Alcalda de L**	**2.29**	**286**	*e*P		**Pn**	**16 26 43.5**	**+0.6**
LALI	**Alcalda de L**	**2.29**	**286**	*e*P		**Pn**	**16 26 43.5**	**+0.6**
BOQS	**Boqueron**	**2.33**	**292**	*e*P		**Pn**	**16 26 45.8**	**+2.0**
BOQS	**Boqueron**	**2.33**	**292**	*e*P		**Pn**	**16 26 45.8**	**+2.0**
HZTE	**Horizontes, Gu**	**2.56**	**146**	*e*P		**Pn**	**16 26 46.8**	**+0.1**
GBS3	**Finca Las Img**	**2.59**	**143**	*e*P		**Pn**	**16 26 46.4**	**-0.7**
BUAI	**Buenos Aires**	**2.59**	**139**	*e*P		**Pn**	**16 26 47.2**	**+0.1**
GB1A	**Borinquen Arri**	**2.59**	**141**	*i*P		**Pn**	**16 26 47.3**	**+0.1**
BUEV	**Buena Vista**	**2.61**	**142**	*e*P		**Pn**	**16 26 47.3**	**0.0**
LAPC	**Finca la Perla**	**2.61**	**142**	*e*P		**Pn**	**16 26 46.9**	**-0.6**
GPS2	**Hotel Rincn d**	**2.67**	**141**	*e*P		**Pn**	**16 26 48.5**	**+0.2**
LIM1	**Limonal**	**2.78**	**140**	*i*P		**Pn**	**16 26 50.0**	**+0.3**
GUAB	**Guayabo de Bag**	**2.79**	**140**	*e*P		**Pn**	**16 26 50.3**	**+0.5**
HORNC	**Hornillas**	**2.81**	**139**	*e*P		**Pn**	**16 26 50.6**	**+0.4**
COLC	**Colonia**	**2.83**	**140**	*e*P		**Pn**	**16 26 51.0**	**+0.6**
NUBE	**Las Nubes**	**2.85**	**292**	*e*P		**Pn**	**16 26 51.5**	**+0.8**
NUBE	**Las Nubes**	**2.85**	**292**	*e*P		**Pn**	**16 26 51.5**	**+0.8**
CUI	**Cuipilapa**	**2.87**	**139**	*e*P		**Pn**	**16 26 51.5**	**+0.6**
PTEN	**Parque Tenorio**	**2.94**	**136**	*e*P		**Pn**	**16 26 53.1**	**+1.2**
ACAL	**Aguas Claras**	**2.97**	**138**	*e*P		**Pn**	**16 26 53.1**	**+0.8**
GUAI	**GUAI**	**2.98**	**149**	*e*P		**Pn**	**16 26 53.0**	**+0.5**
JTS	**Las Juntas de**	**3.28**	**141**	*e*P		**Pn**	**16 26 56.8**	**+0.3**
CDM	**Cerro de Muert**	**4.61**	**135**	*e*P		**Pn**	**16 27 16.5**	**+1.3**

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*BJI **11** 16:30:53.5±0.0,51.°31N×135.°65E,h13km,mb4.4/7, mB4.4/1,ML4.4/4*
*IDC **11** 16:30:53.6±0.7,51.°21N×135.°53E,h0km,mb3.9/14, mbtmp3.8/17,ML3.5/2,Error ellipse: s-maj=18.3km s-min=12.3km az=125.0*
*MOS **11** 16:30:54.4±1.5,51.°16N×135.°53E,h10km,mb4.3/7,Error ellipse: s-maj=12.2km s-min=8.0km az=99.0*
*SKHL **11** 16:30:56.1±0.3,51.°14N×135.°54E,h11km±3km,mb4.3/8, ms3.7/4*
*NEIC **11** 16:30:56.2±0.6,51.°13N±0.°10×135.°5E±0.°3,h15km±5km, mb4.2/23,Error ellipse: s-maj=25.1km s-min=13.7km az=102.0*
ISC 11 16:30:55.9±0.4,51.°09N±0.°03×135.°49E±0.°02,h10km,n102, σ 2s 05/121,mb4.2/32,6C-5D,Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GRNR	**Gornyy**	**0.67**	**118**	*i*P		**Pg**	**16 31 08.8**	**-0.2**
GRNR				*e*S		**Sg**	**16 31 17.3**	**-0.4**
GRNR				pmax	pmax			
	comp=N,2μm,0.2s							
GRNR				pmax	pmax			
	comp=E,1μm,0.2s							
GRNR				pmax	pmax			
	comp=Z,1μm,0.1s							
GRNR				smax	smax			
	comp=E,4μm,0.1s							
GRNR	**Gornyy**	**0.67**	**118**	*i*Pg		**Pg**	**16 31 08.7**	**-0.2**
GRNR				AMB	AMB		16 31 08.9	
	comp=E,341nm,0.3s							
GRNR				*e*Sg		**Sg**	**16 31 17.4**	**-0.3**
GRNR				A	A		16 31 17.7	
	comp=E,3μm,0.3s							
GRNR				A	A		16 31 17.7	
	comp=E,2μm,0.3s							
EKMR	**Ekimchan**	**2.53**	**323**	*i* Pn		**Pn**	**16 31 36.2**	**-0.8**
EKMR				*e*Pg		**Pb**	**16 31 41.2**	**-0.2**
EKMR				AMB	AMB		16 31 42.4	
	comp=E,95nm,0.7s							
EKMR				*e*Sg		**Sb**	**16 32 13.4**	**+0.9**
EKMR				A	A		16 32 18.5	
	comp=E,989nm,0.8s							
KHBR	**Khabarovsk**	**2.64**	**186**	*e*Pg		**Pg**	**16 31 46.0**	**-0.4**
KHBR				AMB	AMB		16 31 48.0	
	comp=E,68nm,0.5s							
KHBR				*e*rx		rx	16 31 50.7	
KHBR				*e*Sg		**Sg**	**16 32 19.9**	**-0.7**
KHBR				A	A		16 32 21.9	
	comp=E,860nm,0.6s							
KHBR				AMS	AMS		16 33 07.5	
	comp=E,310nm,2.0s							
KHBR				AMS	AMS		16 33 07.5	
	comp=E,290nm,2.0s							
KLR	**Kul'dur**	**3.04**	**234**	Pn		**Pn**	**16 31 45.8**	**+1.7**
	comp=E,7.5nm,0.3s,baz=46,slow=17,SNR=38							
KLR				Pg		**Pb**	**16 31 52.8**	**+2.6**
	comp=E,39nm,0.3s,baz=52,slow=18,SNR=144							
KLR				Lg	Lg		16 32 32.0	
	comp=E,46nm,0.3s,baz=307,slow=21,SNR=4.6							
	comp=E,9.8nm,0.3s							
KLR	**Kul'dur**	**3.04**	**234**	*e*Pn		**Pn**	**16 31 45.9**	**+1.8**
KLR				P		**Pb**	**16 31 50.8**	**+0.6**
KLR				*e*Pg		**Pg**	**16 31 52.5**	**-1.7**
KLR				*e*Sg		**Sg**	**16 32 33.4**	**-0.2**

NKL	**Nikolayevsk**	**3.80**	**55**	*e*Pn		**Pn**	**16 31 54.2**	**-0.3**
NKL				*e*Pg		**Pb**	**16 32 03.5**	**+0.4**
NKL				*e*Sg		**Sb**	**16 32 52.8**	**+3.6**
NKL				A	A		16 32 54.7	
	comp=E,328nm,0.6s							
NKL				AMS	AMS		16 34 04.8	
	comp=E,420nm,4.0s							
NKL				AMS	AMS		16 34 04.8	
	comp=E,550nm,4.0s							
TYV	**Tymovskoe**	**4.53**	**90**	*e*P		**Pb**	**16 32 17.9**	**+2.4**
TYV				pmax	pmax			
	comp=Z,100nm,1.4s							
TYV				pmax	pmax			
	comp=Z,11nm,0.3s							
TYV	**Tymovskoe**	**4.53**	**90**	*e*Pg		**Pb**	**16 32 17.3**	**+1.8**
TYV				AMB	AMB		16 32 18.2	
	comp=Z,11nm,0.3s							
TYV				*e*Sg		**Sg**	**16 33 17.8**	**-3.6**
TYV				A	A		16 33 22.6	
	comp=Z,147nm,0.8s							
TYV				AMS	AMS		16 34 17.3	
	comp=Z,320nm,7.0s							
TYV				AMS	AMS		16 34 17.3	
	comp=Z,250nm,7.0s							
UGL	**Uglegorsk**	**4.69**	**113**	*e*P		**Pg**	**16 32 23.3**	**-2.4**
UGL				pmax	pmax			
	comp=Z,40nm,0.6s							
UGL	**Uglegorsk**	**4.69**	**113**	*e*Pg		**Pb**	**16 32 20.8**	**+2.6**
UGL				AMB	AMB		16 32 24.0	
	comp=Z,39nm,0.6s							
UGL				*e*Sg		**Sg**	**16 33 21.5**	**-4.9**
UGL				A	A		16 33 24.0	
	comp=Z,465nm,0.6s							
UGL				A	A		16 33 24.0	
	comp=Z,224nm,0.6s							
ZEA	**Zeya**	**5.70**	**301**	*e*P		**Pn**	**16 32 20.7**	**+0.2**
ZEA				pmax	pmax			
	comp=N,10.0nm,0.6s							
ZEA				pmax	pmax			
	comp=Z,10.0nm,0.4s							
ZEA				MLR	MLR			
	comp=E,200nm,7.0s							
ZEA				MLR	MLR			
	comp=Z,400nm,7.0s							
ZEA	**Zeya**	**5.70**	**301**	*e*Pg		**Pb**	**16 32 38.2**	**+2.9**
ZEA				*e*Sg		**Sg**	**16 33 52.7**	**-6.0**
ZEA				A	A		16 33 55.8	
	comp=Z,220nm,0.8s							
ZEA				A	A		16 33 55.8	
	comp=Z,120nm,0.8s							
TEY	**Ternei**	**6.11**	**173**	*e*Sg		**Sg**	**16 34 06.7**	**-5.1**
TEY				A	A		16 34 14.5	
	comp=Z,31nm,0.5s							
KROS	**Kirovskiy**	**6.16**	**306**	*e*Pg		**Pb**	**16 32 47.3**	**+4.1**
KROS				*e*Sg		**Sg**	**16 34 07.8**	**-5.7**
KROS				A	A		16 34 12.4	
	comp=Z,204nm,0.7s							
YSS	**Yuzh-Sakhalins**	**6.32**	**128**	*e*P		Pn	16 32 37.3	+8.2
YSS				*e*			16 33 39.9	
YSS				MLR	MLR			
	comp=Z,500nm,15.0s							
YSS	**Yuzh-Sakhalins**	**6.32**	**128**	*e*Pn		**Pn**	**16 32 29.3**	**+0.2**
YSS				*e*Pg		**Pb**	**16 32 49.3**	**+3.3**
YSS				AMB	AMB		16 33 03.0	
	comp=Z,10.0nm,0.5s							
YSS				*e*Sg		**Sg**	**16 34 12.0**	**-6.7**
USRK	**Ussuriysk Ar.**	**7.29**	**200**	Pn		**Pn**	**16 32 43.6**	**+1.2**
	comp=Z,0.8nm,0.5s,baz=18,slow=16,SNR=2.6							
USRK				Sn		**Sn**	**16 34 07.2**	**+2.0**
	comp=Z,0.5nm,0.3s,baz=4.8,slow=19,SNR=1.7							
USRK				Lg	Lg		16 34 44.7	
	comp=Z,0.8nm,0.3s,baz=10.0,slow=26,SNR=3.6							
BNX	**BinXian**	**7.59**	**228**	*i*Pg		**Pg**	**16 33 19.2**	**-1.9**
BNX				Sg		**Sg**	**16 34 57.8**	**-1.5**
BNX				smax	smax			
	comp=N,190nm,0.8s							
BNX				smax	smax			
	comp=E,170nm,1.1s							
MSHR	**Mys Shultsa**	**9.02**	**201**	*ce*P		**Pn**	**16 33 03.6**	**-2.5**
MSHR				pmax	pmax			
	comp=Z,9.0nm,0.4s							
HIA	**Hailar**	**10.27**	**266**	*i* P		**Pn**	**16 33 26.5**	**+3.2**
YAK	**Yakutsk**	**11.42**	**346**	Lg		Lg	16 36 44.7	
	baz=235,slow=23,SNR=9.8							
YAK	**Yakutsk**	**11.42**	**346**	*ce*P		**Pn**	**16 33 42.2**	**+3.4**
YAK				pmax	pmax			
	comp=Z,5.0nm,0.8s							
KSRS	**Korea Array**	**14.66**	**204**	Pn		**P**	**16 34 31.5**	**+1.9**
	comp=Z,0.2nm,0.3s,baz=18,slow=10,SNR=17							
MJAR	**Matsushiro Arr**	**14.68**	**171**	Pn		**P**	**16 34 29.2**	**-0.6**
	baz=360,slow=11,SNR=11							
MJAR	**Matsushiro Arr**	**14.68**	**171**	P		**P**	**16 34 29

	comp=Z,3.3nm,0.7s							
MLY	**Manley**	**38.97**	**40**	P	**P**	**16 38 20.7**	**-1.0**
SUA	**Susitna One**	**40.05**	**46**	P	**P**	**16 38 30.2**	**-0.8**
SUA				IAmb	IAmb	16 38 55.8	
	comp=Z,7.3nm,1.3s						
WRH	**Wood River Hil**	**40.22**	**41**	P	**P**	**16 38 31.2**	**-0.9**
ILAR	**Eielson Array**	**40.61**	**40**	P	**P**	**16 38 33.4**	**-2.0**
	comp=Z,0.9nm,0.8s,baz=289,slow=8.4,SNR=11						
	comp=Z,0.9nm,0.8s						
ILAR	**Eielson Array**	**40.61**	**40**	*e*P	**P**	**16 38 37.2**	**+1.8**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BMAR	**Burnt Mountain**	**40.67**	**36**	P	**P**	**16 38 35.3**	**-0.6**
SML	**Sawmill**	**41.01**	**45**	P	**P**	**16 38 38.1**	**-0.7**
SCM	**Sheep Creek Mo**	**41.45**	**44**	P	**P**	**16 38 40.9**	**-1.5**
SCM				IAmb	IAmb	16 38 43.8	
	comp=Z,4.5nm,0.9s						
SCM	**Sheep Creek Mo**	**41.45**	**44**	P	**P**	**16 38 40.9**	**-1.5**
SCM				pmax	pmax		
	comp=Z,4.0nm,0.9s						
RIDG	**Independent Ri**	**41.80**	**41**	P	**P**	**16 38 43.0**	**-2.3**
RIDG				IAmb	IAmb	16 38 48.4	
	comp=Z,6.5nm,1.2s						
M24K	**Tolsona, Glenn**	**41.85**	**44**	P	**P**	**16 38 45.1**	**-0.6**
M24K				IAmb	IAmb	16 38 49.8	
	comp=Z,4.7nm,0.7s						
VRDI	**Verde Repeater**	**43.39**	**44**	P	**P**	**16 38 57.1**	**-1.3**
VRDI				IAmb	IAmb	16 39 07.8	
	comp=Z,6.1nm,1.3s						
ARU	**Arti**	**43.57 308**		*c i*P	**P**	**16 39 00.1**	**+0.5**
ARU						16 40 36.8	
ARU				S	**S**	**16 45 31.2**	**+2.8**
ARU				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ARU	**Arti**	**43.57 308**		P	**P**	**16 39 01.5**	**+1.9**
INK	**Inuvik**	**44.24**	**32**	P	**P**	**16 39 03.2**	**-1.6**
	comp=Z,3.2nm,0.6s,baz=280,slow=5.3,SNR=4.3						
	comp=Z,3.2nm,0.6s						
INK	**Inuvik**	**44.24**	**32**	P	**P**	**16 39 02.7**	**-2.1**
INK				IAmb	IAmb	16 39 10.6	
	comp=Z,6.0nm,1.1s						
ABKAR	**Akbulak array**	**46.42 299**		P	**P**	**16 39 21.4**	**-0.9**
ABKAR	**Akbulak array**	**46.42 299**		P	**P**	**16 39 21.8**	**-0.5**
BESE	**Bessie Mountai**	**48.47**	**44**	P	**P**	**16 39 35.7**	**-2.5**
RES	**Resolute Bay**	**50.11**	**15**	P	**P**	**16 39 48.6**	**-1.9**
RES				IAmb	IAmb	16 39 52.5	
	comp=Z,3.1nm,0.9s						
RES	**Resolute Bay**	**50.11**	**15**	P	**P**	**16 39 48.6**	**-1.9**
RES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TULEG	**Thule**	**51.70**	**7**	P	**P**	**16 40 01.3**	**-1.1**
FINES	**FINESS Array B**	**54.56 326**		P	**P**	**16 40 22.1**	**-1.6**
	comp=Z,2.5nm,0.7s,baz=38,slow=9.6,SNR=11						
	comp=Z,2.5nm,0.7s						
FINES	**FINESS Array B**	**54.56 326**		*e*P	**P**	**16 40 25.0**	**+1.3**
OBN	**Obninsk**	**54.62 316**		*e*P	**P**	**16 40 25.5**	**+1.3**
OBN				*i*		16 42 26.1	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.5s						
OBN	**Obninsk**	**54.62 316**		P	**P**	**16 40 25.7**	**+1.5**
NACGM	**Naroch**	**58.89 320**		*e*P	**P**	**16 40 50.9**	**-3.6**
	baz=44						
KIV	**Kislovodsk**	**59.03 303**		*e*P	**P**	**16 40 57.6**	**+1.7**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KIV	**Kislovodsk**	**59.03 303**		P	**P**	**16 40 57.7**	**+1.8**
NB2	**NORSAR Subarra**	**59.66 332**		P	**P**	**16 40 58.0**	**-1.9**
	comp=Z,0.7nm,0.6s,baz=38,slow=7.4						
NOA	**NORSAR Array B**	**59.66 332**		P	**P**	**16 40 58.0**	**-1.9**
	comp=Z,0.6nm,0.5s,baz=45,slow=8.0,SNR=8.0						
	comp=Z,0.6nm,0.5s						
NORES	**NORESS Array B**	**59.81 332**		*e*P	**P**	**16 41 01.4**	**+0.6**
AKASG	**Malin Array Be**	**60.88 316**		P	**P**	**16 41 06.3**	**-2.0**
	comp=Z,0.3nm,0.3s,baz=38,slow=7.6,SNR=4.6						
	comp=Z,0.3nm,0.3s						
BRTR	**Keskin Array B**	**66.79 305**		P	**P**	**16 41 46.8**	**-0.8**
	comp=Z,1.1nm,0.6s,baz=63,slow=5.4,SNR=8.6						
	comp=Z,1.1nm,0.6s						
BRTR	**Keskin Array B**	**66.79 305**		P	**P**	**16 41 46.6**	**-1.0**
BRTR	**Keskin Array B**	**66.79 305**		*e*P	**P**	**16 41 47.1**	**-0.5**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CLL	**Collm**	**66.95 325**		*i* P	**P**	**16 41 46.7**	**-1.5**
CLL				*e*		16 41 49.0	
CLL				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CLL	**Collm**	**66.95 325**		*i* P	**P**	**16 41 46.7**	**-1.5**
	comp=Z,2.0nm,0.6s						
CLL				*ex*	x	16 41 49.0	
	comp=Z,2.0nm,0.5s						
EKA	**Eskdalemuir Ar**	**68.50 336**		P	**P**	**16 41 57.0**	**-1.0**
GERES	**GERESS Array B**	**68.70 323**		P	**P**	**16 41 57.4**	**-2.1**
	comp=Z,0.4nm,0.6s,baz=64,slow=4.5,SNR=4.9						
	comp=Z,0.4nm,0.6s						
GERES	**GERESS Array B**	**68.70 323**		*e*P	**P**	**16 41 58.7**	**-0.8**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NVAR	**Mina Array Bea**	**69.99**	**53**	P	**P**	**16 42 07.9**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=304,slow=6.4,SNR=2.4						
	comp=Z,0.2nm,0.3s						
WRA	**Warramunga Arr**	**70.73 181**		P	**P**	**16 42 11.2**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=354,slow=6.9,SNR=11						
	comp=Z,0.7nm,0.6s						
WRA	**Warramunga Arr**	**70.73 181**		P	**P**	**16 42 11.1**	**-0.9**
WRA	**Warramunga Arr**	**70.73 181**		*e*P	**P**	**16 42 14.8**	**+2.8**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	**Alice Springs**	**74.44 182**		P	**P**	**16 42 34.2**	**+0.1**
	comp=Z,1.4nm,0.8s,baz=358,slow=5.4,SNR=20						
	comp=Z,1.4nm,0.8s						
ASAR	**Alice Springs**	**74.44 182**		P	**P**	**16 42 33.8**	**-0.3**
TXAR	**Lajitas Array**	**84.49**	**49**	P	**P**	**16 43 28.3**	**-0.8**
	comp=Z,0.5nm,0.8s,baz=270,slow=3.6,SNR=4.6						
	comp=Z,0.5nm,0.8s						

MAN 11 16:48:25.7, 19°.51N×121°.90E, h13km, mb4.4, ML3.2, MS3.0, Philippine Islands region

MAN 11 16:50:02.1, 13°.87N×120°.64E, h98km, mb3.7, ML2.4, MS1.9, Mindoro

NEIC ***11*** *17:06:20.7±0.8, 52°.78N±0°.10×169°.52W±0°.05, h14km±6km, ML3.1/24(AEIC), Error ellipse: s-maj=14.5km s-min=2.4km az=165.0*

AEIC ***11*** *17:06:20±1.6, 52°.77N±0°.08×169°.52W±0°.04, h9km±5km, Error ellipse: s-maj=11.5km s-min=1.0km az=161.0*

IDC ***11*** *17:06:23.2±5.7, 52°.26N×168°.35W, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=452.3km s-min=38.6km az=162.0*

ISC 11 17:06:19.5±1.0, 52°.7N±0°.1×169°.52W±0°.07, h10km, n32, σ0s67/26, mb3.5/3, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIKH	**Nikolski High**	**0.47**	**59**		**Pg**	**17 06 29.5**	**+0.9**
NIKH					**Sb**	**17 06 36.9**	**+0.1**
OKSP	**Okmok Steeple**	**0.91**	**54**		**Pg**	**17 06 36.9**	**-0.1**
OKSO	**Okmok South**	**1.03**	**52**		**Pg**	**17 06 38.8**	**-0.5**
OKSO					**Sb**	**17 06 53.9**	**+0.8**
OKFG	**Magazine Ridge**	**1.18**	**54**		**Pb**	**17 06 41.5**	**-0.5**
OKFG					**Sb**	**17 06 57.6**	**+0.3**
MSW	**Makushin Switc**	**2.02**	**53**		**Pn**	**17 06 54.0**	**+0.3**
MTBL	**Makushin Table**	**2.10**	**53**		**Pn**	**17 06 55.3**	**+0.5**
UNV	**Unalaska Valle**	**2.12**	**57**		**Pn**	**17 06 55.4**	**+0.4**
UNV					**Sn**	**17 07 21.8**	**+0.4**
AKBBA	**Akutan Broad B**	**2.54**	**56**		**Pn**	**17 07 01.3**	**+0.5**
AKGG	**Akutan Green G**	**2.57**	**54**		**Pn**	**17 07 01.9**	**+0.8**
AKUT	**Akutan**	**2.64**	**56**	Pn	**Pn**	**17 07 02.7**	**+0.6**
KOFP	**Korovin Flat P**	**2.84**	**263**		**Pn**	**17 07 05.1**	**+0.2**
ATKA	**Atka Island**	**2.91**	**261**		**Pn**	**17 07 05.8**	**0.0**
ISLZ	**Isanotski Laza**	**3.98**	**58**		**Pn**	**17 07 21.6**	**+1.0**
GSTD	**Great Sitkin T**	**4.12**	**263**		**Pn**	**17 07 23.0**	**+0.5**
FALS	**False Pass**	**4.20**	**57**	Pn	**Pn**	**17 07 21.7**	**-1.8**
SPIA	**Saint Paul Isl**	**4.47**	**355**		**Pn**	**17 07 27.5**	**+0.2**
ADK	**Adak**	**4.48**	**262**	Pn	**Pn**	**17 07 28.2**	**+0.8**
KIWB	**Kanaga Island**	**4.77**	**262**	Pn	**Pn**	**17 07 32.0**	**+0.7**
SDPT	**Sand Point**	**5.94**	**60**	Pn	**Pn**	**17 07 47.8**	**+0.4**
HIN	**Hinchinbrook I**	**14.76**	**50**	Pn	**Pn**	**17 09 47.4**	**-0.8**
H11N2	**WAKE ISLAND Hy**	**37.68**	**218**	T	T	17 53 41.6	
	baz=24,slow=76,SNR=69						
H11N3	**WAKE ISLAND Hy**	**37.69**	**218**	T	T	17 53 41.6	
	baz=24,slow=76,SNR=93						
H11N1	**WAKE ISLAND Hy**	**37.70**	**218**	T	T	17 53 42.7	
	baz=24,slow=76,SNR=80						
H11S1	**WAKE ISLAND Hy**	**38.87**	**218**	T	T	17 54 52.2	
	baz=23,slow=76,SNR=175						
H11S2	**WAKE ISLAND Hy**	**38.89**	**218**	T	T	17 54 49.1	
	baz=23,slow=76,SNR=114						
H11S3	**WAKE ISLAND Hy**	**38.89**	**218**	T	T	17 54 49.2	
	baz=23,slow=76,SNR=81						
PDAR	**Pinedale Array**	**40.42**	**79**	P	**P**	**17 13 58.1**	**+0.1**
	0.2nm,0.4s,baz=292,slow=5.3,SNR=1.2						
	0.2nm,0.4s						
TXAR	**Lajitas Array**	**52.83**	**89**	P	**P**	**17 15 35.1**	**-0.1**
	0.4nm,0.6s,baz=311,slow=5.9,SNR=4.8						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**90.56**	**230**	P	P	17 19 28.1	+6.5
	0.3nm,0.8s,baz=35,slow=5.7,SNR=4.1						
	0.3nm,0.8s						
H03N2	**Juan Fernandez**	**116.14**	**111**	T	T	19 31 32.4	
	baz=322,slow=77,SNR=4.4						
H03N1	**Juan Fernandez**	**116.15**	**111**	T	T	19 31 35.0	
	baz=322,slow=77,SNR=7.3						
H03N3	**Juan Fernandez**	**116.16**	**111**	T	T	19 31 33.5	
	baz=322,slow=77,SNR=5.8						

IDC ***11*** *17:11:07.8±5.7, 40°.06N×49°.04E, h0km, mb3.6/2, mbtmp3.5/3, ML3.2/1, Error ellipse: s-maj=131.6km s-min=28.6km az=28.0*

TEH ***11*** *17:11:14.2, 40°.13N×48°.97E, h8km, ML3.0*

ISC 11 17:11:13.5±1.2, 40°.12N±0°.04×49°.15E±0°.05, h29km±11km, n43, σ1s06/40, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ALIB	**Äli-Bayra**	**0.20**	**213**	*e*Pn	**Pb**	**17 11 19.3**	**-0.2**
GBS	**Qobustan**	**0.44**	**339**	*e*Pn	**Pb**	**17 11 22.9**	**-0.1**
GOBA	**Gobu**	**0.53**	**58**	*e*Pn	**Pn**	**17 11 26.6**	**+1.5**
ATGJ	**Altiaghaj**	**0.75**	**348**	*e*Pg	**Pb**	**17 11 29.0**	**+0.8**
KDMR	**Kurdemir**	**0.78**	**289**	*e*Pn	**Pn**	**17 11 28.1**	**-0.4**
PQL	**Pirkuli**	**0.79**	**328**	*e*Pg	**Pn**	**17 11 28.4**	**-0.4**
SIZA	**Siyzn**	**0.97**	**349**	*e*Pg	**Pn**	**17 11 32.2**	**+0.9**
GLBA	**Clilabad**	**1.05**	**214**	*e*Pg	**Pn**	**17 11 33.1**	**+0.8**
ZRD	**Zardab**	**1.13**	**278**	*e*Pn	**Pn**	**17 11 33.9**	**+0.5**
BLQ	**Beylaqan**	**1.29**	**252**	*e*Pn	**Pn**	**17 11 35.9**	**+0.4**
QBL	**Gabala**	**1.29**	**310**	*e*Pn	**Pn**	**17 11 35.9**	**+0.2**
XNQ	**Khinaliq**	**1.30**	**324**	*e*Pn	**Pn**	**17 11 36.3**	**+0.4**
QUB	**Quba**	**1.39**	**335**	*e*Pn	**Pn**	**17 11 37.3**	**+0.3**
YRD	**Yardimli**	**1.40**	**210**	*e*Pg	**Pn**	**17 11 37.2**	**0.0**
LKRN	**Lenkeran, Azer**	**1.44**	**192**	*e*Pn	**Pn**	**17 11 39.4**	**+1.8**
BRDA	**Brd**	**1.51**	**276**	*e*Pn	**Pn**	**17 11 39.9**	**+1.3**
QSAR	**Qusar**	**1.54**	**335**	*e*Pn	**Pn**	**17 11 40.0**	**+0.9**
QRD	**Qoradiz**	**1.56**	**245**	*e*Pn	**Pn**	**17 11 39.9**	**+0.7**
ASTR	**Astara**	**1.59**	**190**	*e*Pn	**Pn**	**17 11 40.8**	**+1.2**
LRK	**Lerik**	**1.60**	**203**	*e*Pn	**Pn**	**17 11 41.1**	**+1.0**
GRMI	**Germi**	**1.63**	**217**	*e*Pn	**Pn**	**17 11 40.4**	**0.0**
GRMI				*e*		17 12 05.9	
	comp=Z,99nm,0.5s						
MNGR	**Mingechevir, A**	**1.70**	**293**	*e*Pn	**Pn**	**17 11 41.7**	**+0.5**
SEKA	**Sheki**	**1.84**	**307**	*e*Pn	**Pn**	**17 11 43.5**	**+0.3**
GANJ	**Ganja**	**2.22**	**285**	*e*Pn	**Pn**	**17 11 48.5**	**+0.1**
ZKT	**Zaqatala**	**2.42**	**310**	*e*Pn	**Pn**	**17 11 53.3**	**+2.1**
IHRS	**Heris**	**2.43**	**223**	*e*Pn	**Pn**	**17 11 52.6**	**+1.1**
IHRS				*e*		17 12 29.6	
	comp=Z,1μm,0.6s						
ISRB	**Sarab**	**2.57**	**207**	*e*Pn	Pn	17 11 57.8	+4.4
ISRB				*e*		17 12 05.5	
	comp=Z,280nm,0.5s						
GDB	**GEDABAY**	**2.66**	**284**	*e*Pn	**Pn**	**17 11 54.9**	**+0.4**
ORD	**Ordubad**	**2.71**	**245**	*e*Pn	**Pn**	**17 11 56.1**	**+0.9**
SBZ	**Shahbuz**	**2.86**	**256**	*e*Pn	**Pn**	**17 11 58.2**	**+0.9**
IBST	**Bostanabad**	**2.99**	**217**	*e*		17 12 11.0	
	comp=Z,236nm,0.4s						
IBST				*e*Pn	**Pn**	**17 12 02.5**	**+3.3**
IMRD	**Marand**	**3.02**	**243**	*e*		17 12 10.1	
	comp=Z,521nm,0.3s						
IMRD				*e*Pn	Pn	17 12 03.8	+4.3
QZX	**Qazax, Azerbai**	**3.02**	**289**	*e*Pn	**Pn**	**17 12 00.0**	**+0.6**
ISHB	**Shabestar**	**3.30**	**237**	*e*		17 12 32.0	
	comp=Z,143nm,0.3s						
ISHB				*e*Pn	Pn	17 12 07.9	+4.5
IGZV	**Ghazvin**	**3.83**	**167**	*e*Pn	**Pn**	**17 12 10.6**	**-0.1**
IGZV				*e*		17 13 01.5	
	comp=N,498nm,0.4s						
QALM	**Alamut, Qazvin**	**3.87**	**162**	*e*Pn	**Pn**	**17 12 09.7**	**-1.6**
IPRN	**Peran**	**4.62**	**146**	*e*Pn	**Pn**	**17 12 20.9**	**-0.6**
IFIR	**Firoozkooh**	**5.31**	**146**	*e*Pn	**Pn**	**17 12 32.3**	**+1.3**
IFIR				*e*		17 13 36.9	
	comp=Z,131nm,0.3s						
ISHM	**Shahmirzad**	**5.41**	**141**	*e*Pn	**Pn**	**17 12 33.0**	**+0.5**
ISHM				*e*		17 13 34.7	
	comp=Z,436nm,0.4s						
MRVT	**Maraveh tapeh**	**5.95**	**112**	*e*		17 13 47.1	
	comp=Z,99nm,0.3s						
GEYT	**Alibeck**	**7.32**	**105**	Pn	**Pn**	**17 12 57.7**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=260,slow=17,SNR=2.5						
GEYT				Sn	**Sn**	**17 14 20.4**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=289,slow=9.0,SNR=2.9						
	comp=Z,1.4nm,0.5s						
MKAR	**Makanchi Array**	**24.83**	**63**	P	**P**	**17 16 32.7**	**-0.5**
	comp=Z,0.4nm,0.8s,baz=268,slow=8.4,SNR=4.3						
	comp=Z,0.4nm,0.8s						
FINES	**FINESS Array B**	**25.59**	**334**	P	**P**	**17 16 38.4**	**-1.4**
	comp=Z,3.2nm,1.0s,baz=142,slow=12,SNR=5.5						
	comp=Z,3.2nm,1.0s						

NEIC ***11*** *17:16:12.7±2.8, 8°.07S±0°.04×107°.56E±0°.02, h27km±4km, mb4.8/68, Error ellipse: s-maj=6.6km s-min=1.7km az=151.0*

DJA ***11*** *17:16:15.0±1.0, 8°.3S×10°.8E±°, h19km±9km, M4.8/24, mb4.9/11, mB5.3/4, MLv4.8/24, Mw(mB)4.8/4*

GCMT ***11*** *17:16:15.7±0.6, 8°.73S±0°.04×107°.45E±0°.03, h59km±2km, MW4.8/54, Moment Tensor Solution. s31,c39; s54,c70; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 1.84±.14; Mθθ -2.17±.10; Mφφ 0.32±.15; Mrθ 0.41±.08; Mφθ 1.02±.08; Mrφ 0.45±.11; Best double couple: Mo 2.31200×10^16 NP1: φs 311.00000°, δ46.00000°, λ121.00000°. NP2: φs 89.00000°, δ52.00000°, λ62.00000°. Principal axes: T 2.0780, Plg68.0000°, Azm297.0000°; N 0.4640, Plg22.0000°, Azm108.0000°; P -2.5460, Plg3.0000°, Azm199.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***11*** *17:16:19.0±1.5, 7°.90S×107°.79E, h75km±12km, mb4.1/27, mbtmp4.4/28, MS3.7/44 Error ellipse: s-maj=15.3km s-min=10.2km az=58.0*

ISC 11 17:16:14.3±0.8, 8°.19S±0°.04×107°.60E±0°.04, h44km±7km, n241, σ2s01/230, mb4.7/64, MS3.7/47, 1D, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMJI	**Cimerak**	**0.93**	**64**	P	**Pn**	**17 16 31.5**	**+0.5**
CMJI				S	**Sn**	**17 16 42.5**	**-0.7**
CNJI	**Cibinong**	**1.00**	**332**	P	**Pn**	**17 16 33.4**	**+1.5**
CNJI				S	**Sn**	**17 16 44.9**	**+0.1**
LEM	**Lembang**	**1.36**	**1**	P	**Pn**	**17 16 39.9**	**+2.9**
	3μm,0.4s,baz=281,slow=1.8,SNR=364						
LEM				S	**Sn**	**17 16 59.1**	**+5.2**
	7μm,0.7s,baz=162,slow=21,SNR=18						
LEM				LR	LR	17 17 16.3	
	comp=Z,5μm,18.5s,baz=236,slow=53						
SKJI	**Sukabumi**	**1.57**	**319**	P	**Pn**	**17 16 41.7**	**+1.9**
DBJI	**Dramaga**	**1.83**	**333**	P	**Pn**	**17 16 46.3**	**+2.9**
TNG	**Tangerang**	**2.22**	**335**	P	**Pn**	**17 16 52.1**	**+3.4**
SBJI	**Serang**	**2.52**	**325**	P	**Pn**	**17 16 56.0**	**+3.1**
YOGI	**Yogyakarta**	**2.69**	**82**	P	**Pn**	**17 16 55.9**	**+0.7**
UGM	**Wanagama**	**2.91**	**85**	Pn	**Pn**	**17 16 59.1**	**+1.0**
UGM				Sn	**Sn**	**17 17 30.5**	**-1.4**
UGM	**Wanagama**	**2.91**	**85**	P	**Pn**	**17 16 58.5**	**+0.4**
UGM	**Wanagama**	**2.91**	**85**	P	**Pn**	**17 16 59.2**	**+1.0**
XMI	**Christmas Isla**	**2.93**	**220**	P	**Pn**	**17 16 59.1**	**+0.7**
XMIS	**Christmas Isla**	**2.98**	**220**	Pn	**Pn**	**17 16 59.3**	**+0.2**
XMIS				Sn	**Sn**	**17 17 30.5**	**-3.1**
XMIS	**Christmas Isla**	**2.98**	**220**	P	**Pn**	**17 16 59.3**	**+0.2**
SMRI	**Semarang**	**3.04**	**68**		**Pn**	**17 17 02.7**	**+2.8**
SMRI				Sn	**Sn**	**17 17 37.8**	**+2.8**
SMRI	**Semarang**	**3.04**	**68**	P	**Pn**	**17 17 02.3**	**+2.4**
SMRI	**Semarang**	**3.04**	**68**	P	**Pn**	**17 17 03.3**	**+3.4**
WOJI	**Wonogiri, Jawa**	**3.31**	**84**	P	**Pn**	**17 17 04.1**	**+0.5**
PCJI	**Pacitan**	**3.54**	**90**	P	**Pn**	**17 17 07.6**	**+0.8**
PCJI				S	**Sn**	**17 17 46.1**	**-1.3**
UWJI	**Ujung Watu**	**3.76**	**62**	P	**Pn**	**17 17 12.5**	**+2.7**
KASI	**Kota Agung**	**4.07**	**311**	P	**Pn**	**17 17 17.5**	**+3.5**
PWJI	**Pagerwojo**	**4.17**	**88**	P	**Pn**	**17 17 16.3**	**+0.9**
KLI	**Kotabumi**	**4.29**	**320**	P	**Pn**	**17 17 21.0**	**+3.9**
TBJI	**Tambak Boyo**	**4.43**	**72**	P	**Pn**	**17 17 21.0**	**+2.0**
LWLI	**Liwa**	**4.73**	**312**	P	Pn	17 17 28.2	+5.0
GRJI	**Gresik**	**5.00**	**76**	P	**Pn**	**17 17 28.5**	**+1.6**
GMJI	**Gumukmas**	**5.78**	**91**	P	**Pn**	**17 17 40.0**	**+2.4**
	0.6nm2μm104nn,0.6s						
PMBI	**Palembang**	**5.94**	**332**	Pn	**Pn**	**17 17 38.0**	**-1.8**
BLJI	**Banyuglugur**	**5.95**	**86**	P	**Pn**	**17 17 41.8**	**+1.8**
	0.4nm1μm86nm,0.6s						
MNAI	**Manna**	**5.99**	**309**	Pn	**Pn**	**17 17 41.2**	**+0.8**
MNAI	**Manna**	**5.99**	**309**	P	**Pn**	**17 17 44.0**	**+3.6**
PPBI	**Pangkal Pinang**	**6.17**	**346**	P	**Pn**	**17 17 46.9**	**+4.0**
	0.5nm10μm54nm,0.6s						
KMMI	**Kalianget**	**6.41**	**80**	P	**Pn**	**17 17 47.0**	**+0.7**
	0.3nm45nm,1.1s						
ABJI	**Asem Bagus**	**6.58**	**87**	P	**Pn**	**17 17 51.5**	**+2.9**
	0.6nm140nm,0.5s						
IGBI	**Denpasar**	**7.49**	**95**	P	**Pn**	**17 18 05.2**	**+4.2**
	0.6nm2μm98nm,1.1s						
SRBI	**Singaraja**	**7.54**	**90**	P	**Pn**	**17 18 05.5**	**+3.8**
	0.4nm99nm,0.6s						
BBKI	**Banjar Baru**	**8.60**	**57**	P	Pn	17 18 21.3	+5.0
	22nm,0.6s						
PPSI	**Pulau Pagai**	**9.28**	**305**	P	**Pn**	**17 18 26.1**	**+0.4**
	127nm,0.7s						
KSM	**Kuching**	**9.97**	**16**		**Pn**	**17 18 33.7**	**-1.5**
PLAI	**Plampang**	**10.08**	**94**	P	**Pn**	**17 18 38.4**	**+1.7**
	79nm,0.8s						
PLAI	**Plampang**	**10.08**	**94**	P	**Pn**	**17 18 38.9**	**+2.2**
MYKOM	**Kota Tinggi**	**10.60**	**339**	Pn	**Pn**	**17 18 42.2**	**-1.5**
SISI	**Saibi**	**10.88**	**308**	P	**Pn**	**17 18 48.7**	**+1.1**
	23nm,0.7s						
COCO	**West Island**	**11.32**	**249**	Pn	**Pn**	**17 18 49.6**	**-3.9**
SBUM	**Sibu**	**11.53**	**24**	Pn	**Pn**	**17 18 55.1**	**-1.4**
WBSI	**Waikabubak, Su**	**11.74**	**98**	P	**Pn**	**17 18 59.4**	**+0.1**
KAPI	**Kappang**	**12.48**	**76**	LR	LR	17 24 48.5	
	comp=Z,387nm,19.1s,baz=268,slow=42						
KAPI	**Kappang**	**12.48**	**76**	Pn	**Pn**	**17 19 05.9**	**-3.4**
KAPI	**Kappang**	**12.48**	**76**	P	**Pn**	**17 19 11.9**	**+2.5**
GSI	**Gunungsitoli**	**13.75**	**313**	Pn	**Pn**	**17 19 21.5**	**-5.2**
MMRI	**Maumere**	**14.49**	**93**	Pn	**Pn**	**17 19 36.7**	**-0.1**
KULM	**Kulim**	**15.08**	**332**	Pn	**Pn**	**17 19 43.2**	**-1.4**
GIRL	**Giralia**	**15.72**	**157**	Pn	**Pn**	**17 19 50.4**	**-2.4**
GIRL				IAmb	IAmb	17 20 23.8	
	comp=Z,111nm,1.4s						
GIRL	**Giralia**	**15.72**	**157**	P	**Pn**	**17 19 52.7**	**-0.1**
BATI	**Baumata**	**15.98**	**98**	P	**Pn**	**17 19 56.2**	**-0.1**
	comp=Z,15nm,0.5s,baz=292,slow=6.3,SNR=4.6						
BATI				S	**Sn**	**17 22 43.0**	**-10**
	comp=Z,11nm,0.7s,baz=357,slow=6.8,SNR=1.4						
TOLI2	**Tolitoli**	**16.07**	**55**		**Pn**	**17 19 56.6**	**-0.7**
TOLI2	**Tolitoli**	**16.07**	**55**	P	**P**	**17 20 02.5**	**+2.4**
SOEI	**Soe**	**16.54**	**97**	P	**Pn**	**17 20 02.4**	**-1.0**
SOEI				IAmb	IAmb	17 20 33.7	
	comp=Z,47nm,0.8s						
SOEI	**Soe**	**16.54**	**97**	P	**P**	**17 20 06.6**	**+1.1**
	comp=Z,75nm,1.4s						
LHMI	**Lhok Sumawe**	**17.05**	**321**	P	**Pn**	**17 20 07.8**	**-1.9**
LHMI				IAmb	IAmb	17 20 15.7	
	comp=Z,134nm,1.1s						
MYLDM	**Lahad Datu**	**17.17**	**40**		**Pn**	**17 20 10.0**	**-1.2**
MBWA	**Marble Bar**	**17.41**	**139**	P	**Pn**	**17 20 11.7**	**-2.5**
MBWA	**Marble Bar**	**17.41**	**139**	P	P	**17 20 15.3**	**+0.3**
PSA00	**Pilbara Seismi**	**17.79**	**140**	P	**Pn**	**17 20 16.2**	**-2.6**
PSA00	**Pilbara Seismi**	**17.79**	**140**	P	**Pn**	**17 20 16.7**	**-2.0**
PSA00				IAmb	IAmb	17 21 02.9	
	comp=Z,12nm,1.4s						
PSA00	**Pilbara Seismi**	**17.79**	**140**	P	**P**	**17 20 20.2**	**+1.1**
SRIT

CTA Charters Tower 39.20 112 LR LR 17 41 18.8
comp=Z,67nm,18.6s,baz=282,slow=38
STKA Stephens Creek 39.41 131 P **P** **17 23 42.3 +2.1**
comp=Z,10nm,0.5s,baz=303,slow=8.6,SNR=40
STKA LR LR 17 40 43.5
comp=Z,100nm,20.5s,baz=268,slow=37
comp=Z,10nm,0.5s
STKA Stephens Creek 39.41 131 P **P** **17 23 41.2 +1.0**
STKA Stephens Creek 39.41 131 P **P** **17 23 42.6 +2.5**
JIRN Jiri 41.23 331 *e*P **P** **17 23 56.3 +0.7**
comp=Z,13nm,0.6s
NJ2 Nanjing 41.44 14 *e*P P 17 24 04.2 +7.4
NJ2 pmax pmax
comp=Z,4.0nm,0.5s
GUN Gumba 41.59 330 *e*P **P** **17 23 59.4 +0.8**
XAN Xi'an 42.02 2 P **P** **17 24 00.4 -1.2**
XAN pmax pmax
comp=Z,5.0nm,0.8s
XAN LR LR
comp=Z,100nm,13.9s
XAN LR LR
comp=Z,130nm,14.6s
XAN LR LR
comp=Z,200nm,16.7s
CMSA Cobar Meteorol 42.36 129 P **P** **17 24 07.7 +3.2**
KOLN Koldanda 42.63 328 *e*P **P** **17 24 07.2 +0.3**
GUMO Guam 42.86 60 LR LR 17 41 33.8
comp=Z,41nm,21.4s,baz=240,slow=36
DANN Dangsing 43.02 329 *e*P **P** **17 24 10.1 0.0**
comp=Z,14nm,0.4s
PYUN Piuthan 43.22 328 *e*P **P** **17 24 12.1 +0.4**
KRVT Keravat (AS076 44.31 88 LR LR 17 47 31.6
comp=Z,79nm,18.2s,baz=20,slow=42
CAN Canberra 46.47 132 P **P** **17 24 40.0 +2.6**
CAN Canberra 46.47 132 P **P** **17 24 40.5 +3.2**
JTU Tsushima 47.23 25 P **P** **17 24 42.0 -1.1**
GTA Gaotai 47.91 352 *e*P **P** **17 24 49.8 +1.3**
GTA PcP **PcP** **17 26 17.8 +1.3**
GTA pmax pmax
comp=Z,2.0nm,0.6s
GTA pmax pmax
comp=Z,50nm,5.1s
GTA LR LR
comp=Z,120nm,18.5s
GTA LR LR
comp=Z,180nm,18.5s
GTA LR LR
comp=Z,140nm,19.6s
HHC Hu-ho-hao-te 48.94 4 *e*P **P** **17 24 58.7 +2.4**
HHC pmax pmax
comp=Z,19nm,0.9s
HHC pmax pmax
comp=Z,130nm,6.1s
KSRS Korea Array 49.23 21 P **P** **17 24 58.9 +0.4**
comp=Z,0.9nm,0.6s,baz=210,slow=6.9,SNR=10
KSRS PcP **PcP** **17 26 21.9 +0.8**
comp=Z,0.6nm,0.9s,baz=220,slow=3.9,SNR=4.2
KSRS LR LR 17 46 34.8
comp=Z,30nm,21.7s,baz=205,slow=37
comp=Z,0.9nm,0.6s
JHS Saijyo 49.26 28 P **P** **17 24 57.1 -1.7**
JHS IAmb IAmb 17 25 25.3
comp=Z,11nm,1.2s
SEHB SEOHWA 50.07 21 P **P** **17 25 04.3 -0.6**
SEHB IAmb IAmb 17 25 10.3
comp=Z,15nm,1.5s
JHJ Hachijo jima 2 51.23 35 LR LR 17 47 45.2
comp=Z,20nm,18.5s,baz=250,slow=37
MJAR Matsushiro Arr 52.97 31 P **P** **17 25 25.0 -1.7**
comp=Z,0.9nm,0.8s,baz=183,slow=7.3,SNR=4.3
MJAR PcP **PcP** **17 26 36.0 +0.9**
comp=Z,1.2nm,0.7s,baz=199,slow=4.4,SNR=6.8
MJAR LR LR 17 48 23.8
comp=Z,30nm,21.2s,baz=200,slow=37
comp=Z,0.9nm,0.8s
MJB9 Matsu-Tunnel 52.97 31 P **P** **17 25 26.9 +0.3**
WMQ Urumqi 54.83 342 *e*P **P** **17 25 42.1 +2.0**
KSH Kashi 55.79 331 P **P** **17 25 46.4 -0.8**
KSH PcP **PcP** **17 26 47.4 +1.5**
KSH pmax pmax
comp=Z,18nm,0.6s
SONM Songino Array 55.79 359 P **P** **17 25 47.4 +0.3**
comp=Z,1.8nm,0.6s,baz=174,slow=8.5,SNR=12
SONM PcP **PcP** **17 26 45.7 0.0**
comp=Z,2.9nm,0.7s,baz=168,slow=4.0,SNR=9.7
SONM LR LR 17 50 46.9
comp=Z,119nm,20.5s,baz=172,slow=37
comp=Z,1.8nm,0.6s
SONM Songino Array 55.79 359 **P** **17 25 46.6 -0.5**
SONM PcP **PcP** **17 26 45.2 -0.5**
KBL Kabul 56.01 322 P **P** **17 25 47.5 -1.4**
KBL IAmb IAmb 17 25 51.3
comp=Z,6.1nm,0.7s
BNX BinXian 56.55 17 ⇓P **P** **17 25 53.1 +0.8**
BNX pmax pmax
comp=Z,8.0nm,1.1s
BNX pmax pmax
comp=Z,100nm,5.8s
USRK Ussuriysk Ar. 56.63 21 P **P** **17 25 52.9 0.0**
comp=Z,1.8nm,0.6s,baz=201,slow=6.2,SNR=3.1
comp=Z,1.8nm,0.6s
WSAR Wadi Sarin 57.17 304 P **P** **17 25 59.4 +2.2**
comp=Z,6.5nm,0.6s,baz=154,slow=7.8,SNR=8.4
WSAR LR LR 17 49 13.1
comp=Z,88nm,19.4s,baz=136,slow=34
comp=Z,6.5nm,0.6s
KDJ Kajisay 57.29 333 P **P** **17 25 56.8 -1.1**
KDJ IAmb IAmb 17 25 59.2
comp=Z,10nm,0.6s
JTM Tenmabayashi 57.66 30 P **P** **17 25 58.6 -1.7**
DRK Karamyk 57.88 328 P **P** **17 26 01.9 -0.3**
DZM Mont Dzumac 58.13 111 LR LR 17 52 48.5
comp=Z,57nm,18.3s,baz=271,slow=38
GAR Garm 58.33 326 P **P** **17 26 04.0 -1.3**
CHGR Chuyangaron 58.74 325 P **P** **17 26 05.6 -2.4**
CHGR IAmb IAmb 17 26 28.0
comp=Z,8.0nm,0.8s
BTK Batken 58.82 328 P **P** **17 26 07.5 -1.0**
AAK Ala-Archa 58.91 332 LR LR 17 53 21.7
comp=Z,49nm,21.1s,baz=156,slow=38
MK31 Makanchi Array 59.20 340 P **P** **17 26 09.3 -1.7**
MK31 IAmb IAmb 17 26 11.9
comp=Z,4.3nm,0.6s
MK31 PcP **PcP** **17 26 57.7 -1.3**
MKAR Makanchi Array 59.20 340 P **P** **17 26 09.8 -1.2**
comp=Z,6.6nm,0.5s,baz=148,slow=7.4,SNR=93
MKAR LR LR 17 53 33.0
comp=Z,70nm,21.5s,baz=151,slow=38
comp=Z,6.6nm,0.5s
MKAR Makanchi Array 59.20 340 P **P** **17 26 09.5 -1.5**
MKAR PcP **PcP** **17 26 57.9 -1.2**
MAKZ Makanchi 59.32 340 P **P** **17 26 10.8 -1.1**
OPO Ambohidratompo 59.44 253 P **P** **17 26 16.9 +3.5**
comp=Z,3.1nm,0.6s,baz=112,slow=3.5,SNR=3.9
comp=Z,3.1nm,0.6s
UOSS Minazif 59.91 305 P **P** **17 26 14.2 -2.1**
UOSS IAmb IAmb 17 26 23.1
comp=Z,6.9nm,0.7s
VOI Vohitsoka 59.94 250 P **P** **17 26 15.9 -0.8**
ASAJ Asahikawa 60.93 28 LR LR 17 52 44.9
comp=Z,28nm,20.6s,baz=199,slow=36
JKA Kamikawa-asahi 60.93 28 P **P** **17 26 22.2 -0.6**
KLR Kul'dur 60.97 18 P **P** **17 26 21.1 -1.9**
comp=Z,3.3nm,0.5s,baz=190,slow=3.5,SNR=18
KLR LR LR 17 55 38.5
comp=Z,26nm,18.3s,baz=270,slow=39
comp=Z,3.3nm,0.5s
KK31 Karatay Array 61.19 330 P **P** **17 26 21.8 -2.9**
KKAR Karatay Array 61.19 330 P **P** **17 26 21.1 -3.6**
KKAR Karatay Array 61.19 330 P **P** **17 26 21.7 -3.0**
YSS Yuzh-Sakhalins 63.17 26 P **P** **17 26 37.0 -0.8**
KURBB Kurchatov Arra 63.77 340 P **P** **17 26 40.7 -1.0**
comp=Z,1.9nm,0.5s,baz=156,slow=5.8,SNR=17
KURBB PcP **PcP** **17 27 17.2 -0.1**
comp=Z,1.1nm,0.7s,baz=153,slow=3.1,SNR=5.8
KURBB LR LR 17 57 35.0
comp=Z,99nm,20.8s,baz=136,slow=39
comp=Z,1.9nm,0.5s
KURK Kurchatov 63.82 340 P **P** **17 26 40.6 -1.4**
KURK IAmb IAmb 17 26 43.2
comp=Z,3.0nm,0.6s
ZALV Zalesovo Beam 64.83 345 P **P** **17 26 47.5 -1.1**
comp=Z,0.8nm,0.3s,baz=150,slow=4.1,SNR=6.3
ZALV LR LR 17 56 44.1
comp=Z,43nm,21.9s,baz=199,slow=38
comp=Z,0.8nm,0.3s
ZALV Zalesovo Beam 64.83 345 P **P** **17 26 46.4 -2.2**

GEYT Alibeck 65.05 318 P **P** **17 26 50.9 +0.5**
comp=Z,10.0nm,0.7s,baz=108,slow=9.5,SNR=8.9
comp=Z,10.0nm,0.7s
RPZ Rata Peaks 65.27 134 LR LR 17 53 11.2
comp=Z,154nm,21.9s,baz=268,slow=34
MAW Mawson 66.41 197 P **P** **17 27 01.7 +3.1**
comp=Z,3.0nm,0.6s,baz=63,slow=6.3,SNR=14
comp=Z,3.0nm,0.6s
BKZ Black Stump Fm 68.52 129 P **P** **17 27 12.3 -0.3**
BKZ IAmb IAmb 17 27 16.1
comp=Z,11nm,0.9s
URZ Urewera 68.89 128 LR LR 17 59 09.3
comp=Z,114nm,19.4s,baz=211,slow=37
MSVF Nonsavu 68.99 106 LR LR 18 00 11.2
comp=Z,43nm,18.4s,baz=315,slow=38
ABKAR Akbulak array 70.74 329 P **P** **17 27 25.9 +0.1**
ABKAR Akbulak array 70.74 329 P **P** **17 27 25.8 -0.1**
YAK Yakutsk 72.08 11 P **P** **17 27 32.3 -1.4**
comp=Z,8.7nm,0.7s,baz=142,slow=1.2,SNR=11
YAK LR LR 17 58 56.9
comp=Z,31nm,21.8s,baz=269,slow=36
comp=Z,8.7nm,0.7s
YAK Yakutsk 72.08 11 P **P** **17 27 31.8 -1.9**
PEA0B Petropavlovsk- 74.34 29 P **P** **17 27 46.4 -0.8**
PEA0B IAmb IAmb 17 28 05.7
comp=Z,24nm,1.4s
PETK Petropavlovsk- 74.34 29 P **P** **17 27 46.5 -0.8**
comp=Z,1.6nm,0.6s,baz=204,slow=3.2,SNR=6.2
comp=Z,1.6nm,0.6s
PETK Petropavlovsk- 74.34 29 P **P** **17 27 45.8 -1.5**
VNDA Vanda 74.69 169 P **P** **17 27 50.7 +1.8**
comp=Z,1.4nm,0.6s,baz=322,slow=4.3,SNR=9.7
VNDA LR LR 17 58 21.7
comp=Z,67nm,18.1s,baz=250,slow=34
comp=Z,1.4nm,0.6s
VNDA Vanda 74.69 169 **P** **17 27 50.9 +2.0**
PET Petropavlovsk 74.75 29 P **P** **17 27 48.8 -0.7**
SBA Scott Base 75.77 169 P **P** **17 27 57.5 +2.4**
SBA IAmb IAmb 17 28 16.0
comp=Z,9.3nm,1.5s
MA2 Magadan 75.78 21 LR LR 18 05 10.0
comp=Z,18nm,18.1s,baz=234,slow=39
ARU Arti 75.95 334 LR LR 18 03 57.0
comp=Z,44nm,21.6s,baz=150,slow=38
ARU Arti 75.95 334 P **P** **17 27 56.0 -0.4**
ARU IAmb IAmb 17 27 58.0
comp=Z,7.0nm,0.8s
GURO Guroymak-BITLI 76.52 313 P **P** **17 28 00.5 +0.2**
GURO IAmb IAmb 17 28 04.0
comp=Z,4.5nm,0.6s
MBAR Mbarara 76.91 271 LR LR 17 55 50.1
comp=Z,60nm,21.9s,baz=120,slow=31
MBAR Mbarara 76.91 271 P **P** **17 28 03.4 +0.3**
MARD Mardin 76.99 311 P **P** **17 28 03.2 +0.3**
LSZ Lusaka 77.72 256 LR LR 17 59 17.2
comp=Z,99nm,19.5s,baz=128,slow=33
KBZ Khabaz 77.93 318 P **P** **17 28 08.6 +0.8**
comp=Z,4.7nm,0.9s,baz=133,slow=5.3,SNR=8.3
comp=Z,4.7nm,0.9s
KIV Kislovodsk 78.16 318 P **P** **17 28 09.3 +0.1**
KIV IAmb IAmb 17 28 14.0
comp=Z,5.8nm,0.6s
NRIK Noril'sk 78.60 353 P **P** **17 28 10.9 -0.1**
comp=Z,2.6nm,0.5s,baz=84,slow=6.2,SNR=4.5
comp=Z,2.6nm,0.5s
SEY Seymchan 78.72 19 LR LR 18 06 20.3
comp=Z,27nm,18.4s,baz=192,slow=38
GHAJ Ghor Haditha 79.16 304 P **P** **17 28 15.9 +1.0**
GHAJ IAmb IAmb 17 28 17.5
comp=Z,6.7nm,0.7s
EIL Elat 79.21 302 LR LR 18 05 18.8
comp=Z,49nm,18.3s,baz=104,slow=37
TIXI Tiksi 80.91 7 LR LR 18 06 20.4
comp=Z,31nm,20.4s,baz=182,slow=37
TIXI Tiksi 80.91 7 P **P** **17 28 21.4 -2.1**
TIXI IAmb IAmb 17 28 23.7
comp=Z,4.0nm,0.7s
QSPA South Pole Qui 81.80 180 LR LR 18 01 12.4
comp=Z,136nm,19.2s,baz=323,slow=33
CSS Mathiatis 81.97 307 P **P** **17 28 28.9 -1.1**
CSS IAmb IAmb 17 28 35.0
comp=Z,11nm,0.8s
SHEM Shemya Is, Ala 82.66 34 LR LR 18 03 08.9
comp=Z,25nm,20.5s,baz=34,slow=34
SUR Sutherland 82.97 238 LR LR 17 58 32.5
comp=Z,112nm,20.7s,baz=121,slow=30
BR131 Keskin Array S 83.06 312 P **P** **17 28 34.4 -1.3**
BR131 IAmb IAmb 17 28 37.7
comp=Z,5.7nm,0.8s
BRTR Keskin Array B 83.06 312 P **P** **17 28 35.9 +0.2**
comp=Z,2.9nm,0.7s,baz=137,slow=7.1,SNR=25
BRTR LR LR 18 07 05.1
comp=Z,42nm,20.5s,baz=119,slow=37
comp=Z,2.9nm,0.7s
BRTR Keskin Array B 83.06 312 P **P** **17 28 35.0 -0.7**
BZK Bozkurt 83.44 314 P **P** **17 28 36.7 -0.7**
ANTO Ankara 83.73 312 P **P** **17 28 38.9 -0.2**
ANTO IAmb IAmb 17 28 41.1
comp=Z,5.1nm,0.7s
KLMR Klimovskoe 86.71 333 *e*P **P** **17 28 54.0 +0.7**
KLMR AMP 17 28 55.7
comp=Z,13nm,1.3s
KARP Karpathos 87.01 306 P **P** **17 28 54.1 -1.3**
TSUM Tsumeb 87.36 251 LR LR 18 03 10.8
comp=Z,77nm,18.5s,baz=125,slow=32
SNAA Sanae 88.57 197 P **P** **17 29 05.9 +3.6**
SNAA Sanae 88.57 197 LR LR 18 03 56.9
comp=Z,144nm,18.3s,baz=44,slow=32
AKASG Malin Array Be 88.99 321 P **P** **17 29 04.0 -0.5**
comp=Z,1.1nm,0.6s,baz=74,slow=3.7,SNR=13
comp=Z,1.1nm,0.6s
AKASG Malin Array Be 88.99 321 IAmb IAmb 17 29 05.9
comp=Z,2.5nm,0.9s
MLR Muntele Rosu 89.98 316 P **P** **17 29 08.5 -0.9**
MLR IAmb IAmb 17 29 14.6
comp=Z,3.2nm,0.7s
VNA2 Neumayer--Watz 90.22 197 P **P** **17 29 13.2 +3.2**
baz=103,slow=4.0
MNK Minsk 90.69 325 *i* P **P** **17 29 08.2 -4.1**
MNK comp=E,2.0nm,0.9s *e*P **P** **17 29 08.2 -4.1**
MNK comp=Z,21nm,0.9s,baz=103 *i* PP **PP** **17 32 42.9 -5.1**
MNK *i* PPP PPP 17 34 40.7
MNK *i* S **SKSac** **17 39 36.5 -3.9**
MNK *i* SS **SS** **17 46 02.1 -5.5**
MNK *i* SSS 17 49 36.1
MNK *i* LQ LQ 18 04 09.9
MNK *i* LR LR 18 10 59.4
MNK *i* LRM MLR 18 12 58.6
MNK comp=E,86nm,14.6s *i* LRM MLR 18 13 31.6
comp=Z,5μm,17.5s
VNA3 Neumayer Olymp 90.73 197 P **P** **17 29 15.4 +3.0**
BURAR Bucovina Array 90.89 318 P **P** **17 29 13.0 -0.6**
BURAR IAmb IAmb 17 29 18.5
comp=Z,2.9nm,0.7s
BUR08 Bucovina Ar. S 90.91 318 P **P** **17 29 13.5 -0.1**
BUR08 IAmb IAmb 17 29 16.4
comp=Z,2.8nm,0.8s
FINES FINESS Array B 93.10 332 P **P** **17 29 23.6 +0.3**
comp=Z,2.2nm,0.7s,baz=96,slow=3.8,SNR=6.3
FINES LR LR 18 19 07.9
comp=Z,33nm,18.1s,baz=34,slow=41
comp=Z,2.2nm,0.7s
ARCES ARCESS Array B 94.86 340 P **P** **17 29 31.5 +0.2**
comp=Z,0.9nm,0.7s,baz=111,slow=5.3,SNR=5.0
ARCES LR LR 18 17 14.1
comp=Z,39nm,19.7s,baz=104,slow=39
comp=Z,0.9nm,0.7s
VRAC Vranov 96.80 319 LR LR 18 22 50.8
comp=Z,22nm,18.4s,baz=83,slow=41
GERES GERESS Array B 98.67 318 P Pdif 17 29 49.5 +0.4
comp=Z,0.3nm,0.6s,baz=106,slow=6.2,SNR=4.2
comp=Z,0.3nm,0.6s
PDAR Pinedale Array 132.59 37 PKP **PKiKP** **17 35 26.4 +0.4**
comp=Z,0.3nm,0.5s,baz=328,slow=3.2,SNR=1.9
SCHQ Schefferville 133.28 356 PKP **PKPdf** **17 35 25.2 -0.2**
comp=Z,2.1nm,0.8s,baz=45,slow=3.6,SNR=5.6
TXAR Lajitas Array 143.88 50 PKP PKPbc 17 35 44.0 +0.4
comp=Z,0.7nm,0.6s,baz=268,slow=2.4,SNR=9.4
ABTX Abilene, Hawle 144.95 42 PKPdf **PKPab** **17 35 45.4 -1.2**
TUL1 Leonard 145.11 34 **PKPbc** **17 35 45.9 -1.1**
CCM Cathedral Cave 145.74 27 PKPdf **PKPab** **17 35 49.4 0.0**
JCT Junction City 146.12 45 **PKPab** **17 35 51.4 +0.3**
BDFB Brasilia 146.17 226 PKPbc **PKiKP** **17 35 53.4 -0.9**
comp=Z,2.1nm,0.6s,baz=114,slow=8.3,SNR=3.8

U40A Yellville 146.34 31 **PKPbc** **17 35 50.7 -0.2**
SSPA Standing Stone 147.33 8 **PKPbc** **17 35 53.5 0.0**
MIAR Mount Ida 147.34 34 **PKPbc** **17 35 54.3 +0.5**
833A Chaparral WMA, 147.62 48 **PKiKP** **17 35 56.3 -0.5**
WVT Waverly 148.83 25 **PKPbc** **17 35 58.0 +0.3**
LVC Limon Verde 149.20 186 PKPbc **PKiKP** **17 36 01.2 +0.5**
comp=Z,3.4nm,0.7s,baz=261,slow=8.3,SNR=3.9
TKL Tuckaleechee C 150.75 19 PKPbc **PKiKP** **17 36 03.4 +0.4**
comp=Z,12nm,0.6s,baz=136,slow=3.4,SNR=28
LRAL Lakeview Retre 151.83 27 **PKPbc** **17 36 04.8 -0.2**
GOGA Godfrey 152.90 21 **PKiKP** **17 36 08.9 +1.3**
ROSC El Rosal 176.16 150 PKPab **PKPab** **17 38 04.8 +3.6**
comp=Z,12nm,0.4s,baz=126,slow=17,SNR=3.5

DJA 11 17:19:27.2±1.4, 0°S±3°×12°5E±°, h24km±14km, M4.0/12, mb4.3/2, mB4.6/1, MLv3.9/12, Mw(mB)3.8/1, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**1.08**	**311**	P		Pn 17 19 45.1	-1.7
KMSI				S		Sb 17 19 59.3	-1.5
SANI	**Sanana**	**2.24**	**148**	P		Pn 17 20 01.0	-1.9
TNTI	**Ternate**	**2.73**	**71**	P		Pn 17 20 09.5	-0.1
LBMI	**Labuha**	**2.75**	**100**	P		Pn 17 20 09.9	0.0
LBMI				S		Sn 17 20 42.5	0.0
MRSI	**Marisa**	**2.92**	**282**	P		Pn 17 20 09.6	-2.5
APSI	**Ampana**	**3.23**	**256**	P		Pn 17 20 17.8	+1.3
SGSI	**Sangihe**	**3.87**	**11**	P		Pn 17 20 25.5	+0.2
TTSI	**Tana Toraja**	**5.75**	**240**	P		Pn 17 20 52.5	+1.4
	0.1nm517nm18nm,0.4s						
SPSI	**Sidrap Palu**	**6.29**	**233**	P		Pn 17 21 00.2	+1.6

*NDI **11** 18:12:21.3±3.6, 25°.74N×95°.14E, h90km, ML4.2, mb4.5(NEIC)*
*BJI **11** 18:12:21.3±0.0, 25°.83N×95°.16E, h79km, mb4.4/41, mB4.6/21, Ms3.5/4, Ms7 3.3/4*
*IDC **11** 18:12:22.4±0.7, 25°.77N×95°.27E, h79km±6km, mb3.9/22, mbtmp4.2/23, MS3.1/6, Error ellipse: s-maj=18.5km s-min=10.8km az=53.0*
*NEIC **11** 18:12:23.4±1.2, 25°.79N±0°.08×95°.23E±0°.04, h83km±6km, mb4.5/100, Error ellipse: s-maj=12.3km s-min=3.5km az=202.0*
ISC 11 18:12:22.1±0.6, 25°.71N±0°.04×95°.06E±0°.05, h80km±5km, n249, σ1°32/274, mb4.4/75, 3C-5D, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MOKO	**MOKOCHONG**	**0.78**	**321**	*e*P	**Pn**	**18 12 39.3**	**+0.5**
MOKO				*e*S	**Sn**	**18 12 52.0**	**+0.8**
MOKO				IAML		18 12 53.3	
	comp=N,5μm,0.2s						
MOKO				IAML		18 12 53.3	
	comp=E,6μm,0.2s						
KOHI	**KOHIMA**	**0.86**	**271**	*e*P	**Pn**	**18 12 40.7**	**+1.0**
KOHI				*e*S	**Sn**	**18 12 54.2**	**+1.5**
KOHI				IAML		18 12 57.0	
	comp=E,4μm,0.3s						
KOHI				IAML		18 12 57.1	
	comp=N,6μm,0.5s						
JORH	**JORHAT**	**1.26**	**325**	*e*S	**Sn**	**18 13 01.5**	**+0.5**
DIBR	**DIBRUGARH**	**1.75**	**356**	*e*S	**Sn**	**18 13 11.9**	**-0.6**
DIBR				IAML		18 13 19.4	
	comp=N,12μm,0.5s						
LKP	**Lekhapani**	**1.76**	**23**	*e*P	**Pn**	**18 12 50.3**	**-0.5**
ITAN	**ITANAGAR**	**1.86**	**320**	*e*P	**Pn**	**18 12 52.3**	**+0.1**
ITAN				*e*S	**Sn**	**18 13 14.5**	**-0.6**
ITAN				IAML		18 13 15.1	
	comp=N,4μm,0.3s						
ITAN				IAML		18 13 15.7	
	comp=E,3μm,0.2s						
ZIRO	**ZIRO**	**2.11**	**329**	*e*P	**Pn**	**18 12 54.8**	**-0.8**
ZIRO				*e*S	**Sn**	**18 13 19.5**	**-1.7**
ZIRO				IAML		18 13 20.9	
	comp=E,4μm,0.2s						
SHL	**Shillong**	**2.87**	**268**	*e*P	**Pn**	**18 13 04.9**	**-0.9**
AZL	**Aizawl**	**2.91**	**228**	*e*P	**Pn**	**18 13 06.7**	**+0.3**
AZL				*e*S	**Sn**	**18 13 42.2**	**+1.7**
AZL				IAML		18 13 48.4	
	comp=E,463nm,0.4s						
AZL				IAML		18 13 49.8	
	comp=N,364nm,0.4s						
GUWA	**GUWAHATI**	**3.07**	**280**	*e*P	**Pn**	**18 13 08.5**	**+0.1**
GUWA				*e*S	**Sn**	**18 13 41.9**	**-2.1**
GUWA				IAML		18 13 44.4	
	comp=N,18μm,0.3s						
TURI	**Tura**	**4.27**	**269**	*e*P	**Pn**	**18 13 23.3**	**-1.3**
TURI				*e*S	**Sn**	**18 14 10.9**	**-2.4**
TURI				IAML		18 14 12.2	
	comp=N,833nm,0.4s						
DHUB	**DHUBRI**	**4.57**	**275**	*e*P	**Pn**	**18 13 28.7**	**0.0**
DHUB				*e*S	**Sn**	**18 14 17.2**	**-3.4**
DHUB				IAML		18 14 22.3	
	comp=N,530nm,0.2s						
DHUB				IAML		18 14 22.5	
	comp=E,574nm,0.2s						
LSA	**Lhasa**	**5.27**	**320**	Pn	**Pn**	**18 13 39.6**	**+0.8**
LSA	**Lhasa**	**5.27**	**320**	P	**Pn**	**18 13 42.3**	**+3.5**
LSA				smax	smax		
	comp=E,130nm,0.7s						
LSA				smax	smax		
	comp=E,62nm,0.6s						
GTK	**Tadong**	**6.00**	**287**	*e*P	**Pn**	**18 13 48.2**	**-0.2**
GTK				*e*S	**Sn**	**18 14 54.3**	**-1.6**
GTK				IAML		18 14 56.9	
	comp=N,171nm,0.3s						
GTK				IAML		18 14 59.1	
	comp=E,158nm,0.2s						
PZH	**PanZhiHua**	**6.06**	**81**	P	**Pn**	**18 13 50.6**	**+1.4**
PZH				pmax	pmax		
	comp=E,10.0nm,1.2s						
PZH				pmax	pmax		
	comp=E,120nm,5.8s						
TAPN	**Taplejung**	**6.78**	**286**	*e*Pn	**Sn**	**18 13 58.9**	**-0.3**
TAPN				*e*Sn	**Sn**	**18 15 14.8**	**-0.3**
	comp=E,200nm,0.4s						
KMI	**Kunming**	**6.97**	**93**	⇑P	**Pn**	**18 14 04.8**	**+3.0**
KMI				pmax	pmax		
	comp=E,22nm,0.9s						
ODAN	**Odare**	**6.98**	**281**	*e*Pn	**Pn**	**18 14 02.7**	**+0.8**
ODAN				*e*Sn	**Sn**	**18 15 19.9**	**0.0**
	comp=E,111nm,0.4s						
RAMN	**Ramite**	**7.69**	**281**	*e*Pn	**Pn**	**18 14 12.1**	**+0.5**
RAMN				*e*Sn	**Sn**	**18 15 37.3**	**0.0**
CHTO	**Chiang Mai**	**7.75**	**152**	Pn	**Pn**	**18 14 12.4**	**+0.1**
CM31	**Chiang Mai Arr**	**8.07**	**153**		**Pn**	**18 14 18.1**	**+1.5**
CMAR	**Chiang Mai Arr**	**8.07**	**153**	P	**Pn**	**18 14 18.0**	**+1.4**
	comp=E,4.4nm,0.7s,baz=328,slow=13,SNR=32						
CMAR				LR	LR	18 17 54.9	
	comp=E,30nm,20.8s,baz=325,slow=41						
CMAR	**Chiang Mai Arr**	**8.07**	**153**	Pn	**Pn**	**18 14 17.8**	**+1.2**
JIRN	**Jiri**	**8.17**	**286**	*e*Pn	**Pn**	**18 14 17.7**	**-0.5**
JIRN				*e*Sn	**Sn**	**18 15 46.9**	**-2.2**
	comp=E,198nm,0.4s						
GUN	**Gumba**	**8.49**	**287**	*e*Pn	**Pn**	**18 14 22.3**	**-0.3**
GUN				*e*Sn	**Sn**	**18 15 54.1**	**-2.8**
	comp=E,357nm,0.5s						
BOK	**Bokaro**	**8.55**	**259**	*e*P	**Pn**	**18 14 23.5**	**+0.3**
BOK				*e*S	**Sn**	**18 15 54.6**	**-3.4**
PKI	**Pulchoki**	**8.83**	**284**	*e*Pn	**Pn**	**18 14 26.5**	**-0.7**
PKI				*e*Sn	**Sn**	**18 16 02.7**	**-2.6**
	comp=E,84nm,0.4s						
PKIN	**Phulchoki**	**8.84**	**284**	*e*Pn	**Pn**	**18 14 26.5**	**-0.8**
PKIN				*e*Sn	**Sn**	**18 16 02.6**	**-2.9**
	comp=E,51nm,0.3s						
KKN	**Kakani**	**8.98**	**285**	*e*Pn	**Pn**	**18 14 28.6**	**-0.6**
KKN				*e*Sn	**Sn**	**18 16 06.1**	**-2.7**
DMN	**Daman**	**9.10**	**284**	*e*Pn	**Pn**	**18 14 30.1**	**-0.8**
DMN				*e*Sn	**Sn**	**18 16 08.7**	**-3.1**
	comp=E,74nm,0.5s						
CD2	**Chengdu**	**9.25**	**54**	P	**Pn**	**18 14 31.6**	**-1.1**
GKN	**Gorkha**	**9.58**	**286**	*e*Pn	**Pn**	**18 14 36.5**	**-0.8**
GKN				*e*Sn	**Sn**	**18 16 19.6**	**-3.8**
	comp=E,82nm,0.3s						
DANN	**Dangsing**	**10.41**	**287**	*e*Pn	**Pn**	**18 14 46.5**	**-2.3**
DANN				*e*Sn	**Sn**	**18 16 39.1**	**-4.7**
	comp=E,101nm,0.5s						
KOLN	**Koldanda**	**10.45**	**284**	*e*Pn	**Pn**	**18 14 47.6**	**-1.6**
KOLN				*e*Sn	**Sn**	**18 16 40.5**	**-4.0**
GOMU	**GeErMu**	**10.46**	**359**	P	**Pn**	**18 14 46.8**	**-2.6**

GOMU pmax pmax
comp=E,5.0nm,0.6s
GOMU pmax pmax
comp=E,64nm,5.0s
GYA Guiyang 10.46 83 ⇑P **Pn 18 14 47.7 -1.6**
GYA pmax pmax
comp=E,10.0nm,1.9s
PYUN Piuthan 11.03 285 *e*Pn **Pn 18 14 54.3 -2.8**
PYUN *e*Sn **Sn 18 16 53.6 -5.2**
comp=E,94nm,0.6s
LZH Lanzhou 12.79 34 *e*P **P 18 15 30.2 +1.3**
LZH pmax pmax
comp=Z,21nm,1.0s
ENH Enshi 13.53 67 Pn **Pn 18 15 26.7 -3.9**
JBP Jabalpur 13.96 263 *e*P **Pn 18 15 36.0 -0.3**
GTA Gaotai 14.23 15 *e*P **P 18 15 44.8 0.0**
GTA pmax pmax
comp=Z,3.0nm,0.9s
GTA pmax pmax
comp=Z,72nm,4.0s
GTA LR LR
comp=N,60nm,15.3s
GTA LR LR
comp=E,62nm,13.1s
GTA LR LR
comp=Z,62nm,13.8s
XAN Xi'an 14.60 52 ⇑P **P 18 15 46.9 -1.9**
XAN pmax pmax
comp=Z,23nm,1.0s
XAN pmax pmax
comp=Z,77nm,4.8s
BHPL Bhopal 16.24 265 *e*P **Pn 18 16 03.8 -1.6**
WMQ Urumqi 19.04 343 *e*P **Pn 18 16 41.1 +1.8**
HNS HongShan 20.36 50 ⇓P **P 18 16 52.6 +0.6**
HHC Hu-ho-hao-te 20.40 38 *e*P **P 18 16 52.1 -0.5**
HHC pmax pmax
comp=Z,32nm,0.9s
HHC pmax pmax
comp=Z,160nm,5.5s
KSH Kashi 21.11 315 P **P 18 17 03.1 +2.8**
KSH S **S 18 20 48.5 -2.3**
KSH pmax pmax
comp=Z,6.0nm,0.7s
NJ2 Nanjing 21.75 68 *e*P **P 18 17 02.7 -4.3**
NJ2 pmax pmax
comp=Z,4.0nm,0.5s
PALK Pallekele 22.89 219 LR LR 18 27 33.5
comp=Z,36nm,21.1s,baz=137,slow=40
PSI Prapat 23.08 170 P **P 18 17 22.9 +1.7**
comp=Z,3.5nm,0.4s,baz=94,slow=3.7,SNR=2.4
comp=Z,3.5nm,0.4s
RPSI Rantau Prapat 23.18 170 P **P 18 17 22.9 +0.9**
MK31 Makanchi Array 23.36 337 **P 18 17 23.8 +0.2**
MKAR Makanchi Array 23.36 337 P **P 18 17 23.9 +0.3**
comp=Z,7.2nm,0.7s,baz=146,slow=11,SNR=66
MKAR PcP **PcP 18 21 09.1 +1.2**
comp=Z,0.5nm,0.6s,baz=129,slow=2.5,SNR=3.8
comp=Z,7.2nm,0.7s
MKAR Makanchi Array 23.36 337 **P 18 17 23.6 +0.1**
MAKZ Makanchi 23.49 337 P **P 18 17 25.2 +0.5**
MAKZ IAmb IAmb 18 17 27.5
comp=Z,10nm,0.7s
SONM Songino Array 23.82 19 P **P 18 17 28.2 +0.4**
comp=Z,2.3nm,0.6s,baz=200,slow=10,SNR=20
comp=Z,2.3nm,0.6s
SONM Songino Array 23.82 19 P **P 18 17 27.6 -0.2**
DRK Karamyk 23.84 311 P **P 18 17 29.6 +1.4**
DRK IAmb IAmb 18 17 32.3
comp=Z,8.0nm,0.6s
AAK Ala-Archa 23.87 320 P **P 18 17 30.1 +1.8**
comp=Z,2.7nm,0.4s,baz=147,slow=5.7,SNR=5.6
comp=Z,2.7nm,0.4s
AAK Ala-Archa 23.87 320 P **P 18 17 29.2 +1.0**
ULN Ulaanbaatar 24.05 20 P **P 18 17 29.5 -0.4**
GAR Garm 24.65 309 P **P 18 17 36.4 +1.0**
GAR IAmb IAmb 18 17 56.4
comp=Z,15nm,1.1s
BTK Batken 24.78 311 P **P 18 17 38.4 +1.9**
KKAR Karatay Array 26.52 317 P **P 18 17 53.1 +0.9**
KURBB Kurchatov Arra 27.93 337 P **P 18 18 06.2 +1.6**
comp=Z,3.8nm,0.6s,baz=147,slow=9.6,SNR=50
KURBB PcP **PcP 18 21 19.4 +1.2**
comp=Z,1.3nm,0.7s,baz=163,slow=1.8,SNR=10
comp=Z,3.8nm,0.6s
KURK Kurchatov 27.98 337 P **P 18 18 05.6 +0.5**
KURK IAmb IAmb 18 18 07.4
comp=Z,6.1nm,0.7s
KURK Kurchatov 27.98 337 **PcP 18 21 19.4 +1.1**
ZAA0 Zalesovo Array 29.22 348 P **P 18 18 17.0 +1.0**
ZALV Zalesovo Beam 29.22 348 P **P 18 18 16.9 +0.9**
comp=Z,1.3nm,0.6s,baz=147,slow=8.0,SNR=6.6
ZALV PcP **PcP 18 21 21.1 -0.2**
comp=Z,0.5nm,0.4s,baz=174,slow=4.5,SNR=2.9
comp=Z,1.3nm,0.6s
ZALV Zalesovo Beam 29.22 348 P **P 18 18 16.3 +0.3**
BNX BinXian 32.68 44 ⇓P **P 18 18 46.5 -0.1**
BNX pmax pmax
comp=Z,10.0nm,1.0s
BNX pmax pmax
comp=Z,73nm,4.6s
BRVK Borovoye 33.03 332 P **P 18 18 50.6 +1.0**
BRVK IAmb IAmb 18 18 52.1
comp=Z,6.0nm,0.8s
USRK Ussuriysk Ar. 35.07 49 P **P 18 19 06.0 -1.3**
comp=Z,4.6nm,0.8s,baz=244,slow=9.8,SNR=6.7
comp=Z,4.6nm,0.8s
ABKAR Akbulak array 35.96 320 P **P 18 19 15.8 +0.9**
ABKAR Akbulak array 35.96 320 P **P 18 19 16.0 +1.2**
ABKAR IAmb IAmb 18 19 17.6
comp=Z,3.9nm,0.8s
KLR Kul'dur 36.87 41 LR LR 18 37 39.3
comp=Z,22nm,19.7s,baz=200,slow=41
MJAR Matsushiro Arr 38.20 63 P **P 18 19 31.8 -2.4**
comp=Z,0.5nm,0.5s,baz=276,slow=9.7,SNR=4.8
comp=Z,0.5nm,0.5s
KAPI Kappang 38.82 138 LR LR 18 40 32.1
comp=Z,28nm,19.5s,baz=312,slow=44
ARU Arti 40.39 329 P **P 18 19 53.0 +1.0**
ARU IAmb IAmb 18 19 54.4
comp=Z,9.8nm,1.3s
NRIK Noril'sk 43.88 356 P **P 18 20 20.5 +0.3**
comp=Z,5.5nm,0.6s,baz=148,slow=6.9,SNR=4.7
comp=Z,5.5nm,0.6s
NRIK Noril'sk 43.88 356 IAmb IAmb 18 20 22.2
comp=Z,5.6nm,0.7s
TIXI Tiksi 49.71 13 P **P 18 21 05.1 -0.5**
TIXI IAmb IAmb 18 21 07.2
comp=Z,5.7nm,1.3s
KLMR Klimovskoe 51.24 329 *e*P **P 18 21 18.0 +0.8**
KLMR AMP 18 21 19.1
comp=Z,6.0nm,0.6s
BR131 Keskin Array S 52.59 302 P **P 18 21 28.6 +0.7**
BR131 IAmb IAmb 18 21 31.0
comp=Z,3.1nm,0.7s
BRTR Keskin Array B 52.59 302 P **P 18 21 29.4 +1.5**
comp=Z,1.6nm,0.6s,baz=113,slow=7.3,SNR=18
comp=Z,1.6nm,0.6s
LVZ Lovozero 55.39 336 P **P 18 21 47.5 -0.2**
AKASG Malin Array Be 55.40 315 P **P 18 21 48.5 +0.5**
comp=Z,1.2nm,0.5s,baz=72,slow=5.7,SNR=23
comp=Z,1.2nm,0.5s
AKASG Malin Array Be 55.40 315 P **P 18 21 47.7 -0.3**
AKASG IAmb IAmb 18 21 49.4
comp=Z,2.5nm,0.7s
AKBB Malin Array Si 55.40 315 P **P 18 21 47.8 -0.1**
AKBB IAmb IAmb 18 21 49.2
comp=Z,6.4nm,0.7s
ELL Elmali 55.84 298 P **P 18 21 52.0 +0.5**
FIA1 FINESS Array S 57.73 328 P **P 18 22 05.1 +0.9**
FINES FINESS Array B 57.73 328 P **P 18 22 05.4 +1.1**
comp=Z,2.4nm,0.7s,baz=90,slow=11,SNR=10.0
comp=Z,2.4nm,0.7s
FINES FINESS Array B 57.73 328 P **P 18 22 05.3 +1.0**
MLR Muntele Rosu 57.80 309 P **P 18 22 06.3 +1.1**
BURAR Bucovina Array 58.12 312 P **P 18 22 08.8 +1.4**
BURAR IAmb IAmb 18 22 09.7
comp=Z,2.0nm,0.6s
BUR08 Bucovina Ar. S 58.13 312 P **P 18 22 07.3 -0.2**
BUR08 IAmb IAmb 18 22 09.5
comp=Z,1.7nm,0.7s
KARP Karpathos 58.23 297 P **P 18 22 08.4 +0.1**
KEV Kevo 58.54 338 P **P 18 22 10.8 +0.9**
PABE Paberze 58.59 321 P **P 18 22 11.3 +1.0**
ARCES ARCESS Array B 59.02 337 P **P 18 22 13.2 +0.1**
comp=Z,3.2nm,0.7s,baz=69,slow=6.6,SNR=9.5
comp=Z,3.2nm,0.7s

ARCES ARCESS Array B 59.02 337 P **P 18 22 13.9 +0.8**
WB0 Warramunga Arr 59.20 136 P **P 18 22 14.7 -0.3**
WRA Warramunga Arr 59.29 136 P **P 18 22 15.6 -0.1**
comp=Z,2.8nm,0.7s,baz=325,slow=7.1,SNR=12
comp=Z,2.8nm,0.7s
WB2 Warramunga Arr 59.30 136 P **P 18 22 15.7 0.0**
WB2 IAmb IAmb 18 22 49.4
comp=Z,7.1nm,1.1s
BILL Bilibino 59.40 24 P **P 18 22 14.7 -1.1**
BILL IAmb IAmb 18 22 16.9
comp=Z,6.6nm,1.1s
SANT Santorini 59.43 299 P **P 18 22 17.0 +0.4**
VTS Vitosha 60.08 306 P **P 18 22 21.1 +0.1**
VTS IAmb IAmb 18 22 23.6
comp=Z,3.6nm,0.7s
IDI Anoyia 60.10 297 P **P 18 22 21.9 +0.6**
IDI IAmb IAmb 18 22 24.8
comp=Z,3.9nm,1.0s
NIE Niedzica 61.21 314 *e*P **P 18 22 30.6 +2.1**
ASAR Alice Springs 61.84 139 P **P 18 22 33.1 +0.1**
comp=Z,2.4nm,0.7s,baz=322,slow=6.8,SNR=24
comp=Z,2.4nm,0.7s
ITM Ithomi 62.05 300 P **P 18 22 34.0 -0.4**
SPB2 Spitsbergen Ar 62.70 347 P **P 18 22 37.8 -0.1**
PDG Podgorica 63.01 306 P **P 18 22 41.5 +0.9**
MODS Modra-Piesok 63.33 313 *e*P **P 18 22 41.4 -1.3**
KRLC Kraliky 63.38 315 *e*P **P 18 22 44.1 +1.1**
DPC Dobruska-Polom 63.63 315 *e*P **P 18 22 45.8 +1.2**
OSTC Ostas 63.66 316 *e*P **P 18 22 46.2 +1.4**
CONA Conrad Observa 64.34 313 *i* P **P 18 22 50.7 +1.3**
comp=Z,5.3nm,1.0s
NC405 NORSAR Array S 64.66 328 P **P 18 22 51.8 +0.6**
NC303 NORSAR Array S 64.81 328 P **P 18 22 53.2 +1.0**
NC303 IAmb IAmb 18 23 25.3
comp=Z,9.3nm,1.2s
PRU Pruhonice 64.82 315 *e*P **P 18 22 53.5 +1.1**
NB2 NORSAR Subarra 64.91 328 P **P 18 22 53.6 +0.8**
comp=Z,1.3nm,0.6s,baz=82,slow=6.5
NOA NORSAR Array B 64.91 328 P **P 18 22 52.9 +0.1**
comp=Z,1.9nm,0.7s,baz=82,slow=6.4,SNR=11
NOA pP **pP 18 23 14.1 +0.2**
comp=Z,0.7nm,0.8s,baz=82,slow=6.8,SNR=2.4
comp=Z,1.9nm,0.7s
NC204 NORSAR Array S 65.10 328 P **P 18 22 54.6 +0.6**
CKRC Cesky Krumlov 65.19 314 *e*P **P 18 22 55.7 +0.9**
MOA Molln 65.41 313 *i* P **P 18 22 56.8 +0.5**
comp=Z,0.8nm,0.4s
CLL Collm 65.53 317 P **P 18 22 57.0 0.0**
CLL Collm 65.53 317 *i* P **P 18 22 57.7 +0.7**
comp=Z,3.0nm,0.7s
GEC2 GERESS Array S 65.58 314 P **P 18 22 57.3 -0.1**
GEC2 IAmb IAmb 18 22 59.8
comp=Z,2.9nm,0.8s
GERES GERESS Array B 65.58 314 P **P 18 22 58.7 +1.3**
comp=Z,2.3nm,0.6s,baz=69,slow=7.3,SNR=30
GERES pP **pP 18 23 19.2 +0.7**
comp=Z,0.9nm,0.8s,baz=77,slow=6.0,SNR=3.6
GERES LR LR 18 57 14.5
comp=Z,23nm,19.0s,baz=63,slow=41
comp=Z,2.3nm,0.6s
GERES GERESS Array B 65.58 314 P **P 18 22 58.3 +0.9**
KHC Kasperske Hory 65.60 314 *e*P **P 18 22 55.0 -2.5**
STAL STALIGIAL 66.79 312 P **P 18 23 05.3 +0.1**
STAL IAmb IAmb 18 23 06.3
comp=Z,8.7nm,1.1s
WTTA Wattenberg 67.28 313 *i* P **P 18 23 09.2 +0.8**
comp=Z,2.6nm,0.5s
SQTA Sankt Quirin 67.57 313 *i* P **P 18 23 11.0 +0.8**
comp=Z,3.5nm,0.4s
MOTA Moosalm 67.61 313 *i* P **P 18 23 11.1 +0.6**
comp=Z,5.0nm,0.9s
RETA Reutte 67.80 313 *i* P **P 18 23 12.6 +1.1**
comp=Z,4.6nm,0.5s
TUE Stuetta 68.99 312 P **P 18 23 19.4 +0.2**
TUE IAmb IAmb 18 24 00.9
comp=Z,4.8nm,1.0s
BBOO Buckleboo 70.08 144 P **P 18 23 24.1 -1.6**
WLF Walferdange 70.17 316 P **P 18 23 27.2 +1.1**
WLF IAmb IAmb 18 23 29.1
comp=Z,9.0nm,0.8s
WLF Walferdange 70.17 316 *dx* x 18 23 28.2
WLF *dx* x 18 23 49.3
SENIN Lac Senin/Sane 70.39 313 P **P 18 23 27.9 +0.1**
SENIN IAmb IAmb 18 23 30.1
comp=Z,3.2nm,0.8s
BMRD Maredsous 70.84 317 *d*P **P 18 23 29.6 -0.6**
BNI Bardonecchia 71.19 312 P **P 18 23 33.5 +0.9**
A21K Barrow 71.51 19 P **P 18 23 33.9 +0.1**
A21K IAmb IAmb 18 23 35.7
comp=Z,10nm,0.8s
A21K Barrow 71.51 19 P **P 18 23 35.1 +1.2**
baz=295
KEST Kesra 72.20 302 P **P 18 23 39.5 +0.7**
comp=Z,3.2nm,0.9s,baz=142,slow=2.4,SNR=2.5
comp=Z,3.2nm,0.9s
KEST Kesra 72.20 302 IAmb IAmb 18 24 11.9
comp=Z,11nm,1.3s
STKA Stephens Creek 72.47 140 P **P 18 23 39.8 -0.3**
comp=Z,1.5nm,0.7s,baz=307,slow=14,SNR=3.0
comp=Z,1.5nm,0.7s
EUNU Eureka 74.45 0 P **P 18 23 52.4 +1.3**
IMAR Indian Mountai 74.92 23 P **P 18 23 54.4 +0.4**
TOLK Toolik Lake Re 74.94 20 P **P 18 23 54.8 +0.6**
TOLK IAmb IAmb 18 23 56.0
comp=Z,7.1nm,0.8s
TOLK Toolik Lake Re 74.94 20 P **P 18 23 55.3 +1.2**
baz=302
H21K Melozitna Rive 75.42 23 P **P 18 23 57.5 +0.6**
H21K Melozitna Rive 75.42 23 P **P 18 23 58.0 +1.1**
baz=300,SNR=16
J20K Nowinta River 75.66 25 P **P 18 23 58.6 +0.3**
J20K Nowinta River 75.66 25 P **P 18 23 59.4 +1.1**
baz=299
I21K Tanana 75.96 24 P **P 18 24 00.8 +0.9**
I21K IAmb IAmb 18 24 02.0
comp=Z,5.8nm,0.8s
I21K Tanana 75.96 24 P **P 18 24 01.3 +1.4**
baz=301,SNR=5.9
K20K Telida 76.10 26 P **P 18 24 01.5 +0.7**
K20K Telida 76.10 26 P **P 18 24 02.1 +1.2**
baz=300
O16K Kokwok River B 76.20 30 P **P 18 24 02.1 +0.6**
baz=297
L19K White Mountain 76.37 27 P **P 18 24 02.7 +0.3**
L19K IAmb IAmb 18 24 04.1
comp=Z,3.5nm,0.8s
L19K White Mountain 76.37 27 P **P 18 24 03.1 +0.8**
baz=299
H23K Yukon River 76.48 22 P **P 18 24 03.5 +0.6**
H23K Yukon River 76.48 22 P **P 18 24 04.2 +1.2**
baz=303,SNR=5.5
MLY Manley 76.49 23 P **P 18 24 03.1 +0.1**
MLY IAmb IAmb 18 24 05.2
comp=Z,7.3nm,1.0s
MLY Manley 76.49 23 P **P 18 24 03.9 +0.9**
baz=302,SNR=11
CHUM Lake Minchumin 76.51 25 P **P 18 24 04.2 +1.1**
baz=301
SVW2 Sparrevohn 76.59 28 P **P 18 24 04.0 +0.4**
SVW2 IAmb IAmb 18 24 05.3
comp=Z,3.0nm,0.7s
L20K Farewell, AK 76.61 26 P **P 18 24 04.1 +0.3**
baz=300
N18K Kilae Creek 76.67 29 P **P 18 24 04.2 +0.1**
N18K IAmb IAmb 18 24 26.5
comp=Z,8.9nm,1.4s
N18K Kilae Creek 76.67 29 P **P 18 24 04.6 +0.6**
baz=299
M19K Big River Lodg 76.69 27 P **P 18 24 05.4 +1.2**
baz=300
CAST Castle Rocks 76.84 25 P **P 18 24 05.4 +0.4**
CAST IAmb IAmb 18 24 06.7
comp=Z,4.4nm,0.8s
CAST Castle Rocks 76.84 25 P **P 18 24 05.7 +0.7**
baz=301
BPAW Bear Paw Mtn. 76.89 24 P **P 18 24 05.4 +0.1**
BPAW IAmb IAmb 18 24 07.5
comp=Z,4.6nm,0.7s
BPAW Bear Paw Mtn. 76.89 24 P **P 18 24 06.1 +0.8**
baz=302,SNR=7.7
I23K Minto, Yukon-K 76.91 23 P **P 18 24 05.3 -0.1**
I23K Minto, Yukon-K 76.91 23 P **P 18 24 06.3 +1.0**
baz=303
SDPT Sand Point 76.97 35 P **P 18 24 04.9 -0.9**
H24K Noodor Dome 77.04 22 P **P 18 24 06.5 +0.3**
H24K Noodor Dome 77.04 22 P **P 18 24 07.0 +0.8**
baz=304
PPLA Purkeypile 77.07 26 P **P 18 24 07.0 +0.6**
PPLA IAmb IAmb 18 24 07.5
comp=Z,4.7nm,0.8s
PPLA Purkeypile 77.07 26 P **P 18 24 06.8 +0.4**
baz=301
BMAR Burnt Mountain 77.17 20 P **P 18 24 07.0 +0.2**
M20K Styx River 77.22 27 P **P 18 24 08.4 +1.1**
baz=301
NEA2 Nenana 77.33 23 P **P 18 24 07.7 0.0**
NEA2 IAmb IAmb 18 24 09.5
comp=Z,4.4nm,0.9s
NEA2 Nenana 77.33 23 P **P 18 24 08.5 +0.9**
baz=304,SNR=5.1
O18K Koktuh Hills 77.36 29 P **P 18 24 08.8 +0.7**
O18K IAmb IAmb 18 24 20.1
comp=Z,6.5nm,1.1s
O18K Koktuh Hills 77.36 29 P **P 18 24 09.1 +1.1**
baz=300
MDM Murphy Dome 77.42 23 P **P 18 24 08.1 -0.1**
MDM IAmb IAmb 18 24 09.8
comp=Z,9.0nm,0.8s
TRF Thorofare Moun 77.51 25 P **P 18 24 09.9 +1.0**
baz=303
P18K Big Mountain, 77.58 30 P **P 18 24 08.1 -1.2**
P18K IAmb IAmb 18 24 10.7
comp=Z,4.2nm,0.7s
POKR Poker Plat Res 77.61 23 P **P 18 24 10.1 +0.8**
baz=305
CNBA Cherabura Isl 77.67 35 P **P 18 24 08.3 -1.4**
CCB Clear Creek Bu 77.75 23 P **P 18 24 08.3 -1.7**
SKT Skwentna 77.82 26 P **P 18 24 09.8 -0.7**
baz=302
ILAR Eielson Array 78.00 23 P **P 18 24 10.8 -0.6**
comp=Z,2.1nm,0.8s,baz=297,slow=5.3,SNR=18
comp=Z,2.1nm,0.8s
ILAR Eielson Array 78.00 23 P **P 18 24 09.9 -1.5**
SUA Susitna One 78.41 27 P **P 18 24 14.0 +0.1**
SUA IAmb IAmb 18 24 14.6
comp=Z,7.7nm,0.7s
SUA Susitna One 78.41 27 P **P 18 24 13.7 -0.2**
baz=303
J25K Salcha River, 78.62 22 P **P 18 24 13.1 -1.8**
J25K Salcha River, 78.62 22 P **P 18 24 14.4 -0.5**
baz=307
SML Sawmill 79.18 26 P **P 18 24 18.4 +0.4**
SML IAmb IAmb 18 24 19.1
comp=Z,7.7nm,0.9s
SML Sawmill 79.18 26 P **P 18 24 18.5 +0.5**
baz=305
BRLK Bradley Lake 79.28 28 P **P 18 24 17.3 -1.3**
J26L Joseph Creek 79.30 22 P **P 18 24 17.5 -1.2**
J26L IAmb IAmb 18 24 19.9
comp=Z,3.9nm,0.8s
J26L Joseph Creek 79.30 22 P **P 18 24 19.2 +0.5**
baz=308,SNR=5.6
RIDG Independent Ri 79.33 23 P **P 18 24 18.7 -0.1**
RIDG IAmb IAmb 18 24 19.8
comp=Z,4.8nm,0.7s
RIDG Independent Ri 79.33 23 P **P 18 24 18.8 -0.1**
baz=307,SNR=5.2
KNK Knik Glacier 79.35 26 P **P 18 24 19.0 +0.1**
baz=305
SCRK Sand Creek 79.48 23 P **P 18 24 18.9 -0.8**
SCRK Sand Creek 79.48 23 P **P 18 24 20.0 +0.2**
baz=308,SNR=5.1
KDAK Kodiak Island 79.60 30 P **P 18 24 19.8 -0.5**
KDAK Kodiak Island 79.60 30 P **P 18 24 19.9 -0.4**
baz=302
K27K Chicken 80.11 22 P **P 18 24 24.3 +1.4**
baz=310
KLU Klutina 80.29 25 P **P 18 24 25.0 +0.9**
baz=307
ESDC Sonseca Array 80.49 309 P **P 18 24 26.6 +1.0**
comp=Z,0.9nm,0.8s,baz=44,slow=4.1,SNR=8.5
ESDC pP **pP 18 24 47.5 +0.2**
comp=Z,0.7nm,0.9s,baz=43,slow=6.7,SNR=3.0
comp=Z,0.9nm,0.8s
ESDC Sonseca Array 80.49 309 P **P 18 24 27.1 +1.6**
HIN Hinchinbrook I 80.72 26 P **P 18 24 26.8 +0.4**
N25K Chitina, Valde 80.73 25 P **P 18 24 27.5 +1.1**
baz=308
L27K Beaver Creek, 80.81 23 P **P 18 24 28.3 +1.5**
L27K IAmb IAmb 18 24 29.2
comp=Z,6.6nm,0.8s
L27K Beaver Creek, 80.81 23 P **P 18 24 28.4 +1.6**
baz=310,SNR=13
PAB San Pablo 80.82 309 P **P 18 24 27.8 +0.5**
PAB IAmb IAmb 18 24 50.7
comp=Z,4.0nm,1.0s
BCAR Beaver Creek A 80.83 23 P **P 18 24 28.2 +1.3**
C36M Paulatuk 81.08 13 P **P 18 24 28.2 +0.2**
BMRM Bremner River 81.12 25 P **P 18 24 29.3 +0.8**
baz=308
M27K Edge Creek, AK 81.25 23 P **P 18 24 30.3 +1.0**
M27K IAmb IAmb 18 24 32.1
comp=Z,5.9nm,1.0s
M27K Edge Creek, AK 81.25 23 P **P 18 24 30.3 +1.0**
baz=310
MID Middleton Isla 81.37 27 P **P 18 24 29.3 -0.4**
BARN Barnard Glacier 82.17 24 P **P 18 24 34.5 +0.3**
CTG Chitna Glacier 82.35 24 P **P 18 24 36.4 +1.3**
baz=311
CTGM Chitina Glacie 82.36 24 P **P 18 24 35.7 +0.6**
CTGM IAmb IAmb 18 24 37.3
comp=Z,7.3nm,1.0s
M30M Minto, Yukon 82.85 22 P **P 18 24 38.9 +1.4**
baz=314
YUK6 Outpost Mounta 83.45 23 P **P 18 24 41.9 +1.1**
baz=313
HYT Haines Junctio 83.83 23 P **P 18 24 44.2 +1.5**
baz=314
M31M Drury Creek, Y 83.91 21 P **P 18 24 43.6 +0.6**
baz=316
N31M Braeburn, Yuko 83.96 22 P **P 18 24 44.5 +1.3**
baz=315
FARO Faro, Yukon 84.22 21 P **P 18 24 46.5 +2.0**
baz=317
O30N Mendenhall 84.37 23 P **P 18 24 46.6 +1.3**
baz=315
MMPY Sheldon Lake, 84.58 20 P **P 18 24 47.9 +1.5**
baz=319,SNR=5.7
WHY Whitehorse 84.86 22 P **P 18 24 48.2 +0.4**
WHY IAmb IAmb 18 24 49.3
comp=Z,2.0nm,0.6s
WHY Whitehorse 84.86 22 P **P 18 24 48.4 +0.5**
baz=316
BOSA Boshof 86.08 236 LR LR 19 05 53.5
comp=Z,45nm,18.8s,baz=188,slow=37
TORD Torodi Ar. Bea 87.37 283 P **P 18 25 01.9 +1.0**
comp=Z,0.9nm,0.6s,baz=70,slow=4.1,SNR=9.9
TORD pP **pP 18 25 22.7 -0.1**
comp=Z,1.0nm,0.9s,baz=26,slow=3.1,SNR=4.1
comp=Z,0.9nm,0.6s
TXAR Lajitas Array 122.39 19 PKP **PKPdf 18 31 08.5 -0.2**
comp=Z,0.1nm,0.4s,baz=174,slow=0.9,SNR=4.4
ROSC El Rosal 147.93 340 PKPbc **PKPdf 18 31 57.4 +1.0**
comp=Z,32nm,0.7s,baz=184,slow=9.3,SNR=7.9
ROSC PKPab **PKiKP 18 32 01.5 +0.2**
comp=Z,32nm,0.7s,baz=118,slow=17,SNR=4.1

HEL ***11*** *18:23:44.1±0.1, 67.60N×33.89E, h0km, ML1.9, Explosion*
NAO ***11*** *18:23:44.2±1.5, 67.70N×33.77E, ML2.6*
ISC 11 18:23:44.8±0.9, 67.79N±0.03×33.59E±0.03, h0km, n25,
σ1§54/46, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APZ9	**Apatity**	**0.23**	**197**	Pg	**Pg**	**18 23 48.1**	**-1.1**
APZ9				Lg	Lg	18 23 50.9	
APZ9	**Apatity**	**0.23**	**197**	Pg	**Pg**	**18 23 48.1**	**-1.1**
APZ9				Sg	**Sg**	**18 23 50.9**	**-1.3**
APA0	**Apatity Array**	**0.29**	**231**	Pg	**Pg**	**18 23 49.1**	**-1.2**
APA0	baz=87,slow=18			Lg	Lg	18 23 54.6	
	baz=73,slow=28						
APA0	**Apatity Array**	**0.29**	**231**	Pg	**Pg**	**18 23 49.1**	**-1.2**
APA0	baz=87,slow=18			Sg	**Sg**	**18 23 54.6**	**+0.5**
	baz=73,slow=28						
LVZ	**Lovozero**	**0.42**	**74**	PG	**Pg**	**18 23 51.6**	**-1.2**
	baz=225						
LVZ				SG	**Sg**	**18 23 56.8**	**-1.4**
VRF	**Varrio**	**1.51**	**270**	PG	**Pb**	**18 24 13.5**	**-0.2**
VRF				MSG		18 24 33.1	
	comp=Z,14nm,0.2s						

VRF				SG	**Sn**	**18 24 34.8**	**+1.3**	
OLKF	**Oulanka, Finla**	**2.21**	**230**	PG	**Pn**	**18 24 23.4**	**+0.8**	
OLKF				SG	**Sb**	**18 24 53.1**	**-0.2**	
KU6	**Riekki**	**2.29**	**221**	PG	**Pn**	**18 24 23.8**	**0.0**	
KU6	comp=Z,3.4nm,0.2s			MSG		18 24 50.4		
KU6				SG	**Sn**	**18 24 53.7**	**+1.0**	
MSF	**Maaselka**	**2.60**	**226**	PG	**Pn**	**18 24 30.0**	**+1.9**	
MSF				SG	**Sb**	**18 25 03.6**	**-1.2**	
SGF	**Sodankyl**	**2.72**	**266**	PG	**Pb**	**18 24 34.4**	**+0.1**	
SGF				SG	**Sg**	**18 25 10.2**	**-2.0**	
KEV	**Kevo**	**3.10**	**313**	Pn	**Pn**	**18 24 36.9**	**+1.9**	
KEV				SN	**Sn**	**18 25 15.0**	**+2.4**	
KEV	**Kevo**	**3.10**	**313**	Pn	**Pn**	**18 24 36.9**	**+1.9**	
KEV	**Kevo**	**3.10**	**313**	PN	**Pn**	**18 24 37.0**	**+2.1**	
KEV				SN	**Sb**	**18 25 16.2**	**-2.9**	
RNF	**Rovaniemi**	**3.18**	**252**	PN	**Pn**	**18 24 35.8**	**-0.1**	
RNF	baz=69			SN	**Sn**	**18 25 16.7**	**+2.2**	
ARA0	**ARCESS Array S**	**3.44**	**304**	Pn	**Pn**	**18 24 39.3**	**-0.3**	
ARA0	baz=123,slow=16			Pg	**Pg**	**18 24 49.6**	**-1.0**	
ARA0	baz=114,slow=18			Sn	**Sn**	**18 25 22.3**	**+1.4**	
ARA0	baz=122,slow=28			Lg	Lg	18 25 33.3		
ARA0	baz=118,slow=37							
ARA0	**ARCESS Array S**	**3.44**	**304**	Pn	**Pn**	**18 24 39.3**	**-0.3**	
ARA0	baz=123,slow=16			Pg	**Pg**	**18 24 49.6**	**-1.0**	
ARA0	baz=114,slow=18			Sg	**Sg**	**18 25 33.3**	**-1.7**	
ARA0	baz=118,slow=37							
ARA0	**ARCESS Array S**	**3.44**	**304**	PN	**Pn**	**18 24 40.4**	**+0.9**	
ARA0	baz=122			SN	**Sn**	**18 25 22.9**	**+2.0**	
KLF	**Kolari**	**3.74**	**266**	PG	**Pb**	**18 24 52.5**	**+0.9**	
KLF	baz=78			SG	**Sg**	**18 25 42.0**	**-2.7**	
HEF	**Hetta**	**3.77**	**284**	PG	**Pg**	**18 24 56.0**	**-1.0**	
HEF				SN	**Sn**	**18 25 30.7**	**+1.6**	
KTK1	**Kautokeino**	**4.02**	**293**	SN	**Sn**	**18 25 38.6**	**+3.4**	
TOF	**Tornio**	**4.03**	**249**	PG	**Pb**	**18 24 58.1**	**+1.6**	
PAJU	**Pajala**	**4.11**	**264**	PG	**Pb**	**18 24 59.2**	**+1.2**	
PAJU				SN	**Sn**	**18 25 39.2**	**+1.6**	
LANU	**Lannavaara**	**4.39**	**279**	SN	**Sn**	**18 25 46.2**	**+1.9**	
KALU	**Kalix**	**4.48**	**249**	PG	**Pb**	**18 25 05.3**	**+1.1**	
KALU				SN	**Sn**	**18 25 47.0**	**+0.5**	
ERTU	**Ertsjaerv**	**4.61**	**260**	PN	**Pn**	**18 24 57.0**	**+1.4**	
ERTU				SN	**Sn**	**18 25 49.1**	**-0.7**	

IDC 11 18:37:35.7±2.8, 8°.53S×159°.85E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=61.4km s-min=21.8km az=68.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**0.90**	**174**	Pn	Pn	18 37 55.7	0.0
	116nm,0.3s,baz=86,slow=2.9,SNR=82						
HNR				Sn	Sn	18 38 10.2	+0.7
	151nm,0.3s,baz=58,slow=23,SNR=6.5						
WRA	**Warramunga Arr**	**27.16**	**243**	P	P	18 43 22.1	+1.0
	0.4nm,0.5s,baz=68,slow=9.6,SNR=2.0						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**29.04**	**236**	P	P	18 43 37.2	-0.7
	0.2nm,0.4s,baz=61,slow=9.7,SNR=5.4						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**87.74**	**318**	P	P	18 50 26.6	-0.1
	0.1nm,0.5s,baz=95,slow=6.2,SNR=1.6						
	0.1nm,0.5s						

*IDC **11** 18:40:22.8±5.6, 8°.86S×124°.09E, h77km±65km, mb3.6/1, mbtmp3.5/3, ML3.4/2, Error ellipse: s-maj=66.2km s-min=37.2km az=37.0*
*DJA **11** 18:40:25.2±0.5, 9°.5S×12°.4E±°, h91km±9km, M3.6/9, mb4.1/2, MLv3.4/9*
ISC 11 18:40:24.7±1.0, 9°.06S±0°.09×123°.72E±0°.08, h100km, n19, σ1s52/21, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**0.88**	**142**	P	**Pn**	**18 40 44.4**	**+0.5**
SOEI	**Soe**	**0.88**	**142**	P	**Pn**	**18 40 44.5**	**+0.5**
BATI	**Baumata**	**1.14**	**183**	P	**Pn**	**18 40 47.0**	**+0.2**
	285nm,0.4s,baz=33,slow=3.7,SNR=182						
BATI				S	**Sn**	**18 41 04.7**	**+1.4**
	91nm,0.3s,baz=321,slow=23,SNR=14						
BATI	**Baumata**	**1.14**	**183**	P	**Pn**	**18 40 46.9**	**+0.2**
MMRI	**Maumere**	**1.52**	**286**	P	**Pn**	**18 40 51.7**	**+0.5**
MMRI	**Maumere**	**1.52**	**286**	P	**Pn**	**18 40 52.1**	**+0.9**
EDFI	**Ende, Flores**	**2.02**	**279**	P	**Pn**	**18 40 58.3**	**+0.6**
EDFI				S	**Sn**	**18 41 23.0**	**+0.1**
BASI	**Baing, Sumba**	**3.30**	**249**	P	**Pn**	**18 41 15.1**	**+0.6**
WBSI	**Waikabubak, Su**	**4.31**	**262**	P	**Pn**	**18 41 27.2**	**-0.9**
BSSI	**Bau Bau, Buton**	**4.32**	**312**	P	**Pn**	**18 41 30.9**	**+2.7**
MTN	**Manton Dam**	**8.20**	**118**	P	**Pn**	**18 42 20.1**	**-0.8**
KNRA	**Kununurra**	**8.22**	**144**	P	**Pn**	**18 42 22.4**	**+1.2**
KDU	**Kakadu**	**9.32**	**114**	P	**Pn**	**18 42 34.6**	**-1.6**
WRA	**Warramunga Arr**	**14.92**	**138**	P	**Pn**	**18 43 46.6**	**-3.8**
	0.2nm,0.3s,baz=310,slow=14,SNR=1.8						
WRA				S	Sn	18 46 19.6	-15
	0.7nm,0.5s,baz=324,slow=21,SNR=3.2						
	0.2nm,0.3s						
WRAB	**Tennant Creek**	**14.92**	**138**	P	**P**	**18 43 52.5**	**-1.1**
	9.6nm,2.5s						
ASAR	**Alice Springs**	**17.49**	**147**	P	**Pn**	**18 44 22.1**	**-0.2**
	0.1nm,0.3s,baz=324,slow=13,SNR=13						
ASAR				S	Sn	18 47 23.9	-13
	1.0nm,0.8s,baz=311,slow=22,SNR=5.8						
	0.7nm,0.7s						
QIS	**Mount Isa**	**19.12**	**128**	P	**Pn**	**18 44 41.9**	**0.0**
OOD	**Oodnadatta**	**21.79**	**150**	P	**P**	**18 45 11.5**	**+2.9**
MKAR	**Makanchi Array**	**66.72**	**330**	P	**P**	**18 51 05.8**	**+0.6**
	0.7nm,0.5s,baz=138,slow=7.4,SNR=12						
	0.7nm,0.5s						

*IDC **11** 19:03:03.7±2.9, 17°.78S×178°.31W, h581km±22km, mb2.6/5, mbtmp3.6/6, Error ellipse: s-maj=123.9km s-min=20.8km az=151.0*
ISC 11 19:03:03.4±2.1, 17°.9S±0°.7×178°.3W±0°.4, h579km, n7, σ0s29/6, mb3.1/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.52**	**271**	P	**P**	**19 04 24.4**	**+0.4**
	34nm,0.7s,baz=120,slow=9.5,SNR=40						
WRA	**Warramunga Arr**	**44.78**	**259**	P	**P**	**19 10 26.5**	**-0.3**
	0.3nm,0.5s,baz=97,slow=6.8,SNR=7.4						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**44.94**	**254**	P	**P**	**19 10 27.8**	**-0.2**
	0.8nm,0.6s,baz=87,slow=9.0,SNR=18						
	0.8nm,0.6s						
NVAR	**Mina Array Bea**	**79.28**	**44**	P	**P**	**19 14 09.9**	**0.0**
	0.4nm,0.7s,baz=226,slow=7.1,SNR=4.1						
	0.4nm,0.7s						
ILAR	**Eielson Array**	**85.80**	**13**	P	**P**	**19 14 41.5**	**-0.1**
	0.2nm,0.4s,baz=221,slow=5.5,SNR=6.6						
	0.2nm,0.4s						
TXAR	**Lajitas Array**	**85.84**	**58**	P	**P**	**19 14 43.0**	**+0.1**
	0.1nm,0.6s,baz=215,slow=4.3,SNR=1.8						
	0.1nm,0.6s						
BRTR	**Keskin Array B**	**144.84**	**315**	PKP	PKPbc	19 21 35.8	-0.3
	0.3nm,0.6s,baz=52,slow=2.4,SNR=2.6						

*DJA **11** 19:03:06.4±1.0, 0°.N±4°×9°.8E±°, h19km±11km, M3.9/11, mb3.9/2, MLv3.9/11*
*IDC **11** 19:03:09.8±5.1, 0°.51N×98°.05E, h49km±40km, mb3.6/7, mbtmp3.8/9, ML3.6/2, MS2.2/1, Error ellipse: s-maj=51.9km s-min=27.5km az=48.0*
ISC 11 19:03:07.1±0.9, 0°.44N±0°.06×97°.91E±0°.08, h29km, n21, σ0s81/21, mb3.9/7, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSI	**Gunungsitoli**	**0.92**	**339**	P	**Pn**	**19 03 23.3**	**-0.8**
GSI				S	**Sb**	**19 03 37.1**	**+0.6**
SISI	**Saibi**	**2.11**	**146**	P	**Pn**	**19 03 39.9**	**-0.6**
PSI	**Prapat**	**2.56**	**23**	P	**Pn**	**19 03 46.5**	**-0.3**
	5.6nm,0.3s,baz=216,slow=14,SNR=9.3						
PSI				LR	LR	19 04 30.4	
	comp=Z,44nm,18.1s,baz=160,slow=34						
	11nm,0.3s						
PPI	**Padang Panjang**	**2.64**	**110**	P	**Pn**	**19 03 46.4**	**-1.4**
PPI				S	**Sn**	**19 04 19.2**	**+0.2**
KCSI	**Kotacane, Aceh**	**3.07**	**357**	P	**Pn**	**19 03 54.0**	**+0.3**
KCSI				S	**Sn**	**19 04 30.2**	**+0.8**
TSI	**Tuntungan**	**3.11**	**12**	P	**Pn**	**19 03 54.8**	**+0.5**
BKNI	**Bangkinang**	**3.13**	**92**	P	**Pn**	**19 03 54.1**	**-0.5**
BKNI				S	**Sb**	**19 04 41.1**	**+1.1**
PPSI	**Pulau Pagai**	**3.81**	**147**	P	**Pn**	**19 04 04.3**	**+0.4**
KRJI	**Kerinci**	**4.35**	**125**	P	**Pn**	**19 04 12.7**	**+1.3**
CMAR	**Chiang Mai Arr**	**17.94**	**3**	P	**Pn**	**19 07 13.2**	**-1.3**
	0.1nm,0.3s,baz=192,slow=11,SNR=12						
	0.5nm,0.5s						
H08S2	**Diego Garcia H**	**26.58**	**252**	T	T	19 36 09.8	
	baz=73,slow=76,SNR=97						
H08S3	**Diego Garcia H**	**26.59**	**252**	T	T	19 36 07.8	
	baz=73,slow=76,SNR=300						
H08S1	**Diego Garcia H**	**26.60**	**252**	T	T	19 36 09.9	
	baz=73,slow=76,SNR=20						
WRA	**Warramunga Arr**	**41.03**	**122**	P	**P**	**19 10 48.1**	**-0.2**
	0.6nm,1.0s,baz=306,slow=8.7,SNR=1.8						
	0.6nm,1.0s						
KSRS	**Korea Array**	**46.08**	**34**	P	**P**	**19 11 27.3**	**-1.3**
	1.3nm,0.6s,baz=218,slow=8.2,SNR=16						
	1.3nm,0.6s						
SONM	**Songino Array**	**47.78**	**8**	P	**P**	**19 11 42.2**	**+0.3**
	0.6nm,0.5s,baz=188,slow=9.4,SNR=6.0						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	**48.15**	**346**	P	**P**	**19 11 45.1**	**+0.5**
	0.8nm,0.6s,baz=159,slow=7.7,SNR=13						
	0.8nm,0.6s						
ZALV	**Zalesovo Beam**	**54.42**	**351**	P	**P**	**19 12 31.6**	**+0.2**
	2.2nm,0.6s,baz=176,slow=6.4,SNR=13						
	2.2nm,0.6s						
BRTR	**Keskin Array B**	**70.14**	**312**	P	**P**	**19 14 17.7**	**+0.4**
	0.4nm,0.7s,baz=93,slow=2.9,SNR=2.9						
	0.4nm,0.7s						
FINES	**FINESS Array B**	**81.00**	**332**	P	**P**	**19 15 19.1**	**+0.3**
	1.5nm,0.8s,baz=112,slow=3.7,SNR=4.9						
	1.5nm,0.8s						
TXAR	**Lajitas Array**	**143.93**	**33**	PKP	PKPbc	19 22 39.2	+0.8
	0.2nm,0.6s,baz=323,slow=0.5,SNR=2.2						

MAN 11 19:18:59.0, 13°.37N×120°.27E, h24km, mb3.9, ML2.7, MS2.2, Mindoro

*IDC **11** 19:48:19.2±2.7, 6°.54S×130°.54E, h88km±28km, mb3.4/3, mbtmp3.8/6, Error ellipse: s-maj=38.6km s-min=20.1km az=75.0*
ISC 11 19:48:18.6±0.7, 6°.48S±0°.07×130°.43E±0°.09, h90km, n17, σ2s12/19, mb3.6/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.64**	**9**	P	**Pn**	**19 49 41.2**	**+1.2**
	3.1nm,0.3s,baz=198,slow=19,SNR=26						
SIJI				S	**Sn**	**19 50 38.7**	**-4.8**
	18nm,0.2s,baz=201,slow=21,SNR=10						
MTN	**Manton Dam**	**6.36**	**174**	P	**Pn**	**19 49 50.3**	**+0.5**
KDU	**Kakadu**	**6.49**	**162**	P	**Pn**	**19 49 50.1**	**-1.5**
BATI	**Baumata**	**7.65**	**241**	P	**Pn**	**19 50 09.2**	**+1.8**
	17nm,0.9s,baz=40,slow=7.9,SNR=1.2						
BATI				S	**Sn**	**19 51 29.3**	**-3.2**
	30nm,0.9s,baz=122,slow=18,SNR=2.3						
KNRA	**Kununurra**	**9.28**	**190**	P	**Pn**	**19 50 27.9**	**-1.8**
WRAB	**Tennant Creek**	**13.90**	**164**	P	**Pn**	**19 51 33.3**	**+1.5**
WRA	**Warramunga Arr**	**13.91**	**165**	P	**Pn**	**19 51 28.3**	**-3.6**
	0.4nm,0.4s,baz=348,slow=13,SNR=1.8						
WRA				S	Sn	19 53 49.8	-15
	1.1nm,0.5s,baz=345,slow=21,SNR=7.4						
COEN	**Coen**	**14.57**	**122**	P	**Pn**	**19 51 40.4**	**-0.1**
ASAR	**Alice Springs**	**17.41**	**169**	P	**Pn**	**19 52 14.5**	**-1.5**
	0.6nm,0.5s,baz=339,slow=10,SNR=16						
ASAR				S	Sn	19 55 14.0	-16
	0.7nm,0.7s,baz=353,slow=26,SNR=4.4						
MTSU	**Mount Surprise**	**17.82**	**132**	P	**Pn**	**19 52 21.2**	**+0.2**
WRKA	**Warakurna**	**18.56**	**186**	P	**P**	**19 52 28.2**	**-0.4**
OOD	**Oodnadatta**	**21.78**	**167**	P	**P**	**19 53 03.6**	**+0.4**
MULG	**Mulgathing**	**23.92**	**172**	P	**P**	**19 53 24.9**	**+0.6**
LCRK	**Leigh Creek**	**24.94**	**164**	P	**P**	**19 53 36.1**	**+2.5**
STKA	**Stephens Creek**	**27.34**	**159**	P	**P**	**19 53 55.3**	**+0.1**
	0.7nm,0.3s,baz=319,slow=12,SNR=5.1						
	0.7nm,0.3s						
CMAR	**Chiang Mai Arr**	**39.73**	**309**	P	**P**	**19 55 44.2**	**+1.6**
	0.3nm,0.6s,baz=135,slow=7.4,SNR=4.0						
	0.3nm,0.6s						
MKAR	**Makanchi Array**	**68.03**	**327**	P	**P**	**19 59 09.9**	**+1.5**
	0.3nm,0.4s,baz=118,slow=8.2,SNR=10						
	0.3nm,0.4s						

IDC 11 19:53:44.2±3.6, 28°.53S×178°.15W, h0km, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=85.8km s-min=19.2km az=55.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.75**	**164**	Pn	Pn	19 54 03.4	+1.3
	200nm,0.3s,baz=22,slow=19,SNR=2.5						
RAO				Sn	Sn	19 54 13.2	-0.9
	972nm,0.3s,baz=287,slow=19,SNR=16						
ASAR	**Alice Springs**	**43.11**	**265**	P	P	20 01 46.0	-0.5
	0.3nm,0.5s,baz=105,slow=7.3,SNR=7.4						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**43.93**	**270**	P	P	20 01 53.4	+0.2
	1.9nm,0.3s,baz=109,slow=7.5,SNR=3.5						
	1.9nm,0.3s						
VNDA	**Vanda**	**49.94**	**186**	P	P	20 02 39.1	-0.2
	0.3nm,0.3s,baz=45,slow=8.6,SNR=5.7						
	0.3nm,0.3s						
H03S2	**Juan Fernandez**	**81.61**	**124**	T	T	21 35 25.8	
	baz=238						
H03S1	**Juan Fernandez**	**81.62**	**124**	T	T	21 35 22.7	
	baz=238						
H03S3	**Juan Fernandez**	**81.62**	**124**	T	T	21 35 23.6	
	baz=238						
H10N3	**ASCENSION HYDR**	**140.55**	**154**	T	T	22 49 36.3	
	baz=205,slow=80						
H10N1	**ASCENSION HYDR**	**140.55**	**154**	T	T	22 49 37.1	
	baz=205,slow=80						
H10N2	**ASCENSION HYDR**	**140.56**	**154**	T	T	22 49 37.1	
	baz=205,slow=80						
FINES	**FINESS Array B**	**143.34**	**341**	PKP	PKPbc	20 13 18.3	+1.3
	1.0nm,0.5s,baz=58,slow=3.4,SNR=9.8						

*NEIC **11** 20:32:50.8±1.1, 36°.17N±0°.03×120°.85W±0°.05, h12km±5km, Error ellipse: s-maj=7.9km s-min=0.5km az=54.0*
*NCEDC **11** 20:32:50.6±1.5, 36°.21N±0°.03×120°.78W±0°.05, h9km±5km, ML3.0/27, ML2.9/62(NEIC), Error ellipse: s-maj=6.3km s-min=2.2km az=59.0*
*ANF **11** 20:32:50.8±0.8, 36°.22N×120°.70W, h9km±3km, ML3.0/12, ML3.1/12, Error ellipse: s-maj=6.3km s-min=4.2km az=108.0*
ISC 11 20:32:50.4±0.9, 36°.19N±0°.03×120°.83W±0°.03, h11km±6km, n74, σ0s75/82, Central California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMPB	**Monarch Peak**	**0.04**	**38**		**Pg**	**20 32 52.5**	**0.0**
PMPB				Sg	**Sg**	**20 32 54.0**	**-0.1**
PKD	**Bear Valley Ra**	**0.34**	**136**		**Pg**	**20 32 57.4**	**+0.3**
PDRM	**Domengine Ranc**	**0.40**	**68**		**Pg**	**20 32 59.0**	**+0.7**
BBGB	**Big Mountain B**	**0.43**	**337**		**Pg**	**20 32 59.9**	**+1.0**
BBGB				Sg	**Sb**	**20 33 06.5**	**-0.1**
PAPM	**Alder Peak**	**0.51**	**238**		**Pb**	**20 33 01.6**	**+0.1**
BSMM	**Soledad Missio**	**0.52**	**292**		**Pg**	**20 33 01.2**	**+0.6**
RAMR	**Ramage Ranch**	**0.55**	**183**		**Pb**	**20 33 02.0**	**-0.1**
BJCM	**Johnson Can.**	**0.58**	**309**		**Pg**	**20 33 01.9**	**+0.2**
BLRM	**Lewis Ranch**	**0.60**	**323**		**Pg**	**20 33 02.6**	**+0.6**
TCHL	**Shandon**	**0.61**	**145**		**Pg**	**20 33 02.9**	**+0.7**
HAST	**Hastings Reser**	**0.62**	**289**		**Pg**	**20 33 02.7**	**+0.3**
SCZ	**Santa Cruz**	**0.62**	**312**		**Pg**	**20 33 02.5**	**+0.1**
PAGB	**Antelope Grade**	**0.65**	**134**		**Pg**	**20 33 03.3**	**+0.2**
PAGB				IAML		20 33 16.8	
	comp=E,818nm,0.7s						
PAGB				IAML		20 33 17.4	
	comp=N,637nm,0.5s						
THIS	**South End of C**	**0.67**	**133**		**Pg**	**20 33 04.0**	**+0.5**
TRAM	**Private Proper**	**0.68**	**138**		**Pg**	**20 33 03.9**	**+0.3**
TSCN	**Private Proper**	**0.75**	**148**		**Pg**	**20 33 05.5**	**+0.6**
SAO	**San Andreas Ge**	**0.76**	**319**		**Pg**	**20 33 05.3**	**+0.1**
SAO	**San Andreas Ge**	**0.76**	**319**	Pg	**Pg**	**20 33 05.2**	**0.0**
HSFM	**Saint Francis**	**0.82**	**319**		**Pg**	**20 33 06.8**	**+0.4**
PACP	**Pacheco Peak**	**0.90**	**336**		**Pb**	**20 33 08.5**	**+0.4**
HFEM	**San Felipe**	**0.92**	**330**		**Pb**	**20 33 08.9**	**+0.5**
HCOM	**Corn Cob Canyo**	**0.99**	**315**		**Pg**	**20 33 09.4**	**-0.2**
GHS	**Gilroy Hot Spr**	**1.03**	**332**		**Pb**	**20 33 10.5**	**+0.1**
SMMC	**Simmler**	**1.10**	**142**	P	**Pb**	**20 33 11.5**	**-0.1**
	baz=325,SNR=15						
SMMC				S	**Sg**	**20 33 26.5**	**+0.5**
	baz=325						
VOG	**Valley Oaks Go**	**1.18**	**83**	P	**Pn**	**20 33 11.3**	**-1.6**
	baz=265,SNR=8.1						
VOG				S	**Sb**	**20 33 26.8**	**-1.3**
	baz=265						
MOBB	**Monterey Bay O**	**1.19**	**295**		**Pn**	**20 33 13.0**	**+0.1**
CMPM	**Mikes Peak**	**1.23**	**342**		**Pn**	**20 33 13.8**	**0.0**
PMLM	**Mount Lospe**	**1.30**	**172**		**Pn**	**20 33 14.5**	**-0.1**
MHC	**Mount Hamilton**	**1.32**	**331**		**Pn**	**20 33 14.5**	**-0.5**
COSM	**Mount Oso**	**1.39**	**342**		**Pn**	**20 33 16.3**	**+0.4**
VES	**Vestal, Richgr**	**1.46**	**103**	P	**Pn**	**20 33 15.7**	**-1.0**
	baz=286,SNR=16						
VES				S	**Sn**	**20 33 34.3**	**-1.6**
	baz=286						
PKM	**Mcpherson Peak**	**1.54**	**147**	P	**Pn**	**20 33 17.5**	**-0.5**
	baz=330,SNR=11						
PKM				S	**Sb**	**20 33 39.4**	**+0.8**
	baz=330						
KCC	**Kaiser Creek**	**1.66**	**46**		**Pn**	**20 33 19.5**	**-0.1**
BCW	**Bitter Crk WRg**	**1.70**	**137**		**Pn**	**20 33 20.7**	**+0.5**
CMB	**Columbia Colle**	**1.88**	**11**	Pn	**Pn**	**20 33 21.9**	**-0.7**
ARVC	**Arvin**	**1.94**	**122**	P	**Pn**	**20 33 23.1**	**-0.3**
	baz=305						
ARVC				S	**Sn**	**20 33 47.9**	**+0.1**
	baz=305						
ISA	**Isabella, Lake**	**1.98**	**105**	Pn	**Pn**	**20 33 23.9**	**-0.2**
ISA				IAML		20 33 51.2	
	comp=N,111nm,0.4s						
ISA				IAML		20 33 53.9	
	comp=E,102nm,0.5s						
ISA	**Isabella, Lake**	**1.98**	**105**	P	**Pn**	**20 33 23.9**	**-0.2**
	baz=287,SNR=72						
ISA				S	**Sn**	**20 33 48.6**	**-0.3**
	baz=287						
MRDM	**Red Cones**	**2.00**	**45**		**Pn**	**20 33 25.4**	**+0.9**
MDPB	**Devils Postpil**	**2.01**	**44**		**Pn**	**20 33 25.3**	**+0.7**
MDPB				IAML		20 33 54.7	
	comp=N,147nm,0.4s						
BKS	**Berkeley--Byer**	**2.03**	**327**		**Pn**	**20 33 24.4**	**-0.2**
OMMB	**Old Mammoth Mi**	**2.04**	**45**	Pn	**Pn**	**20 33 26.0**	**+0.9**
OMMB				IAML		20 33 55.2	
	comp=E,121nm,0.7s						
OMMB				IAML		20 33 57.0	
	comp=N,146nm,0.6s						
MDCM	**Deadman Creek**	**2.09**	**43**		**Pn**	**20 33 26.6**	**+0.9**
MLAC	**Mammoth, Mammo**	**2.15**	**47**	Pb	**Pn**	**20 33 28.4**	**+1.9**
	baz=228,SNR=15						
MDRNC	**Doe Ridge**	**2.16**	**47**		**Pn**	**20 33 28.6**	**+2.0**
MTUM	**Tungsten Hills**	**2.16**	**57**		**Pn**	**20 33 27.5**	**+0.9**
CWC	**Cottonwood Cre**	**2.23**	**83**	Pb	**Pn**	**20 33 28.9**	**+1.2**
	baz=265						
OSI	**Osito Audit: C**	**2.33**	**132**	Pb	**Pn**	**20 33 30.9**	**+2.1**
	baz=314,SNR=7.8						
CCAC	**Calif City Air**	**2.51**	**113**		**Pn**	**20 33 32.0**	**+0.7**
CCAC				IAML		20 34 16.1	
	comp=E,83nm,1.0s						
LRMC	**Laurel Mtn Rad**	**2.65**	**104**	P	**Pn**	**20 33 33.4**	**+0.1**
	baz=287,SNR=15						
EDW2	**Edwards Air Fo**	**2.65**	**119**	P	**Pn**	**20 33 33.6**	**+0.3**
	baz=301,SNR=9.6						
MPMC	**Manual Prospec**	**2.71**	**92**	P	**Pn**	**20 33 34.6**	**+0.4**
	baz=274,SNR=24						
LCH	**Last Change Ra**	**2.76**	**67**		**Pn**	**20 33 35.4**	**+0.5**
LCH				IAML		20 34 19.5	
	comp=E,41nm,0.3s						
EMB	**Emerald Bay**	**2.84**	**12**		**Pn**	**20 33 36.3**	**+0.2**
EMB				IAML		20 34 20.3	
	comp=N,65nm,0.4s						
EMB				IAML		20 34 22.2	
	comp=E,55nm,0.6s						
NVAR	**Mina Array Bea**	**3.01**	**41**		**Pn**	**20 33 38.0**	**-0.3**
RYN	**Ryan**	**3.05**	**36**		**Pn**	**20 33 38.6**	**-0.2**
RYN				IAML		20 34 29.7	
	comp=E,43nm,0.6s						
RYN				IAML		20 34 30.2	
	comp=N,42nm,0.7s						
PNTR	**Pine Nut**	**3.06**	**18**		**Pn**	**20 33 40.1**	**+1.1**
PNTR				IAML		20 34 31.7	
	comp=E,49nm,1.0s						
YERR	**Yerington**	**3.07**	**24**		**Pn**	**20 33 40.4**	**+1.4**
YERR				IAML		20 34 29.8	
	comp=N,55nm,1.0s						
MPK	**Martis Peak**	**3.17**	**11**	Pn	**Pn**	**20 33 41.4**	**+0.8**
QSM	**Queen of Sheba**	**3.22**	**93**		**Pn**	**20 33 41.0**	**+0.1**
QSM				IAML		20 34 39.6	
	comp=E,20nm,0.8s						
QSM				IAML		20 34 41.1	
	comp=N,25nm,1.1s						
GWY	**Greenwater Val**	**3.37**	**89**	Pn	**Pn**	**20 33 43.0**	**-0.2**
GWY				IAML		20 34 47.8	
	comp=E,26nm,0.9s						
GWY				IAML		20 34 56.5	
	comp=N,18nm,0.8s						
GSC	**Goldstone, Bar**	**3.39**	**104**		**Pn**	**20 33 42.9**	**-0.5**
GSC				IAML		20 34 27.7	
	comp=E,30nm,0.8s						
GSC				IAML		20 34 47.6	
	comp=N,25nm,1.1s						
ORV	**Oroville**	**3.41**	**351**		**Pn**	**20 33 43.7**

BSO4				⇓eX			20 48 28.0	
CHOJ	**Chosi**	**0.46**	**44**	P	**Pn**	**20 48 18.5**	**-0.7**
CHOJ				S	**Sn**	**20 48 26.8**	**-0.5**
BSO3	**Boso 3**	**0.57**	**176**	⇓*i*P	**Pn**	**20 48 20.4**	**+0.3**
BSO3				⇓X		20 48 30.5	
BSO1	**Boso 1**	**0.83**	**149**	P	**Pn**	**20 48 23.2**	**+0.1**
JYT	**Yasato**	**0.88**	**346**	Pn	**Pn**	**20 48 22.7**	**-1.7**
JYT				Sn	**Sn**	**20 48 33.9**	**-2.5**
JIM2	**Oshima 3**	**1.07**	**233**	⇓*i*P	**Pn**	**20 48 25.9**	**-1.0**
JIM2				⇓*e*S	**Sn**	**20 48 39.3**	**-1.5**
JOD2	**Odawara 2**	**1.13**	**265**	⇓*i*P	**Pn**	**20 48 27.0**	**-0.7**
JOD2				⇓S	**Sn**	**20 48 41.0**	**-1.2**
JAG	**Ashikaga**	**1.33**	**322**	⇓*i*P	**Pn**	**20 48 29.5**	**-0.9**
JRY	**Ryogami san**	**1.43**	**297**	⇓*i*P	**Pn**	**20 48 31.1**	**-0.6**
JIZS	**Izushimoda**	**1.46**	**244**	⇓*i*P	**Pn**	**20 48 31.4**	**-0.6**
JIZS				⇓*e*S	**Sn**	**20 48 49.0**	**-1.0**
JFNN	**Fujinakano**	**1.47**	**264**	P	**Pn**	**20 48 31.8**	**-0.4**
JFNN				*e*S	**Sn**	**20 48 49.6**	**-0.7**
MJAR	**Matsushiro Arr**	**2.17**	**303**	Pn	**Pn**	**20 48 40.2**	**-1.6**
	9.0nm,0.4s,baz=142,slow=14,SNR=60						
MJAR				Sn	**Sn**	**20 49 06.5**	**-1.1**
	1.8nm,0.3s,baz=288,slow=31,SNR=4.5						
MJAR				LR	LR	20 49 46.7	
	comp=Z,59nm,21.5s,baz=83,slow=48						
MJAR	**Matsushiro Arr**	**2.17**	**303**		**Pn**	**20 48 39.6**	**-2.2**
MAJO	**Matsushiro**	**2.17**	**303**		**Pn**	**20 48 41.4**	**-0.5**
MJB9	**Matsu-Tunnel**	**2.18**	**303**		**Pn**	**20 48 41.6**	**-0.3**
JHJ	**Hachijo Tima 2**	**2.31**	**194**	Pn	**Pn**	**20 48 43.5**	**-0.3**
	103nm,0.3s,baz=325,slow=19,SNR=46						
JHJ				Sn	**Sn**	**20 49 09.2**	**-1.8**
	86nm,0.3s,baz=308,slow=22,SNR=17						
	278nm,0.3s						
JHJ2	**Mitsune**	**2.32**	**194**	Pn	**Pn**	**20 48 43.1**	**-0.7**
JMM	**Marumori**	**2.50**	**6**		**Pn**	**20 48 45.5**	**-0.9**
JGF	**Kuroka**	**2.55**	**276**		**Pn**	**20 48 47.9**	**+0.9**
INU	**Inuyama**	**2.82**	**271**		**Pn**	**20 48 50.7**	**0.0**
JSD	**Sado**	**3.20**	**327**		**Pn**	**20 48 55.3**	**-0.5**
JTM	**Tenmabayashi**	**5.43**	**5**	Pn	**Pn**	**20 49 25.6**	**-0.7**
JHS	**Saijyo**	**6.03**	**269**	Pn	**Pn**	**20 49 35.8**	**+1.2**
ERM	**Erimo**	**6.96**	**17**	Pn	**Pn**	**20 49 45.6**	**-1.7**
JCJ	**Chichijima**	**8.38**	**169**	Pn	**Pn**	**20 50 04.6**	**-2.2**
	9.0nm,0.3s,baz=89,slow=23,SNR=7.1						
JCJ				Sn	**Sn**	**20 51 34.2**	**-5.8**
	5.6nm,0.3s,baz=253,slow=19,SNR=1.7						
	18nm,0.3s						
KSRS	**Korea Array**	**10.32**	**285**	LR	LR	20 54 27.5	
	comp=Z,38nm,20.1s,baz=115,slow=37						
KSAR	**Wonju Array Be**	**10.35**	**285**	Pn	**Pn**	**20 50 35.1**	**+1.4**
H11N2	**WAKE ISLAND Hy**	**28.02**	**117**	T	T	21 23 08.0	
	baz=309,slow=75,SNR=36						
H11N1	**WAKE ISLAND Hy**	**28.03**	**117**	T	T	21 23 08.2	
	baz=309,slow=75,SNR=53						
H11N3	**WAKE ISLAND Hy**	**28.04**	**117**	T	T	21 23 15.4	
	baz=309,slow=75,SNR=40						
H11S3	**WAKE ISLAND Hy**	**28.66**	**119**	T	T	21 24 04.5	
	baz=311,slow=76,SNR=25						
H11S1	**WAKE ISLAND Hy**	**28.66**	**119**	T	T	21 24 01.7	
	baz=311,slow=76,SNR=32						
H11S2	**WAKE ISLAND Hy**	**28.68**	**119**	T	T	21 24 06.2	
	baz=311,slow=76,SNR=26						
MK31	**Makanchi Array**	**44.37**	**303**	P	**P**	**20 56 12.6**	**-0.3**
MK31				IAmb	IAmb	20 56 22.3	
	comp=Z,1.0nm,1.1s						
MKAR	**Makanchi Array**	**44.37**	**303**	P	**P**	**20 56 13.7**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=81,slow=10.0,SNR=4.6						
	comp=Z,0.4nm,0.7s						
MKAR	**Makanchi Array**	**44.37**	**303**	P	**P**	**20 56 12.5**	**-0.5**
KURK	**Kurchatov**	**46.37**	**309**	P	**P**	**20 56 27.8**	**-0.8**
KURK				IAmb	IAmb	20 56 44.5	
	comp=Z,1.7nm,0.7s						
KURBB	**Kurchatov Arra**	**46.44**	**309**	P	**P**	**20 56 28.4**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=79,slow=6.9,SNR=8.3						
	comp=Z,0.5nm,0.6s						
K20K	**Telida**	**48.13**	**33**	P	**P**	**20 56 42.6**	**+0.4**
K20K				IAmb	IAmb	20 56 53.0	
	comp=Z,3.7nm,1.4s						
SEW	**Seward**	**50.34**	**38**	P	**P**	**20 57 00.9**	**+1.9**
ILAR	**Eielson Array**	**51.31**	**32**	P	**P**	**20 57 06.7**	**+0.4**
	comp=Z,0.7nm,0.8s,baz=259,slow=5.9,SNR=5.9						
	comp=Z,0.7nm,0.8s						
WR0	**Warramunga Arr**	**55.31**	**187**	P	**P**	**20 57 37.1**	**+1.0**
WR0				IAmb	IAmb	20 57 49.5	
	comp=Z,7.6nm,1.2s						
WRA	**Warramunga Arr**	**55.31**	**187**	P	**P**	**20 57 36.8**	**+0.7**
	comp=Z,0.7nm,0.6s,baz=1.2,slow=7.5,SNR=2.8						
	comp=Z,0.7nm,0.6s						
WRA	**Warramunga Arr**	**55.31**	**187**	P	**P**	**20 57 36.8**	**+0.7**
ASAR	**Alice Springs**	**59.04**	**187**	P	**P**	**20 58 04.3**	**+1.9**
	comp=Z,0.5nm,0.8s,baz=16,slow=6.5,SNR=2.4						
	comp=Z,0.5nm,0.8s						

***IDC 11** 20:48:55.1±4.4, **6.13S**×**132.09E**, **h0**km, **mb3.5**/2, **mbtmp3.4/4, ML3.5/2, Error ellipse: s-maj=316.5km s-min=30.0km az=74.0, Tanimbar Islands region*

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.90**	**171**	Pn	Pn	20 52 13.0	-0.6
	0.2nm,0.3s,baz=351,slow=13,SNR=13						
WRA				Sn	Sn	20 54 36.8	-12
	0.6nm,0.3s,baz=338,slow=20,SNR=8.9						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**17.52**	**174**	P	Pn	20 53 01.4	+0.4
ASAR	0.2nm,0.3s,baz=348,slow=11,SNR=15			S	Sn	20 56 04.5	-12
	0.4nm,0.5s,baz=1.5,slow=24,SNR=6.1						
	0.8nm,0.6s						
MKAR	**Makanchi Array**	**68.66**	**326**	P	P	21 00 00.6	+0.2
	0.4nm,0.5s,baz=117,slow=8.4,SNR=7.0						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**72.87**	**328**	P	P	21 00 25.7	-0.2
	0.1nm,0.5s,baz=131,slow=4.2,SNR=2.2						
	0.1nm,0.5s						

*IDC **11** 21:07:46.4±3.7, 26.64S×67.19W, h0km, mb3.7/2, mbtmp3.8/2, Error ellipse: s-maj=376.4km s-min=74.3km az=159.0*
*GUC **11** 21:08:19.9±0.6, 23.97S×66.85W, h215km±5km, ML3.9*
*NEIC **11** 21:08:19.6±2.2, 24.00S±0.08×66.77W±0.2, h196km±6km, mb4.0/4, Md3.5(SJA), Error ellipse: s-maj=21.6km s-min=11.3km az=90.0*
ISC 11 21:08:19.4±0.8, 23.92S±0.05×66.83W±0.05, h200km, n51, σ1 37/66, mb4.0/3, 7C-1D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLA	**San Lorenzo**	**1.44**	**124**	*i*P	**Pn**	**21 08 54.4**	**+1.6**
SLA				⇓*i*S	**Sn**	**21 09 20.1**	**+1.3**
LVC	**Limon Verde**	**2.32**	**304**	P	**Pn**	**21 09 04.0**	**+2.3**
LVC	**Limon Verde**	**2.32**	**304**	⇑*i*P	**Pn**	**21 09 03.6**	**+1.9**
LVC				*i*S	**Sn**	**21 09 36.3**	**+1.7**
PB15	**IPOC Station P**	**2.53**	**286**		**Pn**	**21 09 06.1**	**+2.2**
PB06	**IPOC Station P**	**2.80**	**295**		**Pn**	**21 09 08.7**	**+1.8**
PB06	**IPOC Station P**	**2.80**	**295**	⇑*i*P	**Pn**	**21 09 08.8**	**+1.9**
PB06				*i*S	**Sn**	**21 09 45.0**	**+1.1**
PB06				IAML		21 09 46.3	
	comp=N,342nm,0.2s						
GO02	**Mina Guanaco**	**2.80**	**243**	Pn	**Pn**	**21 09 08.6**	**+1.6**
GO02	**Mina Guanaco**	**2.80**	**243**	⇑*i*P	**Pn**	**21 09 08.6**	**+1.6**
GO02				*i*S	**Sn**	**21 09 45.5**	**+1.2**
GO02				IAML		21 09 46.1	
	comp=N,446nm,0.3s						
PB09	**IPOC Station P**	**3.07**	**313**		**Pn**	**21 09 12.5**	**+2.4**
PB09	**IPOC Station P**	**3.07**	**313**	*i*P	**Pn**	**21 09 12.2**	**+2.1**
PB09				*i*S	**Sn**	**21 09 51.6**	**+1.9**
PB09				IAML		21 09 57.9	
	comp=E,68nm,0.5s						
PB14	**IPOC Station P**	**3.34**	**257**		**Pn**	**21 09 14.5**	**+1.1**
PB14	**IPOC Station P**	**3.34**	**257**	*i*P	**Pn**	**21 09 14.4**	**+1.1**
PB14				*i*S	**Sn**	**21 09 54.9**	**-0.7**
PB14				IAML		21 09 57.8	
	comp=E,63nm,0.4s						
PB10	**IPOC Station P**	**3.44**	**276**		**Pn**	**21 09 15.8**	**+1.5**
PB10	**IPOC Station P**	**3.44**	**276**	⇑*i*P	**Pn**	**21 09 15.6**	**+1.3**
PB10				*i*S	**Sn**	**21 09 58.0**	**+0.7**
PB10				IAML		21 10 00.1	
	comp=E,60nm,0.3s						
PB04	**IPOC Station P**	**3.44**	**297**		**Pn**	**21 09 16.0**	**+1.5**
PB04	**IPOC Station P**	**3.44**	**297**	⇑*i*P	**Pn**	**21 09 15.8**	**+1.3**
PB04				*i*S	**Sn**	**21 09 57.7**	**0.0**
AC02	**Maricunga**	**3.57**	**215**	Pn	**Pn**	**21 09 17.5**	**+1.1**
AC02	**Maricunga**	**3.57**	**215**	*i*P	**Pn**	**21 09 17.7**	**+1.3**
PB07	**IPOC Station P**	**3.57**	**307**		**Pn**	**21 09 17.4**	**+1.2**
PB07	**IPOC Station P**	**3.57**	**307**	⇑*i*P	**Pn**	**21 09 17.3**	**+1.2**
PB07				*i*S	**Sn**	**21 09 59.9**	**-0.6**
PB01	**IPOC Station P**	**3.78**	**319**		**Pn**	**21 09 19.7**	**+1.1**
PB01	**IPOC Station P**	**3.78**	**319**	⇑*i*P	**Pn**	**21 09 19.7**	**+1.1**
PB01				*i*S	**Sn**	**21 10 04.4**	**-0.6**
PB02	**IPOC Station P**	**3.84**	**312**	Pn	**Pn**	**21 09 20.3**	**+0.9**
PB02	**IPOC Station P**	**3.84**	**312**	*e*P	**Pn**	**21 09 20.4**	**+0.9**
PB02				*i*S	**Sn**	**21 10 05.6**	**-0.8**
AC01	**Pan de Azucar**	**4.08**	**236**	Pn	**Pn**	**21 09 21.7**	**-0.4**
PB08	**IPOC Station P**	**4.34**	**330**		**Pn**	**21 09 27.0**	**+1.2**
PB08	**IPOC Station P**	**4.34**	**330**	*i*P	**Pn**	**21 09 27.6**	**+1.7**
PB08				*i*S	**Sn**	**21 10 18.6**	**+0.5**
PATCX	**Punta Patache**	**4.36**	**314**		**Pn**	**21 09 26.3**	**+0.5**
PATCX	**Punta Patache**	**4.36**	**314**	*e*P	**Pn**	**21 09 25.5**	**-0.3**
PATCX				*i*S	**Sn**	**21 10 16.6**	**-1.4**
TA01	**Diego Aracena**	**4.56**	**316**		**Pn**	**21 09 29.0**	**+0.7**
TA01	**Diego Aracena**	**4.56**	**316**	*e*P	**Pn**	**21 09 28.8**	**+0.5**
TA01				*i*S	**Sn**	**21 10 20.4**	**-2.1**
AC06	**Mina Casimiro**	**4.67**	**222**	Pn	**Pn**	**21 09 28.9**	**-0.8**
TA02	**Huaiquique**	**4.75**	**319**	Pn	**Pn**	**21 09 33.1**	**+2.4**
GO01	**Chusmiza**	**4.77**	**332**		**Pn**	**21 09 32.1**	**+0.7**
GO03	**Copiap**	**4.78**	**219**	Pn	**Pn**	**21 09 29.1**	**-1.8**
PB11	**IPOC Station P**	**4.91**	**327**		**Pn**	**21 09 32.8**	**-0.1**
PB11	**IPOC Station P**	**4.91**	**327**	*e*P	**Pn**	**21 09 32.9**	**+0.1**
PB11				*e*S	**Sn**	**21 10 28.6**	**-2.1**
PB16	**IPOC Station P**	**6.10**	**335**		**Pn**	**21 09 48.6**	**+0.1**
PB12	**IPOC Station P**	**6.21**	**328**	Pn	**Pn**	**21 09 49.5**	**0.0**
CO01	**Juntas del Tor**	**6.70**	**205**	Pn	**Pn**	**21 09 54.9**	**-1.0**
GO04	**Tololo Observa**	**7.16**	**209**	Pn	**Pn**	**21 09 58.9**	**-3.0**
CO03	**El Pedregal**	**7.70**	**206**	Pn	**Pn**	**21 10 07.1**	**-1.6**
BO04	**La Punta**	**10.56**	**197**	Pn	**Pn**	**21 10 46.0**	**+0.1**
BDFB	**Brasilia**	**19.51**	**68**	P	**P**	**21 12 31.1**	**-0.7**
	comp=E,2.6nm,0.5s,baz=234,slow=14,SNR=5.0						
	comp=E,2.6nm,0.5s						
BDFB	**Brasilia**	**19.51**	**68**	P	**P**	**21 12 31.1**	**-0.7**
QSPA	**South Pole Qui**	**66.28**	**180**	P	**P**	**21 18 46.6**	**+0.6**
QSPA				IAmb	IAmb	21 19 00.6	
	comp=Z,4.3nm,1.4s						
TOA0	**Torodi Ar. Sit**	**76.39**	**69**	P	**P**	**21 19 47.0**	**-0.1**
TOA0				IAmb	IAmb	21 20 14.2	
	comp=Z,4.7nm,1.4s						
TORD	**Torodi Ar. Bea**	**76.39**	**69**	P	**P**	**21 19 45.5**	**-1.7**
	comp=Z,0.3nm,0.6s,baz=239,slow=4.2,SNR=4.4						
	comp=Z,0.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**76.39**	**69**	P	**P**	**21 19 45.7**	**-1.5**
MKAR	**Makanchi Array**	**146.37**	**40**	PKPbc	**PKPdf**	**21 27 34.8**	**-0.2**
	comp=Z,0.3nm,0.8s,baz=305,slow=3.0,SNR=3.6						
MKAR	**Makanchi Array**	**146.37**	**40**		**PKPdf**	**21 27 36.0**	**+1.0**

*IDC **11** 21:17:44.3±1.8, 29.79N×80.87E, h0km, mb3.5/5, mbtmp3.4/7, ML3.6/2, Error ellipse: s-maj=71.6km s-min=21.5km az=61.0*
ISC 11 21:17:46.5±0.9, 30.00N±0.08×80.93E±0.09, h10km, n12, σ1 51/14, mb3.6/4, Western Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LGTI	**Lohaghat**	**0.81**	**227**	*e*PG	**Pn**	**21 18 04.9**	**+1.0**
LGTI				*e*SG	**Sb**	**21 18 15.2**	**+1.6**
NDI	**New Delhi**	**3.50**	**249**	*e*P	**Pn**	**21 18 42.0**	**+1.1**
NDI				*e*S	**Sn**	**21 19 19.5**	**-2.9**
CHCP	**Chirah Chowk**	**7.47**	**301**	P	**Pn**	**21 19 36.3**	**+0.8**
THW	**Thamme Wali**	**8.33**	**292**	P	**Pn**	**21 19 45.9**	**-1.4**
CEP	**Cherat**	**8.56**	**299**	P	**Pn**	**21 19 51.0**	**+0.4**
MKAR	**Makanchi Array**	**16.80**	**3**	P	**P**	**21 21 44.5**	**+0.6**
	0.2nm,0.8s,baz=190,slow=11,SNR=11						
	0.5nm,0.5s						
CMAR	**Chiang Mai Arr**	**20.02**	**121**	P	**P**	**21 22 19.9**	**+0.3**
	0.1nm,0.3s,baz=320,slow=12,SNR=1.9						
	0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**20.67**	**356**	P	**P**	**21 22 27.7**	**+1.3**
	0.8nm,0.9s,baz=183,slow=11,SNR=11						
	0.8nm,0.9s						
ZALV	**Zelesovo Beam**	**24.09**	**6**	P	**P**	**21 23 02.5**	**+0.5**
	0.5nm,0.3s,baz=198,slow=9.7,SNR=3.0						
	0.5nm,0.3s						
FINES	**FINESS Array B**	**47.44**	**328**	P	**P**	**21 26 22.1**	**+1.1**
	1.3nm,0.6s,baz=108,slow=9.2,SNR=7.3						
	1.3nm,0.6s						
WRA	**Warramunga Arr**	**71.48**	**127**	P	**P**	**21 29 06.2**	**-1.4**
	0.4nm,0.8s,baz=322,slow=6.2,SNR=1.9						
	0.4nm,0.8s						
ASAR	**Alice Springs**	**73.72**	**130**	P	**P**	**21 29 18.9**	**-2.0**
	0.4nm,0.9s,baz=322,slow=5.9,SNR=2.0						
	0.4nm,0.9s						

MAN 11 21:18:12.7, 16.46N×120.97E, h3km, mb3.9, ML2.7, MS2.2, 3C-3D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPP	**San Manuel, Pa**	**0.41**	**222**	⇓*e*P	Pb	21 18 21.6	+0.8
SAMP	**Sagada Mountai**	**0.62**	**354**	⇑*e*P	Pg	21 18 24.4	+0.5
SAMP				*e*S		21 18 27.9	
BALP	**Baler**	**0.92**	**141**	⇓*e*P	Pb	21 18 29.9	+0.3
BALP				*e*S		21 18 48.5	
CAUP	**Cauayan**	**0.95**	**59**	⇓*e*P	Pn	21 18 31.8	+0.4
CAUP				*e*S		21 19 01.0	
BOLP	**Bolinao**	**1.02**	**266**	⇑*e*P	Pb	21 18 32.8	+0.1
BOLP				*e*S		21 18 46.7	
PALP	**Palanan**	**1.52**	**67**	⇑*e*P	Pg	21 18 40.7	+0.3
PALP				*e*S		21 18 53.2	

NEIC 11 21:34:06.9±0.8, 36.217N±0.010×97.28W±0.01, h4km±5km, mb_Lg2.0/19, Error ellipse: s-maj=1.7km s-min=1.0km az=153.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T35A	**Sooner Cattle**	**0.93**	**41**	Pg	Pg	21 34 23.8	-1.0
T35A				Sg	Sg	21 34 36.1	-0.9
FNO	**Franklin**	**0.96**	**186**	Pg	Pg	21 34 25.2	-0.2
TUL1	**Leonard**	**1.25**	**104**	Pg	Pg	21 34 29.8	-1.1
X34A	**Smith Ranch, M**	**1.67**	**196**	IAmb_Lg		21 34 59.2	
	comp=Z,4.7nm,0.9s						
WMOK	**Wichita Mounta**	**1.92**	**220**	Pn	Pn	21 34 40.4	+0.1
WMOK				IAmb_Lg		21 35 07.2	
	comp=Z,11nm,0.7s						
X37A	**Clayton**	**2.25**	**136**	Pn	Pn	21 34 45.0	0.0
X37A				IAmb_Lg		21 35 18.1	
	comp=Z,4.3nm,0.7s						
U38A	**Gravette**	**2.35**	**84**	Pn	Pn	21 34 46.6	+0.3
U38A				IAmb_Lg		21 35 24.6	
	comp=Z,6.1nm,0.8s						
R32A	**Long Quarter,**	**2.48**	**333**	IAmb_Lg		21 35 23.4	
	comp=Z,7.0nm,0.8s						
W39A	**Magazine**	**3.02**	**109**	IAmb_Lg		21 35 47.6	
	comp=Z,8.2nm,0.9s						
MIAR	**Mount Ida**	**3.46**	**118**	IAmb_Lg		21 35 57.9	
	comp=Z,3.0nm,0.8s						
S39A	**Bolivar**	**3.50**	**64**	IAmb_Lg		21 35 57.5	
	comp=Z,6.0nm,0.8s						
U40A	**Yellville**	**3.58**	**86**	IAmb_Lg		21 36 08.6	
	comp=Z,5.1nm,0.7s						
X40A	**Basin Creek Fa**	**4.03**	**114**	IAmb_Lg		21 36 22.3	
	comp=Z,3.7nm,0.8s						
W41B	**Gary Mavity, V**	**4.23**	**103**	IAmb_Lg		21 36 23.6	
	comp=Z,4.6nm,0.8s						

*INET **11** 21:42:31.5±0.8, 12.81N×87.09W, h2km±4km, MW4.4*
*IDC **11** 21:42:32.5±1.4, 12.74N×87.07W, h0km, mb3.9/8, mbtmp4.0/12, ML3.2/4, MS3.7/32, Error ellipse: s-maj=39.7km s-min=17.6km az=45.0*
*UCR **11** 21:42:32.1±2.0, 12.82N×87.09W, h8km±14km, ML4.6, mb4.3(NEIC)*
*NEIC **11** 21:42:33.0±1.4, 12.79N±0.06×86.97W±0.06, h10km±1km, mb4.3/33, Md4.7(SNET), Error ellipse: s-maj=12.5km s-min=6.5km az=218.0*
*SNET **11** 21:42:33.2±1.4, 12.86N×87.13W, h10km, ML4.6*
ISC 11 21:42:32.7±0.5, 12.82N±0.03×87.04W±0.03, h10km, n163, σ1 29/153, mb4.2/20, MS3.8/30, 6D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**0.12**	**186**	Pg	**Pg**	**21 42 35.7**	**0.0**
CNGN	**Cerro Negro**	**0.46**	**134**	Pg	**Pb**	**21 42 41.7**	**-1.2**
CNGN	**Cerro Negro**	**0.46**	**134**	*e*P	**Pb**	**21 42 41.7**	**-1.2**
CSGN	**Cosiguina Volc**	**0.53**	**287**	*e*P	**Pg**	**21 42 41.6**	**-1.4**
MOMN	**Momotombo**	**0.64**	**130**	*e*P	**Pb**	**21 42 44.8**	**-1.1**
BRAN	**Las Pilas**	**0.68**	**99**	*e*P	**Pn**	**21 42 50.1**	**+1.7**
APYN	**Apoyeque**	**0.89**	**131**	*e*P	**Pg**	**21 42 48.4**	**-1.4**
CNCH	**Conchagua**	**0.90**	**300**	⇓*i*P	**Pg**	**21 42 47.7**	**-2.3**
CNCH				*e*S	**Sg**	**21 43 01.0**	**-0.8**
CNCH				IAML		21 43 09.1	
	comp=Z,32μm,0.6s						
CNCH	**Conchagua**	**0.90**	**300**	⇓*i*P	**Pg**	**21 42 47.7**	**-2.3**
CNCH				*e*S	**Sg**	**21 43 01.0**	**-0.8**
CNCH				IAML		21 43 09.1	
	comp=Z,32μm,0.6s						
LCND	**La Caada**	**0.96**	**300**	⇓*e*P	**Pg**	**21 42 48.7**	**-2.5**
LCND				*e*S	**Sg**	**21 43 02.5**	**-1.3**
LCND				IAML		21 43 05.9	
	comp=Z,12μm,0.5s						
LCND	**La Caada**	**0.96**	**300**	⇓*e*P	**Pg**	**21 42 48.7**	**-2.5**
LCND				*e*S	**Sg**	**21 43 02.5**	**-1.3**
LCND				IAML		21 43 05.9	
	comp=Z,12μm,0.5s						
HUEN		**0.97**	**120**	*e*P	**Pb**	**21 42 51.0**	**-0.6**
MGAN	**Managua**	**1.02**	**131**	*e*P	**Pg**	**21 42 51.2**	**-1.2**
MGAN				*e*P	**Pg**	**21 42 51.2**	**-1.2**
MGAN				*e*S	**Sn**	**21 43 06.5**	**-1.0**
MATN	**Matagalpa**	**1.09**	**84**	Pg	**Pg**	**21 42 51.7**	**-1.9**
MATN	**Matagalpa**	**1.09**	**84**	*e*P	**Pg**	**21 42 51.7**	**-1.9**
MATN				*e*S	**Sn**	**21 43 07.4**	**-1.9**
MASN	**Masaya**	**1.20**	**134**	*e*P	**Pb**	**21 42 53.7**	**-1.9**
TGUH	**Tegucigalpa,Un**	**1.25**	**349**	Pn	**Pn**	**21 42 54.9**	**-1.4**
TGUH	**Tegucigalpa,Un**	**1.25**	**349**	⇓*i*P	**Pn**	**21 42 54.9**	**-1.4**
TGUH				*e*S	**Sb**	**21 43 11.4**	**-1.2**
TGUH	**Tegucigalpa,Un**	**1.25**	**349**	⇓*i*P	**Pn**	**21 42 54.9**	**-1.4**
TGUH				*e*S	**Sb**	**21 43 11.4**	**-1.2**
BOAB	**BOACO BROADBAN**	**1.39**	**105**		**Pn**	**21 42 56.6**	**-1.5**
PACA	**Pacayal**	**1.41**	**297**	*e*P	**Pn**	**21 42 56.2**	**-2.3**
PACA				*e*S	**Sn**	**21 43 14.9**	**-2.3**
PACA	**Pacayal**	**1.41**	**297**	*e*P	**Pn**	**21 42 56.2**	**-2.3**
PACA				*e*S	**Sn**	**21 43 14.9**	**-2.3**
PACA	**Pacayal**	**1.41**	**297**	*e*P	**Pn**	**21 42 56.8**	**-1.8**
CAHU	**Cacacuatique**	**1.48**	**310**	*e*P	**Pn**	**21 42 57.6**	**-2.0**
CAHU	**Cacacuatique**	**1.48**	**310**	*e*P	**Pn**	**21 42 57.6**	**-2.0**
SCLA	**Alcaldia de Sa**	**1.86**	**298**	*e*P	**Pn**	**21 43 04.1**	**-0.6**
SCLA	**Alcaldia de Sa**	**1.86**	**298**	*e*P	**Pn**	**21 43 04.1**	**-0.6**
COEG	**Centro de Oper**	**1.96**	**294**	*e*P	**Pn**	**21 43 05.5**	**-0.6**
COEG	**Centro de Oper**	**1.96**	**294**	*e*P	**Pn**	**21 43 05.5**	**-0.6**
ACON	**Acoyapa**	**2.01**	**115**		**Pn**	**21 43 05.1**	**-1.6**
ACON	**Acoyapa**	**2.01**	**115**	*e*P	**Pb**	**21 43 07.5**	**-1.8**
PAVA	**Las Pavas**	**2.05**	**296**	*e*P	**Pn**	**21 43 06.0**	**-1.3**
PAVA	**Las Pavas**	**2.05**	**296**	*e*P	**Pn**	**21 43 06.0**	**-1.3**
PAVA	**Las Pavas**	**2.05**	**296**	*e*P	**Pn**	**21 43 07.8**	**+0.5**
SJTE	**Alcalda de S**	**2.07**	**293**	*e*P	**Pn**	**21 43 06.2**	**-1.4**
SJTE	**Alcalda de S**	**2.07**	**293**	*e*P	**Pn**	**21 43 06.2**	**-1.4**
LFRS	**El Faro**	**2.13**	**292**	*e*P	**Pn**	**21 43 08.2**	**-0.1**
LFRS	**El Faro**	**2.13**	**292**	*e*P	**Pn**	**21 43 08.2**	**-0.1**
LALI	**Alcalda de L**	**2.32**	**287**	*e*P	**Pn**	**21 43 10.7**	**-0.2**
LALI	**Alcalda de L**	**2.32**	**287**	*e*P	**Pn**	**21 43 10.7**	**-0.2**
UEES	**Universidad Ev**	**2.32**	**293**	*e*P	**Pn**	**21 43 10.8**	**-0.2**
UEES	**Universidad Ev**	**2.32**	**293**	*e*P	**Pn**	**21 43 10.8**	**-0.2**
HZTE	**Horizontes, Gu**	**2.53**	**146**		**Pn**	**21 43 12.3**	**-1.5**
HZTE	**Horizontes, Gu**	**2.53**	**146**	*e*P	**Pn**	**21 43 13.1**	**-0.7**
GBS3	**Finca Las Img**	**2.55**	**142**	*e*P	**Pn**	**21 43 13.2**	**-1.0**
BUAI	**Buenos Aires**	**2.55**	**139**	*e*P	**Pn**	**21 43 13.1**	**-1.1**
BUEV	**Buena Vista**	**2.57**	**141**	*e*P	**Pn**	**21 43 13.5**	**-0.9**
LAPC	**Finca la Perla**	**2.58**	**142

TKL LR LR 21 55 28.3
comp=Z,61nm,20.4s,baz=182,slow=34
comp=Z,3.4nm,0.8s
TKL Tuckaleechee C 22.93 7 P **P** **21 47 36.5 -0.5**
X37A Clayton 22.95 342 P **P** **21 47 36.9 -0.3**
X37A IAmb IAmb 21 47 47.4
comp=Z,15nm,1.1s
V51A Loudon 23.01 6 P **P** **21 47 37.1 -0.7**
V51A IAmb IAmb 21 47 49.0
comp=Z,12nm,1.1s
V52A Sevierville 23.13 7 P **P** **21 47 39.2 +0.1**
V52A IAmb IAmb 21 47 53.3
comp=Z,18nm,1.4s
LCAR Lake Charles 23.44 352 P **P** **21 47 43.3 +1.2**
LCAR IAmb IAmb 21 47 45.3
comp=Z,13nm,1.5s
TZTN Tazewell 23.83 7 P **P** **21 47 45.9 -0.1**
TZTN IAmb IAmb 21 48 04.7
comp=Z,12nm,1.2s
T47A Sharon Grove 24.06 360 P **P** **21 47 47.7 -0.5**
TUL1 Leonard 24.31 343 P **P** **21 47 50.4 0.0**
LPIG La Paz 24.72 300 LR LR 21 57 15.9
comp=Z,313nm,19.8s,baz=157,slow=36
S51A Beattyville 24.91 7 P **P** **21 47 55.5 -0.3**
MNTX Cornudas Mount 25.25 321 P **P** **21 47 59.9 +0.8**
MNTX IAmb IAmb 21 48 04.1
comp=Z,7.0nm,1.4s
R50A Paris 25.47 5 P **P** **21 48 00.4 -0.6**
R50A IAmb IAmb 21 48 10.2
comp=Z,11nm,1.2s
NNA Nana 26.64 157 LR LR 21 57 33.4
comp=Z,68nm,21.7s,baz=328,slow=34
P52A Corning 27.05 8 P **P** **21 48 15.2 -0.1**
P52A IAmb IAmb 21 48 16.9
comp=Z,7.0nm,0.8s
ANMO Albuquerque 28.18 325 P **P** **21 48 28.4 +2.7**
comp=Z,0.4nm,0.4s,baz=163,slow=8.5,SNR=3.8
ANMO LR LR 22 01 46.8
comp=Z,57nm,20.4s,baz=119,slow=41
comp=Z,0.4nm,0.4s
ANMO Albuquerque 28.18 325 P **P** **21 48 26.4 +0.6**
J56A Wolcott 31.59 14 P **P** **21 48 56.2 +0.7**
SADO Sadowa 32.55 10 P **P** **21 49 03.5 -0.4**
LONY Lake Ozonia 33.43 16 P **P** **21 49 11.2 -0.5**
PFO Pinyon Flats O 33.85 313 LR LR 22 05 13.1
comp=Z,164nm,18.0s,baz=350,slow=40
LPAZ La Paz 34.44 147 LR LR 22 04 27.5
comp=Z,104nm,21.6s,baz=326,slow=38
MDP Montagnes des 34.80 100 LR LR 22 04 59.3
comp=Z,116nm,18.0s,baz=258,slow=39
PDAR Pinedale Array 35.64 331 LR LR 22 05 57.6
comp=Z,78nm,19.8s,baz=136,slow=39
ELK Elko 37.20 324 LR LR 22 08 21.8
comp=Z,190nm,18.5s,baz=142,slow=42
NVAR Mina Array Bea 37.69 318 LR LR 22 07 59.4
comp=Z,192nm,19.8s,baz=130,slow=41
ULM Lac du Bonnet 38.02 351 P **P** **21 49 53.6 +2.7**
comp=Z,1.6nm,0.6s,baz=201,slow=8.6,SNR=2.4
comp=Z,1.6nm,0.6s
BMN Battle Mountai 38.18 322 P **P** **21 49 52.6 -0.1**
SIV San Ignacio 38.46 137 LR LR 22 06 22.6
comp=Z,125nm,18.5s,baz=312,slow=37
LVC Limon Verde 39.44 153 LR LR 22 05 29.4
comp=Z,80nm,18.9s,baz=301,slow=35
YBH Yreka Blue Hor 42.33 320 LR LR 22 10 46.5
comp=Z,134nm,19.5s,baz=148,slow=40
NEW Newport 43.28 331 LR LR 22 12 00.8
comp=Z,56nm,18.0s,baz=157,slow=41
SCHQ Schefferville 44.81 16 P **P** **21 50 48.6 +1.9**
comp=Z,2.9nm,0.8s,baz=210,slow=3.3,SNR=6.2
SCHQ LR LR 22 10 23.1
comp=Z,79nm,18.2s,baz=213,slow=37
comp=Z,2.9nm,0.8s
CPUP Villa Florida 48.47 144 LR LR 22 14 00.4
comp=Z,93nm,18.3s,baz=316,slow=39
BBB Bella Bella 51.21 329 LR LR 22 18 02.5
comp=Z,97nm,18.6s,baz=131,slow=42
YKA Yellowknife Ar 53.36 344 P **P** **21 51 54.6 +2.5**
comp=Z,1.7nm,0.9s,baz=135,slow=6.7,SNR=4.1
YKA LR LR 22 15 47.4
comp=Z,57nm,20.2s,baz=125,slow=37
comp=Z,1.7nm,0.9s
RCBR Riachuelo 54.08 107 LR LR 22 17 25.5
comp=Z,102nm,18.2s,baz=88,slow=39
DLBC Dease Lake 55.75 334 LR LR 22 18 11.7
comp=Z,73nm,19.9s,baz=130,slow=38
BCAR Beaver Creek A 63.08 335 P **P** **21 53 00.3 +0.2**
TULEG Thule 64.44 5 P **P** **21 53 09.4 +0.6**
ILAR Eielson Array 65.84 336 P **P** **21 53 20.3 +2.2**
comp=Z,0.8nm,0.8s,baz=141,slow=6.8,SNR=4.6
ILAR LR LR 22 27 01.8
comp=Z,76nm,18.8s,baz=90,slow=40
comp=Z,0.8nm,0.8s
BMAR Burnt Mountain 66.08 339 P **P** **21 53 19.9 +0.2**
SUMG Summit 66.13 14 *i* P **P** **21 53 24.0 +3.7**
KDAK Kodiak Island 66.27 328 LR LR 22 23 16.2
comp=Z,63nm,18.3s,baz=152,slow=37
MLY Manley 67.47 336 P **P** **21 53 29.3 +0.7**
MLY IAmb IAmb 21 53 45.9
comp=Z,2.0nm,0.9s
PPT Papeete 68.72 245 LR LR 22 15 07.8
comp=Z,227nm,18.2s,baz=36,slow=28
ESDC Sonseca Array 76.64 52 P **P** **21 54 24.9 +0.8**
comp=Z,0.9nm,0.8s,baz=290,slow=5.6,SNR=6.6
ESDC LR LR 22 22 30.1
comp=Z,37nm,18.8s,baz=278,slow=31
comp=Z,0.9nm,0.8s
ESDC Sonseca Array 76.64 52 P **P** **21 54 23.8 -0.3**
ESDC IAmb IAmb 21 54 38.8
comp=Z,4.2nm,1.5s
MDT Midelt 76.87 59 LR LR 22 25 43.2
comp=Z,49nm,18.1s,baz=172,slow=34
TORD Torodi Ar. Bea 85.94 78 LR LR 22 28 32.4
comp=Z,49nm,21.6s,baz=222,slow=32
KEST Kesra 87.71 54 LR LR 22 31 15.4
comp=Z,48nm,18.1s,baz=273,slow=33
WRA Warramunga Arr 139.76 254 PKP **PKiKP** **22 02 03.8 -0.5**
comp=Z,1.3nm,0.7s,baz=91,slow=2.0,SNR=8.9
ASAR Alice Springs 139.78 249 PKhKP PKPpre 22 01 56.6
comp=Z,0.2nm,0.6s,baz=79,slow=2.0,SNR=1.7
ASAR PKP **PKiKP** **22 02 04.1 -0.1**
comp=Z,0.7nm,0.7s,baz=101,slow=1.8,SNR=9.3

NNC ***11*** *21:54:01.5±3.7,36°56N×71°01E,h0km,mb5.2,mpv5.6, Error ellipse: s-maj=39.0km s-min=22.1km az=152.0*
BJI ***11*** *21:54:06.4±0.0,36°34N×71°38E,h93km,mb4.6/50, mB4.6/28*
MOS ***11*** *21:54:06.6±0.9,36°37N×71°41E,h101km,mb4.7/49,Error ellipse: s-maj=4.3km s-min=3.0km az=99.4*
NEIC ***11*** *21:54:08.8±2.2,36°42N±0°04×71°23E±0°07,h104km±4km, mb4.7/141,Error ellipse: s-maj=8.0km s-min=6.1km az=100.0*
IDC ***11*** *21:54:09.3±0.5,36°33N×71°37E,h117km±4km,mb4.3/35, mbtmp4.7/39,MS3.2/21,Error ellipse: s-maj=9.4km s-min=7.5km az=13.0*
ISC 11 21:54:07.7±0.3,36°36N±0°03×71°38E±0°03,h102km±3km, h102km:pP-P,n700,σ178/752,mb4.7/179,**49C-48D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**2.56**	**170**	⇓P	**Pn**	**21 54 49.8**	**+2.0**
CEP				S	**Sn**	**21 55 21.0**	**+2.4**
KBL	**Kabul**	**2.63**	**227**	Pn	**Pn**	**21 54 49.6**	**+0.8**
KBL				Sn	**Sn**	**21 55 20.9**	**+0.7**
KBL	**Kabul**	**2.63**	**227**	PN	**Pn**	**21 54 49.6**	**+0.8**
KBL						21 55 20.9	
KBL	**Kabul**	**2.63**	**227**	P	**Pn**	**21 54 50.1**	**+1.4**
	SNR=86						
KBL				S	**Sn**	**21 55 21.9**	**+1.6**
GAR	**Garm**	**2.77**	**343**		**Pn**	**21 54 50.3**	**-0.2**
CHGR	**Chuyangaron**	**2.90**	**323**	Pn	**Pn**	**21 54 50.9**	**-1.2**
CHGR	**Chuyangaron**	**2.90**	**323**	PN	**Pn**	**21 54 50.9**	**-1.2**
CHCP	**Chirah Chowk**	**3.10**	**150**	⇓P	**Pn**	**21 54 56.9**	**+2.0**
DRK	**Karamyk**	**3.13**	**6**		**Pn**	**21 54 56.7**	**+1.2**
THW	**Thamme Wali**	**3.57**	**175**	P	**Pn**	**21 55 02.2**	**+1.1**
BTK	**Batken**	**3.72**	**353**		**Pn**	**21 55 04.2**	**+1.0**
BTK	**Batken**	**3.72**	**353**	PN	**Pn**	**21 55 04.2**	**+1.0**
SARP	**Sargodha**	**4.55**	**166**	P	**Pn**	**21 55 14.3**	**0.0**
JMU	**Jammu**	**4.65**	**140**	*e*P	**Pn**	**21 55 16.7**	**+1.1**
JMU				*e*S	**Sn**	**21 56 08.0**	**-0.5**
KSH	**Kashi**	**4.81**	**48**	P	**Pn**	**21 55 14.6**	**-3.3**
KSH				S	Sn	21 56 01.2	-11
TAS	**Tashkent**	**5.22**	**342**	Pn	**Pn**	**21 55 22.7**	**-0.7**
TAS	**Tashkent**	**5.22**	**342**	PN	**Pn**	**21 55 22.7**	**-0.7**
THN	**Thein Dam**	**5.31**	**136**	*e*P	**Pn**	**21 55 25.6**	**+1.1**
THN				*e*S	**Sn**	**21 56 24.3**	**-0.1**
IUG	**luzhnay**	**5.88**	**350**	*d*iPN	**Pn**	**21 55 31.9**	**-0.4**
IUG	**luzhnay**	**5.88**	**350**	⇓*i*P	**Pn**	**21 55 31.9**	**-0.4**
	baz=350						
IUG				*e*S	**Sn**	**21 56 35.6**	**-2.7**
	baz=350						
AML	**Almayashu**	**6.04**	**17**	P	**Pn**	**21 55 35.2**	**+0.4**
	SNR=344						
AML	**Almayashu**	**6.04**	**17**	*i* P	**Pn**	**21 55 35.3**	**+0.5**
	SNR=833						
CHM	**Chimkent**	**6.11**	**348**	*e*PN	**Pn**	**21 55 35.3**	**-0.1**
CHM	**Chimkent**	**6.11**	**348**	*e*P	**Pn**	**21 55 35.3**	**-0.1**
	baz=348						
CHM				*e*S	**Sn**	**21 56 39.9**	**-4.0**
	baz=348						
UCH	**Uchtor**	**6.35**	**22**	P	**Pn**	**21 55 39.3**	**+0.3**
	SNR=221						
BHK	**Bhakra**	**6.47**	**138**	*e*P	**Pn**	**21 55 40.8**	**+0.5**
BHK				*e*S	**Sn**	**21 56 49.5**	**-3.2**
BHK				*e*S	**Sn**	**21 56 51.1**	**-1.6**
DZA	**Taraz**	**6.53**	**360**	*d*iPN	**Pn**	**21 55 41.3**	**+0.2**
DZA	**Taraz**	**6.53**	**360**	⇓*i*P	**Pn**	**21 55 41.3**	**+0.2**
	baz=0.2						
DZA				*e*S	**Sn**	**21 56 51.0**	**-3.0**
	baz=0.2						
EKS2	**Erkin-Say**	**6.56**	**16**	P	**Pn**	**21 55 42.4**	**+0.7**
	SNR=225						
AAK	**Ala-Archa**	**6.72**	**20**	P	**Pn**	**21 55 44.7**	**+0.9**
	SNR=119						
AAK	**Ala-Archa**	**6.72**	**20**	P	**Pn**	**21 55 44.7**	**+0.9**
	177nm,0.4s,baz=204,slow=8.8,SNR=203						
AAK				S	**Sn**	**21 56 56.7**	**-2.2**
	69nm,0.7s,baz=326,slow=15,SNR=1.8						
AAK				LR	LR	21 58 16.3	
	comp=Z,55nm,20.6s,baz=202,slow=37						
AAK	**Ala-Archa**	**6.72**	**20**	Pn	**Pn**	**21 55 44.6**	**+0.9**
AAK	**Ala-Archa**	**6.72**	**20**	*de*PN	**Pn**	**21 55 44.4**	**+0.6**
AAK				pmax	pmax		
	comp=Z,250nm,0.8s						
AAK	**Ala-Archa**	**6.72**	**20**	P	**Pn**	**21 55 44.8**	**+0.9**
AAK				S	**Sn**	**21 56 52.8**	**-6.1**
AAK	**Ala-Archa**	**6.72**	**20**	*i* P	**Pn**	**21 55 44.6**	**+0.9**
	SNR=121						
BRLS	**Borolday**	**6.77**	**350**	*e*PN	**Pn**	**21 55 40.1**	**-4.2**
BRLS	**Borolday**	**6.77**	**350**	*e*P	**Pn**	**21 55 40.2**	**-4.2**
	baz=349						
BRLS				*e*S	**Sn**	**21 56 51.2**	**-8.7**
	baz=349						
KK31	**Karatay Array**	**6.77**	**355**	Pn	**Pn**	**21 55 43.7**	**-0.7**
KK31	**Karatay Array**	**6.77**	**355**	PN	**Pn**	**21 55 43.7**	**-0.7**
KK31	**Karatay Array**	**6.77**	**355**	P	**Pn**	**21 55 43.9**	**-0.5**
	comp=Z,457nm,0.3s,baz=177,slow=12						
KK31				⇑S	**Sn**	**21 56 55.8**	**-4.1**
	comp=Z,80nm,0.4s,baz=190,slow=25,SNR=5.6						
KKAR	**Karatay Array**	**6.77**	**355**		**Pn**	**21 55 43.6**	**-0.8**
KKAR	**Karatay Array**	**6.77**	**355**		**Pn**	**21 55 43.7**	**-0.7**
KKAR	**Karatay Array**	**6.77**	**355**	PN	**Pn**	**21 55 43.6**	**-0.8**
KBK	**Karagaybulak**	**6.87**	**23**	P	**Pn**	**21 55 46.7**	**+0.8**
	SNR=125						
FRU1	**Bishkek**	**6.92**	**20**	Pn	**Pn**	**21 55 47.8**	**+1.4**
FRU1	**Bishkek**	**6.92**	**20**	PN	**Pn**	**21 55 47.8**	**+1.4**
ULHL	**Ulhol**	**6.98**	**31**	P	**Pn**	**21 55 49.1**	**+1.6**
	SNR=36						
BOOM	**Boomskoye usch**	**7.07**	**29**		**Pn**	**21 55 49.5**	**+0.9**
BOOM	**Boomskoye usch**	**7.07**	**29**	PN	**Pn**	**21 55 49.5**	**+0.9**
SMLA	**Simla**	**7.10**	**136**	*e*P	**Pn**	**21 55 48.2**	**-0.6**
SMLA				*e*S	**Sn**	**21 57 03.0**	**-5.0**
CHMS	**Chumysh**	**7.12**	**20**	P	**Pn**	**21 55 49.7**	**+0.5**
	SNR=147						
CHMS	**Chumysh**	**7.12**	**20**	⇓P	**Pn**	**21 55 49.6**	**+0.5**
	comp=Z,162nm,0.7s						
CHMS				⇓S	**Sn**	**21 57 06.7**	**-1.9**
	comp=Z,120nm,0.6s						
USP	**Ospenovka**	**7.31**	**18**	P	**Pn**	**21 55 51.5**	**-0.2**
	SNR=189						
KDJ	**Kajisay**	**7.31**	**36**		**Pn**	**21 55 52.4**	**+0.5**
KDJ	**Kajisay**	**7.31**	**36**	PN	**Pn**	**21 55 52.4**	**+0.5**
TKM2	**Tokmak 2**	**7.32**	**25**	P	**Pn**	**21 55 52.7**	**+0.8**
	SNR=96						
TKM2	**Tokmak 2**	**7.32**	**25**	PN	**Pn**	**21 55 52.5**	**+0.5**
TKM2	**Tokmak 2**	**7.32**	**25**	⇓P	**Pn**	**21 55 52.5**	**+0.5**
	comp=Z,116nm,0.6s						
TKM2				⇓S	**Sn**	**21 57 12.1**	**-1.4**
	comp=Z,60nm,0.8s						
SGDS	**Sogindy**	**7.51**	**18**	*d*iPN	**Pn**	**21 55 54.0**	**-0.5**
SGDS				pmax	pmax		
	comp=Z,16nm,0.6s						
SGDS	**Sogindy**	**7.51**	**18**	⇓*i*P	**Pn**	**21 55 54.0**	**-0.5**
	comp=Z,16nm,0.6s,baz=19						
SGDS				*e*S	**Sn**	**21 57 17.6**	**-0.5**
	baz=19						
HRA	**Herat**	**7.72**	**258**		**Pn**	**21 55 56.1**	**-1.3**
TNSS	**Tian-Shan**	**7.93**	**31**	*e*PN	**Pn**	**21 56 00.6**	**+0.1**
TNSS	**Tian-Shan**	**7.93**	**31**	*e*P	**Pn**	**21 56 00.6**	**+0.1**
	baz=32						
AAA	**Alma-Ata**	**8.06**	**30**	*e*PN	**Pn**	**21 56 03.5**	**+1.6**
AAA	**Alma-Ata**	**8.06**	**30**	*e*P	**Pn**	**21 56 03.5**	**+1.6**
	baz=31						
MDOK	**Medeo**	**8.08**	**31**	*e*PN	**Pn**	**21 56 02.7**	**+0.5**
MDOK	**Medeo**	**8.08**	**31**	*e*P	**Pn**	**21 56 02.7**	**+0.5**
	baz=32						
PRZ	**Przheval'sk**	**8.18**	**39**	Pn	**Pn**	**21 56 04.7**	**+1.0**
PRZ	**Przheval'sk**	**8.18**	**39**	PN	**Pn**	**21 56 04.7**	**+1.0**
KUU	**Kurty**	**8.43**	**25**	*d*iPN	**Pn**	**21 56 06.0**	**-0.9**
KUU				pmax	pmax		
	comp=Z,14nm,0.6s						
KUU	**Kurty**	**8.43**	**25**	⇓*i*P	**Pn**	**21 56 06.1**	**-0.9**
	comp=Z,14nm,0.6s,baz=26						
SATY	**Saty**	**8.61**	**37**	*de*PN	**Pn**	**21 56 09.4**	**0.0**
SATY	**Saty**	**8.61**	**37**	⇓*e*P	**Pn**	**21 56 09.4**	**0.0**
	baz=38						
CHKK	**Chushkaly**	**8.63**	**28**	*e*PN	**Pn**	**21 56 09.0**	**-0.6**
CHKK	**Chushkaly**	**8.63**	**28**	*e*P	**Pn**	**21 56 09.0**	**-0.6**
	baz=29						
ZHN	**Zhinishke**	**8.70**	**36**	*e*PN	**Pn**	**21 56 10.4**	**-0.3**
ZHN	**Zhinishke**	**8.70**	**36**	*e*P	**Pn**	**21 56 10.4**	**-0.3**
	baz=38						
BTLS	**Baital**	**8.91**	**12**	*d*iPN	**Pn**	**21 56 12.1**	**-1.3**
BTLS				pmax	pmax		
	comp=Z,6.0nm,0.5s						
BTLS	**Baital**	**8.91**	**12**	⇓*i*P	**Pn**	**21 56 12.1**	**-1.3**
	comp=Z,5.7nm,0.5s,baz=13						
BTLS				*e*S	**Sn**	**21 57 50.0**	**-1.9**
	baz=13						
UZB	**Uzynbulak**	**8.97**	**39**	*e*PN	**Pn**	**21 56 14.6**	**+0.1**
UZB	**Uzynbulak**	**8.97**	**39**	*e*P	**Pn**	**21 56 14.6**	**+0.1**
	baz=40						
KPKS	**Kokpek**	**9.05**	**36**	*d*iP	**Pn**	**21 56 15.4**	**0.0**
KPKS				pmax	pmax		
	comp=Z,23nm,0.9s						
KPKS	**Kokpek**	**9.05**	**36**	⇓*i*P	**Pn**	**21 56 15.4**	**0.0**
	comp=Z,23nm,0.9s,baz=37						
KHET	**Khetri**	**9.07**	**154**	*e*P	**Pn**	**21 56 13.5**	**-2.2**
KHET				*e*S	**Sn**	**21 57 48.7**	**-7.3**
NDI	**New Delhi**	**9.10**	**146**	*e*P	**Pn**	**21 56 14.5**	**-1.6**
SHLS	**Shalkode**	**9.21**	**40**	*e*P	**Pn**	**21 56 19.8**	**+2.2**
SHLS	**Shalkode**	**9.21**	**40**	*e*P	**Pn**	**21 56 19.9**	**+2.2**
	baz=42						
AYAN	**Aya Nagar**	**9.23**	**147**	*e*P	**Pn**	**21 56 15.7**	**-2.2**
AYAN				*e*S	**Sn**	**21 57 54.8**	**-5.1**
KUDL	**Kundal**	**9.26**	**151**	*e*P	**Pn**	**21 56 16.2**	**-2.0**
KUDL				*e*S	**Sn**	**21 57 54.4**	**-6.2**
SONA	**Sohna**	**9.41**	**148**	*e*P	**Pn**	**21 56 17.8**	**-2.5**
SONA				*e*S	**Sn**	**21 57 56.3**	**-8.0**
JASL	**Jaisalmer**	**9.41**	**183**	*e*P	**Pn**	**21 56 18.6**	**-1.8**
PTH	**Pithoragarh**	**10.05**	**130**	*e*P	**Pn**	**21 56 26.6**	**-2.7**
PTH				*e*S	**Sn**	**21 58 11.6**	**-8.6**
PTH				*e*S	**Sn**	**21 58 12.4**	**-7.9**
LGTI	**Lohaghat**	**10.14**	**130**	*e*P	**Pn**	**21 56 26.8**	**-3.5**
LGTI				*e*S	Sn	21 58 12.2	-10
LGTI				*e*S	Sn	21 58 12.7	-9.4
TDK	**Taldyqorghan**	**10.15**	**30**	*e*P	**Pn**	**21 56 29.1**	**-1.1**
TDK	**Taldyqorghan**	**10.15**	**30**	*e*P	**Pn**	**21 56 29.2**	**-1.1**
	baz=30						
AJM	**Ajmer**	**10.23**	**163**	*e*P	**Pn**	**21 56 30.2**	**-1.4**
AJM				*e*S	**Sn**	**21 58 17.9**	**-6.5**
GEYT	**Alibeck**	**10.70**	**282**	P	**Pn**	**21 56 33.4**	**-4.5**
	comp=Z,30nm,0.3s,baz=104,slow=9.2,SNR=118						
GEYT				S	Sn	21 58 26.4	-9.3
	comp=Z,44nm,0.4s,baz=135,slow=24,SNR=5.0						
GEYT				LR	LR	22 02 07.1	
	comp=Z,130nm,20.1s,baz=173,slow=45						
GYA0	**ALIBECK ARRAY**	**10.70**	**282**	P	**Pn**	**21 56 33.5**	**-4.4**
GYA0B	**ALIBECK ARRAY**	**10.70**	**282**	Pn	**Pn**	**21 56 33.5**	**-4.4**
GYA0B	**ALIBECK ARRAY**	**10.70**	**282**	⇑P	Pn	21 56 33.0	-4.8
GYA0B				⇓S	Sn	21 58 26.5	-9.2
JHNI	**Jhansi**	**12.47**	**149**	*e*P	**Pn**	**21 56 58.1**	**-3.4**
JHNI				*e*S	Sn	21 59 07.9	-11
JHNI				*e*S	Sn	21 59 08.3	-10
PYUN	**Piuthan**	**12.81**	**127**	*e*P	**Pn**	**21 57 02.5**	**-3.7**
	comp=Z,383nm,0.4s						
PYUN				*e*S	Sn	21 59 15.9	-11
MAKZ	**Makanchi**	**13.10**	**34**		**Pn**	**21 57 08.1**	**-1.6**
MAKZ	**Makanchi**	**13.10**	**34**	P	**Pn**	**21 57 08.1**	**-1.6**
MAKZ	**Makanchi**	**13.10**	**34**	⇓P	**Pn**	**21 57 08.0**	**-1.7**
	comp=Z,22nm,1.1s						
DANN	**Dangsing**	**13.15**	**124**	*e*P	**Pn**	**21 57 07.2**	**-3.6**
	comp=Z,227nm,0.4s						
MK31	**Makanchi Array**	**13.23**	**35**		**Pn**	**21 57 10.9**	**-0.5**
MK31	**Makanchi Array**	**13.23**	**35**	*d*iP	**Pn**	**21 57 09.2**	**-2.2**
MK31	**Makanchi Array**	**13.23**	**35**	P	**Pn**	**21 57 09.7**	**-1.7**
	comp=Z,7.6nm,0.6s,baz=206,slow=8.8,SNR=77						
MKAR	**Makanchi Array**	**13.23**	**35**	P	**Pn**	**21 57 10.0**	**-1.4**
	comp=Z,6.3nm,0.9s,baz=223,slow=13,SNR=44						
MKAR				LR	LR	22 01 48.9	
	comp=Z,50nm,19.3s,baz=232,slow=35						
MKAR	**Makanchi Array**	**13.23**	**35**		**Pn**	**21 57 10.6**	**-0.8**
MKAR	**Makanchi Array**	**13.23**	**35**	*i* P	**Pn**	**21 57 10.3**	**-1.1**
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BRZS	**Berezniki**	**13.65**	**4**	*d*iP	**Pn**	**21 57 13.8**	**-3.0**
BRZS				pmax	pmax		
	comp=Z,11nm,0.7s						
BRZS	**Berezniki**	**13.65**	**4**	⇓*i*P	**Pn**	**21 57 13.9**	**-3.0**
	comp=Z,11nm,0.7s,baz=3.8						
GKN	**Gorkha**	**13.97**	**123**	*e*P	**Pn**	**21 57 17.6**	**-3.7**
	comp=Z,283nm,0.4s						
BHPL	**Bhopal**	**14.08**	**157**	*e*P	**Pn**	**21 57 19.7**	**-2.9**
BHPL				IAmb	IAmb	21 57 30.1	
	comp=Z,71nm,0.4s						
BHPL				*e*S	Sn	21 59 47.1	-11
WMQ	**Urumqi**	**14.53**	**54**	*e*P	**P**	**21 57 31.4**	**-0.6**
DMN	**Daman**	**14.54**	**123**	*e*P	**Pn**	**21 57 24.8**	**-3.9**
	comp=Z,141nm,0.4s						
DMN				*e*S	Sn	21 59 58.5	-11
PKIN	**Phulchoki**	**14.76**	**122**	*e*P	**Pn**	**21 57 27.7**	**-3.8**
	comp=Z,245nm,0.4s						
PKI	**Pulchoki**	**14.77**	**122**	*e*P	**Pn**	**21 57 27.9**	**-3.8**
	comp=Z,163nm,0.4s						
GUN	**Gumba**	**14.88**	**120**	*e*P	**Pn**	**21 57 28.8**	**-4.3**
	comp=Z,108nm,0.4s						
ZSN	**Zaisan**	**14.93**	**38**	*e*P	**Pn**	**21 57 33.8**	**+0.5**
ZSN	**Zaisan**	**14.93**	**38**	*e*P	**Pn**	**21 57 33.8**	**+0.5**
	baz=38						
KURBB	**Kurchatov Arra**	**15.16**	**18**	P	**Pn**	**21 57 32.4**	**-3.8**
	comp=Z,2.2nm,0.6s,baz=217,slow=12,SNR=22						
KURBB	**Kurchatov Arra**	**15.16**	**18**	⇓P	**Pn**	**21 57 32.3**	**-3.8**
	comp=Z,266nm,0.7s						
JIRN	**Jiri**	**15.25**	**120**	*e*P	**Pn**	**21 57 34.5**	**-3.3**
	comp=Z,296nm,0.4s						
KURK	**Kurchatov**	**15.27**	**18**	Pn	**Pn**	**21 57 34.2**	**-3.3**
KURK	**Kurchatov**	**15.27**	**18**	*i* P	**Pn**	**21 57 37.3**	**-0.2**
KURK				pmax	pmax		
	comp=Z,19nm,0.8s						
KURK	**Kurchatov**	**15.27**	**18**	⇑P	**Pn**	**21 57 33.7**	**-3.8**
	comp=Z,18nm,0.8s						
AB31	**Akbulak array**	**15.36**	**331**	P	**Pn**	**21 57 35.3**	**-3.3**
AB31	**Akbulak array**	**15.36**	**331**	P	**Pn**	**21 57 35.3**	**-3.3**
	comp=Z,56nm,0.5s,baz=142,slow=11,SNR=2980						
AB31				⇓S	**Sn**	**22 00 22.0**	**-6.2**
	comp=Z,14nm,0.4s,baz=147,slow=24,SNR=6.7						
ABKAR	**Akbulak array**	**15.36**	**331**		**Pn**	**21 57 34.6**	**-4.0**
ABKAR	**Akbulak array**	**15.36**	**331**		**Pn**	**21 57 34.8**	**-3.9**
SEM	**Semipalatinsk**	**15.44**	**22**	*e*P	**P**	**21 57 42.0**	**-0.1**
SEM	**Semipalatinsk**	**15.44**	**22**	*e*P	**P**	**21 57 42.1**	**-0.1**
	baz=22						
JASK	**Jask - Hormozg**	**15.58**	**232**	P	**Pn**	**21 57 42.1**	**+0.5**
RAMN	**Ramite**	**15.98**	**122**	*e*P	**Pn**	**21 57 42.7**	**-4.1**
	comp=Z,150nm,0.4s						
AKL	**Akola**	**16.36**	**161**	*e*P	**Pn**	**21 57 50.2**	**-1.1**
TAPN	**Taplejung**	**16.51**	**118**	*e*P	**Pn**	**21 57 49.9**	**-3.5**
	comp=Z,157nm,0.4s						
BANOM	**Banah**	**16.56**	**235**	P	**Pn**	**21 57 54.0**	**+0.2**
BANOM	**Banah**	**16.56**	**235**	*i* P	**Pn**	**21 57 54.0**	**+0.2**
	SNR=8.8						
SHME	**Shamm**	**16.58**	**236**	P	**P**	**21 57 55.4**	**+0.6**
SHME	**Shamm**	**16.58**	**236**	P	**P**	**21 57 55.1**	**+0.3**
BRVK	**Borovoye**	**16.72**	**358**		**Pn**	**21 57 52.9**	**-2.5**
BRVK				IAmb	IAmb	21 57 58.0	
	comp=Z,29nm,0.7s						
BRVK	**Borovoye**	**16.72**	**358**	*i* P	**Pn**	**21 57 54.0**	**-1.5**
BRVK				pmax	pmax		
	comp=Z,25nm,0.8s						
BRVK	**Borovoye**	**16.72**	**358**	P	**Pn**	**21 57 53.7**	**-1.7**
BRVK	**Borovoye**	**16.72**	**358**	⇓P	**Pn**	**21 57 52.9**	**-2.5**
	comp=Z,31nm,0.9s						
MASF	**Masafi**	**17.02**	**234**	P	**P**	**21 58 00.1**	**+0.4**
MSFE	**Esma-Masafi**	**17.03**	**234**	P	**P**	**21 57 60.0**	**+0.2**
AKTO	**Aktyubinsk**	**17.06**	**330**	P	**Pn**	**21 57 58.6**	**-1.0**
	comp=Z,138nm,0.7s,baz=132,slow=13,SNR=89						
AKTO				S	Sn	22 00 55.3	-14
	comp=Z,12nm,0.5s,baz=67,slow=19,SNR=2.2						
AKTO				LR	LR	22 06 13.4	
	comp=Z,13nm,19.1s,baz=137,slow=42						
AKTO	**Aktyubinsk**	**17.06**	**330**	⇑P	**Pn**	**21 57 57.6**	**-2.0**
	comp=Z,109nm,

comp=Z,42nm,0.8s
ZAA0 Zalesovo Array 19.92 24 ⇑P **P 21 58 30.6 -0.5**
comp=Z,7.7nm,0.8s
ZALV Zalesovo Beam 19.92 24 P **P 21 58 30.8 -0.2**
comp=Z,36nm,0.5s,baz=220,slow=10,SNR=143
ZALV S **S 22 02 05.8 -3.7**
comp=Z,1.0nm,0.5s,baz=216,slow=19,SNR=1.3
ZALV Zalesovo Beam 19.92 24 P **P 21 58 30.5 -0.5**
ZALV Zalesovo Beam 19.92 24 *i* P **P 21 58 30.7 -0.4**
ZALV pmax pmax
comp=Z,35nm,0.5s
GUWA GUWAHATI 20.07 115 *e*S S 22 02 00.6 -12
DDFL Dedoflistskaro 20.28 292 P Pn 21 58 37.0 -1.0
SHMA Al-Shehemyia 20.34 245 P **P 21 58 35.2 -0.6**
MZR Muzera 20.42 234 P **P 21 58 36.1 -0.7**
MZR Muzera 20.42 234 *i* P **P 21 58 36.1 -0.7**
SNR=11
SHL Shillong 20.57 116 P **P 21 58 39.1 +0.6**
SHL lAmb lAmb 21 58 48.7
comp=Z,35nm,0.8s
SHL Shillong 20.57 116 P **P 21 58 39.1 +0.6**
SHL pmax pmax
comp=Z,35nm,0.8s
SHL Shillong 20.57 116 *e*S **S 22 02 13.9 -9.1**
TEZP TEZPUR 20.65 112 lAmb lAmb 21 58 41.0
comp=Z,50nm,0.5s
GROC Groznyy 20.77 297 *e*P **P 21 58 41.6 +1.3**
GROC *e**SP **sP 21 59 09.4 -3.7**
GROC *e*S **S 22 02 30.3 +3.9**
GROC *e**SS **sS 22 02 57.3 -3.1**
GROC pmax pmax
comp=Z,97nm,1.0s
ZIRO ZIRO 20.97 108 lAmb lAmb 21 58 47.0
comp=Z,54nm,0.8s
ZIRO *e*S **S 22 02 23.6 -7.2**
ITAN ITANAGAR 21.06 110 lAmb lAmb 21 58 49.7
comp=Z,98nm,1.0s
GNI Garni 21.23 288 P **P 21 58 47.7 +2.2**
comp=Z,42nm,0.5s,baz=40,slow=1.3,SNR=56
comp=Z,42nm,0.5s
GNI Garni 21.23 288 P **P 21 58 47.4 +1.9**
GNI Garni 21.23 288*ce*P **P 21 58 47.6 +2.1**
GNI pmax pmax
comp=Z,146nm,1.3s
GNI Garni 21.23 288 P **P 21 58 48.3 +2.9**
GNI Garni 21.23 288 P **P 21 58 48.4 +2.9**
GUDG Gudauri 21.61 295 P **P 21 58 53.3 +3.7**
SVE Sverdlovsk 21.71 344 *e*P **P 21 58 50.3 0.0**
SVE *e*S **S 22 02 40.7 -3.7**
SVE pmax pmax
comp=Z,76nm,1.3s
ARU Arti 21.87 341 P **P 21 58 51.9 0.0**
comp=Z,47nm,0.8s,baz=169,slow=5.7,SNR=52
ARU S **S 22 02 43.8 -3.4**
comp=Z,3.9nm,0.5s,baz=106,slow=23,SNR=1.3
ARU LR LR 22 08 03.2
comp=Z,144nm,19.0s,baz=150,slow=38
comp=Z,47nm,0.8s
ARU Arti 21.87 341 P **P 21 58 51.0 -0.9**
ARU Arti 21.87 341*c i* P **P 21 58 51.1 -0.8**
ARU S **S 22 02 47.6 +0.4**
ARU SS **SnSn 22 03 32.4 +10**
ARU pmax pmax
comp=Z,138nm,1.5s
ZEI Tsey 22.08 295 *e*P **P 21 58 54.5 0.0**
ZEI pmax pmax
comp=Z,16nm,0.6s
MOKO MOKOCHONG 22.10 110 lAmb lAmb 21 59 01.7
comp=Z,67nm,0.7s
KOHI KOHIMA 22.12 112 lAmb lAmb 21 59 03.1
comp=Z,56nm,0.7s
KOHI *e*S **S 22 02 50.3 -2.3**
BGD Bogdanovka 22.15 291 P **P 21 58 52.7 -2.6**
AKH Akhalkalaki 22.24 292 P **P 21 58 59.6 +3.4**
AZL Aizawl 22.27 118 lAmb lAmb 21 59 04.6
comp=Z,60nm,0.9s
AZL *e*S **S 22 02 54.4 -0.5**
ONI Oni 22.38 295 P **P 21 58 58.0 +0.5**
ONI lAmb lAmb 21 59 07.2
comp=Z,52nm,0.7s
ONI Oni 22.38 295 P **P 21 58 58.0 +0.5**
ONI pmax pmax
comp=Z,52nm,0.7s
KARS Kars 22.51 290 P **P 21 59 00.3 +1.3**
KARS lAmb lAmb 21 59 04.8
comp=Z,84nm,1.0s
KARS Kars 22.51 290 P **P 21 59 00.3 +1.3**
KARS pmax pmax
comp=Z,84nm,1.0s
LKP Lekhapani 22.60 107 lAmb lAmb 21 59 02.5
comp=Z,36nm,0.8s
GTA Gaotai 22.61 74 ⇑P **P 21 59 02.5 +2.5**
GTA pP pP 21 59 26.0 +5.1
GTA pmax pmax
comp=Z,34nm,0.8s
GTA pmax pmax
comp=Z,96nm,4.7s
GTA LR LR
comp=Z,110nm,13.1s
GTA LR LR
comp=Z,120nm,16.7s
GTA LR LR
comp=Z,110nm,15.3s
KBZ Khabaz 22.94 297 P **P 21 59 03.5 +0.5**
comp=Z,16nm,0.7s,baz=116,slow=7.5,SNR=19
KBZ S **S 22 03 06.2 +1.0**
comp=Z,1.8nm,0.6s,baz=131,slow=20,SNR=1.3
KBZ LR LR 22 10 38.1
comp=Z,67nm,18.7s,baz=100,slow=43
comp=Z,16nm,0.7s
KBZ Khabaz 22.94 297*ce*P **P 21 59 03.4 +0.4**
KBZ pmax pmax
comp=Z,9.0nm,0.7s
GOF Gofitskoye 23.08 301 ⇓ *i* P **P 21 59 06.0 +1.6**
GOF pmax pmax
comp=Z,95nm,0.8s
SHA1 Shidzhatmaz 23.11 297*d i* P **P 21 59 05.2 +0.2**
KVAR Kislovodsk Arr 23.12 298 P **P 21 59 06.0 +1.1**
comp=Z,3.0nm,0.4s,baz=73,slow=19,SNR=10.0
KVAR S **S 22 03 10.9 +2.7**
comp=Z,6.0nm,0.8s,baz=244,slow=2.8,SNR=2.2
comp=Z,3.0nm,0.4s
KIV Kislovodsk 23.12 298 P **P 21 59 04.9 -0.1**
KIV lAmb lAmb 21 59 36.6
comp=Z,42nm,0.7s
KIV Kislovodsk 23.12 298 *e*P **P 21 59 05.0 +0.1**
KIV *e*S **S 22 03 09.3 +1.0**
KIV pmax pmax
comp=Z,29nm,0.9s
KIV MLR MLR
comp=Z,61nm,14.0s
KIV Kislovodsk 23.12 298 P **P 21 59 05.9 +0.9**
KIV S **S 22 03 15.4 +7.0**
KIV Kislovodsk 23.12 298 P **P 21 59 05.4 +0.4**
BELG Belogornoye 23.19 321 P **P 21 59 05.7 +0.3**
comp=Z,77nm,0.8s,baz=90,slow=1.2,SNR=41
comp=Z,77nm,0.8s
BELG Belogornoye 23.19 321*d i* P **P 21 59 05.2 -0.1**
BELG pmax pmax
comp=Z,16nm,1.0s
GURO Guroymak-BITLI 23.36 284 P **P 21 59 07.3 +0.1**
KNGR Kungurtug, Tuv 23.56 45 *i* P **P 21 59 09.8 +0.9**
MARD Mardin 24.46 281 P **P 21 59 17.4 +0.2**
KOPT Kop Dagi 24.48 288 P **P 21 59 17.7 +0.2**
SOC Sochi 25.21 296 *e*P **P 21 59 24.8 +1.1**
SOC *e**PP **pP 21 59 46.6 -0.7**
SOC *e**SP **sP 21 59 57.5 -1.8**
SOC *e* 22 00 06.7
SOC *e*S **S 22 03 44.9 +3.3**
SOC pmax pmax
comp=Z,21nm,0.9s
RAYN Ar Rayn 25.72 247 P **P 21 59 27.6 -1.0**
RAYN lAmb lAmb 22 00 05.8
comp=Z,31nm,1.6s
RAYN Ar Rayn 25.72 247 P **P 21 59 27.7 -1.0**
RAYN pmax pmax
comp=Z,31nm,1.6s
RAYN Ar Rayn 25.72 247 P **P 21 59 28.1 -0.6**
VRH Novokhopyorsk 25.83 314 *e*P **P 21 59 29.6 +0.4**
VRH pmax pmax
comp=Z,10.0nm,0.7s
MOY Mondy 25.99 45 *e*P **P 21 59 32.9 +2.0**
MOY pmax pmax
comp=Z,12nm,1.3s
LZH Lanzhou 26.13 81 ⇓P **P 21 59 37.8 +5.5**
LZH sP sP 22 00 11.6 +3.5
LZH pmax pmax
comp=Z,19nm,1.2s
LZH pmax pmax
comp=Z,130nm,5.6s
LZH LR LR
comp=Z,140nm,10.7s
LZH LR LR
comp=Z,140nm,11.2s
LZH LR LR
comp=Z,140nm,13.6s
KIRV Kirov 26.50 334 P **P 21 59 36.5 +1.4**
comp=Z,38nm,0.6s,baz=168,slow=1.4,SNR=12
comp=Z,38nm,0.6s
KIRV Kirov 26.50 334*ce*P **P 21 59 36.3 +1.1**
ZAK Zakamensk 26.85 48 *e*P **P 21 59 39.7 +1.1**
ZAK pmax pmax
comp=Z,7.0nm,1.3s
VSR Storozhevoye 27.32 313 *e*P **P 21 59 42.9 +0.2**
VSR pmax pmax
comp=Z,10.0nm,0.8s
CD2 Chengdu 27.42 92 P **P 21 59 42.4 -1.5**
VORR Voronezh 27.46 314 *e*P **P 21 59 45.0 +1.1**
VORR *i* *PP **pP 22 00 11.0 +3.6**
VORR pmax pmax
comp=Z,18nm,1.3s
PZH PanZhiHua 27.61 102 P **P 21 59 48.3 +2.6**
PZH pmax pmax
comp=Z,8.0nm,0.7s
PZH pmax pmax
comp=Z,100nm,5.3s
LPSR Galich'ya Gora 27.97 316 *e*P **P 21 59 48.8 +0.4**
LPSR pmax pmax
comp=Z,10.0nm,0.9s
SONM Songino Array 28.17 55 P **P 21 59 52.1 +1.7**
comp=Z,2.2nm,0.6s,baz=266,slow=9.0,SNR=17
SONM pP **pP 22 00 17.7 +3.5**
comp=Z,3.3nm,0.8s,baz=259,slow=9.0,SNR=5.7
SONM LR LR 22 12 46.3
comp=Z,56nm,19.0s,baz=248,slow=40
comp=Z,2.2nm,0.6s
SONM Songino Array 28.17 55 P **P 21 59 51.1 +0.7**
ULN Ulaanbaatar 28.61 55 P **P 21 59 54.5 +0.2**
ULN Ulaanbaatar 28.61 55*ce*P **P 21 59 54.9 +0.5**
ULN pmax pmax
comp=Z,8.0nm,2.5s
ASF Jabal al Asfar 28.71 272 P **P 21 59 56.6 +1.3**
comp=Z,1.7nm,0.6s,baz=105,slow=12,SNR=3.5
comp=Z,1.7nm,0.6s
BR131 Keskin Array S 29.77 288 P **P 22 00 04.5 -0.2**
BR131 Keskin Array S 29.77 288 P **P 22 00 04.5 -0.2**
BR131 pmax pmax
comp=Z,4.0nm,0.6s
BRTR Keskin Array B 29.77 288 P **P 22 00 05.5 +0.7**
comp=Z,1.6nm,0.6s,baz=101,slow=9.4,SNR=14
BRTR pP **pP 22 00 31.6 +3.1**
comp=Z,1.9nm,0.6s,baz=97,slow=8.5,SNR=4.1
BRTR PcP **PcP 22 03 04.6 -1.4**
comp=Z,0.4nm,0.4s,baz=117,slow=1.9,SNR=4.7
comp=Z,1.6nm,0.6s
BRTR Keskin Array B 29.77 288 P **P 22 00 05.0 +0.3**
BRTR Keskin Array B 29.77 288 *i* P **P 22 00 05.8 +1.1**
BRTR pmax pmax
comp=Z,2.0nm,0.6s
CHTO Chiang Mai 29.88 118 P **P 22 00 07.4 +1.7**
CHTO Chiang Mai 29.88 118 P **P 22 00 07.4 +1.7**
CHTO pmax pmax
comp=Z,5.0nm,0.8s
MOS Moscow 29.96 321 *e*P **P 22 00 05.4 -0.6**
MOS *e* 22 01 09.2
MOS pmax pmax
comp=Z,33nm,1.1s
PRGR Permogore 30.03 336 *e*P **P 22 00 07.6 +1.1**
CMAR Chiang Mai Arr 30.12 119 P **P 22 00 09.4 +1.6**
comp=Z,1.0nm,0.3s,baz=300,slow=8.4,SNR=8.8
CMAR pP **pP 22 00 34.9 +3.3**
comp=Z,6.3nm,0.8s,baz=297,slow=8.6,SNR=5.2
comp=Z,1.0nm,0.3s
CMAR Chiang Mai Arr 30.12 119 *i* P **P 22 00 09.8 +2.0**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
PALK Pallekele 30.18 161 P **P 22 00 09.0 +0.6**
comp=Z,7.2nm,0.7s,baz=126,slow=3.6,SNR=4.2
PALK LR LR 22 13 37.3
comp=Z,36nm,19.7s,baz=125,slow=39
comp=Z,7.2nm,0.7s
PALK Pallekele 30.18 161 P **P 22 00 09.5 +1.1**
PALK Pallekele 30.18 161 P **P 22 00 09.5 +1.1**
PALK pmax pmax
comp=Z,76nm,1.5s
OBN Obninsk 30.25 319 LR LR 22 13 36.3
comp=Z,11nm,19.0s,baz=344,slow=39
OBN Obninsk 30.25 319 P **P 22 00 08.2 -0.3**
OBN Obninsk 30.25 319*ce*P **P 22 00 09.3 +0.8**
OBN *e**PP **pP 22 00 31.9 -0.1**
OBN *e* 22 01 10.3
OBN pmax pmax
comp=Z,12nm,0.5s
XAN Xi'an 30.64 83 P **P 22 00 13.8 +1.4**
XAN pP pP 22 00 38.5 +2.0
XAN sP sP 22 00 50.4 +1.5
XAN pmax pmax
comp=Z,10.0nm,0.9s
CSS Mathiatis 30.82 279 P **P 22 00 14.6 +0.7**
EIL Elat 31.13 268 LR LR 22 16 02.5
comp=Z,51nm,18.8s,baz=118,slow=42
HHC Hu-ho-hao-te 31.53 69 *e*P **P 22 00 22.4 +2.3**
HHC pmax pmax
comp=Z,14nm,0.9s
HHC pmax pmax
comp=Z,220nm,5.4s
KLMR Klimovskoe 31.75 331 *e*P **P 22 00 20.3 -1.4**
KLMR *e* 22 01 28.0
KLMR pmax pmax
comp=Z,7.0nm,0.6s
KLMR Klimovskoe 31.75 331 *e*P **P 22 00 20.3 -1.4**
KLMR AMP 22 00 23.4
comp=Z,7.0nm,0.6s
KLMR *e*PP **PnPn 22 01 28.1 -1.8**
ENH Enshi 32.27 90 P **P 22 00 28.3 +1.6**
ENH lAmb lAmb 22 00 30.1
comp=Z,16nm,1.1s
ELL Elmali 33.13 283 P **P 22 00 34.7 +0.5**
ELL Elmali 33.13 283 P **P 22 00 34.7 +0.5**
ELL pmax pmax
comp=Z,49nm,0.7s
MILM Milestii Mici 33.15 302 ⇓ *i* P **P 22 00 35.4 +1.3**
comp=Z,30nm,0.9s
MILM Milestii Mici 33.15 302 ⇑P **P 22 00 35.9 +1.8**
MILM Milestii Mici 33.15 302*d i* P **P 22 00 35.4 +1.3**
MILM pmax pmax
comp=Z,30nm,0.9s
AKASG Malin Array Be 33.27 309 P **P 22 00 35.4 +0.2**
comp=Z,5.9nm,0.5s,baz=76,slow=6.3,SNR=44
AKASG LR LR 22 17 37.3
comp=Z,24nm,18.3s,baz=103,slow=42
comp=Z,5.9nm,0.5s
AKASG Malin Array Be 33.27 309 P **P 22 00 35.2 +0.1**
AKASG lAmb lAmb 22 00 36.3
comp=Z,15nm,0.7s
AKBB Malin Array Si 33.27 309 P **P 22 00 35.3 +0.2**
AKBB Malin Array Si 33.27 309*ce*P **P 22 00 35.7 +0.6**
KIEV Kiev 33.28 309 P **P 22 00 35.0 -0.2**
SORM Soroca 33.54 304 ⇑P **P 22 00 37.8 +0.3**
SORM Soroca 33.54 304 ⇑P **P 22 00 37.8 +0.3**
NRIK Noril'sk 34.21 10 P **P 22 00 43.9 +0.9**
comp=Z,7.9nm,0.7s,baz=198,slow=6.5,SNR=11
comp=Z,7.9nm,0.7s
NRIK Noril'sk 34.21 10 P **P 22 00 43.6 +0.6**
NRIK lAmb lAmb 22 00 46.0
comp=Z,10nm,0.8s
NRIK Noril'sk 34.21 10 ⇑ *e*P **P 22 00 43.9 +0.9**
NRIK pmax pmax
comp=Z,11nm,0.7s
HNS HongShan 34.45 75 ⇑P **P 22 00 47.7 +2.2**
HNS pmax pmax
comp=Z,9.0nm,0.7s
VRI Vrincioaia 34.56 300 ⇑P **P 22 00 50.4 +4.0**
VRI Vrincioaia 34.56 300 ⇑P **P 22 00 50.4 +4.0**
PLOR Plostina 34.62 300 ⇑P **P 22 00 48.9 +2.0**
PLOR Plostina 34.62 300 ⇑P **P 22 00 48.9 +2.0**
TESR Tescani 34.62 301 ⇑P **P 22 00 48.0 +1.1**
KMPD K-Podol'skiy 34.83 305 P **P 22 00 50.0 +1.4**
HORU Horodok 34.89 306 P **P 22 00 49.8 +0.6**
COVR Voineasa-Covas 34.93 300 ⇓P **P 22 00 51.3 +1.7**
BIZ Bicaz 35.00 302 ⇓P **P 22 00 51.6 +1.4**
BJT Baijiatuau 35.11 70 P **P 22 00 52.8 +1.6**
BJT lAmb lAmb 22 00 53.9
comp=Z,6.8nm,0.7s
BJT Baijiatuau 35.11 70 P **P 22 00 52.8 +1.6**
BJT pmax pmax
comp=Z,7.0nm,0.7s
BJI Beijing 35.12 70 P **P 22 00 53.0 +1.8**
BJI pmax pmax
comp=Z,9.0nm,0.7s
MLR Muntele Rosu 35.12 299 ⇑P **P 22 00 53.6 +2.3**
MLR Muntele Rosu 35.12 299 LR LR 22 19 30.1
comp=Z,56nm,18.9s,baz=132,slow=43
MLR Muntele Rosu 35.12 299 P **P 22 00 52.2 +0.9**
MLR lAmb lAmb 22 00 56.3
comp=Z,20nm,0.9s
MLR Muntele Rosu 35.12 299 ⇑P **P 22 00 53.6 +2.3**
DOPR Dopca 35.50 300 ⇑P **P 22 00 56.4 +2.0**
NACGM Naroch 35.53 316 ⇓ *e*P **P 22 00 54.9 +0.4**
baz=99
KARP Karpathos 35.57 282 P **P 22 00 55.3 +0.1**
BURAR Bucovina Array 35.62 303 ⇑P **P 22 00 56.7 +1.2**
BURAR Bucovina Array 35.62 303 P **P 22 00 56.1 +0.6**
BURAR lAmb lAmb 22 00 58.9
comp=Z,8.2nm,0.8s
BURAR Bucovina Array 35.62 303 ⇑P **P 22 00 56.7 +1.2**
BUR08 Bucovina Ar. S 35.63 303 P **P 22 00 56.4 +0.7**
BUR08 lAmb lAmb 22 00 58.7
comp=Z,5.3nm,0.8s
IDID Didziasalis 35.65 316 *e*P **P 22 00 57.1 +1.6**
VOIR 35.75 299 ⇑P **P 22 00 59.0 +2.4**
VOIR 35.75 299 ⇑P **P 22 00 59.0 +2.4**
IIGN Ignalina 35.94 316 *e*P **P 22 00 59.4 +1.4**
ISAL Salakas 36.05 317 *e*P **P 22 00 59.7 +0.8**
ARCR ARCALIA 36.20 302 ⇓P **P 22 01 02.8 +2.4**
VSU Vasula 36.49 322 *i* P **P 22 01 02.2 -0.4**
VSU pmax pmax
comp=Z,41nm,0.9s
LVV L'vov 36.49 307 *e*P **P 22 01 03.9 +1.1**
LOT Lotru 36.65 299 ⇑P **P 22 01 05.7 +1.3**
SANT Santorini 36.71 284 P **P 22 01 04.3 -0.6**
SANT lAmb lAmb 22 01 18.3
comp=Z,6.6nm,1.0s
CJR Cluj-Napoca 36.72 302 ⇑P **P 22 01 06.9 +2.0**
CJR Cluj-Napoca 36.72 302 ⇑P **P 22 01 06.9 +2.0**
BMR Baia Mare 36.78 303 P **P 22 01 08.6 +3.3**
BMR pmax pmax
comp=Z,24nm,1.1s
PABE Paberze 37.23 316 P **P 22 01 09.0 +0.1**
PABE Paberze 37.23 316 *e*P **P 22 01 10.2 +1.3**
DEV Deva 37.23 300 P **P 22 01 12.0 +2.8**
DEV pmax pmax
comp=Z,10.0nm,1.0s
VTS Vitosha 37.27 295 ⇑P **P 22 01 10.9 +1.2**
VTS Vitosha 37.27 295 P **P 22 01 10.1 +0.4**
VTS Vitosha 37.27 295 ⇑P **P 22 01 10.9 +1.2**
VSVD Vaisvydziai 37.34 317 *e*P **P 22 01 10.9 +1.0**
IDI Anoyia 37.43 283 ⇑P **P 22 01 09.4 -1.6**
IDI Anoyia 37.43 283 P **P 22 01 10.7 -0.3**
comp=Z,4.0nm,0.5s,baz=82,slow=8.4,SNR=15
comp=Z,4.0nm,0.5s
IDI Anoyia 37.43 283 P **P 22 01 10.3 -0.7**
IDI lAmb lAmb 22 01 13.3
comp=Z,4.4nm,0.5s
SUW Suwalki 37.44 314 P **P 22 01 10.9 +0.2**
SUW lAmb lAmb 22 01 11.9
comp=Z,12nm,0.6s
SUW Suwalki 37.44 314 P **P 22 01 11.0 +0.2**
SUW pmax pmax
comp=Z,12nm,0.6s
KOLS Kolonicke sedl 37.61 305 *e*P **P 22 01 13.6 +1.3**
KOLS pmax pmax
comp=Z,7.0nm,0.8s
KOLS Kolonicke sedl 37.61 305 *e*P **P 22 01 13.6 +1.3**
LVZ Lovozero 37.70 338 P **P 22 01 13.2 +0.4**
LVZ Lovozero 37.70 338 ⇑P **P 22 01 13.3 +0.4**
SRIT Nakonsritamara 37.72 130 P **P 22 01 15.1 +1.5**
SRIT lAmb lAmb 22 01 41.7
comp=Z,14nm,1.2s
FIA1 FINESS Array S 37.77 326 P **P 22 01 14.1 +0.7**
FIA1 lAmb lAmb 22 01 32.5
comp=Z,12nm,1.1s
FINES FINESS Array B 37.77 326 P **P 22 01 14.3 +0.9**
comp=Z,3.6nm,0.4s,baz=118,slow=8.8,SNR=70
FINES LR LR 22 17 42.6
comp=Z,52nm,21.5s,baz=84,slow=37
comp=Z,3.6nm,0.4s
FINES FINESS Array B 37.77 326 P **P 22 01 14.2 +0.7**
APA Apatity 37.88 337 ⇓ *i* P 22 01 09.3 -5.0
APA pmax pmax
comp=Z,4.0nm,1.2s
APA MLR MLR
comp=Z,200nm,15.0s
MTSE Matsula 38.03 321 *e*P **P 22 01 16.5 +0.9**
CRVS Cervenica-Dubn 38.14 305 *e*PP PP 22 02 48.2 +2.4
BZS Buzias 38.15 300 ⇑P **P 22 01 18.3 +1.4**
BZS Buzias 38.15 300 ⇑P **P 22 01 18.3 +1.4**
MEF Metsahovi 38.16 324 *e*P **P 22 01 17.7 +1.0**
STHS Stebnicka Huta 38.29 306 *e*PP PP 22 02 53.6 +6.2
PBUR Paburge 38.46 317 *e*P **P 22 01 20.9 +1.6**
NIE Niedzica 38.91 306 *e*P **P 22 01 25.2 +2.0**
FNA Florina 38.92 292 P **P 22 01 23.3 -0.2**
FNA Florina 38.92 292 P **P 22 01 23.3 -0.2**
FNA pmax pmax
comp=Z,4.0nm,1.0s
NJ2 Nanjing 39.19 82 *e*P **P 22 01 23.2 -2.5**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
OUL Oulu 39.25 331 P **P 22 01 26.1 +0.3**
OUL pmax pmax
comp=Z,19nm,1.0s
LANS Liptovska Anna 39.45 306 *e*P **P 22 01 30.8 +3.0**
LANS Liptovska Anna 39.45 306 *e*P **P 22 01 30.8 +3.0**
RAF Rauma 39.63 324 *e*P **P 22 01 30.0 +1.1**
KOLL Kolacno 40.17 305 *e*P **P 22 01 36.0 +2.3**
SRO2 Moca 40.22 303 *e*P **P 22 01 36.0 +1.9**
SRO2 pmax pmax
comp=Z,16nm,1.0s
SRO2 Moca 40.22 303 *e*P **P 22 01 36.0 +1.9**
MAUC Maruska 40.52 306 *e*P **P 22 01 37.9 +1.3**
MAUC *ex* x 22 03 15.0
KOVH Kovagotottos 40.56 301 P **P 22 01 37.9 +1.0**
JAVC Velka Javorina 40.65 305 *e*P **P 22 01 40.4 +2.7**
MORC Moravsky Berou 40.69 307 ⇑P **P 22 01 39.4 +1.4**
MORC Moravsky Berou 40.69 307 P **P 22 01 38.2 +0.2**
MORC lAmb lAmb 22 01 41.4
comp=Z,8.6nm,1.0s
MORC Moravsky Berou 40.69 307 ⇑P **P 22 01 39.4 +1.4**
MORC Moravsky Berou 40.69 307 *e*P **P 22 01 39.6 +1.6**
GKP Gorka Klasztor 40.90 312 *e*P **P 22 01 40.4 +0.9**
GKP Gorka Klasztor 40.90 312 *e*P **P 22 01 40.9 +1.4**
MODS Modra-Piesok 40.93 304 *e*PP PP 22 03 25.1 +9.0
KEV Kevo 41.05 338 P **P 22 01 41.4 +0.8**
KEV lAmb lAmb 22 01 42.3
comp=Z,16nm,1.0s
KEV Kevo 41.05 338 P **P 22 01 41.4 +0.8**
KEV pmax pmax
comp=Z,16nm,1.0s
KRLC Kraliky 41.18 307 *e*P **P 22 01 43.3 +1.3**
KRLC *e* 22 03 16.2
KRLC Kraliky 41.18 307 *e*P **P 22 01 43.3 +1.3**
KRLC *e*PP **PP 22 03 16.2 -2.5**
VRAC Vranov 41.33 306 *e*P **P 22 01 45.4 +2.2**
ARA0 ARCESS Array S 41.39 338 *e*P **P 22 01 44.6 +1.2**
ARCES ARCESS Array B 41.39 338 P **P 22 01 44.6 +1.2**
comp=Z,14nm,0.5s,baz=113,slow=8.0,SNR=156
ARCES LR LR 22 19 59.6
comp=Z,85nm,19.5s,baz=124,slow=37
comp=Z,14nm,0.5s
ARCES ARCESS Array B 41.39 338 P **P 22 01 44.5 +1.1**
ARCES lAmb lAmb 22 01 45.4
comp=Z,18nm,0.8s
DPC Dobruska-Polom 41.46 308 *e*P **P 22 01 44.4 +0.1**
DPC *e* 22 03 23.0
DPC Dobruska-Polom 41.46 308 *e*P **P 22 01 44.4 +0.1**
DPC *e*PP **PP 22 03 23.0 +1.2**
KRUC Moravsky 41.48 306 *e*P **P 22 01 46.6 +2.2**
OSTC Ostas 41.52 308 *e*P **P 22 01 47.1 +2.3**
OSTC *e*PP **PP 22 03 20.7 -1.7**
CHVC Chvalec 41.62 308 *e*P **P 22 01 45.8 +0.2**
CHVC *ex* x 22 03 33.2
UPC Upice 41.65 308 *e*P **P 22 01 47.4 +1.6**
UPC Upice 41.65 308 *e*P **P 22 01 47.4 +1.6**

KTK1 Kautokeino 41.87 336 *e*P P **22 01 47.8 +0.5**
CONA Conrad Observa 41.91 304 P P **22 01 48.7 +0.6**
comp=Z,2.3nm,0.8s
ZEA Zeya 41.94 47 *e*P P **22 01 49.6 +1.5**
ZEA pmax pmax
comp=Z,10.0nm,1.0s
PSI Prapat 41.97 136 P P **22 01 49.2 +0.3**
comp=Z,3.8nm,0.5s,baz=11,slow=10,SNR=4.4
comp=Z,3.8nm,0.5s
TREC Trest 42.05 306 *e*P P **22 01 50.4 +1.3**
TREC Trest 42.05 306 *e*P P **22 01 50.4 +1.3**
BSD Bornholm Skovb 42.33 315 *e*P P **22 01 52.1 +0.9**
HAMF Hammerfest 42.47 339 *e*P P **22 01 53.5 +1.3**
GSI Gunungsitoli 42.48 139 P P **22 01 54.6 +1.7**
SOKA Soboth 42.60 302 *e*P P **22 01 54.2 +0.5**
comp=Z,2.6nm,0.6s
PRU Pruhonice 42.62 307 *e*P P **22 01 54.3 +0.6**
PRU Pruhonice 42.62 307 *e*P P **22 01 54.3 +0.6**
CKRC Cesky Krumlov 42.86 305 *e*P P **22 01 57.3 +1.6**
CKRC *ex* x 22 03 34.4
BRG Berggiesshubel 42.95 308 *e*P P **22 01 57.7 +1.3**
BRG Amp 22 02 00.3
comp=Z,13nm,1.2s
BRG *ex* x 22 03 46.3
BRG Amp 22 03 48.1
comp=Z,19nm,1.7s
BRG Berggiesshubel 42.95 308 *e*P P **22 01 57.6 +1.3**
BRG *e* 22 03 46.3
BRG pmax pmax
comp=Z,13nm,1.2s
DEL Delary 42.98 317 *e*P P **22 01 57.0 +0.6**
MOA Molln 42.99 304 *e*P P **22 01 56.6 -0.1**
comp=Z,0.3nm,0.4s
JETT Jettan, Norway 43.01 336 *e*P P **22 01 57.6 +1.0**
CUC Castrocucco 43.24 292 P P **22 01 58.7 -0.1**
CUC IAmb IAmb 22 02 04.6
comp=Z,8.9nm,0.7s
GERES GERESS Array B 43.26 305 P P **22 01 59.5 +0.6**
comp=Z,0.7nm,0.8s,baz=134,slow=3.9,SNR=6.4
GERES PP **PP 22 03 40.7 -0.5**
comp=Z,0.6nm,0.8s,baz=68,slow=11,SNR=2.0
GERES GERESS Array B 43.26 305 P P **22 01 59.3 +0.4**
KHC Kasperske Hory 43.32 306 P P **22 01 59.1 -0.2**
KHC Kasperske Hory 43.32 306 *e*P P **22 02 00.9 +1.6**
KHC *e* 22 03 42.5
KHC Kasperske Hory 43.32 306 *e*P P **22 02 00.9 +1.6**
KHC *e*PP **PP 22 03 42.5 +0.8**
CLL Collm 43.52 309 P P **22 02 00.8 0.0**
CLL Collm 43.52 309 *e*P P **22 02 01.0 +0.1**
CLL *e**PP **pP 22 02 27.0 +1.5**
CLL pmax pmax
comp=Z,9.0nm,1.1s
CLL Collm 43.52 309 *e*P P **22 02 01.0 +0.1**
comp=Z,9.0nm,1.1s
CLL *e*pP **pP 22 02 27.0 +1.5**
CLL *e*PP **PP 22 03 43.0 -0.8**
CLL *ex* x 22 03 56.0
CLL *e*pPP 22 04 05.0
TRO Tromso 43.52 336 *e*P P **22 02 01.3 +0.7**
YAK Yakutsk 43.91 35 P P **22 02 02.9 -0.8**
comp=Z,9.7nm,0.5s,baz=201,slow=0.8,SNR=9.5
YAK pP **pP 22 02 30.0 +1.0**
comp=Z,7.2nm,0.6s,baz=160,slow=3.6,SNR=3.1
comp=Z,9.7nm,0.5s
YAK Yakutsk 43.91 35 P P **22 02 03.0 -0.8**
YAK Yakutsk 43.91 35*ce*P P **22 02 02.7 -1.1**
YAK pmax pmax
comp=Z,17nm,0.7s
FAUS Fauske 44.07 333 *e*P P **22 02 05.9 +0.9**
MOR8 Moi Rana 44.09 331 *e*P P **22 02 05.2 -0.1**
STEI Steigen 44.24 333 *e*P P **22 02 07.1 +0.7**
NC405 NORSAR Array S 44.44 323 P P **22 02 08.4 +0.2**
NC602 NORSAR Array S 44.49 323 P P **22 02 08.4 -0.1**
NC602 NORSAR Array S 44.49 323 *e*P P **22 02 08.7 +0.2**
NORES NORESS Array B 44.49 323 P P **22 02 08.6 +0.1**
KS19 Wonju Array Si 44.58 71 P P **22 02 10.2 +0.7**
KS19 IAmb IAmb 22 02 11.6
comp=Z,9.2nm,0.9s
KSAR Wonju Array Be 44.61 71 P P **22 02 10.2 +0.5**
KSAR Wonju Array Be 44.61 71 P P **22 02 10.2 +0.5**
KSRS Korea Array 44.64 71 P P **22 02 10.2 +0.3**
comp=Z,4.4nm,0.7s,baz=280,slow=6.5,SNR=27
KSRS LR LR 22 22 16.2
comp=Z,17nm,21.5s,baz=70,slow=38
comp=Z,4.4nm,0.7s
SEHB SEOHWA 44.66 70 P P **22 02 11.3 +1.1**
SEHB IAmb IAmb 22 02 12.3
comp=Z,9.0nm,0.8s
NB2 NORSAR Subarra 44.68 323 P P **22 02 10.1 0.0**
baz=94,slow=7.9
NB2 NORSAR Subarra 44.68 323 P P **22 02 10.1 0.0**
comp=Z,13nm,0.5s,baz=94,slow=7.9
NOA NORSAR Array B 44.68 323 P P **22 02 10.0 0.0**
comp=Z,14nm,0.6s,baz=96,slow=7.8,SNR=152
NOA LR LR 22 21 35.5
comp=Z,28nm,18.4s,baz=100,slow=37
comp=Z,14nm,0.6s
KONS Konsvik 44.69 331 *e*P P **22 02 10.5 +0.6**
STOK Stokkvaagen 44.69 331 *e*P P **22 02 10.7 +0.7**
NSS Namsos 44.78 328 *e*P P **22 02 11.2 +0.5**
GRA1 Grafenberg Arr 44.79 307 P P **22 02 11.3 +0.3**
GRA1 IAmb IAmb 22 02 16.8
comp=Z,12nm,1.2s
GRF Grafenberg Arr 44.79 307 P P **22 02 11.4 +0.3**
GRF pmax pmax
comp=Z,12nm,1.2s
TWG Pinlang 44.81 93 P P **22 02 15.0 +3.4**
NAO01 NORSAR Array S 44.82 323 P P **22 02 10.8 -0.3**
WTTA Wattenberg 44.83 303 *e*P P **22 02 11.7 +0.1**
comp=Z,55nm,0.0s
OSL Oslo 44.84 322 *e*P P **22 02 11.7 +0.5**
KSCHJ Chungju 44.84 72 P P **22 02 11.9 +0.2**
KSCHJ IAmb IAmb 22 02 13.2
comp=Z,8.7nm,0.9s
LOF Lofoten 44.91 333 *e*P P **22 02 12.1 +0.4**
MURB Monte Urbino 44.92 298 P P **22 02 12.5 +0.2**
MURB IAmb IAmb 22 02 51.7
comp=Z,20nm,1.1s
KLR Kul'dur 44.98 54 P P **22 02 13.3 +0.7**
comp=Z,2.1nm,0.5s,baz=272,slow=6.7,SNR=14
KLR LR LR 22 22 36.6
comp=Z,39nm,18.4s,baz=220,slow=38
comp=Z,2.1nm,0.5s
KLR Kul'dur 44.98 54*ce*P P **22 02 13.5 +0.9**
KLR pmax pmax
comp=Z,2.0nm,0.6s
CTI Castel Tesino 45.01 302 P P **22 02 12.9 -0.1**
CTI IAmb IAmb 22 02 14.6
comp=Z,10nm,1.3s
CTI Castel Tesino 45.01 302 P P **22 02 12.9 -0.1**
CTI pmax pmax
comp=Z,10.0nm,1.3s
SQTA Sankt Quirin 45.12 303 *e*P P **22 02 13.6 -0.3**
comp=Z,3.7nm,0.6s
SQTA *i* P **PcP 22 03 52.0 -0.7**
comp=Z,1.7nm,0.4s
MOTA Moosalm 45.18 304 *e*P P **22 02 14.0 -0.3**
comp=Z,0.1nm,0.2s
MOTA *e*P **PcP 22 03 52.0 -0.9**
comp=Z,3.2nm,0.9s
HOPEN Hopen 45.21 346 *e*P P **22 02 15.2 +1.3**
KONO Kongsberg 45.39 321 P P **22 02 15.9 +0.2**
KONO IAmb IAmb 22 02 17.6
comp=Z,12nm,0.7s
KONO Kongsberg 45.39 321*ce*P P **22 02 15.2 -0.4**
KONO pmax pmax
comp=Z,11nm,1.3s
KONO Kongsberg 45.39 321 *e*P P **22 02 15.8 +0.2**
FETA Feichten 45.48 303 *e*P P **22 02 16.0 -0.7**
comp=Z,2.6nm,0.5s
FETA *i* P **PcP 22 03 53.5 -0.5**
comp=Z,2.9nm,0.6s
BJO1 Bjornoya 45.49 343 *e*P P **22 02 17.1 +0.9**
MSHR Mys Shultsa 45.73 63*ce*P P **22 02 20.2 +1.6**
MSHR pmax pmax
comp=Z,7.0nm,1.3s
DOMB Dombas 45.79 324 *e*P P **22 02 19.3 +0.5**
TIXI Tiksi 45.79 22 P P **22 02 18.7 +0.1**
comp=Z,6.7nm,0.3s,baz=268,slow=12,SNR=60
comp=Z,6.7nm,0.3s
TIXI Tiksi 45.79 22 P P **22 02 18.7 +0.1**
TIXI IAmb IAmb 22 02 19.4
comp=Z,9.4nm,0.8s
SALO Salr 45.86 301 P P **22 02 20.2 +0.6**
SALO IAmb IAmb 22 02 51.1
comp=Z,11nm,0.8s
DAVA Damuels 46.01 304 *e*P P **22 02 20.3 -0.5**
comp=Z,5.9nm,0.5s
SKAR Skarslia 46.08 322 *e*P P **22 02 22.1 +1.0**
DAVOX Davos/Dischmat 46.09 303 LR LR 22 27 47.1
comp=Z,38nm,19.0s,baz=270,slow=44
TUE Stuetta 46.51 303 P P **22 02 24.3 -0.6**
MOL Molde 46.53 325 *e*P P **22 02 25.1 +0.7**
SNART Snartemo 46.61 319 *e*P P **22 02 26.3 +1.1**
JTU Tsushima 46.69 74 P P **22 02 27.0 +0.9**
JTU IAmb IAmb 22 02 32.3
comp=Z,16nm,1.1s
AKN Aaknes 46.77 325 *e*P P **22 02 27.7 +1.3**
ODD1 Odda 46.90 321 *e*P P **22 02 28.5 +1.0**
HSPB Hornsund (broa 47.35 345 *e*P P **22 02 32.2 +1.5**
ASK Askoy 47.61 322 *e*P P **22 02 33.8 +0.9**
SPB2 Spitsbergen Ar 47.70 347 P P **22 02 34.8 +1.4**
SPB2 IAmb IAmb 22 03 03.3
comp=Z,39nm,1.4s
SPA0 Spitsbergen Ar 47.70 347 *e*P P **22 02 34.4 +0.9**
SPITS Spitsbergen Ar 47.70 347 P P **22 02 35.0 +1.5**
SPITS pmax pmax
comp=Z,25nm,1.1s
BTNL Ternell 47.92 309 *d*P P **22 02 37.6 +2.1**
comp=Z,4.4nm,0.9s
SENIN Lac Senin/Sane 47.92 303 P P **22 02 35.6 -0.3**
MEM Membach 47.99 309 *d*P P **22 02 38.1 +2.1**
comp=Z,5.3nm,1.0s
MEM *d*pP **pP 22 03 03.1 +1.9**
WLF Walferdange 48.05 308 P P **22 02 37.0 +0.5**
WLF IAmb IAmb 22 02 40.5
comp=Z,9.6nm,0.8s
WLF Walferdange 48.05 308 P P **22 02 37.0 +0.5**
WLF pmax pmax
comp=Z,10.0nm,0.8s
WLF Walferdange 48.05 308 *d*P P **22 02 38.6 +2.1**
comp=Z,7.9nm,0.9s
HAU Haudompre 48.23 305 *e*P P **22 02 38.0 +0.1**
HAU pmax pmax
comp=Z,3.0nm,0.6s
LPG La Plagne 48.48 302 *e*P P **22 02 40.2 -0.1**
LPG pmax pmax
comp=Z,3.0nm,0.6s
LPL La Plagne 48.49 302 *e*P P **22 02 39.6 -0.6**
LPL pmax pmax
comp=Z,1.0nm,0.2s
BNI Bardonecchia 48.63 301 P P **22 02 41.5 +0.3**
BNI Bardonecchia 48.63 301 P P **22 02 41.5 +0.3**
MBDF Montbardon 48.65 301 *e*P P **22 02 42.9 +1.5**
MBDF pmax pmax
comp=Z,7.0nm,1.0s
CABF La Chapelle 48.69 304 *e*P P **22 02 42.8 +1.2**
CABF pmax pmax
comp=Z,11nm,1.1s
KBS Kingsbay 48.82 347 P P **22 02 43.7 +1.7**
KBS IAmb IAmb 22 02 45.1
comp=Z,20nm,0.8s
KBS Kingsbay 48.82 347 P P **22 02 43.7 +1.7**
KBS pmax pmax
comp=Z,20nm,0.9s
KBS Kingsbay 48.82 347 *e*P P **22 02 43.1 +1.1**
BMRD Maredsous 48.82 309 *d*P P **22 02 44.3 +1.9**
comp=Z,5.6nm,1.0s
BMRD *d*PcP **PcP 22 04 03.6 -1.9**
KMBO Kilima Mbogo 48.96 228 P P **22 02 45.7 +1.5**
comp=Z,2.0nm,0.7s,baz=42,slow=14,SNR=6.2
comp=Z,2.0nm,0.7s
KMBO Kilima Mbogo 48.96 228 P P **22 02 45.6 +1.4**
KMBO Kilima Mbogo 48.96 228 P P **22 02 45.7 +1.5**
BAIF Baives 49.22 308 *e*P P **22 02 46.8 +1.3**
BAIF pmax pmax
comp=Z,13nm,1.0s
KEST Kesra 49.37 289 P P **22 02 47.8 +0.8**
comp=Z,2.3nm,0.6s,baz=295,slow=1.5,SNR=11
comp=Z,2.3nm,0.6s
KEST Kesra 49.37 289 P P **22 02 47.2 +0.3**
KEST IAmb IAmb 22 03 18.4
comp=Z,5.2nm,0.8s
JHS Saijyo 49.40 72 P P **22 02 47.3 +0.2**
JHS IAmb IAmb 22 02 48.3
comp=Z,19nm,1.3s
KIBK Kibwezi 49.46 226 P P **22 02 48.9 +1.1**
KIBK IAmb IAmb 22 02 50.4
comp=Z,8.0nm,0.7s
KSM Kuching 50.00 125 P P **22 02 53.3 +1.6**
KSM IAmb IAmb 22 03 22.4
comp=Z,12nm,1.2s
LOR Lormes 50.03 305 *e*P P **22 02 51.9 +0.2**
LOR pmax pmax
comp=Z,3.0nm,0.9s
SSB Saint Sauveur 50.05 302 P P **22 02 52.1 +0.2**
SSB IAmb IAmb 22 03 20.6
comp=Z,13nm,1.5s
SSB Saint Sauveur 50.05 302 P P **22 02 52.1 +0.2**
SSB pmax pmax
comp=Z,13nm,1.5s
VIVF Saint-Julien-l 50.06 302 *e*P P **22 02 53.0 +1.0**
VIVF pmax pmax
comp=Z,3.0nm,0.6s
SMF Signal de Mont 50.19 304 *e*P P **22 02 52.9 0.0**
SMF pmax pmax
comp=Z,6.0nm,0.8s
SSF Saint Saulge 50.31 305 *e*P P **22 02 54.7 +0.9**
SSF pmax pmax
comp=Z,8.0nm,1.1s
AVF Avril sur Loir 50.48 304 *e*P P **22 02 55.0 0.0**
AVF pmax pmax
comp=Z,5.0nm,0.7s
CLF Chambon-Foret 50.90 306 P P **22 02 58.4 +0.2**
JSD Sado 52.23 67 P P **22 03 08.1 -0.2**
JSD IAmb IAmb 22 03 09.1
comp=Z,18nm,1.2s
INU Inuyama 52.25 70 P P **22 03 09.3 +0.9**
INU IAmb IAmb 22 03 10.8
comp=Z,8.9nm,0.9s
LDF La Druitiere 52.31 307 *e*P P **22 03 08.3 -0.3**
LDF pmax pmax
comp=Z,5.0nm,0.7s
FLN La Foliniere 52.49 308 *e*P P **22 03 11.2 +1.2**
FLN pmax pmax
comp=Z,37nm,1.6s
EKA Eskdalemuir Ar 52.60 316 P P **22 03 10.8 +0.1**
ESK Eskdalemuir 52.63 316 P P **22 03 11.4 +0.5**
ESK Eskdalemuir 52.63 316 P P **22 03 11.4 +0.5**
ESK pmax pmax
comp=Z,31nm,1.5s
MBAR Mbarara 52.67 235 P P **22 03 12.1 +0.2**
MBAR IAmb IAmb 22 03 12.9
comp=Z,8.2nm,0.7s
MBAR Mbarara 52.67 235*ce*P P **22 03 12.6 +0.6**
MBAR pmax pmax
comp=Z,11nm,1.3s
MJB9 Matsu-Tunnel 52.72 69 P P **22 03 12.1 +0.2**
MJB9 IAmb IAmb 22 03 13.4
comp=Z,10nm,0.8s
MAJO Matsushiro 52.72 69 P P **22 03 12.1 +0.2**
MAJO IAmb IAmb 22 03 13.4
comp=Z,10.0nm,0.8s
MAJO Matsushiro 52.72 69 P P **22 03 12.1 +0.2**
MAJO pmax pmax
comp=Z,10.0nm,0.8s
MJAR Matsushiro Arr 52.72 69 P P **22 03 12.4 +0.4**
comp=Z,7.1nm,0.9s,baz=294,slow=7.2,SNR=26
comp=Z,7.1nm,0.9s
MJAR Matsushiro Arr 52.72 69 P P **22 03 11.9 -0.1**
MYLDM Lahad Datu 53.13 114 P P **22 03 16.1 +1.0**
MYLDM IAmb IAmb 22 03 33.4
comp=Z,20nm,1.2s
EPF Esparros 53.58 300 *e*P P **22 03 19.5 +1.3**
EPF pmax pmax
comp=Z,13nm,1.6s
NOR Nord 54.00 350 *e*P P **22 03 21.4 +0.8**
NOR IAmb IAmb 22 03 25.8
comp=Z,5.4nm,0.9s
JMM Marumori 54.17 66 P P **22 03 22.5 +0.1**
ETSF Etsaut 54.25 301 *e*P P **22 03 22.6 -0.5**
ETSF pmax pmax
comp=Z,4.0nm,0.5s
JYT Yasato 54.33 68 P P **22 03 23.2 -0.4**
SEY Seymchan 54.37 34*ce*P P **22 03 24.5 +1.0**
SEY pmax pmax
comp=Z,13nm,2.5s
ERM Erimo 54.43 60 P P **22 03 25.6 +1.3**
ERM Erimo 54.43 60 P P **22 03 25.6 +1.3**
ERM pmax pmax
comp=Z,24nm,1.2s
QUIF Quistinic 54.45 307 *e*P P **22 03 24.9 +0.6**
QUIF pmax pmax
comp=Z,19nm,1.3s
SJPF Ste Jean 54.64 301 *e*P P **22 03 27.9 +2.1**
SJPF pmax pmax
comp=Z,24nm,1.8s
DSB Dublin 54.93 314 P P **22 03 28.3 +0.6**
DAG Danmarks Havn 54.95 344 *i* P P **22 03 28.0 +0.5**
DAG IAmb IAmb 22 03 30.0
comp=Z,22nm,0.8s
DBG Daneborg 55.82 341 *i* P P **22 03 34.6 +0.8**
DBG IAmb IAmb 22 03 36.6
comp=Z,7.0nm,0.6s
MPSI Mapaga 57.44 117 P P **22 03 48.1 +2.0**
comp=Z,4µmcomp=Z,31nm,1.0s
TOLI2 Tolitoli 57.55 116 P P **22 03 47.9 +1.1**
TOLI2 IAmb IAmb 22 03 48.9
comp=Z,7.3nm,0.6s
ESDC Sonseca Array 57.79 298 P P **22 03 48.2 -0.1**
comp=Z,1.2nm,0.8s,baz=66,slow=6.8,SNR=13
ESDC pP **pP 22 04 15.3 +1.0**
comp=Z,2.2nm,0.9s,baz=56,slow=7.4,SNR=5.2
comp=Z,1.2nm,0.8s
ESDC Sonseca Array 57.79 298 P P **22 03 47.4 -1.0**
BILL Bilibino 58.60 26 P P **22 03 53.8 +0.4**
BILL IAmb IAmb 22 03 54.9
comp=Z,8.3nm,1.0s
BILL Bilibino 58.60 26*de*P P **22 03 54.0 +0.6**
BILL *e**PP **pP 22 04 18.6 -0.8**
BILL *e* 22 06 04.4
BILL pmax pmax
comp=Z,14nm,2.5s
MRSI Marisa 58.82 115 P P **22 03 57.8 +2.1**
comp=Z,55nm,0.9s
BORG Borgarnes 58.88 330 P P **22 03 57.9 +2.5**
BORG Borgarnes 58.88 330 P P **22 03 57.9 +2.5**
BORG pmax pmax
comp=Z,55nm,1.7s
APSI Ampana 59.56 117 P P **22 04 02.4 +1.6**
comp=Z,21nm,1.0s
ABPO Ambohimpanom 59.62 207 P P **22 04 02.0 +0.8**
ABPO IAmb IAmb 22 04 03.0
comp=Z,11nm,0.7s
ABPO Ambohimpanom 59.62 207 P P **22 04 02.0 +0.8**
ABPO pmax pmax
comp=Z,11nm,0.7s
SUMG Summit 61.30 341 P P **22 04 13.5 +1.2**
SUMG Summit 61.30 341 P P **22 04 13.5 +1.2**
SUMG pmax pmax
comp=Z,22nm,0.7s
SUMG Summit 61.30 341 *i* P P **22 04 13.0 +0.7**
SUMG IAmb IAmb 22 04 15.3
comp=Z,22nm,0.7s
VOI Vohitsoka 62.44 206 P P **22 04 21.1 +0.9**
EUNU Eureka 63.17 356 P P **22 04 25.5 +1.3**
ICESG Greenland Ices 63.45 338 *i* P P **22 04 28.1 +1.5**
ICESG IAmb IAmb 22 04 29.4
comp=Z,14nm,0.9s
FOMA Nahampoana Res 65.21 204 P P **22 04 39.1 +1.0**
LSZ Lusaka 65.58 227 P P **22 04 41.2 +0.3**
LSZ IAmb IAmb 22 04 41.6
comp=Z,7.9nm,0.7s
LSZ Lusaka 65.58 227 P P **22 04 41.2 +0.3**
LSZ pmax pmax
comp=Z,8.0nm,0.7s
TOA0 Torodi Ar. Sit 66.02 269 P P **22 04 41.7 -2.0**
TOA0 IAmb IAmb 22 04 44.5
comp=Z,5.5nm,0.6s
TORD Torodi Ar. Bea 66.02 269 P P **22 04 41.7 -2.0**
comp=Z,4.2nm,0.4s,baz=50,slow=5.9,SNR=59
comp=Z,4.2nm,0.4s
TORD Torodi Ar. Bea 66.02 269 P P **22 04 41.4 -2.3**
TORD IAmb IAmb 22 04 45.0
comp=Z,6.2nm,1.1s
ILULI Ilulissat 66.64 341 P P **22 04 46.7 -0.1**
ILULI Ilulissat 66.64 341 P P **22 04 46.7 -0.1**
ILULI pmax pmax
comp=Z,20nm,0.7s
ILULI Ilulissat 66.64 341 *i* P P **22 04 45.7 -1.0**
ILULI IAmb IAmb 22 04 48.8
comp=Z,22nm,0.6s
DY2G Dye2 67.03 337 *i* P P **22 04 50.3 +0.7**
DY2G IAmb IAmb 22 04 51.9
comp=Z,21nm,0.7s
SOEI Soe 67.62 122 P P **22 04 54.9 +1.0**
TOLK Toolik Lake Re 70.98 15 P P **22 05 14.1 +0.3**
TOLK IAmb IAmb 22 05 15.0
comp=Z,11nm,0.9s
TOLK Toolik Lake Re 70.98 15 P P **22 05 14.2 +0.4**
baz=326,SNR=12
IVI Ivigtut 71.11 334 P P **22 05 14.8 +0.2**
IVI IAmb IAmb 22 05 27.0
comp=Z,27nm,1.2s
GIRL Giralia 71.29 138 P P **22 05 17.4 +1.2**
COLD Coldfoot 72.03 16 P P **22 05 20.3 +0.3**
COLD IAmb IAmb 22 05 21.2
comp=Z,7.0nm,0.9s
COLD Coldfoot 72.03 16 P P **22 05 20.4 +0.3**
baz=326,SNR=8.0
IMAR Indian Mountai 72.22 18 P P **22 05 20.9 -0.3**
H21K Melozitna Rive 72.71 18 P P **22 05 23.9 -0.3**
H21K Melozitna Rive 72.71 18 P P **22 05 24.2 +0.1**
baz=324,SNR=6.1
BMAR Burnt Mountain 73.01 14 P P **22 05 26.7 +0.8**
I21K Tanana 73.30 18 P P **22 05 27.6 +0.1**
I21K Tanana 73.30 18 P P **22 05 27.9 +0.3**
baz=325
H23K Yukon River 73.34 16 P P **22 05 28.3 +0.4**
H23K Yukon River 73.34 16 P P **22 05 28.6 +0.7**
baz=327,SNR=7.8
J20K Nowinta River 73.56 19 P P **22 05 29.4 +0.3**
J20K IAmb IAmb 22 05 30.5
comp=Z,6.8nm,0.8s
J20K Nowinta River 73.56 19 P P **22 05 29.4 +0.3**
baz=323,SNR=8.4
PSA00 Pilbara Seismi 73.59 133 P P **22 05 30.0 +0.1**
PSA00 IAmb IAmb 22 05 51.4
comp=Z,27nm,1.3s
PSA00 Pilbara Seismi 73.59 133 P P **22 05 30.2 +0.3**
PSA00 IAmb IAmb 22 05 30.9
comp=Z,6.2nm,0.8s
H24K Noodor Dome 73.70 16 P P **22 05 30.4 +0.4**
H24K Noodor Dome 73.70 16 P P **22 05 30.5 +0.5**
baz=328,SNR=6.9
MLY Manley 73.72 17 P P **22 05 30.3 +0.2**
MLY Manley 73.72 17 P P **22 05 30.1 0.0**
baz=326,SNR=6.8
I23K Minto, Yukon-K 73.95 17 P P **22 05 32.2 +0.8**
I23K Minto, Yukon-K 73.95 17 P P **22 05 31.6 +0.2**
baz=327,SNR=6.3
C36M Paulatuk 73.99 6 P P **22 05 31.3 -0.2**
C36M Paulatuk 73.99 6 P P **22 05 31.4 -0.1**
baz=347
INK Inuvik 74.00 9 P P **22 05 32.1 +0.5**
INK IAmb IAmb 22 05 35.6
comp=Z,6.7nm,0.8s
INK Inuvik 74.00 9 P P **22 05 32.1 +0.5**
INK pmax pmax
comp=Z,7.0nm,0.9s
INK Inuvik 74.00 9 P P **22 05 31.9 +0.3**
baz=339
TTA Tatalina 74.05 20 P P **22 05 32.2 +0.1**
baz=322
K20K Telida 74.25 20 P P **22 05 33.6 +0.5**
baz=324,SNR=10
CHUM Lake Minchumin 74.28 19 P P **22 05 33.7 +0.4**
baz=325,SNR=6.9
MDM Murphy Dome 74.37 16 P P **22 05 34.5 +0.6**
BPAW Bear Paw Mtn. 74.44 18 P P **22 05 34.1 -0.2**
baz=326,SNR=5.5
NEA2 Nenana 74.49 17 P P **22 05 34.5 0.0**
baz=327,SNR=12
CAST Castle Rocks 74.72 19 P P **22 05 35.9 0.0**
CAST IAmb IAmb 22 05 37.0
comp=Z,14nm,0.9s
CAST Castle Rocks 74.72 19 P P **22 05 36.1 +0.2**
baz=325
CCB Clear Creek Bu 74.73 16 P P **22 05 35.7 -0.2**
LBTB Lobatse 74.78 222 P P **22 05 37.3 +0.5**
LBTB IAmb IAmb 22 05 37.9
comp=Z,19nm,0.7s
LBTB Lobatse 74.78 222 P P **22 05 37.3 +0.5**
LBTB pmax pmax
comp=Z,19nm,0.7s

IL31		74.83	16	P		P	22 05 35.8	-0.7
ILAR	Eielson Array	74.83	16	P		P	22 05 35.7	-0.8
	comp=Z,2.2nm,0.8s,baz=316,slow=5.1,SNR=19							
ILAR				pP		pP	22 06 06.1	+2.5
	comp=Z,0.7nm,0.6s,baz=324,slow=7.1,SNR=2.5							
	comp=Z,2.2nm,0.8s							
KNRA	Kununurra	74.89	123	P		P	22 05 37.7	+0.2
L19K	White Mountain	74.97	21	P		P	22 05 37.5	+0.1
L19K	White Mountain	74.97	21	P		P	22 05 37.8	+0.4
	baz=323,SNR=5.5							
DBIC	Dimbokro	75.00	267	P		P	22 05 36.8	-1.5
	comp=Z,2.7nm,0.7s,baz=30,slow=4.6,SNR=5.9							
	comp=Z,2.7nm,0.7s							
DBIC	Dimbokro	75.00	267	P		P	22 05 36.0	-2.2
DBIC				IAmb		IAmb	22 05 49.9	
	comp=Z,18nm,1.4s							
L20K	Farewell, AK	75.00	20	P		P	22 05 37.7	+0.1
	baz=324,SNR=5.0							
TSUM	Tsumeb	75.07	232	LR		LR	22 40 18.3	
	comp=Z,90nm,18.5s,baz=154,slow=37							
KIC	Kosan Boka	75.08	267	⇓ *i* P		P	22 05 37.0	-1.8
	comp=Z,6.7nm,0.5s							
PPLA	Purkeypile	75.12	19	P		P	22 05 38.0	-0.4
	baz=325							
N16K	Nishlik Lake	75.14	23	P		P	22 05 39.8	+1.4
	baz=320,SNR=5.2							
TIC	Toumodi	75.14	267	⇑ *i* P		P	22 05 38.1	-1.0
	comp=Z,3.2nm,0.2s							
J25K	Salcha River,	75.30	15	P		P	22 05 38.7	-0.6
	baz=330,SNR=5.5							
M19K	Big River Lodg	75.33	21	P		P	22 05 39.8	+0.3
	baz=324							
LIC	Lamto	75.39	267	⇓ *i* P		P	22 05 39.2	-1.4
	comp=Z,5.5nm,0.6s							
J26L	Joseph Creek	75.78	15	P		P	22 05 42.0	-0.1
	baz=332							
K24K	Donnelly Dome	75.92	16	P		P	22 05 42.5	-0.3
	baz=330							
I29M	Ogilvie Camp,	76.00	12	P		P	22 05 43.0	-0.3
	baz=336							
O16K	Kokwok River B	76.03	23	P		P	22 05 44.5	+1.0
	baz=321,SNR=5.8							
SKT	Skwentna	76.05	19	P		P	22 05 43.0	-0.6
	baz=326,SNR=6.9							
SCRK	Sand Creek	76.15	15	P		P	22 05 44.2	0.0
	baz=331							
DHY	Denali Highway	76.17	17	P		P	22 05 43.7	-0.7
	baz=329							
RIDG	Independent Ri	76.18	16	P		P	22 05 43.4	-0.9
	baz=331							
K27K	Chicken	76.50	14	P		P	22 05 46.4	+0.3
K27K	Chicken	76.50	14	P		P	22 05 46.5	+0.4
	baz=333							
WAT6	Susitna Watana	76.51	17	P		P	22 05 45.5	-0.9
	baz=329							
PAX	Paxson	76.71	16	P		P	22 05 46.9	-0.5
PAX	Paxson	76.71	16	P		P	22 05 46.9	-0.5
PAX				pmax		pmax		
	comp=Z,4.0nm,0.7s							
PAX	Paxson	76.71	16	P		P	22 05 47.1	-0.2
	baz=330							
O18K	Koktuh Hills	76.73	22	P		P	22 05 48.3	+0.8
	baz=323							
P17K	Kvichak River	76.87	23	P		P	22 05 49.2	+1.0
	baz=322							
SML	Sawmill	77.03	18	P		P	22 05 48.9	-0.3
SML				IAmb		IAmb	22 05 49.6	
	comp=Z,10nm,0.7s							
SML	Sawmill	77.03	18	P		P	22 05 49.0	-0.1
	baz=328,SNR=5.4							
P18K	Big Mountain,	77.09	22	P		P	22 05 49.6	+0.1
	baz=323							
M23K	Glacier View	77.19	18	P		P	22 05 49.3	-0.7
	baz=329							
SCM	Sheep Creek Mo	77.25	18	P		P	22 05 50.1	-0.3
	baz=329							
HARP	HAARP	77.28	17	P		P	22 05 51.1	+0.6
	baz=331							
M24K	Tolsona, Glenn	77.30	17	P		P	22 05 51.5	+0.8
	baz=330							
L27K	Beaver Creek,	77.42	15	P		P	22 05 51.8	+0.5
	baz=333							
BCAR	Beaver Creek A	77.42	15	P		P	22 05 51.9	+0.6
MORW	Morawa	77.45	141	P		P	22 05 51.7	0.0
MORW				IAmb		IAmb	22 05 52.2	
	comp=Z,36nm,1.4s							
M26K	Nabesna, AK	77.76	16	P		P	22 05 53.3	+0.1
	baz=332							
BOSA	Boshof	77.84	220	P		P	22 05 54.0	0.0
	comp=Z,23nm,0.7s,baz=36,slow=5.0,SNR=38							
	comp=Z,23nm,0.7s							
BOSA	Boshof	77.84	220	P		P	22 05 53.9	-0.1
M27K	Edge Creek, AK	78.04	15	P		P	22 05 55.4	+0.6
M27K				IAmb		IAmb	22 05 56.4	
	comp=Z,8.2nm,1.1s							
M27K	Edge Creek, AK	78.04	15	P		P	22 05 55.4	+0.6
	baz=333							
BVCY	Beaver Creek	78.20	15	P		P	22 05 56.4	+0.8
	baz=334							
EYAK	Cordova Ski Ar	78.75	18	P		P	22 05 57.5	-1.0
	baz=330							
M30M	Minto, Yukon	78.83	13	P		P	22 05 58.2	-0.9
	baz=337							
YUK3	Moose Creek	78.86	15	P		P	22 05 59.1	-0.3
	baz=334							
KDAK	Kodiak Island	79.21	22	P		P	22 06 00.7	-0.4
	baz=325							
CTG	Chitna Glacier	79.40	16	P		P	22 06 02.3	0.0
	baz=334							
YUK8	Steele Glacier	79.44	15	P		P	22 06 03.0	+0.3
	baz=335							
YUK4	Talbot Arm	79.62	14	P		P	22 06 02.1	-1.4
	baz=336							
N30M	Aishikik Lake	79.81	13	P		P	22 06 05.0	+0.6
	baz=337							
HYT	Haines Junctio	80.32	14	P		P	22 06 08.0	+0.7
HYT	Haines Junctio	80.32	14	P		P	22 06 07.9	+0.7
	baz=337							
O30N	Mendenhall	80.64	13	P		P	22 06 09.2	+0.3
	baz=338							
WHY	Whitehorse	80.96	13	P		P	22 06 09.9	-0.7
	baz=339							
YKA	Yellowknife Ar	81.37	3	P		P	22 06 12.7	+0.1
	comp=Z,5.6nm,0.7s,baz=350,slow=5.2,SNR=20							
YKA				pP		pP	22 06 41.6	+1.3
	comp=Z,2.5nm,0.7s,baz=353,slow=5.7,SNR=3.1							
	comp=Z,5.6nm,0.7s							
YKA	Yellowknife Ar	81.37	3	P		P	22 06 12.5	-0.1
WB0	Warramunga Arr	81.57	122	P		P	22 06 13.8	-0.5
WB0				IAmb		IAmb	22 06 43.5	
	comp=Z,12nm,1.1s							
WRA	Warramunga Ar	81.66	122	P		P	22 06 14.0	-0.8
	comp=Z,1.6nm,0.4s,baz=325,slow=4.6,SNR=40							
WRA				pP		pP	22 06 44.1	+1.8
	comp=Z,4.8nm,0.7s,baz=321,slow=5.1,SNR=7.5							
	comp=Z,1.6nm,0.4s							
P33M	Teslin, Yukon	81.74	12	P		P	22 06 14.6	-0.1
	baz=341							
PLBC	Pleasant Camp	81.80	14	P		P	22 06 15.2	+0.2
	baz=338							
SCHQ	Schefferville	82.35	337	P		P	22 06 18.4	+0.5
	comp=Z,5.1nm,0.9s,baz=330,slow=2.3,SNR=8.5							
	comp=Z,5.1nm,0.9s							
SCHQ	Schefferville	82.35	337	P		P	22 06 17.9	-0.1
SCHQ				IAmb		IAmb	22 06 19.5	
	comp=Z,8.6nm,1.1s							
SUR	Sutherland	83.15	221	P		P	22 06 22.8	+0.3
AS31	Alice Springs	83.92	125	P		P	22 06 25.7	-0.7
ASAR	Alice Springs	83.92	125	P		P	22 06 25.6	-0.8
	comp=Z,2.6nm,0.6s,baz=310,slow=5.1,SNR=56							
ASAR				pP		pP	22 06 55.8	+1.8
	comp=Z,4.4nm,0.7s,baz=320,slow=5.5,SNR=8.7							
	comp=Z,2.6nm,0.6s							
ASAR	Alice Springs	83.92	125	P		P	22 06 25.9	-0.5
ASAR	Alice Springs	83.92	125	P		P	22 06 25.9	-0.5
FCC	Fort Churchill	84.46	352	P		P	22 06 28.9	+0.3
FCC				IAmb		IAmb	22 06 31.1	
	comp=Z,6.3nm,0.8s							
FCC	Fort Churchill	84.46	352	P		P	22 06 28.9	+0.3
FCC				pmax		pmax		
	comp=Z,6.0nm,0.9s							
ULM	Lac du Bonnet	93.03	352	P		P	22 07 08.7	-0.9
	comp=Z,4.0nm,0.8s,baz=324,slow=4.7,SNR=5.9							
ULM				LR		LR	22 52 35.0	
	comp=Z,16nm,19.3s,baz=93,slow=38							
	comp=Z,4.0nm,0.8s							
NEW	Newport	95.41	6	LR		LR	22 55 58.3	
	comp=Z,38nm,18.1s,baz=236,slow=39							

TXAR	Lajitas Array	114.49	355	PKP		PKiKP	22 12 35.3	-0.8
	comp=Z,0.3nm,0.7s,baz=126,slow=1.7,SNR=3.7							
SNAA	Sanae	119.37	200	PKPdf		PKPdf	22 12 42.3	-1.7
VNA2	Neumayer--Watz	120.38	202	PKPdf		PKPdf	22 12 44.8	-1.0
VNA3	Neumayer Olymp	121.19	202	PKPdf		PKPdf	22 12 46.2	-1.3
CPUP	Villa Florida	135.51	268	PKP		PKPdf	22 13 13.9	-2.1
	comp=Z,2.6nm,0.7s,baz=53,slow=6.2,SNR=3.4							
PLCA	Paso Flores	150.06	250	PKPbc		PKPbc	22 13 45.9	-0.4
	comp=Z,4.8nm,0.8s,baz=127,slow=3.5,SNR=7.9							

IDC ***11*** *22:29:42.9±3.5, 35°.59N×140°.28E, h63km±27km, mb3.5/7, mbtmp3.8/10, ML3.6/3, Error ellipse: s-maj=46.0km s-min=7.3km az=65.0*

NEIC ***11*** *22:29:44.1±0.7, 35°.61N±0°.05×140°.19E±0°.08, h66km±8km, mb4.2/7, Error ellipse: s-maj=9.8km s-min=7.2km az=108.0*

JMA ***11*** *22:29:44.1±0.2, 35°.7N±0°.7×140°.1E±0°.8, h71km±2km, MV3.4/40, CENTRAL CHIBA PREF*

JMA Felt I J1 at CENTRAL CHIBA PREF .

ISC 11 22:29:44.6±0.7, 35°.59N±0°.04×140°.08E±0°.04, h74km±6km, n53, σ0°92/61, mb3.8/12, 10D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JCN	Nagara	0.20	150	P		Pn	22 29 55.7	-0.1
JCN				S		Sn	22 30 04.8	+0.9
TOK	Tokyo	0.28	290	P		Pn	22 29 56.2	+0.1
TOK				S		Sn	22 30 05.0	+0.5
JSMT	Sammumatsuo	0.31	81	P		Pn	22 29 56.0	-0.3
JSMT				S		Sn	22 30 05.9	+1.0
JYT	Yasato	0.64	9	P		Pn	22 29 57.8	-1.5
JYT				Sn		Sn	22 30 07.6	-2.3
BSO3	Boso 3	0.87	156	*i* P		Pn	22 30 01.0	-0.5
BSO3				S		Sn	22 30 14.8	+0.8
JOD2	Odawara 2	0.87	248	⇓ *i* P		Pn	22 30 01.1	-0.7
JOD2				⇓ S		Sn	22 30 13.3	-1.3
JAG	Ashikaga	0.97	329	⇓ *i* P		Pn	22 30 02.1	-0.9
JIM2	Oshima 3	1.02	211	*i* P		Pn	22 30 02.6	-1.1
JIM2				S		Sn	22 30 16.4	-1.4
JRY	Ryogami san	1.04	294	⇓ *i* P		Pn	22 30 03.7	-0.2
BSO1	Boso 1	1.19	141	*i* P		Pn	22 30 04.5	-0.7
BSO1				S		Sn	22 30 20.8	0.0
JFNN	Fujinakano	1.20	251	⇓ *i* P		Pn	22 30 05.6	-0.3
JFNN				⇓ S		Sn	22 30 21.3	-0.5
JYN	Shimob	1.25	266	⇓ *i* P		Pn	22 30 06.1	-0.5
JYN				⇓ S		Sn	22 30 22.5	-0.5
JIZS	Izushimoda	1.31	229	⇓ *i* P		Pn	22 30 06.8	-0.5
JIZS				⇓ S		Sn	22 30 23.2	-1.1
JKT	Katashina	1.35	330	*i* P		Pn	22 30 07.0	-0.8
JKT				S		Sn	22 30 24.2	-1.1
MJAR	Matsushiro Arr	1.78	303	P		Pn	22 30 12.2	-1.3
	30nm,0.3s,baz=149,slow=14,SNR=139							
MJAR				S		Sn	22 30 36.4	+1.0
	25nm,0.3s,baz=28,slow=10,SNR=5.8							
MJAR				LR		LR	22 31 08.5	
	comp=Z,58nm,21.2s,baz=46,slow=44							
MJAR	Matsushiro Arr	1.78	303			Pn	22 30 12.6	-0.9
MAJO	Matsushiro	1.79	303			Pn	22 30 13.5	0.0
MJB9	Matsu-Tunnel	1.79	303			Pn	22 30 13.6	0.0
JGF	Kuroka	2.22	271			Pn	22 30 20.3	+1.0
JMM	Marumori	2.34	14			Pn	22 30 21.3	+0.4
JHJ	Hachijo jima 2	2.48	186	P		Pn	22 30 21.6	-1.2
	28nm,0.3s,baz=332,slow=23,SNR=37							
JHJ				S		Sn	22 30 51.2	-0.9
	188nm,0.3s,baz=54,slow=23,SNR=11							
	56nm,0.3s							
JHJ2	Mitsune	2.48	185	Pn		Pn	22 30 22.4	-0.5
INU	Inuyama	2.51	265			Pn	22 30 23.7	+0.5
JSD	Sado	2.84	330	Pn		Pn	22 30 27.5	-0.2
JTM	Tenmabayashi	5.24	8	Pn		Pn	22 30 59.5	-1.0
JHS	Saijyo	5.72	266	Pn		Pn	22 31 07.8	+0.8
ERM	Erimo	6.85	20	Pn		Pn	22 31 19.9	-2.4
JCJ	Chichijima	8.66	167	P		Pn	22 31 44.8	-2.4
	3.4nm,0.3s,baz=278,slow=17,SNR=1.6							
JCJ				S		Sn	22 33 13.7	-10
	23nm,0.5s,baz=288,slow=20,SNR=2.1							
	23nm,0.5s							
JCJ	Chichijima	8.66	167	Pn		Pn	22 31 46.4	-0.8
KSRS	Korea Array	9.96	284	P		Pn	22 32 06.0	+1.2
	0.1nm,0.3s,baz=99,slow=14,SNR=6.2							
	0.9nm,0.5s							
H11N2	WAKE ISLAND Hy	28.40	117	T		T	23 05 17.5	
	baz=309,slow=75							
H11N1	WAKE ISLAND Hy	28.41	117	T		T	23 05 21.8	
	baz=309,slow=75							
H11N3	WAKE ISLAND Hy	28.42	117	T		T	23 05 24.6	
	baz=309,slow=75							
H11S1	WAKE ISLAND Hy	29.05	119	T		T	23 06 03.7	
	baz=310,slow=76							
H11S3	WAKE ISLAND Hy	29.05	119	T		T	23 06 06.9	
	baz=310,slow=76							
H11S2	WAKE ISLAND Hy	29.06	119	T		T	23 05 44.6	
	baz=310,slow=76							
ZALV	Zalesovo Beam	42.10	314	P		P	22 37 29.4	+0.3
	0.4nm,0.3s,baz=99,slow=9.1,SNR=2.6							
	0.4nm,0.3s							
MK31	Makanchi Array	43.98	303	P		P	22 37 45.1	+0.7
MK31				IAmb		IAmb	22 37 46.3	
	comp=Z,1.0nm,0.9s							
MKAR	Makanchi Array	43.98	303	P		P	22 37 44.7	+0.2
	comp=Z,1.3nm,0.8s,baz=89,slow=9.7,SNR=8.8							
	comp=Z,1.3nm,0.8s							
MKAR	Makanchi Array	43.98	303	P		P	22 37 45.2	+0.7
KURK	Kurchatov	45.98	309	P		P	22 38 00.7	+0.5
KURK				IAmb		IAmb	22 38 03.3	
	comp=Z,2.0nm,0.7s							
WR0	Warramunga Arr	55.50	186	P		P	22 39 11.3	-0.6
WRA	Warramunga Arr	55.50	187	P		P	22 39 11.2	-0.8
	comp=Z,0.4nm,0.3s,baz=1.2,slow=7.5,SNR=6.2							
	comp=Z,0.4nm,0.3s							
WRA	Warramunga Arr	55.50	187	P		P	22 39 11.1	-0.9
ABKAR	Akbulak array	58.05	310	P		P	22 39 29.7	-0.1
ABKAR	Akbulak array	58.05	310	P		P	22 39 30.3	+0.5
ABKAR				IAmb		IAmb	22 39 54.7	
	comp=Z,2.3nm,1.3s							
ASAR	Alice Springs	59.23	187	P		P	22 39 38.1	-0.1
	comp=Z,0.3nm,0.6s,baz=8.9,slow=15,SNR=1.8							
	comp=Z,0.3nm,0.6s							
ASAR	Alice Springs	59.23	187	P		P	22 39 38.6	+0.4
GEYT	Alibeck	63.59	299	P		P	22 40 08.0	+0.4
GEYT				IAmb		IAmb	22 40 08.5	
	comp=Z,2.0nm,0.6s							
GYA0B	ALIBECK ARRAY	63.59	299	P		P	22 40 08.1	+0.5
GYA0B				IAmb		IAmb	22 40 08.5	
	comp=Z,3.9nm,0.6s							
FINES	FINESS Array B	69.58	332	P		P	22 40 45.6	+0.3
	comp=Z,2.7nm,1.0s,baz=85,slow=5.2,SNR=9.8							
	comp=Z,2.7nm,1.0s							
AKASG	Malin Array Be	74.77	322	P		P	22 41 16.4	-0.1
	comp=Z,0.2nm,0.3s,baz=73,slow=36,SNR=1.8							
	comp=Z,0.2nm,0.3s							
NOA	NORSAR Array B	75.09	337	P		P	22 41 18.5	+0.3
	comp=Z,0.2nm,0.4s,baz=47,slow=5.2,SNR=1.6							
	comp=Z,0.2nm,0.4s							

IDC ***11*** *22:40:38.7±0.6, 52°.47N×170°.69W, h0km, mb4.0/21, mbtmp3.9/23, ML3.7/2, MS3.6/6, Error ellipse: s-maj=21.1km s-min=12.2km az=175.0*

AEIC ***11*** *22:40:43±4.5, 52°.18N±0°.08×170°.38W±0°.09, h26km±4km, Error ellipse: s-maj=13.1km s-min=5.1km az=151.0*

NEIC ***11*** *22:40:46.7±1.6, 52°.48N±0°.09×170°.56W±0°.08, h55km±6km, mb4.1/59, ML4.2/6, ML3.8/35(AEIC), Error ellipse: s-maj=13.4km s-min=5.6km az=161.0*

ISC 11 22:40:46.1±0.5, 52°.41N±0°.10×170°.49W±0°.04, h55km, n153, σ1°33/149, mb4.0/43, MS3.6/6, 1C, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
NIKH	Nikolski High	1.14	60			Sn	22 41 20.0	-0.5
NIKH	Nikolski High	1.14	60			Pn	22 41 05.0	-0.8
OKER	Okmok East Rim	1.81	54			Pn	22 41 15.7	+0.8
KOSE	Korovin Southe	2.18	270			Pn	22 41 20.0	+0.1
KOFP	Korovin Flat P	2.22	268			Pn	22 41 20.4	-0.1
KOKL	Mount Kliuchef	2.28	269			Pn	22 41 21.3	+0.1
ATKA	Atka Island	2.29	266			Pn	22 41 20.5	-0.8
ATKA						Sn	22 41 51.1	+2.9
MSW	Makushin Switc	2.69	54			Pn	22 41 28.2	+1.3
MTBL	Makushin Table	2.78	54			Pn	22 41 29.7	+1.7
UNV	Unalaska Valle	2.80	57			Pn	22 41 29.1	+0.8
UNV	Unalaska Valle	2.80	57			Sn	22 42 04.5	+3.7

AKBBA	Akutan Broad B	3.22	56			Pn	22 41 35.3	+1.2
AKLV	Akutan Long Va	3.24	55			Pn	22 41 35.8	+1.4
AKGG	Akutan Green G	3.24	55			Pn	22 41 35.5	+1.2
AKUT	Akutan	3.32	57	Pn		Pn	22 41 37.7	+2.3
AKUT				IAML			22 42 28.5	
	comp=E,192nm,0.7s							
AKSA	Akutan Strait	3.36	57			Pn	22 41 36.7	+0.7
GSTR	Great Sitkin T	3.44	267			Pn	22 41 37.7	+0.6
GSMY	Great Sitkin M	3.44	266			Pn	22 41 37.9	+0.8
GSTD	Great Sitkin T	3.50	266			Pn	22 41 37.9	0.0
GSTD						Sn	22 42 20.0	+1.9
GSCK	Great Sitkin C	3.51	266			Pn	22 41 38.3	+0.2
ADK	Adak	3.85	265			Pn	22 41 43.0	+0.3
ADK				IAML			22 42 39.0	
	comp=E,398nm,0.6s							
WECS	Westdahl Cape	4.02	56			Pn	22 41 46.0	+0.9
KIWB	Kanaga Island	4.14	265			Pn	22 41 47.6	+0.9
KIMD	Kanaga Island	4.21	264			Pn	22 41 47.8	+0.2
TAPA	Tanaga Point A	4.55	265			Pn	22 41 53.1	+0.8
SSLN	Shishaldin Nor	4.55	56			Pn	22 41 53.6	+1.3
SPIA	Saint Paul Isl	4.78	2			Pn	22 41 57.6	+2.1
SDPT	Sand Point	6.61	60	Pn		Pn	22 42 22.6	+2.1
P18K	Big Mountain,	11.04	45			Pn	22 43 23.6	+2.5
O18K	Koktuh Hills	11.31	43			Pn	22 43 27.6	+3.0
Q19K	Cape Douglas,	11.52	49	Pn		Pn	22 43 28.4	+0.8
N18K	Kilae Creek	11.54	38	Pn		Pn	22 43 30.3	+2.5
KDAK	Kodiak Island	11.57	55	Pn		Pn	22 43 26.1	-2.1
	comp=E,0.5nm,0.3s,baz=218,slow=7.2,SNR=11							
KDAK				Sn		Sn	22 45 29.7	-6.0
	comp=E,0.1nm,0.3s,baz=117,slow=16,SNR=1.4							
KDAK	Kodiak Island	11.57	55			Pn	22 43 28.2	0.0
N19K	Bonanza Creek	12.16	40	Pn		Pn	22 43 39.2	+2.8
M19K	Big River Lodg	12.88	36			Pn	22 43 49.7	+3.7
L19K	White Mountain	12.90	34	Pn		Pn	22 43 49.7	+3.4
TTA	Tatalina	13.05	30	Pn		Pn	22 43 52.1	+3.7
K20K	Telida	13.97	32			Pn	22 44 03.7	+2.8
SKT	Skwentna	14.00	39	Pn		Pn	22 44 04.2	+2.9
PPLA	Purkeypile	14.30	36			P	22 44 10.6	-0.5
J20K	Nowinta River	14.53	29			Pn	22 44 10.2	+1.9
KTH	Kantishna Hill	15.16	35	Pn		Pn	22 44 16.9	+0.3
KTH				IAmb		IAmb	22 44 38.1	
	comp=Z,9.3nm,1.2s							
BPAW	Bear Paw Mtn.	15.49	33			Pn	22 44 21.3	+0.7
BPAW				IAmb		IAmb	22 44 42.0	
	comp=Z,6.0nm,0.8s							
SCM	Sheep Creek Mo	15.64	44	Pn		Pn	22 44 20.7	-2.0
SCM				IAmb		IAmb	22 44 34.0	
	comp=Z,8.6nm,0.9s							
I21K	Tanana	15.90	29	P		P	22 44 29.2	+0.5
IMAR	Indian Mountai	16.00	25			P	22 44 30.2	+0.4
MLY	Manley	16.18	31	P		P	22 44 32.2	+0.4
I23K	Minto, Yukon-K	16.70	32	P		P	22 44 38.4	+0.9
I23K				IAmb		IAmb	22 44 57.9	
	comp=Z,12nm,1.4s							
PAX	Paxson	16.92	42	Pn		Pn	22 44 38.7	-0.2
MDM	Murphy Dome	16.96	34			Pn	22 44 39.4	+0.2
IL31		17.31	35			Pn	22 44 43.9	+0.4
ILAR	Eielson Array	17.31	35	P		Pn	22 44 42.7	-0.9
	comp=Z,0.2nm,0.3s,baz=226,slow=8.3,SNR=8.4							
ILAR				PcP		PcP	22 49 23.6	+0.8
	comp=Z,0.3nm,0.5s,baz=272,slow=3.1,SNR=4.9							
	comp=Z,0.2nm,0.5s							
ILAR	Eielson Array	17.31	35	P		Pn	22 44 44.0	+0.5
RIDG	Independent Ri	17.53	40			Pn	22 44 46.8	+0.5
H24K	Noodor Dome	17.52	32			P	22 44 48.4	+0.7
M26K	Nabesna, AK	17.73	45	P		Pn	22 44 48.7	0.0
GRNC	Granite Creek	17.76	51	P		P	22 44 50.1	+0.6
GRNC				IAmb		IAmb	22 44 56.0	
	comp=Z,4.5nm,0.8s							
J25K	Salcha River,	17.77	37	P		Pn	22 44 48.6	-0.6
DOT	Dot Lake	17.80	41	P		Pn	22 44 49.6	+0.1
SCRK	Sand Creek	17.98	40	P		P	22 44 51.5	-0.3
M27K	Edge Creek, AK	18.20	46	P		P	22 44 54.5	+0.3
J26L	Joseph Creek	18.39	38	P		P	22 44 55.7	-0.6
BCAR	Beaver Creek A	18.49	44	P		P	22 44 57.5	+0.2
PEA0B	Petropavlovsk-	19.19	285	P		Pn	22 45 05.3	-1.0
PEA0B				IAmb		IAmb	22 45 06.0	
	comp=Z,16nm,1.2s							
PETK	Petropavlovsk-	19.19	285	P		P	22 45 03.9	-1.1
	comp=Z,1.7nm,0.3s,baz=88,slow=12,SNR=21							
	comp=Z,4.2nm,0.5s							
PETK	Petropavlovsk-	19.19	285	P		P	22 45 04.5	-0.4
BMAR	Burnt Mountain	19.64	30	P		P	22 45 11.0	+1.2
HYT	Haines Junctio	19.82	52			Pn	22 45 14.1	+0.2
HYT				IAmb		IAmb	22 45 15.8	
	comp=Z,14nm,0.6s							
P33M	Teslin, Yukon	22.04	54	P		P	22 45 36.2	+0.4
SEY	Seymchan	22.14	313	P		P	22 45 35.8	-0.9
	comp=Z,1.5nm,0.6s,baz=102,slow=7.6,SNR=7.2							
SEY

ULM Lac du Bonnet 44.74 62 P **P** **22 48 53.8 +0.3**
comp=Z,2.6nm,0.9s,baz=187,slow=9.5,SNR=3.4
comp=Z,2.6nm,0.9s
B35A Bob, Littlefor 46.96 63 P **P** **22 49 11.5 +0.4**
121A Cookes Peak, D 48.67 88 P **P** **22 49 26.4 +1.6**
121A IAmb IAmb 22 49 31.2
comp=Z,2.8nm,1.3s
SPB2 Spitsbergen Ar 49.62 358 P **P** **22 49 31.2 +0.1**
DAG Danmarks Havn 49.85 8 *i* P **P** **22 49 32.0 -0.9**
DAG IAmb IAmb 22 49 33.2
comp=Z,3.2nm,0.6s
SONM Songino Array 50.69 300 P **P** **22 49 39.4 -0.4**
comp=Z,0.5nm,0.5s,baz=56,slow=6.2,SNR=3.9
SONM PcP **PcP** **22 50 55.8 -0.6**
comp=Z,0.9nm,0.6s,baz=63,slow=1.4,SNR=6.0
comp=Z,0.5nm,0.5s
SONM Songino Array 50.69 300 P **P** **22 49 39.6 -0.3**
SONM IAmb IAmb 22 49 55.1
comp=Z,2.3nm,1.4s
MNTX Cornudas Mount 50.72 87 P **P** **22 49 41.1 +1.0**
MNTX IAmb IAmb 22 49 42.5
comp=Z,2.0nm,0.8s
DBG Daneborg 51.99 10 *i* P **P** **22 49 47.1 -1.9**
DBG IAmb IAmb 22 49 48.7
comp=Z,3.6nm,0.6s
GUMO Guam 52.53 239 LR LR 23 08 01.4
comp=Z,137nm,22.0s,baz=27,slow=31
HNS HongShan 52.71 285 ⇑P **P** **22 49 54.7 -0.1**
HNS pmax pmax
comp=Z,11nm,0.8s
TX32 Lajitas Array 53.43 88 P **P** **22 50 01.0 +0.7**
TX32 IAmb IAmb 22 50 01.9
comp=Z,2.4nm,0.8s
TXAR Lajitas Array 53.43 88 P **P** **22 50 01.3 +0.9**
comp=Z,2.2nm,0.7s,baz=297,slow=5.5,SNR=42
TXAR PcP **PcP** **22 51 07.8 +0.9**
comp=Z,0.5nm,0.6s,baz=239,slow=1.2,SNR=5.3
comp=Z,2.2nm,0.7s
SCO Scoresbysund 55.34 12 P **P** **22 50 13.8 +0.4**
SCHQ Schefferville 55.88 43 P **P** **22 50 17.7 +0.1**
comp=Z,3.4nm,0.8s,baz=350,slow=6.1,SNR=5.6
comp=Z,3.4nm,0.8s
SCHQ Schefferville 55.88 43 P **P** **22 50 18.0 +0.4**
SCHQ IAmb IAmb 22 50 35.1
comp=Z,3.1nm,1.0s
SADO Sadowa 57.01 58 LR LR 23 13 30.7
comp=Z,28nm,19.6s,baz=128,slow=34
ARCES ARCESS Array B 57.81 353 P **P** **22 50 30.4 -0.7**
comp=Z,3.7nm,1.0s,baz=8.7,slow=8.8,SNR=5.9
comp=Z,3.7nm,1.0s
ARCES ARCESS Array B 57.81 353 P **P** **22 50 30.4 -0.7**
SSLB Suanglung 58.52 269 P **P** **22 50 36.4 -0.3**
LVZ Lovozero 58.55 349 P **P** **22 50 35.9 -0.4**
G62A West of Eustis 61.03 53 P **P** **22 50 54.1 +0.4**
BATG Bathurst New B 61.65 49 P **P** **22 50 58.4 +0.6**
KURK Kurchatov 61.89 318 P **P** **22 50 59.1 -0.1**
KURK IAmb IAmb 22 51 00.8
comp=Z,1.5nm,1.1s
MK31 Makanchi Array 63.28 313 P **P** **22 51 07.6 -1.1**
MK31 IAmb IAmb 22 51 14.3
comp=Z,2.0nm,1.4s
MKAR Makanchi Array 63.28 313 P **P** **22 51 07.8 -0.9**
comp=Z,0.2nm,0.3s,baz=40,slow=5.6,SNR=7.1
comp=Z,0.2nm,0.3s
FINES FINESS Array B 65.73 351 P **P** **22 51 23.6 -0.8**
comp=Z,1.1nm,0.7s,baz=0.2,slow=7.8,SNR=8.1
comp=Z,1.1nm,0.7s
FINES FINESS Array B 65.73 351 P **P** **22 51 23.5 -0.9**
NC303 NORSAR Array S 66.71 359 P **P** **22 51 30.2 -0.5**
NB2 NORSAR Subarra 66.89 359 P **P** **22 51 31.5 -0.4**
comp=Z,1.1nm,0.6s,baz=1.9,slow=6.5
NOA NORSAR Array B 66.89 359 P **P** **22 51 31.6 -0.4**
comp=Z,1.0nm,0.6s,baz=1.3,slow=6.3,SNR=14
comp=Z,1.0nm,0.6s
KONO Kongsberg 68.30 360 P **P** **22 51 40.9 +0.2**
KONO IAmb IAmb 22 51 42.6
comp=Z,5.9nm,1.2s
ABKAR Akbulak array 70.04 327 P **P** **22 51 51.0 -0.7**
ABKAR Akbulak array 70.04 327 P **P** **22 51 51.1 -0.6**
ABKAR IAmb IAmb 22 52 11.9
comp=Z,2.6nm,1.2s
CMAR Chiang Mai Arr 75.94 282 P **P** **22 52 26.8 -0.3**
comp=Z,2.1nm,0.5s,baz=29,slow=6.3,SNR=12
comp=Z,2.1nm,0.5s
CMAR Chiang Mai Arr 75.94 282 P **P** **22 52 26.6 -0.4**
CLL Collm 76.62 358 P **P** **22 52 29.9 -0.4**
CLL IAmb IAmb 22 52 31.0
comp=Z,2.5nm,1.1s
GERES GERESS Array B 79.06 357 P **P** **22 52 44.1 0.0**
comp=Z,0.6nm,0.7s,baz=31,slow=6.2,SNR=5.2
comp=Z,0.6nm,0.7s
BUR08 Bucovina Ar. S 79.43 349 P **P** **22 52 45.8 -0.3**
BUR08 IAmb IAmb 22 52 48.2
comp=Z,3.3nm,1.4s
BURAR Bucovina Array 79.46 349 P **P** **22 52 46.0 -0.3**
BURAR IAmb IAmb 22 52 48.0
comp=Z,1.4nm,1.2s
BRTR Keskin Array B 85.88 342 P **P** **22 53 18.6 -1.2**
comp=Z,0.3nm,0.8s,baz=345,slow=4.5,SNR=2.3
comp=Z,0.3nm,0.8s
WRA Warramunga Arr 86.49 231 P **P** **22 53 21.6 -1.2**
comp=Z,0.5nm,0.7s,baz=33,slow=5.7,SNR=2.1
WRA LR LR 23 26 03.2
comp=Z,100nm,20.6s,baz=94,slow=32
comp=Z,0.5nm,0.7s
ESDC Sonseca Array 87.55 10 P **P** **22 53 27.7 -0.2**
comp=Z,0.9nm,0.8s,baz=355,slow=4.0,SNR=7.7
comp=Z,0.9nm,0.8s
ESDC Sonseca Array 87.55 10 P **P** **22 53 27.2 -0.6**
ESDC IAmb IAmb 22 53 28.6
comp=Z,1.2nm,0.9s
AS31 Alice Springs 89.89 229 P **P** **22 53 38.3 -0.5**
AS31 IAmb IAmb 22 54 05.5
comp=Z,0.6nm,0.9s
ASAR Alice Springs 89.90 229 P **P** **22 53 38.5 -0.4**
comp=Z,1.5nm,0.8s,baz=26,slow=4.9,SNR=15
comp=Z,1.5nm,0.8s
ASAR Alice Springs 89.90 229 P **P** **22 53 38.1 -0.7**
H03N2 Juan Fernandez 116.58 111 T T 01 06 46.0
baz=318,slow=77
H03N1 Juan Fernandez 116.59 111 T T 01 06 39.0
baz=318,slow=77
H03N3 Juan Fernandez 116.59 111 T T 01 06 46.0
baz=318,slow=77
MAW Mawson 150.47 219 PKPbc **PKPbc** **23 00 30.1 +0.2**
comp=Z,2.9nm,0.9s,baz=171,slow=3.1,SNR=6.2
MAW Mawson 150.47 219 **PKPbc** **23 00 29.7 -0.1**
BOSA Boshof 153.50 328 PKPbc **PKiKP** **23 00 38.6 +0.4**
comp=Z,6.8nm,1.2s,baz=347,slow=3.9,SNR=6.4

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*BJI **11** 22:54:16.0±0.0,35°.69N×140°.43E,h38km,mb4.6/66, mB4.7/43,Ms4.1/55,Ms7 3.9/51*
*MOS **11** 22:54:18.7±0.8,36°.00N×139°.82E,h24km,mb5.2/39,Error ellipse: s-maj=6.0km s-min=3.7km az=104.7*
*NEIC **11** 22:54:22.4±1.9,35°.98N±0°.04×139°.97E±0°.06,h35km±3km, mb5.0/241,Error ellipse: s-maj=7.1km s-min=6.4km az=104.0*
*IDC **11** 22:54:22.8±1.1,35°.93N×139°.81E,h44km±10km,mb4.5/46, mbtmp4.7/48,ML4.5/2,MS3.8/60,Error ellipse: s-maj=9.4km s-min=6.5km az=67.0*
*JMA **11** 22:54:23.6±0.1,36°.0N±0°.3×139°.9E±0°.4,h40km±1km, MD4.8/40,MW4.8/40,SOUTHERN IBARAKI PREF*
JMA Felt IV J1 at SOUTHERN IBARAKI PREF
*NIED **11** 22:54:23.6,36°.00N×139°.93E,h40km,MW4.8,Moment Tensor Solution. s3 Moment tensor: Scale 10^16^Nm; M_{rr}1.07; $M_{\theta\theta}$-1.32; $M_{\phi\phi}$0.25; $M_{r\theta}$0.58; $M_{\theta\phi}$-0.57; $M_{\phi r}$0.84; Fault plane solution: $M_0$1.68000×10^16^ NP1: ϕ_s279.00000°,δ35.00000°,λ136.00000°. NP2: ϕ_s47.00000°,δ66.00000°,λ63.00000°.*
*GCMT **11** 22:54:26.4±0.3,35°.92N±0°.02×140°.00E±0°.03,h47km±1km, MW4.9/72,Moment Tensor Solution. s38,c47; s72,c100; Duration: 0 Moment tensor: Scale 10^16^Nm; M_{rr}2.06±.13; $M_{\theta\theta}$-1.92±.08; $M_{\phi\phi}$-0.13±.08; $M_{r\theta}$1.04±.08; $M_{\theta\phi}$-0.72±.05; $M_{\phi r}$0.61±.06; Best double couple: $M_0$2.43600×10^16^ NP1:ϕ_s256.00000°,δ31.00000°,λ100.00000°. NP2: ϕ_s65.00000°,δ60.00000°,λ84.00000°. Principal axes: T 2.3890, Plg74.0000°, Azm320.0000°; N 0.0980, Plg5.0000°, Azm68.0000°; P -2.4840, Plg15.0000°, Azm159.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 22:54:22.2±0.2,35°.98N±0°.03×139°.93E±0°.03,h40km±2km, h40km:pP-P,n1078,σ1°51/1014,mb5.0/259,MS3.9/78, 47C-41D,Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.32**	**41**			**Pn**	**22 54 32.0**	**+1.3**
JYT	**Yasato**	**0.32**	**41**	⇓*i*P		**Pn**	**22 54 32.0**	**+1.3**
JYT				⇓S		**Sn**	**22 54 38.1**	**+1.4**
JYT	**Yasato**	**0.32**	**41**	A		A	22 54 32.0	
comp=E,575nm,0.5s,comp=E,727nm,0.4s								
TOK	**Tokyo**	**0.33**	**206**	*i* P		**Pn**	**22 54 33.4**	**+2.7**
TOK	**Tokyo**	**0.33**	**206**	A		A	22 54 33.4	
comp=E,515nm,1.4s,comp=E,409nm,0.7s								
JSMT	**Sammumatsuo**	**0.54**	**129**	*i* P		**Pn**	**22 54 35.3**	**+1.8**
JSMT				S		**Sn**	**22 54 43.1**	**+1.7**
JSMT	**Sammumatsuo**	**0.54**	**129**	A		A	22 54 35.3	
comp=E,120nm,1.2s,comp=E,131nm,0.8s								
JHU	**Hanno**	**0.55**	**256**	A		A	22 54 34.9	
comp=E,65nm,0.9s,comp=E,47nm,1.4s								
JAG	**Ashikaga**	**0.59**	**319**	⇓*i*P		**Pn**	**22 54 35.4**	**+1.3**
JAG				⇓S		**Sn**	**22 54 43.8**	**+1.2**
JAG	**Ashikaga**	**0.59**	**319**	A		A	22 54 35.4	
comp=E,56nm,0.6s,comp=E,43nm,1.2s								
JCN	**Nagara**	**0.61**	**159**	A		A	22 54 35.8	
comp=E,213nm,0.8s,comp=E,240nm,1.6s								
JHYU	**Hitachinakayam**	**0.64**	**56**	A		A	22 54 36.0	
comp=E,380nm,0.3s,comp=E,424nm,0.4s								
JSGW	**Sagamiharawaka**	**0.70**	**237**	A		A	22 54 37.2	
comp=E,65nm,0.9s,comp=E,85nm,2.1s								
JYO	**Yokosk**	**0.79**	**196**	A		A	22 54 38.5	
comp=E,82nm,2.4s,comp=E,155nm,1.1s								
CHOJ	**Chosi**	**0.80**	**110**	A		A	22 54 38.6	
comp=E,28nm,1.5s,comp=E,41nm,1.3s								
JHO	**Hitachi**	**0.81**	**39**	A		A	22 54 38.5	
comp=E,96nm,0.2s,comp=E,72nm,0.2s								
JRY	**Ryogami san**	**0.84**	**273**	⇓*i*P		**Pn**	**22 54 38.6**	**+1.1**
JRY				⇓S		**Sn**	**22 54 49.7**	**+1.0**
JRY	**Ryogami san**	**0.84**	**273**	A		A	22 54 38.6	
comp=E,19nm,2.5s,comp=E,20nm,3.6s								
JKUC	**kamogawauchiur**	**0.85**	**165**	A		A	22 54 39.4	
comp=E,78nm,1.1s,comp=E,87nm,1.4s								
TATJ	**Tateyama 2**	**0.95**	**182**	A		A	22 54 40.9	
comp=E,124nm,1.8s,comp=E,200nm,2.2s								
JKT	**Katashina**	**0.96**	**325**	⇓*i*P		**Pn**	**22 54 40.4**	**+1.1**
JKT				⇓S		**Sn**	**22 54 53.5**	**+1.8**
JKT	**Katashina**	**0.96**	**325**	A		A	22 54 40.4	
comp=E,56nm,0.5s,comp=E,47nm,0.5s								
JSB	**Shiboa**	**0.98**	**359**	A		A	22 54 41.0	
comp=E,53nm,1.5s,comp=E,48nm,0.8s								
JOD2	**Odawara 2**	**0.99**	**224**	⇓P		**Pn**	**22 54 40.7**	**+1.0**
JOD2	**Odawara 2**	**0.99**	**224**	A		A	22 54 40.7	
comp=E,38nm,1.7s,comp=E,47nm,1.6s								
JGK	**Kuni**	**1.19**	**299**	A		A	22 54 44.3	
comp=E,17nm,2.0s,comp=E,15nm,1.2s								
JFFD	**Fukushimafurud**	**1.22**	**24**	A		A	22 54 44.4	
comp=E,62nm,0.3s,comp=E,43nm,0.4s								
JYN	**Shimob**	**1.23**	**247**	*i* P		**Pn**	**22 54 44.7**	**+1.8**
JYN	**Shimob**	**1.23**	**247**	A		A	22 54 44.7	
comp=E,30nm,1.0s,comp=E,52nm,1.4s								
BSO3	**Boso 3**	**1.27**	**158**	⇓*i*P		**Pn**	**22 54 44.1**	**+0.9**
JHTM	**Izuhatsuma**	**1.27**	**217**	A		A	22 54 45.6	
comp=E,91nm,1.0s,comp=E,113nm,1.2s								
JFNN	**Fujinakano**	**1.29**	**233**	P		**Pn**	**22 54 45.0**	**+1.3**
JFNN	**Fujinakano**	**1.29**	**233**	A		A	22 54 45.0	
comp=E,35nm,2.3s,comp=E,38nm,1.9s								
ONAJ	**Iwakimizuishig**	**1.31**	**32**	A		A	22 54 46.0	
comp=E,159nm,0.3s,comp=E,111nm,0.2s								
JIM2	**Oshima 3**	**1.33**	**198**	A		A	22 54 46.4	
comp=E,63nm,1.3s,comp=E,69nm,1.7s								
JUON	**Uonuma**	**1.41**	**330**	A		A	22 54 47.3	
comp=E,11nm,6.2s,comp=E,8.0nm,2.2s								
JFY	**Yanaizu**	**1.43**	**353**	A		A	22 54 47.6	
comp=E,18nm,2.1s,comp=E,11nm,1.3s								
JNT	**Takato**	**1.46**	**266**	A		A	22 54 48.3	
comp=E,25nm,1.1s,comp=E,20nm,1.9s								
MJAR	**Matsushiro Arr**	**1.50**	**292**	P		**Pn**	**22 54 46.8**	**+0.2**
2μm,0.7s,baz=96,slow=15,SNR=1805								
MJAR				S		**Sn**	**22 55 03.0**	**-2.0**
409nm,0.4s,baz=102,slow=40,SNR=5.4								
MJAR				LR		LR	22 55 38.0	
comp=Z,4μm,21.0s,baz=136,slow=52								
MJAR	**Matsushiro Arr**	**1.50**	**292**			**Pn**	**22 54 47.2**	**+0.6**
MAJO	**Matsushiro**	**1.50**	**292**			**Pn**	**22 54 47.6**	**+1.0**
MAJO				Sn		**Sn**	**22 55 06.8**	**+1.8**
MJB9	**Matsu-Tunnel**	**1.50**	**292**			**Pn**	**22 54 47.6**	**+0.9**
JIZS	**Izushimoda**	**1.53**	**215**	A		A	22 54 49.4	
comp=E,32nm,1.3s,comp=E,15nm,1.1s								
JNG	**Nsakai**	**1.54**	**286**	A		A	22 54 49.4	
comp=E,8.0nm,0.7s,comp=E,13nm,3.3s								
JTHY	**Toshimahigashi**	**1.55**	**200**	A		A	22 54 49.7	
comp=E,38nm,0.8s,comp=E,31nm,1.4s								
JFT	**Otama**	**1.56**	**12**	A		A	22 54 49.6	
comp=E,39nm,2.2s,comp=E,27nm,0.8s								
JFK	**Kawauchi**	**1.57**	**28**	A		A	22 54 49.7	
comp=E,31nm,0.7s,comp=E,21nm,1.3s								
SHZ3	**Shizuoka 3**	**1.60**	**237**	A		A	22 54 51.5	
comp=E,27nm,1.2s,comp=E,38nm,2.3s								
JNIO	**Niijimaoohara**	**1.71**	**199**	A		A	22 54 52.0	
comp=E,37nm,1.5s,comp=E,31nm,2.5s								
JSKK	**Shikinejimakit**	**1.75**	**200**	A		A	22 54 52.6	
comp=E,29nm,1.5s,comp=E,15nm,1.5s								
JNY	**Yasuok**	**1.80**	**250**	A		A	22 54 53.2	
comp=E,24nm,1.0s,comp=E,30nm,1.2s								
JJN	**Nakama**	**1.81**	**309**	A		A	22 54 53.2	
comp=E,19nm,1.1s,comp=E,13nm,1.0s								
JIZZ	**Izumozaki**	**1.83**	**328**	A		A	22 54 53.4	
comp=E,26nm,1.7s,comp=E,30nm,4.8s								
JNS	**Sasagawa**	**1.90**	**345**	A		A	22 54 54.4	
comp=E,6.0nm,2.1s,comp=E,6.0nm,1.7s								
JMST	**Minamisoumatoc**	**1.90**	**24**	A		A	22 54 54.3	
comp=E,27nm,1.7s,comp=E,28nm,0.4s								
JKO	**Kozu shima**	**1.91**	**200**	A		A	22 54 54.8	
comp=E,30nm,2.8s,comp=E,19nm,2.5s								
JYAR	**Yonezawaarcadi**	**1.93**	**5**	A		A	22 54 54.8	
comp=E,37nm,1.3s,comp=E,33nm,1.2s								
JSG	**Sagara**	**1.94**	**228**	A		A	22 54 55.2	
comp=E,28nm,3.7s,comp=E,31nm,2.0s								
JMM	**Marumori**	**2.00**	**20**			**Pn**	**22 54 55.1**	**+1.6**
JMM	**Marumori**	**2.00**	**20**	A		A	22 54 55.8	
comp=E,33nm,2.1s,comp=E,23nm,1.2s								
JKKS	**Kakegawashinom**	**2.01**	**233**	A		A	22 54 56.3	
comp=E,23nm,3.7s,comp=E,18nm,1.3s								
JMKN	**Mikurajimanish**	**2.11**	**188**	A		A	22 54 57.7	
comp=E,15nm,1.7s,comp=E,11nm,0.9s								
HMMJ	**Hamatsu 2**	**2.13**	**239**	A		A	22 54 57.9	
comp=E,10.0nm,5.4s,comp=E,10.0nm,3.2s								
JGF	**Kuroka**	**2.13**	**260**			**Pn**	**22 54 57.9**	**+2.7**
JGF	**Kuroka**	**2.13**	**260**	A		A	22 54 57.9	
comp=E,9.0nm,2.0s,comp=E,19nm,1.5s								
JGN	**Niukaw**	**2.13**	**277**	A		A	22 54 57.9	
comp=E,7.0nm,10.0s,comp=E,5.0nm,9.0s								
JTT	**Ttatey**	**2.19**	**287**	A		A	22 54 58.7	
comp=E,7.0nm,2.5s,comp=E,10.0nm,1.6s								
JYS	**Shiratata**	**2.23**	**3**	A		A	22 54 59.2	
comp=E,22nm,1.4s,comp=E,15nm,1.3s								
JSSY	**Shinshiroyabe**	**2.25**	**242**	A		A	22 54 59.7	
comp=E,7.0nm,6.3s,comp=E,6.0nm,2.2s								
JAO	**Obara**	**2.29**	**253**	A		A	22 55 00.3	
comp=E,13nm,1.2s,comp=E,13nm,2.3s								
JSD	**Sado**	**2.45**	**327**	Pn		**Pn**	**22 55 01.0**	**+1.4**
JSD	**Sado**	**2.45**	**327**	A		A	22 55 02.3	
comp=E,5.0nm,7.4s,comp=E,4.0nm,3.1s								
JOU	**Okura**	**2.45**	**14**	A		A	22 55 02.2	
comp=E,19nm,2.1s,comp=E,21nm,1.6s								
INU	**Inuyama**	**2.46**	**256**			**Pn**	**22 55 01.8**	**+2.1**
JAW	**Awa shima**	**2.53**	**348**	A		A	22 55 03.4	
comp=E,4.0nm,22.6s,comp=E,4.0nm,3.9s								
JICN	**Ichinomiyachia**	**2.61**	**256**	A		A	22 55 04.7	
comp=E,21nm,2.3s,comp=E,25nm,2.5s								
JYA	**Atsumi**	**2.61**	**356**	A		A	22 55 04.6	
comp=E,11nm,1.5s,comp=E,11nm,0.7s								
JIKH	**Ishinomakikobu**	**2.62**	**27**	A		A	22 55 04.8	
comp=E,11nm,2.2s,comp=E,11nm,6.2s								
JYTA	**Yamagatataniai**	**2.63**	**262**	A		A	22 55 05.0	
comp=E,6.0nm,4.2s,comp=E,11nm,4.6s								
JAA	**Atsumi**	**2.65**	**240**	A		A	22 55 05.4	
comp=E,4.0nm,6.1s,comp=E,6.0nm,4.4s								
JJH	**Hakui**	**2.71**	**291**	A		A	22 55 06.1	
comp=E,2.0nm,5.5s,comp=E,5.0nm,5.6s								
JIO	**Ouri**	**2.71**	**24**	A		A	22 55 06.0	
comp=E,12nm,4.8s,comp=E,6.0nm,11.7s								
JOFO	**Osakifurukawao**	**2.73**	**16**	A		A	22 55 06.2	
comp=E,36nm,2.0s,comp=E,50nm,3.1s								
JHJ	**Hachijo jima 2**	**2.86**	**183**	P		**Pn**	**22 55 05.8**	**+0.5**
623nm,0.3s,baz=334,slow=16,SNR=433								
JHJ				S		**Sn**	**22 55 38.2**	**-0.3**
3μm,0.5s,baz=216,slow=5.2,SNR=5.7								
1μm,0.3s								
JHJ2	**Mitsune**	**2.87**	**182**	Pn		**Pn**	**22 55 05.7**	**+0.3**
JHJ2	**Mitsune**	**2.87**	**182**	A		A	22 55 08.5	
comp=E,13nm,6.4s,comp=E,12nm,1.4s								
JHCJ	**Hachijojimakas**	**2.91**	**182**	A		A	22 55 09.1	
comp=E,7.0nm,34.1s,comp=E,5.0nm,3.9s								
JKG	**Kaga**	**2.93**	**277**	A		A	22 55 09.3	
comp=E,5.0nm,2.4s,comp=E,5.0nm,1.9s								
JYK	**Kaneyama**	**2.95**	**6**	A		A	22 55 09.4	
comp=E,6.0nm,4.8s,comp=E,5.0nm,0.9s								
JEG	**Eigenji**	**3.01**	**255**	A		A	22 55 10.5	
comp=E,3.0nm,4.0s,comp=E,6.0nm,1.4s								
JYYZ	**Yamagatayuza**	**3.03**	**360**	A		A	22 55 10.4	
comp=E,11nm,1.5s,comp=E,14nm,5.2s								
JHG	**Hegura jima**	**3.05**	**309**	A		A	22 55 10.9	
comp=E,2.0nm,3.8s,comp=E,3.0nm,5.5s								
JKMT	**Kesennumamotoy**	**3.08**	**23**	A		A	22 55 11.2	
comp=E,8.0nm,2.0s,comp=E,6.0nm,0.6s								
JIE	**Ise**	**3.08**	**240**	A		A	22 55 11.5	
comp=E,5.0nm,2.2s,comp=E,5.0nm,3.7s								
JMK	**Ichinoseki**	**3.13**	**19**	A		A	22 55 12.0	
comp=E,7.0nm,2.6s,comp=E,3.0nm,5.1s								
TSUJ	**Tsu 2**	**3.14**	**247**	A		A	22 55 12.3	
comp=E,6.0nm,5.9s,comp=E,7.0nm,3.6s								
JTB	**Tobi-shima**	**3.22**	**355**	A		A	22 55 13.2	
comp=N,4.0nm,3.7s								
JFM	**Mihama**	**3.24**	**263**	A		A	22 55 13.8	
comp=E,4.0nm,1.2s,comp=E,8.0nm,1.3s								
OFUJ	**Ofunato**	**3.38**	**24**	A		A	22 55 15.5	
comp=E,8.0nm,4.1s								
JRG	**Rokugo**	**3.45**	**9**	A		A	22 55 16.5	
comp=E,7.0nm,3.3s,comp=E,7.0nm,3.6s								
JKN2	**Miekihoku**	**3.47**	**241**	A		A	22 55 17.0	
comp=E,3.0nm,5.3s,comp=E,4.0nm,17.2s								
JAOM	**Aogashimamukai**	**3.52**	**182**	A		A	22 55 17.7	
comp=E,13nm,1.2s,comp=E,8.0nm,2.6s								
JYW	**Yuwa**	**3.56**	**3**	A		A	22 55 18.0	
comp=E,13nm,2.2s,comp=E,23nm,2.3s								
JOM	**Ohasama**	**3.65**	**17**	A		A	22 55 19.2	
comp=E,6.0nm,2.0s,comp=E,4.0nm,13.6s								
JHE	**Heguri**	**3.72**	**250**	A		A	22 55 20.5	
comp=E,4.0nm,3.9s,comp=E,6.0nm,1.8s								
JWT	**Wachi**	**3.76**	**261**	A		A	22 55 21.0	
comp=N,4.0nm,2.2s								
JSZI	**Iwateshizukuis**	**3.84**	**12**	A		A	22 55 21.9	
comp=E,17nm,2.6s,comp=E,14nm,2.5s								
MIYJ	**Miyakonagasawa**	**3.88**	**22**	A		A	22 55 22.6	
comp=E,8.0nm,6.4s								
JKY	**Yasaka**	**3.94**	**266**	A		A	22 55 23.6	
comp=E,3.0nm,5.1s,comp=E,8.0nm,1.7s								
JOG3	**Oga3**	**3.99**	**351**	A		A	22 55 23.2	
comp=E,5.0nm,2.0s,comp=E,5.0nm,5.8s								
JMIK	**Miki**	**4.16**	**255**	A		A	22 55 26.6	
comp=E,5.0nm,1.8s,comp=E,7.0nm,1.4s								
JTH	**Tanohata**	**4.23**	**21**	A		A	22 55 27.5	
comp=E,5.0nm,4.9s,comp=E,5.0nm,10.1s								
JAH	**Hinai**	**4.23**	**7**	A		A	22 55 27.5	
comp=E,5.0nm,9.3s								
JWKM	**Wakayamakushim**	**4.27**	**235**	A		A	22 55 28.3	
comp=E,3.0nm,2.6s								
JNTW	**Noshirotokiwa**	**4.28**	**2**	A		A	22 55 28.2	
comp=E,10.0nm,7.7s,comp=E,13nm,2.6s								
JKSM	**Kasumi**	**4.30**	**266**	A		A	22 55 28.7	
comp=N,2.0nm,2.3s								
JWM	**Minabe**	**4.32**	**242**	A		A	22 55 29.0	
comp=N,3.0nm,3.0s								
JAWN	**Awajishima-nag**	**4.38**	**251**	A		A	22 55 29.8	
comp=E,4.0nm,5.5s,comp=E,5.0nm,2.7s								
JKEN	**Kujiedanarisaw**	**4.44**	**18**	A		A	22 55 30.4	
comp=E,10.0nm,0.6s,comp=E,11nm,1.3s								
JANG	**Nango**	**4.56**	**15**	A		A	22 55 32.0	
comp=E,3.0nm,5.3s								
JIW	**Iwasaki**	**4.60**	**1**	A		A	22 55 32.7	
comp=E,3.0nm,5.0s,comp=E,2.0nm,4.5s								
JHHS	**Hirosakihyakuz**	**4.67**	**4**	A		A	22 55 33.6	
comp=N,7.0nm,5.3s								
JTM	**Tenmabayashi**	**4.88**	**10**			**Pn**	**22 55 35.9**	**+2.9**
JAI	**Aioi**	**5.01**	**246**	A		A	22 55 38.6	
comp=N,2.0nm,4.8s								
JKR	**Kurayoshi**	**5.01**	**265**	A		A	22 55 38.6	
comp=E,2.0nm,8.8s,comp=E,3.0nm,2.2s								
JSI2	**Shiura 2**	**5.08**	**4**	A		A	22 55 39.4	
comp=E,2.0nm,7.3s,comp=E,3.0nm,4.7s								
JARK	**Aomorirokkasho**	**5.14**	**12**	A		A	22 55 40.2	
comp=E,3.0nm,3.6s,comp=E,4.0nm,8.0s								
JJS	**Sakaide**	**5.17**	**254**	A		A	22 55 40.9	
comp=E,1.0nm,8.1s,comp=E,2.0nm,6.9s								
JAHD	**Aomorihigashid**	**5.39**	**11**	A		A	22 55 43.6	
comp=E,7.0nm,1.0s,comp=E,6.0nm,1.6s								
MRT2	**Murotomisaki 2**	**5.43**	**243**	A		A	22 55 44.5	
comp=E,2.0nm,6.6s,comp=E,2.0nm,12.0s								
JOT	**Ohata**	**5.46**	**9**	A		A	22 55 44.7	
comp=E,4.0nm,5.9s,comp=E,2.0nm,3.3s								
JMN	**Monobe**	**5.46**	**247**	A		A	22 55 45.0	
comp=E,3.0nm,9.5s,comp=E,2.0nm,2.2s								
JHS	**Saijyo**	**5.65**	**262**			**Pn**	**22 55 46.1**	**+2.5**
JHS	**Saijyo**	**5.65**	**262**	A		A	22 55 47.5	
comp=N,2.0nm,4.9s								
ERM	**Er

NAWB Namwon 10.21 271 Pn Pn 22 56 50.0 +3.8
INCN Inchon 10.78 282 Pn Pn 22 56 55.0 +1.1
INCN Inchon 10.78 282 P Pn 22 56 55.0 +1.1
KUR Kuril'sk 11.03 31 eP Pn 22 56 55.6 -1.6
KUR eS Sn **22 58 52.6 -6.5**
KUR pmax pmax
comp=Z,72nm,0.4s
KUR smax smax
comp=E,193nm,0.6s
KUR smax smax
comp=N,81nm,0.3s
YSS Yuzh-Sakhalins 11.16 10 Pn Pn 22 56 59.2 +0.2
YSS Yuzh-Sakhalins 11.16 10 eP Pn 22 57 00.0 +0.9
YSS eS Sn **22 59 04.7 +2.3**
YSS pmax pmax
comp=Z,40nm,1.0s
YSS MLR MLR
comp=Z,600nm,15.0s
MDJ Mudanjiang 11.68 321 Pn Pn 22 57 09.6 +3.4
MDJ Mudanjiang 11.68 321 P Pn 22 57 12.2 +6.0
MDJ S Sn 22 59 28.2 +13
MDJ pmax pmax
comp=Z,47nm,1.0s
MDJ pmax pmax
comp=Z,160nm,3.9s
MDJ LR LR
comp=Z,420nm,12.5s
MDJ LR LR
comp=Z,300nm,15.3s
MDJ LR LR
comp=Z,630nm,15.0s
CN2 Changchun 13.57 310 eP Pn 22 57 28.7 -3.4
CN2 eS **Sn 22 59 59.2 -2.3**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=N,200nm,15.0s
CN2 LR LR
comp=E,300nm,15.0s
CN2 LR LR
comp=Z,400nm,17.2s
BNX BinXian 13.58 320 ⇓P Pn 22 57 34.6 +2.5
BNX pP **P 22 57 42.5 +2.2**
BNX sP 22 57 49.3
BNX S **Sn 23 00 08.0 +6.5**
BNX sS **S 23 00 21.7 -1.7**
BNX pmax pmax
comp=Z,25nm,1.1s
BNX pmax pmax
comp=Z,150nm,3.5s
BNX LR LR
comp=Z,220nm,12.6s
BNX LR LR
comp=Z,320nm,14.7s
BNX LR LR
comp=Z,440nm,15.0s
SNY Shenyang 14.00 300 ⇓P P 22 57 42.7 -2.3
SNY S Sn 23 00 21.4 +10
SNY pmax pmax
comp=Z,140nm,3.5s
SNY LR LR
comp=Z,340nm,15.1s
SNY LR LR
comp=Z,430nm,17.5s
SNY LR LR
comp=Z,620nm,15.3s
KLR Kul'dur 14.53 338 P Pn 22 57 45.4 +0.4
comp=Z,0.7nm,0.3s,baz=136,slow=12,SNR=16
KLR LR LR 23 03 14.5
comp=Z,288nm,18.0s,baz=143,slow=36
comp=Z,1.9nm,0.3s
KLR Kul'dur 14.53 338 ceP Pn 22 57 45.0 0.0
KLR pmax pmax
comp=Z,9.0nm,1.7s
DL2 Dalian 14.83 287 P P 22 57 52.3 -2.0
DL2 pmax pmax
comp=Z,27nm,1.4s
DL2 LR LR
comp=Z,440nm,19.5s
DL2 LR LR
comp=Z,520nm,19.6s
TYV Tymovskoe 15.00 7 eP Pn 22 57 49.9 -1.3
TYV eS **Sn 23 00 35.3 -0.8**
TYV pmax pmax
comp=Z,12nm,1.3s
TYV pmax pmax
comp=Z,200nm,3.5s
TYV smax smax
comp=N,200nm,4.3s
TYV smax smax
comp=E,100nm,4.3s
NKL Nikolayevsk 17.17 2 eP Pn 22 58 17.6 -1.3
NKL eS **Sn 23 01 28.5 -0.2**
NKL pmax pmax
comp=N,1.0nm,1.4s
NKL pmax pmax
comp=Z,14nm,1.0s
NKL pmax pmax
comp=E,2.0nm,0.9s
NKL smax smax
comp=E,2.0nm,1.0s
NKL smax smax
comp=N,1.0nm,1.4s
NKL MLR MLR
comp=E,47nm,12.0s
NKL MLR MLR
comp=N,16nm,19.0s
NKL MLR MLR
comp=Z,149nm,13.0s
NJ2 Nanjing 17.90 263 eP Pn 22 58 27.9 -0.2
NJ2 pmax pmax
comp=Z,5.0nm,0.5s
NJ2 LR LR
comp=Z,270nm,16.1s
NJ2 LR LR
comp=Z,340nm,17.1s
NJ2 LR LR
comp=Z,470nm,20.8s
TIA Tai'an 18.43 277 eP P 22 58 33.8 -0.4
TIA S **Sn 23 01 58.7 -0.8**
TIA pmax pmax
comp=Z,27nm,1.2s
TIA pmax pmax
comp=Z,68nm,3.9s
TIA LR LR
comp=Z,190nm,17.1s
TIA LR LR
comp=Z,250nm,18.0s
TIA LR LR
comp=Z,300nm,23.0s
YOJ Yonaguni jima 18.56 236 P P 22 58 34.5 -1.1
YOJ IAmb IAmb 22 58 40.0
comp=Z,282nm,1.4s
YOJ Yonaguni jima 18.56 236 P P 22 58 34.6 -1.1
YOJ pmax pmax
comp=Z,282nm,1.4s
BJI Beijing 19.14 289 P P 22 58 42.5 +0.7
BJI pmax pmax
comp=Z,30nm,0.7s
BJI LR LR
comp=Z,170nm,21.3s
BJI LR LR
comp=Z,140nm,24.6s
BJI LR LR
comp=Z,370nm,23.9s
BJT Baijiatuau 19.14 289 P P 22 58 41.8 -0.1
BJT Baijiatuau 19.14 289 P P 22 58 41.8 -0.1
BJT pmax pmax
comp=Z,23nm,0.8s
YHNB Yeheng 19.55 240 P P 22 58 45.3 -1.3
NACB Ningan chiao 19.72 238 P P 22 58 47.7 -0.7
HIA Hailar 19.84 318 P P 22 58 47.9 -1.6
HIA Hailar 19.84 318 P P 22 58 47.9 -1.6
HIA pmax pmax
comp=Z,11nm,0.6s
ZEA Zeya 19.84 337 eP P 22 58 47.2 -2.2
ZEA pmax pmax
comp=E,10.0nm,0.7s
ZEA pmax pmax
comp=N,30nm,1.0s
ZEA pmax pmax
comp=Z,60nm,0.6s
ZEA MLR MLR
comp=E,200nm,14.0s

XLT XiLinHaoTe 19.88 301 ⇓P Pn 22 58 54.3 +2.4
XLT pP pP 22 59 02.2 +2.2
XLT sP sP 22 59 10.9 +5.9
XLT PP **PnPn 22 59 14.2 +7.8**
XLT S **S 23 02 25.0 -6.6**
XLT sS sS 23 02 49.9 +2.4
XLT SS SnSn 23 03 04.0 +15
XLT pmax pmax
comp=E,20nm,1.1s
XLT pmax pmax
comp=E,94nm,4.6s
XLT LR LR
comp=E,400nm,17.5s
XLT LR LR
comp=E,430nm,16.2s
HNS HongShan 20.27 282 ⇑P P 22 58 52.4 -1.8
HNS eS **S 23 02 31.7 -7.5**
HNS SS **SnSn 23 03 06.3 +8.1**
HNS pmax pmax
comp=E,23nm,0.9s
HNS LR LR
comp=E,220nm,17.0s
HNS LR LR
comp=E,320nm,18.5s
HNS LR LR
comp=E,330nm,18.6s
SSLB Suanglung 20.41 239 P P 22 58 54.5 -1.5
YULB Yu-li 20.44 237 P P 22 58 55.5 -0.6
PEA0B Petropavlovsk- 21.19 31 P P 22 59 04.5 +0.5
PEA0B Petropavlovsk- 21.19 31 ceP P 22 59 04.1 0.0
PETK Petropavlovsk- 21.19 31 P P 22 59 05.1 +1.0
comp=E,18nm,1.1s,baz=77,slow=9.8,SNR=5.6
PETK S **S 23 03 02.0 +4.6**
comp=E,1.9nm,0.4s,baz=127,slow=40,SNR=4.7
PETK LR LR 23 07 12.6
comp=E,124nm,19.5s,baz=222,slow=36
comp=E,18nm,1.1s
PETK Petropavlovsk- 21.19 31 P P 22 59 04.0 -0.1
PET Petropavlovsk 21.54 32 P P 22 59 08.1 +0.4
PET IAmb IAmb 22 59 13.4
comp=Z,56nm,1.4s
PET Petropavlovsk 21.54 32 eP P 22 59 09.1 +1.4
PET eS **S 23 03 00.7 -3.4**
PET pmax pmax
comp=Z,39nm,1.4s
PET pmax pmax
comp=Z,200nm,6.1s
PET MLR MLR
comp=Z,200nm,14.0s
PET MLR MLR
comp=Z,500nm,14.0s
WHN Wuhan 22.04 263 ⇓P P 22 59 17.7 +4.4
WHN pmax pmax
comp=Z,30nm,0.6s
WHN LR LR
comp=Z,680nm,20.6s
LYN LuoYang 22.45 274 ⇑P P 22 59 15.4 -2.3
LYN pP pP 22 59 29.5 +1.8
LYN sP sP 22 59 37.1 +4.3
LYN S **S 23 03 15.1 -6.5**
LYN SS **SnSn 23 04 04.2 +12**
LYN pmax pmax
comp=Z,10.0nm,1.0s
LYN pmax pmax
comp=Z,80nm,3.9s
LYN LR LR
comp=Z,340nm,14.8s
LYN LR LR
comp=Z,430nm,20.3s
LYN LR LR
comp=Z,500nm,18.3s
HHC Hu-ho-hao-te 22.70 291 eP P 22 59 20.7 +0.2
HHC S **S 23 03 20.6 -5.6**
HHC pmax pmax
comp=Z,19nm,0.8s
HHC pmax pmax
comp=Z,130nm,6.1s
HHC LR LR
comp=Z,220nm,11.5s
HHC LR LR
comp=Z,400nm,14.9s
HHC LR LR
comp=Z,410nm,15.0s
GUMO Guam 22.74 167 P P 22 59 20.1 -0.7
comp=Z,117nm,1.0s,baz=0.0,slow=20,SNR=3.6
comp=Z,117nm,1.0s
GUMO Guam 22.74 167 P P 22 59 19.9 -1.0
CNSH ChangSha 24.11 259 ⇑P P 22 59 34.6 +0.4
CNSH S **S 23 03 51.4 +2.2**
CNSH LR LR
comp=Z,270nm,17.1s
CNSH LR LR
comp=Z,190nm,18.8s
MA2 Magadan 24.64 13 P P 22 59 39.1 +0.5
comp=Z,41nm,0.6s,baz=203,slow=9.3,SNR=35
comp=Z,41nm,0.6s
MA2 Magadan 24.64 13 P P 22 59 39.5 +0.9
MA2 IAmb IAmb 22 59 41.3
comp=Z,49nm,0.6s
MA2 Magadan 24.64 13 ceP P 22 59 40.2 +1.5
MA2 pmax pmax
comp=Z,48nm,0.8s
XAN Xi'an 25.42 275 P P 22 59 45.1 -1.0
XAN pP sP 22 59 59.3 -2.5
XAN sP pP 23 00 06.3 +9.3
XAN S **S 23 04 07.5 -2.8**
XAN sS sS 23 04 32.4 +3.9
XAN pmax pmax
comp=Z,10.0nm,1.0s
XAN pmax pmax
comp=Z,79nm,6.7s
XAN LR LR
comp=Z,290nm,17.0s
XAN LR LR
comp=Z,280nm,18.7s
XAN LR LR
comp=Z,340nm,17.3s
ENH Enshi 26.06 266 P P 22 59 50.7 -1.3
YAK Yakutsk 26.86 349 P P 22 59 58.4 -0.3
comp=Z,20nm,0.6s,baz=145,slow=2.8,SNR=12
YAK S **S 23 04 33.9 +1.7**
comp=Z,4.6nm,0.4s,baz=180,slow=12,SNR=1.6
YAK LR LR 23 10 45.7
comp=Z,247nm,18.9s,baz=102,slow=37
comp=Z,20nm,0.6s
YAK Yakutsk 26.86 349 P P 22 59 58.3 -0.3
YAK IAmb IAmb 23 00 00.2
comp=Z,36nm,0.9s
YAK Yakutsk 26.86 349 eP P 22 59 58.0 -0.7
YAK eS **S 23 04 29.9 -2.3**
YAK smax smax
comp=E,40nm,2.0s
YAK smax smax
comp=N,68nm,2.7s
YAK MLR MLR
comp=Z,229nm,17.0s
ULN Ulaanbaatar 26.98 306 P P 22 59 59.5 -0.7
ULN Ulaanbaatar 26.98 306 ceP P 22 59 58.9 -1.3
ULN pmax pmax
comp=Z,11nm,1.3s
SONM Songino Array 27.41 306 P P 23 00 03.0 -1.0
comp=Z,5.0nm,0.8s,baz=104,slow=9.0,SNR=18
SONM PcP **PcP 23 03 22.2 +0.2**
comp=Z,0.6nm,0.7s,baz=97,slow=4.0,SNR=2.1
comp=Z,5.0nm,0.8s
SONM Songino Array 27.41 306 P P 23 00 03.2 -0.8
SONM Songino Array 27.41 306 P P 23 00 03.2 -0.8
SONM pmax pmax
comp=Z,5.0nm,0.8s
SEY Seymchan 28.06 12 P P 23 00 10.2 +0.8
comp=Z,8.6nm,0.8s,baz=191,slow=7.5,SNR=13
SEY LR LR 23 11 33.7
comp=Z,169nm,21.2s,baz=196,slow=37
comp=Z,8.6nm,0.8s
SEY Seymchan 28.06 12 ceP P 23 00 09.4 0.0
SEY pmax pmax
comp=Z,12nm,0.8s
LZH Lanzhou 29.08 281 eP P 23 00 16.9 -2.2
LZH pP pP 23 00 26.5 -3.5
LZH sP sP 23 00 34.8 0.0
LZH sS sS 23 05 24.2 -2.3
LZH pmax pmax
comp=Z,24nm,1.3s
LZH pmax pmax
comp=Z,150nm,4.7s
LZH LR LR
comp=Z,320nm,12.3s
LZH LR LR
comp=Z,370nm,12.4s
LZH LR LR
comp=Z,430nm,14.5s
SHEM Shemya Is, Ala 29.25 44 LR LR 23 10 11.8
comp=Z,70nm,22.0s,baz=276,slow=32
GYA Guiyang 29.87 261 ⇑P P 23 00 25.0 -1.1
GYA pmax pmax
comp=Z,11nm,1.2s
ZAK Zakamensk 30.01 310 eP P 23 00 26.1 -1.0
ZAK pmax pmax
comp=Z,4.0nm,1.0s
CD2 Chengdu 30.49 271 P P 23 00 31.0 -0.4
CD2 S **S 23 05 29.5 -0.6**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 LR LR
comp=Z,460nm,22.5s
CD2 LR LR
comp=Z,430nm,18.6s
QIZ Qiongzhong 31.41 246 P P 23 00 40.7 +1.1
QIZ S **S 23 05 45.6 +1.0**
QIZ LR LR
comp=Z,180nm,20.7s
QIZ LR LR
comp=Z,140nm,13.5s
QIZ LR LR
comp=Z,140nm,27.1s
MOY Mondy 31.73 312 eP P 23 00 42.1 -0.1
GTA Gaotai 31.75 288 eP P 23 00 42.6 +0.1
GTA pP pP 23 00 54.1 +0.5
GTA sP sP 23 00 59.3 +1.0
GTA PcP **PcP 23 03 34.2 +0.9**
GTA pmax pmax
comp=Z,4.0nm,0.7s
GTA pmax pmax
comp=Z,52nm,7.3s
GTA LR LR
comp=Z,150nm,17.4s
GTA LR LR
comp=Z,170nm,17.4s
GTA LR LR
comp=Z,200nm,18.5s
PATS Pohnpei 33.55 145 P P 23 00 59.4 +1.1
KMI Kunming 33.63 262 ⇑P P 23 00 57.6 -1.6
KMI pmax pmax
comp=Z,9.0nm,0.9s
PZH PanZhiHua 33.81 265 P P 23 01 03.1 +2.4
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH pmax pmax
comp=Z,100nm,6.3s
BILL Bilibino 35.37 17 P P 23 01 13.4 -0.1
BILL Bilibino 35.37 17 ceP P 23 01 14.4 +0.9
BILL e 23 02 31.7
BILL pmax pmax
comp=Z,12nm,1.3s
BILL MLR MLR
comp=Z,100nm,17.0s
TIXI Tiksi 36.20 354 P P 23 01 20.4 -0.1
comp=Z,8.9nm,0.6s,baz=267,slow=21,SNR=21
TIXI LR LR 23 18 08.7
comp=Z,97nm,18.1s,baz=180,slow=39
comp=Z,8.9nm,0.6s
TIXI Tiksi 36.20 354 P P 23 01 20.3 -0.3
TIXI IAmb IAmb 23 01 21.2
comp=Z,11nm,0.7s
TIXI Tiksi 36.20 354 ceP P 23 01 20.5 -0.1
TIXI pmax pmax
comp=Z,10.0nm,0.7s
TIXI Tiksi 36.20 354 P P 23 01 20.6 0.0
TIXI x x 23 01 26.9
TIXI pP **pP 23 01 29.0 -2.7**
GOMU GeErMu 36.21 284 P P 23 01 21.5 0.0
GOMU PcP **PcP 23 03 47.2 +0.9**
GOMU S **S 23 06 58.4 -0.9**
GOMU pmax pmax
comp=Z,4.0nm,0.4s
GOMU pmax pmax
comp=Z,61nm,4.5s
GOMU LR LR
comp=Z,100nm,11.9s
GOMU LR LR
comp=Z,82nm,12.0s
GOMU LR LR
comp=Z,100nm,12.9s
MYLDM Lahad Datu 36.45 218 P P 23 01 24.5 +1.2
SWI Sorong 37.54 194 P P 23 01 33.6 +1.1
SWI pmax pmax
comp=Z,25nm,0.8s
SIJI Sorong 37.54 194 LR LR 23 14 24.2
comp=Z,233nm,20.3s,baz=6.0,slow=32
SMPI Sarmi 37.80 182 P P 23 01 34.9 +0.2
comp=Z,22nm,0.7s
GENI Genyem 38.38 180 P P 23 01 40.7 +1.1
comp=Z,66nm,1.1s
TOLI2 Tolitoli 38.99 211 P P 23 01 44.7 -0.1
FAKI Fak Fak 39.36 192 P P 23 01 47.9 0.0
FAKI IAmb IAmb 23 02 06.3
comp=Z,70nm,1.4s
NIKH Nikolski High 39.36 48 P P 23 01 48.4 +0.9
CHTO Chiang Mai 39.88 256 P P 23 01 50.7 -1.5
CHTO Chiang Mai 39.88 256 P P 23 01 50.7 -1.5
CHTO pmax pmax
comp=Z,5.0nm,0.9s
CHTO Chiang Mai 39.88 256 P P 23 01 49.8 -2.4
CHTO x x 23 01 57.3
CHTO pP **pP 23 02 00.0 -3.4**
CMAR Chiang Mai Arr 40.08 255 P P 23 01 53.6 -0.3
comp=Z,2.0nm,0.4s,baz=48,slow=8.3,SNR=7.5
CMAR PcP **PcP 23 03 58.6 +0.5**
comp=Z,1.3nm,0.3s,baz=31,slow=1.3,SNR=6.9
CMAR LR LR 23 20 06.8
comp=Z,93nm,18.4s,baz=70,slow=39
comp=Z,2.0nm,0.4s
CMAR Chiang Mai Arr 40.08 255 P P 23 01 53.0 -0.8
WMQ Urumqi 40.26 298 eP P 23 01 58.9 +3.7
WMQ PP **PnPn 23 03 38.1 +6.1**
WMQ pmax pmax
comp=Z,22nm,0.7s
WMQ LR LR
comp=Z,200nm,19.7s
WMQ LR LR
comp=Z,310nm,24.5s
WMQ LR LR
comp=Z,86nm,19.1s
LSA Lhasa 41.12 276 P P 23 02 02.6 -0.3
LSA Lhasa 41.12 276 P P 23 02 02.6 -0.3
LSA pmax pmax
comp=Z,17nm,1.0s
LSA Lhasa 41.12 276 P P 23 02 04.0 +1.1
LSA pmax pmax
comp=Z,21nm,0.9s
LSA Lhasa 41.12 276 P P 23 02 03.8 +0.9
LSA Lhasa 41.12 276 P P 23 02 03.8 +0.9
ZAA0 Zalesovo Array 41.75 313 P P 23 02 07.0 -0.2
ZAA0 IAmb IAmb 23 02 08.5
comp=Z,46nm,0.8s
ZALV Zalesovo Beam 41.75 313 P P 23 02 07.2 0.0
comp=Z,45nm,0.7s,baz=91,slow=6.4,SNR=180
ZALV PcP **PcP 23 04 02.6 -0.3**
comp=Z,8.0nm,0.6s,baz=94,slow=2.3,SNR=7.5
ZALV LR LR 23 20 13.8
comp=Z,78nm,18.7s,baz=60,slow=37
comp=Z,45nm,0.7s
ZALV Zalesovo Beam 41.75 313 P P 23 02 07.3 +0.1
SHL Shillong 42.20 270 P P 23 02 10.2 -1.2
SHL Shillong 42.20 270 P P 23 02 10.3 -1.2
SHL pmax pmax
comp=Z,8.0nm,0.7s
TNA Tin City 42.35 29 P P 23 02 12.9 +0.9
TNA Tin City 42.35 29 P P 23 02 14.5 +2.5
baz=252
MK31 Makanchi Array 43.67 303 P P 23 02 22.8 -0.1
MK31 Makanchi Array 43.67 303 ciP P 23 02 22.7 -0.3
MKAR Makanchi Array 43.67 303 P P 23 02 23.0 0.0
comp=Z,8.0nm,0.6s,baz=88,slow=9.9,SNR=110
MKAR PcP **PcP 23 04 09.9 +0.3**
comp=Z,2.8nm,0.8s,baz=83,slow=4.5,SNR=3.2
MKAR LR LR 23 21 05.2
comp=Z,150nm,19.0s,baz=80,slow=37
comp=Z,8.0nm,0.6s
MKAR Makanchi Array 43.67 303 P P 23 02 23.0 0.0
NRIK Noril'sk 43.73 336 P P 23 02 23.2 +0.2
comp=Z,11nm,0.8s,baz=111,slow=9.1,SNR=14

NRIK PcP **PcP** **23 04 09.8 +0.5**
comp=Z,5.0nm,0.6s,baz=71,slow=4.9,SNR=2.7
NRIK LR LR 23 21 39.6
comp=Z,103nm,18.3s,baz=178,slow=37
comp=Z,11nm,0.8s
NRIK Noril'sk 43.73 336 P **P** **23 02 22.6 -0.5**
NRIK Noril'sk 43.73 336 *ce*P **P** **23 02 22.5 -0.5**
NRIK pmax pmax
comp=Z,17nm,0.9s
MAKZ Makanchi 43.89 303 P **P** **23 02 24.0 -0.7**
MAKZ Makanchi 43.89 303 P **P** **23 02 24.0 -0.7**
MAKZ pmax pmax
comp=Z,10.0nm,0.9s
MAKZ Makanchi 43.89 303 P **P** **23 02 24.5 -0.2**
MAKZ x x 23 02 30.9
MAKZ pP **pP** **23 02 34.5 -1.5**
MAKZ sP **sP** **23 02 39.1 -1.6**
KSM Kuching 43.97 225 P **P** **23 02 24.3 -1.2**
SDPT Sand Point 44.38 45 P **P** **23 02 27.7 -0.8**
SDPT IAmb IAmb 23 02 54.4
comp=Z,33nm,0.9s
TAPN Taplejung 44.83 274 *e*P **P** **23 02 32.4 -0.4**
comp=Z,16nm,0.4s
CNBA Chernabura Isl 44.90 46 P **P** **23 02 32.6 0.0**
CNBA IAmb IAmb 23 03 06.8
comp=Z,48nm,1.2s
N16K Nishlik Lake 45.48 38 P **P** **23 02 39.7 +2.5**
baz=266,SNR=14
KURK Kurchatov 45.65 309 P **P** **23 02 38.4 -0.1**
KURK Kurchatov 45.65 309 *ce*P **P** **23 02 38.3 -0.3**
KURK pmax pmax
comp=Z,132nm,1.3s
KURK Kurchatov 45.65 309 P **P** **23 02 38.5 -0.1**
KURK pP **pP** **23 02 48.9 -1.0**
SRIT Nakonsritamara 45.71 243 P **P** **23 02 39.0 -0.4**
KURBB Kurchatov Arra 45.71 309 LR LR 23 22 32.9
comp=Z,114nm,18.1s,baz=58,slow=37
O16K Kokwok River B 45.77 39 P **P** **23 02 41.3 +1.9**
baz=268
P16K Nushagak River 45.81 40 P **P** **23 02 42.2 +2.5**
baz=268
RAMN Ramite 45.89 274 *e*P **P** **23 02 40.9 -0.2**
comp=Z,83nm,0.8s
JIRN Jiri 45.93 275 *e*P **P** **23 02 41.8 +0.2**
GUN Gumba 46.07 276 *e*P **P** **23 02 42.6 -0.1**
SHLS Shalkode 46.27 298 *i* P **P** **23 02 41.2 -2.6**
SHLS pmax pmax
comp=Z,8.0nm,0.9s
O17K Koliganek Bris 46.29 39 P **P** **23 02 45.8 +2.3**
baz=268
UZB Uzynbulak 46.59 298 *e*P **P** **23 02 44.8 -1.5**
PKI Pulchoki 46.59 276 *e*P **P** **23 02 45.8 -0.9**
comp=Z,23nm,0.7s
PKIN Phulchoki 46.60 276 *e*P **P** **23 02 46.0 -0.7**
comp=Z,18nm,0.6s
P17K Kvichak River 46.61 39 P **P** **23 02 48.1 +2.1**
baz=269
KPKS Kokpek 46.76 299 *i* P **P** **23 02 47.5 -0.1**
KPKS pmax pmax
comp=Z,7.0nm,0.9s
N18K Kilae Creek 46.91 37 P **P** **23 02 50.1 +1.7**
N18K IAmb IAmb 23 03 02.4
comp=Z,7.6nm,0.8s
N18K Kilae Creek 46.91 37 P **P** **23 02 50.8 +2.4**
baz=269,SNR=6.9
TTA Tatalina 46.96 34 P **P** **23 02 49.8 +0.9**
TTA Tatalina 46.96 34 P **P** **23 02 49.8 +0.9**
TTA pmax pmax
comp=Z,8.0nm,1.3s
TTA Tatalina 46.96 34 P **P** **23 02 50.6 +1.8**
baz=266
GKN Gorkha 47.04 277 *e*P **P** **23 02 50.0 0.0**
comp=Z,143nm,0.9s
SVW2 Sparrevohn 47.08 37 P **P** **23 02 50.9 +1.2**
SVW2 IAmb IAmb 23 02 55.2
comp=Z,9.1nm,0.8s
PRZ Przheval'sk 47.19 298 P **P** **23 02 51.7 +0.7**
PRZ Przheval'sk 47.19 298 P **P** **23 02 51.7 +0.7**
PRZ pmax pmax
comp=Z,57nm,1.1s
ARXS Arharly 47.21 300 *i* P **P** **23 02 50.9 -0.1**
P18K Big Mountain, 47.23 39 P **P** **23 02 52.3 +1.4**
P18K IAmb IAmb 23 02 55.5
comp=Z,15nm,0.9s
P18K Big Mountain, 47.23 39 P **P** **23 02 52.7 +1.8**
baz=270
O18K Koktuh Hills 47.24 38 P **P** **23 02 53.5 +2.5**
baz=270
KULM Kulim 47.26 239 P **P** **23 02 52.6 +1.0**
KULM IAmb IAmb 23 04 10.7
comp=Z,20nm,1.3s
L19K White Mountain 47.46 35 P **P** **23 02 54.8 +2.2**
baz=268,SNR=9.9
DANN Dangsing 47.60 277 *e*P **P** **23 02 54.8 +0.2**
comp=Z,211nm,0.8s
N19K Bonanza Creek 47.61 37 P **P** **23 02 55.1 +1.2**
N19K Bonanza Creek 47.61 37 P **P** **23 02 55.7 +1.8**
baz=270
SOEI Soe 47.83 201 P **P** **23 02 57.4 +1.3**
K20K Telida 47.86 34 P **P** **23 02 58.2 +2.4**
baz=268,SNR=21
J20K Nowinta River 47.87 33 P **P** **23 02 58.0 +2.2**
baz=267,SNR=12
A21K Barrow 47.89 23 P **P** **23 02 57.4 +1.6**
baz=258
TPRI Tanjung Pinang 47.91 231 P **P** **23 02 57.4 +0.7**
L20K Farewell, AK 47.92 35 P **P** **23 02 58.5 +2.2**
baz=269,SNR=8.6
KOLN Koldanda 47.97 277 *e*P **P** **23 02 56.4 -0.9**
comp=Z,14nm,1.4s
Q19K Cape Douglas, 48.06 40 P **P** **23 02 58.1 +0.8**
baz=272,SNR=7.0
AAA Alma-Ata 48.08 299 *e*P **P** **23 02 57.6 -0.2**
KDJ Kajisay 48.15 297 P **P** **23 02 58.8 +0.3**
KDJ IAmb IAmb 23 02 59.9
comp=Z,36nm,1.3s
KDJ Kajisay 48.15 297 P **P** **23 02 58.8 +0.3**
KDJ pmax pmax
comp=Z,36nm,1.3s
IMAR Indian Mountai 48.16 30 P **P** **23 02 59.2 +1.2**
M20K Styx River 48.26 36 P **P** **23 03 01.5 +2.6**
baz=270,SNR=6.4
PYUN Piuthan 48.32 278 *e*P **P** **23 03 00.3 +0.2**
comp=Z,275nm,1.1s
OHAK Old Harbor 48.33 42 P **P** **23 02 59.9 +0.5**
baz=274
BATI Baumata 48.44 202 P **P** **23 03 01.1 +0.4**
comp=Z,18nm,0.4s,baz=79,slow=1.2,SNR=4.9
comp=Z,18nm,0.4s
H21K Melozitna Rive 48.52 31 P **P** **23 03 02.9 +2.1**
baz=267,SNR=8.6
CHUM Lake Minchumin 48.66 33 P **P** **23 03 04.3 +2.4**
baz=269,SNR=10
KDAK Kodiak Island 48.67 41 P **P** **23 03 03.1 +1.0**
comp=Z,30nm,0.4s,baz=308,slow=4.0,SNR=115
KDAK LR LR 23 22 30.9
comp=Z,58nm,22.0s,baz=252,slow=35
comp=Z,30nm,0.4s
KDAK Kodiak Island 48.67 41 P **P** **23 03 03.0 +0.9**
KDAK Kodiak Island 48.67 41 P **P** **23 03 03.3 +1.3**
baz=274
KDAK Kodiak Island 48.67 41 P **P** **23 03 03.1 +1.0**
KDAK sP **sP** **23 03 20.1 +1.9**
PPLA Purkeypile 48.71 34 P **P** **23 03 05.0 +2.5**
baz=270,SNR=9.0
N20K Mount Spurr 48.71 37 P **P** **23 03 04.9 +2.5**
baz=271
Q20K Shuyak Island 48.72 40 P **P** **23 03 03.4 +1.0**
baz=273,SNR=6.9
CAST Castle Rocks 48.76 34 P **P** **23 03 05.3 +2.6**
baz=269,SNR=7.8
SPU Mount Spurr 48.79 37 P **P** **23 03 04.1 +1.2**
I21K Tanana 48.85 31 P **P** **23 03 05.6 +2.3**
baz=268,SNR=8.2
BOOM Boomskoye usch 48.95 298 P **P** **23 03 05.0 +0.4**
BOOM IAmb IAmb 23 03 06.3
comp=Z,13nm,0.8s
BOOM Boomskoye usch 48.95 298 P **P** **23 03 05.0 +0.4**
BOOM pmax pmax
comp=Z,13nm,0.8s
HNR Honiara 48.95 153 LR LR 23 22 38.5
comp=Z,33nm,21.2s,baz=320,slow=35
TKM2 Tokmak 2 49.08 299 P **P** **23 03 06.7 +0.9**
SNR=38
BPAW Bear Paw Mtn. 49.25 33 P **P** **23 03 08.1 +1.7**
BPAW IAmb IAmb 23 03 12.7
comp=Z,7.5nm,0.7s
BPAW Bear Paw Mtn. 49.25 33 P **P** **23 03 08.6 +2.1**
baz=270,SNR=11
MTN Manton Dam 49.27 191 P **P** **23 03 06.8 -0.2**
MLY Manley 49.37 32 P **P** **23 03 09.6 +2.2**
baz=269,SNR=33
SUA Susitna One 49.41 36 P **P** **23 03 08.7 +0.9**
SUA IAmb IAmb 23 03 14.4
comp=Z,14nm,1.0s
SUA Susitna One 49.41 36 P **P** **23 03 10.0 +2.2**
baz=272
BRSE Bradley Lake S 49.50 39 P **P** **23 03 10.1 +1.7**
baz=274
TRF Thorofare Moun 49.57 34 P **P** **23 03 11.0 +1.9**
baz=271,SNR=6.6
KBK Karagaybulak 49.61 299 P **P** **23 03 10.5 +0.8**
SNR=44
COLD Coldfoot 49.65 29 P **P** **23 03 10.4 +1.0**
COLD Coldfoot 49.65 29 P **P** **23 03 11.3 +1.9**
baz=268
BTLS Baital 49.65 302 *i* P **P** **23 03 09.4 -0.3**
BTLS pmax pmax
comp=Z,7.0nm,0.5s
CHMS Chumysh 49.66 299 P **P** **23 03 10.3 +0.4**
SNR=9.6
KSH Kashi 49.75 294 P **P** **23 03 15.1 +4.4**
KSH pP sP 23 03 28.0 +1.1
KSH sP sP 23 03 33.2 +6.3
KSH pmax pmax
comp=Z,13nm,0.8s
KSH LR LR
comp=Z,430nm,20.9s
KSH LR LR
comp=Z,280nm,20.9s
COEN Coen 49.76 176 P **P** **23 03 11.0 +0.2**
USP Ospenovka 49.77 300 P **P** **23 03 11.2 +0.4**
SNR=23
USP Ospenovka 49.77 300 P **P** **23 03 10.9 +0.1**
USP pmax pmax
comp=Z,27nm,1.0s
FRU1 Bishkek 49.80 299 P **P** **23 03 11.3 +0.3**
FRU1 Bishkek 49.80 299 P **P** **23 03 11.3 +0.3**
FRU1 pmax pmax
comp=Z,41nm,1.1s
H23K Yukon River 49.88 31 P **P** **23 03 13.7 +2.5**
baz=270,SNR=32
BWN Browne 49.92 33 P **P** **23 03 13.8 +2.3**
AAK Ala-Archa 49.94 299 P **P** **23 03 12.6 +0.4**
SNR=5.9
AAK Ala-Archa 49.94 299 LR LR 23 25 22.3
comp=Z,160nm,19.3s,baz=78,slow=37
AAK Ala-Archa 49.94 299 P **P** **23 03 12.0 -0.2**
AAK IAmb IAmb 23 03 13.5
comp=Z,18nm,0.9s
AAK Ala-Archa 49.94 299 *ce*P **P** **23 03 12.4 +0.3**
AAK pmax pmax
comp=Z,27nm,1.3s
AAK Ala-Archa 49.94 299 P **P** **23 03 12.5 +0.3**
AAK Ala-Archa 49.94 299 P **P** **23 03 12.5 +0.3**
AAK pP **pP** **23 03 23.7 0.0**
TOLK Toolik Lake Re 49.95 27 P **P** **23 03 13.4 +1.7**
TOLK IAmb IAmb 23 03 14.7
comp=Z,14nm,1.2s
TOLK Toolik Lake Re 49.95 27 P **P** **23 03 13.4 +1.7**
baz=267,SNR=6.4
I23K Minto, Yukon-K 49.95 31 P **P** **23 03 13.4 +1.7**
I23K IAmb IAmb 23 04 34.0
comp=Z,7.1nm,0.8s
I23K Minto, Yukon-K 49.95 31 P **P** **23 03 14.0 +2.3**
baz=270,SNR=12
UCH Uchtor 50.04 298 P **P** **23 03 14.3 +1.1**
SNR=13
UCH Uchtor 50.04 298 P **P** **23 03 14.4 +1.1**
UCH pmax pmax
comp=Z,14nm,0.8s
NEA2 Nenana 50.08 32 P **P** **23 03 14.9 +2.2**
baz=271,SNR=24
SEW Seward 50.12 38 P **P** **23 03 14.1 +1.1**
baz=274
MCK McKinley 50.16 33 P **P** **23 03 14.3 +0.9**
MCK IAmb IAmb 23 03 17.3
comp=Z,15nm,0.8s
MCK McKinley 50.16 33 P **P** **23 03 14.3 +0.9**
MCK pmax pmax
comp=Z,15nm,0.8s
MCK McKinley 50.16 33 P **P** **23 03 14.8 +1.4**
baz=272,SNR=9.2
PMR Palmer 50.18 36 P **P** **23 03 14.6 +1.2**
baz=274
RND Reindeer 50.21 34 P **P** **23 03 14.7 +0.8**
RND IAmb IAmb 23 03 16.0
comp=Z,19nm,1.0s
RND Reindeer 50.21 34 P **P** **23 03 14.7 +0.8**
RND pmax pmax
comp=Z,19nm,1.0s
WAT1 Susitna Watana 50.38 34 P **P** **23 03 15.7 +0.7**
baz=273
EKS2 Erkin-Say 50.44 299 P **P** **23 03 16.4 +0.4**
SNR=11
EKS2 Erkin-Say 50.44 299 P **P** **23 03 16.3 +0.4**
EKS2 pmax pmax
comp=Z,20nm,0.8s
BRVK Borovoye 50.46 313 P **P** **23 03 15.6 -0.1**
BRVK IAmb IAmb 23 03 20.6
comp=Z,9.5nm,0.8s
BRVK Borovoye 50.46 313 *ce*P **P** **23 03 15.6 -0.1**
BRVK pmax pmax
comp=Z,13nm,1.0s
BRVK Borovoye 50.46 313 P **P** **23 03 15.8 0.0**
KNK Knik Glacier 50.51 36 P **P** **23 03 17.4 +1.4**
baz=274
SML Sawmill 50.54 36 P **P** **23 03 17.3 +1.0**
SML IAmb IAmb 23 03 20.1
comp=Z,18nm,0.9s
SML Sawmill 50.54 36 P **P** **23 03 17.7 +1.4**
baz=274,SNR=7.1
H24K Noodor Dome 50.56 30 P **P** **23 03 18.9 +2.4**
baz=271,SNR=28
TCOL CIGO, UAF Yank 50.59 32 P **P** **23 03 18.8 +2.2**
baz=272
COLA College 50.60 32 P **P** **23 03 17.8 +1.2**
COLA IAmb IAmb 23 03 23.6
comp=Z,23nm,0.8s
COLA College 50.60 32 *i* P **P** **23 03 18.0 +1.4**
COLA pmax pmax
comp=Z,14nm,0.8s
COLA College 50.60 32 P **P** **23 03 18.8 +2.2**
AML Almayashu 50.65 298 P **P** **23 03 19.0 +1.2**
SNR=51
AML Almayashu 50.65 298 *i* P **P** **23 03 18.8 +1.0**
SNR=51
WAT6 Susitna Watana 50.77 35 P **P** **23 03 19.2 +1.1**
baz=274,SNR=7.8
POKR Poker Plat Res 50.77 31 P **P** **23 03 19.6 +1.7**
POKR Poker Plat Res 50.77 31 P **P** **23 03 20.3 +2.4**
baz=272,SNR=44
M23K Glacier View 50.83 36 P **P** **23 03 19.6 +1.2**
baz=274
DHY Denali Highway 50.90 34 P **P** **23 03 20.4 +1.4**
baz=274
HDA Harding Lake 51.01 32 P **P** **23 03 20.7 +1.0**
baz=273,SNR=18
SCM Sheep Creek Mo 51.02 36 P **P** **23 03 20.8 +0.9**
SCM IAmb IAmb 23 03 22.5
comp=Z,18nm,1.0s
SCM Sheep Creek Mo 51.02 36 P **P** **23 03 20.8 +0.9**
SCM pmax pmax
comp=Z,18nm,1.0s
SCM Sheep Creek Mo 51.02 36 P **P** **23 03 21.6 +1.7**
baz=275,SNR=6.4
IL31 51.02 32 P **P** **23 03 20.5 +0.8**
IL31 IAmb IAmb 23 03 21.7
comp=Z,17nm,0.9s
ILAR Eielson Array 51.02 32 P **P** **23 03 20.6 +0.8**
comp=Z,12nm,0.8s,baz=270,slow=6.2,SNR=124
ILAR LR LR 23 26 06.2
comp=Z,49nm,19.6s,baz=144,slow=37
comp=Z,12nm,0.8s
ILAR Eielson Array 51.02 32 P **P** **23 03 20.2 +0.4**
M24K Tolsona, Glenn 51.53 35 P **P** **23 03 25.6 +1.8**
baz=276
K24K Donnelly Dome 51.56 33 P **P** **23 03 25.0 +1.1**
baz=275
J25K Salcha River, 51.68 32 P **P** **23 03 25.3 +0.5**
J25K Salcha River, 51.68 32 P **P** **23 03 25.5 +0.7**
baz=274
UGM Wanagama 51.69 218 P **P** **23 03 23.5 -1.9**
KLU Klutina 51.72 36 P **P** **23 03 27.0 +1.8**
baz=276,SNR=7.7
PAX Paxson 51.77 34 P **P** **23 03 27.3 +1.7**
baz=276,SNR=8.1
BMAR Burnt Mountain 51.82 28 P **P** **23 03 27.8 +2.0**
EYAK Cordova Ski Ar 51.91 37 P **P** **23 03 28.4 +1.9**
baz=277
HARP HAARP 51.98 35 P **P** **23 03 28.9 +1.9**
baz=276
RIDG Independent Ri 51.98 33 P **P** **23 03 27.5 +0.4**
RIDG IAmb IAmb 23 03 41.4
comp=Z,8.5nm,0.5s
RIDG Independent Ri 51.98 33 P **P** **23 03 28.1 +1.0**
baz=275,SNR=8.6
GSI Gunungsitoli 52.24 238 P **P** **23 03 28.7 -0.8**
LEM Lembang 52.30 222 LR LR 23 27 40.0
comp=Z,63nm,18.8s,baz=360,slow=38
N25K Chitina, Valde 52.33 36 P **P** **23 03 30.5 +0.8**
N25K Chitina, Valde 52.33 36 P **P** **23 03 31.9 +2.1**
baz=277
SCRK Sand Creek 52.34 33 P **P** **23 03 30.8 +1.0**
baz=276,SNR=23
DOT Dot Lake 52.34 33 P **P** **23 03 30.7 +1.0**
DOT IAmb IAmb 23 03 33.2
comp=Z,16nm,1.0s
BMRM Bremner River 52.41 37 P **P** **23 03 31.7 +1.4**
BMRM IAmb IAmb 23 03 38.8
comp=Z,19nm,1.0s
BMRM Bremner River 52.41 37 P **P** **23 03 32.5 +2.2**
baz=278,SNR=8.5
KNRA Kununurra 52.46 194 P **P** **23 03 31.2 +0.2**
J26L Joseph Creek 52.46 32 P **P** **23 03 31.7 +1.1**
baz=276,SNR=8.9
KKAR Karatay Array 52.62 300 P **P** **23 03 32.2 +0.1**
KKAR Karatay Array 52.62 300 P **P** **23 03 32.3 +0.2**
KKAR IAmb IAmb 23 03 33.4
comp=Z,30nm,0.9s
KKAR Karatay Array 52.62 300 P **P** **23 03 32.3 +0.2**
KKAR pmax pmax
comp=Z,30nm,1.0s
L26K Log Cabin Wild 52.73 34 P **P** **23 03 35.0 +2.4**
baz=277,SNR=18
DRK Karamyk 52.83 296 P **P** **23 03 33.5 -0.5**
DRK IAmb IAmb 23 03 34.9
comp=Z,23nm,0.7s
VRDI Verde Repeater 52.93 36 P **P** **23 03 34.9 +0.6**
VRDI IAmb IAmb 23 03 37.1
comp=Z,51nm,1.9s
M26K Nabesna, AK 52.97 35 P **P** **23 03 36.2 +1.8**
M26K IAmb IAmb 23 03 37.7
comp=Z,19nm,1.4s
M26K Nabesna, AK 52.97 35 P **P** **23 03 36.6 +2.1**
baz=278,SNR=12
MCARA McCarthy VSAT 53.11 36 P **P** **23 03 37.6 +2.2**
baz=279
K27K Chicken 53.16 33 P **P** **23 03 37.4 +1.6**
K27K IAmb IAmb 23 03 38.8
comp=Z,12nm,0.9s
K27K Chicken 53.16 33 P **P** **23 03 37.7 +1.9**
baz=278
IUG Iuzhnay 53.25 299 *i* P **P** **23 03 37.3 +0.5**
WAX Waxell Ridge 53.34 37 P **P** **23 03 38.7 +1.5**
WAX IAmb IAmb 23 03 43.3
comp=Z,20nm,0.8s
BTK Batken 53.35 297 P **P** **23 03 37.4 -0.2**
BTK IAmb IAmb 23 03 41.3
comp=Z,11nm,1.0s
BTK Batken 53.35 297 P **P** **23 03 37.4 -0.2**
BTK pmax pmax
comp=Z,11nm,1.0s
L27K Beaver Creek, 53.41 34 P **P** **23 03 39.6 +1.9**
L27K IAmb IAmb 23 03 42.5
comp=Z,12nm,0.8s
L27K Beaver Creek, 53.41 34 P **P** **23 03 39.9 +2.3**
baz=278
BCAR Beaver Creek A 53.43 34 P **P** **23 03 39.3 +1.5**
M27K Edge Creek, AK 53.50 35 P **P** **23 03 39.5 +1.1**
M27K IAmb IAmb 23 03 45.0
comp=Z,13nm,0.8s
M27K Edge Creek, AK 53.50 35 P **P** **23 03 40.5 +2.1**
baz=279,SNR=16
ISLE Juniper Island 53.57 37 P **P** **23 03 40.1 +1.2**
ISLE IAmb IAmb 23 03 43.0
comp=Z,25nm,1.2s
GRNC Granite Creek 53.83 37 P **P** **23 03 42.2 +1.3**
GRNC IAmb IAmb 23 03 46.7
comp=Z,12nm,0.7s
MESA MESA 53.83 37 P **P** **23 03 42.7 +1.8**
baz=280
YAH Yahtse 53.90 37 P **P** **23 03 42.6 +1.1**
YAH IAmb IAmb 23 03 50.3
comp=Z,9.0nm,0.8s
BVCY Beaver Creek 53.95 34 P **P** **23 03 44.1 +2.5**
baz=280
CTG Chitna Glacier 53.99 36 P **P** **23 03 43.6 +1.7**
baz=280
CTGM Chitina Glacier 53.99 36 P **P** **23 03 42.7 +0.7**
CTGM IAmb IAmb 23 03 44.8
comp=Z,10.0nm,1.0s
TAS Tashkent 54.03 299 P **P** **23 03 42.9 +0.4**
TAS Tashkent 54.03 299 P **P** **23 03 42.9 +0.4**
TAS pmax pmax
comp=Z,56nm,0.8s
GAR Garm 54.07 296 P **P** **23 03 42.7 -0.2**
YUK3 Moose Creek 54.25 35 P **P** **23 03 45.7 +1.7**
baz=281,SNR=12
I29M Ogilvie Camp, 54.56 31 P **P** **23 03 47.5 +1.5**
I29M IAmb IAmb 23 03 49.0
comp=Z,26nm,1.1s
I29M Ogilvie Camp, 54.56 31 P **P** **23 03 47.8 +1.9**
baz=280,SNR=22
YUK8 Steele Glacier 54.67 36 P **P** **23 03 48.8 +1.7**
baz=282
CHGR Chuyangaron 55.04 296 P **P** **23 03 49.5 -0.4**
CHGR Chuyangaron 55.04 296 P **P** **23 03 49.5 -0.4**
CHGR pmax pmax
comp=Z,97nm,0.8s
SVE Sverdlovsk 55.15 319 *e*P **P** **23 03 50.5 +0.2**
SVE pmax pmax
comp=Z,24nm,1.0s
SVE MLR MLR
comp=Z,170nm,17.0s
YUK4 Talbot Arm 55.19 35 P **P** **23 03 53.3 +2.5**
baz=282
PNL Peninsula 55.20 38 P **P** **23 03 52.6 +2.0**
baz=283
YUK6 Outpost Mounta 55.41 36 P **P** **23 03 55.1 +2.6**
baz=283,SNR=11
WB0 Warramunga Arr 55.69 186 P **P** **23 03 54.2 -0.4**
M30M Minto, Yukon 55.77 34 P **P** **23 03 57.2 +2.5**
baz=283,SNR=10.0
HYT Haines Junctio 55.85 36 P **P** **23 03 58.3 +2.9**
baz=284,SNR=13
INK Inuvik 55.86 27 P **P** **23 03 56.5 +1.3**
comp=Z,14nm,0.8s,baz=268,slow=6.5,SNR=16
INK LR LR 23 29 52.3
comp=Z,52nm,18.4s,baz=246,slow=38
comp=Z,14nm,0.8s
INK Inuvik 55.86 27 P **P** **23 03 56.0 +0.8**
INK IAmb IAmb 23 03 57.7
comp=Z,16nm,0.8s
INK Inuvik 55.86 27 P **P** **23 03 56.8 +1.6**
baz=282,SNR=9.4
WRAB Tennant Creek 55.86 186 *i* P **P** **23 03 56.2 +0.4**
WRAB pmax pmax
comp=Z,20nm,0.9s
WRAB Tennant Creek 55.86 186 P **P** **23 03 55.6 -0.1**
WR0 Warramunga Arr 55.87 186 P **P** **23 03 55.5 -0.3**
WRA Warramunga Arr 55.87 186 P **P** **23 03 55.6 -0.2**
comp=Z,18nm,0.5s,baz=359,slow=7.5,SNR=97
comp=Z,18nm,0.5s
WRA Warramunga Arr 55.87 186 P **P** **23 03 55.0 -0.9**
CTA Charters Tower 56.09 173 LR LR 23 27 21.1
comp=Z,81nm,21.2s,baz=60,slow=35
CTAO Charters Tower 56.09 173 P **P** **23 03 58.1 +0.8**
CTAO IAmb IAmb 23 04 51.1
comp=Z,46nm,1.6s
CTAO Charters Tower 56.09 173 P **P** **23 03 58.1 +0.8**
CTAO pmax pmax
comp=Z,46nm,1.6s
ARU Arti 56.36 319 LR LR 23 30 31.5
comp=Z,121nm,18.0s,baz=81,slow=38
ARU Arti 56.36 319 P **P** **23 03 58.9 -0.1**
ARU Arti 56.36 319 *ce* *i*P **P** **23 03 58.9 -0.1**
ARU *PP **sP** **23 04 13.1 -2.1**

ARU 23 04 55.2
ARU 23 06 03.8
ARU S **S** **23 11 47.9 +1.5**
ARU SS **SS** **23 15 33.0 -0.1**
ARU pmax pmax
comp=Z,20nm,0.6s
ARU MLR MLR
comp=Z,144nm,19.0s
ARU Arti 56.36 319 P **P** **23 03 58.9 -0.1**
N31M Braeburn, Yuko 56.50 35 P **P** **23 04 02.6 +2.7**
baz=285
O30N Mendenhall 56.53 36 P **P** **23 04 03.0 +2.8**
baz=285
KBL Kabul 56.68 291 P **P** **23 04 00.9 -1.0**
KBL IAmb IAmb 23 04 02.2
comp=Z,15nm,0.8s
KBL Kabul 56.68 291 P **P** **23 04 00.9 -1.0**
PLBC Pleasant Camp 56.74 37 P **P** **23 04 04.4 +2.7**
baz=285,SNR=10
M31M Drury Creek, Y 56.95 34 P **P** **23 04 03.6 +0.5**
M31M Drury Creek, Y 56.95 34 P **P** **23 04 04.9 +1.8**
baz=285,SNR=5.9
HYBB Hyderabad (bro 56.98 268 *e*P **P** **23 04 04.3 +0.3**
HYBB *es*P **sP** **23 04 19.3 -0.9**
WHY Whitehorse 57.14 36 P **P** **23 04 06.2 +1.6**
WHY IAmb IAmb 23 04 08.0
comp=Z,11nm,1.1s
WHY Whitehorse 57.14 36 P **P** **23 04 06.9 +2.3**
baz=286,SNR=7.6
FARO Faro, Yukon 57.41 34 P **P** **23 04 08.5 +2.1**
baz=286
A36M Sachs Harbour 57.67 22 P **P** **23 04 09.6 +1.6**
A36M Sachs Harbour 57.67 22 P **P** **23 04 10.7 +2.7**
baz=287
ABKAR Akbulak array 57.70 310 P **P** **23 04 08.4 -0.2**
ABKAR IAmb IAmb 23 04 10.4
comp=Z,38nm,1.4s
ABKAR Akbulak array 57.70 310 P **P** **23 04 08.5 -0.1**
P32M Atlin 58.00 37 P **P** **23 04 13.2 +2.6**
baz=287
JIS Juneau Island 58.07 38 P **P** **23 04 12.7 +1.8**
JIS IAmb IAmb 23 04 32.3
comp=Z,11nm,0.9s
MMPY Sheldon Lake, 58.23 33 P **P** **23 04 14.5 +2.3**
baz=288
P33M Teslin, Yukon 58.25 36 P **P** **23 04 13.6 +1.3**
P33M IAmb IAmb 23 04 15.7
comp=Z,17nm,1.1s
P33M Teslin, Yukon 58.25 36 P **P** **23 04 14.6 +2.3**
baz=288,SNR=12
AKTO Aktyubinsk 58.49 312 LR LR 23 30 42.7
comp=Z,57nm,18.3s,baz=64,slow=37
C36M Paulatuk 58.88 24 P **P** **23 04 17.5 +1.1**
C36M Paulatuk 58.88 24 P **P** **23 04 18.0 +1.5**
baz=290,SNR=8.4
AS31 Alice Springs 59.60 186 P **P** **23 04 22.7 +0.7**
AS31 IAmb IAmb 23 04 28.9
comp=Z,4.6nm,0.6s
ASAR Alice Springs 59.60 186 P **P** **23 04 22.1 +0.1**
comp=Z,4.5nm,0.7s,baz=22,slow=6.6,SNR=33
ASAR PKP2bc **P'P'bc** **23 34 01.1 +6.4**
comp=Z,2.1nm,1.0s,baz=163,slow=1.7,SNR=8.1
comp=Z,4.5nm,0.7s
ASAR Alice Springs 59.60 186 P **P** **23 04 22.6 +0.6**
ASAR Alice Springs 59.60 186 P **P** **23 04 22.6 +0.6**
TGTN Hyland Airport 59.92 34 P **P** **23 04 26.9 +3.1**
baz=290
MBWA Marble Bar 59.96 202 P **P** **23 04 24.2 -0.2**
MBWA Marble Bar 59.96 202 P **P** **23 04 26.8 +2.3**
MBWA sP **sP** **23 04 40.9 +0.1**
DLBC Dease Lake 60.18 37 P **P** **23 04 26.6 +0.9**
comp=Z,3.1nm,0.6s,baz=292,slow=13,SNR=6.3
comp=Z,3.1nm,0.6s
DLBC Dease Lake 60.18 37 P **P** **23 04 25.1 -0.6**
DLBC IAmb IAmb 23 04 31.1
comp=Z,12nm,1.2s
DLBC Dease Lake 60.18 37 P **P** **23 04 27.9 +2.2**
baz=291
PSA00 Pilbara Seismi 60.32 202 P **P** **23 04 26.9 0.0**
PSA00 IAmb IAmb 23 04 30.1
comp=Z,8.3nm,0.7s
PSA00 Pilbara Seismi 60.32 202 P **P** **23 04 26.5 -0.4**
PSA00 IAmb IAmb 23 04 43.7
comp=Z,34nm,1.2s
KIRV Kirov 60.36 323 LR LR 23 32 48.5
comp=Z,70nm,18.5s,baz=60,slow=38
KIRV Kirov 60.36 323*ce*P **P** **23 04 27.2 +0.4**
T35M Bob Quinn 60.60 39 P **P** **23 04 31.6 +3.0**
baz=291,SNR=5.7
PALK Pallekele 60.98 257 LR LR 23 33 02.3
comp=Z,48nm,19.9s,baz=158,slow=38
PALK Pallekele 60.98 257 P **P** **23 04 31.1 -0.6**
PALK Pallekele 60.98 257 P **P** **23 04 31.1 -0.6**
PALK pmax pmax
comp=Z,103nm,1.7s
PRGR Permogore 60.99 327‖ *i*P **P** **23 04 31.4 +0.3**
ALE Alert 61.23 3 P **P** **23 04 33.5 +1.1**
ALE pP **pP** **23 04 42.4 -1.7**
ALE sP **sP** **23 04 48.2 -0.6**
SPA0 Spitsbergen Ar 61.32 349 *e*P **P** **23 04 34.3 +1.2**
SPB2 Spitsbergen Ar 61.32 349 P **P** **23 04 33.8 +0.7**
SPITS Spitsbergen Ar 61.32 349 P **P** **23 04 33.4 +0.3**
comp=Z,5.9nm,0.7s,baz=82,slow=6.0,SNR=12
SPITS LR LR 23 31 45.1
comp=Z,53nm,21.8s,baz=10,slow=37
comp=Z,5.9nm,0.7s
EUNU Eureka 61.40 8 P **P** **23 04 34.3 +0.7**
HRA Herat 61.84 294 P **P** **23 04 37.6 0.0**
HRA IAmb IAmb 23 04 38.8
comp=Z,11nm,0.7s
EIDS Eidsvold 61.92 169 P **P** **23 04 37.7 0.0**
NOR Nord 62.02 356 *i*P **P** **23 04 38.4 +0.7**
NOR IAmb IAmb 23 04 41.1
comp=Z,13nm,1.1s
LVZ Lovozero 62.58 336 P **P** **23 04 42.0 +0.3**
LVZ Lovozero 62.58 336 P **P** **23 04 42.0 +0.3**
LVZ pmax pmax
comp=Z,128nm,2.0s
NOUC Port Laguerre 62.93 152 P **P** **23 04 45.0 +0.5**
DZM Mont Dzumac 62.96 152 *e*LR LR 23 23 25.1
comp=Z,220nm,23.3s
DZM Mont Dzumac 62.96 152 LR LR 23 32 37.7
comp=Z,81nm,19.4s,baz=36,slow=36
DZM Mont Dzumac 62.96 152 P **P** **23 04 45.6 +0.9**
DZM IAmb IAmb 23 07 02.1
comp=Z,31nm,1.5s
BJO1 Bjornoya 63.17 345 *e*P **P** **23 04 46.5 +1.0**
GIRL Giralia 63.18 207 P **P** **23 04 47.2 +1.1**
GEYT Alibeck 63.30 299 P **P** **23 04 46.7 -0.3**
comp=Z,8.4nm,0.8s,baz=290,slow=4.3,SNR=9.2
GEYT LR LR 23 34 14.7
comp=Z,117nm,18.9s,baz=52,slow=38
comp=Z,8.4nm,0.8s
GEYT Alibeck 63.30 299 P **P** **23 04 46.8 -0.2**
GEYT IAmb IAmb 23 04 48.4
comp=Z,9.5nm,0.9s
GYA0B ALIBECK ARRAY 63.30 299 P **P** **23 04 47.0 0.0**
GYA0B IAmb IAmb 23 04 48.3
comp=Z,14nm,0.9s
BELG Belogornoye 63.75 317 LR LR 23 34 08.5
comp=Z,60nm,20.9s,baz=61,slow=37
RES Resolute Bay 63.91 14 LR LR 23 34 39.4
comp=Z,46nm,20.1s,baz=352,slow=38
RES Resolute Bay 63.91 14 P **P** **23 04 50.9 +0.5**
RES IAmb IAmb 23 04 53.4
comp=Z,11nm,0.8s
RES Resolute Bay 63.91 14 P **P** **23 04 50.9 +0.5**
RES pmax pmax
comp=Z,11nm,0.9s
KEV Kevo 64.00 339 P **P** **23 04 51.2 +0.2**
KEV Kevo 64.00 339 P **P** **23 04 51.2 +0.2**
KEV pmax pmax
comp=Z,53nm,1.6s
KEV Kevo 64.00 339 P **P** **23 04 51.2 +0.2**
KEV pP **pP** **23 05 02.0 -0.8**
KEV sP **sP** **23 05 08.0 +0.5**
KLMR Klimovskoe 64.00 328 *e*P **P** **23 04 50.0 -1.1**
KLMR pmax pmax
comp=Z,15nm,0.7s
KLMR Klimovskoe 64.00 328 *e*P **P** **23 04 50.1 -1.1**
KLMR AMP 23 04 51.8
comp=Z,15nm,0.7s
HAMF Hammerfest 64.41 341 *e*P **P** **23 04 54.7 +1.0**
MSVF Nonsavu 64.47 139 LR LR 23 32 14.2
comp=Z,41nm,18.0s,baz=301,slow=35

ARA0 ARCESS Array S 64.56 339 *e*P **P** **23 04 55.4 +0.7**
ARCES ARCESS Array B 64.56 339 P **P** **23 04 54.9 +0.2**
comp=Z,4.9nm,0.7s,baz=52,slow=7.8,SNR=26
ARCES LR LR 23 36 06.1
comp=Z,64nm,18.9s,baz=64,slow=39
comp=Z,4.9nm,0.7s
ARCES ARCESS Array B 64.56 339 P **P** **23 04 55.0 +0.4**
ARCES ARCESS Array B 64.56 339 P **P** **23 04 55.1 +0.4**
ARCES pmax pmax
comp=Z,60nm,1.8s
YKA Yellowknife Ar 65.31 30 P **P** **23 05 00.2 +0.5**
comp=Z,5.0nm,0.8s,baz=299,slow=6.4,SNR=15
comp=Z,5.0nm,0.8s
YKA Yellowknife Ar 65.31 30 P **P** **23 04 59.9 +0.2**
KTK1 Kautokeino 65.52 339 *e*P **P** **23 05 00.9 -0.1**
JETT Jettan, Norway 65.97 340 *e*P **P** **23 05 05.2 +1.3**
TULEG Thule 66.29 7 P **P** **23 05 06.1 +0.3**
TULEG Thule 66.29 7 *i*P **P** **23 05 05.6 -0.1**
TULEG IAmb IAmb 23 05 06.8
comp=Z,27nm,0.9s
TRO Tromso 66.32 341 *e*P **P** **23 05 07.3 +1.3**
DAG Danmarks Havn 66.71 355 P **P** **23 05 08.7 +0.2**
DAG pmax pmax
comp=Z,31nm,1.1s
DAG Danmarks Havn 66.71 355 *i*P **P** **23 05 08.6 +0.2**
DAG IAmb IAmb 23 05 09.7
comp=Z,21nm,0.9s
FORT Forrest 67.34 191 P **P** **23 05 13.0 0.0**
MOS Moscow 67.38 323 *e*P **P** **23 05 11.2 -1.8**
MOS pmax pmax
comp=Z,25nm,0.9s
AFI Afiamalu 67.40 128 LR LR 23 33 15.6
comp=Z,47nm,19.5s,baz=313,slow=35
STKA Stephens Creek 67.52 178 P **P** **23 05 14.1 0.0**
comp=Z,2.4nm,0.5s,baz=355,slow=5.9,SNR=9.7
STKA LR LR 23 35 14.2
comp=Z,92nm,20.0s,baz=21,slow=36
comp=Z,2.4nm,0.5s
STKA Stephens Creek 67.52 178 P **P** **23 05 14.1 0.0**
VRH Novokhopyorsk 67.55 318 *e*P **P** **23 05 13.1 -1.1**
VRH pmax pmax
comp=Z,30nm,0.6s
OBN Obninsk 68.22 323 P **P** **23 05 17.8 -0.6**
comp=Z,3.3nm,0.4s,baz=8.4,slow=3.1,SNR=5.5
OBN LR LR 23 36 26.6
comp=Z,23nm,20.6s,baz=2.5,slow=37
comp=Z,3.3nm,0.4s
OBN Obninsk 68.22 323 P **P** **23 05 17.7 -0.6**
OBN IAmb IAmb 23 05 18.9
comp=Z,23nm,1.1s
OBN Obninsk 68.22 323*c i*P **P** **23 05 18.0 -0.3**
OBN *e* 23 07 48.2
OBN *e*S **S** **23 14 16.2 +0.6**
OBN pmax pmax
comp=Z,25nm,1.3s
OBN MLR MLR
comp=Z,146nm,15.0s
LPSR Galich'ya Gora 68.34 320 *e*P **P** **23 05 18.5 -0.6**
LPSR pmax pmax
comp=Z,20nm,0.8s
STEI Steigen 68.46 340 *e*P **P** **23 05 19.7 +0.1**
BBOO Buckleboo 68.53 184 P **P** **23 05 20.8 +0.4**
BBOO IAmb IAmb 23 05 22.2
comp=Z,35nm,1.4s
VORR Voronezh 68.67 319 *e*P **P** **23 05 21.1 -0.1**
VORR pmax pmax
comp=Z,30nm,0.4s
LOF Lofoten 68.77 341 *e*P **P** **23 05 22.1 +0.6**
FAUS Fauske 68.83 340 *e*P **P** **23 05 22.9 +0.9**
VSR Storozhevoye 68.93 319 *e*P **P** **23 05 21.9 -0.9**
VSR pmax pmax
comp=Z,20nm,0.8s
FIA1 FINESS Array S 69.18 332 P **P** **23 05 23.9 -0.2**
FIA1 IAmb IAmb 23 05 28.0
comp=Z,12nm,0.8s
FINES FINESS Array B 69.18 332 P **P** **23 05 24.0 -0.2**
comp=Z,7.0nm,0.6s,baz=52,slow=6.1,SNR=39
comp=Z,7.0nm,0.6s
GOF Gofitskoye 69.90 311⇑ *e*P **P** **23 05 29.1 +0.2**
GOF pmax pmax
comp=Z,19nm,0.8s
MOR8 Moi Rana 69.93 339 *e*P **P** **23 05 27.9 -0.8**
WSAR Wadi Sarin 69.98 285 LR LR 23 38 47.6
comp=Z,63nm,20.0s,baz=94,slow=38
KONS Konsvik 70.06 340 *e*P **P** **23 05 29.6 0.0**
BANOM Banah 70.41 288 P **P** **23 05 32.7 +0.3**
B08A Colville Reser 70.42 44 P **P** **23 05 32.6 +0.4**
SHME Shamm 70.46 288 P **P** **23 05 33.0 +0.3**
ZEI Tsey 70.54 309 *e*P **P** **23 05 31.5 -1.7**
ZEI pmax pmax
comp=Z,4.0nm,0.9s
MEF Metsahovi 70.59 331 *e*P **P** **23 05 32.9 0.0**
KBZ Khabaz 70.67 310 P **P** **23 05 33.8 +0.1**
comp=Z,9.9nm,0.9s,baz=77,slow=3.1,SNR=16
KBZ LR LR 23 40 22.2
comp=Z,69nm,18.9s,baz=74,slow=39
comp=Z,9.9nm,0.9s
KIV Kislovodsk 70.69 311⇑ P **P** **23 05 34.5 +0.6**
KIV Kislovodsk 70.69 311 P **P** **23 05 33.8 -0.1**
KIV IAmb IAmb 23 05 36.0
comp=Z,19nm,0.9s
KIV Kislovodsk 70.69 311 *e*P **P** **23 05 33.2 -0.7**
KIV pmax pmax
comp=Z,25nm,1.1s
KIV MLR MLR
comp=Z,52nm,18.0s
KIV Kislovodsk 70.69 311 *i*P **P** **23 05 35.2 +1.3**
SNR=12
KIV Kislovodsk 70.69 311 P **P** **23 05 34.7 +0.8**
KIV sP **sP** **23 05 50.2 -0.2**
VSU Vasula 70.75 329 *e*P **P** **23 05 34.3 +0.4**
MSFE Esma-Masafi 70.81 288 P **P** **23 05 35.7 +0.8**
SHA1 Shidzhatmaz 70.82 310 *i*P **P** **23 05 34.8 -0.1**
ONI Oni 70.92 309 P **P** **23 05 36.0 +0.6**
ONI Oni 70.92 309 P **P** **23 05 36.0 +0.6**
ONI pmax pmax
comp=Z,7.0nm,1.0s
UPNV Upernavik 70.95 5 *i*P **P** **23 05 35.5 +0.6**
UPNV IAmb IAmb 23 05 35.7
comp=Z,8.5nm,0.5s
JMIC Jan Mayen 70.96 350 LR LR 23 35 49.1
comp=Z,22nm,21.7s,baz=66,slow=35
UOSS Minazif 70.99 287 P **P** **23 05 36.2 +0.2**
UOSS IAmb IAmb 23 05 37.0
comp=Z,11nm,0.8s
UOSS Minazif 70.99 287 P **P** **23 05 36.2 +0.2**
UOSS Minazif 70.99 287 P **P** **23 05 35.7 -0.3**
RAF Rauma 71.06 333 *e*P **P** **23 05 36.3 +0.6**
HATD Hatta, Dubai 71.11 287 *i*P **P** **23 05 37.0 +0.3**
SNR=5.9
ASHO Ashiyiah 71.24 287 P **P** **23 05 37.3 -0.2**
GNI Garni 71.37 306 LR LR 23 39 46.9
comp=Z,84nm,18.2s,baz=70,slow=38
GNI Garni 71.37 306 P **P** **23 05 39.0 +0.8**
GNI IAmb IAmb 23 06 00.6
comp=Z,8.9nm,0.8s
GNI Garni 71.37 306 *i*P **P** **23 05 39.0 +0.8**
GNI pmax pmax
comp=Z,8.0nm,1.0s
GNI Garni 71.37 306 P **P** **23 05 40.0 +1.8**
GNI x x 23 05 44.2
GNI pP **pP** **23 05 50.8 +0.6**
GNI sP **PcP** **23 05 56.2 -1.5**
AKH Akhalkalaki 71.52 308‖ P **P** **23 05 40.3 +1.2**
FAQ Al Faqa, Dubai 71.56 287 P **P** **23 05 39.3 -0.1**
NEW Newport 71.71 43 P **P** **23 05 41.2 +1.2**
comp=Z,1.4nm,0.5s,baz=282,slow=7.0,SNR=4.3
NEW LR LR 23 40 36.5
comp=Z,16nm,18.0s,baz=286,slow=39
comp=Z,1.4nm,0.5s
NEW Newport 71.71 43 P **P** **23 05 40.5 +0.5**
NEW Newport 71.71 43 P **P** **23 05 41.3 +1.2**
baz=304
CHVG Ch'k'valeri 71.71 310‖ P **P** **23 05 41.3 +1.2**
SUMG Summit 71.73 359 P **P** **23 05 41.3 +1.2**
SUMG Summit 71.73 359 P **P** **23 05 41.3 +1.2**
SUMG pmax pmax
comp=Z,44nm,0.8s
SUMG Summit 71.73 359 *i*P **P** **23 05 41.7 +1.6**
SUMG IAmb IAmb 23 05 42.6
comp=Z,41nm,0.8s
NWAO Narrogin (SRO) 71.77 200 P **P** **23 05 40.4 +0.1**
NWAO Narrogin (SRO) 71.77 200 P **P** **23 05 40.4 +0.1**
NWAO pmax pmax
comp=Z,104nm,1.7s

MTSE Matsula 71.78 330 *e*P **P** **23 05 40.5 +0.5**
ALNE Al Ain 71.80 287 P **P** **23 05 41.1 +0.3**
ASUD Al Ashush, Dub 71.83 288 P **P** **23 05 41.3 +0.3**
NSS Namsos 71.84 339 *e*P **P** **23 05 41.2 +0.8**
L04D Klamath Falls 71.93 51 P **P** **23 05 42.2 +0.7**
L04D IAmb IAmb 23 06 08.9
comp=Z,20nm,1.1s
L04D Klamath Falls 71.93 51 P **P** **23 05 43.2 +1.7**
baz=302
PINE Pine Mountain 71.93 49 P **P** **23 05 42.8 +1.2**
PINE IAmb IAmb 23 05 44.7
comp=Z,10nm,0.8s
YBH Yreka Blue Hor 71.93 51 P **P** **23 05 41.4 -0.1**
comp=Z,2.3nm,0.8s,baz=270,slow=5.1,SNR=2.6
comp=Z,2.3nm,0.8s
J05D Fort Rock, OR 72.02 49 P **P** **23 05 44.2 +2.1**
baz=303
MNK Minsk 72.69 326 *i*P **P** **23 05 43.9 -1.7**
MNK *i* 23 08 24.9
MNK *i*PPP PPP 23 10 09.2
MNK *i*S **S** **23 15 04.9 -2.8**
MNK *i*SS **SS** **23 19 47.8 +1.1**
MNK pmax pmax
comp=N,9.0nm,1.0s
MNK pmax pmax
comp=Z,30nm,0.9s
MNK pmax pmax
comp=E,4.0nm,1.2s
MNK MLR MLR
comp=Z,3μm,19.0s
MNK MLR MLR
comp=E,23nm,13.0s
MNK Minsk 72.69 326 *i*P **P** **23 05 44.0 -1.7**
comp=E,4.0nm,1.2s
MNK *i*P **P** **23 05 44.0 -1.7**
comp=N,9.0nm,1.0s
MNK *i*P **P** **23 05 44.0 -1.7**
comp=Z,30nm,0.9s,baz=52
MNK *i*PP **PP** **23 08 25.0 -2.1**
MNK *i*PPP PPP 23 10 09.3
MNK *i*S **S** **23 15 05.0 -2.8**
MNK *i*SS **SS** **23 19 47.8 +1.1**
MNK *i*SSS SSS 23 23 08.1
MNK *i*LQ LQ 23 32 46.5
MNK *i*LR LR 23 38 04.0
MNK *i*LRM MLR 23 40 28.4
comp=Z,3μm,18.5s
MNK *i*LRM MLR 23 40 45.6
comp=E,23nm,12.8s
IDID Didziasalis 72.70 327 *e*P **P** **23 05 46.3 +0.7**
ISAL Salakas 72.81 327 *e*P **P** **23 05 48.0 +1.7**
IIGN Ignalina 72.91 327 *e*P **P** **23 05 47.7 +0.8**
NACGM Naroch 72.94 326‖ *e*P **P** **23 05 46.6 -0.5**
baz=51
SCO Scoresbysund 73.03 354 P **P** **23 05 48.2 +0.9**
SCO IAmb IAmb 23 05 49.9
comp=Z,21nm,1.0s
SCO Scoresbysund 73.03 354 P **P** **23 05 48.2 +0.9**
SCO pmax pmax
comp=Z,21nm,1.0s
SCO Scoresbysund 73.03 354 *i*P **P** **23 05 48.8 +1.5**
SCO IAmb IAmb 23 05 49.4
comp=Z,19nm,1.0s
TBLU Trondheim 73.30 339 *e*P **P** **23 05 48.6 -0.4**
TOO Toolangi 73.37 175 P **P** **23 05 50.2 +0.6**
TOO Toolangi 73.37 175 P **P** **23 05 50.3 +0.6**
TOO pmax pmax
comp=Z,81nm,1.9s
ANN Anapa 73.39 314 *e*P **P** **23 05 48.5 -1.4**
ANN *e**PP **pP** **23 06 01.9 0.0**
ANN *e* 23 08 31.2
ANN *e*PPP PPP 23 10 15.5
ANN *e*S **S** **23 15 12.5 -3.6**
ANN pmax pmax
comp=Z,27nm,0.8s
PABE Paberze 73.80 328 P **P** **23 05 52.0 -0.1**
PABE Paberze 73.80 328 *e*P **P** **23 05 52.6 +0.5**
GURO Guroymak-BITLI 74.00 306 P **P** **23 05 54.3 +0.5**
GURO IAmb IAmb 23 05 55.7
comp=Z,9.4nm,0.9s
MZR Muzera 74.13 287 *i*P **P** **23 05 54.3 -0.3**
SNR=8.7
KOPT Kop Dagi 74.18 308 P **P** **23 05 56.1 +1.1**
MSO Missoula 74.30 43 P **P** **23 05 56.4 +1.0**
baz=306
AKASG Malin Array Be 74.39 322 P **P** **23 05 55.2 -0.4**
comp=Z,11nm,0.7s,baz=47,slow=6.4,SNR=42
AKASG LR LR 23 41 29.6
comp=Z,123nm,18.1s,baz=34,slow=38
comp=Z,11nm,0.7s
AKASG Malin Array Be 74.39 322 P **P** **23 05 55.4 -0.3**
AKASG Malin Array Be 74.39 322 P **P** **23 05 55.4 -0.3**
AKASG pmax pmax
comp=Z,7.0nm,1.0s
AKBB Malin Array Si 74.39 322 P **P** **23 05 55.2 -0.5**
AKBB IAmb IAmb 23 05 57.2
comp=Z,15nm,0.7s
AKBB Malin Array Si 74.39 322 P **P** **23 05 55.2 -0.5**
AKBB pmax pmax
comp=Z,15nm,0.7s
NC405 NORSAR Array S 74.47 337 P **P** **23 05 56.0 0.0**
DOMB Dombas 74.58 338 *e*P **P** **23 05 57.0 +0.3**
MOL Molde 74.62 339 *e*P **P** **23 05 56.9 +0.1**
NB2 NORSAR Subarra 74.69 337 P **P** **23 05 57.2 -0.1**
baz=42,slow=5.9
NB2 NORSAR Subarra 74.69 337 P **P** **23 05 57.2 -0.1**
comp=Z,8.2nm,0.6s,baz=42,slow=5.9
NOA NORSAR Array B 74.69 337 P **P** **23 05 57.2 -0.1**
comp=Z,13nm,0.8s,baz=40,slow=5.8,SNR=77
NOA PP **PP** **23 08 43.0 -0.9**
comp=Z,1.7nm,0.8s,baz=44,slow=8.8,SNR=5.3
NOA LR LR 23 41 46.1
comp=Z,104nm,19.6s,baz=40,slow=38
comp=Z,13nm,0.8s
ILULI Ilulissat 74.80 4 P **P** **23 05 58.2 +0.5**
ILULI IAmb IAmb 23 06 00.5
comp=Z,17nm,0.7s
ILULI Ilulissat 74.80 4 P **P** **23 05 58.2 +0.5**
ILULI pmax pmax
comp=Z,17nm,0.7s
ILULI Ilulissat 74.80 4 *i*P **P** **23 05 58.5 +0.8**
ILULI IAmb IAmb 23 06 00.6
comp=Z,18nm,0.8s
NC602 NORSAR Array S 74.81 336 *e*P **P** **23 05 57.5 -0.4**
NORES NORESS Array B 74.81 336 P **P** **23 05 57.7 -0.2**
AKN Aaknes 75.08 339 *e*P **P** **23 06 00.5 +0.9**
SUW Suwalki 75.12 327 *e*P **P** **23 05 59.5 -0.4**
SUW Suwalki 75.12 327 P **P** **23 06 00.0 +0.2**
SUW IAmb IAmb 23 06 04.7
comp=Z,18nm,1.0s
SUW Suwalki 75.12 327 P **P** **23 06 00.0 +0.2**
SUW pmax pmax
comp=Z,18nm,1.0s
SUW Suwalki 75.12 327 *e*P **P** **23 06 00.8 +0.9**
MFID Camas Ranch 75.21 47 P **P** **23 06 01.8 +1.0**
MFID IAmb IAmb 23 06 03.4
comp=Z,31nm,1.9s
ICESG Greenland Ices 75.24 360 *i*P **P** **23 06 02.1 +1.4**
ICESG IAmb IAmb 23 06 02.6
comp=Z,35nm,0.8s
CMB Columbia Colle 75.45 54 P **P** **23 06 02.9 +0.8**
CMB Columbia Colle 75.45 54 P **P** **23 06 02.9 +0.8**
CMB pmax pmax
comp=Z,7.0nm,1.2s
FCC Fort Churchill 75.47 26 P **P** **23 06 02.0 +0.3**
FCC IAmb IAmb 23 06 04.0
comp=Z,20nm,1.2s
FCC Fort Churchill 75.47 26 P **P** **23 06 02.0 +0.3**
FCC pmax pmax
comp=Z,20nm,1.3s
MARD Mardin 75.51 306 P **P** **23 06 03.0 +0.5**
MARD IAmb IAmb 23 06 04.1
comp=Z,16nm,0.6s
OSL Oslo 75.68 336 *e*P **P** **23 06 03.9 +0.9**
LRM Limekiln Ridge 75.73 43 P **P** **23 06 04.8 +1.0**
EGMT Eagleton 75.84 40 P **P** **23 06 04.8 +0.5**
EGMT IAmb IAmb 23 06 06.4
comp=Z,13nm,0.9s
EGMT Eagleton 75.84 40 P **P** **23 06 05.6 +1.4**
baz=308
SKAR Skarslia 75.87 338 *e*P **P** **23 06 05.0 +0.9**
SOEG Soedalen 75.92 357 *i*P **P** **23 06 04.8 +0.6**
SOEG IAmb IAmb 23 06 06.3
comp=Z,21nm,0.7s
HLID Hailey 75.96 46 P **P** **23 06 06.1 +1.0**

HLID Hailey 75.96 46 P P 23 06 06.8 +1.7
baz=306
BMN Battle Mountai 76.10 50 P P 23 06 07.0 +1.1
BMN IAmb IAmb 23 06 08.9
comp=Z,9.5nm,0.9s
BMN Battle Mountai 76.10 50 P P 23 06 07.0 +1.1
BMN pmax pmax
comp=Z,9.0nm,0.9s
FOO Floro 76.11 340 eP P 23 06 05.8 +0.4
HYA Hoyanger 76.13 339 eP P 23 06 06.5 +1.0
KONO Kongsberg 76.27 337 P P 23 06 06.7 +0.3
KONO IAmb IAmb 23 06 07.7
comp=Z,21nm,1.5s
KONO Kongsberg 76.27 337 ceP P 23 06 07.3 +1.0
KONO pmax pmax
comp=Z,19nm,2.5s
KONO Kongsberg 76.27 337 eP P 23 06 06.6 +0.3
BOZ Bozeman (W) 76.32 43 P P 23 06 08.2 +1.1
BOZ Bozeman (W) 76.32 43 P P 23 06 08.2 +1.1
BOZ pmax pmax
comp=Z,6.0nm,0.9s
BOZ Bozeman (W) 76.32 43 P P 23 06 08.5 +1.4
baz=306
KVT Kavak 76.36 311 P P 23 06 08.6 +1.3
SORM Soroca 76.44 320 ⇑P P 23 06 07.9 +0.5
MDPB Devils Postpil 76.53 53 P P 23 06 08.9 +0.3
TOKA Tokat 76.54 310 P P 23 06 08.8 +0.5
TOKA IAmb IAmb 23 06 09.9
comp=Z,9.7nm,1.0s
NVAR Mina Array Bea 76.57 52 P P 23 06 10.4 +1.7
comp=Z,4.8nm,0.8s,baz=285,slow=5.5,SNR=31
comp=Z,4.8nm,0.8s
NVAR Mina Array Bea 76.57 52 P P 23 06 10.0 +1.3
SUE Sulen 76.63 339 eP P 23 06 09.5 +1.2
NV11 Mina Array Sit 76.67 52 P P 23 06 09.8 +0.6
MILM Milestii Mici 76.96 319 eP P 23 06 12.0 +1.5
MILM LRM MLR 23 42 53.0
comp=Z,100nm,13.0s
MILM Milestii Mici 76.96 319 eP P 23 06 12.0 +1.5
MILM MLR MLR
comp=Z,100nm,13.0s
ASK Askoy 76.97 339 eP P 23 06 11.0 +0.8
ODD1 Odda 77.00 338 eP P 23 06 11.6 +1.1
BER Bergen 77.00 339 eP P 23 06 11.4 +1.0
SFJD Kangerlussuaq 77.02 4 LR LR 23 43 55.5
comp=Z,40nm,18.1s,baz=342,slow=39
SFJD Kangerlussuaq 77.02 4 i P P 23 06 10.5 0.0
SFJD IAmb IAmb 23 06 12.3
comp=Z,9.0nm,0.8s
ELK Elko 77.14 49 LR LR 23 36 41.5
comp=Z,28nm,20.0s,baz=214,slow=33
ELK Elko 77.14 49 P P 23 06 13.0 +1.1
ELK Elko 77.14 49 P P 23 06 13.0 +1.1
ELK pmax pmax
comp=Z,4.0nm,0.6s
DEL Delary 77.19 333 eP P 23 06 10.8 -0.8
BLS5 Blasjo 77.44 338 eP P 23 06 14.1 +1.1
TPH Tonopah 77.47 52 P P 23 06 14.9 +1.1
TPH Tonopah 77.47 52 P P 23 06 14.9 +1.1
TPH pmax pmax
comp=Z,33nm,0.9s
BEL Belsk 77.66 326 eP P 23 06 16.0 +1.7
VASR Vaslui 77.68 319 ⇓P P 23 06 14.9 +0.4
HOMB Homborsund 77.70 336 eP P 23 06 14.4 0.0
DY2G Dye2 77.75 3 i P P 23 06 16.4 +1.5
DY2G IAmb IAmb 23 06 16.6
comp=Z,40nm,0.8s
BSD Bornholm Skovb 77.80 331 eP P 23 06 15.4 +0.4
BSD Bornholm Skovb 77.80 331 i P P 23 06 14.3 -0.7
BSD IAmb IAmb 23 06 16.1
comp=Z,22nm,0.8s
ILGA Ilgaz 77.80 312 P P 23 06 16.0 +0.5
ILGA IAmb IAmb 23 06 43.5
comp=Z,21nm,0.8s
BNN Bunyan 77.80 309 P P 23 06 15.8 +0.2
RLMT Red Lodge 77.92 43 P P 23 06 16.9 +0.8
RLMT IAmb IAmb 23 06 18.8
comp=Z,18nm,1.6s
RLMT Red Lodge 77.92 43 P P 23 06 17.3 +1.2
baz=309
KMY Karmoy 77.98 338 eP P 23 06 16.9 +1.0
SNART Snartemo 78.07 337 eP P 23 06 16.9 +0.5
R11A Troy Canyon, C 78.35 51 P P 23 06 20.2 +1.6
baz=307
BGU Big Grassy Mou 78.36 48 P P 23 06 19.7 +1.1
AHID Auburn Hatcher 78.37 45 P P 23 06 19.5 +0.8
TESR Tescani 78.37 320 ⇑P P 23 06 18.3 0.0
BIZ Bicaz 78.37 320 ⇑P P 23 06 18.9 +0.6
BUR08 Bucovina Ar. S 78.38 321 P P 23 06 18.8 +0.3
BUR01 Bucovina Ar. S 78.39 321 ⇑P P 23 06 19.1 +0.5
BURAR Bucovina Array 78.39 321 P P 23 06 18.8 +0.3
CFR Carcaliu 78.43 318 ⇓P P 23 06 18.7 +0.1
MPMC Manual Prospec 78.48 54 P P 23 06 20.0 +0.6
baz=306
BORG Borgarnes 78.52 352 P P 23 06 21.2 +2.4
BORG Borgarnes 78.52 352 P P 23 06 21.2 +2.4
BORG pmax pmax
comp=Z,34nm,0.9s
BR131 Keskin Array S 78.64 311 P P 23 06 20.3 +0.1
BR131 Keskin Array S 78.64 311 P P 23 06 20.3 +0.1
BR131 pmax pmax
comp=Z,6.0nm,0.9s
BRTR Keskin Array B 78.64 311 P P 23 06 20.2 +0.1
comp=Z,2.8nm,0.7s,baz=98,slow=4.2,SNR=18
BRTR PP PP 23 09 16.9 -1.1
comp=Z,0.9nm,0.8s,baz=61,slow=7.6,SNR=3.7
BRTR LR LR 23 46 29.6
comp=Z,50nm,18.1s,baz=62,slow=40
comp=Z,2.8nm,0.7s
ANGG Ammassalik, Gr 78.71 359 i P P 23 06 19.9 +0.1
ANGG IAmb IAmb 23 06 20.6
comp=Z,16nm,0.8s
VRI Vrincioaia 78.75 319 ⇑P P 23 06 21.0 +0.6
VRI Vrincioaia 78.75 319 P P 23 06 23.3 +2.9
TPNV Topopah Spring 78.76 52 P P 23 06 22.1 +1.2
TPNV Topopah Spring 78.76 52 P P 23 06 22.1 +1.2
TPNV pmax pmax
comp=Z,7.0nm,0.9s
TPNV Topopah Spring 78.76 52 P P 23 06 22.3 +1.4
baz=307
PLOR Plostina 78.80 319 ⇓P P 23 06 21.4 +0.6
HWUT Hardware Ranch 78.82 46 P P 23 06 22.6 +1.5
MUD Monsted U'grnd 78.90 335 i P P 23 06 21.5 +0.5
MUD IAmb IAmb 23 06 22.7
comp=Z,16nm,1.1s
DUG Dugway, Tooele 78.94 48 P P 23 06 23.4 +1.6
DUG IAmb IAmb 23 06 24.6
comp=Z,7.7nm,0.8s
DUG Dugway, Tooele 78.94 48 P P 23 06 23.4 +1.6
DUG pmax pmax
comp=Z,8.0nm,0.8s
DUG Dugway, Tooele 78.94 48 P P 23 06 23.5 +1.7
baz=308
KOLS Kolonicke sedl 78.96 323 eP P 23 06 22.2 +0.6
KOLS pmax pmax
comp=Z,7.0nm,0.7s
KOLS Kolonicke sedl 78.96 323 eP P 23 06 22.2 +0.6
COVR Voineasa-Covas 79.03 319 ⇑P P 23 06 22.9 +0.9
UZH Uzhgorod 79.16 323 eP P 23 06 22.8 +0.2
UZH e 23 06 37.7
ARCR ARCALIA 79.18 321 ⇑P P 23 06 23.0 +0.2
BMR Baia Mare 79.21 322 ⇑P P 23 06 23.6 +0.6
PD31 Pinedale Array 79.25 45 P P 23 06 23.8 +0.2
PDAR Pinedale Array 79.25 45 P P 23 06 24.3 +0.7
comp=Z,2.7nm,0.6s,baz=270,slow=2.6,SNR=25
comp=Z,2.7nm,0.6s
ICOR Ion Corvin 79.30 317 ⇑P P 23 06 24.1 +0.6
ISR Istrita 79.33 319 ⇓P P 23 06 25.1 +1.4
CRVS Cervenica-Dubn 79.37 324 eP P 23 06 24.4 +0.6
CRVS pmax pmax
comp=Z,9.0nm,0.8s
CRVS Cervenica-Dubn 79.37 324 eP P 23 06 24.4 +0.6
GSC Goldstone, Bar 79.38 54 P P 23 06 26.5 +2.3
baz=307
MLR Muntele Rosu 79.41 319 ⇑P P 23 06 25.1 +1.0
MLR Muntele Rosu 79.41 319 P P 23 06 25.2 +1.0
comp=Z,1.4nm,0.4s,baz=328,slow=9.6,SNR=7.5
MLR LR LR 23 45 24.0
comp=Z,68nm,18.8s,baz=44,slow=39
comp=Z,1.4nm,0.4s
MLR Muntele Rosu 79.41 319 P P 23 06 25.2 +1.0
NLU North Lily Min 79.54 48 P P 23 06 26.3 +1.2
NIE Niedzica 79.56 325 eP P 23 06 25.8 +0.9
MDUB Mudurnu 79.66 313 P P 23 06 25.9 +0.3

SOCY Socotra 79.70 278 P P 23 06 24.3 -1.9
NUUK Nuuk 79.74 5 i P P 23 06 26.6 +1.1
NUUK IAmb IAmb 23 06 29.3
comp=Z,38nm,1.2s
CJR Cluj-Napoca 79.81 321 ⇓P P 23 06 26.8 +0.5
MESR Meseseni 79.84 322 ⇓P P 23 06 27.8 +1.4
RAYN Ar Rayn 79.94 292 P P 23 06 27.0 -0.4
RAYN IAmb IAmb 23 06 28.3
comp=Z,12nm,0.8s
RAYN Ar Rayn 79.94 292 P P 23 06 27.0 -0.4
RAYN pmax pmax
comp=Z,12nm,0.8s
RAYN Ar Rayn 79.94 292 i P P 23 06 27.4 0.0
SNR=14
HEC Hector,Ludlow 79.97 54 P P 23 06 29.3 +1.9
baz=307
LANS Liptovska Anna 80.14 325 eP P 23 06 30.0 +2.0
LANS pmax pmax
comp=Z,7.0nm,0.8s
LANS Liptovska Anna 80.14 325 eP P 23 06 30.0 +2.0
KSP Ksiaz 80.36 328 eP P 23 06 29.7 +0.6
GMRC Gramite Mounta 80.44 54 P P 23 06 31.7 +1.7
baz=307,SNR=6.1
BORA Eskisehir 80.47 313 P P 23 06 30.1 0.0
RAR Rarotonga 80.53 125 LR LR 23 35 44.7
comp=Z,115nm,21.2s,baz=298,slow=31
LOT Lotru 80.58 320 ⇑P P 23 06 31.2 +0.7
MORC Moravsky Berou 80.58 326 ⇑P P 23 06 30.8 +0.5
MORC Moravsky Berou 80.58 326 P P 23 06 30.5 +0.2
MORC Moravsky Berou 80.58 326 P P 23 06 30.5 +0.2
MORC pmax pmax
comp=Z,8.0nm,1.0s
MORC Moravsky Berou 80.58 326 eP P 23 06 30.7 +0.4
OSTC Ostas 80.60 327 eP P 23 06 30.9 +0.5
PFO Pinyon Flats O 80.61 55 LR LR 23 36 03.9
comp=Z,43nm,20.3s,baz=260,slow=31
PFO Pinyon Flats O 80.61 55 P P 23 06 31.6 +0.6
PFO IAmb IAmb 23 06 33.3
comp=Z,11nm,0.9s
PFO Pinyon Flats O 80.61 55 P P 23 06 31.6 +0.6
PFO pmax pmax
comp=Z,11nm,1.0s
PFO Pinyon Flats O 80.61 55 P P 23 06 32.8 +1.9
baz=307,SNR=7.5
TPFO Pinon Flats 80.62 55 P P 23 06 32.9 +1.9
baz=307,SNR=6.1
CHVC Chvalec 80.64 328 eP P 23 06 31.2 +0.5
BELC Belle Mtn. Jos 80.69 55 P P 23 06 33.0 +1.6
baz=307
COPA Copaceanca 80.69 318 ⇑P P 23 06 31.9 +0.9
KRLC Kraliky 80.70 327 eP P 23 06 31.3 +0.3
KRLC Kraliky 80.70 327 eP P 23 06 31.3 +0.3
DPC Dobruska-Polom 80.70 327 eP P 23 06 31.5 +0.5
DPC Dobruska-Polom 80.70 327 eP P 23 06 31.5 +0.5
UPC Upice 80.72 328 eP P 23 06 31.2 +0.1
UPC Upice 80.72 328 eP P 23 06 31.2 +0.1
MAUC Maruska 80.74 326 eP P 23 06 31.6 +0.4
PSZ Piszkesteto 80.81 324 ⇑P P 23 06 32.4 +0.8
PSZ Piszkesteto 80.81 324 P P 23 06 32.2 +0.5
PSZ IAmb IAmb 23 06 33.4
comp=Z,57nm,1.9s
PSZ Piszkesteto 80.81 324 P P 23 06 32.2 +0.5
PSZ pmax pmax
comp=Z,57nm,1.9s
PSZ Piszkesteto 80.81 324 P P 23 06 32.0 +0.4
BAR Barrett 81.03 56 P P 23 06 33.6 +0.5
ULM Lac du Bonnet 81.03 33 P P 23 06 32.5 -0.1
comp=Z,5.6nm,0.7s,baz=310,slow=6.5,SNR=12
comp=Z,5.6nm,0.7s
ULM Lac du Bonnet 81.03 33 P P 23 06 32.6 -0.1
KOLL Kolacno 81.04 325 eP P 23 06 31.8 -1.0
MONP2 Monument Peak 81.07 56 P P 23 06 34.7 +1.2
baz=307
ASF Jabal al Asfar 81.09 303 P P 23 06 33.9 +0.4
comp=Z,7.2nm,0.8s,baz=7.3,slow=17,SNR=4.1
comp=Z,7.2nm,0.8s
SIRR Siria 81.09 322 ⇓P P 23 06 33.9 +0.8
GZR Gura Zlata 81.13 321 ⇓P P 23 06 33.5 +0.1
IRM Iron Mountain 81.16 54 P P 23 06 35.3 +1.6
baz=308
JAVC Velka Javorina 81.18 326 eP P 23 06 34.9 +1.3
VLAD Vladila 81.22 319 ⇓P P 23 06 34.7 +0.9
BC3 Big Chuckawall 81.26 55 P P 23 06 35.9 +1.5
baz=308
PVCC Panska Ves 81.33 328 eP P 23 06 34.6 +0.3
PVCC Panska Ves 81.33 328 eP P 23 06 34.6 +0.3
BRG Berggiesshubel 81.34 329 eP P 23 06 34.8 +0.4
BRG Amp 23 06 37.6
comp=Z,6.6nm,0.9s
BRG Berggiesshubel 81.34 329 eP P 23 06 34.7 +0.4
BRG pmax pmax
comp=Z,7.0nm,0.9s
VRAC Vranov 81.34 326 ⇓P P 23 06 35.4 +1.0
VRAC Vranov 81.34 326 P P 23 06 35.0 +0.7
comp=Z,2.6nm,0.5s,baz=56,slow=6.9,SNR=7.8
VRAC LR LR 23 45 33.2
comp=Z,52nm,19.3s,baz=32,slow=38
comp=Z,2.6nm,0.5s
VRAC Vranov 81.34 326 eP P 23 06 34.8 +0.4
CLL Collm 81.40 330 P P 23 06 34.4 -0.2
CLL IAmb IAmb 23 06 36.3
comp=Z,13nm,1.0s
CLL Collm 81.40 330 ⇑i P P 23 06 34.4 -0.2
CLL pmax pmax
comp=Z,25nm,1.4s
CLL Collm 81.40 330 ⇑i P P 23 06 34.4 -0.2
comp=Z,25nm,1.4s
CLL ePcP PcP 23 06 42.0 +1.4
CLL esP sP 23 06 51.0 -0.3
CLL esPcP 23 06 56.0
CLL ePP PP 23 09 40.0 -0.2
RSSD Black Hills 81.40 41 P P 23 06 35.7 +0.6
RSSD Black Hills 81.40 41 P P 23 06 35.9 +0.8
baz=313
RSSD Black Hills 81.40 41 P P 23 06 35.7 +0.6
baz=313
IKP In-Ko-Pah, Jac 81.43 56 P P 23 06 36.5 +1.2
baz=307
URZ Urewera 81.49 151 LR LR 23 37 18.6
comp=Z,129nm,20.4s,baz=31,slow=32
SMOL Smolenice 81.54 325 eP P 23 06 36.4 +1.0
SMOL pmax pmax
comp=Z,16nm,1.8s
SMOL Smolenice 81.54 325 eP P 23 06 36.4 +1.0
BZS Buzias 81.56 321 ⇓P P 23 06 35.8 +0.1
MMAI Mount Meron Ar 81.59 305 LR LR 23 46 38.9
comp=Z,102nm,18.7s,baz=229,slow=38
KRUC Moravsky 81.61 326 eP P 23 06 36.0 +0.2
SRO2 Moca 81.63 324 eP P 23 06 35.8 -0.1
SRO2 Moca 81.63 324 eP P 23 06 35.8 -0.1
O20A White River Ci 81.70 46 P P 23 06 37.3 +0.6
baz=310
MODS Modra-Piesok 81.71 325 eP P 23 06 37.3 +0.9
MODS pmax pmax
comp=Z,24nm,1.4s
MODS Modra-Piesok 81.71 325 eP P 23 06 37.3 +0.9
PDMCI Parker Dam,Lak 81.72 54 P P 23 06 38.4 +1.7
baz=308
PRU Pruhonice 81.74 328 eP P 23 06 36.6 +0.1
PRU Pruhonice 81.74 328 eP P 23 06 36.6 +0.1
CSS Mathiatis 81.76 307 P P 23 06 36.8 -0.1
CSS IAmb IAmb 23 06 37.7
comp=Z,7.5nm,0.7s
TREC Trest 81.84 327 eP P 23 06 37.3 +0.2
TREC Trest 81.84 327 eP P 23 06 37.3 +0.2
GLA Glamis 82.04 55 P P 23 06 40.3 +1.8
baz=308,SNR=5.3
MDVR Moldovita 82.09 321 ⇓P P 23 06 38.8 +0.3
BALB Balikesir 82.15 314 P P 23 06 38.5 -0.3
ALN Alexandroupoli 82.38 316 P P 23 06 40.1 +0.1
ALN IAmb IAmb 23 06 41.5
comp=Z,22nm,1.9s
ALN Alexandroupoli 82.38 316 P P 23 06 40.1 +0.1
ALN pmax pmax
comp=Z,22nm,1.9s
NKC Novy Kostel 82.45 329 eP P 23 06 40.3 +0.1
NKC Novy Kostel 82.45 329 eP P 23 06 40.3 +0.1
N23A Red Feather La 82.52 44 P P 23 06 43.1 +2.0
baz=312
MORH Mrgy, Hungar 82.62 323 ⇑P P 23 06 41.0 -0.1
RONA Rosalia, Austr 82.65 325 i P P 23 06 42.0 +0.7
comp=Z,6.9nm,0.6s
CONA Conrad Observa 82.68 326 eP P 23 06 42.3 +0.7
comp=Z,7.6nm,1.0s,SNR=5.9

Y14A Wickenburg 82.69 53 P P 23 06 42.4 +0.6
CKRC Cesky Krumlov 82.72 327 eP P 23 06 41.5 -0.1
WUAZ Wupatki 82.75 51 P P 23 06 43.5 +1.3
WUAZ IAmb IAmb 23 06 45.0
comp=Z,10nm,0.8s
WUAZ Wupatki 82.75 51 P P 23 06 44.1 +1.8
baz=309
VTS Vitosha 82.78 318 ⇓P P 23 06 43.2 +1.0
VTS Vitosha 82.78 318 P P 23 06 42.6 +0.3
VTS IAmb IAmb 23 06 45.0
comp=Z,6.7nm,0.8s
VTS Vitosha 82.78 318 P P 23 06 42.6 +0.3
VTS pmax pmax
comp=Z,7.0nm,0.8s
ELL Elmali 82.80 310 P P 23 06 41.7 -0.7
ELL IAmb IAmb 23 06 50.0
comp=Z,21nm,0.8s
ELL Elmali 82.80 310 P P 23 06 41.7 -0.7
ELL pmax pmax
comp=Z,21nm,0.8s
FRGS Fruska Gora 82.80 322 ⇑P P 23 06 42.5 +0.3
KHC Kasperske Hory 82.80 328 P P 23 06 42.4 +0.3
KHC IAmb IAmb 23 06 44.4
comp=Z,8.9nm,1.1s
KHC Kasperske Hory 82.80 328 eP P 23 06 42.3 +0.2
KHC Kasperske Hory 82.80 328 eP P 23 06 42.3 +0.2
IVI Ivigtut 82.93 4 P P 23 06 42.9 +0.5
IVI IAmb IAmb 23 06 44.0
comp=Z,24nm,0.9s
IVI Ivigtut 82.93 4 i P P 23 06 42.5 +0.1
IVI IAmb IAmb 23 06 43.7
comp=Z,22nm,0.9s
GEC2 GERESS Array S 82.96 328 P P 23 06 43.2 +0.1
GERES GERESS Array B 82.96 328 P P 23 06 43.0 -0.1
comp=Z,1.1nm,0.4s,baz=44,slow=6.1,SNR=27
comp=Z,1.1nm,0.4s
GERES GERESS Array B 82.96 328 P P 23 06 43.1 +0.1
GERES GERESS Array B 82.96 328 P P 23 06 43.1 +0.1
SMCO Snowmass 83.06 46 P P 23 06 44.7 +0.6
ARSA Arzberg 83.34 326 eP P 23 06 45.0 +0.2
comp=Z,5.4nm,1.1s
GRA1 Grafenberg Arr 83.37 329 P P 23 06 45.2 +0.2
GRA1 IAmb IAmb 23 07 00.2
comp=Z,17nm,1.1s
GRF Grafenberg Arr 83.37 329 P P 23 06 45.2 +0.2
GRF pmax pmax
comp=Z,17nm,1.1s
GRFO Grafenberg 83.37 329 P P 23 06 45.0 0.0
GRFO IAmb IAmb 23 07 00.2
comp=Z,15nm,1.1s
GRFO Grafenberg 83.37 329 P P 23 06 45.0 0.0
GRFO pmax pmax
comp=Z,15nm,1.1s
ISCO Idaho Springs 83.44 45 P P 23 06 47.0 +1.1
baz=312,SNR=5.1
MVCO Mesa Verde 83.44 48 P P 23 06 46.1 +0.2
MVCO IAmb IAmb 23 06 49.4
comp=Z,6.5nm,0.8s
MVCO Mesa Verde 83.44 48 P P 23 06 47.1 +1.2
baz=311,SNR=5.9
DIVS Divibare 83.45 321 P P 23 06 46.1 +0.5
DIVS IAmb IAmb 23 06 47.5
comp=Z,13nm,1.3s
MOA Molln 83.46 327 eP P 23 06 45.7 +0.2
comp=Z,5.2nm,1.1s
EKA Eskdalemuir Ar 83.71 340 P P 23 06 46.7 +0.1
comp=Z,1.8nm,0.6s,baz=42,slow=5.2,SNR=18
EKA PP PP 23 09 58.1 -0.9
comp=Z,1.2nm,0.8s,baz=34,slow=6.4,SNR=3.6
EKA LR LR 23 47 00.6
comp=Z,55nm,18.6s,baz=360,slow=38
comp=Z,1.8nm,0.6s
ESK Eskdalemuir 83.74 340 P P 23 06 47.0 +0.3
ESK IAmb IAmb 23 08 06.5
comp=Z,42nm,1.7s
ESK Eskdalemuir 83.74 340 P P 23 06 47.0 +0.3
ESK pmax pmax
comp=Z,42nm,1.7s
SUSD Miller 83.80 38 P P 23 06 48.2 +0.8
baz=316
SUSD Miller 83.80 38 P P 23 06 48.1 +0.8
baz=316
BIOA Bad Ischl, Aus 83.86 327 eP P 23 06 47.8 +0.2
comp=Z,11nm,1.3s
EIL Elat 83.94 302 P P 23 06 48.1 -0.1
comp=Z,14nm,0.7s,baz=21,slow=3.3,SNR=15
EIL LR LR 23 48 40.1
comp=Z,51nm,19.7s,baz=90,slow=39
comp=Z,14nm,0.7s
SOKA Soboth 83.99 325 eP P 23 06 48.3 0.0
comp=Z,10.0nm,0.8s,SNR=11
214A Organ Pipe Nat 84.05 55 P P 23 06 50.5 +1.6
baz=309
S22A 4UR Ranch, Cre 84.09 47 P P 23 06 51.5 +2.2
baz=312,SNR=6.9
ARG Arkhangelos 84.23 311 P P 23 06 50.0 +0.4
ARG Arkhangelos 84.23 311 P P 23 06 50.0 +0.4
ARG pmax pmax
comp=Z,46nm,1.5s
EYMN Ely 84.66 32 P P 23 06 51.5 -0.1
EYMN IAmb IAmb 23 06 52.9
comp=Z,9.8nm,0.9s
EYMN Ely 84.66 32 P P 23 06 52.1 +0.5
baz=320
MYKA Terra Mystica 84.66 326 eP P 23 06 51.0 -0.7
comp=Z,4.9nm,0.5s
MEM Membach 84.70 333 dP P 23 06 52.1 +0.4
PMOR Pomariorio Ree 84.87 113 eT T 00 39 45.4
comp=Z,9.3nm,0.2s
SDCO Great Sand Dun 84.88 46 P P 23 06 53.6 +0.4
SDCO Great Sand Dun 84.88 46 P P 23 06 54.7 +1.4
baz=312
SDCO Great Sand Dun 84.88 46 P P 23 06 54.8 +1.6
baz=312,SNR=8.2
LIT Litokhoron 84.92 317 P P 23 06 52.6 -0.4
LIT Litokhoron 84.92 317 P P 23 06 52.6 -0.4
LIT pmax pmax
comp=Z,15nm,0.7s
PDG Podgorica 85.02 320 ⇑P P 23 06 53.7 +0.2
PDG Podgorica 85.02 320 P P 23 06 53.4 0.0
ABTA Abfaltersbach 85.08 327 eP P 23 06 53.4 -0.4
comp=Z,0.1nm,0.2s
BCLA Clavier 85.12 333 dP P 23 06 53.5 -0.2
BCLA dPcP PcP 23 06 56.0 -0.9
TUC Tucson 85.16 53 P P 23 06 55.2 +0.7
TUC IAmb IAmb 23 06 56.9
comp=Z,7.7nm,0.8s
TUC Tucson 85.16 53 P P 23 06 55.2 +0.7
TUC pmax pmax
comp=Z,8.0nm,0.9s
TUC Tucson 85.16 53 P P 23 06 56.1 +1.6
baz=310
BGES Gesves 85.22 333 dP P 23 06 53.7 -0.7
BGES dPcP PcP 23 06 56.5 -1.0
APE Apeiranthos 85.23 313 ⇑P P 23 06 53.8 -0.9
MOTA Moosalm 85.23 328 eP P 23 06 54.3 -0.3
comp=Z,6.4nm,1.2s
PPT Papeete 85.25 116 LR LR 23 42 47.6
comp=Z,130nm,18.2s,baz=350,slow=34
PPT2 Papeete2 85.26 116 eLR LR 23 33 24.3
comp=Z,284nm,28.2s
KARP Karpathos 85.26 311 P P 23 06 54.8 -0.1
KARP IAmb IAmb 23 07 17.0
comp=Z,16nm,0.9s
RETA Reutte 85.27 328 eP P 23 06 54.8 0.0
comp=Z,7.4nm,1.0s,SNR=6.1
SQTA Sankt Quirin 85.29 328 i P P 23 06 54.4 -0.5
comp=Z,5.3nm,1.1s
BMRD Maredsous 85.41 333 dP P 23 06 54.6 -0.6
comp=Z,5.8nm,1.1s
WLF Walferdange 85.41 332 dP P 23 06 56.4 +1.1
SNF Seneffe 85.42 333 dP P 23 06 55.2 -0.1
comp=Z,5.6nm,1.2s
ECSD EROS Data Cent 85.47 37 P P 23 06 56.2 +0.4
ECSD IAmb IAmb 23 06 57.0
comp=Z,6.2nm,0.8s
ECSD EROS Data Cent 85.47 37 P P 23 06 55.7 0.0
baz=317
ECSD EROS Data Cent 85.47 37 P P 23 06 56.1 +0.3
baz=317,SNR=10
KBN Korca 85.48 318 P P 23 06 55.6 -0.3
KBN IAmb IAmb 23 06 56.6
comp=Z,15nm,0.7s
KBN Korca 85.48 318 P P 23 06 55.6 -0.3
KBN pmax pmax
comp=Z,15nm,0.7s

BFO	**Black Forest**	**85.62**	**330**		P	**P**	**23 06 55.7**	**-0.7**
BFO					IAmb	IAmb	23 06 57.4	
	comp=Z,24nm,1.6s							
BFO	**Black Forest**	**85.62**	**330**		P	**P**	**23 06 55.7**	**-0.7**
BFO					pmax	pmax		
	comp=Z,24nm,1.6s							
DOU	**Dourbes**	**85.64**	**333**	*dP*		**P**	**23 06 55.9**	**-0.6**
	comp=Z,3.0nm,1.3s							
FETA	**Feichten**	**85.65**	**328**	*eP*		**P**	**23 06 56.2**	**-0.5**
	comp=Z,4.6nm,1.0s							
E38A	**The Farm, Brul**	**85.67**	**33**		P	**P**	**23 06 56.5**	**-0.1**
	baz=320							
SANT	**Santorini**	**85.74**	**313**	⇑	P	**P**	**23 06 56.0**	**-1.3**
DAVA	**Damuels**	**85.80**	**328**	*eP*		**P**	**23 06 57.1**	**-0.4**
	comp=Z,7.4nm,0.9s							
T25A	**Trinidad**	**85.93**	**46**		P	**P**	**23 06 59.2**	**+0.8**
T25A					IAmb	IAmb	23 07 00.7	
	comp=Z,11nm,0.8s							
T25A	**Trinidad**	**85.93**	**46**		P	**P**	**23 06 59.6**	**+1.2**
	baz=313,SNR=8.9							
ANMO	**Albuquerque**	**86.17**	**49**		P	**P**	**23 07 00.1**	**+0.4**
	comp=Z,4.4nm,0.9s,baz=263,slow=4.2,SNR=11							
ANMO					LR	LR	23 45 55.7	
	comp=Z,30nm,18.3s,baz=261,slow=36							
	comp=Z,4.4nm,0.9s							
ANMO	**Albuquerque**	**86.17**	**49**		P	**P**	**23 07 01.2**	**+1.6**
	baz=312							
ECH	**Echery**	**86.19**	**331**		P	**P**	**23 06 59.1**	**-0.1**
ECH					IAmb	IAmb	23 06 59.9	
	comp=Z,6.8nm,1.0s							
ECH	**Echery**	**86.19**	**331**		P	**P**	**23 06 59.1**	**-0.1**
ECH					pmax	pmax		
	comp=Z,7.0nm,1.0s							
DAVOX	**Davos/Dischmat**	**86.20**	**328**		P	**P**	**23 06 59.5**	**0.0**
	comp=Z,1.7nm,0.5s,baz=343,slow=14,SNR=3.1							
DAVOX					LR	LR	23 49 24.6	
	comp=Z,55nm,18.7s,baz=38,slow=38							
	comp=Z,1.7nm,0.5s							
DSB	**Dublin**	**86.44**	**340**		P	**P**	**23 07 00.6**	**+0.3**
Y22A	**Socorro**	**86.53**	**50**		P	**P**	**23 07 02.0**	**+0.6**
	baz=312							
BNM	**Barren Site**	**86.60**	**50**		P	**P**	**23 07 02.7**	**+1.0**
SCHQ	**Schefferville**	**86.67**	**15**		P	**P**	**23 07 01.9**	**+0.5**
	comp=Z,9.8nm,0.8s,baz=349,slow=3.5,SNR=15							
	comp=Z,9.8nm,0.8s							
SCHQ	**Schefferville**	**86.67**	**15**		P	**P**	**23 07 02.2**	**+0.8**
SCHQ					IAmb	IAmb	23 07 03.2	
	comp=Z,10nm,0.8s							
I37A	**Lemond, Waseca**	**86.81**	**35**		P	**P**	**23 07 02.5**	**+0.2**
I37B	**Waseca**	**86.81**	**35**		P	**P**	**23 07 03.5**	**+1.2**
	baz=319							
IDI	**Anoyia**	**86.81**	**312**	⇓	P	**P**	**23 07 01.2**	**-1.4**
IDI	**Anoyia**	**86.81**	**312**		P	**P**	**23 07 01.3**	**-1.4**
	comp=Z,5.2nm,0.6s,baz=25,slow=8.5,SNR=20							
	comp=Z,5.2nm,0.6s							
IDI	**Anoyia**	**86.81**	**312**		P	**P**	**23 07 01.2**	**-1.4**
IDI					IAmb	IAmb	23 07 06.4	
	comp=Z,6.9nm,0.6s							
L34A	**Svendsen Farm,**	**86.89**	**38**		P	**P**	**23 07 02.2**	**-0.4**
L34A					IAmb	IAmb	23 07 04.1	
	comp=Z,17nm,1.1s							
121A	**Cookes Peak, D**	**86.94**	**52**		P	**P**	**23 07 05.5**	**+2.1**
	baz=311							
TAOE	**Nuku Hiva Isla**	**87.09**	**103**	*e*	LR	LR	23 34 13.3	
	comp=Z,225nm,30.9s							
ITM	**Ithomi**	**87.26**	**315**		P	**P**	**23 07 03.3**	**-1.4**
ITM					IAmb	IAmb	23 07 06.6	
	comp=Z,10nm,0.6s							
G40A	**Rib Lake**	**87.30**	**33**		P	**P**	**23 07 05.4**	**+0.7**
	baz=322							
MURB	**Monte Urbino**	**87.73**	**324**		P	**P**	**23 07 07.3**	**+0.5**
MURB					IAmb	IAmb	23 07 08.7	
	comp=Z,14nm,0.8s							
NRCA	**Norcia**	**87.78**	**324**		P	**P**	**23 07 07.2**	**+0.1**
NRCA					IAmb	IAmb	23 07 08.2	
	comp=Z,11nm,0.8s							
AQU	**L'Aquila**	**88.01**	**323**		P	**P**	**23 07 08.9**	**+0.7**
AQU	**L'Aquila**	**88.01**	**323**		P	**P**	**23 07 08.9**	**+0.7**
AQU					pmax	pmax		
	comp=Z,13nm,0.7s							
I40A	**Norwalk**	**88.19**	**34**		P	**P**	**23 07 09.1**	**+0.1**
	baz=321							
I42A	**Draeger Farm,**	**88.95**	**33**		P	**P**	**23 07 13.2**	**+0.6**
	baz=322							
ATD	**Arta Tunnel**	**88.96**	**283**		LR	LR	23 51 25.9	
	comp=Z,45nm,18.3s,baz=358,slow=38							
MNTX	**Cornudas Mount**	**89.02**	**51**		P	**P**	**23 07 13.9**	**+0.8**
	baz=313							
MNTX	**Cornudas Mount**	**89.02**	**51**		P	**P**	**23 07 14.0**	**+0.8**
	baz=313							
TBI	**Tubuai**	**89.03**	**120**	*e*	LR	LR	23 35 16.6	
	comp=Z,180nm,26.8s							
TBI	**Tubuai**	**89.03**	**120**	*e*	T	T	00 44 54.4	
	comp=Z,12nm,0.3s							
VLDQ	**Val d'Or**	**89.87**	**24**		P	**P**	**23 07 16.6**	**0.0**
S39A	**Bolivar**	**91.65**	**39**		P	**P**	**23 07 24.8**	**-0.5**
	baz=320							
TUL1	**Leonard**	**91.67**	**42**		P	**P**	**23 07 26.1**	**+0.8**
TUL1	**Leonard**	**91.67**	**42**		P	**P**	**23 07 26.2**	**+0.8**
	baz=318							
TX31	**Lajitas Ar. Si**	**91.70**	**51**		P	**P**	**23 07 27.0**	**+1.2**
	baz=314							
TX32	**Lajitas Array**	**91.71**	**51**		P	**P**	**23 07 26.5**	**+0.7**
TX32					IAmb	IAmb	23 07 27.9	
	comp=Z,4.3nm,0.7s							
TXAR	**Lajitas Array**	**91.71**	**51**		P	**P**	**23 07 26.9**	**+1.2**
	comp=Z,3.5nm,0.6s,baz=304,slow=3.0,SNR=59							
	comp=Z,3.5nm,0.6s							
TXAR	**Lajitas Array**	**91.71**	**51**		P	**P**	**23 07 26.6**	**+0.8**
TXAR	**Lajitas Array**	**91.71**	**51**		P	**P**	**23 07 27.0**	**+1.2**
R40A	**Maddies Statio**	**91.73**	**38**		P	**P**	**23 07 25.9**	**+0.3**
	baz=320							
ABTX	**Abilene, Hawle**	**91.88**	**47**		P	**P**	**23 07 27.2**	**+0.8**
ABTX					IAmb	IAmb	23 07 28.5	
	comp=Z,7.5nm,1.0s							
ABTX	**Abilene, Hawle**	**91.88**	**47**		P	**P**	**23 07 27.6**	**+1.2**
	baz=316							
ABTX	**Abilene, Hawle**	**91.88**	**47**		P	**P**	**23 07 27.5**	**+1.1**
	baz=316							
U38A	**Gravette**	**92.04**	**41**		P	**P**	**23 07 27.3**	**+0.2**
	baz=319							
SADO	**Sadowa**	**92.17**	**27**		LR	LR	23 52 13.2	
	comp=Z,41nm,18.9s,baz=35,slow=38							
HHAR	**Hobbs**	**92.39**	**41**		P	**P**	**23 07 28.6**	**-0.1**
HHAR					IAmb	IAmb	23 07 30.8	
	comp=Z,5.2nm,0.8s							
HHAR	**Hobbs**	**92.39**	**41**		P	**P**	**23 07 29.1**	**+0.4**
	baz=319							
CCM	**Cathedral Cave**	**92.42**	**38**		P	**P**	**23 07 29.0**	**+0.2**
CCM					IAmb	IAmb	23 07 30.2	
	comp=Z,5.2nm,0.8s							
CCM	**Cathedral Cave**	**92.42**	**38**		P	**P**	**23 07 29.0**	**+0.2**
CCM					pmax	pmax		
	comp=Z,5.0nm,0.8s							
CCM	**Cathedral Cave**	**92.42**	**38**		P	**P**	**23 07 29.2**	**+0.4**
	baz=321							
CCM	**Cathedral Cave**	**92.42**	**38**		P	**P**	**23 07 29.4**	**+0.6**
	baz=321							
L48A	**N Adams**	**92.47**	**31**		P	**P**	**23 07 30.0**	**+1.1**
	baz=326							
L48A					P	**P**	**23 07 30.0**	**+1.1**
	baz=326							
Z35A	**Perchaven, San**	**92.75**	**45**		P	**P**	**23 07 31.1**	**+0.7**
N47A	**Urbana**	**92.79**	**33**		P	**P**	**23 07 30.4**	**-0.1**
	baz=325							
N47A					P	**P**	**23 07 30.4**	**-0.1**
	baz=325							
FVM	**French Village**	**92.89**	**38**		P	**P**	**23 07 31.8**	**+0.9**
	baz=321							
U40A	**Yellville**	**92.91**	**40**		P	**P**	**23 07 31.2**	**+0.1**
U40A					IAmb	IAmb	23 07 32.2	
	comp=Z,9.7nm,0.8s							
U40A	**Yellville**	**92.91**	**40**		P	**P**	**23 07 31.2**	**+0.1**
	baz=320							
U40A					P	**P**	**23 07 31.2**	**+0.1**
	baz=320							
U40A	**Yellville**	**92.91**	**40**		P	**P**	**23 07 31.4**	**+0.3**
	baz=320							
P46A	**Rosedale**	**93.13**	**35**		P	**P**	**23 07 32.8**	**+0.8**
	baz=324							
O48B	**Farmland**	**93.54**	**33**		P	**P**	**23 07 34.4**	**+0.6**
	baz=325							
O48B	**Farmland**	**93.54**	**33**		P	**P**	**23 07 34.5**	**+0.6**
	baz=325							
MIAR	**Mount Ida**	**93.89**	**42**		P	**P**	**23 07 36.5**	**+0.9**
MIAR					IAmb	IAmb	23 07 38.1	
	comp=Z,5.0nm,0.8s							
MIAR	**Mount Ida**	**93.89**	**42**		P	**P**	**23 07 36.5**	**+0.9**
MIAR					pmax	pmax		
	comp=Z,5.0nm,0.8s							
MIAR	**Mount Ida**	**93.89**	**42**		P	**P**	**23 07 36.2**	**+0.6**
	baz=319							
MIAR	**Mount Ida**	**93.89**	**42**		P	**P**	**23 07 36.6**	**+1.0**
	baz=319							
BATG	**Bathurst New B**	**93.90**	**17**		P	**P**	**23 07 36.5**	**+1.1**
BATG					IAmb	IAmb	23 07 37.4	
	comp=Z,8.8nm,0.7s							
ACSO	**Alum Creek Sta**	**94.50**	**32**		P	**P**	**23 07 39.1**	**+0.8**
	baz=326							
O53A	**New Philadelph**	**95.22**	**30**		P	**P**	**23 07 42.4**	**+0.7**
	baz=328							
P52A	**Corning**	**95.35**	**31**		P	**P**	**23 07 42.6**	**+0.4**
	baz=327							
WVT	**Waverly**	**95.62**	**37**		P	**P**	**23 07 43.8**	**+0.3**
	baz=323							
ESDC	**Sonseca Array**	**97.69**	**333**		P	**P**	**23 07 52.5**	**-0.4**
	comp=Z,0.5nm,1.0s,baz=16,slow=4.4,SNR=3.5							
ESDC					PP	**PP**	**23 11 50.8**	**+0.8**
	comp=Z,1.3nm,1.2s,baz=35,slow=7.0,SNR=4.3							
	comp=Z,0.5nm,1.0s							
TKL	**Tuckaleechee C**	**97.93**	**35**		LR	LR	23 53 30.2	
	comp=Z,16nm,21.8s,baz=298,slow=36							
TOA0	**Torodi Ar. Sit**	**117.20**	**313**		PKPdf	**PKPdf**	**23 13 02.6**	**-1.0**
TORD	**Torodi Ar. Bea**	**117.20**	**313**		PKP	**PKPdf**	**23 13 02.6**	**-1.0**
	comp=Z,0.7nm,0.6s,baz=33,slow=1.9,SNR=7.9							
TORD					PP	**PP**	**23 14 12.2**	**-1.3**
	comp=Z,1.2nm,0.9s,baz=18,slow=7.7,SNR=4.0							
TORD					PKKPbc	**PKKPbc**	**23 23 26.4**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=215,slow=3.0,SNR=4.8							
TORD	**Torodi Ar. Bea**	**117.20**	**313**			**PKPdf**	**23 13 02.8**	**-0.9**
SDV	**Santo Domingo**	**126.89**	**39**		PKPdf	**PKPdf**	**23 13 23.1**	**+0.6**
OTAV	**Otavalo**	**129.30**	**53**	*eP*		**PKiKP**	**23 13 30.1**	**+1.9**
BOAV	**Boa Vista**	**137.31**	**31**	*eP*		**PKiKP**	**23 13 45.0**	**+1.2**
ITTB	**Itaituba**	**145.38**	**28**	*eP*		**PKPbc**	**23 13 56.4**	**+0.2**
TMAB	**Tom-Au,PA,Br**	**145.74**	**14**	*eP*		**PKPab**	**23 13 59.2**	**+1.5**
SAML	**Samuel**	**145.83**	**44**		PKPbc	**PKPbc**	**23 13 57.9**	**+0.3**
SAML	**Samuel**	**145.83**	**44**		PKP2	**PKPbc**	**23 13 57.9**	**+0.3**
ROSB	**Rosario**	**146.86**	**7**	*eP*		**PKPab**	**23 14 02.0**	**0.0**
NPGB	**Novo Progresso**	**147.97**	**30**	*eP*		**PKPbc**	**23 14 04.1**	**+0.4**
NPGB	**Novo Progresso**	**147.97**	**30**	*eP*		**PKPbc**	**23 14 03.9**	**+0.1**
PB12	**IPOC Station P**	**148.21**	**65**			**PKPdf**	**23 14 02.4**	**+1.4**
LPAZ	**La Paz**	**148.25**	**59**		PKPbc	**PKPdf**	**23 14 03.6**	**+1.8**
	comp=Z,6.8nm,0.7s,baz=333,slow=2.2,SNR=23							
LPAZ	**La Paz**	**148.25**	**59**			**PKPdf**	**23 14 03.5**	**+1.7**
LPAZ	**La Paz**	**148.25**	**59**		PKP2	**PKPdf**	**23 14 03.5**	**+1.7**
LPAZ	**La Paz**	**148.25**	**59**	*eP*		**PKPbc**	**23 14 04.4**	**-0.8**
LPAZ	**La Paz**	**148.25**	**59**	*eP*		**PKPdf**	**23 14 03.2**	**+1.4**
PRPB	**Parauapebas**	**149.01**	**19**	*eP*		**PKPbc**	**23 14 05.7**	**-0.8**
PB11	**IPOC Station P**	**149.41**	**66**		PKPdf	**PKPdf**	**23 14 03.2**	**+0.2**
NBPB	**Pedra_Branca-C**	**149.70**	**359**	*eP*		**PKPdf**	**23 14 05.4**	**+1.9**
PB01	**IPOC Station P**	**150.31**	**68**		PKPbc	**PKPbc**	**23 14 09.6**	**0.0**
VILB	**Vilhena**	**150.77**	**43**	*eP*		**PKiKP**	**23 14 11.9**	**+0.5**
CLDB	**Colider**	**151.22**	**34**	*eP*		**PKPbc**	**23 14 12.1**	**+0.3**
PDRB	**Porto dos Gac**	**151.44**	**36**	*eP*		**PKPbc**	**23 14 12.6**	**+0.3**
VBST	**Vila Bela da S**	**152.15**	**45**	*eP*		**PKPbc**	**23 14 14.4**	**+0.5**
PTLB	**Pontes e Lacer**	**153.39**	**45**	*eP*		**PKiKP**	**23 14 17.1**	**+0.5**

CNRM ***11*** *22:57:50.7,37°.01N×2°.81E,h140km,ml3.8*
IDC ***11*** *22:57:54.1±1.0,36°.66N×2°.45E,h0km,mb3.6/6, mbtmp3.6/14,ML3.7/8,MS3.3/3,Error ellipse: s-maj=21.2km s-min=15.8km az=144.0*
CRAAG ***11*** *22:57:54.5,36°.75N×2°.38E,Ml4.0,Hypocentre not reviewed by the ISC*
NEIC ***11*** *22:57:55.2±1.8,36°.64N±0°.09×2°.33E±0°.06,h10km±1km, mb4.1/10,Error ellipse: s-maj=15.8km s-min=8.5km az=176.0*
LDG ***11*** *22:57:56.0±0.6,36°.63N×2°.50E,h2km,Ml3.5/36,Error ellipse: s-maj=12.4km s-min=5.6km az=149.0*
MDD ***11*** *22:57:56.3±0.5,36°.58N×2°.44E,h10km±5km,Mb4.4/39, M_mb3.8/41,Error ellipse: s-maj=6.2km s-min=1.9km az=150.0*

ISC 11 22:57:56.4±0.6,36°.84N±0°.05×2°.47E±0°.04,h14km,n159, σ2s44/229,mb3.9/10,MS3.6/3,35C,Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
EBNR	**Beni Rached**	**0.93**	**234**	P		22 58 12.0	
ADJB	**Djebel Djouab**	**1.04**	**131**	P		22 58 14.5	
ECHA	**Ech Chlef**	**1.12**	**233**	P		22 58 15.9	
AKET	**Djebel Ketaf**	**1.39**	**124**	P		22 58 20.8	
EANR	**'Ain N'Sour**	**1.42**	**232**	P		22 58 20.7	
OKGL	**Djebel Kef Gue**	**1.67**	**242**	P		22 58 25.0	
OJBR	**Djebel Berber**	**2.12**	**235**	P		22 58 31.0	
EIBI	**Ibiza**	**2.36**	**338**	Pn	**Pn**	**22 58 36.3**	**+1.6**
EIBI				⇑iVmb_V		22 58 37.0	
	3μm,SNR=11						
EIBI				Sn	**Sn**	**22 59 03.5**	**0.0**
SET	**Setif**	**2.45**	**104**	P		22 58 47.0	
ODJA	**Bouhanifia**	**2.60**	**235**	P		22 58 40.0	
USTO	**Oran**	**2.67**	**247**	P		22 58 50.0	
DFRA	**Djebel Bou Aff**	**2.76**	**95**	P		22 58 40.4	
ETRV	**Los Montesinos**	**2.83**	**296**	Pn	**Pn**	**22 58 41.3**	**+0.2**
ETRV				⇑iVmb_V		22 58 43.9	
	630nm,SNR=1.9						
ETRV				Sn	**Sn**	**22 59 11.9**	**-3.1**
CART	**Cartagena**	**2.87**	**286**	P	**Pn**	**22 58 39.4**	**-2.2**
CART				S	**Sn**	**22 59 10.9**	**-5.0**
CART	**Cartagena**	**2.87**	**286**	Pn	**Pn**	**22 58 39.1**	**-2.5**
ETOS	**Mallorca**	**2.94**	**5**	Pn	**Pn**	**22 58 44.3**	**+1.6**
ETOS				⇑iVmb_V		22 58 46.9	
	2μm,SNR=7.2						
ETOS				Sn	**Sn**	**22 59 17.9**	**+0.1**
AFON	**Font Roja**	**3.00**	**308**	Pn	**Pn**	**22 58 44.0**	**+0.3**
AFON				⇑iVmb_V		22 58 49.4	
	400nm,SNR=2.2						
AFON				Sn	**Sn**	**22 59 20.0**	**+0.5**
EMUR	**La Murta**	**3.12**	**290**	Pn	**Pn**	**22 58 43.9**	**-1.3**
EMUR				⇑iVmb_V		22 58 51.9	
	348nm,SNR=2.5						
EMUR				Sn	**Sn**	**22 59 21.3**	**-1.0**
CASM	**Ain Smara**	**3.29**	**99**	P		22 58 52.0	
ECOL	**Islas Columbre**	**3.36**	**336**	Pn	**Pn**	**22 58 49.8**	**+1.4**
ECOL				Sn	**Sn**	**22 59 30.3**	**+2.2**
MAHO	**Mahon**	**3.36**	**24**	P	**Pn**	**22 58 48.8**	**+0.3**
MAHO				S	**Sn**	**22 59 26.4**	**-1.8**
MAHO	**Mahon**	**3.36**	**24**	Pn	**Pn**	**22 58 48.5**	**0.0**
TLOR	**Lorca, Murcia**	**3.42**	**285**	Pn	**Pn**	**22 58 48.8**	**-0.4**
TLOR				Sn	**Sn**	**22 59 28.1**	**-1.5**
CKFL	**Kef-Lekhel**	**3.45**	**96**	P		22 58 49.0	
EZAR	**Zarzadilla de**	**3.47**	**289**	Pn	**Pn**	**22 58 49.0**	**-1.1**
EZAR				Sn	**Sn**	**22 59 29.0**	**-2.1**
ETOB	**Tobarra**	**3.66**	**301**	Pn	**Pn**	**22 58 52.9**	**+0.2**
ETOB				⇑iVmb_V		22 59 00.8	
	633nm,SNR=5.0						
ETOB				Sn	**Sn**	**22 59 35.2**	**-0.4**
ENIJ	**Nijar**	**3.75**	**273**	Pn	**Pn**	**22 58 52.2**	**-1.7**
ENIJ				⇑iVmb_V		22 58 58.4	
	342nm,SNR=2.2						
ENIJ				Sn	**Sn**	**22 59 33.5**	**-4.3**
ECHE	**Chera**	**3.86**	**316**	Pn	**Pn**	**22 58 56.1**	**+0.8**
ECHE				⇑iVmb_V		22 58 58.9	
	626nm,SNR=4.6						
ECHE				Sn	**Sn**	**22 59 40.4**	**0.0**
CMAH	**Djebel Manchou**	**3.98**	**92**	P		22 58 56.0	
ABSA	**Djebel Ababsia**	**4.07**	**96**	P		22 58 58.0	
EMOS	**Mosqueruela**	**4.21**	**328**	Pn	**Pn**	**22 59 01.7**	**+1.5**
EMOS				⇑iVmb_V		22 59 03.5	
	1μm,SNR=9.2						
EMOS				Sn	**Sn**	**22 59 48.7**	**-0.6**
EBER	**Berja**	**4.29**	**272**	Pn	**Pn**	**22 59 00.1**	**-1.4**
EBER				⇑iVmb_V		22 59 02.5	
	287nm,SNR=1.9						
EBER				Sn	**Sn**	**22 59 49.9**	**-1.6**
ERTA	**Horta de San J**	**4.44**	**339**	Pn	**Pn**	**22 59 05.0**	**+1.7**
ERTA				⇑iVmb_V		22 59 12.8	
	702nm,SNR=9.1						
ERTA				Sn	**Sn**	**22 59 58.9**	**+4.2**
TAF	**Taforalt**	**4.45**	**244**	P	**Pn**	**22 59 01.6**	**-1.9**
TAF				S	**Sn**	**22 59 56.4**	**+1.3**
EQES	**Quesada**	**4.52**	**284**	Pn	**Pn**	**22 59 04.9**	**+0.4**
EQES				⇑iVmb_V		22 59 07.6	
	527nm,SNR=7.6						
EQES				Sn	**Sn**	**22 59 56.2**	**-0.7**
EPOB	**Poblet**	**4.63**	**347**	Pn	**Pn**	**22 59 07.3**	**+1.3**
EPOB				⇑iVmb_V		22 59 11.3	
	289nm,SNR=5.0						
EPOB				Sn	**Sn**	**22 59 58.4**	**-1.3**
GOG	**Mont Gurugu**	**4.71**	**252**	P	**Pn**	**22 59 04.3**	**-2.8**
GOG				S	**Sn**	**22 59 59.8**	**-1.8**
EQUE	**Quentar**	**4.74**	**276**	Pn	**Pn**	**22 59 08.3**	**+0.8**
EQUE				⇑iVmb_V		22 59 17.0	
	192nm,SNR=2.8						
EQUE				Sn	**Sn**	**23 00 02.9**	**+0.6**
JBK	**JBK**	**4.80**	**240**	P	**Pn**	**22 59 06.0**	**-2.5**
JBK				S	**Sn**	**23 00 07.6**	**+3.6**
ELGU	**Los Guajares,**	**4.89**	**272**	Pn	**Pn**	**22 59 08.3**	**-1.3**
ELGU				⇑iVmb_V		22 59 16.4	
	281nm,SNR=3.3						
ELGU				Sn	**Sn**	**23 00 03.6**	**-2.3**
EMIR	**Miracle**	**5.12**	**352**	Pn	**Pn**	**22 59 16.5**	**+3.8**
EMIR				⇑iVmb_V		22 59 16.8	
	999nm,SNR=5.1						
EMIR				Sn	**Sn**	**23 00 12.9**	**+1.2**
EGOR	**Sierra Gorda,**	**5.27**	**275**	Pn	**Pn**	**22 59 15.8**	**+0.9**
EGOR				⇑iVmb_V		22 59 23.6	
	113nm,SNR=1.5						
EGOR				Sn	**Sn**	**23 00 14.8**	**-0.8**
TDRA	**Tendrara**	**5.29**	**226**	P	**Pn**	**22 59 13.1**	**-2.1**
TDRA				S	**Sn**	**23 00 20.8**	**+4.7**
ETOR	**Torete**	**5.32**	**320**	Pn	**Pn**	**22 59 18.0**	**+2.6**
ETOR				⇑iVmb_V		22 59 26.2	
	248nm,SNR=3.8						
ETOR				Sn	**Sn**	**23 00 21.4**	**+4.9**
ESAC	**San Caprasio**	**5.38**	**336**	Pn	**Pn**	**22 59 18.5**	**+2.2**
PALE	**Palemas**	**5.44**	**255**	P	**Pn**	**22 59 15.5**	**-1.6**
PALE				S	**Sn**	**23 00 16.4**	**-3.1**
EJON	**La Jonquera**	**5.61**	**3**	Pn	**Pn**	**22 59 22.2**	**+2.7**
EJON				⇑iVmb_V		22 59 23.1	
	484nm,SNR=3.3						
EJON				Sn	**Sn**	**23 00 23.8**	**+0.1**
FIGM	**Figuig**	**5.61**	**214**	P	**Pn**	**22 59 16.5**	**-3.1**
FIGM				S	**Sn**	**23 00 22.5**	**-1.4**
AKLM	**AKL**	**5.65**	**248**	P	**Pn**	**22 59 17.9**	**-2.2**
AKLM				S	**Sn**	**23 00 28.6**	**+3.8**
UCM	**Universidad Co**	**5.66**	**309**	P	**Pn**	**22 59 20.4**	**+0.3**
UCM				S	**Sn**	**23 00 27.0**	**-4.7**
KEST	**Kesra**	**5.67**	**99**	Pn	**Pn**	**22 59 20.5**	**+0.2**
	2.2nm,0.3s,baz=114,slow=10,SNR=36						
KEST				Sn	**Sn**	**23 00 26.6**	**+1.5**
	0.8nm,0.3s,baz=341,slow=18,SNR=1.7						
	15nm,0.6s						
KEST	**Kesra**	**5.67**	**99**	Pn	**Pn**	**22 59 20.0**	**-0.3**
EADA	**Adamuz**	**5.75**	**285**	Pn	**Pn**	**22 59 20.3**	**-1.1**
EADA				⇑iVmb_V		22 59 28.0	
	101nm,SNR=2.9						
EADA				Sn	**Sn**	**23 00 24.0**	**-3.3**
ESBB	**Sonseca Array**	**5.80**	**301**	Pn	**Pn**	**22 59 21.9**	**-0.1**
ESDC	**Sonseca Array**	**5.80**	**301**	Pn	**Pn**	**22 59 22.4**	**+0.4**
	1.3nm,0.3s,baz=119,slow=13,SNR=78						
ESDC				Sn	**Sn**	**23 00 26.4**	**-1.9**
	0.9nm,0.3s,baz=117,slow=24,SNR=5.9						
	5.0nm,0.6s						
ESDC	**Sonseca Array**	**5.80**	**301**			**Pn**	**22 59 21.8**	**-0.2**
ESDC	**Sonseca Array**	**5.80**	**301**	Pn		**Pn**	**22 59 22.9**	**+0.9**
ESDC				⇑iVmb_V			22 59 29.5	
	150nm,SNR=3.4							
ESDC				Sn		**Sn**	**23 00 30.8**	**+2.4**
EMIJ	**Mijas**	**5.82**	**269**	Pn		**Pn**	**22 59 21.1**	**-1.2**
EMIJ				⇑iVmb_V			22 59 22.5	
	162nm,SNR=1.8							
PAB	**San Pablo**	**6.01**	**299**	Pn		**Pn**	**22 59 24.3**	**-0.7**
PAB	**San Pablo**	**6.01**	**299**	Pn		**Pn**	**22 59 24.9**	**0.0**
PAB				⇑iVmb_V			22 59 31.4	
	127nm,SNR=3.6							
ECHI	**Chisagues Biel**	**6.08**	**344**	Pn		**Pn**	**22 59 28.4**	**+2.4**
ECHI				⇑iVmb_V			22 59 29.7	
	118nm,SNR=2.8							
ECAB	**El Cabril**	**6.39**	**284**	Pn		**Pn**	**22 59 28.8**	**-1.4**
ECAB				⇑iVmb_V			22 59 36.0	
	101nm,SNR=2.2							
ECAB				Sn		**Sn**	**23 00 41.7**	**-1.3**
EPF	**Esparros**	**6.40**	**346**	*e*Pn		**Pn**	**22 59 33.2**	**+3.0**
EPF				*e*Sn		**Sn**	**23 00 39.7**	**-3.4**
	11nm,0.4s							
GUD	**Guadarrama**	**6.42**	**308**	Pn		**Pn**	**22 59 31.7**	**+1.1**
GUD				⇑iVmb_V			22 59 32.8	
	92nm,SNR=3.4							
GUD				Sn		**Sn**	**23 00 41.3**	**-2.5**
ETSF	**Etsaut**	**6.48**

	2.6nm,0.5s								
MBDF	**Montbardon**	**8.53**	**21**	*e*Pn		**Pn**	**23 00 03.9**	**+4.3**
MBDF				*e*Sn		Sn	23 01 32.4	-3.2
	8.3nm,0.6s							
MVO	**Moncorvo**	**8.56**	**303**	*e*P		**Pn**	**23 00 01.2**	**+1.2**
	14nm,1.9s							
MVO				*e*S		Sn	23 01 46.9	+11
MVO				*e*LR		LR	23 03 08.0	
	47nm,16.0s							
SSB	**Saint Sauveur**	**8.58**	**10**	Pn		**Pn**	**23 00 02.0**	**+1.9**
MTE	**Manteigas**	**8.60**	**297**	*e*P		**Pn**	**23 00 00.1**	**-0.4**
MTE				*e*LR		LR	23 02 45.7	
	70nm,16.0s							
MTE	**Manteigas**	**8.60**	**297**	Pn		**Pn**	**22 59 59.6**	**-0.9**
PBRG	**Braganca**	**8.69**	**308**	*e*P		**Pn**	**23 00 02.4**	**+0.7**
	12nm,1.6s							
PBRG				*e*S		Sn	23 01 51.5	+12
EARI	**Arriondas**	**8.73**	**320**	Pn		**Pn**	**23 00 05.5**	**+3.3**
EARI				⇑*i*Vmb_V			23 00 06.8	
	326nm,SNR=3.7							
PMTG	**Montargil**	**8.73**	**288**	*e*P		**Pn**	**23 00 04.3**	**+2.0**
ECAL	**Calabor**	**8.76**	**308**	Pn		**Pn**	**23 00 03.5**	**+0.8**
ECAL				⇑*i*Vmb_V			23 00 08.9	
	220nm,SNR=3.4							
BNI	**Bardonecchia**	**8.80**	**20**	Pn		**Pn**	**23 00 07.2**	**+3.9**
BNI	**Bardonecchia**	**8.80**	**20**	Pn		**Pn**	**23 00 07.8**	**+4.5**
PVIS	**Viseu**	**8.97**	**299**	*e*P		**Pn**	**23 00 05.8**	**+0.3**
	19nm,1.5s							
PVRL	**Vila Real**	**9.07**	**302**	*e*P		**Pn**	**23 00 07.4**	**+0.4**
	20nm,1.6s							
POLO	**Lamas de Olo**	**9.17**	**303**	*e*P		**Pn**	**23 00 08.8**	**+0.5**
	10nm,1.7s							
PCAS	**Casmilo, Conde**	**9.18**	**294**	*e*P		**Pn**	**23 00 08.2**	**-0.2**
LPG	**La Plagne**	**9.23**	**19**	*e*Pn		**Pn**	23 00 14.3	+4.9
LPG				*e*Sn		**Sn**	**23 01 49.7**	**-3.4**
	3.9nm,0.5s							
LPL	**La Plagne**	**9.24**	**19**	*e*Pn		Pn	23 00 14.8	+5.3
TCF	**Toulx Ste Croi**	**9.44**	**359**	*e*Pn		**Pn**	**23 00 14.2**	**+2.2**
TCF				*e*Sn		**Sn**	**23 01 55.4**	**-2.6**
	1.3nm,0.5s							
RAFF	**Raffo Rosso**	**9.52**	**84**	Pn		**Pn**	**23 00 14.3**	**+1.3**
ELOB	**Lobios**	**9.57**	**305**	Pn		**Pn**	**23 00 14.8**	**+1.0**
ELOB				⇑*i*Vmb_V			23 00 20.4	
	142nm,SNR=2.0							
ELOB				Sn		**Sn**	**23 01 58.3**	**-3.0**
BGF	**Bois d'Agland**	**9.72**	**2**	*e*Pn		**Pn**	**23 00 18.9**	**+3.2**
BGF				*e*Sn		**Sn**	**23 02 00.4**	**-4.2**
	3.9nm,0.5s							
PGAV	**Gavieira, Arco**	**9.76**	**305**	*e*P		**Pn**	**23 00 17.0**	**+0.6**
PGAV				*e*S		Sn	23 02 20.3	+15
PGAV				*e*LR		LR	23 03 35.9	
	83nm,18.0s							
EPON	**Pontenova**	**9.81**	**314**	Pn		**Pn**	**23 00 18.1**	**+1.1**
EPON				⇑*i*Vmb_V			23 00 23.7	
	150nm,SNR=1.4							
SMF	**Signal de Mont**	**9.85**	**6**	*e*Pn		**Pn**	**23 00 20.1**	**+2.5**
SMF				*e*Sn		**Sn**	**23 02 06.8**	**-1.2**
	2.7nm,0.7s							
MFF	**Saint Martin d**	**9.95**	**350**	*e*Pn		**Pn**	**23 00 20.9**	**+2.0**
MFF				*e*Sn		**Sn**	**23 02 05.0**	**-5.3**
	2.9nm,0.5s							
AVF	**Avril sur Loir**	**9.97**	**4**	*e*Pn		**Pn**	**23 00 21.7**	**+2.6**
AVF				*e*Sn		**Sn**	**23 02 08.5**	**-2.2**
	1.6nm,0.6s							
CABF	**La Chapelle**	**10.13**	**14**	*e*Pn		**Pn**	**23 00 24.8**	**+3.3**
CABF				*e*Sn		**Sn**	**23 02 12.6**	**-2.3**
	1.8nm,0.6s							
SENIN	**Lac Senin/Sane**	**10.18**	**19**			**Pn**	**23 00 26.5**	**+4.2**
SSF	**Saint Saulge**	**10.24**	**4**	*e*Pn		**Pn**	**23 00 26.2**	**+3.3**
OUK	**Oukaimeden**	**10.25**	**240**	P		Pn	23 00 15.0	-8.3
HYF	**Humbligny**	**10.42**	**1**	*e*Pn		**Pn**	**23 00 29.8**	**+4.4**
HYF				*e*Sn		**Sn**	**23 02 19.5**	**-2.4**
LOR	**Lormes**	**10.47**	**5**	*e*Pn		**Pn**	**23 00 29.0**	**+2.9**
LOR	**Lormes**	**10.47**	**5**	*e*P		Pn	23 00 35.4	+9.3
	baz=187							
TUE	**Stuetta**	**10.91**	**26**	Pn		**Pn**	**23 00 36.2**	**+4.0**
DAVOX	**Davos/Dischmat**	**11.36**	**27**	Pn		**Pn**	**23 00 41.1**	**+2.7**
	0.5nm,0.3s,baz=218,slow=12,SNR=2.7							
	1.1nm,0.4s							
HINF	**Hinteralfeld**	**11.44**	**15**	*e*Pn		**Pn**	**23 00 41.5**	**+2.2**
HINF				*e*Sn		**Sn**	**23 02 44.8**	**-2.1**
	1.7nm,0.3s							
SFTF	**Sexfontaines**	**11.52**	**9**	*e*Pn		**Pn**	**23 00 41.6**	**+1.3**
HAU	**Haudompre**	**11.52**	**13**	*e*Pn		**Pn**	**23 00 43.0**	**+2.6**
HAU				*e*Sn		**Sn**	**23 02 45.2**	**-3.6**
	1.2nm,0.4s							
GRR	**Gorron**	**11.80**	**349**	*e*Pn		**Pn**	**23 00 46.3**	**+2.1**
GRR				*e*Sn		**Sn**	**23 02 50.7**	**-4.9**
	0.6nm,0.3s							
MEZF	**Maizieres J'vi**	**11.81**	**8**	*e*Pn		**Pn**	**23 00 46.5**	**+2.2**
	baz=186							
QUIF	**Quistinic**	**11.82**	**341**	*e*Pn		**Pn**	**23 00 46.1**	**+1.6**
QUIF				*e*Sn		**Sn**	**23 02 51.4**	**-4.8**
	0.4nm,0.3s							
ECH	**Echery**	**11.88**	**15**	Pn		**Pn**	**23 00 47.3**	**+2.0**
LDF	**La Druitiere**	**11.90**	**352**	*e*Pn		**Pn**	**23 00 47.9**	**+2.3**
LDF				*e*Sn		**Sn**	**23 02 52.3**	**-5.8**
	1.0nm,0.6s							
SAVF	**Savonnieres en**	**11.93**	**9**	*e*Pn		**Pn**	**23 00 50.5**	**+4.5**
	baz=190							
PAGF	**Fort de Pagny**	**11.95**	**11**	*e*Pn		**Pn**	**23 00 49.5**	**+3.2**
	baz=189							
PAGF				*e*Sg			23 04 19.7	
	1.0nm,0.3s							
SGMF	**Saint Gilles**	**11.99**	**344**	*e*Pn		**Pn**	**23 00 47.9**	**+1.1**
SGMF				*e*Sn		**Sn**	**23 02 56.5**	**-3.8**
	0.5nm,0.2s							
CDF	**Champ du Feu**	**12.09**	**15**	*e*Pn		**Pn**	**23 00 50.1**	**+1.8**
CDF				*e*Sg			23 04 25.2	
	1.8nm,0.6s							
FLN	**La Foliniere**	**12.11**	**351**	*e*Pn		**Pn**	**23 00 50.1**	**+1.7**
ROSF	**Rostrenen**	**12.24**	**342**	*e*Pn		**Pn**	**23 00 50.8**	**+0.6**
ROSF				*e*Sn		**Sn**	**23 03 01.5**	**-4.9**
	0.6nm,0.3s							
BFO	**Black Forest**	**12.27**	**19**	Pn		**Pn**	**23 00 51.4**	**+0.8**
BAIF	**Baives**	**13.28**	**5**	*e*Pn		**Pn**	**23 01 06.5**	**+2.2**
GEC2	**GERESS Array S**	**14.54**	**31**	Pn		**Pn**	**23 01 24.4**	**+2.7**
GERES	**GERESS Array B**	**14.54**	**31**	Pn		**Pn**	**23 01 23.7**	**+2.0**
	0.1nm,0.3s,baz=219,slow=15,SNR=3.4							
	0.5nm,0.7s							
GERES	**GERESS Array B**	**14.54**	**31**	Pn		**Pn**	**23 01 23.1**	**+1.4**
DIVS	**Divibare**	**15.17**	**56**	Pn		**Pn**	**23 01 31.8**	**+1.6**
DIVS				IAmb		IAmb	23 01 58.0	
	comp=Z,24nm,2.0s							
MORC	**Moravsky Berou**	**16.92**	**35**	Pn		**P**	**23 01 53.6**	**-1.0**
DSB	**Dublin**	**17.53**	**342**	Pn		Pn	**23 01 59.5**	**-0.7**
IDI	**Anoyia**	**18.19**	**88**	P		**P**	**23 02 09.2**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=278,slow=17,SNR=3.3							
	comp=Z,2.3nm,1.0s							
IDI	**Anoyia**	**18.19**	**88**	P		**Pn**	**23 02 07.8**	**-0.8**
IDI				IAmb		IAmb	23 02 27.3	
	comp=Z,7.7nm,1.5s							
EKA	**Eskdalemuir Ar**	**18.89**	**350**	P		**Pn**	**23 02 19.2**	**+2.3**
	baz=164,slow=14							
	comp=Z,0.3nm,0.5s							
MLR	**Muntele Rosu**	**19.62**	**57**	P		**Pn**	**23 02 25.7**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=281,slow=6.3,SNR=3.7							
	comp=Z,6.3nm,1.2s							
BURAR	**Bucovina Array**	**19.92**	**50**	P		**P**	**23 02 25.7**	**-2.1**
BUR08	**Bucovina Ar. S**	**19.92**	**50**	P		**P**	**23 02 25.8**	**-2.0**
BUR08				IAmb		IAmb	23 02 35.0	
	comp=Z,6.4nm,1.2s							
SUW	**Suwalki**	**22.36**	**33**	P		**P**	**23 02 54.4**	**+0.5**
SUW				IAmb		IAmb	23 02 59.0	
	comp=Z,13nm,0.8s							
TOA0	**Torodi Ar. Sit**	**23.60**	**182**	P		**P**	**23 03 04.3**	**-2.6**
TOA0				IAmb		IAmb	23 03 16.4	
	comp=Z,28nm,1.9s							
TORD	**Torodi Ar. Bea**	**23.60**	**182**	P		**P**	**23 03 04.2**	**-2.7**
	comp=Z,0.5nm,0.6s,baz=5.1,slow=10,SNR=6.0							
	comp=Z,0.5nm,0.6s							
AKASG	**Malin Array Be**	**23.61**	**46**	P		**P**	**23 03 06.0**	**-0.8**
	comp=Z,0.5nm,0.4s,baz=246,slow=9.7,SNR=5.8							
	comp=Z,0.5nm,0.4s							
AKASG	**Malin Array Be**	**23.61**	**46**	P		**P**	**23 03 05.9**	**-0.9**
NAO01	**NORSAR Array S**	**24.61**	**10**	P		**P**	**23 03 17.5**	**+1.5**
NB2	**NORSAR Subarra**	**24.85**	**10**	P		**P**	**23 03 20.9**	**+2.7**
	comp=Z,2.4nm,1.1s,baz=195,slow=9.3							
NOA	**NORSAR Array B**	**24.85**	**10**	P		**P**	**23 03 18.9**	**+0.7**
	comp=Z,0.8nm,1.0s,baz=198,slow=10,SNR=3.7							
NOA				LR		LR	23 13 18.9	
	comp=Z,12nm,18.5s,baz=345,slow=37							
	comp=Z,0.8nm,1.0s							
FINES	**FINESS Array B**	**28.75**	**24**	P		**P**	**23 03 53.7**	**+0.5**
	comp=Z,2.1nm,0.9s,baz=238,slow=8.0,SNR=4.3							
	comp=Z,2.1nm,0.9s							

DBG	**Daneborg**	**39.11**	**350**	*i* P		**P**	**23 05 24.3**	**+1.4**
DBG				IAmb		IAmb	23 05 25.0	
	comp=Z,9.3nm,1.1s							
MK31	**Makanchi Array**	**57.92**	**53**	P		**P**	**23 07 48.7**	**+0.7**
MK31				IAmb		IAmb	23 08 09.5	
	comp=Z,3.7nm,1.6s							
MKAR	**Makanchi Array**	**57.92**	**53**	P		**P**	**23 07 48.9**	**+0.8**
	comp=Z,0.6nm,0.6s,baz=286,slow=7.1,SNR=4.8							
	comp=Z,0.6nm,0.6s							
MKAR	**Makanchi Array**	**57.92**	**53**	P		**P**	**23 07 48.5**	**+0.5**
CPUP	**Villa Florida**	**84.33**	**231**	LR		LR	23 43 56.2	
	comp=Z,44nm,21.3s,baz=214,slow=33							
TXAR	**Lajitas Array**	**84.47**	**303**	P		**P**	**23 10 30.1**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=71,slow=4.5,SNR=3.7							
	comp=Z,0.3nm,0.6s							
LVC	**Limon Verde**	**89.51**	**241**	LR		LR	23 50 11.8	
	comp=Z,20nm,19.1s,baz=204,slow=35							
STKA	**Stephens Creek**	**146.08**	**94**	PKPbc		**PKPdf**	**23 17 35.8**	**+0.7**
	comp=Z,1.6nm,0.7s,baz=288,slow=3.2,SNR=3.2							

IDC ***11*** *23:35:51.7±3.5, 8˚.29S×118˚.22E, h168km±28km, mb3.1/4, mbtmp3.7/7, Error ellipse: s-maj=60.2km s-min=12.8km az=52.0*

DJA ***11*** *23:35:55.5±0.4, 8˚S±5˚×11˚9E±˚, h185km±6km, M3.9/11, mb3.9/5, mB5.0/1, MLv3.9/11, Mw(mB)4.3/1*

ISC 11 23:35:55.1±0.8**, 8˚.16S**±0˚.08×**118˚.65E**±0˚.07**, h200**km**, n17,** σ**2s09/21, mb3.4/4, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**1.09**	**233**	P		**Pn**	**23 36 24.6**		**-0.9**
PLAI				S		**Sn**	**23 36 47.5**		**-1.6**
WBSI	**Waikabubak, Su**	**1.64**	**154**	P		**Pn**	**23 36 28.9**		**-1.3**
WBSI				S		**Sn**	**23 36 53.9**		**-3.6**
BASI	**Baing, Sumba**	**2.79**	**137**	P		**Pn**	**23 36 41.9**		**-0.4**
EDFI	**Ende, Flores**	**3.06**	**101**	P		**Pn**	**23 36 44.7**		**-0.9**
BKSI	**Bulukumba**	**3.18**	**27**	P		**Pn**	**23 36 47.0**		**+0.2**
KAPI	**Kappang**	**3.31**	**19**	P		**Pn**	**23 36 47.7**		**-0.8**
	27nm,0.6s,baz=183,slow=8.6,SNR=12								
GMJI	**Gumukmas**	**5.16**	**268**	P		**Pn**	**23 37 11.9**		**+0.4**
	0.2nm34nm,2.2s								
BATI	**Baumata**	**5.35**	**113**	P		**Pn**	**23 37 14.4**		**+0.4**
	21nm,0.3s,baz=67,slow=1.7,SNR=7.2								
BATI				S		**Sn**	**23 38 12.9**		**-3.4**
	102nm,0.3s,baz=330,slow=19,SNR=13								
BATI	**Baumata**	**5.35**	**113**	P		**Pn**	**23 37 14.0**		**0.0**
	0.3nm17nm,0.7s								
SOEI	**Soe**	**5.77**	**106**	P		**Pn**	**23 37 19.0**		**-0.5**
	0.3nm2μm58nm,0.5s								
PCJI	**Pacitan**	**7.40**	**269**	P		**Pn**	**23 37 40.8**		**+0.2**
WRA	**Warramunga Arr**	**19.18**	**129**	P		**P**	**23 40 05.1**		**+1.2**
	0.7nm,0.3s,baz=302,slow=12,SNR=12								
WRA				S		**S**	**23 43 37.0**		**+6.4**
	1.1nm,0.7s,baz=319,slow=24,SNR=0.9								
ASAR	**Alice Springs**	**21.25**	**138**	P		**P**	**23 40 26.9**		**+1.1**
	1.0nm,0.4s,baz=315,slow=8.7,SNR=23								
	1.0nm,0.4s								
SONM	**Songino Array**	**56.80**	**350**	P		**P**	**23 45 19.4**		**+0.8**
	0.2nm,0.5s,baz=167,slow=7.1,SNR=2.2								
	0.2nm,0.5s								
MKAR	**Makanchi Array**	**63.56**	**333**	P		**P**	**23 46 03.1**		**-1.2**
	0.1nm,0.4s,baz=126,slow=7.0,SNR=2.5								
	0.1nm,0.4s								
ZALV	**Zalesovo Beam**	**68.14**	**339**	P		**P**	**23 46 32.7**		**-0.6**
	0.6nm,0.4s,baz=146,slow=8.2,SNR=3.8								
	0.6nm,0.4s								
TORD	**Torodi Ar. Bea**	**117.97**	**281**	PKP		**PKiKP**	**23 54 19.6**		**+0.6**
	0.2nm,0.4s,baz=62,slow=3.1,SNR=5.4								

IDC ***11*** *23:38:14.9±1.5, 6˚.49S×149˚.58E, h0km, mb3.3/1, mbtmp3.8/4, ML4.0/2, MS3.7/1, Error ellipse: s-maj=84.2km s-min=20.3km az=133.0*

ISC 11 23:38:19.7±1.1**, 6˚.4S**±0˚.3×**149˚.5E**±0˚.3**, h49**km**, n7,** σ**0s88/8, 1C, New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.25**	**51**	Pn		**Pn**		**23 39 07.4**	**-0.9**
	9.7nm,0.3s,baz=231,slow=6.5,SNR=4.8								
KRVT				Sn		**Sn**		**23 39 47.1**	**+1.2**
	5.9nm,0.3s,baz=233,slow=13,SNR=3.5								
	46nm,0.5s								
PMG	**Port Moresby**	**3.80**	**217**	Pn		**Pn**		**23 39 15.1**	**-0.7**
	16nm,0.3s,baz=37,slow=5.1,SNR=9.2								
PMG				Sn		**Sn**		**23 40 00.1**	**+0.8**
	13nm,0.3s,baz=30,slow=20,SNR=3.1								
WRA	**Warramunga Arr**	**19.96**	**226**	P		**P**		**23 42 48.4**	**+0.4**
	0.6nm,0.3s,baz=52,slow=11,SNR=16								
	2.8nm,0.5s								
ASAR	**Alice Springs**	**22.81**	**219**	P		**P**		**23 43 18.6**	**0.0**
	1.0nm,0.7s,baz=51,slow=9.3,SNR=8.6								
	1.0nm,0.7s								
RPZ	**Rata Peaks**	**41.76**	**156**	LR		LR		00 02 25.7	
	comp=Z,99nm,19.9s,baz=207,slow=35								
MTUR	**Matau**	**118.34**	**319**	⇑P		**PKPdf**		**23 57 01.8**	**-0.3**
TORD	**Torodi Ar. Bea**	**147.56**	**284**	PKPbc		**PKPab**		**23 58 02.3**	**+0.4**
	2.1nm,1.1s,baz=89,slow=3.0,SNR=8.3								

UPP ***11*** *23:42:19.8±0.3, 67˚.85N×20˚.21E, h0km±2km, ML2.2, Explosion*

KOLA ***11*** *23:42:19.4, 67˚.68N×19˚.99E, h0km, ML2.1*

IDC ***11*** *23:42:20.7±1.2, 67˚.81N×20˚.78E, h0km, mbtmp2.7/3, ML2.0/3, Error ellipse: s-maj=18.8km s-min=7.4km az=118.0*

HEL ***11*** *23:42:20.4±0.0, 67˚.85N×20˚.22E, h0km, ML2.0, ML2.2(UPP), Explosion*

ISC 11 23:42:19.6±0.7**, 67˚.85N**±0˚.02×**20˚.23E**±0˚.02**, h0**km**, n42,** σ**0s97/72, Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RATU	**Laukkuluspa**	**0.24**	**265**	P		**Pg**		**23 42 24.4**	**+0.2**
RATU				S		**Sg**		**23 42 27.8**	**+0.5**
RATU	**Laukkuluspa**	**0.24**	**265**	*i* P		**Pg**		**23 42 24.4**	**+0.2**
RATU				*i* S		**Sg**		**23 42 27.8**	**+0.5**
KOVU	**Salmi**	**0.38**	**356**	P		**Pg**		**23 42 26.8**	**0.0**
KOVU				S		**Sg**		**23 42 32.1**	**+0.4**
KOVU	**Salmi**	**0.38**	**356**	*i* P		**Pg**		**23 42 26.8**	**0.0**
KOVU				*i* S		**Sg**		**23 42 32.1**	**+0.4**
NIKU	**Nikkaluokta**	**0.45**	**273**	P		**Pg**		**23 42 28.2**	**-0.1**
NIKU				S		**Sg**		**23 42 34.4**	**+0.3**
NIKU	**Nikkaluokta**	**0.45**	**273**	*i* P		**Pg**		**23 42 28.2**	**-0.1**
NIKU				*i* S		**Sg**		**23 42 34.4**	**+0.3**
LANU	**Lannavaara**	**0.69**	**72**	P		**Pg**		**23 42 33.0**	**+0.1**
LANU				S		**Sg**		**23 42 42.4**	**+0.6**
LANU	**Lannavaara**	**0.69**	**72**	*e*P		**Pg**		**23 42 31.9**	**-1.0**
LANU				*e*S		**Sg**		**23 42 42.3**	**+0.4**
DUNU	**Dundret**	**0.74**	**170**	P		**Pg**		**23 42 33.6**	**-0.1**
DUNU				S		**Sg**		**23 42 43.8**	**+0.5**
DUNU	**Dundret**	**0.74**	**170**	*i* P		**Pg**		**23 42 33.6**	**-0.1**
DUNU				*i* S		**Sg**		**23 42 43.8**	**+0.5**
MASU	**Masugnsbyn**	**0.78**	**119**	P		**Pg**		**23 42 34.6**	**0.0**
MASU	**Masugnsbyn**	**0.78**	**119**	*i* P		**Pg**		**23 42 34.6**	**0.0**
SALU	**Saltoluokta**	**0.81**	**235**	P		**Pg**		**23 42 34.9**	**-0.2**
SALU				S		**Sg**		**23 42 45.5**	**0.0**
SALU	**Saltoluokta**	**0.81**	**235**	*i* P		**Pg**		**23 42 34.9**	**-0.2**
SALU				*i* S		**Sg**		**23 42 45.5**	**0.0**
KIF	**Kilpisjarvi**	**1.18**	**10**	*e*P		**Pg**		**23 42 42.2**	**0.0**
KIF	**Kilpisjarvi**	**1.18**	**10**	*e*PB		**Pg**		**23 42 42.6**	**+0.3**
	baz=195								
KIF				MSG				23 42 57.9	
	comp=Z,14nm,0.2s								
KIF				*e*SB		**Sb**		**23 42 58.4**	**-0.3**
PAJU	**Pajala**	**1.39**	**125**	*e*P		**Pg**		**23 42 45.0**	**-1.1**
	baz=304								
PAJU				*e*SB		**Sg**		**23 43 04.6**	**+0.5**
HEF	**Hetta**	**1.40**	**65**	*e*P		**Pn**		**23 42 46.2**	**-0.2**
HEF	**Hetta**	**1.40**	**65**	*e*PG		**Pn**		**23 42 45.7**	**-0.7**
	baz=249								
HEF				MSG				23 43 03.4	
	comp=Z,13nm,0.2s								
HEF				*e*SB		**Sg**		**23 43 04.3**	**-0.3**
ERTU	**Ertsjaerv**	**1.51**	**149**	*e*P		**Pn**		**23 42 47.3**	**-0.6**
ERTU				*e*SN		**Sn**		**23 43 08.5**	**+0.4**
KLF	**Kolari**	**1.56**	**111**	*e*P		**Pn**		**23 42 48.3**	**-0.2**
KLF				*e*SN		**Sg**		**23 43 10.4**	**+0.8**
KTK1	**Kautokeino**	**1.61**	**42**	*e*PN		**Pn**		**23 42 49.7**	**+0.4**
KTK1				*e*SN		**Sg**		**23 43 13.6**	**+2.2**
TRO	**Tromso**	**1.86**	**346**	*e*PN		**Pn**		**23 42 53.3**	**+0.7**
TRO				*e*SG		**Sb**		**23 43 17.9**	**-0.1**
KALU	**Kalix**	**2.35**	**147**	*e*P		**Pn**		**23 43 00.5**	**+1.2**
	baz=327								
KALU				*e*SB		**Sb**		**23 43 31.4**	**-0.7**
TOF	**Tornio**	**2.40**	**136**	*e*PB		**Pn**		**23 43 01.7**	**+1.7**
	baz=314								
TOF				MSG				23 43 30.8	
	comp=Z,8.8nm,0.2s								
TOF				*e*SG		**Sb**		**23 43 34.6**	**+1.0**
SGF	**Sodankyl**	**2.44**	**97**	*e*P		**Pn**		**23 43 02.0**	**+1.3**
SGF				*e*SG		**Sb**		**23 43 36.4**	**+1.5**
ARA0	**ARCESS Array S**	**2.57**	**46**	*e*P		**Pn**		**23 43 03.1**	**+0.7**
ARCES	**ARCESS Array B**	**2.57**	**46**	Pn		**Pn**		**23 43 03.1**	**+0.7**
	comp=Z,0.6nm,0.3s,baz=226,slow=16,SNR=16								
ARCES				Lg		Lg		23 43 37.0	
	comp=Z,1.7nm,0.3s,baz=230,slow=23,SNR=13								
	comp=Z,1.4nm,0.3s								
ARCES	**ARCESS Array B**	**2.57**	**46**	P		**Pn**		**23 43 03.6**	**+1.2**
ARCES				S		**Sb**		**23 43 37.9**	**-0.7**
RNF	**Rovaniemi**	**2.57**	**116**	*e*PB		**Pn**		**23 43 04.4**	**+2.0**
	baz=300								
RNF				*e*SG		**Sb**		**23 43 38.6**	**0.0**
KEV	**Kevo**	**3.12**	**49**	*e*PB		**Pb**		**23 43 14.0**	**-1.9**
KEV				*e*S		**Sn**		**23 43 49.6**	**+1.7**
KEV				MSG				23 43 52.8	
	comp=Z,3.8nm,0.2s								
VRF	**Varrio**	**3.56**	**87**	*e*PG		**Pb**		**23 43 23.6**	**+0.2**
OUL	**Oulu**	**3.58**	**138**	*e*SG		**Sb**		**23 44 09.2**	**+1.5**
OLKF	**Oulanka, Finla**	**3.90**	**109**	*e*P		**Pn**		**23 43 22.1**	**+1.4**
MSF	**Maaselka**	**3.98**	**115**	*e*P		**Pn**		**23 43 23.2**	**+1.4**
	baz=305								
UMAU	**Umeaa**	**3.99**	**177**	*e*P		**Pn**		**23 43 24.3**	**+2.5**
	baz=1.0								
KU6	**Riekki**	**4.22**	**111**	*e*P		**Pn**		**23 43 26.4**	**+1.3**
	baz=298								
PRVG	**Vayda Guba**	**4.74**	**61**	P		**Pn**		**23 43 34.1**	**+1.9**
PRVG				S		**Sn**		**23 44 27.1**	**-0.6**
APA0	**Apatity Array**	**4.86**	**87**	P		**Pn**		**23 43 33.8**	**-0.1**
APA0				S		**Sn**		**23 44 31.1**	**+0.3**
LVZ	**Lovozero**	**5.45**	**83**	P		**Pn**		**23 43 41.4**	**-0.6**
LVZ				S		**Sn**		**23 44 43.6**	**-1.7**
FINES	**FINESS Array B**	**6.90**	**156**	Pn		**Pn**		**23 44 00.5**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=348,slow=19,SNR=1.2								
FINES				Sn		**Sn**		**23 45 19.1**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=350,slow=23,SNR=2.0								
FINES				Lg		Lg		23 45 53.9	
	comp=Z,0.3nm,0.3s,baz=348,slow=20,SNR=6.6								
	comp=Z,2.2nm,1.1s								
NOA	**NORSAR Array B**	**7.86**	**214**	Pn		**Pn**		**23 44 15.4**	**+0.4**
	baz=23,slow=12,SNR=1.4								
NOA				Sn		**Sn**		**23 45 43.0**	**-1.6**
	baz=16,slow=9.9,SNR=1.4								
NOA				Lg		Lg		23 46 23.5	
	baz=203,slow=12,SNR=1.8								
	comp=Z,0.2nm,0.6s								

IDC ***11*** *23:42:26.9±1.2, 9˚.30S×158˚.83E, h0km, mb3.4/4, mbtmp3.6/5, ML3.8/1, Error ellipse: s-maj=37.8km s-min=11.4km az=3.0*

ISC 11 23:42:30.3±1.0**, 9˚.4S**±0˚.2×**159˚.0E**±0˚.1**, h27**km**, n6,** σ**0s90/6, mb3.3/4, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**0.95**

DVE				eSg	Sb	23 50 00.1	+1.9
GROC	**Groznyy**	**2.07**	**294**	ePg	Pn	23 49 40.1	+1.6
GROC				eSg	Sb	23 50 06.8	-0.4
KMGR	**Komgaron**	**2.67**	**286**	ePn	Pb	23 49 49.8	-2.5
KMGR				eSn	Sn	23 50 21.5	+2.9
GUDG	**Gudauri**	**2.89**	**273**	ePn	Pn	23 49 50.5	+0.5
GUDG				eSn	Sn	23 50 25.9	+1.8
BTKR	**Batakoyurt**	**2.99**	**291**	ePn	Pb	23 49 54.5	-3.1
BTKR				eSn	Sn	23 50 27.7	+1.4
LACR	**Lac**	**3.04**	**280**	ePn	Pn	23 49 54.3	+2.3
LACR				eSn	Sb	23 50 31.9	-3.4
ARNR	**Ardon**	**3.12**	**286**	ePn	Pn	23 49 52.9	0.0
ARNR				eSn	Sn	23 50 32.6	+3.1
KORR	**Kora**	**3.25**	**284**	ePn	Pn	23 49 54.5	-0.3
KORR				eSn	Sn	23 50 32.4	-0.4
PRTR	**Priterechnaya**	**3.30**	**296**	ePn	Pn	23 49 56.2	+0.8
PRTR				eSn	Sn	23 50 35.7	+1.8
STDR	**Stavd-Durt**	**3.32**	**289**	ePn	Pn	23 49 57.9	+2.2
STDR				eSn	Sn	23 50 37.5	+3.0
LSNR	**Lesken**	**3.46**	**287**	ePn	Pn	23 50 00.2	+2.4
LSNR				eSn	Sn	23 50 41.8	+3.6
GNI	**Garni**	**3.53**	**232**	ePn	Pb	23 50 03.2	-3.7
GNI				eSn	Sn	23 50 43.5	+3.7
ONI	**Oni**	**3.65**	**275**	ePn	Pn	23 50 03.0	+2.8
ONI				eSn	Sn	23 50 46.2	+3.6
KBTC	**Kuba-Taba**	**3.91**	**293**	ePn	Pn	23 50 05.1	+1.2
KBTC				eSn	Sn	23 50 52.3	+3.2
PYA1	**Pyatigorsk**	**4.21**	**295**	ePn	Pn	23 50 09.2	+1.2
PYA1				eSn	Sn	23 50 56.0	-0.5
KBZ	**Khabaz**	**4.24**	**290**	ePn	Pn	23 50 10.1	+1.9
KBZ				eSn	Sn	23 50 58.1	+1.1
SHA1	**Shidzhatmaz**	**4.41**	**290**	ePn	Pn	23 50 12.0	+1.2
SHA1				eSn	Sn	23 51 03.9	+2.3
KIV0	**Kislovodsk Arr**	**4.44**	**293**	ePn	Pn	23 50 11.4	+0.2
KIV0				eSn	Sn	23 51 02.2	-0.2
KIV	**Kislovodsk**	**4.45**	**293**	ePn	Pn	23 50 12.5	+1.2
KIV				eSn	Sn	23 51 03.9	+1.4

*CNRM **11** 23:58:35.9, 36°.29N×3°.93E, h12km, ml3.8*
*IDC **11** 23:58:38.5±1.1, 36°.34N×3°.44E, h0km, mb3.4/6, mbtmp3.5/15, ML3.6/9, MS3.2/6, Error ellipse: s-maj=21.1km s-min=17.3km az=163.0*
*CRAAG **11** 23:58:38.1, 36°.35N×3°.49E, Ml3.6, Hypocentre not reviewed by the ISC*
*MDD **11** 23:58:39.4±0.5, 36°.14N×3°.61E, h10km±9km, Mb4.4/32, M_mb3.8/33, Error ellipse: s-maj=11.0km s-min=2.8km az=146.0*
*NEIC **11** 23:58:40.8±1.1, 36°.40N±0°.09×3°.45E±0°.08, h10km±1km, mb4.0/10, Error ellipse: s-maj=15.4km s-min=11.2km az=188.0*
*LDG **11** 23:58:41.2±0.4, 36°.27N×3°.56E, h2km, Ml3.5/26, Error ellipse: s-maj=8.0km s-min=4.0km az=148.0*

ISC 11 23:58:41.4±0.6, 36°.41N±0°.05×3°.48E±0°.05, h18km, n137, σ1s 90/185, mb3.6/9, MS3.3/4, 28C, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ADJB	**Djebel Djouab**	**0.25**	**187**	P			23 58 43.5	
AKET	**Djebel Ketaf**	**0.49**	**137**	P			23 58 48.8	
SET	**Setif**	**1.57**	**97**	P			23 59 12.0	
EBNR	**Beni Rached**	**1.57**	**266**	P			23 59 13.6	
ECHA	**Ech Chlef**	**1.72**	**262**	P			23 59 16.2	
DFRA	**Djebel Bou Aff**	**1.94**	**85**	P			23 59 13.9	
EANR	**Aïn N'Sour**	**1.98**	**257**	P			23 59 20.1	
OJGS	**Djebel Guires**	**2.39**	**249**	P			23 59 40.0	
CASM	**Ain Smara**	**2.44**	**93**	P			23 59 22.1	
CKFL	**Kef-Lekhel**	**2.62**	**89**	P			23 59 23.8	
OJBR	**Djebel Berber**	**2.67**	**253**	P			23 59 25.0	
EIBI	**Ibiza**	**3.11**	**328**	Pn		**Pn**	**23 59 30.0**	**+0.4**
EIBI				⇑*i*Vmb_V			23 59 34.2	
	2µm,SNR=7.5							
EIBI				Sn		**Sn**	**00 00 05.9**	**-0.4**
ODJA	**Bouhanifia**	**3.13**	**251**	P			23 59 28.0	
CMAH	**Djebel Manchou**	**3.18**	**85**	P			23 59 30.6	
ETOS	**Mallorca**	**3.40**	**351**	Pn		**Pn**	**23 59 33.2**	**-0.2**
ETOS				⇑*i*Vmb_V			23 59 36.7	
	961nm,SNR=3.1							
ETOS				Sn		**Sn**	**00 00 15.4**	**+2.1**
MAHO	**Mahon**	**3.54**	**10**	Pn		**Pn**	**23 59 34.5**	**-0.9**
CART	**Cartagena**	**3.77**	**290**	Pn		**Pn**	**23 59 37.8**	**0.8**
CART	**Cartagena**	**3.77**	**290**	P		**Pn**	**23 59 38.5**	**-0.1**
CART	**Cartagena**	**3.77**	**290**	P		**Pn**	**23 59 38.5**	**-0.1**
CART				S		**Sn**	**00 00 20.0**	**-2.5**
AFON	**Font Roja**	**3.91**	**306**	Pn		**Pn**	**23 59 42.0**	**+1.4**
AFON				⇑*i*Vmb_V			23 59 45.0	
	258nm,SNR=1.6							
EMUR	**La Murta**	**4.03**	**292**	Pn		**Pn**	**23 59 41.8**	**-0.5**
EMUR				⇑*i*Vmb_V			23 59 48.3	
	241nm,SNR=1.9							
EMUR				Sn		**Sn**	**00 00 29.6**	**+0.6**
ECOL	**Islas Columbre**	**4.12**	**329**	Pn		**Pn**	**23 59 43.9**	**+0.5**
ECOL				Sn		**Sn**	**00 00 33.6**	**+2.5**
EZAR	**Zarzadilla de**	**4.38**	**291**	Pn		**Pn**	**23 59 47.1**	**0.0**
EZAR				Sn		**Sn**	**00 00 38.7**	**+0.9**
ETOB	**Tobarra**	**4.58**	**301**	Pn		**Pn**	**23 59 50.0**	**+0.3**
ETOB				⇑*i*Vmb_V			23 59 53.8	
	438nm,SNR=3.8							
ETOB				Sn		**Sn**	**00 00 42.1**	**-0.4**
ENIJ	**Nijar**	**4.60**	**279**	Pn		**Pn**	**23 59 50.0**	**0.0**
ENIJ				⇑*i*Vmb_V			23 59 56.8	
	216nm,SNR=1.1							
ENIJ				Sn		**Sn**	**00 00 40.8**	**-2.3**
ECHE	**Chera**	**4.73**	**314**	Pn		**Pn**	**23 59 52.8**	**+0.9**
ECHE				⇑*i*Vmb_V			23 59 55.8	
	715nm,SNR=6.9							
ECHE				Sn		**Sn**	**00 00 47.7**	**+1.4**
KEST	**Kesra**	**4.80**	**96**	Pn		**Pn**	**23 59 53.4**	**+0.5**
	1.5nm,0.3s,baz=96,slow=5.8,SNR=29							
KEST				Sn		**Sn**	**00 00 48.5**	**+0.4**
	1.2nm,0.3s,baz=351,slow=19,SNR=2.0							
KEST				LR		LR	00 01 59.0	
	comp=Z,182nm,18.9s,baz=184,slow=42 16nm,0.7s							
EMOS	**Mosqueruela**	**5.02**	**323**	Pn		**Pn**	**23 59 56.8**	**+0.8**
EMOS				⇑*i*Vmb_V			00 00 00.1	
	438nm,SNR=4.7							
EMOS				Sn		**Sn**	**00 00 55.1**	**+1.5**
TAF	**Taforalt**	**5.05**	**253**	P		**Pn**	**23 59 56.0**	**-0.3**
TAF	**Taforalt**	**5.05**	**253**	P		**Pn**	**23 59 55.2**	**-1.1**
TAF				S		**Sn**	**00 00 49.8**	**-4.5**
EBER	**Berja**	**5.14**	**277**	Pn		**Pn**	**23 59 56.7**	**-0.9**
EBER				⇑*i*Vmb_V			00 00 04.7	
	205nm,SNR=1.5							
EBER				Sn		**Sn**	**00 00 58.1**	**+1.5**
ERTA	**Horta de San J**	**5.17**	**333**	Pn		**Pn**	**00 00 00.8**	**+3.0**
ERTA				⇑*i*Vmb_V			00 00 08.1	
	142nm,SNR=4.2							
ERTA				Sn		**Sn**	**00 00 56.8**	**-0.1**
EPOB	**Poblet**	**5.28**	**340**	Pn		**Pn**	**00 00 00.8**	**+1.4**
EPOB				⇑*i*Vmb_V			00 00 09.3	
	135nm,SNR=2.0							
EPOB				Sn		**Sn**	**00 01 01.1**	**+1.3**
JBK	**JBK**	**5.35**	**249**	P		**Pn**	**00 00 01.0**	**+0.4**
JBK	**JBK**	**5.35**	**249**	P		**Pn**	**00 00 00.2**	**-0.3**
JBK				S		**Sn**	**00 01 00.2**	**-1.6**
GOG	**Mont Gurugu**	**5.39**	**259**	P		**Pn**	**23 59 59.9**	**-1.0**
GOG				S		**Sn**	**00 00 59.6**	**-3.0**
EQES	**Quesada**	**5.42**	**287**	Pn		**Pn**	**00 00 02.8**	**+1.5**
EQES				⇑*i*Vmb_V			00 00 06.9	
	358nm,SNR=4.9							
TDRA	**Tendrara**	**5.64**	**235**	P		**Pn**	**00 00 05.0**	**+0.5**
TDRA	**Tendrara**	**5.64**	**235**	P		**Pn**	**00 00 02.8**	**-1.7**
TDRA				S		**Sn**	**00 01 09.3**	**+0.4**
EMIR	**Miracle**	**5.70**	**345**	Pn		**Pn**	**00 00 07.4**	**+2.1**
EMIR				Sn		**Sn**	**00 01 12.8**	**+2.6**
ELGU	**Los Guajares,**	**5.73**	**277**	Pn		**Pn**	**00 00 05.0**	**-0.6**
ELGU				⇑*i*Vmb_V			00 00 09.4	
	138nm,SNR=1.8							
ELGU				Sn		**Sn**	**00 01 11.6**	**+0.7**
FIGM	**Figuig**	**5.79**	**224**	P		**Pn**	**00 00 05.0**	**-1.6**
FIGM				S		**Sn**	**00 01 11.2**	**-1.4**
EJON	**La Jonquera**	**6.05**	**356**	Pn		**Pn**	**00 00 11.5**	**+1.6**
EJON				⇑*i*Vmb_V			00 00 17.2	
	382nm,SNR=2.9							
EJON				Sn		**Sn**	**00 01 20.0**	**+1.2**
EGOR	**Sierra Gorda,**	**6.13**	**279**	Pn		**Pn**	**00 00 13.4**	**+2.2**
EGOR				⇑*i*Vmb_V			00 00 19.5	
	83nm,SNR=5.3							
EGOR				Sn		**Sn**	**00 01 22.4**	**+1.5**
ESAC	**San Caprasio**	**6.13**	**331**	Pn		**Pn**	**00 00 14.2**	**+3.1**
ESAC				⇑*i*Vmb_V			00 00 14.5	
	331nm,SNR=2.2							
ETOR	**Torete**	**6.18**	**317**	Pn		**Pn**	**00 00 14.1**	**+2.4**
ETOR				⇑*i*Vmb_V			00 00 19.2	
	197nm,SNR=2.8							
ETOR				Sn		**Sn**	**00 01 22.1**	**+0.1**
AKLM	**AKL**	**6.28**	**255**	P		**Pn**	**00 00 13.3**	**+0.1**
AKLM	**AKL**	**6.28**	**255**	P		**Pn**	**00 00 13.3**	**+0.1**
EMIJ	**Mijas**	**6.65**	**274**	Pn		**Pn**	**00 00 16.7**	**-1.4**
EMIJ				⇑*i*Vmb_V			00 00 22.1	
	176nm,SNR=1.9							
EADA	**Adamuz**	**6.66**	**288**	Pn		**Pn**	**00 00 18.0**	**-0.2**
EADA				⇑*i*Vmb_V			00 00 20.4	
	54nm,SNR=1.4							
EADA				Sn		**Sn**	**00 01 34.8**	**+1.1**
ESBB	**Sonseca Array**	**6.71**	**301**	Pn		**Pn**	**00 00 18.9**	**-0.2**
ESDC	**Sonseca Array**	**6.71**	**301**	Pn		**Pn**	**00 00 19.3**	**+0.2**
	0.4nm,0.3s,baz=112,slow=13,SNR=32							
ESDC				Sn		**Sn**	**00 01 36.6**	**+1.4**
	0.2nm,0.3s,baz=108,slow=24,SNR=3.4							
ESDC				LR		LR	00 02 48.6	
	comp=Z,186nm,20.9s,baz=80,slow=37 4.0nm,0.7s							
ESDC	**Sonseca Array**	**6.71**	**301**	Pn		**Pn**	**00 00 19.1**	**0.0**
ESDC	**Sonseca Array**	**6.71**	**301**	Pn		**Pn**	**00 00 19.1**	**0.0**
ESDC				⇑*i*Vmb_V			00 00 26.7	
	77nm,SNR=1.8							
PAB	**San Pablo**	**6.93**	**299**	Pn		**Pn**	**00 00 22.0**	**-0.1**
PAB	**San Pablo**	**6.93**	**299**	Pn		**Pn**	**00 00 22.1**	**+0.1**
PAB				⇑*i*Vmb_V			00 00 28.9	
	117nm,SNR=3.1							
PAB	**San Pablo**	**6.93**	**299**	P		**Pn**	**00 00 22.5**	**+0.5**
MTLF	**Montolieu**	**6.99**	**352**	ePn		**Pn**	**00 00 24.3**	**+1.4**
MTLF				eSn		**Sn**	**00 01 39.9**	**-2.0**
	7.8nm,0.6s							
EPF	**Esparros**	**7.04**	**341**	ePn		**Pn**	**00 00 25.0**	**+1.4**
EPF				eSn		**Sn**	**00 01 39.5**	**-3.7**
	4.2nm,0.4s							
ETSF	**Etsaut**	**7.19**	**336**	ePn		**Pn**	**00 00 29.3**	**+3.7**
ETSF				eSn		**Sn**	**00 01 44.8**	**-2.1**
	2.3nm,0.3s							
ECAB	**El Cabril**	**7.29**	**286**	Pn		**Pn**	**00 00 28.4**	**+1.5**
ECAB				⇑*i*Vmb_V			00 00 33.9	
	68nm,SNR=1.9							
ECAB				Sn		**Sn**	**00 01 52.4**	**+3.1**
LMR	**La Mourre**	**7.30**	**18**	ePn		**Pn**	**00 00 26.6**	**-0.5**
LMR				eSn		**Sn**	**00 01 44.9**	**-4.5**
	5.7nm,0.3s							
GUD	**Guadarrama**	**7.32**	**308**	Pn		**Pn**	**00 00 27.8**	**+0.3**
GUD				⇑*i*Vmb_V			00 00 32.7	
	61nm,SNR=2.2							
EORO	**Oroz-Betelu**	**7.45**	**332**	Pn		**Pn**	**00 00 31.7**	**+2.4**
EORO				⇑*i*Vmb_V			00 00 34.5	
	69nm,SNR=3.1							
EORO				Sn		**Sn**	**00 01 53.8**	**+0.5**
PGF	**Pioggiola**	**7.47**	**33**	ePn		**Pn**	**00 00 29.9**	**+0.4**
PGF				eSn		**Sn**	**00 01 48.8**	**-5.0**
	8.7nm,0.3s							
PGF				eT		T	00 06 44.6	
MDT	**Midelt**	**7.57**	**244**	Pn		**Pn**	**00 00 29.6**	**-1.2**
	0.2nm,0.3s,baz=88,slow=14,SNR=8.4							
MDT				Lg		Lg	00 02 31.3	
	0.3nm,0.3s,baz=324,slow=9.7,SNR=3.5 2.1nm,0.7s							
MDT	**Midelt**	**7.57**	**244**	P		**Pn**	**00 00 30.1**	**-0.8**
MDT				S		**Sn**	**00 01 52.9**	**-3.2**
SJPF	**Ste Jean**	**7.61**	**333**	ePn		**Pn**	**00 00 33.6**	**+2.2**
SJPF				eSn		**Sn**	**00 01 54.3**	**-2.8**
	12nm,0.6s							
LASF	**Ste Croix**	**7.67**	**2**	ePn		**Pn**	**00 00 32.3**	**+0.2**
LASF				eSn		**Sn**	**00 01 55.9**	**-2.6**
	2.0nm,0.2s							
SMRF	**Simiane la Rot**	**7.73**	**11**	ePn		**Pn**	**00 00 34.1**	**+1.1**
SMRF				eSn		**Sn**	**00 01 57.0**	**-3.0**
	5.1nm,0.7s							
EALK	**Alkurruntz**	**7.81**	**332**	Pn		**Pn**	**00 00 36.5**	**+2.4**
SBF	**Sospel**	**8.04**	**21**	ePn		**Pn**	**00 00 36.7**	**-0.6**
SBF				eSn		**Sn**	**00 02 03.5**	**-4.2**
	13nm,0.6s							
SBF				eT		T	00 07 48.5	
VIVF	**Saint-Julien-l**	**8.49**	**6**	ePn		**Pn**	**00 00 44.1**	**+0.7**
VIVF				eSn		**Sn**	**00 02 15.4**	**-3.3**
	9.9nm,0.7s							
CASP	**Castiglione de**	**8.55**	**40**	Pn		**Pn**	**00 00 44.4**	**+0.1**
CAF	**Calviac**	**8.58**	**353**	ePn		**Pn**	**00 00 48.1**	**+3.5**
CAF				eSn		**Sn**	**00 02 17.7**	**-3.2**
	0.7nm,0.3s							
ELAN	**Lanestosa**	**8.64**	**324**	Pn		**Pn**	**00 00 47.5**	**+2.0**
ELAN				⇑*i*Vmb_V			00 00 50.6	
	138nm,SNR=1.8							
EBAD	**Badajoz**	**8.65**	**289**	Pn		**Pn**	**00 00 45.7**	**0.0**
EBAD				⇑*i*Vmb_V			00 00 47.7	
	42nm,SNR=2.7							
MBDF	**Montbardon**	**8.68**	**16**	ePn		**Pn**	**00 00 47.3**	**+1.2**
MBDF				eSn		**Sn**	**00 02 19.8**	**-3.8**
	7.9nm,0.6s							
ORIF	**Oris-en-Rattie**	**8.70**	**11**	ePn		**Pn**	**00 00 48.3**	**+2.0**
ORIF				eSn		**Sn**	**00 02 19.5**	**-4.4**
	0.8nm,0.3s							
RAFF	**Raffo Rosso**	**8.77**	**81**	Pn		**Pn**	**00 00 48.5**	**+1.3**
LFF	**La Frestale**	**8.77**	**347**	ePn		**Pn**	**00 00 49.0**	**+1.8**
LFF				eSn		**Sn**	**00 02 23.2**	**-2.4**
	7.7nm,0.6s							
SSB	**Saint Sauveur**	**8.90**	**5**	Pn		**Pn**	**00 00 49.7**	**+0.7**
BNI	**Bardonecchia**	**8.97**	**15**	Pn		**Pn**	**00 00 51.2**	**+1.1**
RJF	**Les Rejaudoux**	**9.01**	**351**	ePn		**Pn**	**00 00 52.0**	**+1.5**
RJF	**Les Rejaudoux**	**9.01**	**351**	eP		Pn	00 00 56.1	+5.6
RJF				eSn		**Sn**	**00 02 27.8**	**-3.7**
	4.8nm,0.6s							
PESTR	**Estremoz**	**9.12**	**289**	Pn		**Pn**	**00 00 51.5**	**-0.5**
OSSC	**Osservatorio P**	**9.27**	**38**	Pn		**Pn**	**00 00 54.5**	**+0.4**
LPG	**La Plagne**	**9.41**	**14**	ePn		**Pn**	**00 00 58.2**	**+1.9**
LPG				eSn		**Sn**	**00 02 36.7**	**-5.1**
	2.4nm,0.5s							
LPL	**La Plagne**	**9.43**	**14**	ePn		**Pn**	**00 00 58.3**	**+1.9**
LPL				eSn		**Sn**	**00 02 38.6**	**-3.4**
	3.1nm,0.4s							
MTE	**Manteigas**	**9.52**	**298**	Pn		**Pn**	**00 00 58.5**	**+0.9**
EARI	**Arriondas**	**9.59**	**319**	Pn		**Pn**	**00 01 01.2**	**+2.7**
EARI				⇑*i*Vmb_V			00 01 03.6	
	322nm,SNR=4.0							
ECAL	**Calabor**	**9.66**	**308**	Pn		**Pn**	**00 00 59.4**	**-0.2**
ECAL				⇑*i*Vmb_V			00 01 03.3	
	141nm,SNR=2.0							
NRCA	**Norcia**	**9.82**	**46**	Pn		**Pn**	**00 01 02.9**	**+1.2**
TCF	**Toulx Ste Croi**	**9.92**	**355**	ePn		**Pn**	**00 01 04.5**	**+1.5**
TCF				eSn		**Sn**	**00 02 50.7**	**-3.1**
	2.0nm,0.5s							
BGF	**Bois d'Agland**	**10.15**	**358**	ePn		**Pn**	**00 01 07.7**	**+1.5**
BGF				eSn		**Sn**	**00 02 55.4**	**-4.1**
	3.8nm,0.5s							
SMF	**Signal de Mont**	**10.23**	**1**	ePn		**Pn**	**00 01 08.8**	**+1.5**
SMF				eSn		**Sn**	**00 02 56.8**	**-4.7**
	3.8nm,0.6s							
SENIN	**Lac Senin/Sane**	**10.35**	**15**			**Pn**	**00 01 10.1**	**+1.0**
AVF	**Avril sur Loir**	**10.38**	**360**	ePn		**Pn**	**00 01 10.9**	**+1.7**
AVF				eSn		**Sn**	**00 03 01.2**	**-3.7**
	2.5nm,0.7s							
CABF	**La Chapelle**	**10.38**	**10**	ePn		**Pn**	**00 01 10.9**	**+1.5**
CABF				eSn		**Sn**	**00 03 00.9**	**-4.3**
	7.9nm,0.8s							
MFF	**Saint Martin d**	**10.54**	**346**	ePn		**Pn**	**00 01 12.1**	**+0.6**
MFF				eSn		**Sn**	**00 03 04.2**	**-4.8**
	5.8nm,0.8s							
SSF	**Saint Saulge**	**10.65**	**0**	ePn		**Pn**	**00 01 14.7**	**+1.8**
SSF				eSn		**Sn**	**00 03 09.2**	**-2.4**
	2.2nm,0.7s							
LOR	**Lormes**	**10.86**	**1**	ePn		**Pn**	**00 01 17.5**	**+1.7**
	baz=182							
LOR	**Lormes**	**10.86**	**1**	eP		Pn	00 01 22.5	+6.7
	baz=174							
DAVOX	**Davos/Dischmat**	**11.41**	**23**	Pn		**Pn**	**00 01 24.0**	**+0.4**
	0.2nm,0.3s,baz=299,slow=19,SNR=1.9 0.6nm,0.3s							
HINF	**Hinteralfeld**	**11.67**	**11**	ePn		**Pn**	**00 01 27.3**	**+0.3**
HAU	**Haudompre**	**11.78**	**9**	ePn		**Pn**	**00 01 28.9**	**+0.4**
SFTF	**Sexfontaines**	**11.85**	**5**	ePn		**Pn**	**00 01 30.1**	**+0.8**
ECH	**Echery**	**12.11**	**12**	Pn		**Pn**	**00 01 33.2**	**+0.3**
MEZF	**Maizieres J'vi**	**12.14**	**5**	ePn		**Pn**	**00 01 34.2**	**+0.8**
	baz=190							
PAGF	**Fort de Pagny**	**12.25**	**7**	ePn		**Pn**	**00 01 36.5**	**+1.6**
SAVF	**Savonnieres en**	**12.26**	**5**	ePn		**Pn**	**00 01 36.6**	**+1.6**
	baz=185							
CDF	**Champ du Feu**	**12.32**	**12**	ePn		**Pn**	**00 01 36.0**	**+0.1**
GRR	**Gorron**	**12.39**	**346**	ePn		**Pn**	**00 01 38.7**	**+1.9**
GRR				eSn		**Sn**	**00 03 49.6**	**-4.7**
	3.8nm,0.7s							
BFO	**Black Forest**	**12.44**	**15**	Pn		**Pn**	**00 01 37.5**	**0.0**
LDF	**La Druitiere**	**12.46**	**349**	ePn		**Pn**	**00 01 39.0**	**+1.3**
QUIF	**Quistinic**	**12.51**	**339**	ePn		**Pn**	**00 01 39.8**	**+1.5**
SGMF	**Saint Gilles**	**12.65**	**341**	ePn		**Pn**	**00 01 41.9**	**+1.7**
FLN	**La Foliniere**	**12.69**	**348**	ePn		**Pn**	**00 01 41.6**	**+0.8**
	baz=168							
ROSF	**Rostrenen**	**12.91**	**339**	ePn		**Pn**	**00 01 46.4**	**+2.5**
BAIF	**Baives**	**13.66**	**2**	ePn		**Pn**	**00 01 54.9**	**+0.9**
DOU	**Bourbes**	**13.71**	**3**	Pn		**Pn**	**00 01 57.2**	**+2.5**
GIVF	**Givet**	**13.72**	**4**	ePn		**Pn**	**00 01 55.2**	**+0.3**
GERES	**GERESS Array B**	**14.51**	**28**	Pn		**Pn**	**00 02 06.7**	**+0.8**
	0.1nm,0.3s,baz=207,slow=15,SNR=12 2.4nm,1.0s							
GERES	**GERESS Array B**	**14.51**	**28**	Pn		**Pn**	**00 02 06.6**	**+0.7**
VRAC	**Vranov**	**16.05**	**32**	Pn		**Pn**	**00 02 26.7**	**+0.7**
	0.2nm,0.3s,baz=230,slow=10,SNR=2.0 0.6nm,0.3s							
IDI	**Anoyia**	**17.40**	**87**	P		**P**	**00 02 44.1**	**-0.4**
	0.1nm,0.3s,baz=296,slow=12,SNR=6.1 2.4nm,0.9s							
IDI	**Anoyia**	**17.40**	**87**			**P**	**00 02 44.5**	**+0.1**
KARP	**Karpathos**	**19.18**	**86**	P		**Pn**	**00 03 05.9**	**+0.9**
KARP				IAmb		IAmb	00 03 13.2	
	comp=Z,10nm,0.9s							
MLR	**Muntele Rosu**	**19.20**	**55**	P		**Pn**	**00 03 06.1**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=316,slow=3.1,SNR=6.2 comp=Z,6.1nm,1.1s							
MLR	**Muntele Rosu**	**19.20**	**55**	P		**Pn**	**00 03 05.1**	**-0.1**
MLR				IAmb		IAmb	00 03 09.2	
	comp=Z,12nm,1.3s							
EKA	**Eskdalemuir Ar**	**19.47**	**349**	P		**P**	**00 03 07.4**	**+0.5**
	baz=162,slow=14 comp=Z,0.2nm,0.6s							
BURAR	**Bucovina Array**	**19.59**	**48**	P		**Pn**	**00 03 09.8**	**-0.1**
SUW	**Suwalki**	**22.29**	**32**	P		**P**	**00 03 37.7**	**+0.2**
SUW				IAmb		IAmb	00 03 41.3	
	comp=Z,17nm,1.0s							
TOA0	**Torodi Ar. Sit**	**23.22**	**184**	P		**P**	**00 03 47.2**	**-0.3**
TOA0				IAmb		IAmb	00 03 50.4	
	comp=Z,8.6nm,1.2s							
TORD	**Torodi Ar. Bea**	**23.22**	**184**	P		**P**	**00 03 46.4**	**-1.0**
	comp=Z,2.1nm,0.9s,baz=359,slow=10.0,SNR=9.7 comp=Z,2.1nm,0.9s							
TORD	**Torodi Ar. Bea**	**23.22**	**184**	P		**P**	**00 03 47.0**	**-0.4**
TORD				IAmb		IAmb	00 03 49.7	
	comp=Z,2.4nm,1.1s							
AKASG	**Malin Array Be**	**23.35**	**44**	P		**P**	**00 03 47.7**	**-0.8**
	comp=Z,0.4nm,0.5s,baz=243,slow=10,SNR=4.5 comp=Z,0.4nm,0.5s							
PABE	**Paberze**	**23.67**	**30**	P		**P**	**00 03 51.6**	**+0.1**
BRTR	**Keskin Array B**	**23.92**	**73**	P		**P**	**00 03 54.3**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=257,slow=10,SNR=2.0 comp=Z,0.2nm,0.6s							
NOA	**NORSAR Array B**	**25.14**	**9**	LR		LR	00 14 14.2	
	comp=Z,21nm,18.5s,baz=45,slow=37							
KVAR	**Kislovodsk Arr**	**30.67**	**64**	LR		LR	00 19 25.3	
	comp=Z,38nm,19.8s,baz=52,slow=41							
ABKAR	**Akbulak array**	**42.40**	**54**			**P**	**00 06 34.8**	**+0.2**
ABKAR				IAmb		IAmb	00 06 59.5	
	comp=Z,4.1nm,1.5s							
KMBO	**Kilima Mbogo**	**48.78**	**132**	LR		LR	00 33 02.1	
	comp=Z,42nm,18.1s,baz=84,slow=42							
MKAR	**Makanchi Array**	**57.53**	**53**	P		**P**	**00 08 29.6**	**0.0**
	comp=Z,0.2nm,0.6s,baz=310,slow=5.4,SNR=2.3 comp=Z,0.2nm,0.6s							
MKAR	**Makanchi Array**	**57.53**	**53**	P		**P**	**00 08 29.5**	**-0.1**
ULM	**Lac du Bonnet**	**68.35**	**317**	LR		LR	00 35 08.6	
	comp=Z,36nm,20.2s,baz=31,slow=32							
ULM	**Lac du Bonnet**	**68.35**	**317**	P		**P**	**00 09 41.9**	**+0.4**
SONM	**Songino

comp=Z,2.2nm,1.3s
UNV Unalaska Valle 59.25 40 P P 00 31 26.1 -1.6
IMAR Indian Mountai 65.41 27 P P 00 32 10.3 +1.4
BMAR Burnt Mountain 68.84 24 P P 00 32 32.0 +1.4
OBN Obninsk 69.03 322 P P 00 32 33.6 +1.6
OBN IAmb IAmb 00 32 35.4
comp=Z,11nm,0.4s
FINES FINESS Array B 72.74 330 P P 00 32 53.8 -0.6
comp=Z,4.1nm,1.0s,baz=68,slow=5.1,SNR=4.9
comp=Z,4.1nm,1.0s
FINES FINESS Array B 72.74 330 P P 00 32 54.0 -0.4
BRTR Keskin Array B 75.06 307 P P 00 33 08.4 -0.2
comp=Z,0.6nm,0.6s,baz=71,slow=5.4,SNR=5.7
comp=Z,0.6nm,0.6s
BRTR Keskin Array B 75.06 307 P P 00 33 07.9 -0.7
NC405 NORSAR Array S 79.19 333 P P 00 33 30.5 -0.7
NC405 IAmb IAmb 00 33 45.0
comp=Z,17nm,1.4s
NB2 NORSAR Subarra 79.44 333 P P 00 33 32.0 -0.6
comp=Z,0.2nm,0.4s,baz=51,slow=5.9
NOA NORSAR Array B 79.44 333 P P 00 33 31.9 -0.6
comp=Z,0.3nm,0.5s,baz=55,slow=5.8,SNR=5.3
comp=Z,0.3nm,0.5s
GERES GERESS Array B 84.40 321 P P 00 33 58.5 -0.4
comp=Z,0.2nm,0.5s,baz=66,slow=7.6,SNR=1.7
comp=Z,0.2nm,0.5s

IDC ***12*** *00:34:51.5±2.2, 19°.28S×177°.49W, h581km±21km, mb2.9/3, mbtmp3.9/5, Error ellipse: s-maj=73.6km s-min=20.9km az=154.0*

ISC 12 00:34:52.4±1.3, 18°.9S±0°.4×177°.5W±0°.2, h600km, n8, σ0°.67/9, mb3.6/3, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.36**	**285**	P		**P**	**00 36 20.4**	**0.0**
	2.8nm,0.3s,baz=174,slow=18,SNR=9.3							
AFI	**Afiamalu**	**7.45**	**49**	P		**P**	**00 36 46.1**	**-0.6**
	11nm,0.4s,baz=220,slow=14,SNR=4.3							
STKA	**Stephens Creek**	**38.88**	**242**	P		**P**	**00 41 27.6**	**-0.3**
	0.9nm,0.4s,baz=88,slow=4.4,SNR=3.7							
	0.9nm,0.4s							
WRA	**Warramunga Arr**	**45.27**	**260**	P		**P**	**00 42 17.6**	**-0.4**
	0.5nm,0.4s,baz=98,slow=7.4,SNR=8.6							
	0.5nm,0.4s							
ASAR	**Alice Springs**	**45.32**	**255**	P		**P**	**00 42 18.1**	**-0.3**
	1.6nm,0.7s,baz=87,slow=8.3,SNR=24							
ASAR				PcP		**PcP**	**00 43 45.7**	**+0.6**
	0.7nm,0.9s,baz=101,slow=4.2,SNR=3.3							
	1.6nm,0.7s							
LPAZ	**La Paz**	**102.25**	**112**	P		**Pdif**	**00 47 45.4**	**-0.2**
	0.9nm,0.3s,baz=257,slow=4.9,SNR=11							
ARCES	**ARCESS Array B**	**127.46**	**350**	PKP		**PKiKP**	**00 52 50.9**	**+0.9**
	2.9nm,1.0s,baz=14,slow=5.0,SNR=4.6							
GERES	**GERESS Array B**	**148.81**	**346**	PKPbc		**PKiKP**	**00 53 35.1**	**+0.8**
	0.1nm,0.5s,baz=3.8,slow=2.9,SNR=4.5							

DDA 12 00:50:47.8±0.0, 40°.80N×31°.51E, h7km±4km, ML1.0, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
YIGI	**Dzce**	**0.17**	**344**	P		Pg	00 50 52.0	+0.7
YIGI				*i* AML		AML	00 50 54.0	
	comp=E,43nm,0.3s							
YIGI				S		Sg	00 50 54.6	+0.9
BCAM	**Yenicaga**	**0.42**	**88**	P		Pg	00 50 56.5	+0.5
BCAM				S		Sg	00 51 01.8	+0.2
BCAM				*i* AML		AML	00 51 02.0	
	comp=N,10nm,0.4s							
BTAS	**Taskesti**	**0.45**	**240**	P		Pg	00 50 56.9	+0.4
BTAS				S		Sg	00 51 03.1	+0.7
BTAS				*i* AML		AML	00 51 05.0	
	comp=E,10nm,0.1s							
KIBS	**BOLU**	**0.46**	**145**	P		Pb	00 50 57.6	-0.7
KIBS				S		Sb	00 51 04.4	-1.0
DEVR	**Zonguldak/Devr**	**0.49**	**46**	P		Pg	00 50 57.4	+0.1
DEVR				S		Sg	00 51 03.6	-0.1
SAHE	**Sakarya_HENDEK**	**0.50**	**276**	P		Pg	00 50 57.6	+0.2
SAHE				*i* AML		AML	00 51 05.0	
	comp=E,11nm,0.7s							
SAHE				*i* AML		AML	00 51 05.0	
	comp=N,13nm,0.8s							
SAHE				S		Sb	00 51 05.5	-1.0
AUMIH	**MIHALICIK**	**0.93**	**181**	P		Pn	00 51 07.9	+0.5
AUMIH				S		Sb	00 51 19.0	+0.1

IDC ***12*** *00:52:02.5±0.6, 41°.85N×45°.91E, h0km, mb3.6/13, mbtmp3.8/19, ML3.5/6, MS2.7/3, Error ellipse: s-maj=9.0km s-min=8.0km az=134.0*
NORS ***12*** *00:52:03.5±0.0, 41°.81N×45°.85E, h13km, MPVA4.7*
NSSP ***12*** *00:52:04.7, 41°.82N×45°.77E, h10km, Ms3.9*
MOS ***12*** *00:52:04.3±0.0, 41°.84N×45°.83E, h20km, MPVA4.8*
DDA ***12*** *00:52:05.1±0.0, 42°.21N×45°.74E, h11km±3km, MW4.0*
AZER ***12*** *00:52:05.2±0.1, 41°.71N×45°.94E, h3km, Error ellipse: s-maj=1.4km s-min=0.6km az=319.0*
TIF ***12*** *00:52:06.5, 41°.92N×45°.82E, h37km±1km*
DRS ***12*** *00:52:06.9±0.0, 41°.88N×45°.85E, h14km, ML4.0/6*
NNC ***12*** *00:52:10.8±3.1, 42°.17N×46°.88E, h0km, mb4.1, Error ellipse: s-maj=32.6km s-min=15.8km az=79.0*

ISC 12 00:52:05.3±0.8, 42°.00N±0°.01×45°.75E±0°.01, h17km±6km, n226, σ2°.52/372, mb3.8/17, 14C-14D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
DDFL	**Dedoflistskaro**	**0.62**	**153**	P		**Pg**	**00 52 20.1**	**+2.7**
DDFL				S		**Sn**	**00 52 31.7**	**+2.8**
DDFL	**Dedoflistskaro**	**0.62**	**153**	PG		**Pg**	**00 52 20.1**	**+2.7**
DDFL	**Dedoflistskaro**	**0.62**	**153**	P		**Pg**	**00 52 20.2**	**+2.7**
DDFL				S		**Sn**	**00 52 31.4**	**+2.5**
SEAG	**Tbilisi Sea**	**0.74**	**252**	P		**Pb**	**00 52 21.6**	**+1.8**
SEAG				S		**Sb**	**00 52 33.5**	**+3.9**
SEAG	**Tbilisi Sea**	**0.74**	**252**	PG		**Pb**	**00 52 21.6**	**+1.8**
SEAG				S		**Sb**	**00 52 33.5**	**+3.9**
ZKTA	**Zakatala**	**0.75**	**118**	PG		**Pg**	**00 52 19.0**	**-0.9**
ZKTA	**Zakatala**	**0.75**	**118**	P		**Pg**	**00 52 19.1**	**-0.8**
	SNR=3049							
ZKTA				S		**Sg**	**00 52 29.0**	**-0.7**
BTLR	**Botlikh**	**0.75**	**28**	*d* iPG		**Pn**	**00 52 22.3**	**+1.1**
BTLR	**Botlikh**	**0.75**	**28**	*e*Pg		**Pn**	**00 52 22.4**	**+1.1**
BTLR				*e*Sg		**Sn**	**00 52 34.1**	**+1.8**
BTNK	**Botanikuri**	**0.77**	**246**	P		**Pg**	**00 52 17.8**	**-2.6**
BTNK				S		**Sg**	**00 52 29.7**	**-0.9**
BTNK	**Botanikuri**	**0.77**	**246**	PG		**Pg**	**00 52 17.6**	**-2.8**
BTNK				S		**Sg**	**00 52 29.7**	**-0.9**
XNZR	**Khunzakh**	**0.90**	**52**	*e*PG		**Pn**	**00 52 24.1**	**+0.8**
XNZR				*e*S		**Sn**	**00 52 37.4**	**+1.4**
XNZR				pmax	pmax			
	comp=Z,582nm,0.3s							
XNZR				smax	smax			
	comp=E,2μm,0.4s							
XNZR	**Khunzakh**	**0.90**	**52**	*i* Pg		**Pn**	**00 52 24.1**	**+0.8**
XNZR				*i* Sg		**Sn**	**00 52 36.9**	**+1.0**
	comp=E,582nm,0.3s							
QZX	**Qazax, Azerbai**	**0.98**	**197**	P		**Pb**	**00 52 23.2**	**-0.7**
	SNR=2010							
QZX				S		**Sb**	**00 52 36.1**	**-0.3**
GNBR	**Gunib**	**0.99**	**66**	*e*PG		**Pn**	**00 52 24.9**	**+0.4**
GNBR				*e*S		**Sn**	**00 52 39.6**	**+1.6**
GNBR				pmax	pmax			
	comp=Z,785nm,0.7s							
GNBR				smax	smax			
	comp=E,2μm,0.3s							
GNBR	**Gunib**	**0.99**	**66**	*i* Pg		**Pn**	**00 52 24.8**	**+0.4**
GNBR				*i* Sg		**Sn**	**00 52 38.9**	**+0.8**
	comp=E,3μm,0.6s							
DVE	**Vedeno**	**1.00**	**16**	*d* iPG		**Pn**	**00 52 27.0**	**+2.4**
DVE				*e*S		**Sn**	**00 52 42.6**	**+4.2**
DVE	**Vedeno**	**1.00**	**16**	*i* Pg		**Pn**	**00 52 27.0**	**+2.4**
DVE				*e*Sg		**Sn**	**00 52 42.1**	**+3.8**
KMKR	**Kumukh**	**1.02**	**82**	*e*PG		**Pg**	**00 52 24.5**	**-0.5**
KMKR				*e*S		**Sb**	**00 52 38.5**	**+0.8**
KMKR				pmax	pmax			
	comp=Z,1μm,0.2s							
KMKR				smax	smax			
	comp=E,10μm,0.2s							
KMKR	**Kumukh**	**1.02**	**82**	*i* Pg		**Pg**	**00 52 24.7**	**-0.3**
KMKR				*i* Sg		**Sb**	**00 52 38.2**	**+0.5**
	comp=E,10μm,0.4s							
GUDG	**Gudauri**	**1.05**	**297**	P		**Pn**	**00 52 27.5**	**+2.0**
GUDG				S		**Sn**	**00 52 43.0**	**+3.1**
GUDG	**Gudauri**	**1.05**	**297**	PG		**Pn**	**00 52 27.5**	**+2.0**
GUDG				S		**Sn**	**00 52 43.0**	**+3.1**
GUDG	**Gudauri**	**1.05**	**297**	*i* Pg		**Pn**	**00 52 27.5**	**+2.0**
GUDG				*e*Sg		**Sn**	**00 52 43.1**	**+3.1**
PNSH	**Pansheti**	**1.05**	**308**	P		**Pn**	**00 52 27.6**	**+2.1**
PNSH				S		**Sn**	**00 52 43.4**	**+3.5**
PNSH	**Pansheti**	**1.05**	**308**	PG		**Pn**	**00 52 27.6**	**+2.1**
PNSH				S		**Sn**	**00 52 43.4**	**+3.5**
UNCR	**Uncukul**	**1.06**	**47**	*d* iPG		**Pn**	**00 52 26.9**	**+1.5**
UNCR				*e*S		**Sn**	**00 52 42.1**	**+2.3**
UNCR	**Uncukul**	**1.06**	**47**	*e*Pg		**Pn**	**00 52 26.9**	**+1.5**
UNCR				*i* Sg		**Sn**	**00 52 42.1**	**+2.3**
	comp=E,4μm,0.5s							
ARKR	**Arakani**	**1.11**	**56**	*d* iPG		**Pn**	**00 52 27.4**	**+1.3**
ARKR				*e*S		**Sn**	**00 52 42.4**	**+1.4**
ARKR	**Arakani**	**1.11**	**56**	*e*Pg		**Pn**	**00 52 27.4**	**+1.3**
ARKR				*e*Sg		**Sn**	**00 52 42.4**	**+1.4**
KZRT	**Kazreti**	**1.18**	**239**	P		**Pn**	**00 52 27.2**	**+0.1**
KZRT				S		**Sb**	**00 52 43.2**	**+0.9**
KZRT	**Kazreti**	**1.18**	**239**	PG		**Pn**	**00 52 27.2**	**+0.1**
KZRT				S		**Sb**	**00 52 43.2**	**+0.9**
KZRT	**Kazreti**	**1.18**	**239**	P		**Pn**	**00 52 27.1**	**0.0**
KZRT				S		**Sb**	**00 52 42.4**	**+0.2**
KRNR	**Karanay**	**1.19**	**46**	*d* iPG		**Pn**	**00 52 29.1**	**+1.8**
KRNR				*e*S		**Sn**	**00 52 46.0**	**+2.7**
KRNR	**Karanay**	**1.19**	**46**	*i* Pg		**Pn**	**00 52 29.1**	**+1.8**
KRNR				*e*Sg		**Sn**	**00 52 46.0**	**+2.7**
GROC	**Groznyy**	**1.21**	**2**	*d* iPG		Pn	00 52 31.7	+4.3
GROC				*e*			00 52 50.7	
GROC				pmax	pmax			
	comp=Z,1μm,0.4s							
GROC				smax	smax			
	comp=E,1μm,0.5s							
GROC				smax	smax			
	comp=N,2μm,0.6s							
GROC				smax	smax			
	comp=N,2μm,0.9s							
GROC	**Groznyy**	**1.21**	**2**	*i* Pg		Pn	00 52 31.9	+4.5
GROC				*e*Sg		Sn	00 52 51.2	+7.9
KMGR	**Komgaron**	**1.24**	**329**	*e*PG		Pn	00 52 32.3	+4.3
KMGR				*e*S		Sn	00 52 52.0	+7.6
KMGR	**Komgaron**	**1.24**	**329**	*e*Pg		Pn	00 52 32.3	+4.4
KMGR				*e*Sg		Sn	00 52 52.0	+7.6
DLMR	**Dylym**	**1.25**	**31**	*d* iPG		**Pn**	**00 52 31.0**	**+2.9**
DLMR				*e*S		**Sn**	**00 52 49.5**	**+4.9**
DLMR	**Dylym**	**1.25**	**31**	*i* Pg		**Pn**	**00 52 31.0**	**+2.9**
DLMR				*i* Sg		**Sn**	**00 52 49.5**	**+4.9**
	comp=N,7μm,0.4s							
GDB	**GEDABAY**	**1.27**	**180**	P		Pn	00 52 27.0	-1.5
	SNR=2072							
GDB				S		**Sn**	**00 52 42.5**	**-2.8**
DBC	**Dubki**	**1.30**	**38**	*e*PG		**Pn**	**00 52 31.1**	**+2.4**
DBC				*e*S		**Sn**	**00 52 51.6**	**+5.8**
DBC				pmax	pmax			
	comp=Z,566nm,0.4s							
DBC				smax	smax			
	comp=E,2μm,0.9s							
DBC	**Dubki**	**1.30**	**38**	*e*Pg		**Pn**	**00 52 31.3**	**+2.6**
DBC				*i* Sg		**Sn**	**00 52 50.2**	**+4.4**
	comp=E,2μm,0.5s							
BUJR	**Buynaksk**	**1.30**	**50**	*e*PG		**Pg**	**00 52 31.2**	**+0.8**
BUJR				*e*S		**Sn**	**00 52 50.0**	**+4.1**
BUJR	**Buynaksk**	**1.30**	**50**	*e*Pg		**Pg**	**00 52 31.2**	**+0.8**
BUJR				*e*Sg		**Sn**	**00 52 50.0**	**+4.1**
TRLG	**Trialeti**	**1.31**	**250**	P		**Pn**	**00 52 30.1**	**+1.1**
TRLG				S		**Sb**	**00 52 48.5**	**+2.3**
TRLG	**Trialeti**	**1.31**	**250**	PG		**Pn**	**00 52 30.1**	**+1.1**
TRLG				S		**Sb**	**00 52 48.5**	**+2.3**
VLKR	**Vladikavkaz**	**1.31**	**323**	*e*PG		Pg	00 52 33.7	+3.1
VLKR				*e*S		Sn	00 52 54.2	+8.1
VLKR	**Vladikavkaz**	**1.31**	**323**	*e*Pg		Pg	00 52 33.7	+3.1
VLKR				*e*Sg		Sn	00 52 54.2	+8.2
DMNI	**Dmanisi**	**1.34**	**241**	P		**Pn**	**00 52 29.8**	**+0.4**
DMNI				S		**Sn**	**00 52 47.8**	**+0.9**
DMNI	**Dmanisi**	**1.34**	**241**	PG		**Pn**	**00 52 29.8**	**+0.4**
DMNI				S		**Sn**	**00 52 47.8**	**+0.9**
SEKA	**Sheki**	**1.34**	**125**	PG		**Pn**	**00 52 28.5**	**-0.8**
SEKA	**Sheki**	**1.34**	**125**	P		**Pn**	**00 52 28.5**	**-0.8**
	SNR=619							
SEKA				S		**Sn**	**00 52 45.3**	**-1.5**
LACR	**Lac**	**1.36**	**308**	*i* PG		**Pg**	**00 52 33.0**	**+1.6**
LACR				pmax	pmax			
	comp=Z,555nm,0.3s							
LACR	**Lac**	**1.36**	**308**	*e*Pg		**Pg**	**00 52 32.3**	**+0.8**
LACR				*e*Sg		**Sn**	**00 52 52.6**	**+5.3**
URKR	**Urkarakh**	**1.42**	**83**	*d* iPG		**Pb**	**00 52 31.5**	**+0.2**
URKR				*e*S		**Sg**	**00 52 50.8**	**-0.2**
URKR	**Urkarakh**	**1.42**	**83**	*e*Pg		**Pb**	**00 52 31.5**	**+0.2**
URKR				*e*Sg		**Sg**	**00 52 50.8**	**-0.2**
GANJ	**Ganja**	**1.42**	**162**	PG		**Pn**	**00 52 28.9**	**-1.4**
GANJ	**Ganja**	**1.42**	**162**	P		**Pn**	**00 52 29.0**	**-1.4**
	SNR=254							
GANJ				S		**Sn**	**00 52 46.6**	**-2.1**
STE	**Stepanavan**	**1.44**	**226**	*e*P		**Pn**	**00 52 30.6**	**-0.1**
STE				*e*S		Sg	00 53 49.5	+58
BRNG	**Burnasheti**	**1.48**	**256**	P		**Pn**	**00 52 33.2**	**+1.8**
BRNG				S		**Sb**	**00 52 53.8**	**+2.7**
SGKR	**Sergokala**	**1.49**	**71**	*e*PG		**Pg**	**00 52 33.7**	**-0.3**
SGKR				*e*S		**Sg**	**00 52 55.1**	**+1.7**
SGKR	**Sergokala**	**1.49**	**71**	*e*Pg		**Pg**	**00 52 33.7**	**-0.3**
SGKR				*e*Sg		**Sg**	**00 52 55.1**	**+1.7**
AKT	**Akhty**	**1.57**	**109**	*e*PG		**Pn**	**00 52 32.3**	**-0.2**
AKT				*e*S		**Sn**	**00 52 53.3**	**+0.7**
AKT				pmax	pmax			
	comp=Z,256nm,0.3s							
AKT				smax	smax			
	comp=N,3μm,0.4s							
AKT	**Akhty**	**1.57**	**109**	*e*Pg		**Pn**	**00 52 32.1**	**-0.4**
AKT				*e*Sg		**Sn**	**00 52 51.1**	**-1.5**
ZEI	**Tsey**	**1.58**	**301**	*d* iPN		**Pg**	**00 52 36.2**	**+0.5**
ZEI				*e*S		**Sg**	**00 52 59.5**	**+3.3**
ZEI	**Tsey**	**1.58**	**301**	*e*Pg		**Pg**	**00 52 36.2**	**+0.5**
ZEI				*e*Sg		**Sg**	**00 52 59.5**	**+3.3**
MNGR	**Mingechevir, A**	**1.58**	**140**	PG		**Pn**	**00 52 32.8**	**+0.2**
MNGR	**Mingechevir, A**	**1.58**	**140**	P		**Pn**	**00 52 32.8**	**+0.2**
	SNR=49							
MNGR				Sn		**Sn**	**00 52 53.6**	**+0.9**
ARNR	**Ardon**	**1.60**	**318**	*e*PN		**Pg**	**00 52 37.1**	**+1.1**
ARNR				*e*S		Sg	00 53 03.5	+6.6
ARNR	**Ardon**	**1.60**	**318**	*e*Pg		**Pg**	**00 52 37.1**	**+1.1**
ARNR				*e*Sg		Sg	00 53 02.0	+5.1
MAK	**Makhachkala**	**1.62**	**53**	*e*PN		**Pg**	**00 52 37.1**	**+0.7**
MAK				*e*S		**Sg**	**00 53 01.2**	**+3.8**
MAK				pmax	pmax			
	comp=Z,410nm,0.3s							
MAK				smax	smax			
	comp=N,2μm,0.6s							
MAK	**Makhachkala**	**1.62**	**53**	*e*Pg		**Pg**	**00 52 37.0**	**+0.6**
MAK				*e*Sg		**Sg**	**00 53 00.1**	**+2.7**
BTKR	**Batakoyurt**	**1.64**	**328**	*e*PN		Pg	00 52 38.4	+1.7
BTKR				*e*S		Sg	00 53 03.2	+5.2
BTKR	**Batakoyurt**	**1.64**	**328**	*e*Pg		**Pg**	**00 52 37.7**	**+1.0**
BTKR				*e*Sg		Sg	00 53 03.3	+5.3
KORR	**Kora**	**1.65**	**312**	*d* ePN		**Pg**	**00 52 37.3**	**+0.3**
KORR				*e*S		Sg	00 53 02.8	+4.3
KORR	**Kora**	**1.65**	**312**	*e*Pg		**Pg**	**00 52 37.3**	**+0.3**
KORR				*e*Sg		Sg	00 53 02.8	+4.4
BKRG	**Bakuriani**	**1.68**	**263**	P		**Pb**	**00 52 36.0**	**+0.2**
BKRG				S		**Sg**	**00 53 00.3**	**+0.9**
BKRG	**Bakuriani**	**1.68**	**263**	PN		**Pb**	**00 52 36.0**	**+0.2**
BKRG				S		**Sg**	**00 53 00.3**	**+0.9**
KANR	**Karaman**	**1.76**	**46**	*e*PN		**Pg**	**00 52 39.2**	**+0.2**
KANR				*e*S		**Sg**	**00 53 03.8**	**+1.9**
KANR				pmax	pmax			
	comp=Z,606nm,0.4s							
KANR				smax	smax			
	comp=N,2μm,0.4s							
KANR	**Karaman**	**1.76**	**46**	*e*Pg		**Pg**	**00 52 40.3**	**+1.3**
KANR				*e*Sg		**Sg**	**00 53 02.6**	**+0.7**
BGD	**Bogdanovka**	**1.77**	**246**	P		**Pn**	**00 52 37.3**	**+2.0**
BGD				S		**Sn**	**00 53 00.3**	**+2.7**
BGD	**Bogdanovka**	**1.77**	**246**	PN		**Pn**	**00 52 37.3**	**+2.0**
BGD				S		**Sn**	**00 53 00.3**	**+2.7**
AKH	**Akhalkalaki**	**1.79**	**252**	P		**Pn**	**00 52 37.8**	**+2.2**
AKH				S		**Sn**	**00 53 01.3**	**+3.4**
AKH	**Akhalkalaki**	**1.79**	**252**	PN		**Pn**	**00 52 37.8**	**+2.2**
AKH				S		**Sn**	**00 53 01.3**	**+3.4**
AKH	**Akhalkalaki**	**1.79**	**252**	*e*Pg		**Pn**	**00 52 37.7**	**+2.2**
AKH				*e*Sg		**Sn**	**00 53 01.4**	**+3.4**
ONI	**Oni**	**1.80**	**290**	P		**Pg**	**00 52 38.9**	**-0.9**
ONI				S		**Sg**	**00 53 04.5**	**+1.2**
ONI	**Oni**	**1.80**	**290**	*e*PN		**Pg**	**00 52 39.0**	**-0.9**
ONI	**Oni**	**1.80**	**290**	*e*Pg		**Pg**	**00 52 38.9**	**-0.9**
ONI				*e*Sg		**Sg**	**00 53 04.5**	**+1.2**
KSMR	**Kasumkent**	**1.82**	**102**	*e*PN		**Pn**	**00 52 38.2**	**+2.3**
KSMR				*e*S		**Sn**	**00 53 01.6**	**+2.9**
KSMR	**Kasumkent**	**1.82**	**102**	*e*Pg		**Pn**	**00 52 38.2**	**+2.3**
KSMR				*e*Sg		**Sn**	**00 53 00.8**	**+2.1**
DIGR	**Digorskoe uzhe**	**1.84**	**300**	*e*PN		**Pg**	**00 52 40.6**	**0.0**
DIGR				*e*S		**Sg**	**00 53 07.3**	**+2.8**
DIGR	**Digorskoe uzhe**	**1.84**	**300**	*e*Pg		**Pg**	**00 52 40.6**	**0.0**
DIGR				*e*Sg		**Sg**	**00 53 07.3**	**+2.8**
STDR	**Stavd-Durt**	**1.85**	**318**	*e*PN		**Pg**	**00 52 40.7**	**-0.1**
STDR				*e*S		**Sg**	**00 53 08.2**	**+3.4**
STDR	**Stavd-Durt**	**1.85**	**318**	*e*Pg		**Pg**	**00 52 40.6**	**-0.2**
STDR				*e*Sg		**Sg**	**00 53 08.1**	**+3.3**
KAPZ	**Kaputan**	**1.85**	**206**	*e*P		**Pn**	**00 52 37.2**	**+0.8**
KAPZ				*e*S		**Sn**	**00 53 00.9**	**+1.3**
TRKR	**Terskaya**	**1.88**	**337**	*d* ePN		**Pg**	**00 52 41.0**	**-0.3**
TRKR	**Terskaya**	**1.88**	**337**	*e*Pg		**Pg**	**00 52 41.0**	**-0.3**
TRKR				*e*Sg		**Sg**	**00 53 06.8**	**+1.1**
QBL	**Gabala**	**1.89**	**123**	Pn		**Pn**	**00 52 37.6**	**+0.7**
	SNR=48							
QBL				Sn		**Sn**	**00 53 02.0**	**+1.7**
LSNR	**Lesken**	**1.91**	**313**	*e*PN		**Pg**	**00 52 43.0**	**+1.1**
LSNR				*e*S		Sg	00 53 11.7	+5.0
LSNR	**Lesken**	**1.91**	**313**	*e*Pg		**Pg**	**00 52 40.6**	**-1.3**
LSNR				*e*Sg		**Sg**	**00 53 10.3**	**+3.6**
DRN	**Derbent**	**1.93**	**88**	*e*PN		**Pb**	**00 52 40.1**	**+0.2**
DRN				*e*S		**Sg**	**00 53 06.5**	**-0.7**
DRN				pmax	pmax			
	comp=Z,247nm,0.2s							
DRN				smax	smax			
	comp=E,871nm,0.2s							
DRN	**Derbent**	**1.93**	**88**	*e*Pg		**Pn**	**00 52 38.7**	**+1.4**
DRN				*e*Sg		**Sb**	**00 53 04.0**	**+0.3**
QSAR	**Qusar**	**1.94**	**104**	Pn		**Pn**	**00 52 39.8**	**+2.2**
	SNR=71							
QSAR				Sn		**Sn**	**00 53 04.5**	**+2.9**
AMBZ	**Amberd**	**1.96**	**215**	*e*P		**Pn**	**00 52 39.7**	**+1.7**
AMBZ				*e*S		**Sn**	**00 53 05.5**	**+3.1**
XNQ	**Khinaliq**	**1.98**	**114**	Pn		**Pn**	**00 52 39.6**	**+1.4**
	SNR=93							
XNQ				Sn		**Sn**	**00 53 05.6**	**+3.0**
GNI	**Garni**	**2.00**	**203**	Pn		**Pn**	**00 52 39.3**	**+0.9**
	comp=E,42nm,0.3s,baz=293,slow=8.6,SNR=245							
GNI				Sn		**Sn**	**00 53 05.9**	**+2.8**
	comp=E,200nm,0.3s,baz=126,slow=11,SNR=14							
GNI				LR		LR	00 53 35.0	
	comp=E,101nm,19.1s,baz=33,slow=48							
GNI	**Garni**	**2.00**	**203**	*d* iP		**Pn**	**00 52 39.3**	**+0.9**
GNI				*d* iS		**Sn**	**00 53 05.7**	**+2.6**
GNI	**Garni**	**2.00**	**203**	*d* iPN		**Pn**	**00 52 39.2**	**+0.8**
GNI	**Garni**	**2.00**	**203**	*i* Pg		**Pn**	**00 52 39.3**	**+0.8**
GNI				*e*Sg		**Sn**	**00 53 05.4**	**+2.3**
BRDA	**Brd**	**2.04**	**148**	Pn		**Pn**	**00 52 39.3**	**+0.4**
	SNR=38							
BRDA				Sn		**Sn**	**00 53 05.9**	**+1.9**
PRTR	**Priterechnaya**	**2.06**	**329**	*e*PN		**Pg**	**00 52 43.2**	**-1.5**
PRTR	**Priterechnaya**	**2.06**	**329**	*i* Pg		**Pg**	**00 52 43.3**	**-1.4**
PRTR				*e*Sg		**Sg**	**00 53 12.0**	**+0.5**
EAK	**Akyaka**	**2.08**	**232**	P		**Pn**	**00 52 41.8**	**+2.3**
EAK				S		**Sn**	**00 53 06.8**	**+1.8**
TKB	**Tkibuli**	**2.08**	**281**	P		**Pb**	**00 52 42.0**	**-0.5**
TKB				S		**Sg**	**00 53 11.2**	**-0.9**
TKB	**Tkibuli**	**2.08**	**281**	PN		**Pb**	**00 52 42.0**	**-0.5**
TKB				S		**Sg**	**00 53 11.2**	**-0.9**
AGDM	**Agdam**	**2.15**	**151**	Pn		**Pn**	**00 52 41.1**	**+0.7**
	SNR=39							
AGDM				Sn		**Sn**	**00 53 07.0**	**+0.3**
QUBA	**Quba, Azerbaij**	**2.16**	**106**	Pn		**Pn**	**00 52 42.1**	**+1.6**
	SNR=27							
QUBA				Sn		**Sb**	**00 53 11.5**	**+1.1**
NRKZ	**NAREK**	**2.16**	**203**	*e*P		**Pn**	**00 52 41.5**	**+1.0**
NRKZ				*e*S		**Sn**	**00 53 09.7**	**+2.7**
NCK	**Nalchik**	**2.18**	**314**	*e*PN		**Pg**	**00 52 44.0**	**-3.1**
NCK				*e*S		**Sg**	**00 53 13.1**	**-2.3**
NCK	**Nalchik**	**2.18**	**314**	*e*Pn		**Pg**	**00 52 44.0**	**-3.1**
NCK				*e*Sn		**Sg**	**00 53 13.1**	**-2.3**
ABS	**Abastumani**

KIV **Kislovodsk** 2.98 312 *e*PN **Pb** 00 52 55.5 -2.4
KIV *e*S **Sg** 00 53 33.6 -7.4
KIV Kislovodsk 2.98 312 *e*Pn **Pb** 00 52 55.5 -2.4
KIV *e*Sn **Sg** 00 53 33.6 -7.4
DAGI Agillar 3.02 254 P **Pb** 00 52 58.1 -0.5
DAGI S **Sb** 00 53 37.3 +2.0
BATM Batumi 3.06 264 S **Sb** 00 53 41.6 +5.5
BATM Batumi 3.06 264 PN **Pb** 00 52 59.2 0.0
BATM S **Sb** 00 53 41.7 +5.5
BATM Batumi 3.06 264 P **Pb** 00 52 59.2 0.0
ORD Ordubad 3.07 176 Pn **Pn** 00 52 54.9 +1.7
SNR=17
ORD Sn **Sn** 00 53 32.1 +2.6
DBOC Borcka 3.12 259 P **Pb** 00 53 02.8 +2.4
DBOC S **Sg** 00 53 43.8 -1.8
CLDR Caldiran 3.17 207 P Pn 00 53 01.1 +6.4
DBAD Bademkaya 3.20 254 P **Pb** 00 52 03.3 +0.7
DBAD S **Sb** 00 53 44.3 +4.0
ALIB Äli-Bayra 3.20 128 Pn **Pn** 00 52 57.0 +2.3
SNR=6.9
ALIB Sn **Sn** 00 53 34.1 +1.5
DDEM Demirkent 3.20 251 P **Pb** 00 53 00.4 -1.3
DDEM S **Sb** 00 53 45.1 +4.7
EATA Eleskirt 3.26 230 P **Pn** 00 52 55.5 -0.4
GLBA Clilabad 3.41 143 Pn **Pn** 00 52 59.5 +1.8
SNR=6.6
GLBA Sn **Sn** 00 53 39.9 +2.1
ALER Alexandrovskoy 3.45 324 *e*PN **Pb** 00 53 01.6 -4.3
ALER *e*S **Sb** 00 53 43.6 -4.0
ALER Alexandrovskoy 3.45 324 *e*Pn **Pb** 00 53 01.6 -4.3
ALER *e*Sn **Sb** 00 53 43.6 -4.0
HOMI Horasan 3.50 237 P Pn 00 53 04.0 +4.9
OZAP Van, Ozalp-Mer 3.59 202 P **Pb** 00 53 09.4 +0.9
OZAP S **Sb** 00 53 54.0 +2.2
YRD Yardimli 3.62 147 Pn **Pn** 00 53 00.6 -0.1
SNR=71
YRD Sn **Sn** 00 53 42.4 -0.8
GOF Gofitskoye 3.64 328⇑ *e*PN **Pb** 00 53 04.4 -4.7
GOF *e*S **Sb** 00 53 52.0 -0.9
GOF pmax pmax
comp=Z,10.0nm,0.4s
GOF smax smax
comp=N,61nm,0.5s
GOF smax smax
comp=E,29nm,0.5s
GOF Gofitskoye 3.64 328 *e*Pn **Pb** 00 53 04.4 -4.7
LRK Lerik 3.89 149 Pn **Pn** 00 53 04.4 -0.1
SNR=24
LRK Sn **Sn** 00 53 50.1 +0.2
LKRN Lenkeran, Azer 4.02 144 Pn **Pn** 00 53 06.1 +0.1
LKRN Sn **Sn** 00 53 51.3 -1.4
ASTR Astara 4.15 145 Pn **Pn** 00 53 07.6 -0.3
SNR=9.2
RPOR Krasnaya Polya 4.37 295 *i* PN **Pn** 00 53 13.9 +3.0
RPOR *e*S **Sn** 00 54 06.1 +4.6
RPOR Krasnaya Polya 4.37 295 *i* Pn **Pn** 00 53 13.9 +3.0
RPOR *e*Sn **Sn** 00 54 06.1 +4.6
VSLR Vesyoloye 4.46 291 *e*PN **Pn** 00 53 15.5 +3.5
VSLR *e*S **Sb** 00 54 09.1 -7.4
VSLR Vesyoloye 4.46 291 *e*Pn **Pn** 00 53 15.5 +3.5
VSLR *e*Sn **Sb** 00 54 09.1 -7.4
SOC Sochi 4.71 292 *e*PN **Pn** 00 53 16.9 +1.3
SOC *e* 00 54 14.7
SOC *e*SS **Sb** 00 54 26.9 +3.1
SOC pmax pmax
comp=Z,9.0nm,0.8s
SOC MLR MLR
comp=Z,20nm,11.0s
SOC Sochi 4.71 292 *e*Pn **Pn** 00 53 18.8 +3.3
SOC *e*Sn **Sn** 00 54 13.7 +3.8
GOYR Goytkh 5.17 298 *e*PN **Pn** 00 53 25.3 +3.3
GOYR *e*S **Sn** 00 54 23.8 +2.6
GOYR Goytkh 5.17 298 *e*Pn **Pn** 00 53 25.3 +3.3
GOYR *e*Sn **Sn** 00 54 23.8 +2.6
GEYT Alibeck 10.33 109 Pn **Pn** 00 54 30.0 -2.7
comp=Z,1.5nm,0.3s,baz=317,slow=11,SNR=28
GEYT Sn Sn 00 56 18.8 -9.2
comp=Z,0.6nm,0.3s,baz=12,slow=41,SNR=2.4
comp=Z,3.4nm,0.3s
GYA0 ALIBECK ARRAY 10.33 109 P **Pn** 00 54 29.7 -3.0
GYA0B ALIBECK ARRAY 10.33 109 ⇓P **Pn** 00 54 29.7 -3.0
GYA0B ⇓S Sn 00 56 20.8 -7.2
BELG Belogornoye 10.48 6 Pn **Pn** 00 54 36.1 +1.6
comp=Z,2.2nm,0.3s,baz=126,slow=22,SNR=9.6
BELG Sn **Sn** 00 56 27.3 -4.2
comp=Z,1.3nm,0.3s,baz=220,slow=19,SNR=3.4
comp=Z,22nm,1.0s
AKTO Aktyubinsk 11.96 41 Pn **Pn** 00 54 53.5 -1.5
comp=Z,1.0nm,0.3s,baz=210,slow=8.0,SNR=19
AKTO Sn **Sn** 00 57 01.2 -6.7
comp=Z,0.3nm,0.3s,baz=217,slow=20,SNR=1.9
AKTO LR LR 01 01 41.4
comp=Z,36nm,18.4s,baz=203,slow=48
comp=Z,1.9nm,0.3s
AKTO Aktyubinsk 11.96 41 ⇓P **Pn** 00 54 53.0 -2.0
comp=Z,4.2nm,0.8s
AKTO ⇑S **Sn** 00 56 59.8 -8.1
comp=Z,2.7nm,0.5s
AB31 Akbulak array 12.29 49 P **Pn** 00 54 57.6 -1.8
AB31 Akbulak array 12.29 49 P **Pn** 00 54 57.6 -1.8
comp=Z,1.2nm,0.4s,baz=232,slow=12,SNR=46
AB31 ⇓S **Sn** 00 57 08.8 -7.2
comp=Z,0.9nm,0.4s,baz=235,slow=24,SNR=6.3
AKASG Malin Array Be 14.32 313 Pn **P** 00 55 34.6 +0.4
comp=Z,0.4nm,0.3s,baz=121,slow=11,SNR=1.6
OBN Obninsk 14.45 338 *i* P **Pn** 00 55 30.1 +1.3
OBN pmax pmax
comp=Z,4.0nm,0.9s
MLR Muntele Rosu 14.73 290 LR LR 01 03 29.1
comp=Z,44nm,18.8s,baz=92,slow=46
ARU Arti 16.65 25 Pn **Pn** 00 55 54.9 -2.8
baz=207,slow=9.1,SNR=4.7
ARU Sn Sn 00 58 50.7 -11
baz=344,slow=22,SNR=1.6
comp=Z,1.6nm,0.4s
ARU Arti 16.65 25 *c i*P **P** 00 55 59.4 -0.6
ARU S **S** 00 59 05.9 -7.3
ARU pmax pmax
comp=Z,4.0nm,0.9s
SVE Sverdlovsk 17.66 28 *e*P **Pn** 00 56 08.1 -2.2
SVE *e*S **Sn** 00 59 24.5 -2.0
SVE pmax pmax
comp=Z,7.0nm,0.8s
KK31 Karatay Array 18.27 78 ⇓P **Pn** 00 56 15.3 -2.6
comp=Z,4.2nm,0.7s,baz=282,slow=14,SNR=28
KLMR Klimovskoe 19.26 351 *e*P **Pn** 00 56 28.6 -1.1
KLMR *e* 01 00 06.0
KLMR pmax pmax
comp=Z,5.0nm,0.6s
KLMR Klimovskoe 19.26 351 *e*Pn **Pn** 00 56 28.7 -1.0
KLMR AMP 00 56 35.3
comp=Z,5.0nm,0.6s
KLMR *e*Sn **S** 01 00 06.1 +0.1
KLMR *e*Sn **S** 01 00 06.1 +0.1
BRVK Borovoye 19.82 48 *c e*P **Pn** 00 56 36.4 -0.1
BRVK pmax pmax
comp=Z,7.0nm,0.6s
AAK Ala-Archa 21.23 79 P **P** 00 56 48.6 -1.8
comp=Z,4.6nm,0.7s,baz=238,slow=6.4,SNR=7.2
comp=Z,4.6nm,0.7s
AAK Ala-Archa 21.23 79 *c e*P **P** 00 56 49.9 -0.5
AAK pmax pmax
comp=Z,6.0nm,0.8s
VRAC Vranov 21.55 300 P **P** 00 56 54.0 +0.3
comp=Z,0.8nm,0.3s,baz=236,slow=15,SNR=4.4
VRAC LR LR 01 07 14.4
comp=Z,11nm,19.0s,baz=68,slow=42
comp=Z,0.8nm,0.3s
TKM2 Tokmak 2 21.99 77 P **P** 00 56 57.2 -1.5
TKM2 Tokmak 2 21.99 77 ⇓P **P** 00 56 57.2 -1.5
comp=Z,4.7nm,0.8s
FINES FINESS Array B 22.80 335 P **P** 00 57 07.5 +0.7
comp=Z,1.1nm,0.5s,baz=140,slow=9.2,SNR=6.4
comp=Z,1.1nm,0.5s
GERES GERESS Array B 23.39 298 P **P** 00 57 16.0 +2.9
comp=Z,0.1nm,0.4s,baz=162,slow=26,SNR=1.8
comp=Z,0.1nm,0.4s
KURBB Kurchatov Arra 24.07 58 P **P** 00 57 19.2 -0.3
comp=Z,1.8nm,0.7s,baz=264,slow=11,SNR=26
comp=Z,1.8nm,0.7s
KURK Kurchatov 24.14 58 *c e*P **P** 00 57 20.2 0.0
KURK pmax pmax
comp=Z,3.0nm,0.7s
MK31 Makanchi Array 26.39 67 *i* P **P** 00 57 40.7 0.0
MKAR Makanchi Array 26.39 67 P **P** 00 57 40.1 -0.6
comp=Z,1.4nm,0.7s,baz=266,slow=9.0,SNR=8.7
comp=Z,1.4nm,0.7s
ZALV Zalesovo Beam 28.39 52 P **P** 00 57 57.2 -1.2
comp=Z,0.8nm,0.4s,baz=267,slow=9.8,SNR=6.5
comp=Z,0.8nm,0.4s
ZALV Zalesovo Beam 28.39 52 *e*P **P** 00 57 56.9 -1.6
ZALV pmax pmax
comp=Z,1.0nm,0.4s
NRIK Noril'sk 34.88 24 *i* P **P** 00 58 57.3 +2.0
NRIK pmax pmax
comp=Z,2.0nm,1.0s
NRIK MLR MLR
comp=Z,30nm,18.0s
SONM Songino Array 42.37 61 P **P** 00 59 57.8 -0.8
comp=Z,0.3nm,0.5s,baz=84,slow=40,SNR=2.1
comp=Z,0.3nm,0.5s
ULN Ulaanbaatar 42.79 60 *c e*P **P** 01 00 01.9 -0.2
ULN pmax pmax
comp=Z,4.0nm,1.7s
TORD Torodi Ar. Bea 47.74 246 P **P** 01 00 40.6 -0.9
comp=Z,0.3nm,0.5s,baz=356,slow=5.8,SNR=4.1
comp=Z,0.3nm,0.5s
CMAR Chiang Mai Arr 50.68 101 P **P** 01 01 03.0 -1.0
comp=Z,1.3nm,0.6s,baz=306,slow=8.9,SNR=5.6
comp=Z,1.3nm,0.6s
KSRS Korea Array 61.03 64 P **P** 01 02 17.4 -0.5
comp=Z,0.3nm,0.4s,baz=287,slow=8.5,SNR=1.9
comp=Z,0.3nm,0.4s
ILAR Eielson Array 73.11 6 P **P** 01 03 34.8 +0.6
comp=Z,0.2nm,0.4s,baz=347,slow=4.6,SNR=4.6
comp=Z,0.2nm,0.4s
YKA Yellowknife Ar 74.67 351 P **P** 01 03 43.6 +0.3
comp=Z,1.2nm,0.9s,baz=45,slow=6.9,SNR=3.2
comp=Z,1.2nm,0.9s

AZER ***12*** *00:53:30.7±0.0,41.70N×45.85E,h2km, Error ellipse: s-maj=0.6km s-min=0.3km az=321.0*
MOS ***12*** *00:53:30.3±0.0,41.86N×45.84E,h23km, MPVA4.0*
TIF ***12*** *00:53:32.0,41.91N×45.82E,h41km±1km*
ISC 12 00:53:32.4±1.1,41.86N±0.02×45.79E±0.02,h24km±14km, n53,σ1§42/98,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DDFL	**Dedoflistskaro**	**0.48**	**149**	P		**Pn**	**Pn**	**00 53 45.5**	**+1.7**
ZKTA	**Zakatala**	**0.66**	**109**	P		**Pn**	**Pn**	**00 53 44.7**	**-1.5**
ZKTA				S		Sn	**Sn**	**00 53 54.8**	**-1.1**
SEAG	**Tbilisi Sea**	**0.74**	**263**	P		**Pn**	**Pn**	**00 53 47.3**	**-0.1**
SEAG				S		Sn	**Sn**	**00 53 59.0**	**+1.0**
BTNK	**Botanikuri**	**0.76**	**257**	P		**Pb**	**Pb**	**00 53 43.6**	**-3.4**
BTNK				S		Sb	**Sb**	**00 53 55.3**	**-1.7**
QZX	**Qazax, Azerbai**	**0.86**	**202**	P		**Pn**	**Pn**	**00 53 48.2**	**-0.8**
QZX				S		Sn	**Sn**	**00 54 01.9**	**+1.0**
BTLR	**Botlikh**	**0.86**	**22**	*i* Pg		**Pn**	**Pn**	**00 53 48.0**	**-1.1**
BTLR				*e*Sg		Sn	**Sn**	**00 53 59.8**	**-1.1**
XNZR	**Khunzakh**	**0.96**	**45**	*e*Pg		**Pn**	**Pn**	**00 53 50.1**	**-0.4**
XNZR				*e*Sg		Sn	**Sn**	**00 54 02.5**	**-1.1**
KMKR	**Kumukh**	**1.01**	**74**	*e*Pg		**Pn**	**Pn**	**00 53 50.4**	**-0.8**
KMKR				*e*Sg		Sn	**Sn**	**00 54 03.9**	**-0.9**
GNBR	**Gunib**	**1.02**	**58**	*e*Pg		**Pn**	**Pn**	**00 53 50.7**	**-0.5**
GNBR				*e*Sg		Sn	**Sn**	**00 54 04.4**	**-0.4**
DVE	**Vedeno**	**1.12**	**13**	*e*Pg		**Pb**	**Pb**	**00 53 52.5**	**-0.7**
DVE				*e*Sg		Sn	**Sn**	**00 54 08.0**	**+0.6**
UNCR	**Uncukul**	**1.13**	**41**	*e*Pg		**Pb**	**Pb**	**00 53 52.9**	**-0.4**
UNCR				*e*Sg		Sn	**Sn**	**00 54 08.6**	**+1.1**
GDB	**GEDABAY**	**1.14**	**181**	P		**Pb**	**Pb**	**00 53 52.7**	**-0.8**
GDB				S		Sn	**Sn**	**00 54 08.3**	**+0.4**
GUDG	**Gudauri**	**1.15**	**302**	P		**Pb**	**Pb**	**00 53 53.2**	**-0.5**
GUDG				S		Sb	**Sb**	**00 54 09.0**	**+0.7**
GUDG	**Gudauri**	**1.15**	**302**	*e*Pg		**Pb**	**Pb**	**00 53 53.1**	**-0.6**
GUDG				*e*Sg		Sb	**Sb**	**00 54 08.6**	**+0.4**
ARKR	**Arakani**	**1.16**	**50**	*e*Pg		**Pb**	**Pb**	**00 53 52.6**	**-1.1**
ARKR				*e*Sg		Sn	**Sn**	**00 54 08.3**	**0.0**
PNSH	**Pansheti**	**1.17**	**312**	P		**Pb**	**Pb**	**00 53 53.3**	**-0.6**
PNSH				S		Sb	**Sb**	**00 54 08.9**	**+0.2**
SEKA	**Sheki**	**1.24**	**121**	P		**Pb**	**Pb**	**00 53 54.2**	**-0.9**
SEKA				S		Sb	**Sb**	**00 54 11.5**	**+0.7**
KRNR	**Karanay**	**1.27**	**40**	*e*Pg		**Pb**	**Pb**	**00 53 56.1**	**+0.4**
KRNR				*e*Sg		Sb	**Sb**	**00 54 12.0**	**+0.3**
GANJ	**Ganja**	**1.28**	**162**	P		**Pb**	**Pb**	**00 53 54.9**	**-0.8**
GANJ				S		Sb	**Sb**	**00 54 12.4**	**+0.6**
TRLG	**Trialeti**	**1.30**	**256**	P		**Pb**	**Pb**	**00 53 56.4**	**+0.1**
TRLG				S		Sb	**Sb**	**00 54 13.7**	**+1.0**
DMNI	**Dmanisi**	**1.31**	**247**	P		**Pb**	**Pb**	**00 53 55.7**	**-0.7**
DMNI				S		Sb	**Sb**	**00 54 13.5**	**+0.6**
GROC	**Groznyy**	**1.34**	**0**	*e*Pg		**Pb**	**Pb**	**00 53 56.9**	**0.0**
GROC				*e*Sg		Sb	**Sb**	**00 54 16.4**	**+2.9**
DLMR	**Dylym**	**1.36**	**27**	*e*Pg		**Pb**	**Pb**	**00 53 56.5**	**-0.7**
DLMR				*e*Sg		Sb	**Sb**	**00 54 15.2**	**+1.1**
BUJR	**Buynaksk**	**1.37**	**45**	*e*Pg		**Pb**	**Pb**	**00 53 56.6**	**-0.7**
BUJR				*e*Sg		Sb	**Sb**	**00 54 15.6**	**+1.1**
KMGR	**Komgaron**	**1.38**	**331**	*e*Pg		**Pb**	**Pb**	**00 53 58.7**	**+1.2**
KMGR				*e*Sg		Sb	**Sb**	**00 54 17.1**	**+2.4**
DBC	**Dubki**	**1.39**	**33**	*e*Pg		**Pb**	**Pb**	**00 53 57.8**	**+0.1**
DBC				*e*Sg		Sb	**Sb**	**00 54 15.7**	**+0.6**
URKR	**Urkarakh**	**1.41**	**77**	*e*Pg		**Pb**	**Pb**	**00 53 57.7**	**-0.3**
URKR				*e*Sg		Sb	**Sb**	**00 54 15.9**	**+0.3**
MNGR	**Mingechevir, A**	**1.46**	**138**	P		**Pb**	**Pb**	**00 53 58.7**	**-0.1**
MNGR				S		Sb	**Sb**	**00 54 20.0**	**+3.1**
LACR	**Lac**	**1.47**	**312**	*e*Pg		**Pb**	**Pb**	**00 53 58.8**	**-0.3**
LACR				*e*Sg		Sb	**Sb**	**00 54 18.2**	**+0.8**
BRNG	**Burnasheti**	**1.49**	**261**	P		**Pb**	**Pb**	**00 53 59.4**	**-0.1**
BRNG				S		Sb	**Sb**	**00 54 18.6**	**+0.6**
AKT	**Akhty**	**1.50**	**104**	*e*Pg		**Pb**	**Pb**	**00 53 57.9**	**-1.7**
AKT				*e*Sg		Sb	**Sb**	**00 54 16.6**	**-1.7**
ZEI	**Tsey**	**1.68**	**304**	*e*Pg		**Pb**	**Pb**	**00 54 02.2**	**-0.5**
ZEI				*e*Sg		Sb	**Sb**	**00 54 25.1**	**+1.6**
BKRG	**Bakuriani**	**1.70**	**267**	P		**Pb**	**Pb**	**00 54 02.5**	**-0.5**
BKRG				S		Sb	**Sb**	**00 54 25.4**	**+1.3**
ARNR	**Ardon**	**1.73**	**320**	*e*Pg		**Pb**	**Pb**	**00 54 02.6**	**-0.8**
ARNR				*e*Sg		Sb	**Sb**	**00 54 29.2**	**+4.5**
BGD	**Bogdanovka**	**1.75**	**251**	P		**Pb**	**Pb**	**00 54 03.9**	**0.0**
BGD				S		Sb	**Sb**	**00 54 25.7**	**+0.1**
KORR	**Kora**	**1.77**	**314**	*e*Pg		**Pb**	**Pb**	**00 54 03.1**	**-1.0**
KORR				*e*Sg		Sb	**Sb**	**00 54 28.1**	**+2.2**
AKH	**Akhalkalaki**	**1.78**	**256**	*e*Pg		**Pb**	**Pb**	**00 54 03.6**	**-0.8**
AKH				*e*Sg		Sb	**Sb**	**00 54 27.3**	**+0.9**
QBL	**Gabala**	**1.79**	**120**	P		**Pb**	**Pb**	**00 54 03.4**	**-1.1**
QBL				S		Sb	**Sb**	**00 54 27.6**	**+1.1**
KANR	**Karaman**	**1.83**	**43**	*e*Pg		**Pb**	**Pb**	**00 54 03.4**	**-1.8**
KANR				*e*Sg		Sb	**Sb**	**00 54 26.6**	**-1.0**
ONI	**Oni**	**1.88**	**294**	*e*Pg		**Pb**	**Pb**	**00 54 05.3**	**-0.8**
ONI				*e*Sg		Sb	**Sb**	**00 54 30.9**	**+1.7**
GNI	**Garni**	**1.89**	**205**	*e*Pg		**Pb**	**Pb**	**00 54 05.6**	**-0.6**
GNI				*e*Sg		Sb	**Sb**	**00 54 31.4**	**+2.0**
XNQ	**Khinaliq**	**1.89**	**111**	P		**Pb**	**Pb**	**00 54 07.0**	**+0.7**
XNQ				S		Sb	**Sb**	**00 54 33.9**	**+4.2**
BRDA	**Brd**	**1.91**	**146**	P		**Pb**	**Pb**	**00 54 06.3**	**-0.2**
BRDA				S		Sb	**Sb**	**00 54 33.2**	**+3.3**
AGDM	**Agdam**	**2.02**	**150**	P		**Pb**	**Pb**	**00 54 07.3**	**-1.1**
AGDM				S		Sb	**Sb**	**00 54 35.3**	**+2.3**
LSNR	**Lesken**	**2.03**	**315**	*e*Pg		**Pb**	**Pb**	**00 54 08.2**	**-0.3**
ZRD	**Zardab**	**2.13**	**137**	P		**Pb**	**Pb**	**00 54 08.6**	**-1.7**
ZRD				S		Sb	**Sb**	**00 54 39.1**	**+2.8**
TKB	**Tkibuli**	**2.14**	**284**	P		**Pb**	**Pb**	**00 54 08.3**	**-2.1**
TKB				S		Sb	**Sb**	**00 54 36.5**	**0.0**
HYR	**Heyderabad**	**2.26**	**199**	S		**Sb**	**Sb**	**00 54 43.0**	**+3.0**
KDMR	**Kurdemir**	**2.34**	**129**	S		**Sb**	**Sb**	**00 54 44.5**	**+2.3**
SBZ	**Shahbuz**	**2.47**	**184**	S		**Sb**	**Sb**	**00 54 45.9**	**-0.2**
BLQ	**Beylaqan**	**2.52**	**147**	S		**Sb**	**Sb**	**00 54 48.2**	**+0.6**
NAX	**Nakhchivan**	**2.69**	**185**	S		**Sb**	**Sb**	**00 54 51.5**	**-1.1**
ORD	**Ordubad**	**2.93**	**177**	S		**Sb**	**Sb**	**00 54 59.5**	**+0.1**

IDC ***12*** *01:01:42.0±1.6,0.26N×126.11E,h0km,mb4.0/4, mbtmp4.0/4,MS2.7/1,Error ellipse: s-maj=157.3km s-min=21.9km az=64.0*
DJA ***12*** *01:01:47.5±0.3,0.N±4.×12.6E±.,h10km,M3.6/8,mb4.0/2, MLv3.5/8*
ISC 12 01:01:45.7±0.9,0.01N±0.10×125.79E±0.06,h10km,n11, σ2§27/11,mb4.0/4,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.75**	**65**	P		**Pb**	**Pb**	**01 02 18.2**	**+0.3**
LBMI	**Labuha**	**1.83**	**111**	P		**Pn**	**Pn**	**01 02 19.6**	**+2.4**
LBMI				S		Sn	**Sn**	**01 02 42.5**	**+2.0**
KMSI	**Cibinong**	**1.89**	**287**	P		**Pn**	**Pn**	**01 02 19.5**	**+1.5**
SANI	**Sanana**	**2.06**	**174**	P		**Pn**	**Pn**	**01 02 21.3**	**+1.0**
APSI	**Ampana**	**4.24**	**257**	P		**Pn**	**Pn**	**01 02 54.6**	**+4.3**
FAKI	**Fak Fak**	**7.09**	**114**	P		**Pn**	**Pn**	**01 03 29.8**	**+0.3**
WRA	**Warramunga Arr**	**21.53**	**158**	P		**P**	**P**	**01 06 33.4**	**-1.8**
	2.4nm,0.6s,baz=336,slow=11,SNR=10								
	2.4nm,0.6s								
ASAR	**Alice Springs**	**24.82**	**162**	P		**P**	**P**	**01 07 07.5**	**-0.8**
	1.5nm,0.6s,baz=347,slow=7.6,SNR=28								
	1.5nm,0.6s								
CMAR	**Chiang Mai Arr**	**32.12**	**306**	LR		LR	LR	01 20 57.9	
	comp=Z,14nm,20.6s,baz=140,slow=36								
STKA	**Stephens Creek**	**35.07**	**156**	P		**P**	**P**	**01 08 38.1**	**-0.9**
	1.9nm,0.5s,baz=342,slow=9.8,SNR=5.5								
	1.9nm,0.5s								
MKAR	**Makanchi Array**	**60.09**	**327**	P		**P**	**P**	**01 11 50.9**	**-2.4**
	1.1nm,0.4s,baz=124,slow=8.0,SNR=17								
	1.1nm,0.4s								

IDC ***12*** *01:16:40.0±1.3,0.13N×126.09E,h0km,mb4.1/5, mbtmp4.2/5,MS2.8/2,Error ellipse: s-maj=150.2km s-min=19.0km az=65.0*
NEIC ***12*** *01:16:42.5±1.1,0.0N±0.1×125.92E±0.04,h12km±7km, mb4.4/10,Error ellipse: s-maj=21.1km s-min=4.0km az=169.0*
DJA ***12*** *01:16:44.3±1.8,0.S±6×12.6E±.,h13km±15km,M3.7/7, MLv3.7/7*
ISC 12 01:16:42.4±0.7,0.15S±0.10×125.70E±0.07,h10km,n23, σ1§13/21,mb4.2/11,Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**1.86**	**293**	P		**Pn**	**Pn**	**01 17 15.8**	**+1.5**
LBMI	**Labuha**	**1.87**	**105**	P		**Pn**	**Pn**	**01 17 16.1**	**+1.7**
LBMI				S		Sn	**Sn**	**01 17 39.4**	**+1.3**
TNTI	**Ternate**	**1.90**	**61**	Pn		Pn	Pn	01 17 10.6	-4.3
SANI	**Sanana**	**1.91**	**171**	P		**Pn**	**Pn**	**01 17 15.9**	**+0.8**
APSI	**Ampana**	**4.12**	**259**	P		**Pn**	**Pn**	**01 17 47.1**	**+1.7**
TOLI2	**Tolitoli**	**5.07**	**284**			**Pn**	**Pn**	**01 18 00.2**	**+1.7**
DAV	**Davao City (W)**	**7.17**	**359**	LR		LR	LR	01 20 49.9	
	comp=Z,40nm,20.4s,baz=84,slow=36								
WB0	**Warramunga Arr**	**21.28**	**157**	P		**P**	**P**	**01 21 28.5**	**-0.7**
WB0				IAmb		IAmb	IAmb	01 21 33.2	
	comp=Z,11nm,0.9s								
WRAB	**Tennant Creek**	**21.41**	**157**	P		**P**	**P**	**01 21 30.5**	**-0.2**
WRAB				IAmb		IAmb	IAmb	01 21 34.0	
	comp=Z,14nm,0.7s								
WRA	**Warramunga Arr**	**21.42**	**157**	P		**P**	**P**	**01 21 30.4**	**-0.3**
	comp=Z,4.1nm,0.6s,baz=336,slow=10,SNR=13								
	comp=Z,4.1nm,0.6s								
WB2	**Warramunga Arr**	**21.42**	**157**	P		**P**	**P**	**01 21 30.3**	**-0.4**
WB2				IAmb		IAmb	IAmb	01 21 34.1	
	comp=Z,8.1nm,0.8s								
COEN	**Coen**	**22.08**	**129**	P		**P**	**P**	**01 21 36.9**	**-1.0**
COEN				IAmb		IAmb	IAmb	01 21 46.4	
	comp=Z,32nm,1.4s								
AS31	**Alice Springs**	**24.70**	**162**	P		**P**	**P**	**01 22 04.1**	**+0.1**
ASAR	**Alice Springs**	**24.70**	**162**	P		**P**	**P**	**01 22 04.3**	**+0.4**
	comp=Z,2.9nm,0.6s,baz=345,slow=7.5,SNR=52								
ASAR				LR		LR	LR	01 33 54.5	
	comp=Z,46nm,19.6s,baz=156,slow=42								
	comp=Z,2.9nm,0.6s								
STKA	**Stephens Creek**	**34.96**	**156**	P		**P**	**P**	**01 23 34.9**	**+0.1**
	comp=Z,3.8nm,0.5s,baz=333,slow=7.7,SNR=12								
	comp=Z,3.8nm,0.5s								
STKA	**Stephens Creek**	**34.96**	**156**	IAmb		IAmb	IAmb	01 23 36.1	
	comp=Z,2.3nm,1.2s								
MK31	**Makanchi Array**	**60.18**	**327**	P		**P**	**P**	**01 26 49.7**	**-0.8**
MK31				IAmb		IAmb	IAmb	01 27 00.9	
	comp=Z,2.3nm,1.4s								
MKAR	**Makanchi Array**	**60.18**	**327**	P		**P**	**P**	**01 26 49.5**	**-1.1**
	comp=Z,1.5nm,0.4s,baz=123,slow=8.0,SNR=27								
	comp=Z,1.5nm,0.4s								
KBL	**Kabul**	**63.11**	**309**	P		**P**	**P**	**01 27 09.7**	**-1.0**
KBL				IAmb		IAmb	IAmb	01 27 21.3	
	comp=Z,2.5nm,0.7s								
ZALV	**Zalesovo Beam**	**63.58**	**334**	P		**P**	**P**	**01 27 12.0**	**-1.2**
	comp=Z,0.5nm,0.5s,baz=116,slow=6.6,SNR=2.3								
	comp=Z,0.5nm,0.5s								
GAR	**Garm**	**63.83**	**314**	P		**P**	**P**	**01 27 15.9**	**+0.6**
KURK	**Kurchatov**	**64.47**	**329**	P		**P**	**P**	**01 27 17.2**	**-1.9**
ABKAR	**Akbulak array**	**74.51**	**322**	P		**P**	**P**	**01 28 21.2**	**0.0**

IDC ***12*** *01:25:10.3±1.2,34.33S×178.27W,h0km,mb4.3/4, mbtmp4.3/6,ML4.0/2,MS3.2/2,Error ellipse: s-maj=37.3km s-min=28.5km az=139.0*
NEIC ***12*** *01:25:17.8±1.9,34.34S±0.10×178.4W±0.2,h53km±7km, mb4.4/10,Error ellipse: s-maj=22.7km s-min=9.1km az=121.0*
ISC 12 01:25:17.0±0.8,34.4S±0.1×178.4W±0.1,h51km,n27, σ0§92/27,mb4.2/9,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.17**	**219**	Pn		**Pn**	**Pn**	**01 26 19.5**	**+1.3**
URZ	**Urewera**	**5.33**	**222**	Pn		**Pn**	**Pn**	**01 26 34.1**	**+0.1**
	2.1nm,0.3s,baz=265,slow=4.6,SNR=12								
URZ				Sn		Sn	**Sn**	**01 27 33.4**	**-0.6**
	11nm,0.3s,baz=221,slow=23,SNR=10								
	7.6nm,0.4s								
URZ	**Urewera**	**5.33**	**222**				**Pn**	**01 26 34.8**	**+0.8**
RPZ	**Rata Peaks**	**12.43**	**218**	Pn		Pn	**Pn**	**01 28 09.7**	**-1.5**
	2.3nm,0.3s,baz=47,slow=6.4,SNR=7.0								
RPZ				Sn		Sn	Sn	01 30 15.6	-12
	1.7nm,0.3s,baz=303,slow=22,SNR=7.3								
	5.9nm,0.4s								
MSVF	**Nonsavu**	**16.88**	**348**	LR		LR	LR	01 33 23.1	
	comp=Z,55nm,21.1s,baz=176,slow=29								
MSVF	**Nonsavu**	**16.88**	**348**	Pn		**Pn**	**Pn**	**01 29 09.3**	**-0.6**
MSVF				IA

*DJA **12** 01:35:39.2±0.5,0°N±3°×12°6E±°, h26km±4km, M4.3/13, mb4.6/12, mB5.1/5, MLv4.2/13, Mw(mB)4.4/5*
*NEIC **12** 01:35:41.1±1.8, 0°.1S±0°.1×125°.77E±0°.07, h64km±9km, mb4.5/31, Error ellipse: s-maj=15.2km s-min=9.6km az=174.0*

ISC 12 01:35:39.7±0.5,**0°.09S**±0°.05×**125°.74E**±0°.05,**h50**km,**n83,** σ1§**37**/74,**mb4.5**/33,**MS3.4**/15,**1C, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.84**	**62**	Pn	**Pn**	**01 36 08.3**	**-0.6**
TNTI				Sn	**Sn**	**01 36 32.2**	**+1.2**
TNTI	**Ternate**	**1.84**	**62**	P	**Pn**	**01 36 09.1**	**+0.2**
LBMI	**Labuha**	**1.84**	**107**	P	**Pn**	**01 36 10.1**	**+1.2**
KMSI	**Cibinong**	**1.88**	**291**	P	**Pn**	**01 36 09.3**	**-0.1**
KMSI				S	**Sn**	**01 36 30.5**	**-1.5**
SANI	**Sanana**	**1.96**	**173**	P	**Pn**	**01 36 11.0**	**+0.4**
MRSI	**Marisa**	**3.84**	**278**	P	**Pn**	**01 36 37.1**	**+0.7**
APSI	**Ampana**	**4.17**	**259**	P	**Pn**	**01 36 41.0**	**+0.1**
TOLI2	**Tolitoli**	**5.10**	**284**	Pn	**Pn**	**01 36 55.9**	**+2.2**
SIJI	**Sorong**	**5.58**	**98**	Pn	**Pn**	**01 37 02.0**	**+1.8**
	3.4nm,0.3s,baz=188,slow=22,SNR=4.8						
	7.6nm,0.3s						
MPSI	**Mapaga**	**5.86**	**274**	P	**Pn**	**01 37 07.7**	**+3.6**
	0.2nm664nm48nm,0.8s						
TTSI	**Tana Toraja**	**6.61**	**244**	P	**Pn**	**01 37 15.6**	**+1.3**
	0.2nm1µm39nm,0.6s						
SPSI	**Sidrap Palu**	**7.10**	**237**	P	**Pn**	**01 37 23.2**	**+2.1**
	0.2nm2µm44nm,1.0s						
KAPI	**Kappang**	**7.72**	**231**	Pn	Pn	01 37 35.8	+6.1
	0.8nm,0.3s,baz=37,slow=10,SNR=2.6						
KAPI				Sn	**Sn**	**01 38 53.9**	**-2.0**
	baz=79,slow=13						
MYLDM	**Lahad Datu**	**8.93**	**306**		**Pn**	**01 37 47.7**	**+1.6**
KSM	**Kuching**	**15.51**	**276**		**Pn**	**01 39 18.0**	**+2.7**
KSM				IAmb	IAmb	01 39 20.0	
	comp=Z,20nm,0.8s						
SMRI	**Semarang**	**16.75**	**245**		**Pn**	**01 39 32.2**	**+1.1**
LEM	**Lembang**	**19.28**	**249**	P	**P**	**01 40 01.7**	**+1.0**
	comp=Z,26nm,0.7s,baz=44,slow=15,SNR=5.1						
WB0	**Warramunga Arr**	**21.31**	**157**	P	**P**		
WB0				IAmb	IAmb	01 40 27.4	
	comp=Z,22nm,0.8s						
WRA	**Warramunga Arr**	**21.45**	**157**	P	**P**	**01 40 24.2**	**+0.2**
	comp=Z,6.0nm,0.5s,baz=335,slow=11,SNR=18						
	comp=Z,6.0nm,0.5s						
WRA	**Warramunga Arr**	**21.45**	**157**	P	**P**	**01 40 23.0**	**-1.0**
WB2	**Warramunga Arr**	**21.46**	**157**	P	**P**	**01 40 22.5**	**-1.6**
WB2				IAmb	IAmb	01 40 35.4	
	comp=Z,24nm,1.2s						
WR0	**Warramunga Arr**	**21.55**	**157**	P	**P**	**01 40 23.7**	**-1.3**
PMG	**Port Moresby**	**23.24**	**114**	LR	LR	01 53 17.8	
	comp=Z,83nm,18.6s,baz=226,slow=45						
AS31	**Alice Springs**	**24.74**	**162**	P	**P**	**01 40 56.5**	**-0.3**
ASAR	**Alice Springs**	**24.74**	**162**	P	**P**	**01 40 58.4**	**+1.6**
	comp=Z,4.8nm,0.6s,baz=345,slow=7.6,SNR=66						
	comp=Z,4.8nm,0.6s						
ASAR	**Alice Springs**	**24.74**	**162**	P	**P**	**01 40 56.7**	**0.0**
PSI	**Prapat**	**26.96**	**276**	LR	LR	01 54 00.1	
	comp=Z,75nm,20.1s,baz=86,slow=41						
CTA	**Charters Tower**	**28.25**	**136**	LR	LR	01 54 07.1	
	comp=Z,98nm,18.3s,baz=276,slow=39						
CMAR	**Chiang Mai Arr**	**32.14**	**306**	LR	LR	01 55 55.9	
	comp=Z,24nm,20.5s,baz=115,slow=38						
CMAR	**Chiang Mai Arr**	**32.14**	**306**	P	**P**	**01 42 00.8**	**-2.0**
CHTO	**Chiang Mai**	**32.33**	**307**	P	**P**	**01 42 02.7**	**-1.7**
CHTO				IAmb	IAmb	01 42 04.3	
	comp=Z,7.8nm,1.3s						
NJ2	**Nanjing**	**32.63**	**349**	*e*P	**P**	**01 42 09.1**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
STKA	**Stephens Creek**	**34.99**	**156**	P	**P**	**01 42 29.0**	**+1.5**
	comp=Z,9.3nm,0.8s,baz=327,slow=10,SNR=17						
	comp=Z,9.3nm,0.8s						
STKA	**Stephens Creek**	**34.99**	**156**	P	**P**	**01 42 27.1**	**-0.3**
PZH	**PanZhiHua**	**35.12**	**321**	P	**P**	**01 42 31.1**	**+2.3**
PZH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,100nm,4.7s						
JHJ	**Hachijo jima 2**	**35.59**	**20**	LR	LR	01 56 10.1	
	comp=Z,25nm,21.7s,baz=70,slow=35						
KSAR	**Wonju Array Be**	**37.40**	**3**	P	**P**	**01 42 48.1**	**+0.2**
KSRS	**Korea Array**	**37.41**	**3**	P	**P**	**01 42 48.2**	**+0.2**
	comp=Z,4.1nm,0.8s,baz=182,slow=9.5,SNR=24						
	comp=Z,4.1nm,0.8s						
XAN	**Xi'an**	**37.44**	**337**	P	**P**	**01 42 48.6**	**+0.2**
XAN				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KS19	**Wonju Array Si**	**37.46**	**3**	P	**P**	**01 42 47.8**	**-0.6**
KS19				IAmb	IAmb	01 42 54.5	
	comp=Z,5.3nm,0.8s						
MJAR	**Matsushiro Arr**	**38.24**	**16**	P	**P**	**01 42 53.0**	**-2.1**
	comp=Z,1.6nm,0.9s,baz=187,slow=8.0,SNR=6.9						
	comp=Z,1.6nm,0.9s						
LZH	**Lanzhou**	**41.35**	**333**	*e*P	**P**	**01 43 24.2**	**+3.1**
LZH				pP	pP	01 43 32.3	-1.4
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
HHC	**Hu-ho-hao-te**	**42.74**	**344**	*e*P	**P**	**01 43 35.1**	**+2.8**
HHC				pmax	pmax		
	comp=Z,22nm,1.1s						
HHC				pmax	pmax		
	comp=Z,130nm,5.1s						
USA0B	**Ussuriysk Arra**	**44.45**	**6**	P	**P**	**01 43 45.3**	**-0.5**
USA0B				IAmb	IAmb	01 43 53.9	
	comp=Z,22nm,1.5s						
USRK	**Ussuriysk Ar.**	**44.45**	**6**	P	**P**	**01 43 45.4**	**-0.5**
	comp=Z,1.8nm,0.5s,baz=214,slow=8.7,SNR=2.8						
	comp=Z,1.8nm,0.5s						
BNX	**BinXian**	**45.66**	**2**	⇑P	**P**	**01 43 57.4**	**+2.0**
BNX				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BNX				pmax	pmax		
	comp=Z,100nm,3.5s						
GTA	**Gaotai**	**45.91**	**332**	*e*P	**P**	**01 43 58.7**	**+1.0**
GTA				pP	pP	01 44 03.7	-6.8
GTA				sP	pwP	01 44 08.0	-5.4
GTA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
GTA				pmax	pmax		
	comp=Z,53nm,6.9s						
GTA				LR	LR		
	comp=N,67nm,15.3s						
GTA				LR	LR		
	comp=E,170nm,17.8s						
GTA				LR	LR		
	comp=Z,88nm,17.1s						
ULN	**Ulaanbaatar**	**50.46**	**344**	P	**P**	**01 44 31.6**	**-1.0**
ULN				IAmb	IAmb	01 44 35.2	
	comp=Z,2.9nm,0.7s						
SONM	**Songino Array**	**50.62**	**343**	P	**P**	**01 44 33.5**	**-0.4**
	comp=Z,3.6nm,1.0s,baz=162,slow=8.5,SNR=12						
SONM				LR	LR	02 10 18.7	
	comp=Z,42nm,18.1s,baz=168,slow=41						
	comp=Z,3.6nm,1.0s						
SONM	**Songino Array**	**50.62**	**343**	P	**P**	**01 44 33.1**	**-0.7**
SONM				IAmb	IAmb	01 44 36.8	
	comp=Z,3.4nm,1.0s						
MSVF	**Nonsavu**	**54.33**	**112**	LR	LR	02 08 21.8	
	comp=Z,57nm,19.3s,baz=218,slow=36						
WMQ	**Urumqi**	**55.32**	**327**	*e*P	**P**	**01 45 10.7**	**+2.2**
PETK	**Petropavlovsk-**	**59.32**	**22**	P	**P**	**01 45 36.8**	**+0.4**
	comp=Z,3.1nm,0.9s,baz=217,slow=6.9,SNR=3.5						
	comp=Z,3.1nm,0.9s						
MK31	**Makanchi Array**	**60.16**	**327**	P	**P**	**01 45 41.3**	**-1.0**
MK31				IAmb	IAmb	01 45 44.1	
	comp=Z,5.0nm,0.5s						
MKAR	**Makanchi Array**	**60.16**	**327**	P	**P**	**01 45 41.1**	**-1.3**
	comp=Z,7.1nm,0.4s,baz=122,slow=8.3,SNR=75						
MKAR				LR	LR	02 12 10.1	
	comp=Z,34nm,21.4s,baz=112,slow=37						
	comp=Z,7.1nm,0.4s						
MAKZ	**Makanchi**	**60.34**	**327**	P	**P**	**01 45 42.4**	**-1.2**
URZ	**Urewera**	**60.50**	**135**	LR	LR	02 14 55.9	
	comp=Z,80nm,18.1s,baz=211,slow=39						
YAK	**Yakutsk**	**62.03**	**2**	LR	LR	02 15 18.8	
	comp=Z,14nm,18.1s,baz=273,slow=38						
KBL	**Kabul**	**63.10**	**309**	P	**P**	**01 46 02.5**	**-0.2**
ZAA0	**Zalesovo Array**	**63.55**	**334**	P	**P**	**01 46 04.4**	**-0.6**
ZAA0				IAmb	IAmb	01 46 06.7	
	comp=Z,5.9nm,1.1s						
ZALV	**Zalesovo Beam**	**63.55**	**334**	P	**P**	**01 46 03.6**	**-1.4**
	comp=Z,2.6nm,0.5s,baz=117,slow=5.2,SNR=12						
ZALV				LR	LR	02 14 21.9	
	comp=Z,15nm,21.6s,baz=218,slow=37						
	comp=Z,2.6nm,0.5s						
GAR	**Garm**	**63.82**	**314**	P	**P**	**01 46 06.4**	**-0.9**
KURK	**Kurchatov**	**64.45**	**329**	P	**P**	**01 46 09.8**	**-1.1**
KK31	**Karatay Array**	**65.38**	**319**	P	**P**	**01 46 17.0**	**-0.2**
KKAR	**Karatay Array**	**65.38**	**319**	P	**P**	**01 46 17.3**	**+0.1**
BRVK	**Borovoye**	**70.06**	**328**	P	**P**	**01 46 46.1**	**-0.4**
BRVK				IAmb	IAmb	01 46 48.5	
	comp=Z,5.4nm,1.1s						
TIXI	**Tiksi**	**71.65**	**1**	P	**P**	**01 46 55.4**	**-0.4**
NRIK	**Noril'sk**	**73.89**	**347**	P	**P**	**01 47 08.2**	**-0.9**
	comp=Z,2.2nm,0.4s,baz=129,slow=3.9,SNR=2.1						
	comp=Z,2.2nm,0.4s						
NRIK	**Noril'sk**	**73.89**	**347**	P	**P**	**01 47 08.1**	**-0.9**
NRIK				IAmb	IAmb	01 47 13.9	
	comp=Z,3.9nm,0.9s						
ABKAR	**Akbulak array**	**74.49**	**322**	P	**P**	**01 47 11.6**	**-1.3**
AKTO	**Aktyubinsk**	**76.04**	**322**	LR	LR	02 23 29.6	
	comp=Z,24nm,21.5s,baz=146,slow=38						
ARU	**Arti**	**77.64**	**328**	P	**P**	**01 47 29.4**	**-1.3**
ARU				IAmb	IAmb	01 47 30.4	
	comp=Z,5.4nm,0.8s						
KBZ	**Khabaz**	**84.88**	**314**	P	**P**	**01 48 09.4**	**0.0**
	comp=Z,2.9nm,0.8s,baz=154,slow=4.7,SNR=5.5						
	comp=Z,2.9nm,0.8s						
MARD	**Mardin**	**86.04**	**307**	P	**P**	**01 48 14.8**	**-0.7**
KOPT	**Kop Dagi**	**86.41**	**310**	P	**P**	**01 48 16.1**	**-1.4**
KOPT				IAmb	IAmb	01 48 28.3	
	comp=Z,7.9nm,1.0s						
ILAR	**Eielson Array**	**88.96**	**25**	P	**P**	**01 48 28.7**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=276,slow=5.8,SNR=1.9						
	comp=Z,0.2nm,0.5s						
EIL	**Elat**	**90.73**	**300**	LR	LR	02 36 44.8	
	comp=Z,40nm,18.0s,baz=91,slow=41						
BR131	**Keskin Array S**	**91.68**	**310**	P	**P**	**01 48 40.7**	**-1.5**
BR131				IAmb	IAmb	01 48 50.1	
	comp=Z,1.3nm,0.8s						
BRTR	**Keskin Array B**	**91.68**	**310**	P	**P**	**01 48 41.9**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=118,slow=8.3,SNR=3.7						
	comp=Z,0.4nm,0.6s						
AKASG	**Malin Array Be**	**94.21**	**321**	LR	LR	02 33 48.7	
	comp=Z,10nm,21.5s,baz=98,slow=37						
BURAR	**Bucovina Array**	**97.17**	**318**	P	**P**	**01 49 05.5**	**-1.6**
BURAR				IAmb	IAmb	01 49 07.8	
	comp=Z,1.2nm,0.8s						
TORD	**Torodi Ar. Bea**	**123.07**	**286**	PKP	**PKPdf**	**01 54 31.9**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=22,slow=2.0,SNR=4.3						
TORD	**Torodi Ar. Bea**	**123.07**	**286**		**PKPdf**	**01 54 30.7**	**-1.1**

*IDC **12** 01:38:29.9±2.3, 31°.87S×69°.56W, h98km±21km, mb3.2/3, mbtmp3.7/7, Error ellipse: s-maj=40.7km s-min=16.9km az=93.0*
*NEIC **12** 01:38:30.4±0.7, 31°.86S±0°.06×69°.94W±0°.09, h163km±10km, Error ellipse: s-maj=11.7km s-min=7.9km az=78.0*
*GUC **12** 01:38:31.7±0.8, 31°.89S×69°.92W, h153km±4km, ML4.0*

ISC 12 01:38:30.8±0.7,**31°.86S**±0°.04×**69°.98W**±0°.08,**h155**km±7km, **n72,** σ1§**19**/95,**mb3.4**/4,**22C-3D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VA03	**San Esteban**	**1.02**	**208**		**Pn**	**01 38 56.5**	**+0.2**
VA03	**San Esteban**	**1.02**	**208**	*e*P	**Pn**	**01 38 56.4**	**+0.1**
VA03				*e*S	**Sn**	**01 39 15.1**	**-0.9**
VA03				IAML		01 39 16.1	
	comp=N,8µm,0.4s						
CO02	**Combarbal**	**1.09**	**307**		**Pn**	**01 38 57.8**	**+0.8**
CO02	**Combarbal**	**1.09**	**307**	*e*P	**Pn**	**01 38 57.9**	**+0.9**
CO02				*e*S	**Sn**	**01 39 17.1**	**+0.2**
CO02				IAML		01 39 19.5	
	comp=N,6µm,0.1s						
ZON	**Zonda**	**1.15**	**75**	Pn	Pn	01 38 51.3	-6.1
CO03	**El Pedregal**	**1.18**	**329**		**Pn**	**01 38 58.2**	**+0.4**
CO03	**El Pedregal**	**1.18**	**329**	⇑*e*P	**Pn**	**01 38 58.1**	**+0.4**
CO03				*i* S	**Sn**	**01 39 18.2**	**-0.2**
CO03				IAML		01 39 19.6	
	comp=E,3µm,0.2s						
VA06	**Catapilco**	**1.32**	**238**		**Pn**	**01 38 59.6**	**+0.7**
VA06	**Catapilco**	**1.32**	**238**	⇑*e*P	**Pn**	**01 38 59.6**	**+0.7**
VA06				*i* S	**Sn**	**01 39 20.4**	**-0.1**
VA06				IAML		01 39 22.4	
	comp=E,2µm,0.5s						
ROCH	**El Roble**	**1.41**	**218**	⇑*e*P	**Pn**	**01 39 00.8**	**+0.7**
ROCH				⇑*e* P	**Pn**	**01 39 00.7**	**+0.7**
ROCH				*i* S	**Sn**	**01 39 22.4**	**-0.2**
ROCH				*e*S	**Sn**	**01 39 22.6**	**0.0**
ROCH				IAML		01 39 25.5	
	comp=E,2µm,0.5s						
ROCH				IAML		01 39 28.0	
	comp=N,2µm,0.3s						
PEL	**Peldehue**	**1.41**	**205**		**Pn**	**01 38 59.9**	**0.0**
PEL	**Peldehue**	**1.41**	**205**	⇑*e*P	**Pn**	**01 39 00.2**	**+0.3**
PEL				*e*S	**Sn**	**01 39 21.5**	**-0.8**
PEL				IAML		01 39 24.2	
	comp=E,2µm,0.5s						
ROC1	**El Roble**	**1.42**	**218**		**Pn**	**01 39 00.7**	**+0.5**
FCH	**Farellones**	**1.49**	**190**	⇑*e*P	**Pn**	**01 39 01.3**	**+0.4**
FCH				*e*S	**Sn**	**01 39 23.9**	**-0.3**
FCH				IAML		01 39 29.6	
	comp=E,1µm,0.3s						
MT05	**Renca**	**1.66**	**203**		**Pn**	**01 39 02.8**	**+0.3**
MT05	**Renca**	**1.66**	**203**	⇑*e*P	**Pn**	**01 39 03.1**	**+0.6**
MT05				*e*S	**Sn**	**01 39 26.1**	**-0.7**
MT05				IAML		01 39 29.7	
	comp=E,3µm,0.4s						
MT03	**Universidad Ad**	**1.69**	**195**		**Pn**	**01 39 03.4**	**+0.5**
MT03	**Universidad Ad**	**1.69**	**195**	⇑*e*P	**Pn**	**01 39 03.3**	**+0.5**
MT03				⇑*e*		01 39 03.3	
MT03				*e*S	**Sn**	**01 39 26.4**	**-1.2**
MT03				IAML		01 39 30.4	
	comp=E,3µm,0.2s						
MT02	**Curacav**	**1.71**	**215**		**Pn**	**01 39 02.9**	**0.0**
MT02	**Curacav**	**1.71**	**215**	⇑*e*P	**Pn**	**01 39 03.3**	**+0.4**
MT02				*e*S	**Sn**	**01 39 26.4**	**-1.3**
MT02				IAML		01 39 29.9	
	comp=E,729nm,0.4s						
GO04	**Tololo Observa**	**1.82**	**337**		**Pn**	**01 39 04.6**	**+0.1**
GO04	**Tololo Observa**	**1.82**	**337**	⇑*e*P	**Pn**	**01 39 04.6**	**+0.1**
GO04				*e*S	**Sn**	**01 39 28.9**	**-1.5**
VA01	**Torpederas**	**1.83**	**230**		**Pn**	**01 39 05.1**	**+0.9**
VA01	**Torpederas**	**1.83**	**230**	⇑*e*P	**Pn**	**01 39 04.8**	**+0.6**
VA01				*e*S	**Sn**	**01 39 29.6**	**-0.3**
VA01				IAML		01 39 35.8	
	comp=N,816nm,0.1s						
CO06	**Fray Jorge**	**1.85**	**309**		**Pn**	**01 39 05.0**	**+0.5**
CO06	**Fray Jorge**	**1.85**	**309**	⇓*e*P	**Pn**	**01 39 05.7**	**+1.2**
CO06				*e*S	**Sn**	**01 39 30.7**	**+0.3**
CO06				IAML		01 39 41.6	
	comp=E,448nm,0.2s						
CO01	**Juntas del Tor**	**1.88**	**357**		**Pn**	**01 39 05.3**	**+0.2**
CO01	**Juntas del Tor**	**1.88**	**357**	⇑*e*P	**Pn**	**01 39 05.7**	**+0.6**
CO01				*e*S	**Sn**	**01 39 31.9**	**+0.4**
CO01				IAML		01 39 34.3	
	comp=E,685nm,0.4s						
LMEL	**Las Melosas**	**1.99**	**185**		**Pn**	**01 39 06.6**	**+0.3**
LMEL	**Las Melosas**	**1.99**	**185**	⇑*e*P	**Pn**	**01 39 06.6**	**+0.3**
LMEL				*e*S	**Sn**	**01 39 32.0**	**-1.7**
LMEL				IAML		01 39 41.3	
	comp=N,603nm,0.2s						
MT09	**Talagante**	**2.09**	**204**		**Pn**	**01 39 07.6**	**+0.2**
MT09	**Talagante**	**2.09**	**204**	⇑*e*P	**Pn**	**01 39 07.6**	**+0.2**
MT09				*e*S	**Sn**	**01 39 34.9**	**-0.8**
MT09				IAML		01 39 37.5	
	comp=E,660nm,0.4s						
BO04	**La Punta**	**2.19**	**194**		**Pn**	**01 39 08.7**	**+0.2**
BO04	**La Punta**	**2.19**	**194**	⇑*e*P	**Pn**	**01 39 08.9**	**+0.4**
BO04				*e*S	**Sn**	**01 39 36.4**	**-1.3**
BO04				IAML		01 39 39.6	
	comp=N,746nm,0.2s						
CO05	**La Serena**	**2.22**	**330**		**Pn**	**01 39 08.9**	**+0.2**
CO05	**La Serena**	**2.22**	**330**	*e*P	**Pn**	**01 39 09.2**	**+0.5**
CO05				*e*S	**Sn**	**01 39 37.6**	**-0.4**
CO05				IAML		01 39 40.7	
	comp=N,776nm,0.2s						
VA05	**Santo Domingo**	**2.26**	**217**		**Pn**	**01 39 09.3**	**+0.1**
VA05	**Santo Domingo**	**2.26**	**217**	⇑*e*P	**Pn**	**01 39 09.7**	**+0.5**
VA05				*e*S	**Sn**	**01 39 38.1**	**-0.9**
VA05				IAML		01 39 48.3	
	comp=E,825nm,0.3s						
MT01	**Popeta**	**2.27**	**208**		**Pn**	**01 39 09.0**	**-0.3**
MT01	**Popeta**	**2.27**	**208**	⇑*e*P	**Pn**	**01 39 09.5**	**+0.2**
MT01				*e*S	**Sn**	**01 39 38.2**	**-1.0**
MT01				IAML		01 39 42.4	
	comp=E,376nm,0.4s						
BO01	**Tunca**	**2.69**	**200**	Pn	**Pn**	**01 39 14.1**	**-0.4**
BO01	**Tunca**	**2.69**	**200**	⇑*e*P	**Pn**	**01 39 14.4**	**0.0**
BO01				*e*S	**Sn**	**01 39 47.3**	**-1.0**
BO01				IAML		01 39 54.6	
	comp=E,179nm,0.2s						
LCO	**Las Campanas**	**2.91**	**347**	Pn	**Pn**	**01 39 17.6**	**+0.1**
LCO	**Las Campanas**	**2.91**	**347**	⇑*e*P	**Pn**	**01 39 17.6**	**+0.1**
LCO				*e*S	**Sn**	**01 39 52.7**	**-0.8**
BO03	**Pichilemu**	**3.11**	**212**	⇓*e*P	**Pn**	**01 39 19.4**	**-0.3**
BO03				*e*S	**Sn**	**01 39 56.2**	**-1.5**
BO03				IAML		01 40 08.8	
	comp=E,139nm,0.8s						
GO05	**Huala**	**3.54**	**207**		**Pn**	**01 39 24.6**	**-0.6**
AC04	**Llanos de Chal**	**3.76**	**345**	Pn	**Pn**	**01 39 28.0**	**-0.1**
AC04	**Llanos de Chal**	**3.76**	**345**	⇑*e*P	**Pn**	**01 39 28.1**	**-0.1**
AC04				*e*S	**Sn**	**01 40 10.6**	**-2.1**
ML02	**Panimavida**	**4.07**	**197**		**Pn**	**01 39 31.4**	**-0.7**
GO03	**Copiap**	**4.26**	**357**		**Pn**	**01 39 34.1**	**-0.5**
GO03	**Copiap**	**4.26**	**357**	⇓*e*P	**Pn**	**01 39 34.1**	**-0.5**
GO03				*i* S	**Sn**	**01 40 21.2**	**-3.1**
AC06	**Mina Casimiro**	**4.50**	**356**		**Pn**	**01 39 37.0**	**-0.8**
AC02	**Maricunga**	**5.06**	**9**	Pn	**Pn**	**01 39 44.5**	**-1.1**
BI05	**Punta Hualpn**	**5.55**	**208**	Pn	**Pn**	**01 39 49.7**	**-1.8**
GO02	**Mina Guanaco**	**6.68**	**3**	Pn	**Pn**	**01 40 05.2**	**-1.8**
H03N1	**Juan Fernandez**	**7.70**	**256**	T	T	01 47 19.0	
	baz=86,slow=73,SNR=57						
H03N3	**Juan Fernandez**	**7.71**	**256**	T	T	01 47 23.5	
	baz=86,slow=73,SNR=66						
H03N2	**Juan Fernandez**	**7.71**	**256**	T	T	01 47 20.1	
	baz=86,slow=73,SNR=33						
PLCA	**Paso Flores**	**8.87**	**183**	P	**Pn**	**01 40 35.5**	**-0.2**
	comp=E,0.9nm,0.3s,baz=343,slow=15,SNR=2.9						
PLCA				S	**Sn**	**01 42 14.9**	**+0.6**
	comp=E,0.9nm,0.5s,baz=345,slow=20,SNR=1.5						
LVC	**Limon Verde**	**9.26**	**6**	P	**Pn**	**01 40 39.2**	**-2.2**
	comp=E,1.4nm,0.3s,baz=145,slow=6.8,SNR=8.6						
LVC				S	**Sn**	**01 42 24.6**	**+0.2**
	comp=E,3.8nm,0.6s,baz=96,slow=17,SNR=1.9						
LVC	**Limon Verde**	**9.26**	**6**	Pn	**Pn**	**01 40 39.6**	**-1.7**
PB16	**IPOC Station P**	**13.47**	**2**	Pn	**Pn**	**01 41 33.7**	**-2.8**
PB18	**Visviri**	**14.21**	**2**	Pn	**Pn**	**01 41 42.7**	**-3.1**
LPAZ	**La Paz**	**15.59**	**7**	P	**P**	**01 42 05.4**	**+1.4**
	comp=E,2.3nm,0.7s,baz=142,slow=6.3,SNR=8.5						
LPAZ	**La Paz**	**15.59**	**7**	Pn	**Pn**	**01 42 02.2**	**-0.8**
LPAZ				IAmb	IAmb	01 42 07.7	
	comp=Z,5.5nm,1.1s						
SIV	**San Ignacio**	**17.76**	**29**	P	**Pn**	**01 42 29.0**	**+0.4**
	comp=Z,3.0nm,0.6s,baz=205,slow=12,SNR=12						
PMSA	**Palmer Station**	**33.14**	**175**	P	**P**	**01 44 50.6**	**-1.3**
PMSA				IAmb	IAmb	01 44 52.4	
	comp=Z,84nm,1.4s						
TXAR	**Lajitas Array**	**68.76**	**329**	P	P	01 49 25.3	+7.3
	comp=Z,0.3nm,0.6s,baz=154,slow=6.9,SNR=3.9						
	comp=Z,0.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**81.84**	**69**	P	**P**	**01 50 36.5**	**+3.5**
	comp=Z,0.5nm,0.6s,baz=260,slow=5.6,SNR=5.9						
	comp=Z,0.5nm,0.6s						
NVAR	**Mina Array Bea**	**83.15**	**324**	P	P	01 50 45.2	+5.7
	comp=Z,0.3nm,0.7s,baz=116,slow=6.1,SNR=1.6						
	comp=Z,0.3nm,0.7s						
ZALV	**Zalesovo Beam**	**151.50**	**32**	PKPbc	**PKPab**	**01 58 11.4**	**-3.4**
	comp=Z,2.1nm,0.5s,baz=328,slow=2.5,SNR=11						
MKAR	**Makanchi Array**	**154.05**	**47**	PKPab	**PKPab**	**01 58 30.7**	**+4.7**
	comp=Z,0.1nm,0.5s,baz=329,slow=4.5,SNR=3.6						

*NEIC **12** 01:44:26.9±1.6, 19°.22N±0°.09×145°.6E±0°.1, h143km±7km, mb4.4/56, Error ellipse: s-maj=19.4km s-min=12.3km az=77.0*
*IDC **12** 01:44:28.8±1.9, 19°.22N×145°.50E, h173km±18km, mb3.6/15, mbtmp4.1/18, Error ellipse: s-maj=20.0km s-min=10.3km az=81.0*

ISC 12 01:44:27.1±0.5,**19°.29N**±0°.06×**145°.7E**±0°.1,**h150**km,**n157,** σ1§**16**/144,**mb4.3**/43,**1D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.72**	**188**	P	**Pn**	**01 45 50.8**	**+0.6**
	54nm,0.3s,baz=37,slow=1.6,SNR=18						
GUMO				S	**Sn**	**01 46 56.0**	**+0.9**
	30nm,0.3s,baz=19,slow=20,SNR=1.2						
GUMO	**Guam**	**5.72**	**188**	Pn	**Pn**	**01 45 49.0**	**-1.1**
JCJ	**Chichijima**	**8.41**	**338**	P	**Pn**	**01 46 26.9**	**+0.

O17K	**Koliganek Bris**	57.18	30	P	P	01 53 59.4	+1.3
	baz=251						
ZAA0	**Zalesovo Array**	57.55	322	P	P	01 54 02.0	+1.2
ZAA0				IAmb	IAmb	01 54 06.6	
	comp=Z,1.7nm,0.5s						
ZALV	**Zalesovo Beam**	57.55	322	P	P	01 54 00.2	-0.5
	comp=Z,0.7nm,0.5s,baz=113,slow=5.7,SNR=2.4						
	comp=Z,0.7nm,0.5s						
N18K	**Kilae Creek**	58.04	30	P	P	01 54 05.8	+1.7
	baz=252						
MKAR	**Makanchi Array**	58.05	314	P	P	01 54 03.3	-1.2
	comp=Z,0.2nm,0.3s,baz=86,slow=7.8,SNR=2.4						
	comp=Z,0.2nm,0.3s						
O18K	**Koktuh Hills**	58.11	31	P	P	01 54 06.4	+1.8
	baz=253						
TTA	**Tatalina**	58.73	27	P	P	01 54 10.2	+1.2
	baz=250						
N19K	**Bonanza Creek**	58.74	30	P	P	01 54 09.9	+0.8
N19K				IAmb	IAmb	01 54 12.0	
	comp=Z,5.1nm,0.8s						
N19K	**Bonanza Creek**	58.74	30	P	P	01 54 10.5	+1.4
	baz=253						
L19K	**White Mountain**	58.99	28	P	P	01 54 12.4	+1.6
	baz=252						
L20K	**Farewell, AK**	59.52	28	P	P	01 54 15.7	+1.4
	baz=252						
M20K	**Styx River**	59.68	29	P	P	01 54 17.0	+1.5
	baz=254						
K20K	**Telida**	59.70	27	P	P	01 54 16.6	+1.0
K20K				IAmb	IAmb	01 54 18.3	
	comp=Z,3.3nm,0.8s						
K20K	**Telida**	59.70	27	P	P	01 54 17.5	+1.9
	baz=252						
J20K	**Nowinta River**	59.93	26	P	P	01 54 18.2	+1.1
J20K				IAmb	IAmb	01 54 19.4	
	comp=Z,3.0nm,0.6s						
J20K	**Nowinta River**	59.93	26	P	P	01 54 18.7	+1.6
	baz=251						
SKT	**Skwentna**	60.43	29	P	P	01 54 20.8	+0.2
	baz=255						
CAST	**Castle Rocks**	60.58	27	P	P	01 54 22.7	+1.2
CAST	**Castle Rocks**	60.58	27	P	P	01 54 22.8	+1.2
	baz=254,SNR=12						
CHUM	**Lake Minchumin**	60.61	27	P	P	01 54 22.6	+0.9
	baz=253,SNR=5.4						
SUA	**Susitna One**	60.66	30	P	P	01 54 23.6	+1.4
	baz=256						
IMAR	**Indian Mountai**	60.69	24	P	P	01 54 23.3	+1.1
H21K	**Melozitna Rive**	60.95	25	P	P	01 54 24.8	+0.8
H21K				IAmb	IAmb	01 54 25.9	
	comp=Z,3.0nm,0.7s						
H21K	**Melozitna Rive**	60.95	25	P	P	01 54 25.2	+1.2
	baz=252						
RC01	**Rabbit Creek A**	61.05	30	P	P	01 54 25.1	+0.4
	baz=257						
I21K	**Tanana**	61.13	25	P	P	01 54 26.3	+1.1
I21K				IAmb	IAmb	01 54 27.6	
	comp=Z,3.6nm,0.8s						
I21K	**Tanana**	61.13	25	P	P	01 54 26.8	+1.7
	baz=253,SNR=5.8						
BPAW	**Bear Paw Mtn.**	61.23	27	P	P	01 54 26.2	+0.2
BPAW	**Bear Paw Mtn.**	61.23	27	P	P	01 54 27.2	+1.2
	baz=254,SNR=14						
TRF	**Thorofare Moun**	61.36	27	P	P	01 54 27.7	+0.7
TRF	**Thorofare Moun**	61.36	27	P	P	01 54 27.2	+0.2
	baz=255						
PMR	**Palmer**	61.45	30	P	P	01 54 27.9	+0.5
	baz=257						
MLY	**Manley**	61.59	26	P	P	01 54 28.9	+0.5
MLY				IAmb	IAmb	01 54 30.4	
	comp=Z,4.3nm,0.7s						
MLY	**Manley**	61.59	26	P	P	01 54 29.6	+1.2
	baz=254,SNR=9.4						
KNK	**Knik Glacier**	61.72	30	P	P	01 54 30.0	+0.7
	baz=258						
SML	**Sawmill**	61.86	29	P	P	01 54 30.9	+0.7
SML	**Sawmill**	61.86	29	P	P	01 54 31.1	+0.9
	baz=258,SNR=7.1						
RND	**Reindeer**	61.98	28	P	P	01 54 31.4	+0.4
RND				IAmb	IAmb	01 54 32.5	
	comp=Z,3.3nm,0.8s						
MCK	**McKinley**	62.02	27	P	P	01 54 31.7	+0.5
	baz=256						
M23K	**Glacier View**	62.14	30	P	P	01 54 32.5	+0.4
	baz=259						
NEA2	**Nenana**	62.17	26	IAmb	IAmb	01 54 34.4	
	comp=Z,4.2nm,0.9s						
NEA2	**Nenana**	62.17	26	P	P	01 54 32.3	+0.1
	baz=256						
I23K	**Minto, Yukon-K**	62.19	26	P	P	01 54 33.6	+1.3
	baz=255,SNR=8.5						
H23K	**Yukon River**	62.29	25	P	P	01 54 33.8	+0.8
H23K				IAmb	IAmb	01 54 35.2	
	comp=Z,3.4nm,0.8s						
H23K	**Yukon River**	62.29	25	P	P	01 54 34.4	+1.4
	baz=255,SNR=7.3						
WAT6	**Susitna Watana**	62.30	29	P	P	01 54 34.0	+0.8
	baz=258,SNR=5.0						
SCM	**Sheep Creek Mo**	62.34	30	P	P	01 54 34.4	+1.0
	baz=259,SNR=7.4						
COLD	**Coldfoot**	62.42	23	P	P	01 54 35.6	+1.8
	baz=254						
WRH	**Wood River Hil**	62.55	27	P	P	01 54 35.2	+0.5
WRH				IAmb	IAmb	01 54 35.6	
	comp=Z,4.1nm,0.6s						
DHY	**Denali Highway**	62.56	28	P	P	01 54 35.1	+0.2
	baz=259						
MDM	**Murphy Dome**	62.60	26	P	P	01 54 36.5	+1.4
EYAK	**Cordova Ski Ar**	62.87	31	P	P	01 54 38.3	+1.5
	baz=261						
KLU	**Klutina**	62.94	30	P	P	01 54 38.1	+0.7
	baz=260						
H24K	**Noodor Dome**	62.95	25	P	P	01 54 38.6	+1.2
	baz=256,SNR=6.8						
HDA	**Harding Lake**	63.02	27	P	P	01 54 37.7	-0.1
	baz=258						
TOLK	**Toolik Lake Re**	63.05	22	P	P	01 54 38.1	+0.1
TOLK	**Toolik Lake Re**	63.05	22	P	P	01 54 39.5	+1.5
	baz=253						
IL31		63.12	26	IAmb	IAmb	01 54 38.7	
	comp=Z,4.6nm,0.9s						
ILAR	**Eielson Array**	63.12	26	P	P	01 54 38.1	-0.4
	comp=Z,3.4nm,0.7s,baz=254,slow=5.2,SNR=34						
	comp=Z,3.4nm,0.7s						
ILAR	**Eielson Array**	63.12	26	P	P	01 54 37.7	-0.8
PAX	**Paxson**	63.39	28	P	P	01 54 41.4	+1.0
	baz=260,SNR=6.0						
HARP	**HAARP**	63.44	29	P	P	01 54 41.9	+1.3
	baz=261						
N25K	**Chitina, Valde**	63.58	30	IAmb	IAmb	01 54 43.7	
	comp=Z,3.2nm,0.7s						
N25K	**Chitina, Valde**	63.58	30	P	P	01 54 42.7	+1.1
	baz=262						
J25K	**Salcha River,**	63.73	27	P	P	01 54 42.4	-0.2
J25K	**Salcha River,**	63.73	27	P	P	01 54 42.3	-0.2
	baz=259,SNR=7.1						
RIDG	**Independent Ri**	63.80	28	P	P	01 54 43.4	+0.4
	baz=260,SNR=8.8						
GLB	**Gilahina Butte**	63.93	30	P	P	01 54 44.8	+0.9
GLB				IAmb	IAmb	01 54 46.4	
	comp=Z,6.1nm,1.0s						
SCRK	**Sand Creek**	64.22	27	IAmb	IAmb	01 54 47.2	
	comp=Z,4.7nm,1.0s						
SCRK	**Sand Creek**	64.22	27	P	P	01 54 46.2	+0.4
	baz=261,SNR=9.6						
M26K	**Nabesna, AK**	64.44	29	P	P	01 54 47.9	+0.7
	baz=263						
J26L	**Joseph Creek**	64.48	27	IAmb	IAmb	01 54 48.7	
	comp=Z,5.7nm,0.8s						
J26L	**Joseph Creek**	64.48	27	P	P	01 54 47.7	+0.2
	baz=261,SNR=9.9						
BMAR	**Burnt Mountain**	64.58	24	P	P	01 54 49.7	+1.6
I26K	**Coal Creek Min**	64.78	26	P	P	01 54 48.8	-0.5
	baz=261						
M27K	**Edge Creek, AK**	64.95	29	P	P	01 54 50.9	+0.2
	baz=264						
L27K	**Beaver Creek,**	65.05	29	IAmb	IAmb	01 54 52.9	
	comp=Z,2.7nm,0.7s						
L27K	**Beaver Creek,**	65.05	29	P	P	01 54 52.0	+0.9
	baz=263						
K27K	**Chicken**	65.06	28	P	P	01 54 52.3	+1.2
	baz=263						
DAWY	**Dawson**	66.24	28	P	P	01 54 60.0	+1.2
	baz=265						
KKAR	**Karatay Array**	66.39	309	P	P	01 54 59.7	-0.4
HYT	**Haines Junctio**	66.93	31	P	P	01 55 04.4	+1.1
HYT				IAmb	IAmb	01 55 05.9	
	comp=Z,7.0nm,0.7s						
GAR	**Garm**	66.94	305	P	P	01 55 04.0	+0.3
GAR				IAmb	IAmb	01 55 05.6	
	comp=Z,9.6nm,1.3s						
N30M	**Aishikik Lake**	67.15	31	P	P	01 55 06.1	+1.5
	baz=268						
P30M	**Million Dollar**	67.18	32	P	P	01 55 06.4	+1.6
	baz=269						
M30M	**Minto, Yukon**	67.32	29	P	P	01 55 06.9	+1.3
	baz=268						
M31M	**Drury Creek, Y**	68.44	30	P	P	01 55 13.6	+1.0
	baz=270						
INK	**Inuvik**	68.84	23	P	P	01 55 14.6	-0.3
	comp=Z,2.5nm,0.7s,baz=300,slow=1.2,SNR=5.6						
	comp=Z,2.5nm,0.7s						
INK	**Inuvik**	68.84	23	P	P	01 55 15.6	+0.7
	baz=269						
DLBC	**Dease Lake**	70.81	34	IAmb	IAmb	01 55 29.2	
	comp=Z,4.2nm,0.7s						
DLBC	**Dease Lake**	70.81	34	P	P	01 55 28.7	+1.5
	baz=276						
YKA	**Yellowknife Ar**	77.47	28	P	P	01 56 05.9	+0.2
	comp=Z,2.0nm,0.6s,baz=291,slow=5.2,SNR=9.4						
	comp=Z,2.0nm,0.6s						
J05D	**Fort Rock, OR**	79.20	48	P	P	01 56 16.8	+1.0
	baz=286						
PINE	**Pine Mountain**	79.27	47	P	P	01 56 17.2	+1.0
PINE				IAmb	IAmb	01 56 18.3	
	comp=Z,9.7nm,0.8s						
HAWA	**Hanford**	79.48	45	P	P	01 56 16.3	-0.8
NEW	**Newport**	80.48	42	P	P	01 56 22.2	-0.2
WVOR	**Wild Horse Val**	81.28	48	P	P	01 56 26.7	-0.2
ARCES	**ARCESS Array B**	81.93	342	P	P	01 56 29.2	-0.5
	comp=Z,0.7nm,0.4s,baz=76,slow=7.5,SNR=15						
	comp=Z,0.7nm,0.4s						
ARCES	**ARCESS Array B**	81.93	342	IAmb	IAmb	01 56 34.2	
	comp=Z,1.1nm,1.4s						
KVN	**Kaiserville**	82.73	51	P	P	01 56 34.6	-0.1
NVAR	**Mina Array Bea**	82.78	52	P	P	01 56 35.8	+0.9
	comp=Z,3.9nm,0.8s,baz=263,slow=6.2,SNR=33						
	comp=Z,3.9nm,0.8s						
HLID	**Hailey**	83.83	46	P	P	01 56 40.2	0.0
MPMC	**Manual Prospec**	84.17	54	P	P	01 56 42.5	+0.4
	baz=290						
ELK	**Elko**	84.24	49	P	P	01 56 42.5	+0.2
R11A	**Troy Canyon, C**	84.82	51	P	P	01 56 45.3	0.0
	baz=290						
BOZ	**Bozeman (W)**	84.94	43	P	P	01 56 46.3	+0.6
GSC	**Goldstone, Bar**	84.95	54	P	P	01 56 46.1	+0.3
	baz=290						
GMRC	**Granite Mounta**	86.01	55	P	P	01 56 51.1	-0.1
	baz=291						
FINES	**FINESS Array B**	86.35	335	P	P	01 56 49.6	-2.4
	comp=Z,2.0nm,0.4s,baz=73,slow=4.7,SNR=45						
	comp=Z,2.0nm,0.4s						
HWUT	**Hardware Ranch**	86.51	47	P	P	01 56 54.0	+0.5
HWUT				IAmb	IAmb	01 56 54.6	
	comp=Z,3.2nm,0.8s						
PDAR	**Pinedale Array**	87.42	45	P	P	01 56 57.6	-0.3
	comp=Z,0.5nm,0.5s,baz=171,slow=0.9,SNR=7.4						
	comp=Z,0.5nm,0.5s						
WUAZ	**Wupatki**	89.00	53	P	P	01 57 05.9	+0.4
WUAZ				IAmb	IAmb	01 57 07.2	
	comp=Z,4.2nm,0.9s						
214A	**Organ Pipe Nat**	89.26	56	P	P	01 57 07.3	+0.7
	baz=292						
N23A	**Red Feather La**	90.66	46	P	P	01 57 13.8	+0.6
	baz=296						
SUW	**Suwalki**	91.98	330	*e*P	P	01 57 19.1	+0.4
NOA	**NORSAR Array B**	92.02	340	P	P	01 57 16.5	-2.4
	comp=Z,0.1nm,0.6s,baz=54,slow=6.8,SNR=1.1						
	comp=Z,0.1nm,0.6s						
TXAR	**Lajitas Array**	97.51	56	P	P	01 57 44.5	-0.1
	comp=Z,0.1nm,0.6s,baz=282,slow=4.5,SNR=1.6						
	comp=Z,0.1nm,0.6s						
PB11	**IPOC Station P**	146.72	97	PKPbc	PKPbc	02 03 51.4	-0.9
LPAZ	**La Paz**	147.69	90	PKPbc	PKPbc	02 03 54.4	-1.3
	comp=Z,2.3nm,1.0s,baz=356,slow=2.2,SNR=4.3						
LPAZ	**La Paz**	147.69	90	PKPbc	PKPdf	02 03 52.2	-0.4

*MAN **12** 01:49:57.7, 3.°75N×129.°06E, h18km, mb5.0, ML3.9, MS4.0*
*DJA **12** 01:49:59.6±0.7, 3.°7N±5.°×12.°9E±.°, h18km±4km, M4.6/10, mb4.8/7, mB5.2/2, MLv4.5/10, Mw(mB)4.5/2*
*IDC **12** 01:50:00.1±1.9, 3.°46N×128.°95E, h41km±19km, mb3.9/10, mbtmp4.2/12, ML4.7/2, MS3.2/4, Error ellipse: s-maj=31.2km s-min=9.4km az=62.0*
*NEIC **12** 01:50:03.4±1.3, 3.°38N±0.°09×128.°8E±0.°1, h68km±7km, mb4.4/26, Error ellipse: s-maj=16.9km s-min=13.0km az=71.0*

ISC 12 01:49:59.7±0.5, 3.°50N±0.°05×128.°95E±0.°07, h35km, n63, σ1°36/62, mb4.4/20, MS3.0/3, 2C, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
TNTI	**Ternate**	3.13	210	Pn	Pn	01	50	48.0	+1.3
TNTI	**Ternate**	3.13	210	P	Pn	01	50	47.3	+0.7
SGSI	**Sangihe**	3.42	273	P	Pn	01	50	49.7	-0.8
SGSI				S	Sn	01	51	29.4	-0.5
LBMI	**Labuha**	4.35	199	P	Pn	01	51	04.3	+0.9
LBMI				S	Sn	01	51	54.4	+1.4
GSPH	**General Santos**	4.74	303	*e*P	Pn	01	51	06.3	-2.6
DAV	**Davao City (W)**	4.88	317	P	Pn	01	51	13.3	+2.6
	69nm,0.3s,baz=254,slow=2.8,SNR=4.7								
DAV				S	Sn	01	52	06.4	+0.3
	136nm,0.4s,baz=248,slow=9.9,SNR=1.7								
	212nm,0.5s								
SWI	**Sorong**	4.91	152	P	Pn	01	51	11.6	+0.6
SIJI	**Sorong**	4.92	152	P	Pn	01	51	12.2	+1.1
	12nm,0.3s,baz=252,slow=22,SNR=61								
SIJI				S	Sn	01	52	06.0	-0.8
	40nm,0.4s,baz=211,slow=23,SNR=12								
SIJI				LR	LR	01	53	13.3	
	comp=Z,158nm,18.5s,baz=205,slow=40								
	28nm,0.3s								
KCP	**Kidapawan**	5.19	312	*e*P	Pn	01	51	15.1	+0.1
KCP				*i* S	Sn	01	52	15.7	+2.0
SANI	**Sanana**	6.25	208	P	Pn	01	51	28.4	-1.1
	0.1nm41nm,0.9s								
FAKI	**Fak Fak**	7.18	153	Pn	Pn	01	51	43.4	+1.1
FAKI	**Fak Fak**	7.18	153	P	Pn	01	51	43.9	+1.7
	0.3nm57nm,1.2s								
MRSI	**Marisa**	7.62	247	P	Pn	01	51	51.0	+2.7
	0.9nm3µm247nm,0.7s								
TOLI2	**Tolitoli**	8.49	254		Pn	01	52	00.1	-0.3
MPSI	**Mapaga**	9.57	251	P	Pn	01	52	18.6	+3.5
	15nm,0.7s								
RCP	**Roxas**	10.10	323	*e*P	Pn	01	52	23.2	+0.9
MYLDM	**Lahad Datu**	10.55	279		Pn	01	52	31.6	+3.0
MTN	**Manton Dam**	16.38	172	Pn	Pn	01	53	46.9	-0.2
MTN				IAmb	IAmb	01	54	13.8	
	comp=Z,68nm,1.4s								
GUMO	**Guam**	18.65	57	P	Pn	01	54	17.0	+1.8
KNRA	**Kununurra**	19.05	181	P	Pn	01	54	18.6	-0.5
KNRA				IAmb	IAmb	01	54	44.7	
	comp=Z,52nm,1.4s								
WB0	**Warramunga Arr**	23.73	167	P	P	01	55	08.6	-0.2
WB0				IAmb	IAmb	01	55	25.5	
	comp=Z,21nm,1.4s								
WRA	**Warramunga Arr**	23.89	167	P	P	01	55	10.0	-0.3
	comp=Z,5.0nm,0.7s,baz=346,slow=10,SNR=16								
	comp=Z,5.0nm,0.7s								
WB2	**Warramunga Arr**	23.89	167	P	P	01	55	08.7	-1.6
WB2				IAmb	IAmb	01	55	11.7	
	comp=Z,12nm,0.9s								
AS31	**Alice Springs**	27.43	170	P	P	01	55	40.9	-1.5
ASAR	**Alice Springs**	27.43	170	P	P	01	55	42.0	-0.4
	comp=Z,1.3nm,0.7s,baz=353,slow=6.6,SNR=14								
ASAR				PcP	PcP	01	59	00.4	-0.4
	comp=Z,2.1nm,0.5s,baz=351,slow=2.3,SNR=25								
	comp=Z,1.3nm,0.7s								
JHJ	**Hachijo jima 2**	31.17	18	LR	LR	02	07	54.9	
	comp=Z,27nm,18.8s,baz=78,slow=34								
CMAR	**Chiang Mai Arr**	32.91	299	P	P	01	56	31.6	+0.6
	comp=Z,1.9nm,0.2s,baz=134,slow=9.1,SNR=4.6								
	comp=Z,1.9nm,0.2s								
MJAR	**Matsushiro Arr**	33.98	13	P	P	01	56	39.1	-0.9
	comp=Z,1.7nm,0.8s,baz=177,slow=9.6,SNR=9.8								
MJAR				LR	LR	02	09	51.0	
	comp=Z,28nm,19.2s,baz=180,slow=35								
	comp=Z,1.7nm,0.8s								
MJAR	**Matsushiro Arr**	33.98	13	P	P	01	56	41.5	+1.5
MJAR				IAmb	IAmb	01	56	46.4	
	comp=Z,5.7nm,1.2s								
MAJO	**Matsushiro**	33.98	13	P	P	01	56	41.3	+1.2
MJB9	**Matsu-Tunnel**	33.98	13	P	P	01	56	41.8	+1.7

JSD	**Sado**	35.42	13	P	P	01 56 51.4	-1.1
XAN	**Xi'an**	35.66	331	P	P	01 57 01.2	+6.5
XAN				pP	pwP	01 57 12.9	+2.3
XAN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
STKA	**Stephens Creek**	37.18	162	P	P	01 57 06.5	-1.1
	comp=Z,4.7nm,0.5s,baz=340,slow=9.1,SNR=11						
	comp=Z,4.7nm,0.5s						
STKA	**Stephens Creek**	37.18	162	IAmb	IAmb	01 57 07.7	
	comp=Z,1.0nm,0.6s						
H11S3	**WAKE ISLAND Hy**	39.81	65	T	T	02 40 42.8	
	baz=250,slow=75,SNR=6.5						
H11S1	**WAKE ISLAND Hy**	39.83	65	T	T	02 40 44.7	
	baz=250,slow=75						
H11S2	**WAKE ISLAND Hy**	39.83	65	T	T	02 40 44.2	
	baz=250,slow=75,SNR=5.3						
SONM	**Songino Array**	48.25	340	P	P	01 58 38.3	+1.0
	comp=Z,0.3nm,0.4s,baz=157,slow=7.8,SNR=2.1						
SONM				PcP	PcP	02 00 03.7	-0.3
	comp=Z,0.3nm,0.3s,baz=126,slow=2.5,SNR=2.3						
	comp=Z,0.3nm,0.4s						
SONM	**Songino Array**	48.25	340	P	P	01 58 38.4	+1.0
PETK	**Petropavlovsk-**	54.84	21	P	P	01 59 27.5	+1.2
	comp=Z,0.9nm,0.4s,baz=176,slow=4.3,SNR=1.8						
	comp=Z,0.9nm,0.4s						
MK31	**Makanchi Array**	59.02	324	P	P	01 59 55.2	-0.9
MKAR	**Makanchi Array**	59.02	324	P	P	01 59 55.5	-0.6
	comp=Z,1.0nm,0.5s,baz=120,slow=7.4,SNR=12						
	comp=Z,1.0nm,0.5s						
MAKZ	**Makanchi**	59.21	324	P	P	01 59 56.8	-0.6
MAKZ				IAmb	IAmb	02 00 16.7	
	comp=Z,3.2nm,0.9s						
KURK	**Kurchatov**	63.14	327	P	P	02 00 23.0	-0.9
KURK				IAmb	IAmb	02 00 43.4	
	comp=Z,3.4nm,0.7s						
KK31	**Karatay Array**	64.92	316	P	P	02 00 33.8	-2.1
KKAR	**Karatay Array**	64.92	316	P	P	02 00 35.1	-0.8
WSAR	**Wadi Sarin**	70.55	293	LR	LR	02 37 07.3	
	comp=Z,46nm,18.2s,baz=162,slow=40						
ABKAR	**Akbulak array**	73.73	320	P	P	02 01 29.9	-0.4
ARU	**Arti**	76.32	327	P	P	02 01 44.4	-0.6
N19K	**Bonanza Creek**	80.42	29	P	P	02 02 08.4	+0.7
N19K				IAmb	IAmb	02 02 09.7	
	comp=Z,9.3nm,1.3s						
IMAR	**Indian Mountai**	81.66	24	P	P	02 02 14.7	+0.6
H21K	**Melozitna Rive**	81.99	24	P	P	02 02 16.9	+1.1
H21K				IAmb	IAmb	02 02 17.7	
	comp=Z,2.5nm,0.9s						
I21K	**Tanana**	82.25	25	P	P	02 02 19.0	+1.8
I21K				IAmb	IAmb	02 02 19.7	
	comp=Z,5.3nm,1.2s						
MLY	**Manley**	82.75	25	P	P	02 02 20.4	+0.4
MLY				IAmb	IAmb	02 02 21.8	
	comp=Z,4.2nm,1.2s						
VNDA	**Vanda**	82.92	173	P	P	02 02 20.1	-0.3
	comp=Z,1.1nm,0.7s,baz=318,slow=7.0,SNR=6.9						
	comp=Z,1.1nm,0.7s						
VNDA	**Vanda**	82.92	173	IAmb	IAmb	02 02 30.3	
	comp=Z,3.3nm,1.4s						
COLD	**Coldfoot**	83.25	23	P	P	02 02 23.1	+0.8
COLD				IAmb	IAmb	02 02 24.8	
	comp=Z,5.1nm,0.9s						
MCK	**McKinley**	83.39	26	P	P	02 02 24.2	+1.0
ARCES	**ARCESS Array B**	91.43	340	P	P	02 03 00.6	-1.3
	comp=Z,1.6nm,0.8s,baz=81,slow=5.6,SNR=3.6						
	comp=Z,1.6nm,0.8s						
TORD	**Torodi Ar. Bea**	125.09	289	PKP	PKPdf	02 08 56.3	-1.2
	comp=Z,0.3nm,0.7s,baz=40,slow=3.8,SNR=3.0						
CVTR	**Volcan Turrial**	144.76	67		PKPab	02 09 31.2	-2.3
SRBA	**San Rafael, Bu**	145.41	68	PKPbc	PKPbc	02 09 33.4	-1.8

*TRN **12** 02:24:56.0, 18.°23N×63.°80W, h126km, M3.6(RSPR)*
*NEIC **12** 02:24:56.8±1.4, 18.°1N±0.°6×63.°8W±0.°1, h137km±12km, Error ellipse: s-maj=82.6km s-min=20.0km az=177.0*
*RSPR **12** 02:24:58.0, 18.°52N×63.°95W, h138km±2km, MD3.6/6*

ISC 12 02:24:56.9±1.9, 18.°1N±0.°1×63.°84W±0.°05, h135km±14km, n45, σ0°70/53, 7C-6D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
SJVI	**Gifft Hill Sch**	0.91	282	*e*P	Pn	02	25	19.8	+0.4
SJVI	**Gifft Hill Sch**	0.91	282	*e*S	Sn	02	25	36.8	+0.2
SJVI	**Gifft Hill Sch**	0.91	282		Pn	02	25	19.8	+0.4
SJVI					Sn	02	25	36.8	+0.2
CDVI	**St. Croix**	0.97	247	Pn	Pn	02	25	19.2	-0.7
CDVI				IAML		02	25	23.5	
	comp=N,68nm,0.5s								
CDVI				IAML		02	25	26.2	
	comp=E,60nm,0.6s								
CDVI	**St. Croix**	0.97	247	*e*P	Pn	02	25	19.4	-0.5
STVI	**Saint Thomas**	1.08	281	*e*P	Pn	02	25	21.7	+0.7
STVI	**Saint Thomas**	1.08	281		Pn	02	25	21.7	+0.7
STVI	**Saint Thomas**	1.08	281	IAML		02	25	22.4	
	comp=N,82nm,0.1s								
STVI	**Saint Thomas**	1.08	281		Sn	02	25	38.9	-0.4
STVI	**Saint Thomas**	1.08	281	*e*P	Pn	02	25	21.7	+0.7
STVI				*e*S	Sn	02	25	38.9	-0.4
CUPR	**Culebra, Puert**	1.39	277	*e*P	Pn	02	25	24.3	+0.3
CUPR	**Culebra, Puert**	1.39	277	*e*S	Sn	02	25	43.8	-1.0
CUPR	**Culebra, Puert**

0.7nm,0.3s,baz=42,slow=12,SNR=33
MDP Sn Sn 02 30 51.7 -16
0.1nm,0.3s,baz=84,slow=7.1,SNR=1.9
MDP LR LR 02 32 07.1
comp=Z,55nm,19.4s,baz=294,slow=30
7.6nm,1.0s
H10N3 ASCENSION HYDR 38.00 125 T T 03 13 11.8
baz=307,slow=75,SNR=15
H10N2 ASCENSION HYDR 38.00 125 T T 03 13 10.3
baz=307,slow=75,SNR=16
H10N1 ASCENSION HYDR 38.02 125 T T 03 13 13.3
baz=307,slow=75,SNR=21
H10S3 ASCENSION HYDR 38.55 127 T T 03 13 53.5
baz=273
H10S2 ASCENSION HYDR 38.57 127 T T 03 14 00.6
baz=307
LPAZ La Paz 38.79 217 P P 02 33 13.8 +0.5
0.9nm,0.9s,baz=30,slow=10,SNR=4.3
0.9nm,0.9s
TORD Torodi Ar. Bea 45.29 87 P P 02 34 05.5 -0.3
1.4nm,1.0s,baz=284,slow=7.3,SNR=5.6
1.4nm,1.0s
ULM Lac du Bonnet 53.69 322 P P 02 35 08.8 -0.8
2.1nm,0.9s,baz=73,slow=3.8,SNR=4.8
2.1nm,0.9s
ILAR Eielson Array 81.27 335 P P 02 38 04.3 +0.6
0.8nm,0.8s,baz=60,slow=5.1,SNR=9.0
0.8nm,0.8s

IDC ***12*** *02:40:35.4±1.9,2°.03N×95°.78W,h0km, mb4.0/11, mbtmp4.0/11,MS3.6/21,Error ellipse: s-maj=55.0km s-min=18.2km az=41.0*
NEIC ***12*** *02:40:37.9±1.7,2°.1N±0°.1×95°.78W±0°.09,h10km±2km, mb4.3/31,Error ellipse: s-maj=26.1km s-min=3.3km az=217.0*
ISC 12 02:40:37.2±1.3,2°.1N±0°.2×95°.7W±0°.2,h10km,n66, σ0s86/40,mb4.1/19,MS3.6/20,Galapagos Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PAYG	**Puerto Ayora**	**6.10**	**117**	Pn		**Pn**		**02 42 08.5**	**+1.0**
CCIG	**Comitan**	**14.54**	**14**	Pn		**Pn**		**02 44 04.0**	**+0.6**
TLIG	**Tlapa**	**15.62**	**350**	Pn		**Pn**		**02 44 18.5**	**+0.7**
TLIG				IAmb	IAmb			02 44 19.3	
comp=Z,19nm,1.5s									
ARNL	**Arenillas**	**16.63**	**110**	Pn		**Pn**		**02 44 31.0**	**+0.4**
ARNL				IAmb	IAmb			02 44 44.7	
comp=Z,20nm,1.1s									
COHC	**Cochancay**	**17.08**	**105**	Pn		**Pn**		**02 44 36.8**	**+0.5**
BCIP	**Isla Barro Col**	**17.30**	**65**			**P**		**02 44 40.0**	**-0.5**
BCIP				IAmb	IAmb			02 44 41.6	
comp=Z,67nm,1.4s									
PORT	**Chimborazo Vol**	**17.32**	**102**	Pn		**Pn**		**02 44 40.0**	**+0.1**
PORT				IAmb	IAmb			02 44 54.4	
comp=Z,15nm,1.1s									
OTAV	**Otavalo**	**17.37**	**96**			**P**		**02 44 41.5**	**-0.3**
OTAV				IAmb	IAmb			02 44 51.9	
comp=Z,18nm,1.4s									
SLOR	**San Lorenzo -**	**17.46**	**99**			**P**		**02 44 42.6**	**-0.1**
ATAH	**Atahualpa**	**19.58**	**118**	LR		LR		02 50 59.9	
comp=Z,130nm,21.9s,baz=310,slow=32									
ROSC	**El Rosal**	**21.54**	**82**	P		**P**		**02 45 28.2**	**+0.9**
comp=Z,5.9nm,0.4s,baz=71,slow=2.1,SNR=7.2									
comp=Z,5.9nm,0.4s									
ROSC	**El Rosal**	**21.54**	**82**	P		**P**		**02 45 30.0**	**+2.7**
ZAIG	**Zacatecas**	**21.60**	**343**	P		**P**		**02 45 28.5**	**+0.8**
H06E1	**SOCORRO T-PHAS**	**22.29**	**319**	T		T		03 08 22.9	
SNR=4.9									
NNA	**Nana**	**23.41**	**127**	LR		LR		02 52 17.9	
comp=Z,63nm,20.4s,baz=295,slow=30									
SDV	**Santo Domingo**	**25.86**	**74**	P		**P**		**02 46 10.5**	**+1.0**
comp=Z,3.1nm,0.4s,baz=265,slow=11,SNR=5.1									
comp=Z,3.1nm,0.4s									
SDV	**Santo Domingo**	**25.86**	**74**	P		**P**		**02 46 09.7**	**+0.1**
SDV				IAmb	IAmb			02 46 11.8	
comp=Z,13nm,1.1s									
LPIG	**La Paz**	**26.03**	**328**	LR		LR		02 53 54.8	
comp=Z,87nm,21.2s,baz=200,slow=31									
TXAR	**Lajitas Array**	**28.13**	**345**	P		**P**		**02 46 30.5**	**+0.9**
comp=Z,0.6nm,0.7s,baz=163,slow=10,SNR=4.8									
TXAR				LR		LR		02 56 27.4	
comp=Z,86nm,21.8s,baz=152,slow=34									
comp=Z,0.6nm,0.7s									
LPAZ	**La Paz**	**32.82**	**125**	P		**P**		**02 47 11.5**	**-0.4**
comp=Z,0.3nm,0.5s,baz=304,slow=6.7,SNR=1.4									
LPAZ				LR		LR		02 59 11.1	
comp=Z,64nm,18.8s,baz=296,slow=34									
comp=Z,0.3nm,0.5s									
LPAZ	**La Paz**	**32.82**	**125**	P		**P**		**02 47 10.9**	**-1.0**
LPAZ				IAmb	IAmb			02 47 35.0	
comp=Z,8.1nm,1.4s									
X48A	**Hartselle**	**33.20**	**13**	P		**P**		**02 47 13.1**	**-1.2**
X48A				IAmb	IAmb			02 47 14.3	
comp=Z,4.9nm,0.9s									
ANMO	**Albuquerque**	**34.18**	**344**	LR		LR		03 00 22.3	
comp=Z,118nm,18.8s,baz=173,slow=35									
WVT	**Waverly**	**34.65**	**11**	P		**P**		**02 47 25.4**	**-1.5**
PBMO	**Poplar Bluff**	**34.86**	**7**	P		**P**		**02 47 28.1**	**-0.6**
PBMO				IAmb	IAmb			02 47 39.0	
comp=Z,6.5nm,0.9s									
TKL	**Tuckaleechee C**	**35.20**	**17**	LR		LR		03 00 57.0	
comp=Z,63nm,20.4s,baz=183,slow=35									
T47A	**Sharon Grove**	**35.63**	**12**	P		**P**		**02 47 34.7**	**-0.6**
LVC	**Limon Verde**	**35.88**	**135**	LR		LR		02 58 34.3	
comp=Z,82nm,19.2s,baz=240,slow=30									
SIUC	**Southern Illin**	**35.95**	**9**	P		**P**		**02 47 37.9**	**-0.2**
PFO	**Pinyon Flats O**	**36.87**	**331**	LR		LR		03 00 07.8	
comp=Z,125nm,18.6s,baz=159,slow=32									
MVCO	**Mesa Verde**	**36.88**	**343**	P		**P**		**02 47 46.8**	**+0.5**
MVCO				IAmb	IAmb			02 47 48.6	
comp=Z,3.0nm,0.8s									
R49A	**Shelbyville**	**37.30**	**14**	P		**P**		**02 47 49.3**	**-0.3**
LCMT	**Little Creek M**	**38.32**	**337**	P		**P**		**02 47 59.2**	**+0.8**
LCMT				IAmb	IAmb			02 48 15.2	
comp=Z,5.3nm,1.5s									
ISCO	**Idaho Springs**	**38.59**	**348**	P		**P**		**02 48 00.2**	**-0.7**
SIV	**San Ignacio**	**38.68**	**119**	P		**P**		**02 48 00.9**	**-0.6**
comp=Z,1.0nm,0.6s,baz=295,slow=14,SNR=1.6									
comp=Z,1.0nm,0.6s									
H03N2	**Juan Fernandez**	**38.73**	**157**	T		T		03 29 38.5	
baz=333,slow=77,SNR=42									
H03N1	**Juan Fernandez**	**38.74**	**157**	T		T		03 29 39.7	
baz=333,slow=77,SNR=59									
H03N3	**Juan Fernandez**	**38.75**	**157**	T		T		03 29 39.3	
baz=333,slow=77,SNR=40									
DUG	**Dugway, Tooele**	**40.97**	**340**	P		**P**		**02 48 21.5**	**+1.1**
DUG				IAmb	IAmb			02 48 24.4	
comp=Z,11nm,1.5s									
ECSD	**EROS Data Cent**	**41.47**	**359**	P		**P**		**02 48 24.1**	**-0.3**
NVAR	**Mina Array Bea**	**41.65**	**333**	P		**P**		**02 48 26.4**	**+0.2**
comp=Z,0.7nm,0.7s,baz=157,slow=9.0,SNR=7.8									
comp=Z,0.7nm,0.7s									
ELK	**Elko**	**42.33**	**338**	LR		LR		03 05 52.1	
comp=Z,124nm,18.1s,baz=165,slow=36									
ELK	**Elko**	**42.33**	**338**	P		**P**		**02 48 31.8**	**+0.1**
BW06	**Boulder Array**	**42.34**	**345**	P		**P**		**02 48 32.2**	**+0.5**
BW06				IAmb	IAmb			02 48 33.7	
comp=Z,4.0nm,1.1s									
PDAR	**Pinedale Array**	**42.34**	**345**	P		**P**		**02 48 32.1**	**+0.4**
comp=Z,2.5nm,1.0s,baz=152,slow=6.7,SNR=13									
PDAR				LR		LR		03 05 32.7	
comp=Z,163nm,19.2s,baz=170,slow=35									
comp=Z,2.5nm,1.0s									
PDAR	**Pinedale Array**	**42.34**	**345**	P		**P**		**02 48 33.0**	**+1.2**
YHL	**Hebgen Lake**	**44.71**	**344**	P		**P**		**02 48 52.0**	**+1.1**
YHL				IAmb	IAmb			02 48 56.0	
comp=Z,7.5nm,1.3s									
SADO	**Sadowa**	**44.96**	**17**	LR		LR		03 06 51.1	
comp=Z,64nm,20.9s,baz=6.5,slow=35									
PLID	**Pearl Lake**	**46.40**	**340**	P		**P**		**02 49 03.2**	**-1.0**
PLID				IAmb	IAmb			02 49 05.2	
comp=Z,3.1nm,1.1s									
ULM	**Lac du Bonnet**	**47.98**	**360**	P		**P**		**02 49 14.9**	**-1.2**
comp=Z,3.6nm,0.8s,baz=181,slow=8.4,SNR=7.7									
comp=Z,3.6nm,0.8s									
PLCA	**Paso Flores**	**48.42**	**154**	LR		LR		03 05 35.7	
comp=Z,139nm,18.2s,baz=273,slow=31									
NEW	**Newport**	**49.56**	**341**	LR		LR		03 10 18.0	
comp=Z,46nm,18.4s,baz=171,slow=36									
SCHQ	**Schefferville**	**57.60**	**19**	LR		LR		03 15 13.8	
comp=Z,44nm,18.7s,baz=106,slow=36									
YKA	**Yellowknife Ar**	**61.89**	**350**	P		**P**		**02 50 56.6**	**0.0**
comp=Z,0.7nm,0.8s,baz=147,slow=7.1,SNR=4.9									
YKA				LR		LR		03 18 23.9	
comp=Z,43nm,18.1s,baz=184,slow=37									
comp=Z,0.7nm,0.8s									
DLBC	**Dease Lake**	**62.28**	**340**	LR		LR		03 18 15.1	
comp=Z,130nm,18.3s,baz=128,slow=36									
FRB	**Frobisher Bay**	**64.67**	**13**	P		**P**		**02 51 14.5**	**-0.5**
comp=Z,2.2nm,0.7s,baz=206,slow=4.0,SNR=4.1									
FRB				LR		LR		03 18 51.1	
comp=Z,53nm,18.9s,baz=195,slow=36									
comp=Z,2.2nm,0.7s									
INK	**Inuvik**	**70.90**	**346**	LR		LR		03 22 27.6	
comp=Z,29nm,18.1s,baz=168,slow=35									
SFJD	**Kangerlussuaq**	**71.91**	**17**	LR		LR		03 21 56.9	
comp=Z,12nm,21.9s,baz=238,slow=34									
ILAR	**Eielson Array**	**72.46**	**340**	P		**P**		**02 52 04.3**	**+0.6**
comp=Z,0.8nm,0.9s,baz=163,slow=5.0,SNR=9.3									
comp=Z,0.8nm,0.9s									
H11N3	**WAKE ISLAND Hy**	**96.22**	**290**	T		T		04 41 11.8	
baz=87									
H11N2	**WAKE ISLAND Hy**	**96.24**	**290**	T		T		04 41 06.7	
baz=87,slow=74									
H11N1	**WAKE ISLAND Hy**	**96.24**	**290**	T		T		04 41 07.4	
baz=87,slow=74									
H11S2	**WAKE ISLAND Hy**	**96.51**	**289**	T		T		04 41 33.6	
baz=86,slow=75,SNR=47									
H11S1	**WAKE ISLAND Hy**	**96.52**	**289**	T		T		04 41 33.1	
baz=86,slow=75,SNR=28									
H11S3	**WAKE ISLAND Hy**	**96.53**	**289**	T		T		04 41 31.6	
baz=86,slow=75,SNR=26									
DAVOX	**Davos/Dischmat**	**99.12**	**42**	LR		LR		03 31 45.5	
comp=Z,14nm,20.2s,baz=256,slow=31									

IDC ***12*** *02:42:08.2±1.2,22°.10S×67°.97W,h98km±20km,mb3.6/2, mbtmp3.9/4,Error ellipse: s-maj=57.9km s-min=17.8km az=121.0*
GUC ***12*** *02:42:09.7±0.7,21°.92S×68°.49W,h116km±4km,ML3.6*
ISC 12 02:42:09.0±0.9,21°.91S±0°.04×68°.52W±0°.07,h121km±7km, n21,σ0s96/37,11C-1D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.68**	**279**	⇑	*eP*		**Pn**	**02 42 28.9**	**+0.4**
PB09					*eS*		**Sn**	**02 42 43.5**	**+0.4**
LVC	**Limon Verde**	**0.79**	**207**	P			**Pn**	**02 42 29.7**	**+0.1**
baz=41,slow=9.6									
LVC				S			**Sn**	**02 42 44.6**	**-0.5**
451nm,0.2s,baz=292,slow=22,SNR=6.7									
LVC	**Limon Verde**	**0.79**	**207**	⇓	*eP*		**Pn**	**02 42 29.2**	**-0.4**
LVC					*eS*		**Sn**	**02 42 44.7**	**-0.4**
AF01	**San Pedro de A**	**1.09**	**163**	⇓	*eP*		**Pn**	**02 42 32.9**	**+0.6**
AF01					*eS*		**Sn**	**02 42 49.7**	**-0.2**
AF01					IAML			02 43 12.6	
comp=E,738nm,0.6s									
PB01	**IPOC Station P**	**1.25**	**313**	⇑	*eP*		**Pn**	**02 42 33.8**	**+0.1**
PB01					*i* S		**Sn**	**02 42 52.4**	**-0.1**
PB01					IAML			02 42 54.0	
comp=N,754nm,0.2s									
PB06	**IPOC Station P**	**1.26**	**231**	⇑	*eP*		**Pn**	**02 42 34.1**	**+0.2**
PB06					*i* S		**Sn**	**02 42 53.0**	**+0.2**
PB06					IAML			02 42 55.0	
comp=N,1μm,0.2s									
PB07	**IPOC Station P**	**1.28**	**278**	⇑	*eP*		**Pn**	**02 42 34.4**	**+0.2**
PB07					*eS*		**Sn**	**02 42 53.5**	**+0.1**
PB07					IAML			02 42 57.9	
comp=N,1μm,0.2s									
PB02	**IPOC Station P**	**1.41**	**294**	⇑	*eP*		**Pn**	**02 42 35.6**	**+0.1**
PB02					*i* S		**Sn**	**02 42 55.6**	**-0.1**
PB02					IAML			02 42 59.4	
comp=E,1μm,0.1s									
PB15	**IPOC Station P**	**1.57**	**214**	⇑	*eP*		**Pn**	**02 42 37.8**	**+0.3**
PB15					*eS*		**Sn**	**02 42 59.5**	**+0.3**
PB04	**IPOC Station P**	**1.57**	**254**	⇑	*eP*		**Pn**	**02 42 37.6**	**+0.1**
PB04					*eS*		**Sn**	**02 42 59.3**	**+0.2**
PB04					IAML			02 43 02.8	
comp=N,808nm,0.3s									
PB08	**IPOC Station P**	**1.85**	**341**		*eP*		**Pn**	**02 42 41.8**	**+0.7**
PB08					*eS*		**Sn**	**02 43 06.1**	**+0.6**
PATCX	**Punta Patache**	**1.87**	**305**		*eP*		**Pn**	**02 42 41.0**	**+0.1**
PATCX					*eS*		**Sn**	**02 43 05.0**	**-0.4**
PATCX					IAML			02 43 12.3	
comp=N,605nm,0.2s									
TA01	**Diego Aracena**	**2.04**	**310**	⇑	*eP*		**Pn**	**02 42 42.6**	**-0.4**
TA01					*eS*		**Sn**	**02 43 08.7**	**-0.4**
TA01					IAML			02 43 10.7	
comp=N,504nm,0.3s									
GO01	**Chusmiza**	**2.31**	**344**	⇑	*eP*		**Pn**	**02 42 47.5**	**+0.5**
GO01					*eS*		**Sn**	**02 43 15.7**	**-0.2**
GO01					IAML			02 43 21.9	
comp=E,901nm,0.1s									
PB11	**IPOC Station P**	**2.38**	**333**	⇑	*eP*		**Pn**	**02 42 47.4**	**-0.1**
PB11					*eS*		**Sn**	**02 43 16.8**	**-0.2**
PB11					IAML			02 43 18.4	
comp=E,452nm,0.3s									
PB10	**IPOC Station P**	**2.47**	**229**		*eP*		**Pn**	**02 42 48.1**	**-0.3**
PB10					*eS*		**Sn**	**02 43 16.9**	**-1.8**
PB10					IAML			02 43 31.1	
comp=N,344nm,0.9s									
LPAZ	**La Paz**	**5.60**	**4**	P			**Pn**	**02 43 32.9**	**+2.3**
comp=N,1.2nm,0.4s,baz=151,slow=5.0,SNR=16									
SIV	**San Ignacio**	**9.18**	**51**	P			**Pn**	**02 44 14.5**	**-3.9**
comp=N,5.3nm,0.3s,baz=237,slow=9.6,SNR=41									
QSPA	**South Pole Qui**	**68.29**	**180**	P			**P**	**02 52 57.8**	**+1.0**
comp=N,0.6nm,0.4s,baz=150,slow=7.6,SNR=10									
comp=N,0.6nm,0.4s									
TORD	**Torodi Ar. Bea**	**77.15**	**70**	P			**P**	**02 53 48.8**	**-1.1**
comp=N,0.5nm,0.4s,baz=257,slow=5.6,SNR=12									
comp=N,0.5nm,0.4s									
MKAR	**Makanchi Array**	**145.74**	**37**	PKPbc			**PKPdf**	**03 01 34.3**	**+1.1**
comp=N,0.2nm,0.4s,baz=326,slow=2.4,SNR=1.9									

IDC 12 02:56:53.2±4.9,0°.78N×18°.27W,h0km,mb3.8/3, mbtmp3.9/4,ML3.8/1,MS3.3/3,Error ellipse: s-maj=105.2km s-min=47.3km az=100.0,Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**9.35**	**156**	T		T		03 07 58.4	
baz=339,slow=74,SNR=20									
H10N3	**ASCENSION HYDR**	**9.35**	**156**	T		T		03 07 56.1	
baz=339,slow=74,SNR=21									
H10N1	**ASCENSION HYDR**	**9.37**	**156**	T		T		03 08 05.7	
baz=339,slow=74,SNR=28									
H10S3	**ASCENSION HYDR**	**10.31**	**160**	T		T		03 09 20.1	
baz=342,slow=74,SNR=11									
H10S2	**ASCENSION HYDR**	**10.33**	**160**	T		T		03 09 27.7	
baz=238,slow=74,SNR=2.5									
DBIC	**Dimbokro**	**14.60**	**66**	Pn		Pn		03 00 19.2	-1.9
0.4nm,0.3s,baz=255,slow=13,SNR=9.6									
DBIC						Sn		03 02 49.1	-15
0.3nm,0.3s,baz=220,slow=1.0,SNR=3.6									
DBIC						LR		03 04 34.8	
comp=Z,63nm,20.9s,baz=224,slow=32									
2.2nm,0.5s									
TORD	**Torodi Ar. Bea**	**23.28**	**57**	P		P		03 02 03.6	+0.9
2.4nm,1.0s,baz=246,slow=9.9,SNR=6.6									
2.4nm,1.0s									
MDT	**Midelt**	**34.36**	**21**	LR		LR		03 16 12.5	
comp=Z,62nm,18.3s,baz=158,slow=34									
BOSA	**Boshof**	**50.88**	**129**	P		P		03 05 56.3	-0.1
5.3nm,1.1s,baz=333,slow=11,SNR=2.4									
5.3nm,1.1s									
BRTR	**Keskin Array B**	**61.03**	**44**	P		P		03 07 08.6	-0.4
0.2nm,0.5s,baz=240,slow=8.1,SNR=1.6									
0.2nm,0.5s									
PLCA	**Paso Flores**	**62.87**	**222**	LR		LR		03 30 41.4	
comp=Z,37nm,21.7s,baz=180,slow=32									

JMA ***12*** *03:06:27.2±0.2,24°.N±1°.×125°.2E±0°.5,h43km±4km, MV3.1/11,NEAR MIYAKOJIMA ISLAND*
IDC ***12*** *03:06:32.1±2.6,23°.42N×122°.37E,h0km,mb3.4/3, mbtmp3.4/3,Error ellipse: s-maj=183.6km s-min=30.1km az=65.0*
ISC 12 03:06:25.8±2.4,24°.1N±0°.1×125°.17E±0°.07,h14km±11km, n13,σ1s26/20,mb3.4/3,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JMJ2	**Miyako jima3**	**0.67**	**13**	P		P		**03 06 39.2**	**+0.4**
JMJ2				S			**Sb**	**03 06 48.3**	**-0.1**
JTJ	**Tarama**	**0.70**	**323**	*i* P			**Pg**	**03 06 40.1**	**+0.8**
JTJ				S			**Sb**	**03 06 49.4**	**+0.2**
JOGS	**Gusukube**	**0.71**	**18**	P			**Pg**	**03 06 39.9**	**+0.3**
JOGS				S			**Sb**	**03 06 49.6**	**+0.1**
JIRB	**Irabujima**	**0.74**	**1**	P			**Pg**	**03 06 40.1**	**-0.1**
JIRB				S			**Sg**	**03 06 49.5**	**-0.5**
JIKM	**Ikemajima**	**0.84**	**5**	P			**Pg**	**03 06 41.9**	**-0.2**
JIKM				S			**Sg**	**03 06 52.4**	**-0.7**
JISG	**Ishigakijimahi**	**0.93**	**303**	P			**Pg**	**03 06 43.7**	**0.0**
JIJ	**Ishigaki jima**	**0.97**	**287**	*i* P			**Pg**	**03 06 44.6**	**0.0**
JIJ				S			**Sg**	**03 06 57.0**	**-0.4**
JKRS	**Kuro-shima**	**1.07**	**278**	P			**Pg**	**03 06 46.6**	**+0.3**
JKRS				S			**Sg**	**03 07 00.5**	**+0.2**
HATJ	**Hateruma jima**	**1.24**	**269**	P			**Pn**	**03 06 48.7**	**0.0**
HATJ				*eS*			**Sb**	**03 07 04.4**	**-0.5**
IRIF	**Iriomote-Funau**	**1.33**	**281**	P			**Pn**	**03 06 49.9**	**0.0**
SONM	**Songino Array**	**28.00**	**333**	P			**P**	**03 12 20.3**	**+4.0**
0.2nm,0.4s,baz=148,slow=8.5,SNR=1.7									
0.2nm,0.4s									
MKAR	**Makanchi Array**	**40.97**	**315**	P			**P**	**03 14 05.5**	**-2.7**
0.4nm,0.4s,baz=100,slow=9.4,SNR=8.2									
0.4nm,0.4s									
ASAR	**Alice Springs**	**48.22**	**169**	P		P		03 15 13.8	+7.7
0.3nm,0.8s,baz=347,slow=8.2,SNR=1.6									
0.3nm,0.8s									

IDC ***12*** *03:14:00.2±4.8,21°.68S×171°.12E,h0km,mb3.5/2, mbtmp3.5/2,Error ellipse: s-maj=267.4km s-min=44.2km az=156.0*
NOU ***12*** *03:14:21.3,21°.67S×170°.49E,h164km,MLv4.5/8, Southeast of Loyalty Islands*
ISC 12 03:14:20.3±1.3,21°.7S±0°.1×170°.6E±0°.2,h150km,n13, σ0s76/13,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**2.42**	**275**	P		P	**Pn**	**03 15 00.1**	**-0.3**
PINNC	**Pines Island,**	**3.08**	**252**	P		P	**Pn**	**03 15 08.4**	**-0.2**
DZM	**Mont Dzumac**	**3.89**	**264**	P		P	**Pn**	**03 15 19.4**	**+0.1**
NOUC	**Port Laguerre**	**4.03**	**263**	P		P	**Pn**	**03 15 21.2**	**+0.3**
DVP	**Devils Point**	**4.56**	**330**	P		P	**Pn**	**03 15 27.8**	**-0.2**
ASAR	**Alice Springs**	**33.87**	**260**	P		P	**P**	**03 20 49.2**	**+0.3**
0.4nm,0.5s,baz=98,slow=9.9,SNR=8.2									
0.4nm,0.5s									
WRA	**Warramunga Arr**	**33.91**	**266**	P		P	**P**	**03 20 48.7**	**-0.5**
0.5nm,0.7s,baz=98,slow=8.5,SNR=1.8									
0.5nm,0.7s									
SNAA	**Sanae**	**86.77**	**182**	P		P	**P**	**03 26 46.5**	**-0.8**
VNA3	**Neumayer Olymp**	**87.31**	**180**	P		P	**P**	**03 26 48.9**	**-0.9**
VNA2	**Neumayer--Watz**	**87.62**	**181**	P		P	**P**	**03 26 51.1**	**-0.1**
baz=184,slow=4.7									
VNA1	**Neumayer--Stat**	**87.90**	**180**	P		P	**P**	**03 26 52.7**	**+0.2**
ARCES	**ARCESS Array B**	**127.76**	**345**	PKP			**PKPdf**	**03 33 06.9**	**-0.4**
4.2nm,1.0s,baz=64,slow=2.1,SNR=4.1									
GERES	**GERESS Array B**	**147.26**	**331**	PKPbc			**PKPdf**	**03 33 45.5**	**+1.9**
0.6nm,0.6s,baz=49,slow=3.1,SNR=7.7									

IDC 12 03:14:49.9±24.0,51°.28N×177°.17W,h0km,mb3.1/3, mbtmp3.2/3,MS3.0/2,Error ellipse: s-maj=603.2km s-min=47.9km az=160.0,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ILAR	**Eielson Array**	**20.69**	**38**	P		P	P	03 19 30.4	-0.8
0.1nm,0.4s,baz=239,slow=8.9,SNR=6.9									
0.1nm,0.4s									
JHJ	**Hachijo jima 2**	**36.06**	**257**	LR		LR		03 40 29.2	
comp=Z,8.3nm,18.1s,baz=186,slow=43									
JCJ	**Chichijima**	**38.98**	**247**	LR		LR		03 35 34.1	
comp=Z,60nm,21.2s,baz=146,slow=32									
MKAR	**Makanchi Array**	**60.89**	**309**	P		P		03 25 03.3	-0.7
0.4nm,0.8s,baz=54,slow=7.8,SNR=2.0									
0.4nm,0.8s									
NOA	**NORSAR Array B**	**67.83**	**356**	P		P		03 25 50.4	+1.1
0.1nm,0.4s,baz=358,slow=5.3,SNR=3.3									
0.1nm,0.4s									

IDC ***12*** *03:27:59.4±1.7,31°.86N×137°.72E,h431km±37km,mb2.9/5, mbtmp3.7/7,Error ellipse: s-maj=84.5km s-min=18.1km az=71.0*
JMA ***12*** *03:28:00.9±0.2,32°.N±2°.×13°.8E±°,h439km,MV3.6/34, FAR S OFF TOKAI DISTRICT*
ISC 12 03:27:58.6±1.0,31°.80N±0°.09×137°.3E±0°.1,h400km,n18, σ2s47/22,mb3.1/5,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	**2.17**	**71**	*eP*			**Pn**	**03 28 59.9**	**+4.3**
JHJ2	**Mitsune**	**2.48**	**57**	P			**Pn**	**03 29 01.6**	**+4.0**
JKN2	**Miekihoku**	**2.59**	**340**	*eP*			Pn	03 29 04.2	+5.7
JOD2	**Odawara 2**	**3.75**	**23**	P			**Pn**	**03 29 11.4**	**+3.1**
JYN	**Shimob**	**3.83**	**15**	P			**Pn**	**03 29 13.4**	**+4.4**
BSO3	**Boso 3**	**4.01**	**41**	P			**Pn**	**03 29 11.2**	**+0.9**
BSO1	**Boso 1**	**4.18**	**46**	P			**Pn**	**03 29 12.5**	**+0.9

SLR				IAML			03 40 40.5		
	comp=Z,149nm,0.3s								
POGA	**Pongola**	**3.44**	**167**	⇑*i*	P	**Pn**	**03 39 57.0**	**+1.7**	
POGA				*e*S		**Sn**	**03 40 33.8**	**-1.2**	
POGA				IAML			03 40 56.2		
	comp=Z,210nm,0.7s								
WDLM	**Western Deep L**	**3.91**	**231**	*e*P		**Pn**	**03 40 03.9**	**+2.0**	
WDLM				*e*S		**Sn**	**03 40 48.5**	**+1.5**	
WDLM				IAML			03 41 18.4		
	comp=Z,158nm,0.3s								
MATP	**Matopo**	**4.14**	**328**	⇓*i*	P	**Pn**	**03 40 07.6**	**+2.5**	
MATP				*e*S		**Sn**	**03 40 59.4**	**+6.7**	
MATP				IAML			03 41 10.7		
	comp=Z,5µm,0.6s								
MATP	**Matopo**	**4.14**	**328**	*i* P		**Pn**	**03 40 09.5**	**+4.4**	
MATP				*i* S		**Sn**	**03 40 54.8**	**+2.2**	
MATP	**Matopo**	**4.14**	**328**	*i* P		**Pn**	**03 40 09.5**	**+4.4**	
MATP				*i* S		**Sn**	**03 40 54.8**	**+2.2**	
PRYS	**Parys**	**4.28**	**226**	⇑*i*	P	**Pn**	**03 40 09.4**	**+2.5**	
PRYS				*e*S		**Sn**	**03 40 59.2**	**+3.2**	
PRYS				IAML			03 41 30.9		
	comp=Z,74nm,0.4s								
BLWY	**Bulawayo**	**4.34**	**332**	*e*P		Pb	03 40 14.5	-4.8	
BLWY				*e*S		**Sb**	**03 41 05.8**	**-5.5**	
BLWY				IAML			03 41 19.6		
	comp=Z,409nm,0.3s								
BLWY	**Bulawayo**	**4.34**	**332**	*i* P		**Pn**	**03 40 11.3**	**+3.5**	
BLWY				*i* S		**Sn**	**03 41 00.4**	**+2.8**	
BLWY	**Bulawayo**	**4.34**	**332**	*i* P		**Pn**	**03 40 11.3**	**+3.5**	
BLWY				*i* S		**Sn**	**03 41 00.4**	**+2.8**	
LBTB	**Lobatse**	**4.86**	**257**	⇑*i*	P	**Pn**	**03 40 18.1**	**+3.2**	
LBTB				*e*S		**Sn**	**03 41 14.6**	**+4.3**	
LBTB				IAML			03 41 43.1		
	comp=Z,67nm,0.5s								
LBTB	**Lobatse**	**4.86**	**257**	Pn		**Pn**	**03 40 17.3**	**+2.5**	
LBTB						**Sn**	**03 41 15.8**	**+5.6**	
LBTB	**Lobatse**	**4.86**	**257**	*i* P		**Pn**	**03 40 18.6**	**+3.8**	
LBTB				*i* S		**Sn**	**03 41 12.1**	**+1.9**	
LBTB	**Lobatse**	**4.86**	**257**	*i* P		**Pn**	**03 40 18.6**	**+3.8**	
LBTB				*i* S		**Sn**	**03 41 12.1**	**+1.9**	
SNKL	**Senekal, Frees**	**5.07**	**212**	*e*P		**Pn**	**03 40 20.2**	**+2.4**	
SNKL				*e*S		**Sn**	**03 41 15.1**	**-0.4**	
SNKL				IAML			03 42 00.0		
	comp=Z,45nm,0.4s								
SWZ	**Schweizer**	**5.88**	**236**	*e*P		**Pn**	**03 40 33.1**	**+4.1**	
SWZ				*e*S		**Sn**	**03 41 39.5**	**+4.0**	
SWZ				IAML			03 42 15.5		
	comp=Z,55nm,0.6s								
KSTD	**Kokstad**	**6.74**	**191**	*e*P		**Pn**	**03 40 43.7**	**+3.0**	
KSTD				*e*S		**Sn**	**03 41 56.5**	**-0.1**	
KSTD				IAML			03 42 40.6		
	comp=Z,21nm,0.5s								
BOSA	**Boshof**	**6.79**	**226**	*e*P		**Pn**	**03 40 44.0**	**+2.7**	
BOSA				*e*S		**Sn**	**03 41 59.1**	**+1.3**	
BOSA				IAML			03 42 38.3		
	comp=Z,26nm,0.4s								
BOSA	**Boshof**	**6.79**	**226**	Pn		**Pn**	**03 40 43.1**	**+1.7**	
	comp=Z,0.6nm,0.3s,baz=52,slow=13,SNR=16								
BOSA				Sn		**Sn**	**03 41 53.4**	**-4.4**	
	comp=Z,1.5nm,0.3s,baz=71,slow=14,SNR=4.4								
BOSA				Lg		Lg	03 42 34.6		
	comp=Z,5.6nm,0.3s,baz=327,slow=19,SNR=14								
	comp=Z,1.5nm,0.3s								
BOSA	**Boshof**	**6.79**	**226**	*i* P		**Pn**	**03 40 43.1**	**+1.7**	
BOSA				*i* S		**Sn**	**03 41 55.4**	**-2.4**	
BOSA	**Boshof**	**6.79**	**226**	*i* P		**Pn**	**03 40 43.1**	**+1.7**	
BOSA				*i* S		**Sn**	**03 41 55.4**	**-2.4**	
LSZ	**Lusaka**	**9.01**	**344**	LR		LR	03 44 51.9		
	comp=Z,110nm,18.4s,baz=160,slow=39								
LSZ	**Lusaka**	**9.01**	**344**	Pn		**Pn**	**03 41 14.3**	**+2.3**	
LSZ	**Lusaka**	**9.01**	**344**	*i* P		**Pn**	**03 41 13.6**	**+1.6**	
LSZ				*i* S		**Sn**	**03 42 48.5**	**-4.2**	
LSZ	**Lusaka**	**9.01**	**344**	*i* P		**Pn**	**03 41 13.6**	**+1.6**	
LSZ				*i* S		**Sn**	**03 42 48.5**	**-4.2**	
UPI	**Upington**	**9.62**	**241**	*e*P		**Pn**	**03 41 22.8**	**+2.5**	
UPI				*e*S		**Sn**	**03 43 06.9**	**-0.7**	
UPI				IAML			03 44 17.4		
	comp=Z,7.3nm,0.5s								
SOE	**Somerset East**	**9.84**	**207**	*e*P		**Pn**	**03 41 26.2**	**+3.0**	
SOE				*e*S		**Sn**	**03 43 08.2**	**-4.6**	
SOE				IAML			03 44 30.1		
	comp=Z,6.0nm,0.9s								
KEIM	**Keimoes**	**10.00**	**240**	*e*P		**Pn**	**03 41 28.0**	**+2.6**	
KEIM				*e*S		**Sn**	**03 43 16.1**	**-0.6**	
KEIM				IAML			03 44 21.5		
	comp=Z,16nm,0.6s								
GRAN	**Grantham**	**11.25**	**221**	*e*P		**Pn**	**03 41 44.6**	**+2.1**	
GRAN				*e*S		**Sn**	**03 43 46.1**	**-1.3**	
GRAN				IAML			03 45 05.5		
	comp=Z,10nm,0.6s								
SUR	**Sutherland**	**12.14**	**224**	*e*P		**Pn**	**03 41 57.3**	**+2.4**	
SUR				*e*S		**Sn**	**03 44 06.4**	**-3.1**	
SUR				IAML			03 45 43.5		
	comp=Z,13nm,0.7s								
SUR	**Sutherland**	**12.14**	**224**	Pn		**Pn**	**03 41 55.5**	**+0.6**	
CVNA	**Calvinia**	**12.30**	**230**	*e*P		**Pn**	**03 41 58.8**	**+1.9**	
CVNA				*e*S		**Sn**	**03 44 09.9**	**-3.2**	
CVNA				IAML			03 45 39.1		
	comp=Z,14nm,0.6s								
MATJ	**Matjiesfontein**	**12.88**	**222**	*e*P		**Pn**	**03 42 08.8**	**+3.9**	
MATJ				*e*S		**Sn**	**03 44 23.0**	**-4.3**	
MATJ				IAML			03 46 00.7		
	comp=Z,8.3nm,0.7s								
TSUM	**Tsumeb**	**13.19**	**289**	*e*P		**P**	**03 42 16.6**	**-2.3**	
TSUM				*e*S		**Sn**	**03 44 35.5**	**+0.5**	
TSUM				IAML			03 46 09.3		
	comp=Z,31nm,0.7s								
TSUM	**Tsumeb**	**13.19**	**289**	Pn		**Pn**	**03 42 11.8**	**+2.6**	
CER	**Ceres**	**13.75**	**225**	*e*P		**Pn**	**03 42 20.3**	**+3.6**	
CER				*e*S		**Sn**	**03 44 45.8**	**-2.7**	
CER				IAML			03 46 23.9		
	comp=Z,3.5nm,0.8s								
ELIM	**Elim**	**14.30**	**220**	*e*P		**P**	**03 42 29.6**	**-1.5**	
ELIM				*e*S		**Sn**	**03 44 58.2**	**-3.7**	
ELIM				IAML			03 47 46.9		
	comp=Z,6.3nm,0.8s								
TOA0	**Torodi Ar. Sit**	**46.61**	**319**	P		**P**	**03 47 32.3**	**+2.9**	
TOA0				IAmb		IAmb	03 47 43.0		
	comp=Z,8.4nm,1.5s								
TORD	**Torodi Ar. Bea**	**46.61**	**319**	P		**P**	**03 47 31.5**	**+2.1**	
	comp=Z,0.5nm,0.6s,baz=131,slow=7.1,SNR=5.9								
	comp=Z,0.5nm,0.6s								
TORD	**Torodi Ar. Bea**	**46.61**	**319**	IAmb		IAmb	03 47 41.4		
	comp=Z,1.6nm,1.0s								
SNAA	**Sanae**	**51.36**	**193**	P		**P**	**03 48 07.0**	**+1.7**	
SNAA				IAmb		IAmb	03 48 27.7		
	comp=Z,2.2nm,1.3s								
FINES	**FINESS Array B**	**85.22**	**358**	P		P	03 51 39.9	+3.1	
	comp=Z,2.3nm,1.0s,baz=173,slow=5.6,SNR=4.5								
	comp=Z,2.3nm,1.0s								

MEX ***12*** *03:50:19.9±2.1, 16°.03N×91°.42W, h17km±999km, MD4.0*
GCG ***12*** *03:50:20.6±1.6, 16°.06N×91°.80W, h37km±103km, MD3.7*

ISC 12 03:50:19.7±1.1, 16°.03N±0°.04×91°.61W±0°.04, h32km±14km, n14, σ1§53/25, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CCIG	**Comitan**	**0.57**	**297**	*e*P		**Pb**	**03 50 30.9**	**-0.6**
CCIG				*i* S		**Sn**	**03 50 41.8**	**+1.7**
PAVE	**Pavencul**	**0.99**	**214**	*e*P		**Pb**	**03 50 37.4**	**-1.2**
CHUJ	**Union Juarez**	**1.05**	**208**	*e*P		**Pn**	**03 50 38.1**	**-0.3**
PATR	**El Naranjo**	**1.09**	**214**	*e*P		**Pn**	**03 50 38.9**	**-0.1**
PATR				*i* S		**Sb**	**03 50 52.6**	**-1.5**
STG3	**Santiaguito 3,**	**1.31**	**178**	*e*P		**Pb**	**03 50 43.5**	**-0.3**
STG3				*e*S		**Sb**	**03 51 01.2**	**+0.8**
PCIG		**1.58**	**259**	*e*P		**Pb**	**03 50 47.3**	**-1.0**
PCIG				*e*S		**Sb**	**03 51 08.7**	**+0.7**
TGIG		**1.63**	**297**	*e*P		**Pb**	**03 50 50.2**	**+1.0**
TGIG				*e*S		**Sb**	**03 51 13.3**	**+3.8**
FUG	**Fuego 3**	**1.74**	**155**	*e*P		**Pb**	**03 50 51.4**	**+0.3**
FUG				*e*S		**Sb**	**03 51 15.0**	**+2.4**
NBG	**Las Nubes**	**1.88**	**139**	*e*P		**Pb**	**03 50 53.8**	**+0.3**
NBG				*e*S		**Sb**	**03 51 16.9**	**+0.2**
PCG	**Pacaya**	**1.89**	**149**	*e*P		**Pb**	**03 50 53.0**	**-0.7**
MRL	**Marmol**	**2.08**	**117**	*e*P		**Pb**	**03 50 55.7**	**-1.2**
MRL				*e*S		**Sb**	**03 51 24.2**	**+1.7**
CARR	**Arriaga**	**2.23**	**276**	*e*P		**Pb**	**03 50 57.4**	**-1.9**
CARR				*i* S		**Sb**	**03 51 25.8**	**-0.6**
UXUV	**UXUV**	**2.75**	**298**	*e*P		**Pb**	**03 51 07.9**	**-0.3**
UXUV				*i* S		**Sb**	**03 51 42.6**	**+1.1**
SCIG	**Sabancuy**	**2.95**	**8**	*e*P		**Pn**	**03 51 01.7**	**-2.6**
SCIG				*e*S		**Sn**	**03 51 39.6**	**+0.9**

RSNC ***12*** *04:13:31.2±1.4, 3°.67N×76°.91W, h9km±5km, ML3.0, Fault plane solution: NP1:φ§132.00000°, δ78.00000°, λ-82.00000°.*
IDC ***12*** *04:13:44.4±3.7, 4°.74N×76°.28W, h129km±29km, mb3.1/3, mbtmp3.5/3, Error ellipse: s-maj=62.4km s-min=37.1km az=36.0*

ISC 12 04:13:31.5±1.0, 3°.72N±0°.03×77°.07W±0°.03, h47km±9km, n47, σ1§74/72, mb3.5/3, 6C-7D, Near west coast of Colombia

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MALC	**Bahia Malaga**	**0.40**	**318**	⇓*i* P		**Pn**	**04 13 41.6**	**+0.2**
MALC				*e*S		**Sn**	**04 13 50.5**	**+2.1**
MALC				*i*			04 13 53.0	
	comp=Z,3µm,0.4s							
YOTC	**Yotoco, Valle**	**0.77**	**70**	⇑*i* P		Pn	04 13 42.5	-3.7
YOTC				*e*S		**Sn**	**04 13 51.5**	**-5.3**
POPC	**Popayan, Colom**	**1.23**	**161**	⇑*e*P		**Pn**	**04 13 51.2**	**-1.4**
POPC				*e*S		**Sn**	**04 14 06.8**	**-1.4**
POPC				*i*			04 14 07.3	
	comp=Z,413nm,0.4s							
PIZC	**Pizarro, Choco**	**1.27**	**347**	*e*P		**Pn**	**04 13 53.7**	**+0.8**
PIZC				*e*S		**Sn**	**04 14 12.3**	**+3.4**
PIZC				*i*			04 14 35.1	
	comp=Z,282nm,0.6s							
GR1C	**Gorgona, Isla**	**1.31**	**237**	*e*P		**Pn**	**04 13 52.2**	**-1.1**
MARP	**Paez Belalcaza**	**1.41**	**128**	*e*P		**Pn**	**04 13 53.5**	**-1.5**
PLMC	**San Jos del P**	**1.42**	**34**	*e*P		Pn	04 13 51.9	-3.1
PLMC				*i*			04 14 18.2	
	comp=Z,351nm,0.4s							
PCON	**Cinco Dias**	**1.53**	**154**	*e*P		**Pn**	**04 13 57.0**	**0.0**
PCON				*e*S		**Sn**	**04 14 16.3**	**+0.3**
PCON				*i*			04 14 19.8	
	comp=Z,240nm,0.6s							
SOTA	**Rioblanco**	**1.64**	**164**	⇑*e*P		**Pn**	**04 13 58.3**	**0.0**
SOTA				*e*S		**Sn**	**04 14 19.0**	**+0.5**
SOTA				*i*			04 14 22.2	
	comp=Z,374nm,0.6s							
ORTC	**Ortega, Tolima**	**1.83**	**84**	*e*P		**Pn**	**04 14 00.5**	**-0.1**
ORTC				*e*S		**Sn**	**04 14 23.2**	**+0.6**
ORTC				*i*			04 14 25.8	
	comp=Z,157nm,0.3s							
ANIL	**Santa Ana**	**1.83**	**65**	*e*P		**Pn**	**04 13 59.5**	**-1.3**
ANIL				*e*S		**Sn**	**04 14 22.7**	**-0.2**
ANIL				*i*			04 14 24.5	
	comp=Z,411nm,0.4s							
BETC	**Betania**	**1.92**	**122**	*e*P		**Pn**	**04 14 02.5**	**+0.6**
BETC				*e*S		**Sn**	**04 14 26.7**	**+1.8**
BETC				*i*			04 14 34.2	
	comp=Z,106nm,0.6s							
CRUC	**La Cruz**	**2.14**	**177**	⇑*e*P		**Pn**	**04 14 06.0**	**+0.9**
PRAC	**Prado**	**2.18**	**90**	⇓*e*P		**Pn**	**04 14 05.4**	**0.0**
PRAC				*e*S		**Sn**	**04 14 33.5**	**+2.3**
PRAC				*i*			04 14 36.3	
	comp=Z,304nm,0.5s							
GARC	**Garzon, Huila**	**2.19**	**134**	*e*P		**Pn**	**04 14 06.2**	**+0.5**
GARC				*e*S		**Sn**	**04 14 33.2**	**+1.5**
GARC				*i*			04 14 36.5	
	comp=Z,99nm,0.5s							
GUY2C	**Guyana, Caldas**	**2.26**	**49**	⇑*e*P		**Pn**	**04 14 05.9**	**-1.0**
GUY2C				*e*S		**Sn**	**04 14 34.6**	**+0.8**
GUY2C				*i*			04 14 38.3	
	comp=Z,143nm,0.7s							
CBOC	**Ciudad Bolivar**	**2.38**	**26**	*e*P		**Pn**	**04 14 06.1**	**-2.1**
CCUFI	**Cufio, Nario**	**2.49**	**186**	*e*P		**Pn**	**04 14 11.8**	**+1.7**
CCUFI				*e*S		**Sn**	**04 14 40.3**	**+0.8**
GCUF	**Volcan Galeras**	**2.49**	**186**	*e*P		**Pn**	**04 14 10.7**	**+0.6**
GCUF				*e*S		**Sn**	**04 14 38.5**	**-1.0**
GCUF				*i*			04 14 46.2	
	comp=Z,51nm,0.3s							
TUMC	**Tumaco**	**2.51**	**221**	*e*P		**Pn**	**04 14 11.1**	**+1.3**
TUMC				*e*S		**Sn**	**04 14 40.6**	**+1.4**
FLOC	**Florencia**	**2.55**	**146**	*e*P		**Pn**	**04 14 11.5**	**+1.0**
FLOC				*i*			04 14 45.2	
	comp=Z,32nm,0.4s							
FLOC				*e*S		**Sn**	**04 14 45.4**	**+5.1**
NORC	**Norcasia**	**2.86**	**50**	*e*P		**Pn**	**04 14 15.7**	**+0.9**
NORC				*i*			04 15 02.4	
	comp=Z,31nm,0.6s							
CMBC	**Cumbal**	**2.86**	**195**	*e*P		**Pn**	**04 14 16.3**	**+1.2**
HELC	**Santa Helena**	**2.90**	**32**	⇓*e*P		**Pn**	**04 14 14.9**	**-0.6**
HELC				*e*S		**Sn**	**04 14 48.3**	**-1.0**
HELC				*i*			04 14 52.9	
	comp=Z,22nm,0.5s							
ROSC	**El Rosal**	**2.96**	**68**	P		**Pn**	**04 14 18.1**	**+1.7**
	comp=Z,28nm,0.5s,baz=262,slow=14,SNR=19							
ROSC				S		**Sn**	**04 14 49.5**	**-1.4**
	comp=Z,17nm,0.4s,baz=295,slow=21,SNR=4.1							
ROSC	**El Rosal**	**2.96**	**68**	*e*P		**Pn**	**04 14 18.0**	**+1.7**
ROSC				*i*			04 14 57.1	
	comp=Z,34nm,0.5s							
DBBC	**Dabeiba**	**3.39**	**15**	*e*P		**Pn**	**04 14 22.0**	**0.0**
DBBC				*i*			04 15 21.9	
	comp=Z,63nm,0.6s							
VILC	**Villavicencio,**	**3.39**	**83**	*e*P		**Pn**	**04 14 24.2**	**+2.1**
VILC				*e*S		**Sn**	**04 15 05.4**	**+4.2**
CHIC	**Chingaza**	**3.45**	**75**	⇓*e*P		**Pn**	**04 14 24.7**	**+1.5**
CHIC				*e*S		**Sn**	**04 15 05.3**	**+2.3**
CHIC				*i*			04 15 10.7	
	comp=Z,24nm,0.5s							
SPBC	**San Pablo de B**	**3.55**	**57**	*e*P		**Pn**	**04 14 25.0**	**+0.7**
SPBC				*e*S		**Sn**	**04 15 11.4**	**+6.3**
MACC	**Macarena, Meta**	**3.58**	**116**	⇓*e*P		**Pn**	**04 14 24.5**	**0.0**
MACC				*i*			04 15 30.3	
	comp=Z,41nm,0.6s							
CUSE	**Cuicocha Este**	**3.64**	**201**	⇑*e*P		**Pn**	**04 14 25.6**	**-0.2**
CUSE				*e*S		**Sn**	**04 15 06.6**	**-1.2**
OTAV	**Otavalo**	**3.72**	**202**	*e*P		**Pn**	**04 14 26.7**	**-0.3**
PTBC	**PUERTO BERRIO,**	**3.83**	**43**	*e*P		**Pn**	**04 14 28.2**	**+0.2**
PTBC				*e*S		**Sn**	**04 15 11.7**	**0.0**
PTBC				*i*			04 15 19.1	
	comp=Z,12nm,0.5s							
UREC	**San Jos de Ur**	**4.29**	**21**	*e*P		**Pn**	**04 14 35.2**	**+0.8**
RUSC	**La Rusia**	**4.52**	**61**	*e*P		**Pn**	**04 14 39.7**	**+1.8**
GUVC	**San Jose del G**	**4.58**	**105**	*e*P		**Pn**	**04 14 36.9**	**-1.5**
GUVC				*e*S		**Sn**	**04 15 29.6**	**-0.9**
GUVC				*i*			04 15 54.1	
	comp=Z,21nm,0.4s							
BRRC	**Barranca, Sant**	**4.74**	**45**	⇓*e*P		**Pn**	**04 14 40.6**	**0.0**
BRRC				*e*S		**Sn**	**04 15 34.6**	**+0.2**
BARC	**Barichara**	**4.81**	**53**	⇓*e*P		**Pn**	**04 14 42.9**	**+1.2**
AZU	**Azuero**	**5.15**	**322**	*e*P		**Pn**	**04 14 45.5**	**-0.8**
AZU				*e*S		**Sn**	**04 15 44.1**	**-0.4**
AZU				*i*			04 15 47.9	
	comp=Z,14nm,0.3s							
CACAO	**El Cacao, Vera**	**5.22**	**314**	*e*P		**Pn**	**04 14 46.3**	**-0.8**
CACAO				*e*S		**Sn**	**04 15 45.8**	**-0.2**
CACAO				*i*			04 15 48.1	
	comp=Z,8.0nm,0.1s							
PAMC	**Pamplona, Colo**	**5.64**	**50**	*e*P		**Pn**	**04 14 53.7**	**+0.3**
OCAC	**Ocana**	**5.84**	**40**	*e*P		**Pn**	**04 14 55.7**	**-0.1**
YKA	**Yellowknife Ar**	**64.89**	**342**	P		**P**	**04 24 04.8**	**-0.9**
	comp=Z,0.6nm,0.6s,baz=135,slow=6.3,SNR=6.8							
	comp=Z,0.6nm,0.6s							
ILAR	**Eielson Array**	**78.13**	**336**	P		**P**	**04 25 25.8**	**+0.3**
	comp=Z,0.1nm,0.5s,baz=93,slow=8.2,SNR=1.3							
	comp=Z,0.1nm,0.5s							
TORD	**Torodi Ar. Bea**	**78.23**	**77**	P		**P**	**04 25 25.1**	**-1.9**
	comp=Z,0.3nm,0.6s,baz=275,slow=6.8,SNR=5.6							
	comp=Z,0.3nm,0.6s							
ASAR	**Alice Springs**	**144.12**	**234**	PKPbc		**PKiKP**	**04 33 07.2**	**+0.5**
	comp=Z,0.3nm,0.9s,baz=133,slow=3.9,SNR=2.1							

DJA ***12*** *04:17:03.2±1.7, 4°.N±20°×12°.7E±1°.8, h10km±15km, M4.0/4, MLv4.0/4*
IDC ***12*** *04:17:03.5±1.2, 2°.59N×125°.55E, h0km, mb3.6/6, mbtmp3.6/6, Error ellipse: s-maj=143.3km s-min=18.2km az=67.0*

ISC 12 04:17:09.1±1.1, 3°.3N±0°.1×127°.3E±0°.1, h50km, n9, σ1§35/9, mb3.7/6, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.79**	**281**	P		**Pn**	**04 17 35.6**	**-1.9**
SGSI				S		**Sn**	**04 18 00.4**	**+1.3**
TNTI	**Ternate**	**2.56**	**178**	P		**Pn**	**04 17 47.4**	**-0.7**
KMSI	**Cibinong**	**4.30**	**230**	P		**Pn**	**04 18 12.1**	**+0.1**
WRA	**Warramunga Arr**	**24.16**	**164**	P		**P**	**04 22 19.8**	**-1.0**
	comp=Z,0.6nm,0.6s,baz=336,slow=11,SNR=9.3							
	1.2nm,0.6s							
ASAR	**Alice Springs**	**27.61**	**167**	P		**P**	**04 22 51.0**	**-1.0**
	0.2nm,0.4s,baz=346,slow=7.3,SNR=8.1							
	0.2nm,0.4s							
STKA	**Stephens Creek**	**37.58**	**160**	P		**P**	**04 24 19.2**	**+0.4**
	1.3nm,0.7s,baz=329,slow=11,SNR=4.9							
	1.3nm,0.7s							
SONM	**Songino Array**	**47.84**	**341**	P		**P**	**04 25 43.6**	**+1.7**
	0.4nm,0.3s,baz=157,slow=8.6,SNR=3.4							
	0.4nm,0.3s							
MKAR	**Makanchi Array**	**58.19**	**325**	P		P	04 26 56.9	-1.3
	0.3nm,0.6s,baz=118,slow=7.3,SNR=2.4							
	0.3nm,0.6s							
KURBB	**Kurchatov Arra**	**62.36**	**327**	P		**P**	**04 27 26.0**	**-0.5**
	0.7nm,0.8s,baz=120,slow=6.3,SNR=6.9							
	0.7nm,0.8s							

IDC ***12*** *04:22:01.3±0.7, 2°.92N×126°.42E, h0km, mb3.9/10, mbtmp3.9/11, ML3.8/1, MS3.1/4, Error ellipse: s-maj=58.3km s-min=14.5km az=67.0*
DJA ***12*** *04:22:05.5±0.3, 3°.N±3°×12°.7E±°, h10km, M4.2/12, mb4.3/7, mB5.1/2, MLv4.1/12, Mw(mB)4.4/2*
NEIC ***12*** *04:22:07.8±1.4, 3°.18N±0°.02×126°.93E±0°.09, h51km±9km, mb4.3/11, Error ellipse: s-maj=12.9km s-min=3.5km az=89.0*

ISC 12 04:22:07.9±0.6, 3°.27N±0°.07×127°.07E±0°.08, h50km, n45, σ1§47/38, mb4.1/16, MS3.2/3, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.59**	**285**	P		**Pn**	**04 22 32.8**	**-0.9**
SGSI				S		**Sn**	**04 22 55.9**	**+2.7**
TNTI	**Ternate**	**2.50**	**173**			**Pn**	**04 22 45.2**	**-1.0**
TNTI	**Ternate**	**2.50**	**173**	P		**Pn**	**04 22 46.3**	**+0.2**
LBMI	**Labuha**	**3.91**	**174**	P		**Pn**	**04 23 08.5**	**+3.0**
DAV	**Davao City (W)**	**4.06**	**339**	Pn		**Pn**	**04 23 07.5**	**0.0**
SANI	**Sanana**	**5.39**	**192**	P		**Pn**	**04 23 27.5**	**+1.6**
	0.1nm18nm,0.7s							
MRSI	**Marisa**	**5.83**	**242**	P		**Pn**	**04 23 33.9**	**+2.1**
	0.2nm60nm,1.2s							
SWI	**Sorong**	**5.87**	**134**	P		**Pn**	**04 23 32.9**	**+0.6**
	0.1nm25nm,0.9s							
SIJI	**Sorong**	**5.87**	**134**	Pn		**Pn**	**04 23 33.0**	**+0.5**
	2.5nm,0.3s,baz=338,slow=17,SNR=4.0							
SIJI				Sn		**Sn**	**04 24 39.6**	**+1.1**
	1.2nm,0.3s,baz=240,slow=23,SNR=1.8							
	7.9nm,0.3s							
TOLI2	**Tolitoli**	**6.64**	**251**			**Pn**	**04 23 41.0**	**-2.0**
APSI	**Ampana**	**6.83**	**233**	P		Pn	04 23 48.3	+2.8
	0.2nm52nm,1.2s							
MPSI	**Mapaga**	**7.74**	**248**	P		**Pn**	**04 23 59.3**	**+1.3**
MYLDM	**Lahad Datu**	**8.76**	**283**	Pn		**Pn**	**04 24 09.4**	**-2.5**
TTSI	**Tana Toraja**	**9.59**	**229**	P		Pn	04 24 26.1	+2.8
BATI	**Baunata**	**13.81**	**194**	LR		LR	04 31 47.2	
	comp=Z,52nm,20.6s,baz=124,slow=44							
PMG	**Port Moresby**	**23.65**	**122**	LR		LR	04 38 56.0	
	comp=Z,118nm,21.9s,baz=284,slow=42							
WB0	**Warramunga Arr**	**24.00**	**163**	P		**P**	**04 27 16.4**	**-1.7**
WB0				IAmb		IAmb	04 27 33.2	
	comp=Z,11nm,0.7s							
WRA	**Warramunga Arr**	**24.15**	**163**	P		**P**	**04 27 17.7**	**-1.8**
	comp=Z,2.3nm,0.5s,baz=338,slow=10,SNR=18							
	comp=Z,2.3nm,0.5s							
WB2	**Warramunga Arr**	**24.15**	**163**	P		**P**	**04 27 18.6**	**-0.9**
WB2				IAmb		IAmb	04 27 20.5	
	comp=Z,25nm,1.5s							
ASAR	**Alice Springs**	**27.59**	**166**	P		**P**	**04 27 49.1**	**-1.5**
	comp=Z,0.6nm,0.4s,baz=348,slow=7.5,SNR=21							
ASAR				PcP		**PcP**	**04 31 07.6**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=344,slow=2.3,SNR=2.4							
	comp=Z,0.6nm,0.4s							
ASAR	**Alice Springs**	**27.59**	**166**			**PcP**	**04 31 06.7**	**-0.8**
JHJ	**Hachijo jima 2**	**31.99**	**20**	LR		LR	04 42 03.0	
	comp=Z,48nm,20.1s,baz=250,slow=37							
KSRS	**Korea Array**	**34.03**	**1**	P		**P**	**04

comp=Z,20nm,0.3s
ZEA Zeya 3.70 179 *e*Sg **Sg 04 27 58.8 -4.0**
comp=Z,25nm,0.4s
KHNR Khani 3.92 266 P **Pg 04 27 16.5 -2.6**
KHN Khani 4.02 266 *e*Pg **Pb 04 27 16.5 +1.5**
comp=Z,200nm,0.2s
KHN *e*Sg **Sg 04 28 08.4 -4.7**
comp=Z,627nm,0.3s
OLMR Olekminsk 4.54 313 P **Pb 04 27 25.9 +2.1**
OLMR Olekminsk 4.54 313 *e*Pg **Pb 04 27 25.9 +2.1**
comp=Z,18nm,0.4s
OLMR *e*Sg **Sg 04 28 26.5 -3.3**
comp=Z,83nm,0.4s
YAK Yakutsk 4.79 15 *e*P **Pn 04 27 17.5 +1.2**
YAK *e* 04 28 12.1
YAK pmax pmax
comp=Z,22nm,0.3s
YAK pmax pmax
comp=N,5.0nm,0.3s
YAK smax smax
comp=N,71nm,0.6s
YAK smax smax
comp=E,15nm,0.3s
YAK Yakutsk 4.79 15 *e*Pn **Pn 04 27 15.7 -0.6**
comp=E,95nm,0.7s
YAK *e*Sn **Sn 04 28 10.5 -1.3**
comp=E,293nm,0.5s
TUP Tupik 5.03 236 P **Pn 04 27 23.2 +3.7**
TUP 04 28 18.5
TUP Tupik 5.03 236 *e*Pn **Pn 04 27 23.2 +3.7**
TUP *e*Pg **Pg 04 27 37.8 -2.6**
comp=E,21nm,0.6s
TUP *e*Sn **Sn 04 28 18.4 +0.8**
comp=E,163nm,0.9s
KLR Kul'dur 8.67 159 *de*P **Pn 04 28 10.9 +1.5**
KLR pmax pmax
comp=Z,5.0nm,0.3s
KLR MLR MLR
comp=Z,27nm,9.0s
HIA Hailar 9.29 211 *ce*P **Pn 04 28 18.9 +1.0**
HIA pmax pmax
comp=Z,6.0nm,0.4s
HIA MLR MLR
comp=Z,45nm,15.0s
MA2 Magadan 12.53 70↑ *e*P **Pn 04 29 05.4 +3.1**
MA2 pmax pmax
comp=Z,9.0nm,1.1s
SEY Seymchan 13.67 56↑ *e*P **Pn 04 29 18.9 +1.2**
SEY pmax pmax
comp=Z,1.0nm,0.9s
SEY MLR MLR
comp=Z,19nm,8.0s
YSS Yuzh-Sakhalins 14.17 131↑ *e*P **Pn 04 29 26.6 +1.9**
YSS pmax pmax
comp=Z,7.0nm,1.0s
TIXI Tiksi 14.30 2↑ *e*P **Pn 04 29 26.5 +0.2**
TIXI pmax pmax
comp=Z,5.0nm,2.1s
TIXI MLR MLR
comp=Z,15nm,9.0s
BILL Bilibino 20.43 43 *i* P Pn 04 30 42.6 -0.6
BILL pmax pmax
comp=Z,1.0nm,0.8s
BILL MLR MLR
comp=Z,32nm,16.0s
KURK Kurchatov 28.70 278↓ *e*P **P 04 32 01.0 0.0**
KURK pmax pmax
comp=Z,4.0nm,2.8s
MK31 Makanchi Array 28.99 268↑ *e*P **P 04 32 03.8 +0.1**
BRVK Borovoye 31.88 287↓ *e*P **P 04 32 31.0 +2.0**
BRVK pmax pmax
comp=Z,2.0nm,0.9s
BRVK MLR MLR
comp=Z,27nm,17.0s
AAK Ala-Archa 35.91 269↑ *e*P **P 04 33 03.4 -1.0**
AAK pmax pmax
comp=Z,1.0nm,0.8s
ARU Arti 35.98 298 P **P 04 33 04.0 -0.6**
ARU S **S 04 38 41.7 -1.1**
ARU SS **SnSn 04 40 58.8 -7.6**
COLA College 38.69 43↓ *e*P **P 04 33 28.9 +1.5**
COLA pmax pmax
comp=Z,2.0nm,0.8s
BELG Belogornoye 43.52 299↑ *e*P **P 04 34 05.8 -1.5**
BELG pmax pmax
comp=Z,2.0nm,0.9s

MAN 12 04:29:24.8, 6.56N×126.49E, h12km, mb3.9, ML2.6, MS2.2, Mindanao

*DJA **12** 04:40:44.8±1.3, 3.7N±8.8×12.8E±1.2, h10km, M3.6/3, mb3.5/1, MLv3.6/3*
*IDC **12** 04:40:45.9±1.8, 2.08N×124.93E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=182.8km s-min=25.3km az=64.0*
ISC 12 04:40:44.3±1.5, **3.4N**±0.1×**127.6E**±0.2, **h10**km, **n6**, σ1§**26**/6, **mb3.5**/4, **Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.63**	**185**	P		**Pg**	**04 41 34.8**	**0.0**
MPSI	**Mapaga**	**8.28**	**249**	P		**Pn**	**04 42 44.6**	**+0.1**
WRA	**Warramunga Arr**	**24.13**	**164**	P		**P**	**04 45 59.3**	**-1.3**
	0.5nm,0.6s,baz=335,slow=11,SNR=7.8							
	0.5nm,0.6s							
ASAR	**Alice Springs**	**27.61**	**167**	P		**P**	**04 46 30.9**	**-1.2**
	0.2nm,0.4s,baz=344,slow=7.0,SNR=7.7							
	0.2nm,0.4s							
STKA	**Stephens Creek**	**37.53**	**160**	P		**P**	**04 48 00.0**	**+1.3**
	1.4nm,0.5s,baz=350,slow=11,SNR=1.7							
	1.4nm,0.5s							
MKAR	**Makanchi Array**	**58.31**	**325**	P		**P**	**04 50 39.4**	**-0.1**
	0.3nm,0.5s,baz=119,slow=8.4,SNR=4.4							
	0.3nm,0.5s							

MAN 12 04:48:08.9, 8.83N×124.12E, h30km, mb3.8, ML2.6, MS2.1, Mindanao

IDC 12 04:55:38.9±1.5, **0.78N**×**124.47E**, **h0**km, **mb3.3**/3, **mbtmp3.7**/4, **ML4.6**/1, **MS3.9**/5, **Error ellipse: s-maj=84.7km s-min=24.4km az=72.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**6.34**	**10**	Pn		Pn	04 57 13.9	+0.1
	13nm,0.3s,baz=72,slow=20,SNR=1.5							
DAV				Sn		Sn	04 58 22.0	-5.0
	37nm,0.3s,baz=221,slow=20,SNR=1.7							
	91nm,0.4s							
WRA	**Warramunga Arr**	**22.75**	**155**	P		P	05 00 42.7	-0.4
	0.6nm,0.7s,baz=334,slow=11,SNR=2.4							
	0.6nm,0.7s							
GUMO	**Guam**	**23.87**	**57**	LR		LR	05 08 48.8	
	comp=Z,234nm,21.0s,baz=234,slow=33							
ASAR	**Alice Springs**	**25.97**	**160**	P		P	05 01 13.8	+0.3
	0.3nm,0.8s,baz=338,slow=9.3,SNR=1.9							
	0.3nm,0.8s							
JHJ	**Hachijo jima 2**	**35.24**	**23**	LR		LR	05 16 18.9	
	comp=Z,344nm,21.4s,baz=250,slow=35							
KSRS	**Korea Array**	**36.63**	**5**	LR		LR	05 18 34.2	
	comp=Z,122nm,21.9s,baz=195,slow=38							
KLR	**Kul'dur**	**48.67**	**6**	LR		LR	05 26 00.6	
	comp=Z,165nm,21.1s,baz=204,slow=37							
MSVF	**Nonsavu**	**55.83**	**112**	LR		LR	05 32 30.4	
	comp=Z,118nm,18.8s,baz=204,slow=40							
MKAR	**Makanchi Array**	**58.74**	**327**	P		P	05 05 38.6	-0.1
	0.3nm,0.5s,baz=118,slow=6.9,SNR=5.3							
	0.3nm,0.5s							

*IDC **12** 04:56:07.7±0.4, 3.22N×126.99E, h0km, mb4.3/27, mbtmp4.3/28, ML3.8/1, MS3.8/25, Error ellipse: s-maj=22.3km s-min=9.0km az=75.0*
*BJI **12** 04:56:12.4±0.0, 2.87N×127.25E, h69km, mb4.6/41, mB4.9/25, Ms4.3/23, Ms7 4.2/24*
*DJA **12** 04:56:12.8±0.3, 3.7N±3.1×12.7E±1.1, h10km, M4.3/13, mb4.6/12, mB4.8/6, MLv4.4/13, Mw(mB)4.1/6, MwMwp4.7/3, Mwp5.0/3*

*NEIC **12** 04:56:14.7±1.5, 3.22N±0.07×127.13E±0.07, h44km±4km, mb4.7/72, Error ellipse: s-maj=11.2km s-min=8.4km az=50.0*
*GCMT **12** 04:56:15.7±0.4, 2.91N±0.03×127.26E±0.04, h31km±1km, MW4.9/70, Moment Tensor Solution. s19, c21; s70, c87; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr 1.67±.23; Mθθ 0.90±.13; Mϕϕ -2.57±.15; Mrθ 1.15±.16; Mθϕ -1.26±.10; Mϕr 0.37±.18; Best double couple: M0 2.81500×10^16 NP1: ϕs 49.00000°, δ49.00000°, λ36.00000°. NP2: ϕs 49.00000°, δ64.00000°, λ133.00000°. Principal axes: T 2.5400, Plg51.0000°, Azm9.0000°; N 0.5510, Plg37.0000°, Azm207.0000°; P -3.0900, Plg9.0000°, Azm110.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 04:56:15.3±0.3, **3.24N**±0.04×**127.09E**±0.06, **h50**km, **n196**, σ1§**49**/164, **mb4.6**/71, **MS4.0**/36, **1C-2D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.62**	**286**	P		**Pn**	**04 56 38.9**	**-2.6**
SGSI				S		**Sn**	**04 57 03.2**	**+2.0**
TNTI	**Ternate**	**2.47**	**174**			**Pn**	**04 56 52.5**	**-0.6**
TNTI	**Ternate**	**2.47**	**174**	P		**Pn**	**04 56 52.9**	**-0.2**
LBMI	**Labuha**	**3.87**	**174**	P		**Pn**	**04 57 13.6**	**+1.2**
KMSI	**Cibinong**	**4.08**	**230**	P		**Pn**	**04 57 16.7**	**+1.4**
DAV	**Davao City (W)**	**4.09**	**338**	Pn		**Pn**	**04 57 15.1**	**-0.3**
KCP	**Kidapawan**	**4.24**	**332**↑	*e*P		**Pn**	**04 57 17.0**	**-0.5**
SANI	**Sanana**	**5.37**	**192**	P		**Pn**	**04 57 34.3**	**+1.4**
	0.2nm,644nm,35nm,1.0s							
SWI	**Sorong**	**5.83**	**134**	P		**Pn**	**04 57 39.2**	**-0.1**
	0.2nm,4μm,62nm,1.1s							
MRSI	**Marisa**	**5.83**	**242**	P		**Pn**	**04 57 40.6**	**+1.3**
	0.3nm,1μm,104nm,0.8s							
SIJI	**Sorong**	**5.84**	**134**	Pn		**Pn**	**04 57 37.3**	**-2.1**
	2.5nm,0.3s,baz=338,slow=14,SNR=15							
SIJI				Sn		**Sn**	**04 58 45.5**	**+0.5**
	1.3nm,0.3s,baz=171,slow=22,SNR=1.3							
	19nm,0.7s							
TOLI2	**Tolitoli**	**6.65**	**252**	Pn		**Pn**	**04 57 50.0**	**-0.5**
APSI	**Ampana**	**6.83**	**233**	P		**Pn**	**04 57 55.2**	**+2.3**
	0.4nm,1μm,141nm,1.1s							
MPSI	**Mapaga**	**7.75**	**248**	P		**Pn**	**04 58 05.9**	**+0.4**
	0.1nm,21nm,1.1s							
MYLDM	**Lahad Datu**	**8.78**	**283**	Pn		**Pn**	**04 58 21.1**	**+1.3**
TTSI	**Tana Toraja**	**9.58**	**229**	P		**Pn**	**04 58 32.9**	**+2.2**
	20nm,1.0s							
SRPI	**Serui, Papua**	**10.46**	**119**	P		**Pn**	**04 58 45.7**	**+3.0**
SBUM	**Sibu**	**14.87**	**267**	Pn		**Pn**	**04 59 42.3**	**-0.3**
PLAI	**Plampang**	**15.16**	**218**	P		**P**	**04 59 48.3**	**-2.3**
	122nm,0.9s							
STKI	**Sintang**	**15.92**	**259**	P		**P**	**04 59 59.6**	**+0.5**
	33nm,0.9s							
SRBI	**Singaraja**	**16.34**	**226**	P		**P**	**05 00 04.0**	**+0.3**
	75nm,1.2s							
KSM	**Kuching**	**16.86**	**264**	Pn		**Pn**	**05 00 06.4**	**-1.6**
TPUB	**Ta-pu**	**20.90**	**343**	P		**P**	**05 00 54.5**	**+0.9**
QIZ	**Qiongzhong**	**23.04**	**314**	P		**P**	**05 01 16.2**	**-0.2**
QIZ				S		**S**	**05 05 24.7**	**+1.0**
QIZ				LR		LR		
	comp=N,370nm,15.0s							
QIZ				LR		LR		
	comp=E,240nm,14.7s							
QIZ				LR		LR		
	comp=Z,440nm,24.7s							
WB0	**Warramunga Arr**	**23.96**	**163**	P		**P**	**05 01 22.9**	**-2.3**
WB0				IAmb		IAmb	05 01 35.9	
	comp=Z,17nm,0.7s							
WRAB	**Tennant Creek**	**24.11**	**163**	P		**P**	**05 01 25.3**	**-1.2**
WRAB				IAmb		IAmb	05 01 26.5	
	comp=Z,30nm,0.9s							
WRA	**Warramunga Arr**	**24.11**	**163**	P		**P**	**05 01 24.5**	**-2.1**
	comp=Z,8.5nm,0.7s,baz=334,slow=11,SNR=2.1							
WRA				S		**S**	**05 05 44.2**	**+3.1**
	comp=Z,1.3nm,0.9s,baz=331,slow=14,SNR=2.4							
	comp=Z,8.5nm,0.7s							
WB2	**Warramunga Arr**	**24.12**	**163**	P		**P**	**05 01 25.1**	**-1.6**
WB2				IAmb		IAmb	05 01 26.6	
	comp=Z,26nm,0.9s							
WR0	**Warramunga Arr**	**24.19**	**163**	P		**P**	**05 01 25.7**	**-1.6**
WR0				IAmb		IAmb	05 01 26.7	
	comp=Z,47nm,1.4s							
MBWA	**Marble Bar**	**25.30**	**196**	P		**P**	**05 01 37.0**	**-0.3**
PSA00	**Pilbara Seismi**	**25.66**	**196**	P		**P**	**05 01 41.0**	**+0.4**
AS31	**Alice Springs**	**27.55**	**166**	P		**P**	**05 01 56.1**	**-1.7**
ASAR	**Alice Springs**	**27.56**	**166**	P		**P**	**05 01 55.6**	**-2.2**
	comp=Z,1.3nm,0.6s,baz=343,slow=6.6,SNR=18							
ASAR				PcP		**PcP**	**05 05 15.0**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=357,slow=3.6,SNR=4.6							
ASAR				S		**S**	**05 06 43.4**	**+7.7**
	comp=Z,1.3nm,0.9s,baz=350,slow=20,SNR=4.7							
	comp=Z,1.3nm,0.6s							
ASAR	**Alice Springs**	**27.56**	**166**	P		**P**	**05 01 56.1**	**-1.7**
NJ2	**Nanjing**	**29.69**	**346**	*e*P		**P**	**05 02 18.9**	**+2.3**
NJ2				pmax		pmax		
	comp=Z,9.0nm,0.6s							
CTA	**Charters Tower**	**29.86**	**142**	LR		LR	05 16 06.2	
	comp=Z,240nm,18.6s,baz=315,slow=40							
CMAR	**Chiang Mai Arr**	**31.43**	**301**	P		**P**	**05 02 30.6**	**-1.6**
	comp=Z,2.1nm,0.8s,baz=117,slow=6.8,SNR=9.1							
	comp=Z,2.1nm,0.8s							
CMAR	**Chiang Mai Arr**	**31.43**	**301**	P		**P**	**05 02 31.8**	**-0.4**
CHTO	**Chiang Mai**	**31.58**	**301**	P		**P**	**05 02 32.9**	**-0.6**
PZH	**PanZhiHua**	**33.54**	**316**	P		**P**	**05 02 53.1**	**+2.4**
PZH				pmax		pmax		
	comp=Z,7.0nm,0.6s							
PZH				pmax		pmax		
	comp=Z,100nm,4.1s							
KSAR	**Wonju Array Be**	**34.05**	**1**	P		**P**	**05 02 55.7**	**+1.0**
KSRS	**Korea Array**	**34.06**	**1**	P		**P**	**05 02 54.6**	**-0.3**
	comp=Z,7.2nm,0.8s,baz=176,slow=10,SNR=13							
	comp=Z,2.7nm,0.8s							
TIA	**Tai'an**	**34.08**	**346**	↓P		**P**	**05 02 55.2**	**+0.1**
TIA				pmax		pmax		
	comp=Z,7.0nm,0.8s							
TIA				pmax		pmax		
	comp=Z,110nm,4.9s							
TIA				LR		LR		
	comp=Z,240nm,21.3s							
TIA				LR		LR		
	comp=Z,230nm,20.8s							
TIA				LR		LR		
	comp=Z,360nm,21.0s							
MJAR	**Matsushiro Arr**	**34.69**	**16**	P		**P**	**05 02 58.9**	**-1.5**
	comp=Z,1.4nm,0.8s,baz=182,slow=9.5,SNR=7.3							
MJAR				PcP		**PcP**	**05 05 34.2**	**+0.6**
	comp=Z,1.2nm,0.8s,baz=198,slow=3.3,SNR=4.0							
	comp=Z,1.4nm,0.8s							
XAN	**Xi'an**	**35.01**	**333**	P		**P**	**05 03 01.8**	**-1.4**
XAN				pmax		pmax		
	comp=Z,8.0nm,1.0s							
XAN				pmax		pmax		
	comp=Z,81nm,5.0s							
XAN				LR		LR		
	comp=Z,230nm,18.0s							
XAN				LR		LR		
	comp=Z,280nm,18.7s							
XAN				LR		LR		
	comp=Z,520nm,20.8s							
HNS	**HongShan**	**35.85**	**343**	↓P		**P**	**05 03 13.3**	**+3.0**
HNS				*e*S		**S**	**05 08 51.0**	**+6.5**
HNS				LR		LR		
	comp=Z,220nm,20.6s							
HNS				LR		LR		
	comp=Z,400nm,21.9s							
HNS				LR		LR		
	comp=Z,410nm,22.6s							
STKA	**Stephens Creek**	**37.55**	**160**	P		**P**	**05 03 23.2**	**-1.6**
	comp=Z,8.1nm,0.9s,baz=332,slow=8.1,SNR=12							
STKA				LR		LR	05 21 30.4	
	comp=Z,243nm,19.1s,baz=339,slow=40							
	comp=Z,8.1nm,0.9s							
STKA	**Stephens Creek**	**37.55**	**160**	P		**P**	**05 03 23.5**	**-1.3**
BJT	**Baijiatuan**	**37.92**	**346**	P		**P**	**05 03 27.8**	**-0.1**
BJI	**Beijing**	**37.94**	**346**	P		**P**	**05 03 27.8**	**-0.2**
BJI				pmax		pmax		
	comp=Z,20nm,1.0s							
BJI				LR		LR		
	comp=Z,160nm,18.1s							
BJI				LR		LR		
	comp=Z,170nm,20.2s							
BJI				LR		LR		
	comp=Z,270nm,18.5s							
LZH	**Lanzhou**	**39.10**	**330**	*e*P		P	05 03 43.8	+5.7
LZH				pP		pP	05 03 51.8	+0.9
LZH				sP		sP	05 03 57.5	+0.9
LZH				pmax		pmax		
	comp=Z,21nm,1.2s							
LZH				pmax		pmax		
	comp=Z,75nm,5.6s							
LZH				LR		LR		
	comp=N,410nm,14.0s							
LZH				LR		LR		
	comp=E,430nm,13.9s							
LZH				LR		LR		
	comp=Z,570nm,17.2s							
HHC	**Hu-ho-hao-te**	**39.97**	**342**	*e*P		**P**	**05 03 47.0**	**+1.8**
HHC				pmax		pmax		
	comp=Z,32nm,0.8s							
HHC				pmax		pmax		
	comp=Z,160nm,4.6s							
HHC				LR		LR		
	comp=Z,400nm,19.0s							
HHC				LR		LR		
	comp=Z,320nm,19.7s							
HHC				LR		LR		
	comp=Z,620nm,19.7s							
USRK	**Ussuriysk Ar.**	**41.02**	**5**	P		**P**	**05 03 51.0**	**-2.6**
	comp=Z,3.5nm,0.8s,baz=205,slow=10.0,SNR=3.6							
	comp=Z,3.5nm,0.8s							
USRK	**Ussuriysk Ar.**	**41.02**	**5**	P		**P**	**05 03 54.4**	**+0.8**
MDJ	**Mudanjiang**	**41.27**	**3**	P		**P**	**05 03 55.6**	**0.0**
MDJ				ScP		**ScP**	**05 09 39.5**	**-0.1**
MDJ				PcS		**PcS**	**05 09 43.2**	**-1.5**
MDJ				S		**S**	**05 10 09.8**	**+3.7**
MDJ				pmax		pmax		
	comp=Z,14nm,1.4s							
MDJ				pmax		pmax		
	comp=Z,110nm,3.5s							
MDJ				LR		LR		
	comp=Z,190nm,13.7s							
MDJ				LR		LR		
	comp=Z,140nm,13.4s							
MDJ				LR		LR		
	comp=Z,320nm,22.5s							
H11S3	**WAKE ISLAND Hy**	**41.60**	**66**	T		T	05 48 14.6	
	baz=253,slow=75,SNR=16							
H11S1	**WAKE ISLAND Hy**	**41.62**	**66**	T		T	05 48 15.5	
	baz=253,slow=75,SNR=14							
H11S2	**WAKE ISLAND Hy**	**41.62**	**66**	T		T	05 48 14.6	
	baz=253,slow=75,SNR=8.9							
GTA	**Gaotai**	**43.70**	**329**	*e*P		**P**	**05 04 16.0**	**+0.3**
GTA				pmax		pmax		
	comp=Z,2.0nm,0.9s							
GTA				pmax		pmax		
	comp=Z,32nm,5.5s							
GTA				LR		LR		
	comp=Z,240nm,20.4s							
GTA				LR		LR		
	comp=Z,220nm,19.6s							
GTA				LR		LR		
	comp=Z,410nm,21.1s							
GOMU	**GeErMu**	**44.29**	**322**	P		**P**	**05 04 20.8**	**0.0**
GOMU				S		**S**	**05 10 55.1**	**+3.5**
GOMU				pmax		pmax		
	comp=Z,1.0nm,0.5s							
GOMU				pmax		pmax		
	comp=Z,92nm,4.6s							
GOMU				LR		LR		
	comp=Z,60nm,15.3s							
GOMU				LR		LR		
	comp=Z,95nm,16.2s							
GOMU				LR		LR		
	comp=Z,100nm,15.8s							
KLR	**Kul'dur**	**45.99**	**4**	P		**P**	**05 04 32.8**	**-0.8**
	comp=Z,4.3nm,0.9s,baz=207,slow=6.8,SNR=12							
	comp=Z,4.3nm,0.9s							
PALK	**Pallekele**	**46.35**	**277**	LR		LR	05 26 33.2	
	comp=Z,101nm,19.3s,baz=197,slow=40							
ULN	**Ulaanbaatar**	**47.69**	**342**	P		**P**	**05 04 47.5**	**+0.3**
ULN				IAmb		IAmb	05 04 57.8	
	comp=Z,7.6nm,1.1s							
SONM	**Songino Array**	**47.87**	**341**	P		**P**	**05 04 48.1**	**-0.4**
	comp=Z,1.9nm,0.9s,baz=153,slow=9.8,SNR=10							
	comp=Z,1.9nm,0.9s							
SONM	**Songino Array**	**47.87**	**341**	P		**P**	**05 04 48.3**	**-0.2**
WMQ	**Urumqi**	**53.33**	**325**	*e*P		**P**	**05 05 32.6**	**+3.0**
WMQ				LR		LR		
	comp=Z,380nm,16.1s							
WMQ				LR		LR		
	comp=Z,310nm,21.1s							
WMQ				LR		LR		
	comp=Z,280nm,18.7s							
PETK	**Petropavlovsk-**	**55.75**	**22**	P		**P**	**05 05 47.0**	**+0.1**
	comp=Z,4.0nm,0.8s,baz=207,slow=9.3,SNR=6.5							
	comp=Z,4.0nm,0.8s							
MK31	**Makanchi Array**	**58.16**	**325**	P		**P**	**05 06 03.5**	**-0.7**
MKAR	**Makanchi Array**	**58.16**	**325**	P		**P**	**05 06 03.4**	**-0.8**
	comp=Z,3.0nm,0.8s,baz=125,slow=8.3,SNR=20							
	comp=Z,3.0nm,0.8s							
MKAR	**Makanchi Array**	**58.16**	**325**	P		**P**	**05 06 03.2**	**-0.9**
MAKZ	**Makanchi**	**58.35**	**325**	P		**P**	**05 06 05.6**	**+0.1**
MAKZ				IAmb		IAmb	05 06 24.5	
	comp=Z,7.2nm,1.0s							
KSH	**Kashi**	**58.64**	**315**	P		P	05 06 18.3	+11
KSH				pmax		pmax		
	comp=Z,5.0nm,0.9s							
YAK	**Yakutsk**	**58.69**	**1**	P		**P**	**05 06 06.4**	**-1.1**
	comp=Z,4.9nm,0.3s,baz=253,slow=1.6,SNR=6.4							
YAK				LR		LR	05 31 03.9	
	comp=Z,82nm,21.9s,baz=236,slow=36							
	comp=Z,4.9nm,0.3s							
YAK	**Yakutsk**	**58.69**	**1**	P		**P**	**05 06 07.9**	**+0.5**
MA2	**Magadan**	**59.09**	**14**	LR		LR	05 31 28.5	
	comp=Z,70nm,21.6s,baz=212,slow=36							
AAK	**Ala-Archa**	**60.96**	**318**	LR		LR	05 36 21.4	
	comp=Z,170nm,21.1s,baz=104,slow=40							
ZAA0	**Zalesovo Array**	**61.19**	**333**	P		**P**	**05 06 24.2**	**-0.5**
ZAA0				IAmb		IAmb	05 06 39.9	
	comp=Z,4.3nm,0.8s							
ZALV	**Zalesovo Beam**	**61.19**	**333**	P		**P**	**05 06 24.5**	**-0.3**
	comp=Z,1.4nm,0.7s,baz=153,slow=1.7,SNR=5.9							
	comp=Z,1.4nm,0.7s							
ZALV	**Zalesovo Beam**	**61.19**	**333**	P		**P**	**05 06 24.6**	**-0.1**
URZ	**Urewera**	**61.94**	**137**	LR		LR	05 34 13.0	
	comp=Z,190nm,20.4s,baz=31,slow=37							
KBL	**Kabul**	**62.10**	**308**	P		**P**	**05 06 30.1**	**-1.5**
KURK	**Kurchatov**	**62.34**	**328**	P		**P**	**05 06 32.0**	**-0.6**
SEY	**Seymchan**	**62.43**	**13**	P		**P**	**05 06 33.6**	**+0.7**
	comp=Z,6.0nm,0.9s,baz=218,slow=4.9,SNR=12							
SEY				LR		LR	05 35 11.9	
	comp=Z,42nm,19.6s,baz=192,slow=38							
	comp=Z,6.0nm,0.9s							
GAR	**Garm**	**62.52**	**313**	P		**P**	**05 06 33.4**	**-0.8**
SHEM	**Shemya Is, Ala**	**62.70**	**30**	LR		LR	05 31 14.4	
	comp=Z,25nm,20.8s,baz=289,slow=34							
AFI	**Afiamalu**	**62.96**	**107**	LR		LR	05 30 16.5	
	comp=Z,178nm,21.5s,baz=289,slow=32							
KKAR	**Karatay Array**	**63.83**	**317**	P		**P**	**05 06 41.7**	**-1.0**
BRVK	**Borovoye**	**68.00**	**327**	P		**P**	**05 07 09.1**	**-0.1**
BRVK				IAmb		IAmb	05 07 11.7	
	comp=Z,7.9nm,0.9s							
TIXI	**Tiksi**	**68.33**	**1**	LR		LR	05 40 17.9	
	comp=Z,104nm,20.6s,baz=180,slow=39							
TIXI	**Tiksi**	**68.33**	**1**	P		**P**	**05 07 10.5**	**-0.5**
WSAR	**Wadi Sarin**	**68.95**	**294**	LR		LR	05 40 08.1	
	comp=Z,39nm,19.6s,baz=108,slow=38							
BILL	**Bilibino**	**69.93**	**15**	P		**P**	**05 07 20.7**	**-0.3**
NRIK	**Noril'sk**	**70.99**	**346**	P		**P**	**05 07 27.2**	**-0.1**
	comp=Z,16nm,0.9s,baz=139,slow=6.3,SNR=19							
	comp=Z,16nm,0.9s							
ABKAR	**Akbulak array**	**72.75**	**321**	P		**P**	**05 07 37.7**	**-0.7**
AKTO	**Aktyubinsk**	**74.26**	**322**	P		**P**	**05 07 46.6**	**-0.7**
	comp=Z,1.6nm,0.7s,baz=105,slow=4.5,SNR=6.3							
	comp=Z,1.6nm,0.7s							
RAR	**Rarotonga**	**75.52**	**113**	LR		LR	05 39 41.8	
	comp=Z,29nm,19.1s,baz=310,slow=35							
ARU	**Arti**	**75.54**	**328**	P		**P**	**05 07 53.5**	**-1.0**
	comp=Z,3.1nm,0.5s,baz=75,slow=3.9,SNR=8.4							
ARU				LR		LR	05 44 12.7	
	comp=Z,63nm,19.1s,baz=130,slow=38							
	comp=Z,3.1nm,0.5s							
ARU	**Arti**	**75.54**	**328**	P		**P**	**05 07 54.0**	**-0.5**
ARU				IAmb		IAmb	05 07 54.6	
	comp=Z,13nm,1.2s							
N16K	**Nishlik Lake**	**79.40**	**29**	P		**P**	**05 08 17.4**	**+1.4**
	baz=258,SNR=7.5							
O16K	**Kokwok River B**	**79.55**	**30**	P		**P**	**05 08 17.6**	**+0.8**
	baz=258							
R17K	**Ugashik Creek**	**80.07**	**32**	P		**P**	**05 08 20.0**	**+0.4**
	baz=260							

baz=259
N18K **Kilae Creek** 80.84 29 P P 05 08 24.8 +1.1
baz=260
BELG **Belogornoye** 81.01 322 P P 05 08 24.7 -0.1
comp=Z,9.2nm,0.9s,baz=296,slow=4.2,SNR=5.7
BELG LR LR 05 48 18.6
comp=Z,39nm,18.1s,baz=125,slow=39
comp=Z,9.2nm,0.9s
TTA **Tatalina** 81.17 27 P P 05 08 26.2 +0.6
TTA **Tatalina** 81.17 27 P P 05 08 26.6 +1.1
baz=260,SNR=7.1
N19K **Bonanza Creek** 81.54 29 IAmb IAmb 05 08 39.2
comp=Z,14nm,1.5s
N19K **Bonanza Creek** 81.54 29 P P 05 08 28.7 +1.2
baz=261
L19K **White Mountain** 81.58 28 IAmb IAmb 05 08 30.1
comp=Z,7.2nm,0.9s
L19K **White Mountain** 81.58 28 P P 05 08 28.9 +1.3
baz=261,SNR=8.6
M19K **Big River Lodg** 81.75 28 IAmb IAmb 05 08 34.8
comp=Z,4.9nm,0.8s
M19K **Big River Lodg** 81.75 28 P P 05 08 29.9 +1.4
baz=261
L20K **Farewell, AK** 82.07 27 P P 05 08 29.6 -0.6
baz=262
GNI **Garni** 82.07 310 LR LR 05 50 30.2
comp=Z,20nm,20.7s,baz=84,slow=40
K20K **Telida** 82.11 27 IAmb IAmb 05 08 32.7
comp=Z,5.9nm,0.8s
K20K **Telida** 82.11 27 P P 05 08 31.9 +1.4
baz=261,SNR=7.7
J20K **Nowinta River** 82.20 26 IAmb IAmb 05 08 33.1
comp=Z,8.5nm,0.8s
J20K **Nowinta River** 82.20 26 P P 05 08 32.4 +1.5
baz=261,SNR=12
M20K **Styx River** 82.33 28 IAmb IAmb 05 08 33.8
comp=Z,5.6nm,0.8s
M20K **Styx River** 82.33 28 P P 05 08 33.1 +1.4
baz=262
PPLA **Purkeypile** 82.90 27 P P 05 08 35.1 +0.4
PPLA IAmb IAmb 05 08 36.2
comp=Z,6.0nm,0.8s
PPLA **Purkeypile** 82.90 27 P P 05 08 35.4 +0.7
baz=263
VNDA **Vanda** 82.90 173 P P 05 08 33.5 -0.7
comp=Z,1.7nm,0.9s,baz=323,slow=6.9,SNR=6.4
comp=Z,1.7nm,0.9s
VNDA **Vanda** 82.90 173 P P 05 08 34.7 +0.5
VNDA IAmb IAmb 05 08 44.8
comp=Z,9.4nm,1.5s
CHUM **Lake Minchumin** 82.96 26 P P 05 08 36.1 +1.3
baz=263
H21K **Melozitna Rive** 82.98 24 IAmb IAmb 05 08 37.1
comp=Z,8.1nm,0.9s
H21K **Melozitna Rive** 82.98 24 P P 05 08 36.4 +1.5
baz=262,SNR=7.4
CAST **Castle Rocks** 83.01 27 IAmb IAmb 05 08 37.1
comp=Z,7.6nm,0.8s
CAST **Castle Rocks** 83.01 27 P P 05 08 35.9 +0.9
baz=263,SNR=7.8
SKT **Skwentna** 83.10 28 P P 05 08 35.6 +0.1
baz=264,SNR=8.1
ONI **Oni** 83.13 312 P P 05 08 36.8 +0.6
ONI IAmb IAmb 05 08 50.3
comp=Z,4.7nm,0.8s
I21K **Tanana** 83.26 25 P P 05 08 37.9 +1.6
baz=263,SNR=14
SUA **Susitna One** 83.42 29 P P 05 08 37.4 0.0
baz=265
MAW **Mawson** 83.42 200 P P 05 08 37.4 +0.4
comp=Z,1.3nm,0.8s,baz=127,slow=18,SNR=2.4
MAW LR LR 05 48 38.5
comp=Z,15nm,18.1s,baz=46,slow=38
comp=Z,1.3nm,0.8s
KTH **Kantishna Hill** 83.54 27 IAmb IAmb 05 08 39.7
comp=Z,5.3nm,0.9s
BPAW **Bear Paw Mtn.** 83.57 26 IAmb IAmb 05 08 49.3
comp=Z,8.7nm,1.2s
BPAW **Bear Paw Mtn.** 83.57 26 P P 05 08 38.7 +0.8
baz=264,SNR=7.1
KBZ **Khabaz** 83.58 313 LR LR 05 50 07.9
comp=Z,86nm,21.5s,baz=72,slow=39
KVAR **Kislovodsk Arr** 83.73 314 LR LR 05 51 03.6
comp=Z,79nm,20.6s,baz=282,slow=39
M22K **Willow** 83.74 28 P P 05 08 38.8 0.0
baz=265,SNR=8.6
MLY **Manley** 83.77 25 IAmb IAmb 05 08 41.2
comp=Z,9.3nm,1.0s
MLY **Manley** 83.77 25 P P 05 08 39.8 +0.8
baz=264,SNR=16
TRF **Thorofare Moun** 83.81 27 IAmb IAmb 05 08 40.8
comp=Z,7.6nm,0.9s
TRF **Thorofare Moun** 83.81 27 P P 05 08 39.7 +0.3
baz=265,SNR=7.2
GURO **Guroymak-BITLI** 84.13 308 P P 05 08 41.7 +0.1
GURO IAmb IAmb 05 08 43.2
comp=Z,8.1nm,1.1s
PMR **Palmer** 84.20 29 P P 05 08 41.4 +0.2
baz=266
COLD **Coldfoot** 84.20 23 IAmb IAmb 05 08 44.0
comp=Z,11nm,1.1s
COLD **Coldfoot** 84.20 23 P P 05 08 42.8 +1.7
baz=264
H23K **Yukon River** 84.34 24 IAmb IAmb 05 08 44.5
comp=Z,7.8nm,0.8s
H23K **Yukon River** 84.34 24 P P 05 08 43.4 +1.5
baz=265,SNR=11
I23K **Minto, Yukon-K** 84.36 25 IAmb IAmb 05 08 43.8
comp=Z,9.4nm,1.0s
I23K **Minto, Yukon-K** 84.36 25 P P 05 08 43.0 +1.1
baz=265,SNR=8.8
MCK **McKinley** 84.44 26 P P 05 08 42.5 +0.1
baz=266
NEA2 **Nenana** 84.44 26 IAmb IAmb 05 08 44.5
comp=Z,5.2nm,0.9s
NEA2 **Nenana** 84.44 26 P P 05 08 43.2 +0.8
baz=266,SNR=7.3
RND **Reindeer** 84.45 27 P P 05 08 42.0 -0.6
RND IAmb IAmb 05 08 43.6
comp=Z,7.2nm,0.9s
KNK **Knik Glacier** 84.51 29 P P 05 08 43.9 +1.0
baz=267,SNR=5.3
WAT1 **Susitna Watana** 84.55 27 P P 05 08 43.3 +0.2
baz=266
TOLK **Toolik Lake Re** 84.57 21 IAmb IAmb 05 08 45.3
comp=Z,5.3nm,0.9s
TOLK **Toolik Lake Re** 84.57 21 P P 05 08 44.6 +1.6
baz=265,SNR=6.0
SML **Sawmill** 84.59 28 P P 05 08 44.0 +0.8
baz=267,SNR=7.8
WRH **Wood River Hil** 84.86 26 IAmb IAmb 05 08 45.7
comp=Z,8.8nm,1.1s
M23K **Glacier View** 84.88 28 P P 05 08 45.1 +0.5
baz=267
WAT6 **Susitna Watana** 84.91 28 P P 05 08 45.6 +0.6
baz=267,SNR=6.3
H24K **Noodor Dome** 85.02 24 IAmb IAmb 05 08 57.8
comp=Z,6.7nm,1.3s
H24K **Noodor Dome** 85.02 24 P P 05 08 46.1 +0.8
baz=267
SCM **Sheep Creek Mo** 85.07 28 P P 05 08 46.4 +0.7
baz=268
KOPT **Kop Dagi** 85.32 310 P P 05 08 48.2 +0.5
ILAR **Eielson Array** 85.39 25 P P 05 08 46.9 -0.2
comp=Z,1.2nm,0.9s,baz=256,slow=6.8,SNR=15
comp=Z,1.2nm,0.9s
ILAR **Eielson Array** 85.39 25 P P 05 08 46.7 -0.5
PAX **Paxson** 85.97 27 IAmb IAmb 05 08 52.2
comp=Z,4.0nm,1.0s
KLMR **Klimovskoe** 86.00 331 *e*P P 05 08 47.5 -2.7
KLMR AMP 05 09 02.4
comp=Z,8.0nm,1.1s
GLB **Gilahina Butte** 86.75 29 IAmb IAmb 05 08 56.4
comp=Z,7.5nm,1.0s
K27K **Chicken** 87.48 26 P P 05 08 58.7 +1.3
baz=272
L27K **Beaver Creek,** 87.63 27 P P 05 08 58.9 +0.7
baz=272
OBN **Obninsk** 87.67 325 P P 05 08 57.2 -1.2
comp=Z,3.1nm,0.4s,baz=312,slow=21,SNR=3.1
comp=Z,3.1nm,0.4s
ASF **Jabal al Asfar** 88.46 302 P P 05 09 02.6 -0.3
comp=Z,6.5nm,1.0s,baz=108,slow=4.6,SNR=6.1
comp=Z,6.5nm,1.0s
KMBO **Kilima Mbogo** 89.90 269 P P 05 09 08.3 -1.9
comp=Z,2.3nm,0.8s,baz=42,slow=5.7,SNR=4.3
comp=Z,2.3nm,0.8s
KMBO **Kilima Mbogo** 89.90 269 P P 05 09 09.6 -0.6
KMBO IAmb IAmb 05 09 11.9
comp=Z,5.1nm,1.1s
BRTR **Keskin Array B** 90.61 310 P P 05 09 11.8 -1.0
comp=Z,1.1nm,0.8s,baz=127,slow=5.4,SNR=6.5
comp=Z,1.1nm,0.8s
BRTR **Keskin Array B** 90.61 310 P P 05 09 12.4 -0.4
SPITS **Spitsbergen Ar** 91.03 349 LR LR 05 54 52.0
comp=Z,61nm,20.4s,baz=32,slow=39
ARCES **ARCESS Array B** 91.03 340 P P 05 09 14.1 +0.1
comp=Z,0.9nm,0.8s,baz=52,slow=5.1,SNR=3.6
ARCES LR LR 05 53 40.5
comp=Z,66nm,21.9s,baz=82,slow=38
comp=Z,0.9nm,0.8s
FARO **Faro, Yukon** 91.61 28 P P 05 09 17.3 +0.5
baz=280
AKASG **Malin Array Be** 92.50 321 P P 05 09 18.7 -2.4
comp=Z,0.2nm,0.4s,baz=62,slow=4.0,SNR=2.3
comp=Z,0.2nm,0.4s
DLBC **Dease Lake** 93.98 31 LR LR 05 48 56.2
comp=Z,56nm,20.4s,baz=254,slow=34
MLR **Muntele Rosu** 95.50 316 LR LR 05 59 37.4
comp=Z,72nm,19.8s,baz=63,slow=40
BURAR **Bucovina Array** 95.60 318 P P 05 09 34.1 -1.5
NOA **NORSAR Array B** 99.38 334 LR LR 05 58 42.7
comp=Z,76nm,21.6s,baz=75,slow=38
LSZ **Lusaka** 99.43 255 LR LR 05 53 58.0
comp=Z,73nm,19.2s,baz=144,slow=35
TXAR **Lajitas Array** 121.61 53 PKP PKiKP 05 15 04.3 -0.3
comp=Z,0.2nm,0.7s,baz=224,slow=2.5,SNR=2.5
TORD **Torodi Ar. Bea** 123.41 288 PKP PKiKP 05 15 08.0 -0.3
comp=Z,2.5nm,0.8s,baz=62,slow=2.1,SNR=11
TORD **Torodi Ar. Bea** 123.41 288 PKPdf 05 15 07.0 -1.1
MT01 **Popeta** 145.06 153 PKPbc PKPbc 05 15 45.2 -2.0
MT02 **Curacav** 145.61 152 PKPbc PKPdf 05 15 48.1 -0.7
LCO **Las Campanas** 149.29 148 PKiKP 05 16 00.8 -0.1

CNRM **12** *05:04:43.2, 31.02N×8.45W, h1km, ml3.5*
IGIL **12** *05:04:45.1, 31.08N×8.26W, h8km, ML2.2*
INMG **12** *05:04:45.1±1.6, 31.06N×8.25W, h31km, ML2.7, Error ellipse: s-maj=8.3km s-min=5.5km az=117.0*

ISC 12 05:04:44.8±1.6, **31.24N**±0.05×**8.37W**±0.04, **h18**km±6km, **n35**, σ1§**38**/51, **Morocco**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
OUK	**Oukaimeden**	**0.43**	**94**	P		**Sb**	**05 05 02.0**	**+1.6**
OUK	**Oukaimeden**	**0.43**	**94**	P		**Pb**	**05 04 54.4**	**+0.2**
OUK				S		**Sb**	**05 05 01.6**	**+1.2**
TTIG	**Tnine Tigouga,**	**0.69**	**185**	P		Pb	05 04 52.0	-6.5
EAH	**EAH**	**1.12**	**292**	P		**Pb**	**05 05 05.2**	**-0.4**
EAH				S		**Sg**	**05 05 21.7**	**+0.5**
SRHM	**Skhour des Reh**	**1.29**	**18**	P		**Pg**	**05 05 11.0**	**+1.2**
OUZM	**OUZ**	**1.42**	**103**	P		**Pn**	**05 05 10.2**	**+0.3**
OUZM	**OUZ**	**1.42**	**103**	P		**Pn**	**05 05 09.8**	**0.0**
OUZM				S		**Sb**	**05 05 28.5**	**-0.1**
CGR	**Cap Guir**	**1.44**	**245**	P		**Pn**	**05 05 09.2**	**-0.8**
CGR				S		**Sn**	**05 05 27.4**	**-1.0**
AVE	**Averroes**	**2.21**	**21**	P		**Pg**	**05 05 26.6**	**-0.6**
AVE				S		**Sg**	**05 05 56.7**	**+0.9**
TZRR	**Tazzarine**	**2.44**	**100**	P		**Pn**	**05 05 25.6**	**+1.6**
TZRR				S		**Sb**	**05 05 59.4**	**+1.3**
ZGR	**Zagora**	**2.62**	**115**	P		**Pn**	**05 05 26.0**	**-0.3**
ZGR	**Zagora**	**2.62**	**115**	P		**Pn**	**05 05 27.1**	**+0.7**
MD31	**MD31**	**3.47**	**61**	P		**Pb**	**05 05 43.7**	**-2.0**
MDT	**Midelt**	**3.56**	**63**	P		**Pn**	**05 05 40.9**	**+1.7**
IFR	**Ifrane**	**3.56**	**49**	P		**Pn**	**05 05 41.1**	**+1.8**
IFR				S		**Sg**	**05 06 36.8**	**-2.4**
TANT	**Tantan**	**3.77**	**222**	P		**Pn**	**05 05 39.5**	**-2.5**
RSA	**Sarsar**	**4.22**	**30**	P		**Pn**	**05 05 50.5**	**+2.2**
JBK	**JBK**	**5.78**	**56**	P		Pn	05 06 15.4	+5.5
PFVI	**Vila Bisbo**	**5.89**	**356**	*e*Pn		**Pn**	**05 06 12.3**	**+1.1**
PFVI				*e*Sn		**Sn**	**05 07 18.3**	**0.0**
MORF	**Marmelete**	**6.06**	**358**	*e*Pn		**Pn**	**05 06 15.0**	**+1.5**
PVAQ	**Vaqueiros**	**6.17**	**5**	*e*Pn		**Pn**	**05 06 16.5**	**+1.4**
PVAQ				*e*Sn		**Sn**	**05 07 24.4**	**-0.8**
PVAQ				A		A	05 07 26.7	
	5.3nm,0.4s							
PTEO	**Sao Teotonio**	**6.30**	**357**	*e*Pn		**Pn**	**05 06 18.0**	**+1.2**
PTEO				*e*Sn		**Sn**	**05 07 27.7**	**-0.6**
PCVE	**Castro Verde**	**6.38**	**2**	*e*Pn		**Pn**	**05 06 19.3**	**+1.3**
PCVE				*e*Sn		**Sn**	**05 07 30.0**	**-0.4**
PCVE				A		A	05 07 43.2	
	3.5nm,0.4s							
MESJ	**Messejana**	**6.59**	**1**	*e*P		**Pn**	**05 06 21.7**	**+1.0**
MESJ				*e*S		**Sn**	**05 07 32.2**	**-3.2**
MESJ				IAML			05 07 35.0	
	comp=N,2.3nm,0.2s							
MESJ	**Messejana**	**6.59**	**1**	*e*Pn		**Pn**	**05 06 22.1**	**+1.3**
MESJ				*e*Sn		**Sn**	**05 07 34.9**	**-0.5**
MESJ				A		A	05 07 50.2	
	comp=N,2.9nm,0.4s							
PNCL	**Nicolau / Gran**	**6.86**	**359**	*e*Pn		**Pn**	**05 06 25.9**	**+1.4**
PNCL				*e*Sn		**Sn**	**05 07 40.9**	**-1.2**
PNCL				A		A	05 08 01.5	
	comp=N,2.7nm,0.6s							
PBAR	**Barrancos**	**7.00**	**9**	*e*Sn		**Sn**	**05 07 44.6**	**-1.1**
EVO	**Evora**	**7.28**	**2**	*e*Pn		**Pn**	**05 06 31.6**	**+1.3**
EVO				*e*Sn		**Sn**	**05 07 52.0**	**-0.5**
PACT	**Alcochete**	**7.52**	**357**	*e*Sn		**Sn**	**05 07 58.1**	**-0.3**
PESTR	**Estremoz**	**7.64**	**5**	*e*Pn		**Pn**	**05 06 36.2**	**+1.0**
PESTR				*e*Sn		**Sn**	**05 07 59.7**	**-1.6**
PESTR				A		A	05 08 09.5	
	comp=N,2.0nm,0.7s							
PMAFR	**Mafra**	**7.74**	**355**	*e*Pn		**Pn**	**05 06 38.4**	**+1.9**
PMAFR				*e*Sn		**Sn**	**05 08 02.0**	**-1.7**
PMAFR				A		A	05 08 06.4	
	comp=N,6.6nm,0.8s							
PMRV	**Marv??o**	**8.21**	**5**	*e*Pn		**Pn**	**05 06 43.6**	**+0.5**
PMRV				*e*Sn		**Sn**	**05 08 14.2**	**-1.2**
PMRV				A		A	05 08 26.6	
	comp=N,1.8nm,0.9s							
PSBE	**So Bento**	**8.26**	**358**	*e*Pn		**Pn**	**05 06 45.6**	**+1.8**
PCBR	**Castelo Branco**	**8.61**	**5**	*e*Pn		**Pn**	**05 06 49.7**	**+1.1**
MTE	**Manteigas**	**9.16**	**4**	*e*Pn		**Pn**	**05 06 58.1**	**+1.9**

IDC **12** *05:40:14.1±2.9, 30.33S×177.43W, h0km, mb4.1/4, mbtmp4.0/5, ML3.4/1, Error ellipse: s-maj=59.3km s-min=29.0km az=105.0*

ISC 12 05:40:18.3±2.5, **30.30S**±0.08×**177.5W**±0.3, **h33**km, **n13**, σ1§**63**/9, **mb4.1**/4, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.11**	**339**	Pn		**Pn**	**05 40 37.3**	**-0.2**
	186nm,0.3s,baz=109,slow=22,SNR=2.1							
RAO				Sn		**Sn**	**05 40 49.2**	**-2.5**
	828nm,0.3s,baz=28,slow=23,SNR=21							
URZ	**Urewera**	**9.12**	**208**	Pn		**Pn**	**05 42 25.8**	**-1.7**
	0.4nm,0.3s,baz=239,slow=23,SNR=1.1							
URZ				Sn		**Sn**	**05 44 07.6**	**-1.3**
	0.6nm,0.3s,baz=11,slow=18,SNR=1.7							
	4.5nm,0.9s							
CTA	**Charters Tower**	**34.23**	**279**	P		**P**	**05 47 02.4**	**+1.2**
	1.9nm,0.4s,baz=110,slow=12,SNR=1.6							
	1.9nm,0.4s							
STKA	**Stephens Creek**	**34.95**	**257**	P		**P**	**05 47 08.9**	**+1.7**
	1.1nm,0.6s,baz=97,slow=8.1,SNR=3.0							
	1.1nm,0.6s							
ASAR	**Alice Springs**	**43.57**	**267**	P		**P**	**05 48 20.0**	**+0.6**
	0.5nm,0.4s,baz=104,slow=7.6,SNR=11							
	0.5nm,0.4s							
WRA	**Warramunga Arr**	**44.55**	**272**	P		**P**	**05 48 27.9**	**+0.7**
	1.1nm,0.3s,baz=110,slow=8.1,SNR=45							
	1.1nm,0.3s							
H03S2	**Juan Fernandez**	**80.14**	**123**	T		T	07 21 45.9	
	baz=239,SNR=7.1							
H03S1	**Juan Fernandez**	**80.15**	**123**	T		T	07 21 54.2	
	baz=239,SNR=6.9							
H03S3	**Juan Fernandez**	**80.16**	**123**	T		T	07 21 40.3	
	baz=239,SNR=4.8							
H10N3	**ASCENSION HYDR**	**38.70**	**154**	T		T	08 35 40.0	
	baz=203,slow=75,SNR=5.4							
H10N1	**ASCENSION HYDR**	**38.71**	**154**	T		T	08 35 38.3	
	baz=203,slow=75,SNR=6.0							
H10N2	**ASCENSION HYDR**	**38.72**	**154**	T		T	08 35 30.6	
	baz=203,slow=75,SNR=5.7							
FINES	**FINESS Array B**	**145.20**	**340**	PKPbc		**PKPdf**	**05 59 52.0**	**+0.3**
	2.3nm,0.7s,baz=57,slow=5.1,SNR=10							

IDC **12** *06:11:03.4±2.0, 23.72S×64.71W, h0km, mb3.7/1, mbtmp3.7/5, ML3.5/4, Error ellipse: s-maj=47.6km s-min=21.0km az=30.0*

ISC 12 06:11:05.3±1.2, **23.66S**±0.1×**64.68W**±0.10, **h10**km, **n7**, σ1§**45**/8, **Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**4.02**	**283**	Pn		**Pn**	**06 12 08.1**	**+0.8**
	0.4nm,0.3s,baz=100,slow=11,SNR=3.5							
	4.1nm,0.5s							
CPUP	**Villa Florida**	**7.20**	**114**	Pn		**Pn**	**06 12 50.6**	**0.0**
	0.5nm,0.3s,baz=291,slow=11,SNR=14							
CPUP				Pg		Pb	06 13 14.4	+4.0
	1.7nm,0.3s,baz=287,slow=14,SNR=4.7							
CPUP				Lg		Lg	06 14 53.2	
	2.2nm,0.3s,baz=21,slow=19,SNR=1.5							
	11nm,0.8s							
LPAZ	**La Paz**	**7.97**	**335**	Pn		**Pn**	**06 13 02.5**	**+0.7**
	0.2nm,0.3s,baz=158,slow=11,SNR=7.3							
LPAZ				Sn		**Sn**	**06 14 31.3**	**-1.1**
	0.1nm,0.3s,baz=132,slow=22,SNR=2.0							
LPAZ				Lg		Lg	06 15 25.4	
	0.1nm,0.3s,baz=188,slow=4.2,SNR=1.6							
	0.9nm,0.5s							
SIV	**San Ignacio**	**8.30**	**25**	Pn		**Pn**	**06 13 07.6**	**+1.8**
	0.3nm,0.3s,baz=206,slow=12,SNR=44							
SIV				Sn		**Sn**	**06 14 39.1**	**-0.7**
	0.1nm,0.3s,baz=119,slow=21,SNR=2.0							
SIV				Lg		Lg	06 15 26.2	
	0.1nm,0.3s,baz=260,slow=17,SNR=3.4							
	6.9nm,0.4s							
TXAR	**Lajitas Array**	**64.63**	**323**	P		P	06 21 48.5	+5.2
	0.1nm,0.5s,baz=144,slow=7.8,SNR=1.9							
TORD	**Torodi Ar. Bea**	**74.45**	**68**	P		**P**	**06 22 43.9**	**-0.4**
	0.3nm,0.4s,baz=257,slow=5.5,SNR=2.1							
	0.3nm,0.4s							
MKAR	**Makanchi Array**	**144.86**	**41**	PKP		**PKPdf**	**06 30 40.5**	**-2.1**
	0.1nm,0.4s,baz=298,slow=3.1,SNR=2.7							

IDC **12** *06:19:21.8±1.7, 18.01S×174.29W, h0km, mb3.9/5, mbtmp3.9/6, ML3.4/1, MS3.1/3, Error ellipse: s-maj=110.6km s-min=21.7km az=150.0*
NEIC **12** *06:19:23.6±1.1, 18.08S±0.06×174.14W±0.1, h10km±1km, mb4.3/8, Error ellipse: s-maj=19.5km s-min=6.6km az=245.0*

ISC 12 06:19:23.0±0.8, **17.95S**±0.08×**174.07W**±0.09, **h10**km, **n20**, σ1§**76**/20, **mb4.1**/10, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**4.08**	**107**	Pn		**Pn**	**06 20 25.9**	**+0.3**
NIUE				Sn		**Sn**	**06 21 11.6**	**-1.8**
AFI	**Afiamalu**	**4.58**	**29**	Pn		**Pn**	**06 20 33.7**	**+1.1**
	1.6nm,0.3s,baz=20,slow=11,SNR=2.8							
AFI				Sn		**Sn**	**06 21 21.2**	**-4.6**
	1.2nm,0.3s,baz=1.9,slow=19,SNR=1.8							
AFI				LR		LR	06 22 09.3	
	comp=Z,109nm,18.6s,baz=192,slow=35							
	19nm,0.7s							
AFI	**Afiamalu**	**4.58**	**29**	Pn		**Pn**	**06 20 34.1**	**+1.6**
DZM	**Mont Dzumac**	**18.77**	**254**	LR		LR	06 29 01.4	
	comp=Z,70nm,19.6s,baz=182,slow=31							
URZ	**Urewera**	**21.66**	**199**	P		**P**	**06 24 12.3**	**-1.4**
URZ				IAmb		IAmb	06 24 25.7	
	comp=Z,29nm,1.3s							
PPT	**Papeete**	**23.32**	**93**	LR		LR	06 31 54.3	
	comp=Z,58nm,18.6s,baz=300,slow=32							
WB0	**Warramunga Arr**	**48.66**	**259**	P		**P**	**06 28 06.8**	**-0.9**
WB2	**Warramunga Arr**	**48.67**	**259**	P		**P**	**06 28 06.6**	**-1.2**
WRA	**Warramunga Arr**	**48.69**	**259**	P		**P**	**06 28 06.5**	**-1.5**
	comp=Z,1.2nm,0.6s,baz=97,slow=7.3,SNR=13							
	comp=Z,1.2nm,0.6s							
WRA	**Warramunga Arr**	**48.69**	**259**	P		**P**	**06 28 06.4**	**-1.5**
AS31	**Alice Springs**	**48.76**	**254**	P		**P**	**06 28 07.6**	**-0.9**
AS31				IAmb		IAmb	06 28 11.7	
	comp=Z,1.1nm,0.6s							
ASAR	**Alice Springs**	**48.76**	**254**	P		**P**	**06 28 07.0**	**-1.5**
	comp=Z,3.2nm,0.6s,baz=94,slow=8.0,SNR=31							
	comp=Z,3.2nm,0.6s							
ASAR	**Alice Springs**	**48.76**	**254**	P		**P**	**06 28 07.1**	**-1.4**
SBA	**Scott Base**	**60.67**	**185**	P		**P**	**06 29 34.3**	**+0.3**
SBA				IAmb		IAmb	06 29 47.4	
	comp=Z,1.2nm,1.1s							
VNDA	**Vanda**	**60.79**	**186**	P		**P**	**06 29 34.6**	**-0.2**
VNDA				IAmb		IAmb	06 29 43.8	
	comp=Z,3.2nm,1.2s							
QSPA	**South Pole Qui**	**72.11**	**180**	P		**P**	**06 30 48.4**	**+0.8**
QSPA				IAmb		IAmb	06 31 00.6	
	comp=Z,7.3nm,1.4s							
NVAR	**Mina Array Bea**	**76.64**	**42**	P		**P**	**06 31 16.7**	**+2.2**
	comp=Z,0.7nm,0.8s,baz=224,slow=7.6,SNR=5.6							
	comp=Z,0.7nm,0.8s							
NVAR	**Mina Array Bea**	**76.64**	**42**	P		**P**	**06 31 15.6**	**+1.2**
TXAR	**Lajitas Array**	**82.56**	**56**	P		**P**	**06 31 48.2**	**+1.5**
	comp=Z,0.4nm,0.9s,baz=213,slow=6.5,SNR=4.2							
	comp=Z,0.4nm,0.9s							
PDAR	**Pinedale Array**	**84.58**	**42**	P		**P**	**06 31 57.9**	**+1.0**
	comp=Z,0.9nm,0.8s,baz=226,slow=2.4,SNR=6.7							
	comp=Z,0.9nm,0.8s							

IDC 12 06:35:34.5±1.7, **29.45S**×**178.78W**, **h0**km, **mb3.7**/3, **mbtmp3.7**/3, **Error ellipse: s-maj=169.7km s-min=15.5km az=169.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.78**	**75**	Pn		Pn	06 35 52.5	-0.2
	151nm,0.3s,baz=78,slow=22,SNR=2.0							
RAO				Sn		Sn	06 36 06.3	+1.2
	178nm,0.3s,baz=205,slow=22,SNR=2.0							
STKA	**Stephens Creek**	**34.05**	**256**	P		P	06 42 20.4	-0.1
	1.1nm,0.5s,baz=90,slow=12,SNR=3.5							
	1.1nm,0.5s							
ASAR	**Alice Springs**	**42.49**	**266**	P		P	06 43 31.4	-0.4
	0.3nm,0.5s,baz=103,slow=7.7,SNR=7.5							
	0.3nm,0.5s							
WRA	**Warramunga Arr**	**43.39**	**272**	P		P	06 43 39.2	+0.2
	0.6nm,0.4s,baz=112,slow=7.9,SNR=13							
	0.6nm,0.4s							

IDC **12** *07:00:35.9±0.7, 6.74N×73.00W, h160km±8km, mb3.3/8, mbtmp3.9/10, Error ellipse: s-maj=22.5km s-min=8.0km az=132.0*
RSNC **12** *07:00:36.7±0.9, 6.82N×73.13W, h153km±3km, ML3.8, Fault plane solution: NP1:φ≈27.00000°, δ19.00000°, λ78.00000°.*
NEIC **12** *07:00:36.7±2.6, 6.88N±0.07×73.05W±0.08, h152km±10km, mb4.2/10, Error ellipse: s-maj=12.3km s-min=9.1km az=109.0*

ISC 12 07:00:35.9±0.6, **6.84N**±0.03×**73.12W**±0.04, **h154**km±5km, **n84**, σ1§**41**/128, **mb4.0**/14, **12C-7D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.26**	**194**	⇑*i*P		**Pn**	**07 00 57.2**	**+0.2**
BARC				*e*S		**Sn**	**07 01 12.6**	**-0.6**
BARC				*i*			07 01 13.6	
	comp=Z,1μm,0.2s							
BRRC	**Barranca, Sant**	**0.64**	**294**	⇑*e*P		**Pn**	**07 00 59.0**	**+0.6**
BRRC				*e*S		**Sn**	**07 01 16.2**	**+0.6**
BRRC				*i*			07 01 20.1	
	comp=Z,577nm,0.3s							
PAMC	**Pamplona, Colo**	**0.65**	**40**	⇑*i*P		**Pn**	**07 01 00.1**	**+1.1**
PAMC				*e*S		**Sn**	**07 01 17.6**	**+0.9**
PAMC				*i*			07 01 19.6	
	comp=Z,1μm,0.4s							
RUSC	**La Rusia**	**0.95**	**178**	⇓*i*P		**Pn**	**07 01 01.2**	**0.0**
RUSC				*e*S		**Sn**	**07 01 20.2**	**-0.2**
RUSC				*i*			07 01 21.6	
	comp=Z,606nm,0.4s							
PTBC	**PUERTO BERRIO,**	**1.36**	**257**	*e*P		**Pn**	**07 01 03.6**	**-0.7**
PTBC				*e*S		**Sn**	**07 01 25.8**	**-0.3**
PTBC				*i*			07 01 31.3	
	comp=Z,610nm,0.3s							
TAMC	**Tame, Arauca**	**1.38**	**107**	⇑*i*P		**Pn**	**07 01 05.7**	**+1.2**
TAMC				*i*			07 01 26.7	
	comp=Z,443nm,0.4s							
TAMC				*e*S		**Sn**	**07 01 27.5**	**+1.1**
OCAC	**Ocana**	**1.40**

SPBC eS Sn 07 01 28.5 -0.6
SPBC i 07 01 33.0
comp=Z,1μm,0.3s
NORC Norcasia 2.15 234 eP Pn 07 01 13.0 -0.1
NORC eS Sn 07 01 42.0 +0.2
NORC i 07 01 50.9
comp=Z,424nm,0.4s
CHIC Chingaza 2.28 196 eP Pn 07 01 15.1 +0.1
CHIC eS Sn 07 01 44.8 -0.3
CHIC i 07 01 49.9
comp=Z,467nm,0.5s
ROSC El Rosal 2.32 211 P Pn 07 01 17.1 +1.7
comp=Z,229nm,0.3s,baz=325,slow=4.0,SNR=218
ROSC S Sn 07 01 46.0 +0.2
comp=Z,954nm,0.5s,baz=106,slow=16,SNR=7.5
ROSC El Rosal 2.32 211 Pn 07 01 17.3 +1.9
ROSC El Rosal 2.32 211 eP Pn 07 01 17.1 +1.7
ROSC eS Sn 07 01 47.7 +1.8
ROSC i 07 01 52.0
comp=Z,1μm,0.5s
HELC Santa Helena 2.48 255 eP Pn 07 01 17.9 +0.6
HELC eS Sn 07 01 49.7 +0.5
HELC i 07 01 55.4
comp=Z,380nm,0.3s
UREC San Jos de Ur 2.56 291 eP Pn 07 01 17.0 -0.9
UREC eS Sn 07 01 48.7 -1.6
UREC i 07 02 00.0
comp=Z,396nm,0.3s
LL1C La Loma 1 Cana 2.71 351⇓ eP Pn 07 01 22.4 +2.6
LL1C eS Sn 07 01 57.8 +4.0
GUY2C Guyana, Caldas 2.75 234 eP Pn 07 01 21.2 +0.4
GUY2C eS Sn 07 02 00.3 +4.9
GUY2C i 07 02 03.7
comp=Z,410nm,0.6s
VILC Villavicencio, 2.77 192 eP Pn 07 01 20.5 -0.2
VILC eS Sn 07 01 55.2 -0.1
PTGC Puerto Gaitan, 2.80 159⇓/P Pn 07 01 20.4 -0.6
PTGC eS Sn 07 01 54.3 -1.5
PTGC i 07 01 55.8
comp=Z,308nm,0.2s
LL6C La Loma 6 Bece 2.88 357⇑ eP Pn 07 01 21.8 -0.1
LL6C eS Sn 07 01 57.9 +0.4
LL5C La Loma 5 El P 2.95 348⇑ eP Pn 07 01 24.1 +1.4
LL5C eS Sn 07 02 00.4 +1.3
LL5C i 07 02 10.4
comp=Z,222nm,0.6s
CBOC Ciudad Bolivar 3.04 251⇑ eP Pn 07 01 24.4 +0.5
CBOC eS Sn 07 02 02.9 +1.7
CBOC i 07 02 13.8
comp=Z,91nm,0.5s
DBBC Dabeiba 3.07 273⇑ eP Pn 07 01 24.7 +0.3
SDV Santo Domingo 3.19 50 P Pn 07 01 26.8 +0.8
comp=Z,182nm,0.4s,baz=168,slow=3.6,SNR=69
SDV S Sn 07 02 05.0 +0.2
comp=Z,146nm,0.5s,baz=93,slow=20,SNR=10
SDV Santo Domingo 3.19 50⇓ eP Pn 07 01 27.0 +1.0
SDV eS Sn 07 02 05.5 +0.7
SDV i 07 02 07.6
comp=Z,94nm,0.4s
ARGC Ariguani, Magd 3.20 340 eP Pn 07 01 27.3 +1.4
ARGC eS Sn 07 02 06.7 +2.0
ARGC i 07 02 14.7
comp=Z,92nm,0.3s
ANIL Santa Ana 3.26 224 eP Pn 07 01 28.5 +1.6
ANIL eS Sn 07 02 08.7 +2.1
PRAC Prado 3.57 210 eP Pn 07 01 30.2 -0.5
PRAC eS Sn 07 02 12.5 -0.9
PRAC i 07 02 17.6
comp=Z,432nm,0.5s
ORTC Ortega, Tolima 3.60 216 eP Pn 07 01 31.6 +0.5
ORTC eS Sn 07 02 15.2 +1.1
ORTC i 07 02 18.7
comp=Z,260nm,0.2s
SJCC San Jacinto, C 3.66 326 Pn 07 01 31.1 -0.7
SJCC San Jacinto, C 3.66 326⇓ eP Pn 07 01 30.9 -0.9
SJCC eS Sn 07 02 12.3 -2.9
SJCC i 07 02 27.1
comp=Z,141nm,0.8s
PLMC San Jos del P 3.69 239⇑ eP Pn 07 01 32.6 +0.3
PLMC eS Sn 07 02 18.1 +2.0
PLMC i 07 02 20.9
comp=Z,107nm,0.7s
LCBC Los crdobas, 3.79 302 eS Sn 07 02 20.1 +1.8
CRJC Cerrejon, Guaj 4.16 3 eP Pn 07 01 37.5 -0.9
CRJC eS Sn 07 02 25.5 -1.6
CRJC i 07 02 32.5
comp=Z,139nm,0.3s
YOTC Yotoco, Valle 4.29 229⇓ eP Pn 07 01 39.8 -0.3
GUVC San Jose del G 4.30 173 eP Pn 07 01 39.3 -0.9
GUVC eS Sn 07 02 28.4 -1.9
GUVC i 07 02 34.7
comp=Z,210nm,0.3s
SOLC Bahia Solano 4.31 262 eP Pn 07 01 41.0 +0.8
SOLC eS Sn 07 02 31.9 +1.6
SMRC Santa Marta, M 4.43 346 eP Pn 07 01 41.8 -0.1
SMRC eS Sn 07 02 30.4 -2.8
SMRC i 07 02 33.1
comp=Z,80nm,0.4s
CAPC Capurgana 4.56 293 eP Pn 07 01 42.1 -1.4
CAPC eS Sn 07 02 35.5 -0.8
CAPC i 07 02 35.6
comp=Z,46nm,0.2s
PTAC Punta Ardita, 4.67 274 eP Pn 07 01 42.6 -2.4
PTAC eS Sn 07 02 37.3 -1.5
PTAC i 07 02 45.9
comp=Z,37nm,0.4s
MACC Macarena, Meta 4.72 189⇓ eP Pn 07 01 44.2 -1.5
MACC eS Sn 07 02 36.8 -3.5
MACC i 07 02 41.6
comp=Z,91nm,0.8s
BETC Betania 4.74 209 eP Pn 07 01 45.8 -0.2
BETC eS Sn 07 02 39.3 -1.4
BETC i 07 02 43.4
comp=Z,63nm,0.4s
MARP Paez Belalcaza 4.88 216 eP Pn 07 01 48.0 0.0
MARP eS Sn 07 02 45.1 +0.8
URIC Uribia, Colomb 4.95 13 Pn Pn 07 01 47.9 -0.9
URIC Uribia, Colomb 4.95 13⇑ eP Pn 07 01 48.1 -0.7
URIC eS Sn 07 02 44.3 -1.4
URIC i 07 02 49.6
comp=Z,32nm,0.4s
MALC Bahia Malaga 5.05 236 eP Pn 07 01 51.8 +1.8
GARC Garzon, Huila 5.20 207 eP Pn 07 01 51.3 -1.0
GARC eS Sn 07 02 50.7 -1.1
GARC i 07 02 55.6
comp=Z,81nm,0.3s
BAUV El Baul 5.45 67 Pn 07 01 53.4 -1.8
PCON Cinco Dias 5.55 216 eP Pn 07 01 58.7 +1.5
POPC Popayan, Colom 5.55 220⇑ eP Pn 07 01 56.6 -0.4
POPC eS Sn 07 03 04.0 +3.8
FLOC Florencia 5.80 206 eP Pn 07 01 59.9 -0.2
FLOC eS Sn 07 03 05.3 -0.7
FLOC i 07 03 10.3
comp=Z,29nm,0.5s
SOTA Rioblanco 5.83 217 eP Pn 07 02 02.1 +1.3
BCIP Isla Barro Col 7.04 290 Pn Pn 07 02 15.0 -1.6
BCIP Isla Barro Col 7.04 290 eP Pn 07 02 14.9 -1.6
BCIP eS Sn 07 03 32.2 -3.3
BCIP i 07 03 49.1
comp=Z,6.5nm,0.8s
AZU Azuero 7.16 278 eP Pn 07 02 18.0 -0.1
AZU eS Sn 07 03 35.5 -2.8
BIRV Birongo 7.67 61 Pn Pn 07 02 23.3 -1.6
OTAV Otavalo 8.45 219 Pn Pn 07 02 35.3 -0.4
COHC Cochancay 11.09 214 Pn Pn 07 03 10.4 +0.1
MTDJ Mount Denham 12.10 340 Pn Pn 07 03 25.9 +2.4
CELP Cerrillos 12.86 29 Pn Pn 07 03 31.4 -1.8
PDPR Patillas Dam, 13.09 31 Pn Pn 07 03 35.1 -0.9
GTBY Guantanamo Bay 13.15 352 P P 07 03 40.5 -0.8
LPAZ La Paz 23.51 168 P P 07 05 32.7 0.0
GOGA Godfrey 28.12 341 P P 07 06 14.2 +0.7
GOGA IAmb IAmb 07 06 44.0
comp=Z,5.9nm,1.2s
WVT Waverly 32.11 337 P P 07 06 49.6 +1.0
WVT IAmb IAmb 07 06 50.5
comp=Z,4.9nm,1.0s
T47A Sharon Grove 32.60 339 P P 07 06 54.6 +1.7
T47A IAmb IAmb 07 06 55.0
comp=Z,3.7nm,0.7s
WHAR Wooly Hollow 33.35 331 P P 07 06 59.6 +0.3
WHAR IAmb IAmb 07 07 00.9
comp=Z,4.4nm,1.0s
U40A Yellville 34.48 331 P P 07 07 10.1 +1.0

CCM Cathedral Cave 35.15 335 P P 07 07 15.9 +1.1
TXAR Lajitas Array 36.45 312 P P 07 07 27.1 +0.9
comp=Z,0.7nm,0.7s,baz=126,slow=9.0,SNR=12
comp=Z,0.7nm,0.7s
TXAR Lajitas Array 36.45 312 P P 07 07 27.4 +1.2
TX31 Lajitas Ar. Si 36.45 312 P P 07 07 27.3 +1.1
TX31 IAmb IAmb 07 08 07.7
comp=Z,6.8nm,1.5s
MNTX Cornudas Mount 38.96 314 P P 07 07 47.9 +0.8
MNTX IAmb IAmb 07 07 49.1
comp=Z,5.3nm,1.4s
ULM Lac du Bonnet 47.27 340 P P 07 08 53.4 -0.1
comp=Z,2.5nm,0.4s,baz=129,slow=3.4,SNR=7.9
comp=Z,2.5nm,0.4s
PDAR Pinedale Array 48.06 324 P P 07 09 00.7 +0.6
comp=Z,0.4nm,0.6s,baz=121,slow=9.7,SNR=3.9
comp=Z,0.4nm,0.6s
SCHQ Schefferville 48.12 5 P P 07 09 00.1 +0.1
comp=Z,0.8nm,0.5s,baz=200,slow=2.5,SNR=5.2
comp=Z,0.8nm,0.5s
NVAR Mina Array Bea 51.47 315 P P 07 09 26.8 +0.9
comp=Z,0.2nm,0.5s,baz=127,slow=7.5,SNR=2.6
comp=Z,0.2nm,0.5s
YKA Yellowknife Ar 63.24 340 P P 07 10 47.8 +0.1
comp=Z,1.4nm,0.6s,baz=120,slow=8.6,SNR=8.8
comp=Z,1.4nm,0.6s
DBIC Dimbokro 67.73 86 P P 07 11 16.2 -1.2
comp=Z,2.6nm,0.9s,baz=232,slow=16,SNR=1.6
comp=Z,2.6nm,0.9s
ILAR Eielson Array 76.94 335 P P 07 12 11.4 +0.3
comp=Z,0.2nm,0.6s,baz=10.0,slow=7.3,SNR=2.4
comp=Z,0.2nm,0.6s
MKAR Makanchi Array 122.30 20 PKP **PKPdf** 07 19 12.1 -0.8
comp=Z,0.1nm,0.5s,baz=346,slow=3.3,SNR=1.3
ASAR Alice Springs 149.12 234 PKPbc **PKPbc** 07 20 05.9 -1.1
comp=Z,0.2nm,0.3s,baz=117,slow=3.7,SNR=1.9
WRA Warramunga Arr 150.35 241 PKPbc **PKPbc** 07 20 08.9 -1.1
comp=Z,0.4nm,0.5s,baz=107,slow=2.9,SNR=9.0

GCMT 12 07:01:14.0±0.2, **49°57S**±0.01×**116°05W**±0.01, **h18**km±1km, **MW5.1**/118, **Moment Tensor Solution. s76,c102; s118,c185; Duration: 0 Moment tensor: Scale** 10^{16} **Nm;** M_{rr}0.53±.13; $M_{\theta\theta}$2.32±.13; $M_{\phi\phi}$-1.79±.12; $M_{r\theta}$1.37±.28; $M_{\theta\phi}$5.38±.11; $M_{\phi r}$1.41±.29; **Best double couple:** M_o6.03800×10^{16} **NP1:**ϕ_s102.00000°,δ76.00000°, λ8.00000°. **NP2:**ϕ_s10.00000°,δ83.00000°,λ166.00000°. **Principal axes:** T 6.5500, Plg15.0000°, Azm325.0000°; N -1.0260, Plg74.0000°, Azm163.0000°; P -5.5260, Plg5.0000°, Azm56.0000°; **nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Southern East Pacific Rise**

UCR **12** *07:05:14.7±1.3, 12°.83N×86°.61W, h20km±999km, ML3.7, mb4.2(NEIC)*
SNET **12** *07:05:15.3±0.7, 12°.92N×86°.79W, h0km±12km, ML4.3, ML3.6*
INET **12** *07:05:19.2±1.5, 12°.88N×87°.06W, h1km±2km, MW4.1*
IDC **12** *07:05:19.7±1.2, 12°.83N×86°.83W, h0km, mb3.5/7, mbtmp3.5/8, ML3.8/1, MS3.4/10, Error ellipse: s-maj=50.7km s-min=16.3km az=53.0*
NEIC **12** *07:05:21.6±1.8, 12°.88N±0°.06×86°.92W±0°.06, h10km±1km, mb4.2/5, Md4.3(SNET), Error ellipse: s-maj=13.9km s-min=4.8km az=223.0*
ISC 12 07:05:20.2±1.2, **12°92N**±0°.05×**87°00W**±0°.04, **h6**km±9km, **n67,**σ**1°23/63, mb3.8/9, MS3.4/7, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.22**	**193**				**Pg**	**07 05 24.6**	**+0.1**
CRIN	**San Cristobal**	**0.22**	**193**	*eP*			**Pg**	**07 05 24.3**	**-0.3**
CRIN				*eS*			**Sg**	**07 05 28.3**	**+0.7**
TELN	**Telica**	**0.35**	**152**	*eP*			**Pg**	**07 05 27.2**	**+0.2**
TEL3	**Telica 3**	**0.38**	**156**	*eP*			**Pg**	**07 05 27.8**	**+0.3**
CNGN	**Cerro Negro**	**0.51**	**144**				**Pg**	**07 05 30.5**	**+0.5**
CSGN	**Cosiguina Volc**	**0.55**	**276**	*eP*			**Pg**	**07 05 29.9**	**-0.9**
MOMN	**Momotombo**	**0.68**	**138**	*eP*			**Pb**	**07 05 33.5**	**-1.0**
APYN	**Apoyeque**	**0.93**	**137**	*eP*			**Pb**	**07 05 37.1**	**-1.7**
LCND	**La Caada**	**0.95**	**294**	*eP*			**Pb**	**07 05 36.9**	**-2.2**
LCND					IAML			07 05 57.6	
comp=Z,1μm,0.4s									
LCND	**La Caada**	**0.95**	**294**	*eP*			**Pb**	**07 05 36.9**	**-2.2**
LCND					IAML			07 05 57.6	
comp=Z,1μm,0.4s									
MATN	**Matagalpa**	**1.05**	**89**				**Pb**	**07 05 38.8**	**-2.1**
MATN	**Matagalpa**	**1.05**	**89**	*eP*			**Pb**	**07 05 38.9**	**-1.9**
MGAN	**Managua**	**1.06**	**136**	*eP*			**Pb**	**07 05 39.7**	**-1.3**
WILN	**Americas 2**	**1.09**	**133**	*eP*			**Pn**	**07 05 40.8**	**-1.2**
TGUH	**Tegucigalpa,Un**	**1.16**	**347**				**Pb**	**07 05 41.8**	**-1.1**
TGUH	**Tegucigalpa,Un**	**1.16**	**347**	*eP*			**Pb**	**07 05 41.6**	**-1.3**
BOAB	**BOACO BROADBAN**	**.38**	**109**				**Pn**	**07 05 45.7**	**-0.3**
BOAB	**BOACO BROADBAN**	**.38**	**109**	*eP*			**Pn**	**07 05 44.8**	**-1.3**
BOAB				*eS*			**Sn**	**07 06 04.5**	**-0.1**
PACA	**Pacayal**	**1.40**	**293**	*eP*			**Pn**	**07 05 45.0**	**-1.4**
COEB	**Comit de Eme**	**1.60**	**291**	*eP*			**Pn**	**07 05 47.6**	**-1.5**
COEB				*eS*			**Sg**	**07 06 12.9**	**+1.3**
COEB					IAML			07 06 15.3	
comp=Z,644nm,0.5s									
COEB	**Comit de Eme**	**1.60**	**291**	*eP*			**Pn**	**07 05 47.6**	**-1.5**
COEB				*eS*			**Sg**	**07 06 12.9**	**+1.3**
COEB					IAML			07 06 15.3	
comp=Z,644nm,0.5s									
PQSS	**Presa 15 de Se**	**1.67**	**295**	*eP*			**Pn**	**07 05 48.1**	**-1.9**
PQSS	**Presa 15 de Se**	**1.67**	**295**	*eP*			**Pn**	**07 05 48.1**	**-1.9**
SCLA	**Alcaldia de Sa**	**1.85**	**295**	*eP*			**Pn**	**07 05 51.9**	**-0.7**
SCLA				*eS*			**Sb**	**07 06 19.4**	**+1.3**
SCLA	**Alcaldia de Sa**	**1.85**	**295**	*eP*			**Pn**	**07 05 51.9**	**-0.7**
SCLA				*eS*			**Sb**	**07 06 19.4**	**+1.3**
COEG	**Centro de Oper**	**1.96**	**291**	*eP*			**Pn**	**07 05 52.5**	**-1.6**
COEG				*eS*			**Sb**	**07 06 22.0**	**+1.0**
COEG	**Centro de Oper**	**1.96**	**291**	*eP*			**Pn**	**07 05 52.5**	**-1.6**
COEG				*eS*			**Sb**	**07 06 22.0**	**+1.0**
ACON	**Acoyapa**	**2.02**	**118**				**Pn**	**07 05 55.4**	**+0.6**
ACON	**Acoyapa**	**2.02**	**118**	*eP*			**Pn**	**07 05 54.9**	**+0.1**
ACON				*eS*			**Sb**	**07 06 23.2**	**+0.5**
PAVA	**Las Pavas**	**2.04**	**293**	*eP*			**Pn**	**07 05 54.2**	**-1.1**
SNET	**Serv Nac Est T**	**2.30**	**290**				**Pn**	**07 06 00.8**	**+2.0**
ESQI	**Esquipulas**	**2.80**	**306**				**Pn**	**07 06 08.8**	**+3.2**
ORTG	**Ortega, Santa**	**2.95**	**149**				**Pn**	**07 06 08.2**	**+0.4**
DUNO	**Dulce Nombre,**	**3.18**	**152**				**Pn**	**07 06 11.8**	**+0.9**
JTS	**Las Juntas de**	**3.29**	**142**	Pn			**Pn**	**07 06 12.0**	**-0.3**
comp=Z,10nm,0.3s,baz=65,slow=10,SNR=22									
JTS						Lg	Lg	07 06 57.6	
comp=Z,4.9nm,0.3s,baz=206,slow=22,SNR=1.9									
JTS						LR	LR	07 07 34.0	
comp=Z,153nm,19.6s,baz=44,slow=43									
comp=Z,27nm,0.4s									
JTS	**Las Juntas de**	**3.29**	**142**				**Pn**	**07 06 12.5**	**+0.2**
HDC	**Heredia**	**4.05**	**135**				**Pn**	**07 06 22.0**	**-0.9**
CVTR	**Volcan Turrial**	**4.29**	**132**				**Pn**	**07 06 24.9**	**-1.5**
RIMA	**Rio Macho**	**4.39**	**135**				**Pn**	**07 06 27.6**	**-0.1**
PEZE	**Perez Zeledon,**	**4.79**	**137**				**Pn**	**07 06 32.3**	**-0.7**
PETF	**Flores**	**4.85**	**325**				Pn	07 06 37.6	+3.9
HUEH	**Huehuetenango**	**4.98**	**299**				Pn	07 06 39.3	+3.6
SRBA	**San Rafael, Bu**	**5.12**	**135**				**Pn**	**07 06 37.7**	**+0.2**
CCIG	**Comitan**	**5.99**	**305**				Pn	07 06 53.7	+4.0
ROSC	**El Rosal**	**14.87**	**122**	LR			LR	07 16 21.0	
comp=Z,111nm,18.6s,baz=96,slow=45									
SDV	**Santo Domingo**	**16.56**	**102**	LR			LR	07 15 57.9	
comp=Z,95nm,21.3s,baz=271,slow=39									
SJG	**San Juan**	**20.74**	**73**	LR			LR	07 18 17.7	
comp=Z,110nm,19.8s,baz=272,slow=38									
CBYP	**Canovanas**	**21.04**	**73**	P			**P**	**07 10 05.0**	**-0.1**
TXAR	**Lajitas Array**	**22.50**	**319**	P			**P**	**07 10 22.1**	**+1.3**
comp=Z,0.6nm,0.9s,baz=146,slow=9.7,SNR=4.7									
comp=Z,0.6nm,0.9s									
TKL	**Tuckaleechee C**	**22.83**	**7**	LR			LR	07 19 30.8	
comp=Z,33nm,19.4s,baz=176,slow=37									
CLTN	**Cedars of Leba**	**23.08**	**1**	P			**P**	**07 10 27.1**	**+0.4**
TUL1	**Leonard**	**24.23**	**342**	P			**P**	**07 10 38.0**	**+0.2**
TUL1						IAmb	IAmb	07 10 54.9	
comp=Z,7.0nm,1.1s									
LPIG	**La Paz**	**24.70**	**300**	LR			LR	07 19 53.9	
comp=Z,130nm,20.0s,baz=119,slow=35									
PFO	**Pinyon Flats O**	**33.81**	**312**	LR			LR	07 26 13.2	
comp=Z,68nm,20.1s,baz=139,slow=37									
LPAZ	**La Paz**	**34.50**	**147**	LR			LR	07 26 40.4	
comp=Z,172nm,21.9s,baz=226,slow=37									
PDAR	**Pinedale Array**	**35.58**	**331**	P			P	07 12 22.4	+3.7
comp=Z,0.2nm,0.5s,baz=137,slow=9.4,SNR=2.7									
comp=Z,0.2nm,0.5s									
HWUT Hardware Ranch		**35.71**	**328**	P			**P**	**07 12 19.3**	**-0.5**
HWUT					IAmb		IAmb	07 12 41.1	
comp=Z,5.9nm,1.4s									
NVAR Mina Array Bea		**37.65**	**318**	P			P	07 12 38.5	+2.1
comp=Z,0.3nm,0.6s,baz=130,slow=8.3,SNR=2.7									
NVAR					LR		LR	07 31 23.2	
comp=Z,72nm,18.7s,baz=197,slow=41									
comp=Z,0.3nm,0.6s									
SCHQ Schefferville		**44.71**	**16**	P			**P**	**07 13 35.4**	**+1.4**
comp=Z,1.8nm,0.5s,baz=201,slow=9.7,SNR=3.4									
comp=Z,1.8nm,0.5s									
SCHQ Schefferville		**44.71**	**16**	P			**P**	**07 13 34.1**	**0.0**
SCHQ					IAmb		IAmb	07 13 39.3	
comp=Z,2.2nm,0.7s									
FRB Frobisher Bay		**52.39**	**10**	LR			LR	07 35 55.4	
comp=Z,47nm,20.0s,baz=188,slow=35									
YKA Yellowknife Ar		**53.28**	**344**	P			**P**	**07 14 39.6**	**0.0**
comp=Z,0.8nm,0.7s,baz=196,slow=5.7,SNR=2.8									
comp=Z,0.8nm,0.7s									
ILAR Eielson Array		**65.77**	**336**	P			**P**	**07 16 07.2**	**+1.4**
comp=Z,0.5nm,0.8s,baz=144,slow=4.4,SNR=5.1									
comp=Z,0.5nm,0.8s									
ILAR Eielson Array		**65.77**	**336**	P			**P**	**07 16 05.5**	**-0.3**
ESDC Sonseca Array		**76.56**	**52**	P			**P**	**07 17 11.3**	**-0.5**
comp=Z,0.4nm,0.8s,baz=285,slow=6.1,SNR=3.5									
comp=Z,0.4nm,0.8s									
WRA Warramunga Arr		**139.82**	**254**	PKP			**PKPdf**	**07 24 48.5**	**-1.7**
comp=Z,0.4nm,0.6s,baz=91,slow=2.4,SNR=2.6									
ASAR Alice Springs		**139.85**	**249**	PKP			**PKPdf**	**07 24 50.7**	**+0.5**
comp=Z,0.3nm,0.3s,baz=110,slow=2.1,SNR=1.8									

SNET **12** *07:19:22.6±1.1, 12°.68N×87°.13W, h0km±10km, ML2.8*
INET **12** *07:19:23.6±0.9, 12°.80N×87°.06W, h2km±4km, MW3.2*
ISC 12 07:19:22.8±1.6, **12°88N**±0°.06×**86°97W**±0°.05, **h2**km±12km, **n15,**σ**0°75/22, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.19**	**203**	*eP*			**Pg**	**07 19 26.7**	**+0.1**
CRIN				*eS*			**Sg**	**07 19 29.7**	**+0.6**
TELN	**Telica**	**0.31**	**153**	*eP*			**Pb**	**07 19 30.2**	**-0.9**
TELN				*eS*			**Sb**	**07 19 36.7**	**+0.1**
TEL3	**Telica 3**	**0.33**	**158**	*eP*			**Pb**	**07 19 30.4**	**-1.0**
CNGN	**Cerro Negro**	**0.46**	**145**	*eP*			**Pb**	**07 19 33.2**	**-0.5**
CNGN				*eS*			**Sb**	**07 19 40.8**	**-0.3**
MOMN	**Momotombo**	**0.63**	**138**	*eP*			**Pb**	**07 19 36.3**	**-0.2**
LCND	**La Caada**	**0.99**	**296**	*eP*			**Pg**	**07 19 41.2**	**-0.6**
LCND				*eS*			**Sg**	**07 19 56.1**	**+1.4**
LCND					IAML			07 20 00.6	
comp=Z,527nm,0.5s									
MATN	**Matagalpa**	**1.02**	**87**	*eP*			**Pn**	**07 19 43.7**	**-0.5**
BOAB	**BOACO BROADBAN**	**.35**	**108**	*eP*			**Pn**	**07 19 49.0**	**+0.4**
PACA	**Pacayal**	**1.44**	**294**	*eP*			**Pn**	**07 19 49.5**	**-0.5**
COEB	**Comit de Eme**	**1.64**	**292**	*eP*			**Pn**	**07 19 52.0**	**-0.8**
COEB				*eS*			**Sn**	**07 20 14.4**	**0.0**
PQSS	**Presa 15 de Se**	**1.71**	**296**	*eP*			**Pn**	**07 19 53.4**	**-0.3**
PQSS				*eS*			**Sn**	**07 20 17.4**	**+1.3**
SCLA	**Alcaldia de Sa**	**1.89**	**296**	*eS*			**Sb**	**07 20 22.9**	**+0.7**
SCLA					IAML			07 20 35.2	
comp=Z,41nm,0.8s									
ACON	**Acoyapa**	**1.98**	**117**	*eP*			**Pn**	**07 19 57.7**	**+0.4**
COEG	**Centro de Oper**	**2.00**	**292**	*eP*			**Pn**	**07 19 56.7**	**-0.9**
COEG				*eS*			**Sn**	**07 20 23.5**	**+0.2**
SJTE	**Alcalda de S**	**2.11**	**290**	*eS*			**Sn**	**07 20 26.8**	**+0.8**

IDC **12** *07:22:19.1±0.5, 11°.53S×162°.14E, h0km, mb4.4/17, mbtmp4.4/22, ML4.4/4, MS3.7/24, Error ellipse: s-maj=17.6km s-min=15.2km az=104.0*
BJI **12** *07:22:20.0±0.0, 11°.60S×162°.20E, h20km, mb4.7/16, mB5.1/8, Ms5.1/2*
NEIC **12** *07:22:21.8±1.1, 11°.54S±0°.07×162°.22E±0°.08, h15km±1km, mb4.7/77, Error ellipse: s-maj=12.5km s-min=9.2km az=52.0*
NOU **12** *07:22:25.7, 11°.56S×162°.44E, h64km, mb4.9/19, Solomon Islands*
ISC 12 07:22:24.4±0.3, **11°59S**±0°.05×**162°23E**±0°.06, **h39**km, **n186,** σ**1°15/151, mb4.7/60, MS3.7/23, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.10**	**314**	Pn			**Pn**	**07 23 09.1**	**-1.9**
28nm,0.3s,baz=172,slow=4.6,SNR=3.0									
HNR				Sn			**Sn**	**07 23 42.7**	**-4.1**
132nm,0.3s,baz=179,slow=12,SNR=6.2									
324nm,0.5s									
HNR	**Honiara**	**3.10**	**314**				**Pn**	**07 23 09.7**	**-1.2**
HNR	**Honiara**	**3.10**	**314**	P			**Pn**	**07 23 13.2**	**+2.3**
KOUNC	**Koumac, New Ca**	**9.12**	**168**	Pn			**Pn**	**07 24 33.1**	**-0.5**
KOUNC	**Koumac, New Ca**	**9.12**	**168**	P			**Pn**	**07 24 33.3**	**-0.3**
DZM	**Mont Dzumac**	**11.17**	**159**	*e*LR			LR	07 27 13.2	
comp=Z,1μm,25.9s									
DZM	**Mont Dzumac**	**11.17**	**159**	Pn			**Pn**	**07 25 02.3**	**+0.6**
1.1nm,0.3s,baz=347,slow=7.1,SNR=16									
DZM				Sn			**Sn**	**07 26 59.1**	**-6.3**
0.6nm,0.3s,baz=326,slow=23,SNR=1.5									
DZM				LR			LR	07 28 39.9	
comp=Z,476nm,19.1s,baz=5.0,slow=34									
7.8nm,0.8s									
DZM	**Mont Dzumac**	**11.17**	**159**	Pn			**Pn**	**07 25 02.4**	**+0.7**
MARNC	**Mare, Loyalty**	**11.29**	**151**	Pn			**Pn**	**07 25 02.8**	**-0.5**
PMG	**Port Moresby**	**14.97**	**277**	Pn			**Pn**	**07 25 52.8**	**-0.7**
11nm,0.8s,baz=80,slow=7.2,SNR=3.8									
PMG				LR			LR	07 31 34.7	
comp=Z,559nm,18.1s,baz=116,slow=37									
PMG	**Port Moresby**	**14.97**	**277**				**Pn**	**07 25 52.1**	**-1.4**
MSVF	**Nonsavu**	**16.48**	**114**	Pn			**P**	**07 26 14.2**	**-1.0**
0.1nm,0.3s,baz=75,slow=16,SNR=1.5									
3.8nm,0.9s									
TARA	**Tarawa**	**16.69**	**40**	Pn			**Pn**	**07 26 14.3**	**-1.2**
TARA					IAmb		IAmb	07 26 26.1	
comp=Z,65nm,0.9s									
CTA	**Charters Tower**	**17.52**	**239**	P			**P**	**07 26 25.8**	**-0.9**
comp=Z,0.6nm,0.3s,baz=68,slow=13,SNR=11									
CTA					LR		LR	07 32 08.2	
comp=Z,204nm,20.3s,baz=68,slow=34									
comp=Z,21nm,0.8s									
CTA	**Charters Tower**	**17.52**	**239**	P			**P**	**07 26 28.8**	**+2.0**
CTAO	**Charters Tower**	**17.52**	**239**				**P**	**07 26 27.0**	**+0.2**
CTAO	**Charters Tower**	**17.52**	**239**	P			**P**	**07 26 28.7**	**+2.0**
MTSU	**Mount Surprise**	**18.48**	**247**	P			**Pn**	**07 26 38.8**	**+1.0**
baz=19,SNR=4.4									
MTSU	**Mount Surprise**	**18.48**	**247**	P			**Pn**	**07 26 40.4**	**+2.7**
PATS	**Pohnpei**	**18.72**	**348**	P			**Pn**	**07 26 39.2**	**-1.4**
baz=19,SNR=4.8									
PATS	**Pohnpei**	**18.72**	**348**				**Pn**	**07 26 39.6**	**-0.9**
PATS					IAmb		IAmb	07 26 40.9	
comp=Z,78nm,0.9s									
PATS

STKA Stephens Creek 27.74 220 P P 07 28 09.8 +0.4
WR0 Warramunga Arr 27.88 249 P P 07 28 10.0 -0.9
WR0 IAmb IAmb 07 28 10.7
comp=Z,13nm,1.1s
WB0 Warramunga Arr 27.97 250 P P 07 28 10.9 -0.8
WB0 IAmb IAmb 07 28 12.0
comp=Z,15nm,0.7s
WB2 Warramunga Arr 28.05 249 P P 07 28 11.4 -0.9
baz=28
WB2 Warramunga Arr 28.05 249 P P 07 28 11.7 -0.7
WRA Warramunga Arr 28.06 249 P P 07 28 11.3 -1.1
comp=Z,9.0nm,0.8s,baz=79,slow=9.5,SNR=36
WRA PcP **PcP 07 31 26.7 +0.1**
comp=Z,1.4nm,0.9s,baz=84,slow=2.8,SNR=4.8
comp=Z,9.0nm,0.8s
WRA Warramunga Arr 28.06 249 P P 07 28 11.4 -1.1
KDU Kakadu 29.10 265 P P 07 28 20.8 -1.0
baz=29,SNR=11
LCRK Leigh Creek 29.12 226 P P 07 28 21.7 0.0
AS31 Alice Springs 29.47 242 P P 07 28 24.0 -1.1
ASAR Alice Springs 29.48 242 P P 07 28 23.6 -1.5
comp=Z,10nm,0.7s,baz=65,slow=9.7,SNR=87
ASAR PcP **PcP 07 31 30.5 +0.4**
comp=Z,0.9nm,0.8s,baz=85,slow=2.4,SNR=3.5
comp=Z,10nm,0.7s
ASAR Alice Springs 29.48 242 P P 07 28 23.7 -1.3
URZ Urewera 29.70 156 LR LR 07 38 48.6
comp=Z,169nm,18.8s,baz=31,slow=33
BKZ Black Stump Fm 30.25 158 P P 07 28 31.7 0.0
BKZ IAmb IAmb 07 28 54.2
comp=Z,16nm,1.2s
GUMO Guam 30.37 325 LR LR 07 41 22.8
comp=Z,73nm,18.2s,baz=178,slow=38
MTN Manton Dam 30.41 264 P P 07 28 32.5 -0.9
baz=30,SNR=3.6
MTN Manton Dam 30.41 264 P P 07 28 32.9 -0.5
HTT Hallett 30.45 221 P P 07 28 33.6 0.0
baz=31,SNR=7.7
HTT Hallett 30.45 221 P P 07 28 34.0 +0.4
BBOO Buckleboo 31.98 225 P P 07 28 46.4 -0.6
baz=32,SNR=20
BBOO Buckleboo 31.98 225 P P 07 28 46.8 -0.1
BBOO Buckleboo 31.98 225 P P 07 28 46.7 -0.3
MULG Mulgathing 32.07 230 P P 07 28 47.1 -0.7
SWI Sorong 32.53 287 P P 07 28 52.7 +0.7
comp=Z,950nmcomp=Z,19nm,1.0s
KNRA Kununurra 32.75 259 P P 07 28 53.1 -0.8
baz=33,SNR=7.7
KNRA Kununurra 32.75 259 P P 07 28 52.9 -1.0
RPZ Rata Peaks 32.90 168 LR LR 07 40 48.0
comp=Z,130nm,18.7s,baz=348,slow=34
WRKA Warakurna 34.76 243 P P 07 29 10.1 -1.3
baz=35,SNR=40
WRKA Warakurna 34.76 243 P P 07 29 10.8 -0.6
FORT Forrest 36.92 234 P P 07 29 29.9 +0.1
baz=37,SNR=8.9
FORT Forrest 36.92 234 P P 07 29 29.5 -0.2
FORT Forrest 36.92 234 P P 07 29 29.6 -0.2
MBWA Marble Bar 41.76 251 P P 07 30 09.4 -0.9
MBWA IAmb IAmb 07 30 10.3
comp=Z,11nm,0.8s
TOLI2 Tolitoli 43.07 284 P P 07 30 19.5 -1.5
TOLI2 IAmb IAmb 07 30 22.6
comp=Z,12nm,1.0s
JCJ Chichijima 43.10 333 LR LR 07 45 18.0
comp=Z,74nm,21.8s,baz=132,slow=32
MPSI Mapaga 43.68 283 P P 07 30 25.8 -0.1
comp=Z,9.3nm,1.3s
MORW Morawa 46.34 241 P P 07 30 46.6 -0.4
baz=46
MORW Morawa 46.34 241 P P 07 30 47.1 +0.1
MYLDM Lahad Datu 46.58 289 P P 07 30 48.4 -0.6
PPT Papeete 46.92 103 LR LR 07 48 01.2
comp=Z,109nm,18.4s,baz=300,slow=33
JHJ Hachijo jima 2 49.35 335 LR LR 07 50 41.7
comp=Z,37nm,21.6s,baz=78,slow=35
MJAR Matsushiro Arr 52.96 336 P P 07 31 34.8 -2.3
comp=Z,0.4nm,0.4s,baz=166,slow=8.7,SNR=3.1
comp=Z,0.4nm,0.4s
LEM Lembang 54.05 270 P P 07 31 45.5 -0.3
comp=Z,23nm,0.6s,baz=1.3,slow=16,SNR=3.9
comp=Z,23nm,0.6s
JSD Sado 54.23 337 P P 07 31 45.9 -0.5
MDSI Maura Dua 57.83 272 P P 07 32 11.6 -1.0
comp=Z,948nmcomp=Z,7.6nm,0.8s
ASAJ Asahikawa 58.25 343 LR LR 07 56 16.3
comp=Z,61nm,20.3s,baz=168,slow=35
KSRS Korea Array 58.45 328 P P 07 32 15.7 -0.7
comp=Z,1.1nm,0.7s,baz=146,slow=8.2,SNR=5.9
KSRS LR LR 07 55 47.7
comp=Z,40nm,19.9s,baz=155,slow=34
comp=Z,1.1nm,0.7s
INCN Inchon 59.15 327 P P 07 32 21.6 +0.2
NJ2 Nanjing 60.04 318 *eP* **P 07 32 26.5 -1.1**
NJ2 pmax pmax
comp=Z,27nm,0.6s
RGRI Rengat 60.48 276 P P 07 32 42.7 +12
BKNI Bangkinang 61.89 277 P P 07 32 41.1 +0.5
USRK Ussuriysk Ar. 61.95 336 P P 07 32 40.8 +0.4
comp=Z,6.7nm,0.9s,baz=149,slow=6.7,SNR=6.8
comp=Z,6.7nm,0.9s
USA0B Ussuriysk Arra 61.96 336 P P 07 32 40.5 +0.1
KULM Kulim 63.50 282 P P 07 32 50.9 -0.4
CASY Casey 64.64 201 P P 07 32 58.2 +0.4
GSI Gunungsitoli 65.49 277 P P 07 33 04.1 -0.2
VNDA Vanda 65.92 180 P P 07 33 06.7 +0.7
comp=Z,2.8nm,0.9s,baz=330,slow=5.9,SNR=13
VNDA LR LR 07 57 24.9
comp=Z,66nm,18.6s,baz=349,slow=32
comp=Z,2.8nm,0.9s
VNDA Vanda 65.92 180 P P 07 33 07.2 +1.3
VNDA IAmb IAmb 07 33 07.6
comp=Z,8.1nm,1.4s
SBA Scott Base 66.29 179 P P 07 33 10.2 +1.8
SBA IAmb IAmb 07 33 21.1
comp=Z,13nm,1.4s
CMAR Chiang Mai Arr 69.19 295 P P 07 33 28.7 +1.1
comp=Z,0.9nm,0.3s,baz=130,slow=4.5,SNR=4.9
comp=Z,0.9nm,0.3s
PZH PanZhiHua 69.88 304 P P 07 33 34.2 +2.3
PZH pmax pmax
comp=Z,6.0nm,0.7s
PZH pmax pmax
comp=Z,100nm,4.4s
HHC Hu-ho-hao-te 70.06 321 *eP* **P 07 33 34.8 +2.1**
HHC pmax pmax
comp=Z,33nm,0.9s
HHC pmax pmax
comp=Z,180nm,5.8s
LZH Lanzhou 72.60 314 *eP* **P 07 33 51.3 +3.1**
LZH pP sP 07 33 59.2 -2.1
LZH pmax pmax
comp=Z,20nm,1.3s
LZH LR LR
comp=Z,350nm,15.5s
LZH LR LR
comp=Z,620nm,16.1s
SDPT Sand Point 73.66 21 P P 07 33 53.3 -0.5
ULN Ulaanbaatar 76.75 325 P P 07 34 12.4 +0.4
ULN IAmb IAmb 07 34 13.8
comp=Z,6.2nm,1.1s
GTA Gaotai 76.98 315 *eP* **P 07 34 14.4 +1.0**
GTA pP pP 07 34 20.5 -3.1
GTA sP PcP 07 34 23.2 -1.1
GTA pmax pmax
comp=Z,4.0nm,0.8s
GTA pmax pmax
comp=Z,51nm,6.2s
GTA LR LR
comp=Z,97nm,16.0s
GTA LR LR
comp=Z,450nm,19.6s
SONM Songino Array 77.10 325 P P 07 34 14.2 +0.2
comp=Z,3.4nm,0.7s,baz=146,slow=6.3,SNR=18
SONM LR LR 08 09 44.9
comp=Z,32nm,18.6s,baz=109,slow=37
comp=Z,3.4nm,0.7s
SONM Songino Array 77.10 325 P P 07 34 14.0 +0.1
OHAK Old Harbor 77.72 23 P P 07 34 17.4 +0.4
OHAK IAmb IAmb 07 34 37.0
comp=Z,13nm,1.2s
QSPA South Pole Qui 78.41 180 LR LR 08 03 38.4
comp=Z,56nm,21.7s,baz=83,slow=32
QSPA South Pole Qui 78.41 180 P P 07 34 21.8 +0.8
QSPA IAmb IAmb 07 34 26.5
comp=Z,14nm,1.1s

P18K Big Mountain, 78.59 21 IAmb IAmb 07 34 24.4
comp=Z,12nm,1.1s
BILL Bilibino 79.48 2 P P 07 34 26.4 -0.1
BILL IAmb IAmb 07 34 27.9
comp=Z,7.0nm,1.0s
SVW2 Sparrevohn 79.74 19 P P 07 34 27.5 -0.5
SVW2 IAmb IAmb 07 34 33.2
comp=Z,8.3nm,1.0s
M19K Big River Lodg 80.72 19 IAmb IAmb 07 34 38.1
comp=Z,9.9nm,1.1s
L19K White Mountain 80.78 19 P P 07 34 34.5 +0.9
MAW Mawson 82.91 202 P P 07 34 46.0 +1.2
comp=Z,1.8nm,0.6s,baz=116,slow=9.3,SNR=9.0
comp=Z,1.8nm,0.6s
KTH Kantishna Hill 83.02 19 IAmb IAmb 07 34 48.3
comp=Z,6.5nm,1.2s
TRF Thorofare Moun 83.15 19 P P 07 34 45.8 -0.4
MCK McKinley 83.79 20 IAmb IAmb 07 34 49.9
comp=Z,6.6nm,0.9s
I21K Tanana 83.83 18 P P 07 34 50.5 +1.0
I21K IAmb IAmb 07 34 51.1
comp=Z,6.2nm,1.2s
IMAR Indian Mountai 83.90 17 P P 07 34 50.6 +0.7
MLY Manley 84.11 18 P P 07 34 51.4 +0.4
MLY IAmb IAmb 07 34 51.9
comp=Z,2.5nm,0.6s
WRH Wood River Hil 84.56 19 IAmb IAmb 07 34 54.5
comp=Z,4.5nm,0.8s
CCB Clear Creek Bu 84.77 19 IAmb IAmb 07 34 55.2
comp=Z,4.0nm,0.8s
CTGM Chitina Glacie 84.84 24 IAmb IAmb 07 34 56.6
comp=Z,7.7nm,0.9s
MDM Murphy Dome 84.84 19 IAmb IAmb 07 34 55.8
comp=Z,3.0nm,0.8s
COLA College 84.91 19 P P 07 34 54.3 -0.6
H23K Yukon River 85.02 18 P P 07 34 55.8 +0.3
M26K Nabesna, AK 85.04 22 P P 07 34 56.2 +0.4
M26K IAmb IAmb 07 34 57.5
comp=Z,3.6nm,0.9s
ILAR Eielson Array 85.15 19 P P 07 34 55.7 -0.5
comp=Z,8.8nm,0.5s,baz=240,slow=4.0,SNR=16
comp=Z,0.8nm,0.5s
RIDG Independent Ri 85.18 21 IAmb IAmb 07 35 09.2
comp=Z,6.2nm,1.1s
DOT Dot Lake 85.40 21 IAmb IAmb 07 35 01.5
comp=Z,6.1nm,1.1s
J25K Salcha River, 85.55 20 IAmb IAmb 07 35 00.1
comp=Z,3.7nm,0.6s
L27K Beaver Creek, 85.86 22 IAmb IAmb 07 35 01.8
comp=Z,4.1nm,0.9s
K27K Chicken 86.34 21 IAmb IAmb 07 35 05.4
comp=Z,8.7nm,1.1s
YBH Yreka Blue Hor 86.75 46 LR LR 08 05 21.1
comp=Z,38nm,21.0s,baz=222,slow=30
WMQ Urumqi 87.05 316 *eP* **P 07 35 07.3 +1.1**
DAWY Dawson 87.33 22 P P 07 35 07.8 +0.8
DAWY IAmb IAmb 07 35 11.3
comp=Z,5.8nm,1.2s
I29M Ogilvie Camp, 88.43 21 IAmb IAmb 07 35 14.5
comp=Z,4.8nm,1.0s
NVAR Mina Array Bea 89.02 51 P P 07 35 17.1 +1.3
comp=Z,0.8nm,0.7s,baz=238,slow=7.6,SNR=7.4
NVAR LR LR 08 06 36.2
comp=Z,43nm,21.4s,baz=266,slow=30
comp=Z,0.8nm,0.7s
PFO Pinyon Flats O 89.23 56 LR LR 08 07 36.6
comp=Z,30nm,19.4s,baz=223,slow=30
WVOR Wild Horse Val 89.86 47 IAmb IAmb 07 35 22.7
comp=Z,8.5nm,1.4s
J08A Circle Bar Ran 90.22 46 P P 07 35 22.6 +1.4
J08A IAmb IAmb 07 35 25.6
comp=Z,13nm,1.4s
R11A Troy Canyon, C 91.07 51 IAmb IAmb 07 35 29.2
comp=Z,7.2nm,1.5s
PRN Pahroc Range 91.26 52 IAmb IAmb 07 35 28.8
comp=Z,4.6nm,0.9s
MKAR Makanchi Array 91.57 317 P P 07 35 27.4 +0.2
comp=Z,0.7nm,0.7s,baz=94,slow=7.0,SNR=7.6
comp=Z,0.7nm,0.7s
MKAR Makanchi Array 91.57 317 P P 07 35 27.2 -0.1
F10A Beach Ranch, E 91.77 43 IAmb IAmb 07 35 40.9
comp=Z,2.8nm,0.9s
ELK Elko 91.89 49 LR LR 08 08 10.2
comp=Z,38nm,20.2s,baz=230,slow=30
ELK Elko 91.89 49 P P 07 35 29.2 0.0
NEW Newport 92.42 41 P P 07 35 30.9 -0.3
NEW IAmb IAmb 07 35 35.0
comp=Z,3.8nm,1.1s
HLID Hailey 93.14 46 P P 07 35 35.3 +0.5
TROLL Troll, Antarti 95.50 186 P P 07 35 44.6 -0.4
SNAA Sanae 96.32 185 P P 07 35 48.8 0.0
SNAA Sanae 96.32 185 sP sP 07 36 00.4 -2.8
PDAR Pinedale Array 96.47 48 P P 07 35 50.0 -0.1
comp=Z,0.2nm,0.5s,baz=248,slow=3.7,SNR=2.1
PDAR LR LR 08 15 03.8
comp=Z,16nm,18.5s,baz=231,slow=33
comp=Z,0.2nm,0.5s
YKA Yellowknife Ar 97.05 28 P Pdif 07 35 51.5 -0.5
comp=Z,2.0nm,0.9s,baz=258,slow=5.1,SNR=5.3
YKA LR LR 08 13 14.9
comp=Z,31nm,19.3s,baz=236,slow=32
comp=Z,2.0nm,0.9s
VNA3 Neumayer Olymp 97.17 183 P Pdif 07 35 52.0 -0.6
VNA3 Neumayer Olymp 97.17 183 pP pP 07 36 00.6 -2.5
VNA3 Neumayer Olymp 97.17 183 sP sP 07 36 04.4 -2.6
VNA2 Neumayer--Watz 97.37 183 P Pdif 07 35 53.4 -0.1
baz=189,slow=2.2
VNA2 Neumayer--Watz 97.37 183 pP pP 07 36 01.2 -2.8
VNA2 Neumayer--Watz 97.37 183 sP sP 07 36 04.9 -2.9
ANMO Albuquerque 97.60 56 LR LR 08 16 36.1
comp=Z,38nm,18.2s,baz=225,slow=33
VNA1 Neumayer--Stat 97.69 183 P Pdif 07 35 55.3 +0.4
TXAR Lajitas Array 99.12 62 P Pdif 07 36 04.7 +2.5
comp=Z,0.2nm,0.8s,baz=234,slow=6.2,SNR=2.5
TXAR LR LR 08 12 35.8
comp=Z,18nm,20.9s,baz=242,slow=30
comp=Z,0.2nm,0.8s
ARCES ARCESS Array B 115.96 344 PKP PKPdf 07 41 02.1 -0.5
comp=Z,1.9nm,0.9s,baz=40,slow=7.1,SNR=3.8
BOSA Boshof 122.32 225 PKP PKPdf 07 41 15.6 -0.7
comp=Z,4.4nm,1.0s,baz=154,slow=5.6,SNR=3.9
BOSA Boshof 122.32 225 PKiKP 07 41 16.7 +0.3
LPAZ La Paz 123.00 118 PKP PKiKP 07 41 19.1 +0.5
comp=Z,1.2nm,1.0s,baz=303,slow=8.2,SNR=4.7
AKASG Malin Array Be 125.39 325 PKP PKiKP 07 41 21.2 -0.3
comp=Z,0.3nm,0.4s,baz=45,slow=2.0,SNR=5.8
AKASG Malin Array Be 125.39 325 PKiKP 07 41 21.5 0.0
NOA NORSAR Array B 126.27 343 PKP PKiKP 07 41 24.4 +1.3
comp=Z,0.3nm,0.6s,baz=58,slow=2.1,SNR=2.5
BRTR Keskin Array B 126.76 311 PKP PKiKP 07 41 24.6 -0.3
comp=Z,0.5nm,0.7s,baz=122,slow=1.9,SNR=2.7
SIV San Ignacio 129.14 122 PKP PKiKP 07 41 30.6 +0.4
comp=Z,1.0nm,0.6s,baz=237,slow=5.9,SNR=6.0
CLL Collm 133.15 334 *e*PKiKP **PKiKP 07 41 40.0 +2.9**
GERES GERESS Array B 134.58 331 PKP PKiKP 07 41 39.6 -0.6
comp=Z,0.5nm,0.8s,baz=204,slow=1.7,SNR=2.1
IDI Anoyia 134.77 309 PKP PKiKP 07 41 41.1 +0.1
comp=Z,2.7nm,0.7s,baz=316,slow=4.7,SNR=7.7
EKA Eskdalemuir Ar 134.88 348 PKP PKiKP 07 41 40.4 -0.2
comp=Z,0.4nm,0.5s,baz=29,slow=21,SNR=2.0
KEST Kesra 145.66 319 PKPbc PKPab 07 41 59.6 -0.3
comp=Z,5.0nm,0.9s,baz=77,slow=7.2,SNR=3.2
POLO Lamas de Olo 149.07 345 *e*PKP **PKiKP 07 42 09.4 -0.8**
ESDC Sonseca Array 149.47 339 PKPbc PKiKP 07 42 10.0 -1.0
comp=Z,1.6nm,1.1s,baz=3.0,slow=2.0,SNR=6.4
PVIS Viseu 149.71 345 *e*PKP **PKPab 07 42 14.6 -1.1**
PMRV Marv??o 150.78 343 *e*PKP **PKiKP 07 42 14.8 +1.1**
PMTG Montargil 151.35 344 *e*PKP **PKiKP 07 42 15.6 +0.8**
TORD Torodi Ar. Bea 160.92 277 PKP PKPdf 07 42 21.7 +0.2
comp=Z,0.9nm,1.0s,baz=169,slow=2.9,SNR=3.6
TORD PKPab **PKPab 07 43 04.7 +0.5**
comp=Z,1.5nm,0.9s,baz=84,slow=4.2,SNR=5.6
TORD Torodi Ar. Bea 160.92 277 PKPdf PKPdf 07 42 22.2 +0.7
TORD **PKPab 07 43 04.8 +0.5**

BGR **12** *07:42:23.4±0.8, 44˚.18N×10˚.18E, h10km, ML3.4/12, Error ellipse: s-maj=10.0km s-min=6.7km az=24.0*
PRU **12** *07:42:24.7±0.0, 44˚.65N×9˚.95E, h9km*
IDC **12** *07:42:24.9±2.5, 44˚.59N×10˚.34E, h0km, mbtmp3.6/4, ML3.4/4, Error ellipse: s-maj=28.7km s-min=20.2km az=119.0*
STR **12** *07:42:25.4±1.0, 44˚N±3˚×10˚E±˚, h10km, MLv3.2/13, preliminary*
GEN **12** *07:42:25.1, 44˚.54N×10˚.22E, h24km, Ml3.0*

ROM **12** *07:42:26.4±0.1, 44˚.531N±0˚.005×10˚.202E±0˚.008, h23km, ML3.1/79, Error ellipse: s-maj=0.6km s-min=0.4km az=289.0*
LDG **12** *07:42:27.6±0.1, 44˚.47N×10˚.25E, h19km, Ml3.2/34, Error ellipse: s-maj=2.6km s-min=2.1km az=23.0*
ISC 12 07:42:26.4±0.8, 44.56N±0.01×10.16E±0.01, h19km±2km, n250, σ1ϑ54/330, 2C-3D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ID	h m s	ISC
GRAM	**Graiana**	**0.09**	**226**	P	**Pg**	**07 42 30.2**	**-0.1**
GRAM				S	**Sg**	**07 42 34.1**	**+1.2**
GRAM	**Graiana**	**0.09**	**226**	P	**Pg**	**07 42 30.6**	**+0.3**
GRAM				S	**Sg**	**07 42 34.1**	**+1.2**
GRAM				AML	AML		
	comp=E,52150μm,0.6s						
GRAM				AML	AML		
	comp=N,32600μm,0.9s						
NEVI	**Neviano degli**	**0.12**	**76**	P	**Pg**	**07 42 30.5**	**0.0**
NEVI				S	**Sg**	**07 42 34.4**	**+1.2**
NEVI	**Neviano degli**	**0.12**	**76**	P	**Pg**	**07 42 30.5**	**0.0**
NEVI				S	**Sg**	**07 42 34.4**	**+1.2**
PRMA	**PARMA**	**0.23**	**28**	P	**Pb**	**07 42 32.3**	**+0.6**
PRMA				S	**Sg**	**07 42 38.1**	**+2.4**
PRMA	**PARMA**	**0.23**	**28**	P	**Pb**	**07 42 32.3**	**+0.6**
PRMA				S	**Sg**	**07 42 38.1**	**+2.4**
PRMA				AML	AML		
	comp=E,20400μm,0.3s						
PRMA				AML	AML		
	comp=N,12950μm,0.5s						
PRMA				AML	AML		
	comp=N,13000μm,0.5s						
A306A	**Viano (RE)**	**0.31**	**94**	P	**Pg**	**07 42 32.5**	**-0.7**
GSCL	**Gusciola**	**0.37**	**124**	P	**Pg**	**07 42 33.3**	**-0.9**
GSCL				S	**Sg**	**07 42 39.4**	**-0.1**
GSCL	**Gusciola**	**0.37**	**124**	P	**Pg**	**07 42 33.3**	**-0.9**
GSCL				S	**Sg**	**07 42 39.0**	**-0.5**
GSCL				AML	AML		
	comp=E,7345μm,0.4s						
GSCL				AML	AML		
	comp=N,8230μm,0.8s						
SARO	**Sassorosso**	**0.41**	**155**	P	**Pg**	**07 42 33.8**	**-1.2**
SARO				S	**Sg**	**07 42 40.0**	**-0.7**
VLC	**Villacollemand**	**0.43**	**158**	P	**Pg**	**07 42 34.0**	**-1.2**
VLC				S	**Sg**	**07 42 40.7**	**-0.5**
VLC	**Villacollemand**	**0.43**	**158**	P	**Pg**	**07 42 34.1**	**-1.2**
VLC				S	**Sg**	**07 42 40.6**	**-0.5**
VLC				AML	AML		
	comp=N,2575μm,0.8s						
VLC				AML	AML		
	comp=N,2645μm,0.9s						
VLC				AML	AML		
	comp=E,2135μm,1.5s						
VLC				AML	AML		
	comp=E,2105μm,1.5s						
MSSA	**Maissana**	**0.52**	**243**	P	**Pg**	**07 42 36.9**	**+0.1**
MSSA				S	**Sb**	**07 42 45.3**	**+1.3**
MSSA	**Maissana**	**0.52**	**243**	P	**Pg**	**07 42 37.0**	**+0.1**
MSSA				S	**Sb**	**07 42 45.2**	**+1.2**
MSSA				AML	AML		
	comp=E,1650μm,0.3s						
MSSA				AML	AML		
	comp=N,1865μm,0.7s						
BOB	**Bobbio (Coli)**	**0.55**	**293**	P	**Pg**	**07 42 38.2**	**+0.7**
BOB				S	**Sn**	**07 42 48.2**	**+0.3**
BOB	**Bobbio (Coli)**	**0.55**	**293**	P	**Pg**	**07 42 38.1**	**+0.7**
BOB				S	**Sn**	**07 42 47.5**	**-0.4**
BOB				AML	AML		
	comp=E,1325μm,0.6s						
BOB				AML	AML		
	comp=N,1390μm,0.8s						
BOB				AML	AML		
	comp=E,1225μm,1.5s						
BOB				AML	AML		
	comp=E,1320μm,0.6s						
BOB				AML	AML		
	comp=N,1450μm,0.7s						
BOB				AML	AML		
	comp=N,1395μm,0.8s						
BOB				AML	AML		
	comp=E,1230μm,1.5s						
PLMA	**Palmaria, Port**	**0.55**	**204**	P	**Pb**	**07 42 37.1**	**-0.2**
PLMA				S	**Sb**	**07 42 45.1**	**+0.3**
PLMA	**Palmaria, Port**	**0.55**	**204**	P	**Pb**	**07 42 37.1**	**-0.2**
PLMA				S	**Sb**	**07 42 44.9**	**+0.2**
PLMA				AML	AML		
	comp=N,4045μm,1.1s						
PLMA				AML	AML		
	comp=E,3065μm,0.5s						
MODE	**Modena**	**0.57**	**82**	P	**Pg**	**07 42 38.5**	**+0.8**
CARD	**Cardoso**	**0.58**	**156**	P	**Pb**	**07 42 36.9**	**-0.8**
CARD				S	**Sg**	**07 42 46.4**	**+0.7**
CARD	**Cardoso**	**0.58**	**156**	↑P	**Pb**	**07 42 37.0**	**-0.8**
CARD				AML	AML		
	comp=E,1485μm,0.3s						
CARD				AML	AML		
	comp=E,1490μm,0.3s						
CARD				AML	AML		
	comp=N,1660μm,1.0s						
BDI	**Bagni Di Lucca**	**0.58**	**147**	P	**Pb**	**07 42 37.2**	**-0.7**
BDI				S	**Sg**	**07 42 46.1**	**+0.2**
A312A	**Bozzolo (MN)**	**0.60**	**22**	P	**Pg**	**07 42 39.1**	**+0.8**
ZCCA	**Zocca**	**0.62**	**109**	P	**Pb**	**07 42 38.8**	**+0.3**
ZCCA				S	**Sn**	**07 42 50.9**	**+1.3**
ZCCA	**Zocca**	**0.62**	**109**	P	**Pb**	**07 42 38.8**	**+0.3**
ZCCA				AML	AML		
	comp=E,1135μm,0.5s						
ZCCA				AML	AML		
	comp=N,982μm,0.4s						
ZCCA				AML	AML		
	comp=E,1100μm,0.5s						
ZCCA				AML	AML		
	comp=E,1135μm,0.6s						
ZCCA				AML	AML		
	comp=N,979μm,0.5s						
ZCCA				AML	AML		
	comp=N,981μm,0.5s						
ZCCA				AML	AML		
	comp=N,990μm,0.5s						
GORR	**Gorreto**	**0.62**	**275**	P	**Pg**	**07 42 39.3**	**+0.5**
GORR				S	**Sn**	**07 42 49.8**	**+0.2**
GORR	**Gorreto**	**0.62**	**275**	P	**Pb**	**07 42 39.0**	**+0.5**
GORR				AML	AML		
	comp=E,1080μm,1.1s						
GORR				AML	AML		
	comp=N,1410μm,0.2s						
CAVE	**Cavezzo**	**0.68**	**62**	P	**Pb**	**07 42 39.6**	**+0.2**
CAVE				S	**Sn**	**07 42 54.8**	**+4.0**
CAVE	**Cavezzo**	**0.68**	**62**	P	**Pb**	**07 42 39.3**	**-0.2**
CAVE				AML	AML		
	comp=N,4380μm,1.5s						
CAVE				AML	AML		
	comp=E,4480μm,0.4s						
MAIM	**Mastiano**	**0.68**	**160**	P	**Pb**	**07 42 38.8**	**-0.9**
MAIM				S	**Sg**	**07 42 49.3**	**+0.3**
MAIM	**Mastiano**	**0.68**	**160**	P	**Pb**	**07 42 38.7**	**-0.9**
MAIM				AML	AML		
	comp=E,856μm,0.3s						
MAIM				AML	AML		
	comp=N,840μm,0.5s						
MAIM				AML	AML		
	comp=E,857μm,0.3s						
RAVA	**Ravarino**	**0.71**	**73**	P	**Pg**	**07 42 40.9**	**+0.5**
RAVA				S	**Sn**	**07 42 52.9**	**+1.2**
RAVA	**Ravarino**	**0.71**	**73**	P	**Pg**	**07 42 41.0**	**+0.6**
RAVA				AML	AML		
	comp=N,2975μm,0.3s						
RAVA				AML	AML		
	comp=E,4290μm,0.4s						
RAVA				AML	AML		
	comp=N,2970μm,0.3s						
FNVD	**Fontana Vidola**	**0.79**	**119**	P	**Pb**	**07 42 41.0**	**-0.5**
FNVD				S	**Sn**	**07 42 53.7**	**-0.1**
FNVD	**Fontana Vidola**	**0.79**	**119**	P	**Pb**	**07 42 41.0**	**-0.5**
MTCR	**Monte La Croce**	**0.80**	**131**	P	**Pb**	**07 42 40.7**	**-1.1**
MTCR				S	**Sg**	**07 42 53.4**	**+0.6**
MTCR	**Monte La Croce**	**0.80**	**131**	P	**Pb**	**07 42 40.6**	**-1.1**
MTCR				AML	AML		
	comp=E,1060μm,0.4s						
MTCR				AML	AML		
	comp=N,1125μm,1.2s						
A313A	**Volta Mantovan**	**0.84**	**25**	P	**Pb**	**07 42 42.9**	**+0.7**
ORZI	**Orzinuovi**	**0.86**	**349**	AML	AML		
	comp=E,1155μm,1.0s						

ORZI AML AML
comp=N,1575µm,0.7s
RNCA Ronca, Sant'Ol 0.87 265 P **Pg 07 42 43.7 +0.4**
RNCA S **Sn 07 42 57.6 +2.0**
RNCA Ronca, Sant'Ol 0.87 265 P **Pg 07 42 43.7 +0.4**
RNCA AML AML
comp=E,796µm,0.9s
RNCA AML AML
comp=N,676µm,0.6s
MPPT Montemurlo 0.90 132 P **Pb 07 42 42.7 -0.6**
MPPT AML AML
comp=N,664µm,0.4s
MPPT AML AML
comp=N,664µm,0.4s
MPPT AML AML
comp=E,642µm,1.3s
SARZ Sarezzano 0.94 290 AML AML
comp=E,1980µm,0.7s
SARZ AML AML
comp=E,1915µm,0.6s
SARZ AML AML
comp=N,2825µm,0.8s
SARZ AML AML
comp=E,1910µm,0.6s
SARZ AML AML
comp=N,2860µm,0.8s
MTRZ Monterenzio 0.95 100 P **Pg 07 42 46.7 +1.8**
MTRZ S **Sn 07 43 04.0 +6.3**
FIU Minerbio Fiu 0.95 85 P **Pg 07 42 45.5 +0.5**
FIU AML AML
comp=N,4730µm,1.2s
FIU AML AML
comp=E,6960µm,0.5s
FIU AML AML
comp=N,4725µm,1.2s
CRMI Carmignano 0.96 142 P **Pb 07 42 44.2 -0.2**
CRMI S **Sg 07 42 58.0 +0.2**
CRMI Carmignano 0.96 142 P **Pb 07 42 44.2 -0.2**
CRMI AML AML
comp=N,316µm,0.6s
CRMI AML AML
comp=E,222µm,1.6s
TRES Parco Tresine 0.96 15 P **Pb 07 42 45.1 +0.7**
TRES S **Sn 07 43 00.1 +2.1**
OPPE Oppeano 1.04 43 P **Pb 07 42 45.7 0.0**
OPPE Oppeano 1.04 43 P **Pb 07 42 45.4 -0.3**
OPPE AML AML
comp=N,3480µm,1.4s
OPPE AML AML
comp=E,2515µm,0.3s
SALO Salr 1.09 14 P **Pn 07 42 47.2 +0.6**
SALO Salr 1.09 14 P **Pn 07 42 47.2 +0.6**
SALO AML AML
comp=N,3070µm,0.9s
SALO AML AML
comp=E,1785µm,0.9s
SALO AML AML
comp=N,3065µm,0.9s
SALO AML AML
comp=N,2810µm,0.9s
SALO AML AML
comp=E,1405µm,0.9s
GROG Isola di Gorgo 1.15 190 P **Pn 07 42 47.1 -0.1**
GROG Isola di Gorgo 1.15 190 P **Pn 07 42 46.7 -0.6**
GROG AML AML
comp=E,753µm,1.4s
GROG AML AML
comp=N,674µm,1.4s
GROG AML AML
comp=E,754µm,1.4s
IMOL Imola, Italy 1.15 99 AML AML
comp=E,926µm,0.1s
IMOL AML AML
comp=N,1290µm,0.1s
PCP Piancastagn 1.16 270 P **Pb 07 42 48.4 +0.7**
PCP Piancastagn 1.16 270 P **Pb 07 42 48.5 +0.9**
PCP AML AML
comp=E,387µm,0.7s
PCP AML AML
comp=N,398µm,0.6s
RUFI Rufina 1.21 126 P **Pn 07 42 48.3 +0.2**
ZONE Zone 1.21 359 P **Pn 07 42 48.7 +0.4**
ZONE AML AML
comp=N,1065µm,1.0s
ZONE AML AML
comp=E,892µm,1.5s
LMD Lutirano 1.21 113 P **Pg 07 42 49.7 0.0**
LMD AML AML
comp=E,202µm,1.5s
LMD AML AML
comp=N,184µm,1.5s
BALD Monte Baldo 1.22 22 P **Pn 07 42 48.8 +0.2**
MDI Monti di Nese 1.26 346 P **Pn 07 42 49.6 +0.5**
MDI Monti di Nese 1.26 346 P **Pn 07 42 49.5 +0.5**
MDI AML AML
comp=E,558µm,0.4s
MDI AML AML
comp=N,536µm,1.1s
MAGA Magasa 1.26 15 P **Pn 07 42 49.0 -0.1**
MAGA AML AML
comp=E,3390µm,1.6s
MAGA AML AML
comp=N,3105µm,0.3s
ROVR Rover Verones 1.27 30 P **Pn 07 42 48.8 -0.3**
ROVR S **Sn 07 43 06.9 +1.2**
ROVR AML AML
comp=E,2635µm,0.3s
ROVR AML AML
comp=N,5590µm,1.3s
ROVR AML AML
comp=E,1030µm,0.3s
ROVR AML AML
comp=E,2640µm,0.3s
ROVR AML AML
comp=N,2275µm,1.3s
ROVR AML AML
comp=N,5595µm,1.3s
BAG8 Bagolino 1.28 10 P **Pn 07 42 49.7 +0.4**
OSSC Osservatorio P 1.29 142 P **Pn 07 42 49.1 -0.2**
OSSC AML AML
comp=N,392µm,1.4s
OSSC AML AML
comp=E,330µm,0.6s
QLNO Quiliano 1.32 261 P **Pn 07 42 50.5 +0.7**
QLNO Quiliano 1.32 261 P **Pn 07 42 50.4 +0.7**
QLNO AML AML
comp=E,285µm,0.4s
QLNO AML AML
comp=N,326µm,0.7s
ROTM Rocchetta Tana 1.32 283 P **Pg 07 42 54.1 +2.2**
ROTM Rocchetta Tana 1.32 283 AML AML
comp=N,3110µm,1.4s
ROTM AML AML
comp=E,2175µm,0.4s
TEOL Teolo 1.34 53 P **Pn 07 42 49.4 -0.6**
TEOL AML AML
comp=E,5380µm,0.7s
TEOL AML AML
comp=E,5375µm,0.7s
TEOL AML AML
comp=N,3475µm,1.1s
CSNT Castellina Chi 1.36 143 P **Pn 07 42 50.8 +0.6**
CSNT AML AML
comp=N,344µm,0.4s
CSNT AML AML
comp=E,179µm,1.0s
SFI Santa Sofia 1.38 118 P **Pb 07 42 51.9 +0.4**
SFI AML AML
comp=N,202µm,0.5s
SFI AML AML
comp=E,194µm,0.8s
ASQU Asqua 1.40 122 P **Pn 07 42 51.2 +0.4**
ASQU AML AML
comp=E,184µm,0.6s
ASQU AML AML
comp=N,244µm,0.8s
LUSI Trento, Gardas 1.51 21 P **Pn 07 42 52.1 -0.3**
LUSI AML AML
comp=E,2580µm,0.6s
LUSI AML AML
comp=N,3680µm,0.3s
DOSS Dosso del Somm 1.51 28 P **Pn 07 42 52.1 -0.4**
DOSS AML AML
comp=N,1495µm,0.5s
DOSS AML AML
comp=E,1595µm,0.7s
DOSS AML AML
comp=E,1695µm,0.4s
DOSS AML AML
comp=N,1720µm,0.4s
MABI Malga Bissina 1.52 9 P **Pn 07 42 52.9 +0.3**
MABI Malga Bissina 1.52 9 P **Pn 07 42 52.9 +0.3**
RORO Rocca Rossa 1.57 254 AML AML
comp=E,168µm,1.0s
RORO AML AML
comp=N,284µm,0.3s
MUGIO Muggio 1.58 330 P **Pn 07 42 54.0 +0.7**
MUGIO AML AML
comp=E,215µm,0.3s
MUGIO AML AML
comp=N,222µm,1.0s
CRE Caprese Michel 1.59 125 P **Pn 07 42 54.2 +0.6**
CRE AML AML
comp=E,218µm,1.1s
CRE AML AML
comp=N,176µm,1.4s
GAGG Gaggia 1.63 20 P **Pn 07 42 54.1 0.0**
GAGG AML AML
comp=N,939µm,0.8s
GAGG AML AML
comp=E,950µm,0.9s
GAGG AML AML
comp=E,570µm,1.5s
GAGG AML AML
comp=N,616µm,1.6s
VARE Varese 1.64 324 P **Pn 07 42 55.1 +0.9**
VARE AML AML
comp=N,344µm,1.2s
VARE AML AML
comp=E,512µm,0.4s
IMI Imperia 1.75 249 P **Pn 07 42 56.4 +0.7**
IMI AML AML
comp=E,203µm,0.3s
IMI AML AML
comp=N,302µm,1.2s
CGRP Cima Grappa 1.76 41 P **Pn 07 42 55.6 -0.4**
CGRP AML AML
comp=N,815µm,0.6s
CGRP AML AML
comp=E,816µm,0.5s
MGRO Montegrosso 1.77 254 P **Pn 07 42 56.7 +0.7**
CAFI Castiglion Fio 1.79 133 P **Pn 07 42 56.6 +0.4**
CAFI AML AML
comp=N,59µm,0.6s
CAFI AML AML
comp=E,73µm,0.7s
CTI Castel Tesino 1.82 35 P **Pn 07 42 56.6 -0.2**
CTI AML AML
comp=N,1065µm,0.6s
CTI AML AML
comp=E,805µm,0.2s
BADI Badiali 1.83 124 P **Pn 07 42 57.8 +1.1**
CASP Castiglione de 1.84 164 P **Pn 07 42 56.5 -0.3**
CASP AML AML
comp=E,86µm,1.5s
CASP AML AML
comp=N,156µm,0.5s
BERNI Berninapass 1.86 357 P **Pn 07 42 58.5 +1.1**
BERNI AML AML
comp=E,164µm,1.2s
BERNI AML AML
comp=N,133µm,0.5s
SAOF Saorge 1.96 254 P **Pn 07 42 59.5 +1.0**
SAOF S **Sn 07 43 23.9 +1.4**
SAOF Saorge 1.96 254 P **Pn 07 42 59.5 +1.0**
SAOF AML AML
comp=N,235µm,0.5s
SAOF AML AML
comp=E,258µm,0.5s
TRAV Traversella 1.96 300 P **Pn 07 42 59.0 +0.4**
TRAV AML AML
comp=E,282µm,1.6s
TRAV AML AML
comp=N,228µm,0.4s
VARN Col Varnada, M 1.99 43 P **Pn 07 42 58.6 -0.3**
VARN AML AML
comp=E,892µm,0.3s
VARN AML AML
comp=N,620µm,0.9s
ENR Entracque 1.99 261 P **Pn 07 43 00.2 +1.1**
PIEI Pieia 1.99 120 P **Pn 07 43 00.6 +1.6**
PIEI AML AML
comp=E,72µm,0.4s
PIEI AML AML
comp=N,64µm,1.5s
BURY Giardini Botan 2.03 248 P **Pn 07 43 00.1 +0.7**
STV San Anna di V 2.06 262 P **Pn 07 43 01.1 +1.2**
STV AML AML
comp=N,84µm,0.4s
STV AML AML
comp=E,88µm,0.6s
APPI Appiano 2.06 21 P **Pn 07 43 00.6 +0.5**
APPI AML AML
comp=N,558µm,0.3s
APPI AML AML
comp=E,612µm,0.3s
FSSB Fossombrone 2.07 114 AML AML
comp=N,175µm,1.2s
FSSB AML AML
comp=E,173µm,0.3s
MOSI Grossmontoni 2.08 7 AML AML
comp=N,578µm,0.8s
MOSI AML AML
comp=E,500µm,0.9s
SBF Sospel 2.08 251 *e*Pn **Pn 07 43 01.0 +0.8**
SBF *e*Sn **Sn 07 43 26.6 +1.0**
comp=E,105nm,0.3s
BHB Bricherasio 2.09 279 P **Pn 07 43 01.5 +1.3**
KOSI Kohlern 2.09 24 P **Pn 07 43 01.0 +0.5**
KOSI AML AML
comp=E,332µm,0.5s
KOSI AML AML
comp=N,314µm,0.8s
CIRO Champorcher 2.11 301 P **Pn 07 43 01.0 +0.2**
CIRO AML AML
comp=N,168µm,0.7s
CIRO AML AML
comp=E,156µm,0.5s
RSP Reno Superiore 2.14 287 P **Pn 07 43 01.5 +0.3**
RSP AML AML
comp=N,115µm,0.6s
RSP AML AML
comp=E,130µm,0.6s
SPIF crte de Spivo 2.16 258 P **Pn 07 43 02.9 +1.6**
FUSIO Fusio 2.17 332 P **Pn 07 43 02.4 +0.9**
FUSIO AML AML
comp=E,188µm,0.8s
FUSIO AML AML
comp=N,112µm,0.5s
PGF Pioggiola 2.18 203 *e*Pn **Pn 07 43 01.7 +0.1**
PGF *e*Sn **Sn 07 43 27.1 -0.9**
comp=N,24nm,0.3s
PGF Pioggiola 2.18 203 S **Sn 07 43 27.1 -0.9**
PGF Pioggiola 2.18 203 P **Pn 07 43 01.1 -0.5**
PZZ Stroppo 2.18 270 P **Pn 07 43 02.8 +1.2**
PZZ AML AML
comp=E,185µm,0.8s
PZZ AML AML
comp=N,174µm,0.4s
POLC Polcenigo 2.21 47 P **Pn 07 43 01.5 -0.5**
POLC AML AML
comp=E,630µm,1.0s
POLC AML AML
comp=N,660µm,0.5s
DAVOX Davos/Dischmat 2.23 355 Pn **Pn 07 43 04.7 +2.2**
comp=N,8.2nm,0.3s,baz=170,slow=12,SNR=57
DAVOX Lg Lg 07 43 33.8
comp=N,5.8nm,0.3s,baz=331,slow=22,SNR=7.0
comp=N,19nm,0.4s
DAVOX Davos/Dischmat 2.23 355 P **Pn 07 43 04.4 +2.0**
DAVOX AML AML
comp=N,124µm,1.1s
DAVOX AML AML
comp=E,85µm,1.0s
ATCC AVT- Casa Cast 2.26 127 P **Pn 07 43 03.7 +1.1**
ATCC AML AML
comp=E,115µm,1.1s
ATCC AML AML
comp=N,94µm,0.4s
MVIF Mont Vial 2.26 254 P **Pn 07 43 04.4 +1.7**
ISO Isola 2.26 262 P **Pn 07 43 04.2 +1.4**
ABSI Aberstueckl 2.32 20 P **Pn 07 43 03.9 +0.3**
ABSI AML AML
comp=E,780µm,0.7s
ABSI AML AML
comp=N,679µm,1.0s
CIMO Cimolais 2.38 42 P **Pn 07 43 04.0 -0.3**
CIMO AML AML
CIMO AML AML
SURF Saint Ours 2.40 269 P **Pn 07 43 06.2 +1.5**
MBDF Montbardon 2.42 275 *e*Pn **Pn 07 43 06.9 +1.8**
MBDF *e*Sn **Sn 07 43 35.2 +1.0**
comp=N,71nm,0.7s
STAL STALIGIAL 2.48 46 AML AML
comp=E,540µm,0.3s
STAL AML AML
comp=N,468µm,1.5s
STAL AML AML
comp=N,448µm,1.4s
STAL AML AML
comp=E,581µm,0.3s
FETA Feichten 2.50 9 Pn **Pn 07 43 07.8 +1.7**
comp=E,2.4nm,0.2s
ROSI Rosskopf 2.53 20 P **Pn 07 43 07.4 +0.9**
ROSI AML AML
comp=E,463µm,0.6s
ROSI AML AML
comp=N,524µm,0.3s
PLONS Plons/SG 2.55 348 P **Pn 07 43 09.3 +2.6**
PLONS AML AML
comp=E,70µm,0.9s
PLONS AML AML
comp=N,55µm,0.5s
PLONS Plons/SG 2.55 348 *e*Pn **Pn 07 43 09.4 +2.6**
PLONS *e*Sn **Sb 07 43 41.7 -0.9**
LPG La Plagne 2.59 292 *e*Pn **Pn 07 43 08.4 +0.9**
LPG La Plagne 2.59 292 *e*P **Pb 07 43 11.6 -0.8**
LPG *e*Sn **Sn 07 43 39.3 +0.7**
comp=N,35nm,0.5s
FDMO Fiordimonte 2.61 125 P **Pn 07 43 08.9 +1.5**
FDMO AML AML
comp=N,35µm,1.3s
FDMO AML AML
comp=E,37µm,0.6s
MPRI Monte Prat 2.61 49 P **Pn 07 43 06.8 -0.7**
MPRI AML AML
comp=E,379µm,0.7s
MPRI AML AML
comp=N,413µm,0.8s
LPL La Plagne 2.61 293 *e*Pn **Pn 07 43 09.2 +1.5**
LPL La Plagne 2.61 293 *e*P **Pb 07 43 11.7 -1.0**
LPL *e*Sn **Sn 07 43 39.7 +0.7**
comp=N,51nm,0.5s
BNALP Bannalp 2.62 333 P **Pn 07 43 09.7 +2.0**
BNALP AML AML
comp=N,85µm,0.6s
BNALP AML AML
comp=E,88µm,0.7s
CLUD Cludinico 2.70 44 P **Pn 07 43 08.1 -0.5**
CLUD AML AML
comp=E,184µm,0.6s
CLUD AML AML
comp=N,151µm,1.3s
DAVA Damuels 2.74 356 *e*Pn **Pn 07 43 11.8 +2.4**
comp=N,7.6nm,0.2s,SNR=10
DAVA Sn **Sb 07 43 46.4 -1.6**
comp=N,12nm,0.2s
DAVA Damuels 2.74 356 *e*Pn **Pn 07 43 11.8 +2.4**
ABTA Abfaltersbach 2.74 36 *e*Pn **Pn 07 43 10.5 +1.1**
comp=N,12nm,0.3s,SNR=8.3
RISI Rein 2.74 29 P **Pn 07 43 10.7 +1.2**
RISI AML AML
comp=N,628µm,0.4s
RISI AML AML
comp=E,460µm,0.4s
RSL Roselend 2.75 296 P **Pn 07 43 12.4 +2.9**
SQTA Sankt Quirin 2.76 15 *e*Pn **Pn 07 43 11.7 +2.0**
comp=E,43nm,0.2s,SNR=28
SQTA Sn **Sb 07 43 47.7 -1.0**
comp=E,11nm,0.2s
TRI Trieste 2.80 64 P **Pn 07 43 08.6 -1.4**
TRI AML AML
comp=N,108µm,0.6s
TRI AML AML
comp=E,172µm,0.5s
SABO M.te Sabotino 2.81 58 P **Pn 07 43 09.9 -0.4**
SABO AML AML
comp=N,2420µm,0.9s
SABO AML AML
comp=E,584µm,0.3s
SABO AML AML
comp=E,2320µm,0.3s
SABO AML AML
comp=N,588µm,0.9s
OBER Oberstdorf 2.85 2 *e*Pn **Pn 07 43 13.2 +2.3**
OBER *e*Sn **Sn 07 43 48.8 +4.1**
MOTA Moosalm 2.87 13 *e*Pn **Pn 07 43 12.7 +1.6**
comp=N,13nm,0.2s,SNR=16
MOTA Sn **Sn 07 43 48.5 +3.4**
comp=N,6.3nm,0.2s
WTTA Wattenberg 2.90 20 *e*Pn **Pn 07 43 13.2 +1.6**
comp=N,42nm,0.3s,SNR=24
WTTA Sn **Sb 07 43 51.0 -1.6**
comp=N,44nm,0.5s
WTTA Wattenberg 2.90 20 P **Pn 07 43 13.2 +1.6**
WTTA AML AML
comp=N,228µm,0.9s
WTTA AML AML
comp=E,236µm,0.4s
WTTA Wattenberg 2.90 20 *e*Pn **Pn 07 43 13.3 +1.8**
SKDS Skadanscina 2.91 69 *i* Pn **Pn 07 43 10.3 -1.2**
SKDS *e*Sn **Sn 07 43 42.7 -3.2**
SKDS IAML 07 43 45.5
comp=Z,35nm,0.2s
LMR La Mourre 2.91 246 *e*Pn **Pn 07 43 12.1 +0.6**
LMR *e*Sn **Sn 07 43 45.4 -0.5**
comp=Z,64nm,0.4s
ZUGS Zugspitze, Sch 2.92 11 *e*Pn **Pn 07 43 14.6 +2.7**
WATA Walderalm 2.95 19 *e*Pn **Pn 07 43 14.2 +1.9**
comp=Z,18nm,0.2s,SNR=20
WATA Sn **Sn 07 43 49.8 +2.6**
comp=Z,15nm,0.5s
RETA Reutte 2.96 8 *i* Pn **Pn 07 43 14.1 +1.8**
comp=Z,3.2nm,0.1s,SNR=7.8
WILA Wila 2.99 343 *e*Pn **Pn 07 43 14.9 +2.2**
PART Garmisch-Parte 3.02 12 *e*Pn **Pn 07 43 15.1 +2.0**
PART *e*Sn **Sn 07 43 52.2 +3.6**
FLAF Flassans-sur-I 3.05 249 P **Pn 07 43 14.9 +1.3**
JAVS Javornik 3.06 63 *i* Pn **Pn 07 43 12.7 -1.1**
JAVS *e*Sn **Sn 07 43 47.9 -2.0**
JAVS IAML 07 43 50.4
comp=Z,70nm,0.4s
ORIF Oris-en-Rattie 3.07 278 *e*P **Pb 07 43 17.8 -2.6**
ORIF *e*Sn **Sn 07 43 50.5 +0.4**
comp=Z,43nm,0.6s
ORIF Oris-en-Rattie 3.07 278 P **Pb 07 43 17.7 -2.6**
ACOM Acomizza, Ital 3.08 49 P **Pn 07 43 14.0 -0.2**
ACOM AML AML
comp=E,273µm,0.5s
ACOM AML AML
comp=N,310µm,0.4s
UBR Ueberruh 3.13 359 *e*Pn **Pn 07 43 16.2 +1.6**
TORNY Torny/Romont 3.16 316 P **Pn 07 43 17.7 +2.7**
MYKA Terra Mystica 3.21 48 *e*Pn **Pn 07 43 15.1 -0.6**
comp=N,2.0nm,0.2s
BALST Balsthal 3.27 329 *e*Pn **Pn 07 43 17.9 +1.3**
ARTF Artigues 3.29 254 P **Pn 07 43 18.5 +1.7**
SULZ Cheisacher 3.30 335 *e*Pn **Pn 07 43 18.1 +1.2**
SULZ *e*Sn **Sn 07 43 58.3 +2.7**
OGSM Saint Maurice 3.33 290 P **Pn 07 43 19.8 +2.4**
SMRF Simiane la Rot 3.34 262 *e*Pn **Pn 07 43 20.0 +2.4**
SMRF *e*Sn **Sn 07 43 57.2 +0.4**
comp=N,12nm,0.4s
KBA Koelnbreinsper 3.36 40 *e*Pn **Pn 07 43 18.7 +0.8**
comp=N,2.4nm,0.2s
KBA Koelnbreinsper 3.36 40 *e*Pn **Pn 07 43 19.3 +1.3**
ASEAF Site Antares, 3.39 240 P **Pn 07 43 19.2 +1.4**
SLE Schleitheim 3.41 341 *e*Pn **Pn 07 43 19.0 +0.5**
LJU Ljubljana 3.42 63 P **Pn 07 43 18.3 -0.3**
LJU AML AML
comp=N,906µm,0.4s
LJU AML AML
comp=E,868µm,0.7s
BRANT Les Verrieres 3.51 314 S **Sn 07 44 03.3 +2.3**
BRANT Les Verrieres 3.51 314 P **Pn 07 43 22.1 +2.2**
CABF La Chapelle 3.52 307 *e*Pn **Pn 07 43 21.5 +1.4**
CABF *e*Sn **Sn 07 44 01.6 +0.4**

comp=E,22nm,0.7s
OG35 Corcelles 3.56 296 P **Pn** 07 43 22.6 +2.0
OBKA Obir 3.65 56 *e*Pn **Pn** 07 43 21.3 -0.5
comp=E,1.1nm,0.1s
OBKA *e*Sn **Sn** 07 44 04.3 -0.1
comp=E,11nm,0.4s
OBKA Obir 3.65 56 *e*Pn **Pn** 07 43 21.9 +0.1
RJOB Jochberg 3.67 29 *e*Pn **Pn** 07 43 23.3 +1.2
RIVEL MONT RIVEL 3.70 308 P **Pn** 07 43 24.7 +2.2
INTR Introdacqua 3.73 132 S **Sb** 07 44 21.0 +4.5
VIVF Saint-Julien-l 3.92 276 *e*Pn **Sn** 07 43 27.4 +1.9
VIVF *e*Sn **Sn** 07 44 11.0 0.0
comp=E,9.5nm,0.4s
BIOA Bad Ischl, Aus 3.96 36 *e*Pn **Pn** 07 43 27.0 +1.0
comp=E,1.4nm,0.2s
BFO Black Forest 3.98 342 *e*Pn **Pn** 07 43 27.0 +0.6
HINF Hinteralfeld 3.99 326 *e*Pn **Pn** 07 43 27.2 +0.8
HINF *e*Sn **Sn** 07 44 12.4 -0.2
comp=E,26nm,0.5s
SOKA Soboth 4.02 56 *e*Pn **Pn** 07 43 26.1 -0.8
comp=E,2.2nm,0.3s
SOKA *e*Sn **Sn** 07 44 12.3 -1.2
comp=E,7.3nm,0.4s
CDF Champ du Feu 4.34 334 *e*Pn **Pn** 07 43 31.8 +0.5
CDF *e*Sn **Sn** 07 44 20.6 -0.8
comp=E,12nm,0.4s
HAU Haudompre 4.35 324 *e*Pn **Pn** 07 43 32.4 +1.1
HAU *e*Sn **Sn** 07 44 20.7 -0.7
comp=E,58nm,0.5s
MOA Molln 4.36 39 *i* Pn **Pn** 07 43 32.0 +0.6
comp=E,2.4nm,0.2s
MOA Molln 4.36 39 *e*Pn **Pn** 07 43 32.2 +0.7
LASF Ste Croix 4.55 266 *e*Pn **Pn** 07 43 35.1 +1.0
LASF *e*Sn **Sn** 07 44 26.0 -0.4
comp=E,4.5nm,0.4s
ARSA Arzberg 4.61 52 *e*Pn **Pn** 07 43 34.4 -0.6
comp=E,3.9nm,0.3s,SNR=7.5
ARSA *e*Sn **Sn** 07 44 26.2 -1.7
comp=E,1.8nm,0.4s
ARSA Arzberg 4.61 52 *e*Pn **Pn** 07 43 34.4 -0.6
SMF Signal de Mont 4.90 297 *e*Pn **Pn** 07 43 40.4 +1.4
SMF Signal de Mont 4.90 297 *e*P **Pn** 07 43 43.5 +4.5
SMF *e*Sn **Sn** 07 44 34.4 -0.7
comp=E,12nm,0.5s
GEC2 GERESS Array S 4.93 28 *e*Pn **Pn** 07 43 39.0 -0.4
GEC2 *e*Sn **Sn** 07 44 35.0 -1.0
GERES GERESS Array B 4.93 28 Pn **Pn** 07 43 39.1 -0.4
comp=E,3.0nm,0.3s,baz=204,slow=13,SNR=102
GERES Sn **Sn** 07 44 34.6 -1.4
comp=E,2.6nm,0.3s,baz=203,slow=24,SNR=5.4
GERES Lg Lg 07 45 00.3
comp=E,1.5nm,0.3s,baz=210,slow=32,SNR=10.0
comp=E,4.2nm,0.3s
WET Wettzell 4.95 21 *e*Pn **Pn** 07 43 39.3 -0.3
PAGF Fort de Pagny 5.04 324 *e*Pn **Pn** 07 43 41.7 +0.9
baz=140
PAGF *e*Sn **Sn** 07 44 37.4 -1.0
comp=E,14nm,0.4s
MSAG Monte S. Angel 5.08 122 ⇓P **Pn** 07 43 41.4 0.0
SFTF Sexfontaines 5.09 318 *e*Pn **Pn** 07 43 42.6 +1.1
baz=136
SFTF Sexfontaines 5.09 318 *e*P Pn 07 43 46.3 +4.8
SFTF *e*Sn **Sn** 07 44 38.9 -0.7
comp=E,2.1nm,0.2s
CKRC Cesky Krumlov 5.13 32 *e*PN **Pn** 07 43 40.6 -1.5
CKRC *e*SN **Sn** 07 44 38.2 -2.6
CKRC *e*SG **Sg** 07 45 07.3 -3.7
KHC Kasperske Hory 5.14 26 *e*PN **Pn** 07 43 41.8 -0.5
KHC *e*SN **Sn** 07 44 38.3 -2.7
KHC *e*SG **Sg** 07 45 07.8 -3.5
comp=E,11nm,0.8s
LOR Lormes 5.17 304 *e*Pn **Pn** 07 43 43.8 +1.2
baz=122
LOR *e*Sn **Sn** 07 44 40.5 -1.1
comp=E,22nm,0.5s
CONA Conrad Observa 5.20 48 *i* Pn **Pn** 07 43 42.6 -0.4
comp=E,1.8nm,0.3s
CONA *e*Sn **Sn** 07 44 41.7 -0.7
comp=E,6.7nm,0.6s
AVF Avril sur Loir 5.27 297 *e*Pn **Pn** 07 43 45.1 +1.1
AVF *e*Sn **Sn** 07 44 43.1 -1.0
comp=E,3.4nm,0.4s
SSF Saint Saulge 5.28 301 *e*Pn **Pn** 07 43 45.1 +0.9
SSF *e*Sn **Sn** 07 44 43.3 -1.2
comp=E,16nm,0.4s
MEZF Maizieres J'vi 5.29 320 *e*Pn **Pn** 07 43 45.5 +1.2
baz=142
MEZF *e*Sn **Sn** 07 44 43.4 -1.2
comp=E,7.8nm,0.4s
RONA Rosalia, Austr 5.30 51 *i* Pn **Pn** 07 43 43.7 -0.7
comp=E,5.1nm,0.3s,SNR=6.3
RONA *e*Sn **Sn** 07 44 42.6 -2.3
comp=E,3.2nm,0.4s
SAVF Savonnieres en 5.34 321 *e*Pn **Pn** 07 43 46.9 +1.9
baz=141
SAVF *e*Sn **Sn** 07 44 44.6 -1.3
comp=E,7.2nm,0.5s
BGF Bois d'Agland 5.51 294 *e*Pn **Pn** 07 43 48.8 +1.5
BGF Bois d'Agland 5.51 294 *e*P Pn 07 43 52.6 +5.3
BGF *e*Sn **Sn** 07 44 48.7 -1.4
comp=E,20nm,0.4s
STON Ston 5.72 104 P Pb 07 44 00.9 -4.5
STON ⇑P Pg 07 44 09.2 -6.6
CAF Calviac 5.78 277 *e*Pn **Pn** 07 43 52.3 +1.3
CAF *e*Sn **Sn** 07 44 54.7 -2.1
comp=E,1.7nm,0.3s
TCF Toulx Ste Croi 5.86 290 *e*Pn **Pn** 07 43 53.9 +1.8
TCF *e*Sn **Sn** 07 44 56.7 -2.0
comp=E,2.8nm,0.4s
MTLF Montolieu 5.86 261 *e*Pn **Pn** 07 43 53.9 +1.8
MTLF *e*Sn **Sn** 07 44 57.0 -1.8
comp=E,6.0nm,0.5s
MTLF Montolieu 5.86 261 ⇓P **Pn** 07 43 54.1 +2.0
NKC Novy Kostel 5.89 14 *e*PN **Pn** 07 43 51.1 -1.4
HYF Humbligny 5.91 300 *e*Pn **Pn** 07 43 53.6 +0.9
HYF Humbligny 5.91 300 *e*P Pn 07 43 58.4 +5.7
HYF *e*Sn **Sn** 07 44 59.1 -0.7
comp=E,29nm,0.3s
RJF Les Rejaudoux 6.18 280 *e*Pn **Pn** 07 43 57.5 +1.0
RJF *e*Sn **Sn** 07 45 05.2 -1.4
comp=E,0.7nm,0.3s
PRU Pruhonice 6.20 27 *e*PN **Pn** 07 43 55.9 -0.8
PRU *e*SN **Sn** 07 45 04.6 -2.4
KRUC Moravsky 6.21 41 *e*PN **Pn** 07 43 56.1 -0.8
KRUC *e*SN **Sn** 07 45 04.7 -2.7
KRUC *e*SG **Sg** 07 45 47.1 +1.5
MODS Modra-Piesok 6.22 50 *e*PN **Pn** 07 43 56.8 -0.3
MODS *e*SN **Sn** 07 45 06.0 -1.6
VRAC Vranov 6.48 41 Lg Lg 07 45 50.1
comp=E,0.4nm,0.3s,baz=325,slow=23,SNR=1.6
GIVF Givet 6.63 329 *e*Pn **Pn** 07 44 02.3 -0.3
LFF La Frestale 6.72 277 *e*Pn **Pn** 07 44 03.6 -0.3
BRG Berggiesshubel 6.81 21 Pn **Pn** 07 44 04.7 -0.5
BRG Amp 07 44 06.0
comp=E,4.2nm,0.6s
BRG Berggiesshubel 6.81 21 Sn **Sn** 07 45 18.5 -3.7
BRG Amp 07 45 20.0
comp=E,2.3nm,0.5s
BRG *ex* x 07 46 00.9
BRG Amp 07 46 16.9
comp=E,3.9nm,0.9s
BAIF Baives 6.83 326 *e*Pn **Pn** 07 44 06.2 +0.8
CLL Collm 7.02 15 *e*Pn **Pn** 07 44 07.0 -1.0
CLL *e*Sn **Sn** 07 45 23.0 -4.2
CLL *e*Sg **Sg** 07 46 11.0 -0.4
comp=E,8.0nm,0.9s
KRLC Kraliky 7.12 37 *e*PN **Pn** 07 44 08.4 -1.0
KRLC *e*SG **Sg** 07 46 11.0 -3.7
comp=E,9.7nm,0.7s
DPC Dobruska-Polom 7.14 34 *e*PN **Pn** 07 44 08.2 -1.5
DPC *e*SN **Sn** 07 45 26.6 -3.7
DPC *e*SG **Sg** 07 46 11.2 -4.2
comp=E,6.6nm,1.1s
UPC Upice 7.15 32 *e*PN **Pn** 07 44 08.7 -1.1
CHVC Chvalec 7.23 31 *e*PN **Pn** 07 44 09.7 -1.2
OSTC Ostas 7.27 32 *e*PN **Pn** 07 44 10.7 -0.7
OSTC *e*SG **Sg** 07 46 15.3 -4.0
comp=E,14nm,1.1s
EPF Esparros 7.27 261 *e*Pn **Pn** 07 44 12.2 +0.7
EPF *e*Sn **Sn** 07 45 30.5 -3.0
comp=E,0.6nm,0.3s
MFF Saint Martin d 7.52 289 *e*P **Pn** 07 44 19.6 +4.8
MFF *e*Sn **Sn** 07 45 37.2 -2.2
comp=E,0.7nm,0.3s
GMB Gambarie 7.67 144 P **Pn** 07 44 16.2 -0.9
ETSF Etsaut 7.94 262 *e*P Pn 07 44 25.6 +4.9
ETSF *e*Sn **Sn** 07 45 47.9 -2.1
comp=Z,0.8nm,0.2s
RAFF Raffo Rosso 7.99 155 ⇓P Pn 07 44 25.7 +4.4
LDF La Druitiere 8.15 303 *e*P **Pn** 07 44 28.2 +4.7
SJPF Ste Jean 8.36 264 *e*Pn **Pn** 07 44 27.0 +0.6
FLN La Foliniere 8.44 304 *e*Pn **Pn** 07 44 27.6 +0.1
baz=124
ESDC Sonseca Array 11.56 250 Pn **Pn** 07 45 11.7 +1.3
comp=Z,0.1nm,0.3s,baz=62,slow=14,SNR=5.1
comp=Z,0.6nm,0.8s
FINES FINESS Array B 19.34 23 P **P** 07 46 50.7 +0.4
comp=Z,0.1nm,0.3s,baz=199,slow=13,SNR=4.6
comp=Z,4.0nm,1.0s

AEIC ***12*** *07:56:17.7±1.1,51.43N±0.04×176.75W±0.06,h34km±7km, ML3.5,Error ellipse: s-maj=6.3km s-min=4.7km az=128.0*
NEIC ***12*** *07:56:18.2±0.9,51.5N±0.1×176.84W±0.08,h45km±17km, Error ellipse: s-maj=19.7km s-min=5.9km az=167.0*
IDC ***12*** *07:56:18.2±3.9,51.51N×176.84W,h54km±35km,mb3.2/10, mbtmp3.6/12,ML3.9/2,Error ellipse: s-maj=36.5km s-min=14.4km az=171.0*
ISC 12 07:56:17.6±0.8,51.5N±0.1×176.79W±0.05,h48km,n42, σ0893/35,mb3.5/9,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KIMD	**Kanaga Island**	**0.40**	**317**			**Pn**	**07 56 27.1**	**-0.5**
ADK	**Adak**	**0.42**	**9**			**Pn**	**07 56 27.3**	**-0.4**
ADK					Sg	**Sn**	**07 56 34.6**	**-0.4**
KIWB	**Kanaga Island**	**0.44**	**330**			**Pn**	**07 56 27.8**	**-0.2**
KIKV	**Kanaga Island**	**0.47**	**330**			**Pn**	**07 56 28.2**	**-0.1**
KICM	**Kanaga Island**	**0.51**	**331**			**Pn**	**07 56 28.9**	**+0.1**
GSTD	**Great Sitkin T**	**0.71**	**34**			**Pn**	**07 56 31.4**	**0.0**
TAPA	**Tanaga Point A**	**0.72**	**299**			**Pn**	**07 56 31.4**	**-0.2**
GSMY	**Great Sitkin M**	**0.73**	**38**			**Pn**	**07 56 31.9**	**+0.2**
GSTR	**Great Sitkin T**	**0.77**	**36**			**Pn**	**07 56 32.5**	**+0.3**
TAFP	**Tanaga Falls P**	**0.86**	**301**			**Pn**	**07 56 33.3**	**0.0**
TASE	**Tanaga Southea**	**0.86**	**296**			**Pn**	**07 56 33.6**	**+0.3**
GAEA	**Gareloi East**	**1.26**	**285**			**Pn**	**07 56 39.4**	**+0.7**
GALAA	**Gareloi Lava P**	**1.27**	**284**			**Pn**	**07 56 39.6**	**+0.7**
ATKA	**Atka Island**	**1.77**	**65**			**Pn**	**07 56 45.5**	**-0.2**
KOKL	**Mount Kliuchef**	**1.82**	**61**			**Pn**	**07 56 47.3**	**+0.8**
NIKH	**Nikolski High**	**5.11**	**70**	Pn		**Pn**	**07 57 32.2**	**+0.8**
SHEM	**Shemya Is, Ala**	**5.75**	**286**	P		**Pn**	**07 57 39.6**	**-0.7**
	1.8nm,0.3s,baz=288,slow=23,SNR=1.9							
SHEM				S		**Sn**	**07 58 46.0**	**+1.1**
	23nm,0.8s,baz=309,slow=18,SNR=1.7							
	26nm,0.7s							
UNV	**Unalaska Valle**	**6.70**	**65**	Pn		**Pn**	**07 57 55.2**	**+2.0**
SPIA	**Saint Paul Isl**	**6.88**	**31**	Pn		**Pn**	**07 57 58.9**	**+3.3**
SDPT	**Sand Point**	**10.48**	**62**	Pn		**Pn**	**07 58 44.8**	**-0.2**
KDAK	**Kodiak Island**	**15.32**	**56**	P		**Pn**	**07 59 48.9**	**-1.5**
	0.8nm,0.3s,baz=292,slow=0.6,SNR=20							
	1.6nm,0.3s							
SEY	**Seymchan**	**20.03**	**317**	P		**Pn**	**08 00 48.4**	**+0.3**
	1.1nm,0.7s,baz=340,slow=22,SNR=1.8							
ILAR	**Eielson Array**	**20.39**	**38**	P		**P**	**08 00 49.9**	**-0.1**
	0.3nm,0.6s,baz=238,slow=8.4,SNR=4.1							
	0.3nm,0.6s							
INK	**Inuvik**	**26.66**	**35**	P		**P**	**08 01 51.1**	**-0.3**
	0.4nm,0.5s,baz=251,slow=6.1,SNR=1.4							
	0.4nm,0.5s							
H11N2	**WAKE ISLAND Hy**	**34.17**	**208**	T		T	08 39 19.5	
	baz=18,slow=76,SNR=409							
H11N3	**WAKE ISLAND Hy**	**34.18**	**208**	T		T	08 39 23.8	
	baz=18,slow=76,SNR=363							
H11N1	**WAKE ISLAND Hy**	**34.19**	**208**	T		T	08 39 30.9	
	baz=18,slow=76,SNR=486							
H11S1	**WAKE ISLAND Hy**	**35.39**	**208**	T		T	08 40 48.0	
	baz=18,slow=76,SNR=305							
H11S2	**WAKE ISLAND Hy**	**35.40**	**208**	T		T	08 40 57.9	
	baz=18,slow=76,SNR=159							
H11S3	**WAKE ISLAND Hy**	**35.41**	**208**	T		T	08 40 59.9	
	baz=18,slow=76,SNR=118							
KSRS	**Korea Array**	**40.89**	**272**	P		**P**	**08 03 55.4**	**+0.6**
	0.4nm,0.7s,baz=81,slow=7.5,SNR=2.5							
	0.4nm,0.7s							
NVAR	**Mina Array Bea**	**42.29**	**84**	P		**P**	**08 04 08.0**	**+1.5**
	0.3nm,0.6s,baz=142,slow=18,SNR=2.4							
	0.3nm,0.6s							
PDAR	**Pinedale Array**	**45.08**	**74**	P		**P**	**08 04 29.3**	**+0.4**
	0.3nm,0.4s,baz=331,slow=3.5,SNR=5.9							
	0.3nm,0.4s							
SONM	**Songino Array**	**47.72**	**298**	P		**P**	**08 04 50.0**	**+0.6**
	0.6nm,0.8s,baz=48,slow=8.6,SNR=2.8							
	0.6nm,0.8s							
TXAR	**Lajitas Array**	**57.40**	**83**	P		**P**	**08 06 01.4**	**+0.2**
	0.4nm,0.8s,baz=298,slow=4.8,SNR=5.2							
	0.4nm,0.8s							
KURBB	**Kurchatov Arra**	**59.96**	**315**	P		**P**	**08 06 17.6**	**-0.9**
	0.3nm,0.5s,baz=41,slow=6.5,SNR=4.6							
	0.3nm,0.5s							
WRA	**Warramunga Arr**	**82.96**	**226**	P		**P**	**08 08 36.5**	**-0.8**
	0.8nm,0.8s,baz=33,slow=5.9,SNR=2.6							
	0.8nm,0.9s							
ASAR	**Alice Springs**	**86.42**	**224**	P		**P**	**08 08 54.4**	**-0.2**
	0.7nm,0.8s,baz=5.2,slow=2.8,SNR=5.2							
	0.7nm,0.8s							
TORD	**Torodi Ar. Bea**	**115.64**	**2**	PKP		**PKiKP**	**08 14 53.6**	**-1.0**
	0.6nm,1.0s,baz=332,slow=3.9,SNR=3.1							
H03N2	**Juan Fernandez**	**119.97**	**107**	T		T	10 26 33.6	
	baz=317,slow=77,SNR=63							
H03N1	**Juan Fernandez**	**119.98**	**107**	T		T	10 26 34.9	
	baz=317,slow=77,SNR=52							
H03N3	**Juan Fernandez**	**119.98**	**107**	T		T	10 26 30.7	
	baz=317,slow=77,SNR=67							

IDC ***12*** *08:48:30.7±2.6,2.05S×138.68E,h0km,mb3.9/3, mbtmp3.9/4,ML3.7/1,MS3.3/9,Error ellipse: s-maj=114.7km s-min=24.1km az=81.0*
DJA ***12*** *08:48:34.3±0.4,2.2°S±5.3°×13.8°E±1.1°,h10km±4km,M4.2/7, mb4.2/7,mB4.6/1,MLv4.2/5,Mw(mB)3.9/1*
ISC 12 08:48:33.5±0.8,2.19S±0.08×138.35E±0.04,h10km,n18, σ2815/13,mb4.0/3,MS3.1/4,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.41**	**61**	P		**Pb**	**08 48 42.9**	**+0.1**
SMPI				S		**Sb**	**08 48 47.2**	**-1.9**
GENI	**Genyem**	**1.86**	**102**	P		**Pn**	**08 49 06.0**	**+0.6**
GENI				S		**Sn**	**08 49 31.2**	**+2.3**
SRPI	**Serui, Papua**	**2.14**	**279**	P		**Pn**	**08 49 10.1**	**+0.9**
SRPI				S		**Sn**	**08 49 36.9**	**+1.1**
BAKI	**Biak**	**2.46**	**294**	P		**Pn**	**08 49 13.7**	**+0.1**
FAKI	**Fak Fak**	**6.14**	**263**	P		**Pn**	**08 50 05.1**	**+0.7**
	0.1nm22nm,1.0s							
SIJI	**Sorong**	**7.21**	**280**	LR		LR	08 53 36.2	
	comp=Z,311nm,19.6s,baz=68,slow=41							
PMG	**Port Moresby**	**11.31**	**130**	LR		LR	08 55 40.2	
	comp=Z,73nm,20.1s,baz=68,slow=38							
WRA	**Warramunga Arr**	**18.07**	**192**	P		**Pn**	**08 52 47.0**	**+2.0**
	0.3nm,0.3s,baz=15,slow=12,SNR=16							
WRA				S		Sn	08 55 55.3	-11
	2.4nm,0.9s,baz=20,slow=23,SNR=2.8							
WRA				LR		LR	09 00 33.8	
	comp=Z,208nm,19.8s,baz=48,slow=40							
	1.1nm,0.6s							
KAPI	**Kappang**	**18.77**	**261**	LR		LR	09 01 11.3	
	comp=Z,48nm,20.4s,baz=82,slow=40							
CTA	**Charters Tower**	**19.39**	**157**	LR		LR	09 01 10.2	
	comp=Z,177nm,19.3s,baz=272,slow=39							
ASAR	**Alice Springs**	**21.78**	**191**	P		**P**	**08 53 25.6**	**0.0**
	1.7nm,0.7s,baz=22,slow=11,SNR=16							
ASAR				S		**S**	**08 57 21.2**	**-5.5**
	2.9nm,0.8s,baz=10,slow=20,SNR=9.8							
ASAR				LR		LR	09 02 05.8	
	comp=Z,103nm,20.6s,baz=355,slow=37							
	1.7nm,0.7s							
STKA	**Stephens Creek**	**29.69**	**174**	P		**P**	**08 54 39.8**	**+0.1**
	2.4nm,1.0s,baz=350,slow=7.7,SNR=5.5							
STKA				LR		LR	09 06 29.9	
	comp=Z,121nm,20.1s,baz=20,slow=36							
	2.4nm,1.0s							
H11S3	**WAKE ISLAND Hy**	**34.64**	**52**	T		T	09 31 27.2	
	baz=236,slow=75,SNR=14							
H11S2	**WAKE ISLAND Hy**	**34.65**	**52**	T		T	09 31 18.7	
	baz=236,slow=75,SNR=9.5							
H11S1	**WAKE ISLAND Hy**	**34.66**	**52**	T		T	09 31 30.3	
	baz=236,slow=75,SNR=9.0							
JHJ	**Hachijo jima 2**	**35.15**	**2**	LR		LR	09 06 21.5	
	comp=Z,28nm,21.1s,baz=310,slow=31							
ASAJ	**Asahikawa**	**46.26**	**4**	LR		LR	09 16 49.5	
	comp=Z,18nm,18.2s,baz=138,slow=37							
MKAR Makanchi Array 69.16 322 P **P** 08 59 39.7 -0.6
1.3nm,0.8s,baz=126,slow=7.3,SNR=11
1.3nm,0.8s

IDC ***12*** *08:56:50.8±0.8,16.94N×60.88W,h0km,mb4.0/17, mbtmp4.0/18,ML4.2/1,MS3.2/11,Error ellipse: s-maj=23.0km s-min=14.9km az=18.0*
TRN ***12*** *08:56:54.1,16.86N×61.00W,h23km,MD4.3*
NEIC ***12*** *08:56:56.2±1.7,16.83N±0.04×60.94W±0.06,h28km±4km, mb4.4/26,Error ellipse: s-maj=8.8km s-min=4.8km az=69.0*
ISC 12 08:56:53.6±1.4,16.92N±0.03×60.88W±0.04,h16km±9km, n152,σ1912/161,mb4.3/29,MS3.2/7,1D,Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
H05N1	**Guadeloupe/Mar**	**0.62**	**196**	Pn		**Pb**	**08 57 07.5**	**+1.4**
H05N1				Sn		**Sb**	**08 57 16.3**	**+1.7**
GDSD	**La Dsirade Is**	**0.63**	**197**			**Pg**	**08 57 06.2**	**+0.2**
GDSD				Sg		**Sg**	**08 57 14.7**	**+0.4**
ABD	**La Joyeuse, An**	**0.73**	**233**			**Pg**	**08 57 07.7**	**-0.2**
ABD				Sg		**Sg**	**08 57 17.6**	**0.0**
ABD	**La Joyeuse, An**	**0.73**	**233**	*e*P		**Pg**	**08 57 07.7**	**-0.2**
ABD				*e*S		**Sg**	**08 57 17.6**	**0.0**
ANBD	**Bethesda, Anti**	**0.86**	**279**	*e*P		**Pb**	**08 57 10.2**	**+0.1**
ANBD				*e*S		**Sb**	**08 57 21.8**	**+0.3**
BPA	**Boggy Peak**	**0.94**	**278**	*e*P		**Pb**	**08 57 11.4**	**-0.3**
BPA				*e*S		**Sb**	**08 57 24.7**	**+0.7**
MAGL	**Barre de l'ile**	**1.04**	**202**			**Pb**	**08 57 12.8**	**-0.3**
MAGL	**Barre de l'ile**	**1.04**	**202**	*e*P		**Pb**	**08 57 12.9**	**-0.3**
MAGL				*e*S		**Sb**	**08 57 27.6**	**+1.1**
GDHS	**Morne Mazeau,**	**1.06**	**233**			**Pb**	**08 57 12.8**	**-0.9**
CBE	**Ff, Capester**	**1.09**	**220**			**Pb**	**08 57 13.5**	**-0.7**
CBE	**Ff, Capester**	**1.09**	**220**	*e*P		**Pb**	**08 57 13.9**	**-0.3**
CBE				*e*S		**Sb**	**08 57 28.7**	**+0.5**
ANWB	**Willy Bob**	**1.14**	**311**			**Pn**	**08 57 15.4**	**+0.4**
ANWB	**Willy Bob**	**1.14**	**311**	*e*P		**Pn**	**08 57 15.6**	**+0.6**
ANWB				*e*S		**Sb**	**08 57 30.6**	**+0.9**
MLYT	**Lee's Yard**	**1.27**	**261**	*e*S		**Sb**	**08 57 34.4**	**+1.0**
TDBA	**Terre de Bas,**	**1.28**	**215**			**Pn**	**08 57 16.6**	**-0.4**
TDBA	**Terre de Bas,**	**1.28**	**215**	*e*P		**Pn**	**08 57 17.4**	**+0.4**
MBFL	**Flemmings, Mon**	**1.29**	**263**	*e*P		**Pn**	**08 57 17.0**	**0.0**
MBFL				*e*S		**Sb**	**08 57 33.6**	**-0.3**
TBG	**Guadaloupe-3**	**1.29**	**215**	*e*P		**Pn**	**08 57 17.5**	**+0.6**
TBG				*e*S		**Sb**	**08 57 33.8**	**0.0**
MDVC	**Dominica, Viel**	**1.39**	**201**	*e*P		**Pn**	**08 57 19.0**	**+0.6**
MDVC				*e*S		**Sn**	**08 57 36.4**	**0.0**
DSLB	**Salisbury**	**1.56**	**200**	*e*P		**Pn**	**08 57 20.7**	**0.0**
DSLB				*e*S		**Sn**	**08 57 41.2**	**+0.6**
DLPL	**La Plaine**	**1.61**	**193**			**Pn**	**08 57 21.1**	**-0.4**
DLPL	**La Plaine**	**1.61**	**193**	*e*P		**Pn**	**08 57 22.0**	**+0.5**
DLPL				*e*S		**Sn**	**08 57 41.8**	**-0.2**
MDN	**Morne-Daniel**	**1.66**	**197**	*e*P		**Pn**	**08 57 22.7**	**+0.5**
SKOC	**St. Kitts, UWI**	**1.81**	**282**	*e*P		**Pn**	**08 57 25.1**	**+0.9**
SKOC				*e*S		**Sn**	**08 57 46.5**	**-0.3**
SVN	**Savane Anatole**	**2.08**	**188**			**Pn**	**08 57 28.1**	**+0.1**
SVN	**Savane Anatole**	**2.08**	**188**	*e*P		**Pn**	**08 57 28.5**	**+0.6**
SEUS	**St. Eustatius**	**2.09**	**286**			**Pn**	**08 57 28.8**	**+0.8**
SEUS	**St. Eustatius**	**2.09**	**286**	*e*P		**Pn**	**08 57 29.2**	**+1.2**
BAMF	**Morne Balai**	**2.10**	**187**	*e*P		**Pn**	**08 57 29.1**	**+0.9**
CXM	**Morne La Croix**	**2.11**	**188**	*e*P		**Pn**	**08 57 28.3**	**-0.2**
PCM	**Pelee Case Pet**	**2.11**	**189**	*e*P		**Pn**	**08 57 29.0**	**+0.6**
GBMF	**Grand Be**	**2.12**	**187**	*e*P		**Pn**	**08 57 28.9**	**+0.3**
ILAM	**Ilet Lapin Mar**	**2.13**	**180**			**Pn**	**08 57 28.7**	**+0.2**
ILAM	**Ilet Lapin Mar**	**2.13**	**180**	*e*P		**Pn**	**08 57 29.1**	**+0.5**
ILAM				*e*S		**Sn**	**08 57 54.5**	**-0.1**
PMN	**Morne Lenard**	**2.14**	**188**	*e*P		**Pn**	**08 57 29.4**	**+0.6**
FDF	**Fort de France**	**2.19**	**187**			**Pn**	**08 57 29.2**	**-0.2**
FDF	**Fort de France**	**2.19**	**187**	*e*P		**Pn**	**08 57 30.2**	**+0.8**
FDF				*e*S		**Sn**	**08 57 56.4**	**+0.3**
LPMF	**Morne Lapointe**	**2.33**	**182**	*e*P		**Pn**	**08 57 30.8**	**-0.5**
ZAM	**Aeronautique**	**2.33**	**184**	*e*P		**Pn**	**08 57 31.1**	**-0.3**
SMRT	**St. Maarten**	**2.38**	**299**			**Pn**	**08 57 33.2**	**+1.2**
SMRT	**St. Maarten**	**2.38**	**299**	*e*P		**Pn**	**08 57 33.1**	**+1.1**
BIM	**Bigot**	**2.39**	**184**			**Pn**	**08 57 32.9**	**+0.7**
BIM	**Bigot**	**2.39**	**184**	*e*P		**Pn**	**08 57 32.7**	**+0.5**
BIM				*e*S		**Sn**	**08 58 01.0**	**-0.2**
MPOM	**Morne Pois Mar**	**2.46**	**180**			**Pn**	**08 57 33.2**	**+0.1**
MPOM	**Morne Pois Mar**	**2.46**	**180**	*e*P		**Pn**	**08 57 33.6**	**+0.5**
MPOM				*e*S		**Sn**	**08 58 03.6**	**+0.9**
H05S1	**Guadeloupe/Mar**	**2.48**	**179**	Pn		**Pn**	**08 57 33.4**	**+0.1**
H05S1				Sn		**Sn**	**08 58 03.8**	**+0.5**
SLBI	**Saint Lucia, B**	**2.88**	**182**	*e*P		**Pn**	**08 57 39.6**	**+0.8**
SLBI				*e*S		**Sn**	**08 58 13.2**	**0.0**
SLW	**Petit Monier**	**2.88**	**181**	*e*P		**Pn**	**08 57 40.1**	**+1.2**
SLCP	**Castries, St.**	**2.89**	**182**	*e*P		**Pn**	**08 57 40.7**	**+1.6**
SLB	**Belfond**	**3.07**	**183**	*e*P		**Pn**	**08 57 42.9**	**+1.3**
SLDE	**Delcer**	**3.10**	**183**	*e*P		**Pn**	**08 57 42.2**	**+0.3**
MCLT	**Moule a Chique**	**3.19**	**181**			**Pn**	**08 57 43.9**	**+0.7**
MCLT	**Moule a Chique**	**3.19**	**181**	*e*P		**Pn**	**08 57 44.6**	**+1.4**
SVV	**Soufriere Volc**	**3.59**	**185**	*e*P		**Pn**	**08 57 49.2**	**+0.5**
SVB	**Belmont**	**3.64**	**186**			**Pn**	**08 57 49.3**	**-0.1**
SVB	**Belmont**	**3.64**	**186**	*e*P		**Pn**	**08 57 50.3**	**+0.9**
SVOC	**Richmond Hill,**	**3.75**	**185**	*e*		**Pb**	**08 57 55.8**	**-3.8**
CDVI	**St. Croix**	**3.80**	**283**			**Pn**	**08 57 52.3**	**+0.7**
CDVI	**St. Croix**	**3.80**	**283**	*e*P		**Pn**	**08 57 52.9**	**+1.3**
BBGH	**Gun Hill**	**3.96**	**161**	*e*		**Pn**	**08 57 55.4**	**+1.6**
STVI	**Saint Thomas**	**4.14**	**291**	Pn		**Pn**	**08 57 57.0**	**+0.8**
CUPR	**Culebra, Puert**	**4.42**	**

SADO	**Sadowa**	**31.73**	**335**	LR	LR	09 15 34.6		
	comp=Z,28nm,20.4s,baz=41,slow=35							
SIV	**San Ignacio**	**32.70**	**180**	P	**P**	**09 03 25.4**	**-0.1**	
	comp=Z,2.3nm,0.6s,baz=356,slow=8.5,SNR=12							
SIV				LR	LR	09 17 51.4		
	comp=Z,84nm,18.2s,baz=332,slow=38							
	comp=Z,2.3nm,0.6s							
LPAZ	**La Paz**	**33.76**	**193**	LR	LR	09 19 15.0		
	comp=Z,53nm,18.7s,baz=357,slow=40							
W39A	**Magazine**	**34.50**	**308**	P	**P**	**09 03 42.0**	**+1.0**	
W39A				IAmb	IAmb	09 03 43.0		
	comp=Z,5.0nm,1.0s							
T35A	**Sooner Cattle**	**37.20**	**309**	P	**P**	**09 04 04.2**	**-0.1**	
T35A				IAmb	IAmb	09 04 04.6		
	comp=Z,4.7nm,0.8s							
SCHQ	**Schefferville**	**38.12**	**354**	P	**P**	**09 04 12.3**	**+0.5**	
	comp=Z,2.5nm,0.6s,baz=178,slow=5.4,SNR=11							
	comp=Z,2.5nm,0.6s							
SCHQ	**Schefferville**	**38.12**	**354**	IAmb	IAmb	09 04 13.9		
	comp=Z,14nm,1.5s							
LVC	**Limon Verde**	**40.06**	**192**	LR	LR	09 21 49.1		
	comp=Z,83nm,18.8s,baz=232,slow=37							
TXAR	**Lajitas Array**	**41.03**	**295**	P	**P**	**09 04 35.5**	**-1.0**	
	comp=Z,0.2nm,0.7s,baz=135,slow=8.8,SNR=2.4							
TXAR				PcP	**PcP**	**09 06 36.8**	**+0.3**	
	comp=Z,0.6nm,0.9s,baz=123,slow=4.4,SNR=4.0							
TXAR				LR	LR	09 27 30.2		
	comp=Z,15nm,19.2s,baz=132,slow=45							
	comp=Z,0.2nm,0.7s							
MNTX	**Cornudas Mount**	**42.85**	**299**	P	**P**	**09 04 50.9**	**-0.3**	
ULM	**Lac du Bonnet**	**43.52**	**328**	P	**P**	**09 04 55.5**	**-0.8**	
	comp=Z,1.9nm,0.5s,baz=146,slow=7.4,SNR=4.6							
ULM				LR	LR	09 25 16.8		
	comp=Z,20nm,18.1s,baz=121,slow=39							
	comp=Z,1.9nm,0.5s							
ULM	**Lac du Bonnet**	**43.52**	**328**	P	**P**	**09 04 55.9**	**-0.4**	
Q24A	**Divide**	**44.32**	**309**	P	**P**	**09 05 06.7**	**+3.3**	
Q24A				IAmb	IAmb	09 05 34.8		
	comp=Z,4.8nm,0.8s							
ANMO	**Albuquerque**	**44.33**	**303**	P	**P**	**09 05 02.8**	**-0.6**	
	comp=Z,0.6nm,0.6s,baz=113,slow=7.7,SNR=2.2							
	comp=Z,0.6nm,0.6s							
PV13	**Radium Mtn., P**	**46.89**	**307**	P	**P**	**09 05 24.9**	**+1.3**	
PV13				IAmb	IAmb	09 05 25.2		
	comp=Z,3.1nm,1.0s							
PDAR	**Pinedale Array**	**48.62**	**313**	P	**P**	**09 05 36.9**	**-0.1**	
	comp=Z,1.2nm,0.8s,baz=107,slow=9.5,SNR=9.6							
	comp=Z,1.2nm,0.8s							
JLU	**Jordanelle**	**49.43**	**309**	P	**P**	**09 05 44.2**	**+1.0**	
JLU				IAmb	IAmb	09 05 44.4		
	comp=Z,2.2nm,0.8s							
AHID	**Auburn Hatcher**	**49.71**	**312**	P	**P**	**09 05 46.4**	**+1.0**	
AHID				IAmb	IAmb	09 05 46.4		
	comp=Z,3.0nm,0.9s							
DUG	**Dugway, Tooele**	**50.36**	**308**	P	**P**	**09 05 51.0**	**+0.8**	
DUG				IAmb	IAmb	09 05 51.9		
	comp=Z,2.8nm,1.0s							
HVU	**Hansel Valley**	**50.67**	**310**	P	**P**	**09 05 52.9**	**+0.4**	
H10N3	**ASCENSION HYDR**	**52.04**	**115**	T	T	10 01 52.7		
	baz=298							
H10N2	**ASCENSION HYDR**	**52.04**	**115**	T	T	10 01 57.0		
	baz=298							
H10N1	**ASCENSION HYDR**	**52.06**	**115**	T	T	10 01 57.5		
	baz=298							
TPNV	**Topopah Spring**	**52.49**	**304**	P	**P**	**09 06 07.2**	**+0.9**	
ESDC	**Sonseca Array**	**54.04**	**53**	P	**P**	**09 06 15.7**	**-1.8**	
	comp=Z,0.2nm,0.5s,baz=262,slow=8.7,SNR=2.4							
	comp=Z,0.2nm,0.5s							
NVAR	**Mina Array Bea**	**54.28**	**305**	P	**P**	**09 06 19.3**	**-0.2**	
	comp=Z,1.0nm,0.9s,baz=102,slow=6.5,SNR=6.6							
	comp=Z,1.0nm,0.9s							
DBIC	**Dimbokro**	**55.61**	**93**	P	**P**	**09 06 28.8**	**-0.4**	
	comp=Z,2.7nm,0.6s,baz=286,slow=7.6,SNR=5.1							
	comp=Z,2.7nm,0.6s							
DBIC	**Dimbokro**	**55.61**	**93**	IAmb	IAmb	09 06 30.2		
	comp=Z,20nm,1.4s							
SUMG	**Summit**	**57.16**	**8**	P	**P**	**09 06 40.4**	**+0.6**	
YBH	**Yreka Blue Hor**	**57.99**	**309**	P	**P**	**09 06 44.3**	**-1.5**	
	comp=Z,2.0nm,1.1s,baz=124,slow=3.6,SNR=1.9							
	comp=Z,2.0nm,1.1s							
YKA	**Yellowknife Ar**	**58.73**	**334**	P	**P**	**09 06 49.7**	**-0.8**	
	comp=Z,1.6nm,0.6s,baz=109,slow=7.7,SNR=6.9							
	comp=Z,1.6nm,0.6s							
TORD	**Torodi Ar. Bea**	**60.34**	**84**	P	**P**	**09 07 01.8**	**-0.6**	
	comp=Z,2.9nm,0.8s,baz=287,slow=6.7,SNR=14							
	comp=Z,2.9nm,0.8s							
TORD	**Torodi Ar. Bea**	**60.34**	**84**	P	**P**	**09 07 02.0**	**-0.4**	
NB2	**NORSAR Subarra**	**66.68**	**30**	P	**P**	**09 07 44.6**	**+1.0**	
	comp=Z,0.6nm,0.7s,baz=262,slow=6.5							
NOA	**NORSAR Array B**	**66.68**	**30**	P	**P**	**09 07 44.0**	**+0.4**	
	comp=Z,1.2nm,0.8s,baz=262,slow=6.3,SNR=7.7							
	comp=Z,1.2nm,0.8s							
CLL	**Collm**	**66.93**	**41**	*i* P	**P**	**09 07 45.4**	**+0.2**	
GERES	**GERESS Array B**	**67.34**	**44**	P	**P**	**09 07 48.1**	**0.0**	
	comp=Z,0.3nm,0.5s,baz=264,slow=4.0,SNR=5.6							
	comp=Z,0.3nm,0.5s							
INK	**Inuvik**	**68.00**	**337**	P	**P**	**09 07 50.8**	**-1.0**	
	comp=Z,1.5nm,0.8s,baz=60,slow=11,SNR=5.3							
	comp=Z,1.5nm,0.8s							
BCAR	**Beaver Creek A**	**70.95**	**332**	P	**P**	**09 08 10.9**	**+0.7**	
M27K	**Edge Creek, AK**	**71.00**	**331**	P	**P**	**09 08 12.0**	**+1.5**	
M27K				IAmb	IAmb	09 08 12.7		
	comp=Z,2.4nm,0.8s							
ILAR	**Eielson Array**	**73.15**	**333**	P	**P**	**09 08 22.5**	**-0.7**	
	comp=Z,2.3nm,1.0s,baz=94,slow=4.5,SNR=12							
	comp=Z,2.3nm,1.0s							
ILAR	**Eielson Array**	**73.15**	**333**	P	**P**	**09 08 22.8**	**-0.5**	
FINES	**FINESS Array B**	**73.86**	**30**	P	**P**	**09 08 26.9**	**-0.5**	
	comp=Z,1.2nm,0.6s,baz=0.0,slow=1.9,SNR=6.8							
	comp=Z,1.2nm,0.6s							
MLR	**Muntele Rosu**	**75.95**	**46**	P	**P**	**09 08 40.9**	**+0.9**	
MLR				IAmb	IAmb	09 08 42.1		
	comp=Z,4.8nm,0.9s							
J20K	**Nowinta River**	**76.34**	**333**	P	**P**	**09 08 41.6**	**-0.1**	
J20K				IAmb	IAmb	09 08 41.7		
	comp=Z,1.4nm,0.5s							
IDI	**Anoyia**	**77.05**	**57**	P	**P**	**09 08 47.5**	**+1.1**	
IDI				IAmb	IAmb	09 08 48.4		
	comp=Z,4.2nm,0.8s							

GII **12** *09:22:45.7±0.0,36°.96N×27°.95E,h5km,Mm3.6/8*
ATH **12** *09:22:50.6,37°.00N×28°.09E,h13km±4km,ML3.8/8,Error ellipse: s-maj=4.3km s-min=1.4km az=191.0*
ISK **12** *09:22:50.7,36°.96N×27°.96E,h5km,ML3.8/34*
IDC **12** *09:22:50.7±0.8,36°.88N×28°.03E,h0km,mb3.7/9, mbtmp3.7/16,ML3.6/7,MS3.3/3,Error ellipse: s-maj=17.9km s-min=14.2km az=173.0*
THE **12** *09:22:51.9,36°.98N×27°.97E,h4km±1km,ML3.6/9,Error ellipse: s-maj=1.5km s-min=0.6km az=152.0*
DDA **12** *09:22:51.5±0.0,36°.93N×27°.97E,h13km±2km,MW3.8*
ISC 12 09:22:51.7±0.9,36°.95N±0°.02×27°.97E±0°.02,h13km±6km, n134,σ1§89/190,mb3.7/9,5C,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TURN	**Turunc**	**0.28**	**128**	PG	**Pg**	**09 22 57.3**	**-0.3**
TURN				SG	**Sb**	**09 23 03.0**	**-0.4**
TURN	**Turunc**	**0.28**	**128**	P	**Pg**	**09 22 57.2**	**-0.4**
TURN				S	**Sg**	**09 23 01.7**	**+0.2**
TURN				*i* AML	AML	09 23 05.0	
	comp=N,6μm,0.8s						
TURN				*i* AML	AML	09 23 05.0	
	comp=E,9μm,0.3s						
YER	**Yerkesik**	**0.31**	**54**	P	**Pb**	**09 22 58.1**	**-1.2**
YER				S	**Sb**	**09 23 02.7**	**-1.6**
YER	**Yerkesik**	**0.31**	**54**	PG	**Pb**	**09 22 58.2**	**-1.1**
YER				SG	**Sb**	**09 23 03.0**	**-1.3**
MLSB	**Milas**	**0.38**	**336**	PG	**Pb**	**09 22 59.1**	**-1.3**
MLSB				SG	**Sb**	**09 23 05.3**	**-0.9**
DAT	**Datca**	**0.38**	**235**	P	**Pb**	**09 22 59.2**	**-1.3**
DAT				S	**Sb**	**09 23 06.1**	**-0.3**
DAT	**Datca**	**0.38**	**235**	PG	**Pb**	**09 22 59.4**	**-1.1**
DAT				SG	**Sb**	**09 23 05.7**	**-0.7**
DAT	**Datca**	**0.38**	**235**	P	**Pb**	**09 22 59.5**	**-1.1**
DAT				S	**Sb**	**09 23 05.4**	**-1.0**
DAT				*i* AML	AML	09 23 09.0	
	comp=N,5μm,0.4s						
DAT				*i* AML	AML	09 23 09.0	
	comp=E,4μm,0.3s						
MULA	**Mugla, Merkez-**	**0.42**	**43**	P	**Pb**	**09 23 00.1**	**-1.0**
MULA				S	**Sg**	**09 23 04.6**	**-1.0**
MULA				*i* AML	AML	09 23 09.0	
	comp=E,3μm,0.4s						
MULA				*i* AML	AML	09 23 10.0	
	comp=N,2μm,0.7s						
BDRM	**Kayabasi**	**0.43**	**285**	P	**Pb**	**09 23 00.6**	**-0.8**
BDRM				S	**Sb**	**09 23 07.3**	**-0.5**
BDRM				*i* AML	AML	09 23 08.0	
	comp=N,1μm,0.3s						
BDRM				*i* AML	AML	09 23 08.0	
	comp=E,6μm,0.3s						
BODT	**Bodrum**	**0.54**	**282**	P	**Pb**	**09 23 02.0**	**-1.0**
BODT				S	**Sb**	**09 23 11.1**	**+0.3**
BODT	**Bodrum**	**0.54**	**282**	PG	**Pb**	**09 23 02.1**	**-1.0**
BODT				SG	**Sb**	**09 23 10.5**	**-0.3**
DALY	**Dalyan (Mula)**	**0.57**	**103**	PG	**Pb**	**09 23 03.2**	**-0.3**
DALY				SG	**Sb**	**09 23 12.3**	**+0.8**
AYDN	**Tasoluk**	**0.71**	**354**	P	**Pb**	**09 23 05.5**	**-0.6**
AYDN				S	**Sb**	**09 23 15.4**	**-0.4**
AYDN				*i* AML	AML	09 23 20.0	
	comp=N,3μm,0.3s						
AYDN				*i* AML	AML	09 23 20.0	
	comp=E,4μm,0.5s						
NIS1	**Nisyros Isl.**	**0.72**	**241**	P	**Pb**	**09 23 06.0**	**-0.2**
NIS1				S	**Sn**	**09 23 18.4**	**-0.4**
NIS1				AML	AML	09 23 21.8	
	comp=E,28171μm,0.3s						
NIS1				AML	AML	09 23 22.9	
	comp=N,40764μm,0.4s						
NIS1	**Nisyros Isl.**	**0.72**	**241**	P	**Pb**	**09 23 06.1**	**-0.2**
NIS1				S	**Sn**	**09 23 18.3**	**-0.4**
	comp=N,17μm,0.3s						
NIS1	**Nisyros Isl.**	**0.72**	**241**	PG	**Pb**	**09 23 05.8**	**-0.4**
ARG	**Arkhangelos**	**0.74**	**170**	P	**Pg**	**09 23 05.6**	**-0.5**
ARG				S	**Sb**	**09 23 16.4**	**-0.2**
ARG				AML	AML	09 23 20.9	
	comp=N,19050μm,0.9s						
ARG				AML	AML	09 23 23.3	
	comp=E,12710μm,0.5s						
ARG	**Arkhangelos**	**0.74**	**170**	P	**Pb**	**09 23 06.1**	**-0.5**
ARG				S	**Sn**	**09 23 19.5**	**+0.3**
	comp=E,8μm,0.7s						
ARG	**Arkhangelos**	**0.74**	**170**	PG	**Pb**	**09 23 06.1**	**-0.5**
ARG				SG	**Sb**	**09 23 17.9**	**+1.2**
NISR	**Nisiros**	**0.75**	**244**	P	**Pb**	**09 23 07.0**	**+0.2**
NISR				S	**Sb**	**09 23 17.9**	**+0.9**
NISR				AML	AML	09 23 26.3	
	comp=E,14941μm,0.4s						
NISR				AML	AML	09 23 26.7	
	comp=N,8304μm,0.4s						
NISR	**Nisiros**	**0.75**	**244**	P	**Pb**	**09 23 06.5**	**-0.2**
NISR				S	**Sb**	**09 23 18.1**	**+1.2**
	comp=N,6μm,0.4s						
DDIM	**Aydin, Didim**	**0.77**	**311**	P	**Pb**	**09 23 06.6**	**-0.4**
DDIM				S	**Sb**	**09 23 18.2**	**+0.8**
DDIM				*i* AML	AML	09 23 22.0	
	comp=N,4μm,0.6s						
DDIM				*i* AML	AML	09 23 22.0	
	comp=N,5μm,0.6s						
KOSK	**Kos Island**	**0.82**	**256**	P	**Pn**	**09 23 08.2**	**-0.8**
KOSK				S	**Sn**	**09 23 20.7**	**-0.3**
KOSK				AML	AML	09 23 22.5	
	comp=N,25860μm,0.4s						
KOSK				AML	AML	09 23 26.0	
	comp=E,23235μm,0.5s						
KOSK	**Kos Island**	**0.82**	**256**	P	**Pb**	**09 23 08.1**	**+0.3**
KOSK				S	**Sb**	**09 23 19.3**	**+0.5**
	comp=E,4μm,0.4s						
KOSK	**Kos Island**	**0.82**	**256**	PG	**Pb**	**09 23 07.6**	**-0.2**
TAVA	**DENIZLI_Tavas**	**0.91**	**55**	P	**Pb**	**09 23 09.5**	**-0.1**
TAVA				S	**Sn**	**09 23 23.4**	**-0.2**
TAVA				*i* AML	AML	09 23 27.0	
	comp=E,482nm,0.4s						
TAVA				*i* AML	AML	09 23 31.0	
	comp=E,577nm,0.5s						
FETY	**Fethiye**	**0.95**	**109**	PG	**Pb**	**09 23 09.9**	**-0.2**
FETY	**Fethiye**	**0.95**	**109**	P	**Pn**	**09 23 11.2**	**+0.3**
GCAM	**G?zelcaml?**	**0.95**	**322**	PG	**Pn**	**09 23 10.1**	**-0.7**
GCAM	**G?zelcaml?**	**0.95**	**322**	P	**Pb**	**09 23 09.9**	**-0.2**
GCAM				S	**Sn**	**09 23 24.6**	**+0.3**
GCAM				*i* AML	AML	09 23 27.0	
	comp=E,3μm,0.2s						
GCAM				*i* AML	AML	09 23 27.0	
	comp=E,4μm,0.4s						
AYDB	**Zeytinkoy-Aydi**	**1.00**	**357**	PG	**Pb**	**09 23 10.8**	**-0.2**
CAME	**Cameli-Denizli**	**1.07**	**90**	PG	**Pn**	**09 23 12.6**	**0.0**
CAEL	**Denizli, Camel**	**1.10**	**81**	P	**Pn**	**09 23 14.3**	**+1.3**
CAEL				S	**Sn**	**09 23 30.4**	**+2.3**
CAEL				*i* AML	AML	09 23 42.0	
	comp=E,2μm,0.8s						
CAEL				*i* AML	AML	09 23 43.0	
	comp=E,1μm,0.6s						
SMG	**Samos**	**1.18**	**310**	P	**Pb**	**09 23 13.5**	**-0.5**
SMG				S	**Sb**	**09 23 29.5**	**+0.3**
SMG				AML	AML	09 23 33.4	
	comp=E,6311μm,0.6s						
SMG				AML	AML	09 23 34.1	
	comp=N,5965μm,0.4s						
SMG	**Samos**	**1.18**	**310**	P	**Pn**	**09 23 13.7**	**-0.3**
SMG				S	**Sn**	**09 23 29.9**	**0.0**
	comp=N,3μm,0.4s						
APMY	**Acipayam-Deniz**	**1.19**	**64**	PN	**Pn**	**09 23 14.8**	**+0.6**
GOLH	**Golhisar**	**1.31**	**77**	P	**Pb**	**09 23 17.9**	**+1.7**
GOLH				S	**Sn**	**09 23 39.0**	**+5.7**
GOLH				*i* AML	AML	09 23 40.0	
	comp=N,1μm,0.6s						
GOLH				*i* AML	AML	09 23 40.0	
	comp=N,974nm,0.6s						
AKAS	**Kas**	**1.50**	**118**	PN	**Pg**	**09 23 20.6**	**0.0**
AKAS	**Kas**	**1.50**	**118**	P	**Pg**	**09 23 20.7**	**+0.1**
AKAS				S	**Sg**	**09 23 43.8**	**+3.7**
AKAS				*i* AML	AML	09 23 46.0	
	comp=N,1μm,0.9s						
AKAS				*i* AML	AML	09 23 52.0	
	comp=N,2μm,0.7s						
KARP	**Karpathos**	**1.54**	**205**	P	**Pn**	**09 23 19.4**	**+0.4**
KARP				AML	AML	09 23 44.1	
	comp=E,8321μm,0.6s						
KARP				AML	AML	09 23 44.4	
	comp=N,5476μm,0.6s						
KARP	**Karpathos**	**1.54**	**205**	P	**Pn**	**09 23 19.5**	**+0.4**
KARP				S	**Sn**	**09 23 39.7**	**+0.7**
	comp=N,3μm,0.6s						
KARP	**Karpathos**	**1.54**	**205**	PN	**Pn**	**09 23 19.5**	**+0.4**
ELL	**Elmali**	**1.57**	**97**	PN	**Pg**	**09 23 21.1**	**-0.8**
BLCB	**Balcova**	**1.61**	**333**	P	**Pn**	**09 23 19.7**	**-0.2**
BLCB				S	**Sn**	**09 23 40.0**	**-0.6**
BLCB	**Balcova**	**1.61**	**333**	PN	**Pn**	**09 23 19.8**	**-0.2**
KULA	**Kula-Manisa**	**1.66**	**19**	P	**Pn**	**09 23 20.0**	**-0.6**
KULA				S	**Sn**	**09 23 40.6**	**-1.2**
KULA	**Kula-Manisa**	**1.66**	**19**	PN	**Pb**	**09 23 21.9**	**-0.3**
DEMR	**Demre-Antalya**	**1.71**	**114**	PN	**Pb**	**09 23 21.1**	**0.0**
ZEYE	**Izmir, Urla-Ze**	**1.73**	**318**	P	**Pb**	**09 23 22.3**	**-1.2**
ZEYE				*i* AML	AML	09 23 52.0	
	comp=N,584nm,0.6s						
ZEYE				*i* AML	AML	09 23 59.0	
	comp=N,310nm,0.4s						
GOMA	**Golmarmara-Man**	**1.75**	**359**	PN	**Pb**	**09 23 23.4**	**-0.4**
URLA	**Izmir**	**1.78**	**323**	PN	**Pb**	**09 23 23.6**	**-0.7**
URLA	**Izmir**	**1.78**	**323**	P	**Pn**	**09 23 22.6**	**+0.3**
URLA				S	**Sg**	**09 23 47.1**	**-1.9**
URLA				*i* AML	AML	09 23 58.0	
	comp=N,460nm,0.5s						
URLA				*i* AML	AML	09 24 01.0	
	comp=N,802nm,0.8s						
BRDR	**BURDUR-Merkez**	**1.83**	**65**	P	**Pg**	**09 23 25.3**	**-1.5**
BRDR				S	**Sg**	**09 23 53.1**	**+2.6**
BRDR				*i* AML	AML	09 24 00.0	
	comp=N,211nm,0.6s						
BRDR				*i* AML	AML	09 24 05.0	
	comp=N,271nm,0.9s						
PASA	**Karahalli, USA**	**1.84**	**40**	P	**Pb**	**09 23 24.4**	**-1.0**
PASA				S	**Sb**	**09 23 48.4**	**0.0**
PASA				*i* AML	AML	09 23 59.0	
	comp=N,148nm,0.6s						
PASA				*i* AML	AML	09 24 04.0	
	comp=N,142nm,0.8s						
KHL	**Karahalli**	**1.84**	**42**	PN	**Pb**	**09 23 24.9**	**-0.5**
KORT	**Korkueli**	**1.91**	**88**	PN	**Pg**	**09 23 27.4**	**-1.0**
KORT	**Korkueli**	**1.91**	**88**	P	**Pg**	**09 23 27.8**	**-0.6**
KORT				*i* AML	AML	09 24 08.0	
	comp=N,390nm,0.7s						
KORT				*i* AML	AML	09 24 12.0	
	comp=N,211nm,0.6s						
BASM	**Basmaki-Afyon**	**1.92**	**59**	PN	**Pb**	**09 23 25.8**	**-0.9**
AKHS	**Akhisar**	**1.93**	**356**	P	**Pn**	**09 23 24.1**	**-0.2**
AKHS				S	**Sg**	**09 23 56.4**	**+2.6**
AKHS				*i* AML	AML	09 24 00.0	
	comp=N,664nm,0.7s						
AKS	**Akhisar**	**1.93**	**356**	PN	**Pb**	**09 23 25.9**	**-0.9**
USAK	**Uak-Merkez**	**1.95**	**25**	P	**Pn**	**09 23 25.5**	**+0.8**
USAK				S	**Sb**	**09 23 50.5**	**-0.9**
USAK				*i* AML	AML	09 23 59.0	
	comp=N,132nm,0.7s						
USAK				*i* AML	AML	09 24 06.0	
	comp=N,102nm,0.5s						
APE	**Apeiranthos**	**1.95**	**274**	⇑P	**Pn**	**09 23 24.6**	**-0.1**
APE	**Apeiranthos**	**1.95**	**274**	P	**Pn**	**09 23 24.7**	**-0.1**
APE				S	**Sn**	**09 23 48.9**	**-0.3**
	comp=N,468nm,0.5s						
APE	**Apeiranthos**	**1.95**	**274**	PN	**Pb**	**09 23 26.2**	**-1.1**
APE	**Apeiranthos**	**1.95**	**274**	Pn	**Pn**	**09 23 24.2**	**-0.5**
APE				Sn	**Sn**	**09 23 44.6**	**-4.6**
AKUM	**Antalya-Kumluc**	**2.01**	**107**	P	**Pg**	**09 23 29.3**	**-1.1**
AKUM				S	**Sg**	**09 23 58.9**	**+2.5**
AKUM				*i* AML	AML	09 24 01.0	
	comp=N,478nm,0.4s						
AKUM				*i* AML	AML	09 24 02.0	
	comp=N,269nm,0.7s						
FOCM	**Foa**	**2.01**	**331**	PN	**Pb**	**09 23 27.0**	**-1.2**
CHOS	**Chios island**	**2.09**	**314**	P	**Pn**	**09 23 26.8**	**+0.2**
CHOS	**Chios island**	**2.09**	**314**	P	**Pn**	**09 23 26.7**	**+0.2**
CHOS				S	**Sn**	**09 23 52.8**	**+0.3**
	comp=N,455nm,0.7s						
CHOS	**Chios island**	**2.09**	**314**	PN	**Pb**	**09 23 28.1**	**-1.5**
SANT	**Santorini**	**2.10**	**255**	⇑P	Pg	09 23 35.9	+3.9
SANT	**Santorini**	**2.10**	**255**	PN	**Pb**	**09 23 28.3**	**-1.4**
BUCA	**Burdur, Bucak-**	**2.10**	**79**	P	**Pb**	**09 23 30.1**	**+0.3**
BUCA				S	**Sg**	**09 23 58.8**	**-0.6**
BUCA				*i* AML	AML	09 24 04.0	
	comp=N,124nm,0.8s						
BUCA				*i* AML	AML	09 24 11.0	
	comp=N,155nm,0.7s						
ZEDA	**zmir-Bergama**	**2.13**	**341**	P	**Pn**	**09 23 27.2**	**+0.1**
ZEDA				S	**Sg**	**09 24 00.9**	**+0.6**
ZEDA				*i* AML	AML	09 24 08.0	
	comp=N,248nm,0.5s						
ZEDA				*i* AML	AML	09 24 11.0	
	comp=N,252nm,1.0s						
ANTB	**Antalya**	**2.15**	**91**	PN	**Pb**	**09 23 29.6**	**-1.0**
BCK	**Bucak**	**2.15**	**76**	PN	**Pb**	**09 23 29.5**	**-1.2**
DEMI	**Demirci**	**2.17**	**16**	P	**Pn**	**09 23 28.6**	**+0.8**
DEMI				S	**Sb**	**09 23 56.3**	**-1.6**
DEMI				*i* AML	AML	09 24 10.0	
	comp=N,222nm,0.8s						
DEMI				*i* AML	AML	09 24 12.0	
	comp=N,149nm,0.6s						
CAND	**Candarli**	**2.20**	**336**	PN	**Pb**	**09 23 29.7**	**-1.8**
SIMA	**Simav-Kutahya**	**2.27**	**20**	PN	**Pb**	**09 23 30.8**	**-2.0**
DKL	**Dikili**	**2.28**	**339**	PN	**Pb**	**09 23 30.9**	**-1.8**
ZKR	**Zakros**	**2.32**	**218**	P	**Pb**	**09 23 32.3**	**-1.1**
ZKR				AML	AML	09 24 08.0	
	comp=N,506μm,0.6s						
ZKR				AML	AML	09 24 14.3	
	comp=E,685μm,0.6s						
ZKR	**Zakros**	**2.32**	**218**	P	**Pn**	**09 23 29.8**	**+0.1**
ZKR				S	**Sn**	**09 23 59.5**	**+1.4**
	comp=E,330nm,0.6s						
ZKR	**Zakros**	**2.32**	**218**	PN	**Pb**	**09 23 31.5**	**-1.9**
GEDZ	**Gediz**	**2.38**	**28**	PN	**Pb**	**09 23 32.4**	**-2.2**
STEP	**BALIKESIR_Sava**	**2.43**	**355**	P	**Pn**	**09 23 31.5**	**+0.3**
STEP				S	**Sg**	**09 24 12.8**	**+3.0**
STEP				*i* AML	AML	09 24 21.0	
	comp=E,568nm,0.7s						
STEP				*i* AML	AML	09 24 23.0	
	comp=E,482nm,1.0s						
SUTC	**Sutluce-Ispart**	**2.48**	**77**	PN	**Pb**	**09 23 33.9**	**-2.3**
PSRA	**Psara**	**2.48**	**311**	P	**Pb**	**09 23 34.7**	**-1.5**
NPS	**Neapolis**	**2.54**	**229**	P	**Pn**	**09 23 33.3**	**+0.5**
SHUT	**Suhut-Afyon**	**2.60**	**51**	PN	**Pb**	**09 23 35.6**	**-2.7**
BUHA	**Balikesir, Bur**	**2.64**	**345**	P	**Pn**	**09 23 34.3**	**+0.1**
BUHA				S	**Sg**	**09 24 18.8**	**+2.2**
BUHA				*i* AML	AML	09 24 24.0	
	comp=E,209nm,1.0s						
BUHA				*i* AML	AML	09 24 24.0	
	comp=E,184nm,0.5s						
PRK	**Paraskevi**	**2.65**	**330**	P	**Pn**	**09 23 35.8**	**+1.6**
PRK				AML	AML	09 24 29.0	
	comp=N,1125μm,0.8s						
PRK				AML	AML	09 24 29.5	
	comp=E,1718μm,0.8s						
PRK	**Paraskevi**	**2.65**	**330**	P	**Pn**	**09 23 33.8**	**-0.5**
PRK				S	**Sn**	**09 24 05.4**	**-0.9**
SIGR	**SIGRI**	**2.81**	**324**	P	**Pn**	**09 23 36.6**	**+0.2**
IDI	**Anoyia**	**2.99**	**237**	⇑P	**Pn**	**09 23 40.7**	**+1.7**
IDI	**Anoyia**	**2.99**	**237**	Pn	**Pn**	**09 23 40.3**	**+1.3**
	comp=E,2.9nm,0.3s,baz=56,slow=15,SNR=24						
IDI				Sn	**Sn**	**09 24 14.0**	**-0.9**
	comp=E,6.5nm,0.3s,baz=156,slow=5.9,SNR=7.8						
	comp=E,5.6nm,0.3s						
IDI	**Anoyia**	**2.99**	**237**	P	**Pn**	**09 23 39.8**	**+0.8**
IDI				S	**Sn**	**09 24 14.6**	**-0.2**
CSS	**Mathiatis**	**4.78**	**113**

comp=E,0.8nm,0.7s
ZALV Zalesovo Beam 42.12 48 P **P** 09 30 44.0 +0.5
comp=E,0.7nm,0.4s,baz=292,slow=7.6,SNR=1.8
comp=E,0.7nm,0.4s
SONM Songino Array 56.59 52 P **P** 09 32 35.5 +1.1
comp=E,0.6nm,0.5s,baz=287,slow=7.9,SNR=4.6
comp=E,0.6nm,0.5s
TSUM Tsumeb 56.70 192 LR LR 09 57 02.6
comp=E,48nm,18.0s,baz=332,slow=36
USRK Ussuriysk Ar. 73.96 47 LR LR 10 13 29.7
comp=E,25nm,19.3s,baz=2.4,slow=41
KSRS Korea Array 75.39 54 P **P** 09 34 35.3 +0.1
comp=E,0.6nm,0.7s,baz=318,slow=4.1,SNR=3.2
comp=E,0.6nm,0.7s

*ISK **12** 09:46:13.9, 35.51N×31.04E, h10km, ML2.8/23*
*NIC **12** 09:46:13.8±0.0, 35.72N×31.04E, h7km±9km, Ml3.2/5*
*DDA **12** 09:46:16.1±0.0, 35.69N×31.16E, h20km±1km, ML2.5*
ISC 12 09:46:16.7±1.6, 35.59N±0.03×31.06E±0.03, h19km±5km, n52, σ0.86/75, Cyprus region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKUM	**Antalya-Kumluc**	**0.94**	**322**	P	**Pb**	**09 46 33.4**	**-0.9**
AKUM				*i* AML	AML	09 46 53.0	
	comp=N,122nm,0.6s						
AKUM				*i* AML	AML	09 46 54.0	
	comp=E,137nm,0.4s						
AKMS	**Akamas**	**1.19**	**118**	P	**Pn**	**09 46 37.4**	**-0.8**
AKMS				S	**Sg**	**09 46 56.4**	**+1.2**
AKMS				AML	AML	09 46 58.0	
	1.8nm,0.8s						
AKMS				AML	AML	09 46 58.0	
	1.8nm,0.8s						
AKMS				AML	AML	09 46 59.1	
	2.2nm,0.4s						
AKMS				AML	AML	09 46 59.1	
	2.2nm,0.4s						
GAZI	**Gazipasa**	**1.21**	**57**	P	**Pn**	**09 46 36.2**	**-2.4**
GAZI				*i* AML	AML	09 46 54.0	
	comp=E,158nm,0.6s						
GAZI				*i* AML	AML	09 46 54.0	
	comp=N,82nm,0.3s						
ALFC	**Alefka**	**1.33**	**108**	P	**Pn**	**09 46 39.3**	**-0.9**
ALFC				S	**Sg**	**09 47 00.4**	**+0.6**
ALFC				AML	AML	09 47 02.0	
	1.8nm,0.3s						
ALFC				AML	AML	09 47 02.0	
	1.8nm,0.3s						
ALFC				AML	AML	09 47 02.4	
	1.4nm,0.3s						
ALFC				AML	AML	09 47 02.4	
	1.4nm,0.3s						
AKAS	**Kas**	**1.35**	**299**	PN	**Pn**	**09 46 40.1**	**-0.5**
AKAS				SN	**Sn**	**09 46 58.7**	**+0.7**
ANTB	**Antalya**	**1.35**	**346**	PN	**Pn**	**09 46 40.9**	**+0.4**
ANTB				SN	**Sg**	**09 46 59.8**	**-0.7**
KEPZ	**Antalya-Kepez**	**1.38**	**18**	P	**Pn**	**09 46 39.8**	**-1.2**
KEPZ				S	**Sn**	**09 46 57.9**	**-0.9**
KEPZ				*i* AML	AML	09 46 59.0	
	comp=E,102nm,0.6s						
KEPZ				*i* AML	AML	09 47 00.0	
	comp=N,85nm,0.6s						
KORT	**Korkueli**	**1.52**	**338**	PN	**Pn**	**09 46 43.1**	**+0.1**
KORT				SN	**Sb**	**09 47 03.9**	**+0.5**
KORT	**Korkueli**	**1.52**	**338**	P	**Pn**	**09 46 43.9**	**+0.9**
KORT				*i* AML	AML	09 47 15.0	
	comp=N,65nm,1.1s						
KORT				*i* AML	AML	09 47 17.0	
	comp=E,99nm,0.7s						
LEF	**Lefka**	**1.57**	**107**	PN	**Pn**	**09 46 42.2**	**-1.2**
LEF				SN	**Sn**	**09 47 02.5**	**-0.7**
LEF	**Lefka**	**1.57**	**107**	P	**Pn**	**09 46 44.2**	**+0.8**
AKDN	**Akdeniz- Kıbrı**	**1.58**	**100**	PN	**Pn**	**09 46 43.1**	**-0.6**
AKDN				SN	**Sn**	**09 47 04.1**	**+0.5**
SZAC	**Souni**	**1.71**	**119**	P	**Pn**	**09 46 45.5**	**0.0**
SZAC				S	**Sb**	**09 47 08.8**	**+0.3**
SZAC				AML	AML	09 47 15.7	
	0.7nm,0.6s						
SZAC				AML	AML	09 47 15.7	
	0.7nm,0.6s						
SZAC				AML	AML	09 47 18.5	
	0.7nm,0.7s						
SZAC				AML	AML	09 47 18.5	
	0.7nm,0.7s						
TEKE	**Tekeli-Mersin**	**1.76**	**71**	PN	**Pn**	**09 46 45.9**	**-0.2**
TEKE				SN	**Sb**	**09 47 09.3**	**-0.7**
HDMB	**Hadim**	**1.79**	**40**	PN	**Pn**	**09 46 46.1**	**-0.7**
HDMB				SN	**Sb**	**09 47 10.7**	**-0.5**
ERMK	**Ermenek**	**1.83**	**54**	P	**Pn**	**09 46 47.6**	**+0.2**
ERMK				S	**Sg**	**09 47 14.4**	**-1.5**
ERMK				*i* AML	AML	09 47 17.0	
	comp=N,55nm,0.5s						
ERMK				*i* AML	AML	09 47 24.0	
	comp=E,60nm,0.4s						
SUTC	**Sutluce-Ispart**	**1.89**	**359**	PN	**Pn**	**09 46 48.2**	**+0.2**
SUTC				SN	**Sb**	**09 47 13.4**	**-0.4**
BCK	**Bucak**	**1.91**	**349**	PN	**Pn**	**09 46 48.5**	**+0.2**
BERE	**Bereket-Mersin**	**1.91**	**66**	PN	**Pn**	**09 46 48.3**	**0.0**
BERE				SN	**Sn**	**09 47 13.2**	**+1.3**
FETY	**Fethiye**	**1.91**	**304**	PN	**Pn**	**09 46 47.9**	**-0.4**
SEDI	**Konya, Seydise**	**1.94**	**17**	P	**Pn**	**09 46 48.6**	**-0.2**
SEDI				S	**Sn**	**09 47 13.7**	**+1.0**
SEDI				*i* AML	AML	09 47 16.0	
	comp=E,36nm,0.5s						
SEDI				*i* AML	AML	09 47 17.0	
	comp=N,47nm,0.5s						
CSS	**Mathiatis**	**1.96**	**108**	P	**Pn**	**09 46 48.1**	**-0.7**
CSS				S	**Sb**	**09 47 14.8**	**-1.0**
ASGA	**Asgata**	**1.96**	**113**	P	**Pn**	**09 46 49.0**	**+0.1**
ASGA				S	**Sb**	**09 47 14.7**	**-1.1**
ASGA				AML	AML	09 47 24.6	
	0.6nm,0.4s						
ASGA				AML	AML	09 47 24.6	
	0.6nm,0.4s						
ASGA				AML	AML	09 47 26.8	
	0.6nm,0.7s						
ASGA				AML	AML	09 47 26.8	
	0.6nm,0.7s						
CAME	**Cameli-Denizli**	**1.96**	**314**	PN	**Pn**	**09 46 48.9**	**-0.2**
AKK1	**Akkuyu-Mersin**	**2.09**	**74**	PN	**Pn**	**09 46 50.6**	**0.0**
OSC1	**CSNet OBS 1**	**2.09**	**175**	P	**Pn**	**09 46 50.3**	**-0.3**
OSC1				S	**Sb**	**09 47 20.2**	**+0.7**
AKK2	**Akkuyu-Mersin**	**2.09**	**74**	PN	**Pn**	**09 46 50.8**	**+0.1**
AKKU	**Akkuyu-Mersin**	**2.10**	**74**	PN	**Pn**	**09 46 50.8**	**0.0**
GULN	**MERSIN_Gulnar**	**2.10**	**73**	P	**Pn**	**09 46 51.3**	**+0.4**
GULN				S	**Sn**	**09 47 18.1**	**+1.7**
GULN				*i* AML	AML	09 47 23.0	
	comp=E,40nm,0.7s						
GULN				*i* AML	AML	09 47 26.0	
	comp=N,38nm,0.6s						
TEVE	**Tevekalti-Mers**	**2.11**	**66**	PN	**Pn**	**09 46 51.1**	**+0.1**
MVOU	**Mavrovouni**	**2.18**	**104**	P	**Pn**	**09 46 50.9**	**-1.0**
MVOU				S	**Sn**	**09 47 20.2**	**+2.0**
MVOU				AML	AML	09 47 32.3	
	0.3nm,0.7s						
MVOU				AML	AML	09 47 32.3	
	0.3nm,0.7s						
MVOU				AML	AML	09 47 32.7	
	0.3nm,0.6s						
MVOU				AML	AML	09 47 32.7	
	0.3nm,0.6s						
YESI	**Yesilovacik-Me**	**2.18**	**73**	PN	**Pn**	**09 46 51.9**	**0.0**
TISA	**Tisan-Mersin**	**2.20**	**74**	PN	**Pn**	**09 46 52.1**	**-0.1**
KKBE	**Karaman, Kazim**	**2.23**	**42**	P	**Pn**	**09 46 53.2**	**+0.6**
KKBE				S	**Sb**	**09 47 22.7**	**-0.9**
KKBE				*i* AML	AML	09 47 28.0	
	comp=E,44nm,0.5s						
KKBE				*i* AML	AML	09 47 30.0	
	comp=N,43nm,0.7s						
KARG	**Kargicak-Mersi**	**2.24**	**73**	PN	**Pn**	**09 46 52.8**	**+0.1**
DALY	**Dalyan (Mula)**	**2.30**	**303**	PN	**Pn**	**09 46 53.2**	**-0.4**
APMY	**Acipayam-Deniz**	**2.36**	**324**	PN	**Pn**	**09 46 54.5**	**+0.1**
KRMN	**Karaman**	**2.38**	**48**	PN	**Pn**	**09 46 55.4**	**+0.6**
KMER	**Konya-Meram**	**2.42**	**25**	P	**Pn**	**09 46 56.7**	**+1.4**
KMER				S	**Sn**	**09 47 27.0**	**+2.6**
KMER				*i* AML	AML	09 47 34.0	
	comp=N,34nm,0.7s						
KMER				*i* AML	AML	09 47 35.0	
	comp=E,24nm,0.6s						
ARG	**Arkhangelos**	**2.46**	**286**	PN	**Pn**	**09 46 55.4**	**-0.4**
TURN	**Turunc**	**2.57**	**298**	PN	**Pn**	**09 46 57.3**	**+0.1**
KONT	**Konya--Tatoy**	**2.58**	**24**	PN	**Pn**	**09 46 58.2**	**+0.8**
KIZK	**Mersin**	**2.65**	**69**	P	**Pn**	**09 46 59.1**	**+0.7**
KIZK				S	**Sn**	**09 47 31.8**	**+1.8**
KIZK				*i* AML	AML	09 47 37.0	
	comp=N,20nm,0.3s						
KIZK				*i* AML	AML	09 47 38.0	
	comp=E,26nm,0.5s						
OSC2	**CSNet OBS 4**	**2.70**	**158**	P	**Pn**	**09 46 59.1**	**+0.1**
YER	**Yerkesik**	**2.72**	**305**	PN	**Pn**	**09 46 59.4**	**0.0**
LADK	**Ladik-KONYA**	**2.81**	**21**	PN	**Pn**	**09 47 01.5**	**+0.8**
DAT	**Datca**	**3.04**	**293**	PN	**Pn**	**09 47 03.6**	**-0.2**
KERG	**Konya-Eregli**	**3.07**	**53**	P	**Pn**	**09 47 04.8**	**+0.6**
KERG				*i* AML	AML	09 47 52.0	
	comp=E,20nm,0.6s						
KERG				*i* AML	AML	09 47 53.0	
	comp=N,27nm,0.4s						
MLSB	**Milas**	**3.15**	**304**	PN	**Pn**	**09 47 05.4**	**+0.1**
KIZT	**Kizilcal**	**3.35**	**11**	PN	**Pn**	**09 47 09.0**	**+0.9**
BODT	**Bodrum**	**3.37**	**297**	PN	**Pn**	**09 47 07.6**	**-0.7**
AYDB	**Zeytinkoy-Aydi**	**3.47**	**314**	PN	**Pn**	**09 47 10.1**	**+0.4**

*IDC **12** 09:49:12.3±9.7, 18.47S×170.34E, h222km±54km, mb3.7/4, mbtmp4.2/5, Error ellipse: s-maj=100.7km s-min=76.9km az=95.0*
*NEIC **12** 09:49:13.4±1.6, 18.4S±0.1×170.2E±0.2, h213km±12km, mb4.4/14, Error ellipse: s-maj=23.8km s-min=17.2km az=118.0*
*NOU **12** 09:49:18.7, 18.82S×169.88E, h247km, MLv3.9/7, Vanuatu Islands*
ISC 12 09:49:19.5±1.3, 18.8S±0.1×169.9E±0.1, h250km, n28, σ1.33/29, mb4.4/11, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**1.93**	**303**	P	**Pn**	**09 50 00.6**	**-0.8**
MARNC	**Mare, Loyalty**	**3.20**	**213**	Pn	**Pn**	**09 50 12.3**	**-1.8**
MARNC	**Mare, Loyalty**	**3.20**	**213**	P	**Pn**	**09 50 12.9**	**-1.3**
PINNC	**Pines Island,**	**4.45**	**211**	Pn	**Pn**	**09 50 27.6**	**-1.0**
DZM	**Mont Dzumac**	**4.60**	**224**	P	**Pn**	**09 50 29.0**	**-1.5**
	12nm,0.9s,baz=50,slow=19,SNR=2.6						
DZM				S	**S**	**09 51 29.6**	**+2.6**
	2.9nm,0.3s,baz=239,slow=22,SNR=1.4						
DZM	**Mont Dzumac**	**4.60**	**224**		**Pn**	**09 50 28.0**	**-2.5**
DZM	**Mont Dzumac**	**4.60**	**224**	P	**Pn**	**09 50 29.3**	**-1.2**
NOUC	**Port Laguerre**	**4.71**	**225**	P	**Pn**	**09 50 30.3**	**-1.5**
EIDS	**Eidsvold**	**18.61**	**246**	P	**P**	**09 53 19.1**	**+0.3**
EIDS				IAmb	IAmb	09 53 26.7	
	comp=Z,19nm,1.2s						
ARMA	**Armidale**	**20.21**	**232**	P	**P**	**09 53 35.2**	**-0.8**
CTA	**Charters Tower**	**22.33**	**263**	P	**P**	**09 53 57.2**	**+0.6**
	comp=Z,6.6nm,1.0s,baz=75,slow=12,SNR=2.3						
	comp=Z,6.6nm,1.0s						
PLWZ	**Palliser**	**23.17**	**170**	P	**P**	**09 54 02.7**	**-1.4**
STKA	**Stephens Creek**	**28.61**	**237**	P	**P**	**09 54 53.1**	**+0.2**
	comp=Z,1.5nm,0.6s,baz=59,slow=9.7,SNR=6.3						
	comp=Z,1.5nm,0.6s						
STKA	**Stephens Creek**	**28.61**	**237**	P	**P**	**09 54 53.6**	**+0.7**
WR0	**Warramunga Arr**	**33.34**	**262**	P	**P**	**09 55 32.9**	**-1.5**
WR0				IAmb	IAmb	09 55 53.7	
	comp=Z,12nm,1.4s						
WB0	**Warramunga Arr**	**33.49**	**262**	P	**P**	**09 55 34.8**	**-0.9**
WB0				IAmb	IAmb	09 55 38.1	
	comp=Z,16nm,1.4s						
WB2	**Warramunga Arr**	**33.51**	**262**	P	**P**	**09 55 34.9**	**-1.1**
WB2				IAmb	IAmb	09 55 57.1	
	comp=Z,14nm,1.5s						
WRA	**Warramunga Arr**	**33.52**	**262**	P	**P**	**09 55 34.5**	**-1.5**
	comp=Z,0.9nm,0.5s,baz=95,slow=8.1,SNR=13						
	comp=Z,0.9nm,0.5s						
WRA	**Warramunga Arr**	**33.52**	**262**	P	**P**	**09 55 34.1**	**-1.9**
AS31	**Alice Springs**	**33.84**	**255**	P	**P**	**09 55 38.2**	**-0.5**
AS31				IAmb	IAmb	09 55 38.8	
	comp=Z,6.8nm,0.4s						
ASAR	**Alice Springs**	**33.84**	**255**	P	**P**	**09 55 38.3**	**-0.4**
	comp=Z,8.2nm,0.4s,baz=82,slow=8.8,SNR=330						
	comp=Z,8.2nm,0.4s						
ASAR	**Alice Springs**	**33.84**	**255**	P	**P**	**09 55 38.0**	**-0.7**
MCQ	**Macquarie Isla**	**36.63**	**191**	P	**P**	**09 56 02.8**	**+0.9**
KNRA	**Kununurra**	**39.34**	**268**	P	**P**	**09 56 24.0**	**-1.1**
PSA00	**Pilbara Seismi**	**46.90**	**258**	P	**P**	**09 57 25.7**	**+0.3**
PSA00				IAmb	IAmb	09 57 36.3	
	comp=Z,14nm,1.1s						
MBWA	**Marble Bar**	**47.05**	**258**	P	**P**	**09 57 27.0**	**+0.5**
MBWA				IAmb	IAmb	09 57 27.1	
	comp=Z,23nm,1.2s						
QSPA	**South Pole Qui**	**71.27**	**180**	P	**P**	**10 00 11.2**	**-0.3**
SNAA	**Sanae**	**89.64**	**182**	P	**P**	**10 01 50.6**	**+1.9**
SNAA				IAmb	IAmb	10 01 52.2	
	comp=Z,7.7nm,1.5s						

TAP 12 09:55:07.0, 24.27N×121.66E, h4km±1km, ML1.3, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.09**	**64**	*e*P	Pg	09 55 09.8	+1.1
EHP				*e*S	Sg	09 55 11.3	+1.4
	baz=67						
NACB	**Ninganchiao**	**0.11**	**210**	P	Pg	09 55 09.8	+0.6
NACB				S	Sg	09 55 12.1	+1.3
	baz=210						
ETL	**Fush Village**	**0.12**	**195**	*e*P	Pg	09 55 10.4	+1.1
ETL				*e*S	Sg	09 55 12.8	+1.9
	baz=195						
ETLH	**Xiulin Townshi**	**0.17**	**248**	P	Pg	09 55 11.2	+0.8
ETLH				*e*S	Sg	09 55 14.4	+1.8
	baz=247						
ENA	**Nanau**	**0.17**	**27**	P	Pg	09 55 11.5	+1.1
ENA				S	Sg	09 55 14.3	+1.6
	baz=28						
TWD	**Chiawan**	**0.20**	**196**	P	Pg	09 55 12.1	+1.2
TWD				*i* S	Sg	09 55 15.4	+2.0
	baz=194						
EWUT	**Wuta**	**0.20**	**33**	*e*P	Pg	09 55 11.3	+0.3
EWUT				*e*S	Sg	09 55 14.9	+1.2
	baz=32						
LATG	**Datong**	**0.29**	**336**	P	Pb	09 55 14.0	-0.8
LATG				S	Sb	09 55 18.5	-1.5
	baz=335						
NNSB	**Datong**	**0.29**	**302**	P	Pb	09 55 13.8	-1.1
NNSB				S	Sb	09 55 18.8	-1.4
	baz=301						
HWA	**Hwalien**	**0.30**	**189**	*e*S	Sg	09 55 18.1	+1.5
	baz=187						
NNS	**Nan Shan**	**0.31**	**303**	S	Sb	09 55 19.6	-1.0
	baz=303						
NDS	**Dongshan**	**0.36**	**9**	*e*P	Pb	09 55 15.6	-0.5
	baz=8.0						
NDS				*e*S	Sb	09 55 21.4	-0.8
	baz=8.0						
ENTT	**Nioudou**	**0.38**	**347**	*e*P	Pg	09 55 15.2	+1.0
ENTT				*e*S	Sb	09 55 21.0	-1.5
	baz=348						
FUSS	**Fushou**	**0.38**	**266**	*e*P	Pb	09 55 15.7	-0.7
FUSS				*e*S	Sb	09 55 22.1	-0.6
	baz=266						
TWC	**Suao**	**0.38**	**28**	*e*P	Pb	09 55 15.9	-0.4
TWC				*e*S	Sb	09 55 22.7	+0.2
	baz=28						
WHF	**Hehuan Shan**	**0.38**	**251**	P	Pg	09 55 15.0	+0.6
WHF				S	Sb	09 55 21.5	-1.4
	baz=249						
TWT	**Tachien**	**0.44**	**268**	*e*S	Sb	09 55 25.0	+0.6
	baz=267						
TWE	**Neicheng**	**0.45**	**1**	*e*P	Pb	09 55 16.9	-0.5
TWE				*e*S	Sb	09 55 25.0	+0.5
	baz=3.0						
TDCB	**Techi**	**0.46**	**268**	*e*S	Sb	09 55 24.5	-0.3
	baz=267						
YHNB	**Yeheng**	**0.47**	**327**	*e*P	Pb	09 55 17.8	-0.2
YHNB				*e*S	Sb	09 55 26.3	+1.0
	baz=327						
NSK	**Sanguang**	**0.48**	**326**	*e*P	Pb	09 55 17.9	-0.3
	baz=326						
CHGB	**Renai**	**0.49**	**245**	*e*P	Pb	09 55 18.1	-0.2
	baz=244						
CHGB				*e*S	Sb	09 55 27.0	+1.1
	baz=244						
FUSB	**Fushanzhiwuyua**	**0.49**	**353**	*e*P	Pb	09 55 18.1	-0.1
	baz=352						
FUSB				*e*S	Sb	09 55 26.3	+0.5
	baz=352						
NWLT	**Wulai**	**0.52**	**344**	*e*P	Pb	09 55 18.8	0.0
	baz=344						
NWLT				*e*S	Sb	09 55 26.3	-0.4
	baz=344						
WUSB	**Renai**	**0.57**	**241**	*e*P	Pb	09 55 19.5	-0.1
	baz=240						
EGFH	**Guangfu**	**0.64**	**199**	*e*S	Sb	09 55 30.8	+0.9
	baz=199						
TIPB	**Shuangxi**	**0.71**	**12**	*e*P	Pb	09 55 22.2	+0.2
	baz=12						

TAP 12 09:55:06.6, 23.09N×120.96E, h5km, ML2.4, 3C-1D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ELDTW	**Lidau**	**0.11**	**31**	⇑*i*P	Pg	09 55 08.8	-0.1
	baz=34						
ELDTW				S	Sg	09 55 11.4	+0.9
	baz=34						
STYH	**Taoyuan**	**0.18**	**295**	P	Pg	09 55 10.7	+0.6
	baz=296						
STYH				S	Sg	09 55 13.6	+0.9
	baz=296						
ECS	**Chishang**	**0.24**	**90**	P	Pg	09 55 11.9	+0.6
	baz=84						
ECS				S	Sg	09 55 15.8	+1.3
	baz=84						
LONT	**Longtian**	**0.25**	**139**	*i* P	Pg	09 55 12.2	+0.8
	baz=138						
LONT				*i* S	Sg	09 55 15.8	+1.2
	baz=138						
TWG	**Pinlang**	**0.29**	**159**	*i* P	Pg	09 55 13.1	+0.9
	baz=147						
TWG				*i* S	Sg	09 55 17.1	+1.0
	baz=147						
TWGBT	**Beinan**	**0.30**	**157**	⇓P	Pg	09 55 13.1	+0.7
	baz=147						
TWGBT				S	Sg	09 55 17.1	+0.8
	baz=147						
FULB	**Fuli**	**0.33**	**71**	⇑*i*P	Pg	09 55 13.7	+0.8
	baz=71						
FULB				*i* S	Sg	09 55 18.8	+1.5
	baz=71						
EDH	**Donghe**	**0.34**	**111**	*i* P	Pb	09 55 14.3	-0.8
	baz=118						
EDH				*i* S	Sb	09 55 20.1	-0.8
	baz=118						
SGST	**Jiashian**	**0.34**	**268**	*i* P	Pg	09 55 13.3	+0.1
	baz=264						
SGST				*i* S	Sg	09 55 19.1	+1.3
	baz=264						
WTP	**Ta-pu**	**0.35**	**296**	*i* P	Pb	09 55 14.4	-0.9
	baz=297						
WTP				*i* S	Sb	09 55 20.3	-0.8
	baz=297						
TPUB	**Ta-pu**	**0.36**	**304**	P	Pb	09 55 14.7	-0.8
	baz=305						
TPUB				S	Sb	09 55 20.2	-1.3
	baz=305						
TTN	**Taitung**	**0.38**	**152**	S	Sb	09 55 21.7	-0.3
	baz=150						
CHN1	**Nanshi**	**0.40**	**283**	*i* P	Pb	09 55 15.9	-0.3
	baz=284						
CHN1				S	Sb	09 55 23.1	+0.4
	baz=284						
EYUL	**Yuli**	**0.42**	**53**	P	Pg	09 55 14.7	0.0
	baz=53						
EYUL				S	Sg	09 55 20.1	0.0
	baz=53						
YULB	**Yu-li**	**0.43**	**47**	⇑P	Pg	09 55 14.5	-0.5
	baz=46						
YULB				S	Sg	09 55 19.6	-1.0
	baz=46						
ALS	**Alishan**	**0.44**	**342**	*i* P	Pg	09 55 15.4	+0.3
	baz=343						
ALS				*i* S	Sg	09 55 21.1	+0.3
	baz=343						
SNST	**Tainan City**	**0.44**	**287**	P	Pb	09 55 17.3	+0.4
	baz=287						
SNST				S	Sb	09 55 25.1	+1.4
	baz=287						
TWK	**Hsinying**	**0.46**	**292**	*i* P	Pb	09 55 17.1	-0.2
	baz=293						
TWK				*i* S	Sb	09 55 25.6	+1.1
	baz=293						
SCST	**Cishan**	**0.47**	**244**	*e*P	Pb	09 55 17.1	-0.3
	baz=245						
SCST				S	Sb	09 55 25.6	+1.0
	baz=245						
TSMG	**Majia**	**0.48**	**217**	*e*P	Pg	09 55 16.0	+0.1
	baz=217						
TSMG				S	Sg	09 55 22.2	+0.1
	baz=217						
ECL	**Taimali**	**0.49**	**180**	*i* P	Pg	09 55 16.4	+0.3
	baz=178						
ECL				S	Sg	09 55 22.8	+0.3
	baz=178						
EHY	**Hungye**	**0.53**	**39**	*i* P	Pg	09 55 16.3	-0.5
	baz=40						
EHY				*i* S	Sg	09 55 22.9	-0.8
	baz=40						
TWM1	**Shoushan**	**0.56**	**241**	*i* P	Pn	09 55 20.9	-0.3
	baz=239						
MASBT	**Mashibuluo**	**0.56**	**212**	P	Pg	09 55 17.6	+0.2
	baz=212						
MASBT				S	Sg	09 55 25.6	+0.9
	baz=212						
SHHT	**Tainan City**	**0.56**	**263**	P	Pn	09 55 20.6	-0.7
	baz=263						
SHHT				*e*S	Sn	09 55 31.5	+0.6
	baz=263						
HGSD	**Ruisui**	**0.58**	**47**	P	Pb	09 55 18.9	-0.4
	baz=39						
HGSD				S	Sb	09 55 28.3	+0.4
	baz=39						
LDUT	**Ludao**	**0.63**	**131**	*e*P	Pb	09 55 19.6	-0.5
	baz=130						
LDUT				*e*S	Sb	09 55 29.9	+0.7
	baz=130						
CHY	**Chiayi**	**0.63**	**310**	*e*S	Sb	09 55 30.3	+1.1
	baz=311						
ICHU	**Yijhu**	**0.68**	**293**	*e*P	Pn	09 55 22.7	-0.1
	baz=294						
ICHU				*e*S	Sn	09 55 32.4	-1.3
	baz=294						
VWDT	**VWDT**	**0.68**	**14**	P	Pg	09 55 18.6	-1.0
	baz=19						
VWDT				S	Sb	09 55 30.5	-0.1
	baz=19						
SSLB	**Suanglung**	**0.69**	**360**	P	Pg	09 55 19.2	-0.6
	baz=5.0						
SSLB				S	Sg	09 55 29.1	+0.3
	baz=5.0						
SSPT	**Xinbi**	**0.70**	**211**	*e*P	Pg	09 55 20.6	+0.5
	baz=201						
WDLH	**Douliu**	**0.71**	**327**	*e*P	Pn	09 55 22.9	-0.3
	baz=327						
WDLH				*e*S	Sb	09 55 32.9	+1.5
	baz=327						
EAST	**Anshuo**	**0.71**	**188**	*i* P	Pb	09 55 20.9	-0.6
	baz=178						
EAST				*e*S	Sb	09 55 32.1	+0.5
	baz=178						
EGFH	**Guangfu**	**0.72**	**37**	*e*P	Pg	09 55 19.6	-0.8
	baz=37						
EGFH				*e*S	Sg	09 55 28.9	-0.8
	baz=37						
EGFH	**Guangfu**	**0.72**	**37**	*e*P	Pg	09 55 19.6	-0.8
	baz=199						
CHN8	**Yiju**	**0.73**	**290**	*e*S	Sn	09 55 35.0	0.0
	baz=292						
TAW	**Tawu**	**0.73**	**184**	*e*P	Pg	09 55 21.1	+0.4
	baz=192						
TAWH	**Dawu Township**	**0.75**	**185**	*e*P	Pg	09 55 21.4	+0.3
	baz=184						
TAWH				*e*S	Sb	09 55 32.0	-0.8

	baz=184									
WJS	**Zhushan**	**0.75**	**344**	*eP*		Pn	09 55 23.1	-0.8		
	baz=345									
SCZT	**Fangliau**	**0.78**	**203**	P		Pg	09 55 21.7	+0.1		
	baz=194									
SMLT	**Sun Moon Lake**	**0.79**	**356**	*eP*		Pb	09 55 23.6	+0.8		
	baz=4.0									
WTK	**Tuku**	**0.79**	**319**	*eP*		Pn	09 55 23.9	-0.4		
	baz=319									
WTK				*eS*		Sn	09 55 35.3	-1.2		
	baz=319									
WSL	**Shuilin Townsh**	**0.79**	**303**	*eP*		Pn	09 55 23.8	-0.6		
	baz=304									
WSL				*eS*		Sn	09 55 35.5	-1.1		
	baz=304									
TSCK	**Chigu Township**	**0.80**	**274**	*eP*		Pn	09 55 24.7	+0.2		
	baz=292									
TSCK				*eS*		Sn	09 55 37.6	+0.8		
	baz=292									
TYC	**Yuchr**	**0.81**	**354**	P		Pb	09 55 23.8	+0.6		
	baz=4.0									
TYC				S		Sn	09 55 36.1	-0.9		
	baz=4.0									
ESL	**Shilin**	**0.84**	**31**	P		Pg	09 55 22.0	-0.7		
	baz=47									
SLIU	**Shizi**	**0.89**	**189**	*eP*		Pg	09 55 23.8	+0.3		
	baz=189									
WUSB	**Renai**	**0.91**	**9**	*eP*		Pn	09 55 26.3	+0.2		
	baz=360									
WCS	**Beigang Elemen**	**0.96**	**358**	*eP*		Pb	09 55 26.1	+0.5		
	baz=8.0									
CHGB	**Renai**	**0.98**	**12**	*eP*		Pg	09 55 25.0	-0.4		
	baz=13									
ETLH	**Xiulin Townshi**	**1.21**	**23**	*eP*		Pg	09 55 29.3	-0.5		
	baz=38									
NACB	**Ninganchiao**	**1.22**	**28**	*eP*		Pg	09 55 29.9	-0.2		
	baz=46									
NNSB	**Datong**	**1.39**	**16**	*eP*		Pn	09 55 32.5	-0.2		
	baz=30									
LATG	**Datong**	**1.53**	**20**	*eP*		Pn	09 55 34.6	0.0		
	baz=21									
NFF	**Wufeng Townshi**	**1.54**	**5**	*eP*		Pg	09 55 36.2	+0.1		
	baz=6.0									
YHNB	**Yeheng**	**1.61**	**14**	*eP*		Pb	09 55 36.7	-0.3		
	baz=13									
NSK	**Sanguang**	**1.62**	**13**	*eP*		Pg	09 55 37.4	-0.2		
	baz=2.0									
ENTT	**Nioudou**	**1.64**	**20**	*eP*		Pg	09 55 37.7	-0.3		
	baz=37									
NDS	**Dongshan**	**1.68**	**24**	*eP*		Pb	09 55 37.7	-0.3		
	baz=41									
NWLT	**Wulai**	**1.75**	**17**	*eP*		Pg	09 55 39.8	-0.3		
	baz=6.0									
FUSB	**Fushanzhiwuyua**	**1.76**	**19**	*eP*		Pg	09 55 39.8	-0.4		
	baz=37									

*SOME **12** 10:03:43.4, 40˚.83N×75˚.77E, h10km*
*KRNET **12** 10:03:43.3±0.1, 40˚.85N×75˚.69E, h13km, mb2.7*
*NNC **12** 10:03:44.5±0.9, 40˚.89N×75˚.80E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=6.6km s-min=4.5km az=176.0*
*KNET **12** 10:03:47.1±0.5, 41˚.08N×75˚.65E, h0km, ml2.5, Error ellipse: s-maj=4.6km s-min=3.5km az=48.0*

ISC 12 10:03:42.1±1.7, 40˚.70N±0˚.09×75˚.63E±0˚.03, h8km±11km, n58, σ1°18/93, 30C-7D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ARLS	**Aral**	**1.52**	**320**	⇑	*iP*	**Pb**	**10 04 09.8**	**-0.9**
	baz=15							
ARLS				⇑	*iS*	**Sn**	**10 04 28.9**	**-0.9**
	baz=15							
ULHL	**Ulahol**	**1.61**	**16**	⇓	P	**Pn**	**10 04 10.0**	**-1.1**
	23nm,0.1s,SNR=110							
ULHL				⇓	S	**Sn**	**10 04 29.8**	**-2.2**
	32nm,0.3s							
ULHL	**Ulahol**	**1.61**	**16**	⇑	*iP*	**Pn**	**10 04 09.9**	**-1.1**
	baz=16							
ULHL				⇑	*iS*	**Sn**	**10 04 29.7**	**-2.4**
	baz=16							
UCH	**Uchtor**	**1.74**	**332**	⇑	P	**Pb**	**10 04 13.8**	**-0.8**
	6.7nm,0.2s,SNR=11							
UCH				⇓	S	**Sb**	**10 04 36.0**	**-0.8**
	24nm,0.4s							
UCH	**Uchtor**	**1.74**	**332**	⇑	*iP*	**Pb**	**10 04 13.5**	**-1.1**
	baz=28							
UCH				⇑	*iS*	**Sn**	**10 04 35.6**	**0.0**
	baz=28							
BOOM	**Boomskoye usch**	**1.80**	**7**	⇑	*iP*	**Pn**	**10 04 13.5**	**-0.1**
BOOM	baz=6.0			⇑	*iS*	**Sn**	**10 04 35.7**	**-1.1**
	baz=6.0							
KDJ	**Kajisay**	**1.84**	**39**	⇑	*eP*	**Pn**	**10 04 14.2**	**0.0**
	baz=41							
KDJ				⇑	*iS*	**Sn**	**10 04 37.4**	**-0.4**
	baz=41							
KBK	**Karagaybulak**	**2.02**	**346**	⇑	P	**Pb**	**10 04 19.0**	**-0.1**
	16nm,0.1s,SNR=16							
KBK				⇓	S	**Sb**	**10 04 43.7**	**-0.8**
	61nm,0.2s							
AAK	**Ala-Archa**	**2.11**	**337**	⇓	P	**Pb**	**10 04 20.7**	**0.0**
	12nm,0.2s,SNR=6.7							
AAK				⇓	S	**Sb**	**10 04 46.9**	**-0.3**
	35nm,0.3s							
AAK	**Ala-Archa**	**2.11**	**337**	⇑	*iP*	**Pb**	**10 04 19.0**	**-1.8**
	baz=34							
AAK				⇑	*iS*	**Sn**	**10 04 45.0**	**+0.6**
	baz=34							
TKM2	**Tokmak 2**	**2.22**	**359**	⇑	*iP*	**Pn**	**10 04 20.0**	**+0.6**
	baz=58							
TKM2				⇑	*iS*	**Sn**	**10 04 47.0**	**-0.1**
	baz=58							
TKM2	**Tokmak 2**	**2.22**	**359**	⇑	Pn	**Pb**	**10 04 21.5**	**-1.0**
	7.0nm,0.3s							
TKM2				⇑	Lg	Lg	10 04 50.0	
	15nm,0.4s							
KST	**Kastek**	**2.35**	**6**	*eP*		**Pb**	**10 04 25.0**	**+0.2**
	2.9nm,0.4s							
KST				*eS*		**Sb**	**10 04 55.0**	**+0.9**
	8.0nm,0.3s							
KST	**Kastek**	**2.35**	**6**	Pg		**Pb**	**10 04 24.1**	**-0.7**
	3.4nm,0.3s							
KST				Lg		Lg	10 04 55.0	
	7.8nm,0.3s							
CHMS	**Chumysh**	**2.39**	**344**	⇑	P	**Pb**	**10 04 25.0**	**-0.4**
	5.5nm,0.1s,SNR=6.9							
CHMS				⇑	S	**Sb**	**10 04 54.9**	**-0.1**
	13nm,0.2s							
CHMS	**Chumysh**	**2.39**	**344**	⇑	*iP*	**Pn**	**10 04 22.6**	**+1.1**
	baz=42							
CHMS				⇑	*iS*	**Sn**	**10 04 51.0**	**0.0**
	baz=42							
CHMS	**Chumysh**	**2.39**	**344**	⇑	Pg	**Pb**	**10 04 24.9**	**-0.4**
	3.3nm,0.5s							
CHMS				⇑	Lg	Lg	10 04 56.3	
	3.5nm,0.3s							
IZV	**Izvestkoviy**	**2.45**	**17**	*eP*		**Pb**	**10 04 25.7**	**-0.7**
	22nm,0.2s							
IZV				*eS*		**Sb**	**10 04 55.5**	**-1.3**
	8.8nm,0.4s							
MTBS	**Maitube**	**2.50**	**14**	*eP*		**Pb**	**10 04 27.5**	**+0.3**
	6.1nm,0.2s							
MTBS				*eS*		**Sb**	**10 04 59.4**	**+1.2**
	18nm,0.2s							
MTBS	**Maitube**	**2.50**	**14**	Pg		**Pb**	**10 04 26.1**	**-1.2**
	9.3nm,0.4s							
MTBS				Lg		Lg	10 04 57.7	
	18nm,0.2s							
TNSS	**Tian-Shan**	**2.53**	**22**	*eP*		**Pb**	**10 04 27.8**	**-0.3**
	6.8nm,0.3s							
TNSS				*eS*		**Sb**	**10 04 59.6**	**+0.1**
	8.3nm,0.3s							
TNSS	**Tian-Shan**	**2.53**	**22**	Pg		**Pb**	**10 04 26.9**	**-1.2**
	6.8nm,0.3s							
TNSS				Lg		Lg	10 04 59.6	
	6.1nm,0.5s							
DGS	**Degeres**	**2.54**	**2**	*eP*		**Pb**	**10 04 28.7**	**+0.7**
	11nm,0.3s							
DGS				*eS*		**Sb**	**10 05 01.1**	**+1.7**
	15nm,0.6s							
DGS	**Degeres**	**2.54**	**2**	Pg		**Pb**	**10 04 26.5**	**-1.5**
	14nm,0.7s							
DGS				Lg		Lg	10 04 59.2	
	16nm,0.7s							
ANVS	**Anan'yevo**	**2.58**	**36**	⇑	*iP*	**Pn**	**10 04 24.9**	**+0.6**
	baz=37							
ANVS				⇑	*iS*	**Sn**	**10 04 54.9**	**-1.0**
	baz=37							
MDOK	**Medeo**	**2.68**	**23**	*eP*		**Pb**	**10 04 29.9**	**-0.5**
	4.5nm,0.3s							
MDOK				*eS*		**Sb**	**10 05 03.4**	**0.0**
	9.1nm,0.4s							
MDOK	**Medeo**	**2.68**	**23**	Pg		**Pb**	**10 04 29.1**	**-1.3**
	2.8nm,0.4s							
MDOK				Pg		**Pg**	**10 04 29.3**	**-4.1**
	4.0nm,0.5s							
MDOK				Lg		Lg	10 05 02.9	
	7.8nm,0.4s							
MDOK				Lg		Lg	10 05 03.4	
	9.7nm,0.5s							
USP	**Ospenovka**	**2.70**	**342**	⇑	P	**Pb**	**10 04 30.0**	**-0.7**
	6.3nm,0.2s,SNR=10							
MRKS	**Merke**	**2.72**	**319**	*eP*		**Pg**	**10 04 34.6**	**+0.4**
	1.8nm,0.3s							
MRKS				*eS*		**Sg**	**10 05 11.2**	**+1.6**
	25nm,0.3s							
MRKS	**Merke**	**2.72**	**319**	Pg		**Pg**	**10 04 34.0**	**-0.3**
	3.7nm,0.3s							
MRKS				Lg		Lg	10 05 11.2	
	25nm,0.3s							
PRZ	**Przheval'sk**	**2.74**	**48**	⇑	*iP*	**Pn**	**10 04 27.8**	**+1.3**
	baz=50							
PRZ				⇑	*iS*	**Sn**	**10 05 00.4**	**+0.6**
	baz=50							
KOTS	**Kotyrbulak**	**2.76**	**23**	*eP*		**Pb**	**10 04 31.7**	**-0.1**
	6.0nm,0.4s							
KOTS				*eS*		**Sb**	**10 05 06.5**	**+0.6**
	30nm,0.4s							
KOTS	**Kotyrbulak**	**2.76**	**23**	Pg		**Pb**	**10 04 30.8**	**-1.0**
	5.8nm,0.4s							
KOTS				Lg		Lg	10 05 06.0	
	30nm,0.4s							
SGDS	**Sogindy**	**2.85**	**345**	*eP*		**Pb**	**10 04 33.5**	**+0.3**
	6.6nm,0.4s							
SGDS				*eS*		**Sb**	**10 05 09.5**	**+1.2**
	17nm,0.6s							
SGDS	**Sogindy**	**2.85**	**345**	Pg		**Pb**	**10 04 33.0**	**-0.2**
	6.6nm,0.4s							
SGDS				Lg		Lg	10 05 09.5	
	17nm,0.6s							
KRBS	**Karabastau**	**2.99**	**1**	*eP*		**Pb**	**10 04 36.0**	**+0.3**
	20nm,0.4s							
KRBS				*eS*		**Sb**	**10 05 13.8**	**+1.4**
	12nm,0.5s							
KRBS	**Karabastau**	**2.99**	**1**	Pg		**Pb**	**10 04 35.6**	**-0.1**
	0.2nm,0.1s							
KRBS				Lg		Lg	10 05 13.8	
	12nm,0.5s							
KTBS	**Karatobe**	**3.11**	**14**	*eP*		**Pb**	**10 04 37.9**	**+0.3**
	8.1nm,0.2s							
KTBS				*eS*		**Sb**	**10 05 16.8**	**+1.1**
	15nm,0.5s							
KTBS	**Karatobe**	**3.11**	**14**	Pg		**Pb**	**10 04 37.1**	**-0.6**
	16nm,0.2s							
KTBS				Lg		Lg	10 05 16.4	
	15nm,0.5s							
SATY	**Saty**	**3.14**	**40**	*eP*		**Pb**	**10 04 38.4**	**+0.2**
	1.3nm,0.4s							
SATY				*eS*		**Sb**	**10 05 17.8**	**+1.2**
	27nm,0.5s							
SATY	**Saty**	**3.14**	**40**	Pg		**Pb**	**10 04 37.3**	**-0.9**
	3.3nm,0.3s							
SATY				Lg		Lg	10 05 17.4	
	27nm,0.5s							
KUU	**Kurty**	**3.23**	**9**	*eP*		**Pb**	**10 04 40.1**	**+0.4**
	3.9nm,0.2s							
KUU				*eS*		**Sb**	**10 05 20.8**	**+1.6**
	17nm,0.6s							
KUU	**Kurty**	**3.23**	**9**	Pg		**Pb**	**10 04 39.4**	**-0.3**
	2.7nm,0.3s							
KUU				Lg		Lg	10 05 20.8	
	17nm,0.6s							
CHKK	**Chushkaly**	**3.31**	**17**	*eP*		**Pb**	**10 04 41.7**	**+0.6**
	4.7nm,0.2s							
CHKK				*eS*		**Sb**	**10 05 23.9**	**+2.5**
	19nm,0.2s							
CHKK	**Chushkaly**	**3.31**	**17**	Pg		**Pb**	**10 04 41.2**	**+0.2**
	6.3nm,0.4s							
CHKK				Lg		Lg	10 05 23.9	
	19nm,0.2s							
KURS	**Kuram**	**3.37**	**33**	*eP*		**Pb**	**10 04 42.1**	**+0.1**
	2.0nm,0.4s							
KURS				*eS*		**Sb**	**10 05 24.4**	**+1.2**
	6.8nm,1.0s							
KURS	**Kuram**	**3.37**	**33**	Pg		**Pb**	**10 04 41.3**	**-0.7**
	2.3nm,0.5s							
KURS				Lg		Lg	10 05 24.3	
	6.8nm,1.0s							
UZB	**Uzynbulak**	**3.52**	**45**	*eP*		**Pb**	**10 04 44.3**	**-0.4**
	1.5nm,0.3s							
UZB				*eS*		**Sb**	**10 05 28.2**	**+0.7**
	10nm,0.8s							
UZB	**Uzynbulak**	**3.52**	**45**	Pg		**Pb**	**10 04 43.5**	**-1.2**
	1.6nm,0.2s							
UZB				Pg		Pg	10 04 43.6	-5.9
	1.7nm,0.2s							
UZB				Lg		Lg	10 05 27.5	
	10nm,0.8s							
UZB				Lg		Lg	10 05 28.0	
	10.0nm,0.9s							
SHLS	**Shalkode**	**3.77**	**48**	*eP*		**Pg**	**10 04 54.7**	**+0.5**
	3.4nm,0.4s							
SHLS				*eS*		**Sg**	**10 05 45.8**	**+2.8**
	7.5nm,0.7s							
SHLS	**Shalkode**	**3.77**	**48**	Pg		**Pg**	**10 04 53.7**	**-0.5**
	3.9nm,0.4s							
SHLS				Lg		Lg	10 05 45.6	
	6.4nm,0.7s							
SHLS				Lg		Lg	10 05 45.8	
	7.5nm,0.7s							
ARXS	**Arharly**	**3.87**	**24**	*eP*		**Pb**	**10 04 51.8**	**+1.2**
	2.6nm,0.5s							
ARXS				*eS*		**Sb**	**10 05 41.0**	**+3.5**
	11nm,0.4s							
ARXS	**Arharly**	**3.87**	**24**	Pg		**Pb**	**10 04 49.5**	**-1.1**
	2.6nm,0.5s							
ARXS				Lg		Lg	10 05 38.9	
	11nm,0.6s							
PDGK	**Podgornoye**	**3.89**	**46**	Pg		**Pb**	**10 04 49.8**	**-1.2**
	0.8nm,0.2s							
PDGK				Lg		Lg	10 05 39.4	
	4.9nm,0.8s							
PDGK	**Podgornoye**	**3.89**	**46**	Pg		**Pg**	**10 04 54.4**	**-2.3**
	1.4nm,0.6s							
PDGK				Lg		Lg	10 05 41.6	
	15nm,1.1s							
BLB	**Baldybastay**	**4.00**	**31**	Pg		**Pb**	**10 04 52.2**	**-0.6**
	3.5nm,0.4s							
BLB				Lg		Lg	10 05 43.3	
	7.5nm,0.3s							
IUG	**Iuzhnay**	**4.45**	**291**	*eP*		**Pg**	**10 05 06.7**	**-0.7**
	108nm,0.4s							
IUG				*eS*		**Sg**	**10 06 06.7**	**+1.7**
	7.2nm,0.3s							
KK31	**Karatay Array**	**4.51**	**304**	⇓	Pg	**Pg**	**10 05 06.6**	**-2.0**
	0.7nm,0.5s,baz=114,slow=16,SNR=6.1							
KK31				⇑	Lg	Lg	10 06 03.9	
	0.8nm,0.4s,baz=110,slow=28,SNR=5.6							

*UCR **12** 10:07:18.9±1.6, 7˚.99N×82˚.94W, h13km±17km, MW4.2*
*UPA **12** 10:07:20.1±1.1, 8˚.08N×82˚.89W, h16km±3km, MW3.7, Fault plane solution: NP1:φs67.00000°, δ63.00000°, λ36.00000°.*

ISC 12 10:07:19.3±1.7, 8˚.05N±0˚.06×82˚.93W±0˚.04, h14km±9km, n28, σ0°88/44, 5C-13D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PTPM	**Petroterminale**	**0.16**	**18**	⇓	*iP*	**Pb**	**10 07 24.2**	**0.0**
PTPM					*eS*	**Sb**	**10 07 27.9**	**+0.5**
CDITO	**Canoas**	**0.52**	**6**	⇓	*iP*	**Pg**	**10 07 29.7**	**0.0**
CDITO					*eS*	**Sg**	**10 07 37.3**	**+0.6**
BAGA3	**Bagala, Chiriq**	**0.58**	**44**	⇓	*iP*	**Pg**	**10 07 30.9**	**+0.2**
DVD	**David**	**0.61**	**51**	⇑	*eP*	**Pg**	**10 07 31.1**	**-0.2**
DVD					*eS*	**Sg**	**10 07 39.9**	**+0.4**
CHIR3	**Chiriqui UPA,**	**0.69**	**60**	⇓	*iP*	**Pg**	**10 07 32.2**	**-0.5**
MLIR3	**Monte Lirio, C**	**0.75**	**8**	⇓	*iP*	**Pg**	**10 07 34.0**	**+0.1**
EDSV	**San Vito**	**0.77**	**357**	*eP*		**Pg**	**10 07 34.4**	**+0.1**
EDSV					*eS*	**Sb**	**10 07 46.3**	**+1.4**
PTAR3	**Potrerillos Ar**	**0.77**	**34**	⇓	*iP*	**Pg**	**10 07 33.9**	**-0.4**
PTAR3					*eS*	**Sg**	**10 07 44.7**	**+0.2**
BCO2	**Palmira**	**0.77**	**31**	⇓	*iP*	**Pg**	**10 07 34.0**	**-0.4**
BCO2					*eS*	**Sb**	**10 07 45.6**	**+0.4**
BRU2	**Volcan**	**0.78**	**18**	⇓	*iP*	**Pg**	**10 07 34.2**	**-0.3**
BRU2					*eS*	**Sb**	**10 07 45.6**	**+0.4**
EDPN	**Palmar Norte**	**1.04**	**330**	*eP*		**Pb**	**10 07 38.1**	**-1.2**
EDPN					*eS*	**Sb**	**10 07 53.0**	**+0.1**
EDBA	**Buenos Aires**	**1.16**	**343**	*eP*		**Pn**	**10 07 40.4**	**-0.8**
EDBA					*eS*	**Sb**	**10 07 57.1**	**+1.0**
CHGR2	**Aguacate**	**1.18**	**41**	⇓	*eP*	**Pn**	**10 07 40.0**	**-1.4**
CHGR2					*eS*	**Sb**	**10 07 55.4**	**-1.2**
DRK0	**Durika**	**1.25**	**346**	⇑	*iP*	**Pn**	**10 07 42.4**	**-0.2**
DRK0					*eS*	**Sb**	**10 07 59.3**	**+0.5**
SRBA	**San Rafael, Bu**	**1.25**	**340**	*eP*		**Pn**	**10 07 41.4**	**-1.1**
CNI2	**El Empalme, Bo**	**1.44**	**18**	⇓	*iP*	**Pn**	**10 07 44.6**	**-0.4**
CNI2					*eS*	**Sn**	**10 08 01.5**	**-2.2**
EDDO	**Dominical**	**1.51**	**322**	*eP*		**Pn**	**10 07 45.5**	**-0.6**
CDM	**Cerro de Muert**	**1.71**	**331**	*eP*		**Pn**	**10 07 48.6**	**-0.5**
GMAL	**Guarumal, Vera**	**1.71**	**100**	⇑	*iP*	**Pn**	**10 07 47.7**	**-1.0**
RIMA	**Rio Macho**	**1.94**	**332**	*eP*		**Pn**	**10 07 51.7**	**-0.4**
CACAO	**El Cacao, Vera**	**2.17**	**109**	⇓	*eP*	**Pn**	**10 07 54.3**	**-0.7**
HDC	**Heredia**	**2.26**	**329**	*eP*		**Pn**	**10 07 57.3**	**+0.8**
HDC	**Heredia**	**2.26**	**329**	⇑	*iP*	**Pn**	**10 07 57.2**	**+0.7**
HDC					*eS*	**Sn**	**10 08 26.4**	**+2.1**
PNME	**Penonome**	**2.61**	**80**	⇓	*iP*	**Pn**	**10 08 02.2**	**+1.0**
PNME					*eS*	**Sb**	**10 08 38.2**	**+0.3**
AZU	**Azuero**	**2.64**	**95**	⇑	*eP*	**Pn**	**10 08 02.0**	**+0.4**
AZU					*eS*	**Sn**	**10 08 34.5**	**+0.9**
VTON	**El Valle, Cocl**	**2.84**	**78**	*eS*		**Sb**	**10 08 45.7**	**+1.0**
BCIP	**Isla Barro Col**	**3.25**	**70**	⇓	*eP*	**Pn**	**10 08 11.4**	**+1.4**
BCIP					*eS*	**Sn**	**10 08 48.4**	**-0.2**
SAJU	**San Juanillo,**	**3.40**	**306**	*eP*		**Pn**	**10 08 11.3**	**-0.7**

*ANF **12** 10:15:25.4±0.2, 35˚.90N×97˚.23W, h6km, ML3.5/13, Error ellipse: s-maj=2.6km s-min=2.0km az=135.0*
*NEIC **12** 10:15:25.7±0.8, 35˚.87N±0˚.01×97˚.23W±0˚.01, h8km±4km, Error ellipse: s-maj=1.8km s-min=1.4km az=126.0*
*TUL **12** 10:15:25.5±1.0, 35˚.86N±0˚.01×97˚.23W±0˚.01, h6km±5km, ML3.1, mb_Lg3.1/88(NEIC), Error ellipse: s-maj=1.8km s-min=1.2km az=131.0*

ISC 12 10:15:25.3±1.2, 35˚.88N±0˚.03×97˚.22W±0˚.03, h5km±13km, n88, σ0°66/78, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OK005	**Luther M Schoo**	**0.23**	**174**			Pg	**Pg**	**10 15 29.7**	**-0.1**
OK009	**Oakdale Elemen**	**0.34**	**209**				**Pg**	**10 15 32.1**	**+0.2**
OKCFA	**Oklahoma City**	**0.50**	**202**			Pg	**Pg**	**10 15 35.1**	**+0.1**
OKCFA						Sg	**Sg**	**10 15 41.1**	**-0.3**
OKCFA	**Oklahoma City**	**0.50**	**202**			P	**Pg**	**10 15 35.0**	**+0.1**
	baz=23,SNR=224								
OKCFA						S	**Sg**	**10 15 41.9**	**+0.5**
	baz=23								
OKCSW	**OKLAHOMA CITY**	**0.51**	**200**				**Pg**	**10 15 35.1**	**+0.1**
OKCSW						Sg	**Sg**	**10 15 41.4**	**-0.2**
FNO	**Franklin**	**0.64**	**193**			Pg	**Pg**	**10 15 37.5**	**-0.1**
FNO						Sg	**Sg**	**10 15 45.5**	**-0.4**
TUL1	**Leonard**	**1.16**	**88**			Pg	**Pg**	**10 15 46.7**	**-0.9**
TUL1						Sg	**Sg**	**10 16 02.9**	**+0.3**
TUL1	**Leonard**	**1.16**	**88**			P	**Pg**	**10 15 46.7**	**-0.9**
	baz=268,SNR=309								
TUL1						S	**Sg**	**10 16 03.0**	**+0.3**
	baz=268								
T35A	**Sooner Cattle**	**1.18**	**29**			Pg	**Pg**	**10 15 47.8**	**-0.2**
T35A						Sg	**Sg**	**10 16 03.9**	**+0.5**
T35B	**Sooner Cattle**	**1.18**	**29**			P	**Pg**	**10 15 47.8**	**-0.2**
	baz=209,SNR=129								
T35B						S	**Sg**	**10 16 03.9**	**+0.5**
	baz=209								
X34A	**Smith Ranch, M**	**1.37**	**202**			Pn	**Pn**	**10 15 50.8**	**-0.3**
U32A	**Winter Ranch,**	**1.52**	**290**			Pn	**Pn**	**10 15 53.4**	**+0.1**
U32A	**Winter Ranch,**	**1.52**	**290**			P	**Pn**	**10 15 53.3**	**+0.1**
	baz=110,SNR=116								
U32A						S	**Sg**	**10 16 14.3**	**0.0**
	baz=110								
WMOK	**Wichita Mounta**	**1.71**	**229**				**Pn**	**10 15 56.2**	**+0.4**
WMOK	**Wichita Mounta**	**1.71**	**229**			P	**Pn**	**10 15 56.1**	**+0.3**
	baz=48,SNR=98								
X37A	**Clayton**	**1.99**	**130**			Pn	**Pn**	**10 15 59.9**	**+0.3**
X37A						IAmb_Lg		10 16 33.5	
	comp=Z,119nm,0.8s								
X37A	**Clayton**	**1.99**	**130**			P	**Pn**	**10 15 60.0**	**+0.4**
	baz=310,SNR=149								
X37A						S	**Sb**	**10 16 27.1**	**+0.1**
	baz=310								
U38A	**Gravette**	**2.36**	**75**			Pn	**Pn**	**10 16 05.3**	**+0.5**
U38A	**Gravette**	**2.36**	**75**			P	**Pn**	**10 16 05.7**	**+1.0**
	baz=257,SNR=70								
Z35A	**Perchaven, San**	**2.54**	**181**			Pn	**Pn**	**10 16 07.3**	**+0.1**
Z35A	**Perchaven, San**	**2.54**	**181**			P	**Pn**	**10 16 07.6**	**+0.4**
	baz=0.5,SNR=49								
HHAR	**Hobbs**	**2.69**	**80**			Pn	**Pn**	**10 16 09.7**	**+0.5**
HHAR	**Hobbs**	**2.69**	**80**			P	**Pn**	**10 16 09.4**	**+0.2**
	baz=262								
W39A	**Magazine**	**2.89**	**103**			Pn	**Pn**	**10 16 11.9**	**0.0**
W39A						IAmb_Lg		10 17 04.3	
	comp=Z,78nm,0.8s								
W39A	**Magazine**	**2.89**	**103**			P	**Pn**	**10 16 12.6**	**+0.7**
	baz=284,SNR=16								
Z38A	**Mt. Pleasant**	**3.20**	**144**				**Pn**	**10 16 16.0**	**-0.2**
KSU1	**Kansas State U**	**3.25**	**8**				**Pn**	**10 16 15.7**	**-1.3**
KSU1						IAmb_Lg		10 17 16.3	
	comp=Z,47nm,0.8s								
MIAR	**Mount Ida**	**3.27**	**113**				**Pn**	**10 16 18.2**	**+1.0**
MIAR						IAmb_Lg		10 17 14.2	
	comp=Z,36nm,0.8s								
CBKS	**Cedar Bluff**	**3

comp=Z,30nm,0.9s
LCAR Lake Charles 4.92 86 Pn Pn 10 16 40.1 +0.1
MSTX Muleshoe 4.94 249 Pn Pn 10 16 39.3 -1.0
435B Jarrell 5.09 184 Pn **Pn** 10 16 41.4 -0.9
435B IAmb_Lg 10 18 16.1
comp=Z,30nm,1.2s
N35A Tabor 5.13 14 Pn 10 16 43.0 +0.3
CCM Cathedral Cave 5.26 64 IAmb_Lg 10 18 19.7
comp=Z,37nm,0.7s
KSCO Kaye Shedlock' 5.32 308 Pn 10 16 46.8 +1.4
KSCO IAmb_Lg 10 18 27.3
comp=Z,28nm,0.7s
PBMO Poplar Bluff 5.56 79 IAmb_Lg 10 18 28.0
comp=Z,40nm,0.8s
BGNE Belgrade 5.57 353 IAmb_Lg 10 18 36.3
comp=Z,35nm,0.8s
143A Socs Landing, 5.76 122 IAmb_Lg 10 18 38.3
comp=Z,23nm,0.8s
JCT Junction City 5.80 203 Pn 10 16 50.8 -1.3
JCT IAmb_Lg 10 18 37.1
comp=Z,24nm,0.8s
N38A Joes South For 5.82 31 Pn **Pn** **10 16 52.4 +0.2**
GNAR Gosnell 5.85 87 Pn **Pn** **10 16 52.5 -0.1**
T25A Trinidad 5.92 284 Pn 10 16 54.3 +0.4
T25A IAmb_Lg 10 18 41.2
comp=Z,19nm,0.8s
PEBM Pemiscott Bayo 5.97 86 Pn **Pn** **10 16 54.9 +0.6**
OGNE Ogallala 6.31 325 IAmb_Lg 10 18 56.5
comp=Z,30nm,0.8s
HALT Halls 6.40 87 IAmb_Lg 10 19 00.8
comp=Z,30nm,0.9s
GLAT Glass 6.44 84 IAmb_Lg 10 18 50.5
comp=Z,34nm,0.8s
OXF Oxford 6.54 100 Pn **Pn** **10 17 02.0 -0.2**
OXF IAmb_Lg 10 18 54.2
comp=Z,16nm,1.0s
W45A Hickory Valley 6.59 94 IAmb_Lg 10 19 05.0
comp=Z,18nm,0.8s
S44A Carbondale 6.64 72 Pn **Pn** **10 17 04.0 +0.4**
S44A IAmb_Lg 10 19 08.7
comp=Z,29nm,0.9s
SIUC Southern Illin 6.68 72 IAmb_Lg 10 18 57.7
comp=Z,28nm,0.8s
K31A O'Neill 6.84 350 IAmb_Lg 10 19 08.5
comp=Z,26nm,0.7s
SDCO Great Sand Dun 6.90 288 Pn **Pn** **10 17 08.6 +1.2**
Q24A Divide 7.02 298 IAmb_Lg 10 19 14.3
comp=Z,13nm,0.8s
P43A Skaggs, Pawnee 7.16 56 Pn **Pn** **10 17 12.0 +1.3**
K38A Parkersburg 7.59 26 IAmb_Lg 10 19 35.2
comp=Z,21nm,0.8s
L40A Anamosa 7.74 35 IAmb_Lg 10 19 41.3
comp=Z,18nm,0.8s
ECSD EROS Data Cent 7.86 3 Pn **Pn** **10 17 19.8 -0.5**
baz=184,SNR=11
Y22D IRIS PASSCAL I 8.16 260 IAmb_Lg 10 20 07.1
comp=Z,19nm,0.8s
PHWY Pilot Hill 8.42 312 IAmb_Lg 10 19 59.9
comp=Z,14nm,0.8s
N23A Red Feather La 8.48 309 IAmb_Lg 10 20 17.9
comp=Z,17nm,0.8s
I37A Lemond, Waseca 8.64 19 IAmb_Lg 10 20 11.1
comp=Z,18nm,1.0s
JFWS Jewell Farm 8.86 35 IAmb_Lg 10 20 18.3
comp=Z,21nm,0.7s
I40A Norwalk 9.47 30 IAmb_Lg 10 20 24.6
comp=Z,8.9nm,0.7s
RSSD Black Hills 9.75 330 IAmb_Lg 10 20 53.3
comp=Z,10nm,1.1s
K22A Casper 9.88 316 IAmb_Lg 10 20 58.1
comp=Z,18nm,1.0s

IDC 12 10:16:31.9±2.2,1°29N×126°11E, h0km, mb3.2/3, mbtmp3.2/3, Error ellipse: s-maj=179.1km s-min=27.8km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.59**	**159**	P	P	10 21 33.4	-0.9
	0.6nm,0.6s,baz=338,slow=10,SNR=19						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**25.94**	**163**	P	P	10 22 06.8	+0.6
	0.4nm,0.8s,baz=349,slow=9.5,SNR=7.0						
	0.4nm,0.8s						
MKAR	**Makanchi Array**	**59.21**	**326**	P	P	10 26 35.0	0.0
	0.1nm,0.5s,baz=128,slow=7.6,SNR=2.3						
	0.1nm,0.5s						

IDC 12 10:28:07.9±1.6,4°38S×145°71E, h0km, mb3.3/2, mbtmp3.5/4, ML3.7/1, MS3.9/1, Error ellipse: s-maj=61.7km s-min=26.6km az=112.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.19**	**164**	Pn	Pn	10 29 25.5	-1.4
	4.1nm,0.3s,baz=284,slow=16,SNR=1.5						
PMG				Sn	Sn	10 30 11.2	-16
	4.6nm,0.3s,baz=145,slow=24,SNR=16						
WRA	**Warramunga Arr**	**19.03**	**215**	P	Pn	10 32 32.9	+0.6
	0.2nm,0.3s,baz=34,slow=11,SNR=11						
	0.6nm,0.4s						
ASAR	**Alice Springs**	**22.30**	**210**	P	P	10 33 07.0	-0.2
	0.2nm,0.4s,baz=45,slow=7.7,SNR=10						
	0.2nm,0.4s						
RAO	**Raoul Island**	**42.39**	**130**	LR	LR	10 50 53.9	
	comp=Z,140nm,19.0s,baz=106,slow=32						
ILAR	**Eielson Array**	**84.51**	**23**	P	P	10 40 42.4	-0.1
	0.6nm,0.6s,baz=256,slow=4.8,SNR=8.4						
	0.6nm,0.6s						

*IDC **12** 10:30:36.0±1.4,20°46S×173°97W, h0km, mb3.7/2, mbtmp4.0/4, ML3.4/2, MS2.7/1, Error ellipse: s-maj=58.2km s-min=29.3km az=154.0*
*NEIC **12** 10:30:40.5±1.2,20°2S±0°3×173°9W±0°1, h36km±11km, mb4.6/12, Error ellipse: s-maj=40.8km s-min=19.8km az=175.0*
ISC 12 10:30:39.9±0.7,20°3S±0°1×173°85W±0°09, h35km, n22, σ1°64/24, mb4.6/8, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**3.89**	**73**		**Pn**	**10 31 37.3**	**+0.1**
AFI	**Afiamalu**	**6.64**	**18**	Pn	**Pn**	**10 32 17.5**	**+2.4**
	0.8nm,0.3s,baz=187,slow=16,SNR=1.6						
AFI				Sn	**Sn**	**10 33 28.0**	**-1.6**
	3.8nm,0.3s,baz=160,slow=21,SNR=2.1						
	7.1nm,0.4s						
MSVF	**Nonsavu**	**8.07**	**287**	LR	LR	10 34 42.8	
	comp=Z,54nm,21.3s,baz=117,slow=31						
RAR	**Rarotonga**	**13.20**	**96**	Pn	**Pn**	**10 33 44.4**	**-0.6**
	1.8nm,0.3s,baz=272,slow=7.0,SNR=7.2						
RAR				Sn	Sn	10 35 56.8	-14
	1.3nm,0.3s,baz=74,slow=21,SNR=1.3						
	13nm,0.6s						
ARMA	**Armidale**	**32.68**	**245**	P	**P**	**10 37 08.9**	**-0.3**
ARMA				IAmb	IAmb	10 37 11.9	
	comp=Z,23nm,1.5s						
CTAO	**Charters Tower**	**37.38**	**263**	P	**P**	**10 37 50.6**	**+0.9**
STKA	**Stephens Creek**	**41.39**	**245**	P	**P**	**10 38 23.8**	**+0.7**
WR0	**Warramunga Arr**	**48.29**	**261**	P	**P**	**10 39 17.6**	**-0.5**
WR0				IAmb	IAmb	10 39 28.2	
	comp=Z,15nm,1.5s						
AS31	**Alice Springs**	**48.35**	**256**	P	**P**	**10 39 18.9**	**+0.3**
ASAR	**Alice Springs**	**48.35**	**256**	P	**P**	**10 39 18.5**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=98,slow=8.0,SNR=23						
ASAR				PcP	**PcP**	**10 40 46.7**	**+1.7**
	comp=Z,0.2nm,0.6s,baz=100,slow=4.0,SNR=1.8						
	comp=Z,0.9nm,0.6s						
ASAR	**Alice Springs**	**48.35**	**256**	P	**P**	**10 39 18.2**	**-0.4**
WB0	**Warramunga Arr**	**48.46**	**261**	P	**P**	**10 39 18.5**	**-1.0**
WB0				IAmb	IAmb	10 39 43.5	
	comp=Z,7.2nm,1.1s						
WB2	**Warramunga Arr**	**48.47**	**261**	P	**P**	**10 39 18.7**	**-0.8**
WRA	**Warramunga Arr**	**48.48**	**261**	P	**P**	**10 39 18.8**	**-0.8**
	comp=Z,0.3nm,0.5s,baz=96,slow=8.7,SNR=16						
WRA				PcP	**PcP**	**10 40 47.3**	**+1.9**
	comp=Z,0.9nm,1.1s,baz=100,slow=3.6,SNR=2.1						
	comp=Z,0.3nm,0.5s						
WRA	**Warramunga Arr**	**48.48**	**261**	P	**P**	**10 39 18.2**	**-1.4**
PSA00	**Pilbara Seismi**	**61.50**	**256**	P	**P**	**10 40 53.4**	**-0.3**
PSA00				IAmb	IAmb	10 41 14.1	
	comp=Z,5.9nm,1.4s						
MORW	**Morawa**	**63.50**	**247**	P	**P**	**10 41 07.6**	**+0.6**
TOLI2	**Tolitoli**	**67.38**	**280**	P	**P**	**10 41 28.2**	**-4.0**
TOLI2				IAmb	IAmb	10 41 28.4	
	comp=Z,5.7nm,0.7s						
TOLI2	**Tolitoli**	**67.38**	**280**	P	**P**	**10 41 28.3**	**-4.0**
QSPA	**South Pole Qui**	**69.79**	**180**	P	**P**	**10 41 47.7**	**+1.1**
QSPA				IAmb	IAmb	10 42 03.3	
	comp=Z,4.4nm,1.5s						
AKASG	**Malin Array Be**	**144.60**	**335**	PKP	**PKPdf**	**10 50 13.2**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=33,slow=4.0,SNR=8.6						
BRTR	**Keskin Array B**	**149.50**	**315**	PKPbc	**PKiKP**	**10 50 28.1**	**+1.1**
	comp=Z,0.3nm,0.5s,baz=63,slow=2.5,SNR=2.0						

*SNET **12** 10:30:46.6±1.3, 12°65N×87°09W, h20km±8km, ML3.4*
*INET **12** 10:30:47.4±0.7, 12°83N×87°08W, h3km±2km, MW3.2*
ISC 12 10:30:47.4±1.2,12°88N±0°06×87°01W±0°06, h11km±10km, n14, σ0°76/21, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**0.18**	**192**	*e*P	**Pg**	**10 30 51.4**	**+0.1**
CRIN				*e*S	**Sg**	**10 30 54.5**	**+0.4**
TEL3	**Telica 3**	**0.34**	**151**	*e*P	**Pb**	**10 30 54.8**	**-0.7**
CNGN	**Cerro Negro**	**0.48**	**140**	*e*S	**Sb**	**10 31 04.3**	**-0.7**
CSGN	**Cosiguina Volc**	**0.54**	**281**	*e*P	**Pg**	**10 30 57.4**	**-0.6**
MOMN	**Momotombo**	**0.65**	**135**	*e*P	**Pb**	**10 31 00.6**	**-0.2**
MOMN				*e*S	**Sb**	**10 31 10.4**	**+0.4**
CNCH	**Conchagua**	**0.89**	**297**	*e*P	**Pg**	**10 31 03.6**	**-1.0**
CNCH				*e*S	**Sb**	**10 31 18.6**	**+1.7**
LCND	**La Caada**	**0.96**	**297**	*e*P	**Pg**	**10 31 04.5**	**-1.3**
LCND				*e*S	**Sb**	**10 31 19.0**	**+0.3**
LCND				*e*S	**Sg**	**10 31 19.2**	**+0.8**
LCND				IAML		10 31 21.6	
	comp=Z,1μm,0.5s						
MATN	**Matagalpa**	**1.06**	**87**	*e*P	**Pb**	**10 31 07.5**	**-0.3**
WILN	**Americas 2**	**1.07**	**131**	*e*P	**Pb**	**10 31 07.8**	**-0.2**
WILN				*e*S	**Sn**	**10 31 23.9**	**+0.7**
TGUH	**Tegucigalpa,Un**	**1.20**	**348**	*e*P	**Pn**	**10 31 10.8**	**+0.5**
TGUH	**Tegucigalpa,Un**	**1.20**	**348**	*e*P	**Pn**	**10 31 10.8**	**+0.5**
BOAB	**BOACO BROADBAN**	**1.38**	**108**	*e*P	**Pn**	**10 31 12.6**	**0.0**
PACA	**Pacayal**	**1.41**	**295**	*e*P	**Pn**	**10 31 12.7**	**-0.4**
PACA				*e*S	**Sb**	**10 31 31.3**	**-0.4**
CAHU	**Cacacuatique**	**1.47**	**307**	*e*P	**Pn**	**10 31 14.5**	**+0.5**

*NEIC **12** 10:38:39.9±2.0, 6°60S±0°08×129°97E±0°08, h172km±9km, mb4.3/7, Error ellipse: s-maj=13.9km s-min=8.3km az=133.0*
*IDC **12** 10:38:39.3±1.7, 6°56S×129°89E, h159km±16km, mb3.6/3, mbtmp4.1/6, Error ellipse: s-maj=23.3km s-min=13.2km az=106.0*
ISC 12 10:38:38.4±0.6, 6°66S±0°06×129°94E±0°07, h150km, n44, σ1°97/47, mb4.0/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.89**	**134**	Pn	**Pn**	**10 39 15.0**	**+2.8**
FAKI	**Fak Fak**	**4.37**	**32**	Pn	**Pn**	**10 39 44.8**	**+1.3**
FAKI	**Fak Fak**	**4.37**	**32**	P	**Pn**	**10 39 45.4**	**+1.9**
SIJI	**Sorong**	**5.90**	**13**	P	**Pn**	**10 40 05.2**	**+1.4**
	4.9nm,0.3s,baz=232,slow=23,SNR=12						
SIJI				S	**Sn**	**10 41 09.0**	**-1.6**
	12nm,0.2s,baz=326,slow=22,SNR=9.9						
MTN	**Manton Dam**	**6.26**	**169**	Pn	**Pn**	**10 40 10.1**	**+1.5**
MTN	**Manton Dam**	**6.26**	**169**	P	**Pn**	**10 40 10.2**	**+1.6**
SOEI	**Soe**	**6.40**	**241**	Pn	**Pn**	**10 40 12.9**	**+2.3**
SOEI	**Soe**	**6.40**	**241**	P	**Pn**	**10 40 13.5**	**+2.9**
KDU	**Kakadu**	**6.49**	**158**	P	**Pn**	**10 40 12.7**	**+1.0**
BATI	**Baumata**	**7.14**	**240**	P	**Pn**	**10 40 22.8**	**+2.5**
	21nm,0.4s,baz=302,slow=5.5,SNR=9.1						
BATI				S	**Sn**	**10 41 40.8**	**+0.5**
	34nm,0.5s,baz=44,slow=22,SNR=8.6						
KNRA	**Kununurra**	**9.04**	**187**	Pn	**Pn**	**10 40 45.5**	**-0.2**
KNRA	**Kununurra**	**9.04**	**187**	P	**Pn**	**10 40 45.7**	**0.0**
PLAI	**Plampang**	**12.24**	**259**	P	**Pn**	**10 41 28.4**	**+0.5**
WB0	**Warramunga Arr**	**13.73**	**162**	Pn	**Pn**	**10 41 45.5**	**-1.5**
WRAB	**Tennant Creek**	**13.88**	**162**	P	**Pn**	**10 41 48.8**	**0.0**
WRA	**Warramunga Arr**	**13.88**	**162**	P	**Pn**	**10 41 47.3**	**-1.6**
	0.8nm,0.4s,baz=346,slow=13,SNR=18						
WRA				S	Sn	10 44 12.0	-11
	1.9nm,0.5s,baz=334,slow=22,SNR=11						
WRA	**Warramunga Arr**	**13.88**	**162**		**Pn**	**10 41 46.7**	**-2.2**
WB2	**Warramunga Arr**	**13.89**	**162**	Pn	**Pn**	**10 41 47.8**	**-1.1**
WR0	**Warramunga Arr**	**13.96**	**162**	Pn	**Pn**	**10 41 48.6**	**-1.2**
COEN	**Coen**	**14.90**	**120**	P	**Pn**	**10 42 03.6**	**+1.9**
COEN	**Coen**	**14.90**	**120**	P	**Pn**	**10 42 03.2**	**+1.5**
QIS	**Mount Isa**	**16.70**	**147**	P	**P**	**10 42 25.1**	**+1.6**
AS31	**Alice Springs**	**17.34**	**168**	P	**P**	**10 42 31.9**	**+1.4**
ASAR	**Alice Springs**	**17.34**	**168**	P	**P**	**10 42 32.1**	**+1.6**
	3.2nm,0.6s,baz=345,slow=9.3,SNR=58						
ASAR				S	**S**	**10 45 37.0**	**-6.5**
	0.7nm,0.7s,baz=356,slow=26,SNR=5.3						
ASAR	**Alice Springs**	**17.34**	**168**	P	**P**	**10 42 31.7**	**+1.2**
WRKA	**Warakurna**	**18.34**	**185**	P	**P**	**10 42 42.9**	**+1.4**
OOD	**Oodnadatta**	**21.72**	**166**	P	**P**	**10 43 18.2**	**+0.4**
MULG	**Mulgathing**	**23.82**	**171**	P	**P**	**10 43 39.5**	**+1.9**
FORT	**Forrest**	**24.06**	**184**	P	**P**	**10 43 40.3**	**+0.5**
FORT				IAmb	IAmb	10 43 60.0	
	comp=Z,20nm,1.0s						
FORT	**Forrest**	**24.06**	**184**	P	**P**	**10 43 41.9**	**+2.1**
LCRK	**Leigh Creek**	**24.91**	**163**	P	**P**	**10 43 49.7**	**+2.1**
BBOO	**Buckleboo**	**26.64**	**168**	P	**P**	**10 44 05.0**	**+1.9**
BBOO				IAmb	IAmb	10 44 12.8	
	comp=Z,22nm,1.5s						
BBOO	**Buckleboo**	**26.64**	**168**	P	**P**	**10 44 06.2**	**+3.1**
STKA	**Stephens Creek**	**27.35**	**158**	P	**P**	**10 44 10.1**	**+0.5**
	comp=Z,1.2nm,0.5s,baz=334,slow=7.6,SNR=6.0						
	comp=Z,1.2nm,0.5s						
STKA	**Stephens Creek**	**27.35**	**158**	P	**P**	**10 44 09.4**	**-0.1**
STKA				IAmb	IAmb	10 44 16.6	
	comp=Z,2.5nm,1.4s						
NWAO	**Narrogin (SRO)**	**28.68**	**203**	P	**P**	**10 44 20.5**	**-0.9**
NWAO				IAmb	IAmb	10 44 27.1	
	comp=Z,54nm,1.4s						
CMSA	**Cobar Meteorol**	**28.81**	**151**	P	**P**	**10 44 23.3**	**+0.9**
ARPS	**Mount Arapiles**	**31.89**	**162**	P	**P**	**10 44 51.2**	**+1.7**
NIUE	**Niue**	**59.66**	**108**	P	**P**	**10 48 24.7**	**-2.6**
MK31	**Makanchi Array**	**67.91**	**327**	P	**P**	**10 49 18.3**	**-2.5**
MK31				IAmb	IAmb	10 49 23.0	
	comp=Z,1.2nm,0.9s						
MKAR	**Makanchi Array**	**67.91**	**327**	P	**P**	**10 49 18.5**	**-2.3**
	comp=Z,1.6nm,0.7s,baz=113,slow=7.6,SNR=12						
	comp=Z,1.6nm,0.7s						
MKAR	**Makanchi Array**	**67.91**	**327**	P	**P**	**10 49 18.7**	**-2.1**
KURBB	**Kurchatov Arra**	**72.19**	**328**	P	**P**	**10 49 47.9**	**+1.1**
	comp=Z,1.1nm,0.8s,baz=126,slow=6.1,SNR=10						
	comp=Z,1.1nm,0.8s						
QSPA	**South Pole Qui**	**83.32**	**180**	P	**P**	**10 50 47.6**	**-0.7**

MAN 12 10:39:34.6, 4°88N×126°73E, h23km, mb4.5, ML3.3, MS3.1, Talaud Islands

*IDC **12** 11:11:36.8±1.7, 7°57S×128°22E, h142km±16km, mb3.3/5, mbtmp4.0/9, Error ellipse: s-maj=22.5km s-min=13.8km az=123.0*
*NEIC **12** 11:11:38.7±3.0, 7°5S±0°1×128°20E±0°09, h163km±5km, mb4.3/6, Error ellipse: s-maj=16.4km s-min=12.1km az=178.0*
ISC 12 11:11:37.6±0.6, 7°56S±0°06×128°20E±0°07, h150km, n29, σ1°48/31, mb3.6/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**3.10**	**98**	Pn	**Pn**	**11 12 28.1**	**+1.9**
SOEI	**Soe**	**4.46**	**240**	Pn	**Pn**	**11 12 45.1**	**+1.1**
BATI	**Baumata**	**5.20**	**239**	P	**Pn**	**11 12 53.8**	**+0.1**
	137nm,0.4s,baz=111,slow=2.9,SNR=24						
BATI				S	**Sn**	**11 13 52.4**	**-0.7**
	76nm,0.4s,baz=297,slow=22,SNR=11						
MTN	**Manton Dam**	**5.99**	**151**	Pn	**Pn**	**11 13 04.6**	**+0.4**
MMRI	**Maumere**	**6.00**	**259**	Pn	**Pn**	**11 13 05.3**	**+1.0**
FAKI	**Fak Fak**	**6.12**	**41**	Pn	**Pn**	**11 13 05.5**	**-0.6**
SIJI	**Sorong**	**7.32**	**25**	P	**Pn**	**11 13 21.9**	**-0.1**
	7.9nm,0.4s,baz=241,slow=22,SNR=10.0						
SIJI				S	**Sn**	**11 14 42.5**	**-1.3**
	3.0nm,0.4s,baz=247,slow=23,SNR=1.8						
KNRA	**Kununurra**	**8.08**	**176**		**Pn**	**11 13 31.8**	**-0.3**
WB0	**Warramunga Arr**	**13.54**	**154**	Pn	**Pn**	**11 14 42.3**	**-1.5**
WRA	**Warramunga Arr**	**13.67**	**155**	P	**Pn**	**11 14 42.8**	**-2.6**
	3.4nm,0.8s,baz=323,slow=14,SNR=33						
WRA				S	Sn	11 17 06.3	-11
	9.4nm,0.7s,baz=328,slow=22,SNR=12						
WRA	**Warramunga Arr**	**13.67**	**155**		**Pn**	**11 14 42.2**	**-3.2**
WB2	**Warramunga Arr**	**13.68**	**155**	Pn	**Pn**	**11 14 43.6**	**-1.9**
WR0	**Warramunga Arr**	**13.77**	**154**	Pn	**Pn**	**11 14 44.2**	**-2.5**
MBWA	**Marble Bar**	**15.80**	**210**	Pn	**Pn**	**11 15 09.6**	**-2.4**
MBWA				IAmb	IAmb	11 15 15.6	
	comp=Z,26nm,1.4s						
COEN	**Coen**	**16.02**	**115**	P	**Pn**	**11 15 14.8**	**+0.1**
PSA00	**Pilbara Seismi**	**16.10**	**209**	P	**Pn**	**11 15 15.4**	**-0.2**
PSA00				IAmb	IAmb	11 15 36.4	
	comp=Z,24nm,1.3s						
AS31	**Alice Springs**	**16.92**	**162**	P	**P**	**11 15 26.5**	**+1.4**
ASAR	**Alice Springs**	**16.92**	**162**	P	**P**	**11 15 25.3**	**+0.1**
	comp=Z,5.9nm,0.7s,baz=342,slow=11,SNR=92						
ASAR				S	S	11 18 24.0	-10
	comp=Z,1.1nm,0.5s,baz=348,slow=23,SNR=7.9						
ASAR	**Alice Springs**	**16.92**	**162**	P	**Pn**	**11 15 26.8**	**+1.1**
CMAR	**Chiang Mai Arr**	**38.75**	**312**	P	**P**	**11 18 47.3**	**-0.4**
	comp=Z,0.6nm,0.3s,baz=139,slow=6.2,SNR=4.6						
	comp=Z,0.6nm,0.3s						
KSRS	**Korea Array**	**44.78**	**360**	P	**P**	**11 19 36.4**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=178,slow=9.7,SNR=4.5						
	comp=Z,0.4nm,0.4s						
SONM	**Songino Array**	**58.43**	**343**	P	**P**	**11 21 18.6**	**+1.0**
	comp=Z,0.4nm,0.7s,baz=188,slow=7.3,SNR=2.1						
	comp=Z,0.4nm,0.7s						
MKAR	**Makanchi Array**	**67.73**	**328**	P	**P**	**11 22 19.1**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=122,slow=7.9,SNR=5.5						
	comp=Z,0.5nm,0.5s						
MKAR	**Makanchi Array**	**67.73**	**328**	P	**P**	**11 22 18.5**	**-0.5**
ZALV	**Zalesovo Beam**	**71.31**	**335**	P	**P**	**11 22 39.3**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=155,slow=11,SNR=3.5						
	comp=Z,0.4nm,0.3s						
VNDA	**Vanda**	**72.11**	**173**	P	**P**	**11 22 46.4**	**+1.2**
VNDA				IAmb	IAmb	11 22 47.0	
	comp=Z,1.5nm,0.3s						
QSPA	**South Pole Qui**	**82.42**	**180**	P	**P**	**11 23 42.3**	**-0.7**
QSPA				IAmb	IAmb	11 24 04.6	
	comp=Z,5.2nm,1.4s						
LPAZ	**La Paz**	**151.31**	**146**	PKPbc	**PKPbc**	**11 31 15.8**	**+0.5**
	comp=Z,0.5nm,0.4s,baz=63,slow=5.1,SNR=2.4						
LPAZ	**La Paz**	**151.31**	**146**		**PKPdf**	**11 31 12.2**	**+3.1**

NDI 12 11:20:22.3±3.0, 17°29N×73°81E, h10km, ML3.6, Southern India

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAD	**Karad**	**0.35**	**87**	*e*P	Pg	11 20 28.9	-0.4
KAD				*e*S	Sg	11 20 34.4	+0.4
POO	**Poona**	**1.23**	**2**	*e*P	Pn	11 20 44.0	-1.7
POO				*e*P	Pg	11 20 46.3	+0.2
POO				*e*S	Sn	11 21 03.6	+1.2
POO				*e*S	Sg	11 21 04.2	+2.1
POO				IAML		11 21 05.3	
	comp=E,1μm,0.2s						
GOA	**Goa**	**1.79**	**180**	*e*P	Pn	11 20 51.5	-1.7
GOA				IAML		11 21 14.5	
	comp=N,360nm,0.2s						
GOA				IAML		11 21 14.5	
	comp=E,389nm,0.2s						
BOM	**Bombay**	**1.86**	**329**	*e*P	Pb	11 20 55.7	-0.8
BOM				*e*S	Sn	11 21 18.0	+0.2
BOM				IAML		11 21 22.1	
	comp=N,160nm,0.2s						
PCHI	**Peechi**	**7.15**	**160**	*e*P	Pn	11 22 09.0	+2.0

*IDC **12** 11:22:17.6±0.5, 45°91N×152°29E, h0km, mb4.4/29, mbtmp4.3/36, ML2.9/5, MS3.9/63, Error ellipse: s-maj=13.9km s-min=10.7km az=137.0*
*JMA **12** 11:22:19.8±1.4, 46°N±6′×15°2E±′, h30km, MV4.8/19, KURILE ISLANDS REGION*
*NIED **12** 11:22:19.8, 45°75N×152°71E, h30km, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-4.38; $M_{\theta\theta}$7.66; $M_{\phi\phi}$-3.28; $M_{r\theta}$0.11; $M_{\theta\phi}$-0.39; $M_{\phi r}$3.44; Fault plane solution: $M_0$7.50000×10^{15} NP1: ϕ_s239.00000°, δ57.00000°, λ-140.00000°. NP2: ϕ_s125.00000°, δ58.00000°, λ-40.00000°.*
*BJI **12** 11:22:21.1±0.0, 46°34N×152°67E, h41km, mb4.5/57, mB4.7/32, Ms4.3/42, Ms7 4.2/43*
*SKHL **12** 11:22:21.3±0.6, 45°70N×152°60E, h50km±5km, mb5.3/9, mbv5.3/2, ms4.4/4*
*MOS **12** 11:22:22.8±1.1, 45°90N×152°35E, h46km, mb4.9/61, MS4.0/17, Error ellipse: s-maj=5.9km s-min=4.6km az=90.0*
*NEIC **12** 11:22:23.6±1.3, 45°87N±0°10×152°4E±0°1, h35km±1km, mb4.7/138, Error ellipse: s-maj=18.0km s-min=11.7km az=143.0*
ISC 12 11:22:23.0±0.4,45°84N±0°05×152°41E±0°04, h41km, n651, σ1°64/626, mb4.7/162, MS4.1/84, 47C-36D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**3.25**	**261**	*e*PN	**Pn**	**11 23 12.4**	**+1.0**
KUR				*e*S	**Sn**	**11 23 49.6**	**+0.7**
KUR				pmax	pmax		
	comp=Z,378nm,0.6s						
KUR				pmax	pmax		
	comp=N,130nm,0.3s						
KUR				pmax	pmax		
	comp=E,112nm,0.9s						
KUR				smax	smax		
	comp=N,1μm,0.4s						
KUR				smax	smax		
	comp=E,1μm,0.5s						
KUR				smax	smax		
	comp=N,6μm,1.7s						
KUR				smax	smax		
	comp=E,4μm,1.6s						
KUR				MLR	MLR		
	comp=Z,3μm,9.0s						
KUR	**Kuril'sk**	**3.25**	**261**	*e*P	**Pn**	**11 23 12.3**	**+0.9**
KUR				AMB	AMB	11 23 15.6	
	comp=Z,380nm,0.6s						
KUR				*e*S	**Sn**	**11 23 49.9**	**+1.0**
KUR				A	A	11 23 54.2	
	comp=Z,5μm,2.0s						
KUR				A	A	11 23 54.2	
	comp=Z,4μm,2.0s						
KUR				A	A	11 23 58.4	
	comp=Z,1μm,0.5s						
KUR				A	A	11 23 58.4	
	comp=Z,1μm,0.5s						
KUR				AMS	AMS	11 24 33.0	
	comp=Z,3μm,12.0s						
KUR				AMS	AMS	11 24 33.0	
	comp=Z,5μm,12.0s

comp=E,2μm,0.6s
YUK Yuzh-Kuril'sk 4.99 251 *e*P **Pn 11 23 36.4 +1.1**
YUK AMB AMB 11 23 40.7
comp=E,190nm,0.2s
YUK *e*S **Sn 11 24 32.9 +1.2**
YUK A A 11 24 45.2
comp=E,1μm,0.7s
YUK A A 11 24 45.2
comp=E,2μm,0.7s
YUK AMS AMS 11 25 24.2
comp=E,4μm,13.0s
YUK AMS AMS 11 25 24.2
comp=E,3μm,13.0s
GLVR Golovnino 5.34 249 *e*PN **Pn 11 23 40.6 +0.5**
GLVR pmax pmax
comp=Z,333nm,0.5s
GLVR pmax pmax
comp=E,260nm,0.4s
GLVR pmax pmax
comp=N,85nm,0.2s
GLVR Golovnino 5.34 249 *e*P **Pn 11 23 40.6 +0.5**
GLVR AMB AMB 11 23 56.2
comp=N,330nm,0.5s
GLVR *e*S **Sn 11 24 40.5 +0.3**
GLVR A A 11 24 58.4
comp=N,840nm,0.7s
GLVR A A 11 24 58.4
comp=N,480nm,0.7s
NEM2 Nemuro 2 5.37 245 *e*P **Pn 11 23 39.1 -1.3**
NEM2 *e*S **Sn 11 24 37.6 -3.4**
RUSJ Misakicho 5.37 254 *e*PN **Pn 11 23 42.1 +1.6**
RUSJ *e*S **Sn 11 24 48.2 +7.1**
NMR Nemuro--Hokkai 5.38 245 *e*PN **Pn 11 23 39.0 -1.6**
NMR Nemuro--Hokkai 5.38 245 *e*P **Pn 11 23 39.2 -1.4**
NMR *e*S **Sn 11 24 39.1 -2.1**
SKR Severo-Kuril's 5.44 26⇑ *i*PN **Pn 11 23 41.4 0.0**
SKR pmax pmax
comp=Z,183nm,0.6s
SKR pmax pmax
comp=Z,300nm,2.7s
SKR Severo-Kuril's 5.44 26 *i*P **Pn 11 23 41.4 0.0**
SKR AMB AMB 11 23 43.3
comp=Z,180nm,0.6s
SKR AMB AMB 11 23 45.0
comp=Z,300nm,3.0s
SKR *i*S **Sn 11 24 41.2 -1.4**
SKR A A 11 25 04.6
comp=Z,450nm,0.7s
SKR A A 11 25 04.6
comp=Z,350nm,0.7s
SKR AMS AMS 11 26 14.0
comp=Z,1μm,11.0s
SKR AMS AMS 11 26 14.0
comp=Z,2μm,11.0s
SKR AMS AMS 11 26 14.0
comp=Z,900nm,11.0s
JRA Rausu 5.52 252 *e*P **Pn 11 23 43.9 +1.3**
JNK Nakash 5.93 250 *e*P **Pn 11 23 48.8 +0.6**
AKK Akkeshi 6.11 245 *e*P **Pn 11 23 49.7 -1.0**
AKK *e*S **Sn 11 24 56.6 -2.7**
JAK Akkeshi 6.21 245 *e*P **Pn 11 23 50.6 -1.5**
JAK *e*S **Sn 11 24 57.7 -4.1**
JTKR Abashiri--Toko 6.32 256 *e*P **Pn 11 23 55.0 +1.4**
PAU Pauzhetka 6.34 26 *e*P **Pn 11 23 53.9 +0.2**
PAU AMB AMB 11 23 57.8
comp=Z,70nm,0.4s
PAU *e*S **Sn 11 25 03.4 -1.4**
PAU A A 11 25 11.4
comp=Z,400nm,0.4s
PAU A A 11 25 11.4
comp=Z,320nm,0.4s
JAR Ashorobuto 6.68 251 *e*P **Pn 11 23 59.1 +0.6**
JAR *e*S **Sn 11 25 11.8 -1.5**
YSS Yuzh-Sakhalins 6.77 283 Pn **Pn 11 24 01.8 +2.0**
YSS Yuzh-Sakhalins 6.77 283 *e*PN **Pn 11 24 02.4 +2.7**
YSS pmax pmax
comp=Z,200nm,3.0s
YSS pmax pmax
comp=Z,70nm,0.7s
YSS Yuzh-Sakhalins 6.77 283 *e*P **Pn 11 24 02.1 +2.4**
YSS AMB AMB 11 24 03.4
comp=Z,200nm,3.0s
YSS AMB AMB 11 24 05.5
comp=Z,60nm,0.4s
YSS *e*S **Sn 11 25 17.8 +2.3**
YSS A A 11 25 25.7
comp=Z,30nm,0.6s
YSS A A 11 25 25.7
comp=Z,30nm,0.6s
YSS AMS AMS 11 26 25.0
comp=Z,2μm,18.0s
YSS AMS AMS 11 26 25.0
comp=Z,2μm,18.0s
JOB Onbets 6.81 247 *e*P **Pn 11 23 59.9 -0.4**
JKK2 Kamakawa 2 7.14 257 *e*P **Pn 11 24 07.0 +2.0**
JKA Kamikawa-asahi 7.17 260 Pn 11 24 07.8 +2.6
ASAJ Asahikawa 7.17 260 LR LR 11 26 52.4
comp=Z,946nm,19.4s,baz=60,slow=39
ASAJ Asahikawa 7.17 260 PN **Pn 11 24 07.8 +2.5**
JCH Churui 7.26 247 *e*P **Pn 11 24 05.4 -1.0**
JCH *e*S **Sn 11 25 23.3 -4.2**
JWK2 Keihoku 7.40 270 *e*P Pn 11 24 14.2 +5.9
JAB Ashibetsu 7.63 256 *e*P **Pn 11 24 14.7 +3.2**
ERM Erimo 7.70 243 Pn **Pn 11 24 14.0 +1.6**
ERM Erimo 7.70 243 *ce*PN **Pn 11 24 13.5 +1.0**
ERM pmax pmax
comp=Z,71nm,1.0s
UGL Uglegorsk 7.72 298 *e*PN **Pn 11 24 14.4 +1.7**
UGL pmax pmax
comp=Z,97nm,0.8s
UGL Uglegorsk 7.72 298 *e*P **Pn 11 24 14.4 +1.7**
UGL AMB AMB 11 24 19.0
comp=Z,120nm,0.6s
UGL *e*S **Sn 11 25 39.5 +0.7**
UGL A A 11 25 44.0
comp=Z,220nm,0.6s
UGL A A 11 25 44.0
comp=Z,330nm,0.6s
JNBK Urakawa-nobuka 7.81 246 *e*P **Pn 11 24 12.6 -1.4**
JRBN Rebuntou 7.97 271 *e*P **Pn 11 24 20.1 +4.0**
PEA0B Petropavlovsk- 8.04 23 Pn **Pn 11 24 17.1 0.0**
PEA0B Petropavlovsk- 8.04 23 *ce*PN **Pn 11 24 16.6 -0.6**
PETK Petropavlovsk- 8.04 23 Pn **Pn 11 24 15.5 -1.7**
comp=Z,1.0nm,0.3s,baz=194,slow=17,SNR=14
PETK Sn Sn 11 25 56.6 +10
comp=Z,0.5nm,0.3s,baz=232,slow=7.1,SNR=1.4
comp=Z,32nm,1.0s
PETK Petropavlovsk- 8.04 23 Pn **Pn 11 24 16.7 -0.5**
PETK Petropavlovsk- 8.04 23 PN **Pn 11 24 16.7 -0.5**
TYV Tymovskoe 8.21 311 *e*PN **Pn 11 24 23.8 +4.4**
TYV pmax pmax
comp=Z,19nm,0.7s
TYV pmax pmax
comp=Z,100nm,2.3s
TYV Tymovskoe 8.21 311 *e*P **Pn 11 24 23.2 +3.8**
TYV AMB AMB 11 24 24.3
comp=Z,10.0nm,0.5s
TYV *e*S **Sn 11 25 53.4 +2.6**
TYV A A 11 25 58.7
comp=Z,20nm,0.7s
TYV A A 11 25 58.7
comp=Z,30nm,0.7s
PET Petropavlovsk 8.26 27 Pn **Pn 11 24 20.5 +0.5**
PET Petropavlovsk 8.26 27 *e*PN **Pn 11 24 19.8 -0.2**
PET MLR MLR
comp=Z,300nm,14.0s
PET MLR MLR
comp=Z,500nm,14.0s
PET Petropavlovsk 8.26 27 *e*P **Pn 11 24 20.0 0.0**
PET AMB AMB 11 24 22.0
comp=Z,10.0nm,0.4s
PET *e*S **Sn 11 25 49.5 -2.4**
PET AMS AMS 11 28 49.7
comp=Z,500nm,14.0s
JEW Eniwo 8.41 253 Pn **Pn 11 24 23.8 +1.5**
JANG Nango 9.66 239 *e*P **Pn 11 24 35.7 -3.7**
JANG *e*S Sn 11 26 16.2 -10
JTM Tenmabayashi 9.69 243 Pn **Pn 11 24 37.9 -1.9**
JTH Tanohata 9.73 236 *e*P **Pn 11 24 36.7 -3.7**
JTH *e*S Sn 11 26 18.2 -10
NKL Nikolayevsk 10.56 318 *e*PN **Pn 11 24 49.1 -2.5**
NKL pmax pmax
comp=E,3.0nm,0.4s
NKL pmax pmax
comp=N,2.0nm,1.4s
NKL pmax pmax
comp=Z,42nm,1.2s
NKL MLR MLR
comp=E,93nm,12.0s
NKL MLR MLR
comp=N,18nm,14.0s
NKL MLR MLR
comp=Z,780nm,15.0s
NKL Nikolayevsk 10.56 318 *e*P **Pn 11 24 53.8 +2.2**
NKL AMB AMB 11 24 56.2
comp=Z,90nm,0.7s
GRNR Gornyy 11.73 301⇓ *i*PN Pn 11 25 12.5 +4.9
GRNR *e*S Sn 11 27 27.1 +10
GRNR pmax pmax
comp=E,10.0nm,0.6s
GRNR pmax pmax
comp=N,5.0nm,0.5s
GRNR pmax pmax
comp=Z,9.0nm,0.8s
GRNR smax smax
comp=N,5.0nm,0.6s
GRNR MLR MLR
comp=N,250nm,16.0s
GRNR MLR MLR
comp=Z,710nm,16.0s
GRNR Gornyy 11.73 301 *e*rx rx 11 25 12.5
GRNR AMB AMB 11 25 13.6
comp=Z,90nm,0.8s
JMM Marumori 11.76 231 Pn **Pn 11 25 08.4 +0.3**
JSD Sado 13.10 238 Pn **Pn 11 25 22.6 -3.7**
MA2 Magadan 13.79 356 Pn **Pn 11 25 35.4 -0.3**
comp=Z,13nm,0.7s,baz=164,slow=8.0,SNR=6.5
MA2 LR LR 11 31 09.2
comp=Z,422nm,18.7s,baz=176,slow=39
MA2 Magadan 13.79 356⇑ *e*P **Pn 11 25 36.3 +0.6**
MA2 pmax pmax
comp=Z,15nm,0.8s
MA2 Magadan 13.79 356 *e*P **Pn 11 25 36.3 +0.6**
MJA0 Matsu Arr-Jizo 14.13 234 *e*P **Pn 11 25 38.1 -2.3**
MJAR Matsushiro Arr 14.15 234 Pn **Pn 11 25 37.5 -3.2**
baz=39,slow=14,SNR=11
MJAR LR LR 11 32 36.6
comp=Z,158nm,18.8s,baz=62,slow=44
comp=Z,2.4nm,0.8s
MJAR Matsushiro Arr 14.15 234 Pn **Pn 11 25 38.1 -2.6**
MJAR Matsushiro Arr 14.15 234 P **Pn 11 25 38.1 -2.6**
MJB9 Matsu-Tunnel 14.15 234 Pn **Pn 11 25 38.6 -2.1**
KLR Kul'dur 14.36 291 Pn **Pn 11 25 40.7 -2.7**
comp=Z,0.1nm,0.3s,baz=100,slow=14,SNR=4.9
KLR LR LR 11 31 28.4
comp=Z,861nm,19.0s,baz=96,slow=39
comp=Z,1.6nm,0.8s
KLR Kul'dur 14.36 291⇑ *e*P **Pn 11 25 44.8 +1.4**
KLR pmax pmax
comp=Z,39nm,1.7s
KLR Kul'dur 14.36 291 *e*P **Pn 11 25 44.1 +0.7**
USA0B Ussuriysk Arra 14.54 271 Pn **Pn 11 25 45.7 -0.2**
USA0B Ussuriysk Arra 14.54 271⇑ *e*P **Pn 11 25 46.0 +0.1**
USRK Ussuriysk Ar. 14.54 271 Pn **Pn 11 25 42.2 -3.6**
comp=Z,0.3nm,0.3s,baz=78,slow=12,SNR=5.6
USRK LR LR 11 31 28.0
comp=Z,652nm,18.0s,baz=60,slow=38
comp=Z,6.3nm,0.8s
USRK Ussuriysk Ar. 14.54 271 Pn **Pn 11 25 45.5 -0.4**
USRK Ussuriysk Ar. 14.54 271 P **Pn 11 25 45.5 -0.4**
JGF Kuroka 15.30 233 Pn **Pn 11 25 56.7 +0.6**
MSHR Mys Shultsa 15.58 266⇓ *e*P **Pn 11 25 59.8 +0.2**
MSHR pmax pmax
comp=Z,6.0nm,0.9s
SHEM Shemya Is, Ala 15.70 56 Pn **Pn 11 25 59.5 -1.6**
comp=Z,19nm,0.7s,baz=262,slow=7.3,SNR=4.8
SHEM Sn **Sn 11 28 44.1 -10**
comp=Z,0.9nm,0.3s,baz=253,slow=20,SNR=1.9
SHEM LR LR 11 31 01.6
comp=Z,144nm,20.0s,baz=282,slow=33
SMY Shemya 15.70 56 Pn **Pn 11 25 58.9 -2.1**
SMY lAmb lAmb 11 26 08.0
comp=Z,122nm,1.4s
SMY Shemya 15.70 56 P **Pn 11 25 58.9 -2.1**
SMY pmax pmax
comp=Z,122nm,1.4s
MDJ Mudanjiang 16.12 274 P **P 11 26 08.6 -0.6**
MDJ pP pP 11 26 17.8 -1.1
MDJ S **Sn 11 29 05.2 +1.2**
MDJ ScP **ScP 11 34 29.5 -1.6**
MDJ ScS **ScS 11 38 10.4 +0.5**
MDJ pmax pmax
comp=Z,14nm,1.1s
MDJ pmax pmax
comp=Z,100nm,4.0s
MDJ LR LR
comp=Z,340nm,14.5s
MDJ LR LR
comp=Z,670nm,17.8s
MDJ LR LR
comp=Z,840nm,17.1s
SEY Seymchan 17.12 360 P **Pn 11 26 15.7 -3.3**
comp=Z,0.2nm,0.3s,baz=143,slow=9.8,SNR=6.2
SEY LR LR 11 33 25.0
comp=Z,413nm,18.2s,baz=182,slow=39
comp=Z,4.8nm,1.1s
SEY Seymchan 17.12 360⇓ *e*P **Pn 11 26 17.5 -1.5**
SEY pmax pmax
comp=Z,8.0nm,1.3s
SEY Seymchan 17.12 360 *e*P **Pn 11 26 17.5 -1.5**
BNX BinXian 17.43 279⇓ P **Pn 11 26 22.3 -0.5**
BNX S **Sn 11 29 33.4 -2.3**
BNX pmax pmax
comp=Z,8.0nm,0.8s
BNX pmax pmax
comp=Z,50nm,5.5s
BNX LR LR
comp=Z,150nm,15.3s
BNX LR LR
comp=Z,530nm,18.0s
BNX LR LR
comp=Z,610nm,18.0s
ZEA Zeya 17.99 305 *e*P **Pn 11 26 30.0 +0.3**
ZEA pmax pmax
comp=E,20nm,1.2s
ZEA pmax pmax
comp=N,10.0nm,1.0s
ZEA pmax pmax
comp=Z,20nm,1.5s
ZEA MLR MLR
comp=N,100nm,13.0s
ZEA Zeya 17.99 305 *e*P **P 11 26 32.3 +2.4**
ZEA AMB AMB 11 26 35.3
comp=N,30nm,0.8s
CN2 Changchun 19.21 274 *e*P **P 11 26 42.9 -0.4**
CN2 *ep*P pP 11 26 54.2 +1.2
CN2 *e*S **S 11 30 08.3 -10**
CN2 pmax pmax
comp=N,10.0nm,0.5s
CN2 LR LR
comp=N,500nm,15.0s
CN2 LR LR
comp=N,600nm,15.0s
CN2 LR LR
comp=N,600nm,17.0s
SEHB SEOHWA 19.42 256 P **Pn 11 26 46.9 -0.2**
KSRS Korea Array 20.07 254 P **P 11 26 52.6 -0.1**
comp=N,3.9nm,0.8s,baz=68,slow=11,SNR=14
KSRS LR LR 11 34 01.1
comp=N,257nm,18.8s,baz=55,slow=35
comp=N,3.9nm,0.8s
KSAR Wonju Array Be 20.10 254 P **P 11 26 54.1 +1.0**
KSAR Wonju Array Be 20.10 254 P **P 11 26 54.1 +1.0**
JCJ Chichijima 20.41 207 LR LR 11 36 42.3
comp=N,66nm,19.0s,baz=138,slow=42
YAK Yakutsk 20.84 329 P **P 11 27 01.9 +1.1**
comp=N,6.2nm,0.5s,baz=108,slow=1.5,SNR=2.0
YAK S **S 11 30 45.0 -5.6**
comp=N,4.3nm,0.5s,baz=176,slow=1.2,SNR=1.4
YAK LR LR 11 34 59.4
comp=N,301nm,19.7s,baz=90,slow=37
YAK Yakutsk 20.84 329 P **P 11 27 01.3 +0.5**
YAK Yakutsk 20.84 329 *d*P Pn 11 27 06.9 +3.4
YAK *e* 11 31 14.3
YAK *e*SS Sn 11 31 21.5 +24
YAK *e* 11 38 30.3
YAK pmax pmax
comp=Z,97nm,0.9s
YAK pmax pmax
comp=E,32nm,1.3s
YAK pmax pmax
comp=N,27nm,1.0s
YAK MLR MLR
comp=Z,309nm,19.0s
YAK MLR MLR
comp=N,234nm,18.0s
YAK MLR MLR
comp=E,123nm,17.0s
TJN Taejon 21.04 252 P **P 11 27 03.1 0.0**
TJN Taejon 21.04 252⇑ *e*P **P 11 27 06.7 +3.5**
BILL Bilibino 23.39 13 *i*P **P 11 27 25.3 -2.3**
BILL *i* 11 27 32.0
BILL *i* 11 27 42.1
BILL pmax pmax
comp=Z,13nm,1.0s
BILL MLR MLR
comp=Z,260nm,19.0s
BJI Beijing 26.99 271 P **P 11 28 04.9 +4.1**
BJI pmax pmax
comp=Z,3.0nm,0.4s
BJI LR LR
comp=Z,170nm,13.9s
BJI LR LR
comp=Z,410nm,15.1s
BJI LR LR
comp=Z,500nm,16.4s
TIXI Tiksi 28.21 344 P **P 11 28 09.6 -1.7**
comp=Z,0.7nm,0.3s,baz=90,slow=23,SNR=2.0
TIXI LR LR 11 39 49.6
comp=Z,236nm,20.4s,baz=180,slow=37
comp=Z,0.7nm,0.3s
TIXI Tiksi 28.21 344⇑ *e*P **P 11 28 10.7 -0.6**
TIXI pmax pmax
comp=Z,1.0nm,0.8s
TIXI MLR MLR
comp=Z,215nm,16.0s
H11N2 WAKE ISLAND Hy 28.65 151 T T 11 58 35.1
baz=339,slow=74
H11N1 WAKE ISLAND Hy 28.67 151 T T 11 58 42.5
baz=339
H11N3 WAKE ISLAND Hy 28.67 151 T T 11 58 37.4
baz=339,slow=74
HNS HongShan 29.20 267⇓ P **P 11 28 23.1 +2.6**
HNS *e*S **S 11 33 10.4 +0.3**
HNS LR LR
comp=Z,130nm,12.6s
HNS LR LR
comp=Z,250nm,13.6s
HNS LR LR
comp=Z,210nm,22.6s
NJ2 Nanjing 29.27 254 *e*P P 11 28 26.1 +4.9
NJ2 pmax pmax
comp=Z,8.0nm,0.6s
NJ2 LR LR
comp=Z,460nm,17.2s
NJ2 LR LR
comp=Z,400nm,20.6s
H11S1 WAKE ISLAND Hy 29.72 152 T T 11 59 57.5
baz=336,slow=76
H11S3 WAKE ISLAND Hy 29.73 152 T T 12 00 01.3
baz=336
H11S2 WAKE ISLAND Hy 29.74 152 T T 12 00 01.9
baz=336,slow=76
HHC Hu-ho-hao-te 29.88 275 *e*P **P 11 28 29.5 +2.8**
HHC pmax pmax
comp=Z,35nm,0.8s
HHC pmax pmax
comp=Z,180nm,5.1s
HHC LR LR
comp=Z,360nm,14.0s
HHC LR LR
comp=Z,870nm,14.0s
HHC LR LR
comp=Z,1μm,14.0s
ULN Ulaanbaatar 30.75 290⇑ *e*P **P 11 28 35.4 +1.1**
ULN pmax pmax
comp=Z,2.0nm,0.9s
ULN Ulaanbaatar 30.75 290 *e*P **P 11 28 35.4 +1.1**
SONM Songino Array 31.19 291 P **P 11 28 36.7 -1.5**
comp=Z,0.3nm,0.3s,baz=88,slow=40,SNR=2.5
SONM LR LR 11 42 03.9
comp=Z,367nm,19.1s,baz=78,slow=38
comp=Z,0.3nm,0.3s
N16K Nishlik Lake 31.88 45 P **P 11 28 45.3 +1.3**
baz=265,SNR=5.2
LYN LuoYang 32.21 264⇓ P **P 11 28 48.6 +1.5**
LYN pmax pmax
comp=Z,10.0nm,0.5s
LYN LR LR
comp=Z,290nm,16.5s
LYN LR LR
comp=Z,290nm,11.0s
O17K Koliganek Bris 32.67 46 P **P 11 28 52.2 +1.4**
baz=268
GUMO Guam 32.78 194 LR LR 11 42 23.4
comp=Z,69nm,18.5s,baz=28,slow=37
N18K Kilae Creek 33.31 45 P **P 11 28 55.5 -0.9**
N18K Kilae Creek 33.31 45 P **P 11 28 58.1 +1.6**
baz=267
P18K Big Mountain, 33.61 47 P **P 11 29 00.3 +1.2**
P18K lAmb lAmb 11 29 01.9
comp=Z,6.5nm,0.8s
P18K Big Mountain, 33.61 47 P **P 11 29 00.3 +1.2**
baz=270,SNR=5.3
M19K Big River Lodg 34.09 43 P **P 11 29 04.2 +0.9**
baz=267
K20K Telida 34.34 40 P **P 11 29 06.6 +1.2**
baz=265
L20K Farewell, AK 34.37 42 P **P 11 29 06.1 +0.5**
baz=267
J20K Nowinta River 34.39 39 P **P 11 29 06.6 +0.9**
J20K Nowinta River 34.39 39 P **P 11 29 06.9 +1.1**
baz=264
OHAK Old Harbor 34.72 51 P **P 11 29 08.5 -0.1**
baz=275
IMAR Indian Mountai 34.79 35 P **P 11 29 09.6 +0.4**
XAN Xi'an 34.96 266 P **P 11 29 06.9 -4.2**
XAN pP pP 11 29 16.2 -5.0
XAN pmax pmax
comp=Z,5.0nm,0.9s
XAN LR LR
comp=N,250nm,13.6s
XAN LR LR
comp=E,200nm,13.7s
XAN LR LR
comp=Z,300nm,15.8s
KDAK Kodiak Island 35.05 50 P **P 11 29 11.2 -0.4**
comp=Z,12nm,0.7s,baz=302,slow=6.2,SNR=18
comp=Z,12nm,0.7s
KDAK Kodiak Island 35.05 50 P **P 11 29 11.6 +0.1**
KDAK Kodiak Island 35.05 50 *e*P **P 11 29 11.6 +0.1**
KDAK Kodiak Island 35.05 50 P **P 11 29 11.6 +0.1**
baz=274
Q20K Shuyak Island 35.10 48 P **P 11 29 11.8 -0.1**
baz=274
H21K Melozitna Rive 35.13 36 P **P 11 29 13.2 +1.0**
H21K lAmb lAmb 11 29 14.1
comp=Z,5.9nm,0.8s
H21K Melozitna Rive 35.13 36 P **P 11 29 13.1 +1.0**
baz=263,SNR=13
PPLA Purkeypile 35.16 41 P **P 11 29 12.7 0.0**
PPLA lAmb lAmb 11 29 25.4
comp=Z,15nm,1.2s
I21K Tanana 35.42 37 P **P 11 29 15.3 +0.7**
I21K Tanana 35.42 37 P **P 11 29 15.8 +1.2**
baz=264,SNR=7.4
SKT Skwentna 35.45 42 P **P 11 29 17.0 +2.0**
baz=269
MLY Manley 35.93 37 P **P 11 29 20.5 +1.4**
MLY Manley 35.93 37 P **P 11 29 20.5 +1.4**
baz=266,SNR=6.2
TRF Thorofare Moun 36.05 40 P **P 11 29 20.7 +0.5**
TRF lAmb lAmb 11 29 23.0
comp=Z,6.2nm,0.9s
TRF Thorofare Moun 36.05 40 P **P 11 29 21.2 +1.0**
baz=268
H23K Yukon River 36.49 36 P **P 11 29 25.2 +1.5**
H23K lAmb lAmb 11 29 26.1
comp=Z,6.3nm,0.8s
H23K Yukon River 36.49 36 P **P 11 29 25.3 +1.5**
baz=266,SNR=14
I23K Minto, Yukon-K 36.52 37 P **P 11 29 25.2 +1.1**
I23K Minto, Yukon-K 36.52 37 P **P 11 29 25.1 +1.1**
baz=267
NEA2 Nenana 36.62 38 P **P 11 29 25.8 +0.9**
NEA2 lAmb lAmb 11 29 26.6
comp=Z,5.3nm,0.8s
NEA2 Nenana 36.62 38 P **P 11 29 25.7 +0.8**

baz=268,SNR=11
MCK McKinley 36.66 40 P **P** **11 29 25.9 +0.7**
baz=269
TOLK Toolik Lake Re 36.77 31 P **P** **11 29 26.4 +0.2**
TOLK Toolik Lake Re 36.77 31 P **P** **11 29 27.3 +1.1**
baz=262
KNK Knik Glacier 36.92 43 P **P** **11 29 28.5 +1.0**
baz=273
SML Sawmill 36.96 43 P **P** **11 29 28.8 +0.9**
SML Sawmill 36.96 43 P **P** **11 29 28.8 +0.9**
SML pmax pmax
comp=Z,17nm,0.8s
SML Sawmill 36.96 43 P **P** **11 29 28.9 +0.9**
baz=272,SNR=8.9
TCOL CIGO, UAF Yank 37.15 38 P **P** **11 29 30.6 +1.3**
baz=269,SNR=5.2
COLA College 37.15 38 *ce*P **P** **11 29 30.7 +1.3**
COLA pmax pmax
comp=Z,8.0nm,0.8s
CCB Clear Creek Bu 37.17 38 P **P** **11 29 30.4 +0.9**
H24K Noodor Dome 37.17 36 P **P** **11 29 30.6 +0.9**
H24K Noodor Dome 37.17 36 P **P** **11 29 31.1 +1.5**
baz=268,SNR=9.7
WAT6 Susitna Watana 37.21 41 P **P** **11 29 30.4 +0.3**
baz=272
M23K Glacier View 37.25 43 P **P** **11 29 31.0 +0.6**
baz=273
POKR Poker Plat Res 37.33 37 P **P** **11 29 32.7 +1.7**
POKR IAmb IAmb 11 29 33.2
comp=Z,13nm,0.8s
POKR Poker Plat Res 37.33 37 P **P** **11 29 32.6 +1.7**
baz=269,SNR=9.2
DHY Denali Highway 37.36 41 P **P** **11 29 31.4 -0.1**
DHY Denali Highway 37.36 41 P **P** **11 29 31.6 +0.2**
baz=272
LZH Lanzhou 37.44 273 ⇓P **P** **11 29 34.0 +1.6**
LZH pP sP 11 29 47.7 -0.2
LZH sP pP 11 29 52.9 +10
LZH pmax pmax
comp=Z,36nm,1.3s
LZH LR LR
comp=Z,280nm,13.4s
LZH LR LR
comp=Z,260nm,14.0s
LZH LR LR
comp=Z,410nm,15.5s
HDA Harding Lake 37.53 38 P **P** **11 29 33.0 +0.4**
HDA Harding Lake 37.53 38 P **P** **11 29 32.7 +0.1**
baz=270,SNR=5.9
IL31 37.56 38 P **P** **11 29 33.3 +0.5**
ILAR Eielson Array 37.56 38 P **P** **11 29 32.6 -0.3**
comp=Z,2.2nm,0.9s,baz=258,slow=7.2,SNR=24
comp=Z,2.2nm,0.9s
ILAR Eielson Array 37.56 38 P **P** **11 29 33.3 +0.4**
ILAR Eielson Array 37.56 38 P **P** **11 29 33.3 +0.4**
M24K Tolsona, Glenn 37.97 42 P **P** **11 29 38.0 +1.6**
M24K IAmb IAmb 11 29 49.9
comp=Z,16nm,1.1s
M24K Tolsona, Glenn 37.97 42 P **P** **11 29 37.1 +0.7**
baz=274
K24K Donnelly Dome 38.06 39 P **P** **11 29 37.5 +0.4**
baz=272,SNR=5.5
KLU Klutina 38.13 43 P **P** **11 29 38.7 +0.9**
baz=275
J25K Salcha River, 38.22 38 P **P** **11 29 38.1 -0.4**
J25K Salcha River, 38.22 38 P **P** **11 29 38.1 -0.4**
baz=271,SNR=9.3
PAX Paxson 38.24 41 P **P** **11 29 38.5 -0.2**
baz=273
RIDG Independent Ri 38.48 39 P **P** **11 29 41.1 +0.4**
RIDG Independent Ri 38.48 39 P **P** **11 29 41.2 +0.5**
baz=273
BMAR Burnt Mountain 38.54 34 P **P** **11 29 43.1 +1.9**
GTA Gaotai 38.64 280 *e*P **P** **11 29 43.0 +0.6**
GTA pmax pmax
comp=Z,3.0nm,0.4s
GTA pmax pmax
comp=Z,79nm,5.1s
GTA LR LR
comp=Z,170nm,15.3s
GTA LR LR
comp=Z,240nm,16.7s
GTA LR LR
comp=Z,270nm,16.7s
BMRM Bremner River 38.82 44 P **P** **11 29 45.0 +1.5**
baz=277
DOT Dot Lake 38.83 40 P **P** **11 29 43.8 +0.2**
SCRK Sand Creek 38.84 39 P **P** **11 29 44.0 +0.2**
baz=273
J26L Joseph Creek 39.00 38 P **P** **11 29 46.1 +1.0**
J26L Joseph Creek 39.00 38 P **P** **11 29 45.8 +0.8**
baz=273
L26K Log Cabin Wild 39.20 41 P **P** **11 29 48.5 +1.8**
baz=275
NRIK Noril'sk 39.29 330 LR LR 11 46 57.3
comp=Z,154nm,18.1s,baz=48,slow=38
NRIK Noril'sk 39.29 330⇑ *e*P **P** **11 29 46.0 -1.3**
NRIK pmax pmax
comp=Z,2.0nm,1.0s
VRDI Verde Repeater 39.34 43 P **P** **11 29 49.2 +1.1**
M26K Nabesna, AK 39.42 41 P **P** **11 29 49.6 +1.0**
M26K Nabesna, AK 39.42 41 P **P** **11 29 50.2 +1.6**
baz=276,SNR=9.3
K27K Chicken 39.68 39 P **P** **11 29 51.6 +1.0**
K27K IAmb IAmb 11 29 52.9
comp=Z,12nm,0.9s
K27K Chicken 39.68 39 P **P** **11 29 52.1 +1.4**
baz=275
L27K Beaver Creek, 39.88 40 P **P** **11 29 53.7 +1.3**
L27K Beaver Creek, 39.88 40 P **P** **11 29 54.1 +1.7**
baz=276
BCAR Beaver Creek A 39.90 40 P **P** **11 29 54.2 +1.6**
M27K Edge Creek, AK 39.94 41 P **P** **11 29 54.8 +1.8**
baz=277
CD2 Chengdu 40.32 266 P **P** **11 29 57.3 +0.9**
CD2 S **S** **11 35 57.5 -3.8**
CD2 pmax pmax
comp=Z,140nm,2.4s
CD2 LR LR
comp=Z,270nm,6.7s
CD2 LR LR
comp=Z,200nm,9.3s
CTG Chitna Glacier 40.40 44 P **P** **11 29 58.3 +1.5**
baz=279
BVCY Beaver Creek 40.41 41 P **P** **11 29 58.4 +1.6**
baz=278
YUK3 Moose Creek 40.69 42 P **P** **11 30 00.4 +1.2**
baz=279
DAWY Dawson 40.85 39 P **P** **11 30 01.6 +1.2**
DAWY Dawson 40.85 39 P **P** **11 30 01.3 +0.9**
baz=277
I29M Ogilvie Camp, 41.16 37 P **P** **11 30 04.1 +1.2**
I29M Ogilvie Camp, 41.16 37 P **P** **11 30 04.1 +1.2**
baz=277,SNR=8.3
YUK4 Talbot Arm 41.62 43 P **P** **11 30 08.6 +1.7**
baz=281
HYT Haines Junctio 42.26 43 P **P** **11 30 13.5 +1.4**
HYT Haines Junctio 42.26 43 P **P** **11 30 14.2 +2.1**
baz=282
INK Inuvik 42.68 32 P **P** **11 30 15.8 +0.7**
comp=Z,4.2nm,0.7s,baz=287,slow=6.5,SNR=16
comp=Z,4.2nm,0.7s
INK Inuvik 42.68 32 P **P** **11 30 16.7 +1.6**
INK Inuvik 42.68 32 P **P** **11 30 16.3 +1.1**
baz=278,SNR=5.8
ZALV Zalesovo Beam 42.75 306 P **P** **11 30 14.8 -1.2**
comp=Z,0.6nm,0.5s,baz=127,slow=9.6,SNR=2.1
ZALV PcP **PcP** **11 32 07.0 +0.2**
comp=Z,1.3nm,0.7s,baz=85,slow=1.8,SNR=5.6
ZALV LR LR 11 49 10.2
comp=Z,569nm,18.3s,baz=44,slow=38
comp=Z,0.6nm,0.5s
N31M Braeburn, Yuko 42.94 42 P **P** **11 30 20.1 +2.6**
baz=283
O30N Mendenhall 42.95 43 P **P** **11 30 19.5 +1.9**
baz=283
PLBC Pleasant Camp 43.14 45 P **P** **11 30 21.2 +2.2**
baz=285
M31M Drury Creek, Y 43.42 41 P **P** **11 30 21.8 +0.6**
baz=283
GOMU GeErMu 43.66 278 P **P** **11 30 24.2 +0.2**
GOMU pmax pmax
comp=Z,3.0nm,0.9s
GOMU pmax pmax
comp=Z,65nm,5.3s
GOMU LR LR
comp=Z,58nm,11.2s
GOMU LR LR
comp=Z,73nm,11.3s
GOMU LR LR
comp=Z,68nm,12.0s
FARO Faro, Yukon 43.88 41 P **P** **11 30 25.8 +0.7**
baz=284
PZH PanZhiHua 44.41 262 P **P** **11 30 32.1 +2.3**
PZH pmax pmax
comp=Z,8.0nm,0.7s
PZH pmax pmax
comp=Z,110nm,5.1s
KMI Kunming 44.60 260 ⇑P **P** **11 30 35.0 +3.5**
KMI pmax pmax
comp=Z,7.0nm,0.9s
P33M Teslin, Yukon 44.66 43 P **P** **11 30 32.6 +1.2**
baz=286
MMPY Sheldon Lake, 44.73 40 P **P** **11 30 34.1 +2.3**
baz=285
WMQ Urumqi 44.81 292 *e*P **P** **11 30 32.2 -0.5**
WMQ LR LR
comp=Z,270nm,18.5s
WMQ LR LR
comp=Z,220nm,14.1s
DLBC Dease Lake 46.58 45 P **P** **11 30 49.3 +2.8**
baz=290
MK31 Makanchi Array 46.93 298 P **P** **11 30 49.2 -0.2**
MK31 Makanchi Array 46.93 298 *ce*P **P** **11 30 48.4 -1.0**
MKAR Makanchi Array 46.93 298 P **P** **11 30 48.2 -1.2**
comp=Z,1.8nm,0.8s,baz=70,slow=8.0,SNR=12
MKAR PcP **PcP** **11 32 21.3 -0.1**
comp=Z,0.9nm,0.6s,baz=75,slow=2.9,SNR=4.0
MKAR ScP **ScP** **11 36 13.7 +2.0**
comp=Z,0.6nm,0.7s,baz=72,slow=4.0,SNR=3.9
MKAR LR LR 11 51 32.0
comp=Z,476nm,18.9s,baz=70,slow=38
comp=Z,1.8nm,0.8s
MKAR Makanchi Array 46.93 298 P **P** **11 30 48.6 -0.8**
MKAR Makanchi Array 46.93 298 P **P** **11 30 48.6 -0.8**
KURK Kurchatov 47.47 304 P **P** **11 30 53.1 -0.3**
KURK Kurchatov 47.47 304⇑ *e*P **P** **11 30 52.0 -1.4**
KURK pmax pmax
comp=Z,3.0nm,0.9s
KURBB Kurchatov Arra 47.56 304 LR LR 11 51 45.3
comp=Z,168nm,18.5s,baz=12,slow=37
KRVT Keravat (AS076 49.93 181 LR LR 11 54 13.5
comp=Z,43nm,18.1s,baz=223,slow=38
SIJI Sorong 50.13 208 P **P** **11 31 13.5 -0.7**
comp=Z,5.4nm,0.7s,baz=349,slow=8.1,SNR=4.4
SIJI LR LR 11 54 17.7
comp=Z,38nm,18.1s,baz=25,slow=38
comp=Z,5.4nm,0.7s
CMAR Chiang Mai Arr 51.68 256 P **P** **11 31 27.0 +1.1**
comp=Z,1.8nm,0.7s,baz=38,slow=7.8,SNR=11
CMAR LR LR 11 54 57.6
comp=Z,88nm,19.3s,baz=45,slow=38
comp=Z,1.8nm,0.7s
CMAR Chiang Mai Arr 51.68 256 *i* P **P** **11 31 28.1 +2.2**
CMAR pmax pmax
comp=Z,2.0nm,0.7s
RES Resolute Bay 51.85 18 LR LR 11 56 43.6
comp=Z,68nm,18.9s,baz=221,slow=40
YKA Yellowknife Ar 51.94 36 P **P** **11 31 28.4 +1.1**
comp=Z,2.5nm,0.9s,baz=299,slow=7.3,SNR=8.1
comp=Z,2.5nm,0.9s
NOR Nord 52.67 358 *i* P **P** **11 31 33.5 +1.1**
NOR IAmb IAmb 11 31 50.6
comp=Z,1.1nm,0.7s
AAK Ala-Archa 53.80 297 LR LR 11 55 52.8
comp=Z,313nm,18.3s,baz=52,slow=38
AAK Ala-Archa 53.80 297⇑ *e*P **P** **11 31 41.9 +0.4**
AAK pmax pmax
comp=Z,4.0nm,0.7s
AAK Ala-Archa 53.80 297 *e*P **P** **11 31 41.9 +0.4**
KSH Kashi 54.55 293 P **P** **11 31 49.9 +2.9**
KSH pP pwP 11 32 02.0 0.0
KSH pmax pmax
comp=Z,5.0nm,0.9s
KSH LR LR
comp=Z,1μm,20.1s
KSH LR LR
comp=Z,640nm,19.1s
KSH LR LR
comp=Z,430nm,17.7s
NLWA Neilton Lookou 54.78 56 P **P** **11 31 49.4 +1.0**
ARU Arti 55.35 318 LR LR 11 57 05.9
comp=Z,138nm,19.5s,baz=16,slow=38
ARU Arti 55.35 318 P **P** **11 31 51.5 -0.8**
ARU IAmb IAmb 11 31 52.8
comp=Z,12nm,1.2s
ARU Arti 55.35 318 *c* iP **P** **11 31 50.7 -1.6**
ARU S **S** **11 39 32.5 -0.9**
ARU pmax pmax
comp=Z,11nm,1.2s
ARU MLR MLR
comp=Z,195nm,15.0s
HNR Honiara 55.44 171 LR LR 11 52 57.3
comp=Z,51nm,20.5s,baz=29,slow=33
KK31 Karatay Array 56.01 299 P **P** **11 31 57.8 +0.5**
KK31 Karatay Array 56.01 299 P **P** **11 31 57.8 +0.5**
KK31 pmax pmax
comp=Z,4.0nm,1.0s
KKAR Karatay Array 56.01 299 P **P** **11 31 57.4 +0.1**
KKAR Karatay Array 56.01 299 P **P** **11 31 57.8 +0.5**
KKAR IAmb IAmb 11 31 58.4
comp=Z,3.9nm,0.9s
KKAR Karatay Array 56.01 299 P **P** **11 31 57.8 +0.5**
KKAR pmax pmax
comp=Z,4.0nm,1.0s
B08A Colville Reser 56.84 53 P **P** **11 32 03.0 -0.1**
B08A IAmb IAmb 11 32 05.2
comp=Z,7.5nm,1.1s
I03D Drain, OR 57.10 59 P **P** **11 32 07.2 +2.2**
baz=304
HOOD Mount Hood Mea 57.20 57 P **P** **11 32 07.5 +1.7**
H04A Detroit Lake 57.24 58 P **P** **11 32 08.0 +2.0**
H04A IAmb IAmb 11 32 08.8
comp=Z,12nm,1.0s
G05D Wamic, OR 57.44 57 P **P** **11 32 09.5 +2.1**
baz=304
DAG Danmarks Havn 57.53 358 P **P** **11 32 07.6 +0.1**
DAG pmax pmax
comp=Z,6.0nm,1.0s
DAG Danmarks Havn 57.53 358 *i* P **P** **11 32 07.0 -0.5**
DAG IAmb IAmb 11 32 08.2
comp=Z,3.5nm,0.8s
BTK Batken 57.53 296 P **P** **11 32 08.9 +0.7**
BTK IAmb IAmb 11 32 10.5
comp=Z,6.6nm,0.8s
BTK Batken 57.53 296 P **P** **11 32 08.9 +0.7**
BTK pmax pmax
comp=Z,7.0nm,0.8s
I04A Tendick Farm, 57.61 59 P **P** **11 32 10.7 +2.1**
baz=305
C09A Chrisman Ranch 57.74 53 P **P** **11 32 09.8 +0.3**
C09A IAmb IAmb 11 32 11.5
comp=Z,6.5nm,0.9s
I05D Terrebonne, OR 57.94 58 P **P** **11 32 13.0 +2.0**
baz=305
J04D Umpqua Nationa 58.10 59 P **P** **11 32 14.8 +2.5**
baz=305
NEW Newport 58.11 52 LR LR 11 54 41.2
comp=Z,37nm,21.5s,baz=290,slow=33
NEW Newport 58.11 52 P **P** **11 32 13.4 +1.4**
NEW Newport 58.11 52 P **P** **11 32 13.5 +1.4**
NEW pmax pmax
comp=Z,4.0nm,1.0s
NEW Newport 58.11 52 P **P** **11 32 13.5 +1.4**
baz=305
KIRV Kirov 58.21 323 LR LR 11 59 48.3
comp=Z,204nm,18.2s,baz=36,slow=39
GAR Garm 58.46 295 P **P** **11 32 15.8 +1.0**
PINE Pine Mountain 58.48 58 P **P** **11 32 17.0 +2.0**
PINE IAmb IAmb 11 32 18.3
comp=Z,9.6nm,0.9s
E09A Wood Farm, Sta 58.54 54 P **P** **11 32 15.8 +0.8**
E09A IAmb IAmb 11 32 17.4
comp=Z,7.5nm,1.0s
ARCES ARCESS Array B 58.55 341 P **P** **11 32 15.1 +0.3**
comp=Z,2.5nm,0.9s,baz=38,slow=6.1,SNR=5.0
ARCES LR LR 12 00 45.2
comp=Z,98nm,19.6s,baz=91,slow=40
comp=Z,2.5nm,0.9s
ARCES ARCESS Array B 58.55 341 P **P** **11 32 14.5 -0.3**
ARCES IAmb IAmb 11 32 26.7
comp=Z,6.2nm,1.1s
L04D Klamath Falls 58.57 60 P **P** **11 32 17.8 +2.3**
baz=305
J05D Fort Rock, OR 58.60 59 P **P** **11 32 18.2 +2.5**
baz=305
ABKAR Akbulak array 58.63 310 P **P** **11 32 15.1 -0.5**
ABKAR Akbulak array 58.63 310 P **P** **11 32 15.2 -0.5**
ABKAR IAmb IAmb 11 32 16.1
comp=Z,4.4nm,1.1s
G08A Pilot Rock 58.78 56 P **P** **11 32 16.9 0.0**
G08A IAmb IAmb 11 32 19.4
comp=Z,5.1nm,1.0s
AKTO Aktyubinsk 58.97 312 LR LR 12 00 10.0
comp=Z,473nm,18.5s,baz=49,slow=39
K05A Summer Lake 59.13 59 P **P** **11 32 20.4 +0.9**
CHGR Chuyangaron 59.39 295 P **P** **11 32 21.7 +0.5**
CHGR Chuyangaron 59.39 295 P **P** **11 32 21.7 +0.5**
CHGR pmax pmax
comp=Z,46nm,0.9s
BMO Blue Mountains 59.99 55 P **P** **11 32 26.1 +0.9**
BMO IAmb IAmb 11 32 28.0
comp=Z,4.3nm,1.0s
BMO Blue Mountains 59.99 55 P **P** **11 32 26.1 +0.9**
BMO pmax pmax
comp=Z,4.0nm,1.0s
UPNV Upernavik 60.01 9 *i* P **P** **11 32 23.1 -1.7**
UPNV IAmb IAmb 11 32 24.7
comp=Z,8.3nm,0.8s
DBG Daneborg 60.04 358 *i* P **P** **11 32 23.8 -1.2**
DBG IAmb IAmb 11 32 28.6
comp=Z,6.1nm,1.2s
J08A Circle Bar Ran 60.19 57 P **P** **11 32 27.5 +0.8**
J08A IAmb IAmb 11 32 29.6
comp=Z,9.0nm,1.1s
PLID Pearl Lake 60.59 54 P **P** **11 32 31.0 +1.4**
WVOR Wild Horse Val 60.65 58 P **P** **11 32 30.6 +0.8**
WVOR IAmb IAmb 11 32 32.5
comp=Z,7.0nm,0.9s
WVOR Wild Horse Val 60.65 58 P **P** **11 32 30.6 +0.8**
WVOR pmax pmax
comp=Z,7.0nm,1.0s
MSO Missoula 60.70 52 P **P** **11 32 31.9 +1.8**
MSO IAmb IAmb 11 32 32.5
comp=Z,8.3nm,0.9s
MSO Missoula 60.70 52 P **P** **11 32 31.5 +1.4**
baz=307,SNR=14
SUMG Summit 61.64 4 P **P** **11 32 37.0 +0.6**
SUMG Summit 61.64 4 P **P** **11 32 37.0 +0.6**
SUMG pmax pmax
comp=Z,15nm,0.8s
SUMG Summit 61.64 4 *i* P **P** **11 32 36.9 +0.6**
SUMG IAmb IAmb 11 32 39.0
comp=Z,14nm,0.8s
HRY Holter Researc 61.92 51 P **P** **11 32 39.4 +1.0**
VCNR Virginia City 61.93 62 P **P** **11 32 40.1 +1.5**
VCNR IAmb IAmb 11 32 41.5
comp=Z,8.0nm,0.8s
KBL Kabul 61.95 292 P **P** **11 32 38.8 0.0**
KBL Kabul 61.95 292 P **P** **11 32 38.8 0.0**
KBL pmax pmax
comp=Z,12nm,0.8s
LRM Limekiln Ridge 62.13 52 P **P** **11 32 41.2 +1.3**
CMB Columbia Colle 62.24 63 P **P** **11 32 41.8 +1.3**
CMB IAmb IAmb 11 32 43.3
comp=Z,5.9nm,0.9s
CMB Columbia Colle 62.24 63 P **P** **11 32 41.8 +1.3**
CMB pmax pmax
comp=Z,6.0nm,0.9s
YERR Yerington 62.37 62 P **P** **11 32 43.5 +2.0**
HLID Hailey 62.42 55 P **P** **11 32 43.8 +2.0**
baz=308,SNR=7.7
BCYI Bear Canyon 62.53 54 P **P** **11 32 44.1 +1.5**
JMIC Jan Mayen 62.67 353 LR LR 11 57 45.7
comp=Z,31nm,21.1s,baz=273,slow=34
BMN Battle Mountai 62.71 59 P **P** **11 32 45.1 +1.4**
BMN IAmb IAmb 11 32 46.6
comp=Z,6.3nm,0.8s
BMN Battle Mountai 62.71 59 P **P** **11 32 45.1 +1.4**
BMN pmax pmax
comp=Z,6.0nm,0.8s
BOZ Bozeman (W) 62.73 52 P **P** **11 32 44.8 +1.0**
BOZ IAmb IAmb 11 32 46.0
comp=Z,5.6nm,0.8s
BOZ Bozeman (W) 62.73 52 P **P** **11 32 44.8 +1.0**
BOZ pmax pmax
comp=Z,6.0nm,0.8s
BOZ Bozeman (W) 62.73 52 P **P** **11 32 45.6 +1.8**
baz=309,SNR=16
BELG Belogornoye 62.89 318 LR LR 12 02 33.1
comp=Z,174nm,18.1s,baz=34,slow=38
KVN Kaiserville 63.03 61 P **P** **11 32 47.2 +1.3**
KVN Kaiserville 63.03 61 P **P** **11 32 47.3 +1.3**
KVN pmax pmax
comp=Z,11nm,1.0s
NVAR Mina Array Bea 63.29 62 P **P** **11 32 49.2 +1.5**
comp=Z,6.4nm,0.7s,baz=287,slow=6.8,SNR=64
comp=Z,6.4nm,0.7s
YHL Hebgen Lake 63.44 52 P **P** **11 32 50.1 +1.4**
YHL IAmb IAmb 11 32 51.5
comp=Z,5.3nm,1.0s
GCMT Greycliff 63.67 51 P **P** **11 32 52.1 +2.1**
ELK Elko 63.69 58 LR LR 11 55 50.2
comp=Z,31nm,21.6s,baz=220,slow=32
ELK Elko 63.69 58 P **P** **11 32 52.1 +1.7**
H17A Grant Village 64.06 52 P **P** **11 32 56.3 +3.5**
baz=310,SNR=7.9
TPH Tonopah 64.17 61 P **P** **11 32 54.6 +1.1**
TPH Tonopah 64.17 61 P **P** **11 32 54.6 +1.1**
TPH pmax pmax
comp=Z,40nm,0.9s
RLMT Red Lodge 64.32 51 P **P** **11 32 56.1 +1.7**
RLMT IAmb IAmb 11 32 58.0
comp=Z,8.4nm,1.1s
RLMT Red Lodge 64.32 51 P **P** **11 32 56.4 +2.1**
baz=310,SNR=5.2
MOOW Moose Ponds 64.38 53 P **P** **11 32 56.8 +1.9**
MOOW IAmb IAmb 11 32 58.0
comp=Z,7.2nm,1.2s
VES Vestal, Richgr 64.42 64 P **P** **11 32 56.1 +1.2**
baz=309
HVU Hansel Valley 64.48 56 P **P** **11 32 57.2 +1.8**
HVU IAmb IAmb 11 32 58.2
comp=Z,6.2nm,1.0s
HVU Hansel Valley 64.48 56 P **P** **11 32 57.2 +1.8**
HVU pmax pmax
comp=Z,6.0nm,1.0s
PKM Mcpherson Peak 64.56 65 P **P** **11 32 58.3 +2.2**
baz=310
FINES FINESS Array B 64.65 335 P **P** **11 32 56.3 +0.3**
comp=Z,7.3nm,0.7s,baz=46,slow=8.2,SNR=23
FINES LR LR 12 03 54.5
comp=Z,144nm,18.8s,baz=36,slow=39
comp=Z,7.3nm,0.7s
CWC Cottonwood Cre 64.67 63 P **P** **11 32 58.4 +1.6**
baz=310
GRAC Grapevine Rang 64.77 62 P **P** **11 32 58.9 +1.7**
GRAC Grapevine Rang 64.77 62 P **P** **11 32 59.3 +2.1**
baz=310,SNR=10.0
ISA Isabella, Lake 64.92 64 P **P** **11 32 59.1 +0.9**
baz=310
R11A Troy Canyon, C 65.00 60 P **P** **11 33 00.4 +1.5**
R11A IAmb IAmb 11 33 01.4
comp=Z,5.5nm,0.9s
R11A Troy Canyon, C 65.00 60 P **P** **11 33 00.3 +1.5**
baz=310,SNR=15
ARVC Arvin 65.04 65 P **P** **11 33 00.6 +1.7**
baz=310
ICESG Greenland Ices 65.04 5 *i* P **P** **11 32 57.5 -1.3**
ICESG *eP* **P** **11 32 57.9 -0.9**
ICESG Amb 11 33 00.7
comp=Z,6.3nm,0.9s
MPMC Manual Prospec 65.29 63 P **P** **11 33 02.6 +1.8**
baz=310,SNR=11
FURC Furnace Creek, 65.41 62 P **P** **11 33 03.4 +2.1**
baz=310,SNR=13
DUG Dugway, Tooele 65.47 57 P **P** **11 33 03.6 +1.7**
DUG pmax pmax
comp=Z,12nm,1.0s
DUG Dugway, Tooele 65.47 57 P **P** **11 33 04.0 +2.1**
baz=310,SNR=11
TPNV Topopah Spring 65.49 62 P **P** **11 33 03.6 +1.6**
baz=310,SNR=9.6
LRMC Laurel Mtn Rad 65.53 64 P **P** **11 33 03.7 +1.3**
baz=310
BW06 Boulder Array 65.68 53 P **P** **11 33 04.3 +1.0**
BW06 IAmb IAmb 11 33 05.6
comp=Z,8.0nm,1.0s
BW06 Boulder Array 65.68 53 P **P** **11 33 04.8 +1.6**
baz=311,SNR=8.9

PD31 Pinedale Array 65.68 53 P **P** **11 33 04.1 +0.8**
PD31 IAmb IAmb 11 33 05.5
comp=Z,6.7nm,0.9s
PDAR Pinedale Array 65.68 53 P **P** **11 33 04.5 +1.2**
comp=Z,4.6nm,0.9s,baz=318,slow=2.0,SNR=30
PDAR LR LR 11 58 25.5
comp=Z,25nm,21.5s,baz=291,slow=33
comp=Z,4.6nm,0.9s
GWY Greenwater Val 65.72 63 P **P** **11 33 04.6 +1.1**
GWY IAmb IAmb 11 33 05.9
comp=Z,8.3nm,0.8s
EDW2 Edwards Air Fo 65.72 64 P **P** **11 33 05.4 +2.0**
baz=310,SNR=6.9
QSM Queen of Sheba 65.73 63 P **P** **11 33 04.9 +1.5**
QSM IAmb IAmb 11 33 06.0
comp=Z,7.9nm,0.8s
OBN Obninsk 65.78 325 *i* P **P** **11 33 02.5 -0.9**
OBN *i* 11 33 16.9
OBN pmax pmax
comp=Z,5.0nm,0.8s
OBN MLR MLR
comp=Z,112nm,20.0s
OBN Obninsk 65.78 325 *e*P **P** **11 33 02.5 -0.9**
PSUT Pine Spring 65.92 59 P **P** **11 33 05.8 +0.9**
PRN Pahroc Range 65.93 61 P **P** **11 33 05.6 +0.8**
PRN IAmb IAmb 11 33 08.6
comp=Z,4.5nm,1.0s
HEL Helsinki 65.99 334 P **P** **11 33 00.9 -3.7**
HEL pmax pmax
comp=Z,8.0nm,0.8s
NLU North Lily Min 66.06 57 P **P** **11 33 06.8 +1.0**
NLU IAmb IAmb 11 33 08.4
comp=Z,7.4nm,0.9s
FRB Frobisher Bay 66.06 19 LR LR 12 05 38.3
comp=Z,47nm,18.1s,baz=346,slow=39
SFJD Kangerlussuaq 66.13 10 LR LR 12 04 02.3
comp=Z,96nm,19.3s,baz=351,slow=38
SHOC Shoshone, Teco 66.14 63 P **P** **11 33 07.8 +1.7**
baz=310
GSC Goldstone, Bar 66.20 63 P **P** **11 33 08.2 +1.7**
baz=310
MPU Maple Canyon 66.28 57 P **P** **11 33 08.0 +0.9**
MPU IAmb IAmb 11 33 09.8
comp=Z,7.6nm,0.9s
BFSC Mount Baldy Ra 66.35 65 P **P** **11 33 09.1 +1.6**
baz=310
GEYT Alibeck 66.65 301 P **P** **11 33 10.3 +0.9**
comp=Z,6.2nm,0.7s,baz=54,slow=10.0,SNR=7.9
comp=Z,6.2nm,0.7s
GEYT Alibeck 66.65 301 P **P** **11 33 10.6 +1.2**
GEYT IAmb IAmb 11 33 12.1
comp=Z,7.1nm,0.8s
TUQ Turquoise Moun 66.66 63 P **P** **11 33 11.2 +1.7**
baz=311,SNR=8.2
BBRC Big Bear Solar 66.80 64 P **P** **11 33 12.2 +1.7**
baz=311
HEC Hector,Ludlow 66.80 63 P **P** **11 33 12.0 +1.7**
baz=311,SNR=5.9
CCUT Cedar City 66.86 60 P **P** **11 33 11.9 +1.1**
CCUT IAmb IAmb 11 33 13.7
comp=Z,5.3nm,1.0s
MURC Murrieta 67.05 65 P **P** **11 33 12.9 +1.0**
baz=311
DY2G Dye2 67.10 8 *i* P **P** **11 33 09.9 -2.0**
DY2G IAmb IAmb 11 33 20.4
comp=Z,4.9nm,0.7s
RDMU Red Mountain 67.11 55 P **P** **11 33 14.3 +1.9**
GMRC Granite Mounta 67.25 63 P **P** **11 33 14.9 +1.6**
baz=311
MSVF Nonsavu 67.41 153 LR LR 11 56 59.3
comp=Z,101nm,20.7s,baz=359,slow=31
K22A Casper 67.43 52 P **P** **11 33 15.8 +1.4**
baz=312
WR0 Warramunga Arr 67.47 198 P **P** **11 33 15.6 +1.1**
WR0 IAmb IAmb 11 33 37.8
comp=Z,5.7nm,1.2s
WB2 Warramunga Arr 67.50 198 P **P** **11 33 15.3 +0.6**
WB2 IAmb IAmb 11 33 17.8
comp=Z,10.0nm,1.2s
WRA Warramunga Arr 67.50 198 P **P** **11 33 15.0 +0.3**
comp=Z,2.9nm,0.8s,baz=18,slow=6.5,SNR=13
WRA LR LR 12 04 24.5
comp=Z,26nm,18.9s,baz=44,slow=37
comp=Z,2.9nm,0.8s
SRU San Rafael Swe 67.52 57 P **P** **11 33 15.7 +0.7**
SRU San Rafael Swe 67.52 57 P **P** **11 33 15.7 +0.7**
SRU pmax pmax
comp=Z,12nm,0.9s
ULM Lac du Bonnet 67.53 40 P **P** **11 33 13.9 -0.7**
comp=Z,2.6nm,0.7s,baz=296,slow=7.9,SNR=5.2
ULM LR LR 12 04 11.1
comp=Z,28nm,19.9s,baz=306,slow=37
comp=Z,2.6nm,0.7s
ULM Lac du Bonnet 67.53 40 P **P** **11 33 13.5 -1.1**
AFI Afiamalu 67.69 142 LR LR 11 56 16.5
comp=Z,71nm,20.5s,baz=44,slow=30
RSSD Black Hills 67.78 49 P **P** **11 33 17.3 +0.7**
RSSD Black Hills 67.78 49 P **P** **11 33 17.3 +0.7**
RSSD pmax pmax
comp=Z,13nm,1.0s
RSSD Black Hills 67.78 49 P **P** **11 33 18.0 +1.3**
baz=313
IRM Iron Mountain 67.98 63 P **P** **11 33 19.5 +1.7**
baz=311
BC3 Big Chuckawall 68.11 64 P **P** **11 33 20.0 +1.3**
baz=311
W13A Hualapai Mount 68.14 62 P **P** **11 33 20.3 +1.3**
U15A North Rim 68.24 60 P **P** **11 33 20.9 +1.2**
U15A IAmb IAmb 11 33 22.7
comp=Z,7.2nm,0.9s
PDMCI Parker Dam,Lak 68.51 63 P **P** **11 33 22.8 +1.8**
baz=312
NC405 NORSAR Array S 68.75 341 P **P** **11 33 22.6 +0.4**
DZM Mont Dzumac 68.78 166 LR LR 11 57 52.4
comp=Z,68nm,19.4s,baz=320,slow=31
PV23 Carpenter Ridg 68.84 56 P **P** **11 33 23.7 +0.3**
PV23 IAmb IAmb 11 33 25.9
comp=Z,11nm,1.1s
PV10 Paradox Valley 68.87 56 P **P** **11 33 25.2 +1.6**
NB2 NORSAR Subarra 68.93 341 P **P** **11 33 23.2 -0.1**
comp=Z,3.1nm,0.8s,baz=27,slow=6.5
NOA NORSAR Array B 68.93 341 P **P** **11 33 23.0 -0.2**
comp=Z,5.3nm,0.8s,baz=28,slow=6.4,SNR=26
NOA LR LR 12 07 39.3
comp=Z,76nm,18.2s,baz=15,slow=40
comp=Z,5.3nm,0.8s
N23A Red Feather La 68.94 53 P **P** **11 33 25.7 +1.7**
baz=313,SNR=6.6
PV13 Radium Mtn., P 69.15 56 P **P** **11 33 25.9 +0.6**
WUAZ Wupatki 69.40 60 P **P** **11 33 28.1 +1.3**
WUAZ IAmb IAmb 11 33 29.8
comp=Z,6.1nm,1.0s
WUAZ Wupatki 69.40 60 P **P** **11 33 28.7 +1.9**
baz=312
SMCO Snowmass 69.52 55 P **P** **11 33 28.1 +0.4**
SMCO IAmb IAmb 11 33 30.1
comp=Z,5.0nm,0.9s
NACGM Naroch 69.60 330⇑ *e*P P 11 33 19.7 -7.8
baz=38
ISCO Idaho Springs 69.87 53 P **P** **11 33 30.8 +1.0**
ISCO IAmb IAmb 11 33 32.5
comp=Z,5.2nm,0.8s
ISCO Idaho Springs 69.87 53 P **P** **11 33 30.8 +1.0**
ISCO pmax pmax
comp=Z,5.0nm,0.9s
ISCO Idaho Springs 69.87 53 P **P** **11 33 31.5 +1.7**
baz=313,SNR=7.8
MVCO Mesa Verde 69.97 57 P **P** **11 33 31.0 +0.6**
MVCO IAmb IAmb 11 33 32.8
comp=Z,7.4nm,0.9s
MVCO Mesa Verde 69.97 57 P **P** **11 33 31.9 +1.5**
baz=313,SNR=5.9
X16A Lo Mia Camp, P 70.09 61 P **P** **11 33 32.8 +1.7**
X16A IAmb IAmb 11 33 34.1
comp=Z,7.0nm,0.9s
F33A 5 Mile Ranch, 70.50 44 P **P** **11 33 33.4 +0.3**
F33A IAmb IAmb 11 33 34.8
comp=Z,11nm,0.9s
S22A 4UR Ranch, Cre 70.58 56 P **P** **11 33 35.4 +1.3**
S22A IAmb IAmb 11 33 37.1
comp=Z,6.7nm,1.1s
S22A 4UR Ranch, Cre 70.58 56 P **P** **11 33 36.1 +1.9**
baz=313,SNR=7.5
OGNE Ogallala 71.04 50 P **P** **11 33 36.9 +0.2**
OGNE Ogallala 71.04 50 P **P** **11 33 38.0 +1.3**
baz=315,SNR=11
KIV Kislovodsk 71.08 314 *e*P **P** **11 33 39.2 +2.4**
KIV pmax pmax
comp=Z,17nm,1.1s
KIV MLR MLR
comp=Z,101nm,18.0s
KBZ Khabaz 71.14 314 P **P** **11 33 38.0 +1.0**
comp=Z,14nm,0.8s,baz=72,slow=2.5,SNR=31
KBZ LR LR 12 09 26.1
comp=Z,188nm,18.1s,baz=53,slow=40
comp=Z,14nm,0.8s
KBZ Khabaz 71.14 314 *de*P **P** **11 33 38.6 +1.6**
KBZ pmax pmax
comp=Z,15nm,0.9s
KBZ Khabaz 71.14 314 *e*P **P** **11 33 38.6 +1.6**
EYMN Ely 71.18 40 P **P** **11 33 38.0 +0.7**
EYMN IAmb IAmb 11 33 38.7
comp=Z,10nm,1.1s
EYMN Ely 71.18 40 P **P** **11 33 37.9 +0.7**
baz=319,SNR=7.1
ASAR Alice Springs 71.19 198 P **P** **11 33 38.8 +1.3**
comp=Z,2.8nm,0.9s,baz=18,slow=5.6,SNR=18
ASAR LR LR 12 07 04.0
comp=Z,23nm,18.9s,baz=342,slow=38
comp=Z,2.8nm,0.9s
SDCO Great Sand Dun 71.34 55 P **P** **11 33 40.1 +1.4**
baz=314
ONI Oni 71.67 313 P **P** **11 33 42.3 +1.9**
ONI IAmb IAmb 11 33 43.9
comp=Z,6.7nm,0.8s
ONI Oni 71.67 313 P **P** **11 33 42.3 +1.9**
ONI pmax pmax
comp=Z,7.0nm,0.8s
ECSD EROS Data Cent 71.87 45 P **P** **11 33 42.1 +0.6**
ECSD EROS Data Cent 71.87 45 P **P** **11 33 42.0 +0.6**
baz=317,SNR=16
TUC Tucson 71.92 62 P **P** **11 33 43.6 +1.5**
baz=313
AKASG Malin Array Be 72.03 326 P **P** **11 33 41.7 -0.5**
comp=Z,6.7nm,0.7s,baz=32,slow=6.4,SNR=39
AKASG LR LR 12 07 40.0
comp=Z,152nm,20.2s,baz=49,slow=38
comp=Z,6.7nm,0.7s
AKASG Malin Array Be 72.03 326 P **P** **11 33 43.0 +0.7**
AKASG Malin Array Be 72.03 326 P **P** **11 33 43.0 +0.7**
AKASG pmax pmax
comp=Z,2.0nm,0.9s
AKBB Malin Array Si 72.03 326 P **P** **11 33 42.1 -0.2**
AKBB IAmb IAmb 11 33 43.5
comp=Z,10nm,0.8s
AKBB Malin Array Si 72.03 326 *de*P **P** **11 33 42.4 +0.1**
KIEV Kiev 72.04 326 P **P** **11 33 41.0 -1.3**
E38A The Farm, Brul 72.16 41 P **P** **11 33 43.8 +0.7**
T25A Trinidad 72.39 55 P **P** **11 33 46.4 +1.4**
baz=315,SNR=5.4
AKH Akhalkalaki 72.50 312⇑ P **P** **11 33 49.0 +3.4**
ANMO Albuquerque 72.73 58 LR LR 12 03 08.3
comp=Z,23nm,20.3s,baz=244,slow=34
ANMO Albuquerque 72.73 58 *de*P **P** **11 33 48.4 +1.4**
ANMO pmax pmax
comp=Z,4.0nm,1.3s
ANMO Albuquerque 72.73 58 P **P** **11 33 48.4 +1.4**
baz=314
GNI Garni 72.75 310 LR LR 12 09 16.1
comp=Z,217nm,18.9s,baz=64,slow=39
GNI Garni 72.75 310⇑ *e*P **P** **11 33 48.7 +1.7**
GNI pmax pmax
comp=Z,8.0nm,0.9s
I37A Lemond, Waseca 73.23 43 P **P** **11 33 50.9 +1.3**
121A Cookes Peak, D 73.61 60 P **P** **11 33 54.5 +2.3**
baz=314
SCHQ Scheffer ville 74.33 22 P **P** **11 33 56.7 +0.8**
comp=Z,2.9nm,0.8s,baz=354,slow=5.5,SNR=3.9
comp=Z,2.9nm,0.8s
SORM Soroca 74.41 325⇓ P **P** **11 33 56.7 +0.3**
SORM Soroca 74.41 325⇓ P **P** **11 33 56.7 +0.3**
KMPD K-Podol'skiy 74.82 326 P **P** **11 33 59.0 +0.3**
MILM Milestii Mici 75.20 324⇓ P **P** **11 33 59.4 -1.5**
MILM Milestii Mici 75.20 324⇓ P **P** **11 33 59.4 -1.5**
MORS Morshin 75.33 328 P **P** **11 34 03.3 +1.6**
AMTX Amarillo 75.55 55 P **P** **11 34 04.0 +0.8**
AMTX IAmb IAmb 11 34 05.7
comp=Z,11nm,0.9s
AMTX Amarillo 75.55 55 P **P** **11 34 04.8 +1.5**
baz=316
MSTX Muleshoe 75.57 56 P **P** **11 34 05.2 +1.7**
baz=316
MNTX Cornudas Mount 75.64 59 P **P** **11 34 05.5 +1.7**
baz=315,SNR=7.9
VASR Vaslui 75.84 324⇓ P **P** **11 34 06.0 +1.4**
BUR08 Bucovina Ar. S 76.06 326 P **P** **11 34 07.0 +1.0**
BUR08 IAmb IAmb 11 34 08.8
comp=Z,8.8nm,0.8s
BURAR Bucovina Array 76.07 326⇓ P **P** **11 34 06.2 +0.1**
BURAR Bucovina Array 76.07 326 P **P** **11 34 06.8 +0.7**
BURAR Bucovina Array 76.07 326⇓ P **P** **11 34 06.2 +0.1**
KOLS Kolonicke sedl 76.09 329 *e*P **P** **11 34 07.2 +1.1**
KOLS pmax pmax
comp=Z,15nm,0.9s
KOLS Kolonicke sedl 76.09 329 *e*P **P** **11 34 07.2 +1.1**
WSAR Wadi Sarin 76.22 289 LR LR 12 11 46.5
comp=Z,143nm,19.8s,baz=63,slow=39
BIZ Bicaz 76.28 325⇑ P **P** **11 34 08.3 +1.2**
VLDR Vladesti 76.36 324⇑ P **P** **11 34 07.2 -0.4**
NIE Niedzica 76.38 330 *e*P **P** **11 34 09.2 +1.5**
CRVS Cervenica-Dubn 76.41 329 *e*P **P** **11 34 09.1 +1.2**
CRVS pmax pmax
comp=Z,11nm,1.1s
CRVS Cervenica-Dubn 76.41 329 *e*P **P** **11 34 09.1 +1.2**
TESR Tescani 76.41 325⇑ P **P** **11 34 08.9 +1.0**
VARL Varlezi 76.41 324⇑ P P 11 33 51.3 -17
KSP Ksiaz 76.49 333 *e*P **P** **11 34 08.9 +0.6**
KSP *e*L L 12 11 24.0
comp=Z,173nm,20.4s
KSP Ksiaz 76.49 333 P **P** **11 34 09.3 +1.0**
KSP pmax pmax
comp=Z,10.0nm,0.9s
TRSU Trosnyk 76.54 328 P **P** **11 34 10.2 +1.7**
TLCR 76.58 323⇑ P **P** **11 34 04.8 -4.0**
TLCR 76.58 323⇑ P **P** **11 34 04.8 -4.0**
OKC Ostrava-Krasne 76.76 332 *e*P **P** **11 34 10.9 +1.1**
OKC MLR MLR
comp=Z,100nm,23.0s
OKC Ostrava-Krasne 76.76 332 *e*P **P** **11 34 10.9 +1.1**
OKC AMS AMS 12 13 40.0
comp=Z,100nm,23.0s
OSTC Ostas 76.77 333 *e*P **P** **11 34 10.7 +0.8**
OSTC AMS AMS 12 12 00.0
comp=Z,200nm,16.3s
CHVC Chvalec 76.79 333 *e*P **P** **11 34 11.1 +1.1**
CHVC AMS AMS 12 11 00.0
comp=Z,100nm,15.1s
ARCR ARCALIA 76.84 326⇑ P **P** **11 34 12.3 +1.9**
UPC Upice 76.87 333 *e*P **P** **11 34 11.2 +0.8**
UPC MLR MLR
comp=Z,200nm,23.0s
UPC Upice 76.87 333 *e*P **P** **11 34 11.2 +0.8**
UPC AMS AMS 12 11 10.0
comp=Z,200nm,23.0s
CFR Carcaliu 76.88 323⇓ P **P** **11 34 12.3 +1.8**
LANS Liptovska Anna 76.90 330 *e*P **P** **11 34 12.9 +2.2**
LANS pmax pmax
comp=Z,9.0nm,0.9s
LANS Liptovska Anna 76.90 330 *e*P **P** **11 34 12.9 +2.2**
VRI Vrincioaia 76.90 324⇑ P **P** **11 34 10.9 +0.2**
VRI Vrincioaia 76.90 324⇑ P **P** **11 34 10.9 +0.2**
DPC Dobruska-Polom 76.91 333 *e*P **P** **11 34 11.3 +0.6**
DPC MLR MLR
comp=Z,200nm,20.3s
DPC Dobruska-Polom 76.91 333 *e*P **P** **11 34 11.3 +0.6**
DPC AMS AMS 12 12 00.0
comp=Z,200nm,20.3s
T35A Sooner Cattle 76.93 50 P **P** **11 34 11.7 +0.7**
T35A IAmb IAmb 11 34 12.6
comp=Z,11nm,0.9s
PLOR Plostina 76.94 324⇑ P **P** **11 34 15.5 +4.5**
PLOR Plostina 76.94 324⇑ P **P** **11 34 15.5 +4.5**
KRLC Kraliky 77.00 332 *e*P **P** **11 34 11.7 +0.5**
KRLC MLR MLR
comp=Z,100nm,21.0s
KRLC Kraliky 77.00 332 *e*P **P** **11 34 11.7 +0.5**
KRLC AMS AMS 12 10 40.0
comp=Z,100nm,21.0s
MORC Moravsky Berou 77.01 332⇓ P **P** **11 34 12.3 +1.0**
MORC Moravsky Berou 77.01 332 P **P** **11 34 12.2 +1.0**
MORC Moravsky Berou 77.01 332⇓ P **P** **11 34 12.3 +1.0**
MORC Moravsky Berou 77.01 332 *e*P **P** **11 34 12.1 +0.8**
TPGR Topolog 77.01 323⇑ P **P** **11 34 12.6 +1.2**
CLL Collm 77.09 335 P **P** **11 34 11.7 +0.1**
CLL Collm 77.09 335 *i* P **P** **11 34 11.7 +0.1**
CLL pmax pmax
comp=Z,13nm,0.9s
CLL Collm 77.09 335 *i* P **P** **11 34 11.7 +0.1**
comp=Z,13nm,0.9s
CLL LmV 12 11 00.0
comp=Z,100nm,19.2s
EKA Eskdalemuir Ar 77.10 346 P **P** **11 34 12.5 +0.9**
KECS Kecovo 77.11 329 *e*P **P** **11 34 12.8 +1.0**
KECS Kecovo 77.11 329 *e*P **P** **11 34 12.8 +1.0**
COVR Voineasa-Covas 77.13 325⇑ P **P** **11 34 13.8 +1.8**
BRG Berggiesshubel 77.19 334 *e*P **P** **11 34 12.8 +0.5**
BRG Amp 11 34 16.7
comp=Z,5.1nm,1.0s
BRG Berggiesshubel 77.19 334 *e*P **P** **11 34 12.7 +0.5**
BRG pmax pmax
comp=Z,5.0nm,1.0s
MAUC Maruska 77.27 331 *e*P **P** **11 34 14.3 +1.6**
PVCC Panska Ves 77.30 334 AMS AMS 12 12 20.0
comp=Z,100nm,14.4s
MESR Meseseni 77.33 327⇑ P **P** **11 34 15.1 +2.1**
HARR Harsova 77.35 323⇓ P **P** **11 34 09.3 -3.9**
HARR Harsova 77.35 323⇓ P **P** **11 34 09.3 -3.9**
DOPR Dopca 77.36 325⇑ P **P** **11 34 15.0 +1.7**
TLBR Topalu 77.42 323⇑ P **P** **11 34 14.3 +0.7**
CJR Cluj-Napoca 77.44 327⇑ P **P** **11 34 15.7 +1.9**
CJR Cluj-Napoca 77.44 327⇑ P **P** **11 34 15.7 +1.9**
MLR Muntele Rosu 77.52 325 LR LR 12 11 14.4
comp=Z,85nm,19.7s,baz=62,slow=38
MLR Muntele Rosu 77.52 325 P **P** **11 34 15.5 +1.1**
MLR pmax pmax
comp=Z,10.0nm,0.8s
DRGR 77.72 327⇓ P **P** **11 34 16.1 +0.8**
DRGR 77.72 327⇓ P **P** **11 34 16.1 +0.8**
VRAC Vranov 77.73 332⇑ P **P** **11 34 16.4 +1.1**
VRAC Vranov 77.73 332 LR LR 12 13 28.6
comp=Z,139nm,20.6s,baz=24,slow=40
VRAC Vranov 77.73 332⇑ P **P** **11 34 16.4 +1.1**
VRAC Vranov 77.73 332 *e*P **P** **11 34 16.4 +1.1**
JAVC Velka Javorina 77.76 331 *e*P **P** **11 34 17.2 +1.7**
PRU Pruhonice 77.79 334 *e*P **P** **11 34 16.9 +1.3**
PRU MLR MLR
comp=Z,200nm,21.7s
PRU Pruhonice 77.79 334 *e*P **P** **11 34 16.9 +1.3**
PRU AMS AMS 12 12 20.0
comp=Z,200nm,21.7s
PSZ Piszkesteto 77.80 330⇓ P **P** **11 34 16.8 +1.1**
PSZ Piszkesteto 77.80 330 P **P** **11 34 16.6 +0.8**
PSZ IAmb IAmb 11 34 18.3
comp=Z,9.8nm,1.0s
PSZ Piszkesteto 77.80 330 P **P** **11 34 16.6 +0.8**
PSZ pmax pmax
comp=Z,10.0nm,1.0s
BORR Bors 77.81 328⇑ P P 11 34 04.3 -11
HDIL Hopedale 77.84 43 P **P** **11 34 16.5 +0.5**
baz=321
VOIR 77.93 325⇑ P **P** **11 34 17.7 +1.1**
VOIR 77.93 325⇑ P **P** **11 34 17.7 +1.1**
STKA Stephens Creek 77.97 189 P **P** **11 34 17.4 +0.8**
comp=Z,3.2nm,1.0s,baz=352,slow=10,SNR=4.4
STKA LR LR 12 10 03.9
comp=Z,35nm,19.7s,baz=26,slow=37
comp=Z,3.2nm,1.0s
KRUC Moravsky 78.01 332 P **P** **11 34 18.2 +1.4**
KRUC pmax pmax
comp=Z,16nm,1.0s
KRUC Moravsky 78.01 332 *e*P **P** **11 34 17.7 +0.9**
TREC Trest 78.10 333 AMS AMS 12 12 00.0
comp=Z,200nm,20.5s
SMOL Smolenice 78.14 331 *e*P **P** **11 34 18.9 +1.3**
SMOL pmax pmax
comp=Z,5.0nm,1.1s
SMOL Smolenice 78.14 331 *e*P **P** **11 34 18.9 +1.3**
NKC Novy Kostel 78.20 335 AMS AMS 12 11 50.0
comp=Z,100nm,18.4s
MODS Modra-Piesok 78.31 331 *e*P **P** **11 34 20.2 +1.7**
MODS pmax pmax
comp=Z,18nm,1.0s
MODS Modra-Piesok 78.31 331 *e*P **P** **11 34 20.2 +1.7**
ABTX Abilene, Hawle 78.35 55 P **P** **11 34 20.3 +1.3**
baz=317
TX31 Lajitas Ar. Si 78.36 60 P **P** **11 34 20.6 +1.3**
TX32 Lajitas Array 78.36 60 P **P** **11 34 20.6 +1.3**
TX32 IAmb IAmb 11 34 21.6
comp=Z,9.1nm,0.8s
TXAR Lajitas Array 78.36 60 P **P** **11 34 20.6 +1.3**
comp=Z,7.8nm,0.7s,baz=300,slow=4.2,SNR=121
comp=Z,7.8nm,0.7s
BR131 Keskin Array S 78.71 316 P **P** **11 34 22.0 +0.9**
BR131 IAmb IAmb 11 34 23.5
comp=Z,8.2nm,1.1s
BR131 Keskin Array S 78.71 316 P **P** **11 34 22.0 +0.9**
BR131 pmax pmax
comp=Z,8.0nm,1.1s
BRTR Keskin Array B 78.71 316 P **P** **11 34 21.8 +0.7**
comp=Z,4.4nm,1.0s,baz=57,slow=4.6,SNR=19
BRTR LR LR 12 14 50.7
comp=Z,148nm,18.1s,baz=54,slow=40
comp=Z,4.4nm,1.0s
BRTR Keskin Array B 78.71 316 P **P** **11 34 21.5 +0.5**
BRTR Keskin Array B 78.71 316 *i* P **P** **11 34 22.2 +1.1**
BRTR pmax pmax
comp=Z,4.0nm,1.0s
HHAR Hobbs 78.77 49 P **P** **11 34 21.9 +0.7**
HHAR IAmb IAmb 11 34 22.6
comp=Z,7.8nm,1.1s
CCM Cathedral Cave 78.81 46 P **P** **11 34 22.2 +0.8**
CCM IAmb IAmb 11 34 22.9
comp=Z,7.5nm,0.9s
CCM Cathedral Cave 78.81 46 P **P** **11 34 22.2 +0.8**
CCM pmax pmax
comp=Z,8.0nm,0.9s
CCM Cathedral Cave 78.81 46 P **P** **11 34 21.9 +0.5**
baz=320
KHC Kasperske Hory 78.84 334 *e*P **P** **11 34 21.7 +0.2**
KHC *e* 11 34 31.0
KHC MLR MLR
comp=Z,200nm,18.9s
KHC Kasperske Hory 78.84 334 *e*P **P** **11 34 21.7 +0.2**
KHC *ep*P **PcP** **11 34 31.0 +0.9**
KHC AMS AMS 12 13 10.0
comp=Z,200nm,18.9s
GZR Gura Zlata 78.86 326⇑ P **P** **11 34 21.9 +0.2**
GZR Gura Zlata 78.86 326⇑ P **P** **11 34 21.9 +0.2**
CKRC Cesky Krumlov 78.89 333 *e*P **P** **11 34 22.5 +0.8**
GERES GERESS Array B 79.05 334 P **P** **11 34 23.3 +0.6**
comp=Z,2.1nm,0.9s,baz=40,slow=2.3,SNR=15
comp=Z,2.1nm,0.9s
BZS Buzias 79.11 327⇓ P **P** **11 34 23.8 +0.8**
BZS Buzias 79.11 327⇓ P **P** **11 34 23.8 +0.8**
CONA Conrad Observa 79.17 332 *e*P **P** **11 34 24.5 +1.1**
comp=Z,4.8nm,0.9s,SNR=6.5
RONA Rosalia, Austr 79.22 332 *e*P **P** **11 34 25.0 +1.4**
comp=Z,7.5nm,1.2s
U40A Yellville 79.28 48 P **P** **11 34 24.7 +0.6**
U40A Yellville 79.28 48 P **P** **11 34 24.7 +0.6**
baz=320,SNR=12
RAR Rarotonga 79.59 135 LR LR 12 01 52.0
comp=Z,64nm,20.5s,baz=306,slow=30
BTNL Ternell 79.61 339 *d*P **P** **11 34 26.9 +1.3**
MEM Membach 79.62 339 *d*P **P** **11 34 26.8 +1.2**
comp=Z,5.5nm,1.0s
W39A Magazine 79.67 50 P **P** **11 34 27.2 +1.0**
baz=320
MORH Mrgy, Hungar 79.70 329⇓ P **P** **11 34 25.9 -0.2**
JCT Junction City 79.83 57 P **P** **11 34 28.6 +1.4**
JCT IAmb IAmb 11 34 29.8
comp=Z,12nm,1.2s
JCT Junction City 79.83 57 P **P** **11 34 28.6 +1.4**
JCT pmax pmax
comp=Z,12nm,1.2s
JCT Junction City 79.83 57 P **P** **11 34 28.2 +1.0**
baz=318
ARSA Arzberg 79.87 332 *e*P **P** **11 34 28.7 +1.6**
comp=Z,4.6nm,1.1s
BCLA Clavier 79.97 339 *d*P **P** **11 34 27.1 -0.4**
O48B Farmland 80.01 41 P **P** **11 34 28.6 +0.6**
baz=323
FCAR Ozark Folk Cen 80.02 48 P **P** **11 34 28.1 0.0**
FCAR IAmb IAmb 11 34 29.2
comp=Z,9.7nm,1.1s
BIOA Bad Ischl, Aus 80.09 333 *e*P **P** **11 34 29.6 +1.3**
comp=Z,5.0nm,1.0s

FRGS	**Fruska Gora**	**80.18**	**328**	⇓P	**P**	**11 34 29.7**	**+0.9**
BMRD	**Maredsous**	**80.21**	**340**	*d*P	**P**	**11 34 30.2**	**+1.4**
MIAR	**Mount Ida**	**80.28**	**50**	P	**P**	**11 34 30.0**	**+0.5**
MIAR	**Mount Ida**	**80.28**	**50**	P	**P**	**11 34 30.5**	**+1.0**
	baz=320,SNR=5.2						
W41B	**Gary Mavity, V**	**80.50**	**49**	P	**P**	**11 34 31.8**	**+1.1**
	baz=320,SNR=5.4						
SOKA	**Soboth**	**80.54**	**332**	*e*P	**P**	**11 34 32.2**	**+1.5**
	comp=Z,7.4nm,1.0s,SNR=4.3						
X40A	**Basin Creek Fa**	**80.72**	**49**	P	**P**	**11 34 33.5**	**+1.7**
	baz=320						
KBA	**Koelnbreinsper**	**80.73**	**333**	*e*P	**P**	**11 34 33.6**	**+1.7**
	comp=Z,6.0nm,0.8s						
PMOR	**Pomariorio Ree**	**80.97**	**122**	*e*T	T	13 03 51.5	
	comp=Z,4.0nm,0.2s						
VTS	**Vitosha**	**81.00**	**325**	⇑P	**P**	**11 34 35.0**	**+1.6**
VTS	**Vitosha**	**81.00**	**325**	P	**P**	**11 34 34.1**	**+0.7**
VTS				lAmb	lAmb	11 34 36.6	
	comp=Z,12nm,0.9s						
VTS	**Vitosha**	**81.00**	**325**	⇑P	**P**	**11 34 35.0**	**+1.6**
WATA	**Walderalm**	**81.05**	**334**	*i* P	**P**	**11 34 35.7**	**+2.2**
	comp=Z,10.0nm,0.9s,SNR=4.3						
WTTA	**Wattenberg**	**81.10**	**334**	*e*P	**P**	**11 34 36.0**	**+2.2**
	comp=Z,13nm,0.8s,SNR=6.6						
MOTA	**Moosalm**	**81.18**	**335**	*e*P	**P**	**11 34 36.4**	**+2.1**
	comp=Z,12nm,0.9s						
SQTA	**Sankt Quirin**	**81.26**	**334**	*e*P	**P**	**11 34 37.0**	**+2.3**
	comp=Z,7.6nm,0.8s						
CDF	**Champ du Feu**	**81.31**	**337**	*e*P	**P**	**11 34 35.8**	**+1.0**
CDF				pmax	pmax		
	comp=Z,6.0nm,0.9s						
FETA	**Feichten**	**81.59**	**335**	*e*P	**P**	**11 34 38.6**	**+2.1**
	comp=Z,5.4nm,1.1s						
O53A	**New Philadelph**	**81.78**	**39**	P	**P**	**11 34 38.1**	**+0.7**
	baz=326						
HAU	**Haudompre**	**81.93**	**338**	*e*P	**P**	**11 34 39.0**	**+1.0**
HAU				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HINF	**Hinteralfeld**	**81.97**	**337**	*e*P	**P**	**11 34 40.1**	**+1.8**
HINF				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WVT	**Waverly**	**82.02**	**45**	P	**P**	**11 34 38.9**	**+0.2**
WVT				lAmb	lAmb	11 34 40.5	
	comp=Z,6.1nm,0.9s						
WVT	**Waverly**	**82.02**	**45**	P	**P**	**11 34 38.9**	**+0.2**
WVT				pmax	pmax		
	comp=Z,6.0nm,1.0s						
WVT	**Waverly**	**82.02**	**45**	P	**P**	**11 34 39.6**	**+0.9**
	baz=322						
PPT	**Papeete**	**82.03**	**125**	LR	LR	12 12 32.5	
	comp=Z,50nm,18.2s,baz=324,slow=37						
PPT2	**Papeete2**	**82.04**	**125**	*e*LR	LR	11 59 46.8	
	comp=Z,159nm,22.8s						
DAVOX	**Davos/Dischmat**	**82.06**	**335**	LR	LR	12 15 40.2	
	comp=Z,47nm,19.0s,baz=82,slow=39						
MMAI	**Mount Meron Ar**	**83.05**	**311**	LR	LR	12 16 43.3	
	comp=Z,226nm,18.3s,baz=212,slow=39						
LOR	**Lormes**	**83.25**	**339**	*e*P	**P**	**11 34 46.1**	**+1.2**
LOR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SSF	**Saint Saulge**	**83.53**	**339**	*e*P	**P**	**11 34 47.7**	**+1.3**
SSF				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ZAIG	**Zacatecas**	**83.80**	**64**	P	**P**	**11 34 49.5**	**+1.0**
ZAIG				lAmb	lAmb	11 34 51.1	
	comp=Z,6.5nm,1.1s						
AVF	**Avril sur Loir**	**83.82**	**339**	*e*P	**P**	**11 34 47.7**	**-0.1**
AVF				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SMF	**Signal de Mont**	**83.84**	**339**	*e*P	**P**	**11 34 48.6**	**+0.7**
SMF				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LPL	**La Plagne**	**84.11**	**337**	*e*P	**P**	**11 34 50.6**	**+1.0**
LPL				pmax	pmax		
	comp=Z,11nm,1.3s						
146A	**Union**	**84.14**	**48**	P	**P**	**11 34 49.4**	**-0.3**
TKL	**Tuckaleechee C**	**84.36**	**43**	LR	LR	12 12 31.9	
	comp=Z,55nm,21.7s,baz=338,slow=36						
RAYN	**Ar Rayn**	**84.42**	**298**	⇓P	**P**	**11 34 53.0**	**+1.6**
MFF	**Saint Martin d**	**84.83**	**341**	*e*P	**P**	**11 34 57.0**	**+4.1**
MFF				pmax	pmax		
	comp=Z,33nm,1.7s						
LRAL	**Lakeview Retre**	**84.88**	**47**	P	**P**	**11 34 54.0**	**+0.6**
	baz=323						
ORIF	**Oris-en-Rattie**	**84.90**	**337**	*e*P	**P**	**11 34 55.3**	**+1.8**
ORIF				pmax	pmax		
	comp=Z,5.0nm,0.9s						
VIVF	**Saint-Julien-l**	**85.28**	**338**	*e*P	**P**	**11 34 56.4**	**+1.1**
VIVF				pmax	pmax		
	comp=Z,5.0nm,0.9s						
EIL	**Elat**	**85.89**	**309**	LR	LR	12 18 55.3	
	comp=Z,102nm,18.3s,baz=89,slow=40						
PGF	**Pioggiola**	**86.16**	**334**	*e*P	**P**	**11 35 00.0**	**+0.2**
PGF				pmax	pmax		
	comp=Z,63nm,1.6s						
LMR	**La Mourre**	**86.18**	**336**	*e*P	**P**	**11 35 02.1**	**+2.4**
LMR				pmax	pmax		
	comp=Z,21nm,1.1s						
IDI	**Anoyia**	**86.39**	**319**	⇑P	**P**	**11 34 58.6**	**-2.4**
URZ	**Urewera**	**86.62**	**161**	LR	LR	12 06 50.0	
	comp=Z,60nm,20.8s,baz=31,slow=31						
TBI	**Tubuai**	**86.71**	**129**	*e*LR	LR	12 01 55.3	
	comp=Z,150nm,26.5s						
VAE	**Valguarnera**	**88.85**	**328**	LR	LR	12 20 26.8	
	comp=Z,66nm,19.2s,baz=328,slow=39						
KEST	**Kesra**	**92.23**	**331**	P	**P**	**11 35 29.2**	**+0.7**
	comp=Z,4.4nm,1.0s,baz=25,slow=4.3,SNR=4.1						
KEST				LR	LR	12 22 02.1	
	comp=Z,64nm,18.2s,baz=269,slow=39						
	comp=Z,4.4nm,1.0s						
ESDC	**Sonseca Array**	**92.27**	**342**	P	**P**	**11 35 30.2**	**+1.5**
	comp=Z,0.5nm,0.8s,baz=343,slow=21,SNR=2.8						
ESDC				LR	LR	12 22 36.4	
	comp=Z,51nm,19.2s,baz=0.0,slow=39						
	comp=Z,0.5nm,0.8s						
ATD	**Arta Tunnel**	**95.02**	**292**	LR	LR	12 22 29.6	
	comp=Z,57nm,19.2s,baz=2.0,slow=38						
MDT	**Midelt**	**98.99**	**341**	LR	LR	12 28 06.5	
	comp=Z,65nm,18.2s,baz=357,slow=40						
H03N2	**Juan Fernandez**	**139.23**	**91**	T	T	14 17 25.1	
	baz=308,slow=77						
H03N1	**Juan Fernandez**	**139.24**	**91**	T	T	14 17 26.3	
	baz=308,slow=77						
H03N3	**Juan Fernandez**	**139.24**	**91**	T	T	14 17 25.9	
	baz=308,slow=77						
PLCA	**Paso Flores**	**148.60**	**96**	PKPbc	**PKiKP**	**11 42 06.2**	**-0.4**
	comp=Z,5.4nm,0.8s,baz=310,slow=2.4,SNR=13						
PLCA	**Paso Flores**	**148.60**	**96**	PKP2	**PKiKP**	**11 42 06.1**	**-0.5**
CPUP	**Villa Florida**	**149.34**	**61**	PKPbc	**PKiKP**	**11 42 08.1**	**-0.4**
	comp=Z,4.8nm,1.0s,baz=50,slow=20,SNR=3.1						
CPUP	**Villa Florida**	**149.34**	**61**	PKPbc	**PKiKP**	**11 42 09.3**	**+0.9**
CPUP	**Villa Florida**	**149.34**	**61**	PKP2	**PKiKP**	**11 42 09.3**	**+0.9**
SNAA	**Sanae**	**151.55**	**196**	PKPbc	**PKPbc**	**11 42 11.3**	**+0.1**
	comp=Z,3.4nm,0.7s,baz=151,slow=2.4,SNR=6.0						

MAN 12 11:24:14.4,9.20N×122.67E,h20km,mb4.3,ML3.1,MS2.8, 6C-1D,Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNOP	**Candoni, Negro**	**0.63**	**357**	⇑*e*P	Pn	11 24 26.8	+0.4
CNOP				*e*S		11 25 20.4	
TBP	**Tagbilaran**	**1.27**	**67**	*e*P	Pn	11 24 36.6	0.0
TBP				*i* S		11 24 54.0	
GUIM	**Jordan**	**1.42**	**357**	⇑*e*P	Pn	11 24 38.2	+0.1
GUIM				*e*S		11 25 20.9	
PAGZ	**Pagadian**	**1.51**	**152**	⇑*e*P	Pn	11 24 39.5	+2.6
LLP	**Lapu-Lapu**	**1.69**	**49**	⇓*e*P	Pb	11 24 43.2	+0.7
LLP				*i* S		11 25 05.5	
CUYO	**Cuyo Island**	**2.31**	**315**	⇑*e*P	Pn	11 24 52.3	+1.2
CUYO				*e*S		11 24 58.4	
MSLP	**Maasin**	**2.35**	**66**	⇑*e*P	Pn	11 24 51.7	+0.2
MSLP				*e*S		11 25 00.8	
RCP	**Roxas**	**2.35**	**2**	⇑*e*P	Pb	11 24 54.5	+0.3

ROM 12 11:31:37.9±0.1,40.98N±0.01×16.470E±0.007,h7km±1km, ML1.6/1,1C,Error ellipse: s-maj=1.2km s-min=0.6km az=9.0,Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRVN	**Minervino Murg**	**0.22**	**290**	⇑P	Pg	11 31 43.0	+0.7
MRVN				S	Sg	11 31 46.6	+1.2
MRVN				AML	AML		
	comp=N,260μm,0.1s						
MRVN				AML	AML		
	comp=E,246μm,0.1s						
MATE	**Matera**	**0.38**	**152**	P	Pb	11 31 46.3	-0.7
MATE				S	Sb	11 31 52.6	-0.4
MIGL	**Miglionico**	**0.38**	**183**	P	Pb	11 31 46.6	-0.3
MIGL				S	Sb	11 31 52.4	-0.7
PALZ	**Palazzo San Ge**	**0.39**	**264**	P	Pb	11 31 46.4	-0.7
PALZ				S	Sb	11 31 52.9	-0.5
LTRZ	**Laterza**	**0.46**	**145**	P	Pb	11 31 47.8	-0.6
LTRZ				S	Sb	11 31 54.8	-0.7
NOCI	**Noci**	**0.49**	**113**	P	Pb	11 31 48.7	-0.2
NOCI				S	Sb	11 31 55.5	-0.8

*IDC **12** 11:42:17.2±1.3,9.91S×154.40E,h0km,mb3.7/7, mbtmp3.7/7,MS2.7/2,Error ellipse: s-maj=49.1km s-min=24.6km az=114.0*
ISC 12 11:42:20.3±1.2,9.9S±0.2×154.4E±0.3,h18km,n10, σ0.891/8,mb3.7/7,D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.74**	**240**	P	**P**	**11 47 11.0**	**+0.1**
	2.3nm,0.8s,baz=65,slow=9.8,SNR=7.4						
	2.3nm,0.8s						
ASAR	**Alice Springs**	**23.84**	**232**	P	**P**	**11 47 32.7**	**-0.1**
	2.4nm,0.8s,baz=63,slow=8.8,SNR=19						
	2.4nm,0.8s						
STKA	**Stephens Creek**	**24.85**	**207**	P	**P**	**11 47 41.6**	**-0.2**
	2.3nm,0.8s,baz=27,slow=12,SNR=5.9						
	2.3nm,0.8s						
GUMO	**Guam**	**25.18**	**338**	LR	LR	11 56 11.1	
	comp=Z,18nm,22.0s,baz=140,slow=33						
KSRS	**Korea Array**	**53.24**	**334**	LR	LR	12 11 32.6	
	comp=Z,7.5nm,21.2s,baz=0.0,slow=33						
SONM	**Songino Array**	**71.46**	**328**	P	**P**	**11 53 40.5**	**+0.6**
	0.2nm,0.3s,baz=149,slow=6.7,SNR=1.6						
	0.2nm,0.3s						
QSPA	**South Pole Qui**	**80.08**	**180**	P	**P**	**11 54 29.7**	**+0.7**
	1.3nm,0.9s,baz=342,slow=2.6,SNR=2.1						
	1.3nm,0.9s						
MKAR	**Makanchi Array**	**85.18**	**319**	P	**P**	**11 54 56.0**	**+0.3**
	0.3nm,0.7s,baz=114,slow=6.5,SNR=2.6						
	0.3nm,0.7s						
ILAR	**Eielson Array**	**86.30**	**22**	P	**P**	**11 55 00.6**	**-0.2**
	0.4nm,0.8s,baz=252,slow=5.4,SNR=4.9						
	0.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**153.03**	**279**	PKPbc	**PKPbc**	**12 02 16.1**	**-1.8**
	0.2nm,0.3s,baz=80,slow=1.7,SNR=2.8						

JMA 12 12:06:40.1±0.0,39.4N±0.1×140.7E±0.1,h10km,MV0.7/30, SOUTHERN IWATE PREF,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JRG	**Rokugo**	**0.08**	**295**	*i* P	Pg	12 06 42.3	-0.1
JRG				*e*S	Sg	12 06 43.9	-0.2
JOM	**Ohasama**	**0.45**	**76**	P	Pg	12 06 48.9	-0.1
JOM				*e*S	Sg	12 06 54.9	-0.1
JYK	**Kaneyama**	**0.53**	**213**	P	Pg	12 06 50.2	-0.1
JYK				*e*S	Sg	12 06 57.1	-0.2
JMK	**Ichinoseki**	**0.56**	**137**	P	Pg	12 06 50.9	-0.2

*NNC **12** 12:15:18.9±2.5,44.36N×81.51E,h0km,mb2.6,mpv2.2, Error ellipse: s-maj=40.3km s-min=7.1km az=125.0*
*SOME **12** 12:15:20.8,44.22N×81.40E,h5km*
ISC 12 12:15:20.8±1.7,44.21N±0.05×81.40E±0.09,h10km,n12, σ0.992/22,3C-1D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.16**	**277**	*e*P	**Pb**	**12 15 42.5**	**-0.6**
	3.9nm,0.3s						
DJR				*e*S	**Sg**	**12 15 58.5**	**+0.1**
	3.4nm,0.0s						
KNOS	**Konyrlen**	**1.60**	**276**	*e*P	**Pg**	**12 15 51.5**	**-0.1**
	4.6nm,0.2s						
KNOS				*e*S	**Sg**	**12 16 13.7**	**+1.3**
	23nm,0.6s						
PDGK	**Podgornoye**	**1.64**	**238**	P	**Pg**	**12 15 51.8**	**-0.5**
	0.9nm,0.2s						
PDGK				⇑S	**Sg**	**12 16 15.0**	**+1.3**
	4.5nm,0.5s						
KAPS	**Kapalarasan**	**1.81**	**307**	*e*P	**Pg**	**12 15 54.8**	**-0.7**
	2.4nm,0.3s						
KAPS				*e*S	**Sg**	**12 16 19.6**	**+0.5**
	13nm,0.4s						
UZB	**Uzynbulak**	**2.03**	**239**	*e*P	**Pg**	**12 15 59.2**	**-0.5**
	2.7nm,0.1s						
UZB				*e*S	**Sg**	**12 16 26.9**	**+0.9**
	4.5nm,0.2s						
KPKS	**Kokpek**	**2.10**	**250**	*e*P	**Pg**	**12 16 00.1**	**-1.0**
	3.9nm,0.2s						
KPKS				*e*S	**Sg**	**12 16 28.6**	**+0.2**
	18nm,0.7s						
TDK	**Taldyqorghan**	**2.28**	**291**	*e*P	**Pb**	**12 16 03.2**	**+1.1**
	17nm,0.2s						
TDK				*e*S	**Sg**	**12 16 33.5**	**-0.6**
	26nm,0.2s						
ZHN	**Zhinishke**	**2.39**	**245**	*e*P	**Pg**	**12 16 05.4**	**-1.3**
	8.0nm,0.2s						
ZHN				*e*S	**Sg**	**12 16 37.4**	**-0.3**
	11nm,0.5s						
SATY	**Saty**	**2.46**	**243**	*e*P	**Pg**	**12 16 06.9**	**-1.1**
	2.2nm,0.2s						
SATY				*e*S	**Sg**	**12 16 40.0**	**+0.1**
	13nm,0.2s						
ARXS	**Arharly**	**2.57**	**271**	*e*P	**Pb**	**12 16 08.4**	**+1.3**
	0.9nm,0.2s						
ARXS				*e*S	**Sg**	**12 16 42.5**	**-0.9**
	5.2nm,0.3s						
MAKZ	**Makanchi**	**2.63**	**9**	⇑Pg	**Pn**	**12 16 02.4**	**-1.0**
	2.0nm,0.6s						
MAKZ				⇑Lg	Lg	12 16 39.1	
	0.7nm,0.3s						
MK31	**Makanchi Array**	**2.66**	**13**	Pg	**Pn**	**12 16 04.6**	**+0.8**
	0.1nm,0.2s,baz=192,slow=16,SNR=8.7						
MK31				⇓Lg	Lg	12 16 39.0	
	0.2nm,0.2s,baz=190,slow=28,SNR=11						

NOU 12 12:26:55.8,15.70S×167.82E,h75km,MLv3.7/4,Vanuatu Islands,Vanuatu Islands

*IGIL **12** 12:42:11.3,35.39N×3.76W,h4km,ML2.4*
*MDD **12** 12:42:11.5±0.4,35.39N×3.76W,h6km±3km,mb_Lg3.0/24, Error ellipse: s-maj=4.2km s-min=1.9km az=174.0*
*SFS **12** 12:42:11.0,35.30N×3.70W,h6km,ML3.0,ALBORAN SUR*
*INMG **12** 12:42:12.8±1.2,35.32N×3.73W,h31km,ML2.6,Error ellipse: s-maj=3.8km s-min=2.4km az=15.0*
*CNRM **12** 12:42:13.3,35.48N×3.85W,h16km,ml2.9*
ISC 12 12:42:11.9±0.9,35.43N±0.02×3.76W±0.02,h27km±8km, n87,σ1.949/149,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.26**	**214**	P	**Pb**	**12 42 18.5**	**-0.1**
PALE	**Palemas**	**0.26**	**214**	P	**Pb**	**12 42 18.5**	**-0.1**
PALE				S	Sb	12 42 23.2	+0.2
PVLZ	**Peæn de**	**0.51**	**240**	P	**Pb**	**12 42 22.4**	**+0.1**
PVLZ				S	**Sb**	**12 42 27.8**	**-1.6**
GOG	**Mont Gurugu**	**0.66**	**108**	P	**Pn**	**12 42 28.0**	**+2.4**
GOG	**Mont Gurugu**	**0.66**	**108**	P	**Pb**	**12 42 24.4**	**-0.5**
GOG				S	**Sb**	**12 42 33.5**	**-0.3**
EMEL	**Melilla**	**0.67**	**101**	Pg	**Pb**	**12 42 24.7**	**-0.3**
EMEL				Sg	**Sb**	**12 42 33.5**	**-0.5**
WMELI	**Melilla**	**0.67**	**100**	P	**Pb**	**12 42 24.6**	**-0.4**
WMELI				S	**Sb**	**12 42 33.1**	**-0.9**
EALB	**Alboran**	**0.78**	**49**	Pg	**Pb**	**12 42 26.1**	**-0.7**
EALB				Sg	**Sb**	**12 42 36.4**	**-0.7**
AKLM	**AKL**	**0.93**	**185**	P	**Pb**	**12 42 30.5**	**+1.2**
AKLM	**AKL**	**0.93**	**185**	P	**Pb**	**12 42 30.6**	**+1.3**
AKLM				S	**Sn**	**12 42 44.4**	**+2.8**
CHAS	**Isla Isabel II**	**1.12**	**102**	P	**Pn**	**12 42 30.9**	**-0.8**
CHAS				S	**Sn**	**12 42 44.5**	**-1.8**
TAF	**Taforalt**	**1.27**	**119**	P	**Pb**	**12 42 37.0**	**+1.8**
TAF	**Taforalt**	**1.27**	**119**	P	**Pn**	**12 42 33.9**	**-0.1**
TAF				S	**Sb**	**12 42 52.6**	**+1.6**
CHEFC	**Chefchaouen**	**1.33**	**256**	P	**Pb**	**12 42 36.4**	**+0.1**
CHEFC				S	**Sb**	**12 42 54.1**	**+1.2**
SMIR	**Smir Dam**	**1.34**	**281**	P	**Pb**	**12 42 37.0**	**+0.6**
SMIR	**Smir Dam**	**1.34**	**281**	P	**Pn**	**12 42 33.2**	**-1.7**
SMIR				S	**Sb**	**12 42 53.5**	**+0.4**
CEU	**Ceuta**	**1.39**	**290**	P	**Pn**	**12 42 34.0**	**-1.5**
CEU				S	**Sn**	**12 42 49.4**	**-3.6**
ECEU	**Ceuta**	**1.39**	**290**	Pn	**Pn**	**12 42 34.8**	**-0.8**
ECEU				Sn	**Sn**	**12 42 51.7**	**-1.5**
ECEU				*i* Vmb_Lg		12 42 54.6	
EMIJ	**Mijas**	**1.40**	**324**	Pn	**Pn**	**12 42 34.7**	**-0.9**
EMIJ				Sn	**Sn**	**12 42 51.9**	**-1.4**
EMIJ				*i* Vmb_Lg		12 42 55.8	
ELGU	**Los Guajares,**	**1.44**	**4**	Pn	**Pn**	**12 42 35.5**	**-0.8**
ELGU				Sn	**Sn**	**12 42 53.5**	**-0.8**
ELGU				*i* Vmb_Lg		12 42 57.1	
JBK	**JBK**	**1.47**	**138**	P	**Pn**	**12 42 36.9**	**0.0**
JBK				S	**Sb**	**12 42 57.8**	**+0.7**
EBER	**Berja**	**1.62**	**26**	Pn	**Pn**	**12 42 38.4**	**-0.5**
EBER				Sn	**Sn**	**12 42 59.5**	**+0.4**
EBER				*i* Vmb_Lg		12 43 04.3	
EGOR	**Sierra Gorda,**	**1.70**	**351**	Pn	**Pn**	**12 42 40.3**	**+0.4**
EGOR				Sn	**Sb**	**12 43 03.7**	**+0.2**
EGOR				*i* Vmb_Lg		12 43 07.4	
EJIF	**Jimena Fronter**	**1.72**	**307**	Pn	**Pn**	**12 42 40.8**	**+0.8**
EQUE	**Quentar**	**1.79**	**8**	Pn	**Pb**	**12 42 42.8**	**-1.2**
EQUE				Sn	**Sb**	**12 43 05.2**	**-0.9**
EQUE				*i* Vmb_Lg		12 43 05.7	
SICH	**Sidi Chahed**	**1.84**	**224**	P	**Pn**	**12 42 40.2**	**-1.6**
SICH				S	**Sb**	**12 43 08.1**	**+0.6**
LCRM	**LCR**	**1.96**	**208**	P	**Pb**	**12 42 48.1**	**+1.0**
LCRM				S	**Sb**	**12 43 12.7**	**+1.5**
LIJA	**Lijar**	**1.98**	**318**	P	**Pn**	**12 42 45.0**	**+1.2**
LIJA				S	**Sb**	**12 43 14.5**	**+2.9**
ENIJ	**Nijar**	**1.98**	**39**	Pn	**Pn**	**12 42 42.9**	**-0.9**
ENIJ				Sn	**Sn**	**12 43 05.9**	**-1.9**
ENIJ				*i* Vmb_Lg		12 43 06.9	
ESPR	**Espera**	**2.22**	**311**	Pn	**Pb**	**12 42 49.8**	**-1.4**
ESPR				Sn	**Sb**	**12 43 17.0**	**-1.3**
ESPR				*i* Vmb_Lg		12 43 24.3	
IFR	**Ifrane**	**2.22**	**211**	P	**Pn**	**12 42 48.9**	**+1.7**
IFR				S	**Sb**	**12 43 16.4**	**-2.1**
EQES	**Quesada**	**2.43**	**13**	Pn	**Pn**	**12 42 52.1**	**+2.1**
EQES				Sn	**Sn**	**12 43 21.5**	**+2.6**
EQES				*i* Vmb_Lg		12 43 23.8	
MD31	**MD31**	**2.69**	**198**	P	**Pb**	**12 42 56.6**	**-2.8**
MD31				S	**Sb**	**12 43 29.7**	**-2.3**
MDT	**Midelt**	**2.71**	**195**	P	**Pb**	**12 42 57.0**	**-2.6**
MDT	**Midelt**	**2.71**	**195**	P	**Pb**	**12 42 57.0**	**-2.6**
MDT				S	**Sb**	**12 43 31.5**	**-0.9**
TDRA	**Tendrara**	**2.79**	**148**	P	**Pn**	**12 42 57.8**	**+2.8**
TDRA				S	**Sb**	**12 43 32.4**	**-2.5**
EADA	**Adamuz**	**2.81**	**347**	Pn	**Pn**	**12 42 56.3**	**+1.3**
EADA				Sn	**Sn**	**12 43 30.2**	**+2.2**
EADA				*i* Vmb_Lg		12 43 37.2	
EZAR	**Zarzadilla de**	**2.95**	**34**	Pn	**Pn**	**12 42 57.5**	**+0.4**
EZAR				Sn	**Sn**	**12 43 32.2**	**+0.5**
ECAB	**El Cabril**	**2.95**	**334**	Pn	**Pn**	**12 42 58.3**	**+1.2**
ECAB				Sn	**Sn**	**12 43 32.8**	**+1.1**
ECAB				*i* Vmb_Lg		12 43 42.6	
ZHG	**ZHG**	**3.10**	**231**	P	**Pn**	**12 43 00.5**	**+1.4**
ZHG				S	**Sn**	**12 43 39.1**	**+3.8**
EMUR	**La Murta**	**3.15**	**39**	Pn	**Pn**	**12 43 00.1**	**+0.3**
EMUR				Sn	**Sn**	**12 43 33.8**	**-2.6**
EMUR				*i* Vmb_Lg		12 43 36.4	
EMIN	**Mina Concepcio**	**3.30**	**316**	Pn	**Pn**	**12 43 02.3**	**+0.4**
EMIN				Sn	**Sn**	**12 43 39.4**	**-0.8**
EGRO	**El Granado**	**3.66**	**306**	Pn	**Pn**	**12 43 07.4**	**+0.7**
EGRO				Sn	**Sn**	**12 43 48.2**	**-0.8**
EGRO				*i* Vmb_Lg		12 43 51.8	
ETOB	**Tobarra**	**3.66**	**28**	Pn	**Pn**	**12 43 08.6**	**+1.7**
ETOB				Sn	**Sn**	**12 43 50.2**	**+0.9**
PVAQ	**Vaqueiros**	**3.75**	**303**	*e*Pn	**Pn**	**12 43 08.9**	**+1.0**
PVAQ				*e*Sn	**Sn**	**12 43 50.6**	**-0.6**
PVAQ				A	A	12 43 57.4	
	11nm,0.3s						
PVAQ	**Vaqueiros**	**3.75**	**303**	P	**Pn**	**12 43 08.7**	**+0.7**
PVAQ	**Vaqueiros**	**3.75**	**303**	P	**Pn**	**12 43 08.4**	**+0.5**
PVAQ				S	**Sn**	**12 43 49.7**	**-1.5**
PBAR	**Barrancos**	**3.79**	**317**	*e*Sn	**Sn**	**12 43 51.6**	**-0.8**
PBDV	**Barranco-do-Ve**	**3.82**	**299**	*e*Pn	**Pn**	**12 43 10.0**	**+1.0**
PBDV				*e*Sn	**Sn**	**12 43 52.2**	**-0.8**
PBDV				A	A	12 44 03.9	
	8.8nm,0.6s						
PCVE	**Castro Verde**	**4.08**	**304**	*e*Pn	**Pn**	**12 43 14.0**	**+1.4**
PCVE				*e*Sn	**Sn**	**12 44 00.0**	**+0.5**
PCVE				A	A	12 44 03.6	
	9.4nm,0.3s						
PAB	**San Pablo**	**4.13**	**354**	Pn	**Pn**	**12 43 15.1**	**+1.8**
PAB				Sn	**Sn**	**12 44 01.0**	**+0.2**
PAB				*i* Vmb_Lg		12 44 34.4	
PAB	**San Pablo**	**4.13**	**354**	P	**Pn**	**12 43 15.1**	**+1.8**
PBEJ	**Beja**	**4.19**	**309**	*e*Pn	**Pn**	**12 43 15.0**	**+0.9**
PBEJ				*e*Sn	**Sn**	**12 44 01.9**	**-0.2**
PBEJ				A	A	12 44 03.6	
	5.6nm,0.4s						
EBAD	**Badajoz**	**4.21**	**323**	Pn	**Pn**	**12 43 15.0**	**+0.7**
EBAD				Sn	**Sn**	**12 44 02.2**	**-0.4**
EBAD				*i* Vmb_Lg		12 44 07.5	
ESDC	**Sonseca Array**	**4.24**	**358**	Pn	**Pn**	**12 43 16.4**	**+1.6**
ESDC				Sn	**Sn**	**12 44 03.3**	**0.0**
MESJ	**Messejana**	**4.32**	**305**	*e*P	**Pn**	**12 43 16.3**	**+0.5**
MESJ	

PVIS	**Viseu**	**6.20**	**330**	*e*Pn	**Pn**	**12 43 44.9**	**+3.2**
PVIS				*e*Sn	**Sn**	**12 44 51.4**	**-0.3**
PVIS				A	A	12 45 29.4	
	comp=N,4.0nm,0.6s						
MVO	**Moncorvo**	**6.27**	**337**	*e*Pn	**Pn**	**12 43 44.4**	**+1.7**
MVO				*e*Sn	**Sn**	**12 44 52.9**	**-0.6**
MVO				A	A	12 45 40.9	
	comp=N,5.0nm,0.4s						
ERTA	**Horta de San J**	**6.39**	**29**	Pn	**Pn**	**12 43 45.5**	**+1.3**
ERTA				*i* Vmb_Lg		12 45 12.0	
POLO	**Lamas de Olo**	**6.72**	**333**	*e*Pn	**Pn**	**12 43 51.7**	**+2.8**
PBRG	**Braganca**	**6.78**	**341**	*e*Pn	**Pn**	**12 43 51.4**	**+1.8**
ETOS	**Mallorca**	**6.78**	**48**	Pn	**Pn**	**12 43 50.2**	**+0.6**
ETOS				Sn	**Sn**	**12 45 06.1**	**+0.1**
ETOS				*i* Vmb_Lg		12 48 22.3	
ECAL	**Calabor**	**6.90**	**341**	Pn	**Pn**	**12 43 53.1**	**+1.7**
PGAV	**Gavieira, Arco**	**7.41**	**333**	*e*Pn	**Pn**	**12 44 00.3**	**+1.9**

MDD 12 12:45:29.2±0.4, 42°29N×8°18W, h4km±5km, mb_Lg1.9/7, 1D, Error ellipse: s-maj=3.6km s-min=3.0km az=82.0, Spain

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PGAV	**Gavieira, Arco**	**0.34**	**192**	⇓*e*Pg	Pg	12 45 36.1	+0.5
PGAV				*e*Sg	Sg	12 45 40.9	+0.9
PGAV				A	A	12 45 41.0	
	10nm,0.2s						
EZAM	**Zamans**	**0.41**	**250**	Pg	Pg	12 45 36.7	-0.4
EZAM				Sg	Sg	12 45 42.4	-0.1
EZAM				*i* Vmb_Lg		12 45 43.2	
ELOB	**Lobios**	**0.43**	**169**	Pg	Pg	12 45 38.1	+0.6
ELOB				Sg	Sg	12 45 44.0	+0.9
ELOB				*i* Vmb_Lg		12 45 46.7	
EAGO	**Agolada(Pontev**	**0.51**	**7**	Pg	Pg	12 45 39.2	+0.2
EAGO				Sg	Sg	12 45 46.2	+0.5
EAGO				*i* Vmb_Lg		12 45 48.4	
PCAB	**Cabril**	**0.59**	**169**	*e*Pg	Pg	12 45 41.0	+0.5
PCAB				*e*Sg	Sg	12 45 49.2	+1.0
PCAB				A	A	12 45 50.6	
	15nm,0.1s						
EMAZ	**Mazaricos**	**0.88**	**318**	Pg	Pg	12 45 45.4	-0.7
EMAZ				Sg	Sg	12 45 56.5	-1.0
EMAZ				*i* Vmb_Lg		12 45 59.5	
POLO	**Lamas de Olo**	**0.96**	**163**	*e*S	Sg	12 45 59.2	-0.9
ECAL	**Calabor**	**1.13**	**108**	Pg	Pg	12 45 50.2	-0.6
ECAL				Sg	Sg	12 46 05.3	-0.1
ECAL				*i* Vmb_Lg		12 46 06.3	
PBRG	**Braganca**	**1.17**	**114**	*e*S	Sg	12 46 07.1	+0.2
PBRG				A	A	12 46 08.7	
	2.8nm,0.1s						
EPON	**Pontenova**	**1.28**	**36**	Pg	Pg	12 45 52.2	-1.5
EPON				Sg	Sg	12 46 09.7	-0.5
EPON				*i* Vmb_Lg		12 46 12.5	
EARI	**Arriondas**	**2.40**	**64**	Pn	Pn	12 46 08.0	-1.4
EARI				Pg	Pb	12 46 12.5	-0.6
EARI				*i* Vmb_Lg		12 46 35.6	
EARI				Sn	Sn	12 46 37.5	-1.8
GUD	**Guadarrama**	**3.44**	**117**	Sn	Sn	12 47 01.5	-3.6

*NOU **12** 12:51:08.7, 39°04S×145°83E, h0km, MLv3.9/9, Bass Strait, Australia*
*AUST **12** 12:51:09.3±0.7, 39°02S×145°88E, h10km, Error ellipse: s-maj=8.5km s-min=7.1km az=41.0*

ISC 12 12:51:09.2±1.4, 39°01S±0°07×145°82E±0°05, h10km, n20, σ0s80/24, Bass Strait

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AUSSC	**Sale College,**	**1.34**	**48**	P	**Pb**	**12 51 34.5**	**+0.1**
	baz=1.3						
AUSSC				S	**Sg**	**12 51 52.7**	**+0.4**
	baz=1.3						
GEXS	**Deakin Univers**	**1.45**	**303**	P	**Pn**	**12 51 36.0**	**+0.5**
TOO	**Toolangi**	**1.46**	**350**	P	**Pn**	**12 51 35.5**	**-0.1**
	baz=1.5						
TOO				S	**Sn**	**12 51 55.3**	**+0.4**
	baz=1.5						
TOO	**Toolangi**	**1.46**	**350**	P	**Pn**	**12 51 35.4**	**-0.3**
AUMTC	**Mt Clear Colle**	**2.07**	**312**	P	**Pn**	**12 51 44.9**	**+0.8**
	baz=2.1						
BRAT	**Ballarat**	**2.08**	**314**	P	**Pn**	**12 51 44.9**	**+0.7**
AULHS	**Lilydale High**	**2.48**	**155**	P	**Pn**	**12 51 48.7**	**-0.9**
	baz=2.5						
GLAD	**Gladstone**	**2.59**	**140**	P	**Pn**	**12 51 51.6**	**+0.5**
MILA	**Mila**	**3.28**	**54**	P	**Pn**	**12 52 00.9**	**+0.2**
	baz=3.2						
MILA				S	**Sn**	**12 52 38.8**	**-0.9**
	baz=3.2						
MOO	**Moorlands**	**3.58**	**164**	P	**Pn**	**12 52 04.5**	**-0.3**
	baz=3.6						
MOO	**Moorlands**	**3.58**	**164**	P	**Pn**	**12 52 04.8**	**0.0**
ARPS	**Mount Arapiles**	**3.87**	**304**	P	**Pn**	**12 52 09.3**	**+0.6**
	baz=3.9						
ARPS	**Mount Arapiles**	**3.87**	**304**	P	**Pn**	**12 52 09.6**	**+0.9**
TAU	**Tasmania Unive**	**4.06**	**164**	P	**Pn**	**12 52 11.2**	**-0.1**
CAN	**Canberra**	**4.47**	**36**	P	**Pn**	**12 52 18.3**	**+1.2**
AUMTS	**Mt Stromlo**	**4.47**	**36**	P	**Pn**	**12 52 18.3**	**+1.2**
	baz=4.5						
CNB	**Canberra Magne**	**4.65**	**39**	P	**Pn**	**12 52 19.9**	**+0.4**
	baz=4.6						
CNB	**Canberra Magne**	**4.65**	**39**	P	**Pn**	**12 52 20.1**	**+0.6**
CMSA	**Cobar Meteorol**	**7.46**	**359**	P	**Pn**	**12 52 58.0**	**0.0**
	baz=7.5						
STKA	**Stephens Creek**	**7.91**	**333**	P	**Pn**	**12 53 04.7**	**+0.4**
	baz=7.9						
STKA				S	**Sn**	**12 54 31.6**	**-2.2**
	baz=7.9						

MAN 12 13:08:06.4, 9°44N×125°64E, h18km, mb4.9, ML3.8, MS3.8, 1C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**0.37**	**336**	⇑*i*P	Pb	13 08 14.6	+0.2
SCPH				*i* S	Sb	13 08 20.5	+1.0
TBP	**Tagbilaran**	**1.77**	**278**	⇓*i*P	Pn	13 08 35.6	-0.7
TBP				*i* S	Sn	13 08 54.9	-3.2
LLP	**Lapu-Lapu**	**1.86**	**298**	⇓*e*P	Pn	13 08 37.7	+0.2
LLP				*i* S	Sn	13 09 01.2	+0.9
KCP	**Kidapawan**	**2.48**	**193**	⇓*e*P	Pn	13 08 48.1	+1.3

*IDC **12** 13:08:13.7±0.7, 32°37N×130°65E, h0km, mb4.0/17, mbtmp4.1/19, ML3.6/3, MS3.5/16, Error ellipse: s-maj=16.7km s-min=13.0km az=99.0*
*JMA **12** 13:08:15.1±0.0, 32°5N±0°1×130°7E±0°2, h7km, MD4.3/20, MV4.5/20, SOUTHERN KUMAMOTO PREF*
JMA Felt V J1 at SOUTHERN KUMAMOTO PREF .
*NEIC **12** 13:08:15.7±1.6, 32°38N±0°04×130°51E±0°04, h10km±1km, mb4.5/64, Error ellipse: s-maj=7.7km s-min=4.9km az=320.0*
*NIED **12** 13:08:15.1, 32°45N×130°68E, h7km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^15^Nm; Mrr1.02; Mθθ0.47; Mϕϕ-1.49; Mrθ-0.46; Mθϕ1.65; Mϕr-0.86; Fault plane solution: M0 2.30000×10^15^ NP1: ϕs291.00000°, δ56.00000°, λ24.00000°. NP2: ϕs188.00000°, δ70.00000°, λ144.00000°.*

ISC 12 13:08:15.3±1.0, 32°42N±0°03×130°60E±0°04, h7km±6km, n181, σ1s28/150, mb4.5/55, MS3.5/17, 2C-4D, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIU3	**Izumi3**	**0.22**	**53**	⇓*i*P	**Pg**	**13 08 18.2**	**-1.5**
JIU3				⇓S	**Sg**	**13 08 20.9**	**-1.9**
JIU3	**Izumi3**	**0.22**	**53**	A	A	13 08 18.2	
	comp=E,77nm,0.4s,comp=E,122nm,3.6s						
JZO	**Okuchi**	**0.28**	**181**	⇓*i*P	**Pg**	**13 08 21.3**	**+0.6**
JZO				⇓S	**Sg**	**13 08 25.5**	**+1.1**
JZO	**Okuchi**	**0.28**	**181**	A	A	13 08 21.3	
	comp=E,155nm,0.3s,comp=E,142nm,0.7s						
JHD	**Hondo**	**0.40**	**277**	A	A	13 08 24.1	
	comp=E,31nm,1.7s,comp=E,56nm,2.8s						
JTA	**Tamana**	**0.55**	**354**	*i* P	**Pg**	**13 08 25.5**	**-0.4**
JTA				S	**Sg**	**13 08 32.8**	**-0.4**
JTA	**Tamana**	**0.55**	**354**	A	A	13 08 25.5	
	comp=E,15nm,6.8s,comp=E,8.0nm,3.5s						
JTZ	**Takazaki**	**0.66**	**141**	*i* P	**Pb**	**13 08 28.1**	**-0.9**
JTZ				S	**Sb**	**13 08 36.5**	**-1.8**
JTZ	**Takazaki**	**0.66**	**141**	A	A	13 08 28.1	
	comp=E,27nm,0.4s,comp=E,21nm,1.1s						
NGSJ	**Nagasakinomoza**	**0.71**	**288**	A	A	13 08 29.7	
	comp=E,13nm,4.8s,comp=E,14nm,4.6s						
JNU	**Nakatsue**	**0.74**	**18**	Pg	**Pg**	**13 08 28.8**	**-0.8**
	baz=197,slow=19						
JNU				Lg	Lg	13 08 37.9	
	baz=218,slow=19						
JNU	**Nakatsue**	**0.74**	**18**	Pg	**Pg**	**13 08 28.5**	**-1.0**
JNU				Sg	**Sg**	**13 08 37.7**	**-1.5**
JNU	**Nakatsue**	**0.74**	**18**	A	A	13 08 28.4	
	comp=E,24nm,4.3s,comp=E,12nm,4.1s						
JKIT	**Kitakata**	**0.75**	**74**	A	A	13 08 28.1	
	comp=E,21nm,1.8s,comp=E,30nm,0.5s						
JTSN	**Tsuno**	**0.78**	**102**	A	A	13 08 28.9	
	comp=E,20nm,3.9s,comp=E,62nm,0.5s						
JUR	**Ureshino**	**0.87**	**321**	A	A	13 08 32.1	
	comp=E,9.0nm,5.4s,comp=E,11nm,5.4s						
JHHC	**Hyugahichiya**	**0.87**	**88**	A	A	13 08 30.6	
	comp=E,25nm,4.0s,comp=E,33nm,1.1s						
JSU	**Suzuyama**	**0.92**	**188**		**Pb**	**13 08 32.9**	**-0.6**
JSU				Sn	**Sb**	**13 08 45.7**	**-0.1**
JSU	**Suzuyama**	**0.92**	**188**	A	A	13 08 33.2	
	comp=E,16nm,2.3s,comp=E,11nm,0.9s						
JNKG	**Nichinankitago**	**1.00**	**139**	A	A	13 08 33.6	
	comp=E,18nm,3.9s,comp=E,13nm,1.8s						
JFI	**Itaya**	**1.02**	**350**	A	A	13 08 34.1	
	comp=E,8.0nm,5.7s,comp=E,6.0nm,6.7s						
JNAR	**Kushima--Naru**	**1.05**	**147**	A	A	13 08 34.8	
	comp=E,12nm,1.7s,comp=E,9.0nm,1.1s						
JSJ	**Shimokoshiki**	**1.05**	**226**	A	A	13 08 36.1	
	comp=E,8.0nm,2.2s,comp=E,10.0nm,1.4s						
JBEP	**Beppuamama**	**1.14**	**36**	A	A	13 08 35.3	
	comp=E,25nm,6.3s,comp=E,17nm,1.8s						
JSKE	**Saikikamae**	**1.16**	**70**	A	A	13 08 35.5	
	comp=E,11nm,4.8s,comp=E,8.0nm,2.0s						
JUS	**Usuki**	**1.16**	**56**	A	A	13 08 35.6	
	comp=E,12nm,3.1s,comp=E,15nm,3.1s						
JTSR	**Tashiro 2**	**1.27**	**168**	A	A	13 08 39.0	
	comp=E,8.0nm,2.5s						
JFA	**Akaike**	**1.30**	**7**	A	A	13 08 38.5	
	comp=E,11nm,7.0s,comp=E,7.0nm,2.3s						
JKI	**Kunimi**	**1.46**	**33**	A	A	13 08 40.8	
	comp=E,16nm,1.7s,comp=E,20nm,2.1s						
JII	**Iki**	**1.56**	**332**	A	A	13 08 43.3	
	comp=E,7.0nm,4.0s,comp=E,7.0nm,5.8s						
JFU	**Fukue jima 2**	**1.58**	**279**	A	A	13 08 44.5	
	comp=E,4.0nm,3.9s,comp=E,6.0nm,1.9s						
UWA2	**Uwa jima 2**	**1.88**	**64**	A	A	13 08 46.9	
	comp=E,6.0nm,2.3s,comp=E,8.0nm,2.0s						
JTY	**Toyota**	**1.88**	**12**	A	A	13 08 47.5	
	comp=E,7.0nm,2.9s,comp=E,4.0nm,5.1s						
JTO	**Tosashimizu**	**1.91**	**76**	A	A	13 08 47.5	
	comp=E,7.0nm,2.2s,comp=E,5.0nm,3.0s						
JNA	**Nagahama**	**1.94**	**54**	A	A	13 08 48.0	
	comp=E,3.0nm,4.1s,comp=E,4.0nm,3.0s						
JKD	**Kumamatsu**	**1.95**	**33**	A	A	13 08 48.2	
	comp=E,9.0nm,2.8s,comp=E,7.0nm,2.5s						
JTSM	**Tsushimamitsus**	**2.17**	**332**	A	A	13 08 52.3	
	comp=E,3.0nm,5.2s,comp=E,2.0nm,3.0s						
JKU	**Kubokawa**	**2.25**	**66**	A	A	13 08 52.5	
	comp=E,5.0nm,1.4s,comp=E,5.0nm,3.4s						
JTU	**Tsushima**	**2.33**	**335**	Pn	**Pn**	**13 08 52.9**	**-1.1**
JHM	**Kurahashi**	**2.36**	**43**	A	A	13 08 54.0	
	comp=E,4.0nm,3.1s,comp=E,3.0nm,4.2s						
JHGM	**Hagishima**	**2.40**	**11**	A	A	13 08 55.0	
	comp=E,8.0nm,2.8s,comp=E,5.0nm,2.5s						
JHT	**Toyohira**	**2.71**	**34**	A	A	13 08 59.1	
	comp=E,4.0nm,8.8s,comp=E,4.0nm,2.1s						
JMN	**Monobe**	**3.04**	**64**	Pn	**Pn**	**13 09 04.8**	**+0.9**
JMN	**Monobe**	**3.04**	**64**	A	A	13 09 03.8	
	comp=E,7.0nm,5.8s,comp=E,5.0nm,1.3s						
JHS	**Saijyo**	**3.32**	**38**	Pn	**Pn**	**13 09 07.7**	**+0.1**
JISK	**Izumosakaura**	**3.60**	**31**	A	A	13 09 11.8	
	comp=E,5.0nm,2.7s,comp=E,4.0nm,1.5s						
NAWB	**Namwon**	**4.01**	**319**		**Pn**	**13 09 16.2**	**-0.8**
TJN	**Taejon**	**4.77**	**327**	Pn	**Pn**	**13 09 26.5**	**-1.0**
KSCHJ	**Chungju**	**4.95**	**335**	Pn	**Pn**	**13 09 30.2**	**+0.2**
KSRS	**Korea Array**	**5.49**	**337**	Pn	**Pn**	**13 09 37.4**	**+0.1**
	0.3nm,0.3s,baz=157,slow=14,SNR=3.5						
KSRS				Pg	**Pb**	**13 09 56.0**	**+4.7**
	2.0nm,0.3s,baz=154,slow=17,SNR=9.3						
KSRS				Sn	**Sb**	**13 10 51.2**	**-6.1**
	1.4nm,0.3s,baz=156,slow=28,SNR=5.2						
KSRS				Lg	Lg	13 11 06.6	
	2.1nm,0.3s,baz=154,slow=29,SNR=4.4						
KSAR	**Wonju Array Be**	**5.49**	**337**	Pn	**Pn**	**13 09 36.9**	**-0.5**
KS19	**Wonju Array Si**	**5.55**	**337**	Pn	**Pn**	**13 09 37.9**	**-0.3**
JOW	**Kunigami**	**5.92**	**201**	Pn	**Pn**	**13 09 42.3**	**-1.1**
INCN	**Inchon**	**6.01**	**328**	Pn	**Pn**	**13 09 44.7**	**0.0**
INU	**Inuyama**	**6.08**	**60**	Pn	**Pn**	**13 09 45.3**	**-0.3**
SEHB	**SEOHWA**	**6.15**	**342**	Pn	**Pn**	**13 09 45.8**	**-0.7**
JGF	**Kuroka**	**6.45**	**59**	Pn	**Pn**	**13 09 50.4**	**-0.2**
MJB9	**Matsu-Tunnel**	**7.50**	**55**	Pn	**Pn**	**13 10 05.9**	**+0.8**
MJAR	**Matsushiro Arr**	**7.51**	**55**	Pn	**Pn**	**13 10 05.1**	**0.0**
	0.8nm,0.3s,baz=236,slow=13,SNR=46						
MJAR				Sn	**Sn**	**13 11 32.7**	**+2.2**
	baz=158,slow=38						
MJAR				Lg	Lg	13 12 13.0	
	baz=226,slow=27						
MJAR				LR	LR	13 13 15.3	
	comp=Z,422nm,19.0s,baz=214,slow=40						
	16nm,0.5s						
JHJ	**Hachijo jima 2**	**7.76**	**82**	Pn	**Pn**	**13 10 08.8**	**+0.2**
	25nm,0.3s,baz=53,slow=20,SNR=13						
	79nm,0.4s						
JHJ2	**Mitsune**	**7.79**	**82**	Pn	**Pn**	**13 10 08.7**	**-0.3**
SSE	**Sheshan**	**8.13**	**263**	P	**Pn**	**13 10 15.8**	**+2.2**
SSE				S	**Sn**	**13 11 45.4**	**-0.3**
SSE				pmax	pmax		
	comp=Z,15nm,0.8s						
SSE				pmax	pmax		
	comp=Z,76nm,4.0s						
SSE				LR	LR		
	comp=N,370nm,11.9s						
SSE				LR	LR		
	comp=E,250nm,12.0s						
JSD	**Sado**	**8.40**	**46**	Pn	**Pn**	**13 10 17.3**	**-0.1**
JYT	**Yasato**	**8.79**	**62**	Pn	**Pn**	**13 10 23.5**	**+0.7**
JMM	**Marumori**	**9.96**	**54**		**Pn**	**13 10 39.3**	**+0.6**
NJ2	**Nanjing**	**9.96**	**271**	*e*P	**Pn**	**13 10 41.0**	**+2.3**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
NJ2				LR	LR		
	comp=N,610nm,10.6s						
NJ2				LR	LR		
	comp=E,270nm,8.5s						
NJ2				LR	LR		
	comp=Z,610nm,9.0s						
HNS	**HongShan**	**13.96**	**295**	⇑P	**P**	**13 11 43.8**	**+2.3**
HNS				*e*S	**S**	**13 14 27.9**	**-2.6**
HNS				LR	LR		
	comp=N,560nm,15.9s						
HNS				LR	LR		
	comp=E,360nm,14.5s						
HNS				LR	LR		
	comp=Z,270nm,14.5s						
ASAJ	**Asahikawa**	**14.99**	**35**	LR	LR	13 17 11.0	
	comp=Z,50nm,20.7s,baz=222,slow=36						
LYN	**LuoYang**	**15.29**	**283**	*e*P	**P**	**13 11 55.1**	**-1.2**
LYN				sP	sP	13 12 00.6	+1.2
LYN				S	**S**	**13 14 55.1**	**-2.6**
LYN				SS	SbSb	13 15 26.2	-18
LYN				pmax	pmax		
	comp=Z,140nm,4.0s						
LYN				LR	LR		
	comp=N,550nm,11.1s						
LYN				LR	LR		
	comp=E,250nm,14.4s						
LYN				LR	LR		
	comp=Z,450nm,11.5s						
KLR	**Kul'dur**	**16.82**	**3**	Pn	**P**	**13 12 16.8**	**+3.6**
	comp=Z,0.4nm,0.3s,baz=199,slow=4.8,SNR=15						
HHC	**Hu-ho-hao-te**	**17.42**	**304**	*e*P	**Pn**	**13 12 18.8**	**0.0**
HHC				pmax	pmax		
	comp=Z,22nm,0.8s						
HHC				pmax	pmax		
	comp=Z,120nm,6.5s						
HHC				LR	LR		
	comp=N,430nm,13.3s						
HHC				LR	LR		
	comp=E,650nm,12.1s						
HHC				LR	LR		
	comp=Z,980nm,12.4s						
XAN	**Xi'an**	**18.21**	**281**	P	P	13 12 42.4	+14
XAN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GYA	**Guiyang**	**21.66**	**260**	*e*P	**P**	**13 13 05.2**	**-1.3**
GYA				LR	LR		
	comp=Z,170nm,8.4s						
LZH	**Lanzhou**	**22.39**	**287**	*e*P	**P**	**13 13 09.7**	**-4.7**
LZH				sP	pP	13 13 14.5	-2.0
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
LZH				LR	LR		
	comp=N,380nm,11.2s						
LZH				LR	LR		
	comp=E,300nm,12.3s						
LZH				LR	LR		
	comp=Z,370nm,13.9s						
GUMO	**Guam**	**22.84**	**142**	LR	LR	13 20 42.4	
	comp=Z,57nm,21.0s,baz=356,slow=33						
CD2	**Chengdu**	**22.88**	**273**	P	**P**	**13 13 19.3**	**-0.2**
CD2				S	**S**	**13 17 29.3**	**-0.2**
CD2				pmax	pmax		
	comp=Z,70nm,2.2s						
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CD2				LR	LR		
	comp=N,70nm,5.7s						
CD2				LR	LR		
	comp=E,460nm,6.4s						
CD2				LR	LR		
	comp=Z,450nm,6.1s						
QIZ	**Qiongzhong**	**22.91**	**239**	P	**P**	**13 13 18.4**	**-1.4**
QIZ				S	**S**	**13 17 27.9**	**-2.2**
QIZ				LR	LR		
	comp=N,180nm,12.7s						
QIZ				LR	LR		
	comp=E,160nm,11.2s						
QIZ				LR	LR		
	comp=Z,170nm,14.7s						
ULN	**Ulaanbaatar**	**23.58**	**318**	P	**P**	**13 13 26.7**	**+0.2**
ULN				lAmb	lAmb	13 13 31.8	
	comp=Z,10nm,1.0s						
SONM	**Songino Array**	**23.94**	**317**	P	**P**	**13 13 30.4**	**+0.5**
	comp=Z,3.5nm,0.8s,baz=134,slow=10,SNR=16						
SONM				LR	LR	13 23 50.3	
	comp=Z,206nm,18.4s,baz=100,slow=39						
	comp=Z,3.5nm,0.8s						
SONM	**Songino Array**	**23.94**	**317**	P	**P**	**13 13 29.9**	**-0.1**
KMI	**Kunming**	**25.43**	**261**	⇑P	**P**	**13 13 40.8**	**-3.1**
KMI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
PZH	**PanZhiHua**	**25.77**	**264**	P	**P**	**13 13 47.4**	**+0.6**
PZH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,5.3s						
GTA	**Gaotai**	**25.81**	**294**	*e*P	**P**	**13 13 47.5**	**+0.4**
GTA				pP	sP	13 13 52.0	+1.6
GTA				sP	pP	13 13 56.0	+6.6
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,58nm,5.1s						
GTA				LR	LR		
	comp=N,400nm,16.7s						
GTA				LR	LR		
	comp=E,150nm,13.4s						
GTA				LR	LR		
	comp=Z,200nm,14.9s						
PETK	**Petropavlovsk-**	**28.41**	**35**	LR	LR	13 25 48.0	
	comp=Z,40nm,18.1s,baz=216,slow=37						
PET	**Petropavlovsk**	**28.83**	**36**	P	**P**	**13 14 14.4**	**+0.6**
PET				lAmb	lAmb	13 14 23.4	
	comp=Z,20nm,1.4s						
GOMU	**GeErMu**	**29.70**	**287**	P	**P**	**13 14 23.5**	**+1.2**
GOMU				pP	sP	13 14 25.5	-0.1
GOMU				sP	pP	13 14 27.5	+3.0
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GOMU				pmax	pmax		
	comp=Z,79nm,5.6s						
MA2	**Magadan**	**30.31**	**20**	LR	LR	13 26 47.7	
	comp=Z,49nm,18.1s,baz=240,slow=37						
CHTO	**Chiang Mai**	**31.47**	**252**	P	**P**	**13 14 36.5**	**-1.1**
CHTO				lAmb	lAmb	13 14 41.2	
	comp=Z,8.7nm,1.2s						
CMAR	**Chiang Mai Arr**	**31.65**	**252**	P	**P**	**13 14 40.4**	**+1.2**
	comp=Z,1.2nm,0.7s,baz=54,slow=7.3,SNR=7.3						
CMAR				LR	LR	13 29 27.4	
	comp=Z,91nm,18.6s,baz=85,slow=40						
	comp=Z,1.2nm,0.7s						
CMAR	**Chiang Mai Arr**	**31.65**	**252**	P	**P**	**13 14 37.9**	**-1.4**
SEY	**Seymchan**	**33.52**	**18**	LR	LR	13 28 44.6	
	comp=Z,59nm,19.1s,baz=202,slow=37						
WAKE	**Wake Island**	**34.81**	**103**	P	**P**	**13 15 08.8**	**+2.1**
WMQ	**Urumqi**	**35.26**	**301**	*e*P	**P**	**13 15 12.3**	**+1.8**
ZALV	**Zalesovo Beam**	**38.84**	**317**	P	**P**	**13 15 40.6**	**-0.1**
	comp=Z,3.1nm,1.1s,baz=111,slow=8.4,SNR=7.1						
ZALV				LR	LR	13 32 50.8	
	comp=Z,81nm,18.8s,baz=104,slow=38						
	comp=Z,3.1nm,1.1s						
ZALV	**Zalesovo Beam**	**38.84**	**317**	P	**P**	**13 15 41.0**	**+0.3**
MKAR	**Makanchi Array**	**39.27**	**306**	P	**P**	**13 15 43.8**	**-0.7**
	comp=Z,0.9nm,0.7s,baz=97,slow=10,SNR=6.5						
	comp=Z,0.9nm,0.7s						
MKAR	**Makanchi Array**	**39.27**	**306**	P	**P**	**13 15 44.5**	**0.0**
TIXI	**Tiksi**	**39.30**	**359**	P	**P**	**13 15 45.7**	**+1.4**
MAKZ	**Makanchi**	**39.49**	**306**	P	**P**	**13 15 46.5**	**+0.2**
KURK	**Kurchatov**	**42.02**	**312**	P	**P**	**13 16 07.8**	**+0.8**
KURK				lAmb	lAmb	13 16 09.7	
	comp=Z,10nm,1.4s						
NRIK	**Noril'sk**	**44.10**	**340**	P	**P**	**13 16 23.9**	**+0.2**
	comp=Z,1.8nm,0.5s,baz=127,slow=9.4,SNR=4.7						
	comp=Z,1.8nm,0.5s						
BRVK	**Borovoye**	**47.30**	**314**	P	**P**	**13 16 49.0**	**-0.2**
BRVK				lAmb	lAmb	13 16 53.0	
	comp=Z,3.7nm,0.7s						
KK31	**Karatay Array**	**47.77**	**301**	P	**P**	**13 16 53.0**	**0.0**
KKAR	**Karatay Array**	**47.77**	**301**	P	**P**	**13 16 53.1**	**+0.1**
HNR	**Honiara**	**50.16**	**141**	LR	LR	13 37 25.5	
	comp=Z,44nm,18.8s,baz=210,slow=35						
WB0	**Warramunga Arr**	**52.01**	**175**	P	**P**	**13 17 24.2**	**-1.2**
WRA	**Warramunga Arr**	**52.18**	**176**	P	**P**	**13 17 25.6**	**-1.0**
	comp=Z,0.8nm,0.5s,baz=357,slow=8.0,SNR=11						
	comp=Z,0.8nm,0.5s						
WB2	**Warramunga Arr**	**52.19**	**176**	P	**P**	**

MLY	**Manley**	**56.38**	**30**	P	**P**	**13 17 57.6**	**+0.8**
TOLK	**Toolik Lake Re**	**56.55**	**26**	P	**P**	**13 17 58.7**	**+0.7**
TOLK				IAmb	IAmb	13 18 02.1	
	comp=Z,3.9nm,1.1s						
TRF	**Thorofare Moun**	**56.74**	**32**	P	**P**	**13 18 00.5**	**+0.9**
SUA	**Susitna One**	**56.78**	**34**	P	**P**	**13 18 00.2**	**+0.4**
H23K	**Yukon River**	**56.80**	**29**	P	**P**	**13 18 00.3**	**+0.5**
H23K				IAmb	IAmb	13 18 04.4	
	comp=Z,5.9nm,0.8s						
NEA2	**Nenana**	**57.14**	**30**	P	**P**	**13 18 02.5**	**+0.4**
NEA2				IAmb	IAmb	13 18 06.0	
	comp=Z,5.5nm,0.7s						
RC01	**Rabbit Creek A**	**57.31**	**35**	P	**P**	**13 18 03.0**	**-0.4**
RND	**Reindeer**	**57.39**	**32**	P	**P**	**13 18 03.6**	**-0.4**
RND				IAmb	IAmb	13 18 07.0	
	comp=Z,6.2nm,0.8s						
MDM	**Murphy Dome**	**57.45**	**30**	P	**P**	**13 18 04.7**	**+0.3**
H24K	**Noodor Dome**	**57.48**	**29**	P	**P**	**13 18 04.8**	**+0.2**
PMR	**Palmer**	**57.52**	**34**	P	**P**	**13 18 06.8**	**+2.0**
PMR				IAmb	IAmb	13 18 07.8	
	comp=Z,4.4nm,0.9s						
SEW	**Seward**	**57.61**	**36**	P	**P**	**13 18 07.4**	**+1.9**
CCB	**Clear Creek Bu**	**57.67**	**30**	P	**P**	**13 18 07.0**	**+1.2**
SML	**Sawmill**	**57.87**	**34**	P	**P**	**13 18 08.9**	**+1.5**
SML				IAmb	IAmb	13 18 14.5	
	comp=Z,3.9nm,0.8s						
KNK	**Knik Glacier**	**57.87**	**34**	P	**P**	**13 18 09.0**	**+1.6**
KNK				IAmb	IAmb	13 18 10.3	
	comp=Z,5.2nm,0.6s						
IL31		**58.04**	**30**	P	**P**	**13 18 08.3**	**-0.1**
ILAR	**Eielson Array**	**58.04**	**30**	P	**P**	**13 18 07.8**	**-0.7**
	comp=Z,1.3nm,0.7s,baz=277,slow=6.7,SNR=14						
ILAR				LR	LR	13 43 11.6	
	comp=Z,30nm,18.5s,baz=218,slow=36						
	comp=Z,1.3nm,0.7s						
DHY	**Denali Highway**	**58.10**	**32**	P	**P**	**13 18 10.0**	**+0.8**
SCM	**Sheep Creek Mo**	**58.33**	**34**	P	**P**	**13 18 10.7**	**+0.1**
BMAR	**Burnt Mountain**	**58.56**	**27**	P	**P**	**13 18 12.5**	**+0.3**
SCRK	**Sand Creek**	**59.43**	**31**	P	**P**	**13 18 18.1**	**-0.3**
SCRK				IAmb	IAmb	13 18 20.9	
	comp=Z,5.0nm,1.0s						
DOT	**Dot Lake**	**59.46**	**31**	P	**P**	**13 18 17.9**	**-0.5**
DOT				IAmb	IAmb	13 18 24.4	
	comp=Z,3.0nm,1.1s						
J26L	**Joseph Creek**	**59.50**	**30**	P	**P**	**13 18 18.9**	**+0.1**
M26K	**Nabesna, AK**	**60.21**	**32**	P	**P**	**13 18 23.4**	**-0.2**
M26K				IAmb	IAmb	13 18 28.1	
	comp=Z,5.9nm,1.0s						
VRDI	**Verde Repeater**	**60.27**	**34**	P	**P**	**13 18 26.0**	**+1.7**
VRDI				IAmb	IAmb	13 18 47.1	
	comp=Z,4.2nm,1.0s						
MCARA	**McCarthy VSAT**	**60.44**	**34**	P	**P**	**13 18 25.5**	**+0.3**
MCARA				IAmb	IAmb	13 18 28.2	
	comp=Z,3.9nm,0.6s						
BCAR	**Beaver Creek A**	**60.59**	**31**	P	**P**	**13 18 26.6**	**+0.3**
M27K	**Edge Creek, AK**	**60.73**	**32**	P	**P**	**13 18 27.7**	**+0.4**
M27K				IAmb	IAmb	13 18 31.5	
	comp=Z,2.7nm,0.9s						
INK	**Inuvik**	**62.41**	**25**	P	**P**	**13 18 38.5**	**+0.2**
INK				IAmb	IAmb	13 19 01.3	
	comp=Z,6.4nm,1.4s						
LVZ	**Lovozero**	**62.57**	**335**	P	**P**	**13 18 39.8**	**+0.3**
ARCES	**ARCESS Array B**	**65.04**	**338**	P	**P**	**13 18 57.6**	**+1.9**
	comp=Z,0.6nm,0.7s,baz=60,slow=9.9,SNR=5.1						
ARCES				LR	LR	13 52 27.2	
	comp=Z,54nm,18.5s,baz=338,slow=41						
	comp=Z,0.6nm,0.7s						
ARCES	**ARCESS Array B**	**65.04**	**338**	P	**P**	**13 18 57.5**	**+1.7**
KBZ	**Khabaz**	**66.92**	**308**	P	**P**	**13 19 08.7**	**+0.5**
	comp=Z,5.3nm,1.0s,baz=136,slow=2.3,SNR=9.2						
	comp=Z,5.3nm,1.0s						
KIV	**Kislovodsk**	**66.97**	**308**	P	**P**	**13 19 09.9**	**+1.2**
FIA1	**FINESS Array S**	**68.53**	**330**	P	**P**	**13 19 17.3**	**-0.8**
FINES	**FINESS Array B**	**68.53**	**330**	P	**P**	**13 19 17.5**	**-0.5**
	comp=Z,3.3nm,0.5s,baz=67,slow=7.0,SNR=20						
FINES				LR	LR	13 52 27.9	
	comp=Z,36nm,18.6s,baz=72,slow=39						
	comp=Z,3.3nm,0.5s						
FINES	**FINESS Array B**	**68.53**	**330**	P	**P**	**13 19 17.3**	**-0.8**
YKA	**Yellowknife Ar**	**72.07**	**26**	P	**P**	**13 19 39.5**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=243,slow=35,SNR=2.2						
	comp=Z,0.3nm,0.6s						
AKASG	**Malin Array Be**	**72.20**	**319**	P	**P**	**13 19 40.4**	**-0.4**
	comp=Z,1.2nm,0.6s,baz=51,slow=6.6,SNR=11						
	comp=Z,1.2nm,0.6s						
AKASG	**Malin Array Be**	**72.20**	**319**	P	**P**	**13 19 41.0**	**+0.3**
AKBB	**Malin Array Si**	**72.20**	**319**	P	**P**	**13 19 40.9**	**+0.2**
AKBB				IAmb	IAmb	13 19 42.2	
	comp=Z,4.1nm,0.8s						
NC405	**NORSAR Array S**	**74.46**	**334**	P	**P**	**13 19 53.3**	**-0.6**
NB201	**NORSAR Array S**	**74.66**	**334**	P	**P**	**13 19 55.2**	**+0.2**
NB2	**NORSAR Subarra**	**74.69**	**334**	P	**P**	**13 19 53.9**	**-1.4**
	comp=Z,1.9nm,0.7s,baz=50,slow=6.2						
NOA	**NORSAR Array B**	**74.69**	**334**	P	**P**	**13 19 53.8**	**-1.4**
	comp=Z,1.0nm,0.6s,baz=50,slow=5.8,SNR=11						
NOA				LR	LR	13 54 32.9	
	comp=Z,19nm,18.4s,baz=50,slow=37						
	comp=Z,1.0nm,0.6s						
BR131	**Keskin Array S**	**74.90**	**308**	P	**P**	**13 19 56.5**	**-0.5**
BRTR	**Keskin Array B**	**74.90**	**308**	P	**P**	**13 19 56.9**	**-0.1**
	comp=Z,3.6nm,0.9s,baz=88,slow=3.8,SNR=20						
	comp=Z,3.6nm,0.9s						
BRTR	**Keskin Array B**	**74.90**	**308**	P	**P**	**13 19 56.3**	**-0.7**
BURAR	**Bucovina Array**	**76.05**	**318**	P	**P**	**13 20 02.6**	**-0.8**
FCC	**Fort Churchill**	**81.84**	**22**	P	**P**	**13 20 34.3**	**-0.4**
FCC				IAmb	IAmb	13 20 36.9	
	comp=Z,3.0nm,0.8s						
KVN	**Kaiserville**	**84.52**	**47**	P	**P**	**13 20 49.7**	**+0.4**
KVN				IAmb	IAmb	13 20 50.1	
	comp=Z,6.3nm,1.4s						
NVAR	**Mina Array Bea**	**84.77**	**47**	P	**P**	**13 20 50.6**	**0.0**
	comp=Z,0.6nm,0.7s,baz=295,slow=5.1,SNR=5.0						
	comp=Z,0.6nm,0.7s						
PDAR	**Pinedale Array**	**87.07**	**40**	P	**P**	**13 21 01.6**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=294,slow=0.9,SNR=4.9						
	comp=Z,0.5nm,0.7s						

MAN 12 13:12:40.9,9°45N×125°59E, h16km, mb4.9, ML3.8, MS3.8, 4C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**0.34**	**343**	↑*i*	P*b*	13 12 48.5	-1.5
SCPH				*i*	S*b*	13 12 53.2	-3.6
TBP	**Tagbilaran**	**1.72**	**278**	↓*i*	P*n*	13 13 09.6	+0.2
TBP				*i*	S*n*	13 13 33.1	+1.6
LLP	**Lapu-Lapu**	**1.82**	**298**	↑*e*	P*n*	13 13 11.8	+0.6
LLP				*i*	S*n*	13 13 34.3	-0.4
KCP	**Kidapawan**	**2.48**	**192**	↓*e*	P*b*	13 13 22.0	-0.1
KCP				*i*	S*b*	13 14 12.2	+21
CTBH	**Cotabato--PC H**	**2.59**	**211**	↑*i*	P*b*	13 13 29.9	+5.3
RCP	**Roxas**	**3.50**	**307**	↑*e*	P*n*	13 13 36.6	+2.2

IDC 12 13:14:17.2±2.6, 3°23N×128°23E, h0km, mb3.4/3, mbtmp3.4/3, MS3.1/3, Error ellipse: s-maj=186.8km s-min=27.8km az=69.0, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**11.78**	**226**	LR	LR	13 22 16.5	
	comp=Z,47nm,18.4s,baz=358,slow=41						
WRA	**Warramunga Arr**	**23.80**	**166**	P	P	13 19 31.1	-0.8
	0.5nm,0.5s,baz=345,slow=9.6,SNR=5.0						
WRA				LR	LR	13 31 35.8	
	comp=Z,53nm,18.9s,baz=62,slow=44						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**27.30**	**169**	P	P	13 20 03.4	-0.4
	0.5nm,0.7s,baz=338,slow=7.6,SNR=2.6						
	0.5nm,0.7s						
MKAR	**Makanchi Array**	**58.82**	**325**	P	P	13 24 18.6	+1.0
	0.2nm,0.5s,baz=111,slow=8.0,SNR=2.3						
	0.2nm,0.5s						
TIXI	**Tiksi**	**68.33**	**0**	LR	LR	13 53 32.2	
	comp=Z,17nm,22.0s,baz=358,slow=34						

*IDC **12** 13:21:37.4±3.7, 15°.53S×174°.03W, h70km±39km, mb3.7/2, mbtmp4.1/3, ML4.2/1, Error ellipse: s-maj=171.5km s-min=32.7km az=147.0*
*NEIC **12** 13:21:38.1±0.7, 15°.4S±0°.1×174°.05W±0°.10, h70km±17km, mb4.4/7, Error ellipse: s-maj=21.3km s-min=8.0km az=147.0*
ISC 12 13:21:38.9±0.8, **15°.4S**±0°.1×**173°.9W**±0°.1, **h94**km, **n18,**

σ0°74/17, mb4.4/6, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.51**	**55**	P	P*n*	**13 22 18.9**	**+0.9**
	44nm,0.3s,baz=187,slow=1.9,SNR=74						
AFI				S	S*n*	**13 22 46.6**	**-1.4**
	199nm,0.3s,baz=274,slow=22,SNR=13						
	102nm,0.3s						
AFI	**Afiamalu**	**2.51**	**55**	P*n*	P*n*	**13 22 18.6**	**+0.6**
NIUE	**Niue**	**5.28**	**135**	P*n*	P*n*	**13 22 55.7**	**+0.4**
H11N3	**WAKE ISLAND Hy**	**39.66**	**331**	T	T	14 11 43.8	
	baz=146						
H11N1	**WAKE ISLAND Hy**	**39.67**	**331**	T	T	14 11 55.8	
	baz=146						
H11N2	**WAKE ISLAND Hy**	**39.68**	**331**	T	T	14 11 34.0	
	baz=146						
BBOO	**Buckleboo**	**48.42**	**240**	P	**P**	**13 30 11.9**	**0.0**
BBOO				IAmb	IAmb	13 30 33.1	
	comp=Z,12nm,1.2s						
WR0	**Warramunga Arr**	**49.20**	**257**	P	**P**	**13 30 17.7**	**-0.4**
WR0				IAmb	IAmb	13 30 21.2	
	comp=Z,5.1nm,1.2s						
WB0	**Warramunga Arr**	**49.35**	**257**	P	**P**	**13 30 18.9**	**-0.3**
WB2	**Warramunga Arr**	**49.38**	**257**	P	**P**	**13 30 18.9**	**-0.6**
WB2				IAmb	IAmb	13 30 19.5	
	comp=Z,8.9nm,1.4s						
WRA	**Warramunga Arr**	**49.40**	**257**	P	**P**	**13 30 18.7**	**-0.8**
	comp=Z,0.9nm,1.0s,baz=96,slow=6.9,SNR=12						
WRA				PcP	**PcP**	**13 31 41.4**	**+0.8**
	comp=Z,0.2nm,0.7s,baz=94,slow=3.2,SNR=1.0						
	comp=Z,0.9nm,1.0s						
WRA	**Warramunga Arr**	**49.40**	**257**	IAmb	IAmb	13 30 25.1	
	comp=Z,0.2nm,1.3s						
AS31	**Alice Springs**	**49.67**	**252**	P	**P**	**13 30 21.1**	**-0.6**
AS31				IAmb	IAmb	13 30 22.1	
	comp=Z,0.8nm,0.6s						
ASAR	**Alice Springs**	**49.67**	**252**	P	**P**	**13 30 21.2**	**-0.4**
	comp=Z,2.4nm,0.4s,baz=88,slow=7.6,SNR=132						
ASAR				PcP	**PcP**	**13 31 42.6**	**+1.0**
	comp=Z,0.2nm,0.5s,baz=94,slow=4.0,SNR=1.5						
	comp=Z,2.4nm,0.4s						
ASAR	**Alice Springs**	**49.67**	**252**	P	**P**	**13 30 20.9**	**-0.7**
FORT	**Forrest**	**55.01**	**243**	P	**P**	**13 31 00.2**	**-0.7**
BRTR	**Keskin Array B**	**145.84**	**321**	PKPbc	**PKPbc**	**13 41 07.5**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=56,slow=3.6,SNR=2.2						
GERES	**GERESS Array B**	**146.05**	**351**	PKPbc	**PKPab**	**13 41 09.2**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=34,slow=0.4,SNR=1.6						

*INMG **12** 13:30:23.0±1.4, 35°.53N×3°.69W, h5km±4km, ML2.4, Error ellipse: s-maj=3.7km s-min=2.6km az=1.0*
*MDD **12** 13:30:23.5±0.3, 35°.57N×3°.73W, h0km, mb_Lg2.7/23, Error ellipse: s-maj=3.0km s-min=1.9km az=6.0*
*SFS **12** 13:30:23.0, 35°.50N×3°.70W, ML2.7, ALBORAN SUR*
*CNRM **12** 13:30:25.5, 35°.65N×3°.74W, h24km, ml2.6*
*IGIL **12** 13:30:25.3, 35°.57N×3°.73W, h2km*
ISC 12 13:30:23.8±1.1, **35°.65N**±0°.02×**3°.73W**±0°.02, **h8**km±9km, **n74,**
σ1°44/131, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALE	**Palemas**	**0.47**	**202**	P	P*b*	**13 30 34.9**	**+0.6**
PALE				S	S*b*	**13 30 41.6**	**+0.3**
EALB	**Alboran**	**0.64**	**63**	P*g*	P*n*	**13 30 38.8**	**-0.3**
EALB				S*g*	S*n*	**13 30 48.2**	**-1.2**
PVLZ	**Peæn de**	**0.67**	**225**	P	P*b*	**13 30 38.3**	**+0.6**
PVLZ				S	S*g*	**13 30 44.8**	**-0.5**
WMELI	**Melilla**	**0.72**	**117**	P	P*b*	**13 30 39.2**	**+0.7**
WMELI				S	S*b*	**13 30 48.3**	**-0.2**
EMEL	**Melilla**	**0.72**	**119**	P*g*	P*b*	**13 30 39.3**	**+0.8**
EMEL				S*g*	S*b*	**13 30 47.9**	**-0.7**
GOG	**Mont Gurugu**	**0.74**	**125**	P	P*b*	**13 30 39.4**	**+0.5**
GOG				S	S*b*	**13 30 50.0**	**+0.8**
GOG	**Mont Gurugu**	**0.74**	**125**	P	P*b*	**13 30 39.5**	**+0.5**
GOG				S	S*b*	**13 30 48.7**	**-0.4**
AKLM	**AKL**	**1.14**	**186**	P	P*n*	**13 30 48.0**	**+1.8**
AKLM	**AKL**	**1.14**	**186**	P	P*n*	**13 30 47.5**	**+1.3**
AKLM				S	S*b*	**13 31 00.9**	**+0.1**
CHAS	**Isla Isabel II**	**1.16**	**113**	P	P*g*	**13 30 45.3**	**-0.7**
CHAS				S	S*g*	**13 30 59.0**	**-2.1**
ELGU	**Los Guajares,**	**1.22**	**4**	P*g*	P*b*	**13 30 47.2**	**+0.1**
ELGU				S*g*	S*g*	**13 31 02.9**	**-0.1**
EMIJ	**Mijas**	**1.24**	**318**	P*g*	P*g*	**13 30 47.8**	**+0.2**
EMIJ				S*g*	S*g*	**13 31 04.1**	**+0.4**
EMIJ				*i* Vmb_Lg		13 31 06.1	
SMIR	**Smir Dam**	**1.34**	**272**	P	P*n*	**13 30 47.4**	**-1.4**
SMIR				S	S*b*	**13 31 04.9**	**-1.7**
CEU	**Ceuta**	**1.36**	**281**	P	P*n*	**13 30 47.5**	**-1.6**
CEU				S	S*b*	**13 31 02.6**	**-4.4**
ECEU	**Ceuta**	**1.36**	**281**	P*g*	P*n*	**13 30 48.2**	**-0.9**
ECEU				S*g*	S*b*	**13 31 05.1**	**-2.0**
ECEU				*i* Vmb_Lg		13 31 08.5	
TAF	**Taforalt**	**1.36**	**127**	P	P*n*	**13 30 49.1**	**-0.1**
TAF	**Taforalt**	**1.36**	**127**	P	P*n*	**13 30 49.1**	**-0.1**
TAF				S	S*b*	**13 31 06.5**	**-0.7**
EBER	**Berja**	**1.42**	**28**	P*g*	P*n*	**13 30 50.4**	**+0.4**
EBER				S*g*	S*b*	**13 31 08.5**	**-0.4**
EBER				*i* Vmb_Lg		13 31 18.5	
CHEFC	**Chefchaouen**	**1.42**	**248**	P	P*g*	**13 30 51.3**	**+0.2**
CHEFC				S	S*g*	**13 31 09.8**	**+0.3**
EGOR	**Sierra Gorda,**	**1.49**	**348**	P*n*	P*n*	**13 30 50.8**	**-0.2**
EGOR				S*n*	S*n*	**13 31 10.4**	**-0.3**
EGOR				*i* Vmb_Lg		13 31 15.3	
EQUE	**Quentar**	**1.57**	**8**	P*n*	P*b*	**13 30 53.1**	**0.0**
EQUE				S*n*	S*n*	**13 31 12.4**	**-0.2**
EQUE				*i* Vmb_Lg		13 31 18.7	
EJIF	**Jimena Fronter**	**1.62**	**300**	P*n*	P*n*	**13 30 52.0**	**-0.6**
EJIF				S*n*	S*n*	**13 31 11.6**	**-2.1**
JBK	**JBK**	**1.62**	**144**	P	P*n*	**13 30 53.0**	**+0.1**
JBK	**JBK**	**1.62**	**144**	P	P*n*	**13 30 53.0**	**+0.1**
ENIJ	**Nijar**	**1.80**	**43**	P*n*	P*n*	**13 30 54.0**	**-1.2**
ENIJ				S*n*	S*n*	**13 31 16.1**	**-2.2**
ENIJ				*i* Vmb_Lg		13 31 20.6	
LIJA	**Lijar**	**1.84**	**313**	P	P*g*	**13 30 59.0**	**-0.1**
ESPR	**Espera**	**2.10**	**306**	P*n*	P*n*	**13 30 58.8**	**-0.5**
ESPR				S*n*	S*n*	**13 31 26.4**	**+0.7**
ESPR				*i* Vmb_Lg		13 31 42.0	
LCRM	**LCR**	**2.17**	**206**	P	P*g*	**13 31 07.0**	**+1.6**
EQES	**Quesada**	**2.21**	**14**	P*n*	P*n*	**13 31 01.4**	**+0.4**
EQES				S*n*	S*b*	**13 31 31.1**	**-0.7**
EQES				*i* Vmb_Lg		13 31 34.5	
IFR	**Ifrane**	**2.42**	**209**	P	P*n*	**13 31 04.8**	**+0.9**
IFR				S	S*n*	**13 31 32.9**	**-0.8**
TLOR	**Lorca, Murcia**	**2.59**	**39**	P*n*	P*n*	**13 31 05.4**	**-0.6**
TLOR				S*n*	S*n*	**13 31 34.7**	**-2.9**
EADA	**Adamuz**	**2.60**	**345**	P*n*	P*n*	**13 31 07.1**	**+0.9**
EADA				S*n*	S*n*	**13 31 38.3**	**+0.2**
EADA				S*g*	S*b*	**13 31 44.5**	**+1.6**
EADA				*i* Vmb_Lg		13 31 47.0	
EZAR	**Zarzadilla de**	**2.76**	**36**	S*n*	S*n*	**13 31 42.4**	**+0.5**
ECAB	**El Cabril**	**2.77**	**331**	P*n*	P*n*	**13 31 08.9**	**+0.4**
ECAB				S*n*	S*n*	**13 31 43.8**	**+1.6**
ECAB				*i* Vmb_Lg		13 31 48.9	
MD31	**MD31**	**2.90**	**197**	P	P*n*	**13 31 11.5**	**+1.1**
MD31				S	S*n*	**13 31 45.8**	**+0.2**
MDT	**Midelt**	**2.92**	**195**	P	P*b*	**13 31 14.4**	**-1.8**
MDT	**Midelt**	**2.92**	**195**	P	P*b*	**13 31 14.4**	**-1.8**
MDT				S	S*n*	**13 31 46.4**	**+0.5**
EMUR	**La Murta**	**2.96**	**42**	P*n*	P*n*	**13 31 10.4**	**-0.8**
EMUR				S*n*	S*n*	**13 31 46.4**	**-0.5**
EMUR				*i* Vmb_Lg		13 31 48.5	
EMIN	**Mina Concepcio**	**3.17**	**313**	P*n*	P*n*	**13 31 14.3**	**+0.3**
EMIN				S*n*	S*n*	**13 31 51.0**	**-1.0**
EMIN				*i* Vmb_Lg		13 31 53.5	
ZHG	**ZHG**	**3.26**	**228**	P	P*n*	**13 31 15.4**	**+0.2**
ZHG				S	S*n*	**13 31 56.3**	**+2.1**
ETOB	**Tobarra**	**3.46**	**30**	P*n*	P*n*	**13 31 20.3**	**+2.3**
ETOB				S*n*	S*n*	**13 32 01.0**	**+1.7**
ETOB				*i* Vmb_Lg		13 32 04.2	
EGRO	**El Granado**	**3.56**	**303**	P*n*	P*n*	**13 31 18.5**	**-0.8**
EGRO				S*n*	S*n*	**13 32 00.4**	**-1.1**
EGRO				*i* Vmb_Lg		13 32 04.8	
PVAQ	**Vaqueiros**	**3.66**	**300**	*e*P*n*	P*n*	**13 31 21.8**	**+1.1**
PVAQ				*e*S*n*	S*n*	**13 32 03.3**	**-0.7**
PVAQ				A	A	13 32 05.9	
	8.7nm,0.2s						
PBAR	**Barrancos**	**3.66**	**315**	*e*S*n*	S*n*	**13 32 04.0**	**0.0**
PBDV	**Barranco-do-Ve**	**3.74**	**296**	*e*P*n*	P*n*	**13 31 22.9**	**+1.0**
PBDV				*e*S*n*	S*n*	**13 32 04.9**	**-1.2**
PAB	**San Pablo**	**3.92**	**353**	P*n*	P*n*	**13 31 25.8**	**+1.4**
PAB				S*n*	S*n*	**13 32 10.5**	**-0.1**
PAB				*i* Vmb_Lg		13 32 16.9	
PAB	**San Pablo**	**3.92**	**353**	P	P*n*	**13 31 27.1**	**+2.8**
PAB	**San Pablo**	**3.92**	**353**	P	P*n*	**13 31 27.1**	**+2.8**
PCVE	**Castro Verde**	**3.99**	**301**	*e*P*n*	P*n*	**13 31 26.4**	**+1.2**
PCVE				*e*S*n*	S*n*	**13 32 11.4**	**-0.8**
PCVE				A	A	13 32 13.6	
	6.5nm,0.3s						
ESDC	**Sonseca Array**	**4.02**	**357**	P*n*	P*n*	**13 31 26.3**	**+0.6**
ESDC				S*n*	S*n*	**13 32 12.8**	**-0.2**
ESDC				*i* Vmb_Lg		13 32 19.0	
EBAD	**Badajoz**	**4.06**	**321**	P*n*	P*n*	**13 31 26.7**	**+0.5**
EBAD				S*n*	S*n*	**13 32 13.4**	**-0.5**
EBAD				*i* Vmb_Lg		13 32 18.4	
PBEJ	**Beja**	**4.08**	**307**	*e*S*n*	S*n*	**13 32 13.9**	**-0.5**
PBEJ				A	A	13 32 26.0	
	2.6nm,0.5s						
MESJ	**Messejana**	**4.22**	**303**	*e*P	P*n*	**13 31 29.3**	**+1.0**
MESJ				*e*S	S*n*	**13 32 16.0**	**-1.8**
MESJ	**Messejana**	**4.22**	**303**	*e*P*n*	P*n*	**13 31 29.6**	**+1.3**
MESJ				*e*S*n*	S*n*	**13 32 17.0**	**-0.8**
MORF	**Marmelete**	**4.30**	**294**	*e*S*n*	S*n*	**13 32 19.3**	**-0.5**
MORF				A	A	13 32 22.9	
	4.5nm,0.2s						
PTEO	**Sao Teotonio**	**4.44**	**297**	*e*P*n*	P*n*	**13 31 33.1**	**+1.7**
PTEO				*e*S*n*	S*n*	**13 32 21.6**	**-1.7**
PTEO				A	A	13 32 29.4	
	6.2nm,1.6s						
PESTR	**Estremoz**	**4.45**	**317**	*e*P*n*	P*n*	**13 31 33.9**	**+2.3**
PESTR				*e*S*n*	S*n*	**13 32 22.6**	**-0.9**
PESTR				A	A	13 32 47.1	
	3.0nm,0.4s						
PESTR	**Estremoz**	**4.45**	**317**	P	P*n*	**13 31 33.9**	**+2.3**
PESTR				S	S*n*	**13 32 22.4**	**-1.2**
EVO	**Evora**	**4.47**	**311**	P	P*n*	**13 31 34.1**	**+2.3**
EVO				S	S*n*	**13 32 22.6**	**-1.4**
EVO	**Evora**	**4.47**	**311**	*e*P*n*	P*n*	**13 31 33.6**	**+1.7**
EVO				*e*S*n*	S*n*	**13 32 23.0**	**-1.1**
PNCL	**Nicolau / Gran**	**4.56**	**304**	*e*P*n*	P*n*	**13 31 34.4**	**+1.3**
PNCL				*e*S*n*	S*n*	**13 32 25.3**	**-1.0**
PNCL				A	A	13 32 29.7	
	3.1nm,0.4s						
UCM	**Universidad Co**	**4.67**	**5**	P	P*n*	**13 31 39.1**	**+4.5**
UCM				S	S*n*	**13 32 33.1**	**+4.2**
PMRV	**Marv??o**	**4.76**	**323**	*e*P*n*	P*n*	**13 31 38.0**	**+2.1**
PMRV				*e*S*n*	S*n*	**13 32 31.1**	**-0.2**
PMRV				A	A	13 33 07.5	
	2.8nm,0.5s						
EPLA	**Plasencia**	**4.78**	**338**	P*n*	P*n*	**13 31 36.7**	**+0.5**
EPLA				*i* Vmb_Lg		13 32 32.8	
EPLA				S*n*	S*n*	**13 32 32.9**	**+1.1**
PMTG	**Montargil**	**4.95**	**315**	*e*P*n*	P*n*	**13 31 40.5**	**+2.1**
PMTG				*e*S*n*	S*n*	**13 32 35.3**	**-0.5**
PMTG				A	A	13 33 14.2	
	3.6nm,0.7s						
PACT	**Alcochete**	**5.12**	**309**	*e*P*n*	P*n*	**13 31 43.3**	**+2.5**
PCBR	**Castelo Branco**	**5.13**	**326**	*e*P*n*	P*n*	**13 31 44.1**	**+3.2**
PCBR				*e*S*n*	S*n*	**13 32 39.4**	**-0.9**
PCBR				A	A	13 32 41.8	
	3.0nm,0.5s						
EIBI	**Ibiza**	**5.26**	**49**	P*n*	P*n*	**13 31 41.8**	**-0.9**
EIBI				*i* Vmb_Lg		13 32 39.6	
EIBI				S*n*	S*n*	**13 32 41.2**	**-2.4**
ETOR	**Torete**	**5.33**	**14**	P*n*	P*n*	**13 31 43.8**	**+0.1**
ETOR				S*n*	S*n*	**13 32 45.9**	**+0.7**
ETOR				*i* Vmb_Lg		13 32 46.0	
OUZM	**OUZ**	**5.37**	**209**	P	P*n*	**13 31 45.5**	**+1.2**
PMAFR	**Mafra**	**5.52**	**308**	*e*S*n*	S*n*	**13 32 49.0**	**-0.9**
PSBE	**So Bento**	**5.57**	**315**	*e*P*n*	P*n*	**13 31 49.4**	**+2.4**
PSBE				*e*S*n*	S*n*	**13 32 50.1**	**-1.2**
MVO	**Moncorvo**	**6.08**	**336**	*e*P*n*	P*n*	**13 31 56.8**	**+2.7**
PBRG	**Braganca**	**6.58**	**340**	*e*P*n*	P*n*	**13 32 03.4**	**+2.5**

*INET **12** 13:38:38.4±0.3, 12°.94N×87°.06W, h6km±2km, ML3.4*
*SNET **12** 13:38:39.5±0.8, 12°.95N×87°.09W, h19km±120km, ML3.2*
ISC 12 13:38:38.2±1.0, **12°.97N**±0°.07×**87°.02W**±0°.06, **h13**km, **n10,**
σ0°60/13, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res

HSIG IAmb IAmb 13 47 33.5
comp=Z,29nm,1.7s
ROSC El Rosal 38.01 70 LR LR 14 00 18.3
comp=Z,258nm,20.5s,baz=232,slow=32
TXAR Lajitas Array 38.69 9 P **P** **13 47 37.3 +0.6**
comp=Z,0.4nm,1.0s,baz=183,slow=9.4,SNR=3.4
comp=Z,0.4nm,1.0s
TXAR Lajitas Array 38.69 9 P **P** **13 47 37.1 +0.5**
PPT Papeete 39.52 253 LR LR 13 59 43.9
comp=Z,249nm,19.2s,baz=103,slow=30
PPT2 Papeete2 39.52 253 *e*LR LR 13 58 05.1
comp=Z,787nm,26.5s
PB16 IPOC Station P 40.14 108 P **P** **13 47 50.8 +1.2**
TBI Tubuai 40.45 245 *e*LR LR 13 58 30.9
comp=Z,703nm,28.2s
MNTX Cornudas Mount 40.81 6 P **P** **13 47 54.0 -0.1**
HKT Hockley 41.11 19 P **P** **13 47 55.6 -0.9**
LPAZ La Paz 41.23 104 P **P** **13 47 58.5 -0.1**
comp=Z,1.3nm,0.8s,baz=306,slow=6.5,SNR=5.9
comp=Z,1.3nm,0.8s
LPAZ La Paz 41.23 104 P **P** **13 47 57.6 -1.0**
LVC Limon Verde 41.43 114 LR LR 14 00 53.2
comp=Z,214nm,19.8s,baz=281,slow=30
121A Cookes Peak, D 41.46 3 P **P** **13 48 00.5 +0.7**
CO06 Fray Jorge 41.52 127 P **P** **13 47 59.2 -0.9**
ABTX Abilene, Hawle 42.63 13 P **P** **13 48 08.9 -0.2**
ABTX IAmb IAmb 13 48 24.8
comp=Z,18nm,1.7s
BLYC Blythe 42.86 354 P **P** **13 48 11.0 +0.1**
BLYC IAmb IAmb 13 48 15.6
comp=Z,14nm,1.4s
SDV Santo Domingo 42.93 66 LR LR 14 02 38.2
comp=Z,155nm,21.3s,baz=252,slow=31
PFO Pinyon Flats O 42.96 352 LR LR 14 01 35.7
comp=Z,474nm,20.2s,baz=174,slow=30
X18A Snowflake 43.41 360 P **P** **13 48 16.5 +0.9**
X18A IAmb IAmb 13 48 28.0
comp=Z,11nm,1.5s
MT03 Universidad Ad 43.53 130 P **P** **13 48 17.1 +0.5**
LMEL Las Melosas 43.91 130 P **P** **13 48 19.7 -0.1**
LMEL IAmb IAmb 13 48 22.1
comp=Z,11nm,0.9s
ANMO Albuquerque 43.94 4 P **P** **13 48 21.2 +1.4**
comp=Z,0.2nm,0.3s,baz=180,slow=8.2,SNR=3.4
comp=Z,0.2nm,0.3s
ANMO Albuquerque 43.94 4 P **P** **13 48 20.6 +0.7**
W13A Hualapai Mount 44.14 355 P **P** **13 48 21.7 +0.1**
W13A IAmb IAmb 13 48 38.9
comp=Z,18nm,1.6s
SHPR Sheep Range 45.66 354 P **P** **13 48 32.7 -0.8**
SHPR IAmb IAmb 13 48 51.1
comp=Z,18nm,1.7s
PAGB Antelope Grade 45.68 348 P **P** **13 48 32.9 -0.7**
SAML Samuel 46.03 94 P **P** **13 48 34.9 -1.8**
SAML IAmb IAmb 13 48 42.6
comp=Z,4.8nm,1.4s
TPNV Topopah Spring 46.22 353 P **P** **13 48 38.8 +0.8**
TPNV IAmb IAmb 13 48 41.3
comp=Z,8.1nm,1.4s
PRN Pahroc Range 46.54 354 P **P** **13 48 41.8 +1.4**
PRN IAmb IAmb 13 49 06.0
comp=Z,9.7nm,1.3s
PLCA Paso Flores 46.90 139 P **P** **13 48 44.0 +0.8**
comp=Z,6.1nm,0.9s,baz=286,slow=8.6,SNR=8.4
comp=Z,6.1nm,0.9s
PLCA Paso Flores 46.90 139 P **P** **13 48 43.5 +0.3**
WHAR Wooly Hollow 47.17 20 P **P** **13 48 46.5 +1.3**
TPH Tonopah 47.45 352 P **P** **13 48 48.6 +1.0**
NVAR Mina Array Bea 47.96 351 P **P** **13 48 53.2 +1.7**
comp=Z,1.7nm,1.0s,baz=181,slow=10,SNR=1.1
NVAR PcP **PcP** **13 50 18.3 -1.6**
comp=Z,0.3nm,0.5s,baz=137,slow=4.5,SNR=1.9
NVAR LR LR 14 04 22.0
comp=Z,396nm,21.0s,baz=168,slow=30
comp=Z,1.7nm,1.0s
NVAR Mina Array Bea 47.96 351 P **P** **13 48 52.6 +1.1**
LCAR Lake Charles 48.26 20 P **P** **13 48 53.7 0.0**
RAR Rarotonga 49.50 250 LR LR 14 04 26.4
comp=Z,88nm,21.1s,baz=38,slow=29
ELK Elko 49.86 355 P **P** **13 49 07.1 +0.9**
comp=Z,0.4nm,0.4s,baz=169,slow=8.4,SNR=3.7
ELK LR LR 14 06 39.6
comp=Z,458nm,18.0s,baz=180,slow=32
comp=Z,0.4nm,0.4s
ELK Elko 49.86 355 P **P** **13 49 06.7 +0.6**
TKL Tuckaleechee C 50.86 27 LR LR 14 10 24.0
comp=Z,54nm,19.1s,baz=186,slow=36
SJG San Juan 50.90 58 LR LR 14 07 55.7
comp=Z,139nm,20.3s,baz=232,slow=33
PDAR Pinedale Array 51.63 0 P **P** **13 49 19.2 -0.2**
comp=Z,0.3nm,0.7s,baz=120,slow=5.3,SNR=4.1
PDAR LR LR 14 08 19.9
comp=Z,403nm,18.3s,baz=186,slow=33
comp=Z,0.3nm,0.7s
TZTN Tazewell 51.70 27 P **P** **13 49 19.2 -0.7**
TZTN IAmb IAmb 13 49 38.1
comp=Z,12nm,1.1s
YBH Yreka Blue Hor 51.97 348 LR LR 14 06 22.8
comp=Z,248nm,19.5s,baz=162,slow=30
CPUP Villa Florida 52.48 116 LR LR 14 07 30.2
comp=Z,156nm,21.3s,baz=279,slow=31
MFID Camas Ranch 52.57 354 P **P** **13 49 26.7 +0.5**
MFID IAmb IAmb 13 49 34.7
comp=Z,14nm,1.8s
FLWY Flagg Ranch 52.95 359 P **P** **13 49 29.3 0.0**
RSSD Black Hills 53.25 5 P **P** **13 49 30.1 -1.3**
RSSD IAmb IAmb 13 49 32.0
comp=Z,6.3nm,1.4s
USHA Ushuaia 56.15 153 LR LR 14 08 22.3
comp=Z,482nm,19.1s,baz=197,slow=30
NEW Newport 57.49 354 LR LR 14 10 10.7
comp=Z,248nm,21.1s,baz=178,slow=31
MDP Montagnes des 58.72 78 LR LR 14 12 46.4
comp=Z,158nm,18.5s,baz=248,slow=33
ULM Lac du Bonnet 60.36 10 P **P** **13 50 22.0 +0.4**
comp=Z,3.5nm,0.9s,baz=219,slow=7.5,SNR=1.9
ULM LR LR 14 13 37.7
comp=Z,80nm,19.4s,baz=196,slow=33
comp=Z,3.5nm,0.9s
SADO Sadowa 60.36 25 LR LR 14 15 33.2
comp=Z,138nm,18.7s,baz=114,slow=35
AFI Afiamalu 60.76 259 LR LR 14 11 27.3
comp=Z,96nm,18.4s,baz=44,slow=31
BBB Bella Bella 63.05 347 LR LR 14 12 53.0
comp=Z,81nm,18.8s,baz=224,slow=31
PMSA Palmer Station 64.06 160 LR LR 14 12 09.8
comp=Z,600nm,20.4s,baz=352,slow=30
DLBC Dease Lake 69.29 349 P **P** **13 51 20.8 +1.1**
comp=Z,0.5nm,0.3s,baz=162,slow=9.6,SNR=1.8
DLBC LR LR 14 17 02.3
comp=Z,161nm,18.6s,baz=138,slow=32
comp=Z,0.5nm,0.3s
MSVF Nonsavu 70.34 254 LR LR 14 14 38.4
comp=Z,163nm,21.6s,baz=99,slow=29
URZ Urewera 71.13 233 LR LR 14 14 43.9
comp=Z,181nm,19.0s,baz=34,slow=29
YKA Yellowknife Ar 71.49 358 P **P** **13 51 32.4 -0.5**
comp=Z,0.4nm,0.7s,baz=228,slow=15,SNR=2.2
YKA LR LR 14 19 57.7
comp=Z,121nm,18.4s,baz=184,slow=33
comp=Z,0.4nm,0.7s
SCHQ Schefferville 73.17 24 LR LR 14 23 48.0
comp=Z,110nm,18.4s,baz=173,slow=36
RCBR Riachuelo 73.26 93 LR LR 14 22 57.9
comp=Z,158nm,18.2s,baz=54,slow=35
KDAK Kodiak Island 75.20 338 LR LR 14 18 01.7
comp=Z,333nm,18.3s,baz=151,slow=30
RPZ Rata Peaks 75.91 227 LR LR 14 20 30.9
comp=Z,148nm,19.9s,baz=92,slow=32
BCAR Beaver Creek A 76.03 346 P **P** **13 51 59.2 -0.5**
DOT Dot Lake 77.09 345 P **P** **13 52 05.8 +0.2**
ILAR Eielson Array 78.73 345 P **P** **13 52 14.8 +0.1**
comp=Z,0.3nm,0.8s,baz=171,slow=4.9,SNR=2.1
ILAR LR LR 14 19 54.5
comp=Z,123nm,19.6s,baz=132,slow=30
comp=Z,0.3nm,0.8s
M19K Big River Lodg 78.79 340 P **P** **13 52 14.8 -0.3**
M19K IAmb IAmb 13 52 28.8
comp=Z,8.5nm,1.4s
KTH Kantishna Hill 78.90 343 P **P** **13 52 15.2 -0.6**
KTH IAmb IAmb 13 52 16.6
comp=Z,5.6nm,0.9s
INK Inuvik 79.05 351 P **P** **13 52 15.9 -0.4**
comp=Z,0.9nm,0.9s,baz=176,slow=3.9,SNR=2.3
INK LR LR 14 23 00.8
comp=Z,187nm,21.8s,baz=142,slow=32
comp=Z,0.9nm,0.9s

FRB Frobisher Bay 79.10 17 LR LR 14 25 32.4
comp=Z,239nm,18.6s,baz=198,slow=34
K20K Telida 79.72 341 P **P** **13 52 19.3 -0.9**
K20K IAmb IAmb 13 52 36.5
comp=Z,17nm,1.8s
DZM Mont Dzumac 80.86 249 LR LR 14 18 03.0
comp=Z,50nm,21.5s,baz=138,slow=28
QSPA South Pole Qui 80.96 180 LR LR 14 24 31.7
comp=Z,130nm,18.7s,baz=106,slow=33
QSPA South Pole Qui 80.96 180 P **P** **13 52 28.1 +1.0**
QSPA IAmb IAmb 13 52 38.5
comp=Z,8.6nm,1.1s
IMAR Indian Mountai 81.52 343 P **P** **13 52 29.2 -0.5**
RES Resolute Bay 84.16 4 LR LR 14 27 43.9
comp=Z,324nm,20.2s,baz=293,slow=34
VNA3 Neumayer Olymp 84.68 161 P **P** **13 52 46.2 0.0**
VNA2 Neumayer--Watz 85.48 161 P **P** **13 52 49.5 -0.6**
baz=252,slow=5.1
SNAA Sanae 86.67 162 LR LR 14 24 14.1
comp=Z,95nm,21.2s,baz=153,slow=30
H11S2 WAKE ISLAND Hy 86.74 289 T T 15 29 06.3
baz=101,slow=75,SNR=1081
H11S1 WAKE ISLAND Hy 86.75 289 T T 15 28 55.5
baz=101,slow=75,SNR=596
H11S3 WAKE ISLAND Hy 86.76 289 T T 15 29 07.6
baz=101,slow=75,SNR=580
H11N3 WAKE ISLAND Hy 86.78 290 T T 15 28 56.0
baz=102,slow=75,SNR=542
H11N2 WAKE ISLAND Hy 86.79 290 T T 15 28 57.1
baz=102,slow=75,SNR=332
H11N1 WAKE ISLAND Hy 86.79 290 T T 15 28 56.8
baz=102,slow=75,SNR=243
SFJD Kangerlussuaq 86.91 20 LR LR 14 30 28.8
comp=Z,93nm,18.8s,baz=238,slow=35
SHEM Shemya Is, Ala 88.88 324 LR LR 14 24 58.8
comp=Z,194nm,20.8s,baz=124,slow=30
PETK Petropavlovsk- 98.71 322 LR LR 14 29 30.0
comp=Z,134nm,21.0s,baz=103,slow=30
CTA Charters Tower 99.77 248 LR LR 14 29 58.0
comp=Z,40nm,21.8s,baz=81,slow=30
SONM Songino Array 130.78 328 PKP **PKiKP** **13 59 25.5 +0.3**
comp=Z,0.3nm,0.4s,baz=5.7,slow=5.8,SNR=1.9
BRTR Keskin Array B 135.41 41 PKP **PKiKP** **13 59 35.4 +0.6**
comp=Z,0.6nm,0.7s,baz=20,slow=4.6,SNR=3.5
MKAR Makanchi Array 141.06 347 PKP **PKiKP** **13 59 45.3 -0.6**
comp=Z,0.1nm,0.4s,baz=64,slow=3.4,SNR=2.3
GEYT Alibeck 149.32 19 PKPbc **PKPbc** **14 00 01.7 -0.4**
comp=Z,1.5nm,0.7s,baz=274,slow=5.6,SNR=2.0
CMAR Chiang Mai Arr 150.60 291 PKPbc **PKiKP** **14 00 06.3 0.0**
comp=Z,0.2nm,0.3s,baz=170,slow=0.5,SNR=3.1

*IDC **12** 14:00:29.1±2.1,6.23N×73.58W,h140km±24km, mbtmp3.9/1,Error ellipse: s-maj=162.6km s-min=9.2km az=131.0*
*RSNC **12** 14:00:30.5±1.4,6.09N×73.50W,h132km±5km,ML3.2, Mw3.6*
ISC 12 14:00:29.0±1.0,6.07N±0.03°×73.50W±0.03,h141km±6km, n36,σ1ᵖ31/70,3D,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
RUSC	**La Rusia**	**0.45**	**113**	⇓*e*P		**Pn**	**14 00 50.0**	**+0.3**
RUSC				*e*S		**Sn**	**14 01 04.7**	**-0.5**
BARC	**Barichara**	**0.60**	**31**	*i* P		**Pn**	**14 00 50.5**	**+0.3**
BARC				⇓*e*P		**Pn**	**14 00 50.5**	**+0.3**
BARC				*e*S		**Sn**	**14 01 05.2**	**-1.0**
BARC				*i*			14 01 07.2	
	comp=Z,276nm,0.2s							
SPBC	**San Pablo de B**	**0.71**	**234**	*e*P		**Pn**	**14 00 50.7**	**0.0**
SPBC				*e*S		**Sn**	**14 01 06.3**	**-0.8**
SPBC				*i*			14 01 08.7	
	comp=Z,599nm,0.3s							
BRRC	**Barranca, Sant**	**1.05**	**348**	⇓*e*P		**Pn**	**14 00 53.6**	**+0.2**
BRRC				*e*S		**Sn**	**14 01 11.9**	**-0.1**
BRRC				*i*			14 01 15.3	
	comp=Z,129nm,0.2s							
PTBC	**PUERTO BERRIO,**	**1.06**	**296**	*e*P		**Pn**	**14 00 52.5**	**-0.9**
PTBC				*e*S		**Sn**	**14 01 10.3**	**-1.8**
PTBC				*i*			14 01 12.2	
	comp=Z,321nm,0.9s							
CHIC	**Chingaza**	**1.45**	**189**	*e*P		**Pn**	**14 00 58.3**	**+0.5**
CHIC				*e*S		**Sn**	**14 01 19.7**	**0.0**
CHIC				*i*			14 01 25.3	
	comp=Z,145nm,0.3s							
NORC	**Norcasia**	**1.46**	**250**	*e*P		**Pn**	**14 00 57.6**	**+0.2**
NORC				*e*S		**Sn**	**14 01 19.0**	**-0.1**
NORC				*i*			14 01 22.2	
	comp=Z,408nm,0.2s							
ROSC	**El Rosal**	**1.47**	**214**	P		**Pn**	**14 00 59.0**	**+1.0**
	comp=Z,56nm,0.3s,baz=36,slow=8.7,SNR=18							
ROSC				S		**Sn**	**14 01 21.8**	**+1.8**
	comp=Z,90nm,0.3s,baz=30,slow=20,SNR=7.6							
ROSC	**El Rosal**	**1.47**	**214**	*e*P		**Pn**	**14 00 59.4**	**+1.4**
ROSC				*e*S		**Sn**	**14 01 21.9**	**+1.8**
ROSC				*i*			14 01 25.8	
	comp=Z,179nm,0.3s							
PAMC	**Pamplona, Colo**	**1.49**	**32**	*e*P		**Pn**	**14 00 59.4**	**+1.2**
PAMC				*e*S		**Sn**	**14 01 20.9**	**+0.3**
PAMC				*i*			14 01 22.9	
	comp=Z,102nm,0.3s							
TAMC	**Tame, Arauca**	**1.73**	**78**	*e*P		**Pn**	**14 01 01.8**	**+1.3**
TAMC				*e*S		**Sn**	**14 01 24.3**	**-0.3**
TAMC				*i*			14 01 24.5	
	comp=Z,222nm,0.2s							
VILC	**Villavicencio,**	**1.96**	**186**	*e*P		**Pn**	**14 01 03.7**	**+0.5**
VILC				*e*S		**Sn**	**14 01 29.9**	**+0.5**
HELC	**Santa Helena**	**2.02**	**273**	*e*P		**Pn**	**14 01 05.6**	**+1.4**
HELC				*e*S		**Sn**	**14 01 30.8**	**-0.4**
HELC				*i*			14 01 37.8	
	comp=Z,114nm,0.3s							
GUY2C	**Guyana, Caldas**	**2.04**	**246**	*e*P		**Pn**	**14 01 05.4**	**+0.8**
GUY2C				*e*S		**Sn**	**14 01 33.2**	**+1.5**
GUY2C				*i*			14 01 39.1	
	comp=Z,91nm,0.5s							
OCAC	**Ocana**	**2.16**	**5**	*e*P		**Pn**	**14 01 06.3**	**+0.6**
OCAC				*e*S		**Sn**	**14 01 34.2**	**+0.3**
OCAC				*i*			14 01 41.4	
	comp=Z,296nm,0.2s							
PTGC	**Puerto Gaitan,**	**2.30**	**144**	*e*P		**Pn**	**14 01 07.7**	**+0.4**
PTGC				*e*S		**Sn**	**14 01 36.6**	**-0.1**
PTGC				*i*			14 01 39.0	
	comp=Z,101nm,0.2s							
ANIL	**Santa Ana**	**2.46**	**231**	*e*P		**Pn**	**14 01 10.6**	**+1.1**
ANIL				*e*S		**Sn**	**14 01 41.9**	**+1.2**
CBOC	**Ciudad Bolivar**	**2.51**	**265**	*e*P		**Pn**	**14 01 10.8**	**+0.8**
CBOC				*e*S		**Sn**	**14 01 41.6**	**+0.2**
CBOC				*i*			14 01 45.7	
	comp=Z,40nm,0.4s							
UREC	**San Jos de Ur**	**2.62**	**310**	*e*P		**Pn**	**14 01 10.6**	**-0.6**
UREC				*e*S		**Sn**	**14 01 40.0**	**-3.8**
PRAC	**Prado**	**2.72**	**211**	*e*P		**Pn**	**14 01 12.4**	**-0.1**
PRAC				*e*S		**Sn**	**14 01 47.4**	**+1.3**
PRAC				*i*			14 01 52.2	
	comp=Z,116nm,0.4s							
ORTC	**Ortega, Tolima**	**2.77**	**219**	*e*P		**Pn**	**14 01 13.5**	**+0.4**
ORTC				*e*S		**Sn**	**14 01 47.5**	**+0.4**
ORTC				*i*			14 01 53.7	
	comp=Z,63nm,0.4s							
DBBC	**Dabeiba**	**2.85**	**289**	*e*P		**Pn**	**14 01 14.5**	**+0.3**
DBBC				*e*S		**Sn**	**14 01 48.7**	**-0.4**
DBBC				*i*			14 02 03.6	
	comp=Z,102nm,0.6s							
PLMC	**San Jos del P**	**3.00**	**247**	*e*P		**Pn**	**14 01 17.2**	**+1.1**
PLMC				*e*S		**Sn**	**14 01 52.2**	**-0.4**
PLMC				*i*			14 01 56.7	
	comp=Z,24nm,0.7s							
YOTC	**Yotoco, Valle**	**3.51**	**234**	*e*P		**Pn**	**14 01 22.7**	**-0.1**
YOTC				*e*S		**Sn**	**14 02 06.4**	**+2.0**
GUVC	**San Jose del G**	**3.61**	**166**	*e*P		**Pn**	**14 01 24.0**	**+0.1**
GUVC				*e*S		**Sn**	**14 02 05.9**	**-0.6**
LL6C	**La Loma 6 Bece**	**3.65**	**4**	*e*P		**Pn**	**14 01 26.5**	**+2.0**
LL6C				*e*S		**Sn**	**14 02 08.7**	**+1.3**
MACC	**Macarena, Meta**	**3.92**	**185**	*e*P		**Pn**	**14 01 27.2**	**-0.8**
MACC				*e*S		**Sn**	**14 02 10.7**	**-3.1**
MACC				*i*			14 02 14.2	
	comp=Z,26nm,0.3s							
LCBC	**Los crdobas,**	**3.97**	**314**	*e*S		**Pn**	**14 01 32.8**	**+4.2**
SDV	**Santo Domingo**	**3.98**	**45**	P		**Pn**	**14 01 30.2**	**+1.2**
	comp=Z,11nm,0.3s,baz=225,slow=1.4,SNR=5.2							
SDV				S		**Sn**	**14 02 14.5**	**-1.1**
	comp=Z,49nm,0.4s,baz=232,slow=17,SNR=16							
SDV	**Santo Domingo**	**3.98**	**45**	*e*P		**Pn**	**14 01 29.9**	**+0.9**
SDV				*e*S		**Sn**	**14 02 15.0**	**-0.6**
SDV				*i*			14 02 16.7	
	comp=Z,44nm,0.5s							
MARP	**Paez Belalcaza**	**4.04**	**217**	*e*P		**Pn**	**14 01 30.0**	**+0.2**
MARP				*e*S		**Sn**	**14 02 14.5**	**-2.4**
SJCC	**San Jacinto, C**	**4.15**	**336**	*e*P		**Pn**	**14 01 31.1**	**0.0**
SJCC				*e*S		**Sn**	**14 02 15.8**	**-3.6**
GARC	**Garzon, Huila**	**4.34**	**207**	*e*P		**Pn**	**14 01 32.8**	**-1.0**
GARC				*e*S		**Sn**	**14 02 22.0**	**-2.1**
CRJC	**Cerrejon, Guaj**	**4.96**	**7**	*e*P		**Pn**	**14 01 42.2**	**+0.4**
CRJC				*e*S		**Sn**	**14 02 37.7**	**-0.8**
CRJC				*i*			14 02 47.0	
	comp=Z,34nm,0.5s							
ASAR	**Alice Springs**	**148.37**	**234**	PKPbc		**PKPbc**	**14 19 59.3**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=119,slow=3.3,SNR=9.1							
WRA	**Warramunga Arr**	**149.65**	**240**	PKPbc		**PKPbc**	**14 20 02.8**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=101,slow=4.0,SNR=4.6							

IDC 12 14:26:52.0±8.9,37.16N×68.84E,h142km±57km,mb2.9/1, mbtmp3.5/5,Error ellipse: s-maj=176.7km s-min=29.7km az=158.0,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**6.99**	**37**	P		Pn	14 28 31.6	-0.3
	3.4nm,0.3s,baz=225,slow=7.1,SNR=2.7							
GEYT	**Alibeck**	**8.55**	**278**	P		Pn	14 28 52.9	+0.1
	1.1nm,0.3s,baz=93,slow=10,SNR=6.2							
MKAR	**Makanchi Array**	**13.87**	**42**	P		Pn	14 30 03.8	+1.5
	0.8nm,0.6s,baz=217,slow=12,SNR=8.8							
KURBB	**Kurchatov Arra**	**15.15**	**24**	P		Pn	14 30 16.9	-1.4
	0.3nm,0.7s,baz=212,slow=12,SNR=1.6							
ZALV	**Zalesovo Beam**	**20.10**	**28**	P		P	14 31 14.2	0.0
	0.6nm,0.4s,baz=210,slow=10,SNR=4.7							
	0.6nm,0.4s							

MAN 12 14:55:16.1,13.03N×121.75E,h19km,mb4.4,ML3.3, MS3.1,10C-2D,Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
BOAC	**Boac**	**0.44**	**12**	⇑*e*P		Pb	14 55 25.2	+0.8
BOAC				*e*S			14 56 04.9	
SJMP	**San Jose**	**0.83**	**228**	⇑*e*P		Pn	14 55 31.4	+0.1
SJMP				*e*S			14 55 43.0	
PGP	**Puerto Galera**	**0.91**	**301**	⇑*e*P		Pb	14 55 31.4	+0.6
PGP				*i* S			14 55 43.2	
GQP	**Guinayangan**	**1.10**	**38**	⇑*e*P		Pn	14 55 35.7	0.0
GQP				*e*S			14 55 51.2	
TGY	**Tagaytay City**	**1.33**	**324**	⇑*e*P		Pb	14 55 39.6	+0.2
TGY				*i* S			14 55 59.9	
JCNP	**Jose Panganiba**	**1.56**	**36**	⇑*e*P		Pb	14 55 43.2	+0.4
JCNP				*e*S			14 56 04.6	
MACP	**Maragondon, Ca**	**1.59**	**321**	⇑*e*P		Pb	14 55 43.0	+0.7
MACP				*e*S			14 56 09.9	
LUBP	**Lubang**	**1.62**	**296**	⇑*e*P		Pb	14 55 43.4	+0.7
LUBP				*e*S			14 56 02.5	
RCP	**Roxas**	**1.75**	**146**	⇓*e*P		Pn	14 55 45.1	+0.9
SCSP	**San Jose Seism**	**1.83**	**70**	⇑*e*P		Pb	14 55 47.2	+1.0
JAP	**San Jose, Anti**	**2.27**	**175**	⇑*e*P		Pb	14 55 53.2	+1.9
PCPH	**Palayan**	**2.60**	**346**	⇓*e*P		Pb	14 55 58.8	+2.3

*NEIC **12** 14:55:17.5±1.1,23.4S±0.1×179.6W±0.1,h530km±9km, mb4.4/36,Error ellipse: s-maj=16.7km s-min=15.3km az=123.0*
*IDC **12** 14:55:20.4±2.2,23.33S×179.83W,h561km±25km, mb3.4/13,mbtmp4.3/14,Error ellipse: s-maj=23.1km s-min=15.8km az=48.0*
ISC 12 14:55:17.9±0.5,23.50S±0.07×179.70W±0.08,h536km, n58,σ1ᵖ40/54,mb4.3/27,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**6.11**	**339**	P		**P**	**14 56 58.3**	**+1.3**
	3.7nm,0.8s,baz=210,slow=20,SNR=1.8							
AFI	**Afiamalu**	**12.13**	**40**	P		**P**	**14 57 55.9**	**-2.1**
	14nm,0.6s,baz=180,slow=20,SNR=4.7							
DZM	**Mont Dzumac**	**12.86**	**274**	P		**P**	**14 58 03.2**	**-2.3**
	7.2nm,0.9s,baz=93,slow=18,SNR=1.5							
URZ	**Urewera**	**14.96**	**190**	P		**P**	**14 58 25.6**	**-1.4**
	12nm,0.9s,baz=44,slow=20,SNR=1.8							
URZ				S		**S**	**15 00 56.4**	**-6.5**
	6.7nm,0.8s,baz=301,slow=19,SNR=1.0							
BKZ	**Black Stump Fm**	**15.95**	**191**	P		**P**	**14 58 35.6**	**-1.6**
BKZ				IAmb	IAmb		14 58 57.8	
	comp=Z,12nm,1.2s							
LTZ	**Lake Taylor**	**20.35**	**197**	P		**P**	**14 59 18.0**	**+0.3**
RPZ	**Rata Peaks**	**21.55**	**198**	P		**P**	**14 59 31.4**	**+2.9**
	comp=Z,28nm,1.1s,baz=48,slow=2.6,SNR=2.0							
	comp=Z,28nm,1.1s							
RPZ	**Rata Peaks**	**21.55**	**198**	P		**P**	**14 59 28.5**	**0.0**
KNTN	**Kanton**	**22.00**	**22**	P		**P**	**14 59 31.8**	**-1.1**
ARMA	**Armidale**	**26.42**	**249**	P		**P**	**15 00 13.8**	**+1.8**
ARMA				IAmb	IAmb		15 00 34.0	
	comp=Z,31nm,1.4s							
EIDS	**Eidsvold**	**26.65**	**260**	P		**P**	**15 00 15.1**	**+1.2**
EIDS				IAmb	IAmb		15 00 41.4	
	comp=Z,34nm,1.4s							
CAN	**Canberra**	**29.58**	**239**	P		**P**	**15 00 41.4**	**+1.8**
CAN				IAmb	IAmb		15 01 00.8	
	comp=Z,26nm,1.5s							
CTA	**Charters Tower**	**31.75**	**269**	P		**P**	**15 00 59.1**	**+0.8**
	comp=Z,12nm,0.3s,baz=94,slow=11,SNR=30							
	comp=Z,12nm,0.3s							
CTAO	**Charters Tower**	**31.75**	**269**	P		**P**	**15 00 59.5**	**+1.2**
TOO	**Toolangi**	**32.90**	**237**	P		**P**	**15 01 09.3**	**+1.5**
TOO				IAmb	IAmb		15 01 27.9	
	comp=Z,28nm,1.4s							
PMG	**Port Moresby**	**34.63**	**288**	P		**P**	**15 01 22.1**	**-0.6**
	comp=Z,14nm,0.9s,baz=194,slow=13,SNR=2.0							
	comp=Z,14nm,0.9s							
PMG	**Port Moresby**	**34.63**	**288**	IAmb	IAmb		15 01 34.3	
	comp=Z,22nm,1.1s							
STKA	**Stephens Creek**	**35.13**	**248**	P		**P**	**15 01 26.9**	**+0.2**
	comp=Z,2.4nm,0.4s,baz=94,slow=11,SNR=10							
	comp=Z,2.4nm,0.4s							
STKA	**Stephens Creek**	**35.13**	**248**	IAmb	IAmb		15 01 28.7	
	comp=Z,0.9nm,0.8s							
COEN	**Coen**	**36.33**	**278**	P		**P**	**15 01 38.0**	**+1.3**
COEN				IAmb	IAmb		15 01 56.3	
	comp=Z,14nm,1.0s							
BBOO	**Buckleboo**	**39.85**	**246**	P		**P**	**15 02 05.6**	**+0.3**
AS31	**Alice Springs**	**42.37**	**260**	P		**P**	**15 02 25.5**	**+0.1**
ASAR	**Alice Springs**	**42.37**	**260**	P		**P**	**15 02 25.8**	**+0.4**
	comp=Z,4.1nm,0.5s,baz=97,slow=7.1,SNR=21							
	comp=Z,4.1nm,0.5s							
WR0	**Warramunga Arr**	**42.52**	**266**	P		**P**	**15 02 26.3**	**-0.3**
WR0				IAmb	IAmb		15 02 33.2	
	comp=Z,12nm,1.3s							
WB2	**Warramunga Arr**	**42.70**	**266**	P		**P**	**15 02 27.8**	**-0.1**
WB2				IAmb	IAmb		15 02 28.6	
	comp=Z,4.7nm,0.5s							
WB0	**Warramunga Arr**	**42.70**	**266**	P		**P**	**15 02 27.8**	**-0.2**
WB0				IAmb	IAmb		15 02 28.7	
	comp=Z,7.8nm,0.8s							
WRA	**Warramunga Arr**	**42.71**	**266**	P		**P**	**15 02 27.2**	**-0.8**
	comp=Z,4.5nm,0.5s,baz=103,slow=8.4,SNR=14							
	comp=Z,4.5nm,0.5s							
WRA	**Warramunga Arr**	**42.71**	**266**	P		**P**	**15 02 27.9**	**-0.2**
FORT	**Forrest**	**46.71**	**249**	P		**P**	**15 02 58.2**	**-0.4**
SIJI	**Sorong**	**52.57**	**288**	P		**P**	**15 03 41.0**

TOLI2	**Tolitoli**	**62.74**	**284**	P	**P**	**15 04 50.9**	**-0.3**
TOLI2				IAmb	IAmb	15 05 10.5	
	comp=Z,4.8nm,0.9s						
VA02	**Isla de Pascua**	**62.86**	**110**	P	**P**	**15 04 51.4**	**-0.4**
QSPA	**South Pole Qui**	**66.58**	**180**	P	**P**	**15 05 16.1**	**+1.4**
	comp=Z,1.5nm,0.6s,baz=357,slow=1.1,SNR=18						
	comp=Z,1.5nm,0.6s						
QSPA	**South Pole Qui**	**66.58**	**180**	IAmb	IAmb	15 05 19.1	
	comp=Z,1.6nm,0.8s						
MAJO	**Matsushiro**	**71.73**	**325**	P	**P**	**15 05 45.0**	**-0.8**
MJB9	**Matsu-Tunnel**	**71.73**	**325**	P	**P**	**15 05 45.0**	**-0.9**
BELA	**Belgrano 2**	**76.80**	**173**	P	**P**	**15 06 14.7**	**+0.8**
MAW	**Mawson**	**78.22**	**200**	P	**P**	**15 06 22.8**	**+1.1**
	comp=Z,1.6nm,0.7s,baz=65,slow=19,SNR=2.4						
	comp=Z,1.6nm,0.7s						
TROLL	**Troll, Antarti**	**84.73**	**181**	P	**P**	**15 06 55.7**	**+0.5**
SNAA	**Sanae**	**85.06**	**179**	P	**P**	**15 06 56.8**	**+0.2**
SNAA	**Sanae**	**85.06**	**179**	P	**P**	**15 06 56.4**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=196,slow=11,SNR=7.0						
	comp=Z,0.4nm,0.5s						
SNAA	**Sanae**	**85.06**	**179**	IAmb	IAmb	15 07 10.6	
	comp=Z,4.2nm,1.4s						
VNA3	**Neumayer Olymp**	**85.26**	**177**	P	**P**	**15 06 57.8**	**+0.3**
VNA2	**Neumayer--Watz**	**85.68**	**177**	P	**P**	**15 07 00.5**	**+1.0**
	baz=187,slow=1.4						
M19K	**Big River Lodg**	**87.50**	**12**	P	**P**	**15 07 08.2**	**+0.1**
M19K				IAmb	IAmb	15 07 30.7	
	comp=Z,2.7nm,1.1s						
CMAR	**Chiang Mai Arr**	**89.65**	**290**	P	**P**	**15 07 19.1**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=100,slow=4.7,SNR=4.2						
	comp=Z,0.6nm,0.8s						
TXAR	**Lajitas Array**	**89.99**	**58**	P	**P**	**15 07 21.5**	**+0.9**
	comp=Z,0.1nm,0.6s,baz=254,slow=6.5,SNR=2.3						
	comp=Z,0.1nm,0.6s						
BRTR	**Keskin Array B**	**147.55**	**308**	PKPbc	**PKPbc**	**15 14 01.7**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=101,slow=1.4,SNR=2.3						
CLL	**Collm**	**150.55**	**344**	*i* PKPbc	**PKiKP**	**15 14 09.3**	**-0.1**
TORD	**Torodi Ar. Bea**	**169.62**	**188**	PKPab	**PKPab**	**15 15 41.6**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=185,slow=4.8,SNR=2.0						

IDC ***12*** *14:56:50.1±3.1, 11°.40S×165°.99E, h0km, mb4.1/5, mbtmp4.1/6, ML4.2/1, MS3.2/1, Error ellipse: s-maj=68.3km s-min=34.8km az=89.0*
NEIC ***12*** *14:56:57.0±1.2, 11°.5S±0°.1×166°.3E±0°.2, h68km±9km, mb4.4/9, Error ellipse: s-maj=30.5km s-min=18.3km az=109.0*

ISC 12 14:56:55.2±0.9, **11°.57S**±0°.08×**166°.3E**±0°.2, **h50km, n18,** σ1§**41/18, mb4.2/10, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOUNC	**Koumac, New Ca**	**9.13**	**192**	Pn	**Pn**	**14 59 06.6**	**+2.1**
DZM	**Mont Dzumac**	**10.45**	**179**	Pn	**Pn**	**14 59 24.2**	**+1.7**
	2.0nm,0.3s,baz=270,slon=21,SNR=14						
DZM				Sn	**Sn**	**15 01 15.1**	**-3.1**
	0.1nm,0.3s,baz=323,slow=20,SNR=1.7						
	5.0nm,0.3s						
TARA	**Tarawa**	**14.44**	**28**	Pn	**Pn**	**15 00 16.7**	**-0.1**
CTA	**Charters Tower**	**21.03**	**244**	LR	LR	15 08 15.5	
	comp=Z,66nm,18.0s,baz=75,slow=33						
STKA	**Stephens Creek**	**30.43**	**225**	P	**P**	**15 03 03.8**	**+0.6**
	2.0nm,0.6s,baz=34,slow=11,SNR=5.2						
	2.0nm,0.6s						
STKA	**Stephens Creek**	**30.43**	**225**	P	**P**	**15 03 04.2**	**+1.0**
WR0	**Warramunga Arr**	**31.62**	**251**	P	**P**	**15 03 12.9**	**-0.9**
WR0				IAmb	IAmb	15 03 37.8	
	comp=Z,16nm,1.4s						
WB0	**Warramunga Arr**	**31.72**	**251**	P	**P**	**15 03 13.7**	**-1.0**
WB0				IAmb	IAmb	15 03 15.9	
	comp=Z,9.7nm,0.9s						
WRA	**Warramunga Arr**	**31.80**	**251**	P	**P**	**15 03 14.6**	**-0.8**
	comp=Z,3.3nm,0.8s,baz=83,slow=9.1,SNR=7.6						
	comp=Z,3.3nm,0.8s						
AS31	**Alice Springs**	**33.03**	**244**	P	**P**	**15 03 25.3**	**-0.9**
ASAR	**Alice Springs**	**33.03**	**244**	P	**P**	**15 03 25.7**	**-0.5**
	comp=Z,2.5nm,0.6s,baz=69,slow=9.4,SNR=14						
	comp=Z,2.5nm,0.6s						
BBOO	**Buckleboo**	**34.86**	**228**	P	**P**	**15 03 42.1**	**+0.2**
PSA00	**Pilbara Seismi**	**45.46**	**251**	P	**P**	**15 05 09.4**	**-0.4**
PSA00				IAmb	IAmb	15 05 11.3	
	comp=Z,12nm,1.1s						
CASY	**Casey**	**66.09**	**201**	P	**P**	**15 07 38.8**	**+2.0**
CASY				IAmb	IAmb	15 08 00.6	
	comp=Z,3.9nm,1.1s						
KULM	**Kulim**	**67.39**	**281**	P	**P**	**15 07 45.1**	**-1.0**
CMAR	**Chiang Mai Arr**	**72.80**	**294**	P	**P**	**15 08 20.1**	**+1.0**
	comp=Z,1.1nm,0.9s,baz=108,slow=4.4,SNR=5.5						
	comp=Z,1.1nm,0.9s						
QSPA	**South Pole Qui**	**78.44**	**180**	P	**P**	**15 08 49.3**	**-1.4**
QSPA				IAmb	IAmb	15 09 01.1	
	comp=Z,1.4nm,1.1s						
MKAR	**Makanchi Array**	**94.26**	**317**	P	**P**	**15 10 08.8**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=97,slow=5.6,SNR=2.6						
	comp=Z,0.3nm,0.6s						

IDC ***12*** *14:58:01.9±0.9, 7°.98S×123°.29E, h216km±8km, mb3.3/6, mbtmp3.9/11, Error ellipse: s-maj=26.3km s-min=10.9km az=68.0*
NEIC ***12*** *14:58:01.9±1.4, 7°.93S±0°.08×123°.26E±0°.08, h217km±6km, mb4.2/24, Error ellipse: s-maj=13.3km s-min=9.1km az=219.0*
DJA ***12*** *14:58:03.5±0.8, 8°S±4°×12°3E±°, h195km±10km, M4.0/12, mb4.7/1, mB4.9/1, MLv3.7/12, Mw(mB)4.2/1*

ISC 12 14:58:00.7±0.5, **7°.94S**±0°.05×**123°.26E**±0°.06, **h200km, n67,** σ1§**57/68, mb3.9/12, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMRI	**Maumere**	**1.22**	**236**	Pn	**Pn**	**14 58 33.3**	**+1.2**
MMRI	**Maumere**	**1.22**	**236**	P	**Pn**	**14 58 34.3**	**+2.2**
MMRI	**Maumere**	**1.22**	**236**	P	**Pn**	**14 58 35.5**	**+3.4**
EDFI	**Ende, Flores**	**1.75**	**242**	P	**Pn**	**14 58 38.7**	**+1.9**
SOEI	**Soe**	**2.06**	**151**	Pn	**Pn**	**14 58 42.3**	**+2.3**
SOEI	**Soe**	**2.06**	**151**	P	**Pn**	**14 58 43.1**	**+3.1**
SOEI				S	**Sn**	**14 59 13.6**	**+2.9**
SOEI	**Soe**	**2.06**	**151**	P	**Pn**	**14 58 42.8**	**+2.8**
BATI	**Baumata**	**2.29**	**170**	P	**Pn**	**14 58 44.7**	**+2.4**
	139nm,0.4s,baz=349,slow=5.2,SNR=54						
BATI				S	**Sn**	**14 59 17.6**	**+2.7**
	236nm,0.3s,baz=346,slow=19,SNR=14						
BATI	**Baumata**	**2.29**	**170**	P	**Pn**	**14 58 45.3**	**+3.0**
BBSI	**Bau Bau**	**2.53**	**344**	P	**Pn**	**14 58 48.5**	**+3.5**
BSSI	**Bau Bau, Buton**	**3.28**	**303**	P	**Pn**	**14 58 55.2**	**+1.5**
BASI	**Baing, Sumba**	**3.48**	**229**	P	**Pn**	**14 58 57.5**	**+1.3**
BKSI	**Bulukumba**	**4.06**	**310**	P	**Pn**	**14 59 04.7**	**+1.5**
WBSI	**Waikabubak, Su**	**4.18**	**240**	P	**Pn**	**14 59 06.0**	**+1.2**
KAPI	**Kappang**	**4.54**	**310**	P	**Pn**	**14 59 10.7**	**+1.5**
	14nm,0.7s,baz=116,slow=6.8,SNR=5.1						
KAPI	**Kappang**	**4.54**	**310**	Pn	**Pn**	**14 59 09.9**	**+0.7**
BNSI	**Bone**	**4.71**	**318**	P	**Pn**	**14 59 14.4**	**+3.0**
PLAI	**Plampang**	**5.50**	**260**	P	**Pn**	**14 59 22.6**	**+1.1**
PLAI	**Plampang**	**5.50**	**260**	P	**Pn**	**14 59 22.1**	**+0.6**
MTN	**Manton Dam**	**9.15**	**123**		**Pn**	**15 00 09.2**	**+0.2**
MTN	**Manton Dam**	**9.15**	**123**	P	**Pn**	**15 00 09.4**	**+0.4**
KNRA	**Kununurra**	**9.39**	**145**	Pn	**Pn**	**15 00 12.0**	**0.0**
KNRA	**Kununurra**	**9.39**	**145**	P	**Pn**	**15 00 12.5**	**+0.4**
KDU	**Kakadu**	**10.22**	**118**	P	**Pn**	**15 00 22.6**	**-0.2**
SIJI	**Sorong**	**10.63**	**49**	P	**Pn**	**15 00 29.3**	**+1.1**
	3.8nm,0.6s,baz=186,slow=16,SNR=4.4						
UGM	**Wanagama**	**12.61**	**269**	Pn	**Pn**	**15 00 51.8**	**-1.7**
MBWA	**Marble Bar**	**13.58**	**194**	P	**Pn**	**15 01 07.1**	**+1.7**
MBWA	**Marble Bar**	**13.58**	**194**	P	**P**	**15 01 08.8**	**+0.9**
MYLDM	**Lahad Datu**	**13.87**	**340**	P	**Pn**	**15 01 10.6**	**+1.5**
PSA00	**Pilbara Seismi**	**13.95**	**193**	P	**Pn**	**15 01 11.6**	**+1.6**
PSA00	**Pilbara Seismi**	**13.95**	**193**	P	**P**	**15 01 12.5**	**+0.5**
WB0	**Warramunga Arr**	**15.96**	**139**	P	**P**	**15 01 33.8**	**-0.5**
WB0				IAmb	IAmb	15 01 49.6	
	comp=Z,7.9nm,1.1s						
WRA	**Warramunga Arr**	**16.05**	**139**	P	**P**	**15 01 34.6**	**-0.7**
	comp=Z,0.7nm,0.5s,baz=315,slow=13,SNR=22						
WRA				S	**S**	**15 04 30.2**	**-3.4**
	comp=Z,2.2nm,0.6s,baz=320,slow=24,SNR=2.1						
WRA	**Warramunga Arr**	**16.05**	**139**	P	**P**	**15 01 34.2**	**-1.1**
WB2	**Warramunga Arr**	**16.06**	**139**		**P**	**15 01 35.2**	**-0.2**
WB2				IAmb	IAmb	15 01 44.3	
	comp=Z,11nm,1.2s						
WR0	**Warramunga Arr**	**16.19**	**139**		**P**	**15 01 37.0**	**+0.1**
WR0				IAmb	IAmb	15 01 56.4	
	comp=Z,5.0nm,0.8s						
GIRL	**Giralia**	**17.00**	**210**		**P**	**15 01 46.4**	**+0.7**
GIRL	**Giralia**	**17.00**	**210**	P	**P**	**15 01 46.1**	**+0.4**
	comp=Z,162nm,2.1s						

XMIS	**Christmas Isla**	**17.56**	**260**	Pn	**P**	**15 01 53.4**	**+1.5**
WRKA	**Warakurna**	**17.67**	**165**	P	**P**	**15 01 54.1**	**+1.0**
AS31	**Alice Springs**	**18.68**	**148**	P	**P**	**15 02 04.5**	**+0.6**
AS31				IAmb	IAmb	15 02 27.1	
	comp=Z,2.1nm,0.5s						
ASAR	**Alice Springs**	**18.68**	**148**	P	**P**	**15 02 05.1**	**+1.1**
	comp=Z,3.0nm,0.8s,baz=331,slow=12,SNR=28						
ASAR				S	**S**	**15 05 23.2**	**-3.0**
	comp=Z,0.3nm,0.7s,baz=326,slow=15,SNR=2.2						
ASAR	**Alice Springs**	**18.68**	**148**	P	**P**	**15 02 04.8**	**+0.8**
COEN	**Coen**	**20.44**	**109**	P	**P**	**15 02 22.8**	**-0.2**
COEN				IAmb	IAmb	15 02 40.1	
	comp=Z,30nm,1.4s						
MORW	**Morawa**	**22.09**	**197**	P	**P**	**15 02 38.6**	**-1.2**
MORW				IAmb	IAmb	15 02 39.3	
	comp=Z,12nm,0.6s						
FORT	**Forrest**	**23.16**	**169**	P	**P**	**15 02 49.6**	**+0.1**
FORT				IAmb	IAmb	15 02 59.8	
	comp=Z,22nm,0.7s						
NWAO	**Narrogin (SRO)**	**25.48**	**192**	P	**P**	**15 03 09.6**	**-1.0**
KULM	**Kulim**	**26.10**	**300**	P	**P**	**15 03 16.3**	**0.0**
KULM				IAmb	IAmb	15 03 39.0	
	comp=Z,14nm,1.3s						
BBOO	**Buckleboo**	**27.45**	**156**	P	**P**	**15 03 27.6**	**-0.6**
BBOO				IAmb	IAmb	15 03 38.5	
	comp=Z,25nm,1.4s						
STKA	**Stephens Creek**	**29.30**	**147**	P	**P**	**15 03 44.8**	**+0.2**
	comp=Z,0.8nm,0.4s,baz=326,slow=3.6,SNR=3.4						
	comp=Z,0.8nm,0.4s						
STKA	**Stephens Creek**	**29.30**	**147**	P	**P**	**15 03 44.6**	**0.0**
PATS	**Pohnpei**	**37.91**	**68**	P	**P**	**15 04 58.2**	**-0.8**
MJAR	**Matsushiro Arr**	**46.42**	**17**	P	**P**	**15 06 06.7**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=185,slow=8.3,SNR=2.0						
	comp=Z,0.3nm,0.5s						
MJAR	**Matsushiro Arr**	**46.42**	**17**	IAmb	IAmb	15 06 12.9	
	comp=Z,1.2nm,1.4s						
AFI	**Afiamalu**	**63.91**	**102**	P	P	15 08 08.5	-4.4
MKAR	**Makanchi Array**	**65.53**	**330**	P	**P**	**15 08 22.4**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=133,slow=7.6,SNR=8.3						
	comp=Z,0.3nm,0.4s						
MKAR	**Makanchi Array**	**65.53**	**330**	P	**P**	**15 08 21.9**	**-0.8**
KBL	**Kabul**	**66.38**	**313**	P	**P**	**15 08 27.6**	**-1.0**
KBL				IAmb	IAmb	15 08 28.4	
	comp=Z,2.9nm,0.6s						
KURK	**Kurchatov**	**69.99**	**332**	P	**P**	**15 08 50.2**	**-0.2**
VNDA	**Vanda**	**72.40**	**172**	P	**P**	**15 09 04.0**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=336,slow=6.6,SNR=5.1						
	comp=Z,0.5nm,0.6s						
VNDA	**Vanda**	**72.40**	**172**	P	**P**	**15 09 03.7**	**-0.8**
TIXI	**Tiksi**	**79.51**	**2**	P	**P**	**15 09 43.4**	**-1.2**
TIXI				IAmb	IAmb	15 09 58.2	
	comp=Z,2.0nm,1.1s						
QSPA	**South Pole Qui**	**82.05**	**180**	P	**P**	**15 09 57.6**	**-0.9**
	comp=Z,1.9nm,1.1s,baz=51,slow=17,SNR=11						
	comp=Z,1.9nm,1.1s						
QSPA	**South Pole Qui**	**82.05**	**180**	P	**P**	**15 09 57.5**	**-0.9**
RAYN	**Ar Rayn**	**82.05**	**295**	P	**P**	**15 09 57.9**	**-1.3**
RAYN				IAmb	IAmb	15 10 23.9	
	comp=Z,4.3nm,1.5s						
SNAA	**Sanae**	**93.12**	**195**	P	**P**	**15 10 50.8**	**-0.8**
	comp=Z,0.7nm,0.7s,baz=180,slow=5.1,SNR=1.7						
	comp=Z,0.7nm,0.7s						
SNAA	**Sanae**	**93.12**	**195**	IAmb	IAmb	15 11 06.0	
	comp=Z,3.9nm,1.4s						

IDC 12 15:46:25.9±2.1, **1°.37S**×**134°.20E, h0km, mb3.5/2, mbtmp3.7/4, ML3.6/2, Error ellipse: s-maj=46.0km s-min=24.7km az=59.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**2.98**	**280**	Pn	Pn	15 47 15.5	+1.1
	12nm,0.3s,baz=107,slow=11,SNR=147						
SIJI				Sn	Sn	15 47 50.4	-0.5
	14nm,0.3s,baz=163,slow=19,SNR=9.1						
	45nm,0.2s						
WRA	**Warramunga Arr**	**18.46**	**180**	P	Pn	15 50 42.9	-0.5
	0.2nm,0.3s,baz=358,slow=12,SNR=13						
	0.9nm,0.6s						
ASAR	**Alice Springs**	**22.17**	**181**	P	P	15 51 24.0	+0.3
	1.0nm,0.5s,baz=0.5,slow=11,SNR=11						
	1.0nm,0.5s						
MKAR	**Makanchi Array**	**66.01**	**324**	P	P	15 57 14.2	-0.3
	0.3nm,0.5s,baz=120,slow=5.2,SNR=5.2						
	0.3nm,0.5s						

MAN 12 15:51:33.9, 13°.09N×121°.55E, h14km, mb3.9, ML2.6, MS2.2, 2C, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SJMP	**San Jose**	**0.75**	**214**	*e*P	Pg	15 51 48.6	+0.4
SJMP				*e*S		15 52 23.7	
JCNP	**Jose Panganiba**	**1.64**	**43**	*e*P	Pn	15 52 02.0	+0.3

NEIC ***12*** *16:02:33.2±0.8, 17°.4S±0°.2×178°.5W±0°.2, h550km±6km, mb4.2/8, Error ellipse: s-maj=30.2km s-min=25.4km az=134.0*
IDC ***12*** *16:02:37.3±1.8, 17°.62S×178°.62W, h592km±20km, mb2.9/5, mbtmp3.8/7, Error ellipse: s-maj=42.4km s-min=23.4km az=155.0*

ISC 12 16:02:37.8±0.9, **17°.6S**±0°.1×**178°.6W**±0°.1, **h600km, n18,** σ0§**89/18, mb3.7/9, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.16**	**268**	P	**P**	**16 03 56.7**	**-1.2**
	3.3nm,0.5s,baz=148,slow=15,SNR=12						
RAO	**Raoul Island**	**11.58**	**177**	P	**P**	**16 05 11.8**	**-0.4**
	664nm,0.3s,baz=54,slow=19,SNR=4.2						
RAO	**Raoul Island**	**11.58**	**177**	P	**P**	**16 05 11.6**	**-0.6**
DZM	**Mont Dzumac**	**14.71**	**250**	P	**P**	**16 05 44.9**	**+1.5**
	7.1nm,0.8s,baz=49,slow=8.9,SNR=1.7						
PLWZ	**Palliser**	**24.43**	**191**	P	**P**	**16 07 11.2**	**+0.4**
ARMA	**Armidale**	**29.89**	**239**	P	**P**	**16 07 59.3**	**+0.6**
CAN	**Canberra**	**33.70**	**232**	P	**P**	**16 08 30.4**	**-0.5**
STKA	**Stephens Creek**	**38.57**	**241**	P	**P**	**16 09 10.9**	**+0.1**
	0.8nm,0.4s,baz=97,slow=10.0,SNR=7.1						
	0.8nm,0.4s						
BBOO	**Buckleboo**	**43.35**	**241**	P	**P**	**16 09 47.9**	**-0.6**
BBOO				IAmb	IAmb	16 10 07.7	
	comp=Z,22nm,1.4s						
WB0	**Warramunga Arr**	**44.44**	**260**	P	**P**	**16 09 57.0**	**-0.1**
WB0				IAmb	IAmb	16 10 13.0	
	comp=Z,17nm,1.4s						
WB2	**Warramunga Arr**	**44.46**	**259**	P	**P**	**16 09 56.7**	**-0.6**
WB2				IAmb	IAmb	16 09 58.7	
	comp=Z,18nm,1.5s						
WRA	**Warramunga Arr**	**44.47**	**259**	P	**P**	**16 09 56.9**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=96,slow=7.0,SNR=8.5						
	comp=Z,0.5nm,0.5s						
AS31	**Alice Springs**	**44.66**	**254**	P	**P**	**16 09 58.8**	**0.0**
AS31				IAmb	IAmb	16 10 01.5	
	comp=Z,2.5nm,1.4s						
ASAR	**Alice Springs**	**44.66**	**254**	P	**P**	**16 09 58.9**	**0.0**
	comp=Z,3.0nm,0.5s,baz=88,slow=8.8,SNR=113						
	comp=Z,3.0nm,0.5s						
ASAR	**Alice Springs**	**44.66**	**254**	P	**P**	**16 09 58.5**	**-0.3**
TXAR	**Lajitas Array**	**86.03**	**58**	P	**P**	**16 14 17.9**	**+1.6**
	comp=Z,2.0nm,0.7s,baz=217,slow=5.7,SNR=2.9						
	comp=Z,2.0nm,0.7s						
YKA	**Yellowknife Ar**	**94.17**	**25**	P	**P**	**16 14 51.5**	**-1.5**
	comp=Z,0.3nm,0.6s,baz=233,slow=4.5,SNR=2.7						
	comp=Z,0.3nm,0.6s						
CLL	**Collm**	**145.15**	**347**	*e*PKiKP	**PKiKP**	**16 21 13.0**	**+1.1**

MAN 12 16:26:53.3, 10°.38N×125°.02E, h6km, mb4.6, ML3.5, MS3.3, Leyte

SKHL ***12*** *16:46:20.2±0.7, 48°.40N×154°.90E, h67km±4km, mb4.2/5*
KRSC ***12*** *16:46:22.3±1.7, 48°.40N×157°.54E, h8km±49km, ML3.7*

ISC 12 16:46:18.8±1.9, **48°.2N**±0°.2×**155°.2E**±0°.2, **h35km, n23,** σ2§**42/35, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.52**	**13**	*e*P	**Pn**	**16 46 56.6**	**-0.6**
SKR				AMB	AMB	16 47 01.5	
	60nm,0.6s						
SKR				*e*S	**Sn**	**16 47 24.0**	**-2.7**
SKR				A	A	16 47 26.4	
	60nm,0.3s						
SKR				A	A	16 47 26.4	
	80nm,0.3s						
PAU	**Pauzhetka**	**3.40**	**17**	*e*P	**Pn**	**16 47 10.3**	**+1.0**
PAU				AMB	AMB	16 47 14.2	
	20nm,0.4s						
PAU				*e*S	**Sn**	**16 47 47.3**	**-1.0**
PAU				A	A	16 47 49.4	
	70nm,0.5s						
PAU				A	A	16 47 49.4	
	70nm,0.5s						
KDTR	**Khodutka, Kamc**	**4.02**	**26**	*e*P	**Pn**	**16 47 19.6**	**+1.7**
KDTR				*e*S	**Sn**	**16 48 00.6**	**-3.1**
ASAK	**Asacha**	**4.49**	**21**	*e*P	**Pn**	**16 47 27.7**	**+3.3**
MTVR	**Mutnovka**	**4.66**	**23**	*e*P	**Pn**	**16 47 28.6**	**+1.9**
MTVR				*e*S	**Sn**	**16 48 18.9**	**-0.6**
GRL	**Gorelyy**	**4.69**	**22**	*i* P	**Pn**	**16 47 30.0**	**+2.8**
GRL				*e*S	**Sn**	**16 48 19.8**	**-0.6**
RUS	**Russkaya**	**4.70**	**25**	*e*P	**Pn**	**16 47 28.1**	**+0.9**
RUS				*e*S	**Sn**	**16 48 17.3**	**-3.1**
PET	**Petropavlovsk**	**5.27**	**23**	*e*P	**Pn**	**16 47 37.5**	**+2.5**
DALK	**Dalny**	**5.30**	**24**	*e*P	**Pn**	**16 47 37.4**	**+2.0**
DALK				*e*S	**Sn**	**16 48 34.0**	**-1.2**
UGLR	**Uglovaya**	**5.48**	**23**	*e*P	**Pn**	**16 47 41.0**	**+3.0**
KOK	**Koryaka**	**5.51**	**22**	*e*P	**Pn**	**16 47 41.8**	**+3.4**
AVH	**Avacha**	**5.51**	**23**	*i* P	**Pn**	**16 47 42.2**	**+3.8**
SDLR	**Sedlovina**	**5.56**	**23**	*e*P	**Pn**	**16 47 40.7**	**+1.6**
KRX	**Arik**	**5.57**	**22**	*e*P	**Pn**	**16 47 42.7**	**+3.4**
SPN	**Mys Shipunski**	**5.75**	**30**	P	**Pn**	**16 47 41.8**	**+0.3**
SPN				S	**Sn**	**16 48 41.4**	**-4.7**
KUR	**Kuril'sk**	**5.88**	**242**	*e*P	**Pn**	**16 47 43.8**	**+0.4**
KUR				AMB	AMB	16 47 47.8	
	10.0nm,0.5s						
KUR				*e*S	**Sn**	**16 48 46.9**	**-2.6**
KUR				A	A	16 48 59.7	
	20nm,0.5s						
KUR				A	A	16 48 59.7	
	10.0nm,0.5s						
SHO	**Shikotan**	**7.29**	**236**	*e*P	**Pn**	**16 48 03.8**	**+1.1**
SHO				AMB	AMB	16 48 05.6	
	10.0nm,0.5s						
SHO				*e*S	**Sn**	**16 49 22.4**	**-1.8**
SHO				A	A	16 49 43.0	
	60nm,0.6s						
SHO				A	A	16 49 43.0	
	10.0nm,0.6s						
MKZ	**Mys Kozlova**	**7.52**	**30**	*e*P	**Pn**	**16 48 06.1**	**+0.2**
TUMR	**Tumrok**	**7.69**	**22**	*e*P	**Pn**	**16 48 12.1**	**+3.8**
YUK	**Yuzh-Kuril'sk**	**7.74**	**241**	*e*P	**Pn**	**16 48 10.3**	**+1.4**
YUK				AMB	AMB	16 48 14.2	
	10.0nm,0.5s						
YUK				*e*S	**Sn**	**16 49 32.8**	**-2.5**
YUK				A	A	16 49 38.9	
	80nm,0.6s						
YUK				A	A	16 49 38.9	
	100nm,0.6s						
NMR	**Nemuro--Hokkai**	**8.23**	**237**	*e*P	**Pn**	**16 48 16.8**	**+1.2**
NMR				*e*S	**Sn**	**16 49 45.1**	**-2.1**
AKK	**Akkeshi**	**8.95**	**238**	*e*P	**Pn**	**16 48 27.3**	**+1.8**
KBTR	**Krutoberegovo**	**9.24**	**27**	*e*P	**Pn**	**16 48 31.5**	**+2.1**

IDC ***12*** *16:48:36.9±1.3, 38°.61N×49°.46E, h0km, mb3.8/8, mbtmp3.8/14, ML4.2/5, MS2.9/5, Error ellipse: s-maj=27.0km s-min=13.8km az=7.0*
MOS ***12*** *16:48:37.8±1.2, 38°.92N×49°.67E, h7km, mb4.1/4, Error ellipse: s-maj=8.4km s-min=7.0km az=118.7*
NEIC ***12*** *16:48:38.0±2.4, 38°.66N±0°.07×49°.48E±0°.02, h10km±1km, mb4.0/17, mb_Lg3.9(TEH), Error ellipse: s-maj=11.6km s-min=3.1km az=173.0*
TEH ***12*** *16:48:38.8, 38°.57N×49°.52E, h16km, ML3.8*
AZER ***12*** *16:48:41.2±0.1, 38°.67N×49°.43E, h31km±1km, Error ellipse: s-maj=2.3km s-min=1.9km az=344.0*
NNC ***12*** *16:48:50.9±12.0, 39°.35N×50°.84E, h0km, mb3.9, Error ellipse: s-maj=121.3km s-min=44.0km az=57.0*

ISC 12 16:48:38.6±1.2, **38°.65N**±0°.03×**49°.52E**±0°.03, **h15km**±8km, **n171,** σ1§**73/203, mb4.0/14, 13C-2D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASTR	**Astara**	**0.58**	**261**	*e*Pg	**Pn**	**16 48 53.0**	**+0.7**
ASTR	**Astara**	**0.58**	**261**	P	**Pn**	**16 48 52.9**	**+0.5**
	SNR=387						
ASTR				S	**Sn**	**16 49 01.6**	**0.0**
LKRN	**Lenkeran, Azer**	**0.58**	**276**	PG	**Pn**	**16 48 52.9**	**+0.5**
LKRN	**Lenkeran, Azer**	**0.58**	**276**	*e*Pg	**Pn**	**16 48 52.9**	**+0.5**
LKRN	**Lenkeran, Azer**	**0.58**	**276**	P	**Pn**	**16 48 53.0**	**+0.5**
	SNR=118					

SNR=8.1
QBL Sn Sn 16 49 53.7 +1.3
ITBZ Tabriz 2.68 262 *e*Pn Pn 16 49 23.1 +1.7
ITBZ *e* 16 49 44.1
comp=Z,2µm,0.6s
XNQ Khinaliq 2.73 338 Pn Pn 16 49 24.1 +1.9
SNR=5.0
XNQ Sn Sn 16 49 56.9 +1.9
ORD Ordubad 2.77 277 Pn Pn 16 49 24.5 +2.0
SNR=95
ORD Sn Sn 16 49 57.6 +1.8
QUBA Quba, Azerbaij 2.81 344 Pn Pn 16 49 25.7 +2.6
QUBA Sn Sn 16 50 00.0 +3.2
MNGR Mingechevir, A 2.83 319 Sn Sn 16 49 59.0 +1.8
IAZR Azarshahr 2.96 252 *e*Pn Pn 16 49 28.1 +2.8
IAZR *e* 16 49 51.3
comp=Z,3µm,0.6s
IMRD Marand 2.99 272 *e*Pn Pn 16 49 27.9 +2.2
QSAR Qusar 3.02 342 Pn Pn 16 49 28.7 +2.8
QSAR Sn Sn 16 50 03.9 +2.0
ISHB Shabestar 3.09 264 *e*Pn Pn 16 49 28.6 +1.6
ISHB *e* 16 49 55.1
comp=Z,2µm,0.6s
IMHD Mahdasht 3.10 162 *e*Pn Pn 16 49 29.2 +2.1
SEKA Sheki 3.12 326 PN Pn 16 49 28.9 +1.6
SEKA Sheki 3.12 326 Pn Pn 16 49 29.0 +1.6
SNR=28
SEKA Sn Sn 16 50 04.5 +0.1
AKT Akhty 3.14 335 *de*PN Pn 16 49 26.0 -1.7
GANJ Ganja 3.17 310 PN Pn 16 49 29.5 +1.5
GANJ Ganja 3.17 310 Pn Pn 16 49 29.5 +1.5
SNR=7.9
GANJ Sn Sn 16 50 05.1 -0.5
SBZ Shahbuz 3.18 285 Pn Pn 16 49 30.5 +2.3
SNR=49
SBZ Sn Sn 16 50 07.5 +1.5
NAX Nakhchivan 3.19 281 PN Pn 16 49 31.0 +2.7
NAX Nakhchivan 3.19 281 Pn Pn 16 49 31.0 +2.7
SNR=12
NAX Sn Sn 16 50 08.2 +2.2
IRAZ Razeghan 3.26 174 *e*Pn Pn 16 49 30.4 +1.0
IRAZ *e* 16 50 12.3
comp=Z,2µm,0.6s
IPRN Peran 3.29 136 *e*Pn Pn 16 49 31.0 +1.3
DRN Derbent 3.50 345⇑ *e*PN Pn 16 49 29.4 -3.0
IHSB Hasanabad 3.50 156 *e*Pn Pn 16 49 35.3 +2.7
MAHB Mahabad 3.56 239 *e*Pn Pn 16 49 34.5 +1.0
GDB GEDABAY 3.57 307 Pn Pn 16 49 35.0 +1.4
SNR=34
GDB Sn Sn 16 50 15.9 +0.3
IDMV Damavand 3.67 146 *e*Pn Pn 16 49 37.9 +2.8
IDMV *e* 16 50 23.0
comp=Z,1µm,0.5s
ZKTA Zakatala 3.72 324 PN Pn 16 49 37.7 +2.2
ZKTA Zakatala 3.72 324 Pn Pn 16 49 37.8 +2.2
SNR=19
ZKTA Sn Sn 16 50 20.1 +0.9
HYR Heyderabad 3.78 288 Pn Pn 16 49 39.2 +2.8
HYR Sg Sg 16 50 38.6 -1.5
HAGD Aghdareh 3.83 185 *e*Pn Pn 16 49 38.3 +1.0
IFIR Firoozkooh 3.96 138 *e*Pn Pn 16 49 41.4 +2.3
GNI Garni 4.00 294 Pn Pb 16 49 46.9 -1.9
comp=Z,3.0nm,0.3s,baz=66,slow=4.0,SNR=10
GNI Sn Sb 16 50 36.9 -0.1
comp=Z,3.2nm,0.3s,baz=175,slow=21,SNR=1.7
GNI LR LR 16 51 35.2
comp=Z,135nm,21.7s,baz=118,slow=45
GNI Garni 4.00 294 Pn Pn 16 49 36.7 -2.8
GNI Garni 4.00 294⇑ *e*PN Pn 16 49 36.6 -2.8
QZX Qazax, Azerbai 4.00 308 Pn Pn 16 49 42.0 +2.6
SNR=6.2
QZX Sn Sn 16 50 26.4 +0.4
IQOM Qom 4.00 161 *e*Pn Pn 16 49 41.2 +1.6
IGLO Ghaloghah 4.04 121 *e*Pn Pn 16 49 41.8 +1.7
IVRN Varamin 4.05 153 *e*Pn Pn 16 49 42.6 +2.4
ISHM Shahmirzad 4.14 132 *e*Pn Pn 16 49 43.0 +1.5
ILAS Lasjerd 4.27 139 *e*Pn Pn 16 49 45.0 +1.7
IANJ Anjilo 4.74 131 *e*Pn Pn 16 49 52.9 +3.2
IANJ *e* 16 49 53.3
comp=Z,1µm,0.4s
ISFB Sefidab 4.82 152 *e*Pn Pn 16 49 53.1 +2.4
KRSH Karshahi 5.13 155 *e*Pn Pn 16 49 57.4 +2.4
MRVT Maraveh tapeh 5.27 99 *e*Pn Pn 16 49 57.9 +1.0
GROC Groznyy 5.35 329 *e*PN Pb 16 50 08.7 -3.1
GROC *e* 16 50 53.9
GROC pmax pmax
comp=Z,45nm,0.4s
GROC smax smax
comp=E,30nm,0.6s
GROC smax smax
comp=E,32nm,0.4s
GROC MLR MLR
comp=Z,14nm,2.0s
ZEI Tsey 5.94 316 *e*P Pn 16 50 08.1 +1.9
ZEI pmax pmax
comp=Z,9.0nm,0.6s
IPIR Pirpir 6.06 169 *e*Pn Pn 16 50 08.8 +0.9
ONI Oni 6.07 312 Pn Pn 16 50 10.4 +2.6
ONI Oni 6.07 312 *e*P Pn 16 50 10.4 +2.6
IZEF Zefreh 6.18 157 *e*Pn Pn 16 50 11.8 +2.2
ANAR Anarak 6.43 147 *e*Pn Pn 16 50 14.4 +1.5
GEYT Alibeck 6.80 93 Pn Pn 16 50 18.6 +0.7
comp=Z,3.2nm,0.3s,baz=286,slow=12,SNR=39
GEYT Sn Sn 16 51 29.9 -5.1
comp=Z,4.0nm,0.3s,baz=240,slow=29,SNR=5.4
GEYT LR LR 16 54 07.4
comp=Z,50nm,18.7s,baz=266,slow=48
comp=Z,6.3nm,0.2s
GEYT Alibeck 6.80 93 Pn Pn 16 50 18.1 +0.2
GYA0 ALIBECK ARRAY 6.80 93 P Pn 16 50 18.4 +0.5
GYA0 S Sn 16 51 29.6 -5.4
GYA0B ALIBECK ARRAY 6.80 93 Pn Pn 16 50 18.1 +0.3
GYA0B ALIBECK ARRAY 6.80 93 ⇑P Pn 16 50 18.5 +0.6
GYA0B ⇑S Sn 16 51 29.6 -5.5
SBZV Sabzevar 6.81 107 *e*Pn Pn 16 50 20.4 +2.2
ISFR Sfrayin 6.89 101 *e*Pn Pn 16 50 21.9 +2.5
KBZ Khabaz 7.12 318 Pn Pn 16 50 25.3 +3.1
comp=Z,1.2nm,0.6s,baz=112,slow=11,SNR=1.9
KBZ Khabaz 7.12 318⇓ *e*P Pn 16 50 17.7 -4.5
IEMG Emamgholi 7.31 97 *e*Pn Pn 16 50 27.4 +2.3
KIV Kislovodsk 7.38 318 *e*P Pn 16 50 22.9 -3.0
KIV pmax pmax
comp=Z,5.0nm,1.1s
KIV MLR MLR
comp=Z,10.0nm,9.0s
IAKL Akhelmad 7.61 103 *e*Pn Pn 16 50 31.1 +1.9
IPAY Payeh 7.84 103 *e*Pn Pn 16 50 33.5 +1.2
TKDS Koohdasht(Taba 7.94 127 *e*Pn Pn 16 50 35.7 +2.1
IKRD Kardeh 8.14 100 *e*Pn Pn 16 50 38.4 +1.9
IKRD *e* 16 52 11.7
comp=Z,309nm,0.3s
IBAF Bafgh 8.61 143 *e*Pn Pn 16 50 45.6 +2.8
TBJM Torbat-e-JAM 9.28 108 *e*Pn Pn 16 50 54.9 +2.8
BNN Bunyan 10.69 275 Pn Pn 16 51 11.1 -0.1
BR131 Keskin Array S 12.37 280⇑ *e*P Pn 16 51 31.0 -3.3
BRTR Keskin Array B 12.37 280 LR LR 16 57 19.5
comp=Z,137nm,18.1s,baz=100,slow=42
AB31 Akbulak array 12.98 32 P Pn 16 51 40.5 -1.9
AB31 S Sn 16 53 57.0 -9.4
AB31 Akbulak array 12.98 32 P Pn 16 51 40.5 -1.9
comp=Z,0.4nm,0.3s,baz=208,slow=13,SNR=12
AB31 ⇑S Sn 16 53 57.0 -9.4
comp=Z,2.8nm,0.4s,baz=208,slow=22,SNR=6.8
ABKAR Akbulak array 12.98 32 Pn Pn 16 51 40.2 -2.1
AKTO Aktyubinsk 13.24 24 Pn Pn 16 51 44.3 -1.6
comp=Z,1.1nm,0.3s,baz=208,slow=13,SNR=17
AKTO Sn Sn 16 54 01.8 -11
comp=Z,0.6nm,0.3s,baz=49,slow=20,SNR=7.0
comp=Z,4.4nm,0.7s
AKTO Aktyubinsk 13.24 24 ⇑P Pn 16 51 44.6 -1.3
comp=Z,5.9nm,0.9s
AKTO ⇑S Sn 16 54 02.3 -10
comp=Z,10nm,0.5s
KK31 Karatay Array 16.48 68 Pn Pn 16 52 27.9 -1.3
KK31 Karatay Array 16.48 68 P Pn 16 52 27.9 -1.3
KK31 pmax pmax
comp=Z,2.0nm,0.8s
KK31 Karatay Array 16.48 68 P Pn 16 52 27.8 -1.3
comp=Z,1.0nm,0.5s,baz=264,slow=12,SNR=12
KKAR Karatay Array 16.48 68 Pn Pn 16 52 27.4 -1.7
KKAR Karatay Array 16.48 68 Pn Pn 16 52 27.3 -1.9
KKAR IAmb IAmb 16 52 36.5
comp=Z,2.2nm,0.8s
KKAR Karatay Array 16.48 68 P Pn 16 52 27.5 -1.7
KKAR pmax pmax
comp=Z,2.0nm,0.8s
KARP Karpathos 18.10 267 Pn 16 52 48.1 -1.4
KARP IAmb IAmb 16 52 52.6
comp=Z,9.8nm,0.7s
AKASG Malin Array Be 18.73 317 P P 16 52 56.3 -0.3
comp=Z,0.5nm,0.3s,baz=122,slow=12,SNR=2.2
comp=Z,0.3nm,0.4s
MLR Muntele Rosu 18.75 299 P P 16 52 57.0 0.0
comp=Z,0.2nm,0.3s,baz=147,slow=5.9,SNR=5.6
comp=Z,2.1nm,0.8s
MLR Muntele Rosu 18.75 299 P P 16 52 54.7 -2.3
MLR IAmb IAmb 16 53 07.2
comp=Z,9.1nm,1.5s
ARU Arti 18.78 16 P P 16 52 55.4 -1.7
comp=Z,1.8nm,0.3s,baz=227,slow=3.5,SNR=4.9
ARU Arti 18.78 16 P P 16 52 55.4 -1.7
ARU IAmb IAmb 16 53 11.9
comp=Z,4.7nm,0.9s
ARU Arti 18.78 16*c i*P P 16 52 55.6 -1.5
ARU S Sn 16 56 28.1 +0.9
ARU pmax pmax
comp=Z,2.0nm,0.6s
AAK Ala-Archa 19.34 70 S Sn 16 56 41.3 0.0
comp=Z,1.5nm,0.3s,baz=30,slow=2.8,SNR=1.0
AAK Ala-Archa 19.34 70⇑ *e*P Pn 16 53 05.9 +1.2
AAK pmax pmax
comp=Z,4.0nm,1.2s
BURAR Bucovina Array 19.81 305 Pn P 16 53 09.0 +0.5
BURAR Bucovina Array 19.81 305 P P 16 53 09.0 +0.5
BURAR pmax pmax
comp=Z,2.0nm,0.6s
BUR08 Bucovina Ar. S 19.83 305 P P 16 53 07.2 -1.5
IDI Anoyia 19.95 268 P P 16 53 10.5 +0.3
comp=Z,0.5nm,0.3s,baz=27,slow=14,SNR=2.6
comp=Z,2.3nm,0.4s
IDI Anoyia 19.95 268 P 16 53 10.3 +0.1
IDI IAmb IAmb 16 53 22.6
comp=Z,7.6nm,1.0s
KIRV Kirov 19.95 360 LR LR 17 03 14.9
comp=Z,53nm,20.7s,baz=204,slow=44
BRVK Borovoye 20.31 38 P P 16 53 12.8 -1.0
BRVK IAmb IAmb 16 53 15.5
comp=Z,3.8nm,0.6s
BRVK Borovoye 20.31 38⇑ *e*P P 16 53 14.7 +0.9
BRVK pmax pmax
comp=Z,3.0nm,0.6s
VTS Vitosha 20.31 290 P P 16 53 12.5 -1.6
VTS Vitosha 20.31 290 P P 16 53 12.5 -1.6
VTS pmax pmax
comp=Z,2.0nm,0.7s
KLMR Klimovskoe 23.09 347 *e*P P 16 53 42.5 -1.0
KLMR pmax pmax
comp=Z,6.0nm,0.7s
KLMR Klimovskoe 23.09 347 *e*P P 16 53 42.5 -1.0
KLMR AMP 16 53 57.5
comp=Z,6.0nm,0.7s
KURBB Kurchatov Arra 23.70 50 P P 16 53 51.2 +1.6
comp=Z,2.9nm,0.8s,baz=256,slow=9.5,SNR=17
comp=Z,2.9nm,0.8s
KURK Kurchatov 23.78 50 P P 16 53 49.8 -0.6
KURK IAmb IAmb 16 53 53.4
comp=Z,4.5nm,0.8s
KURK Kurchatov 23.78 50⇑ *e*P P 16 53 52.5 +2.0
KURK pmax pmax
comp=Z,4.0nm,0.9s
MAKZ Makanchi 25.06 60 P P 16 54 02.7 +0.5
MAKZ IAmb IAmb 16 54 05.0
comp=Z,3.0nm,0.7s
MAKZ Makanchi 25.06 60 P P 16 54 02.7 +0.5
MAKZ pmax pmax
comp=Z,3.0nm,0.7s
MK31 Makanchi Array 25.27 61 P P 16 54 04.2 0.0
MK31 IAmb IAmb 16 54 06.9
comp=Z,2.8nm,0.7s
MK31 Makanchi Array 25.27 61*d i*P P 16 54 05.8 +1.6
MKAR Makanchi Array 25.27 61 P P 16 54 06.1 +1.9
comp=Z,3.0nm,0.7s,baz=262,slow=8.0,SNR=31
comp=Z,3.0nm,0.7s
MKAR Makanchi Array 25.27 61 P P 16 54 03.2 -1.0
MKAR Makanchi Array 25.27 61 *e*P P 16 54 03.2 -1.0
TIP Timpagrande 25.43 282 P P 16 54 05.2 -0.6
VRAC Vrnjov 25.79 305 LR LR 17 06 02.8
comp=Z,20nm,18.9s,baz=94,slow=41
FINES FINESS Array B 27.04 335 P P 16 54 20.9 +0.9
comp=Z,1.2nm,0.8s,baz=140,slow=11,SNR=1.4
comp=Z,1.2nm,0.8s
GERES GERESS Array B 27.58 303 P P 16 54 26.2 +1.1
comp=Z,0.3nm,0.7s,baz=96,slow=10.0,SNR=1.9
comp=Z,0.3nm,0.7s
ZALV Zalesovo Beam 28.42 46 P P 16 54 32.2 -0.2
comp=Z,1.1nm,0.5s,baz=270,slow=9.1,SNR=5.5
comp=Z,1.1nm,0.5s
ZALV Zalesovo Beam 28.42 46 *i* P P 16 54 32.5 +0.1
ZALV pmax pmax
comp=Z,1.0nm,0.4s
WMQ Urumqi 28.99 67 *e*P P 16 54 41.0 +3.3
ESDC Sonseca Array 40.97 289 P P 16 56 20.4 -0.4
comp=Z,0.5nm,0.7s,baz=82,slow=10,SNR=4.4
comp=Z,0.5nm,0.7s
HHC Hu-ho-hao-te 46.86 67 *e*P P 16 57 08.0 -0.2
HHC pmax pmax
comp=Z,31nm,1.0s
HHC pmax pmax
comp=Z,140nm,5.5s
CMAR Chiang Mai Arr 47.22 101 P P 16 57 12.1 +1.1
comp=Z,0.7nm,0.6s,baz=300,slow=8.0,SNR=5.8
comp=Z,0.7nm,0.6s
KSRS Korea Array 59.87 64 P P 16 58 44.4 +0.7
comp=Z,1.0nm,0.8s,baz=290,slow=6.3,SNR=5.7
comp=Z,1.0nm,0.8s
TOLK Toolik Lake Re 72.08 7 P P 17 00 02.5 +0.7
TOLK IAmb IAmb 17 00 04.1
comp=Z,1.5nm,0.8s
IMAR Indian Mountai 74.15 10 P P 17 00 14.2 +0.2
H21K Melozitna Rive 74.58 9 P P 17 00 17.5 +1.0
J20K Nowinta River 75.81 10 P P 17 00 24.6 +1.0
BCAR Beaver Creek A 78.22 5 P P 17 00 38.4 +1.1
SKT Skwentna 78.28 10 P P 17 00 37.9 +0.3

NEIC **12** *16:51:11.1±1.3, 18°.12S±0°.07×178°.0W±0°.1, h531km±8km, mb4.2/44, Error ellipse: s-maj=19.3km s-min=9.3km az=76.0*
IDC **12** *16:51:12.2±1.9, 18°.10S×178°.25W, h527km±19km, mb3.3/8, mbtmp4.2/9, Error ellipse: s-maj=24.0km s-min=17.0km az=86.0*

ISC 12 16:51:12.5±0.6, 18°.1S±0°.1×178°.1W±0°.1, h550km, n64, σ1§07/62, mb4.0/29, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.68**	**274**	P	**P**	**16 52 30.6**	**-1.5**
	25nm,0.7s,baz=122,slow=5.2,SNR=22						
MSVF	**Nonsavu**	**3.68**	**274**	P	**P**	**16 52 30.4**	**-1.8**
NIUE	**Niue**	**7.82**	**99**	P	**P**	**16 53 07.4**	**-1.1**
URZ	**Urewera**	**20.57**	**191**	P	**P**	**16 55 11.7**	**-1.8**
	14nm,0.8s,baz=252,slow=1.7,SNR=14						
	14nm,0.8s						
URZ	**Urewera**	**20.57**	**191**	IAmb	IAmb	16 55 15.1	
	comp=Z,47nm,1.4s						
BKZ	**Black Stump Fm**	**21.56**	**191**	P	**P**	**16 55 20.5**	**-2.1**
LTZ	**Lake Taylor**	**25.98**	**196**	P	**P**	**16 56 00.2**	**-1.5**
LBZ	**Lake Benmore**	**28.04**	**198**	P	**P**	**16 56 18.4**	**-1.3**
CTAO	**Charters Tower**	**33.71**	**261**	P	**P**	**16 57 08.5**	**-0.2**
CAN	**Canberra**	**33.85**	**233**	P	**P**	**16 57 09.8**	**+0.1**
CAN				IAmb	IAmb	16 57 24.6	
	comp=Z,22nm,1.3s						
PATS	**Pohnpei**	**33.96**	**315**	P	**P**	**16 57 10.8**	**0.0**
TOO	**Toolangi**	**37.31**	**231**	P	**P**	**16 57 39.0**	**+0.6**
TOO				IAmb	IAmb	16 57 45.9	
	comp=Z,13nm,1.2s						
COEN	**Coen**	**37.40**	**270**	P	**P**	**16 57 39.6**	**+0.3**
MANU	**Manus Island**	**37.42**	**291**	P	**P**	**16 57 40.1**	**+0.6**
MANU				IAmb	IAmb	16 57 58.9	
	comp=Z,8.9nm,1.1s						
STKA	**Stephens Creek**	**38.82**	**241**	P	**P**	**16 57 51.5**	**+0.9**
	comp=Z,1.3nm,0.7s,baz=352,slow=15,SNR=4.5						
	comp=Z,1.3nm,0.7s						
BBOO	**Buckleboo**	**43.59**	**241**	P	**P**	**16 58 28.9**	**+0.5**
BBOO				IAmb	IAmb	16 58 32.4	
	comp=Z,19nm,1.4s						
WR0	**Warramunga Arr**	**44.70**	**260**	P	**P**	**16 58 36.4**	**-0.8**
WR0				IAmb	IAmb	16 59 04.8	
	comp=Z,12nm,1.4s						
WB0	**Warramunga Arr**	**44.86**	**260**	P	**P**	**16 58 37.6**	**-0.8**
WB0				IAmb	IAmb	16 58 56.5	
	comp=Z,13nm,1.2s						
WB2	**Warramunga Arr**	**44.88**	**260**	P	**P**	**16 58 37.9**	**-0.7**
WB2				IAmb	IAmb	16 58 45.5	
	comp=Z,11nm,1.1s						
WRA	**Warramunga Arr**	**44.89**	**260**	P	**P**	**16 58 38.1**	**-0.6**
	comp=Z,1.7nm,0.5s,baz=94,slow=6.9,SNR=52						
	comp=Z,1.7nm,0.5s						
AS31	**Alice Springs**	**45.03**	**254**	P	**P**	**16 58 39.8**	**0.0**
AS31				IAmb	IAmb	16 58 40.5	
	comp=Z,2.8nm,0.6s						
ASAR	**Alice Springs**	**45.03**	**254**	P	**P**	**16 58 40.0**	**+0.2**
	comp=Z,9.6nm,0.6s,baz=88,slow=8.1,SNR=249						
	comp=Z,9.6nm,0.6s						
ASAR	**Alice Springs**	**45.03**	**254**	P	**P**	**16 58 39.2**	**-0.5**
MTN	**Manton Dam**	**49.09**	**268**	P	**P**	**16 59 09.8**	**-0.5**
MTN				IAmb	IAmb	16 59 33.5	
	comp=Z,37nm,1.4s						
FORT	**Forrest**	**50.21**	**245**	P	**P**	**16 59 18.1**	**-0.3**
FORT				IAmb	IAmb	16 59 20.0	
	comp=Z,20nm,0.9s						
KNRA	**Kununurra**	**50.77**	**264**	P	**P**	**16 59 22.6**	**0.0**
KNRA				IAmb	IAmb	16 59 23.2	
	comp=Z,14nm,0.9s						
JHJ2	**Mitsune**	**64.84**	**322**	P	**P**	**17 00 58.6**	**+1.0**
JGF	**Kuroka**	**68.03**	**322**	P	**P**	**17 01 18.3**	**+0.9**
JGF				IAmb	IAmb	17 01 26.3	
	comp=Z,30nm,1.5s						
MJAR	**Matsushiro Arr**	**68.19**	**323**	P	**P**	**17 01 18.8**	**+0.4**
	comp=Z,3.2nm,0.9s,baz=146,slow=6.1,SNR=12						
	comp=Z,3.2nm,0.9s						
MJAR	**Matsushiro Arr**	**68.19**	**323**	P	**P**	**17 01 17.7**	**-0.6**
MAJO	**Matsushiro**	**68.20**	**323**	P	**P**	**17 01 18.6**	**+0.2**
MAJO				IAmb	IAmb	17 01 19.6	
	comp=Z,5.9nm,1.1s						
MJB9	**Matsu-Tunnel**	**68.20**	**323**	P	**P**	**17 01 18.7**	**+0.2**
MJB9				IAmb	IAmb	17 01 19.6	
	comp=Z,6.2nm,1.1s						
JSD	**Sado**	**69.22**	**324**	P	**P**	**17 01 25.6**	**+1.1**
JSD				IAmb	IAmb	17 01 26.3	
	comp=Z,4.1nm,0.6s						
KIWB	**Kanaga Island**	**69.61**	**1**	P	**P**	**17 01 25.6**	**-0.9**
UGM	**Wanagama**	**69.93**	**268**	P	**P**	**17 01 29.8**	**+0.4**
JHS	**Saijyo**	**70.19**	**319**	P	**P**	**17 01 31.5**	**+1.1**
QSPA	**South Pole Qui**	**72.01**	**180**	P	**P**	**17 01 42.6**	**+1.9**
QSPA				IAmb	IAmb	17 01 44.1	
	comp=Z,7.6nm,1.5s						
JTU	**Tsushima**	**72.27**	**317**	P	**P**	**17 01 43.3**	**+0.8**
KSRS	**Korea Array**	**75.00**	**318**	P	**P**	**17 01 60.0**	**+2.0**
	comp=Z,0.7nm,0.6s,baz=133,slow=6.3,SNR=7.3						
	comp=Z,0.7nm,0.6s						
O18K	**Koktuh Hills**	**79.83**	**12**	P	**P**	**17 02 24.2**	**+0.5**
O18K				IAmb	IAmb	17 02 43.5	
	comp=Z,5.5nm,1.1s						
N18K	**Kilae Creek**	**80.48**	**11**	P	**P**	**17 02 27.7**	**+0.7**
N18K				IAmb	IAmb	17 02 35.7	
	comp=Z,5.0nm,1.2s						
SVW2	**Sparrevohn**	**80.92**	**11**	P	**P**	**17 02 30.0**	**+0.7**
M19K	**Big River Lodg**	**81.89**	**11**	P	**P**	**17 02 34.6**	**+0.4**
BELA	**Belgrano 2**	**81.99**	**173**	P	**P**	**17 02 35.0**	**+0.4**
SUA	**Susitna One**	**82.20**	**13**	P	**P**	**17 02 36.0**	**+0.1**
K20K	**Telida**	**83.29**	**11**	P	**P**	**17 02 42.0**	**+0.7**
SCM	**Sheep Creek Mo**	**83.29**	**14**	P	**P**	**17 02 41.9**	**+0.5**
SCM				IAmb	IAmb	17 02 49.4	
	comp=Z,5.3nm,1.1s						
GLB	**Gilahina Butte**	**83.82**	**16**	P	**P**	**17 02 44.7**	**+0.8**
GLB				IAmb	IAmb	17 03 03.8	
	comp=Z,3.9nm,1.3s						
J20K	**Nowinta River**	**84.03**	**10**	P	**P**	**17 02 46.0**	**+1.1**
TRF	**Thorofare Moun**	**84.09**	**12**	P	**P**	**17 02 45.1**	**-0.3**
TRF				IAmb	IAmb	17 02 45.8	
	comp=Z,5.2nm,1.2s						
RND	**Reindeer**	**84.34**	**13**	P	**P**	**17 02 47.2**	**+0.7**
RND				IAmb	IAmb	17 02 48.3	
	comp=Z,4.4nm,1.2s						
DHY	**Denali Highway**	**84.37**	**14**	P	**P**	**17 02 47.2**	**+0.5**
CCB	**Clear Creek Bu**	**85.66**	**13**	P	**P**	**17 02 52.9**	**+0.2**
IMAR	**Indian Mountai**	**85.77**	**10**	P	**P**	**17 02 54.0**	**+0.7**
ILAR	**Eielson Array**	**85.96**	**13**	P	**P**	**17 02 54.5**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=221,slow=5.3,SNR=5.8						
	comp=Z,0.3nm,0.4s						
BMAR	**Burnt Mountain**	**88.73**	**12**	P	**P**	**17 03 08.6**	**+1.4**
PLCA	**Paso Flores**	**91.02**	**134**	P	P	17 03 22.3	+3.6
	comp=Z,0.4nm,0.5s,baz=258,slow=9.3,SNR=3.2						
	comp=Z,0.4nm,0.5s						
MKAR	**Makanchi Array**	**109.44**	**314**	PKiKP	**PKiKP**	**17 08 41.2**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=148,slow=0.2,SNR=4.8						
BRTR	**Keskin Array B**	**145.09**	**315**	PKPbc	**PKiKP**	**17 09 50.2**	**-1.9**
	comp=Z,1.1nm,0.4s,baz=99,slow=3.2,SNR=13						
BRTR	**Keskin Array B**	**145.09**	**315**		**PKiKP**	**17 09 50.0**	**-2.0**
CLL	**Collm**	**145.66**	**348**	*i* PKPbc	**PKiKP**	**17 09 51.4**	**-1.2**
	comp=Z,4.0nm,0.9s						
GERES	**GERESS Array B**	**147.82**	**345**	PKPbc	**PKiKP**	**17 09 57.6**	**+0.3**
	comp=Z,0.8nm,0.5s,baz=28,slow=3.2,SNR=10						
GERES	**GERESS Array B**	**147.82**	**345**		**PKiKP**	**17 09 56.7**	**-0.7**
TORD	**Torodi Ar. Bea**	**175.12**	**178**	PKPab	**PKPab**	**17 12 03.3**	**+3.6**
	comp=Z,1.0nm,0.6s,baz=316,slow=10,SNR=6.6						

GUC **12** *17:07:41.3±0.6, 37°.87S×75°.07W, h18km±6km, ML4.9*
NEIC **12** *17:07:48.6±1.0, 37°.73S±0°.05×74°.3W±0°.2, h15km±9km, Mwr4.0/39, Mwr4.6(GUC), Error ellipse: s-maj=19.7km s-min=7.8km az=89.0*
NEIC **12** *17:07:50, 37°.73S×74°.14W, h18km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.19; $M_{\theta\theta}$0.08; $M_{\phi\phi}$-1.28; $M_{r\theta}$0.34; $M_{\theta\phi}$-0.05; $M_{\phi r}$-0.25; Fault plane solution: M_o1.31000×10^{15} NP1:ϕ_s166.77000°, δ52.50000°, λ70.19000°. NP2:ϕ_s17.38000°, δ41.72000°, λ113.82000°. Principal axes: T 1.3107, Plg73.0000°, Azm20.0000°; N -0.0104, Plg16.0000°, Azm179.0000°; P -1.3002, Plg6.0000°, Azm271.0000°;*

ISC 12 17:07:42.3±3.2, 37°.82S±0°.04×74°.8W±0°.1, h10km±25km, n48, σ1§99/57, 2C, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LC02	**Puerto Saavedr**	**1.48**	**132**		**Pb**	**17 08 10.7**	**+0.8**
LC02					**Sn**	**17 08 28.5**	**+0.1**
LC02	**Puerto Saavedr**	**1.48**	**132**	*i* P	**Pb**	**17 08 10.5**	**+0.7**
LC02				*i* S	**Sn**	**17 08 28.4**	**+0.1**
LC02				IAML		17 08 33.1	
	comp=N,33µm,0.4s						
CCSP	**San Pedro de C**	**1.66**	**55**	*e*P	**Pb**	**17 08 12.4**	**+0.9**
CCSP				*i* S	**Sn**	**17 08 26.6**	**-6.2**
CCSP				IAML		17 08 33.4	
	comp=N,17µm,0.5s						
BI05	**Punta Hualpn**	**1.67**	**51**		**Pn**	**17 08 12.0**	**+0.5**
BI05	**Punta Hualpn**	**1.67**	**51**⇑ *i* P		**Pn**	**17 08 11.9**	**+0.4**
BI05				*e*S	**Sn**	**17 08 30.9**	**-2.1**
BI05				IAML		17 08 35.0	
	comp=E,15µm,0.4s						
LR04	**Corral**	**2.32**	**153**		**Pb**	**17 08 25.0**	**+0.8**
LR04	**Corral**	**2.32**	**153**	*e*P	**Pb**	**17 08 24.9**	**+0.6**
LR04				*i* S	**Sn**	**17 08 49.1**	**0.0**
LR04				IAML		17 08 50.4	
	comp=E,6µm,0.2s						
LR02	**Universidad Au**	**2.33**	**149**	*e*P	**Pb**	**17 08 25.6**	**+1.3**
LR02				*i* S	**Sn**	**17 08 49.7**	**+0.5**
LR02				IAML		17 09 09.6	
	comp=E,9µm,0.3s						
LR03	**Panguipulli**	**2.64**	**134**		**Pn**	**17 08 27.5**	**+2.6**
LR03	**Panguipulli**	**2.64**	**134**	*e*P	**Pn**	**17 08 27.5**	**+2.6**
LR03				*i* S	**Sn**	**17 08 59.2**	**+2.2**
LR03				IAML		17 09 05.6	
	comp=E,4µm,0.6s						
ML02	**Panimavida**	**3.40**	**54**		**Pn**	**17 08 35.6**	**+0.2**
LL04	**Puerto Octay**	**3.60**	**150**		**Pn**	**17 08 41.9**	**-4.1**
LL04	**Puerto Octay**	**3.60**	**150**	*e*P	**Pb**	**17 08 42.0**	**-4.1**
LL04				*i* S	**Sn**	**17 09 17.7**	**-3.0**
GO05	**Huala**	**3.63**	**40**		**Pn**	**17 08 40.2**	**+1.6**
GO05	**Huala**	**3.63**	**40**	*e*P	**Pn**	**17 08 40.2**	**+1.6**
GO05				*e*S	**Sn**	**17 09 23.8**	**+2.2**
LL05	**Los Muermos**	**3.73**	**164**		**Pb**	**17 08 45.8**	**-2.4**
LL05	**Los Muermos**	**3.73**	**164**	*e*P	**Pb**	**17 08 46.4**	**-1.8**
LL03	**Petrohue**	**3.80**	**152**	*e*P	**Pn**	**17 08 43.7**	**+2.8**
BO03	**Pichilemu**	**4.03**	**36**	*e*P	**Pn**	**17 08 45.4**	**+1.4**
PLCA	**Paso Flores**	**4.40**	**133**		**Pn**	**17 08 51.9**	**+2.7**
BO01	**Tunca**	**4.55**	**42**		**Pn**	**17 08 52.2**	**+0.9**
BO01	**Tunca**	**4.55**	**42**	*e*P	**Pn**	**17 08 52.1**	**+0.9**
MT01	**Popeta**	**4.88**	**37**

MT09	Talagante	5.08	39		Pn	17 08 59.9 +1.3
MT09	Talagante	5.08	39	eP	Pn	17 08 59.8 +1.1
BO04	La Punta	5.11	43		Pn	17 08 59.5 +0.4
BO04	La Punta	5.11	43	eP	Pn	17 08 59.4 +0.4
MT02	Curacav	5.44	34		Pn	17 09 04.5 +1.1
MT02	Curacav	5.44	34	eP	Pn	17 09 04.7 +1.3
LMEL	Las Melosas	5.44	45		Pn	17 09 04.8 +1.2
MT05	Renca	5.52	38		Pn	17 09 05.4 +0.8
MT05	Renca	5.52	38	eP	Pn	17 09 05.9 +1.4
MT03	Universidad Ad	5.55	40		Pn	17 09 05.9 +0.9
MT03	Universidad Ad	5.55	40	eP	Pn	17 09 06.2 +1.2
ROC1	El Roble	5.73	34		Pn	17 09 09.6 +1.9
ROCH	El Roble	5.74	34	eP	Pn	17 09 09.4 +1.6
PEL	Peldehue	5.74	37		Pn	17 09 09.1 +1.4
PEL	Peldehue	5.74	37	eP	Pn	17 09 08.7 +1.0
VA03	San Esteban	6.12	36		Pn	17 09 14.2 +1.3
CO06	Fray Jorge	7.59	21		Pn	17 09 35.0 +2.0
CO03	El Pedregal	7.75	27		Pn	17 09 37.7 +2.5
ZON	Zonda	8.03	41		Pn	17 09 40.2 +1.1
GO04	Tololo Observa	8.31	25		Pn	17 09 45.8 +2.6
CO01	Juntas del Tor	8.74	28		Pn	17 09 51.9 +2.9
LCO	Las Campanas	9.42	22		Pn	17 10 01.0 +2.6

BJI **12** *17:11:35.8±0.0, 43.°95N×148.°25E, h43km, mb4.7/73, mB4.8/53, Ms4.2/67, Ms7 4.1/68*

NEIC **12** *17:11:36.6±2.4, 43.°89N±0.°07×147.°94E±0.°08, h20km±3km, mb5.3/219, Error ellipse: s-maj=9.7km s-min=8.1km az=178.0*

NIED **12** *17:11:37.8, 43.°64N×147.°69E, h0km, MW4.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}0.49; $M_{\theta\theta}$-0.68; $M_{\phi\phi}$0.19; $M_{r\theta}$1.75; $M_{\theta\phi}$-0.41; $M_{\phi r}$-0.20; Fault plane solution: $M_0$1.90000×10^{16} NP1: ϕ_s215.00000°, δ17.00000°, λ30.00000°. NP2:ϕ_s96.00000°, δ82.00000°, λ105.00000°.*

JMA **12** *17:11:37.8±0.2, 43.°6N±0.°9×14.°8E±.°, h0km, MD4.8/40, MV5.3/40, E OFF HOKKAIDO*

JMA Felt I J1 at E OFF HOKKAIDO .

IDC **12** *17:11:38.4±2.4, 43.°95N×147.°85E, h33km±17km, mb4.9/40, mbtmp5.1/46, ML4.4/5, MS4.0/81, Error ellipse: s-maj=11.6km s-min=9.7km az=146.0*

MOS **12** *17:11:39.7±0.9, 43.°89N×147.°84E, h60km, mb5.5/77, MS4.5/20, Error ellipse: s-maj=6.2km s-min=3.6km az=118.7*

MOS Felt (III) at Malokuril'skoye.

SKHL **12** *17:11:39.2±0.6, 43.°80N×148.°00E, h63km±5km, mb5.7/15, mbv5.1/4, ms4.6/4*

ISC 12 17:11:38.9±0.4**, 43.°89N**±0.°03×**147.°93E**±0.°03**, h41**km±3km**, h40**km:pP-P,n1304,σ1s34**/1313,mb5.3**/324,**MS4.2**/112, **160C-62D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SHO	**Shokotan**	**0.79**	**269**	*d*	iPN		**Pn**	**17 11 53.4**	**-0.2**
SHO					eS		**Sn**	**17 12 03.9**	**-0.3**
SHO					pmax		pmax		
	comp=E,2μm,0.4s								
SHO					pmax		pmax		
	comp=Z,2μm,0.4s								
SHO					pmax		pmax		
	comp=N,1μm,0.2s								
SHO					smax		smax		
	comp=N,32μm,0.4s								
SHO					smax		smax		
	comp=E,40μm,0.5s								
SHO	**Shokotan**	**0.79**	**269**	*i*	P		**Pn**	**17 11 53.6**	**0.0**
SHO					AMB		AMB	17 11 56.0	
	comp=E,4μm,0.2s								
SHO					eS		**Sn**	**17 12 04.8**	**+0.6**
SHO					A		A	17 12 05.5	
	comp=E,32μm,0.5s								
SHO					A		A	17 12 05.5	
	comp=E,40μm,0.5s								
KUR	**Kuril'sk**	**1.34**	**358**	*c*	iPN		**Pn**	**17 12 02.0**	**+0.9**
KUR				*i*	S		**Sn**	**17 12 19.0**	**+1.3**
KUR					pmax		pmax		
	comp=E,1μm,0.3s								
KUR					pmax		pmax		
	comp=Z,3μm,0.3s								
KUR					smax		smax		
	comp=N,46μm,1.7s								
KUR					smax		smax		
	comp=E,37μm,0.4s								
KUR					smax		smax		
	comp=N,22μm,0.6s								
KUR	**Kuril'sk**	**1.34**	**358**	*i*	P		**Pn**	**17 12 02.0**	**+0.9**
KUR					AMB		AMB	17 12 04.2	
	comp=N,3μm,0.3s								
KUR				*i*	S		**Sn**	**17 12 18.9**	**+1.3**
KUR					A		A	17 12 20.2	
	comp=N,46μm,2.0s								
KUR					A		A	17 12 21.0	
	comp=N,22μm,0.6s								
KUR					A		A	17 12 21.0	
	comp=N,37μm,0.6s								
YUK	**Yuzh-Kuril'sk**	**1.50**	**276**	*c*	iPN		**Pn**	**17 12 03.6**	**+0.4**
YUK				*i*	S		**Sn**	**17 12 21.3**	**-0.2**
YUK					pmax		pmax		
	comp=N,797nm,0.2s								
YUK					pmax		pmax		
	comp=Z,3μm,0.2s								
YUK					pmax		pmax		
	comp=E,1μm,0.1s								
YUK					smax		smax		
	comp=E,40μm,0.7s								
YUK					smax		smax		
	comp=N,19nm,0.5s								
YUK					smax		smax		
	comp=E,41μm,0.7s								
YUK					smax		smax		
	comp=N,41μm,1.1s								
YUK	**Yuzh-Kuril'sk**	**1.50**	**276**	*i*	P		**Pn**	**17 12 03.7**	**+0.5**
YUK					AMB		AMB	17 12 06.8	
	comp=N,3μm,0.2s								
YUK				*i*	S		**Sn**	**17 12 21.9**	**+0.4**
YUK					A		A	17 12 23.2	
	comp=N,41μm,1.0s								
YUK					A		A	17 12 23.2	
	comp=N,41μm,1.0s								
YUK					A		A	17 12 24.6	
	comp=N,19μm,0.7s								
YUK					A		A	17 12 24.6	
	comp=N,40μm,0.7s								
NEM2	**Nemuro 2**	**1.67**	**252**	*e*	P		**Pn**	**17 12 05.1**	**-0.4**
NEM2					eS		**Sn**	**17 12 24.6**	**-1.1**
NEM2	**Nemuro 2**	**1.67**	**252**		A		A	17 12 05.1	
	comp=N,9.0nm,0.9s,comp=N,11nm,1.9s								
NMR	**Nemuro--Hokkai**	**1.68**	**253**	*d*	iPN		**Pn**	**17 12 05.1**	**-0.6**
NMR					eS		**Sn**	**17 12 25.0**	**-1.0**
NMR	**Nemuro--Hokkai**	**1.68**	**253**	*i*	P		**Pn**	**17 12 05.2**	**-0.5**
NMR					eS		**Sn**	**17 12 25.5**	**-0.5**
GLVR	**Golovnino**	**1.75**	**266**	⇓	iPN		**Pn**	**17 12 07.4**	**+0.7**
GLVR				*i*	S		**Sn**	**17 12 28.8**	**+1.1**
GLVR					pmax		pmax		
	comp=E,490nm,0.5s								
GLVR					pmax		pmax		
	comp=Z,5μm,0.5s								
GLVR					pmax		pmax		
	comp=N,336nm,0.2s								
GLVR					smax		smax		
	comp=N,45μm,0.5s								
GLVR					smax		smax		
	comp=E,22μm,0.4s								
GLVR	**Golovnino**	**1.75**	**266**	*i*	P		**Pn**	**17 12 07.4**	**+0.7**
GLVR					AMB		AMB	17 12 08.2	
	comp=E,5μm,0.5s								
GLVR				*i*	S		**Sn**	**17 12 28.8**	**+1.1**
GLVR					A		A	17 12 35.4	
	comp=E,45μm,0.5s								
GLVR					A		A	17 12 35.4	
	comp=E,22μm,0.5s								
RUSJ	**Misakicho**	**1.94**	**277**	⇓	iPN		**Pn**	**17 12 11.0**	**+1.7**
RUSJ				*i*	S		**Sn**	**17 12 34.8**	**+2.3**
JRA	**Rausu**	**2.03**	**272**	*e*	P		**Pn**	**17 12 11.7**	**+1.2**
JRA					eS		**Sn**	**17 12 36.5**	**+1.9**
JRA	**Rausu**	**2.03**	**272**		A		A	17 12 11.7	
	comp=E,15nm,1.5s,comp=E,31nm,1.6s								
JNSB	**Nemuroshibetsu**	**2.12**	**268**	*e*	P		**Pn**	**17 12 13.0**	**+1.3**
JNSB					eS		**Sn**	**17 12 38.1**	**+1.3**
JNSB	**Nemuroshibetsu**	**2.12**	**268**		A		A	17 12 13.0	
	comp=E,14nm,1.9s,comp=E,24nm,2.6s								
JKHN	**Kushirohamanak**	**2.17**	**249**	*e*	P		**Pn**	**17 12 12.4**	**0.0**
JKHN	**Kushirohamanak**	**2.17**	**249**		A		A	17 12 12.4	
	comp=E,14nm,4.0s,comp=E,16nm,2.9s								
JNK	**Nakash**	**2.34**	**264**	*e*	P		**Pn**	**17 12 15.4**	**+0.6**
JNK					eS		**Sn**	**17 12 42.9**	**+0.5**
AKK	**Akkeshi**	**2.41**	**250**	*e*	P		**Pn**	**17 12 15.7**	**0.0**
AKK					eS		**Sn**	**17 12 43.8**	**-0.2**
JAK	**Akkeshi**	**2.52**	**250**	*e*	P		**Pn**	**17 12 17.2**	**0.0**
JAK					eS		**Sn**	**17 12 45.5**	**-1.1**
JAK	**Akkeshi**	**2.52**	**250**		A		A	17 12 17.2	
	comp=E,15nm,1.3s,comp=E,11nm,3.4s								
JTKR	**Abashiri--Toko**	**2.90**	**273**	*e*	P		**Pn**	**17 12 24.6**	**+2.0**
JTKR	**Abashiri--Toko**	**2.90**	**273**		A		A	17 12 24.6	
	comp=E,2.0nm,6.7s,comp=E,4.0nm,6.4s								
JAR	**Ashorobuto**	**3.08**	**260**	*e*	P		**Pn**	**17 12 26.1**	**+1.1**
JAR					eS		**Sn**	**17 13 02.0**	**+1.5**
JAR	**Ashorobuto**	**3.08**	**260**		A		A	17 12 26.1	
	comp=E,5.0nm,6.5s,comp=E,5.0nm,0.7s								
JOB	**Onbets**	**3.14**	**253**	*e*	P		**Pn**	**17 12 26.4**	**+0.6**
JOB	**Onbets**	**3.14**	**253**		A		A	17 12 26.4	
	comp=E,8.0nm,1.5s,comp=E,7.0nm,1.0s								
JMP	**Maruseppu**	**3.30**	**274**	*e*	P		**Pn**	**17 12 30.2**	**+2.2**
JCH	**Churui**	**3.57**	**251**	*e*	P		**Pn**	**17 12 31.6**	**-0.1**
JCH	**Churui**	**3.57**	**251**		A		A	17 12 31.6	
	comp=E,4.0nm,1.0s,comp=E,5.0nm,1.7s								
JKK2	**Kamakawa 2**	**3.74**	**271**	*e*	P		**Pn**	**17 12 36.9**	**+2.8**
JKA	**Kamikawa-asahi**	**3.85**	**275**		Pn		**Pn**	**17 12 38.6**	**+3.1**
JKA	**Kamikawa-asahi**	**3.85**	**275**	*e*	P		**Pn**	**17 12 38.6**	**+3.1**
ASAJ	**Asahikawa**	**3.85**	**275**		LR		LR	17 14 17.1	
	comp=E,1μm,18.4s,baz=98,slow=42								
ASAJ	**Asahikawa**	**3.85**	**275**		PN		**Pn**	**17 12 38.6**	**+3.0**
ASAJ	**Asahikawa**	**3.85**	**275**	*e*	P		**Pn**	**17 12 38.5**	**+3.0**
ERM	**Erimo**	**3.97**	**243**		Pn		**Pn**	**17 12 39.0**	**+1.8**
ERM	**Erimo**	**3.97**	**243**	*d*	iPN		**Pn**	**17 12 38.9**	**+1.8**
JEM	**Erimo**	**3.97**	**243**	*e*	P		**Pn**	**17 12 38.0**	**+0.8**
JEM	**Erimo**	**3.97**	**243**		A		A	17 12 38.0	
	comp=E,6.0nm,6.7s,comp=E,7.0nm,5.3s								
JSE	**Soyaes**	**3.97**	**287**	*e*	P		**Pn**	**17 12 39.7**	**+2.5**
JNBK	**Urakawa-nobuka**	**4.12**	**249**	*e*	P		**Pn**	**17 12 39.4**	**+0.2**
JNBK	**Urakawa-nobuka**	**4.12**	**249**		A		A	17 12 39.4	
	comp=E,8.0nm,1.1s,comp=E,5.0nm,0.9s								
JAB	**Ashibetsu**	**4.15**	**267**		A		A	17 12 41.8	
	comp=E,3.0nm,4.3s,comp=E,5.0nm,7.5s								
JSHD	**Hidakashinhida**	**4.26**	**252**		A		A	17 12 42.4	
	comp=E,7.0nm,1.9s,comp=E,8.0nm,2.1s								
JSS	**Shosan**	**4.40**	**279**	*e*	P		**Pn**	**17 12 46.9**	**+3.8**
JHR	**Hokuryu**	**4.49**	**270**	*e*	P		**Pn**	**17 12 47.9**	**+3.5**
JWK2	**Keihoku**	**4.53**	**290**	*e*	P		**Pn**	**17 12 49.5**	**+4.6**
JIAM	**Iburiatsuma**	**4.57**	**256**		A		A	17 12 46.9	
	comp=E,11nm,3.8s,comp=E,12nm,1.1s								
YSS	**Yuzh-Sakhalins**	**4.76**	**312**		Pn		**Pn**	**17 12 50.2**	**+2.2**
YSS	**Yuzh-Sakhalins**	**4.76**	**312**	*α*	iPN		**Pn**	**17 12 50.5**	**+2.6**
YSS					eS		**Sn**	**17 13 43.2**	**+1.4**
YSS					pmax		pmax		
	comp=Z,400nm,4.0s								
YSS					pmax		pmax		
	comp=Z,320nm,0.5s								
YSS					smax		smax		
	comp=N,360nm,0.7s								
YSS					smax		smax		
	comp=E,140nm,0.7s								
YSS	**Yuzh-Sakhalins**	**4.76**	**312**	*i*	P		**Pn**	**17 12 50.5**	**+2.6**
YSS					AMB		AMB	17 12 50.8	
	comp=E,400nm,4.0s								
YSS					AMB		AMB	17 12 51.0	
	comp=E,320nm,0.5s								
YSS					eS		**Sn**	**17 13 43.2**	**+1.4**
YSS					A		A	17 13 47.8	
	comp=E,360nm,0.7s								
YSS					A		A	17 13 47.8	
	comp=E,140nm,0.7s								
YSS					AMS		AMS	17 14 33.0	
	comp=E,800nm,18.0s								
YSS					AMS		AMS	17 14 33.0	
	comp=E,1μm,18.0s								
YSS					AMS		AMS	17 14 33.0	
	comp=E,3μm,18.0s								
JISS	**Ishikarishitsu**	**4.77**	**265**		A		A	17 12 50.3	
	comp=E,8.0nm,4.0s,comp=E,7.0nm,6.1s								
JEW	**Eniwo**	**4.84**	**260**		Pn		**Pn**	**17 12 51.6**	**+2.5**
JKB	**Kayabe**	**5.45**	**251**		A		A	17 12 59.0	
	comp=E,5.0nm,3.4s,comp=E,5.0nm,1.6s								
JTM	**Tenmabayashi**	**5.95**	**241**		Pn		**Pn**	**17 13 03.7**	**-0.7**
UGL	**Uglegorsk**	**6.58**	**324**	*e*	PN		**Pn**	**17 13 15.6**	**+2.7**
UGL					S		**Sn**	**17 14 30.7**	**+4.2**
UGL					pmax		pmax		
	comp=Z,224nm,0.9s								
UGL					smax		smax		
	comp=N,477nm,1.0s								
UGL					smax		smax		
	comp=E,281nm,0.7s								
UGL	**Uglegorsk**	**6.58**	**324**	*e*	P		**Pn**	**17 13 15.6**	**+2.7**
UGL					AMB		AMB	17 13 17.7	
	comp=E,500nm,2.0s								
UGL					AMB		AMB	17 13 18.0	
	comp=E,220nm,0.7s								
UGL					eS		**Sn**	**17 14 28.2**	**+1.7**
UGL					A		A	17 14 42.0	
	comp=E,480nm,0.8s								
UGL					A		A	17 14 42.0	
	comp=E,280nm,0.8s								
UGL					AMS		AMS	17 15 39.0	
	comp=E,2μm,18.0s								
UGL					AMS		AMS	17 15 39.0	
	comp=E,2μm,18.0s								
UGL					AMS		AMS	17 15 39.0	
	comp=E,2μm,18.0s								
TYV	**Tymovskoe**	**7.83**	**335**	*e*	PN		**Pn**	**17 13 34.1**	**+3.9**
TYV					pmax		pmax		
	comp=Z,30nm,1.0s								
TYV					pmax		pmax		
	comp=Z,300nm,3.3s								
TYV	**Tymovskoe**	**7.83**	**335**	*e*	P		**Pn**	**17 13 33.1**	**+2.9**
TYV					AMB		AMB	17 13 34.3	
	comp=Z,30nm,1.0s								
TYV					AMB		AMB	17 13 34.6	
	comp=Z,300nm,3.0s								
TYV					eS		**Sn**	**17 14 58.3**	**+0.8**
TYV					A		A	17 14 59.5	
	comp=Z,20nm,0.9s								
TYV					A		A	17 14 59.5	
	comp=Z,40nm,0.9s								
TYV					AMS		AMS	17 16 12.0	
	comp=Z,3μm,20.0s								
TYV					AMS		AMS	17 16 12.0	
	comp=Z,2μm,20.0s								
TYV					AMS		AMS	17 16 12.0	
	comp=Z,2μm,20.0s								
JMM	**Marumori**	**8.09**	**224**				**Pn**	**17 13 30.8**	**-2.9**
TEY	**Ternei**	**8.18**	**282**	⇓	ePN		Pn	17 13 41.6	+6.7
TEY					*e*			17 15 10.7	
TEY					pmax		pmax		
	comp=E,20nm,1.4s								
TEY					pmax		pmax		
	comp=Z,10.0nm,1.4s								
TEY	**Ternei**	**8.18**	**282**	*e*	rx		rx	17 13 41.6	
TEY					AMB		AMB	17 13 42.3	
	comp=Z,10.0nm,1.0s								
SKR	**Severo-Kuril's**	**8.78**	**36**	⇓	iPN		**Pn**	**17 13 43.4**	**+0.3**
SKR					pmax		pmax		
	comp=Z,300nm,3.0s								
SKR					pmax		pmax		
	comp=Z,317nm,0.6s								
SKR					MLR		MLR		
	comp=Z,2μm,16.0s								
SKR					MLR		MLR		
	comp=N,1μm,14.0s								
SKR					MLR		MLR		
	comp=E,1μm,14.0s								
SKR	**Severo-Kuril's**	**8.78**	**36**	*i*	P		**Pn**	**17 13 43.6**	**+0.5**
SKR					AMB		AMB	17 13 44.4	
	comp=E,300nm,3.0s								
SKR					AMB		AMB	17 13 46.1	
	comp=E,320nm,0.6s								
SKR				*i*	S		**Sn**	**17 15 19.2**	**-1.4**
SKR					A		A	17 15 30.4	
	comp=E,90nm,0.4s								
SKR					A		A	17 15 30.4	
	comp=E,150nm,0.4s								
SKR					AMS		AMS	17 17 01.1	
	comp=E,2μm,14.0s								
SKR					AMS		AMS	17 17 01.1	
	comp=E,1μm,14.0s								
SKR					AMS		AMS	17 17 01.1	
	comp=E,2μm,14.0s								
JSD	**Sado**	**9.36**	**235**				**Pn**	**17 13 49.6**	**-1.5**
PAU	**Pauzhetka**	**9.65**	**35**	*i*	P		**Pn**	**17 13 55.2**	**+0.1**
PAU					AMB		AMB	17 13 56.3	
	comp=E,300nm,0.3s								
PAU					eS		**Sn**	**17 15 39.1**	**-3.0**
PAU					A		A	17 15 44.2	
	comp=E,230nm,0.3s								
PAU					A		A	17 15 44.2	
	comp=E,140nm,0.3s								
JYT	**Yasato**	**9.68**	**220**		Pn		**Pn**	**17 13 52.1**	**-3.3**
OKH	**Okha**	**10.21**	**343**	*c*	iPN		**Pn**	**17 14 06.1**	**+3.5**
OKH					pmax		pmax		
	comp=Z,100nm,10.3s								
OKH					MLR		MLR		
	comp=N,1μm,16.0s								
OKH	**Okha**	**10.21**	**343**	*i*	P		**Pn**	**17 14 06.1**	**+3.5**
OKH					AMB		AMB	17 14 08.2	
	comp=N,150nm,0.5s								
OKH					AMB		AMB	17 14 14.0	
	comp=N,100nm,10.0s								
OKH					eS		**Sn**	**17 15 56.9**	**+1.2**
OKH					A		A	17 16 24.3	
	comp=N,150nm,0.6s								
OKH					A		A	17 16 24.3	
	comp=N,13μm,0.6s								
OKH					AMS		AMS	17 18 32.3	
	comp=N,1μm,16.0s								
OKH					AMS		AMS	17 18 32.3	
	comp=N,2μm,16.0s								
OKH					AMS		AMS	17 18 32.3	
	comp=N,1μm,16.0s								
GRNR	**Gornyy**	**10.40**	**315**	⇑	iPN		Pn	17 14 11.6	+6.3
GRNR					eS		Sn	17 16 12.9	+12
GRNR					pmax		pmax		
	comp=E,10.0nm,0.9s								
GRNR					pmax		pmax		
	comp=Z,10.0nm,0.9s								
GRNR					pmax		pmax		
	comp=N,7.0nm,0.8s								
GRNR					smax		smax		
	comp=N,5.0nm,0.6s								
GRNR	**Gornyy**	**10.40**	**315**	*e*	rx		rx	17 14 11.6	
GRNR					AMB		AMB	17 14 12.5	
	comp=N,100nm,0.9s								
NKL	**Nikolayevsk**	**10.43**	**335**	*e*	PN		**Pn**	**17 14 05.2**	**-0.5**
NKL					pmax		pmax		
	comp=N,1.0nm,0.6s								
NKL					pmax		pmax		
	comp=Z,126nm,1.2s								
NKL					pmax		pmax		
	comp=E,2.0nm,0.9s								
NKL					MLR		MLR		
	comp=Z,767nm,15.0s								
NKL	**Nikolayevsk**	**10.43**	**335**	*i*	P		**Pn**	**17 14 08.4**	**+2.7**
NKL					AMB		AMB	17 14 10.2	
	comp=Z,280nm,0.6s								
MJAR	**Matsushiro Arr**	**10.44**	**229**		Pn		**Pn**	**17 14 04.6**	**-1.3**
	comp=Z,0.8nm,0.3s,baz=27,slow=13,SNR=103								
MJAR					Sn		**Sn**	**17 16 03.2**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=11,slow=20,SNR=1.6 comp=Z,32nm,0.8s								
MJAR	**Matsushiro Arr**	**10.44**	**229**				**Pn**	**17 14 04.0**	**-1.9**
MJB9	**Matsu-Tunnel**	**10.44**	**229**		Pn		**Pn**	**17 14 04.8**	**-1.1**
PEA0B	**Petropavlovsk-**	**11.26**	**32**		Pn		**Pn**	**17 14 16.7**	**-0.4**
PEA0B	**Petropavlovsk-**	**11.26**	**32**	*ce*	PN		**Pn**	**17 14 16.5**	**-0.6**
PETK	**Petropavlovsk-**	**11.26**	**32**		Pn		**Pn**	**17 14 16.1**	**-1.0**
	comp=Z,12nm,0.3s,baz=197,slow=13,SNR=130								
PETK					LR		LR	17 18 33.8	
	comp=Z,1μm,21.2s,baz=224,slow=37 comp=Z,65nm,0.5s								
PETK	**Petropavlovsk-**	**11.26**	**32**				**Pn**	**17 14 15.8**	**-1.2**
USA0B	**Ussuriysk Arra**	**11.48**	**277**		Pn		**Pn**	**17 14 17.1**	**-2.9**
USA0B	**Ussuriysk Arra**	**11.48**	**277**	*ce*	PN		**Pn**	**17 14 23.6**	**+3.5**
USRK	**Ussuriysk Ar.**	**11.48**	**277**		Pn		**Pn**	**17 14 19.5**	**-0.5**
	comp=Z,4.0nm,0.7s,baz=149,slow=40,SNR=2.5								
USRK					LR		LR	17 19 01.8	
	comp=Z,452nm,18.5s,baz=81,slow=39								
PET	**Petropavlovsk**	**11.57**	**34**				**Pn**	**17 14 19.8**	**-1.5**
PET	**Petropavlovsk**	**11.57**	**34**	*e*	PN		**Pn**	**17 14 19.2**	**-2.1**
PET					pmax		pmax		
	comp=Z,45nm,0.7s								
PET					MLR		MLR		
	comp=Z,2μm,16.0s								
PET					MLR		MLR		
	comp=Z,1μm,14.0s								
JGF	**Kuroka**	**11.60**	**228**				**Pn**	**17 14 21.6**	**-0.3**
VLA	**Vladivostok**	**11.68**	**272**	⇑	ePN		**Pn**	**17 14 24.0**	**+1.2**
VLA	**Vladivostok**	**11.68**	**272**	*e*	P		**Pn**	**17 14 24.0**	**+1.2**
INU	**Inuyama**	**11.97**	**228**				**Pn**	**17 14 26.2**	**-0.7**
KLR	**Kul'dur**	**12.34**	**301**		Pn		**Pn**	**17 14 34.8**	**+3.0**
	comp=Z,0.2nm,0.3s,baz=104,slow=14,SNR=22								
KLR					LR		LR	17 19 37.0	
	comp=Z,882nm,19.8s,baz=119,slow=39								
KLR	**Kul'dur**	**12.34**	**301**	*c*	iPN		**Pn**	**17 14 34.4**	**+2.6**
KLR					pmax		pmax		
	comp=Z,59nm,1.7s								
KLR	**Kul'dur**	**12.34**	**301**	*e*	P		**Pn**	**17 14 33.2**	**+1.4**
JHJ	**Hachijo jima 2**	**12.50**	**213**		Pn		**Pn**	**17 14 30.3**	**-3.8**
	comp=Z,12nm,0.3s,baz=53,slow=20,SNR=1.5								
JHJ					Sn		Sn	17 16 38.1	-14
	comp=Z,95nm,0.3s,baz=39,slow=19,SNR=10.0								
MDJ	**Mudanjiang**	**13.17**	**280**		P		**Pn**	**17 14 42.7**	**-0.4**
MDJ					pP		P	17 14 49.5	-2.9
MDJ					sP			17 14 55.7	
MDJ					S		**Sn**	**17 17 10.4**	**+2.3**
MDJ					ScP		**ScP**	**17 23 39.9**	**-2.0**
MDJ					PcS		**PcS**	**17 23 45.0**	**-1.4**
MDJ					ScS		**ScS**	**17 27 15.1**	**-3.3**
MDJ					pmax		pmax		
	comp=Z,5.0nm,2.6s								
MDJ					pmax		pmax		
	comp=Z,130nm,3.8s								
MDJ					LR		LR		
	comp=Z,930nm,21.8s								
MDJ					LR		LR		
	comp=Z,340nm,19.5s								
MDJ					LR		LR		
	comp=Z,600nm,18.4s								
JHS	**Saijyo**	**14.47**	**237**				**Pn**	**17 14 59.9**	**-1.0**
BNX	**BinXian**	**14.68**	**284**	⇓	P		**Pn**	**17 15 05.2**	**+1.5**
BNX					S		**Sn**	**17 17 51.5**	**+6.5**
BNX					sS		**S**	**17 17 58.0**	**-4.5**
BNX					pmax		pmax		
	comp=Z,13nm,0.9s								
BNX					pmax		pmax		
	comp=Z,84nm,6.2s								
BNX					LR		LR		
	comp=Z,360nm,14.6s								
BNX					L

	comp=N,10.0nm,0.4s									
ZEA						pmax	pmax			
	comp=Z,30nm,1.1s									
ZEA						smax	smax			
	comp=E,100nm,9.1s									
ZEA						smax	smax			
	comp=N,100nm,9.0s									
ZEA						MLR	MLR			
	comp=E,300nm,13.0s									
ZEA						MLR	MLR			
	comp=N,200nm,12.0s									
ZEA						MLR	MLR			
	comp=Z,400nm,14.0s									
ZEA	**Zeya**	**16.75**	**313**		*e*P	**Pn**		**17 15 28.4**	**-1.8**	
ZEA					AMB	AMB		17 15 34.6		
	comp=Z,110nm,0.8s									
JCJ	**Chichijima**	**17.39**	**197**		P	**Pn**		**17 15 35.9**	**-2.5**	
	comp=Z,31nm,0.3s,baz=271,slow=23,SNR=5.5									
JCJ					S	Sn		17 18 34.5	-16	
	comp=Z,50nm,0.3s,baz=300,slow=22,SNR=7.9									
JCJ	**Chichijima**	**17.39**	**197**			**Pn**		**17 15 35.8**	**-2.7**	
TJN	**Taejon**	**17.40**	**251**		*de*P	**Pn**		**17 15 38.7**	**+0.3**	
NAWB	**Namwon**	**17.90**	**249**		P	**Pn**		**17 15 43.9**	**-0.7**	
SNY	**Shenyang**	**17.96**	**272**		⇓P	**P**		**17 15 46.8**	**+1.4**	
SNY					pmax	pmax				
	comp=Z,16nm,0.8s									
SNY					pmax	pmax				
	comp=Z,74nm,3.5s									
SNY					LR	LR				
	comp=Z,200nm,20.6s									
SNY					LR	LR				
	comp=Z,310nm,17.2s									
SNY					LR	LR				
	comp=Z,450nm,17.3s									
SEY	**Seymchan**	**19.25**	**6**		P	**P**		**17 15 57.8**	**-1.7**	
	comp=Z,4.9nm,0.3s,baz=184,slow=8.8,SNR=98									
SEY					LR	LR		17 23 36.8		
	comp=Z,1µm,19.5s,baz=184,slow=37									
	comp=Z,30nm,0.5s									
SEY	**Seymchan**	**19.25**	**6**	*ce*	P	**P**		**17 15 58.5**	**-1.0**	
SEY					pmax	pmax				
	comp=Z,111nm,1.5s									
SMY	**Shemya**	**19.43**	**54**		P	**P**		**17 16 02.1**	**+0.5**	
SMY					IAmb	IAmb		17 16 06.3		
	comp=Z,167nm,0.9s									
SMY	**Shemya**	**19.43**	**54**		P	**P**		**17 16 02.1**	**+0.5**	
SMY					pmax	pmax				
	comp=Z,167nm,0.9s									
SHEM	**Shemya Is, Ala**	**19.43**	**54**		P	**Pn**		**17 16 03.9**	**+0.9**	
	comp=Z,3.5nm,0.3s,baz=62,slow=0.5,SNR=18									
SHEM					S	S		17 19 26.4	-12	
	comp=Z,15nm,0.7s,baz=65,slow=22,SNR=1.5									
SHEM					LR	LR		17 24 25.6		
	comp=Z,125nm,19.2s,baz=276,slow=40									
	comp=Z,144nm,0.9s									
DL2	**Dalian**	**20.31**	**265**		P	Pn		17 16 12.9	-0.5	
DL2					S	Sn		17 19 59.3	-1.8	
DL2					pmax	pmax				
	comp=Z,24nm,0.7s									
DL2					pmax	pmax				
	comp=Z,96nm,5.8s									
DL2					LR	LR				
	comp=Z,190nm,16.3s									
DL2					LR	LR				
	comp=Z,220nm,18.9s									
DL2					LR	LR				
	comp=Z,340nm,18.2s									
YAK	**Yakutsk**	**21.09**	**336**		P	**P**		**17 16 16.4**	**-3.0**	
	comp=Z,34nm,0.3s,baz=171,slow=0.3,SNR=64									
YAK					S	**S**		**17 20 01.5**	**-10**	
	comp=Z,1.1nm,0.4s,baz=78,slow=6.9,SNR=1.6									
YAK					LR	LR		17 24 53.5		
	comp=Z,843nm,19.7s,baz=90,slow=38									
YAK	**Yakutsk**	**21.09**	**336**		P	**P**		**17 16 16.4**	**-3.0**	
YAK					IAmb	IAmb		17 16 19.0		
	comp=Z,114nm,0.7s									
YAK	**Yakutsk**	**21.09**	**336**		*e*P	**P**		**17 16 16.3**	**-3.2**	
YAK					*e*			17 16 32.9		
YAK					*e*S	**S**		**17 20 11.6**	**-0.1**	
YAK					*e*			17 20 22.1		
YAK					*e*SS	**SnSn**		**17 20 35.1**	**+0.3**	
YAK					*e*			17 27 37.3		
YAK					pmax	pmax				
	comp=Z,103nm,0.8s									
YAK					pmax	pmax				
	comp=N,23nm,1.1s									
YAK					pmax	pmax				
	comp=E,21nm,1.1s									
YAK					smax	smax				
	comp=N,72nm,2.4s									
YAK					smax	smax				
	comp=E,52nm,2.4s									
YAK					MLR	MLR				
	comp=Z,698nm,15.0s									
YAK					MLR	MLR				
	comp=E,382nm,15.0s									
YAK					MLR	MLR				
	comp=N,319nm,15.0s									
XLT	**XiLinHaoTe**	**22.88**	**281**		*e*P	**P**		**17 16 38.6**	**-0.2**	
XLT					pP	pP		17 16 48.8	-0.2	
XLT					sP	sP		17 16 53.4	-0.7	
XLT					S	**S**		**17 20 43.1**	**-2.5**	
XLT					pmax	pmax				
	comp=N,15nm,1.0s									
XLT					pmax	pmax				
	comp=N,66nm,3.5s									
XLT					LR	LR				
	comp=N,56nm,21.9s									
XLT					LR	LR				
	comp=N,250nm,16.2s									
XLT					LR	LR				
	comp=N,320nm,16.1s									
JOW	**Kunigami**	**23.28**	**229**		P	**P**		**17 16 43.2**	**+0.3**	
	comp=N,40nm,0.8s,baz=22,slow=6.0,SNR=5.5									
JOW					LR	LR		17 26 30.6		
	comp=N,262nm,20.4s,baz=276,slow=38									
	comp=N,40nm,0.8s									
JOW	**Kunigami**	**23.28**	**229**		P	**P**		**17 16 41.3**	**-1.7**	
JOW					IAmb	IAmb		17 16 45.2		
	comp=Z,81nm,1.1s									
BJI	**Beijing**	**23.84**	**272**		P	**P**		**17 16 48.3**	**+0.2**	
BJI					S	**S**		**17 21 03.2**	**+2.1**	
BJI					sS	**sS**		**17 21 21.6**	**+3.1**	
BJI					pmax	pmax				
	comp=Z,11nm,0.8s									
BJI					pmax	pmax				
	comp=Z,88nm,3.9s									
BJI					LR	LR				
	comp=Z,130nm,14.7s									
BJI					LR	LR				
	comp=Z,310nm,17.7s									
BJI					LR	LR				
	comp=Z,440nm,19.3s									
SSE	**Sheshan**	**24.64**	**248**		P	**P**		**17 16 55.7**	**+0.2**	
SSE					S	**S**		**17 21 15.4**	**+1.3**	
SSE					pmax	pmax				
	comp=Z,13nm,1.1s									
SSE					pmax	pmax				
	comp=Z,81nm,3.9s									
TIA	**Tai'an**	**24.69**	**262**		⇑P	**P**		**17 16 57.1**	**+1.1**	
TIA					S	**S**		**17 21 11.5**	**-3.4**	
TIA					pmax	pmax				
	comp=Z,13nm,0.8s									
TIA					pmax	pmax				
	comp=Z,140nm,5.4s									
TIA					LR	LR				
	comp=Z,170nm,15.2s									
TIA					LR	LR				
	comp=Z,240nm,17.0s									
TIA					LR	LR				
	comp=Z,320nm,16.7s									
ADK	**Adak**	**24.84**	**59**		P	**P**		**17 16 58.4**	**+1.3**	
ADK					IAmb	IAmb		17 17 11.1		
	comp=Z,68nm,0.9s									
ADK	**Adak**	**24.84**	**59**		P	**P**		**17 16 58.4**	**+1.3**	
ADK					pmax	pmax				
	comp=Z,68nm,1.0s									
NJ2	**Nanjing**	**25.65**	**252**	*e*	P	**P**		**17 17 05.4**	**+0.7**	
NJ2					pmax	pmax				
	comp=Z,11nm,0.6s									
NJ2					LR	LR				
	comp=Z,520nm,20.1s									
NJ2					LR	LR				
	comp=Z,520nm,22.1s									
NJ2					LR	LR				
	comp=Z,610nm,17.2s									
HNS	**HongShan**	**25.91**	**267**		⇑P	**P**		**17 17 09.6**	**+2.7**	
HNS					S	**S**		**17 21 42.5**	**+8.4**	
HNS					pmax	pmax				
	comp=Z,11nm,0.9s									
HNS					LR	LR				
	comp=Z,220nm,16.1s									
HNS					LR	LR				
	comp=Z,140nm,17.7s									
HNS					LR	LR				
	comp=Z,260nm,16.7s									
BILL	**Bilibino**	**26.07**	**16**		P	**P**		**17 17 07.3**	**-0.8**	
BILL	**Bilibino**	**26.07**	**16**	*d*	P	**P**		**17 17 05.0**	**-3.1**	
BILL				*i*				17 17 15.3		
BILL				*i*				17 17 23.1		
BILL				*i*				17 20 34.9		
BILL				*i*	S	**S**		**17 21 42.7**	**+6.5**	
BILL					pmax	pmax				
	comp=Z,35nm,1.3s									
BILL					MLR	MLR				
	comp=Z,454nm,22.0s									
HHC	**Hu-ho-hao-te**	**26.90**	**276**	*e*	P	**P**		**17 17 17.4**	**+1.4**	
HHC					S	**S**		**17 21 44.6**	**-5.4**	
HHC					ScS	**ScS**		**17 28 06.6**	**+1.6**	
HHC					pmax	pmax				
	comp=Z,43nm,1.0s									
HHC					pmax	pmax				
	comp=Z,170nm,4.6s									
HHC					LR	LR				
	comp=Z,340nm,13.3s									
HHC					LR	LR				
	comp=Z,280nm,13.1s									
HHC					LR	LR				
	comp=Z,520nm,14.0s									
BTO	**Baotou**	**28.09**	**277**	*e*	P	**P**		**17 17 28.7**	**+2.0**	
ULN	**Ulaanbaatar**	**28.49**	**293**	*ce*	P	**P**		**17 17 30.5**	**+0.3**	
ULN					pmax	pmax				
	comp=Z,16nm,0.9s									
ULN	**Ulaanbaatar**	**28.49**	**293**	*e*	P	**P**		**17 17 30.5**	**+0.3**	
LYN	**LuoYang**	**28.82**	**263**	*e*	P	**P**		**17 17 34.9**	**+1.8**	
LYN					pP	pP		17 17 44.0	-0.1	
LYN					sP	sP		17 17 48.1	-0.9	
LYN					S	**S**		**17 22 17.6**	**-2.6**	
LYN					pmax	pmax				
	comp=Z,20nm,0.7s									
LYN					pmax	pmax				
	comp=Z,200nm,5.9s									
LYN					LR	LR				
	comp=Z,150nm,12.7s									
LYN					LR	LR				
	comp=Z,250nm,17.4s									
LYN					LR	LR				
	comp=Z,290nm,16.7s									
H11N2	**WAKE ISLAND Hy**	**28.85**	**141**		T	T		17 48 17.9		
	baz=332,slow=76,SNR=771									
H11N1	**WAKE ISLAND Hy**	**28.86**	**141**		T	T		17 48 15.3		
	baz=332,slow=76,SNR=513									
H11N3	**WAKE ISLAND Hy**	**28.86**	**141**		T	T		17 48 19.3		
	baz=332,slow=76,SNR=962									
SONM	**Songino Array**	**28.93**	**293**		P	**P**		**17 17 33.7**	**-0.5**	
	comp=Z,11nm,0.8s,baz=85,slow=5.0,SNR=58									
SONM					PcP	**PcP**		**17 20 42.6**	**+0.4**	
	comp=Z,1.4nm,0.7s,baz=123,slow=2.1,SNR=2.6									
SONM					LR	LR		17 30 15.1		
	comp=Z,379nm,18.8s,baz=85,slow=39									
	comp=Z,11nm,0.8s									
SONM	**Songino Array**	**28.93**	**293**		P	**P**		**17 17 34.1**	**-0.1**	
SONM	**Songino Array**	**28.93**	**293**		P	**P**		**17 17 34.1**	**-0.1**	
SONM					pmax	pmax				
	comp=Z,12nm,0.8s									
SPIA	**Saint Paul Isl**	**29.21**	**48**		P	**P**		**17 17 37.4**	**+1.1**	
	baz=261									
TIXI	**Tiksi**	**29.34**	**348**		P	**P**		**17 17 33.3**	**-3.9**	
	comp=Z,3.9nm,0.6s,baz=268,slow=23,SNR=20									
TIXI					PcP	**PcP**		**17 20 42.6**	**0.0**	
	comp=Z,1.7nm,0.5s,baz=89,slow=5.3,SNR=3.0									
TIXI					ScP	**ScP**		**17 24 19.7**	**-1.2**	
	comp=Z,0.7nm,0.5s,baz=93,slow=4.8,SNR=4.4									
TIXI					LR	LR		17 29 20.6		
	comp=Z,239nm,21.9s,baz=180,slow=36									
TIXI	**Tiksi**	**29.34**	**348**	*de*	P	**P**		**17 17 33.1**	**-4.2**	
TIXI					pmax	pmax				
	comp=Z,5.0nm,0.8s									
WHN	**Wuhan**	**29.66**	**255**		⇓P	P		17 17 45.4	+4.9	
H11S1	**WAKE ISLAND Hy**	**29.83**	**142**		T	T		17 49 30.4		
	baz=333,slow=76,SNR=1489									
H11S3	**WAKE ISLAND Hy**	**29.83**	**142**		T	T		17 49 33.3		
	baz=333,slow=76,SNR=1524									
H11S2	**WAKE ISLAND Hy**	**29.85**	**142**		T	T		17 49 27.1		
	baz=333,slow=76,SNR=1649									
GAMB	**Gambell**	**30.27**	**35**		P	**P**		**17 17 45.7**	**+0.1**	
	baz=248									
GUMO	**Guam**	**30.31**	**186**		LR	LR		17 28 09.9		
	comp=Z,276nm,21.9s,baz=40,slow=33									
ZAK	**Zakamensk**	**30.68**	**298**	*e*	P	**P**		**17 17 48.3**	**-1.2**	
ZAK				*e*				17 20 44.0		
ZAK					pmax	pmax				
	comp=Z,5.0nm,1.1s									
XAN	**Xi'an**	**31.63**	**265**		P	**P**		**17 17 59.0**	**+1.0**	
XAN					pP	pP		17 18 11.3	+2.3	
XAN					sP	sP		17 18 16.9	+3.0	
XAN					S	**S**		**17 22 59.6**	**-4.7**	
XAN					pmax	pmax				
	comp=Z,5.0nm,1.0s									
XAN					pmax	pmax				
	comp=Z,82nm,5.0s									
XAN					LR	LR				
	comp=Z,140nm,12.4s									
XAN					LR	LR				
	comp=Z,250nm,12.7s									
XAN					LR	LR				
	comp=Z,250nm,16.3s									
MOY	**Mondy**	**32.01**	**301**	*e*	P	**P**		**17 18 01.3**	**+0.1**	
MOY	**Mondy**	**32.01**	**301**	*e*	P	**P**		**17 18 01.3**	**+0.1**	
TNA	**Tin City**	**32.43**	**33**		P	**P**		**17 18 05.6**	**+1.0**	
TNA	**Tin City**	**32.43**	**33**		P	**P**		**17 18 05.6**	**+1.0**	
	baz=250,SNR=7.5									
ANM	**Nome**	**33.15**	**35**		P	**P**		**17 18 12.5**	**+1.6**	
	baz=254,SNR=6.3									
KNGR	**Kungurtug, Tuv**	**34.30**	**299**	⇑	*e*P	**P**		**17 18 20.9**	**-0.4**	
LZH	**Lanzhou**	**34.33**	**272**		⇑P	**P**		**17 18 22.7**	**+1.0**	
LZH					pP	pP		17 18 33.9	+1.1	
LZH					sP	sP		17 18 39.8	+2.2	
LZH					S	**S**		**17 23 42.2**	**-4.2**	
LZH					SS	**SnSn**		**17 26 03.5**	**+5.4**	
LZH					pmax	pmax				
	comp=Z,44nm,1.2s									
LZH					pmax	pmax				
	comp=Z,160nm,5.0s									
LZH					LR	LR				
	comp=Z,210nm,12.3s									
LZH					LR	LR				
	comp=Z,240nm,13.4s									
LZH					LR	LR				
	comp=Z,300nm,15.0s									
CNBA	**Chernabura Isl**	**35.09**	**53**		P	**P**		**17 18 26.9**	**-0.9**	
RDOG	**Red Dog Mine**	**35.12**	**30**		P	**P**		**17 18 24.2**	**-3.8**	
	baz=252									
N16K	**Nishlik Lake**	**35.49**	**43**		P	**P**		**17 18 32.8**	**+1.5**	
	baz=267,SNR=67									
O16K	**Kokwok River B**	**35.80**	**45**		P	**P**		**17 18 34.8**	**+1.0**	
	baz=269,SNR=16									
GTA	**Gaotai**	**35.82**	**280**		⇑P	**P**		**17 18 35.2**	**+0.7**	
GTA					pP	pP		17 18 46.4	+0.7	
GTA					sP	sP		17 18 52.5	+2.0	
GTA					PcP	**PcP**		**17 21 02.0**	**+0.7**	
GTA					S	**S**		**17 24 09.8**	**+0.5**	
GTA					ScS	**ScS**		**17 28 49.2**	**-0.1**	
GTA					pmax	pmax				
	comp=Z,13nm,1.2s									
GTA					pmax	pmax				
	comp=Z,110nm,5.5s									
GTA					LR	LR				
	comp=Z,190nm,17.8s									
GTA					LR	LR				
	comp=Z,150nm,18.9s									
GTA					LR	LR				
	comp=Z,250nm,18.2s									
P16K	**Nushagak River**	**35.84**	**46**		P	**P**		**17 18 35.5**	**+1.3**	
	baz=270,SNR=14									
O17K	**Koliganek Bris**	**36.31**	**44**		P	**P**		**17 18 39.5**	**+1.3**	
	baz=269,SNR=45									
P17K	**Kvichak River**	**36.64**	**45**		P	**P**		**17 18 42.0**	**+1.0**	
	baz=271									
R17K	**Ugashik Creek**	**36.71**	**48**		P	**P**		**17 18 41.2**	**-0.5**	
	baz=273									
GCSA	**Galena City Sc**	**36.76**	**36**		P	**P**		**17 18 42.5**	**+0.5**	
	baz=263,SNR=6.5									
N18K	**Kilae Creek**	**36.92**	**43**		P	**P**		**17 18 45.0**	**+1.5**	
N18K	**Kilae Creek**	**36.92**	**43**		P	**P**		**17 18 45.0**	**+1.5**	
	baz=269,SNR=70									
TTA	**Tatalina**	**36.97**	**39**		P	**P**		**17 18 45.0**	**+1.1**	
TTA					IAmb	IAmb		17 18 46.9		
	comp=Z,47nm,1.0s									
TTA	**Tatalina**	**36.97**	**39**		P	**P**		**17 18 45.0**	**+1.1**	
TTA					pmax	pmax				
	comp=Z,47nm,1.0s									
TTA	**Tatalina**	**36.97**	**39**		P	**P**		**17 18 44.9**	**+1.1**	
	baz=266,SNR=60									
CD2	**Chengdu**	**36.98**	**265**		P	**P**		**17 18 44.6**	**+0.3**	
CD2					pP	pP		17 18 52.6	-2.9	
CD2					S	**S**		**17 24 28.0**	**+1.1**	
CD2					pmax	pmax				
	comp=Z,80nm,2.2s									
CD2					LR	LR				
	comp=Z,220nm,7.8s									
CD2					LR	LR				
	comp=Z,210nm,4.9s									
SVW2	**Sparrevohn**	**37.08**	**42**		P	**P**		**17 18 46.4**	**+1.5**	
SVW2					IAmb	IAmb		17 18 47.5		
	comp=Z,57nm,0.8s									
P18K	**Big Mountain,**	**37.26**	**45**		P	**P**		**17 18 47.1**	**+0.8**	
P18K	**Big Mountain,**	**37.26**	**45**		P	**P**		**17 18 47.2**	**+0.9**	
	baz=271,SNR=39									
O18K	**Koktuh Hills**	**37.26**	**44**		P	**P**		**17 18 47.6**	**+1.3**	
	baz=271,SNR=32									
CHIR	**Chirikof Islan**	**37.27**	**51**		P	**P**		**17 18 46.2**	**-0.2**	
	baz=276									
L19K	**White Mountain**	**37.46**	**40**		P	**P**		**17 18 49.4**	**+1.4**	
L19K					IAmb	IAmb		17 18 50.6		
	comp=Z,70nm,1.5s									
L19K	**White Mountain**	**37.46**	**40**		P	**P**		**17 18 49.2**	**+1.1**	
	baz=268,SNR=26									
N19K	**Bonanza Creek**	**37.62**	**43**		P	**P**		**17 18 50.9**	**+1.4**	
N19K					IAmb	IAmb		17 18 52.0		
	comp=Z,51nm,0.8s									
N19K	**Bonanza Creek**	**37.62**	**43**		P	**P**		**17 18 50.9**	**+1.4**	
	baz=270,SNR=36									
M19K	**Big River Lodg**	**37.67**	**41**		P	**P**		**17 18 51.3**	**+1.5**	
	baz=269									
O19K	**Port Alsworth**	**37.70**	**44**		P	**P**		**17 18 51.6**	**+1.6**	
	baz=271									
K20K	**Telida**	**37.87**	**39**		P	**P**		**17 18 52.6**	**+1.2**	
K20K	**Telida**	**37.87**	**39**		P	**P**		**17 18 52.7**	**+1.2**	
	baz=267,SNR=36									
J20K	**Nowinta River**	**37.89**	**37**		P	**P**		**17 18 53.2**	**+1.7**	
J20K	**Nowinta River**	**37.89**	**37**		P	**P**		**17 18 52.9**	**+1.3**	
	baz=266,SNR=98									
L20K	**Farewell, AK**	**37.92**	**40**		P	**P**		**17 18 53.1**	**+1.2**	
	baz=268,SNR=44									
SII	**Sitkinak Islan**	**37.99**	**50**		P	**P**		**17 18 52.5**	**-0.1**	
SII					IAmb	IAmb		17 19 07.8		
	comp=Z,63nm,0.9s									
Q19K	**Cape Douglas,**	**38.09**	**46**		P	**P**		**17 18 53.3**	**-0.1**	
	baz=273									
A21K	**Barrow**	**38.17**	**25**		P	**P**		**17 18 53.3**	**-0.6**	
A21K	**Barrow**	**38.17**	**25**		P	**P**		**17 18 53.8**	**0.0**	
	baz=254,SNR=12									
IMAR	**Indian Mountai**	**38.21**	**34**		P	**P**		**17 18 55.2**	**+1.0**	
M20K	**Styx River**	**38.27**	**41**		P	**P**		**17 18 56.8**	**+1.9**	
M20K					IAmb	IAmb		17 18 57.6		
	comp=Z,39nm,0.8s									
M20K	**Styx River**	**38.27**	**41**		P	**P**		**17 18 56.6**	**+1.7**	
	baz=270,SNR=45									
OHAK	**Old Harbor**	**38.41**	**48**		P	**P**		**17 18 55.6**	**-0.4**	
	baz=276,SNR=11									
O20K	**Slope Mountain**	**38.55**	**44**		P	**P**		**17 18 57.9**	**+0.6**	
	baz=273,SNR=18									
H21K	**Melozitna Rive**	**38.57**	**35**		P	**P**		**17 18 58.6**	**+1.3**	
H21K	**Melozitna Rive**	**38.57**	**35**		P	**P**		**17 18 58.6**	**+1.3**	
	baz=266,SNR=179									
CHUM	**Lake Minchumin**	**38.68**	**38**		P	**P**		**17 18 59.9**	**+1.8**	
	baz=268,SNR=26									
PPLA	**Purkeypile**	**38.71**	**39**		P	**P**		**17 19 00.3**	**+1.6**	
PPLA	**Purkeypile**	**38.71**	**39**		P	**P**		**17 19 00.6**	**+1.9**	
	baz=270,SNR=33									
SPCR	**Spurr Chakacha**	**38.72**	**42**		P	**P**		**17 19 00.2**	**+1.5**	
	baz=272,SNR=10									
KDAK	**Kodiak Island**	**38.74**	**48**		P	**P**		**17 18 58.6**	**-0.2**	
KDAK					IAmb	IAmb		17 18 59.5		
	comp=Z,58nm,0.9s									
KDAK	**Kodiak Island**	**38.74**	**48**		P	**P**		**17 18 58.6**	**-0.2**	
KDAK					pmax	pmax				
	comp=Z,58nm,0.9s									
KDAK	**Kodiak Island**	**38.74**	**48**		P	**P**		**17 18 58.4**	**-0.4**	
	baz=276									
Q20K	**Shuyak Island**	**38.77**	**46**		P	**P**		**17 18 58.7**	**-0.2**	
	baz=275,SNR=17									
CAST	**Castle Rocks**	**38.77**	**38**		P	**P**		**17 19 00.5**	**+1.5**	
	baz=269,SNR=19									
I21K	**Tanana**	**38.88**	**36**		P	**P**		**17 19 01.5**	**+1.6**	
	baz=267,SNR=21									
SKT	**Skwentna**	**39.02**	**41**		P	**P**		**17 19 02.1**	**+1.0**	
SKT	**Skwentna**	**39.02**	**41**		P	**P**		**17 19 01.9**	**+0.7**	
	baz=271,SNR=19									
HOM	**Homer**	**39.07**	**44**		P	**P**		**17 19 02.4**	**+0.9**	
	baz=274,SNR=6.0									
BPAW	**Bear Paw Mtn.**	**39.27**	**37**		P	**P**		**17 19 04.4**	**+1.3**	
BPAW	**Bear Paw Mtn.**	**39.27**	**37**		P	**P**		**17 19 04.4**	**+1.3**	
	baz=269,SNR=33									
CNPM	**China Poot**	**39.29**	**45**		P	**P**		**17 19 03.4**	**0.0**	
CNPM					IAmb	IAmb		17 19 05.2		
	comp=Z,53nm,1.1s									
KTH	**Kantishna Hill**	**39.29**	**38**		P	**P**		**17 19 03.1**	**-0.3**	
KTH					IAmb	IAmb		17 19 05.5		
	comp=Z,56nm,0.8s									
NRIK	**Noril'sk**	**39.40**	**331**		P	**P**		**17 19 01.8**	**-2.4**	
	comp=Z,1.8nm,0.4s,baz=104,slow=7.4,SNR=7.6									
NRIK					PcP	**PcP**		**17 21 11.7**	**+0.2**	
	comp=Z,5.9nm,0.5s,baz=79,slow=4.6,SNR=8.5									
NRIK					LR	LR		17 36 36.0		
	comp=Z,300nm,18.8s,baz=91,slow=38									
	comp=Z,1.8nm,0.4s									
NRIK	**Noril'sk**	**39.40**	**331**		P	**P**		**17 19 02.4**	**-1.8**	
NRIK					PcP	**PcP**		**17 21 12.1**	**+0.6**	
NRIK	**Noril'sk**	**39.40**	**331**	*ce*	P	**P**		**17 19 01.9**	**-2.2**	
NRIK					pmax	pmax				
	comp=Z,11nm,1.5s									
MLY	**Manley**	**39.40**	**36**		P	**P**		**17 19 05.6**	**+1.4**	
MLY					IAmb	IAmb		17 19 06.8		
	comp=Z,63nm,0.8s									
MLY	**Manley**	**39.40**	**36**		P	**P**		**17 19 05.7**	**+1.4**	
	baz=268,SNR=114									
SUA	**Susitna One**	**39.41**	**42**		P	**P**		**17 19 04.8**	**+0.3**	
SUA					IAmb	IAmb		17 19 07.8		
	comp=Z,28nm,0.6

baz=271,SNR=14
PMR Palmer 40.18 41 P P 17 19 10.8 +0.1
baz=274,SNR=11
RND Reindeer 40.22 38 IAmb IAmb 17 19 13.4
comp=Z,30nm,0.6s
GHO Glory Hole Cre 40.27 41 IAmb IAmb 17 19 13.1
comp=Z,48nm,0.8s
QIZ Qiongzhong 40.34 244 P P 17 19 12.1 -0.4
QIZ S S 17 25 18.2 +0.6
QIZ LR LR
comp=Z,340nm,19.8s
QIZ LR LR
comp=Z,220nm,18.1s
QIZ LR LR
comp=Z,290nm,21.5s
WAT1 Susitna Watana 40.38 39 P P 17 19 12.6 +0.1
baz=273
MDM Murphy Dome 40.46 36 IAmb IAmb 17 19 15.4
comp=Z,71nm,0.8s
KNK Knik Glacier 40.51 42 IAmb IAmb 17 19 15.8
comp=Z,90nm,1.1s
KNK Knik Glacier 40.51 42 P P 17 19 14.0 +0.5
baz=275,SNR=29
WRH Wood River Hil 40.53 37 IAmb IAmb 17 19 16.7
comp=Z,65nm,1.0s
SML Sawmill 40.55 41 P P 17 19 14.5 +0.6
baz=274,SNR=104
H24K Noodor Dome 40.61 35 P P 17 19 15.9 +1.6
H24K Noodor Dome 40.61 35 P P 17 19 16.1 +1.7
baz=270,SNR=146
TCOL CIGO, UAF Yank 40.62 36 P P 17 19 15.7 +1.4
baz=271,SNR=22
COLA College 40.62 36 P P 17 19 15.8 +1.5
COLA College 40.62 36*c iP* P 17 19 15.0 +0.7
COLA pmax pmax
comp=Z,114nm,1.1s
WAT6 Susitna Watana 40.77 40 P P 17 19 15.9 +0.1
baz=274,SNR=26
GOMU GeErMu 40.78 278 P P 17 19 17.0 +0.6
GOMU PcP PcP 17 21 17.5 +0.5
GOMU S S 17 25 16.8 -7.8
GOMU pmax pmax
comp=Z,17nm,0.7s
GOMU pmax pmax
comp=Z,69nm,4.9s
GOMU LR LR
comp=Z,120nm,16.8s
GOMU LR LR
comp=Z,76nm,16.2s
GOMU LR LR
comp=Z,48nm,16.9s
POKR Poker Plat Res 40.80 36 P P 17 19 17.4 +1.6
baz=271,SNR=66
M23K Glacier View 40.83 41 P P 17 19 16.5 +0.4
baz=275,SNR=30
DHY Denali Highway 40.90 39 P P 17 19 17.2 +0.3
baz=274,SNR=72
PZH PanZhiHua 40.96 261 P P 17 19 18.3 +0.6
PZH sP sP 17 19 32.7 -1.1
PZH S S 17 25 23.8 -3.2
PZH pmax pmax
comp=Z,10.0nm,1.2s
PZH pmax pmax
comp=Z,110nm,5.9s
PZH LR LR
comp=Z,320nm,20.0s
PZH LR LR
comp=Z,460nm,19.4s
PZH LR LR
comp=Z,380nm,19.6s
SCM Sheep Creek Mo 41.02 41 IAmb IAmb 17 19 19.5
comp=Z,50nm,0.9s
SCM Sheep Creek Mo 41.02 41 P P 17 19 18.5 +0.7
baz=275,SNR=28
HDA Harding Lake 41.03 37 P P 17 19 17.8 +0.1
baz=272,SNR=89
IL31 41.04 36 IAmb IAmb 17 19 20.8
comp=Z,64nm,0.8s
ILAR Eielson Array 41.04 36 P P 17 19 18.1 +0.3
comp=Z,50nm,0.9s,baz=266,slow=7.9,SNR=271
ILAR LR LR 17 38 27.3
comp=Z,133nm,19.1s,baz=274,slow=39
comp=Z,50nm,0.9s
KMI Kunming 41.09 258 ⇑P P 17 19 20.8 +1.8
KMI pP pP 17 19 29.6 -0.7
KMI S S 17 25 28.8 -0.4
KMI pmax pmax
comp=Z,11nm,0.8s
KMI LR LR
comp=Z,220nm,14.1s
KMI LR LR
comp=Z,240nm,14.3s
KMI LR LR
comp=Z,290nm,16.1s
GLI Glacier Island 41.22 42 IAmb IAmb 17 19 20.5
comp=Z,39nm,0.8s
GLI Glacier Island 41.22 42 P P 17 19 19.5 +0.1
baz=276,SNR=17
ZAA0 Zalesovo Array 41.36 307 P P 17 19 20.5 0.0
ZAA0 PcP PcP 17 21 18.8 +0.7
ZALV Zalesovo Beam 41.36 307 P P 17 19 20.4 -0.2
comp=Z,4.8nm,0.5s,baz=74,slow=7.0,SNR=26
ZALV PcP PcP 17 21 18.4 +0.3
comp=Z,13nm,0.8s,baz=82,slow=2.7,SNR=16
ZALV ScP ScP 17 25 03.8 -0.9
comp=Z,0.3nm,0.4s,baz=85,slow=4.9,SNR=4.6
ZALV LR LR 17 37 39.1
comp=Z,242nm,18.6s,baz=78,slow=38
comp=Z,4.8nm,0.5s
ZALV Zalesovo Beam 41.36 307 P P 17 19 20.1 -0.5
ZALV PcP PcP 17 21 18.8 +0.7
ZALV Zalesovo Beam 41.36 307 P P 17 19 20.1 -0.5
M24K Tolsona, Glenn 41.53 40 P P 17 19 23.4 +1.4
baz=276,SNR=34
FID Port Fidalgo 41.54 42 IAmb IAmb 17 19 23.3
comp=Z,81nm,1.4s
K24K Donnelly Dome 41.57 38 P P 17 19 22.4 +0.2
baz=274,SNR=16
J25K Salcha River, 41.70 37 P P 17 19 22.7 -0.6
baz=274,SNR=40
KLU Klutina 41.72 41 IAmb IAmb 17 19 25.5
comp=Z,77nm,1.0s
KLU Klutina 41.72 41 P P 17 19 24.4 +0.9
baz=277,SNR=60
Q23K Middleton Isla 41.78 44 P P 17 19 25.3 +1.5
baz=278
PAX Paxson 41.78 39 P P 17 19 24.7 +0.7
baz=275,SNR=19
DIV Divide 41.83 42 IAmb IAmb 17 19 26.5
comp=Z,86nm,1.1s
BMAR Burnt Mountain 41.91 32 P P 17 19 26.4 +1.4
EYAK Cordova Ski Ar 41.92 43 P P 17 19 24.6 -0.4
EYAK Cordova Ski Ar 41.92 43 P P 17 19 26.1 +1.1
baz=278,SNR=8.3
HARP HAARP 41.98 40 P P 17 19 26.8 +1.3
baz=276,SNR=19
RIDG Independent Ri 41.99 38 P P 17 19 25.7 0.0
baz=275
N25K Chitina, Valde 42.33 41 P P 17 19 29.6 +1.0
baz=278,SNR=10
DOT Dot Lake 42.35 38 IAmb IAmb 17 19 29.5
comp=Z,28nm,0.6s
SCRK Sand Creek 42.35 37 IAmb IAmb 17 19 30.9
comp=Z,60nm,1.0s
SCRK Sand Creek 42.35 37 P P 17 19 28.9 +0.2
baz=275,SNR=81
BMRM Bremner River 42.42 42 IAmb IAmb 17 19 31.8
comp=Z,76nm,1.0s
BMRM Bremner River 42.42 42 P P 17 19 30.3 +1.1
baz=278,SNR=40
J26L Joseph Creek 42.49 37 P P 17 19 29.2 -0.5
baz=275,SNR=44
WMQ Urumqi 42.56 292 ⇓P P 17 19 31.9 +1.3
WMQ pmax pmax
comp=Z,110nm,0.9s
WMQ pmax pmax
comp=Z,160nm,3.7s
WMQ LR LR
comp=Z,350nm,16.3s
WMQ LR LR
comp=Z,550nm,16.3s
WMQ LR LR
comp=Z,320nm,17.9s
MENT Mentasta 42.58 39 IAmb IAmb 17 19 34.3
comp=Z,26nm,0.5s
HMT Hamilton 42.68 43 IAmb IAmb 17 19 33.1
comp=Z,37nm,0.7s

L26K Log Cabin Wild 42.74 39 IAmb IAmb 17 19 34.3
comp=Z,48nm,1.0s
L26K Log Cabin Wild 42.74 39 P P 17 19 33.2 +1.5
baz=277,SNR=25
VRDI Verde Repeater 42.93 41 P P 17 19 34.6 +1.0
VRDI IAmb IAmb 17 19 35.7
comp=Z,38nm,0.9s
SUCK Suckling Hills 42.96 43 IAmb IAmb 17 19 37.5
comp=Z,88nm,1.4s
M26K Nabesna, AK 42.98 40 IAmb IAmb 17 19 37.0
comp=Z,71nm,0.8s
M26K Nabesna, AK 42.98 40 P P 17 19 35.4 +1.7
baz=278,SNR=95
MCARA McCarthy VSAT 43.11 41 P P 17 19 36.2 +1.5
baz=279,SNR=11
ZSN Zaisan 43.14 298 *eP* P 17 19 35.1 0.0
ZSN Zaisan 43.14 298 *eP* P 17 19 35.2 0.0
baz=298
K27K Chicken 43.18 37 P P 17 19 36.6 +1.4
baz=277
TGL Tana Glacier 43.31 42 P P 17 19 37.1 +0.6
TGL IAmb IAmb 17 19 38.9
comp=Z,87nm,1.2s
SNH Sunshine Point 43.41 43 IAmb IAmb 17 19 40.1
comp=Z,74nm,0.9s
L27K Beaver Creek, 43.42 39 P P 17 19 39.0 +1.7
baz=278
M27K Edge Creek, AK 43.50 40 IAmb IAmb 17 19 41.6
comp=Z,39nm,0.7s
M27K Edge Creek, AK 43.50 40 P P 17 19 39.5 +1.5
baz=279,SNR=48
ISLE Juniper Island 43.57 42 IAmb IAmb 17 19 40.7
comp=Z,54nm,0.8s
MESA MESA 43.84 43 P P 17 19 42.4 +1.5
baz=281,SNR=8.3
BVCY Beaver Creek 43.96 39 P P 17 19 43.0 +1.4
baz=280,SNR=40
CTG Chitna Glacier 43.99 42 P P 17 19 43.3 +1.4
baz=281,SNR=25
TABL Table Mountain 44.19 42 IAmb IAmb 17 19 45.6
comp=Z,58nm,0.8s
YUK3 Moose Creek 44.26 40 P P 17 19 45.1 +0.9
baz=281,SNR=35
DAWY Dawson 44.35 37 P P 17 19 45.5 +0.9
baz=279,SNR=13
I29M Ogilvie Camp, 44.60 35 P P 17 19 47.9 +1.2
baz=279,SNR=105
YUK8 Steele Glacier 44.68 41 P P 17 19 48.4 +0.8
baz=282,SNR=12
PINM Pinnacle 44.69 43 P P 17 19 48.5 +1.0
baz=282,SNR=6.1
MK31 Makanchi Array 45.02 298 IAmb IAmb 17 19 51.4
comp=Z,26nm,0.8s
MK31 Makanchi Array 45.02 298 *i P* P 17 19 50.0 -0.2
MK31 pmax pmax
comp=Z,28nm,0.7s
MKAR Makanchi Array 45.02 298 P P 17 19 50.1 -0.1
comp=Z,24nm,0.7s,baz=78,slow=8.5,SNR=205
MKAR PcP PcP 17 21 31.3 +0.6
comp=Z,5.3nm,0.9s,baz=61,slow=4.0,SNR=3.3
MKAR ScP ScP 17 25 19.1 -0.5
comp=Z,1.2nm,0.9s,baz=73,slow=5.0,SNR=4.6
MKAR LR LR 17 40 03.7
comp=Z,402nm,18.6s,baz=66,slow=38
comp=Z,24nm,0.7s
MKAR Makanchi Array 45.02 298 *eP* P 17 19 51.9 +1.7
YUK4 Talbot Arm 45.19 41 P P 17 19 52.9 +1.3
baz=282,SNR=15
MAKZ Makanchi 45.21 298 P P 17 19 51.9 +0.1
MAKZ IAmb IAmb 17 19 53.0
comp=Z,30nm,0.8s
MAKZ Makanchi 45.21 298 P P 17 19 51.9 +0.1
MAKZ pmax pmax
comp=Z,30nm,0.8s
YUK6 Outpost Mounta 45.42 41 P P 17 19 54.8 +1.3
baz=283
MANU Manus Island 45.73 181 P P 17 19 56.4 +0.3
M30M Minto, Yukon 45.78 39 P P 17 19 57.8 +1.7
baz=283,SNR=18
HYT Haines Junctio 45.85 41 P P 17 19 59.0 +2.2
HYT Haines Junctio 45.85 41 P P 17 19 58.9 +2.1
baz=284,SNR=59
N30M Aishikik Lake 45.90 40 P P 17 19 58.4 +1.3
baz=284,SNR=8.9
KURK Kurchatov 45.91 304 P P 17 19 57.2 0.0
KURK IAmb IAmb 17 19 58.0
comp=Z,43nm,1.2s
KURK Kurchatov 45.91 304*ceP* P 17 19 56.9 -0.3
KURK pmax pmax
comp=Z,15nm,0.9s
KURK Kurchatov 45.91 304 *eP* P 17 19 56.9 -0.3
INK Inuvik 45.99 30 P P 17 19 59.0 +1.4
comp=Z,81nm,0.7s,baz=288,slow=6.8,SNR=151
INK PcP PcP 17 21 33.5 0.0
comp=Z,10nm,0.9s,baz=276,slow=5.6,SNR=3.9
INK LR LR 17 42 34.7
comp=Z,230nm,18.5s,baz=278,slow=40
comp=Z,81nm,0.7s
INK Inuvik 45.99 30 P P 17 19 59.0 +1.4
INK Inuvik 45.99 30 P P 17 19 58.8 +1.2
baz=280,SNR=130
KURBB Kurchatov Arra 46.00 304 LR LR 17 40 35.1
comp=Z,298nm,18.4s,baz=51,slow=38
KURBB Kurchatov Arra 46.00 304 P P 17 19 57.5 -0.4
KURBB pmax pmax
comp=Z,12nm,0.6s
SMPI Sarmi 46.42 193 P P 17 20 02.5 +1.0
comp=Z,24nm,1.4s
N31M Braeburn, Yuko 46.50 40 P P 17 20 03.8 +2.1
baz=285,SNR=19
O30N Mendenhall 46.54 41 P P 17 20 03.7 +1.6
baz=285,SNR=9.9
SRPI Serui, Papua 46.75 196 P P 17 20 05.2 +1.1
PLBC Pleasant Camp 46.75 43 P P 17 20 05.6 +1.9
baz=286,SNR=14
M31M Drury Creek, Y 46.96 39 IAmb IAmb 17 20 07.9
comp=Z,60nm,1.5s
M31M Drury Creek, Y 46.96 39 P P 17 20 06.8 +1.5
baz=285,SNR=30
SWI Sorong 46.99 203 P P 17 20 06.2 +0.3
SWI pmax pmax
comp=Z,31nm,0.7s
SWI Sorong 46.99 203 P P 17 20 06.2 +0.3
comp=Z,31nm,0.7s
SIJI Sorong 46.99 203 LR LR 17 36 33.0
comp=Z,108nm,21.9s,baz=10,slow=32
WHY Whitehorse 47.14 41 P P 17 20 07.7 +0.8
WHY Whitehorse 47.14 41 P P 17 20 08.4 +1.5
baz=286,SNR=10
FARO Faro, Yukon 47.42 39 P P 17 20 10.3 +1.4
baz=286,SNR=23
CHTO Chiang Mai 47.86 255 P P 17 20 15.7 +2.9
CHTO pmax pmax
comp=Z,8.0nm,1.0s
LBMI Labuha 47.95 208 P P 17 20 14.5 +1.1
comp=Z,15nm,0.9s
SIT Sitka 48.00 46 P P 17 20 15.6 +2.2
baz=289
A36M Sachs Harbour 48.01 25 P P 17 20 13.7 +0.4
baz=284
P32M Atlin 48.01 42 P P 17 20 14.8 +1.3
baz=288
JIS Juneau Island 48.09 44 IAmb IAmb 17 20 29.8
comp=Z,34nm,0.9s
CMAR Chiang Mai Arr 48.10 254 P P 17 20 15.8 +1.1
comp=Z,2.1nm,0.8s,baz=37,slow=7.4,SNR=11
CMAR PcP PcP 17 21 43.5 +1.7
comp=Z,1.2nm,0.9s,baz=10,slow=5.5,SNR=1.7
CMAR LR LR 17 42 32.6
comp=Z,166nm,20.3s,baz=45,slow=39
KRVT Keravat (AS076 48.12 175 LR LR 17 36 55.0
comp=Z,235nm,21.6s,baz=133,slow=32
TDK Taldyqorghan 48.21 297*c iP* P 17 20 15.9 +0.6
TDK Taldyqorghan 48.21 297⇑*iP* P 17 20 15.9 +0.6
baz=297
MMPY Sheldon Lake, 48.24 38 P P 17 20 17.0 +1.7
baz=287,SNR=11
P33M Teslin, Yukon 48.25 41 P P 17 20 16.3 +0.9
P33M IAmb IAmb 17 20 18.1
comp=Z,40nm,1.1s
P33M Teslin, Yukon 48.25 41 P P 17 20 17.1 +1.7
baz=288,SNR=21
SHLS Shalkode 48.31 294*c iP* P 17 20 14.2 -1.9
SHLS pmax pmax
comp=Z,8.0nm,0.4s
SHLS Shalkode 48.31 294⇑*iP* P 17 20 14.3 -1.9
comp=Z,7.7nm,0.4s,baz=294

UZB Uzynbulak 48.60 294 *eP* P 17 20 15.4 -3.1
UZB Uzynbulak 48.60 294 *eP* P 17 20 15.4 -3.1
baz=294
FAKI Fak Fak 48.68 201 P P 17 20 18.6 -0.5
comp=Z,23nm,1.0s
KPKS Kokpek 48.69 295*c iP* P 17 20 19.2 +0.2
KPKS pmax pmax
comp=Z,26nm,0.8s
KPKS Kokpek 48.69 295⇑*iP* P 17 20 19.3 +0.2
comp=Z,26nm,0.8s,baz=295
ARXS Arharly 48.92 296 *eP* P 17 20 21.0 +0.2
ZHN Zhinishke 48.98 295 *eP* P 17 20 19.6 -1.7
ZHN Zhinishke 48.98 295 *eP* P 17 20 19.6 -1.7
baz=295
MRSI Marisa 49.04 215 P P 17 20 22.5 +0.7
comp=Z,31nm,1.3s
SATY Saty 49.05 295*c iP* P 17 20 22.4 +0.6
SATY pmax pmax
comp=Z,17nm,0.7s
SATY Saty 49.05 295⇑*iP* P 17 20 22.5 +0.6
comp=Z,17nm,0.7s,baz=295
C36M Paulatuk 49.09 28 P P 17 20 22.4 +0.8
baz=287,SNR=55
CHKK Chushkaly 49.62 296⇑*iP* P 17 20 26.0 0.0
CHKK Chushkaly 49.62 296⇑*iP* P 17 20 26.1 0.0
baz=296
BRZS Berezniki 49.72 305*c iP* P 17 20 26.7 0.0
BRZS pmax pmax
comp=Z,16nm,0.7s
BRZS Berezniki 49.72 305⇑*iP* P 17 20 26.7 0.0
comp=Z,16nm,0.7s,baz=305
SANI Sanana 49.79 209 P P 17 20 27.3 -0.2
comp=Z,26nm,1.0s
BRVK Borovoye 49.89 310 P P 17 20 28.3 +0.3
BRVK IAmb IAmb 17 20 29.5
comp=Z,22nm,0.9s
BRVK Borovoye 49.89 310*ceP* P 17 20 27.4 -0.6
BRVK pmax pmax
comp=Z,26nm,1.1s
BRVK Borovoye 49.89 310 *eP* P 17 20 27.4 -0.6
MDOK Medeo 49.89 295 *i P* P 17 20 28.9 +0.6
MDOK Medeo 49.89 295 *i P* P 17 20 28.9 +0.6
baz=295
TGTN Hyland Airport 49.92 39 P P 17 20 30.5 +2.4
baz=290
AAA Alma-Ata 49.96 295 *eP* P 17 20 27.1 -1.6
AAA Alma-Ata 49.96 295 *eP* P 17 20 27.2 -1.6
baz=296
TNSS Tian-Shan 50.02 295 *i P* P 17 20 30.4 +0.9
TNSS Tian-Shan 50.02 295 *i P* P 17 20 30.4 +0.9
baz=295
KUU Kurty 50.03 296*ceP* P 17 20 28.9 -0.2
KUU Kurty 50.03 296⇑*eP* P 17 20 28.9 -0.2
baz=296
DLBC Dease Lake 50.19 43 LR LR 17 45 27.0
comp=Z,57nm,18.1s,baz=301,slow=40
DLBC Dease Lake 50.19 43 P P 17 20 32.2 +2.0
baz=291,SNR=7.2
KDJ Kajisay 50.28 294 IAmb IAmb 17 20 33.0
comp=Z,52nm,1.1s
T35M Bob Quinn 50.62 45 P P 17 20 36.0 +2.6
baz=292,SNR=15
OTUK Ortayu 50.64 303 P P 17 20 33.8 0.0
OTUK pmax pmax
comp=Z,53nm,1.0s
ULHL Ulahol 50.84 295 P P 17 20 36.4 +0.9
SNR=17
TKM2 Tokmak 2 50.95 296 P P 17 20 37.7 +1.3
SNR=11
BTLS Baital 50.98 299*c iP* P 17 20 36.2 -0.1
BTLS pmax pmax
comp=Z,4.0nm,0.5s
BTLS Baital 50.98 299⇑*iP* P 17 20 36.3 -0.1
comp=Z,4.3nm,0.5s,baz=299
SGDS Sogindy 51.33 297*c iP* P 17 20 39.4 +0.4
SGDS pmax pmax
comp=Z,16nm,0.7s
SGDS Sogindy 51.33 297⇑*iP* P 17 20 39.5 +0.4
comp=Z,16nm,0.7s,baz=297
WRGLY Wrigley 51.40 35 P P 17 20 40.9 +1.7
baz=292,SNR=6.7
CHMS Chumysh 51.46 296 P P 17 20 40.5 +0.5
SNR=8.2
KBK Karagaybulak 51.50 296 P P 17 20 41.1 +0.7
SNR=44
USP Ospenovka 51.50 297 P P 17 20 40.8 +0.4
SNR=73
USP Ospenovka 51.50 297 P P 17 20 40.7 +0.4
USP pmax pmax
comp=Z,80nm,0.9s
AAK Ala-Archa 51.80 296 P P 17 20 43.3 +0.6
SNR=11
AAK Ala-Archa 51.80 296 LR LR 17 44 44.8
comp=Z,126nm,18.2s,baz=84,slow=38
AAK Ala-Archa 51.80 296 P P 17 20 43.2 +0.5
AAK IAmb IAmb 17 20 44.2
comp=Z,79nm,1.4s
AAK Ala-Archa 51.80 296*c iP* P 17 20 42.9 +0.2
AAK pmax pmax
comp=Z,26nm,1.1s
AAK Ala-Archa 51.80 296 *eP* P 17 20 42.9 +0.2
AAK Ala-Archa 51.80 296 *i P* P 17 20 42.9 +0.2
SNR=10
UCH Uchtor 51.98 295 P P 17 20 45.4 +1.0
SNR=7.9
UCH Uchtor 51.98 295 P P 17 20 45.9 +1.5
UCH pmax pmax
comp=Z,10.0nm,0.8s
SBUM Sibu 51.98 228 P P 17 20 44.0 -0.1
EKS2 Erkin-Say 52.26 296 P P 17 20 46.6 +0.5
SNR=27
EKS2 Erkin-Say 52.26 296 P P 17 20 46.4 +0.4
EKS2 pmax pmax
comp=Z,54nm,1.0s
KSH Kashi 52.33 292 P P 17 20 50.6 +4.0
KSH pP pP 17 21 00.3 +2.1
KSH sP sP 17 21 04.5 +1.6
KSH PP PP 17 22 50.4 +5.2
KSH S S 17 28 15.2 +5.9
KSH ScS ScS 17 30 36.7 +3.5
KSH pmax pmax
comp=Z,22nm,1.0s
KSH LR LR
comp=Z,630nm,14.4s
KSH LR LR
comp=Z,430nm,17.4s
KSH LR LR
comp=Z,440nm,18.0s
AML Almayashu 52.56 296 P P 17 20 49.7 +1.1
SNR=15
AML Almayashu 52.56 296 *i P* P 17 20 49.6 +0.9
SNR=15
PMG Port Moresby 53.05 181 LR LR 17 40 40.6
comp=Z,115nm,21.9s,baz=340,slow=33
SVE Sverdlovsk 53.42 317⇓*eP* P 17 20 54.0 -0.2
SVE pmax pmax
comp=Z,51nm,0.9s
SVE MLR MLR
comp=Z,329nm,17.0s
MTKI Muara Teweh, K 53.50 223 P P 17 20 55.9 +0.6
DZA Taraz 53.72 298 *eP* P 17 20 55.8 -0.9
DZA Taraz 53.72 298 *eP* P 17 20 55.8 -0.9
baz=298
KSM Kuching 53.83 229 P P 17 20 58.3 +0.6
KK31 Karatay Array 54.14 298 IAmb IAmb 17 21 00.8
comp=Z,35nm,0.8s
KK31 Karatay Array 54.14 298 *i P* P 17 21 00.0 +0.3
KK31 pmax pmax
comp=Z,27nm,0.7s
KKAR Karatay Array 54.14 298 IAmb IAmb 17 21 00.8
comp=Z,35nm,0.8s
HNR Honiara 54.18 165 LR LR 17 40 51.5
comp=Z,214nm,22.0s,baz=346,slow=32
BNSI Bone 54.20 215 P P 17 21 01.5 +1.1
BBSI Bau Bau 54.22 212 P P 17 21 00.5 0.0
comp=Z,3.6nm,0.9s
STKI Sintang 54.38 227 P P 17 21 03.0 +1.3
NOR Nord 54.49 357 *i P* P 17 20 57.9 -3.8
NOR IAmb IAmb 17 21 22.6
comp=Z,6.4nm,0.8s
HOPEN Hopen 54.59 346 *eP* P 17 21 02.2 -0.3
ARU Arti 54.62 317 P P 17 21 02.4 -0.6
comp=Z,35nm,0.6s,baz=63,slow=4.3,SNR=62
ARU LR LR 17 46 51.0
comp=Z,336nm,18.1s,baz=52,slow=39
comp=Z,35nm,0.6s

ARU Arti 54.62 317 P **P** 17 21 02.7 -0.3
ARU Arti 54.62 317 *c i*P **P** 17 21 02.5 -0.5
ARU *PP **sP** 17 21 18.4 -1.0
ARU 17 22 04.8
ARU 17 23 01.6
ARU S **S** 17 28 39.8 +0.2
ARU SS **SS** 17 32 17.6 -4.5
ARU pmax pmax
comp=Z,33nm,0.6s
ARU MLR MLR
comp=Z,282nm,15.0s
ARU Arti 54.62 317 *eP* **P** 17 21 02.5 -0.5
RES Resolute Bay 54.67 17 LR LR 17 47 40.8
comp=Z,114nm,19.3s,baz=280,slow=40
KBS Kingsbay 54.74 351⇓ *eP* **P** 17 21 01.2 -2.3
KBS pmax pmax
comp=Z,16nm,1.7s
KBS Kingsbay 54.74 351 *i* P **P** 17 21 00.9 -2.6
KBS Kingsbay 54.74 351 *eP* **P** 17 21 01.6 -1.9
SPA0 Spitsbergen Ar 54.75 349 *eP* **P** 17 21 02.4 -1.3
SPITS Spitsbergen Ar 54.75 349 P **P** 17 21 02.2 -1.5
comp=Z,0.9nm,0.3s,baz=51,slow=8.0,SNR=28
SPITS PcP **PcP** 17 22 05.8 +0.1
comp=Z,1.2nm,0.4s,baz=95,slow=3.5,SNR=5.2
SPITS LR LR 17 47 58.0
comp=Z,156nm,18.0s,baz=10.0,slow=40
IUG luzhnay 54.92 297 *c i*P **P** 17 21 06.2 +0.6
IUG luzhnay 54.92 297⇑ *i*P **P** 17 21 06.2 +0.6
baz=297
YKA Yellowknife Ar 55.37 34 P **P** 17 21 08.9 +0.6
comp=Z,11nm,0.6s,baz=299,slow=6.9,SNR=51
YKA PcP **PcP** 17 22 07.8 -0.4
comp=Z,2.7nm,0.7s,baz=301,slow=3.7,SNR=2.2
YKA PP **PP** 17 23 10.1 -1.8
comp=Z,0.9nm,0.7s,baz=309,slow=6.2,SNR=2.2
YKA LR LR 17 47 55.2
comp=Z,94nm,19.1s,baz=303,slow=39
comp=Z,11nm,0.6s
HSPB Hornsund (broa 55.76 348 *eP* **P** 17 21 08.3 -2.6
HSPB Hornsund (broa 55.76 348 *eP* **P** 17 21 08.9 -2.0
GAR Garm 56.37 294 P **P** 17 21 15.6 -0.4
BJO1 Bjornoya 57.09 346 *eP* **P** 17 21 20.2 -0.2
CHGR Chuyangaron 57.31 294 P **P** 17 21 22.8 +0.2
AB31 Akbulak array 57.41 309 *i* P **P** 17 21 23.3 +0.3
AB31 pmax pmax
comp=Z,54nm,0.7s
ABKAR Akbulak array 57.41 309 P **P** 17 21 23.1 +0.1
COEN Coen 57.73 185 P **P** 17 21 26.4 +0.9
COEN IAmb IAmb 17 21 27.4
comp=Z,31nm,1.0s
PRGR Permogore 57.76 327 *eP* **P** 17 21 23.5 -1.7
PRGR *e*PP **pP** 17 21 37.5 +0.5
KIRV Kirov 57.83 322 P **P** 17 21 25.0 -0.7
comp=Z,35nm,0.5s,baz=55,slow=2.0,SNR=23
KIRV PcP **PcP** 17 22 17.1 -0.9
comp=Z,12nm,0.5s,baz=63,slow=4.5,SNR=2.6
KIRV LR LR 17 48 36.8
comp=Z,355nm,18.8s,baz=50,slow=38
comp=Z,35nm,0.5s
KIRV Kirov 57.83 322 *d i*P **P** 17 21 24.5 -1.2
AKTO Aktyubinsk 57.87 311 P **P** 17 21 26.1 -0.1
comp=Z,21nm,0.7s,baz=68,slow=7.6,SNR=68
AKTO LR LR 17 48 44.8
comp=Z,219nm,18.0s,baz=58,slow=38
comp=Z,21nm,0.7s
AKTO Aktyubinsk 57.87 311 P **P** 17 21 25.8 -0.4
AKTO pmax pmax
comp=Z,28nm,0.8s
APA Apatity 58.48 336⇓ *i*P **P** 17 21 28.4 -1.8
APA pmax pmax
comp=Z,11nm,0.6s
NLWA Neilton Lookou 58.51 53 IAmb IAmb 17 21 33.0
comp=Z,31nm,0.9s
KEV Kevo 58.78 340 P **P** 17 21 30.5 -1.8
KEV IAmb IAmb 17 21 49.5
comp=Z,24nm,1.2s
KEV Kevo 58.78 340 P **P** 17 21 30.5 -1.8
KEV pmax pmax
comp=Z,24nm,1.2s
D03D Eldon 58.88 52 P **P** 17 21 34.6 +1.2
baz=302,SNR=22
HAMF Hammerfest 58.96 341 *eP* **P** 17 21 31.4 -2.1
PPBI Pangkal Pinang 59.15 231 P **P** 17 21 37.5 +1.9
ARA0 ARCESS Array S 59.31 340 *eP* **P** 17 21 34.6 -1.4
ARCES ARCESS Array B 59.31 340 P **P** 17 21 34.5 -1.5
comp=Z,3.0nm,0.4s,baz=46,slow=8.1,SNR=48
ARCES PcP **PcP** 17 22 23.7 0.0
comp=Z,4.6nm,0.7s,baz=42,slow=4.1,SNR=6.3
ARCES LR LR 17 51 06.4
comp=Z,247nm,20.1s,baz=51,slow=40
comp=Z,3.0nm,0.4s
ARCES ARCESS Array B 59.31 340 P **P** 17 21 34.6 -1.4
ARCES ARCESS Array B 59.31 340 P **P** 17 21 34.6 -1.4
ARCES pmax pmax
comp=Z,9.0nm,0.9s
DAG Danmarks Havn 59.31 356 P **P** 17 21 34.4 -1.5
DAG pmax pmax
comp=Z,8.0nm,1.1s
DAG Danmarks Havn 59.31 356 *i* P **P** 17 21 33.5 -2.4
DAG IAmb IAmb 17 21 34.9
comp=Z,31nm,1.6s
PSI Prapat 59.52 241 LR LR 17 49 24.8
comp=Z,72nm,18.2s,baz=40,slow=38
F04A Amboy 60.14 54 P **P** 17 21 43.1 +1.1
KTK1 Kautokeino 60.25 340 *eP* **P** 17 21 41.0 -1.4
I02E Swisshome, OR 60.31 56 P **P** 17 21 44.6 +1.4
baz=304
JETT Jettan, Norway 60.52 341 *eP* **P** 17 21 42.7 -1.6
B08A Colville Reser 60.55 50 P **P** 17 21 45.2 +0.3
KLMR Klimovskoe 60.61 328 *eP* **P** 17 21 42.0 -3.0
KLMR pmax pmax
comp=Z,40nm,0.9s
KLMR Klimovskoe 60.61 328 *eP* **P** 17 21 42.0 -3.0
KLMR AMP 17 21 45.8
comp=Z,40nm,0.9s
H04D Lebanon 60.74 55 P **P** 17 21 47.3 +1.2
baz=304,SNR=5.4
J01E Myrtle Point 60.79 57 P **P** 17 21 48.0 +1.5
baz=304
TRO Tromso 60.80 342 *eP* **P** 17 21 44.5 -1.7
I03D Drain, OR 60.84 56 P **P** 17 21 48.6 +1.8
baz=304,SNR=8.0
H04A Detroit Lake 60.98 55 IAmb IAmb 17 21 49.8
comp=Z,31nm,0.9s
G05D Wamic, OR 61.17 54 P **P** 17 21 50.5 +1.4
baz=304,SNR=9.2
K02D Willamette Mer 61.21 57 P **P** 17 21 50.9 +1.4
baz=305
I04A Tendick Farm, 61.34 56 P **P** 17 21 51.4 +1.1
baz=305,SNR=15
L02F Cave Junction 61.59 58 P **P** 17 21 53.1 +1.1
baz=305
I05D Terrebonne, OR 61.67 55 P **P** 17 21 53.6 +1.0
baz=305,SNR=11
NEW Newport 61.81 49 P **P** 17 21 53.4 -0.1
NEW IAmb IAmb 17 21 55.0
comp=Z,16nm,0.9s
NEW Newport 61.81 49 P **P** 17 21 53.4 -0.1
NEW pmax pmax
comp=Z,16nm,0.9s
NEW Newport 61.81 49 P **P** 17 21 53.7 +0.2
baz=305,SNR=16
DBG Daneborg 61.82 356 *i* P **P** 17 21 50.8 -2.2
DBG IAmb IAmb 17 21 52.9
comp=Z,72nm,2.1s
J04D Umpqua Nationa 61.84 56 P **P** 17 21 55.2 +1.3
baz=305,SNR=15
BELG Belogornoye 62.18 317 P **P** 17 21 55.8 +0.1
comp=Z,130nm,0.7s,baz=302,slow=0.9,SNR=66
BELG PcP **PcP** 17 22 34.4 -1.1
comp=Z,14nm,0.8s,baz=60,slow=3.7,SNR=3.6
BELG LR LR 17 51 23.5
comp=Z,234nm,18.6s,baz=311,slow=38
comp=Z,130nm,0.7s
BELG Belogornoye 62.18 317 *c i*P **P** 17 21 55.5 -0.2
BELG pmax pmax
comp=Z,16nm,0.9s
KHMM Horse Mountain 62.21 59 IAmb IAmb 17 21 59.0
comp=Z,25nm,0.8s
LEM Lembang 62.23 227 LR LR 17 49 39.1
comp=Z,31nm,20.7s,baz=349,slow=37
L04D Klamath Falls 62.31 57 P **P** 17 21 58.1 +1.1
baz=305,SNR=17
J05D Fort Rock, OR 62.34 56 P **P** 17 21 58.6 +1.4
baz=305,SNR=24
YBH Yreka Blue Hor 62.34 58 LR LR 17 44 17.6
comp=Z,75nm,21.9s,baz=293,slow=31
YBH Yreka Blue Hor 62.34 58 IAmb IAmb 17 21 59.6
comp=Z,19nm,0.9s
UPNV Upernavik 62.42 8 *i* P **P** 17 21 55.8 -1.2
UPNV IAmb IAmb 17 21 56.9
comp=Z,86nm,1.1s
STEI Steigen 62.97 342 *eP* **P** 17 21 59.1 -1.6
WALA Waterton Lakes 63.07 47 IAmb IAmb 17 22 03.5
comp=Z,17nm,0.8s
LOF Lofoten 63.19 343 *eP* **P** 17 22 00.6 -1.6
HYBB Hyderabad (bro 63.34 269 *eP* **P** 17 22 04.2 +0.2
HYBB *esP* **pP** 17 22 13.4 -2.4
FAUS Fauske 63.40 341 *eP* **P** 17 22 02.5 -1.1
CTA Charters Tower 63.68 182 LR LR 17 46 17.6
comp=Z,100nm,21.6s,baz=16,slow=33
SUMG Summit 63.75 2 *i* P **P** 17 22 06.5 +0.2
SUMG IAmb IAmb 17 22 07.5
comp=Z,76nm,0.9s
JMIC Jan Mayen 64.18 352 LR LR 17 49 51.8
comp=Z,34nm,21.4s,baz=46,slow=36
PLID Pearl Lake 64.31 51 IAmb IAmb 17 22 11.7
comp=Z,38nm,1.2s
HRA Herat 64.31 294 IAmb IAmb 17 22 12.2
comp=Z,22nm,0.9s
WVOR Wild Horse Val 64.38 55 P **P** 17 22 11.5 +0.8
MSO Missoula 64.40 49 P **P** 17 22 11.3 +0.6
baz=308,SNR=24
WB0 Warramunga Arr 64.55 194 P **P** 17 22 11.1 -0.6
MOR8 Moi Rana 64.58 341 *eP* **P** 17 22 08.9 -2.6
KONS Konsvik 64.62 342 *eP* **P** 17 22 11.9 +0.3
MOS Moscow 64.66 324 *eP* **P** 17 22 09.9 -2.2
MOS *e* 17 22 46.0
MOS pmax pmax
comp=Z,100nm,1.8s
MOS pmax pmax
comp=Z,61nm,1.5s
WRAB Tennant Creek 64.72 194⇑ *eP* **P** 17 22 11.9 -0.9
WRAB pmax pmax
comp=Z,22nm,1.0s
WRA Warramunga Arr 64.73 194 P **P** 17 22 12.2 -0.7
comp=Z,11nm,1.0s,baz=17,slow=6.9,SNR=29
comp=Z,11nm,1.0s
STOK Stokkvaagen 64.78 342 *eP* **P** 17 22 13.2 +0.6
GEYT Alibeck 64.86 299 P **P** 17 22 14.2 +0.4
comp=Z,12nm,0.6s,baz=90,slow=0.1,SNR=20
GEYT LR LR 17 53 17.7
comp=Z,176nm,18.1s,baz=64,slow=39
comp=Z,12nm,0.6s
GEYT Alibeck 64.86 299 P **P** 17 22 14.1 +0.3
GEYT IAmb IAmb 17 22 15.3
comp=Z,18nm,0.9s
GYA0B ALIBECK ARRAY 64.86 299 P **P** 17 22 13.9 +0.1
GYA0B IAmb IAmb 17 22 18.4
comp=Z,32nm,1.1s
BEKR Beckworth 64.88 58 IAmb IAmb 17 22 15.6
comp=Z,32nm,0.9s
FINES FINESS Array B 65.00 333 P **P** 17 22 13.2 -1.0
comp=Z,35nm,0.6s,baz=41,slow=7.4,SNR=264
FINES LR LR 17 53 45.1
comp=Z,328nm,18.7s,baz=41,slow=39
comp=Z,35nm,0.6s
OBN Obninsk 65.53 324 P **P** 17 22 16.9 -0.7
comp=Z,3.8nm,0.4s,baz=229,slow=0.7,SNR=15
OBN LR LR 17 53 17.8
comp=Z,51nm,19.3s,baz=345,slow=38
comp=Z,3.8nm,0.4s
OBN Obninsk 65.53 324 *i* P **P** 17 22 16.3 -1.4
OBN *i* 17 22 29.1
OBN *i* 17 22 46.9
OBN pmax pmax
comp=Z,31nm,1.0s
OBN MLR MLR
comp=Z,230nm,17.0s
OBN Obninsk 65.53 324 *eP* **P** 17 22 16.6 -1.1
FCC Fort Churchill 65.62 30 P **P** 17 22 18.3 +0.1
FCC Fort Churchill 65.62 30 P **P** 17 22 18.3 +0.1
FCC pmax pmax
comp=Z,25nm,0.6s
SCO Scoresbysund 65.70 356 *i* P **P** 17 22 17.1 -1.4
SCO IAmb IAmb 17 22 19.5
comp=Z,17nm,0.8s
VRH Novokhopyorsk 65.79 319 *eP* **P** 17 22 18.6 -0.8
VRH pmax pmax
comp=Z,140nm,0.7s
EGMT Eagleton 65.89 46 P **P** 17 22 21.1 +0.8
baz=309
HLID Hailey 66.15 52 P **P** 17 22 23.0 +0.8
baz=309,SNR=21
LPSR Galich'ya Gora 66.17 321 *eP* **P** 17 22 21.4 -0.5
LPSR pmax pmax
comp=Z,90nm,0.7s
ILULI Ilulissat 66.34 7 *i* P **P** 17 22 21.7 -0.9
ILULI IAmb IAmb 17 22 22.9
comp=Z,62nm,1.0s
BOZ Bozeman (W) 66.42 49 P **P** 17 22 24.6 +0.7
BOZ Bozeman (W) 66.42 49 P **P** 17 22 24.7 +0.8
baz=309,SNR=55
BMN Battle Mountai 66.44 56 IAmb IAmb 17 22 26.0
comp=Z,22nm,0.8s
MEF Metsahovi 66.47 333 *eP* **P** 17 22 22.6 -1.0
NSS Namsos 66.53 341 *eP* **P** 17 22 23.0 -1.0
VORR Voronezh 66.67 320⇓ *i*P **P** 17 22 25.3 +0.3
VORR pmax pmax
comp=Z,50nm,1.1s
RAF Rauma 66.69 335 *eP* **P** 17 22 24.6 -0.4
VSU Vasula 66.99 331 *deP* **P** 17 22 26.0 -1.0
VSU pmax pmax
comp=Z,50nm,0.8s
VSU Vasula 66.99 331 *eP* **P** 17 22 26.3 -0.7
VSR Storozhevoye 66.99 320 *eP* **P** 17 22 26.6 -0.5
VSR pmax pmax
comp=Z,80nm,0.5s
NVAR Mina Array Bea 67.03 58 P **P** 17 22 28.9 +1.0
comp=Z,25nm,0.8s,baz=290,slow=6.8,SNR=169
NVAR LR LR 17 49 58.8
comp=Z,42nm,19.7s,baz=292,slow=34
comp=Z,25nm,0.8s
MLAC Mammoth, Mammo 67.19 59 P **P** 17 22 31.1 +2.1
baz=309
ICESG Greenland Ices 67.20 3 *i* P **P** 17 22 28.8 +0.2
ICESG IAmb IAmb 17 22 29.8
comp=Z,164nm,0.8s
MSVF Nonsavu 67.24 149 LR LR 17 45 56.0
comp=Z,133nm,21.9s,baz=340,slow=31
ELK Elko 67.43 55 LR LR 17 47 46.3
comp=Z,68nm,21.9s,baz=322,slow=32
ELK Elko 67.43 55 P **P** 17 22 31.3 +0.9
YFT Old Faithful 67.59 49 IAmb IAmb 17 22 35.9
comp=Z,15nm,0.7s
DZM Mont Dzumac 67.80 161 *e*LR LR 17 42 21.1
comp=Z,225nm,28.6s
DZM Mont Dzumac 67.80 161 LR LR 17 48 21.6
comp=Z,75nm,20.4s,baz=88,slow=32
MTSE Mansula 67.80 332 *eP* **P** 17 22 32.0 -0.2
AAL Aland 67.90 335 *eP* **P** 17 22 32.0 -0.7
RLMT Red Lodge 68.01 48 IAmb IAmb 17 22 36.1
comp=Z,31nm,1.4s
RLMT Red Lodge 68.01 48 P **P** 17 22 34.9 +0.9
baz=311,SNR=12
TBLU Trondheim 68.02 341 *eP* **P** 17 22 32.3 -1.1
MOOW Moose Ponds 68.09 50 IAmb IAmb 17 22 36.9
comp=Z,25nm,1.1s
VES Vestal, Richgr 68.15 61 P **P** 17 22 34.8 +0.1
baz=309
SOEG Soedalen 68.23 360 *i* P **P** 17 22 33.6 -1.0
SOEG IAmb IAmb 17 22 35.3
comp=Z,33nm,0.9s
AFI Afiamalu 68.26 137 LR LR 17 44 36.1
comp=Z,66nm,21.9s,baz=20,slow=29
PKM Mcpherson Peak 68.29 62 P **P** 17 22 36.4 +0.6
baz=309
CWC Cottonwood Cre 68.41 60 P **P** 17 22 37.2 +0.7
baz=309
DGMT Dagmar 68.41 43 P **P** 17 22 36.2 0.0
baz=312
DGMT Dagmar 68.41 43 P **P** 17 22 36.6 +0.4
baz=312
AS31 Alice Springs 68.45 194 P **P** 17 22 36.5 -0.1
ASAR Alice Springs 68.45 194 P **P** 17 22 36.9 +0.3
comp=Z,3.4nm,0.7s,baz=13,slow=6.3,SNR=55
ASAR LR LR 17 50 22.8
comp=Z,82nm,21.8s,baz=18,slow=34
comp=Z,3.4nm,0.7s
ASAR Alice Springs 68.45 194 P **P** 17 22 36.5 0.0
ASAR Alice Springs 68.45 194 P **P** 17 22 36.5 0.0
GRAC Grapevine Rang 68.50 59 P **P** 17 22 38.1 +1.1
baz=309,SNR=12
SFJD Kangerlussuaq 68.54 8 LR LR 17 53 56.2
comp=Z,155nm,19.8s,baz=340,slow=37
SFJD Kangerlussuaq 68.54 8 *i* P **P** 17 22 36.0 -0.6
SFJD IAmb IAmb 17 22 37.0
comp=Z,41nm,0.8s
LAO LASA Array 68.58 45 P **P** 17 22 38.5 +1.1
baz=312
LAO LASA Array 68.58 45 P **P** 17 22 38.5 +1.1
baz=312
PALK Pallekele 68.62 259 LR LR 17 54 22.0
comp=Z,96nm,21.4s,baz=160,slow=37
ISA Isabella, Lake 68.65 61 P **P** 17 22 37.7 -0.3
baz=309,SNR=7.8
R11A Troy Canyon, C 68.74 57 P **P** 17 22 39.3 +0.7
baz=310,SNR=51
FRB Frobisher Bay 68.88 16 LR LR 17 55 33.2
comp=Z,218nm,20.3s,baz=4.5,slow=38
GROC Groznyy 68.89 310 *eP* **P** 17 22 39.6 +0.4
GROC *e* 17 23 03.3
GROC pmax pmax
comp=Z,46nm,0.7s
MPMC Manual Prospec 69.02 60 P **P** 17 22 41.0 +0.6
baz=310,SNR=24
FURC Furnace Creek, 69.15 59 P **P** 17 22 41.9 +1.0
baz=310,SNR=23
SLIT Slitere, Latvi 69.16 332 *eP* **P** 17 22 40.6 0.0
GOF Gofitskoye 69.16 313⇑ *i*P **P** 17 22 41.2 +0.3
GOF pmax pmax
comp=Z,242nm,0.7s
DUG Dugway, Tooele 69.20 54 IAmb IAmb 17 22 43.3
comp=Z,23nm,0.9s
DUG Dugway, Tooele 69.20 54 P **P** 17 22 42.3 +0.9
DUG Dugway, Tooele 69.20 54 P **P** 17 22 42.3 +0.9
baz=310,SNR=23
TPNV Topopah Spring 69.22 58 P **P** 17 22 42.4 +0.8
baz=310,SNR=32
LRMC Laurel Mtn Rad 69.27 60 P **P** 17 22 42.4 +0.6
baz=310,SNR=6.0
IDID Didziasalis 69.34 328 *eP* **P** 17 22 42.4 +0.6
DOMB Dombas 69.34 341 *eP* **P** 17 22 41.6 -0.2
ISAL Salakas 69.38 329 *eP* **P** 17 22 42.9 +0.9
BW06 Boulder Array 69.39 50 P **P** 17 22 43.0 +0.3
baz=311,SNR=21
PDAR Pinedale Array 69.39 50 P **P** 17 22 42.9 +0.3
comp=Z,10nm,0.7s,baz=272,slow=2.3,SNR=72
PDAR LR LR 17 53 44.7
comp=Z,46nm,19.8s,baz=323,slow=36
comp=Z,10nm,0.7s
DY2G Dye2 69.43 6 *i* P **P** 17 22 41.9 -0.5
DY2G IAmb IAmb 17 22 43.2
comp=Z,76nm,0.8s
EDW2 Edwards Air Fo 69.45 61 P **P** 17 22 43.6 +0.7
baz=310,SNR=16
GWY Greenwater Val 69.45 59 IAmb IAmb 17 22 44.6
comp=Z,29nm,0.9s
IIGN Ignalina 69.50 329 *eP* **P** 17 22 43.4 +0.6
MNK Minsk 69.51 327 *i* P **P** 17 22 43.3 +0.5
MNK *i* *PP **sP** 17 22 59.8 +0.4
MNK *i* *SP **PcP** 17 23 06.7 +0.9
MNK *i* 17 25 19.9
MNK *i* PPP PPP 17 27 02.8
MNK *i* S **S** 17 31 51.4 +4.2
MNK *i* *SS **SKiKP** 17 32 21.0 -6.6
MNK pmax pmax
comp=Z,57nm,0.9s
MNK pmax pmax
comp=E,5.0nm,1.0s
MNK Minsk 69.51 327 *i* P **P** 17 22 43.4 +0.5
comp=E,5.0nm,1.0s
MNK *i* P **P** 17 22 43.4 +0.5
MNK *i* P **P** 17 22 43.4 +0.5
comp=Z,57nm,0.9s,baz=42
MNK *i* pP **sP** 17 22 59.8 +0.4
MNK *i* sP **PcP** 17 23 06.8 +0.9
MNK *i* PP **PP** 17 25 20.0 +3.8
MNK *i* PPP PPP 17 27 02.9
MNK *i* S **S** 17 31 51.4 +4.2
MNK *i* sS **SKiKP** 17 32 21.0 -6.6
MNK *i* SS SS 17 36 25.9 +12
MNK *i* SSS SSS 17 39 44.7
MNK *i* LQ LQ 17 48 55.8
MNK *i* LR LR 17 51 58.2
MNK *i* LRM MLR 17 56 03.1
comp=E,22nm,18.7s
MNK *i* LRM MLR 17 57 54.5
comp=Z,6μm,18.7s
SNCC San Nicolas Is 69.51 63 P **P** 17 22 44.2 +0.9
baz=310
NC204 NORSAR Array S 69.58 339 IAmb IAmb 17 22 44.9
comp=Z,31nm,0.8s
NACGM Naroch 69.63 328 *i* P **P** 17 22 43.6 0.0
baz=41
NB2 NORSAR Subarra 69.67 339 P **P** 17 22 42.8 -1.0
baz=32,slow=6.5
NB2 NORSAR Subarra 69.67 339 P **P** 17 22 42.8 -1.0
comp=Z,15nm,0.5s,baz=32,slow=6.5
NOA NORSAR Array B 69.67 339 P **P** 17 22 43.6 -0.2
comp=Z,13nm,0.5s,baz=32,slow=6.6,SNR=148
NOA LR LR 17 56 25.2
comp=Z,218nm,21.8s,baz=20,slow=39
comp=Z,13nm,0.5s
AKN Aaknes 69.71 342 *eP* **P** 17 22 44.5 +0.5
HFS Hagfors 69.77 338 P **P** 17 22 44.3 -0.1
comp=Z,27nm,0.4s,baz=36,slow=5.5,SNR=214
comp=Z,27nm,0.4s
NLU North Lily Min 69.79 54 IAmb IAmb 17 22 46.9
comp=Z,17nm,0.9s
NC602 NORSAR Array S 69.84 339 *eP* **P** 17 22 44.2 -0.6
NORES NORESS Array B 69.84 339 P **P** 17 22 44.2 -0.6
VSVD Vaisvydziai 69.86 330 *eP* **P** 17 22 45.1 +0.1
SHOC Shoshone, Teco 69.88 59 P **P** 17 22 46.4 +0.9
baz=310,SNR=5.7
GSC Goldstone, Bar 69.93 60 P **P** 17 22 46.6 +0.7
baz=310,SNR=11
MPU Maple Canyon 70.01 53 IAmb IAmb 17 22 48.2
comp=Z,19nm,0.9s
BFSC Mount Baldy Ra 70.07 61 P **P** 17 22 47.5 +0.6
baz=310,SNR=6.3
KVAR Kislovodsk Arr 70.08 312 P **P** 17 22 48.0 +1.2
comp=Z,44nm,0.8s,baz=265,slow=23,SNR=66
KVAR LR LR 17 57 39.4
comp=Z,221nm,21.0s,baz=278,slow=39
comp=Z,44nm,0.8s
KIV Kislovodsk 70.08 312 ⇓P **P** 17 22 47.8 +1.1
KIV Kislovodsk 70.08 312 P **P** 17 22 45.8 -1.0
KIV Kislovodsk 70.08 312 *eP* **P** 17 22 47.0 +0.3
KIV *eS* **S** 17 31 54.3 -0.3
KIV pmax pmax
comp=Z,194nm,1.1s
KIV pmax pmax
comp=Z,25nm,3.8s
KIV MLR MLR
comp=Z,183nm,18.0s
KIV Kislovodsk 70.08 312 *eP* **P** 17 22 47.0 +0.3
KIV Kislovodsk 70.08 312 *i* P **P** 17 22 47.7 +0.9
SNR=67
KBZ Khabaz 70.12 312 P **P** 17 22 47.9 +1.1
comp=Z,81nm,0.8s,baz=46,slow=4.6,SNR=165
KBZ LR LR 17 58 18.5
comp=Z,323nm,18.8s,baz=38,slow=40
SHPR Sheep Range 70.18 58 IAmb IAmb 17 22 49.5
comp=Z,22nm,0.9s
ZEI Tsey 70.21 311 *eP* **P** 17 22 44.8 -2.8
ZEI pmax pmax
comp=Z,70nm,1.0s
PABE Paberze 70.22 330 *eP* **P** 17 22 47.5 +0.3
TUQ Turquoise Moun 70.39 60 P **P** 17 22 49.6 +0.7
baz=310,SNR=18
HEC Hector,Ludlow 70.53 60 P **P** 17 22 50.3 +0.7
baz=310,SNR=7.2
PBUR Paburge 70.54 331 *eP* **P** 17 22 49.5 +0.4
ONI Oni 70.58 311 P **P** 17 22 51.2 +1.4
FOO Floro 70.66 342 *eP* **P** 17 22 49.7 0.0
MSU Marysvale 70.67 55 P **P** 17 22 50.4 -0.2
MSU Marysvale 70.67 55 P **P** 17 22 50.4 -0.2
SKAR Skarslia 70.71 340 *eP* **P** 17 22 50.7 +0.5
OSL Oslo 70.74 339 *eP* **P** 17 22 51.0 +0.8
ANGG Ammassalik, Gr 70.74 2 *eP* **P** 17 22 48.0 -2.2
ANGG IAmb IAmb 17 22 52.7
comp=Z,668nm,2.6s
MURC Murrieta 70.78 62 P **P** 17 22 51.5 +0.4
baz=310,SNR=6.5
HYA Hoyanger 70.79 341 *eP* **P** 17 22 50.8 +0.3
GMRC Granite Mounta 70.98 60 P **P** 17 22 53.1 +0.7
baz=311,SNR=14

ULM Lac du Bonnet 71.05 38 P P 17 22 52.1 -0.2
comp=Z,9.4nm,0.6s,baz=307,slow=6.8,SNR=18
ULM LR LR 17 55 01.8
comp=Z,83nm,21.9s,baz=286,slow=37
comp=Z,9.4nm,0.6s
ULM Lac du Bonnet 71.05 38 P P 17 22 51.9 -0.4
ULM IAmb IAmb 17 22 52.6
comp=Z,12nm,0.7s
ULM Lac du Bonnet 71.05 38 P P 17 22 51.9 -0.4
ULM pmax pmax
comp=Z,12nm,0.7s
MDND Maddock 71.06 41 P P 17 22 53.2 +0.7
baz=315,SNR=6.2
MDND Maddock 71.06 41 P P 17 22 53.2 +0.7
baz=315,SNR=6.2
K22A Casper 71.13 49 P P 17 22 53.5 +0.3
baz=313,SNR=8.7
K22A Casper 71.13 49 P P 17 22 53.5 +0.3
baz=313,SNR=8.7
NUUK Nuuk 71.16 9 *i* P P 17 22 53.2 +0.4
NUUK IAmb IAmb 17 22 54.0
comp=Z,95nm,1.0s
SUE Sulen 71.20 342 *eP* P 17 22 53.8 +0.8
PFO Pinyon Flats O 71.24 61 P P 17 22 55.1 +1.2
PFO pmax pmax
comp=Z,15nm,1.2s
PFO Pinyon Flats O 71.24 61 P P 17 22 54.1 +0.1
baz=311,SNR=8.5
CHVG Ch'k'valeri 71.24 312 ⇓P P 17 22 55.2 +1.5
CHVG Ch'k'valeri 71.24 312 ⇓P P 17 22 55.2 +1.5
BELC Belle Mtn. Jos 71.28 61 P P 17 22 54.2 0.0
baz=311,SNR=11
KONO Kongsberg 71.28 339 P P 17 22 53.0 -0.6
KONO Kongsberg 71.28 339 *deP* P 17 22 53.7 +0.1
KONO pmax pmax
comp=Z,12nm,0.9s
KONO Kongsberg 71.28 339 *eP* P 17 22 53.5 0.0
AKH Akhalkalaki 71.35 310 ⇑P P 17 22 56.2 +1.7
AKH Akhalkalaki 71.35 310 P P 17 22 56.3 +1.7
E28A Huff 71.44 43 P P 17 22 55.4 +0.6
baz=315
RSSD Black Hills 71.45 46 P P 17 22 54.1 -1.1
RSSD Black Hills 71.45 46 P P 17 22 54.1 -1.1
RSSD pmax pmax
comp=Z,13nm,0.8s
RSSD Black Hills 71.45 46 P P 17 22 55.2 0.0
baz=314,SNR=13
RSSD Black Hills 71.45 46 P P 17 22 55.2 0.0
baz=314
GNI Garni 71.50 308 P P 17 22 57.2 +1.7
comp=Z,23nm,0.9s,baz=80,slow=1.1,SNR=22
GNI LR LR 17 57 43.2
comp=Z,155nm,18.5s,baz=74,slow=39
comp=Z,23nm,0.9s
GNI Garni 71.50 308 *ceP* P 17 22 56.9 +1.4
GNI pmax pmax
comp=Z,40nm,1.1s
GNI Garni 71.50 308 P P 17 22 57.5 +2.1
ASK Askoy 71.62 342 *eP* P 17 22 56.1 +0.5
SUW Suwalki 71.67 329 *i* P P 17 22 55.4 -0.6
SUW Suwalki 71.67 329 *eP* P 17 22 55.9 -0.1
BER Bergen 71.67 341 *eP* P 17 22 55.8 -0.1
BAR Barrett 71.71 62 P P 17 22 55.2 -1.5
IRM Iron Mountain 71.71 60 P P 17 22 57.3 +0.6
baz=311,SNR=9.8
MONP2 Monument Peak 71.73 62 P P 17 22 57.3 +0.3
baz=311
ODD1 Odda 71.79 341 *eP* P 17 22 57.2 +0.6
AKASG Malin Array Be 71.80 324 P P 17 22 56.5 -0.3
comp=Z,66nm,0.7s,baz=37,slow=6.5,SNR=316
AKASG LR LR 17 57 04.0
comp=Z,179nm,18.0s,baz=34,slow=38
comp=Z,66nm,0.7s
AKBB Malin Array Si 71.80 324 *ceP* P 17 22 56.3 -0.5
BC3 Big Chuckawall 71.85 61 P P 17 22 57.9 +0.3
baz=311,SNR=10
O20A White River Ci 71.88 52 P P 17 22 57.9 +0.1
baz=312,SNR=9.9
SOC Sochi 71.91 313 *eP* P 17 22 56.5 -1.2
SOC *e* 17 25 33.9
SOC *ePPP* PPP 17 27 19.6
SOC *eS* S 17 32 14.2 -1.4
SOC *eSS* SS 17 36 55.8 +4.2
SOC pmax pmax
comp=Z,37nm,0.8s
SOC MLR MLR
comp=Z,275nm,20.0s
SOC Sochi 71.91 313 *eP* P 17 22 56.5 -1.2
U15A North Rim 71.98 57 IAmb IAmb 17 23 00.7
comp=Z,25nm,0.9s
IKP In-Ko-Pah, Jac 72.09 62 P P 17 22 59.4 +0.4
baz=311,SNR=5.8
SWSC Sam W. Stewart 72.09 61 P P 17 22 59.1 +0.2
baz=311
KARS Kars 72.11 309 P P 17 23 01.4 +2.3
KARS pmax pmax
comp=Z,217nm,1.0s
BATM Batumi 72.22 311 ⇑P P 17 23 00.5 +1.0
BATM Batumi 72.22 311 ⇑P P 17 23 00.5 +1.0
ANN Anapa 72.24 316 *ceP* P 17 22 59.2 -0.4
ANN pmax pmax
comp=Z,38nm,0.9s
ANN Anapa 72.24 316 *eP* P 17 22 59.2 -0.4
PDMCI Parker Dam,Lak 72.24 59 P P 17 22 60.0 +0.2
baz=311,SNR=6.9
BLS5 Blasjo 72.26 340 *eP* P 17 23 00.1 +0.6
KLNR Kaliningrad 72.27 331 *ceP* P 17 22 58.9 -0.6
KLNR pmax pmax
comp=Z,104nm,1.0s
AGMN Agassiz Nation 72.48 39 P P 17 23 00.6 -0.4
baz=317
GLA Glamis 72.64 61 P P 17 23 02.9 +0.7
baz=312
N23A Red Feather La 72.64 50 P P 17 23 03.3 +0.8
baz=314,SNR=19
KMY Karmoy 72.74 341 *eP* P 17 23 02.6 +0.3
HOMB Homborsund 72.76 339 *eP* P 17 23 02.8 +0.4
DEL Delary 72.80 335 *eP* P 17 23 02.4 -0.3
SNART Snartemo 73.03 340 *eP* P 17 23 04.3 +0.3
OVD Ostervraa, Den 73.13 338 *i* P P 17 23 04.6 0.0
OVD IAmb IAmb 17 23 05.2
comp=Z,108nm,0.8s
WUAZ Wupatki 73.14 57 P P 17 23 06.7 +1.4
baz=312
B35A Bob, Littlefor 73.39 38 P P 17 23 06.2 -0.2
baz=318,SNR=14
ISCO Idaho Springs 73.58 50 P P 17 23 08.9 +0.9
ISCO Idaho Springs 73.58 50 P P 17 23 08.9 +0.9
baz=314,SNR=16
ISCO Idaho Springs 73.58 50 P P 17 23 08.9 +0.9
baz=314,SNR=16
BSD Bornholm Skovb 73.61 334 *eP* P 17 23 07.6 +0.1
BSD Bornholm Skovb 73.61 334 *i* P P 17 23 07.0 -0.5
BSD IAmb IAmb 17 23 07.8
comp=Z,82nm,0.8s
BANOM Banah 73.62 290 *i* P P 17 23 08.7 +0.6
SNR=6.5
GOET G??ttrup 73.65 338 *i* P P 17 23 06.7 -1.0
SHME Shamn 73.65 290 P P 17 23 08.5 +0.3
MVCO Mesa Verde 73.71 54 P P 17 23 09.2 +0.5
baz=313,SNR=13
SIM Simferopol' 73.79 317 *eP* P 17 23 08.4 -0.4
SIM pmax pmax
comp=Z,90nm,1.3s
COP Copenhagen 73.89 336 *i* P P 17 23 09.7 +0.6
COP IAmb IAmb 17 23 09.9
comp=Z,177nm,0.7s
MSFE Esma-Masafi 74.09 290 P P 17 23 11.2 +0.3
SORM Soroca 74.10 323 ⇑P P 17 23 10.2 -0.3
SORM Soroca 74.10 323 ⇑P P 17 23 10.2 -0.3
MUD Monsted U'grnd 74.17 338 *i* P P 17 23 11.2 +0.5
MUD IAmb IAmb 17 23 11.6
comp=Z,49nm,0.8s
LLD Lille Linde 74.26 336 *i* P P 17 23 11.0 -0.3
LLD IAmb IAmb 17 23 11.9
comp=Z,92nm,0.8s
BEL Belsk 74.28 329 *i* P P 17 23 12.3 +0.8
S22A 4UR Ranch, Cre 74.31 53 P P 17 23 13.3 +1.0
baz=314,SNR=19
UOSS Minazif 74.33 290 P P 17 23 11.4 -0.9
UOSS IAmb IAmb 17 23 13.3
comp=Z,30nm,0.9s
UOSS Minazif 74.33 290 *i* P P 17 23 12.1 -0.2
SNR=7.8
GKP Gorka Klasztor 74.38 332 *i* P P 17 23 12.2 +0.2
GKP Gorka Klasztor 74.38 332 P P 17 23 12.2 +0.2
GKP Gorka Klasztor 74.38 332 *eP* P 17 23 12.8 +0.7
Q24A Divide 74.42 51 P P 17 23 13.6 +0.6
baz=314
IVI Ivigtut 74.44 8 *i* P P 17 23 11.5 -0.7
IVI IAmb IAmb 17 23 13.7
comp=Z,69nm,1.2s
HATD Hatta, Dubai 74.46 289 *i* P P 17 23 13.5 +0.5
SNR=8.1
ASHO Ashiyiah 74.60 289 *i* P P 17 23 14.3 +0.4
SNR=6.6
LVV L'vov 74.62 326 *eP* P 17 23 13.5 0.0
214A Organ Pipe Nat 74.63 60 P P 17 23 14.5 +0.6
baz=312,SNR=5.1
EYMN Ely 74.68 37 P P 17 23 13.9 -0.1
baz=320,SNR=14
EYMN Ely 74.68 37 P P 17 23 13.8 -0.2
baz=320,SNR=14
OGNE Ogallala 74.73 48 P P 17 23 15.1 +0.7
baz=315
OGNE Ogallala 74.73 48 P P 17 23 15.1 +0.7
baz=315
KIS Kishinev 74.75 322 ⇑*iP* P 17 23 14.3 0.0
comp=Z,110nm,1.4s
KIS Kishinev 74.75 322 *c iP* P 17 23 14.3 0.0
KIS pmax pmax
comp=Z,110nm,1.4s
DRBR Darabani 74.80 324 ⇑P P 17 23 14.7 +0.1
MILM Milestii Mici 74.82 322 ⇑*iP* P 17 23 14.3 -0.4
comp=Z,50nm,0.5s
MILM Milestii Mici 74.82 322 *eP*cP PcP 17 23 30.0 +1.4
MILM *eL* L 17 55 11.0
MILM LRM MLR 17 58 42.0
comp=Z,300nm,19.5s
MILM Milestii Mici 74.82 322 ⇑P P 17 23 13.8 -0.9
MILM Milestii Mici 74.82 322 *c iP* P 17 23 14.3 -0.4
MILM *e* 17 23 30.0
MILM pmax pmax
comp=Z,160nm,2.0s
FAQ Al Faqa, Dubai 74.88 290 P P 17 23 15.6 +0.2
SDCO Great Sand Dun 75.07 52 P P 17 23 17.5 +0.8
baz=314,SNR=14
SDCO Great Sand Dun 75.07 52 P P 17 23 17.5 +0.8
baz=314,SNR=14
ASUD Al Ashush, Dub 75.14 290 P P 17 23 16.5 -0.4
IAS Iasi 75.16 323 ⇓P P 17 23 16.3 -0.4
IAS Iasi 75.16 323 ⇓P P 17 23 16.3 -0.4
ALNE Al Ain 75.23 289 P P 17 23 17.8 +0.3
BIGH Upper Bighouse 75.33 345 ⇑*eP* P 17 23 17.6 +0.2
F36A Milaca 75.36 39 P P 17 23 17.4 -0.4
baz=319,SNR=8.5
MLA1 Latheron 75.40 345 *eP* P 17 23 18.1 +0.2
VASR Vaslui 75.48 322 ⇑P P 17 23 18.8 +0.3
ECSD EROS Data Cent 75.48 43 P P 17 23 18.3 -0.3
ECSD IAmb IAmb 17 23 19.6
comp=Z,38nm,1.2s
ECSD EROS Data Cent 75.48 43 P P 17 23 18.6 -0.1
baz=318,SNR=26
ECSD EROS Data Cent 75.48 43 P P 17 23 18.6 -0.1
baz=318,SNR=26
DIKM Dikmen 75.61 314 ⇓P P 17 23 17.2 -2.2
STKA Stephens Creek 75.63 186 P P 17 23 20.3 +1.0
comp=Z,4.9nm,1.0s,baz=352,slow=8.4,SNR=5.7
STKA LR LR 17 54 16.6
comp=Z,106nm,21.9s,baz=25,slow=34
comp=Z,4.9nm,1.0s
TUC Tucson 75.66 59 P P 17 23 20.9 +0.9
TUC pmax pmax
comp=Z,10.0nm,1.1s
TUC Tucson 75.66 59 P P 17 23 20.8 +0.9
baz=313
E38A The Farm, Brul 75.68 38 P P 17 23 19.0 -0.7
baz=320,SNR=9.8
KSCO Kaye Shedlock' 75.78 49 P P 17 23 20.7 +0.1
baz=316
BIR Birlad 75.84 322 ⇓P P 17 23 22.1 +1.5
BIR Birlad 75.84 322 ⇓P P 17 23 22.1 +1.5
BURAR Bucovina Array 75.85 324 ⇑P P 17 23 21.4 +0.6
BURAR Bucovina Array 75.85 324 ⇑P P 17 23 21.4 +0.6
VLDR Vladesti 75.96 321 ⇑P P 17 23 21.9 +0.7
BIZ Bicaz 76.00 323 ⇑P P 17 23 21.9 +0.4
BZK Bozkurt 76.02 315 ⇑P P 17 23 21.6 -0.1
KOLS Kolonicke sedl 76.03 326 *eP* P 17 23 22.2 +0.6
KOLS pmax pmax
comp=Z,59nm,1.0s
KOLS Kolonicke sedl 76.03 326 *eP* P 17 23 22.2 +0.6
TESR Tescani 76.09 323 ⇓P P 17 23 22.2 +0.2
GHRR 76.10 322 ⇓P P 17 23 23.3 +1.2
T25A Trinidad 76.11 52 P P 17 23 23.2 +0.6
baz=315,SNR=9.9
TLCR 76.13 320 ⇑P P 17 23 22.5 +0.3
TLCR 76.13 320 ⇑P P 17 23 22.5 +0.3
SCTR Scanteiesti 76.13 321 ⇑P P 17 23 23.3 +1.0
TATR Tatarca 76.16 321 ⇑P P 17 23 23.4 +1.0
SPMN Marine on St. 76.17 39 P P 17 23 22.6 +0.1
baz=320
SPMN Marine on St. 76.17 39 P P 17 23 22.6 +0.1
baz=320
LEWI Lewis, Hebride 76.18 347 ⇑*eP* P 17 23 22.1 -0.2
LEWI IAmb IAmb 17 23 22.9
comp=Z,29nm,0.8s
UZH Uzhgorod 76.26 326 ⇑*iP* P 17 23 21.5 -1.4
UZH *e* 17 23 33.6
PANC Panciu 76.36 322 ⇓P P 17 23 22.4 -1.1
CRVS Cervenica-Dubn 76.37 327 *eP* P 17 23 24.2 +0.6
CRVS pmax pmax
comp=Z,48nm,0.8s
CRVS Cervenica-Dubn 76.37 327 *eP* P 17 23 24.2 +0.6
NIE Niedzica 76.41 328 *i* P P 17 23 25.0 +1.2
NIE Niedzica 76.41 328 P P 17 23 24.6 +0.8
BGNE Belgrade 76.43 45 P P 17 23 24.1 0.0
baz=317
CFR Carcaliu 76.45 321 ⇓P P 17 23 24.3 +0.3
CFR Carcaliu 76.45 321 ⇓P P 17 23 24.3 +0.3
ANMO Albuquerque 76.46 54 LR LR 17 55 42.4
comp=Z,38nm,20.8s,baz=332,slow=35
ANMO Albuquerque 76.46 54 P P 17 23 25.1 +0.5
ANMO Albuquerque 76.46 54 *ceP* P 17 23 25.3 +0.7
ANMO pmax pmax
comp=Z,10.0nm,1.1s
ANMO Albuquerque 76.46 54 P P 17 23 25.3 +0.7
baz=314,SNR=18
ANMO Albuquerque 76.46 54 P P 17 23 25.5 +0.9
baz=314
ODBI Odobesti 76.48 322 ⇑P P 17 23 26.1 +1.9
KAC Achnashellach 76.52 346 ⇑*eP* P 17 23 24.2 0.0
BMR Baia Mare 76.53 325 ⇑P P 17 23 25.1 +0.6
BMR Baia Mare 76.53 325 ⇑P P 17 23 25.1 +0.6
VRI Vrincioaia 76.55 322 ⇑P P 17 23 25.2 +0.5
VRI Vrincioaia 76.55 322 ⇑P P 17 23 25.2 +0.5
TPGR Topolog 76.56 320 ⇑P P 17 23 25.3 +0.5
PLOR Plostina 76.60 322 ⇑P P 17 23 25.5 +0.5
PLOR Plostina 76.60 322 ⇑P P 17 23 25.5 +0.5
D41A Chassel 76.62 36 P P 17 23 24.2 -0.9
baz=322,SNR=7.5
ARCR ARCALIA 76.63 324 ⇑P P 17 23 26.0 +0.9
KSP Ksiaz 76.72 331 *i* P P 17 23 26.1 +0.6
KSP Ksiaz 76.72 331 P P 17 23 25.8 +0.3
KSP pmax pmax
comp=Z,85nm,1.0s
KPL Plockton 76.74 346 ⇑*eP* P 17 23 25.3 -0.1
KPL IAmb IAmb 17 23 26.4
comp=Z,59nm,0.8s
COVR Voineasa-Covas 76.80 322 ⇑P P 17 23 26.8 +0.7
BISRR Bisoca 76.81 322 ⇑P P 17 23 27.5 +1.3
I37B Waseca 76.81 41 P P 17 23 26.5 +0.4
baz=320,SNR=15
GRER 76.82 322 ⇓P P 17 23 28.5 +2.4
Y22A Socorro 76.86 56 P P 17 23 27.8 +0.9
baz=314,SNR=9.2
OKC Ostrava-Krasne 76.88 329 *eP* P 17 23 26.2 -0.2
OKC Ostrava-Krasne 76.88 329 *eP* P 17 23 26.2 -0.2
OKC AMS AMS 17 58 50.0
comp=Z,200nm,29.8s
HARR Harsova 76.91 321 ⇓P P 17 23 27.2 +0.5
HARR Harsova 76.91 321 ⇓P P 17 23 27.2 +0.5
LANS Liptovska Anna 76.95 328 *eP* P 17 23 28.3 +1.4
LANS pmax pmax
comp=Z,43nm,1.0s
LANS Liptovska Anna 76.95 328 *eP* P 17 23 28.3 +1.4
OSTC Ostas 76.98 331 *eP* P 17 23 27.1 +0.1
OSTC AMS AMS 18 00 10.0
comp=Z,200nm,19.2s
CHVC Chvalec 77.01 331 *eP* P 17 23 27.3 +0.1
CHVC AMS AMS 18 00 10.0
comp=Z,200nm,18.7s
DOPR Dopca 77.06 323 ⇑P P 17 23 28.3 +0.8
KECS Kecovo 77.09 327 *eP* P 17 23 28.6 +0.9
KECS Kecovo 77.09 327 *eP* P 17 23 28.6 +0.9
UPC Upice 77.09 331 *eP* P 17 23 27.8 +0.2
UPC MLR MLR
comp=Z,300nm,18.4s
UPC Upice 77.09 331 *eP* P 17 23 27.8 +0.2
UPC AMS AMS 18 00 20.0
comp=Z,300nm,18.4s
DPC Dobruska-Polom 77.12 331 *eP* P 17 23 28.2 +0.4
DPC MLR MLR
comp=Z,200nm,20.9s
DPC Dobruska-Polom 77.12 331 *eP* P 17 23 28.2 +0.4
DPC AMS AMS 18 00 10.0
comp=Z,200nm,20.9s
COWI Conover 77.13 37 P P 17 23 27.2 -0.8
baz=322
MORC Moravsky Berou 77.15 330 ⇓P P 17 23 29.0 +1.0
MORC Moravsky Berou 77.15 330 ⇓P P 17 23 29.0 +1.0
MORC Moravsky Berou 77.15 330 ⇑*iP* P 17 23 28.5 +0.5
MESR Meseseni 77.17 325 ⇑P P 17 23 29.2 +1.1
KRLC Kraliky 77.18 330 *eP* P 17 23 28.4 +0.2
KRLC MLR MLR
comp=Z,200nm,21.4s
KRLC Kraliky 77.18 330 *eP* P 17 23 28.4 +0.2
KRLC AMS AMS 18 00 00.0
comp=Z,200nm,21.4s
MLR Muntele Rosu 77.19 322 ⇓P P 17 23 28.3 -0.1
MLR Muntele Rosu 77.19 322 P P 17 23 28.6 +0.2
comp=Z,8.6nm,0.4s,baz=321,slow=2.4,SNR=26
MLR LR LR 18 00 34.7
comp=Z,235nm,19.2s,baz=44,slow=38
comp=Z,8.6nm,0.4s
MLR Muntele Rosu 77.19 322 IAmb IAmb 17 23 30.2
comp=Z,16nm,0.6s
MLR Muntele Rosu 77.19 322 ⇓P P 17 23 28.3 -0.1
ISR Istrita 77.21 322 ⇑P P 17 23 28.9 +0.4
ISR Istrita 77.21 322 ⇑P P 17 23 28.9 +0.4
CJR Cluj-Napoca 77.24 324 P P 17 23 31.1 +2.5
AMRR Amara 77.25 321 ⇓P P 17 23 30.0 +1.5
INVG Invergeldie, C 77.30 344 *eP* P 17 23 28.1 -0.6
INVG IAmb IAmb 17 23 29.3
comp=Z,23nm,0.9s
SCHQ Schefferville 77.30 20 P P 17 23 29.0 +0.3
comp=Z,14nm,0.5s,baz=345,slow=5.4,SNR=53
SCHQ LR LR 18 00 48.5
comp=Z,176nm,19.9s,baz=330,slow=38
comp=Z,14nm,0.5s
SCHQ Schefferville 77.30 20 IAmb IAmb 17 23 29.5
comp=Z,20nm,0.6s
G40A Rib Lake 77.31 38 P P 17 23 28.8 -0.2
baz=321,SNR=8.9
121A Cookes Peak, D 77.35 57 P P 17 23 30.8 +1.2
baz=314,SNR=13
121A Cookes Peak, D 77.35 57 P P 17 23 30.9 +1.2
baz=314,SNR=13
MAUC Maruska 77.39 329 *eP* P 17 23 29.7 +0.4
MAUC AMS AMS 17 59 50.0
comp=Z,400nm,21.4s
ICOR Ion Corvin 77.41 320 ⇓P P 17 23 30.7 +1.2
CLL Collm 77.44 333 ⇑*iP* P 17 23 29.4 -0.2
CLL *eS* S 17 33 27.0 +10
CLL pmax pmax
comp=Z,129nm,0.9s
CLL Collm 77.44 333 ⇑*iP* P 17 23 29.4 -0.2
comp=Z,129nm,0.9s
CLL *eS* **S** 17 33 21.0 +4.0
CLL *ePS* **PnS** 17 34 00.0 -0.1
CLL *eSS* SS 17 38 48.0 +33
CLL Lm MLR 18 01 00.0
comp=Z,300nm,20.0s
MZR Muzera 77.48 290 *i* P P 17 23 30.4 +0.1
SNR=5.9
SHAB Shabla 77.48 319 ⇑P P 17 23 33.4 +3.5
ESY Stoneypath 77.49 344 ⇑*eP* P 17 23 29.8 +0.1
BRG Berggiesshubel 77.50 332 ⇑*iP* P 17 23 30.0 +0.1
BRG Amp 17 23 31.2
comp=Z,50nm,1.2s
BRG *ex* x 17 23 45.5
BRG Amp 17 23 46.3
comp=Z,9.7nm,0.8s
BRG Amp 18 01 21.0
comp=Z,0.3nm,19.4s
BRG Amp 18 01 25.0
comp=N,0.1nm,18.3s
BRG Amp 18 01 26.0
comp=E,0.2nm,19.0s
BRG Berggiesshubel 77.50 332 ⇑*iP* P 17 23 30.0 +0.1
BRG *e* 17 23 45.5
BRG pmax pmax
comp=Z,50nm,1.2s
BRG MLR MLR
comp=Z,280nm,19.4s
BRG MLR MLR
comp=N,130nm,18.3s
BRG MLR MLR
comp=E,150nm,19.0s
DRGR 77.55 325 ⇓P P 17 23 30.0 -0.3
DRGR 77.55 325 ⇓P P 17 23 30.0 -0.3
PVCC Panska Ves 77.58 332 *eP* P 17 23 31.1 +0.8
PVCC MLR MLR
comp=Z,400nm,15.6s
PVCC Panska Ves 77.58 332 *eP* P 17 23 31.1 +0.8
PVCC AMS AMS 18 01 00.0
comp=Z,400nm,15.6s
VOIR 77.62 323 ⇑P P 17 23 31.5 +0.7
VOIR 77.62 323 ⇑P P 17 23 31.5 +0.7
EBL Broad Law 77.71 344 ⇑*eP* P 17 23 31.1 +0.1
EBL IAmb IAmb 17 23 32.0
comp=Z,34nm,1.1s
PSZ Piszkesteto 77.78 327 ⇑P P 17 23 31.8 +0.2
PSZ Piszkesteto 77.78 327 ⇑P P 17 23 31.8 +0.2
PSZ Piszkesteto 77.78 327 P P 17 23 32.0 +0.4
PSZ PP **PcP** 17 23 36.2 -5.3
KOLL Kolacno 77.82 328 *eP* P 17 23 32.6 +0.9
E43A Lone Tree Farm 77.83 35 IAmb IAmb 17 23 32.5
comp=Z,24nm,0.8s
E43A Lone Tree Farm 77.83 35 P P 17 23 31.7 -0.1
baz=323,SNR=6.5
F42A Maple Grove Fa 77.83 36 P P 17 23 31.5 -0.3
baz=322
BR131 Keskin Array S 77.85 314 *c iP* P 17 23 32.4 +0.2
BRTR Keskin Array B 77.85 314 P P 17 23 32.8 +0.5
comp=Z,5.4nm,0.6s,baz=75,slow=3.0,SNR=55
BRTR LR LR 18 04 40.5
comp=Z,148nm,18.3s,baz=68,slow=41
comp=Z,5.4nm,0.6s
JAVC Velka Javorina 77.86 329 ⇑*iP* P 17 23 33.6 +1.6
VRAC Vranov 77.89 330 ⇑P P 17 23 32.8 +0.7
VRAC Vranov 77.89 330 P P 17 23 32.9 +0.7
comp=Z,41nm,1.0s,baz=37,slow=5.5,SNR=57
VRAC LR LR 18 01 09.1
comp=Z,220nm,18.6s,baz=30,slow=38
comp=Z,41nm,1.0s
VRAC Vranov 77.89 330 ⇑*iP* P 17 23 32.8 +0.7
PGBU Glenifferbraes 77.96 344 *eP* P 17 23 32.2 -0.1
PGBU IAmb IAmb 17 23 33.6
comp=Z,106nm,1.0s
PRU Pruhonice 78.05 331 *eP* P 17 23 32.9 0.0
PRU MLR MLR
comp=Z,400nm,18.5s
PRU Pruhonice 78.05 331 *eP* P 17 23 32.9 0.0
PRU AMS AMS 18 01 00.0
comp=Z,400nm,18.5s
N35A Tabor 78.10 44 P P 17 23 33.7 +0.3
baz=319
BSZH Besenyszg 78.14 327 P P 17 23 36.7 +3.2
EKA Eskdalemuir Ar 78.15 344 P P 17 23 33.5 +0.1
comp=Z,25nm,0.7s,baz=26,slow=5.3,SNR=113
EKA LR LR 18 02 27.8
comp=Z,68nm,20.5s,baz=0.0,slow=39
comp=Z,25nm,0.7s
KRUC Moravsky 78.16 330 ⇑*iP* P 17 23 34.2 +0.6
ESK Eskdalemuir 78.17 344 ⇑*eP* P 17 23 33.4 -0.1
ESK IAmb IAmb 17 23 34.4
comp=Z,34nm,0.8s
ESK Eskdalemuir 78.17 344 P P 17 23 33.7 +0.2
ESK IAmb IAmb 17 23 34.6
comp=Z,36nm,0.8s
ESK Eskdalemuir 78.17 344 P P 17 23 33.7 +0.2
ESK pmax pmax
comp=Z,36nm,0.8s
LOT Lotru 78.17 323 ⇑P P 17 23 34.1 +0.2

DEV Deva 78.20 324 ⇓P P 17 23 34.3 +0.4
DEV Deva 78.20 324 ⇓P P 17 23 34.3 +0.4
SMOL Smolenice 78.24 329 eP P 17 23 35.1 +1.1
SMOL pmax pmax
comp=Z,36nm,1.5s
SMOL Smolenice 78.24 329 eP P 17 23 35.1 +1.1
TREC Trest 78.30 330 eP P 17 23 34.1 -0.3
TREC MLR MLR
comp=Z,200nm,17.2s
TREC Trest 78.30 330 eP P 17 23 34.1 -0.3
TREC AMS AMS 18 00 40.0
comp=Z,200nm,17.2s
EDMD Edmundbyers 78.37 343⇑eP P 17 23 34.5 -0.1
EDMD IAmb IAmb 17 23 35.8
comp=Z,22nm,0.9s
SIRR Siria 78.41 325 ⇑P P 17 23 35.5 +0.5
MODS Modra-Piesok 78.41 329 eP P 17 23 36.1 +1.1
MODS pmax pmax
comp=Z,99nm,1.4s
MODS Modra-Piesok 78.41 329 eP P 17 23 36.1 +1.1
RAZG Razgrad 78.43 321 ⇑P P 17 23 35.5 +0.3
BUD Budapest 78.48 327 P P 17 23 37.7 +2.3
BUD Budapest 78.48 327 P P 17 23 36.1 +0.7
SRO Srobarova 78.48 328 eP P 17 23 36.5 +1.1
SRO pmax pmax
comp=Z,96nm,1.7s
SRO Srobarova 78.48 328 eP P 17 23 36.5 +1.1
SRO2 Moca 78.49 328 eP P 17 23 35.3 -0.1
SRO2 pmax pmax
comp=Z,21nm,1.0s
SRO2 Moca 78.49 328 eP P 17 23 35.3 -0.1
GDLE Glaisdale, N Y 78.49 342⇑eP P 17 23 35.4 +0.1
GDLE IAmb IAmb 17 23 36.2
comp=Z,48nm,0.9s
NKC Novy Kostel 78.55 333 eP P 17 23 35.6 -0.1
NKC MLR MLR
comp=Z,200nm,15.4s
NKC Novy Kostel 78.55 333 eP P 17 23 35.6 -0.1
NKC AMS AMS 18 01 50.0
comp=Z,200nm,15.4s
NEWG New Galloway 78.56 344⇑eP P 17 23 35.6 -0.1
NEWG IAmb IAmb 17 23 36.5
comp=Z,87nm,1.7s
COPA Copaceanca 78.57 322 ⇓P P 17 23 34.0 -1.9
ZST Bratislava 78.62 329 eP P 17 23 37.4 +1.2
ZST pmax pmax
comp=Z,87nm,1.4s
ZST Bratislava 78.62 329 eP P 17 23 37.3 +1.1
GZR Gura Zlata 78.64 324 ⇑P P 17 23 36.6 +0.2
GZR Gura Zlata 78.64 324 ⇑P P 17 23 36.6 +0.2
CSKK Cskako 78.87 328 P P 17 23 38.0 +0.5
GAL1 Galloway 78.90 344⇑eP P 17 23 37.6 +0.1
BZS Buzias 78.95 325 ⇑P P 17 23 38.1 +0.1
BZS Buzias 78.95 325 ⇑P P 17 23 38.1 +0.1
CLGH Cloghs, Cushen 78.96 345⇑eP P 17 23 37.8 0.0
CLGH IAmb IAmb 17 23 38.9
comp=Z,49nm,0.9s
I42A Draeger Farm, 78.97 38 IAmb IAmb 17 23 38.9
comp=Z,28nm,0.9s
I42A Draeger Farm, 78.97 38 P P 17 23 37.4 -0.8
baz=322,SNR=6
H43A Windswept, Lux 79.01 37 IAmb IAmb 17 23 39.3
comp=Z,38nm,1.1s
H43A Windswept, Lux 79.01 37 P P 17 23 38.3 -0.1
baz=323,SNR=5.5
HPK Haverah Park 79.10 342 eP P 17 23 39.0 +0.3
HPK IAmb IAmb 17 23 40.0
comp=Z,104nm,0.8s
KHC Kasperske Hory 79.11 331 IAmb IAmb 17 23 41.3
comp=Z,35nm,0.7s
KHC Kasperske Hory 79.11 331 eP P 17 23 39.2 +0.3
KHC e 17 23 57.0
KHC MLR MLR
comp=Z,400nm,17.6s
KHC Kasperske Hory 79.11 331 eP P 17 23 39.2 +0.3
KHC ex x 17 23 57.0
KHC AMS AMS 18 01 50.0
comp=Z,400nm,17.6s
CKRC Cesky Krumlov 79.11 331 eP P 17 23 39.0 +0.1
JFWS Jewell Farm 79.13 39 P P 17 23 38.4 -0.7
baz=321
EGYH Egyhazaskeszo 79.18 328 P P 17 23 40.3 +1.1
HERR Herculane 79.20 324 ⇓P P 17 23 39.0 -0.4
IDGL Inch Island, C 79.22 346⇑eP P 17 23 39.3 0.0
SOP Sopron 79.25 329 P P 17 23 40.5 +0.9
SOP Sopron 79.25 329 P P 17 23 40.5 +0.9
AMTX Amarillo 79.27 52 P P 17 23 40.6 +0.6
baz=317,SNR=6.2
AMTX Amarillo 79.27 52 P P 17 23 40.6 +0.6
baz=317
MSTX Muleshoe 79.30 53 P P 17 23 41.0 +0.7
baz=316
GERES GERESS Array B 79.31 331 P P 17 23 40.1 +0.1
comp=Z,5.2nm,0.4s,baz=40,slow=6.9,SNR=93
comp=Z,5.2nm,0.4s
CONA Conrad Observa 79.31 329 eP P 17 23 40.7 +0.7
comp=Z,20nm,0.7s,SNR=22
MPLH Magyarpolny 79.31 328 P P 17 23 40.5 +0.5
DJES Djerdap 79.33 324 ⇓P P 17 23 39.5 -0.6
L40A Anamosa 79.33 41 P P 17 23 39.7 -0.5
baz=321,SNR=6.0
RONA Rosalia, Austr 79.34 329 eP P 17 23 41.1 +0.9
comp=Z,11nm,0.6s,SNR=16
N38A Joes South For 79.35 43 P P 17 23 40.0 -0.3
baz=320
BORA Eskisehir 79.36 316 P P 17 23 39.9 -0.6
MNTX Cornudas Mount 79.38 56 P P 17 23 41.3 +0.7
baz=315,SNR=25
MNTX Cornudas Mount 79.38 56 P P 17 23 41.3 +0.7
baz=315,SNR=25
GRFO Grafenberg 79.42 333 P P 17 23 40.9 +0.4
GRFO Grafenberg 79.42 333 P P 17 23 40.9 +0.4
GRFO pmax pmax
comp=Z,63nm,0.8s
WIM Isle of Man 79.57 344⇑eP P 17 23 41.3 +0.1
MDVR Moldovita 79.58 324 ⇑P P 17 23 39.9 -1.6
LBWR Ladybower, Pea 79.64 342⇑eP P 17 23 42.1 +0.4
LBWR IAmb IAmb 17 23 43.0
comp=Z,144nm,0.9s
MORH Mrgy, Hungar 79.67 327 ⇑P P 17 23 41.1 -0.8
MORH Mrgy, Hungar 79.67 327 ⇑iP P 17 23 41.3 -0.6
MORH Mrgy, Hungar 79.67 327 P P 17 23 41.4 -0.6
WACR West Acre 79.72 340⇑eP P 17 23 42.4 +0.3
WACR IAmb IAmb 17 23 43.3
comp=Z,108nm,1.0s
GMM Mts of Mourne 79.73 345⇑eP P 17 23 41.9 -0.2
MOA Mollin 79.95 330 iP P 17 23 43.8 +0.3
comp=Z,9.0nm,0.8s,SNR=9.3
KOVH Kovagotottos 79.99 327 P P 17 23 43.3 -0.4
ARSA Arzberg 80.00 329 iP P 17 23 44.1 +0.4
comp=Z,11nm,1.1s,SNR=7.9
FRGS Fruska Gora 80.07 326 ⇑P P 17 23 44.3 +0.2
FRGS Fruska Gora 80.07 326⇑iP P 17 23 44.0 -0.1
VLDQ Val d'Or 80.07 29 P P 17 23 42.3 -1.7
VLDQ IAmb IAmb 17 23 43.9
comp=Z,43nm,1.1s
P38A Dawn 80.09 44 IAmb IAmb 17 23 45.3
comp=Z,58nm,1.4s
P38A Dawn 80.09 44 P P 17 23 44.3 -0.1
baz=320,SNR=8.9
L42A Oliver, Polo 80.11 40 P P 17 23 43.9 -0.5
baz=322
BEBN Eben Emael 80.14 337 bP P 17 23 44.4 0.0
comp=Z,60nm,0.7s
CWF Charnwood Fore 80.17 342 eP P 17 23 44.3 -0.2
CWF IAmb IAmb 17 23 46.4
comp=Z,50nm,1.2s
BEHE Becsehely 80.18 328 P P 17 23 44.8 +0.1
WME Myndd Eilian 80.20 344⇑eP P 17 23 44.5 -0.1
BTNL Ternell 80.20 336 dP P 17 23 44.9 +0.1
comp=Z,16nm,1.3s
ELMS Elmsett, Ipswi 80.22 340⇑eP P 17 23 45.1 +0.4
MEM Membach 80.22 336 bP P 17 23 44.9 +0.1
comp=Z,20nm,1.1s
BIOA Bad Ischl, Aus 80.31 331 iP P 17 23 45.7 +0.3
comp=Z,9.7nm,0.6s,SNR=11
BSTI Sart Tilman 80.37 337 dP P 17 23 45.9 +0.3
comp=Z,8.7nm,0.7s
FOEL Foel Wylfa 80.44 343⇑eP P 17 23 46.3 +0.3
FOEL IAmb IAmb 17 23 47.3
comp=Z,64nm,0.9s
BHOU Houvegnez 80.45 336 dP P 17 23 46.1 +0.1
BOVS Bovan 80.51 324 ⇑P P 17 23 45.9 -0.6
N41A Harden Midland 80.56 41 P P 17 23 47.0 +0.1
baz=321,SNR=7.3

RAR Rarotonga 80.56 132 LR LR 17 59 23.5
comp=Z,30nm,19.0s,baz=326,slow=36
BCLA Clavier 80.59 337 dP P 17 23 46.8 0.0
T35B Sooner Cattle 80.61 47 P P 17 23 47.3 +0.1
baz=319,SNR=15
VTS Vitosha 80.66 322 ⇑P P 17 23 48.2 +0.7
VTS Vitosha 80.66 322 IAmb IAmb 17 23 49.3
comp=Z,21nm,0.8s
VTS Vitosha 80.66 322 ⇑P P 17 23 48.2 +0.7
SOKA Sooth 80.66 329 eP P 17 23 47.5 +0.1
comp=Z,22nm,0.7s,SNR=13
PERS Pernice 80.67 329 iP P 17 23 47.5 +0.2
BGES Gesves 80.68 337 bP P 17 23 47.2 0.0
comp=Z,16nm,1.1s
HLM1 Long Mynd 80.72 342⇑eP P 17 23 47.8 +0.3
HLM1 IAmb IAmb 17 23 48.2
comp=Z,20nm,0.7s
DSB Dublin 80.75 345 IAmb IAmb 17 23 49.0
comp=Z,57nm,1.3s
RDO Rodhopi 80.77 320 IAmb IAmb 17 23 49.7
comp=Z,23nm,0.9s
SNF Seneffe 80.80 337 dP P 17 23 48.1 +0.2
comp=Z,19nm,0.9s
BMRD Maredsous 80.84 337 dP P 17 23 48.3 +0.1
comp=Z,23nm,1.1s
RCHB Rochefort 80.85 337 dP P 17 23 48.0 -0.1
comp=Z,14nm,1.1s
DIVS Divibare 80.86 325⇑iP P 17 23 48.0 -0.5
STU Stuttgart 80.87 334 P P 17 23 49.2 +0.8
STU pmax pmax
comp=Z,95nm,0.9s
P40A Paris 80.90 43 P P 17 23 48.7 0.0
baz=321,SNR=17
KBA Koelnbreinsper 80.94 330 eP P 17 23 49.1 +0.2
comp=Z,14nm,0.5s,SNR=15
OBKA Obir 80.98 329 iP P 17 23 48.9 -0.2
comp=Z,7.4nm,0.8s
WMOK Wichita Mounta 81.00 50 P P 17 23 49.7 +0.3
baz=318
WMOK Wichita Mounta 81.00 50 P P 17 23 49.6 +0.3
baz=318
GIVF Givet 81.01 337 eP P 17 23 48.3 -0.7
GIVF pmax pmax
comp=Z,17nm,1.0s
DOU Dourbes 81.08 337 dP P 17 23 49.3 -0.1
BAIF Baives 81.22 337 eP P 17 23 49.5 -0.7
BAIF pmax pmax
comp=Z,32nm,1.4s
CRES Cresnjev 81.22 329⇑iP P 17 23 50.0 -0.3
MCH1 Michaelchurch 81.24 342⇑eP P 17 23 50.5 +0.3
MCH1 IAmb IAmb 17 23 50.9
comp=Z,37nm,0.8s
BBLS Lazići 81.29 325⇑iP P 17 23 51.1 +0.3
WATA Walderalm 81.33 332 iP P 17 23 51.4 +0.3
comp=Z,16nm,0.5s,SNR=18
M44A Midewin, Midew 81.34 39 P P 17 23 51.0 +0.1
baz=323
MONM Monmouth 81.34 342 eP P 17 23 50.7 -0.1
MONM IAmb IAmb 17 23 52.5
comp=Z,50nm,1.2s
WTTA Wattenberg 81.38 332 iP P 17 23 51.8 +0.5
comp=Z,21nm,0.5s,SNR=14
HDIL Hopedale 81.42 40 P P 17 23 51.5 +0.1
baz=322,SNR=6.7
HDIL Hopedale 81.42 40 P P 17 23 51.4 +0.1
baz=322,SNR=6.7
SWN1 Swindon 81.42 341⇑eP P 17 23 51.9 +0.8
SWN1 IAmb IAmb 17 23 52.6
comp=Z,307nm,1.4s
BLY Banja Luka 81.46 327⇑iP P 17 23 51.0 -0.5
RETA Reute 81.48 332 eP P 17 23 52.0 +0.3
comp=Z,28nm,1.1s,SNR=9.8
MOTA Moosalm 81.49 332 iP P 17 23 52.1 +0.2
comp=Z,15nm,0.5s,SNR=20
RUDO Rudo 81.51 325 eP P 17 23 51.1 -0.7
ABTA Abfaltersbach 81.52 331 iP P 17 23 51.1 -0.8
comp=Z,4.4nm,0.6s
BFO Black Forest 81.54 334 P P 17 23 50.8 -1.1
BFO Black Forest 81.54 334 P P 17 23 50.8 -1.1
BFO pmax pmax
comp=Z,14nm,0.8s
CSS Mathiatis 81.55 311 P P 17 23 51.8 -0.4
CSS IAmb IAmb 17 23 54.4
comp=Z,22nm,1.0s
SJES Sjenica 81.55 324⇑iP P 17 23 52.2 0.0
SQTA Sankt Quirin 81.56 332 eP P 17 23 52.5 +0.3
comp=Z,13nm,0.5s,SNR=9.5
ASF Jabal al Asfar 81.60 307 P P 17 23 53.8 +1.2
comp=Z,16nm,0.9s,baz=58,slow=3.6,SNR=28
comp=Z,16nm,0.9s
LPIG La Paz 81.61 65 LR LR 17 51 55.7
comp=Z,37nm,21.0s,baz=234,slow=30
RSBS Rosebush, Pemb 81.65 343 eP P 17 23 52.3 -0.1
RSBS IAmb IAmb 17 23 53.6
comp=Z,68nm,1.4s
IWEX Carrickbyrne, 81.66 345 eP P 17 23 52.6 +0.2
S39A Bolivar 81.68 45 P P 17 23 52.1 -0.8
S39A IAmb IAmb 17 23 53.1
comp=Z,20nm,0.8s
S39A Bolivar 81.68 45 P P 17 23 52.0 -0.8
baz=320,SNR=16
CEY Cerknica 81.68 329⇑iP P 17 23 52.2 -0.5
CEY Cerknica 81.68 329 iP P 17 23 52.3 -0.5
R40A Maddies Statio 81.75 44 P P 17 23 52.5 -0.6
baz=321,SNR=16
TUL1 Leonard 81.75 47 P P 17 23 53.5 +0.2
baz=319,SNR=6.6
TUL1 Leonard 81.75 47 P P 17 23 53.5 +0.2
baz=319,SNR=6.6
MGRS Mrkonjic Grad 81.78 327⇑iP P 17 23 53.6 +0.3
CDF Champ du Feu 81.79 335 eP P 17 23 52.7 -0.7
CDF pmax pmax
comp=Z,17nm,0.8s
MMAI Mount Meron Ar 81.84 308 P P 17 23 52.6 -1.2
comp=Z,2.8nm,0.5s,baz=252,slow=27,SNR=6.9
MMAI LR LR 18 04 44.2
comp=Z,171nm,19.4s,baz=196,slow=39
comp=Z,2.8nm,0.5s
FETA Feichten 81.90 332 eP P 17 23 54.2 +0.2
comp=Z,11nm,0.8s,SNR=7.2
DAVA Damuels 81.95 333 eP P 17 23 54.5 +0.2
comp=Z,9.6nm,0.5s,SNR=7.7
SKDS Skadanscina 82.00 329⇑iP P 17 23 53.4 -1.0
ECH Echery 82.00 335 P P 17 23 54.1 -0.3
ECH IAmb IAmb 17 23 55.4
comp=Z,18nm,0.8s
ECH Echery 82.00 335 P P 17 23 54.1 -0.3
ECH pmax pmax
comp=Z,18nm,0.8s
P43A Skaggs, Pawnee 82.03 41 P P 17 23 54.3 -0.3
baz=322
SRKY Kupres RS 82.03 327 eP P 17 23 54.6 -0.1
UPM Unac-Piva 82.04 325 eP P 17 23 54.2 -0.7
U38A Gravette 82.09 46 P P 17 23 54.6 -0.4
baz=320,SNR=5.8
TX31 Lajitas Ar. Si 82.10 57 P P 17 23 56.0 +0.6
baz=316,SNR=70
TXAR Lajitas Array 82.10 57 P P 17 23 56.0 +0.7
comp=Z,21nm,0.7s,baz=298,slow=4.0,SNR=264
TXAR LR LR 17 55 05.5
comp=Z,36nm,21.9s,baz=330,slow=32
comp=Z,21nm,0.7s
TXAR Lajitas Array 82.10 57 P P 17 23 55.5 +0.2
TXAR Lajitas Array 82.10 57 P P 17 23 55.6 +0.2
SADO Sadowa 82.29 32 LR LR 18 02 12.5
comp=Z,93nm,21.1s,baz=0.0,slow=37
DAVOX Davos/Dischmat 82.39 332 P P 17 23 57.0 +0.4
comp=Z,9.1nm,0.5s,baz=351,slow=3.2,SNR=29
DAVOX LR LR 18 05 38.5
comp=Z,150nm,18.6s,baz=82,slow=39
comp=Z,9.1nm,0.5s
CTI Castel Tesino 82.42 331 P P 17 23 55.3 -1.4
CTI Castel Tesino 82.42 331 P P 17 23 55.3 -1.4
CTI pmax pmax
comp=Z,13nm,0.7s
CCM Cathedral Cave 82.44 43 P P 17 23 56.4 -0.4
CCM IAmb IAmb 17 23 57.7
comp=Z,29nm,0.9s
CCM Cathedral Cave 82.44 43 P P 17 23 56.4 -0.4
CCM pmax pmax
comp=Z,29nm,0.9s
CCM Cathedral Cave 82.44 43 P P 17 23 56.7 -0.1
baz=321,SNR=22
CCM Cathedral Cave 82.44 43 P P 17 23 57.0 +0.2
baz=321
HHAR Hobbs 82.44 46 P P 17 23 56.5 -0.3
baz=320
HAU Haudompre 82.44 335 eP P 17 23 55.8 -0.9
HAU pmax pmax
comp=Z,15nm,0.9s
BRY Bratogost 82.44 325 eP P 17 23 56.0 -0.9
RAYN Ar Rayn 82.45 295 ⇑P P 17 23 57.7 +0.6
RAYN Ar Rayn 82.45 295 iP P 17 23 57.7 +0.6
SNR=10
SLM Saint Louis 82.48 42 P P 17 23 56.8 -0.1
baz=322
L48A N Adams 82.49 37 P P 17 23 57.0 0.0
baz=325
L48A P P 17 23 57.0 0.0
baz=325
AAM Ann Arbor 82.53 36 P P 17 23 57.7 +0.5
baz=325
AAM Ann Arbor 82.53 36 P P 17 23 57.7 +0.5
baz=325
PDG Podgorica 82.53 324 ⇑P P 17 23 56.7 -0.4
PDG Podgorica 82.53 324⇑iP P 17 23 56.8 -0.4
SFIN Lafayette 82.57 39 P P 17 23 57.6 +0.1
baz=324,SNR=6.4
SFIN Lafayette 82.57 39 P P 17 23 57.5 0.0
baz=324,SNR=6.4
TREB Trebinje 82.67 325 eP P 17 23 56.0 -1.9
TRQ Mont Tremblant 82.70 28 P P 17 23 57.9 -0.2
TRQ IAmb IAmb 17 23 58.8
comp=Z,37nm,1.0s
PMOR Pomariorio Ree 82.73 119 eT T 18 55 12.5
comp=Z,39nm,0.2s
DRME Dracevica, Mon 82.76 324⇑iP P 17 23 58.1 -0.3
N47A Urbana 82.80 38 P P 17 23 58.0 -0.6
baz=324,SNR=7.9
N47A P P 17 23 58.0 -0.6
baz=324,SNR=7.9
TUE Stuetta 82.84 333 P P 17 23 58.6 -0.4
TUE IAmb IAmb 17 24 02.4
comp=Z,27nm,1.0s
Q44A Meyer Farm, Va 82.85 41 P P 17 23 59.0 +0.1
baz=322,SNR=6.9
FVM French Village 82.90 43 P P 17 23 59.3 +0.1
baz=322,SNR=7.8
U40A Yellville 82.94 45 IAmb IAmb 17 24 00.2
comp=Z,46nm,1.1s
U40A Yellville 82.94 45 P P 17 23 59.4 -0.2
baz=321,SNR=30
U40A P P 17 23 59.4 -0.2
baz=321,SNR=30
U40A Yellville 82.94 45 P P 17 23 59.3 -0.2
baz=321,SNR=30
X37A Clayton 82.97 48 P P 17 23 59.8 +0.1
baz=320
P46A Rosedale 83.13 40 P P 17 24 00.7 +0.4
baz=324,SNR=16
W39A Magazine 83.35 47 P P 17 24 01.6 0.0
baz=320,SNR=9.1
W39A Magazine 83.35 47 P P 17 24 01.6 0.0
baz=320,SNR=9.1
N49A Columbus Grove 83.43 37 P P 17 24 02.0 +0.1
baz=325,SNR=6.0
N49A P P 17 24 02.0 +0.1
baz=325,SNR=6.0
O48B Farmland 83.55 38 P P 17 24 01.8 -0.7
baz=325,SNR=7.0
O48B Farmland 83.55 38 P P 17 24 02.4 -0.1
baz=325,SNR=7.0
JCT Junction City 83.56 54 P P 17 24 03.3 +0.5
baz=318,SNR=7.9
JCT Junction City 83.56 54 P P 17 24 03.1 +0.3
baz=318,SNR=7.9
SENIN Lac Senin/Sane 83.60 334 IAmb IAmb 17 24 03.6
comp=Z,14nm,0.7s
PPT Papeete 83.61 122 LR LR 18 03 26.3
comp=Z,70nm,18.7s,baz=320,slow=37
PPT2 Papeete2 83.63 122 eLR LR 17 49 38.4
comp=Z,199nm,25.8s
FLN La Foliniere 83.65 340 eP P 17 24 02.3 -0.6
FLN pmax pmax
comp=Z,42nm,1.0s
S44A Carbondale 83.69 42 P P 17 24 03.6 +0.3
baz=322,SNR=6.5
D62A Allapoint, All 83.70 24 P P 17 24 03.1 -0.1
baz=334,SNR=11
D62A P P 17 24 03.1 -0.1
baz=334,SNR=11
LDF La Druitiere 83.72 339 eP P 17 24 02.7 -0.5
LDF pmax pmax
comp=Z,27nm,1.0s
CABF La Chapelle 83.77 335 eP P 17 24 03.0 -0.6
CABF pmax pmax
comp=Z,15nm,1.1s
WHTX Lake Whitney, 83.78 51 P P 17 24 04.2 +0.3
baz=319
PBMO Poplar Bluff 83.84 43 P P 17 24 04.3 +0.2
baz=322,SNR=14
LOR Lormes 83.84 336 eP P 17 24 03.2 -0.7
LOR pmax pmax
comp=Z,19nm,0.7s
BMNY Brushton-Moira 83.92 29 P P 17 24 03.8 -0.5
baz=331,SNR=5.9
MIAR Mount Ida 83.96 47 IAmb IAmb 17 24 06.0
comp=Z,27nm,0.9s
MIAR Mount Ida 83.96 47 P P 17 24 04.9 +0.2
baz=320,SNR=25
MIAR Mount Ida 83.96 47 P P 17 24 05.1 +0.4
baz=320,SNR=25
E62A Clayton Lake 83.98 25 P P 17 24 04.5 0.0
baz=334,SNR=10.0
E62A P P 17 24 04.5 0.0
baz=334,SNR=10.0
P48A Milroy 84.07 39 P P 17 24 04.7 -0.5
baz=324
P48A P P 17 24 04.7 -0.5
baz=324
LONY Lake Ozonia 84.09 29 P P 17 24 04.9 -0.3
baz=331
GRR Gorron 84.09 340 eP P 17 24 04.9 -0.2
GRR pmax pmax
comp=Z,41nm,0.6s
SSF Saint Saulge 84.13 336 eP P 17 24 05.5 +0.1
SSF pmax pmax
comp=Z,21nm,0.9s
W41B Gary Mavity, V 84.17 46 P P 17 24 05.5 -0.2
baz=321,SNR=15
W41B Gary Mavity, V 84.17 46 P P 17 24 06.0 +0.2
baz=321,SNR=15
P49A Miami Univ. Ec 84.33 38 P P 17 24 06.2 -0.3
baz=325,SNR=9.6
P49A Miami Univ. Ec 84.33 38 P P 17 24 06.6 0.0
baz=325,SNR=9.6
BATG Bathurst New B 84.39 22 IAmb IAmb 17 24 07.9
comp=Z,27nm,0.8s
X40A Basin Creek Fa 84.39 46 P P 17 24 07.5 +0.6
baz=321,SNR=5.9
X40A P P 17 24 07.5 +0.6
baz=321,SNR=5.9
X40A Basin Creek Fa 84.39 46 P P 17 24 07.6 +0.6
baz=321,SNR=5.9
SMF Signal de Mont 84.41 336 eP P 17 24 06.3 -0.5
SMF pmax pmax
comp=Z,34nm,0.8s
AVF Avril sur Loir 84.42 336 eP P 17 24 06.4 -0.4
AVF pmax pmax
comp=Z,22nm,0.9s
F62A Pittston Farm, 84.49 26 P P 17 24 07.1 -0.1
baz=334
F62A P P 17 24 07.1 -0.1
baz=334
M53A WI Miller and 84.49 35 P P 17 24 06.7 -0.5
baz=327
WVNY West Valley, N 84.50 33 P P 17 24 07.0 -0.3
baz=328
ACSO Alum Creek Sta 84.52 37 P P 17 24 07.5 +0.1
baz=326,SNR=7.1
ACSO Alum Creek Sta 84.52 37 P P 17 24 07.6 +0.2
baz=326,SNR=7.1
ALLY Alegheny Colle 84.53 34 P P 17 24 07.9 +0.4
baz=327,SNR=6.0
LPL La Plagne 84.54 334 eP P 17 24 07.5 -0.2
LPL pmax pmax
comp=Z,16nm,0.6s
LPG La Plagne 84.55 334 eP P 17 24 07.7 -0.2
LPG pmax pmax
comp=Z,22nm,0.7s
EIL Elat 84.57 306 LR LR 18 06 44.5
comp=Z,155nm,19.6s,baz=93,slow=39
SGMF Saint Gilles 84.64 341 eP P 17 24 07.7 -0.2

SGMF pmax pmax
comp=Z,43nm,0.8s
ROSF Rostrenen 84.73 341 *e*P **P** **17 24 08.3 0.0**
ROSF pmax pmax
comp=Z,57nm,0.9s
BGF Bois d'Agland 84.78 337 *e*P **P**
BGF pmax pmax
comp=Z,9.0nm,0.8s
G62A West of Eustis 84.92 26 P **P** **17 24 09.9 +0.5**
baz=333,SNR=6.7
G62A P **P** **17 24 09.9 +0.5**
baz=333,SNR=6.7
J58A Remsen 84.93 30 P **P** **17 24 09.2 -0.2**
baz=330
J58A P **P** **17 24 09.2 -0.2**
baz=330
N53A Lisbon 84.95 35 P **P** **17 24 10.1 +0.4**
baz=327,SNR=6.9
N53A P **P** **17 24 10.1 +0.4**
baz=327,SNR=6.9
BNI Bardonecchia 84.97 334 IAmb IAmb 17 24 15.6
comp=Z,29nm,1.4s
BNI Bardonecchia 84.97 334 P **P** **17 24 08.4 -1.4**
QUIF Quistinic 85.10 341 *e*P **P** **17 24 09.8 -0.4**
QUIF pmax pmax
comp=Z,30nm,1.0s
P51A Williamsport 85.11 37 P **P** **17 24 10.3 -0.1**
baz=326,SNR=8.9
P51A P **P** **17 24 10.3 -0.1**
baz=326,SNR=8.9
O52A Adamsville 85.11 36 P **P** **17 24 10.4 0.0**
baz=326,SNR=8.7
O52A P **P** **17 24 10.4 0.0**
baz=326,SNR=8.7
J59A Piesco 85.12 30 P **P** **17 24 10.2 -0.2**
baz=331
J59A P **P** **17 24 10.2 -0.2**
baz=331
L56A Greenwood 85.14 32 P **P** **17 24 10.4 -0.2**
baz=329,SNR=5.3
L56A P **P** **17 24 10.4 -0.2**
baz=329,SNR=5.3
R49A Shelbyville 85.14 39 P **P** **17 24 11.3 +0.7**
baz=325
R49A P **P** **17 24 11.3 +0.7**
baz=325
TCF Toulx Ste Croi 85.21 337 *e*P **P** **17 24 10.6 -0.2**
TCF pmax pmax
comp=Z,22nm,1.0s
MBDF Montbardon 85.23 333 *e*P **P** **17 24 10.7 -0.4**
MBDF pmax pmax
comp=Z,8.0nm,0.4s
M55A Ridgway 85.23 33 P **P** **17 24 11.3 +0.2**
baz=328,SNR=10
M55A P **P** **17 24 11.3 +0.2**
baz=328,SNR=10
O53A New Philadelph 85.26 36 P **P** **17 24 11.4 +0.2**
baz=327,SNR=9.4
PKME Peaks-Kenny Pk 85.27 25 P **P** **17 24 11.6 +0.5**
baz=334
PKME Peaks-Kenny Pk 85.27 25 P **P** **17 24 11.5 +0.4**
baz=334
H62A Milan 85.29 27 P **P** **17 24 11.9 +0.7**
baz=333,SNR=10.0
H62A P **P** **17 24 11.9 +0.7**
baz=333,SNR=10.0
T47A Sharon Grove 85.29 41 P **P** **17 24 11.9 +0.5**
baz=324,SNR=15
LBNH Lisbon 85.33 28 P **P** **17 24 12.2 +0.7**
baz=332
ORIF Oris-en-Rattie 85.34 334 *e*P **P** **17 24 11.4 -0.2**
ORIF pmax pmax
comp=Z,15nm,0.8s
Q51A Peebles 85.36 38 P **P** **17 24 11.8 +0.1**
baz=326,SNR=12
Q51A P **P** **17 24 11.8 +0.1**
baz=326,SNR=12
P52A Corning 85.38 36 P **P** **17 24 11.8 0.0**
baz=326,SNR=6.6
833A Chaparral WMA, 85.39 55 P **P** **17 24 12.7 +0.7**
baz=318
ACCN Adirondack Com 85.49 29 P **P** **17 24 12.4 +0.1**
baz=331
MFF Saint Martin d 85.56 339 *e*P **P** **17 24 12.6 0.0**
MFF pmax pmax
comp=Z,35nm,0.8s
WVT Waverly 85.63 42 P **P** **17 24 13.1 0.0**
WVT IAmb IAmb 17 24 14.3
comp=Z,26nm,1.4s
WVT Waverly 85.63 42 P **P** **17 24 13.1 0.0**
WVT pmax pmax
comp=Z,27nm,1.4s
WVT Waverly 85.63 42 P **P** **17 24 13.4 +0.3**
baz=323,SNR=9.2
WVT Waverly 85.63 42 P **P** **17 24 13.2 +0.1**
baz=323
O54A Avella 85.67 35 P **P** **17 24 13.8 +0.6**
baz=327,SNR=5.0
O54A P **P** **17 24 13.8 +0.6**
baz=327,SNR=5.0
BINY Binghamton 85.68 31 P **P** **17 24 13.2 -0.1**
baz=330
IDI Anoyia 85.70 317 ⇑P **P** **17 24 13.0 -0.6**
IDI Anoyia 85.70 317 P **P** **17 24 12.8 -0.8**
comp=Z,8.1nm,0.5s,baz=324,slow=5.7,SNR=14
IDI LR LR 18 08 48.0
comp=Z,60nm,18.8s,baz=41,slow=40
comp=Z,8.1nm,0.5s
IDI Anoyia 85.70 317 IAmb IAmb 17 24 13.9
comp=Z,21nm,1.1s
VIVF Saint-Julien-l 85.78 335 *e*P **P** **17 24 14.6 +0.9**
VIVF pmax pmax
comp=Z,28nm,1.0s
SBF Sospel 85.78 333 *e*P **P** **17 24 13.4 -0.4**
SBF pmax pmax
comp=Z,10.0nm,0.5s
WVL Waterville 85.78 26 P **P** **17 24 14.0 +0.4**
baz=334
P53A Whipple 85.82 36 P **P** **17 24 14.2 +0.2**
baz=327,SNR=5.4
P53A P **P** **17 24 14.2 +0.2**
baz=327,SNR=5.4
Q52A Bidwell 85.88 37 P **P** **17 24 14.5 +0.2**
baz=326
Q52A P **P** **17 24 14.5 +0.2**
baz=326
URZ Urewera 85.94 157 LR LR 17 55 28.8
comp=Z,74nm,21.8s,baz=31,slow=31
M57A Sunshine Farm, 85.99 32 P **P** **17 24 15.1 +0.3**
baz=329,SNR=11
M57A P **P** **17 24 15.1 +0.3**
baz=329,SNR=11
L59A Walton 86.03 31 P **P** **17 24 15.0 0.0**
baz=330,SNR=6.7
L59A P **P** **17 24 15.0 0.0**
baz=330,SNR=6.7
OXF Oxford 86.13 44 P **P** **17 24 15.9 +0.3**
baz=323,SNR=5.5
OXF Oxford 86.13 44 P **P** **17 24 15.9 +0.3**
baz=323,SNR=5.5
SSPA Standing Stone 86.29 33 P **P** **17 24 16.4 +0.2**
SSPA IAmb IAmb 17 24 17.6
comp=Z,22nm,0.9s
SSPA Standing Stone 86.29 33 P **P** **17 24 16.6 +0.4**
baz=329,SNR=6.4
SSPA Standing Stone 86.29 33 P **P** **17 24 16.6 +0.4**
baz=329
U49A Red Boiling Sp 86.30 41 IAmb IAmb 17 24 17.6
comp=Z,22nm,0.7s
U49A Red Boiling Sp 86.30 41 P **P** **17 24 16.7 +0.3**
baz=324,SNR=21
RJF Les Rejaudoux 86.30 337 *e*P **P** **17 24 15.7 -0.6**
RJF pmax pmax
comp=Z,26nm,1.0s
MCWV Mont Chateau 86.33 35 P **P** **17 24 17.2 +0.7**
baz=328,SNR=7.8
MCWV Mont Chateau 86.33 35 P **P** **17 24 17.0 +0.5**
baz=328,SNR=7.8
T50A Nancy 86.33 40 P **P** **17 24 16.7 +0.1**
baz=325
T50A P **P** **17 24 16.7 +0.1**
baz=325
S51A Beattyville 86.39 39 P **P** **17 24 17.0 +0.2**
baz=326,SNR=6.3
S51A P **P** **17 24 17.0 +0.2**
baz=326,SNR=6.3
V48A Smith Brothers 86.43 42 P **P** **17 24 16.9 -0.1**
baz=324,SNR=7.5

Q54A Coxs Mills 86.48 36 P **P** **17 24 17.8 +0.5**
baz=327,SNR=12
Q54A P **P** **17 24 17.8 +0.5**
baz=327,SNR=12
CAF Calviac 86.49 336 *e*P **P** **17 24 17.6 +0.4**
CAF pmax pmax
comp=Z,34nm,0.9s
R53A Hurricane 86.54 37 P **P** **17 24 17.6 +0.1**
baz=326
R53A P **P** **17 24 17.6 +0.1**
baz=326
LMR La Mourre 86.56 333 *e*P **P** **17 24 16.8 -0.7**
LMR pmax pmax
comp=Z,59nm,1.2s
N58A Sunbury 86.57 32 P **P** **17 24 17.9 +0.3**
baz=330,SNR=6.1
N58A P **P** **17 24 17.9 +0.3**
baz=330,SNR=6.1
LFF La Frestale 86.86 337 *e*P **P** **17 24 19.3 +0.4**
LFF pmax pmax
comp=Z,20nm,0.6s
HRV Adam Dziewonsk 86.99 28 ⇑P **P** **17 24 19.6 -0.1**
S54A Dingess, Beckl 87.26 37 P **P** **17 24 21.2 +0.1**
baz=327,SNR=5.1
S54A P **P** **17 24 21.2 +0.1**
baz=327,SNR=5.1
TZTN Tazewell 87.31 39 IAmb IAmb 17 24 23.4
comp=Z,16nm,0.8s
TZTN Tazewell 87.31 39 P **P** **17 24 22.0 +0.7**
baz=326,SNR=8.3
TZTN Tazewell 87.31 39 P **P** **17 24 21.7 +0.3**
baz=326,SNR=8.3
X48A Hartselle 87.36 43 P **P** **17 24 21.3 -0.3**
baz=324,SNR=6.6
R55A Marlinton 87.37 36 P **P** **17 24 22.3 +0.6**
baz=328,SNR=10
R55A P **P** **17 24 22.3 +0.6**
baz=328,SNR=10
V51A Loudon 87.55 40 P **P** **17 24 22.3 -0.2**
baz=325,SNR=7.9
W50A Signal Mountai 87.59 41 P **P** **17 24 22.8 0.0**
baz=325
TUPA Temple Univers 87.74 32 P **P** **17 24 23.6 +0.3**
baz=330,SNR=9.6
146A Union 87.80 45 P **P** **17 24 23.8 +0.1**
baz=323,SNR=7.5
Z47A Carrollton 87.85 44 P **P** **17 24 24.1 +0.1**
baz=323,SNR=7.5
V52A Sevierville 87.86 40 P **P** **17 24 24.3 +0.3**
baz=326,SNR=14
MTLF Montolieu 87.89 336 *e*P **P** **17 24 24.0 0.0**
MTLF pmax pmax
comp=Z,9.0nm,0.7s
TKL Tuckaleechee C 87.93 40 LR LR 18 05 04.1
comp=Z,82nm,21.7s,baz=326,slow=36
TKL Tuckaleechee C 87.93 40 P **P** **17 24 24.7 +0.4**
baz=326,SNR=14
TBI Tubuai 88.09 125 *e*LR LR 17 51 39.0
comp=Z,192nm,31.2s
TBI Tubuai 88.09 125 *e*T T 19 01 54.0
comp=Z,4.3nm,0.3s
U54A Nelsons Funny 88.11 38 P **P** **17 24 24.7 -0.5**
baz=327,SNR=5.4
U54A P **P** **17 24 24.7 -0.5**
baz=327,SNR=5.4
BLA Blacksburg 88.14 37 P **P** **17 24 25.5 +0.1**
baz=327
Y49A Blount Mountai 88.14 43 P **P** **17 24 25.2 -0.2**
baz=324,SNR=7.3
X51A Calhoun 88.32 41 P **P** **17 24 26.3 +0.1**
baz=325
X51A P **P** **17 24 26.3 +0.1**
baz=325
V53A Saluda 88.36 39 P **P** **17 24 26.6 +0.1**
baz=326,SNR=7.4
V53A P **P** **17 24 26.6 +0.1**
baz=326,SNR=7.4
LRAL Lakeview Retre 88.52 43 P **P** **17 24 26.9 -0.3**
baz=324
LRAL Lakeview Retre 88.52 43 P **P** **17 24 26.8 -0.3**
baz=324
VAE Valguarnera 88.71 325 LR LR 18 08 45.9
comp=Z,164nm,18.1s,baz=116,slow=39
EPF Esparros 88.73 337 *e*P **P** **17 24 27.9 -0.1**
EPF pmax pmax
comp=Z,5.0nm,0.7s
T57A Hurt 88.82 36 P **P** **17 24 28.7 +0.2**
baz=328
T57A P **P** **17 24 28.7 +0.2**
baz=328
CASEE Lake Jocassee 88.87 40 P **P** **17 24 29.3 +0.5**
baz=326,SNR=12
SJPF Ste Jean 89.08 338 *e*P **P** **17 24 30.4 +0.8**
SJPF pmax pmax
comp=Z,24nm,1.6s
ETSF Etsaut 89.10 337 *e*P **P** **17 24 29.6 -0.2**
ETSF pmax pmax
comp=Z,7.0nm,0.6s
Z51A Franklin 89.18 42 P **P** **17 24 30.4 +0.1**
baz=325,SNR=5.9
Y52A Lilburn 89.27 41 P **P** **17 24 30.9 +0.2**
baz=325,SNR=5.3
Y52A P **P** **17 24 30.9 +0.2**
baz=325,SNR=5.3
KMSC Kings Mountain 89.47 38 P **P** **17 24 32.0 +0.5**
baz=327,SNR=6.2
KMSC Kings Mountain 89.47 38 P **P** **17 24 31.9 +0.3**
baz=327,SNR=6.2
PAULI Pauline 89.52 39 P **P** **17 24 31.5 -0.3**
baz=327
RPZ Rata Peaks 89.64 163 LR LR 17 59 15.5
comp=Z,170nm,21.0s,baz=344,slow=32
HODGE Hodges 89.81 40 P **P** **17 24 33.3 +0.1**
baz=326,SNR=8.0
GOGA Godfrey 89.92 41 P **P** **17 24 34.1 +0.4**
baz=326
152A Waverly Hall 89.93 42 P **P** **17 24 33.5 -0.3**
baz=325
W57A Gilead 90.06 37 P **P** **17 24 34.6 +0.3**
baz=328,SNR=5.4
W57A P **P** **17 24 34.6 +0.3**
baz=328,SNR=5.4
KEST Kesra 92.26 327 P **P** **17 24 44.5 -0.1**
comp=Z,3.7nm,0.8s,baz=324,slow=8.4,SNR=3.6
KEST LR LR 18 11 14.1
comp=Z,236nm,18.4s,baz=339,slow=39
comp=Z,3.7nm,0.8s
ATD Arta Tunnel 92.70 289 LR LR 18 12 36.0
comp=Z,130nm,18.2s,baz=357,slow=40
ESDC Sonseca Array 93.03 339 P **P** **17 24 47.8 -0.3**
comp=Z,3.0nm,0.9s,baz=18,slow=3.7,SNR=24
ESDC LR LR 18 11 00.4
comp=Z,157nm,21.7s,baz=6.0,slow=38
comp=Z,3.0nm,0.9s
PAB San Pablo 93.25 339 ⇑P **P** **17 24 48.5 -0.6**
MSEY Mahe Island 94.97 268 P **P** **17 24 58.9 +1.6**
MDT Midelt 99.64 337 LR LR 18 14 53.6
comp=Z,91nm,21.9s,baz=11,slow=38
TORD Torodi Ar. Bea 115.42 323 PKP **PKiKP** **17 30 15.5 -1.0**
comp=Z,0.9nm,0.6s,baz=39,slow=1.6,SNR=8.8
TORD PP PP 17 31 00.8 -16
comp=Z,1.0nm,0.8s,baz=15,slow=8.8,SNR=4.2
VNDA Vanda 121.45 176 PKP **PKiKP** **17 30 26.5 +0.2**
comp=Z,0.4nm,0.6s,baz=320,slow=4.4,SNR=3.6
DBIC Dimbokro 123.98 327 PKhKP PKPpre 17 30 30.4
comp=Z,2.6nm,0.5s,baz=91,slow=4.0,SNR=5.1
ETMB Extrema 134.97 51 *e*P **PKiKP** **17 30 56.0 +0.7**
LPAZ La Paz 138.93 59 PKhKP PKPpre 17 30 59.4
comp=Z,1.2nm,0.8s,baz=33,slow=4.6,SNR=4.7
PRPB Parauapebas 139.33 28 *e*P **PKiKP** **17 31 03.5 -0.7**
RCBR Riachuelo 141.94 6 *e*P **PKiKP** **17 31 08.8 -0.9**
NBMA Muriti-CE 143.15 11 *e*P **PKPdf** **17 31 10.5 +1.6**
PEXB Peixe 145.38 29 *e*P **PKPab** **17 31 12.8 +0.1**
SALV Santo Antonio 145.64 43 *e*P **PKPbc** **17 31 13.4 +0.1**
NBAN Anadia - AL 145.71 7 *e*P **PKPdf** **17 31 13.3 0.0**
POCN Pocone 145.72 45 *e*P **PKPab** **17 31 14.4 +0.5**
LCO Las Campanas 145.90 77 **PKPab** **17 31 14.9 +0.2**
LCO Las Campanas 145.90 77 PKP2 **PKPab** **17 31 14.9 +0.2**
GO04 Tololo Observa 146.50 79 **PKPbc** **17 31 16.2 +0.3**
SDBA SAO DESIDERIO 146.74 23 *e*P **PKPbc** **17 31 16.6 -0.1**
NBLA Lagarto - SE 146.85 10 *e*P **PKPbc** **17 31 16.8 -0.2**
TROLL Troll, Antarti 147.31 199 PKP **PKPab** **17 31 17.9 -0.9**
BO01 Tunca 148.54 86 **PKPbc** **17 31 21.3 +0.3**
BDFB Brasilia 148.74 31 PKPbc **PKPbc** **17 31 22.6 +0.4**
comp=Z,9.3nm,0.7s,baz=312,slow=3.7,SNR=14
BDFB Brasilia 148.74 31 *e*P **PKPbc** **17 31 20.6 -1.5**
SNAA Sanae 148.76 197 PKP **PKiKP** **17 31 21.7 -0.2**

GDU01 Guandu, BA 149.25 14 *e*P **PKPbc** **17 31 22.1 -1.2**
VNA2 Neumayer--Watz 150.28 196 PKP **PKiKP** **17 31 25.6 +0.7**
VNA3 Neumayer Olymp 150.45 194 PKP **PKiKP** **17 31 25.8 +0.4**
VNA1 Neumayer--Stat 150.67 196 PKP **PKiKP** **17 31 27.7 +1.9**
IPMB Ipameri, GO 150.81 33 *e*P **PKPdf** **17 31 23.4 +2.0**
CMC01 Camacan, BA 150.86 15 *e*P **PKPdf** **17 31 22.3 +0.8**
PLCA Paso Flores 151.54 97 PKPbc **PKiKP** **17 31 29.1 +0.4**
comp=Z,4.2nm,0.7s,baz=274,slow=2.1,SNR=12
PLCA Paso Flores 151.54 97 **PKiKP** **17 31 28.9 +0.2**
GUA01 Guaratinga, BA 152.00 16 *e*P **PKPbc** **17 31 26.9 -2.9**
CPUP Villa Florida 153.07 58 PKP **PKPdf** **17 31 22.6 -1.9**
comp=Z,4.2nm,1.0s,baz=315,slow=5.3,SNR=3.1
CPUP PKPab **PKPab** **17 31 43.8 +0.2**
comp=Z,6.2nm,1.1s,baz=286,slow=3.0,SNR=4.8
CPUP Villa Florida 153.07 58 *e*P **PKPdf** **17 31 27.2 +2.6**
ABR01 Abrolhos, BA 153.56 14 *e*P **PKPdf** **17 31 27.7 +2.2**

MAN 12 17:15:43.2, 8.49N×127.24E, h10km, mb4.5, ML3.4, MS3.2, 6C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	**1.67**	**287**	⇑*e*P	Pb	17 16 11.6	0.0
BUTP				*e*S		17 17 02.4	
GLSP	**General Luna,**	**1.69**	**320**	⇑*e*P	Pg	17 16 12.3	+1.5
GLSP				*e*S		17 16 37.4	
MATI	**Mati**	**1.81**	**212**	⇓*e*P	Pn	17 16 14.7	+0.2
MATI				*e*S		17 17 12.5	
KCP	**Kidapawan**	**2.58**	**235**	⇓*e*P	Pn	17 16 27.0	+2.2
KCP				*i* S		17 16 58.7	
DDMP	**Don Marcelino,**	**2.81**	**213**	⇑*e*P	Pn	17 16 30.0	+1.9
DDMP				*e*S		17 16 34.5	
MSLP	**Maasin**	**2.86**	**305**	⇑*e*P	Pb	17 16 29.0	+2.0
CTBH	**Cotabato--PC H**	**3.22**	**247**	⇑*i*P	Pn	17 16 34.1	+1.0

NIED ***12*** *17:39:57.9, 31.09N×129.04E, h12km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.37; $M_{\theta\theta}$1.62; $M_{\phi\phi}$-1.25; $M_{r\theta}$0.62; $M_{\theta\phi}$0.86; $M_{\phi r}$2.97; Fault plane solution: $M_0$3.40000×10^{14} NP1: ϕ_s109.00000°, δ29.00000°, λ-5.00000°. NP2:ϕ_s203.00000°, δ88.00000°, λ-119.00000°.*

JMA 12 17:39:57.9±0.2, 31.1N±0.3×129.0E±0.8, h12km±1km, MV3.5/32, SW OFF KYUSHU, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JSJ	**Shimokoshiki**	**0.82**	**44**	*e*P	Pg	17 40 13.2	-0.7
JSJ				*e*S	Sg	17 40 24.5	-0.2
JKC	**Kuchinoerabu**	**1.18**	**122**	*e*P	Pb	17 40 20.0	-0.2
JKC				*e*S	Sb	17 40 34.8	-0.6
JSU	**Suzuyama**	**1.28**	**71**	*e*P	Pn	17 40 21.6	-0.1
JSU				*e*S	Sb	17 40 38.6	+0.2
JYAK	**Yakushimahirau**	**1.52**	**123**	*e*P	Pn	17 40 24.7	-0.3
JFU	**Fukue jima 2**	**1.58**	**351**	*e*P	Pn	17 40 26.4	+0.6
JTN	**Tanegashima 3**	**1.72**	**104**	*e*P	Pn	17 40 27.5	-0.3
JMTN	**Minamitane**	**1.74**	**113**	*e*P	Pn	17 40 28.0	-0.1
JTZ	**Takazaki**	**1.93**	**65**	*e*P	Pn	17 40 31.1	+0.5

NOU 12 17:41:47.2, 17.74S×169.12E, h103km, mb4.1/7, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**0.89**	**271**	P	Pn	17 42 07.1	+0.4
MARNC	**Mare, Loyalty**	**3.86**	**195**	P	Pn	17 42 44.0	-0.6
DZM	**Mont Dzumac**	**4.99**	**210**	P	Pn	17 42 59.6	-0.3
PINNC	**Pines Island,**	**5.10**	**198**	P	Pn	17 43 01.8	+0.6

IDC ***12*** *18:01:59.1±1.4, 45.40N×151.78E, h0km, mb3.8/14, mbtmp3.8/18, ML2.8/4, MS3.0/6, Error ellipse: s-maj=35.6km s-min=18.2km az=160.0*
JMA ***12*** *18:01:59.8±0.8, 45.5°N±5.5°×15.2°E±.°, h30km, MV4.1/14, KURILE ISLANDS REGION*
SKHL ***12*** *18:01:59.5±0.8, 44.70N×152.10E, h47km±6km, mb4.5/3*
MOS ***12*** *18:02:02.2±1.1, 45.03N×151.68E, h45km, mb4.4/8, Error ellipse: s-maj=9.5km s-min=9.1km az=101.0*

ISC 12 18:02:02.5±0.8, 45.00N±0.09×151.80E±0.07, h35km, n81, σ1§84/95, mb3.9/22, MS3.1/5, 10C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.80**	**276**	*e*iPN	**Pn**	**18 02 45.1**	**+0.4**
KUR				*e*S	**Sn**	**18 03 18.8**	**+1.7**
KUR				pmax	pmax		
	comp=Z,74nm,0.4s						
KUR				pmax	pmax		
	comp=N,22nm,0.3s						
KUR				smax	smax		
	comp=N,139nm,0.3s						
KUR				smax	smax		
	comp=E,112nm,0.6s						
KUR				MLR	MLR		
	comp=Z,700nm,14.0s						
KUR	**Kuril'sk**	**2.80**	**276**	*e*P	**Pn**	**18 02 45.2**	**+0.5**
KUR				AMB	AMB	18 02 46.7	
	comp=Z,70nm,0.4s						
KUR				*e*S	**Sn**	**18 03 19.7**	**+2.6**
KUR				A	A	18 03 21.9	
	comp=Z,150nm,0.4s						
KUR				A	A	18 03 21.9	
	comp=Z,100nm,0.4s						
SHO	**Shikotan**	**3.74**	**254**	*e*PN	**Pn**	**18 02 57.1**	**-0.5**
SHO				*e*S	**Sn**	**18 03 41.4**	**+1.1**
SHO				pmax	pmax		
	comp=N,11nm,0.3s						
SHO				pmax	pmax		
	comp=E,14nm,0.3s						
SHO				pmax	pmax		
	comp=Z,28nm,0.3s						
SHO				smax	smax		
	comp=N,51nm,0.3s						
SHO				smax	smax		
	comp=E,114nm,0.4s						
SHO	**Shikotan**	**3.74**	**254**	*e*P	**Pn**	**18 02 57.3**	**-0.3**
SHO				AMB	AMB	18 02 57.9	
	comp=E,30nm,0.3s						
SHO				*e*S	**Sn**	**18 03 41.0**	**+0.7**
SHO				A	A	18 03 43.9	
	comp=E,80nm,0.4s						
SHO				A	A	18 03 43.9	
	comp=E,110nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**4.36**	**259**	*e*PN	**Pn**	**18 03 04.8**	**-1.3**
YUK				*e*S	**Sn**	**18 03 57.8**	**+2.2**
YUK				pmax	pmax		
	comp=Z,88nm,0.3s						
YUK				pmax	pmax		
	comp=E,32nm,0.2s						
YUK				pmax	pmax		
	comp=N,7.0nm,0.1s						
YUK				smax	smax		
	comp=N,101nm,0.3s						
YUK				smax	smax		
	comp=E,183nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**4.36**	**259**	*e*P	**Pn**	**18 03 06.2**	**+0.1**
YUK				AMB	AMB	18 03 08.6	
	comp=E,40nm,0.3s						
YUK				*e*S	**Sn**	**18 03 56.6**	**+1.0**
YUK				A	A	18 04 04.5	
	comp=E,100nm,0.5s						
YUK				A	A	18 04 04.5	
	comp=E,180nm,0.5s						
NEM2	**Nemuro 2**	**4.65**	**252**	*e*P	**Pn**	**18 03 09.9**	**-0.3**
NEM2				*e*S	**Sn**	**18 04 01.5**	**-1.4**
NMR	**Nemuro--Hokkai**	**4.66**	**252**	*e*PN	**Pn**	**18 03 09.8**	**-0.5**
NMR				*e*S	**Sn**	**18 04 01.5**	**-1.7**
NMR	**Nemuro--Hokkai**	**4.66**	**252**	*e*P	**Pn**	**18 03 09.8**	**-0.5**
NMR				*e*S	**Sn**	**18 04 01.7**	**-1.5**
GLVR	**Golovnino**	**4.68**	**257**	*e*PN	**Pn**	**18 03 11.1**	**+0.6**
GLVR				*e*S	**Sn**	**18 04 06.3**	**+2.8**
GLVR				smax	smax		
	comp=E,136nm,0.3s						
GLVR				smax	smax		
	comp=N,277nm,0.4s						
GLVR	**Golovnino**	**4.68**	**257**	*e*P	**Pn**	**18 03 11.1**	**+0.6**
GLVR				*e*S	**Sn**	**18 04 05.5**	**+2.0**
GLVR				A	A	18 04 13.4	
	comp=N,280nm,0.4s						
GLVR				A	A	18 04 13.4	
	comp=N,140nm,0.4s						

RUSJ	**Misakicho**	**4.77**	**261**	*e*PN	**Pn**	**18 03 14.6**	**+2.8**
RUSJ				*e*S	Sn	18 04 12.8	+7.0
JRA	**Rausu**	**4.90**	**260**	*e*P	**Pn**	**18 03 15.5**	**+2.0**
JNK	**Nakash**	**5.28**	**257**	*e*P	**Pn**	**18 03 20.0**	**+1.2**
AKK	**Akkeshi**	**5.40**	**251**	*e*P	**Pn**	**18 03 20.2**	**-0.2**
AKK				*e*S	**Sn**	**18 04 20.4**	**-0.9**
JAK	**Akkeshi**	**5.50**	**251**	*e*P	**Pn**	**18 03 21.6**	**-0.3**
JAK				*e*S	**Sn**	**18 04 22.6**	**-1.3**
JTKR	**Abashiri--Toko**	**5.74**	**262**	*e*P	**Pn**	**18 03 26.7**	**+1.6**
JOB	**Onbets**	**6.12**	**253**	*e*P	**Pn**	**18 03 30.6**	**+0.3**
SKR	**Severo-Kuril's**	**6.38**	**26⇑**	*e*PN	**Pn**	**18 03 35.5**	**+1.6**
SKR	**Severo-Kuril's**	**6.38**	**26**	*e*P	**Pn**	**18 03 35.5**	**+1.6**
SKR				AMB	AMB	18 03 37.2	
	comp=N,30nm,0.5s						
JCH	**Churui**	**6.55**	**252**	*e*P	**Pn**	**18 03 36.8**	**+0.5**
JCH				*e*S	**Sn**	**18 04 48.8**	**-1.0**
JKK2	**Kamakawa 2**	**6.58**	**263**	*e*P	**Pn**	**18 03 38.8**	**+2.1**
ERM	**Erimo**	**6.96**	**248⇑**	*e*PN	**Pn**	**18 03 44.4**	**+2.6**
JNBK	**Urakawa-nobuka**	**7.11**	**251**	*e*P	**Pn**	**18 03 43.8**	**0.0**
JANG	**Nango**	**8.87**	**242**	*e*P	**Pn**	**18 04 06.5**	**-1.7**
JANG				*e*S	**Sn**	**18 05 40.7**	**-6.1**
PETK	**Petropavlovsk-**	**8.99**	**23**	Pn	**Pn**	**18 04 05.5**	**-4.1**
	comp=N,0.2nm,0.3s,baz=184,slow=14,SNR=2.0						
	comp=N,0.7nm,0.5s						
PET	**Petropavlovsk**	**9.20**	**27⇑**	*e*PN	**Pn**	**18 04 15.7**	**+3.2**
KLR	**Kul'dur**	**14.29**	**294**	Pn	**Pn**	**18 05 22.0**	**0.0**
	baz=90,slow=10,SNR=2.6						
	comp=N,0.9nm,0.7s						
MA2	**Magadan**	**14.61**	**358**	LR	LR	18 10 31.6	
	comp=N,47nm,19.4s,baz=187,slow=36						
SEY	**Seymchan**	**17.97**	**1**	P	**Pn**	**18 06 05.7**	**-3.6**
	comp=N,0.1nm,0.3s,baz=174,slow=11,SNR=4.0						
SEY				LR	LR	18 13 29.7	
	comp=N,47nm,19.5s,baz=189,slow=39						
	comp=N,1.8nm,0.9s						
ZEA	**Zeya**	**18.15**	**308**	*e*P	**P**	**18 06 10.8**	**-0.7**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ZEA				MLR	MLR		
	comp=E,100nm,16.0s						
ZEA				MLR	MLR		
	comp=Z,100nm,13.0s						
CN2	**Changchun**	**18.85**	**276**	*e*P	**Pn**	**18 06 18.6**	**-1.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KSRS	**Korea Array**	**19.43**	**256**	P	**Pn**	**18 06 29.4**	**+2.3**
	comp=Z,0.1nm,0.3s,baz=67,slow=9.3,SNR=3.0						
	comp=Z,0.6nm,0.7s						
YAK	**Yakutsk**	**21.35**	**331**	LR	LR	18 15 26.7	
	comp=Z,31nm,19.2s,baz=108,slow=38						
YAK	**Yakutsk**	**21.35**	**331**	*i* P	**P**	**18 06 47.1**	**+0.8**
H11N2	**WAKE ISLAND Hy**	**28.14**	**149**	T	T	18 38 46.7	
	baz=337						
H11N1	**WAKE ISLAND Hy**	**28.16**	**149**	T	T	18 38 43.3	
	baz=337						
H11N3	**WAKE ISLAND Hy**	**28.16**	**149**	T	T	18 38 42.8	
	baz=337						
TIXI	**Tiksi**	**28.91**	**345**	P	**P**	**18 07 54.4**	**-3.2**
	comp=Z,0.9nm,0.4s,baz=96,slow=22,SNR=12						
	comp=Z,0.9nm,0.4s						
TIXI	**Tiksi**	**28.91**	**345**	*i* P	**P**	**18 07 59.9**	**+2.3**
TIXI	**Tiksi**	**28.91**	**345**	*e*P	**P**	**18 07 59.9**	**+2.3**
ULN	**Ulaanbaatar**	**30.65**	**292⇑**	*e*P	**P**	**18 08 11.4**	**-2.1**
ULN				pmax	pmax		
	comp=Z,1.0nm,1.0s						
SONM	**Songino Array**	**31.09**	**292**	P	**P**	**18 08 17.7**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=77,slow=8.2,SNR=5.9						
	comp=Z,1.0nm,0.7s						
GTA	**Gaotai**	**38.36**	**280**	*e*P	**P**	**18 09 22.0**	**+1.8**
GTA				sP	pwP	18 09 36.0	-1.1
GTA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ILAR	**Eielson Array**	**38.49**	**37**	P	**P**	**18 09 21.2**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=257,slow=8.0,SNR=3.2						
	comp=Z,0.3nm,0.7s						
GOMU	**GeErMu**	**43.36**	**279**	P	**P**	**18 10 03.1**	**+1.4**
GOMU				pP	pP	18 10 05.9	-4.0
GOMU				sP	sP	18 10 07.4	-5.9
GOMU				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,30nm,5.0s						
INK	**Inuvik**	**43.62**	**31**	P	**P**	**18 10 02.7**	**-0.1**
	comp=Z,2.2nm,1.1s,baz=304,slow=3.6,SNR=4.3						
	comp=Z,2.2nm,1.1s						
MKAR	**Makanchi Array**	**46.95**	**298**	P	**P**	**18 10 29.4**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=72,slow=8.0,SNR=7.1						
	comp=Z,0.6nm,0.7s						
MKAR	**Makanchi Array**	**46.95**	**298**	*ce*P	**P**	**18 10 30.0**	**+0.4**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**46.95**	**298**	*e*P	**P**	**18 10 30.0**	**+0.4**
KURK	**Kurchatov**	**47.59**	**304**	*ce*P	**P**	**18 10 31.9**	**-2.5**
KURK				pmax	pmax		
	comp=Z,5.0nm,2.5s						
CMAR	**Chiang Mai Arr**	**51.07**	**257**	P	**P**	**18 11 03.6**	**+2.1**
	comp=Z,0.4nm,0.7s,baz=23,slow=7.2,SNR=4.5						
	comp=Z,0.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**51.07**	**257**	*i* P	**P**	**18 11 04.9**	**+3.4**
AAK	**Ala-Archa**	**53.80**	**297**	*ce*P	**P**	**18 11 21.8**	**+0.2**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AAK	**Ala-Archa**	**53.80**	**297**	*e*P	**P**	**18 11 21.8**	**+0.2**
ARU	**Arti**	**55.69**	**318**	LR	LR	18 35 17.9	
	comp=Z,13nm,19.1s,baz=60,slow=36						
ARU	**Arti**	**55.69**	**318**	*c i*P	**P**	**18 11 33.4**	**-1.5**
ARU				*P	**sP**	**18 11 47.8**	**+1.3**
ARU				S	**S**	**18 19 11.5**	**-7.0**
ARU				SS	**SS**	**18 22 58.2**	**-5.1**
ARU				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NVAR	**Mina Array Bea**	**64.07**	**61**	P	**P**	**18 12 33.7**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=297,slow=6.0,SNR=3.3						
	comp=Z,0.3nm,0.6s						
FINES	**FINESS Array B**	**65.23**	**335**	P	**P**	**18 12 39.2**	**-0.7**
	comp=Z,1.0nm,0.7s,baz=39,slow=9.1,SNR=10						
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	**65.23**	**335**	*i* P	**P**	**18 12 38.7**	**-1.2**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NB2	**NORSAR Subarra**	**69.58**	**341**	P	**P**	**18 13 07.4**	**-0.1**
	comp=Z,4.6nm,0.8s,baz=30,slow=6.5						
NOA	**NORSAR Array B**	**69.58**	**341**	P	**P**	**18 13 07.6**	**+0.1**
	comp=Z,3.2nm,0.9s,baz=29,slow=6.4,SNR=12						
NOA				LR	LR	18 46 50.8	
	comp=Z,10.0nm,19.4s,baz=55,slow=39						
	comp=Z,3.2nm,0.9s						
KIV	**Kislovodsk**	**71.36**	**314**	*e*P	**P**	**18 13 19.4**	**+0.7**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,26nm,18.0s						
KIV	**Kislovodsk**	**71.36**	**314**	*e*P	**P**	**18 13 19.4**	**+0.7**
KBZ	**Khabaz**	**71.41**	**314**	P	**P**	**18 13 19.9**	**+1.0**
	comp=Z,3.3nm,0.9s,baz=346,slow=4.2,SNR=6.4						
	comp=Z,3.3nm,0.9s						
KBZ	**Khabaz**	**71.41**	**314⇑**	*e*P	**P**	**18 13 20.2**	**+1.4**
KBZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KBZ	**Khabaz**	**71.41**	**314**	*e*P	**P**	**18 13 20.2**	**+1.4**
AKASG	**Malin Array Be**	**72.48**	**326**	P	**P**	**18 13 24.9**	**-0.2**
	comp=Z,1.9nm,0.5s,baz=32,slow=6.3,SNR=18						
	comp=Z,1.9nm,0.5s						
AKBB	**Malin Array Si**	**72.48**	**326⇓**	*e*P	**P**	**18 13 24.8**	**-0.4**
DPC	**Dobruska-Polom**	**77.46**	**333**	*e*P	**P**	**18 13 55.0**	**+1.0**
DPC	**Dobruska-Polom**	**77.46**	**333**	*e*P	**P**	**18 13 55.0**	**+1.0**
KRLC	**Kraliky**	**77.55**	**332**	*e*P	**P**	**18 13 54.5**	**0.0**
KRLC	**Kraliky**	**77.55**	**332**	*e*P	**P**	**18 13 54.5**	**0.0**
CLL	**Collm**	**77.67**	**335**	*i* P	**P**	**18 13 54.8**	**-0.3**
CLL				*e*PP	**sP**	**18 14 08.0**	**+0.9**
CLL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CLL	**Collm**	**77.67**	**335**	*i* P	**P**	**18 13 54.8**	**-0.3**
	comp=Z,3.0nm,0.9s						
CLL				*ep*P	**sP**	**18 14 08.0**	**+0.9**
BRTR	**Keskin Array B**	**79.03**	**316**	P	**P**	**18 14 03.6**	**+0.6**
	comp=Z,0.6nm,0.8s,baz=56,slow=5.7,SNR=4.9						
BRTR				LR	LR	18 55 46.6	
	comp=Z,27nm,18.5s,baz=116,slow=41						
	comp=Z,0.6nm,0.8s						
TXAR	**Lajitas Array**	**79.16**	**59**	P	**P**	**18 14 03.8**	**0.0**
	comp=Z,0.2nm,0.5s,baz=268,slow=2.4,SNR=2.7						
	comp=Z,0.2nm,0.5s						
KHC	**Kasperske Hory**	**79.41**	**334**	*e*P	**P**	**18 14 05.4**	**+0.7**
KHC	**Kasperske Hory**	**79.41**	**334**	*e*P	**P**	**18 14 05.4**	**+0.7**
CKRC	**Cesky Krumlov**	**79.44**	**333**	*e*P	**P**	**18 14 05.8**	**+0.9**
GERES	**GERESS Array B**	**79.62**	**333**	P	**P**	**18 14 06.1**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=45,slow=6.2,SNR=6.7						
	comp=Z,0.6nm,0.7s						

*IDC **12** 18:05:11.0±2.5, 22°.32**N**×143°.43**E**, h111km±21km, mb3.5/13, mbtmp3.9/15, Error ellipse: s-maj=27.4km s-min=13.5km az=84.0*
*JMA **12** 18:05:15.3±0.3, 23°**N**±1°×14°**3E**±°, h147km, IOTO ISLANDS REGION*
ISC 12 18:05:11.7±0.7, **22°.33N**±0'.08×**143°.4E**±0'.2, **h118**km, **n32**, σ1**9**02/32, **mb3.7**/12, **Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**4.43**	**346**	*e*P		**Pn**	**18 06 18.3**	**+1.4**
JHH2				*e*S		**Sn**	**18 07 07.0**	**-0.6**
CBIJ	**Chichi jima**	**4.88**	**347**	P		**Pn**	**18 06 23.8**	**+0.8**
CBIJ				*e*S		**Sn**	**18 07 17.1**	**-1.2**
JCJ	**Chichijima**	**4.88**	**347**	P		**Pn**	**18 06 23.7**	**+0.8**
	50nm,0.3s,baz=108,slow=17,SNR=22							
JCJ				S		**Sn**	**18 07 16.8**	**-1.6**
	100nm,0.3s,baz=68,slow=23,SNR=12							
BSO1	**Boso 1**	**12.46**	**351**	*e*P		**Pn**	**18 08 05.7**	**+1.2**
BSO3	**Boso 3**	**12.69**	**349**	*e*P		**Pn**	**18 08 06.9**	**-0.7**
JOD2	**Odowara 2**	**13.43**	**345**	*e*P		**Pn**	**18 08 17.4**	**-0.1**
JHU	**Hanno**	**13.95**	**346**	*e*P		**Pn**	**18 08 21.1**	**-3.1**
JRY	**Ryogami san**	**14.20**	**345**	*e*P		**Pn**	**18 08 26.7**	**-0.7**
JHO	**Hitachi**	**14.45**	**351**	*e*P		**Pn**	**18 08 30.6**	**+0.1**
MJAR	**Matsushiro Arr**	**14.87**	**343**	P		**Pn**	**18 08 34.5**	**-1.4**
	0.8nm,0.5s,baz=127,slow=12,SNR=9.2							
KSRS	**Korea Array**	**20.15**	**322**	P		**P**	**18 09 37.5**	**+1.1**
	2.0nm,0.6s,baz=143,slow=8.7,SNR=13							
	2.0nm,0.6s							
H11N1	**WAKE ISLAND Hy**	**22.07**	**92**	T		T	18 32 39.5	
	baz=283							
H11N2	**WAKE ISLAND Hy**	**22.07**	**92**	T		T	18 32 42.8	
	baz=283							
H11N3	**WAKE ISLAND Hy**	**22.08**	**92**	T		T	18 32 41.7	
	baz=283							
H11S3	**WAKE ISLAND Hy**	**22.14**	**96**	T		T	18 32 52.8	
	baz=283,slow=75,SNR=8.0							
H11S1	**WAKE ISLAND Hy**	**22.15**	**96**	T		T	18 32 50.7	
	baz=283,slow=75,SNR=3.7							
H11S2	**WAKE ISLAND Hy**	**22.16**	**96**	T		T	18 32 50.1	
	baz=283,slow=75,SNR=1.7							
KLR	**Kul'dur**	**28.40**	**344**	P		**P**	**18 10 56.0**	**+1.2**
	2.9nm,0.6s,baz=169,slow=9.7,SNR=12							
	2.9nm,0.6s							
SONM	**Songino Array**	**38.99**	**320**	P		**P**	**18 12 27.2**	**+0.6**
	0.2nm,0.3s,baz=126,slow=7.3,SNR=2.7							
	0.2nm,0.3s							
WRA	**Warramunga Arr**	**42.94**	**193**	P		**P**	**18 12 58.6**	**-0.4**
	0.5nm,0.3s,baz=14,slow=8.7,SNR=43							
WRA				PcP		**PcP**	**18 14 47.4**	**-0.2**
	0.8nm,0.9s,baz=356,slow=4.0,SNR=2.8							
	0.5nm,0.3s							
ASAR	**Alice Springs**	**46.64**	**192**	P		**P**	**18 13 27.9**	**-0.5**
	0.3nm,0.4s,baz=8.6,slow=7.5,SNR=16							
ASAR				PcP		**PcP**	**18 15 00.5**	**+0.1**
	0.5nm,0.9s,baz=10,slow=5.8,SNR=3.0							
	0.3nm,0.4s							
ZALV	**Zalesovo Beam**	**53.85**	**321**	P		**P**	**18 14 22.3**	**0.0**
	0.6nm,0.4s,baz=125,slow=7.2,SNR=2.9							
	0.6nm,0.4s							
MKAR	**Makanchi Array**	**54.43**	**312**	P		**P**	**18 14 27.3**	**+0.6**
	0.4nm,0.5s,baz=88,slow=8.3,SNR=6.7							
MKAR				PcP		**PcP**	**18 15 29.1**	**+0.1**
	0.3nm,0.4s,baz=85,slow=3.1,SNR=5.6							
	0.4nm,0.5s							
YKA	**Yellowknife Ar**	**75.80**	**28**	P		**P**	**18 16 44.5**	**0.0**
	0.4nm,0.3s,baz=294,slow=5.6,SNR=6.1							
	0.4nm,0.3s							
ARCES	**ARCESS Array B**	**78.39**	**342**	P		**P**	**18 16 59.0**	**+0.1**
	1.6nm,0.6s,baz=64,slow=8.2,SNR=7.9							
	1.6nm,0.6s							
KBZ	**Khabaz**	**82.09**	**314**	P		**P**	**18 17 19.5**	**+0.4**
	1.6nm,0.6s,baz=200,slow=3.4,SNR=4.8							
	1.6nm,0.6s							
NVAR	**Mina Array Bea**	**82.59**	**52**	P		**P**	**18 17 22.5**	**+0.4**
	0.5nm,0.7s,baz=264,slow=6.1,SNR=4.8							
	0.5nm,0.7s							
FINES	**FINESS Array B**	**82.71**	**335**	P		**P**	**18 17 20.9**	**-1.1**
	1.1nm,0.3s,baz=63,slow=4.6,SNR=34							
	1.1nm,0.3s							
NOA	**NORSAR Array B**	**88.44**	**339**	P		**P**	**18 17 48.8**	**-1.6**
	0.3nm,0.6s,baz=40,slow=4.8,SNR=1.9							
	0.3nm,0.6s							
TORD	**Torodi Ar. Bea**	**128.51**	**310**	PKP		**PKPdf**	**18 24 04.8**	**-0.8**
	0.2nm,0.4s,baz=50,slow=2.9,SNR=5.1							
PLCA	**Paso Flores**	**146.01**	**131**	PKPbc		**PKPbc**	**18 24 37.9**	**-0.1**
	1.2nm,0.4s,baz=256,slow=4.5,SNR=15							
LPAZ	**La Paz**	**149.67**	**84**	PKPbc		**PKPbc**	**18 24 48.9**	**-0.2**
	0.7nm,0.4s,baz=342,slow=6.4,SNR=3.8							

*NNC **12** 18:14:29.6±1.3, 39°.23**N**×75°.34**E**, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=9.7km s-min=5.8km az=165.0*
*SOME **12** 18:14:32.5, 39°.27**N**×75°.47**E**, h10km*
*KRNET **12** 18:14:32.7±0.1, 39°.45**N**×75°.83**E**, mb3.4*
ISC 12 18:14:30.4±1.4, **39°.19N**±0'.07×**75°.51E**±0'.03, **h10**km, **n57**, σ2**9**70/89, **34C-7D**, **Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**2.48**	**303**	⇓*i*P		**Pb**	**18 15 16.7**	**+1.6**
	baz=96							
OHH				⇓*i*S		**Sg**	**18 15 48.5**	**-1.7**
	baz=96							
ARLS	**Aral**	**2.82**	**342**	⇑*i*P		**Pn**	**18 15 17.7**	**+2.1**
	baz=35							
ARLS				⇑*i*S		**Sn**	**18 15 50.7**	**+1.0**
	baz=35							
DRK	**Karamyk**	**2.89**	**277**	⇑*i*P		**Pb**	**18 15 24.3**	**+2.1**
	baz=72							
DRK				⇑*i*S		**Sg**	**18 16 01.8**	**-1.4**
	baz=72							
ULHL	**Ulahol**	**3.11**	**10**	P		**Pg**	**18 15 29.6**	**-0.3**
	SNR=7.8							
ULHL	**Ulahol**	**3.11**	**10⇑**	*e*P		**Pn**	**18 15 19.9**	**+0.3**
	baz=6.0							
ULHL				⇑*i*S		**Sn**	**18 15 54.4**	**-2.5**
	baz=6.0							
UCH	**Uchtor**	**3.13**	**346**	P		**Pn**	**18 15 21.7**	**+1.5**
	SNR=19							
UCH	**Uchtor**	**3.13**	**346⇑**	*e*P		**Pn**	**18 15 21.9**	**+1.7**
	baz=41							
UCH				⇑*i*S		**Sn**	**18 15 57.8**	**0.0**
	baz=41							
KDJ	**Kajisay**	**3.20**	**23⇑**	*i*P		**Pn**	**18 15 20.8**	**-0.1**
	baz=21							
KDJ				⇑*e*S		**Sn**	**18 15 55.9**	**-3.4**
	baz=21							
BOOM	**Boomskoye usch**	**3.32**	**6⇑**	*i*P		**Pn**	**18 15 23.1**	**+0.6**
	baz=2.0							
BOOM				⇑*i*S		**Sn**	**18 15 59.9**	**-2.1**
	baz=2.0							
KBK	**Karagaybulak**	**3.49**	**353**	P		**Pb**	**18 15 29.8**	**-2.6**
	SNR=14							
KBK	**Karagaybulak**	**3.49**	**353**	⇓*i*P		**Pn**	**18 15 26.3**	**+1.4**
	baz=49							
KBK				⇓*i*S		**Sn**	**18 16 05.5**	**-0.8**
	baz=49							
AAK	**Ala-Archa**	**3.53**	**348**	P		**Pn**	**18 15 28.2**	**+2.8**
	SNR=5.7							
AAK	**Ala-Archa**	**3.53**	**348**	⇑*i*P		**Pn**	**18 15 27.2**	**+1.8**
	baz=43							
AAK				⇑*i*S		**Sn**	**18 16 07.0**	**-0.3**
	baz=43							
EKS2	**Erkin-Say**	**3.71**	**340⇑**	*e*P		**Pn**	**18 15 30.3**	**+2.5**
	baz=35							
EKS2				⇑*i*S		**Sn**	**18 16 12.4**	**+0.7**
	baz=35							
BTK	**Batken**	**3.72**	**285**	⇓*e*P		**Pb**	**18 15 35.1**	**-1.2**
	baz=81							
BTK				⇓*i*S		**Sb**	**18 16 20.7**	**-0.8**
	baz=81							
TKM2	**Tokmak 2**	**3.73**	**1**	⇑Pg		**Pb**	**18 15 35.7**	**-0.8**
	13nm,1.1s							
TKM2				⇑Lg		Lg	18 16 25.8	
	15nm,0.7s							
ARK	**Arkit**	**3.75**	**315**	⇑*i*P		**Pn**	**18 15 33.1**	**+4.7**
	baz=10.0							
ARK				⇑*i*S		**Sn**	**18 16 17.2**	**+4.4**
	baz=10.0							
CHMS	**Chumysh**	**3.85**	**352**	P		**Pn**	**18 15 33.7**	**+4.0**
	SNR=8.9							
CHMS	**Chumysh**	**3.85**	**352**	⇑*i*P		**Pn**	**18 15 31.2**	**+1.5**
	baz=47							
CHMS				⇑*i*S		**Sn**	**18 16 13.9**	**-1.1**
	baz=47							
ANVS	**Anan'yevo**	**3.95**	**24⇑**	*e*P		**Pn**	**18 15 31.1**	**0.0**
	baz=22							
ANVS				⇑*i*S		**Sn**	**18 16 13.5**	**-4.1**
	baz=22							
MRKS	**Merke**	**3.95**	**335**	*e*P		**Pg**	**18 15 48.7**	**+2.7**
	2.6nm,0.1s							
MRKS				*e*S		**Sg**	**18 16 42.8**	**+5.5**
	10nm,1.1s							
TNSS	**Tian-Shan**	**4.00**	**15**	*e*P		**Pg**	**18 15 45.4**	**-1.5**
	2.3nm,0.4s							
TNSS				*e*S		**Sg**	**18 16 37.1**	**-1.6**
	6.6nm,0.7s							
TNSS	**Tian-Shan**	**4.00**	**15**	Pg		**Pb**	**18 15 42.5**	**+1.4**
	2.4nm,0.5s							
TNSS				Lg		Lg	18 16 37.1	
	6.7nm,0.7s							
GAR	**Garm**	**4.04**	**269⇑**	*i*P		**Pb**	**18 15 40.5**	**-1.2**
	baz=66							
GAR				⇑*i*S		**Sb**	**18 16 30.1**	**-0.6**
	baz=66							
DGS	**Degeres**	**4.06**	**3**	*e*P		**Pg**	**18 15 46.2**	**-1.8**
	4.9nm,0.3s							
DGS				*e*S		**Sg**	**18 16 38.5**	**-2.1**
	8.0nm,0.5s							
DGS	**Degeres**	**4.06**	**3**	Pg		**Pb**	**18 15 43.5**	**+1.6**
	4.1nm,0.3s							
DGS				Lg		Lg	18 16 38.4	
	8.0nm,0.6s							
TRKS	**Terek-Say**	**4.08**	**306⇑**	*i*P		**Pn**	**18 15 37.4**	**+4.5**
	baz=1.0							
TRKS				⇑*i*S		**Sn**	**18 16 24.9**	**+4.2**
	baz=1.0							
MDOK	**Medeo**	**4.14**	**16**	*e*P		**Pb**	**18 15 47.2**	**+3.8**
	4.2nm,0.6s							
MDOK				*e*S		**Sg**	**18 16 40.3**	**-2.9**
	11nm,0.8s							
MDOK	**Medeo**	**4.14**	**16**	Pg		**Pb**	**18 15 44.6**	**+1.2**
	2.1nm,0.5s							
MDOK				Pg		Pg	18 15 45.7	-4.0
	2.9nm,0.5s							
MDOK				Lg		Lg	18 16 40.3	
	11nm,1.0s							
MDOK				Lg		Lg	18 16 40.4	
	13nm,0.8s							
USP	**Ospenovka**	**4.15**	**350**	P		**Pn**	**18 15 38.2**	**+4.5**
	SNR=5.5							
KOTS	**Kotyrbulak**	**4.22**	**16**	*e*P		**Pg**	**18 15 49.5**	**-1.7**
	4.6nm,0.6s							
KOTS				*e*S		**Sg**	**18 16 44.2**	**-1.7**
	24nm,0.8s							
KOTS	**Kotyrbulak**	**4.22**	**16**	Pg		**Pb**	**18 15 46.8**	**+2.1**
	5.9nm,0.5s							
KOTS				Lg		Lg	18 16 44.2	
	24nm,1.1s							
SGDS	**Sogindy**	**4.31**	**351**	*e*P		**Pg**	**18 15 51.2**	**-1.7**
	5.8nm,0.8s							
SGDS				*e*S		**Sg**	**18 16 47.6**	**-1.2**
	2.7nm,0.8s							
SGDS	**Sogindy**	**4.31**	**351**	Pg		**Pb**	**18 15 48.8**	**+2.5**
	6.4nm,0.5s							
SGDS				Lg		Lg	18 16 47.6	
	3.3nm,0.7s							
SATY	**Saty**	**4.44**	**29**	*e*P		**Pb**	**18 15 52.8**	**+4.3**
	2.7nm,0.5s							
SATY				*e*S		**Sg**	**18 16 50.4**	**-2.6**
	16nm,0.6s							
SATY	**Saty**	**4.44**	**29**	Pg		**Pb**	**18 15 50.2**	**+1.7**
	8.5nm,0.5s							
SATY				Lg		Lg	18 16 50.2	
	17nm,1.1s							
KRBS	**Karabastau**	**4.51**	**2**	*e*P		**Pb**	**18 15 53.6**	**+4.0**
	1.5nm,0.6s							
KRBS				*e*S		**Sg**	**18 16 51.7**	**-3.3**
	4.6nm,0.4s							
ZHN	**Zhinishke**	**4.55**	**28**	*e*P		**Pb**	**18 15 55.0**	**+4.6**
	3.9nm,0.2s							
ZHN				*e*S		**Sg**	**18 16 53.9**	**-2.5**
	8.9nm,0.3s							
ZHN	**Zhinishke**	**4.55**	**28**	Pg		**Pb**	**18 15 52.5**	**+2.1**
	4.2nm,0.2s							
ZHN				Lg		Lg	18 16 53.8	
	10nm,0.3s							
KTBS	**Karatobe**	**4.61**	**11**	*e*P		**Pg**	**18 15 56.4**	**-2.1**
	2.9nm,0.5s							
KTBS				*e*S		**Sg**	**18 16 56.3**	**-1.9**
	21nm,0.5s							
KTBS	**Karatobe**	**4.61**	**11**	Pg		**Pb**	**18 15 54.2**	**+2.9**
	2.9nm,0.5s							
KTBS				Lg		Lg	18 16 56.8	
	21nm,0.5s							
KUU	**Kurty**	**4.74**	**7**	*e*P		**Pb**	**18 15 57.8**	**+4.2**
	1.8nm,0.6s							
KUU				*e*S		**Sg**	**18 16 58.7**	**-3.9**
	10nm,

TELN	Telica	0.33	142	eP		Pg	18 19 36.5	+0.5
CNGN	Cerro Negro	0.50	137	eP		Pg	18 19 39.3	+0.4
CSGN	Cosiguina Volc	0.51	282	eP		Pg	18 19 39.2	-0.1
MOMN	Momotombo	0.67	133	eP		Pg	18 19 42.3	+0.2
CNCH	Conchagua	0.87	298	eP		Pg	18 19 45.6	-0.4
CNCH				eS		Sn	18 19 59.2	-0.3
CNCH				IAML			18 20 03.9	
	comp=Z,827nm,0.3s							
LCND	La Caada	0.94	298	eP		Pg	18 19 47.0	-0.1
LCND				eS		Sg	18 19 59.5	+0.1
LCND				IAML			18 20 02.3	
	comp=Z,238nm,0.3s							
MATN	Matagalpa	1.09	87	eP		Pb	18 19 48.9	-0.8
TGUH	Tegucigalpa,Un	1.20	349	eP		Pn	18 19 52.2	+0.7
TGUH				eS		Sb	18 20 07.9	+0.7
RANC	El Ranchito	1.34	295	eP		Pn	18 19 53.9	+0.5
PACA	Pacayal	1.38	296	eP		Pn	18 19 54.4	+0.4
PACA				eS		Sg	18 20 13.6	-0.1
PACA	Pacayal	1.38	296	eP		Pn	18 19 54.8	+0.7
BOAB	BOACO BROADBAN	1.41	107	eP		Pn	18 19 53.9	-0.3

IDC ***12*** *18:47:01.6±0.7,43°.62N×127°.46W,h0km,mb4.1/21, mbtmp4.1/29,ML3.9/8,MS3.7/53,Error ellipse: s-maj=17.8km s-min=8.2km az=36.0*

NEIC ***12*** *18:47:04.1±2.1,43°.53N±0°.07×127°.4W±0°.1,h10km±2km, mb4.6/49,Error ellipse: s-maj=14.6km s-min=11.1km az=244.0*

GCMT ***12*** *18:47:05.1±0.4,43°.50N±0°.03×127°.82W±0°.03,h24km±2km, MW4.8/83,Moment Tensor Solution. s12,c14; s83,c105; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=0.58±.16; Mθθ=-2.00±.14; Mφφ 1.42±.09; Mrθ=-0.55±.18; Mθφ=-1.24±.09; Mφr=0.12±.14; Best double couple: M₀2.18200×10¹⁶ NP1:φs27.00000°,δ75.00000°,λ3.00000°. NP2: φs296.00000°,δ88.00000°,λ165.00000°. Principal axes: T 1.8840, Plg13.0000°, Azm251.0000°; N 0.6000, Plg74.0000°, Azm107.0000°; P -2.4790, Plg9.0000°, Azm343.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 18:47:04.2±0.5, 43°.56N±0°.06×127°.57W±0°.06, h15km, n448,σ1ᵗ49/404, mb4.5/41, MS3.9/50, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	Edson Butte	2.46	105		Pn	18 47 40.3	-3.5
J01E	Myrtle Point	2.68	97		Pn	18 47 43.4	-3.3
J01E	Myrtle Point	2.68	97	P	Pn	18 47 43.4	-3.3
	baz=280,SNR=67						
I02E	Swisshome, OR	2.75	77	Pn	Pn	18 47 45.0	-2.7
I02E	Swisshome, OR	2.75	77	P	Pn	18 47 45.1	-2.6
	baz=259,SNR=38						
I02E				S	Sn	18 48 18.7	-1.9
	baz=259						
KBO	Bosley Butte	2.80	118		Pn	18 47 45.8	-2.7
K02D	Willamette Mer	2.98	105	P	Pn	18 47 47.7	-3.3
	baz=289,SNR=24						
K02D				S	Sn	18 48 23.9	-2.7
	baz=289						
I03D	Drain, OR	3.06	86	P	Pn	18 47 49.5	-2.6
	baz=268,SNR=309						
I03D				S	Sn	18 48 26.3	-2.2
	baz=268						
DBO	Dodson Butte	3.18	96		Pn	18 47 51.0	-2.8
HEBO	Mount Hebo	3.20	57		Pn	18 47 52.1	-1.9
KSXB	Camp Six Broad	3.22	121		Pn	18 47 51.5	-2.9
COR	Corvallis	3.24	70		Pn	18 47 52.8	-1.7
L02F	Cave Junction	3.27	115	P	Pn	18 47 52.9	-2.0
	baz=299						
BUCK	Buck Mountain	3.37	77		Pn	18 47 54.9	-1.5
HUMO	Hull Mountain	3.51	104		Pn	18 47 55.3	-2.9
H04D	Lebanon	3.61	73	Pn	Pn	18 47 58.4	-1.2
H04D	Lebanon	3.61	73	P	Pn	18 47 58.5	-1.2
	baz=255,SNR=230						
I04A	Tendick Farm,	3.75	85	P	Pn	18 47 59.7	-1.8
	baz=268,SNR=411						
KHMM	Horse Mountain	3.91	132		Pn	18 48 03.2	-0.7
J04D	Umpqua Nationa	3.99	93		Pn	18 48 03.9	-1.0
J04D	Umpqua Nationa	3.99	93	P	Pn	18 48 04.0	-1.0
	baz=276,SNR=139						
J04D				S	Sn	18 48 53.7	+2.1
	baz=276						
YBH	Yreka Blue Hor	4.02	115	Pn	Pn	18 48 04.1	-1.1
	6.6nm,0.3s,baz=290,slow=13,SNR=157						
YBH				Sn	Sn	18 48 51.9	-0.3
	0.9nm,0.3s,baz=221,slow=19,SNR=1.4						
YBH				LR	LR	18 49 25.8	
	comp=Z,269nm,18.3s,baz=222,slow=36						
	34nm,0.5s						
YBH	Yreka Blue Hor	4.02	115		Pn	18 48 03.8	-1.4
H04A	Detroit Lake	4.03	72	Pn	Pn	18 48 04.3	-1.1
KMPM	Mount Pierce	4.05	140		Pn	18 48 05.9	+0.2
L04D	Klamath Falls	4.09	107		Pn	18 48 05.1	-1.2
L04D	Klamath Falls	4.09	107	P	Pn	18 48 05.0	-1.3
	baz=292,SNR=26						
E03A	Lebam	4.12	42	Pn	Pn	18 48 05.4	-1.2
K04D	Chiloquin, OR	4.36	100	P	Pn	18 48 08.5	-1.5
	baz=285,SNR=18						
F04A	Amboy	4.37	55		Pn	18 48 09.6	-0.4
KMRM	Mail Ridge	4.40	138		Pn	18 48 09.8	-0.7
WISH	Wishkah	4.46	36		Pn	18 48 10.3	-0.9
I05D	Terrebonne, OR	4.56	78	P	Pn	18 48 11.7	-1.0
	baz=262,SNR=134						
HOOD	Mount Hood Mea	4.59	65		Pn	18 48 12.8	-0.4
J05D	Fort Rock, OR	4.62	91	P	Pn	18 48 11.8	-1.8
	baz=276,SNR=29						
NLWA	Neilton Lookou	4.63	33		Pn	18 48 12.6	-1.0
G05D	Wamic, OR	4.79	67	P	Pn	18 48 15.4	-0.4
	baz=251,SNR=118						
PINE	Pine Mountain	4.81	85	Pn	Pn	18 48 14.8	-1.5
C03A	Quillayute Air	4.87	24		Pn	18 48 16.1	-0.7
K05A	Summer Lake	4.95	97		Pn	18 48 16.6	-1.6
D03D	Eldon	5.07	37	P	Pn	18 48 18.5	-1.1
	baz=218,SNR=37						
D03D				S	Sn	18 49 18.0	+0.1
	baz=218						
B04A	Port Angeles	5.32	31	Pn	Pn	18 48 22.9	-0.1
D05A	Enumclaw	5.35	45		Pn	18 48 23.8	+0.3
OZB	Mount Ozzard	5.59	14		Pn	18 48 26.1	-0.7
MOD	Modoc Plateau	5.60	105		Pn	18 48 24.9	-2.1
CLRS	Cowichan Lake	5.78	23		Pn	18 48 28.7	-0.7
PGC	Sidney	5.84	28		Pn	18 48 29.5	-0.7
I07A	Izee	5.86	82	Pn	Pn	18 48 29.4	-1.2
F07A	Phinny Hill Vi	5.92	64		Pn	18 48 30.9	-0.4
ORV	Oroville	6.05	129	Pn	Pn	18 48 34.6	+1.4
LTY	Liberty	6.10	50		Pn	18 48 34.0	+0.1
E07A	Sunnyside	6.23	59	Pn	Pn	18 48 35.4	-0.2
HAWA	Hanford	6.36	61	Pn	Pn	18 48 37.3	-0.1
G08A	Pilot Rock	6.40	71	Pn	Pn	18 48 37.0	-1.0
B06A	Marblemount	6.52	38	Pn	Pn	18 48 39.0	-0.5
J08A	Circle Bar Ran	6.62	89		Pn	18 48 39.7	-1.3
WVOR	Wild Horse Val	6.64	97		Pn	18 48 39.2	-2.2
CBB	Campbell River	6.65	12	Pn	Pn	18 48 42.7	+1.4
E08A	Dider Farm, El	6.70	61		Pn	18 48 41.7	-0.3
D08A	Wollman Farm,	7.03	57		Pn	18 48 46.1	-0.4
PAHR	Pah Rah Range	7.23	119	Pn	Pn	18 48 47.6	-1.9
E09A	Wood Farm, Sta	7.30	63	Pn	Pn	18 48 49.0	-1.3
PNTR	Pine Nut	7.47	124		Pn	18 48 54.2	+1.4
B08A	Colville Reser	7.48	47	Pn	Pn	18 48 51.5	-1.3
BMO	Blue Mountains	7.49	76		Pn	18 48 51.6	-1.3
LLLB	Lillooet	8.05	27	Pn	Pn	18 49 01.4	+0.9
BBB	Bella Bella	8.64	358	Pn	Pn	18 49 10.3	+1.8
	1.2nm,0.3s,baz=188,slow=14,SNR=4.2						
BBB				LR	LR	18 51 52.6	
	comp=Z,742nm,18.4s,baz=152,slow=34						
NEW	Newport	8.67	53	Pn	Pn	18 49 08.0	-1.1
	4.0nm,0.3s,baz=232,slow=11,SNR=34						
NEW				LR	LR	18 52 29.6	
	comp=Z,1μm,20.5s,baz=254,slow=38						
	16nm,0.5s						
NEW	Newport	8.67	53	P	Pn	18 49 08.1	-0.9
	baz=240						
NVAR	Mina Array Bea	8.67	123	Pn	Pn	18 49 10.4	+1.1
	0.7nm,0.3s,baz=296,slow=14,SNR=34						
	3.6nm,0.6s						
MLAC	Mammoth, Mammo	8.89	129	P	Pn	18 49 17.6	+5.2
	baz=315						
HLID	Hailey	9.55	85	Pn	Pn	18 49 19.4	-1.9
HLID	Hailey	9.55	85	P	Pn	18 49 22.3	+1.0
	baz=274						
ELK	Elko	9.58	103	Pn	Pn	18 49 22.7	+1.0
	0.4nm,0.3s,baz=296,slow=13,SNR=27						
ELK				LR	LR	18 53 06.1	
	comp=Z,198nm,20.4s,baz=285,slow=38						
	7.0nm,0.8s						
VES	Vestal, Richgr	10.10	137	P	Pn	18 49 31.5	+2.8
	baz=323						
MSO	Missoula	10.16	66		Pn	18 49 28.3	-1.2
MSO	Missoula	10.16	66	P	Pn	18 49 28.5	-1.1
	baz=256						
CWC	Cottonwood Cre	10.17	131	P	Pn	18 49 33.1	+3.4
	baz=318						
GRAC	Grapevine Rang	10.18	127	P	Pn	18 49 35.1	+5.3
	baz=314						
JTMT	Jette	10.20	61	Pn	Pn	18 49 28.9	-1.2
BCYI	Bear Canyon	10.25	81		Pn	18 49 30.8	-0.1
R11A	Troy Canyon, C	10.44	116	P	Pn	18 49 38.1	+4.5
	baz=304						
ISA	Isabella, Lake	10.54	135	P	Pn	18 49 37.9	+3.1
	baz=322						
MCMT	McKenzie Canyo	10.65	78		Pn	18 49 35.3	-1.1
MPMC	Manual Prospec	10.77	131	P	Pn	18 49 41.5	+3.5
	baz=318						
ARVC	Arvin	10.79	138	P	Pn	18 49 40.2	+2.1
	baz=325						
FURC	Furnace Creek,	10.83	127	P	Pn	18 49 42.8	+4.2
	baz=315						
TPNV	Topopah Spring	10.87	124	P	Pn	18 49 42.8	+3.4
	baz=312						
WALA	Waterton Lakes	10.93	55	Pn	Pn	18 49 40.6	+0.6
LRM	Limekiln Ridge	11.00	73		Pn	18 49 40.6	-0.6
BGU	Big Grassy Mou	11.09	99	Pn	Pn	18 49 40.9	-1.5
LRMC	Laurel Mtn Rad	11.10	133	P	Pn	18 49 46.2	+3.8
	baz=320						
OSI	Osito Audit: C	11.26	140	P	Pn	18 49 48.6	+4.0
	baz=326						
EDW2	Edwards Air Fo	11.40	136	P	Pn	18 49 48.5	+1.9
	baz=323						
DUG	Duguay, Tooele	11.50	102	Pn	Pn	18 49 48.1	+0.2
DUG	Duguay, Tooele	11.50	102	P	Pn	18 49 48.2	+0.2
	baz=292						
BOZ	Bozeman (W)	11.55	74		Pn	18 49 47.3	-1.3
BOZ	Bozeman (W)	11.55	74	P	Pn	18 49 48.3	-0.3
	baz=265						
GSC	Goldstone, Bar	11.70	131	P	Pn	18 49 54.0	+3.3
	baz=319						
SHPR	Sheep Range	11.82	122		Pn	18 49 52.1	-0.3
YHL	Hebgen Lake	11.83	78		Pn	18 49 52.8	+0.2
TPAW	Teton Pass	12.07	85		Pn	18 49 55.8	0.0
BFSC	Mount Baldy Ra	12.08	137	P	Pn	18 49 57.4	+1.5
	baz=324						
TUQ	Turquoise Moun	12.10	128	P	Pn	18 49 59.8	+3.7
	baz=316						
NLU	North Lily Min	12.12	102	Pn	Pn	18 49 56.1	-0.3
FLWY	Flagg Ranch	12.20	82		Pn	18 49 55.3	-2.3
H17A	Grant Village	12.27	80	P	Pn	18 50 01.5	+2.9
	baz=272						
LOHW	Long Hollow	12.30	84		Pn	18 49 57.4	-1.7
HEC	Hector,Ludlow	12.31	131	P	Pn	18 50 02.2	+3.2
	baz=319						
CCUT	Cedar City	12.35	114	Pn	Pn	18 49 59.3	-0.3
GMRC	Granite Mounta	12.72	130	P	Pn	18 50 07.9	+3.3
	baz=318						
BELC	Belle Mtn. Jos	13.12	133	P	Pn	18 50 12.9	+2.8
	baz=321						
BW06	Boulder Array	13.17	87		Pn	18 50 11.9	+1.1
BW06	Boulder Array	13.17	87	P	Pn	18 50 12.0	+1.1
	baz=280						
PD31	Pinedale Array	13.18	87		Pn	18 50 12.0	+1.1
PDAR	Pinedale Array	13.18	87	Pn	Pn	18 50 12.1	+1.2
	0.1nm,0.3s,baz=277,slow=12,SNR=39						
PDAR				LR	LR	18 55 35.2	
	comp=Z,824nm,18.4s,baz=281,slow=39						
	9.5nm,1.0s						
PDAR	Pinedale Array	13.18	87	Pn	Pn	18 50 11.3	+0.4
PFO	Pinyon Flats O	13.18	135	Pn	Pn	18 50 13.3	+2.4
	0.2nm,0.3s,baz=321,slow=17,SNR=4.3						
	2.4nm,0.8s						
PFO	Pinyon Flats O	13.18	135	P	Pn	18 50 13.2	+2.3
	baz=323						
RLMT	Red Lodge	13.20	77	Pn	Pn	18 50 10.4	-0.8
RLMT	Red Lodge	13.20	77	P	Pn	18 50 11.5	+0.3
	baz=269						
WRAK	Wrangell Islan	13.23	348	P	Pn	18 50 15.1	+3.7
	baz=164						
IRM	Iron Mountain	13.47	130	P	Pn	18 50 16.9	+2.2
	baz=318						
P18A	Preston Nutter	13.54	101		Pn	18 50 13.0	-3.0
T35M	Bob Quinn	13.55	354	P	Pn	18 50 19.9	+4.2
	baz=171						
BC3	Big Chuckawall	13.68	132	P	Pn	18 50 20.0	+2.4
	baz=320						
MONP2	Monument Peak	13.77	137	P	Pn	18 50 21.5	+2.5
	baz=324						
PDMCI	Parker Dam,Lak	13.93	127	P	Pn	18 50 23.7	+2.6
	baz=316						
SWSC	Sam W. Stewart	14.04	135	P	P	18 50 26.8	-3.5
	baz=323						
IKP	In-n-Pah, Jac	14.12	137	P	P	18 50 28.7	-2.7
	baz=324						
GLA	Glamis	14.47	132	P	Pn	18 50 31.2	+2.7
	baz=321						
O20A	White River Ci	14.80	97	P	Pn	18 50 32.5	-0.6
	baz=290						
DLBC	Dease Lake	14.98	355	Pn	Pn	18 50 35.5	+0.2
	0.1nm,0.3s,baz=174,slow=11,SNR=4.6						
DLBC				LR	LR	18 55 34.8	
	comp=Z,433nm,21.1s,baz=168,slow=34						
	3.6nm,0.9s						
DLBC	Dease Lake	14.98	355	Pn	Pn	18 50 37.5	+2.3
DLBC				IAmb	IAmb	18 50 44.1	
	comp=Z,16nm,0.9s						
DLBC	Dease Lake	14.98	355	P	P	18 50 38.9	-1.9
	baz=172						
RWWY	Rawlins	15.10	90		Pn	18 50 35.0	-2.2
LAO	LASA Array	15.38	71	P	P	18 50 44.5	-0.8
	baz=266,SNR=8.0						
LAO	LASA Array	15.38	71	P	P	18 50 44.4	-0.8
	baz=266						
K22A	Casper	15.40	86	P	Pn	18 50 39.3	-1.7
	baz=280						
K22A	Casper	15.40	86	P	Pn	18 50 39.5	-1.4
	baz=280						
MVCO	Mesa Verde	15.84	107	P	Pn	18 50 48.6	+1.8
	baz=300						
N23A	Red Feather La	16.23	92		Pn	18 50 49.9	-2.0
N23A				IAmb	IAmb	18 51 14.8	
	comp=Z,35nm,0.8s						
N23A	Red Feather La	16.23	92	P	Pn	18 50 50.7	-1.1
	baz=287						
214A	Organ Pipe Nat	16.41	130	P	P	18 50 58.3	+1.6
	baz=320						
P32M	Atlin	16.49	349	P	P	18 50 57.6	+0.1
	baz=164						
S22A	4UR Ranch, Cre	16.76	103		Pn	18 50 57.1	-1.5
S22A	4UR Ranch, Cre	16.76	103	P	Pn	18 50 58.5	0.0
	baz=297						
PLBC	Pleasant Camp	16.81	344	P	Pn	18 50 60.0	+1.1
	baz=157						
ISCO	Idaho Springs	16.81	95		Pn	18 50 58.6	-0.8
ISCO				IAmb	IAmb	18 51 04.5	
	comp=Z,41nm,0.9s						
ISCO	Idaho Springs	16.81	95	P	Pn	18 50 58.6	-0.8
	baz=290,SNR=38						
ISCO	Idaho Springs	16.81	95	P	Pn	18 50 58.1	-1.2
	baz=290						
RSSD	Black Hills	16.98	80	P	Pn	18 51 01.2	-0.1
	baz=276,SNR=8.7						
RSSD	Black Hills	16.98	80	P	P	18 51 02.3	-0.9
	baz=276						
P33M	Teslin, Yukon	16.98	351	P	P	18 51 03.6	+0.7
	baz=166						
TUC	Tucson	17.32	125	P	P	18 51 07.5	+0.7
	baz=316						
Q24A	Divide	17.45	98	P	Pn	18 51 07.0	-0.4
	baz=293						
PNL	Peninsula	17.68	340	P	P	18 51 10.7	+0.1
	baz=150						
WHY	Whitehorse	17.69	348	P	P	18 51 10.9	+0.2
	baz=162						
SDCO	Great Sand Dun	17.70	102		Pn	18 51 10.3	-0.1
SDCO	Great Sand Dun	17.70	102	P	P	18 51 10.8	-0.4
	baz=296,SNR=53						
SDCO	Great Sand Dun	17.70	102	P	P	18 51 10.8	-0.4
	baz=296						
O30N	Mendenhall	17.99	346	P	P	18 51 15.6	+1.6
	baz=159						
HYT	Haines Junctio	18.30	344		P	18 51 18.4	+0.9
HYT	Haines Junctio	18.30	344	P	P	18 51 19.3	+1.8
	baz=156						
ANMO	Albuquerque	18.43	111	P	Pn	18 51 19.5	+0.2
	comp=Z,0.1nm,0.3s,baz=310,slow=12,SNR=17						
	comp=Z,4.2nm,0.9s						
ANMO	Albuquerque	18.43	111	P	Pn	18 51 19.3	0.0
ANMO	Albuquerque	18.43	111	P	Pn	18 51 20.3	+1.0
	baz=304,SNR=13						
ANMO	Albuquerque	18.43	111	P	Pn	18 51 20.3	+1.0
	baz=304						
YUK6	Outpost Mounta	18.58	343	P	Pn	18 51 22.4	+1.4
	baz=154						
N31M	Braeburn, Yuko	18.61	348	P	Pn	18 51 22.7	+1.5
	baz=160						
T25A	Trinidad	18.75	102	P	Pn	18 51 24.2	+1.1
	baz=297						
N30M	Aishikik Lake	18.81	346	P	Pn	18 51 24.5	+0.9
	baz=158						
YUK4	Talbot Arm	19.00	343	P	Pn	18 51 27.5	+1.4
	baz=154						
FARO	Faro, Yukon	19.01	352	P	Pn	18 51 26.9	+1.0
	baz=166						
121A	Cookes Peak, D	19.02	119	P	Pn	18 51 28.1	+1.7
	baz=311						
121A				S	S	18 55 10.5	+9.2
	baz=311						
121A	Cookes Peak, D	19.02	119	P	Pn	18 51 28.2	+1.7
	baz=311						
M31M	Drury Creek, Y	19.11	350	P	Pn	18 51 27.4	+0.3
	baz=164						
E28A	Huff	19.19	72	P	Pn	18 51 28.9	+0.7
	baz=270						
YUK8	Steele Glacier	19.19	342	P	Pn	18 51 28.6	+0.2
	baz=152						
GRNC	Granite Creek	19.20	339	P	P	18 51 26.7	-0.8
MMPY	Sheldon Lake,	19.22	355	P	Pn	18 51 29.6	+1.1
	baz=171						
KSCO	Kaye Shedlock'	19.26	95	P	Pn	18 51 29.8	+0.6
	baz=292						
KSCO	Kaye Shedlock'	19.26	95	P	Pn	18 51 29.7	+0.5
	baz=292						
CTGM	Chitina Glacie	19.29	339	P	P	18 51 27.8	-0.6
CTGM				IAmb	IAmb	18 51 33.3	
	comp=Z,38nm,1.4s						
CTG	Chitna Glacier	19.29	339	P	Pn	18 51 30.3	+0.9
	baz=148						
BARN	Barnard Glacie	19.46	339	P	P	18 51 30.6	+0.4
BARN				IAmb	IAmb	18 51 34.5	
	comp=Z,28nm,1.0s						
YUK3	Moose Creek	19.78	342	P	Pn	18 51 34.8	-0.6
	baz=151						
M30M	Minto, Yukon	19.81	347	P	P	18 51 34.1	+0.3
M30M				IAmb	IAmb	18 51 38.5	
	comp=Z,30nm,1.3s						
M30M	Minto, Yukon	19.81	347	P	Pn	18 51 35.2	-0.3
	baz=159						
WRGLY	Wrigley	19.85	5	P	Pn	18 51 37.6	+1.6
	baz=188						
MDND	Maddock	19.94	68	P	Pn	18 51 36.7	-0.5
	baz=268,SNR=5.5						
MDND	Maddock	19.94	68	P	Pn	18 51 36.6	-0.6
	baz=268						
MCARA	McCarthy VSAT	20.09	338	P	Pn	18 51 38.2	-0.6
	baz=145						
BMRM	Bremner River	20.20	336	P	Pn	18 51 39.8	-0.4
	baz=142						
EYAK	Cordova Ski Ar	20.24	334	P	Pn	18 51 42.6	+2.1
	baz=139						
YKA	Yellowknife Ar	20.43	17	P	P	18 51 40.7	+0.1
	comp=Z,2.6nm,0.6s,baz=205,slow=11,SNR=13						
YKA				LR	LR	18 59 10.7	
	comp=Z,83nm,19.3s,baz=201,slow=36						
	comp=Z,2.6nm,0.6s						
BVCY	Beaver Creek	20.44	342	P	Pn	18 51 42.2	-0.7
	baz=151						
SUSD	Miller	20.56	78	S	Sn	18 55 33.9	-2.1
	baz=278						
M27K	Edge Creek, AK	20.62	341	P	P	18 51 43.9	+1.0
M27K	Edge Creek, AK	20.62	341	P	Pn	18 51 44.4	-0.8
	baz=149						
N25K	Chitina, Valde	20.71	337	P	Pn	18 51 45.5	-0.7
	baz=143						
GLI	Glacier Island	20.93	333	P	P	18 51 47.1	+1.1
GLI				IAmb	IAmb	18 51 51.1	
	comp=Z,45nm,1.0s						
GLI	Glacier Island	20.93	333	P	P	18 51 47.3	+1.3
	baz=137						
M26K	Nabesna, AK	20.93	340	P	Pn	18 51 47.6	-1.1
	baz=147						
KLU	Klutina	21.02	335	P	P	18 51 48.7	+1.7
	baz=140						
K31A	O'Neill	21.02	83	P	P	18 51 48.2	+1.0
	baz=282						
MNTX	Cornudas Mount	21.11	117	P	P	18 51 50.3	+2.0
	baz=311,SNR=25						
MNTX	Cornudas Mount	21.11	117	P	P	18 51 50.0	+1.7
	baz=311						
KDAK	Kodiak Island	21.14	321	P	P	18 51 49.3	+1.0
	comp=Z,26nm,0.9s,baz=134,slow=5.7,SNR=22						
KDAK				LR	LR	18 57 53.5	
	comp=Z,561nm,21.3s,baz=141,slow=31						
	comp=Z,26nm,0.9s						
KDAK	Kodiak Island	21.14	321	P	P	18 51 49.3	+1.0
KDAK				IAmb	IAmb	18 51 50.3	
	comp=Z,38nm,0.9s						
KDAK	Kodiak Island	21.14	321	P	P	18 51 49.5	+1.2
	baz=121						
OHAK	Old Harbor	21.18	319	P	P	18 51 50.1	+1.3
	baz=119						
BCAR	Beaver Creek A	21.21	342	P	P	18 51 50.6	+1.5
SEW	Seward	21.22	329	P	P	18 51 50.5	+1.4
	baz=131						
L27K	Beaver Creek,	21.22	342	P	P	18 51 50.9	+1.7
	baz=150						
SII	Sitkinak Islan	21.31	317	P	P	18 51 50.4	+0.2
	baz=116						
BRSE	Bradley Lake S	21.48	327	P	P	18 51 53.2	+1.2
	baz=128						
Q20K	Shuyak Island	21.50	323	P	P	18 51 53.5	+1.3
	baz=123						
MSTX	Muleshoe	21.50	108	P	P	18 51 53.6	+1.0
	baz=304						
MSTX	Muleshoe	21.50	108	P	P	18 51 53.6	+1.0
	baz=304						
HARP	HAARP	21.51	337	P	P	18 51 54.1	+1.8
	baz=143						
CNPM	China Poot	21.55	326	P	P	18 51 53.7	+1.0
CNPM				IAmb	IAmb	18 51 54.8	
	comp=Z,35nm,1.1s						
L26K	Log Cabin Wild	21.55	340	P	P	18 51 54.4	+1.7
	baz=147						
M24K	Tolsona, Glenn	21.57	336	P	P	18 51 53.5	+0.5
	baz=140						
DAWY	Dawson	21.63	346	P	P	18 51 55.1	+1.5
	baz=156						
SCM	Sheep Creek Mo	21.71	334

comp=Z,32nm,0.9s
ECSD EROS Data Cent 22.34 79 P P 18 52 01.4 0.0
baz=280,SNR=22
ECSD EROS Data Cent 22.34 79 P P 18 52 01.6 +0.2
baz=280
WAT6 Susitna Watana 22.40 335 P P 18 52 02.8 +0.8
baz=138
O20K Slope Mountain 22.44 326 P P 18 52 03.3 +1.0
baz=126
N33B J Bar K, Exete 22.45 87 P P 18 52 03.3 +0.8
baz=287
AGMN Agassiz Nation 22.46 67 P P 18 52 02.6 0.0
AGMN Agassiz Nation 22.46 67 P P 18 52 02.2 -0.4
baz=270,SNR=15
AGMN Agassiz Nation 22.46 67 P P 18 52 02.3 -0.4
baz=270
SCRK Sand Creek 22.51 341 P P 18 52 04.0 +1.0
baz=147
RIDG Independent Ri 22.52 340 P P 18 52 04.0 +0.8
baz=145
ULM Lac du Bonnet 22.54 62 P P 18 52 02.4 -1.0
comp=Z,14nm,0.9s,baz=275,slow=9.3,SNR=14
ULM LR LR 19 01 03.7
comp=Z,510nm,20.2s,baz=271,slow=38
comp=Z,14nm,0.9s
ULM Lac du Bonnet 22.54 62 P P 18 52 02.1 -1.3
ULM IAmb IAmb 18 52 04.9
comp=Z,22nm,1.1s
SUA Susitna One 22.60 331 P P 18 52 04.8 +0.7
baz=132
I29M Ogilvie Camp, 22.66 348 P P 18 52 05.5 +0.9
I29M Ogilvie Camp, 22.66 348 P P 18 52 05.1 +0.6
baz=159
DHY Denali Highway 22.67 336 P P 18 52 06.0 +1.2
DHY IAmb IAmb 18 52 08.1
comp=Z,30nm,1.0s
DHY Denali Highway 22.67 336 P P 18 52 05.8 +1.0
baz=140
RSO Redoubt South 22.72 327 P P 18 52 07.1 +1.6
K24K Donnelly Dome 22.81 339 P P 18 52 09.6 +3.4
baz=144
J26L Joseph Creek 22.86 342 P P 18 52 07.9 +1.2
baz=148
SPCR Spurr Chakacha 22.97 329 P P 18 52 09.9 +2.0
baz=129
CUT Chulitna 23.08 333 P P 18 52 10.5 +1.6
baz=134
P18K Big Mountain, 23.16 323 P P 18 52 10.2 +0.4
baz=121
SKT Skwentna 23.23 331 P P 18 52 11.4 +1.0
baz=131
J25K Salcha River, 23.37 341 P P 18 52 12.9 +0.9
baz=146
O18K Koktuh Hills 23.39 324 P P 18 52 12.8 +0.7
baz=122
P17K Kvichak River 23.60 322 P P 18 52 14.5 +0.4
baz=118
HDA Harding Lake 23.60 339 P P 18 52 15.7 +1.5
HDA Harding Lake 23.60 339 P P 18 52 14.9 +0.7
baz=143
N19K Bonanza Creek 23.62 326 IAmb IAmb 18 52 17.1
comp=Z,14nm,0.9s
N19K Bonanza Creek 23.62 326 P P 18 52 15.1 +0.6
baz=124
MCK McKinley 23.63 336 P P 18 52 15.5 +1.0
baz=138
N35A Tabor 23.72 85 P P 18 52 16.4 +0.8
baz=287,SNR=7.1
M20K Styx River 23.74 329 P P 18 52 16.5 +0.9
baz=128
TX31 Lajitas Ar. Si 23.79 119 P P 18 52 17.4 +1.0
TX31 Lajitas Ar. Si 23.79 119 P P 18 52 17.3 +1.0
baz=313,SNR=32
TX32 Lajitas Array 23.79 119 P P 18 52 17.2 +0.8
TX32 IAmb IAmb 18 52 21.4
comp=Z,19nm,1.2s
TXAR Lajitas Array 23.79 119 P P 18 52 17.2 +0.9
comp=Z,5.4nm,0.6s,baz=300,slow=8.4,SNR=64
TXAR PcP **PcP 18 55 58.5 -1.2**
comp=Z,0.2nm,0.6s,baz=183,slow=0.5,SNR=3.6
comp=Z,5.4nm,0.6s
TRF Thorofare Moun 23.83 335 P P 18 52 18.4 +1.8
baz=136
ILAR Eielson Array 23.88 339 P P 18 52 17.2 +0.4
comp=Z,6.2nm,0.8s,baz=151,slow=9.1,SNR=70
ILAR PcP **PcP 18 55 59.9 +0.8**
comp=Z,0.8nm,0.7s,baz=168,slow=3.5,SNR=5.8
comp=Z,6.2nm,0.8s
WMOK Wichita Mounta 23.90 102 P P 18 52 17.8 +0.4
WMOK Wichita Mounta 23.90 102 P P 18 52 18.2 +0.9
baz=300,SNR=20
WMOK Wichita Mounta 23.90 102 P P 18 52 18.2 +0.9
baz=300
LPIG La Paz 24.04 138 LR LR 19 00 43.9
comp=Z,298nm,19.5s,baz=302,slow=34
PPLA Purkeypile 24.07 332 P P 18 52 19.6 +0.8
PPLA Purkeypile 24.07 332 P P 18 52 19.7 +1.0
baz=132
N18K Kilae Creek 24.12 325 P P 18 52 19.6 +0.5
N18K IAmb IAmb 18 52 22.2
comp=Z,22nm,1.1s
N18K Kilae Creek 24.12 325 P P 18 52 19.9 +0.7
baz=122
O17K Koliganek Bris 24.17 322 P P 18 52 20.1 +0.6
baz=119
F36A Milaca 24.20 73 P P 18 52 19.7 -0.3
baz=277,SNR=17
M19K Big River Lodg 24.22 329 P P 18 52 21.3 +1.2
baz=127
NEA2 Nenana 24.32 337 P P 18 52 21.9 +0.9
baz=139
L20K Farewell, AK 24.39 330 P P 18 52 22.0 +0.4
baz=128
ABTX Abilene, Hawle 24.43 107 P P 18 52 22.6 +0.4
baz=305,SNR=8.8
ABTX Abilene, Hawle 24.43 107 P P 18 52 22.9 +0.7
baz=305
BPAW Bear Paw Mtn. 24.52 335 P P 18 52 22.1 -0.6
BPAW Bear Paw Mtn. 24.52 335 P P 18 52 22.7 -0.1
baz=136
T35B Sooner Cattle 24.52 95 P P 18 52 22.6 -0.5
baz=296
O16K Kokwok River B 24.54 322 P P 18 52 23.6 +0.7
baz=117
L19K White Mountain 24.57 329 IAmb IAmb 18 52 25.1
comp=Z,12nm,0.8s
L19K White Mountain 24.57 329 P P 18 52 24.1 +0.9
baz=126
I37B Waseca 24.57 77 P P 18 52 24.2 +0.8
baz=281,SNR=7.3
CHUM Lake Minchumin 24.78 334 P P 18 52 25.4 +0.3
baz=133
SPMN Marine on St. 24.79 74 P P 18 52 27.5 +2.2
baz=278,SNR=9.6
I23K Minto, Yukon-K 24.83 338 P P 18 52 26.5 +1.0
baz=140
H24K Noodor Dome 24.99 340 IAmb IAmb 18 52 30.6
comp=Z,24nm,1.1s
H24K Noodor Dome 24.99 340 P P 18 52 28.3 +1.2
baz=143
INK Inuvik 25.01 355 P P 18 52 26.2 -0.8
comp=Z,4.2nm,0.8s,baz=157,slow=8.6,SNR=16
comp=Z,4.2nm,0.8s
INK Inuvik 25.01 355 P P 18 52 26.5 -0.6
baz=169
K20K Telida 25.01 332 IAmb IAmb 18 52 29.6
comp=Z,16nm,0.9s
K20K Telida 25.01 332 P P 18 52 27.5 +0.2
baz=130
MLY Manley 25.12 337 P P 18 52 29.0 +0.8
baz=137
N16K Nishlik Lake 25.25 323 P P 18 52 30.3 +0.9
baz=118
EYMN Ely 25.40 67 P P 18 52 30.2 -0.6
EYMN IAmb IAmb 18 52 43.3
comp=Z,17nm,0.9s
H23K Yukon River 25.40 339 P P 18 52 31.8 +1.1
baz=140
TTA Tatalina 25.44 330 P P 18 52 31.6 +0.4
baz=126
TUL1 Leonard 25.49 97 IAmb IAmb 18 52 33.2
comp=Z,26nm,1.2s
TUL1 Leonard 25.49 97 P P 18 52 30.8 -0.9
baz=297
J20K Nowinta River 25.57 333 IAmb IAmb 18 52 33.9
comp=Z,11nm,1.0s
J20K Nowinta River 25.57 333 P P 18 52 32.8 +0.5
baz=131

JCT Junction City 25.59 111 P P 18 52 31.7 -1.1
baz=309,SNR=7.4
JCT Junction City 25.59 111 P P 18 52 33.4 +0.6
baz=309
I21K Tanana 25.59 336 P P 18 52 33.5 +1.1
baz=136
H21K Melozitna Rive 26.18 336 P P 18 52 38.5 +0.8
baz=135
U38A Gravette 26.27 94 P P 18 52 38.9 +0.1
baz=296,SNR=8.0
X37A Clayton 26.41 99 P P 18 52 40.2 +0.1
baz=300,SNR=17
S39A Bolivar 26.52 91 IAmb IAmb 18 52 47.0
comp=Z,25nm,1.4s
S39A Bolivar 26.52 91 P P 18 52 40.4 -0.7
baz=294,SNR=7.6
I40A Norwalk 26.57 76 P P 18 52 43.3 +1.8
baz=282
L40A Anamosa 26.57 81 P P 18 52 43.3 +1.8
baz=286,SNR=11
COLD Coldfoot 26.66 340 P P 18 52 43.2 +1.1
baz=141
P40A Paris 26.76 86 P P 18 52 44.8 +1.6
baz=290
W39A Magazine 27.27 96 P P 18 52 48.4 +0.6
baz=298,SNR=8.2
W39A Magazine 27.27 96 P P 18 52 48.4 +0.6
baz=298
U40A Yellville 27.42 93 P P 18 52 49.0 -0.2
baz=296
U40A P P 18 52 49.0 -0.2
baz=296
U40A Yellville 27.42 93 P P 18 52 48.9 -0.3
baz=296
TOLK Toolik Lake Re 27.65 343 IAmb IAmb 18 52 53.9
comp=Z,18nm,1.1s
TOLK Toolik Lake Re 27.65 343 P P 18 52 52.5 +1.5
baz=144
MIAR Mount Ida 27.73 97 P P 18 52 52.6 +0.6
baz=299
X40A Basin Creek Fa 28.29 97 P P 18 52 57.5 +0.5
baz=299
X40A P P 18 52 57.5 +0.5
baz=299
W41B Gary Mavity, V 28.39 95 P P 18 52 57.3 -0.6
baz=298
W41B Gary Mavity, V 28.39 95 P P 18 52 57.3 -0.6
baz=298
HKT Hockley 28.63 108 P P 18 52 59.3 -0.7
PBMO Poplar Bluff 29.00 91 P P 18 53 02.7 -0.6
baz=295
OXF Oxford 30.76 94 P P 18 53 19.5 +0.6
baz=299,SNR=8.7
OXF Oxford 30.76 94 P P 18 53 19.9 +1.0
baz=299
WVT Waverly 31.16 90 P P 18 53 22.7 +0.3
baz=296,SNR=5.2
WVT Waverly 31.16 90 P P 18 53 22.9 +0.4
baz=296
A21K Barrow 31.27 342 P P 18 53 23.6 +0.7
baz=137
P48A Milroy 31.57 83 P P 18 53 25.2 -0.9
baz=291
P48A P P 18 53 25.2 -0.9
baz=291
Z47A Carrollton 32.37 95 P P 18 53 33.1 0.0
baz=300,SNR=7.5
LRAL Lakeview Retre 33.23 95 P P 18 53 40.5 -0.1
baz=300,SNR=5.8
LRAL Lakeview Retre 33.23 95 P P 18 53 40.6 -0.1
baz=300
Y49A Blount Mountai 33.25 93 P P 18 53 40.6 -0.1
baz=299
W50A Signal Mountai 33.41 90 P P 18 53 42.9 +0.7
baz=298,SNR=8.0
X51A Calhoun 34.04 91 P P 18 53 48.2 +0.5
baz=298,SNR=9.1
X51A P P 18 53 48.2 +0.5
baz=298,SNR=9.1
250A Grady 34.30 96 P P 18 53 50.2 +0.2
baz=302,SNR=5.1
SADO Sadowa 34.35 71 LR LR 19 08 04.1
comp=Z,371nm,19.9s,baz=344,slow=37
Z51A Franklin 34.41 93 P P 18 53 51.2 +0.3
baz=300
W52A Murphy 34.47 89 P P 18 53 51.9 +0.5
baz=298
Y52A Lilburn 34.95 91 P P 18 53 55.9 +0.4
baz=299,SNR=10.0
Y52A P P 18 53 55.9 +0.4
baz=299,SNR=10.0
Q54A Coxs Mills 35.06 81 P P 18 53 56.1 -0.3
baz=293
Q54A P P 18 53 56.1 -0.3
baz=293
152A Waverly Hall 35.07 93 P P 18 53 56.4 -0.1
baz=301,SNR=6.6
CASEE Lake Jocassee 35.24 89 P P 18 53 58.9 +0.8
baz=298
352A Blakely 35.54 95 P P 18 54 01.3 +0.7
baz=302
GOGA Godfrey 35.61 91 P P 18 54 01.3 +0.1
GOGA Godfrey 35.61 91 P P 18 54 00.4 -0.8
baz=300,SNR=14
GOGA Godfrey 35.61 91 P P 18 54 01.4 +0.2
baz=300
BLA Blacksburg 36.08 84 P P 18 54 06.0 +0.8
baz=295
HODGE Hodges 36.09 89 P P 18 54 05.2 -0.1
baz=299,SNR=5.7
PAULI Pauline 36.13 88 P P 18 54 05.7 +0.1
baz=298,SNR=5.8
KMSC Kings Mountain 36.33 87 P P 18 54 07.2 -0.1
baz=298
KMSC Kings Mountain 36.33 87 P P 18 54 07.3 -0.1
baz=298
HAW Hawthorne Fire 36.98 90 P P 18 54 12.5 -0.5
baz=300,SNR=5.1
W57A Gilead 37.30 86 P P 18 54 15.7 +0.1
baz=298
W57A P P 18 54 15.7 +0.1
baz=298
FRB Frobisher Bay 38.61 38 LR LR 19 10 16.6
comp=Z,129nm,18.2s,baz=232,slow=36
SHEM Shemya Is, Ala 39.00 305 LR LR 19 07 46.7
comp=Z,62nm,19.4s,baz=332,slow=32
SCHQ Schefferville 40.03 52 P P 18 54 37.2 -1.2
comp=Z,4.2nm,0.8s,baz=303,slow=7.1,SNR=7.2
SCHQ LR LR 19 11 27.8
comp=Z,334nm,19.0s,baz=270,slow=37
comp=Z,4.2nm,0.8s
SFJD Kangerlussuaq 45.90 32 LR LR 19 15 10.5
comp=Z,86nm,18.7s,baz=276,slow=37
SEY Seymchan 48.09 323 P P 18 55 41.5 -1.2
comp=Z,3.3nm,0.8s,baz=94,slow=7.5,SNR=9.9
SEY LR LR 19 15 20.2
comp=Z,186nm,18.0s,baz=50,slow=35
comp=Z,3.3nm,0.8s
PETK Petropavlovsk- 48.45 309 P P 18 55 44.8 -1.0
comp=Z,1.2nm,0.7s,baz=70,slow=6.9,SNR=2.4
PETK LR LR 19 13 14.7
comp=Z,44nm,19.9s,baz=75,slow=32
comp=Z,1.2nm,0.7s
MA2 Magadan 49.86 319 LR LR 19 15 38.7
comp=Z,110nm,19.9s,baz=80,slow=34
TIXI Tiksi 53.33 337 LR LR 19 19 41.0
comp=Z,138nm,19.7s,baz=3.0,slow=37
TAOE Nuku Hiva Isla 53.40 196 eT T 19 53 28.0
comp=Z,55nm,0.2s
SPITS Spitsbergen Ar 56.59 8 LR LR 19 20 13.1
comp=Z,37nm,21.6s,baz=294,slow=35
JMIC Jan Mayen 57.79 20 LR LR 19 21 33.1
comp=Z,50nm,21.3s,baz=304,slow=36
H11N3 WAKE ISLAND Hy 59.07 268 T T 20 00 51.5
baz=50,slow=75,SNR=463
H11N2 WAKE ISLAND Hy 59.07 268 T T 20 00 52.7
baz=50,slow=75,SNR=366
H11N1 WAKE ISLAND Hy 59.08 268 T T 20 00 51.7
baz=50,slow=75,SNR=308
H11S1 WAKE ISLAND Hy 59.99 267 T T 20 02 10.8
baz=50,slow=75,SNR=2776
H11S2 WAKE ISLAND Hy 60.00 267 T T 20 02 11.5
baz=50,slow=75,SNR=2277
H11S3 WAKE ISLAND Hy 60.01 267 T T 20 02 08.5
baz=50,slow=75,SNR=1917
PMOR Pomariorio Ree 61.17 203 *eT* T 20 03 17.5
comp=Z,18nm,0.2s
ASAJ Asahikawa 61.46 305 LR LR 19 23 44.5
comp=Z,16nm,18.6s,baz=94,slow=36

TIAR Tiarei 64.01 203 *eT* T 20 06 46.4
comp=Z,6.4nm,0.2s
PPT2 Papeete2 64.11 203 *eLR* LR 19 15 44.6
comp=Z,82nm,26.5s
NRIK Noril'sk 64.48 347 P P 18 57 38.5 -1.1
comp=Z,2.9nm,0.8s,baz=46,slow=6.9,SNR=5.1
comp=Z,2.9nm,0.8s
KLR Kul'dur 64.52 314 P P 18 57 41.5 +1.3
comp=Z,1.2nm,0.7s,baz=2.5,slow=13,SNR=3.5
KLR LR LR 19 25 10.5
comp=Z,39nm,19.1s,baz=52,slow=36
comp=Z,1.2nm,0.7s
ARCES ARCESS Array B 65.49 10 LR LR 19 25 52.7
comp=Z,37nm,21.3s,baz=349,slow=36
USRK Ussuriysk Ar. 67.53 310 LR LR 19 26 04.5
comp=Z,29nm,19.4s,baz=54,slow=35
MJAR Matsushiro Arr 68.66 300 P P 18 58 04.4 -2.4
comp=Z,1.1nm,0.7s,baz=50,slow=5.0,SNR=5.6
AFI Afiamalu 70.00 226 LR LR 19 25 05.0
comp=Z,56nm,18.1s,baz=58,slow=33
NB2 NORSAR Subarra 70.51 20 P P 18 58 17.6 -0.3
comp=Z,2.6nm,1.1s,baz=333,slow=6.5
NOA NORSAR Array B 70.51 20 P P 18 58 17.1 -0.7
comp=Z,1.2nm,0.9s,baz=341,slow=5.8,SNR=3.2
NOA LR LR 19 27 06.0
comp=Z,24nm,20.7s,baz=330,slow=34
comp=Z,1.2nm,0.9s
EKA Eskdalemuir Ar 70.81 30 LR LR 19 27 33.0
comp=Z,63nm,20.1s,baz=346,slow=34
RAR Rarotonga 70.92 212 LR LR 19 21 10.2
comp=Z,70nm,20.9s,baz=7.5,slow=29
FINES FINESS Array B 73.19 13 P P 18 58 33.6 -0.3
comp=Z,1.5nm,0.9s,baz=321,slow=4.9,SNR=5.1
FINES LR LR 19 28 49.7
comp=Z,52nm,20.5s,baz=348,slow=34
comp=Z,1.5nm,0.9s
FINES FINESS Array B 73.19 13 P P 18 58 33.2 -0.7
KSRS Korea Array 74.29 307 P P 18 58 39.8 -1.0
comp=Z,2.1nm,1.0s,baz=56,slow=6.6,SNR=7.1
KSRS LR LR 19 28 52.7
comp=Z,13nm,20.6s,baz=40,slow=34
comp=Z,2.1nm,1.0s
KLMR Klimovskoe 75.41 6 *eP* P 18 58 44.9 -2.0
KLMR AMP 18 58 55.1
comp=Z,14nm,1.4s
MDP Montagnes des 75.58 97 LR LR 19 35 32.2
comp=Z,63nm,19.1s,baz=225,slow=38
SONM Songino Array 77.34 326 P P 18 58 57.7 -0.5
comp=Z,2.1nm,0.8s,baz=39,slow=3.6,SNR=12
SONM LR LR 19 32 55.8
comp=Z,78nm,19.5s,baz=40,slow=36
comp=Z,2.1nm,0.8s
MSVF Nonsavu 78.72 232 LR LR 19 27 56.5
comp=Z,68nm,18.5s,baz=4.9,slow=31
ZALV Zalesovo Beam 78.99 341 P P 18 59 06.2 -0.8
comp=Z,1.3nm,0.7s,baz=11,slow=6.7,SNR=5.4
ZALV LR LR 19 36 18.0
comp=Z,52nm,18.1s,baz=36,slow=37
comp=Z,1.3nm,0.7s
GUMO Guam 79.03 278 LR LR 19 26 02.9
comp=Z,60nm,20.6s,baz=91,slow=30
CLL Collm 79.51 24 *eP* P 18 59 10.0 0.0
comp=Z,4.0nm,1.2s
CLL *es*P **sP 18 59 16.0 +0.5**
comp=Z,9.0nm,1.5s
BRG Berggiesshubel 80.17 24 *eP* P 18 59 14.3 +0.7
BRG Amp 18 59 18.8
comp=Z,5.8nm,1.2s
BRG *ex* x 18 59 21.1
BRG Amp 18 59 22.4
comp=Z,6.8nm,1.1s
NKC Novy Kostel 80.29 25 *eP* P 18 59 24.8 +11
HHC Hu-ho-hao-te 80.54 319 *eP* P 18 59 16.7 +0.8
HHC pmax pmax
comp=Z,19nm,1.0s
HHC pmax pmax
comp=Z,110nm,5.4s
LPAZ La Paz 80.58 123 P P 18 59 15.8 -1.1
comp=Z,2.9nm,0.7s,baz=333,slow=5.2,SNR=13
LPAZ LR LR 19 37 50.0
comp=Z,38nm,18.4s,baz=266,slow=38
comp=Z,2.9nm,0.7s
DPC Dobruska-Polom 81.32 22 *eP* P 18 59 20.7 +0.9
KHC Kasperske Hory 81.61 25 *eP* P 18 59 21.7 +0.3
KRLC Kraliky 81.69 22 *eP* P 18 59 22.5 +0.7
GERES GERESS Array B 81.90 25 P P 18 59 22.8 -0.1
comp=Z,0.7nm,0.9s,baz=332,slow=6.1,SNR=4.9
comp=Z,0.7nm,0.9s
VRAC Vranov 82.33 23 LR LR 19 39 41.0
comp=Z,24nm,18.6s,baz=332,slow=38
DAVOX Davos/Dischmat 82.49 28 LR LR 19 35 28.3
comp=Z,43nm,19.9s,baz=263,slow=35
ESDC Sonseca Array 82.76 40 P P 18 59 27.3 -0.3
comp=Z,0.7nm,0.6s,baz=316,slow=4.6,SNR=6.8
ESDC LR LR 19 33 34.6
comp=Z,46nm,18.6s,baz=320,slow=34
comp=Z,0.7nm,0.6s
KURK Kurchatov 83.38 344 P P 18 59 29.2 -1.2
KURK IAmb IAmb 18 59 32.7
comp=Z,9.9nm,1.4s
KURBB Kurchatov Arra 83.49 344 LR LR 19 38 57.2
comp=Z,36nm,20.1s,baz=16,slow=37
AKASG Malin Array Be 83.97 15 P P 18 59 33.6 +0.1
comp=Z,0.2nm,0.3s,baz=337,slow=4.5,SNR=1.6
AKASG LR LR 19 38 18.9
comp=Z,44nm,18.7s,baz=353,slow=37
comp=Z,0.2nm,0.3s
MKAR Makanchi Array 86.23 340 P P 18 59 43.4 -1.6
comp=Z,1.1nm,1.0s,baz=29,slow=4.6,SNR=3.1
MKAR LR LR 19 39 58.9
comp=Z,41nm,19.0s,baz=23,slow=37
comp=Z,1.1nm,1.0s
AKTO Aktyubinsk 86.26 356 LR LR 19 42 27.0
comp=Z,17nm,18.1s,baz=8.2,slow=39
GTA Gaotai 86.97 325 *eP* P 18 59 47.7 -1.2
GTA pP pP 18 59 53.3 +0.4
GTA sP pwP 18 59 59.0 +2.2
GTA pmax pmax
comp=Z,2.0nm,1.0s
GTA pmax pmax
comp=Z,48nm,4.7s
GTA LR LR
comp=N,78nm,17.1s
GTA LR LR
comp=E,66nm,17.4s
GTA LR LR
comp=Z,110nm,18.9s
WMQ Urumqi 87.47 335 *eP* P 18 59 54.6 +3.5
MDT Midelt 87.86 45 LR LR 19 34 22.1
comp=Z,40nm,20.5s,baz=284,slow=32
LZH Lanzhou 87.97 321 *eP* P 18 59 53.5 -0.3
LZH pP PcP 18 59 56.5 +0.9
LZH pmax pmax
comp=Z,15nm,1.3s
LZH LR LR
comp=N,160nm,16.0s
LZH LR LR
comp=E,170nm,16.6s
LZH LR LR
comp=Z,140nm,18.7s
MLR Muntele Rosu 88.26 18 LR LR 19 39 20.2
comp=Z,71nm,19.1s,baz=358,slow=36
DZM Mont Dzumac 88.98 238 *eLR* LR 19 27 18.2
comp=Z,146nm,23.4s
DZM Mont Dzumac 88.98 238 LR LR 19 34 38.4
comp=Z,69nm,18.1s,baz=325,slow=32
AAK Ala-Archa 91.94 344 LR LR 19 44 48.4
comp=Z,66nm,18.4s,baz=23,slow=38
PMG Port Moresby 93.00 260 LR LR 19 33 20.3
comp=Z,66nm,21.5s,baz=134,slow=30
URZ Urewera 95.61 221 LR LR 19 33 36.1
comp=Z,55nm,20.5s,baz=31,slow=29
GNI Garni 96.39 6 LR LR 19 47 19.8
comp=Z,24nm,19.0s,baz=106,slow=38
PZH PanZhiHua 96.89 317 P P 19 00 36.8 +1.7
PZH pmax pmax
comp=Z,7.0nm,0.8s
PZH pmax pmax
comp=Z,100nm,4.2s
DAV Davao City (W) 97.20 287 LR LR 19 37 57.5
comp=Z,44nm,20.5s,baz=69,slow=31
SIJI Sorong 98.69 277 LR LR 19 39 51.6
comp=Z,15nm,19.6s,baz=72,slow=32

MAN ***12*** *18:47:55.2, 9.˚25N×126.˚82E, h22km, mb5.2, ML4.1, MS4.3*
IDC ***12*** *18:47:57.1±0.7, 9.˚20N×126.˚53E, h37km±5km, mb3.8/19,*

mbtmp4.1/21,ML4.3/2,MS3.2/6,Error ellipse: s-maj=20.1km s-min=11.9km az=83.0
*NEIC **12** 18:47:57.4±0.8,9°.3N±0°.1×126°.7E±0°.1,h39km±9km, mb4.6/17,Error ellipse: s-maj=21.3km s-min=15.0km az=87.0*
ISC 12 18:47:57.1±0.5,**9°.25N**±0°.04×**126°.83E**±0°.06,**h40**km±4km, **n75**,σ1¶**61**/76,**mb4.3**/28,**13C-3D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	**General Luna,**	**0.87**	**308**	*eP*	**Pn**	**18 48 11.2**	**-1.8**
GLSP	**General Luna,**	**0.87**	**308**	*eS*		18 49 51.9	
BUTP	**Butuan**	**1.22**	**257**	*eP*	**Pn**	**18 48 15.2**	**-2.5**
BUTP	**Butuan**	**1.22**	**257**	*eS*		18 49 47.8	
SCPH	**Surigao**	**1.42**	**292**	*iP*	**Pn**	**18 48 18.6**	**-1.9**
SCPH				*i S*	**Sn**	**18 48 38.1**	**+0.2**
MSLP	**Maasin**	**2.13**	**295**	*eP*	**Pn**	**18 48 31.0**	**+0.8**
MSLP	**Maasin**	**2.13**	**295**	*eS*	Sn	18 49 35.8	+40
MATI	**Mati**	**2.35**	**194**	*eP*	**Pn**	**18 48 32.7**	**-0.6**
MATI				*eS*	**Sn**	**18 48 57.0**	**-3.9**
DAV	**Davao City (W)**	**2.49**	**210**	Pn	**Pn**	**18 48 34.8**	**-0.4**
	21nm,0.3s,baz=40,slow=2.9,SNR=2.3						
DAV				Sn	**Sn**	**18 49 09.0**	**+4.7**
	45nm,0.3s,baz=150,slow=17,SNR=5.0						
DAV				LR	LR	18 49 42.2	
	comp=Z,938nm,18.6s,baz=40,slow=45 121nm,0.5s						
DAV	**Davao City (W)**	**2.49**	**210**		**Pn**	**18 48 34.0**	**-1.1**
KCP	**Kidapawan**	**2.81**	**218**	*iP*	**Pn**	**18 48 40.1**	**+0.5**
KCP				*i S*	**Sn**	**18 49 13.7**	**+1.4**
TBP	**Tagbilaran**	**2.96**	**279**	*eP*	**Pn**	**18 48 41.4**	**-0.2**
TBP				*i S*	**Sn**	**18 49 19.3**	**+3.5**
LLP	**Lapu-Lapu**	**3.01**	**291**	*eP*	**Pn**	**18 48 39.1**	**-3.3**
LLP				*eS*	**Sn**	**18 49 22.1**	**+4.8**
CTBH	**Cotabato--PC H**	**3.25**	**232**	*iP*	**Pn**	**18 48 46.3**	**+0.7**
DDMP	**Don Marcelino,**	**3.31**	**200**	*eP*	**Pn**	**18 48 49.3**	**+2.8**
DDMP				*eS*	**Sn**	**18 49 24.6**	**0.0**
GSPH	**General Santos**	**3.65**	**211**	*eP*	**Pn**	**18 48 52.0**	**+0.8**
PAGZ	**Pagadian**	**3.68**	**248**	*eP*	**Pn**	**18 48 52.5**	**+1.1**
PAGZ	**Pagadian**	**3.68**	**248**	*eS*	Sn	18 50 29.6	+56
CNOP	**Candoni, Negro**	**4.17**	**278**	*eP*	**Pn**	**18 48 58.5**	**+0.2**
CNOP	**Candoni, Negro**	**4.17**	**278**	*eS*	Sn	18 49 23.6	-22
GUIM	**Jordan**	**4.39**	**289**	*eP*	**Pn**	**18 49 01.5**	**+0.2**
GUIM	**Jordan**	**4.39**	**289**	*eS*	Pn	18 49 06.8	+5.5
RCP	**Roxas**	**4.63**	**300**	*eP*	**Pn**	**18 49 05.5**	**+1.0**
JAP	**San Jose, Anti**	**5.03**	**288**	*eP*	**Pn**	**18 49 13.8**	**+3.7**
PVCP	**Virac**	**5.05**	**329**	*eP*	**Pn**	**18 49 11.2**	**+0.7**
SIJI	**Sorong**	**10.98**	**156**	LR	LR	18 54 44.3	
	comp=Z,78nm,21.4s,baz=83,slow=37						
FAKI	**Fak Fak**	**13.24**	**156**	Pn	**Pn**	**18 51 03.5**	**+0.8**
KAPI	**Kappang**	**15.82**	**207**	LR	LR	18 58 11.3	
	comp=Z,53nm,19.8s,baz=44,slow=39						
GUMO	**Guam**	**18.20**	**75**	LR	LR	18 59 29.2	
	comp=Z,56nm,18.6s,baz=247,slow=37						
BATI	**Baumata**	**19.58**	**189**	P	**P**	**18 52 21.2**	**-0.7**
	3.3nm,0.3s,baz=37,slow=5.3,SNR=5.5 19nm,0.6s						
MTN	**Manton Dam**	**22.36**	**169**	P	**P**	**18 52 52.6**	**+0.7**
KNRA	**Kununurra**	**24.84**	**176**	P	**P**	**18 53 16.8**	**+0.9**
KNRA				IAmb	IAmb	18 53 40.5	
	comp=Z,20nm,0.9s						
KSRS	**Korea Array**	**28.10**	**2**	P	**P**	**18 53 45.3**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=182,slow=9.6,SNR=6.2						
KSRS				pP	**sP**	**18 53 56.3**	**-1.7**
	comp=Z,1.7nm,0.9s,baz=190,slow=10,SNR=5.0 comp=Z,0.8nm,0.6s						
COEN	**Coen**	**28.19**	**145**	P	**P**	**18 53 45.8**	**-0.3**
COEN				IAmb	IAmb	18 54 04.7	
	comp=Z,17nm,1.1s						
PSI	**Prapat**	**28.46**	**259**	P	**P**	**18 53 47.4**	**-1.4**
	comp=Z,7.5nm,0.9s,baz=42,slow=7.2,SNR=5.2						
PSI				LR	LR	19 08 21.6	
	comp=Z,40nm,19.4s,baz=272,slow=43 comp=Z,7.5nm,0.9s						
CMAR	**Chiang Mai Arr**	**28.54**	**292**	P	**P**	**18 53 47.5**	**-1.8**
	comp=Z,0.5nm,0.3s,baz=96,slow=7.3,SNR=3.7						
CMAR				pP	**pP**	**18 53 56.9**	**-1.9**
	comp=Z,0.4nm,0.3s,baz=109,slow=7.7,SNR=2.6						
CMAR				LR	LR	19 05 46.3	
	comp=Z,46nm,18.4s,baz=145,slow=38 comp=Z,0.5nm,0.3s						
WB0	**Warramunga Arr**	**29.78**	**166**	P	**P**	**18 53 59.9**	**-0.3**
WB0				IAmb	IAmb	18 54 20.1	
	comp=Z,14nm,1.4s						
WRA	**Warramunga Arr**	**29.93**	**166**	P	**P**	**18 54 01.1**	**-0.5**
	comp=Z,0.8nm,0.3s,baz=349,slow=9.4,SNR=7.0 comp=Z,0.8nm,0.3s						
WB2	**Warramunga Arr**	**29.94**	**166**	P	**P**	**18 54 00.0**	**-1.6**
WB2				IAmb	IAmb	18 54 16.2	
	comp=Z,8.6nm,1.1s						
WR0	**Warramunga Arr**	**30.00**	**165**	P	**P**	**18 54 02.0**	**-0.1**
WR0				IAmb	IAmb	18 54 02.8	
	comp=Z,15nm,1.4s						
GSI	**Gunungsitoli**	**30.15**	**257**	P	**P**	**18 54 01.7**	**-2.0**
AS31	**Alice Springs**	**33.43**	**168**	P	**P**	**18 54 32.1**	**-0.3**
ASAR	**Alice Springs**	**33.43**	**168**	P	**P**	**18 54 31.6**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=352,slow=7.2,SNR=16						
ASAR				PcP	**PcP**	**18 57 13.1**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=336,slow=2.2,SNR=5.1 comp=Z,0.3nm,0.3s						
ASAR	**Alice Springs**	**33.43**	**168**	P	**P**	**18 54 32.1**	**-0.3**
H11S3	**WAKE ISLAND Hy**	**39.70**	**72**	T	T	19 38 33.1	
	baz=262,slow=75,SNR=50						
H11S1	**WAKE ISLAND Hy**	**39.71**	**72**	T	T	19 38 34.1	
	baz=262,slow=75,SNR=31						
H11S2	**WAKE ISLAND Hy**	**39.72**	**72**	T	T	19 38 29.8	
	baz=262,slow=75,SNR=31						
FORT	**Forrest**	**39.81**	**178**	P	**P**	**18 55 25.1**	**-1.4**
KLR	**Kul'dur**	**40.07**	**5**	P	**P**	**18 55 29.3**	**+0.8**
	comp=Z,0.9nm,0.6s,baz=162,slow=8.4,SNR=6.0 comp=Z,0.9nm,0.6s						
SONM	**Songino Array**	**42.16**	**339**	P	**P**	**18 55 45.3**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=171,slow=9.4,SNR=1.9 comp=Z,0.4nm,0.4s						
BBOO	**Buckleboo**	**42.74**	**169**	P	**P**	**18 55 51.6**	**+1.0**
BBOO				IAmb	IAmb	18 55 56.5	
	comp=Z,16nm,1.2s						
STKA	**Stephens Creek**	**43.26**	**162**	P	**P**	**18 55 55.4**	**+0.5**
	comp=Z,1.8nm,0.7s,baz=341,slow=8.1,SNR=3.8 comp=Z,1.8nm,0.7s						
STKA	**Stephens Creek**	**43.26**	**162**	P	**P**	**18 55 55.5**	**+0.7**
MK31	**Makanchi Array**	**53.17**	**323**	P	**P**	**18 57 10.3**	**-0.9**
MKAR	**Makanchi Array**	**53.17**	**323**	P	**P**	**18 57 10.5**	**-0.7**
	comp=Z,3.8nm,0.7s,baz=122,slow=8.2,SNR=42						
MKAR				pP	**pP**	**18 57 21.3**	**+0.4**
	comp=Z,2.3nm,0.6s,baz=118,slow=8.2,SNR=9.2 comp=Z,3.8nm,0.7s						
MAKZ	**Makanchi**	**53.36**	**323**	P	**P**	**18 57 11.8**	**-0.8**
ZALV	**Zalesovo Beam**	**55.78**	**331**	P	**P**	**18 57 28.5**	**-1.5**
	comp=Z,0.7nm,0.4s,baz=116,slow=6.6,SNR=6.1 comp=Z,0.7nm,0.4s						
ZALV	**Zalesovo Beam**	**55.78**	**331**	P	**P**	**18 57 29.1**	**-0.9**
KURK	**Kurchatov**	**57.22**	**326**	P	**P**	**18 57 39.0**	**-1.2**
KURK				IAmb	IAmb	18 57 40.1	
	comp=Z,5.5nm,0.8s						
TIXI	**Tiksi**	**62.36**	**1**	P	**P**	**18 58 15.9**	**+0.7**
TIXI				IAmb	IAmb	18 58 28.8	
	comp=Z,5.2nm,0.9s						
BRVK	**Borovoye**	**62.89**	**326**	P	**P**	**18 58 18.1**	**-1.0**
NRIK	**Noril'sk**	**65.14**	**346**	P	**P**	**18 58 33.8**	**+0.2**
	comp=Z,3.9nm,0.6s,baz=138,slow=6.4,SNR=5.3 comp=Z,3.9nm,0.6s						
KDAK	**Kodiak Island**	**77.22**	**33**	P	**P**	**18 59 47.4**	**+0.5**
	comp=Z,2.4nm,0.6s,baz=299,slow=5.4,SNR=5.1 comp=Z,2.4nm,0.6s						
KDAK	**Kodiak Island**	**77.22**	**33**	P	**P**	**18 59 46.5**	**-0.3**
KDAK				IAmb	IAmb	18 59 56.4	
	comp=Z,5.9nm,1.1s						
ILAR	**Eielson Array**	**80.12**	**26**	P	**P**	**19 00 05.5**	**+2.8**
	comp=Z,0.4nm,0.6s,baz=250,slow=5.2,SNR=5.1						
ILAR				pP	**sP**	**19 00 15.5**	**-0.3**
	comp=Z,0.8nm,0.9s,baz=275,slow=5.5,SNR=5.0 comp=Z,0.4nm,0.6s						
INK	**Inuvik**	**85.03**	**22**	P	**P**	**19 00 29.9**	**+1.7**
	comp=Z,0.7nm,0.5s,baz=285,slow=5.1,SNR=4.6 comp=Z,0.7nm,0.5s						
ARCES	**ARCESS Array B**	**85.34**	**340**	P	**P**	**19 00 29.6**	**-0.2**
	comp=Z,1.9nm,0.7s,baz=82,slow=6.6,SNR=7.4						
ARCES				pP	**pP**	**19 00 41.1**	**+1.5**
	comp=Z,2.4nm,0.6s,baz=77,slow=7.1,SNR=4.2 comp=Z,1.9nm,0.7s						
BRTR	**Keskin Array B**	**86.60**	**310**	P	**P**	**19 00 36.8**	**0.0**
	comp=Z,0.4nm,0.8s,baz=46,slow=8.9,SNR=2.4 comp=Z,0.4nm,0.8s						
FINES	**FINESS Array B**	**87.05**	**332**	P	**P**	**19 00 37.4**	**-0.9**
	comp=Z,1.4nm,0.8s,baz=86,slow=4.3,SNR=5.8						
VNDA	**Vanda**	**88.85**	**173**	P	**P**	**19 00 48.0**	**+1.5**
	comp=Z,0.5nm,0.8s,baz=331,slow=6.5,SNR=1.8 comp=Z,0.5nm,0.8s						
NOA	**NORSAR Array B**	**93.91**	**334**	pP	pP	19 01 21.9	+1.5
	comp=Z,0.4nm,0.7s,baz=62,slow=4.7,SNR=3.9						
YKA	**Yellowknife Ar**	**94.46**	**24**	P	**P**	**19 01 14.1**	**+1.2**
	comp=Z,0.7nm,0.6s,baz=298,slow=4.5,SNR=4.0						
YKA				pP	**sP**	**19 01 26.2**	**+0.2**
	comp=Z,1.8nm,0.8s,baz=306,slow=4.6,SNR=5.9 comp=Z,0.7nm,0.6s						
TXAR	**Lajitas Array**	**118.07**	**50**	PKP	**PKiKP**	**19 06 42.6**	**+2.0**
	comp=Z,0.1nm,0.5s,baz=301,slow=0.5,SNR=2.4						
TORD	**Torodi Ar. Bea**	**121.15**	**291**	PKP	**PKPdf**	**19 06 45.6**	**-1.1**
	comp=Z,0.3nm,0.7s,baz=74,slow=2.3,SNR=2.1						
PLCA	**Paso Flores**	**145.05**	**157**	PKPbc	**PKPbc**	**19 07 29.4**	**-0.7**
	comp=Z,1.6nm,1.1s,baz=243,slow=2.3,SNR=1.6						

*IDC **12** 19:04:13.5±1.5, 12°.53N×87°.47W, h0km, mb3.6/10, mbtmp3.8/13,ML3.2/3,MS3.3/7,Error ellipse: s-maj=44.5km s-min=18.2km az=42.0*
*UCR **12** 19:04:14.6±2.0, 12°.90N×87°.07W, h0km±8km, ML4.1*
*INET **12** 19:04:15.4±0.7, 12°.89N×87°.04W, h6km±5km, ML4.5*
ISC 12 19:04:15.8±1.2,**12°.87N**±0°.05×**87°.08W**±0°.04,**h12**km±9km, **n77**,σ1¶**43**/76,**mb3.8**/10,**MS3.4**/6,**6C**,**Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.17**	**171**	*eP*	**Pg**	**19 04 20.5**	**+0.9**
TELN	**Telica**	**0.36**	**138**	*eP*	**Pb**	**19 04 23.3**	**-0.8**
CSGN	**Cosiguina Volc**	**0.48**	**283**	*eP*	**Pb**	**19 04 25.7**	**-0.6**
CNGN	**Cerro Negro**	**0.52**	**135**	*eP*	**Pg**	**19 04 25.8**	**-0.1**
MOMN	**Momotombo**	**0.70**	**131**	*eP*	**Pb**	**19 04 28.6**	**-1.4**
BRAN	**Las Pilas**	**0.72**	**102**	*eP*	**Pn**	**19 04 33.9**	**+2.0**
CNCH	**Conchagua**	**0.84**	**299**	*eP*	**Pb**	**19 04 31.3**	**-1.1**
CNCH				*iP*	**Pg**	**19 04 31.5**	**-0.5**
CNCH				IAML		19 04 33.1	
	comp=Z,82μm,0.4s						
CNCH	**Conchagua**	**0.84**	**299**	*eP*	**Pb**	**19 04 31.3**	**-1.1**
CNCH				*iP*	**Pg**	**19 04 31.5**	**-0.5**
CNCH				IAML		19 04 33.1	
	comp=Z,82μm,0.4s						
LCND	**La Caada**	**0.91**	**299**	*eP*	**Pb**	**19 04 32.4**	**-1.1**
LCND				IAML		19 04 33.4	
	comp=Z,28μm,0.3s						
LCND	**La Caada**	**0.91**	**299**	*eP*	**Pb**	**19 04 32.4**	**-1.1**
LCND				IAML		19 04 33.4	
	comp=Z,28μm,0.3s						
APYN	**Apoyeque**	**0.95**	**132**	*eP*	**Pb**	**19 04 31.9**	**-2.4**
MGAN	**Managua**	**1.08**	**131**	*eP*	**Pb**	**19 04 35.0**	**-1.5**
WILN	**Americas 2**	**1.12**	**129**	*eP*	**Pn**	**19 04 35.3**	**-2.0**
MATN	**Matagalpa**	**1.12**	**87**	*eP*	**Pb**	**19 04 34.2**	**-3.0**
CRUN	**El Crucero**	**1.16**	**139**	*eP*	**Pn**	**19 04 35.0**	**-3.0**
TGUH	**Tegucigalpa,Un**	**1.20**	**351**	*eP*	**Pb**	**19 04 37.3**	**-1.2**
TGUH	**Tegucigalpa,Un**	**1.20**	**351**	*eP*	**Pb**	**19 04 37.3**	**-1.2**
TGUH	**Tegucigalpa,Un**	**1.20**	**351**	*eP*	**Pb**	**19 04 37.4**	**-1.1**
MASN	**Masaya**	**1.26**	**134**	*eP*	**Pn**	**19 04 37.7**	**-1.6**
VSM	**San Miguel**	**1.29**	**296**	*eP*	**Pn**	**19 04 38.9**	**-1.1**
VSM	**San Miguel**	**1.29**	**296**	*eP*	**Pn**	**19 04 38.9**	**-1.1**
LCY	**Lacayo**	**1.31**	**295**	*eP*	**Pn**	**19 04 39.0**	**-1.0**
LCY	**Lacayo**	**1.31**	**295**	*eP*	**Pn**	**19 04 39.0**	**-1.0**
PACA	**Pacayal**	**1.35**	**296**	*eP*	**Pn**	**19 04 39.6**	**-1.0**
PACA				IAML		19 05 03.9	
	comp=Z,29μm,0.6s						
PACA	**Pacayal**	**1.35**	**296**	*eP*	**Pn**	**19 04 39.6**	**-1.0**
PACA				IAML		19 05 03.9	
	comp=Z,29μm,0.6s						
PACA	**Pacayal**	**1.35**	**296**	*eP*	**Pn**	**19 04 39.8**	**-0.8**
BOAB	**BOACO BROADBAN**	**1.44**	**107**	*eP*	**Pn**	**19 04 39.8**	**-1.9**
COEB	**Comit de Eme**	**1.55**	**294**	*eP*	**Pn**	**19 04 42.6**	**-0.7**
COEB				IAML		19 04 44.3	
	comp=Z,4μm,0.4s						
COEB	**Comit de Eme**	**1.55**	**294**	*eP*	**Pn**	**19 04 42.6**	**-0.7**
COEB				IAML		19 04 44.3	
	comp=Z,4μm,0.4s						
COEB	**Comit de Eme**	**1.55**	**294**	*eP*	**Pn**	**19 04 42.7**	**-0.7**
PQSS	**Presa 15 de Se**	**1.63**	**298**	*eP*	**Pn**	**19 04 43.5**	**-0.8**
PQSS	**Presa 15 de Se**	**1.63**	**298**	*eP*	**Pn**	**19 04 43.5**	**-0.8**
SCLA	**Alcaldia de Sa**	**1.81**	**297**	*eP*	**Pn**	**19 04 46.1**	**-0.8**
SCLA				IAML		19 05 22.4	
	comp=Z,582nm,0.6s						
SCLA	**Alcaldia de Sa**	**1.81**	**297**	*eP*	**Pn**	**19 04 46.1**	**-0.8**
SCLA				IAML		19 05 22.4	
	comp=Z,582nm,0.6s						
CONN	**Concepcion**	**1.92**	**132**	*eP*	**Pn**	**19 04 47.8**	**-0.6**
PAVA	**Las Pavas**	**2.00**	**295**	*eP*	**Pn**	**19 04 48.9**	**-0.6**
PAVA				IAML		19 04 56.5	
	comp=Z,3μm,0.4s						
PAVA	**Las Pavas**	**2.00**	**295**	*eP*	**Pn**	**19 04 48.9**	**-0.6**
PAVA				IAML		19 04 56.5	
	comp=Z,3μm,0.4s						
PAVA	**Las Pavas**	**2.00**	**295**	*eP*	**Pn**	**19 04 49.0**	**-0.5**
SJTE	**Alcalda de S**	**2.02**	**292**	*eP*	**Pn**	**19 04 49.3**	**-0.5**
SJTE				*eS*	**Sb**	**19 05 19.4**	**+1.7**
SJTE				IAML		19 05 25.2	
	comp=Z,436nm,0.3s						
SJTE	**Alcalda de S**	**2.02**	**292**	*eP*	**Pn**	**19 04 49.3**	**-0.5**
SJTE				*eS*	**Sb**	**19 05 19.4**	**+1.7**
SJTE				IAML		19 05 25.2	
	comp=Z,436nm,0.3s						
SNET	**Serv Nac Est T**	**2.25**	**291**	*eP*	**Pn**	**19 04 53.6**	**+0.6**
LALI	**Alcalda de L**	**2.27**	**286**	*eP*	**Pn**	**19 04 53.8**	**+0.6**
CEVE	**Cerro Verde**	**2.66**	**291**	*eP*	**Pn**	**19 04 58.8**	**+0.1**
CEVE	**Cerro Verde**	**2.66**	**291**	*eP*	**Pn**	**19 04 58.8**	**+0.1**
SBLS	**San Blas**	**2.66**	**292**	IAML		19 05 07.4	
	comp=Z,321nm,0.5s						
SBLS	**San Blas**	**2.66**	**292**	IAML		19 05 07.4	
	comp=Z,321nm,0.5s						
ESQI	**Esquipulas**	**2.77**	**308**	IAML		19 05 51.9	
	comp=Z,469nm,0.7s						
NUBE	**Las Nubes**	**2.82**	**292**	*eP*	**Pn**	**19 05 00.6**	**-0.3**
NUBE				*eS*	**Sb**	**19 05 38.5**	**-2.4**
NUBE	**Las Nubes**	**2.82**	**292**	*eP*	**Pn**	**19 05 00.6**	**-0.3**
NUBE				*eS*	**Sb**	**19 05 38.5**	**-2.4**
SLOZ	**Alcaldia de Sa**	**2.87**	**294**	IAML		19 05 54.2	
	comp=Z,275nm,0.7s						
ORTG	**Ortega, Santa**	**2.95**	**147**	*eP*	**Pn**	**19 05 02.4**	**-0.2**
JTS	**Las Juntas de**	**3.30**	**141**	Pn	**Pn**	**19 05 07.1**	**-0.2**
	comp=Z,9.5nm,0.3s,baz=37,slow=9.2,SNR=36						
JTS				Sn	**Sn**	**19 05 46.7**	**+0.1**
	comp=Z,16nm,0.3s,baz=229,slow=21,SNR=5.2 comp=Z,26nm,0.4s						
JTS	**Las Juntas de**	**3.30**	**141**	*eP*	**Pn**	**19 05 07.1**	**-0.2**
JTS	**Las Juntas de**	**3.30**	**141**	*eP*	**Pn**	**19 05 06.8**	**-0.6**
LAFE	**Finca La Fe, P**	**3.71**	**145**	*eP*	**Pn**	**19 05 13.4**	**+0.5**
LAFE	**Finca La Fe, P**	**3.71**	**145**	*eP*	**Pn**	**19 05 13.2**	**+0.2**
LCR2	**La Lucha 2**	**4.33**	**136**	*eP*	**Pn**	**19 05 21.5**	**-0.2**
RIMA	**Rio Macho**	**4.41**	**134**	*eP*	**Pn**	**19 05 24.1**	**+1.3**
CDM	**Cerro de Muert**	**4.63**	**135**	*eP*	**Pn**	**19 05 26.8**	**+0.8**
ROSC	**El Rosal**	**14.91**	**121**	Pn	**P**	**19 07 49.0**	**-3.7**
	comp=Z,1.0nm,0.3s,baz=297,slow=22,SNR=1.3 comp=Z,3.8nm,0.3s						
SDV	**Santo Domingo**	**16.62**	**102**	Pn	**P**	**19 08 12.6**	**+1.0**
	comp=Z,0.9nm,0.3s,baz=286,slow=12,SNR=1.5						
SDV				LR	LR	19 14 56.3	
	comp=Z,78nm,20.3s,baz=274,slow=38 comp=Z,2.7nm,0.3s						
SJG	**San Juan**	**20.82**	**73**	LR	LR	19 17 14.8	
	comp=Z,218nm,19.5s,baz=268,slow=37						
TXAR	**Lajitas Array**	**22.49**	**319**	P	**P**	**19 09 15.5**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=147,slow=9.2,SNR=7.8						
TXAR				LR	LR	19 18 40.4	
	comp=Z,31nm,19.3s,baz=132,slow=38 comp=Z,0.3nm,0.5s						
TKL	**Tuckaleechee C**	**22.89**	**7**	P	**P**	**19 09 23.4**	**+4.0**
	comp=Z,2.4nm,0.8s,baz=187,slow=12,SNR=1.9 comp=Z,2.4nm,0.8s						
ANMO	**Albuquerque**	**28.12**	**325**	LR	LR	19 22 14.7	
	comp=Z,34nm,18.9s,baz=128,slow=38						
PFO	**Pinyon Flats O**	**33.79**	**313**	LR	LR	19 25 08.8	
	comp=Z,55nm,18.4s,baz=190,slow=37						
NVAR	**Mina Array Bea**	**37.63**	**318**	P	**P**	**19 11 30.8**	**-0.2**
	comp=Z,0.1nm,0.4s,baz=120,slow=8.4,SNR=2.1 comp=Z,0.1nm,0.4s						
SCHQ	**Schefferville**	**44.78**	**17**	P	**P**	**19 12 30.9**	**+1.6**
	comp=Z,1.0nm,0.4s,baz=221,slow=9.9,SNR=5.1 comp=Z,1.0nm,0.4s						
FRB	**Frobisher Bay**	**52.45**	**10**	P	**P**	**19 13 30.4**	**+2.3**
	comp=Z,3.1nm,0.8s,baz=213,slow=8.1,SNR=2.1 comp=Z,3.1nm,0.8s						
YKA	**Yellowknife Ar**	**53.31**	**344**	P	**P**	**19 13 36.2**	**+1.7**
	comp=Z,0.8nm,0.6s,baz=138,slow=7.5,SNR=4.8 comp=Z,0.8nm,0.6s						
DLBC	**Dease Lake**	**55.69**	**334**	P	**P**	**19 13 52.2**	**+0.2**
	comp=Z,0.8nm,0.5s,baz=135,slow=2.9,SNR=1.8 comp=Z,0.8nm,0.5s						
INK	**Inuvik**	**62.92**	**342**	P	**P**	**19 14 42.7**	**+1.0**
	comp=Z,0.7nm,0.6s,baz=136,slow=5.9,SNR=2.5						
INK				LR	LR	19 44 26.7	
	comp=Z,24nm,19.4s,baz=131,slow=38 comp=Z,0.7nm,0.6s						
ILAR	**Eielson Array**	**65.79**	**336**	P	**P**	**19 15 00.5**	**-0.1**
	comp=Z,0.1nm,0.6s,baz=107,slow=4.8,SNR=4.6 comp=Z,0.1nm,0.6s						
ESDC	**Sonseca Array**	**76.65**	**52**	P	P	19 16 10.2	+3.3
	comp=Z,0.4nm,0.7s,baz=287,slow=5.6,SNR=6.6 comp=Z,0.4nm,0.7s						
DBIC	**Dimbokro**	**80.99**	**85**	LR	LR	19 47 48.6	
	comp=Z,48nm,21.9s,baz=328,slow=32						
WRA	**Warramunga Arr**	**139.76**	**254**	PKP	**PKPdf**	**19 23 42.1**	**-2.6**
	comp=Z,0.9nm,0.9s,baz=85,slow=2.3,SNR=3.4						
ASAR	**Alice Springs**	**139.76**	**249**	PKP	**PKPdf**	**19 23 42.4**	**-2.2**
	comp=Z,0.3nm,0.7s,baz=86,slow=1.4,SNR=2.2						

*ANF **12** 19:44:32.9±0.3, 35°.90N×97°.25W, h1km±2km, ML3.2/8, Error ellipse: s-maj=2.2km s-min=1.7km az=123.0*
*TUL **12** 19:44:33.5±0.9, 35°.86N±0°.01×97°.23W±0°.02, h6km±6km, ML3.0, mb_Lg2.9/76(NEIC), Error ellipse: s-maj=2.6km s-min=0.9km az=131.0*
*NEIC **12** 19:44:33.6±0.4, 35°.87N±0°.01×97°.25W±0°.02, h9km±6km, Error ellipse: s-maj=2.8km s-min=0.9km az=137.0*
ISC 12 19:44:33.4±1.2,**35°.88N**±0°.04×**97°.24W**±0°.03,**h6**km±11km, **n58**,σ0¶**52**/36,**Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK005	**Luther M Schoo**	**0.23**	**171**	Pg	**Pg**	**19 44 38.0**	**+0.1**
OK005				Sg	**Sg**	**19 44 41.3**	**+0.4**
ADOK	**Arcadia Dam**	**0.25**	**206**	Pg	**Pg**	**19 44 38.4**	**+0.1**
OK009	**Oakdale Elemen**	**0.33**	**207**	Pg	**Pg**	**19 44 40.0**	**+0.1**
OKCFA	**Oklahoma City**	**0.49**	**201**	Pg	**Pg**	**19 44 42.9**	**0.0**
OKCFA	**Oklahoma City**	**0.49**	**201**	P	**Pg**	**19 44 43.0**	**0.0**
	baz=19,SNR=122						
OKCFA				S	**Sg**	**19 44 49.8**	**+0.4**
	baz=19						
OKCSW	**OKLAHOMA CITY**	**0.50**	**199**		**Pg**	**19 44 43.0**	**0.0**
FNO	**Franklin**	**0.64**	**192**	Pg	**Pg**	**19 44 45.4**	**-0.2**
TUL1	**Leonard**	**1.17**	**88**		**Pb**	**19 44 54.8**	**-1.3**
TUL1	**Leonard**	**1.17**	**88**	P	**Pb**	**19 44 54.8**	**-1.3**
	baz=269,SNR=96						
TUL1				S	**Sg**	**19 45 11.0**	**-0.1**
	baz=269						
T35A	**Sooner Cattle**	**1.19**	**29**	Pg	**Pb**	**19 44 55.9**	**-0.4**
T35B	**Sooner Cattle**	**1.19**	**29**	P	**Pb**	**19 44 55.9**	**-0.4**
	baz=210,SNR=126						
T35B				S	**Sb**	**19 45 12.4**	**+0.4**
	baz=210						
X34A	**Smith Ranch, M**	**1.37**	**201**	Pn	**Pn**	**19 44 58.8**	**-0.2**
U32A	**Winter Ranch,**	**1.51**	**290**	Pn	**Pn**	**19 45 00.8**	**-0.3**
U32A	**Winter Ranch,**	**1.51**	**290**	P	**Pn**	**19 45 01.2**	**+0.2**
	baz=109,SNR=80						
U32A				Sb	**Sg**	**19 45 22.2**	**+0.2**
	baz=109						
WMOK	**Wichita Mounta**	**1.70**	**228**		**Pn**	**19 45 04.0**	**+0.3**
WMOK	**Wichita Mounta**	**1.70**	**228**	P	**Pn**	**19 45 03.8**	**+0.2**
	baz=47						
WMOK				S	**Sb**	**19 45 26.7**	**0.0**
	baz=47						
X37A	**Clayton**	**2.00**	**130

SCPH	**Surigao**	**0.78**	**297**	*e*P	Pb	19 56 43.6 +0.2
SCPH				*i* S		19 56 55.0
MSLP	**Maasin**	**1.50**	**298**∩	*e*P	Pn	19 56 53.5 +0.8

SNET **12** *19:57:56.7±0.9, 13.˚40N×90.˚70W, h11km±11km, ML2.9*
GCG **12** *19:57:59.1±0.4, 13.˚67N×90.˚96W, h12km±40km, MD3.3*
ISC 12 19:57:55.8±2.5**, 13.˚5N**±0.˚1×**90.˚85W**±0.˚09**, h20**km±9km**, n11,**
σ0**88**/18**, 1D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCG	**Pacaya**	**0.95**	**14**	*e*P	**Pn**	**19 58 14.3**	**0.0**
FUG	**Fuego 3**	**0.98**	**0**∥	*e*P	**Pn**	**19 58 14.2**	**-0.4**
NUBE	**Las Nubes**	**1.12**	**67**	*e*P	**Pn**	**19 58 15.2**	**-1.3**
NUBE				IAML		19 58 17.8	
	comp=Z,103nm,0.2s						
NUBE				*e*S	**Sb**	**19 58 29.6**	**-1.3**
SLOZ	**Alcaldia de Sa**	**1.18**	**61**	*e*P	**Pn**	**19 58 16.2**	**-0.9**
SLOZ				*e*S	**Sb**	**19 58 31.8**	**-0.5**
SLOZ				IAML		19 58 34.9	
	comp=Z,171nm,0.3s						
NBG	**Las Nubes**	**1.22**	**23**	*e*P	**Pb**	**19 58 19.4**	**+1.0**
NBG				*e*S	**Sn**	**19 58 35.3**	**+1.2**
CEVE	**Cerro Verde**	**1.24**	**73**	*e*P	**Pn**	**19 58 17.3**	**-0.9**
CEVE				IAML		19 58 38.0	
	comp=Z,730nm,0.2s						
STG3	**Santiaguito 3,**	**1.43**	**331**	*e*P	**Pn**	**19 58 20.7**	**0.0**
STG3				*e*S	**Sn**	**19 58 37.6**	**-1.4**
UEES	**Universidad Ev**	**1.58**	**81**	*e*P	**Pn**	**19 58 22.5**	**-0.3**
UEES				*e*S	**Sn**	**19 58 42.8**	**+0.2**
UEES				IAML		19 58 44.9	
	comp=Z,430nm,0.2s						
SJTE	**Alcalda de S**	**1.79**	**85**	*e*P	**Pn**	**19 58 25.9**	**+0.3**
SJTE				IAML		19 58 26.7	
	comp=Z,111nm,0.2s						
SJTE				*e*S	**Sn**	**19 58 47.5**	**-0.4**
COEG	**Centro de Oper**	**1.92**	**85**	*e*P	**Pn**	**19 58 27.8**	**+0.4**
COEG				*e*S	**Sn**	**19 58 51.5**	**+0.6**
SCLA	**Alcaldia de Sa**	**2.07**	**83**	*e*P	**Pn**	**19 58 29.7**	**+0.3**

NEIC **12** *20:35:20.0±1.1, 4.˚0S±0.˚1×143.˚0E±0.˚1, h114km±7km, mb4.2/17, Error ellipse: s-maj=21.2km s-min=15.6km az=75.0*
IDC **12** *20:35:23.1±2.3, 4.˚10S×143.˚04E, h148km±23km, mb3.8/15, mbtmp4.3/18, MS3.0/3, Error ellipse: s-maj=17.8km s-min=11.9km az=89.0*
DJA **12** *20:35:24.1±3.4, 3.˚5S±5.˚1×14.˚3E±.˚, h19km±30km, M4.7/13, mB4.8/1, mb4.6/13, MLv4.8/6, Mw(mB)4.0/1*
ISC 12 20:35:19.9±0.5**, 4.˚14S**±0.˚06×**142.˚96E**±0.˚07**, h115**km**, n79,**
σ1**56**/78**, mb4.2**/26**, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENI	**Genyem**	**3.18**	**299**	P	**Pn**	**20 36 06.0**	**-2.5**
GENI	**Genyem**	**3.18**	**299**	P	**Pn**	**20 36 08.9**	**+0.4**
SMPI	**Sarmi**	**4.75**	**297**	P	**Pn**	**20 36 26.9**	**-2.6**
PMG	**Port Moresby**	**6.69**	**142**	P	**Pn**	**20 36 57.1**	**+1.4**
	13nm,0.4s,baz=45,slow=7.8,SNR=7.8						
PMG				S	**Sn**	**20 38 08.2**	**-2.4**
	42nm,0.9s,baz=311,slow=9.3,SNR=3.8						
PMG				LR	LR	20 40 08.7	
	comp=Z,138nm,18.1s,baz=82,slow=43						
PMG	**Port Moresby**	**6.69**	**142**	Pn	**Pn**	**20 36 56.6**	**+0.9**
SRPI	**Serui, Papua**	**7.08**	**288**	P	**Pn**	**20 37 01.0**	**0.0**
	0.4nm67nm,0.4s						
BAKI	**Biak**	**7.44**	**293**	P	**Pn**	**20 37 09.8**	**+3.9**
KRVT	**Keravat (AS076**	**9.04**	**91**	P	**Pn**	**20 37 31.4**	**+3.8**
	34nm,0.8s,baz=260,slow=1.7,SNR=4.2						
FAKI	**Fak Fak**	**10.76**	**276**	Pn	**Pn**	**20 37 51.2**	**+0.3**
FAKI	**Fak Fak**	**10.76**	**276**	P	**Pn**	**20 37 52.2**	**+1.4**
	40nm,0.8s						
FAKI	**Fak Fak**	**10.76**	**276**	P	**Pn**	**20 37 50.3**	**-0.5**
SIJI	**Sorong**	**12.12**	**285**	P	**Pn**	**20 38 09.3**	**+0.4**
	21nm,0.7s,baz=107,slow=17,SNR=14						
SIJI				LR	LR	20 43 51.4	
	comp=Z,52nm,18.0s,baz=142,slow=42						
SWI	**Sorong**	**12.13**	**285**	P	**Pn**	**20 38 10.2**	**+1.1**
	41nm,0.9s						
KDU	**Kakadu**	**13.40**	**230**	P	**Pn**	**20 38 23.6**	**-2.0**
MTN	**Manton Dam**	**14.54**	**233**	Pn	**Pn**	**20 38 40.8**	**+0.5**
LBMI	**Labuha**	**15.83**	**282**	P	**P**	**20 38 59.5**	**+1.6**
	24nm,0.9s						
CTA	**Charters Tower**	**16.18**	**169**	LR	LR	20 44 30.4	
	comp=Z,45nm,20.5s,baz=11,slow=34						
TNTI	**Ternate**	**16.33**	**287**	P	**P**	**20 39 07.0**	**+3.6**
	7.9nm,0.8s						
SANI	**Sanana**	**17.07**	**276**	P	**Pn**	**20 39 17.0**	**+5.3**
	13nm,0.8s						
WB0	**Warramunga Arr**	**17.64**	**208**	P	**P**	**20 39 18.1**	**+0.3**
WB0				IAmb	IAmb	20 39 20.3	
	comp=Z,22nm,0.8s						
WR0	**Warramunga Arr**	**17.74**	**207**	P	**P**	**20 39 19.4**	**+0.5**
WRAB	**Tennant Creek**	**17.80**	**207**	P	**P**	**20 39 20.4**	**+0.7**
WRAB				IAmb	IAmb	20 39 22.2	
	comp=Z,19nm,0.7s						
WRAB	**Tennant Creek**	**17.80**	**207**	P	**P**	**20 39 20.2**	**+0.5**
WB2	**Warramunga Arr**	**17.81**	**207**	P	**P**	**20 39 20.2**	**+0.5**
WB2				IAmb	IAmb	20 39 22.4	
	comp=Z,18nm,0.6s						
WRA	**Warramunga Arr**	**17.81**	**207**	P	**P**	**20 39 20.2**	**+0.4**
	comp=Z,12nm,0.7s,baz=28,slow=12,SNR=84						
WRA				S	S	20 42 26.9	-12
	comp=Z,1.6nm,0.7s,baz=29,slow=23,SNR=3.0						
WRA	**Warramunga Arr**	**17.81**	**207**	P	**P**	**20 39 18.5**	**-1.3**
KNRA	**Kununurra**	**18.07**	**230**	P	**P**	**20 39 22.4**	**-0.2**
KNRA	**Kununurra**	**18.07**	**230**	P	**P**	**20 39 22.6**	**0.0**
SOEI	**Soe**	**19.37**	**252**	P	**P**	**20 39 37.4**	**+0.5**
SOEI	**Soe**	**19.37**	**252**	P	**Pn**	**20 39 40.5**	**+1.3**
SOEI	**Soe**	**19.37**	**252**	P	**P**	**20 39 38.7**	**+1.7**
BATI	**Baumata**	**20.06**	**251**	P	Pn	20 39 47.6	+0.4
	comp=Z,39nm,0.6s,baz=127,slow=5.1,SNR=8.6						
	comp=Z,39nm,0.6s						
AS31	**Alice Springs**	**21.29**	**203**	P	**P**	**20 39 58.6**	**+1.1**
ASAR	**Alice Springs**	**21.29**	**203**	P	**P**	**20 39 57.7**	**+0.2**
	comp=Z,3.3nm,0.7s,baz=29,slow=12,SNR=25						
ASAR				S	**S**	**20 43 43.2**	**-4.4**
	comp=Z,0.5nm,0.9s,baz=22,slow=16,SNR=2.0						
	comp=Z,3.3nm,0.7s						
ASAR	**Alice Springs**	**21.29**	**203**	P	**P**	**20 39 58.1**	**+0.7**
EIDS	**Eidsvold**	**22.50**	**160**	P	**P**	**20 40 11.4**	**+1.3**
EIDS				IAmb	IAmb	20 40 14.5	
	comp=Z,15nm,1.0s						
TOLI2	**Tolitoli**	**22.77**	**283**	P	**P**	**20 40 10.1**	**-2.7**
TOLI2				IAmb	IAmb	20 40 14.1	
	comp=Z,7.1nm,0.7s						
INKA	**Innaminka**	**23.57**	**185**	P	**P**	**20 40 21.7**	**+1.6**
OOD	**Oodnadatta**	**24.52**	**196**	P	**P**	**20 40 30.3**	**+1.5**
WRKA	**Warakurna**	**25.11**	**213**	P	**P**	**20 40 34.6**	**+0.3**
LCRK	**Leigh Creek**	**26.55**	**189**	P	**P**	**20 40 47.8**	**+0.7**
MULG	**Mulgathing**	**27.33**	**197**	P	**P**	**20 40 54.7**	**+0.6**
STKA	**Stephens Creek**	**27.62**	**183**	P	**P**	**20 40 57.5**	**+0.9**
	comp=Z,2.3nm,0.5s,baz=14,slow=11,SNR=12						
	comp=Z,2.3nm,0.5s						
STKA	**Stephens Creek**	**27.62**	**183**	P	**P**	**20 40 57.4**	**+0.7**
STKA	**Stephens Creek**	**27.62**	**183**	P	**P**	**20 40 57.4**	**+0.7**
DZM	**Mont Dzumac**	**28.91**	**130**	P	**P**	**20 41 09.1**	**+0.7**
	comp=Z,5.8nm,0.5s,baz=283,slow=22,SNR=1.9						
	comp=Z,5.8nm,0.5s						
FORT	**Forrest**	**29.99**	**206**	P	**P**	**20 41 18.5**	**+0.7**
FORT	**Forrest**	**29.99**	**206**	P	**P**	**20 41 18.2**	**+0.5**
	comp=Z,27nm,0.9s						
CAN	**Canberra**	**31.53**	**171**	P	**P**	**20 41 30.7**	**-0.6**
ARPS	**Mount Arapiles**	**32.49**	**182**	P	**P**	**20 41 40.7**	**+1.1**
	comp=Z,19nm,0.8s						
MORW	**Morawa**	**35.59**	**223**	P	**P**	**20 42 07.9**	**+1.4**
	comp=Z,26nm,2.7s						
BLDU	**Ballidu**	**36.14**	**220**	P	**P**	**20 42 12.8**	**+1.6**
MJAR	**Matsushiro Arr**	**40.71**	**354**	P	**P**	**20 42 48.1**	**-1.3**
	comp=Z,2.0nm,0.8s,baz=163,slow=8.9,SNR=5.4						
	comp=Z,2.0nm,0.8s						
MJAR	**Matsushiro Arr**	**40.71**	**354**	P	**P**	**20 42 47.8**	**-1.6**
MJAR				IAmb	IAmb	20 42 50.1	
	comp=Z,2.1nm,1.1s						
NJ2	**Nanjing**	**42.67**	**329**	*e*P	**P**	**20 43 03.8**	**-1.6**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KSRS	**Korea Array**	**43.68**	**343**	P	**P**	**20 43 13.7**	**+0.3**
KSRS				PcP	**PcP**	**20 44 58.4**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=136,slow=3.4,SNR=3.2						
	comp=Z,3.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**48.83**	**299**	P	**P**	**20 43 54.2**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=122,slow=6.3,SNR=7.7						
	comp=Z,0.9nm,0.7s						
USRK	**Ussuriysk Ar.**	**49.12**	**350**	P	**P**	**20 43 55.9**	**+0.1**
	comp=Z,8.9nm,0.6s,baz=156,slow=8.3,SNR=16						
	comp=Z,8.9nm,0.6s						
USRK	**Ussuriysk Ar.**	**49.12**	**350**	P	**P**	**20 43 56.3**	**+0.5**
PZH	**PanZhiHua**	**50.17**	**310**	P	**P**	**20 44 06.3**	**+2.0**
PZH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,100nm,4.5s						
BNX	**BinXian**	**51.55**	**346**	*e*P	**P**	**20 44 13.9**	**-0.2**
BNX				pmax	pmax		
	comp=Z,15nm,1.0s						
BNX				pmax	pmax		
	comp=Z,60nm,5.7s						
HHC	**Hu-ho-hao-te**	**53.19**	**330**	*e*P	**P**	**20 44 27.4**	**+1.0**
HHC				pmax	pmax		
	comp=Z,41nm,1.0s						
HHC				pmax	pmax		
	comp=Z,150nm,5.4s						
PETK	**Petropavlovsk-**	**58.38**	**10**	P	**P**	**20 45 02.7**	**-0.4**
	comp=Z,6.2nm,0.8s,baz=188,slow=9.3,SNR=12						
	comp=Z,6.2nm,0.8s						
SONM	**Songino Array**	**60.87**	**333**	P	**P**	**20 45 19.9**	**-0.5**
	comp=Z,0.3nm,0.7s,baz=123,slow=5.3,SNR=2.7						
	comp=Z,0.3nm,0.7s						
WMQ	**Urumqi**	**68.78**	**320**	*e*P	**P**	**20 46 13.5**	**+1.7**
MK31	**Makanchi Array**	**73.53**	**321**	P	**P**	**20 46 39.8**	**-0.5**
MKAR	**Makanchi Array**	**73.53**	**321**	P	**P**	**20 46 39.9**	**-0.4**
	comp=Z,1.4nm,0.7s,baz=102,slow=7.6,SNR=19						
	comp=Z,1.4nm,0.7s						
MKAR	**Makanchi Array**	**73.53**	**321**	P	**P**	**20 46 39.8**	**-0.5**
MAKZ	**Makanchi**	**73.73**	**321**	P	**P**	**20 46 40.0**	**-1.4**
MAKZ				IAmb	IAmb	20 46 42.0	
	comp=Z,2.6nm,0.8s						
VNDA	**Vanda**	**74.02**	**176**	P	**P**	**20 46 42.8**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=331,slow=6.1,SNR=5.7						
	comp=Z,0.7nm,0.7s						
KDJ	**Kajisay**	**75.14**	**315**	P	**P**	**20 46 49.2**	**-0.7**
KDJ				IAmb	IAmb	20 46 50.9	
	comp=Z,3.0nm,1.0s						
ZALV	**Zalesovo Beam**	**75.32**	**329**	P	**P**	**20 46 49.2**	**-1.3**
	comp=Z,1.0nm,0.6s,baz=109,slow=6.7,SNR=4.6						
	comp=Z,1.0nm,0.6s						
TIXI	**Tiksi**	**76.21**	**355**	P	**P**	**20 46 53.9**	**-1.2**
TIXI				IAmb	IAmb	20 46 54.1	
	comp=Z,2.5nm,1.1s						
NRIK	**Noril'sk**	**82.30**	**343**	P	**P**	**20 47 27.2**	**-1.1**
	comp=Z,5.8nm,0.8s,baz=116,slow=5.1,SNR=8.2						
	comp=Z,5.8nm,0.8s						
ILAR	**Eielson Array**	**85.39**	**24**	P	**P**	**20 47 42.0**	**-2.1**
	comp=Z,3.2nm,0.9s,baz=258,slow=4.9,SNR=18						
	comp=Z,3.2nm,0.9s						
PLCA	**Paso Flores**	**125.83**	**149**	PKP	**PKPdf**	**20 54 07.8**	**-0.9**
	comp=Z,1.9nm,0.8s,baz=262,slow=7.1,SNR=7.0						
LPAZ	**La Paz**	**143.16**	**124**	PKP	PKPbc	20 54 39.9	+0.4
	comp=Z,2.8nm,0.7s,baz=274,slow=1.5,SNR=9.5						
CPUP	**Villa Florida**	**143.90**	**148**	PKP	PKPab	20 54 40.2	+0.4
	comp=Z,0.7nm,0.3s,baz=183,slow=6.5,SNR=3.4						
DBIC	**Dimbokro**	**147.87**	**276**	PKPbc	**PKPbc**	**20 54 52.0**	**-0.7**
	comp=Z,3.8nm,0.7s,baz=86,slow=3.6,SNR=6.7						

MDD **12** *20:41:41.4±1.5, 36.˚65N×11.˚06W, h3km±41km, mb_Lg2.2/2, Error ellipse: s-maj=53.7km s-min=12.4km az=54.0*
INMG **12** *20:41:41.5±0.9, 36.˚43N×11.˚26W, h31km, ML1.8, Error ellipse: s-maj=6.4km s-min=3.9km az=109.0*
CNRM **12** *20:41:58.0, 34.˚80N×9.˚75W, h322km, ml2.9*
IGIL 12 20:41:40.8, 36.˚46N×11.˚14W, h14km, ML1.5, 1C,
Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**1.97**	**69**∩	*e*Pn	Pn	20 42 12.1	-1.7
PFVI				*e*Sn	Sn	20 42 35.0	-3.4
PFVI				A	A	20 42 36.9	
	8.2nm,0.7s						
MORF	**Marmelete**	**2.17**	**66**	*e*P	Pn	20 42 14.8	-1.7
MORF	**Marmelete**	**2.17**	**66**	*e*Pn	Pn	20 42 14.9	-1.6
PTEO	**Sao Teotonio**	**2.22**	**60**	*e*Sn	Sn	20 42 41.3	-3.0
PNCL	**Nicolau / Gran**	**2.66**	**51**	*e*Pn	Pn	20 42 21.6	-1.6
PNCL				*e*Sn	Sn	20 42 51.7	-3.5
PNCL				A	A	20 42 54.2	
	3.7nm,0.4s						
PBDV	**Barranco-do-Ve**	**2.69**	**72**	*e*Pn	Pn	20 42 22.3	-1.4
PBDV				*e*Sn	Sn	20 42 53.0	-3.1
PBDV				A	A	20 43 02.1	
	3.1nm,0.7s						
MESJ	**Messejana**	**2.71**	**59**	*e*S	Sn	20 42 52.7	-3.8
MESJ				IAML		20 42 55.6	
	comp=N,2.0nm,0.2s						
MESJ	**Messejana**	**2.71**	**59**	*e*Pn	Pn	20 42 22.5	-1.4
MESJ				*e*Sn	Sn	20 42 53.3	-3.2
MESJ				A	A	20 43 00.8	
	comp=N,2.2nm,0.4s						
PCVE	**Castro Verde**	**2.74**	**64**	*e*Pn	Pn	20 42 22.9	-1.5
PCVE				*e*Sn	Sn	20 42 54.1	-3.2
PCVE				A	A	20 42 59.5	
	comp=N,2.2nm,0.8s						
PMAFR	**Mafra**	**2.89**	**30**	*e*Sn	Sn	20 42 57.2	-3.9
PMAFR				A	A	20 43 02.8	
	comp=N,8.0nm,0.7s						
PVAQ	**Vaqueiros**	**2.90**	**70**	*e*Pn	Pn	20 42 25.1	-1.4
PVAQ				*e*Sn	Sn	20 42 57.8	-3.4
PVAQ				A	A	20 43 07.9	
	comp=N,1.3nm,0.7s						
PACT	**Alcochete**	**2.94**	**38**	*e*Sn	Sn	20 42 59.2	-3.0
PBEJ	**Beja**	**3.04**	**58**	*e*Sn	Sn	20 43 01.1	-3.7
EGRO	**El Granado**	**3.12**	**69**	Pn	Pn	20 42 28.6	-0.9
EGRO				Sn	Sn	20 43 03.4	-3.2
EGRO				*i* Vmb_Lg		20 43 06.0	
EVO	**Evora**	**3.23**	**49**	*e*Pn	Pn	20 42 29.7	-1.4
EVO				*e*Sn	Sn	20 43 05.6	-3.9
PMTG	**Montargil**	**3.48**	**41**	*e*Pn	Pn	20 42 32.9	-1.6
PMTG				*e*Sn	Sn	20 43 11.5	-4.0
PSBE	**So Bento**	**3.57**	**31**	*e*Sn	Sn	20 43 14.5	-3.2
PBAR	**Barrancos**	**3.69**	**61**	*e*Sn	Sn	20 43 16.6	-4.1
PESTR	**Estremoz**	**3.70**	**48**	*e*Sn	Sn	20 43 17.0	-4.0
EBAD	**Badajoz**	**4.00**	**54**	Pn	Pn	20 42 39.8	-1.9
EBAD				Sn	Sn	20 43 23.1	-5.2
EBAD				*i* Vmb_Lg		20 43 27.3	
PMRV	**Marv??o**	**4.19**	**44**	*e*Pn	Pn	20 42 42.7	-1.6
PMRV				*e*Sn	Sn	20 43 27.6	-5.5
PMRV				A	A	20 43 29.6	
	comp=N,1.0nm,0.2s						
OUK	**Oukaimeden**	**5.91**	**152**	P	Pn	20 43 05.5	-2.7
OUK				S	Sn	20 44 00.8	-15
TTIG	**Tnine Tigouga,**	**6.31**	**158**	P	Pn	20 43 07.5	-6.1
TTIG				S	Sn	20 44 06.5	-19
MD31	**MD31**	**6.36**	**122**	P	Pn	20 43 11.1	-3.1
MD31				S	Sn	20 44 10.7	-16
MDT	**Midelt**	**6.50**	**122**	P	Pn	20 43 13.6	-2.5
OUZM	**OUZ**	**6.63**	**145**	P	Pn	20 43 14.9	-3.0

TUL **12** *20:51:20.1±0.6, 36.˚67N±0.˚01×98.˚32W±0.˚01, h6km±6km, ML2.5, mb_Lg2.1/11(NEIC), Error ellipse: s-maj=1.9km s-min=0.3km az=140.0*
NEIC 12 20:51:20.4±0.6**, 36.˚66N**±0.˚01×**98.˚315W**±0.˚009**, h9**km±5km**,**
Error ellipse: s-maj=2.1km s-min=0.5km az=152.0,
Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	**Winter Ranch,**	**0.62**	**243**	Pg	Pg	20 51 32.2	-0.2
T35A	**Sooner Cattle**	**1.47**	**80**		Pn	20 51 47.3	+0.3
R32A	**Long Quarter,**	**1.78**	**350**		Pn	20 51 52.0	+0.7
WMOK	**Wichita Mounta**	**1.96**	**191**		Pn	20 51 53.9	+0.1
TUL1	**Leonard**	**2.17**	**110**	IAmb_Lg		20 52 31.0	
	comp=Z,6.8nm,0.9s						
AMTX	**Amarillo**	**3.26**	**238**	IAmb_Lg		20 53 08.8	
	comp=Z,4.9nm,0.7s						
HHAR	**Hobbs**	**3.55**	**95**	IAmb_Lg		20 53 10.3	
	comp=Z,3.5nm,1.1s						
W39A	**Magazine**	**3.96**	**110**	IAmb_Lg		20 53 33.1	
	comp=Z,5.6nm,1.1s						
S39A	**Bolivar**	**4.12**	**74**	IAmb_Lg		20 53 32.9	
	comp=Z,5.0nm,0.7s						
T25A	**Trinidad**	**4.91**	**277**	IAmb_Lg		20 54 09.0	
	comp=Z,4.4nm,1.1s						
SDCO	**Great Sand Dun**	**5.84**	**283**	IAmb_Lg		20 54 26.0	
	comp=Z,2.0nm,1.3s						

IDC **12** *21:23:58.8±8.6, 1.˚72N×123.˚62E, h289km±94km, mb3.1/6, mbtmp3.7/6, MS2.5/1, Error ellipse: s-maj=156.7km s-min=16.9km az=65.0*
DJA **12** *21:24:00.2±0.6, 2.˚N±5.˚1×12.˚4E±.˚, h306km±6km, M3.8/11, MLv3.8/11*
ISC 12 21:24:00.3±0.8**, 1.˚87N**±0.˚08×**124.˚16E**±0.˚07**, h300**km**, n15,**
σ1**07**/18**, mb3.3**/6**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**1.30**	**188**	P	**Pn**	**21 24 43.1**	**+0.8**
KMSI				S	**Sn**	**21 25 17.3**	**+1.6**
SGSI	**Sangihe**	**2.26**	**37**	P	**Pn**	**21 24 49.5**	**+0.3**
SGSI				S	**S**	**21 25 30.1**	**+1.8**
MRSI	**Marisa**	**2.61**	**238**	P	**Pn**	**21 24 54.0**	**+1.6**
MRSI				S	**S**	**21 25 34.4**	**+0.5**
TNTI	**Ternate**	**3.39**	**109**	P	**Pn**	**21 25 00.9**	**+0.9**
APSI	**Ampana**	**3.73**	**222**	P	**Pn**	**21 25 03.7**	**+0.1**
LBMI	**Labuha**	**4.17**	**127**	P	**Pn**	**21 25 08.8**	**+0.4**
SANI	**Sanana**	**4.30**	**155**	P	**Pn**	**21 25 08.8**	**-1.1**
MPSI	**Mapaga**	**4.52**	**250**	P	**Pn**	**21 25 12.8**	**+0.4**
SIJI	**Sorong**	**7.61**	**111**	LR	LR	21 29 29.6	
	comp=Z,32nm,20.7s,baz=7.5,slow=41						
WRA	**Warramunga Arr**	**23.87**	**156**	P	**P**	**21 28 47.3**	**-0.1**
	0.9nm,0.6s,baz=332,slow=11,SNR=26						
	0.9nm,0.6s						
ASAR	**Alice Springs**	**27.10**	**160**	P	**P**	**21 29 16.3**	**0.0**
	0.3nm,0.3s,baz=336,slow=9.0,SNR=12						
ASAR				PcP	**PcP**	**21 32 28.4**	**-0.4**
	0.3nm,0.6s,baz=347,slow=2.9,SNR=1.9						
	0.3nm,0.3s						
STKA	**Stephens Creek**	**37.42**	**155**	P	**P**	**21 30 45.9**	**+0.5**
	0.5nm,0.4s,baz=0.0,slow=10,SNR=1.2						
	0.5nm,0.4s						
SONM	**Songino Array**	**48.30**	**344**	P	**P**	**21 32 11.8**	**-0.2**
	0.3nm,0.4s,baz=162,slow=6.1,SNR=2.1						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**57.66**	**327**	P	**P**	**21 33 18.4**	**-1.4**
	0.9nm,0.4s,baz=121,slow=8.1,SNR=23						
	0.9nm,0.4s						
ZALV	**Zalesovo Beam**	**61.11**	**335**	P	**P**	**21 33 41.5**	**-1.6**
	0.5nm,0.5s,baz=120,slow=6.1,SNR=2.2						
	0.5nm,0.5s						

IDC **12** *21:43:09.5±0.8, 3.˚20N×126.˚99E, h0km, mb3.8/8, mbtmp3.8/9, ML3.5/1, MS3.4/16, Error ellipse: s-maj=61.2km s-min=15.2km az=67.0*
DJA **12** *21:43:12.4±0.5, 4.˚N±5.˚1×12.˚7E±.˚, h112km±5km, M4.1/12, mb4.1/6, mB4.9/3, MLv4.0/12, Mw(mB)4.2/3*
ISC 12 21:43:16.5±0.7**, 3.˚20N**±0.˚07×**126.˚88E**±0.˚08**, h50**km**, n34,**
σ1**69**/21**, mb3.8**/8**, MS3.5**/16**, 1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.43**	**290**	P	**Pn**	**21 43 39.6**	**-0.5**
SGSI				S	**Sn**	**21 43 58.2**	**+0.4**
TNTI	**Ternate**	**2.46**	**169**	P	**Pn**	**21 43 57.6**	**+3.4**
LBMI	**Labuha**	**3.87**	**171**	P	**Pn**	**21 44 15.9**	**+2.5**
KMSI	**Cibinong**	**3.90**	**228**	P	**Pn**	**21 44 15.3**	**+1.4**
KCP	**Kidapawan**	**4.18**	**335**∥	*e*P	**Pn**	**21 44 19.9**	**+2.0**
SANI	**Sanana**	**5.29**	**190**	P	**Pn**	**21 44 31.7**	**-1.3**
MRSI	**Marisa**	**5.63**	**241**	P	**Pn**	**21 44 38.7**	**+1.0**
	0.1nm29nm,1.0s						
SWI	**Sorong**	**5.96**	**133**	P	**Pn**	**21 44 41.8**	**-0.3**
	0.1nm16nm,1.2s						
SIJI	**Sorong**	**5.96**	**133**	Pn	**Pn**	**21 44 40.0**	**-2.2**
	1.4nm,0.3s,baz=331,slow=19,SNR=2.7						
SIJI				Sn	**Sn**	**21 45 47.7**	**-1.6**
	0.4nm,0.3s,baz=142,slow=19,SNR=1.5						
	3.8nm,0.3s						
APSI	**Ampana**	**6.64**	**232**	P	**Pn**	**21 44 52.5**	**+1.0**
	0.1nm38nm,0.9s						
WRA	**Warramunga Arr**	**24.14**	**163**	P	**P**	**21 48 26.4**	**-1.6**
	1.5nm,0.4s,baz=342,slow=8.4,SNR=15						
	1.5nm,0.4s						
BKNI	**Bangkinang**	**25.98**	**264**	P	P	21 48 34.9	-10
ASAR	**Alice Springs**	**27.57**	**166**	P	**P**	**21 48 58.1**	**-0.9**
	0.3nm,0.3s,baz=340,slow=7.7,SNR=9.0						
	0.3nm,0.3s						
KSRS	**Korea Array**	**34.10**	**1**	P	**P**	**21 49 54.7**	**-1.7**
	0.6nm,0.5s,baz=181,slow=11,SNR=2.3						
	0.6nm,0.5s						
MJAR	**Matsushiro Arr**	**34.78**	**16**	LR	LR	22 03 53.2	
	comp=Z,74nm,21.2s,baz=196,slow=36		

0.2nm,0.5s

GII **12** *22:50:29.2±0.4,35°.20N×26°.82E,h60km,Mm2.8/3*
ATH **12** *22:50:33.8,35°.55N×26°.63E,h49km±5km,ML2.5/7,Error ellipse: s-maj=5.6km s-min=0.9km az=142.0*
ISK **12** *22:50:34.4,35°.48N×26°.67E,h49km±1km,ML2.4/16*
DDA **12** *22:50:34.2±0.0,35°.63N×26°.76E,h29km±3km,ML2.4*
THE **12** *22:50:35.5,35°.60N×26°.57E,h6km±2km,ML2.5/3,Error ellipse: s-maj=3.0km s-min=0.6km az=164.0*

ISC 12 22:50:32.6±1.1,35°.22N±0°.04×26°.95E±0°.04,h49km±13km, n67,σ2s11/108,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.37**	**28**	P	Pn	22 50 44.9	+2.5
KARP				S	**Sn**	**22 50 52.9**	**+3.6**
KARP				AML	AML	22 50 55.1	
	comp=N,1969μm,0.2s						
KARP				AML	AML	22 50 55.3	
	comp=E,2551μm,0.2s						
KARP	**Karpathos**	**0.37**	**28**	P	Pn	22 50 44.9	+2.5
KARP				S	**Sn**	**22 50 53.2**	**+3.9**
	comp=E,1μm,0.2s						
KARP	**Karpathos**	**0.37**	**28**	PG	Pn	22 50 45.1	+2.7
KARP				SG	**Sn**	**22 50 52.9**	**+3.6**
ZKR	**Zakros**	**0.61**	**260**	P	**Pn**	**22 50 45.8**	**+0.7**
ZKR				S	**Sn**	**22 50 54.5**	**+0.4**
ZKR				AML	AML	22 50 55.4	
	comp=E,3493μm,0.4s						
ZKR				AML	AML	22 50 55.6	
	comp=N,862μm,0.4s						
ZKR	**Zakros**	**0.61**	**260**	P	**Pn**	**22 50 46.0**	**+0.9**
ZKR				S	**Sn**	**22 50 54.9**	**+0.8**
	comp=N,1μm,0.4s						
ZKR	**Zakros**	**0.61**	**260**	PG	**Pn**	**22 50 45.7**	**+0.6**
ZKR				SG	**Sn**	**22 50 54.8**	**+0.7**
FRMA	**Ierapetra Chan**	**1.02**	**259**	P	**Pn**	**22 50 50.4**	**-0.1**
FRMA				S	**Sn**	**22 51 02.2**	**-1.5**
FRMA				AML	AML	22 51 05.8	
	comp=N,801μm,0.3s						
FRMA				AML	AML	22 51 07.6	
	comp=E,830μm,0.2s						
FRMA	**Ierapetra Chan**	**1.02**	**259**	P	**Pn**	**22 50 50.7**	**+0.2**
FRMA				S	**Sn**	**22 51 04.1**	**+0.4**
NPS	**Neapolis**	**1.09**	**272**	P	**Pn**	**22 50 51.7**	**+0.2**
NPS	**Neapolis**	**1.09**	**272**	P	**Pn**	**22 50 51.9**	**+0.4**
NPS				S	**Sn**	**22 51 05.2**	**-0.4**
ARG	**Arkhangelos**	**1.38**	**44**	P	Pn	22 50 58.9	+3.5
ARG				S	**Sn**	**22 51 16.9**	**+4.4**
ARG				AML	AML	22 51 18.4	
	comp=N,110μm,0.2s						
ARG				AML	AML	22 51 18.5	
	comp=E,194μm,0.3s						
ARG	**Arkhangelos**	**1.38**	**44**	P	Pn	22 51 00.6	+5.2
ARG				S	**Sn**	**22 51 18.8**	**+6.3**
	comp=E,72nm,0.2s						
ARG	**Arkhangelos**	**1.38**	**44**	PN	Pn	22 50 58.7	+3.3
NIS1	**Nisyros Isl.**	**1.39**	**8**	P	**Pn**	**22 50 55.1**	**-0.5**
NIS1				S	**Sn**	**22 51 10.4**	**-2.4**
NIS1				AML	AML	22 51 18.3	
	comp=E,307μm,0.3s						
NIS1				AML	AML	22 51 21.8	
	comp=N,233μm,0.5s						
NIS1	**Nisyros Isl.**	**1.39**	**8**	P	**Pn**	**22 50 55.4**	**-0.2**
NIS1				S	**Sn**	**22 51 13.0**	**+0.2**
NIS1	**Nisyros Isl.**	**1.39**	**8**	PN	**Pn**	**22 50 55.4**	**-0.2**
NIS1				SN	**Sn**	**22 51 10.7**	**-2.1**
NISR	**Nisiros**	**1.39**	**6**	P	**Pn**	**22 50 55.0**	**-0.6**
NISR				S	**Sn**	**22 51 10.2**	**-2.7**
NISR				AML	AML	22 51 12.7	
	comp=E,391μm,0.3s						
NISR				AML	AML	22 51 15.4	
	comp=N,285μm,0.2s						
NISR	**Nisiros**	**1.39**	**6**	P	**Pn**	**22 50 55.3**	**-0.3**
NISR				S	**Sn**	**22 51 11.9**	**-1.0**
HRKL	**Herakleio**	**1.51**	**274**	P	**Pn**	**22 50 57.4**	**+0.1**
HRKL	**Herakleio**	**1.51**	**274**	PN	**Pn**	**22 50 57.1**	**-0.1**
HRKL				SN	**Sn**	**22 51 13.4**	**-2.4**
KOSK	**Kos Island**	**1.53**	**1**	P	**Pn**	**22 50 56.6**	**-0.8**
KOSK	**Kos Island**	**1.53**	**1**	PN	**Pn**	**22 50 57.3**	**-0.1**
KOSK				SN	**Sn**	**22 51 13.4**	**-2.7**
DAT	**Datca**	**1.59**	**19**	P	**Pn**	**22 50 59.8**	**+1.4**
DAT				S	**Sn**	**22 51 19.1**	**+1.3**
DAT	**Datca**	**1.59**	**19**	PN	**Pn**	**22 50 58.9**	**+0.5**
DAT				SN	**Sn**	**22 51 17.2**	**-0.6**
DAT	**Datca**	**1.59**	**19**	P	**Pn**	**22 50 58.8**	**+0.4**
DAT				S	**Sn**	**22 51 17.3**	**-0.6**
SANT	**Santorini**	**1.67**	**314**	P	**Pn**	**22 50 57.2**	**-2.2**
SANT	**Santorini**	**1.67**	**314**	PN	**Pn**	**22 50 57.4**	**-2.0**
SANT				SN	**Sn**	**22 51 14.2**	**-5.4**
IDI	**Anoyia**	**1.69**	**273**	P	**Pn**	**22 50 59.4**	**-0.2**
IDI				S	**Sn**	**22 51 19.3**	**-0.8**
IDI				AML	AML	22 51 24.2	
	comp=E,128μm,0.4s						
IDI				AML	AML	22 51 25.2	
	comp=N,96μm,0.3s						
IDI	**Anoyia**	**1.69**	**273**	PN	**Pn**	**22 50 59.8**	**+0.2**
BODT	**Bodrum**	**1.86**	**9**	P	**Pn**	**22 51 02.0**	**-0.1**
BODT				S	**Sn**	**22 51 23.8**	**-0.5**
BODT	**Bodrum**	**1.86**	**9**	PN	**Pn**	**22 51 01.9**	**-0.1**
BODT				SN	**Sn**	**22 51 22.4**	**-1.9**
TURN	**Turunc**	**1.87**	**34**	PN	**Pn**	**22 51 04.0**	**+1.9**
TURN				SN	**Sn**	**22 51 26.4**	**+1.8**
TURN	**Turunc**	**1.87**	**34**	P	**Pn**	**22 51 03.9**	**+1.7**
TURN				S	**Sn**	**22 51 25.6**	**+1.0**
BDRM	**Kayabasi**	**1.88**	**12**	P	**Pn**	**22 51 02.1**	**-0.2**
BDRM				S	**Sn**	**22 51 23.1**	**-1.8**
DALY	**Dalyan (Mula)**	**2.11**	**41**	PN	Pn	22 51 08.2	+2.8
APE	**Apeiranthos**	**2.17**	**329**	P	**Pn**	**22 51 04.2**	**-2.1**
APE	**Apeiranthos**	**2.17**	**329**	PN	**Pn**	**22 51 04.8**	**-1.5**
APE				SN	**Sn**	**22 51 26.6**	**-5.4**
APE	**Apeiranthos**	**2.17**	**329**	Pn	**Pn**	**22 51 03.9**	**-2.4**
APE				Sn	**Sn**	**22 51 27.2**	**-4.8**
MLSB	**Milas**	**2.17**	**18**	PN	**Pn**	**22 51 07.1**	**+0.8**
MLSB				SN	**Sn**	**22 51 31.2**	**-0.9**
YER	**Yerkesik**	**2.19**	**29**	P	**Pn**	**22 51 09.0**	**+2.4**
YER				S	**Sn**	**22 51 34.9**	**+2.3**
YER	**Yerkesik**	**2.19**	**29**	PN	**Pn**	**22 51 08.5**	**+1.9**
FETY	**Fethiye**	**2.23**	**50**	P	Pn	22 51 10.3	+3.2
FETY				S	**Sn**	**22 51 38.8**	**+5.2**
MULA	**Mugla, Merkez-**	**2.31**	**28**	P	**Pn**	**22 51 10.5**	**+2.2**
MULA				S	**Sn**	**22 51 34.8**	**-0.8**
AKAS	**Kas**	**2.39**	**64**	P	**Pn**	**22 51 11.6**	**+2.3**
AKAS				S	**Sn**	**22 51 39.7**	**+2.2**
IMMV	**Iera Moni Meta**	**2.44**	**276**	PN	Pn	**22 51 09.9**	**0.0**
GCAM	**G?zelcaml?**	**2.48**	**5**	P	**Pn**	**22 51 09.8**	**-0.7**
AYDN	**Tasoluk**	**2.55**	**17**	P	**Pn**	**22 51 11.5**	**+0.1**
AYDN				S	**Sn**	**22 51 40.0**	**-1.3**
KNDR	**Palaiochora Ch**	**2.67**	**271**	PN	**Pn**	**22 51 14.0**	**+1.0**
CAEL	**Denizli, Camel**	**2.70**	**45**	P	**Pn**	**22 51 15.8**	**+2.2**
CAEL				S	**Sn**	**22 51 51.6**	**+6.5**
CAEL				*i* AML	AML	22 52 11.0	
	comp=N,21nm,0.8s						
CAEL				*i* AML	AML	22 52 13.0	
	comp=N,19nm,0.8s						
CAEL				*i* AML	AML	22 52 25.0	
	comp=N,15nm,0.8s						
TAVA	**DENIZLI_Tavas**	**2.75**	**35**	P	**Pn**	**22 51 16.8**	**+2.6**
TAVA				S	**Sn**	**22 51 46.5**	**+0.3**
DGB	**zmir**	**2.83**	**359**	P	**Pn**	**22 51 14.0**	**-1.1**
GOLH	**Golhisar**	**2.92**	**46**	P	**Pn**	**22 51 19.2**	**+2.6**
GOLH				S	**Sn**	**22 51 54.2**	**+3.8**
AKUM	**Antalya-Kumluc**	**2.97**	**67**	P	**Pn**	**22 51 19.8**	**+2.6**
AKUM				S	**Sn**	**22 51 54.1**	**+2.5**
ZEDA	**zmir-Bergama**	**3.74**	**2**	P	**Pn**	**22 51 27.0**	**-0.8**
ZEDA				*i* AML	AML	22 52 08.0	
	comp=N,7.3nm,1.4s						
USAK	**Uak-Merkez**	**3.86**	**25**	P	**Pn**	**22 51 31.1**	**+1.6**
USAK				*i* AML	AML	22 52 13.0	
	comp=N,27nm,1.1s						
USAK				*i* AML	AML	22 52 13.0	
	comp=N,30nm,3.6s						
CSS	**Mathiatis**	**5.24**	**91**	Pn	**Pn**	**22 51 46.9**	**-1.5**
CSS				Sn	**Sn**	**22 52 47.0**	**-0.5**
GEM	**Giv'at Ha'Em**	**7.49**	**103**	Sn	**Sn**	**22 53 42.3**	**-0.6**
NATI	**Neve Ativ**	**7.54**	**103**	Pn	**Pn**	**22 52 18.2**	**-1.6**
NATI				Sn	**Sn**	**22 53 44.0**	**+0.1**
SALP	**Salfit**	**7.56**	**112**	Pn	**Pn**	**22 52 18.6**	**-1.6**
SALP				Sn	**Sn**	**22 53 44.0**	**-0.5**
MMLI	**Mount Malkishu**	**7.58**	**109**	Pn	**Pn**	**22 52 18.4**	**-2.0**
MMLI				Sn	**Sn**	**22 53 44.5**	**-0.5**
KZIT	**Kziot**	**7.59**	**122**	Pn	**Pn**	**22 52 18.8**	**-1.8**
KZIT				Sn	**Sn**	**22 53 44.2**	**-1.1**
YTIR	**Yattir**	**7.85**	**117**	Pn	**Pn**	**22 52 22.6**	**-1.6**
YTIR				Sn	**Sn**	**22 53 51.2**	**-0.5**
KRMI	**Paran Flat**	**8.30**	**126**	Pn	**Pn**	**22 52 28.5**	**-1.8**
KRMI				Sn	**Sn**	**22 54 00.9**	**-1.8**
PRNI	**Paran**	**8.34**	**123**	Pn	**Pn**	**22 52 28.6**	**-2.3**
PRNI				Sn	**Sn**	**22 54 02.4**	**-1.3**
HRFI	**Mount Harif**	**8.56**	**125**	Pn	**Pn**	**22 52 32.1**	**-1.8**
HRFI				Sn	**Sn**	**22 54 07.4**	**-1.7**
MBRI	**Mt Berech**	**8.63**	**127**	Sn	**Sn**	**22 54 09.8**	**-1.2**
EIL	**Elat**	**8.74**	**127**	Sn	**Sn**	**22 54 11.6**	**-1.8**

MAN **12** *22:55:33.9,11°.24N×126°.54E,h32km,mb5.5,ML4.5, MS4.7*
NEIC **12** *22:55:39.9±1.2,11°.15N±0°.07×126°.3E±0°.1,h51km±2km, mb4.7/35,Error ellipse: s-maj=15.5km s-min=9.3km az=68.0*
IDC **12** *22:55:40.4±2.1,11°.12N×126°.29E,h61km±20km,mb3.9/24, mbtmp4.3/26,MS3.5/33,Error ellipse: s-maj=19.8km s-min=10.1km az=78.0*
DJA **12** *22:55:55.9±0.4,11°.N±3°×12°.6E±°,h165km±5km,M4.9/37, mB5.4/13,mb4.5/37,MLv5.3/2,Mw(mB)4.8/13*

ISC 12 22:55:37.8±0.4,11°.23N±0°.04×126°.47E±0°.06,h37km,n165, σ2s90/127,mb4.6/46,MS3.6/31,4C-6D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.74**	**214**	*e*P	**Pn**	**22 56 02.5**	**-2.8**
SCPH				*e*S	**Sn**	**22 56 23.8**	**-2.5**
LLP	**Lapu-Lapu**	**2.62**	**250**	*i*P	**Pn**	**22 56 15.7**	**-1.9**
LLP				*i* S	**Sn**	**22 56 53.4**	**+5.2**
TBP	**Tagbilaran**	**2.99**	**239**	*e*P	**Pn**	**22 56 21.0**	**-1.6**
TBP				*i* S	**Sn**	**22 57 02.1**	**+4.9**
RCP	**Roxas**	**3.67**	**275**	*e*P	**Pn**	**22 56 30.6**	**-1.3**
DAV	**Davao City (W)**	**4.23**	**192**	P	**Pn**	**22 56 40.3**	**+0.5**
	122nm,0.4s,baz=297,slow=11,SNR=1.8						
DAV				S	**Sn**	**22 57 28.7**	**+0.8**
	201nm,0.5s,baz=65,slow=19,SNR=3.6						
DAV	**Davao City (W)**	**4.23**	**192**		**Pn**	**22 56 40.1**	**+0.4**
DAV	**Davao City (W)**	**4.23**	**192**	Sn	**Sn**	**22 57 26.5**	**-1.4**
KCP	**Kidapawan**	**4.41**	**198**	*e*P	**Pn**	**22 56 45.3**	**+3.0**
CTBH	**Cotabato--PC H**	**4.55**	**209**	*i*P	**Pn**	**22 56 45.2**	**+1.0**
GQP	**Guinayangan**	**4.74**	**304**	*e*P	**Pn**	**22 56 45.5**	**-1.2**
PGP	**Puerto Galera**	**5.84**	**293**	*e*P	**Pn**	**22 57 01.9**	**0.0**
TGY	**Tagaytay City**	**6.11**	**298**	P	**Pn**	**22 57 06.7**	**+1.1**
	109nm,0.3s,baz=180,slow=24,SNR=4.6						
PCPH	**Palayan**	**6.77**	**310**	*e*P	Pn	22 57 30.9	+16
MRSI	**Marisa**	**11.60**	**203**	P	Pn	22 58 36.2	+15
	20nm,0.9s						
LBMI	**Labuha**	**11.84**	**175**	P	Pn	22 58 41.2	+17
	2μm17nm,0.7s						
MPSI	**Mapaga**	**12.64**	**212**	P	**P**	**22 58 47.9**	**+2.0**
	626nm8.3nm,0.9s						
SWI	**Sorong**	**12.93**	**158**	P	P	22 58 59.2	+10
	46nm,1.0s						
SIJI	**Sorong**	**12.93**	**158**	P	**Pn**	**22 58 40.9**	**+1.8**
	4.5nm,0.3s,baz=295,slow=14,SNR=3.5						
APSI	**Ampana**	**12.98**	**202**	P	P	22 58 54.2	+4.5
	20nm,0.5s						
SANI	**Sanana**	**13.21**	**182**	P	P	22 58 59.9	+7.7
	28nm,1.4s						
MSAI	**Masohi**	**14.69**	**170**	P	P	22 59 17.7	+9.0
	19nm,0.6s						
SMKI	**Samarinda**	**14.81**	**219**	P	P	22 59 14.9	+4.8
	3μm54nm,0.7s						
AAI	**Ambon**	**14.92**	**173**	P	P	22 59 23.4	+12
	30nm,1.1s						
FAKI	**Fak Fak**	**15.19**	**157**	Pn	**Pn**	**22 59 07.5**	**-2.2**
FAKI				IAmb	IAmb	22 59 28.8	
	comp=Z,84nm,1.2s						
FAKI	**Fak Fak**	**15.19**	**157**	P	P	22 59 27.4	+13
	comp=Z,68nm,1.2s						
JOW	**Kunigami**	**15.61**	**6**	LR	LR	23 05 02.6	
	comp=Z,285nm,18.5s,baz=272,slow=36						
BAKI	**Biak**	**15.62**	**142**	P	P	22 59 41.1	+22
BKB	**Balikpapan**	**15.64**	**218**	P	**P**	**22 59 21.8**	**+2.5**
	comp=Z,102nm,0.8s						
TTSI	**Tana Toraja**	**15.65**	**205**	P	**P**	**22 59 26.0**	**+6.6**
	comp=Z,1μmcomp=Z,46nm,1.1s						
SRPI	**Serui, Papua**	**16.24**	**143**	P	P	22 59 41.6	+16
SPSI	**Sidrap Palu**	**16.51**	**204**	P	P	22 59 37.1	+8.2
	comp=Z,21nm,0.7s						
MTKI	**Muara Teweh, K**	**16.70**	**224**	P	**P**	**22 59 36.0**	**+5.0**
	comp=Z,38nm,0.4s						
BNSI	**Bone**	**16.77**	**203**	P	P	22 59 39.5	+7.6
	comp=Z,1μmcomp=Z,51nm,1.2s						
BBSI	**Bau Bau**	**17.06**	**193**	P	P	22 59 45.1	+10
	comp=Z,7.1nm,1.0s						
KAPI	**Kappang**	**17.47**	**203**	LR	LR	23 08 12.7	
	comp=Z,114nm,18.8s,baz=6.0,slow=44						
SMPI	**Sarmi**	**17.91**	**136**	P	**P**	**22 59 48.0**	**+3.6**
GUMO	**Guam**	**18.12**	**81**	LR	LR	23 06 08.3	
	comp=Z,187nm,20.6s,baz=274,slow=34						
STKI	**Sintang**	**18.57**	**234**	P	**Pn**	**22 59 54.3**	**+2.0**
KSM	**Kuching**	**18.75**	**240**	P	**P**	**22 59 50.8**	**-2.9**
GENI	**Genyem**	**19.35**	**134**	P	Pn	23 00 15.6	+14
	comp=Z,57nm,2.2s						
EDFI	**Ende, Flores**	**20.41**	**194**	P	Pn	23 00 20.4	+6.2
	comp=Z,13nm,0.9s						
BATI	**Baumata**	**21.48**	**188**	P	**P**	**23 00 22.6**	**-0.8**
	comp=Z,38nm,0.6s,baz=100,slow=6.1,SNR=3.3						
	comp=Z,38nm,0.6s						
BATI	**Baumata**	**21.48**	**188**	P	P	23 00 33.4	+10
	comp=Z,87nm,0.9s						
JCJ	**Chichijima**	**21.62**	**41**	LR	LR	23 08 20.9	
	comp=Z,205nm,20.9s,baz=183,slow=35						
PPBI	**Pangkal Pinang**	**24.21**	**238**	P	**P**	**23 00 52.5**	**+1.3**
WOJI	**Wonogiri, Jawa**	**24.46**	**220**	P	**P**	**23 00 55.6**	**+2.2**
	comp=Z,31nm,1.1s						
LEM	**Lembang**	**25.96**	**227**	P	**P**	**23 01 05.8**	**-1.4**
	comp=Z,24nm,0.7s,baz=191,slow=23,SNR=1.8						
	comp=Z,24nm,0.7s						
KSRS	**Korea Array**	**26.14**	**3**	P	**P**	**23 01 10.8**	**+2.4**
	comp=Z,0.7nm,0.4s,baz=184,slow=10,SNR=5.2						
KSRS				LR	LR	23 12 10.9	
	comp=Z,115nm,19.1s,baz=180,slow=38						
	comp=Z,0.7nm,0.4s						
LYN	**LuoYang**	**26.49**	**333**	*e*P	**P**	**23 01 08.3**	**-3.4**
LYN				pP	pP	23 01 16.8	-3.0
LYN				sP	sP	23 01 20.6	-3.3
LYN				S	**S**	**23 05 46.7**	**+3.4**
LYN				sS	sS	23 06 04.8	+7.4
LYN				SS	SnSn	23 07 04.1	+17
LYN				pmax	pmax		
	comp=Z,160nm,4.5s						
LYN				LR	LR		
	comp=N,220nm,9.0s						
LYN				LR	LR		
	comp=E,210nm,7.5s						
LYN				LR	LR		
	comp=Z,120nm,8.4s						
KLI	**Kotabumi**	**26.80**	**234**	P	**P**	**23 01 16.1**	**+1.4**
MJAR	**Matsushiro Arr**	**27.34**	**21**	P	**P**	**23 01 19.5**	**+0.2**
	comp=Z,0.9nm,0.3s,baz=191,slow=9.6,SNR=1.8						
MJAR				LR	LR	23 11 55.5	
	comp=Z,197nm,19.1s,baz=202,slow=35						
	comp=Z,0.9nm,0.3s						
MJAR	**Matsushiro Arr**	**27.34**	**21**	P	**P**	**23 01 20.5**	**+1.2**
LWLI	**Liwa**	**27.53**	**235**	P	**P**	**23 01 23.1**	**+1.7**
	comp=Z,32nm,0.6s						
CMAR	**Chiang Mai Arr**	**27.54**	**288**	P	**P**	**23 01 19.4**	**-1.9**
	comp=Z,2.1nm,0.8s,baz=101,slow=7.3,SNR=9.9						
CMAR				LR	LR	23 14 14.0	
	comp=Z,52nm,18.4s,baz=110,slow=41						
	comp=Z,2.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**27.54**	**288**	P	**P**	**23 01 19.1**	**-2.2**
XAN	**Xi'an**	**27.80**	**328**	P	**P**	**23 01 22.8**	**-0.7**
XAN				pP	pP	23 01 32.1	+0.6
XAN				sP	sP	23 01 35.9	-0.2
XAN				PP	**PnPn**	**23 02 17.5**	**+6.9**
XAN				S	**S**	**23 06 09.2**	**+5.2**
XAN				sS	sS	23 06 24.8	+6.5
XAN				pmax	pmax		
	comp=Z,7.0nm,0.6s						
XAN				pmax	pmax		
	comp=Z,51nm,4.0s						
XAN				LR	LR		
	comp=N,190nm,12.7s						
XAN				LR	LR		
	comp=E,120nm,12.9s						
XAN				LR	LR		
	comp=Z,170nm,12.7s						
PSI	**Prapat**	**28.57**	**255**	P	**P**	**23 01 29.2**	**-1.5**
	comp=Z,1.9nm,0.4s,baz=41,slow=9.3,SNR=2.5						
	comp=Z,1.9nm,0.4s						
RPSI	**Rantau Prapat**	**28.60**	**255**	P	**P**	**23 01 29.2**	**-1.6**
WRA	**Warramunga Arr**	**31.93**	**166**	P	**P**	**23 01 58.7**	**-1.5**
	comp=Z,2.3nm,0.5s,baz=352,slow=6.9,SNR=21						
WRA				PcP	**PcP**	**23 04 50.7**	**+0.6**
	comp=Z,1.0nm,0.8s,baz=342,slow=3.2,SNR=2.1						
	comp=Z,2.3nm,0.5s						
WRA	**Warramunga Arr**	**31.93**	**166**	P	**P**	**23 01 59.1**	**-1.0**
USRK	**Ussuriysk Ar.**	**33.19**	**7**	LR	LR	23 15 22.2	
	comp=Z,68nm,19.8s,baz=181,slow=36						
BNX	**BinXian**	**34.40**	**1**	P	**P**	**23 02 17.4**	**-4.0**
BNX				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BNX				pmax	pmax		
	comp=Z,52nm,6.9s						
AS31	**Alice Springs**	**35.44**	**168**	P	**P**	**23 02 30.8**	**+0.1**
ASAR	**Alice Springs**	**35.44**	**168**	P	**P**	**23 02 29.5**	**-1.2**
	comp=Z,2.0nm,0.4s,baz=351,slow=6.9,SNR=39						
ASAR				PcP	**PcP**	**23 05 00.3**	**+0.3**
	comp=Z,1.1nm,0.9s,baz=348,slow=2.2,SNR=1.8						
	comp=Z,2.0nm,0.4s						
ASAJ	**Asahikawa**	**35.60**	**20**	LR	LR	23 16 26.9	
	comp=Z,87nm,19.8s,baz=216,slow=35						
GTA	**Gaotai**	**36.71**	**324**	P	**P**	**23 02 42.7**	**+1.2**
GTA				pP	pP	23 02 51.4	+1.8
GTA				sP	pwP	23 02 59.0	-1.7
GTA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KLR	**Kul'dur**	**38.13**	**6**	P	**P**	**23 02 55.0**	**+1.7**
	comp=Z,0.7nm,0.3s,baz=108,slow=6.4,SNR=2.4						
KLR				LR	LR	23 18 48.2	
	comp=Z,86nm,20.0s,baz=226,slow=36						
	comp=Z,0.7nm,0.3s						
HNR	**Honiara**	**39.11**	**120**	LR	LR	23 18 18.3	
	comp=Z,95nm,20.8s,baz=308,slow=35						
H11S3	**WAKE ISLAND Hy**	**39.47**	**75**	T	T	23 46 04.6	
	baz=272,SNR=19						
H11S1	**WAKE ISLAND Hy**	**39.48**	**75**	T	T	23 46 06.9	
	baz=272,SNR=8.8						
H11S2	**WAKE ISLAND Hy**	**39.48**	**75**	T	T	23 46 04.6	
	baz=272,SNR=8.5						
TAPN	**Taplejung**	**39.74**	**299**	*e*P	**P**	**23 03 05.8**	**-1.7**
H11N1	**WAKE ISLAND Hy**	**39.77**	**73**	T	T	23 46 30.6	
	baz=264,slow=74,SNR=28						
H11N2	**WAKE ISLAND Hy**	**39.78**	**73**	T	T	23 46 30.3	
	baz=264,slow=74,SNR=21						
H11N3	**WAKE ISLAND Hy**	**39.79**	**73**	T	T	23 46 32.0	
	baz=264,slow=74,SNR=29						
ODAN	**Odare**	**39.89**	**299**	*e*P	**P**	**23 03 06.8**	**-1.8**
	comp=Z,7.8nm,1.0s						
ULN	**Ulaanbaatar**	**39.99**	**340**	P	**P**	**23 03 09.4**	**+0.4**
SONM	**Songino Array**	**40.19**	**339**	P	**P**	**23 03 12.2**	**+1.5**
	comp=Z,2.6nm,0.9s,baz=157,slow=9.1,SNR=9.5						
SONM				LR	LR	23 21 05.8	
	comp=Z,81nm,19.3s,baz=115,slow=38						
	comp=Z,2.6nm,0.9s						
SONM	**Songino Array**	**40.19**	**339**	P	**P**	**23 03 12.0**	**+1.3**
RAMN	**Ramite**	**40.59**	**298**	*e*P	**P**	**23 03 12.8**	**-1.6**
JIRN	**Jiri**	**41.13**	**299**	*e*P	**P**	**23 03 16.9**	**-2.1**
	comp=Z,39nm,0.6s						
GUN	**Gumba**	**41.46**	**300**	*e*P	**P**	**23 03 20.0**	**-1.7**
	comp=Z,55nm,0.8s						
PKI	**Pulchoki**	**41.77**	**299**	*e*P	**P**	**23 03 21.9**	**-2.3**
	comp=Z,16nm,0.7s						
PKIN	**Phulchoki**	**41.78**	**299**	*e*P	**P**	**23 03 21.8**	**-2.5**
	comp=Z,17nm,0.6s						
GKN	**Gorkha**	**42.54**	**299**	*e*P	**P**	**23 03 27.1**	**-3.2**
	comp=Z,14nm,0.7s						
KOLN	**Koldanda**	**43.38**	**299**	*e*P	**P**	**23 03 35.1**	**-2.0**
	comp=Z,2.8nm,0.8s						
DANN	**Dangsing**	**43.38**	**299**	*e*P	**P**	**23 03 34.5**	**-2.7**
	comp=Z,30nm,0.7s						
PYUN	**Piuthan**	**43.98**	**299**	*e*P	**P**	**23 03 40.3**	**-1.7**
	comp=Z,45nm,0.8s						
STKA	**Stephens Creek**	**45.25**	**162**	P	**P**	**23 03 51.6**	**-0.1**
	comp=Z,3.5nm,0.4s,baz=329,slow=9.8,SNR=5.2						
	comp=Z,3.5nm,0.4s						
PETK	**Petropavlovsk-**	**48.68**	**25**	P	**P**	**23 04 19.2**	**+0.9**
	comp=Z,0.6nm,0.4s,baz=205,slow=6.4,SNR=2.0						
PETK				LR	LR	23 27 18.9	
	comp=Z,64nm,18.1s,baz=216,slow=39						
	comp=Z,0.6nm,0.4s						
PETK	**Petropavlovsk-**	**48.68**	**25**	P	**P**	**23 04 19.0**	**+0.8**
YAK	**Yakutsk**	**50.77**	**2**	LR	LR	23 27 27.4	
	comp=Z,48nm,18.6s,baz=266,slow=38						
CAN	**Canberra**	**50.98**	**156**	P	**P**	**23 04 36.4**	**+0.4**
MK31	**Makanchi Array**	**51.39**	**322**	P	**P**	**23 04 39.4**	**+0.5**
MK31				IAmb	IAmb	23 04 40.4	
	comp=Z,5.5nm,0.8s						
MKAR	**Makanchi Array**	**51.39**	**322**	P	**P**	**23 04 39.5**	**+0.6**
	comp=Z,6.1nm,0.7s,baz=119,slow=8.4,SNR=63						
MKAR				LR	LR	23 29 31.5	
	comp=Z,67nm,18.8s,baz=128,slow=40						
	comp=Z,6.1nm,0.7s		

comp=Z,9.1nm,1.4s
KDAK Kodiak Island 75.75 33 LR LR 23 38 41.5
comp=Z,28nm,19.5s,baz=248,slow=34
GNI Garni 76.56 309 LR LR 23 45 02.5
comp=Z,36nm,18.5s,baz=100,slow=39
BPAW Bear Paw Mtn. 76.71 27 P **P** **23 07 27.1 +2.1**
BPAW IAmb IAmb 23 07 39.7
comp=Z,10nm,1.2s
MLY Manley 76.85 26 P **P** **23 07 27.1 +1.3**
MLY IAmb IAmb 23 07 40.6
comp=Z,7.7nm,1.3s
NEA2 Nenana 77.56 26 P **P** **23 07 29.6 -0.1**
KBZ Khabaz 77.71 312 P **P** **23 07 30.9 0.0**
comp=Z,0.6nm,0.3s,baz=37,slow=5.1,SNR=2.2
comp=Z,0.6nm,0.3s
KIV Kislovodsk 77.84 313 P **P** **23 07 30.8 -1.0**
KIV IAmb IAmb 23 07 43.5
comp=Z,4.7nm,0.7s
ILAR Eielson Array 78.49 26 P **P** **23 07 36.1 +1.3**
comp=Z,0.7nm,0.9s,baz=245,slow=5.6,SNR=7.0
ILAR LR LR 23 47 39.1
comp=Z,15nm,18.0s,baz=246,slow=40
comp=Z,0.7nm,0.9s
ILAR Eielson Array 78.49 26 P **P** **23 07 35.8 +0.9**
KLMR Klimovskoe 78.80 330 *eP* **P** **23 07 35.2 -1.3**
KLMR AMP 23 07 49.5
comp=Z,34nm,1.4s
BMAR Burnt Mountain 79.31 23 P **P** **23 07 41.5 +2.2**
BCAR Beaver Creek A 80.87 27 P **P** **23 07 48.7 +0.9**
ARCES ARCESS Array B 83.36 340 P **P** **23 08 00.9 +0.2**
comp=Z,1.6nm,0.7s,baz=76,slow=5.1,SNR=4.6
comp=Z,1.6nm,0.7s
ARCES ARCESS Array B 83.36 340 P **P** **23 08 01.0 +0.2**
HSPB Hornsund (broa 83.73 348 *eP* P 23 07 55.0 -7.4
BRTR Keskin Array B 85.08 309 P **P** **23 08 09.1 -1.2**
comp=Z,0.7nm,0.8s,baz=101,slow=6.4,SNR=5.0
comp=Z,0.7nm,0.8s
FINES FINESS Array B 85.14 332 P **P** **23 08 10.1 +0.2**
comp=Z,1.4nm,0.5s,baz=87,slow=5.4,SNR=16
comp=Z,1.4nm,0.5s
FINES FINESS Array B 85.14 332 P **P** **23 08 10.2 +0.4**
AKASG Malin Array Be 85.95 321 P **P** **23 08 13.2 -1.0**
comp=Z,2.7nm,0.9s,baz=56,slow=4.0,SNR=14
comp=Z,2.7nm,0.9s
AKASG Malin Array Be 85.95 321 P **P** **23 08 13.3 -0.8**
AKASG IAmb IAmb 23 08 25.6
comp=Z,11nm,1.4s
AKBB Malin Array Si 85.95 321 P **P** **23 08 12.5 -1.6**
CSS Mathiatis 86.20 305 P **P** **23 08 14.4 -1.4**
CSS IAmb IAmb 23 08 18.6
comp=Z,6.1nm,0.8s
DLBC Dease Lake 87.47 31 LR LR 23 43 54.9
comp=Z,23nm,21.9s,baz=289,slow=33
BUR08 Bucovina Ar. S 89.26 318 P **P** **23 08 29.8 -0.4**
BUR08 IAmb IAmb 23 08 56.2
comp=Z,3.3nm,1.1s
KMBO Kilima Mbogo 89.45 269 LR LR 23 49 04.8
comp=Z,46nm,18.6s,baz=96,slow=36
BBB Bella Bella 90.46 36 LR LR 23 46 48.8
comp=Z,20nm,19.1s,baz=278,slow=34
VNDA Vanda 90.86 173 P **P** **23 08 36.5 -0.3**
comp=Z,1.5nm,1.0s,baz=308,slow=5.0,SNR=5.9
comp=Z,1.5nm,1.0s
VNDA Vanda 90.86 173 P **P** **23 08 37.4 +0.6**
NB2 NORSAR Subarra 91.98 334 P **P** **23 08 41.5 -1.1**
comp=Z,0.9nm,0.9s,baz=63,slow=5.1
NOA NORSAR Array B 91.98 334 P **P** **23 08 41.8 -0.8**
comp=Z,0.4nm,0.7s,baz=110,slow=4.1,SNR=4.6
comp=Z,0.4nm,0.7s
VRAC Vranov 94.13 322 LR LR 23 54 27.8
comp=Z,31nm,18.3s,baz=83,slow=38
MBAR Mbarara 95.74 271 LR LR 23 49 50.2
comp=Z,35nm,21.5s,baz=100,slow=34
GERES GERESS Array B 96.06 322 P **P** **23 09 00.8 -0.8**
comp=Z,0.2nm,0.6s,baz=85,slow=11,SNR=2.1
comp=Z,0.2nm,0.6s
GERES GERESS Array B 96.06 322 P **P** **23 09 01.4 -0.3**
YBH Yreka Blue Hor 97.62 45 LR LR 23 43 43.3
comp=Z,18nm,21.2s,baz=274,slow=30
TXAR Lajitas Array 117.05 49 PKP **PKPdf** **23 14 18.8 -0.8**
comp=Z,0.1nm,0.6s,baz=2.9,slow=3.6,SNR=2.2
TXAR Lajitas Array 117.05 49 **PKPdf** **23 14 18.4 -1.3**
TORD Torodi Ar. Bea 120.09 292 PKP **PKPdf** **23 14 24.8 -0.9**
comp=Z,0.3nm,0.5s,baz=65,slow=3.4,SNR=4.1
PLCA Paso Flores 147.00 156 PKPbc **PKPbc** **23 15 17.2 +0.2**
comp=Z,2.4nm,0.9s,baz=317,slow=5.0,SNR=4.6
PLCA Paso Flores 147.00 156 PKPdf **PKPdf** **23 15 14.2 -0.7**

IDC 12 22:58:04.2±2.6, 11°.20N×126°.32E, h0km, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=284.9km s-min=31.0km az=68.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**31.93**	**166**	P	P	23 04 31.9	0.0
	1.2nm,1.0s,baz=343,slow=8.9,SNR=1.9						
	1.2nm,1.0s						
MKAR	**Makanchi Array**	**51.33**	**322**	P	P	23 07 11.0	+0.6
	0.8nm,0.6s,baz=123,slow=9.4,SNR=2.5						
	0.8nm,0.6s						
ZALV	**Zalesovo Beam**	**53.84**	**331**	P	P	23 07 28.6	-0.3
	0.7nm,0.4s,baz=120,slow=8.5,SNR=2.3						
	0.7nm,0.4s						
FINES	**FINESS Array B**	**85.10**	**332**	P	P	23 10 41.5	-0.4
	1.1nm,0.9s,baz=86,slow=5.7,SNR=4.8						
	1.1nm,0.9s						

WEL 12 23:00:31.7±1.2, 35°S±10°×178°0W±1°.2, h33km, M3.5/3, ML4.2/11, MLv3.5/3, Error ellipse: s-maj=0.0km s-min=0.0km az=127.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.05**	**212**	P	Pn	23 01 18.9	+1.3
MXZ				S	Sn	23 01 54.5	+1.5
WMGZ	**Waiomatatini S**	**3.23**	**209**	P	Pn	23 01 22.6	+2.6
WMGZ				S	Sn	23 02 01.3	+4.1
PKGZ	**Pakihiroa**	**3.42**	**212**	P	Pn	23 01 24.0	+1.2
PKGZ				S	Sn	23 02 03.6	+1.3
HAZ	**Te Kaha**	**3.45**	**216**	P	Pn	23 01 23.1	+0.1
HAZ				S	Sn	23 02 03.1	+0.2
PUZ	**Puketiti**	**3.51**	**208**	P	Pn	23 01 25.1	+1.3
PUZ				S	Sn	23 02 04.8	+0.6
RUGZ	**Raukumara Rang**	**3.67**	**215**	P	Pn	23 01 26.2	0.0
RUGZ				S	Sn	23 02 07.3	-1.1
TWGZ	**Tauwhareparae**	**3.71**	**210**	P	Pn	23 01 27.1	+0.4
TWGZ				S	Sn	23 02 11.0	+1.7
CNGZ	**Carnagh Statio**	**3.89**	**206**	P	Pn	23 01 29.8	+0.7
MWZ	**Matawai**	**4.04**	**214**	P	Pn	23 01 30.8	-0.3
MWZ				S	Sn	23 02 15.8	-1.5
KUZ	**Kuaotunu**	**4.15**	**244**	S	Sn	23 02 23.9	+3.8
URZ	**Urewera**	**4.18**	**218**	P	Pn	23 01 31.5	-1.6
URZ				S	Sn	23 02 17.4	-3.3
SNGZ	**Shannon Statio**	**4.49**	**212**	P	Pn	23 01 36.6	-0.8
MUGZ	**Murupara**	**4.52**	**219**	P	Pn	23 01 35.3	-2.4
KNZ	**Kokohu**	**4.56**	**207**	P	Pn	23 01 38.3	0.0
OTVZ	**Oturere**	**5.60**	**221**	P	Pn	23 01 48.7	-4.1
PRHZ	**Porangahau**	**6.04**	**208**	P	Pn	23 01 54.2	-4.4

MAN 12 23:03:31.9, 11°.17N×126°.39E, h1km, mb4.3, ML3.1, MS2.8
IDC 12 23:03:32.1±1.2, 11°.16N×126°.11E, h0km, mb3.9/7, mbtmp3.9/7, Error ellipse: s-maj=71.8km s-min=19.4km az=66.0
NEIC 12 23:03:39.9±1.8, 11°.2N±0°.1×126°.4E±0°.1, h55km±4km, mb4.4/17, Error ellipse: s-maj=19.3km s-min=14.2km az=57.0
ISC 12 23:03:36.3±0.7, 11°.26N±0°.07×126°.61E±0°.08, h35km, n37, σ1°98/39, mb4.3/16, 4C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	**General Luna,**	**1.54**	**198**	*eP*	**Pn**	**23 03 57.4**	**-3.9**
GLSP				*eS*	Sn	23 04 29.4	+9.3
MSLP	**Maasin**	**2.05**	**237**	*eP*	**Pn**	**23 04 04.8**	**-3.6**
BUTP	**Butuan**	**2.48**	**203**	*eP*	**Pn**	**23 04 12.6**	**-1.6**
LLP	**Lapu-Lapu**	**2.76**	**250**	*eP*	**Pn**	**23 04 15.3**	**-2.8**
LLP				*eS*	**Sn**	**23 04 51.6**	**+1.3**
TBP	**Tagbilaran**	**3.12**	**240**	*eP*	**Pn**	**23 04 20.1**	**-2.9**
TBP				*i S*	**Sn**	**23 05 03.7**	**+4.6**
RCP	**Roxas**	**3.80**	**275**	*eP*	**Pn**	**23 04 30.4**	**-2.1**
MYLDM	**Lahad Datu**	**10.04**	**234**	Pn	**Pn**	**23 05 59.4**	**+1.2**
TNTI	**Ternate**	**10.45**	**176**	Pn	**Pn**	**23 06 05.9**	**+2.2**
TOLI2	**Tolitoli**	**11.62**	**210**	Pn	**Pn**	**23 06 20.7**	**+0.9**
MTN	**Manton Dam**	**24.36**	**169**	P	**P**	**23 08 52.8**	**+1.5**
MTN				IAmb	IAmb	23 09 12.0	
comp=Z,23nm,1.1s							
KULM	**Kulim**	**26.35**	**259**	P	**P**	**23 09 07.9**	**-1.5**
KULM				IAmb	IAmb	23 09 20.6	
comp=Z,11nm,1.1s							
KNRA	**Kununurra**	**26.85**	**175**	P	**P**	**23 09 16.7**	**+3.0**
KNRA				IAmb	IAmb	23 09 21.1	
comp=Z,7.5nm,0.8s							
CMAR	**Chiang Mai Arr**	**27.66**	**288**	P	**P**	**23 09 17.7**	**-3.4**
comp=Z,0.3nm,0.3s,baz=89,slow=7.3,SNR=1.6							
comp=Z,0.3nm,0.3s							
WB0	**Warramunga Arr**	**31.77**	**166**	P	**P**	**23 09 57.5**	**+0.1**
WB0				IAmb	IAmb	23 09 57.7	
comp=Z,9.1nm,1.1s							
WRA	**Warramunga Arr**	**31.93**	**166**	P	**P**	**23 09 59.6**	**+0.8**
comp=Z,0.8nm,0.5s,baz=346,slow=9.3,SNR=8.5							
comp=Z,0.8nm,0.5s							
WRA	**Warramunga Arr**	**31.93**	**166**	P	**P**	**23 10 00.9**	**+2.0**
WB2	**Warramunga Arr**	**31.93**	**166**	P	**P**	**23 10 00.0**	**+1.2**
WB2				IAmb	IAmb	23 10 01.3	
comp=Z,10nm,1.1s							
WR0	**Warramunga Arr**	**31.99**	**166**	P	**P**	**23 10 00.3**	**+0.9**
MBWA	**Marble Bar**	**32.92**	**192**	P	**P**	**23 10 06.2**	**-1.3**
ASAR	**Alice Springs**	**35.44**	**168**	P	**P**	**23 10 30.6**	**+1.2**
comp=Z,0.5nm,0.5s,baz=350,slow=7.1,SNR=13							
comp=Z,0.5nm,0.5s							
MK31	**Makanchi Array**	**51.45**	**322**	P	**P**	**23 12 38.5**	**+0.4**
MKAR	**Makanchi Array**	**51.45**	**322**	P	**P**	**23 12 38.3**	**+0.2**
comp=Z,1.0nm,0.5s,baz=117,slow=8.4,SNR=13							
comp=Z,1.0nm,0.6s							
MKAR	**Makanchi Array**	**51.45**	**322**	P	**P**	**23 12 38.2**	**0.0**
MAKZ	**Makanchi**	**51.65**	**322**	P	**P**	**23 12 40.0**	**+0.4**
MAKZ				IAmb	IAmb	23 12 54.5	
comp=Z,2.2nm,1.1s							
ZALV	**Zalesovo Beam**	**53.93**	**331**	P	**P**	**23 12 56.0**	**-0.3**
comp=Z,0.5nm,0.3s,baz=108,slow=9.3,SNR=2.0							
comp=Z,0.5nm,0.3s							
KKAR	**Karatay Array**	**57.80**	**314**	P	**P**	**23 13 23.7**	**-0.6**
ABKAR	**Akbulak array**	**66.35**	**319**	P	**P**	**23 14 20.9**	**-0.6**
LTZ	**Lake Taylor**	**68.07**	**145**	P	**P**	**23 14 30.3**	**-2.2**
M19K	**Big River Lodg**	**74.96**	**29**	P	**P**	**23 15 15.9**	**+2.2**
M19K				IAmb	IAmb	23 15 20.2	
comp=Z,3.2nm,1.0s							
M24K	**Tolsona, Glenn**	**78.84**	**29**	P	**P**	**23 15 36.0**	**+0.4**
BMAR	**Burnt Mountain**	**79.23**	**23**	P	**P**	**23 15 40.3**	**+2.6**
TABL	**Table Mountain**	**81.41**	**30**	P	**P**	**23 15 50.1**	**+0.4**
TABL				IAmb	IAmb	23 16 08.4	
comp=Z,8.2nm,1.1s							
KEV	**Kevo**	**82.83**	**340**	P	**P**	**23 15 58.9**	**+2.3**
KEV				IAmb	IAmb	23 16 11.6	
comp=Z,6.5nm,1.1s							
ARCES	**ARCESS Array B**	**83.39**	**340**	P	**P**	**23 16 00.8**	**+1.1**
comp=Z,1.4nm,0.9s,baz=76,slow=6.4,SNR=4.7							
comp=Z,1.4nm,0.9s							
ARCES	**ARCESS Array B**	**83.39**	**340**	P	**P**	**23 16 00.6**	**+0.9**
ILGA	**Ilgaz**	**84.87**	**311**	P	**P**	**23 16 08.4**	**+0.4**
FINES	**FINESS Array B**	**85.19**	**332**	P	**P**	**23 16 08.9**	**0.0**
comp=Z,3.0nm,1.1s,baz=76,slow=5.9,SNR=8.9							
comp=Z,3.0nm,1.1s							

MAN 12 23:07:27.6, 11°.42N×126°.90E, h52km, mb4.2, ML3.0, MS2.7
IDC 12 23:07:31.9±0.8, 11°.17N×126°.20E, h0km, mb3.9/11, mbtmp3.9/11, MS3.8/3, Error ellipse: s-maj=72.6km s-min=15.6km az=71.0
NEIC 12 23:07:39.4±1.1, 11°.04N±0°.08×125°.9E±0°.1, h36km±7km, mb4.6/18, Error ellipse: s-maj=18.0km s-min=11.4km az=73.0
ISC 12 23:07:37.7±0.6, 11°.15N±0°.08×126°.2E±0°.1, h35km, n42, σ1°25/41, mb4.3/20, 4C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	**General Luna,**	**1.36**	**183**	*eP*	**Pn**	**23 07 57.6**	**-2.7**
GLSP				*eS*	Sn	23 08 30.9	+14
MSLP	**Maasin**	**1.66**	**233**	*eP*	**Pn**	**23 08 05.2**	**+0.9**
BUTP	**Butuan**	**2.24**	**195**	*eP*	**Pn**	**23 08 13.8**	**+1.4**
LLP	**Lapu-Lapu**	**2.34**	**249**	*eP*	**Pn**	**23 08 14.2**	**+0.5**
LLP				*eS*	Sn	23 08 51.2	+10
TBP	**Tagbilaran**	**2.72**	**238**	*eP*	**Pn**	**23 08 19.9**	**+1.0**
TBP				*i S*	Sn	23 09 00.9	+10
RCP	**Roxas**	**3.41**	**277**	*eP*	**Pn**	**23 08 30.1**	**+1.6**
MYLDM	**Lahad Datu**	**9.65**	**233**	Pn	**Pn**	**23 09 50.9**	**-3.3**
FAKI	**Fak Fak**	**15.22**	**156**	Pn	**Pn**	**23 11 12.2**	**+2.0**
FAKI				IAmb	IAmb	23 11 30.6	
comp=Z,36nm,1.1s							
GUMO	**Guam**	**18.40**	**80**	LR	LR	23 18 00.4	
comp=Z,41nm,20.2s,baz=96,slow=34							
KULM	**Kulim**	**25.93**	**259**	P	**P**	**23 13 07.2**	**+0.2**
KULM				IAmb	IAmb	23 13 26.2	
comp=Z,16nm,1.1s							
KNRA	**Kununurra**	**26.78**	**175**	P	**P**	**23 13 14.2**	**-0.3**
COEN	**Coen**	**30.10**	**146**	P	**P**	**23 13 45.9**	**+1.7**
COEN				IAmb	IAmb	23 13 50.0	
comp=Z,22nm,1.1s							
WB0	**Warramunga Arr**	**31.77**	**165**	P	**P**	**23 13 58.1**	**-0.8**
WB0				IAmb	IAmb	23 13 58.2	
comp=Z,9.2nm,1.2s							
WRA	**Warramunga Arr**	**31.92**	**165**	P	**P**	**23 13 59.6**	**-0.6**
comp=Z,0.9nm,0.5s,baz=353,slow=7.1,SNR=8.6							
comp=Z,0.9nm,0.5s							
WB2	**Warramunga Arr**	**31.93**	**165**	P	**P**	**23 14 00.0**	**-0.2**
WB2				IAmb	IAmb	23 14 16.6	
comp=Z,19nm,1.5s							
WR0	**Warramunga Arr**	**31.99**	**165**	P	**P**	**23 14 00.3**	**-0.5**
WR0				IAmb	IAmb	23 14 12.2	
comp=Z,7.6nm,1.1s							
MBWA	**Marble Bar**	**32.73**	**191**	P	**P**	**23 14 05.3**	**-2.0**
PSA00	**Pilbara Seismi**	**33.11**	**191**	P	**P**	**23 14 10.6**	**0.0**
PSA00				IAmb	IAmb	23 14 23.3	
comp=Z,7.7nm,1.1s							
AS31	**Alice Springs**	**35.41**	**168**	P	**P**	**23 14 31.1**	**+0.5**
ASAR	**Alice Springs**	**35.42**	**168**	P	**P**	**23 14 30.5**	**-0.1**
comp=Z,0.9nm,0.4s,baz=347,slow=6.9,SNR=21							
ASAR				PcP	**PcP**	**23 16 58.9**	**-1.2**
comp=Z,0.3nm,0.5s,baz=351,slow=3.2,SNR=1.8							
comp=Z,0.9nm,0.4s							
ASAR	**Alice Springs**	**35.42**	**168**	P	**P**	**23 14 31.0**	**+0.4**
KLR	**Kul'dur**	**38.24**	**6**	P	**P**	**23 14 53.4**	**-1.0**
comp=Z,0.8nm,0.6s,baz=180,slow=10,SNR=2.2							
comp=Z,0.8nm,0.6s							
SONM	**Songino Array**	**40.17**	**339**	P	**P**	**23 15 10.5**	**-0.2**
comp=Z,0.6nm,0.7s,baz=39,slow=42,SNR=2.3							
comp=Z,0.6nm,0.7s							
MORW	**Morawa**	**41.17**	**194**	P	**P**	**23 15 17.6**	**-1.3**
MORW				IAmb	IAmb	23 15 30.0	
comp=Z,27nm,1.3s							
FORT	**Forrest**	**41.73**	**178**	P	**P**	**23 15 23.8**	**+0.3**
STKA	**Stephens Creek**	**45.26**	**161**	P	**P**	**23 15 51.5**	**-0.4**
comp=Z,1.3nm,0.4s,baz=334,slow=8.3,SNR=4.7							
comp=Z,1.3nm,0.4s							
STKA	**Stephens Creek**	**45.26**	**161**	P	**P**	**23 15 53.3**	**+1.4**
STKA					**pP**	**23 16 02.3**	**+1.9**
MK31	**Makanchi Array**	**51.29**	**322**	P	**P**	**23 16 38.7**	**+0.4**
MKAR	**Makanchi Array**	**51.29**	**322**	P	**P**	**23 16 38.4**	**+0.1**
comp=Z,1.9nm,0.6s,baz=113,slow=8.7,SNR=24							
comp=Z,1.9nm,0.6s							
MKAR	**Makanchi Array**	**51.29**	**322**	P	**P**	**23 16 38.5**	**+0.2**
DZM	**Mont Dzumac**	**51.46**	**130**	P	**P**	**23 16 41.7**	**+1.6**
MAKZ	**Makanchi**	**51.48**	**322**	P	**P**	**23 16 40.2**	**+0.3**
TOO	**Toolangi**	**51.74**	**160**	P	**P**	**23 16 43.1**	**+1.3**
TOO				IAmb	IAmb	23 16 46.3	
comp=Z,19nm,1.5s							
ZALV	**Zalesovo Beam**	**53.82**	**331**	P	**P**	**23 16 56.5**	**-0.4**
comp=Z,0.8nm,0.4s,baz=123,slow=6.9,SNR=4.9							
comp=Z,0.8nm,0.4s							
KURK	**Kurchatov**	**55.30**	**325**	P	**P**	**23 17 07.9**	**+0.1**
KURK				IAmb	IAmb	23 17 08.6	
comp=Z,5.9nm,1.1s							
ARCES	**ARCESS Array B**	**83.35**	**340**	P	**P**	**23 20 01.2**	**+0.4**
comp=Z,1.1nm,0.8s,baz=78,slow=6.4,SNR=9.3							
comp=Z,1.1nm,0.8s							
BRTR	**Keskin Array B**	**84.92**	**309**	P	**P**	**23 20 09.6**	**-0.1**
comp=Z,0.4nm,0.8s,baz=101,slow=1.4,SNR=2.3							
comp=Z,0.4nm,0.8s							
FINES	**FINESS Array B**	**85.08**	**332**	P	**P**	**23 20 08.8**	**-0.9**
comp=Z,1.0nm,0.4s,baz=78,slow=4.5,SNR=22							
comp=Z,1.0nm,0.4s							
AKASG	**Malin Array Be**	**85.84**	**321**	P	**P**	**23 20 12.2**	**-1.6**
comp=Z,0.2nm,0.3s,baz=49,slow=4.7,SNR=3.3							
comp=Z,0.2nm,0.3s							
IDI	**Anoyia**	**92.69**	**307**	LR	LR	00 08 10.0	
comp=Z,326nm,19.1s,baz=301,slow=39							
GERES	**GERESS Array B**	**95.96**	**322**	LR	LR	00 05 30.7	
comp=Z,32nm,21.6s,baz=129,slow=36							
TORD	**Torodi Ar. Bea**	**119.87**	**292**	PKP	**PKPdf**	**23 26 23.7**	**-1.7**
comp=Z,0.4nm,0.7s,baz=91,slow=0.9,SNR=4.5							

GCG 12 23:18:07.3±0.8, 13°.57N×91°.01W, h39km±254km, MD3.1
SNET 12 23:18:07.0±1.0, 13°.56N×90°.86W, h20km, ML2.8
ISC 12 23:18:06.9±3.0, 13°.5N±0°.1×90°.95W±0°.08, h33km±8km, n13, σ0°54/18, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**0.91**	**6**	*eP*	**Pb**	**23 18 24.2**	**-0.3**
PCG	**Pacaya**	**0.91**	**21**	*eP*	**Pn**	**23 18 23.7**	**0.0**
NUBE	**Las Nubes**	**1.19**	**72**	*eP*	**Pn**	**23 18 26.7**	**-0.7**
NUBE				*eS*	**Sn**	**23 18 41.7**	**-0.9**
NUBE				IAML		23 18 44.7	
comp=Z,92nm,0.2s							
NBG	**Las Nubes**	**1.20**	**29**	*eP*	**Pn**	**23 18 28.2**	**+0.6**
NBG				*eS*	**Sb**	**23 18 45.1**	**+0.5**
LOAL	**Lomas de Alarc**	**1.22**	**68**	*eP*	**Pn**	**23 18 27.6**	**-0.2**
LOAL				*eS*	**Sn**	**23 18 43.8**	**+0.5**
SLOZ	**Alcaldia de Sa**	**1.23**	**66**	*eP*	**Pn**	**23 18 27.7**	**-0.2**
SLOZ				*eS*	**Sn**	**23 18 43.6**	**+0.1**
SLOZ				IAML		23 18 50.3	
comp=Z,119nm,0.5s							
RTR	**El Retiro**	**1.31**	**74**	*eP*	**Pn**	**23 18 28.9**	**-0.2**
STG3	**Santiaguito 3,**	**1.32**	**333**	*eP*	**Pn**	**23 18 29.2**	**0.0**
STG3				*eS*	**Sn**	**23 18 45.7**	**0.0**
CEVE	**Cerro Verde**	**1.32**	**77**	*eP*	**Pn**	**23 18 28.8**	**-0.5**
CEVE				IAML		23 18 54.5	
comp=Z,491nm,0.3s							
SBLS	**San Blas**	**1.32**	**77**	*eP*	**Pn**	**23 18 28.9**	**-0.4**
PMON	**Piamonte**	**1.60**	**83**	*eP*	**Pn**	**23 18 33.1**	**+0.1**
LFRS	**El Faro**	**1.83**	**87**	*eP*	**Pn**	**23 18 36.9**	**+0.7**
COEG	**Centro de Oper**	**2.01**	**87**	*eP*	**Pn**	**23 18 39.6**	**+0.9**

NEIC 12 23:22:59.1±1.5, 24°.70S±0°.10×179°.9W±0°.1, h504km±6km, mb4.4/27, Error ellipse: s-maj=19.2km s-min=14.4km az=95.0
IDC 12 23:23:05.3±7.1, 24°.16S×179°.41E, h544km±47km, mb3.4/3, mbtmp4.2/4, Error ellipse: s-maj=135.4km s-min=35.9km az=136.0
ISC 12 23:22:59.0±0.7, 24°.72S±0°.09×180°.0E±0°.1, h500km, n42, σ1°04/41, mb4.3/17, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.90**	**158**	P	**P**	**23 24 25.4**	**+0.5**
MSVF	**Nonsavu**	**7.18**	**345**	P	**P**	**23 24 48.7**	**+1.6**
1.2nm,0.3s,baz=137,slow=24,SNR=2.0							
MSVF	**Nonsavu**	**7.18**	**345**	P	**P**	**23 24 48.2**	**+1.0**
MARNC	**Mare, Loyalty**	**11.44**	**284**	P	**P**	**23 25 33.1**	**+1.5**
BKZ	**Black Stump Fm**	**14.70**	**191**	P	**P**	**23 26 07.9**	**+2.0**
KOUNC	**Koumac, New Ca**	**15.05**	**283**	P	**P**	**23 26 07.5**	**-2.2**
QRZ	**Quartz Range**	**17.22**	**199**	P	**P**	**23 26 31.8**	**-0.1**
PLWZ	**Palliser**	**17.25**	**192**	P	**P**	**23 26 30.9**	**-1.4**
KHZ	**Kahutara**	**18.43**	**195**	P	**P**	**23 26 41.6**	**-1.4**
LTZ	**Lake Taylor**	**19.10**	**198**	P	**P**	**23 26 49.0**	**-0.2**
LTZ				IAmb	IAmb	23 26 55.4	
comp=Z,18nm,1.2s							
OXZ	**Oxford**	**19.66**	**197**	P	**P**	**23 26 55.3**	**+0.9**
FOZ	**Fox Glacier**	**20.52**	**201**	P	**P**	**23 27 02.2**	**+0.1**
MLZ	**Mavora Lakes**	**22.71**	**202**	P	**P**	**23 27 22.2**	**+0.2**
ARMA	**Armidale**	**25.70**	**251**	P	**P**	**23 27 50.6**	**+1.7**
ARMA				IAmb	IAmb	23 27 58.1	
comp=Z,8.5nm,1.1s							
CTAO	**Charters Tower**	**31.45**	**272**	P	**P**	**23 28 39.9**	**+0.9**
CTAO				IAmb	IAmb	23 28 41.2	
comp=Z,18nm,1.1s							
STKA	**Stephens Creek**	**34.39**	**249**	P	**P**	**23 29 04.3**	**+0.5**
comp=Z,1.3nm,0.4s,baz=97,slow=10.0,SNR=5.1							
comp=Z,1.3nm,0.4s							
STKA	**Stephens Creek**	**34.39**	**249**	P	**P**	**23 29 04.4**	**+0.7**
PATS	**Pohnpei**	**37.80**	**323**	P	**P**	**23 29 31.6**	**-0.6**
PATS				IAmb	IAmb	23 29 44.0	
comp=Z,24nm,1.1s							
BBOO	**Buckleboo**	**39.09**	**248**	P	**P**	**23 29 42.1**	**-0.5**
BBOO				IAmb	IAmb	23 29 54.2	
comp=Z,14nm,1.1s							
AS31	**Alice Springs**	**41.87**	**262**	P	**P**	**23 30 05.0**	**+0.1**
ASAR	**Alice Springs**	**41.87**	**262**	P	**P**	**23 30 05.0**	**+0.1**
comp=Z,1.4nm,0.4s,baz=93,slow=7.1,SNR=37							
comp=Z,1.4nm,0.4s							
ASAR	**Alice Springs**	**41.87**	**262**	P	**P**	**23 30 04.6**	**-0.4**
WR0	**Warramunga Arr**	**42.13**	**267**	P	**P**	**23 30 06.7**	**-0.4**
WR0				IAmb	IAmb	23 30 07.0	
comp=Z,8.9nm,1.1s							
WB2	**Warramunga Arr**	**42.30**	**267**	P	**P**	**23 30 08.2**	**-0.2**
WB2				IAmb	IAmb	23 30 08.7	
comp=Z,5.7nm,0.6s							
WRAB	**Tennant Creek**	**42.31**	**267**	P	P	23 30 13.7	+5.2
WB0	**Warramunga Arr**	**42.31**	**267**	P	**P**	**23 30 08.2**	**-0.3**
WB0				IAmb	IAmb	23 30 08.8	
comp=Z,5.6nm,0.5s							
WRA	**Warramunga Arr**	**42.32**	**267**	P	**P**	**23 30 08.4**	**-0.2**
comp=Z,3.9nm,0.3s,baz=100,slow=6.9,SNR=76							
comp=Z,3.9nm,0.3s							
WRA	**Warramunga Arr**	**42.32**	**267**	P	**P**	**23 30 08.3**	**-0.2**
FORT	**Forrest**	**45.99**	**250**	P	**P**	**23 30 35

	comp=Z,17nm,1.0s						
KHZ	**Kahutara**	**27.15**	**200**	P	**P**	**23 45 32.0**	**-0.1**
KHZ				IAmb	IAmb	23 45 49.9	
	comp=Z,12nm,1.1s						
BBOO	**Buckleboo**	**47.15**	**241**	P	**P**	**23 48 21.3**	**+0.5**
BBOO				IAmb	IAmb	23 48 26.8	
	comp=Z,7.2nm,0.9s						
WR0	**Warramunga Arr**	**48.41**	**258**	P	**P**	**23 48 31.8**	**+1.1**
WR0				IAmb	IAmb	23 48 41.4	
	comp=Z,6.0nm,0.9s						
WB0	**Warramunga Arr**	**48.56**	**259**	P	**P**	**23 48 31.7**	**-0.3**
WB2	**Warramunga Arr**	**48.59**	**258**	P	**P**	**23 48 31.9**	**-0.2**
WRA	**Warramunga Arr**	**48.60**	**258**	P	**P**	**23 48 31.8**	**-0.4**
	comp=Z,0.8nm,0.5s,baz=97,slow=7.0,SNR=4.7						
	comp=Z,0.8nm,0.5s						
AS31	**Alice Springs**	**48.73**	**253**	P	**P**	**23 48 33.2**	**-0.1**
AS31				IAmb	IAmb	23 48 34.3	
	comp=Z,1.6nm,0.6s						
ASAR	**Alice Springs**	**48.73**	**253**	P	**P**	**23 48 33.5**	**+0.3**
	comp=Z,4.6nm,0.6s,baz=90,slow=8.3,SNR=18						
	comp=Z,4.6nm,0.6s						
SBA	**Scott Base**	**61.35**	**184**	P	**P**	**23 50 04.8**	**+1.7**
VNDA	**Vanda**	**61.46**	**186**	P	**P**	**23 50 05.0**	**+1.1**
MORW	**Morawa**	**64.32**	**246**	P	**P**	**23 50 22.7**	**-1.0**
QSPA	**South Pole Qui**	**72.80**	**180**	P	**P**	**23 51 16.1**	**+0.2**
EMB	**Emerald Bay**	**75.46**	**41**	P	**P**	**23 51 30.9**	**-1.0**
NVAR	**Mina Array Bea**	**76.28**	**42**	P	**P**	**23 51 37.0**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=229,slow=8.3,SNR=3.9						
	comp=Z,0.3nm,0.6s						
NVAR	**Mina Array Bea**	**76.28**	**42**	P	**P**	**23 51 37.7**	**+1.1**
CCB	**Clear Creek Bu**	**84.14**	**11**	P	**P**	**23 52 18.5**	**+0.7**
CCB				IAmb	IAmb	23 52 28.3	
	comp=Z,1.8nm,1.2s						
PD31	**Pinedale Array**	**84.22**	**42**	P	**P**	**23 52 18.9**	**-0.2**
PDAR	**Pinedale Array**	**84.22**	**42**	P	**P**	**23 52 19.6**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=186,slow=2.7,SNR=6.1						
	comp=Z,0.8nm,0.6s						
PDAR	**Pinedale Array**	**84.22**	**42**	P	**P**	**23 52 19.1**	**0.0**
YHL	**Hebgen Lake**	**84.25**	**40**	P	**P**	**23 52 20.9**	**+1.7**
YHL				IAmb	IAmb	23 52 21.6	
	comp=Z,1.9nm,0.7s						
ILAR	**Eielson Array**	**84.42**	**11**	P	**P**	**23 52 20.1**	**+0.8**
	comp=Z,0.1nm,0.5s,baz=209,slow=7.2,SNR=5.3						
	comp=Z,0.1nm,0.5s						
CLL	**Collm**	**145.53**	**352**	*e*PKPbc	**PKPab**	**23 59 26.0**	**+0.7**

*IDC **12** 23:41:06.2±3.1,5.°42S×147.°26E,h169km±29km,mb3.5/6, mbtmp4.1/9,Error ellipse: s-maj=37.6km s-min=22.1km az=98.0*
*NEIC **12** 23:41:07.2±1.3,5.°48S±0.°07×147.°3E±0.°2,h173km±4km, mb4.4/16,Error ellipse: s-maj=25.4km s-min=10.1km az=92.0*

ISC 12 23:41:06.4±0.7,5.°53S±0.°06×147.°3E±0.°2,h170km,n35, σ0s98/37,mb3.9/10,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MANU	**Manus Island**	**3.46**	**1**	Pn	**Pn**	**23 42 01.1**	**+0.6**
PMG	**Port Moresby**	**3.85**	**182**	P	**Pn**	**23 42 06.2**	**+0.8**
	62nm,0.5s,baz=57,slow=5.5,SNR=26						
PMG				S	**Sn**	**23 42 49.0**	**-2.5**
	55nm,0.7s,baz=106,slow=21,SNR=11						
PMG	**Port Moresby**	**3.85**	**182**		**Pn**	**23 42 06.3**	**+0.8**
PMG					**Sn**	**23 42 49.8**	**-1.8**
COEN	**Coen**	**9.30**	**205**	Pn	**Pn**	**23 43 18.0**	**+1.0**
CTA	**Charters Tower**	**14.51**	**184**	P	**P**	**23 44 26.0**	**+0.1**
	8.5nm,1.0s,baz=343,slow=11,SNR=2.5						
CTAO	**Charters Tower**	**14.51**	**184**	P	**P**	**23 44 28.6**	**+2.7**
MTN	**Manton Dam**	**17.51**	**244**	P	**P**	**23 44 59.2**	**+0.1**
MTN				IAmb	IAmb	23 45 00.6	
	comp=Z,13nm,0.8s						
WB0	**Warramunga Arr**	**18.91**	**220**	P	**P**	**23 45 14.9**	**+0.6**
WB0				IAmb	IAmb	23 45 18.2	
	comp=Z,13nm,0.8s						
WR0	**Warramunga Arr**	**18.95**	**220**	P	**P**	**23 45 15.2**	**+0.4**
WRAB	**Tennant Creek**	**19.06**	**220**	P	**P**	**23 45 15.9**	**0.0**
WB2	**Warramunga Arr**	**19.06**	**220**	P	**P**	**23 45 16.4**	**+0.4**
WB2				IAmb	IAmb	23 45 17.3	
	comp=Z,39nm,1.1s						
WRA	**Warramunga Arr**	**19.07**	**220**	P	**P**	**23 45 16.5**	**+0.5**
	comp=Z,12nm,0.5s,baz=45,slow=12,SNR=86						
WRA	**Warramunga Arr**	**19.07**	**220**	P	**P**	**23 45 15.2**	**-0.8**
EIDS	**Eidsvold**	**20.06**	**170**	P	Pn	23 45 29.8	-0.7
KNRA	**Kununurra**	**20.79**	**240**	P	**P**	**23 45 34.0**	**-0.5**
KNRA				IAmb	IAmb	23 45 38.2	
	comp=Z,11nm,0.6s						
AS31	**Alice Springs**	**22.16**	**214**	P	**P**	**23 45 49.4**	**+0.6**
AS31				IAmb	IAmb	23 45 53.7	
	comp=Z,6.0nm,0.5s						
ASAR	**Alice Springs**	**22.16**	**214**	P	**P**	**23 45 49.4**	**+0.6**
	comp=Z,9.2nm,0.5s,baz=49,slow=8.4,SNR=141						
ASAR				S	**S**	**23 49 40.3**	**-0.3**
	comp=Z,6.1nm,0.9s,baz=31,slow=22,SNR=18						
	comp=Z,9.2nm,0.5s						
ASAR	**Alice Springs**	**22.16**	**214**	P	**P**	**23 45 49.3**	**+0.5**
MBWA	**Marble Bar**	**30.89**	**237**	P	**P**	**23 47 06.7**	**-0.5**
MBWA				IAmb	IAmb	23 47 07.5	
	comp=Z,7.3nm,0.9s						
FORT	**Forrest**	**30.94**	**213**	P	**P**	**23 47 08.2**	**+0.7**
PSA00	**Pilbara Seismi**	**30.98**	**236**	P	**P**	**23 47 07.4**	**-0.6**
PSA00				IAmb	IAmb	23 47 21.3	
	comp=Z,9.7nm,1.1s						
GIRL	**Giralia**	**36.15**	**239**	P	**P**	**23 47 53.0**	**+0.4**
SONM	**Songino Array**	**64.13**	**331**	P	**P**	**23 51 23.1**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=37,slow=44,SNR=2.4						
	comp=Z,0.4nm,0.5s						
VNDA	**Vanda**	**72.36**	**177**	P	**P**	**23 52 14.1**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=330,slow=7.1,SNR=6.6						
	comp=Z,0.7nm,0.6s						
VNDA	**Vanda**	**72.36**	**177**	P	**P**	**23 52 14.4**	**+1.1**
MKAR	**Makanchi Array**	**77.31**	**320**	P	**P**	**23 52 41.8**	**-0.5**
	comp=Z,0.4nm,0.7s,baz=100,slow=5.5,SNR=3.1						
	comp=Z,0.4nm,0.7s						
ZALV	**Zalesovo Beam**	**78.76**	**328**	P	**P**	**23 52 48.6**	**-1.4**
	comp=Z,0.7nm,0.5s,baz=100,slow=6.2,SNR=3.6						
	comp=Z,0.7nm,0.5s						
ZALV	**Zalesovo Beam**	**78.76**	**328**	P	**P**	**23 52 48.9**	**-1.1**
IMAR	**Indian Mountai**	**82.95**	**21**	P	**P**	**23 53 12.7**	**+0.7**
SCM	**Sheep Creek Mo**	**83.55**	**26**	P	**P**	**23 53 14.8**	**-0.4**
SCM				IAmb	IAmb	23 53 25.8	
	comp=Z,4.9nm,1.2s						
QSPA	**South Pole Qui**	**84.44**	**180**	P	**P**	**23 53 19.5**	**-0.3**
ILAR	**Eielson Array**	**84.94**	**23**	P	**P**	**23 53 21.4**	**-0.8**
	comp=Z,1.0nm,0.8s,baz=257,slow=4.8,SNR=9.6						
	comp=Z,1.0nm,0.8s						
ILAR	**Eielson Array**	**84.94**	**23**	P	**P**	**23 53 21.7**	**-0.4**
GERES	**GERESS Array B**	**121.68**	**326**	PKP	**PKPdf**	**23 59 39.4**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=196,slow=1.0,SNR=3.9						
TORD	**Torodi Ar. Bea**	**145.24**	**285**	PKPbc	**PKPdf**	**00 00 23.5**	**-1.4**
	comp=Z,0.5nm,0.4s,baz=74,slow=4.1,SNR=20						

HEL 12 23:47:04.0±0.0,67.°83N×20.°19E,h0km,ML1.7, ML1.4(UPP),Explosion,Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RATU	**Laukkuluspa**	**0.23**	**270**	*i* P	Pg	23 47 08.1	-0.2
RATU				*i* S	Sg	23 47 11.2	-0.1
KOVU	**Salmi**	**0.40**	**358**	*i* P	Pg	23 47 11.2	-0.5
KOVU				*i* S	Sg	23 47 16.4	-0.4
NIKU	**Nikkaluokta**	**0.44**	**276**	*i* P	Pg	23 47 12.0	-0.4
LANU	**Lannavaara**	**0.71**	**71**	*e*P	Pg	23 47 16.9	-0.8
	baz=257						
LANU				*e*S	Sg	23 47 26.2	-0.7
DUNU	**Dundret**	**0.72**	**168**	*i* P	Pg	23 47 17.0	-0.8
MASU	**Masugnsbyn**	**0.78**	**117**	*i* P	Pg	23 47 18.4	-0.6
MASU				*i* S	Sg	23 47 28.9	-0.2
KIF	**Kilpisjarvi**	**1.21**	**10**	*e*P	Pg	23 47 26.9	-0.1
KIF	**Kilpisjarvi**	**1.21**	**10**	*e*PB	Pg	23 47 26.8	-0.3
KIF				MSG		23 47 40.5	
	comp=Z,8.3nm,0.2s						
KIF				*e*SB	Sg	23 47 42.6	-0.1
PAJU	**Pajala**	**1.39**	**124**	*e*P	Pg	23 47 28.6	-1.9
	baz=302						
PAJU				*e*SB	Sg	23 47 47.1	-1.3
HEF	**Hetta**	**1.43**	**64**	*e*P	Pn	23 47 28.1	-3.0
HEF	**Hetta**	**1.43**	**64**	*e*PG	Pn	23 47 29.7	-1.4
HEF				MSG		23 47 47.2	
	comp=Z,3.6nm,0.2s						
HEF				*e*SB	Sg	23 47 48.7	-1.0
ERTU	**Ertsjaerv**	**1.50**	**148**	*e*PG	Pn	23 47 30.9	-1.2
ERTU				*e*SB	Sg	23 47 51.0	-0.9
KLF	**Kolari**	**1.57**	**111**	*e*P	Pn	23 47 31.9	-1.1
	baz=296						
KLF				*e*SN	Sn	23 47 53.3	-0.6
KTK1	**Kautokeino**	**1.64**	**42**	*e*PG	Pn	23 47 33.3	-0.8
KTK1				*e*SN	Sn	23 47 55.5	-0.3
KALU	**Kalix**	**2.34**	**146**	*e*P	Pn	23 47 44.1	+0.5
TOF	**Tornio**	**2.39**	**135**	*e*PB	Pn	23 47 45.3	+1.0
	baz=323						
TOF				MSG		23 48 15.2	
	comp=Z,3.3nm,0.2s						
SGF	**Sodankyl**	**2.45**	**96**	*e*PB	Pn	23 47 46.7	+1.5
SGF				*e*S	Sn	23 48 12.5	-3.3
RNF	**Rovaniemi**	**2.57**	**116**	*e*PB	Pn	23 47 48.3	+1.5
ARA0	**ARCESS Array S**	**2.59**	**46**	*e*SB	Sn	23 48 21.3	+2.0
KEV	**Kevo**	**3.15**	**49**	*e*S	Sn	23 48 29.1	-3.8
KEV				MSG		23 48 36.4	
	comp=Z,1.9nm,0.2s						

*IDC **12** 23:48:06.0±1.0,10.°12S×118.°61E,h0km,mb4.0/4, mbtmp4.1/8,ML4.1/4,MS3.0/6,Error ellipse: s-maj=35.2km s-min=21.6km az=62.0*
*DJA **12** 23:48:11.6±0.3,10.°S±3.°×11.°9E±.°,h10km,M4.6/25, mB5.1/7,mb4.8/15,MLv4.7/25,Mw(mB)4.5/7*

ISC 12 23:48:12.0±0.8,10.°12S±0.°07×118.°86E±0.°05,h35km,n42, σ2s00/40,mb4.0/4,South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WBSI	**Waikabubak, Su**	**0.71**	**48**	P	**Pn**	**23 48 24.0**	**-1.6**
WBSI				S	**Sn**	**23 48 36.1**	**+0.8**
PLAI	**Plampang**	**1.67**	**320**	P	**Pn**	**23 48 39.3**	**+0.6**
PLAI				S	**Sn**	**23 49 00.2**	**+1.3**
BASI	**Baing, Sumba**	**1.70**	**94**	P	**Pn**	**23 48 41.6**	**+2.5**
BASI				S	**Sn**	**23 49 05.3**	**+5.7**
EDFI	**Ende, Flores**	**3.11**	**64**	P	**Pn**	**23 48 59.3**	**+0.7**
MMRI	**Maumere**	**3.65**	**66**	P	**Pn**	**23 49 07.4**	**+1.4**
DNP	**Denpasar**	**3.87**	**291**	P	**Pn**	**23 49 09.7**	**+0.6**
IGBI	**Denpasar**	**3.88**	**289**	P	**Pn**	**23 49 11.3**	**+2.1**
SRBI	**Singaraja**	**4.13**	**299**	P	**Pn**	**23 49 15.1**	**+2.5**
BSSI	**Bau Bau, Buton**	**4.27**	**22**	P	**Pn**	**23 49 17.5**	**+3.0**
BATI	**Baumata**	**4.73**	**91**	Pn	**Pn**	**23 49 22.3**	**+1.3**
	14nm,0.3s,baz=318,slow=0.5,SNR=9.1						
BATI				Sn	**Sn**	**23 50 14.9**	**+0.3**
	20nm,0.3s,baz=42,slow=21,SNR=6.9						
	40nm,0.3s						
BATI	**Baumata**	**4.73**	**91**	P	**Pn**	**23 49 23.7**	**+2.8**
BKSI	**Bulukumba**	**4.93**	**15**	P	**Pn**	**23 49 25.1**	**+1.5**
ABJI	**Asem Bagus**	**5.12**	**296**	P	**Pn**	**23 49 28.3**	**+2.1**
	0.9nm167nm,0.9s						
KAPI	**Kappang**	**5.15**	**10**	Pn	**Pn**	**23 49 26.8**	**+0.2**
	3.1nm,0.3s,baz=192,slow=7.2,SNR=12						
KAPI				Sn	**Sn**	**23 50 24.7**	**-0.1**
	5.1nm,0.3s,baz=252,slow=23,SNR=2.6						
KAPI				LR	LR	23 51 34.2	
	comp=Z,293nm,21.6s,baz=166,slow=40						
	22nm,0.6s						
SOEI	**Soe**	**5.34**	**87**	P	**Pn**	**23 49 31.1**	**+1.7**
	0.6nm82nm,0.7s						
GMJI	**Gumukmas**	**5.65**	**288**	P	**Pn**	**23 49 34.4**	**+0.9**
	0.5nm99nm,1.0s						
BLJI	**Banyuglugur**	**5.71**	**294**	P	**Pn**	**23 49 36.5**	**+2.2**
	0.3nm77nm,0.6s						
BNSI	**Bone**	**5.81**	**12**	P	**Pn**	**23 49 38.2**	**+2.4**
	0.4nm786nm78nm,0.7s						
SPSI	**Sidrap Palu**	**6.18**	**8**	P	**Pn**	**23 49 42.4**	**+1.6**
	0.2nm2µm34nm,0.8s						
GRJI	**Gresik**	**7.07**	**296**	P	**Pn**	**23 49 53.1**	**+0.1**
	0.5nm1µm115nm,0.6s						
TTSI	**Tana Toraja**	**7.09**	**8**	P	**Pn**	**23 49 55.7**	**+2.4**
	0.2nm1µm28nm,0.7s						
PWJI	**Pagerwojo**	**7.27**	**286**	P	**Pn**	**23 49 58.7**	**+2.9**
	0.4nm48nm,0.8s						
BWJI	**Bawean**	**7.46**	**304**	P	**Pn**	**23 50 00.7**	**+2.3**
	1.4nm299nm,1.2s						
PCJI	**Pacitan**	**7.82**	**284**	P	**Pn**	**23 50 04.6**	**+1.3**
	0.3nm63nm,0.9s						
WOJI	**Wonogiri, Jawa**	**8.16**	**285**	P	**Pn**	**23 50 10.8**	**+2.8**
	29nm,1.2s						
UGM	**Wanagama**	**8.52**	**284**	P	**Pn**	**23 50 14.2**	**+1.2**
	94nm,1.5s						
UWJI	**Ujung Watu**	**8.65**	**295**	P	**Pn**	**23 50 15.9**	**+1.2**
LEM	**Lembang**	**11.59**	**286**	LR	LR	23 55 29.7	
	comp=Z,84nm,20.1s,baz=57,slow=39						
SIJI	**Sorong**	**15.38**	**54**	Pn	**Pn**	**23 51 47.1**	**+0.5**
	1.4nm,0.3s,baz=227,slow=22,SNR=1.6						
	4.4nm,0.4s						
WRA	**Warramunga Arr**	**17.84**	**125**	P	**Pn**	**23 52 14.6**	**-3.1**
	2.1nm,0.5s,baz=298,slow=12,SNR=24						
WRA				S	Sn	23 55 19.1	-17
	1.5nm,0.7s,baz=295,slow=23,SNR=2.4						
DAV	**Davao City (W)**	**18.34**	**22**	LR	LR	00 00 14.0	
	comp=Z,24nm,18.9s,baz=160,slow=40						
ASAR	**Alice Springs**	**19.69**	**135**	P	**P**	**23 52 37.9**	**-0.5**
	0.5nm,0.3s,baz=319,slow=11,SNR=29						
ASAR				S	S	23 56 04.2	-15
	0.7nm,0.5s,baz=307,slow=22,SNR=3.4						
ASAR				LR	LR	23 59 46.8	
	comp=Z,59nm,20.4s,baz=336,slow=35						
	2.0nm,0.5s						
PMG	**Port Moresby**	**27.90**	**91**	LR	LR	00 06 44.1	
	comp=Z,39nm,19.4s,baz=327,slow=40						
H08S2	**Diego Garcia H**	**45.85**	**269**	T	T	00 45 44.3	
	baz=96,slow=75,SNR=7.0						
H08S3	**Diego Garcia H**	**45.86**	**269**	T	T	00 45 41.9	
	baz=96,slow=75,SNR=11						
H08S1	**Diego Garcia H**	**45.87**	**269**	T	T	00 45 53.4	
	baz=96,slow=75,SNR=8.0						
KSRS	**Korea Array**	**48.08**	**10**	LR	LR	00 16 26.1	
	comp=Z,9.4nm,21.5s,baz=165,slow=35						
SONM	**Songino Array**	**58.75**	**350**	P	**P**	**23 58 05.7**	**-0.8**
	0.8nm,0.5s,baz=166,slow=8.4,SNR=4.4						
	0.8nm,0.5s						
MKAR	**Makanchi Array**	**65.38**	**333**	P	**P**	**23 58 49.5**	**-1.4**
	0.7nm,0.5s,baz=145,slow=6.8,SNR=9.0						
	0.7nm,0.5s						
ZALV	**Zalesovo Beam**	**70.03**	**339**	P	**P**	**23 59 17.9**	**-2.2**
	1.6nm,0.6s,baz=136,slow=4.8,SNR=5.9						
	1.6nm,0.6s						
VNDA	**Vanda**	**70.91**	**171**	P	**P**	**23 59 25.3**	**+0.1**
	1.1nm,1.0s,baz=318,slow=3.2,SNR=3.9						
	1.1nm,1.0s						
TORD	**Torodi Ar. Bea**	**118.51**	**279**	PKP	**PKiKP**	**00 06 57.2**	**+0.1**
	0.8nm,0.6s,baz=68,slow=2.0,SNR=7.9						

*SSNC **12** 23:54:48.8±0.9,18.°64N×76.°45W,h2km±5km,MD2.8, ML1.9,MW2.6*
*JSN **12** 23:54:49.5±0.3,18.°44N×76.°46W,h4km±6km,MD3.3*

ISC 12 23:54:45.7±1.5,18.°65N±0.°06×76.°44W±0.°05,h11km±14km, n10,σ0s84/15,1C-2D,Jamaica region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMJ	**Castle Mountai**	**0.51**	**173**	*i* P	**Pg**	**23 54 55.6**	**-0.2**
GWJ	**Greenwich**	**0.63**	**205**	*i* P	**Pg**	**23 54 58.0**	**-0.1**
STH	**Stony Hill**	**0.67**	**212**	↓*i*P	**Pg**	**23 54 58.7**	**0.0**
HOJ	**Hope**	**0.70**	**204**	*i* P	**Pg**	**23 54 59.2**	**-0.2**
CVJ	**Coleyville**	**1.12**	**248**	↓*i*P	**Pn**	**23 55 08.2**	**+0.8**
MTDJ	**Mount Denham**	**1.12**	**248**	*e*P	**Pn**	**23 55 07.9**	**+0.5**
MTDJ				*e*S	**Sn**	**23 55 22.9**	**0.0**
MCJ	**Malvern**	**1.38**	**239**	↑*i*P	**Pg**	**23 55 12.1**	**-0.2**
MCJ				*i* S	**Sb**	**23 55 29.0**	**-0.4**
LMGC	**Las Mercedes**	**1.50**	**339**	*e*P	**Pb**	**23 55 13.5**	**-0.1**
LMGC				*e*S	**Sb**	**23 55 32.5**	**-0.3**
LMGC				IAML		23 55 34.0	
	comp=E,14nm,0.2s						
LMGC				IAML		23 55 34.5	
	comp=N,18nm,0.0s						
GTBY	**Guantanamo Bay**	**1.79**	**44**	*e*P	**Pb**	**23 55 18.3**	**-0.2**
GTBY				*e*S	**Sn**	**23 55 39.6**	**+0.3**
GTBY				IAML		23 55 42.7	
	comp=N,19nm,0.2s						
GTBY				IAML		23 55 42.9	
	comp=N,15nm,0.1s						
MASC	**Masc**	**2.58**	**54**	*e*P	**Pn**	**23 55 28.9**	**+1.4**
MASC				*e*S	**Sn**	**23 55 56.7**	**-2.1**
MASC				IAML		23 55 58.7	
	comp=N,2.0nm,0.1s						
MASC				IAML		23 55 59.0	
	comp=E,2.7nm,0.2s						

*IDC **12** 23:58:35.1±0.7,57.°63S×25.°76W,h0km,mb4.1/7, mbtmp4.1/8,ML3.9/1,Error ellipse: s-maj=36.0km s-min=18.8km az=83.0*

*NEIC **12** 23:58:43.0±1.5,57.°72S±0.°10×25.°8W±0.°2,h56km±7km, mb4.4/19,Error ellipse: s-maj=15.3km s-min=13.5km az=66.0*

ISC 12 23:58:43.8±0.5,57.°75S±0.°09×25.°9W±0.°1,h65km,n43, σ0s92/35,mb4.2/11,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**6.88**	**296**	Pn	**Pn**	**00 00 21.8**	**0.0**
VNA1	**Neumayer--Stat**	**14.95**	**157**	P	**Pn**	**00 02 09.8**	**-1.2**
VNA3	**Neumayer Olymp**	**15.15**	**160**	P	**Pn**	**00 02 12.6**	**-1.0**
SNAA	**Sanae**	**16.90**	**155**	P	**P**	**00 02 36.3**	**-0.5**
SNAA	**Sanae**	**16.90**	**155**	Pn	**Pn**	**00 02 35.2**	**-0.5**
	0.4nm,0.3s,baz=302,slow=12,SNR=14						
	1.4nm,0.4s						
SNAA	**Sanae**	**16.90**	**155**	P	**Pn**	**00 02 35.6**	**-0.1**
TROLL	**Troll, Antarti**	**18.41**	**152**	P	**Pn**	**00 02 57.4**	**+3.3**
EFI	**East Falkland**	**19.42**	**274**	Pn	**Pn**	**00 03 06.8**	**+0.6**
EFI				IAmb	IAmb	00 03 10.0	
	comp=Z,57nm,1.4s						
BELA	**Belgrano 2**	**20.44**	**185**	P	**P**	**00 03 14.8**	**-0.6**
BELA				IAmb	IAmb	00 03 19.5	
	comp=Z,2.9nm,0.5s						
PLTB	**Pedras Altas**	**32.16**	**312**	P	**P**	**00 05 04.6**	**-0.5**
PLTB				IAmb	IAmb	00 05 06.9	
	comp=Z,11nm,1.1s						
QSPA	**South Pole Qui**	**32.50**	**180**	P	**P**	**00 05 08.4**	**+0.5**
	comp=Z,1.4nm,0.5s,baz=222,slow=1.0,SNR=20						
	comp=Z,1.4nm,0.5s						
QSPA	**South Pole Qui**	**32.50**	**180**	IAmb	IAmb	00 05 10.9	
	comp=Z,2.1nm,0.7s						
PLCA	**Paso Flores**	**33.01**	**281**	P	**P**	**00 05 12.0**	**-0.5**
PLCA				IAmb	IAmb	00 05 38.4	
	comp=Z,7.4nm,1.5s						
MAW	**Mawson**	**38.37**	**142**	P	**P**	**00 05 57.6**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=246,slow=10.0,SNR=2.0						
	comp=Z,0.9nm,0.5s						
MAW	**Mawson**	**38.37**	**142**	P	**P**	**00 05 57.8**	**-0.1**
VNDA	**Vanda**	**44.91**	**182**	P	**P**	**00 06 52.4**	**+1.2**
	comp=Z,1.1nm,0.6s,baz=186,slow=6.9,SNR=14						
	comp=Z,1.1nm,0.6s						
VNDA	**Vanda**	**44.91**	**182**	IAmb	IAmb	00 06 53.2	
	comp=Z,1.2nm,0.7s						
H10S2	**ASCENSION HYDR**	**49.44**	**15**	T	T	01 01 11.1	
	baz=188,slow=74,SNR=8.3						
H10S3	**ASCENSION HYDR**	**49.45**	**15**	T	T	01 01 11.2	
	baz=32,slow=74,SNR=9.6						
H10N1	**ASCENSION HYDR**	**50.56**	**15**	T	T	01 02 34.1	
	baz=188,slow=76,SNR=7.3						
H10N3	**ASCENSION HYDR**	**50.56**	**15**	T	T	01 02 33.8	
	baz=188,slow=76,SNR=19						
H10N2	**ASCENSION HYDR**	**50.58**	**15**	T	T	01 02 36.2	
	baz=188,slow=76,SNR=9.9						
LPAZ	**La Paz**	**51.93**	**305**	P	**P**	**00 07 46.6**	**0.0**
	comp=Z,1.2nm,0.6s,baz=184,slow=6.2,SNR=5.7						
	comp=Z,1.2nm,0.6s						
LPAZ	**La Paz**	**51.93**	**305**	IAmb	IAmb	00 07 56.5	
	comp=Z,3.4nm,1.3s						
SAML	**Samuel**	**56.50**	**314**	P	**P**	**00 08 18.3**	**-0.8**
DBIC	**Dimbokro**	**66.44**	**23**	P	**P**	**00 09 25.6**	**-0.4**
	comp=Z,1.4nm,0.5s,baz=166,slow=8.3,SNR=2.1						
	comp=Z,1.4nm,0.5s						
DBIC	**Dimbokro**	**66.44**	**23**	P	**P**	**00 09 25.6**	**-0.4**
DBIC				IAmb	IAmb	00 09 28.1	
	comp=Z,15nm,1.4s						
TOA0	**Torodi Ar. Sit**	**74.20**	**28**	P	**P**	**00 10 13.6**	**+0.3**
TOA0				pwP	**pP**	**00 10 31.8**	**+1.9**
TOA0				IAmb	IAmb	00 10 32.0	
	comp=Z,2.9nm,0.7s						
TORD	**Torodi Ar. Bea**	**74.20**	**28**	P	**P**	**00 10 13.6**	**+0.2**
	comp=Z,1.8nm,0.5s,baz=199,slow=6.5,SNR=34						
	comp=Z,1.8nm,0.5s						
TORD	**Torodi Ar. Bea**	**74.20**	**28**	IAmb	IAmb	00 10 32.0	
	comp=Z,2.0nm,0.8s						
TORD				pwP	pwP	00 10 32.1	-2.0
TOSP	**Speyside**	**74.43**	**325**	P	**P**	**00 10 15.5**	**+0.8**
GDHS	**Morne Mazeau,**	**79.50**	**325**	P	**P**	**00 10 43.0**	**-0.1**
THZ	**Tophouse**	**79.61**	**194**	P	**P**	**00 10 44.5**	**+0.9**
BKZ	**Black Stump Fm**	**81.64**	**197**	P	**P**	**00 10 55.2**	**+0.6**
PDPR	**Patillas Dam,**	**82.49**	**322**	P	**P**	**00 10 58.7**	**-0.2**
PDPR				IAmb	IAmb	00 11 11.6	
	comp=Z,23nm,1.5s						
ASAR	**Alice Springs**	**97.15**	**161**	P	**P**	**00 12 07.9**	**-1.1**
	comp=Z,0.3nm,0.5s,baz=184,slow=4.4,SNR=6.3						
	comp=

LCND				IAML		00 12 58.6	
	comp=Z,2μm,0.2s						
CNCH	**Conchagua**	**1.09**	**67**	*eP*	**Pn**	**00 12 43.2**	**-0.2**
CNCH				IAML		00 13 01.9	
	comp=Z,4μm,0.2s						
CNCH	**Conchagua**	**1.09**	**67**	*eP*	**Pn**	**00 12 43.2**	**-0.2**
CNCH				IAML		00 13 01.9	
	comp=Z,4μm,0.2s						
CAHU	**Cacacuatique**	**1.11**	**35**	*eP*	**Pn**	**00 12 44.1**	**+0.3**
CAHU	**Cacacuatique**	**1.11**	**35**	*eP*	**Pn**	**00 12 44.1**	**+0.3**
CEVE	**Cerro Verde**	**1.21**	**323**	*eP*	**Pn**	**00 12 45.6**	**+0.4**
CEVE	**Cerro Verde**	**1.21**	**323**	*eP*	**Pn**	**00 12 45.6**	**+0.4**
SBLS	**San Blas**	**1.22**	**323**	*eP*	**Pn**	**00 12 45.7**	**+0.4**
SBLS	**San Blas**	**1.22**	**323**	*eP*	**Pn**	**00 12 45.7**	**+0.4**
SNJE	**San Jose**	**1.23**	**325**	*eP*	**Pn**	**00 12 45.7**	**+0.2**
SNJE	**San Jose**	**1.23**	**325**	*eP*	**Pn**	**00 12 45.7**	**+0.2**
RTR	**El Retiro**	**1.28**	**324**	*eP*	**Pn**	**00 12 46.5**	**+0.4**
RTR	**El Retiro**	**1.28**	**324**	*eP*	**Pn**	**00 12 46.5**	**+0.4**
NUBE	**Las Nubes**	**1.36**	**320**	*iP*	**Pn**	**00 12 47.4**	**+0.1**
NUBE	**Las Nubes**	**1.36**	**320**	*iP*	**Pn**	**00 12 47.4**	**+0.1**
CRIN	**San Cristobal**	**1.78**	**95**	*eP*	**Pn**	**00 12 53.1**	**+0.2**
CRIN				*eS*	**Sn**	**00 13 14.7**	**0.0**
CRIN				IAML		00 13 20.9	
	comp=N,992nm,0.2s						
TGUH	**Tegucigalpa,Un**	**1.96**	**52**	*eP*	**Pn**	**00 12 54.9**	**-0.5**

NEIC ***13*** *00:16:58.7±1.2, 6.38N±0.09×94.4E±0.1, h70km±6km, mb4.2/11, Error ellipse: s-maj=16.3km s-min=12.6km az=69.0*
IDC ***13*** *00:16:59.5±3.7, 6.41N×94.45E, h82km±27km, mb3.5/7, mbtmp3.8/8, Error ellipse: s-maj=75.6km s-min=16.0km az=55.0*
ISC 13 00:16:57.5±0.8, 6.38N±0.07×94.32E±0.09, h64km, n31, σ1§08/32, mb4.1/13, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	**Lhok Sumawe**	**2.85**	**114**	Pn	**Pn**	**00 17 42.2**	**+1.5**
SRIT	**Nakonsritamara**	**5.68**	**67**	Pn	**Pn**	**00 18 20.6**	**+1.2**
SRIT				Sn	**Sn**	**00 19 23.3**	**-0.1**
PSI	**Prapat**	**5.81**	**128**	P	**Pn**	**00 18 23.4**	**+2.2**
	7.1nm,0.3s,baz=306,slow=11,SNR=12						
PSI				S	**Sn**	**00 19 27.3**	**+0.7**
	3.1nm,0.4s,baz=190,slow=21,SNR=1.5						
RPSI	**Rantau Prapat**	**5.87**	**128**		**Pn**	**00 18 23.4**	**+1.4**
RPSI					**Sn**	**00 19 27.3**	**-0.7**
GSI	**Gunungsitoli**	**6.00**	**147**	Pn	**Pn**	**00 18 24.8**	**+1.0**
GSI				Sn	**Sn**	**00 19 29.4**	**-1.7**
KULM	**Kulim**	**6.39**	**99**	Pn	**Pn**	**00 18 28.6**	**-0.6**
H08S3	**Diego Garcia H**	**25.85**	**238**	T	T	00 49 15.7	
	baz=56,slow=75,SNR=3.5						
H08S2	**Diego Garcia H**	**25.85**	**238**	T	T	00 49 13.3	
	baz=56,slow=75,SNR=2.9						
H08S1	**Diego Garcia H**	**25.86**	**238**	T	T	00 49 16.4	
	baz=56,slow=75,SNR=4.7						
MK31	**Makanchi Array**	**41.57**	**348**	P	**P**	**00 24 38.8**	**-0.2**
MKAR	**Makanchi Array**	**41.57**	**348**	P	**P**	**00 24 39.1**	**+0.1**
	0.5nm,0.4s,baz=164,slow=7.9,SNR=9.9						
MKAR				ScP	**ScP**	**00 30 16.8**	**-3.2**
	0.3nm,0.8s,baz=182,slow=6.9,SNR=2.2						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**41.57**	**348**	P	**P**	**00 24 38.9**	**-0.1**
MAKZ	**Makanchi**	**41.66**	**347**	P	**P**	**00 24 39.3**	**-0.4**
MAKZ				IAmb	IAmb	00 24 43.8	
	comp=Z,1.9nm,1.1s						
SONM	**Songino Array**	**42.57**	**12**	P	**P**	**00 24 47.1**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=178,slow=11,SNR=2.4						
	comp=Z,0.5nm,0.6s						
KURK	**Kurchatov**	**46.09**	**346**	P	**P**	**00 25 15.3**	**+0.2**
KURK				IAmb	IAmb	00 25 16.0	
	comp=Z,0.9nm,0.6s						
WB0	**Warramunga Arr**	**47.22**	**124**	P	**P**	**00 25 23.8**	**-0.7**
WB0				IAmb	IAmb	00 25 28.6	
	comp=Z,13nm,1.3s						
WRA	**Warramunga Arr**	**47.27**	**125**	P	**P**	**00 25 24.5**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=306,slow=8.4,SNR=7.5						
	comp=Z,0.8nm,0.7s						
WRA	**Warramunga Arr**	**47.27**	**125**	P	**P**	**00 25 24.1**	**-0.7**
WB2	**Warramunga Arr**	**47.27**	**125**	P	**P**	**00 25 24.0**	**-0.9**
WR0	**Warramunga Arr**	**47.44**	**124**	P	**P**	**00 25 25.8**	**-0.3**
ZAA0	**Zalesovo Array**	**48.05**	**352**	P	**P**	**00 25 29.5**	**-0.9**
ZAA0				IAmb	IAmb	00 25 32.2	
	comp=Z,3.0nm,1.2s						
ZALV	**Zalesovo Beam**	**48.05**	**352**	P	**P**	**00 25 30.1**	**-0.3**
	comp=Z,0.8nm,0.3s,baz=172,slow=7.6,SNR=7.3						
	comp=Z,0.8nm,0.3s						
ASAR	**Alice Springs**	**48.84**	**129**	P	**P**	**00 25 36.5**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=299,slow=7.8,SNR=7.5						
	comp=Z,0.3nm,0.5s						
ASAR	**Alice Springs**	**48.84**	**129**	P	**P**	**00 25 37.0**	**+0.1**
AS31	**Alice Springs**	**48.84**	**129**	P	**P**	**00 25 36.8**	**-0.2**
AS31				IAmb	IAmb	00 25 48.6	
	comp=Z,3.0nm,1.4s						
ABKAR	**Akbulak array**	**51.62**	**332**	P	**P**	**00 25 59.3**	**+1.8**
TIXI	**Tiksi**	**68.65**	**11**	P	**P**	**00 27 52.9**	**-0.7**
TIXI				IAmb	IAmb	00 27 53.2	
	comp=Z,3.2nm,0.5s						
FINES	**FINESS Array B**	**74.11**	**332**	P	**P**	**00 28 26.4**	**-0.4**
	comp=Z,1.0nm,0.3s,baz=99,slow=4.8,SNR=24						
	comp=Z,1.0nm,0.3s						
FINES	**FINESS Array B**	**74.11**	**332**	P	**P**	**00 28 26.7**	**0.0**
ARCES	**ARCESS Array B**	**76.72**	**340**	P	**P**	**00 28 42.3**	**+0.7**
	comp=Z,1.2nm,0.8s,baz=77,slow=7.6,SNR=5.6						
	comp=Z,1.2nm,0.8s						
ARCES	**ARCESS Array B**	**76.72**	**340**	IAmb	IAmb	00 28 46.7	
	comp=Z,4.0nm,1.2s						

TEH ***13*** *00:26:23.6, 36.61N×54.81E, h6km, ML3.2*
AZER ***13*** *00:26:28.0±1.2, 36.87N×54.50E, h10km, Error ellipse: s-maj=13.7km s-min=7.8km az=43.0*
ISC 13 00:26:23.9±0.9, 36.70N±0.05×54.77E±0.04, h10km, n34, σ1§99/41, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGLO	**Ghaloghah**	**0.78**	**256**	*e*Pg	**Pb**	**00 26 39.6**	**-0.2**
IGLO				*e*		00 27 00.4	
	comp=Z,11μm,0.7s						
MRVT	**Maraveh tapeh**	**1.42**	**47**	*e*Pn	**Pb**	**00 26 50.6**	**0.0**
MRVT				*e*		00 27 17.0	
	comp=Z,99nm,0.3s						
ISHM	**Shahmirzad**	**1.49**	**234**	*e*Pn	**Pb**	**00 26 51.4**	**-0.5**
ISHM				*e*		00 26 56.1	
	comp=Z,5μm,0.2s						
IFIR	**Firoozkooh**	**1.94**	**238**	*e*Pn	**Pb**	**00 26 59.6**	**0.0**
IFIR				*e*		00 27 35.0	
	comp=Z,2μm,0.5s						
ILAS	**Lasjerd**	**1.97**	**229**	*e*Pn	**Pb**	**00 26 59.8**	**-0.3**
ILAS				*e*		00 27 02.5	
	comp=Z,2μm,0.3s						
IPRN	**Peran**	**2.02**	**258**	*e*Pn	**Pb**	**00 27 01.2**	**+0.4**
IPRN				*e*Sg	**Sg**	**00 27 31.9**	**+3.2**
SBZV	**Sabzevar**	**2.31**	**97**	*e*Pn	**Pb**	**00 27 04.4**	**-1.4**
IDMV	**Damavand**	**2.48**	**244**	*e*	Pg	00 27 16.5	+4.9
	comp=Z,1μm,0.4s						
ISFR	**Sfrayin**	**2.61**	**81**	*e*Pn	**Pb**	**00 27 09.0**	**-2.0**
IVRN	**Varamin**	**3.00**	**236**	*e*Pn	**Pb**	**00 27 14.4**	**-3.2**
IVRN				*e*		00 27 28.7	
	comp=Z,502nm,0.5s						
TNSJ	**Nastanj**	**3.12**	**151**	*e*Pn	**Pn**	**00 27 14.2**	**+0.9**
ISFB	**Sefidab**	**3.12**	**222**	*e*Pn	**Pn**	**00 27 14.8**	**+1.5**
IEMG	**Emamgholi**	**3.19**	**76**	*e*Pn	**Pn**	**00 27 16.7**	**+2.3**
IEMG				*e*		00 28 18.3	
	comp=N,722nm,0.3s						
IAKL	**Akhelmad**	**3.21**	**91**	*e*Pn	**Pn**	**00 27 16.6**	**+2.0**
QALM	**Alamut, Qazvin**	**3.33**	**267**	*e*Pn	**Pn**	**00 27 19.2**	**+2.8**
IPAY	**Payeh**	**3.41**	**93**	*e*Pn	**Pn**	**00 27 20.0**	**+2.6**
ANAR	**Anarak**	**3.60**	**194**	*e*Pn	**Pn**	**00 27 21.3**	**+1.3**
TKDS	**Koohdasht(Taba**	**3.63**	**147**	*e*Pn	**Pn**	**00 27 22.1**	**+1.7**
LHJ2	**Lahijan - Gila**	**3.80**	**278**	*e*Pn	**Pn**	**00 27 26.3**	**+3.7**
IKRD	**Kardeh**	**3.81**	**87**	*e*Pn	**Pn**	**00 27 25.3**	**+2.4**
TPRV	**Parvadeh(Tabas**	**3.99**	**156**	*e*Pn	**Pn**	**00 27 26.2**	**+1.0**
JRKH	**Jarkhoshk**	**4.57**	**98**	*e*Pn	**Pn**	**00 27 34.9**	**+1.6**
TBJM	**Torbat-e-JAM**	**4.73**	**106**	*e*Pn	**Pn**	**00 27 37.5**	**+2.0**
AFRZ	**Afriz**	**4.77**	**132**	*e*Pn	**Pn**	**00 27 37.2**	**+1.1**
ITEG	**Tejag**	**5.01**	**138**	*e*Pn	**Pn**	**00 27 40.7**	**+1.3**
ASTR	**Astara**	**5.10**	**293**	P	**Pn**	**00 27 40.8**	**+0.4**
ASTR				S	**Sn**	**00 28 37.2**	**-2.1**
LRK	**Lerik**	**5.46**	**293**	P	**Pn**	**00 27 46.1**	**+0.6**
LRK				S	**Sn**	**00 28 47.2**	**-1.3**
YRD	**Yardimli**	**5.62**	**295**	P	**Pn**	**00 27 48.4**	**+0.5**
YRD				S	**Sn**	**00 28 49.4**	**-3.1**

ATGJ	**Altiaghaj**	**6.17**	**314**	S	**Sn**	**00 29 04.3**	**-1.5**
PQL	**Pirkuli**	**6.32**	**312**	P	**Pn**	**00 27 56.7**	**-0.6**
PQL				S	**Sn**	**00 29 09.2**	**-0.5**
SIZA	**Siyzn**	**6.33**	**315**	S	**Sn**	**00 29 06.7**	**-3.1**
SEKA	**Sheki**	**7.42**	**310**	P	**Pn**	**00 28 11.0**	**-1.3**
SEKA				S	**Sn**	**00 29 32.2**	**-4.5**
GDB	**GEDABAY**	**8.11**	**302**	P	**Pn**	**00 28 22.4**	**+0.4**
GDB				S	**Sn**	**00 29 51.9**	**-1.8**
QZX	**Qazax, Azerbai**	**8.52**	**304**	P	**Pn**	**00 28 27.7**	**+0.2**
QZX				S	**Sn**	**00 30 01.0**	**-2.7**

JMA ***13*** *00:37:23.6±0.2, 25.N±2.×122.5E±0.5, h117km±2km, MV2.4/9, NW OFF ISHIGAKIJIMA IS*
TAP ***13*** *00:37:23.6, 24.76N×122.51E, h120km±1km, ML3.0, D*
ISC 13 00:37:24.3±1.9, 24.75N±0.07×122.50E±0.03, h115km±12km, n59, σ0§42/82, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.50**	**126**	P	**Pn**	**00 37 41.8**	**+0.1**
JYNG				*e*S	**Sn**	**00 37 55.0**	**+0.3**
TWB1	**Santiao Chiao**	**0.53**	**299**	P	**Pn**	**00 37 42.0**	**+0.1**
	baz=297						
YOJ	**Yonaguni jima**	**0.54**	**122**	*i* P	**Pn**	**00 37 41.9**	**0.0**
	baz=123						
YOJ				*i* S	**Sn**	**00 37 55.2**	**0.0**
	baz=123						
YOJ	**Yonaguni jima**	**0.54**	**122**	P	**Pn**	**00 37 42.0**	**0.0**
YOJ				*e*S	**Sn**	**00 37 55.6**	**+0.3**
TWC	**Suao**	**0.61**	**257**	*e*P	**Pn**	**00 37 42.1**	**-0.4**
	baz=255						
NTC	**Toucheng**	**0.62**	**280**	*e*P	**Pn**	**00 37 42.3**	**-0.2**
	baz=278						
TIPB	**Shuangxi**	**0.65**	**290**	*i* P	**Pn**	**00 37 42.8**	**0.0**
	baz=286						
SXI1	**Grass Mountain**	**0.67**	**301**	P	**Pn**	**00 37 42.9**	**0.0**
	baz=299						
SXI1				*e*S	**Sn**	**00 37 57.3**	**+0.3**
	baz=299						
NDS	**Dongshan**	**0.72**	**261**	P	**Pn**	**00 37 43.3**	**0.0**
	baz=260						
NDS				*e*S	**Sn**	**00 37 57.1**	**-0.6**
	baz=260						
EWUT	**Wuta**	**0.73**	**246**	P	**Pn**	**00 37 43.3**	**0.0**
	baz=244						
EWUT				*e*S	**Sn**	**00 37 57.5**	**-0.1**
	baz=244						
NWF	**Wu-fen Shan**	**0.73**	**296**	P	**Pn**	**00 37 43.5**	**0.0**
	baz=294						
WFSB	**Wu-fen Shan**	**0.73**	**296**	P	**Pn**	**00 37 43.5**	**+0.1**
	baz=294						
TWE	**Neicheng**	**0.76**	**268**	*i* P	**Pn**	**00 37 43.6**	**0.0**
	baz=266						
ENA	**Nanau**	**0.76**	**245**	P	**Pn**	**00 37 43.9**	**+0.2**
	baz=244						
ENA				*e*S	**Sn**	**00 37 58.5**	**+0.3**
	baz=244						
TNOU	**National Taiwa**	**0.77**	**301**	*e*P	**Pn**	**00 37 43.7**	**-0.1**
	baz=299						
FUSB	**Fushanzhiwuyua**	**0.83**	**271**	*e*P	**Pn**	**00 37 44.1**	**-0.3**
	baz=269						
ENTT	**Nioudou**	**0.86**	**263**	*e*P	**Pn**	**00 37 44.9**	**+0.4**
	baz=261						
TWA	**Mucha**	**0.87**	**286**	*e*P	**Pn**	**00 37 44.3**	**-0.4**
	baz=284						
NWLT	**Wulai**	**0.91**	**272**	*e*P	**Pn**	**00 37 44.7**	**-0.3**
	baz=270						
NWLT				*e*S	**Sn**	**00 38 01.1**	**+0.4**
	baz=270						
NHDH	**Xindian Distri**	**0.91**	**284**	*e*P	**Pn**	**00 37 44.7**	**-0.3**
	baz=282						
LATG	**Datong**	**0.91**	**257**	*e*P	**Pn**	**00 37 45.6**	**+0.4**
	baz=255						
LATG				*e*S	**Sn**	**00 38 01.6**	**+0.7**
	baz=255						
YM01	**YM01**	**0.94**	**295**	*e*P	**Pn**	**00 37 45.1**	**-0.2**
	baz=294						
TATO	**Taipei**	**0.95**	**284**	*e*P	**Pn**	**00 37 44.9**	**-0.5**
	baz=282						
NACB	**Ninganchiao**	**1.01**	**235**	*e*P	**Pn**	**00 37 45.7**	**-0.3**
	baz=235						
NACB				*e*S	**Sn**	**00 38 01.9**	**-0.4**
	baz=235						
YHNB	**Yeheng**	**1.03**	**266**	*e*P	**Pn**	**00 37 46.4**	**+0.1**
	baz=264						
YHNB				*e*S	**Sn**	**00 38 03.0**	**+0.1**
	baz=264						
NSK	**Sanguang**	**1.04**	**266**	*e*P	**Pn**	**00 37 46.5**	**+0.1**
	baz=265						
NSK				*e*S	**Sn**	**00 38 02.9**	**-0.2**
	baz=265						
TWS1	**Kuangyinshan**	**1.05**	**290**	*e*P	**Pn**	**00 37 46.1**	**-0.3**
	baz=288						
TWD	**Chiawan**	**1.06**	**231**	*e*P	**Pn**	**00 37 46.3**	**-0.3**
	baz=230						
NNSB	**Datong**	**1.07**	**253**	*e*P	**Pn**	**00 37 46.8**	**+0.1**
	baz=252						
NNS	**Nan Shan**	**1.07**	**254**	*e*P	**Pn**	**00 37 47.0**	**+0.2**
	baz=252						
NNS				*e*S	**Sn**	**00 38 04.3**	**+0.6**
	baz=252						
ETLH	**Xiulin Townshi**	**1.08**	**240**	*e*P	**Pn**	**00 37 46.4**	**-0.4**
	baz=239						
IRIF	**Iriomote-Funau**	**1.19**	**110**	P	**Pn**	**00 37 47.8**	**-0.1**
TEYL	**Yanliau Villag**	**1.21**	**223**	*e*P	**Pn**	**00 37 47.8**	**-0.3**
	baz=224						
ETM	**Tongmen**	**1.21**	**230**	*e*P	**Pn**	**00 37 47.5**	**-0.6**
	baz=229						
FUSS	**Fushou**	**1.25**	**247**	*e*P	**Pn**	**00 37 49.1**	**+0.3**
	baz=246						
FUSS				*e*S	**Sn**	**00 38 07.6**	**+0.2**
	baz=246						
NFF	**Wufeng Townshi**	**1.27**	**265**	*e*P	**Pn**	**00 37 48.6**	**-0.1**
	baz=264						
NFF				*e*S	**Sn**	**00 38 06.8**	**-0.6**
	baz=264						
WHF	**Hehuan Shan**	**1.28**	**242**	*e*P	**Pn**	**00 37 49.3**	**0.0**
	baz=241						
WHF				*e*S	**Sn**	**00 38 07.8**	**-0.4**
	baz=241						
TWT	**Tachien**	**1.31**	**248**	*e*P	**Pn**	**00 37 49.8**	**+0.4**
	baz=247						
TWT				*e*S	**Sn**	**00 38 09.0**	**+0.6**
	baz=247						
TDCB	**Techi**	**1.32**	**248**	*e*P	**Pn**	**00 37 50.0**	**+0.5**
	baz=247						
TDCB				*e*S	**Sn**	**00 38 08.8**	**+0.2**
	baz=247						
ESL	**Shilin**	**1.35**	**227**	*e*P	**Pn**	**00 37 48.9**	**-0.8**
	baz=225						
HSN1	**Hsinchu**	**1.35**	**272**	*e*P	**Pn**	**00 37 49.6**	**0.0**
	baz=270						
TEGC	**Jichi Village**	**1.36**	**221**	*e*P	**Pn**	**00 37 49.7**	**-0.1**
	baz=220						
NSTT	**Nanjuang**	**1.37**	**265**	*e*P	**Pn**	**00 37 49.6**	**-0.3**
	baz=264						
NSTT				*e*S	**Sn**	**00 38 08.8**	**-0.6**
	baz=264						
CHGB	**Renai**	**1.39**	**241**	*e*P	**Pn**	**00 37 50.7**	**+0.3**
	baz=240						
CHGB				*e*S	**Sn**	**00 38 10.7**	**+0.5**
	baz=240						
OWD	**Renai**	**1.45**	**237**	*e*P	**Pn**	**00 37 51.0**	**+0.1**
	baz=236						
OWD				*e*S	**Sn**	**00 38 10.4**	**-0.8**
	baz=236						
JKRS	**Kuro-shima**	**1.46**	**110**	P	**Pn**	**00 37 51.2**	**+0.2**
JKRS				*e*S	**Sn**	**00 38 11.5**	**+0.3**
WUSB	**Renai**	**1.47**	**239**	*e*P	**Pn**	**00 37 51.6**	**+0.4**
	baz=238						
JIJ	**Ishigaki jima**	**1.54**	**104**	P	**Pn**	**00 37 51.8**	**-0.1**
JIJ				S	**Sn**	**00 38 12.3**	**-0.5**
NMLH	**Miaoli**	**1.57**	**263**	*e*P	**Pn**	**00 37 52.2**	**-0.1**
	baz=261						
VWDT	**VWDT**	**1.59**	**232**	*e*P	**Pn**	**00 37 52.8**	**+0.3**
	baz=231						
HGSD	**Ruisui**	**1.59**	**218**	*e*P	**Pn**	**00 37 52.2**	**-0.3**
	baz=218						
EHY	**Hungye**	**1.64**	**221**	*e*P	**Pn**	**00 37 53.8**	**+0.7**
	baz=220						
SMLT	**Sun Moon Lake**	**1.70**	**240**	*e*P	**Pn**	**00 37 55.0**	**+1.0**
	baz=239						
SSLB	**Suanglung**	**1.71**	**236**	*e*P	**Pn**	**00 37 54.6**	**+0.7**
	baz=235						
YULB	**Yu-li**	**1.74**	**219**	*e*P	**Pn**	**00 37 53.5**	**-0.9**
	baz=219						

FULB	**Fuli**	**1.90**	**216**	*e*P	**Pn**	**00 37 57.2**	**+0.9**
	baz=215						
ALS	**Alishan**	**1.98**	**232**	*e*P	**Pn**	**00 37 58.3**	**+0.7**
	baz=231						
JTJ	**Tarama**	**2.00**	**93**	S	**Sn**	**00 38 23.0**	**+0.1**
EDH	**Donghe**	**2.08**	**212**	*e*P	**Pn**	**00 37 57.4**	**-1.1**
	baz=211						

IDC ***13*** *00:44:24.9±1.2, 67.90N×20.35E, h0km, mbtmp2.4/3, ML1.9/3, Error ellipse: s-maj=18.2km s-min=7.0km az=121.0*
HEL ***13*** *00:44:25.7±0.0, 67.85N×20.22E, h0km, ML2.1, ML2.0(UPP), Explosion*
BER ***13*** *00:44:27.6±1.6, 67.87N×20.29E, h1km, ML1.8, Confirmed Induced event*
KOLA ***13*** *00:44:28.3, 67.81N×20.49E, h0km, ML2.1*
ISC 13 00:44:25.2±0.7, 67.85N±0.02×20.27E±0.02, h0km, n39, σ1§21/72, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RATU	**Laukkuluspa**	**0.26**	**265**	*i* P	**Pg**	**00 44 29.8**	**-0.3**
RATU				*i* S	**Sg**	**00 44 33.1**	**-0.3**
KOVU	**Salmi**	**0.38**	**354**	*i* P	**Pg**	**00 44 32.4**	**-0.1**
KOVU				*i* S	**Sg**	**00 44 37.5**	**+0.1**
NIKU	**Nikkaluokta**	**0.47**	**273**	*i* P	**Pg**	**00 44 33.6**	**-0.4**
NIKU				*i* S	**Sg**	**00 44 40.0**	**-0.1**
LANU	**Lannavaara**	**0.68**	**72**	*e*P	**Pg**	**00 44 38.4**	**+0.2**
LANU				*e*S	**Sg**	**00 44 43.8**	**-3.2**
DUNU	**Dundret**	**0.74**	**171**	*i* P	**Pg**	**00 44 39.0**	**-0.2**
DUNU				*i* S	**Sg**	**00 44 49.0**	**+0.3**
SALU	**Saltoluokta**	**0.82**	**236**	*i* P	**Pg**	**00 44 40.2**	**-0.6**
KIF	**Kilpisjarvi**	**1.18**	**9**	*e*P	**Pg**	**00 44 47.5**	**-0.2**
KIF	**Kilpisjarvi**	**1.18**	**9**	*e*P	**Pg**	**00 44 47.4**	**-0.4**
	baz=193						
KIF				MSG		00 45 02.7	
	comp=Z,27nm,0.2s						
KIF				*e*S	**Sg**	**00 45 03.3**	**+0.2**
PAJU	**Pajala**	**1.37**	**126**	*e*P	**Pg**	**00 44 50.2**	**-1.3**
PAJU				*e*SB	**Sg**	**00 45 08.9**	**-0.3**
HEF	**Hetta**	**1.39**	**64**	*e*P	**Pg**	**00 44 51.1**	**-0.7**
HEF				*e*S	**Sg**	**00 45 09.5**	**-0.3**
HEF	**Hetta**	**1.39**	**64**	*e*PG	**Pg**	**00 44 51.1**	**-0.7**
	baz=250						
HEF				MSG		00 45 08.2	
	comp=Z,22nm,0.2s						
HEF				*e*SB	**Sg**	**00 45 09.4**	**-0.5**
ERTU	**Ertsjaerv**	**1.50**	**149**	*e*P	**Pn**	**00 44 52.6**	**-0.6**
ERTU				*e*SN	**Sn**	**00 45 14.2**	**+0.7**
KLF	**Kolari**	**1.55**	**112**	*e*PG	**Pn**	**00 44 53.7**	**-0.2**
	baz=299						
KLF				*e*SB	**Sn**	**00 45 14.7**	**0.0**
KTK1	**Kautokeino**	**1.61**	**42**	*e*P	**Pn**	**00 44 54.9**	**+0.1**
KTK1				*e*S	**Sn**	**00 45 15.9**	**-0.3**
KTK1				IAML		00 45 19.1	
	comp=Z,15nm,0.2s						
KTK1	**Kautokeino**	**1.61**	**42**	*e*PG	**Pn**	**00 44 54.9**	**+0.1**
KTK1				*e*SN	**Sb**	**00 45 16.4**	**-0.1**
HARU	**Harads**	**1.71**	**170**	*e*P	**Pn**	**00 44 56.4**	**+0.2**
JETT	**Jettan, Norway**	**1.72**	**2**	*e*P	**Pn**	**00 44 56.2**	**-0.2**
JETT				*e*S	**Sn**	**00 45 18.1**	**-0.9**
JETT				IAML		00 45 22.5	
	comp=Z,39nm,0.4s						
TRO	**Tromso**	**1.86**	**345**	*e*PN	**Pn**	**00 44 58.7**	**+0.5**
TRO				*e*SG	**Sb**	**00 45 23.3**	**-0.4**
FAUS	**Fauske**	**1.96**	**259**	*e*P	**Pn**	**00 45 00.3**	**+0.7**
FAUS				*e*S	**Sn**	**00 45 24.7**	**-0.1**
FAUS				IAML		00 45 30.5	
	comp=Z,16nm,0.7s						
KALU	**Kalix**	**2.34**	**147**	*e*P	**Pn**	**00 45 05.7**	**+0.9**
	baz=332						
KALU				*e*SB	**Sb**	**00 45 36.7**	**-0.7**
TOF	**Tornio**	**2.39**	**136**	*e*PB	**Pn**	**00 45 07.1**	**+1.7**
TOF				MSG		00 45 36.7	
	comp=Z,8.8nm,0.2s						
TOF				*e*SG	**Sb**	**00 45 39.0**	**+0.2**
SGF	**Sodankyl**	**2.43**	**97**	*e*P	**Pn**	**00 45 07.3**	**+1.3**
SGF				*e*SB	**Sb**	**00 45 38.7**	**-1.3**
RNF	**Rovaniemi**	**2.56**	**116**	*e*PB	**Pn**	**00 45 10.2**	**+2.4**
RNF				*e*SG	**Sb**	**00 45 44.1**	**+0.3**
ARA0	**ARCESS Array S**	**2.56**	**46**	*e*P	**Pn**	**00 45 08.9**	**+1.1**
ARA0				*e*S	**Sn**	**00 45 38.4**	**-1.3**
ARA0				IAML		00 45 44.0	
	comp=Z,6.0nm,0.5s						
ARA0	**ARCESS Array S**	**2.56**	**46**	*e*P	**Pn**	**00 45 08.8**	**+1.0**
ARA0				*e*SB	**Sb**	**00 45 43.2**	**-0.6**
ARCES	**ARCESS Array B**	**2.56**	**46**	Pn	**Pn**	**00 45 08.3**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=231,slow=14,SNR=39						
ARCES				Lg	Lg	00 45 42.0	
	comp=Z,1.3nm,0.3s,baz=228,slow=26,SNR=18						
	comp=Z,1.0nm,0.3s						
ARCES	**ARCESS Array B**	**2.56**	**46**	P	**Pn**	**00 45 09.6**	**+1.7**
ARCES				S	**Sn**	**00 45 40.3**	**+0.6**
KEV	**Kevo**	**3.11**	**49**	*e*P	**Pn**	**00 45 16.8**

H03S3	**Juan Fernandez**	**27.18**	**97**	T		T		01 27 47.5	
	baz=258								
H03N2	**Juan Fernandez**	**27.25**	**96**	T		T		01 27 55.6	
	baz=268,slow=75								
H03N3	**Juan Fernandez**	**27.25**	**96**	T		T		01 27 58.9	
	baz=268,slow=75								
H03N1	**Juan Fernandez**	**27.26**	**96**	T		T		01 28 02.1	
	baz=268,slow=75								
LL04	**Puerto Octay**	**31.51**	**113**	P		**P**		**00 59 59.2**	**+0.6**
ML02	**Panimavida**	**32.86**	**103**	P		**P**		**01 00 09.5**	**-1.0**
PLCA	**Paso Flores**	**32.93**	**113**	P		**P**		**01 00 10.4**	**-0.7**
	1.5nm,0.9s,baz=235,slow=15,SNR=1.9								
	1.5nm,0.9s								
PLCA	**Paso Flores**	**32.93**	**113**	IAmb		IAmb		01 00 16.9	
	comp=Z,21nm,1.4s								
BO01	**Tunca**	**33.41**	**101**	P		**P**		**01 00 15.1**	**-0.1**
BO01				IAmb		IAmb		01 00 39.1	
	comp=Z,16nm,1.4s								
PEL	**Peldehue**	**34.03**	**99**	P		**P**		**01 00 20.6**	**-0.1**
MT03	**Universidad Ad**	**34.08**	**100**	P		**P**		**01 00 20.8**	**-0.4**
LMEL	**Las Melosas**	**34.24**	**100**	P		**P**		**01 00 22.8**	**0.0**
LMEL				IAmb		IAmb		01 00 31.5	
	comp=Z,21nm,1.2s								
GO04	**Tololo Observa**	**34.79**	**94**	P		**P**		**01 00 26.4**	**-1.2**
ZON	**Zonda**	**36.10**	**97**	P		**P**		**01 00 39.0**	**+0.4**
ZON				IAmb		IAmb		01 00 43.8	
	comp=Z,15nm,1.3s								
AC02	**Maricunga**	**37.36**	**89**	P		**P**		**01 00 49.2**	**-0.7**
AC02				IAmb		IAmb		01 00 59.5	
	comp=Z,22nm,1.2s								
GO02	**Mina Guanaco**	**37.66**	**87**	P		**P**		**01 00 51.4**	**-0.9**
GO02				IAmb		IAmb		01 00 57.2	
	comp=Z,24nm,1.3s								
PB04	**IPOC Station P**	**38.48**	**82**	P		**P**		**01 00 59.5**	**+0.5**
PB15	**IPOC Station P**	**38.62**	**84**	P		**P**		**01 01 00.6**	**+0.3**
PB15				IAmb		IAmb		01 01 10.5	
	comp=Z,36nm,1.5s								
NNA	**Nana**	**39.14**	**63**	P		P		01 01 00.9	-3.6
	comp=Z,2.6nm,0.4s,baz=155,slow=17,SNR=1.7								
	comp=Z,2.6nm,0.4s								
NNA	**Nana**	**39.14**	**63**	IAmb		IAmb		01 01 06.6	
	comp=Z,16nm,1.2s								
PB02	**IPOC Station P**	**39.17**	**81**	P		**P**		**01 01 04.2**	**-0.6**
LVC	**Limon Verde**	**39.36**	**84**	P		P		01 01 02.3	-4.3
	comp=Z,4.2nm,0.8s,baz=337,slow=13,SNR=3.4								
	comp=Z,4.2nm,0.8s								
LVC	**Limon Verde**	**39.36**	**84**	P		P		01 01 03.5	-3.1
LVC				IAmb		IAmb		01 01 13.2	
	comp=Z,35nm,1.5s								
PB09	**IPOC Station P**	**39.47**	**82**	P		**P**		**01 01 07.1**	**-0.2**
PB09				IAmb		IAmb		01 01 19.1	
	comp=Z,22nm,1.1s								
PB01	**IPOC Station P**	**39.64**	**81**	P		**P**		**01 01 08.2**	**-0.4**
PB11	**IPOC Station P**	**40.15**	**79**	P		**P**		**01 01 12.2**	**-0.8**
PB16	**IPOC Station P**	**41.01**	**77**	P		**P**		**01 01 19.7**	**-0.9**
LPAZ	**La Paz**	**43.23**	**76**	P		P		01 01 35.2	-3.5
	comp=Z,2.1nm,1.0s,baz=240,slow=7.6,SNR=7.0								
	comp=Z,2.1nm,1.0s								
LPAZ	**La Paz**	**43.23**	**76**	P		**P**		**01 01 37.6**	**-1.1**
COHC	**Cochancay**	**43.24**	**50**	P		**P**		**01 01 45.5**	**-1.3**
PORT	**Chimborazo Vol**	**45.40**	**50**	P		**P**		**01 01 55.5**	**-0.6**
PORT				IAmb		IAmb		01 02 14.9	
	comp=Z,13nm,1.2s								
OTAV	**Otavalo**	**46.92**	**49**	P		**P**		**01 02 07.5**	**-0.4**
OTAV				IAmb		IAmb		01 02 13.3	
	comp=Z,11nm,1.4s								
CPUP	**Villa Florida**	**47.24**	**95**	P		**P**		**01 02 09.4**	**-0.4**
	comp=Z,8.2nm,1.3s,baz=180,slow=6.1,SNR=2.4								
	comp=Z,8.2nm,1.3s								
CPUP	**Villa Florida**	**47.24**	**95**	IAmb		IAmb		01 02 14.4	
	comp=Z,22nm,1.5s								
BELA	**Belgrano 2**	**53.43**	**165**	P		**P**		**01 02 56.3**	**+0.3**
BELA				IAmb		IAmb		01 03 08.2	
	comp=Z,10nm,1.2s								
QSPA	**South Pole Qui**	**55.24**	**180**	P		**P**		**01 03 09.7**	**+0.2**
	comp=Z,0.9nm,0.8s,baz=98,slow=3.9,SNR=1.6								
	comp=Z,0.9nm,0.8s								
BAUV	**El Baul**	**60.20**	**52**	P		**P**		**01 03 44.5**	**-0.3**
VNA3	**Neumayer Olymp**	**61.09**	**159**	P		**P**		**01 03 49.0**	**-1.1**
VNA1	**Neumayer--Stat**	**61.76**	**158**	P		**P**		**01 03 53.8**	**-0.8**
MCQ	**Macquarie Isla**	**61.94**	**221**	P		**P**		**01 03 54.6**	**-1.5**
SNAA	**Sanae**	**62.86**	**160**	P		**P**		**01 04 00.8**	**-1.3**
SNAA	**Sanae**	**62.86**	**160**	P		**P**		**01 04 01.0**	**-1.1**
TXAR	**Lajitas Array**	**64.42**	**8**	P		P		01 04 09.0	-3.9
	comp=Z,0.2nm,0.8s,baz=184,slow=5.8,SNR=3.1								
	comp=Z,0.2nm,0.8s								
TX31	**Lajitas Ar. Si**	**64.42**	**8**	P		**P**		**01 04 12.9**	**0.0**
TX31				IAmb		IAmb		01 04 39.2	
	comp=Z,11nm,1.2s								
MNTX	**Cornudas Mount**	**66.59**	**6**	P		**P**		**01 04 25.8**	**-0.9**
MNTX				IAmb		IAmb		01 04 52.0	
	comp=Z,7.0nm,1.4s								
CELP	**Cerrillos**	**68.07**	**47**	P		**P**		**01 04 36.1**	**-0.3**
SNCC	**San Nicolas Is**	**68.23**	**353**	P		**P**		**01 04 37.7**	**+0.7**
PASC	**Pasadena Art C**	**69.02**	**354**	P		**P**		**01 04 42.2**	**+0.2**
X18A	**Snowflake**	**69.15**	**2**	P		**P**		**01 04 43.2**	**+0.1**
X18A				IAmb		IAmb		01 04 57.3	
	comp=Z,9.5nm,1.3s								
HLK	**Haleakala**	**69.59**	**316**	P		**P**		**01 04 44.5**	**-1.6**
ANMO	**Albuquerque**	**69.73**	**5**	P		**P**		**01 04 46.3**	**-0.3**
GSC	**Goldstone, Bar**	**70.05**	**356**	P		**P**		**01 04 48.2**	**-0.3**
GSC				IAmb		IAmb		01 05 03.1	
	comp=Z,10nm,1.4s								
ISA	**Isabella, Lake**	**70.53**	**354**	P		**P**		**01 04 51.8**	**+0.4**
QSM	**Queen of Sheba**	**70.71**	**356**	P		**P**		**01 04 51.9**	**-0.5**
352A	**Blakely**	**70.79**	**24**	P		**P**		**01 04 54.1**	**+1.1**
250A	**Grady**	**70.81**	**23**	P		**P**		**01 04 52.6**	**-0.4**
U15A	**North Rim**	**71.02**	**360**	P		**P**		**01 04 54.1**	**-0.5**
U15A				IAmb		IAmb		01 05 00.0	
	comp=Z,9.0nm,1.4s								
KIP	**Kipapa**	**71.13**	**315**	P		**P**		**01 04 55.6**	**+0.4**
SHPR	**Sheep Range**	**71.17**	**357**	IAmb		IAmb		01 05 10.2	
	comp=Z,11nm,1.5s								
LRAL	**Lakeview Retre**	**71.56**	**22**	P		**P**		**01 04 57.6**	**+0.1**
TPNV	**Topopah Spring**	**71.66**	**356**	P		**P**		**01 04 58.6**	**+0.3**
TPNV				IAmb		IAmb		01 05 12.5	
	comp=Z,9.2nm,1.3s								
MVCO	**Mesa Verde**	**71.87**	**3**	P		**P**		**01 04 59.3**	**-0.4**
MVCO				IAmb		IAmb		01 05 12.7	
	comp=Z,15nm,1.5s								
PRN	**Pahroc Range**	**72.06**	**357**	P		**P**		**01 05 00.5**	**-0.2**
T25A	**Trinidad**	**72.07**	**6**	P		**P**		**01 05 01.1**	**+0.3**
W41B	**Gary Mavity, V**	**72.15**	**17**	P		**P**		**01 05 01.1**	**+0.1**
W41B				IAmb		IAmb		01 05 09.9	
	comp=Z,7.9nm,1.1s								
CCUT	**Cedar City**	**72.16**	**359**	P		**P**		**01 05 00.8**	**-0.6**
CCUT				IAmb		IAmb		01 05 16.0	
	comp=Z,11nm,1.4s								
Y49A	**Blount Mountai**	**72.50**	**22**	P		**P**		**01 05 03.7**	**+0.4**
Y49A				IAmb		IAmb		01 05 16.0	
	comp=Z,13nm,1.4s								
HHAR	**Hobbs**	**72.83**	**15**	P		**P**		**01 05 06.4**	**+1.3**
HHAR				IAmb		IAmb		01 05 13.5	
	comp=Z,13nm,1.3s								
TPH	**Tonopah**	**72.83**	**356**	P		**P**		**01 05 05.4**	**0.0**
X48A	**Hartselle**	**72.86**	**21**	P		**P**		**01 05 05.9**	**+0.6**
X48A				IAmb		IAmb		01 05 12.8	
	comp=Z,10.0nm,1.3s								
R11A	**Troy Canyon, C**	**73.02**	**357**	P		**P**		**01 05 06.1**	**-0.4**
GOGA	**Godfrey**	**73.05**	**25**	P		**P**		**01 05 05.8**	**-0.7**
GOGA				IAmb		IAmb		01 05 06.6	
	comp=Z,9.6nm,1.4s								
CMB	**Columbia Colle**	**73.05**	**353**	P		**P**		**01 05 07.8**	**+1.3**
PLAL	**Pickwick Lake**	**73.06**	**20**	P		**P**		**01 05 07.4**	**+0.9**
LHV	**Little Huntoon**	**73.10**	**355**	P		**P**		**01 05 07.5**	**+0.9**
LHV				IAmb		IAmb		01 05 21.1	
	comp=Z,15nm,1.3s								
NV11	**Mina Array Sit**	**73.25**	**355**	P		**P**		**01 05 07.6**	**-0.2**
NV11				IAmb		IAmb		01 05 21.8	
	comp=Z,14nm,1.4s								
NVAR	**Mina Array Bea**	**73.26**	**355**	P		P		01 05 05.0	-2.9
	comp=Z,0.8nm,0.9s,baz=193,slow=6.8,SNR=6.1								
	comp=Z,0.8nm,0.9s								
NVAR	**Mina Array Bea**	**73.26**	**355**	P		**P**		**01 05 08.2**	**+0.3**
Q16A	**Castle Valley**	**73.51**	**1**	P		**P**		**01 05 09.7**	**+0.3**
Q16A				IAmb		IAmb		01 05 22.6	
	comp=Z,9.4nm,1.2s								
KOUNC	**Koumac, New Ca**	**73.62**	**256**	P		**P**		**01 05 09.1**	**-1.2**
KVN	**Kaiserville**	**73.86**	**355**	IAmb		IAmb		01 05 25.4	
	comp=Z,15nm,1.4s								
TMUT	**Trail Mountain**	**73.89**	**1**	P		**P**		**01 05 11.1**	**-0.6**
SWET	**Sewanee**	**73.91**	**22**	P		**P**		**01 05 12.0**	**+0.5**
SWET				IAmb		IAmb		01 05 19.6	
	comp=Z,14nm,1.3s								
NLU	**North Lily Min**	**74.54**	**360**	P		**P**		**01 05 15.6**	**+0.2**
NLU				IAmb		IAmb		01 05 29.0	
	comp=Z,11nm,1.4s								
ISCO	**Idaho Springs**	**74.61**	**5**	P		**P**		**01 05 16.4**	**+0.5**
PAHR	**Pah Rah Range**	**74.62**	**354**	P		**P**		**01 05 15.2**	**-0.5**
DUG	**Dugway, Tooele**	**74.79**	**359**	P		**P**		**01 05 17.7**	**+1.0**
BMN	**Battle Mountai**	**75.18**	**356**	IAmb		IAmb		01 05 32.7	
	comp=Z,10nm,1.3s								
RDMU	**Red Mountain**	**75.19**	**2**	IAmb		IAmb		01 05 32.7	
	comp=Z,11nm,1.1s								
JLU	**Jordanelle**	**75.19**	**0**	P		**P**		**01 05 18.6**	**-0.5**
JLU				IAmb		IAmb		01 05 33.1	
	comp=Z,7.4nm,1.1s								
BIRD	**Birdtown, Kers**	**75.23**	**26**	P		**P**		**01 05 19.8**	**+0.6**
BIRD				IAmb		IAmb		01 05 43.0	
	comp=Z,13nm,1.3s								
S44A	**Carbondale**	**75.28**	**18**	P		**P**		**01 05 20.3**	**+0.9**
S44A				IAmb		IAmb		01 05 28.4	
	comp=Z,9.2nm,1.1s								
V53A	**Saluda**	**75.33**	**24**	P		**P**		**01 05 21.6**	**+1.8**
V53A				IAmb		IAmb		01 05 29.2	
	comp=Z,12nm,1.1s								
HVU	**Hansel Valley**	**76.37**	**359**	P		**P**		**01 05 24.0**	**-1.8**
BW06	**Boulder Array**	**77.38**	**2**	P		**P**		**01 05 30.5**	**-1.1**
BW06				IAmb		IAmb		01 05 44.7	
	comp=Z,7.7nm,1.1s								
PD31	**Pinedale Array**	**77.38**	**2**	P		**P**		**01 05 29.6**	**-1.9**
PD31				IAmb		IAmb		01 05 44.7	
	comp=Z,7.9nm,1.3s								
PDAR	**Pinedale Array**	**77.38**	**2**	P		P		01 05 28.9	-2.7
	comp=Z,1.3nm,0.9s,baz=176,slow=4.5,SNR=8.3								
	comp=Z,1.3nm,0.9s								
MAW	**Mawson**	**77.68**	**178**	P		**P**		**01 05 34.2**	**+1.5**
	comp=Z,0.6nm,0.2s,baz=290,slow=6.3,SNR=1.7								
	comp=Z,0.6nm,0.2s								
HLID	**Hailey**	**78.18**	**358**	P		**P**		**01 05 34.6**	**-1.3**
HLID				IAmb		IAmb		01 05 49.6	
	comp=Z,14nm,1.3s								
LOHW	**Long Hollow**	**78.21**	**1**	P		**P**		**01 05 36.0**	**-0.1**
RSSD	**Black Hills**	**79.03**	**6**	P		**P**		**01 05 41.3**	**+0.7**
RSSD				IAmb		IAmb		01 05 54.3	
	comp=Z,14nm,1.5s								
P52A	**Corning**	**79.15**	**23**	P		**P**		**01 05 41.4**	**+0.3**
MCMT	**McKenzie Canyo**	**79.42**	**359**	P		**P**		**01 05 42.0**	**-0.8**
ECSD	**EROS Data Cent**	**79.55**	**11**	P		**P**		**01 05 44.0**	**+0.8**
ECSD				IAmb		IAmb		01 05 51.0	
	comp=Z,11nm,1.3s								
BMO	**Blue Mountains**	**79.59**	**356**	P		**P**		**01 05 42.8**	**-0.7**
O52A	**Adamsville**	**79.69**	**23**	P		**P**		**01 05 44.9**	**+0.8**
RLMT	**Red Lodge**	**79.74**	**2**	P		**P**		**01 05 43.6**	**-0.9**
G08A	**Pilot Rock**	**80.13**	**355**	P		**P**		**01 05 46.4**	**0.0**
F36A	**Milaca**	**82.14**	**13**	P		**P**		**01 05 56.7**	**-0.3**
WVNY	**West Valley, N**	**82.81**	**24**	P		**P**		**01 06 00.2**	**-0.4**
H01W1	**Cape Leeuwin H**	**98.26**	**217**	T		T		02 57 24.9	
	baz=140,slow=75,SNR=9.3								
H01W2	**Cape Leeuwin H**	**98.27**	**217**	T		T		02 57 10.5	
	baz=140,slow=75,SNR=9.6								
H01W3	**Cape Leeuwin H**	**98.28**	**217**	T		T		02 57 25.5	
	baz=140,slow=75,SNR=8.8								
TORD	**Torodi Ar. Bea**	**116.69**	**92**	PKP		**PKPdf**		**01 12 21.5**	**0.0**
	comp=Z,0.2nm,0.8s,baz=222,slow=3.9,SNR=1.9								
AKASG	**Malin Array Be**	**147.87**	**49**	PKP		**PKPdf**		**01 13 16.2**	**-2.1**
	comp=Z,0.3nm,0.3s,baz=288,slow=2.7,SNR=3.2								
AKASG	**Malin Array Be**	**147.87**	**49**			**PKPdf**		**01 13 19.1**	**+0.9**
CMAR	**Chiang Mai Arr**	**148.09**	**247**	PKPbc		**PKPdf**		**01 13 21.8**	**+2.2**
	comp=Z,3.7nm,0.8s,baz=175,slow=2.4,SNR=13								
SONM	**Songino Array**	**148.85**	**306**	PKPbc		**PKPdf**		**01 13 21.9**	**+1.7**
	comp=Z,0.7nm,0.7s,baz=117,slow=1.6,SNR=4.2								
BRTR	**Keskin Array B**	**152.30**	**70**	PKPbc		**PKPdf**		**01 13 30.1**	**+4.3**
	comp=Z,0.3nm,0.8s,baz=284,slow=5.8,SNR=3.1								
BRTR				PKPab		**sPKPbc**		**01 13 40.4**	**+4.5**
	comp=Z,1.3nm,0.9s,baz=193,slow=5.1,SNR=5.0								
ZALV	**Zalesovo Beam**	**157.68**	**333**	PKP		**PKPdf**		**01 13 31.4**	**-1.1**
	comp=Z,0.6nm,0.6s,baz=129,slow=2.0,SNR=2.1								
ZALV				PKPab		**PKPab**		**01 14 02.8**	**-2.0**
	comp=Z,0.6nm,0.4s,baz=76,slow=6.1,SNR=2.7								
ZALV	**Zalesovo Beam**	**157.68**	**333**	PKPab		**PKPab**		**01 14 04.4**	**-0.4**

INET ***13*** *00:56:02.5±1.0, 12°.84N×87°.04W, h15km±5km, ML4.1*
SNET ***13*** *00:56:04.6±0.7, 12°.92N×87°.11W, h0km±15km, ML3.3*
ISC 13 00:56:02.3±1.1, 12°.76N±0°.09×87°.00W±0°.05, h24km±8km, n13, σ0°62/15, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.08**	**220**	*eP*	**Pb**	**00 56 06.5**	**-0.4**
CRIN				*eS*	**Sb**	**00 56 10.5**	**+0.6**
CRIN				IAML		00 56 10.8	
	comp=N,42μm,0.3s						
TELN	**Telica**	**0.23**	**133**	*eP*	**Pn**	**00 56 09.1**	**-1.2**
TEL3	**Telica 3**	**0.24**	**141**	*eP*	**Pn**	**00 56 09.8**	**-0.6**
CNGN	**Cerro Negro**	**0.39**	**131**	*eP*	**Pn**	**00 56 12.5**	**0.0**
MOMN	**Momotombo**	**0.57**	**128**	*eP*	**Pn**	**00 56 15.6**	**+0.6**
CNCH	**Conchagua**	**0.96**	**302**	*eP*	**Pb**	**00 56 20.8**	**+0.3**
CNCH				IAML		00 56 39.9	
	comp=Z,2μm,0.4s						
LCND	**La Caada**	**1.03**	**302**	*eP*	**Pb**	**00 56 21.2**	**-0.2**
LCND				*eS*	**Sb**	**00 56 35.0**	**+0.5**
LCND				IAML		00 56 39.5	
	comp=Z,591nm,0.4s						
MATN	**Matagalpa**	**1.06**	**81**	*eP*	**Pb**	**00 56 21.7**	**-0.4**
TGUH	**Tegucigalpa,Un**	**1.32**	**348**	*eP*	**Pb**	**00 56 26.2**	**-0.3**
BOAB	**BOACO BROADBAN**	**1.34**	**103**	*eP*	**Pb**	**00 56 27.4**	**+0.7**
RANC	**El Ranchito**	**1.42**	**298**	*eP*	**Pb**	**00 56 28.5**	**+0.2**
PACA	**Pacayal**	**1.47**	**299**	*eP*	**Pb**	**00 56 29.6**	**+0.5**
SJTE	**Alcalda de S**	**2.13**	**294**	*eP*	**Pb**	**00 56 39.9**	**-0.5**

IDC 13 00:58:33.7±2.4, 2°.08N×127°.20E, h0km, mb3.5/2, mbtmp3.5/2, Error ellipse: s-maj=179.8km s-min=28.3km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.98**	**163**	P	P	01 03 39.1	-1.0
	1.2nm,0.6s,baz=341,slow=11,SNR=16						
	1.2nm,0.6s						
ASAR	**Alice Springs**	**26.41**	**166**	P	P	01 04 13.6	+1.4
	0.4nm,0.4s,baz=344,slow=11,SNR=2.5						
MKAR	**Makanchi Array**	**59.18**	**326**	P	P	01 08 36.3	-0.3
	0.2nm,0.4s,baz=125,slow=8.5,SNR=2.2						
	0.2nm,0.4s						

IDC ***13*** *00:59:35.2±0.6, 4°.61S×104°.96W, h0km, mb4.6/19, mbtmp4.6/19, MS5.4/55, Error ellipse: s-maj=20.6km s-min=13.5km az=52.0*

MOS ***13*** *00:59:37.3±1.2, 4°.41S×104°.81W, h10km, mb5.2/44, MS5.1/7, Error ellipse: s-maj=10.2km s-min=5.8km az=90.3*

NEIC ***13*** *00:59:39.9±1.8, 4°.43S±0°.10×104°.84W±0°.1, h10km±1km, mb5.2/657, Ms_20 5.4/383, Mwb5.6/41, Mww5.7, Error ellipse: s-maj=18.1km s-min=15.7km az=236.0*

NEIC ***13*** *00:59:40.2, 4°.42S×104°.86W, h6km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.03; $M_{\theta\theta}$0.65; $M_{\phi\phi}$-0.68; $M_{r\theta}$-0.45; $M_{\theta\phi}$3.45; $M_{\phi r}$-0.21; Fault plane solution: M_o3.55000×10^{17} NP1:ϕ_s185.22000°, δ83.13000°, λ175.96000°. NP2:ϕ_s275.70000°, δ85.99000°, λ6.89000°. Principal axes: T 3.5634, Plg8.0000°, Azm141.0000°; N -0.0311, Plg82.0000°, Azm306.0000°; P -3.5323, Plg2.0000°, Azm50.0000°;*

GCMT ***13*** *00:59:40.9±0.1, 4°.41S±0°.01×104°.98W±0°.01, h15km, MW5.7/156, Moment Tensor Solution. s133,c264; s156,c337; Duration: 1s7 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.31±.04; $M_{\theta\theta}$1.33±.04; $M_{\phi\phi}$-1.01±.04; $M_{r\theta}$-0.07±.11; $M_{\theta\phi}$4.16±.04; $M_{\phi r}$0.62±.12; Best double couple: M_o4.36800×10^{17} NP1:ϕ_s98.00000°, δ82.00000°, λ-3.00000°. NP2:ϕ_s188.00000°, δ87.00000°, λ-172.00000°. Principal axes: T 4.5030, Plg4.0000°, Azm323.0000°; N -0.2630, Plg81.0000°, Azm206.0000°; P -4.2330, Plg8.0000°, Azm53.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***13*** *00:59:49, 4°.56S×104°.69W, h12km, Moment Tensor Solution. Duration: 20s0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.25; $M_{\theta\theta}$2.39; $M_{\phi\phi}$-2.13; $M_{r\theta}$1.44; $M_{\theta\phi}$3.28; $M_{\phi r}$0.19; Fault plane solution: M_o4.25000×10^{17} NP1:ϕ_s16.00000°, δ73.00000°, λ174.00000°. NP2:ϕ_s108.00000°, δ85.00000°, λ17.00000°. Principal axes: T 4.5047, Plg16.0000°, Azm333.0000°; N -0.5719, Plg72.0000°, Azm125.0000°;*

P -3.9327, Plg8.0000°, Azm241.0000°;
ISC 13 00:59:38.3±0.3, 4°.65S±0°.04×104°.94W±0°.06, h13km, n1352, σ1883/1412, mb5.1/330, MS5.4/269, 18C-6D, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAYG	**Puerto Ayora**	**15.16**	**75**		**Pn**	**01 03 12.2**	**-0.2**
PAYG	**Puerto Ayora**	**15.16**	**75**	*e*P	**Pn**	**01 03 12.8**	**+0.5**
RPN	**Rapa Nui**	**22.75**	**190**	LR	LR	01 11 12.4	
	comp=Z,5μm,19.5s,baz=4.0,slow=31						
RTAL	**Retalhuleu**	**23.14**	**34**	P	**P**	**01 04 43.8**	**-0.7**
CMIG	**Matias Romero**	**23.77**	**24**	P	**P**	**01 04 49.6**	**-1.2**
	11nm,0.9s,baz=212,slow=6.1,SNR=12						
CMIG				LR	LR	01 12 09.2	
	comp=Z,5μm,18.2s,baz=204,slow=32						
	11nm,0.9s						
HUEH	**Huehuetenango**	**23.89**	**34**	P	**P**	**01 04 52.8**	**+0.7**
SNET	**Serv Nac Est T**	**23.98**	**40**	P	**P**	**01 04 53.0**	**+0.1**
SNET				IAMs_20	IAMs_20	01 11 48.3	
	comp=Z,12μm,19.0s						
DUNO	**Dulce Nombre,**	**24.27**	**53**	P	**P**	**01 04 54.8**	**-0.8**
DUNO				IAmb	IAmb	01 05 03.1	
	comp=Z,64nm,1.1s						
ORTG	**Ortega, Santa**	**24.47**	**52**	P	**P**	**01 04 56.9**	**-0.6**
ORTG				IAmb	IAmb	01 05 08.9	
	comp=Z,114nm,1.4s						
ESQI	**Esquipulas**	**24.56**	**39**	P	**P**	**01 04 58.3**	**+0.1**
HZTE	**Horizontes, Gu**	**24.57**	**52**	P	**P**	**01 04 57.8**	**-0.4**
CRIN	**San Cristobal**	**24.76**	**46**	P	**P**	**01 05 00.2**	**+0.2**
JTS	**Las Juntas de**	**24.83**	**53**	P	**P**	**01 04 59.5**	**-1.1**
	comp=Z,24nm,0.9s,baz=306,slow=2.1,SNR=12						
JTS				LR	LR	01 12 08.2	
	comp=Z,21μm,20.3s,baz=302,slow=30						
	comp=Z,24nm,0.9s						
JTS	**Las Juntas de**	**24.83**	**53**	P	**P**	**01 05 00.6**	**0.0**
JTS				IAmb	IAmb	01 05 09.0	
	comp=Z,62nm,1.1s						
JTS	**Las Juntas de**	**24.83**	**53**	*e*P	**P**	**01 05 00.9**	**+0.3**
JTS				pmax	pmax		
	comp=Z,28nm,1.0s						
JTS	**Las Juntas de**	**24.83**	**53**	*e*P	**P**	**01 04 60.0**	**-0.7**
ARNL	**Arenillas**	**24.83**	**88**	P	**P**	**01 05 02.0**	**+1.4**
CNGN	**Cerro Negro**	**24.88**	**47**	P	**P**	**01 05 01.1**	**0.0**
HDC	**Heredia**	**25.34**	**55**	P	**P**	**01 05 05.5**	**+0.2**
PEZE	**Perez Zeledon,**	**25.36**	**57**	P	**P**	**01 05 05.6**	**+0.1**
PEZE				IAmb	IAmb	01 05 07.6	
	comp=Z,48nm,1.1s						
RIMA	**Rio Macho**	**25.42**	**56**	P	**P**	**01 05 05.5**	**-0.6**
RIMA				IAmb	IAmb	01 05 08.5	
	comp=Z,58nm,1.4s						
TGUH	**Tegucigalpa,Un**	**25.55**	**43**	P	**P**	**01 05 07.0**	**-0.2**
TGUH	**Tegucigalpa,Un**	**25.55**	**43**	*e*P	**P**	**01 05 06.6**	**-0.5**
SRBA	**San Rafael, Bu**	**25.55**	**57**	P	**P**	**01 05 06.7**	**-0.6**
SRBA				IAmb	IAmb	01 05 18.5	
	comp=Z,55nm,1.2s						
BOAB	**BOACO BROADBAN**	**25.60**	**48**	P	**P**	**01 05 07.4**	**-0.1**
CDITO	**Canoas**	**25.63**	**59**	P	**P**	**01 05 08.2**	**+0.4**
CDITO				IAmb	IAmb	01 05 10.1	
	comp=Z,98nm,1.4s						
CVTR	**Volcan Turrial**	**25.64**	**55**	P	**P**	**01 05 08.9**	**+0.5**
DRK0	**Durika**	**25.66**	**57**	P	**P**	**01 05 08.2**	**-0.2**
ACON	**Acoyapa**	**25.67**	**50**	P	**P**	**01 05 07.2**	**-1.0**
MATN	**Matagalpa**	**25.73**	**47**	P	**P**	**01 05 06.9**	**-1.9**
MATN				IAmb	IAmb	01 05 16.4	
	comp=Z,44nm,1.2s						
COHC	**Cochancay**	**25.73**	**86**	P	**P**	**01 05 08.3**	**-0.4**
BRU2	**Volcan**	**25.89**	**59**	P	**P**	**01 05

ARGC Ariguani, Magd 33.80 65 eP P 01 06 12.9 -7.5
TXAR Lajitas Array 33.81 2 P **P 01 06 19.4 -0.9**
comp=Z,1.0nm,0.7s,baz=187,slow=8.8,SNR=11
TXAR PcP **PcP 01 09 00.0 +0.5**
comp=Z,1.5nm,0.9s,baz=193,slow=5.1,SNR=4.3
TXAR LR LR 01 17 41.3
comp=Z,5µm,21.2s,baz=180,slow=32
comp=Z,1.0nm,0.7s
TXAR Lajitas Array 33.81 2 P **P 01 06 19.9 -0.5**
TXAR Lajitas Array 33.81 2 P **P 01 06 19.9 -0.5**
TXAR 01 09 00.0
TX31 Lajitas Ar. Si 33.81 2 P **P 01 06 20.6 +0.2**
TX31 Lajitas Ar. Si 33.81 2 P **P 01 06 20.4 0.0**
baz=182,SNR=5.4
TX32 Lajitas Array 33.81 2 P **P 01 06 19.9 -0.5**
HSIG 33.97 351 P **P 01 06 21.3 -0.4**
735A Kenedy 34.01 11 P **P 01 06 22.8 +0.8**
735A IAmb IAmb 01 06 44.3
comp=Z,21nm,0.7s
735A Kenedy 34.01 11 S **S 01 11 49.7 +2.6**
baz=193
OCAC Ocana 34.04 68 IAmb IAmb 01 06 23.1
comp=Z,17nm,0.7s
OCAC Ocana 34.04 68 eP **P 01 06 21.7 -1.0**
LL6C La Loma 6 Bece 34.64 66 eP **P 01 06 27.2 -0.5**
SOR Soroa 34.69 37 P **P 01 06 26.7 -1.3**
SOR IAmb IAmb 01 06 42.0
comp=Z,56nm,1.5s
SOR Soroa 34.69 37 P **P 01 06 26.7 -1.3**
SOR pmax pmax
comp=Z,56nm,1.5s
TAMC Tame, Arauca 34.88 72 eP **P 01 06 29.1 -0.7**
TBTG Tabatinga, AM 34.93 91 eP **P 01 06 29.0 -1.3**
TAOE Nuku Hiva Isla 35.20 261 eLR LR 01 15 09.0
comp=Z,10µm,25.4s
JCT Junction City 35.27 8 P **P 01 06 32.9 -0.1**
JCT IAmb IAmb 01 07 01.6
comp=Z,32nm,1.2s
JCT Junction City 35.27 8 P **P 01 06 32.9 -0.1**
JCT pmax pmax
comp=Z,32nm,1.3s
JCT MLR MLR
comp=Z,3µm,19.0s
JCT Junction City 35.27 8 P **P 01 06 32.5 -0.4**
baz=189
JCT S **S 01 12 08.9 +2.3**
baz=189
MTDJ Mount Denham 35.31 49 P **P 01 06 32.4 -1.1**
MTDJ IAMs_20 IAMs_20 01 18 17.0
comp=Z,5µm,20.0s
MTDJ Mount Denham 35.31 49 eP P 01 06 28.7 -4.9
HKT Hockley 35.49 14 P **P 01 06 35.3 +0.6**
HKT Hockley 35.49 14ij eP **P 01 06 34.5 -0.2**
HKT pmax pmax
comp=Z,5.0nm,1.2s
HKT Hockley 35.49 14 S **S 01 12 10.2 +0.4**
baz=196
CRJC Cerrejon, Guaj 35.50 64 eP **P 01 06 32.4 -2.9**
435B Jarrell 35.92 11 P **P 01 06 38.3 -0.2**
435B Jarrell 35.92 11 S **S 01 12 18.0 +1.4**
baz=192
435B Jarrell 35.92 11 P **P 01 06 38.0 -0.5**
baz=192
435B S **S 01 12 20.2 +3.6**
baz=192
MNTX Cornudas Mount 36.15 359 P **P 01 06 40.3 -0.1**
MNTX IAmb IAmb 01 06 42.3
comp=Z,39nm,1.4s
MNTX Cornudas Mount 36.15 359 P **P 01 06 39.8 -0.7**
baz=179,SNR=20
MNTX S **S 01 12 21.6 +1.6**
baz=179
MNTX Cornudas Mount 36.15 359 P **P 01 06 39.2 -1.2**
baz=179,SNR=20
MNTX S **S 01 12 22.2 +2.3**
baz=179
PB12 IPOC Station P 36.53 115 P **P 01 06 44.7 +0.6**
SFX San Felipe 36.73 346 P **P 01 06 45.2 -0.1**
SDV Santo Domingo 36.75 69 LR LR 01 19 13.8
comp=Z,8µm,20.7s,baz=246,slow=32
SDV Santo Domingo 36.75 69 P **P 01 06 45.6 -0.4**
SDV Santo Domingo 36.75 69 IAMs_20 IAMs_20 01 18 51.6
comp=Z,7µm,21.0s
SDV Santo Domingo 36.75 69 eP **P 01 06 45.2 -0.8**
SDV Santo Domingo 36.75 69 eP **P 01 06 45.4 -0.7**
441A DeRidder 36.95 17 S **S 01 12 35.3 +3.2**
baz=200
PB18 Visviri 37.01 113 P **P 01 06 50.1 +1.5**
PB18 IAmb IAmb 01 07 12.1
comp=Z,40nm,1.1s
121A Cookes Peak, D 37.07 356 P **P 01 06 48.1 -0.4**
baz=175,SNR=14
121A Cookes Peak, D 37.07 356 P **P 01 06 47.6 -0.9**
baz=175,SNR=14
121A S **S 01 12 36.4 +1.9**
baz=175
WHTX Lake Whitney, 37.12 11 P **P 01 06 48.7 -0.1**
WHTX IAmb IAmb 01 06 55.2
comp=Z,32nm,1.1s
WHTX Lake Whitney, 37.12 11 S **S 01 12 36.7 +1.8**
baz=192
WHTX Lake Whitney, 37.12 11 P **P 01 06 47.5 -1.3**
baz=192
WHTX S **S 01 12 35.7 +0.9**
baz=192
214A Organ Pipe Nat 37.16 349 P **P 01 06 48.8 -0.3**
214A Organ Pipe Nat 37.16 349 P **P 01 06 47.8 -1.3**
baz=167
214A S **S 01 12 38.8 +3.3**
baz=167
TUC Tucson 37.17 352 P **P 01 06 49.1 -0.2**
TUC Tucson 37.17 352 IAMs_20 IAMs_20 01 18 39.2
comp=Z,6µm,20.0s
TUC Tucson 37.17 352 P **P 01 06 49.1 -0.2**
TUC pmax pmax
comp=Z,16nm,1.4s
TUC Tucson 37.17 352 P **P 01 06 48.1 -1.1**
baz=170
TA01 Diego Aracena 37.30 118 P **P 01 06 52.0 +1.6**
ABTX Abilene, Hawle 37.41 7 IAmb IAmb 01 06 59.6
comp=Z,54nm,1.4s
ABTX Abilene, Hawle 37.41 7 P **P 01 06 51.0 -0.2**
baz=188,SNR=10
ABTX S **S 01 12 38.7 -0.5**
baz=188
ABTX Abilene, Hawle 37.41 7 P **P 01 06 49.8 -1.4**
baz=188,SNR=10
ABTX S **S 01 12 39.0 -0.2**
baz=188
PATCX Punta Patache 37.42 119 P **P 01 06 53.2 +1.6**
237A Washetta, Mont 37.47 13 P **P 01 06 52.4 +0.8**
237A IAmb IAmb 01 07 03.3
comp=Z,45nm,1.2s
237A Washetta, Mont 37.47 13 S **S 01 12 43.0 +2.9**
baz=195
PB11 IPOC Station P 37.50 117 P **P 01 06 53.6 +1.2**
NATX Nacogdoches 37.51 14 P **P 01 06 53.4 +1.5**
NATX IAmb IAmb 01 07 21.7
comp=Z,32nm,1.1s
NATX Nacogdoches 37.51 14 S **S 01 12 42.4 +1.8**
baz=197
NATX Nacogdoches 37.51 14 P **P 01 06 50.4 -1.6**
baz=197
NATX S **S 01 12 40.2 -0.4**
baz=197
H03N2 Juan Fernandez 37.52 143 T T 01 46 47.2
baz=317,slow=77,SNR=302
H03N1 Juan Fernandez 37.53 143 T T 01 46 48.5
baz=317,slow=77,SNR=380
H03N3 Juan Fernandez 37.53 143 T T 01 46 47.8
baz=317,slow=77,SNR=410
342A Flagon Creek P 37.79 18 P **P 01 06 53.3 -1.1**
342A IAmb IAmb 01 07 01.6
comp=Z,44nm,1.1s
342B Flagon Creek P 37.79 18 S **S 01 12 46.1 +1.1**
baz=201
PB02 IPOC Station P 37.82 119 P **P 01 06 56.9 +1.9**
GO01 Chusmiza 37.88 116 P **P 01 06 57.1 +1.1**
LPAZ La Paz 37.92 111 P **P 01 06 57.4 +0.9**
comp=Z,1.7nm,0.6s,baz=307,slow=3.0,SNR=7.0
LPAZ LR LR 01 20 20.7
comp=Z,3µm,19.1s,baz=272,slow=33
comp=Z,1.7nm,0.6s
LPAZ La Paz 37.92 111 eP **P 01 06 51.8 -4.7**
LPAZ La Paz 37.92 111 eP **P 01 06 55.4 -1.1**
CCX Cicese 37.99 344 P **P 01 06 55.5 -0.6**

PB08 IPOC Station P 38.07 117 P **P 01 06 58.4 +1.0**
113A Mohawk Valley, 38.14 348 P **P 01 06 57.1 -0.3**
GTBY Guantanamo Bay 38.16 49 P **P 01 06 56.7 -1.0**
GTBY Guantanamo Bay 38.16 49 eP **P 01 06 56.7 -1.0**
061Z Ochoppi 38.25 36 S **S 01 12 53.6 +1.4**
baz=221
344A Westbrook Farm 38.37 20 P **P 01 06 58.8 -0.5**
344A IAmb IAmb 01 07 24.9
comp=Z,55nm,1.3s
344A Westbrook Farm 38.37 20 S **S 01 12 57.6 +3.8**
baz=203
Y22A Socorro 38.42 357 P **P 01 07 00.0 +0.1**
baz=176,SNR=20
Y22A S **S 01 12 58.2 +3.3**
baz=176
MSTX Muleshoe 38.46 3 P **P 01 06 59.8 -0.4**
MSTX IAmb IAmb 01 07 11.5
comp=Z,40nm,1.1s
MSTX Muleshoe 38.46 3 P **P 01 07 01.0 +0.8**
baz=183
MSTX S **S 01 12 56.6 +1.3**
baz=183
MSTX Muleshoe 38.46 3 P **P 01 06 58.9 -1.3**
baz=183
MSTX S **S 01 12 57.2 +1.9**
baz=183
Z35A Perchaven, San 38.47 10 IAmb IAmb 01 07 07.1
comp=Z,51nm,1.2s
Z35A Perchaven, San 38.47 10 P **P 01 07 00.2 +0.1**
baz=192
Z35A S **S 01 12 56.4 +1.1**
baz=192
RMX La Rumorosa 38.53 345 P **P 01 06 59.9 -0.9**
RMX IAmb IAmb 01 07 18.7
comp=Z,27nm,0.7s
YUH Yuha Desert 38.53 345 P **P 01 06 59.7 -0.9**
PB09 IPOC Station P 38.56 120 P **P 01 07 01.6 +0.4**
PB09 IAmb IAmb 01 07 14.4
comp=Z,45nm,1.2s
Y22D IRIS PASSCAL I 38.56 357 P **P 01 07 01.4 +0.4**
Y22D IRIS PASSCAL I 38.56 357 P **P 01 06 59.1 -1.9**
baz=177
Y22D S **S 01 12 59.4 +2.5**
baz=177
IKP In-Ko-Pah, Jac 38.58 345 P **P 01 07 00.4 -0.8**
baz=162,SNR=6.1
IKP S **S 01 12 59.6 +2.5**
baz=162
PB06 IPOC Station P 38.61 121 P **P 01 07 01.8 +0.1**
TKX Tecate 38.63 344 P **P 01 07 00.5 -1.1**
GLA Glamis 38.65 347 P **P 01 07 01.9 +0.2**
GLA IAmb IAmb 01 07 22.6
comp=Z,50nm,1.4s
GLA Glamis 38.65 347 P **P 01 07 01.9 +0.2**
GLA pmax pmax
comp=Z,50nm,1.4s
GLA Glamis 38.65 347 P **P 01 07 00.2 -1.5**
baz=164,SNR=7.4
GLA S **S 01 13 03.2 +5.2**
baz=164
PB14 IPOC Station P 38.68 124 P **P 01 07 03.4 +0.9**
PB14 IAmb IAmb 01 07 19.8
comp=Z,25nm,0.7s
ETMB Extrema 38.74 100 eP **P 01 07 01.5 -1.2**
346A Big Creek Wild 38.76 21 S **S 01 13 02.9 +3.3**
baz=205
BAR Barrett 38.76 344 P **P 01 07 02.5 -0.1**
SWSC Sam W. Stewart 38.78 345 P **P 01 07 01.6 -1.1**
baz=162
Z38A Mt. Pleasant 38.86 13 P **P 01 07 03.8 +0.4**
MONP2 Monument Peak 38.89 345 P **P 01 07 03.2 -0.7**
baz=161
MONP2 S **S 01 13 05.7 +3.7**
baz=161
LVC Limon Verde 39.14 121 P **P 01 07 08.7 +2.3**
comp=Z,11nm,1.1s,baz=269,slow=5.3,SNR=6.8
LVC LR LR 01 19 02.2
comp=Z,4µm,19.6s,baz=289,slow=30
LVC Limon Verde 39.14 121 P **P 01 07 08.3 +2.0**
LVC IAmb IAmb 01 07 19.6
comp=Z,57nm,1.4s
LVC Limon Verde 39.14 121 P **P 01 07 08.4 +2.0**
LVC pmax pmax
comp=Z,57nm,1.4s
LVC Limon Verde 39.14 121 eP **P 01 07 06.2 -0.2**
VBMS Vicksburg 39.14 20 P **P 01 07 04.7 -1.0**
baz=203
X18A Snowflake 39.25 353 P **P 01 07 06.6 -0.3**
143A Socs Landing, 39.31 18 S **S 01 13 09.2 +1.4**
baz=201
BC3 Big Chuckawall 39.37 346 P **P 01 07 07.0 -0.8**
baz=163,SNR=6.2
ANMO Albuquerque 39.41 358 LR LR 01 20 35.7
comp=Z,2µm,19.8s,baz=182,slow=32
ANMO Albuquerque 39.41 358 P **P 01 07 08.4 +0.2**
ANMO Albuquerque 39.41 358ce eP **P 01 07 08.8 +0.6**
ANMO pmax pmax
comp=Z,23nm,1.7s
ANMO Albuquerque 39.41 358 P **P 01 07 08.2 0.0**
baz=177,SNR=21
ANMO S **S 01 13 13.0 +3.2**
baz=177
ANMO Albuquerque 39.41 358 P **P 01 07 07.3 -0.9**
baz=177
ANMO S **S 01 13 13.1 +3.3**
baz=177
Z41A Richland Creek 39.41 16 P **P 01 07 07.4 -0.6**
Z41A IAmb IAmb 01 07 15.0
comp=Z,62nm,1.4s
Z41A Richland Creek 39.41 16 S **S 01 13 11.6 +2.2**
baz=199
Z41A S **S 01 13 11.6 +2.2**
baz=199
Z41A Richland Creek 39.41 16 P **P 01 07 05.6 -2.4**
baz=199
Z41A S **S 01 13 12.1 +2.6**
baz=199
AMTX Amarillo 39.44 4 P **P 01 07 08.2 -0.1**
AMTX IAmb IAmb 01 07 31.6
comp=Z,70nm,1.4s
AMTX IAMs_20 IAMs_20 01 21 16.7
comp=Z,7µm,22.0s
AMTX Amarillo 39.44 4 P **P 01 07 09.0 +0.6**
baz=185
AMTX Amarillo 39.44 4 P **P 01 07 06.9 -1.4**
baz=185
AMTX S **S 01 13 11.1 +1.1**
baz=185
HATO Hato, Curacao 39.49 65 IAMs_20 IAMs_20 01 21 20.8
comp=Z,5µm,21.0s
BRAL Brewton 39.50 24 P **P 01 07 07.4 -1.4**
baz=209
451A Vernon 39.58 26 S **S 01 13 15.7 +3.7**
baz=211
GO02 Mina Guanaco 39.58 125 P **P 01 07 11.8 +1.8**
PFO Pinyon Flats O 39.58 345 LR LR 01 19 30.1
comp=Z,10µm,21.0s,baz=154,slow=30
PFO Pinyon Flats O 39.58 345 P **P 01 07 09.5 -0.1**
PFO Pinyon Flats O 39.58 345ce P **P 01 07 10.4 +0.8**
PFO pmax pmax
comp=Z,25nm,1.2s
PFO Pinyon Flats O 39.58 345 P **P 01 07 09.0 -0.6**
baz=162
PFO S **S 01 13 17.6 +5.3**
baz=162
SCI2 San Clemente I 39.58 342 P **P 01 07 08.1 -1.3**
baz=158
SCI2 S **S 01 13 18.1 +6.0**
baz=158
WMOK Wichita Mounta 39.60 8 P **P 01 07 09.1 -0.5**
WMOK Wichita Mounta 39.60 8 P **P 01 07 09.1 -0.5**
WMOK pmax pmax
comp=Z,15nm,1.2s
WMOK Wichita Mounta 39.60 8 P **P 01 07 08.9 -0.7**
baz=190
WMOK S **S 01 13 12.4 +0.1**
baz=190
X34A Smith Ranch, M 39.61 9 P **P 01 07 09.1 -0.6**
DWPF Disney Wildern 39.67 33 P **P 01 07 09.5 -0.8**
DWPF Disney Wildern 39.67 33 IAMs_20 IAMs_20 01 20 52.9
comp=Z,5µm,22.0s
DWPF Disney Wildern 39.67 33 P **P 01 07 07.8 -2.5**
baz=218
DWPF S **S 01 13 16.1 +2.6**
baz=218
PDMCI Parker Dam,Lak 39.70 348 P **P 01 07 09.7 -0.7**
baz=165
PDMCI S **S 01 13 16.0 +2.2**
baz=165
WLAR White Oak Lake 39.73 16 P **P 01 07 10.5 -0.2**
WLAR IAmb IAmb 01 07 17.6
comp=Z,65nm,1.2s
MURC Murrieta 39.77 344 P **P 01 07 09.8 -1.3**
baz=160
MURC S **S 01 13 19.6 +4.7**
baz=160
IRM Iron Mountain 39.78 347 P **P 01 07 10.3 -0.8**
baz=164,SNR=8.8
IRM S **S 01 13 18.8 +3.8**
baz=164
W18A Petrified Fore 39.81 354 P **P 01 07 11.8 +0.3**
W18A Petrified Fore 39.81 354 P **P 01 07 10.7 -0.9**
baz=172
W18A S **S 01 13 20.8 +5.0**
baz=172
553A Crawfordville 39.82 28 IAmb IAmb 01 07 19.3
comp=Z,59nm,0.9s
553A Crawfordville 39.82 28 S **S 01 13 16.2 +0.5**
baz=213
BELC Belle Mtn. Jos 39.83 346 P **P 01 07 10.9 -0.8**
baz=162,SNR=10.0
BELC S **S 01 13 21.5 +5.4**
baz=162
ELS Elsinore Mount 39.88 344 P **P 01 07 10.3 -1.7**
AF01 San Pedro de A 39.89 121 P **P 01 07 14.6 +2.1**
AF01 IAmb IAmb 01 07 35.5
comp=Z,43nm,0.9s
CIS Catalina Islan 39.94 342 P **P 01 07 11.6 -0.8**
baz=159
CIS S **S 01 13 22.8 +5.4**
baz=159
AC06 Mina Casimiro 39.95 128 P **P 01 07 14.1 +1.4**
146A Union 40.03 21 P **P 01 07 12.8 -0.3**
146A IAmb IAmb 01 07 26.3
comp=Z,46nm,1.1s
146A Union 40.03 21 S **S 01 13 20.6 +1.8**
baz=205
X37A Clayton 40.05 12 P **P 01 07 12.1 -1.3**
X37A Clayton 40.05 12 P **P 01 07 12.8 -0.5**
baz=195,SNR=8.4
X37A S **S 01 13 20.3 +1.3**
baz=195
656A Willston 40.08 31 P **P 01 07 12.1 -1.6**
SNCC San Nicolas Is 40.14 341 P **P 01 07 12.9 -1.2**
baz=157
SNCC S **S 01 13 25.3 +4.9**
baz=157
GO03 Copiap 40.15 128 P **P 01 07 14.7 +0.3**
FMP Fort Macarthur 40.19 343 P **P 01 07 13.3 -1.2**
baz=159
FMP S **S 01 13 26.6 +5.5**
baz=159
NEE2 Needles Airpor 40.25 348 P **P 01 07 13.8 -1.2**
baz=165
NEE2 S **S 01 13 26.7 +4.7**
baz=165
BBRC Big Bear Solar 40.32 345 P **P 01 07 14.2 -1.6**
baz=161
BBRC S **S 01 13 27.7 +4.2**
baz=161
FNO Franklin 40.32 10 P **P 01 07 15.5 0.0**
FNO IAmb IAmb 01 07 43.9
comp=Z,58nm,1.4s
CCAR Cane Creek 40.33 17 P **P 01 07 15.0 -0.6**
CCAR IAmb IAmb 01 07 22.9
comp=Z,62nm,1.3s
CCAR Cane Creek 40.33 17 S **S 01 13 26.0 +2.9**
baz=200
WUAZ Wupatki 40.41 352 P **P 01 07 15.7 -0.8**
WUAZ IAmb IAmb 01 07 36.7
comp=Z,65nm,1.4s
WUAZ IAMs_20 IAMs_20 01 20 49.9
comp=Z,4µm,19.0s
WUAZ Wupatki 40.41 352 P **P 01 07 14.5 -2.0**
baz=170
WUAZ S **S 01 13 25.3 +0.7**
baz=170
W13A Hualapai Mount 40.42 349 P **P 01 07 15.7 -0.9**
MIAR Mount Ida 40.43 15 P **P 01 07 15.8 -0.6**
MIAR Mount Ida 40.43 15 P **P 01 07 15.8 -0.6**
MIAR pmax pmax
comp=Z,25nm,0.9s
MIAR Mount Ida 40.43 15 P **P 01 07 15.9 -0.5**
baz=197,SNR=15
MIAR S **S 01 13 25.3 +0.7**
baz=197
MIAR Mount Ida 40.43 15 P **P 01 07 14.3 -2.2**
baz=197,SNR=15
MIAR S **S 01 13 25.8 +1.1**
baz=197
OKCFA Oklahoma City 40.47 9 P **P 01 07 17.0 +0.2**
OKCFA IAmb IAmb 01 07 24.1
comp=Z,56nm,1.2s
LCO Las Campanas 40.48 131 P **P 01 07 19.4 +2.0**
LCO IAmb IAmb 01 07 29.0
comp=Z,62nm,1.4s
LCO Las Campanas 40.48 131 P **P 01 07 19.4 +2.0**
LCO pmax pmax
comp=Z,62nm,1.4s
BFSC Mount Baldy Ra 40.50 344 P **P 01 07 16.7 -0.5**
baz=160,SNR=15
BFSC S **S 01 13 33.1 +7.1**
baz=160
GMRC Granite Mounta 40.50 346 P **P 01 07 16.6 -0.6**
baz=163,SNR=16
GMRC S **S 01 13 30.9 +4.9**
baz=163
250A Grady 40.53 25 IAmb IAmb 01 07 23.1
comp=Z,50nm,1.1s
250A Grady 40.53 25 P **P 01 07 16.7 -0.6**
baz=209,SNR=6.8
250A S **S 01 13 28.7 +2.4**
baz=209
CO05 La Serena 40.55 132 P **P 01 07 19.6 +2.0**
X40A Basin Creek Fa 40.56 15 P **P 01 07 17.4 -0.2**
X40A Basin Creek Fa 40.56 15 P **P 01 07 18.5 +1.0**
baz=199
X40A P **P 01 07 18.5 +1.0**
baz=199
X40A S **S 01 13 27.7 +1.1**
baz=199
X40A S **S 01 13 27.7 +1.1**
baz=199
X40A Basin Creek Fa 40.56 15 P **P 01 07 17.0 -0.6**
baz=199
X40A S **S 01 13 28.6 +2.0**
baz=199
PASC Pasadena Art C 40.58 343 P **P 01 07 18.0 +0.3**
PASC IAmb IAmb 01 07 23.6
comp=Z,54nm,1.4s
PASC Pasadena Art C 40.58 343 IAMs_20 IAMs_20 01 19 55.3
comp=Z,6µm,19.0s
SDDR Presa de Saban 40.61 54 P **P 01 07 17.6 -0.7**
SDDR Presa de Saban 40.61 54 eP **P 01 07 16.3 -2.0**
CO06 Fray Jorge 40.66 133 P **P 01 07 19.3 +0.8**
CO06 IAmb IAmb 01 07 26.6
comp=Z,62nm,1.4s
352A Blakely 40.68 27 S **S 01 13 30.2 +1.7**
baz=211
DECC Green Verdugo 40.70 343 P **P 01 07 18.0 -0.8**
baz=159
DECC S **S 01 13 34.8 +5.9**
baz=159
HEC Hector,Ludlow 40.71 346 P **P 01 07 18.3 -0.5**
baz=162,SNR=14
HEC S **S 01 13 34.0 +5.0**
baz=162
SCZ2 Santa Cruz Isl 40.87 341 P **P 01 07 18.7 -1.4**
baz=157
Z47A Carrollton 40.90 22 P **P 01 07 19.5 -0.8**
baz=206
Z47A S **S 01 13 32.6 +1.0**
baz=206
RRX Edison Barstow 40.92 345 P **P 01 07 19.6 -0.9**
baz=161
RRX S **S 01 13 36.2 +4.1**
baz=161
UALR University of 40.97 16 P **P 01 07 20.9 0.0**
Y45A Yeager Farm, C 40.98 20 S **S 01 13 36.6 +3.7**
baz=204
W39A Magazine 41.00 14 IAmb IAmb 01 07 27.9
comp=Z,56nm,1.4s
W39A Magazine 41.00 14 P **P 01 07 20.2 -0.9**
baz=197

W39A S **S** **01 13 35.4 +2.3**
baz=197
W39A **Magazine** **41.00 14** P **P** **01 07 19.9 -1.2**
baz=197
W39A S **S** **01 13 34.9 +1.8**
baz=197
GO04 **Tololo Observa** **41.01 132** P **P** **01 07 23.8 +2.1**
GO04 IAmb IAmb 01 07 41.6
comp=Z,45nm,1.2s
BANI **BANI** **41.06 55** P **P** **01 07 21.6 -0.5**
X43A **Marvell** **41.15 18** P **P** **01 07 20.6 -1.8**
baz=201
OSI **Osito Audit: C** **41.16 343** P **P** **01 07 21.5 -1.0**
baz=159
OSI S **S** **01 13 39.9 +4.2**
baz=159
LRAL **Lakeview Retre** **41.16 23** P **P** **01 07 21.1 -1.4**
baz=208
LRAL S **S** **01 13 37.2 +1.6**
baz=208
LRAL **Lakeview Retre** **41.16 23** P **P** **01 07 21.1 -1.4**
baz=208
LRAL S **S** **01 13 37.4 +1.8**
baz=208
TUQ **Turquoise Moun** **41.18 346** P **P** **01 07 22.1 -0.8**
baz=163,SNR=11
TUQ S **S** **01 13 40.5 +4.3**
baz=163
U32A **Winter Ranch,** **41.19 7** **P** **01 07 22.6 -0.2**
U32A IAmb IAmb 01 07 35.1
comp=Z,57nm,1.2s
U32A **Winter Ranch,** **41.19 7** S **S** **01 13 38.0 +1.9**
baz=189
EDW2 **Edwards Air Fo** **41.19 344** P **P** **01 07 21.9 -0.9**
baz=160,SNR=15
EDW2 S **S** **01 13 39.3 +3.1**
baz=160
TUL1 **Leonard** **41.25 11** P **P** **01 07 22.3 -0.9**
baz=194
TUL1 S **S** **01 13 37.0 +0.2**
baz=194
TUL1 **Leonard** **41.25 11** P **P** **01 07 22.0 -1.2**
baz=194
TUL1 S **S** **01 13 37.0 +0.2**
baz=194
TIGA **Tifton** **41.26 28** P **P** **01 07 21.8 -1.6**
TIGA **Tifton** **41.26 28** S **S** **01 13 39.6 +2.5**
baz=213
TIGA **Tifton** **41.26 28** P **P** **01 07 20.7 -2.7**
baz=213
GSC **Goldstone, Bar** **41.27 345** IAmb IAmb 01 07 44.7
comp=Z,52nm,1.5s
GSC **Goldstone, Bar** **41.27 345** P **P** **01 07 23.0 -0.5**
baz=162,SNR=16
GSC S **S** **01 13 39.1 +1.7**
baz=162
SC01 **Santiago de lo** **41.30 54** P **P** **01 07 22.9 -0.9**
SBC **Santa Barbara** **41.30 341** P **P** **01 07 21.4 -2.2**
baz=157
SBC S **S** **01 13 44.1 +6.5**
baz=157
BIRV **Birongo** **41.33 69** P **P** **01 07 22.3 -1.9**
W41B **Gary Mavity, V** **41.37 16** P **P** **01 07 22.8 -1.4**
W41B **Gary Mavity, V** **41.37 16** P **P** **01 07 23.5 -0.7**
baz=199,SNR=6.9
W41B S **S** **01 13 40.4 +1.8**
baz=199
W41B **Gary Mavity, V** **41.37 16** P **P** **01 07 22.5 -1.7**
baz=199,SNR=6.9
W41B S **S** **01 13 41.4 +2.8**
baz=199
CO01 **Juntas del Tor** **41.43 131** P **P** **01 07 26.5 +1.4**
CO03 **El Pedregal** **41.44 133** IAmb IAmb 01 07 33.0
comp=Z,51nm,1.4s
456A **Hilliard** **41.44 30** P **P** **01 07 24.2 -0.6**
CCAC **Calif City Air** **41.45 344** P **P** **01 07 25.1 +0.1**
CCAC IAmb IAmb 01 07 45.1
comp=Z,44nm,1.1s
WHAR **Wooly Hollow** **41.47 16** IAmb IAmb 01 07 31.7
comp=Z,47nm,1.3s
T25A **Trinidad** **41.57 1** P **P** **01 07 25.6 -0.6**
baz=181,SNR=14
T25A S **S** **01 13 46.3 +4.2**
baz=181
OXF **Oxford** **41.61 19** P **P** **01 07 25.6 -0.6**
OXF **Oxford** **41.61 19** P **P** **01 07 25.6 -0.6**
OXF pmax pmax
comp=Z,34nm,1.2s
OXF **Oxford** **41.61 19** S **S** **01 13 42.9 +0.7**
baz=204
OXF **Oxford** **41.61 19** P **P** **01 07 25.1 -1.1**
baz=204
OXF S **S** **01 13 45.1 +2.8**
baz=204
ARVC **Arvin** **41.66 343** P **P** **01 07 25.4 -1.2**
baz=159
ARVC S **S** **01 13 48.9 +5.8**
baz=159
SAML **Samuel** **41.66 98** P **P** **01 07 26.0 -1.0**
SAML **Samuel** **41.66 98** P **P** **01 07 26.0 -1.0**
SAML pmax pmax
comp=Z,12nm,1.0s
BCW **Bitter Crk WRg** **41.67 342** P **P** **01 07 25.0 -1.8**
BCW IAmb IAmb 01 07 31.9
comp=Z,70nm,1.4s
LRMC **Laurel Mtn Rad** **41.67 344** P **P** **01 07 25.6 -1.2**
baz=160
SHOC **Shoshone, Teco** **41.71 346** P **P** **01 07 26.2 -0.9**
baz=163
SHOC S **S** **01 13 49.7 +5.9**
baz=163
PKM **Mcpherson Peak** **41.74 342** P **P** **01 07 25.9 -1.7**
baz=157
PKM S **S** **01 13 49.1 +4.5**
baz=157
MVCO **Mesa Verde** **41.77 356** IAmb IAmb 01 07 44.5
comp=Z,46nm,1.2s
MVCO **Mesa Verde** **41.77 356** P **P** **01 07 26.5 -1.3**
baz=174,SNR=13
MVCO S **S** **01 13 48.8 +3.7**
baz=174
152A **Waverly Hall** **41.78 26** P **P** **01 07 26.4 -1.3**
152A **Waverly Hall** **41.78 26** P **P** **01 07 26.8 -0.9**
baz=211,SNR=7.1
QSM **Queen of Sheba** **41.92 345** IAmb IAmb 01 07 35.7
comp=Z,34nm,1.1s
VA06 **Catapilco** **41.94 136** IAmb IAmb 01 07 36.7
comp=Z,54nm,1.2s
VA01 **Torpederas** **41.96 136** P **P** **01 07 30.0 +0.8**
VA01 IAmb IAmb 01 07 37.7
comp=Z,43nm,1.1s
AROD **Rodeo** **41.99 131** *e*P **P** **01 07 30.7 +0.8**
HHAR **Hobbs** **42.00 13** P **P** **01 07 28.1 -1.2**
baz=196
HHAR S **S** **01 13 46.9 -1.1**
baz=196
U38A **Gravette** **42.05 13** P **P** **01 07 29.8 0.0**
ISA **Isabella, Lake** **42.06 343** P **P** **01 07 30.2 +0.2**
ISA **Isabella, Lake** **42.06 343** P **P** **01 07 30.2 +0.2**
ISA pmax pmax
comp=Z,37nm,1.4s
ISA **Isabella, Lake** **42.06 343** P **P** **01 07 29.6 -0.4**
baz=159,SNR=9.7
ISA S **S** **01 13 52.5 +3.5**
baz=159
GWY **Greenwater Val** **42.08 346** IAmb IAmb 01 07 37.0
comp=Z,38nm,1.1s
T35B **Sooner Cattle** **42.09 10** P **P** **01 07 29.7 -0.4**
baz=192
T35B S **S** **01 13 49.2 -0.1**
baz=192
GRTK **Grand Turk** **42.11 51** P **P** **01 07 30.5 +0.1**
GRTK IAMs_20 IAMs_20 01 22 18.2
comp=Z,7µm,20.0s
Y49A **Blount Mountai** **42.11 23** P **P** **01 07 29.3 -1.1**
baz=208,SNR=6.0
Y49A S **S** **01 13 51.7 +1.9**
baz=208
Z51A **Franklin** **42.14 25** P **P** **01 07 29.6 -1.0**
baz=210
Z51A S **S** **01 13 51.2 +1.0**
baz=210
LCMT **Little Creek M** **42.16 350** P **P** **01 07 30.3 -0.5**
MPMC **Manual Prospec** **42.16 345** P **P** **01 07 30.2 -0.7**
baz=161,SNR=20
MPMC S **S** **01 13 57.3 +6.5**
baz=161

SDCO **Great Sand Dun** **42.18 359** P **P** **01 07 31.3 +0.1**
baz=179,SNR=21
SDCO S **S** **01 13 51.9 +0.8**
baz=179
SDCO **Great Sand Dun** **42.18 359** P **P** **01 07 30.5 -0.6**
baz=179,SNR=21
SDCO S **S** **01 13 52.2 +1.0**
baz=179
HBAR **Harrisburg** **42.18 17** P **P** **01 07 30.0 -0.8**
255A **Hazlehurst** **42.19 29** IAmb IAmb 01 07 38.6
comp=Z,51nm,1.2s
255A **Hazlehurst** **42.19 29** S **S** **01 13 51.0 +0.1**
baz=214
SMMC **Simmler** **42.19 342** P **P** **01 07 30.5 -0.6**
baz=157
SMMC S **S** **01 13 55.8 +4.8**
baz=157
S22A **4JR Ranch, Cre** **42.21 358** P **P** **01 07 30.8 -0.6**
baz=177,SNR=20
S22A S **S** **01 13 55.5 +3.8**
baz=177
ACDV **Cuesta del Vie** **42.26 131** *e*P **P** **01 07 32.4 +0.6**
W45A **Hickory Valley** **42.27 19** IAmb IAmb 01 07 50.3
comp=Z,53nm,1.0s
W45A **Hickory Valley** **42.27 19** P **P** **01 07 30.3 -1.3**
baz=204
W45A S **S** **01 13 54.2 +2.2**
baz=204
U40A **Yellville** **42.33 15** P **P** **01 07 31.0 -1.1**
baz=198,SNR=7.6
U40A P **P** **01 07 31.0 -1.1**
baz=198,SNR=7.6
U40A S **S** **01 13 54.1 +1.3**
baz=198
U40A S **S** **01 13 54.1 +1.3**
baz=198
U40A **Yellville** **42.33 15** P **P** **01 07 31.1 -0.9**
baz=198,SNR=7.6
U40A S **S** **01 13 54.1 +1.3**
baz=198
VA05 **Santo Domingo** **42.35 137** P **P** **01 07 33.9 +1.7**
VA05 IAmb IAmb 01 07 42.6
comp=Z,39nm,1.2s
ROC1 **El Roble** **42.37 136** P **P** **01 07 35.0 +2.2**
ROC1 IAmb IAmb 01 07 50.0
comp=Z,30nm,0.6s
FURC **Furnace Creek,** **42.39 346** P **P** **01 07 32.1 -0.4**
baz=162,SNR=15
FURC S **S** **01 13 57.5 +3.7**
baz=162
X48A **Hartselle** **42.39 22** P **P** **01 07 31.0 -1.6**
baz=207,SNR=5.4
X48A S **S** **01 13 53.5 -0.4**
baz=207
VES **Vestal, Richgr** **42.40 343** P **P** **01 07 31.7 -0.9**
baz=159,SNR=9.0
VES S **S** **01 14 01.0 +7.1**
baz=159
PKCU **Pink Cliffs** **42.43 351** P **P** **01 07 33.5 +0.2**
PKCU IAmb IAmb 01 07 36.7
comp=Z,64nm,1.4s
MT02 **Curacav** **42.45 136** IAmb IAmb 01 07 51.0
comp=Z,60nm,1.4s
154A **Montrose** **42.46 28** IAmb IAmb 01 07 43.0
comp=Z,59nm,1.1s
154A **Montrose** **42.46 28** P **P** **01 07 32.4 -0.8**
baz=213,SNR=6.7
154A S **S** **01 13 57.3 +2.4**
baz=213
PLAL **Pickwick Lake** **42.49 21** IAmb IAmb 01 07 38.6
comp=Z,34nm,0.8s
ACCO **Cerro Coronel** **42.50 132** *e*P **P** **01 07 35.2 +1.2**
LCAR **Lake Charles** **42.51 17** P **P** **01 07 31.7 -1.8**
LCAR IAmb IAmb 01 07 56.5
comp=Z,45nm,1.3s
LCAR **Lake Charles** **42.51 17** P **P** **01 07 32.2 -1.3**
baz=200,SNR=8.5
LCAR S **S** **01 13 57.9 +2.3**
baz=200
VA03 **San Esteban** **42.58 135** P **P** **01 07 34.5 +0.2**
CWC **Cottonwood Cre** **42.68 344** S **S** **01 14 02.4 +4.0**
baz=160
PEL **Peldehue** **42.69 136** IAmb IAmb 01 07 38.7
comp=Z,48nm,1.4s
PEL IAMs_20 IAMs_20 01 20 30.8
comp=Z,7µm,20.0s
PEL **Peldehue** **42.69 136** P **P** **01 07 33.4 -1.8**
PEL pmax pmax
comp=Z,30nm,1.6s
SZCU **Shurtz Canyon** **42.70 350** P **P** **01 07 35.2 -0.2**
TPNV **Topopah Spring** **42.71 347** IAmb IAmb 01 07 43.4
comp=Z,49nm,1.5s
TPNV **Topopah Spring** **42.71 347** P **P** **01 07 35.4 +0.1**
baz=163,SNR=13
TPNV S **S** **01 14 03.1 +4.3**
baz=163
CCUT **Cedar City** **42.71 350** P **P** **01 07 35.9 +0.5**
MT01 **Popeta** **42.72 137** IAmb IAmb 01 07 47.9
comp=Z,60nm,1.5s
PV13 **Radium Mtn., P** **42.74 355** IAmb IAmb 01 07 42.7
comp=Z,34nm,1.1s
MT05 **Renca** **42.80 136** P **P** **01 07 37.5 +1.5**
PV11 **David Mesa, Pa** **42.88 355** P **P** **01 07 36.1 -0.6**
PV11 IAmb IAmb 01 07 50.8
comp=Z,49nm,1.3s
PRN **Pahroc Range** **42.88 348** IAmb IAmb 01 07 58.1
comp=Z,87nm,1.3s
PV15 **Paradox Valley** **42.90 356** IAmb IAmb 01 07 53.2
comp=Z,54nm,1.3s
VOG **Valley Oaks Go** **42.94 343** P **P** **01 07 35.7 -1.3**
baz=158
GO05 **Huala** **42.94 139** IAmb IAmb 01 07 45.6
comp=Z,48nm,1.1s
RTLS **Leoncito** **42.95 133** *e*P **P** **01 07 39.3 +1.7**
GOGA **Godfrey** **42.97 27** P **P** **01 07 35.9 -1.4**
GOGA **Godfrey** **42.97 27** P **P** **01 07 35.7 -1.5**
baz=212
GOGA S **S** **01 14 02.8 +0.4**
baz=212
GOGA **Godfrey** **42.97 27** P **P** **01 07 35.1 -2.2**
baz=212
GOGA S **S** **01 14 03.0 +0.7**
baz=212
PV10 **Paradox Valley** **42.97 355** P **P** **01 07 36.3 -1.3**
MT03 **Universidad Ad** **43.01 136** P **P** **01 07 38.6 +0.8**
MT03 IAmb IAmb 01 07 59.6
comp=Z,52nm,1.2s
GRAC **Grapevine Rang** **43.02 345** IAmb IAmb 01 07 45.7
comp=Z,54nm,1.2s
GRAC **Grapevine Rang** **43.02 345** P **P** **01 07 36.7 -1.0**
baz=162
LNXT **Lenox** **43.04 18** P **P** **01 07 37.8 0.0**
Y52A **Lilburn** **43.09 26** P **P** **01 07 37.2 -1.0**
baz=211,SNR=6.4
Y52A P **P** **01 07 37.2 -1.0**
baz=211,SNR=6.4
Y52A S **S** **01 14 04.4 +0.3**
baz=211
Y52A S **S** **01 14 04.4 +0.3**
baz=211
AUSP **Uspallata** **43.11 134** *e*P **P** **01 07 40.0 +1.1**
BO01 **Tunca** **43.13 138** IAmb IAmb 01 07 47.6
comp=Z,58nm,1.4s
R32A **Long Quarter,** **43.24 7** P **P** **01 07 39.5 0.0**
R32A **Long Quarter,** **43.24 7** S **S** **01 14 06.6 +0.3**
baz=189
S11A **Rachel** **43.26 347** P **P** **01 07 40.0 +0.2**
S11A IAmb IAmb 01 08 06.6
comp=Z,68nm,1.3s
GLAT **Glass** **43.26 19** P **P** **01 07 39.1 -0.5**
GLAT IAmb IAmb 01 07 56.8
comp=Z,52nm,0.9s
ZON **Zonda** **43.27 133** IAmb IAmb 01 07 52.1
comp=Z,38nm,1.3s
ZON **Zonda** **43.27 133** P **P** **01 07 37.4 -2.5**
PMPB **Monarch Peak** **43.28 341** P **P** **01 07 39.1 -0.8**
TIN **Tinemaha, Big** **43.30 344** P **P** **01 07 39.0 -1.1**
baz=160
TIN S **S** **01 14 13.1 +5.8**
baz=160
X51A **Calhoun** **43.35 24** P **P** **01 07 39.2 -1.2**
baz=210,SNR=6.7
X51A P **P** **01 07 39.2 -1.2**
baz=210,SNR=6.7
X51A S **S** **01 14 10.0 +2.0**
baz=210
X51A S **S** **01 14 10.0 +2.0**
baz=210

PBMO **Poplar Bluff** **43.38 17** IAmb IAmb 01 07 59.5
comp=Z,53nm,1.1s
PBMO **Poplar Bluff** **43.38 17** P **P** **01 07 39.9 -0.7**
baz=201,SNR=16
Q24A **Divide** **43.39 360** P **P** **01 07 40.3 -0.7**
Q24A **Divide** **43.39 360** P **P** **01 07 40.0 -1.0**
baz=180
Q24A S **S** **01 14 13.0 +3.9**
baz=180
LMEL **Las Melosas** **43.42 136** IAmb IAmb 01 07 58.7
comp=Z,54nm,1.4s
S39A **Bolivar** **43.49 13** P **P** **01 07 39.7 -1.7**
baz=197,SNR=17
S39A S **S** **01 14 09.1 -0.8**
baz=197
KSCO **Kaye Shedlock'** **43.49 3** P **P** **01 07 41.9 +0.3**
KSCO IAmb IAmb 01 07 43.8
comp=Z,50nm,1.2s
KSCO **Kaye Shedlock'** **43.49 3** P **P** **01 07 40.7 -0.9**
baz=183
KSCO S **S** **01 14 12.4 +2.3**
baz=183
SWET **Sewanee** **43.49 23** IAmb IAmb 01 07 53.9
comp=Z,41nm,1.4s
CBKS **Cedar Bluff** **43.51 6** P **P** **01 07 41.3 -0.3**
CBKS IAmb IAmb 01 07 53.4
comp=Z,41nm,0.9s
CBKS **Cedar Bluff** **43.51 6** P **P** **01 07 41.3 -0.3**
CBKS pmax pmax
comp=Z,41nm,1.0s
CBKS **Cedar Bluff** **43.51 6** S **S** **01 14 10.7 +0.5**
baz=187
CBKS **Cedar Bluff** **43.51 6** P **P** **01 07 40.4 -1.3**
baz=187
CBKS S **S** **01 14 11.2 +1.0**
baz=187
HICK **Hickman** **43.53 18** P **P** **01 07 40.5 -1.2**
ACLC **CERRO LA CRUZ** **43.56 129** *e*P **P** **01 07 42.4 0.0**
TCRU **Three Creeks R** **43.60 351** P **P** **01 07 42.6 +0.1**
WVT **Waverly** **43.62 20** P **P** **01 07 41.0 -1.5**
WVT IAmb IAmb 01 07 54.5
comp=Z,42nm,1.1s
WVT **Waverly** **43.62 20** P **P** **01 07 41.0 -1.5**
WVT pmax pmax
comp=Z,42nm,1.2s
WVT **Waverly** **43.62 20** P **P** **01 07 41.0 -1.5**
baz=205,SNR=14
WVT S **S** **01 14 12.6 +0.8**
baz=205
WVT **Waverly** **43.62 20** P **P** **01 07 40.8 -1.7**
baz=205
WVT S **S** **01 14 12.8 +1.0**
baz=205
V48A **Smith Brothers** **43.62 22** IAmb IAmb 01 07 54.8
comp=Z,42nm,1.1s
V48A **Smith Brothers** **43.62 22** P **P** **01 07 41.4 -1.2**
baz=206,SNR=11
V48A S **S** **01 14 12.7 +0.9**
baz=206
SMCO **Snowmass** **43.65 358** P **P** **01 07 42.9 -0.2**
SMCO IAMs_20 IAMs_20 01 23 05.3
comp=Z,4µm,20.0s
BBGB **Big Mountain B** **43.69 341** P **P** **01 07 43.9 +0.7**
BBGB IAmb IAmb 01 07 51.1
comp=Z,58nm,1.1s
ASAL **Salagasta** **43.70 134** *e*P **P** **01 07 44.3 +0.9**
W50A **Signal Mountai** **43.72 23** IAmb IAmb 01 07 55.6
comp=Z,43nm,1.5s
W50A **Signal Mountai** **43.72 23** P **P** **01 07 41.5 -2.0**
baz=209
W50A S **S** **01 14 14.6 +1.2**
baz=209
ML02 **Panimavida** **43.73 139** P **P** **01 07 44.2 +0.8**
ML02 IAmb IAmb 01 07 56.2
comp=Z,48nm,1.2s
Q16A **Castle Valley** **43.73 353** P **P** **01 07 38.9 -4.6**
PSUT **Pine Spring** **43.75 350** P **P** **01 07 44.2 +0.4**
HAW **Hawthorne Fire** **43.78 29** S **S** **01 14 15.7 +1.4**
baz=215
SRU **San Rafael Swe** **43.84 354** IAmb IAmb 01 07 58.1
comp=Z,31nm,1.0s
R11A **Troy Canyon, C** **43.90 348** P **P** **01 07 44.4 -0.6**
baz=164,SNR=32
R11A S **S** **01 14 18.9 +2.6**
baz=164
AAGR **Agrelo** **43.97 135** *e*P **P** **01 07 47.8 +2.3**
SAO **San Andreas Ge** **43.99 341** P **P** **01 07 45.6 +0.1**
SAO **San Andreas Ge** **43.99 341** P **P** **01 07 45.6 +0.1**
SAO pmax pmax
comp=Z,32nm,1.4s
MLAC **Mammoth, Mammo** **44.00 344** P **P** **01 07 44.8 -1.1**
baz=160
MLAC S **S** **01 14 21.4 +3.6**
baz=160
OMMB **Old Mammoth Mi** **44.03 344** P **P** **01 07 45.8 -0.4**
CELP **Cerrillos** **44.06 58** P **P** **01 07 43.6 -2.7**
MDPB **Devils Postpil** **44.07 344** P **P** **01 07 46.1 -0.4**
TMUT **Trail Mountain** **44.10 353** P **P** **01 07 47.4 +0.7**
T45B **Paducah** **44.15 19** S **S** **01 14 20.5 +1.0**
baz=204
MACA **Manacapuru-AM** **44.17 90** *e*P **P** **01 07 46.0 -1.4**
W52A **Murphy** **44.20 25** P **P** **01 07 46.2 -1.0**
W52A IAmb IAmb 01 07 57.6
comp=Z,36nm,1.1s
W52A **Murphy** **44.20 25** P **P** **01 07 46.6 -0.6**
baz=211,SNR=5.6
W52A S **S** **01 14 22.1 +1.8**
baz=211
HODGE **Hodges** **44.20 27** IAmb IAmb 01 07 57.1
comp=Z,46nm,1.4s
HODGE **Hodges** **44.20 27** P **P** **01 07 45.8 -1.4**
baz=213,SNR=9.3
HODGE S **S** **01 14 21.0 +0.6**
baz=213
KSU1 **Kansas State U** **44.20 9** P **P** **01 07 46.4 -0.8**
baz=192
KSU1 S **S** **01 14 21.2 +0.9**
baz=192
P17A **Butcher Ranch,** **44.23 354** IAmb IAmb 01 07 50.0
comp=Z,51nm,1.4s
ISCO **Idaho Springs** **44.23 359** P **P** **01 07 48.2 +0.5**
ISCO **Idaho Springs** **44.23 359** P **P** **01 07 48.2 +0.5**
baz=179,SNR=15
ISCO S **S** **01 14 23.5 +2.2**
baz=179
ISCO **Idaho Springs** **44.23 359** P **P** **01 07 46.8 -0.9**
baz=179,SNR=15
ISCO S **S** **01 14 24.5 +3.3**
baz=179
CSU **Charleston Sou** **44.24 30** P **P** **01 07 46.5 -1.0**
NHSC **New Hope** **44.28 30** IAMs_20 IAMs_20 01 24 23.8
comp=Z,6µm,20.0s
NHSC **New Hope** **44.28 30** P **P** **01 07 47.4 -0.4**
baz=217
NHSC S **S** **01 14 24.1 +2.6**
baz=217
NHSC **New Hope** **44.28 30** P **P** **01 07 46.1 -1.7**
baz=217
NHSC S **S** **01 14 24.1 +2.6**
baz=217
R40A **Maddies Statio** **44.31 14** P **P** **01 07 46.8 -1.2**
baz=198,SNR=12
R40A S **S** **01 14 21.9 +0.1**
baz=198
P18A **Preston Nutter** **44.33 354** IAmb IAmb 01 08 09.1
comp=Z,47nm,1.1s
APLL **PUNTA DE LOS L** **44.33 130** *e*P **P** **01 07 48.2 -0.2**
CCM **Cathedral Cave** **44.35 16** P **P** **01 07 47.2 -1.1**
CCM **Cathedral Cave** **44.35 16** P **P** **01 07 47.2 -1.1**
CCM pmax pmax
comp=Z,21nm,1.0s
CCM **Cathedral Cave** **44.35 16** P **P** **01 07 47.2 -1.1**
baz=200,SNR=10
CCM S **S** **01 14 23.3 +0.9**
baz=200
CCM **Cathedral Cave** **44.35 16** P **P** **01 07 46.9 -1.4**
baz=200
CCM S **S** **01 14 24.4 +2.0**
baz=200
SJG **San Juan** **44.44 58** LR LR 01 22 49.9
comp=Z,3µm,20.6s,baz=232,slow=31
SJG **San Juan** **44.44 58** P **P** **01 07 46.9 -2.4**
SJG IAmb IAmb 01 07 54.7
comp=Z,34nm,1.1s
SJG **San Juan** **44.44 58** P **P** **01 07 46.9 -2.4**
SJG pmax pmax

comp=Z,34nm,1.1s
SJG San Juan 44.44 58 *e*P P 01 07 44.1 -5.3
LHV Little Huntoon 44.50 345 P **P 01 07 50.3 +0.9**
LHV IAmb IAmb 01 07 55.2
comp=Z,50nm,1.3s
PDPR Patillas Dam, 44.50 59 IAmb IAmb 01 07 59.0
comp=Z,48nm,1.4s
SIV San Ignacio 44.51 108 LR LR 01 23 50.4
comp=Z,7µm,21.7s,baz=295,slow=33
FVM French Village 44.51 16 P **P 01 07 48.4 -1.2**
baz=201,SNR=8.1
FVM S **S 01 14 24.5 -0.2**
baz=201
BG3 Lake Jocassee 44.54 26 IAmb IAmb 01 08 01.0
comp=Z,32nm,1.0s
CASEE Lake Jocassee 44.54 26 P **P 01 07 49.3 -0.6**
baz=212,SNR=8.6
CASEE S **S 01 14 28.3 +3.0**
baz=212
S44A Carbondale 44.58 18 IAmb IAmb 01 07 52.0
comp=Z,24nm,0.9s
S44A Carbondale 44.58 18 P **P 01 07 49.1 -1.0**
baz=202,SNR=8.5
S44A S **S 01 14 27.5 +1.8**
baz=202
SIUC Southern Illin 44.61 18 IAmb IAmb 01 07 50.1
comp=Z,23nm,0.9s
NVAR Mina Array Bea 44.62 345 P **P 01 07 49.0 -1.7**
comp=Z,5.3nm,1.0s,baz=172,slow=8.5,SNR=20
NVAR PcP **PcP 01 09 34.1 +0.5**
comp=Z,1.8nm,1.0s,baz=182,slow=2.7,SNR=2.8
NVAR LR LR 01 22 37.5
comp=Z,5µm,18.6s,baz=164,slow=31
comp=Z,5.3nm,1.0s
V51A Loudon 44.63 24 IAmb IAmb 01 08 03.0
comp=Z,28nm,1.1s
V51A Loudon 44.63 24 P **P 01 07 49.5 -1.1**
baz=210,SNR=8.4
V51A S **S 01 14 27.8 +1.2**
baz=210
T47A Sharon Grove 44.64 20 IAmb IAmb 01 07 56.6
comp=Z,18nm,0.8s
T47A Sharon Grove 44.64 20 P **P 01 07 49.3 -1.4**
baz=206
T47A S **S 01 14 27.9 +1.3**
baz=206
O20A White River Ci 44.66 356 P **P 01 07 50.3 -0.8**
baz=175,SNR=28
O20A S **S 01 14 32.0 +4.6**
baz=175
U49A Red Boiling Sp 44.70 22 P **P 01 07 48.9 -2.2**
baz=208,SNR=8.3
U49A S **S 01 14 27.4 -0.1**
baz=208
HUMP Col San Antoni 44.70 58 P **P 01 07 48.7 -2.8**
JSC Jenkinsville 44.70 28 P **P 01 07 50.1 -1.1**
JSC IAmb IAmb 01 07 51.2
comp=Z,30nm,1.0s
JSC Jenkinsville 44.70 28 P **P 01 07 50.1 -1.1**
JSC pmax pmax
comp=Z,30nm,1.0s
JSC Jenkinsville 44.70 28 P **P 01 07 50.5 -0.8**
baz=215,SNR=10
Q09A Carvers 44.72 346 P **P 01 07 51.8 +0.3**
TKL Tuckaleechee C 44.74 25 LR LR 01 26 36.2
comp=Z,2µm,19.0s,baz=217,slow=36
TKL Tuckaleechee C 44.74 25 IAmb IAmb 01 08 02.2
comp=Z,43nm,1.4s
TKL Tuckaleechee C 44.74 25 P **P 01 07 50.1 -1.4**
baz=211,SNR=7.2
TKL S **S 01 14 30.6 +2.3**
baz=211
CBYP Canovanas 44.76 58 P **P 01 07 49.2 -2.7**
CBYP IAmb IAmb 01 07 54.9
comp=Z,25nm,1.1s
CMB Columbia Colle 44.82 343 P **P 01 07 52.8 +0.6**
CMB Columbia Colle 44.82 343 P **P 01 07 52.8 +0.6**
CMB pmax pmax
comp=Z,25nm,1.4s
RYN Ryan 44.86 345 IAmb IAmb 01 08 13.1
comp=Z,44nm,1.4s
MPU Maple Canyon 44.87 353 IAmb IAmb 01 08 00.8
comp=Z,33nm,1.0s
PAULI Pauline 44.89 27 IAmb IAmb 01 07 52.8
comp=Z,29nm,1.0s
PAULI Pauline 44.89 27 P **P 01 07 52.0 -0.7**
baz=214,SNR=7.8
PAULI S **S 01 14 31.9 +1.5**
baz=214
Y57A Sumter 44.91 29 P **P 01 07 51.7 -1.1**
Y57A IAmb IAmb 01 08 02.6
comp=Z,43nm,1.4s
VILB Vilhena 44.92 104 *e*P **P 01 07 52.9 -0.4**
BOAV Boa Vista 44.93 82 *e*P **P 01 07 52.0 -1.4**
MTP Monte Pirata 44.94 59 P **P 01 07 52.8 -0.6**
MTP IAmb IAmb 01 07 58.9
comp=Z,41nm,1.2s
V52A Sevierville 44.98 25 P **P 01 07 53.5 +0.1**
V52A Sevierville 44.98 25 P **P 01 07 51.9 -1.5**
baz=211
V52A S **S 01 14 33.6 +2.0**
baz=211
KVN Kaiserville 45.15 346 IAmb IAmb 01 08 02.5
comp=Z,31nm,1.4s
V53A Saluda 45.16 26 IAmb IAmb 01 08 07.5
comp=Z,21nm,0.9s
V53A Saluda 45.16 26 P **P 01 07 54.0 -1.0**
baz=212,SNR=8.7
V53A P **P 01 07 54.0 -1.0**
baz=212,SNR=8.7
V53A S **S 01 14 36.2 +1.8**
baz=212
V53A S **S 01 14 36.2 +1.8**
baz=212
SLM Saint Louis 45.17 16 P **P 01 07 53.8 -1.0**
SLM IAmb IAmb 01 08 01.0
comp=Z,60nm,1.4s
SLM Saint Louis 45.17 16 P **P 01 07 53.8 -1.0**
SLM pmax pmax
comp=Z,60nm,1.5s
SLM Saint Louis 45.17 16 S **S 01 14 36.3 +2.1**
baz=201
Y58A Scranton 45.17 30 S **S 01 14 36.2 +1.7**
baz=217
Y58A S **S 01 14 36.2 +1.7**
baz=217
RDMU Red Mountain 45.20 355 IAmb IAmb 01 08 13.8
comp=Z,42nm,1.3s
DUG Dugway, Tooele 45.20 351 IAmb IAmb 01 08 16.3
comp=Z,58nm,1.5s
DUG Dugway, Tooele 45.20 351 P **P 01 07 55.4 +0.1**
DUG Dugway, Tooele 45.20 351 P **P 01 07 54.8 -0.5**
baz=169,SNR=19
DUG S **S 01 14 40.7 +5.6**
baz=169
P38A Dawn 45.29 12 P **P 01 07 54.8 -1.0**
baz=196
P38A S **S 01 14 35.6 -0.4**
baz=196
VBST Vila Bela da S 45.29 106 *e*P **P 01 07 55.1 -1.1**
N23A Red Feather La 45.33 359 P **P 01 07 56.3 -0.1**
N23A IAmb IAmb 01 08 09.9
comp=Z,46nm,1.3s
N23A Red Feather La 45.33 359 P **P 01 07 55.4 -1.0**
baz=178,SNR=13
N23A S **S 01 14 40.7 +3.7**
baz=178
KMSC Kings Mountain 45.38 27 P **P 01 07 54.9 -1.7**
KMSC Kings Mountain 45.38 27 P **P 01 07 54.2 -2.4**
baz=214,SNR=6.5
KMSC Kings Mountain 45.38 27 P **P 01 07 54.7 -1.9**
baz=214,SNR=6.5
KMSC S **S 01 14 38.6 +1.1**
baz=214
BIRD Birdtown, Kers 45.38 29 IAmb IAmb 01 08 01.9
comp=Z,17nm,0.9s
BIRD Birdtown, Kers 45.38 29 P **P 01 07 55.4 -1.2**
baz=215,SNR=5.3
BIRD S **S 01 14 38.7 +1.2**
baz=215
YERR Yerington 45.38 344 P **P 01 07 56.4 -0.4**
YERR IAmb IAmb 01 08 04.8
comp=Z,39nm,1.2s
JLU Jordanelle 45.42 353 P **P 01 07 57.1 -0.1**
JLU IAmb IAmb 01 08 15.7
comp=Z,31nm,1.3s
OGNE Ogallala 45.45 3 P **P 01 07 56.8 -0.3**
OGNE IAMs_20 IAMs_20 01 25 10.8
comp=Z,5µm,18.0s
OGNE Ogallala 45.45 3 P **P 01 07 57.6 +0.4**
baz=184,SNR=8.1
OGNE S **S 01 14 40.9 +2.5**
baz=184
OGNE Ogallala 45.45 3 P **P 01 07 56.7 -0.5**
baz=184,SNR=8.1
T50A Nancy 45.50 23 P **P 01 07 55.7 -1.8**
T50A Nancy 45.50 23 P **P 01 07 56.0 -1.5**
baz=209
T50A P **P 01 07 56.0 -1.5**
baz=209
T50A S **S 01 14 40.6 +1.4**
baz=209
T50A S **S 01 14 40.6 +1.4**
baz=209
PPTF Pamatai, Papee 45.51 250 IAMs_20 IAMs_20 01 21 13.8
comp=Z,6µm,22.0s
PPT Papeete 45.51 250 LR LR 01 22 05.9
comp=Z,4µm,18.9s,baz=76,slow=30
PPT2 Papeete2 45.52 250 *e*LR LR 01 19 52.9
comp=Z,11µm,26.2s
P40A Paris 45.54 14 IAmb IAmb 01 08 12.8
comp=Z,38nm,1.1s
P40A Paris 45.54 14 P **P 01 07 56.2 -1.6**
baz=198,SNR=9.4
P40A S **S 01 14 39.6 0.0**
baz=198
TZTN Tazewell 45.60 24 P **P 01 07 56.7 -1.7**
TZTN IAmb IAmb 01 08 03.6
comp=Z,30nm,0.9s
TZTN Tazewell 45.60 24 P **P 01 07 57.0 -1.3**
baz=210,SNR=7.9
TZTN S **S 01 14 41.6 +1.0**
baz=210
TZTN Tazewell 45.60 24 P **P 01 07 56.7 -1.7**
baz=210,SNR=7.9
TZTN S **S 01 14 42.1 +1.5**
baz=210
EMB Emerald Bay 45.61 343 P **P 01 07 58.5 -0.1**
Y59A Loris 45.64 31 P **P 01 07 57.1 -1.5**
Y59A IAmb IAmb 01 08 05.1
comp=Z,32nm,0.8s
Y59A Loris 45.64 31 P **P 01 07 57.3 -1.3**
baz=218
Y59A P **P 01 07 57.3 -1.3**
baz=218
N33B J Bar K, Exete 45.68 8 S **S 01 14 42.4 +0.7**
baz=190
N33A J Bar K, Exete 45.68 8 P **P 01 07 59.3 +0.3**
PHWY Pilot Hill 45.73 359 IAmb IAmb 01 08 01.7
comp=Z,38nm,1.2s
Q44A Meyer Farm, Va 45.77 17 P **P 01 07 58.7 -0.9**
baz=202,SNR=9.0
Q44A S **S 01 14 44.5 +1.5**
baz=202
VCNR Virginia City 45.79 344 P **P 01 08 01.0 +1.0**
VCNR IAmb IAmb 01 08 07.9
comp=Z,35nm,1.1s
X58A Rowland 45.85 30 P **P 01 07 59.5 -0.8**
X58A IAmb IAmb 01 08 00.1
comp=Z,25nm,0.8s
X58A Rowland 45.85 30 P **P 01 07 58.9 -1.5**
baz=217
X58A P **P 01 07 58.9 -1.5**
baz=217
X58A S **S 01 14 45.3 +1.0**
baz=217
X58A S **S 01 14 45.3 +1.0**
baz=217
MPK Martis Peak 45.89 344 P **P 01 08 00.7 -0.2**
MPK IAmb IAmb 01 08 13.6
comp=Z,39nm,1.2s
MRA San Martin 45.89 132 *e*P **P 01 08 01.3 +0.4**
BGU Big Grassy Mou 45.95 351 P **P 01 08 01.1 -0.1**
W57A Gilead 46.02 29 IAmb IAmb 01 08 06.5
comp=Z,17nm,0.8s
W57A Gilead 46.02 29 P **P 01 07 59.2 -2.4**
baz=216,SNR=6.2
W57A P **P 01 07 59.2 -2.4**
baz=216,SNR=6.2
W57A S **S 01 14 47.8 +1.2**
baz=216
W57A S **S 01 14 47.8 +1.2**
baz=216
V55A Taylorsville 46.02 27 P **P 01 08 00.3 -1.4**
V55A IAmb IAmb 01 08 07.0
comp=Z,26nm,0.8s
V55A Taylorsville 46.02 27 P **P 01 08 00.6 -1.1**
baz=214,SNR=12
V55A P **P 01 08 00.6 -1.1**
baz=214,SNR=12
V55A S **S 01 14 48.0 +1.3**
baz=214
V55A S **S 01 14 48.0 +1.3**
baz=214
N35A Tabor 46.08 10 P **P 01 08 01.2 -0.9**
N35A Tabor 46.08 10 S **S 01 14 46.9 -0.5**
baz=193
PAHR Pah Rah Range 46.10 345 IAmb IAmb 01 08 23.1
comp=Z,43nm,1.4s
ELK Elko 46.15 349 LR LR 01 24 21.5
comp=Z,7µm,18.6s,baz=169,slow=32
ELK Elko 46.15 349 IAmb IAmb 01 08 10.2
comp=Z,25nm,1.4s
ELK Elko 46.15 349 P **P 01 08 02.9 0.0**
RWWY Rawlins 46.16 358 P **P 01 08 02.7 -0.3**
TCA Tanti 46.24 130 *e*P **P 01 08 03.9 +0.2**
BGNE Belgrade 46.25 7 S **S 01 14 50.6 +0.7**
baz=189
BMN Battle Mountai 46.26 347 P **P 01 08 03.5 -0.1**
BMN IAmb IAmb 01 08 23.6
comp=Z,32nm,1.4s
BMN Battle Mountai 46.26 347 P **P 01 08 03.5 -0.1**
BMN pmax pmax
comp=Z,31nm,1.4s
PTLB Pontes e Lacer 46.26 107 *e*P **P 01 08 02.6 -1.3**
GDXM Geysers 46.29 341 P **P 01 08 04.8 +1.0**
P43A Skaggs, Pawnee 46.30 16 IAmb IAmb 01 08 21.6
comp=Z,17nm,0.9s
P43A Skaggs, Pawnee 46.30 16 S **S 01 14 52.1 +1.5**
baz=201
U54A Nelsons Funny 46.31 26 S **S 01 14 52.3 +1.3**
baz=213
U54A S **S 01 14 52.3 +1.3**
baz=213
LL04 Puerto Octay 46.42 146 P **P 01 08 07.0 +2.3**
LL04 IAmb IAmb 01 08 14.2
comp=Z,24nm,1.4s
HWUT Hardware Ranch 46.43 353 P **P 01 08 05.0 0.0**
HWUT IAMs_20 IAMs_20 01 24 47.2
comp=Z,5µm,18.0s
N38A Joes South For 46.48 12 P **P 01 08 04.1 -1.1**
N38A Joes South For 46.48 12 S **S 01 14 52.3 -0.8**
baz=196
R49A Shelbyville 46.49 22 P **P 01 08 03.5 -1.8**
baz=208,SNR=7.6
R49A P **P 01 08 03.5 -1.8**
baz=208,SNR=7.6
R49A S **S 01 14 54.0 +0.6**
baz=208
R49A S **S 01 14 54.0 +0.6**
baz=208
BEKR Beckworth 46.52 344 P **P 01 08 05.6 -0.1**
S51A Beattyville 46.52 23 S **S 01 14 54.2 +0.3**
baz=210
S51A S **S 01 14 54.2 +0.3**
baz=210
HOPS Hopland Field 46.55 340 P **P 01 08 05.3 -0.5**
HVU Hansel Valley 46.75 352 IAmb IAmb 01 08 14.6
comp=Z,30nm,1.2s
TBI Tubuai 46.77 242 *e*LR LR 01 20 33.0
comp=Z,9µm,27.8s
TBI Tubuai 46.77 242 *e*T T 01 58 04.3
comp=Z,8.7nm,0.3s
R50A Paris 46.80 22 IAmb IAmb 01 08 19.2
comp=Z,34nm,1.1s
R50A Paris 46.80 22 P **P 01 08 05.5 -2.2**
baz=209
R50A P **P 01 08 05.5 -2.2**
baz=209
R50A S **S 01 14 55.7 -2.1**
baz=209
R50A S **S 01 14 55.7 -2.1**
baz=209
BLO Bloomington 46.80 20 IAmb IAmb 01 08 12.3
comp=Z,24nm,0.8s
U56A King 46.81 27 IAmb IAmb 01 08 18.3
comp=Z,38nm,1.4s
U56A King 46.81 27 P **P 01 08 06.6 -1.2**
baz=214
U56A P **P 01 08 06.6 -1.2**
baz=214
U56A S **S 01 14 58.7 +0.7**
baz=214
U56A S **S 01 14 58.7 +0.7**
baz=214
V58A Windy Hill, Pi 46.96 29 IAmb IAmb 01 08 13.8
comp=Z,12nm,0.8s
P46A Rosedale 46.98 19 S **S 01 15 00.3 0.0**
baz=204
L34A Svendsen Farm, 47.04 9 P **P 01 08 09.6 0.0**
L34A IAmb IAmb 01 08 17.5
comp=Z,18nm,0.9s
L34A Svendsen Farm, 47.04 9 S **S 01 14 59.9 -1.3**
baz=192
O44A Mansfield 47.08 17 P **P 01 08 08.6 -1.4**
O44A Mansfield 47.08 17 S **S 01 15 01.6 -0.1**
baz=202
K22A Casper 47.10 358 P **P 01 08 09.7 -0.5**
baz=178,SNR=15
K22A S **S 01 15 03.4 +1.2**
baz=178
K22A Casper 47.10 358 P **P 01 08 08.6 -1.6**
baz=178,SNR=15
K22A S **S 01 15 04.7 +2.5**
baz=178
CNNC Cliffs of the 47.12 31 IAMs_20 IAMs_20 01 25 48.0
comp=Z,5µm,21.0s
CNNC Cliffs of the 47.12 31 P **P 01 08 08.4 -1.9**
baz=218
HDIL Hopedale 47.22 16 S **S 01 15 01.3 -2.4**
baz=201
HDIL Hopedale 47.22 16 P **P 01 08 08.1 -2.9**
baz=201
HDIL S **S 01 15 03.8 +0.1**
baz=201
KCPM Cahto Peak 47.34 340 P **P 01 08 11.9 -0.2**
PLCA Paso Flores 47.36 144 P **P 01 08 10.0 -2.3**
comp=Z,4.6nm,1.1s,baz=221,slow=2.1,SNR=2.0
PLCA LR LR 01 23 44.5
comp=Z,9µm,18.1s,baz=324,slow=31
comp=Z,4.6nm,1.1s
PLCA Paso Flores 47.36 144 P **P 01 08 10.7 -1.6**
PLCA IAmb IAmb 01 08 16.6
comp=Z,26nm,1.2s
PLCA Paso Flores 47.36 144 P **P 01 08 10.7 -1.6**
PLCA pmax pmax
comp=Z,26nm,1.2s
BW06 Boulder Array 47.38 355 IAmb IAmb 01 08 30.1
comp=Z,27nm,1.2s
BW06 IAMs_20 IAMs_20 01 25 35.2
comp=Z,5µm,18.0s
BW06 Boulder Array 47.38 355 P **P 01 08 10.7 -1.8**
baz=174
BW06 S **S 01 15 05.6 -0.7**
baz=174
PD31 Pinedale Array 47.38 355 IAmb IAmb 01 08 30.1
comp=Z,26nm,1.2s
PDAR Pinedale Array 47.38 355 P **P 01 08 11.2 -1.3**
comp=Z,6.8nm,0.7s,baz=172,slow=7.4,SNR=25
PDAR LR LR 01 25 45.3
comp=Z,4µm,18.5s,baz=186,slow=33
comp=Z,6.8nm,0.7s
K31A O'Neill 47.38 6 P **P 01 08 12.4 +0.1**
K31A O'Neill 47.38 6 S **S 01 15 06.3 +0.3**
baz=188
LL01 San Ignacio de 47.41 147 P **P 01 08 15.0 +2.5**
P48A Milroy 47.44 21 IAmb IAmb 01 08 16.7
comp=Z,18nm,0.8s
P48A Milroy 47.44 21 P **P 01 08 10.4 -2.4**
baz=207
P48A P **P 01 08 10.4 -2.4**
baz=207
P48A S **S 01 15 04.6 -2.2**
baz=207
P48A S **S 01 15 04.6 -2.2**
baz=207
BLA Blacksburg 47.50 27 P **P 01 08 12.3 -1.0**
BLA Blacksburg 47.50 27 P **P 01 08 12.3 -1.0**
BLA pmax pmax
comp=Z,44nm,1.5s
BLA MLR MLR
comp=Z,3µm,20.0s
BLA Blacksburg 47.50 27 S **S 01 15 07.6 -0.3**
baz=214
BLA Blacksburg 47.50 27 P **P 01 08 10.6 -2.7**
baz=214
BLA S **S 01 15 08.0 +0.1**
baz=214
AHID Auburn Hatcher 47.52 354 IAmb IAmb 01 08 40.4
comp=Z,21nm,1.1s
AHID IAMs_20 IAMs_20 01 25 25.1
comp=Z,5µm,19.0s
SCIA State Center 47.55 12 P **P 01 08 12.1 -1.4**
SCIA State Center 47.55 12 P **P 01 08 10.5 -3.0**
baz=196
SCIA S **S 01 15 06.8 -1.5**
baz=196
S54A Dingess, Beckl 47.60 25 P **P 01 08 12.4 -1.7**
baz=213
S54A P **P 01 08 12.4 -1.7**
baz=213
S54A S **S 01 15 09.7 +0.4**
baz=213
S54A S **S 01 15 09.7 +0.4**
baz=213
MPOM Morne Pois Mar 47.65 66 P **P 01 08 15.8 +1.1**
MPOM IAMs_20 IAMs_20 01 25 54.1
comp=Z,4µm,21.0s
SFIN Lafayette 47.71 18 P **P 01 08 13.6 -1.2**
SFIN IAmb IAmb 01 08 28.3
comp=Z,32nm,1.5s
SFIN Lafayette 47.71 18 P **P 01 08 12.1 -2.7**
baz=204
SFIN S **S 01 15 11.9 +1.3**
baz=204
ILAM Ilet Lapin Mar 47.74 65 IAMs_20 IAMs_20 01 25 45.7
comp=Z,4µm,22.0s
P49A Miami Univ. Ec 47.76 21 P **P 01 08 12.7 -2.5**
baz=208
P49A S **S 01 15 10.0 -1.3**
baz=208
P49A Miami Univ. Ec 47.76 21 P **P 01 08 11.4 -3.8**
baz=208
P49A S **S 01 15 11.8 +0.4**
baz=208
R53A Hurricane 47.78 25 IAmb IAmb 01 08 31.4
comp=Z,21nm,1.1s
R53A Hurricane 47.78 25 S **S 01 15 12.9 +1.1**
baz=212
R53A S **S 01 15 12.9 +1.1**
baz=212
Q51A Peebles 47.82 23 S **S 01 15 11.5 -0.9**
baz=210
Q51A S **S 01 15 11.5 -0.9**
baz=210
T57A Hurt 47.86 28 IAmb IAmb 01 08 21.1
comp=Z,16nm,0.9s
T57A Hurt 47.86 28 P **P 01 08 13.0 -3.1**
baz=216,SNR=6.8
T57A P **P 01 08 13.0 -3.1**
baz=216,SNR=6.8
T57A S **S 01 15 14.1 +1.1**
baz=216
T57A S **S 01 15 14.1 +1.1**
baz=216
KMRM Mail Ridge 47.87 341 P **P 01 08 16.0 -0.2**
REDW Red Top Meadow 48.08 354 IAmb IAmb 01 08 32.7
comp=Z,26nm,1.1s
REDW IAMs_20 IAMs_20 01 25 45.0
comp=Z,4µm,19.0s
L40A Anamosa 48.14 14 IAmb IAmb 01 08 19.9
comp=Z,13nm,0.9s
L40A Anamosa 48.14 14 P **P 01 08 16.0 -2.0**
baz=198
L40A S **S 01 15 14.6 -2.1**
baz=198
PTET Porto Estrela 48.14 106 *e*P **P 01 08 17.9 -0.7**
PDRB Porto dos Gac 48.17 101 *e*P **P 01 08 17.0 -1.8**
SNOW Snow King Moun 48.17 354 IAmb IAmb 01 08 43.5
comp=Z,18nm,1.1s
SNOW IAMs_20 IAMs_20 01 25 48.4
comp=Z,4µm,19.0s

KMPM Mount Pierce 48.18 340 P **P** **01 08 18.1 -0.4**
Q52A Bidwell 48.19 24 P **P** **01 08 16.3 -2.2**
baz=211,SNR=6.2
Q52A P **P** **01 08 16.3 -2.2**
baz=211,SNR=6.2
Q52A S **S** **01 15 18.1 +0.5**
baz=211
Q52A S **S** **01 15 18.1 +0.5**
baz=211
TPAW Teton Pass 48.22 354 IAmb IAmb 01 08 33.1
TPAW IAMs_20 IAMs_20 01 25 57.6
comp=Z,4µm,18.0s
O48B Farmland 48.24 20 P **P** **01 08 14.2 -4.8**
baz=207
O48B S **S** **01 15 16.0 -2.2**
baz=207
LOHW Long Hollow 48.31 354 IAmb IAmb 01 08 32.3
comp=Z,35nm,1.3s
LOHW IAMs_20 IAMs_20 01 25 43.9
comp=Z,4µm,20.0s
P51A Williamsport 48.33 23 P **P** **01 08 16.5 -3.1**
P51A IAmb IAmb 01 08 37.3
comp=Z,36nm,1.3s
P51A Williamsport 48.33 23 P **P** **01 08 17.1 -2.5**
baz=210
P51A P **P** **01 08 17.1 -2.5**
baz=210
P51A S **S** **01 15 20.4 +1.0**
baz=210
P51A S **S** **01 15 20.4 +1.0**
baz=210
M44A Midewin, Midew 48.35 17 S **S** **01 15 17.5 -2.2**
baz=203
K38A Parkersburg 48.35 12 P **P** **01 08 20.6 +0.9**
K38A IAmb IAmb 01 08 34.2
comp=Z,32nm,1.4s
K38A Parkersburg 48.35 12 S **S** **01 15 16.8 -2.9**
baz=196
FXWY Fox Creek 48.38 354 P **P** **01 08 19.9 -0.3**
MOD Modoc Plateau 48.40 345 IAMs_20 IAMs_20 01 25 00.9
comp=Z,3µm,18.0s
MOOW Moose Ponds 48.46 354 IAmb IAmb 01 08 27.6
comp=Z,25nm,1.1s
MOOW IAMs_20 IAMs_20 01 25 58.8
comp=Z,4µm,19.0s
KHMM Horse Mountain 48.46 341 P **P** **01 08 21.1 +0.3**
L42A Oliver, Polo 48.47 15 P **P** **01 08 19.5 -1.1**
L42A IAmb IAmb 01 08 44.5
comp=Z,37nm,1.4s
L42A Oliver, Polo 48.47 15 S **S** **01 15 19.3 -2.1**
baz=200
O49A Covington 48.47 21 IAmb IAmb 01 08 24.5
comp=Z,18nm,0.9s
O49A Covington 48.47 21 P **P** **01 08 18.3 -2.4**
baz=208
O49A P **P** **01 08 18.3 -2.4**
baz=208
O49A S **S** **01 15 19.5 -2.0**
baz=208
O49A S **S** **01 15 19.5 -2.0**
baz=208
WVOR Wild Horse Val 48.48 346 IAmb IAmb 01 08 22.9
comp=Z,22nm,1.2s
WVOR Wild Horse Val 48.48 346 P **P** **01 08 18.9 -2.0**
JCC Jacoby Creek, 48.51 341 IAMs_20 IAMs_20 01 24 01.2
comp=Z,4µm,21.0s
R55A Marlinton 48.52 26 P **P** **01 08 20.2 -1.0**
R55A IAmb IAmb 01 08 28.3
comp=Z,16nm,1.1s
R55A Marlinton 48.52 26 S **S** **01 15 24.4 +2.0**
baz=214
R55A S **S** **01 15 24.4 +2.0**
baz=214
RSSD Black Hills 48.55 1 P **P** **01 08 21.7 +0.2**
RSSD Black Hills 48.55 1 P **P** **01 08 21.7 +0.2**
RSSD pmax pmax
comp=Z,55nm,1.2s
RSSD Black Hills 48.55 1 P **P** **01 08 20.5 -1.0**
baz=181,SNR=26
RSSD S **S** **01 15 22.6 -0.3**
baz=181
RSSD Black Hills 48.55 1 P **P** **01 08 19.4 -2.1**
baz=181
RSSD S **S** **01 15 22.6 -0.3**
baz=181
N47A Urbana 48.62 19 P **P** **01 08 18.8 -3.0**
baz=206,SNR=6.9
N47A P **P** **01 08 18.8 -3.0**
baz=206,SNR=6.9
N47A S **S** **01 15 22.1 -1.4**
baz=206
N47A S **S** **01 15 22.1 -1.4**
baz=206
S57A Dark Hollow, R 48.62 28 S **S** **01 15 25.0 +1.3**
baz=216
S57A S **S** **01 15 25.0 +1.3**
baz=216
T59A Double "B" Far 48.65 29 IAmb IAmb 01 08 20.9
comp=Z,16nm,1.0s
T59A Double "B" Far 48.65 29 S **S** **01 15 25.2 +1.1**
baz=218
T59A S **S** **01 15 25.2 +1.1**
baz=218
AY01 Puyuhuapi 48.71 149 P **P** **01 08 25.0 +2.5**
AY01 IAmb IAmb 01 08 26.1
comp=Z,33nm,1.4s
POCN Pocone 48.72 108 *eP* **P** **01 08 22.3 -0.7**
ECSD EROS Data Cent 48.74 8 IAmb IAmb 01 08 30.4
comp=Z,28nm,1.4s
ECSD EROS Data Cent 48.74 8 IAMs_20 IAMs_20 01 27 15.8
comp=Z,4µm,18.0s
ECSD EROS Data Cent 48.74 8 P **P** **01 08 21.3 -1.4**
baz=191,SNR=8.5
ECSD S **S** **01 15 23.0 -2.2**
baz=191
ECSD EROS Data Cent 48.74 8 P **P** **01 08 21.0 -1.7**
baz=191,SNR=8.5
ECSD S **S** **01 15 24.0 -1.2**
baz=191
HLID Hailey 48.74 351 IAmb IAmb 01 08 39.2
comp=Z,30nm,1.1s
HLID Hailey 48.74 351 P **P** **01 08 21.4 -1.6**
baz=167,SNR=27
HLID S **S** **01 15 28.0 +2.5**
baz=167
FLWY Flagg Ranch 48.78 354 IAMs_20 IAMs_20 01 26 09.5
comp=Z,4µm,20.0s
Q54A Coxs Mills 48.80 25 P **P** **01 08 21.9 -1.3**
baz=213
Q54A P **P** **01 08 21.9 -1.3**
baz=213
Q54A S **S** **01 15 26.8 +0.6**
baz=213
Q54A S **S** **01 15 26.8 +0.6**
baz=213
KRPM Rodgers 48.81 341 P **P** **01 08 23.4 0.0**
P52A Corning 48.82 23 IAmb IAmb 01 08 28.6
comp=Z,30nm,1.0s
P52A Corning 48.82 23 P **P** **01 08 21.0 -2.4**
baz=211,SNR=6.9
P52A S **S** **01 15 26.1 -0.3**
baz=211
YBH Yreka Blue Hor 48.92 342 LR LR 01 24 29.3
comp=Z,4µm,21.5s,baz=170,slow=31
YBH Yreka Blue Hor 48.92 342 P **P** **01 08 24.2 -0.1**
YBH IAMs_20 IAMs_20 01 24 07.0
comp=Z,4µm,22.0s
YBH Yreka Blue Hor 48.92 342 P **P** **01 08 24.2 -0.1**
YBH pmax pmax
comp=Z,14nm,1.0s
YPP Pitchstone Pla 48.98 354 IAmb IAmb 01 08 45.2
comp=Z,38nm,1.2s
P53A Whipple 48.99 24 P **P** **01 08 23.6 -1.2**
baz=212,SNR=6.8
P53A P **P** **01 08 23.6 -1.2**
baz=212,SNR=6.8
P53A S **S** **01 15 26.5 -2.4**
baz=212
P53A S **S** **01 15 26.5 -2.4**
baz=212
ACSO Alum Creek Sta 49.01 22 P **P** **01 08 22.5 -2.3**
baz=209
ACSO S **S** **01 15 27.1 -1.9**
baz=209
CLDB Colider 49.04 100 *eP* **P** **01 08 22.7 -2.8**
ITTB Itaituba 49.05 92 *eP* **P** **01 08 23.2 -2.4**

JSRW J. Sargeant Re 49.07 29 P **P** **01 08 23.3 -2.0**
H17A Grant Village 49.08 355 P **P** **01 08 26.9 +1.2**
H17A Grant Village 49.08 355 P **P** **01 08 24.3 -1.4**
baz=172
H17A S **S** **01 15 33.7 +3.2**
baz=172
L44A Lake County Fo 49.11 17 P **P** **01 08 24.0 -1.6**
baz=203
L44A S **S** **01 15 28.5 -1.9**
baz=203
SUSD Miller 49.16 6 P **P** **01 08 24.7 -1.3**
SUSD Miller 49.16 6 S **S** **01 15 31.0 -0.1**
baz=188
SUSD Miller 49.16 6 P **P** **01 08 24.1 -1.8**
baz=188
SUSD S **S** **01 15 31.6 +0.5**
baz=188
YFT Old Faithful 49.16 354 P **P** **01 08 26.1 -0.2**
YFT IAmb IAmb 01 08 40.9
comp=Z,36nm,1.2s
N49A Columbus Grove 49.17 21 P **P** **01 08 23.7 -2.4**
N49A IAmb IAmb 01 08 36.8
comp=Z,25nm,1.1s
N49A Columbus Grove 49.17 21 S **S** **01 15 29.1 -2.2**
baz=208
N49A S **S** **01 15 29.1 -2.2**
baz=208
JFWS Jewell Farm 49.18 14 P **P** **01 08 24.1 -1.9**
JFWS IAmb IAmb 01 08 36.3
comp=Z,17nm,0.9s
JFWS Jewell Farm 49.18 14 P **P** **01 08 24.2 -1.9**
JFWS pmax pmax
comp=Z,17nm,1.0s
JFWS MLR MLR
comp=Z,900nm,18.0s
JFWS Jewell Farm 49.18 14 S **S** **01 15 30.4 -0.9**
baz=199
JFWS Jewell Farm 49.18 14 P **P** **01 08 24.3 -1.8**
baz=199
JFWS S **S** **01 15 31.2 -0.1**
baz=199
T60A Surry 49.19 30 P **P** **01 08 24.4 -1.9**
LKWY Lake 49.23 355 P **P** **01 08 26.6 -0.2**
LKWY IAMs_20 IAMs_20 01 26 07.4
comp=Z,4µm,20.0s
LKWY Lake 49.23 355 P **P** **01 08 26.6 -0.2**
LKWY pmax pmax
comp=Z,89nm,1.5s
L04D Klamath Falls 49.25 343 P **P** **01 08 25.7 -1.1**
baz=157
L04D S **S** **01 15 35.0 +2.3**
baz=157
K05A Summer Lake 49.32 345 P **P** **01 08 27.9 +0.5**
J08A Circle Bar Ran 49.33 347 P **P** **01 08 27.5 +0.1**
J08A IAmb IAmb 01 08 48.1
comp=Z,34nm,1.4s
NBRS Nobres 49.34 105 *eP* **P** **01 08 26.6 -1.3**
O52A Adamsville 49.35 23 S **S** **01 15 33.3 -0.6**
baz=211
O52A S **S** **01 15 33.3 -0.6**
baz=211
NPGB Novo Progresso 49.37 95 *eP* **P** **01 08 25.3 -2.8**
KSXB Camp Six Broad 49.37 341 P **P** **01 08 27.7 0.0**
YMR Madison River 49.39 354 P **P** **01 08 28.4 +0.4**
YNR Norris Junctio 49.41 355 P **P** **01 08 28.9 +0.8**
YNR IAmb IAmb 01 08 37.6
comp=Z,22nm,1.1s
K04D Chiloquin, OR 49.46 344 P **P** **01 08 27.3 -1.1**
baz=158
K04D S **S** **01 15 40.1 +4.5**
baz=158
K43A Burlington 49.48 16 S **S** **01 15 33.2 -2.4**
baz=202
L02F Cave Junction 49.54 342 P **P** **01 08 27.8 -1.1**
baz=155
L02F S **S** **01 15 39.0 +2.5**
baz=155
I37A Lemond, Waseca 49.54 11 IAmb IAmb 01 08 30.3
comp=Z,29nm,0.9s
I37B Waseca 49.54 11 P **P** **01 08 27.3 -1.5**
baz=195
QLMT Earthquake Lak 49.60 354 P **P** **01 08 29.1 -0.4**
SALV Santo Antonio 49.61 107 *eP* **P** **01 08 29.0 -0.8**
RLMT Red Lodge 49.70 356 IAmb IAmb 01 08 36.5
comp=Z,29nm,1.0s
RLMT Red Lodge 49.70 356 P **P** **01 08 28.1 -2.2**
baz=174,SNR=25
RLMT S **S** **01 15 37.5 -1.5**
baz=174
O53A New Philadelph 49.71 24 P **P** **01 08 28.0 -2.2**
baz=212,SNR=7.8
O53A S **S** **01 15 37.3 -1.6**
baz=212
CBN Corbin Frederi 49.72 29 P **P** **01 08 28.8 -1.4**
CBN IAMs_20 IAMs_20 01 27 51.7
comp=Z,5µm,20.0s
CBN Corbin Frederi 49.72 29 P **P** **01 08 28.3 -2.0**
baz=217
CBN S **S** **01 15 39.5 +0.5**
baz=217
MCWV Mont Chateau 49.78 25 IAmb IAmb 01 08 35.7
comp=Z,30nm,1.0s
MCWV Mont Chateau 49.78 25 P **P** **01 08 29.0 -1.8**
baz=214,SNR=6.2
MCWV S **S** **01 15 41.8 +1.8**
baz=214
MCWV Mont Chateau 49.78 25 P **P** **01 08 28.7 -2.0**
baz=214,SNR=6.2
MCWV S **S** **01 15 40.9 +1.0**
baz=214
HUMO Hull Mountain 49.80 343 P **P** **01 08 32.3 +1.4**
HUMO IAmb IAmb 01 09 00.6
comp=Z,38nm,1.5s
COYC Coyhaique 49.80 150 pP 01 08 34.1 +0.1
COYC Coyhaique 49.80 150 IAmb IAmb 01 08 44.5
comp=Z,39nm,1.1s
N51A Ashland 49.83 22 P **P** **01 08 31.8 +0.7**
N51A IAmb IAmb 01 08 35.0
comp=Z,22nm,1.0s
J05D Fort Rock, OR 49.93 344 P **P** **01 08 31.1 -0.9**
baz=158,SNR=15
J05D S **S** **01 15 48.5 +6.3**
baz=158
L48A N Adams 49.99 20 IAmb IAmb 01 08 30.6
comp=Z,26nm,0.8s
L48A N Adams 49.99 20 P **P** **01 08 30.0 -2.3**
baz=207
L48A P **P** **01 08 30.0 -2.3**
baz=207
L48A S **S** **01 15 44.5 +1.7**
baz=207
L48A S **S** **01 15 44.5 +1.7**
baz=207
O54A Avella 50.00 25 IAmb IAmb 01 08 37.0
comp=Z,31nm,0.9s
O54A Avella 50.00 25 P **P** **01 08 30.9 -1.5**
baz=213,SNR=6.5
O54A P **P** **01 08 30.9 -1.5**
baz=213,SNR=6.5
O54A S **S** **01 15 43.4 +0.5**
baz=213
O54A S **S** **01 15 43.4 +0.5**
baz=213
M50A Fremont 50.01 21 IAmb IAmb 01 08 30.9
comp=Z,29nm,0.9s
M50A Fremont 50.01 21 P **P** **01 08 30.1 -2.3**
baz=209
M50A P **P** **01 08 30.1 -2.3**
baz=209
I40A Norwalk 50.01 13 S **S** **01 15 45.7 +2.7**
baz=199
K02D Willamette Mer 50.09 342 P **P** **01 08 32.1 -1.1**
baz=155
K02D S **S** **01 15 47.1 +2.8**
baz=155
J04D Umpqua Nationa 50.13 344 P **P** **01 08 33.9 +0.2**
J04D Umpqua Nationa 50.13 344 P **P** **01 08 32.3 -1.3**
baz=157
J04D S **S** **01 15 47.4 +2.3**
baz=157
CPUP Villa Florida 50.32 121 P **P** **01 08 33.4 -1.7**
comp=Z,9.3nm,0.9s,baz=298,slow=8.6,SNR=11
CPUP LR LR 01 26 31.7
comp=Z,3µm,20.3s,baz=288,slow=32
comp=Z,9.3nm,0.9s
CPUP Villa Florida 50.32 121 *eP* **P** **01 08 36.2 +1.1**
N53A Lisbon 50.34 24 IAmb IAmb 01 08 39.6
comp=Z,34nm,0.9s
N53A Lisbon 50.34 24 P **P** **01 08 32.9 -2.1**
baz=212,SNR=6.0
N53A P **P** **01 08 32.9 -2.1**
baz=212,SNR=6.0
N53A S **S** **01 15 50.9 +3.2**
baz=212
N53A S **S** **01 15 50.9 +3.2**
baz=212
AQDB Aquidauana 50.35 113 *eP* **P** **01 08 33.9 -1.5**
DBO Dodson Butte 50.35 343 P **P** **01 08 34.5 -0.6**
DBO IAmb IAmb 01 08 50.0
comp=Z,35nm,1.2s
BOZ Bozeman (W) 50.38 354 P **P** **01 08 34.5 -0.8**
BOZ Bozeman (W) 50.38 354 P **P** **01 08 33.8 -1.5**
baz=171,SNR=12
BOZ S **S** **01 15 48.4 0.0**
baz=171
ANTJ Antonio Joao (50.38 115 *eP* **P** **01 08 36.5 +0.7**
I42A Draeger Farm, 50.43 15 S **S** **01 15 46.4 -2.4**
baz=201
P57A Homestead Farm 50.45 27 IAmb IAmb 01 08 35.2
comp=Z,26nm,1.1s
P57A Homestead Farm 50.45 27 P **P** **01 08 33.3 -2.5**
baz=216,SNR=5.6
P57A P **P** **01 08 33.3 -2.5**
baz=216,SNR=5.6
P57A S **S** **01 15 51.2 +2.0**
baz=216
P57A S **S** **01 15 51.2 +2.0**
baz=216
BMO Blue Mountains 50.51 349 P **P** **01 08 34.6 -1.7**
AAM Ann Arbor 50.58 20 P **P** **01 08 34.9 -1.8**
baz=208
AAM S **S** **01 15 49.6 -1.2**
baz=208
J01E Myrtle Point 50.59 342 IAMs_20 IAMs_20 01 25 20.3
comp=Z,5µm,22.0s
J01E Myrtle Point 50.59 342 P **P** **01 08 35.4 -1.5**
baz=155
J01E S **S** **01 15 57.0 +5.9**
baz=155
PP1B Ponte de Pedra 50.62 109 *eP* **P** **01 08 37.6 +0.1**
MALB Monte Alegre 50.66 89 *eP* **P** **01 08 35.0 -2.8**
I04A Tendick Farm, 50.73 344 P **P** **01 08 36.6 -1.3**
baz=157
I04A S **S** **01 15 55.4 +2.3**
baz=157
M52A Chesterland 50.76 23 P **P** **01 08 36.7 -1.4**
M52A IAmb IAmb 01 08 50.2
comp=Z,43nm,1.1s
M52A Chesterland 50.76 23 S **S** **01 15 52.1 -1.3**
baz=211
M52A S **S** **01 15 52.1 -1.3**
baz=211
SPMN Marine on St. 50.82 11 P **P** **01 08 37.7 -0.9**
SPMN IAmb IAmb 01 08 40.1
comp=Z,19nm,1.0s
SPMN Marine on St. 50.82 11 P **P** **01 08 35.6 -3.0**
baz=196
SPMN S **S** **01 15 55.1 +0.9**
baz=196
F33A 5 Mile Ranch, 50.85 8 P **P** **01 08 39.2 +0.4**
I03D Drain, OR 50.91 343 P **P** **01 08 36.7 -2.5**
baz=156
I03D S **S** **01 16 00.7 +5.3**
baz=156
M53A WI Miller and 50.94 23 P **P** **01 08 35.7 -3.8**
baz=212
M53A S **S** **01 15 55.8 -0.2**
baz=212
I05D Terrebonne, OR 50.94 345 P **P** **01 08 36.5 -3.0**
baz=159
I05D S **S** **01 16 00.1 +4.0**
baz=159
LAO LASA Array 51.12 359 IAmb IAmb 01 08 42.3
comp=Z,49nm,1.2s
LAO IAMs_20 IAMs_20 01 28 04.2
comp=Z,3µm,19.0s
LAO LASA Array 51.12 359 P **P** **01 08 40.0 -0.9**
baz=178,SNR=8.0
LAO LASA Array 51.12 359 P **P** **01 08 38.9 -2.0**
baz=178,SNR=8.0
LAO S **S** **01 15 59.3 +0.7**
baz=178
BUCK Buck Mountain 51.26 343 P **P** **01 08 40.9 -1.1**
H43A Windswept, Lux 51.27 16 P **P** **01 08 42.0 +0.1**
H43A Windswept, Lux 51.27 16 S **S** **01 15 58.9 -1.5**
baz=202
G08A Pilot Rock 51.27 347 IAmb IAmb 01 09 02.9
comp=Z,31nm,1.4s
F36A Milaca 51.30 10 IAmb IAmb 01 08 52.8
comp=Z,28nm,1.2s
F36A Milaca 51.30 10 P **P** **01 08 40.6 -1.5**
baz=194,SNR=5.9
F36A S **S** **01 15 59.1 -1.7**
baz=194
ALLY Alegheny Colle 51.33 24 P **P** **01 08 40.5 -2.0**
G40A Rib Lake 51.41 13 S **S** **01 16 01.8 -0.6**
baz=199
I02E Swisshome, OR 51.43 343 P **P** **01 08 41.0 -2.1**
baz=155
I02E S **S** **01 16 07.3 +4.6**
baz=155
SSPA Standing Stone 51.44 26 P **P** **01 08 41.9 -1.4**
SSPA IAmb IAmb 01 08 42.1
comp=Z,28nm,1.3s
SSPA Standing Stone 51.44 26 IAMs_20 IAMs_20 01 29 06.2
comp=Z,3µm,19.0s
SSPA Standing Stone 51.44 26 P **P** **01 08 40.7 -2.6**
baz=215
SSPA S **S** **01 16 07.4 +4.5**
baz=215
H04A Detroit Lake 51.49 344 P **P** **01 08 43.1 -0.5**
H04A IAmb IAmb 01 09 03.7
comp=Z,34nm,1.2s
H04D Lebanon 51.49 344 IAMs_20 IAMs_20 01 26 40.9
comp=Z,4µm,19.0s
H04D Lebanon 51.49 344 P **P** **01 08 41.5 -2.0**
baz=157
H04D S **S** **01 16 05.5 +2.0**
baz=157
HRY Holter Researc 51.50 354 P **P** **01 08 43.5 -0.2**
MVL Millersville 51.62 28 IAmb IAmb 01 08 44.3
comp=Z,19nm,0.9s
PAGS Pennsylvania G 51.63 27 IAmb IAmb 01 08 44.0
comp=Z,26nm,0.9s
COR Corvallis 51.71 343 P **P** **01 08 46.4 +1.2**
M55A Ridgway 51.74 25 P **P** **01 08 44.7 -0.9**
M55A IAmb IAmb 01 08 50.4
comp=Z,40nm,1.2s
G05D Wamic, OR 51.78 345 P **P** **01 08 44.0 -1.7**
baz=159
G05D S **S** **01 16 11.2 +3.7**
baz=159
ERPA Erie 51.78 24 P **P** **01 08 42.3 -3.5**
baz=212
ERPA S **S** **01 16 07.0 -0.7**
baz=212
MSO Missoula 51.87 352 IAMs_20 IAMs_20 01 28 44.3
comp=Z,4µm,18.0s
MSO Missoula 51.87 352 P **P** **01 08 44.1 -2.4**
baz=168,SNR=8.9
MSO S **S** **01 16 08.4 -0.5**
baz=168
ITQB Itaqui 51.94 124 *eP* **P** **01 08 48.2 +1.0**
HOOD Mount Hood Mea 51.94 345 P **P** **01 08 47.1 0.0**
D32A Dogwood Acres, 52.03 7 P **P** **01 08 47.5 0.0**
D32A IAmb IAmb 01 08 57.9
comp=Z,34nm,1.1s
F07A Phinny Hill Vi 52.06 347 P **P** **01 08 47.7 -0.1**
F07A IAmb IAmb 01 08 52.8
comp=Z,40nm,1.5s
P61A Hammonton 52.12 29 P **P** **01 08 46.9 -1.4**
N58A Sunbury 52.13 27 P **P** **01 08 47.1 -1.3**
N58A IAmb IAmb 01 08 48.8
comp=Z,23nm,1.1s
N58A Sunbury 52.13 27 S **S** **01 16 13.7 +1.3**
baz=216
N58A S **S** **01 16 13.7 +1.3**
baz=216
E09A Wood Farm, Sta 52.27 348 P **P** **01 08 48.4 -0.9**
M57A Sunshine Farm, 52.34 26 P **P** **01 08 48.0 -2.0**
M57A IAmb IAmb 01 08 55.0
comp=Z,23nm,1.1s
M57A Sunshine Farm, 52.34 26 S **S** **01 16 19.7 +4.4**
baz=216

M57A S **S** **01 16 19.7 +4.4**
baz=216
F42A **Maple Grove Fa** **52.37 15** IAmb IAmb 01 09 04.0
comp=Z,29nm,1.3s
G45A **Suttons Bay** **52.39 17** S **S** **01 16 15.6 -0.3**
baz=204
G45A S **S** **01 16 15.6 -0.3**
baz=204
E38A **The Farm, Brul** **52.39 12** P **P** **01 08 50.1 -0.1**
E38A IAmb IAmb 01 09 00.8
comp=Z,28nm,1.2s
HAWA **Hanford** **52.44 347** IAmb IAmb 01 09 10.4
comp=Z,29nm,1.1s
HAWA IAMs_20 IAMs_20 01 27 35.8
comp=Z,3µm,20.0s
COWI **Conover** **52.44 14** P **P** **01 08 49.0 -1.7**
baz=200
COWI S **S** **01 16 15.5 -1.0**
baz=200
MDND **Maddock** **52.48 5** P **P** **01 08 50.9 0.0**
MDND **Maddock** **52.48 5** P **P** **01 08 49.3 -1.6**
baz=187
MDND S **S** **01 16 15.9 -1.1**
baz=187
WVNY **West Valley, N** **52.59 24** S **S** **01 16 19.0 +0.3**
baz=214
EGMT **Eagleton** **52.62 356** IAmb IAmb 01 09 11.7
comp=Z,58nm,1.4s
EGMT **Eagleton** **52.62 356** P **P** **01 08 50.1 -1.9**
baz=174
EGMT S **S** **01 16 18.7 -0.3**
baz=174
E07A **Sunnyside** **52.67 347** P **P** **01 08 51.8 -0.5**
E07A IAmb IAmb 01 09 12.2
comp=Z,35nm,1.3s
F04A **Amboy** **52.71 345** P **P** **01 08 52.6 0.0**
F04A IAmb IAmb 01 08 57.6
comp=Z,32nm,1.3s
C2SB **Chapadao do Su** **52.71 110** *eP* **P** **01 08 54.2 +1.1**
L56A **Greenwood** **52.80 25** IAmb IAmb 01 08 58.4
comp=Z,34nm,0.9s
L56A **Greenwood** **52.80 25** P **P** **01 08 52.2 -1.3**
baz=215
L56A P **P** **01 08 52.2 -1.3**
baz=215
L56A S **S** **01 16 22.5 +0.8**
baz=215
L56A S **S** **01 16 22.5 +0.8**
baz=215
JTMT **Jette** **52.81 352** P **P** **01 08 53.1 -0.5**
XMAS **Kiritimati** **52.88 276** P **P** **01 08 56.0 +1.5**
XMAS IAmb IAmb 01 09 03.6
comp=Z,40nm,1.1s
XMAS **Kiritimati** **52.88 276** IAMs_20 IAMs_20 01 24 42.7
comp=Z,4µm,20.0s
DGMT **Dagmar** **52.90 1** P **P** **01 08 53.9 -0.1**
DGMT **Dagmar** **52.90 1** IAMs_20 IAMs_20 01 28 58.1
comp=Z,3µm,21.0s
DGMT **Dagmar** **52.90 1** P **P** **01 08 54.4 +0.4**
baz=181,SNR=8.2
DGMT **Dagmar** **52.90 1** P **P** **01 08 52.7 -1.3**
baz=181,SNR=8.2
DGMT S **S** **01 16 27.3 +4.6**
baz=181
D08A **Wollman Farm,** **52.94 348** P **P** **01 08 53.4 -0.9**
D08A IAmb IAmb 01 09 13.5
comp=Z,33nm,1.3s
MCPB **Macapa, AP** **52.99 87** *eP* **P** **01 08 53.6 -1.7**
UNIS **Unistalda (Bra** **53.04 123** *eP* **P** **01 08 56.2 +0.8**
BBSR **BB Station** **53.06 43** S **S** **01 16 27.1 +1.7**
baz=234
DVLD **Doverlandia** **53.06 107** *eP* **P** **01 08 53.9 -1.9**
MDP **Montagnes des** **53.12 80** LR LR 01 29 18.6
comp=Z,3µm,20.3s,baz=266,slow=34
KSPA **Keystone Colle** **53.13 27** S **S** **01 16 26.6 +0.6**
baz=217
MMNY **Mt. Morris Dam** **53.15 25** P **P** **01 08 54.7 -1.2**
MMNY IAmb IAmb 01 09 00.8
comp=Z,30nm,0.9s
MEDO **Medina** **53.28 24** P **P** **01 08 54.8 -2.0**
MEDO IAmb IAmb 01 08 56.0
comp=Z,35nm,0.9s
ARAG **Araguaiana, MT** **53.30 106** *eP* **P** **01 08 56.8 -0.7**
AGMN **Agassiz Nation** **53.32 8** P **P** **01 08 56.7 -0.4**
AGMN IAmb IAmb 01 08 58.3
comp=Z,29nm,1.0s
AGMN **Agassiz Nation** **53.32 8** P **P** **01 08 56.5 -0.6**
baz=191,SNR=6.6
AGMN **Agassiz Nation** **53.32 8** P **P** **01 08 55.5 -1.6**
baz=191,SNR=6.6
AGMN S **S** **01 16 26.9 -1.5**
baz=191
D41A **Chassel** **53.48 14** IAmb IAmb 01 09 05.0
comp=Z,44nm,1.2s
SNDB **Serra Nova Dou** **53.51 101** *eP* **P** **01 08 58.0 -1.0**
LTY **Liberty** **53.52 347** IAmb IAmb 01 09 18.7
comp=Z,40nm,1.4s
C09A **Chrisman Ranch** **53.53 349** IAmb IAmb 01 09 13.8
comp=Z,26nm,1.1s
BINY **Binghamton** **53.54 27** IAMs_20 IAMs_20 01 30 26.9
comp=Z,3µm,20.0s
BINY **Binghamton** **53.54 27** P **P** **01 08 56.6 -2.3**
baz=217
PAL **Palisades** **53.57 29** IAMs_20 IAMs_20 01 30 17.7
comp=Z,4µm,20.0s
PAL **Palisades** **53.57 29** P **P** **01 08 56.5 -2.6**
baz=220
E03A **Lebam** **53.58 344** P **P** **01 08 59.3 +0.3**
J55A **Hilton** **53.62 24** S **S** **01 16 33.1 +0.4**
baz=214
J55A S **S** **01 16 33.1 +0.4**
baz=214
EYMN **Ely** **53.69 11** P **P** **01 08 58.6 -1.2**
EYMN IAmb IAmb 01 09 06.3
comp=Z,42nm,1.3s
EYMN **Ely** **53.69 11** S **S** **01 16 30.6 -2.8**
baz=197
EYMN **Ely** **53.69 11** P **P** **01 08 57.9 -1.9**
baz=197
EYMN S **S** **01 16 33.5 0.0**
baz=197
B35A **Bob, Littlefor** **53.69 9** IAmb IAmb 01 09 00.8
comp=Z,20nm,1.0s
B35A **Bob, Littlefor** **53.69 9** P **P** **01 08 58.3 -1.5**
baz=194,SNR=5.7
K57A **Scipio Center** **53.74 26** S **S** **01 16 34.4 +0.1**
baz=216
NEW **Newport** **53.76 350** LR LR 01 29 03.3
comp=Z,7µm,18.4s,baz=180,slow=33
NEW **Newport** **53.76 350** IAmb IAmb 01 09 07.1
comp=Z,25nm,1.1s
NEW **Newport** **53.76 350** P **P** **01 08 58.1 -2.3**
baz=165,SNR=22
NEW S **S** **01 16 35.9 +1.4**
baz=165
WSPT **Westport, CT** **53.98 29** IAMs_20 IAMs_20 01 29 57.5
comp=Z,4µm,21.0s
E46A **Sault Ste Mari** **53.99 18** S **S** **01 16 38.1 +0.5**
baz=206
WALA **Waterton Lakes** **54.05 353** IAmb IAmb 01 09 21.7
comp=Z,40nm,1.3s
B08A **Colville Reser** **54.27 348** IAmb IAmb 01 09 19.1
comp=Z,24nm,1.3s
YLE **Yale** **54.28 29** IAMs_20 IAMs_20 01 29 55.8
comp=Z,4µm,22.0s
SADO **Sadowa** **54.36 22** LR LR 01 32 36.6
comp=Z,3µm,18.3s,baz=200,slow=36
SADO **Sadowa** **54.36 22** IAmb IAmb 01 09 03.7
comp=Z,32nm,1.1s
D03D **Eldon** **54.36 345** P **P** **01 09 03.3 -1.4**
baz=157,SNR=7.4
NLWA **Neilton Lookou** **54.44 344** P **P** **01 09 05.0 -0.3**
NLWA IAmb IAmb 01 09 16.1
comp=Z,22nm,1.2s
NLWA IAMs_20 IAMs_20 01 27 52.8
comp=Z,4µm,21.0s
PTGB **Pitanga** **54.51 117** *eP* **P** **01 09 05.9 -0.5**
PCMB **Pacaembu** **54.63 113** *eP* **P** **01 09 07.6 +0.4**
CPSB **Cacapava Do Su** **54.79 124** *eP* **P** **01 09 10.2 +2.0**
PRPB **Paraupebas** **54.88 94** *eP* **P** **01 09 08.1 -1.1**
B06A **Marblemount** **54.89 347** P **P** **01 09 08.0 -0.5**
TRY **Troy** **55.02 28** P **P** **01 09 08.7 -0.9**
TRY IAmb IAmb 01 09 14.4
comp=Z,32nm,1.1s
TRY IAMs_20 IAMs_20 01 31 07.0
comp=Z,3µm,20.0s
PLTB **Pedras Altas** **55.07 126** IAmb IAmb 01 09 15.8
comp=Z,36nm,1.3s
PLTB **Pedras Altas** **55.07 126** *eP* **P** **01 09 10.6 +0.4**
WCNY **West Carthage** **55.12 25** S **S** **01 16 53.4 +0.6**
baz=216
ITRB **Iturama** **55.16 111** *eP* **P** **01 09 12.6 +1.4**
ULM **Lac du Bonnet** **55.23 7** P **P** **01 09 08.9 -2.1**
comp=Z,21nm,1.0s,baz=200,slow=8.0,SNR=20
ULM LR LR 01 31 20.8
comp=Z,5µm,19.3s,baz=192,slow=34
comp=Z,21nm,1.0s
ULM **Lac du Bonnet** **55.23 7** IAmb IAmb 01 09 11.9
comp=Z,36nm,1.1s
ULM **Lac du Bonnet** **55.23 7** *ceP* **P** **01 09 10.2 -0.8**
L61B **Northampton** **55.27 29** IAMs_20 IAMs_20 01 31 17.6
comp=Z,3µm,20.0s
L61B **Northampton** **55.27 29** P **P** **01 09 08.3 -3.1**
baz=220
QUA2 **Belchertown** **55.30 29** IAMs_20 IAMs_20 01 31 54.4
comp=Z,2µm,19.0s
POHA **Pohakuloa** **55.32 298** IAMs_20 IAMs_20 01 27 39.7
comp=Z,3µm,20.0s
PGC **Sidney** **55.49 345** P **P** **01 09 12.1 -0.7**
PGC IAmb IAmb 01 09 17.2
comp=Z,33nm,1.3s
RAR **Rarotonga** **55.62 248** LR LR 01 26 25.1
comp=Z,1µm,18.4s,baz=75,slow=29
HRV **Adam Dziewonsk** **55.85 29** IAMs_20 IAMs_20 01 31 04.1
comp=Z,4µm,21.0s
LONY **Lake Ozonia** **56.09 26** IAMs_20 IAMs_20 01 31 49.2
comp=Z,3µm,20.0s
LONY **Lake Ozonia** **56.09 26** S **S** **01 17 06.9 +1.0**
baz=217
HNH **Hanover** **56.41 28** IAMs_20 IAMs_20 01 32 15.9
comp=Z,4µm,20.0s
PEXB **Peixe** **56.44 101** *eP* **P** **01 09 19.5 -0.8**
FFD **Franklin Falls** **56.53 29** IAMs_20 IAMs_20 01 33 19.1
comp=Z,2µm,19.0s
VT1 **Waterbury** **56.68 27** IAMs_20 IAMs_20 01 32 18.6
comp=Z,4µm,20.0s
TMAB **Tom-Au,PA,Br** **56.77 90** *eP* **P** **01 09 21.4 -1.3**
BDFB **Brasilia** **56.93 106** P **P** **01 09 23.1 -0.9**
comp=Z,6.8nm,0.9s,baz=299,slow=3.1,SNR=8.6
BDFB LR LR 01 31 55.8
comp=Z,4µm,18.6s,baz=277,slow=34
comp=Z,6.8nm,0.9s
BDFB **Brasilia** **56.93 106** P **P** **01 09 22.6 -1.3**
BDFB IAmb IAmb 01 09 33.9
comp=Z,44nm,1.4s
BDFB **Brasilia** **56.93 106** *eP* **P** **01 09 22.6 -1.3**
LLLB **Lillooet** **56.94 347** IAmb IAmb 01 09 38.8
comp=Z,24nm,1.2s
IPMB **Ipameri, GO** **56.97 108** *eP* **P** **01 09 23.0 -1.1**
LBNH **Lisbon** **56.99 28** IAMs_20 IAMs_20 01 32 43.1
comp=Z,3µm,20.0s
SMTB **Santa Maria do** **57.06 98** *eP* **P** **01 09 24.5 -0.3**
MNTQ **Montreal, Queb** **57.20 26** P **P** **01 09 26.0 +0.9**
MNTQ IAmb IAmb 01 09 29.9
comp=Z,21nm,0.9s
TRQ **Mont Tremblant** **57.38 25** IAmb IAmb 01 09 31.1
comp=Z,23nm,1.0s
USHA **Ushuaia** **58.05 156** LR LR 01 29 14.8
comp=Z,5µm,18.4s,baz=300,slow=31
KIP **Kipapa** **58.08 299** IAMs_20 IAMs_20 01 26 59.5
comp=Z,3µm,21.0s
RCLB **Rio Claro- Sao** **58.18 113** *eP* **P** **01 09 32.8 +0.3**
WVL **Waterville** **58.31 29** IAMs_20 IAMs_20 01 32 29.0
comp=Z,4µm,20.0s
VAO **Valinhos** **58.78 114** *eP* **P** **01 09 38.3 +1.5**
PKME **Peaks-Kenny Pk** **59.00 29** IAMs_20 IAMs_20 01 32 51.3
comp=Z,3µm,21.0s
SDBA **SAO DESIDERIO** **59.77 102** *eP* **P** **01 09 43.0 -0.7**
F64A **Sherman** **59.89 29** P **P** **01 09 44.3 +0.4**
F64A IAmb IAmb 01 09 48.9
comp=Z,30nm,1.1s
BBB **Bella Bella** **59.95 344** LR LR 01 32 26.4
comp=Z,2µm,18.7s,baz=158,slow=33
LMQ **La Malbaie** **60.23 26** P **P** **01 09 44.7 -1.5**
D62A **Allapoint, All** **60.45 27** P **P** **01 09 47.2 -0.5**
PQI **Presque Isle** **60.63 28** IAMs_20 IAMs_20 01 33 51.6
comp=Z,4µm,21.0s
ROSB **Rosrio** **60.70 91** *eP* **P** **01 09 48.4 -1.6**
EFI **East Falkland** **60.84 149** P **P** **01 09 53.1 +2.8**
EFI **East Falkland** **60.84 149** ‖ *eP* P 01 09 56.4 +6.1
EFI pmax pmax
comp=Z,85nm,1.1s
BATG **Bathurst New B** **62.00 29** P **P** **01 09 57.4 -0.9**
CAM01 **Campos-RJ** **63.50 112** *eP* **P** **01 10 08.0 -0.7**
SJMB **Sao Joao De Ma** **63.68 108** *eP* **P** **01 10 09.3 -0.7**
FCC **Fort Churchill** **63.80 6** P **P** **01 10 08.7 -1.2**
FCC **Fort Churchill** **63.80 6** P **P** **01 10 08.7 -1.2**
FCC pmax pmax
comp=Z,36nm,1.1s
RIB01 **Linhares ES** **64.47 109** *eP* **P** **01 10 17.2 +2.0**
NAN01 **Guarapari, ES** **64.63 107** *eP* **P** **01 10 15.4 -0.8**
NBMO **Morrinhos-CE** **64.74 91** *eP* **P** **01 10 16.5 -0.5**
T35M **Bob Quinn** **64.79 345** P **P** **01 10 15.6 -0.9**
baz=152
WRAK **Wrangell Islan** **64.86 344** P **P** **01 10 15.9 -1.0**
WRAK **Wrangell Islan** **64.86 344** P **P** **01 10 15.5 -1.4**
baz=149
GDU01 **Guandu, BA** **64.99 103** *eP* **P** **01 10 18.1 -0.5**
NBPB **Pedra_Branca-C** **65.08 94** *eP* **P** **01 10 18.6 -0.7**
NBMA **Muriti-CE** **65.82 96** *eP* **P** **01 10 23.8 -0.3**
DLBC **Dease Lake** **66.02 346** LR LR 01 35 46.9
comp=Z,2µm,20.3s,baz=148,slow=33
DLBC **Dease Lake** **66.02 346** P **P** **01 10 24.5 0.0**
DLBC **Dease Lake** **66.02 346** P **P** **01 10 23.3 -1.2**
baz=152,SNR=8.9
AFI **Afiamalu** **66.42 257** LR LR 01 31 23.5
comp=Z,1µm,21.5s,baz=88,slow=29
PMSA **Palmer Station** **66.70 162** LR LR 01 31 56.8
comp=Z,6µm,21.2s,baz=310,slow=29
NBLA **Lagarto - SE** **66.72 100** *eP* **P** **01 10 29.3 -0.5**
JIS **Juneau Island** **67.03 344** P **P** **01 10 30.7 -0.1**
JIS IAMs_20 IAMs_20 01 36 31.8
comp=Z,2µm,18.0s
SCHQ **Schefferville** **67.16 23** P **P** **01 10 29.8 -2.0**
comp=Z,6.6nm,0.9s,baz=142,slow=1.8,SNR=6.4
SCHQ LR LR 01 38 58.4
comp=Z,3µm,19.9s,baz=219,slow=35
comp=Z,6.6nm,0.9s
SCHQ **Schefferville** **67.16 23** P **P** **01 10 30.4 -1.4**
JOHN **Johnston Islan** **67.24 290** IAMs_20 IAMs_20 01 30 53.6
comp=Z,3µm,20.0s
YKA **Yellowknife Ar** **67.36 355** P **P** **01 10 31.7 -1.2**
comp=Z,7.2nm,0.9s,baz=164,slow=6.5,SNR=20
YKA LR LR 01 37 17.4
comp=Z,2µm,21.2s,baz=180,slow=34
comp=Z,7.2nm,0.9s
BESE **Bessie Mountai** **67.42 344** P **P** **01 10 34.0 +0.6**
P32M **Atlin** **67.97 345** P **P** **01 10 35.6 -1.2**
baz=149
NBAN **Anadia - AL** **68.22 99** *eP* **P** **01 10 38.3 -1.1**
P33M **Teslin, Yukon** **68.27 345** IAmb IAmb 01 10 53.0
comp=Z,22nm,1.5s
P33M **Teslin, Yukon** **68.27 345** P **P** **01 10 37.7 -1.1**
baz=150
P33M S **S** **01 19 40.6 +1.5**
baz=150
SMAI **San Martin Ant** **68.31 166** P **P** **01 10 41.7 +2.9**
TGTN **Hyland Airport** **68.41 348** P **P** **01 10 38.5 -1.1**
baz=155
TGTN S **S** **01 19 42.3 +1.7**
baz=155
PLBC **Pleasant Camp** **68.58 343** P **P** **01 10 40.0 -0.6**
baz=146
RCBR **Riachuelo** **68.72 94** LR LR 01 39 35.0
comp=Z,3µm,19.1s,baz=56,slow=35
RCBR **Riachuelo** **68.72 94** P **P** **01 10 42.1 -0.4**
RCBR **Riachuelo** **68.72 94** IAMs_20 IAMs_20 01 39 04.2
comp=Z,3µm,20.0s
RCBR **Riachuelo** **68.72 94** P **P** **01 10 42.1 -0.4**
RCBR pmax pmax
comp=Z,56nm,1.4s
RCBR **Riachuelo** **68.72 94** *eP* **P** **01 10 41.8 -0.8**
WRGLY **Wrigley** **69.13 351** P **P** **01 10 42.8 -1.2**
baz=160
WHY **Whitehorse** **69.19 345** P **P** **01 10 43.6 -1.0**
baz=148
WHY S **S** **01 19 52.9 +2.8**
baz=148
O30N **Mendenhall** **69.60 344** P **P** **01 10 46.1 -0.9**
baz=146,SNR=6.8
O30N S **S** **01 19 59.4 +4.6**
baz=146
PNL **Peninsula** **69.65 342** P **P** **01 10 46.5 -0.8**
baz=143
BCPM **Bancas Point** **69.95 342** IAMs_20 IAMs_20 01 33 35.2
comp=Z,2µm,22.0s
MMPY **Sheldon Lake,** **70.02 347** P **P** **01 10 48.5 -1.1**
baz=152,SNR=12
MMPY S **S** **01 20 01.9 +2.2**
baz=152
HYT **Haines Junctio** **70.03 344** P **P** **01 10 50.3 +0.5**
HYT IAmb IAmb 01 11 10.9
comp=Z,37nm,1.5s
HYT **Haines Junctio** **70.03 344** P **P** **01 10 48.9 -0.9**
baz=145,SNR=9.1
HYT S **S** **01 20 04.2 +4.2**
baz=145
N31M **Braeburn, Yuko** **70.12 345** P **P** **01 10 50.6 +0.4**
N31M IAMs_20 IAMs_20 01 38 06.5
comp=Z,2µm,20.0s
N31M **Braeburn, Yuko** **70.12 345** P **P** **01 10 49.4 -0.8**
baz=147,SNR=9.7
N31M S **S** **01 20 06.1 +5.2**
baz=147
FARO **Faro, Yukon** **70.15 346** P **P** **01 10 49.9 -0.5**
baz=150
PINM **Pinnacle** **70.25 342** P **P** **01 10 49.9 -1.2**
baz=142
PINM S **S** **01 20 06.0 +3.5**
baz=142
YUK6 **Outpost Mounta** **70.37 343** P **P** **01 10 51.2 -0.8**
baz=144,SNR=11
YUK6 S **S** **01 20 08.9 +4.7**
baz=144
M31M **Drury Creek, Y** **70.38 346** IAmb IAmb 01 11 08.1
comp=Z,25nm,1.4s
M31M IAMs_20 IAMs_20 01 37 59.2
comp=Z,2µm,20.0s
M31M **Drury Creek, Y** **70.38 346** P **P** **01 10 51.0 -0.7**
baz=148,SNR=7.4
M31M S **S** **01 20 05.9 +2.0**
baz=148
N30M **Aishikik Lake** **70.44 344** P **P** **01 10 51.4 -0.8**
baz=146
N30M S **S** **01 20 08.5 +3.8**
baz=146
YUK4 **Talbot Arm** **70.78 344** P **P** **01 10 53.7 -0.7**
baz=144,SNR=9.6
TABL **Table Mountain** **70.80 342** P **P** **01 10 56.8 +2.2**
TABL IAmb IAmb 01 11 16.9
comp=Z,17nm,1.1s
TABL IAMs_20 IAMs_20 01 34 27.6
comp=Z,3µm,22.0s
MESA **MESA** **70.84 341** IAMs_20 IAMs_20 01 34 23.0
comp=Z,2µm,20.0s
MESA **MESA** **70.84 341** P **P** **01 10 53.9 -1.0**
baz=140
MESA S **S** **01 20 13.5 +3.8**
baz=140
YAH **Yahtse** **70.92 342** IAMs_20 IAMs_20 01 34 29.0
comp=Z,2µm,22.0s
YUK8 **Steele Glacier** **71.05 343** P **P** **01 10 55.1 -1.1**
baz=143,SNR=8.9
YUK8 S **S** **01 20 17.9 +5.6**
baz=143
LOGN **Logan Glacier** **71.06 342** P **P** **01 10 56.8 +0.7**
LOGN IAmb IAmb 01 11 09.0
comp=Z,23nm,1.2s
LOGN IAMs_20 IAMs_20 01 34 39.5
comp=Z,2µm,22.0s
SNH **Sunshine Point** **71.13 341** IAMs_20 IAMs_20 01 34 55.6
comp=Z,2µm,19.0s
GRNC **Granite Creek** **71.21 342** P **P** **01 10 57.9 +0.8**
GRNC IAmb IAmb 01 11 04.9
comp=Z,24nm,1.1s
GRNC IAMs_20 IAMs_20 01 34 39.7
comp=Z,3µm,22.0s
CTGM **Chitina Glacie** **71.27 342** P **P** **01 10 57.4 +0.1**
CTGM IAMs_20 IAMs_20 01 34 45.1
comp=Z,3µm,22.0s
CTG **Chitna Glacier** **71.27 342** P **P** **01 10 56.5 -0.8**
baz=141
ISLE **Juniper Island** **71.30 342** P **P** **01 10 56.0 -1.5**
ISLE IAmb IAmb 01 11 08.3
comp=Z,26nm,1.3s
ISLE IAMs_20 IAMs_20 01 34 37.9
comp=Z,2µm,22.0s
M30M **Minto, Yukon** **71.30 345** IAmb IAmb 01 11 05.2
comp=Z,16nm,1.1s
M30M IAMs_20 IAMs_20 01 38 50.6
comp=Z,2µm,19.0s
M30M **Minto, Yukon** **71.30 345** P **P** **01 10 56.0 -1.3**
baz=146,SNR=10
M30M S **S** **01 20 18.0 +3.5**
baz=146
WAX **Waxell Ridge** **71.34 341** P **P** **01 10 58.6 +0.9**
WAX IAmb IAmb 01 11 11.9
comp=Z,24nm,1.0s
WAX IAMs_20 IAMs_20 01 35 03.1
comp=Z,2µm,19.0s
SUCK **Suckling Hills** **71.36 341** P **P** **01 10 59.9 +2.1**
SUCK IAMs_20 IAMs_20 01 34 47.6
comp=Z,2µm,19.0s
BARN **Barnard Glacie** **71.44 342** IAMs_20 IAMs_20 01 35 35.6
comp=Z,2µm,19.0s
TGL **Tana Glacier** **71.57 341** P **P** **01 10 60.0 +0.9**
TGL IAmb IAmb 01 11 19.5
comp=Z,29nm,1.4s
TGL IAMs_20 IAMs_20 01 34 33.1
comp=Z,2µm,21.0s
YUK3 **Moose Creek** **71.65 343** P **P** **01 10 58.5 -1.2**
baz=142,SNR=17
YUK3 S **S** **01 20 22.8 +3.8**
baz=142
HMT **Hamilton** **71.71 341** IAMs_20 IAMs_20 01 34 59.0
comp=Z,2µm,20.0s
ORCD **Orcadas** **71.73 153** P **P** **01 11 02.4 +2.4**
Q23K **Middleton Isla** **71.76 339** IAMs_20 IAMs_20 01 34 48.4
comp=Z,2µm,22.0s
MCARA **McCarthy VSAT** **72.11 342** P **P** **01 11 02.5 +0.3**
MCARA **McCarthy VSAT** **72.11 342** P **P** **01 11 01.1 -1.1**
baz=140
MCARA S **S** **01 20 26.9 +3.0**
baz=140
VRDI **Verde Repeater** **72.13 342** P **P** **01 11 02.5 -0.1**
VRDI IAmb IAmb 01 11 15.9
comp=Z,27nm,1.2s
BVCY **Beaver Creek** **72.27 343** P **P** **01 11 02.0 -1.2**
baz=142,SNR=7.2
BMRM **Bremner River** **72.30 341** P **P** **01 11 03.5 +0.1**
BMRM IAMs_20 IAMs_20 01 35 30.5
comp=Z,2µm,20.0s
BMRM **Bremner River** **72.30 341** P **P** **01 11 02.8 -0.6**
baz=138,SNR=10
BMRM S **S** **01 20 26.7 +0.5**
baz=138
EYAK **Cordova Ski Ar** **72.37 340** P **P** **01 11 04.3 +0.6**
EYAK IAmb IAmb 01 11 11.5
comp=Z,25nm,1.1s
EYAK **Cordova Ski Ar** **72.37 340** P **P** **01 11 02.8 -1.0**
baz=137
EYAK S **S** **01 20 27.1 +0.3**
baz=137
GLB **Gilahina Butte** **72.40 342** P **P** **01 11 03.9 -0.2**
GLB IAmb IAmb 01 11 11.9
comp=Z,26nm,1.1s
HIN **Hinchinbrook I** **72.52 340** P **P** **01 11 05.1 +0.5**
HIN IAmb IAmb 01 11 27.0
comp=Z,29nm,1.0s
M27K **Edge Creek, AK** **72.52 343** P **P** **01 11 05.1 +0.3**
M27K IAMs_20 IAMs_20 01 35 43.1
comp=Z,2µm,21.0s
M27K **Edge Creek, AK** **72.52 343** P **P** **01 11 03.8 -1.0**
baz=141,SNR=12
M27K S **S** **01 20 31.5 +2.6**
baz=141
FID **Port Fidalgo** **72.76 340** P **P** **01 11 06.1 -0.1**
FID IAmb IAmb 01 11 25.7
comp=Z,18nm,1.0s
FID IAMs_20 IAMs_20 01 35 37.5
comp=Z,2µm,20.0s
N25K **Chitina, Valde** **72.78 341** IAmb IAmb 01 11 14.3
comp=Z,23nm,1.3s
N25K IAMs_20 IAMs_20 01 35 49.0
comp=Z,2µm,21.0s
N25K **Chitina, Valde** **72.78 341** P **P** **01 11 05.2 -1.1**
baz=138,SNR=6.4
N25K S **S** **01 20 33.0 +1.3**
baz=138
DIV **Divide** **72.80 341** P **P** **01 11 05.5 -1.0**

DIV IAmb IAmb 01 11 11.5
comp=Z,17nm,1.2s
M26K Nabesna, AK 72.88 343 IAmb IAmb 01 11 20.0
M26K comp=Z,22nm,1.2s IAMs_20 IAMs_20 01 36 33.8
comp=Z,2µm,19.0s
M26K Nabesna, AK 72.88 343 P **P** **01 11 05.8 -1.1**
M26K baz=140,SNR=11 S **S** **01 20 33.6 +0.8**
baz=140
RAO Raoul Island 72.90 241 LR LR 01 34 58.0
comp=Z,986nm,20.8s,baz=152,slow=29
SII Sitkinak Islan 72.95 334 P **P** **01 11 05.1 -2.2**
baz=128
OHAK Old Harbor 72.97 335 P **P** **01 11 06.9 -0.5**
OHAK Old Harbor 72.97 335 P **P** **01 11 05.0 -2.4**
baz=129
KDAK Kodiak Island 73.03 336 LR LR 01 36 08.1
comp=Z,5µm,18.3s,baz=150,slow=30
KDAK Kodiak Island 73.03 336 P **P** **01 11 08.3 +0.6**
KDAK IAmb IAmb 01 11 20.2
comp=Z,25nm,1.1s
KDAK Kodiak Island 73.03 336ñ *eP* **P** **01 11 07.5 -0.3**
KDAK pmax pmax
comp=Z,42nm,1.7s
KDAK Kodiak Island 73.03 336 P **P** **01 11 05.5 -2.3**
baz=130
KDAK S **S** **01 20 35.0 +0.5**
baz=130
L27K Beaver Creek, 73.06 343 IAmb IAmb 01 11 13.2
comp=Z,22nm,1.2s
L27K IAMs_20 IAMs_20 01 36 03.2
comp=Z,2µm,22.0s
L27K Beaver Creek, 73.06 343 P **P** **01 11 06.3 -1.6**
baz=141,SNR=14
L27K S **S** **01 20 36.4 +1.7**
baz=141
GLI Glacier Island 73.07 340 P **P** **01 11 07.3 -0.6**
GLI IAmb IAmb 01 11 20.2
comp=Z,31nm,1.2s
GLI IAMs_20 IAMs_20 01 35 43.9
comp=Z,2µm,21.0s
GLI Glacier Island 73.07 340 P **P** **01 11 05.8 -2.1**
baz=136
GLI S **S** **01 20 34.7 -0.1**
baz=136
KLU Klutina 73.12 341 P **P** **01 11 08.0 -0.3**
KLU IAmb IAmb 01 11 24.0
comp=Z,27nm,1.4s
KLU IAMs_20 IAMs_20 01 35 56.1
comp=Z,2µm,21.0s
KLU Klutina 73.12 341 P **P** **01 11 06.5 -1.8**
baz=137
DAWY Dawson 73.19 345 IAmb IAmb 01 11 21.1
comp=Z,20nm,1.1s
DAWY Dawson 73.19 345 P **P** **01 11 07.0 -1.7**
baz=144,SNR=12
DAWY S **S** **01 20 37.2 +0.9**
baz=144
J29M Klondike Camp 73.21 346 IAMs_20 IAMs_20 01 38 00.2
comp=Z,2µm,21.0s
SEW Seward 73.36 338 P **P** **01 11 09.3 -0.3**
SEW IAmb IAmb 01 11 23.0
comp=Z,19nm,1.0s
SEW Seward 73.36 338 P **P** **01 11 07.6 -2.0**
baz=133
SEW S **SKiKP** **01 20 40.4 -0.5**
baz=133
FRB Frobisher Bay 73.46 16 LR LR 01 44 12.9
comp=Z,1µm,18.1s,baz=211,slow=36
L26K Log Cabin Wild 73.47 343 IAmb IAmb 01 11 25.8
comp=Z,21nm,1.2s
L26K IAMs_20 IAMs_20 01 35 59.2
comp=Z,2µm,20.0s
L26K Log Cabin Wild 73.47 343 P **P** **01 11 08.5 -1.8**
baz=140
L26K S **SKiKP** **01 20 40.6 -0.5**
baz=140
Q20K Shuyak Island 73.49 336 P **P** **01 11 10.0 -0.4**
baz=130
Q20K S **S** **01 20 39.4 -0.2**
baz=130
MENT Mentasta 73.51 343 P **P** **01 11 11.0 +0.4**
MENT IAmb IAmb 01 11 18.0
comp=Z,32nm,1.4s
HARP HAARP 73.54 342 P **P** **01 11 09.7 -1.0**
baz=138
HARP S **SKiKP** **01 20 41.9 +0.7**
baz=138
BRSE Bradley Lake S 73.59 338 P **P** **01 11 09.8 -1.3**
baz=132
BRSE S **SKiKP** **01 20 42.2 +0.9**
baz=132
CNPM China Poot 73.63 337 IAmb IAmb 01 11 27.2
comp=Z,31nm,1.1s
CNPM IAMs_20 IAMs_20 01 35 34.1
comp=Z,3µm,21.0s
M24K Tolsona, Glenn 73.65 341 P **P** **01 11 11.3 -0.1**
M24K IAmb IAmb 01 11 25.8
comp=Z,28nm,1.0s
M24K IAMs_20 IAMs_20 01 36 15.2
comp=Z,2µm,22.0s
M24K Tolsona, Glenn 73.65 341 P **P** **01 11 10.7 -0.7**
baz=137
M24K S **S** **01 20 42.1 +0.6**
baz=137
BRLK Bradley Lake 73.66 338 P **P** **01 11 11.4 -0.1**
BRLK IAmb IAmb 01 11 41.3
comp=Z,30nm,1.3s
BRLK IAMs_20 IAMs_20 01 35 34.7
comp=Z,2µm,20.0s
O22K Cooper Landing 73.71 339 IAMs_20 IAMs_20 01 37 26.1
comp=Z,2µm,18.0s
O22K Cooper Landing 73.71 339 S **S** **01 20 42.5 +0.4**
baz=133
SCM Sheep Creek Mo 73.83 341 IAmb IAmb 01 11 25.2
comp=Z,30nm,1.1s
SCM IAMs_20 IAMs_20 01 36 15.0
comp=Z,2µm,21.0s
SCM Sheep Creek Mo 73.83 341 P **P** **01 11 10.4 -2.1**
baz=135,SNR=6.2
SCM S **S** **01 20 44.0 +0.4**
baz=135
HOM Homer 73.88 337 IAMs_20 IAMs_20 01 35 41.6
comp=Z,2µm,21.0s
K27K Chicken 73.88 344 IAMs_20 IAMs_20 01 40 56.0
comp=Z,2µm,19.0s
K27K Chicken 73.88 344 P **P** **01 11 11.9 -0.7**
baz=141
K27K S **S** **01 20 46.5 +2.6**
baz=141
KNK Knik Glacier 73.91 340 IAmb IAmb 01 11 28.6
comp=Z,29nm,1.0s
KNK IAMs_20 IAMs_20 01 36 29.3
comp=Z,2µm,20.0s
KNK Knik Glacier 73.91 340 P **P** **01 11 11.2 -1.7**
baz=134,SNR=6.5
KNK S **SKiKP** **01 20 42.7 +1.0**
baz=134
M23K Glacier View 73.93 340 P **P** **01 11 11.2 -1.8**
baz=135,SNR=9.0
M23K S **S** **01 20 44.6 0.0**
baz=135
I29M Ogilvie Camp, 73.98 346 IAmb IAmb 01 11 25.2
comp=Z,24nm,1.1s
I29M IAMs_20 IAMs_20 01 40 02.5
comp=Z,2µm,18.0s
I29M Ogilvie Camp, 73.98 346 P **P** **01 11 11.5 -1.8**
baz=145,SNR=13
PAX Paxson 74.06 342 P **P** **01 11 11.6 -2.3**
baz=138
PAX S **S** **01 20 44.5 -1.7**
baz=138
RC01 Rabbit Creek A 74.13 339 P **P** **01 11 14.2 0.0**
RC01 IAMs_20 IAMs_20 01 37 41.2
comp=Z,2µm,18.0s
RC01 Rabbit Creek A 74.13 339 P **P** **01 11 11.6 -2.6**
baz=133
RC01 S **S** **01 20 44.9 -2.0**
baz=133
SML Sawmill 74.15 340 IAmb IAmb 01 11 41.1
comp=Z,28nm,1.2s
SML IAMs_20 IAMs_20 01 36 50.4
comp=Z,2µm,19.0s
SML Sawmill 74.15 340 P **P** **01 11 12.4 -1.9**
baz=134,SNR=7.4
SML S **S** **01 20 48.5 +1.4**
baz=134
DOT Dot Lake 74.15 343 IAmb IAmb 01 11 21.5
comp=Z,18nm,1.0s
Q19K Cape Douglas, 74.19 336 S **S** **01 20 46.6 -1.1**
baz=129
PMR Palmer 74.27 340 IAmb IAmb 01 11 27.2
comp=Z,35nm,1.1s
PMR Palmer 74.27 340 P **P** **01 11 13.0 -1.9**
baz=134,SNR=8.0
PMR S **S** **01 20 48.8 +0.5**
baz=134
GHO Glory Hole Cre 74.32 340 P **P** **01 11 15.0 -0.4**
GHO IAmb IAmb 01 11 41.5
comp=Z,23nm,1.3s
GHO IAMs_20 IAMs_20 01 36 54.1
comp=Z,1µm,19.0s
FIS Fire Island 74.34 339 IAMs_20 IAMs_20 01 37 46.7
comp=Z,2µm,18.0s
SCRK Sand Creek 74.38 343 IAMs_20 IAMs_20 01 36 41.3
comp=Z,3µm,22.0s
SCRK Sand Creek 74.38 343 P **P** **01 11 14.0 -1.7**
baz=139,SNR=12
SCRK S **S** **01 20 50.7 +0.9**
baz=139
CAPN Captain Cook N 74.43 338 IAMs_20 IAMs_20 01 40 28.0
comp=Z,2µm,19.0s
RIDG Independent Ri 74.45 343 P **P** **01 11 15.5 -0.5**
RIDG IAMs_20 IAMs_20 01 37 24.2
comp=Z,2µm,20.0s
RIDG Independent Ri 74.45 343 P **P** **01 11 13.9 -2.2**
baz=138,SNR=17
RIDG S **S** **01 20 50.7 +0.2**
baz=138
CHNA Chernabura Isl 74.45 331 P **P** **01 11 13.2 -2.9**
baz=122
WAT6 Susitna Watana 74.50 341 P **P** **01 11 14.4 -2.1**
baz=135,SNR=11
WAT6 S **S** **01 20 49.7 -1.6**
baz=135
O20K Slope Mountain 74.53 337 P **P** **01 11 15.1 -1.5**
baz=130
O20K S **S** **01 20 49.8 -1.6**
baz=130
R17K Ugashik Creek 74.56 334 P **P** **01 11 15.0 -1.8**
baz=126
R17K S **S** **01 20 51.8 0.0**
baz=126
J26L Joseph Creek 74.66 344 IAmb IAmb 01 11 22.4
comp=Z,17nm,1.1s
J26L Joseph Creek 74.66 344 P **P** **01 11 15.6 -1.7**
baz=140,SNR=14
J26L S **S** **01 20 53.6 +0.8**
baz=140
M22K Willow 74.72 340 IAMs_20 IAMs_20 01 38 10.7
comp=Z,2µm,18.0s
M22K Willow 74.72 340 P **P** **01 11 15.8 -1.8**
baz=133
SUA Susitna One 74.75 339 IAMs_20 IAMs_20 01 38 02.4
comp=Z,2µm,18.0s
SUA Susitna One 74.75 339 P **P** **01 11 16.2 -1.7**
baz=132
SUA S **S** **01 20 54.6 +0.6**
baz=132
K24K Donnelly Dome 74.78 342 P **P** **01 11 16.1 -1.8**
baz=137
K24K S **S** **01 20 55.2 +1.1**
baz=137
WAT1 Susitna Watana 74.94 341 P **P** **01 11 16.6 -2.3**
baz=134
WAT1 S **S** **01 20 53.1 -2.9**
baz=134
C36M Paulatuk 75.00 353 P **P** **01 11 19.1 +0.1**
C36M Paulatuk 75.00 353 P **P** **01 11 17.1 -1.9**
baz=160
C36M S **S** **01 20 55.6 -0.6**
baz=160
N20K Mount Spurr 75.10 338 P **P** **01 11 18.0 -1.9**
baz=131
N20K S **S** **01 20 56.2 -1.7**
baz=131
SPCR Spurr Chakacha 75.10 338 P **P** **01 11 17.4 -2.5**
baz=131
P18K Big Mountain, 75.12 336 IAmb IAmb 01 11 35.1
comp=Z,24nm,1.4s
P18K Big Mountain, 75.12 336 P **P** **01 11 17.7 -2.4**
baz=127
P18K S **S** **01 20 58.1 0.0**
baz=127
SDPT Sand Point 75.16 331 P **P** **01 11 17.0 -3.3**
baz=122
CUT Chulitna 75.22 340 P **P** **01 11 20.2 -0.2**
CUT IAMs_20 IAMs_20 01 38 37.7
comp=Z,2µm,18.0s
CUT Chulitna 75.22 340 P **P** **01 11 18.2 -2.2**
baz=133
J25K Salcha River, 75.26 343 IAmb IAmb 01 11 28.1
comp=Z,20nm,1.1s
J25K IAMs_20 IAMs_20 01 41 10.5
comp=Z,2µm,19.0s
J25K Salcha River, 75.26 343 P **P** **01 11 18.5 -2.2**
baz=138,SNR=14
J25K S **S** **01 20 58.8 -0.6**
baz=138
O19K Port Alsworth 75.26 337 P **P** **01 11 20.3 -0.3**
O19K IAmb IAmb 01 11 32.7
comp=Z,22nm,1.2s
O19K Port Alsworth 75.26 337 P **P** **01 11 18.2 -2.5**
baz=128
O19K S **S** **01 20 58.4 -1.0**
baz=128
SKT Skwentna 75.37 339 IAMs_20 IAMs_20 01 38 39.9
comp=Z,2µm,18.0s
SKT Skwentna 75.37 339 P **P** **01 11 19.5 -1.9**
baz=131,SNR=16
SKT S **S** **01 20 59.9 -0.8**
baz=131
O18K Koktuh Hills 75.40 336 P **P** **01 11 21.1 -0.4**
O18K IAmb IAmb 01 11 34.1
comp=Z,28nm,1.1s
O18K Koktuh Hills 75.40 336 P **P** **01 11 19.3 -2.2**
baz=128
O18K S **S** **01 20 59.7 -1.4**
baz=128
INK Inuvik 75.48 349 P **P** **01 11 21.0 -0.8**
comp=Z,12nm,1.1s,baz=155,slow=5.8,SNR=18
INK LR LR 01 42 22.4
comp=Z,4µm,18.7s,baz=142,slow=34
comp=Z,12nm,1.1s
INK Inuvik 75.48 349 IAmb IAmb 01 11 23.6
comp=Z,29nm,1.2s
INK Inuvik 75.48 349 P **P** **01 11 20.2 -1.6**
baz=150,SNR=17
INK S **S** **01 21 02.7 +1.1**
baz=150
P17K Kvichak River 75.50 335 P **P** **01 11 19.7 -2.4**
baz=126
P17K S **S** **01 21 00.7 -1.4**
baz=126
HDA Harding Lake 75.57 343 IAmb IAmb 01 11 27.0
comp=Z,22nm,1.4s
HDA Harding Lake 75.57 343 P **P** **01 11 20.2 -2.3**
baz=136,SNR=6.9
HDA S **S** **01 21 01.5 -1.3**
baz=136
HDA S **S** **01 21 01.5 -1.3**
baz=136
MCK McKinley 75.70 341 IAMs_20 IAMs_20 01 37 48.3
comp=Z,2µm,20.0s
MCK McKinley 75.70 341 P **P** **01 11 20.9 -2.3**
baz=134,SNR=6.3
MCK S **S** **01 21 02.2 -2.1**
baz=134
N19K Bonanza Creek 75.71 337 IAmb IAmb 01 11 36.6
comp=Z,23nm,1.1s
N19K Bonanza Creek 75.71 337 P **P** **01 11 20.6 -2.8**
baz=128,SNR=8.6
N19K S **S** **01 21 04.5 -0.1**
baz=128
IL31 75.82 343 IAmb IAmb 01 11 35.0
comp=Z,24nm,1.1s
ILAR Eielson Array 75.82 343 P **P** **01 11 22.6 -1.3**
comp=Z,7.8nm,1.0s,baz=156,slow=4.9,SNR=30
ILAR LR LR 01 41 59.9
comp=Z,1µm,19.4s,baz=123,slow=34
comp=Z,7.8nm,1.0s
ILAR Eielson Array 75.82 343 P **P** **01 11 23.7 -0.1**
ILAR Eielson Array 75.82 343 P **P** **01 11 23.7 -0.1**
M20K Styx River 75.88 339 IAmb IAmb 01 11 31.5
comp=Z,15nm,0.9s
M20K IAMs_20 IAMs_20 01 38 46.4
comp=Z,2µm,19.0s
M20K Styx River 75.88 339 P **P** **01 11 21.9 -2.5**
baz=130,SNR=8.2
M20K S **S** **01 21 05.0 -1.5**
baz=130
TRF Thorofare Moun 75.94 341 IAmb IAmb 01 11 31.8
comp=Z,29nm,1.2s
TRF IAMs_20 IAMs_20 01 37 32.8
comp=Z,2µm,20.0s
TRF Thorofare Moun 75.94 341 P **P** **01 11 22.1 -2.7**
baz=133,SNR=8.9
WRH Wood River Hil 75.96 342 IAMs_20 IAMs_20 01 37 56.1
comp=Z,2µm,20.0s
CCB Clear Creek Bu 76.00 342 IAMs_20 IAMs_20 01 37 59.1
comp=Z,1µm,19.0s
P16K Nushagak River 76.06 335 P **P** **01 11 24.3 -0.9**
baz=125
O17K Koliganek Bris 76.11 336 P **P** **01 11 23.8 -1.8**
baz=126
O17K S **S** **01 21 07.7 -1.2**
baz=126
N18K Kilae Creek 76.17 337 IAmb IAmb 01 11 38.5
comp=Z,20nm,1.1s
N18K Kilae Creek 76.17 337 P **P** **01 11 23.7 -2.2**
baz=127,SNR=11
N18K S **S** **01 21 07.1 -2.5**
baz=127
BWN Browne 76.17 342 P **P** **01 11 25.9 0.0**
BWN IAMs_20 IAMs_20 01 38 03.5
comp=Z,2µm,20.0s
COLA College 76.18 343 P **P** **01 11 25.8 -0.1**
COLA College 76.18 343 IAMs_20 IAMs_20 01 38 05.9
comp=Z,1µm,20.0s
COLA College 76.18 343*deP* **P** **01 11 26.4 +0.6**
COLA pmax pmax
comp=Z,8.0nm,1.4s
COLA College 76.18 343 P **P** **01 11 24.2 -1.6**
baz=136
COLA S **S** **01 21 08.9 -0.5**
baz=136
TCOL CIGO, UAF Yank 76.18 343 P **P** **01 11 26.2 +0.3**
TCOL IAmb IAmb 01 11 40.2
comp=Z,21nm,1.3s
TCOL IAMs_20 IAMs_20 01 38 05.9
comp=Z,1µm,20.0s
TCOL CIGO, UAF Yank 76.18 343 P **P** **01 11 23.9 -2.0**
baz=136
TCOL S **S** **01 21 08.9 -0.5**
baz=136
PPLA Purkeypile 76.21 340 P **P** **01 11 24.4 -1.9**
baz=131,SNR=14
PPLA S **S** **01 21 12.2 +2.0**
baz=131
KTH Kantishna Hill 76.22 341 IAMs_20 IAMs_20 01 39 23.2
comp=Z,1µm,18.0s
POKR Poker Plat Res 76.23 343 P **P** **01 11 25.6 -0.6**
POKR IAmb IAmb 01 11 42.6
comp=Z,29nm,1.4s
POKR IAMs_20 IAMs_20 01 41 52.1
comp=Z,2µm,20.0s
POKR Poker Plat Res 76.23 343 P **P** **01 11 24.3 -1.9**
baz=136
POKR S **S** **01 21 06.6 -3.5**
baz=136
MSVF Nonsavu 76.24 253 LR LR 01 36 45.8
comp=Z,873nm,21.0s,baz=98,slow=29
SVW2 Sparrevohn 76.30 337 IAmb IAmb 01 11 47.8
comp=Z,19nm,1.1s
NEA2 Nenana 76.35 342 IAmb IAmb 01 11 42.3
comp=Z,35nm,1.2s
NEA2 IAMs_20 IAMs_20 01 37 55.4
comp=Z,2µm,20.0s
NEA2 Nenana 76.35 342 P **P** **01 11 25.2 -1.7**
baz=134,SNR=11
NEA2 S **S** **01 21 10.3 -1.1**
baz=134
MDM Murphy Dome 76.35 343 IAmb IAmb 01 11 38.6
comp=Z,27nm,1.2s
MDM IAMs_20 IAMs_20 01 38 10.5
comp=Z,2µm,20.0s
M19K Big River Lodg 76.36 338 IAMs_20 IAMs_20 01 42 25.0
comp=Z,1µm,18.0s
M19K Big River Lodg 76.36 338 P **P** **01 11 25.5 -1.5**
baz=129
M19K S **S** **01 21 09.9 -1.6**
baz=129
O16K Kokwok River B 76.42 335 P **P** **01 11 25.2 -2.2**
baz=125
O16K S **S** **01 21 12.1 -0.2**
baz=125
CAST Castle Rocks 76.52 340 P **P** **01 11 27.1 -0.8**
CAST IAmb IAmb 01 11 28.4
comp=Z,30nm,1.2s
CAST IAMs_20 IAMs_20 01 38 23.1
comp=Z,2µm,19.0s
CAST Castle Rocks 76.52 340 P **P** **01 11 25.8 -2.1**
baz=131
L20K Farewell, AK 76.53 339 P **P** **01 11 25.7 -2.3**
baz=129,SNR=11
L20K S **S** **01 21 11.4 -2.2**
baz=129
BPAW Bear Paw Mtn. 76.61 341 IAmb IAmb 01 11 35.1
comp=Z,16nm,1.1s
BPAW IAMs_20 IAMs_20 01 38 13.5
comp=Z,2µm,20.0s
BPAW Bear Paw Mtn. 76.61 341 P **P** **01 11 26.3 -2.1**
baz=132,SNR=7.3
L19K White Mountain 76.70 338 IAmb IAmb 01 11 35.9
comp=Z,29nm,1.2s
L19K IAMs_20 IAMs_20 01 37 37.1
comp=Z,2µm,22.0s
L19K White Mountain 76.70 338 P **P** **01 11 26.7 -2.2**
baz=128,SNR=12
L19K S **S** **01 21 13.2 -2.2**
baz=128
I23K Minto, Yukon-K 76.83 342 IAMs_20 IAMs_20 01 38 33.0
comp=Z,2µm,20.0s
I23K Minto, Yukon-K 76.83 342 P **P** **01 11 27.9 -1.7**
baz=134,SNR=19
I23K S **S** **01 21 16.1 -0.4**
baz=134
MIDW Midway 76.84 300 IAMs_20 IAMs_20 01 36 30.3
comp=Z,2µm,20.0s
H24K Noodor Dome 76.88 343 IAMs_20 IAMs_20 01 42 40.3
comp=Z,2µm,20.0s
H24K Noodor Dome 76.88 343 P **P** **01 11 28.4 -1.5**
baz=136,SNR=22
H24K S **S** **01 21 16.3 -0.9**
baz=136
CHUM Lake Minchumin 76.90 340 P **P** **01 11 28.2 -1.8**
baz=131
CHUM S **S** **01 21 17.8 +0.4**
baz=131
K20K Telida 77.16 340 IAmb IAmb 01 11 38.2
comp=Z,29nm,1.1s
K20K IAMs_20 IAMs_20 01 39 40.1
comp=Z,2µm,18.0s
K20K Telida 77.16 340 P **P** **01 11 29.1 -2.4**
baz=129,SNR=18
K20K S **S** **01 21 20.6 +0.3**
baz=129
MLY Manley 77.17 342 IAmb IAmb 01 11 38.9
comp=Z,27nm,1.0s
MLY IAMs_20 IAMs_20 01 38 37.1
comp=Z,2µm,19.0s
MLY Manley 77.17 342 P **P** **01 11 29.8 -1.8**
baz=133,SNR=20
MLY S **S** **01 21 16.7 -3.7**
baz=133
N16K Nishlik Lake 77.20 336 P **P** **01 11 30.4 -1.5**
baz=124
N16K S **S** **01 21 19.5 -1.4**
baz=124
H23K Yukon River 77.35 343 IAMs_20 IAMs_20 01 42 36.9
comp=Z,2µm,20.0s
H23K Yukon River 77.35 343 P **P** **01 11 30.5 -2.1**
baz=134
H23K S **S** **01 21 21.2 -1.2**
baz=134
UNV Unalaska Valle 77.50 328 P **P** **01 11 34.5 +1.0**
UNV Unalaska Valle 77.50 328 P **P** **01 11 31.5 -2.1**
baz=116
TTA Tatalina 77.58 339 P **P** **01 11 31.7 -2.3**
baz=127
TTA S **S** **01 21 22.1 -3.0**
baz=127
I21K Tanana 77.66 342 IAmb IAmb 01 11 52.9

comp=Z,25nm,1.3s
I21K IAMs_20 IAMs_20 01 39 08.0
comp=Z,2µm,19.0s
I21K Tanana 77.66 342 P **P** **01 11 32.5 -1.7**
baz=132,SNR=10
URZ Urewera 77.67 232 LR LR 01 40 21.4
comp=Z,2µm,18.0s,baz=35,slow=32
J20K Nowinta River 77.71 340 IAmb IAmb 01 11 45.2
comp=Z,19nm,1.0s
J20K IAMs_20 IAMs_20 01 40 17.6
comp=Z,2µm,18.0s
J20K Nowinta River 77.71 340 P **P** **01 11 32.1 -2.4**
baz=129,SNR=9.2
J20K S **S** **01 21 24.5 -1.7**
baz=129
H21K Melozitna Rive 78.23 342 IAmb IAmb 01 11 55.8
comp=Z,33nm,1.4s
H21K IAMs_20 IAMs_20 01 39 36.2
comp=Z,2µm,19.0s
H21K Melozitna Rive 78.23 342 P **P** **01 11 35.6 -1.9**
baz=131,SNR=14
H21K S **S** **01 21 28.7 -3.1**
baz=131
COLD Coldfoot 78.52 344 P **P** **01 11 37.6 -1.4**
baz=134,SNR=14
COLD S **S** **01 21 36.9 +2.0**
baz=134
GCSA Galena City Sc 78.99 340 P **P** **01 11 40.3 -1.2**
baz=127
TOLK Toolik Lake Re 79.34 345 IAmb IAmb 01 11 49.1
comp=Z,29nm,1.2s
TOLK IAMs_20 IAMs_20 01 40 17.2
comp=Z,2µm,20.0s
TOLK Toolik Lake Re 79.34 345 P **P** **01 11 42.5 -1.0**
baz=134,SNR=16
TOLK S **S** **01 21 45.5 +1.9**
baz=134
RES Resolute Bay 79.44 3 LR LR 01 45 22.9
comp=Z,2µm,18.6s,baz=186,slow=35
RES Resolute Bay 79.44 3 IAmb IAmb 01 11 45.0
comp=Z,20nm,1.1s
SPIA Saint Paul Isl 80.83 330 P **P** **01 11 52.8 +1.1**
SPIA Saint Paul Isl 80.83 330 P **P** **01 11 50.2 -1.5**
baz=113
SFJD Kangerlussuaq 81.11 19 LR LR 01 47 20.6
comp=Z,2µm,19.9s,baz=235,slow=35
SFJD Kangerlussuaq 81.11 19 IAMs_20 IAMs_20 01 47 08.8
comp=Z,2µm,20.0s
BELA Belgrano 2 81.39 168 IAmb IAmb 01 12 05.7
comp=Z,34nm,1.3s
ANM Nome 81.96 338 IAMs_20 IAMs_20 01 40 28.3
comp=Z,2µm,22.0s
ANM Nome 81.96 338 P **P** **01 11 55.3 -2.3**
baz=119
ILULI Ilulissat 82.25 17 P **P** **01 11 59.2 +0.2**
ILULI IAmb IAmb 01 12 04.2
comp=Z,23nm,1.2s
ILULI Ilulissat 82.25 17 P **P** **01 11 59.2 +0.2**
ILULI pmax pmax
comp=Z,23nm,1.2s
TARA Tarawa 82.27 272 IAMs_20 IAMs_20 01 42 11.2
comp=Z,1µm,18.0s
DY2G Dye2 82.28 20 *i* P P 01 11 54.5 -5.0
DY2G IAmb IAmb 01 12 05.0
comp=Z,1µm,4.6s
RPZ Rata Peaks 82.48 227 LR LR 01 41 57.9
comp=Z,3µm,19.3s,baz=60,slow=31
RDOG Red Dog Mine 82.87 341 IAMs_20 IAMs_20 01 42 16.8
comp=Z,2µm,19.0s
A21K Barrow 82.94 345 IAMs_20 IAMs_20 01 46 57.2
comp=Z,2µm,19.0s
A21K Barrow 82.94 345 P **P** **01 12 00.9 -1.6**
baz=128
SBA Scott Base 85.13 192 P **P** **01 12 17.0 +3.3**
SBA IAmb IAmb 01 12 26.3
comp=Z,27nm,1.4s
SBA Scott Base 85.13 192 P **P** **01 12 17.0 +3.3**
SBA pmax pmax
comp=Z,27nm,1.5s
QSPA South Pole Qui 85.41 180 LR LR 01 44 00.1
comp=Z,2µm,19.6s,baz=116,slow=31
QSPA South Pole Qui 85.41 180 P **P** **01 12 16.8 +1.3**
ICESG Greenland Ices 85.73 19 *i* P **P** **01 12 15.4 -1.8**
ICESG IAmb IAmb 01 12 26.8
comp=Z,85nm,1.3s
VNDA Vanda 86.19 193 P **P** **01 12 19.4 +0.4**
comp=Z,3.9nm,1.3s,baz=126,slow=4.3,SNR=4.8
VNDA LR LR 01 42 47.5
comp=Z,663nm,20.2s,baz=94,slow=30
comp=Z,3.9nm,1.3s
VNDA Vanda 86.19 193 IAmb IAmb 01 12 27.2
comp=Z,18nm,1.4s
DZM Mont Dzumac 87.00 248 *e*LR LR 01 39 10.2
comp=Z,2µm,23.8s
DZM Mont Dzumac 87.00 248 LR LR 01 45 37.5
comp=Z,721nm,18.0s,baz=86,slow=32
VNA3 Neumayer Olymp 87.33 161 P **P** **01 12 23.8 -0.9**
SUMG Summit 87.53 16 IAmb IAmb 01 12 44.5
comp=Z,16nm,1.2s
SUMG IAMs_20 IAMs_20 01 53 02.3
comp=Z,2µm,18.0s
SUMG Summit 87.53 16 *i* P **P** **01 12 25.0 -1.0**
SUMG IAmb IAmb 01 12 55.6
comp=Z,307nm,3.0s
VNA1 Neumayer--Stat 87.87 161 P **P** **01 12 27.2 0.0**
SHEM Shemya Is, Ala 88.20 323 LR LR 01 43 07.3
comp=Z,3µm,21.5s,baz=118,slow=30
ALE Alert 89.05 5 IAMs_20 IAMs_20 01 52 13.4
comp=Z,1µm,18.0s
KOUNC Koumac, New Ca 89.11 250 IAMs_20 IAMs_20 01 42 40.2
comp=Z,2µm,22.0s
SNAA Sanae 89.42 162 LR LR 01 45 17.4
comp=Z,2µm,20.6s,baz=266,slow=31
SNAA Sanae 89.42 162 IAMs_20 IAMs_20 01 45 17.0
comp=Z,2µm,21.0s
SNAA Sanae 89.42 162⇓ *e*P **P** **01 12 34.8 +0.2**
SNAA pmax pmax
comp=Z,5.0nm,1.3s
H11N3 WAKE ISLAND Hy 89.81 290 T T 02 51 49.4
baz=95,slow=75,SNR=1099
H11N2 WAKE ISLAND Hy 89.82 290 T T 02 52 08.6
baz=95,slow=75,SNR=1064
H11N1 WAKE ISLAND Hy 89.83 290 T T 02 51 50.7
baz=95,slow=75,SNR=585
H11S2 WAKE ISLAND Hy 89.90 288 T T 02 52 06.6
baz=94,slow=74,SNR=1293
H11S1 WAKE ISLAND Hy 89.90 288 T T 02 52 08.8
baz=94,slow=74,SNR=935
H11S3 WAKE ISLAND Hy 89.91 288 T T 02 52 15.3
baz=94,slow=74,SNR=859
BILL Bilibino 93.82 338⇑ *e*P **P** **01 12 55.9 +0.9**
BILL *e* 01 12 59.5
BILL PPP PPP 01 18 40.0
BILL *e*PS **PS** **01 25 21.5 +1.9**
BILL *e*SS SS 01 30 27.6 +5.0
BILL pmax pmax
comp=Z,9.0nm,1.2s
BILL MLR MLR
comp=Z,528nm,17.0s
HNR Honiara 94.28 260 IAMs_20 IAMs_20 01 50 09.3
comp=Z,1µm,18.0s
JMIC Jan Mayen 96.47 19 LR LR 01 54 52.2
comp=Z,988nm,21.4s,baz=262,slow=34
PET Petropavlovsk 97.55 323 *e*P **P** **01 13 09.8 -2.4**
PET *e* 01 17 13.3
PET *e* 01 23 48.1
PET *e*S **S** **01 24 34.7 -2.2**
PET *e*PS **PS** **01 25 57.1 -3.8**
PET *e*SS **SS** **01 31 11.7 -4.4**
COI Coimbra 97.96 50 IAMs_20 IAMs_20 01 49 00.0
comp=Z,1µm,22.0s
PETK Petropavlovsk- 98.12 323 P **P** **01 13 13.2 -1.6**
comp=Z,0.8nm,0.6s,baz=221,slow=7.7,SNR=1.9
PETK LR LR 01 48 31.1
comp=Z,2µm,21.7s,baz=89,slow=30
comp=Z,0.8nm,0.6s
AVE Averroes 98.82 57 IAMs_20 IAMs_20 01 52 18.7
comp=Z,1µm,20.0s
SFS San Fernando 99.77 54 IAMs_20 IAMs_20 01 50 21.3
comp=Z,2µm,22.0s
SEY Seymchan 99.88 333 LR LR 01 53 40.8
comp=Z,2µm,18.2s,baz=82,slow=32
ESK Eskdalemuir 100.48 35 IAMs_20 IAMs_20 01 54 57.8
comp=Z,1µm,21.0s
PAB San Pablo 101.11 51 IAMs_20 IAMs_20 01 50 53.4
comp=Z,2µm,22.0s
MA2 Magadan 101.22 330 IAMs_20 IAMs_20 01 54 50.3
comp=Z,1µm,19.0s
TIXI Tiksi 105.23 345 IAMs_20 IAMs_20 02 01 33.6
comp=Z,918nm,22.0s
PMG Port Moresby 106.81 259 IAMs_20 IAMs_20 01 52 18.7
comp=Z,1µm,20.0s
WLF Walferdange 107.11 39 IAMs_20 IAMs_20 01 56 15.7
comp=Z,934nm,22.0s
BNI Bardonecchia 108.49 44 IAMs_20 IAMs_20 01 55 53.7
comp=Z,1µm,22.0s
SENIN Lac Senin/Sane 108.62 43 IAMs_20 IAMs_20 01 58 45.0
comp=Z,872nm,20.0s
TUE Stuetta 109.97 42 IAMs_20 IAMs_20 02 01 00.6
comp=Z,1µm,20.0s
GRA1 Grafenberg Arr 110.28 38 IAMs_20 IAMs_20 02 05 53.4
comp=Z,788nm,20.0s
GRFO Grafenberg 110.28 38 IAMs_20 IAMs_20 02 05 53.4
comp=Z,812nm,20.0s
CLL Collm 110.84 36 *e*SKSac **SKSac** **01 24 50.0 -0.6**
CLL *e*SKKSac **SKKSac** **01 25 48.0 -3.5**
CLL *e*Sdif **Sdif** **01 26 34.0 +5.8**
CLL *e*PS PS 01 28 19.0 -0.6
CLL *e*PPS PPS 01 29 18.0
CLL *e*SS **SS** **01 34 23.0 +4.4**
CLL *e*SSS SSS 01 38 28.0
NKC Novy Kostel 110.86 38 *e*PP PP 01 19 01.0 +12
NKC *e*PS **PS** **01 28 23.5 +3.6**
NKC AMS AMS 02 04 20.0
comp=Z,700nm,19.6s
LVZ Lovozero 111.20 15 IAMs_20 IAMs_20 02 04 32.9
comp=Z,797nm,20.0s
KHC Kasperske Hory 111.92 38 *e*PP PP 01 19 08.2 +12
KHC *e*PS **PS** **01 28 32.3 +2.6**
KHC AMS AMS 01 55 40.0
comp=Z,900nm,25.5s
PVCC Panska Ves 112.04 37 AMS AMS 02 01 00.0
comp=Z,500nm,21.0s
PRU Pruhonice 112.22 37 *e*PP PP 01 19 08.1 +10
PRU *e*PS **PS** **01 28 37.1 +4.8**
PRU AMS AMS 02 05 20.0
comp=Z,700nm,17.5s
CKRC Cesky Krumlov 112.47 39 *e*PP PP 01 19 10.6 +10
CKRC *e*PS **PS** **01 28 41.4 +6.6**
CKRC AMS AMS 01 58 40.0
comp=Z,800nm,22.1s
CHVC Chvalec 112.90 36 AMS AMS 02 01 50.0
comp=Z,700nm,21.4s
UPC Upice 112.91 36 *e*PS PS 01 28 42.2 +3.5
UPC AMS AMS 02 01 50.0
comp=Z,600nm,19.8s
OSTC Ostas 113.01 36 *e*PP **PP** **01 19 11.6 +7.5**
OSTC *e*PS **PS** **01 28 36.8 -2.9**
OSTC AMS AMS 01 59 40.0
comp=Z,700nm,20.5s
TREC Trest 113.04 38 AMS AMS 02 05 20.0
comp=Z,900nm,19.6s
DPC Dobruska-Polom 113.15 37 *e*PP PP 01 19 16.3 +11
DPC *e*PS **PS** **01 28 40.4 -0.6**
DPC AMS AMS 02 01 30.0
comp=Z,700nm,20.6s
KRLC Kraliky 113.53 37 *e*PS PS 01 28 48.8 +4.3
KRLC AMS AMS 02 02 20.0
comp=Z,600nm,22.0s
AQU L'Aquila 113.88 46 IAMs_20 IAMs_20 01 59 03.6
comp=Z,1µm,22.0s
MAUC Matuska 114.43 37 AMS AMS 02 02 30.0
comp=Z,1µm,18.6s
OKC Ostrava-Krasne 114.43 37 AMS AMS 02 04 10.0
comp=Z,500nm,18.0s
SUW Suwalki 115.35 31 IAMs_20 IAMs_20 02 11 39.6
comp=Z,708nm,18.0s
WRA Warramunga Arr 116.86 245 PKP **PKPdf** **01 18 22.6 -1.1**
comp=Z,1.6nm,0.9s,baz=94,slow=1.8,SNR=3.8
TIP Timpagrande 117.24 48 IAMs_20 IAMs_20 02 04 55.9
comp=Z,719nm,21.0s
DIVS Divibare 117.84 42 IAMs_20 IAMs_20 02 06 42.9
comp=Z,715nm,19.0s
PDG Podgorica 117.96 44 IAMs_20 IAMs_20 02 01 51.4
comp=Z,1µm,22.0s
AKASG Malin Array Be 120.25 32 PKP **PKPdf** **01 18 28.8 -0.5**
comp=Z,0.1nm,0.3s,baz=290,slow=2.8,SNR=1.3
OBN Obninsk 120.94 25 IAMs_20 IAMs_20 02 11 39.7
comp=Z,679nm,20.0s
OBN Obninsk 120.94 25*c i*PKIKP **PKiKP** **01 18 31.5 +1.0**
OBN *i* 01 18 35.0
OBN *e* 01 19 57.7
OBN 01 25 37.0
OBN *e*PS **PS** **01 29 45.5 -5.6**
OBN *i* PPS PPS 01 31 14.2
OBN *e*SS SS 01 36 29.2 -0.6
OBN SSS SSS 01 41 00.0
OBN pmax pmax
comp=Z,4.0nm,0.5s
OBN MLR MLR
comp=Z,641nm,19.0s
CN2 Changchun 121.04 319 *e*PKP **PKiKP** **01 18 34.3 +3.2**
CN2 SKKS 01 26 58.8
CN2 SS **SS** **01 36 35.5 +3.2**
CN2 LR LR
comp=Z,520nm,18.0s
CN2 LR LR
comp=Z,1µm,18.0s
CN2 LR LR
comp=Z,1µm,20.0s
MLR Muntele Rosu 121.07 38 IAMs_20 IAMs_20 02 14 37.9
comp=Z,773nm,21.0s
FAKI Fak Fak 122.37 264 IAMs_20 IAMs_20 02 11 29.7
comp=Z,788nm,18.0s
LPSR Galich'ya Gora 123.70 26 *e*PKIKP **PKPdf** **01 18 35.7 -0.1**
LPSR pmax pmax
comp=Z,7.0nm,1.1s
VORR Voronezh 124.48 26 *e*PKIKP **PKiKP** **01 18 40.7 +3.1**
VORR pmax pmax
comp=Z,9.0nm,0.4s
VRH Novokhopyorsk 125.91 25 *e*PKIKP **PKPdf** **01 18 38.1 -2.0**
VRH pmax pmax
comp=Z,10.0nm,1.0s
ARU Arti 126.72 11 IAMs_20 IAMs_20 02 17 03.8
comp=Z,956nm,18.0s
ARU Arti 126.72 11 *i* PKIKP **PKiKP** **01 18 42.9 +0.9**
ARU 01 20 36.5
ARU 01 25 54.0
ARU MLR MLR
comp=Z,865nm,18.0s
XLT XiLinHaoTe 126.81 324⇓ *i*PKP **PKiKP** **01 18 42.7 0.0**
XLT AMB AMB
comp=Z,140nm,9.2s
XLT LR LR
comp=Z,1µm,22.2s
XLT LR LR
comp=Z,2µm,21.3s
BELG Belogornoye 127.28 21⇑ *i*PKIKP **PKiKP** **01 18 45.6 +2.4**
ZAK Zakamensk 128.62 337 *e*PKIKP **PKPdf** **01 18 44.2 -1.3**
ZAK pmax pmax
comp=Z,4.0nm,1.7s
BR131 Keskin Array S 128.88 41 PKPdf **PKiKP** **01 18 47.7 +0.6**
BR131 Keskin Array S 128.88 41⇑ *i*PKIKP **PKiKP** **01 18 47.6 +0.6**
BRTR Keskin Array B 128.88 41 PKP **PKPdf** **01 18 43.5 -2.9**
comp=Z,3.2nm,1.0s,baz=359,slow=7.4,SNR=6.6
BRTR Keskin Array B 128.88 41 **PKiKP** **01 18 47.0 0.0**
BRTR Keskin Array B 128.88 41*c i*PKIKP **PKiKP** **01 18 50.5 +3.5**
BRTR pmax pmax
comp=Z,3.0nm,1.0s
ULN Ulaanbaatar 128.96 333⇑ *i*PKIKP **PKPdf** **01 18 46.5 +0.2**
SONM Songino Array 129.28 333 PKP **PKPdf** **01 18 45.2 -1.6**
comp=Z,1.7nm,0.9s,baz=76,slow=1.7,SNR=7.7
DAV Davao City (W) 129.71 275 IAMs_20 IAMs_20 02 18 18.9
comp=Z,608nm,18.0s
ZALV Zalesovo Beam 130.21 352 PKP **PKPdf** **01 18 47.0 -1.2**
comp=Z,0.5nm,0.3s,baz=18,slow=0.5,SNR=4.9
ZALV Zalesovo Beam 130.21 352 PKIKP **PKPdf** **01 18 47.0 -1.2**
SOC Sochi 130.25 33 *i* PKIKP **PKiKP** **01 18 49.1 -0.4**
SOC *e* 01 21 00.8
SOC *e*PPP PPP 01 23 46.6
SOC *e* 01 25 54.4
SOC *e*PS **PS** **01 31 09.4 -3.9**
SOC *e*SS SS 01 38 21.2 -6.1
SOC MLR MLR
comp=Z,439nm,17.0s
NJ2 Nanjing 130.80 309 *e*PKP **PKPdf** **01 18 50.0 0.0**
NJ2 LR LR
comp=Z,610nm,16.6s
NJ2 LR LR
comp=Z,1µm,18.5s
NJ2 LR LR
comp=Z,2µm,18.9s
NACB Ninganchiao 131.22 298 IAMs_20 IAMs_20 02 06 43.0
comp=Z,935nm,22.0s
HHC Hu-ho-hao-te 131.32 323 *e*PKP **PKPdf** **01 18 48.2 -2.7**
KIV Kislovodsk 131.58 31 *i* PKIKP **PKiKP** **01 18 53.6 +1.3**
KIV *e* 01 21 11.0
KIV *e*PS **PS** **01 31 23.7 -1.3**
KIV *e*SS SS 01 38 45.0 +1.4
KIV *e*SSS SSS 01 43 37.5
KIV pmax pmax
comp=Z,4.0nm,1.1s
BRVK Borovoye 131.58 4 PKPdf **PKiKP** **01 18 52.4 +0.6**
BRVK Borovoye 131.58 4 IAMs_20 IAMs_20 02 19 57.5
comp=Z,1µm,20.0s
BRVK Borovoye 131.58 4⇑ *i*PKIKP **PKPdf** **01 18 50.6 -0.3**
BRVK pmax pmax
comp=Z,8.0nm,1.7s
YULB Yu-li 131.70 297 IAMs_20 IAMs_20 02 15 01.7
comp=Z,648nm,20.0s
KBZ Khabaz 131.85 31 PKP **PKPdf** **01 18 50.5 -1.1**
comp=Z,1.2nm,0.7s,baz=314,slow=5.2,SNR=1.6
KBZ Khabaz 131.85 31*c i*PKIKP **PKiKP** **01 18 55.6 +3.0**
TWG Pinlang 132.05 297 IAMs_20 IAMs_20 02 17 60.0
comp=Z,717nm,18.0s
KNMB Chin-men Tao 133.94 300 IAMs_20 IAMs_20 02 16 25.5
comp=Z,717nm,19.0s
KURK Kurchatov 133.99 357 PKPdf **PKPdf** **01 18 56.0 +0.5**
KURK Kurchatov 133.99 357⇑ *e*PKIKP **PKPdf** **01 18 54.3 -1.2**
MYLDM Lahad Datu 136.72 273 IAMs_20 IAMs_20 02 15 16.3
comp=Z,784nm,20.0s
MK31 Makanchi Array 137.55 353 PKPdf **PKPdf** **01 19 02.7 +0.4**
MK31 pPKPdf **sPKPdf** **01 19 07.5 +0.7**
MK31 Makanchi Array 137.55 353⇑ *e*PKIKP **PKPdf** **01 19 02.9 +0.6**
MKAR Makanchi Array 137.55 353 PKP **PKPdf** **01 19 02.3 0.0**
comp=Z,1.9nm,1.0s,baz=0.0,slow=1.7,SNR=6.2
MKAR PP **PP** **01 21 47.5 +0.4**
comp=Z,3.1nm,1.1s,baz=353,slow=3.8,SNR=5.5
MKAR Makanchi Array 137.55 353 PKPpre PKPpre 01 18 55.3
MKAR PKPdf **PKiKP** **01 19 03.3 -0.9**
MKAR pPKPdf sPKPdf 01 19 09.2 +2.4
MKAR Makanchi Array 137.55 353*ce*PKIKP **PKiKP** **01 19 03.5 -0.7**
MKAR pmax pmax
comp=Z,2.0nm,1.0s
MAKZ Makanchi 137.57 353 PKPpre PKPpre 01 18 55.9
MAKZ **PKiKP** **01 19 03.6 -0.7**
MAKZ Makanchi 137.57 353 PKIKP **PKiKP** **01 19 03.6 -0.7**
ENH Enshi 138.73 312 IAMs_20 IAMs_20 02 11 41.4
comp=Z,944nm,20.0s
GTA Gaotai 138.77 331 *e*PKP **PKPdf** **01 19 04.2 -0.7**
GTA LR LR
comp=Z,570nm,20.4s
GTA LR LR
comp=Z,810nm,21.1s
GTA LR LR
comp=Z,1µm,21.8s
LZH Lanzhou 139.01 324 *e*PKP **PKPdf** **01 19 00.2 -5.3**
LZH AMB AMB
comp=Z,170nm,9.0s
LZH LR LR
comp=Z,1µm,18.1s
LZH LR LR
comp=Z,1µm,18.2s
LZH LR LR
comp=Z,2µm,20.4s
WMQ Urumqi 139.42 346 *e*PKP **PKiKP** **01 19 07.6 -0.6**
WMQ LR LR
comp=Z,1µm,17.5s
WMQ LR LR
comp=Z,720nm,19.1s
WMQ LR LR
comp=Z,1µm,18.1s
CD2 Chengdu 142.43 317 PKP **PKPdf** **01 19 11.1 -0.6**
KDJ Kajisay 142.63 357 PKPdf **PKPdf** **01 19 10.9 -0.9**
KDJ pPKPdf **sPKPdf** **01 19 17.4 +1.0**
QIZ Qiongzhong 143.18 296 IAMs_20 IAMs_20 02 15 36.3
comp=Z,671nm,20.0s
QIZ Qiongzhong 143.18 296 PKP **PKPdf** **01 19 11.9 -1.3**
QIZ PP **PP** **01 22 27.2 +3.7**
QIZ LR LR
comp=Z,430nm,19.1s
QIZ LR LR
comp=Z,380nm,16.7s
QIZ LR LR
comp=Z,570nm,19.9s
GOMU GeErMu 143.72 332 PKP **PKPdf** **01 19 13.7 -0.5**
GOMU pPKP PKiKP 01 19 17.7 +0.1
GOMU SKS **SKSdf** **01 26 18.1 -6.1**
GOMU SKKS **SKKSac** **01 29 16.3 -3.5**
GOMU AMB AMB
comp=Z,100nm,5.7s
GOMU LR LR
comp=Z,780nm,19.6s
GOMU LR LR
comp=Z,320nm,19.2s
GOMU LR LR
comp=Z,370nm,19.6s
BTK Batken 144.54 6 **PKPdf** **01 19 14.8 -0.4**
BTK pPKPdf **sPKPdf** **01 19 19.8 +0.2**
KSM Kuching 144.67 266 IAMs_20 IAMs_20 02 22 07.5
comp=Z,720nm,21.0s
KSH Kashi 145.28 359 PKPbc **PKPdf** **01 19 16.5 0.0**
KSH pPKP sPKPdf 01 19 22.8 +1.8
KSH LR LR
comp=Z,1µm,19.7s
KSH LR LR
comp=Z,470nm,16.8s
KSH LR LR
comp=Z,2µm,18.7s
LEM Lembang 145.56 251 PKPbc **PKPdf** **01 19 15.2 -2.5**
baz=27,slow=2.3
RAYN Ar Rayn 145.87 54 PKPdf **PKPdf** **01 19 17.0 -0.9**
RAYN Ar Rayn 145.87 54 IAMs_20 IAMs_20 02 39 28.1
comp=Z,611nm,20.0s
RAYN Ar Rayn 145.87 54 PKIKP **PKPdf** **01 19 17.0 -0.9**
PZH PanZhiHua 146.49 313 PKPbc **PKPdf** **01 19 19.4 +0.5**
PZH sPKP 01 19 24.6
PZH PP **PP** **01 22 41.9 -0.8**
PZH LR LR
comp=Z,300nm,19.2s
PZH LR LR
comp=Z,450nm,18.8s
PZH LR LR
comp=Z,450nm,17.6s
KMI Kunming 146.52 310⇓ PKPbc **PKPab** **01 19 21.8 +0.3**
KMI sPKP 01 19 25.1
KMI PP **PP** **01 22 46.7 +3.5**
KMI SS SS 01 41 45.3 +3.9
KMI AMB AMB
comp=Z,200nm,4.9s
KMI LR LR
comp=Z,520nm,21.8s
KMI LR LR
comp=Z,920nm,24.0s
KMI LR LR
comp=Z,2µm,25.2s
ATD Arta Tunnel 147.41 76 IAMs_20 IAMs_20 02 29 29.7
comp=Z,744nm,19.0s
LSA Lhasa 150.80 330 P **PKiKP** **01 19 32.6 +0.1**
MYKOM Kota Tinggi 151.12 265 IAMs_20 IAMs_20 02 22 59.7
comp=Z,582nm,21.0s
CHTO Chiang Mai 152.76 303 PKPdf **PKPdf** **01 19 30.1 +1.2**
CHTO **PKiKP** **01 19 36.9 +0.7**
CHTO Chiang Mai 152.76 303 IAMs_20 IAMs_20 02 18 28.3
comp=Z,815nm,22.0s
CHTO Chiang Mai 152.76 303 PKIKP **PKPdf** **01 19 30.1 +1.2**
CHTO 01 19 36.9
CMAR Chiang Mai Arr 152.93 302 PKP **PKPdf** **01 19 28.9 -0.3**
comp=Z,1.4nm,0.4s,baz=91,slow=2.8,SNR=7.0
CMAR PKPbc **PKPbc** **01 19 35.5 -0.9**
comp=Z,2.0nm,0.3s,baz=336,slow=0.9,SNR=11
CMAR Chiang Mai Arr 152.93 302 PKPab **PKPab** **01 19 45.9 -1.6**
CMAR Chiang Mai Arr 152.93 302*ce*PKIKP **PKPdf** **01 19 30.1 +0.9**
CMAR pmax pmax
comp=Z,1.0nm,0.4s
KULM Kulim 154.50 273 IAMs_20 IAMs_20 02 34 04.4
comp=Z,624nm,22.0s

*IDC **13** 01:20:46.3±0.9, 5.°72N×120.°69E, h0km, mb3.8/7, mbtmp3.9/8, ML4.2/1, MS4.4/4, Error ellipse: s-maj=67.0km s-min=18.5km az=69.0*
*MAN **13** 01:20:48.4, 5.°54N×120.°35E, h150km, mb4.9, ML3.8, MS3.9*
*DJA **13** 01:20:48.2±0.7, 6.°N±7.°×12.°0E±.°, h10km, M4.8/9, mB5.3/7, mb4.8/9, MLv4.8/8, Mw(mB)4.7/7*

NEIC ***13*** *01:20:49.0±1.5,5°.6N±0°.1×120°.52E±0°.08,h15km±6km, mb4.1/4, Error ellipse: s-maj=20.3km s-min=6.5km az=211.0*

ISC 13 01:20:51.5±0.6,5°.47N±0°.06×120°.39E±0°.06,h35km,n46, σ1§62/44,mb4.0/9,MS4.4/5,1C-7D,Sulu Archipelago

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MYLDM	**Lahad Datu**	**1.91**	**261**			**Pn**	**01 21 22.2**	**+0.6**
ZCP	**Zamboanga City**	**2.22**	**49**	*iP*		**Pn**	**01 21 26.2**	**+0.4**
ZCP				*i* S		**Sn**	**01 21 56.0**	**+4.0**
PAGZ	**Pagadian**	**3.79**	**51**	*iP*		**Pn**	**01 21 46.6**	**-1.0**
PAGZ				*i* S		**Sn**	**01 22 28.0**	**-3.0**
BATP	**Bataraza**	**4.19**	**322**	*eP*		Pn	01 21 45.5	-7.5
TOLI2	**Tolitoli**	**4.34**	**175**			**Pn**	**01 21 54.9**	**-0.3**
TOLI2				Sn		**Sn**	**01 22 41.1**	**-3.5**
PPR	**Puerto Princes**	**4.59**	**339**	*iP*		**Pn**	**01 21 56.6**	**-1.9**
KCP	**Kidapawan**	**4.91**	**72**	*iP*		**Pn**	**01 22 01.9**	**-1.1**
KCP				*i* S		**Sn**	**01 22 58.5**	**-0.2**
MPSI	**Mapaga** 0.6nm4µm52nm,0.4s	**5.12**	**186**	P		**Pn**	**01 22 05.8**	**0.0**
MRSI	**Marisa**	**5.19**	**163**	P		**Pn**	**01 22 08.5**	**+1.7**
CGP	**Cagayan de Oro**	**5.20**	**55**	*eP*		Pn	01 22 18.3	+11
BUKP	**Musuan**	**5.22**	**62**	*eP*		**Pn**	**01 22 07.8**	**+0.6**
DDMP	**Don Marcelino,**	**5.33**	**83**	*eP*		**Pn**	**01 22 07.7**	**-1.0**
DDMP				*eS*		**Sn**	**01 23 07.1**	**-1.8**
DAV	**Davao City (W)** comp=Z,117nm,22.0s,baz=336,slow=41	**5.39**	**73**	LR		LR	01 24 14.2	
SGSI	**Sangihe**	**5.42**	**109**	P		**Pn**	**01 22 09.2**	**-0.7**
KMSI	**Cibinong** 0.8nm164nm,0.4s	**6.04**	**144**	P		**Pn**	**01 22 19.4**	**+1.0**
APSI	**Ampana** 0.4nm1µm99nm,0.7s	**6.46**	**169**	P		**Pn**	**01 22 26.5**	**+2.3**
BKB	**Balikpapan** 0.7nm88nm,0.7s	**7.54**	**208**	P		**Pn**	**01 22 38.6**	**-0.5**
TNTI	**Ternate** 26nm,0.5s	**8.38**	**124**	P		**Pn**	**01 22 50.4**	**-0.2**
TTSI	**Tana Toraja** 2µm58nm,0.7s	**8.47**	**184**	P		**Pn**	**01 22 54.9**	**+3.0**
SANI	**Sanana** 20nm,0.7s	**9.33**	**143**	P		**Pn**	**01 23 04.2**	**+0.6**
SPSI	**Sidrap Palu**	**9.39**	**184**	P		**Pn**	**01 23 07.3**	**+2.9**
STKI	**Sintang**	**10.39**	**239**	P		**Pn**	**01 23 19.9**	**+1.7**
KAPI	**Kappang** 1.8nm,0.3s,baz=5.7,slow=13,SNR=6.0 9.9nm,0.5s	**10.43**	**184**	Pn		**Pn**	**01 23 21.8**	**+3.1**
KAPI	**Kappang**	**10.43**	**184**	Pn		**Pn**	**01 23 20.3**	**+1.6**
MMRI	**Maumere**	**14.13**	**173**	Pn		**Pn**	**01 24 06.9**	**-2.5**
WB0	**Warramunga Arr**	**28.61**	**152**			**P**	**01 26 45.4**	**+0.6**
WRA	**Warramunga Arr** 0.7nm,0.7s,baz=336,slow=9.8,SNR=5.5 0.7nm,0.7s	**28.73**	**152**	P		**P**	**01 26 45.6**	**-0.3**
ASAR	**Alice Springs** 0.4nm,0.7s,baz=329,slow=8.7,SNR=2.5 0.4nm,0.7s	**31.82**	**156**	P		**P**	**01 27 12.7**	**-0.4**
KSRS	**Korea Array** comp=Z,27nm,19.8s,baz=155,slow=37	**32.57**	**11**	LR		LR	01 40 40.3	
STKA	**Stephens Creek** 2.9nm,0.8s,baz=314,slow=12,SNR=3.0 2.9nm,0.8s	**42.28**	**153**	P		**P**	**01 28 43.9**	**+2.1**
MK31	**Makanchi Array**	**52.63**	**328**	P		**P**	**01 30 01.4**	**-0.7**
MKAR	**Makanchi Array** 0.5nm,0.5s,baz=128,slow=8.4,SNR=6.8	**52.63**	**328**	P		**P**	**01 30 02.0**	**-0.1**
MKAR	0.5nm,0.7s,baz=129,slow=4.1,SNR=4.3 0.5nm,0.5s			PcP		**PcP**	**01 31 10.8**	**-1.1**
MKAR	**Makanchi Array**	**52.63**	**328**	P		**P**	**01 30 02.2**	**+0.1**
ZAA0	**Zalesovo Array** comp=Z,2.1nm,1.1s	**56.29**	**336**	P		**P**	**01 30 27.8**	**-0.8**
ZAA0				IAmb	IAmb	IAmb	01 30 54.6	
ZALV	**Zalesovo Beam** comp=Z,0.8nm,0.5s,baz=126,slow=7.2,SNR=4.5 comp=Z,1.8nm,0.5s	**56.29**	**336**	P		**P**	**01 30 27.4**	**-1.2**
ZALV	**Zalesovo Beam**	**56.29**	**336**	P		**P**	**01 30 27.9**	**-0.7**
KURK	**Kurchatov**	**56.97**	**330**	P		**P**	**01 30 33.3**	**-0.2**
KURK				IAmb	IAmb	IAmb	01 30 34.2	
KKAR	**Karatay Array** comp=Z,2.1nm,0.8s	**57.71**	**319**	P		**P**	**01 30 39.3**	**+0.4**
ABKAR	**Akbulak array**	**66.85**	**322**	P		**P**	**01 31 39.8**	**-0.1**
NRIK	**Noril'sk** comp=Z,663nm,20.6s,baz=22,slow=39	**67.33**	**348**	LR		LR	02 04 33.6	
BELG	**Belogornoye** comp=Z,110nm,21.4s,baz=329,slow=40	**75.20**	**323**	LR		LR	02 10 14.6	
KIRV	**Kirov** comp=Z,411nm,20.6s,baz=334,slow=38	**75.49**	**329**	LR		LR	02 09 08.0	
MMAI	**Mount Meron Ar** comp=Z,146nm,19.6s,baz=101,slow=39	**82.86**	**302**	LR		LR	02 15 01.1	
ILAR	**Eielson Array** comp=Z,0.5nm,0.7s,baz=252,slow=4.6,SNR=6.2 comp=Z,0.5nm,0.7s	**86.26**	**25**	P		**P**	**01 33 28.2**	**-1.2**
ILAR	**Eielson Array**	**86.26**	**25**	P		**P**	**01 33 29.1**	**-0.3**
ARCES	**ARCESS Array B** comp=Z,1.0nm,0.8s,baz=69,slow=8.8,SNR=1.9 comp=Z,1.0nm,0.8s	**86.63**	**339**	P		**P**	**01 33 31.5**	**+0.4**

IDC ***13*** *01:51:16.8±1.1,12°.14N×88°.56W,h0km,mb4.1/13, mbtmp4.1/16,ML3.6/3,MS3.5/4, Error ellipse: s-maj=35.5km s-min=15.7km az=41.0*

NEIC ***13*** *01:51:18.4±2.2,11°.95N±0°.06×88°.71W±0°.06,h10km±1km, mb4.5/189, Error ellipse: s-maj=12.7km s-min=8.6km az=223.0*

UCR ***13*** *01:51:19.6±1.6,11°.89N×88°.89W,h35km±12km,ML4.0, mb4.5(NEIC)*

GCG ***13*** *01:51:19.9±0.8,11°.81N×89°.35W,h1km±73km,MD4.2*

INET ***13*** *01:51:20.0±1.2,11°.96N×88°.76W,h15km±178km,MW4.0*

SNET ***13*** *01:51:20.8±1.1,11°.98N×88°.86W,h35km±999km,ML4.1*

ISC 13 01:51:17.4±0.5,11°.94N±0°.04×88.79W±0°.04,h10km,n307, σ1§09/306,mb4.5/86,1C-1D,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LCY	**Lacayo**	**1.55**	**18**	*eP*		**Pb**	**01 51 46.4**	**+0.1**
LCY	**Lacayo**	**1.55**	**18**	*eP*		**Pb**	**01 51 46.4**	**+0.1**
CSGN	**Cosiguina Volc**	**1.59**	**49**	*eP*		**Pn**	**01 51 45.8**	**+0.2**
PACA	**Pacayal**	**1.59**	**17**	*eP*		**Pn**	**01 51 46.8**	**+1.0**
PACA				*eS*		**Sb**	**01 52 07.5**	**+0.4**
PACA	**Pacayal**	**1.59**	**17**	*eP*		**Pn**	**01 51 46.8**	**+1.0**
PACA				*eS*		**Sb**	**01 52 07.5**	**+0.4**
PACA	**Pacayal**	**1.59**	**17**	*eP*		**Pb**	**01 51 46.9**	**0.0**
LCND	**La Caada** comp=Z,1µm,0.3s	**1.62**	**33**	*eP*		**Pn**	**01 51 46.3**	**+0.3**
LCND					IAML		01 52 15.9	
LCND	**La Caada** comp=Z,1µm,0.3s	**1.62**	**33**	*eP*		**Pn**	**01 51 46.3**	**+0.3**
LCND					IAML		01 52 15.9	
LALI	**Alcalda de L**	**1.62**	**342**	*i* P		**Pn**	**01 51 46.1**	**+0.1**
LALI	**Alcalda de L**	**1.62**	**342**	*i* P		**Pn**	**01 51 46.1**	**+0.1**
LALI	**Alcalda de L**	**1.62**	**342**	*eP*		**Pn**	**01 51 46.1**	**+0.1**
CNCH	**Conchagua**	**1.63**	**35**	*eP*		**Pn**	**01 51 46.6**	**+0.3**
CNCH	**Conchagua**	**1.63**	**35**	*eP*		**Pn**	**01 51 46.6**	**+0.3**
COEG	**Centro de Oper**	**1.67**	**357**	*eP*		**Pn**	**01 51 47.0**	**+0.2**
COEG				*eS*		**Sn**	**01 52 08.1**	**-0.3**
COEG	comp=Z,2µm,0.4s				IAML		01 52 15.8	
COEG	**Centro de Oper** comp=Z,2µm,0.4s	**1.67**	**357**	*eP*		**Pn**	**01 51 47.0**	**+0.2**
COEG				*eS*		**Sn**	**01 52 08.1**	**-0.3**
COEG					IAML		01 52 15.8	
SJTE	**Alcalda de S**	**1.68**	**353**	*eP*		**Pn**	**01 51 46.8**	**-0.1**
SJTE	**Alcalda de S**	**1.68**	**353**	*eP*		**Pn**	**01 51 46.8**	**-0.1**
LFRS	**El Faro**	**1.69**	**351**	*i* P		**Pn**	**01 51 47.5**	**+0.4**
LFRS	**El Faro**	**1.69**	**351**	*i* P		**Pn**	**01 51 47.5**	**+0.4**
SCLA	**Alcaldia de Sa**	**1.75**	**2**	*eP*		**Pn**	**01 51 48.8**	**+0.8**
SCLA	**Alcaldia de Sa**	**1.75**	**2**	*eP*		**Pn**	**01 51 48.8**	**+0.8**
PAVA	**Las Pavas**	**1.77**	**355**	*eP*		**Pn**	**01 51 48.5**	**+0.3**
PAVA	**Las Pavas**	**1.77**	**355**	*eP*		**Pn**	**01 51 48.5**	**+0.3**
PAVA	**Las Pavas**	**1.77**	**355**	*eP*		**Pn**	**01 51 48.3**	**+0.1**
SNET	**Serv Nac Est T**	**1.79**	**346**	Pn		**Pn**	**01 51 48.6**	**+0.2**
SNET	**Serv Nac Est T**	**1.79**	**346**	*eP*		**Pn**	**01 51 48.8**	**+0.3**
SNET	comp=Z,2µm,0.4s				IAML		01 52 13.5	
SNET	**Serv Nac Est T** comp=Z,2µm,0.4s	**1.79**	**346**	*eP*		**Pn**	**01 51 48.8**	**+0.3**
SNET					IAML		01 52 13.5	
SNET	**Serv Nac Est T**	**1.79**	**346**	*eP*		**Pn**	**01 51 48.7**	**+0.3**
UEES	**Universidad Ev** comp=Z,2µm,0.3s	**1.82**	**346**	*eP*		**Pn**	**01 51 49.3**	**+0.5**
UEES					IAML		01 52 20.0	
UEES	**Universidad Ev** comp=Z,2µm,0.3s	**1.82**	**346**	*eP*		**Pn**	**01 51 49.3**	**+0.5**
UEES					IAML		01 52 20.0	
BOQS	**Boqueron**	**1.85**	**345**	*eP*		**Pn**	**01 51 50.0**	**+0.6**
BOQS	**Boqueron**	**1.85**	**345**	*eP*		**Pn**	**01 51 50.0**	**+0.6**
CRIN	**San Cristobal**	**1.86**	**66**	Pn		**Pn**	**01 51 49.8**	**+0.3**
CRIN	**San Cristobal**	**1.86**	**66**	*eP*		**Pn**	**01 51 49.8**	**+0.3**
CAHU	**Cacacuatique**	**1.91**	**17**	*i* P		**Pb**	**01 51 51.9**	**-0.5**
CAHU	**Cacacuatique**	**1.91**	**17**	*i* P		**Pb**	**01 51 51.9**	**-0.5**
CEDA	**San Andres**	**1.94**	**343**	*eP*		**Pn**	**01 51 51.1**	**+0.5**
CEDA	comp=Z,4µm,0.5s				IAML		01 52 20.4	
CEDA	**San Andres**	**1.94**	**343**	*eP*		**Pn**	**01 51 51.1**	**+0.5**
CEDA					IAML		01 52 20.4	
TEL3	**Telica 3**	**2.01**	**72**	*eP*		**Pn**	**01 51 51.8**	**+0.5**
TELN	**Telica**	**2.03**	**71**	*eP*		**Pn**	**01 51 52.3**	**+0.6**
CEVE	**Cerro Verde**	**2.04**	**337**	*eP*		**Pn**	**01 51 52.7**	**+0.6**
CEVE	**Cerro Verde**	**2.04**	**337**	*eP*		**Pn**	**01 51 52.7**	**+0.6**
SBLS	**San Blas**	**2.05**	**337**	*eP*		**Pn**	**01 51 53.0**	**+0.8**
SBLS				*eS*		**Sn**	**01 52 17.1**	**-0.9**
SBLS	**San Blas**	**2.05**	**337**	*eP*		**Pn**	**01 51 53.0**	**+0.8**
SBLS				*eS*		**Sn**	**01 52 17.1**	**-0.9**
SNJE	**San Jose**	**2.07**	**338**	*eP*		**Pn**	**01 51 53.1**	**+0.7**
SNJE	**San Jose**	**2.07**	**338**	*eP*		**Pn**	**01 51 53.1**	**+0.7**
RTR	**El Retiro**	**2.12**	**337**	*eP*		**Pn**	**01 51 53.9**	**+0.9**
RTR	**El Retiro**	**2.12**	**337**	*eP*		**Pn**	**01 51 53.9**	**+0.9**
CNGN	**Cerro Negro**	**2.12**	**75**	Pn		**Pn**	**01 51 52.7**	**-0.3**
CNGN	**Cerro Negro**	**2.12**	**75**	*eP*		**Pn**	**01 51 52.9**	**-0.1**
NUBE	**Las Nubes**	**2.17**	**334**	*i* P		**Pn**	**01 51 54.2**	**+0.4**
NUBE	**Las Nubes**	**2.17**	**334**	*i* P		**Pn**	**01 51 54.2**	**+0.4**
MOMN	**Momotombo**	**2.25**	**78**	*eP*		**Pn**	**01 51 54.5**	**-0.3**
SLOZ	**Alcaldia de Sa**	**2.29**	**335**	*eP*		**Pn**	**01 51 55.8**	**+0.6**
APYN	**Apoyeque**	**2.41**	**83**	*eP*		**Pn**	**01 51 56.0**	**-0.9**
TISN	**Laguna Tiscapa**	**2.48**	**85**	*eP*		**Pn**	**01 51 57.8**	**0.0**
MGAN	**Managua**	**2.50**	**85**	*eP*		**Pn**	**01 51 58.1**	**-0.1**
WILN	**Americas 2**	**2.56**	**85**	*eP*		**Pn**	**01 51 59.0**	**+0.1**
TGUH	**Tegucigalpa,Un**	**2.57**	**35**			**Pn**	**01 52 00.3**	**+1.0**
TGUH	**Tegucigalpa,Un**	**2.57**	**35**	*eP*		**Pn**	**01 52 00.4**	**+1.1**
TGUH	**Tegucigalpa,Un**	**2.57**	**35**	*eP*		**Pn**	**01 52 00.4**	**+1.1**
TGUH	**Tegucigalpa,Un**	**2.57**	**35**	*eP*		**Pn**	**01 52 00.4**	**+1.1**
ESQI	**Esquipulas**	**2.66**	**348**	Pn		**Pn**	**01 52 02.6**	**+2.1**
ESQI	**Esquipulas**	**2.66**	**348**	*eP*		**Pn**	**01 52 01.8**	**+1.4**
MATN	**Matagalpa**	**2.97**	**70**	Pn		**Pn**	**01 52 03.4**	**-1.3**
MATN	**Matagalpa**	**2.97**	**70**	*eP*		**Pn**	**01 52 03.5**	**-1.2**
PCG	**Pacaya**	**3.01**	**324**	*eS*		**Sn**	**01 52 43.7**	**+2.0**
NBG	**Las Nubes**	**3.04**	**330**	*eP*		**Pn**	**01 52 08.5**	**+2.7**
NBG				*eS*		**Sn**	**01 52 46.6**	**+4.3**
BOAB	**BOACO BROADBAN**	**3.10**	**80**			**Pn**	**01 52 05.8**	**-0.6**
BOAB	**BOACO BROADBAN**	**3.10**	**80**	*eP*		**Pn**	**01 52 05.8**	**-0.6**
CONN	**Concepcion**	**3.12**	**97**	*eP*		**Pn**	**01 52 05.6**	**-1.2**
FUG	**Fuego 3**	**3.19**	**322**	*eP*		**Pn**	**01 52 08.6**	**+0.8**
FUG				*eS*		**Sn**	**01 52 47.1**	**+1.0**
MRL	**Marmol**	**3.24**	**345**	*eP*		**Pn**	**01 52 12.0**	**+3.5**
MRL				*eS*		**Sb**	**01 52 54.4**	**-0.5**
HZTE	**Horizontes, Gu**	**3.37**	**111**			**Pn**	**01 52 10.9**	**+0.8**
HZTE	**Horizontes, Gu**	**3.37**	**111**	*eP*		**Pn**	**01 52 10.9**	**+0.8**
GBS3	**Finca Las Img**	**3.47**	**109**	*eP*		**Pn**	**01 52 12.3**	**+0.8**
LAPC	**Finca la Perla**	**3.50**	**109**	*eP*		**Pn**	**01 52 12.7**	**+0.8**
GB1A	**Borinquen Arri**	**3.51**	**108**	*eP*		**Pn**	**01 52 13.3**	**+1.1**
ACON	**Acoyapa**	**3.54**	**89**	Pn		**Pn**	**01 52 12.2**	**-0.3**
SAJU	**San Juanillo,**	**3.55**	**121**	*eP*		**Pn**	**01 52 12.1**	**-0.6**
BUAI	**Buenos Aires**	**3.56**	**107**	*eP*		**Pn**	**01 52 13.8**	**+1.1**
GPS2	**Hotel Rincn d**	**3.58**	**109**	*eP*		**Pn**	**01 52 14.3**	**+1.2**
GUAI	**GUAI**	**3.62**	**117**	*eP*		**Pn**	**01 52 13.5**	**-0.1**
ORTG	**Ortega, Santa**	**3.63**	**115**	Pn		**Pn**	**01 52 13.8**	**0.0**
GUAB	**Guayabo de Bag**	**3.70**	**109**	*eP*		**Pn**	**01 52 16.0**	**+1.3**
DUNO	**Dulce Nombre,**	**3.73**	**119**			**Pn**	**01 52 14.8**	**-0.2**
DUNO	**Dulce Nombre,**	**3.73**	**119**	*eP*		**Pn**	**01 52 15.3**	**+0.2**
HORNC	**Hornillas**	**3.75**	**109**	*eP*		**Pn**	**01 52 16.7**	**+1.3**
VMAR	**Armenia, Volca**	**3.77**	**107**	*eP*		**Pn**	**01 52 16.8**	**+1.1**
CUI	**Cuipilapa**	**3.78**	**109**	*eP*		**Pn**	**01 52 17.1**	**+1.2**
RTAL	**Retalhuleu**	**3.82**	**313**			**Pn**	**01 52 16.1**	**-0.2**
INDI	**Punta indio, G**	**3.83**	**122**	*eP*		**Pn**	**01 52 16.2**	**-0.3**
STG3	**Santiaguito 3,**	**3.86**	**316**	*eP*		**Pn**	**01 52 17.8**	**+0.8**
STG3				*eS*		**Sn**	**01 53 00.4**	**-2.2**
ACAL	**Aguas Claras**	**3.91**	**109**	*eP*		**Pn**	**01 52 19.0**	**+1.4**
PTEN	**Parque Tenorio**	**3.93**	**108**	*eP*		**Pn**	**01 52 18.6**	**+0.7**
PTEN				*eS*		**Sn**	**01 53 07.7**	**+3.7**
JTS	**Las Juntas de** comp=Z,14nm,0.3s,baz=16,slow=21,SNR=78	**4.11**	**113**	Pn		**Pn**	**01 52 21.0**	**+0.7**
JTS				Sn		**Sn**	**01 53 07.7**	**-0.9**
JTS	comp=Z,13nm,0.3s,baz=4.5,slow=22,SNR=6.5			LR		LR	01 53 16.2	
JTS	comp=Z,173nm,19.1s,baz=20,slow=30 comp=Z,30nm,0.4s							
JTS	**Las Juntas de**	**4.11**	**113**	Pn		**Pn**	**01 52 21.1**	**+0.8**
JTS	**Las Juntas de**	**4.11**	**113**	*eP*		**Pn**	**01 52 21.2**	**+0.8**
JTS	**Las Juntas de**	**4.11**	**113**	*eP*		**Pn**	**01 52 21.1**	**+0.8**
CASO	**Castillo**	**4.25**	**110**	*eP*		**Pn**	**01 52 23.5**	**+1.1**
CEDE	**Laguna Cedeo**	**4.26**	**109**	*eP*		**Pn**	**01 52 23.5**	**+1.0**
HUEH	**Huehuetenango**	**4.27**	**322**			**Pn**	**01 52 25.3**	**+2.6**
FORC	**Fortuna**	**4.30**	**109**	*eP*		**Pn**	**01 52 24.2**	**+1.2**
LAFE	**Finca La Fe, P**	**4.36**	**119**	*eP*		**Pn**	**01 52 23.5**	**-0.3**
LAFE	**Finca La Fe, P**	**4.36**	**119**	*eP*		**Pn**	**01 52 23.4**	**-0.4**
HDC	**Heredia**	**4.98**	**112**	Pn		**Pn**	**01 52 34.1**	**+1.7**
PETF	**Flores**	**5.05**	**348**			**Pn**	**01 52 35.8**	**+2.5**
CVTR	**Volcan Turrial**	**5.30**	**111**			**Pn**	**01 52 38.4**	**+1.3**
RIMA	**Rio Macho**	**5.30**	**114**	Pn		**Pn**	**01 52 38.5**	**+1.6**
BATAN	**Batan**	**5.62**	**108**	Pn		**Pn**	**01 52 42.8**	**+1.6**
PEZE	**Perez Zeledon,**	**5.63**	**116**			**Pn**	**01 52 43.2**	**+1.8**
SRBA	**San Rafael, Bu**	**5.98**	**116**			**Pn**	**01 52 47.5**	**+1.4**
DRK0	**Durika**	**6.07**	**115**	Pn		**Pn**	**01 52 50.3**	**+2.9**
CDITO	**Canoas**	**6.72**	**119**			**Pn**	**01 52 56.8**	**+0.6**
BRU2	**Volcan**	**6.77**	**117**	Pn		**Pn**	**01 52 58.1**	**+1.1**
CMIG	**Matias Romero** comp=Z,1.3nm,0.3s,baz=119,slow=9.7,SNR=16	**7.81**	**312**	Pn		**Pn**	**01 53 12.3**	**+1.2**
CMIG				Sn		**Sn**	**01 54 35.5**	**-4.2**
CMIG	comp=Z,0.8nm,0.3s,baz=128,slow=14,SNR=1.8			LR		LR	01 56 21.4	
CMIG	comp=Z,276nm,18.5s,baz=132,slow=39 comp=Z,3.8nm,0.3s							
MTDJ	**Mount Denham**	**12.54**	**59**	Pn		**Pn**	**01 54 18.4**	**+2.4**
GUY2C	**Guyana, Caldas**	**14.86**	**116**	*eP*		**Pn**	**01 54 50.4**	**+2.3**
PTBC	**PUERTO BERRIO,**	**15.13**	**110**	*eP*		**P**	**01 54 55.8**	**-0.8**
NORC	**Norcasia**	**15.14**	**114**	*eP*		**P**	**01 54 54.9**	**-1.9**
POPC	**Popayan, Colom**	**15.21**	**127**	*eP*		**P**	**01 54 55.6**	**-2.1**
GTBY	**Guantanamo Bay**	**15.36**	**57**	P		**P**	**01 54 59.6**	**+0.5**
ORTC	**Ortega, Tolima**	**15.60**	**120**	*eP*		**P**	**01 55 04.7**	**+2.8**
OCAC	**Ocana**	**15.67**	**102**	Pn		**Pn**	**01 54 59.7**	**+1.1**
SPBC	**San Pablo de B**	**15.83**	**112**	*eP*		**P**	**01 55 04.9**	**+0.5**
ROSC	**El Rosal** comp=Z,2.8nm,0.3s,baz=333,slow=17,SNR=6.2	**15.96**	**115**	Pn		**P**	**01 55 05.5**	**-0.6**
ROSC	**El Rosal**	**15.96**	**115**	P		**P**	**01 55 06.4**	**+0.2**
ROSC				IAmb	IAmb	IAmb	01 55 13.8	
SLOR	**San Lorenzo -** comp=Z,30nm,1.2s	**16.22**	**140**	P		**P**	**01 55 09.5**	**+0.4**
BARC	**Barichara**	**16.29**	**108**	*eP*		**P**	**01 55 09.0**	**-0.7**
CHIC	**Chingaza**	**16.57**	**115**	*eP*		**P**	**01 55 13.3**	**+0.3**
PORT	**Chimborazo Vol**	**16.63**	**143**	P		**P**	**01 55 14.5**	**+0.7**
RUSC	**La Rusia**	**16.64**	**110**	*eP*		**P**	**01 55 13.9**	**+0.1**
VILC	**Villavicencio,**	**16.84**	**116**	*eP*		**P**	**01 55 16.0**	**+0.3**
060A	**Indiantown**	**16.98**	**27**	P		**P**	**01 55 16.7**	**-0.3**
COHC	**Cochancay**	**17.17**	**146**	P		**Pn**	**01 55 17.7**	**+0.1**
DWPF	**Disney Wildern** comp=Z,41nm,1.3s	**17.50**	**22**	P		**Pn**	**01 55 21.8**	**+0.1**
DWPF				IAmb	IAmb	IAmb	01 55 23.8	
SDV	**Santo Domingo** comp=Z,0.4nm,0.3s,baz=273,slow=5.3,SNR=5.8 comp=Z,3.8nm,0.5s	**18.12**	**98**	P		**Pn**	**01 55 28.9**	**-0.7**
SDV	**Santo Domingo**	**18.12**	**98**			**Pn**	**01 55 28.5**	**-1.1**
735A	**Kenedy** comp=Z,20nm,0.8s	**18.82**	**335**	P		**Pn**	**01 55 39.3**	**+1.6**
735A				IAmb	IAmb	IAmb	01 55 58.1	
833A	**Chaparral WMA,**	**19.08**	**330**	P		**P**	**01 55 40.8**	**+0.7**
HKT	**Hockley**	**19.08**	**341**	P		**P**	**01 55 40.7**	**+0.6**
SDD	**Santo Domingo**	**19.33**	**68**	P		**P**	**01 55 42.2**	**-0.8**
346A	**Big Creek Wild** comp=Z,18nm,0.8s	**19.36**	**358**	P		**P**	**01 55 44.1**	**+0.9**
346A				IAmb	IAmb	IAmb	01 55 49.8	
344A	**Westbrook Farm** comp=Z,27nm,0.8s	**19.50**	**355**	P		**P**	**01 55 45.7**	**+0.9**
344A				IAmb	IAmb	IAmb	01 55 56.1	
342A	**Flagon Creek P** comp=Z,39nm,1.0s	**19.61**	**351**	P		**P**	**01 55 47.1**	**+1.1**
342A				IAmb	IAmb	IAmb	01 55 51.9	
352A	**Blakely**	**19.77**	**10**	P		**P**	**01 55 49.1**	**+1.4**
DR12	**Loma Pena Alta**	**19.91**	**68**	P		**P**	**01 55 49.5**	**+0.1**
TIGA	**Tifton** comp=Z,26nm,0.9s	**19.99**	**13**	P		**P**	**01 55 51.1**	**+0.9**
TIGA				IAmb	IAmb	IAmb	01 56 01.2	
VBMS	**Vicksburg**	**20.25**	**356**	P		**P**	**01 55 54.3**	**+1.5**
435B	**Jarrell** comp=Z,28nm,0.8s	**20.44**	**338**	IAmb	IAmb	IAmb	01 56 07.9	
NATX	**Nacogdoches**	**20.45**	**346**	P		**P**	**01 55 54.9**	**-0.2**
NATX	comp=Z,29nm,1.2s			IAmb		IAmb	01 56 11.4	
146A	**Union**	**20.60**	**359**	P		**P**	**01 55 57.6**	**+0.8**
BAUV	**El Baul**	**20.62**	**96**	P		**P**	**01 55 55.0**	**-2.2**
BAUV	comp=Z,15nm,0.5s			IAmb		IAmb	01 55 59.0	
255A	**Hazlehurst**	**20.73**	**15**	P		**P**	**01 55 58.3**	**+0.2**
143A	**Socs Landing,** comp=Z,19nm,0.9s	**20.80**	**354**	P		**P**	**01 55 59.9**	**+0.9**
143A				IAmb		IAmb	01 56 15.4	
152A	**Waverly Hall**	**20.97**	**10**	P		**P**	**01 56 01.1**	**+0.3**
LRAL	**Lakeview Retre** comp=Z,18nm,1.2s	**21.06**	**4**	P		**P**	**01 56 02.6**	**+0.9**
LRAL				IAmb		IAmb	01 56 08.2	
JCT	**Junction City** comp=Z,14nm,0.9s	**21.08**	**333**	IAmb		IAmb	01 56 12.9	
154A	**Montrose** comp=Z,37nm,1.1s	**21.23**	**13**	P		**P**	**01 56 03.5**	**0.0**
154A				IAmb		IAmb	01 56 08.1	
Z41A	**Richland Creek** comp=Z,22nm,1.2s	**21.54**	**351**	P		**P**	**01 56 07.4**	**+0.6**
Z41A				IAmb		IAmb	01 56 17.5	
Z51A	**Franklin** comp=Z,16nm,0.9s	**21.54**	**8**	P		**P**	**01 56 08.5**	**+1.7**
Z51A				IAmb		IAmb	01 56 13.0	
ATAH	**Atahualpa** comp=Z,6.1nm,1.1s,baz=344,slow=7.4,SNR=3.1	**21.59**	**151**	P		**P**	**01 56 10.3**	**+2.4**
ATAH	comp=Z,168nm,18.5s,baz=314,slow=34 comp=Z,6.1nm,1.1s			LR		LR	02 03 35.7	
HPIG		**21.77**	**316**	P		**P**	**01 56 09.3**	**-0.3**
Y45A	**Yeager Farm, C** comp=Z,30nm,1.1s	**21.84**	**358**	P		**P**	**01 56 08.3**	**-1.7**
Y45A				IAmb		IAmb	01 56 17.2	
GOGA	**Godfrey** comp=Z,10nm,0.8s	**21.92**	**12**	P		**P**	**01 56 11.7**	**+0.7**
GOGA				IAmb		IAmb	01 56 16.3	
Y49A	**Blount Mountai**	**21.93**	**5**	P		**P**	**01 56 10.8**	**-0.3**
Z38A	**Mt. Pleasant** comp=Z,20nm,0.8s	**21.97**	**346**	P		**P**	**01 56 10.1**	**-1.3**
Z38A				IAmb		IAmb	01 56 25.8	
CCAR	**Cane Creek**	**22.05**	**353**	P		**P**	**01 56 12.7**	**+0.4**
BIRV	**Birongo** comp=Z,14nm,1.0s	**22.14**	**92**	P		**P**	**01 56 12.2**	**-1.3**
BIRV				IAmb		IAmb	01 56 18.0	
TXAR	**Lajitas Array** comp=Z,3.2nm,0.8s,baz=147,slow=11,SNR=24 comp=Z,3.2nm,0.8s	**22.17**	**324**	P		**P**	**01 56 14.5**	**+0.8**
TXAR	**Lajitas Array**	**22.17**	**324**	P		**P**	**01 56 14.2**	**+0.4**
TX31	**Lajitas Ar. Si** comp=Z,18nm,0.9s	**22.17**	**324**	IAmb		IAmb	01 56 20.9	
Y52A	**Lilburn** comp=Z,16nm,1.1s	**22.25**	**10**	P		**P**	**01 56 13.9**	**-0.5**
Y52A				IAmb		IAmb	01 56 25.6	
X48A	**Hartselle**	**22.47**	**4**	P		**P**	**01 56 16.9**	**+0.1**
OXF	**Oxford** comp=Z,17nm,0.9s	**22.48**	**359**	P		**P**	**01 56 17.4**	**+0.5**
OXF				IAmb		IAmb	01 56 36.6	
Z35A	**Perchaven, San** comp=Z,17nm,0.9s	**22.66**	**341**	P		**P**	**01 56 19.6**	**+0.8**
Z35A				IAmb		IAmb	01 56 29.5	
FPAL	**

BLA	**Blacksburg**	**26.26**	**15**	P	**P**	**01 56 53.6**	**+0.7**
BLA				IAmb	IAmb	01 56 56.0	
	comp=Z,17nm,1.2s						
T57A	**Hurt**	**26.39**	**17**	P	**P**	**01 56 53.7**	**-0.3**
T57A				IAmb	IAmb	01 56 58.6	
	comp=Z,8.5nm,1.1s						
R40A	**Maddies Statio**	**26.43**	**354**	IAmb	IAmb	01 57 05.2	
	comp=Z,10nm,1.1s						
121A	**Cookes Peak, D**	**26.91**	**323**	P	**P**	**01 56 58.5**	**-0.5**
P40A	**Paris**	**27.63**	**355**	P	**P**	**01 57 06.0**	**+0.8**
P40A				IAmb	IAmb	01 57 16.4	
	comp=Z,14nm,1.1s						
P49A	**Miami Univ. Ec**	**27.72**	**7**	P	**P**	**01 57 05.8**	**-0.2**
P49A				IAmb	IAmb	01 57 07.4	
	comp=Z,12nm,1.3s						
P38A	**Dawn**	**27.89**	**352**	P	**P**	**01 57 07.6**	**+0.1**
P38A				IAmb	IAmb	01 57 12.2	
	comp=Z,9.8nm,1.4s						
TUC	**Tucson**	**28.63**	**319**	P	**P**	**01 57 14.6**	**+0.3**
SDCO	**Great Sand Dun**	**29.73**	**333**	P	**P**	**01 57 24.1**	**-0.2**
L46A	**Eue Claire**	**30.04**	**4**	P	**P**	**01 57 27.5**	**+0.9**
L40A	**Anamosa**	**30.08**	**356**	P	**P**	**01 57 27.3**	**+0.3**
S22A	**4UR Ranch, Cre**	**30.35**	**331**	P	**P**	**01 57 30.4**	**+0.7**
X16A	**Lo Mia Camp, P**	**30.42**	**321**	P	**P**	**01 57 31.5**	**+1.2**
113A	**Mohawk Valley,**	**30.89**	**316**	P	**P**	**01 57 35.6**	**+1.4**
113A				IAmb	IAmb	01 57 36.5	
	comp=Z,11nm,1.5s						
WUAZ	**Wupatki**	**31.12**	**323**	P	**P**	**01 57 37.5**	**+1.0**
WUAZ				IAmb	IAmb	01 57 39.4	
	comp=Z,4.2nm,0.8s						
GLA	**Glamis**	**31.78**	**316**	P	**P**	**01 57 43.5**	**+1.3**
GLA				IAmb	IAmb	01 57 44.7	
	comp=Z,7.9nm,1.0s						
W13A	**Hualapai Mount**	**32.39**	**320**	P	**P**	**01 57 49.2**	**+1.5**
W13A				IAmb	IAmb	01 57 50.6	
	comp=Z,5.1nm,1.1s						
SAML	**Samuel**	**32.85**	**128**	P	**P**	**01 57 50.0**	**-1.6**
O20A	**White River Ci**	**32.92**	**332**	IAmb	IAmb	01 58 05.8	
	comp=Z,6.8nm,1.0s						
PKCU	**Pink Cliffs**	**33.00**	**324**	P	**P**	**01 57 54.9**	**+1.7**
PKCU				IAmb	IAmb	01 57 57.4	
	comp=Z,8.6nm,1.2s						
G40A	**Rib Lake**	**33.24**	**358**	P	**P**	**01 57 55.0**	**+0.3**
G40A				IAmb	IAmb	01 57 57.0	
	comp=Z,10nm,1.1s						
LCMT	**Little Creek M**	**33.25**	**323**	P	**P**	**01 57 56.8**	**+1.7**
LCMT				IAmb	IAmb	01 58 01.5	
	comp=Z,4.6nm,1.0s						
P17A	**Butcher Ranch,**	**33.62**	**329**	P	**P**	**01 57 59.9**	**+1.6**
P17A				IAmb	IAmb	01 58 06.0	
	comp=Z,3.1nm,0.8s						
CCUT	**Cedar City**	**33.68**	**323**	P	**P**	**01 57 59.5**	**+0.6**
SADO	**Sadowa**	**33.75**	**12**	P	**P**	**01 57 58.5**	**-0.6**
F36A	**Milaca**	**34.05**	**354**	P	**P**	**01 58 00.5**	**-1.2**
F36A				IAmb	IAmb	01 58 03.9	
	comp=Z,7.4nm,1.1s						
RSSD	**Black Hills**	**34.65**	**341**	P	**P**	**01 58 06.9**	**-0.4**
QSM	**Queen of Sheba**	**34.84**	**318**	P	**P**	**01 58 10.2**	**+1.4**
QSM				IAmb	IAmb	01 58 11.3	
	comp=Z,8.1nm,1.2s						
TPNV	**Topopah Spring**	**35.04**	**320**	P	**P**	**01 58 12.2**	**+1.5**
TPNV				IAmb	IAmb	01 58 13.9	
	comp=Z,6.4nm,1.2s						
ISA	**Isabella, Lake**	**35.74**	**316**	P	**P**	**01 58 18.2**	**+1.6**
REDW	**Red Top Meadow**	**36.66**	**333**	IAmb	IAmb	01 58 31.6	
	comp=Z,5.1nm,0.8s						
SNOW	**Snow King Moun**	**36.70**	**333**	P	**P**	**01 58 24.6**	**-0.4**
SNOW				IAmb	IAmb	01 58 33.5	
	comp=Z,7.5nm,1.1s						
AGMN	**Agassiz Nation**	**36.72**	**352**	P	**P**	**01 58 24.8**	**+0.1**
AGMN				IAmb	IAmb	01 58 35.2	
	comp=Z,15nm,1.3s						
LOHW	**Long Hollow**	**36.75**	**333**	P	**P**	**01 58 25.1**	**-0.2**
TPAW	**Teton Pass**	**36.81**	**333**	P	**P**	**01 58 27.0**	**+1.1**
MDND	**Maddock**	**36.92**	**348**	P	**P**	**01 58 25.8**	**-0.7**
TA01	**Diego Aracena**	**37.13**	**150**	P	**P**	**01 58 27.2**	**-1.2**
NV11	**Mina Array Sit**	**37.15**	**320**	P	**P**	**01 58 29.7**	**+1.0**
NV11				IAmb	IAmb	01 58 32.5	
	comp=Z,13nm,1.4s						
OMMB	**Old Mammoth Mi**	**37.20**	**319**	P	**P**	**01 58 30.8**	**+1.5**
NVAR	**Mina Array Bea**	**37.24**	**320**	P	**P**	**01 58 31.7**	**+2.2**
	comp=Z,3.6nm,0.8s,baz=136,slow=8.2,SNR=28						
NVAR				PcP	**PcP**	**02 00 49.4**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=142,slow=4.6,SNR=6.2						
	comp=Z,3.6nm,0.8s						
LHV	**Little Huntoon**	**37.26**	**320**	P	**P**	**01 58 31.8**	**+2.4**
LHV				IAmb	IAmb	01 58 32.9	
	comp=Z,4.8nm,0.9s						
VLDQ	**Val d'Or**	**37.29**	**13**	P	**P**	**01 58 29.9**	**+0.4**
VLDQ				IAmb	IAmb	01 58 44.3	
	comp=Z,10nm,1.1s						
KVN	**Kaiserville**	**37.49**	**321**	P	**P**	**01 58 32.9**	**+1.2**
YHL	**Hebgen Lake**	**37.99**	**334**	P	**P**	**01 58 37.7**	**+1.9**
CMB	**Columbia Colle**	**38.34**	**318**	P	**P**	**01 58 39.8**	**+1.1**
PNTR	**Pine Nut**	**38.44**	**320**	P	**P**	**01 58 39.7**	**0.0**
ULM	**Lac du Bonnet**	**38.64**	**353**	P	**P**	**01 58 40.1**	**-0.7**
	comp=Z,3.0nm,0.8s,baz=178,slow=10,SNR=4.1						
	comp=Z,3.0nm,0.8s						
ULM	**Lac du Bonnet**	**38.64**	**353**	P	**P**	**01 58 41.3**	**+0.4**
ULM				IAmb	IAmb	01 58 51.4	
	comp=Z,15nm,1.4s						
BEKR	**Beckworth**	**39.38**	**321**	P	**P**	**01 58 48.8**	**+1.4**
ORV	**Oroville**	**39.91**	**319**	P	**P**	**01 58 53.1**	**+1.4**
J08A	**Circle Bar Ran**	**40.47**	**326**	P	**P**	**01 58 57.1**	**+0.7**
J08A				IAmb	IAmb	01 58 58.7	
	comp=Z,9.9nm,1.3s						
HOOD	**Mount Hood Mea**	**43.48**	**326**	P	**P**	**01 59 22.7**	**+1.7**
SCHQ	**Schefferville**	**46.15**	**17**	P	**P**	**01 59 40.4**	**-1.7**
	comp=Z,9.0nm,1.1s,baz=210,slow=5.6,SNR=5.0						
	comp=Z,9.0nm,1.1s						
SCHQ	**Schefferville**	**46.15**	**17**	P	**P**	**01 59 41.1**	**-0.9**
CPUP	**Villa Florida**	**48.82**	**142**	LR	LR	02 21 02.3	
	comp=Z,178nm,18.0s,baz=172,slow=37						
YKA	**Yellowknife Ar**	**53.76**	**345**	P	**P**	**02 00 38.2**	**-1.5**
	comp=Z,2.0nm,0.8s,baz=140,slow=7.2,SNR=6.5						
	comp=Z,2.0nm,0.8s						
DLBC	**Dease Lake**	**55.81**	**335**	P	**P**	**02 00 55.8**	**+1.1**
	comp=Z,2.6nm,0.8s,baz=153,slow=14,SNR=3.7						
	comp=Z,2.6nm,0.8s						
BCAR	**Beaver Creek A**	**63.17**	**336**	P	**P**	**02 01 46.0**	**+0.5**
INK	**Inuvik**	**63.30**	**343**	P	**P**	**02 01 47.0**	**+0.9**
	comp=Z,1.3nm,0.8s,baz=127,slow=7.4,SNR=4.5						
	comp=Z,1.3nm,0.8s						
INK	**Inuvik**	**63.30**	**343**	P	**P**	**02 01 45.4**	**-0.7**
INK				IAmb	IAmb	02 01 60.0	
	comp=Z,3.0nm,1.1s						
J26L	**Joseph Creek**	**64.55**	**337**	P	**P**	**02 01 54.4**	**-0.2**
J26L				IAmb	IAmb	02 01 55.9	
	comp=Z,3.7nm,1.1s						
KNK	**Knik Glacier**	**65.30**	**333**	P	**P**	**02 01 59.8**	**+0.4**
HDA	**Harding Lake**	**65.83**	**336**	P	**P**	**02 02 01.6**	**-1.2**
HDA				IAmb	IAmb	02 02 03.6	
	comp=Z,3.2nm,0.9s						
IL31		**65.96**	**337**	IAmb	IAmb	02 02 04.6	
	comp=Z,5.1nm,1.1s						
ILAR	**Eielson Array**	**65.96**	**337**	P	**P**	**02 02 03.8**	**+0.2**
	comp=Z,2.4nm,1.0s,baz=135,slow=4.1,SNR=20						
	comp=Z,2.4nm,1.0s						
ILAR	**Eielson Array**	**65.96**	**337**	P	**P**	**02 02 03.6**	**+0.1**
RND	**Reindeer**	**66.21**	**335**	P	**P**	**02 02 05.6**	**+0.3**
BMAR	**Burnt Mountain**	**66.29**	**340**	P	**P**	**02 02 04.8**	**-1.0**
I23K	**Minto, Yukon-K**	**67.07**	**336**	IAmb	IAmb	02 02 18.2	
	comp=Z,5.5nm,1.2s						
MLY	**Manley**	**67.57**	**336**	IAmb	IAmb	02 02 14.9	
	comp=Z,4.3nm,0.9s						
N19K	**Bonanza Creek**	**67.87**	**331**	P	**P**	**02 02 15.8**	**-0.2**
COLD	**Coldfoot**	**68.18**	**338**	P	**P**	**02 02 18.5**	**+0.9**
COLD				IAmb	IAmb	02 02 20.6	
	comp=Z,7.3nm,1.4s						
ESDC	**Sonseca Array**	**78.54**	**52**	P	**P**	**02 03 17.9**	**-1.4**
	comp=Z,0.6nm,0.9s,baz=292,slow=8.1,SNR=3.2						
	comp=Z,0.6nm,0.9s						
ESDC	**Sonseca Array**	**78.54**	**52**	P	**P**	**02 03 19.1**	**-0.2**
SMAI	**San Martin Ant**	**81.37**	**172**	P	**P**	**02 03 35.0**	**+1.2**
BILL	**Bilibino**	**84.52**	**339**	P	**P**	**02 03 50.1**	**-0.3**
NC405	**NORSAR Array S**	**84.66**	**29**	P	**P**	**02 03 49.3**	**-1.9**
TORD	**Torodi Ar. Bea**	**87.80**	**77**	P	**P**	**02 04 06.7**	**-0.9**
	comp=Z,0.3nm,0.8s,baz=272,slow=4.9,SNR=5.1						
	comp=Z,0.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**87.80**	**77**	P	**P**	**02 04 07.6**	**0.0**
SEY	**Seymchan**	**91.89**	**336**	P	**P**	**02 04 26.2**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=100,slow=8.2,SNR=4.7						
	comp=Z,1.0nm,0.6s						
PZH	**PanZhiHua**	**140.44**	**345**	PKP	**PKPdf**	**02 10 48.2**	**+0.3**
CMAR	**Chiang Mai Arr**	**148.85**	**346**	PKPbc	**PKPbc**	**02 11 05.5**	**-0.8**
	comp=Z,1.8nm,0.3s,baz=344,slow=3.8,SNR=9.5						
CMAR	**Chiang Mai Arr**	**148.85**	**346**		**PKPbc**	**02 11 05.9**	**-0.4**

*IDC **13** 02:04:15.9±1.2,5.5S×150.45E, h0km, mb3.8/3, mbtmp3.8/4, ML1.8/1, Error ellipse: s-maj=87.1km s-min=19.7km az=132.0*

ISC 13 02:04:16.8±1.1,5.4S±0.3×150.4E±0.3, h10km, n6, σ0s65/8, mb3.9/3, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.92**	**57**	Pn	**Pb**	**02 04 51.9**	**-0.1**
	40nm,0.3s,baz=198,slow=0.6,SNR=15						
KRVT				Sn	**Sg**	**02 05 18.9**	**+0.2**
	63nm,0.3s,baz=195,slow=20,SNR=5.1						
PMG	**Port Moresby**	**5.15**	**219**	Pn	**Pn**	**02 05 33.9**	**-0.1**
	2.4nm,0.3s,baz=62,slow=10,SNR=2.2						
PMG				Sn	**Sn**	**02 06 34.1**	**+0.6**
	2.1nm,0.3s,baz=354,slow=19,SNR=1.9						
	8.5nm,0.8s						
WRA	**Warramunga Arr**	**21.32**	**226**	P	**P**	**02 09 04.2**	**+0.2**
	1.7nm,0.6s,baz=53,slow=11,SNR=13						
	1.7nm,0.6s						
ASAR	**Alice Springs**	**24.16**	**220**	P	**P**	**02 09 32.5**	**-1.0**
	2.4nm,0.7s,baz=52,slow=9.2,SNR=22						
	2.4nm,0.7s						
ILAR	**Eielson Array**	**83.58**	**23**	P	**P**	**02 16 45.5**	**+0.5**
	0.8nm,0.7s,baz=241,slow=5.2,SNR=8.5						
	0.8nm,0.7s						
TORD	**Torodi Ar. Bea**	**148.20**	**286**	PKPbc	**PKiKP**	**02 24 05.3**	**-0.6**
	0.7nm,0.7s,baz=60,slow=3.5,SNR=7.1						

VIE 13 02:24:30.7±0.2, 47.32N×11.09E, h11km, ml-0.3/3, Error ellipse: s-maj=3.5km s-min=1.2km az=44.0 2 km NE of Telfs, Austria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MOTA	**Moosalm**	**0.03**	**23**	*e*Pg	Pg	02 24 33.0	+0.1
	0.7nm,0.1s						
MOTA				*e*Sg	Sg	02 24 34.9	+0.4
	0.7nm,0.1s						
SQTA	**Sankt Quirin**	**0.13**	**140**	*e*Pg	Pg	02 24 34.1	+0.2
	0.1nm,0.0s						
SQTA				*e*Sg	Sg	02 24 36.4	+0.2
	1.9nm,0.1s						
RETA	**Reutte**	**0.28**	**307**	*e*Pg	Pg	02 24 36.5	+0.1
	0.1nm,0.1s						
RETA				*e*Sg	Sg	02 24 40.6	+0.3
	0.2nm,0.1s						

*MEX **13** 02:35:26.0±0.9, 14.80N×92.89W, h72km±20km, MD3.9*
*GCG **13** 02:35:28.0±0.4, 14.97N×92.70W, h19km±4km, MD3.8*

ISC 13 02:35:21.9±1.2, 14.66N±0.06×93.01W±0.04, h20km±10km, n15, σ1s19/29, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**0.77**	**71**	*e*P	**Pn**	**02 35 38.8**	**+1.3**
THIG				*e*S	**Sn**	**02 35 48.5**	**0.0**
PATR	**El Naranjo**	**0.88**	**59**	*e*P	**Pn**	**02 35 39.6**	**+0.3**
PATR				*i* S	**Sb**	**02 35 50.9**	**+0.8**
PAVE	**Pavencul**	**0.97**	**56**	*e*P	**Pn**	**02 35 41.0**	**+0.4**
PAVE				*i* S	**Sn**	**02 35 53.2**	**-0.6**
CHUJ	**Union Juarez**	**0.98**	**63**	*e*P	**Pn**	**02 35 40.9**	**+0.2**
CHUJ				*e*S	**Sb**	**02 35 53.1**	**+0.3**
PCIG		**1.06**	**349**	*i* P	**Pb**	**02 35 42.3**	**+0.7**
PCIG				*i* S	**Sb**	**02 35 54.9**	**-0.1**
STG3	**Santiaguito 3,**	**1.40**	**88**	*e*P	**Pb**	**02 35 48.6**	**+1.2**
STG3				*e*S	**Sn**	**02 36 02.4**	**-2.0**
CARR	**Arriaga**	**1.80**	**331**	*e*P	**Pb**	**02 35 53.4**	**-0.8**
CARR				*e*S	**Sn**	**02 36 14.8**	**+0.6**
CCIG	**Comitan**	**1.82**	**27**	*e*P	**Pb**	**02 35 54.2**	**-0.5**
CCIG				*i* S	**Sn**	**02 36 13.0**	**-1.9**
TGIG		**2.11**	**357**	*e*P	**Pn**	**02 35 56.8**	**+0.7**
TGIG				*e*S	**Sn**	**02 36 19.2**	**-2.6**
FUG	**Fuego 3**	**2.11**	**95**	*e*P	**Pb**	**02 35 59.3**	**-0.3**
FUG				*e*S	**Sn**	**02 36 22.7**	**+0.7**
PCG	**Pacaya**	**2.34**	**96**	*e*P	**Pb**	**02 36 03.1**	**-0.4**
PCG				*e*S	**Sb**	**02 36 30.4**	**-1.9**
NBG	**Las Nubes**	**2.58**	**91**	*e*S	**Sb**	**02 36 38.9**	**-0.2**
UXUV	**UXUV**	**2.86**	**338**	*e*P	**Pn**	**02 36 08.6**	**+2.2**
UXUV				*e*S	**Sn**	**02 36 40.8**	**+0.6**
HUIG	**Huatulco**	**3.19**	**291**	*e*P	**Pn**	**02 36 11.8**	**+1.0**
HUIG				*e*S	**Sn**	**02 36 46.9**	**-1.3**
NEUV	**Arroyo Zacate**	**4.05**	**319**	*e*P	**Pn**	**02 36 21.4**	**-1.4**
NEUV				*e*S	**Sn**	**02 37 09.9**	**+0.3**

IDC 13 02:44:27.4±2.5, 3.95N×126.49E, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=199.0km s-min=30.3km az=66.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.96**	**162**	P	P	02 49 52.7	-0.1
	0.4nm,0.7s,baz=340,slow=10,SNR=2.4						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**28.38**	**166**	P	P	02 50 23.6	0.0
	0.2nm,0.5s,baz=354,slow=6.9,SNR=4.2						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**57.24**	**325**	P	P	02 54 16.7	0.0
	0.2nm,0.6s,baz=111,slow=7.9,SNR=2.4						
	0.2nm,0.6s						

*IDC **13** 03:01:09.1±1.5, 34.37S×112.36W, h0km, mb3.9/3, mbtmp4.1/4, ML4.8/1, MS3.7/5, Error ellipse: s-maj=49.2km s-min=40.3km az=138.0*
*NEIC **13** 03:01:12.3±2.3, 34.1S±0.1×112.3W±0.1, h10km±1km, mb4.4/6, Error ellipse: s-maj=22.6km s-min=15.8km az=347.0*

ISC 13 03:01:11.7±0.8, 34.1S±0.1×112.3W±0.2, h10km, n37, σ1s01/22, mb4.3/6, MS3.8/4, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**7.41**	**21**	Pn	**Pn**	**03 03 00.9**	**+1.0**
	12nm,0.3s,baz=232,slow=17,SNR=1.9						
RPN				LR	LR	03 05 18.5	
	comp=Z,200nm,18.3s,baz=214,slow=32						
	33nm,0.3s						
RPN	**Rapa Nui**	**7.41**	**21**		**Pn**	**03 02 59.8**	**-0.1**
H03S2	**Juan Fernandez**	**27.57**	**99**	T	T	03 35 27.4	
	baz=247						
H03S1	**Juan Fernandez**	**27.58**	**99**	T	T	03 35 31.3	
	baz=247						
H03S3	**Juan Fernandez**	**27.59**	**99**	T	T	03 35 29.2	
	baz=247						
H03N2	**Juan Fernandez**	**27.64**	**98**	T	T	03 35 38.3	
	baz=256						
H03N3	**Juan Fernandez**	**27.64**	**98**	T	T	03 35 26.9	
	baz=256						
H03N1	**Juan Fernandez**	**27.65**	**98**	T	T	03 35 36.5	
	baz=256						
NNA	**Nana**	**39.03**	**64**	LR	LR	03 20 50.8	
	comp=Z,108nm,19.4s,baz=254,slow=30						
TA02	**Huaiquique**	**39.64**	**81**	P	**P**	**03 08 43.1**	**-0.8**
ATAH	**Atahualpa**	**41.18**	**57**	LR	LR	03 21 33.5	
	comp=Z,159nm,21.6s,baz=235,slow=30						
LPAZ	**La Paz**	**43.31**	**77**	P	**P**	**03 09 15.1**	**+0.3**
	0.9nm,0.9s,baz=222,slow=4.4,SNR=2.8						
	0.9nm,0.9s						
LPAZ	**La Paz**	**43.31**	**77**	P	**P**	**03 09 15.1**	**+0.3**
URZ	**Urewera**	**55.89**	**244**	LR	LR	03 29 42.6	
	comp=Z,75nm,18.9s,baz=211,slow=31						
QSPA	**South Pole Qui**	**56.08**	**180**	P	**P**	**03 10 52.3**	**+1.5**
SDV	**Santo Domingo**	**58.18**	**51**	LR	LR	03 32 33.8	
	comp=Z,62nm,19.1s,baz=90,slow=32						
CCUT	**Cedar City**	**71.31**	**359**	P	**P**	**03 12 33.5**	**+1.9**
CCUT				IAmb	IAmb	03 12 38.8	
	comp=Z,2.8nm,0.8s						
NVAR	**Mina Array Bea**	**72.40**	**355**	P	**P**	**03 12 39.3**	**+1.2**
	comp=Z,1.1nm,0.9s,baz=193,slow=7.6,SNR=5.9						
	comp=Z,1.1nm,0.9s						
NVAR	**Mina Array Bea**	**72.40**	**355**	P	**P**	**03 12 38.2**	**+0.1**
BW06	**Boulder Array**	**76.55**	**2**	P	**P**	**03 13 01.1**	**-1.1**
BW06				IAmb	IAmb	03 13 07.5	
	comp=Z,3.0nm,0.9s						
PD31	**Pinedale Array**	**76.55**	**2**	P	**P**	**03 13 01.4**	**-0.8**
PD31				IAmb	IAmb	03 13 07.5	
	comp=Z,2.6nm,0.9s						
PDAR	**Pinedale Array**	**76.55**	**2**	P	**P**	**03 13 02.1**	**0.0**
	comp=Z,2.7nm,0.9s,baz=183,slow=5.2,SNR=7.3						
	comp=Z,2.7nm,0.9s						
PDAR	**Pinedale Array**	**76.55**	**2**	P	**P**	**03 13 01.0**	**-1.2**
HLID	**Hailey**	**77.33**	**358**	P	**P**	**03 13 06.9**	**+0.4**
HLID				IAmb	IAmb	03 13 13.2	
	comp=Z,2.4nm,0.9s						
H11S2	**WAKE ISLAND Hy**	**93.06**	**290**	T	T	04 58 16.8	
	baz=126,slow=75,SNR=5.3						
H11S1	**WAKE ISLAND Hy**	**93.08**	**290**	T	T	04 58 04.9	
	baz=126,slow=75,SNR=5.1						
H11S3	**WAKE ISLAND Hy**	**93.08**	**290**	T	T	04 58 24.2	
	baz=126,slow=75,SNR=5.7						
H01W1	**Cape Leeuwin H**	**98.76**	**217**	T	T	05 05 06.5	
	baz=146						
H01W2	**Cape Leeuwin H**	**98.77**	**217**	T	T	05 04 45.8	
	baz=146						
H01W3	**Cape Leeuwin H**	**98.78**	**217**	T	T	05 04 45.5	
	baz=146						
AKASG	**Malin Array Be**	**147.52**	**48**	PKPbc	**PKPbc**	**03 20 54.5**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=284,slow=3.3,SNR=1.6						
SONM	**Songino Array**	**148.12**	**307**	PKPbc	**PKPbc**	**03 20 57.4**	**-0.1**
	comp=Z,3.1nm,0.9s,baz=96,slow=3.0,SNR=4.8						
SONM	**Songino Array**	**148.12**	**307**		**PKPbc**	**03 20 57.3**	**-0.3**
CMAR	**Chiang Mai Arr**	**148.14**	**249**	PKPbc	**PKPdf**	**03 20 54.9**	**-0.1**
	comp=Z,1.7nm,0.4s,baz=147,slow=2.0,SNR=4.9						
CMAR	**Chiang Mai Arr**	**148.14**	**249**	PKPdf	**PKPdf**	**03 20 53.8**	**-1.2**
CMAR					**PKiKP**	**03 20 59.1**	**-0.9**
BRTR	**Keskin Array B**	**152.27**	**68**	PKPbc	**PKPdf**	**03 21 01.8**	**+0.7**
	comp=Z,0.7nm,0.9s,baz=228,slow=1.7,SNR=4.3						
BRTR	**Keskin Array B**	**152.27**	**68**	PKPdf	**PKPdf**	**03 20 59.5**	**-1.6**

*SNET **13** 03:31:54.0±0.6, 13.39N×90.86W, h13km±6km, ML3.0*
*GCG **13** 03:31:56.0±0.4, 13.63N×90.99W, h26km±3km, MD3.4*

ISC 13 03:31:52.6±2.9, 13.4N±0.2×91.02W±0.09, h29km, n12, σ0s55/16, 1C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FUG	**Fuego 3**	**1.07**	**9**	*e*P	**Pb**	**03 32 12.1**	**-0.5**
PCG	**Pacaya**	**1.07**	**22**	*e*P	**Pb**	**03 32 12.2**	**-0.5**
NUBE	**Las Nubes**	**1.31**	**67**	*e*P	**Pn**	**03 32 14.7**	**-0.4**
LOAL	**Lomas de Alarc**	**1.35**	**63**	*e*P	**Pn**	**03 32 15.6**	**+0.1**
LOAL				*e*S	**Sn**	**03 32 32.6**	**0.0**
NBG	**Las Nubes**	**1.36**	**29**	*e*P	**Pb**	**03 32 17.2**	**-0.4**
NBG				*e*S	**Sn**	**03 32 33.6**	**+0.5**
SLOZ	**Alcaldia de Sa**	**1.36**	**62**	*e*P	**Pn**	**03 32 15.8**	**+0.1**
SLOZ				*e*S	**Sn**	**03 32 32.2**	**-0.5**
SLOZ				IAML		03 32 36.2	
	comp=Z,160nm,0.4s						
STG3	**Santiaguito 3,**	**1.42**	**338**	*e*P	**Pb**	**03 32 17.8**	**-0.7**
STG3				*e*S	**Sn**	**03 32 34.9**	**+0.5**
CEVE	**Cerro Verde**	**1.43**	**72**	*e*P	**Pn**	**03 32 17.1**	**+0.4**
CEVE				IAML		03 32 40.1	
	comp=Z,462nm,0.2s						
RTR	**El Retiro**	**1.43**	**69**	*e*P	**Pn**	**03 32 17.0**	**+0.2**
SBLS	**San Blas**	**1.43**	**72**	*e*P	**Pn**	**03 32 17.0**	**+0.2**
PMON	**Piamonte**	**1.69**	**79**	*e*P	**Pn**	**03 32 21.1**	**+0.8**
ESQI	**Esquipulas**	**2.00**	**54**	*e*P	**Pn**	**03 32 25.6**	**+1.0**

*JMA **13** 03:54:47.9±1.0, 43.88N±0.07×142.46E±0.08, h205km±7km, n21, σ0s66/29, mb3.4/3, Hokkaido region*
*IDC **13** 03:55:07.7±17.0, 42.68N×139.64E, h305km±87km, mb2.8/3, mbtmp3.4/4, Error ellipse: s-maj=338.4km s-min=29.2km az=58.0*

ISC 13 03:54:47.9±1.0, 43.88N±0.07×142.46E±0.08, h205km±7km, n21, σ0s66/29, mb3.4/3, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKK2	**Kamakawa 2**	**0.20**	**91**	*e*P	**Pn**	**03 55 15.1**	**+0.3**
JKK2				*e*S	**S**	**03 55 35.9**	**0.0**
ASAJ	**Asahikawa**	**0.26**	**22**	P	**Pn**	**03 55 14.9**	**+0.1**
ASAJ				*e*S	**S**	**03 55 35.4**	**-0.7**
JAB	**Ashibetsu**	**0.41**	**205**	*e*S	**S**	**03 55 37.4**	**+0.8**
JHR	**Hokuryu**	**0.55**	**256**	*e*S	**S**	**03 55 37.7**	**+0.4**
JMP	**Maruseppu**	**0.66**	**78**	*e*P	**Pn**	**03 55 16.6**	**+0.3**
JSS	**Shosan**	**0.68**	**320**	*e*P	**Pn**	**03 55 16.2**	**-0.1**
JSS				*e*S	**S**	**03 55 37.9**	**-0.6**
JFR	**Furan**	**0.72**	**172**	*e*P	**Pn**	**03 55 16.6**	**0.0**
JFR				*e*S	**S**	**03 55 38.9**	**+0.1**
JYG	**Yagishiri**	**0.93**	**307**	*e*P	**Pn**	**03 55 17.3**	**-0.3**
JISS	**Ishikarishitsu**	**0.97**	**232**	*e*P	**Pn**	**03 55 18.7**	**+0.7**
JTKR	**Abashiri--Toko**	**1.05**	**84**	*e*P	**Pn**	**03

RPZ	**Rata Peaks**	**24.32 198**	P	**P**	**04 05 18.8**	**-0.7**	
	4.2nm,0.4s,baz=63,slow=6.8,SNR=2.4						
	4.2nm,0.4s						
MLZ	**Mavora Lakes**	**26.73 201**	P	**P**	**04 05 41.7**	**+1.0**	
WHZ	**Wether Hill Ro**	**27.25 201**	P	**P**	**04 05 46.8**	**+1.5**	
EIDS	**Eidsvold**	**28.22 255**	P	**P**	**04 05 54.0**	**+0.1**	
	baz=28,SNR=5.0						
EIDS	**Eidsvold**	**28.22 255**	P	**P**	**04 05 54.0**	**+0.1**	
EIDS			IAmb	IAmb	04 05 55.5		
	comp=Z,28nm,1.4s						
ARMA	**Armidale**	**28.40 244**	P	**P**	**04 05 56.6**	**+0.9**	
	baz=28,SNR=6.2						
ARMA	**Armidale**	**28.40 244**	P	**P**	**04 05 56.5**	**+0.9**	
ARMA			IAmb	IAmb	04 05 57.4		
	comp=Z,15nm,0.7s						
ARMA	**Armidale**	**28.40 244**	P	**P**	**04 05 56.5**	**+0.9**	
RMQ	**Roma**	**30.37 253**	P	**P**	**04 06 13.6**	**+1.1**	
	baz=30,SNR=6.4						
RMQ	**Roma**	**30.37 253**	P	**P**	**04 06 13.2**	**+0.7**	
CNB	**Canberra Magne**	**31.55 236**	P	**P**	**04 06 23.3**	**+0.8**	
	baz=31,SNR=11						
CNB	**Canberra Magne**	**31.55 236**	P	**P**	**04 06 22.8**	**+0.3**	
CAN	**Canberra**	**31.83 236**	P	**P**	**04 06 25.8**	**+0.9**	
CAN			IAmb	IAmb	04 06 26.9		
	comp=Z,17nm,1.1s						
CTA	**Charters Tower**	**32.91 265**	P	**P**	**04 06 34.3**	**+0.1**	
	comp=Z,17nm,0.4s,baz=87,slow=9.7,SNR=34						
	comp=Z,17nm,0.4s						
CTAO	**Charters Tower**	**32.91 265**	P	**P**	**04 06 34.3**	**+0.1**	
CTAO			IAmb	IAmb	04 06 35.3		
	comp=Z,36nm,1.1s						
CTAO	**Charters Tower**	**32.91 265**	P	**P**	**04 06 34.2**	**+0.1**	
CMSA	**Cobar Meteorol**	**33.62 244**	P	**P**	**04 06 40.3**	**+0.3**	
	baz=34,SNR=19						
CMSA	**Cobar Meteorol**	**33.62 244**	P	**P**	**04 06 40.1**	**+0.1**	
PMG	**Port Moresby**	**34.91 284**	P	**P**	**04 06 50.9**	**0.0**	
	comp=Z,96nm,0.8s,baz=100,slow=7.3,SNR=14						
	comp=Z,96nm,0.8s						
PMG	**Port Moresby**	**34.91 284**	P	**P**	**04 06 51.0**	**0.0**	
PMG	**Port Moresby**	**34.91 284**	P	**P**	**04 06 51.0**	**0.0**	
MTSU	**Mount Surprise**	**35.03 268**	P	**P**	**04 06 52.2**	**+0.3**	
	baz=35,SNR=6.6						
TOO	**Toolangi**	**35.22 234**	P	**P**	**04 06 53.6**	**+0.3**	
	baz=35,SNR=4.4						
TOO	**Toolangi**	**35.22 234**	P	**P**	**04 06 53.8**	**+0.6**	
TOO			IAmb	IAmb	04 06 57.1		
	comp=Z,20nm,1.1s						
PATS	**Pohnpei**	**35.72 318**	P	**P**	**04 06 58.3**	**+0.6**	
COEN	**Coen**	**37.07 274**	P	**P**	**04 07 09.0**	**+0.3**	
	baz=37,SNR=12						
COEN	**Coen**	**37.07 274**	P	**P**	**04 07 09.2**	**+0.4**	
COEN	**Coen**	**37.07 274**	P	**P**	**04 07 09.2**	**+0.4**	
STKA	**Stephens Creek**	**37.12 245**	P	**P**	**04 07 09.3**	**+0.4**	
	comp=Z,15nm,0.8s,baz=91,slow=9.5,SNR=31						
	comp=Z,15nm,0.8s						
STKA	**Stephens Creek**	**37.12 245**	P	**P**	**04 07 09.5**	**+0.5**	
	baz=37,SNR=13						
STKA	**Stephens Creek**	**37.12 245**	P	**P**	**04 07 09.3**	**+0.4**	
STKA	**Stephens Creek**	**37.12 245**	P	**P**	**04 07 09.4**	**+0.4**	
QIS	**Mount Isa**	**39.03 263**	P	**P**	**04 07 24.6**	**0.0**	
	baz=39,SNR=6.0						
QIS	**Mount Isa**	**39.03 263**	P	**P**	**04 07 24.1**	**-0.5**	
HTT	**Hallett**	**39.55 243**	P	**P**	**04 07 28.9**	**+0.2**	
	baz=39,SNR=6.2						
NAPP	**Napperby**	**40.17 243**	P	**P**	**04 07 34.1**	**+0.6**	
BBOO	**Buckleboo**	**41.88 244**	P	**P**	**04 07 46.9**	**-0.2**	
	baz=42,SNR=22						
BBOO	**Buckleboo**	**41.88 244**	P	**P**	**04 07 46.8**	**-0.2**	
BBOO			IAmb	IAmb	04 07 47.3		
	comp=Z,26nm,0.7s						
OOD	**Oodnadatta**	**42.04 251**	P	**P**	**04 07 48.8**	**+0.4**	
MULG	**Mulgathing**	**43.46 248**	P	**P**	**04 07 59.1**	**-0.3**	
WR0	**Warramunga Arr**	**43.82 263**	P	**P**	**04 08 01.6**	**-0.8**	
WR0			IAmb	IAmb	04 08 03.3		
	comp=Z,39nm,1.2s						
AS31	**Alice Springs**	**43.90 257**	P	**P**	**04 08 02.5**	**-0.4**	
AS31			IAmb	IAmb	04 08 03.4		
	comp=Z,8.8nm,0.7s						
AS31			PcP	**PcP**	**04 09 36.3**	**+0.2**	
ASAR	**Alice Springs**	**43.90 257**	P	**P**	**04 08 02.6**	**-0.4**	
	comp=Z,33nm,0.7s,baz=97,slow=7.7,SNR=367						
ASAR			PcP	**PcP**	**04 09 35.4**	**-0.7**	
	comp=Z,4.1nm,0.7s,baz=96,slow=4.3,SNR=7.3						
ASAR			ScP	**ScP**	**04 12 34.3**	**+1.1**	
	comp=Z,2.3nm,0.8s,baz=100,slow=4.5,SNR=7.2						
ASAR			S	**S**	**04 13 50.4**	**-2.9**	
	comp=Z,7.5nm,0.8s,baz=94,slow=16,SNR=23						
	comp=Z,33nm,0.7s						
ASAR	**Alice Springs**	**43.90 257**	P	**P**	**04 08 02.8**	**-0.2**	
ASAR			PcP	**PcP**	**04 09 36.5**	**+0.4**	
WB0	**Warramunga Arr**	**43.99 263**	P	**P**	**04 08 02.9**	**-0.8**	
WB2	**Warramunga Arr**	**44.00 263**	P	**P**	**04 08 03.0**	**-0.7**	
WB2			IAmb	IAmb	04 08 03.9		
	comp=Z,49nm,1.1s						
WRAB	**Tennant Creek**	**44.00 263**	P	**P**	**04 08 02.7**	**-1.1**	
WRAB			IAmb	IAmb	04 08 03.8		
	comp=Z,38nm,1.1s						
WRAB	**Tennant Creek**	**44.00 263**	P	**P**	**04 08 02.8**	**-1.0**	
WRA	**Warramunga Arr**	**44.01 263**	P	**P**	**04 08 02.9**	**-1.0**	
	comp=Z,14nm,0.6s,baz=97,slow=7.6,SNR=252						
WRA			S	**S**	**04 13 50.8**	**-4.1**	
	comp=Z,4.6nm,0.8s,baz=97,slow=13,SNR=7.6						
	comp=Z,14nm,0.6s						
WRA	**Warramunga Arr**	**44.01 263**	P	**P**	**04 08 02.8**	**-1.0**	
GENI	**Genyem**	**44.10 289**	P	**P**	**04 08 04.6**	**0.0**	
	comp=Z,119nm,1.3s						
SMPI	**Sarmi**	**45.67 289**	P	**P**	**04 08 16.1**	**-0.5**	
KDU	**Kakadu**	**47.42 272**	P	**P**	**04 08 29.1**	**-0.7**	
	baz=47,SNR=5.1						
SRPI	**Serui, Papua**	**47.92 287**	P	**P**	**04 08 33.2**	**-0.3**	
	comp=Z,100nm,0.5s						
MTN	**Manton Dam**	**48.63 271**	P	**P**	**04 08 37.5**	**-1.2**	
	baz=48,SNR=8.9						
MTN	**Manton Dam**	**48.63 271**	P	**P**	**04 08 37.6**	**-1.2**	
MTN			IAmb	IAmb	04 08 38.5		
	comp=Z,32nm,0.8s						
FORT	**Forrest**	**48.63 247**	P	**P**	**04 08 38.1**	**-0.5**	
	baz=48,SNR=20						
FORT	**Forrest**	**48.63 247**	P	**P**	**04 08 37.7**	**-0.9**	
FORT	**Forrest**	**48.63 247**	P	**P**	**04 08 38.1**	**-0.5**	
WRKA	**Warakurna**	**48.83 255**	P	**P**	**04 08 39.8**	**-0.4**	
	baz=49,SNR=92						
WRKA	**Warakurna**	**48.83 255**	P	**P**	**04 08 39.8**	**-0.4**	
KNRA	**Kununurra**	**50.09 267**	P	**P**	**04 08 49.1**	**-0.4**	
	baz=50,SNR=8.1						
KNRA	**Kununurra**	**50.09 267**	P	**P**	**04 08 48.8**	**-0.7**	
KNRA			IAmb	IAmb	04 08 49.5		
	comp=Z,29nm,0.7s						
KNRA	**Kununurra**	**50.09 267**	P	**P**	**04 08 49.3**	**-0.2**	
SIJI	**Sorong**	**52.83 286**	P	**P**	**04 09 08.9**	**-0.3**	
	comp=Z,62nm,0.8s,baz=83,slow=5.1,SNR=28						
	comp=Z,62nm,0.8s						
SOEI	**Soe**	**55.98 272**	P	**P**	**04 09 32.7**	**+1.3**	
SOEI	**Soe**	**55.98 272**	P	**P**	**04 09 31.3**	**-0.1**	
PSA00	**Pilbara Seismi**	**57.05 257**	P	**P**	**04 09 36.8**	**-1.7**	
PSA00			IAmb	IAmb	04 09 38.8		
	comp=Z,22nm,0.9s						
PSA00			PcP	**PcP**	**04 10 25.6**	**+0.3**	
PSA00	**Pilbara Seismi**	**57.05 257**	P	**P**	**04 09 37.8**	**-0.7**	
MBWA	**Marble Bar**	**57.24 258**	P	**P**	**04 09 39.1**	**-0.7**	
MBWA			IAmb	IAmb	04 09 39.9		
	comp=Z,30nm,0.7s						
MBWA	**Marble Bar**	**57.24 258**	P	**P**	**04 09 39.3**	**-0.5**	
KLBR	**Kellerberrin**	**57.39 245**	P	**P**	**04 09 40.6**	**-0.1**	
	baz=57,SNR=17						
KLBR	**Kellerberrin**	**57.39 245**	P	**P**	**04 09 40.3**	**-0.4**	
VNDA	**Vanda**	**57.45 185**	P	**P**	**04 09 42.6**	**+2.3**	
	comp=Z,0.9nm,0.6s,baz=355,slow=7.5,SNR=9.9						
	comp=Z,0.9nm,0.6s						
VNDA	**Vanda**	**57.45 185**	P	**P**	**04 09 42.2**	**+1.9**	
NWAO	**Narrogin (SRO)**	**57.70 244**	P	**P**	**04 09 42.5**	**-0.3**	
NWAO			IAmb	IAmb	04 09 46.5		
	comp=Z,45nm,1.2s						
NWAO	**Narrogin (SRO)**	**57.70 244**	P	**P**	**04 09 42.6**	**-0.2**	
BLDU	**Ballidu**	**58.39 246**	P	**P**	**04 09 47.0**	**-0.5**	
	baz=58,SNR=17						
BLDU	**Ballidu**	**58.39 246**	P	**P**	**04 09 47.1**	**-0.4**	
MUN	**Mundaring**	**58.66 245**	P	**P**	**04 09 49.5**	**+0.2**	
	baz=58,SNR=3.9						
MUN	**Mundaring**	**58.66 245**	P	**P**	**04 09 49.4**	**+0.2**	
EDFI	**Ende, Flores**	**58.70 272**	P	**P**	**04 09 49.1**	**-0.8**	
	comp=Z,28nm,1.4s						
MORW	**Morawa**	**59.17 248**	P	**P**	**04 09 52.1**	**-0.6**	
	baz=59,SNR=4.3						
MORW	**Morawa**	**59.17 248**	P	**P**	**04 09 51.8**	**-0.9**	
MORW			IAmb	IAmb	04 09 53.1		
	comp=Z,34nm,1.2s						
MORW	**Morawa**	**59.17 248**	P	**P**	**04 09 52.4**	**-0.3**	
GIRL	**Giralia**	**61.92 255**	P	**P**	**04 10 10.4**	**-0.4**	
	baz=62,SNR=7.9						
GIRL	**Giralia**	**61.92 255**	P	**P**	**04 10 11.7**	**+0.8**	
GIRL	**Giralia**	**61.92 255**	P	**P**	**04 10 11.6**	**+0.7**	
PLAI	**Plampang**	**62.34 271**	P	**P**	**04 10 13.1**	**-0.6**	
TOLI2	**Tolitoli**	**63.16 282**	P	**P**	**04 10 17.4**	**-1.6**	
TOLI2			IAmb	IAmb	04 10 19.4		
	comp=Z,16nm,1.0s						
TOLI2	**Tolitoli**	**63.16 282**	P	**P**	**04 10 18.9**	**-0.1**	
QSPA	**South Pole Qui**	**69.15 180**	P	**P**	**04 10 56.3**	**+1.0**	
	comp=Z,5.7nm,0.8s,baz=10,slow=3.3,SNR=25						
	comp=Z,5.7nm,0.8s						
QSPA	**South Pole Qui**	**69.15 180**	P	**P**	**04 10 57.0**	**+1.6**	
UGM	**Wanagama**	**69.42 269**	P	**P**	**04 10 57.4**	**-0.4**	
UGM	**Wanagama**	**69.42 269**	P	**P**	**04 10 57.5**	**-0.2**	
JGF	**Kuroka**	**70.02 323**	P	**P**	**04 11 00.1**	**-0.8**	
JGF			IAmb	IAmb	04 11 05.8		
	comp=Z,31nm,1.5s						
MJAR	**Matsushiro Arr**	**70.23 324**	P	**P**	**04 11 01.3**	**-0.8**	
	comp=Z,2.9nm,0.6s,baz=146,slow=7.6,SNR=8.1						
	comp=Z,2.9nm,0.6s						
MJAR	**Matsushiro Arr**	**70.23 324**	P	**P**	**04 11 01.6**	**-0.4**	
MAJO	**Matsushiro**	**70.23 324**	P	**P**	**04 11 01.9**	**-0.2**	
MJB9	**Matsu-Tunnel**	**70.23 324**	P	**P**	**04 11 02.1**	**0.0**	
JHS	**Saijyo**	**72.07 320**	P	**P**	**04 11 13.3**	**+0.5**	
JHS			IAmb	IAmb	04 11 14.2		
	comp=Z,18nm,0.9s						
ADK	**Adak**	**72.50 1**	P	**P**	**04 11 14.6**	**-0.2**	
ADK			IAmb	IAmb	04 11 34.4		
	comp=Z,32nm,1.1s						
YULB	**Yu-li**	**73.28 304**	P	**P**	**04 11 19.4**	**-0.6**	
YULB			IAmb	IAmb	04 11 21.2		
	comp=Z,42nm,1.5s						
PETK	**Petropavlovsk-**	**76.54 346**	P	**P**	**04 11 37.6**	**+0.1**	
	comp=Z,4.7nm,0.7s,baz=124,slow=7.4,SNR=12						
	comp=Z,4.7nm,0.7s						
PETK	**Petropavlovsk-**	**76.54 346**	P	**P**	**04 11 37.5**	**0.0**	
KSRS	**Korea Array**	**76.84 319**	P	**P**	**04 11 39.7**	**+0.2**	
	comp=Z,2.1nm,0.7s,baz=142,slow=7.0,SNR=7.1						
	comp=Z,2.1nm,0.7s						
USRK	**Ussuriysk Ar.**	**79.01 326**	P	**P**	**04 11 52.1**	**+1.2**	
	comp=Z,5.4nm,0.7s,baz=201,slow=3.7,SNR=7.2						
	comp=Z,5.4nm,0.7s						
USRK	**Ussuriysk Ar.**	**79.01 326**	P	**P**	**04 11 52.2**	**+1.3**	
BELA	**Belgrano 2**	**79.22 173**	P	**P**	**04 11 52.3**	**+0.6**	
NJ2	**Nanjing**	**79.73 310**	*e*P	**P**	**04 11 54.9**	**-0.2**	
NJ2			pmax	pmax			
	comp=Z,7.0nm,0.5s						
MDJ	**Mudanjiang**	**80.55 325**	P	**P**	**04 12 00.1**	**+1.1**	
MDJ			pmax	pmax			
	comp=Z,12nm,0.6s						
MDJ			pmax	pmax			
	comp=Z,100nm,3.6s						
YBH	**Yreka Blue Hor**	**80.95 39**	P	**P**	**04 12 03.8**	**+2.5**	
MAW	**Mawson**	**80.99 200**	P	**P**	**04 12 01.6**	**+0.6**	
	comp=Z,2.0nm,0.7s,baz=72,slow=12,SNR=4.3						
	comp=Z,2.0nm,0.7s						
MAW	**Mawson**	**80.99 200**	P	**P**	**04 12 02.0**	**+1.0**	
YERR	**Yerington**	**81.42 43**	P	**P**	**04 12 04.8**	**+0.9**	
NVAR	**Mina Array Bea**	**81.70 44**	P	**P**	**04 12 07.0**	**+1.6**	
	comp=Z,2.1nm,0.8s,baz=222,slow=8.6,SNR=16						
	comp=Z,2.1nm,0.8s						
NVAR	**Mina Array Bea**	**81.70 44**	P	**P**	**04 12 07.2**	**+1.8**	
NV11	**Mina Array Sit**	**81.79 44**	P	**P**	**04 12 07.5**	**+1.8**	
KVN	**Kaiserville**	**82.18 43**	P	**P**	**04 12 09.1**	**+1.3**	
CN2	**Changchun**	**82.30 323**	*e*P	**P**	**04 12 08.5**	**+0.5**	
CN2			*e*PP	**PP**	**04 15 30.5**	**+2.6**	
K05A	**Summer Lake**	**82.63 39**	P	**P**	**04 12 11.9**	**+1.9**	
K05A			IAmb	IAmb	04 12 12.8		
	comp=Z,7.9nm,1.0s						
IPM	**Ipoh**	**82.65 278**	P	**P**	**04 12 10.3**	**-0.2**	
IPM			IAmb	IAmb	04 12 11.4		
	comp=Z,20nm,0.7s						
O18K	**Koktuh Hills**	**82.72 12**	P	**P**	**04 12 09.8**	**+0.1**	
O18K			IAmb	IAmb	04 12 10.6		
	comp=Z,7.0nm,0.8s						
PSI	**Prapat**	**83.99 275**	P	**P**	**04 12 16.4**	**-0.9**	
	comp=Z,13nm,0.9s,baz=84,slow=0.9,SNR=9.5						
	comp=Z,13nm,0.9s						
L19K	**White Mountain**	**84.95 11**	P	**P**	**04 12 21.5**	**+0.8**	
BJI	**Beijing**	**85.81 316**	P	**P**	**04 12 25.9**	**+0.6**	
BJI			pmax	pmax			
	comp=Z,7.0nm,0.6s						
RND	**Reindeer**	**87.22 13**	P	**P**	**04 12 31.5**	**0.0**	
RND			IAmb	IAmb	04 12 32.3		
	comp=Z,5.7nm,0.7s						
TX31	**Lajitas Ar. Si**	**87.73 58**	P	**P**	**04 12 35.3**	**+0.5**	
TX31			IAmb	IAmb	04 12 37.8		
	comp=Z,12nm,1.1s						
TXAR	**Lajitas Array**	**87.73 58**	P	**P**	**04 12 37.0**	**+2.2**	
	comp=Z,2.0nm,0.8s,baz=223,slow=6.6,SNR=14						
	comp=Z,2.0nm,0.8s						
XAN	**Xi'an**	**87.96 308**	P	**P**	**04 12 36.3**	**+0.7**	
XAN			pmax	pmax			
	comp=Z,13nm,0.8s						
WRH	**Wood River Hil**	**88.33 13**	P	**P**	**04 12 36.0**	**-0.5**	
WRH			IAmb	IAmb	04 12 37.0		
	comp=Z,4.8nm,0.9s						
ILAR	**Eielson Array**	**88.84 13**	P	**P**	**04 12 38.5**	**-0.4**	
	comp=Z,0.8nm,0.5s,baz=217,slow=5.1,SNR=14						
	comp=Z,0.8nm,0.5s						
KMI	**Kunming**	**89.06 297**	↑P	**P**	**04 12 41.9**	**+0.7**	
KMI			pmax	pmax			
	comp=Z,10.0nm,0.8s						
HHC	**Hu-ho-hao-te**	**89.26 315**	*e*P	**P**	**04 12 42.5**	**+0.9**	
HHC			pmax	pmax			
	comp=Z,22nm,1.0s						
HHC			pmax	pmax			
	comp=Z,150nm,8.0s						
PDAR	**Pinedale Array**	**89.64 43**	P	**P**	**04 12 43.9**	**+0.4**	
	comp=Z,1.2nm,0.8s,baz=222,slow=2.0,SNR=9.3						
	comp=Z,1.2nm,0.8s						
PDAR	**Pinedale Array**	**89.64 43**	P	**P**	**04 12 44.0**	**+0.5**	
CMAR	**Chiang Mai Arr**	**89.75 290**	P	**P**	**04 12 45.7**	**+1.5**	
	comp=Z,6.1nm,0.9s,baz=121,slow=3.0,SNR=26						
	comp=Z,6.1nm,0.9s						
CMAR	**Chiang Mai Arr**	**89.75 290**	P	**P**	**04 12 45.1**	**+0.9**	
PZH	**PanZhiHua**	**90.43 298**	P	**P**	**04 12 48.0**	**+0.6**	
PZH			pmax	pmax			
	comp=Z,10.0nm,0.6s						
PZH			pmax	pmax			
	comp=Z,60nm,5.5s						
LZH	**Lanzhou**	**92.59 308**	↓P	**P**	**04 12 58.1**	**+0.9**	
LZH			pP	PcP	04 13 02.3	+4.8	
LZH			pmax	pmax			
	comp=Z,17nm,1.4s						
ZALV	**Zalesovo Beam**	**110.48 321**	PKiKP	**PKiKP**	**04 18 12.0**	**-1.3**	
	comp=Z,0.5nm,0.4s,baz=75,slow=1.6,SNR=3.6						
MKAR	**Makanchi Array**	**111.09 313**	PKiKP	**PKiKP**	**04 18 13.6**	**-1.2**	
	comp=Z,0.6nm,0.8s,baz=78,slow=2.5,SNR=6.0						
KURK	**Kurchatov**	**113.93 317**		**PKiKP**	**04 18 18.9**	**-1.0**	
KURBB	**Kurchatov Arra**	**113.98 317**	PKiKP	**PKiKP**	**04 18 18.9**	**-1.2**	
	comp=Z,0.9nm,0.7s,baz=87,slow=1.9,SNR=11						
ARCES	**ARCESS Array B**	**129.23 349**	PKP	**PKPdf**	**04 18 48.3**	**-0.5**	
	comp=Z,1.4nm,0.6s,baz=8.7,slow=1.2,SNR=11						
FINES	**FINESS Array B**	**136.02 343**	PKhKP	PKPpre	04 18 57.6		
	comp=Z,0.4nm,0.4s,baz=355,slow=34,SNR=1.3						
FINES			PKP	**PKPdf**	**04 19 02.6**	**+0.9**	
	comp=Z,0.6nm,0.6s,baz=96,slow=6.2,SNR=6.1						
NB2	**NORSAR Subarra**	**139.33 353**	PKP	PKPpre	04 18 59.3		
	comp=Z,3.4nm,1.4s,baz=16,slow=3.2						
NOA	**NORSAR Array B**	**139.33 353**	PKhKP	PKPpre	04 18 59.4		
	comp=Z,0.3nm,0.7s,baz=19,slow=3.9,SNR=6.1						
NOA			PKP	**PKPdf**	**04 19 07.4**	**-0.5**	
	comp=Z,0.4nm,0.7s,baz=14,slow=4.1,SNR=4.7						
LODK	**Lodwar**	**142.68 247**		**PKPdf**	**04 19 12.9**	**-2.5**	
AKASG	**Malin Array Be**	**143.11 330**	PKhKP	PKPpre	04 19 11.9		
	comp=Z,18nm,0.7s,baz=35,slow=4.3,SNR=76						
AKBB	**Malin Array Si**	**143.11 330**		PKPpre	04 19 12.0		
SORM	**Soroca**	**145.27 328**	↑P	**PKPdf**	**04 19 19.1**	**+0.4**	
MILM	**Milestii Mici**	**145.84 326**	↓*e*PKP	**PKPdf**	**04 19 20.0**	**+0.3**	
	comp=Z,50nm,1.2s						
BR131	**Keskin Array S**	**146.71 311**		**PKPbc**	**04 19 23.4**	**-0.9**	
BRTR	**Keskin Array B**	**146.71 311**	PKPbc	**PKPbc**	**04 19 23.8**	**-0.6**	
	comp=Z,4.0nm,0.7s,baz=130,slow=4.5,SNR=26						
BRTR	**Keskin Array B**	**146.71 311**		**PKPbc**	**04 19 23.5**	**-0.9**	
BURAR	**Bucovina Array**	**147.15 330**	↓P	**PKiKP**	**04 19 26.6**	**-0.3**	
BURAR	**Bucovina Array**	**147.15 330**	PKPbc	**PKPbc**	**04 19 24.7**	**-0.5**	
BIZ	**Bicaz**	**147.20 328**	↑P	**PKPbc**	**04 19 25.7**	**+0.5**	
CFR	**Carcaliu**	**147.31 324**	↓P	**PKPbc**	**04 19 25.3**	**-0.2**	
TPGR	**Topolog**	**147.35 323**	↑P	**PKPbc**	**04 19 25.6**	**-0.1**	
VRI	**Vrincioaia**	**147.62 326**	↑P	**PKPbc**	**04 19 25.5**	**-0.9**	
HARR	**Harsova**	**147.72 323**	↑P	**PKPbc**	**04 19 26.4**	**-0.2**	
CRVS	**Cervenica-Dubn**	**147.81 335**	*e*PKP	**PKPbc**	**04 19 27.3**	**+0.5**	
CRVS			*e*		04 19 31.8		
KSP	**Ksiaz**	**147.92 342**	*e*PKP	**PKPbc**	**04 19 27.6**	**+0.6**	
OSTC	**Ostas**	**148.20 342**	↑*e*PKP	**PKiKP**	**04 19 28.8**	**-0.1**	
CHVC	**Chvalec**	**148.22 342**	↑*e*PKP	**PKiKP**	**04 19 28.4**	**-0.6**	
DOPR	**Dopca**	**148.23 327**	↑P	**PKPbc**	**04 19 28.3**	**+0.4**	
MLR	**Muntele Rosu**	**148.27 326**	↑P	**PKiKP**	**04 19 28.9**	**-0.5**	
MLR	**Muntele Rosu**	**148.27 326**	PKPbc	**PKPbc**	**04 19 27.5**	**-0.7**	
CLL	**Collm**	**148.34 346**	PKPbc	**PKPbc**	**04 19 27.5**	**-0.4**	
CLL	**Collm**	**148.34 346**	↓*i*PKPbc	**PKPbc**	**04 19 27.9**	**-0.1**	
	comp=Z,11nm,1.0s						
CLL			↑*i*PKPab	**PKPab**	**04 19 33.1**	**-0.3**	
	comp=Z,6.0nm,0.8s						
CLL			*ex*	x	04 21 53.0		
DPC	**Dobruska-Polom**	**148.35 342**	↑*e*PKP	**PKiKP**	**04 19 28.8**	**-0.5**	
DPC			*e*PKPAB	**PKPab**	**04 19 34.4**	**+0.8**	
LANS	**Liptovska Anna**	**148.36 337**	*e*PKP	**PKiKP**	**04 19 29.3**	**0.0**	
LANS			*e*		04 19 34.6		
MORC	**Moravsky Berou**	**148.48 340**	↓P	**PKPbc**	**04 19 28.7**	**+0.3**	
MORC	**Moravsky Berou**	**148.48 340**	PKPbc	**PKPbc**	**04 19 28.0**	**-0.4**	
MORC	**Moravsky Berou**	**148.48 340**	*e*PKP	**PKPbc**	**04 19 28.5**	**0.0**	
BRG	**Berggiesshubel**	**148.52 345**	*e*PKP	**PKPbc**	**04 19 28.9**	**+0.4**	
BRG			Amp		04 19 31.5		
	comp=Z,16nm,1.5s						
MAUC	**Maruska**	**148.75 339**	↑*e*PKP	**PKiKP**	**04 19 30.1**	**0.0**	
VOIR		**148.77 327**	↑P	**PKiKP**	**04 19 30.0**	**-0.3**	
BORA	**Eskisehir**	**148.84 314**		**PKPbc**	**04 19 29.0**	**-0.7**	
DRGR		**148.92 331**	↑P	**PKPbc**	**04 19 29.3**	**-0.3**	
PRU	**Pruhonice**	**149.18 343**	↑*e*PKP	**PKPbc**	**04 19 30.5**	**+0.4**	
VRAC	**Vranov**	**149.19 340**	*e*PKP	**PKPbc**	**04 19 30.4**	**+0.2**	
KOLL	**Kolacno**	**149.22 338**	*e*PKP	**PKiKP**	**04 19 31.1**	**+0.1**	
JAVC	**Velka Javorina**	**149.24 339**	*e*PKP	**PKiKP**	**04 19 31.5**	**+0.3**	
LOT	**Lotru**	**149.40 328**	↑P	**PKPbc**	**04 19 30.1**	**-0.8**	
KRUC	**Moravsky**	**149.47 340**	*e*PKP	**PKPbc**	**04 19 30.6**	**-0.2**	
MODS	**Modra-Piesok**	**149.79 339**	*e*PKP	**PKiKP**	**04 19 32.0**	**-0.3**	
SIRR	**Siria**	**149.79 332**	↑P	**PKPbc**	**04 19 31.6**	**-0.1**	
GZR	**Gura Zlata**	**149.93 329**	↑P	**PKPbc**	**04 19 31.5**	**-0.6**	
KHC	**Kasperske Hory**	**150.22 344**	PKPbc	**PKPbc**	**04 19 30.8**	**-1.9**	
KHC	**Kasperske Hory**	**150.22 344**	↑*e*PKP	**PKPbc**	**04 19 32.8**	**+0.2**	
KHC			*e*PKPAB	**PKPab**	**04 19 42.1**	**+0.7**	
BZS	**Buzias**	**150.30 331**	↑P	**PKPbc**	**04 19 32.4**	**-0.5**	
CKRC	**Cesky Krumlov**	**150.31 343**	↑*e*PKP	**PKiKP**	**04 19 33.1**	**-0.2**	
GEC2	**GERESS Array S**	**150.45 343**		**PKPbc**	**04 19 31.9**	**-1.3**	
GERES	**GERESS Array B**	**150.45 343**	PKPbc	**PKPbc**	**04 19 32.8**	**-0.5**	
	comp=Z,17nm,0.7s,baz=38,slow=2.4,SNR=16						
HERR	**Herculane**	**150.47 329**	↓P	**PKPbc**	**04 19 32.9**	**-0.4**	
CONA	**Conrad Observa**	**150.64 340**	*e*P	**PKPbc**	**04 19 33.8**	**+0.1**	
	comp=Z,4.8nm,0.7s						
RONA	**Rosalia, Austr**	**150.70 339**	*e*P	**PKPbc**	**04 19 33.8**	**0.0**	
	comp=Z,5.4nm,0.6s						
MDVR	**Moldovita**	**150.88 329**	↑P	**PKPbc**	**04 19 33.8**	**-0.6**	
AKAS	**Kas**	**151.06 308**	PKPbc	**PKPbc**	**04 19 33.7**	**-1.4**	
MORH	**Mrgy, Hungar**	**151.10 335**	↑P	**PKPbc**	**04 19 33.9**	**-0.7**	
MOA	**Molln**	**151.20 342**	*e*P	**PKPbc**	**04 19 34.5**	**-0.4**	
	comp=Z,2.2nm,0.8s						
BLKB	**Belogradchik**	**151.25 327**	↑P	**PKPbc**	**04 19 34.2**	**-1.0**	
ARSA	**Arzberg**	**151.35 340**	*e*P	**PKPbc**	**04 19 35.0**	**-0.2**	
	comp=Z,1.7nm,0.6s						
BIOA	**Bad Ischl, Aus**	**151.52 343**	*e*P	**PKPab**	**04 19 47.8**	**+0.9**	
	comp=Z,2.7nm,0.7s						
VTS	**Vitosha**	**151.66 325**	↑P	**PKPbc**	**04 19 34.5**	**-1.7**	
SOKA	**Soboth

JAM eS Sn 04 22 28.2 -2.5
JAM Amami Oshima 1.57 337 A A 04 22 09.2
comp=E,66nm,6.0s,comp=E,61nm,7.4s
JOKE Okinoerabujima 1.59 285 P Pn 04 22 09.6 -1.7
JOKE eS Sn 04 22 28.6 -2.9
JOKE Okinoerabujima 1.59 285 A A 04 22 09.6
comp=E,124nm,5.1s,comp=E,101nm,5.5s
JAMN Amaminishikomi 1.62 322 P Pn 04 22 09.7 -1.9
JAMN eS Sn 04 22 28.7 -3.3
JAMN Amaminishikomi 1.62 322 A A 04 22 09.7
comp=E,40nm,7.7s,comp=E,80nm,6.5s
JYRO Yoronjima 1.66 272 P Pn 04 22 10.2 -2.0
JYRO S Sn 04 22 29.4 -3.6
JYRO Yoronjima 1.66 272 A A 04 22 10.2
comp=E,96nm,5.6s,comp=E,107nm,6.9s
JOW Kunigami 1.82 266 Pn Pn 04 22 12.7 -1.7
2µm,0.3s,baz=104,slow=12,SNR=254
JOW Sn Sn 04 22 35.0 -2.0
3µm,0.3s,baz=205,slow=27,SNR=15
JOW Kunigami 1.82 266 Pn 04 22 12.5 -1.8
JOW Kunigami 1.82 266 P Pn 04 22 13.2 -1.2
JOW Kunigami 1.82 266 P Pn 04 22 12.6 -1.8
JOW eS Sn 04 22 34.5 -2.6
JOW Kunigami 1.82 266 A A 04 22 12.6
comp=E,85nm,5.4s,comp=E,100nm,1.7s
JIH Iheya 2.09 272 eP Pn 04 22 16.4 -1.7
JIH S Sn 04 22 41.7 -2.0
JIH Iheya 2.09 272 A A 04 22 16.4
comp=E,70nm,5.3s,comp=E,69nm,5.3s
JNTH Nagotoyohara 2.09 258 P Pn 04 22 15.9 -2.2
JNTH S Sn 04 22 40.0 -3.7
JNTH Nagotoyohara 2.09 258 A A 04 22 15.9
comp=E,82nm,6.3s,comp=E,75nm,5.7s
JTAJ Takarajima 2.38 336 P Pn 04 22 19.8 -2.3
JTAJ eS Sn 04 22 47.7 -3.2
JTAJ Takarajima 2.38 336 A A 04 22 19.8
comp=E,30nm,9.9s,comp=E,42nm,3.7s
JJT3 Tamagusuku3 2.41 251 P Pn 04 22 20.6 -1.8
JJT3 eS Sn 04 22 49.3 -2.1
JJT3 Tamagusuku3 2.41 251 A A 04 22 20.6
comp=E,259nm,6.1s,comp=E,207nm,6.5s
JAGN Aguni-jima 2.77 263 P Pn 04 22 25.4 -2.0
JAGN S Sn 04 22 57.5 -2.9
JAGN Aguni-jima 2.77 263 A A 04 22 25.4
comp=E,121nm,6.5s,comp=E,87nm,5.0s
JNN Nakanoshima 2.89 353 eS Sn 04 23 00.7 -2.7
JNN Nakanoshima 2.89 353 A A 04 23 00.7
comp=E,37nm,9.6s,comp=E,38nm,6.6s
JKE Kume jima 2 3.21 259 P Pn 04 22 31.2 -2.4
JKE Kume jima 2 3.21 259 A A 04 22 31.2
comp=E,32nm,6.1s,comp=E,32nm,6.4s
JYAK Yakushimahirau 3.26 3 P Pn 04 22 33.1 -1.1
JYAK Yakushimahirau 3.26 3 A A 04 22 33.1
comp=E,14nm,6.8s,comp=E,13nm,8.6s
JMTN Minamitane 3.46 9 eP Pn 04 22 35.8 -1.1
JMTN S Sn 04 23 15.4 -2.0
JMTN Minamitane 3.46 9 A A 04 22 35.8
comp=E,20nm,7.0s,comp=E,20nm,8.8s
JKC Kuchinoerabu 3.48 358 eS Sn 04 23 15.8 -2.2
JTN Tanegashima 3 3.72 9 P Pn 04 22 38.7 -1.9
JTN eS Sn 04 23 20.5 -3.4
JTN Tanegashima 3 3.72 9 A A 04 22 38.7
comp=E,14nm,7.3s,comp=E,14nm,11.3s
JSU Suzuyama 4.52 2 Pn Pn 04 22 49.9 -1.7
JSU Suzuyama 4.52 2 A A 04 22 50.5
comp=E,6.0nm,6.7s,comp=E,5.0nm,10.2s
JMJ Miyako jima 2 5.00 246 P Pn 04 22 56.3 -1.8
JNU Nakatsue 6.15 4 Pn Pn 04 23 14.7 +0.7
baz=0.0,slow=20
JNU Sn Sn 04 24 19.1 -4.8
baz=253,slow=19
YOJ Yonaguni jima 7.04 251 Pn Pn 04 23 23.5 -2.6
YOJ Yonaguni jima 7.04 251 P Pn 04 23 23.5 -2.6
JTU Tsushima 7.57 354 Pn Pn 04 23 33.9 +0.4
TATO Taipei 8.18 258 Pn Pn 04 23 41.6 -0.3
TATO Taipei 8.18 258 P Pn 04 23 43.4 +1.6
TATO P Pn 04 23 43.4 +1.6
NACB Ninganchiao 8.34 252 Pn Pn 04 23 39.9 -4.2
JHS Saijyo 8.36 16 Pn Pn 04 23 44.9 +0.6
YHNB Yeheng 8.37 256 Pn Pn 04 23 42.4 -2.1
YHNB Yeheng 8.37 256 P Pn 04 23 42.9 -1.6
NAWB Namwon 8.79 344 Pn Pn 04 23 49.7 -0.4
YULB Yu-li 8.90 248 Pn Pn 04 23 47.7 -4.1
SSE Sheshan 8.98 299 P Pn 04 23 52.9 +0.2
SSE S Sn 04 25 32.9 -0.5
SSE pmax pmax
comp=Z,33nm,1.5s
SSE pmax pmax
comp=Z,1µm,9.6s
SSE LR LR
comp=N,8µm,17.2s
SSE LR LR
comp=E,7µm,17.2s
SSLB Suanglung 9.03 252 Pn Pn 04 23 49.9 -3.7
SSLB Suanglung 9.03 252 P Pn 04 23 50.3 -3.2
TWG Pinlang 9.34 246 Pn Pn 04 23 51.0 -6.8
TPUB Ta-pu 9.50 249 Pn Pn 04 23 57.5 -2.4
TPUB Ta-pu 9.50 249 P Pn 04 23 59.2 -0.7
TJN Taejon 9.71 346 Pn Pn 04 24 03.5 +0.8
TJN Taejon 9.71 346*c i*P Pn 04 24 03.9 +1.2
TJN Taejon 9.71 346 P Pn 04 24 05.7 +3.0
KSCHJ Chungju 10.07 349 Pn 04 24 09.6 +1.9
INU Inuyama 10.14 33 Pn Pn 04 24 08.8 +0.2
INU Inuyama 10.14 33 P Pn 04 24 09.2 +0.6
JHJ Hachijo jima 2 10.24 51 Pn Pn 04 24 11.5 +1.4
61nm,0.3s,baz=26,slow=22,SNR=5.9
JHJ LR LR 04 27 43.5
comp=Z,4µm,19.6s,baz=306,slow=35
166nm,0.4s
JHJ Hachijo jima 2 10.24 51 Pn 04 24 11.5 +1.4
JGF Kuroka 10.50 33 Pn Pn 04 24 13.2 -0.5
JCJ Chichijima 10.59 87 Pn Pn 04 24 12.5 -2.4
8.1nm,0.3s,baz=287,slow=19,SNR=2.5
JCJ Sn Sn 04 26 05.3 -7.8
5.4nm,0.3s,baz=307,slow=20,SNR=1.4
JCJ LR LR 04 27 44.5
comp=Z,3µm,18.4s,baz=305,slow=34
JCJ Chichijima 10.59 87 Pn 04 24 12.7 -2.2
KSAR Wonju Array Be 10.64 350 Pn 04 24 16.7 +1.2
KSAR Wonju Array Be 10.64 350 P Pn 04 24 16.7 +1.2
KSRS Korea Array 10.65 350 Pn Pn 04 24 17.6 +2.1
0.9nm,0.3s,baz=166,slow=13,SNR=50
KSRS LR LR 04 28 51.9
comp=Z,6µm,18.2s,baz=170,slow=40
KS19 Wonju Array Si 10.70 349 Pn Pn 04 24 17.4 +1.0
QZH Quanzhou 10.73 262⇑*i*P Pn 04 24 17.0 +0.2
QZH S Sn 04 26 18.5 +1.9
QZH pmax pmax
comp=Z,860nm,7.1s
QZH LR LR
comp=N,5µm,9.5s
QZH LR LR
comp=E,6µm,8.3s
QZH LR LR
comp=Z,9µm,9.4s
INCN Inchon 10.93 344 Pn Pn 04 24 21.3 +1.7
INCN Inchon 10.93 344 P Pn 04 24 21.3 +1.7
INCN Inchon 10.93 344 P Pn 04 24 22.3 +2.8
NJ2 Nanjing 11.19 300⇑P Pn 04 24 24.8 +1.8
NJ2 S Sn 04 26 28.8 +1.2
NJ2 SS SnSn 04 26 42.4 +2.9
NJ2 pmax pmax
comp=Z,57nm,1.4s
NJ2 pmax pmax
comp=Z,2µm,8.0s
NJ2 LR LR
comp=N,24µm,10.9s
NJ2 LR LR
comp=E,25µm,13.3s
NJ2 LR LR
comp=Z,29µm,13.3s
SEHB SEOHWA 11.40 352 Pn Pn 04 24 27.6 +1.6
MJAR Matsushiro Arr 11.67 33 Pn Pn 04 24 30.5 +0.9
0.2nm,0.3s,baz=199,slow=13,SNR=18
MJAR LR LR 04 28 56.7
comp=Z,4µm,18.8s,baz=219,slow=37
8.8nm,0.7s
MJAR Matsushiro Arr 11.67 33 Pn Pn 04 24 30.0 +0.4
MJB9 Matsu-Tunnel 11.67 33 Pn Pn 04 24 30.8 +1.2
APYP Conner 12.34 225 *i* P P 04 24 46.2 -4.7
APYP *i* S 04 25 15.2
JSD Sado 12.91 29 Pn Pn 04 24 47.5 +1.0
DL2 Dalian 13.95 331⇑*i*P Pn 04 25 00.8 +0.1
DL2 S Sn 04 27 32.3 -2.8

DL2 pmax pmax
comp=Z,26nm,1.2s
DL2 pmax pmax
comp=Z,2µm,9.0s
DL2 LR LR
comp=N,9µm,15.1s
DL2 LR LR
comp=E,10µm,12.8s
DL2 LR LR
comp=Z,12µm,19.8s
WHN Wuhan 14.44 288⇓P Pn 04 25 07.8 +0.3
WHN pP P 04 25 12.3 -1.9
WHN S Sn 04 27 52.6 +5.4
WHN LR LR
comp=N,31µm,9.3s
WHN LR LR
comp=E,14µm,11.2s
WHN LR LR
comp=Z,27µm,10.8s
TIA Tai'an 14.52 313⇓P Pn 04 25 09.4 +0.9
TIA pmax pmax
comp=Z,140nm,1.7s
TIA pmax pmax
comp=Z,2µm,9.6s
TIA LR LR
comp=N,18µm,12.6s
TIA LR LR
comp=E,14µm,15.5s
TIA LR LR
comp=Z,15µm,18.1s
CNSH ChangSha 15.46 278⇑P Pn 04 25 21.8 +0.6
CNSH S Sn 04 28 14.6 +2.6
CNSH LR LR
comp=N,13µm,14.2s
CNSH LR LR
comp=E,13µm,10.7s
CNSH LR LR
comp=Z,14µm,10.7s
TGY Tagaytay City 15.51 216 Pn P 04 25 25.6 -0.7
48nm,0.3s,baz=231,slow=12,SNR=4.4
SNY Shenyang 15.82 341⇑P P 04 25 28.0 -1.5
SNY pmax pmax
comp=Z,100nm,2.0s
SNY pmax pmax
comp=Z,2µm,3.5s
SNY LR LR
comp=N,9µm,16.6s
SNY LR LR
comp=E,27µm,16.1s
SNY LR LR
comp=Z,16µm,11.0s
GZH Guangzhou 15.85 260 P Pn 04 25 28.1 +1.8
GZH S Sn 04 28 27.3 +5.7
GZH LR LR
comp=N,7µm,11.4s
GZH LR LR
comp=E,7µm,12.3s
PGP Puerto Galera 16.00 215⇑*e*P Pn 04 25 29.6 +1.2
VLA Vladivostok 16.16 4*de*P P 04 25 33.0 -0.3
VLA pmax pmax
comp=Z,134nm,1.1s
LUBP Lubang 16.18 218⇓*e*P Pn 04 25 28.8 -1.8
HNS HongShan 16.79 312⇑P Pn 04 25 36.9 -1.2
HNS S Sn 04 28 48.6 +4.5
HNS pmax pmax
comp=Z,520nm,1.2s
HNS LR LR
comp=Z,4µm,12.0s
HNS LR LR
comp=Z,19µm,16.2s
HNS LR LR
comp=Z,14µm,17.7s
RCP Roxas 16.90 206⇓*e*P P 04 25 42.4 +0.8
LYN LuoYang 17.08 301⇑*i*P Pn 04 25 42.5 +0.7
LYN S Sn 04 28 50.1 -1.2
LYN pmax pmax
comp=Z,470nm,1.7s
LYN pmax pmax
comp=Z,4µm,6.4s
LYN LR LR
comp=Z,17µm,17.2s
LYN LR LR
comp=Z,19µm,18.1s
USA0B Ussuriysk Arra 17.25 4 Pn 04 25 43.6 -0.2
USA0B Ussuriysk Arra 17.25 4 P Pn 04 25 43.6 -0.2
USA0B pmax pmax
comp=Z,219nm,1.4s
USRK Ussuriysk Ar. 17.25 4 P P 04 25 46.4 +1.1
comp=Z,50nm,1.0s,baz=184,slow=7.6,SNR=41
USRK LR LR 04 32 00.9
comp=Z,3µm,20.9s,baz=175,slow=36
CN2 Changchun 17.25 348 *e*P Pn 04 25 44.4 +0.5
CN2 *e*PP pwP 04 25 58.8 +2.7
CN2 S Sn 04 28 55.3 0.0
CN2 pmax pmax
comp=Z,50nm,1.2s
CN2 pmax pmax
comp=Z,1µm,5.5s
CN2 LR LR
comp=Z,6µm,16.0s
CN2 LR LR
comp=Z,21µm,16.0s
CN2 LR LR
comp=Z,10µm,17.0s
BJI Beijing 17.54 322 P Pn 04 25 47.9 +0.3
BJI S Sn 04 29 06.0 +3.5
BJI pmax pmax
comp=Z,49nm,1.1s
BJI pmax pmax
comp=Z,3µm,8.3s
BJI LR LR
comp=Z,2µm,18.5s
BJI LR LR
comp=Z,7µm,19.3s
BJI LR LR
comp=Z,9µm,25.7s
MDJ Mudanjiang 17.62 358 P P 04 25 50.0 +0.6
MDJ S Sn 04 29 05.4 +1.1
MDJ SS SnSn 04 29 19.8 +1.8
MDJ pmax pmax
comp=Z,2µm,8.2s
MDJ LR LR
comp=Z,6µm,13.6s
MDJ LR LR
comp=Z,7µm,14.1s
MDJ LR LR
comp=Z,8µm,13.2s
MDJ Mudanjiang 17.62 358 P P 04 25 51.6 +2.2
GULI GuiLin 17.98 269⇑P Pn 04 25 49.8 -3.3
GULI S Sn 04 29 13.4 0.0
GULI pmax pmax
comp=Z,70nm,1.6s
GULI LR LR
comp=Z,24µm,17.1s
GULI LR LR
comp=Z,5µm,17.1s
GULI LR LR
comp=Z,26µm,12.8s
TBP Tagbilaran 18.23 201⇓*i*P P 04 25 57.4 +1.0
ERM Erimo 18.34 32⇑*e*P P 04 25 59.4 +2.1
ERM pmax pmax
comp=Z,58nm,1.3s
TIY Taiyuan 18.48 310 *e*P Pn 04 25 59.8 +0.6
TIY S S 04 29 30.9 +1.4
TIY pmax pmax
comp=Z,93nm,1.1s
TIY pmax pmax
comp=Z,3µm,5.5s
TIY LR LR
comp=Z,16µm,15.4s
TIY LR LR
comp=Z,11µm,15.7s
TIY LR LR
comp=Z,14µm,16.7s
ENH Enshi 18.57 285 P 04 25 59.0 -1.0
TEY Ternei 18.72 14⇓*e*P Pn 04 26 05.1 +3.1
TEY pmax pmax
comp=N,20nm,2.0s
TEY pmax pmax
comp=Z,40nm,1.4s
TEY pmax pmax
comp=E,10.0nm,1.9s
TEY pmax pmax
comp=Z,200nm,7.9s
TEY pmax pmax
comp=E,100nm,5.0s

TEY pmax pmax
comp=N,200nm,6.0s
BNX BinXian 18.88 354⇓P Pn 04 26 03.8 0.0
BNX pP sP 04 26 07.4 -1.0
BNX sP pwP 04 26 11.3 -2.6
BNX S Sn 04 29 32.4 -2.2
BNX pmax pmax
comp=N,38nm,1.9s
BNX pmax pmax
comp=N,1µm,6.5s
BNX LR LR
comp=N,9µm,12.6s
BNX LR LR
comp=N,7µm,11.6s
BNX LR LR
comp=N,10µm,13.5s
GUMO Guam 19.05 131 P Pn 04 26 08.3 +2.2
comp=N,212nm,0.7s,baz=215,slow=7.2,SNR=9.4
GUMO LR LR 04 31 51.2
comp=N,9µm,20.1s,baz=285,slow=32
GUMO Guam 19.05 131 P Pn 04 26 07.1 +1.0
GUMO IAmb IAmb 04 26 19.3
comp=Z,402nm,1.0s
GUMO Guam 19.05 131 P Pn 04 26 07.1 +1.0
GUMO pmax pmax
comp=Z,402nm,1.0s
GUMO Guam 19.05 131 P Pn 04 26 09.0 +2.9
BIPH Bislig 19.05 192⇑*e*P Pn 04 26 06.7 +0.5
BUKP Musuan 19.63 196 *e*P Pn 04 26 12.9 -0.2
XAN Xi'an 19.71 296 P P 04 26 11.8 -0.7
XAN PP PnPn 04 26 31.0 +3.2
XAN S S 04 29 53.9 -0.3
XAN sS sS 04 30 00.1 -0.4
XAN pmax pmax
comp=Z,500nm,1.4s
XAN pmax pmax
comp=Z,2µm,5.5s
XAN LR LR
comp=Z,18µm,12.0s
XAN LR LR
comp=Z,11µm,11.7s
XAN LR LR
comp=Z,21µm,16.3s
ASAJ Asahikawa 19.78 27 LR LR 04 33 51.2
comp=Z,3µm,20.0s,baz=217,slow=37
ASAJ Asahikawa 19.78 27 P P 04 26 13.6 +0.5
ASAJ pmax pmax
comp=Z,47nm,0.9s
JKA Kamikawa-asahi 19.78 27 P P 04 26 13.6 +0.4
PAGZ Pagadian 20.12 200 *e*P P 04 26 17.2 +0.1
DAV Davao City (W) 20.29 194 LR LR 04 33 38.8
comp=Z,1µm,19.4s,baz=3.5,slow=35
PPR Puerto Princes 20.30 215⇓*i*P Pn 04 26 22.4 +1.3
QIZ Qiongzhong 20.41 252 P Pn 04 26 21.8 -0.5
QIZ S S 04 30 05.5 -2.7
QIZ pmax pmax
comp=Z,170nm,1.8s
QIZ pmax pmax
comp=Z,2µm,7.0s
QIZ LR LR
comp=Z,4µm,23.9s
QIZ LR LR
comp=Z,3µm,27.9s
QIZ Qiongzhong 20.41 252 P Pn 04 26 22.9 +0.6
XLT XiLinHaoTe 20.44 329⇓*i*P P 04 26 20.3 -0.1
XLT sP pwP 04 26 29.8 -1.3
XLT S S 04 30 06.8 -1.8
XLT sS pS 04 30 16.8 -2.7
XLT pmax pmax
comp=Z,160nm,1.1s
XLT pmax pmax
comp=Z,960nm,3.8s
XLT LR LR
comp=Z,8µm,22.4s
XLT LR LR
comp=Z,7µm,22.5s
KCP Kidapawan 20.46 195⇑*e*P P 04 26 21.2 +0.4
CTBH Cotabato--PC H 20.47 197⇑*e*P Pn 04 26 22.9 0.0
HHC Hu-ho-hao-te 20.77 317 *e*P P 04 26 23.8 -0.2
HHC PP PnPn 04 26 50.8 +8.5
HHC S S 04 30 12.1 -3.1
HHC sS Sn 04 30 18.5 -1.9
HHC pmax pmax
comp=Z,160nm,1.3s
HHC LR LR
comp=Z,22µm,14.9s
HHC LR LR
comp=Z,19µm,14.9s
GYA Guiyang 21.12 274⇓P P 04 26 28.9 +0.9
GYA S S 04 30 24.3 +1.8
GYA pmax pmax
comp=Z,89nm,1.6s
GYA pmax pmax
comp=Z,730nm,5.8s
GYA LR LR
comp=Z,10µm,18.6s
GYA LR LR
comp=Z,5µm,12.5s
GYA LR LR
comp=Z,5µm,16.0s
YUK Yuzh-Kuril'sk 21.16 32⇓*e*P P 04 26 29.6 +1.5
BTO Baotou 21.59 314 *e*P P 04 26 34.3 +1.4
BTO LR LR
comp=Z,36µm,16.7s
BTO LR LR
comp=Z,27µm,21.6s
YSS Yuzh-Sakhalins 22.24 23 P P 04 26 39.8 +0.2
YSS IAMs_20 IAMs_20 04 35 28.5
comp=Z,3µm,18.0s
YSS Yuzh-Sakhalins 22.24 23*de*P P 04 26 40.3 +0.6
YSS *e**SP sP 04 26 47.0 +2.2
YSS *eS* S 04 30 41.1 -2.5
YSS pmax pmax
comp=Z,170nm,1.3s
YSS pmax pmax
comp=N,600nm,2.4s
YSS pmax pmax
comp=Z,1µm,2.4s
YSS smax smax
comp=N,800nm,4.5s
YSS MLR MLR
comp=N,3µm,16.0s
YSS Yuzh-Sakhalins 22.24 23 P P 04 26 40.2 +0.6
KLR Kul'dur 22.25 2 P P 04 26 39.5 -0.3
comp=N,42nm,0.7s,baz=174,slow=9.0,SNR=45
KLR LR LR 04 35 08.7
comp=N,2µm,20.4s,baz=182,slow=36
comp=N,42nm,0.7s
KLR Kul'dur 22.25 2*de*P P 04 26 38.7 -1.1
KLR pmax pmax
comp=Z,259nm,1.7s
KLR MLR MLR
comp=Z,2µm,14.0s
KUR Kuril'sk 23.01 33 *e*P P 04 26 46.1 -1.7
KUR *i* S S 04 31 03.2 +5.7
KUR pmax pmax
comp=Z,3µm,3.8s
KUR pmax pmax
comp=N,2µm,5.2s
KUR pmax pmax
comp=E,2µm,5.3s
KUR pmax pmax
comp=Z,438nm,1.3s
KUR pmax pmax
comp=N,267nm,1.5s
KUR pmax pmax
comp=E,241nm,1.2s
KUR MLR MLR
comp=Z,2µm,14.0s
CD2 Chengdu 23.54 286 P P 04 26 51.8 -1.6
CD2 sP pP 04 26 56.1 -0.9
CD2 S S 04 31 03.6 -3.1
CD2 sS pS 04 31 11.8 +0.8
CD2 pmax pmax
comp=Z,180nm,0.9s
CD2 pmax pmax
comp=Z,960nm,4.5s
CD2 LR LR
comp=Z,13µm,13.3s
CD2 LR LR
comp=Z,15µm,12.2s
SGSI Sangihe 23.60 192 P P 04 26 54.6 +0.6
comp=Z,3µmcomp=Z,250nm,1.0s
HIA Hailar 23.72 343 IAMs_20 IAMs_20 04 36 54.1
comp=Z,3µm,20.0s
HIA Hailar 23.72 343*de*P P 04 26 55.2 +0.3

HIA pmax pmax
comp=Z,41nm,1.1s
HIA MLR MLR
comp=Z,3μm,14.0s
UGL Uglegorsk 23.88 19 *e*P **P 04 26 58.7 +2.3**
UGL *e*S **S 04 31 17.2 +5.6**
UGL pmax pmax
comp=Z,300nm,1.1s
UGL pmax pmax
comp=Z,4μm,6.5s
UGL MLR MLR
comp=Z,4μm,16.0s
LZH Lanzhou 24.26 299 ⇓P **P 04 27 00.6 +0.3**
LZH sP sP 04 27 05.8 +0.1
LZH PP pwP 04 27 30.4 +19
LZH S **S 04 31 17.0 -1.3**
LZH pmax pmax
comp=Z,75nm,1.1s
LZH pmax pmax
comp=Z,2μm,4.6s
LZH LR LR
comp=Z,12μm,13.0s
LZH LR LR
comp=Z,14μm,13.0s
LZH LR LR
comp=Z,16μm,14.7s
MYLDM Lahad Datu 24.42 210 P **P 04 27 02.1 +0.5**
MYLDM IAmb IAmb 04 27 06.8
comp=Z,280nm,1.2s
MYLDM IAMs_20 IAMs_20 04 32 43.2
comp=Z,5μm,19.0s
KMI Kunming 24.82 272 ⇑P **P 04 27 06.4 +0.9**
KMI pP sP 04 27 10.1 -0.8
KMI PP **PnPn 04 27 42.9 +4.9**
KMI S **S 04 31 22.9 -4.8**
KMI SS **SnSn 04 32 20.0 +5.0**
KMI pmax pmax
comp=Z,170nm,1.6s
KMI pmax pmax
comp=Z,2μm,6.4s
KMI LR LR
comp=Z,5μm,12.1s
KMI LR LR
comp=Z,12μm,14.0s
KMI LR LR
comp=Z,12μm,14.1s
PZH PanZhiHua 25.50 275 P **P 04 27 11.8 +0.3**
PZH pP **pP 04 27 14.6 -0.6**
PZH PP pwP 04 27 52.8 +30
PZH S **S 04 31 34.5 -3.8**
PZH sS **sS 04 31 44.3 -0.2**
PZH SS **SnSn 04 32 42.1 +11**
PZH PcS **PcS 04 34 22.4 -1.5**
PZH pmax pmax
comp=Z,120nm,1.4s
PZH pmax pmax
comp=Z,1μm,3.6s
PZH LR LR
comp=Z,8μm,14.0s
PZH LR LR
comp=Z,7μm,15.0s
PZH LR LR
comp=Z,9μm,15.1s
TYV Tymovskoe 25.65 18 *e*P **P 04 27 14.1 +1.6**
TYV *e*S **S 04 31 45.3 +5.3**
TYV pmax pmax
comp=Z,1μm,3.2s
TYV pmax pmax
comp=Z,100nm,0.9s
TYV smax smax
comp=N,500nm,5.5s
TYV smax smax
comp=E,1μm,5.5s
SPMM Sapulut 25.78 213 P **P 04 27 17.0 +2.9**
TNTI Ternate 26.20 187 P **P 04 27 18.4 +0.7**
TNTI IAmb IAmb 04 27 21.8
comp=Z,244nm,1.3s
TNTI Ternate 26.20 187 P **P 04 27 19.2 +1.4**
comp=Z,2μmcomp=Z,150nm,1.4s
TNTI Ternate 26.20 187 P **P 04 27 20.0 +2.2**
ZEA Zeya 26.84 356 *e*P **P 04 27 23.2 0.0**
ZEA *e*S **S 04 31 53.8 -4.8**
ZEA pmax pmax
comp=E,30nm,1.2s
ZEA pmax pmax
comp=N,70nm,1.1s
ZEA pmax pmax
comp=Z,150nm,1.0s
ZEA pmax pmax
comp=E,200nm,4.6s
ZEA pmax pmax
comp=N,700nm,4.4s
ZEA pmax pmax
comp=Z,900nm,5.7s
ZEA smax smax
comp=E,600nm,4.9s
ZEA smax smax
comp=N,900nm,9.8s
ZEA MLR MLR
comp=N,2μm,12.0s
ZEA MLR MLR
comp=Z,2μm,11.0s
KMSI Cibinong 26.94 194 P **P 04 27 25.3 +0.9**
comp=Z,320nm,1.6s
NKL Nikolayevsk 27.27 14 *e*P **P 04 27 26.0 -1.1**
NKL *e*S **S 04 32 06.0 +0.6**
NKL pmax pmax
comp=E,7.0nm,0.6s
NKL pmax pmax
comp=N,161nm,0.7s
NKL pmax pmax
comp=Z,144nm,1.3s
NKL smax smax
comp=N,345nm,0.8s
NKL smax smax
comp=E,6.0nm,0.8s
NKL MLR MLR
comp=N,2μm,12.0s
NKL MLR MLR
comp=Z,2μm,17.0s
TOLI2 Tolitoli 27.29 201 P **P 04 27 26.4 -1.2**
TOLI2 Tolitoli 27.29 201 P **P 04 27 27.1 -0.5**
MRSI Marisa 27.54 198 P **P 04 27 29.0 -0.9**
comp=Z,3μmcomp=Z,199nm,1.4s
ULN Ulaanbaatar 27.67 325 P **P 04 27 30.2 -0.8**
ULN Ulaanbaatar 27.67 325 IAMs_20 IAMs_20 04 39 22.3
comp=Z,6μm,20.0s
ULN Ulaanbaatar 27.67 325*ce*P **P 04 27 31.5 +0.5**
ULN pmax pmax
comp=Z,32nm,1.0s
ULN MLR MLR
comp=Z,5μm,15.0s
ULN Ulaanbaatar 27.67 325 P **P 04 27 31.6 +0.7**
SWI Sorong 27.69 178 P **P 04 27 31.2 +0.1**
SWI pmax pmax
comp=Z,30nm,1.2s
SWI Sorong 27.69 178 P **P 04 27 30.8 -0.3**
comp=Z,1μmcomp=Z,31nm,1.2s
SIJI Sorong 27.69 178 P **P 04 27 30.1 -1.2**
comp=Z,15nm,0.8s,baz=345,slow=12,SNR=14
SIJI LR LR 04 37 05.3
comp=Z,2μm,19.6s,baz=32,slow=33
comp=Z,15nm,0.8s
SONM Songino Array 27.99 324 P **P 04 27 33.7 -0.1**
comp=Z,8.3nm,0.7s,baz=126,slow=7.8,SNR=26
SONM LR LR 04 39 44.1
comp=Z,6μm,20.1s,baz=132,slow=39
comp=Z,8.3nm,0.7s
SONM Songino Array 27.99 324 P **P 04 27 33.2 -0.6**
CIT Chita 28.02 338 *e*P **P 04 27 35.6 +1.6**
CIT *e* 04 28 35.0
CIT pmax pmax
comp=Z,189nm,2.1s
GTA Gaotai 28.23 304 ⇑P **P 04 27 34.6 -1.5**
GTA pP sP 04 27 41.9 +0.4
GTA sP pwP 04 27 48.3 +1.5
GTA S **S 04 32 17.3 -4.0**
GTA sS sS 04 32 27.5 0.0
GTA pmax pmax
comp=Z,13nm,0.8s
GTA pmax pmax
comp=Z,530nm,6.5s
GTA LR LR
comp=Z,11μm,14.2s
GTA LR LR
comp=Z,10μm,17.5s
GTA LR LR
comp=Z,14μm,17.8s
MPSI Mapaga 28.31 202 P **P 04 27 36.4 -0.3**
comp=Z,3μmcomp=Z,86nm,1.9s
LUWI Luwuk 28.78 196 P **P 04 27 40.4 -0.5**
LUWI Luwuk 28.78 196 P **P 04 27 44.8 +3.9**
comp=Z,134nm,1.3s
APSI Ampana 28.95 198 P **P 04 27 40.9 -1.5**
comp=Z,1μmcomp=Z,93nm,1.2s
SANI Sanana 29.15 189 P **P 04 27 41.4 -2.8**
comp=Z,1μmcomp=Z,70nm,1.8s
FAKI Fak Fak 29.77 176 P **P 04 27 50.3 +0.6**
FAKI IAMs_20 IAMs_20 04 41 35.4
comp=Z,3μm,20.0s
FAKI Fak Fak 29.77 176 P **P 04 27 48.6 -1.1**
comp=Z,2μmcomp=Z,202nm,1.2s
FAKI Fak Fak 29.77 176 P **P 04 27 50.2 +0.5**
SMPI Sarmi 29.91 163 P **P 04 27 51.9 +1.0**
comp=Z,81nm,1.2s
CHTO Chiang Mai 29.95 261 P **P 04 27 51.2 -0.1**
CHTO IAmb IAmb 04 28 11.8
comp=Z,166nm,1.6s
CHTO Chiang Mai 29.95 261 IAMs_20 IAMs_20 04 40 14.2
comp=Z,2μm,20.0s
CHTO Chiang Mai 29.95 261 P **P 04 27 51.2 -0.1**
CHTO pmax pmax
comp=Z,166nm,1.7s
CHTO MLR MLR
comp=Z,2μm,20.0s
CHTO Chiang Mai 29.95 261 P **P 04 27 52.7 +1.4**
CHTO P **P 04 27 52.7 +1.4**
CHTO Chiang Mai 29.95 261 P **P 04 27 52.5 +1.1**
CM31 Chiang Mai Arr 30.08 260 P **P 04 27 54.5 +1.9**
CMAR Chiang Mai Arr 30.08 260 P **P 04 27 52.8 +0.3**
comp=Z,5.7nm,0.8s,baz=53,slow=8.0,SNR=30
CMAR PcP **PcP 04 30 55.4 +1.2**
comp=Z,3.5nm,0.6s,baz=34,slow=1.5,SNR=7.4
CMAR LR LR 04 40 40.3
comp=Z,2μm,18.9s,baz=65,slow=38
comp=Z,5.7nm,0.8s
CMAR Chiang Mai Arr 30.08 260 P **P 04 27 52.8 +0.3**
CMAR Chiang Mai Arr 30.08 260 *i* P **P 04 27 54.7 +2.2**
CMAR pmax pmax
comp=Z,6.0nm,0.9s
MSAI Masohi 30.17 183 P **P 04 27 54.3 +1.1**
comp=Z,1μmcomp=Z,11nm,0.5s
AAI Ambon 30.54 184 P **P 04 27 55.6 -0.9**
comp=Z,118nm,1.3s
SKR Severo-Kuril's 30.78 33*d i*P **P 04 27 58.0 -0.3**
SKR *e* 04 28 06.2
SKR *i* S **S 04 32 59.3 -1.3**
SKR pmax pmax
comp=Z,200nm,8.0s
SKR pmax pmax
comp=Z,63nm,1.0s
SKR MLR MLR
comp=Z,1μm,16.0s
BKB Balikpapan 30.90 207 P **P 04 28 00.1 +0.4**
ZAK Zakamensk 31.18 326 *e*P **P 04 28 02.0 -0.1**
ZAK pmax pmax
comp=Z,14nm,1.2s
GOMU GeErMu 31.46 296 P **P 04 28 04.6 -0.4**
GOMU sP pP 04 28 08.1 -0.8
GOMU PcP **PcP 04 30 57.8 -0.2**
GOMU S **S 04 33 09.3 -3.2**
GOMU pmax pmax
comp=Z,4.0nm,0.6s
GOMU pmax pmax
comp=Z,390nm,5.4s
GOMU LR LR
comp=Z,3μm,17.5s
GOMU LR LR
comp=Z,3μm,17.3s
GOMU LR LR
comp=Z,3μm,18.0s
TTSI Tana Toraja 31.51 200 P **P 04 28 02.8 -2.3**
comp=Z,1μmcomp=Z,35nm,1.5s
KSM Kuching 31.80 220 P **P 04 28 08.1 +0.5**
KSM Kuching 31.80 220 P **P 04 28 11.0 +3.4**
KSM Kuching 31.80 220 P **P 04 28 09.1 +1.5**
IRK Irkutsk 31.92 329 *e*P **P 04 28 07.6 -0.8**
IRK pmax pmax
comp=Z,46nm,1.9s
STKI Sintang 32.30 217 P **P 04 28 14.0 +1.9**
BOD Bodaibo 32.91 344 *e*P **P 04 28 19.0 +2.0**
BOD pmax pmax
comp=Z,49nm,1.5s
PEA0B Petropavlovsk- 33.11 31*d i*P **P 04 28 18.5 -0.3**
PETK Petropavlovsk- 33.11 31 P **P 04 28 19.3 +0.5**
comp=Z,18nm,0.9s,baz=204,slow=3.3,SNR=24
PETK LR LR 04 42 38.7
comp=Z,2μm,18.1s,baz=220,slow=38
comp=Z,18nm,0.9s
PETK Petropavlovsk- 33.11 31 P **P 04 28 19.1 +0.3**
MOY Mondy 33.11 326 *e*P **P 04 28 18.7 -0.3**
MOY pmax pmax
comp=Z,19nm,1.8s
BBSI Bau Bau 33.12 194 P **P 04 28 20.0 +0.8**
comp=Z,15nm,0.8s
PATS Pohnpei 33.30 122 P **P 04 28 21.4 +0.5**
PATS IAmb IAmb 04 28 26.4
comp=Z,99nm,1.0s
PATS IAMs_20 IAMs_20 04 38 53.7
comp=Z,4μm,19.0s
PATS Pohnpei 33.30 122 P **P 04 28 23.4 +2.6**
KAPI Kappang 33.40 199 P **P 04 28 22.9 +1.3**
comp=Z,6.1nm,0.4s,baz=20,slow=5.3,SNR=5.5
comp=Z,6.1nm,0.4s
KAPI Kappang 33.40 199 P **P 04 28 20.9 -0.7**
KAPI Kappang 33.40 199*ce*P **P 04 28 22.6 +1.0**
KAPI pmax pmax
comp=Z,33nm,1.3s
TEZP TEZPUR 33.40 278 *e*P **P 04 28 22.1 +0.4**
TEZP IAmb IAmb 04 28 29.1
comp=Z,45nm,0.9s
PET Petropavlovsk 33.49 31 P **P 04 28 22.2 +0.2**
PET IAmb IAmb 04 28 45.6
comp=Z,102nm,1.2s
PET IAMs_20 IAMs_20 04 42 49.4
comp=Z,2μm,18.0s
PET Petropavlovsk 33.49 31 *e*P **P 04 28 22.3 +0.2**
PET *e*S **S 04 33 42.5 -0.4**
PET pmax pmax
comp=Z,90nm,1.6s
PET pmax pmax
comp=Z,500nm,6.2s
PET MLR MLR
comp=Z,2μm,17.0s
BKSI Bulukumba 33.58 199 P **P 04 28 24.0 +0.8**
comp=Z,697nmcomp=Z,35nm,1.6s
BBKI Banjar Baru 33.74 209 P **P 04 28 25.7 +1.1**
AZL Aizawl 34.06 273 *e*P **P 04 28 27.6 +0.1**
AZL IAmb IAmb 04 28 34.3
comp=Z,17nm,0.5s
WAKE Wake Island 34.20 95 P **P 04 28 29.9 +1.3**
WAKE Wake Island 34.20 95 IAMs_20 IAMs_20 04 39 39.6
comp=Z,2μm,21.0s
WAKE Wake Island 34.20 95 P **P 04 28 30.1 +1.5**
H11N1 WAKE ISLAND Hy 34.27 94 T T 05 05 02.0
baz=290,slow=75
H11N2 WAKE ISLAND Hy 34.27 94 T T 05 05 11.1
baz=290,slow=75
H11N3 WAKE ISLAND Hy 34.28 94 T T 05 04 56.0
baz=290,slow=75
SHL Shillong 34.40 276 *e*P **P 04 28 30.6 0.0**
SHL IAmb IAmb 04 28 34.5
comp=Z,59nm,1.1s
GUWA GUWAHATI 34.45 278⇑*e*P **P 04 28 31.0 +0.2**
GUWA IAmb IAmb 04 28 34.5
comp=Z,26nm,0.8s
LSA Lhasa 34.46 284 P **P 04 28 28.2 -3.1**
LSA IAMs_20 IAMs_20 04 43 15.3
comp=Z,3μm,19.0s
LSA Lhasa 34.46 284 P **P 04 28 28.3 -3.1**
LSA pmax pmax
comp=Z,89nm,1.7s
LSA MLR MLR
comp=Z,3μm,19.0s
LSA Lhasa 34.46 284 P **P 04 28 32.5 +1.1**
LSA S **S 04 33 58.5 -0.9**
LSA LR LR
comp=Z,3μm,11.7s
LSA LR LR
comp=Z,4μm,12.6s
LSA LR LR
comp=Z,4μm,12.3s
H11S3 WAKE ISLAND Hy 34.50 96 T T 05 05 19.8
baz=290,slow=75,SNR=3.6
H11S1 WAKE ISLAND Hy 34.51 96 T T 05 05 18.6
baz=290,slow=75,SNR=3.3
H11S2 WAKE ISLAND Hy 34.52 96 T T 05 05 11.5
baz=290,slow=75,SNR=3.6
YAK Yakutsk 35.06 359 LR LR 04 41 53.1
comp=Z,895nm,21.9s,baz=166,slow=35
YAK Yakutsk 35.06 359 P **P 04 28 35.2 -0.4**
YAK IAmb IAmb 04 28 42.5
comp=Z,102nm,0.9s
YAK Yakutsk 35.06 359*c i*P **P 04 28 35.6 0.0**
YAK *e**PP **sP 04 28 41.6 +0.6**
YAK *e* 04 29 52.3
YAK *e* 04 31 07.1
YAK *e*S **S 04 34 09.3 +2.4**
YAK *e*SS **SS 04 36 29.1 -10**
YAK pmax pmax
comp=Z,102nm,1.1s
YAK pmax pmax
comp=N,61nm,1.2s
YAK pmax pmax
comp=E,7.0nm,0.9s
YAK pmax pmax
comp=Z,461nm,6.1s
YAK pmax pmax
comp=N,164nm,4.4s
YAK pmax pmax
comp=E,78nm,3.4s
YAK smax smax
comp=E,237nm,3.2s
YAK smax smax
comp=N,207nm,2.3s
YAK MLR MLR
comp=Z,2μm,15.0s
YAK MLR MLR
comp=N,2μm,14.0s
YAK MLR MLR
comp=E,480nm,15.0s
MA2 Magadan 35.52 18 LR LR 04 44 40.8
comp=E,716nm,18.1s,baz=216,slow=39
MA2 Magadan 35.52 18 P **P 04 28 38.9 -0.7**
MA2 Magadan 35.52 18⇓*e*P **P 04 28 40.1 +0.5**
MA2 pmax pmax
comp=Z,46nm,1.0s
MA2 MLR MLR
comp=Z,1μm,17.0s
MA2 Magadan 35.52 18 P **P 04 28 40.1 +0.5**
KULM Kulim 35.55 238 P **P 04 28 41.2 +0.9**
KULM Kulim 35.55 238 P **P 04 28 44.0 +3.7**
MYKOM Kota Tinggi 35.65 230 P **P 04 28 41.4 +0.3**
MYKOM IAmb IAmb 04 28 45.7
comp=Z,114nm,1.3s
MYKOM Kota Tinggi 35.65 230 P **P 04 28 45.0 +3.9**
IPM Ipoh 35.80 236 IAmb IAmb 04 28 45.7
comp=Z,119nm,1.4s
IPM Ipoh 35.80 236 P **P 04 28 45.0 +2.5**
IPM Ipoh 35.80 236 P **P 04 28 45.0 +2.5**
MMRI Maumere 36.25 194 P **P 04 28 45.5 -0.8**
MMRI Maumere 36.25 194 P **P 04 28 46.2 0.0**
comp=Z,211nm,1.4s
MMRI Maumere 36.25 194 P **P 04 28 46.7 +0.5**
EDFI Ende, Flores 36.48 194 P **P 04 28 47.6 -0.7**
comp=Z,597nmcomp=Z,45nm,1.6s
DSRI Dabo 36.85 226 P **P 04 28 52.3 +0.9**
comp=Z,29nm,1.2s
SOEI Soe 36.97 190 IAmb IAmb 04 29 35.7
comp=Z,245nm,1.2s
SOEI Soe 36.97 190 P **P 04 28 51.3 -1.2**
RABL Rabaul 37.50 142 P **P 04 28 57.3 +0.4**
RABL Rabaul 37.50 142 P **P 04 29 01.4 +4.5**
comp=Z,282nm,1.1s
BATI Baumata 37.51 191 LR LR 04 45 00.8
comp=Z,412nm,21.0s,baz=18,slow=37
KRVT Keravat (AS076 37.52 143 LR LR 04 44 29.5
comp=Z,1μm,18.0s,baz=119,slow=36
PLAI Plampang 37.60 201 P **P 04 28 57.8 0.0**
PLAI Plampang 37.60 201 P **P 04 28 58.2 +0.4**
TAPN Taplejung 37.77 281 *e*P **P 04 29 01.2 +1.7**
WMQ Urumqi 38.12 307 *e*P **P 04 29 04.9 +2.8**
WMQ sP pwP 04 29 12.3 -0.5
WMQ PP **PnPn 04 30 30.8 +0.1**
WMQ S **S 04 34 52.8 -1.6**
WMQ pmax pmax
comp=Z,37nm,1.3s
WMQ pmax pmax
comp=Z,600nm,6.1s
WMQ LR LR
comp=Z,5μm,12.7s
WMQ LR LR
comp=Z,8μm,15.1s
WMQ LR LR
comp=Z,6μm,18.5s
ODAN Odare 38.13 280 *e*P **P 04 29 02.4 -0.1**
PSI Prapat 38.47 237 P **P 04 29 06.3 +1.0**
comp=Z,24nm,1.0s,baz=35,slow=11,SNR=21
PSI LR LR 04 44 10.0
comp=Z,683nm,21.6s,baz=8.5,slow=35
comp=Z,24nm,1.0s
SEY Seymchan 38.79 16 P **P 04 29 07.9 +0.6**
comp=Z,35nm,0.9s,baz=215,slow=5.7,SNR=47
SEY LR LR 04 46 06.4
comp=Z,2μm,19.0s,baz=211,slow=38
comp=Z,35nm,0.9s
SEY Seymchan 38.79 16*ce*P **P 04 29 08.2 +0.9**
SEY pmax pmax
comp=Z,47nm,0.9s
RAMN Ramite 38.81 280 *e*P **P 04 29 08.5 +0.3**
comp=Z,67nm,1.0s
JIRN Jiri 39.05 281 *e*P **P 04 29 11.0 +0.6**
comp=Z,123nm,1.1s
GUN Gumba 39.28 282 *e*P **P 04 29 13.1 +0.8**
comp=Z,133nm,0.8s
KDU Kakadu 39.48 177 P **P 04 29 16.0 +2.6**
comp=Z,44nm,1.6s
MTN Manton Dam 39.58 179 P **P 04 29 13.2 -1.2**
UGM Wanagama 39.63 212 P **P 04 29 14.5 -0.3**
UGM Wanagama 39.63 212 P **P 04 29 15.2 +0.4**
PMG Port Moresby 39.68 153 P **P 04 29 15.9 +0.6**
comp=Z,46nm,1.0s,baz=349,slow=8.0,SNR=6.0
PMG LR LR 04 43 19.9
comp=Z,4μm,21.1s,baz=316,slow=33
comp=Z,46nm,1.0s
PMG Port Moresby 39.68 153 P **P 04 29 15.2 -0.1**
PMG Port Moresby 39.68 153 IAMs_20 IAMs_20 04 43 08.7
comp=Z,4μm,20.0s
PMG Port Moresby 39.68 153⇑*e*P **P 04 29 17.2 +2.0**
PMG pmax pmax
comp=Z,78nm,1.3s
PMG Port Moresby 39.68 153 P **P 04 29 16.5 +1.2**
PMG Port Moresby 39.68 153 P **P 04 29 16.4 +1.2**
PKI Pulchoki 39.74 281 *e*P **P 04 29 16.5 +0.3**
PKIN Phulchoki 39.76 281 *e*P **P 04 29 16.5 +0.3**
KKN Kakani 39.82 282 *e*P **P 04 29 16.5 -0.2**
DMN Daman 40.00 282 *e*P **P 04 29 18.3 +0.1**
comp=Z,408nm,1.2s
BOK Bokaro 40.11 276 *e*P **P 04 29 19.2 +0.4**
LEM Lembang 40.15 216 P **P 04 29 20.2 +0.9**
comp=Z,58nm,0.8s,baz=24,slow=7.5,SNR=15
LEM LR LR 04 48 48.3
comp=Z,335nm,18.2s,baz=20,slow=40
comp=Z,58nm,0.8s
GKN Gorkha 40.35 282 *e*P **P 04 29 20.8 -0.1**
comp=Z,209nm,0.9s
GSI Gunungsitoli 40.47 236 P **P 04 29 22.3 +0.5**
GSI IAmb IAmb 04 29 25.3
comp=Z,282nm,1.4s
GSI Gunungsitoli 40.47 236 P **P 04 29 23.0 +1.2**
ZSN Zaisan 40.86 312 *e*P **P 04 29 23.9 -0.9**
ZSN Zaisan 40.86 312 *e*P **P 04 29 23.9 -0.9**
baz=312
DANN Dangsing 41.05 283 *e*P **P 04 29 26.8 -0.1**
comp=Z,438nm,0.9s
KOLN Koldanda 41.29 282 *e*P **P 04 29 27.2 -1.6**
SHEM Shemya Is, Ala 41.42 40 P **P 04 29 29.9 +0.6**
comp=Z,102nm,1.0s,baz=311,slow=6.8,SNR=5.6
SHEM LR LR 04 44 58.2
comp=Z,317nm,20.7s,baz=280,slow=34
comp=Z,102nm,1.0s
SMY Shemya 41.42 40 P **P 04 29 30.0 +0.8**
SMY IAmb IAmb 04 29 34.3
comp=Z,209nm,1.2s
SMY Shemya 41.42 40 P **P 04 29 30.0 +0.8**
SMY pmax pmax
comp=Z,209nm,1.2s
PYUN Piuthan 41.77 283 *e*P **P 04 29 31.9 -0.8**

comp=Z,481nm,1.3s
KNRA Kununurra 42.42 182 P P 04 29 36.8 -0.9
KNRA IAmb IAmb 04 29 40.7
comp=Z,179nm,0.9s
KNRA Kununurra 42.42 182 P P 04 29 37.4 -0.3
MK31 Makanchi Array 42.44 311 *ce*P **P 04 29 37.2 -0.6**
MK31 pmax pmax
comp=Z,19nm,0.7s
MKAR Makanchi Array 42.44 311 P P 04 29 37.7 -0.1
comp=Z,18nm,0.9s,baz=96,slow=9.1,SNR=75
MKAR LR LR 04 49 10.0
comp=Z,4µm,18.6s,baz=98,slow=39
comp=Z,18nm,0.9s
COEN Coen 42.56 161 P P 04 29 39.3 +0.4
MAKZ Makanchi 42.66 311 P P 04 29 38.6 -0.8
MAKZ Makanchi 42.66 311 P P 04 29 38.7 -0.8
MAKZ pmax pmax
comp=Z,99nm,1.5s
MAKZ MLR MLR
comp=Z,6µm,18.0s
ZAA0 Zalesovo Array 42.80 322 P P 04 29 39.6 -0.9
ZALV Zalesovo Beam 42.80 322 P P 04 29 40.1 -0.4
comp=Z,17nm,0.7s,baz=107,slow=8.8,SNR=46
ZALV PcP **PcP 04 31 32.0 +0.5**
comp=Z,5.7nm,1.0s,baz=101,slow=1.5,SNR=3.6
ZALV LR LR 04 49 27.0
comp=Z,2µm,19.4s,baz=117,slow=39
comp=Z,17nm,0.7s
ZALV Zalesovo Beam 42.80 322 P P 04 29 38.9 -1.6
ZALV Zalesovo Beam 42.80 322 *i* P **P 04 29 40.0 -0.5**
ZALV pmax pmax
comp=Z,17nm,0.7s
BLSP Bilaspur 43.88 275 *e*P **P 04 29 49.3 -0.4**
LGTI Lohaghat 43.91 285 *e*P **P 04 29 50.8 +1.0**
PDGK Podgornoye 43.95 305 *i* P **P 04 29 48.5 -1.7**
PDGK pmax pmax
comp=Z,63nm,1.2s
SHLS Shalkode 43.96 305 *e*P **P 04 29 48.2 -2.0**
SHLS *e*S **S 04 36 15.1 -6.2**
SHLS Shalkode 43.96 305 *e*P **P 04 29 48.3 -2.0**
baz=305
SHLS *e*S **S 04 36 15.1 -6.2**
baz=305
UZB Uzynbulak 44.28 305 *e*P **P 04 29 52.5 -0.3**
UZB Uzynbulak 44.28 305 *e*P **P 04 29 52.6 -0.3**
baz=305
SEM Semipalatinsk 44.50 316 *e*P **P 04 29 52.5 -2.0**
SEM Semipalatinsk 44.50 316 *e*P **P 04 29 52.5 -2.0**
baz=315
KPKS Kokpek 44.55 306 *e*P **P 04 29 53.8 -1.1**
KPKS *e*S **S 04 36 29.1 -0.7**
KPKS pmax pmax
comp=Z,29nm,1.4s
KPKS Kokpek 44.55 306 *e*P **P 04 29 53.9 -1.1**
comp=Z,29nm,1.4s,baz=305
KPKS *e*S **S 04 36 29.1 -0.7**
baz=305
ZHN Zhinishke 44.71 305 *e*P **P 04 29 55.8 -0.4**
ZHN Zhinishke 44.71 305 *e*P **P 04 29 55.9 -0.4**
baz=305
SATY Saty 44.73 305 *e*P **P 04 29 56.8 +0.5**
SATY pmax pmax
comp=Z,20nm,0.8s
SATY Saty 44.73 305 *e*P **P 04 29 56.9 +0.5**
comp=Z,20nm,0.8s,baz=304
TIXI Tiksi 44.73 359 P **P 04 29 55.5 -0.2**
comp=Z,12nm,1.0s,baz=93,slow=23,SNR=34
TIXI LR LR 04 48 48.5
comp=Z,1µm,18.8s,baz=180,slow=36
comp=Z,12nm,1.0s
TIXI Tiksi 44.73 359 P **P 04 29 55.0 -0.7**
TIXI IAMs_20 IAMs_20 04 50 42.4
comp=Z,2µm,22.0s
TIXI Tiksi 44.73 359 *ce*P **P 04 29 56.0 +0.3**
TIXI pmax pmax
comp=Z,78nm,1.7s
TIXI MLR MLR
comp=Z,2µm,15.0s
TDK Taldyqorghan 44.88 308 *e*P **P 04 29 58.1 +0.7**
TDK pmax pmax
comp=Z,100nm,1.0s
TDK MLR MLR
comp=Z,6µm,16.0s
TDK Taldyqorghan 44.88 308 *e*P **P 04 29 58.1 +0.7**
comp=Z,100nm,1.0s,baz=307
TDK *e*LR LR 04 48 51.8
comp=Z,6µm,16.3s,baz=307
ARXS Arharly 45.22 307 *e*P **P 04 30 00.4 +0.2**
JBP Jabalpur 45.50 277 *e*P **P 04 30 03.6 +1.0**
JBP *e*S **S 04 36 50.3 +6.5**
KURK Kurchatov 45.58 316 P **P 04 30 01.5 -1.2**
KURK Kurchatov 45.58 316 *de*P **P 04 30 01.4 -1.4**
KURK pmax pmax
comp=Z,74nm,1.3s
KURK MLR MLR
comp=Z,8µm,18.0s
KURK Kurchatov 45.58 316 P **P 04 30 03.3 +0.5**
KURK P **P 04 30 03.3 +0.5**
KURK P **P 04 30 03.3 +0.5**
KURBB Kurchatov Arra 45.62 316 P **P 04 30 02.3 -0.8**
comp=Z,18nm,0.7s,baz=104,slow=7.9,SNR=52
KURBB PP **PP 04 31 48.8 -1.1**
comp=Z,6.2nm,1.0s,baz=92,slow=8.4,SNR=6.9
KURBB LR LR 04 50 53.7
comp=Z,8µm,19.6s,baz=88,slow=38
comp=Z,18nm,0.7s
MDOK Medeo 45.72 305 *e*P **P 04 30 04.4 +0.1**
MDOK MLR MLR
comp=Z,2µm,17.0s
MDOK Medeo 45.72 305 *e*P **P 04 30 04.4 +0.1**
baz=304
MDOK *e*LR LR 04 49 28.6
comp=Z,2µm,17.0s,baz=304
TNSS Tian-Shan 45.79 305 *e*P **P 04 30 05.0 -0.1**
TNSS Tian-Shan 45.79 305 *e*P **P 04 30 05.0 -0.1**
baz=304
CHKK Chushkaly 45.80 306 *e*P **P 04 30 04.4 -0.3**
CHKK Chushkaly 45.80 306 *e*P **P 04 30 04.5 -0.3**
baz=306
MIDW Midway 46.09 76 P **P 04 30 07.2 +0.1**
MIDW Midway 46.09 76 P **P 04 30 10.8 +3.7**
JHNI Jhansi 46.20 280 *e*P **P 04 30 06.2 -1.9**
HNR Honiara 46.22 137 LR LR 04 48 07.2
comp=Z,868nm,21.5s,baz=331,slow=34
KUU Kurty 46.27 306 *e*P **P 04 30 08.8 +0.4**
KUU pmax pmax
comp=Z,190nm,2.5s
KUU Kurty 46.27 306 *e*P **P 04 30 08.9 +0.4**
comp=Z,190nm,2.5s,baz=306
SMLA Simla 46.28 288 *e*P **P 04 30 08.4 -0.2**
SMLA IAmb IAmb 04 30 12.1
comp=Z,280nm,1.4s
ULHL Ulahol 46.29 304 P **P 04 30 09.8 +1.0**
SNR=19
KIWB Kanaga Island 46.33 43 P **P 04 30 08.0 -0.8**
BILL Bilibino 46.40 18 P **P 04 30 08.5 -0.5**
BILL IAmb IAmb 04 30 13.6
comp=Z,64nm,1.1s
BILL IAMs_20 IAMs_20 04 50 54.3
comp=Z,1µm,18.0s
BILL Bilibino 46.40 18 *c i*P **P 04 30 08.8 -0.2**
BILL *i* *PP **sP 04 30 14.5 0.0**
BILL *e* 04 31 46.6
BILL 04 32 00.0
BILL *i* S **S 04 36 54.7 -0.8**
BILL SSS SSS 04 41 23.0
BILL pmax pmax
comp=Z,110nm,1.7s
BILL MLR MLR
comp=Z,770nm,15.0s
KSH Kashi 46.50 300 P **P 04 30 13.9 +3.5**
KSH PcP **PcP 04 31 44.6 -0.1**
KSH PP **PP 04 32 00.8 +1.2**
KSH S **S 04 37 04.9 +6.9**
KSH pmax pmax
comp=Z,32nm,1.5s
KSH pmax pmax
comp=Z,600nm,6.5s
KSH LR LR
comp=Z,4µm,13.6s
KSH LR LR
comp=Z,3µm,15.2s
KSH LR LR
comp=Z,5µm,13.6s
ADK Adak 46.62 43 P **P 04 30 10.2 -0.8**
ADK IAmb IAmb 04 30 20.9
comp=Z,66nm,1.1s
ADK Adak 46.62 43 P **P 04 30 10.2 -0.8**
ADK pmax pmax
comp=Z,66nm,1.1s
ADK Adak 46.62 43 P **P 04 30 10.8 -0.2**
WB0 Warramunga Arr 46.63 175 P **P 04 30 10.5 -0.8**
TKM2 Tokmak 2 46.78 305 P **P 04 30 11.4 -1.2**
SNR=9.8
TKM2 Tokmak 2 46.78 305 P **P 04 30 12.4 -0.3**
TKM2 pmax pmax
comp=Z,31nm,1.1s
WRAB Tennant Creek 46.79 175 P **P 04 30 11.4 -1.2**
WRAB IAmb IAmb 04 30 15.7
comp=Z,112nm,1.1s
WRAB Tennant Creek 46.79 175 *de*P **P 04 30 12.1 -0.5**
WRAB pmax pmax
comp=Z,197nm,1.7s
WRAB Tennant Creek 46.79 175 P **P 04 30 12.4 -0.2**
WRA Warramunga Arr 46.80 175 P **P 04 30 12.1 -0.6**
comp=Z,55nm,0.9s,baz=355,slow=8.5,SNR=125
WRA PcP **PcP 04 31 45.5 -0.2**
comp=Z,5.8nm,0.8s,baz=349,slow=4.1,SNR=2.1
WRA LR LR 04 51 36.8
comp=Z,341nm,18.8s,baz=29,slow=38
comp=Z,55nm,0.9s
WB2 Warramunga Arr 46.80 175 P **P 04 30 11.9 -0.8**
WR0 Warramunga Arr 46.83 175 P **P 04 30 12.1 -0.8**
MTSU Mount Surprise 46.85 162 P **P 04 30 14.2 +1.1**
SONA Sohna 46.86 284 *e*P **P 04 30 13.6 +0.4**
KBK Karagaybulak 47.25 304 P **P 04 30 20.5 +4.2**
SNR=8.6
THN Thein Dam 47.31 290 *e*P **P 04 30 16.2 -0.5**
KUDL Kundal 47.40 284 *e*P **P 04 30 16.6 -0.8**
CHMS Chumysh 47.40 305 *i* P **P 04 30 18.0 +0.7**
CHMS pmax pmax
comp=Z,72nm,1.4s
SGDS Sogindy 47.50 305 *e*P **P 04 30 17.2 -0.9**
SGDS pmax pmax
comp=Z,21nm,1.6s
SGDS Sogindy 47.50 305 *e*P **P 04 30 17.2 -0.9**
comp=Z,21nm,1.6s,baz=305
UCH Uchtor 47.57 304 P **P 04 30 20.9 +1.8**
SNR=32
AAK Ala-Archa 47.59 304 P **P 04 30 18.8 -0.1**
comp=Z,2.0nm,0.3s,baz=102,slow=11
AAK LR LR 04 54 16.7
comp=Z,5µm,18.1s,baz=86,slow=41
comp=Z,2.0nm,0.3s
AAK Ala-Archa 47.59 304 P **P 04 30 19.1 +0.2**
AAK Ala-Archa 47.59 304 P **P 04 30 19.1 +0.2**
AAK pmax pmax
comp=Z,35nm,1.6s
AAK MLR MLR
comp=Z,5µm,18.0s
USP Ospenovka 47.59 305 P **P 04 30 17.5 -1.3**
SNR=12
BHPL Bhopal 47.75 278 *e*P **P 04 30 19.8 -0.5**
BHPL IAmb IAmb 04 30 25.2
comp=Z,82nm,1.3s
BTLS Baital 47.97 307 *e*P **P 04 30 19.7 -1.9**
BTLS pmax pmax
comp=Z,63nm,1.6s
BTLS Baital 47.97 307 *e*P **P 04 30 19.8 -1.9**
comp=Z,63nm,1.6s,baz=307
KHET Khetri 48.00 285 *e*P **P 04 30 22.2 +0.1**
QIS Mount Isa 48.10 168 P **P 04 30 22.6 -0.2**
EKS2 Erkin-Say 48.11 304 P **P 04 30 26.6 +3.6**
SNR=6.0
TARA Tarawa 48.15 115 P **P 04 30 25.1 +1.7**
TARA IAmb IAmb 04 30 27.1
comp=Z,80nm,1.1s
TARA Tarawa 48.15 115 IAMs_20 IAMs_20 04 46 08.9
comp=Z,2µm,21.0s
AML Almayashu 48.18 304 P **P 04 30 26.3 +2.5**
SNR=12
AML Almayashu 48.18 304 P **P 04 30 26.0 +2.2**
ATKA Atka Island 48.19 43 P **P 04 30 23.3 +0.1**
HYB Hyderabad 48.57 270 *e*P **P 04 30 25.6 -1.1**
HYB IAmb IAmb 04 30 30.9
comp=Z,54nm,1.2s
HYBB Hyderabad (bro 48.57 270 *e*P **P 04 30 26.1 -0.6**
HYBB *e*PcP **PcP 04 31 52.7 +0.3**
HYBB *e*PcS **PcS 04 35 48.7 0.0**
MDRS Chennai 48.73 264 *e*P **P 04 30 29.7 +1.8**
MDRS IAmb IAmb 04 30 33.0
comp=Z,125nm,1.5s
MBWA Marble Bar 48.93 193 P **P 04 30 27.9 -1.2**
MBWA IAmb IAmb 04 30 32.4
comp=Z,105nm,1.0s
MBWA Marble Bar 48.93 193 P **P 04 30 28.9 -0.2**
NRIK Noril'sk 49.13 341 P **P 04 30 29.7 -0.5**
comp=Z,31nm,1.1s,baz=124,slow=8.7,SNR=32
NRIK LR LR 04 52 23.1
comp=Z,2µm,18.7s,baz=136,slow=38
comp=Z,31nm,1.1s
NRIK Noril'sk 49.13 341 *c i*P **P 04 30 30.4 +0.2**
NRIK pmax pmax
comp=Z,52nm,0.9s
NRIK MLR MLR
comp=Z,3µm,15.0s
BRZS Berezniki 49.23 314 *e*P **P 04 30 31.3 0.0**
BRZS pmax pmax
comp=Z,58nm,1.6s
BRZS Berezniki 49.23 314 *e*P **P 04 30 31.4 0.0**
comp=Z,58nm,1.6s,baz=314
CTA Charters Tower 49.27 160 LR LR 04 49 14.9
comp=Z,1µm,21.3s,baz=343,slow=34
CTA Charters Tower 49.27 160 P **P 04 30 32.9 +1.1**
CTA Charters Tower 49.27 160 P **P 04 30 32.7 +0.9**
CTAO Charters Tower 49.27 160 P **P 04 30 32.3 +0.5**
CTAO Charters Tower 49.27 160 P **P 04 30 32.3 +0.5**
CTAO pmax pmax
comp=Z,236nm,1.0s
CTAO Charters Tower 49.27 160 P **P 04 30 32.7 +0.9**
PSA00 Pilbara Seismi 49.31 193 P **P 04 30 31.8 -0.3**
PSA00 Pilbara Seismi 49.31 193 IAmb IAmb 04 30 35.4
comp=Z,11nm,1.1s
PSA00 Pilbara Seismi 49.31 193 P **P 04 30 31.7 -0.3**
OTUK Ortayu 49.31 312 P **P 04 30 32.0 0.0**
OTUK pmax pmax
comp=Z,166nm,1.4s
ASAR Alice Springs 50.46 176 P **P 04 30 40.5 -0.3**
comp=Z,35nm,0.8s,baz=7.4,slow=13,SNR=127
ASAR PcP **PcP 04 31 57.3 -1.6**
comp=Z,6.1nm,0.7s,baz=353,slow=4.1,SNR=1.3
ASAR LR LR 04 53 54.7
comp=Z,414nm,18.9s,baz=15,slow=38
comp=Z,35nm,0.8s
KK31 Karatay Array 50.51 305 IAmb IAmb 04 30 45.9
comp=Z,186nm,1.7s
KK31 Karatay Array 50.51 305 P **P 04 30 41.6 +0.5**
KK31 pmax pmax
comp=Z,95nm,1.5s
KKAR Karatay Array 50.51 305 P **P 04 30 41.6 +0.5**
KKAR IAmb IAmb 04 30 45.9
comp=Z,186nm,1.7s
KKAR Karatay Array 50.51 305 P **P 04 30 41.6 +0.5**
KKAR pmax pmax
comp=Z,186nm,1.7s
IUG luzhnay 50.90 304 *e*P **P 04 30 43.7 -0.5**
IUG luzhnay 50.90 304 *e*P **P 04 30 43.8 -0.5**
baz=303
PALK Pallekele 50.91 257 P **P 04 30 44.0 -0.5**
comp=Z,13nm,1.0s,baz=149,slow=14,SNR=2.0
PALK LR LR 04 53 21.7
comp=Z,988nm,21.1s,baz=158,slow=37
comp=Z,13nm,1.0s
PALK Pallekele 50.91 257 P **P 04 30 44.7 +0.1**
PALK Pallekele 50.91 257 IAMs_20 IAMs_20 04 53 32.5
comp=Z,1µm,20.0s
PALK Pallekele 50.91 257 P **P 04 30 44.7 +0.1**
PALK pmax pmax
comp=Z,91nm,1.5s
PALK MLR MLR
comp=Z,1µm,20.0s
BRVK Borovoye 51.04 318 P **P 04 30 44.6 -0.3**
BRVK IAmb IAmb 04 30 48.9
comp=Z,194nm,1.2s
BRVK Borovoye 51.04 318 *de*P **P 04 30 44.7 -0.3**
BRVK pmax pmax
comp=Z,118nm,1.2s
BRVK MLR MLR
comp=Z,10µm,17.0s
BRVK Borovoye 51.04 318 P **P 04 30 46.1 +1.2**
BRVK P **P 04 30 46.1 +1.2**
SPIA Saint Paul Isl 51.29 37 P **P 04 30 46.3 -0.4**
SPIA IAmb IAmb 04 30 50.8
comp=Z,103nm,1.2s
SPIA Saint Paul Isl 51.29 37 P **P 04 30 47.0 +0.3**
baz=260
SPIA Saint Paul Isl 51.29 37 P **P 04 30 50.5 +3.8**
NIKH Nikolski High 51.52 42 P **P 04 30 48.6 +0.1**
baz=265
WRKA Warakurna 51.74 182 P **P 04 30 50.7 +0.3**
CHGR Chuyangaron 51.84 299 IAmb IAmb 04 30 55.0
comp=Z,178nm,1.2s
CHGR Chuyangaron 51.84 299 P **P 04 30 52.6 +1.3**
GAMB Gambell 52.10 29 P **P 04 30 52.9 +0.3**
baz=254
POO Poona 52.38 273 *e*P **P 04 30 58.2 +2.7**
POO IAmb IAmb 04 31 02.2
comp=Z,61nm,1.1s
KOD Kodaikanal 52.39 262 *e*P **P 04 30 56.5 +0.6**
KBL Kabul 52.50 294 P **P 04 30 56.6 +0.2**
KBL Kabul 52.50 294 P **P 04 30 56.6 +0.2**
KBL pmax pmax
comp=Z,229nm,1.3s
KBL Kabul 52.50 294 P **P 04 30 57.8 +1.5**
SNR=107
KBL P **P 04 30 57.8 +1.5**
SNR=107
KBL P **P 04 30 57.8 +1.5**
SNR=107
UNV Unalaska Valle 52.99 41 P **P 04 30 59.0 -0.4**
baz=266
PCHI Peechi 53.25 263 *e*P **P 04 31 01.9 0.0**
PCHI *e*S **S 04 38 35.5 +2.8**
RK1H Rockhampton Ha 53.73 157 P **P 04 31 07.9 +2.8**
TNA Tin City 54.14 27 IAmb IAmb 04 31 12.3
comp=Z,134nm,1.2s
TNA Tin City 54.14 27 P **P 04 31 07.1 -0.5**
baz=256
OOD Oodnadatta 54.70 174 P **P 04 31 11.7 -0.4**
FALS False Pass 54.85 40 P **P 04 31 12.6 -0.4**
baz=268
QLP Quilpie 54.91 165 P **P 04 31 13.5 -0.1**
ANM Nome 54.98 28 P **P 04 31 12.9 -0.9**
baz=259
INKA Innaminka 55.31 169 P **P 04 31 16.7 +0.2**
EIDS Eidsvold 55.76 157 P **P 04 31 20.1 +0.3**
EIDS IAmb IAmb 04 31 23.4
comp=Z,81nm,1.0s
EIDS Eidsvold 55.76 157 P **P 04 31 20.8 +1.0**
RMQ Roma 56.04 160 P **P 04 31 23.6 +1.8**
SDPT Sand Point 56.55 40 P **P 04 31 23.5 -1.7**
baz=270
RDOG Red Dog Mine 56.62 24 IAmb IAmb 04 31 26.1
comp=Z,68nm,1.1s
RDOG Red Dog Mine 56.62 24 P **P 04 31 22.2 -3.3**
baz=259
SVE Sverdlovsk 56.82 322 *de*P **P 04 31 28.1 +1.0**
SVE *e*S **S 04 39 19.7 +0.3**
SVE pmax pmax
comp=Z,225nm,1.5s
SVE MLR MLR
comp=Z,5µm,14.0s
MULG Mulgathing 57.04 176 P **P 04 31 28.5 -0.4**
CHNA Chernabura Isl 57.07 40 P **P 04 31 27.5 -1.3**
baz=271
CHNA S **S 04 39 26.4 +3.7**
baz=271
CNBA Chernabura Isl 57.07 40 P **P 04 31 29.0 +0.1**
CNBA IAmb IAmb 04 31 31.9
comp=Z,68nm,1.0s
MORW Morawa 57.37 195 IAmb IAmb 04 31 34.4
comp=Z,100nm,1.4s
MORW Morawa 57.37 195 P **P 04 31 32.0 +0.8**
FORT Forrest 57.46 182 P **P 04 31 32.3 +0.5**
AB31 Akbulak array 57.50 313 *i* P **P 04 31 31.5 -0.5**
AB31 pmax pmax
comp=Z,106nm,1.2s
ABKAR Akbulak array 57.50 313 P **P 04 31 32.0 0.0**
ABKAR IAmb IAmb 04 31 35.8
comp=Z,143nm,1.2s
N16K Nishlik Lake 57.56 34 P **P 04 31 33.1 +0.7**
baz=268,SNR=15
N16K S **S 04 39 32.9 +3.7**
baz=268
LCRK Leigh Creek 57.59 172 P **P 04 31 33.2 +0.5**
O16K Kokwok River B 57.88 35 P **P 04 31 35.0 +0.5**
baz=269,SNR=6.4
O16K S **S 04 39 35.9 +2.6**
baz=269
P16K Nushagak River 57.93 35 P **P 04 31 35.4 +0.6**
baz=270
ARU Arti 57.97 322 LR LR 04 59 26.8
comp=Z,7µm,18.1s,baz=84,slow=39
ARU Arti 57.97 322 P **P 04 31 35.6 +0.4**
ARU Arti 57.97 322 *c i*P **P 04 31 35.7 +0.5**
ARU 04 32 27.9
ARU 04 33 44.2
ARU PPP PPP 04 35 03.7
ARU S **S 04 39 38.6 +4.1**
ARU 04 41 26.7
ARU pmax pmax
comp=Z,221nm,1.4s
ARU MLR MLR
comp=Z,5µm,16.0s
O17K Koliganek Bris 58.39 35 P **P 04 31 38.9 +0.8**
baz=270
O17K S **S 04 39 42.6 +2.7**
baz=270
GCSA Galena City Sc 58.63 29 P **P 04 31 39.4 -0.2**
baz=267
AKTO Aktyubinsk 58.64 314 LR LR 04 58 39.2
comp=Z,3µm,20.1s,baz=91,slow=38
AKTO Aktyubinsk 58.64 314 P **P 04 31 40.0 0.0**
AKTO pmax pmax
comp=Z,64nm,1.4s
BLDU Ballidu 58.72 194 P **P 04 31 42.3 +1.7**
P17K Kvichak River 58.73 35 P **P 04 31 40.9 +0.5**
baz=271
P17K S **S 04 39 47.7 +3.4**
baz=271
R17K Ugashik Creek 58.79 37 P **P 04 31 40.5 -0.4**
baz=272
TTA Tatalina 58.95 31 P **P 04 31 42.5 +0.4**
baz=269,SNR=21
TTA S **S 04 39 48.7 +1.5**
baz=269
N18K Kilae Creek 58.99 33 P **P 04 31 43.1 +0.8**
baz=270,SNR=9.9
N18K S **S 04 39 51.4 +3.6**
baz=270
A21K Barrow 59.29 21 IAMs_20 IAMs_20 04 58 19.2
comp=Z,833nm,20.0s
A21K Barrow 59.29 21 P **P 04 31 44.7 +0.6**
baz=263,SNR=13
A21K S **S 04 39 54.1 +2.9**
baz=263
CHIR Chirikof Islan 59.30 39 P **P 04 31 44.9 +0.4**
baz=274
O18K Koktuh Hills 59.34 34 P **P 04 31 45.4 +0.6**
baz=272
O18K S **S 04 39 55.8 +3.4**
baz=272
P18K Big Mountain, 59.34 35 P **P 04 31 45.1 +0.4**
baz=272
P18K S **S 04 39 54.6 +2.2**
baz=272
KLBR Kellerberrin 59.45 192 P **P 04 31 45.9 +0.2**
L19K White Mountain 59.48 32 P **P 04 31 46.3 +0.6**
baz=270,SNR=36
L19K S **S 04 39 57.9 +3.8**
baz=270
Q18K Katmai Hardscr 59.48 36 P PP 04 33 46.5 -10
baz=272
STKA Stephens Creek 59.50 169 P **P 04 31 45.4 -0.7**
comp=Z,17nm,1.0s,baz=351,slow=6.7,SNR=19
STKA LR LR 04 56 31.8
comp=Z,724nm,21.8s,baz=346,slow=35
comp=Z,17nm,1.0s
STKA Stephens Creek 59.50 169 *i e*P **P 04 31 48.0 +2.0**
STKA Stephens Creek 59.50 169 P **P 04 31 46.0 0.0**
N19K Bonanza Creek 59.68 33 P **P 04 31 47.6 +0.5**
baz=272
N19K S **S 04 40 00.0 +3.2**
baz=272
M19K Big River Lodg 59.70 32 P **P 04 31 47.8 +0.6**
baz=271
M19K S **S 04 40 00.2 +3.3**
baz=271

BBOO Buckleboo 59.70 174 P **P** 04 31 46.3 -1.1
BBOO IAmb IAmb 04 31 50.8
comp=Z,96nm,1.4s
BBOO Buckleboo 59.70 174 P **P** 04 31 47.2 -0.2
O19K Port Alsworth 59.78 34 P **P** 04 31 48.1 +0.4
baz=272
O19K S **S** 04 40 02.3 +4.4
baz=272
J20K Nowinta River 59.80 29 IAmb IAmb 04 31 53.4
comp=Z,91nm,1.1s
J20K Nowinta River 59.80 29 P **P** 04 31 48.9 +1.1
baz=270,SNR=52
J20K S **S** 04 40 02.0 +3.9
baz=270
K20K Telida 59.83 30 IAmb IAmb 04 31 53.7
comp=Z,71nm,1.1s
K20K Telida 59.83 30 P **P** 04 31 49.3 +1.3
baz=270,SNR=50
K20K S **S** 04 40 02.2 +3.6
baz=270
L20K Farewell, AK 59.93 31 P **P** 04 31 49.8 +1.0
baz=271,SNR=33
L20K S **S** 04 40 05.6 +5.7
baz=271
DZM Mont Dzumac 60.00 141 *e*S S 04 39 50.0 -12
comp=Z,2µm,25.8s
DZM *e*LR LR 04 49 19.2
comp=Z,5µm,27.4s
DZM Mont Dzumac 60.00 141 LR LR 04 54 35.0
comp=Z,1µm,21.9s,baz=334,slow=33
CMSA Cobar Meteorol 60.00 165 P **P** 04 31 50.3 +0.8
SII Sitkinak Islan 60.05 38 IAMs_20 IAMs_20 04 53 12.3
comp=Z,616nm,21.0s
SII Sitkinak Islan 60.05 38 P **P** 04 31 49.5 -0.2
baz=274
SII Sitkinak Islan 60.05 38 P **P** 04 31 52.8 +3.1
WHYH Whyalla 60.07 173 P **P** 04 31 51.9 +2.0
MUN Mundaring 60.14 194 P **P** 04 31 52.7 +2.3
Q19K Cape Douglas, 60.18 35 P **P** 04 31 50.1 -0.4
baz=273
NAPP Napperby 60.28 172 P **P** 04 31 52.0 +0.6
M20K Styx River 60.30 32 P **P** 04 31 52.3 +1.0
baz=272
M20K S **S** 04 40 07.4 +2.6
baz=272
H21K Melozitna Rive 60.37 28 IAmb IAmb 04 31 56.6
comp=Z,81nm,1.1s
H21K Melozitna Rive 60.37 28 P **P** 04 31 52.6 +0.9
baz=270,SNR=59
H21K S **S** 04 40 08.6 +3.2
baz=270
OHAK Old Harbor 60.49 37 P **P** 04 31 51.7 -0.9
OHAK IAmb IAmb 04 31 59.1
comp=Z,100nm,1.5s
OHAK Old Harbor 60.49 37 P **P** 04 31 52.7 +0.1
baz=275
GEYT Alibeck 60.53 300 P **P** 04 31 54.0 +0.7
comp=Z,45nm,1.2s,baz=96,slow=1.4,SNR=19
GEYT LR LR 05 02 38.0
comp=Z,5µm,18.0s,baz=94,slow=41
comp=Z,45nm,1.2s
GYA0 ALIBECK ARRAY 60.53 300 P **P** 04 31 54.6 +1.3
GYA0B ALIBECK ARRAY 60.53 300 IAmb IAmb 04 31 57.8
comp=Z,87nm,1.2s
ARMA Armidale 60.60 159 P **P** 04 31 54.9 +1.2
ARMA IAmb IAmb 04 31 58.0
comp=Z,68nm,1.0s
ARMA Armidale 60.60 159 P **P** 04 31 54.5 +0.7
CHUM Lake Minchumin 60.61 30 P **P** 04 31 54.4 +1.1
baz=272,SNR=23
CHUM S **S** 04 40 10.6 +2.2
baz=272
HTT Hallett 60.62 172 P **P** 04 31 54.8 +1.0
O20K Slope Mountain 60.63 34 P **P** 04 31 53.7 +0.1
baz=274
O20K S **S** 04 40 11.6 +2.6
baz=274
PPLA Purkeypile 60.70 31 P **P** 04 31 55.0 +0.9
baz=272,SNR=33
I21K Tanana 60.72 28 IAmb IAmb 04 31 59.2
comp=Z,116nm,1.2s
I21K Tanana 60.72 28 P **P** 04 31 55.3 +1.2
baz=271,SNR=13
I21K S **S** 04 40 12.5 +2.7
baz=271
CAST Castle Rocks 60.72 30 IAmb IAmb 04 31 59.5
comp=Z,68nm,1.0s
CAST Castle Rocks 60.72 30 P **P** 04 31 55.2 +1.0
baz=272,SNR=64
N20K Mount Spurr 60.77 33 P **P** 04 31 55.3 +0.7
baz=273
N20K S **S** 04 40 14.1 +3.3
baz=273
SPCR Spurr Chakacha 60.77 33 P **P** 04 31 55.0 +0.4
baz=273,SNR=11
SPCR S **S** 04 40 15.3 +4.5
baz=273
KDAK Kodiak Island 60.82 37 LR LR 04 58 13.5
comp=Z,230nm,21.0s,baz=263,slow=36
KDAK Kodiak Island 60.82 37 P **P** 04 31 54.8 0.0
KDAK Kodiak Island 60.82 37 *de*P **P** 04 31 54.3 -0.6
KDAK pmax pmax
comp=Z,91nm,0.9s
KDAK MLR MLR
comp=Z,599nm,18.0s
KDAK Kodiak Island 60.82 37 P **P** 04 31 54.7 -0.1
baz=275
KDAK S **S** 04 40 12.2 +0.9
baz=275
NWAO Narrogin (SRO) 60.85 193 P **P** 04 31 55.5 +0.2
NWAO IAmb IAmb 04 31 58.6
comp=Z,108nm,1.4s
NWAO Narrogin (SRO) 60.85 193 P **P** 04 31 55.5 +0.2
NWAO pmax pmax
comp=Z,109nm,1.5s
NWAO Narrogin (SRO) 60.85 193 P **P** 04 31 56.6 +1.3
Q20K Shuyak Island 60.85 36 P **P** 04 31 54.7 -0.4
baz=275
Q20K S **S** 04 40 13.1 +1.4
baz=275
SKT Skwentna 61.05 32 P **P** 04 31 56.5 +0.1
baz=274,SNR=33
SKT S **S** 04 40 15.6 +1.4
baz=274
HOM Homer 61.15 35 P **P** 04 31 56.3 -0.8
baz=275
BPAW Bear Paw Mtn. 61.18 29 IAmb IAmb 04 32 01.9
comp=Z,62nm,1.2s
BPAW Bear Paw Mtn. 61.18 29 P **P** 04 31 58.0 +0.7
baz=273,SNR=30
KTH Kantishna Hill 61.24 30 IAmb IAmb 04 32 02.9
comp=Z,75nm,1.4s
KTH IAMs_20 IAMs_20 05 00 11.3
comp=Z,580nm,18.0s
MLY Manley 61.25 28 IAmb IAmb 04 32 02.5
comp=Z,69nm,1.2s
MLY Manley 61.25 28 P **P** 04 31 58.2 +0.4
baz=272,SNR=66
MLY S **S** 04 40 17.7 +0.9
baz=272
CNPM China Poot 61.37 35 IAmb IAmb 04 32 45.6
comp=Z,44nm,0.7s
COLD Coldfoot 61.39 26 P **P** 04 31 59.3 +0.7
baz=272
COLD S **S** 04 40 20.9 +2.6
baz=272
SUA Susitna One 61.45 32 IAmb IAmb 04 32 03.8
comp=Z,41nm,0.8s
SUA Susitna One 61.45 32 P **P** 04 31 58.5 -0.8
baz=274,SNR=23
SUA S **S** 04 40 21.5 +1.9
baz=274
BRLK Bradley Lake 61.53 34 IAmb IAmb 04 32 48.4
comp=Z,38nm,0.7s
TRF Thorofare Moun 61.53 30 P **P** 04 31 59.9 +0.1
baz=274,SNR=15
TRF S **S** 04 40 22.3 +1.7
baz=274
TOLK Toolik Lake Re 61.59 24 P **P** 04 32 00.3 +0.4
TOLK IAmb IAmb 04 32 04.8
comp=Z,69nm,1.3s
TOLK IAMs_20 IAMs_20 05 00 46.2
comp=Z,734nm,18.0s
TOLK Toolik Lake Re 61.59 24 P **P** 04 32 00.8 +0.8
baz=272,SNR=44
TOLK S **S** 04 40 23.0 +2.1
baz=272

BRSE Bradley Lake S 61.60 34 P **P** 04 31 59.5 -0.7
baz=275,SNR=14
CUT Chulitna 61.61 31 IAmb IAmb 04 32 06.8
comp=Z,106nm,1.2s
CUT Chulitna 61.61 31 P **P** 04 31 59.7 -0.5
baz=274
H23K Yukon River 61.71 27 P **P** 04 32 02.1 +1.2
baz=273,SNR=72
H23K S **S** 04 40 27.0 +4.5
baz=273
M22K Willow 61.73 32 P **P** 04 32 00.7 -0.3
baz=275,SNR=25
I23K Minto, Yukon-K 61.83 28 P **P** 04 32 02.6 +1.1
baz=274,SNR=30
I23K S **S** 04 40 27.4 +3.5
baz=274
BWN Browne 61.84 29 IAmb IAmb 04 32 46.6
comp=Z,94nm,1.1s
RC01 Rabbit Creek A 61.97 33 IAmb IAmb 04 32 06.2
comp=Z,78nm,1.3s
RC01 Rabbit Creek A 61.97 33 P **P** 04 32 02.3 -0.3
baz=276,SNR=20
RC01 S **S** 04 40 26.5 +0.6
baz=276
NEA2 Nenana 61.99 29 P **P** 04 32 02.7 0.0
NEA2 Nenana 61.99 29 P **P** 04 32 03.4 +0.7
baz=274,SNR=65
NEA2 S **S** 04 40 28.9 +2.9
baz=274
O22K Cooper Landing 62.04 34 P **P** 04 32 02.5 -0.5
baz=276
MCK McKinley 62.11 30 IAMs_20 IAMs_20 04 58 56.3
comp=Z,534nm,19.0s
MCK McKinley 62.11 30 P **P** 04 32 03.4 -0.1
baz=275,SNR=40
MCK S **S** 04 40 27.4 -0.3
baz=275
TWOA Tennyson Woods 62.16 172 P **P** 04 32 05.3 +1.2
RND Reindeer 62.18 30 IAMs_20 IAMs_20 05 00 29.0
comp=Z,604nm,20.0s
SEW Seward 62.21 34 IAmb IAmb 04 32 08.3
comp=Z,94nm,1.1s
SEW Seward 62.21 34 P **P** 04 32 03.8 -0.4
baz=276,SNR=29
SEW S **S** 04 40 30.8 +2.0
baz=276
PMR Palmer 62.22 32 IAmb IAmb 04 32 07.7
comp=Z,62nm,1.2s
PMR Palmer 62.22 32 P **P** 04 32 03.7 -0.5
baz=276,SNR=34
PMR S **S** 04 40 30.4 +1.6
baz=276
WAT1 Susitna Watana 62.37 31 P **P** 04 32 04.9 -0.4
baz=276
H24K Noodor Dome 62.39 27 IAmb IAmb 04 32 10.5
comp=Z,80nm,1.1s
H24K Noodor Dome 62.39 27 P **P** 04 32 06.9 +1.4
baz=275,SNR=64
H24K S **S** 04 40 33.9 +2.7
baz=275
WRH Wood River Hil 62.42 29 IAmb IAmb 04 32 48.9
comp=Z,51nm,1.2s
TCOL CIGO, UAF Yank 62.48 28 IAmb IAmb 04 32 11.6
comp=Z,67nm,1.2s
TCOL CIGO, UAF Yank 62.48 28 P **P** 04 32 06.1 +0.2
baz=275,SNR=8.7
COLA College 62.48 28 P **P** 04 32 05.9 0.0
COLA IAmb IAmb 04 32 11.6
comp=Z,60nm,1.2s
COLA College 62.48 28 ǁ*e*P **P** 04 32 07.6 +1.6
COLA pmax pmax
comp=Z,35nm,1.1s
COLA MLR MLR
comp=Z,209nm,18.0s
COLA College 62.48 28 P **P** 04 32 06.0 0.0
baz=275
KNK Knik Glacier 62.55 32 P **P** 04 32 06.8 +0.2
baz=276,SNR=19
KNK S **S** 04 40 36.2 +2.9
baz=276
SML Sawmill 62.57 32 P **P** 04 32 06.8 +0.1
baz=276,SNR=18
SML S **S** 04 40 34.8 +1.2
baz=276
POKR Poker Plat Res 62.64 28 P **P** 04 32 07.6 +0.6
baz=275,SNR=19
POKR S **S** 04 40 37.5 +3.3
baz=275
KIRV Kirov 62.73 324 LR LR 05 02 33.0
comp=Z,8µm,18.2s,baz=84,slow=39
KIRV Kirov 62.73 324 *d*iP **P** 04 32 06.8 -0.8
WAT6 Susitna Watana 62.76 31 P **P** 04 32 07.9 -0.2
baz=276,SNR=60
WAT6 S **S** 04 40 38.7 +2.6
baz=276
M23K Glacier View 62.86 32 P **P** 04 32 08.1 -0.5
baz=277,SNR=15
M23K S **S** 04 40 40.2 +3.1
baz=277
ILAR Eielson Array 62.91 29 P **P** 04 32 08.4 -0.4
comp=Z,10nm,0.8s,baz=275,slow=5.8,SNR=47
PKPPKP **P'P'df** 05 01 08.5 -7.3
comp=Z,1.0nm,1.2s,baz=56,slow=2.4,SNR=4.3
ILAR LR LR 05 02 12.5
comp=Z,199nm,18.1s,baz=266,slow=39
comp=Z,10nm,0.8s
HDA Harding Lake 62.92 29 IAmb IAmb 04 32 12.7
comp=Z,77nm,1.0s
HDA Harding Lake 62.92 29 P **P** 04 32 08.3 -0.6
baz=276,SNR=68
HDA S **S** 04 40 39.0 +1.3
baz=276
HDA S **S** 04 40 39.0 +1.3
baz=276
MGCD Mangrove Creek 63.03 160 P **P** 04 32 11.6 +1.7
SCM Sheep Creek Mo 63.04 32 IAmb IAmb 04 32 13.9
comp=Z,80nm,1.0s
SCM Sheep Creek Mo 63.04 32 P **P** 04 32 10.0 +0.1
baz=277,SNR=37
SCM S **S** 04 40 42.2 +2.7
baz=277
GLI Glacier Island 63.28 33 IAmb IAmb 04 32 15.1
comp=Z,42nm,0.9s
GLI Glacier Island 63.28 33 P **P** 04 32 11.1 -0.2
baz=278,SNR=14
GLI S **S** 04 40 44.5 +2.2
baz=278
K24K Donnelly Dome 63.50 30 P **P** 04 32 12.8 0.0
baz=278,SNR=33
BMAR Burnt Mountain 63.55 25 P **P** 04 32 14.0 +1.0
M24K Tolsona, Glenn 63.55 31 IAmb IAmb 04 32 19.1
comp=Z,56nm,0.9s
M24K Tolsona, Glenn 63.55 31 P **P** 04 32 12.9 -0.3
baz=278,SNR=22
J25K Salcha River, 63.57 29 P **P** 04 32 12.4 -0.9
baz=278,SNR=25
J25K S **S** 04 40 46.0 0.0
baz=278
HIN Hinchinbrook I 63.63 33 IAmb IAmb 04 32 17.8
comp=Z,41nm,0.9s
PAX Paxson 63.75 30 IAmb IAmb 04 32 18.7
comp=Z,45nm,1.1s
PAX Paxson 63.75 30 P **P** 04 32 14.7 +0.1
baz=278,SNR=39
PAX S **S** 04 40 49.2 +0.8
baz=278
KLU Klutina 63.75 32 P **P** 04 32 14.7 +0.1
baz=279,SNR=22
KLU S **S** 04 40 51.1 +2.8
baz=279
Q23K Middleton Isla 63.86 34 P **P** 04 32 15.1 0.0
baz=279
DIV Divide 63.88 33 IAmb IAmb 04 32 19.6
comp=Z,45nm,0.9s
JLN Jalan Bani Buh 63.90 283 P **P** 04 32 17.1 +1.0
JLN P **P** 04 32 17.1 +1.0
RIDG Independent Ri 63.92 30 P **P** 04 32 15.5 -0.1
baz=278,SNR=64
RIDG S **S** 04 40 52.2 +1.9
baz=278
HARP HAARP 63.98 31 P **P** 04 32 16.5 +0.5
baz=279,SNR=16
HARP S **S** 04 40 54.1 +3.2
baz=279
EYAK Cordova Ski Ar 63.98 33 P **P** 04 32 16.4 +0.5
baz=279
EYAK S **S** 04 40 53.8 +2.8
baz=279

WBK Wadi Bani Khal 64.13 283 P **P** 04 32 19.0 +1.4
SNR=6.5
WBK P **P** 04 32 19.0 +1.4
SNR=6.5
PRGR Permogore 64.16 328⇑ *i*P **P** 04 32 17.6 +0.5
MSVF Nonsavu 64.19 128 LR LR 04 58 47.4
comp=Z,624nm,18.0s,baz=323,slow=35
MSVF Nonsavu 64.19 128 P **P** 04 32 18.9 +0.9
MSVF IAmb IAmb 04 32 23.0
comp=Z,70nm,1.1s
MSVF Nonsavu 64.19 128 *de*P **P** 04 32 20.8 +2.8
MSVF pmax pmax
comp=Z,60nm,1.3s
MSVF Nonsavu 64.19 128 P **P** 04 32 19.1 +1.1
WSAR Wadi Sarin 64.21 284 LR LR 05 02 28.0
comp=Z,1µm,19.8s,baz=94,slow=38
WSAR Wadi Sarin 64.21 284 P **P** 04 32 20.2 +2.0
SNR=6.1
SCRK Sand Creek 64.26 29 IAmb IAmb 04 32 21.6
comp=Z,53nm,1.0s
SCRK Sand Creek 64.26 29 P **P** 04 32 17.8 -0.2
baz=279,SNR=48
SCRK S **S** 04 40 56.4 +1.7
baz=279
DOT Dot Lake 64.28 30 IAmb IAmb 04 32 22.0
comp=Z,58nm,1.0s
ARPS Mount Arapiles 64.32 170 P **P** 04 32 18.9 +0.5
J26L Joseph Creek 64.36 29 IAmb IAmb 04 32 22.4
comp=Z,62nm,0.9s
J26L Joseph Creek 64.36 29 P **P** 04 32 18.3 -0.2
baz=279,SNR=87
J26L S **S** 04 40 56.6 +0.8
baz=279
N25K Chitina, Valde 64.36 32 IAmb IAmb 04 32 23.8
comp=Z,51nm,1.2s
N25K Chitina, Valde 64.36 32 P **P** 04 32 18.9 +0.3
baz=280,SNR=21
N25K S **S** 04 40 58.2 +2.3
baz=280
CAN Canberra 64.42 163 P **P** 04 32 19.1 0.0
CAN Canberra 64.42 163 P **P** 04 32 19.1 0.0
CAN pmax pmax
comp=Z,340nm,1.8s
CAN Canberra 64.42 163 P **P** 04 32 20.6 +1.4
DGTI Dogotuki 64.43 126 P **P** 04 32 21.0 +1.5
BMRM Bremner River 64.47 33 IAmb IAmb 04 32 29.7
comp=Z,76nm,1.0s
BMRM Bremner River 64.47 33 P **P** 04 32 19.3 0.0
baz=280,SNR=32
BMRM S **S** 04 40 58.9 +1.8
baz=280
CNB Canberra Magne 64.51 163 P **P** 04 32 20.9 +1.1
MENT Mentasta 64.55 30 P **P** 04 32 20.2 +0.5
MENT IAmb IAmb 04 32 24.2
comp=Z,61nm,1.1s
BIDO Bidbid 64.55 285 P **P** 04 32 22.5 +2.1
SNR=12
BIDO P **P** 04 32 22.5 +2.1
SNR=12
L26K Log Cabin Wild 64.70 30 IAmb IAmb 04 32 25.2
comp=Z,62nm,1.1s
L26K IAMs_20 IAMs_20 05 01 54.8
comp=Z,689nm,22.0s
L26K Log Cabin Wild 64.70 30 P **P** 04 32 21.2 +0.5
baz=280,SNR=32
HMT Hamilton 64.74 33 IAmb IAmb 04 32 26.0
comp=Z,72nm,1.2s
GLB Gilahina Butte 64.76 32 IAmb IAmb 04 32 25.4
comp=Z,50nm,0.9s
SMDO Samad 64.78 284 P **P** 04 32 22.9 +0.9
SNR=9.3
SMDO P **P** 04 32 22.9 +0.9
SNR=9.3
BELG Belogornoye 64.78 318 LR LR 05 02 49.2
comp=Z,4µm,18.4s,baz=78,slow=38
BELG Belogornoye 64.78 318 *c*iP **P** 04 32 21.6 +0.3
BELG pmax pmax
comp=Z,15nm,1.2s
BELG MLR MLR
comp=Z,641nm,18.0s
KIP Kipapa 64.84 78⇑ *e*P **P** 04 32 24.3 +2.1
KIP pmax pmax
comp=Z,78nm,1.1s
JMDO Jabal Madar 64.96 283 P **P** 04 32 24.8 +1.7
SNR=6.0
JMDO P **P** 04 32 24.8 +1.7
SNR=6.0
M26K Nabesna, AK 64.97 31 IAmb IAmb 04 32 27.4
comp=Z,100nm,1.1s
M26K IAMs_20 IAMs_20 05 01 58.9
comp=Z,573nm,19.0s
M26K Nabesna, AK 64.97 31 P **P** 04 32 22.3 -0.2
baz=281,SNR=81
VRDI Verde Repeater 64.97 32 IAmb IAmb 04 32 26.8
comp=Z,45nm,0.9s
SUCK Suckling Hills 65.03 33 IAmb IAmb 04 32 27.6
comp=Z,64nm,1.1s
K27K Chicken 65.08 29 P **P** 04 32 23.7 +0.6
baz=281
K27K S **S** 04 41 05.2 +0.7
baz=281
MCARA McCarthy VSAT 65.14 32 P **P** 04 32 24.0 +0.4
baz=281,SNR=17
HOQ Hoqain 65.23 285 P **P** 04 32 26.3 +1.5
SNR=11
HOQ P **P** 04 32 26.3 +1.5
SNR=11
HOQ P **P** 04 32 26.3 +1.5
SNR=11
BGLC Bering Glacier 65.26 33 P **P** 04 32 24.2 -0.1
baz=281
BANOM Banah 65.32 288 P **P** 04 32 27.1 +1.8
TGL Tana Glacier 65.36 33 IAmb IAmb 04 32 29.6
comp=Z,60nm,0.8s
L27K Beaver Creek, 65.37 30 IAMs_20 IAMs_20 05 02 14.6
comp=Z,580nm,21.0s
L27K Beaver Creek, 65.37 30 P **P** 04 32 25.7 +0.6
baz=281,SNR=55
BCAR Beaver Creek A 65.39 30 P **P** 04 32 26.0 +0.7
WAX Waxell Ridge 65.41 33 IAmb IAmb 04 33 05.4
comp=Z,42nm,1.0s
BRAT Ballarat 65.44 168 P **P** 04 32 26.8 +1.2
SNH Sunshine Point 65.47 33 IAmb IAmb 04 32 30.3
comp=Z,45nm,1.0s
M27K Edge Creek, AK 65.49 31 IAmb IAmb 04 32 30.8
comp=Z,47nm,1.0s
M27K Edge Creek, AK 65.49 31 P **P** 04 32 26.5 +0.5
baz=282,SNR=48
MHTO MHTO 65.57 282 P **P** 04 32 29.7 +2.8
MHTO P **P** 04 32 29.7 +2.8
ISLE Juniper Island 65.63 33 IAmb IAmb 04 32 30.7
comp=Z,42nm,0.9s
SOHO SOHO 65.72 286 P **P** 04 32 29.4 +1.5
SOHO P **P** 04 32 29.4 +1.5
UOSS Minazif 65.72 287 IAMs_20 IAMs_20 05 04 59.6
comp=Z,1µm,21.0s
TOO Toolangi 65.77 167 P **P** 04 32 28.5 +0.7
TOO Toolangi 65.77 167 P **P** 04 32 28.5 +0.7
TOO pmax pmax
comp=Z,185nm,1.5s
TOO Toolangi 65.77 167 P **P** 04 32 29.2 +1.4
HATD Hatta, Dubai 65.83 287 P **P** 04 32 30.3 +1.7
HATD P **P** 04 32 30.3 +1.7
MESA MESA 65.90 33 IAmb IAmb 04 32 33.0
comp=Z,80nm,1.2s
MESA MESA 65.90 33 P **P** 04 32 28.6 -0.2
baz=282
ASHO Ashiyiah 65.94 286 P **P** 04 32 30.5 +1.1
ASHO P **P** 04 32 30.5 +1.1
BVCY Beaver Creek 65.94 31 P **P** 04 32 29.5 +0.7
baz=282,SNR=15
YAH Yahtse 65.96 33 IAmb IAmb 04 32 33.4
comp=Z,42nm,1.0s
CTG Chitna Glacier 66.03 32 P **P** 04 32 30.1 +0.6
baz=283,SNR=20
CTGM Chitina Glacie 66.03 32 IAmb IAmb 04 32 33.8
comp=Z,58nm,1.1s
NAZ Nazwa, Dubai 66.17 287 P **P** 04 32 31.3 +0.5
LOGN Logan Glacier 66.22 32 IAmb IAmb 04 33 07.6
comp=Z,63nm,1.3s
DAWY Dawson 66.23 29 P **P** 04 32 31.1 +0.5
baz=283,SNR=29
YUK3 Moose Creek 66.26 31 P **P** 04 32 31.6 +0.5
baz=283,SNR=44
YUK3 S **S** 04 41 21.8 +2.3
baz=283
FAQ Al Faqa, Dubai 66.31 287 P **P** 04 32 32.3 +0.5

FAQ P P 04 32 32.3 +0.5
I29M Ogilvie Camp, 66.39 27 P P 04 32 32.2 +0.6
baz=283,SNR=35
I29M S S 04 41 23.3 +2.8
baz=283
ALNE Al Ain 66.42 286 P P 04 32 33.9 +1.4
SNR=5.9
ALNE P P 04 32 33.9 +1.4
SNR=5.9
J29M Klondike Camp 66.64 28 P P 04 32 34.0 +0.8
baz=284
YUK8 Steele Glacier 66.70 32 P P 04 32 34.2 +0.3
baz=284,SNR=20
YUK8 S S 04 41 28.5 +3.6
baz=284
LKBA Tubou, Lakemba 66.74 127 P P 04 32 36.3 +1.9
PCA Pinnacle 66.75 33 IAmb IAmb 04 32 39.0
comp=Z,101nm,1.2s
PINM Pinnacle 66.75 33 P P 04 32 34.4 +0.3
baz=284,SNR=17
MAK Makhachkala 67.14 308 eP P 04 32 32.0 -4.7
MAK eS S 04 41 25.1 -5.2
MAK pmax pmax
comp=Z,123nm,1.0s
YUK4 Talbot Arm 67.21 32 P P 04 32 37.9 +0.8
baz=285
KLMR Klimovskoe 67.21 328 eP P 04 32 36.4 -0.4
KLMR e 04 35 03.2
KLMR eSS SS 04 45 53.5 +4.2
KLMR pmax pmax
comp=Z,61nm,1.5s
KLMR MLR MLR
comp=Z,4µm,13.0s
KLMR Klimovskoe 67.21 328 eP P 04 32 36.4 -0.4
KLMR AMP 04 32 52.2
comp=Z,61nm,1.5s
KLMR ePP PP 04 35 03.2 -1.4
KLMR eSS SS 04 45 53.5 +4.2
KLMR eSS SS 04 45 53.5 +4.2
KLMR LQ LQ 04 57 04.5
KLMR LQ LQ 04 57 04.5
KLMR LR LR 05 01 11.9
KLMR AMP 05 06 29.5
comp=Z,4µm,13.4s
PNL Peninsula 67.27 33 P P 04 32 37.9 +0.6
baz=285,SNR=6.3
UMZA Um Al Zommool 67.39 285 P P 04 32 38.9 +0.3
UMZA P P 04 32 38.9 +0.3
LVZ Lovozero 67.40 336 IAMs_20 IAMs_20 05 06 44.8
comp=Z,2µm,21.0s
YUK6 Outpost Mounta 67.44 32 P P 04 32 39.7 +1.0
baz=285,SNR=15
HOPEN Hopen 67.47 346 eP P 04 32 39.0 +0.8
INK Inuvik 67.47 24 LR LR 05 05 14.7
comp=Z,306nm,18.4s,baz=267,slow=39
INK Inuvik 67.47 24 P P 04 32 38.5 +0.2
INK Inuvik 67.47 24 P P 04 32 38.5 +0.2
INK pmax pmax
comp=Z,35nm,1.1s
INK Inuvik 67.47 24 P P 04 32 38.6 +0.2
baz=286,SNR=31
INK S S 04 41 35.2 +1.8
baz=286
POHA Pohakuloa 67.60 79 P P 04 32 41.0 +0.7
POHA Pohakuloa 67.60 79 P P 04 32 42.7 +2.4
KHU Kahuku 67.72 79 P P 04 32 40.0 -1.1
KHU Kahuku 67.72 79 P P 04 32 40.0 -1.1
KHU pmax pmax
comp=Z,243nm,1.1s
M30M Minto, Yukon 67.73 30 P P 04 32 41.2 +1.0
baz=286,SNR=18
M30M S S 04 41 36.6 -0.3
baz=286
HYT Haines Junctio 67.88 32 IAmb IAmb 04 32 46.1
comp=Z,66nm,1.2s
HYT Haines Junctio 67.88 32 P P 04 32 42.5 +1.3
baz=286,SNR=39
N30M Aishikik Lake 67.90 31 P P 04 32 42.2 +0.9
baz=286,SNR=19
APA Apatity 67.95 336 ⇓iP P 04 32 39.9 -1.5
APA i 04 35 07.0
APA iS S 04 41 30.0 -9.2
APA i 04 42 22.0
APA iSS SS 04 46 02.0 +1.5
APA pmax pmax
comp=Z,42nm,0.9s
GROC Groznyy 68.28 308 eP P 04 32 43.8 -0.1
GROC e 04 33 07.8
GROC eS S 04 41 47.2 +3.3
GROC pmax pmax
comp=Z,188nm,1.6s
SPA0 Spitsbergen Ar 68.49 348 eP P 04 32 45.1 +0.5
SPITS Spitsbergen Ar 68.49 348 P P 04 32 45.1 +0.5
SPITS pmax pmax
comp=Z,2.0nm,0.7s
N31M Braeburn, Yuko 68.50 31 IAmb IAmb 04 32 49.9
comp=Z,83nm,1.2s
N31M Braeburn, Yuko 68.50 31 P P 04 32 46.0 +1.0
baz=288,SNR=20
O30N Mendenhall 68.56 32 P P 04 32 46.0 +0.6
baz=287,SNR=17
DDFL Dedoflistskaro 68.57 307 P P 04 32 49.2 +3.4
VRH Novokhopyorsk 68.62 318 eP P 04 32 45.4 -0.5
VRH pmax pmax
comp=Z,40nm,1.4s
VRH MLR MLR
comp=Z,3µm,20.0s
PLBC Pleasant Camp 68.82 33 P P 04 32 47.6 +0.6
baz=287,SNR=14
KBS Kingsbay 68.86 349 P P 04 32 47.3 +0.3
KBS IAmb IAmb 04 32 51.1
comp=Z,69nm,1.4s
KBS Kingsbay 68.86 349 ceP P 04 32 47.5 +0.6
KBS pmax pmax
comp=Z,62nm,1.7s
KBS Kingsbay 68.86 349 iP P 04 32 46.4 -0.5
KBS Kingsbay 68.86 349 eP P 04 32 47.5 +0.6
M31M Drury Creek, Y 68.91 30 P P 04 32 48.0 +0.5
baz=288,SNR=20
A36M Sachs Harbour 68.93 19 P P 04 32 47.3 -0.1
baz=292
WHY Whitehorse 69.16 32 P P 04 32 49.8 +0.6
baz=288,SNR=24
WHY S S 04 41 56.8 +2.7
baz=288
HSPB Hornsund (broa 69.22 347 iP P 04 32 50.1 +0.9
HSPB eL L 05 02 25.7
comp=Z,1µm,28.1s
HSPB Hornsund (broa 69.22 347 eP P 04 32 50.0 +0.9
SKAG Skagway 69.32 33 IAmb IAmb 04 32 55.6
comp=Z,90nm,1.4s
SKAG Skagway 69.32 33 P P 04 32 50.7 +0.7
baz=288,SNR=11
AFI Afiamalu 69.36 118 LR LR 04 59 25.8
comp=Z,271nm,18.2s,baz=303,slow=33
FARO Faro, Yukon 69.37 30 P P 04 32 51.0 +0.6
baz=289,SNR=60
FARO S S 04 41 57.6 +1.3
baz=289
KEV Kevo 69.43 339 P P 04 32 50.8 +0.3
KEV Kevo 69.43 339 P P 04 32 50.8 +0.3
KEV pmax pmax
comp=Z,47nm,1.2s
KEV MLR MLR
comp=Z,2µm,20.0s
GLAD Gladstone 69.58 166 P P 04 32 53.5 +1.8
GOF Gofitskoye 69.61 311 ⇑eP P 04 32 52.9 +0.8
GOF eS S 04 42 01.6 +2.0
GOF pmax pmax
comp=Z,80nm,0.9s
MOS Moscow 69.61 323 eP P 04 32 49.5 -2.4
MOS eS S 04 41 58.3 -0.9
MOS e 04 42 48.2
MOS pmax pmax
comp=Z,72nm,1.1s
MOS pmax pmax
comp=Z,300nm,2.4s
MOS smax smax
comp=E,900nm,6.5s
MOS smax smax
comp=E,500nm,3.8s
MOS MLR MLR
comp=E,3µm,20.0s
MOS MLR MLR
comp=Z,4µm,20.0s
MOS MLR MLR
comp=N,2µm,23.0s
BJO1 Bjornoya 69.68 345 eP P 04 32 53.9 +1.9
ZEI Tsey 69.73 308 eP P 04 32 52.2 -1.0
ZEI pmax pmax
comp=Z,68nm,1.0s
DOK Doka 69.80 281 P P 04 32 56.5 +2.8
DOK P P 04 32 56.5 +2.8
LPSR Galich'ya Gora 69.86 319 eP P 04 32 52.9 -0.6
LPSR pmax pmax
comp=Z,40nm,1.0s
LPSR MLR MLR
comp=Z,5µm,18.0s
GNI Garni 69.96 306 P P 04 32 55.1 +0.5
comp=Z,14nm,0.8s,baz=214,slow=2.2,SNR=26
GNI LR LR 05 08 03.9
comp=Z,1µm,18.9s,baz=78,slow=40
comp=Z,14nm,0.8s
GNI Garni 69.96 306 P P 04 32 55.1 +0.5
GNI Garni 69.96 306 diP P 04 32 55.7 +1.1
GNI pmax pmax
comp=Z,53nm,1.6s
GNI MLR MLR
comp=Z,2µm,19.0s
GNI Garni 69.96 306 P P 04 32 57.9 +3.3
GNI P P 04 32 57.9 +3.3
VORR Voronezh 69.98 318 eP P 04 32 55.1 +0.8
VORR pmax pmax
comp=Z,80nm,0.4s
ARA0 ARCESS Array S 70.00 339 eP P 04 32 54.7 +0.6
ARCES ARCESS Array B 70.00 339 P P 04 32 54.0 -0.1
comp=Z,28nm,1.1s,baz=67,slow=6.7,SNR=26
ARCES LR LR 05 08 02.0
comp=Z,2µm,19.8s,baz=46,slow=40
comp=Z,28nm,1.1s
ARCES ARCESS Array B 70.00 339 IAmb IAmb 04 32 58.1
comp=Z,71nm,1.2s
P32M Atlin 70.06 33 P P 04 32 55.5 +0.8
baz=289
SIT Sitka 70.08 35 IAmb IAmb 04 33 02.9
comp=Z,92nm,1.4s
SIT Sitka 70.08 35 P P 04 32 55.6 +0.8
baz=289
ONI Oni 70.10 308 IAmb IAmb 04 33 03.1
comp=Z,64nm,1.0s
ONI Oni 70.10 308 P P 04 32 56.5 +1.2
HAMF Hammerfest 70.11 340 eP P 04 32 54.4 -0.4
KBZ Khabaz 70.12 310 P P 04 32 55.9 +0.6
comp=Z,58nm,0.9s,baz=99,slow=4.2,SNR=47
KBZ LR LR 05 06 25.5
comp=Z,3µm,20.6s,baz=70,slow=38
comp=Z,58nm,0.9s
KBZ Khabaz 70.12 310 deP P 04 32 55.7 +0.4
KBZ pmax pmax
comp=Z,72nm,1.0s
KBZ MLR MLR
comp=Z,3µm,19.0s
VSR Storozhevoye 70.15 318 eP P 04 32 55.5 +0.2
VSR pmax pmax
comp=Z,50nm,1.1s
VSR MLR MLR
comp=Z,5µm,19.0s
MMPY Sheldon Lake, 70.16 29 P P 04 32 56.1 +0.9
baz=290,SNR=19
RBK Rabkut 70.16 280 P P 04 32 58.7 +2.7
RBK P P 04 32 58.7 +2.7
JIS Juneau Island 70.16 34 IAmb IAmb 04 33 03.4
comp=Z,53nm,1.1s
SAKB Bahrain 70.17 290 P P 04 32 56.3 +0.3
KVAR Kislovodsk Arr 70.19 310 P P 04 32 56.7 +0.8
comp=Z,24nm,1.1s,baz=253,slow=19,SNR=8.5
KVAR LR LR 05 06 17.5
comp=Z,2µm,19.6s,baz=282,slow=38
comp=Z,24nm,1.1s
KIV Kislovodsk 70.20 310 ⇓P P 04 32 59.0 +3.1
KIV Kislovodsk 70.20 310 P P 04 32 56.3 +0.4
KIV Kislovodsk 70.20 310 eP P 04 32 56.2 +0.3
KIV e 04 35 31.4
KIV eS S 04 42 07.8 +1.0
KIV pmax pmax
comp=Z,120nm,4.3s
KIV pmax pmax
comp=Z,139nm,1.1s
KIV MLR MLR
comp=Z,2µm,18.0s
KIV Kislovodsk 70.20 310 P P 04 32 57.9 +2.0
KIV P P 04 32 57.9 +2.0
P33M Teslin, Yukon 70.28 32 P P 04 32 56.8 +0.7
baz=290,SNR=26
P33M S S 04 42 10.2 +3.1
baz=290
C36M Paulatuk 70.34 21 P P 04 32 56.4 +0.3
baz=294,SNR=40
C36M S S 04 42 08.5 +1.2
baz=294
NOR Nord 70.36 355 iP P 04 32 56.5 +0.3
NOR IAmb IAmb 04 33 02.4
comp=Z,34nm,0.9s
WHFO Wadi Hawf 70.38 281 P P 04 32 57.7 +0.3
WHFO P P 04 32 57.7 +0.3
OBN Obninsk 70.38 323 P P 04 32 57.2 +0.5
comp=Z,3.1nm,0.5s,baz=137,slow=1.3,SNR=14
OBN LR LR 05 06 11.8
comp=Z,1µm,20.5s,baz=67,slow=38
OBN Obninsk 70.38 323 P P 04 32 56.1 -0.5
OBN Obninsk 70.38 323 ciP P 04 32 57.0 +0.4
OBN i *PP pP 04 32 59.2 -1.4
OBN e*SP sP 04 33 02.1 -0.1
OBN 04 33 18.0
OBN 04 35 34.0
OBN PPP PPP 04 37 17.0
OBN i S S 04 42 11.6 +3.4
OBN e 04 42 50.6
OBN pmax pmax
comp=Z,58nm,1.3s
OBN MLR MLR
comp=Z,3µm,15.0s
BGD Bogdanovka 70.43 307 P P 04 32 56.6 -0.9
AKH Akhalkalaki 70.45 307 ⇓P P 04 32 59.3 +1.7
AKH Akhalkalaki 70.45 307 P P 04 32 59.2 +1.6
ALE Alert 70.56 2 IAMs_20 IAMs_20 05 07 32.3
comp=Z,776nm,19.0s
KTK1 Kautokeino 70.95 339 eP P 04 33 00.5 +0.6
KARS Kars 71.01 306 P P 04 33 02.7 +1.7
ABTO Aybut 71.02 280 P P 04 33 02.3 +1.0
ABTO P P 04 33 02.3 +1.0
CHVG Ch'k'valeri 71.02 309 ⇑P P 04 33 05.2 +4.4
CHVG Ch'k'valeri 71.02 309 ⇑P P 04 33 05.2 +4.4
VALR Valaam 71.04 330 ceP P 04 33 00.8 +0.2
VALR pmax pmax
comp=Z,70nm,1.1s
VALR MLR MLR
comp=Z,2µm,14.0s
JETT Jettan, Norway 71.60 340 eP P 04 33 04.7 +0.8
CRAG Craig 71.78 37 P P 04 33 05.1 0.0
baz=291
GEVA Gevas 71.81 304 IAmb IAmb 04 33 10.2
comp=Z,73nm,1.2s
WRAK Wrangell Islan 71.84 35 P P 04 33 04.6 -0.8
baz=292
TGTN Hyland Airport 71.87 30 P P 04 33 05.9 +0.3
baz=293
TRO Tromso 72.02 340 eP P 04 33 06.6 +0.2
DLBC Dease Lake 72.25 33 P P 04 33 09.3 +1.3
baz=293,SNR=10
SOC Sochi 72.35 310 eP P 04 33 08.6 -0.2
SOC e 04 35 44.8
SOC ePPP PPP 04 37 29.2
SOC eS S 04 42 33.3 +1.8
SOC e 04 42 57.2
SOC eSSS SSS 04 50 22.9
SOC pmax pmax
comp=Z,88nm,1.1s
SOC MLR MLR
comp=Z,2µm,19.0s
T35M Bob Quinn 72.70 34 P P 04 33 10.7 0.0
baz=293
DIB Dawson Inlet, 72.97 39 IAmb IAmb 04 33 19.1
comp=Z,77nm,1.1s
KOPT Kop Dagi 73.07 307 IAmb IAmb 04 33 31.3
comp=Z,69nm,1.1s
FIA1 FINESS Array S 73.13 331 P P 04 33 12.5 -0.6
FIA1 IAmb IAmb 04 33 17.1
comp=Z,118nm,1.3s
FINES FINESS Array B 73.13 331 P P 04 33 12.9 -0.2
comp=Z,35nm,1.0s,baz=76,slow=8.0,SNR=39
FINES LR LR 05 09 49.2
comp=Z,3µm,18.6s,baz=64,slow=40
comp=Z,35nm,1.0s
FINES FINESS Array B 73.13 331 P P 04 33 12.8 -0.2
WRGLY Wrigley 73.19 27 P P 04 33 13.6 +0.2
baz=297
KTUT Trabzon 73.24 308 ⇓P P 04 33 14.4 +0.3
XMAS Kiritimati 73.27 96 P P 04 33 15.7 +1.0
XMAS Kiritimati 73.27 96 P P 04 33 16.3 +1.6
ANN Anapa 73.45 312 eP P 04 33 14.9 -0.3
ANN eS S 04 42 41.8 -2.1
ANN pmax pmax
comp=Z,193nm,1.5s
ANN MLR MLR
comp=N,4µm,23.0s
ANN MLR MLR
comp=Z,4µm,24.0s
ANN MLR MLR
comp=E,2µm,21.0s
MARD Mardin 73.85 304 IAmb IAmb 04 33 22.1
comp=Z,134nm,1.4s
STEI Steigen 74.05 339 eP P 04 33 18.3 -0.1
VSU Vasula 74.12 328 ciP P 04 33 19.7 +0.8
VSU pmax pmax
comp=Z,253nm,1.2s
VSU MLR MLR
comp=Z,5µm,15.0s
VSU Vasula 74.12 328 eP P 04 33 19.6 +0.7
FAUS Fauske 74.34 339 eP P 04 33 20.1 0.0
MEF Metsahovi 74.41 330 eP P 04 33 21.2 +0.6
RES Resolute Bay 74.47 11 LR LR 05 08 35.2
comp=Z,289nm,19.5s,baz=305,slow=38
LOF Lofoten 74.47 340 eP P 04 33 21.5 +0.7
RAO Raoul Island 74.74 135 LR LR 05 01 26.8
comp=Z,1µm,18.5s,baz=176,slow=32
DAG Danmarks Havn 74.76 353 P P 04 33 22.7 +0.3
DAG Danmarks Havn 74.76 353 iP P 04 33 21.0 -1.4
DAG IAmb IAmb 04 33 25.2
comp=Z,49nm,1.2s
RAF Rauma 75.18 331 eP P 04 33 25.9 +0.9
MNK Minsk 75.26 324 iP P 04 33 26.2 +0.6
MNK i 04 33 39.5
MNK i 04 36 14.1
MNK iPPP PPP 04 37 59.9
MNK iS S 04 43 03.6 -0.2
MNK iSS SS 04 47 53.7 +0.8
MNK iSSS SSS 04 51 16.1
MNK pmax pmax
comp=Z,49nm,0.9s
MNK pmax pmax
comp=E,26nm,1.6s
MNK MLR MLR
comp=E,607nm,25.0s
MNK MLR MLR
comp=Z,9µm,25.0s
MNK Minsk 75.26 324 iP P 04 33 26.2 +0.6
comp=E,26nm,1.6s,baz=245
MNK iP P 04 33 26.2 +0.6
MNK iP P 04 33 26.2 +0.6
comp=Z,49nm,0.9s
MNK iPcP PcP 04 33 39.5 +0.5
MNK iPP PP 04 36 14.2 +0.4
MNK iPPP PPP 04 37 60.0
MNK iS S 04 43 03.7 -0.2
MNK iSS SS 04 47 53.7 +0.8
MNK iSSS SSS 04 51 16.1
MNK iLQ LQ 05 01 29.2
MNK iLR LR 05 04 28.3
MNK iLRM MLR 05 08 46.1
MNK comp=E,607nm,24.8s
MNK iLRM MLR 05 08 47.9
comp=Z,9µm,24.9s
MOR8 Moi Rana 75.29 338 eP P 04 33 24.0 -1.6
RAYN Ar Rayn 75.33 289 P P 04 33 26.4 -0.3
RAYN IAmb IAmb 04 33 30.7
comp=Z,101nm,1.1s
RAYN Ar Rayn 75.33 289 ⇓P P 04 33 26.8 +0.1
RAYN Ar Rayn 75.33 289 P P 04 33 27.3 +0.6
MTSE Matsula 75.37 329 eP P 04 33 27.0 +0.9
IDID Didziasalis 75.50 325 eP P 04 33 28.0 +1.0
KONS Konsvik 75.54 338 eP P 04 33 28.1 +1.1
SIM Simferopol' 75.57 313 eP P 04 33 27.5 -0.1
SIM e 04 36 23.0
SIM S SKSac 04 43 27.0 -10
SIM pmax pmax
comp=Z,96nm,1.0s
NACGM Naroch 75.66 325 eP P 04 33 29.4 +1.4
STOK Stokkvaagen 75.67 338 eP P 04 33 28.9 +1.1
ISAL Salakas 75.69 325 eP P 04 33 29.3 +1.2
IIGN Ignalina 75.75 325 eP P 04 33 29.4 +1.0
TOKA Tokat 75.81 308 IAmb IAmb 04 33 33.3
comp=Z,83nm,1.2s
KVT Kavak 75.81 309 P P 04 33 30.6 +1.5
TULEG Thule 76.06 5 IAMs_20 IAMs_20 05 10 45.5
comp=Z,730nm,19.0s
DIKM Dikmen 76.13 310 ⇓P P 04 33 31.9 +1.1
AKASG Malin Array Be 76.17 320 P P 04 33 30.1 -0.8
comp=Z,30nm,1.1s,baz=48,slow=6.0,SNR=76
AKASG LR LR 05 09 58.1
comp=Z,6µm,18.2s,baz=67,slow=38
comp=Z,30nm,1.1s
AKBB Malin Array Si 76.17 320 deP P 04 33 30.6 -0.3
AAL Aland 76.36 331 eP P 04 33 32.3 +0.5
SLIT Siitere, Latvi 76.60 328 eP P 04 33 34.1 +0.9
VSVD Vaisvydziai 76.61 326 eP P 04 33 33.5 +0.3
PABE Paberze 76.81 326 eP P 04 33 35.3 +0.8
BZK Bozkurt 76.86 310 ⇑P P 04 33 33.1 -1.9
YKA Yellowknife Ar 77.07 26 P P 04 33 35.0 -0.8
comp=Z,28nm,1.1s,baz=302,slow=5.3,SNR=25
YKA LR LR 05 10 17.5
comp=Z,258nm,19.6s,baz=304,slow=38
comp=Z,28nm,1.1s
YKA Yellowknife Ar 77.07 26 iP P 04 33 36.7 +0.9
YKA pmax pmax
comp=Z,24nm,1.0s
NSS Namsos 77.08 337 eP P 04 33 35.0 -0.8
DBG Daneborg 77.14 352 iP P 04 33 36.1 +0.2
DBG IAmb IAmb 04 33 39.6
comp=Z,70nm,1.2s
PBUR Paburge 77.57 327 eP P 04 33 39.6 +0.9
PURM Purcari 77.60 316 ⇑P P 04 33 38.3 -0.8
SORM Soroca 77.81 318 ⇑P P 04 33 40.6 +0.4
SORM Soroca 77.81 318 ⇑P P 04 33 40.6 +0.4
SUW Suwalki 77.93 325 iP P 04 33 41.7 +0.9
SUW eS S 04 43 34.8 +1.6
SUW eL L 05 11 51.0
comp=Z,4µm,18.3s
SUW Suwalki 77.93 325 eP P 04 33 41.3 +0.6
BR131 Keskin Array S 78.04 308 diP P 04 33 41.5 -0.4
BR131 Keskin Array S 78.04 308 P P 04 33 42.7 +0.9
SNR=69
BR131 P P 04 33 42.7 +0.9
SNR=69
BRTR Keskin Array B 78.04 308 P P 04 33 42.1 +0.2
comp=Z,29nm,0.9s,baz=96,slow=4.7,SNR=106
BRTR LR LR 05 13 22.8
comp=Z,2µm,21.4s,baz=47,slow=40
comp=Z,29nm,0.9s
BRTR Keskin Array B 78.04 308 iP P 04 33 42.0 +0.2
BRTR pmax pmax
comp=Z,30nm,0.9s
KIS Kishinev 78.04 317 eP P 04 33 40.0 -1.5
comp=Z,210nm,6.9s
KIS Kishinev 78.04 317 eP P 04 33 40.0 -1.5
KIS ePPP PPP 04 38 29.0
KIS eS S 04 43 27.0 -7.6
KIS ePS PnS 04 44 00.0 -16
KIS pmax pmax
comp=Z,210nm,6.9s
MILM Milestii Mici 78.08 317 eP P 04 33 40.0 -1.7
comp=Z,400nm,5.1s
MILM Milestii Mici 78.08 317 ePcP PcP 04 34 02.0 +11
MILM Milestii Mici 78.08 317 ⇓P P 04 33 38.8 -3.0
MILM Milestii Mici 78.08 317 eP P 04 33 40.0 -1.7
MILM ePPP PPP 04 38 29.0
MILM eS S 04 43 29.0 -6.0
MILM e 04 43 50.0
MILM ePS PnS 04 44 02.0 -14
MILM pmax pmax
comp=Z,400nm,5.1s
MILM MLR MLR
comp=Z,2µm,15.5s
JMIC Jan Mayen 78.11 347 LR LR 05 10 45.8
comp=Z,451nm,19.1s,baz=53,slow=38

JMIC Jan Mayen 78.11 347 *e*P **P** **04 33 42.6 +1.1**
URZ Urewera 78.30 144 P **P** **04 33 42.2 -0.7**
URZ IAmb IAmb 04 33 47.3
comp=Z,132nm,1.5s
TBLU Trondheim 78.46 336 *e*P **P** **04 33 43.0 -0.5**
ANTO Ankara 78.57 309 P **P** **04 33 44.8 +0.1**
ANTO IAmb IAmb 04 33 49.2
comp=Z,186nm,1.6s
ANTO Ankara 78.57 309 P **P** **04 33 44.8 +0.1**
ANTO pmax pmax
comp=Z,186nm,1.7s
ANTO MLR MLR
comp=Z,2µm,22.0s
IAS Iasi 78.72 317 ⇑P **P** **04 33 44.9 -0.3**
IAS Iasi 78.72 317 ⇑P **P** **04 33 44.9 -0.3**
OZB Mount Ozzard 78.76 41 IAmb IAmb 04 33 50.7
comp=Z,80nm,1.2s
ASF Jabal al Asfar 78.81 300 P **P** **04 33 46.4 +0.2**
comp=Z,25nm,1.1s,baz=57,slow=0.9,SNR=25
ASF LR LR 05 15 12.5
comp=Z,677nm,18.2s,baz=85,slow=41
comp=Z,25nm,1.1s
VASR Vaslui 78.83 317 ⇑P **P** **04 33 48.8 +2.8**
TLCR 78.86 315 ⇑P **P** **04 33 46.7 +0.6**
TLCR 78.86 315 ⇑P **P** **04 33 46.7 +0.6**
JURR Jurilovca 79.01 315 ⇓P **P** **04 33 47.4 +0.5**
VLDR Vladesti 79.02 316 ⇑P **P** **04 33 48.2 +1.3**
HFS Hagfors 79.02 333 LR LR 05 13 30.3
comp=Z,2µm,18.1s,baz=41,slow=39
BIR Birlad 79.11 316 ⇑P **P** **04 33 48.6 +1.2**
BIR Birlad 79.11 316 ⇑P **P** **04 33 48.6 +1.2**
KLNR Kaliningrad 79.14 326 *de*P **P** **04 33 48.7 +1.3**
KLNR pmax pmax
comp=Z,191nm,1.5s
KLNR MLR MLR
comp=Z,4µm,16.0s
SCTR Scanteiesti 79.15 316 ⇓P **P** **04 33 48.2 +0.5**
TATR Tataraca 79.15 316 ⇓P **P** **04 33 48.8 +1.1**
TPGR Topolog 79.26 315 ⇑P **P** **04 33 48.8 +0.4**
NC303 NORSAR Array S 79.29 334 IAmb IAmb 04 33 51.8
comp=Z,108nm,1.2s
CFR Carcaliu 79.29 315 ⇑P **P** **04 33 48.1 -0.3**
CFR Carcaliu 79.29 315 ⇑P **P** **04 33 48.1 -0.3**
GHRR 79.34 316 ⇓P **P** **04 33 49.8 +1.1**
IZVR Izvoarele 79.35 316 ⇑P **P** **04 33 49.4 +0.7**
NB2 NORSAR Subarra 79.46 334 P **P** **04 33 45.4 -3.7**
NB2 pmax pmax
comp=Z,52nm,1.4s
NB2 NORSAR Subarra 79.46 334 P **P** **04 33 48.1 -1.1**
baz=51,slow=5.9
NB2 NORSAR Subarra 79.46 334 P **P** **04 33 48.1 -1.1**
comp=Z,99nm,1.2s,baz=51,slow=5.9
NOA NORSAR Array B 79.46 334 P **P** **04 33 48.0 -1.1**
comp=Z,48nm,1.1s,baz=50,slow=5.4,SNR=110
NOA LR LR 05 13 25.9
comp=Z,2µm,18.5s,baz=55,slow=39
comp=Z,48nm,1.1s
EFOR EFORIE 79.48 314 ⇑P **P** **04 33 51.7 +2.2**
NC602 NORSAR Array S 79.52 334 IAmb IAmb 04 33 52.0
comp=Z,130nm,1.4s
NC602 NORSAR Array S 79.52 334 *e*P **P** **04 33 48.6 -0.8**
NORES NORESS Array B 79.52 334 P **P** **04 33 51.8 +2.4**
NORES pmax pmax
comp=Z,9.0nm,1.1s
LVV L'vov 79.53 321 *e*P **P** **04 33 49.0 -0.7**
LVV *e* 04 36 47.7
LVV *e*PPP PPP 04 38 37.2
LVV *e*S **S** **04 43 47.1 -3.4**
LVV *e*PS **PnS** **04 44 28.2 -6.4**
LVV *e*SSS SSS 04 52 20.9
LVV pmax pmax
comp=Z,100nm,1.4s
LVV MLR MLR
comp=N,2µm,18.0s
LVV MLR MLR
comp=E,3µm,18.0s
LVV MLR MLR
comp=Z,4µm,18.0s
MFTR Murfatlar 79.57 314 ⇑P **P** **04 33 51.1 +1.2**
PANC Panciu 79.58 316 ⇑P **P** **04 33 51.3 +1.3**
TESR Tescani 79.59 317 ⇑P **P** **04 33 50.2 +0.2**
MMAI Mount Meron Ar 79.60 302 P **P** **04 33 50.0 -0.4**
comp=Z,1.1nm,0.4s,baz=297,slow=40,SNR=1.4
MMAI LR LR 05 16 08.9
comp=Z,778nm,19.0s,baz=236,slow=41
MMAI Mount Meron Ar 79.60 302 P **P** **04 33 50.0 -0.4**
NBO00 NORSAR Array S 79.64 334 IAmb IAmb 04 33 53.1
comp=Z,109nm,1.1s
TLBR Topalu 79.64 315 ⇓P **P** **04 33 51.3 +1.0**
HARR Harsova 79.65 315 ⇑P **P** **04 33 51.1 +0.8**
HARR Harsova 79.65 315 P **P** **04 33 51.3 +0.9**
DOMB Dombas 79.65 336 *e*P **P** **04 33 50.4 +0.3**
ODBI Odobesti 79.69 316 ⇑P **P** **04 33 51.9 +1.3**
NAO01 NORSAR Array S 79.71 334 P **P** **04 33 49.0 -1.4**
NAO01 IAmb IAmb 04 33 53.9
comp=Z,152nm,1.4s
BIZ Bicaz 79.72 318 ⇓P **P** **04 33 51.7 +0.9**
VRI Vrincioaia 79.85 316 ⇑P **P** **04 33 52.1 +0.6**
VRI Vrincioaia 79.85 316 ⇑P **P** **04 33 52.1 +0.6**
MOL Molde 79.85 337 *e*P **P** **04 33 51.8 +0.6**
PLOR Plostina 79.90 316 ⇓P **P** **04 33 53.3 +1.5**
PLOR Plostina 79.90 316 ⇓P **P** **04 33 53.3 +1.5**
BURAR Bucovina Array 79.92 318 ⇓P **P** **04 33 52.3 +0.3**
BURAR Bucovina Array 79.92 318 ⇓P **P** **04 33 52.3 +0.3**
GRER 79.92 316 ⇑P **P** **04 33 54.2 +2.3**
PSN Preselentsi 79.95 314 *i* P **P** **04 33 52.9 +0.8**
ICOR Ion Corvin 80.00 314 ⇑P **P** **04 33 53.5 +1.2**
BISRR Bisoca 80.01 316 ⇓P **P** **04 33 54.0 +1.6**
AMRR Amara 80.06 315 ⇑P **P** **04 33 51.5 -1.1**
AMRR Amara 80.06 315 ⇑P **P** **04 33 51.5 -1.1**
COVR Voineasa-Covas 80.18 317 ⇓P **P** **04 33 53.8 +0.5**
BORA Eskisehir 80.18 310 IAmb IAmb 04 33 59.9
comp=Z,75nm,0.9s
GHAJ Ghor Haditha 80.21 300 IAMs_20 IAMs_20 05 15 44.4
comp=Z,942nm,18.0s
BEL Belsk 80.29 324 *i* P **P** **04 33 55.3 +1.6**
BEL *e*S **S** **04 43 57.7 -0.5**
BEL *e*L L 05 12 22.9
comp=Z,4µm,18.3s
CSS Mathiatis 80.31 304 IAmb IAmb 04 34 05.5
comp=Z,67nm,1.0s
ISR Istrita 80.31 316 ⇓P **P** **04 33 55.7 +1.6**
ISR Istrita 80.31 316 ⇓P **P** **04 33 55.7 +1.6**
NEHR Nehoiu 80.32 316 ⇓P **P** **04 33 55.9 +1.8**
OSL Oslo 80.33 334 *e*P **P** **04 33 53.8 0.0**
UPNV Upernavik 80.42 2 *i* P **P** **04 33 51.3 -2.7**
UPNV IAmb IAmb 04 33 57.6
comp=Z,49nm,1.3s
SUMG Summit 80.42 357 IAmb IAmb 04 34 01.4
comp=Z,102nm,1.0s
SUMG IAMs_20 IAMs_20 05 13 55.8
comp=Z,770nm,18.0s
SUMG Summit 80.42 357 *i* P **P** **04 33 55.9 +1.4**
SUMG IAmb IAmb 04 34 01.1
comp=Z,120nm,1.1s
LEHL Lehliu 80.45 315 ⇓P **P** **04 33 56.2 +1.5**
NLWA Neilton Lookou 80.47 42 IAmb IAmb 04 34 00.7
comp=Z,84nm,1.3s
MLR Muntele Rosu 80.51 316 ⇑P **P** **04 33 56.7 +1.5**
MLR Muntele Rosu 80.51 316 P **P** **04 33 56.3 +1.1**
comp=Z,30nm,1.0s,baz=37,slow=2.2,SNR=26
MLR LR LR 05 12 48.4
comp=Z,2µm,19.0s,baz=56,slow=38
comp=Z,30nm,1.0s
MLR Muntele Rosu 80.51 316 IAmb IAmb 04 34 19.2
comp=Z,152nm,1.7s
MLR Muntele Rosu 80.51 316 ⇑P **P** **04 33 56.7 +1.5**
ISK Istanbul-Kandi 80.59 311 P **P** **04 33 55.7 +0.2**
DOPR Dopca 80.62 317 ⇑P **P** **04 33 56.5 +0.8**
SECR 80.65 316 ⇑P **P** **04 33 57.4 +1.6**
WISH Wishkah 80.66 42 IAmb IAmb 04 34 01.3
comp=Z,96nm,1.2s
PRD Provadia 80.68 314 *i* P **P** **04 33 57.8 +1.8**
ARCR ARCALIA 80.69 318 ⇑P **P** **04 33 57.9 +1.9**
SULR 80.71 315 ⇑P **P** **04 33 57.7 +1.6**
SKAR Skarslia 80.80 335 *e*P **P** **04 33 57.1 +0.7**
SCO Scoresbysund 80.83 351 IAmb IAmb 04 34 01.1
comp=Z,156nm,1.4s
SCO IAMs_20 IAMs_20 05 13 15.4
comp=Z,646nm,20.0s
SCO Scoresbysund 80.83 351 *i* P **P** **04 33 56.4 +0.2**
SCO IAmb IAmb 04 34 00.8
comp=Z,154nm,1.4s
D03D Eldon 80.86 41 P **P** **04 33 58.4 +1.5**
baz=300,SNR=50
BMR Baia Mare 80.91 319 ⇑P **P** **04 33 58.6 +1.5**
BMR Baia Mare 80.91 319 P **P** **04 33 58.0 +0.9**
KONO Kongsberg 80.96 334 P **P** **04 33 55.9 -1.2**
KONO Kongsberg 80.96 334 *ce*P **P** **04 33 57.9 +0.8**
KONO pmax pmax
comp=Z,29nm,1.3s
KONO Kongsberg 80.96 334 *e*P **P** **04 33 57.4 +0.3**
KOLS Kolonicke sedl 80.97 321 *e*P **P** **04 33 58.3 +0.8**
KOLS pmax pmax
comp=Z,24nm,1.0s
KOLS Kolonicke sedl 80.97 321 *e*P **P** **04 33 58.3 +0.8**
E03A Lebam 81.07 42 IAmb IAmb 04 34 03.5
comp=Z,113nm,1.2s
RAZG Razgrad 81.08 314 ⇓P **P** **04 33 58.5 +0.4**
VOIR 81.08 317 ⇑P **P** **04 33 59.2 +0.9**
VOIR 81.08 317 ⇑P **P** **04 33 59.2 +0.9**
DEL Delary 81.10 330 *e*P **P** **04 33 58.7 +0.8**
MTUR Matau 81.18 316 ⇑P P 04 34 07.9 +9.1
HYA Hoyanger 81.27 336 *e*P **P** **04 33 59.3 +0.5**
CJR Cluj-Napoca 81.33 318 ⇑P **P** **04 34 00.9 +1.5**
CJR Cluj-Napoca 81.33 318 ⇑P **P** **04 34 00.9 +1.5**
GKP Gorka Klasztor 81.34 326 *e*P **P** **04 34 00.9 +1.6**
GKP Gorka Klasztor 81.34 326 *e*P **P** **04 33 60.0 +0.7**
FOO Fioro 81.38 337 *e*P **P** **04 33 59.3 -0.1**
EIL Elat 81.39 299 P **P** **04 34 00.1 0.0**
comp=Z,9.0nm,0.7s,baz=33,slow=2.9,SNR=11
EIL LR LR 05 15 04.0
comp=Z,779nm,20.2s,baz=78,slow=39
comp=Z,9.0nm,0.7s
BSD Bornholm Skovb 81.41 328 *e*P **P** **04 34 00.5 +0.9**
BSD Bornholm Skovb 81.41 328 *i* P **P** **04 33 59.7 0.0**
BSD IAmb IAmb 04 34 04.8
comp=Z,74nm,0.8s
CRVS Cervenica-Dubn 81.45 321 *e*P **P** **04 34 01.3 +1.2**
CRVS pmax pmax
comp=Z,123nm,1.2s
CRVS Cervenica-Dubn 81.45 321 *e*P **P** **04 34 01.2 +1.2**
MESR Meseseni 81.49 319 ⇑P **P** **04 33 57.2 -3.0**
SZH Strazhica 81.59 314 *i* P **P** **04 34 00.9 0.0**
COPA Copaceanca 81.62 315 ⇓P **P** **04 33 59.9 -1.0**
D05A Enumclaw 81.68 41 IAmb IAmb 04 34 07.0
comp=Z,71nm,1.2s
EDRB Edirne 81.75 313 P **P** **04 34 03.1 +1.4**
DRGR 81.81 319 ⇑P **P** **04 34 02.7 +0.6**
DRGR 81.81 319 ⇑P **P** **04 34 02.7 +0.6**
NIE Niedzica 81.82 322 *i* P **P** **04 34 03.9 +1.9**
NIE *e*S **S** **04 44 17.3 +2.8**
NIE *e*L L 05 14 00.1
comp=Z,2µm,17.1s
NIE Niedzica 81.82 322 P **P** **04 34 03.6 +1.6**
SUE Sulen 81.85 336 *e*P **P** **04 34 01.5 -0.3**
LOT Lotru 81.86 317 ⇑P **P** **04 34 02.6 +0.2**
ODD1 Odda 81.94 335 *e*P **P** **04 34 03.0 +0.6**
KULA Kula-Manisa 82.04 309 P **P** **04 34 04.2 +0.8**
BALB Balikesir 82.05 310 IAmb IAmb 04 34 09.6
comp=Z,80nm,0.9s
F04A Amboy 82.06 42 IAmb IAmb 04 34 08.4
comp=Z,106nm,1.2s
ASK Askoy 82.08 336 *e*P **P** **04 34 03.2 +0.2**
BER Bergen 82.10 336 *e*P **P** **04 34 03.2 +0.1**
I02E Swisshome, OR 82.11 44 P **P** **04 34 03.7 +0.2**
baz=300
VLAD Vladila 82.20 316 ⇑P **P** **04 34 05.9 +1.9**
COR Corvallis 82.20 44 P **P** **04 34 02.5 -1.6**
COR Corvallis 82.20 44 P **P** **04 34 02.5 -1.6**
COR pmax pmax
comp=Z,137nm,1.1s
KECS Kecovo 82.22 321 *e*P **P** **04 34 05.6 +1.5**
KECS pmax pmax
comp=Z,40nm,1.0s
KECS Kecovo 82.22 321 *e*P **P** **04 34 05.6 +1.5**
LANS Liptovska Anna 82.43 322 *e*P **P** **04 34 07.4 +2.2**
LANS pmax pmax
comp=Z,27nm,1.5s
LANS Liptovska Anna 82.43 322 *e*P **P** **04 34 07.4 +2.2**
AKAS Kas 82.45 307 IAmb IAmb 04 34 10.7
comp=Z,49nm,1.0s
GZR Gura Zlata 82.49 317 ⇓P **P** **04 34 06.0 +0.4**
GZR Gura Zlata 82.49 317 ⇓P **P** **04 34 06.0 +0.4**
J01E Myrtle Point 82.53 45 IAmb IAmb 04 34 10.8
comp=Z,123nm,1.4s
J01E Myrtle Point 82.53 45 P **P** **04 34 05.1 -0.6**
baz=300,SNR=6.0
H04D Lebanon 82.59 44 IAmb IAmb 04 34 14.4
comp=Z,79nm,1.2s
H04D Lebanon 82.59 44 P **P** **04 34 07.0 +0.9**
baz=301,SNR=8.2
B08A Colville Reser 82.59 39 IAmb IAmb 04 34 10.4
comp=Z,61nm,1.1s
SRE Strehaia 82.61 317 ⇑P **P** **04 34 07.4 +1.2**
SRE Strehaia 82.61 317 ⇑P **P** **04 34 07.4 +1.2**
I03D Drain, OR 82.62 45 P **P** **04 34 07.3 +1.1**
baz=300,SNR=16
ATD Arta Tunnel 82.63 279 P **P** **04 34 08.8 +2.0**
comp=Z,43nm,1.1s,baz=20,slow=2.2,SNR=9.3
ATD LR LR 05 13 13.8
comp=Z,279nm,18.1s,baz=58,slow=37
comp=Z,43nm,1.1s
ATD Arta Tunnel 82.63 279 P **P** **04 34 06.7 -0.1**
ATD IAmb IAmb 04 34 11.8
comp=Z,108nm,1.3s
ATD IAMs_20 IAMs_20 05 12 59.9
comp=Z,443nm,20.0s
ATD Arta Tunnel 82.63 279 P **P** **04 34 11.5 +4.7**
ATD Arta Tunnel 82.63 279 *e*P **P** **04 34 09.2 +2.4**
ATD *e*S S 04 43 53.0 -31
ATD Arta Tunnel 82.63 279 *e*P **P** **04 34 09.2 +2.4**
ATD Arta Tunnel 82.63 279 *e*P **P** **04 34 09.6 +2.7**
ATD Arta Tunnel 82.63 279 *e*P **P** **04 34 09.2 +2.4**
ALN Alexandroupoli 82.67 312 P **P** **04 34 07.2 +0.6**
ENEZ Enez 82.68 312 P **P** **04 34 07.5 +0.9**
SIRR Siria 82.71 318 ⇑P **P** **04 34 08.0 +1.3**
GOET G??ttrup 82.77 332 *i* P **P** **04 34 04.3 -2.4**
GOET IAmb IAmb 04 34 09.8
comp=Z,384nm,1.6s
OKC Ostrava-Krasne 82.77 323 *e*P **P** **04 34 08.6 +1.7**
OKC *e*S **S** **04 44 30.2 +6.1**
OKC MLR MLR
comp=Z,3µm,14.2s
OKC Ostrava-Krasne 82.77 323 *e*P **P** **04 34 08.6 +1.7**
OKC *e*S **S** **04 44 30.2 +6.1**
OKC AMS AMS 05 14 30.0
comp=Z,3µm,14.2s
H04A Detroit Lake 82.84 43 IAmb IAmb 04 34 11.8
comp=Z,59nm,1.1s
BAIL Bailesti 82.85 316 ⇑P P 04 34 01.1 -6.3
PSZ Piszkesteto 82.85 321 ⇑P **P** **04 34 09.0 +1.5**
PSZ Piszkesteto 82.85 321 IAmb IAmb 04 34 13.8
comp=Z,63nm,1.1s
PSZ Piszkesteto 82.85 321 ⇑P **P** **04 34 09.0 +1.5**
PSZ Piszkesteto 82.85 321 P **P** **04 34 08.7 +1.2**
RDO Rodhopi 82.89 313 P **P** **04 34 08.6 +0.9**
RDO Rodhopi 82.89 313 IAmb IAmb 04 34 12.0
comp=Z,115nm,1.4s
RAR Rarotonga 82.90 118 LR LR 05 05 01.8
comp=Z,240nm,19.6s,baz=301,slow=31
KMY Karmoy 82.93 335 *e*P **P** **04 34 08.4 +0.9**
K02D Willamette Mer 82.93 46 P **P** **04 34 08.5 +0.5**
baz=300,SNR=6.9
PLD Plovdiv 82.95 314 *i* P **P** **04 34 09.2 +1.2**
YER Yerkesik 82.96 308 P **P** **04 34 09.4 +1.2**
PUNG Punghina 82.97 316 ⇑P **P** **04 34 09.1 +1.0**
BSZH Besenyszg 82.97 320 ⇓P P 04 33 54.4 -14
BSZH Besenyszg 82.97 320 P **P** **04 34 10.0 +2.0**
HERR Herculane 82.97 317 ⇑P **P** **04 34 08.1 0.0**
DBO Dodson Butte 82.98 45 IAmb IAmb 04 34 13.1
comp=Z,44nm,1.0s
EZN Ezine 83.01 311 P **P** **04 34 08.6 +0.3**
EZN Ezine 83.01 311 P **P** **04 34 08.2 -0.1**
DJES Djerdap 83.02 317 ⇑P **P** **04 34 09.1 +0.8**
BZS Buzias 83.07 318 ⇓P **P** **04 34 09.2 +0.7**
BZS Buzias 83.07 318 ⇓P **P** **04 34 09.2 +0.7**
G05D Wamic, OR 83.08 42 P **P** **04 34 09.4 +0.8**
baz=302,SNR=5.3
MORC Moravsky Berou 83.13 323 ⇓P **P** **04 34 08.9 0.0**
MORC Moravsky Berou 83.13 323 IAmb IAmb 04 34 13.2
comp=Z,92nm,1.4s
MORC Moravsky Berou 83.13 323 ⇓P **P** **04 34 08.9 0.0**
MORC Moravsky Berou 83.13 323 *e*P **P** **04 34 09.3 +0.4**
RZN Rozhen 83.15 313 *i* P **P** **04 34 09.2 -0.1**
I04A Tendick Farm, 83.16 44 P **P** **04 34 09.8 +0.6**
baz=301,SNR=33
MUD Monsted U'grnd 83.17 331 *i* P **P** **04 34 08.7 -0.1**
MUD IAmb IAmb 04 34 12.3
comp=Z,171nm,1.4s
KSP Ksiaz 83.19 324 *i* P **P** **04 34 10.8 +1.7**
KSP *e*S **S** **04 44 31.8 +3.5**
KSP *e*L L 05 15 15.8
comp=Z,4µm,16.9s
KSP Ksiaz 83.19 324 P **P** **04 34 10.0 +0.9**
MAUC Maruska 83.21 323 *e*P **P** **04 34 10.8 +1.6**
MAUC *e*S **S** **04 44 33.2 +4.5**
MAUC AMS AMS 05 14 40.0
comp=Z,5µm,14.4s
BLCB Balcova 83.22 310 P **P** **04 34 10.1 +0.6**
SMTH Samothraki Isl 83.22 312 P **P** **04 34 08.2 -1.3**
KSXB Camp Six Broad 83.23 46 IAmb IAmb 04 34 14.5
comp=Z,52nm,1.0s
E07A Sunnyside 83.25 41 IAmb IAmb 04 34 14.9
comp=Z,63nm,1.1s
L02F Cave Junction 83.28 46 P **P** **04 34 10.6 +0.9**
baz=300
PRK Paraskevi 83.33 311 P **P** **04 34 11.8 +1.8**
KOLL Kolacno 83.33 322 *e*P **P** **04 34 11.5 +1.7**
KRLC Kraliky 83.37 324 *e*P **P** **04 34 11.2 +1.1**
KRLC *e*S **S** **04 44 34.2 +3.9**
KRLC MLR MLR
comp=Z,4µm,14.3s
KRLC Kraliky 83.37 324 *e*P **P** **04 34 11.2 +1.1**
KRLC *e*S **S** **04 44 34.2 +3.9**
KRLC AMS AMS 05 15 00.0
comp=Z,4µm,14.3s
OSTC Ostas 83.39 324 *e*P **P** **04 34 12.4 +2.2**
OSTC *e*S **S** **04 44 34.4 +3.9**
OSTC AMS AMS 05 14 10.0
comp=Z,3µm,17.1s
MDVR Moldovita 83.45 317 ⇑P **P** **04 34 09.9 -0.7**
DPC Dobruska-Polom 83.46 324 *e*P **P** **04 34 11.3 +0.8**
DPC *e*S **S** **04 44 34.7 +3.5**
DPC MLR MLR
comp=Z,3µm,18.0s
DPC Dobruska-Polom 83.46 324 *e*P **P** **04 34 11.3 +0.8**
DPC *e*S **S** **04 44 34.7 +3.5**
DPC AMS AMS 05 14 00.0
comp=Z,3µm,18.0s
CHVC Chvalec 83.46 324 *e*P **P** **04 34 12.0 +1.5**
CHVC AMS AMS 05 15 10.0
comp=Z,3µm,13.8s
BLKB Belogradchik 83.47 316 ⇓P **P** **04 34 11.1 +0.4**
BANR Banloc 83.48 318 ⇓P P 04 34 03.0 -7.7
C09A Chrisman Ranch 83.49 39 P **P** **04 34 10.9 +0.2**
C09A IAmb IAmb 04 34 15.2
comp=Z,67nm,1.1s
ARG Arkhangelos 83.51 307 P **P** **04 34 11.4 +0.4**
D08A Wollman Farm, 83.53 40 IAmb IAmb 04 34 15.9
comp=Z,61nm,1.0s
UPC Upice 83.53 324 *e*P **P** **04 34 12.4 +1.6**
UPC *e*S **S** **04 44 35.2 +3.4**
UPC MLR MLR
comp=Z,3µm,13.7s
UPC Upice 83.53 324 *e*P **P** **04 34 12.4 +1.6**
UPC *e*S **S** **04 44 35.2 +3.4**
UPC AMS AMS 05 15 10.0
comp=Z,3µm,13.7s
HAWA Hanford 83.53 41 IAmb IAmb 04 34 16.2
comp=Z,53nm,1.1s
I05D Terrebonne, OR 83.54 43 P **P** **04 34 12.0 +1.0**
baz=302,SNR=15
F07A Phinny Hill Vi 83.56 41 IAmb IAmb 04 34 16.6
comp=Z,63nm,1.0s
JAVC Velka Javorina 83.58 322 *e*P **P** **04 34 12.6 +1.4**
BUD Budapest 83.58 321 P **P** **04 34 11.9 +0.8**
KAVA Kavala 83.63 313 P **P** **04 34 11.4 -0.1**
VTS Vitosha 83.63 315 ⇑P **P** **04 34 12.7 +1.0**
VTS Vitosha 83.63 315 IAmb IAmb 04 34 18.8
comp=Z,63nm,0.9s
VTS Vitosha 83.63 315 ⇑P **P** **04 34 12.7 +1.0**
VTS Vitosha 83.63 315 *i* P **P** **04 34 12.0 +0.3**
J04D Umpqua Nationa 83.63 45 P **P** **04 34 13.2 +1.5**
baz=301,SNR=6.4
DAT Datca 83.65 308 P **P** **04 34 11.8 0.0**
BODT Bodrum 83.68 308 P **P** **04 34 12.4 +0.5**
SMG Samos 83.69 309 P **P** **04 34 12.7 +0.8**
THAS Thassos island 83.69 312 P **P** **04 34 14.1 +2.3**
LIA Limnos Island 83.74 312 P **P** **04 34 11.1 -1.0**
E08A Dider Farm, El 83.75 41 IAmb IAmb 04 34 16.7
comp=Z,46nm,0.9s
MMB Musomiste 83.84 314 *i* P **P** **04 34 12.1 -0.6**
NEW Newport 83.87 38 IAmb IAmb 04 34 17.7
comp=Z,45nm,1.1s
NEW Newport 83.87 38 P **P** **04 34 13.3 +0.6**
baz=304,SNR=40
NVR Nevrokopi 83.88 313 P **P** **04 34 13.5 +0.7**
CHOS Chios island 83.90 310 P **P** **04 34 12.2 -0.8**
SMOL Smolenice 83.90 322 *e*P **P** **04 34 14.9 +2.1**
SMOL pmax pmax
comp=Z,90nm,1.5s
SMOL Smolenice 83.90 322 *e*P **P** **04 34 14.9 +2.1**
VRAC Vranov 83.91 323 ⇑P **P** **04 34 14.1 +1.3**
VRAC Vranov 83.91 323 P **P** **04 34 13.5 +0.7**
comp=Z,86nm,1.2s,baz=66,slow=4.9,SNR=40
VRAC LR LR 05 14 54.1
comp=Z,3µm,18.4s,baz=62,slow=38
comp=Z,86nm,1.2s
VRAC Vranov 83.91 323 ⇑P **P** **04 34 14.1 +1.3**
VRAC Vranov 83.91 323 *e*P **P** **04 34 13.5 +0.7**
ICESG Greenland Ices 83.94 356 *i* P **P** **04 34 10.4 -2.6**
ICESG IAmb IAmb 04 34 16.4
comp=Z,76nm,1.3s
NISR Nisiros 84.02 308 P **P** **04 34 15.2 +1.6**
YBH Yreka Blue Hor 84.03 46 LR LR 05 06 18.4
comp=Z,148nm,20.6s,baz=296,slow=32
YBH Yreka Blue Hor 84.03 46 P **P** **04 34 14.3 +0.6**
YBH IAmb IAmb 04 34 19.4
comp=Z,81nm,1.8s
YBH Yreka Blue Hor 84.03 46 P **P** **04 34 14.3 +0.6**
YBH pmax pmax
comp=Z,81nm,1.8s
L04D Klamath Falls 84.04 45 P **P** **04 34 14.0 +0.2**
baz=301,SNR=12
KOKK Kokkinochori, 84.06 313 P **P** **04 34 14.2 +0.5**
BOVS Bovan 84.06 316 ⇑P **P** **04 34 12.4 -1.2**
MODS Modra-Piesok 84.06 322 *e*P **P** **04 34 15.4 +1.8**
MODS pmax pmax
comp=Z,376nm,1.4s
MODS Modra-Piesok 84.06 322 *e*P **P** **04 34 15.4 +1.8**
CSKK Cskako 84.08 321 P **P** **04 34 15.3 +1.6**
ILULI Ilulissat 84.10 1 *i* P **P** **04 34 11.3 -2.0**
ILULI IAmb IAmb 04 34 16.5
comp=Z,70nm,1.2s
KKB Krupnik 84.11 314 *i* P **P** **04 34 14.4 +0.4**
TEND Ethiopian Broa 84.13 280 *e*P **P** **04 34 16.5 +1.9**
TEND Ethiopian Broa 84.13 280 *e*P **P** **04 34 16.5 +1.9**
SOEG Soedalen 84.14 353 *i* P **P** **04 34 13.5 -0.1**
SOEG IAmb IAmb 04 34 16.7
comp=Z,86nm,1.4s
KRUC Moravsky 84.16 323 *e*P **P** **04 34 14.4 +0.4**
J05D Fort Rock, OR 84.16 44 P **P** **04 34 15.4 +1.1**
baz=302,SNR=36
SRS Serrai 84.17 313 P **P** **04 34 14.7 +0.4**
K04D Chiloquin, OR 84.18 45 P **P** **04 34 15.4 +1.0**
baz=302
ZST Bratislava 84.26 322 *e*P **P** **04 34 16.6 +2.0**
ZST pmax pmax
comp=Z,287nm,1.6s
ZST Bratislava 84.26 322 *e*P **P** **04 34 16.6 +2.0**
PVCC Panska Ves 84.27 325 *e*P **P** **04 34 15.9 +1.3**
PVCC *e*S **S** **04 44 41.8 +2.6**
PVCC MLR MLR
comp=Z,4µm,14.9s
PVCC Panska Ves 84.27 325 *e*P **P** **04 34 15.9 +1.3**
PVCC *e*S **S** **04 44 41.8 +2.6**
PVCC AMS AMS 05 15 50.0
comp=Z,4µm,14.9s
OUR Ouranopolis 84.31 313 P **P** **04 34 15.5 +0.5**
BRG Berggiesshubel 84.38 325 *e*P **P** **04 34 16.5 +1.3**
BRG Amp 04 34 20.0
comp=Z,86nm,1.4s
BRG *ex* x 04 34 36.6
BRG Amp 04 34 37.8
comp=Z,45nm,1.2s
BRG Berggiesshubel 84.38 325 S **S** **04 44 41.0 +0.7**
BRG Berggiesshubel 84.38 325 *e*P **P** **04 34 16.4 +1.3**
BRG pmax pmax
comp=Z,86nm,1.4s
BRG Berggiesshubel 84.38 325 S **S** **04 44 41.0 +0.7**
FRGS Fruska Gora 84.39 318 ⇑P **P** **04 34 16.0 +0.6**

FRGS	**Fruska Gora**	**84.39**	**318**	*e*P		**P**	**04 34 15.6**	**+0.2**
MORH	**Mrgy, Hungar**	**84.50**	**320**	⇓P		**P**	**04 34 16.7**	**+0.9**
MORH	**Mrgy, Hungar**	**84.50**	**320**	*e*P		**P**	**04 34 15.7**	**-0.1**
MORH	**Mrgy, Hungar**	**84.50**	**320**	P		**P**	**04 34 16.7**	**+0.9**
TREC	**Trest**	**84.51**	**323**	*e*P		**P**	**04 34 17.5**	**+1.6**
TREC				*e*S		**S**	**04 44 39.8**	**-1.9**
TREC				MLR	MLR			
	comp=Z,4μm,15.1s							
TREC	**Trest**	**84.51**	**323**	*e*P		**P**	**04 34 17.5**	**+1.6**
TREC				*e*S		**S**	**04 44 39.8**	**-1.9**
TREC				AMS	AMS		05 15 40.0	
	comp=Z,4μm,15.1s							
KARP	**Karpathos**	**84.52**	**307**	P		**P**	**04 34 16.5**	**+0.3**
KARP	**Karpathos**	**84.52**	**307**	IAMs_20	IAMs_20		05 18 35.9	
	comp=Z,1μm,20.0s							
EGYH	**Egyhazaskeszo**	**84.58**	**321**	P		**P**	**04 34 18.2**	**+2.0**
CLL	**Collm**	**84.60**	**326**	*i* P		**P**	**04 34 16.3**	**+0.1**
CLL				*e*S		**S**	**04 44 41.0**	**-1.4**
CLL				pmax	pmax			
	comp=Z,151nm,1.5s							
CLL	**Collm**	**84.60**	**326**	*i* P		**P**	**04 34 16.3**	**+0.1**
	comp=Z,151nm,1.5s							
CLL				*e*Pmax			04 34 21.0	
CLL				*e*PP		**PP**	**04 37 36.0**	**+4.7**
CLL				*e*(PPP)			04 39 42.0	
CLL				*e*S		**S**	**04 44 41.0**	**-1.4**
CLL				*e*SS		**SS**	**04 50 08.0**	**-4.5**
CLL				*ex*		x	04 54 54.0	
CLL				LmH			05 09 00.0	
	comp=N,6μm,18.7s							
CLL				LmH			05 09 00.0	
	comp=E,4μm,18.8s							
CLL				Lmax			05 16 00.0	
KNT	**Kendrikon**	**84.60**	**314**	P		**P**	**04 34 16.9**	**+0.4**
MPLH	**Magyarpolny**	**84.60**	**321**	P		**P**	**04 34 17.8**	**+1.5**
PRU	**Pruhonice**	**84.60**	**324**	*e*P		**P**	**04 34 17.8**	**+1.5**
PRU				*e*S		**S**	**04 44 42.1**	**-0.4**
PRU				MLR	MLR			
	comp=Z,3μm,14.8s							
PRU	**Pruhonice**	**84.60**	**324**	*e*P		**P**	**04 34 17.8**	**+1.5**
PRU				*e*S		**S**	**04 44 42.1**	**-0.4**
PRU				AMS	AMS		05 15 50.0	
	comp=Z,3μm,14.8s							
PLG	**Polygyros**	**84.65**	**313**	P		**P**	**04 34 17.1**	**+0.3**
K05A	**Summer Lake**	**84.66**	**44**	P		**P**	**04 34 17.4**	**+0.4**
K05A				IAmb	IAmb		04 34 22.0	
	comp=Z,51nm,0.9s							
SKY	**Skiros Island**	**84.67**	**311**	P		**P**	**04 34 17.0**	**+0.1**
HORT	**Hortiatis**	**84.76**	**313**	P		**P**	**04 34 17.4**	**0.0**
SOP	**Sopron**	**84.86**	**322**	P		**P**	**04 34 21.7**	**+4.1**
SOP	**Sopron**	**84.86**	**322**	P		**P**	**04 34 19.0**	**+1.4**
DIVS	**Divibare**	**84.86**	**317**	IAmb	IAmb		04 34 22.0	
	comp=Z,67nm,1.3s							
DIVS	**Divibare**	**84.86**	**317**	*e*P		**P**	**04 34 17.5**	**-0.3**
KOVH	**Kovagotottos**	**84.89**	**320**	P		**P**	**04 34 18.7**	**+1.0**
RONA	**Rosalia, Austr**	**84.99**	**322**	*i* P		**P**	**04 34 19.9**	**+1.6**
	comp=Z,6.4nm,0.7s,SNR=24							
GRG	**Griva**	**85.02**	**314**	P		**P**	**04 34 18.7**	**0.0**
CONA	**Conrad Observa**	**85.10**	**322**	*i* P		**P**	**04 34 20.4**	**+1.5**
	comp=Z,22nm,0.8s,SNR=80							
CONA				*e*P		**PP**	**04 37 35.5**	**-0.1**
	comp=Z,12nm,1.5s							
KYMI	**Kymi, Euboea I**	**85.10**	**311**	P		**P**	**04 34 18.8**	**-0.2**
WALA	**Waterton Lakes**	**85.16**	**36**	IAmb	IAmb		04 34 24.7	
	comp=Z,52nm,1.1s							
SANT	**Santorini**	**85.31**	**308**	IAMs_20	IAMs_20		05 17 33.9	
	comp=Z,869nm,22.0s							
SJES	**Sjenica**	**85.33**	**317**	*e*P		**P**	**04 34 21.5**	**+1.3**
XOR	**Xorichti**	**85.33**	**312**	P		**P**	**04 34 17.6**	**-2.6**
BBLS	**Lazići**	**85.34**	**317**	*e*P		**P**	**04 34 21.4**	**+1.2**
ZKR	**Zakros**	**85.40**	**307**	P		**P**	**04 34 20.8**	**+0.2**
CKRC	**Cesky Krumlov**	**85.41**	**323**	*e*P		**P**	**04 34 21.7**	**+1.3**
CKRC				*e*S		**S**	**04 44 49.1**	**-1.6**
CKRC				AMS	AMS		05 16 10.0	
	comp=Z,3μm,14.7s							
LIT	**Litokhoron**	**85.41**	**313**	P		**P**	**04 34 20.5**	**-0.1**
BEHE	**Becsehely**	**85.43**	**321**	P		**P**	**04 34 25.1**	**+4.6**
MOD	**Modoc Plateau**	**85.47**	**45**	IAmb	IAmb		04 34 25.7	
	comp=Z,67nm,1.1s							
GDXM	**Geysers**	**85.48**	**49**	IAmb	IAmb		04 34 26.6	
	comp=Z,79nm,1.4s							
DION	**Dionisos Attik**	**85.50**	**311**	P		**P**	**04 34 20.3**	**-0.8**
RUDO	**Rudo**	**85.50**	**317**	*e*P		**P**	**04 34 20.5**	**-0.4**
NKC	**Novy Kostel**	**85.53**	**325**	*e*P		**P**	**04 34 22.1**	**+1.1**
NKC				*e*S		**S**	**04 44 49.4**	**-2.4**
NKC				MLR	MLR			
	comp=Z,6μm,15.6s							
NKC	**Novy Kostel**	**85.53**	**325**	*e*P		**P**	**04 34 22.1**	**+1.1**
NKC				*e*S		**S**	**04 44 49.4**	**-2.4**
NKC				AMS	AMS		05 16 40.0	
	comp=Z,6μm,15.6s							
KHC	**Kasperske Hory**	**85.61**	**324**	*e*P		**P**	**04 34 22.5**	**+1.1**
KHC				*e*			04 34 30.0	
KHC				*e*S		**S**	**04 44 50.9**	**-1.8**
KHC				MLR	MLR			
	comp=Z,5μm,17.6s							
KHC	**Kasperske Hory**	**85.61**	**324**	*e*P		**P**	**04 34 22.5**	**+1.1**
KHC				*x*		x	04 34 30.0	
KHC				*e*S		**S**	**04 44 50.9**	**-1.8**
KHC				AMS	AMS		05 15 20.0	
	comp=Z,5μm,17.6s							
DESE	**Dese**	**85.63**	**280**	*e*P		**P**	**04 34 26.3**	**+3.8**
DESE	**Dese**	**85.63**	**280**	*e*P		**P**	**04 34 26.3**	**+3.8**
DESE	**Dese**	**85.63**	**280**	*e*P		**P**	**04 34 26.1**	**+3.6**
DESE	**Dese**	**85.63**	**280**	*e*P		**P**	**04 34 26.1**	**+3.6**
DESE	**Dese**	**85.63**	**280**	*e*P		**P**	**04 34 23.0**	**+0.5**
DESE	**Dese**	**85.63**	**280**	*e*P		**P**	**04 34 26.7**	**+4.2**
DESE	**Dese**	**85.63**	**280**	*e*P		**P**	**04 34 26.3**	**+3.8**
ATHU	**Athens Univers**	**85.66**	**311**	P		**P**	**04 34 22.9**	**+1.1**
ARSA	**Arzberg**	**85.68**	**322**	*i* P		**P**	**04 34 22.8**	**+1.0**
	comp=Z,8.9nm,1.0s,SNR=32							
GEC2	**GERESS Array S**	**85.72**	**324**	P		**P**	**04 34 21.4**	**-0.7**
GERES	**GERESS Array B**	**85.72**	**324**	P		**P**	**04 34 21.9**	**-0.1**
	comp=Z,7.8nm,0.9s,baz=49,slow=4.1,SNR=39							
GERES				LR		LR	05 16 01.7	
	comp=Z,4μm,18.5s,baz=64,slow=38							
	comp=Z,7.8nm,0.9s							
GERES	**GERESS Array B**	**85.72**	**324**	P		**P**	**04 34 22.0**	**-0.1**
JTMT	**Jette**	**85.73**	**38**	IAmb	IAmb		04 34 27.6	
	comp=Z,68nm,1.2s							
KZN	**Kozani**	**85.77**	**313**	P		**P**	**04 34 22.1**	**-0.4**
ATAL	**Atalanti**	**85.80**	**311**	P		**P**	**04 34 21.6**	**-0.9**
J08A	**Circle Bar Ran**	**85.81**	**43**	P		**P**	**04 34 23.0**	**+0.3**
J08A				IAmb	IAmb		04 34 28.2	
	comp=Z,94nm,1.1s							
LKR	**Lokris**	**85.83**	**311**	P		**P**	**04 34 20.7**	**-2.0**
ORV	**Oroville**	**85.95**	**47**	IAmb	IAmb		04 34 27.6	
	comp=Z,52nm,1.1s							
BORG	**Borgarnes**	**85.95**	**348**	P		**P**	**04 34 23.7**	**+1.0**
BORG	**Borgarnes**	**85.95**	**348**	P		**P**	**04 34 23.7**	**+1.0**
BORG				pmax	pmax			
	comp=Z,134nm,1.4s							
UPM	**Unac-Piva**	**86.01**	**317**	*e*P		**P**	**04 34 24.6**	**+0.9**
MOA	**Molln**	**86.01**	**323**	*i* P		**P**	**04 34 24.5**	**+1.1**
	comp=Z,13nm,0.9s,SNR=22							
MOA				*e*P		**PP**	**04 37 44.0**	**+1.1**
	comp=Z,6.7nm,1.2s							
BLY	**Banja Luka**	**86.17**	**319**	*e*P		**P**	**04 34 25.4**	**+1.2**
MAKR	**Makrakomi, Fth**	**86.22**	**312**	P		**P**	**04 34 25.0**	**+0.4**
ANKE	**Ethiopia-Afar**	**86.22**	**279**	*e*P		**P**	**04 34 27.0**	**+1.5**
ANKE	**Ethiopia-Afar**	**86.22**	**279**	*e*P		**P**	**04 34 27.0**	**+1.5**
ANKE	**Ethiopia-Afar**	**86.22**	**279**	*e*P		**P**	**04 34 21.8**	**-3.7**
PDG	**Podgorica**	**86.22**	**316**	⇑P		**P**	**04 34 25.6**	**+1.1**
PDG	**Podgorica**	**86.22**	**316**	*e*P		**P**	**04 34 25.4**	**+0.9**
WVOR	**Wild Horse Val**	**86.22**	**44**	IAmb	IAmb		04 34 29.5	
	comp=Z,55nm,1.1s							
KPRO	**Kipourio**	**86.22**	**313**	P		**P**	**04 34 20.5**	**-4.2**
KBN	**Korca**	**86.24**	**314**	IAmb	IAmb		04 34 28.2	
	comp=Z,73nm,1.2s							
IDI	**Anoyia**	**86.25**	**308**	⇓P		**P**	**04 34 25.3**	**+0.4**
IDI	**Anoyia**	**86.25**	**308**	P		**P**	**04 34 24.9**	**-0.1**
	comp=Z,18nm,1.0s,baz=34,slow=10,SNR=8.3							
IDI				LR	LR		05 18 48.3	
	comp=Z,898nm,20.3s,baz=57,slow=40							
	comp=Z,18nm,1.0s							
IDI	**Anoyia**	**86.25**	**308**	P		**P**	**04 34 23.3**	**-1.6**
IDI	**Anoyia**	**86.25**	**308**	P		**P**	**04 34 23.9**	**-1.0**
IDI				IAmb	IAmb		04 34 48.8	
	comp=Z,50nm,1.2s							
IDI				IAMs_20	IAMs_20		05 18 27.9	
	comp=Z,1μm,21.0s							
PERS	**Pernice**	**86.26**	**321**	*e*P		**P**	**04 34 25.3**	**+0.6**
SOKA	**Soboth**	**86.29**	**321**	*i* P		**P**	**04 34 25.7**	**+0.8**
	comp=Z,11nm,0.6s,SNR=38							
SOKA				*e*P		PP	04 37 36.8	-8.5
	comp=Z,7.2nm,1.4s							
SFJD	**Kangerlussuaq**	**86.33**	**0**	LR		LR	05 13 48.5	
	comp=Z,375nm,18.9s,baz=356,slow=36							
SFJD	**Kangerlussuaq**	**86.33**	**0**	P		**P**	**04 34 23.8**	**-0.7**
SFJD				IAmb	IAmb		04 34 28.4	
	comp=Z,79nm,1.3s							
SFJD	**Kangerlussuaq**	**86.33**	**0**	P		**P**	**04 34 23.8**	**-0.7**
SFJD				pmax	pmax			
	comp=Z,79nm,1.3s							
SFJD	**Kangerlussuaq**	**86.33**	**0**	*i* P		**P**	**04 34 21.0**	**-3.5**
SFJD				IAmb	IAmb		04 34 27.3	
	comp=Z,75nm,1.2s							
DRME	**Dracevica, Mon**	**86.40**	**316**	*e*P		**P**	**04 34 25.6**	**+0.2**
BRY	**Bratogost**	**86.40**	**317**	*e*P		**P**	**04 34 25.5**	**-0.1**
MGRS	**Mrkonjic Grad**	**86.42**	**319**	*e*P		**P**	**04 34 26.9**	**+1.4**
TIR	**Tirane**	**86.43**	**315**	⇓P		**P**	**04 34 29.1**	**+3.5**
TIR	**Tirane**	**86.43**	**315**	⇓P		**P**	**04 34 29.1**	**+3.5**
BIOA	**Bad Ischl, Aus**	**86.45**	**323**	*i* P		**P**	**04 34 27.6**	**+2.0**
	comp=Z,26nm,1.2s,SNR=16							
MSO	**Missoula**	**86.46**	**38**	P		**P**	**04 34 26.1**	**+0.3**
	baz=306,SNR=31							
MSO				S		**S**	**04 44 59.4**	**-1.9**
	baz=306							
GRFO	**Grafenberg**	**86.49**	**325**	P		**P**	**04 34 25.0**	**-0.7**
GRFO				IAmb	IAmb		04 35 09.8	
	comp=Z,103nm,1.4s							
GRFO	**Grafenberg**	**86.49**	**325**	P		**P**	**04 34 25.0**	**-0.7**
GRFO				pmax	pmax			
	comp=Z,103nm,1.4s							
BEKR	**Beckworth**	**86.53**	**47**	IAmb	IAmb		04 34 31.0	
	comp=Z,44nm,1.0s							
CRES	**Cresnjev**	**86.55**	**321**	*e*P		**P**	**04 34 26.3**	**+0.2**
GUR	**Goura**	**86.64**	**311**	P		**P**	**04 34 25.7**	**-1.1**
OBKA	**Obir**	**86.66**	**321**	*i* P		**P**	**04 34 27.7**	**+0.9**
	comp=Z,8.1nm,0.8s,SNR=8.8							
OBKA				*e*P		**PP**	**04 37 46.0**	**-2.2**
	comp=Z,12nm,1.7s							
JAN	**Janina**	**86.72**	**313**	P		**P**	**04 34 28.1**	**+1.0**
KLV	**Kalavryta, Ach**	**86.72**	**311**	P		**P**	**04 34 26.1**	**-1.0**
LAKA	**Lakka**	**86.73**	**312**	P		P	04 34 13.2	-14
IMMV	**Iera Moni Meta**	**86.81**	**308**	P		**P**	**04 34 27.7**	**+0.2**
DY2G	**Dye2**	**86.82**	**359**	*i* P		**P**	**04 34 27.1**	**-0.2**
DY2G				IAmb	IAmb		04 34 30.2	
	comp=Z,160nm,1.6s							
LJU	**Ljubljana**	**86.94**	**321**	*e*P		**P**	**04 34 28.3**	**+0.3**
LJU	**Ljubljana**	**86.94**	**321**	*i* P		**P**	**04 34 29.2**	**+1.2**
LJU				*e*S		**S**	**04 45 04.7**	**-1.1**
KBA	**Koelnbreinsper**	**86.98**	**322**	*i* P		**P**	**04 34 29.2**	**+0.8**
	comp=Z,8.3nm,0.7s,SNR=17							
KBA				*e*P		**PP**	**04 37 48.6**	**-2.3**
	comp=Z,16nm,1.4s							
FCC	**Fort Churchill**	**86.98**	**21**	IAmb	IAmb		04 34 31.7	
	comp=Z,80nm,1.1s							
GVDS	**Gavdos**	**87.05**	**308**	P		**P**	**04 34 30.9**	**+2.2**
MPK	**Martis Peak**	**87.05**	**47**	IAmb	IAmb		04 34 34.2	
	comp=Z,72nm,1.2s							
GVD	**Gavdhos**	**87.05**	**308**	P		**P**	**04 34 28.5**	**-0.2**
KTHR	**Kythira**	**87.07**	**309**	P		**P**	**04 34 27.0**	**-1.8**
MYKA	**Terra Mystica**	**87.08**	**322**	*e*P		**P**	**04 34 29.7**	**+0.9**
	comp=Z,6.8nm,0.8s							
MYKA				*e*P		**PP**	**04 37 50.4**	**-1.3**
	comp=Z,7.2nm,1.2s							
EMB	**Emerald Bay**	**87.17**	**47**	IAmb	IAmb		04 34 33.9	
	comp=Z,50nm,0.9s							
CEY	**Cerknica**	**87.18**	**321**	*e*P		**P**	**04 34 29.1**	**-0.1**
CEY	**Cerknica**	**87.18**	**321**	*i* P		**P**	**04 34 27.0**	**-2.2**
CEY				*e*PP		**PP**	**04 37 52.4**	**0.0**
PAHR	**Pah Rah Range**	**87.25**	**46**	IAmb	IAmb		04 34 34.2	
	comp=Z,42nm,1.0s							
TSLK	**Tsoukalades, L**	**87.29**	**313**	P		P	04 34 17.2	-13
ITM	**Ithomi**	**87.33**	**311**	P		**P**	**04 34 29.5**	**-0.6**
ITM	**Ithomi**	**87.33**	**311**	P		**P**	**04 34 29.1**	**-0.9**
AAE	**Adis Abeba**	**87.33**	**279**	*e*P		**P**	**04 34 32.9**	**+2.1**
AAE	**Adis Abeba**	**87.33**	**279**	*e*P		**P**	**04 34 32.9**	**+2.1**
AAE	**Adis Abeba**	**87.33**	**279**	*e*P		P	04 34 25.8	-5.0
AAE	**Adis Abeba**	**87.33**	**279**	*e*P		**P**	**04 34 32.9**	**+2.1**
MFID	**Camas Ranch**	**87.38**	**42**	IAmb	IAmb		04 34 35.2	
	comp=Z,55nm,1.1s							
FURI	**Furi**	**87.46**	**279**	*e*P		**P**	**04 34 31.1**	**-0.4**
FURI				*e*S		**SKSac**	**04 44 57.8**	**-1.4**
FURI	**Furi**	**87.46**	**279**	*e*P		**P**	**04 34 31.1**	**-0.4**
FURI	**Furi**	**87.46**	**279**	*e*P		**P**	**04 34 32.9**	**+1.4**
FURI	**Furi**	**87.46**	**279**	*e*P		**P**	**04 34 32.9**	**+1.4**
FURI	**Furi**	**87.46**	**279**	*e*P		P	04 34 26.3	-5.1
FURI	**Furi**	**87.46**	**279**	*e*P		**P**	**04 34 27.8**	**-3.7**
FURI	**Furi**	**87.46**	**279**	*e*P		**P**	**04 34 31.1**	**-0.4**
CMB	**Columbia Colle**	**87.49**	**48**	IAmb	IAmb		04 34 35.1	
	comp=Z,33nm,0.9s							
SKDS	**Skadanscina**	**87.53**	**321**	*e*P		**P**	**04 34 30.7**	**-0.2**
TRI	**Trieste**	**87.57**	**321**	P		**P**	**04 34 34.7**	**+3.7**
ABTA	**Abfaltersbach**	**87.63**	**322**	*i* P		**P**	**04 34 31.1**	**-0.3**
	comp=Z,14nm,0.9s,SNR=21							
YERR	**Yerington**	**87.73**	**47**	IAmb	IAmb		04 34 37.4	
	comp=Z,37nm,1.1s							
WATA	**Walderalm**	**87.77**	**323**	*i* P		**P**	**04 34 34.0**	**+1.8**
	comp=Z,4.1nm,0.5s,SNR=6.2							
WATA				*e*P		**PP**	**04 37 56.3**	**-1.0**
	comp=Z,7.3nm,0.9s							
WTTA	**Wattenberg**	**87.78**	**323**	*i* P		**P**	**04 34 33.8**	**+1.5**
	comp=Z,8.0nm,0.8s,SNR=13							
WTTA				*e*P		**PP**	**04 37 58.1**	**+0.7**
	comp=Z,11nm,1.1s							
STAL	**STALIGIAL**	**87.82**	**322**	IAmb	IAmb		04 34 39.0	
	comp=Z,49nm,1.1s							
LRM	**Limekiln Ridge**	**87.89**	**38**	P		**P**	**04 34 33.2**	**+0.3**
EGMT	**Eagleton**	**87.97**	**36**	P		**P**	**04 34 33.3**	**+0.2**
	baz=310							
MOTA	**Moosalm**	**88.02**	**324**	*e*P		**P**	**04 34 34.2**	**+0.9**
	comp=Z,7.0nm,0.7s							
MOTA				*e*P		**PP**	**04 37 59.4**	**+0.2**
	comp=Z,9.9nm,1.5s							
SQTA	**Sankt Quirin**	**88.04**	**323**	*i* P		**P**	**04 34 35.0**	**+1.6**
	comp=Z,2.5nm,0.4s,SNR=7.6							
SQTA				*e*P		**PP**	**04 37 57.7**	**-1.7**
	comp=Z,6.3nm,1.0s							
RETA	**Reutte**	**88.11**	**324**	*i* P		**P**	**04 34 35.6**	**+2.0**
	comp=Z,1.1nm,0.4s,SNR=8.9							
RETA				*e*P		**PP**	**04 38 00.0**	**+0.2**
	comp=Z,6.5nm,1.3s							
HLID	**Hailey**	**88.12**	**41**	IAmb	IAmb		04 34 39.2	
	comp=Z,46nm,1.1s							
HLID				IAMs_20	IAMs_20		05 20 18.3	
	comp=Z,531nm,19.0s							
HLID	**Hailey**	**88.12**	**41**	P		**P**	**04 34 35.2**	**+1.3**
	baz=306,SNR=66							
HLID				S		**S**	**04 45 18.8**	**+1.2**
	baz=306							
PMPB	**Monarch Peak**	**88.19**	**50**	IAmb	IAmb		04 34 46.9	
	comp=Z,40nm,1.1s							
BMN	**Battle Mountai**	**88.22**	**45**	IAmb	IAmb		04 34 40.2	
	comp=Z,63nm,1.2s							
FRB	**Frobisher Bay**	**88.37**	**8**	LR	LR		05 14 57.0	
	comp=Z,884nm,21.8s,baz=357,slow=36							
RYN	**Ryan**	**88.40**	**47**	IAmb	IAmb		04 34 40.1	
	comp=Z,43nm,1.2s							
BTNL	**Ternell**	**88.40**	**328**	*d*PcP		**PcP**	**04 34 35.2**	**+0.3**
FETA	**Feichten**	**88.42**	**323**	*i* P		**P**	**04 34 35.6**	**+0.4**
	comp=Z,3.3nm,0.7s,SNR=10							
FETA				*e*P		**PP**	**04 38 00.3**	**-2.2**
	comp=Z,20nm,2.2s							
KVN	**Kaiserville**	**88.44**	**46**	IAmb	IAmb		04 34 40.2	
	comp=Z,52nm,1.3s							
BOZ	**Bozeman (W)**	**88.49**	**38**	IAmb	IAmb		04 34 40.9	
	comp=Z,57nm,1.2s							
BOZ				IAMs_20	IAMs_20		05 22 03.5	
	comp=Z,440nm,19.0s							
BOZ	**Bozeman (W)**	**88.49**	**38**	P		**P**	**04 34 36.2**	**+0.6**
	baz=308,SNR=61							
CTI	**Castel Tesino**	**88.53**	**322**	IAmb	IAmb		04 34 44.8	
	comp=Z,38nm,1.1s							
BHOU	**Houvegnez**	**88.61**	**328**	*d*PcP		**PcP**	**04 34 37.1**	**-0.4**
LHV	**Little Huntoon**	**88.62**	**47**	IAmb	IAmb		04 34 41.5	
	comp=Z,68nm,1.4s							
NVAR	**Mina Array Bea**	**88.65**	**47**	P		**P**	**04 34 38.0**	**+1.4**
	comp=Z,18nm,0.9s,baz=290,slow=4.9,SNR=48							
NVAR				LR	LR		05 06 24.8	
	comp=Z,150nm,21.7s,baz=291,slow=30							
	comp=Z,18nm,0.9s							
NVAR	**Mina Array Bea**	**88.65**	**47**	P		**P**	**04 34 37.2**	**+0.6**
BSTI	**Sart Tilman**	**88.66**	**328**	*d*PcP		**PcP**	**04 34 37.0**	**-0.7**
DAVA	**Damuels**	**88.70**	**324**	*i* P		**P**	**04 34 36.8**	**+0.2**
	comp=Z,5.5nm,0.7s,SNR=7.1							
DAVA				*e*P		**PP**	**04 38 02.4**	**-2.3**
	comp=Z,17nm,1.7s							
MLAC	**Mammoth, Mammo**	**88.74**	**48**	P		**P**	**04 34 37.3**	**+0.2**
	baz=304							
BFO	**Black Forest**	**88.82**	**326**			**P**	**04 34 36.1**	**-0.9**
BFO	**Black Forest**	**88.82**	**326**	P		**P**	**04 34 36.1**	**-0.9**
BFO				pmax	pmax			
	comp=Z,38nm,1.6s							
BFO				MLR	MLR			
	comp=Z,2μm,19.0s							
PAGB	**Antelope Grade**	**88.82**	**50**	IAmb	IAmb		04 34 42.0	
	comp=Z,80nm,1.5s							
EKA	**Eskdalemuir Ar**	**88.89**	**335**	LR	LR		05 19 48.6	
	comp=Z,3μm,19.3s,baz=42,slow=39							
EKA	**Eskdalemuir Ar**	**88.89**	**335**	P		**P**	**04 34 36.5**	**-0.6**
BCLA	**Clavier**	**88.90**	**328**	*d*PcP		**P**	**04 34 37.8**	**+0.6**
DILA	**Dilla**	**88.91**	**277**	*e*P		P	04 34 24.4	-14
ESK	**Eskdalemuir**	**88.92**	**336**	P		**P**	**04 34 36.5**	**-0.7**
ESK				IAmb	IAmb		04 34 39.9	
	comp=Z,48nm,1.4s							
ESK	**Eskdalemuir**	**88.92**	**336**	P		**P**	**04 34 36.5**	**-0.7**
ESK				pmax	pmax			
	comp=Z,48nm,1.4s							
TEOL	**Teolo**	**88.95**	**322**	IAmb	IAmb		04 34 44.3	
	comp=Z,30nm,0.8s							
WLF	**Walferdange**	**89.01**	**327**	IAmb	IAmb		04 34 42.1	
	comp=Z,59nm,1.3s							
WLF	**Walferdange**	**89.01**	**327**	*d*PcP		**PcP**	**04 34 39.0**	**-0.3**
DAVOX	**Davos/Dischmat**	**89.02**	**324**	P		**P**	**04 34 38.0**	**-0.2**
	comp=Z,14nm,0.9s,baz=43,slow=4.6,SNR=19							
DAVOX				LR	LR		05 18 18.4	
	comp=Z,3μm,18.3s,baz=44,slow=38							
	comp=Z,14nm,0.9s							
DAVOX	**Davos/Dischmat**	**89.02**	**324**	P		**P**	**04 34 38.0**	**-0.2**
BGES	**Gesves**	**89.02**	**328**	*d*PcP		**P**	**04 34 38.5**	**+0.7**
VOG	**Valley Oaks Go**	**89.09**	**49**	P		**P**	**04 34 38.3**	**-0.1**
	baz=303							
RCHB	**Rochefort**	**89.11**	**328**	*d*PcP		**P**	**04 34 38.0**	**-0.2**
SMMC	**Simmler**	**89.22**	**50**	P		**P**	**04 34 40.1**	**+1.0**
	baz=303							
BMRD	**Maredsous**	**89.23**	**329**	*d*PcP		**P**	**04 34 38.9**	**+0.2**
ELK	**Elko**	**89.28**	**44**	LR	LR		05 16 01.9	
	comp=Z,97nm,18.1s,baz=298,slow=36							
ELK	**Elko**	**89.28**	**44**	P		**P**	**04 34 40.2**	**+0.7**
ELK	**Elko**	**89.28**	**44**	P		**P**	**04 34 40.2**	**+0.7**
ELK				pmax	pmax			
	comp=Z,45nm,1.4s							
CDF	**Champ du Feu**	**89.30**	**326**	*e*P		**P**	**04 34 39.8**	**+0.5**
CDF				pmax	pmax			
	comp=Z,62nm,1.5s							
GIVF	**Givet**	**89.34**	**328**	*e*P		**P**	**04 34 40.0**	**+0.7**
GIVF				pmax	pmax			
	comp=Z,57nm,1.5s							
PPT	**Papeete**	**89.38**	**110**	LR	LR		05 06 41.4	
	comp=Z,799nm,21.6s,baz=296,slow=30							
PPT2	**Papeete2**	**89.39**	**110**	*e*LR	LR		05 02 52.4	
	comp=Z,2μm,23.2s							
DOU	**Dourbes**	**89.45**	**328**	*d*PcP		**P**	**04 34 40.2**	**+0.4**
TIN	**Tinemaha, Big**	**89.46**	**48**	P		**P**	**04 34 40.0**	**-0.3**
	baz=304							
TUE	**Stuetta**	**89.50**	**324**	IAmb	IAmb		04 34 44.9	
	comp=Z,46nm,1.1s							
VES	**Vestal, Richgr**	**89.56**	**50**	P		**P**	**04 34 40.5**	**-0.1**
	baz=304							
PKM	**Mcpherson Peak**	**89.58**	**51**	P		**P**	**04 34 42.6**	**+1.6**
	baz=303,SNR=8.4							
TIP	**Timpagrande**	**89.62**	**315**	⇓P		**P**	**04 34 41.7**	**+0.8**
TIP	**Timpagrande**

comp=Z,44nm,1.1s
BW06 Boulder Array 91.42 40 P **P** 04 34 49.9 +0.4
baz=310,SNR=38
PD31 Pinedale Array 91.42 40 IAmb IAmb 04 34 54.3
comp=Z,40nm,1.1s
PDAR Pinedale Array 91.42 40 P **P** 04 34 50.0 +0.5
comp=Z,27nm,1.1s,baz=318,slow=2.0,SNR=53
comp=Z,27nm,1.1s
PSUT Pine Spring 91.44 45 IAmb IAmb 04 34 56.7
comp=Z,51nm,1.4s
LPL La Plagne 91.50 324 *e*P **P** 04 34 50.7 +0.9
LPL pmax pmax
comp=Z,10.0nm,0.9s
LPG La Plagne 91.51 324 *e*P **P** 04 34 51.5 +1.6
LPG pmax pmax
comp=Z,28nm,1.4s
RRX Edison Barstow 91.51 49 P **P** 04 34 49.0 -0.8
baz=305
JLU Jordanelle 91.67 42 IAmb IAmb 04 34 58.9
comp=Z,61nm,1.2s
NLU North Lily Min 91.69 43 IAmb IAmb 04 34 56.5
comp=Z,49nm,1.1s
SHPR Sheep Range 91.80 47 IAmb IAmb 04 34 56.3
comp=Z,33nm,1.2s
BNI Bardonecchia 91.84 324 **P** 04 34 52.0 +0.7
BNI Bardonecchia 91.84 324 P **P** 04 34 52.0 +0.7
BNI pmax pmax
comp=Z,30nm,1.4s
ELS Elsinore Mount 91.91 51 IAmb IAmb 04 34 56.1
comp=Z,46nm,1.4s
BBRC Big Bear Solar 91.91 50 P **P** 04 34 52.2 +0.3
baz=305
TUQ Turquoise Moun 91.91 48 P **P** 04 34 52.7 +0.9
baz=305,SNR=6.8
HEC Hector,Ludlow 91.98 49 P **P** 04 34 53.2 +1.2
baz=305,SNR=8.3
SSF Saint Saulge 92.08 327 *e*P **P** 04 34 52.3 +0.2
SSF pmax pmax
comp=Z,23nm,1.7s
MURC Murrieta 92.09 50 P **P** 04 34 53.1 +0.6
baz=305,SNR=6.8
VAE Valguarnera 92.11 314 LR LR 05 23 50.6
comp=Z,466nm,18.9s,baz=60,slow=40
TBI Tubuai 92.21 115 *e*LR LR 05 04 07.7
comp=Z,2µm,32.2s
TCRU Three Creeks R 92.28 44 IAmb IAmb 04 34 59.0
comp=Z,50nm,1.1s
CCUT Cedar City 92.34 45 P **P** 04 34 53.5 -0.4
AVF Avril sur Loir 92.34 327 *e*P **P** 04 34 54.5 +1.2
AVF pmax pmax
comp=Z,30nm,1.6s
GMRC Granite Mounta 92.46 49 P **P** 04 34 55.1 +0.8
baz=306,SNR=7.4
PFO Pinyon Flats O 92.59 50 LR LR 05 16 03.0
comp=Z,229nm,18.0s,baz=292,slow=35
PFO Pinyon Flats O 92.59 50 P **P** 04 34 56.2 +1.3
PFO Pinyon Flats O 92.59 50*ce*P **P** 04 34 56.7 +1.7
PFO pmax pmax
comp=Z,107nm,1.1s
PFO MLR MLR
comp=Z,559nm,18.0s
PFO Pinyon Flats O 92.59 50 P **P** 04 34 55.6 +0.7
baz=305,SNR=47
TMUT Trail Mountain 92.62 43 IAmb IAmb 04 35 00.2
comp=Z,40nm,1.3s
BELC Belle Mtn. Jos 92.69 50 P **P** 04 34 55.8 +0.4
baz=305,SNR=25
FLN La Foliniere 92.73 330 *e*P **P** 04 34 55.5 +0.4
FLN pmax pmax
comp=Z,77nm,1.5s
LODK Lodwar 92.87 275 IAMs_20 IAMs_20 05 20 37.6
comp=Z,426nm,19.0s
Q16A Castle Valley 92.88 43 P **P** 04 34 56.3 +0.1
ULM Lac du Bonnet 92.91 28 P **P** 04 34 55.8 -0.1
comp=Z,33nm,1.1s,baz=328,slow=5.6,SNR=20
ULM LR LR 05 20 21.4
comp=Z,415nm,19.2s,baz=338,slow=38
comp=Z,33nm,1.1s
ULM Lac du Bonnet 92.91 28 IAmb IAmb 04 34 59.6
comp=Z,42nm,1.1s
ULM Lac du Bonnet 92.91 28‖ *e*P **P** 04 34 57.3 +1.4
BAR Barrett 92.98 51 IAmb IAmb 04 35 01.1
comp=Z,46nm,1.1s
MONP2 Monument Peak 93.03 51 P **P** 04 34 57.9 +0.8
baz=305,SNR=36
KIBK Kibwezi 93.06 269 IAMs_20 IAMs_20 05 23 19.5
comp=Z,377nm,19.0s
MDND Maddock 93.08 31 P **P** 04 34 58.6 +1.9
baz=317
MDND Maddock 93.08 31 P **P** 04 34 57.1 +0.4
baz=317
TKX Tecate 93.08 51 IAmb IAmb 04 35 01.6
comp=Z,57nm,1.2s
NEE2 Needles Airpor 93.17 48 P **P** 04 34 57.1 -0.3
baz=306
IRM Iron Mountain 93.17 49 P **P** 04 34 58.6 +1.1
baz=306,SNR=22
K22A Casper 93.19 38 P **P** 04 34 58.7 +1.1
baz=312
K22A Casper 93.19 38 P **P** 04 34 58.2 +0.6
baz=312,SNR=12
KMBO Kilima Mbogo 93.23 270 P **P** 04 34 58.6 +0.3
comp=Z,2.6nm,0.9s,baz=64,slow=1.5,SNR=5.4
comp=Z,2.6nm,0.9s
KMBO Kilima Mbogo 93.23 270 P **P** 04 34 56.4 -1.9
KMBO Kilima Mbogo 93.23 270 IAMs_20 IAMs_20 05 23 12.5
comp=Z,622nm,20.0s
BC3 Big Chuckawall 93.26 50 P **P** 04 34 58.5 +0.6
baz=306,SNR=29
IKP In-Ko-Pah, Jac 93.38 51 P **P** 04 34 59.4 +0.8
baz=305,SNR=15
SWSC Sam W. Stewart 93.43 50 P **P** 04 34 59.3 +0.7
baz=305,SNR=5.8
RWWY Rawlins 93.45 39 IAmb IAmb 04 35 03.3
RWWY comp=Z,38nm,1.1s IAMs_20 IAMs_20 05 25 00.9
comp=Z,479nm,18.0s
W13A Hualapai Mount 93.46 48 IAmb IAmb 04 35 03.8
comp=Z,36nm,1.1s
E28A Huff 93.49 32 IAmb IAmb 04 35 03.2
comp=Z,60nm,1.4s
E28A Huff 93.49 32 P **P** 04 35 00.4 +1.7
baz=316
YUH Yuha Desert 93.51 51 IAmb IAmb 04 35 03.8
comp=Z,60nm,1.1s
RSSD Black Hills 93.54 36 **P** 04 34 59.9 +0.7
RSSD IAmb IAmb 04 35 04.2
comp=Z,49nm,1.3s
RSSD Black Hills 93.54 36 IAMs_20 IAMs_20 05 24 37.0
comp=Z,309nm,20.0s
RSSD Black Hills 93.54 36 P **P** 04 34 59.9 +0.7
RSSD pmax pmax
comp=Z,49nm,1.3s
RSSD Black Hills 93.54 36 P **P** 04 35 00.7 +1.5
baz=314
RSSD Black Hills 93.54 36 P **P** 04 34 59.5 +0.2
baz=314
PDMCI Parker Dam,Lak 93.76 48 P **P** 04 35 01.3 +1.1
baz=306,SNR=15
O20A White River Ci 93.86 41 IAmb IAmb 04 35 05.9
comp=Z,53nm,1.4s
O20A White River Ci 93.86 41 P **P** 04 35 00.4 -0.4
baz=310,SNR=14
GLA Glamis 94.03 50 P **P** 04 35 02.6 +1.1
baz=306,SNR=25
CASY Casey 94.17 188 P **P** 04 35 01.1 0.0
CASY IAmb IAmb 04 35 04.9
comp=Z,62nm,1.9s
ROSF Rostrenen 94.27 331 *e*P **P** 04 35 03.0 +0.8
ROSF pmax pmax
comp=Z,9.0nm,1.4s
CAF Calviac 94.30 326 *e*P **P** 04 35 04.1 +1.6
CAF pmax pmax
comp=Z,12nm,1.1s
RJF Les Rejaudoux 94.30 327 *e*P **P** 04 35 06.2 +3.8
RJF pmax pmax
comp=Z,23nm,1.4s
AGMN Agassiz Nation 94.41 29 IAMs_20 IAMs_20 05 20 35.4
comp=Z,343nm,21.0s
AGMN Agassiz Nation 94.41 29 P **P** 04 35 03.3 +0.4
baz=320
AGMN Agassiz Nation 94.41 29 P **P** 04 35 03.0 +0.1
baz=320
N23A Red Feather La 94.69 39 IAmb IAmb 04 35 12.8
comp=Z,47nm,1.2s
N23A Red Feather La 94.69 39 P **P** 04 35 04.8 +0.2
baz=312,SNR=23
PHWY Pilot Hill 94.69 39 IAMs_20 IAMs_20 05 24 21.7
comp=Z,322nm,20.0s
Y14A Wickenburg 94.74 48 IAmb IAmb 04 35 10.1
comp=Z,27nm,1.0s
WUAZ Wupatki 94.85 46 IAMs_20 IAMs_20 05 09 43.8
comp=Z,380nm,19.0s
WUAZ Wupatki 94.85 46 P **P** 04 35 06.2 +0.8
baz=308,SNR=39
PV15 Paradox Valley 94.88 42 P **P** 04 35 06.2 +0.7
PV15 IAmb IAmb 04 35 10.3
comp=Z,30nm,1.1s
113A Mohawk Valley, 94.92 50 IAmb IAmb 04 35 10.2
comp=Z,51nm,1.2s
SMCO Snowmass 95.23 41 IAmb IAmb 04 35 12.2
comp=Z,32nm,1.2s
B35A Bob, Littlefor 95.27 28 IAmb IAmb 04 35 10.5
comp=Z,40nm,1.4s
B35A Bob, Littlefor 95.27 28 P **P** 04 35 07.6 +0.9
baz=322
X16A Lo Mia Camp, P 95.48 47 IAmb IAmb 04 35 14.1
comp=Z,47nm,1.1s
MVCO Mesa Verde 95.59 43 IAmb IAmb 04 35 13.5
comp=Z,32nm,1.4s
MVCO IAMs_20 IAMs_20 05 24 13.4
comp=Z,312nm,19.0s
MVCO Mesa Verde 95.59 43 P **P** 04 35 10.0 +1.2
baz=310,SNR=6.3
ISCO Idaho Springs 95.61 40 P **P** 04 35 10.5 +1.6
baz=312
ISCO Idaho Springs 95.61 40 P **P** 04 35 09.7 +0.8
baz=312,SNR=6.7
SUSD Miller 95.88 33 P **P** 04 35 09.9 +0.3
baz=317
214A Organ Pipe Nat 96.05 50 P **P** 04 35 12.2 +1.5
baz=307,SNR=22
F33A 5 Mile Ranch, 96.09 31 IAmb IAmb 04 35 15.1
comp=Z,26nm,1.2s
F33A 5 Mile Ranch, 96.09 31 P **P** 04 35 11.2 +0.6
baz=320
W18A Petrified Fore 96.14 46 P **P** 04 35 12.3 +1.0
baz=309
S22A 4UR Ranch, Cre 96.25 42 P **P** 04 35 12.9 +1.0
baz=311,SNR=8.2
KEST Kesra 96.39 315 LR LR 05 25 02.4
comp=Z,886nm,18.5s,baz=352,slow=39
Q24A Divide 96.43 40 P **P** 04 35 13.0 +0.3
baz=312
EYMN Ely 96.51 27 IAmb IAmb 04 35 16.8
comp=Z,29nm,1.3s
EYMN Ely 96.51 27 IAMs_20 IAMs_20 05 25 09.7
comp=Z,435nm,19.0s
EYMN Ely 96.51 27 P **P** 04 35 11.2 -1.3
baz=323
OGNE Ogallala 96.81 37 P **P** 04 35 13.3 -0.7
baz=315
SDCO Great Sand Dun 97.04 41 IAMs_20 IAMs_20 05 27 56.3
comp=Z,300nm,18.0s
SDCO Great Sand Dun 97.04 41 P Pdif 04 35 16.9 +1.4
baz=312
SDCO Great Sand Dun 97.04 41 P Pdif 04 35 16.1 +0.6
baz=312,SNR=13
TUC Tucson 97.20 48 Pdif 04 35 17.0 +0.9
TUC IAmb IAmb 04 35 21.7
comp=Z,35nm,1.5s
TUC Tucson 97.20 48 IAMs_20 IAMs_20 05 11 20.4
comp=Z,534nm,21.0s
TUC Tucson 97.20 48 P Pdif 04 35 17.0 +0.9
TUC pmax pmax
comp=Z,35nm,1.5s
TUC Tucson 97.20 48 P Pdif 04 35 16.3 +0.2
baz=308
SCHQ Schefferville 97.21 10 LR LR 05 20 06.5
comp=Z,706nm,21.6s,baz=360,slow=36
ECSD EROS Data Cent 97.53 32 IAMs_20 IAMs_20 05 24 48.3
comp=Z,299nm,19.0s
ECSD EROS Data Cent 97.53 32 P Pdif 04 35 17.7 +0.4
baz=319
ECSD EROS Data Cent 97.53 32 P **P** 04 35 16.4 -0.8
baz=319
T25A Trinidad 98.09 41 P Pdif 04 35 20.3 +0.2
baz=313
ANMO Albuquerque 98.31 44 P Pdif 04 35 21.5 +0.3
ANMO IAMs_20 IAMs_20 05 16 54.3
comp=Z,302nm,20.0s
ANMO Albuquerque 98.31 44*ce*P Pdif 04 35 23.0 +1.9
ANMO pmax pmax
comp=Z,7.0nm,1.2s
ANMO Albuquerque 98.31 44 P Pdif 04 35 23.2 +2.1
baz=311
ANMO Albuquerque 98.31 44 P **P** 04 35 20.9 -0.2
baz=311
BGNE Belgrade 98.51 35 P **P** 04 35 20.8 -0.9
baz=318
Y22D IRIS ASSCAL I 98.59 45 IAMs_20 IAMs_20 05 27 40.8
comp=Z,388nm,19.0s
Y22D IRIS PASSCAL I 98.59 45 P **P** 04 35 21.2 -1.1
baz=311
Y22A Socorro 98.66 45 P Pdif 04 35 24.5 +1.8
baz=311
MBAR Mbarara 98.80 274 IAMs_20 IAMs_20 05 24 20.0
comp=Z,443nm,21.0s
COWI Conover 98.95 27 IAMs_20 IAMs_20 05 27 46.2
comp=Z,417nm,20.0s
121A Cookes Peak, D 99.04 47 P **Pdif** 04 35 26.6 +2.2
baz=310
121A Cookes Peak, D 99.04 47 Pdiff **Pdif** 04 35 24.1 -0.3
baz=310
CBKS Cedar Bluff 99.56 37 IAMs_20 IAMs_20 05 28 44.7
comp=Z,392nm,18.0s
CBKS Cedar Bluff 99.56 37 Pdiff **Pdif** 04 35 24.8 -1.6
baz=316
EPT El Paso 100.35 46 IAMs_20 IAMs_20 05 21 53.6
comp=Z,410nm,22.0s
SCIA State Center 100.54 32 Pdiff **Pdif** 04 35 29.2 -1.4
baz=322
PBRG Braganca 100.88 329 *e*PP **PP** 04 39 42.3 +3.0
KSU1 Kansas State U 101.01 35 IAMs_20 IAMs_20 05 30 02.7
comp=Z,367nm,19.0s
KSU1 Kansas State U 101.01 35 Pdiff **Pdif** 04 35 32.4 -0.3
baz=319
JFWS Jewell Farm 101.08 29 Pdiff **Pdif** 04 35 32.7 -0.3
baz=324
MNTX Cornudas Mount 101.12 46 Pdif **Pdif** 04 35 34.4 +0.9
MNTX Cornudas Mount 101.12 46 Pdiff **Pdif** 04 35 33.1 -0.3
baz=312
ESDC Sonseca Array 101.19 326 P **Pdif** 04 35 33.2 -0.4
comp=Z,2.2nm,1.1s,baz=42,slow=4.0,SNR=9.7
ESDC PP **PP** 04 39 40.8 -0.9
comp=Z,2.9nm,1.0s,baz=40,slow=7.0,SNR=8.7
ESDC Sonseca Array 101.19 326 **Pdif** 04 35 33.5 -0.1
MSTX Muleshoe 101.22 43 Pdiff **Pdif** 04 35 32.9 -1.1
baz=314
AMTX Amarillo 101.25 41 Pdiff **Pdif** 04 35 33.0 -1.1
baz=314
PGAV Gavieira, Arco 101.45 330 *e*LR LR 05 13 59.9
comp=Z,1µm,16.0s
MVO Moncorvo 101.52 329 *e*PP **PP** 04 39 45.3 +1.2
MVO Moncorvo 101.52 329 *e*LR LR 05 17 31.0
comp=Z,3µm,18.0s
POLO Lamas de Olo 101.71 329 *e*PP **PP** 04 39 47.4 +1.9
MTE Manteigas 102.36 328 *e*PP **PP** 04 39 55.1 +4.6
MTE Manteigas 102.36 328 *e*LR LR 05 18 09.1
comp=Z,3µm,18.0s
L44A Lake County Fo 102.67 28 Pdiff **Pdif** 04 35 39.2 -0.9
baz=326
COI Coimbra 102.92 329 *e*PP **PP** 04 40 01.7 +7.2
WMOK Wichita Mounta 103.03 40 Pdiff **Pdif** 04 35 41.3 -0.6
baz=316
PMRV Marv??o 103.06 328 *e*PP **PP** 04 40 03.0 +7.4
PMRV Marv??o 103.06 328 *e*LR LR 05 18 31.8
comp=Z,2µm,20.0s
PCAS Casmilo, Conde 103.08 329 *e*PP **PP** 04 39 59.3 +3.5
HDIL Hopedale 103.40 30 Pdiff **Pdif** 04 35 42.6 -0.8
baz=324
PESTR Estremoz 103.59 327 *e*PP **PP** 04 40 01.4 +1.8
PSBE So Bento 103.65 329 *e*PP **PP** 04 40 07.8 +7.8
PMTG Montargil 103.74 328 *e*PP **PP** 04 40 05.8 +5.1
TXAR Lajitas Array 103.80 47 Pdiff **Pdif** 04 35 46.3 +0.8
comp=Z,2.1nm,1.0s,baz=266,slow=3.4,SNR=11
TXAR PP **PP** 04 40 00.6 -1.1
comp=Z,3.5nm,1.3s,baz=302,slow=5.2,SNR=3.9
TXAR PKKPbc **PKKPbc** 04 51 35.2 -0.9
comp=Z,0.4nm,0.7s,baz=146,slow=5.0,SNR=5.3
TXAR Lajitas Array 103.80 47 Pdif **Pdif** 04 35 45.2 -0.3
TUL1 Leonard 103.83 37 IAMs_20 IAMs_20 05 28 24.4
comp=Z,385nm,19.0s
TUL1 Leonard 103.83 37 Pdiff **Pdif** 04 35 45.2 -0.2
baz=319
AAM Ann Arbor 104.28 25 IAMs_20 IAMs_20 05 31 20.1
comp=Z,485nm,18.0s
PMAFR Mafra 104.32 329 *e*PP **PP** 04 40 07.8 +2.8
CCM Cathedral Cave 104.50 33 IAMs_20 IAMs_20 05 28 37.7
comp=Z,370nm,21.0s
PNCL Nicolau / Gran 104.64 328 *e*PP **PP** 04 40 03.3 -4.1
MESJ Messejana 104.71 327 *e*PP **PP** 04 40 08.4 +0.5
PCVE Castro Verde 104.78 327 *e*PP **PP** 04 40 04.4 -4.1
PVAQ Vaqueiros 104.80 327 *e*PP **PP** 04 40 11.0 +2.3
PVAQ Vaqueiros 104.80 327 *e*LR LR 05 19 05.5
comp=Z,1µm,18.0s
PQI Presque Isle 104.85 13 IAMs_20 IAMs_20 05 23 51.2
comp=Z,679nm,22.0s
PBDV Barranco-do-Ve 105.04 327 *e*PP **PP** 04 40 13.7 +3.3
LONY Lake Ozonia 105.21 18 Pdiff **Pdif** 04 35 50.4 -1.0
baz=337
MORF Marmelete 105.34 327 *e*PP **PP** 04 40 12.9 +0.3
MORF Marmelete 105.34 327 *e*PP **PP** 04 40 10.3 -2.4
PFVI Vila Bisbo 105.56 327 *e*PP **PP** 04 40 14.2 0.0
VNDA Vanda 105.95 173 PP **PP** 04 40 18.2 +0.9
comp=Z,2.7nm,1.1s,baz=289,slow=6.4,SNR=5.9
MIAR Mount Ida 106.04 37 IAMs_20 IAMs_20 05 32 58.0
comp=Z,389nm,18.0s
P49A Miami Univ. Ec 106.21 28 IAMs_20 IAMs_20 05 32 48.5
comp=Z,506nm,18.0s
ACSO Alum Creek Sta 106.32 26 IAMs_20 IAMs_20 05 33 13.1
comp=Z,466nm,19.0s
X40A Basin Creek Fa 106.48 36 IAMs_20 IAMs_20 05 32 52.5
comp=Z,314nm,19.0s
435B Jarrell 106.58 42 IAMs_20 IAMs_20 05 34 40.8
comp=Z,376nm,19.0s
P52A Corning 107.16 26 IAMs_20 IAMs_20 05 32 28.4
comp=Z,417nm,19.0s
NATX Nacogdoches 107.55 39 IAMs_20 IAMs_20 05 34 41.4
comp=Z,404nm,19.0s
WVT Waverly 107.67 32 IAMs_20 IAMs_20 05 31 03.5
comp=Z,499nm,18.0s
SSPA Standing Stone 107.82 22 IAMs_20 IAMs_20 05 29 17.4
comp=Z,506nm,21.0s
MCWV Mont Chateau 108.00 24 IAMs_20 IAMs_20 05 32 07.4
comp=Z,594nm,19.0s
OXF Oxford 108.21 34 IAMs_20 IAMs_20 05 34 28.1
comp=Z,329nm,20.0s
HKT Hockley 108.22 41 IAMs_20 IAMs_20 05 32 16.9
comp=Z,527nm,20.0s
TZTN Tazewell 109.23 28 IAMs_20 IAMs_20 05 34 12.6
comp=Z,519nm,18.0s
BLA Blacksburg 109.93 26 IAMs_20 IAMs_20 05 35 38.7
comp=Z,510nm,18.0s
LRAL Lakeview Retre 110.58 33 IAMs_20 IAMs_20 05 35 28.7
comp=Z,460nm,18.0s
GOGA Godfrey 111.92 30 IAMs_20 IAMs_20 05 35 50.9
comp=Z,640nm,18.0s
PMPST Porto Santo, M 112.38 330 *e*PP **PP** 04 41 08.8 +5.0
CNNC Cliffs of the 112.63 25 IAMs_20 IAMs_20 05 30 41.1
comp=Z,423nm,18.0s
PMAR Madeira 112.94 330 *e*PP **PP** 04 41 07.7 -0.3
PMOZ Porto Moniz, M 112.98 331 *e*LR LR 05 19 08.2
comp=Z,674nm,18.0s
BOSA Boshof 114.75 249 PKP PKPdf 04 40 23.6 -0.3
comp=Z,1.8nm,0.8s,baz=142,slow=17,SNR=3.8
TORD Torodi Ar. Bea 116.14 302 PKP **PKPdf** 04 40 25.6 -1.3
comp=Z,0.9nm,0.7s,baz=35,slow=2.5,SNR=8.3
TORD PP **PP** 04 41 30.7 -0.7
comp=Z,4.7nm,1.1s,baz=62,slow=5.2,SNR=7.7
TORD PKKPab **PKKPbc** 04 50 56.9 +0.9
comp=Z,3.2nm,1.0s,baz=260,slow=2.5,SNR=5.9
TORD Torodi Ar. Bea 116.14 302 **PKPdf** 04 40 26.0 -0.9
QSPA South Pole Sui 116.74 180 **PKPdf** 04 40 26.2 -0.4
DWPF Disney Wildern 117.33 32 IAMs_20 IAMs_20 05 39 19.2
comp=Z,514nm,18.0s
NVL N'lazarevskaya 124.51 201 *e*PKIKP **PKPdf** 04 40 41.2 0.0
NVL pmax pmax
comp=Z,13nm,1.0s
TROLL Troll, Antarti 126.77 198 PKPdf **PKiKP** 04 40 46.1 -0.2
GRTK Grand Turk 127.53 25 IAMs_20 IAMs_20 05 42 17.6
comp=Z,560nm,20.0s
SNAA Sanae 128.39 197 PKPdf **PKPdf** 04 40 48.3 -0.4
SNAA Sanae 128.39 197 **PKPdf** 04 40 49.0 +0.3
SNAA Sanae 128.39 197‖ *i*PKIKP **PKiKP** 04 40 49.5 +0.1
SNAA pmax pmax
comp=Z,39nm,1.7s
SNAA MLR MLR
comp=Z,291nm,20.0s
BELA Belgrano 2 128.54 184 **PKPdf** 04 40 48.4 -0.4
SDDR Presa de Saban 129.75 27 IAMs_20 IAMs_20 05 40 26.7
comp=Z,419nm,20.0s
VNA3 Neumayer Olymp 130.38 196 PKPdf **PKPdf** 04 40 52.9 +0.4
VNA1 Neumayer--Stat 130.42 197 PKPdf **PKiKP** 04 40 54.6 +1.2
RIMA Rio Macho 130.68 47 PKPdf **PKPdf** 04 40 52.0 -3.0
SJG San Juan 132.43 21 IAMs_20 IAMs_20 05 49 41.2
comp=Z,282nm,22.0s
SMRT St. Maarten 133.40 18 IAMs_20 IAMs_20 05 27 54.6
comp=Z,196nm,20.0s
BCIP Isla Barro Col 133.68 43 PKPdf **PKPdf** 04 40 58.9 -1.5
BCIP IAMs_20 IAMs_20 05 47 17.1
comp=Z,277nm,22.0s
BCIP Isla Barro Col 133.68 43 PKIKP **PKPdf** 04 40 58.9 -1.5
FDF Fort de France 137.08 16 IAMs_20 IAMs_20 05 51 51.9
comp=Z,344nm,20.0s
DBBC Dabelba 137.56 41 *e*P **PKiKP** 04 41 10.7 +0.9
OCAC Ocana 138.17 36 *e*P **PKPdf** 04 41 09.3 +0.4
CBUC Ciudad Bolivar 138.59 42 *e*P **PKPdf** 04 41 13.4 +1.5
BRRC Barranca, Sant 138.90 38 *e*P **PKPdf** 04 41 10.4 +0.3
PTBC PUERTO BERRIO 138.95 39 *e*P **PKPdf** 04 41 08.8 -1.4
SDV Santo Domingo 138.98 33 **PKPdf** 04 41 06.1 -4.4
SDV Santo Domingo 138.98 33 *e*P **PKPdf** 04 41 10.1 -0.4
SDV Santo Domingo 138.98 33 *e*P **PKPdf** 04 41 09.6 -0.9
PLMC San Jos del P 139.19 43 *e*P **PKPdf** 04 41 06.7 -4.1
GUY2C Guyana, Caldas 139.49 42 *e*P PKPpre 04 41 04.6
YOTC Yotoco, Valle 139.87 44 *e*P PKPpre 04 41 01.8
BAUV El Baul 140.11 29 PKPpre 04 41 04.1
RUSC La Rusia 140.25 38 *e*P **PKPdf** 04 41 12.7 -0.5
ROSC El Rosal 140.41 41 PKP **PKPdf** 04 41 11.8 -1.7
comp=Z,3.7nm,0.4s,baz=84,slow=10,SNR=2.5
ROSC El Rosal 140.41 41 **PKPdf** 04 41 11.7 -1.7
ROSC El Rosal 140.41 41 *e*P **PKiKP** 04 41 16.9 +1.0
POPC Popayan, Colom 140.78 46 *e*P **PKPdf** 04 41 10.2 -3.7
CHIC Chingaza 140.92 40 *e*P **PKPdf** 04 41 14.6 +0.3
PMSA Palmer Station 141.09 170 *e*P **PKPdf** 04 41 10.8 -1.7
OTAV Otavalo 141.31 50 PKPdf **PKPdf** 04 41 13.6 -1.5
OTAV Otavalo 141.31 50 PKIKP **PKPdf** 04 41 13.6 -1.5
OTAV Otavalo 141.31 50‖ *e*P **PKPdf** 04 41 11.8 -3.3
OTAV Otavalo 141.31 50 *e*P **PKPdf** 04 41 14.0 -1.1
ARNL Arenillas 142.77 57 PKPpre PKPpre 04 41 12.4
BOSC San Juan Bosco 143.66 54 PKPdf PKPbc 04 41 16.6 +0.2
PTLC Puerto Leguiza 143.79 46 *e*P PKPbc 04 41 16.5 0.0
BOAV Boa Vista 148.99 21 *e*P **PKPdf** 04 41 26.5 -1.2
TBTG Tabatinga, AM 150.23 44 *e*P **PKPdf** 04 41 28.8 -0.9
NNA Nana 150.47 65 PKPdf **PKPdf** 04 41 30.0 0.0
NNA Nana 150.47 65 PKIKP **PKPdf** 04 41 30.0 0.0
CZSB Cruzeiro do Su 150.97 53 *e*P **PKPdf** 04 41 30.0 -0.8
MCPB Macapa, AP 153.45 5 *e*P **PKPdf** 04 41 32.0 -2.5
MACA Manacapuru-AM 154.09 26 *e*P **PKPdf** 04 41 33.1 -2.3
MALB Monte Alegre 154.64 11 *e*P **PKPdf** 04 41 34.5 -1.7
TMAB Tom-Au,PA,Br 155.49 356 *e*P **PKPdf** 04 41 34.9 -2.5
ETMB Extrema 156.88 46 *e*P **PKPdf** 04 41 36.9 -2.2
NBMA Muriti-CE 157.91 330 *e*P **PKPdf** 04 41 36.0 -4.6
PLCA Paso Flores 157.97 134 PKP **PKPdf** 04 41 40.9 +1.1
comp=Z,3.9nm,1.1s,baz=113,slow=3.8,SNR=2.8
PLCA PKPab **PKPab** 04 42 14.1 +1.0
comp=Z,21nm,1.1s,baz=254,slow=3.8,SNR=9.6
PLCA Paso Flores 157.97 134 *e*P **PKPdf** 04 41 36.7 -3.2
SAML Samuel 157.99 38 **PKPdf** 04 41 40.3 -0.2
SAML Samuel 157.99 38 PKIKP **PKPdf** 04 41 40.3 -0.2
PRPB Parauapebas 159.32 0 *e*P **PKPdf** 04 41 39.2 -3.0
NPGB Novo Progresso 159.47 16 *e*P **PKPdf** 04 41 40.1 -2.2
LPAZ La Paz 159.86 62 PKP **PKPdf** 04 41 45.1 +1.7
comp=Z,14nm,1.3s,baz=358,slow=2.9,SNR=12
LPAZ PKPab **PKPab** 04 42 22.2 -0.3
comp=Z,9.0nm,0.9s,baz=327,slow=7.5,SNR=7.8
LPAZ La Paz 159.86 62 **PKPdf** 04 41 43.2 -0.2
LPAZ La Paz 159.86 62 PKIKP **PKPdf** 04 41 43.2 -0.2
GO01 Chusmiza 160.69 72 **PKPdf** 04 41 44.6 +0.5
SMTB Santa Maria do 161.88 353 *e*P **PKPdf** 04 41 41.9 -3.1
VILB Vilhena 162.93 37 *e*P **PKPdf** 04 41 43.0 -2.9
CLDB Colider 162.99 21 *e*P **PKPdf** 04 41 43.0 -3.0
PDRB Porto dos Gac 163.35 25 *e*P **PKPdf** 04 41 45.8 -0.5
GDU01 Guandu, BA 163.77 322 *e*P **PKPdf** 04 41 43.5 -3.2
VBST Vila Bela da S 164.32 40 *e*P **PKPdf** 04 41 46.3 -0.9
SDBA SAO DESIDERIO 164.83 342 *e*P **PKPdf** 04 41 46.0 -1.7
SNDB Serra Nova Dou 165.01 6 *e*P **PKPdf** 04 41 46.9 -1.0
PEXB Peixe 165.16 355 *e*P **PKPdf** 04 41 46.9 -1.1
PTLB Pontes e Lacer 165.56 39 *e*P **PKPdf** 04 41 47.5 -0.8

GUA01	Guaratinga, BA	166.18	316	*e*P		PKPdf	04 41 46.5	-2.3
NBRS	Nobres	166.19	25	*e*P		PKPdf	04 41 47.2	-1.6
ABR01	Abrolhos, BA	166.46	309	*e*P		PKPdf	04 41 46.8	-2.1
PTET	Porto Estrela	166.53	33	*e*P		PKPdf	04 41 47.5	-1.6
JANB	Januaria	167.13	336	*e*P		PKPdf	04 41 47.2	-2.4
NAN01	Guarapari, ES	167.33	314	*e*P		PKPdf	04 41 47.2	-2.4
SALV	Santo Antonio	167.66	28	*e*P		PKPdf	04 41 49.2	-0.7
POCN	Pocone	167.81	34	*e*P		PKPdf	04 41 49.0	-0.9
BSFB	Barra de Sao F	168.51	313	*e*P		PKPdf	04 41 48.7	-1.6
RIB01	Linhares ES	168.55	310	*e*P		PKPdf	04 41 48.5	-1.9
ARAG	Araguaiana, MT	168.62	10	*e*P		PKPdf	04 41 48.7	-1.8
BDFB	Brasilia	168.62	352	PKP		PKPdf	04 41 51.0	+0.3
	comp=Z,1.3nm,0.6s,baz=40,slow=6.3,SNR=4.0							
BDFB	Brasilia	168.62	352	PKIKP		PKPdf	04 41 51.0	+0.3
BDFB	Brasilia	168.62	352	*e*P		PKPdf	04 41 47.9	-2.8
SJMB	Sao Joao De Ma	168.64	315	*e*P		PKPdf	04 41 48.5	-2.0
ALF01	Guarapari-ES	169.64	306	*e*P		PKPdf	04 41 49.0	-2.0
CPUP	Villa Florida	173.14	86	PKP		PKPdf	04 41 53.8	+1.2
	comp=Z,9.8nm,1.2s,baz=72,slow=2.5,SNR=4.8							
CPUP				PKPab		pPKPab	04 43 22.5	-1.8
	comp=Z,9.9nm,1.1s,baz=277,slow=1.5,SNR=3.8							
CPUP				PP		PP	04 47 12.5	+0.1
	comp=Z,5.8nm,1.1s,baz=20,slow=5.8,SNR=3.1							
CPUP	Villa Florida	173.14	86			PKPdf	04 41 51.5	-1.1
ITQB	Itaqui	173.32	115	*e*P		PKPdf	04 41 49.6	-3.0
PLTB	Pedras Altas	174.13	145	*e*P		PKPdf	04 41 48.8	-4.0
PCMB	Pacaembu	174.47	15	*e*P		PKPdf	04 41 50.3	-3.0

IDC 13 04:22:46.7±12.0, 36.63N×72.68E, h178km±82km, mb3.0/1, mbtmp3.3/5, Error ellipse: s-maj=213.6km s-min=44.2km az=143.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**6.16**	**13**	P			Pn	04 24 16.2	+0.3
	2.5nm,0.4s,baz=207,slow=11,SNR=3.8								
AAK				S			Sn	04 25 17.3	-8.8
	4.2nm,0.4s,baz=341,slow=20,SNR=11								
MKAR	**Makanchi Array**	**12.43**	**32**	P			Pn	04 25 37.0	-0.5
	0.1nm,0.3s,baz=236,slow=10,SNR=1.9								
KURBB	**Kurchatov Arra**	**14.61**	**15**	P			Pn	04 26 04.5	-0.3
	0.2nm,0.5s,baz=204,slow=11,SNR=3.4								
ZALV	**Zalesovo Beam**	**19.26**	**22**	P			P	04 26 57.6	+0.3
	0.9nm,0.3s,baz=208,slow=11,SNR=4.8								
TORD	**Torodi Ar. Bea**	**67.07**	**270**	P			P	04 33 21.1	0.0
	0.2nm,0.4s,baz=51,slow=6.6,SNR=8.1								
	0.2nm,0.4s								

MAN 13 04:26:18.4, 16.26N×120.87E, h25km, mb3.7, ML2.5, MS2.0, Luzon

*IDC **13** 04:27:01.9±0.5, 26.95N×130.28E, h0km, mb4.9/35, mbtmp4.9/38, ML4.1/3, Error ellipse: s-maj=13.8km s-min=11.0km az=107.0*
*BJI **13** 04:27:02.1±0.0, 26.99N×130.25E, h6km, mb4.8/50, mB5.4/19, Ms5.5/24, Ms7 5.2/24*
*MOS **13** 04:27:03.6±1.1, 26.86N×130.23E, h25km, mb5.3/56, Error ellipse: s-maj=13.6km s-min=6.2km az=80.4*
*NIED **13** 04:27:04.2, 26.94N×130.26E, h56km, MW5.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-7.49; $M_{\theta\theta}$3.08; $M_{\phi\phi}$4.41; $M_{r\theta}$1.53; $M_{\theta\phi}$2.17; $M_{\phi r}$-1.96; Fault plane solution: $M_0$7.09000×10^{16} NP1: ϕ_s229.00000°, δ44.00000°, λ-70.00000°. NP2:ϕ_s22.00000°, δ50.00000°, λ-108.00000°.*
*NEIC **13** 04:27:04±1.9, 26.93N±0.08×130.25E±0.08, h10km±1km, mb5.3/315 Error ellipse: s-maj=14.2km s-min=10.1km az=141.0*
*JMA **13** 04:27:04.2±0.1, 26.9N±0.5×130.3E±0.5, h56km, MV5.2/24, MW5.3/24, NEAR MINAMI-DAITOJIMA IS*
JMA Felt I J1 at NEAR MINAMI-DAITOJIMA IS.
*GCMT **13** 04:27:08.0±0.2, 26.96N±0.01×130.25E±0.02, h12km, MW5.3/137, Moment Tensor Solution. s57, c77; s137, c232; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.96±.04; $M_{\theta\theta}$0.46±.02; $M_{\phi\phi}$0.50±.03; $M_{r\theta}$0.16±.06; $M_{\theta\phi}$0.52±.01; $M_{\phi r}$0.02±.06; Best double couple: $M_0$0.99100×10^{17} NP1:ϕ_s38.00000°, δ42.00000°, λ-99.00000°. NP2:ϕ_s230.00000°, δ49.00000°, λ-82.00000°. Principal axes: T 1.0070, Plg4.0000°, Azm314.0000°; N -0.0310, Plg6.0000°, Azm45.0000°; P -0.9750, Plg83.0000°, Azm193.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 04:27:04.5±0.6, 26.93N±0.03×130.27E±0.03, h16km±3km, n699, σ1^{s}42/630, mb5.2/263, MS5.2/12, 76C-42D, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JKDJ	**Kitadaitoujima**	**1.34**	**136**	P			**Pn**	**04 27 27.1**	**-1.4**
JKDJ					*e*S		**Sn**	**04 27 43.5**	**-2.5**
JMZ	**Minamidaito 2**	**1.40**	**142**	*e*P			**Pn**	**04 27 28.0**	**-1.3**
JZK	**Kikaishima**	**1.41**	**349**	P			**Pn**	**04 27 28.6**	**-0.8**
JTK	**Tokunoshima**	**1.45**	**306**	P			**Pn**	**04 27 28.5**	**-1.5**
JOKE	**Okinoerabujima**	**1.57**	**286**	*i* P			**Pn**	**04 27 30.4**	**-1.3**
JOKE					*e*S		**Sn**	**04 27 49.0**	**-2.7**
JAM	**Amami Oshima**	**1.59**	**338**	P			**Pn**	**04 27 30.2**	**-1.7**
JAM					*e*S		**Sn**	**04 27 49.8**	**-2.3**
JAM	**Amami Oshima**	**1.59**	**338**	A			A	04 27 30.2	
	comp=N,51nm,2.0s								
JYRO	**Yoronjima**	**1.62**	**274**	*i* P			**Pn**	**04 27 31.1**	**-1.3**
JYRO					*e*S		**Sn**	**04 27 49.7**	**-3.3**
JAMN	**Amaminishikomi**	**1.63**	**324**	P			**Pn**	**04 27 30.6**	**-1.9**
JAMN					*e*S		**Sn**	**04 27 50.4**	**-2.7**
JAMN	**Amaminishikomi**	**1.63**	**324**	A			A	04 27 30.6	
	comp=E,27nm,1.8s								
JOW	**Kunigami**	**1.78**	**267**	Pn			**Pn**	**04 27 33.6**	**-1.0**
	650nm,0.3s,baz=128,slow=25,SNR=37								
JOW				Sn			**Sn**	**04 27 54.5**	**-2.4**
	2μm,0.3s,baz=255,slow=29,SNR=23								
JOW	**Kunigami**	**1.78**	**267**	*i* P			**Pn**	**04 27 33.5**	**-1.0**
JOW					*e*S		**Sn**	**04 27 54.6**	**-2.4**
JOW	**Kunigami**	**1.78**	**267**	A			A	04 27 33.5	
	comp=E,22nm,0.7s,comp=E,35nm,1.5s								
JNTH	**Nagotoyohara**	**2.05**	**259**	*i* P			**Pn**	**04 27 36.7**	**-1.5**
JNTH					*e*S		**Sn**	**04 27 59.9**	**-3.6**
JIH	**Iheya**	**2.06**	**273**	*e*P			**Pn**	**04 27 37.2**	**-1.1**
JIH					*e*S		**Sn**	**04 28 02.2**	**-1.5**
JJT3	**Tamagusuku3**	**2.36**	**251**	P			**Pn**	**04 27 41.6**	**-0.9**
JJT3					*e*S		**Sn**	**04 28 09.0**	**-2.2**
JTAJ	**Takarajima**	**2.41**	**337**	P			**Pn**	**04 27 41.0**	**-2.2**
JTAJ					*e*S		**Sn**	**04 28 08.2**	**-4.1**
JAGN	**Aguni-jima**	**2.73**	**264**	*i* P			**Pn**	**04 27 46.4**	**-1.2**
JAGN					*e*S		**Sn**	**04 28 17.1**	**-3.1**
JNN	**Nakanoshima**	**2.92**	**353**	*e*P			**Pn**	**04 27 49.0**	**-1.2**
JNN					*e*S		**Sn**	**04 28 21.4**	**-3.7**
JKE	**Kume jima 2**	**3.17**	**260**	P			**Pn**	**04 27 51.9**	**-1.8**
JKE					*e*S		**Sn**	**04 28 27.1**	**-4.2**
JYAK	**Yakushimahirau**	**3.30**	**4**	P			**Pn**	**04 27 54.1**	**-1.5**
JYAK					*e*S		**Sn**	**04 28 30.9**	**-3.6**
JMTN	**Minamitane**	**3.50**	**9**	*e*P			**Pn**	**04 27 56.9**	**-1.4**
JMTN					*e*S		**Sn**	**04 28 36.1**	**-3.2**
JKC	**Kuchinoerabu**	**3.52**	**359**	*e*P			**Pn**	**04 27 57.4**	**-1.1**
JKC					*e*S		**Sn**	**04 28 35.8**	**-4.0**
JSU	**Suzuyama**	**4.56**	**2**	Pn			**Pn**	**04 28 12.0**	**-0.9**
JNU	**Nakatsue**	**6.19**	**5**	Pn			**Pn**	**04 28 34.2**	**-1.0**
	baz=343,slow=20								
JNU				Sn			**Sn**	**04 29 40.4**	**-5.4**
	baz=232,slow=19								
YOJ	**Yonaguni jima**	**6.99**	**251**	Pn			**Pn**	**04 28 43.4**	**-2.8**
YOJ	**Yonaguni jima**	**6.99**	**251**	P			**Pn**	**04 28 43.4**	**-2.8**
JTU	**Tsushima**	**7.61**	**355**	Pn			**Pn**	**04 28 54.7**	**+0.1**
NACB	**Ninganchiao**	**8.30**	**253**	Pn			**Pn**	**04 29 00.2**	**-4.0**
YHNB	**Yeheng**	**8.32**	**256**	Pn			**Pn**	**04 29 02.2**	**-2.4**
JHS	**Saijyo**	**8.41**	**16**	Pn			**Pn**	**04 29 05.6**	**-0.1**
SSLB	**Suanglung**	**8.98**	**252**	Pn			**Pn**	**04 29 10.3**	**-3.3**
TJN	**Taejon**	**9.74**	**346**	Pn			**Pn**	**04 29 25.4**	**+1.6**
TJN	**Taejon**	**9.74**	**346**		*e*P		**Pn**	**04 29 26.3**	**+2.4**
KSCHJ	**Chungju**	**10.10**	**349**	Pn			**Pn**	**04 29 29.8**	**+0.9**
INU	**Inuyama**	**10.19**	**33**	Pn			**Pn**	**04 29 29.5**	**-0.5**
JHJ	**Hachijo jima 2**	**10.29**	**51**	Pn			**Pn**	**04 29 32.6**	**+1.1**
	48nm,0.3s,baz=197,slow=22,SNR=6.8								
	155nm,0.4s								
JGF	**Kuroka**	**10.56**	**33**	Pn			**Pn**	**04 29 34.5**	**-0.7**
JCJ	**Chichijima**	**10.63**	**86**	Pn			**Pn**	**04 29 32.9**	**-3.2**
	6.7nm,0.3s,baz=270,slow=20,SNR=1.8								
KSAR	**Wonju Array Be**	**10.67**	**350**	Pn			**Pn**	**04 29 37.2**	**+0.5**
KSAR	**Wonju Array Be**	**10.67**	**350**	P			**Pn**	**04 29 37.2**	**+0.5**
KSRS	**Korea Array**	**10.68**	**350**	Pn			**Pn**	**04 29 38.3**	**+1.6**
	1.8nm,0.3s,baz=168,slow=14,SNR=61								
KS19	**Wonju Array Si**	**10.73**	**350**	Pn			**Pn**	**04 29 37.2**	**-0.3**
INCN	**Inchon**	**10.96**	**345**	Pn			**Pn**	**04 29 43.1**	**+2.4**
INCN	**Inchon**	**10.96**	**345**	P			**Pn**	**04 29 43.1**	**+2.4**
NJ2	**Nanjing**	**11.18**	**300**	*e*P			**Pn**	**04 29 43.5**	**-0.1**
NJ2						pmax	pmax		
	comp=Z,11nm,0.5s								
SEHB	**SEOHWA**	**11.43**	**352**	Pn			**Pn**	**04 29 48.7**	**+1.6**
MAJO	**Matsushiro**	**11.72**	**33**	Pn			**Pn**	**04 29 51.5**	**+0.5**
MAJO	**Matsushiro**	**11.72**	**33**	P			**Pn**	**04 29 51.5**	**+0.5**
MJAR	**Matsushiro Arr**	**11.72**	**33**	Pn			**Pn**	**04 29 50.5**	**-0.6**
	0.5nm,0.3s,baz=196,slow=12,SNR=14								
	2.5nm,0.4s								
MJAR	**Matsushiro Arr**	**11.72**	**33**	Pn			**Pn**	**04 29 52.9**	**+1.8**
MJAR	**Matsushiro Arr**	**11.72**	**33**	P			**Pn**	**04 29 52.9**	**+1.8**
MJB9	**Matsu-Tunnel**	**11.72**	**33**	Pn			**Pn**	**04 29 51.6**	**+0.6**
WHN	**Wuhan**	**14.42**	**288**	⇓P			**P**	**04 30 35.5**	**+0.8**
WHN						pmax	pmax		
	comp=Z,190nm,1.0s								
VLA	**Vladivostok**	**16.21**	**4**	⇑*e*P			**P**	**04 30 55.6**	**+1.1**
VLA						pmax	pmax		
	comp=Z,183nm,2.0s								
HNS	**HongShan**	**16.79**	**312**	⇑P			**P**	**04 31 00.5**	**-0.5**
HNS						pmax	pmax		
	comp=Z,150nm,1.1s								
LYN	**LuoYang**	**17.07**	**301**	⇓P			**Pn**	**04 31 02.3**	**-0.1**
LYN						pmax	pmax		
	comp=Z,80nm,1.0s								
LYN						pmax	pmax		
	comp=Z,2μm,6.3s								
LYN						LR	LR		
	comp=Z,11μm,11.2s								
LYN						LR	LR		
	comp=Z,16μm,11.0s								
LYN						LR	LR		
	comp=Z,18μm,11.6s								
CN2	**Changchun**	**17.28**	**348**	*e*P			**Pn**	**04 31 05.3**	**+0.3**
CN2						PP	**pwP**	**04 31 19.8**	**+3.4**
CN2						LR	LR		
	comp=Z,3μm,16.0s								
CN2						LR	LR		
	comp=Z,10μm,16.0s								
CN2						LR	LR		
	comp=Z,6μm,17.0s								
USA0B	**Ussuriysk Arra**	**17.29**	**4**	P			**Pn**	**04 31 05.7**	**+0.6**
USA0B	**Ussuriysk Arra**	**17.29**	**4**	P			**Pn**	**04 31 05.7**	**+0.6**
USA0B						pmax	pmax		
	comp=Z,111nm,1.4s								
USRK	**Ussuriysk Ar.**	**17.29**	**4**	P			**P**	**04 31 06.2**	**-0.2**
	comp=Z,2.0nm,0.3s,baz=171,slow=7.1,SNR=16								
	comp=Z,26nm,0.8s								
USRK	**Ussuriysk Ar.**	**17.29**	**4**	P			**Pn**	**04 31 05.0**	**-0.1**
BJT	**Baijiatuan**	**17.54**	**322**	IAmb			IAmb	04 31 22.4	
	comp=Z,176nm,0.9s								
BJI	**Beijing**	**17.55**	**322**	P			**P**	**04 31 10.0**	**+0.6**
BJI						pmax	pmax		
	comp=Z,32nm,1.0s								
GULI	**GuiLin**	**17.95**	**269**	⇑P			**Pn**	**04 31 10.5**	**-2.9**
ERM	**Erimo**	**18.39**	**32**	⇓*e*P			**Pn**	**04 31 19.9**	**+1.2**
ERM						pmax	pmax		
	comp=Z,20nm,0.9s								
ENH	**Enshi**	**18.55**	**285**				**P**	**04 31 20.7**	**+0.1**
XAN	**Xi'an**	**19.70**	**296**	P			**P**	**04 31 32.8**	**-0.3**
XAN						pP	sP	04 31 36.9	-0.8
XAN						sP	pwP	04 31 39.8	-3.6
XAN						S	**Sn**	**04 35 17.1**	**+1.6**
XAN						pmax	pmax		
	comp=Z,120nm,0.9s								
XAN						LR	LR		
	comp=Z,6μm,11.0s								
XAN						LR	LR		
	comp=Z,7μm,11.2s								
XAN						LR	LR		
	comp=Z,6μm,11.9s								
ASAJ	**Asahikawa**	**19.83**	**27**	P			**Pn**	**04 31 35.7**	**-0.3**
ASAJ						pmax	pmax		
	comp=Z,50nm,0.7s								
JKA	**Kamikawa-asahi**	**19.83**	**27**	P			**Pn**	**04 31 35.7**	**-0.4**
QIZ	**Qiongzhong**	**20.36**	**252**	P			Pn	04 31 42.7	+0.2
QIZ	**Qiongzhong**	**20.36**	**252**	P			Pn	04 31 42.6	+0.1
QIZ						S	Sn	04 35 30.4	-1.3
QIZ						pmax	pmax		
	comp=Z,59nm,1.2s								
QIZ						pmax	pmax		
	comp=Z,1μm,5.8s								
QIZ						LR	LR		
	comp=Z,4μm,12.7s								
QIZ						LR	LR		
	comp=Z,3μm,11.5s								
QIZ						LR	LR		
	comp=Z,3μm,9.6s								
XLT	**XiLinHaoTe**	**20.45**	**330**	⇑*i*P			**P**	**04 31 41.8**	**+0.5**
XLT						sP	pwP	04 31 49.8	-1.5
XLT						pmax	pmax		
	comp=Z,31nm,1.7s								
XLT						pmax	pmax		
	comp=Z,1μm,3.8s								
HHC	**Hu-ho-hao-te**	**20.77**	**317**	*e*P			Pn	04 31 46.8	-0.4
HHC						pmax	pmax		
	comp=Z,80nm,1.5s								
HHC						pmax	pmax		
	comp=Z,2μm,9.1s								
GYA	**Guiyang**	**21.09**	**274**	⇓P			**P**	**04 31 49.9**	**+1.5**
GYA						pmax	pmax		
	comp=Z,39nm,1.0s								
YUK	**Yuzh-Kuril'sk**	**21.21**	**32**	⇑*e*P			**P**	**04 31 50.9**	**+1.5**
YSS	**Yuzh-Sakhalins**	**22.29**	**23**	P			**P**	**04 32 00.9**	**-0.1**
YSS						IAmb	IAmb	04 32 23.7	
	comp=Z,240nm,1.5s								
YSS	**Yuzh-Sakhalins**	**22.29**	**23**	*ce*	P		**P**	**04 32 00.8**	**-0.1**
YSS						pmax	pmax		
	comp=Z,144nm,2.1s								
KLR	**Kul'dur**	**22.30**	**3**	P			**P**	**04 31 59.9**	**-1.1**
	comp=Z,29nm,0.7s,baz=200,slow=6.7,SNR=37								
	comp=Z,29nm,0.7s								
KLR	**Kul'dur**	**22.30**	**3**	*de*	P		**P**	**04 32 00.9**	**-0.1**
KLR						pmax	pmax		
	comp=Z,25nm,0.8s								
KUR	**Kuril'sk**	**23.06**	**33**	⇑*e*P			**P**	**04 32 09.5**	**+0.4**
KUR						pmax	pmax		
	comp=Z,259nm,1.7s								
HIA	**Hailar**	**23.74**	**343**	⇑*i*P			**P**	**04 32 17.0**	**+1.1**
HIA						pmax	pmax		
	comp=Z,32nm,1.3s								
UGL	**Uglegorsk**	**23.93**	**19**	*e*P			**P**	**04 32 19.4**	**+1.8**
UGL						pmax	pmax		
	comp=Z,100nm,1.1s								
UGL						MLR	MLR		
	comp=E,2μm,11.0s								
UGL						MLR	MLR		
	comp=N,2μm,13.0s								
UGL						MLR	MLR		
	comp=Z,3μm,11.0s								
LZH	**Lanzhou**	**24.25**	**299**	⇓P			**P**	**04 32 22.4**	**+1.5**
LZH						sP	pwP	04 32 28.3	-3.1
LZH						PP	**PnPn**	**04 32 55.8**	**+5.1**
LZH						pmax	pmax		
	comp=Z,34nm,1.1s								
GRNR	**Gornyy**	**24.27**	**10**	⇑*i*P			**P**	**04 32 21.1**	**+0.3**
GRNR						pmax	pmax		
	comp=N,6.0nm,1.0s								
GRNR						pmax	pmax		
	comp=Z,7.0nm,1.0s								
GRNR						MLR	MLR		
	comp=E,2μm,12.0s								
GRNR						MLR	MLR		
	comp=N,2μm,13.0s								
GRNR						MLR	MLR		
	comp=Z,3μm,13.0s								
KMI	**Kunming**	**24.79**	**272**	⇑P			**P**	**04 32 27.3**	**+1.3**
KMI						pP	sP	04 32 31.4	+0.6
KMI						PP	**PnPn**	**04 33 01.8**	**+3.6**
KMI						pmax	pmax		
	comp=Z,54nm,1.0s								
KMI						LR	LR		
	comp=Z,6μm,12.6s								
KMI						LR	LR		
	comp=Z,4μm,14.9s								
KMI						LR	LR		
	comp=Z,4μm,13.4s								
PZH	**PanZhiHua**	**25.46**	**276**	P			**P**	**04 32 32.3**	**+0.3**
PZH						pmax	pmax		
	comp=Z,40nm,1.4s								
PZH						pmax	pmax		
	comp=Z,90nm,5.0s								
TYV	**Tymovskoe**	**25.70**	**18**	*e*P			**P**	**04 32 40.1**	**+6.4**
TYV						pmax	pmax		
	comp=Z,50nm,0.7s								
TYV						pmax	pmax		
	comp=Z,800nm,4.4s								
ZEA	**Zeya**	**26.87**	**356**	*e*P			**P**	**04 32 44.7**	**+0.4**
ZEA						pmax	pmax		
	comp=E,20nm,1.1s								
ZEA						pmax	pmax		
	comp=N,30nm,0.9s								
ZEA						pmax	pmax		
	comp=Z,50nm,0.9s								
TOLI2	**Tolitoli**	**27.24**	**201**	P			**P**	**04 32 46.9**	**-1.0**
TOLI2						IAmb	IAmb	04 32 49.0	
	comp=Z,63nm,1.0s								
ULN	**Ulaanbaatar**	**27.68**	**325**	P			**P**	**04 32 52.9**	**+1.0**
ULN	**Ulaanbaatar**	**27.68**	**325**	*de*	P		**P**	**04 32 53.4**	**+1.5**
ULN						pmax	pmax		
	comp=Z,6.0nm,0.9s								
SONM	**Songino Array**	**28.00**	**324**	P			**P**	**04 32 56.0**	**+1.4**
	comp=Z,5.0nm,0.8s,baz=134,slow=8.5,SNR=5.9								
	comp=Z,5.0nm,0.8s								
SONM	**Songino Array**	**28.00**	**324**	P			**P**	**04 32 54.1**	**-0.6**
GTA	**Gaotai**	**28.23**	**304**	*e*P			**P**	**04 32 55.9**	**-0.9**
GTA						pP	sP	04 33 00.9	-0.6
GTA						sP	pwP	04 33 05.4	-1.9
GTA						pmax	pmax		
	comp=Z,14nm,0.9s								
FAKI	**Fak Fak**	**29.74**	**176**	P			**P**	**04 33 09.3**	**-0.9**
FAKI						IAmb	IAmb	04 33 11.2	
	comp=Z,59nm,1.0s								
CHTO	**Chiang Mai**	**29.91**	**261**	P			**P**	**04 33 12.4**	**+0.6**
CHTO	**Chiang Mai**	**29.91**	**261**	P			**P**	**04 33 12.4**	**+0.6**
CHTO						pmax	pmax		
	comp=Z,25nm,1.1s								
CMAR	**Chiang Mai Arr**	**30.04**	**260**	P			**P**	**04 33 13.6**	**+0.7**
	comp=Z,1.7nm,0.4s,baz=49,slow=7.8,SNR=8.5								
CMAR				PcP			**PcP**	**04 36 15.8**	**+0.9**
	comp=Z,1.4nm,0.3s,baz=14,slow=1.0,SNR=8.5								
	comp=Z,1.7nm,0.4s								
CMAR	**Chiang Mai Arr**	**30.04**	**260**	P			**P**	**04 33 13.1**	**+0.2**
CMAR							**PcP**	**04 36 15.5**	**+0.7**
GOMU	**GeErMu**	**31.45**	**296**	P			**P**	**04 33 25.9**	**+0.3**
GOMU						pP	pP	04 33 28.0	-1.0
GOMU						S	**S**	**04 38 25.4**	**-7.7**
GOMU						pmax	pmax		
	comp=Z,9.0nm,0.8s								
GOMU						pmax	pmax		
	comp=Z,200nm,4.9s								
GOMU						LR	LR		
	comp=Z,1μm,10.1s								
GOMU						LR	LR		
	comp=Z,2μm,9.8s								
GOMU						LR	LR		
	comp=Z,1μm,9.1s								
KSM	**Kuching**	**31.75**	**220**	P			**P**	**04 33 29.1**	**+1.2**
PEA0B	**Petropavlovsk-**	**33.16**	**31**	P			**P**	**04 33 39.9**	**-0.1**
PEA0B						IAmb	IAmb	04 33 41.9	
	comp=Z,37nm,1.4s								
PEA0B	**Petropavlovsk-**	**33.16**	**31**	*ce*	P		**P**	**04 33 40.7**	**+0.7**
PETK	**Petropavlovsk-**	**33.16**	**31**	P			**P**	**04 33 40.5**	**+0.4**
	comp=Z,10nm,1.1s,baz=212,slow=7.7,SNR=7.5								
	comp=Z,10nm,1.1s								
PETK	**Petropavlovsk-**	**33.16**	**31**	P			**P**	**04 33 39.7**	**-0.3**
SRIT	**Nakonsritamara**	**34.28**	**244**	IAmb			IAmb	04 33 53.8	
	comp=Z,36nm,0.9s								
H11N1	**WAKE ISLAND Hy**	**34.30**	**94**	T			T	05 10 49.6	
	baz=296								
H11N2	**WAKE ISLAND Hy**	**34.30**	**94**	T			T	05 10 46.8	
	baz=296								
H11N3	**WAKE ISLAND Hy**	**34.31**	**94**	T			T	05 10 44.9	
	baz=296								
YAK	**Yakutsk**	**35.10**	**360**	P			**P**	**04 33 56.5**	**-0.1**
	comp=Z,6.9nm,0.3s,baz=175,slow=2.9,SNR=4.1								
	comp=Z,6.9nm,0.3s								
YAK	**Yakutsk**	**35.10**	**360**	P			**P**	**04 33 56.4**	**-0.3**
YAK	**Yakutsk**	**35.10**	**360**	*ce*	P		**P**	**04 33 56.6**	**-0.1**
YAK						pmax	pmax		
	comp=Z,32nm,0.9s								
KULM	**Kulim**	**35.50**	**238**	P			**P**	**04 34 00.2**	**-0.4**
MA2	**Magadan**	**35.57**	**18**	⇑*e*P			**P**	**04 34 01.5**	**+0.7**
MA2						pmax	pmax		
	comp=Z,15nm,1.0s								
MYKOM	**Kota Tinggi**	**35.59**	**230**	P			**P**	**04 34 02.2**	**+0.7**
IPM	**Ipoh**	**35.75**	**236**	P			**P**	**04 34 03.4**	**+0.6**
IPM						IAmb	IAmb	04 34 09.1	
	comp=Z,48nm,1.5s								
TAPN	**Taplejung**	**37.74**	**281**	*e*P			**P**	**04 34 20.4**	**+0.3**
ODAN	**Odare**	**38.10**	**280**	*e*P			**P**	**04 34 22.4**	**-0.7**
WMQ	**Urumqi**	**38.12**	**308**	*e*P			**P**	**04 34 26.0**	**+3.2**
WMQ						LR	LR		
	comp=Z,4μm,13.5s								
WMQ						LR	LR		
	comp=Z,3μm,13.1s								
WMQ						LR	LR		
	comp=

comp=Z,13nm,0.9s
KURBB **Kurchatov Arra** 45.62 316 P P 04 35 23.6 -0.3
comp=Z,12nn,0.8s,baz=102,slow=8.7,SNR=37
comp=Z,12nn,0.8s
BILL **Bilibino** 46.44 18 P P 04 35 30.9 +0.7
BILL IAmb IAmb 04 35 32.4
comp=Z,27nm,1.2s
BILL **Bilibino** 46.44 18*c iP* P 04 35 29.6 -0.5
BILL *e**PP **sP** 04 35 35.2 +0.1
BILL *e**SP **pwP** 04 35 40.3 -0.4
BILL *e* 04 36 59.4
BILL S S 04 42 28.0 +11
BILL pmax pmax
comp=Z,18nm,1.2s
BILL MLR MLR
comp=Z,436nm,13.0s
KSH **Kashi** 46.48 300 P P 04 35 35.0 +3.9
KSH pP pwP 04 35 40.3 -1.4
KSH PcP **PcP** 04 37 08.3 +2.8
KSH PcS **PcS** 04 41 02.0 +1.7
KSH pmax pmax
comp=Z,13nm,1.5s
KSH LR LR
comp=Z,4μm,14.3s
KSH LR LR
comp=Z,4μm,14.6s
KSH LR LR
comp=Z,6μm,14.6s
KSH **Kashi** 46.48 300 ScP P 04 35 35.4 +4.3
WB0 **Warramunga Arr** 46.59 175 IAmb IAmb 04 35 32.2
comp=Z,23nm,0.8s
WRAB **Tennant Creek** 46.75 175 P P 04 35 32.7 -0.4
WRAB IAmb IAmb 04 35 34.0
comp=Z,32nn,0.8s
WRAB **Tennant Creek** 46.75 175*d iP* P 04 35 32.9 -0.2
WRAB pmax pmax
comp=Z,33nm,0.9s
WRA **Warramunga Arr** 46.76 175 P P 04 35 32.6 -0.5
comp=Z,24nn,0.8s,baz=352,slow=8.3,SNR=43
comp=Z,24nn,0.8s
WR0 **Warramunga Arr** 46.80 174 P P 04 35 32.7 -0.7
MBWA **Marble Bar** 48.88 193 P P 04 35 49.5 -0.1
MBWA IAmb IAmb 04 35 51.4
comp=Z,36nn,1.0s
NRIK **Noril'sk** 49.16 341 P P 04 35 52.0 +0.9
comp=Z,11nn,1.1s,baz=125,slow=8.0,SNR=3.6
comp=Z,11nn,1.1s
NRIK **Noril'sk** 49.16 341*de*P P 04 35 50.3 -0.9
NRIK pmax pmax
comp=Z,30nn,1.5s
CTAO **Charters Tower** 49.24 160 P P 04 35 53.2 +0.9
CTAO **Charters Tower** 49.24 160 P P 04 35 53.2 +0.9
CTAO pmax pmax
comp=Z,55nn,0.9s
PSA00 **Pilbara Seismi** 49.26 193 IAmb IAmb 04 35 54.5
comp=Z,27nn,0.9s
ASAR **Alice Springs** 50.42 176 P P 04 36 01.6 +0.2
comp=Z,19nn,0.7s,baz=2.9,slow=7.9,SNR=50
ASAR PcP **PcP** 04 37 19.9 +0.3
comp=Z,5.5nn,0.8s,baz=1.6,slow=4.5,SNR=4.8
comp=Z,19nn,0.7s
KK31 **Karatay Array** 50.50 305 IAmb IAmb 04 36 04.8
comp=Z,79nn,1.8s
KKAR **Karatay Array** 50.50 305 P P 04 36 03.4 +1.6
KKAR IAmb IAmb 04 36 04.8
comp=Z,79nn,1.8s
KKAR **Karatay Array** 50.50 305 P P 04 36 03.4 +1.6
KKAR pmax pmax
comp=Z,79nn,1.8s
BRVK **Borovoye** 51.04 318 P P 04 36 06.8 +1.0
BRVK IAmb IAmb 04 36 07.8
comp=Z,34nn,0.8s
BRVK **Borovoye** 51.04 318*c iP* P 04 36 06.9 +1.2
BRVK pmax pmax
comp=Z,30nn,0.9s
CHGR **Chuyangaron** 51.83 299 P P 04 36 12.5 +0.5
KBL **Kabul** 52.48 294 P P 04 36 17.2 +0.2
KBL **Kabul** 52.48 294 P P 04 36 17.2 +0.2
KBL pmax pmax
comp=Z,283nm,1.9s
UNV **Unalaska Valle** 53.05 41 P P 04 36 20.9 +0.3
baz=266
SVE **Sverdlovsk** 56.83 322 *e*P P 04 36 49.1 +1.2
SVE pmax pmax
comp=Z,73nn,1.6s
CHNA **Chernabura Isl** 57.12 40 P P 04 36 50.7 +0.7
baz=271
ABKAR **Akbulak array** 57.50 313 P P 04 36 53.4 +0.6
N16K **Nishlik Lake** 57.62 34 P P 04 36 53.9 +0.4
baz=268
O16K **Kokwok River B** 57.93 35 P P 04 36 54.4 -1.3
baz=269
ARU **Arti** 57.98 322 P P 04 36 56.5 +0.5
ARU IAmb IAmb 04 36 58.4
comp=Z,35nn,1.0s
ARU **Arti** 57.98 322*c iP* P 04 36 56.5 +0.5
ARU 04 37 42.1
ARU 04 39 03.4
ARU S S 04 44 59.8 +4.2
ARU SS SS 04 48 44.1 -2.2
ARU pmax pmax
comp=Z,48nn,1.2s
HRA **Herat** 58.02 295 IAmb IAmb 04 36 59.6
comp=Z,33nn,1.2s
O17K **Koliganek Bris** 58.44 35 P P 04 37 00.3 +1.1
baz=270
P17K **Kvichak River** 58.78 35 P P 04 37 02.0 +0.5
baz=271
TTA **Tatalina** 59.00 31 P P 04 37 03.4 +0.3
baz=269
N18K **Kilae Creek** 59.04 33 P P 04 37 04.5 +1.1
baz=270
A21K **Barrow** 59.34 21 P P 04 37 06.8 +1.6
baz=263
O18K **Koktuh Hills** 59.40 34 IAmb IAmb 04 37 08.3
comp=Z,17nn,0.9s
O18K **Koktuh Hills** 59.40 34 P P 04 37 06.8 +0.9
baz=272
P18K **Big Mountain,** 59.40 35 IAmb IAmb 04 37 07.8
comp=Z,48nn,1.4s
P18K **Big Mountain,** 59.40 35 P P 04 37 06.4 +0.5
baz=272
STKA **Stephens Creek** 59.47 169 P P 04 37 06.2 -0.3
comp=Z,4.2nn,0.8s,baz=3.9,slow=8.2,SNR=4.7
comp=Z,4.2nn,0.8s
STKA **Stephens Creek** 59.47 169⇓*e*P P 04 37 06.6 0.0
L19K **White Mountain** 59.53 32 P P 04 37 07.5 +0.7
L19K **White Mountain** 59.53 32 P P 04 37 07.5 +0.7
baz=270
M19K **Big River Lodg** 59.75 32 P P 04 37 09.0 +0.7
baz=271
J20K **Nowinta River** 59.85 29 P P 04 37 10.1 +1.2
J20K IAmb IAmb 04 37 11.6
comp=Z,39nn,1.2s
J20K **Nowinta River** 59.85 29 P P 04 37 09.3 +0.4
baz=270
K20K **Telida** 59.88 30 IAmb IAmb 04 37 11.9
comp=Z,30nn,1.1s
K20K **Telida** 59.88 30 P P 04 37 09.6 +0.4
baz=270
L20K **Farewell, AK** 59.98 31 P P 04 37 10.5 +0.6
baz=271
IMAR **Indian Mountai** 60.03 27 P P 04 37 10.5 +0.4
SII **Sitkinak Islan** 60.10 38 P P 04 37 11.3 +0.5
baz=274
Q19K **Cape Douglas,** 60.23 35 P P 04 37 11.5 -0.2
baz=273
M20K **Styx River** 60.35 32 P P 04 37 13.2 +0.7
baz=272
H21K **Melozitna Rive** 60.42 28 IAmb IAmb 04 37 15.4
comp=Z,31nn,1.2s
H21K **Melozitna Rive** 60.42 28 P P 04 37 13.6 +0.8
baz=270
GEYT **Alibeck** 60.52 300 P P 04 37 14.8 +0.8
comp=Z,11nn,0.8s,baz=196,slow=5.5,SNR=7.8
comp=Z,11nn,0.8s
GYA0B **ALIBECK ARRAY** 60.52 300 IAmb IAmb 04 37 22.0
comp=Z,32nn,1.2s
OHAK **Old Harbor** 60.54 37 P P 04 37 13.1 -0.6
OHAK IAmb IAmb 04 37 14.8
comp=Z,23nn,1.1s
OHAK **Old Harbor** 60.54 37 P P 04 37 13.4 -0.3
baz=275
RSO **Redoubt South** 60.60 34 P P 04 37 15.6 +1.2
CHUM **Lake Minchumin** 60.66 30 P P 04 37 15.0 +0.6
baz=272
PPLA **Purkeypile** 60.75 31 IAmb IAmb 04 37 17.7
comp=Z,48nn,1.4s
PPLA **Purkeypile** 60.75 31 P P 04 37 15.8 +0.5
baz=272
I21K **Tanana** 60.77 28 P P 04 37 16.0 +0.8
I21K IAmb IAmb 04 37 18.0
comp=Z,28nn,1.1s
I21K **Tanana** 60.77 28 P P 04 37 15.9 +0.7
baz=271
CAST **Castle Rocks** 60.77 30 IAmb IAmb 04 37 17.7
comp=Z,26nn,1.0s
CAST **Castle Rocks** 60.77 30 P P 04 37 15.7 +0.4
baz=272
N20K **Mount Spurr** 60.82 33 P P 04 37 15.6 -0.1
baz=273
SPCR **Spurr Chakacha** 60.82 33 P P 04 37 16.0 +0.3
baz=273
KDAK **Kodiak Island** 60.87 37 P P 04 37 15.7 -0.3
KDAK **Kodiak Island** 60.87 37*ce*P P 04 37 16.5 +0.5
KDAK pmax pmax
comp=Z,36nn,1.4s
Q20K **Shuyak Island** 60.90 36 P P 04 37 16.4 +0.2
baz=275
SKT **Skwentna** 61.10 32 P P 04 37 17.2 -0.4
baz=273
BPAW **Bear Paw Mtn.** 61.23 29 IAmb IAmb 04 37 20.8
comp=Z,24nn,1.2s
BPAW **Bear Paw Mtn.** 61.23 29 P P 04 37 18.5 +0.1
baz=273
KTH **Kantishna Hill** 61.29 30 IAmb IAmb 04 37 21.0
comp=Z,33nn,1.5s
MLY **Manley** 61.30 28 IAmb IAmb 04 37 21.4
comp=Z,24nn,1.2s
MLY **Manley** 61.30 28 P P 04 37 19.2 +0.3
baz=272
SUA **Susitna One** 61.51 32 IAmb IAmb 04 37 22.6
comp=Z,18nn,1.0s
SUA **Susitna One** 61.51 32 P P 04 37 20.0 -0.4
baz=274
BRLK **Bradley Lake** 61.58 34 IAmb IAmb 04 37 23.2
comp=Z,21nn,1.0s
TRF **Thorofare Moun** 61.58 30 P P 04 37 20.7 -0.2
baz=274
TOLK **Toolik Lake Re** 61.64 24 IAmb IAmb 04 37 23.6
comp=Z,29nn,1.4s
TOLK **Toolik Lake Re** 61.64 24 P P 04 37 21.6 +0.5
baz=272
BRSE **Bradley Lake S** 61.66 34 P P 04 37 22.2 +0.8
baz=275
H23K **Yukon River** 61.76 27 P P 04 37 22.2 +0.3
H23K IAmb IAmb 04 37 24.9
comp=Z,26nn,1.1s
H23K **Yukon River** 61.76 27 P P 04 37 23.0 +1.1
baz=273
M22K **Willow** 61.78 32 P P 04 37 21.9 -0.2
baz=275
I23K **Minto, Yukon-K** 61.88 28 P P 04 37 23.4 +0.8
baz=274
RC01 **Rabbit Creek A** 62.02 33 IAmb IAmb 04 37 25.7
comp=Z,23nn,1.3s
RC01 **Rabbit Creek A** 62.02 33 P P 04 37 24.2 +0.5
baz=275
NEA2 **Nenana** 62.04 29 P P 04 37 24.2 +0.4
baz=274
MCK **McKinley** 62.16 30 P P 04 37 25.2 +0.5
baz=275
SEW **Seward** 62.27 34 IAmb IAmb 04 37 38.3
comp=Z,20nn,0.9s
SEW **Seward** 62.27 34 P P 04 37 24.6 -0.7
baz=276
PMR **Palmer** 62.27 32 IAmb IAmb 04 37 26.4
comp=Z,22nn,1.2s
PMR **Palmer** 62.27 32 P P 04 37 24.5 -0.8
baz=276
GHO **Glory Hole Cre** 62.35 32 IAmb IAmb 04 37 27.4
comp=Z,15nn,1.0s
H24K **Noodor Dome** 62.44 27 IAmb IAmb 04 37 29.3
comp=Z,24nn,1.2s
H24K **Noodor Dome** 62.44 27 P P 04 37 27.0 +0.5
baz=275
WRH **Wood River Hil** 62.47 29 P P 04 37 26.7 0.0
COLA **College** 62.54 28*de*P P 04 37 26.9 -0.2
COLA pmax pmax
comp=Z,7.0nn,0.9s
CCB **Clear Creek Bu** 62.58 29 IAmb IAmb 04 37 50.6
comp=Z,38nn,2.0s
KNK **Knik Glacier** 62.61 32 IAmb IAmb 04 37 29.1
comp=Z,23nn,1.1s
KNK **Knik Glacier** 62.61 32 P P 04 37 27.0 -0.7
baz=276
SML **Sawmill** 62.62 32 P P 04 37 27.0 -0.8
baz=276
POKR **Poker Plat Res** 62.69 28 P P 04 37 28.5 +0.3
baz=275
KIRV **Kirov** 62.74 324*ce*P P 04 37 29.3 +0.8
WAT6 **Susitna Watana** 62.81 31 P P 04 37 28.6 -0.6
baz=276
M23K **Glacier View** 62.91 32 P P 04 37 29.4 -0.3
baz=277
IL31 62.96 29 P P 04 37 29.3 -0.5
ILAR **Eielson Array** 62.96 29 P P 04 37 29.6 -0.4
comp=Z,2.8nn,0.8s,baz=269,slow=5.9,SNR=15
comp=Z,2.8nn,0.8s
ILAR **Eielson Array** 62.96 29 P P 04 37 28.2 -1.7
HDA **Harding Lake** 62.97 29 IAmb IAmb 04 37 31.4
comp=Z,25nn,0.9s
HDA **Harding Lake** 62.97 29 P P 04 37 29.5 -0.5
baz=276
SCM **Sheep Creek Mo** 63.09 32 IAmb IAmb 04 37 33.4
comp=Z,38nn,1.3s
SCM **Sheep Creek Mo** 63.09 32 P P 04 37 31.0 0.0
baz=277
GLI **Glacier Island** 63.33 33 IAmb IAmb 04 37 33.8
comp=Z,19nn,0.9s
GLI **Glacier Island** 63.33 33 P P 04 37 32.0 -0.5
baz=278
K24K **Donnelly Dome** 63.55 30 P P 04 37 34.1 +0.2
baz=277
M24K **Tolsona, Glenn** 63.60 31 P P 04 37 34.8 +0.5
baz=278
J25K **Salcha River,** 63.62 29 P P 04 37 33.8 -0.6
baz=277
PAX **Paxson** 63.80 30 P P 04 37 35.5 -0.2
baz=278
KLU **Klutina** 63.80 32 P P 04 37 36.1 +0.4
KLU IAmb IAmb 04 37 37.5
comp=Z,27nn,1.4s
KLU **Klutina** 63.80 32 P P 04 37 35.7 0.0
baz=278
DIV **Divide** 63.93 32 IAmb IAmb 04 37 38.4
comp=Z,30nn,1.2s
RIDG **Independent Ri** 63.97 30 P P 04 37 36.7 0.0
baz=278
HARP **HAARP** 64.03 31 P P 04 37 37.4 +0.4
baz=279
PRGR **Permogore** 64.18 328 *e*P P 04 37 40.4 +2.4
SCRK **Sand Creek** 64.31 29 IAmb IAmb 04 37 40.4
comp=Z,21nn,1.0s
SCRK **Sand Creek** 64.31 29 P P 04 37 38.8 -0.2
baz=279
DOT **Dot Lake** 64.33 30 IAmb IAmb 04 37 40.3
comp=Z,20nn,0.9s
J26L **Joseph Creek** 64.41 29 IAmb IAmb 04 37 40.7
comp=Z,18nn,0.8s
J26L **Joseph Creek** 64.41 29 P P 04 37 39.2 -0.5
baz=279
N25K **Chitina, Valde** 64.41 32 IAmb IAmb 04 37 41.8
comp=Z,57nn,1.9s
N25K **Chitina, Valde** 64.41 32 P P 04 37 39.5 -0.2
baz=280
I26K **Coal Creek Min** 64.46 28 P P 04 37 39.6 -0.2
baz=279
BMRM **Bremner River** 64.52 33 P P 04 37 39.9 -0.5
BMRM **Bremner River** 64.52 33 P P 04 37 40.5 +0.1
baz=280
MENT **Mentasta** 64.60 30 IAmb IAmb 04 37 47.0
comp=Z,18nn,0.9s
L26K **Log Cabin Wild** 64.75 30 IAmb IAmb 04 37 44.0
comp=Z,16nn,1.1s
L26K **Log Cabin Wild** 64.75 30 P P 04 37 42.0 +0.2
baz=280
BELG **Belogornoye** 64.78 318*ce*P P 04 37 42.8 +0.7
BELG pmax pmax
comp=Z,5.0nn,1.1s
HMT **Hamilton** 64.80 33 IAmb IAmb 04 37 44.1
comp=Z,30nn,1.2s
GLB **Gilahina Butte** 64.81 32 IAmb IAmb 04 37 44.2
comp=Z,24nn,1.2s
M26K **Nabesna, AK** 65.02 31 IAmb IAmb 04 37 46.3
comp=Z,28nn,1.1s
M26K **Nabesna, AK** 65.02 31 P P 04 37 43.9 +0.3
baz=280
VRDI **Verde Repeater** 65.02 32 P P 04 37 43.6 -0.2
VRDI IAmb IAmb 04 37 45.5
comp=Z,17nn,1.0s
K27K **Chicken** 65.13 29 IAmb IAmb 04 37 46.5
comp=Z,21nn,1.1s
K27K **Chicken** 65.13 29 P P 04 37 44.9 +0.7
baz=280
MCARA **McCarthy VSAT** 65.20 32 P P 04 37 44.9 +0.2
baz=281
TGL **Tana Glacier** 65.41 33 IAmb IAmb 04 37 47.9
comp=Z,19nn,0.8s
L27K **Beaver Creek,** 65.42 30 P P 04 37 45.9 -0.3
baz=281
WAX **Waxell Ridge** 65.46 33 IAmb IAmb 04 37 48.4
comp=Z,14nn,0.8s
M27K **Edge Creek, AK** 65.54 31 P P 04 37 46.8 -0.2
M27K IAmb IAmb 04 37 49.1
comp=Z,17nn,1.1s
M27K **Edge Creek, AK** 65.54 31 P P 04 37 47.4 +0.3
baz=282
ISLE **Juniper Island** 65.68 33 IAmb IAmb 04 38 29.9
comp=Z,18nn,1.0s
CTG **Chitna Glacier** 66.08 32 P P 04 37 50.8 +0.2
baz=282
DAWY **Dawson** 66.28 29 P P 04 37 51.9 +0.2
baz=283
I29M **Ogilvie Camp,** 66.44 27 IAmb IAmb 04 37 55.0
comp=Z,24nn,1.3s
I29M **Ogilvie Camp,** 66.44 27 P P 04 37 53.0 +0.3
baz=283
PCA **Pinnacle** 66.80 33 IAmb IAmb 04 38 15.6
comp=Z,23nn,0.8s
PINM **Pinnacle** 66.80 33 P P 04 37 55.1 -0.1
baz=284
MAK **Makhachkala** 67.14 308 *e*P P 04 37 46.5 -11
MAK *e* 04 40 20.8
MAK *e*SS SS 04 51 05.4 -4.5
MAK pmax pmax
comp=Z,97nn,1.2s
MAK MLR MLR
comp=Z,1μm,14.0s
KLMR **Klimovskoe** 67.23 328 *e*P P 04 37 57.2 -0.5
KLMR pmax pmax
comp=Z,19nn,1.1s
KLMR **Klimovskoe** 67.23 328 *e*P P 04 37 57.2 -0.5
KLMR AMP 04 38 01.2
comp=Z,19nn,1.1s
PNL **Peninsula** 67.33 33 P P 04 37 58.7 +0.3
baz=285
INK **Inuvik** 67.52 24 P P 04 37 59.1 -0.3
INK **Inuvik** 67.52 24 P P 04 37 59.2 -0.3
INK pmax pmax
comp=Z,18nn,1.3s
INK **Inuvik** 67.52 24 P P 04 37 59.3 -0.1
baz=286
M30M **Minto, Yukon** 67.78 30 IAmb IAmb 04 38 03.9
comp=Z,33nn,1.6s
M30M **Minto, Yukon** 67.78 30 P P 04 38 02.2 +0.9
baz=286
N30M **Aishikik Lake** 67.95 31 P P 04 38 03.3 +0.9
baz=286
APA **Apatity** 67.97 336⇓*iP* P 04 38 02.4 +0.1
APA pmax pmax
comp=Z,12nn,0.8s
GROC **Groznyy** 68.27 308 *e*P P 04 38 04.5 -0.1
GROC *e* 04 38 28.2
GROC *e*S S 04 47 08.7 +3.9
GROC pmax pmax
comp=Z,30nn,0.6s
LGD **Lagodekhi** 68.36 307 P P 04 38 04.8 -0.4
P30M **Million Dollar** 68.39 33 P P 04 38 05.8 +0.7
baz=286
SPB2 **Spitsbergen Ar** 68.52 348 P P 04 38 05.2 -0.4
SPB2 IAmb IAmb 04 38 35.5
comp=Z,16nn,0.8s
N31M **Braeburn, Yuko** 68.55 31 IAmb IAmb 04 38 08.8
comp=Z,20nn,1.2s
N31M **Braeburn, Yuko** 68.55 31 P P 04 38 07.2 +1.1
baz=287
O30N **Mendenhall** 68.61 32 P P 04 38 07.4 +0.9
baz=287
VRH **Novokhopyorsk** 68.63 318 *e*P P 04 38 06.0 -0.7
VRH pmax pmax
comp=Z,30nn,1.6s
KBS **Kingsbay** 68.89 349 P P 04 38 06.7 -1.2
KBS IAmb IAmb 04 38 09.3
comp=Z,22nn,1.4s
KBS **Kingsbay** 68.89 349⇑*e*P P 04 38 07.8 -0.1
KBS pmax pmax
comp=Z,9.0nn,1.1s
M31M **Drury Creek, Y** 68.97 30 P P 04 38 09.0 +0.4
baz=288
A36M **Sachs Harbour** 68.98 19 P P 04 38 09.3 +0.8
baz=292
WHY **Whitehorse** 69.22 32 P P 04 38 10.9 +0.5
baz=288
HSPB **Hornsund (broa** 69.25 347 *i* P P 04 38 11.0 +0.8
SKAG **Skagway** 69.37 33 P P 04 38 12.8 +1.7
baz=288
GUDG **Gudauri** 69.42 308 P P 04 38 12.9 +0.8
GOF **Gofitskoye** 69.61 311⇑*e*P P 04 38 14.3 +1.4
GOF pmax pmax
comp=Z,21nn,0.8s
MOS **Moscow** 69.62 323 *e*P P 04 38 11.0 -1.8
MOS *e* 04 38 24.2
MOS *e* 04 38 32.9
MOS *e*S S 04 47 20.3 +0.1
MOS pmax pmax
comp=Z,31nn,0.9s
MOS pmax pmax
comp=Z,100nn,1.4s
ZEI **Tsey** 69.72 308 *e*P P 04 38 13.3 -0.6
ZEI pmax pmax
comp=Z,18nn,0.6s
LPSR **Galich'ya Gora** 69.86 319 *e*P P 04 38 14.0 -0.3
LPSR pmax pmax
comp=Z,30nn,1.8s
N32M **Quiet Lake** 69.89 31 P P 04 38 15.8 +1.4
baz=289
GNI **Garni** 69.96 306 P P 04 38 15.8 +0.4
comp=Z,5.7nn,0.6s,baz=332,slow=1.5,SNR=5.3
comp=Z,5.7nn,0.6s
GNI **Garni** 69.96 306 P P 04 38 16.8 +1.4
GNI **Garni** 69.96 306*ce*P P 04 38 17.5 +2.1
GNI pmax pmax
comp=Z,18nn,1.2s
VORR **Voronezh** 69.99 318 *e*P P 04 38 15.4 +0.3
VORR pmax pmax
comp=Z,30nn,0.4s
ARCES **ARCESS Array B** 70.02 339 P P 04 38 14.6 -0.4
comp=Z,4.9nn,0.8s,baz=65,slow=6.8,SNR=11
comp=Z,4.9nn,0.8s
ARCES **ARCESS Array B** 70.02 339 P P 04 38 15.1 +0.1
ARCES IAmb IAmb 04 38 38.1
comp=Z,66nn,2.0s
ARCES **ARCESS Array B** 70.02 339 P P 04 38 15.1 +0.1
ARCES pmax pmax
comp=Z,66nn,2.0s
ONI **Oni** 70.10 308 P P 04 38 17.7 +1.6
P32M **Atlin** 70.11 33 P P 04 38 16.9 +1.1
baz=289
KBZ **Khabaz** 70.12 310 P P 04 38 16.5 +0.4
comp=Z,21nn,0.8s,baz=82,slow=3.5,SNR=21
comp=Z,21nn,0.8s
VSR **Storozhevoye** 70.16 318 *e*P P 04 38 15.4 -0.8
VSR pmax pmax
comp=Z,30nn,1.5s
KVAR **Kislovodsk Arr** 70.19 310 P P 04 38 16.9 +0.3
comp=Z,4.7nn,0.6s,baz=90,slow=20,SNR=2.3
comp=Z,4.7nn,0.6s
KIV **Kislovodsk** 70.20 310 ⇑P P 04 38 17.7 +1.0
KIV **Kislovodsk** 70.20 310 P P 04 38 16.6 -0.1
KIV **Kislovodsk** 70.20 310 *e*P P 04 38 17.0 +0.3
KIV *e*S S 04 47 29.8 +2.1
KIV pmax pmax
comp=Z,31nn,1.1s
P33M **Teslin, Yukon** 70.33 32 P P 04 38 18.7 +1.5
baz=290
C36M **Paulatuk** 70.39 21 P P 04 38 17.3 +0.1
baz=294
OBN **Obninsk** 70.39 323 P P 04 38 17.9 +0.5
comp=Z,4.4nn,0.4s,baz=68,slow=9.9,SNR=4.4
comp=Z,4.4nn,0.4s
OBN **Obninsk** 70.39 323 P P 04 38 17.6 +0.1

OBN Obninsk 70.39 323 *ce*P **P 04 38 18.0 +0.5**
OBN *e**SP **pwP 04 38 25.5 -3.0**
OBN *e* 04 38 34.3
OBN *e*S **S 04 47 25.3 -3.9**
OBN *e* 04 47 58.4
OBN SS **SS 04 51 59.0 -0.4**
OBN pmax pmax
comp=Z,19nm,1.1s
NOR Nord 70.39 355 *i* P **P 04 38 16.7 -0.5**
NOR IAmb IAmb 04 38 17.8
comp=Z,11nm,0.9s
BGD Bogdanovka 70.42 307 P **P 04 38 19.6 +1.3**
AKH Akhalkalaki 70.45 307 ⇑P **P 04 38 19.4 +1.0**
AKH Akhalkalaki 70.45 307 P **P 04 38 20.1 +1.7**
CHVG Ch'k'valeri 71.01 309 ⇑P **P 04 38 24.3 +2.7**
CHVG Ch'k'valeri 71.01 309 ⇑P **P 04 38 24.3 +2.7**
GEVA Gevas 71.80 304 IAmb IAmb 04 38 29.0
comp=Z,20nm,0.9s
DLBC Dease Lake 72.30 33 P **P 04 38 30.2 +1.1**
baz=293
SOC Sochi 72.35 310 *e*P **P 04 38 28.3 -1.3**
SOC *e*S **S 04 47 52.6 +0.2**
SOC *e* 04 48 36.3
SOC *e*SS **SS 04 52 29.7 -0.4**
SOC pmax pmax
comp=Z,32nm,0.8s
SOC MLR MLR
comp=Z,2μm,17.0s
KOPT Kop Dagi 73.07 307 IAmb IAmb 04 38 38.0
comp=Z,38nm,1.3s
FINES FINESS Array B 73.15 331 P **P 04 38 33.1 -0.9**
comp=Z,7.1nm,0.8s,baz=78,slow=8.8,SNR=12
comp=Z,7.1nm,0.8s
FINES FINESS Array B 73.15 331 P **P 04 38 33.5 -0.5**
FINES FINESS Array B 73.15 331 P **P 04 38 33.5 -0.5**
ANN Anapa 73.45 312 *e*P **P 04 38 34.9 -1.1**
ANN *e*S **SKiKP 04 48 07.7 +1.4**
ANN pmax pmax
comp=Z,55nm,0.9s
ANN MLR MLR
comp=Z,1μm,13.0s
MARD Mardin 73.84 304 IAmb IAmb 04 38 40.9
comp=Z,25nm,0.8s
VSU Vasula 74.13 328 *ce*P **P 04 38 40.7 +0.9**
VSU pmax pmax
comp=Z,66nm,0.9s
VSU Vasula 74.13 328 *e*P **P 04 38 40.0 +0.2**
MEF Metsahovi 74.43 330 *e*P **P 04 38 42.0 +0.5**
DAG Danmarks Havn 74.80 353 P **P 04 38 43.0 -0.4**
DAG Danmarks Havn 74.80 353 *i* P **P 04 38 42.0 -1.4**
DAG IAmb IAmb 04 38 43.9
comp=Z,68nm,1.7s
RAF Rauma 75.20 331 *e*P **P 04 38 46.2 +0.3**
RAYN Ar Rayn 75.31 289 P **P 04 38 46.1 -1.2**
RAYN IAmb IAmb 04 38 49.6
comp=Z,36nm,1.0s
RAYN Ar Rayn 75.31 289 ⇑P **P 04 38 48.0 +0.6**
MTSE Matsula 75.39 329 *e*P **P 04 38 47.6 +0.6**
IDID Didziasalis 75.51 325 *e*P **P 04 38 48.9 +1.1**
SIM Simferopol' 75.57 313 *e*P **P 04 38 48.1 -0.3**
SIM pmax pmax
comp=Z,35nm,0.8s
NACGM Naroch 75.67 325 ⇓*e*P **P 04 38 49.7 +1.0**
baz=63
ISAL Salakas 75.71 325 *e*P **P 04 38 50.1 +1.1**
IIGN Ignalina 75.76 325 *e*P **P 04 38 50.7 +1.5**
KVT Kavak 75.81 309 P **P 04 38 51.2 +1.3**
AKASG Malin Array Be 76.18 320 P **P 04 38 51.0 -0.7**
comp=Z,8.2nm,0.8s,baz=49,slow=6.1,SNR=33
comp=Z,8.2nm,0.8s
AKASG Malin Array Be 76.18 320 IAmb IAmb 04 38 53.1
comp=Z,47nm,1.6s
AKBB Malin Array Si 76.18 320 IAmb IAmb 04 38 52.9
comp=Z,22nm,0.8s
AKBB Malin Array Si 76.18 320 *de*P **P 04 38 50.5 -1.2**
AAL Aland 76.38 331 *e*P **P 04 38 52.5 -0.1**
SLIT Slitere, Latvi 76.61 328 *e*P **P 04 38 54.6 +0.5**
VSVD Vaisvydziai 76.62 326 *e*P **P 04 38 54.7 +0.6**
PABE Paberze 76.83 326 *e*P **P 04 38 55.8 +0.5**
BZK Bozkurt 76.86 310 ⇓P **P 04 38 55.8 0.0**
YKA Yellowknife Ar 77.12 26 P **P 04 38 56.7 -0.1**
comp=Z,5.5nm,0.8s,baz=299,slow=5.2,SNR=10
comp=Z,5.5nm,0.8s
DBG Daneborg 77.17 352 *e*P **P 04 38 53.0 -4.0**
DBG IAmb IAmb 04 38 57.9
comp=Z,14nm,1.0s
ILGA Ilgaz 77.43 310 IAmb IAmb 04 39 01.7
comp=Z,36nm,0.9s
PBUR Paburge 77.58 327 *e*P **P 04 39 00.1 +0.6**
SORM Soroca 77.82 318 ⇑P **P 04 38 59.5 -1.5**
SORM Soroca 77.82 318 ⇑P **P 04 38 59.5 -1.5**
SUW Suwalki 77.95 325 *i* P **P 04 39 02.6 +1.0**
SUW *e*S **S 04 48 54.2 -0.1**
SUW Suwalki 77.95 325 *e*P **P 04 39 02.1 +0.5**
BR131 Keskin Array S 78.04 308 P **P 04 39 02.1 -0.6**
BR131 Keskin Array S 78.04 308 *d* iP **P 04 39 02.3 -0.3**
BRTR Keskin Array B 78.04 308 P **P 04 39 02.5 -0.1**
comp=Z,18nm,0.8s,baz=97,slow=4.4,SNR=49
comp=Z,18nm,0.8s
ANTO Ankara 78.56 309 P **P 04 39 05.6 +0.2**
ANTO IAmb IAmb 04 39 07.4
comp=Z,24nm,0.9s
ANTO Ankara 78.56 309 P **P 04 39 05.6 +0.2**
ANTO pmax pmax
comp=Z,24nm,0.9s
ASF Jabal al Asfar 78.80 300 P **P 04 39 07.4 +0.5**
comp=Z,13nm,0.8s,baz=51,slow=1.7,SNR=18
comp=Z,13nm,0.8s
TLCR 78.86 315 ⇑P **P 04 39 07.6 +0.7**
TLCR 78.86 315 ⇑P **P 04 39 07.6 +0.7**
JURR Jurilovca 79.02 315 ⇑P **P 04 39 07.5 -0.2**
TPGR Topolog 79.26 315 ⇑P **P 04 39 09.6 +0.4**
CFR Carcaliu 79.30 315 ⇑P **P 04 39 09.3 +0.1**
CFR Carcaliu 79.30 315 ⇑P **P 04 39 09.3 +0.1**
IZVR Izvoarele 79.36 316 ⇑P **P 04 39 09.7 +0.1**
NB2 NORSAR Subarra 79.48 334 P **P 04 39 07.1 -2.9**
NB2 pmax pmax
comp=Z,6.0nm,0.9s
NB2 NORSAR Subarra 79.48 334 P **P 04 39 08.9 -1.1**
baz=52,slow=5.9
NB2 NORSAR Subarra 79.48 334 P **P 04 39 08.9 -1.1**
comp=Z,26nm,0.9s,baz=52,slow=5.9
NOA NORSAR Array B 79.48 334 P **P 04 39 08.9 -1.1**
comp=Z,13nm,0.7s,baz=50,slow=5.4,SNR=29
comp=Z,13nm,0.7s
NC204 NORSAR Array S 79.51 335 P **P 04 39 09.0 -1.2**
LVV L'vov 79.54 321 *e*P **P 04 39 11.4 +0.9**
NORES NORESS Array B 79.54 334 P **P 04 39 10.7 +0.4**
NORES pmax pmax
comp=Z,3.0nm,0.9s
PANC Panciu 79.59 316 ⇑P **P 04 39 11.6 +0.7**
TESR Tescani 79.59 317 ⇑P **P 04 39 10.9 +0.1**
HARR Harsova 79.65 315 ⇓P **P 04 39 12.2 +1.0**
HARR Harsova 79.65 315 ⇓P **P 04 39 12.2 +1.0**
BIZ Bicaz 79.72 318 ⇓P **P 04 39 12.0 +0.4**
VRI Vrincioaia 79.85 316 ⇓P **P 04 39 13.6 +1.3**
VRI Vrincioaia 79.85 316 ⇓P **P 04 39 13.6 +1.3**
PLOR Plostina 79.91 316 ⇑P **P 04 39 14.1 +1.5**
PLOR Plostina 79.91 316 ⇑P **P 04 39 14.1 +1.5**
BURAR Bucovina Array 79.93 318 ⇑P **P 04 39 13.3 +0.5**
BURAR Bucovina Array 79.93 318 P **P 04 39 11.7 -1.1**
BURAR Bucovina Array 79.93 318 ⇑P **P 04 39 13.3 +0.5**
BISRR Bisoca 80.01 316 ⇓P **P 04 39 14.5 +1.3**
BORA Eskisehir 80.18 310 IAmb IAmb 04 39 15.7
comp=Z,38nm,0.8s
COVR Voineasa-Covas 80.18 317 ⇑P **P 04 39 14.2 +0.1**
CSS Mathiatis 80.31 304 IAmb IAmb 04 39 16.5
comp=Z,39nm,0.9s
ISR Istrita 80.32 316 ⇑P **P 04 39 16.9 +2.0**
ISR Istrita 80.32 316 ⇑P **P 04 39 16.9 +2.0**
UPNV Upernavik 80.45 2 *i* P **P 04 39 12.5 -2.5**
UPNV IAmb IAmb 04 39 27.2
comp=Z,23nm,1.2s
SUMG Summit 80.46 357 IAmb IAmb 04 39 17.6
comp=Z,42nm,1.0s
SUMG Summit 80.46 357 *i* P **P 04 39 15.0 -0.5**
SUMG IAmb IAmb 04 39 17.6
comp=Z,82nm,1.4s
MLR Muntele Rosu 80.51 316 ⇑P **P 04 39 17.3 +1.3**
MLR Muntele Rosu 80.51 316 P **P 04 39 15.6 -0.4**
comp=Z,11nm,0.9s,baz=133,slow=3.4,SNR=9.1
comp=Z,11nm,0.9s
MLR Muntele Rosu 80.51 316 ⇑P **P 04 39 17.3 +1.3**
NLWA Neilton Lookou 80.52 42 P **P 04 39 16.6 +0.7**

DOPR Dopca 80.62 317 ⇓P **P 04 39 17.2 +0.8**
SECR 80.66 316 ⇑P **P 04 39 17.3 +0.7**
D03D Eldon 80.91 41 P **P 04 39 19.0 +1.1**
baz=300
BMR Baia Mare 80.91 319 ⇑P **P 04 39 22.2 +4.3**
BMR Baia Mare 80.91 319 ⇑P **P 04 39 22.2 +4.3**
KONO Kongsberg 80.98 334 *de*P **P 04 39 18.4 +0.4**
KONO pmax pmax
comp=Z,7.0nm,1.0s
KOLS Kolonicke sedl 80.98 321 *e*P **P 04 39 19.0 +0.7**
KOLS pmax pmax
comp=Z,10.0nm,0.8s
KOLS Kolonicke sedl 80.98 321 *e*P **P 04 39 19.0 +0.7**
VOIR 81.09 317 ⇑P **P 04 39 18.8 -0.2**
VOIR 81.09 317 ⇑P **P 04 39 18.8 -0.2**
DEL Delary 81.11 330 *e*P **P 04 39 19.5 +0.7**
UZH Uzhgorod 81.12 320 *e*P **P 04 39 18.3 -0.7**
UZH *i* 04 39 25.7
GKP Gorka Klasztor 81.35 326 *i* P **P 04 39 21.6 +1.5**
CRVS Cervenica-Dubn 81.46 321 *e*P **P 04 39 22.1 +1.3**
CRVS pmax pmax
comp=Z,43nm,1.3s
CRVS Cervenica-Dubn 81.46 321 *e*P **P 04 39 22.1 +1.3**
COPA Copaceanca 81.62 315 ⇓P **P 04 39 22.1 +0.4**
DRGR 81.82 319 ⇓P **P 04 39 23.0 +0.1**
DRGR 81.82 319 ⇓P **P 04 39 23.0 +0.1**
NIE Niedzica 81.83 322 *e*P **P 04 39 24.5 +1.6**
LOT Lotru 81.87 317 ⇓P **P 04 39 23.5 +0.3**
BALB Balikesir 82.05 310 IAmb IAmb 04 39 25.8
comp=Z,28nm,0.8s
KECS Kecovo 82.23 321 *e*P **P 04 39 27.3 +2.4**
KECS Kecovo 82.23 321 *e*P **P 04 39 27.3 +2.4**
LANS Liptovska Anna 82.44 322 *e*P **P 04 39 28.6 +2.6**
LANS pmax pmax
comp=Z,5.0nm,0.7s
LANS Liptovska Anna 82.44 322 *e*P **P 04 39 28.6 +2.6**
GZR Gura Zlata 82.50 317 ⇑P **P 04 39 26.7 +0.2**
GZR Gura Zlata 82.50 317 ⇑P **P 04 39 26.7 +0.2**
J01E Myrtle Point 82.58 45 P **P 04 39 28.3 +1.5**
baz=300
ATD Arta Tunnel 82.60 279 P **P 04 39 29.3 +1.8**
comp=Z,16nm,0.7s,baz=68,slow=1.8,SNR=7.1
comp=Z,16nm,0.7s
ATD Arta Tunnel 82.60 279 P **P 04 39 27.6 +0.2**
H04D Lebanon 82.64 44 P **P 04 39 27.9 +0.8**
baz=301
B08A Colville Reser 82.64 39 IAmb IAmb 04 39 29.2
comp=Z,22nm,1.2s
BUCK Buck Mountain 82.65 44 IAmb IAmb 04 39 30.4
comp=Z,24nm,0.9s
I03D Drain, OR 82.68 45 P **P 04 39 27.8 +0.5**
baz=300
SIRR Siria 82.71 318 ⇑P **P 04 39 27.9 +0.4**
OKC Ostrava-Krasne 82.78 323 *e*P **P 04 39 28.4 +0.7**
OKC Ostrava-Krasne 82.78 323 *e*P **P 04 39 28.4 +0.7**
PSZ Piszkesteto 82.86 321 ⇑P **P 04 39 29.6 +1.3**
PSZ Piszkesteto 82.86 321 ⇑P **P 04 39 29.6 +1.3**
RDO Rodhopi 82.89 313 IAmb IAmb 04 39 30.1
comp=Z,15nm,0.9s
HOOD Mount Hood Mea 82.89 43 IAmb IAmb 04 39 31.7
comp=Z,34nm,1.2s
H04A Detroit Lake 82.89 43 IAmb IAmb 04 39 31.4
comp=Z,25nm,1.3s
HERR Herculane 82.98 317 ⇑P **P 04 39 29.3 +0.4**
K02D Willamette Mer 82.98 46 P **P 04 39 29.4 +0.4**
baz=300
DJES Djerdap 83.03 317 ⇑P **P 04 39 29.7 +0.6**
BZS Buzias 83.08 318 ⇑P **P 04 39 28.9 -0.5**
BZS Buzias 83.08 318 ⇑P **P 04 39 28.9 -0.5**
MORC Moravsky Berou 83.14 323 ⇑P **P 04 39 30.2 +0.5**
MORC Moravsky Berou 83.14 323 IAmb IAmb 04 39 32.0
comp=Z,45nm,1.5s
MORC Moravsky Berou 83.14 323 ⇑P **P 04 39 30.2 +0.5**
MORC Moravsky Berou 83.14 323 *e*P **P 04 39 30.5 +0.8**
KSP Ksiaz 83.20 324 *e*P **P 04 39 30.4 +0.5**
I04A Tendick Farm, 83.21 44 P **P 04 39 30.7 +0.5**
baz=301
MAUC Maruska 83.22 323 *e*P **P 04 39 31.2 +1.1**
E07A Sunnyside 83.31 41 IAmb IAmb 04 39 33.1
comp=Z,18nm,1.1s
KRLC Kraliky 83.38 323 *e*P **P 04 39 31.7 +0.8**
KRLC Kraliky 83.38 323 *e*P **P 04 39 31.7 +0.8**
OSTC Ostas 83.41 324 *e*P **P 04 39 33.2 +2.2**
MDVR Moldovita 83.46 317 ⇓P **P 04 39 31.9 +0.5**
DPC Dobruska-Polom 83.47 324 *e*P **P 04 39 32.6 +1.2**
DPC Dobruska-Polom 83.47 324 *e*P **P 04 39 32.6 +1.2**
BLKB Belogradchik 83.47 316 ⇓P **P 04 39 32.2 +0.7**
CHVC Chvalec 83.47 324 *e*P **P 04 39 32.0 +0.7**
C09A Chrisman Ranch 83.54 39 IAmb IAmb 04 39 34.0
comp=Z,33nm,1.4s
UPC Upice 83.54 324 *e*P **P 04 39 33.1 +1.4**
UPC Upice 83.54 324 *e*P **P 04 39 33.1 +1.4**
D08A Wollman Farm, 83.58 40 IAmb IAmb 04 39 34.2
comp=Z,24nm,1.0s
HAWA Hanford 83.58 41 P **P 04 39 31.8 -0.1**
HAWA IAmb IAmb 04 39 34.5
comp=Z,15nm,1.0s
JAVC Velka Javorina 83.59 322 *e*P **P 04 39 33.8 +1.8**
I05D Terrebonne, OR 83.59 43 P **P 04 39 32.9 +0.8**
baz=302
F07A Phinny Hill Vi 83.62 41 IAmb IAmb 04 39 34.8
comp=Z,17nm,1.0s
VTS Vitosha 83.63 315 ⇑P **P 04 39 33.3 +0.8**
VTS Vitosha 83.63 315 ⇑P **P 04 39 33.3 +0.8**
J04D Umpqua Nationa 83.69 44 P **P 04 39 33.5 +0.7**
baz=301
E08A Dider Farm, El 83.81 41 IAmb IAmb 04 39 35.5
comp=Z,17nm,1.0s
SMOL Smolenice 83.91 322 *e*P **P 04 39 34.8 +1.2**
SMOL pmax pmax
comp=Z,22nm,1.2s
SMOL Smolenice 83.91 322 *e*P **P 04 39 34.8 +1.2**
VRAC Vranov 83.92 323 ⇑P **P 04 39 34.6 +1.0**
VRAC Vranov 83.92 323 P **P 04 39 34.1 +0.5**
comp=Z,26nm,0.9s,baz=66,slow=4.6,SNR=19
comp=Z,26nm,0.9s
VRAC Vranov 83.92 323 ⇑P **P 04 39 34.6 +1.0**
VRAC Vranov 83.92 323 *e*P **P 04 39 34.0 +0.4**
BOVS Bovan 84.06 316 ⇑P **P 04 39 29.7 -4.7**
MODS Modra-Piesok 84.08 322 *e*P **P 04 39 34.7 +0.2**
MODS pmax pmax
comp=Z,120nm,1.4s
MODS Modra-Piesok 84.08 322 *e*P **P 04 39 34.7 +0.2**
L04D Klamath Falls 84.09 45 P **P 04 39 35.5 +0.7**
baz=301
KRUC Moravsky 84.17 323 *e*P **P 04 39 35.3 +0.4**
J05D Fort Rock, OR 84.21 44 P **P 04 39 36.1 +0.7**
baz=302
ZST Bratislava 84.27 322 *e*P **P 04 39 37.1 +1.7**
ZST pmax pmax
comp=Z,212nm,2.1s
ZST Bratislava 84.27 322 *e*P **P 04 39 37.1 +1.7**
PVCC Panska Ves 84.28 325 *e*P **P 04 39 36.9 +1.5**
PVCC Panska Ves 84.28 325 *e*P **P 04 39 36.9 +1.5**
E09A Wood Farm, Sta 84.32 40 IAmb IAmb 04 39 38.3
comp=Z,30nm,1.2s
BRG Berggiesshubel 84.39 325 *e*P **P 04 39 37.2 +1.1**
BRG Amp 04 39 38.8
comp=Z,32nm,1.3s
BRG Berggiesshubel 84.39 325 *e*P **P 04 39 37.1 +1.1**
BRG pmax pmax
comp=Z,32nm,1.3s
BRG pmax pmax
comp=N,2μm,16.4s
BRG MLR MLR
comp=E,3μm,16.5s
BRG MLR MLR
comp=Z,4μm,17.3s
FRGS Fruska Gora 84.40 318 ⇑P **P 04 39 36.7 +0.5**
MORH Mrgy, Hungar 84.51 320 ⇑P **P 04 39 36.7 +0.1**
G08A Pilot Rock 84.52 42 P **P 04 39 36.7 -0.2**
TREC Trest 84.52 323 *e*P **P 04 39 38.1 +1.4**
TREC Trest 84.52 323 *e*P **P 04 39 38.1 +1.4**
CLL Collm 84.61 326 *i* P **P 04 39 37.7 +0.6**
CLL *e*S **S 04 50 06.0 +2.5**
CLL pmax pmax
comp=Z,37nm,0.9s
CLL Collm 84.61 326 *i* P **P 04 39 37.7 +0.6**
comp=Z,37nm,0.9s
CLL *i* x x 04 40 07.1
PRU Pruhonice 84.61 324 *e*P **P 04 39 38.5 +1.4**
PRU Pruhonice 84.61 324 *e*P **P 04 39 38.5 +1.4**
DIVS Divibare 84.87 317 IAmb IAmb 04 39 40.1
comp=Z,14nm,1.0s

RONA Rosalia, Austr 85.00 322 *i* P **P 04 39 39.8 +0.6**
comp=Z,20nm,1.2s,SNR=6.9
CONA Conrad Observa 85.11 322 *i* P **P 04 39 41.2 +1.4**
comp=Z,36nm,1.0s,SNR=20
CONA *e*P **PP 04 42 48.9 -7.6**
comp=Z,2.4nm,1.1s
LIT Litokhoron 85.42 313 IAmb IAmb 04 39 42.2
comp=Z,22nm,0.9s
CKRC Cesky Krumlov 85.42 323 *e*P **P 04 39 42.1 +0.8**
MOD Modoc Plateau 85.52 45 IAmb IAmb 04 39 44.5
comp=Z,19nm,1.1s
KHC Kasperske Hory 85.62 324 P **P 04 39 42.6 +0.3**
KHC IAmb IAmb 04 39 45.1
comp=Z,40nm,1.7s
KHC Kasperske Hory 85.62 324 *ce*P **P 04 39 43.0 +0.7**
KHC pmax pmax
comp=Z,20nm,1.4s
KHC Kasperske Hory 85.62 324 *e*P **P 04 39 42.8 +0.5**
ARSA Arzberg 85.69 322 *i* P **P 04 39 43.4 +0.8**
comp=Z,7.7nm,0.8s,SNR=8.6
ARSA *e*P **PP 04 43 06.1 +5.0**
comp=Z,2.8nm,0.9s
GEC2 GERESS Array S 85.73 324 IAmb IAmb 04 39 45.4
comp=Z,25nm,1.5s
GERES GERESS Array B 85.73 324 P **P 04 39 42.4 -0.5**
comp=Z,4.7nm,0.7s,baz=46,slow=5.8,SNR=20
comp=Z,4.7nm,0.7s
KOGS Kog 85.75 321 *i* P **P 04 39 43.7 +0.8**
JTMT Jette 85.78 38 IAmb IAmb 04 39 46.5
comp=Z,21nm,1.3s
J08A Circle Bar Ran 85.87 43 IAmb IAmb 04 39 46.5
comp=Z,26nm,1.2s
MOA Molln 86.02 323 *i* P **P 04 39 44.6 +0.3**
comp=Z,9.5nm,0.8s,SNR=6.7
MOA *e*P **PP 04 43 02.4 -1.4**
comp=Z,3.0nm,1.0s
WVOR Wild Horse Val 86.28 44 IAmb IAmb 04 39 48.3
comp=Z,17nm,1.1s
SOKA Soboth 86.30 321 *i* P **P 04 39 45.7 0.0**
comp=Z,10.0nm,0.9s,SNR=9.5
SOKA *e*P **PP 04 43 03.6 -2.5**
comp=Z,2.2nm,0.9s
BIOA Bad Ischl, Aus 86.46 323 *e*P **P 04 39 47.6 +1.2**
comp=Z,17nm,1.4s
MSO Missoula 86.52 38 IAmb IAmb 04 39 49.4
comp=Z,27nm,1.6s
CRES Cresnjev 86.56 321 *i* P **P 04 39 48.0 +1.1**
BEKR Beckworth 86.58 47 P **P 04 39 46.8 -0.6**
BEKR IAmb IAmb 04 39 49.4
comp=Z,18nm,1.0s
OBKA Obir 86.66 321 *e*P **P 04 39 46.9 -0.6**
comp=Z,12nm,0.8s
OBKA *e*P **PP 04 43 10.6 +1.5**
comp=Z,8.0nm,1.5s
DY2G Dye2 86.86 359 *i* P **P 04 39 46.2 -2.0**
DY2G IAML 04 39 59.8
comp=Z,9.6nm,0.7s
KBA Koelnbreinsper 86.99 322 *e*P **P 04 39 48.8 -0.4**
comp=Z,4.7nm,0.8s
KBA *e*P **PP 04 43 09.5 -2.2**
comp=Z,1.7nm,0.6s
FCC Fort Churchill 87.03 21 IAmb IAmb 04 39 50.4
comp=Z,28nm,1.2s
MYKA Terra Mystica 87.09 322 *e*P **P 04 39 49.6 0.0**
comp=Z,3.3nm,0.7s
EMB Emerald Bay 87.23 47 IAmb IAmb 04 39 53.4
comp=Z,22nm,1.1s
PAHR Pah Rah Range 87.30 46 IAmb IAmb 04 39 53.0
comp=Z,15nm,1.1s
MFID Camas Ranch 87.43 42 IAmb IAmb 04 39 54.0
comp=Z,35nm,1.4s
PNTR Pine Nut 87.49 47 IAmb IAmb 04 39 54.3
comp=Z,13nm,1.1s
CMB Columbia Colle 87.54 48 P **P 04 39 52.1 +0.2**
CMB Columbia Colle 87.54 48 P **P 04 39 52.1 +0.2**
CMB pmax pmax
comp=Z,10.0nm,0.9s
ABTA Abfaltersbach 87.64 322 *i* P **P 04 39 52.3 +0.1**
comp=Z,10nm,0.9s,SNR=6.7
ABTA *e*P **PP 04 43 11.3 -5.6**
comp=Z,6.7nm,1.3s
WATA Walderalm 87.78 323 *e*P **P 04 39 53.3 +0.3**
comp=Z,7.7nm,0.8s
WTTA Wattenberg 87.80 323 *e*P **P 04 39 53.8 +0.7**
comp=Z,11nm,1.1s
STAL STALIGIAL 87.83 322 IAmb IAmb 04 40 15.1
comp=Z,20nm,1.1s
MOTA Moosalm 88.03 324 *e*P **P 04 39 54.0 -0.2**
comp=Z,13nm,1.0s
MOTA *e*P **PP 04 43 22.7 +2.6**
comp=Z,2.2nm,0.6s
SQTA Sankt Quirin 88.05 323 *e*P **P 04 39 55.1 +0.9**
comp=Z,9.9nm,1.4s
RETA Reutte 88.12 324 *e*P **P 04 39 55.1 +0.6**
comp=Z,4.2nm,1.2s
RETA *e*P **PP 04 43 15.8 -4.9**
comp=Z,3.5nm,1.1s
HLID Hailey 88.18 41 IAmb IAmb 04 39 58.0
comp=Z,19nm,1.2s
BMN Battle Mountai 88.28 45 IAmb IAmb 04 39 59.1
comp=Z,18nm,1.2s
FETA Feichten 88.43 323 *e*P **P 04 39 55.1 -1.0**
comp=Z,6.6nm,1.0s
FETA *e*P **PP 04 43 22.2 -1.1**
comp=Z,3.2nm,1.0s
RYN Ryan 88.45 47 IAmb IAmb 04 39 58.9
comp=Z,39nm,1.8s
MEM Membach 88.45 328 *d*P **P 04 39 56.2 +0.3**
KVN Kaiserville 88.49 46 IAmb IAmb 04 39 59.0
comp=Z,29nm,1.7s
BOZ Bozeman (W) 88.54 38 P **P 04 39 57.4 +0.8**
BOZ IAmb IAmb 04 39 59.0
comp=Z,15nm,1.2s
BOZ Bozeman (W) 88.54 38 P **P 04 39 57.4 +0.8**
BOZ pmax pmax
comp=Z,15nm,1.3s
BHOU Houvegnez 88.63 328 *d*P **P 04 39 56.6 -0.1**
LHV Little Huntoon 88.67 47 IAmb IAmb 04 40 00.1
comp=Z,37nm,1.8s
BSTI Sart Tilman 88.68 328 *d*PcP **PcP 04 39 58.3 -0.3**
NVAR Mina Array Bea 88.70 47 P **P 04 39 58.0 +0.4**
comp=Z,4.1nm,0.9s,baz=286,slow=5.3,SNR=11
comp=Z,4.1nm,0.9s
DAVA Damuels 88.71 324 *e*P **P 04 39 57.1 -0.3**
comp=Z,13nm,1.6s
EKA Eskdalemuir Ar 88.91 335 P **P 04 39 57.2 -0.8**
BCLA Clavier 88.91 328 *d*P **P 04 39 58.7 +0.6**
WLF Walferdange 89.02 327 *d*PcP **PcP 04 39 59.6 -0.5**
DAVOX Davos/Dischmat 89.03 324 P **P 04 39 58.4 -0.6**
comp=Z,7.7nm,0.9s,baz=61,slow=4.2,SNR=9.2
comp=Z,7.7nm,0.9s
RCHB Rochefort 89.13 328 *d*P **P 04 39 58.8 -0.3**
BMRD Maredsous 89.24 329 *d*P **P 04 39 59.7 0.0**
YHL Hebgen Lake 89.25 39 P **P 04 40 01.3 +1.1**
YHL IAmb IAmb 04 40 03.9
comp=Z,24nm,1.2s
DOU Dourbes 89.47 328 *d*P **P 04 40 01.1 +0.4**
YMR Madison River 89.48 39 IAmb IAmb 04 40 05.2
comp=Z,19nm,1.1s
TUE Stuetta 89.51 324 IAmb IAmb 04 40 20.3
comp=Z,12nm,0.8s
PKM Mcpherson Peak 89.63 51 P **P 04 40 03.5 +1.5**
baz=303
H17A Grant Village 89.87 39 P **P 04 40 05.4 +2.3**
baz=309
RLMT Red Lodge 90.13 38 IAmb IAmb 04 40 07.0
comp=Z,24nm,1.3s
MOOW Moose Ponds 90.18 39 IAmb IAmb 04 40 07.6
comp=Z,21nm,1.6s
HVU Hansel Valley 90.21 42 IAmb IAmb 04 40 08.4
comp=Z,29nm,1.3s
SNOW Snow King Moun 90.35 40 P **P 04 40 04.1 -1.2**
REDW Red Top Meadow 90.36 40 IAmb IAmb 04 40 09.1
comp=Z,26nm,1.6s
R11A Troy Canyon, C 90.50 46 P **P 04 40 06.5 +0.5**
baz=305
DGMT Dagmar 90.52 33 IAmb IAmb 04 40 08.0
comp=Z,34nm,1.4s
MPMC Manual Prospec 90.56 49 P **P 04 40 06.7 +0.3**
baz=304
BGU Big Grassy Mou 90.57 43 IAmb IAmb 04 40 09.3
comp=Z,22nm,1.3s
FURC Furnace Creek, 90.75 48 P **P 04 40 08.5 +1.6**
baz=305
LRMC Laurel Mtn Rad 90.76 49 P **P 04 40 08.6 +1.4**
baz=304
EDW2 Edwards Air Fo 90.88 50 P **P 04 40 07.6 -0.1**

	baz=304							
GWY	**Greenwater Val**	**91.04**	**48**	P	**P**	**04 40 08.7**	**+0.2**
GWY				IAmb	IAmb	04 40 10.7	
	comp=Z,15nm,1.3s						
PRN	**Pahroc Range**	**91.40**	**46**	IAmb	IAmb	04 40 13.8	
	comp=Z,16nm,1.3s						
GSC	**Goldstone, Bar**	**91.45**	**49**	P	**P**	**04 40 10.9**	**+0.5**
	baz=305						
PDAR	**Pinedale Array**	**91.47**	**40**	P	**P**	**04 40 09.8**	**-0.7**
	comp=Z,5.0nm,0.9s,baz=310,slow=1.3,SNR=16						
	comp=Z,5.0nm,0.9s						
PSUT	**Pine Spring**	**91.50**	**45**	IAmb	IAmb	04 40 13.8	
	comp=Z,13nm,1.1s						
JLU	**Jordanelle**	**91.72**	**42**	IAmb	IAmb	04 40 14.6	
	comp=Z,23nm,1.3s						
NLU	**North Lily Min**	**91.74**	**43**	IAmb	IAmb	04 40 14.7	
	comp=Z,15nm,1.0s						
SHPR	**Sheep Range**	**91.85**	**47**	P	**P**	**04 40 11.7**	**-0.6**
SHPR				IAmb	IAmb	04 40 15.1	
	comp=Z,15nm,1.2s						
MPU	**Maple Canyon**	**91.97**	**43**	IAmb	IAmb	04 40 16.3	
	comp=Z,23nm,1.1s						
TCRU	**Three Creeks R**	**92.33**	**44**	IAmb	IAmb	04 40 21.8	
	comp=Z,24nm,1.2s						
GMRC	**Granite Mounta**	**92.52**	**49**	P	**P**	**04 40 16.5**	**+1.1**
	baz=305						
PFO	**Pinyon Flats O**	**92.65**	**50**	P	**P**	**04 40 16.6**	**+0.7**
PFO	**Pinyon Flats O**	**92.65**	**50**	P	**P**	**04 40 16.6**	**+0.7**
PFO				pmax	pmax		
	comp=Z,20nm,1.0s						
PFO	**Pinyon Flats O**	**92.65**	**50**	P	**P**	**04 40 16.7**	**+0.7**
	baz=305						
LCMT	**Little Creek M**	**92.79**	**46**	IAmb	IAmb	04 40 19.5	
	comp=Z,16nm,1.1s						
RDMU	**Red Mountain**	**92.86**	**41**	P	**P**	**04 40 15.7**	**-1.3**
RDMU				IAmb	IAmb	04 40 20.3	
	comp=Z,19nm,1.1s						
ULM	**Lac du Bonnet**	**92.97**	**28**	P	**P**	**04 40 16.4**	**-0.5**
	comp=Z,7.0nm,0.9s,baz=323,slow=5.8,SNR=7.0						
	comp=Z,7.0nm,0.9s						
ULM	**Lac du Bonnet**	**92.97**	**28**	IAmb	IAmb	04 40 19.0	
	comp=Z,11nm,1.1s						
ULM	**Lac du Bonnet**	**92.97**	**28**	*ce*P	**P**	**04 40 17.5**	**+0.6**
MONP2	**Monument Peak**	**93.08**	**51**	P	**P**	**04 40 17.9**	**-0.2**
	baz=305						
SRU	**San Rafael Swe**	**93.21**	**43**	IAmb	IAmb	04 40 21.7	
	comp=Z,16nm,1.0s						
IRM	**Iron Mountain**	**93.23**	**49**	P	**P**	**04 40 19.7**	**+1.2**
	baz=306						
BC3	**Big Chuckawall**	**93.31**	**50**	P	**P**	**04 40 19.8**	**+0.7**
	baz=306						
IKP	**In-Ko-Pah, Jac**	**93.44**	**51**	P	**P**	**04 40 20.6**	**+1.0**
	baz=305						
RWWY	**Rawlins**	**93.50**	**39**	IAmb	IAmb	04 40 22.1	
	comp=Z,15nm,1.2s						
W13A	**Hualapai Mount**	**93.51**	**48**	IAmb	IAmb	04 40 22.7	
	comp=Z,10nm,1.1s						
YUH	**Yuha Desert**	**93.57**	**51**	IAmb	IAmb	04 40 23.3	
	comp=Z,15nm,1.1s						
RSSD	**Black Hills**	**93.59**	**36**	P	**P**	**04 40 19.5**	**-0.7**
RSSD				IAmb	IAmb	04 40 22.2	
	comp=Z,26nm,1.7s						
RSSD	**Black Hills**	**93.59**	**36**	P	**P**	**04 40 19.5**	**-0.7**
RSSD				pmax	pmax		
	comp=Z,26nm,1.7s						
U15A	**North Rim**	**93.75**	**46**	IAmb	IAmb	04 40 24.2	
	comp=Z,14nm,1.0s						
PDMCI	**Parker Dam,Lak**	**93.81**	**48**	P	**P**	**04 40 21.9**	**+0.7**
	baz=306						
BLYC	**Blythe**	**93.88**	**49**	IAmb	IAmb	04 40 24.9	
	comp=Z,20nm,1.0s						
O20A	**White River Ci**	**93.92**	**41**	P	**P**	**04 40 21.7**	**-0.1**
	baz=310						
PHWY	**Pilot Hill**	**94.74**	**39**	IAmb	IAmb	04 40 28.6	
	comp=Z,20nm,1.6s						
PV13	**Radium Mtn., P**	**94.84**	**43**	IAmb	IAmb	04 40 28.6	
	comp=Z,17nm,1.3s						
113A	**Mohawk Valley,**	**94.97**	**49**	P	**P**	**04 40 26.4**	**-0.1**
113A				IAmb	IAmb	04 40 29.1	
	comp=Z,16nm,1.1s						
SMCO	**Snowmass**	**95.28**	**41**	IAmb	IAmb	04 40 35.2	
	comp=Z,17nm,1.6s						
B35A	**Bob, Littlefor**	**95.32**	**28**	IAmb	IAmb	04 40 29.4	
	comp=Z,9.2nm,1.0s						
X16A	**Lo Mia Camp, P**	**95.53**	**47**	IAmb	IAmb	04 40 33.0	
	comp=Z,11nm,1.0s						
214A	**Organ Pipe Nat**	**96.10**	**50**	IAmb	IAmb	04 40 35.2	
	comp=Z,12nm,1.1s						
214A	**Organ Pipe Nat**	**96.10**	**50**	P	**P**	**04 40 32.2**	**+0.5**
	baz=307						
ANMO	**Albuquerque**	**98.37**	**44**	*e*P	**P**	**04 40 39.5**	**-2.6**
ANMO				pmax	pmax		
	comp=Z,1.0nm,1.1s						
TXAR	**Lajitas Array**	**103.85**	**47**	Pdiff	**Pdif**	**04 41 07.9**	**+1.4**
	comp=Z,0.8nm,0.8s,baz=311,slow=4.3,SNR=1.7						
TXAR				PKKPbc	**PKKPbc**	**04 56 56.5**	**-0.3**
	comp=Z,0.3nm,0.8s,baz=128,slow=5.8,SNR=5.6						
TORD	**Torodi Ar. Bea**	**116.13**	**302**	PKP	**PKPdf**	**04 45 46.1**	**-1.5**
	comp=Z,0.5nm,0.6s,baz=55,slow=0.7,SNR=4.9						
TORD				PP	**PP**	**04 46 51.0**	**-1.1**
	comp=Z,1.4nm,1.0s,baz=56,slow=5.7,SNR=4.0						
TORD				PKKPab	**PKKPab**	**04 56 24.3**	**+0.8**
	comp=Z,0.5nm,0.9s,baz=264,slow=1.5,SNR=3.6						
SNAA	**Sanae**	**128.34**	**197**	PKPdf	**PKPdf**	**04 46 08.7**	**-0.8**
BELA	**Belgrano 2**	**128.50**	**184**		**PKPdf**	**04 46 09.0**	**-0.5**
VNA3	**Neumayer Olymp**	**130.34**	**196**	PKPdf	**PKPdf**	**04 46 13.6**	**+0.3**
VNA1	**Neumayer--Stat**	**130.37**	**197**	PKPdf	**PKiKP**	**04 46 14.3**	**+0.3**
LPAZ	**La Paz**	**159.91**	**62**	PKPab	**PKPab**	**04 47 43.4**	**-0.2**
	comp=Z,3.4nm,0.9s,baz=357,slow=5.1,SNR=5.8						
LPAZ	**La Paz**	**159.91**	**62**		**PKPab**	**04 47 42.5**	**-1.0**
BDFB	**Brasilia**	**168.65**	**352**	PKP	**PKPdf**	**04 47 11.3**	**-0.2**
	comp=Z,1.6nm,0.4s,baz=40,slow=5.4,SNR=3.7						
BDFB	**Brasilia**	**168.65**	**352**		**PKPdf**	**04 47 11.0**	**-0.5**

*SNET **13** 04:31:41.5±0.5, 13°.15N×90°.23W, h25km±4km, ML3.4*
*GCG **13** 04:31:42.3±0.4, 13°.38N×90°.37W, h112km±20km, MD3.4*
ISC 13 04:31:38.1±3.0,**13°.1N**±0°.1×**90°.32W**±0°.08,**h10**km±14km,
n14,σ0**°59**/18,**3D**,**Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NUBE	**Las Nubes**	**1.00**	**32**	*i* P	**Pg**	**04 31 57.4**	**+0.1**
CEVE	**Cerro Verde**	**1.03**	**41**	↓*i* P	**Pg**	**04 31 58.5**	**+0.5**
LALI	**Alcalda de L**	**1.06**	**66**	*e*P	**Pg**	**04 31 58.7**	**+0.2**
LALI				*e*S	**Sg**	**04 32 11.8**	**-0.6**
SLOZ	**Alcaldia de Sa**	**1.10**	**28**	↓*i* P	Pg	04 31 59.0	-0.3
SLOZ				*e*S	**Sg**	**04 32 13.2**	**-0.5**
CEDA	**San Andres**	**1.17**	**50**	*e*P	**Pn**	**04 32 00.5**	**-0.2**
CEDA				IAML		04 32 21.8	
	comp=Z,1μm,0.3s						
UEES	**Universidad Ev**	**1.24**	**57**	*e*P	**Pn**	**04 32 01.7**	**+0.1**
UEES				IAML		04 32 25.2	
	comp=Z,548nm,0.2s						
SJTE	**Alcalda de S**	**1.40**	**66**	*e*P	**Pn**	**04 32 03.6**	**-0.2**
FUG	**Fuego 3**	**1.48**	**340**	*e*P	**Pn**	**04 32 04.8**	**-0.3**
FUG				*e*S	**Sn**	**04 32 24.6**	**0.0**
PAVA	**Las Pavas**	**1.50**	**64**	*e*P	**Pn**	**04 32 05.7**	**+0.5**
COEG	**Centro de Oper**	**1.51**	**68**	*e*P	**Pn**	**04 32 05.3**	**0.0**
NBG	**Las Nubes**	**1.53**	**359**	*e*P	**Pn**	**04 32 07.1**	**+1.3**
NBG				*e*S	**Sn**	**04 32 26.1**	**+0.1**
SCLA	**Alcaldia de Sa**	**1.68**	**67**	↓*e*P	**Pn**	**04 32 08.4**	**+0.7**
STG3	**Santiaguito 3,**	**2.05**	**324**	*e*P	**Pn**	**04 32 13.2**	**+0.3**
STG3				*e*S	**Sn**	**04 32 37.7**	**-1.1**
LCND	**La Caada**	**2.38**	**83**	*e*P	**Pn**	**04 32 17.5**	**+0.3**

*NAO **13** 04:35:05.8±4.0, 64°.48N×4°.32W, ML3.6*
*BER **13** 04:35:08.1±2.8, 64°.52N×4°.42W, h10km, ML2.5, MW2.6, ML3.6(NAO), Confirmed Earthquake*
ISC 13 04:35:04.0±0.9,**64°.52N**±0°.05×**4°.31W**±0°.07,**h10**km,**n40**,
σ3**°21**/63,**Norwegian Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOFL	**Sornfelli, Far**	**2.74**	**207**	*e*P	**Pn**	**04 35 50.0**	**+2.0**
SOFL				*e*S	**Sn**	**04 36 20.4**	**-0.8**
SOFL				IAML		04 36 25.1	
	comp=Z,78nm,0.5s						
LRW	**Lerwick**	**4.64**	**160**	*e*P	**Pn**	**04 36 16.8**	**+2.7**
LRW				*e*S	**Sn**	**04 37 05.5**	**-2.3**
LRW				IAML		04 37 07.5	
	comp=Z,27nm,0.7s						
FOO	**Floro**	**5.17**	**120**	*e*P	**Pn**	**04 36 24.2**	**+2.9**
FOO				*e*S	**Sn**	**04 37 18.8**	**-2.0**
FOO				IAML		04 37 25.1	
	comp=Z,11nm,0.2s						
SUE	**Sulen**	**5.42**	**126**	*e*P	**Pn**	**04 36 27.3**	**+2.6**
SUE				*e*S	**Sn**	**04 37 24.3**	**-2.8**
SUE				IAML		04 37 29.3	
	comp=Z,9.5nm,0.2s						
AKN	**Aaknes**	**5.61**	**110**	Pn	**Pn**	**04 36 31.8**	**+4.5**
AKN				Sn	**Sn**	**04 37 33.4**	**+1.7**
AKN	**Aaknes**	**5.61**	**110**	Pn	**Pn**	**04 36 31.8**	**+4.5**
AKN				Sn	**Sn**	**04 37 33.4**	**+1.7**
MOL	**Molde**	**5.65**	**105**	*e*P	**Pn**	**04 36 30.9**	**+3.1**
MOL				*e*S	**Sn**	**04 37 30.1**	**-2.6**
MOL				IAML		04 37 37.5	
	comp=Z,8.0nm,0.3s						
HYA	**Hoyanger**	**5.87**	**120**	*e*P	**Pn**	**04 36 34.3**	**+3.4**
HYA				*e*S	**Sn**	**04 37 36.3**	**-1.8**
HYA				IAML		04 37 49.0	
	comp=Z,5.3nm,0.5s						
HYA				IAML		04 37 49.4	
	comp=Z,6.5nm,0.5s						
ASK	**Askoy**	**5.98**	**128**	*e*P	**Pn**	**04 36 35.1**	**+2.7**
ASK				*e*S	**Sn**	**04 37 38.1**	**-2.8**
ASK				IAML		04 37 43.0	
	comp=Z,7.0nm,0.2s						
ASK				IAML		04 37 43.0	
	comp=Z,6.3nm,0.2s						
BIGH	**Upper Bighouse**	**6.05**	**178**	*e*P	**Pn**	**04 36 35.1**	**+1.7**
BIGH				*e*S	**Sn**	**04 37 39.3**	**-3.4**
DOMB	**Dombas**	**6.52**	**106**	*e*P	**Pn**	**04 36 42.3**	**+2.4**
DOMB				*e*		04 36 52.3	
DOMB				*e*S	**Sn**	**04 37 50.7**	**-3.6**
DOMB				IAML		04 38 04.3	
	comp=Z,3.1nm,0.3s						
JMI	**Jan Mayen**	**6.65**	**347**	*e*P	**Pn**	**04 36 42.3**	**+0.8**
JNE	**Jan Mayen East**	**6.67**	**349**	*e*P	**Pn**	**04 36 42.8**	**+1.0**
JMIC	**Jan Mayen**	**6.68**	**348**	*e*P	**Pn**	**04 36 42.3**	**+0.3**
JMIC				*e*S	**Sn**	**04 37 52.2**	**-5.9**
JMIC				IAML		04 38 10.4	
	comp=Z,7.3nm,0.4s						
JNW	**Jan Mayen West**	**6.72**	**348**	*e*P	**Pn**	**04 36 42.4**	**-0.1**
SKAR	**Skarslia**	**6.98**	**118**	*e*P	**Pn**	**04 36 49.9**	**+3.8**
SKAR				*e*S	**Sn**	**04 38 03.1**	**-2.3**
SKAR				IAML		04 38 23.8	
	comp=Z,5.0nm,0.7s						
KMY	**Karmoy**	**6.98**	**135**	*e*P	**Pn**	**04 36 48.8**	**+2.7**
KMY				*e*S	**Sn**	**04 38 00.8**	**-4.6**
KMY				IAML		04 38 08.4	
	comp=Z,6.4nm,0.6s						
KMY				IAML		04 38 12.6	
	comp=Z,6.1nm,0.4s						
NSS	**Namsos**	**7.02**	**83**	*e*P	**Pn**	**04 36 49.8**	**+3.2**
NSS				*e*S	**Sn**	**04 38 02.0**	**-4.4**
NSS				IAML		04 38 09.3	
	comp=Z,6.2nm,0.2s						
BLS5	**Blasjo**	**7.20**	**130**	*e*P	**Pn**	**04 36 51.9**	**+2.7**
BLS5				*e*S	**Sn**	**04 38 05.6**	**-5.3**
BLS5				IAML		04 38 15.5	
	comp=Z,3.8nm,0.7s						
KPL	**Plockton**	**7.24**	**186**	*e*P	**Pn**	**04 36 51.2**	**+1.6**
KPL				*e*S	**Sn**	**04 38 06.1**	**-5.7**
STOK	**Stokkvaagen**	**7.44**	**68**	*e*P	**Pn**	**04 36 55.7**	**+3.3**
STOK				*e*S	**Sn**	**04 38 10.5**	**-6.3**
KONS	**Konsvik**	**7.50**	**67**	Pn	**Pn**	**04 36 56.7**	**+3.4**
KONS				Sn	**Sn**	**04 38 12.3**	**-6.0**
KONS	**Konsvik**	**7.50**	**67**	*e*P	**Pn**	**04 36 56.2**	**+2.9**
KONS				*e*S	Sn	04 38 11.9	-6.4
KONS				IAML		04 38 15.0	
	comp=Z,8.7nm,0.2s						
KONS				IAML		04 38 18.3	
	comp=Z,6.2nm,0.2s						
DRUM	**Mains of Drumt**	**7.69**	**173**	*e*P	**Pn**	**04 36 57.9**	**+2.1**
DRUM				*i* S	**Sn**	**04 38 17.4**	**-5.5**
NB2	**NORSAR Subarra**	**7.92**	**109**	Pn	**Pn**	**04 37 02.2**	**+3.1**
	baz=309,slow=14						
NB2	**NORSAR Subarra**	**7.92**	**109**	Pn	**Pn**	**04 37 02.2**	**+3.1**
	baz=309,slow=14						
MOR8	**Moi Rana**	**8.00**	**70**	*e*P	**Pn**	**04 37 04.7**	**+4.6**
MOR8				*e*S	**Sn**	**04 38 31.1**	**+0.4**
MOR8				IAML		04 38 39.3	
	comp=Z,10nm,0.2s						
LOF	**Lofoten**	**8.03**	**55**	*e*P	**Pn**	**04 37 01.1**	**+0.7**
LOF				*e*S	Sn	04 38 23.9	-7.2
LOF				IAML		04 38 27.8	
	comp=Z,4.8nm,0.4s						
NRA0	**NORESS Array S**	**8.22**	**110**	Pn	**Pn**	**04 37 06.1**	**+2.9**
	baz=309,slow=12						
NRA0				Sn	**Sn**	**04 38 33.3**	**-2.7**
	baz=310,slow=22						
NRA0	**NORESS Array S**	**8.22**	**110**	Pn	**Pn**	**04 37 06.1**	**+2.9**
	baz=309,slow=12						
NRA0				Sn	**Sn**	**04 38 33.3**	**-2.7**
	baz=310,slow=22						
FAUS	**Fauske**	**8.48**	**62**	*e*P	**Pn**	**04 37 09.5**	**+2.8**
FAUS				*e*S	Sn	04 38 35.4	-7.0
FAUS				IAML		04 38 41.4	
	comp=Z,6.8nm,0.6s						
NOD	**Norderasen**	**8.49**	**89**	*e*P	**Pn**	**04 37 08.1**	**+1.3**
NOD				*e*		04 38 41.1	
STEI	**Steigen**	**8.59**	**58**	*e*P	**Pn**	**04 37 10.4**	**+2.3**
STEI				*e*S	Sn	04 38 37.7	-7.1
STEI				IAML		04 38 40.0	
	comp=Z,26nm,1.0s						
EKA	**Eskdalemuir Ar**	**9.24**	**176**	Pn	**Pn**	**04 37 18.6**	**+1.6**
EKA	**Eskdalemuir Ar**	**9.24**	**176**	Pn	**Pn**	**04 37 18.6**	**+1.6**
JETT	**Jettan, Norway**	**10.83**	**51**	Pn	**Pn**	**04 37 41.9**	**+3.0**
KIF	**Kilpisjarvi**	**10.83**	**54**	*e*P	**Pn**	**04 37 39.6**	**+0.8**
KIF				*e*		04 39 34.0	
ARA0	**ARCESS Array S**	**12.58**	**53**	Pn	**Pn**	**04 38 06.0**	**+3.3**
	baz=245,slow=14						
ARA0	**ARCESS Array S**	**12.58**	**53**	Pn	**Pn**	**04 38 06.0**	**+3.3**
	baz=245,slow=14						
SPA0	**Spitsbergen Ar**	**15.05**	**16**	P	**P**	**04 38 42.6**	**+0.9**
	baz=180,slow=16						

*INET **13** 04:38:49.4±0.5, 12°.80N×86°.96W, h14km±3km, MW2.6*
*SNET **13** 04:38:50.1±1.2, 12°.81N×87°.08W, h22km±13km, ML2.6*
ISC 13 04:38:48.1±1.2,**12°.84N**±0°.05×**86°.98W**±0°.04,**h13**km±10km,
n11,σ0**°48**/16,**Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**0.15**	**205**	*e*P	**Pb**	**04 38 53.3**	**+0.5**
CRIN				*e*S	**Sg**	**04 38 54.0**	**-0.4**
TEL3	**Telica 3**	**0.30**	**153**	*e*P	**Pb**	**04 38 55.2**	**-0.2**
CNGN	**Cerro Negro**	**0.43**	**140**	*e*P	**Pb**	**04 38 57.8**	**+0.1**
CNCH	**Conchagua**	**0.94**	**298**	*e*P	**Pb**	**04 39 05.7**	**-0.7**
CNCH				*e*S	**Sb**	**04 39 18.6**	**-0.1**
CNCH				IAML		04 39 24.5	
	comp=Z,490nm,0.3s						
LCND	**La Caada**	**1.00**	**298**	*e*P	**Pb**	**04 39 06.6**	**-0.8**
LCND				*e*P	**Pg**	**04 39 08.0**	**+0.5**
LCND				*e*S	**Sb**	**04 39 20.0**	**-0.5**
LCND				*e*S	**Sg**	**04 39 20.5**	**0.0**
LCND				IAML		04 39 24.1	
	comp=Z,225nm,0.3s						
MATN	**Matagalpa**	**1.04**	**85**	*e*P	**Pb**	**04 39 07.5**	**-0.6**
TGUH	**Tegucigalpa,Un**	**1.25**	**347**	*e*P	**Pb**	**04 39 12.1**	**+0.4**
TGUH	**Tegucigalpa,Un**	**1.25**	**347**	*e*P	**Pb**	**04 39 12.1**	**+0.4**
BOAB	**BOACO BROADBAN**	**1.34**	**107**	*e*P	**Pn**	**04 39 12.7**	**0.0**
RANC	**El Ranchito**	**1.40**	**295**	*e*P	**Pn**	**04 39 13.6**	**0.0**
RANC				IAML		04 39 14.3	
	comp=Z,38nm,0.2s						
PACA	**Pacayal**	**1.45**	**296**	*e*P	**Pn**	**04 39 14.4**	**+0.2**

*JMA **13** 04:48:33.5±0.3, 24°.6N±0°.6×122°.0E±0°.6, h65km±4km, MV2.7/9, TAIWAN REGION*
*TAP **13** 04:48:33.7, 24°.65N×122°.01E, h64km, ML3.6, B*
ISC 13 04:48:34.0±1.2,**24°.66N**±0°.03×**122°.05E**±0°.02,**h63**km±5km,
n121,σ0**°88**/210,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWC	**Suao**	**0.19**	**255**	*i* P	**Pn**	**04 48 43.6**	**-0.1**
	baz=252						
TWC				S	**Sn**	**04 48 50.7**	**0.0**
	baz=252						
EGS		**0.21**	**330**	P	**Pn**	**04 48 44.0**	**+0.2**
	baz=349						
EGS				*e*S	**Sn**	**04 48 51.5**	**+0.5**
	baz=349						
NTC	**Toucheng**	**0.28**	**314**	*e*P	**Pn**	**04 48 44.1**	**-0.2**
	baz=330						
NTC				*e*S	**Sn**	**04 48 51.9**	**+0.2**
	baz=330						
ILA	**Ilan**	**0.29**	**291**	*e*P	**Pn**	**04 48 45.2**	**+0.9**
	baz=301						
ILA				S	**Sn**	**04 48 52.8**	**+0.9**
	baz=301						
NDS	**Dongshan**	**0.30**	**265**	*i* P	**Pn**	**04 48 44.8**	**+0.4**
	baz=266						
NDS				S	**Sn**	**04 48 52.1**	**0.0**
	baz=266						
EWUT	**Wuta**	**0.33**	**229**	*i* P	**Pn**	**04 48 44.8**	**+0.2**
	baz=225						
EWUT				S	**Sn**	**04 48 53.0**	**+0.7**
	baz=225						
TWB1	**Santiao Chiao**	**0.35**	**351**	*i* P	**Pn**	**04 48 44.5**	**-0.3**
	baz=358						
TWB1				S	**Sn**	**04 48 52.3**	**-0.4**
	baz=358						
TWE	**Neicheng**	**0.35**	**280**	P	**Pn**	**04 48 45.1**	**+0.3**
	baz=290						
TWE				S	**Sn**	**04 48 53.2**	**+0.5**
	baz=290						
ENA	**Nanau**	**0.36**	**231**	*i* P	**Pn**	**04 48 45.0**	**+0.1**
	baz=226						
ENA				S	**Sn**	**04 48 53.5**	**+0.7**
	baz=226						
TIPB	**Shuangxi**	**0.37**	**327**	P	**Pn**	**04 48 44.8**	**-0.2**
	baz=332						
TIPB				S	**Sn**	**04 48 52.5**	**-0.6**
	baz=332						
FUSB	**Fushanzhiwuyua**	**0.43**	**284**	P	**Pn**	**04 48 46.0**	**+0.4**
	baz=289						
FUSB				*e*S	**Sn**	**04 48 54.5**	**+0.4**
	baz=289						
ENTT	**Nioudou**	**0.44**	**268**	P	**Pn**	**04 48 46.0**	**+0.4**
	baz=275						
SXI1	**Grass Mountain**	**0.46**	**340**	*e*P	**Pn**	**04 48 45.6**	**-0.3**
	baz=335						
SXI1				*e*S	**Sn**	**04 48 54.2**	**-0.4**
	baz=335						
NWF	**Wu-fen Shan**	**0.48**	**329**	P	**Pn**	**04 48 45.9**	**-0.1**
	baz=333						
NWF				*e*S	**Sn**	**04 48 54.3**	**-0.6**
	baz=333						
WFSB	**Wu-fen Shan**	**0.48**	**329**	P	**Pn**	**04 48 45.8**	**-0.1**
	baz=333						
WFSB				*e*S	**Sn**	**04 48 54.5**	**-0.2**
	baz=333						
NDT	**Datong Townshi**	**0.49**	**264**	*e*P	**Pn**	**04 48 46.0**	**-0.1**
	baz=267						
NDT				S	**Sn**	**04 48 55.6**	**+0.6**
	baz=267						
LATG	**Datong**	**0.49**	**256**	P	**Pn**	**04 48 46.4**	**+0.2**
	baz=252						
LATG				S	**Sn**	**04 48 55.8**	**+0.7**
	baz=252						
NWLT	**Wulai**	**0.51**	**283**	*e*P	**Pn**	**04 48 46.6**	**+0.2**
	baz=296						
NWLT				*e*S	**Sn**	**04 48 55.9**	**+0.5**
	baz=296						
TWA	**Mucha**	**0.53**	**307**	P	**Pn**	**04 48 46.2**	**-0.4**
	baz=318						
TWA				S	**Sn**	**04 48 55.1**	**-0.6**
	baz=318						
NHDH	**Xindian Distri**	**0.56**	**303**	P	**Pn**	**04 48 46.5**	**-0.3**
	baz=314						
NHDH				S	**Sn**	**04 48 55.9**	**-0.4**
	baz=314						
TATO	**Taipei**	**0.60**	**302**	*e*P	**Pn**	**04 48 46.9**	**-0.4**
	baz=311						
TATO				*e*S	**Sn**	**04 48 56.0**	**-1.0**
	baz=311						
TAP1	**Taipei**	**0.61**	**309**	*e*S	**Sn**	**04 48 56.9**	**-0.2**
	baz=319						
YHNB	**Yeheng**	**0.61**	**271**	P	**Pn**	**04 48 47.7**	**+0.2**
	baz=272						
YHNB				S	**Sn**	**04 48 57.4**	**0.0**
	baz=272						
TAP	**Taipei**	**0.62**	**308**	*e*S	**Sn**	**04 48 57.0**	**-0.4**
	baz=319						
NSK	**Sanguang**	**0.63**	**272**	P	**Pn**	**04 48 47.6**	**0.0**
	baz=272						
NSK				S	**Sn**	**04 48 57.7**	**0.0**
	baz=272						
ETL	**Fush Village**	**0.63**	**218**	*e*P	**Pn**	**04 48 47.2**	**-0.5**
	baz=207						
ETL				*e*S	**Sn**	**04 48 57.9**	**+0.2**
	baz=207						
NACB	**Ninganchiao**	**0.64**	**221**	P	**Pn**	**04 48 47.0**	**-0.7**
	baz=210						
NACB				*e*S	**Sn**	**04 48 57.4**	**-0.3**
	baz=210						
NNSB	**Datong**	**0.65**	**249**	P	**Pn**	**04 48 47.9**	**0.0**
	baz=242						
NNSB				S	**Sn**	**04 48 58.2**	**0.0**
	baz=242						
YM01	**YM01**	**0.65**	**318**	*e*P	**Pn**	**04 48 47.8**	**-0.2**
	baz=321						
YM01				*e*S	**Sn**	**04 48 57.5**	**-0.6**
	baz=321						
NNS	**Nan Shan**	**0.65**	**251**	P	**Pn**	**04 48 48.0**	**0.0**
	baz=243						
NNS				*e*S	**Sn**	**04 48 58.4**	**+0.1**
	baz=243						
YM08	**YM08**	**0.67**	**322**	*e*P	**Pn**	**04 48 47.9**	**-0.2**
	baz=324						
ETLH	**Xiulin Townshi**	**0.69**	**229**	*e*P	**Pn**	**04 48 48.0**	**-0.3**
	baz=235						
ETLH				*e*S	**Sn**	**04 48 58.3**	**-0.6**
	baz=235						
TWD	**Chiawan**	**0.71**	**216**	*e*P	**Pn**	**04 48 48.1**	**-0.4**
	baz=225						
TWD				*e*S	**Sn**	**04 48 58.7**	**-0.5**
	baz=225						
TWS1	**Kuangyinshan**	**0.72**	**308**	*e*P	**Pn**	**04 48 49.1**	**+0.4**
	baz=316						
TWS1				*e*S	**Sn**	**04 48 58.9**	**-0.6**
	baz=316						
TWY	**Chenhua**	**0.74**	**327**	*e*P	**Pn**	**04 48 49.1**	**+0.2**
	baz=329						

baz=102
YOJ Yonaguni jima 0.90 102 P **Pn 04 48 51.0 +0.1**
YOJ eS **Sn 04 49 03.5 +0.2**
TDCB Techi 0.91 244 eP **Pn 04 48 51.4 +0.3**
baz=235
TDCB eS **Sn 04 49 03.6 -0.1**
baz=235
LIOB Emei 0.94 269 eP **Pn 04 48 51.4 0.0**
baz=269
LIOB eS **Sn 04 49 04.8 +0.5**
baz=269
HSN1 Hsinchu 0.94 277 P **Pn 04 48 51.6 +0.2**
baz=278
HSN1 S **Sn 04 49 04.8 +0.4**
baz=278
NSTT Nanjuang 0.95 269 eP **Pn 04 48 51.6 0.0**
baz=268
NSTT eS **Sn 04 49 04.7 +0.1**
baz=268
PCYT Pengchaiyu 0.97 1 eP **Pn 04 48 51.9 +0.2**
baz=3.0
PCYT eS **Sn 04 49 05.7 +0.8**
baz=3.0
SBCB Hsinchu 0.97 278 eP **Pn 04 48 51.6 -0.3**
baz=278
SBCB eS **Sn 04 49 05.6 +0.6**
baz=278
HSN Hsinchu 0.99 278 eP **Pn 04 48 51.6 -0.4**
baz=281
HSN eS **Sn 04 49 05.0 -0.4**
baz=281
CHGB Renai 1.00 233 eP **Pn 04 48 52.3 0.0**
baz=232
CHGB eS **Sn 04 49 05.2 -0.6**
baz=232
ESL Shilin 1.01 214 eP **Pn 04 48 50.9 -1.4**
baz=220
ESL eS **Sn 04 49 04.0 -1.9**
baz=220
OWD Renai 1.06 229 eP **Pn 04 48 52.9 -0.2**
baz=219
OWD eS **Sn 04 49 06.2 -1.0**
baz=219
NJN Zhunan 1.07 272 eS **Sn 04 49 07.6 +0.3**
baz=271
WHP Taichung City 1.07 250 eP **Pn 04 48 54.0 +0.8**
baz=248
WHP eS **Sn 04 49 08.3 +0.9**
baz=248
WUSB Renai 1.08 232 eP **Pn 04 48 53.4 +0.1**
baz=231
WUSB eS **Sn 04 49 07.1 -0.5**
baz=231
EGFH Guangfu 1.14 210 eP **Pn 04 48 53.7 -0.3**
baz=216
EGFH eS **Sn 04 49 06.9 -1.9**
baz=216
NMLH Miaoli 1.15 264 eP **Pn 04 48 54.1 0.0**
baz=263
NMLH eS **Sn 04 49 09.0 -0.1**
baz=263
NSY Sanyi 1.20 259 eP **Pn 04 48 54.7 -0.1**
baz=257
NSY eS **Sn 04 49 10.5 +0.3**
baz=257
WCS Beigang Elemen 1.20 240 eP **Pn 04 48 55.5 +0.8**
baz=231
WCS eS **Sn 04 49 11.5 +1.3**
baz=231
TWQ1 Liyutan 1.20 255 eP **Pn 04 48 55.8 +1.0**
baz=254
TWQ1 eS **Sn 04 49 10.1 -0.3**
baz=254
VWDT VWDT 1.22 223 eP **Pn 04 48 55.0 0.0**
baz=213
VWDT eS **Sn 04 49 10.6 -0.3**
baz=213
HGSD Ruisui 1.29 206 eP **Pn 04 48 55.3 -0.8**
baz=214
SMLT Sun Moon Lake 1.30 234 eP **Pn 04 48 57.0 +0.8**
baz=232
SMLT eS **Sn 04 49 14.6 +1.7**
baz=232
WDJ Dajia District 1.32 257 eS **Sn 04 49 13.5 +0.4**
baz=256
TYC Yuchr 1.32 236 eP **Pn 04 48 57.0 +0.7**
baz=227
TYC eS **Sn 04 49 14.4 +1.3**
baz=227
SSLB Suanglung 1.32 229 eP **Pn 04 48 57.4 +0.9**
baz=221
SSLB eS **Sn 04 49 15.3 +2.1**
baz=221
EHY Hungye 1.33 210 eP **Pn 04 48 54.9 -1.5**
baz=208
WWF Wufeng 1.38 244 eP **Pn 04 48 57.6 +0.5**
baz=253
WWF eS **Sn 04 49 15.5 +1.0**
baz=253
YULB Yu-li 1.44 209 eP **Pn 04 48 56.2 -1.7**
baz=207
YULB eS **Sn 04 49 14.5 -1.4**
baz=207
WJS Zhushan 1.47 236 eP **Pn 04 48 59.7 +1.4**
baz=246
WJS eS **Sn 04 49 17.3 +0.7**
baz=246
EYUL Yuli 1.47 207 eP **Pn 04 48 58.3 0.0**
baz=206
WNT Mingjian 1.47 238 eP **Pn 04 48 59.8 +1.4**
baz=249
TWF1 Yuli 1.47 208 eP **Pn 04 48 58.5 +0.1**
baz=206
WCHH Zhanghua 1.48 247 eS **Sn 04 49 16.8 0.0**
baz=245
WYL Yuanlin Townsh 1.51 243 eS **Sn 04 49 18.2 +0.6**
baz=253
YUS Yu-Shan 1.54 221 eP **Pn 04 48 59.8 +0.1**
baz=209
YUS eS **Sn 04 49 18.9 -0.1**
baz=209
FULB Fuli 1.61 206 eP **Pn 04 48 59.7 -0.6**
baz=211
FULB eS **Sn 04 49 19.9 -0.2**
baz=211
ALS Alishan 1.61 225 eP **Pn 04 49 01.4 +0.9**
baz=234
ALS eS **Sn 04 49 23.0 +2.4**
baz=234
CHN5 Tsauling 1.64 230 eP **Pn 04 49 01.2 +0.5**
baz=239
CHN5 eS **Sn 04 49 21.9 +1.0**
baz=239
WDLH Douliu 1.68 235 eP **Pn 04 49 01.0 -0.2**
baz=245
WDLH eS **Sn 04 49 22.6 +0.7**
baz=245
WRL Guolierlin Hig 1.70 244 eS **Sn 04 49 21.3 -1.0**
baz=252
HATJ Hateruma jima 1.71 110 eP **Pn 04 49 02.8 +1.2**
ECS Chishang 1.73 206 eP **Pn 04 49 02.2 +0.3**
baz=211
ECS eS **Sn 04 49 23.3 +0.3**
baz=211
ELDTW Lidau 1.74 213 eP **Pn 04 49 01.6 -0.5**
baz=204
WTK Tuku 1.80 238 eP **Pn 04 49 02.8 0.0**
baz=247
WTK eS **Sn 04 49 24.5 -0.1**
baz=247
EDH Donghe 1.81 202 eP **Pn 04 49 01.4 -1.5**
baz=193
EDH eS **Sn 04 49 22.0 -2.9**
baz=193
JKRS Kuro-shima 1.84 103 P **Pn 04 49 03.7 +0.4**
JKRS S **Sn 04 49 26.1 +0.6**
TPUB Ta-pu 1.87 224 eS **Sn 04 49 28.3 +1.8**
baz=234
CHY Chiayi 1.88 232 eP **Pn 04 49 04.5 +0.6**
baz=241
CHY eS **Sn 04 49 27.0 +0.4**
baz=241
WTP Ta-pu 1.92 223 eP **Pn 04 49 05.1 +0.6**
baz=233
WTP eS **Sn 04 49 29.6 +1.8**
baz=233
JIJ Ishigaki jima 1.93 98 P **Pn 04 49 04.6 0.0**
JIJ S **Sn 04 49 27.5 -0.3**

LONT Longtian 1.94 206 eP **Pn 04 49 02.9 -1.8**
baz=196
LONT eS **Sn 04 49 26.6 -1.4**
baz=196
TWK Hsinying 1.99 226 eP **Pn 04 49 06.3 +0.9**
baz=236
TWK eS **Sn 04 49 32.0 +2.7**
baz=236
WSL Shuilin Townsh 2.01 236 eS **Sn 04 49 28.6 -1.2**
baz=244
SNST Tainan City 2.02 225 eS **Sn 04 49 32.0 +2.1**
baz=235
CHN1 Nanshi 2.02 224 eP **Pn 04 49 07.5 +1.6**
baz=233
CHN1 eS **Sn 04 49 31.1 +1.0**
baz=233
TWG Pinlang 2.04 206 eP **Pn 04 49 05.0 -1.0**
baz=196
TWG eS **Sn 04 49 27.8 -2.6**
baz=196
TWGBT Beinan 2.04 206 eP **Pn 04 49 03.7 -2.4**
baz=196
TWGBT eS **Sn 04 49 28.3 -2.1**
baz=196
JISG Ishigakijimahi 2.06 92 P **Pn 04 49 06.4 +0.1**
ICHU Yijhu 2.07 232 eP **Pn 04 49 07.0 +0.5**
baz=231
CHN8 Yiju 2.13 232 eS **Sn 04 49 33.9 +1.3**
baz=230
SSD Sandimen 2.31 215 eP **Pn 04 49 11.4 +1.8**
baz=204
SSD eS **Sn 04 49 39.0 +2.1**
baz=204
TSMG Majia 2.33 214 eP **Pn 04 49 11.6 +1.5**
baz=212
TSMG eS **Sn 04 49 39.4 +1.8**
baz=212
TSCK Chigu Township 2.34 230 eP **Pn 04 49 10.7 +0.5**
baz=230
VWUC VWUC 2.38 279 eP **Pn 04 49 09.7 -1.0**
baz=278
MATB Ma-tsu 2.41 308 eP **Pn 04 49 10.0 -1.1**
baz=310
MASBT Mashibuluo 2.42 213 eP **Pn 04 49 11.9 +0.7**
baz=211
MASBT eS **Sn 04 49 41.2 +1.6**
baz=211
EAST Anshuo 2.52 206 eP **Pn 04 49 11.9 -0.7**
baz=200
SCZT Fangliau 2.63 210 eP **Pn 04 49 15.6 +1.5**
baz=210
PTMZ Houxiangcun 2.69 279 eP **Pn 04 49 13.6 -1.3**
baz=278
SLIU Shizi 2.69 206 eP **Pn 04 49 15.2 +0.3**
baz=204
SLIU eS **Sn 04 49 45.9 -0.4**
baz=204
LYJJ Jianjiangzhen 2.79 313 eP **Pn 04 49 15.4 -0.9**
baz=315
MHZQ Yeshan 3.08 298 eP **Pn 04 49 19.3 -0.9**
baz=300
KNMB Chin-men Tao 3.34 267 eP **Pn 04 49 22.2 -1.5**
baz=264

IDC 13 04:50:26.0±4.8, 22.79S×148.45E, h0km, mbtmp3.3/4, ML3.2/4, Error ellipse: s-maj=50.3km s-min=20.8km az=86.0, Queensland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**3.38**	**322**	Pn	Pn	04 51 20.4	+0.4
	2.7nm,0.3s,baz=133,slow=16,SNR=22						
CTA				Pg	Pb	04 51 27.9	+1.1
	2.4nm,0.3s,baz=148,slow=18,SNR=11						
CTA				Sn	Sn	04 52 01.6	+0.8
	1.7nm,0.3s,baz=216,slow=17,SNR=1.7						
CTA				Lg	Lg	04 52 12.4	
	4.5nm,0.3s,baz=44,slow=18,SNR=7.6						
	7.5nm,0.2s						
STKA	**Stephens Creek**	**10.91**	**212**	Pn	Pn	04 53 02.8	-0.7
	0.1nm,0.3s,baz=30,slow=14,SNR=0.6						
STKA				Lg	Lg	04 56 12.2	
	0.1nm,0.3s,baz=324,slow=19,SNR=3.0						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**13.40**	**263**	Pn	Pn	04 53 39.4	+1.8
	0.1nm,0.3s,baz=96,slow=14,SNR=1.8						
ASAR				Lg	Lg	04 57 34.8	
	baz=80,slow=29						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	**13.45**	**280**	Pn	Pn	04 53 36.7	-1.5
	0.1nm,0.3s,baz=104,slow=11,SNR=6.1						
	0.6nm,0.8s						

IDC 13 04:55:10.2±0.7, 26.95N×130.18E, h0km, mb3.9/15, mbtmp3.9/16, ML3.4/1, Error ellipse: s-maj=19.1km s-min=16.2km az=90.0
JMA 13 04:55:12.5±0.1, 26.9N±0.4×130.3E±0.4, h49km, MV4.2/16, NEAR MINAMI-DAITOJIMA IS
NEIC 13 04:55:12.9±1.3, 26.94N±0.08×130.11E±0.06, h10km±1km, mb4.6/20, Error ellipse: s-maj=13.6km s-min=7.9km az=163.0

ISC 13 04:55:11.9±0.5, 26.90N±0.04×130.21E±0.04, h10km, n63, σ1§32/75, mb4.2/25, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKDJ	**Kitadaitoujima**	**1.36**	**134**	P	Pn	04 55 35.0	-2.0
JKDJ				eS	Sn	04 55 51.8	-3.3
JMZ	**Minamidaito 2**	**1.41**	**140**	P	Pn	04 55 36.1	-1.6
JMZ				S	Sn	04 55 53.0	-3.2
JTK	**Tokunoshima**	**1.43**	**308**	P	Pn	04 55 37.2	-0.6
JTK				S	Sb	04 55 54.8	-2.0
JOKE	**Okinoerabujima**	**1.53**	**288**	P	Pn	04 55 39.1	-0.2
JOKE				eS	Sb	04 55 58.3	-1.6
JYRO	**Yoronjima**	**1.58**	**275**	P	Pn	04 55 39.5	-0.4
JYRO				eS	Sn	04 55 58.9	-1.5
JAM	**Amami Oshima**	**1.59**	**340**	P	Pn	04 55 39.1	-1.1
JAM				eS	Sn	04 55 58.6	-2.3
JAMN	**Amaminishikomi**	**1.62**	**326**	P	Pn	04 55 39.5	-1.1
JAMN				eS	Sn	04 55 59.6	-1.9
JOW	**Kunigami**	**1.73**	**268**	Pn	Pn	04 55 42.1	0.0
	255nm,0.3s,baz=152,slow=23,SNR=138						
JOW				Sn	Sn	04 56 03.3	-1.0
	242nm,0.3s,baz=144,slow=14,SNR=24						
JOW	**Kunigami**	**1.73**	**268**	P	Pn	04 55 41.9	-0.1
JOW				eS	Sb	04 56 03.5	-2.1
JNTH	**Nagotoyohara**	**2.00**	**259**	P	Pn	04 55 45.3	-0.4
JNTH				S	Sn	04 56 09.3	-1.4
JIH	**Iheya**	**2.01**	**274**	P	Pn	04 55 46.2	+0.4
JIH				S	Sn	04 56 10.5	-0.5
JJT3	**Tamagusuku3**	**2.30**	**251**	P	Pn	04 55 50.1	+0.2
JJT3				eS	Sn	04 56 17.6	-0.7
JAGN	**Aguni-jima**	**2.67**	**264**	P	Pn	04 55 54.7	-0.3
JAGN				S	Sn	04 56 26.5	-0.9
JKE	**Kume jima 2**	**3.12**	**260**	P	Pn	04 56 00.5	-0.7
JSU	**Suzuyama**	**4.59**	**3**	Pn	Pn	04 56 21.9	+0.5
JNU	**Nakatsue**	**6.22**	**5**	Pn	Pn	04 56 44.1	+0.3
	baz=163,slow=20						
NACB	**Ninganchiao**	**8.24**	**253**	Pn	Pn	04 57 09.7	-1.9
YULB	**Yu-li**	**8.80**	**249**	Pn	Pn	04 57 15.7	-3.5
INU	**Inuyama**	**10.24**	**33**	Pn	Pn	04 57 39.9	+1.1
KSRS	**Korea Array**	**10.70**	**350**	Pn	Pn	04 57 43.5	-1.6
	0.3nm,0.3s,baz=162,slow=12,SNR=2.0						
	0.4nm,0.3s						
BJT	**Baijiatuan**	**17.53**	**322**	P	P	04 59 18.7	+1.2
XAN	**Xi'an**	**19.66**	**296**	P	Pn	04 59 42.1	-0.3
XAN				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KLR	**Kul'dur**	**22.32**	**3**	P	P	05 00 08.6	-1.0
	comp=Z,2.4nm,0.7s,baz=173,slow=4.8,SNR=9.0						
	comp=Z,2.4nm,0.7s						
TOLI2	**Tolitoli**	**27.20**	**201**	P	P	05 00 54.8	-1.1
TOLI2				IAmb	IAmb	05 00 57.3	
	comp=Z,13nm,1.0s						
SEY	**Seymchan**	**38.87**	**16**	P	P	05 02 37.3	+0.2
	comp=Z,1.8nm,0.6s,baz=250,slow=5.4,SNR=5.9						
	comp=Z,1.8nm,0.6s						
MTN	**Manton Dam**	**39.52**	**179**	P	P	05 02 43.0	0.0
KNRA	**Kununurra**	**42.35**	**182**	P	P	05 03 07.3	+1.0
MKAR	**Makanchi Array**	**42.42**	**311**	P	P	05 03 07.1	+0.3
	comp=Z,0.7nm,0.7s,baz=104,slow=9.8,SNR=7.2						
	comp=Z,0.7nm,0.7s						
MKAR	**Makanchi Array**	**42.42**	**311**	P	P	05 03 06.9	+0.1
ZALV	**Zalesovo Beam**	**42.80**	**322**	P	P	05 03 09.4	-0.2
	comp=Z,0.4nm,0.3s,baz=105,slow=9.8,SNR=3.8						
	comp=Z,0.4nm,0.3s						
ZALV	**Zalesovo Beam**	**42.80**	**322**	P	**P**	**05 03 09.9**	**+0.2**
KURBB	**Kurchatov Arra**	**45.60**	**316**	P	**P**	**05 03 32.3**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=97,slow=9.2,SNR=2.1						
	comp=Z,0.3nm,0.3s						
WB0	**Warramunga Arr**	**46.57**	**175**	P	**P**	**05 03 40.6**	**+0.5**
WB0				IAmb	IAmb	05 03 41.0	
	comp=Z,8.5nm,0.9s						
WRA	**Warramunga Arr**	**46.74**	**175**	P	**P**	**05 03 41.4**	**0.0**
	comp=Z,3.8nm,0.7s,baz=355,slow=8.4,SNR=27						
	comp=Z,3.8nm,0.7s						
WRA	**Warramunga Arr**	**46.74**	**175**	P	**P**	**05 03 42.1**	**+0.7**
WB2	**Warramunga Arr**	**46.74**	**175**	P	**P**	**05 03 41.6**	**+0.2**
WB2				IAmb	IAmb	05 03 47.7	
	comp=Z,14nm,1.4s						
WR0	**Warramunga Arr**	**46.77**	**174**	P	**P**	**05 03 42.3**	**+0.6**
PSA00	**Pilbara Seismi**	**49.23**	**193**	P	**P**	**05 04 01.4**	**+0.8**
PSA00				IAmb	IAmb	05 04 02.0	
	comp=Z,6.4nm,1.0s						
CTAO	**Charters Tower**	**49.23**	**160**	P	**P**	**05 04 01.8**	**+1.1**
AS31	**Alice Springs**	**50.40**	**176**	P	**P**	**05 04 10.6**	**+1.0**
ASAR	**Alice Springs**	**50.40**	**176**	P	**P**	**05 04 09.9**	**+0.3**
	comp=Z,2.9nm,0.8s,baz=6.2,slow=14,SNR=34						
	comp=Z,2.9nm,0.8s						
ASAR	**Alice Springs**	**50.40**	**176**	P	**P**	**05 04 10.2**	**+0.6**
FORT	**Forrest**	**57.40**	**182**	P	**P**	**05 05 03.5**	**+2.9**
ABKAR	**Akbulak array**	**57.48**	**313**	P	**P**	**05 05 02.7**	**+1.6**
J20K	**Nowinta River**	**59.89**	**29**	P	**P**	**05 05 19.2**	**+1.5**
J20K				IAmb	IAmb	05 05 19.8	
	comp=Z,4.0nm,1.1s						
RND	**Reindeer**	**62.27**	**30**	P	**P**	**05 05 34.1**	**+0.2**
RND				IAmb	IAmb	05 05 34.6	
	comp=Z,3.2nm,0.8s						
MDM	**Murphy Dome**	**62.41**	**28**	P	**P**	**05 05 35.9**	**+1.2**
MDM				IAmb	IAmb	05 05 36.4	
	comp=Z,5.5nm,1.1s						
ILAR	**Eielson Array**	**63.00**	**29**	P	**P**	**05 05 37.4**	**-1.3**
	comp=Z,0.5nm,0.8s,baz=270,slow=6.3,SNR=5.9						
	comp=Z,0.5nm,0.8s						
J26L	**Joseph Creek**	**64.46**	**29**	P	**P**	**05 05 48.9**	**+0.5**
J26L				IAmb	IAmb	05 05 49.3	
	comp=Z,2.4nm,0.8s						
KBZ	**Khabaz**	**70.10**	**310**	P	**P**	**05 06 24.6**	**+0.2**
	comp=Z,0.9nm,0.4s,baz=45,slow=4.3,SNR=3.8						
	comp=Z,0.9nm,0.4s						
AKASG	**Malin Array Be**	**76.17**	**320**	P	**P**	**05 06 58.9**	**-1.2**
	comp=Z,1.4nm,0.9s,baz=49,slow=4.8,SNR=6.9						
	comp=Z,1.4nm,0.9s						
AKASG	**Malin Array Be**	**76.17**	**320**	P	**P**	**05 07 00.1**	**0.0**
BR131	**Keskin Array S**	**78.01**	**308**	P	**P**	**05 07 11.0**	**0.0**
BR131				IAmb	IAmb	05 07 24.1	
	comp=Z,4.0nm,1.1s						
BRTR	**Keskin Array B**	**78.01**	**308**	P	**P**	**05 07 10.4**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=96,slow=4.3,SNR=6.1						
	comp=Z,0.8nm,0.7s						
BRTR	**Keskin Array B**	**78.01**	**308**	P	**P**	**05 07 10.6**	**-0.4**
HFS	**Hagfors**	**79.04**	**333**	P	**P**	**05 07 14.7**	**-1.3**
	comp=Z,1.1nm,0.7s,baz=73,slow=11,SNR=2.6						
	comp=Z,1.1nm,0.7s						
NC405	**NORSAR Array S**	**79.25**	**334**	P	**P**	**05 07 16.9**	**-0.2**
NC405				IAmb	IAmb	05 07 28.9	
	comp=Z,12nm,1.1s						
NB2	**NORSAR Subarra**	**79.48**	**334**	P	**P**	**05 07 17.8**	**-0.7**
	comp=Z,0.6nm,0.7s,baz=51,slow=5.3						
NOA	**NORSAR Array B**	**79.48**	**334**	P	**P**	**05 07 16.9**	**-1.6**
	comp=Z,1.2nm,0.8s,baz=50,slow=5.3,SNR=6.2						
	comp=Z,1.2nm,0.8s						
SUMG	**Summit**	**80.48**	**357**	*i* P	P	05 07 35.0	+11
CLL	**Collm**	**84.60**	**326**	eP	**P**	**05 07 49.0**	**+3.5**
	comp=Z,4.0nm,0.9s						
NVAR	**Mina Array Bea**	**88.76**	**47**	P	**P**	**05 08 07.6**	**+1.3**
	comp=Z,0.3nm,0.6s,baz=300,slow=7.2,SNR=4.2						
	comp=Z,0.3nm,0.6s						
PDAR	**Pinedale Array**	**91.52**	**40**	P	**P**	**05 08 19.1**	**-0.2**
	comp=Z,0.8nm,0.8s,baz=298,slow=3.2,SNR=5.6						
	comp=Z,0.8nm,0.8s						

INET 13 05:04:08.2±0.5, 12.89N×87.02W, h6km±4km, MW3.0
SNET 13 05:04:08.8±0.6, 12.86N×87.08W, h18km±5km, ML3.5

ISC 13 05:04:07.9±1.0, 12.85N±0.06×87.03W±0.04, h28km±8km, n20, σ0§84/25, 2C, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.15**	**189**	eP	**Pb**	**05 04 13.0**	**-0.5**
CRIN				eS	**Sb**	**05 04 16.7**	**-0.5**
TELN	**Telica**	**0.31**	**142**	eP	**Pb**	**05 04 15.5**	**+0.1**
TEL3	**Telica 3**	**0.33**	**147**	eP	**Pb**	**05 04 15.9**	**+0.3**
CNGN	**Cerro Negro**	**0.47**	**137**	eP	**Pn**	**05 04 18.4**	**-0.6**
MOMN	**Momotombo**	**0.65**	**133**	eP	**Pn**	**05 04 21.2**	**-0.1**
CNCH	**Conchagua**	**0.89**	**298**	eP	**Pb**	**05 04 24.4**	**-0.5**
CNCH				eS	**Sn**	**05 04 36.7**	**-0.2**
CNCH				IAML		05 04 44.2	
	comp=Z,5μm,0.3s						
LCND	**La Caada**	**0.96**	**299**	eP	**Pb**	**05 04 25.4**	**-0.6**
LCND				eS	**Sb**	**05 04 38.1**	**-0.1**
LCND				IAML		05 04 41.1	
	comp=Z,1μm,0.3s						
TISN	**Laguna Tiscapa**	**1.02**	**133**	eP	**Pb**	**05 04 27.2**	**+0.2**
MATN	**Matagalpa**	**1.08**	**86**	eP	**Pn**	**05 04 26.9**	**-0.4**
TGUH	**Tegucigalpa,Un**	**1.23**	**349**	eP	**Pb**	**05 04 30.2**	**-0.3**
TGUH				eS	**Sb**	**05 04 46.5**	**+0.5**
TGUH	**Tegucigalpa,Un**	**1.23**	**349**	eP	**Pb**	**05 04 30.3**	**-0.3**
CNRM	**Centro Naciona**	**1.28**	**299**	eP	**Pb**	**05 04 30.3**	**-1.0**
RANC	**El Ranchito**	**1.36**	**295**	eP	**Pb**	**05 04 31.9**	**-0.9**
BOAB	**BOACO BROADBAN**	**1.39**	**107**	eP	**Pb**	**05 04 32.4**	**-0.8**
BOAB				eS	**Sb**	**05 04 52.1**	**+1.6**
PACA	**Pacayal**	**1.41**	**296**	eP	**Pb**	**05 04 32.9**	**-0.7**
COEB	**Comit de Eme**	**1.60**	**294**	eP	**Pb**	**05 04 35.6**	**-1.3**
COEB				IAML		05 04 59.6	
	comp=Z,261nm,0.6s						
SCLA	**Alcaldia de Sa**	**1.86**	**297**	eP	**Pn**	**05 04 39.0**	**+1.0**
COEG	**Centro de Oper**	**1.96**	**293**	eP	**Pn**	**05 04 40.7**	**+1.2**
ACON	**Acoyapa**	**2.01**	**116**	eP	**Pb**	**05 04 42.9**	**-0.9**
SJTE	**Alcalda de S**	**2.07**	**292**	eP	**Pn**	**05 04 42.4**	**+1.4**

BUL 13 05:07:52.2±1.3, 22.51S×29.58E, h4km±8km, MD3.6
EAF 13 05:07:56.0±1.8, 22.43S×29.33E, h13km±10km, MD3.5
PRE 13 05:07:56.2±1.5, 22.40S×29.31E, h5km, ML2.5

ISC 13 05:07:54.4±1.5, 22.51S±0.03×29.28E±0.03, h17km±13km, n13, σ1§46/26, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MUSN	**Musina, Limpop**	**0.58**	**67**	eP	**Pn**	**05 08 07.2**	**-0.8**
MUSN				eS	**Sg**	**05 08 13.4**	**-0.4**
MUSN				IAML		05 08 18.2	
	comp=Z,226nm,0.6s						
MOPA	**Mopani**	**2.19**	**118**	eP	**Pb**	**05 08 34.8**	**+1.1**
MOPA				eS	**Sb**	**05 09 01.2**	**+0.5**
MOPA				IAML		05 09 07.0	
	comp=Z,6.6nm,0.2s						
MOPA	**Mopani**	**2.19**	**118**	*i* Pg	**Pb**	**05 08 35.1**	**+1.4**
MOPA				*i* Sg	**Sg**	**05 09 04.4**	**-0.6**
MOPA	**Mopani**	**2.19**	**118**	*i* Pg	**Pb**	**05 08 35.1**	**+1.4**
MOPA				*i* Sg	**Sg**	**05 09 04.4**	**-0.6**
MATP	**Matopo**	**2.20**	**341**	eP	**Pb**	**05 08 33.4**	**-0.5**
MATP				eS	**Sn**	**05 08 59.0**	**+1.6**
MATP				IAML		05 09 04.8	
	comp=Z,452nm,0.6s						
MATP	**Matopo**	**2.20**	**341**	*i* Pg	**Pb**	**05 08 34.0**	**+0.1**
MATP				*i* Sg	**Sg**	**05 09 03.9**	**-1.4**
MATP	**Matopo**	**2.20**	**341**	*i* Pg	**Pb**	**05 08 34.0**	**+0.1**
MATP				*i* Sg	**Sg**	**05 09 03.9**	**-1.4**
BLWY	**Bulawayo**	**2.44**	**345**	*i* P	**Pn**	**05 08 33.6**	**-0.2**
BLWY				*i* Sg	**Sb**	**05 09 09.4**	**+1.4**
BLWY	**Bulawayo**	**2.44**	**345**	*i* P	**Pn**	**05 08 33.6**	**-0.2**
BLWY				*i* Sg	**Sb**	**05 09 09.4**	**+1.4**
LBTB	**Lobatse**	**4.19**	**233**	*i* P	**Pn**	**05 08 59.8**	**+2.1**
LBTB				*i* Sg	**Sg**	**05 10 09.2**	**0.0**
LBTB	**Lobatse**	**4.19**	**233**	*i* P	**Pn**	**05 08 59.8**	**+2.1**
LBTB				*i* Sg	**Sg**	**05 10 09.2**	**0.0**
BOSA	**Boshof**	**7.08**	**210**	*i* P	**Pn**	**05 09 36.8**	**-0.6**
BOSA				*i* S	**Sn**	**05 10 54.5**	**-3.1**
BOSA	**Boshof**	**7.08**	**210**	*i* P	**Pn**	**05 09 36.8**	**-0.6**
BOSA				*i* S	**Sn**	**05 10 54.5**	**-3.1**

INET 13 05:08:11.2±0.5, 12.82N×87.08W, h5km±2km, MW3.0
SNET 13 05:08:12.4±1.6, 12.91N×87.15W, h0km±9km, ML2.8

ISC 13 05:08:10.8±1.1, 12.89N±0.07×87.04W±0.04, h12km±11km,

n18,σ⁹60/27, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.19**	**184**	*eP*	**Pg**	**05 08 15.0**	**+0.1**
CRIN				*eS*	**Sg**	**05 08 18.1**	**+0.3**
TEL3	**Telica 3**	**0.36**	**149**	*eP*	**Pg**	**05 08 18.5**	**+0.3**
CNGN	**Cerro Negro**	**0.51**	**139**	*eP*	**Pg**	**05 08 21.1**	**+0.3**
MOMN	**Momotombo**	**0.68**	**134**	*eP*	**Pg**	**05 08 24.1**	**+0.1**
CNCH	**Conchagua**	**0.87**	**297**	*eP*	**Pg**	**05 08 27.4**	**-0.2**
LCND	**La Caada**	**0.93**	**297**	*eP*	**Pg**	**05 08 28.3**	**-0.5**
LCND				*eP*	**Pb**	**05 08 29.3**	**+0.4**
LCND				*eS*	**Sb**	**05 08 41.7**	**+0.4**
LCND				IAML		05 08 46.7	
	comp=Z,460nm,0.3s						
TISN	**Laguna Tiscapa**	**1.05**	**135**	*eP*	**Pb**	**05 08 30.4**	**-0.6**
MATN	**Matagalpa**	**1.08**	**88**	*eP*	**Pb**	**05 08 31.0**	**-0.6**
TGUH	**Tegucigalpa,Un**	**1.19**	**349**	*eP*	**Pn**	**05 08 34.3**	**+0.9**
TGUH	**Tegucigalpa,Un**	**1.19**	**349**	*eP*	**Pn**	**05 08 34.2**	**+0.9**
RANC	**El Ranchito**	**1.33**	**294**	*eP*	**Pn**	**05 08 35.5**	**+0.1**
RANC				*eS*	**Sg**	**05 08 53.8**	**-0.1**
RANC				IAML		05 09 01.9	
	comp=Z,203nm,0.3s						
PACA	**Pacayal**	**1.38**	**295**	*eP*	**Pb**	**05 08 36.5**	**-0.1**
PACA				*eS*	**Sg**	**05 08 55.5**	**+0.2**
BOAB	**BOACO BROADBAN**	**1.41**	**108**	*eP*	**Pn**	**05 08 35.9**	**-0.4**
COEB	**Comit de Eme**	**1.58**	**293**	*eP*	**Pn**	**05 08 39.2**	**+0.4**
COEB				*eS*	**Sg**	**05 09 00.5**	**-1.1**
COEB				IAML		05 09 04.7	
	comp=Z,70nm,0.5s						
SCLA	**Alcaldia de Sa**	**1.83**	**296**	*eP*	**Pb**	**05 08 44.1**	**-0.3**
COEG	**Centro de Oper**	**1.94**	**292**	*eP*	**Pb**	**05 08 45.2**	**-1.0**
COEG				*eS*	**Sb**	**05 09 10.5**	**+0.2**
SJTE	**Alcalda de S**	**2.05**	**291**	*eP*	**Pn**	**05 08 46.2**	**+1.0**
SJTE				*eS*	**Sb**	**05 09 13.9**	**+0.3**
PMON	**Piamonte**	**2.36**	**291**	*eP*	**Pb**	**05 08 52.3**	**-1.2**
PMON				*eS*	**Sb**	**05 09 22.9**	**+0.3**

*IDC **13** 05:50:58.4±2.3, 23°.68S×114°.52W, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=123.9km s-min=61.9km az=90.0*

ISC 13 05:50:58.5±2.3, 23°.9S±0°.4×11°.4W±°, h10km, n15, σ⁰⁹62/6, mb3.8/3, Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03N2	**Juan Fernandez**	**32.09**	**115**	T	T	06 32 30.0	
	baz=283,slow=75						
H03N3	**Juan Fernandez**	**32.10**	**115**	T	T	06 32 31.2	
	baz=283,slow=75						
H03N1	**Juan Fernandez**	**32.11**	**115**	T	T	06 32 31.2	
	baz=283,slow=75						
TXAR	**Lajitas Array**	**53.88**	**11**	P	**P**	**06 00 22.5**	**+0.4**
	0.7nm,1.0s,baz=194,slow=10.0,SNR=4.5						
	0.7nm,1.0s						
NVAR	**Mina Array Bea**	**62.16**	**356**	P	**P**	**06 01 20.3**	**+0.2**
	0.9nm,0.7s,baz=181,slow=8.1,SNR=9.5						
	0.9nm,0.7s						
PDAR	**Pinedale Array**	**66.49**	**4**	P	**P**	**06 01 47.6**	**-0.9**
	0.5nm,0.7s,baz=170,slow=6.4,SNR=4.4						
	0.5nm,0.7s						
H11S2	**WAKE ISLAND Hy**	**88.01**	**291**	T	T	07 40 07.9	
	baz=116,slow=75						
H11S1	**WAKE ISLAND Hy**	**88.03**	**291**	T	T	07 40 12.6	
	baz=116,slow=75						
H11S3	**WAKE ISLAND Hy**	**88.03**	**291**	T	T	07 40 10.3	
	baz=116,slow=75						
H11N3	**WAKE ISLAND Hy**	**88.38**	**292**	T	T	07 40 26.6	
	baz=117,slow=74						
H11N1	**WAKE ISLAND Hy**	**88.39**	**292**	T	T	07 40 28.2	
	baz=117						
H11N2	**WAKE ISLAND Hy**	**88.39**	**292**	T	T	07 40 27.8	
	baz=117,slow=74						
ZALV	**Zalesovo Beam**	**146.84**	**340**	PKPbc	**PKPbc**	**06 10 40.4**	**-0.3**
	0.3nm,0.3s,baz=48,slow=2.1,SNR=1.6						
BRTR	**Keskin Array B**	**148.55**	**52**	PKPbc	**PKiKP**	**06 10 47.7**	**+0.2**
	1.4nm,0.9s,baz=239,slow=2.5,SNR=5.9						
MKAR	**Makanchi Array**	**153.69**	**334**	PKPbc	**PKiKP**	**06 10 58.0**	**+0.3**
	0.2nm,0.7s,baz=333,slow=2.3,SNR=2.0						

*IDC **13** 05:52:23.5±0.8, 21°.24S×67°.26W, h187km±15km, mb3.6/2, mbtmp3.9/7, Error ellipse: s-maj=25.3km s-min=12.2km az=103.0*

*VAO **13** 05:52:23.8±0.5, 21°.29S×67°.23W, h204km±9km, mb3.8*

*GUC **13** 05:52:25.1±0.7, 21°.27S×67°.47W, h210km±6km, ML4.0*

*SCB **13** 05:52:25.9±1.3, 21°.28S×67°.34W, h158km±15km, ML3.7/6, MW3.3, Error ellipse: s-maj=4.4km s-min=4.1km az=1.0*

ISC 13 05:52:23.4±0.7, 21°.23S±0°.04×67°.28W±0°.05, h191km±8km, n53, σ1⁹57/76, 11C-2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOCB	**Mochara**	**1.53**	**91**	P	**Pn**	**05 52 58.1**	**+0.9**
MOCB				S	**Sn**	**05 53 22.1**	**-1.1**
MOCB				IAML		05 53 24.2	
	186nm,0.6s						
YJA	**Yavi**	**1.89**	**120**	P	**Pn**	**05 53 01.7**	**+1.1**
AF01	**San Pedro de A**	**1.90**	**206**	*i*P	**Pn**	**05 53 02.5**	**+1.9**
PB09	**IPOC Station P**	**1.91**	**253**	*i*P	**Pn**	**05 53 01.6**	**+1.1**
PB09				*e*S	**Sn**	**05 53 29.3**	**0.0**
PB09	**IPOC Station P**	**1.91**	**253**	P	**Pn**	**05 53 01.5**	**+1.0**
LVC	**Limon Verde**	**2.04**	**228**	P	**Pn**	**05 53 02.9**	**+0.8**
	58nm,0.4s,baz=39,slow=8.2,SNR=172						
LVC				S	**Sn**	**05 53 31.9**	**-0.3**
	18nm,0.3s,baz=231,slow=17,SNR=15						
LVC	**Limon Verde**	**2.04**	**228**	P	**Pn**	**05 53 02.7**	**+0.6**
LVC	**Limon Verde**	**2.04**	**228**	*eP*	**Pn**	**05 53 02.8**	**+0.8**
PB08	**IPOC Station P**	**2.06**	**301**	*eP*	**Pn**	**05 53 03.9**	**+1.5**
PB08				*e*S	**Sn**	**05 53 33.2**	**+0.7**
PB08	**IPOC Station P**	**2.06**	**301**	P	**Pn**	**05 53 03.9**	**+1.5**
PB01	**IPOC Station P**	**2.07**	**275**	*i*P	**Pn**	**05 53 02.6**	**+0.5**
PB01				*e*S	**Sn**	**05 53 31.4**	**-0.7**
PB01				IAML		05 53 33.1	
	comp=N,306nm,0.4s						
PB01	**IPOC Station P**	**2.07**	**275**	P	**Pn**	**05 53 02.8**	**+0.7**
GO01	**Chusmiza**	**2.37**	**311**	*i*P	**Pn**	**05 53 07.3**	**+1.4**
GO01				*e*S	**Sn**	**05 53 40.0**	**+1.2**
GO01				IAML		05 53 46.8	
	comp=E,375nm,0.1s						
PB02	**IPOC Station P**	**2.44**	**267**	*i*P	**Pn**	**05 53 06.6**	**+0.4**
PB02				*e*S	**Sn**	**05 53 38.1**	**-1.3**
PB02				IAML		05 53 39.6	
	comp=N,858nm,0.2s						
PB02	**IPOC Station P**	**2.44**	**267**	P	**Pn**	**05 53 06.8**	**+0.6**
PB02				IAML		05 53 39.6	
	comp=N,828nm,0.2s						
PB07	**IPOC Station P**	**2.48**	**258**	*i*P	**Pn**	**05 53 06.9**	**+0.2**
PB07				*i* S	**Sn**	**05 53 38.9**	**-1.4**
PB07				IAML		05 53 41.3	
	comp=N,479nm,0.1s						
PB07	**IPOC Station P**	**2.48**	**258**	P	**Pn**	**05 53 07.4**	**+0.7**
PB07				IAML		05 53 41.7	
	comp=N,218nm,0.4s						
PB06	**IPOC Station P**	**2.58**	**235**	*i*P	**Pn**	**05 53 08.2**	**+0.3**
PB06				*e*S	**Sn**	**05 53 41.6**	**-1.0**
PB06				IAML		05 53 44.5	
	comp=N,193nm,0.1s						
PB06	**IPOC Station P**	**2.58**	**235**	P	**Pn**	**05 53 08.3**	**+0.4**
PB11	**IPOC Station P**	**2.66**	**303**	*i*P	**Pn**	**05 53 09.4**	**+0.6**
PB11				*i* S	**Sn**	**05 53 42.8**	**-1.4**
PB11				IAML		05 53 46.5	
	comp=E,350nm,0.1s						
PB11	**IPOC Station P**	**2.66**	**303**	P	**Pn**	**05 53 09.6**	**+0.7**
PB11				S	**Sn**	**05 53 42.2**	**-2.0**
PB11				IAML		05 53 45.1	
	comp=E,338nm,0.2s						
PB11				IAML		05 53 47.1	
	comp=E,139nm,0.2s						
PATCX	**Punta Patache**	**2.71**	**278**	*i*P	**Pn**	**05 53 09.6**	**+0.3**
PATCX				*e*S	**Sn**	**05 53 43.4**	**-1.7**
PATCX				IAML		05 53 45.1	
	comp=N,628nm,0.3s						
TA01	**Diego Aracena**	**2.79**	**283**	*eP*	**Pn**	**05 53 10.1**	**0.0**
TA01				*e*S	**Sn**	**05 53 44.6**	**-2.0**
PB15	**IPOC Station P**	**2.83**	**225**	*i*P	**Pn**	**05 53 11.2**	**+0.5**
PB15				*e*S	**Sn**	**05 53 47.4**	**-0.3**
PB15	**IPOC Station P**	**2.83**	**225**	P	**Pn**	**05 53 11.3**	**+0.5**
TA02	**Huaiquique**	**2.83**	**289**	*eP*	**Pn**	**05 53 10.8**	**+0.2**
TA02				*e*S	**Sn**	**05 53 45.2**	**-2.2**
PB04	**IPOC Station P**	**2.88**	**247**	*i*P	**Pn**	**05 53 11.3**	**-0.1**
PB04				*e*S	**Sn**	**05 53 46.9**	**-1.9**
PB04				IAML		05 53 49.1	
	comp=N,295nm,0.1s						
PB04	**IPOC Station P**	**2.88**	**247**	P	**Pn**	**05 53 11.9**	**+0.5**
PB04				IAML		05 53 47.8	
	comp=N,184nm,0.2s						
PB16	**IPOC Station P**	**3.56**	**324**	*i*P	**Pn**	**05 53 22.0**	**+1.9**
PB16				*e*S	**Sn**	**05 54 05.1**	**+0.8**
PB16	**IPOC Station P**	**3.56**	**324**	P	**Pn**	**05 53 22.2**	**+2.1**
PB10	**IPOC Station P**	**3.79**	**233**	*eP*	**Pn**	**05 53 22.2**	**0.0**
PB10				*e*S	**Sn**	**05 54 05.2**	**-3.1**
PB10	**IPOC Station P**	**3.79**	**233**	P	**Pn**	**05 53 22.4**	**+0.2**
PB12	**IPOC Station P**	**3.87**	**312**	*eP*	**Pn**	**05 53 22.8**	**-0.7**
PB12				*e*S	**Sn**	**05 54 07.2**	**-3.3**
PB14	**IPOC Station P**	**4.44**	**220**	*eP*	**Pn**	**05 53 30.8**	**+0.1**
PB14				*e*S	**Sn**	**05 54 19.6**	**-4.0**
BBOE	**La Paz, Chanca**	**4.45**	**351**	P	**Pn**	**05 53 33.9**	**+2.8**
GO02	**Mina Guanaco**	**4.45**	**208**	*i*P	**Pn**	**05 53 30.8**	**-0.1**
GO02				*e*S	**Sn**	**05 54 22.3**	**-1.6**
BBOD	**La Paz, Gloria**	**4.74**	**345**	P	**Pn**	**05 53 37.5**	**+2.7**
LPAZ	**La Paz**	**4.98**	**351**	P	**Pn**	**05 53 39.8**	**+1.8**
	comp=N,8.2nm,0.5s,baz=137,slow=8.4,SNR=103						
LPAZ				S	**Sn**	**05 54 36.9**	**+0.2**
	comp=N,4.1nm,0.7s,baz=269,slow=15,SNR=6.3						
LPAZ	**La Paz**	**4.98**	**351**	P	**Pn**	**05 53 40.0**	**+1.9**
LPAZ	**La Paz**	**4.98**	**351**	*eP*	**Pn**	**05 53 39.8**	**+1.8**
SIV	**San Ignacio**	**7.86**	**50**	P	**Pn**	**05 54 13.2**	**-1.8**
	comp=N,7.9nm,0.5s,baz=226,slow=10,SNR=74						
SIV				S	**Sn**	**05 55 36.8**	**-6.8**
	comp=N,3.0nm,0.5s,baz=310,slow=22,SNR=9.8						
PTLB	**Pontes e Lacer**	**9.64**	**55**	*eP*	**Pn**	**05 54 38.2**	**0.0**
CPUP	**Villa Florida**	**10.43**	**121**	P	**Pn**	**05 54 49.8**	**+1.4**
	comp=N,1.8nm,0.8s,baz=300,slow=12,SNR=1.7						
VILB	**Vilhena**	**10.66**	**41**	*eP*	**Pn**	**05 54 51.4**	**0.0**
SNDB	**Serra Nova Dou**	**17.86**	**61**	*eP*	**P**	**05 56 18.8**	**+0.3**
NPGB	**Novo Progresso**	**18.22**	**41**	*eP*	**P**	**05 56 22.0**	**-0.3**
MACA	**Manacapuru-AM**	**19.07**	**21**	*eP*	**P**	**05 56 30.7**	**-0.9**
BDFB	**Brasilia**	**19.10**	**76**	P	**P**	**05 56 32.3**	**+0.3**
	comp=N,2.3nm,0.7s,baz=253,slow=11,SNR=5.3						
ITTB	**Itaituba**	**20.17**	**35**	*eP*	**P**	**05 56 42.6**	**-0.8**
JANB	**Januaria**	**22.66**	**78**	*eP*	**P**	**05 57 07.8**	**-1.0**
MALB	**Monte Alegre**	**23.07**	**35**	*eP*	**P**	**05 57 12.2**	**0.0**
TORD	**Torodi Ar. Bea**	**75.84**	**70**	P	**P**	**06 03 49.3**	**+0.2**
	comp=N,1.5nm,0.5s,baz=253,slow=5.4,SNR=26						
	comp=N,1.5nm,0.5s						
ESDC	**Sonseca Array**	**84.58**	**44**	P	**P**	**06 04 36.3**	**+1.0**
	comp=N,0.6nm,0.8s,baz=264,slow=4.8,SNR=2.9						
	comp=N,0.6nm,0.8s						

*NOU **13** 06:09:10.8, 39°.36S×174°.26E, h232km, MLv3.9/8, North Island, New Zealand*

*WEL **13** 06:09:15.4±1.0, 40°.5S±8°×17°.4E±°, h188km±6km, M2.4/7, ML2.3/7, MLv2.4/7, Error ellipse: s-maj=0.0km s-min=0.0km az=161.0*

ISC 13 06:09:09.5±1.9, 39°.40S±0°.08×174°.32E±0°.07, h230km±10km, n52, σ1⁹79/67, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LREZ	**Lake Rotokare**	**0.09**	**133**	P	**Pn**	**06 09 40.0**	**+0.8**
LREZ				S	**S**	**06 10 01.4**	**-1.2**
NEZ	**North Egmont**	**0.21**	**307**	P	**Pn**	**06 09 41.6**	**+2.1**
NEZ				S	**S**	**06 10 02.3**	**-0.7**
KHEZ	**Kahui Hut**	**0.26**	**294**	S	**S**	**06 10 02.4**	**-0.7**
NMEZ	**Namu Road**	**0.34**	**267**	S	**S**	**06 10 02.1**	**-0.9**
VRZ	**Vera Road**	**0.44**	**51**	P	**Pn**	**06 09 41.0**	**+1.1**
VRZ				S	**S**	**06 10 02.3**	**-1.3**
WAZ	**Wanganui**	**0.63**	**125**	P	**Pn**	**06 09 42.8**	**+2.3**
WAZ				S	**S**	**06 10 03.5**	**-1.3**
MTVZ	**Mangateitei**	**0.89**	**89**	P	**Pn**	**06 09 43.9**	**+2.0**
MTVZ				S	**S**	**06 10 05.3**	**-1.8**
TRVZ	**Turoa**	**0.96**	**84**	P	**Pn**	**06 09 44.5**	**+2.1**
HIZ	**Hauiti**	**0.98**	**26**	P	**Pn**	**06 09 44.1**	**+1.8**
WNVZ	**Wahianoa**	**0.99**	**86**	P	**Pn**	**06 09 44.6**	**+2.0**
NGZ	**Ngauruhoe**	**1.02**	**78**	P	**Pn**	**06 09 44.8**	**+2.1**
NNVZ	**North Ngauruho**	**1.04**	**76**	P	**Pn**	**06 09 45.0**	**+2.1**
KRVZ	**Karewarewa**	**1.07**	**74**	P	**Pn**	**06 09 44.9**	**+2.0**
MOVZ	**Moawhango**	**1.11**	**91**	P	**Pn**	**06 09 44.8**	**+1.6**
MOVZ				S	**S**	**06 10 06.5**	**-2.9**
TMVZ	**Te Maari**	**1.11**	**76**	P	**Pn**	**06 09 45.6**	**+2.4**
BHHZ	**Black Hill Sta**	**1.35**	**94**	P	**Pn**	**06 09 46.4**	**+1.6**
BHHZ				S	**S**	**06 10 09.3**	**-3.0**
BKZ	**Black Stump Fm**	**1.70**	**83**	P	**Pn**	**06 09 49.5**	**+1.8**
TKNZ	**Takaka Hill**	**1.94**	**212**	P	**Pn**	**06 09 51.0**	**+1.3**
TKNZ				S	**S**	**06 10 18.5**	**-2.6**
BFZ	**Birch Farm**	**1.96**	**131**	P	**Pn**	**06 09 51.8**	**+1.9**
QRZ	**Quartz Range**	**1.98**	**223**	P	**Pn**	**06 09 51.2**	**+1.2**
QRZ	**Quartz Range**	**1.98**	**223**	P	**Pn**	**06 09 51.3**	**+1.2**
PXZ	**Pawanui**	**2.06**	**109**	P	**Pn**	**06 09 53.2**	**+2.4**
PXZ				S	**S**	**06 10 22.2**	**-0.9**
MUGZ	**Murupara**	**2.12**	**65**	P	**Pn**	**06 09 53.2**	**+1.7**
MUGZ				S	**S**	**06 10 21.8**	**-2.5**
RTZ	**Ruatahuna**	**2.22**	**70**	P	**Pn**	**06 09 54.4**	**+1.8**
RTZ				S	**S**	**06 10 23.4**	**-2.7**
MRNZ	**Matariki Terra**	**2.33**	**210**	P	**Pn**	**06 09 54.8**	**+1.3**
MRNZ				S	**S**	**06 10 25.8**	**-2.1**
URZ	**Urewera**	**2.46**	**63**	P	**Pn**	**06 09 56.5**	**+1.6**
THZ	**Tophouse**	**2.59**	**204**	P	**Pn**	**06 09 57.8**	**+1.5**
THZ				S	**S**	**06 10 32.7**	**-0.4**
MWZ	**Matawai**	**2.72**	**68**	P	**Pn**	**06 09 59.5**	**+1.8**
MWZ				S	**S**	**06 10 32.2**	**-3.3**
RIGZ	**Rimuhau**	**2.77**	**77**	P	**Pn**	**06 10 00.6**	**+2.3**
RIGZ				S	**S**	**06 10 34.7**	**-1.7**
PRGZ	**Paritu Road**	**2.81**	**81**	P	**Pn**	**06 10 01.1**	**+2.4**
PRGZ				S	**S**	**06 10 35.7**	**-1.5**
RUGZ	**Raukumara Rang**	**2.99**	**62**	P	**Pn**	**06 10 01.9**	**+1.0**
DSZ	**Denniston Nort**	**3.02**	**218**	P	Pn	06 09 58.1	-2.9
KHZ	**Kahutara**	**3.07**	**191**	P	**Pn**	**06 10 03.3**	**+1.8**
KHZ	**Kahutara**	**3.07**	**191**	P	**Pn**	**06 10 03.7**	**+2.2**
PKGZ	**Pakihiroa**	**3.31**	**64**	P	**Pn**	**06 10 06.2**	**+1.8**
WMGZ	**Waiomatatini S**	**3.58**	**65**	P	**Pn**	**06 10 08.5**	**+1.1**
GVZ	**Greta Valley S**	**3.69**	**195**	P	**Pn**	**06 10 09.8**	**+1.1**
LTZ	**Lake Taylor**	**3.72**	**204**	P	**Pn**	**06 10 10.4**	**+1.4**
INZ	**Inchbonnie**	**3.97**	**212**	P	**Pn**	**06 10 13.2**	**+1.2**
AMCZ	**Amberley**	**3.98**	**198**	P	**Pn**	**06 10 13.6**	**+1.6**
OXZ	**Oxford**	**4.28**	**203**	P	**Pn**	**06 10 16.7**	**+0.9**
OKCZ	**Okains Bay**	**4.42**	**192**	P	**Pn**	**06 10 18.7**	**+1.3**
MQZ	**McQueen's Vall**	**4.48**	**196**	P	**Pn**	**06 10 18.4**	**+0.3**
AKCZ	**Akaroa Harbour**	**4.59**	**193**	P	**Pn**	**06 10 20.8**	**+1.2**
RACZ	**Rakaia**	**4.62**	**200**	P	**Pn**	**06 10 20.8**	**+0.9**
WACZ	**Wakanui South**	**4.90**	**201**	P	**Pn**	**06 10 24.4**	**+1.1**
RPZ	**Rata Peaks**	**4.96**	**209**	P	**Pn**	**06 10 24.8**	**+0.8**
RPZ	**Rata Peaks**	**4.96**	**209**	P	**Pn**	**06 10 24.9**	**+0.8**
ARCZ	**Arundel**	**5.12**	**206**	P	**Pn**	**06 10 26.7**	**+0.6**
TMZ	**Timaru**	**5.56**	**205**	P	**Pn**	**06 10 32.9**	**+1.3**
ODZ	**Otahua Downs**	**6.26**	**205**	P	**Pn**	**06 10 42.1**	**+1.6**
ODZ	**Otahua Downs**	**6.26**	**205**	P	**Pn**	**06 10 42.6**	**+2.1**

*IDC **13** 06:44:19.8±1.3, 6°.84N×73°.06W, h143km±46km, mb3.1/2, mbtmp3.7/4, Error ellipse: s-maj=107.9km s-min=7.5km az=133.0*

*RSNC **13** 06:44:21.5±1.1, 6°.82N×73°.15W, h143km±4km, ML3.4, Mw3.8*

ISC 13 06:44:19.9±0.9, 6°.81N±0°.03×73°.10W±0°.04, h152km±6km, n40, σ1⁹46/77, 3C-3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.23**	**201**	*i*eP	**Pn**	**06 44 40.9**	**+0.1**
BARC				*e*S	**Sn**	**06 44 55.5**	**-1.2**
BARC				*i*		06 44 56.8	
	comp=Z,860nm,0.3s						
PAMC	**Pamplona, Colo**	**0.66**	**37**	*i*eP	**Pn**	**06 44 43.9**	**+0.9**
PAMC				*e*S	**Sn**	**06 45 00.5**	**0.0**
PAMC				*i*		06 45 02.9	
	comp=Z,649nm,0.5s						
BRRC	**Barranca, Sant**	**0.68**	**296**	*i*eP	**Pn**	**06 44 42.9**	**+0.4**
BRRC				*e*S	**Sn**	**06 44 59.9**	**+0.2**
BRRC				*i*		06 45 04.0	
	comp=Z,344nm,0.4s						
RUSC	**La Rusia**	**0.91**	**179**	*i*eP	**Pn**	**06 44 44.9**	**+0.2**
RUSC				*e*S	**Sn**	**06 45 03.2**	**-0.5**
RUSC				*i*		06 45 04.4	
	comp=Z,432nm,0.4s						
TAMC	**Tame, Arauca**	**1.35**	**106**	*i*eP	**Pn**	**06 44 49.3**	**+1.2**
TAMC				*i*		06 45 09.8	
	comp=Z,128nm,0.4s						
TAMC				*e*S	**Sn**	**06 45 10.6**	**+0.9**
PTBC	**PUERTO BERRIO,**	**1.38**	**259**	*e*P	**Pn**	**06 44 47.5**	**-0.8**
PTBC				*e*S	**Sn**	**06 45 08.4**	**-1.8**
PTBC				*i*		06 45 12.7	
	comp=Z,233nm,0.2s						
OCAC	**Ocana**	**1.44**	**351**	*i*eP	**Pn**	**06 44 49.3**	**+0.2**
OCAC				*e*S	**Sn**	**06 45 11.1**	**-0.5**
OCAC				*i*		06 45 16.5	
	comp=Z,583nm,0.3s						
SPBC	**San Pablo de B**	**1.50**	**220**	*e*P	**Pn**	**06 44 50.0**	**+0.3**
SPBC				*e*S	**Sn**	**06 45 11.6**	**-1.1**
SPBC				*i*		06 45 12.9	
	comp=Z,285nm,0.2s						
NORC	**Norcasia**	**2.15**	**235**	*e*P	**Pn**	**06 44 57.1**	**+0.1**
NORC				*e*S	**Sn**	**06 45 24.5**	**-1.1**
NORC				*i*		06 45 30.8	
	comp=Z,218nm,0.2s						
CHIC	**Chingaza**	**2.26**	**196**	*e*P	**Pn**	**06 44 59.2**	**+0.6**
CHIC				*e*S	**Sn**	**06 45 27.7**	**-0.6**
CHIC				*i*		06 45 31.6	
	comp=Z,125nm,0.3s						
ROSC	**El Rosal**	**2.30**	**212**	P	**Pn**	**06 45 00.3**	**+1.2**
	comp=Z,61nm,0.3s,baz=309,slow=23,SNR=68						
ROSC				S	**Sn**	**06 45 29.4**	**+0.1**
	comp=Z,163nm,0.4s,baz=44,slow=21,SNR=25						
ROSC	**El Rosal**	**2.30**	**212**	*e*P	**Pn**	**06 45 00.9**	**+1.8**
ROSC				*e*S	**Sn**	**06 45 29.1**	**-0.2**
ROSC				*i*		06 45 35.7	
	comp=Z,178nm,0.3s						
HELC	**Santa Helena**	**2.49**	**256**	*e*P	**Pn**	**06 45 01.5**	**+0.1**
HELC				*e*S	**Sn**	**06 45 32.7**	**-0.7**
HELC				*i*		06 45 40.4	
	comp=Z,150nm,0.4s						
UREC	**San Jos de Ur**	**2.59**	**291**	*e*P	**Pn**	**06 45 01.4**	**-0.9**
UREC				*e*S	**Sn**	**06 45 33.2**	**-1.8**
UREC				*i*		06 45 35.8	
	comp=Z,143nm,0.1s						
GUY2C	**Guyana, Caldas**	**2.75**	**235**	*e*P	**Pn**	**06 45 05.6**	**+0.9**
GUY2C				*e*S	**Sn**	**06 45 39.3**	**+0.1**
GUY2C				*i*		06 45 46.0	
	comp=Z,109nm,0.3s						
LL1C	**La Loma 1 Cana**	**2.75**	**351**	*e*P	**Pn**	**06 45 06.8**	**+2.6**
LL1C				*e*S	**Sn**	**06 45 40.5**	**+1.9**
LL1C				*i*		06 45 48.8	
	comp=Z,289nm,0.3s						
PTGC	**Puerto Gaitan,**	**2.77**	**160**	*e*P	**Pn**	**06 45 04.1**	**-0.3**
PTGC				*e*S	**Sn**	**06 45 37.3**	**-1.6**
PTGC				*i*		06 45 39.7	
	comp=Z,161nm,0.4s						
LL6C	**La Loma 6 Bece**	**2.91**	**357**	*e*P	**Pn**	**06 45 05.8**	**-0.4**
LL6C				*e*S	**Sn**	**06 45 39.9**	**-2.2**
LL6C				*i*		06 46 00.2	
	comp=Z,38nm,0.3s						
CBOC	**Ciudad Bolivar**	**3.05**	**252**	*e*P	**Pn**	**06 45 09.1**	**+1.0**
CBOC				*e*S	**Sn**	**06 45 45.1**	**-0.2**
CBOC				*i*		06 45 49.0	
	comp=Z,41nm,0.5s						
DBBC	**Dabeiba**	**3.10**	**274**	*e*P	**Pn**	**06 45 09.2**	**+0.6**
DBBC				*e*S	**Sn**	**06 45 45.3**	**-1.1**
DBBC				*i*		06 45 53.0	
	comp=Z,308nm,0.7s						
SDV	**Santo Domingo**	**3.20**	**50**	P	**Pn**	**06 45 10.0**	**0.0**
	comp=Z,50nm,0.3s,baz=234,slow=11,SNR=27						
SDV				S	**Sn**	**06 45 47.2**	**-1.6**
	comp=Z,55nm,0.5s,baz=250,slow=22,SNR=17						
SDV	**Santo Domingo**	**3.20**	**50**	*e*P	**Pn**	**06 45 10.8**	**+0.7**
SDV				*e*S	**Sn**	**06 45 48.2**	**-0.6**
SDV				*i*		06 45 52.8	
	comp=Z,43nm,0.7s						
ARGC	**Ariguani, Magd**	**3.23**	**340**	*e*P	**Pn**	**06 45 11.8**	**+1.4**
ARGC				*e*S	**Sn**	**06 45 50.4**	**+0.9**
ARGC				*i*		06 46 01.8	
	comp=Z,38nm,0.3s						
ANIL	**Santa Ana**	**3.25**	**225**	*e*P	**Pn**	**06 45 12.2**	**+1.3**
ANIL				*e*S	**Sn**	**06 45 50.1**	**-0.1**
ANIL				*i*		06 46 00.3	
	comp=Z,200nm,0.3s						
PRAC	**Prado**	**3.55**	**210**	*e*P	**Pn**	**06 45 14.9**	**+0.4**
PRAC				*e*S	**Sn**	**06 45 57.3**	**+0.5**
PRAC				*i*		06 46 02.8	
	comp=Z,115nm,0.4s						
ORTC	**Ortega, Tolima**	**3.59**	**217**	*e*P	**

219nm,0.3s,baz=105,slow=24,SNR=89
JOW Sn **Sn** **06 48 37.3 -1.6**
168nm,0.3s,baz=267,slow=30,SNR=23
JOW LR LR 06 48 55.6
comp=Z,277nm,19.2s,baz=108,slow=40
JOW Kunigami 1.80 266 P **Pn** **06 48 16.0 +0.4**
JOW *eS* **Sn** **06 48 37.5 -1.5**
JOW Kunigami 1.80 266 A A 06 48 16.0
comp=E,2.0nm,2.6s,comp=E,5.0nm,1.9s
JIH Iheya 2.07 273 P **Pn** **06 48 20.1 +0.7**
JIH *eS* **Sn** **06 48 44.6 -0.9**
JNTH Nagotoyohara 2.07 258 P **Pn** **06 48 19.4 0.0**
JNTH S **Sn** **06 48 43.2 -2.4**
JJT3 Tamagusuku3 2.38 251 P **Pn** **06 48 24.2 +0.5**
JJT3 S **Sn** **06 48 51.6 -1.8**
JTAJ Takarajima 2.39 337 P **Pn** **06 48 24.0 +0.3**
JAGN Aguni-jima 2.75 263 P **Pn** **06 48 28.9 +0.2**
JAGN *eS* **Sn** **06 49 00.3 -2.0**
JKE Kume jima 2 3.19 259 P **Pn** **06 48 34.7 -0.1**
JNU Nakatsue 6.16 5 Pn **Pn** **06 49 15.6 -0.1**
baz=0.0,slow=20
JNU Sn **Sn** **06 50 21.9 -4.8**
KLR Kul'dur 22.27 3 P **P** **06 52 42.5 +0.7**
1.0nm,0.5s,baz=192,slow=8.1,SNR=4.6
1.0nm,0.5s
SONM Songino Array 27.99 324 P **P** **06 53 36.7 +0.9**
0.6nm,0.4s,baz=138,slow=8.9,SNR=1.8
0.6nm,0.4s
SEY Seymchan 38.80 16 LR LR 07 11 42.5
comp=Z,37nm,19.6s,baz=39,slow=37
MKAR Makanchi Array 42.44 311 P **P** **06 55 39.2 -0.5**
0.6nm,0.8s,baz=93,slow=8.9,SNR=6.2
0.6nm,0.8s
ZALV Zalesovo Beam 42.80 322 P **P** **06 55 42.9 +0.4**
0.6nm,0.6s,baz=89,slow=7.7,SNR=3.7
0.6nm,0.6s
KURBB Kurchatov Arra 45.61 316 P **P** **06 56 06.0 +1.0**
1.2nm,0.9s,baz=103,slow=7.9,SNR=6.1
1.2nm,0.9s
WRA Warramunga Arr 46.79 175 P **P** **06 56 15.4 +0.7**
4.3nm,0.7s,baz=355,slow=8.5,SNR=36
4.3nm,0.7s
ASAR Alice Springs 50.45 176 P **P** **06 56 43.5 +0.6**
2.4nm,0.7s,baz=6.7,slow=14,SNR=38
2.4nm,0.7s
STKA Stephens Creek 59.49 169 P **P** **06 57 49.3 +1.2**
0.7nm,0.3s,baz=338,slow=8.8,SNR=3.6
0.7nm,0.3s
KBZ Khabaz 70.12 310 P **P** **06 58 58.7 +1.3**
1.1nm,0.4s,baz=44,slow=4.2,SNR=4.6
1.1nm,0.4s
BRTR Keskin Array B 78.03 308 P **P** **06 59 44.0 0.0**
0.9nm,0.8s,baz=96,slow=7.7,SNR=5.2
0.9nm,0.8s
NOA NORSAR Array B 79.46 334 P **P** **06 59 51.0 -0.3**
0.7nm,0.8s,baz=57,slow=5.1,SNR=1.6
0.7nm,0.8s

JMA ***13*** *06:53:47.5±0.3,31.1°N±0.4°×129.0°E±1.0°,h12km±2km, MV3.8/30,SW OFF KYUSHU*
IDC ***13*** *06:53:51.2±1.5,31.1°15N×128.73E,h0km,mb3.4/5, mbtmp3.4/7,ML3.0/2,Error ellipse: s-maj=59.8km s-min=21.6km az=73.0*

ISC 13 06:53:49.8±0.8,31°11N±0.06°×129°25E±0.07°,h6km,n16, σ1§89/17,mb3.5/5,Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JSJ	**Shimokoshiki**	**0.69**	**35**	*eP*	**Pg**	**06 54 02.5**	**-0.6**
JKC	**Kuchinoerabu**	**1.04**	**128**	*eP*	**Pb**	**06 54 09.2**	**-1.0**
JKC				*eS*	**Sn**	**06 54 24.4**	**-1.4**
JSU	**Suzuyama**	**1.11**	**69**	*eP*	**Pn**	**06 54 10.9**	**-0.9**
JNN	**Nakanoshima**	**1.38**	**157**	P	**Pn**	**06 54 13.2**	**-2.3**
JYAK	**Yakushimahirau**	**1.39**	**128**	*eP*	**Pn**	**06 54 14.4**	**-1.4**
JTN	**Tanegashima 3**	**1.56**	**106**	*eP*	**Pn**	**06 54 17.2**	**-0.8**
JMTN	**Minamitane**	**1.59**	**116**	*eP*	**Pn**	**06 54 17.7**	**-0.7**
JFU	**Fukue jima 2**	**1.60**	**345**	*eP*	**Pn**	**06 54 15.9**	**-2.7**
JTZ	**Takazaki**	**1.76**	**63**	*eP*	**Pn**	**06 54 19.6**	**-1.2**
KSRS	**Korea Array**	**6.42**	**351**	Pn	**Pn**	**06 55 24.4**	**-0.4**
	0.1nm,0.3s,baz=175,slow=14,SNR=6.1						
	1.7nm,0.7s						
KLR	**Kul'dur**	**18.20**	**5**	P	**P**	**06 58 06.2**	**+3.0**
	0.1nm,0.3s,baz=174,slow=9.2,SNR=3.8						
	0.6nm,0.5s						
SONM	**Songino Array**	**24.15**	**320**	P	**P**	**06 59 06.0**	**-0.7**
	1.1nm,0.7s,baz=114,slow=9.6,SNR=2.4						
	1.1nm,0.7s						
MKAR	**Makanchi Array**	**39.12**	**307**	P	**P**	**07 01 17.7**	**-0.2**
	0.3nm,0.6s,baz=108,slow=9.3,SNR=2.4						
	0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**42.08**	**313**	P	**P**	**07 01 41.3**	**-1.0**
	0.3nm,0.6s,baz=104,slow=9.6,SNR=3.3						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**50.99**	**174**	P	**P**	**07 02 54.5**	**+2.0**
	0.7nm,1.0s,baz=350,slow=7.7,SNR=2.1						
	0.7nm,1.0s						
ASAR	**Alice Springs**	**54.65**	**175**	P	**P**	**07 03 23.2**	**+3.7**
	0.5nm,0.9s,baz=3.9,slow=15,SNR=1.8						
	0.5nm,0.9s						

IDC ***13*** *06:54:15.7±0.7,32.27N×130.68E,h0km,mb3.9/13, mbtmp3.9/15,ML3.2/2,MS3.4/7,Error ellipse: s-maj=19.8km s-min=13.1km az=92.0*
NEIC ***13*** *06:54:17.4±2.1,32.11N±0.02°×130.48E±0.08,h10km±1km, mb4.4/21,Error ellipse: s-maj=11.3km s-min=3.0km az=98.0*
JMA ***13*** *06:54:18.4±0.0,32.4N±0.1°×130.7E±0.2,h7km±1km, MD4.1/18,MV4.0/18,SOUTHERN KUMAMOTO PREF*
JMA Felt IV J1 at SOUTHERN KUMAMOTO PREF .
NIED ***13*** *06:54:18.4,32.44N×130.68E,h7km,MW4.0,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr0.22; Mθθ0.23; Mφφ -0.45; Mrθ-0.62; Mθφ0.56; Mφr-0.90; Fault plane solution: M₀1.26000×10¹⁵ NP1: φs298.00000°,δ33.00000°,λ10.00000°. NP2: φs199.00000°,δ85.00000°,λ123.00000°.*

ISC 13 06:54:18.5±0.9,32.41N±0.03°×130.64E±0.05°,h12km±6km, n92,σ1§74/64,mb4.3/25,MS3.5/5,2D,Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIU3	**Izumi3**	**0.21**	**46**	↓P	**Pg**	**06 54 21.7**	**-1.3**
JIU3				↓S	**Sg**	**06 54 24.1**	**-2.0**
JIU3	**Izumi3**	**0.21**	**46**	A	A	06 54 21.7	
	comp=E,43nm,0.4s,comp=E,47nm,0.5s						
JZO	**Okuchi**	**0.27**	**187**	*eP*	**Pg**	**06 54 24.7**	**+0.7**
JZO				S	**Sg**	**06 54 28.7**	**+0.9**
JZO	**Okuchi**	**0.27**	**187**	A	A	06 54 24.7	
	comp=E,39nm,0.8s,comp=E,34nm,0.2s						
JHD	**Hondo**	**0.43**	**278**	A	A	06 54 27.5	
	comp=E,13nm,3.3s,comp=E,15nm,1.7s						
JTZ	**Takazaki**	**0.63**	**143**	*i* P	**Pb**	**06 54 31.5**	**0.0**
JTZ				S	**Sg**	**06 54 39.9**	**+0.7**
JKIT	**Kitakata**	**0.72**	**72**	A	A	06 54 31.5	
	comp=E,8.0nm,0.4s,comp=E,13nm,0.4s						
JNU	**Nakatsue**	**0.74**	**16**	Pg	**Pg**	**06 54 32.1**	**-0.8**
	baz=180,slow=20						
JNU				Lg	Lg	06 54 41.4	
	baz=142,slow=20						
JNU	**Nakatsue**	**0.74**	**16**	Pg	**Pn**	**06 54 36.1**	**+1.3**
JTSN	**Tsuno**	**0.75**	**102**	A	A	06 54 32.3	
	comp=E,9.0nm,0.3s,comp=E,32nm,0.4s						
JHHC	**Hyugahichiya**	**0.85**	**87**	A	A	06 54 33.9	
	comp=E,11nm,2.6s,comp=E,13nm,1.0s						
JSU	**Suzuyama**	**0.91**	**190**	Pg	Pg	06 54 28.1	-8.0
JSU	**Suzuyama**	**0.91**	**190**	A	A	06 54 36.5	
	comp=E,6.0nm,1.8s,comp=E,4.0nm,0.6s						
JNKG	**Nichinankitago**	**0.97**	**140**	A	A	06 54 37.0	
	comp=N,6.0nm,1.9s						
JSKE	**Saikikamae**	**1.14**	**69**	A	A	06 54 38.9	
	comp=N,5.0nm,2.0s						
JUS	**Usuki**	**1.15**	**55**	A	A	06 54 39.0	
	comp=N,6.0nm,0.4s						
JFA	**Akaike**	**1.31**	**6**	A	A	06 54 42.1	
	comp=E,5.0nm,2.9s						
JKI	**Kunimi**	**1.45**	**32**	A	A	06 54 44.2	
	comp=E,6.0nm,1.6s,comp=E,9.0nm,1.3s						
JFU	**Fukue jima 2**	**1.61**	**279**	A	A	06 54 48.0	
	comp=N,2.0nm,1.5s						
UWA2	**Uwa jima 2**	**1.86**	**64**	A	A	06 54 50.4	
	comp=N,3.0nm,4.6s						
JKU	**Kubokawa**	**2.23**	**66**	A	A	06 54 55.9	
	comp=N,2.0nm,2.2s						
JHM	**Kurahashi**	**2.35**	**42**	A	A	06 54 57.5	
	comp=E,2.0nm,3.1s						
JTU	**Tsushima**	**2.35**	**334**	Pn	**Pn**	**06 54 57.1**	**+0.2**
JMN	**Monobe**	**3.02**	**63**	Pn	**Pn**	**06 55 06.6**	**+0.4**
JHS	**Saijyo**	**3.31**	**38**	Pn	**Pn**	**06 55 12.6**	**+2.4**
NAWB	**Namwon**	**4.04**	**319**		**Pn**	**06 55 20.9**	**+0.8**
TJN	**Taejon**	**4.80**	**327**	Pn	**Pn**	**06 55 31.1**	**+0.5**
KSCHJ	**Chungju**	**4.97**	**335**	Pn	**Pn**	**06 55 34.5**	**+1.6**
KSRS	**Korea Array**	**5.51**	**337**	Pg	**Pb**	**06 55 58.0**	**+3.4**
	0.8nm,0.3s,baz=156,slow=16,SNR=8.6						
KSRS				Lg	Lg	06 57 09.8	
	1.2nm,0.3s,baz=154,slow=29,SNR=8.7						
KSRS				LR	LR	06 57 52.6	
	comp=Z,236nm,19.0s,baz=165,slow=38						
KSAR	**Wonju Array Be**	**5.51**	**337**	Pn	**Pn**	**06 55 40.5**	**+0.1**
INU	**Inuyama**	**6.06**	**59**	Pn	**Pn**	**06 55 50.2**	**+2.3**
JGF	**Kuroka**	**6.43**	**58**		**Pn**	**06 55 55.9**	**+2.9**
JMZ	**Minamidaito 2**	**6.58**	**175**	Pn	Pn	06 55 47.3	-7.8
MJB9	**Matsu-Tunnel**	**7.49**	**54**	Pn	**Pn**	**06 56 10.5**	**+2.9**
MAJO	**Matsushiro**	**7.49**	**54**	Pn	**Pn**	**06 56 10.9**	**+3.3**
MJAR	**Matsushiro Arr**	**7.49**	**54**	Pn	**Pn**	**06 56 08.9**	**+1.3**
	0.3nm,0.3s,baz=236,slow=13,SNR=19						
MJAR				Lg	Lg	06 58 15.6	
	baz=237,slow=33,SNR=1.2						
MJAR				LR	LR	06 59 19.5	
	comp=Z,178nm,19.9s,baz=222,slow=40						
	8.0nm,0.6s						
MJAR	**Matsushiro Arr**	**7.49**	**54**	Pn	**Pn**	**06 56 10.6**	**+3.1**
SSLB	**Suanglung**	**12.11**	**227**	Pn	Pn	06 57 05.9	-5.0
KLR	**Kul'dur**	**16.83**	**3**	Pn	**P**	**06 58 15.1**	**-0.9**
	0.1nm,0.3s,baz=205,slow=9.1,SNR=4.0						
	1.1nm,0.6s						
SONM	**Songino Array**	**23.97**	**317**	P	**P**	**06 59 33.2**	**+0.5**
	1.9nm,0.7s,baz=140,slow=7.6,SNR=3.5						
	1.9nm,0.7s						
SONM	**Songino Array**	**23.97**	**317**	P	**P**	**06 59 32.3**	**-0.5**
YAK	**Yakutsk**	**29.65**	**359**	LR	LR	07 11 47.4	
	comp=Z,56nm,19.8s,baz=267,slow=35						
H11N2	**WAKE ISLAND Hy**	**34.76**	**102**	T	T	07 37 13.0	
	baz=298,slow=75,SNR=7.6						
H11N1	**WAKE ISLAND Hy**	**34.77**	**102**	T	T	07 37 15.8	
	baz=298,slow=75,SNR=4.0						
H11N3	**WAKE ISLAND Hy**	**34.78**	**102**	T	T	07 37 16.3	
	baz=298,slow=75,SNR=6.0						
ZAA0	**Zalesovo Array**	**38.86**	**317**	P	**P**	**07 01 43.0**	**-0.4**
ZAA0				IAmb	IAmb	07 01 47.4	
	comp=Z,4.6nm,1.4s						
ZALV	**Zalesovo Beam**	**38.86**	**317**	P	**P**	**07 01 40.8**	**-2.6**
	comp=Z,0.3nm,0.4s,baz=123,slow=10,SNR=1.5						
ZALV	**Zalesovo Beam**	**38.86**	**317**	P	**P**	**07 01 41.7**	**-1.7**
MK31	**Makanchi Array**	**39.30**	**306**	P	**P**	**07 01 45.9**	**-1.3**
MKAR	**Makanchi Array**	**39.30**	**306**	P	**P**	**07 01 47.0**	**-0.3**
	comp=Z,0.2nm,0.5s,baz=93,slow=10,SNR=2.1						
	comp=Z,0.2nm,0.5s						
KURK	**Kurchatov**	**42.04**	**312**	P	**P**	**07 02 10.5**	**+0.7**
KURK	**Kurchatov**	**42.04**	**312**	IAmb	IAmb	07 02 10.6	
	comp=Z,2.1nm,1.0s						
KURBB	**Kurchatov Arra**	**42.09**	**311**	P	**P**	**07 02 10.5**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=98,slow=8.6,SNR=5.9						
	comp=Z,0.5nm,0.7s						
KK31	**Karatay Array**	**47.80**	**301**	P	**P**	**07 02 56.0**	**+0.2**
KK31				IAmb	IAmb	07 03 00.4	
	comp=Z,3.7nm,1.0s						
KKAR	**Karatay Array**	**47.80**	**301**	P	**P**	**07 02 55.1**	**-0.6**
WB0	**Warramunga Arr**	**52.00**	**176**	P	**P**	**07 03 24.7**	**-3.1**
WRAB	**Tennant Creek**	**52.16**	**176**	P	**P**	**07 03 26.2**	**-2.7**
WRAB				IAmb	IAmb	07 03 57.1	
	comp=Z,6.4nm,0.8s						
WRA	**Warramunga Arr**	**52.17**	**176**	P	**P**	**07 03 25.9**	**-3.1**
	comp=Z,2.5nm,0.8s,baz=355,slow=8.5,SNR=12						
	comp=Z,2.5nm,0.8s						
WRA	**Warramunga Arr**	**52.17**	**176**	P	**P**	**07 03 26.3**	**-2.7**
WB2	**Warramunga Arr**	**52.17**	**176**	P	**P**	**07 03 26.2**	**-2.9**
WB2				IAmb	IAmb	07 04 07.7	
	comp=Z,8.4nm,1.2s						
WR0	**Warramunga Arr**	**52.20**	**175**	P	P	07 03 25.1	-4.2
ABKAR	**Akbulak array**	**54.12**	**310**	P	**P**	**07 03 43.9**	**+0.8**
CTA	**Charters Tower**	**54.29**	**162**	P	**P**	**07 03 43.3**	**-1.4**
	comp=Z,5.3nm,0.8s,baz=319,slow=7.5,SNR=2.0						
	comp=Z,5.3nm,0.8s						
PSA00	**Pilbara Seismi**	**54.66**	**192**	P	P	07 03 43.2	-4.1
K20K	**Telida**	**55.05**	**32**	P	**P**	**07 03 52.4**	**+2.7**
K20K				IAmb	IAmb	07 04 11.5	
	comp=Z,8.3nm,1.5s						
ASAR	**Alice Springs**	**55.84**	**176**	P	**P**	**07 03 54.3**	**-1.6**
	comp=Z,2.0nm,0.8s,baz=6.5,slow=15,SNR=8.1						
	comp=Z,2.0nm,0.8s						
ASAR	**Alice Springs**	**55.84**	**176**	P	**P**	**07 03 53.6**	**-2.3**
ASAR	**Alice Springs**	**55.84**	**176**	P	**P**	**07 03 54.3**	**-1.6**
PPLA	**Purkeypile**	**55.94**	**33**	P	**P**	**07 03 58.3**	**+2.0**
PPLA				IAmb	IAmb	07 04 26.2	
	comp=Z,4.6nm,1.1s						
RND	**Reindeer**	**57.38**	**32**	P	**P**	**07 04 08.3**	**+1.8**
RND				IAmb	IAmb	07 04 10.4	
	comp=Z,3.2nm,0.8s						
MDM	**Murphy Dome**	**57.45**	**30**	P	**P**	**07 04 08.3**	**+1.5**
MDM				IAmb	IAmb	07 04 11.7	
	comp=Z,4.7nm,1.0s						
ILAR	**Eielson Array**	**58.04**	**30**	P	**P**	**07 04 10.2**	**-0.8**
	comp=Z,0.2nm,0.6s,baz=281,slow=7.0,SNR=2.7						
	comp=Z,0.2nm,0.6s						
M26K	**Nabesna, AK**	**60.20**	**32**	P	**P**	**07 04 27.3**	**+1.2**
M26K				IAmb	IAmb	07 04 30.9	
	comp=Z,3.7nm,1.0s						
K27K	**Chicken**	**60.23**	**30**	P	**P**	**07 04 28.6**	**+2.4**
K27K				IAmb	IAmb	07 04 30.9	
	comp=Z,5.3nm,1.2s						
BCAR	**Beaver Creek A**	**60.59**	**31**	P	**P**	**07 04 31.0**	**+2.3**
BELG	**Belogornoye**	**61.02**	**316**	LR	LR	07 33 03.7	
	comp=Z,32nm,18.0s,baz=130,slow=38						
INK	**Inuvik**	**62.41**	**25**	P	**P**	**07 04 43.1**	**+2.3**
INK				IAmb	IAmb	07 05 14.5	
	comp=Z,4.2nm,1.4s						
KBZ	**Khabaz**	**66.95**	**308**	P	**P**	**07 05 11.7**	**+0.8**
	comp=Z,3.7nm,0.9s,baz=120,slow=2.6,SNR=5.1						
	comp=Z,3.7nm,0.9s						
FIA1	**FINESS Array S**	**68.56**	**330**	P	**P**	**07 05 20.9**	**+0.3**
FINES	**FINESS Array B**	**68.56**	**330**	P	**P**	**07 05 20.3**	**-0.4**
	comp=Z,1.1nm,0.5s,baz=73,slow=6.6,SNR=7.5						
	comp=Z,1.1nm,0.5s						
FINES	**FINESS Array B**	**68.56**	**330**	P	**P**	**07 05 20.9**	**+0.2**
AKASG	**Malin Array Be**	**72.23**	**319**	P	**P**	**07 05 43.0**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=23,slow=5.1,SNR=5.4						
	comp=Z,0.4nm,0.4s						
AKASG	**Malin Array Be**	**72.23**	**319**	IAmb	IAmb	07 05 46.9	
	comp=Z,0.9nm,0.8s						
NC405	**NORSAR Array S**	**74.48**	**334**	P	**P**	**07 05 56.1**	**-0.4**
NOA	**NORSAR Array B**	**74.71**	**334**	P	**P**	**07 05 57.2**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=52,slow=5.5,SNR=2.6						
	comp=Z,0.4nm,0.7s						
BRTR	**Keskin Array B**	**74.93**	**308**	P	**P**	**07 05 60.0**	**+0.3**
	comp=Z,1.5nm,0.8s,baz=86,slow=4.0,SNR=6.6						
	comp=Z,1.5nm,0.8s						
BRTR	**Keskin Array B**	**74.93**	**308**	P	**P**	**07 05 58.9**	**-0.7**
BORG	**Borgarnes**	**80.71**	**348**	LR	LR	07 42 10.8	
	comp=Z,13nm,21.8s,baz=296,slow=36						
FRB	**Frobisher Bay**	**82.97**	**8**	LR	LR	07 44 22.5	
	comp=Z,28nm,21.2s,baz=38,slow=36						
NVAR	**Mina Array Bea**	**84.76**	**47**	P	**P**	**07 06 53.0**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=299,slow=5.2,SNR=4.5						
	comp=Z,0.6nm,0.8s						
NVAR	**Mina Array Bea**	**84.76**	**47**	P	**P**	**07 06 52.4**	**-0.6**
SCHQ	**Schefferville**	**91.82**	**10**	LR	LR	07 51 32.9	
	comp=Z,29nm,19.6s,baz=156,slow=37						

IDC ***13*** *06:54:52.9±1.0,26.72N×130.42E,h0km,mb3.8/10, mbtmp3.7/10,MS3.3/3,Error ellipse: s-maj=29.6km s-min=24.7km az=24.0*
NEIC ***13*** *06:54:56.6±1.1,26.87N±0.07°×130.14E±0.06,h10km±1km, mb4.5/11,Error ellipse: s-maj=12.5km s-min=8.4km az=29.0*
JMA ***13*** *06:54:57.3±0.1,26.9N±0.5°×130.3E±0.6,h47km,MV4.0/16, NEAR MINAMI-DAITOJIMA IS*
NIED ***13*** *06:54:57.3,26.91N×130.25E,h47km,MW4.2,Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁵Nm; Mrr-2.06; Mθθ0.66; Mφφ1.40; Mrθ-0.52; Mθφ0.82; Mφr0.80; Fault plane solution: M₀2.18000×10¹⁵ NP1:φs50.00000°, δ42.00000°,λ-62.00000°. NP2:φs194.00000°,δ54.00000°, λ-113.00000°.*

ISC 13 06:54:55.8±0.6,26.89N±0.04°×130.22E±0.04°,h10km,n48, σ1§28/60,mb4.0/16,Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKDJ	**Kitadaitoujima**	**1.34**	**134**	P	**Pn**	**06 55 20.2**	**-0.4**
JKDJ				*eS*	**Sb**	**06 55 36.9**	**-1.5**
JMZ	**Minamidaito 2**	**1.39**	**140**	Pn	**Pn**	**06 55 22.5**	**+1.2**
JMZ	**Minamidaito 2**	**1.39**	**140**	P	**Pn**	**06 55 20.6**	**-0.7**
JMZ				S	**Sn**	**06 55 37.2**	**-2.5**
JZK	**Kikaishima**	**1.44**	**351**	P	**Pn**	**06 55 22.0**	**+0.1**
JZK				*eS*	**Sn**	**06 55 39.6**	**-1.3**
JTK	**Tokunoshima**	**1.44**	**309**	P	**Pn**	**06 55 21.7**	**-0.3**
JTK				*eS*	**Sn**	**06 55 39.4**	**-1.5**
JOKE	**Okinoerabujima**	**1.54**	**288**	P	**Pn**	**06 55 23.5**	**+0.2**
JOKE				*eS*	**Sn**	**06 55 42.6**	**-0.9**
JYRO	**Yoronjima**	**1.58**	**275**	P	**Pn**	**06 55 24.0**	**+0.1**
JYRO				*eS*	**Sn**	**06 55 43.0**	**-1.5**
JAM	**Amami Oshima**	**1.61**	**340**	P	**Pn**	**06 55 23.7**	**-0.6**
JAM				S	**Sn**	**06 55 42.2**	**-3.0**
JAMN	**Amaminishikomi**	**1.64**	**326**	P	**Pn**	**06 55 24.0**	**-0.6**
JAMN				S	**Sn**	**06 55 43.0**	**-2.7**
JOW	**Kunigami**	**1.74**	**269**	Pn	**Pn**	**06 55 26.4**	**+0.3**
	306nm,0.3s,baz=103,slow=26,SNR=47						
JOW				Sn	**Sn**	**06 55 47.1**	**-1.1**
	142nm,0.3s,baz=248,slow=29,SNR=13						
JOW	**Kunigami**	**1.74**	**269**	Pn	**Pn**	**06 55 26.2**	**+0.1**
JOW	**Kunigami**	**1.74**	**269**	P	**Pn**	**06 55 26.5**	**+0.4**
JOW				S	**Sn**	**06 55 47.4**	**-0.9**
JNTH	**Nagotoyohara**	**2.00**	**260**	P	**Pn**	**06 55 29.7**	**0.0**
JNTH				S	**Sn**	**06 55 52.6**	**-2.1**
JIH	**Iheya**	**2.02**	**275**	P	**Pn**	**06 55 30.4**	**+0.6**
JIH				*eS*	**Sn**	**06 55 54.6**	**-0.5**
JJT3	**Tamagusuku3**	**2.31**	**252**	P	**Pn**	**06 55 34.6**	**+0.8**
JJT3				*eS*	**Sn**	**06 56 02.4**	**+0.1**
JAGN	**Aguni-jima**	**2.68**	**264**	P	**Pn**	**06 55 39.5**	**+0.5**
JAGN				*eS*	**Sn**	**06 56 09.9**	**-1.6**
JSU	**Suzuyama**	**4.61**	**3**	Pn	**Pn**	**06 56 06.4**	**+0.9**
YOJ	**Yonaguni jima**	**6.94**	**251**	Pn	**Pn**	**06 56 36.4**	**-1.1**
NACB	**Ninganchiao**	**8.25**	**253**	Pn	**Pn**	**06 56 55.3**	**-0.2**
YHNB	**Yeheng**	**8.27**	**256**	Pn	**Pn**	**06 56 54.8**	**-1.2**
YULB	**Yu-li**	**8.80**	**249**	Pn	**Pn**	**06 57 00.7**	**-2.4**
SSLB	**Suanglung**	**8.93**	**252**	Pn	**Pn**	**06 57 04.1**	**-0.9**
JYT	**Yasato**	**12.60**	**40**	Pn	**Pn**	**06 57 56.5**	**+1.4**
USRK	**Ussuriysk Ar.**	**17.33**	**4**	LR	LR	07 06 20.1	
	comp=Z,52nm,18.1s,baz=24,slow=39						
BJT	**Baijiatuan**	**17.55**	**322**	P	**Pn**	**06 59 01.0**	**+0.6**
BJT				IAmb	IAmb	06 59 09.7	
	comp=Z,18nm,0.3s						
GUMO	**Guam**	**19.05**	**131**	LR	LR	07 05 30.2	
	comp=Z,79nm,18.3s,baz=168,slow=34						
MKAR	**Makanchi Array**	**42.44**	**311**	P	**P**	**07 02 51.3**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=96,slow=10,SNR=2.0						
	comp=Z,0.4nm,0.8s						
ZALV	**Zalesovo Beam**	**42.82**	**322**	P	**P**	**07 02 54.4**	**+0.7**
	comp=Z,0.6nm,0.5s,baz=117,slow=8.3,SNR=2.3						
	comp=Z,0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**45.62**	**316**	P	**P**	**07 03 17.2**	**+1.0**
	comp=Z,1.0nm,0.9s,baz=103,slow=8.3,SNR=4.2						
	comp=Z,1.0nm,0.9s						
CTAO	**Charters Tower**	**49.22**	**160**	P	**P**	**07 03 46.1**	**+1.6**
AS31	**Alice Springs**	**50.38**	**176**	P	**P**	**07 03 53.3**	**-0.1**
ASAR	**Alice Springs**	**50.39**	**176**	P	**P**	**07 03 50.6**	**-2.8**
	comp=Z,2.0nm,0.8s,baz=1.9,slow=7.2,SNR=6.4						
	comp=Z,2.0nm,0.8s						
KKAR	**Karatay Array**	**50.49**	**305**	P	**P**	**07 03 53.7**	**-0.4**
O18K	**Koktuh Hills**	**59.45**	**34**	P	**P**	**07 05 00.9**	**+2.3**
O18K				IAmb	IAmb	07 05 29.1	
	comp=Z,6.5nm,1.0s						
J20K	**Nowinta River**	**59.90**	**29**	P	**P**	**07 05 03.6**	**+2.0**
J20K				IAmb	IAmb	07 05 44.0	
	comp=Z,8.1nm,1.5s						
K20K	**Telida**	**59.94**	**30**	P	**P**	**07 05 02.8**	**+0.9**
K20K				IAmb	IAmb	07 05 29.9	
	comp=Z,4.8nm,1.1s						
PPLA	**Purkeypile**	**60.80**	**31**	P	**P**	**07 05 09.8**	**+1.8**
ILAR	**Eielson Array**	**63.01**	**29**	P	**P**	**07 05 21.6**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=262,slow=6.8,SNR=4.7						
	comp=Z,0.5nm,0.7s						
BMAR	**Burnt Mountain**	**63.65**	**25**	P	**P**	**07 05 28.6**	**+1.7**
SCRK	**Sand Creek**	**64.37**	**29**	P	**P**	**07 05 32.8**	**+1.1**
SCRK				IAmb	IAmb	07 05 33.7	
	comp=Z,2.2nm,0.9s						
J26L	**Joseph Creek**	**64.47**	**29**	P	**P**	**07 05 33.1**	**+0.8**
J26L				IAmb	IAmb	07 05 45.1	
	comp=Z,2.2nm,1.0s						
VRDI	**Verde Repeater**	**65.08**	**32**	P	**P**	**07 05 37.5**	**+1.0**
VRDI				IAmb	IAmb	07 06 01.2	
	comp=Z,5.1nm,1.2s						
AKASG	**Malin Array Be**	**76.18**	**320**	P	**P**	**07 06 44.1**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=31,slow=4.3,SNR=1.4						
AKASG				LR	LR	07 42 51.4	
	comp=Z,37nm,18.1s,baz=56,slow=38						
	comp=Z,0.2nm,0.3s						
BRTR	**Keskin Array B

comp=Z,6.1nm,0.5s,baz=336,slow=10,SNR=42
WRA PcP **PcP** **07 11 05.8 +0.1**
comp=Z,0.2nm,0.4s,baz=331,slow=1.3,SNR=1.3
comp=Z,6.1nm,0.5s
WRA Warramunga Arr 22.14 154 P **P** **07 07 12.4 -1.9**
WB2 Warramunga Arr 22.15 154 P **P** **07 07 13.6 -0.7**
WB2 IAmb IAmb 07 07 16.5
comp=Z,12nm,0.7s
WR0 Warramunga Arr 22.25 153 P **P** **07 07 14.7 -0.6**
WR0 IAmb IAmb 07 07 40.4
comp=Z,21nm,1.4s
COEN Coen 23.40 127 P **P** **07 07 26.4 +0.2**
COEN IAmb IAmb 07 08 01.0
comp=Z,36nm,1.4s
COEN Coen 23.40 127 P **P** **07 07 26.3 +0.2**
WRKA Warakurna 25.13 171 P **P** **07 07 42.2 +0.4**
AS31 Alice Springs 25.30 158 P **P** **07 07 43.8 +0.5**
ASAR Alice Springs 25.30 159 P **P** **07 07 43.8 +0.4**
comp=Z,5.6nm,0.4s,baz=345,slow=11,SNR=54
ASAR PcP **PcP** **07 11 12.7 +0.2**
comp=Z,0.5nm,0.4s,baz=346,slow=2.5,SNR=5.9
ASAR ScP **ScP** **07 14 37.7 -0.1**
comp=Z,0.3nm,0.6s,baz=352,slow=3.7,SNR=2.2
comp=Z,5.6nm,0.4s
ASAR Alice Springs 25.30 159 P **P** **07 07 43.5 +0.2**
QIS Mount Isa 25.39 144 P **P** **07 07 45.2 +1.1**
GSI Gunungsitoli 26.53 273 P **P** **07 07 52.7 -1.7**
GSI IAmb IAmb 07 08 23.7
comp=Z,27nm,1.1s
JOW Kunigami 27.07 8 LR LR 07 19 23.0
comp=Z,207nm,21.9s,baz=253,slow=38
OOD Oodnadatta 29.72 159 P **P** **07 08 22.9 +0.4**
FORT Forrest 30.75 173 P **P** **07 08 32.0 +0.4**
FORT Forrest 30.75 173 P **P** **07 08 32.0 +0.4**
BLDU Ballidu 31.15 192 P **P** **07 08 34.8 -0.4**
MULG Mulgathing 31.49 163 P **P** **07 08 38.6 +0.4**
KLBR Kellerberrin 31.89 190 P **P** **07 08 41.5 -0.2**
LCRK Leigh Creek 33.05 157 P **P** **07 08 52.8 +1.0**
NWAO Narrogin (SRO) 33.29 191 P **P** **07 08 53.8 0.0**
NWAO Narrogin (SRO) 33.29 191 P **P** **07 08 54.0 +0.2**
BBOO Buckleboo 34.45 162 P **P** **07 09 04.4 +0.5**
BBOO IAmb IAmb 07 09 26.4
comp=Z,35nm,1.5s
BBOO Buckleboo 34.45 162 P **P** **07 09 05.1 +1.2**
comp=Z,14nm,2.3s
STKA Stephens Creek 35.70 154 P **P** **07 09 15.4 +0.8**
comp=Z,7.9nm,0.5s,baz=329,slow=9.2,SNR=23
comp=Z,7.9nm,0.5s
STKA Stephens Creek 35.70 154 P **P** **07 09 15.5 +0.9**
STKA Stephens Creek 35.70 154 P **P** **07 09 15.5 +0.9**
HTT Hallett 35.98 159 P **P** **07 09 18.4 +1.4**
CMSA Cobar Meteorol 37.38 149 P **P** **07 09 30.6 +1.7**
ARMA Armidale 39.95 142 P **P** **07 09 51.0 +0.6**
ARMA IAmb IAmb 07 10 17.9
comp=Z,19nm,1.4s
ARMA Armidale 39.95 142 P **P** **07 09 52.4 +2.0**
MGCD Mangrove Creek 41.62 145 P **P** **07 10 06.4 +2.5**
CAN Canberra 42.06 149 P **P** **07 10 09.4 +1.9**
CAN IAmb IAmb 07 10 10.3
comp=Z,8.2nm,0.7s
CAN Canberra 42.06 149 P **P** **07 10 09.6 +2.1**
KLR Kul'dur 49.58 7 LR LR 07 32 03.4
comp=Z,22nm,21.9s,baz=48,slow=36
MK31 Makanchi Array 59.26 328 P **P** **07 12 16.6 +0.4**
MKAR Makanchi Array 59.26 328 P **P** **07 12 16.1 -0.1**
comp=Z,3.3nm,0.4s,baz=122,slow=8.5,SNR=64
comp=Z,3.3nm,0.4s
MKAR Makanchi Array 59.26 328 P **P** **07 12 16.5 +0.3**
MAKZ Makanchi 59.43 328 P **P** **07 12 16.5 -0.9**
MAKZ IAmb IAmb 07 12 18.0
comp=Z,3.4nm,0.5s
BKZ Black Stump Fm 61.64 136 P **P** **07 12 33.4 +0.9**
URZ Urewera 61.69 134 P **P** **07 12 33.4 +0.7**
ZAA0 Zalesovo Array 62.84 335 P **P** **07 12 40.4 +0.3**
ZALV Zalesovo Beam 62.84 335 P **P** **07 12 39.8 -0.4**
comp=Z,0.5nm,0.4s,baz=130,slow=6.3,SNR=2.5
comp=Z,0.5nm,0.4s
KURK Kurchatov 63.59 330 P **P** **07 12 44.7 -0.5**
KURK IAmb IAmb 07 12 45.7
comp=Z,8.3nm,0.6s
ABKAR Akbulak array 73.46 322 P **P** **07 13 45.3 -1.1**

*IDC **13** 07:17:59.2±1.0,5°.35S×146°.23E, h0km, mb3.9/4, mbtmp4.0/7, ML3.6/2, MS3.1/1, Error ellipse: s-maj=39.1km s-min=22.8km az=95.0*

ISC 13 07:18:06.2±1.0,**5°.5S**±0°.1×**146°.3E**±0°.2, **h50**km**, n16, σ0s79/12, mb3.9/4, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.95**	**167**	Pn	**Pn**	**07 19 04.3**	**0.0**
	20nm,0.3s,baz=337,slow=4.8,SNR=14						
PMG				Sn	**Sn**	**07 19 48.4**	**-1.1**
	24nm,0.3s,baz=316,slow=23,SNR=8.5						
CTA	**Charters Tower**	**14.47**	**180**	Pn	**Pn**	**07 21 28.9**	**+0.6**
	0.2nm,0.3s,baz=0.0,slow=8.1,SNR=1.5						
CTA				LR	LR	07 27 06.1	
	comp=Z,61nm,18.3s,baz=94,slow=37						
	4.2nm,0.9s						
WRA	**Warramunga Arr**	**18.43**	**218**	P	**P**	**07 22 16.4**	**-1.3**
	0.2nm,0.3s,baz=37,slow=11,SNR=7.9						
WRA				PcP	**PcP**	**07 26 46.8**	**-0.1**
	0.7nm,0.7s,baz=35,slow=2.6,SNR=7.5						
	1.5nm,0.7s						
ASAR	**Alice Springs**	**21.61**	**212**	P	**P**	**07 22 52.2**	**0.0**
	0.7nm,0.8s,baz=41,slow=12,SNR=4.1						
	0.7nm,0.8s						
STKA	**Stephens Creek**	**26.57**	**189**	P	**P**	**07 23 41.0**	**+1.4**
	1.8nm,0.6s,baz=12,slow=12,SNR=3.1						
	1.8nm,0.6s						
H11S3	**WAKE ISLAND Hy**	**31.23**	**40**	T	T	07 57 28.9	
	baz=223,slow=75,SNR=7.2						
H11S2	**WAKE ISLAND Hy**	**31.24**	**40**	T	T	07 57 30.4	
	baz=223,slow=75,SNR=6.5						
H11S1	**WAKE ISLAND Hy**	**31.25**	**40**	T	T	07 57 30.6	
	baz=223,slow=75,SNR=7.2						
H11N1	**WAKE ISLAND Hy**	**32.27**	**38**	T	T	07 58 46.2	
	baz=220						
H11N3	**WAKE ISLAND Hy**	**32.28**	**38**	T	T	07 58 47.1	
	baz=220						
H11N2	**WAKE ISLAND Hy**	**32.28**	**38**	T	T	07 58 47.6	
	baz=220						
CMAR	**Chiang Mai Arr**	**52.38**	**298**	P	**P**	**07 27 13.8**	**0.0**
	2.7nm,0.4s,baz=111,slow=4.7,SNR=4.7						
	2.7nm,0.4s						
ILAR	**Eielson Array**	**85.34**	**23**	P	**P**	**07 30 37.1**	**-0.6**
	0.7nm,0.6s,baz=254,slow=5.1,SNR=11						
	0.7nm,0.6s						
TORD	**Torodi Ar. Bea**	**144.26**	**285**	PKP	**PKPab**	**07 37 35.8**	**+0.1**
	0.5nm,0.5s,baz=82,slow=3.5,SNR=4.6						
SIV	**San Ignacio**	**145.51**	**129**	PKPbc	**PKPbc**	**07 37 40.5**	**+0.5**
	1.4nm,0.7s,baz=189,slow=2.9,SNR=4.0						
DBIC	**Dimbokro**	**151.26**	**274**	PKPbc	**PKPbc**	**07 37 55.3**	**0.0**
	4.6nm,1.0s,baz=118,slow=5.7,SNR=3.8						

MAN 13 07:27:14.9, 8°.12N×125°.91E, h14km, mb4.3, ML3.2, MS2.9, Mindanao

NNC 13 07:28:46.7±0.4,**50°.02N×78°.72E, h0km, mb3.5, mpv3.2, 21C-9D, Error ellipse: s-maj=4.6km s-min=2.0km az=70.0, Suspected Mining explosion., Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR07	**Kurchatov Arra**	**0.58**	**347**	⇑P	Pg	07 28 58.1	+0.2
KUR07				⇑S	Sg	07 29 06.7	+1.3
KUR06	**Kurchatov Arra**	**0.60**	**348**	⇑P	Pg	07 28 58.4	+0.1
KUR06				⇑S	Sg	07 29 07.3	+1.3
KUR14	**Kurchatov Arra**	**0.61**	**352**	⇑P	Pg	07 28 58.3	0.0
KUR14				⇑S	Sg	07 29 06.9	+0.7
KUR15	**Kurchatov Arra**	**0.61**	**351**	⇑P	Pg	07 28 58.6	+0.2
KUR15				⇓S	Sb	07 29 08.1	-1.4
KURBB	**Kurchatov Arra**	**0.62**	**349**	⇓P	Pg	07 28 58.7	+0.1
	22nm,0.4s						
KURBB				⇑S	Sg	07 29 08.0	+1.4
	64nm,0.8s						
KUR16	**Kurchatov Arra**	**0.63**	**347**	⇑P	Pg	07 28 58.9	+0.1
KUR16				⇑S	Sg	07 29 07.8	+0.9
KUR17	**Kurchatov Arra**	**0.64**	**346**	⇑P	Pg	07 28 59.0	0.0
KUR17				⇓S	Sg	07 29 08.0	+0.8
KUR05	**Kurchatov Arra**	**0.64**	**349**	⇑P	Pg	07 28 59.0	+0.1
KUR05				⇓S	Sg	07 29 07.9	+0.7
KUR04	**Kurchatov Arra**	**0.66**	**350**	⇑P	Pg	07 28 59.4	0.0
KUR04				⇓S	Sg	07 29 08.3	+0.5
KURK	**Kurchatov**	**0.70**	**355**	⇓P	Pg	07 28 59.9	-0.3
	5.2nm,0.3s						
KURK				⇑S	Sg	07 29 10.2	+0.9
	15nm,0.6s						
SEM	**Semipalatinsk**	**1.06**	**68**	P	Pn	07 29 09.3	+0.3
	10nm,0.1s						
SEM				S	Sg	07 29 20.9	+0.2
	23nm,0.1s						
MAKZ	**Makanchi**	**3.87**	**145**	⇑Pn	Pn	07 29 48.1	+0.6
	1.0nm,0.6s						
MAKZ				⇑Pg	Pb	07 29 57.5	+1.6
	1.5nm,0.5s						
MAKZ				⇓Lg	Lg	07 30 50.0	
	6.7nm,0.7s						
MK31	**Makanchi Array**	**4.00**	**142**	⇑Pn	Pn	07 29 49.5	+0.2
	0.1nm,0.1s,baz=322,slow=10.0,SNR=24						
MK31				⇑Pg	Pb	07 29 59.5	+1.4
	1.2nm,0.5s,baz=322,slow=14,SNR=13						
MK31				⇓Lg	Lg	07 30 53.3	
	3.7nm,0.5s,baz=332,slow=27,SNR=16						
OTUK	**Ortayu**	**4.55**	**250**	⇑Pn	Pn	07 29 57.8	+1.0
	0.5nm,0.1s						
OTUK				⇑Pg	Pb	07 30 09.6	+2.2
	0.9nm,0.6s						
OTUK				⇓Lg	Lg	07 31 11.7	
	2.8nm,0.6s						
ZSN	**Zaisan**	**4.81**	**120**	Pg	Pn	07 30 01.0	+0.7
	3.4nm,0.3s						
ZSN				Lg	Lg	07 30 49.3	
	3.8nm,0.1s						
ARXS	**Arharly**	**5.84**	**186**	Pg	Pg	07 30 35.2	-3.3
	2.2nm,0.3s						
ARXS				Lg	Lg	07 31 48.6	
	5.8nm,0.8s						
KUU	**Kurty**	**6.34**	**196**	Pg	Pg	07 30 46.4	-1.6
	1.4nm,0.2s						
KUU				Lg	Lg	07 32 07.3	
	11nm,0.5s						
KPKS	**Kokpek**	**6.55**	**180**	Pg	Pg	07 30 47.4	-4.8
	3.6nm,0.1s						
KPKS				Lg	Lg	07 32 09.0	
	7.2nm,0.4s						
PDGK	**Podgornoye**	**6.71**	**175**	Pg	Pb	07 30 48.1	+3.9
	0.6nm,0.4s						
PDGK				Lg	Lg	07 32 10.2	
	1.8nm,0.6s						
PDGK	**Podgornoye**	**6.71**	**175**	⇑Lg	Lg	07 32 20.4	
	3.6nm,0.7s						

*GUC **13** 07:31:44.7±0.6, 16°.46S×69°.93W, h246km±5km, ML3.7*
*IDC **13** 07:31:46.5±3.8, 15°.53S×69°.42W, h203km±51km, mb3.6/2, mbtmp4.1/2, Error ellipse: s-maj=241.6km s-min=55.7km az=12.0*
*VAO **13** 07:31:47.5±0.7, 16°.18S×69°.53W, h210km±3km, mb3.7*

ISC 13 07:31:42.9±1.4,**16°.19S**±0°.08×**70°.0W**±0°.1, **h200**km**, n38, σ1s51/46, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**1.77**	**93**	P	**Pn**	**07 32 21.1**	**+1.4**
	268nm,0.3s,baz=306,slow=7.4,SNR=3983						
LPAZ				S	**Sn**	**07 32 47.4**	**-0.9**
	50nm,0.5s,baz=337,slow=15,SNR=8.7						
LPAZ	**La Paz**	**1.77**	**93**	*e*P	**Pn**	**07 32 21.3**	**+1.5**
LPAZ				*e*S	**Sn**	**07 32 47.0**	**-1.2**
PB16	**IPOC Station P**	**2.18**	**168**	*e*P	**Pn**	**07 32 26.7**	**+2.8**
PB16				*i* S	**Sn**	**07 32 58.9**	**+3.0**
PB16				IAML		07 33 03.4	
	comp=E,51nm,0.1s						
PB12	**IPOC Station P**	**2.44**	**188**	*e*P	**Pn**	**07 32 27.9**	**+1.7**
PB12				*i* S	**Sn**	**07 32 59.6**	**-0.4**
GO01	**Chusmiza**	**3.54**	**168**	*e*P	**Pn**	**07 32 40.7**	**+1.3**
GO01				*i* S	**Sn**	**07 33 23.1**	**-0.7**
PB11	**IPOC Station P**	**3.56**	**175**	*e*P	**Pn**	**07 32 40.2**	**+0.8**
PB11				*i* S	**Sn**	**07 33 22.4**	**-1.5**
PB08	**IPOC Station P**	**4.00**	**169**	*e*P	**Pn**	**07 32 47.1**	**+2.0**
PB08				*i* S	**Sn**	**07 33 32.2**	**-1.8**
TA01	**Diego Aracena**	**4.36**	**183**	*e*P	**Pn**	**07 32 49.0**	**-0.1**
TA01				*i* S	**Sn**	**07 33 37.5**	**-3.9**
LVC	**Limon Verde**	**6.46**	**171**	*e*P	**Pn**	**07 33 20.6**	**+4.1**
ETMB	**Extrema**	**7.32**	**30**	*e*P	**Pn**	**07 33 28.7**	**+1.4**
VBST	**Vila Bela da S**	**9.74**	**82**	*e*P	**Pn**	**07 33 57.7**	**-1.2**
VILB	**Vilhena**	**9.99**	**72**	*e*P	**Pn**	**07 34 01.4**	**-0.6**
PTLB	**Pontes e Lacer**	**10.45**	**87**	*e*P	**Pn**	**07 34 07.4**	**-0.6**
PTET	**Porto Estrela**	**12.35**	**88**	*e*P	**Pn**	**07 34 31.4**	**-1.0**
POCN	**Pocone**	**12.71**	**94**	*e*P	**Pn**	**07 34 36.1**	**-0.7**
PDRB	**Porto dos Gac**	**13.63**	**72**	*e*P	**Pn**	**07 34 47.7**	**-0.7**
SALV	**Santo Antonio**	**13.72**	**91**	*e*P	**Pn**	**07 34 48.5**	**-1.0**
NBRS	**Nobres**	**13.82**	**84**	*e*P	**Pn**	**07 34 50.1**	**-0.6**
AQDB	**Aquidauana**	**14.20**	**110**	*e*P	**Pn**	**07 34 54.7**	**-0.6**
CLDB	**Colider**	**14.75**	**71**	*e*P	**Pn**	**07 35 01.8**	**-0.4**
MACA	**Manacapuru-AM**	**15.84**	**36**	*e*P	**P**	**07 35 15.7**	**+0.5**
NPGB	**Novo Progresso**	**16.94**	**59**	*e*P	**P**	**07 35 27.2**	**-0.1**
DVLD	**Doverlandia**	**17.09**	**94**	*e*P	**P**	**07 35 28.5**	**-0.4**
ITTB	**Itaituba**	**18.26**	**51**	*e*P	**P**	**07 35 42.1**	**+0.5**
SNDB	**Serra Nova Dou**	**18.59**	**79**	*e*P	**P**	**07 35 45.2**	**-0.1**
PTGB	**Pitanga**	**18.78**	**120**	*e*P	**P**	**07 35 47.8**	**+0.4**
RODS	**Rosario do Sul**	**19.53**	**139**	*e*P	**P**	**07 35 55.4**	**+0.1**
FRTB	**Fartura**	**20.46**	**114**	*e*P	**P**	**07 36 05.6**	**+0.2**
CPSB	**Cacapava Do Su**	**20.71**	**136**	*e*P	**P**	**07 36 09.5**	**+1.6**
MALB	**Monte Alegre**	**21.03**	**49**	*e*P	**P**	**07 36 13.4**	**+2.1**
BDFB	**Brasilia**	**21.12**	**92**	P	**P**	**07 36 10.8**	**-1.6**
	comp=E,3.3nm,0.6s,baz=272,slow=13,SNR=7.9						
	comp=E,3.3nm,0.6s						
BDFB	**Brasilia**	**21.12**	**92**	*e*P	**P**	**07 36 11.0**	**-1.5**
PEXB	**Peixe**	**21.39**	**82**	*e*P	**P**	**07 36 13.6**	**-1.6**
SMTB	**Santa Maria do**	**23.01**	**74**	*e*P	**P**	**07 36 30.9**	**+0.3**
MCPB	**Macapa, AP**	**23.65**	**50**	*e*P	**P**	**07 36 37.4**	**+1.0**
JANB	**Januaria**	**24.73**	**91**	*e*P	**P**	**07 36 44.6**	**-1.6**
NBPB	**Pedra_Branca-C**	**31.61**	**74**	*e*P	**P**	**07 37 47.5**	**+0.2**
TORD	**Torodi Ar. Bea**	**76.59**	**72**	P	**P**	**07 43 11.1**	**-0.8**
	comp=E,1.5nm,0.6s,baz=259,slow=4.9,SNR=13						
	comp=E,1.5nm,0.6s						

*TUL **13** 07:37:39.3±1.1, 36°.47N±0°.03×98°.75W±0°.02, h0km±3km, ML2.5, mb_Lg2.6/4(NEIC), Error ellipse: s-maj=3.9km s-min=1.4km az=156.0*

NEIC 13 07:37:39.4±1.6,**36°.49N**±0°.05×**98°.73W**±0°.02, **h5**km±1km**, Error ellipse: s-maj=8.7km s-min=2.1km az=347.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
U32A	**Winter Ranch,**	**0.24**	**243**	Pg	Pg	07 37 44.0	-0.1
U32A				Sg	Sg	07 37 48.0	+0.7
143A	**Socs Landing,**	**7.13**	**120**	IAmb_Lg		07 41 32.8	
	comp=Z,3.2nm,0.8s						
W45A	**Hickory Valley**	**7.87**	**97**	IAmb_Lg		07 41 49.2	
	comp=Z,13nm,0.8s						

*IDC **13** 07:38:06.2±0.7, 12°.38N×125°.52E, h0km, mb4.0/11, mbtmp4.0/11, MS2.9/7, Error ellipse: s-maj=44.3km s-min=15.9km az=67.0*
*MAN **13** 07:38:14.2, 12°.44N×125°.14E, h67km, mb4.8, ML3.7, MS3.6*
*NEIC **13** 07:38:14.5±1.4, 12°.19N±0°.05×125°.1E±0°.2, h48km±9km, mb4.5/15, Error ellipse: s-maj=22.1km s-min=5.7km az=103.0*

ISC 13 07:38:11.5±0.6,**12°.37N**±0°.05×**125°.44E**±0°.07, **h33**km**, n49, σ1s28/45, mb4.2/20, MS2.7/4, 1C-4D, Samar**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSLP	**Maasin**	**2.29**	**195**	⇓*i*P	**Pb**	**07 38 50.7**	**-1.6**
MSLP				*i* S	**Sb**	**07 39 22.3**	**+2.0**
LLP	**Lapu-Lapu**	**2.50**	**216**	⇓*e*P	**Pn**	**07 38 51.4**	**+1.5**
LLP				*i* S	**Sn**	**07 39 21.5**	**+2.1**
SCPH	**Surigao**	**2.57**	**179**	⇑*i*P	**Pb**	**07 38 54.1**	**-2.9**
SCPH				*i* S	**Sn**	**07 39 21.4**	**+0.3**
RCP	**Roxas**	**2.76**	**253**	⇓*e*P	**Pn**	**07 38 53.6**	**+0.1**
RCP				*e*S	**Sn**	**07 39 25.8**	**+0.1**
TBP	**Tagbilaran**	**3.08**	**210**	*e*P	**Pn**	**07 38 59.3**	**+1.4**
TBP				*i* S	**Sn**	**07 39 35.9**	**+2.3**
BIPH	**Bislig**	**4.26**	**168**	⇓*e*P	**Pn**	**07 39 15.3**	**+1.2**
BIPH				*i* S	**Sn**	**07 40 05.9**	**+3.2**
DAV	**Davao City (W)**	**5.27**	**179**	LR	LR	07 42 07.4	
	comp=Z,291nm,18.6s,baz=350,slow=46						
MYLDM	**Lahad Datu**	**9.90**	**224**	Pn	**Pn**	**07 40 29.5**	**-2.1**
TWG	**Pinlang**	**11.20**	**339**	Pn	**Pn**	**07 40 52.0**	**+2.6**
SIJI	**Sorong**	**14.37**	**156**	LR	LR	07 47 14.7	
	comp=Z,37nm,20.9s,baz=237,slow=38						
GUMO	**Guam**	**18.97**	**84**	LR	LR	07 47 49.9	
	comp=Z,46nm,21.7s,baz=120,slow=31						
KSRS	**Korea Array**	**25.08**	**5**	LR	LR	07 54 20.9	
	comp=Z,16nm,18.8s,baz=170,slow=39						
CMAR	**Chiang Mai Arr**	**26.24**	**287**	P	**P**	**07 43 43.4**	**-0.4**
	1.4nm,0.2s,baz=95,slow=7.8,SNR=6.6						
CMAR				LR	LR	07 55 16.2	
	comp=Z,15nm,18.2s,baz=180,slow=39						
	1.4nm,0.2s						
MJAR	**Matsushiro Arr**	**26.67**	**23**	LR	LR	07 53 36.5	
	comp=Z,35nm,20.8s,baz=176,slow=35						
WB0	**Warramunga Arr**	**33.13**	**164**	P	**P**	**07 44 44.1**	**-0.7**
WB0				IAmb	IAmb	07 45 00.4	
	comp=Z,7.8nm,1.2s						
WRAB	**Tennant Creek**	**33.28**	**165**	P	**P**	**07 44 45.9**	**-0.2**
WRAB				IAmb	IAmb	07 44 48.8	
	comp=Z,8.2nm,1.0s						
WRA	**Warramunga Arr**	**33.28**	**165**	P	**P**	**07 44 45.3**	**-0.9**
	comp=Z,0.6nm,0.7s,baz=343,slow=8.9,SNR=7.3						
WRA				PcP	**PcP**	**07 47 27.8**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=357,slow=2.7,SNR=1.6						
	comp=Z,0.6nm,0.7s						
WRA	**Warramunga Arr**	**33.28**	**165**	IAmb	IAmb	07 44 54.1	
	comp=Z,0.5nm,1.5s						
WB2	**Warramunga Arr**	**33.28**	**165**	P	**P**	**07 44 45.3**	**-0.9**
WB2				IAmb	IAmb	07 45 29.6	
	comp=Z,8.2nm,1.1s						
WR0	**Warramunga Arr**	**33.35**	**164**	P	**P**	**07 44 45.4**	**-1.4**
WR0				IAmb	IAmb	07 45 19.0	
	comp=Z,11nm,1.4s						
PSA00	**Pilbara Seismi**	**34.18**	**189**	P	**P**	**07 44 52.6**	**-1.3**
PSA00				IAmb	IAmb	07 45 36.6	
	comp=Z,9.9nm,1.3s						
AS31	**Alice Springs**	**36.76**	**167**	P	**P**	**07 45 15.3**	**-0.9**
ASAR	**Alice Springs**	**36.76**	**167**	P	**P**	**07 45 15.9**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=346,slow=6.7,SNR=18						
ASAR				PcP	**PcP**	**07 47 37.8**	**-0.4**
	comp=Z,0.2nm,0.8s,baz=343,slow=2.9,SNR=1.5						
	comp=Z,1.1nm,0.6s						
ASAR	**Alice Springs**	**36.76**	**167**	P	**P**	**07 45 15.1**	**-1.0**
KLR	**Kul'dur**	**37.12**	**7**	LR	LR	08 00 53.1	
	comp=Z,16nm,20.2s,baz=196,slow=37						
SONM	**Songino Array**	**38.78**	**339**	P	**P**	**07 45 33.1**	**-0.1**
	comp=Z,0.8nm,0.4s,baz=152,slow=6.4,SNR=2.4						
	comp=Z,0.8nm,0.4s						
H11S3	**WAKE ISLAND Hy**	**40.15**	**76**	T	T	08 28 37.3	
	baz=272,slow=74						
H11S1	**WAKE ISLAND Hy**	**40.17**	**76**	T	T	08 28 37.8	
	baz=272,slow=74						
H11S2	**WAKE ISLAND Hy**	**40.17**	**76**	T	T	08 28 40.3	
	baz=272						
H11N1	**WAKE ISLAND Hy**	**40.42**	**74**	T	T	08 28 59.5	
	baz=266,slow=75,SNR=308						
H11N2	**WAKE ISLAND Hy**	**40.42**	**74**	T	T	08 28 59.7	
	baz=266,slow=75,SNR=177						
H11N3	**WAKE ISLAND Hy**	**40.43**	**74**	T	T	08 29 00.5	
	baz=266,slow=75,SNR=227						
BBOO	**Buckleboo**	**46.06**	**168**	P	**P**	**07 46 32.6**	**+0.4**
STKA	**Stephens Creek**	**46.64**	**161**	P	**P**	**07 46 36.4**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=8.5,slow=13,SNR=2.9						
	comp=Z,0.5nm,0.3s						
STKA	**Stephens Creek**	**46.64**	**161**	P	**P**	**07 46 37.1**	**+0.3**
MK31	**Makanchi Array**	**49.88**	**322**	P	**P**	**07 47 02.6**	**+0.8**
MK31				IAmb	IAmb	07 47 03.6	
	comp=Z,2.5nm,0.8s						
MKAR	**Makanchi Array**	**49.88**	**322**	P	**P**	**07 47 02.5**	**+0.8**
	comp=Z,3.4nm,0.8s,baz=117,slow=8.5,SNR=29						
MKAR				PcP	**PcP**	**07 48 22.3**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=104,slow=5.1,SNR=5.0						
	comp=Z,3.4nm,0.8s						
MKAR	**Makanchi Array**	**49.88**	**322**	P	**P**	**07 47 02.3**	**+0.5**
MAKZ	**Makanchi**	**50.07**	**322**	P	**P**	**07 47 04.1**	**+0.8**
MAKZ				IAmb	IAmb	07 47 05.0	
	comp=Z,6.8nm,1.3s						
ZALV	**Zalesovo Beam**	**52.41**	**331**	P	**P**	**07 47 19.9**	**-0.7**
	comp=Z,0.7nm,0.4s,baz=108,slow=4.8,SNR=4.0						
	comp=Z,0.7nm,0.4s						
KURK	**Kurchatov**	**53.89**	**325**	P	**P**	**07 47 32.5**	**+1.0**
KK31	**Karatay Array**	**56.21**	**314**	P	**P**	**07 47 49.0**	**+0.4**
KK31				IAmb	IAmb	07 47 49.6	
	comp=Z,1.7nm,0.8s						
KKAR	**Karatay Array**	**56.21**	**314**	P	**P**	**07 47 48.1**	**-0.5**
BRVK	**Borovoye**	**59.56**	**325**	P	**P**	**07 48 12.3**	**+0.5**
BRVK				IAmb	IAmb	07 48 13.4	
	comp=Z,5.2nm,0.9s						
ABKAR	**Akbulak array**	**64.77**	**319**	P	**P**	**07 48 47.0**	**+0.2**
ILAR	**Eielson Array**	**77.92**	**26**	P	**P**	**07 50 05.3**	**-0.6**
	comp=Z,0.3nm,0.7s,baz=254,slow=6.5,SNR=2.8						
	comp=Z,0.3nm,0.7s						
ARCES	**ARCESS Array B**	**81.95**	**340**	P	**P**	**07 50 28.4**	**+0.7**
	comp=Z,2.1nm,0.8s,baz=76,slow=10,SNR=5.0						
	comp=Z,2.1nm,0.8s						
FINES	**FINESS Array B**	**83.67**	**332**	P	**P**	**07 50 36.5**	**-0.2**
	comp=Z,0.6nm,0.4s,baz=92,slow=4.6,SNR=6.7						
	comp=Z,0.6nm,0.4s						
NOA	**NORSAR Array B**	**90.53**	**334**	P	**P**	**07 51 08.7**	**-1.4**
	comp=Z,0.3nm,0.6s,baz=62,slow=4.6,SNR=2.7						
	comp=Z,0.3nm,0.6s						

*DSN **13** 07:52:58.0±1.4, 27°.29N×58°.19E, h10km, ML3.0/5, Error ellipse: s-maj=28.4km s-min=11.2km az=114.0*

TEH 13 07:52:57.3, 28°.00N×55°.33E, h8km**, ML3.1, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LAR1	**LAR**	**0.91**	**249**	*e*Pg	Pb	07 53 15.6	+0.3

H11S1	**WAKE ISLAND Hy**	**30.03**	**154**	T	T	08 45 21.9		
	baz=342							
H11S3	**WAKE ISLAND Hy**	**30.04**	**154**	T	T	08 45 29.9		
	baz=342							
H11S2	**WAKE ISLAND Hy**	**30.05**	**154**	T	T	08 45 31.7		
	baz=342							
INK	**Inuvik**	**41.79**	**32**	P	**P**	**08 14 12.4**	**+0.8**	
	0.5nm,0.7s,baz=297,slow=4.5,SNR=2.9							
	0.5nm,0.7s							
ZALV	**Zalesovo Beam**	**42.86**	**306**	LR	LR	08 32 05.4		
	comp=Z,25nm,18.6s,baz=62,slow=36							
MKAR	**Makanchi Array**	**47.17**	**298**	P	**P**	**08 14 54.6**	**-0.3**	
	1.2nm,0.8s,baz=64,slow=8.2,SNR=10.0							
	1.2nm,0.8s							
CMAR	**Chiang Mai Arr**	**52.44**	**257**	P	**P**	**08 15 35.6**	**+0.4**	
	1.0nm,0.3s,baz=19,slow=8.6,SNR=4.5							
	1.0nm,0.3s							
AKTO	**Aktyubinsk**	**58.99**	**312**	LR	LR	08 43 44.8		
	comp=Z,26nm,19.0s,baz=70,slow=38							
FINES	**FINESS Array B**	**64.32**	**335**	P	**P**	**08 16 57.4**	**-0.1**	
	1.3nm,0.5s,baz=42,slow=8.8,SNR=9.1							
FINES				LR	LR	08 48 01.2		
	comp=Z,17nm,18.8s,baz=321,slow=39							
	1.3nm,0.5s							
NB2	**NORSAR Subarra**	**68.50**	**341**	P	**P**	**08 17 24.5**	**+0.1**	
	comp=Z,0.4nm,0.6s,baz=28,slow=6.5							
NOA	**NORSAR Array B**	**68.50**	**341**	P	**P**	**08 17 24.5**	**+0.1**	
	comp=Z,0.6nm,0.6s,baz=29,slow=6.3,SNR=4.5							
	comp=Z,0.6nm,0.6s							
AKASG	**Malin Array Be**	**71.82**	**326**	P	**P**	**08 17 44.4**	**-0.5**	
	comp=Z,1.1nm,0.7s,baz=33,slow=6.3,SNR=6.6							
	comp=Z,1.1nm,0.7s							
ASAR	**Alice Springs**	**72.02**	**199**	P	**P**	**08 17 46.2**	**0.0**	
	comp=Z,0.4nm,0.6s,baz=5.8,slow=5.4,SNR=6.0							
	comp=Z,0.4nm,0.6s							
TXAR	**Lajitas Array**	**77.50**	**61**	P	**P**	**08 18 17.6**	**-0.6**	
	comp=Z,0.1nm,0.6s,baz=311,slow=4.2,SNR=2.0							
	comp=Z,0.1nm,0.6s							

IDC 13 08:06:44.9±3.6, 0°.18N×81°.22W, h0km, mb3.6/2, mbtmp3.7/3, ML2.4/1, Error ellipse: s-maj=95.5km s-min=40.0km az=16.0, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**8.30**	**56**	P	n	Pn	08 08 47.1	+0.1
	1.0nm,0.3s,baz=238,slow=19,SNR=1.7							
	4.4nm,0.4s							
TXAR	**Lajitas Array**	**36.05**	**325**	P		P	08 13 48.3	-0.1
	0.3nm,0.7s,baz=137,slow=8.8,SNR=4.7							
	0.3nm,0.7s							
TORD	**Torodi Ar. Bea**	**83.06**	**77**	P		P	08 19 13.2	0.0
	1.1nm,1.1s,baz=258,slow=6.9,SNR=3.7							
	1.1nm,1.1s							

IDC 13 09:20:16.1±3.3, 5°.14S×145°.76E, h64km±30km, mb3.9/9, mbtmp4.2/12, ML3.7/3, MS3.3/14, Error ellipse: s-maj=23.6km s-min=18.1km az=60.0

ISC 13 09:20:13.1±0.8, 5°.02S±0°.08×145°.7E±0°.1, h35km, n37, σ1s63/26, mb4.3/9, MS3.4/11, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.59**	**162**	P		**Pn**	**09 21 20.4**	**+0.3**
	27nm,0.3s,baz=16,slow=6.5,SNR=36							
PMG				S		**Sn**	**09 22 12.6**	**+0.4**
	221nm,0.5s,baz=146,slow=19,SNR=14							
	53nm,0.3s							
PMG	**Port Moresby**	**4.59**	**162**	P		**Pn**	**09 21 20.4**	**+0.3**
COEN	**Coen**	**9.22**	**195**	P		**Pn**	**09 22 25.4**	**+1.7**
MTSU	**Mount Surprise**	**13.10**	**186**	P		**Pn**	**09 23 20.7**	**+3.8**
CTA	**Charters Tower**	**14.98**	**178**	P		**P**	**09 23 45.8**	**-1.7**
	4.5nm,0.5s,baz=321,slow=2.9,SNR=1.8							
CTA				LR		LR	09 29 29.3	
	comp=Z,145nm,21.8s,baz=33,slow=37							
CTA	**Charters Tower**	**14.98**	**178**	P		**P**	**09 23 45.5**	**-2.1**
CTAO	**Charters Tower**	**14.98**	**178**	P		**P**	**09 23 45.4**	**-2.1**
SIJI	**Sorong**	**14.99**	**286**	P		**P**	**09 23 47.0**	**-0.6**
	1.0nm,0.3s,baz=268,slow=22,SNR=4.1							
SIJI				LR		LR	09 30 56.6	
	comp=Z,193nm,20.1s,baz=48,slow=42							
	5.2nm,0.5s							
WRAB	**Tennant Creek**	**18.48**	**216**	P		**Pn**	**09 24 28.5**	**+1.9**
WRA	**Warramunga Arr**	**18.50**	**216**	P		**Pn**	**09 24 26.5**	**-0.3**
	0.6nm,0.3s,baz=45,slow=9.5,SNR=44							
	2.9nm,0.8s							
GUMO	**Guam**	**18.51**	**357**	LR		LR	09 31 17.6	
	comp=Z,65nm,18.4s,baz=150,slow=36							
KNRA	**Kununurra**	**19.72**	**236**	P		**Pn**	**09 24 40.9**	**-0.6**
RMQ	**Roma**	**21.54**	**173**	P		**P**	**09 25 02.4**	**+2.9**
ASAR	**Alice Springs**	**21.74**	**210**	P		**P**	**09 25 01.0**	**-0.7**
	1.1nm,0.5s,baz=36,slow=7.1,SNR=34							
ASAR				S		**S**	**09 28 57.7**	**-2.9**
	0.3nm,0.8s,baz=5.5,slow=18,SNR=2.6							
ASAR				LR		LR	09 34 13.3	
	comp=Z,135nm,18.2s,baz=32,slow=39							
	1.1nm,0.5s							
DAV	**Davao City (W)**	**23.40**	**301**	LR		LR	09 34 53.6	
	comp=Z,30nm,19.5s,baz=139,slow=37							
DZM	**Mont Dzumac**	**26.28**	**132**	P		**P**	**09 25 45.2**	**-0.4**
	22nm,1.0s,baz=258,slow=13,SNR=2.9							
DZM				LR		LR	09 35 03.2	
	comp=Z,118nm,20.2s,baz=12,slow=34							
	22nm,1.0s							
CMSA	**Cobar Meteorol**	**26.38**	**180**	P		**P**	**09 25 47.2**	**+1.0**
STKA	**Stephens Creek**	**26.99**	**188**	P		**P**	**09 25 51.4**	**-0.4**
	2.8nm,0.5s,baz=355,slow=10,SNR=12							
STKA				LR		LR	09 39 12.1	
	comp=Z,99nm,19.0s,baz=22,slow=42							
	2.8nm,0.5s							
MULG	**Mulgathing**	**27.42**	**202**	P		**P**	**09 25 56.1**	**+0.5**
HTT	**Hallett**	**28.96**	**192**	P		**P**	**09 26 10.2**	**+0.8**
H11S3	**WAKE ISLAND Hy**	**31.21**	**41**	T		T	09 58 52.8	
	baz=221,slow=75							
H11S2	**WAKE ISLAND Hy**	**31.22**	**41**	T		T	09 59 49.3	
	baz=221							
H11S1	**WAKE ISLAND Hy**	**31.23**	**41**	T		T	09 59 50.3	
	baz=221,slow=75							
H11N1	**WAKE ISLAND Hy**	**32.23**	**40**	T		T	10 00 40.0	
	baz=220							
H11N3	**WAKE ISLAND Hy**	**32.25**	**40**	T		T	10 01 10.0	
	baz=220,slow=74							
H11N2	**WAKE ISLAND Hy**	**32.25**	**40**	T		T	10 01 07.3	
	baz=220,slow=74							
MSVF	**Nonsavu**	**34.06**	**114**	P		**P**	**09 26 54.3**	**-0.2**
	2.3nm,0.6s,baz=266,slow=14,SNR=4.4							
MSVF				LR		LR	09 40 13.6	
	comp=Z,83nm,19.3s,baz=3.9,slow=35							
	2.3nm,0.6s							
URZ	**Urewera**	**43.70**	**144**	P		**P**	**09 28 14.6**	**-0.3**
	5.9nm,0.7s,baz=251,slow=24,SNR=1.8							
	5.9nm,0.7s							
KSRS	**Korea Array**	**45.39**	**340**	P		**P**	**09 28 29.6**	**+1.3**
	1.1nm,0.7s,baz=150,slow=10,SNR=4.4							
KSRS				LR		LR	09 45 38.7	
	comp=Z,59nm,20.1s,baz=145,slow=33							
	1.1nm,0.7s							
PSI	**Prapat**	**47.37**	**278**	LR		LR	09 50 53.9	
	comp=Z,30nm,21.5s,baz=117,slow=39							
CMAR	**Chiang Mai Arr**	**51.65**	**298**	LR		LR	09 51 36.9	
	comp=Z,7.9nm,21.1s,baz=70,slow=36							
KLR	**Kul'dur**	**55.38**	**349**	LR		LR	09 52 55.9	
	comp=Z,18nm,19.6s,baz=195,slow=35							
MKAR	**Makanchi Array**	**75.92**	**321**	P		**P**	**09 31 57.8**	**+1.4**
	0.2nm,0.5s,baz=114,slow=8.2,SNR=3.5							
	0.2nm,0.5s							
ZALV	**Zalesovo Beam**	**77.50**	**328**	LR		LR	10 04 48.8	
	comp=Z,30nm,21.8s,baz=107,slow=34							
MAW	**Mawson**	**82.64**	**203**	P		**P**	**09 32 31.4**	**-1.2**
	2.1nm,0.6s,baz=102,slow=9.5,SNR=9.9							
	2.1nm,0.6s							
ILAR	**Eielson Array**	**85.10**	**23**	P		**P**	**09 32 43.9**	**-1.3**
	1.4nm,0.7s,baz=251,slow=5.3,SNR=15							
	1.4nm,0.7s							
YBH	**Yreka Blue Hor**	**94.50**	**49**	LR		LR	10 10 09.6	
	comp=Z,28nm,18.6s,baz=296,slow=32							

JMA 13 10:07:32.4±0.3, 46°.N±2°.×14°.3E±°, h326km±2km, MV3.3/35, NE OFF HOKKAIDO

SKHL 13 10:07:33.8±0.6, 45°.60N×142°.90E, h316km±1km, mb4.2/7, msha4.6/7

IDC 13 10:07:34.5±3.2, 45°.89N×142°.55E, h324km±31km, mb3.0/8, mbtmp3.7/11, Error ellipse: s-maj=43.1km s-min=22.6km az=161.0

ISC 13 10:07:32.5±0.7, 45°.56N±0°.06×142°.76E±0°.08, h318km±6km, n31, σ1s31/43, mb3.4/8, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JSE	**Soyaes**	**0.61**	**192**	P		**Pn**	**10 08 14.2**	**+0.7**
JWK2	**Keihoku**	**0.66**	**248**	*i* P		**Pn**	**10 08 14.6**	**+1.0**
JWK2				S		**S**	**10 08 46.6**	**+0.2**
JRR	**Rishiri**	**1.11**	**248**	*e*P		**Pn**	**10 08 16.0**	**+0.7**
JRBN	**Rebuntou**	**1.20**	**264**	P		**Pn**	**10 08 15.8**	**+0.1**
JRBN				*e*S		**S**	**10 08 48.6**	**-1.7**
JSS	**Shosan**	**1.33**	**209**	P		**Pn**	**10 08 17.6**	**+1.1**
YSS	**Yuzh-Sakhalins**	**1.39**	**360**	*e*P		**Pn**	**10 08 17.1**	**+0.4**
YSS				AMB		AMB	10 08 19.5	
	20nm,0.4s							
YSS				*e*S		**S**	**10 08 50.5**	**-1.5**
YSS				A		A	10 08 51.7	
	130nm,0.8s							
YSS				A		A	10 08 51.7	
	50nm,0.8s							
ASAJ	**Asahikawa**	**1.45**	**185**	P		**Pn**	**10 08 18.5**	**+1.2**
ASAJ				*e*S		**S**	**10 08 54.6**	**+1.6**
JYG	**Yagishiri**	**1.48**	**220**	P		**Pn**	**10 08 18.2**	**+0.8**
JMP	**Maruseppu**	**1.61**	**164**	*i* P		**Pn**	**10 08 19.4**	**+1.1**
JKK2	**Kamakawa 2**	**1.69**	**180**	P		**Pn**	**10 08 20.0**	**+1.2**
JTKR	**Abashiri--Toko**	**1.79**	**152**	P		**Pn**	**10 08 20.9**	**+1.5**
JTKR				*e*S		**S**	**10 08 58.2**	**+1.4**
JAR	**Ashorobuto**	**2.38**	**162**	P		**Pn**	**10 08 25.5**	**+1.5**
JAR				*e*S		**S**	**10 09 05.7**	**+0.6**
JEW	**Eniwo**	**2.88**	**200**	*e*P		**Pn**	**10 08 29.8**	**+1.3**
JAK	**Akkeshi**	**2.92**	**151**	*e*P		**Pn**	**10 08 29.3**	**+0.6**
JAK				*e*S		**S**	**10 09 12.4**	**-1.4**
AKK	**Akkeshi**	**2.95**	**149**	*e*P		**Pn**	**10 08 29.7**	**+0.6**
AKK				*e*S		**S**	**10 09 12.7**	**-1.7**
AKK				A		A	10 09 14.0	
	200nm,0.4s							
AKK				A		A	10 09 14.0	
	200nm,0.4s							
JCH	**Churui**	**2.98**	**171**	*e*P		**Pn**	**10 08 29.2**	**-0.2**
JCH				*e*S		**S**	**10 09 11.6**	**-3.3**
NMR	**Nemuro--Hokkai**	**3.05**	**135**	*e*P		**Pn**	**10 08 30.2**	**+0.2**
NMR				AMB		AMB	10 08 33.2	
	30nm,0.7s							
NMR				*e*S		**S**	**10 09 13.7**	**-2.4**
NMR				A		A	10 09 15.7	
	40nm,0.4s							
NMR				A		A	10 09 15.7	
	50nm,0.4s							
NEM2	**Nemuro 2**	**3.06**	**135**	*e*P		**Pn**	**10 08 30.7**	**+0.6**
NEM2				*e*S		**S**	**10 09 14.0**	**-2.2**
JNBK	**Urakawa-nobuka**	**3.28**	**180**	*e*P		**Pn**	**10 08 33.1**	**+0.8**
JNBK				*e*S		**S**	**10 09 18.8**	**-1.4**
UGL	**Uglegorsk**	**3.55**	**353**	*e*P		**Pn**	**10 08 35.6**	**+0.8**
UGL				AMB		AMB	10 08 36.0	
	100nm,0.7s							
USRK	**Ussuriysk Ar.**	**7.77**	**264**	P		**Pn**	**10 09 23.5**	**+0.1**
	1.5nm,0.6s,baz=79,slow=15,SNR=2.5							
KLR	**Kul'dur**	**8.32**	**300**	P		**Pn**	**10 09 29.3**	**-0.7**
	1.0nm,0.4s,baz=83,slow=12,SNR=2.5							
SEY	**Seymchan**	**18.25**	**14**	P		**P**	**10 11 23.2**	**-0.2**
	1.7nm,0.4s,baz=220,slow=15,SNR=8.0							
MKAR	**Makanchi Array**	**40.98**	**294**	P		**P**	**10 14 44.5**	**-0.5**
	0.2nm,0.6s,baz=71,slow=11,SNR=2.6							
	0.2nm,0.6s							
ILAR	**Eielson Array**	**41.91**	**37**	P		**P**	**10 14 51.0**	**-1.1**
	0.5nm,0.7s,baz=273,slow=6.9,SNR=7.1							
	0.5nm,0.7s							
INK	**Inuvik**	**46.43**	**31**	P		**P**	**10 15 27.2**	**-0.4**
	1.0nm,0.4s,baz=293,slow=5.3,SNR=13							
	1.0nm,0.4s							
FINES	**FINESS Array B**	**61.80**	**331**	P		**P**	**10 17 16.5**	**-1.3**
	0.7nm,0.6s,baz=291,slow=12,SNR=3.5							
	0.7nm,0.6s							
NVAR	**Mina Array Bea**	**69.22**	**56**	P		**P**	**10 18 07.6**	**+2.0**
	0.4nm,0.5s,baz=294,slow=6.5,SNR=6.6							
	0.4nm,0.5s							
PDAR	**Pinedale Array**	**71.07**	**48**	P		**P**	**10 18 16.6**	**-0.1**
	0.3nm,0.6s,baz=236,slow=1.6,SNR=3.9							
	0.3nm,0.6s							
ULM	**Lac du Bonnet**	**71.89**	**35**	P		**P**	**10 18 21.4**	**+0.4**
	1.3nm,0.6s,baz=294,slow=10.0,SNR=2.1							
	1.3nm,0.6s							
TXAR	**Lajitas Array**	**84.17**	**54**	P		**P**	**10 19 30.4**	**+1.7**
	0.6nm,0.8s,baz=304,slow=4.8,SNR=8.2							
	0.6nm,0.8s							

BJI 13 10:17:02.8±0.0, 8°.33S×160°.43E, h15km, mb4.7/35, mB5.0/24, Ms4.9/16, Ms7 4.6/17

NEIC 13 10:17:05.3±2.9, 8°.55S±0°.03×160°.48E±0°.09, h44km±5km, mb4.8/71, Error ellipse: s-maj=12.3km s-min=4.7km az=93.0

IDC 13 10:17:08.0±1.1, 8°.82S×160°.51E, h70km±8km, mb4.2/17, mbtmp4.5/19, MS3.9/39, Error ellipse: s-maj=18.3km s-min=12.4km az=87.0

ISC 13 10:17:05.6±0.4, 8°.64S±0°.04×160°.50E±0°.06, h50km±3km, h50km:pP-P, n221, σ1s42/185, mb4.8/60, MS4.1/46, 2C-1D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**0.96**	**214**	P		**Pn**	**10 17 23.0**	**+0.3**
	11μm,0.4s,baz=167,slow=3.0,SNR=812							
HNR				S		**Sn**	**10 17 37.7**	**+2.4**
	25μm,0.4s,baz=49,slow=19,SNR=18							
HNR				LR		LR	10 17 55.8	
	comp=Z,4μm,20.7s,baz=340,slow=58							
HNR	**Honiara**	**0.96**	**214**			**Pn**	**10 17 23.1**	**+0.3**
HNR	**Honiara**	**0.96**	**214**	P		**Pn**	**10 17 23.1**	**+0.4**
RABL	**Rabaul**	**9.38**	**298**	Pn		**Pn**	**10 19 16.7**	**-1.6**
KRVT	**Кекчат (AS076**	**9.45**	**297**	P		Pn	10 19 24.1	+4.9
	23nm,0.4s,baz=62,slow=2.6,SNR=8.6							
KRVT				S		**Sn**	**10 21 00.6**	**-3.5**
	35nm,0.8s,baz=222,slow=23,SNR=0.8							
KOUNC	**Koumac, New Ca**	**12.40**	**163**	Pn		**Pn**	**10 19 59.8**	**+0.4**
PMG	**Port Moresby**	**13.20**	**266**	LR		LR	10 25 16.3	
	comp=Z,729nm,18.9s,baz=110,slow=37							
DZM	**Mont Dzumac**	**14.53**	**157**	*e*LR		LR	10 23 51.8	
	comp=Z,1μm,23.1s							
DZM	**Mont Dzumac**	**14.53**	**157**	P		**Pn**	**10 20 29.6**	**+1.2**
	14nm,0.7s,baz=114,slow=19,SNR=2.5							
DZM				S		**Sn**	**10 23 07.4**	**-0.9**
	15nm,1.0s,baz=63,slow=14,SNR=2.2							
DZM				LR		LR	10 25 39.7	
	comp=Z,717nm,19.6s,baz=18,slow=36							
MARNC	**Mare, Loyalty**	**14.69**	**151**	Pn		**Pn**	**10 20 30.8**	**+0.3**
PATS	**Pohnpei**	**15.53**	**352**	P		**Pn**	**10 20 37.9**	**-3.4**
	baz=16,SNR=16							
PATS	**Pohnpei**	**15.53**	**352**			**Pn**	**10 20 37.6**	**-3.7**
PATS	**Pohnpei**	**15.53**	**352**	P		**Pn**	**10 20 37.3**	**-4.0**
TARA	**Tarawa**	**15.87**	**52**			**Pn**	**10 20 43.9**	**-1.7**
TARA	**Tarawa**	**15.87**	**52**	P		**Pn**	**10 20 44.1**	**-1.7**
COEN	**Coen**	**17.78**	**251**	P		**P**	**10 21 10.8**	**+0.8**
	baz=18,SNR=12							
COEN	**Coen**	**17.78**	**251**	P		**P**	**10 21 10.1**	**+0.2**
CTA	**Charters Tower**	**17.87**	**229**	P		**P**	**10 21 13.7**	**+2.9**
	15nm,0.8s,baz=52,slow=11,SNR=14							
CTA				LR		LR	10 27 17.3	
	comp=Z,404nm,21.9s,baz=57,slow=34							
CTAO	**Charters Tower**	**17.87**	**229**			**P**	**10 21 12.3**	**+1.4**
MTSU	**Mount Surprise**	**18.34**	**237**	P		**Pn**	**10 21 18.3**	**+1.9**
	baz=19,SNR=23							
KWAJ	**Kwajalein Atol**	**18.72**	**22**	P		**Pn**	**10 21 22.1**	**+1.1**
EIDS	**Eidsvold**	**18.90**	**207**	P		**Pn**	**10 21 24.4**	**+1.2**
	baz=19,SNR=16							
EIDS	**Eidsvold**	**18.90**	**207**	P		**Pn**	**10 21 24.2**	**+1.1**
EIDS					AMb	IAmb	10 21 25.2	
	comp=Z,25nm,0.7s							
EIDS	**Eidsvold**	**18.90**	**207**	P		**Pn**	**10 21 24.7**	**+1.5**
MSVF	**Nonsavu**	**19.32**	**120**	P		**Pn**	**10 21 30.9**	**+2.5**
	comp=Z,7.2nm,0.8s,baz=203,slow=14,SNR=5.7							
MSVF				LR		LR	10 27 44.5	
	comp=Z,208nm,18.0s,baz=305,slow=33							
DGTI	**Dogotuki**	**20.26**	**114**	P		Pn	10 21 40.2	+0.8
RMQ	**Roma**	**20.96**	**211**	P		Pn	10 21 46.5	-1.1
	baz=21,SNR=11							
RMQ	**Roma**	**20.96**	**211**	P		Pn	10 21 46.5	-1.1
SMPI	**Sarmi**	**22.66**	**286**	P		**P**	**10 22 05.3**	**+2.4**
	comp=Z,19nm,0.9s							
ARMA	**Armidale**	**23.20**	**200**	P		**P**	**10 22 08.6**	**+0.2**
	baz=24,SNR=38							
ARMA	**Armidale**	**23.20**	**200**	P		**P**	**10 22 08.4**	**0.0**
ARMA	**Armidale**	**23.20**	**200**	P		**P**	**10 22 08.2**	**-0.2**
QIS	**Mount Isa**	**23.40**	**237**	P		**P**	**10 22 10.5**	**+0.2**
	baz=24,SNR=17							
QIS	**Mount Isa**	**23.40**	**237**	P		**P**	**10 22 10.5**	**+0.2**
QLP	**Quilpie**	**23.59**	**219**	P		**P**	**10 22 11.7**	**-0.2**
	baz=24,SNR=5.3							
QLP	**Quilpie**	**23.59**	**219**	P		**P**	**10 22 12.0**	**0.0**
MGCD	**Mangrove Creek**	**25.95**	**198**	P		**P**	**10 22 34.4**	**+1.0**
	baz=26,SNR=6.9							
MGCD	**Mangrove Creek**	**25.95**	**198**	P		**P**	**10 22 34.4**	**+1.0**
INKA	**Innaminka**	**26.63**	**222**	P		**P**	**10 22 39.4**	**-0.2**
CMSA	**Cobar Meteorol**	**26.63**	**209**	P		**P**	**10 22 39.3**	**-0.2**
	baz=27,SNR=28							
CMSA	**Cobar Meteorol**	**26.63**	**209**	P		**P**	**10 22 39.5**	**-0.1**
GUMO	**Guam**	**26.99**	**325**	LR		LR	10 33 29.1	
	comp=Z,83nm,18.2s,baz=144,slow=36							
WR0	**Warramunga Arr**	**27.51**	**243**	P		**P**	**10 22 47.4**	**-0.2**
WR0					IAmb	IAmb	10 22 49.6	
	comp=Z,12nm,0.8s							
WB0	**Warramunga Arr**	**27.57**	**244**	P		**P**	**10 22 48.0**	**-0.3**
WB0					IAmb	IAmb	10 22 48.8	
	comp=Z,20nm,0.8s							
H11S2	**WAKE ISLAND Hy**	**27.64**	**13**	T		T	10 51 28.2	
	baz=194,slow=76,SNR=610							
H11S3	**WAKE ISLAND Hy**	**27.64**	**13**	T		T	10 51 23.6	
	baz=194,slow=76,SNR=440							
H11S1	**WAKE ISLAND Hy**	**27.66**	**13**	T		T	10 51 29.3	
	baz=194,slow=76,SNR=423							
WRAB	**Tennant Creek**	**27.67**	**243**	P		**P**	**10 22 48.8**	**-0.3**
WRAB					IAmb	IAmb	10 22 49.6	
	comp=Z,22nm,0.8s							
WRAB	**Tennant Creek**	**27.67**	**243**	P		**P**	**10 22 48.8**	**-0.3**
WB2	**Warramunga Arr**	**27.67**	**243**	P		**P**	**10 22 48.8**	**-0.3**
WB2					IAmb	IAmb	10 22 49.6	
	comp=Z,21nm,0.8s							
AFI	**Afiamalu**	**27.68**	**103**	LR		LR	10 31 51.5	
	comp=Z,142nm,18.4s,baz=1.5,slow=32							
WRA	**Warramunga Arr**	**27.68**	**243**	P		**P**	**10 22 48.7**	**-0.5**
	comp=Z,19nm,0.8s,baz=72,slow=8.6,SNR=94							
WRA					PcP	**PcP**	**10 26 04.3**	**-1.2**
	comp=Z,2.2nm,0.7s,baz=73,slow=2.3,SNR=6.3							
WRA					LR	LR	10 33 09.8	
	comp=Z,261nm,21.3s,baz=136,slow=35							
	comp=Z,19nm,0.8s							
WRA	**Warramunga Arr**	**27.68**	**243**	P		**P**	**10 22 48.1**	**-1.1**
KDU	**Kakadu**	**27.82**	**259**	P		**P**	**10 22 49.7**	**-0.7**
	baz=28,SNR=8.5							
CNB	**Canberra Magne**	**28.44**	**199**	P		**P**	**10 22 56.1**	**+0.3**
	baz=29,SNR=9.3							
CNB	**Canberra Magne**	**28.44**	**199**	P		**P**	**10 22 56.8**	**+0.9**
CAN	**Canberra**	**28.57**	**200**	P		**P**	**10 22 57.2**	**+0.3**
CAN					IAmb	IAmb	10 22 58.3	
	comp=Z,22nm,0.9s							
CAN	**Canberra**	**28.57**	**200**	P		**P**	**10 22 57.7**	**+0.7**
CAN	**Canberra**	**28.57**	**200**	P		**P**	**10 22 57.3**	**+0.3**
CAN					pP	**pP**	**10 23 10.2**	**+0.9**
CAN					sP	**sP**	**10 23 15.8**	**+0.9**
H11N1	**WAKE ISLAND Hy**	**28.87**	**13**	T		T	10 52 56.4	
	baz=193,slow=76,SNR=1967							
H11N3	**WAKE ISLAND Hy**	**28.88**	**13**	T		T	10 52 57.0	
	baz=193,slow=76,SNR=2529							
H11N2	**WAKE ISLAND Hy**	**28.89**	**13**	T		T	10 52 57.7	
	baz=193,slow=76,SNR=2077							
STKA	**Stephens Creek**	**29.04**	**215**	P		**P**	**10 23 00.6**	**-0.6**
	comp=Z,3.1nm,0.5s,baz=44,slow=13,SNR=9.2							
STKA					LR	LR	10 34 46.8	
	comp=Z,442nm,18.8s,baz=26,slow=37							
	comp=Z,3.1nm,0.5s							
STKA	**Stephens Creek**	**29.04**	**215**	P		**P**	**10 23 00.7**	**-0.4**
	baz=29,SNR=14							
STKA	**Stephens Creek**	**29.04**	**215**	P		**P**	**10 23 00.6**	**-0.6**
MTN	**Manton Dam**	**29.14**	**259**	P		**P**	**10 23 01.6**	**-0.6**
	baz=29,SNR=9.4							
MTN	**Manton Dam**	**29.14**	**259**	P		**P**	**10 23 01.8**	**-0.4**
MTN					IAmb	IAmb	10 23 16.8	
	comp=Z,37nm,1.4s							
AS31	**Alice Springs**	**29.51**	**236**	P		**P**	**10 23 04.5**	**-1.0**
ASAR	**Alice Springs**	**29.51**	**236**	P		**P**	**10 23 04.2**	**-1.3**
	comp=Z,7.5nm,0.6s,baz=63,slow=10,SNR=167							
ASAR					PcP	**PcP**	**10 26 09.8**	**-0.3**
	comp=Z,2.7nm,0.5s,baz=83,slow=2.5,SNR=8.7							
ASAR					ScP	**ScP**	**10 29 47.1**	**-0.9**
	comp=Z,0.6nm,0.9s,baz=59,slow=2.5,SNR=3.3							
ASAR					LR	LR	10 34 58.1	
	comp=Z,271nm,18.8s,baz=62,slow=36							
	comp=Z,7.5nm,0.6s							
LCRK	**Leigh Creek**	**30.07**	**221**	P		**P**	**10 23 09.7

comp=Z,45nm,20.2s,baz=161,slow=37
ASAJ Asahikawa 54.95 344 LR LR 10 47 58.3
comp=Z,200nm,21.1s,baz=174,slow=34
KSRS Korea Array 55.05 328 P **P** **10 26 34.6 +2.2**
comp=Z,0.7nm,0.5s,baz=160,slow=7.5,SNR=2.8
comp=Z,0.7nm,0.5s
NJ2 Nanjing 56.72 318 *e*P **P** **10 26 47.3 +2.9**
NJ2 pmax pmax
comp=Z,13nm,0.5s
NJ2 LR LR
comp=Z,770nm,11.8s
NJ2 LR LR
comp=Z,600nm,12.8s
NJ2 LR LR
comp=Z,800nm,13.7s
USRK Ussuriysk Ar. 58.58 336 P **P** **10 26 59.5 +2.2**
comp=Z,4.0nm,0.8s,baz=171,slow=6.3,SNR=7.6
comp=Z,4.0nm,0.8s
USRK Ussuriysk Ar. 58.58 336 P **P** **10 26 56.6 -0.7**
TAOE Nuku Hiva Isla 58.61 95 *e*LR LR 10 44 10.9
comp=Z,91nm,29.6s
TAOE Nuku Hiva Isla 58.61 95 *e*T T 11 29 50.8
comp=Z,61nm,0.2s
DRV Dumont d'Urvil 59.61 189 P **P** **10 27 03.4 -0.7**
DRV sP **sP** **10 27 24.6 +1.9**
CN2 Changchun 61.10 332 *e*P **P** **10 27 15.5 +0.9**
CN2 PP **PP** **10 29 33.1 +3.3**
CN2 S **S** **10 35 31.3 +1.1**
CN2 LR LR
comp=Z,360nm,14.0s
CN2 LR LR
comp=Z,250nm,14.0s
CN2 LR LR
comp=Z,360nm,15.0s
PEA0B Petropavlovsk- 61.55 358 P **P** **10 27 17.9 +0.5**
PETK Petropavlovsk- 61.55 358 P **P** **10 27 18.6 +1.2**
comp=Z,8.0nm,1.1s,baz=133,slow=8.3,SNR=11
PETK LR LR 10 49 43.2
comp=Z,168nm,22.0s,baz=147,slow=32
comp=Z,8.0nm,1.1s
PETK Petropavlovsk- 61.55 358 P **P** **10 27 18.1 +0.7**
SHEM Shemya Is, Ala 62.22 9 LR LR 10 49 04.5
comp=Z,68nm,21.0s,baz=230,slow=31
PSI Prapat 62.42 278 LR LR 10 57 46.3
comp=Z,60nm,19.0s,baz=144,slow=39
XAN Xi'an 64.71 314 P **P** **10 27 38.9 0.0**
XAN pmax pmax
comp=Z,8.0nm,0.8s
XAN LR LR
comp=Z,330nm,17.7s
XAN LR LR
comp=Z,290nm,18.9s
XAN LR LR
comp=Z,350nm,17.2s
KMI Kunming 65.47 303 ⇓P **P** **10 27 47.1 +2.9**
KMI pP pP 10 27 56.6 -1.0
KMI pmax pmax
comp=Z,7.0nm,1.1s
XLT XiLinHaoTe 65.95 326 ⇑*i*P **P** **10 27 51.3 +4.5**
XLT pmax pmax
comp=Z,19nm,0.9s
XLT pmax pmax
comp=Z,48nm,3.9s
XLT LR LR
comp=Z,350nm,11.6s
XLT LR LR
comp=Z,300nm,12.1s
CMAR Chiang Mai Arr 66.41 294 P **P** **10 27 51.4 +1.3**
comp=Z,3.5nm,0.6s,baz=116,slow=4.6,SNR=14
comp=Z,3.5nm,0.6s
CMAR Chiang Mai Arr 66.41 294 P **P** **10 27 50.1 -0.1**
CHTO Chiang Mai 66.53 295 P **P** **10 27 51.7 +0.9**
CHTO pP **pP** **10 28 02.9 -1.4**
HHC Hu-ho-hao-te 66.70 321 *e*P **P** **10 27 54.8 +3.2**
HHC pmax pmax
comp=Z,20nm,0.9s
HHC pmax pmax
comp=Z,170nm,4.6s
HHC LR LR
comp=Z,330nm,12.7s
HHC LR LR
comp=Z,210nm,14.1s
HHC LR LR
comp=Z,370nm,13.7s
CASY Casey 66.81 200 P **P** **10 27 49.3 -2.5**
CASY Casey 66.81 200 P **P** **10 27 50.8 -0.9**
CASY x x 10 27 56.7
CASY pP **pwP** **10 28 06.6 -0.8**
PZH PanZhiHua 66.83 304 P **P** **10 27 54.0 +1.2**
PZH S **S** **10 36 39.5 -2.7**
PZH pmax pmax
comp=Z,10.0nm,0.6s
PZH pmax pmax
comp=Z,130nm,4.9s
PZH LR LR
comp=Z,340nm,21.0s
PZH LR LR
comp=Z,310nm,19.0s
PZH LR LR
comp=Z,160nm,14.3s
MA2 Magadan 68.43 355 LR LR 10 54 08.5
comp=Z,76nm,21.7s,baz=134,slow=32
VNDA Vanda 68.86 180 P **P** **10 28 03.8 -0.8**
VNDA comp=Z,5.0nm,0.6s,baz=340,slow=6.9,SNR=50 LR LR 10 53 15.4
comp=Z,124nm,20.9s,baz=340,slow=32
comp=Z,5.0nm,0.6s
VNDA Vanda 68.86 180 P **P** **10 28 03.6 -0.9**
VNDA IAmb IAmb 10 28 05.1
comp=Z,6.4nm,0.8s
VNDA Vanda 68.86 180 P **P** **10 28 03.7 -0.8**
VNDA x x 10 28 12.2
VNDA pP **pP** **10 28 18.0 0.0**
SBA Scott Base 69.27 179 P **P** **10 28 07.1 +0.1**
SBA x x 10 28 17.5
SBA pP **pwP** **10 28 22.5 +1.7**
LZH Lanzhou 69.34 314 *e*P **P** **10 28 10.3 +1.9**
LZH pP pP 10 28 16.0 -6.0
LZH pmax pmax
comp=Z,19nm,1.3s
LZH pmax pmax
comp=Z,75nm,6.7s
LZH LR LR
comp=Z,250nm,14.4s
LZH LR LR
comp=Z,310nm,16.5s
CCD Concordia, Ant 69.64 190 P **P** **10 28 09.0 -0.8**
CCD pP **pP** **10 28 23.7 +0.3**
SEY Seymchan 71.63 356 LR LR 10 57 33.8
comp=Z,75nm,20.7s,baz=198,slow=34
ULN Ulaanbaatar 73.36 326 P **P** **10 28 33.8 +1.4**
ULN IAmb IAmb 10 28 41.0
comp=Z,8.9nm,1.1s
GTA Gaotai 73.69 315 ⇑P **P** **10 28 36.4 +1.9**
GTA pP pP 10 28 46.5 -1.7
GTA pmax pmax
comp=Z,7.0nm,0.8s
GTA pmax pmax
comp=Z,110nm,4.7s
GTA LR LR
comp=Z,160nm,16.4s
GTA LR LR
comp=Z,430nm,18.2s
GTA LR LR
comp=Z,230nm,17.8s
SONM Songino Array 73.72 325 P **P** **10 28 34.7 +0.2**
comp=Z,3.2nm,0.8s,baz=136,slow=7.4,SNR=6.9
comp=Z,3.2nm,0.8s
YAK Yakutsk 74.41 345 LR LR 10 58 23.6
comp=Z,112nm,22.0s,baz=86,slow=33
KDAK Kodiak Island 76.36 24 LR LR 10 59 53.1
comp=Z,76nm,18.1s,baz=224,slow=34
BILL Bilibino 76.60 2 P **P** **10 28 50.0 -0.4**
BILL IAmb IAmb 10 29 18.5
comp=Z,14nm,1.2s
SVW2 Sparrevohn 77.55 20 P **P** **10 28 56.8 +0.9**
SVW2 IAmb IAmb 10 29 17.1
comp=Z,10nm,0.9s
CNPM China Poot 78.05 23 IAmb IAmb 10 29 01.8
comp=Z,11nm,0.9s
BRLK Bradley Lake 78.34 23 IAmb IAmb 10 29 03.1
comp=Z,12nm,1.0s
M19K Big River Lodg 78.53 20 IAmb IAmb 10 29 05.0
comp=Z,7.9nm,0.9s
L19K White Mountain 78.57 20 IAmb IAmb 10 29 23.7
comp=Z,12nm,1.2s
CAST Castle Rocks 80.34 20 IAmb IAmb 10 29 25.3
comp=Z,5.2nm,0.8s
GHO Glory Hole Cre 80.37 22 IAmb IAmb 10 29 40.8
comp=Z,22nm,1.0s
PALK Pallekele 81.08 279 LR LR 11 08 07.5
comp=Z,29nm,19.7s,baz=254,slow=38
QSPA South Pole Qui 81.35 180 LR LR 11 02 45.4
comp=Z,127nm,18.7s,baz=340,slow=34
QSPA South Pole Qui 81.35 180 P **P** **10 29 15.7 -1.1**
QSPA IAmb IAmb 10 29 17.9
comp=Z,4.4nm,0.7s
M24K Tolsona, Glenn 81.60 22 P **P** **10 29 16.5 -1.5**
MCK McKinley 81.61 20 IAmb IAmb 10 29 38.2
comp=Z,11nm,0.9s
TCOL CIGO, UAF Yank 82.70 20 IAmb IAmb 10 29 43.5
comp=Z,7.9nm,0.8s
COLA College 82.70 20 P **P** **10 29 23.3 -0.2**
COLA IAmb IAmb 10 29 43.5
comp=Z,8.2nm,0.8s
HDA Harding Lake 82.72 20 IAmb IAmb 10 29 34.2
comp=Z,8.7nm,1.3s
H23K Yukon River 82.76 19 IAmb IAmb 10 29 52.7
comp=Z,8.0nm,1.3s
TIXI Tiksi 82.81 350 LR LR 11 08 47.6
comp=Z,34nm,18.4s,baz=179,slow=37
TIXI Tiksi 82.81 350 P **P** **10 29 24.1 +0.1**
ILAR Eielson Array 82.96 20 P **P** **10 29 24.8 -0.2**
comp=Z,1.1nm,0.5s,baz=243,slow=5.4,SNR=25
ILAR LR LR 11 00 52.0
comp=Z,51nm,21.2s,baz=236,slow=32
comp=Z,1.1nm,0.5s
RIDG Independent Ri 83.06 21 IAmb IAmb 10 29 41.6
comp=Z,9.0nm,1.2s
J25K Salcha River, 83.39 21 IAmb IAmb 10 29 38.3
comp=Z,4.0nm,0.6s
WMQ Urumqi 83.76 316 *e*P **P** **10 29 32.0 +2.4**
WMQ LR LR
comp=Z,130nm,22.7s
MAW Mawson 84.98 202 P **P** **10 29 34.2 -1.0**
comp=Z,2.1nm,0.7s,baz=106,slow=7.3,SNR=7.7
MAW LR LR 11 05 00.3
comp=Z,67nm,18.4s,baz=94,slow=34
comp=Z,2.1nm,0.7s
N31M Braeburn, Yuko 85.46 26 IAmb IAmb 10 29 50.3
comp=Z,9.6nm,0.8s
BBB Bella Bella 85.60 36 LR LR 11 00 58.5
comp=Z,48nm,20.7s,baz=234,slow=31
DLBC Dease Lake 86.82 30 LR LR 11 00 22.4
comp=Z,57nm,21.3s,baz=266,slow=30
MK31 Makanchi Array 88.25 318 IAmb IAmb 10 29 53.2
comp=Z,4.7nm,0.7s
MKAR Makanchi Array 88.25 318 P **P** **10 29 52.6 +0.9**
comp=Z,6.0nm,0.6s,baz=100,slow=5.9,SNR=52
comp=Z,6.0nm,0.6s
MKAR Makanchi Array 88.25 318 P **P** **10 29 51.7 0.0**
MAKZ Makanchi 88.47 318 P **P** **10 29 53.2 +0.5**
MAKZ IAmb IAmb 10 30 05.0
comp=Z,6.9nm,0.9s
NVAR Mina Array Bea 88.48 51 P **P** **10 29 54.6 +1.4**
comp=Z,0.7nm,0.7s,baz=243,slow=6.5,SNR=8.5
comp=Z,0.7nm,0.7s
ZALV Zalesovo Beam 88.61 325 P **P** **10 29 52.7 -0.4**
comp=Z,1.1nm,0.5s,baz=107,slow=5.1,SNR=6.8
ZALV LR LR 11 09 51.7
comp=Z,31nm,20.1s,baz=100,slow=36
comp=Z,1.1nm,0.5s
PFO Pinyon Flats O 88.98 56 LR LR 11 02 21.5
comp=Z,174nm,20.6s,baz=268,slow=30
INK Inuvik 89.36 20 LR LR 11 04 44.1
comp=Z,73nm,21.5s,baz=174,slow=32
SHPR Sheep Range 90.56 53 P **P** **10 30 06.4 +3.5**
SHPR IAmb IAmb 10 30 18.2
comp=Z,5.5nm,1.2s
KDJ Kajisay 90.81 312 IAmb IAmb 10 30 17.2
comp=Z,7.1nm,0.9s
PRN Pahroc Range 90.81 52 IAmb IAmb 10 30 17.0
comp=Z,5.4nm,1.0s
NEW Newport 91.34 41 LR LR 11 08 12.8
comp=Z,104nm,18.1s,baz=216,slow=34
W13A Hualapai Mount 91.34 55 IAmb IAmb 10 30 19.3
comp=Z,4.0nm,0.8s
NRIK Noril'sk 92.09 340 LR LR 11 11 27.5
comp=Z,90nm,20.9s,baz=54,slow=35
CCUT Cedar City 92.16 53 P **P** **10 30 11.8 +1.4**
CCUT IAmb IAmb 10 30 23.0
comp=Z,4.2nm,0.9s
YKA Yellowknife Ar 95.24 28 P **P** **10 30 25.4 +1.8**
comp=Z,0.8nm,0.7s,baz=258,slow=4.6,SNR=3.1
YKA LR LR 11 06 31.3
comp=Z,72nm,21.4s,baz=280,slow=31
comp=Z,0.8nm,0.7s
PDAR Pinedale Array 95.75 48 P **P** **10 30 28.2 +1.4**
comp=Z,0.3nm,0.5s,baz=236,slow=1.6,SNR=4.1
comp=Z,0.3nm,0.5s
ANMO Albuquerque 97.37 56 LR LR 11 06 06.0
comp=Z,64nm,21.1s,baz=264,slow=30
SNAA Sanae 99.10 185 LR LR 11 12 28.4
comp=Z,94nm,20.4s,baz=104,slow=34
ARCES ARCESS Array B 112.68 344 PKiKP **PKiKP** **10 35 36.2 0.0**
comp=Z,1.0nm,0.9s,baz=66,slow=2.3,SNR=5.6
ARCES PKKPbc **PKKPbc** **10 46 23.9 -3.6**
comp=Z,1.6nm,0.5s,baz=228,slow=1.1,SNR=21
FINES FINESS Array B 117.61 337 PKP **PKPdf** **10 35 45.2 -0.6**
comp=Z,0.7nm,0.5s,baz=122,slow=2.5,SNR=6.0
AKASG Malin Array Be 122.00 326 PKP **PKPdf** **10 35 53.7 -0.8**
comp=Z,0.8nm,0.4s,baz=27,slow=1.1,SNR=4.8
NB2 NORSAR Subarra 122.96 343 PKPdf **PKPdf** **10 35 55.8 -0.4**
comp=Z,0.5nm,0.7s,baz=39,slow=1.9
NOA NORSAR Array B 122.96 343 PKP **PKPdf** **10 35 55.8 -0.4**
comp=Z,0.5nm,0.7s,baz=32,slow=2.0,SNR=4.4
BOSA Boshof 123.11 228 PKP **PKPdf** **10 35 57.4 -0.2**
comp=Z,4.9nm,0.5s,baz=132,slow=1.9,SNR=19
BRTR Keskin Array B 123.53 312 PKP **PKiKP** **10 35 58.2 -0.1**
comp=Z,1.0nm,0.7s,baz=157,slow=3.5,SNR=4.8
SUR Sutherland 123.95 221 PKP **PKiKP** **10 35 59.6 +0.2**
comp=Z,3.4nm,0.6s,baz=180,slow=8.1,SNR=6.7
MATP Matopo 124.66 238 PKP **PKPdf** **10 36 00.6 -0.2**
comp=Z,2.6nm,0.7s,baz=161,slow=3.4,SNR=2.8
LBTB Lobatse 124.78 231 PKP **PKPdf** **10 36 00.8 0.0**
comp=Z,2.1nm,0.6s,baz=90,slow=3.0,SNR=4.3
LPAZ La Paz 125.88 117 PKP **PKPdf** **10 36 03.9 +0.1**
comp=Z,1.1nm,0.6s,baz=16,slow=3.9,SNR=7.8
SDV Santo Domingo 129.50 86 PKP **PKiKP** **10 36 10.6 -0.3**
comp=Z,3.4nm,0.3s,baz=320,slow=7.9,SNR=4.4
CLL Collm 129.76 334 *e*PKPdf **PKPdf** **10 36 08.0 -1.4**
CLL *e*PKPdf **pPKPdf** **10 36 22.0 -1.9**
CLL *e*SKPdf **SKiKP** **10 39 42.0 -0.2**
CLL LmH 11 32 00.0
comp=N,200nm,19.6s
CLL LmH 11 32 00.0
comp=E,100nm,18.1s
SIV San Ignacio 132.12 121 PKP **PKPdf** **10 36 13.9 -1.1**
comp=E,0.5nm,0.5s,baz=228,slow=4.5,SNR=3.7
BDFB Brasilia 142.86 130 PKhKP PKPpre 10 36 29.7
comp=E,2.2nm,0.5s,baz=288,slow=2.7,SNR=7.3
ESDC Sonseca Array 146.11 338 PKPbc **PKPbc** **10 36 40.5 -0.2**
comp=E,0.9nm,0.6s,baz=352,slow=2.3,SNR=6.0
ESDC Sonseca Array 146.11 338 **PKPbc** **10 36 40.8 +0.1**
TORD Torodi Ar. Bea 158.71 284 PKP **PKPdf** **10 36 58.7 -0.1**
comp=E,2.4nm,0.8s,baz=48,slow=1.7,SNR=14
TORD PKPab **PKPab** **10 37 34.3 -0.2**
comp=E,2.8nm,0.7s,baz=85,slow=4.6,SNR=13

JMA 13 10:29:05.5±0.1, 36°3N±0.2°×140°7E±0.5, h46km, MV1.1/20, E OFF IBARAKI PREF, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHYU	**Hitachinakayam**	**0.11**	**290**	P	Pn	10 29 12.7	0.0
JHO	**Hitachi**	**0.33**	**339**	*i* P	Pn	10 29 14.2	-0.2
JHO				S	Sn	10 29 20.5	-0.3

*IDC **13** 10:29:10.7±3.8, 36°.26N×140°.44E, h0km, mb3.4/2, mbtmp3.4/2, Error ellipse: s-maj=74.6km s-min=17.0km az=25.0*
*JMA **13** 10:29:21.5±0.1, 36°.0N±0°.2×139°.9E±0°.3, h42km, MV3.2/38, SW IBARAKI PREF*
JMA Felt I J1 at SW IBARAKI PREF .
ISC 13 10:29:20.3±1.1, 36°.04N±0°.06×139°.92E±0°.06, h50km, n17, σ1°07/15, 5D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYT	**Yasato**	**0.29**	**50**	*i* P	**Pn**	**10 29 30.1**	**+0.7**
JYT				S	**Sn**	**10 29 36.1**	**+0.4**
JAG	**Ashikaga**	**0.54**	**316**	⇓*i*P	**Pn**	**10 29 32.6**	**+0.5**
JAG				⇓S	**Sn**	**10 29 40.4**	**-0.1**
JRY	**Ryogami san**	**0.83**	**269**	⇓*i*P	**Pn**	**10 29 36.0**	**+0.2**
JRY				⇓S	**Sn**	**10 29 46.9**	**-0.1**
JKT	**Katashina**	**0.90**	**323**	*i* P	**Pn**	**10 29 37.5**	**+0.6**
JKT				S	**Sn**	**10 29 49.7**	**+0.7**
JOD2	**Odawara 2**	**1.03**	**221**	P	**Pn**	**10 29 39.7**	**+1.3**
JYN	**Shimob**	**1.24**	**245**	P	**Pn**	**10 29 43.1**	**+1.7**
BSO3	**Boso 3**	**1.33**	**159**	⇓P	**Pn**	**10 29 43.0**	**+0.7**
JUON	**Uonuma**	**1.36**	**329**	P	**Pn**	**10 29 44.2**	**+1.4**
MJAR	**Matsushiro Arr**	**1.47**	**290**	Pg	**Pn**	**10 29 44.4**	**-0.1**
	1.1nm,0.3s,baz=94,slow=15,SNR=57						
MJAR				Lg	Lg	10 30 06.8	
	1.0nm,0.3s,baz=144,slow=7.8,SNR=2.8						
H11N2	**WAKE ISLAND Hy**	**28.72**	**117**	T	T	11 04 52.7	
	baz=311						
H11N1	**WAKE ISLAND Hy**	**28.73**	**117**	T	T	11 04 59.2	
	baz=311						
H11N3	**WAKE ISLAND Hy**	**28.74**	**117**	T	T	11 04 58.6	
	baz=311						
H11S1	**WAKE ISLAND Hy**	**29.38**	**119**	T	T	11 06 15.1	
	baz=311						
H11S3	**WAKE ISLAND Hy**	**29.38**	**119**	T	T	11 06 16.3	
	baz=311						
H11S2	**WAKE ISLAND Hy**	**29.39**	**119**	T	T	11 06 16.0	
	baz=311						
WRA	**Warramunga Arr**	**55.93**	**186**	P	**P**	**10 38 53.1**	**-0.2**
	0.3nm,0.5s,baz=1.2,slow=7.4,SNR=4.8						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**59.66**	**186**	P	**P**	**10 39 17.2**	**-2.2**
	0.3nm,0.8s,baz=1.4,slow=7.7,SNR=1.4						
	0.3nm,0.8s						

*IDC **13** 10:31:19.4±0.5, 34°.38S×58°.02E, h0km, mb4.3/15, mbtmp4.3/16, ML4.0/1, MS3.6/9, Error ellipse: s-maj=20.2km s-min=14.2km az=43.0*
*NEIC **13** 10:31:21.5±1.6, 34°.37S±0°.10×58°.1E±0°.2, h10km±1km, mb4.7/25, Error ellipse: s-maj=23.3km s-min=13.4km az=240.0*
ISC 13 10:31:20.9±0.4, 34°32S±0°.08×58°.13E±0°.10, h10km, n59, σ1°07/51, mb4.5/25, MS3.6/9, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RER	**Riviere de l'E**	**13.28**	**350**	Pn	**Pn**	**10 34 27.9**	**-1.7**
VOI	**Vohitsoka**	**15.89**	**318**	Pn	**Pn**	**10 35 04.5**	**-0.4**
VOI				IAmb	IAmb	10 35 26.4	
	comp=Z,30nm,1.1s						
OPO	**Ambohidratompo**	**18.47**	**325**	P	**Pn**	**10 35 38.3**	**+1.0**
	baz=104,slow=11,SNR=5.3						
	comp=Z,11nm,0.9s						
BOSA	**Boshof**	**28.54**	**272**	P	**P**	**10 37 15.7**	**-1.2**
	comp=Z,2.9nm,0.8s,baz=160,slow=12,SNR=2.2						
BOSA				LR	LR	10 46 18.8	
	comp=Z,122nm,20.7s,baz=100,slow=32						
	comp=Z,2.9nm,0.8s						
MATP	**Matopo**	**29.61**	**290**	P	**P**	**10 37 25.1**	**-1.4**
	comp=Z,4.2nm,1.0s,baz=65,slow=21,SNR=3.6						
	comp=Z,4.2nm,1.0s						
LBTB	**Lobatse**	**29.65**	**279**	P	**P**	**10 37 24.9**	**-1.9**
	comp=Z,5.1nm,1.0s,baz=190,slow=22,SNR=3.4						
LBTB				LR	LR	10 47 23.5	
	comp=Z,106nm,18.2s,baz=90,slow=33						
	comp=Z,5.1nm,1.0s						
H08S1	**Diego Carcia H**	**29.66**	**30**	T	T	11 08 17.9	
	baz=212,slow=76						
H08S2	**Diego Garcia H**	**29.67**	**30**	T	T	11 08 13.1	
	baz=212						
H08S3	**Diego Garcia H**	**29.68**	**30**	T	T	11 08 23.3	
	baz=212,slow=76						
SUR	**Sutherland**	**31.12**	**263**	LR	LR	10 48 04.4	
	comp=Z,62nm,19.9s,baz=126,slow=32						
LSZ	**Lusaka**	**32.95**	**298**	P	**P**	**10 37 55.2**	**-0.8**
	comp=Z,1.5nm,0.4s,baz=68,slow=16,SNR=1.6						
LSZ				LR	LR	10 49 05.2	
	comp=Z,107nm,18.4s,baz=148,slow=32						
	comp=Z,1.5nm,0.4s						
MAW	**Mawson**	**33.44**	**177**	P	**P**	**10 37 59.4**	**-0.1**
	comp=Z,2.0nm,0.6s,baz=338,slow=11,SNR=3.2						
	comp=Z,2.0nm,0.6s						
MAW	**Mawson**	**33.44**	**177**	P	**P**	**10 37 59.7**	**+0.1**
TSUM	**Tsumeb**	**38.94**	**282**	P	**P**	**10 38 49.2**	**+1.9**
	comp=Z,0.8nm,0.3s,baz=121,slow=12,SNR=1.7						
TSUM				LR	LR	10 53 17.1	
	comp=Z,104nm,19.5s,baz=162,slow=34						
MBAR	**Mbarara**	**42.21**	**317**	LR	LR	10 55 47.3	
	comp=Z,112nm,18.9s,baz=141,slow=35						
CASY	**Casey**	**44.15**	**153**	P	**P**	**10 39 30.1**	**+0.8**
CASY				IAmb	IAmb	10 39 31.2	
	comp=Z,9.2nm,0.9s						
NWAO	**Narrogin (SRO)**	**48.62**	**106**	P	**P**	**10 40 02.8**	**-2.1**
SNAA	**Sanae**	**48.74**	**202**	P	**P**	**10 40 05.3**	**0.0**
SNAA	**Sanae**	**48.74**	**202**	P	**P**	**10 40 05.4**	**0.0**
	comp=Z,9.1nm,0.8s,baz=106,slow=6.9,SNR=27						
	comp=Z,9.1nm,0.8s						
SNAA	**Sanae**	**48.74**	**202**	P	**P**	**10 40 05.3**	**0.0**
SNAA				IAmb	IAmb	10 40 06.3	
	comp=Z,14nm,1.0s						
VNA3	**Neumayer Olymp**	**50.78**	**203**	P	**P**	**10 40 20.7**	**-0.2**
QSPA	**South Pole Qui**	**55.85**	**180**	P	**P**	**10 40 58.1**	**-0.3**
	comp=Z,5.2nm,0.7s,baz=256,slow=2.7,SNR=42						
	comp=Z,5.2nm,0.7s						
QSPA	**South Pole Qui**	**55.85**	**180**	P	**P**	**10 40 57.9**	**-0.5**
QSPA				IAmb	IAmb	10 40 58.6	
	comp=Z,10nm,0.9s						
WSAR	**Wadi Sarin**	**57.24**	**1**	LR	LR	11 00 10.7	
	comp=Z,52nm,19.0s,baz=174,slow=30						
BELA	**Belgrano 2**	**57.31**	**195**	P	**P**	**10 41 08.0**	**-0.4**
BELA				IAmb	IAmb	10 41 08.5	
	comp=Z,5.4nm,1.1s						
FORT	**Forrest**	**57.98**	**108**	P	**P**	**10 41 13.7**	**-0.1**
RAYN	**Ar Rayn**	**58.77**	**346**	P	**P**	**10 41 19.4**	**+0.1**
RAYN				IAmb	IAmb	10 41 22.8	
	comp=Z,3.8nm,0.9s						
VNDA	**Vanda**	**59.66**	**166**	P	**P**	**10 41 24.9**	**+0.2**
	comp=Z,2.4nm,0.8s,baz=260,slow=7.4,SNR=16						
	comp=Z,2.4nm,0.8s						
VNDA	**Vanda**	**59.66**	**166**	P	**P**	**10 41 25.0**	**+0.2**
SBA	**Scott Base**	**60.49**	**167**	P	**P**	**10 41 31.9**	**+1.5**
SBA				IAmb	IAmb	10 41 39.1	
	comp=Z,7.6nm,1.1s						
BBOO	**Buckleboo**	**63.35**	**113**	P	**P**	**10 41 50.5**	**+0.1**
KNRA	**Kununurra**	**65.47**	**93**	P	**P**	**10 42 04.0**	**-0.6**
ASAR	**Alice Springs**	**65.76**	**103**	P	**P**	**10 42 06.3**	**0.0**
	comp=Z,4.3nm,0.9s,baz=235,slow=5.8,SNR=24						
	comp=Z,4.3nm,0.9s						
AS31	**Alice Springs**	**65.76**	**103**	P	**P**	**10 42 06.2**	**-0.2**
WRA	**Warramunga Arr**	**67.92**	**100**	P	**P**	**10 42 20.0**	**-0.2**
	comp=Z,9.0nm,0.8s,baz=239,slow=5.5,SNR=27						
	comp=Z,9.0nm,0.8s						
WRA	**Warramunga Arr**	**67.92**	**100**	P	**P**	**10 42 20.4**	**+0.3**
WB2	**Warramunga Arr**	**67.93**	**100**	P	**P**	**10 42 19.5**	**-0.7**
WB2				IAmb	IAmb	10 42 24.1	
	comp=Z,8.9nm,0.9s						
WRAB	**Tennant Creek**	**67.93**	**100**	P	**P**	**10 42 20.2**	**0.0**
STKA	**Stephens Creek**	**67.97**	**114**	P	**P**	**10 42 20.8**	**+0.5**
	comp=Z,5.0nm,0.8s,baz=250,slow=4.7,SNR=7.5						
	comp=Z,5.0nm,0.8s						
STKA	**Stephens Creek**	**67.97**	**114**	P	**P**	**10 42 20.4**	**+0.1**
WB0	**Warramunga Arr**	**68.05**	**99**	P	**P**	**10 42 21.1**	**+0.1**
WR0	**Warramunga Arr**	**68.07**	**100**	P	**P**	**10 42 20.3**	**-0.9**
WR0				IAmb	IAmb	10 42 24.5	
	comp=Z,8.6nm,1.0s						
TORD	**Torodi Ar. Bea**	**71.41**	**301**	P	**P**	**10 42 41.2**	**-0.4**
	comp=Z,1.5nm,0.8s,baz=116,slow=5.0,SNR=7.8						
	comp=Z,1.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**71.41**	**301**	P	**P**	**10 42 39.8**	**-1.8**
CAN	**Canberra**	**71.77**	**121**	P	**P**	**10 42 43.9**	**+0.2**
CAN				IAmb	IAmb	10 42 55.9	
	comp=Z,20nm,1.3s						
DBIC	**Dimbokro**	**72.03**	**292**	LR	LR	11 12 55.9	
	comp=Z,44nm,18.9s,baz=153,slow=35						
GNI	**Garni**	**75.13**	**349**	LR	LR	11 12 56.0	
	comp=Z,29nm,21.3s,baz=64,slow=33						
BRTR	**Keskin Array B**	**77.08**	**341**	P	**P**	**10 43 15.8**	**+1.5**
	comp=Z,3.2nm,0.9s,baz=166,slow=6.1,SNR=6.9						
	comp=Z,3.2nm,0.9s						
KK31	**Karatay Array**	**77.88**	**9**		**P**	**10 43 21.1**	**+2.5**
KK31				IAmb	IAmb	10 43 22.2	
	comp=Z,3.7nm,1.1s						
KKAR	**Karatay Array**	**77.88**	**9**		**P**	**10 43 20.4**	**+1.8**
KDJ	**Kajisay**	**78.06**	**14**	P	**P**	**10 43 19.8**	**0.0**
KDJ				IAmb	IAmb	10 43 38.4	
	comp=Z,4.6nm,0.8s						
ABKAR	**Akbulak array**	**83.22**	**1**	P	**P**	**10 43 47.3**	**+0.2**

MKAR Makanchi Array 83.62 16 P **P** **10 43 51.4 +2.1**
comp=Z,0.2nm,0.4s,baz=217,slow=6.5,SNR=2.9
comp=Z,0.2nm,0.4s
MKAR Makanchi Array 83.62 16 P **P** **10 43 51.0 +1.8**
AKASG Malin Array Be 88.42 342 P **P** **10 44 11.4 -1.3**
comp=Z,0.5nm,0.4s,baz=183,slow=3.8,SNR=5.2
comp=Z,0.5nm,0.4s
INK Inuvik 145.32 8 PKPbc **PKPab** **10 50 59.3 +1.3**
comp=Z,2.5nm,0.8s,baz=13,slow=8.1,SNR=8.3
INK Inuvik 145.32 8 **PKPab** **10 50 59.5 +1.6**
ILAR Eielson Array 145.95 19 PKPbc **PKPdf** **10 50 59.0 -0.2**
comp=Z,0.7nm,0.6s,baz=305,slow=3.9,SNR=8.5
YKA Yellowknife Ar 151.44 353 PKPbc **PKPbc** **10 51 13.5 -0.6**
comp=Z,0.6nm,0.6s,baz=5.6,slow=2.4,SNR=2.3

INET ***13*** *10:36:31.6±1.3, 11.12N×88.12W, h15km±22km, MW4.4*
IDC ***13*** *10:36:38.4±0.6, 12.06N×87.12W, h0km, mb4.2/13, mbtmp4.2/15, ML3.3/3, MS3.7/19, Error ellipse: s-maj=33.1km s-min=11.1km az=54.0*
UCR ***13*** *10:36:44.5±2.2, 11.65N×87.40W, h35km±999km, mb4.6(NEIC)*
NEIC ***13*** *10:36:44.3±2.6, 11.74N±0.06×87.43W±0.01, h40km±8km, mb4.6/154, Error ellipse: s-maj=8.6km s-min=1.8km az=182.0*
ISC 13 10:36:44.0±0.4, 11.76N±0.05×87.42W±0.05, h48km, n298, σ1819/235, mb4.6/73, MS3.8/17, 1C-1D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TEL3	**Telica 3**	**0.99**	**35**	*eP*			**Pn**	**10 37 02.2**	**+0.7**
CRIN	**San Cristobal**	**1.00**	**21**				**Pn**	**10 37 02.6**	**+0.7**
CRIN	**San Cristobal**	**1.00**	**21**	*e*P			**Pn**	**10 37 02.5**	**+0.7**
CRIN				*e*S			Sn	10 37 26.7	+12
TELN	**Telica**	**1.02**	**34**	*eP*			**Pn**	**10 37 02.4**	**+0.4**
CNGN	**Cerro Negro**	**1.02**	**44**				**Pn**	**10 37 02.5**	**+0.5**
CNGN	**Cerro Negro**	**1.02**	**44**	*eP*			**Pn**	**10 37 02.4**	**+0.4**
MOMN	**Momotombo**	**1.08**	**53**	*eP*			**Pn**	**10 37 03.1**	**+0.4**
APYN	**Apoyeque**	**1.15**	**65**	*eP*			**Pn**	**10 37 03.1**	**-0.5**
TISN	**Laguna Tiscapa**	**1.19**	**71**	*eP*			**Pn**	**10 37 04.4**	**+0.2**
MGAN	**Managua**	**1.21**	**71**	*eP*			**Pn**	**10 37 04.6**	**+0.1**
MGAN				*eP*			**Pn**	**10 37 04.7**	**+0.2**
CSGN	**Cosiguina Volc**	**1.22**	**354**	*eP*			**Pn**	**10 37 04.6**	**-0.1**
MASN	**Masaya**	**1.26**	**79**	*eP*			**Pn**	**10 37 04.5**	**-0.7**
WILN	**Americas 2**	**1.27**	**71**	*eP*			**Pn**	**10 37 05.3**	**0.0**
CONN	**Concepcion**	**1.77**	**96**	*eP*			**Pn**	**10 37 11.1**	**-1.0**
BOAB	**BOACO BROADBAN**	**1.85**	**68**				**Pn**	**10 37 13.1**	**-0.1**
BOAB	**BOACO BROADBAN**	**1.85**	**68**	*eP*			**Pn**	**10 37 13.1**	**-0.1**
MATN	**Matagalpa**	**1.87**	**51**				**Pn**	**10 37 13.2**	**-0.5**
MATN	**Matagalpa**	**1.87**	**51**	*eP*			**Pn**	**10 37 13.1**	**-0.5**
HZTE	**Horizontes, Gu**	**2.07**	**120**				**Pn**	**10 37 15.9**	**-0.3**
HZTE	**Horizontes, Gu**	**2.07**	**120**	*eP*			**Pn**	**10 37 15.6**	**-0.6**
GBS3	**Finca Las Img**	**2.15**	**116**	*eP*			**Pn**	**10 37 16.6**	**-0.9**
LAPC	**Finca la Perla**	**2.18**	**117**	*eP*			**Pn**	**10 37 16.4**	**-1.5**
GB1A	**Borinquen Arri**	**2.19**	**115**	*eP*			**Pn**	**10 37 17.8**	**-0.2**
BUEV	**Buena Vista**	**2.19**	**116**	*eP*			**Pn**	**10 37 17.5**	**-0.5**
ACON	**Acoyapa**	**2.21**	**84**				**Pn**	**10 37 17.5**	**-0.7**
ACON	**Acoyapa**	**2.21**	**84**	*eP*			**Pn**	**10 37 17.3**	**-0.9**
BUAI	**Buenos Aires**	**2.23**	**113**	*eP*			**Pn**	**10 37 19.1**	**+0.7**
GPS2	**Hotel Rincn d**	**2.26**	**116**	*eP*			**Pn**	**10 37 19.0**	**+0.1**
TGUH	**Tegucigalpa,Un**	**2.29**	**4**				**Pn**	**10 37 20.4**	**+0.9**
ORTG	**Ortega, Santa**	**2.37**	**126**	Pn			**Pn**	**10 37 19.3**	**-1.2**
GUAI	**GUAI**	**2.38**	**128**	*eP*			**Pn**	**10 37 19.0**	**-1.6**
GUAB	**Guayabo de Bag**	**2.39**	**116**	*eP*			**Pn**	**10 37 21.8**	**+1.1**
COLC	**Colonia**	**2.43**	**116**	*eP*			**Pn**	**10 37 21.6**	**+0.3**
HORNC	**Hornillas**	**2.43**	**115**	*eP*			**Pn**	**10 37 21.1**	**-0.2**
CUI	**Cuipilapa**	**2.47**	**116**	*eP*			**Pn**	**10 37 21.3**	**-0.4**
DUNO	**Dulce Nombre,**	**2.52**	**131**				**Pn**	**10 37 20.3**	**-2.1**
DUNO	**Dulce Nombre,**	**2.52**	**131**	*eP*			**Pn**	**10 37 19.9**	**-2.6**
ACAL	**Aguas Claras**	**2.59**	**115**	*eP*			**Pn**	**10 37 22.7**	**-0.8**
PTEN	**Parque Tenorio**	**2.60**	**113**	*i*P			**Pn**	**10 37 22.9**	**-0.7**
SNET	**Serv Nac Est T**	**2.61**	**318**				**Pn**	**10 37 22.8**	**-1.0**
JTS	**Las Juntas de**	**2.83**	**121**	Pn			**Pn**	**10 37 25.8**	**-0.8**
	2.5nm,0.3s,baz=174,slow=23,SNR=15								
JTS					Sn		**Sn**	**10 37 58.3**	**-1.2**
	16nm,0.3s,baz=188,slow=22,SNR=7.5								
JTS	**Las Juntas de**	**2.83**	**121**	Pn			**Pn**	**10 37 26.3**	**-0.4**
CASO	**Castillo**	**2.94**	**116**	*eP*			**Pn**	**10 37 28.5**	**+0.2**
CEDE	**Laguna Cedeo**	**2.95**	**115**	*eP*			**Pn**	**10 37 28.6**	**+0.2**
FORC	**Fortuna**	**2.99**	**115**	*eP*			**Pn**	**10 37 28.5**	**-0.4**
LAFE	**Finca La Fe, P**	**3.13**	**128**	*eP*			**Pn**	**10 37 28.7**	**-2.1**
ESQI	**Esquipulas**	**3.36**	**326**				**Pn**	**10 37 34.1**	**0.0**
HDC	**Heredia**	**3.68**	**118**				**Pn**	**10 37 40.7**	**+2.1**
HDC	**Heredia**	**3.68**	**118**	*eP*			**Pn**	**10 37 40.6**	**+2.0**
HDC3	**Heredia 3**	**3.69**	**118**	*eP*			**Pn**	**10 37 39.6**	**+1.0**
CVTR	**Volcan Turrial**	**3.99**	**115**	Pn			**Pn**	**10 37 43.3**	**+0.3**
RIMA	**Rio Macho**	**4.01**	**119**	Pn			**Pn**	**10 37 43.7**	**+0.6**
RIMA	**Rio Macho**	**4.01**	**119**	*eP*			**Pn**	**10 37 43.4**	**+0.2**
CDM	**Cerro de Muert**	**4.21**	**121**	*eP*			**Pn**	**10 37 46.4**	**+0.3**
EDDO	**Dominical**	**4.29**	**125**	*eP*			**Pn**	**10 37 46.8**	**0.0**
PEZE	**Perez Zeledon,**	**4.37**	**122**				**Pn**	**10 37 48.7**	**+0.7**
SRBA	**San Rafael, Bu**	**4.71**	**122**				**Pn**	**10 37 53.0**	**+0.2**
SRBA	**San Rafael, Bu**	**4.71**	**122**	*eP*			**Pn**	**10 37 52.9**	**+0.2**
EDPN	**Palmar Norte**	**4.79**	**125**	*eP*			**Pn**	**10 37 54.2**	**+0.6**
DRK0	**Durika**	**4.79**	**121**				**Pn**	**10 37 55.6**	**+1.8**
DRK0	**Durika**	**4.79**	**121**	*eP*			**Pn**	**10 37 55.4**	**+1.6**
EDBA	**Buenos Aires**	**4.82**	**122**	*eP*			**Pn**	**10 37 54.5**	**+0.4**
EDSV	**San Vito**	**5.26**	**123**	*eP*			**Pn**	**10 38 01.9**	**+1.7**
CDITO	**Canoas**	**5.48**	**125**	*eP*			**Pn**	**10 38 04.7**	**+1.6**
CCOL	**Caracol de Cor**	**5.50**	**127**	*eP*			**Pn**	**10 38 04.6**	**+1.3**
BRU2	**Volcan**	**5.50**	**122**				**Pn**	**10 38 04.3**	**+0.7**
BRU2	**Volcan**	**5.50**	**122**	*eP*			**Pn**	**10 38 04.2**	**+0.7**
PETF	**Flores**	**5.65**	**335**				**Pn**	**10 38 07.3**	**+1.8**
CMIG	**Matias Romero**	**8.97**	**307**	Pn			**Pn**	**10 38 49.7**	**-1.2**
	0.8nm,0.3s,baz=124,slow=9.1,SNR=10								
CMIG					Sn		**Sn**	**10 40 32.8**	**+2.2**
	baz=58,slow=9.5 3.2nm,0.5s								
SJCC	**San Jacinto, C**	**12.16**	**98**	Pn			**Pn**	**10 39 35.8**	**+1.0**
YOTC	**Yotoco, Valle**	**13.41**	**124**	*eP*			**P**	**10 40 02.7**	**+2.7**
PTBC	**PUERTO BERRIO,**	**13.80**	**111**	*eP*			**P**	**10 40 04.4**	**+0.1**
POPC	**Popayan, Colom**	**14.04**	**130**	*eP*			**P**	**10 40 09.1**	**+1.9**
OCAC	**Ocana**	**14.32**	**103**	P			**P**	**10 40 10.7**	**+0.5**
OCAC	**Ocana**	**14.32**	**103**	*eP*			**P**	**10 40 10.7**	**+0.5**
ORTC	**Ortega, Tolima**	**14.35**	**122**	*eP*			**P**	**10 40 13.0**	**+2.6**
SOTA	**Rioblanco**	**14.36**	**131**	*eP*			**P**	**10 40 14.4**	**+3.4**
MARP	**Paez Belalcaza**	**14.40**	**127**	*eP*			**P**	**10 40 14.6**	**+3.3**
SPBC	**San Pablo de B**	**14.52**	**114**	*eP*			**P**	**10 40 13.7**	**+1.4**
ROSC	**El Rosal**	**14.66**	**117**	LR			LR	10 47 32.9	
	comp=Z,156nm,18.2s,baz=2.0,slow=45								
PRAC	**Prado**	**14.76**	**122**	*eP*			**P**	**10 40 16.8**	**+1.8**
BARC	**Barichara**	**14.96**	**109**	*eP*			**P**	**10 40 16.4**	**-1.0**
PAMC	**Pamplona, Colo**	**15.16**	**106**	*eP*			**P**	**10 40 20.7**	**+0.8**
CHIC	**Chingaza**	**15.28**	**116**	*eP*			**P**	**10 40 20.0**	**-1.1**
RUSC	**La Rusia**	**15.31**	**111**	*eP*			**P**	**10 40 24.9**	**+3.4**
FLOC	**Florencia**	**15.44**	**130**	*eP*			**P**	**10 40 25.6**	**+3.0**
PORT	**Chimborazo Vol**	**15.69**	**146**	P			**P**	**10 40 27.7**	**+1.8**
PORT					IAmb		IAmb	10 40 37.6	
	comp=Z,40nm,0.9s								
MACC	**Macarena, Meta**	**16.50**	**124**	*eP*			**P**	**10 40 36.9**	**+2.6**
SDV	**Santo Domingo**	**16.76**	**98**	Pn			**Pn**	**10 40 30.8**	**-4.8**
	comp=Z,0.8nm,0.3s,baz=301,slow=6.9,SNR=1.8								
SDV					LR		LR	10 48 41.7	
	comp=Z,151nm,18.8s,baz=270,slow=44 comp=Z,3.4nm,0.3s								
SDV	**Santo Domingo**	**16.76**	**98**	P			**Pn**	**10 40 34.4**	**-1.3**
PTLC	**Puerto Leguiza**	**17.02**	**132**	*eP*			**P**	**10 40 44.2**	**+4.2**
BRAL	**Brewton**	**19.32**	**1**	P			**Pn**	**10 41 05.9**	**-0.7**
	baz=181								
HKT	**Hockley**	**19.72**	**338**	P			**P**	**10 41 09.6**	**+0.1**
352A	**Blakely**	**19.76**	**6**	P			**Pn**	**10 41 11.9**	**+0.1**
352A					IAmb		IAmb	10 41 13.8	
	comp=Z,30nm,0.8s								
344A	**Westbrook Farm**	**19.84**	**352**	P			**Pn**	**10 41 11.9**	**-0.9**
344A					IAmb		IAmb	10 41 14.5	
	comp=Z,46nm,0.9s								
TIGA	**Tifton**	**19.91**	**10**	P			**Pn**	**10 41 12.9**	**-0.6**
TIGA					IAmb		IAmb	10 41 17.7	
	comp=Z,39nm,0.8s								
TIGA	**Tifton**	**19.91**	**10**	P			**P**	**10 41 12.2**	**+0.7**
	baz=191								
833A	**Chaparral WMA,**	**19.93**	**328**	P			**P**	**10 41 12.0**	**+0.1**
833A	**Chaparral WMA,**	**19.93**	**328**	P			**P**	**10 41 12.5**	**+0.6**
	baz=144,SNR=25								
342A	**Flagon Creek P**	**20.04**	**348**	P			Pn	10 41 15.6	+0.4
VBMS	**Vicksburg**	**20.57**	**353**	P			**P**	**10 41 19.1**	**+0.4**
	baz=171								
ATAH	**Atahualpa**	**20.80**	**154**	P			**P**	**10 41 23.1**	**+1.2**
	comp=Z,4.8nm,0.9s,baz=280,slow=7.1,SNR=5.8								
ATAH					LR		LR	10 48 31.0	
	comp=Z,228nm,18.4s,baz=342,slow=34 comp=Z,4.8nm,0.9s								
152A	**Waverly Hall**	**20.96**	**6**	IAmb		IAmb		10 41 28.3	
	comp=Z,27nm,0.8s								
NATX	**Nacogdoches**	**21.00**	**343**	P			Pn	10 41 25.0	-1.5
NATX					IAmb		IAmb	10 41 30.3	
	comp=Z,37nm,0.8s								
NATX	**Nacogdoches**	**21.00**	**343**	P			**P**	**10 41 24.1**	**+0.6**
	baz=160								
435B	**Jarrell**	**21.15**	**335**	P			**P**	**10 41 25.5**	**+0.4**
435B					IAmb		IAmb	10 41 34.6	
	comp=Z,24nm,0.9s								
435B	**Jarrell**	**21.15**	**335**	P			**P**	**10 41 25.0**	**0.0**
	baz=151								
LRAL	**Lakeview Retre**	**21.18**	**1**	P			**P**	**10 41 26.9**	**+1.6**
LRAL					IAmb		IAmb	10 41 30.7	
	comp=Z,25nm,0.9s								
LRAL	**Lakeview Retre**	**21.18**	**1**	P			**P**	**10 41 26.8**	**+1.4**
	baz=181,SNR=9.8								
Z47A	**Carrollton**	**21.35**	**358**	P			**P**	**10 41 29.6**	**+2.5**
Z47A					IAmb		IAmb	10 41 31.2	
	comp=Z,37nm,0.9s								
SJG	**San Juan**	**21.49**	**70**	LR			LR	10 50 26.4	
	comp=Z,143nm,19.3s,baz=249,slow=39								
Z51A	**Franklin**	**21.56**	**5**	P			**P**	**10 41 29.4**	**0.0**
Z51A					IAmb		IAmb	10 41 33.9	
	comp=Z,22nm,0.8s								
GOGA	**Godfrey**	**21.86**	**9**	P			**P**	**10 41 34.7**	**+2.1**
GOGA					IAmb		IAmb	10 41 36.5	
	comp=Z,18nm,0.8s								
GOGA	**Godfrey**	**21.86**	**9**	P			**P**	**10 41 33.8**	**+1.3**
	baz=190,SNR=9.4								
JCT	**Junction City**	**21.89**	**330**	P			**P**	**10 41 32.3**	**-0.7**
JCT	**Junction City**	**21.89**	**330**	P			**P**	**10 41 33.0**	**0.0**
	baz=146								
Z41A	**Richland Creek**	**21.96**	**348**	IAmb			IAmb	10 41 37.7	
	comp=Z,19nm,0.7s								
Z41A	**Richland Creek**	**21.96**	**348**	P			**P**	**10 41 33.9**	**+0.2**
	baz=166								
Y49A	**Blount Mountai**	**22.02**	**2**	IAmb			IAmb	10 41 37.0	
	comp=Z,27nm,1.1s								
Y45A	**Yeager Farm, C**	**22.09**	**355**	IAmb			IAmb	10 41 38.3	
	comp=Z,30nm,0.8s								
WHTX	**Lake Whitney,**	**22.16**	**337**	P			**P**	**10 41 35.7**	**-0.2**
	baz=153								
Y52A	**Lilburn**	**22.22**	**7**	IAmb			IAmb	10 41 40.0	
	comp=Z,20nm,0.7s								
Z38A	**Mt. Pleasant**	**22.50**	**343**	IAmb			IAmb	10 41 43.2	
	comp=Z,30nm,0.8s								
OXF	**Oxford**	**22.73**	**356**	P			**P**	**10 41 41.6**	**-0.2**
OXF	**Oxford**	**22.73**	**356**	P			**P**	**10 41 41.5**	**-0.4**
	baz=175,SNR=8.1								
TXAR	**Lajitas Array**	**23.13**	**322**	P			**P**	**10 41 47.0**	**+0.8**
	comp=Z,4.4nm,0.6s,baz=139,slow=9.5,SNR=88								
TXAR					PcP		**PcP**	**10 45 36.1**	**+2.4**
	comp=Z,1.0nm,0.8s,baz=147,slow=2.9,SNR=6.1 comp=Z,4.4nm,0.6s								
X40A	**Basin Creek Fa**	**23.16**	**349**	IAmb			IAmb	10 41 47.8	
	comp=Z,28nm,1.4s								
X40A	**Basin Creek Fa**	**23.16**	**349**	P			**P**	**10 41 46.2**	**-0.2**
	baz=166								
Z35A	**Perchaven, San**	**23.29**	**339**	IAmb			IAmb	10 41 50.4	
	comp=Z,37nm,1.1s								
UALR	**University of**	**23.35**	**350**	P			**P**	**10 41 46.9**	**-1.2**
UALR					IAmb		IAmb	10 41 49.3	
	comp=Z,20nm,0.9s								
W45A	**Hickory Valley**	**23.35**	**356**	P			**P**	**10 41 47.5**	**-0.7**
MIAR	**Mount Ida**	**23.37**	**347**	IAmb			IAmb	10 41 49.7	
	comp=Z,26nm,1.0s								
MIAR	**Mount Ida**	**23.37**	**347**	P			**P**	**10 41 48.0**	**-0.4**
	baz=165,SNR=15								
SWET	**Sewanee**	**23.39**	**3**	IAmb			IAmb	10 41 50.9	
	comp=Z,22nm,1.2s								
W50A	**Signal Mountai**	**23.42**	**4**	IAmb			IAmb	10 41 51.2	
	comp=Z,18nm,0.8s								
W52A	**Murphy**	**23.45**	**7**	IAmb			IAmb	10 42 06.5	
	comp=Z,21nm,1.0s								
ABTX	**Abilene, Hawle**	**23.61**	**334**	IAmb			IAmb	10 42 01.3	
	comp=Z,21nm,1.3s								
ABTX	**Abilene, Hawle**	**23.61**	**334**	P			**P**	**10 41 50.4**	**-0.3**
	baz=149								
BIRD	**Birdtown, Kers**	**23.65**	**14**	IAmb			IAmb	10 41 53.5	
	comp=Z,16nm,0.8s								
W41B	**Gary Mavity, V**	**23.72**	**350**	IAmb			IAmb	10 41 52.8	
	comp=Z,18nm,1.1s								
W41B	**Gary Mavity, V**	**23.72**	**350**	P			**P**	**10 41 51.3**	**-0.3**
	baz=168,SNR=6.1								
CPCT	**Cooper Cave**	**23.73**	**6**	IAmb			IAmb	10 41 54.5	
	comp=Z,23nm,0.9s								
WHAR	**Wooly Hollow**	**23.84**	**350**	IAmb			IAmb	10 41 53.7	
	comp=Z,14nm,0.9s								
KMSC	**Kings Mountain**	**23.93**	**12**	P			**P**	**10 41 53.3**	**-0.3**
	baz=195								
TKL	**Tuckaleechee C**	**24.02**	**7**	P			**P**	**10 41 54.8**	**+0.4**
	comp=Z,16nm,0.8s,baz=180,slow=9.1,SNR=16								
TKL					LR		LR	10 52 47.5	
	comp=Z,107nm,18.0s,baz=149,slow=41								
TKL	**Tuckaleechee C**	**24.02**	**7**	IAmb			IAmb	10 41 58.3	
	comp=Z,27nm,1.0s								
W39A	**Magazine**	**24.04**	**347**	P			**P**	**10 41 54.4**	**-0.2**
	baz=164,SNR=5.9								
V51A	**Loudon**	**24.10**	**6**	IAmb			IAmb	10 42 00.6	
	comp=Z,44nm,1.5s								
CLTN	**Cedars of Leba**	**24.25**	**2**	IAmb			IAmb	10 41 59.2	
	comp=Z,18nm,0.8s								
WVT	**Waverly**	**24.27**	**359**	P			**P**	**10 41 56.0**	**-0.7**
WVT	**Waverly**	**24.27**	**359**	P			**P**	**10 41 55.5**	**-1.2**
	baz=179								
FCAR	**Ozark Folk Cen**	**24.40**	**351**	IAmb			IAmb	10 41 59.0	
	comp=Z,13nm,0.8s								
LCAR	**Lake Charles**	**24.44**	**353**	IAmb			IAmb	10 41 58.9	
	comp=Z,13nm,0.7s								
U49A	**Red Boiling Sp**	**24.69**	**3**	IAmb			IAmb	10 42 10.5	
	comp=Z,10nm,0.8s								
PARMO	**Parma**	**24.89**	**356**	P			**P**	**10 42 02.5**	**+0.2**
TZTN	**Tazewell**	**24.93**	**7**	IAmb			IAmb	10 42 14.1	
	comp=Z,17nm,0.9s								
TZTN	**Tazewell**	**24.93**	**7**	P			**P**	**10 42 01.6**	**-1.1**
	baz=189								
U40A	**Yellville**	**24.98**	**350**	IAmb			IAmb	10 42 04.1	
	comp=Z,18nm,0.9s								
U40A	**Yellville**	**24.98**	**350**	P			**P**	**10 42 02.9**	**-0.3**
	baz=167,SNR=16								
PBMO	**Poplar Bluff**	**25.06**	**354**	IAmb			IAmb	10 42 04.8	
	comp=Z,16nm,0.9s								
WMOK	**Wichita Mounta**	**25.11**	**338**	IAmb			IAmb	10 42 07.1	
	comp=Z,22nm,1.2s								
WMOK	**Wichita Mounta**	**25.11**	**338**	P			**P**	**10 42 03.6**	**-0.8**
	baz=153,SNR=6.9								
TUL1	**Leonard**	**25.21**	**344**	P			**P**	**10 42 04.3**	**-0.9**
	baz=160,SNR=11								
U38A	**Gravette**	**25.37**	**347**	P			**P**	**10 42 05.8**	**-0.9**
MNTX	**Cornudas Mount**	**25.85**	**323**	P			**P**	**10 42 10.2**	**-1.0**
	baz=136								
SIUC	**Southern Illin**	**25.90**	**357**	IAmb			IAmb	10 42 12.2	
	comp=Z,18nm,0.8s								
BLA	**Blacksburg**	**26.12**	**13**	P			**P**	**10 42 13.4**	**-0.1**
	baz=196								
MSTX	**Muleshoe**	**26.18**	**330**	IAmb			IAmb	10 42 16.5	
	comp=Z,28nm,1.0s								
MSTX	**Muleshoe**	**26.18**	**330**	P			**P**	**10 42 13.0**	**-1.2**
	baz=144,SNR=9.7								
S39A	**Bolivar**	**26.36**	**349**	IAmb			IAmb	10 42 16.6	
	comp=Z,19nm,0.8s								
CCM	**Cathedral Cave**	**26.41**	**353**	P			**P**	**10 42 15.5**	**-0.6**
CCM					IAmb		IAmb	10 42 16.4	
	comp=Z,17nm,1.0s								
CCM	**Cathedral Cave**	**26.41**	**353**	P			**P**	**10 42 14.7**	**-1.4**
	baz=172								
AMTX	**Amarillo**	**26.42**	**333**	IAmb			IAmb	10 42 30.1	
	comp=Z,19nm,0.8s								
AMTX	**Amarillo**	**26.42**	**333**	P			**P**	**10 42 15.3**	**-1.1**
	baz=147								
U32A	**Winter Ranch,**	**26.65**	**339**				**P**	**10 42 17.5**	**-0.8**
Q44A	**Meyer Farm, Va**	**27.07**	**357**	IAmb			IAmb	10 42 22.5	
	comp=Z,22nm,0.9s								
Q52A	**Bidwell**	**27.48**	**9**	IAmb			IAmb	10 42 27.9	
	comp=Z,16nm,0.8s								
Q54A	**Cox Mills**	**27.74**	**11**	IAmb			IAmb	10 42 30.3	
	comp=Z,10nm,0.7s								
P49A	**Miami Univ. Ec**	**27.77**	**4**	P			**P**	**10 42 27.3**	**-0.9**
	baz=186								
P51A	**Williamsport**	**27.88**	**7**	IAmb			IAmb	10 42 31.0	
	comp=Z,11nm,0.7s								
P53A	**Whipple**	**28.13**	**10**	IAmb			IAmb	10 42 34.3	
	comp=Z,12nm,0.8s								
P52A	**Corning**	**28.16**	**9**	IAmb			IAmb	10 42 33.3	
	comp=Z,12nm,0.8s								
P52A	**Corning**	**28.16**	**9**	P			**P**	**10 42 30.0**	**-1.8**
	baz=191								
P38A	**Dawn**	**28.28**	**350**	IAmb			IAmb	10 42 33.5	
	comp=Z,21nm,1.0s								
O48B	**Farmland**	**28.46**	**4**	P			**P**	**10 42 33.1**	**-1.3**
	baz=185								
SFIN	**Lafayette**	**28.51**	**1**	P			**P**	**10 42 33.4**	**-1.4**
	baz=181								
ACSO	**Alum Creek Sta**	**28.63**	**7**	IAmb			IAmb	10 42 38.0	
	comp=Z,8.7nm,0.8s								
ACSO	**Alum Creek Sta**	**28.63**	**7**	P			**P**	**10 42 34.2**	**-1.7**
	baz=189								
HDIL	**Hopedale**	**28.73**	**357**	P			**P**	**10 42 35.6**	**-1.2**
	baz=176								
O53A	**New Philadelph**	**28.91**	**10**	P			**P**	**10 42 38.1**	**-0.3**
	baz=193								
T25A	**Trinidad**	**29.53**	**332**	P			**P**	**10 42 42.9**	**-1.4**
	baz=145								
SSPA	**Standing Stone**	**29.97**	**15**	P			**P**	**10 42 47.1**	**-0.7**
	baz=199								
M53A	**WI Miller and**	**30.16**	**10**	P			**P**	**10 42 49.4**	**-0.1**
	baz=193								
L40A	**Anamosa**	**30.38**	**354**	IAmb			IAmb	10 42 51.9	
	comp=Z,16nm,1.0s								
SDCO	**Great Sand Dun**	**30.53**	**331**	P			**P**	**10 42 53.1**	**-0.1**
	baz=143								
214A	**Organ Pipe Nat**	**30.84**	**315**	P			**P**	**10 42 55.4**	**-0.2**
	baz=125								
BGNE	**Belgrade**	**31.00**	**344**	P			**P**	**10 42 57.2**	**+0.3**
	baz=159								
JFWS	**Jewell Farm**	**31.14**	**356**	IAmb			IAmb	10 42 58.8	
	comp=Z,12nm,1.1s								
JFWS	**Jewell Farm**	**31.14**	**356**	P			**P**	**10 42 57.8**	**-0.3**
	baz=175								
MVCO	**Mesa Verde**	**31.63**	**327**	P			**P**	**10 43 02.6**	**-0.2**
	baz=138								
SAML	**Samuel**	**31.68**	**129**	P			**P**	**10 43 02.3**	**-0.9**
OGNE	**Ogallala**	**31.79**	**339**	P			**P**	**10 43 04.4**	**+0.4**
	baz=152								
BINY	**Binghamton**	**31.93**	**16**	P			**P**	**10 43 05.4**	**+0.3**
	baz=201								
ISCO	**Idaho Springs**	**32.24**	**333**	P			**P**	**10 43 07.9**	**-0.3**
	baz=145								
PV07	**Paradox Valley**	**32.63**	**328**	IAmb			IAmb	10 43 16.5	
	comp=Z,7.7nm,1.2s								
PV23	**Carpenter Ridg**	**32.83**	**328**	IAmb			IAmb	10 43 23.9	
	comp=Z,14nm,1.2s								
ECSD	**EROS Data Cent**	**32.84**	**348**	P			**P**	**10 43 11.8**	**-1.2**
	baz=163,SNR=16								
L61B	**Northampton**	**33.17**	**20**	P			**P**	**10 43 15.3**	**-0.6**
	baz=207								
PHWY	**Pilot Hill**	**33.42**	**335**	IAmb			IAmb	10 43 17.8	
	comp=Z,6.0nm,0.8s								
G40A	**Rib Lake**	**33.48**	**356**	IAmb			IA

comp=Z,95nm,18.7s,baz=235,slow=38
M31M Drury Creek, Y 60.52 337 P P 10 46 48.6 -0.4
baz=125
I29M Ogilvie Camp, 63.72 339 P P 10 47 09.5 -0.9
baz=122
INK Inuvik 63.87 343 P P 10 47 09.9 -1.4
comp=Z,2.8nm,1.0s,baz=74,slow=7.1,SNR=4.6
comp=Z,2.8nm,1.0s
INK Inuvik 63.87 343 P P 10 47 11.5 +0.2
INK IAmb IAmb 10 47 12.2
comp=Z,5.9nm,1.2s
INK Inuvik 63.87 343 P P 10 47 10.7 -0.6
baz=128
BCAR Beaver Creek A 63.89 336 P P 10 47 12.7 +1.1
L27K Beaver Creek, 63.91 336 P P 10 47 11.4 -0.3
baz=118
L26K Log Cabin Wild 64.51 335 P P 10 47 15.2 -0.4
baz=116
J26L Joseph Creek 65.25 337 P P 10 47 19.6 -0.9
baz=116
PAX Paxson 65.37 335 P P 10 47 20.3 -0.9
baz=114
RIDG Independent Ri 65.43 336 P P 10 47 21.0 -0.7
baz=115
WAT6 Susitna Watana 66.18 334 P P 10 47 26.0 -0.6
baz=112
HDA Harding Lake 66.55 336 P P 10 47 28.5 -0.3
baz=113
ILAR Eielson Array 66.66 336 P P 10 47 28.6 -0.8
comp=Z,1.1nm,1.0s,baz=122,slow=4.5,SNR=9.4
ILAR LR LR 11 23 00.6
comp=Z,78nm,18.3s,baz=215,slow=42
comp=Z,1.1nm,1.0s
RND Reindeer 66.95 335 P P 10 47 32.0 +0.6
RND IAmb IAmb 10 47 41.8
comp=Z,6.2nm,1.0s
H24K Noodor Dome 67.47 337 P P 10 47 34.4 -0.2
baz=113
SKT Skwentna 67.64 333 P P 10 47 35.0 -0.8
baz=108
I23K Minto, Yukon-K 67.78 336 P P 10 47 36.3 -0.2
baz=111
Q19K Cape Douglas, 67.80 329 P P 10 47 36.4 -0.4
baz=104
CHIR Chirikof Islan 68.14 326 P P 10 47 38.3 -0.7
baz=102
MLY Manley 68.29 336 P P 10 47 39.7 -0.1
baz=110
TOLK Toolik Lake Re 69.15 340 P P 10 47 44.6 -0.5
baz=112
K20K Telida 69.17 334 P P 10 47 44.7 -0.6
baz=106
JMIC Jan Mayen 75.35 19 LR LR 11 22 33.0
comp=Z,38nm,19.4s,baz=2.5,slow=37
MDT Midelt 77.74 59 LR LR 11 21 19.1
comp=Z,82nm,18.6s,baz=333,slow=35
NOA NORSAR Array B 83.96 29 LR LR 11 27 31.5
comp=Z,29nm,18.0s,baz=0.0,slow=36
SEY Seymchan 92.60 337 LR LR 11 37 60.0
comp=Z,35nm,18.7s,baz=186,slow=40
MA2 Magadan 95.08 334 LR LR 11 37 28.4
comp=Z,29nm,19.0s,baz=100,slow=38
NRIK Noril'sk 99.03 2 LR LR 11 36 00.4
comp=Z,41nm,21.2s,baz=16,slow=36
KURK Kurchatov 116.61 10 PKiKP 10 55 23.2 +0.4
KURBB Kurchatov Arra 116.68 10 PKP PKiKP 10 55 23.2 +0.3
comp=Z,0.2nm,0.3s,baz=0.0,slow=0.9,SNR=2.6
KSRS Korea Array 120.87 328 PKP PKiKP 10 55 32.8 +1.2
comp=Z,0.6nm,0.4s,baz=52,slow=1.4,SNR=4.6
KSH Kashi 126.70 16 PKP PKPdf 10 55 41.4 -1.4
LZH Lanzhou 131.24 348 *e*PKP **PKPdf 10 55 51.0 -0.5**
LZH pPKP PKiKP 10 55 55.5 +3.0
ASAR Alice Springs 139.04 247 PKP PKPdf 10 56 06.8 +0.6
comp=Z,1.0nm,0.9s,baz=73,slow=2.0,SNR=4.1
WRA Warramunga Arr 139.10 253 PKP PKiKP 10 56 07.6 -1.0
comp=Z,1.3nm,0.9s,baz=92,slow=3.5,SNR=5.9
PZH PanZhiHua 140.94 347 PKP PKPdf 10 56 10.3 +0.6
CMAR Chiang Mai Arr 149.33 348 PKP PKPdf 10 56 26.1 +1.9
comp=Z,6.5nm,0.8s,baz=336,slow=3.0,SNR=7.1
CMAR PKPbc PKiKP 10 56 29.7 0.0
comp=Z,6.6nm,0.8s,baz=343,slow=3.3,SNR=9.9

BJI ***13*** *10:44:07.0±0.0,27.0̇0N×130.0̇30E,h10km,mb4.4/29, mB4.5/13,Ms4.1/16,Ms7 4.0/18*
IDC ***13*** *10:44:08.1±0.7,26.9̇6N×130.0̇30E,h0km,mb4.0/19, mbtmp4.0/21,ML2.6/2,MS3.5/16,Error ellipse: s-maj=19.2km s-min=15.4km az=83.0*
MOS ***13*** *10:44:09.2±1.1,26.9̇6N×130.0̇38E,h19km,mb4.6/26,Error ellipse: s-maj=12.9km s-min=6.2km az=104.5*
JMA ***13*** *10:44:10.4±0.1,27.0̇0N±0.0̇4×130.0̇3E±0.0̇5,h60km,MD4.1/18, MV4.1/18,NEAR MINAMI-DAITOJIMA IS*
NEIC ***13*** *10:44:10.2±1.1,26.9̇2N±0.0̇7×130.0̇30E±0.0̇9,h10km±1km, mb4.6/49,Error ellipse: s-maj=15.3km s-min=10.0km az=126.0*
NIED ***13*** *10:44:10.4,26.9̇7N×130.0̇30E,h60km,MW4.5,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-4.01; $M_{\theta\theta}$2.32; $M_{\phi\phi}$ 1.68; $M_{r\theta}$3.92; $M_{\theta\phi}$ 1.45; $M_{r\phi}$0.39; Fault plane solution: $M_0$5.39000×10^{15} NP1:ϕs40.00000°, δ25.00000°,λ-120.00000°. NP2:ϕs253.00000°, δ69.00000°,λ-77.00000°.*

ISC 13 10:44:10.4±0.7,26.9̇6N±0.0̇4×130.31E±0.0̇4,h16km±4km, n175,σ1ŝ17/179,mb4.5/64,MS3.7/19,12C-1D,Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JKDJ	**Kitadaitoujima**	**1.34**	**138**	P			**Pn**	**10 44 33.4**	**-1.0**
JKDJ				S			**Sb**	**10 44 50.8**	**-1.3**
JKDJ	**Kitadaitoujima**	**1.34**	**138**	A			A	10 44 33.4	
comp=E,12nm,3.5s,comp=E,12nm,5.4s									
JZK	**Kikaishima**	**1.39**	**348**	P			**Pn**	**10 44 34.4**	**-0.8**
JZK				S			**Sb**	**10 44 51.6**	**-1.9**
JZK	**Kikaishima**	**1.39**	**348**	A			A	10 44 34.4	
comp=E,12nm,2.4s,comp=E,11nm,3.4s									
JMZ	**Minamidaito 2**	**1.40**	**144**	P			**Pn**	**10 44 34.1**	**-1.1**
JMZ				*e*S			**Sn**	**10 44 51.6**	**-1.8**
JMZ	**Minamidaito 2**	**1.40**	**144**	A			A	10 44 34.1	
comp=E,11nm,3.7s,comp=E,12nm,3.9s									
JTK	**Tokunoshima**	**1.46**	**305**	P			**Pn**	**10 44 34.9**	**-1.3**
JTK				*e*S			**Sn**	**10 44 52.8**	**-2.2**
JTK	**Tokunoshima**	**1.46**	**305**	A			A	10 44 34.9	
comp=E,4.0nm,4.7s,comp=E,3.0nm,1.4s									
JAM	**Amami Oshima**	**1.58**	**337**	P			**Pn**	**10 44 36.2**	**-1.6**
JAM				*e*S			**Sn**	**10 44 55.3**	**-2.6**
JOKE	**Okinoerabujima**	**1.60**	**285**	P			**Pn**	**10 44 37.2**	**-0.9**
JOKE				S			**Sn**	**10 44 56.7**	**-1.7**
JOKE	**Okinoerabujima**	**1.60**	**285**	A			A	10 44 37.2	
comp=E,5.0nm,1.8s,comp=E,4.0nm,3.6s									
JAMN	**Amaminishikomi**	**1.63**	**322**	P			**Pn**	**10 44 36.8**	**-1.7**
JAMN				*e*S			**Sn**	**10 44 56.2**	**-2.9**
JYRO	**Yoronjima**	**1.66**	**273**	P			**Pn**	**10 44 37.8**	**-1.1**
JYRO				*e*S			**Sn**	**10 44 57.1**	**-2.7**
JOW	**Kunigami**	**1.82**	**267**	Pn			**Pn**	**10 44 40.2**	**-0.9**
151nm,0.3s,baz=112,slow=26,SNR=152									
JOW				Sn			**Sn**	**10 45 01.4**	**-2.5**
244nm,0.3s,baz=101,slow=30,SNR=20									
JOW	**Kunigami**	**1.82**	**267**	Pn			**Pn**	**10 44 40.6**	**-0.5**
JOW	**Kunigami**	**1.82**	**267**	P			**Pn**	**10 44 40.2**	**-0.9**
JOW	**Kunigami**	**1.82**	**267**	A			A	10 44 40.2	
comp=E,3.0nm,2.2s,comp=E,5.0nm,1.7s									
JIH	**Iheya**	**2.09**	**273**	P			**Pn**	**10 44 43.8**	**-1.0**
JIH				S			**Sn**	**10 45 08.7**	**-1.8**
JNTH	**Nagotoyohara**	**2.09**	**258**	P			**Pn**	**10 44 43.4**	**-1.4**
JNTH				S			**Sn**	**10 45 07.7**	**-2.8**
JJT3	**Tamagusuku3**	**2.40**	**251**	P			**Pn**	**10 44 48.3**	**-0.8**
JAGN	**Aguni-jima**	**2.76**	**263**	P			**Pn**	**10 44 53.2**	**-0.9**
JAGN				S			**Sn**	**10 45 25.5**	**-1.6**
JKE	**Kume jima 2**	**3.21**	**260**	P			**Pn**	**10 44 59.2**	**-1.1**
JKE				S			**Sn**	**10 45 36.5**	**-1.7**
JSU	**Suzuyama**	**4.54**	**2**				**Pn**	**10 45 18.2**	**-0.3**
YHNB	**Yeheng**	**8.36**	**256**	Pn			**Pn**	**10 46 11.5**	**+0.3**
JHS	**Saijyo**	**8.37**	**16**				**Pn**	**10 46 11.8**	**+0.6**
SSLB	**Suanglung**	**9.03**	**252**	Pn			**Pn**	**10 46 19.5**	**-0.7**
JGF	**Kuroka**	**10.52**	**33**	Pn			**Pn**	**10 46 40.5**	**-0.1**
JCJ	**Chichijima**	**10.59**	**87**	LR			LR	10 50 08.0	
comp=Z,108nm,19.0s,baz=140,slow=34									
KSRS	**Korea Array**	**10.66**	**350**	Pn			**Pn**	**10 46 43.9**	**+1.4**
0.1nm,0.3s,baz=168,slow=13,SNR=6.9									
KSRS				LR			LR	10 50 47.3	
comp=Z,120nm,21.1s,baz=165,slow=38									
1.8nm,0.8s									
NJ2	**Nanjing**	**11.19**	**300**	*e*P			**Pn**	**10 46 47.3**	**-2.5**
NJ2							pmax	pmax	
comp=Z,16nm,0.6s									
NJ2							LR	LR	
comp=N,550nm,7.3s									
NJ2							LR	LR	
comp=E,420nm,8.5s									
NJ2							LR	LR	
comp=Z,840nm,11.4s									
MJAR	**Matsushiro Arr**	**11.68**	**33**	Pn			**Pn**	**10 46 57.1**	**+0.6**
baz=211,slow=13,SNR=2.8									
2.2nm,0.9s									
MSHR	**Mys Shultsa**	**15.60**	**2**	*ce*P			**Pn**	**10 47 47.4**	**-2.3**
MSHR							pmax	pmax	
comp=Z,6.0nm,1.0s									
HNS	**HongShan**	**16.80**	**312**	⇑P			**P**	**10 48 06.8**	**-0.3**
HNS				S			**Sn**	**10 51 12.0**	**+0.8**
HNS							pmax	pmax	
comp=Z,16nm,1.1s									
HNS							LR	LR	
comp=Z,320nm,16.3s									
HNS							LR	LR	
comp=Z,280nm,19.6s									
LYN	**LuoYang**	**17.09**	**301**	⇑ *i*P			**Pn**	**10 48 07.0**	**-1.7**
LYN				sP			pwP	10 48 21.3	+1.1
LYN				S			**Sn**	**10 51 16.4**	**-2.0**
LYN							pmax	pmax	
comp=Z,20nm,0.7s									
LYN							pmax	pmax	
comp=Z,210nm,7.8s									
LYN							LR	LR	
comp=Z,230nm,9.6s									
LYN							LR	LR	
comp=Z,430nm,11.4s									
LYN							LR	LR	
comp=Z,500nm,12.4s									
USRK	**Ussuriysk Ar.**	**17.26**	**4**	P			**P**	**10 48 13.0**	**+0.8**
comp=Z,2.1nm,0.8s,baz=178,slow=13,SNR=5.0									
USRK	**Ussuriysk Ar.**	**17.26**	**4**	P			**P**	**10 48 12.6**	**+0.4**
USRK	**Ussuriysk Ar.**	**17.26**	**4**	P			**P**	**10 48 12.6**	**+0.4**
BJT	**Baijiatuau**	**17.54**	**322**	P			**P**	**10 48 16.0**	**+0.7**
BJT	**Baijiatuau**	**17.54**	**322**	P			**P**	**10 48 16.0**	**+0.7**
BJT							pmax	pmax	
comp=Z,17nm,0.9s									
BJI	**Beijing**	**17.55**	**322**	P			**P**	**10 48 16.3**	**+0.9**
BJI				pP			**sP**	**10 48 19.8**	**-0.1**
BJI				S			**Sn**	**10 51 33.1**	**+3.5**
BJI							pmax	pmax	
comp=Z,15nm,1.0s									
GUMO	**Guam**	**19.04**	**131**	LR			LR	10 54 16.1	
comp=Z,155nm,19.7s,baz=308,slow=32									
XAN	**Xi'an**	**19.71**	**296**	⇑P			**Pn**	**10 48 40.1**	**-0.7**
XAN				sP			pwP	10 48 49.6	+0.3
XAN				S			**Sn**	**10 52 22.9**	**+0.9**
XAN							pmax	pmax	
comp=Z,15nm,1.2s									
XAN							pmax	pmax	
comp=Z,160nm,4.5s									
XAN							LR	LR	
comp=Z,400nm,11.9s									
XAN							LR	LR	
comp=Z,230nm,11.2s									
XAN							LR	LR	
comp=Z,380nm,11.9s									
DAV	**Davao City (W)**	**20.28**	**194**	LR			LR	10 56 24.1	
comp=Z,60nm,18.9s,baz=342,slow=36									
HHC	**Hu-ho-hao-te**	**20.77**	**317**	*e*P			**P**	**10 48 50.3**	**-0.6**
HHC							pmax	pmax	
comp=Z,26nm,1.1s									
HHC							pmax	pmax	
comp=Z,170nm,6.1s									
HHC							LR	LR	
comp=Z,200nm,10.2s									
HHC							LR	LR	
comp=Z,370nm,11.6s									
KLR	**Kul'dur**	**22.27**	**2**	P			**P**	**10 49 05.7**	**-1.1**
comp=Z,2.2nm,0.8s,baz=163,slow=8.3,SNR=10									
comp=Z,2.2nm,0.8s									
KLR	**Kul'dur**	**22.27**	**2**	*ce*P			**P**	**10 49 05.6**	**-1.1**
KLR							pmax	pmax	
comp=Z,13nm,2.5s									
LZH	**Lanzhou**	**24.27**	**299**	*e*P			**P**	**10 49 29.4**	**+2.3**
LZH				pP			pwP	10 49 34.6	-3.2
LZH							pmax	pmax	
comp=Z,19nm,1.1s									
LZH							LR	LR	
comp=Z,310nm,11.9s									
LZH							LR	LR	
comp=Z,380nm,12.5s									
LZH							LR	LR	
comp=Z,400nm,14.1s									
MYLDM	**Lahad Datu**	**24.41**	**210**	P			**P**	**10 49 28.9**	**+0.6**
MYLDM							IAmb	IAmb	10 49 31.6
comp=Z,17nm,1.1s									
KMI	**Kunming**	**24.82**	**272**	⇓P			**P**	**10 49 36.1**	**+3.8**
KMI				pP			pwP	10 49 38.1	-4.7
KMI							pmax	pmax	
comp=Z,6.0nm,0.8s									
PZH	**PanZhiHua**	**25.50**	**276**	P			**P**	**10 49 39.8**	**+1.5**
PZH							pmax	pmax	
comp=Z,10.0nm,1.1s									
PZH							pmax	pmax	
comp=Z,60nm,3.8s									
TNTI	**Ternate**	**26.19**	**187**	P			**P**	**10 49 44.1**	**-0.3**
ZEA	**Zeya**	**26.85**	**356**	*e*P			**P**	**10 49 50.2**	**+0.1**
ZEA							pmax	pmax	
comp=N,10.0nm,1.2s									
ZEA							pmax	pmax	
comp=Z,10.0nm,0.9s									
TOLI2	**Tolitoli**	**27.28**	**201**	P			**P**	**10 49 54.0**	**-0.3**
SIJI	**Sorong**	**27.68**	**178**	LR			LR	10 59 33.2	
comp=Z,46nm,20.1s,baz=155,slow=33									
ULN	**Ulaanbaatar**	**27.68**	**325**	*i*P			**P**	**10 49 57.8**	**-0.1**
ULN							pmax	pmax	
comp=Z,3.0nm,1.2s									
SONM	**Songino Array**	**28.00**	**324**	P			**P**	**10 50 01.3**	**+0.6**
SONM	**Songino Array**	**28.00**	**324**	P			**P**	**10 50 01.3**	**+0.6**
SONM							pmax	pmax	
comp=Z,3.0nm,1.1s									
GTA	**Gaotai**	**28.24**	**304**	*e*P			**P**	**10 50 05.0**	**+2.1**
GTA				sP			pwP	10 50 15.8	+2.1
GTA							pmax	pmax	
comp=Z,3.0nm,0.7s									
GTA							pmax	pmax	
comp=Z,50nm,5.1s									
GTA							LR	LR	
comp=Z,160nm,16.0s									
GTA							LR	LR	
comp=Z,300nm,17.8s									
GTA							LR	LR	
comp=Z,230nm,17.4s									
CMAR	**Chiang Mai Arr**	**30.08**	**260**	LR			LR	11 02 12.4	
comp=Z,25nm,20.9s,baz=80,slow=36									
PETK	**Petropavlovsk-**	**33.12**	**31**	P			**P**	**10 50 45.5**	**-0.1**
comp=Z,1.1nm,0.8s,baz=240,slow=4.8,SNR=2.4									
PETK							LR	LR	11 05 41.7
comp=Z,45nm,18.1s,baz=182,slow=39									
comp=Z,1.1nm,0.8s									
PETK	**Petropavlovsk-**	**33.12**	**31**	P			**P**	**10 50 46.1**	**+0.4**
PETK	**Petropavlovsk-**	**33.12**	**31**	P			**P**	**10 50 46.1**	**+0.4**
KAPI	**Kappang**	**33.38**	**199**	P			**P**	**10 50 47.5**	**-0.7**
KAPI	**Kappang**	**33.38**	**199**	P			**P**	**10 50 47.5**	**-0.7**
KAPI							pmax	pmax	
comp=Z,38nm,1.3s									
WMQ	**Urumqi**	**38.13**	**307**	*e*P			**P**	**10 51 30.8**	**+1.9**
WMQ							LR	LR	
comp=Z,97nm,17.3s									
SEY	**Seymchan**	**38.80**	**16**	*ce*P			**P**	**10 51 33.3**	**-0.9**
SEY							pmax	pmax	
comp=Z,3.0nm,1.3s									
PMG	**Port Moresby**	**39.67**	**153**	LR			LR	11 07 59.8	
comp=Z,44nm,19.2s,baz=292,slow=36									
KNRA	**Kununurra**	**42.40**	**182**	P			**P**	**10 52 04.5**	**+0.2**
MK31	**Makanchi Array**	**42.45**	**311**	P			**P**	**10 52 05.1**	**+0.5**
MK31	**Makanchi Array**	**42.45**	**311**	*i*P			**P**	**10 52 04.4**	**-0.2**
MKAR	**Makanchi Array**	**42.45**	**311**	P			**P**	**10 52 05.7**	**+1.1**
comp=Z,0.9nm,0.7s,baz=116,slow=8.5,SNR=6.9									
MKAR							PcP	**PcP**	**10 53 54.5**	**-2.9**
comp=Z,0.3nm,0.5s,baz=106,slow=5.1,SNR=2.0									
comp=Z,0.9nm,0.7s									
MKAR	**Makanchi Array**	**42.45**	**311**	*i*P			**P**	**10 52 05.5**	**+0.9**
MKAR							pmax	pmax	
comp=Z,1.0nm,0.7s									
MAKZ	**Makanchi**	**42.67**	**311**	P			**P**	**10 52 07.7**	**+1.3**
MAKZ	**Makanchi**	**42.67**	**311**	P			**P**	**10 52 07.7**	**+1.3**
MAKZ							pmax	pmax	
comp=Z,3.0nm,1.2s									
ZAA0	**Zalesovo Array**	**42.81**	**322**	P			**P**	**10 52 08.2**	**+0.8**
ZALV	**Zalesovo Beam**	**42.81**	**322**	P			**P**	**10 52 08.3**	**+0.9**
comp=Z,1.6nm,0.7s,baz=116,slow=6.8,SNR=6.5									
comp=Z,1.6nm,0.7s									
ZALV	**Zalesovo Beam**	**42.81**	**322**	P			**P**	**10 52 08.5**	**+1.1**
ZALV	**Zalesovo Beam**	**42.81**	**322**	*i* P			**P**	**10 52 08.5**	**+1.1**
ZALV							pmax	pmax	
comp=Z,2.0nm,0.7s									
TIXI	**Tiksi**	**44.74**	**359**	P			**P**	**10 52 23.7**	**+1.1**
comp=Z,1.1nm,0.3s,baz=92,slow=23,SNR=4.0									
comp=Z,1.1nm,0.3s									
TIXI	**Tiksi**	**44.74**	**359**	P			**P**	**10 52 23.2**	**+0.6**
TIXI	**Tiksi**	**44.74**	**359**	*ce*P			**P**	**10 52 23.4**	**+0.8**
TIXI							pmax	pmax	
comp=Z,8.0nm,2.5s									
KURK	**Kurchatov**	**45.59**	**316**	P			**P**	**10 52 29.6**	**-0.1**
KURK	**Kurchatov**	**45.59**	**316**	*ce*P			**P**	**10 52 29.2**	**-0.4**
KURK							pmax	pmax	
comp=Z,9.0nm,2.5s									
KURBB	**Kurchatov Arra**	**45.62**	**316**	P			**P**	**10 52 29.6**	**-0.4**
comp=Z,0.7nm,0.6s,baz=99,slow=9.0,SNR=4.9									
KURBB							LR	LR	11 12 25.6
comp=Z,151nm,21.7s,baz=116,slow=37									
comp=Z,0.7nm,0.6s									
BILL	**Bilibino**	**46.41**	**18**	⇑ *e*P			**P**	**10 52 36.0**	**+0.1**
BILL					*SP		**sP**	**10 52 40.0**	**-0.5**
BILL					*e*			10 52 45.6	
BILL					*e*S		**S**	**10 59 19.5**	**-3.2**
BILL					SSS		SSS	11 03 52.0	
BILL					pmax		pmax		
comp=Z,5.0nm,1.0s									
BILL					MLR		MLR		
comp=Z,42nm,17.0s									
WB0	**Warramunga Arr**	**46.61**	**175**	P			**P**	**10 52 37.7**	**-0.3**
WRA	**Warramunga Arr**	**46.78**	**175**	P			**P**	**10 52 39.6**	**+0.3**
comp=Z,6.0nm,0.9s,baz=352,slow=8.4,SNR=22									
comp=Z,6.0nm,0.9s									
WRA	**Warramunga Arr**	**46.78**	**175**	P			**P**	**10 52 38.5**	**-0.8**
WB2	**Warramunga Arr**	**46.78**	**175**	P			**P**	**10 52 39.9**	**+0.6**
WR0	**Warramunga Arr**	**46.82**	**175**	P			**P**	**10 52 39.5**	**-0.1**
NRIK	**Noril'sk**	**49.15**	**341**	*i* P			**P**	**10 52 57.9**	**+0.8**
NRIK							pmax	pmax	
comp=Z,7.0nm,1.4s									
CTAO	**Charters Tower**	**49.25**	**160**	P			**P**	**10 52 58.0**	**-0.5**
CTAO	**Charters Tower**	**49.25**	**160**	P			**P**	**10 52 58.0**	**-0.5**
CTAO							pmax	pmax	
comp=Z,41nm,1.1s									
PSA00	**Pilbara Seismi**	**49.29**	**193**	P			**P**	**10 52 59.2**	**+0.5**
PSA00	**Pilbara Seismi**	**49.29**	**193**	P			**P**	**10 52 59.0**	**+0.3**
PSA00							IAmb	IAmb	10 53 00.2
comp=Z,11nm,1.1s									
AS31	**Alice Springs**	**50.44**	**176**				**P**	**10 53 07.2**	**-0.3**
ASAR	**Alice Springs**	**50.45**	**176**	P			**P**	**10 53 08.1**	**+0.5**
comp=Z,4.0nm,0.8s,baz=1.7,slow=7.5,SNR=30									
ASAR					PcP		**PcP**	**10 54 25.8**	**+0.1**
comp=Z,1.2nm,0.9s,baz=358,slow=3.1,SNR=3.1									
comp=Z,4.0nm,0.8s									
ASAR	**Alice Springs**	**50.45**	**176**	P			**P**	**10 53 08.3**	**+0.8**
ASAR	**Alice Springs**	**50.45**	**176**	P			**P**	**10 53 08.3**	**+0.8**
KK31	**Karatay Array**	**50.52**	**305**	P			**P**	**10 53 08.8**	**+0.8**
KK31	**Karatay Array**	**50.52**	**305**	P			**P**	**10 53 08.8**	**+0.8**
KK31							pmax	pmax	
comp=Z,4.0nm,1.3s									
KKAR	**Karatay Array**	**50.52**	**305**	P			**P**	**10 53 08.6**	**+0.6**
KKAR	**Karatay Array**	**50.52**	**305**	P			**P**	**10 53 08.6**	**+0.6**
BRVK	**Borovoye**	**51.05**	**318**	P			**P**	**10 53 11.9**	**+0.1**
BRVK							IAmb	IAmb	10 53 13.8
comp=Z,5.7nm,0.9s									
BRVK	**Borovoye**	**51.05**	**318**	*ce*P			**P**	**10 53 10.7**	**-1.1**
BRVK							pmax	pmax	
comp=Z,6.0nm,1.0s									
ABKAR	**Akbulak array**	**57.51**	**313**	P			**P**	**10 53 59.1**	**+0.2**
ABKAR	**Akbulak array**	**57.51**	**313**	P			**P**	**10 53 59.6**	**+0.7**
ABKAR							IAmb	IAmb	10 54 00.2
comp=Z,3.4nm,0.9s									
ARU	**Arti**	**57.98**	**322**	P			**P**	**10 54 01.8**	**-0.2**
comp=Z,5.2nm,0.2s,baz=22,slow=1.3,SNR=5.3									
ARU	**Arti**	**57.98**	**322**	P			**P**	**10 54 02.7**	**+0.6**
ARU							IAmb	IAmb	10 54 16.5
comp=Z,6.5nm,1.0s									
ARU	**Arti**	**57.98**	**322**	*c i*P			**P**	**10 54 01.5**	**-0.6**
ARU								10 56 08.4	
ARU					S		**S**	**11 02 02.0**	**+0.4**
ARU					SS		**SS**	**11 05 50.3**	**-2.1**
ARU					pmax		pmax		
comp=Z,8.0nm,1.4s									
AKTO	**Aktyubinsk**	**58.65**	**314**	P			**P**	**10 54 08.3**	**+1.4**
comp=Z,0.8nm,0.7s,baz=90,slow=9.1,SNR=3.8									
AKTO					LR		LR	11 21 05.8	
comp=Z,47nm,20.7s,baz=67,slow=38									
comp=Z,0.8nm,0.7s									
DZM	**Mont Dzumac**	**59.99**	**141**	LR			LR	11 17 39.0	
comp=Z,43nm,18.2s,baz=238,slow=34									
IMAR	**Indian Mountai**	**59.99**	**27**	P			**P**	**10 54 15.9**	**+0.1**
H21K	**Melozitna Rive**	**60.38**	**28**	P			**P**	**10 54 19.5**	**+0.9**
H21K							IAmb	IAmb	10 54 43.9
comp=Z,4.4nm,1.1s									
H23K	**Yukon River**	**61.72**	**27**	P			**P**	**10 54 28.6**	**+0.9**
NEA2	**Nenana**	**62.00**	**29**	P			**P**	**10 54 30.0**	**+0.4**
NEA2							IAmb	IAmb	10 54 31.1
comp=Z,8.5nm,1.1s									
RND	**Reindeer**	**62.19**	**30**	P			**P**	**10 54 31.2**	**+0.3**
RND							IAmb	IAmb	10 54 31.6
comp=Z,5.7nm,0.9s									
RND	**Reindeer**	**62.19**	**30**	P			**P**	**10 54 31.3**	**+0.3**
RND							pmax	pmax	
comp=Z,6.0nm,0.9s									
MDM	**Murphy Dome**	**62.33**	**28**	P			**P**	**10 54 32.2**	**+0.4**
MDM							IAmb	IAmb	10 54 33.5
comp=Z,5.9nm,1.0s									
ILAR	**Eielson Array**	**62.92**	**29**	P			**P**	**10 54 35.5**	**-0.2**
comp=Z,0.5nm,0.8s,baz=271,slow=6.9,SNR=5.5									
comp=Z,0.5nm,0.8s									
HDA	**Harding Lake**	**62.93**	**29**	P			**P**	**10 54 35.0**	**-0.8**
HDA							IAmb	IAmb	10 54 36.1
comp=Z,5.9nm,1.0s									
BMAR	**Burnt Mountain**	**63.56**	**25**	P			**P**	**10 54 41.6**	**+1.7**
SCRK	**Sand Creek**	**64.27**

comp=Z,5.3nm,1.5s
BR131 Keskin Array S 78.05 308 P **P** 10 56 08.8 +0.1
BR131 IAmb IAmb 10 56 10.0
comp=Z,7.2nm,1.1s
BR131 Keskin Array S 78.05 308 P **P** 10 56 08.8 +0.1
BR131 pmax pmax
comp=Z,7.0nm,1.1s
BRTR Keskin Array B 78.05 308 P **P** 10 56 09.0 +0.3
comp=Z,2.4nm,0.9s,baz=122,slow=4.7,SNR=12
BRTR LR LR 11 34 48.3
comp=Z,40nm,20.1s,baz=17,slow=39
comp=Z,2.4nm,0.9s
BRTR Keskin Array B 78.05 308 P **P** 10 56 08.8 +0.1
BRTR Keskin Array B 78.05 308 *i* P **P** 10 56 09.3 +0.6
BRTR pmax pmax
comp=Z,3.0nm,0.9s
NB2 NORSAR Subarra 79.47 334 P **P** 10 56 15.0 -1.0
comp=Z,1.0nm,0.8s,baz=48,slow=5.3
NOA NORSAR Array B 79.47 334 P **P** 10 56 15.3 -0.7
comp=Z,2.5nm,0.9s,baz=50,slow=5.3,SNR=7.3
comp=Z,2.5nm,0.9s
VRI Vrincioaia 79.86 316 P **P** 10 56 19.7 +1.4
VRI pmax pmax
comp=Z,3.0nm,0.7s
BUR08 Bucovina Ar. S 79.93 318 P **P** 10 56 18.9 0.0
BURAR Bucovina Array 79.93 318 P **P** 10 56 18.2 -0.6
BURAR Bucovina Array 79.93 318 *e*P **P** 10 56 18.2 -0.6
BURAR pmax pmax
comp=Z,3.0nm,1.2s
MLR Muntele Rosu 80.52 316 LR LR 11 36 18.6
comp=Z,60nm,19.8s,baz=14,slow=39
NIE Niedzica 81.83 322 P **P** 10 56 31.0 +2.1
NIE pmax pmax
comp=Z,3.0nm,1.4s
VTS Vitosha 83.64 315 P **P** 10 56 39.6 +1.0
VTS pmax pmax
comp=Z,7.0nm,1.1s
PINE Pine Mountain 84.08 44 P **P** 10 56 41.7 +0.9
PINE IAmb IAmb 10 56 43.3
comp=Z,6.0nm,0.9s
KRUC Moravsky 84.17 323 P **P** 10 56 41.6 +0.7
KRUC pmax pmax
comp=Z,5.0nm,1.1s
BRG Berggiesshubel 84.39 325 *e*P **P** 10 56 42.8 +0.7
BRG Amp 10 56 47.1
comp=Z,2.7nm,0.6s
BRG Berggiesshubel 84.39 325 *e*P **P** 10 56 42.7 +0.7
BRG pmax pmax
comp=Z,3.0nm,0.6s
CLL Collm 84.61 326 P **P** 10 56 43.3 +0.2
CLL Collm 84.61 326 *e*P **P** 10 56 44.0 +0.9
CLL pmax pmax
comp=Z,13nm,1.1s
CLL Collm 84.61 326 *e*P **P** 10 56 44.0 +0.9
comp=Z,13nm,1.1s
MOD Modoc Plateau 85.48 45 P **P** 10 56 46.9 -1.0
MOD IAmb IAmb 10 56 49.9
comp=Z,6.7nm,1.3s
GERES GERESS Array B 85.73 324 P **P** 10 56 49.5 +0.6
comp=Z,0.6nm,0.7s,baz=9.5,slow=8.4,SNR=2.8
comp=Z,0.6nm,0.7s
IDI Anoyia 86.26 308 LR LR 11 41 55.8
comp=Z,30nm,18.3s,baz=74,slow=40
NVAR Mina Array Bea 88.66 47 P **P** 10 57 04.1 +0.6
comp=Z,0.7nm,0.8s,baz=280,slow=3.6,SNR=6.5
comp=Z,0.7nm,0.8s
NVAR Mina Array Bea 88.66 47 P **P** 10 57 03.5 +0.1
YHL Hebgen Lake 89.20 39 P **P** 10 57 06.6 +0.6
YHL IAmb IAmb 10 57 08.6
comp=Z,4.6nm,1.2s
H17A Grant Village 89.83 39 P **P** 10 57 11.1 +2.2
HVU Hansel Valley 90.17 42 P **P** 10 57 11.1 +0.7
HVU IAmb IAmb 10 57 13.1
comp=Z,4.3nm,1.0s
HVU Hansel Valley 90.17 42 P **P** 10 57 11.1 +0.7
HVU pmax pmax
comp=Z,4.0nm,1.0s
DUG Dugway, Tooele 91.10 43 P **P** 10 57 14.5 -0.2
DUG IAmb IAmb 10 57 17.2
comp=Z,4.5nm,1.0s
DUG Dugway, Tooele 91.10 43 P **P** 10 57 14.5 -0.2
DUG pmax pmax
comp=Z,4.0nm,1.0s
PDAR Pinedale Array 91.43 40 P **P** 10 57 16.8 +0.5
comp=Z,1.1nm,0.9s,baz=285,slow=2.3,SNR=7.8
comp=Z,1.1nm,0.9s
NLU North Lily Min 91.70 43 P **P** 10 57 17.8 +0.2
NLU IAmb IAmb 10 57 19.9
comp=Z,3.6nm,0.9s
LCMT Little Creek M 92.75 46 IAmb IAmb 10 57 24.8
comp=Z,4.8nm,1.2s

IDC ***13*** *10:48:55.1±1.4,26°.96N×130°.20E,h0km,mb3.5/5, mbtmp3.5/5,Error ellipse: s-maj=34.1km s-min=22.1km az=49.0*
JMA ***13*** *10:48:57.2±0.1,27°.0N±0°.3×130°.3E±0°.4,h60km,MV3.5/19, NEAR MINAMI-DAITOJIMA IS*
ISC 13 10:48:54.3±1.6,26°.93N±0°.04×130°.25E±0°.04,h1km±11km, n22,σ1°34/34,mb3.6/5,Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JKDJ	**Kitadaitoujima**	**1.35**	**136**	P	**Pb**		**10 49 20.0**	**-0.5**
JKDJ				*e*S	**Sb**		**10 49 36.9**	**-1.4**
JZK	**Kikaishima**	**1.40**	**350**	P	**Pg**		**10 49 21.1**	**-0.1**
JZK				*e*S	**Sn**		**10 49 38.2**	**-2.0**
JMZ	**Minamidaito 2**	**1.41**	**141**	*e*P	**Pg**		**10 49 21.1**	**-0.1**
JMZ				S	**Sn**		**10 49 38.0**	**-2.3**
JTK	**Tokunoshima**	**1.43**	**307**	P	**Pg**		**10 49 21.8**	**0.0**
JOKE	**Okinoerabujima**	**1.55**	**287**	P	**Pb**		**10 49 23.9**	**0.0**
JOKE				*e*S	**Sn**		**10 49 43.0**	**-0.9**
JAM	**Amami Oshima**	**1.58**	**339**	P	**Pb**		**10 49 23.4**	**-1.0**
JAM				*e*S	**Sn**		**10 49 42.3**	**-2.4**
JYRO	**Yoronjima**	**1.60**	**274**	P	**Pb**		**10 49 24.4**	**-0.3**
JYRO				*e*S	**Sb**		**10 49 44.5**	**-1.0**
JAMN	**Amaminishikomi**	**1.62**	**324**	P	**Pb**		**10 49 24.0**	**-1.0**
JAMN				S	**Sn**		**10 49 43.2**	**-2.3**
JOW	**Kunigami**	**1.76**	**267**	Pn	**Pb**		**10 49 26.7**	**-0.8**
JOW	108nm,0.3s,baz=114,slow=22,SNR=16			Sn	**Sb**		**10 49 49.1**	**-1.0**
	79nm,0.3s,baz=107,slow=25,SNR=14							
JOW	**Kunigami**	**1.76**	**267**	P	**Pb**		**10 49 26.7**	**-0.8**
JOW				*e*S	**Sn**		**10 49 48.1**	**-1.0**
JNTH	**Nagotoyohara**	**2.03**	**259**	P	**Pn**		**10 49 30.0**	**+0.3**
JNTH				*e*S	**Sn**		**10 49 54.3**	**-1.4**
JIH	**Iheya**	**2.04**	**274**	P	**Pb**		**10 49 30.7**	**-1.4**
JIH				*e*S	**Sn**		**10 49 55.5**	**-0.3**
JJT3	**Tamagusuku3**	**2.34**	**251**	P	**Pn**		**10 49 34.7**	**+0.8**
JTAJ	**Takarajima**	**2.40**	**338**	P	**Pn**		**10 49 34.5**	**-0.3**
JAGN	**Aguni-jima**	**2.71**	**264**	*e*P	**Pn**		**10 49 39.7**	**+0.8**
JAGN				S	**Sn**		**10 50 10.9**	**-1.4**
JKE	**Kume jima 2**	**3.15**	**260**	P	**Pn**		**10 49 45.0**	**-0.1**
KSRS	**Korea Array**	**10.68**	**350**	Pn	**Pn**		**10 51 31.8**	**+3.4**
	0.2nm,0.3s,baz=167,slow=14,SNR=1.7							
MKAR	**Makanchi Array**	**42.43**	**311**	P	**P**		**10 56 51.8**	**+1.1**
	0.4nm,0.7s,baz=111,slow=7.9,SNR=2.5							
	0.4nm,0.7s							
KURBB	**Kurchatov Arra**	**45.61**	**316**	P	**P**		**10 57 16.7**	**+0.7**
	0.4nm,0.6s,baz=98,slow=8.8,SNR=2.8							
	0.4nm,0.6s							
WRA	**Warramunga Arr**	**46.76**	**175**	P	**P**		**10 57 25.6**	**+0.2**
	0.9nm,0.7s,baz=355,slow=8.4,SNR=5.2							
	0.9nm,0.7s							
ASAR	**Alice Springs**	**50.42**	**176**	P	**P**		**10 57 55.5**	**+2.0**
	0.6nm,0.8s,baz=6.7,slow=14,SNR=8.6							
	0.6nm,0.8s							
NOA	**NORSAR Array B**	**79.48**	**334**	P	**P**		**11 01 02.3**	**0.0**
	0.2nm,0.4s,baz=53,slow=5.1,SNR=2.7							
	0.2nm,0.4s							

IDC 13 11:17:51.6±3.7,17°.27S×179°.42W,h552km±18km, mb2.8/4,mbtmp3.6/5,Error ellipse: s-maj=146.6km s-min=32.5km az=140.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.46**	**259**	P	P		11 19 03.8	0.0
	12nm,0.6s,baz=50,slow=6.5,SNR=19							
STKA	**Stephens Creek**	**38.10**	**240**	P	P		11 24 23.9	0.0
	0.6nm,0.4s,baz=78,slow=14,SNR=1.3							
	0.6nm,0.4s							
WRA	**Warramunga Arr**	**43.80**	**259**	P	P		11 25 08.8	-0.5
	0.7nm,1.0s,baz=95,slow=7.8,SNR=8.4							
	0.7nm,1.0s							
ASAR	**Alice Springs**	**44.04**	**254**	P	P		11 25 11.2	+0.1
	0.9nm,0.4s,baz=89,slow=7.9,SNR=25							
	0.9nm,0.4s							
ILAR	**Eielson Array**	**85.49**	**13**	P	P		11 29 30.8	-0.1
	0.4nm,1.1s,baz=223,slow=4.9,SNR=2.2							
	0.4nm,1.1s							

NEIC ***13*** *11:31:29.9±2.2,19°.0S±0°.1×169°.7E±0°.2,h144km±13km, mb4.3/9,Error ellipse: s-maj=28.1km s-min=18.8km az=117.0*
IDC ***13*** *11:31:36.3±8.1,19°.11S×168°.91E,h152km±53km,mb3.5/3, mbtmp3.9/4,Error ellipse: s-maj=123.0km s-min=67.8km az=119.0*
ISC 13 11:31:31.7±1.6,19°.1S±0°.1×169°.4E±0°.2,h150km,n17, σ1°08/18,mb4.2/7,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**2.71**	**208**	Pn	**Pn**		**11 32 15.3**	**-0.1**
PINNC	**Pines Island,**	**3.96**	**207**	Pn	**Pn**		**11 32 32.4**	**+1.0**
DZM	**Mont Dzumac**	**4.06**	**222**	P	**Pn**		**11 32 33.4**	**+0.5**
	6.1nm,0.3s,baz=117,slow=16,SNR=30							
DZM				S	**Sn**		**11 33 18.0**	**-2.4**
	35nm,0.7s,baz=279,slow=23,SNR=6.6							
DZM	**Mont Dzumac**	**4.06**	**222**		**Pn**		**11 32 33.1**	**+0.3**
EIDS	**Eidsvold**	**18.07**	**246**	P	**P**		**11 35 33.4**	**+1.7**
EIDS				IAmb	IAmb		11 35 55.8	
	comp=Z,30nm,1.4s							
PATS	**Pohnpei**	**27.98**	**336**	P	**P**		**11 37 07.6**	**-0.8**
STKA	**Stephens Creek**	**28.06**	**238**	P	**P**		**11 37 10.3**	**+1.2**
	comp=Z,1.6nm,0.6s,baz=86,slow=11,SNR=5.2							
	comp=Z,1.6nm,0.6s							
STKA	**Stephens Creek**	**28.06**	**238**	P	**P**		**11 37 09.9**	**+0.8**
WR0	**Warramunga Arr**	**32.83**	**263**	P	**P**		**11 37 50.2**	**-1.1**
WR0				IAmb	IAmb		11 38 01.9	
	comp=Z,11nm,1.4s							
WB0	**Warramunga Arr**	**32.99**	**263**	P	**P**		**11 37 51.5**	**-1.1**
WRA	**Warramunga Arr**	**33.02**	**263**	P	**P**		**11 37 52.8**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=98,slow=8.3,SNR=10							
	comp=Z,0.4nm,0.5s							
WRA	**Warramunga Arr**	**33.02**	**263**	P	**P**		**11 37 52.1**	**-0.9**
AS31	**Alice Springs**	**33.31**	**256**	P	**P**		**11 37 55.5**	**+0.1**
AS31				IAmb	IAmb		11 37 56.3	
	comp=Z,1.4nm,0.5s							
ASAR	**Alice Springs**	**33.31**	**256**	P	**P**		**11 37 55.9**	**+0.4**
	comp=Z,2.5nm,0.6s,baz=84,slow=8.8,SNR=58							
	comp=Z,2.5nm,0.6s							
ASAR	**Alice Springs**	**33.31**	**256**	P	**P**		**11 37 55.3**	**-0.2**
MBWA	**Marble Bar**	**46.53**	**259**	P	**P**		**11 39 45.1**	**+0.6**
MBWA				IAmb	IAmb		11 40 13.8	
	comp=Z,17nm,1.5s							
QSPA	**South Pole Qui**	**70.97**	**180**	P	**P**		**11 42 31.9**	**-0.8**
QSPA				IAmb	IAmb		11 42 51.4	
	comp=Z,5.1nm,1.4s							

IDC ***13*** *11:44:39.7±0.9,15°.58S×179°.81W,h0km,mb4.1/10, mbtmp4.1/11,ML5.3/1,MS3.7/46,Error ellipse: s-maj=31.7km s-min=17.8km az=124.0*
NEIC ***13*** *11:44:40.2±0.9,15°.6S±0°.1×179°.7W±0°.1,h10km±1km, mb4.8/17,Error ellipse: s-maj=26.2km s-min=8.7km az=142.0*
GCMT ***13*** *11:44:44.2±0.3,15°.77S±0°.02×179°.27W±0°.02,h27km±1km, MW4.9/71,Moment Tensor Solution. s11,c13; s71,c93; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=.0.30±.14; Mθθ0.47±.11; Mϕϕ-0.17±.10; Mrθ-1.52±.23; Mθϕ2.11±.09; Mϕr0.08±.17; Best double couple: M₀2.62900×10¹⁶ NP1:ϕs185.00000°,δ54.00000°,λ-175.00000°. NP2: ϕs92.00000°,δ86.00000°,λ-36.00000°. Principal axes: T 2.7190, Plg22.0000°, Azm144.0000°; N -0.1800, Plg54.0000°, Azm267.0000°; P -2.5400, Plg28.0000°, Azm42.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 13 11:44:40.2±0.6,15°.6S±0°.1×179°.7W±0°.1,h10km,n80, σ1°10/40,mb4.6/19,MS3.8/44,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.97**	**225**	Pn	**Pn**		**11 45 27.2**	**-0.3**
	16nm,0.3s,baz=252,slow=19,SNR=100							
MSVF				Sn	**Sn**		**11 46 04.4**	**+1.2**
	35nm,0.3s,baz=315,slow=18,SNR=5.6							
MSVF				LR	LR		11 46 46.5	
	comp=Z,4μm,18.7s,baz=39,slow=43							
	94nm,0.6s							
MSVF	**Nonsavu**	**2.97**	**225**		**Pn**		**11 45 26.8**	**-0.7**
AFI	**Afiamalu**	**7.89**	**78**	LR	LR		11 48 59.0	
	comp=Z,520nm,21.4s,baz=228,slow=33							
RAO	**Raoul Island**	**13.65**	**173**	LR	LR		11 52 10.6	
	comp=Z,1μm,21.3s,baz=132,slow=33							
DZM	**Mont Dzumac**	**14.55**	**242**	*e*LR	LR		11 51 15.8	
	comp=Z,666nm,26.0s							
DZM	**Mont Dzumac**	**14.55**	**242**	LR	LR		11 53 20.0	
	comp=Z,323nm,18.6s,baz=40,slow=36							
RAR	**Rarotonga**	**19.74**	**109**	LR	LR		11 54 48.1	
	comp=Z,140nm,19.2s,baz=258,slow=31							
HNR	**Honiara**	**20.75**	**285**	LR	LR		11 56 22.6	
	comp=Z,427nm,18.4s,baz=76,slow=34							
URZ	**Urewera**	**22.70**	**186**	LR	LR		11 56 57.0	
	comp=Z,249nm,18.9s,baz=31,slow=32							
LTZ	**Lake Taylor**	**27.91**	**193**	P	**P**		**11 50 30.4**	**-0.1**
LTZ				IAmb	IAmb		11 50 33.0	
	comp=Z,18nm,0.9s							
EIDS	**Eidsvold**	**28.93**	**246**	P	**P**		**11 50 40.3**	**+0.5**
EIDS				IAmb	IAmb		11 50 56.9	
	comp=Z,37nm,1.5s							
PPT2	**Papeete2**	**28.96**	**98**	*e*LR	LR		11 56 49.7	
	comp=Z,240nm,26.0s							
PPT	**Papeete**	**28.96**	**98**	LR	LR		11 59 02.1	
	comp=Z,63nm,20.2s,baz=280,slow=30							
TBI	**Tubuai**	**29.52**	**110**	*e*LR	LR		11 57 10.6	
	comp=Z,366nm,28.5s							
LBZ	**Lake Benmore**	**29.90**	**195**	P	**P**		**11 50 48.1**	**-0.1**
LBZ				IAmb	IAmb		11 51 15.7	
	comp=Z,38nm,1.4s							
KRVT	**Keravat (AS076**	**29.95**	**289**	LR	LR		12 01 33.9	
	comp=Z,321nm,20.1s,baz=282,slow=34							
MLZ	**Mavora Lakes**	**31.35**	**197**	P	**P**		**11 51 02.4**	**+1.4**
CTA	**Charters Tower**	**32.63**	**257**	LR	LR		12 03 08.4	
	comp=Z,132nm,18.3s,baz=84,slow=34							
PMG	**Port Moresby**	**32.87**	**277**	LR	LR		12 01 34.2	
	comp=Z,128nm,21.2s,baz=84,slow=31							
COEN	**Coen**	**35.86**	**268**	P	**P**		**11 51 40.2**	**-0.4**
COEN				IAmb	IAmb		11 51 59.0	
	comp=Z,27nm,1.4s							
STKA	**Stephens Creek**	**38.66**	**238**	P	**P**		**11 52 05.5**	**+1.2**
	comp=Z,6.3nm,1.0s,baz=67,slow=11,SNR=4.8							
STKA				LR	LR		12 06 19.6	
	comp=Z,192nm,21.1s,baz=36,slow=34							
	comp=Z,6.3nm,1.0s							
STKA	**Stephens Creek**	**38.66**	**238**	P	**P**		**11 52 04.0**	**-0.2**
TAOE	**Nuku Hiva Isla**	**39.23**	**85**	*e*LR	LR		12 01 31.6	
	comp=Z,113nm,24.4s							
BBOO	**Buckleboo**	**43.44**	**239**	P	**P**		**11 52 43.2**	**-0.3**
BBOO				IAmb	IAmb		11 52 57.8	
	comp=Z,13nm,1.1s							
WB0	**Warramunga Arr**	**43.79**	**258**	P	**P**		**11 52 45.9**	**-0.6**
WB0				IAmb	IAmb		11 53 09.7	
	comp=Z,20nm,1.4s							
WRA	**Warramunga Arr**	**43.83**	**257**	P	**P**		**11 52 46.5**	**-0.4**
	comp=Z,1.4nm,0.9s,baz=90,slow=8.2,SNR=7.1							
WRA				LR	LR		12 10 03.0	
	comp=Z,98nm,18.5s,baz=44,slow=35							
	comp=Z,1.4nm,0.9s							
WRA	**Warramunga Arr**	**43.83**	**257**	P	**P**		**11 52 46.3**	**-0.6**
AS31	**Alice Springs**	**44.22**	**252**	P	**P**		**11 52 49.7**	**-0.3**
ASAR	**Alice Springs**	**44.22**	**252**	P	**P**		**11 52 50.2**	**+0.2**
	comp=Z,5.3nm,1.0s,baz=84,slow=8.8,SNR=46							
ASAR				LR	LR		12 09 35.3	
	comp=Z,115nm,19.7s,baz=100,slow=34							
	comp=Z,5.3nm,1.0s							
ASAR	**Alice Springs**	**44.22**	**252**	P	**P**		**11 52 49.9**	**-0.1**
GUMO	**Guam**	**45.48**	**308**	LR	LR		12 09 17.6	
	comp=Z,36nm,21.3s,baz=118,slow=33							
KNRA	**Kununurra**	**49.48**	**263**	P	**P**		**11 53 29.1**	**-2.1**
KNRA				IAmb	IAmb		11 53 46.7	
	comp=Z,33nm,1.4s							
FORT	**Forrest**	**49.86**	**243**	P	**P**		**11 53 32.9**	**-1.0**
SIJI	**Sorong**	**50.49**	**282**	LR	LR		12 14 54.9	
	comp=Z,73nm,19.7s,baz=44,slow=36							
DAV	**Davao City (W)**	**58.66**	**289**	LR	LR		12 19 55.1	
	comp=Z,33nm,18.1s,baz=99,slow=36							

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**60.27**	**273**	LR	LR		12 21 01.5	
	comp=Z,24nm,18.6s,baz=110,slow=36							
JHJ	**Hachijo jima 2**	**62.00**	**322**	LR	LR		12 15 38.2	
	comp=Z,47nm,21.9s,baz=100,slow=30							
VNDA	**Vanda**	**62.59**	**184**	P	**P**		**11 55 06.6**	**+2.5**
	comp=Z,0.5nm,0.7s,baz=355,slow=9.0,SNR=3.8							
VNDA				LR	LR		12 18 34.8	
	comp=Z,45nm,18.3s,baz=34,slow=32							
	comp=Z,0.5nm,0.7s							
VNDA	**Vanda**	**62.59**	**184**	P	**P**		**11 55 04.4**	**+0.3**
MJAR	**Matsushiro Arr**	**65.33**	**324**	P	**P**		**11 55 24.3**	**+1.5**
	comp=Z,2.9nm,0.7s,baz=146,slow=7.2,SNR=7.0							
MJAR				LR	LR		12 19 20.4	
	comp=Z,71nm,19.2s,baz=134,slow=32							
	comp=Z,2.9nm,0.7s							
RPN	**Rapa Nui**	**65.83**	**113**	LR	LR		12 16 38.6	
	comp=Z,68nm,21.9s,baz=259,slow=29							
JHS	**Saijyo**	**67.35**	**319**	P	**P**		**11 55 35.8**	**0.0**
SHEM	**Shemya Is, Ala**	**68.29**	**356**	LR	LR		12 19 33.1	
	comp=Z,74nm,19.6s,baz=92,slow=31							
ASAJ	**Asahikawa**	**68.68**	**332**	LR	LR		12 26 00.5	
	comp=Z,34nm,18.0s,baz=168,slow=36							
PETK	**Petropavlovsk-**	**71.17**	**346**	P	**P**		**11 55 59.3**	**+0.3**
	comp=Z,0.8nm,0.8s,baz=161,slow=9.2,SNR=2.3							
PETK				LR	LR		12 20 44.4	
	comp=Z,64nm,21.8s,baz=146,slow=30							
	comp=Z,0.8nm,0.8s							
PETK	**Petropavlovsk-**	**71.17**	**346**	P	**P**		**11 55 58.1**	**-0.9**
KSRS	**Korea Array**	**72.16**	**319**	P	**P**		**11 56 06.7**	**+1.4**
	comp=Z,1.5nm,0.8s,baz=128,slow=6.8,SNR=7.2							
KSRS				LR	LR		12 22 17.1	
	comp=Z,46nm,21.5s,baz=125,slow=31							
	comp=Z,1.5nm,0.8s							
USRK	**Ussuriysk Ar.**	**74.03**	**326**	LR	LR		12 25 47.6	
	comp=Z,39nm,18.6s,baz=86,slow=33							
QSPA	**South Pole Qui**	**74.40**	**180**	P	**P**		**11 56 17.1**	**-1.2**
QSPA				IAmb	IAmb		11 56 24.5	
	comp=Z,6.1nm,0.8s							
KDAK	**Kodiak Island**	**76.53**	**15**	LR	LR		12 26 02.7	
	comp=Z,34nm,19.6s,baz=233,slow=32							
KLR	**Kul'dur**	**77.52**	**330**	LR	LR		12 26 33.9	
	comp=Z,65nm,19.9s,baz=126,slow=32							
YBH	**Yreka Blue Hor**	**77.60**	**40**	LR	LR		12 24 19.6	
	comp=Z,80nm,18.9s,baz=252,slow=31							
LPIG	**La Paz**	**78.44**	**61**	LR	LR		12 22 49.3	
	comp=Z,65nm,20.3s,baz=234,slow=29							
MA2	**Magadan**	**78.68**	**345**	LR	LR		12 27 26.1	
	comp=Z,41nm,20.6s,baz=153,slow=33							
NVAR	**Mina Array Bea**	**78.70**	**45**	P	**P**		**11 56 43.8**	**+0.6**
	comp=Z,0.6nm,0.8s,baz=224,slow=8.5,SNR=6.2							
	comp=Z,0.6nm,0.8s							
BBB	**Bella Bella**	**80.96**	**29**	LR	LR		12 26 35.8	
	comp=Z,36nm,18.6s,baz=260,slow=31							
SEY	**Seymchan**	**81.29**	**348**	LR	LR		12 29 46.6	
	comp=Z,27nm,19.2s,baz=163,slow=33							
ELK	**Elko**	**81.90**	**44**	LR	LR		12 25 10.8	
	comp=Z,75nm,20.4s,baz=165,slow=30							
ILAR	**Eielson Array**	**83.98**	**14**	P	**P**		**11 57 10.8**	**+0.5**
	comp=Z,1.8nm,1.1s,baz=229,slow=5.5,SNR=6.9							
	comp=Z,1.8nm,1.1s							
NEW	**Newport**	**84.45**	**37**	LR	LR		12 30 47.6	
	comp=Z,34nm,18.2s,baz=266,slow=33							
BELA	**Belgrano 2**	**84.56**	**173**	P	**P**		**11 57 11.6**	**-1.7**
MAW	**Mawson**	**85.55**	**200**	P	**P**		**11 57 19.9**	**+1.5**
	comp=Z,2.9nm,0.8s,baz=133,slow=2.7,SNR=4.2							
MAW				LR	LR		12 32 59.0	
	comp=Z,95nm,18.0s,baz=140,slow=34							
	comp=Z,2.9nm,0.8s							
ANMO	**Albuquerque**	**85.71**	**52**	LR	LR		12 27 21.8	
	comp=Z,65nm,21.1s,baz=275,slow=30							
TXAR	**Lajitas Array**	**85.88**	**58**	LR	LR		12 29 02.0	
	comp=Z,82nm,18.4s,baz=229,slow=31							
PDAR	**Pinedale Array**	**86.60**	**44**	LR	LR		12 28 34.5	
	comp=Z,53nm,20.7s,baz=311,slow=30							
CMAR	**Chiang Mai Arr**	**86.91**	**290**	LR	LR		12 33 49.7	
	comp=Z,18nm,20.3s,baz=95,slow=34							
CMIG	**Matias Romero**	**89.75**	**72**	LR	LR		12 29 46.3	
	comp=Z,45nm,19.3s,baz=162,slow=30							
TROLL	**Troll, Antarti**	**92.55**	**181**	P	**P**		**11 57 51.3**	**-0.4**
YKA	**Yellowknife Ar**	**92.82**	**25**	LR	LR		12 36 01.3	
	comp=Z,46nm,18.5s,baz=293,slow=33							
SNAA	**Sanae**	**92.88**	**179**	P	**P**		**11 57 51.7**	**-1.4**
SNAA	**Sanae**	**92.88**	**179**	P	**P**		**11 57 53.0**	**-0.1**
SNAA				IAmb	IAmb		11 57 58.7	
	comp=Z,4.7nm,1.4s							
VNA3	**Neumayer Olymp**	**93.07**	**177**	P	**P**		**11 57 53.3**	**-0.7**
VNA1	**Neumayer--Stat**	**93.73**	**177**	P	**P**		**11 57 56.3**	**-0.6**
ULM	**Lac du Bonnet**	**98.01**	**40**	LR	LR		12 37 09.2	
	comp=Z,47nm,18.7s,baz=259,slow=32							
ATAH	**Atahualpa**	**98.92**	**100**	LR	LR		12 33 28.0	
	comp=Z,41nm,19.1s,baz=221,slow=30							
NNA	**Nana**	**98.93**	**105**	LR	LR		12 32 24.0	
	comp=Z,21nm,18.6s,baz=226,slow=29							
ARCES	**ARCESS Array B**	**123.86**	**350**	PKP	**PKPdf**		**12 03 36.6**	**-1.4**
	comp=Z,0.8nm,0.8s,baz=29,slow=2.1,SNR=1.7							
GERES	**GERESS Array B**	**145.10**	**344**	PKPbc	**PKiKP**		**12 04 21.8**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=57,slow=3.6,SNR=4.0							
TORD	**Torodi Ar. Bea**	**177.16**	**210**	PKP	**PKPdf**		**12 04 54.5**	**+2.5**
	comp=Z,1.0nm,1.1s,baz=115,slow=0.3,SNR=3.6							
TORD				PKPab	PKPab		12 06 37.1	+1.4
	comp=Z,0.6nm,0.9s,baz=149,slow=2.3,SNR=2.6							
TORD	**Torodi Ar. Bea**	**177.16**	**210**		**PKPdf**		**12 04 50.3**	**-1.7**

TUL ***13*** *11:52:08.6±1.3,36°.45N±0°.02×98°.78W±0°.03,h6km±4km, ML3.2,mb_Lg3.2/92(NEIC),Error ellipse: s-maj=3.3km s-min=2.8km az=136.0*
NEIC ***13*** *11:52:08.8±1.2,36°.45N±0°.01×98°.75W±0°.02,h5km±1km, Error ellipse: s-maj=3.3km s-min=2.7km az=261.0*
ANF ***13*** *11:52:09.0±0.2,36°.41N×98°.75W,h6km,ML3.9/9,Error ellipse: s-maj=2.9km s-min=2.1km az=176.0*
IDC ***13*** *11:52:09.1±1.8,36°.49N×98°

baz=305,SNR=14
Z35A Perchaven, San 3.36 159 Pn Pn 11 53 00.5 -1.4
U38A Gravette 3.49 89 Pn **Pn** 11 53 03.1 -0.6
U38A lAmb_Lg 11 54 07.5
comp=Z,56nm,0.8s
HHAR Hobbs 3.86 91 Pn **Pn** 11 53 09.8 +1.0
ABTX Abilene, Hawle 3.92 192 Pn 11 53 08.1 -1.6
KSCO Kaye Shedlock' 4.00 310 Pn **Pn** 11 53 11.3 +0.4
KSCO lAmb_Lg 11 54 22.2
comp=Z,68nm,0.8s
MSTX Muleshoe 4.16 234 Pn 11 53 13.1 +0.1
W39A Magazine 4.20 106 Pn **Pn** 11 53 14.1 +0.6
W39A lAmb_Lg 11 54 33.0
comp=Z,59nm,0.8s
N33A J Bar K, Exete 4.37 13 Pn 11 53 15.4 -0.3
N33A lAmb_Lg 11 54 39.3
comp=Z,48nm,0.8s
Z38A Mt. Pleasant 4.44 135 Pn 11 53 16.6 -0.1
Z38A lAmb_Lg 11 54 31.6
comp=Z,47nm,0.8s
S39A Bolivar 4.48 73 Pn 11 53 17.3 0.0
S39A Bolivar 4.48 73 P **Pn** 11 53 17.5 +0.3
baz=256
WHTX Lake Whitney, 4.59 167 Pn 11 53 19.1 +0.2
MIAR Mount Ida 4.61 113 Pn 11 53 20.2 +1.1
MIAR lAmb_Lg 11 54 43.2
comp=Z,35nm,0.7s
T25A Trinidad 4.62 280 Pn 11 53 19.4 0.0
U40A Yellville 4.73 90 Pn 11 53 20.6 0.0
U40A lAmb_Lg 11 54 39.4
comp=Z,70nm,0.9s
U40A Yellville 4.73 90 P **Pn** 11 53 20.7 0.0
baz=273,SNR=13
U40A P **Pn** 11 53 20.7 0.0
baz=273,SNR=13
BGNE Belgrade 4.94 5 Pn 11 53 24.2 +0.5
BGNE lAmb_Lg 11 54 59.2
comp=Z,49nm,0.8s
N35A Tabor 4.99 28 Pn 11 53 25.1 +0.8
237A Washetta, Mont 5.07 151 lAmb_Lg 11 54 59.6
comp=Z,36nm,1.0s
P38A Dawn 5.16 51 Pn 11 53 27.6 +1.0
P38A lAmb_Lg 11 55 00.2
comp=Z,31nm,0.7s
OGNE Ogallala 5.16 331 Pn **Pn** 11 53 27.8 +1.0
OGNE lAmb_Lg 11 54 54.8
comp=Z,64nm,0.7s
X40A Basin Creek Fa 5.19 111 lAmb_Lg 11 54 59.5
comp=Z,46nm,0.9s
MGMO Mountain Grove 5.21 81 Pn 11 53 28.5 +1.0
WHAR Wooly Hollow 5.35 101 Pn 11 53 29.3 0.0
WHAR lAmb_Lg 11 55 03.8
comp=Z,44nm,0.8s
FCAR Ozark Folk Cen 5.36 94 Pn 11 53 29.4 -0.1
FCAR lAmb_Lg 11 55 03.6
comp=Z,33nm,0.8s
WLAR White Oak Lake 5.37 120 Pn 11 53 29.3 -0.2
WLAR lAmb_Lg 11 55 05.8
comp=Z,48nm,0.8s
W41B Gary Mavity, V 5.41 102 lAmb_Lg 11 55 15.2
comp=Z,38nm,1.0s
R40A Maddies Statio 5.44 69 Pn 11 53 31.0 +0.5
UALR University of 5.46 106 Pn 11 53 30.6 -0.1
UALR lAmb_Lg 11 55 11.3
comp=Z,48nm,1.1s
SDCO Great Sand Dun 5.57 285 Pn **Pn** 11 53 33.2 +0.6
SDCO lAmb_Lg 11 55 12.9
comp=Z,40nm,1.1s
Q24A Divide 5.67 298 Pn **Pn** 11 53 32.9 -1.1
Q24A lAmb_Lg 11 55 16.6
comp=Z,41nm,0.8s
435B Jarrell 5.76 170 Pn 11 53 33.5 -1.3
435B lAmb_Lg 11 55 18.3
comp=Z,45nm,1.0s
Z41A Richland Creek 5.82 122 Pn **Pn** 11 53 34.2 -1.6
Z41A lAmb_Lg 11 55 22.9
comp=Z,47nm,0.9s
JCT Junction City 6.05 189 Pn **Pn** 11 53 37.4 -1.6
JCT lAmb_Lg 11 55 36.7
comp=Z,44nm,0.9s
N38A Joes South For 6.08 43 Pn 11 53 40.0 +0.8
LCAR Lake Charles 6.12 92 Pn **Pn** 11 53 40.4 +0.6
K31A O'Neill 6.14 360 Pn **Pn** 11 53 39.5 -0.6
CCM Cathedral Cave 6.16 73 Pn **Pn** 11 53 41.9 +1.5
CCM lAmb_Lg 11 55 32.3
comp=Z,27nm,0.8s
CCAR Cane Creek 6.23 112 Pn **Pn** 11 53 40.9 -0.5
CCAR lAmb_Lg 11 55 38.9
comp=Z,36nm,0.8s
ISCO Idaho Springs 6.37 303 Pn 11 53 43.6 0.0
ANMO Albuquerque 6.48 259 Pn **Pn** 11 53 43.9 -1.1
comp=Z,0.3nm,0.3s,baz=50,slow=19,SNR=2.9
ANMO Pg **Pb** 11 54 04.8 +2.9
comp=Z,0.6nm,0.3s,baz=71,slow=16,SNR=16
ANMO Lg Lg 11 55 30.0
comp=Z,1.6nm,0.3s,baz=0.0,slow=14,SNR=3.5
comp=Z,0.6nm,0.3s
ANMO Albuquerque 6.48 259 Pn 11 53 44.0 -1.0
HBAR Harrisburg 6.59 96 Pn 11 53 45.6 -0.8
PBMO Poplar Bluff 6.67 85 Pn **Pn** 11 53 47.3 0.0
PBMO lAmb_Lg 11 55 43.3
comp=Z,35nm,0.8s
FVM French Village 6.78 75 Pn 11 53 48.7 -0.2
FVM lAmb_Lg 11 55 46.8
comp=Z,40nm,1.1s
BNM Barren Site 6.87 253 Pn 11 53 51.3 +0.9
SCIA State Center 6.90 37 Pn Pn 11 53 50.2 -0.3
SCIA lAmb_Lg 11 55 56.6
comp=Z,42nm,0.8s
CRNM Carthage 7.03 251 Pn Pn 11 53 51.3 -1.2
SLM Saint Louis 7.07 70 lAmb_Lg 11 55 54.7
comp=Z,32nm,0.8s
SMCO Snowmass 7.07 295 Pn Pn 11 53 49.9 -3.4
143A Socs Landing, 7.11 120 lAmb_Lg 11 56 05.6
comp=Z,26nm,0.9s
Y22D IRIS PASSCAL I 7.13 253 lAmb_Lg 11 56 05.9
comp=Z,26nm,0.7s
PHWY Pilot Hill 7.13 315 Pn Pn 11 53 52.8 -1.2
PHWY lAmb_Lg 11 55 55.0
comp=Z,29nm,0.8s
LENM Lemitar 7.13 254 Pn Pn 11 53 53.0 -1.0
MNTX Cornudas Mount 7.30 231 Pn Pn 11 53 55.8 -0.3
ECSD EROS Data Cent 7.42 12 Pn Pn 11 53 57.4 -0.3
GLAT Glass 7.61 89 Pn Pn 11 54 00.1 -0.1
S44A Carbondale 7.66 78 lAmb_Lg 11 56 24.4
comp=Z,31nm,0.8s
SIUC Southern Illin 7.69 78 lAmb_Lg 11 56 24.3
comp=Z,22nm,0.8s
OXF Oxford 7.84 102 Pn Pn 11 54 03.5 +0.1
OXF lAmb_Lg 11 56 26.2
comp=Z,26nm,0.9s
W45A Hickory Valley 7.85 97 Pn Pn 11 54 03.2 -0.4
W45A lAmb_Lg 11 56 31.5
comp=Z,30nm,1.0s
MVCO Mesa Verde 7.88 278 Pn Pn 11 54 04.3 +0.1
PV15 Paradox Valley 7.99 286 Pn Pn 11 54 05.3 -0.5
833A Chaparral WMA, 8.15 184 lAmb_Lg 11 56 40.3
comp=Z,19nm,1.1s
PV13 Radium Mtn., P 8.23 285 Pn Pn 11 54 08.7 -0.3
TX31 Lajitas Ar. Si 8.25 212 Pn Pn 11 54 08.3 -0.9
TX32 Lajitas Array 8.25 212 Pn Pn 11 54 09.1 -0.1
TXAR Lajitas Array 8.25 212 Pn Pn 11 54 08.4 -0.8
comp=Z,0.2nm,0.3s,baz=29,slow=9.9,SNR=17
TXAR Pg **Pb** 11 54 36.0 +4.0
comp=Z,0.7nm,0.3s,baz=36,slow=14,SNR=6.1
TXAR Lg Lg 11 56 21.1
comp=Z,1.3nm,0.3s,baz=34,slow=30,SNR=6.5
comp=Z,0.3nm,0.3s
O20A White River Ci 8.33 299 Pn Pn 11 54 09.4 -1.0
121A Cookes Peak, D 8.46 245 Pn Pn 11 54 11.3 -0.9
K22A Casper 8.62 318 Pn Pn 11 54 13.9 -0.4
K22A lAmb_Lg 11 57 00.9
comp=Z,32nm,1.1s
RSSD Black Hills 8.65 334 Pn Pn 11 54 14.2 -0.5
RSSD lAmb_Lg 11 56 55.2
comp=Z,18nm,0.9s
PLAL Pickwick Lake 8.78 97 Pn Pn 11 54 15.9 -0.4
WVT Waverly 8.79 89 Pn Pn 11 54 16.2 -0.3
O44A Mansfield 8.85 62 Pn Pn 11 54 17.7 +0.4
L42A Oliver, Polo 8.93 49 lAmb_Lg 11 57 07.6
comp=Z,29nm,0.8s
JFWS Jewell Farm 9.15 43 lAmb_Lg 11 57 23.3
comp=Z,28nm,0.8s
P46A Rosedale 9.60 67 Pn Pn 11 54 26.9 -0.7
I40A Norwalk 9.65 37 lAmb_Lg 11 57 30.2

comp=Z,15nm,0.8s
PDAR Pinedale Array 10.46 310 Pn Pn 11 54 40.6 +1.0
comp=Z,0.1nm,0.3s,baz=121,slow=17,SNR=2.0
PDAR Pg 11 55 21.3
comp=Z,0.2nm,0.3s,baz=116,slow=16,SNR=5.2
PDAR Lg Lg 11 57 33.5
comp=Z,0.4nm,0.3s,baz=107,slow=30,SNR=7.3
comp=Z,0.2nm,0.4s
ULM Lac du Bonnet 13.92 8 Pn Pn 11 55 21.5 -5.1
comp=Z,0.7nm,0.4s,baz=180,slow=12,SNR=1.7
ULM Sn Sn 11 57 42.2 -19
comp=Z,0.3nm,0.3s,baz=129,slow=11,SNR=1.6
ULM Lg Lg 11 59 22.9
comp=Z,0.2nm,0.3s,baz=84,slow=15,SNR=3.8

NEIC ***13*** *12:05:51.6±1.3, 8.3°N±0.2°×39.2°W±0.1, h10km±1km, mb4.3/8, Error ellipse: s-maj=28.1km s-min=16.9km az=337.0*
IDC ***13*** *12:05:52.2±1.2, 7.6°N×39.2°W, h0km, mb3.8/5, mbtmp3.8/5, MS3.2/4, Error ellipse: s-maj=40.5km s-min=27.7km az=144.0*
ISC 13 12:05:51.9±0.8, 7.8°N±0.1°×39.0°W±0.1, h10km, n20, σ2°2°20/13, mb4.1/7, MS3.2/3, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RCBR	**Riachuelo**	**13.84**	**167**	Pn	**P**	**12 09 15.7**	**-1.1**
MDP	**Montagnes des**	**13.86**	**260**	LR	LR	12 13 05.1	
	comp=Z,38nn,21.1s,baz=50,slow=32						
SACV	**Santiago Islan**	**16.65**	**63**	Pn	**Pn**	**12 09 44.4**	**-1.2**
SACV				lAmb	lAmb	12 10 20.7	
	comp=Z,22nm,1.0s						
H10N3	**ASCENSION HYDR**	**28.89**	**122**	T	T	12 42 57.0	
	baz=302,slow=75,SNR=27						
H10N2	**ASCENSION HYDR**	**28.89**	**122**	T	T	12 42 55.4	
	baz=302,slow=75,SNR=28						
H10N1	**ASCENSION HYDR**	**28.91**	**122**	T	T	12 42 56.7	
	baz=302,slow=75,SNR=32						
LPAZ	**La Paz**	**37.48**	**230**	P	**P**	**12 13 05.6**	**-1.2**
	comp=Z,0.9nm,0.4s,baz=34,slow=11,SNR=8.0						
	comp=Z,0.9nm,0.4s						
LPAZ	**La Paz**	**37.48**	**230**	P	**P**	**12 13 06.3**	**-0.5**
TOA0	**Torodi Ar. Sit**	**40.29**	**79**	P	**P**	**12 13 29.3**	**-0.4**
TOA0				lAmb	lAmb	12 13 37.6	
	comp=Z,6.3nm,1.3s						
TORD	**Torodi Ar. Bea**	**40.29**	**79**	P	**P**	**12 13 34.2**	**+4.5**
	comp=Z,1.1nm,0.8s,baz=270,slow=8.6,SNR=4.8						
	comp=Z,1.1nm,0.8s						
TORD	**Torodi Ar. Bea**	**40.29**	**79**	P	**P**	**12 13 28.8**	**-0.9**
MDT	**Midelt**	**40.42**	**47**	LR	LR	12 29 06.2	
	comp=Z,28nm,18.2s,baz=160,slow=34						
GO02	**Mina Guanaco**	**44.28**	**221**	P	**P**	**12 14 03.9**	**+1.4**
ESDC	**Sonseca Array**	**44.61**	**39**	LR	LR	12 30 57.5	
	comp=Z,27nm,18.1s,baz=234,slow=34						
PLCA	**Paso Flores**	**56.35**	**209**	P	**P**	**12 15 33.6**	**+0.3**
	comp=Z,2.5nm,0.8s,baz=55,slow=8.8,SNR=5.5						
	comp=Z,2.5nm,0.8s						
PLCA	**Paso Flores**	**56.35**	**209**	P	**P**	**12 15 34.1**	**+0.8**
TXAR	**Lajitas Array**	**64.22**	**299**	P	**P**	**12 16 29.6**	**+2.0**
	comp=Z,0.1nm,0.6s,baz=107,slow=8.6,SNR=1.9						
	comp=Z,0.1nm,0.6s						
SDCO	**Great Sand Dun**	**66.77**	**308**	P	**P**	**12 16 40.3**	**-3.9**
SDCO				lAmb	lAmb	12 17 24.7	
	comp=Z,3.2nm,0.8s						
INK	**Inuvik**	**84.54**	**338**	P	**P**	**12 18 26.1**	**+1.2**
	comp=Z,2.1nm,1.1s,baz=102,slow=3.0,SNR=4.2						
	comp=Z,2.1nm,1.1s						
AKTO	**Aktyubinsk**	**88.49**	**39**	LR	LR	12 59 59.0	
	comp=Z,23nm,18.1s,baz=75,slow=37						

IDC ***13*** *12:09:05.7±1.5, 19.°34S×177.°35W, h571km±19km, mb2.9/3, mbtmp4.0/6, Error ellipse: s-maj=29.7km s-min=27.7km az=138.0*
NEIC ***13*** *12:09:06.1±0.5, 19.°1S±0.2°×177.°4W±0.2, h585km±14km, mb4.2/14, Error ellipse: s-maj=29.1km s-min=24.0km az=148.0*
ISC 13 12:09:05.2±0.8, 19.2°S±0.2°×177.4°W±0.1, h570km, n23, σ0°92/25, mb4.0/11, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.58**	**288**	P	**P**	**12 10 34.9**	**+1.9**
	9.6nm,0.4s,baz=141,slow=13,SNR=35						
MSVF	**Nonsavu**	**4.58**	**288**	P	**P**	**12 10 34.4**	**+1.4**
AFI	**Afiamalu**	**7.54**	**46**	P	**P**	**12 10 60.0**	**+0.6**
	21nm,0.5s,baz=164,slow=2.5,SNR=6.3						
AFI	**Afiamalu**	**7.54**	**46**	P	**P**	**12 10 59.4**	**+0.1**
URZ	**Urewera**	**19.56**	**193**	P	**P**	**12 12 55.3**	**-0.8**
	2.2nm,0.3s,baz=1.0,slow=4.3,SNR=7.1						
URZ	**Urewera**	**19.56**	**193**	P	**P**	**12 12 55.6**	**-0.6**
STKA	**Stephens Creek**	**38.87**	**243**	P	**P**	**12 15 43.2**	**+0.6**
	1.9nm,0.8s,baz=74,slow=8.9,SNR=4.2						
	1.9nm,0.8s						
STKA	**Stephens Creek**	**38.87**	**243**	P	**P**	**12 15 42.8**	**+0.2**
BBOO	**Buckleboo**	**43.64**	**242**	P	**P**	**12 16 20.1**	**-0.1**
BBOO				lAmb	lAmb	12 16 29.0	
	comp=Z,29nm,1.5s						
WR0	**Warramunga Arr**	**45.17**	**261**	P	**P**	**12 16 31.7**	**-0.5**
WR0				lAmb	lAmb	12 16 42.9	
	comp=Z,7.4nm,1.2s						
WB0	**Warramunga Arr**	**45.33**	**261**	P	**P**	**12 16 32.8**	**-0.7**
WB0				lAmb	lAmb	12 16 37.2	
	comp=Z,20nm,1.5s						
WB2	**Warramunga Arr**	**45.35**	**261**	P	**P**	**12 16 32.0**	**-1.5**
WB2				lAmb	lAmb	12 16 48.5	
	comp=Z,14nm,1.5s						
WRA	**Warramunga Arr**	**45.36**	**261**	P	**P**	**12 16 33.4**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=98,slow=7.4,SNR=29						
WRA				PcP	**PcP**	**12 18 01.6**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=90,slow=3.8,SNR=6.3						
	comp=Z,0.4nm,0.3s						
WRA	**Warramunga Arr**	**45.36**	**261**	P	**P**	**12 16 32.8**	**-0.9**
AS31	**Alice Springs**	**45.38**	**255**	P	**P**	**12 16 33.7**	**-0.1**
AS31				lAmb	lAmb	12 16 54.8	
	comp=Z,1.8nm,1.3s						
ASAR	**Alice Springs**	**45.38**	**255**	P	**P**	**12 16 33.9**	**+0.1**
	comp=Z,1.4nm,0.5s,baz=86,slow=8.2,SNR=37						
ASAR				PcP	**PcP**	**12 18 01.4**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=105,slow=3.9,SNR=7.3						
	comp=Z,1.4nm,0.5s						
ASAR	**Alice Springs**	**45.38**	**255**	P	**P**	**12 16 33.3**	**-0.5**
FORT	**Forrest**	**50.33**	**246**	P	**P**	**12 17 09.6**	**-1.0**
KNRA	**Kununurra**	**51.33**	**265**	P	**P**	**12 17 17.3**	**-0.6**
PSA00	**Pilbara Seismi**	**58.52**	**256**	P	**P**	**12 18 07.5**	**-0.5**
PSA00	**Pilbara Seismi**	**58.52**	**256**	P	**P**	**12 18 07.3**	**-0.7**
PSA00				lAmb	lAmb	12 18 28.4	
	comp=Z,11nm,1.2s						
QSPA	**South Pole Qui**	**70.84**	**180**	P	**P**	**12 19 26.3**	**+1.4**
QSPA				lAmb	lAmb	12 19 44.3	
	comp=Z,8.1nm,1.4s						
TOLK	**Toolik Lake Re**	**89.91**	**10**	P	**P**	**12 21 01.9**	**-1.6**
TOLK				lAmb	lAmb	12 21 02.4	
	comp=Z,3.1nm,0.7s						

JMA ***13*** *12:09:36.0±0.1, 27.°0N±0.°6×130.°3E±0.°7, h49km, MV3.4/13, NEAR MINAMI-DAITOJIMA IS*
IDC ***13*** *12:09:41.4±1.3, 25.°69N×127.°59E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=42.2km s-min=18.6km az=103.0*
ISC 13 12:09:34.3±2.0, 26.°99N±0.°05×130.°34E±0.°05, h13km±14km, n15, σ1°8°26, mb3.5/3, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKDJ	**Kitadaitoujima**	**1.35**	**140**	P	**Pn**	**12 09 58.8**	**0.0**
JKDJ				*eS*	**Sb**	**12 10 16.1**	**-0.5**
JZK	**Kikaishima**	**1.35**	**346**	P	**Pg**	**12 10 00.0**	**-0.3**
JZK				*eS*	**Sb**	**12 10 16.8**	**0.0**
JMZ	**Minamidaito 2**	**1.41**	**146**	P	**Pn**	**12 09 59.3**	**-0.4**
JMZ				S	**Sn**	**12 10 16.5**	**-1.6**
JTK	**Tokunoshima**	**1.47**	**303**	P	**Pn**	**12 10 00.6**	**+0.2**
JAM	**Amami Oshima**	**1.56**	**335**	P	**Pn**	**12 10 01.8**	**+0.2**
JAM				*eS*	**Sn**	**12 10 20.5**	**-1.2**
JAMN	**Amaminishikomi**	**1.62**	**321**	P	**Pn**	**12 10 02.4**	**-0.2**
JAMN				*eS*	**Sn**	**12 10 21.4**	**-1.8**
JOKE	**Okinoerabujima**	**1.62**	**283**	P	**Pn**	**12 10 02.7**	**+0.2**
JOKE				S	**Sn**	**12 10 22.2**	**-1.1**
JYRO	**Yoronjima**	**1.69**	**271**	P	**Pn**	**12 10 03.7**	**+0.2**
JYRO				*eS*	**Sn**	**12 10 22.9**	**-2.1**
JOW	**Kunigami**	**1.85**	**265**	Pn	**Pn**	**12 10 06.2**	**+0.4**
	71nm,0.3s,baz=108,slow=25,SNR=52						
JOW				Sn	**Sn**	**12 10 27.7**	**-1.3**
	74nm,0.3s,baz=81,slow=29,SNR=16						
JOW	**Kunigami**	**1.85**	**265**	P	**Pn**	**12 10 06.2**	**+0.4**
JOW				*eS*	**Sn**	**12 10 27.9**	**-1.2**
JIH	**Iheya**	**2.12**	**272**	P	**Pn**	**12 10 09.9**	**+0.5**
JIH				*eS*	**Sn**	**12 10 35.1**	**-0.5**
JNTH	**Nagotoyohara**	**2.13**	**258**	P	**Pn**	**12 10 09.4**	**-0.1**
JNTH				S	**Sn**	**12 10 33.8**	**-2.1**
MKAR	**Makanchi Array**	**42.45**	**311**	P	**P**	**12 17 29.7**	**+0.8**
	0.1nm,0.4s,baz=112,slow=6.9,SNR=2.1						
	0.1nm,0.4s						
WRA	**Warramunga Arr**	**46.82**	**175**	P	**P**	**12 18 05.0**	**+1.1**
	0.6nm,0.6s,baz=354,slow=8.5,SNR=3.8						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**50.48**	**176**	P	**P**	**12 18 33.5**	**+1.4**
	0.3nm,0.5s,baz=5.2,slow=15,SNR=8.8						
	0.3nm,0.5s						

BUT ***13*** *12:14:39.0±1.9, 44.°73N±0.°02×111.°76W±0.°02, h10km±6km, ML4.3/29, ML4.0/66(NEIC), Mwr4.0/31(NEIC), Error ellipse: s-maj=3.7km s-min=1.9km az=200.0*
NEIC ***13*** *12:14:39.1, 44.°73N×111.°76W, h12km, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr=1.15; Mθθ 1.07; Mϕϕ 0.08; Mrθ 0.33; Mϕθ -0.05; Mϕr-0.24; Fault plane solution: M₀ 1.18000×10¹⁵ NP1:φs 83.63000°, δ 37.07000°, λ -105.29000°. NP2:φs 282.54000°, δ 54.45000°, λ -78.73000°. Principal axes: T 1.1228, Plg 9.0000°, Azm 5.0000°; N 0.1126, Plg 9.0000°, Azm 96.0000°; P -1.2354, Plg 77.0000°, Azm 231.0000°;*
NEIC ***13*** *12:14:40.7±1.6, 44.°73N±0.°02×111.°78W±0.°02, h8km±7km Error ellipse: s-maj=2.9km s-min=0.9km az=217.0*
IDC ***13*** *12:14:40.2±0.6, 44.°76N×111.°63W, h0km, mb3.8/4, mbtmp3.7/12, ML3.4/7, MS3.4/8, Error ellipse: s-maj=10.4km s-min=7.0km az=59.0*
ANF ***13*** *12:14:41.4±0.2, 44.°77N×111.°74W, h10km, ML4.3/12, Error ellipse: s-maj=3.0km s-min=2.2km az=24.0*
ISC 13 12:14:40.2±1.1, 44.°74N±0.°02×111.°78W±0.°02, h3km±9km, n158, σ1°53/173, mb4.1/5, MS3.5/7, Hebgen Lake region, Montana

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMI	**Centennial Mou**	**0.24**	**153**		**Pg**	**12 14 45.4**	**+0.4**
QLMT	**Earthquake Lak**	**0.26**	**70**		**Pg**	**12 14 45.6**	**+0.3**
YPDC	**Denny Creek**	**0.38**	**95**		**Pg**	**12 14 47.9**	**+0.3**
YHB	**Horse Butte**	**0.41**	**88**		**Pg**	**12 14 48.5**	**+0.2**
YHB					**Sg**	**12 14 54.1**	**+0.5**
YHL	**Hebgen Lake**	**0.44**	**75**		**Pg**	**12 14 48.9**	**+0.2**
YHL				Sg	**Sg**	**12 14 54.8**	**+0.5**
GCR	**Grayling Creek**	**0.48**	**83**		**Pg**	**12 14 49.9**	**+0.5**
YPWB	**West Boundary**	**0.50**	**105**		**Pg**	**12 14 50.5**	**+0.7**
YMC	**Maple Creek**	**0.55**	**88**		**Pg**	**12 14 51.1**	**+0.3**
PZCI	**Patelzick Cree**	**0.56**	**224**		**Pg**	**12 14 51.4**	**+0.4**
YMR	**Madison River**	**0.58**	**97**		**Pg**	**12 14 51.7**	**+0.2**
YMR				Sg	**Sg**	**12 14 59.5**	**+0.5**
YMR				IAML		12 15 02.9	
	comp=E,22μm,0.5s						
YPM	**Purple Mountai**	**0.65**	**97**		**Pg**	**12 14 53.4**	**+0.6**
YHH	**Holmes Hill**	**0.66**	**86**		**Pg**	**12 14 53.1**	**+0.2**
MCD	**Moose Creek**	**0.69**	**142**		**Pg**	**12 14 54.0**	**+0.4**
YFT	**Old Faithful**	**0.73**	**113**	Pg	**Pg**	**12 14 54.4**	**+0.1**
YFT				Sg	**Sg**	**12 15 03.3**	**-0.5**
YNM	**Yellowstone No**	**0.76**	**91**		**Pg**	**12 14 55.1**	**+0.2**
MCMT	**McKenzie Canyo**	**0.77**	**277**		**Pg**	**12 14 55.6**	**+0.6**
YNR	**Norris Junctio**	**0.78**	**92**		**Pg**	**12 14 55.3**	**+0.1**
YNR				Sg	**Sg**	**12 15 04.9**	**-0.5**
YNR				IAML		12 15 06.1	
	comp=E,8μm,0.4s						
YNR				IAML		12 15 07.6	
	comp=N,6μm,0.5s						
YMV	**Mammoth Vault**	**0.81**	**73**		**Pg**	**12 14 55.8**	**+0.1**
YPP	**Pitchstone Pla**	**0.84**	**124**		**Pg**	**12 14 56.5**	**+0.2**
YPP				Sg	**Sg**	**12 15 07.1**	**-0.1**
YPP				IAML		12 15 09.6	
	comp=E,3μm,0.5s						
BOZ	**Bozeman (W)**	**0.86**	**7**		**Pg**	**12 14 56.6**	**-0.1**
BOZ				Sg	**Sg**	**12 15 07.6**	**-0.3**
BOZ				IAML		12 15 11.0	
	comp=E,4μm,0.5s						
BOZ	**Bozeman (W)**	**0.86**	**7**	P	**Pg**	**12 14 56.6**	**-0.1**
	baz=186,SNR=1000						
BOZ				S	**Sg**	**12 15 08.2**	**+0.3**
	baz=186						
YLT	**Little Thumb C**	**0.90**	**109**		**Pb**	**12 14 58.1**	**-0.6**
YUF	**Upper Falls**	**0.90**	**91**		**Pg**	**12 14 57.6**	**+0.1**
YUF					**Sb**	**12 15 09.9**	**-1.2**
YUF				IAML		12 15 12.1	
	comp=N,4μm,0.4s						
YUF				IAML		12 15 13.9	
	comp=E,3μm,0.4s						
H17A	**Grant Village**	**0.92**	**112**		**Pg**	**12 14 58.4**	**+0.4**
H17A				Sg	**Sg**	**12 15 09.7**	**-0.2**
H17A	**Grant Village**	**0.92**	**112**	P	**Pg**	**12 14 58.4**	**+0.4**
	baz=292,SNR=560						
H17A				S	**Sb**	**12 15 11.2**	**-0.6**
	baz=292						
ICI	**Italian Canyon**	**0.93**	**244**		**Pg**	**12 14 58.0**	**-0.1**
LKWY	**Lake**	**1.00**	**100**		**Pb**	**12 14 60.0**	**-0.3**
LKWY					**Sb**	**12 15 12.9**	**-1.0**
FLWY	**Flagg Ranch**	**1.01**	**130**		**Pg**	**12 14 59.5**	**-0.2**
FLWY				Sg	**Sg**	**12 15 12.7**	**-0.1**
FLWY				IAML		12 15 13.5	
	comp=E,3μm,0.6s						
FLWY				IAML		12 15 13.7	
	comp=E,3μm,0.5s						
EMI	**Eightmile Cany**	**1.06**	**231**		**Pg**	**12 15 00.0**	**-0.5**
YTP	**The Promontory**	**1.12**	**108**		**Pg**	**12 15 01.4**	**-0.3**
YPPC	**Pelican Cone**	**1.13**	**94**		**Pn**	**12 15 03.2**	**-0.1**
YPSB	**Soda Butte**	**1.17**	**82**		**Pg**	**12 15 02.3**	**-0.3**
LRM	**Limekiln Ridge**	**1.18**	**336**		**Pb**	**12 15 02.7**	**-0.7**
FXWY	**Fox Creek**	**1.23**	**154**		**Pb**	**12 15 02.7**	**-1.5**
FXWY				IAML		12 15 24.3	
	comp=E,2μm,0.6s						
MOOW	**Moose Ponds**	**1.24**	**143**		**Pn**	**12 15 02.8**	**-1.8**
BCYI	**Bear Canyon**	**1.24**	**250**		**Pn**	**12 15 04.2**	**-0.5**
TPAW	**Teton Pass**	**1.39**	**154**		**Pn**	**12 15 05.6**	**-1.1**
TPAW				IAML		12 15 31.2	
	comp=E,2μm,0.8s						
TPAW				IAML		12 15 32.7	
	comp=E,3μm,0.5s						
LOHW	**Long Hollow**	**1.41**	**143**		**Pn**	**12 15 06.1**	**-0.9**
LOHW				IAML		12 15 25.2	
	comp=E,2μm,0.6s						
LOHW				IAML		12 15 25.3	
	comp=E,2μm,0.5s						
SNOW	**Snow King Moun**	**1.48**	**150**		**Pn**	**12 15 07.5**	**-0.4**
SNOW				IAML		12 15 28.0	
	comp=E,2μm,0.7s						
SNOW				IAML		12 15 30.6	
	comp=E,3μm,0.6s						
REDW	**Red Top Meadow**	**1.53**	**154**		**Pn**	**12 15 08.4**	**-0.3**
REDW				IAML		12 15 38.4	
	comp=E,3μm,0.8s						
REDW				IAML		12 15 38.5	
	comp=E,2μm,0.7s						
ECR	**Eagle Creek**	**1.71**	**170**		**Pn**	**12 15 11.0**	**-0.1**
GCMT	**Greycliff**	**1.82**	**54**		**Pb**	**12 15 13.1**	**-1.2**
RLMT	**Red Lodge**	**1.82**	**77**	Pn	**Pn**	**12 15 12.6**	**-0.1**
RLMT				IAML		12 15 41.5	
	comp=E,3μm,0.5s						
RLMT				IAML		12 15 42.7	
	comp=E,3μm,0.5s						
RLMT	**Red Lodge**	**1.82**	**77**	P	**Pb**	**12 15 13.4**	**-1.0**
	baz=258,SNR=418					

BW06	**Boulder Array**	**2.54**	**140**		**Pn**	**12 15 23.2 +0.6**
BW06	**Boulder Array**	**2.54**	**140**	P	**Pn**	**12 15 23.4 +0.8**
	baz=322,SNR=93					
BW06				Sb	**Sb**	**12 15 58.7 +0.2**
	baz=322					
PD31	**Pinedale Array**	**2.54**	**140**		**Pn**	**12 15 23.8 +1.2**
PDAR	**Pinedale Array**	**2.54**	**140**	Pn	**Pn**	**12 15 24.2 +1.6**
	comp=E,16nm,0.3s,baz=341,slow=15,SNR=266					
PDAR				Lg	Lg	12 15 57.8
	comp=E,32nm,0.3s,baz=346,slow=30,SNR=14					
PDAR	**Pinedale Array**	**2.54**	**140**	Pn	**Pn**	**12 15 23.8 +1.2**
MSO	**Missoula**	**2.58**	**325**		**Pn**	**12 15 23.1 +0.1**
MSO	**Missoula**	**2.58**	**325**	P	**Pn**	**12 15 22.9 -0.1**
	baz=143,SNR=89					
MSO				Sb	**Sb**	**12 16 01.1 +1.8**
	baz=143					
PLID	**Pearl Lake**	**3.02**	**278**		**Pn**	**12 15 29.4 +0.3**
PLID	**Pearl Lake**	**3.02**	**278**	IAML		12 16 18.0
	comp=E,729nm,0.6s					
HVU	**Hansel Valley**	**3.05**	**194**		**Pn**	**12 15 30.4 +1.0**
HWUT	**Hardware Ranch**	**3.14**	**177**		**Pn**	**12 15 31.9 +1.2**
MFID	**Camas Ranch**	**3.21**	**247**	Pn	**Pn**	**12 15 31.8 +0.2**
MFID				IAML		12 16 24.5
	comp=E,923nm,0.7s					
JTMT	**Jette**	**3.47**	**331**	Pn	**Pn**	**12 15 35.5 +0.3**
EGMT	**Eagleton**	**3.57**	**22**		**Pn**	**12 15 36.9 +0.3**
EGMT	**Eagleton**	**3.57**	**22**	P	**Pn**	**12 15 36.8 +0.3**
	baz=204					
EGMT				Sb	**Sb**	**12 16 29.0 +1.3**
	baz=204					
BGU	**Big Grassy Mou**	**3.92**	**194**		**Pn**	**12 15 41.8 +0.3**
BMO	**Blue Mountains**	**3.94**	**274**		**Pn**	**12 15 41.6 0.0**
BMO				IAML		12 16 47.3
	comp=E,227nm,0.7s					
BMO				IAML		12 16 51.2
	comp=E,220nm,0.4s					
F10A	**Beach Ranch, E**	**4.04**	**290**		**Pn**	**12 15 44.0 +1.0**
K22A	**Casper**	**4.34**	**117**		**Pn**	**12 15 47.4 +0.1**
K22A				IAML		12 17 23.9
	comp=E,193nm,0.6s					
K22A				IAML		12 17 27.0
	comp=N,173nm,0.7s					
K22A	**Casper**	**4.34**	**117**	P	**Pn**	**12 15 48.5 +1.2**
	baz=301					
K22A				Sb	**Sb**	**12 16 53.6 +3.4**
	baz=301					
LAO	**LASA Array**	**4.35**	**61**		**Pn**	**12 15 47.2 -0.1**
LAO	**LASA Array**	**4.35**	**61**	P	**Pn**	**12 15 47.4 +0.1**
	baz=245,SNR=13					
LAO				Sb	**Sb**	**12 16 53.5 +3.4**
	baz=245					
RDMU	**Red Mountain**	**4.47**	**158**		**Pn**	**12 15 49.4 +0.3**
RWWY	**Rawlins**	**4.52**	**131**		**Pn**	**12 15 50.1 +0.3**
WALA	**Waterton Lakes**	**4.56**	**342**		**Pn**	**12 15 50.6 +0.4**
DUG	**Dugway, Tooele**	**4.61**	**190**	Pn	**Pn**	**12 15 52.2 +1.3**
DUG				IAML		12 17 18.9
	comp=N,97nm,1.1s					
DUG				IAML		12 17 29.7
	comp=N,78nm,1.0s					
DUG	**Dugway, Tooele**	**4.61**	**190**	P	**Pn**	**12 15 51.6 +0.7**
	baz=9.3,SNR=55					
MPU	**Maple Canyon**	**4.72**	**179**	Pn	**Pn**	**12 15 53.4 +0.8**
LNOR	**Lincton Mounta**	**4.73**	**286**		**Pn**	**12 15 53.4 +0.9**
ELK	**Elko**	**4.74**	**214**	Pn	**Pn**	**12 15 57.2 +4.5**
	comp=N,1.9nm,0.3s,baz=22,slow=17,SNR=31					
ELK				Lg	Lg	12 17 03.8
	comp=N,8.7nm,0.3s,baz=179,slow=8.3,SNR=8.9					
	comp=N,17nm,0.4s					
ELK	**Elko**	**4.74**	**214**		**Pn**	**12 15 54.3 +1.5**
NLU	**North Lily Min**	**4.79**	**183**		**Pn**	**12 15 54.7 +1.3**
E09A	**Wood Farm, Sta**	**4.81**	**294**	Pn	**Pn**	**12 15 54.7 +1.2**
J08A	**Circle Bar Ran**	**5.02**	**256**		**Pn**	**12 15 57.3 +0.8**
NEW	**Newport**	**5.10**	**316**	Pn	**Pn**	**12 15 58.0 +0.5**
	comp=N,4.2nm,0.3s,baz=143,slow=14,SNR=31					
NEW				Lg	Lg	12 17 18.6
	comp=N,43nm,0.3s,baz=232,slow=21,SNR=9.0					
	comp=N,12nm,0.3s					
NEW	**Newport**	**5.10**	**316**		**Pn**	**12 15 57.9 +0.2**
NEW	**Newport**	**5.10**	**316**	P	**Pn**	**12 15 57.8 +0.2**
	baz=132,SNR=22					
NEW				Sb	**Sb**	**12 17 17.6 +5.7**
	baz=132					
G08A	**Pilot Rock**	**5.12**	**279**	Pn	**Pn**	**12 15 58.5 +0.6**
O20A	**White River Ci**	**5.29**	**149**	P	**Pn**	**12 15 59.4 -0.9**
	baz=332,SNR=17					
O20A				Sb	**Sb**	**12 17 23.1 +5.6**
	baz=332					
E08A	**Dider Farm, El**	**5.40**	**291**		**Pn**	**12 16 02.0 +0.3**
C09A	**Chrisman Ranch**	**5.45**	**306**		**Pn**	**12 16 02.6 +0.3**
TMUT	**Trail Mountain**	**5.46**	**175**	Pn	**Pn**	**12 16 03.2 +0.5**
WVOR	**Wild Horse Val**	**5.49**	**248**		**Pn**	**12 16 03.9 +0.9**
D08A	**Wollman Farm,**	**5.50**	**297**		**Pn**	**12 16 03.0 0.0**
OD2	**Odessa Site #2**	**5.50**	**301**		**Pn**	**12 16 03.3 +0.2**
I07A	**Izee**	**5.58**	**266**		**Pn**	**12 16 05.0 +0.9**
RSSD	**Black Hills**	**5.58**	**94**		**Pn**	**12 16 04.1 -0.1**
RSSD	**Black Hills**	**5.58**	**94**	P	**Pn**	**12 16 04.4 +0.1**
	baz=279					
RSSD				Sb	**Sb**	**12 17 31.0 +5.3**
	baz=279					
HAWA	**Hanford**	**5.69**	**290**	Pn	**Pn**	**12 16 06.5 +0.8**
N23A	**Red Feather La**	**5.76**	**130**	P	**Pn**	**12 16 07.5 +0.7**
	baz=314					
F07A	**Phinny Hill Vi**	**5.86**	**284**		**Pn**	**12 16 08.2 +0.2**
E07A	**Sunnyside**	**5.95**	**291**		**Pn**	**12 16 10.0 +0.8**
B08A	**Colville Reser**	**6.34**	**307**	Pn	**Pn**	**12 16 14.5 -0.1**
DGMT	**Dagmar**	**6.42**	**52**		**Pn**	**12 16 17.1 +1.5**
DGMT	**Dagmar**	**6.42**	**52**	P	**Pn**	**12 16 17.0 +1.5**
	baz=237,SNR=6.1					
DGMT				Sb	**Sb**	**12 17 54.7 +5.2**
	baz=237					
PINE	**Pine Mountain**	**6.65**	**265**		**Pn**	**12 16 19.8 +0.8**
LTY	**Liberty**	**6.69**	**295**		**Pn**	**12 16 19.0 -0.4**
ISCO	**Idaho Springs**	**6.73**	**135**	P	**Pn**	**12 16 18.8 -1.3**
	baz=319					
G05D	**Wamic, OR**	**6.79**	**278**	P	**Pn**	**12 16 21.2 +0.5**
	baz=91,SNR=15					
I05D	**Terrebonne, OR**	**6.85**	**270**	P	**Pn**	**12 16 21.3 -0.2**
	baz=83					
J05D	**Fort Rock, OR**	**6.97**	**261**	P	**Pn**	**12 16 25.8 +2.4**
	baz=75,SNR=10.0					
R11A	**Troy Canyon, C**	**7.00**	**205**	P	**Pn**	**12 16 27.2 +3.5**
	baz=23,SNR=9.1					
HOOD	**Mount Hood Mea**	**7.02**	**278**		**Pn**	**12 16 24.6 +0.5**
PNT	**Penticton**	**7.04**	**313**		Pn	12 16 29.9 +5.7
H04A	**Detroit Lake**	**7.42**	**273**		**Pn**	**12 16 30.7 +1.3**
D05A	**Enumclaw**	**7.53**	**293**		**Pn**	**12 16 31.0 +0.2**
J04D	**Umpqua Nationa**	**7.60**	**262**	P	**Pn**	**12 16 33.5 +1.4**
	baz=75					
S11A	**Rachel**	**7.70**	**204**		**Pn**	**12 16 33.2 -0.1**
H04D	**Lebanon**	**7.82**	**272**	P	**Pn**	**12 16 37.3 +2.4**
	baz=85					
S22A	**4UR Ranch, Cre**	**7.92**	**150**	P	**Pn**	**12 16 39.3 +2.8**
	baz=334					
MVCO	**Mesa Verde**	**7.92**	**161**	P	**Pn**	**12 16 38.5 +2.0**
	baz=343,SNR=7.3					
E28A	**Huff**	**7.98**	**73**		**Pn**	**12 16 36.1 -0.9**
NVAR	**Mina Array Bea**	**7.98**	**220**	Pn	**Pn**	**12 16 40.7 +3.4**
	comp=N,0.1nm,0.3s,baz=33,slow=13,SNR=14					
NVAR				Pg	**Pb**	**12 17 00.0 +0.8**
	comp=N,0.9nm,0.3s,baz=34,slow=16,SNR=10					
NVAR				Lg	Lg	12 18 51.2
	comp=N,0.5nm,0.3s,baz=42,slow=30,SNR=2.7					
	comp=N,1.1nm,0.6s					
L04D	**Klamath Falls**	**8.06**	**255**	P	**Pn**	**12 16 40.8 +2.5**
	baz=68					
OGNE	**Ogallala**	**8.10**	**115**	P	**Pn**	**12 16 40.4 +1.6**
	baz=301					
D03D	**Eldon**	**8.34**	**294**	P	**Pn**	**12 16 41.5 -0.4**
	baz=106,SNR=7.8					
I03D	**Drain, OR**	**8.38**	**267**	P	**Pn**	**12 16 43.9 +1.4**
	baz=79					
SDCO	**Great Sand Dun**	**8.43**	**144**	P	**Pn**	**12 16 44.7 +1.1**
	baz=328					
TPNV	**Topopah Spring**	**8.49**	**205**	P	**Pn**	**12 16 46.8 +2.6**
	baz=22					
WUAZ	**Wupatki**	**9.22**	**178**	P	**Pn**	**12 16 57.2 +2.9**
	baz=358					
MPMC	**Manual Prospec**	**9.70**	**209**	P	**Pn**	**12 17 03.8 +2.9**
	baz=25					
W18A	**Petrified Fore**	**9.74**	**170**	P	**Pn**	**12 17 04.6 +3.2**
	baz=351					
TUQ	**Turquoise Moun**	**9.82**	**200**	P	**Pn**	**12 17 06.6 +4.2**
	baz=18					
ANMO	**Albuquerque**	**10.60**	**156**	Pn	**Pn**	**12 17 13.9 +0.7**
	comp=N,0.1nm,0.3s,baz=235,slow=4.2,SNR=1.6					
ANMO				Lg	Lg	12 20 13.7
	comp=N,0.1nm,0.3s,baz=242,slow=22,SNR=2.4					
	comp=N,0.4nm,0.3s					
ECSD	**EROS Data Cent**	**10.93**	**90**	Pn	**Pn**	**12 17 17.6 +0.1**
ECSD	**EROS Data Cent**	**10.93**	**90**	P	**Pn**	**12 17 16.5 -1.0**
	baz=280					
AGMN	**Agassiz Nation**	**11.53**	**66**		**Pn**	**12 17 23.8 -1.8**
AGMN	**Agassiz Nation**	**11.53**	**66**	P	**Pn**	**12 17 24.0 -1.6**
	baz=258,SNR=9.3					
ULM	**Lac du Bonnet**	**12.07**	**57**	Pn	**Pn**	**12 17 30.6 -2.5**
	comp=N,0.7nm,0.3s,baz=255,slow=11,SNR=6.9					
ULM				Lg	Lg	12 20 49.0
	comp=N,1.0nm,0.3s,baz=336,slow=22,SNR=2.5					
ULM				LR	LR	12 21 33.0
	comp=N,33nm,19.3s,baz=264,slow=34					
	comp=N,3.0nm,0.5s					
TUC	**Tucson**	**12.44**	**176**	P	**Pn**	**12 17 39.3 +1.1**
	baz=357					
F36A	**Milaca**	**12.90**	**79**		**Pn**	**12 17 41.9 -2.5**
B35A	**Bob, Littlefor**	**12.94**	**67**		**Pn**	**12 17 42.4 -2.5**
U40A	**Yellville**	**16.61**	**114**	P	**P**	**12 18 37.0 +0.4**
	baz=306,SNR=14					
TXAR	**Lajitas Array**	**16.67**	**155**	Pn	**P**	**12 18 36.8 -0.6**
	baz=341,slow=11,SNR=6.1					
	comp=N,0.7nm,1.0s					
YKA	**Yellowknife Ar**	**17.86**	**356**	Pn	**Pn**	**12 18 46.2 -3.3**
	comp=N,0.5nm,0.3s,baz=166,slow=13,SNR=13					
YKA				Lg	Lg	12 23 46.0
	baz=170,slow=27					
	comp=N,1.0nm,0.5s					
MMPY	**Sheldon Lake,**	**21.15**	**335**	P	**P**	**12 19 23.2 -3.0**
	baz=139,SNR=5.4					
ILAR	**Eielson Array**	**27.91**	**328**	P	**P**	**12 20 33.2 +2.0**
	comp=N,1.2nm,1.0s,baz=131,slow=8.6,SNR=7.8					
	comp=N,1.2nm,1.0s					
SFJD	**Kangerlussuaq**	**38.72**	**33**	LR	LR	12 38 05.4
	comp=N,47nm,21.3s,baz=259,slow=36					
BORG	**Borgarnes**	**50.85**	**34**	LR	LR	12 45 01.6
	comp=N,48nm,19.3s,baz=297,slow=36					
JMIC	**Jan Mayen**	**52.47**	**24**	LR	LR	12 46 04.4
	comp=N,27nm,18.4s,baz=250,slow=36					
PETK	**Petropavlovsk-**	**56.24**	**314**	P	**P**	**12 24 22.0 +0.6**
	comp=N,1.3nm,0.6s,baz=78,slow=11,SNR=8.9					
	comp=N,1.3nm,0.6s					
NB2	**NORSAR Subarra**	**64.91**	**27**	P	**P**	**12 25 20.4 -0.2**
	comp=Z,0.8nm,0.6s,baz=313,slow=6.9					
NOA	**NORSAR Array B**	**64.91**	**27**	P	**P**	**12 25 20.6 +0.1**
	comp=Z,0.5nm,0.7s,baz=313,slow=6.7,SNR=3.8					
NOA				LR	LR	12 52 55.7
	comp=Z,12nm,20.2s,baz=35,slow=35					
	comp=Z,0.5nm,0.7s					
FINES	**FINESS Array B**	**68.82**	**20**	P	**P**	**12 25 46.5 +1.2**
	comp=Z,0.8nm,0.6s,baz=350,slow=7.1,SNR=2.3					
	comp=Z,0.8nm,0.6s					
AKASG	**Malin Array Be**	**79.09**	**24**	LR	LR	13 02 55.7
	comp=Z,39nm,20.1s,baz=46,slow=37					
MLR	**Muntele Rosu**	**82.66**	**28**	LR	LR	13 04 42.5
	comp=Z,62nm,19.9s,baz=92,slow=36					
HHC	**Hu-ho-hao-te**	**86.34**	**329**	*e*P	P	12 27 18.1 -5.6
HHC				pmax	pmax	
	comp=Z,15nm,1.0s					
HHC				pmax	pmax	
	comp=Z,200nm,4.4s					
WMQ	**Urumqi**	**90.13**	**346**	*e*P	**P**	**12 27 40.6 -1.1**
BRTR	**Keskin Array B**	**90.34**	**26**	LR	LR	13 08 14.0
	comp=Z,33nm,18.1s,baz=68,slow=36					

INET ***13*** *13:29:41.2±1.0, 12.83N×87.09W, h15km±4km, MW3.6*
SNET ***13*** *13:29:44.4±1.1, 12.94N×87.20W, h7km±10km, ML3.5*
ISC 13 13:29:41.0±1.3, 12.93N±0.06×87.04W±0.04, h6km±13km, n15, σ0.961/23, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**0.23**	**183**	*e*P	**Pg**	**13 29 45.4**	**0.0**
CRIN				*e*S	**Sg**	**13 29 48.3**	**-0.1**
TELN	**Telica**	**0.38**	**148**	*e*P	**Pg**	**13 29 48.6**	**+0.2**
CSGN	**Cosiguina Volc**	**0.51**	**276**	*e*P	**Pg**	**13 29 51.4**	**+0.6**
CNGN	**Cerro Negro**	**0.54**	**142**	*e*P	**Pg**	**13 29 51.7**	**+0.3**
MOMN	**Momotombo**	**0.71**	**137**	*e*P	**Pg**	**13 29 54.8**	**+0.2**
MOMN				*e*S	**Sg**	**13 30 04.1**	**+0.3**
CNCH	**Conchagua**	**0.85**	**294**	*e*P	**Pb**	**13 29 58.0**	**-0.3**
CNCH				*e*S	**Sb**	**13 30 09.8**	**-0.2**
CNCH				IAML		13 30 16.1	
	comp=Z,3μm,0.4s						
LCND	**La Caada**	**0.91**	**295**	*e*P	**Pg**	**13 29 58.5**	**0.0**
LCND				*e*S	**Sg**	**13 30 10.2**	**-0.2**
LCND				IAML		13 30 16.6	
	comp=Z,935nm,0.4s						
MATN	**Matagalpa**	**1.08**	**90**	*e*P	**Pb**	**13 30 01.3**	**-0.9**
TGUH	**Tegucigalpa,Un**	**1.15**	**348**	*e*P	**Pn**	**13 30 04.2**	**+0.4**
TGUH				*e*S	**Sn**	**13 30 20.6**	**+0.8**
LCY	**Lacayo**	**1.32**	**292**	*e*P	**Pn**	**13 30 05.8**	**-0.3**
PACA	**Pacayal**	**1.36**	**293**	*e*P	**Pg**	**13 30 07.1**	**0.0**
PACA				*e*S	**Sb**	**13 30 23.7**	**-1.0**
PACA				IAML		13 30 32.5	
	comp=Z,3μm,0.4s						
SCLA	**Alcaldia de Sa**	**1.82**	**295**	*e*P	**Pb**	**13 30 14.6**	**-0.1**
SCLA				*e*S	**Sb**	**13 30 37.7**	**-0.1**
COEG	**Centro de Oper**	**1.92**	**291**	*e*P	**Pb**	**13 30 15.7**	**-0.9**
COEG				*e*S	**Sn**	**13 30 38.5**	**-0.4**
COEG				IAML		13 30 46.0	
	comp=Z,247nm,0.5s						
SJTE	**Alcalda de S**	**2.04**	**290**	*e*P	**Pn**	**13 30 16.6**	**+0.7**
PMON	**Piamonte**	**2.35**	**290**	*e*P	**Pn**	**13 30 21.7**	**+1.4**

IDC ***13*** *13:34:19.3±4.8, 1.04S×78.56W, h0km, mb3.7/2, mbtmp3.7/3, ML3.9/1, Error ellipse: s-maj=136.7km s-min=47.0km az=104.0*
ISC 13 13:34:21.1±2.6, 1.3S±0.2×78.9W±0.3, h10km, n6, σ1.995/6, Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FLOC	**Florencia**	**4.32**	**48**	*e*P	**Pg**	**13 35 45.5**	**+1.5**
GARC	**Garzon, Huila**	**4.85**	**44**	*e*P	**Pg**	**13 35 53.1**	**-1.0**
MARP	**Paez Belalcaza**	**5.05**	**35**	*e*P	**Pg**	**13 35 59.3**	**+1.2**
LPAZ	**La Paz**	**18.27**	**145**	P	**Pn**	**13 38 35.4**	**-0.1**
	0.2nm,0.3s,baz=308,slow=9.3,SNR=2.9						
	0.6nm,0.5s						
PLCA	**Paso Flores**	**39.96**	**170**	P	**P**	**13 41 57.3**	**+1.4**
	1.3nm,0.8s,baz=348,slow=9.3,SNR=3.9						
	1.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**81.12**	**77**	P	**P**	**13 46 35.4**	**-2.2**
	0.7nm,1.1s,baz=278,slow=6.0,SNR=4.0						
	0.7nm,1.1s						

MAN 13 13:38:34.5, 9.43N×125.55E, h7km, mb4.7, ML3.6, MS3.5, 3C-7D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**0.36**	**350**	*i*P	Pb	13 38 42.4	+0.3
SCPH				*i* S		13 38 48.1	
BUTP	**Butuan**	**0.46**	**172**	*e*P	Pb	13 38 44.0	+0.1
BUTP				*e*S		13 38 53.4	
GLSP	**General Luna,**	**0.67**	**58**	*e*P	Pb	13 38 47.6	+0.3
GLSP				*e*S		13 39 00.7	
MSLP	**Maasin**	**0.98**	**316**	*i*P	Pg	13 38 53.1	0.0
MSLP				*i* S		13 39 13.6	
CGP	**Cagayan de Oro**	**1.29**	**221**	*i*P	Pb	13 38 58.3	+0.1
CGP				*e*S		14 09 16.4	
BIPH	**Bislig**	**1.46**	**147**	*e*P	Pn	13 39 00.8	+0.3
BIPH				*i* S		13 39 21.4	
OCLP	**Ormoc**	**1.87**	**330**	*e*P	Pb	13 39 07.7	+0.7
CTBH	**Cotabato--PC H**	**2.55**	**211**	*i*P	Pb	13 39 18.2	+1.6
PAGZ	**Pagadian**	**2.66**	**234**	*e*P	Pn	13 39 18.7	+1.7
PAGZ				*e*S		13 39 50.9	
DDMP	**Don Marcelino,**	**3.31**	**177**	*e*P	Pn	13 39 27.7	+1.8
DDMP				*e*S		13 40 09.3	

MDD ***13*** *13:45:34.8±0.5, 41.60N×2.57E, h17km±4km, mb_Lg2.6/11, Error ellipse: s-maj=3.7km s-min=2.4km az=134.0*
MRB ***13*** *13:45:34.9±0.2, 41.60N×2.54E, ML2.0/19, Error ellipse: s-maj=1.5km s-min=0.7km az=298.0*
LDG ***13*** *13:45:34.0±0.1, 41.58N×2.57E, h4km, Ml2.4/11, Error ellipse: s-maj=2.0km s-min=1.2km az=126.0*
STR ***13*** *13:45:36.4±1.0, 42°N±5'×±', h4km, MLv2.1/6, preliminary*
ISC 13 13:45:33.1±1.0, 41.57N±0.02×2.63E±0.03, h17km±7km, n59, σ1.908/114, Spain

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CFON	**Fontmartina**	**0.24**	**323**	P	**Pg**	**13 45 38.6**	**-0.1**
CFON				S	**Sg**	**13 45 41.3**	**-1.1**
CCAS	**Cassa de la Se**	**0.38**	**33**	P	**Pb**	**13 45 42.2**	**+0.9**
CCAS				S	**Sb**	**13 45 47.7**	**+0.9**
FBR	**Fabra**	**0.41**	**248**	P	**Pg**	**13 45 41.7**	**+0.2**
FBR				S	**Sg**	**13 45 46.8**	**-0.4**
CORI	**Orista**	**0.59**	**313**	P	**Pg**	**13 45 44.6**	**-0.2**
CORI				S	**Sg**	**13 45 51.7**	**-1.0**
	133nm,0.1s						
CGAR	**Garraf**	**0.60**	**243**	P	Pn	13 45 45.5	-9.0
CGAR				S	Sb	13 45 53.0	-16
	26nm,0.2s						
CBEU	**Beuda**	**0.69**	**3**	P	**Pb**	**13 45 47.3**	**+0.7**
CBEU				Sg	**Sb**	**13 45 56.3**	**+0.4**
	93nm,0.2s						
CBRU	**Bruguera**	**0.79**	**335**	P	**Pg**	**13 45 48.5**	**0.0**
CBRU				S	**Sg**	**13 45 58.5**	**-0.5**
	22nm,0.1s						
CPAL	**Palau Saverder**	**0.84**	**28**	P	**Pn**	**13 45 50.5**	**+0.4**
CPAL				S	**Sn**	**13 46 01.9**	**-0.1**
	29nm,0.2s						
EMIR	**Miracle**	**0.89**	**293**	Pg	**Pb**	**13 45 50.4**	**+0.2**
EMIR				Sg	**Sb**	**13 46 01.2**	**-0.6**
EMIR	**Miracle**	**0.89**	**293**	Pg	**Pb**	**13 45 50.4**	**+0.2**
EMIR				Sg	**Sb**	**13 46 01.2**	**-0.6**
EJON	**La Jonquera**	**0.90**	**12**	Pg	**Pn**	**13 45 51.3**	**+0.3**
EJON	**La Jonquera**	**0.90**	**12**	Pg	**Pn**	**13 45 51.3**	**+0.3**
EJON				Sg	**Sg**	**13 46 02.8**	**+0.4**
EJON				*i* Vmb_Lg		13 46 03.7	
SJAF	**Saint Jean de**	**0.93**	**12**	P	**Pn**	**13 45 51.9**	**+0.5**
SJAF				Sg	**Sn**	**13 46 04.5**	**+0.1**
	29nm,0.2s						
SJAF	**Saint Jean de**	**0.93**	**12**	Pg	**Pn**	**13 45 52.0**	**+0.5**
SJAF				Sg	**Sg**	**13 46 03.9**	**+0.4**
CLLI	**Llivia**	**1.03**	**332**	P	**Pb**	**13 45 52.6**	**0.0**
CLLI				Sg	**Sg**	**13 46 06.6**	**-0.1**
	21nm,0.3s						
CORG	**Organya**	**1.18**	**304**	P	**Pb**	**13 45 55.3**	**+0.3**
CORG				S	**Sb**	**13 46 10.3**	**+0.3**
	16nm,0.1s						
EPOB	**Poblet**	**1.19**	**260**	P	**Pb**	**13 45 55.6**	**+0.5**
EPOB				S	**Sb**	**13 46 10.7**	**+0.6**
	27nm,0.3s						
EPOB				Sg	**Sn**	**13 46 11.4**	**+0.7**
EPOB	**Poblet**	**1.19**	**260**	Pg	**Pn**	**13 45 55.3**	**+0.4**
EPOB				Sg	**Sb**	**13 46 10.8**	**+0.6**
EPOB				*i* Vmb_Lg		13 46 11.4	
ARBS	**La Rabassa**	**1.19**	**318**	P	**Pb**	**13 45 55.6**	**+0.3**
ARBS				S	**Sb**	**13 46 10.7**	**+0.2**
	48nm,0.4s						
PAND	**Andorre**	**1.25**	**320**	Pg	**Pg**	**13 45 57.3**	**+0.1**
PAND				Sg	**Sg**	**13 46 13.8**	**+0.2**
	58nm,0.2s						
PAND	**Andorre**	**1.25**	**320**	Pg	**Pg**	**13 45 57.0**	**-0.2**
PAND				Sg	**Sb**	**13 46 12.5**	**+0.4**
CSOR	**Sort**	**1.37**	**306**	P	**Pb**	**13 45 58.7**	**+0.3**
CSOR				S	**Sb**	**13 46 16.4**	**+0.8**
	39nm,0.2s						
FNEB	**Nbias**	**1.39**	**344**	Pg	**Pg**	**13 45 59.6**	**-0.3**
FNEB				Sg	**Sg**	**13 46 17.6**	**-0.4**
CAVN	**Les Avellanes**	**1.44**	**283**	P	**Pb**	**13 45 59.8**	**+0.4**
CAVN				S	**Sb**	**13 46 18.3**	**+0.9**
	57nm,0.4s						
CEST	**Esterri de Car**	**1.45**	**316**	P	**Pb**	**13 46 00.3**	**+0.6**
CEST				S	**Sb**	**13 46 18.6**	**+0.7**
	11nm,0.1s						
CTRE	**Tremp**	**1.57**	**299**	P	**Pb**	**13 46 02.4**	**+0.6**
CTRE				S	**Sb**	**13 46 22.6**	**+1.1**
	16nm,0.4s						
CARA	**Val d'Aran**	**1.76**	**311**	S	**Sb**	**13 46 27.3**	**+0.5**
	24nm,0.2s						
MLS	**Moulis**	**1.79**	**321**	Pg	**Pg**	**13 46 07.0**	**-0.5**
MLS				Sg	**Sg**	**13 46 30.2**	**-0.7**
	11nm,0.5s						
MLS	**Moulis**	**1.79**	**321**	Pg	**Pg**	**13 46 06.9**	**-0.7**
MLS				Sn	**Sb**	**13 46 27.9**	**+0.3**
MTLF	**Montolieu**	**1.79**	**350**	*e*Pn	**Pn**	**13 46 03.9**	**+0.6**
MTLF	**Montolieu**	**1.79**	**350**	*e*Pg	**Pg**	**13 46 07.2**	**-0.4**
MTLF				*e*Sn	**Sn**	**13 46 26.4**	**+0.8**
	12nm,0.3s						
MTLF	**Montolieu**	**1.79**	**350**	Pg	**Pg**	**13 46 07.2**	**-0.4**
MTLF	**Montolieu**	**1.79**	**350**	Pn	**Pb**	**13 46 06.4**	**+0.9**
MTLF				Pg	**Pg**	**13 46 07.4**	**-0.2**
MTLF	**Montolieu**	**1.79**	**350**	Sn	**Sb**	**13 46 28.6**	**+1.0**
ETOS	**Mallorca**	**1.81**	**175**	Pn	**Pn**	**13 46 03.5**	**+0.4**
ETOS				Sn	**Sn**	**13 46 25.0**	**-0.9**
ETOS				*i* Vmb_Lg		13 46 38.6	
ERTA	**Horta de San J**	**1.83**	**251**	P	**Pb**	**13 46 05.9**	**-0.2**
ERTA				Pg	**Pg**	**13 46 08.0**	**-0.4**
ERTA				S	**Sb**	**13 46 29.6**	**+0.7**
	6.9nm,0.5s						
ERTA				Sg	**Sg**	**13 46 32.4**	**+0.2**
ERTA	**Horta de San J**	**1.83**	**251**	Pn	**Pn**	**13 46 04.2**	**+0.3**
ERTA				Pg	**Pg**	**13 46 08.0**	**-0.4**
ERTA				Sn	**Sn**	**13 46 26.6**	**-0.1**
ERTA				Sg	**

az=19.0

ISC 13 13:48:26.5±0.8, 14°38S±0°09×167°4E±0°1, h200km, n30, σ1ˢ74/30, mb4.2/12, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOUNC	**Koumac, New Ca**	**6.82**	**205**	Pn	**Pn**	**13 50 00.2**	**-4.2**
DZM	**Mont Dzumac**	**7.70**	**187**	P	**Pn**	**13 50 17.2**	**+1.2**
	8.5nm,0.3s,baz=63,slow=10.0,SNR=24						
DZM				S	**Sn**	**13 51 43.1**	**0.0**
	5.0nm,0.4s,baz=311,slow=23,SNR=1.5						
DZM	**Mont Dzumac**	**7.70**	**187**	Pn	**Pn**	**13 50 14.3**	**-1.7**
HNR	**Honiara**	**8.80**	**303**	P	**Pn**	**13 50 31.7**	**+1.4**
	34nm,0.3s,baz=127,slow=18,SNR=1.2						
HNR	**Honiara**	**8.80**	**303**		**Pn**	**13 50 26.7**	**-3.6**
MSVF	**Nonsavu**	**10.76**	**109**	P	**P**	**13 50 59.4**	**-3.1**
	2.2nm,0.8s,baz=265,slow=12,SNR=1.1						
EIDS	**Eidsvold**	**18.83**	**232**	P	**Pn**	**13 52 31.9**	**-2.4**
EIDS				IAmb	IAmb	13 52 38.2	
	comp=Z,16nm,1.1s						
COEN	**Coen**	**23.50**	**268**	P	**P**	**13 53 19.6**	**+1.0**
COEN				IAmb	IAmb	13 53 45.2	
	comp=Z,17nm,1.0s						
LTZ	**Lake Taylor**	**28.61**	**173**	P	**P**	**13 54 04.9**	**+0.7**
LTZ				IAmb	IAmb	13 54 23.5	
	comp=Z,21nm,1.2s						
STKA	**Stephens Creek**	**29.32**	**229**	P	**P**	**13 54 13.0**	**+2.4**
	comp=Z,2.3nm,0.4s,baz=50,slow=9.7,SNR=14						
	comp=Z,2.3nm,0.4s						
STKA	**Stephens Creek**	**29.32**	**229**	P	**P**	**13 54 12.6**	**+2.0**
WR0	**Warramunga Arr**	**31.85**	**255**	P	**P**	**13 54 32.6**	**-0.4**
WR0				IAmb	IAmb	13 54 51.8	
	comp=Z,9.8nm,1.2s						
WB0	**Warramunga Arr**	**31.98**	**256**	P	**P**	**13 54 33.4**	**-0.8**
WB0				IAmb	IAmb	13 54 47.6	
	comp=Z,12nm,1.4s						
WB2	**Warramunga Arr**	**32.03**	**255**	P	**P**	**13 54 33.8**	**-0.8**
WB2				IAmb	IAmb	13 54 36.2	
	comp=Z,7.9nm,1.4s						
WRA	**Warramunga Arr**	**32.04**	**255**	P	**P**	**13 54 34.1**	**-0.6**
	comp=Z,0.7nm,0.4s,baz=81,slow=6.7,SNR=16						
	comp=Z,0.7nm,0.4s						
AS31	**Alice Springs**	**32.92**	**249**	P	**P**	**13 54 41.6**	**-0.7**
ASAR	**Alice Springs**	**32.92**	**249**	P	**P**	**13 54 41.9**	**-0.5**
	comp=Z,1.0nm,0.5s,baz=76,slow=9.2,SNR=49						
	comp=Z,1.0nm,0.5s						
ASAR	**Alice Springs**	**32.92**	**249**	P	**P**	**13 54 41.5**	**-0.9**
BBOO	**Buckleboo**	**33.90**	**232**	P	**P**	**13 54 51.9**	**+1.3**
MTN	**Manton Dam**	**35.27**	**268**	P	**P**	**13 55 03.1**	**+0.6**
KNRA	**Kununurra**	**37.31**	**263**	P	**P**	**13 55 19.3**	**-0.6**
FORT	**Forrest**	**39.59**	**239**	P	**P**	**13 55 39.3**	**+0.7**
VNDA	**Vanda**	**63.21**	**181**	P	**P**	**13 58 34.6**	**+1.6**
	comp=Z,0.3nm,0.6s,baz=0.9,slow=7.4,SNR=5.8						
	comp=Z,0.3nm,0.6s						
VNDA	**Vanda**	**63.21**	**181**	P	**P**	**13 58 34.6**	**+1.6**
SBA	**Scott Base**	**63.48**	**180**	P	**P**	**13 58 36.5**	**+1.8**
CASY	**Casey**	**63.90**	**202**	P	**P**	**13 58 38.8**	**+1.1**
CASY				IAmb	IAmb	13 58 40.0	
	comp=Z,5.9nm,1.1s						
MAW	**Mawson**	**82.25**	**202**	P	**P**	**14 00 25.3**	**+0.1**
	comp=Z,1.1nm,0.5s,baz=117,slow=5.8,SNR=2.4						
	comp=Z,1.1nm,0.5s						
MAW	**Mawson**	**82.25**	**202**	IAmb	IAmb	14 00 34.6	
	comp=Z,1.5nm,1.4s						
ILAR	**Eielson Array**	**86.16**	**18**	P	**P**	**14 00 44.9**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=239,slow=5.1,SNR=4.2						
	comp=Z,0.2nm,0.6s						
ARCES	**ARCESS Array B**	**119.95**	**345**	PKP	**PKiKP**	**14 06 54.2**	**+1.5**
	comp=Z,0.7nm,0.3s,baz=72,slow=2.3,SNR=19						

*IDC **13** 13:48:25.3±0.5,29°21S×61°10E, h0km, mb4.3/14, mbtmp4.3/15, ML4.6/1, MS3.7/13, Error ellipse: s-maj=20.9km s-min=16.0km az=24.0*
*NEIC **13** 13:48:27.8±1.7,29°1S±0°1×61°1E±0°1, h13km±4km, mb4.6/25, Error ellipse: s-maj=17.6km s-min=14.7km az=225.0*

ISC 13 13:48:27.4±0.5, 29°1S±0°1×61°00E±0°09, h10km, n78, σ1ˢ22/65, mb4.7/31, MS3.8/14, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RER	**Riviere de l'E**	**9.25**	**328**	Pn	**Pn**	**13 50 38.2**	**-2.8**
FOMA	**Nahampoana Res**	**13.16**	**285**	Pn	**Pn**	**13 51 34.0**	**-0.4**
VOI	**Vohitsoka**	**14.69**	**296**		**Pn**	**13 51 55.5**	**0.0**
ABPO	**Ambohimpanom**	**16.09**	**306**	Pn	**Pn**	**13 52 13.7**	**-0.3**
OPO	**Ambohidratompo**	**16.42**	**307**	Pn	**Pn**	**13 52 18.5**	**+0.4**
	0.2nm,0.3s,baz=118,slow=13,SNR=11						
OPO				Sn	Sn	13 55 07.4	-13
	0.1nm,0.3s,baz=171,slow=14,SNR=2.4						
OPO				LR	LR	13 55 59.5	
	comp=Z,102nm,20.6s,baz=356,slow=28						
	7.6nm,0.6s						
H08S1	**Diego Garcia H**	**23.95**	**29**	T	T	14 18 24.2	
	baz=204,slow=76,SNR=34						
H08S2	**Diego Garcia H**	**23.96**	**29**	T	T	14 18 24.9	
	baz=204,slow=76,SNR=27						
H08S3	**Diego Garcia H**	**23.97**	**29**	T	T	14 18 26.5	
	baz=204,slow=76,SNR=27						
BOSA	**Boshof**	**31.23**	**262**	LR	LR	14 05 39.7	
	comp=Z,98nm,18.4s,baz=116,slow=33						
LBTB	**Lobatse**	**31.71**	**269**	LR	LR	14 05 21.4	
	comp=Z,49nm,20.5s,baz=114,slow=32						
LBTB	**Lobatse**	**31.71**	**269**	P	**P**	**13 54 51.5**	**-0.1**
LBTB				IAmb	IAmb	13 55 03.5	
	comp=Z,8.7nm,1.1s						
LSZ	**Lusaka**	**33.23**	**287**	P	**P**	**13 55 04.1**	**-0.9**
	comp=Z,7.5nm,0.6s,baz=128,slow=7.6,SNR=12						
	comp=Z,7.5nm,0.6s						
LSZ	**Lusaka**	**33.23**	**287**	P	**P**	**13 55 04.8**	**-0.2**
LSZ				IAmb	IAmb	13 55 06.6	
	comp=Z,8.4nm,0.8s						
SUR	**Sutherland**	**34.54**	**254**	LR	LR	14 06 41.6	
	comp=Z,136nm,18.2s,baz=126,slow=32						
MAW	**Mawson**	**38.52**	**179**	LR	LR	14 07 07.0	
	comp=Z,109nm,21.6s,baz=354,slow=29						
TSUM	**Tsumeb**	**40.63**	**274**	P	**P**	**13 56 08.4**	**+0.4**
	comp=Z,3.5nm,0.7s,baz=118,slow=11,SNR=4.9						
TSUM				LR	LR	14 11 38.8	
	comp=Z,105nm,18.3s,baz=149,slow=34						
	comp=Z,3.5nm,0.7s						
TSUM	**Tsumeb**	**40.63**	**274**	P	**P**	**13 56 08.2**	**+0.3**
ATD	**Arta Tunnel**	**44.06**	**334**	LR	LR	14 12 01.3	
	comp=Z,130nm,20.9s,baz=84,slow=32						
H01W2	**Cape Leeuwin H**	**44.99**	**112**	T	T	14 44 18.7	
	baz=261,slow=75,SNR=49						
H01W3	**Cape Leeuwin H**	**44.99**	**112**	T	T	14 44 19.0	
	baz=261,slow=75,SNR=42						
H01W1	**Cape Leeuwin H**	**45.01**	**112**	T	T	14 44 19.9	
	baz=261,slow=75,SNR=44						
SNAA	**Sanae**	**54.44**	**200**	P	**P**	**13 57 53.7**	**-0.9**
	comp=Z,2.5nm,0.9s,baz=0.4,slow=24,SNR=5.2						
SNAA				LR	LR	14 16 03.9	
	comp=Z,61nm,21.4s,baz=46,slow=30						
	comp=Z,2.5nm,0.9s						
SNAA	**Sanae**	**54.44**	**200**	P	**P**	**13 57 54.1**	**-0.4**
SNAA				IAmb	IAmb	13 58 04.2	
	comp=Z,4.8nm,1.1s						
CMAR	**Chiang Mai Arr**	**59.84**	**42**	P	**P**	**13 58 33.5**	**+0.2**
	comp=Z,1.9nm,0.7s,baz=230,slow=7.6,SNR=13						
	comp=Z,1.9nm,0.7s						
PYUN	**Piuthan**	**60.68**	**22**	*e*P	**P**	**13 58 39.2**	**+0.1**
	comp=Z,74nm,0.8s						
QSPA	**South Pole Qui**	**61.02**	**180**	LR	LR	14 21 28.8	
	comp=Z,69nm,20.7s,baz=242,slow=32						
GKN	**Gorkha**	**61.15**	**24**	*e*P	**P**	**13 58 42.3**	**0.0**
	comp=Z,47nm,0.9s						
DANN	**Dangsing**	**61.17**	**23**	*e*P	**P**	**13 58 42.4**	**-0.2**
GUN	**Gumba**	**61.52**	**25**	*e*P	**P**	**13 58 45.3**	**+0.3**
	comp=Z,46nm,0.9s						
TAPN	**Taplejung**	**61.72**	**27**	*e*P	**P**	**13 58 48.4**	**+2.1**
KNRA	**Kununurra**	**63.33**	**94**	P	**P**	**13 58 56.9**	**-0.1**
VNDA	**Vanda**	**64.10**	**166**	P	**P**	**13 59 00.1**	**-1.1**
	comp=Z,1.9nm,0.8s,baz=266,slow=5.9,SNR=13						
VNDA				LR	LR	14 25 05.8	
	comp=Z,83nm,18.6s,baz=234,slow=34						
	comp=Z,1.9nm,0.8s						
VNDA	**Vanda**	**64.10**	**166**	P	**P**	**13 59 00.7**	**-0.5**
VNDA				IAmb	IAmb	13 59 12.4	
	comp=Z,2.3nm,0.9s						
ASAR	**Alice Springs**	**64.59**	**104**	P	**P**	**13 59 03.8**	**-1.6**
	comp=Z,1.9nm,0.7s,baz=244,slow=6.0,SNR=21						
	comp=Z,1.9nm,0.7s						
AS31	**Alice Springs**	**64.59**	**104**	P	**P**	**13 59 03.8**	**-1.6**
SBA	**Scott Base**	**64.98**	**167**	P	**P**	**13 59 07.2**	**+0.3**
SBA				IAmb	IAmb	13 59 14.6	
	comp=Z,5.6nm,1.1s						
WRA	**Warramunga Arr**	**66.41**	**100**	P	**P**	**13 59 15.6**	**-1.6**
	comp=Z,2.8nm,0.9s,baz=247,slow=5.6,SNR=12						
	comp=Z,2.8nm,0.9s						
WB0	**Warramunga Arr**	**66.53**	**100**	P	**P**	**13 59 16.7**	**-1.3**
WR0	**Warramunga Arr**	**66.58**	**101**	P	**P**	**13 59 16.8**	**-1.4**
PZH	**PanZhiHua**	**67.73**	**39**	P	**P**	**13 59 28.3**	**+2.9**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,90nm,4.1s						
KSH	**Kashi**	**69.71**	**12**	P	**P**	**13 59 34.5**	**-2.9**
KSH				sP	pwP	13 59 42.0	-3.2
KSH				pmax	pmax		
	comp=Z,9.0nm,0.8s						
TOA0	**Torodi Ar. Sit**	**71.00**	**298**	P	**P**	**13 59 46.0**	**+0.2**
TOA0				IAmb	IAmb	13 59 47.2	
	comp=Z,5.9nm,0.9s						
TORD	**Torodi Ar. Bea**	**71.00**	**298**	P	**P**	**13 59 46.2**	**+0.5**
	comp=Z,4.4nm,0.8s,baz=108,slow=5.3,SNR=24						
TORD				LR	LR	14 30 38.9	
	comp=Z,64nm,19.4s,baz=222,slow=36						
	comp=Z,4.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**71.00**	**298**	P	**P**	**13 59 45.9**	**+0.1**
TORD				IAmb	IAmb	13 59 47.2	
	comp=Z,5.6nm,0.9s						
KK31	**Karatay Array**	**72.41**	**7**	P	**P**	**13 59 53.5**	**-0.1**
KK31				IAmb	IAmb	13 59 57.7	
	comp=Z,5.7nm,1.1s						
KKAR	**Karatay Array**	**72.41**	**7**	P	**P**	**13 59 53.3**	**-0.3**
DBIC	**Dimbokro**	**72.56**	**288**	P	**P**	**13 59 55.3**	**+0.2**
	comp=Z,5.9nm,0.8s,baz=130,slow=9.0,SNR=4.4						
	comp=Z,5.9nm,0.8s						
DBIC	**Dimbokro**	**72.56**	**288**	P	**P**	**13 59 55.4**	**+0.2**
BRTR	**Keskin Array B**	**73.08**	**338**	P	**P**	**13 59 58.1**	**+0.3**
	comp=Z,1.1nm,0.8s,baz=153,slow=8.3,SNR=5.0						
	comp=Z,1.1nm,0.8s						
KBZ	**Khabaz**	**74.38**	**346**	LR	LR	14 31 01.9	
	comp=Z,73nm,21.2s,baz=152,slow=34						
ITM	**Ithomi**	**75.46**	**329**	P	**P**	**14 00 12.0**	**+0.4**
LZH	**Lanzhou**	**76.38**	**35**	*e*P	**P**	**14 00 15.8**	**-1.3**
LZH				pP	pwP	14 00 23.4	-1.4
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
WMQ	**Urumqi**	**76.61**	**20**	*e*P	**P**	**14 00 19.1**	**+1.0**
WMQ				pP	sP	14 00 21.8	+1.2
WMQ				PcP	**PcP**	**14 00 31.6**	**+2.1**
WMQ				pmax	pmax		
	comp=Z,22nm,0.7s						
WMQ				LR	LR		
	comp=Z,130nm,19.3s						
GTA	**Gaotai**	**77.18**	**30**	*e*P	**P**	**14 00 24.8**	**+3.3**
GTA				pP	PcP	14 00 31.0	-1.2
GTA				sP	pwP	14 00 34.3	+5.1
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,69nm,5.1s						
GTA				LR	LR		
	comp=N,87nm,16.7s						
GTA				LR	LR		
	comp=E,79nm,14.9s						
GTA				LR	LR		
	comp=Z,130nm,16.4s						
MAKZ	**Makanchi**	**77.93**	**15**	P	**P**	**14 00 23.8**	**-1.6**
MK31	**Makanchi Array**	**77.98**	**15**	P	**P**	**14 00 24.1**	**-1.6**
MK31				IAmb	IAmb	14 00 29.1	
	comp=Z,3.3nm,1.0s						
MKAR	**Makanchi Array**	**77.98**	**15**	P	**P**	**14 00 25.4**	**-0.2**
	comp=Z,2.8nm,0.8s,baz=189,slow=6.0,SNR=17						
	comp=Z,2.8nm,0.8s						
MKAR	**Manchi Array**	**77.98**	**15**	P	**P**	**14 00 24.0**	**-1.7**
ABKAR	**Akbulak array**	**78.04**	**359**	P	**P**	**14 00 25.2**	**-0.7**
KEST	**Kesra**	**80.79**	**320**	LR	LR	14 36 07.6	
	comp=Z,61nm,19.7s,baz=234,slow=35						
KURK	**Kurchatov**	**81.01**	**11**	P	**P**	**14 00 41.7**	**-0.3**
KURK				IAmb	IAmb	14 00 46.4	
	comp=Z,5.0nm,1.0s						
HHC	**Hu-ho-hao-te**	**83.92**	**36**	*e*P	**P**	**14 01 00.4**	**+2.8**
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,190nm,4.5s						
AKASG	**Malin Array Be**	**84.31**	**340**	P	**P**	**14 00 58.6**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=166,slow=3.7,SNR=6.8						
	comp=Z,0.3nm,0.3s						
ARU	**Arti**	**85.25**	**359**	P	**P**	**14 01 02.7**	**-1.0**
ARU				IAmb	IAmb	14 01 07.7	
	comp=Z,5.2nm,0.8s						
ZAA0	**Zalesovo Array**	**85.27**	**14**	P	**P**	**14 01 03.0**	**-1.0**
ZAA0				IAmb	IAmb	14 01 07.8	
	comp=Z,5.8nm,0.9s						
ZALV	**Zalesovo Beam**	**85.27**	**14**	P	**P**	**14 01 03.1**	**-0.9**
	comp=Z,4.3nm,0.9s,baz=195,slow=4.5,SNR=11						
	comp=Z,4.3nm,0.9s						
ZALV	**Zalesovo Beam**	**85.27**	**14**	P	**P**	**14 01 02.9**	**-1.1**
SUW	**Suwalki**	**89.03**	**339**	*e*P	**P**	**14 01 22.9**	**+0.7**
ESDC	**Sonseca Array**	**91.27**	**316**	P	**P**	**14 01 34.4**	**+1.3**
	comp=Z,1.9nm,0.9s,baz=110,slow=3.0,SNR=8.0						
	comp=Z,1.9nm,0.9s						
ESDC	**Sonseca Array**	**91.27**	**316**	P	**P**	**14 01 33.8**	**+0.7**
ESDC				IAmb	IAmb	14 01 36.0	
	comp=Z,5.7nm,1.4s						
ILAR	**Eielson Array**	**140.27**	**18**	PKP	**PKPdf**	**14 07 56.4**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=303,slow=3.0,SNR=5.0						
YKA	**Yellowknife Ar**	**146.51**	**356**	PKPbc	**PKPbc**	**14 08 07.5**	**-0.7**
	comp=Z,2.8nm,0.6s,baz=351,slow=3.4,SNR=18						
ULM	**Lac du Bonnet**	**152.60**	**327**	PKPbc	**PKPbc**	**14 08 22.8**	**-1.1**
	comp=Z,9.0nm,0.7s,baz=32,slow=2.9,SNR=18						
ULM	**Lac du Bonnet**	**152.60**	**327**	PKPbc	**PKPbc**	**14 08 22.4**	**-1.5**
PDAR	**Pinedale Array**	**164.41**	**333**	PKP	**PKPdf**	**14 08 31.4**	**-0.2**
	comp=Z,1.5nm,0.9s,baz=132,slow=2.2,SNR=11						
TXAR	**Lajitas Array**	**166.60**	**275**	PKP	**PKPdf**	**14 08 34.4**	**+0.8**
	comp=Z,1.0nm,0.7s,baz=132,slow=2.4,SNR=14						
TXAR	**Lajitas Array**	**166.60**	**275**		**PKPdf**	**14 08 33.7**	**+0.1**
NVAR	**Mina Array Bea**	**170.71**	**357**	PKP	**PKPdf**	**14 08 37.1**	**+0.9**
	comp=Z,0.6nm,0.7s,baz=175,slow=1.0,SNR=5.3						

*REN **13** 13:57:49.9±0.8, 39°59N±0°03×115°81W±0°03, h2km±6km, ML2.8/5, ML2.8/62(NEIC), Error ellipse: s-maj=3.9km s-min=3.2km az=145.0*

NEIC 13 13:57:49.8±0.7, 39°61N±0°04×115°83W±0°01, h7km±6km, Error ellipse: s-maj=5.7km s-min=1.1km az=182.0, Nevada

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ELK	**Elko**	**1.22**	**22**		Pb	13 58 13.5	+0.1
ELK					Sb	13 58 29.9	+0.4
R11A	**Troy Canyon, C**	**1.27**	**171**		Pn	13 58 13.3	-0.9
R11A				IAML		13 58 31.9	
	comp=E,152nm,0.2s						
Q09A	**Carvers**	**1.31**	**234**	Pg	Pn	13 58 14.4	-0.3
Q09A				IAML		13 58 35.4	
	comp=E,190nm,0.3s						
Q09A				IAML		13 58 35.8	
	comp=N,196nm,0.4s						
BMN	**Battle Mountai**	**1.35**	**308**		Pn	13 58 15.1	-0.2
BMN	**Battle Mountai**	**1.35**	**308**	IAML		13 58 37.3	
	comp=E,183nm,0.4s						
KVN	**Kaiserville**	**1.85**	**253**	Pn	Pn	13 58 21.6	-0.5
KVN				IAML		13 58 50.5	
	comp=E,61nm,0.6s						
PSUT	**Pine Spring**	**1.88**	**124**		Pn	13 58 21.9	-0.6
PSUT	**Pine Spring**	**1.88**	**124**	IAML		13 58 51.1	
	comp=E,104nm,0.5s						
TPH	**Topaph**	**1.88**	**216**		Pn	13 58 22.8	+0.2
S11A	**Rachel**	**1.96**	**178**		Pn	13 58 23.8	+0.1
NV11	**Mina Array Sit**	**2.16**	**238**	Pn	Pn	13 58 26.3	-0.1
NVAR	**Mina Array Bea**	**2.26**	**239**	Pn	Pn	13 58 27.5	-0.3
PRN	**Pahroc Range**	**2.28**	**164**		Pn	13 58 27.8	-0.3
PRN				IAML		13 59 07.7	
	comp=E,73nm,0.5s						
RYN	**Ryan**	**2.31**	**246**	Pn	Pn	13 58 28.1	-0.4
RYN				IAML		13 59 05.9	
	comp=E,50nm,0.3s						
RYN				IAML		13 59 08.9	
	comp=N,49nm,0.4s						
DUG	**Dugway, Tooele**	**2.39**	**75**	Pn	Pn	13 58 29.4	-0.2
LHV	**Little Huntoon**	**2.49**	**238**	Pn	Pn	13 58 30.8	0.0
LHV				IAML		13 59 13.8	
	comp=E,43nm,0.6s						
LHV				IAML		13 59 16.2	
	comp=N,42nm,0.8s						
BGU	**Big Grassy Mou**	**2.51**	**58**		Pn	13 58 31.3	+0.1
TPNV	**Topopah Spring**	**2.68**	**187**		Pn	13 58 33.4	-0.1
YERR	**Yerington**	**2.72**	**258**	Pn	Pn	13 58 34.3	+0.2
YERR				IAML		13 59 20.1	
	comp=N,36nm,0.7s						
PAHR	**Pah Rah Range**	**2.75**	**273**	Pn	Pn	13 58 35.2	+0.7
PAHR				IAML		13 59 20.0	
	comp=E,22nm,0.5s						
TCRU	**Three Creeks R**	**2.81**	**110**	Pn	Pn	13 58 35.7	+0.2
TCRU				IAML		13 59 20.6	
	comp=E,24nm,0.9s						
CCUT	**Cedar City**	**2.82**	**136**	Pn	Pn	13 58 35.6	+0.1
CCUT				IAML		13 59 18.7	
	comp=E,34nm,0.5s						
CCUT				IAML		13 59 18.9	
	comp=N,22nm,0.6s						
SZCU	**Shurtz Canyon**	**2.94**	**132**	Pn	Pn	13 58 36.7	-0.5
SZCU				IAML		13 59 25.6	
	comp=N,38nm,0.2s						
PNTR	**Pine Nut**	**2.97**	**261**	Pn	Pn	13 58 37.2	-0.3
PNTR				IAML		13 59 26.0	
	comp=N,37nm,0.7s						
PNTR				IAML		13 59 33.7	
	comp=E,29nm,0.8s						
MSU	**Marysvale**	**3.05**	**110**	Pn	Pn	13 58 38.8	+0.2
MTPU	**Mount Pierson**	**3.25**	**118**		Pn	13 58 41.6	+0.1
LCMT	**Little Creek M**	**3.29**	**141**	Pn	Pn	13 58 42.2	+0.2
LCMT				IAML		13 59 34.5	
	comp=E,18nm,0.3s						
LCMT				IAML		13 59 35.5	
	comp=N,14nm,0.3s						
EMB	**Emerald Bay**	**3.38**	**261**	Pn	Pn	13 58 43.6	+0.5
EMB				IAML		13 59 39.5	
	comp=N,13nm,0.6s						
EMB				IAML		13 59 39.5	
	comp=E,15nm,1.1s						
GWY	**Greenwater Val**	**3.48**	**191**	Pn	Pn	13 58 45.1	+0.5
GWY				IAML		13 59 41.6	
	comp=N,20nm,0.4s						
GWY				IAML		13 59 46.4	
	comp=E,18nm,1.1s						
PKCU	**Pine Cliffs**	**3.50**	**127**	Pn	Pn	13 58 45.0	-0.1
U15A	**North Rim**	**4.23**	**138**	Pn	Pn	13 58 54.8	-0.2
U15A				IAML		14 00 04.4	
	comp=N,14nm,0.6s						
W13A	**Hualapai Mount**	**4.76**	**160**	Pn	Pn	13 59 02.4	+0.2
W13A				IAML		14 00 30.9	
	comp=N,4.5nm,4.5s						

*TUL **13** 13:57:57.1±0.7, 36°40N±0°02×97°14W±0°02, h8km±7km, ML2.4, mb_Lg2.5/26(NEIC), Error ellipse: s-maj=2.7km s-min=1.8km az=221.0*

NEIC 13 13:57:57.0±0.4, 36°39N±0°02×97°16W±0°01, h5km±7km, Error ellipse: s-maj=2.5km s-min=1.2km az=202.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T35A	**Sooner Cattle**	**0.74**	**45**	Pg	Pg	13 58 11.0	-0.2
OK002	**Wilshire Harra**	**0.84**	**182**	Pg	Pg	13 58 12.3	-0.9
OKCFA	**Oklahoma City**	**1.00**	**194**	Pg	Pg	13 58 16.0	-0.2
FNO	**Franklin**	**1.15**	**190**	Pg	Pg	13 58 18.5	-0.5
TUL1	**Leonard**	**1.21**	**113**		Pg	13 58 19.3	-0.8
U32A	**Winter Ranch,**	**1.49**	**270**	Pn	Pn	13 58 24.3	-0.1
X34A	**Smith Ranch, M**	**1.87**	**197**		Pn	13 58 30.3	+0.6
X34A				IAmb_Lg		13 59 00.4	
	comp=Z,19nm,0.8s						
WMOK	**Wichita Mounta**	**2.12**	**219**	Pn	Pn	13 58 33.8	+0.7
X37A	**Clayton**	**2.32**	**140**	IAmb_Lg		13 59 12.8	
	comp=Z,19nm,0.8s						
HHAR	**Hobbs**	**2.60**	**92**		Pn	13 58 39.5	-0.2
S39A	**Bolivar**	**3.33**	**66**	Pn	Pn	13 58 49.7	0.0
U40A	**Yellville**	**3.48**	**89**	Pn	Pn	13 58 52.0	+0.2
Z38A	**Mt. Pleasant**	**3.60**	**150**	IAmb_Lg		13 59 58.2	
	comp=Z,18nm,1.1s						
AMTX	**Amarillo**	**3.98**	**249**	IAmb_Lg		14 00 05.9	
	comp=Z,9.6nm,0.8s						
MGMO	**Mountain Grove**	**4.00**	**78**	IAmb_Lg		14 00 07.0	
	comp=Z,8.1nm,0.8s						
X40A	**Basin Creek Fa**	**4.01**	**117**	IAmb_Lg		14 00 05.5	
	comp=Z,11nm,0.8s						
P38A	**Dawn**	**4.31**	**41**	IAmb_Lg		14 00 15.0	
	comp=Z,12nm,0.8s						
R40A	**Maddies Statio**	**4.33**	**63**	IAmb_Lg		14 00 16.2	
	comp=Z,7.6nm,0.7s						
N33A	**J Bar K, Exete**	**4.34**	**357**	IAmb_Lg		14 00 14.6	
	comp=Z,14nm,0.9s						
CCM	**Cathedral Cave**	**5.00**	**69**	IAmb_Lg		14 00 33.0	
	comp=Z,15nm,0.8s						
FVM	**French Village**	**5.61**	**72**	IAmb_Lg		14 00 54.0	
	comp=Z,7.8nm,0.8s						
JCT	**Junction City**	**6.30**	**201**	IAmb_Lg		14 01 16.2	
	comp=Z,4.6nm,0.9s						

*NEIC **13** 14:11:35.5±1.9, 55°43N±0°04×158°36W±0°07, h46km±15km, ML3.6/22, ML3.4(AEIC), Error ellipse: s-maj=6.9km s-min=5.3km az=144.0*
*AEIC **13** 14:11:35±2.0, 55°41N±0°05×158°36W±0°06, h20km±5km, Error ellipse: s-maj=8.1km s-min=2.2km az=145.0*
*IDC **13** 14:11:37.6±5.6, 55°91N×158°45W, h57km±59km, mb3.2/3, mbtmp3.6/6, ML3.8/3, Error ellipse: s-maj=58.2km s-min=29.7km az=168.0*

ISC 13 14:11:35.1±0.9, 55°48N±0°06×158°33W±0°04, h46km±16km, n122, σ1ˢ37/128, mb3.3/3, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNSG	**Veniaminof 6**	**0.78**	**327**		**Pn**	**14 11 50.0**	**+0.3**
VNSG					**Sn**	**14 12 01.3**	**+0.9**
VNHG	**Veniaminof 1**	**0.88**	**328**		**Pn**	**14 11 51.9**	**+0.7**
CHNA	**Chernabura Isl**	**0.97**	**229**	P	**Pn**

	comp=N,9.7nm,0.3s							
KDAK	**Kodiak Island**	**3.92**	**52**			**Pn**	**14 12 33.2**	**+0.5**
KDAK	**Kodiak Island**	**3.92**	**52**	IAML			14 13 54.2	
	comp=N,39nm,1.1s							
KDAK				IAML			14 13 56.4	
	comp=N,44nm,1.4s							
O16K	**Kokwok River B**	**4.13**	**2**			**Pn**	**14 12 37.0**	**+1.4**
O16K	**Kokwok River B** baz=182	**4.13**	**2**	P		**Pn**	**14 12 37.0**	**+1.4**
P18K	**Big Mountain,**	**4.27**	**22**			**Pn**	**14 12 39.3**	**+1.8**
P18K	**Big Mountain,** baz=204	**4.27**	**22**	P		**Pn**	**14 12 39.3**	**+1.8**
Q19K	**Cape Douglas,**	**4.29**	**34**	Pn		**Pn**	**14 12 39.4**	**+1.5**
Q19K				IAML			14 13 41.3	
	comp=N,111nm,0.9s							
O17K	**Koliganek Bris**	**4.36**	**8**			**Pn**	**14 12 40.8**	**+2.1**
O17K	**Koliganek Bris** baz=189	**4.36**	**8**	P		**Pn**	**14 12 40.8**	**+2.1**
AKUT	**Akutan**	**4.51**	**256**	Pn		**Pn**	**14 12 42.1**	**+1.3**
AKUT				IAML			14 13 53.3	
	comp=N,95nm,1.5s							
O18K	**Koktuh Hills**	**4.70**	**20**			**Pn**	**14 12 45.3**	**+2.0**
O18K				IAML			14 14 12.4	
	comp=N,26nm,0.9s							
UNV	**Unalaska Valle**	**5.02**	**254**	Pn		**Pn**	**14 12 46.8**	**-1.0**
O19K	**Port Alsworth**	**5.19**	**23**			**Pn**	**14 12 51.2**	**+1.1**
O19K				IAML			14 13 56.6	
	comp=E,44nm,0.5s							
O19K				IAML			14 14 08.7	
	comp=N,44nm,0.5s							
N18K	**Kilae Creek**	**5.38**	**13**			**Pn**	**14 12 54.4**	**+1.8**
CNPM	**China Poot**	**5.57**	**40**			**Pn**	**14 12 56.1**	**+0.8**
N19K	**Bonanza Creek**	**5.72**	**19**			**Pn**	**14 12 59.5**	**+2.0**
SVW2	**Sparrevohn**	**5.82**	**13**			**Pn**	**14 13 00.2**	**+1.5**
BRLK	**Bradley Lake**	**5.87**	**40**	Pn		**Pn**	**14 12 59.3**	**-0.1**
SPU	**Mount Spurr**	**6.60**	**27**	Pn		**Pn**	**14 13 09.9**	**+0.4**
SEW	**Seward**	**6.63**	**42**	Pn		**Pn**	**14 13 09.3**	**-0.5**
NIKH	**Nikolski High**	**6.66**	**252**	Pn		**Pn**	**14 13 10.6**	**+0.3**
M19K	**Big River Lodg**	**6.76**	**16**			**Pn**	**14 13 13.5**	**+1.9**
SPIA	**Saint Paul Isl**	**6.84**	**289**	Pn		**Pn**	**14 13 13.9**	**+1.1**
L19K	**White Mountain**	**6.96**	**14**			**Pn**	**14 13 16.0**	**+1.6**
M20K	**Styx River**	**6.97**	**21**			**Pn**	**14 13 16.2**	**+1.7**
SUA	**Susitna One**	**7.20**	**30**	Pn		**Pn**	**14 13 19.0**	**+1.4**
RC01	**Rabbit Creek A**	**7.22**	**35**	Pn		**Pn**	**14 13 18.2**	**+0.3**
TTA	**Tatalina**	**7.57**	**8**	Pn		**Pn**	**14 13 23.9**	**+1.1**
Q23K	**Middleton Isla**	**7.58**	**54**	Pn		**Pn**	**14 13 23.7**	**+1.0**
MID	**Middleton Isla**	**7.58**	**54**	Pn		**Pn**	**14 13 23.7**	**+0.9**
KNIK	**Knik Glacier**	**7.88**	**37**	Pn		**Pn**	**14 13 27.9**	**+1.0**
GHO	**Glory Hole Cre**	**7.99**	**34**	Pn		**Pn**	**14 13 29.5**	**+1.1**
HIN	**Hinchinbrook I**	**7.99**	**47**	Pn		**Pn**	**14 13 28.9**	**+0.5**
GLI	**Glacier Island**	**8.03**	**43**	Pn		**Pn**	**14 13 28.3**	**-0.6**
PPLA	**Purkeypile**	**8.08**	**20**			**Pn**	**14 13 33.1**	**+3.4**
K20K	**Telida**	**8.19**	**14**	Pn		**Pn**	**14 13 31.8**	**+0.6**
FID	**Port Fidalgo**	**8.20**	**45**	Pn		**Pn**	**14 13 31.1**	**-0.2**
SML	**Sawmill**	**8.21**	**35**	Pn		**Pn**	**14 13 32.1**	**+0.7**
EYAK	**Cordova Ski Ar**	**8.38**	**48**	Pn		**Pn**	**14 13 33.2**	**-0.6**
SCM	**Sheep Creek Mo**	**8.56**	**37**			**Pn**	**14 13 36.2**	**-0.1**
KLU	**Klutina**	**8.85**	**42**			**Pn**	**14 13 40.0**	**-0.4**
HMT	**Hamilton**	**8.92**	**51**	Pn		**Pn**	**14 13 40.9**	**-0.3**
J20K	**Nowinta River**	**8.97**	**12**	Pn		**Pn**	**14 13 43.6**	**+1.7**
SUCK	**Suckling Hills**	**9.03**	**53**	Pn		**Pn**	**14 13 44.4**	**+1.8**
BMRM	**Bremner River**	**9.08**	**47**	Pn		**Pn**	**14 13 45.2**	**+1.7**
M24K	**Tolsona, Glenn**	**9.15**	**39**	Pn		**Pn**	**14 13 45.2**	**+0.8**
RND	**Reindeer**	**9.29**	**27**			**Pn**	**14 13 46.3**	**0.0**
BPAW	**Bear Paw Mtn.**	**9.40**	**20**	Pn		**Pn**	**14 13 48.3**	**+0.6**
N25K	**Chitina, Valde**	**9.43**	**44**	Pn		**Pn**	**14 13 49.6**	**+1.4**
DHY	**Denali Highway**	**9.44**	**32**	Pn		**Pn**	**14 13 48.1**	**-0.3**
SNH	**Sunshine Point**	**9.50**	**54**	Pn		**Pn**	**14 13 49.8**	**+0.6**
WAX	**Waxell Ridge**	**9.60**	**52**	Pn		**Pn**	**14 13 51.1**	**+0.5**
GLB	**Gilahina Butte**	**9.66**	**46**	Pn		**Pn**	**14 13 51.1**	**-0.3**
VRDI	**Verde Repeater**	**9.70**	**47**	Pn		**Pn**	**14 13 51.6**	**-0.4**
TGL	**Tana Glacier**	**9.74**	**51**	Pn		**Pn**	**14 13 51.6**	**-0.9**
PAX	**Paxson**	**9.97**	**36**			**Pn**	**14 13 57.2**	**+1.5**
YAH	**Yahtse**	**10.08**	**54**	Pn		**Pn**	**14 13 58.4**	**+1.2**
GRNC	**Granite Creek**	**10.21**	**52**			**Pn**	**14 14 00.2**	**+1.1**
TABL	**Table Mountain**	**10.38**	**54**	Pn		**Pn**	**14 14 02.0**	**+0.7**
CTGM	**Chitina Glacie**	**10.50**	**52**	Pn		**Pn**	**14 14 04.3**	**+1.4**
M26K	**Nabesna, AK**	**10.51**	**42**			**Pn**	**14 14 04.1**	**+1.2**
MENT	**Mentasta**	**10.56**	**39**	Pn		**Pn**	**14 14 05.6**	**+2.0**
H21K	**Melozitna Rive**	**10.56**	**13**	Pn		**Pn**	**14 14 05.1**	**+1.5**
CCB	**Clear Creek Bu**	**10.57**	**25**			**Pn**	**14 14 02.3**	**-1.4**
HDA	**Harding Lake**	**10.60**	**28**			**Pn**	**14 14 02.7**	**-1.4**
I23K	**Minto, Yukon-K**	**10.66**	**21**	Pn		**Pn**	**14 14 04.7**	**-0.1**
PCA	**Pinnacle**	**10.68**	**57**	Pn		**Pn**	**14 14 05.8**	**+0.4**
RIDG	**Independent Ri**	**10.71**	**34**			**Pn**	**14 14 06.4**	**+0.7**
MDM	**Murphy Dome**	**10.74**	**24**	Pn		**Pn**	**14 14 04.8**	**-1.2**
IMAR	**Indian Mountai**	**10.77**	**10**	Pn		**Pn**	**14 14 08.4**	**+1.9**
IL31		**10.91**	**27**			**Pn**	**14 14 06.8**	**-1.5**
ILAR	**Eielson Array** comp=N,0.5nm,0.3s,baz=220,slow=13,SNR=17	**10.91**	**27**	P		**Pn**	**14 14 06.1**	**-2.2**
ILAR				S		**Sn**	**14 16 02.5**	**-6.2**
	comp=N,0.2nm,0.5s,baz=249,slow=31,SNR=1.3 comp=N,0.9nm,0.4s							
ILAR	**Eielson Array**	**10.91**	**27**	Pn		**Pn**	**14 14 08.2**	**-0.1**
M27K	**Edge Creek, AK**	**10.92**	**44**	Pn		**Pn**	**14 14 09.7**	**+1.0**
BCPM	**Bancas Point**	**10.94**	**58**	Pn		**Pn**	**14 14 09.8**	**+1.1**
SCRK	**Sand Creek**	**11.15**	**34**	Pn		**Pn**	**14 14 11.5**	**-0.3**
J25K	**Salcha River,**	**11.19**	**30**			**Pn**	**14 14 11.3**	**-1.0**
H23K	**Yukon River**	**11.22**	**19**			**Pn**	**14 14 12.2**	**-0.4**
L27K	**Beaver Creek,**	**11.33**	**41**	Pn		**Pn**	**14 14 15.1**	**+1.0**
BCAR	**Beaver Creek A**	**11.35**	**41**	Pn		**Pn**	**14 14 15.1**	**+0.8**
J26L	**Joseph Creek**	**11.65**	**33**			**Pn**	**14 14 19.0**	**+0.5**
K27K	**Chicken**	**11.82**	**37**	Pn		**Pn**	**14 14 22.1**	**+1.3**
JIS	**Juneau Island**	**13.37**	**68**	Pn		**Pn**	**14 14 43.4**	**+1.5**
WHY	**Whitehorse**	**13.41**	**58**	Pn		**Pn**	**14 14 43.8**	**+1.3**
TOLK	**Toolik Lake Re**	**13.81**	**14**	Pn		**Pn**	**14 14 48.6**	**+0.7**
I29M	**Ogilvie Camp,**	**13.92**	**37**	P		**P**	**14 14 58.8**	**+2.4**
M31M	**Drury Creek, Y**	**14.04**	**52**	P		**P**	**14 14 60.0**	**+2.2**
INK	**Inuvik** comp=N,0.4nm,0.3s,baz=221,slow=15,SNR=15 comp=N,1.7nm,0.4s	**17.19**	**32**	P		**Pn**	**14 15 31.1**	**-0.4**
INK	**Inuvik**	**17.19**	**32**	Pn		**Pn**	**14 15 31.3**	**-0.2**
C36M	**Paulatuk**	**20.68**	**34**	P		**P**	**14 16 11.2**	**+0.6**
A36M	**Sachs Harbour**	**21.61**	**27**	P		**P**	**14 16 20.1**	**-0.5**
YKA	**Yellowknife Ar** comp=N,0.6nm,0.6s,baz=268,slow=9.8,SNR=3.6 comp=N,0.6nm,0.6s	**23.20**	**55**	P		**P**	**14 16 37.2**	**-0.3**
PETK	**Petropavlovsk-** comp=N,1.0nm,0.7s,baz=80,slow=8.5,SNR=3.7 comp=N,1.0nm,0.7s	**25.45**	**283**	P		**P**	**14 16 58.3**	**-0.1**
SEY	**Seymchan** comp=N,0.6nm,0.6s,baz=79,slow=12,SNR=4.3 comp=N,0.6nm,0.6s	**25.72**	**307**	P		**P**	**14 16 59.1**	**-1.5**

*IDC **13** 14:12:02.7±0.7,3.°12N×65.°42E, h0km, mb4.0/10, mbtmp4.0/10, MS3.6/47, Error ellipse: s-maj=23.8km s-min=19.3km az=87.0*
*NEIC **13** 14:12:04.7±1.0,3.°3N±0.°1×65.°27E±0.°07, h14km±4km, mb4.4/16, Error ellipse: s-maj=21.0km s-min=8.6km az=193.0*

ISC 13 14:12:03.7±0.6, 3.°2N±0.°1×65.°3E±0.°1, h10km, n77, σ1ᵖ50/34, mb4.3/17, MS3.6/46, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALK	**Pallekele** comp=Z,181nm,19.4s,baz=357,slow=32	**15.82**	**75**	LR	LR	14 20 34.2	
WSAR	**Wadi Sarin** comp=Z,237nm,18.6s,baz=162,slow=33	**20.91**	**342**	LR	LR	14 23 37.1	
GEYT	**Alibeck** comp=Z,170nm,21.0s,baz=161,slow=36	**35.15**	**350**	LR	LR	14 32 58.6	
GYA0B	**ALIBECK ARRAY**	**35.15**	**350**	P	**P**	**14 18 56.8**	**-0.9**
GYA0B				IAmb	IAmb	14 19 16.8	
	comp=Z,3.8nm,0.7s						
CMAR	**Chiang Mai Arr** comp=Z,0.4nm,0.4s,baz=256,slow=12,SNR=5.0	**36.20**	**63**	P	**P**	**14 19 08.9**	**+1.9**
CMAR				LR	LR	14 33 46.7	
	comp=Z,60nm,18.1s,baz=250,slow=36 comp=Z,0.4nm,0.4s						
CMAR	**Chiang Mai Arr**	**36.20**	**63**	P	**P**	**14 19 06.9**	**-0.1**
CHTO	**Chiang Mai**	**36.33**	**62**	P	**P**	**14 19 07.7**	**-0.4**
CHTO				IAmb	IAmb	14 19 18.8	
	comp=Z,11nm,1.4s						
EIL	**Elat** comp=Z,64nm,20.2s,baz=109,slow=34	**38.99**	**316**	LR	LR	14 33 53.3	
KKAR	**Karatay Array**	**39.96**	**6**	P	**P**	**14 19 38.8**	**+0.5**
AAK	**Ala-Archa** comp=Z,129nm,19.8s,baz=204,slow=37	**40.07**	**11**	LR	LR	14 36 53.8	
MMAI	**Mount Meron Ar** comp=Z,52nm,18.8s,baz=268,slow=36	**40.76**	**320**	LR	LR	14 36 14.1	
GNI	**Garni** comp=Z,67nm,18.1s,baz=150,slow=37	**41.20**	**336**	LR	LR	14 37 27.2	
MAKZ	**Makanchi**	**45.74**	**16**	P	**P**	**14 20 21.5**	**-3.7**
MAKZ				IAmb	IAmb	14 20 26.7	
	comp=Z,2.8nm,1.1s						
MK31	**Makanchi Array**	**45.82**	**16**	P	**P**	**14 20 22.1**	**-3.7**
MKAR	**Makanchi Array** comp=Z,0.7nm,0.7s,baz=203,slow=8.5,SNR=8.6	**45.82**	**16**	P	**P**	**14 20 26.1**	**+0.3**
MKAR				PcP	**PcP**	**14 22 06.4**	**+3.1**
	comp=Z,0.9nm,0.9s,baz=230,slow=3.6,SNR=5.4						
MKAR				LR	LR	14 40 43.9	
	comp=Z,64nm,20.5s,baz=208,slow=38 comp=Z,0.7nm,0.7s						
MKAR	**Makanchi Array**	**45.82**	**16**	P	**P**	**14 20 22.7**	**-3.1**
MKAR					**PcP**	**14 22 02.3**	**-0.9**
BRTR	**Keskin Array B** comp=Z,1.1nm,0.6s,baz=141,slow=8.4,SNR=6.3	**46.30**	**326**	P	**P**	**14 20 31.8**	**+1.9**
BRTR				LR	LR	14 40 31.2	
	comp=Z,116nm,19.0s,baz=133,slow=37 comp=Z,1.1nm,0.6s						
BRTR	**Keskin Array B**	**46.30**	**326**	P	**P**	**14 20 30.1**	**+0.2**
AKAS	**Kas**	**46.50**	**319**	P	**P**	**14 20 29.7**	**-1.8**
AKTO	**Aktyubinsk** comp=Z,28nm,18.2s,baz=167,slow=39	**47.44**	**354**	LR	LR	14 43 13.6	
LBTB	**Lobatse** comp=Z,128nm,18.3s,baz=64,slow=33	**47.70**	**232**	LR	LR	14 38 24.4	
KURBB	**Kurchatov Arra** comp=Z,67nm,21.4s,baz=190,slow=35	**48.52**	**11**	LR	LR	14 40 39.7	
KURK	**Kurchatov**	**48.62**	**11**	P	**P**	**14 20 47.7**	**+0.1**
KURK				IAmb	IAmb	14 20 49.6	
	comp=Z,7.8nm,1.4s						
IDI	**Anoyia** comp=Z,37nm,19.0s,baz=94,slow=38	**49.16**	**315**	LR	LR	14 43 01.2	
BRVK	**Borovoye**	**49.83**	**4**	P	**P**	**14 20 55.7**	**-1.0**
BRVK				IAmb	IAmb	14 21 06.8	
	comp=Z,2.1nm,0.7s						
BOSA	**Boshof** comp=Z,3.3nm,0.9s,baz=78,slow=7.1,SNR=4.8	**49.84**	**228**	P	**P**	**14 20 57.2**	**-0.2**
BOSA				LR	LR	14 39 44.9	
	comp=Z,73nm,18.7s,baz=26,slow=33 comp=Z,3.3nm,0.9s						
BELG	**Belogornoye** comp=Z,50nm,19.6s,baz=155,slow=38	**51.16**	**346**	LR	LR	14 44 45.0	
TSUM	**Tsumeb** comp=Z,78nm,18.7s,baz=148,slow=34	**51.97**	**243**	LR	LR	14 41 24.6	
ZAA0	**Zalesovo Array**	**53.01**	**14**	P	**P**	**14 21 20.6**	**0.0**
ZAA0				IAmb	IAmb	14 21 21.3	
	comp=Z,2.8nm,0.7s						
ZALV	**Zalesovo Beam** comp=Z,2.7nm,0.6s,baz=200,slow=8.0,SNR=12	**53.01**	**14**	P	**P**	**14 21 20.6**	**+0.1**
ZALV				LR	LR	14 43 41.4	
	comp=Z,57nm,21.2s,baz=210,slow=36 comp=Z,2.7nm,0.6s						
ZALV	**Zalesovo Beam**	**53.01**	**14**	P	**P**	**14 21 20.4**	**-0.2**
ARU	**Arti** comp=Z,36nm,19.5s,baz=159,slow=37	**53.31**	**355**	LR	LR	14 45 05.6	
MLR	**Muntele Rosu** comp=Z,48nm,20.4s,baz=142,slow=36	**54.36**	**327**	LR	LR	14 45 05.6	
SUR	**Sutherland** comp=Z,162nm,18.1s,baz=100,slow=34	**55.08**	**226**	LR	LR	14 42 53.1	
AKASG	**Malin Array Be** comp=Z,51nm,21.2s,baz=107,slow=38	**56.20**	**333**	LR	LR	14 47 39.0	
SONM	**Songino Array** comp=Z,0.8nm,0.6s,baz=221,slow=8.6,SNR=2.9	**56.72**	**32**	P	**P**	**14 21 49.6**	**+1.8**
SONM				LR	LR	14 46 18.8	
	comp=Z,75nm,19.8s,baz=261,slow=36 comp=Z,0.8nm,0.6s						
MORW	**Morawa**	**58.24**	**127**	P	**P**	**14 21 57.9**	**-0.7**
MORW				IAmb	IAmb	14 21 59.3	
	comp=Z,11nm,0.8s						
PSA00	**Pilbara Seismi**	**58.73**	**118**	P	**P**	**14 22 01.9**	**-0.4**
H01W3	**Cape Leeuwin H** baz=300,slow=75,SNR=37	**59.42**	**134**	T	T	15 26 04.6	
H01W2	**Cape Leeuwin H** baz=300,slow=75,SNR=39	**59.43**	**134**	T	T	15 26 05.0	
H01W1	**Cape Leeuwin H** baz=300,slow=75,SNR=44	**59.44**	**134**	T	T	15 26 06.0	
VRAC	**Vranov** comp=Z,25nm,19.1s,baz=132,slow=38	**61.75**	**326**	LR	LR	14 50 59.1	
GERES	**GERESS Array B** comp=Z,26nm,19.7s,baz=110,slow=38	**63.16**	**325**	LR	LR	14 52 29.2	
DAVOX	**Davos/Dischmat** comp=Z,23nm,21.1s,baz=263,slow=36	**64.54**	**321**	LR	LR	14 50 47.8	
FINES	**FINESS Array B** comp=Z,24nm,18.8s,baz=114,slow=38	**65.12**	**340**	LR	LR	14 53 54.7	
KSRS	**Korea Array** comp=Z,30nm,18.5s,baz=250,slow=39	**66.44**	**50**	LR	LR	14 54 57.1	
NRIK	**Noril'sk** comp=Z,74nm,19.5s,baz=210,slow=38	**67.64**	**8**	LR	LR	14 55 24.4	
HFS	**Hagfors** comp=Z,36nm,20.3s,baz=136,slow=37	**68.98**	**335**	LR	LR	14 55 10.9	
NOA	**NORSAR Array B** comp=Z,25nm,19.6s,baz=125,slow=37	**70.50**	**335**	LR	LR	14 56 06.8	
MAW	**Mawson** comp=Z,2.8nm,0.6s,baz=343,slow=14,SNR=12 comp=Z,2.8nm,0.6s	**70.71**	**181**	P	**P**	**14 23 20.4**	**+1.0**
MAW	**Mawson**	**70.71**	**181**	P	**P**	**14 23 19.5**	**+0.1**
ARCES	**ARCESS Array B** comp=Z,33nm,18.0s,baz=122,slow=39	**71.20**	**346**	LR	LR	14 58 23.5	
MDT	**Midelt** comp=Z,69nm,18.3s,baz=141,slow=34	**71.42**	**303**	LR	LR	14 53 02.0	
WRA	**Warramunga Arr** comp=Z,3.4nm,1.0s,baz=285,slow=6.1,SNR=9.3 comp=Z,3.4nm,1.0s	**71.49**	**112**	P	**P**	**14 23 24.5**	**-0.7**
WRA	**Warramunga Arr**	**71.49**	**112**	P	**P**	**14 23 25.6**	**+0.4**
WB2	**Warramunga Arr**	**71.50**	**112**	P	**P**	**14 23 25.6**	**+0.4**
AS31	**Alice Springs**	**71.82**	**116**	P	**P**	**14 23 26.9**	**-0.3**
ASAR	**Alice Springs** comp=Z,2.1nm,0.9s,baz=290,slow=5.9,SNR=14 comp=Z,2.1nm,0.9s	**71.82**	**116**	P	**P**	**14 23 26.1**	**-1.1**
ASAR	**Alice Springs**	**71.82**	**116**	P	**P**	**14 23 26.9**	**-0.3**
ESDC	**Sonseca Array** comp=Z,0.5nm,0.9s,baz=99,slow=4.2,SNR=2.5 comp=Z,0.5nm,0.9s	**72.06**	**311**	P	**P**	**14 23 29.0**	**+0.6**
ESDC	**Sonseca Array**	**72.06**	**311**	IAmb	IAmb	14 23 36.9	
	comp=Z,2.1nm,1.1s						
KLR	**Kul'dur** comp=Z,57nm,18.9s,baz=290,slow=37	**72.29**	**39**	LR	LR	14 56 52.7	
MJAR	**Matsushiro Arr** comp=Z,21nm,20.4s,baz=114,slow=38	**74.33**	**53**	LR	LR	14 59 02.6	
EKA	**Eskdalemuir Ar** comp=Z,21nm,19.0s,baz=179,slow=38	**75.22**	**327**	LR	LR	15 00 02.2	
JHJ	**Hachijo jima 2** comp=Z,23nm,19.8s,baz=282,slow=37	**75.22**	**57**	LR	LR	14 58 35.2	
YAK	**Yakutsk** comp=Z,39nm,20.2s,baz=269,slow=37	**75.33**	**26**	LR	LR	14 58 21.0	
ASAJ	**Asahikawa** comp=Z,29nm,20.1s,baz=2.0,slow=36	**78.61**	**46**	LR	LR	14 59 24.9	
TIXI	**Tiksi** comp=Z,63nm,18.8s,baz=187,slow=37	**78.80**	**17**	LR	LR	15 01 04.0	
SPITS	**Spitsbergen Ar** comp=Z,26nm,18.4s,baz=36,slow=39	**79.04**	**351**	LR	LR	15 03 53.5	
STKA	**Stephens Creek** comp=Z,64nm,18.6s,baz=204,slow=34	**80.08**	**123**	LR	LR	14 57 36.5	
MA2	**Magadan** comp=Z,55nm,18.1s,baz=275,slow=37	**84.91**	**31**	LR	LR	15 03 57.3	
BORG	**Borgarnes** comp=Z,35nm,19.3s,baz=80,slow=38	**85.66**	**335**	LR	LR	15 06 10.7	
ARMA	**Armidale**	**88.43**	**120**	P	**P**	**14 24 56.1**	**-0.6**
PETK	**Petropavlovsk-** comp=Z,52nm,18.9s,baz=286,slow=38	**88.86**	**37**	LR	LR	15 07 36.8	
VNDA	**Vanda** comp=Z,67nm,18.5s,baz=261,slow=32	**94.56**	**167**	LR	LR	15 02 14.3	
SFJD	**Kangerlussuaq** comp=Z,42nm,19.9s,baz=358,slow=36	**96.90**	**339**	LR	LR	15 10 00.0	
TXAR	**Lajitas Array** comp=Z,0.6nm,0.7s,baz=47,slow=2.8,SNR=10	**145.94**	**343**	PKPbc	**PKPab**	**14 31 45.5**	**+0.7**

*IDC **13** 14:13:20.9±6.4, 4.°19S×102.°21W, h0km, mb3.6/6, mbtmp3.6/6, MS3.5/7, Error ellipse: s-maj=220.0km s-min=120.0km az=99.0*

ISC 13 14:13:22.6±6.7, 4.°2S±0.°9×10.°2W±.°, h10km, n21, σ0ᵖ56/6, mb3.6/6, MS3.4/7, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero** comp=Z,74nm,21.6s,baz=167,slow=31	**22.35**	**19**	LR	LR	14 24 59.0	
JTS	**Las Juntas de** comp=Z,208nm,19.5s,baz=334,slow=31	**22.42**	**50**	LR	LR	14 24 49.8	
TXAR	**Lajitas Array** 0.1nm,0.4s,baz=183,slow=15,SNR=2.6	**33.35**	**358**	P	**P**	**14 20 01.4**	**+0.3**
TXAR				LR	LR	14 31 32.4	
	comp=Z,76nm,21.1s,baz=169,slow=33 0.1nm,0.4s						
LPAZ	**La Paz** comp=Z,44nm,18.7s,baz=230,slow=32	**35.58**	**112**	LR	LR	14 32 19.2	
H03N2	**Juan Fernandez** baz=322,slow=78,SNR=11	**36.32**	**146**	T	T	14 59 50.6	
H03N1	**Juan Fernandez** baz=322,slow=78,SNR=26	**36.34**	**146**	T	T	14 59 51.0	
H03N3	**Juan Fernandez** baz=322,slow=78,SNR=17	**36.34**	**146**	T	T	14 59 51.1	
ANMO	**Albuquerque** comp=Z,36nm,18.8s,baz=176,slow=35	**39.12**	**354**	LR	LR	14 36 13.0	
NVAR	**Mina Array Bea** 0.4nm,0.7s,baz=155,slow=9.7,SNR=4.9 0.4nm,0.7s	**44.94**	**342**	P	**P**	**14 21 38.0**	**0.0**
PDAR	**Pinedale Array** 0.2nm,0.5s,baz=163,slow=6.6,SNR=1.5 0.2nm,0.5s	**47.20**	**353**	P	**P**	**14 21 55.2**	**-0.6**
PPT	**Papeete** comp=Z,59nm,18.8s,baz=227,slow=30	**48.21**	**250**	LR	LR	14 37 15.6	
YKA	**Yellowknife Ar** 1.4nm,0.9s,baz=156,slow=5.8,SNR=3.1 1.4nm,0.9s	**67.16**	**354**	P	**P**	**14 24 16.2**	**-0.2**
INK	**Inuvik** 2.3nm,0.9s,baz=143,slow=5.0,SNR=10.0 2.3nm,0.9s	**75.54**	**348**	P	**P**	**14 25 07.6**	**+0.7**
ILAR	**Eielson Array** 0.7nm,0.8s,baz=144,slow=5.5,SNR=6.3 0.7nm,0.8s	**76.19**	**342**	P	**P**	**14 25 10.6**	**-0.2**
URZ	**Urewera** comp=Z,62nm,21.7s,baz=210,slow=30	**80.09**	**232**	LR	LR	14 52 46.4	
H11N3	**WAKE ISLAND Hy** baz=94,slow=74,SNR=13	**92.20**	**289**	T	T	16 07 55.5	
H11N2	**WAKE ISLAND Hy** baz=94,slow=74,SNR=19	**92.21**	**290**	T	T	16 07 57.0	
H11N1	**WAKE ISLAND Hy** baz=94,slow=74,SNR=9.7	**92.22**	**289**	T	T	16 07 56.7	
H11S2	**WAKE ISLAND Hy** baz=94,slow=74,SNR=21	**92.32**	**288**	T	T	16 08 10.4	
H11S1	**WAKE ISLAND Hy** baz=94,slow=74,SNR=18	**92.32**	**288**	T	T	16 08 05.6	
H11S3	**WAKE ISLAND Hy** baz=94,slow=74,SNR=17	**92.33**	**288**	T	T	16 08 05.1	

*NEIC **13** 14:14:57.7±0.8, 35.°6S±0.°2×179.°8E±0.°2, h45km±14km, mb4.2/7, Error ellipse: s-maj=34.1km s-min=3.3km az=131.0*
*WEL **13** 14:14:57.7±1.0, 35.°5S±8.°×18.°0W±.°1 2, h33km, M4.0/18, mB4.1/1, ML4.4/24, MLv4.0/18, Mw(mB)3.2/1, Error ellipse: s-maj=0.0km s-min=0.0km az=118.0*
*IDC **13** 14:14:58.2±8.6, 35.°26S×179.°84W, h75km±63km, mb3.6/2, mbtmp3.8/3, ML3.6/1, Error ellipse: s-maj=63.3km s-min=41.4km az=57.0*

ISC 13 14:14:59.3±1.1, 35.°13S±0.°08×179.°9E±0.°1, h50km, n50, σ1ᵖ95/55, mb3.9/5, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**2.76**	**208**	Pn	Pn	14 15 33.4	-7.7
MXZ	**Matakaoa Point**	**2.76**	**208**	P	**Pn**	**14 15 41.4**	**+0.3**
WMGZ	**Waiomatatini S**	**2.95**	**204**	P	**Pn**	**14 15 44.8**	**+1.2**
PKGZ	**Pakihiroa**	**3.13**	**208**	P	**Pn**	**14 15 46.9**	**+0.6**
PKGZ				S	**Sn**	**14 16 26.3**	**+3.8**
HAZ	**Te Kaha**	**3.14**	**213**	P	**Pn**	**14 15 46.3**	**0.0**
PUZ	**Puketiti**	**3.23**	**204**	P	**Pn**	**14 15 47.7**	**+0.2**
PUZ				S	**Sn**	**14 16 28.0**	**+3.2**
RUGZ	**Raukumara Rang**	**3.36**	**212**	P	**Pn**	**14 15 50.3**	**+0.8**
RUGZ				S	**Sn**	**14 16 30.6**	**+2.4**
TWGZ	**Tauwhareparae**	**3.42**	**207**	P	**Pn**	**14 15 50.9**	**+0.7**
TWGZ				S	**Sn**	**14 16 32.1**	**+2.5**
CNGZ	**Carnagh Statio**	**3.62**	**202**	P	**Pn**	**14 15 53.6**	**+0.7**
TKGZ	**Te Karaka**	**3.70**	**206**	P	**Pn**	**14 15 54.6**	**+0.6**
TKGZ				S	**Sn**	**14 16 39.0**	**+2.6**
OPRZ	**Ohinepanea**	**3.84**	**224**	P	**Pn**	**14 15 56.9**	**+1.1**
URZ	**Urewera** 4.6nm,0.3s,baz=6.3,slow=9.2,SNR=28	**3.86**	**215**	P	**Pn**	**14 15 55.9**	**-0.3**
URZ				S	**Sn**	**14 16 39.7**	**-0.5**
	29nm,0.3s,baz=20,slow=23,SNR=7.1 9.5nm,0.3s						
URZ	**Urewera**	**3.86**	**215**		Pn	14 15 51.2	-4.9
URZ	**Urewera**	**3.86**	**215**	P	**Pn**	**14 15 56.3**	**+0.1**
URZ				S	**Sn**	**14 16 40.3**	**+0.1**
RAGZ	**Rawiri**	**3.92**	**210**	P	**Pn**	**14 15 58.0**	**+1.0**
TGRZ	**Tauranga**	**3.94**	**228**	P	**Pn**	**14 15 58.8**	**+1.6**
PRGZ	**Paritu Road**

CNGN	**Cerro Negro**	**0.48**	**129**	*eP*		Pg	14 37 42.0	+0.4
CSGN	**Cosiguina Volc**	**0.49**	**290**	*eP*		Pg	14 37 42.2	+0.4
MOMN	**Momotombo**	**0.66**	**126**	*eP*		Pg	14 37 45.1	+0.1
MATN	**Matagalpa**	**1.14**	**84**	*eP*		Pb	14 37 52.4	-1.4

NEIC ***13*** *14:45:15.9±2.7, 13°.04N±0°.07×88°.59W±0°.07, h62km±6km, mb4.4/105, Md4.8(SNET), Error ellipse: s-maj=13.5km s-min=5.5km az=46.0*
INET ***13*** *14:45:15.8±1.3, 13°.05N×88°.60W, h17km±13km, MW4.1*
SNET ***13*** *14:45:15.5±0.9, 12°.95N×88°.73W, h43km±24km, ML4.6*
UCR ***13*** *14:45:15.5±0.8, 12°.94N×88°.74W, h44km±21km, ML4.5, mb4.4(NEIC)*
GCG ***13*** *14:45:16.7±0.3, 13°.07N×88°.79W, h104km±47km, MD4.2*
IDC ***13*** *14:45:16.2±2.0, 13°.25N×88°.31W, h75km±20km, mb3.9/10, mbtmp4.2/13, MS3.3/17, Error ellipse: s-maj=31.1km s-min=12.8km az=47.0*

ISC 13 14:45:14.9±0.8, 13°.00N±0°.05×88°.67W±0°.03, h65km±6km, n245, σ0.99/251, mb4.4/55, 4D, El Salvador

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
COEB	**Comit de Eme**	**0.51**	**15**	*ePg*		**Pn**		**14 45 28.0**	**+0.4**
COEB					*eS*	**Sn**		**14 45 37.5**	**+0.8**
COEB					IAML			14 45 45.4	
	comp=Z,19μm,0.5s								
COEB	**Comit de Eme**	**0.51**	**15**	*ePg*		**Pn**		**14 45 28.0**	**+0.4**
COEB					*eS*	**Sn**		**14 45 37.5**	**+0.8**
COEB					IAML			14 45 45.4	
	comp=Z,19μm,0.5s								
COEB	**Comit de Eme**	**0.51**	**15**	*eP*		**Pn**		**14 45 27.9**	**+0.4**
LCY	**Lacayo**	**0.56**	**41**	*eP*		**Pn**		**14 45 28.5**	**+0.4**
LCY	**Lacayo**	**0.56**	**41**	*eP*		**Pn**		**14 45 28.5**	**+0.4**
VSM	**San Miguel**	**0.57**	**42**	*eP*		**Pn**		**14 45 29.1**	**+0.7**
VSM	**San Miguel**	**0.57**	**42**	*eP*		**Pn**		**14 45 29.1**	**+0.7**
PACA	**Pacayal**	**0.57**	**36**	*eP*		**Pn**		**14 45 28.9**	**+0.7**
PACA					*eS*	**Sn**		**14 45 39.0**	**+1.0**
PACA					IAML			14 45 41.7	
	comp=Z,180μm,0.3s								
PACA	**Pacayal**	**0.57**	**36**	*eP*		**Sn**		**14 45 28.9**	**+0.7**
PACA					*eS*	**Sn**		**14 45 39.0**	**+1.0**
PACA					IAML			14 45 41.7	
	comp=Z,180μm,0.3s								
PACA	**Pacayal**	**0.57**	**36**	*eP*		**Pn**		**14 45 29.1**	**+0.8**
PQSS	**Presa 15 de Se**	**0.63**	**10**	*eP*		**Pn**		**14 45 29.2**	**+0.5**
PQSS	**Presa 15 de Se**	**0.63**	**10**	*eP*		**Pn**		**14 45 29.2**	**+0.5**
SNVI	**San Vicente**	**0.63**	**345**	*eP*		**Pn**		**14 45 28.9**	**0.0**
SNVI					*eS*	**Sn**		**14 45 39.3**	**+0.3**
SNVI	**San Vicente**	**0.63**	**345**	*eP*		**Pn**		**14 45 28.9**	**0.0**
SNVI					*eS*	**Sn**		**14 45 39.3**	**+0.3**
COEG	**Centro de Oper**	**0.65**	**342**	*eP*		**Pn**		**14 45 28.9**	**-0.1**
COEG					*eS*	**Sn**		**14 45 38.9**	**-0.3**
COEG					IAML			14 45 51.3	
	comp=Z,15μm,0.4s								
COEG	**Centro de Oper**	**0.65**	**342**	*eP*		**Pn**		**14 45 28.9**	**-0.1**
COEG					*eS*	**Sn**		**14 45 38.9**	**-0.3**
COEG					IAML			14 45 51.3	
	comp=Z,15μm,0.4s								
COEG	**Centro de Oper**	**0.65**	**342**	*eP*		**Pn**		**14 45 29.0**	**-0.1**
SJTE	**Alcalda de S**	**0.69**	**332**	*eP*		**Pn**		**14 45 29.2**	**-0.3**
SJTE	**Alcalda de S**	**0.69**	**332**	*eP*		**Pn**		**14 45 29.2**	**-0.3**
SCLA	**Alcaldia de Sa**	**0.70**	**355**	*eP*		**Pn**		**14 45 30.2**	**+0.7**
SCLA	**Alcaldia de Sa**	**0.70**	**355**	*eP*		**Pn**		**14 45 30.2**	**+0.7**
LFRS	**El Faro**	**0.72**	**328**	*eP*		**Pn**		**14 45 29.7**	**-0.2**
LFRS	**El Faro**	**0.72**	**328**	*eP*		**Pn**		**14 45 29.7**	**-0.2**
PAVA	**Las Pavas**	**0.75**	**340**	*eP*		**Pn**		**14 45 30.5**	**+0.3**
PAVA					IAML			14 45 44.9	
	comp=Z,20μm,0.2s								
PAVA	**Las Pavas**	**0.75**	**340**	*eP*		**Pn**		**14 45 30.5**	**+0.3**
PAVA					IAML			14 45 44.9	
	comp=Z,20μm,0.2s								
PAVA	**Las Pavas**	**0.75**	**340**	*eP*		**Pn**		**14 45 30.5**	**+0.3**
LALI	**Alcalda de L**	**0.80**	**307**	*eP*		**Pn**		**14 45 30.0**	**-0.6**
LALI	**Alcalda de L**	**0.80**	**307**	*eP*		**Pn**		**14 45 30.0**	**-0.6**
LALI	**Alcalda de L**	**0.80**	**307**	*eP*		**Pn**		**14 45 29.9**	**-0.8**
LBRS	**Las Brisas**	**0.82**	**334**	*eP*		**Pn**		**14 45 31.6**	**+0.6**
LBRS	**Las Brisas**	**0.82**	**334**	*eP*		**Pn**		**14 45 31.6**	**+0.6**
LCND	**La Caada**	**0.82**	**68**	*ePg*		**Pn**		**14 45 31.6**	**+0.7**
LCND					IAML			14 45 46.7	
	comp=Z,22μm,0.3s								
LCND	**La Caada**	**0.82**	**68**	*ePg*		**Pn**		**14 45 31.6**	**+0.7**
LCND					IAML			14 45 46.7	
	comp=Z,22μm,0.3s								
LFU	**La Fuente**	**0.86**	**330**	*eP*		**Pn**		**14 45 31.7**	**+0.2**
LFU	**La Fuente**	**0.86**	**330**	*eP*		**Pn**		**14 45 31.7**	**+0.2**
CNCH	**Conchagua**	**0.86**	**71**	*eP*		**Pn**		**14 45 32.0**	**+0.4**
CNCH	**Conchagua**	**0.86**	**71**	*eP*		**Pn**		**14 45 32.0**	**+0.4**
SNET	**Serv Nac Est T**	**0.87**	**321**		Pn	**Pn**		**14 45 31.3**	**-0.3**
SNET					Sn	**Sn**		**14 45 44.0**	**0.0**
SNET	**Serv Nac Est T**	**0.87**	**321**	*eP*		**Pn**		**14 45 31.4**	**-0.3**
SNET					IAML			14 45 46.6	
	comp=Z,9μm,0.2s								
SNET	**Serv Nac Est T**	**0.87**	**321**	*eP*		**Pn**		**14 45 31.4**	**-0.3**
SNET					IAML			14 45 46.6	
	comp=Z,9μm,0.2s								
UEES	**Universidad Ev**	**0.90**	**322**	*eP*		**Pn**		**14 45 31.6**	**-0.5**
UEES					IAML			14 45 49.4	
	comp=Z,8μm,0.2s								
UEES	**Universidad Ev**	**0.90**	**322**	*eP*		**Pn**		**14 45 31.6**	**-0.5**
UEES					IAML			14 45 49.4	
	comp=Z,8μm,0.2s								
BOQS	**Boqueron**	**0.94**	**321**	*eP*		**Pn**		**14 45 32.6**	**0.0**
BOQS					*eS*	**Sn**		**14 45 46.1**	**+0.4**
BOQS	**Boqueron**	**0.94**	**321**	*eP*		**Pn**		**14 45 32.6**	**0.0**
BOQS					*eS*	**Sn**		**14 45 46.1**	**+0.4**
JAYA	**Jayaque - finc**	**1.00**	**311**	*eP*		**Pn**		**14 45 33.0**	**-0.4**
JAYA					*eS*	**Sn**		**14 45 47.2**	**+0.3**
JAYA					IAML			14 45 50.6	
	comp=Z,8μm,0.2s								
JAYA	**Jayaque - finc**	**1.00**	**311**	*eP*		**Pn**		**14 45 33.0**	**-0.4**
JAYA					*eS*	**Sn**		**14 45 47.2**	**+0.3**
JAYA					IAML			14 45 50.6	
	comp=Z,8μm,0.2s								
CEDA	**San Andres**	**1.06**	**319**	*eP*		**Pn**		**14 45 34.4**	**+0.3**
CEDA	**San Andres**	**1.06**	**319**	*eP*		**Pn**		**14 45 34.4**	**+0.3**
CSGN	**Cosiguina Volc**	**1.08**	**91**	*eP*		**Pn**		**14 45 35.0**	**+0.6**
CEVE	**Cerro Verde**	**1.24**	**312**	*eP*		**Pn**		**14 45 36.8**	**+0.2**
CEVE					IAML			14 45 56.2	
	comp=Z,8μm,0.3s								
CEVE	**Cerro Verde**	**1.24**	**312**	*eP*		**Pn**		**14 45 36.8**	**+0.2**
CEVE					IAML			14 45 56.2	
	comp=Z,8μm,0.3s								
SBLS	**San Blas**	**1.25**	**312**	*eP*		**Pn**		**14 45 36.9**	**+0.3**
SBLS	**San Blas**	**1.25**	**312**	*eP*		**Pn**		**14 45 36.9**	**+0.3**
SNJE	**San Jose**	**1.25**	**314**	*eP*		**Pn**		**14 45 37.0**	**+0.3**
SNJE	**San Jose**	**1.25**	**314**	*eP*		**Pn**		**14 45 37.0**	**+0.3**
RTR	**El Retiro**	**1.30**	**313**	*eP*		**Pn**		**14 45 37.8**	**+0.6**
RTR	**El Retiro**	**1.30**	**313**	*eP*		**Pn**		**14 45 37.8**	**+0.6**
NUBE	**Las Nubes**	**1.40**	**310**	*eP*		**Pn**		**14 45 38.6**	**0.0**
NUBE	**Las Nubes**	**1.40**	**310**	*eP*		**Pn**		**14 45 38.6**	**0.0**
SLOZ	**Alcaldia de Sa**	**1.49**	**313**	*eP*		**Pn**		**14 45 39.8**	**+0.2**
CRIN	**San Cristobal**	**1.61**	**101**			**Pn**		**14 45 41.9**	**+0.6**
CRIN	**San Cristobal**	**1.61**	**101**	*eP*		**Pn**		**14 45 42.1**	**+0.8**
CRIN					*eS*	**Sn**		**14 46 02.4**	**+1.2**
ESQI	**Esquipulas**	**1.68**	**337**			**Pn**		**14 45 43.4**	**+1.1**
ESQI	**Esquipulas**	**1.68**	**337**	*eP*		**Pn**		**14 45 43.4**	**+1.1**
TGUH	**Tegucigalpa,Un**	**1.72**	**52**			**Pn**		**14 45 44.1**	**+1.3**
TGUH	**Tegucigalpa,Un**	**1.72**	**52**	*eP*		**Pn**		**14 45 44.2**	**+1.4**
TGUH	**Tegucigalpa,Un**	**1.72**	**52**	*eP*		**Pn**		**14 45 44.2**	**+1.4**
TELN	**Telica**	**1.84**	**102**	*eP*		**Pn**		**14 45 44.5**	**+0.1**
CNGN	**Cerro Negro**	**1.99**	**104**			**Pn**		**14 45 46.4**	**+0.1**
CNGN	**Cerro Negro**	**1.99**	**104**	*eP*		**Pn**		**14 45 46.3**	**-0.1**
MOMN	**Momotombo**	**2.16**	**106**	*eP*		**Pn**		**14 45 48.7**	**0.0**
NBG	**Las Nubes**	**2.27**	**314**	*eP*		**Pn**		**14 45 52.5**	**+2.2**
MRL	**Marmol**	**2.29**	**335**	*eP*		**Pn**		**14 45 52.8**	**+2.2**
APYN	**Apoyeque**	**2.39**	**108**	*eP*		**Pn**		**14 45 50.6**	**-1.2**
MGAN	**Managua**	**2.51**	**110**	*eP*		**Pn**		**14 45 53.2**	**-0.3**
FUG	**Fuego 3**	**2.55**	**304**	*eP*		**Pn**		**14 45 55.9**	**+1.7**
FUG					*eS*	**Sn**		**14 46 26.3**	**+2.1**
MATN	**Matagalpa**	**2.68**	**91**			**Pn**		**14 45 55.2**	**-0.5**
MATN	**Matagalpa**	**2.68**	**91**	*eP*		**Pn**		**14 45 55.3**	**-0.5**
MATN					*eS*	**Sn**		**14 46 26.5**	**-0.6**
BOAB	**BOACO BROADBAN**	**2.98**	**100**			**Pn**		**14 45 59.6**	**-0.2**
STG3	**Santiaguito 3,**	**3.29**	**301**	*eP*		**Pn**		**14 46 05.7**	**+1.5**
STG3					*eS*	**Sn**		**14 46 42.9**	**+0.6**
RTAL	**Retalhuleu**	**3.31**	**298**		Pn	**Pn**		**14 46 07.4**	**+3.1**
ACON	**Acoyapa**	**3.57**	**106**			**Pn**		**14 46 08.5**	**+0.7**
HZTE	**Horizontes, Gu**	**3.77**	**127**			**Pn**		**14 46 12.3**	**+1.6**
HZTE	**Horizontes, Gu**	**3.77**	**127**	*eP*		**Pn**		**14 46 12.4**	**+1.6**
PETF	**Flores**	**4.06**	**344**			**Pn**		**14 46 16.2**	**+1.6**
ORTG	**Ortega, Santa**	**4.10**	**130**		Pn	**Pn**		**14 46 16.5**	**+1.3**
ORTG	**Ortega, Santa**	**4.10**	**130**	*eP*		**Pn**		**14 46 17.0**	**+1.9**
DUNO	**Dulce Nombre,**	**4.26**	**133**			**Pn**		**14 46 18.5**	**+1.2**
DUNO	**Dulce Nombre,**	**4.26**	**133**	*eP*		**Pn**		**14 46 18.3**	**+1.0**
JTS	**Las Juntas de**	**4.53**	**126**	*eP*		**Pn**		**14 46 21.8**	**+0.8**
	comp=Z,9.3nm,0.3s,baz=28,slow=14,SNR=9.7								
JTS						S	**Sn**	**14 47 11.1**	**-1.5**
	comp=Z,31nm,0.4s,baz=355,slow=22,SNR=1.4								
JTS	**Las Juntas de**	**4.53**	**126**	Pn		**Pn**		**14 46 22.0**	**+0.9**
LAFE	**Finca La Fe, P**	**4.87**	**130**	*eP*		**Pn**		**14 46 26.8**	**+1.2**
RIMA	**Rio Macho**	**5.71**	**124**	Pn		**Pn**		**14 46 38.2**	**+0.9**
SRBA	**San Rafael, Bu**	**6.42**	**125**			**Pn**		**14 46 48.2**	**+1.2**
RGM0	**Gandoca**	**6.84**	**119**	Pn		**Pn**		**14 46 53.2**	**+0.5**
BRU2	**Volcan**	**7.21**	**125**			**Pn**		**14 46 58.2**	**+0.3**
CMIG	**Matias Romero**	**7.25**	**305**	P		**Pn**		**14 47 00.2**	**+1.9**
	comp=Z,2.5nm,0.4s,baz=126,slow=7.3,SNR=10								
CMIG						S	**Sn**	**14 48 18.7**	**-0.4**
	comp=Z,8.2nm,0.5s,baz=105,slow=20,SNR=1.6								
SJCC	**San Jacinto, C**	**13.58**	**102**	P		**P**		**14 48 31.3**	**-0.3**
PAYG	**Puerto Ayora**	**13.68**	**187**	P		**P**		**14 48 33.4**	**+0.7**
GTBY	**Guantanamo Bay**	**14.71**	**60**	P		**P**		**14 48 44.3**	**+0.3**
SDV	**Santo Domingo**	**18.17**	**101**	P		**P**		**14 49 20.8**	**-1.9**
	comp=Z,7.6nm,0.5s,baz=343,slow=10,SNR=2.9								
SDV						LR	LR	14 57 15.4	
	comp=Z,38nm,18.8s,baz=278,slow=40								
SDV	**Santo Domingo**	**18.17**	**101**	P		**P**		**14 49 22.3**	**-0.3**
344A	**Westbrook Farm**	**18.46**	**354**	P		**Pn**		**14 49 26.9**	**+0.7**
342A	**Flagon Creek P**	**18.59**	**350**	P		**P**		**14 49 28.0**	**+1.1**
342A						IAmb	IAmb	14 49 51.5	
	comp=Z,15nm,0.7s								
435B	**Jarrell**	**19.52**	**336**	P		**P**		**14 49 38.4**	**+1.3**
435B						IAmb	IAmb	14 49 44.5	
	comp=Z,13nm,0.5s								
152A	**Waverly Hall**	**19.91**	**10**			**Pn**		**14 49 44.6**	**+1.2**
152A						IAmb	IAmb	14 49 46.3	
	comp=Z,13nm,0.8s								
LRAL	**Lakeview Retre**	**20.00**	**4**	Pn		**Pn**		**14 49 45.8**	**+1.3**
237A	**Washetta, Mont**	**20.01**	**342**	Pn		**Pn**		**14 49 46.4**	**+1.7**
237A						IAmb	IAmb	14 49 58.6	
	comp=Z,19nm,0.9s								
JCT	**Junction City**	**20.21**	**331**	P		**P**		**14 49 46.1**	**+1.5**
BAUV	**El Baul**	**20.65**	**99**			**P**		**14 49 47.1**	**-2.3**
GOGA	**Godfrey**	**20.86**	**12**	P		**P**		**14 49 53.0**	**+1.4**
GOGA						IAmb	IAmb	14 49 56.0	
	comp=Z,9.9nm,0.7s								
TXAR	**Lajitas Array**	**21.40**	**322**	P		**P**		**14 49 58.9**	**+1.3**
	comp=Z,2.6nm,0.6s,baz=142,slow=10,SNR=39								
TXAR						PcP	**PcP**	**14 54 00.3**	**+1.2**
	comp=Z,0.4nm,0.8s,baz=123,slow=4.6,SNR=4.1								
	comp=Z,2.6nm,0.6s								
TXAR	**Lajitas Array**	**21.40**	**322**	P		**P**		**14 49 59.0**	**+1.4**
TXAR						PcP	**PcP**	**14 53 59.6**	**+0.4**
TX31	**Lajitas Ar. Si**	**21.40**	**322**	P		**P**		**14 49 59.1**	**+1.6**
TX32	**Lajitas Array**	**21.40**	**322**	P		**P**		**14 49 59.0**	**+1.5**
MIAR	**Mount Ida**	**21.90**	**349**	P		**P**		**14 50 04.1**	**+1.4**
W41B	**Gary Mavity, V**	**22.31**	**352**	P		**P**		**14 50 07.5**	**+0.4**
X37A	**Clayton**	**22.33**	**345**	P		**P**		**14 50 09.0**	**+1.6**
X37A						IAmb	IAmb	14 50 38.3	
	comp=Z,21nm,1.3s								
WHAR	**Wooly Hollow**	**22.43**	**352**	P		**P**		**14 50 09.5**	**+1.1**
W39A	**Magazine**	**22.57**	**349**	P		**P**		**14 50 11.8**	**+1.8**
W39A						IAmb	IAmb	14 50 30.0	
	comp=Z,16nm,1.4s								
MTP	**Monte Pirata**	**22.83**	**74**	P		**P**		**14 50 12.5**	**-0.3**
MTP						IAmb	IAmb	14 50 24.8	
	comp=Z,14nm,0.9s								
TKL	**Tuckaleechee C**	**22.99**	**10**	P		**P**		**14 50 13.1**	**-1.1**
	comp=Z,4.3nm,0.6s,baz=172,slow=12,SNR=3.2								
TKL						LR	LR	14 59 36.4	
	comp=Z,31nm,18.9s,baz=168,slow=38								
	comp=Z,4.3nm,0.6s								
TKL	**Tuckaleechee C**	**22.99**	**10**	IAmb		IAmb		14 50 32.8	
	comp=Z,11nm,1.0s								
FCAR	**Ozark Folk Cen**	**23.00**	**353**	P		**P**		**14 50 15.4**	**+1.0**
X34A	**Smith Ranch, M**	**23.05**	**340**	P		**P**		**14 50 16.4**	**+1.5**
X34A						IAmb	IAmb	14 50 32.7	
	comp=Z,9.4nm,0.8s								
STVI	**Saint Thomas**	**23.43**	**74**	P		**P**		**14 50 17.9**	**-0.8**
STVI						IAmb	IAmb	14 50 35.1	
	comp=Z,15nm,0.8s								
WMOK	**Wichita Mounta**	**23.50**	**339**	P		**P**		**14 50 20.4**	**+1.2**
FNO	**Franklin**	**23.52**	**342**	P		**P**		**14 50 20.3**	**+1.0**
U40A	**Yellville**	**23.56**	**352**	P		**P**		**14 50 20.6**	**+1.0**
U40A						IAmb	IAmb	14 50 23.4	
	comp=Z,11nm,0.6s								
HHAR	**Hobbs**	**23.66**	**349**	P		**P**		**14 50 22.0**	**+1.5**
HHAR						IAmb	IAmb	14 50 23.7	
	comp=Z,7.1nm,0.6s								
T47A	**Sharon Grove**	**23.93**	**3**	P		**P**		**14 50 22.6**	**-0.3**
T47A						IAmb	IAmb	14 50 41.4	
	comp=Z,20nm,1.4s								
MNTX	**Cornudas Mount**	**24.13**	**323**	P		**P**		**14 50 25.5**	**+0.7**
V58A	**Windy Hill, Pi**	**24.27**	**19**	P		**P**		**14 50 26.6**	**+0.5**
MSTX	**Muleshoe**	**24.50**	**331**	P		**P**		**14 50 29.0**	**+0.7**
MSTX						IAmb	IAmb	14 50 30.8	
	comp=Z,12nm,0.8s								
AMTX	**Amarillo**	**24.77**	**334**	P		**P**		**14 50 31.1**	**+0.4**
AMTX						IAmb	IAmb	14 50 37.9	
	comp=Z,7.5nm,0.6s								
S39A	**Bolivar**	**24.93**	**351**	P		**P**		**14 50 32.7**	**+0.6**
CCM	**Cathedral Cave**	**25.06**	**355**	P		**P**		**14 50 32.8**	**-0.4**
CCM						IAmb	IAmb	14 50 52.3	
	comp=Z,10nm,1.1s								
P40A	**Paris**	**26.59**	**354**	P		**P**		**14 50 47.0**	**-0.1**
P40A						IAmb	IAmb	14 51 04.5	
	comp=Z,8.5nm,0.8s								
BNM	**Barren Site**	**26.64**	**325**	P		**P**		**14 50 49.5**	**+1.7**
Q54A	**Coxs Mills**	**26.79**	**14**	P		**P**		**14 50 49.1**	**+0.2**
LENM	**Lemitar**	**26.84**	**325**	P		**P**		**14 50 51.8**	**+2.1**
ANMO	**Albuquerque**	**27.14**	**327**	LR		LR		15 02 10.2	
	comp=Z,28nm,20.5s,baz=161,slow=37								
T25A	**Trinidad**	**27.86**	**332**	P		**P**		**14 50 58.4**	**-0.4**
PV11	**David Mesa, Pa**	**30.94**	**328**	P		**P**		**14 51 27.6**	**+1.6**
PV11						IAmb	IAmb	14 51 28.5	
	comp=Z,3.5nm,0.6s								
N23A	**Red Feather La**	**31.64**	**335**	P		**P**		**14 51 33.4**	**+1.2**
J56A	**Wolcott**	**31.84**	**16**	P		**P**		**14 51 33.9**	**+0.3**
SADO	**Sadowa**	**32.69**	**13**	P		**P**		**14 51 38.0**	**-3.0**
	comp=Z,4.9nm,0.7s,baz=223,slow=11,SNR=4.2								
	comp=Z,4.9nm,0.7s								
SADO	**Sadowa**	**32.69**	**13**	P		**P**		**14 51 40.7**	**-0.3**
SADO						IAmb	IAmb	14 51 42.3	
	comp=Z,5.4nm,0.8s								
P17A	**Butcher Ranch,**	**32.79**	**328**	P		**P**		**14 51 43.5**	**+1.4**
P17A						IAmb	IAmb	14 51 45.9	
	comp=Z,3.1nm,0.7s								
RWWY	**Rawlins**	**32.83**	**334**	P		**P**		**14 51 43.7**	**+1.0**
RWWY						IAmb	IAmb	14 51 44.9	
	comp=Z,5.2nm,0.7s								
COWI	**Conover**	**32.99**	**359**	P		**P**		**14 51 42.8**	**-0.9**
COWI						IAmb	IAmb	14 51 43.7	
	comp=Z,11nm,1.4s								
F33A	**5 Mile Ranch,**	**33.36**	**350**	P		**P**		**14 51 46.5**	**-0.3**
F33A						IAmb	IAmb	14 51 48.9	
	comp=Z,4.2nm,0.6s								
SAML	**Samuel**	**33.41**	**129**	P		**P**		**14 51 46.5**	**-1.2**
RSSD	**Black Hills**	**33.70**	**340**	P		**P**		**14 51 51.4**	**+1.3**
RSSD						IAmb	IAmb	14 51 52.6	
	comp=Z,2.9nm,0.7s								
PDAR	**Pinedale Array**	**34.73**	**333**	P		**P**		**14 51 58.2**	**-0.9**
	comp=Z,0.8nm,0.5s,baz=123,slow=11,SNR=9.5								
PDAR						PcP	**PcP**	**14 54 30.5**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=120,slow=5.3,SNR=2.5								
	comp=Z,0.8nm,0.5s								
PDAR	**Pinedale Array**	**34.73**	**333**	P		**P**		**14 51 59.5**	**+0.4**
HWUT	**Hardware Ranch**	**34.79**	**329**	P		**P**		**14 52 00.9**	**+1.3**
LPAZ	**La Paz**	**35.49**	**145**	LR		LR		15 05 48.0	
	comp=Z,57nm,18.6s,baz=306,slow=35								
AGMN	**Agassiz Nation**	**35.69**	**352**	P		**P**		**14 52 06.5**	**-0.4**
REDW	**Red Top Meadow**	**35.78**	**332**	P		**P**		**14 52 09.1**	**+0.9**
LOHW	**Long Hollow**	**35.87**	**332**	P		**P**		**14 52 09.9**	**+1.1**
LOHW						IAmb	IAmb	14 52 10.8	
	comp=Z,2.4nm,0.7s								
TPAW	**Teton Pass**	**35.93**	**332**	P		**P**		**14 52 10.6**	**+1.1**
TPAW						IAmb	IAmb	14 52 12.2	
	comp=Z,4.3nm,0.9s								
MDP	**Montagnes des**	**36.40**	**99**	LR		LR		15 09 42.7	
	comp=Z,36nm,20.2s,baz=225,slow=41								
PB16	**IPOC Station P**	**36.43**	**148**	P		**P**		**14 52 14.2**	**0.0**
RLMT	**Red Lodge**	**36.50**	**335**	P		**P**		**14 52 15.1**	**+0.9**
NVAR	**Mina Array Bea**	**36.51**	**319**	P		**P**		**14 52 16.0**	**+1.6**
	comp=Z,1.0nm,0.6s,baz=129,slow=7.1,SNR=9.8								
NVAR						PcP	**PcP**	**14 54 38.1**	**+1.1**
	comp=Z,1.3nm,0.6s,baz=131,slow=3.7,SNR=13								
	comp=Z,1.0nm,0.6s								
NVAR	**Mina Array Bea**	**36.51**	**319**	P		**P**		**14 52 16.1**	**+1.8**
NVAR						PcP		**14 54 37.4**	**+0.4**
LHV	**Little Huntoon**	**36.53**	**319**	P		**P**		**14 52 16.5**	**+2.2**
KVN	**Kaiserville**	**36.75**	**320**	P		**P**		**14 52 17.0**	**+0.6**
BMN	**Battle Mountai**	**37.06**	**323**	P		**P**		**14 52 20.5**	**+1.5**
GCMT	**Greycliff**	**37.21**	**336**	P		**P**		**14 52 20.4**	**+0.2**
ULM	**Lac du Bonnet**	**37.61**	**352**	P		**P**		**14 52 21.4**	**-1.8**
	comp=Z,5.1nm,0.7s,baz=162,slow=10,SNR=10								
ULM						LR	LR	15 08 49.0	
	comp=Z,53nm,19.3s,baz=102,slow=38								
	comp=Z,5.1nm,0.7s								
ULM	**Lac du Bonnet**	**37.61**	**352**	P		**P**		**14 52 21.9**	**-1.4**
DGMT	**Dagmar**	**37.64**	**343**	P		**P**		**14 52 24.0**	**+0.4**
BCYI	**Bear Canyon**	**37.70**	**331**	P		**P**		**14 52 26.1**	**+1.6**
MCMT	**McKenzie Canyo**	**37.83**	**332**	P		**P**		**14 52 26.9**	**+1.4**
BOZ	**Bozeman (W)**	**37.88**	**334**	P		**P**		**14 52 26.7**	**+0.9**
BOZ						IAmb	IAmb	14 52 30.0	
	comp=Z,3.3nm,0.7s								
LRM	**Limekiln Ridge**	**38.41**	**333**	P		**P**		**14 52 31.1**	**+0.7**
WVOR	**Wild Horse Val**	**39.16**	**324**	P		**P**		**14 52 37.3**	**+0.7**
ORV	**Oroville**	**39.20**	**318**	P		**P**		**14 52 36.5**	**-0.3**
ORV						IAmb	IAmb	14 52 37.5	
	comp=Z,3.4nm,0.8s								
JTMT	**Jette**	**40.70**	**333**	P		**P**		**14 52 50.8**	**+1.5**
WALA	**Waterton Lakes**	**41.55**	**335**	P		**P**		**14 52 58.0**	**+1.8**
I02E	**Swisshome, OR**	**43.20**	**323**	P		**P**		**14 53 10.4**	**+0.9**
SCHQ	**Schefferville**	**45.10**	**18**	P		**P**		**14 53 21.9**	**-2.8**
	comp=Z,4.1nm,0.8s,baz=206,slow=8.9,SNR=3.6								
	comp=Z,4.1nm,0.8s								
SCHQ	**Schefferville**	**45.10**	**18**	P		**P**		**14 53 23.7**	**-1.0**
H03N2	**Juan Fernandez**	**47.11**	**169**	T		T		15 43 53.1	
	baz=347,slow=76,SNR=3.9								
H03N1	**Juan Fernandez**	**47.11**	**169**	T		T	

*IDC **13** 14:55:12.8±1.1,5°.59N×126°.13E,h116km±9km,mb4.0/21, mbtmp4.4/23,MS3.3/2,Error ellipse: s-maj=19.0km s-min=9.5km az=84.0*
*NEIC **13** 14:55:12.2±1.8,5°.54N±0°.06×126°.13E±0°.09,h104km±6km, mb4.5/67,Error ellipse: s-maj=13.6km s-min=7.9km az=71.0*

ISC 13 14:55:12.2±0.7,5°.53N±0°.03×126°.17E±0°.05,h109km±6km, n182,σ1♀44/196,mb4.4/57,4C-9D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.73**	**322**	↓*eP*		**Pn**	**14 55 29.0**	**-1.8**
DDMP				*eS*		**Sn**	**14 56 42.6**	**-2.1**
GSPH	**General Santos**	**1.33**	**295**	↓*iP*		Pn	14 55 32.2	-4.9
GSPH				*i* S		**Sn**	**14 55 55.2**	**-0.7**
MATI	**Mati**	**1.41**	**4**	↓*eP*		**Pn**	**14 55 36.6**	**-1.3**
MATI				*eS*		**Sn**	**14 56 01.2**	**+3.8**
DAV	**Davao City (W)**	**1.64**	**339**	P		**Pn**	**14 55 40.1**	**-0.6**
	222nm,0.3s,baz=84,slow=7.3,SNR=2.9							
DAV				S		**Sn**	**14 56 02.1**	**-0.2**
	459nm,0.3s,baz=91,slow=20,SNR=5.3							
DAV	**Davao City (W)**	**1.64**	**339**			**Pn**	**14 55 40.4**	**-0.3**
DAV	**Davao City (W)**	**1.64**	**339**	P		**Pn**	**14 55 40.7**	**0.0**
KCP	**Kidapawan**	**1.82**	**324**	↓*eP*		**Pn**	**14 55 43.0**	**0.0**
KCP				*eS*		**Sn**	**14 56 07.0**	**+0.6**
SGSI	**Sangihe**	**1.94**	**199**	P		**Pn**	**14 55 45.3**	**+0.9**
SGSI				S		**Sn**	**14 56 12.0**	**+3.0**
CTBH	**Cotabato--PC H**	**2.54**	**311**	↑*iP*		**Pn**	**14 55 51.9**	**-0.3**
CTBH				*i* S		**Sn**	**14 56 23.9**	**+1.0**
BIPH	**Bislig**	**2.64**	**4**	↑*eP*		**Pn**	**14 55 53.0**	**-0.5**
BIPH				*eS*		**Sn**	**14 56 27.9**	**+2.6**
CGP	**Cagayan de Oro**	**3.25**	**333**	↓*eP*		**Pn**	**14 56 04.4**	**+2.8**
CGP				*eS*		**Sn**	**14 56 40.4**	**+0.7**
BUTP	**Butuan**	**3.46**	**351**	↓*eP*		**Pn**	**14 56 06.2**	**+1.8**
BUTP				*eS*		**Sn**	**14 56 52.1**	**+7.5**
PAGZ	**Pagadian**	**3.60**	**310**	↓*eP*		**Pn**	**14 56 07.6**	**+1.4**
GLSP	**General Luna,**	**4.23**	**359**	↓*eP*		**Pn**	**14 56 15.7**	**+1.0**
GLSP				*eS*		**Sn**	**14 57 03.5**	**+0.4**
ZCP	**Zamboanga City**	**4.30**	**289**	↑*eP*		**Pn**	**14 56 17.6**	**+2.0**
ZCP				*eS*		**Sn**	**14 57 05.2**	**+0.4**
TBP	**Tagbilaran**	**4.72**	**331**	↑*eP*		**Pn**	**14 56 22.4**	**+1.0**
TBP				*i* S		**Sn**	**14 57 19.0**	**+3.9**
MSLP	**Maasin**	**4.75**	**344**	↓*eP*		**Pn**	**14 56 22.9**	**+1.2**
MSLP				*eS*		**Sn**	**14 57 21.5**	**+5.6**
TNTI	**Ternate**	**4.88**	**166**			**Pn**	**14 56 22.2**	**-1.3**
TNTI	**Ternate**	**4.88**	**166**	P		**Pn**	**14 56 22.1**	**-1.3**
TNTI	**Ternate**	**4.88**	**166**	P		**Pn**	**14 56 22.9**	**-0.5**
KMSI	**Cibinong**	**5.38**	**204**	P		**Pn**	**14 56 32.0**	**+1.7**
	0.6nm2μm180nm,0.7s							
LBMI	**Labuha**	**6.27**	**168**	P		**Pn**	**14 56 41.2**	**-1.1**
	0.3nm898nm46nm,0.8s							
MRSI	**Marisa**	**6.56**	**220**	P		**Pn**	**14 56 47.7**	**+1.5**
	1.1nm3μm397nm,0.7s							
TOLI2	**Tolitoli**	**6.94**	**231**			**Pn**	**14 56 51.3**	**-0.1**
TOLI2	**Tolitoli**	**6.94**	**231**	P		**Pn**	**14 56 51.8**	**+0.4**
LUWI	**Luwuk**	**7.36**	**208**			**Pn**	**14 57 00.4**	**+3.4**
LUWI	**Luwuk**	**7.36**	**208**	P		**Pn**	**14 56 58.9**	**+1.9**
	0.8nm2μm271nm,1.1s							
SANI	**Sanana**	**7.53**	**181**	P		**Pn**	**14 56 56.9**	**-2.5**
MYLDM	**Lahad Datu**	**7.64**	**268**	Pn		**Pn**	**14 57 03.9**	**+3.0**
APSI	**Ampana**	**7.83**	**215**	P		**Pn**	**14 57 05.4**	**+2.0**
	1μm132nm,1.2s							
MPSI	**Mapaga**	**8.11**	**231**	P		**Pn**	**14 57 07.1**	**-0.2**
	411nm23nm,0.6s							
SWI	**Sorong**	**8.14**	**141**	P		**Pn**	**14 57 04.7**	**-2.9**
	15nm,0.8s							
FAKI	**Fak Fak**	**10.36**	**144**	Pn		**Pn**	**14 57 37.5**	**-0.3**
FAKI	**Fak Fak**	**10.36**	**144**	P		**Pn**	**14 57 37.9**	**+0.1**
TTSI	**Tana Toraja**	**10.62**	**217**	P		**Pn**	**14 57 42.9**	**+1.6**
	495nm28nm,0.8s							
BNSI	**Bone**	**11.57**	**212**	P		**P**	**14 58 00.8**	**-2.3**
KAPI	**Kappang**	**12.28**	**212**	P		**Pn**	**14 58 05.3**	**+1.8**
	7.6nm,0.4s,baz=63,slow=11,SNR=1.2							
MTKI	**Muara Teweh, K**	**12.96**	**241**	P		**P**	**14 58 20.0**	**+1.2**
BBKI	**Banjar Baru**	**14.41**	**232**	P		P	14 58 46.2	+11
SOEI	**Soe**	**15.30**	**187**	P		**P**	**14 58 44.3**	**-0.6**
SOEI					IAmb	IAmb	14 58 56.0	
	comp=Z,44nm,0.9s							
BATI	**Baumata**	**15.83**	**189**	P		**P**	**14 58 50.4**	**-0.2**
	comp=Z,18nm,0.3s,baz=310,slow=7.9,SNR=6.8							
GENI	**Genyem**	**16.15**	**120**	P		**Pn**	**14 58 50.1**	**-2.9**
KSM	**Kuching**	**16.33**	**256**	Pn		**Pn**	**14 58 54.0**	**-1.2**
PLAI	**Plampang**	**16.53**	**210**	P		**P**	**14 59 00.8**	**+2.4**
SRBI	**Singaraja**	**17.39**	**219**	P		**P**	**14 59 05.8**	**-2.0**
	comp=Z,1μmcomp=Z,57nm,0.5s							
YULB	**Yu-li**	**18.37**	**346**	P		**P**	**14 59 18.7**	**+0.1**
YULB					IAmb	IAmb	14 59 47.4	
	comp=Z,31nm,1.4s							
MTN	**Manton Dam**	**18.91**	**165**	P		**P**	**14 59 25.1**	**+0.6**
MTN					IAmb	IAmb	14 59 45.9	
	comp=Z,35nm,1.2s							
KDU	**Kakadu**	**19.15**	**161**	P		**Pn**	**14 59 28.6**	**-0.6**
YHNB	**Yeheng**	**19.58**	**347**	P		**P**	**14 59 31.7**	**-0.2**
YHNB	**Yeheng**	**19.58**	**347**	P		**Pn**	**14 59 34.6**	**+0.4**
KNRA	**Kununurra**	**21.23**	**173**	P		**P**	**14 59 49.9**	**+0.4**
KNRA					IAmb	IAmb	15 00 01.9	
	comp=Z,19nm,0.7s							
KNRA	**Kununurra**	**21.23**	**173**	P		**P**	**14 59 50.2**	**+0.7**
JOW	**Kunigami**	**21.28**	**5**	P		**P**	**14 59 50.6**	**+0.5**
	comp=Z,38nm,0.8s,baz=215,slow=8.8,SNR=3.2							
	comp=Z,38nm,0.8s							
LEM	**Lembang**	**22.21**	**237**	P		**P**	**15 00 01.7**	**+1.5**
	comp=Z,15nm,0.5s,baz=323,slow=3.6,SNR=4.6							
	comp=Z,15nm,0.5s							
MYKOM	**Kota Tinggi**	**22.57**	**261**	P		**P**	**15 00 02.8**	**-0.9**
RGRI	**Rengat**	**24.50**	**257**	P		**P**	**15 00 20.3**	**-1.4**
COEN	**Coen**	**25.69**	**139**	P		**P**	**15 00 32.3**	**0.0**
COEN					IAmb	IAmb	15 01 00.5	
	comp=Z,41nm,1.4s							
COEN	**Coen**	**25.69**	**139**	P		**P**	**15 00 32.7**	**+0.3**
	comp=Z,23nm,2.1s							
WB0	**Warramunga Arr**	**26.41**	**162**	P		**P**	**15 00 38.5**	**-0.3**
WB0					IAmb	IAmb	15 01 06.4	
	comp=Z,7.2nm,0.9s							
WRAB	**Tennant Creek**	**26.55**	**163**	P		**P**	**15 00 40.3**	**+0.2**
WRA	**Warramunga Arr**	**26.56**	**163**	P		**P**	**15 00 39.3**	**-0.9**
	comp=Z,1.2nm,0.7s,baz=336,slow=10,SNR=3.9							
WRA					PcP	**PcP**	**15 04 02.8**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=328,slow=2.5,SNR=1.3							
	comp=Z,1.2nm,0.7s							
WRA	**Warramunga Arr**	**26.56**	**163**	P		**P**	**15 00 39.3**	**-0.9**
WB2	**Warramunga Arr**	**26.56**	**163**	P		**P**	**15 00 39.6**	**-0.6**
WB2					IAmb	IAmb	15 01 08.1	
	comp=Z,16nm,1.4s							
WR0	**Warramunga Arr**	**26.64**	**162**	P		**P**	**15 00 40.7**	**-0.2**
MBWA	**Marble Bar**	**27.26**	**193**	P		**P**	**15 00 45.8**	**-0.6**
MBWA					IAmb	IAmb	15 01 01.3	
	comp=Z,22nm,1.5s							
PSI	**Prapat**	**27.30**	**265**	P		**P**	**15 00 46.8**	**-0.3**
	comp=Z,1.8nm,0.4s,baz=183,slow=8.4,SNR=4.0							
PSI					LR	LR	15 12 14.4	
	comp=Z,50nm,18.8s,baz=198,slow=37							
	comp=Z,1.8nm,0.4s							
PSA00	**Pilbara Seismi**	**27.64**	**193**	P		**P**	**15 00 49.3**	**-0.5**
PSA00					IAmb	IAmb	15 01 02.9	
	comp=Z,9.2nm,1.1s							
GSI	**Gunungsitoli**	**28.84**	**263**	P		**P**	**15 00 59.4**	**-1.3**
GSI	**Gunungsitoli**	**28.84**	**263**	P		**P**	**15 01 01.2**	**+0.6**
QIS	**Mount Isa**	**29.09**	**153**	P		**P**	**15 01 03.7**	**+0.9**
CMAR	**Chiang Mai Arr**	**29.51**	**298**	P		**P**	**15 01 06.5**	**0.0**
	comp=Z,0.8nm,0.6s,baz=95,slow=7.0,SNR=8.6							
CMAR					PcP	**PcP**	**15 04 09.2**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=116,slow=0.9,SNR=5.3							
	comp=Z,0.8nm,0.6s							
AS31	**Alice Springs**	**29.98**	**166**	P		**P**	**15 01 10.6**	**0.0**
ASAR	**Alice Springs**	**29.98**	**166**	P		**P**	**15 01 10.7**	**0.0**
	comp=Z,1.3nm,0.6s,baz=345,slow=7.0,SNR=34							
ASAR					PcP	**PcP**	**15 04 10.8**	**+0.2**
	comp=Z,1.4nm,0.6s,baz=346,slow=2.5,SNR=11							
ASAR					LR	LR	15 13 27.9	
	comp=Z,60nm,20.0s,baz=89,slow=36							
	comp=Z,1.3nm,0.6s							
WRKA	**Warakurna**	**30.45**	**176**	P		**P**	**15 01 15.5**	**+0.7**
PZH	**PanZhiHua**	**31.28**	**314**	P		**P**	**15 01 24.6**	**+2.4**
PZH					pmax	pmax		
	comp=Z,10.0nm,0.5s							
PZH					pmax	pmax		
	comp=Z,80nm,4.0s							
INU	**Inuyama**	**31.32**	**17**	P		**P**	**15 01 21.6**	**-0.6**
INU					IAmb	IAmb	15 01 42.5	
	comp=Z,14nm,1.3s							
KSRS	**Korea Array**	**31.82**	**3**	P		**P**	**15 01 27.7**	**+1.2**
	comp=Z,1.2nm,0.5s,baz=184,slow=9.5,SNR=9.9							
	comp=Z,1.2nm,0.5s							
CTAO	**Charters Tower**	**32.22**	**143**	P		**P**	**15 01 30.8**	**+0.5**
XAN	**Xi'an**	**32.57**	**333**	P		**P**	**15 01 31.8**	**-1.5**
XAN					pmax	pmax		
	comp=Z,5.0nm,0.6s							
OOD	**Oodnadatta**	**34.38**	**165**	P		**P**	**15 01 49.7**	**+0.7**
BJT	**Baijiatuau**	**35.50**	**347**	P		**P**	**15 01 57.7**	**-0.8**
BJT					IAmb	IAmb	15 01 59.1	
	comp=Z,5.9nm,0.7s							
BJI	**Beijing**	**35.52**	**347**	P		**P**	**15 01 57.8**	**-0.8**
BJI					pmax	pmax		
	comp=Z,5.0nm,0.9s							
FORT	**Forrest**	**36.15**	**177**	P		**P**	**15 02 05.1**	**+1.0**
MULG	**Mulgathing**	**36.40**	**168**	P		**P**	**15 02 07.9**	**+1.6**
LZH	**Lanzhou**	**36.68**	**329**	*eP*		**P**	**15 02 04.5**	**-4.3**
LZH					pP	pP	15 02 22.3	-11
LZH					pmax	pmax		
	comp=Z,19nm,1.1s							
HNR	**Honiara**	**36.80**	**114**	P		**P**	**15 02 09.9**	**0.0**
BLDU	**Ballidu**	**37.06**	**194**	P		**P**	**15 02 12.4**	**+0.5**
HHC	**Hu-ho-hao-te**	**37.52**	**342**	*eP*		**P**	**15 02 17.3**	**+1.5**
HHC					pmax	pmax		
	comp=Z,15nm,0.9s							
HHC					pmax	pmax		
	comp=Z,140nm,3.9s							
USA0B	**Ussuriysk Arra**	**38.85**	**7**	P		**P**	**15 02 26.0**	**-0.7**
USA0B					IAmb	IAmb	15 02 43.0	
	comp=Z,7.6nm,0.7s							
USRK	**Ussuriysk Ar.**	**38.85**	**7**	P		**P**	**15 02 26.3**	**-0.5**
	comp=Z,2.8nm,0.6s,baz=115,slow=16,SNR=3.5							
	comp=Z,2.8nm,0.6s							
EIDS	**Eidsvold**	**39.11**	**143**	P		**P**	**15 02 28.5**	**-0.7**
BBOO	**Buckleboo**	**39.27**	**167**	P		**P**	**15 02 30.4**	**0.0**
BBOO	**Buckleboo**	**39.27**	**167**	P		**P**	**15 02 31.3**	**+0.9**
STKA	**Stephens Creek**	**40.00**	**159**	P		**P**	**15 02 37.1**	**+0.7**
	comp=Z,8.1nm,0.7s,baz=334,slow=8.8,SNR=16							
STKA					PcP	**PcP**	**15 04 39.6**	**+0.1**
	comp=Z,2.1nm,0.5s,baz=310,slow=5.4,SNR=4.5							
	comp=Z,8.1nm,0.7s							
STKA	**Stephens Creek**	**40.00**	**159**	P		**P**	**15 02 36.9**	**+0.4**
STKA	**Stephens Creek**	**40.00**	**159**	P		**P**	**15 02 37.7**	**+1.2**
HTT	**Hallett**	**40.59**	**164**	P		**P**	**15 02 42.8**	**+1.4**
H11S3	**WAKE ISLAND Hy**	**41.56**	**68**	T		T	15 47 01.2	
	baz=258,slow=74							
H11S1	**WAKE ISLAND Hy**	**41.58**	**68**	T		T	15 47 02.0	
	baz=258							
H11S2	**WAKE ISLAND Hy**	**41.58**	**68**	T		T	15 47 01.7	
	baz=258,slow=74							
TWOA	**Tennyson Woods**	**42.01**	**165**	P		**P**	**15 02 54.9**	**+2.1**
TAPN	**Taplejung**	**42.52**	**305**	*eP*		**P**	**15 02 57.5**	**0.0**
RAMN	**Ramite**	**43.27**	**304**	*eP*		**P**	**15 03 04.0**	**+0.4**
KLR	**Kul'dur**	**43.80**	**5**	P		**P**	**15 03 07.1**	**-0.1**
	comp=Z,1.8nm,0.7s,baz=224,slow=4.5,SNR=4.4							
	comp=Z,1.8nm,0.7s							
JIRN	**Jiri**	**43.88**	**305**	*eP*		**P**	**15 03 08.7**	**+0.1**
	comp=Z,24nm,0.5s							
GUN	**Gumba**	**44.23**	**305**	*eP*		**P**	**15 03 11.3**	**-0.1**
	comp=Z,28nm,0.5s							
PKI	**Pulchoki**	**44.49**	**304**	*eP*		**P**	**15 03 12.8**	**-0.6**
	comp=Z,13nm,0.8s							
PKIN	**Phulchoki**	**44.50**	**304**	*eP*		**P**	**15 03 13.2**	**-0.2**
	comp=Z,7.9nm,0.5s							
ARPS	**Mount Arapiles**	**44.56**	**162**	P		**P**	**15 03 15.0**	**+1.7**
GKN	**Gorkha**	**45.28**	**304**	*eP*		**P**	**15 03 19.0**	**-0.5**
	comp=Z,15nm,0.5s							
SONM	**Songino Array**	**45.42**	**341**	P		**P**	**15 03 18.1**	**-2.2**
	comp=Z,0.7nm,0.4s,baz=153,slow=10.0,SNR=3.5							
	comp=Z,0.7nm,0.4s							
SONM	**Songino Array**	**45.42**	**341**		IAmb	IAmb	15 03 22.8	
	comp=Z,1.8nm,1.0s							
CAN	**Canberra**	**45.96**	**154**	P		**P**	**15 03 25.7**	**+1.1**
CAN					IAmb	IAmb	15 03 27.4	
	comp=Z,8.2nm,0.9s							
DANN	**Dangsing**	**46.13**	**304**	*eP*		**P**	**15 03 25.8**	**-0.5**
	comp=Z,50nm,0.6s							
PYUN	**Piuthan**	**46.67**	**304**	*eP*		**P**	**15 03 30.4**	**-0.1**
	comp=Z,23nm,0.7s							
WMQ	**Urumqi**	**50.94**	**325**	*eP*		**P**	**15 04 04.4**	**+1.7**
PETK	**Petropavlovsk-**	**53.99**	**23**	P		**P**	**15 04 24.6**	**-0.3**
	comp=Z,5.8nm,1.3s,baz=210,slow=11,SNR=2.6							
PETK					PcP	**PcP**	**15 05 28.5**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=216,slow=2.4,SNR=1.7							
	comp=Z,5.8nm,1.3s							
PETK	**Petropavlovsk-**	**53.99**	**23**	P		**P**	**15 04 26.1**	**+1.2**
MK31	**Makanchi Array**	**55.77**	**325**	P		**P**	**15 04 36.9**	**-1.0**
MK31					IAmb	IAmb	15 04 37.9	
	comp=Z,2.9nm,0.6s							
MKAR	**Makanchi Array**	**55.77**	**325**	P		**P**	**15 04 37.3**	**-0.6**
	comp=Z,4.4nm,0.5s,baz=120,slow=7.8,SNR=82							
MKAR					PcP	**PcP**	**15 05 34.9**	**-0.8**
	comp=Z,1.5nm,0.7s,baz=116,slow=5.5,SNR=5.2							
	comp=Z,4.4nm,0.5s							
MKAR	**Makanchi Array**	**55.77**	**325**	P		**P**	**15 04 36.9**	**-1.0**
MAKZ	**Makanchi**	**55.96**	**325**	P		**P**	**15 04 38.1**	**-1.1**
MAKZ					IAmb	IAmb	15 04 39.2	
	comp=Z,4.0nm,0.9s							
MSVF	**Nonsavu**	**56.18**	**116**	P		**P**	**15 04 41.7**	**+0.4**
KSH	**Kashi**	**56.38**	**314**	P		**P**	**15 04 42.3**	**-0.2**
KSH					pmax	pmax		
	comp=Z,4.0nm,1.0s							
YAK	**Yakutsk**	**56.44**	**2**	P		**P**	**15 04 42.5**	**+0.3**
KDJ	**Kajisay**	**56.64**	**318**	P		**P**	**15 04 43.8**	**-0.5**
KDJ					IAmb	IAmb	15 04 45.0	
	comp=Z,3.4nm,0.6s							
ZAA0	**Zalesovo Array**	**58.74**	**333**	P		**P**	**15 04 56.4**	**-2.2**
ZAA0					IAmb	IAmb	15 04 57.4	
	comp=Z,1.7nm,0.5s							
ZALV	**Zalesovo Beam**	**58.74**	**333**	P		**P**	**15 04 56.7**	**-1.9**
	comp=Z,1.6nm,0.4s,baz=124,slow=6.0,SNR=9.2							
	comp=Z,1.6nm,0.4s							
ZALV	**Zalesovo Beam**	**58.74**	**333**	P		**P**	**15 04 56.5**	**-2.1**
KURK	**Kurchatov**	**59.93**	**327**	P		**P**	**15 05 05.8**	**-1.0**
GAR	**Garm**	**60.30**	**312**	P		**P**	**15 05 08.9**	**-0.9**
KKAR	**Karatay Array**	**61.54**	**317**	P		**P**	**15 05 16.3**	**-1.7**
HIZ	**Hauiti**	**62.86**	**139**	P		**P**	**15 05 26.8**	**0.0**
BSWZ	**Blackbirch Sta**	**64.02**	**142**	P		**P**	**15 05 34.5**	**+0.2**
KHZ	**Kahuhara**	**64.22**	**143**	P		**P**	**15 05 35.6**	**0.0**
BKZ	**Black Stump Fm**	**64.29**	**138**	P		**P**	**15 05 36.3**	**+0.1**
TIXI	**Tiksi**	**66.06**	**1**	P		**P**	**15 05 47.0**	**0.0**
TIXI					IAmb	IAmb	15 05 48.4	
	comp=Z,3.7nm,0.6s							
NRIK	**Noril'sk**	**68.56**	**346**	P		**P**	**15 06 02.6**	**-0.3**
	comp=Z,2.3nm,0.4s,baz=140,slow=4.5,SNR=4.0							
	comp=Z,2.3nm,0.4s							
NRIK	**Noril'sk**	**68.56**	**346**	P		**P**	**15 06 02.2**	**-0.7**
NRIK					IAmb	IAmb	15 06 04.2	
	comp=Z,3.1nm,0.7s							
ABKAR	**Akbulak array**	**70.41**	**320**	P		**P**	**15 06 13.2**	**-1.4**
ABKAR	**Akbulak array**	**70.41**	**320**	P		**P**	**15 06 13.1**	**-1.5**
ABKAR					IAmb	IAmb	15 06 15.2	
	comp=Z,3.2nm,0.8s							
ARU	**Arti**	**73.13**	**328**	P		**P**	**15 06 29.3**	**-1.4**
ARU					IAmb	IAmb	15 06 29.9	
	comp=Z,4.6nm,0.5s							
SVW2	**Sparrevohn**	**79.51**	**29**	P		**P**	**15 07 08.3**	**+1.6**
SVW2					IAmb	IAmb	15 07 17.1	
	comp=Z,6.7nm,1.3s							
N19K	**Bonanza Creek**	**80.00**	**29**	P		**P**	**15 07 10.4**	**+0.9**
N19K					IAmb	IAmb	15 07 21.4	
	comp=Z,8.8nm,1.1s							
J20K	**Nowinta River**	**80.56**	**26**	P		**P**	**15 07 12.8**	**+0.5**
KDAK	**Kodiak Island**	**80.68**	**32**	P		**P**	**15 07 13.4**	**+0.4**
IMAR	**Indian Mountai**	**80.94**	**24**	P		**P**	**15 07 15.5**	**+1.2**
H21K	**Melozitna Rive**	**81.29**	**24**	P		**P**	**15 07 15.7**	**-0.5**
CNPM	**China Poot**	**81.50**	**31**	P		**P**	**15 07 18.0**	**+0.5**
CNPM					IAmb	IAmb	15 07 45.4	
	comp=Z,15nm,1.3s							
SUA	**Susitna One**	**81.87**	**29**	P		**P**	**15 07 19.7**	**+0.3**
SUA					IAmb	IAmb	15 07 32.2	
	comp=Z,8.3nm,1.2s							
MLY	**Manley**	**82.10**	**25**	P		**P**	**15 07 21.1**	**+0.6**
MLY					IAmb	IAmb	15 07 22.6	
	comp=Z,3.3nm,0.7s							
RC01	**Rabbit Creek A**	**82.33**	**29**	P		**P**	**15 07 22.0**	**+0.3**
RC01					IAmb	IAmb	15 07 32.9	
	comp=Z,11nm,1.5s							
H23K	**Yukon River**	**82.65**	**24**	P		**P**	**15 07 24.7**	**+1.4**
I23K	**Minto, Yukon-K**	**82.69**	**25**	P		**P**	**15 07 24.8**	**+1.3**
I23K					IAmb	IAmb	15 07 26.0	
	comp=Z,3.3nm,0.7s							
TOLK	**Toolik Lake Re**	**82.79**	**22**	P		**P**	**15 07 25.6**	**+1.6**
H24K	**Noodor Dome**	**83.33**	**24**	P		**P**	**15 07 28.2**	**+1.3**
H24K					IAmb	IAmb	15 07 30.3	
	comp=Z,4.6nm,1.1s							
CCB	**Clear Creek Bu**	**83.33**	**26**	P		**P**	**15 07 26.9**	**+0.1**
SCM	**Sheep Creek Mo**	**83.51**	**28**	P		**P**	**15 07 28.3**	**+0.4**
SCM					IAmb	IAmb	15 07 49.0	
	comp=Z,6.1nm,1.2s							
IL31		**83.73**	**26**	P		**P**	**15 07 28.4**	**-0.4**
ILAR	**Eielson Array**	**83.73**	**26**	P		**P**	**15 07 28.1**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=244,slow=5.0,SNR=19							
	comp=Z,0.5nm,0.5s							
M24K	**Tolsona, Glenn**	**84.05**	**28**	P		**P**	**15 07 31.5**	**+0.8**
M24K					IAmb	IAmb	15 07 51.9	
	comp=Z,10nm,1.2s							
KLU	**Klutina**	**84.18**	**29**	P		**P**	**15 07 32.4**	**+1.0**
KLU					IAmb	IAmb	15 07 33.1	
	comp=Z,2.5nm,0.7s							
J25K	**Salcha River,**	**84.38**	**26**	P		**P**	**15 07 31.9**	**-0.4**
J25K					IAmb	IAmb	15 07 34.3	
	comp=Z,4.7nm,1.4s							
BMAR	**Burnt Mountain**	**84.65**	**23**	P		**P**	**15 07 35.1**	**+1.6**
HMT	**Hamilton**	**85.02**	**30**	P		**P**	**15 07 36.1**	**+0.6**
HMT					IAmb	IAmb	15 07 47.0	
	comp=Z,14nm,1.3s							
J26L	**Joseph Creek**	**85.17**	**26**	P		**P**	**15 07 36.5**	**+0.3**
VNDA	**Vanda**	**85.27**	**173**	P		**P**	**15 07 36.5**	**+0.2**
	comp=Z,0.9nm,0.5s,baz=322,slow=7.0,SNR=12							
	comp=Z,0.9nm,0.5s							
VNDA	**Vanda**	**85.27**	**173**	P		**P**	**15 07 36.8**	**+0.4**
BCAR	**Beaver Creek A**	**86.04**	**27**	P		**P**	**15 07 41.9**	**+1.3**
SBA	**Scott Base**	**86.18**	**172**			**P**	**15 07 42.6**	**+1.8**
ARCES	**ARCESS Array B**	**88.58**	**340**	P		**P**	**15 07 51.1**	**-1.4**
	comp=Z,1.7nm,0.6s,baz=83,slow=5.0,SNR=7.5							
	comp=Z,1.7nm,0.6s							
ARCES	**ARCESS Array B**	**88.58**	**340**	P		**P**	**15 07 51.6**	**-0.9**
SPB2	**Spitsbergen Ar**	**88.61**	**349**	P		**P**	**15 07 52.5**	**0.0**
INK	**Inuvik**	**88.70**	**21**	P		**P**	**15 07 52.5**	**-0.6**
	comp=Z,2.1nm,0.5s,baz=220,slow=4.2,SNR=5.7							
	comp=Z,2.1nm,0.5s							
INK	**Inuvik**	**88.70**	**21**	P		**P**	**15 07 53.1**	**0.0**
INK					IAmb	IAmb	15 08 12.0	
	comp=Z,4.0nm,1.4s							
FIA1	**FINESS Array S**	**89.99**	**332**	P		**P**	**15 07 57.6**	**-1.7**
FIA1					IAmb	IAmb	15 08 18.4	
	comp=Z,11nm,1.4s							
FINES	**FINESS Array B**	**89.99**	**332**	P		**P**	**15 07 57.9**	**-1.4**
	comp=Z,2.1nm,0.7s,baz=51,slow=7.6,SNR=11							
	comp=Z,2.1nm,0.7s							
FINES	**FINESS Array B**	**89.99**	**332**	P		**P**	**15 07 57.5**	**-1.7**
NB2	**NORSAR Subarra**	**96.94**	**334**	P		**P**	**15 08 29.6**	**-1.7**
	comp=Z,0.6nm,0.5s,baz=65,slow=4.6							
NOA	**NORSAR Array B**	**96.94**	**334**	P		**P**	**15 08 29.5**	**-1.7**
	comp=Z,0.6nm,0.6s,baz=65,slow=4.6,SNR=5.2							
	comp=Z,0.6nm,0.6s							
TXAR	**Lajitas Array**	**120.93**	**51**	PKP		**PKiKP**	**15 13 52.9**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=211,slow=1.4,SNR=6.0							
TORD	**Torodi Ar. Bea**	**121.82**	**289**	PKP		**PKPdf**	**15 13 54.2**	**-0.4**
	comp=Z,0.7nm,0.3s,baz=71,slow=2.1,SNR=12							

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VSM	**San Miguel**	**0.68**	**30**	*eP*		**Pn**	**15 32 46.9**	**0.0**
PACA	**Pacayal**	**0.69**	**25**	*eP*		**Pn**	**15 32 47.1**	**+0.1**
PACA				*eS*		**Sn**	**15 32 57.6**	**+0.4**
PACA				IAML			15 32 59.4	
	comp=Z,32µm,0.3s							
PACA	**Pacayal**	**0.69**	**25**	*eP*		**Pn**	**15 32 47.1**	**+0.1**
PACA				*eS*		**Sn**	**15 32 57.6**	**+0.4**
PACA				IAML			15 32 59.4	
	comp=Z,32µm,0.3s							
PACA	**Pacayal**	**0.69**	**25**	*eP*		**Pn**	**15 32 47.1**	**+0.1**
PQSS	**Presa 15 de Se**	**0.79**	**4**	*eP*		**Pn**	**15 32 48.1**	**0.0**
PQSS	**Presa 15 de Se**	**0.79**	**4**	*eP*		**Pn**	**15 32 48.1**	**0.0**
COEG	**Centro de Oper**	**0.82**	**342**	*eP*		**Pn**	**15 32 48.0**	**-0.5**
COEG				*eS*		**Sn**	**15 32 59.7**	**-0.3**
COEG	**Centro de Oper**	**0.82**	**342**	*eP*		**Pn**	**15 32 48.0**	**-0.5**
COEG				*eS*		**Sn**	**15 32 59.7**	**-0.3**
LCND	**La Caada**	**0.85**	**56**	*eP*		**Pn**	**15 32 48.4**	**-0.5**
LCND				IAML			15 33 02.7	
	comp=Z,3µm,0.3s							
LCND	**La Caada**	**0.85**	**56**	*eP*		**Pn**	**15 32 48.4**	**-0.5**
LCND				IAML			15 33 02.7	
	comp=Z,3µm,0.3s							
SJTE	**Alcalda de S**	**0.86**	**334**	*eP*		**Pn**	**15 32 48.3**	**-0.8**
SJTE				*eS*		**Sn**	**15 33 00.7**	**-0.2**
SJTE	**Alcalda de S**	**0.86**	**334**	*eP*		**Pn**	**15 32 48.3**	**-0.8**
SJTE				*eS*		**Sn**	**15 33 00.7**	**-0.2**
SCLA	**Alcaldia de Sa**	**0.87**	**353**	*eP*		**Pn**	**15 32 49.1**	**-0.1**
SCLA				*eS*		**Sn**	**15 33 01.7**	**+0.7**
SCLA	**Alcaldia de Sa**	**0.87**	**353**	*eP*		**Pn**	**15 32 49.1**	**-0.1**
SCLA				*eS*		**Sn**	**15 33 01.7**	**+0.7**
LFRS	**El Faro**	**0.89**	**331**	*eP*		**Pn**	**15 32 48.8**	**-0.7**
LFRS				*eS*		**Sn**	**15 33 01.3**	**-0.5**
LFRS	**El Faro**	**0.89**	**331**	*eP*		**Pn**	**15 32 48.8**	**-0.7**
LFRS				*eS*		**Sn**	**15 33 01.3**	**-0.5**
PAVA	**Las Pavas**	**0.93**	**340**	*eP*		**Pn**	**15 32 49.6**	**-0.3**
PAVA				*eS*		**Sn**	**15 33 03.0**	**+0.5**
PAVA				IAML			15 33 08.2	
	comp=Z,2µm,0.3s							
PAVA	**Las Pavas**	**0.93**	**340**	*eP*		**Pn**	**15 32 49.6**	**-0.3**
PAVA				*eS*		**Sn**	**15 33 03.0**	**+0.5**
PAVA				IAML			15 33 08.2	
	comp=Z,2µm,0.3s							
PAVA	**Las Pavas**	**0.93**	**340**	*eP*		**Pn**	**15 32 49.7**	**-0.2**
LBRS	**Las Brisas**	**0.99**	**335**	*eP*		**Pn**	**15 32 50.9**	**+0.2**
LBRS	**Las Brisas**	**0.99**	**335**	*eP*		**Pn**	**15 32 50.9**	**+0.2**
LFU	**La Fuente**	**1.03**	**332**	*eP*		**Pn**	**15 32 51.2**	**0.0**
LFU	**La Fuente**	**1.03**	**332**	*eP*		**Pn**	**15 32 51.2**	**0.0**
SNET	**Serv Nac Est T**	**1.03**	**325**	Pn		**Pn**	**15 32 50.7**	**-0.6**
SNET				Sn		**Sn**	**15 33 03.8**	**-1.1**
SNET	**Serv Nac Est T**	**1.03**	**325**	*eP*		**Pn**	**15 32 50.8**	**-0.6**
SNET	**Serv Nac Est T**	**1.03**	**325**	*eP*		**Pn**	**15 32 50.8**	**-0.6**
CSGN	**Cosiguina Volc**	**1.04**	**82**	*eP*		**Pn**	**15 32 50.8**	**-0.6**
BOQS	**Boqueron**	**1.10**	**324**	*eP*		**Pn**	**15 32 52.0**	**-0.4**
BOQS				*eS*		**Sn**	**15 33 06.7**	**0.0**
BOQS	**Boqueron**	**1.10**	**324**	*eP*		**Pn**	**15 32 52.0**	**-0.4**
BOQS				*eS*		**Sn**	**15 33 06.7**	**0.0**
JAYA	**Jayaque - finc**	**1.15**	**315**	*eP*		**Pn**	**15 32 52.1**	**-0.8**
JAYA				IAML			15 33 12.5	
	comp=Z,1µm,0.2s							
JAYA	**Jayaque - finc**	**1.15**	**315**	*eP*		**Pn**	**15 32 52.1**	**-0.8**
JAYA				IAML			15 33 12.5	
	comp=Z,1µm,0.2s							
CEVE	**Cerro Verde**	**1.39**	**315**	*eP*		**Pn**	**15 32 56.1**	**-0.1**
CEVE				IAML			15 33 16.8	
	comp=Z,1µm,0.3s							
CEVE	**Cerro Verde**	**1.39**	**315**	*eP*		**Pn**	**15 32 56.1**	**-0.1**
CEVE				IAML			15 33 16.8	
	comp=Z,1µm,0.3s							
SBLS	**San Blas**	**1.40**	**316**	*eP*		**Pn**	**15 32 56.8**	**+0.4**
SBLS	**San Blas**	**1.40**	**316**	*eP*		**Pn**	**15 32 56.8**	**+0.4**
RTR	**El Retiro**	**1.45**	**317**	*eP*		**Pn**	**15 32 57.6**	**+0.6**
RTR	**El Retiro**	**1.45**	**317**	*eP*		**Pn**	**15 32 57.6**	**+0.6**
CRIN	**San Cristobal**	**1.54**	**95**	Pn		**Pn**	**15 32 57.9**	**-0.2**
CRIN	**San Cristobal**	**1.54**	**95**	*eP*		**Pn**	**15 32 58.0**	**0.0**
CRIN				*eS*		**Sn**	**15 33 17.4**	**+0.4**
NUBE	**Las Nubes**	**1.55**	**313**	*eP*		**Pn**	**15 32 58.1**	**-0.2**
NUBE	**Las Nubes**	**1.55**	**313**	*eP*		**Pn**	**15 32 58.1**	**-0.2**
TGUH	**Tegucigalpa,Un**	**1.79**	**47**	Pn		**Pn**	**15 33 01.2**	**-0.3**
TGUH	**Tegucigalpa,Un**	**1.79**	**47**	*eP*		**Pn**	**15 33 01.3**	**-0.3**
TGUH	**Tegucigalpa,Un**	**1.79**	**47**	*eP*		**Pn**	**15 33 01.3**	**-0.3**
ESQI	**Esquipulas**	**1.85**	**338**	Pn		**Pn**	**15 33 02.8**	**+0.4**
CNGN	**Cerro Negro**	**1.90**	**100**	Pn		**Pn**	**15 33 02.0**	**-1.0**
CNGN	**Cerro Negro**	**1.90**	**100**	*eP*		**Pn**	**15 33 02.4**	**-0.7**
MOMN	**Momotombo**	**2.07**	**102**	*eP*		**Pn**	**15 33 04.4**	**-1.0**
MATN	**Matagalpa**	**2.63**	**88**	Pn		**Pn**	**15 33 10.9**	**-2.1**
MATN	**Matagalpa**	**2.63**	**88**	*eP*		**Pn**	**15 33 11.3**	**-1.7**
BOAB	**BOACO BROADBAN**	**2.91**	**97**	Pn		**Pn**	**15 33 15.4**	**-1.4**
ACON	**Acoyapa**	**3.47**	**104**	Pn		**Pn**	**15 33 23.6**	**-0.9**
HZTE	**Horizontes, Gu**	**3.63**	**125**	Pn		**Pn**	**15 33 25.8**	**-0.9**
ORTG	**Ortega, Santa**	**3.95**	**128**	Pn		**Pn**	**15 33 31.5**	**+0.4**
JTS	**Las Juntas de**	**4.39**	**125**	Pn		**Pn**	**15 33 38.0**	**+0.8**
HDC	**Heredia**	**5.24**	**122**	Pn		**Pn**	**15 33 48.2**	**-0.7**
RIMA	**Rio Macho**	**5.57**	**123**	Pn		**Pn**	**15 33 53.0**	**-0.5**
SRBA	**San Rafael, Bu**	**6.28**	**124**	Pn		**Pn**	**15 34 04.4**	**+1.3**
DRK0	**Durika**	**6.36**	**123**	Pn		**Pn**	**15 34 05.9**	**+1.7**
TX31	**Lajitas Ar. Si**	**21.56**	**322**	P		**P**	**15 37 18.0**	**0.0**
TX31				IAmb		IAmb	15 37 20.4	
	comp=Z,4.7nm,1.1s							
TX32	**Lajitas Array**	**21.56**	**322**	P		**P**	**15 37 18.1**	**+0.1**
TX32				IAmb		IAmb	15 37 40.3	
	comp=Z,3.0nm,1.5s							
TXAR	**Lajitas Array**	**21.56**	**322**	P		**P**	**15 37 18.0**	**+0.1**

NOU ***13*** *15:41:22.9,24.˚72S×177.˚93E,h219km, mb4.4/13, South of Fiji Islands*

NEIC ***13*** *15:41:26.6±1.3,24.˚3S±0.˚1×180.˚0E±0.˚2, h497km±10km, mb4.4/25, Error ellipse: s-maj=21.4km s-min=18.5km az=97.0*

IDC ***13*** *15:41:27.7±2.2,24.˚11S×179.˚95E,h517km±23km, mb3.4/4, mbtmp4.4/6, Error ellipse: s-maj=27.7km s-min=22.7km az=90.0*

ISC 13 15:41:26.7±0.7**,24˚23S**±0˚.08×**179˚.9E**±0˚.1**, h500**km**, n53,** σ1°**06**/53**, mb4.4**/16**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**6.08**	**11**	P	**P**	**15 43 04.9**	**+0.9**
MSVF	**Nonsavu**	**6.70**	**344**	P	**P**	**15 43 10.9**	**+0.8**
	20nm,0.5s,baz=151,slow=19,SNR=74						
MSVF	**Nonsavu**	**6.70**	**344**	P	**P**	**15 43 10.5**	**+0.3**
TAVE	**Taveuni**	**7.49**	**1**	P	**P**	**15 43 19.6**	**+1.6**
NIUE	**Niue**	**10.73**	**63**	P	**P**	**15 43 51.9**	**0.0**
AFI	**Afiamalu**	**12.91**	**39**	P	**P**	**15 44 13.9**	**-1.2**
URZ	**Urewera**	**14.19**	**189**	P	**P**	**15 44 29.1**	**+0.9**
	10.0nm,0.5s,baz=9.3,slow=18,SNR=15						
URZ				S	**S**	**15 46 58.8**	**+0.9**
	6.2nm,0.6s,baz=350,slow=7.0,SNR=2.8						
URZ	**Urewera**	**14.19**	**189**	P	**P**	**15 44 25.9**	**-2.3**
KOUNC	**Koumac, New Ca**	**14.93**	**281**	P	P	15 44 22.7	-14
	32nm,1.2s						
BKZ	**Black Stump Fm**	**15.17**	**190**	P	**P**	**15 44 36.1**	**-2.4**
BKZ				IAmb	IAmb	15 44 50.9	
	comp=Z,14nm,1.2s						
BKZ	**Black Stump Fm**	**15.17**	**190**	P	**P**	**15 44 38.6**	**0.0**
BFZ	**Birch Farm**	**16.69**	**190**	P	**P**	**15 44 53.4**	**-1.0**
BHW	**Baring Head**	**17.64**	**193**	P	**P**	**15 45 02.2**	**-1.3**
QRZ	**Quartz Range**	**17.67**	**199**	P	**P**	**15 45 03.4**	**-0.5**
ARMA	**Armidale**	**25.85**	**250**	P	**P**	**15 46 18.3**	**+0.4**
ARMA				IAmb	IAmb	15 46 40.6	
	comp=Z,24nm,1.4s						
EIDS	**Eidsvold**	**26.20**	**261**	P	**P**	**15 46 20.4**	**-0.5**
RMQ	**Roma**	**28.23**	**259**	P	**P**	**15 46 40.2**	**+1.4**
CNB	**Canberra Magne**	**28.64**	**240**	P	**P**	**15 46 44.5**	**+2.2**
CAN	**Canberra**	**28.93**	**240**	P	**P**	**15 46 46.4**	**+1.7**
CAN				IAmb	IAmb	15 47 10.1	
	comp=Z,20nm,1.5s						
CMSA	**Cobar Meteorol**	**31.04**	**249**	P	**P**	**15 47 04.2**	**+1.2**
CTA	**Charters Tower**	**31.42**	**271**	P	**P**	**15 47 07.6**	**+1.1**
CTAO	**Charters Tower**	**31.42**	**271**	P	**P**	**15 47 07.6**	**+1.1**
TOO	**Toolangi**	**32.22**	**237**	P	**P**	**15 47 14.2**	**+1.1**
TOO				IAmb	IAmb	15 47 17.9	
	comp=Z,14nm,1.3s						
QLP	**Quilpie**	**32.27**	**258**	P	**P**	**15 47 14.7**	**+1.0**
TAU	**Tasmania Unive**	**32.66**	**227**	P	**P**	**15 47 18.1**	**+1.4**
MTSU	**Mount Surprise**	**33.70**	**273**	P	**P**	**15 47 27.0**	**+1.1**
MCQ	**Macquarie Isla**	**34.03**	**202**	P	**P**	**15 47 27.8**	**-0.3**
STKA	**Stephens Creek**	**34.55**	**249**	P	**P**	**15 47 33.6**	**+0.8**
	comp=Z,1.5nm,0.3s,baz=96,slow=9.5,SNR=12						
	comp=Z,1.5nm,0.3s						
STKA	**Stephens Creek**	**34.55**	**249**	P	**P**	**15 47 33.6**	**+0.8**
ARPS	**Mount Arapiles**	**34.90**	**240**	P	**P**	**15 47 36.9**	**+1.2**
BBOO	**Buckleboo**	**39.26**	**247**	P	**P**	**15 48 11.4**	**-0.3**
BBOO				IAmb	IAmb	15 48 27.8	
	comp=Z,14nm,1.2s						
AS31	**Alice Springs**	**41.92**	**261**	P	**P**	**15 48 33.1**	**-0.1**
AS31				IAmb	IAmb	15 48 35.4	
	comp=Z,2.6nm,0.3s						
ASAR	**Alice Springs**	**41.92**	**261**	P	**P**	**15 48 33.2**	**0.0**
	comp=Z,2.3nm,0.4s,baz=95,slow=7.0,SNR=59						
	comp=Z,2.3nm,0.4s						
ASAR	**Alice Springs**	**41.92**	**261**	P	**P**	**15 48 32.8**	**-0.4**
WR0	**Warramunga Arr**	**42.14**	**267**	P	**P**	**15 48 34.6**	**-0.3**
WR0				IAmb	IAmb	15 48 34.7	
	comp=Z,3.6nm,0.6s						
WB2	**Warramunga Arr**	**42.31**	**267**	P	**P**	**15 48 35.8**	**-0.5**
WB2				IAmb	IAmb	15 48 36.5	
	comp=Z,7.3nm,0.7s						
WB0	**Warramunga Arr**	**42.32**	**267**	P	**P**	**15 48 35.7**	**-0.6**
WB0				IAmb	IAmb	15 48 36.5	
	comp=Z,8.5nm,0.7s						
WRA	**Warramunga Arr**	**42.33**	**267**	P	**P**	**15 48 35.7**	**-0.7**
	comp=Z,6.6nm,0.5s,baz=104,slow=8.0,SNR=32						
	comp=Z,6.6nm,0.5s						
WRA	**Warramunga Arr**	**42.33**	**267**	P	**P**	**15 48 35.8**	**-0.5**
FORT	**Forrest**	**46.14**	**250**	P	**P**	**15 49 05.2**	**-0.6**
MTN	**Manton Dam**	**47.42**	**275**	P	**P**	**15 49 14.3**	**-1.4**
MTN				IAmb	IAmb	15 49 25.1	
	comp=Z,37nm,1.4s						
KNRA	**Kununurra**	**48.63**	**270**	P	**P**	**15 49 24.6**	**0.0**
KNRA				IAmb	IAmb	15 49 37.9	
	comp=Z,35nm,1.4s						
PSA00	**Pilbara Seismi**	**55.05**	**260**	P	**P**	**15 50 10.2**	**-0.8**
MORW	**Morawa**	**56.71**	**250**	P	**P**	**15 50 22.1**	**-0.4**
MORW				IAmb	IAmb	15 50 45.6	
	comp=Z,36nm,1.4s						
MMRI	**Maumere**	**57.09**	**275**	P	**P**	**15 50 24.0**	**-1.3**
CASY	**Casey**	**59.79**	**206**	P	**P**	**15 50 42.3**	**-0.3**
CASY				IAmb	IAmb	15 51 06.8	
	comp=Z,9.6nm,1.5s						
TOLI2	**Tolitoli**	**62.60**	**285**	P	**P**	**15 51 01.2**	**-0.8**
QSPA	**South Pole Qui**	**65.85**	**180**	P	**P**	**15 51 22.8**	**+0.8**
	comp=Z,0.8nm,0.7s,baz=60,slow=2.6,SNR=5.2						
	comp=Z,0.8nm,0.7s						
QSPA	**South Pole Qui**	**65.85**	**180**	P	**P**	**15 51 22.6**	**+0.6**
KSM	**Kuching**	**72.10**	**280**	P	**P**	**15 51 59.9**	**-0.6**
MAW	**Mawson**	**77.42**	**200**	P	**P**	**15 52 30.1**	**+0.7**
AKASG	**Malin Array Be**	**145.22**	**327**	PKPbc	**PKPdf**	**16 00 05.8**	**-0.9**
	comp=Z,0.5nm,0.4s,baz=37,slow=4.0,SNR=5.3						
BRTR	**Keskin Array B**	**147.73**	**307**	PKPbc	**PKPdf**	**16 00 13.2**	**+1.7**
	comp=Z,0.8nm,0.7s,baz=58,slow=18,SNR=4.2						

MAN 13 15:54:06.5,16˚00N×121˚40E,h42km, mb3.9, ML2.7, MS2.3, Luzon

IDC ***13*** *16:01:08.0±0.6,32.˚42N×141.˚39E, h0km, mb4.0/17, mbtmp4.0/21, ML3.8/3, MS3.3/12, Error ellipse: s-maj=18.9km s-min=13.9km az=69.0*

NEIC ***13*** *16:01:09.8±1.0,32.˚44N±0.˚07×141.˚54E±0.˚09, h14km±5km, mb4.5/32, Error ellipse: s-maj=11.1km s-min=10.0km az=71.0*

MOS ***13*** *16:01:09.3±0.9,32.˚41N×141.˚33E, h21km, mb4.7/24, Error ellipse: s-maj=18.2km s-min=6.5km az=116.1*

JMA ***13*** *16:01:10.9±0.5,33.˚1N±1.˚4×141.˚1E±.˚, h17km, MV4.0/52, E OFF HACHIJOJIMA ISLAND*

NIED ***13*** *16:01:10.9,32.˚56N×141.˚39E, h17km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^15 Nm; Mrr1.02; Mθθ-0.03; Mφφ-0.98; Mrθ-0.37; Mθφ0.07; Mφr2.95; Fault plane solution: M03.14000×10^15 NP1: φs178.00000°, δ9.00000°, λ95.00000°. NP2:φs353.00000°, δ81.00000°, λ89.00000°.*

ISC 13 16:01:12.1±0.5**,32˚42N**±0˚.05×**141˚45E**±0˚.06**, h31**km**, n170,** σ1°**13**/165**, mb4.5**/48**, MS3.4**/14**, 8C-1D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	**1.43**	**272**	P	**Pn**	**16 01 35.4**	**-0.5**
JHCJ	**Hachijojimakas**	**1.54**	**295**	P	**Pn**	**16 01 36.3**	**-1.1**
JHJ2	**Mitsune**	**1.54**	**297**	Pn	**Pn**	**16 01 36.5**	**-0.9**
JHJ2	**Mitsune**	**1.54**	**297**	P	**Pn**	**16 01 36.4**	**-1.0**
JHJ	**Hachijo jima 2**	**1.57**	**297**	Pn	**Pn**	**16 01 36.5**	**-1.4**
	177nm,0.3s,baz=97,slow=21,SNR=72						
JHJ				Sn	**Sn**	**16 01 53.5**	**-3.5**
	143nm,0.3s,baz=66,slow=19,SNR=7.5						
JHJ				LR	LR	16 01 56.0	
	comp=Z,215nm,22.0s,baz=68,slow=32						
JMKN	**Mikurajimanish**	**2.14**	**314**	*eP*	**Pn**	**16 01 45.4**	**-0.3**
JMKN				S	**Sn**	**16 02 09.9**	**-1.3**
BSO1	**Boso 1**	**2.26**	**350**	P	**Pn**	**16 01 46.0**	**-0.8**
BSO3	**Boso 3**	**2.50**	**342**	*eP*	**Pn**	**16 01 50.5**	**+0.2**
BSO4	**Boso 4**	**2.72**	**340**	*eP*	**Pn**	**16 01 54.1**	**+0.5**
JOD2	**Odawara 2**	**3.45**	**326**	P	**Pn**	**16 02 02.8**	**-0.9**
JHU	**Hanno**	**3.87**	**333**	P	**Pn**	**16 02 09.1**	**-0.3**
JYN	**Shimob**	**3.90**	**323**	*eP*	**Pn**	**16 02 11.5**	**+1.5**
JYT	**Yasato**	**3.94**	**345**		**Pn**	**16 02 10.3**	**0.0**
JYT	**Yasato**	**3.94**	**345**	P	**Pn**	**16 02 11.5**	**+1.1**
JRY	**Ryogami san**	**4.16**	**330**	P	**Pn**	**16 02 14.3**	**+0.8**
JNY	**Yasuok**	**4.18**	**315**	*eP*	**Pn**	**16 02 16.4**	**+2.6**
JHO	**Hitachi**	**4.24**	**350**	P	**Pn**	**16 02 13.9**	**-0.7**
JAG	**Ashikaga**	**4.32**	**338**	P	**Pn**	**16 02 16.3**	**+0.7**
JAO	**Obara**	**4.50**	**310**	P	**Pn**	**16 02 19.1**	**+1.0**
JGF	**Kuroka**	**4.65**	**314**	Pn	**Pn**	**16 02 21.3**	**+1.1**
INU	**Inuyama**	**4.70**	**310**		**Pn**	**16 02 21.4**	**+0.4**
MJAR	**Matsushiro Arr**	**4.90**	**328**	Pn	**Pn**	**16 02 23.8**	**+0.1**
	1.0nm,0.3s,baz=154,slow=11,SNR=27						
MJAR				Sn	**Sn**	**16 03 16.6**	**-2.8**
	0.3nm,0.3s,baz=115,slow=25,SNR=1.1						
	12nm,0.5s						
MJAR	**Matsushiro Arr**	**4.90**	**328**	Pn	**Pn**	**16 02 23.9**	**+0.2**
MAT	**Matsushiro**	**4.91**	**328**	P	**Pn**	**16 02 24.5**	**+0.8**
MJB9	**Matsu-Tunnel**	**4.91**	**328**	Pn	**Pn**	**16 02 24.5**	**+0.7**
JFT	**Otama**	**5.17**	**350**	*eP*	**Pn**	**16 02 27.1**	**-0.2**
JFT				*eS*	**Sn**	**16 03 23.1**	**-2.7**
JCJ	**Chichijima**	**5.35**	**173**	Pn	**Pn**	**16 02 29.8**	**0.0**
	10nm,0.3s,baz=251,slow=18,SNR=1.7						
JCJ				Sn	**Sn**	**16 03 26.4**	**-3.9**
	13nm,0.3s,baz=298,slow=21,SNR=2.2						
	45nm,0.6s						
JCJ	**Chichijima**	**5.35**	**173**	Pn	**Pn**	**16 02 29.6**	**-0.2**
JMM	**Marumori**	**5.46**	**355**		**Pn**	**16 02 30.0**	**-1.3**
JSD	**Sado**	**6.18**	**336**		**Pn**	**16 02 40.8**	**-0.4**
JHS	**Saijyo**	**7.41**	**293**	Pn	**Pn**	**16 02 60.0**	**+1.9**
JTM	**Tenmabayashi**	**8.35**	**358**	Pn	**Pn**	**16 03 09.6**	**-1.4**
ERM	**Erimo**	**9.67**	**8**	Pn	**Pn**	**16 03 26.1**	**-3.0**
ERM	**Erimo**	**9.67**	**8**	*i* P	**Pn**	**16 03 25.5**	**-3.5**
JKA	**Kamikawa-asahi**	**11.71**	**4**	Pn	**Pn**	**16 03 55.3**	**-1.6**
ASAJ	**Asahikawa**	**11.71**	**4**	P	**Pn**	**16 03 55.3**	**-1.7**
KSRS	**Korea Array**	**12.18**	**298**	Pn	P	16 04 08.7	-6.9
	0.1nm,0.3s,baz=109,slow=13,SNR=11						
KSRS				LR	LR	16 08 54.1	
	comp=Z,194nm,18.2s,baz=115,slow=38						
SHO	**Shikotan**	**12.18**	**19**	*eP*	**Pn**	**16 04 00.5**	**-2.9**
SHO				pmax	pmax		
	comp=Z,3.0nm,0.3s						
MSHR	**Mys Shultsa**	**13.01**	**324**	*ceP*	Pn	16 04 08.2	-6.5
MSHR				pmax	pmax		
	comp=Z,36nm,1.7s						
USA0B	**Ussuriysk Arra**	**13.89**	**330**	Pn	**Pn**	**16 04 27.4**	**+0.6**
USA0B	**Ussuriysk Arra**	**13.89**	**330**	P	**Pn**	**16 04 27.4**	**+0.6**
USRK	**Ussuriysk Ar.**	**13.89**	**330**	Pn	**Pn**	**16 04 25.8**	**-1.1**
	comp=Z,2.6nm,0.8s,baz=123,slow=10,SNR=5.3						
YSS	**Yuzh-Sakhalins**	**14.55**	**4**	Pn	**Pn**	**16 04 34.6**	**-1.0**
MDJ	**Mudanjiang**	**15.29**	**326**	Pn	**Pn**	**16 04 46.2**	**+0.7**
KLR	**Kul'dur**	**18.30**	**339**	P	**P**	**16 05 21.1**	**-2.3**
	comp=Z,0.4nm,0.3s,baz=130,slow=12,SNR=21						
KLR				LR	LR	16 11 11.1	
	comp=Z,32nm,21.1s,baz=133,slow=33						
	comp=Z,4.5nm,0.6s						
KLR	**Kul'dur**	**18.30**	**339**	*eP*	**P**	**16 05 21.1**	**-2.3**
KLR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
NJ2	**Nanjing**	**19.12**	**275**	*eP*	**P**	**16 05 30.8**	**-1.7**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.7s						
YULB	**Yu-li**	**19.93**	**248**	P	**Pn**	**16 05 42.2**	**-1.1**
YULB				IAmb	IAmb	16 05 55.1	
	comp=Z,17nm,1.0s						
ZEA	**Zeya**	**23.61**	**339**	*eP*	**P**	**16 06 20.9**	**+0.8**
ZEA				pmax	pmax		
	comp=E,30nm,0.9s						
ZEA				pmax	pmax		
	comp=N,70nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,150nm,0.7s						
HHC	**Hu-ho-hao-te**	**25.32**	**298**	*eP*	**P**	**16 06 37.5**	**+1.4**
HHC				pmax	pmax		
	comp=Z,23nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,4.4s						
HHC				LR	LR		
	comp=N,220nm,15.2s						
HHC				LR	LR		
	comp=E,170nm,14.3s						
HHC				LR	LR		
	comp=Z,320nm,14.7s						
H11N2	**WAKE ISLAND Hy**	**26.04**	**113**	T	T	16 33 52.8	
	baz=306,slow=74						
H11N1	**WAKE ISLAND Hy**	**26.05**	**113**	T	T	16 33 54.8	
	baz=306,slow=74						
H11N3	**WAKE ISLAND Hy**	**26.06**	**113**	T	T	16 33 52.2	
	baz=306,slow=74						
H11S3	**WAKE ISLAND Hy**	**26.59**	**115**	T	T	16 34 40.0	
	baz=306						
H11S1	**WAKE ISLAND Hy**	**26.59**	**115**	T	T	16 34 40.0	
	baz=306						
H11S2	**WAKE ISLAND Hy**	**26.60**	**115**	T	T	16 34 40.0	
	baz=306						
XAN	**Xi'an**	**27.20**	**282**	P	**P**	**16 06 52.4**	**-0.7**
XAN				pP	pP	16 06 58.9	-2.1
XAN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MA2	**Magadan**	**27.86**	**10**	*ceP*	**P**	**16 07 00.3**	**+1.6**
MA2				pmax	pmax		
	comp=Z,18nm,1.7s						
ULN	**Ulaanbaatar**	**30.19**	**311**	P	**P**	**16 07 20.8**	**+1.1**
ULN				IAmb	IAmb	16 07 23.2	
	comp=Z,4.2nm,0.9s						
ULN	**Ulaanbaatar**	**30.19**	**311**	*i* P	**P**	**16 07 20.5**	**+0.8**
ULN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
YAK	**Yakutsk**	**30.58**	**349**	LR	LR	16 19 18.4	
	comp=Z,37nm,20.3s,baz=93,slow=36						
YAK	**Yakutsk**	**30.58**	**349**	*eP*	**P**	**16 07 22.5**	**-0.2**
YAK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,2.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,1.0nm,1.1s						
SONM	**Songino Array**	**30.60**	**311**	P	**P**	**16 07 24.7**	**+1.4**
	comp=E,2.1nm,0.7s,baz=111,slow=9.4,SNR=12						
SONM				LR	LR	16 20 14.4	
	comp=E,107nm,19.4s,baz=82,slow=38						
	comp=E,2.1nm,0.7s						
SONM	**Songino Array**	**30.60**	**311**	P	**P**	**16 07 24.2**	**+0.9**
LZH	**Lanzhou**	**31.17**	**287**	*eP*	**P**	**16 07 28.1**	**-0.4**
LZH				pP	pP	16 07 37.0	+0.5
LZH				sP	pwP	16 07 40.9	-0.2
LZH				pmax	pmax		
	comp=Z,21nm,1.2s						
LZH				LR	LR		
	comp=N,170nm,13.4s						
LZH				LR	LR		
	comp=E,140nm,13.2s						
LZH				LR	LR		
	comp=Z,190nm,15.8s						
SEY	**Seymchan**	**31.31**	**10**	P	**P**	**16 07 29.6**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=192,slow=20,SNR=4.5						
	comp=Z,0.6nm,0.6s						
GTA	**Gaotai**	**34.20**	**294**	*eP*	**P**	**16 07 54.3**	**-0.6**
GTA				pP	sP	16 08 05.6	-0.7
GTA				sP	pwP	16 08 12.8	+5.2
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,61nm,5.8s						
GTA				LR	LR		

comp=Z,31nm,18.7s,baz=116,slow=40
ILAR Eielson Array 53.41 30 P **P** **16 10 29.1 +0.5**
comp=Z,0.6nm,0.7s,baz=270,slow=6.3,SNR=6.8
comp=Z,0.6nm,0.7s
BRVK Borovoye 53.83 315*ce*P **P** **16 10 31.4 -0.4**
BRVK pmax pmax
comp=Z,7.0nm,2.5s
BMAR Burnt Mountain 54.38 27 P **P** **16 10 37.2 +1.5**
KK31 Karatay Array 55.56 303 P **P** **16 10 44.3 -0.3**
KK31 IAmb IAmb 16 10 56.9
comp=Z,2.2nm,0.8s
KK31 Karatay Array 55.56 303 P **P** **16 10 44.3 -0.3**
KK31 pmax pmax
comp=Z,2.0nm,0.8s
KKAR Karatay Array 55.56 303 P **P** **16 10 44.3 -0.2**
KKAR Karatay Array 55.56 303 P **P** **16 10 44.3 -0.2**
AS31 Alice Springs 56.24 188 P **P** **16 10 49.4 -0.1**
ASAR Alice Springs 56.24 188 P **P** **16 10 49.8 +0.3**
comp=Z,0.7nm,0.7s,baz=4.7,slow=6.4,SNR=16
comp=Z,0.7nm,0.7s
ASAR Alice Springs 56.24 188 P **P** **16 10 49.2 -0.3**
CHGR Chuyangaron 57.77 298 P **P** **16 11 00.1 -0.3**
CHGR Chuyangaron 57.77 298 P **P** **16 11 00.2 -0.3**
CHGR pmax pmax
comp=Z,12nm,0.7s
SVE Sverdlovsk 58.67 321 *e*P **P** **16 11 06.9 +0.6**
SVE pmax pmax
comp=Z,9.0nm,1.0s
ARU Arti 59.88 320 P **P** **16 11 14.3 -0.3**
ARU Arti 59.88 320*c i*P **P** **16 11 14.5 -0.1**
ARU S **S** **16 19 23.6 -0.6**
ARU pmax pmax
comp=Z,7.0nm,0.8s
ABKAR Akbulak array 60.99 312 P **P** **16 11 22.2 -0.2**
KIRV Kirov 63.97 324*ce*P **P** **16 11 42.1 0.0**
AFI Afiamalu 64.21 128 LR LR 16 32 51.9
comp=Z,23nm,22.0s,baz=82,slow=30
PRGR Permogore 64.67 328 *e*P **P** **16 11 46.7 +0.1**
GEYT Alibeck 66.16 301 LR LR 16 43 11.9
comp=Z,33nm,19.6s,baz=338,slow=38
YKA Yellowknife Ar 67.79 29 P **P** **16 12 07.2 +0.6**
comp=Z,1.2nm,0.8s,baz=296,slow=5.1,SNR=3.8
YKA LR LR 16 49 59.0
comp=Z,16nm,18.0s,baz=182,slow=43
comp=Z,1.2nm,0.8s
YKA Yellowknife Ar 67.79 29 *i*P **P** **16 12 08.5 +1.9**
YKA pmax pmax
comp=Z,1.0nm,0.8s
ARCES ARCESS Array B 68.32 340 P **P** **16 12 10.2 +0.3**
ARCES ARCESS Array B 68.32 340 P **P** **16 12 10.2 +0.3**
ARCES pmax pmax
comp=Z,10.0nm,1.4s
FIA1 FINESS Array S 72.91 333 P **P** **16 12 37.9 0.0**
FIA1 IAmb IAmb 16 12 59.2
comp=Z,7.1nm,1.0s
FINES FINESS Array B 72.91 333 P **P** **16 12 38.1 +0.2**
comp=Z,1.4nm,0.5s,baz=70,slow=5.4,SNR=15
FINES LR LR 16 49 48.0
comp=Z,22nm,19.1s,baz=93,slow=40
comp=Z,1.4nm,0.5s
FINES FINESS Array B 72.91 333 P **P** **16 12 37.9 -0.1**
FINES FINESS Array B 72.91 333 *i*P **P** **16 12 38.2 +0.3**
FINES pmax pmax
comp=Z,1.0nm,0.5s
KBZ Khabaz 73.96 312 P **P** **16 12 45.4 +1.0**
comp=Z,9.1nm,0.8s,baz=80,slow=5.6,SNR=18
KBZ Khabaz 73.96 312*ce*P **P** **16 12 43.9 -0.5**
KBZ pmax pmax
comp=Z,11nm,0.9s
KIV Kislovodsk 73.98 312 *e*P **P** **16 12 46.2 +1.5**
KIV pmax pmax
comp=Z,12nm,1.1s
KIV MLR MLR
comp=Z,16nm,18.0s
GNI Garni 74.52 308*ce*P **P** **16 12 49.1 +1.1**
GNI pmax pmax
comp=Z,6.0nm,1.0s
NVAR Mina Array Bea 77.75 52 P **P** **16 13 08.1 +1.6**
comp=Z,0.7nm,0.7s,baz=289,slow=5.7,SNR=9.1
comp=Z,0.7nm,0.7s
NVAR Mina Array Bea 77.75 52 P **P** **16 13 07.2 +0.7**
MCMT McKenzie Canyo 77.76 45 P **P** **16 13 05.1 -1.3**
AKASG Malin Array Be 77.97 323 P **P** **16 13 06.9 -0.2**
comp=Z,0.7nm,0.4s,baz=47,slow=6.3,SNR=11
comp=Z,0.7nm,0.4s
AKASG Malin Array Be 77.97 323 P **P** **16 13 07.5 +0.3**
AKASG Malin Array Be 77.97 323 *i*P **P** **16 13 07.1 -0.1**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKBB Malin Array Si 77.97 323 P **P** **16 13 07.2 0.0**
AKBB IAmb IAmb 16 13 08.0
comp=Z,9.2nm,1.4s
AKBB Malin Array Si 77.97 323 P **P** **16 13 07.2 0.0**
AKBB pmax pmax
comp=Z,9.0nm,1.4s
NC405 NORSAR Array S 78.23 338 P **P** **16 13 08.8 +0.3**
NC204 NORSAR Array S 78.41 338 P **P** **16 13 09.7 +0.2**
NB201 NORSAR Array S 78.42 338 P **P** **16 13 09.6 +0.1**
NB2 NORSAR Subarra 78.45 338 P **P** **16 13 10.1 +0.4**
comp=Z,1.2nm,0.6s,baz=41,slow=5.6
NOA NORSAR Array B 78.45 338 P **P** **16 13 09.9 +0.3**
comp=Z,2.3nm,0.7s,baz=41,slow=5.4,SNR=14
comp=Z,2.3nm,0.7s
NOA NORSAR Array B 78.45 338 P **P** **16 13 10.0 +0.3**
PDAR Pinedale Array 80.89 45 P **P** **16 13 24.8 +1.2**
comp=Z,0.3nm,0.6s,baz=325,slow=4.5,SNR=2.4
comp=Z,0.3nm,0.6s
BUR08 Bucovina Ar. S 81.94 322 P **P** **16 13 29.2 +0.4**
BR131 Keskin Array S 81.94 312 P **P** **16 13 29.2 +0.2**
BR131 IAmb IAmb 16 13 30.7
comp=Z,5.4nm,0.7s
BR131 Keskin Array S 81.94 312 P **P** **16 13 29.2 +0.2**
BR131 pmax pmax
comp=Z,5.0nm,0.7s
BRTR Keskin Array B 81.94 312 P **P** **16 13 30.0 +0.9**
comp=Z,3.5nm,0.7s,baz=111,slow=4.2,SNR=22
comp=Z,3.5nm,0.7s
BRTR Keskin Array B 81.94 312 P **P** **16 13 29.3 +0.2**
BURAR Bucovina Array 81.95 322 P **P** **16 13 28.9 0.0**
BURAR Bucovina Array 81.95 322 P **P** **16 13 28.9 0.0**
BURAR pmax pmax
comp=Z,3.0nm,1.0s
ANGG Ammassalik, Gr 82.28 360 *i*P **P** **16 13 33.3 +3.2**
ANTO Ankara 82.39 313 P **P** **16 13 32.3 +1.0**
ANTO Ankara 82.39 313 P **P** **16 13 32.3 +1.0**
ANTO pmax pmax
comp=Z,9.0nm,0.6s
RAYN Ar Rayn 82.45 293 P **P** **16 13 32.1 +0.2**
RAYN IAmb IAmb 16 13 33.4
comp=Z,4.6nm,0.8s
RAYN Ar Rayn 82.45 293 P **P** **16 13 32.1 +0.2**
RAYN pmax pmax
comp=Z,5.0nm,0.8s
MORC Moravsky Berou 84.24 327 P **P** **16 13 40.9 +0.3**
MORC IAmb IAmb 16 13 41.7
comp=Z,1.8nm,0.6s
MORC Moravsky Berou 84.24 327 P **P** **16 13 40.9 +0.3**
MORC pmax pmax
comp=Z,2.0nm,0.6s
MORC Moravsky Berou 84.24 327 *e*P **P** **16 13 40.9 +0.3**
JAVC Velka Javorina 84.83 327 *e*P **P** **16 13 45.7 +2.1**
VRAC Vranov 85.01 327 *e*P **P** **16 13 45.4 +1.0**
CLL Collm 85.11 330 P **P** **16 13 44.9 0.0**
CLL IAmb IAmb 16 13 45.9
comp=Z,3.9nm,0.8s
CLL Collm 85.11 330 *i*P **P** **16 13 45.3 +0.4**
CLL pmax pmax
comp=Z,5.0nm,0.9s
CLL Collm 85.11 330 *i*P **P** **16 13 45.3 +0.4**
comp=Z,5.0nm,0.9s
KRUC Moravsky 85.27 327 *e*P **P** **16 13 46.3 +0.5**
TXAR Lajitas Array 92.90 52 P **P** **16 14 23.9 +1.4**
comp=Z,0.5nm,0.9s,baz=292,slow=1.9,SNR=5.1
comp=Z,0.5nm,0.9s
TXAR Lajitas Array 92.90 52 P **P** **16 14 21.7 -0.8**
LPAZ La Paz 148.77 66 PKPbc **PKiKP** **16 20 59.4 +0.2**
comp=Z,1.6nm,0.6s,baz=341,slow=1.8,SNR=11

IDC ***13*** *16:03:57.3±6.9, 30.73N×141.27E, h34km±54km, mb3.5/5, mbtmp3.6/7, ML2.6/2, Error ellipse: s-maj=62.1km s-min=25.2km az=83.0*
ISC 13 16:03:57.6±1.1, 30.8N±0.1×141.1E±0.3, h35km, n13, σ1§56/8, mb3.6/5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**2.60**	**334**	Pn	**Pn**	**16 04 36.7**	**-0.5**
	3.1nm,0.3s,baz=60,slow=19,SNR=1.1						
JHJ				Sn	**Sn**	**16 05 05.5**	**-2.1**
	5.1nm,0.3s,baz=66,slow=21,SNR=2.0						
	277nm,1.3s						
MJAR	**Matsushiro Arr**	**6.25**	**338**	Pn	**Pn**	**16 05 29.6**	**+2.4**
	0.1nm,0.3s,baz=161,slow=14,SNR=1.4						
	0.9nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**25.71**	**109**	T	T	16 35 56.0	
	baz=304						
H11N1	**WAKE ISLAND Hy**	**25.71**	**109**	T	T	16 35 59.7	
	baz=304						
H11N3	**WAKE ISLAND Hy**	**25.72**	**109**	T	T	16 35 53.2	
	baz=304						
H11S3	**WAKE ISLAND Hy**	**26.18**	**112**	T	T	16 36 23.2	
	baz=304,slow=75						
H11S1	**WAKE ISLAND Hy**	**26.18**	**112**	T	T	16 36 27.1	
	baz=304,slow=75						
H11S2	**WAKE ISLAND Hy**	**26.20**	**112**	T	T	16 36 23.3	
	baz=304,slow=75						
MKAR	**Makanchi Array**	**47.48**	**307**	P	**P**	**16 12 30.0**	**+1.0**
	0.2nm,0.6s,baz=82,slow=8.8,SNR=2.7						
	0.2nm,0.6s						
WRA	**Warrarunga Arr**	**50.84**	**188**	P	**P**	**16 12 54.5**	**-0.5**
	0.5nm,0.8s,baz=5.5,slow=7.7,SNR=5.6						
	0.5nm,0.3s						
ASAR	**Alice Springs**	**54.57**	**188**	P	**P**	**16 13 21.9**	**-0.6**
	0.6nm,0.9s,baz=1.4,slow=5.2,SNR=5.3						
	0.6nm,0.9s						
FINES	**FINESS Array B**	**74.25**	**333**	P	**P**	**16 15 30.8**	**+0.1**
	1.7nm,0.8s,baz=56,slow=5.2,SNR=3.6						
	1.7nm,0.8s						
TXAR	**Lajitas Array**	**94.12**	**52**	P	**P**	**16 17 12.5**	**-0.5**
	0.2nm,0.8s,baz=335,slow=4.1,SNR=2.2						
	0.2nm,0.8s						

IDC ***13*** *16:22:47.0±1.0, 63.00N×155.00E, h0km, mb3.4/4, mbtmp3.5/6, ML4.5/2, MS2.7/2, Error ellipse: s-maj=20.0km s-min=10.8km az=162.0*
NERS ***13*** *16:22:48.3±0.0, 62.97N×154.99E, h19km*
NEIC ***13*** *16:22:49.4±1.1, 63.07N±0.09×154.9E±0.1, h17km±4km, mb4.4/10, Error ellipse: s-maj=13.8km s-min=7.9km az=157.0*
ISC 13 16:22:47.7±0.6, 63.00N±0.04×155.02E±0.03, h10km, n33, σ1§11/43, mb4.2/9, 3C-1D, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OMS	**Omsukchan**	**0.60**	**144**	*e*Pg	**Pb**	**16 23 00.3**	**0.0**
OMS				Pgmax		16 23 01.6	
	390nm,0.4s						
OMS				*e*Sg	**Sb**	**16 23 09.0**	**+0.2**
OMS				Sgmax		16 23 09.2	
	4μm,0.2s						
OMS				Sgmax		16 23 09.2	
	1μm,0.2s						
SEY	**Seymchan**	**1.21**	**268**	Pg	**Pb**	**16 23 10.4**	**-0.2**
	158nm,0.3s,baz=90,slow=16,SNR=2335						
SEY				Lg	Lg	16 23 25.4	
	360nm,0.3s,baz=0.0,slow=20,SNR=17						
SEY	**Seymchan**	**1.21**	**268**	*i*Pg	**Pg**	**16 23 10.5**	**-0.3**
SEY				Pgmax		16 23 12.0	
	360nm,0.3s						
SEY				*e*Sg	**Sb**	**16 23 25.6**	**-0.6**
SEY				Sgmax		16 23 28.7	
	2μm,0.3s						
SEY				Sgmax		16 23 28.7	
	2μm,0.3s						
EVEN	**Evensk**	**2.24**	**117**	*e*Pg	**Pg**	**16 23 29.0**	**-1.6**
EVEN				Pgmax		16 23 36.6	
	320nm,0.2s						
EVEN				*e*Sg	**Sg**	**16 23 57.8**	**-1.8**
EVEN				Sgmax		16 23 59.9	
	2μm,0.4s						
EVEN				Sgmax		16 23 59.9	
	390nm,0.2s						
TLAR	**Talaya**	**2.25**	**214**	*e*P	**Pn**	**16 23 25.5**	**+0.5**
TLAR				*e*Pg	**Pg**	**16 23 30.4**	**-0.3**
TLAR				Pgmax		16 23 34.1	
	200nm,0.2s						
TLAR				*e*Sg	**Sg**	**16 23 58.7**	**-1.1**
TLAR				Sgmax		16 24 01.5	
	1μm,0.2s						
TLAR				Sgmax		16 24 01.5	
	2μm,0.2s						
SUUS	**Susuman**	**3.14**	**269**	*i*P	**Pn**	**16 23 38.2**	**+0.9**
SUUS				*e*Pg	**Pg**	**16 23 46.2**	**-1.7**
SUUS				Pgmax		16 23 48.6	
	40nm,0.3s						
SUUS				*e*Sg	**Sg**	**16 24 28.7**	**+0.1**
SUUS				Sgmax		16 24 32.6	
	400nm,0.4s						
SUUS				Sgmax		16 24 32.6	
	230nm,0.4s						
MGD	**Magadan 1**	**3.60**	**217**	*e*P	**Pn**	**16 23 43.5**	**-0.1**
MGD				*e*		16 23 56.0	
MGD				*e*Sg	**Sg**	**16 24 40.2**	**-3.2**
MGD				Sgmax		16 24 48.2	
	200nm,0.3s						
MGD				Sgmax		16 24 48.2	
	300nm,0.3s						
GADL	**Gadlja**	**3.79**	**210**	*e*	**Pg**	**16 24 00.6**	**+0.4**
GADL				*e*Sg	**Sg**	**16 24 48.5**	**-0.8**
GADL				Sgmax		16 24 55.4	
	850nm,0.4s						
GADL				Sgmax		16 24 55.4	
	680nm,0.4s						
MA2	**Magadan**	**4.00**	**213**	Pn	**Pn**	**16 23 49.6**	**+0.6**
	4.4nm,0.3s,baz=343,slow=7.5,SNR=47						
MA2				Lg	Lg	16 24 53.3	
	32nm,0.3s,baz=141,slow=21,SNR=6.1						
MA2				LR	LR	16 25 36.2	
	comp=Z,87nm,19.2s,baz=38,slow=42						
	9.5nm,0.3s						
MA2	**Magadan**	**4.00**	**213**		**Pn**	**16 23 49.4**	**+0.3**
MA2	**Magadan**	**4.00**	**213**	*i*P	**Pn**	**16 23 49.3**	**+0.3**
MA2				*e*		16 23 55.8	
MA2				*e*Pg	**Pb**	**16 23 59.7**	**+1.5**
MA2				Pgmax		16 24 05.8	
	30nm,0.3s						
MA2				*e*Sg	**Sg**	**16 24 53.8**	**-2.3**
MA2				Sgmax		16 24 56.9	
	80nm,0.2s						
MA2				Sgmax		16 24 56.9	
	20nm,0.2s						
BILL	**Bilibino**	**6.88**	**38**	Pn	**Pn**	**16 24 28.8**	**+0.3**
PETK	**Petropavlovsk-**	**10.02**	**171**	Pn	**Pn**	**16 25 12.0**	**+0.5**
YAK	**Yakutsk**	**11.72**	**277**	Lg	Lg	16 28 58.9	
	baz=54,slow=15,SNR=1.2						
YAK				LR	LR	16 30 35.7	
	comp=Z,36nm,21.4s,baz=88,slow=40						
TIXI	**Tiksi**	**13.16**	**322**	Pn	**Pn**	**16 25 52.6**	**-1.7**
	4.5nm,0.3s,baz=84,slow=4.5,SNR=1.1						
TIXI				Lg	Lg	16 29 44.8	
	6.0nm,0.3s,baz=86,slow=4.3,SNR=1.2						
	0.2nm,0.3s						
IMAR	**Indian Mountai**	**21.75**	**59**	P	**P**	**16 27 40.4**	**+1.4**
L19K	**White Mountain**	**22.62**	**69**	P	**P**	**16 27 49.3**	**+1.0**
TOLK	**Toolik Lake Re**	**22.66**	**52**	P	**P**	**16 27 48.8**	**+0.1**
TOLK				IAmb	IAmb	16 28 01.4	
	comp=Z,12nm,1.4s						
USA0B	**Ussuriysk Arra**	**23.03**	**226**	P	**P**	**16 27 53.2**	**+0.5**
USA0B				IAmb	IAmb	16 28 02.8	
	comp=Z,11nm,1.1s						
USRK	**Ussuriysk Ar.**	**23.03**	**226**	P	**P**	**16 27 53.9**	**+1.2**
	comp=Z,0.6nm,0.5s,baz=169,slow=27,SNR=4.4						
	comp=Z,0.6nm,0.5s						
USRK	**Ussuriysk Ar.**	**23.03**	**226**	P	**P**	**16 27 53.2**	**+0.5**
SDPT	**Sand Point**	**23.61**	**88**	P	**P**	**16 27 59.2**	**+0.8**
H24K	**Noodor Dome**	**24.09**	**58**	P	**P**	**16 28 04.2**	**+1.2**
BMAR	**Burnt Mountain**	**24.80**	**53**	P	**P**	**16 28 09.8**	**+0.4**
ILAR	**Eielson Array**	**24.87**	**60**	P	**P**	**16 28 10.6**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=285,slow=9.1,SNR=5.5						
	comp=Z,0.4nm,0.7s						
SCM	**Sheep Creek Mo**	**25.96**	**66**	P	**P**	**16 28 21.4**	**+1.4**
SCM				IAmb	IAmb	16 28 22.6	
	comp=Z,7.3nm,1.0s						
GLI	**Glacier Island**	**26.53**	**68**	P	**P**	**16 28 26.6**	**+1.5**
GLI				IAmb	IAmb	16 28 48.5	
	comp=Z,6.9nm,1.0s						
EUNU	**Eureka**	**33.04**	**16**	P	**P**	**16 29 23.1**	**+0.4**
EUNU				IAmb	IAmb	16 29 24.2	
	comp=Z,13nm,1.5s						
GCMT	**Greycliff**	**52.69**	**61**	P	**P**	**16 32 03.0**	**+0.9**
FXWY	**Fox Creek**	**53.91**	**64**	P	**P**	**16 32 10.6**	**-0.6**
NVAR	**Mina Array Bea**	**55.14**	**73**	P	**P**	**16 32 21.4**	**+1.2**
	comp=Z,0.1nm,0.4s,baz=316,slow=7.7,SNR=2.7						
	comp=Z,0.1nm,0.4s						
PDAR	**Pinedale Array**	**55.24**	**63**	P	**P**	**16 32 21.4**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=355,slow=2.2,SNR=7.0						
	comp=Z,0.8nm,0.7s						
PLCA	**Paso Flores**	**145.20**	**72**	PKPbc	**PKPdf**	**16 42 23.8**	**-0.8**
	comp=Z,0.7nm,0.6s,baz=308,slow=7.0,SNR=3.5						

NEIC ***13*** *16:26:48.8±0.9, 42.00N±0.02×126.0W±0.1, h10km±2km, ML3.2/64, ML3.3(NCEDC), Error ellipse: s-maj=18.9km s-min=3.1km az=263.0*
NCEDC ***13*** *16:26:49.3±1.2, 42.02N±0.06×126.3W±0.2, h25km±9km, Error ellipse: s-maj=16.8km s-min=9.0km az=86.0*
IDC ***13*** *16:26:50.2±2.4, 42.11N×125.84W, h0km, mb3.3/4, mbtmp3.4/9, ML3.2/4, MS3.2/7, Error ellipse: s-maj=41.7km s-min=15.4km az=48.0*
ANF ***13*** *16:26:52.2±1.1, 42.12N×125.80W, h14km±15km, ML3.2/12, Error ellipse: s-maj=13.5km s-min=8.6km az=41.0*
ISC 13 16:26:48.0±2.4, 42.02N±0.04×126.01W±0.07, h1km±15km, n68, σ1§37/71, mb3.4/4, MS3.1/4, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBO	**Bosley Butte**	**1.34**	**81**		**Pg**	**16 27 13.2**	**-0.6**
KBO				IAML		16 27 33.5	
	comp=E,275nm,0.2s						
KEBM	**Edson Butte**	**1.51**	**55**		**Pn**	**16 27 15.3**	**-1.0**
KEBM				IAML		16 27 35.8	
	comp=N,430nm,0.8s						
KEBM				IAML		16 27 38.6	
	comp=E,320nm,1.5s						
KSXB	**Camp Six Broad**	**1.60**	**96**		**Pn**	**16 27 16.8**	**-0.8**
KRPM	**Rodgers**	**1.72**	**119**	Pn	**Pn**	**16 27 18.6**	**-0.7**
KRPM				IAML		16 27 43.1	
	comp=E,275nm,0.8s						
KRPM				IAML		16 27 49.4	
	comp=N,222nm,1.0s						
L02F	**Cave Junction**	**1.82**	**86**	P	**Pn**	**16 27 20.0**	**-0.5**
	baz=268,SNR=10.0						
K02D	**Willamette Mer**	**1.87**	**68**	P	**Pn**	**16 27 20.7**	**-0.6**
	baz=252,SNR=118						
K02D				Sb	**Sn**	**16 27 45.2**	**-0.3**
	baz=252						
J01E	**Myrtle Point**	**1.91**	**53**		**Pn**	**16 27 20.6**	**-1.2**
J01E				IAML		16 27 46.0	
	comp=N,222nm,0.5s						
J01E	**Myrtle Point**	**1.91**	**53**	P	**Pn**	**16 27 20.6**	**-1.2**
	baz=237,SNR=35						
J01E				S	**Sn**	**16 27 44.4**	**-2.1**
	baz=237						
JCC	**Jacoby Creek,**	**1.92**	**128**		**Pn**	**16 27 20.6**	**-1.1**
JCC				IAML		16 27 46.6	
	comp=E,126nm,0.8s						
KHMM	**Horse Mountain**	**2.06**	**123**	Pn	**Pn**	**16 27 23.1**	**-0.9**
KHMM				IAML		16 27 52.2	
	comp=N,113nm,0.8s						
KHMM				IAML		16 27 52.9	
	comp=E,123nm,0.9s						
KMPM	**Mount Pierce**	**2.15**	**138**		**Pn**	**16 27 23.8**	**-1.2**
KMPM				IAML		16 27 54.9	
	comp=N,205nm,0.7s						
DBO	**Dodson Butte**	**2.32**	**61**	Pn	**Pn**	**16 27 27.1**	**-0.4**
DBO				IAML		16 27 58.3	
	comp=N,76nm,1.0s						
HUMO	**Hull Mountain**	**2.34**	**74**		**Pn**	**16 27 27.3**	**-0.4**
YBH	**Yreka Blue Hor**	**2.48**	**96**	Pn	**Pn**	**16 27 30.3**	**+0.6**
	comp=N,5.5nm,0.3s,baz=295,slow=13,SNR=70						
YBH				Sn	**Sb**	**16 28 04.9**	**+0.3**
	comp=N,2.0nm,0.3s,baz=338,slow=15,SNR=6.4						
	comp=N,14nm,0.2s						
YBH	**Yreka Blue Hor**	**2.48**	**96**		**Pn**	**16 27 30.3**	**+0.6**
KMRM	**Mail Ridge**	**2.50**	**135**		**Pn**	**16 27 29.4**	**-0.5**
KMRM				IAML		16 28 03.9	
	comp=N,92nm,0.9s						
KMRM				IAML		16 28 15.0	
	comp=E,132nm,0.8s						
I03D	**Drain, OR**	**2.58**	**49**	P	**Pn**	**16 27 30.6**	**-0.3**
	baz=233,SNR=21						
I03D				S	**Sn**	**16 28 00.9**	**-2.0**
	baz=233						
I02E	**Swisshome, OR**	**2.62**	**37**		**Pn**	**16 27 31.1**	**-0.5**
I02E				IAML		16 28 04.8	
	comp=N,96nm,0.8s						
I02E				IAML		16 28 06.3	
	comp=E,108nm,1.0s						
I02E	**Swisshome, OR**	**2.62**	**37**	P	**Pn**	**16 27 31.5**	**0.0**
	baz=221						
I02E				S	**Sn**	**16 28 02.1**	**-1.9**
	baz=221						
L04D	**Klamath Falls**	**2.77**	**85**		**Pn**	**16 27 32.0**	**-1.6**
L04D				IAML		16 28 16.0	
	comp=E,50nm,1.0s						
L04D	**Klamath Falls**	**2.77**	**85**	P	**Pn**	**16 27 34.5**	**+0.8**
	baz=267,SNR=29						
KCPM	**Cahto Peak**	**2.97**	**141**	Pn	**Pn**	**16 27 35.3**	**-1.2**
BUCK	**Buck Mountain**	**3.10**	**45**		**Pn**	**16 27 37.9**	**-0.3**
BUCK				IAML		16 28 25.3	
	comp=N,51nm,1.0s						
BUCK				IAML		16 28 27.3	
	comp=E,54nm,1.5s						
J04D	**Umpqua Nationa**	**3.13**	**66**		**Pn**	**16 27 37.7**	**-1.0**
J04D	**Umpqua Nationa**	**3.13**	**66**	P	**Pn**	**16 27 39.8**	**+1.1**
	baz=250,SNR=28						
J04D				Sb	**Sb**	**16 28 23.1**	**-0.2**
	baz=250						
I04A	**Tendick Farm,**	**3.18**	**55**	P	**Pn**	**16 27 39.2**	**-0.2**
	baz=239,SNR=16						
I04A				S	**Sn**	**16 28 17.2**	**-0.8**
	baz=239						
K04D	**Chiloquin, OR**	**3.21**	**78**	P	**Pn**	**16 27 40.4**	**+0.6**
	baz=261						
COR	**Corvallis**	**3.24**	**37**	Pn	**Pn**	**16 27 38.9**	**-1.1**
COR				IAML		16 28 23.1	
	comp=E,82nm,1.1s						
H04D	**Lebanon**	**3.46**	**43**	Pn	**Pn**	**16 27 43.4**	**+0.4**
H04D				IAML		16 28 32.0	
	comp=N,55nm,0.8s						
H04D	**Lebanon**	**3.46**	**43**	P	**Pn**	**16 27 43.7**	**+0.6**
	baz=227						
H04D				S	**Sn**	**16 28 23.6**	**-1.1**
	baz=227						
HEBO	**Mount Hebo**	**3.59**	**26**	Pn	**Pn**	**16 27 45.4**	**+0.5**
J05D	**Fort Rock, OR**	**3.74**	**69**	P	**Pn**	**16 27 47.6**	**+0.5**
	baz=253,SNR=17						
J05D				Sb	**Sb**	**16 28 40.1**	**-0.9**
	baz=253						
HOPS	**Hopland Field**	**3.76**	**142**	Pn	**Pn**	**16 27 46.2**	**-1.1**
HOPS				IAML		16 28 16.1	
	comp=N,50nm,3.3s						
HOPS				IAML		16 28 51.7	
	comp=E,48nm,2.7s						
H04A	**Detroit Lake**	**3.86**	**45**		**Pn**	**16 27 48.9**	**+0.3**
H04A				IAML		16 28 39.1	
	comp=E,40nm,0.4s						
H04A				IAML		16 28 40.4	
	comp=N,44nm,0.7s						
K05A	**Summer Lake**	**3.86**	**78**	Pn	**Pn**	**16 27 48.9**	**+0.1**
K05A				IAML		16 28 55.2	
	comp=N,18nm,2.1s						
K05A				IAML		16 29 19.8	
	comp=E,20nm,2.6s						
PINE	**Pine Mountain**	**4.12**	**63**		**Pn**	**16 27 50.8**	**-1.6**
ORV	**Oroville**	**4.22**	**124**		**Pn**	**16 27 51.1**	**-2.4**
ORV				IAML		16 28 47.9	
	comp=E,38nm,0.6s						
MOD	**Modoc Plateau**	**4.26**	**90**		**Pn**	**16 27 52.5**	**-1.8**
G05D	**Wamic, OR**	**4.69**	**45**	P	**Pn**	**16 28 01.1**	**+1.1**
	baz=230						
F04A	**Amboy**	**4.69**	**32**		**Pn**	**16 27 58.1**	**-1.9**
F04A				IAML		16 29 01.0	
	comp=N,26nm,0.8s						
BEKR	**Beckworth**	**4.79**	**115**		**Pn**	**16 27 59.9**	**-1.6**
BEKR				IAML		16 29 07.6	
	comp=N,9.6nm,0.7s						
BEKR				IAML		16 29 15.5	
	comp=E,10nm,1.0s						
E03A	**Lebam**	**4.85**	**20**	Pn	**Pn**	**16 28 00.8**	**-1.4**
EMB	**Emerald Bay**	**5.43**	**122**	Pn	**Pn**	**16 28 08.8**	**-1.6**
WVOR	**Wild Horse Val**	**5.49**	**83**		**Pn**	**16 28 10.3**	**-0.8**
PAHR	**Pah Rah Range**	**5.53**	**113**		**Pn**	**16 28 10.5**	**-1.1**
NLWA	**Neilton Lookou**	**5.58**	**15**	Pn	**Pn**	**16 28 12.4**	**+0.2**

PNTR	**Pine Nut**	**5.69**	**119**			**Pn**	**16 28 13.4**	**-0.6**
J08A	**Circle Bar Ran**	**5.71**	**74**	Pn		**Pn**	**16 28 13.9**	**-0.3**
D03D	**Eldon**	**5.89**	**20**	P		**Pn**	**16 28 17.7**	**+1.3**
	baz=204							
D03D				S		**Sn**	**16 29 21.3**	**-3.4**
	baz=204							
YERR	**Yerington**	**5.99**	**118**			**Pn**	**16 28 15.8**	**-2.1**
LTY	**Liberty**	**6.47**	**34**			**Pn**	**16 28 22.9**	**-1.6**
RYN	**Ryan**	**6.65**	**118**			**Pn**	**16 28 24.5**	**-2.5**
NVAR	**Mina Array Bea**	**6.90**	**119**	Pn		**Pn**	**16 28 32.5**	**+1.9**
	comp=E,0.5nm,0.3s,baz=296,slow=14,SNR=15							
NVAR				Lg		Lg	16 30 07.3	
	comp=E,0.1nm,0.3s,baz=297,slow=24,SNR=1.5							
	comp=E,1.3nm,0.5s							
BMO	**Blue Mountains**	**6.94**	**63**			**Pn**	**16 28 29.5**	**-1.5**
ELK	**Elko**	**8.20**	**95**	Pn		**Pn**	**16 28 51.8**	**+3.4**
	comp=E,0.1nm,0.3s,baz=287,slow=14,SNR=7.0							
	comp=E,0.7nm,0.4s							
NEW	**Newport**	**8.85**	**42**	LR		LR	16 32 31.9	
	comp=E,104nm,20.5s,baz=260,slow=39							
PDAR	**Pinedale Array**	**12.19**	**81**	Pn		**Pn**	**16 29 45.6**	**+2.6**
	baz=242,slow=11,SNR=1.9							
	comp=E,0.2nm,0.7s							
DLBC	**Dease Lake**	**16.63**	**353**	Pn		**P**	**16 30 45.1**	**+0.2**
	comp=E,2.6nm,0.9s,baz=203,slow=15,SNR=3.3							
DLBC				LR		LR	16 36 04.7	
	comp=E,67nm,18.6s,baz=297,slow=34							
ANMO	**Albuquerque**	**16.84**	**108**	LR		LR	16 38 05.9	
	comp=E,58nm,21.8s,baz=304,slow=40							
YKA	**Yellowknife Ar**	**21.60**	**14**	P		**P**	**16 31 40.9**	**+1.9**
	comp=E,4.2nm,1.0s,baz=204,slow=12,SNR=9.5							
	comp=E,4.2nm,1.0s							
TXAR	**Lajitas Array**	**22.05**	**118**	P		**P**	**16 31 47.1**	**+2.8**
	comp=E,0.3nm,0.7s,baz=291,slow=7.7,SNR=3.6							
	comp=E,0.3nm,0.7s							
ULM	**Lac du Bonnet**	**22.33**	**58**	P		**P**	**16 31 47.5**	**+0.5**
	comp=E,1.9nm,0.7s,baz=277,slow=10,SNR=4.2							
ULM				LR		LR	16 40 58.0	
	comp=E,57nm,20.2s,baz=358,slow=38							
	comp=E,1.9nm,0.7s							
ILAR	**Eielson Array**	**25.72**	**339**	P		**P**	**16 32 20.1**	**+0.5**
	comp=E,0.3nm,0.7s,baz=152,slow=6.0,SNR=3.0							
ILAR				LR		LR	16 40 43.4	
	comp=E,48nm,21.6s,baz=184,slow=32							
	comp=E,0.3nm,0.7s							
INK	**Inuvik**	**26.65**	**354**	LR		LR	16 42 40.0	
	comp=E,71nm,18.3s,baz=181,slow=36							
TKL	**Tuckaleechee C**	**33.25**	**87**	LR		LR	16 47 41.3	
	comp=E,57nm,18.6s,baz=315,slow=38							
H11N3	**WAKE ISLAND Hy**	**60.19**	**270**	T		T	17 41 58.8	
	baz=52,slow=75,SNR=52							
H11N2	**WAKE ISLAND Hy**	**60.20**	**270**	T		T	17 41 60.0	
	baz=52,slow=75,SNR=33							
H11N1	**WAKE ISLAND Hy**	**60.21**	**270**	T		T	17 41 58.2	
	baz=52,slow=75,SNR=49							

IDC ***13*** *16:28:19.8±0.6,26.94N×130.11E,h0km,mb4.0/20, mbtmp4.0/23,ML3.5/3,MS3.4/17,Error ellipse: s-maj=16.6km s-min=12.9km az=88.0*

MOS ***13*** *16:28:20.8±1.0,26.94N×130.31E,h18km,mb4.4/17,Error ellipse: s-maj=13.4km s-min=6.6km az=99.9*

NEIC ***13*** *16:28:21.8±1.3,26.96N±0.07×130.09E±0.07,h10km±1km, mb4.7/36,Error ellipse: s-maj=12.0km s-min=10.0km az=153.0*

JMA ***13*** *16:28:22.2±0.1,26.9N±0.4×130.3E±0.5,h58km,MD4.0/26, MV4.2/26,NEAR MINAMI-DAITOJIMA IS*

NIED ***13*** *16:28:22.2,26.93N×130.25E,h58km,MW4.3,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr=-2.36; Mθθ0.88; Mϕϕ1.48; Mrθ1.42; Mθϕ1.00; Mϕr0.18; Fault plane solution: M₀2.67000×10¹⁵ NP1:ϑ₁21.00000°, δ35.00000°,λ-120.00000°. NP2:ϑ₂236.00000°, δ60.00000°,λ-70.00000°.*

ISC 13 16:28:20.6±1.6,26.96N±0.03×130.19E±0.03,h5km±10km, n146,σ1§50/158,mb4.5/51,MS3.5/17,10C-1D,Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JZK	**Kikaishima**	**1.36**	**352**	P			**Pn**	**16 28 46.6**	**+0.4**
JZK				S			**Sb**	**16 29 03.8**	**-0.4**
JTK	**Tokunoshima**	**1.37**	**307**	*i* P			**Pb**	**16 28 46.4**	**-0.3**
JTK				S			**Sg**	**16 29 04.0**	**-0.8**
JTK	**Tokunoshima**	**1.37**	**307**	A			A	16 28 46.4	
	comp=E,2.0nm,3.2s,comp=E,2.0nm,3.7s								
JKDJ	**Kitadaitoujima**	**1.42**	**135**	*i* P			**Pn**	**16 28 45.3**	**-1.7**
JKDJ				S			**Sn**	**16 29 02.4**	**-3.6**
JKDJ	**Kitadaitoujima**	**1.42**	**135**	A			A	16 28 45.3	
	comp=E,10.0nm,3.2s,comp=E,9.0nm,3.5s								
JMZ	**Minamidaito 2**	**1.47**	**141**	P			**Pn**	**16 28 46.0**	**-1.7**
JMZ				S			**Sn**	**16 29 03.0**	**-4.2**
JMZ	**Minamidaito 2**	**1.47**	**141**	A			A	16 28 46.0	
	comp=E,9.0nm,5.4s,comp=E,8.0nm,4.3s								
JOKE	**Okinoerabujima**	**1.50**	**286**	*i* P			**Pb**	**16 28 48.3**	**-0.5**
JOKE				S			**Sg**	**16 29 07.1**	**-1.6**
JAM	**Amami Oshima**	**1.53**	**340**	P			**Pn**	**16 28 48.2**	**-0.3**
JAM				*e*S			**Sn**	**16 29 07.6**	**-1.3**
JYRO	**Yoronjima**	**1.55**	**273**	*i* P			**Pb**	**16 28 48.9**	**-0.9**
JYRO				S			**Sn**	**16 29 07.7**	**-1.6**
JAMN	**Amaminishikomi**	**1.56**	**325**	*i* P			**Pn**	**16 28 48.7**	**-0.3**
JAMN				S			**Sn**	**16 29 07.8**	**-1.8**
JOW	**Kunigami**	**1.71**	**266**	Pn			**Pn**	**16 28 51.1**	**+0.1**
	120nm,0.3s,baz=114,slow=24,SNR=245								
JOW				Sn			**Sn**	**16 29 11.3**	**-2.1**
	186nm,0.3s,baz=243,slow=28,SNR=28								
JOW	**Kunigami**	**1.71**	**266**	*i* P			**Pb**	**16 28 51.3**	**-1.3**
JOW				S			**Sb**	**16 29 12.4**	**-2.0**
JIH	**Iheya**	**1.98**	**273**	*i* P			**Pn**	**16 28 55.0**	**+0.2**
JIH				S			**Sb**	**16 29 19.4**	**-2.8**
JIH	**Iheya**	**1.98**	**273**	A			A	16 28 55.0	
	comp=E,2.0nm,4.4s,comp=E,3.0nm,5.3s								
JNTH	**Nagotoyohara**	**1.99**	**258**	*i* P			**Pn**	**16 28 54.6**	**-0.2**
JNTH				S			**Sn**	**16 29 18.4**	**-1.6**
JJT3	**Tamagusuku3**	**2.30**	**250**	P			**Pn**	**16 28 59.5**	**+0.3**
JJT3				S			**Sn**	**16 29 27.0**	**-0.9**
JTAJ	**Takarajima**	**2.35**	**338**	P			**Pn**	**16 28 59.4**	**-0.4**
JTAJ				S			**Sn**	**16 29 26.6**	**-2.5**
JAGN	**Aguni-jima**	**2.66**	**263**	P			**Pn**	**16 29 04.1**	**0.0**
JAGN				S			**Sn**	**16 29 35.3**	**-1.4**
JNN	**Nakanoshima**	**2.88**	**355**	*e*S			**Sn**	**16 29 39.9**	**-2.3**
JKE	**Kume jima 2**	**3.11**	**259**	P			**Pn**	**16 29 09.8**	**-0.5**
JKE				*e*S			**Sn**	**16 29 46.3**	**-1.5**
JYAK	**Yakushimahirau**	**3.28**	**5**	P			**Pn**	**16 29 12.2**	**-0.3**
JYAK				S			**Sn**	**16 29 47.9**	**-4.0**
JMTN	**Minamitane**	**3.48**	**10**	P			**Pn**	**16 29 15.1**	**-0.3**
JMTN				S			**Sn**	**16 29 53.0**	**-3.9**
JKC	**Kuchinoerabu**	**3.49**	**0**	*e*P			**Pn**	**16 29 15.1**	**-0.4**
JKC				S			**Sn**	**16 29 53.1**	**-4.0**
JTN	**Tanegashima 3**	**3.74**	**10**	P			**Pn**	**16 29 18.1**	**-0.9**
JTN				S			**Sn**	**16 30 00.2**	**-3.3**
JSU	**Suzuyama**	**4.53**	**3**	Pn			**Pn**	**16 29 29.0**	**-0.9**
JNU	**Nakatsue**	**6.17**	**5**	Pn			**Pn**	**16 29 52.9**	**+0.5**
JNU				Sn			**Sn**	**16 30 57.6**	**-5.7**
NACB	**Ninganchiao**	**8.24**	**252**	Pn			**Pn**	**16 30 19.6**	**-1.2**
YHNB	**Yeheng**	**8.26**	**256**	Pn			**Pn**	**16 30 19.6**	**-1.6**
JHS	**Saijyo**	**8.39**	**17**	Pn			**Pn**	**16 30 23.7**	**+0.8**
YULB	**Yu-li**	**8.80**	**248**	Pn			**Pn**	**16 30 24.5**	**-4.0**
TWG	**Pinlang**	**9.25**	**245**	Pn			**Pn**	**16 30 30.8**	**-3.8**
INU	**Inuyama**	**10.20**	**33**	Pn			**Pn**	**16 30 49.9**	**+2.3**
JHJ	**Hachijo jima 2**	**10.33**	**51**	Pn			**Pn**	**16 30 50.9**	**+1.5**
	9.7nm,0.3s,baz=219,slow=14,SNR=1.2								
JHJ				LR			LR	16 34 22.7	
	comp=Z,69nm,18.3s,baz=131,slow=35								
	39nm,0.3s								
JHJ2	**Mitsune**	**10.35**	**51**	Pn			**Pn**	**16 30 51.3**	**+1.7**
JGF	**Kuroka**	**10.57**	**34**	Pn			**Pn**	**16 30 53.5**	**+0.8**
KSRS	**Korea Array**	**10.63**	**350**	Pn			**Pn**	**16 30 55.0**	**+1.4**
	0.1nm,0.3s,baz=169,slow=14,SNR=15								
	2.2nm,0.7s								
KSRS	**Korea Array**	**10.63**	**350**	P			**Pn**	**16 30 55.0**	**+1.4**
MAJO	**Matsushiro**	**11.73**	**34**	Pn			**Pn**	**16 31 09.3**	**+0.8**
MAJO	**Matsushiro**	**11.73**	**34**	P			**Pn**	**16 31 09.4**	**+0.8**
MJAR	**Matsushiro Arr**	**11.73**	**34**	Pn			**Pn**	**16 31 10.1**	**+1.5**
	0.1nm,0.3s,baz=204,slow=12,SNR=2.4								
	1.2nm,0.5s								
MJB9	**Matsu-Tunnel**	**11.73**	**34**	Pn			**Pn**	**16 31 09.6**	**+0.9**
USRK	**Ussuriysk Ar.**	**17.26**	**4**	P			**P**	**16 32 25.4**	**+1.6**
	3.1nm,1.0s,baz=176,slow=6.6,SNR=4.4								
BJT	**Baijiatuan**	**17.47**	**322**	P			**P**	**16 32 26.3**	**+0.1**
BJT	**Baijiatuan**	**17.47**	**322**	P			**P**	**16 32 26.3**	**+0.1**
BJT				pmax			pmax		
	comp=Z,19nm,0.9s								
GUMO	**Guam**	**19.12**	**131**	LR			LR	16 38 28.0	
	comp=Z,77nm,19.9s,baz=312,slow=32								
DAV	**Davao City (W)**	**20.26**	**193**	LR			LR	16 41 25.7	
	comp=Z,44nm,18.3s,baz=122,slow=39								
KLR	**Kul'dur**	**22.27**	**3**	P			**P**	**16 33 18.2**	**-0.1**
	comp=Z,2.1nm,0.7s,baz=212,slow=8.5,SNR=6.3								
	comp=Z,2.1nm,0.7s								
KLR	**Kul'dur**	**22.27**	**3**	*ce*P			**P**	**16 33 17.8**	**-0.5**
KLR				pmax			pmax		
	comp=Z,11nm,2.5s								
ZEA	**Zeya**	**26.84**	**356**	*e*P			**P**	**16 34 04.1**	**+2.4**
ZEA				pmax			pmax		
	comp=Z,10.0nm,1.1s								
TOLI2	**Tolitoli**	**27.25**	**201**	P			**P**	**16 34 05.2**	**-0.5**
TOLI2				IAmb			IAmb	16 34 06.7	
	comp=Z,19nm,1.1s								
ULN	**Ulaanbaatar**	**27.62**	**325**	*ce*P			**P**	**16 34 09.8**	**+0.8**
ULN				pmax			pmax		
	comp=Z,4.0nm,1.7s								
SONM	**Songino Array**	**27.93**	**325**	P			**P**	**16 34 13.5**	**+1.6**
	comp=Z,0.4nm,0.3s,baz=132,slow=8.0,SNR=3.5								
	comp=Z,0.4nm,0.3s								
FAKI	**Fak Fak**	**29.77**	**176**	P			**P**	**16 34 28.2**	**-0.1**
CMAR	**Chiang Mai Arr**	**29.98**	**260**	P			**P**	**16 34 32.1**	**+2.0**
	comp=Z,0.6nm,0.8s,baz=56,slow=7.4,SNR=5.4								
CMAR				LR			LR	16 47 17.2	
	comp=Z,20nm,19.5s,baz=35,slow=38								
PETK	**Petropavlovsk-**	**33.17**	**31**	P			**P**	**16 34 59.3**	**+1.4**
	comp=Z,0.9nm,0.8s,baz=251,slow=9.0,SNR=3.7								
	comp=Z,0.9nm,0.8s								
YAK	**Yakutsk**	**35.07**	**360**	*e*P			**P**	**16 35 14.5**	**+0.3**
YAK				pmax			pmax		
	comp=Z,9.0nm,1.5s								
YAK				pmax			pmax		
	comp=N,7.0nm,1.5s								
YAK				pmax			pmax		
	comp=E,4.0nm,1.4s								
SEY	**Seymchan**	**38.82**	**16**	P			**P**	**16 35 45.6**	**-0.5**
	comp=E,0.6nm,0.6s,baz=232,slow=8.9,SNR=2.6								
	comp=E,0.6nm,0.6s								
SEY	**Seymchan**	**38.82**	**16**	*i* P			**P**	**16 35 46.1**	**0.0**
SEY				pmax			pmax		
	comp=Z,5.0nm,1.8s								
MTN	**Manton Dam**	**39.58**	**179**	P			**P**	**16 35 51.5**	**-1.4**
MTN				IAmb			IAmb	16 35 54.5	
	comp=Z,28nm,1.2s								
PMG	**Port Moresby**	**39.73**	**153**	LR			LR	16 50 54.1	
	comp=Z,43nm,18.9s,baz=317,slow=34								
MK31	**Makanchi Array**	**42.37**	**311**	P			**P**	**16 36 14.0**	**-1.7**
MK31	**Makanchi Array**	**42.37**	**311**	*i* P			**P**	**16 36 16.9**	**+1.2**
MKAR	**Makanchi Array**	**42.37**	**311**	P			**P**	**16 36 14.1**	**-1.6**
	comp=Z,0.6nm,0.8s,baz=109,slow=9.0,SNR=9.2								
	comp=Z,0.6nm,0.8s								
MKAR	**Makanchi Array**	**42.37**	**311**	*i* P			**P**	**16 36 18.0**	**+2.3**
MKAR				pmax			pmax		
	comp=Z,1.0nm,0.8s								
KNRA	**Kununurra**	**42.41**	**182**	P			**P**	**16 36 15.8**	**-0.3**
KNRA				IAmb			IAmb	16 36 29.3	
	comp=Z,24nm,1.1s								
COEN	**Coen**	**42.59**	**161**	P			**P**	**16 36 17.6**	**-0.1**
ZALV	**Zalesovo Beam**	**42.74**	**322**	P			**P**	**16 36 17.2**	**-1.4**
	comp=Z,0.4nm,0.4s,baz=116,slow=6.6,SNR=2.4								
ZALV				LR			LR	16 55 32.8	
	comp=Z,26nm,18.8s,baz=112,slow=38								
	comp=Z,0.4nm,0.4s								
TIXI	**Tiksi**	**44.73**	**359**	P			**P**	**16 36 34.3**	**0.0**
	comp=Z,0.9nm,0.3s,baz=91,slow=22,SNR=4.8								
	comp=Z,0.9nm,0.3s								
TIXI	**Tiksi**	**44.73**	**359**	*i* P			**P**	**16 36 3.3**	**+1.9**
TIXI				pmax			pmax		
	comp=Z,2.0nm,1.1s								
KURBB	**Kurchatov Arra**	**45.55**	**316**	LR			LR	16 57 20.0	
	comp=Z,67nm,19.1s,baz=83,slow=38								
BILL	**Bilibino**	**46.43**	**18**	*e*P			**P**	**16 36 48.3**	**+0.4**
BILL								16 38 19.0	
BILL				*e*S			**S**	**16 43 31.7**	**-4.2**
BILL				pmax			pmax		
	comp=Z,7.0nm,1.7s								
BILL				MLR			MLR		
	comp=Z,33nm,16.0s								
WB0	**Warramunga Arr**	**46.63**	**175**	P			**P**	**16 36 49.6**	**-0.3**
WB0				IAmb			IAmb	16 36 50.2	
	comp=Z,6.0nm,0.7s								
WRAB	**Tennant Creek**	**46.79**	**175**	*ce*P			**P**	**16 36 49.4**	**-1.8**
WRAB				pmax			pmax		
	comp=Z,15nm,1.7s								
WRA	**Warramunga Arr**	**46.80**	**175**	P			**P**	**16 36 51.0**	**-0.3**
	comp=Z,6.5nm,0.7s,baz=355,slow=8.5,SNR=51								
WRA				PcP			**PcP**	**16 38 24.1**	**-0.4**
	comp=Z,0.1nm,0.4s,baz=358,slow=3.8,SNR=1.9								
	comp=Z,6.5nm,0.7s								
WRA	**Warramunga Arr**	**46.80**	**175**	P			**P**	**16 36 50.8**	**-0.5**
WB2	**Warramunga Arr**	**46.80**	**175**	P			**P**	**16 36 50.9**	**-0.3**
WB2				IAmb			IAmb	16 36 51.9	
	comp=Z,7.6nm,0.7s								
WR0	**Warramunga Arr**	**46.83**	**174**	P			**P**	**16 36 51.2**	**-0.3**
WR0				IAmb			IAmb	16 36 52.3	
	comp=Z,8.9nm,0.8s								
AAK	**Ala-Archa**	**47.50**	**304**	LR			LR	16 58 31.5	
	comp=Z,45nm,20.2s,baz=90,slow=38								
NRIK	**Noril'sk**	**49.10**	**341**	P			**P**	**16 37 09.2**	**+0.6**
	comp=Z,1.3nm,0.5s,baz=102,slow=8.5,SNR=4.3								
	comp=Z,1.3nm,0.5s								
NRIK	**Noril'sk**	**49.10**	**341**	*i* P			**P**	**16 37 07.7**	**-0.9**
NRIK				pmax			pmax		
	comp=Z,5.0nm,1.3s								
PSA00	**Pilbara Seismi**	**49.28**	**193**	P			**P**	**16 37 10.1**	**-0.3**
PSA00	**Pilbara Seismi**	**49.28**	**193**	P			**P**	**16 37 09.9**	**-0.5**
PSA00				IAmb			IAmb	16 37 11.4	
	comp=Z,11nm,1.1s								
CTAO	**Charters Tower**	**49.30**	**160**	P			**P**	**16 37 11.4**	**+0.8**
CTAO	**Charters Tower**	**49.30**	**160**	P			**P**	**16 37 11.4**	**+0.8**
CTAO				pmax			pmax		
	comp=Z,33nm,1.0s								
AS31	**Alice Springs**	**50.46**	**176**	P			**P**	**16 37 19.4**	**0.0**
ASAR	**Alice Springs**	**50.46**	**176**	P			**P**	**16 37 19.4**	**-0.1**
	comp=Z,4.8nm,0.8s,baz=5.9,slow=14,SNR=68								
ASAR				PcP			**PcP**	**16 38 37.7**	**0.0**
	comp=Z,1.2nm,0.8s,baz=16,slow=3.8,SNR=4.4								
	comp=Z,4.8nm,0.8s								
BRVK	**Borovoye**	**50.97**	**318**	P			**P**	**16 37 22.8**	**-0.3**
BRVK	**Borovoye**	**50.97**	**318**	*ce*P			**P**	**16 37 24.1**	**+1.1**
BRVK				pmax			pmax		
	comp=Z,5.0nm,1.3s								
EIDS	**Eidsvold**	**55.79**	**157**	P			**P**	**16 37 58.3**	**-0.4**
ABKAR	**Akbulak array**	**57.43**	**313**	P			**P**	**16 38 11.4**	**+1.2**
ARU	**Arti**	**57.91**	**322**	LR			LR	17 05 45.3	
	comp=Z,48nm,19.6s,baz=110,slow=39								
ARU	**Arti**	**57.91**	**322**	*d* P			**P**	**16 38 13.4**	**0.0**
ARU								16 40 23.1	
ARU				S			**S**	**16 46 15.4**	**+1.7**
ARU				SS			**SS**	**16 50 01.9**	**-2.2**
ARU				pmax			pmax		
	comp=Z,9.0nm,2.4s								
AKTO	**Aktyubinsk**	**58.57**	**314**	LR			LR	17 04 41.0	
	comp=Z,41nm,18.2s,baz=70,slow=37								
STKA	**Stephens Creek**	**59.51**	**169**	P			**P**	**16 38 24.5**	**-0.3**
	comp=Z,1.9nm,0.7s,baz=343,slow=9.8,SNR=7.0								
	comp=Z,1.9nm,0.7s								
STKA	**Stephens Creek**	**59.51**	**169**	P			**P**	**16 38 24.1**	**-0.6**
L19K	**White Mountain**	**59.54**	**32**	P			**P**	**16 38 25.0**	**+0.3**
J20K	**Nowinta River**	**59.85**	**29**	P			**P**	**16 38 27.6**	**+0.8**
J20K				IAmb			IAmb	16 38 33.9	
	comp=Z,6.4nm,1.2s								
K20K	**Telida**	**59.89**	**30**	P			**P**	**16 38 28.0**	**+0.9**
K20K				IAmb			IAmb	16 38 40.8	
	comp=Z,7.7nm,1.1s								
IMAR	**Indian Mountai**	**60.03**	**27**	P			**P**	**16 38 28.5**	**+0.5**
ARMA	**Armidale**	**60.63**	**159**	P			**P**	**16 38 33.0**	**+0.4**
RND	**Reindeer**	**62.23**	**30**	P			**P**	**16 38 42.7**	**-0.4**
RND				IAmb			IAmb	16 38 43.7	
	comp=Z,5.0nm,0.9s								
RND	**Reindeer**	**62.23**	**30**	P			**P**	**16 38 42.7**	**-0.4**
RND				pmax			pmax		
	comp=Z,5.0nm,0.9s								
MDM	**Murphy Dome**	**62.37**	**28**	P			**P**	**16 38 44.6**	**+0.7**
MDM				IAmb			IAmb	16 38 57.6	
	comp=Z,9.8nm,1.3s								
KIRV	**Kirov**	**62.67**	**324**	*ce*P			**P**	**16 38 48.5**	**+2.6**
ILAR	**Eielson Array**	**62.96**	**29**	P			**P**	**16 38 47.2**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=271,slow=7.0,SNR=5.7								
	comp=Z,0.4nm,0.7s								
BMAR	**Burnt Mountain**	**63.60**	**25**	P			**P**	**16 38 53.6**	**+1.6**
CAN	**Canberra**	**64.45**	**163**	P			**P**	**16 38 58.6**	**+0.6**
CAN	**Canberra**	**64.45**	**163**	P			**P**	**16 38 58.6**	**+0.6**
CAN				pmax			pmax		
	comp=Z,18nm,1.4s								
BELG	**Belogornoye**	**64.71**	**318**	LR			LR	17 08 10.1	
	comp=Z,42nm,21.8s,baz=128,slow=37								
M26K	**Nabesna, AK**	**65.03**	**31**	P			**P**	**16 39 01.6**	**+0.1**
M26K				IAmb			IAmb	16 39 03.1	
	comp=Z,7.3nm,1.2s								
VRDI	**Verde Repeater**	**65.03**	**32**	P			**P**	**16 39 01.8**	**+0.1**
VRDI				IAmb			IAmb	16 39 15.8	
	comp=Z,4.1nm,1.1s								
TOO	**Toolangi**	**65.78**	**167**	P			**P**	**16 39 08.0**	**+1.4**
TOO				IAmb			IAmb	16 39 28.5	
	comp=Z,8.2nm,1.1s								
TOO	**Toolangi**	**65.78**	**167**	P			**P**	**16 39 08.0**	**+1.4**
TOO				pmax			pmax		
	comp=Z,8.0nm,1.1s								
YAH	**Yahtse**	**66.03**	**33**	P			**P**	**16 39 07.7**	**-0.5**
LVZ	**Lovozero**	**67.36**	**336**	P			**P**	**16 39 17.2**	**+0.8**
LVZ	**Lovozero**	**67.36**	**336**	P			**P**	**16 39 17.2**	**+0.8**
LVZ				pmax			pmax		
	comp=Z,42nm,1.3s								
GNI	**Garni**	**69.88**	**306**	LR			LR	17 13 34.1	
	comp=Z,31nm,19.6s,baz=104,slow=39								
KBZ	**Khabaz**	**70.05**	**310**	P			**P**	**16 39 35.1**	**+1.6**
	comp=Z,2.3nm,0.8s,baz=170,slow=3.0,SNR=6.3								
KBZ				LR			LR	17 13 36.3	
	comp=Z,25nm,18.1s,baz=65,slow=39								
	comp=Z,2.3nm,0.8s								
KBZ	**Khabaz**	**70.05**	**310**	*ce*P			**P**	**16 39 34.0**	**+0.5**
KBZ				pmax			pmax		
	comp=Z,5.0nm,1.3s								
KIV	**Kislovodsk**	**70.12**	**310**	*e*P			**P**	**16 39 35.0**	**+0.9**
KIV				pmax			pmax		
	comp=Z,6.0nm,1.1s								
KIV				MLR			MLR		
	comp=Z,17nm,18.0s								
FINES	**FINESS Array B**	**73.08**	**331**	P			**P**	**16 39 50.2**	**-1.3**
	comp=Z,1.0nm,0.7s,baz=53,slow=5.4,SNR=3.4								
FINES				LR			LR	17 14 14.3	
	comp=Z,32nm,18.8s,baz=78,slow=38								
	comp=Z,1.0nm,0.7s								
FINES	**FINESS Array B**	**73.08**	**331**	P			**P**	**16 39 51.2**	**-0.2**
FINES	**FINESS Array B**	**73.08**	**331**	*i* P			**P**	**16 39 52.0**	**+0.5**
FINES				pmax			pmax		
	comp=Z,1.0nm,0.6s								
AKASG	**Malin Array Be**	**76.11**	**320**	P			**P**	**16 40 09.0**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=50,slow=5.6,SNR=5.9								
AKASG				LR			LR	17 16 36.2	
	comp=Z,62nm,19.1s,baz=39,slow=38								
	comp=Z,0.4nm,0.5s								
AKASG	**Malin Array Be**	**76.11**	**320**	*i* P			**P**	**16 40 10.8**	**+1.6**
AKBB	**Malin Array Si**	**76.11**	**320**	P			**P**	**16 40 09.2**	**-0.1**
AKBB				IAmb			IAmb	16 40 10.7	
	comp=Z,6.7nm,1.4s								
AKBB	**Malin Array Si**	**76.11**	**320**	*ce*P			**P**	**16 40 09.4**	**+0.2**
BR131	**Keskin Array S**	**77.96**	**308**	P			**P**	**16 40 18.8**	**-1.3**
BR131				IAmb			IAmb	16 40 21.7	
	comp=Z,6.4nm,1.1s								
BR131	**Keskin Array S**	**77.96**	**308**	*i* P			**P**	**16 40 19.4**	**-0.7**
BRTR	**Keskin Array B**	**77.96**	**308**	P			**P**	**16 40 20.2**	**+0.1**
	comp=Z,2.2nm,1.1s,baz=80,slow=3.0,SNR=7.5								
	comp=Z,2.2nm,1.1s								
BRTR	**Keskin Array B**	**77.96**	**308**	*ce*P			**P**	**16 40 21.0**	**+0.9**
BRTR				pmax			pmax		
	comp=Z,2.0nm,1.0s								
NC405	**NORSAR Array S**	**79.19**	**334**	P			**P**	**16 40 25.9**	**-0.4**
NC405		

PMSA	**Palmer Station**	**81.15**	**157**	P		**P**	**16 42 09.2**	**-2.1**
SEY	**Seymchan**	**86.42**	**347**	P		**P**	**16 42 36.4**	**-0.8**
	comp=Z,1.3nm,0.9s,baz=92,slow=22,SNR=3.0							
	comp=Z,1.3nm,0.9s							
TXAR	**Lajitas Array**	**86.59**	**57**	P		**P**	**16 42 41.1**	**+2.1**
	comp=Z,0.3nm,0.7s,baz=232,slow=4.4,SNR=4.0							
	comp=Z,0.3nm,0.7s							
CCB	**Clear Creek Bu**	**87.84**	**12**	P		**P**	**16 42 43.0**	**-0.8**
IMAR	**Indian Mountai**	**88.00**	**9**	P		**P**	**16 42 44.5**	**-0.1**
ILAR	**Eielson Array**	**88.13**	**13**	P		**P**	**16 42 44.0**	**-1.3**
	comp=Z,0.3nm,0.6s,baz=216,slow=4.3,SNR=2.6							
	comp=Z,0.3nm,0.6s							
J25K	**Salcha River,**	**88.31**	**13**	P		**P**	**16 42 46.2**	**0.0**
J25K				IAmb		IAmb	16 42 57.6	
	comp=Z,3.0nm,1.4s							
PDAR	**Pinedale Array**	**88.56**	**43**	P		**P**	**16 42 49.4**	**+1.3**
	comp=Z,0.2nm,0.5s,baz=158,slow=1.0,SNR=2.3							
	comp=Z,0.2nm,0.5s							
AKASG	**Malin Array Be**	**143.20**	**332**	PKP		PKPab	16 49 21.7	-1.4
	comp=Z,0.7nm,0.5s,baz=39,slow=4.8,SNR=8.1							
BRTR	**Keskin Array B**	**147.17**	**313**	PKPbc		**PKPdf**	**16 49 34.8**	**+2.0**
	comp=Z,0.3nm,0.6s,baz=93,slow=3.2,SNR=1.9							
CLL	**Collm**	**148.11**	**348**	*i* PKPbc		**PKPbc**	**16 49 37.4**	**-0.2**
GERES	**GERESS Array B**	**150.27**	**345**	PKPbc		**PKPdf**	**16 49 41.3**	**+4.0**
	comp=Z,0.2nm,0.3s,baz=16,slow=5.2,SNR=2.5							

JMA 13 16:36:28.9±0.2, 25°N±1°×123.6E±0.5, h27km, MV1.5/7, NW OFF ISHIGAKIJIMA IS, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.80**	**173**	S	Sb	16 36 53.9	-0.8
JISG	**Ishigakijimahi**	**0.83**	**131**	P	Pb	16 36 44.3	-0.5
JISG				*e*S	Sb	16 36 55.6	0.0
JIJ	**Ishigaki jima**	**0.90**	**148**	*e*P	Pb	16 36 45.3	-0.5
JIJ				*e*S	Sb	16 36 57.4	-0.2
JKRS	**Kuro-shima**	**0.96**	**158**	P	Pn	16 36 46.4	-0.2
JKRS				S	Sn	16 36 59.4	0.0
HATJ	**Hateruma jima**	**1.08**	**171**	*e*P	Pn	16 36 47.9	-0.4

TAP 13 16:36:43.6, 24.68N×122.04E, h5km, ML1.7, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWC	**Suao**	**0.19**	**248**	P	Pg	16 36 48.6	+1.2
	baz=246						
TWC				*i* S	Sg	16 36 51.2	+1.4
	baz=246						
EGS		**0.19**	**329**	P	Pg	16 36 48.1	+0.7
	baz=330						
EGS				*i* S	Sg	16 36 51.3	+1.3
	baz=330						
NTC	**Toucheng**	**0.26**	**312**	*e*P	Pb	16 36 50.0	-0.8
	baz=311						
NTC				*e*S	Sb	16 36 54.3	-1.3
	baz=311						
ILA	**Ilan**	**0.28**	**288**	*e*P	Pg	16 36 49.5	+0.5
	baz=287						
ILA				S	Sg	16 36 54.1	+1.3
	baz=287						
NDS	**Dongshan**	**0.30**	**261**	*e*P	Pb	16 36 50.6	-0.9
	baz=260						
NDS				*e*S	Sb	16 36 56.5	-0.2
	baz=260						
TWB1	**Santiao Chiao**	**0.33**	**351**	*e*P	Pg	16 36 50.9	+0.9
	baz=352						
EWUT	**Wuta**	**0.34**	**226**	*e*P	Pb	16 36 51.5	-0.6
	baz=225						
EWUT				*e*S	Sb	16 36 56.4	-1.4
	baz=225						
TWE	**Neicheng**	**0.34**	**277**	P	Pb	16 36 51.6	-0.6
	baz=276						
TWE				S	Sb	16 36 57.8	-0.2
	baz=276						
TIPB	**Shuangxi**	**0.35**	**326**	P	Pb	16 36 51.7	-0.7
	baz=325						
TIPB				S	Sb	16 36 57.9	-0.3
	baz=325						
ENA	**Nanau**	**0.37**	**227**	P	Pb	16 36 52.2	-0.5
	baz=226						
ENA				S	Sb	16 36 58.2	-0.6
	baz=226						
FUSB	**Fushanzhiwuyua**	**0.42**	**281**	*e*P	Pb	16 36 53.5	-0.1
	baz=280						
FUSB				S	Sb	16 37 00.6	+0.3
	baz=280						
ENTT	**Nioudou**	**0.43**	**265**	*i* P	Pb	16 36 54.3	+0.5
	baz=264						
ENTT				*i* S	Sb	16 37 00.6	0.0
	baz=264						
SXI1	**Grass Mountain**	**0.44**	**340**	P	Pb	16 36 53.5	-0.5
	baz=339						
SXI1				*e*S	Sb	16 37 01.0	+0.1
	baz=339						
LATG	**Datong**	**0.49**	**253**	P	Pb	16 36 55.1	+0.3
	baz=252						
LATG				S	Sb	16 37 02.0	-0.4
	baz=252						
NWLT	**Wulai**	**0.50**	**281**	*e*P	Pb	16 36 55.0	+0.1
	baz=281						
NWLT				*e*S	Sb	16 37 02.5	0.0
	baz=281						
TWA	**Mucha**	**0.51**	**306**	*e*P	Pb	16 36 55.3	+0.2
	baz=305						
YHNB	**Yeheng**	**0.61**	**269**	P	Pb	16 36 57.2	+0.4
	baz=268						
YHNB				S	Sb	16 37 06.0	+0.4
	baz=268						
NSK	**Sanguang**	**0.62**	**270**	*e*S	Sb	16 37 06.1	0.0
	baz=269						
YM01	**YM01**	**0.63**	**317**	S	Sb	16 37 06.7	+0.3
	baz=317						
NACB	**Ninganchiao**	**0.65**	**219**	P	Pb	16 36 57.3	-0.2
	baz=218						
NNSB	**Datong**	**0.65**	**247**	*e*P	Pb	16 36 57.2	-0.3
	baz=247						
NNSB				S	Sb	16 37 07.2	+0.2
	baz=247						
NNS	**Nan Shan**	**0.66**	**249**	*e*S	Sb	16 37 07.5	+0.5
	baz=247						
ETLH	**Xiulin Townshi**	**0.69**	**227**	*e*P	Pb	16 36 58.2	-0.1
	baz=227						
ETLH				S	Sb	16 37 08.6	+0.4
	baz=227						
TWY	**Chenhua**	**0.71**	**326**	*e*P	Pg	16 36 57.8	+0.4
	baz=326						
TWY				*e*S	Sb	16 37 08.8	+0.1
	baz=326						
NCU	**National Centr**	**0.83**	**291**	*e*S	Sb	16 37 12.9	+0.9
	baz=290						
FUSS	**Fushou**	**0.85**	**239**	*e*P	Pb	16 37 00.8	-0.2
	baz=239						
FUSS				*e*S	Sb	16 37 13.2	+0.5
	baz=239						

*IDC **13** 16:36:57.6±2.9, 41.89N×126.10W, h0km, mb2.8/2, mbtmp3.0/4, ML3.1/2, Error ellipse: s-maj=38.8km s-min=26.6km az=37.0*
*NEIC **13** 16:36:57.8±1.5, 41.98N±0.05×126.1W±0.2, h10km±8km, ML2.8/64, Error ellipse: s-maj=17.7km s-min=7.2km az=84.0*
*ANF **13** 16:36:59.5±1.1, 42.13N×125.86W, h10km, ML2.9/7, Error ellipse: s-maj=11.4km s-min=5.7km az=101.0*
ISC 13 16:36:59.0±1.6, 42.01N±0.05×125.98W±0.09, h11km, n44, σ1§23/49, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBO	**Bosley Butte**	**1.32**	**81**	Pn	**Pn**	**16 37 22.2**	**-1.3**
KBO				IAML		16 37 42.6	
	comp=E,126nm,0.2s						
KBO				IAML		16 37 43.1	
	comp=N,91nm,0.2s						
KEBM	**Edson Butte**	**1.49**	**54**	Pn	**Pn**	**16 37 24.3**	**-1.5**
KEBM				IAML		16 37 45.1	
	comp=N,162nm,0.6s						
KEBM				IAML		16 37 45.3	
	comp=E,150nm,0.6s						
KSXB	**Camp Six Broad**	**1.58**	**96**	Pn	**Pn**	**16 37 26.0**	**-1.1**
KRPM	**Rodgers**	**1.70**	**120**	Pn	**Pn**	**16 37 27.0**	**-1.6**
KRPM				IAML		16 38 13.1	
	comp=E,92nm,2.1s						
KRPM				IAML		16 38 29.7	
	comp=N,59nm,1.7s						
L02F	**Cave Junction**	**1.80**	**86**	P	**Pn**	**16 37 29.1**	**-0.9**
	baz=271						
K02D	**Willamette Mer**	**1.85**	**68**	P	**Pn**	**16 37 29.6**	**-1.1**
	baz=251,SNR=97						
K02D				Sb	**Sn**	**16 37 53.8**	**-0.4**
	baz=251						
JCC	**Jacoby Creek,**	**1.89**	**128**	Pn	**Pn**	**16 37 29.6**	**-1.6**
J01E	**Myrtle Point**	**1.90**	**52**	Pn	**Pn**	**16 37 29.7**	**-1.6**
J01E	**Myrtle Point**	**1.90**	**52**	P	**Pn**	**16 37 29.7**	**-1.6**
	baz=234,SNR=28						
J01E				S	**Sn**	**16 37 53.3**	**-2.0**
	baz=234						
KHMM	**Horse Mountain**	**2.04**	**123**	Pn	**Pn**	**16 37 32.3**	**-1.1**
KHMM				IAML		16 37 59.1	
	comp=N,36nm,1.5s						
KMPM	**Mount Pierce**	**2.12**	**138**	Pn	**Pn**	**16 37 32.5**	**-2.0**
KMPM				IAML		16 38 02.4	
	comp=N,55nm,0.6s						
KMPM				IAML		16 38 04.6	
	comp=E,68nm,0.9s						
DBO	**Dodson Butte**	**2.31**	**60**	Pn	**Pn**	**16 37 36.2**	**-0.8**
HUMO	**Hull Mountain**	**2.32**	**74**		**Pn**	**16 37 36.5**	**-0.7**
YBH	**Yreka Blue Hor**	**2.46**	**95**	Pn	**Pn**	**16 37 39.8**	**+0.6**
	comp=E,3.6nm,0.3s,baz=294,slow=15,SNR=43						
YBH				Sn	**Sb**	**16 38 13.2**	**-0.4**
	comp=E,1.2nm,0.3s,baz=313,slow=19,SNR=3.6						
	comp=E,6.4nm,0.3s						
YBH	**Yreka Blue Hor**	**2.46**	**95**		**Pn**	**16 37 39.6**	**+0.4**
KMRM	**Mail Ridge**	**2.48**	**135**		**Pn**	**16 37 38.8**	**-0.7**
KMRM				IAML		16 38 13.6	
	comp=E,43nm,0.7s						
KMRM				IAML		16 38 19.8	
	comp=N,42nm,3.1s						
I03D	**Drain, OR**	**2.56**	**48**	P	**Pn**	**16 37 39.3**	**-1.1**
	baz=230,SNR=26						
I03D				S	**Sn**	**16 38 09.9**	**-1.7**
	baz=230						
I02E	**Swisshome, OR**	**2.61**	**36**	Pn	**Pn**	**16 37 40.5**	**-0.6**
I02E				IAML		16 38 13.4	
	comp=E,59nm,0.6s						
I02E				IAML		16 38 14.0	
	comp=N,49nm,0.6s						
I02E	**Swisshome, OR**	**2.61**	**36**	P	**Pn**	**16 37 40.2**	**-1.0**
	baz=217,SNR=16						
I02E				S	**Sn**	**16 38 10.5**	**-2.4**
	baz=217						
L04D	**Klamath Falls**	**2.74**	**84**		**Pn**	**16 37 43.4**	**+0.3**
L04D	**Klamath Falls**	**2.74**	**84**	P	**Pn**	**16 37 43.6**	**+0.5**
	baz=269,SNR=108						
KCPM	**Cahto Peak**	**2.95**	**141**	Pn	**Pn**	**16 37 44.4**	**-1.6**
KCPM				IAML		16 38 54.6	
	comp=N,42nm,3.0s						
BUCK	**Buck Mountain**	**3.09**	**44**	Pn	**Pn**	**16 37 47.1**	**-0.8**
BUCK				IAML		16 38 35.2	
	comp=N,26nm,1.4s						
BUCK				IAML		16 38 36.3	
	comp=E,24nm,1.8s						
J04D	**Umpqua Nationa**	**3.11**	**65**		**Pn**	**16 37 48.0**	**-0.2**
J04D				IAML		16 38 44.9	
	comp=N,52nm,1.1s						
COR	**Corvallis**	**3.23**	**36**	Pn	**Pn**	**16 37 49.7**	**+0.1**
COR				IAML		16 38 33.9	
	comp=N,43nm,0.6s						
COR				IAML		16 38 34.0	
	comp=N,38nm,0.7s						
H04D	**Lebanon**	**3.45**	**42**	Pn	**Pn**	**16 37 53.3**	**+0.6**
H04D				IAML		16 38 38.6	
	comp=E,37nm,0.6s						
H04D				IAML		16 38 40.4	
	comp=N,27nm,0.6s						
H04D	**Lebanon**	**3.45**	**42**	S	**Sn**	**16 38 32.5**	**-1.0**
	baz=224						
HEBO	**Mount Hebo**	**3.58**	**26**	Pn	**Pn**	**16 37 54.3**	**-0.2**
J05D	**Fort Rock, OR**	**3.73**	**68**	P	**Pn**	**16 37 56.4**	**-0.2**
	baz=253,SNR=10.0						
HOPS	**Hopland Field**	**3.74**	**143**	Pn	**Pn**	**16 37 54.8**	**-1.9**
K05A	**Summer Lake**	**3.84**	**78**		**Pn**	**16 37 57.9**	**-0.3**
K05A				IAML		16 38 42.3	
	comp=E,8.4nm,4.5s						
H04A	**Detroit Lake**	**3.84**	**45**		**Pn**	**16 37 58.2**	**+0.1**
PINE	**Pine Mountain**	**4.11**	**63**		**Pn**	**16 38 02.0**	**+0.1**
PINE				IAML		16 38 51.6	
	comp=E,7.3nm,3.1s						
PINE				IAML		16 40 08.0	
	comp=N,9.8nm,3.1s						
ORV	**Oroville**	**4.20**	**124**	Pn	**Pn**	**16 38 03.6**	**+0.7**
ORV				IAML		16 38 57.4	
	comp=N,14nm,0.6s						
ORV				IAML		16 38 57.6	
	comp=E,15nm,0.8s						
MOD	**Modoc Plateau**	**4.24**	**90**	Pn	**Pn**	**16 38 03.4**	**-0.3**
F04A	**Amboy**	**4.69**	**32**	Pn	**Pn**	**16 38 10.3**	**+0.7**
E03A	**Lebam**	**4.85**	**20**	Pn	**Pn**	**16 38 11.8**	**-0.1**
I07A	**Izee**	**5.18**	**64**		**Pn**	**16 38 17.1**	**+0.6**
I07A				IAML		16 39 37.2	
	comp=E,4.6nm,4.6s						
I07A				IAML		16 41 44.3	
	comp=N,4.7nm,4.3s						
WVOR	**Wild Horse Val**	**5.47**	**83**	Pn	**Pn**	**16 38 19.9**	**-0.6**
PNTR	**Pine Nut**	**5.67**	**119**	Pn	**Pn**	**16 38 24.5**	**+1.1**
D03D	**Eldon**	**5.89**	**19**	S	**Sn**	**16 39 31.1**	**-2.6**
	baz=201						
NVAR	**Mina Array Bea**	**6.88**	**119**	Pn	**Pn**	**16 38 40.9**	**+0.9**
	comp=N,0.3nm,0.3s,baz=298,slow=14,SNR=6.6						
	comp=N,0.3nm,0.4s						
YKA	**Yellowknife Ar**	**21.60**	**14**	P	**P**	**16 41 50.8**	**+2.2**
	comp=N,0.6nm,0.7s,baz=205,slow=12,SNR=1.3						
	comp=N,0.6nm,0.7s						
TXAR	**Lajitas Array**	**22.03**	**118**	P	**P**	**16 41 55.9**	**+2.3**
	comp=N,0.1nm,0.4s,baz=309,slow=12,SNR=2.3						
	comp=N,0.1nm,0.4s						

*IDC **13** 16:44:09.3±1.7, 0.55N×125.80E, h0km, mb3.6/4, mbtmp3.6/4, MS3.0/2, Error ellipse: s-maj=164.9km s-min=22.9km az=64.0*
*DJA **13** 16:44:16.4±0.2, 0.3S±2.2×12.5E±.1, h10km, M4.0/14, mb4.0/3, mB4.5/1, MLv3.9/14, Mw(mB)3.7/1*
ISC 13 16:44:17.6±0.9, 0.08S±0.07×124.78E±0.06, h50km, n23, σ1§54/21, mb3.6/4, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**1.03**	**309**	P	**Pn**	**16 44 35.7**	**-0.1**
KMSI				S	**Sn**	**16 44 49.2**	**0.0**
LUWI	**Luwuk**	**2.23**	**245**	P	**Pn**	**16 44 53.3**	**+1.2**
LUWI	**Luwuk**	**2.23**	**245**	P	Pn	16 44 57.2	+5.1
SANI	**Sanana**	**2.30**	**148**	P	**Pn**	**16 44 51.9**	**-1.1**
TNTI	**Ternate**	**2.72**	**72**	P	**Pn**	**16 45 00.6**	**+1.8**
TNTI	**Ternate**	**2.72**	**72**	P	**Pn**	**16 45 01.7**	**+2.9**
LBMI	**Labuha**	**2.77**	**102**	P	**Pn**	**16 45 00.3**	**+0.8**
MRSI	**Marisa**	**2.90**	**281**	P	**Pn**	**16 44 59.9**	**-1.3**
APSI	**Ampana**	**3.24**	**255**	P	**Pn**	**16 45 07.2**	**+1.2**
SGSI	**Sangihe**	**3.81**	**11**	P	**Pn**	**16 45 16.5**	**+2.6**
TOLI2	**Tolitoli**	**4.17**	**286**	P	**Pn**	**16 45 19.8**	**+1.0**
MPSI	**Mapaga**	**4.90**	**275**	P	**Pn**	**16 45 30.3**	**+1.5**
MSAI	**Masohi**	**5.26**	**128**	P	**Pn**	**16 45 34.3**	**+0.6**
TTSI	**Tana Toraja**	**5.77**	**239**	P	**Pn**	**16 45 41.7**	**+1.0**
	0.1nm9.1nm,0.4s						
BNSI	**Bone**	**6.34**	**227**	P	**Pn**	**16 45 50.6**	**+2.0**
	0.1nm9.9nm,0.8s						
BKSI	**Bulukumba**	**6.98**	**222**	P	**Pn**	**16 45 59.3**	**+1.9**
FAKI	**Fak Fak**	**7.98**	**111**	P	**Pn**	**16 46 10.0**	**-1.0**
WRA	**Warramunga Arr**	**21.85**	**155**	P	**P**	**16 49 04.7**	**-1.4**
	0.8nm,0.8s,baz=337,slow=11,SNR=12						
	0.8nm,0.8s						
ASAR	**Alice Springs**	**25.06**	**160**	P	**P**	**16 49 37.5**	**0.0**
	0.5nm,0.5s,baz=341,slow=8.8,SNR=13						
	0.5nm,0.5s						
STKA	**Stephens Creek**	**35.40**	**155**	P	**P**	**16 51 09.4**	**+0.7**
	0.6nm,0.3s,baz=344,slow=8.6,SNR=8.8						
	0.6nm,0.3s						
ASAJ	**Asahikawa**	**46.78**	**18**	LR	LR	17 11 29.9	
	comp=Z,13nm,20.0s,baz=243,slow=36						
MKAR	**Makanchi Array**	**59.63**	**327**	P	**P**	**16 54 15.3**	**-1.3**
	0.3nm,0.4s,baz=127,slow=7.9,SNR=8.3						
	0.3nm,0.4s						
AAK	**Ala-Archa**	**61.93**	**320**	LR	LR	17 23 31.5	
	comp=Z,14nm,18.1s,baz=145,slow=38						

*MAN **13** 16:51:19.8, 16.25N×119.78E, h55km, mb4.8, ML3.7, MS3.6*
*NEIC **13** 16:51:20.8±1.5, 16.08N±0.09×120.1E±0.1, h68km±7km, mb4.4/21, Error ellipse: s-maj=16.2km s-min=13.5km az=88.0*
*IDC **13** 16:51:26.9±1.3, 16.09N×120.09E, h129km±15km, mb3.5/13, mbtmp4.0/14, MS2.9/2, Error ellipse: s-maj=25.3km s-min=15.3km az=68.0*
ISC 13 16:51:18.9±0.5, 16.08N±0.06×119.72E±0.07, h50km, n58, σ1§56/56, mb4.2/20, 3C-6D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOLP	**Bolinao**	**0.36**	**31**	↓*e*P	Pn	**16 51 29.9**	**+1.3**
BOLP				*e*S	Sn	16 52 21.1	+46
SMPP	**San Manuel, Pa**	**0.93**	**85**	↓*e*P	**Pn**	**16 51 35.7**	**+0.1**
PCPH	**Palayan**	**1.42**	**111**	↑*e*P	Pn	16 51 47.8	+5.5
PCPH				*e*S	**Sn**	**16 52 01.3**	**+1.4**
BALP	**Baler**	**1.82**	**100**	↓*e*P	**Pn**	**16 51 49.3**	**+1.6**
BALP				*e*S	Sn	16 52 37.4	+28
SIPP	**Brgy, Tapao**	**1.97**	**21**	↓*e*P	**Pn**	**16 51 49.5**	**-0.3**
SIPP				*e*S	Sn	16 52 32.7	+19
CAUP	**Cauayan**	**2.19**	**67**	↓*e*P	**Pn**	**16 51 54.1**	**+1.1**
CAUP				*e*S	Sn	16 52 40.0	+21
TGY	**Tagaytay City**	**2.29**	**149**	P	Pn	16 52 01.7	+7.4
	748nm,0.5s,baz=330,slow=16						
TGY				S	Sn	16 52 30.9	+10
	baz=330,slow=16						
TGY	**Tagaytay City**	**2.29**	**149**	↑*e*P	Pn	16 52 00.4	+6.1
TGY				*e*S	Sn	16 52 32.0	+11
PGP	**Puerto Galera**	**2.82**	**155**	↑*e*P	Pn	16 52 05.9	+4.3
PGP				*i* S	**Sn**	**16 52 39.5**	**+5.0**
SGCP	**Gonzaga**	**3.10**	**46**	↓*e*P	**Pn**	**16 52 05.5**	**+0.2**
SGCP				*e*S	**Sn**	**16 52 47.1**	**+6.0**
YULB	**Yu-li**	**7.43**	**11**	Pn	**Pn**	**16 53 03.4**	**-1.4**
SSLB	**Suanglung**	**7.76**	**8**	Pn	**Pn**	**16 53 10.5**	**+1.1**
NACB	**Ninganchiao**	**8.25**	**12**	Pn	**Pn**	**16 53 15.8**	**-0.1**
YHNB	**Yeheng**	**8.69**	**10**	Pn	**Pn**	**16 53 23.3**	**+1.2**
YOJ	**Yonaguni jima**	**8.90**	**20**	Pn	**Pn**	**16 53 24.4**	**-0.4**
QIZ	**Qiongzhong**	**9.87**	**289**	Pn	Pn	16 53 41.5	+3.2
DAV	**Davao City (W)**	**10.63**	**147**	LR	LR	16 59 18.2	
	comp=Z,98nm,21.9s,baz=324,slow=45						
LUWI	**Luwuk**	**17.27**	**170**	P		**P**	**16 55 16.8**	**-0.8**
LUWI				IAmb	IAmb	16 55 34.4	
	comp=Z,27nm,1.1s						
CMAR	**Chiang Mai Arr**	**19.98**	**280**	P		**Pn**	**16 55 53.4**	**+3.9**
	comp=Z,1.8nm,0.9s,baz=97,slow=8.0,SNR=11						
CMAR				PcP		**PcP**	**17 00 02.4**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=128,slow=0.2,SNR=6.7						
	comp=Z,1.8nm,0.9s						
KSRS	**Korea Array**	**22.50**	**17**	P		**P**	**16 56 14.5**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=204,slow=12,SNR=5.3						
	comp=Z,0.9nm,0.7s						
JHJ	**Hachijo jima 2**	**24.84**	**43**	LR	LR	17 05 38.0	
	comp=Z,20nm,20.1s,baz=330,slow=35						
ASAR	**Alice Springs**	**41.86**	**160**	P		**P**	**16 59 01.8**	**-2.6**
	comp=Z,1.0nm,0.6s,baz=340,slow=7.0,SNR=5.3						
	comp=Z,1.0nm,0.6s						
MK31	**Makanchi Array**	**43.57**	**323**	P		**P**	**16 59 19.6**	**+1.6**
MKAR	**Makanchi Array**	**43.57**	**323**	P		**P**	**16 59 19.4**	**+1.3**
	comp=Z,0.5nm,0.4s,baz=126,slow=9.5,SNR=12							
MKAR				PcP		**PcP**	**17 01 05.7**	**+0.7**
	comp=Z,1.2nm,0.7s,baz=112,slow=3.7,SNR=9.1						
	comp=Z,0.5nm,0.4s						
MAKZ	**Makanchi**	**43.76**	**323**	P		**P**	**16 59 21.0**	**+1.4**
ZAA0	**Zalesovo Array**	**46.52**	**332**	P		**P**	**16 59 41.3**	**0.0**
ZALV	**Zalesovo Beam**	**46.52**	**332**	P		**P**	**16 59 41.9**	**+0.6**
	comp=Z,0.9nm,0.7s,baz=147,slow=6.4,SNR=5.1							
ZALV				PcP		**PcP**	**17 01 14.7**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=105,slow=4.7,SNR=3.9						
	comp=Z,0.9nm,0.7s						
ZALV	**Zalesovo Beam**	**46.52**	**332**	P		**P**	**16 59 41.5**	**+0.2**
PETK	**Petropavlovsk-**	**47.44**	**30**	P		**P**	**16 59 46.7**	**-1.7**
	comp=Z,0.9nm,0.5s,baz=216,slow=7.0,SNR=5.6							
	comp=Z,0.9nm,0.5s						
KURK	**Kurchatov**	**47.70**	**326**	P		**P**	**16 59 51.3**	**+0.8**
KURK				IAmb	IAmb	16 59 52.8	
	comp=Z,9.5nm,1.1s						
STKA	**Stephens Creek**	**52.09**	**156**	P		**P**	**17 00 22.8**	**-1.2**
	comp=Z,1.9nm,0.7s,baz=336,slow=4.9,SNR=3.7						
	comp=Z,1.9nm,0.7s						
STKA	**Stephens Creek**	**52.09**	**156**	P		**P**	**17 00 23.0**	**-1.0**
BRVK	**Borovoye**	**53.36**	**325**	P		**P**	**17 00 34.6**	**+1.4**
BRVK				IAmb	IAmb	17 00 35.5	
	comp=Z,4.6nm,0.8s						
TIXI	**Tiksi**	**55.83**	**3**	P		**P**	**17 00 49.2**	**-1.5**
TIXI				IAmb	IAmb	17 01 05.7	
	comp=Z,3.2nm,1.1s						
NRIK	**Noril'sk**	**56.90**	**347**	P		**P**	**17 00 58.2**	**-0.2**
	comp=Z,4.7nm,0.8s,baz=110,slow=7.6,SNR=7.7							
	comp=Z,4.7nm,0.8s						
NRIK	**Noril'sk**	**56.90**	**347**	P		**P**	**17 00 58.6**	**+0.1**
ABKAR	**Akbulak array**	**58.33**	**318**	P		**P**	**17 01 10.0**	**+1.1**
ARU	**Arti**	**60.89**	**326**	P		**P**	**17 01 26.6**	**+0.3**
KBZ	**Khabaz**	**69.61**	**311**	P		**P**	**17 02 23.7**	**+0.7**
	comp=Z,1.2nm,0.5s,baz=180,slow=13,SNR=5.0							
	comp=Z,1.2nm,0.5s						
TTA	**Tatalina**	**73.22**	**28**	P		**P**	**17 02 43.7**	**-0.9**
TTA				IAmb	IAmb	17 02 52.9	
	comp=Z,2.8nm,1.1s						
IMAR	**Indian Mountai**	**74.04**	**25**	P		**P**	**17 02 48.8**	**-0.5**
ARCES	**ARCESS Array B**	**76.54**	**339**	P		**P**	**17 03 03.9**	**+0.3**
	comp=Z,2.7nm,0.8s,baz=81,slow=7.5,SNR=7.3							
	comp=Z,2.7nm,0.8s						
ARCES	**ARCESS Array B**	**76.54**	**339**	IAmb	IAmb	17 03 04.7	
	comp=Z,4.7nm,0.9s						
SPB2	**Spitsbergen Ar**	**77.08**	**348**	P		**P**	**17 03 06.8**	**+0.4**
SPB2				IAmb	IAmb	17 03 08.7	
	comp=Z,6.4nm,0.8s						
BMAR	**Burnt Mountain**	**77.47**	**23**	P		**P**	**17 03 09.1**	**+0.2**
FIA1	**FINESS Array S**	**77.76**	**331**	P		**P**	**17 03 10.1**	**-0.3**
FIA1				IAmb	IAmb	17 03 25.0	
	comp=Z,13nm,1.4s						
FINES	**FINESS Array B**	**77.76**	**331**	P		**P**	**17 03 10.6**	**+0.1**
	comp=Z,1.2nm,0.5s,baz=59,slow=5.4,SNR=13							
	comp=Z,1.

SWI	**Sorong**	**12.18 295**	P	**Pn**	**16 54 28.8**	**-1.3**
MTN	**Manton Dam**	**12.85 238**	Pn	**Pn**	**16 54 39.3**	**0.0**
WB0	**Warramunga Arr**	**15.57 209**	Pn	**Pn**	**16 55 17.6**	**+1.5**
WB0			IAmb	IAmb	16 55 28.0	
	comp=Z,9.4nm,0.7s					
WR0	**Warramunga Arr**	**15.66 208**		**Pn**	**16 55 17.4**	**+0.2**
WR0			IAmb	IAmb	16 55 29.9	
	comp=Z,13nm,0.7s					
WB2	**Warramunga Arr**	**15.74 209**	Pn	**Pn**	**16 55 18.8**	**+0.6**
WB2			IAmb	IAmb	16 55 30.2	
	comp=Z,18nm,1.1s					
WRA	**Warramunga Arr**	**15.74 209**	Pn	**Pn**	**16 55 18.9**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=27,slow=12,SNR=8.0					
WRA			Sn	**Sn**	**16 58 07.2**	**-4.9**
	comp=Z,0.5nm,0.3s,baz=31,slow=22,SNR=4.4					
WRA	**Warramunga Arr**	**15.74 209**		**Pn**	**16 55 18.5**	**+0.2**
KNRA	**Kununurra**	**16.30 233**		**Pn**	**16 55 25.1**	**-0.3**
KNRA			IAmb	IAmb	16 55 33.2	
	comp=Z,22nm,0.7s					
SOEI	**Soe**	**18.19 257**	P	**Pn**	**16 55 48.0**	**-1.2**
AS31	**Alice Springs**	**19.20 204**	P	**Pn**	**16 56 03.6**	**+2.4**
ASAR	**Alice Springs**	**19.20 204**	P	**Pn**	**16 56 04.4**	**+3.1**
	comp=Z,8.4nm,0.7s,baz=33,slow=10,SNR=48					
ASAR			S	**Sn**	**16 59 31.4**	**-4.4**
	comp=Z,1.2nm,0.6s,baz=19,slow=28,SNR=5.4					
ASAR			LR	LR	17 04 20.7	
	comp=Z,102nm,20.3s,baz=36,slow=39					
ASAR	**Alice Springs**	**19.20 204**	P	**Pn**	**16 56 03.8**	**+2.5**
TOLI2	**Tolitoli**	**22.64 288**	P	**P**	**16 56 38.4**	**+1.0**
TOLI2			IAmb	IAmb	16 56 46.2	
	comp=Z,5.8nm,1.0s					
STKA	**Stephens Creek**	**25.62 181**	P	**P**	**16 57 08.8**	**+3.3**
	comp=Z,1.1nm,0.8s,baz=355,slow=11,SNR=1.5					
	comp=Z,1.1nm,0.8s					
KSRS	**Korea Array**	**45.39 344**	P	**P**	**16 59 52.5**	**-1.9**
	comp=Z,0.7nm,0.5s,baz=160,slow=8.0,SNR=5.4					
	comp=Z,0.7nm,0.5s					
CMAR	**Chiang Mai Arr**	**49.22 301**	P	**P**	**17 00 26.6**	**+1.9**
	comp=Z,0.2nm,0.4s,baz=127,slow=7.0,SNR=2.0					
	comp=Z,0.2nm,0.4s					
USRK	**Ussuriysk Ar.**	**50.96 350**	P	**P**	**17 00 36.8**	**-0.6**
	comp=Z,1.5nm,0.7s,baz=120,slow=5.7,SNR=3.0					
	comp=Z,1.5nm,0.7s					
PETK	**Petropavlovsk-**	**60.45 11**	P	**P**	**17 01 44.1**	**-1.3**
	comp=Z,1.2nm,0.6s,baz=146,slow=6.2,SNR=3.5					
	comp=Z,1.2nm,0.6s					
PETK	**Petropavlovsk-**	**60.45 11**	P	**P**	**17 01 43.4**	**-1.9**
SONM	**Songino Array**	**62.33 334**	P	**P**	**17 01 58.3**	**0.0**
	comp=Z,0.5nm,0.5s,baz=133,slow=8.1,SNR=2.0					
	comp=Z,0.5nm,0.5s					
SONM	**Songino Array**	**62.33 334**	IAmb	IAmb	17 02 00.1	
	comp=Z,1.1nm,0.9s					
MK31	**Makanchi Array**	**74.66 322**	P	**P**	**17 03 15.0**	**-0.3**
MK31			IAmb	IAmb	17 03 17.2	
	comp=Z,3.0nm,1.4s					
MKAR	**Makanchi Array**	**74.66 322**	P	**P**	**17 03 16.2**	**+0.9**
	comp=Z,1.2nm,0.6s,baz=103,slow=7.6,SNR=12					
	comp=Z,1.2nm,0.6s					
MKAR	**Makanchi Array**	**74.66 322**	P	**P**	**17 03 15.1**	**-0.2**
MAKZ	**Makanchi**	**74.86 322**	P	**P**	**17 03 16.4**	**-0.1**
MAKZ			IAmb	IAmb	17 03 18.1	
	comp=Z,5.9nm,1.4s					
ZALV	**Zalesovo Beam**	**76.67 329**	P	**P**	**17 03 26.1**	**-0.5**
	comp=Z,0.5nm,0.4s,baz=128,slow=4.6,SNR=2.2					
	comp=Z,0.5nm,0.4s					
CNPM	**China Poot**	**83.64 28**	P	**P**	**17 04 02.6**	**-1.5**
QSPA	**South Pole Qui**	**83.83 180**	P	**P**	**17 04 06.5**	**+1.4**
BRVK	**Borovoye**	**84.21 325**	P	**P**	**17 04 07.3**	**+0.1**
IL31		**87.48 24**	P	**P**	**17 04 21.2**	**-1.8**
IL31			IAmb	IAmb	17 04 22.0	
	comp=Z,1.7nm,0.8s					
ILAR	**Eielson Array**	**87.48 24**	P	**P**	**17 04 21.2**	**-1.9**
	comp=Z,1.0nm,0.7s,baz=260,slow=4.5,SNR=6.5					
	comp=Z,1.0nm,0.7s					
BMAR	**Burnt Mountain**	**89.23 22**	P	**P**	**17 04 29.8**	**-1.7**
ABKAR	**Akbulak array**	**89.62 320**	P	**P**	**17 04 32.9**	**-0.7**

MAN 13 16:58:13.7, 16°.22N×119°.94E, h33km, mb4.5, ML3.3, MS3.1, Luzon

MAN 13 16:58:19.8, 9°.76N×122°.33E, h19km, mb4.5, ML3.4, MS3.2, Negros

NEIC ***13*** *17:04:21.6±1.6, 19°.8S±0°.2×177°.4W±0°.1, h544km±8km, mb4.4/31, Error ellipse: s-maj=22.4km s-min=17.9km az=196.0*

IDC ***13*** *17:04:22.2±2.4, 19°.77S×177°.56W, h551km±21km, mb3.4/5, mbtmp4.4/7, Error ellipse: s-maj=29.7km s-min=22.4km az=78.0*

ISC 13 17:04:21.1±0.6, 19°.8S±0°.1×177°.46W±0°.09, h550km, n45, σ1857/47, mb4.3/20, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.71**	**295**	P	**P**	**17 05 49.7**	**+1.0**
	30nm,0.4s,baz=150,slow=8.1,SNR=128						
MSVF	**Nonsavu**	**4.71**	**295**	P	**P**	**17 05 49.4**	**+0.7**
NIUE	**Niue**	**7.14**	**86**	P	**P**	**17 06 09.8**	**-0.7**
AFI	**Afiamalu**	**7.96**	**44**	P	P	17 06 14.7	-3.9
	22nm,0.5s,baz=236,slow=7.3,SNR=3.6						
AFI				S	S	17 07 45.1	-10
	11nm,0.3s,baz=180,slow=20,SNR=2.8						
AFI	**Afiamalu**	**7.96**	**44**	P	**P**	**17 06 15.1**	**-3.6**
URZ	**Urewera**	**19.03**	**193**	P	**P**	**17 08 07.3**	**-0.9**
	4.9nm,0.3s,baz=300,slow=18,SNR=13						
URZ				S	**S**	**17 11 05.4**	**-7.3**
	7.1nm,1.0s,baz=318,slow=12,SNR=1.8						
URZ	**Urewera**	**19.03**	**193**	P	**P**	**17 08 07.4**	**-0.8**
URZ				IAmb	IAmb	17 08 19.4	
	comp=Z,25nm,1.3s						
BKZ	**Black Stump Fm**	**20.04**	**194**	P	**P**	**17 08 15.5**	**-1.9**
BKZ				IAmb	IAmb	17 08 41.2	
	comp=Z,23nm,1.4s						
QRZ	**Quartz Range**	**22.68**	**200**	P	**P**	**17 08 41.4**	**+0.3**
NNZ	**Nelson**	**22.77**	**198**	P	**P**	**17 08 41.7**	**-0.2**
THZ	**Tophouse**	**23.41**	**198**	P	**P**	**17 08 47.6**	**-0.1**
KHZ	**Kahutara**	**23.84**	**197**	P	**P**	**17 08 50.9**	**-0.4**
KHZ				IAmb	IAmb	17 08 55.6	
	comp=Z,24nm,1.2s						
LTZ	**Lake Taylor**	**24.54**	**198**	P	**P**	**17 08 56.8**	**-0.8**
LTZ				IAmb	IAmb	17 09 02.5	
	comp=Z,26nm,1.5s						
WHZ	**Wether Hill Ro**	**28.71**	**201**	P	**P**	**17 09 35.0**	**+0.8**
CTAO	**Charters Tower**	**34.08**	**263**	P	**P**	**17 10 20.9**	**+0.5**
CTAO				IAmb	IAmb	17 10 32.3	
	comp=Z,18nm,1.1s						
TOO	**Toolangi**	**36.75**	**233**	P	**P**	**17 10 43.2**	**+0.8**
TOO				IAmb	IAmb	17 10 43.7	
	comp=Z,6.5nm,0.7s						
COEN	**Coen**	**38.05**	**272**	P	**P**	**17 10 53.9**	**+0.6**
COEN				IAmb	IAmb	17 11 03.5	
	comp=Z,24nm,1.3s						
STKA	**Stephens Creek**	**38.57**	**243**	P	**P**	**17 10 58.1**	**+0.8**
	comp=Z,4.5nm,0.5s,baz=94,slow=10,SNR=13						
	comp=Z,4.5nm,0.5s						
STKA	**Stephens Creek**	**38.57**	**243**	P	**P**	**17 10 58.0**	**+0.8**
BBOO	**Buckleboo**	**43.34**	**243**	P	**P**	**17 11 35.4**	**+0.3**
WR0	**Warramunga Arr**	**45.02**	**261**	P	**P**	**17 11 48.0**	**-0.4**
WR0				IAmb	IAmb	17 12 02.0	
	comp=Z,9.2nm,1.2s						
AS31	**Alice Springs**	**45.19**	**256**	P	**P**	**17 11 49.7**	**+0.2**
ASAR	**Alice Springs**	**45.19**	**256**	P	**P**	**17 11 49.6**	**+0.1**
	comp=Z,9.4nm,0.8s,baz=88,slow=7.6,SNR=129						
ASAR				PcP	**PcP**	**17 13 18.2**	**+0.1**
	comp=Z,1.3nm,0.6s,baz=103,slow=4.0,SNR=7.6						
ASAR				S	**S**	**17 17 46.5**	**-3.3**
	comp=Z,1.0nm,0.7s,baz=91,slow=15,SNR=7.6						
	comp=Z,9.4nm,0.8s						
ASAR	**Alice Springs**	**45.19**	**256**	P	**P**	**17 11 49.2**	**-0.4**
WB0	**Warramunga Arr**	**45.19**	**261**	P	**P**	**17 11 49.4**	**-0.2**
WB0				IAmb	IAmb	17 11 50.3	
	comp=Z,5.7nm,0.9s						
WB2	**Warramunga Arr**	**45.20**	**261**	P	**P**	**17 11 49.4**	**-0.3**
WB2				IAmb	IAmb	17 11 50.5	
	comp=Z,6.3nm,0.8s						
WRA	**Warramunga Arr**	**45.21**	**261**	P	**P**	**17 11 49.2**	**-0.6**
	comp=Z,2.0nm,0.3s,baz=98,slow=7.5,SNR=115						
WRA				PcP	**PcP**	**17 13 18.4**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=97,slow=6.8,SNR=2.4						
	comp=Z,2.0nm,0.3s						
WRA	**Warramunga Arr**	**45.21**	**261**	P	**P**	**17 11 48.9**	**-0.9**
MTN	**Manton Dam**	**49.67**	**270**	P	**P**	**17 12 22.7**	**-0.6**
MTN				IAmb	IAmb	17 12 27.2	
	comp=Z,40nm,1.5s						
FORT	**Forrest**	**50.06**	**246**	P	**P**	**17 12 25.6**	**-0.2**
FORT				IAmb	IAmb	17 12 45.5	
	comp=Z,29nm,1.1s						
KNRA	**Kununurra**	**51.22**	**265**	P	**P**	**17 12 34.3**	**-0.2**
KNRA				IAmb	IAmb	17 12 34.6	
	comp=Z,28nm,1.2s						
PSA00	**Pilbara Seismi**	**58.34**	**256**	P	**P**	**17 13 23.0**	**-1.2**
PSA00	**Pilbara Seismi**	**58.34**	**256**	P	**P**	**17 13 23.5**	**-0.7**
PSA00				IAmb	IAmb	17 13 24.7	
	comp=Z,14nm,0.8s						
MBWA	**Marble Bar**	**58.52**	**257**	P	**P**	**17 13 25.1**	**-0.3**
MBWA				IAmb	IAmb	17 13 25.8	
	comp=Z,7.6nm,0.7s						
SBA	**Scott Base**	**58.64**	**184**	P	**P**	**17 13 27.8**	**+2.6**
VNDA	**Vanda**	**58.69**	**185**	P	**P**	**17 13 27.5**	**+1.9**
	comp=Z,0.7nm,0.7s,baz=38,slow=5.3,SNR=6.7						
	comp=Z,0.7nm,0.7s						
VNDA	**Vanda**	**58.69**	**185**	IAmb	IAmb	17 13 35.5	
	comp=Z,5.0nm,1.4s						
CASY	**Casey**	**64.85**	**205**	P	**P**	**17 14 06.7**	**+0.8**
CASY				IAmb	IAmb	17 14 24.1	
	comp=Z,10nm,1.5s						
QSPA	**South Pole Qui**	**70.31**	**180**	P	**P**	**17 14 41.1**	**+1.8**
KSM	**Kuching**	**73.82**	**278**	P	**P**	**17 15 00.3**	**-0.2**
KSM				IAmb	IAmb	17 15 01.7	
	comp=Z,5.8nm,0.9s						
CMAR	**Chiang Mai Arr**	**90.35**	**289**	P	**P**	**17 16 25.9**	**+1.5**
	comp=Z,1.0nm,0.8s,baz=110,slow=2.4,SNR=7.8						
	comp=Z,1.0nm,0.8s						
DRK0	**Durika**	**97.01**	**83**	P	**P**	**17 16 55.1**	**+0.1**
BRTR	**Keskin Array B**	**146.71**	**313**	PKPbc	**PKPbc**	**17 23 01.9**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=90,slow=1.4,SNR=6.5						
CLL	**Collm**	**147.46**	**348**	*i* PKPbc	**PKPbc**	**17 23 03.6**	**+0.3**
GERES	**GERESS Array B**	**149.62**	**345**	PKPbc	**PKPbc**	**17 23 09.1**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=5.7,slow=1.0,SNR=8.6						

NEIC ***13*** *17:17:25.0±1.6, 6°.36S±0°.06×130°.6E±0°.1, h111km±9km, mb4.4/6, Error ellipse: s-maj=18.3km s-min=7.7km az=77.0*

IDC ***13*** *17:17:25.7±2.6, 6°.22S×130°.49E, h113km±25km, mb3.6/3, mbtmp4.2/6, Error ellipse: s-maj=36.5km s-min=24.2km az=108.0*

ISC 13 17:17:23.6±0.6, 6°.37S±0°.05×130°.57E±0°.07, h100km, n34, σ2870/40, mb4.0/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.76**	**156**	Pn	**Pn**	**17 17 54.6**	**+1.5**
SAUI	**Saumlaki**	**1.76**	**156**	P	**Pn**	**17 17 54.3**	**+1.2**
BNDI	**Bandanaira**	**1.95**	**340**	P	**Pn**	**17 17 58.6**	**+3.0**
FAKI	**Fak Fak**	**3.81**	**26**		**Pn**	**17 18 21.8**	**+1.4**
FAKI	**Fak Fak**	**3.81**	**26**	P	**Pn**	**17 18 21.7**	**+1.4**
SIJI	**Sorong**	**5.51**	**7**	P	**Pn**	**17 18 43.5**	**+0.1**
	58nm,0.3s,baz=203,slow=13,SNR=161						
SIJI				S	**Sn**	**17 19 40.9**	**-4.6**
	80nm,0.3s,baz=287,slow=19,SNR=19						
SANI	**Sanana**	**6.27**	**313**	P	**Pn**	**17 18 56.5**	**+2.8**
	14nm,0.8s						
MTN	**Manton Dam**	**6.46**	**175**	Pn	**Pn**	**17 18 58.2**	**+2.0**
MTN				Sn	**Sn**	**17 20 08.7**	**+0.3**
MTN	**Manton Dam**	**6.46**	**175**	P	**Pn**	**17 18 59.5**	**+3.3**
KDU	**Kakadu**	**6.55**	**164**	P	**Pn**	**17 19 00.0**	**+2.6**
SOEI	**Soe**	**7.09**	**241**	Pn	**Pn**	**17 19 08.2**	**+3.3**
SOEI	**Soe**	**7.09**	**241**	P	**Pn**	**17 19 08.7**	**+3.8**
	42nm,1.6s						
BATI	**Baumata**	**7.83**	**240**	P	**Pn**	**17 19 17.6**	**+2.7**
	23nm,0.4s,baz=69,slow=5.5,SNR=17						
BATI				S	**Sn**	**17 20 41.2**	**-0.7**
	38nm,0.4s,baz=130,slow=20,SNR=8.8						
KNRA	**Kununurra**	**9.42**	**191**	Pn	**Pn**	**17 19 37.3**	**+0.8**
KNRA				Sn	**Sn**	**17 21 15.7**	**-4.8**
KNRA	**Kununurra**	**9.42**	**191**	P	**Pn**	**17 19 37.4**	**+1.0**
	125nm,0.6s						
PLAI	**Plampang**	**12.92**	**258**	P	**Pn**	**17 20 25.4**	**+1.9**
	28nm,1.3s						
WB0	**Warramunga Arr**	**13.82**	**165**	Pn	**Pn**	**17 20 33.7**	**-1.7**
WRA	**Warramunga Arr**	**13.98**	**165**	P	**Pn**	**17 20 35.6**	**-1.8**
	1.6nm,0.3s,baz=348,slow=13,SNR=29						
WRA				S	**Sn**	**17 23 04.0**	**-7.3**
	6.5nm,0.6s,baz=330,slow=24,SNR=8.1						
WRA	**Warramunga Arr**	**13.98**	**165**		**Pn**	**17 20 35.5**	**-1.9**
WB2	**Warramunga Arr**	**13.98**	**165**	Pn	**Pn**	**17 20 35.7**	**-1.7**
WR0	**Warramunga Arr**	**14.05**	**164**	Pn	**Pn**	**17 20 38.1**	**-0.2**
COEN	**Coen**	**14.51**	**122**	P	**Pn**	**17 20 47.0**	**+2.8**
COEN	**Coen**	**14.51**	**122**	P	**Pn**	**17 20 46.6**	**+2.4**
	21nm,1.3s						
QIS	**Mount Isa**	**16.60**	**149**	P	**P**	**17 21 14.8**	**+3.6**
AS31	**Alice Springs**	**17.49**	**170**	P	**P**	**17 21 22.1**	**+1.0**
ASAR	**Alice Springs**	**17.49**	**170**	P	**Pn**	**17 21 23.5**	**+2.2**
	1.3nm,0.4s,baz=347,slow=11,SNR=54						
ASAR				S	**Sn**	**17 24 30.1**	**-6.2**
	1.7nm,0.5s,baz=350,slow=26,SNR=6.3						
ASAR	**Alice Springs**	**17.49**	**170**	P	**Pn**	**17 21 23.1**	**+1.8**
MBWA	**Marble Bar**	**18.06**	**214**	P	**P**	**17 21 27.0**	**-0.4**
MBWA				IAmb	IAmb	17 22 26.6	
	comp=Z,71nm,2.0s						
CMAR	**Chiang Mai Arr**	**39.77**	**309**	P	**P**	**17 24 45.7**	**-1.3**
	comp=Z,0.6nm,0.8s,baz=132,slow=6.2,SNR=6.0						
	comp=Z,0.6nm,0.8s						
PETK	**Petropavlovsk-**	**63.55**	**18**	P	**P**	**17 27 43.4**	**0.0**
	comp=Z,1.1nm,0.8s,baz=209,slow=12,SNR=4.1						
	comp=Z,1.1nm,0.8s						
MK31	**Makanchi Array**	**68.02**	**326**	P	**P**	**17 28 12.0**	**-0.3**
MK31				IAmb	IAmb	17 28 12.8	
	comp=Z,1.1nm,0.8s						
MKAR	**Makanchi Array**	**68.02**	**326**	P	**P**	**17 28 12.1**	**-0.2**
	comp=Z,1.4nm,0.4s,baz=114,slow=8.2,SNR=33						
	comp=Z,1.4nm,0.4s						
MAKZ	**Makanchi**	**68.20**	**326**	P	**P**	**17 28 13.1**	**-0.3**
MAKZ				IAmb	IAmb	17 30 38.0	
	comp=Z,12nm,1.9s						
QSPA	**South Pole Qui**	**83.60**	**180**	P	**P**	**17 29 41.1**	**+0.3**
QSPA				IAmb	IAmb	17 29 46.2	
	comp=Z,26nm,1.9s						

AEIC ***13*** *17:34:16.2±0.9, 53°.05N±0°.04×167°.19W±0°.07, h49km±9km, Error ellipse: s-maj=7.0km s-min=4.5km az=134.0*

NEIC 13 17:34:17.2±0.8, 53°.1N±0°.1×167°.2W±0°.1, h47km±29km, ML3.5/8, ML3.3(AEIC), **Error ellipse: s-maj=19.1km s-min=3.4km az=150.0, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKFG	**Magazine Ridge**	**0.56**	**310**		Pn	17 34 29.0	0.0
OKSO	**Okmok South**	**0.66**	**298**		Pn	17 34 30.2	-0.1
MGOD	**Makushin Gods**	**0.77**	**14**		Pn	17 34 31.5	-0.3
UNV	**Unalaska Valle**	**0.90**	**27**		Pn	17 34 32.6	-0.8
MSW	**Makushin Switc**	**0.90**	**16**		Pn	17 34 33.3	-0.2
MTBL	**Makushin Table**	**0.97**	**18**		Pn	17 34 34.7	+0.2
NIKH	**Nikolski High**	**1.01**	**266**		Pn	17 34 34.0	-0.9
NIKH	**Nikolski High**	**1.01**	**266**	Sn	Sn	17 34 47.9	0.0
AKBBA	**Akutan Broad B**	**1.29**	**35**		Pn	17 34 38.6	-0.2
AKGG	**Akutan Green G**	**1.35**	**31**		Pn	17 34 39.9	+0.2
AKUT	**Akutan**	**1.38**	**37**		Pn	17 34 39.2	-0.7
AKUT	**Akutan**	**1.38**	**37**	Sn	Sn	17 34 57.1	+0.1
AKUT				IAML		17 34 58.8	
	comp=N,732nm,0.3s						
AKSA	**Akutan Strait**	**1.41**	**39**		Pn	17 34 39.5	-0.9
WECS	**Westdahl Cape**	**2.06**	**43**		Pn	17 34 50.0	+0.6
WESE	**West Dahl East**	**2.10**	**46**		Pn	17 34 50.3	+0.3
SSLW	**Shishaldin Wes**	**2.50**	**45**		Pn	17 34 55.9	+0.4
ISLZ	**Isanotski Laza**	**2.66**	**49**		Pn	17 34 58.2	+0.7
FALS	**False Pass**	**2.87**	**49**		Pn	17 35 01.2	+0.8
SPIA	**Saint Paul Isl**	**4.49**	**338**	Pn	Pn	17 35 22.6	0.0
SDPT	**Sand Point**	**4.57**	**57**	Pn	Pn	17 35 23.8	+0.1
SDPT				IAML		17 36 44.4	
	comp=E,42nm,2.2s						
SDPT				IAML		17 36 44.6	
	comp=N,40nm,0.9s						
CNBA	**Chernabura Isl**	**4.83**	**65**	Pn	Pn	17 35 26.2	-1.1
ADK	**Adak**	**5.92**	**262**	Pn	Pn	17 35 43.1	+0.9
KIWB	**Kanaga Island**	**6.20**	**263**	Pn	Pn	17 35 46.8	+0.7
CHIR	**Chirikof Islan**	**7.30**	**63**	Pn	Pn	17 36 00.5	-0.6
O18K	**Koktuh Hills**	**9.50**	**39**	Pn	Pn	17 36 28.3	-3.0
KDAK	**Kodiak Island**	**9.56**	**54**	Pn	Pn	17 36 27.9	-4.1
RSO	**Redoubt South**	**10.84**	**41**	Pn	Pn	17 36 49.4	-0.3
CNPM	**China Poot**	**10.97**	**47**	Pn	Pn	17 36 51.5	+0.1
L19K	**White Mountain**	**11.27**	**31**	Pn	Pn	17 36 56.4	+1.0

IDC ***13*** *17:41:00.1±0.5, 50°.83S×139°.45E, h0km, mb4.5/10, mbtmp4.5/11, ML4.5/1, MS4.2/34, Error ellipse: s-maj=22.5km s-min=15.4km az=88.0*

NEIC ***13*** *17:41:00.9±1.6, 50°.91S±0°.09×139°.4E±0°.2, h10km±1km, mb5.0/34, Error ellipse: s-maj=19.3km s-min=14.7km az=101.0*

BJI ***13*** *17:41:00.0±0.0, 51°.00S×139°.50E, h10km, mb4.7/19, mB5.3/10, Ms4.9/7, Ms7 4.5/6*

GCMT ***13*** *17:41:01.9±0.2, 50°.94S±0°.01×139°.44E±0°.02, h17km±1km, MW5.0/101, Moment Tensor Solution. s43,c52; s101,c150; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=0.39±.13; Mθθ 0.17±.12; Mϕϕ 0.22±.14; Mrθ 1.60±.32; Mθϕ -3.58±.10; Mϕr 0.35±.29; Best double couple: Mo 3.95100×10^16 NP1:ϕs 179.00000°, δ 66.00000°, λ -7.00000°. NP2:ϕs 272.00000°, δ 83.00000°, λ -156.00000°. Principal axes: T 3.9630, Plg 12.0000°, Azm 43.0000°; N -0.0240, Plg 65.0000°, Azm 286.0000°; P -3.9390, Plg 22.0000°, Azm 138.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 17:41:01.4±0.4, 50°.96S±0°.06×139°.46E±0°.09, h11km, n175, σ1832/134, mb4.8/33, MS4.2/39, 1C-1D, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAU	**Tasmania Unive**	**9.67**	**37**	Pn	**Pn**	**17 43 18.4**	**-2.0**
TAU	**Tasmania Unive**	**9.67**	**37**	P	**Pn**	**17 43 22.4**	**+2.0**
MLBS	**Spotswood, Mel**	**13.68**	**18**	P	**Pn**	**17 44 16.2**	**+1.1**
BRAT	**Ballarat**	**13.78**	**15**	P	**Pn**	**17 44 18.5**	**+2.0**
TOO	**Toolangi**	**14.05**	**20**	Pn	**Pn**	**17 44 19.6**	**-0.8**
TOO	**Toolangi**	**14.05**	**20**	P	**Pn**	**17 44 22.6**	**+2.3**
ARPS	**Mount Arapiles**	**14.28**	**8**	P	**Pn**	**17 44 25.6**	**+2.2**
TWOA	**Tennyson Woods**	**15.93**	**357**	P	**Pn**	**17 44 46.8**	**+1.5**
CAN	**Canberra**	**17.08**	**27**		**Pn**	**17 44 58.4**	**-1.6**
CAN	**Canberra**	**17.08**	**27**	P	**P**	**17 45 01.8**	**0.0**
CNB	**Canberra Magne**	**17.20**	**28**	P	**P**	**17 45 04.8**	**+1.7**
	26nm,1.4s						
HTT	**Hallett**	**17.52**	**359**	P	**P**	**17 45 07.4**	**+0.8**
NAPP	**Napperby**	**17.79**	**356**	P	**P**	**17 45 11.8**	**+2.3**
	26nm,1.4s						
WHYH	**Whyalla**	**17.96**	**355**	P	**P**	**17 45 12.6**	**+1.2**
BBOO	**Buckleboo**	**18.30**	**351**		**Pn**	**17 45 13.0**	**-2.1**
BBOO				IAmb	IAmb	17 45 20.2	
	comp=Z,122nm,1.4s						
BBOO	**Buckleboo**	**18.30**	**351**	P	**P**	**17 45 16.6**	**+1.4**
STKA	**Stephens Creek**	**19.13**	**6**	P	**P**	**17 45 24.2**	**-0.1**
	comp=Z,0.8nm,0.3s,baz=172,slow=13,SNR=35						
STKA				LR	LR	17 51 38.1	
	comp=Z,687nm,20.1s,baz=184,slow=34						
	comp=Z,26nm,0.8s						
STKA	**Stephens Creek**	**19.13**	**6**	P	**P**	**17 45 23.6**	**-0.7**
STKA	**Stephens Creek**	**19.13**	**6**	P	**Pn**	**17 45 25.2**	**+0.1**
CMSA	**Cobar Meteorol**	**19.94**	**16**	P	**Pn**	**17 45 36.3**	**+1.4**
LCRK	**Leigh Creek**	**20.51**	**357**	P	**P**	**17 45 39.7**	**+0.4**
MULG	**Mulgathing**	**21.04**	**347**	P	**P**	**17 45 45.3**	**+0.2**
CASY	**Casey**	**21.20**	**213**	P	**P**	**17 45 46.9**	**+0.4**
CASY				IAmb	IAmb	17 45 53.1	
	comp=Z,75nm,1.4s						
FORT	**Forrest**	**21.87**	**333**	P	**P**	**17 45 53.7**	**-0.3**
FORT	**Forrest**	**21.87**	**333**	P	**P**	**17 45 54.5**	**+0.5**
ARMA	**Armidale**	**22.44**	**29**	P	**P**	**17 46 00.8**	**+0.6**
ARMA				IAmb	IAmb	17 46 02.7	
	comp=Z,102nm,1.4s						
ARMA	**Armidale**	**22.44**	**29**	P	**P**	**17 46 01.7**	**+1.5**
RPZ	**Rata Peaks**	**22.48**	**84**	P	**P**	**17 46 02.3**	**+1.9**
	comp=Z,21nm,0.9s,baz=247,slow=6.7,SNR=5.2						
RPZ				LR	LR	17 52 59.4	
	comp=Z,848nm,19.2s,baz=244,slow=32						
	comp=Z,21nm,0.9s						
RPZ	**Rata Peaks**	**22.48**	**84**	IAmb	IAmb	17 46 03.3	
	comp=Z,72nm,1.2s						
INKA	**Innaminka**	**23.20**	**3**	P	**P**	**17 46 09.3**	**+1.2**
OOD	**Oodnadatta**	**23.31**	**352**	P	**P**	**17 46 11.6**	**+2.4**
H01W1	**Cape Leeuwin H**	**24.34**	**302**	T	T	18 11 23.2	
	baz=139,slow=75,SNR=3895						
H01W2	**Cape Leeuwin H**	**24.35**	**301**	T	T	18 11 22.6	
	baz=139,slow=75,SNR=4294						
H01W3	**Cape Leeuwin H**	**24.36**	**302**	T	T	18 11 24.5	
	baz=139,slow=75,SNR=3984						
QLP	**Quilpie**	**24.61**	**10**	P	**P**	**17 46 22.5**	**+1.0**
KLBR	**Kellerberrin**	**25.14**	**312**	P	**P**	**

comp=Z,286nm,21.6s,baz=321,slow=34
GENI Genyem 48.20 1 P **P** **17 49 43.2 +1.4**
comp=Z,68nm,1.1s
FAKI Fak Fak 48.25 350 P **P** **17 49 42.5 +0.3**
KAPI Kappang 48.67 333 LR LR 18 09 25.4
comp=Z,195nm,20.9s,baz=186,slow=35
SMPI Sarmi 48.79 359 P **P** **17 49 47.9 +1.5**
comp=Z,546nmcomp=Z,20nm,1.3s
SWI Sorong 50.39 349 P **P** **17 50 00.2 +1.7**
comp=Z,19nm,1.0s
LBMI Labuha 51.15 345 P **P** **17 50 06.0 +1.7**
comp=Z,16nm,1.2s
LEM Lembang 51.32 318 LR LR 18 10 07.2
comp=Z,132nm,20.4s,baz=160,slow=34
BELA Belgrano 2 51.39 182 P **P** **17 50 04.7 -0.7**
BBKI Banjar Baru 51.65 328 P **P** **17 50 08.6 +0.5**
comp=Z,36nm,1.2s
LUWI Luwuk 51.70 339 P **P** **17 50 07.5 -0.9**
LUWI IAmb IAmb 17 50 34.0
comp=Z,33nm,1.0s
TNTI Ternate 52.55 345 P **P** **17 50 13.6 -1.1**
TNTI IAmb IAmb 17 50 25.1
comp=Z,9.6nm,0.8s
TROLL Troll, Antarti 53.66 195 P **P** **17 50 21.5 -0.9**
AFI Afiamalu 53.85 65 LR LR 18 08 29.8
comp=Z,168nm,21.3s,baz=207,slow=31
AFI Afiamalu 53.85 65 P **P** **17 50 22.5 -1.9**
MTKI Muara Teweh, K 54.00 329 P **P** **17 50 26.7 +1.3**
TOLI2 Tolitoli 54.26 337 P **P** **17 50 24.5 -2.8**
SNAA Sanae 54.80 194 P **P** **17 50 30.8 +0.2**
SNAA Sanae 54.80 194 LR LR 18 12 37.9
comp=Z,436nm,21.4s,baz=166,slow=35
SNAA Sanae 54.80 194 P **P** **17 50 30.2 -0.5**
RAR Rarotonga 55.47 81 LR LR 18 11 48.2
comp=Z,91nm,18.2s,baz=224,slow=33
STKI Sintang 56.10 326 P **P** **17 50 41.4 +0.8**
comp=Z,15nm,1.1s
VNA3 Neumayer Olymp 56.13 192 P **P** **17 50 39.8 -0.4**
VNA1 Neumayer--Stat 56.49 192 P **P** **17 50 42.4 -0.4**
KSM Kuching 57.83 325 P **P** **17 50 52.7 -0.2**
KSM IAmb IAmb 17 50 56.1
comp=Z,10nm,1.0s
MYLDM Lahad Datu 58.75 335 P **P** **17 50 56.7 -2.5**
MYLDM IAmb IAmb 17 51 20.3
comp=Z,9.4nm,1.0s
RGRI Rengat 59.40 315 P P 17 51 16.8 +13
TBI Tubuai 60.41 91 *e*LR LR 18 08 17.2
comp=Z,144nm,25.8s
PMSA Palmer Station 63.17 169 LR LR 18 16 00.0
comp=Z,132nm,18.2s,baz=242,slow=33
PSI Prapat 63.73 314 LR LR 18 15 48.5
comp=Z,178nm,21.7s,baz=136,slow=33
PPT2 Papeete2 64.57 87 *e*LR LR 18 10 13.9
comp=Z,170nm,23.0s
PPT Papeete 64.59 87 LR LR 18 13 27.5
comp=Z,89nm,19.9s,baz=238,slow=30
H08S2 Diego Garcia H 69.65 283 T T 19 07 59.5
baz=142,slow=76,SNR=1486
H08S1 Diego Carcia H 69.67 283 T T 19 08 00.4
baz=142,slow=76,SNR=487
H08S3 Diego Garcia H 69.67 283 T T 19 08 01.0
baz=142,slow=76,SNR=2563
USHA Ushuaia 72.04 163 LR LR 18 19 52.9
comp=Z,254nm,18.2s,baz=204,slow=32
PALK Pallekele 76.82 299 LR LR 18 20 35.9
comp=Z,163nm,19.0s,baz=252,slow=31
TAOE Nuku Hiva Isla 77.13 88 *e*LR LR 18 15 58.6
comp=Z,156nm,23.9s
CM31 Chiang Mai Arr 77.72 321 P **P** **17 52 57.3 -0.8**
CM31 IAmb IAmb 17 53 02.8
comp=Z,19nm,1.4s
CMAR Chiang Mai Arr 77.72 321 P **P** **17 52 58.6 +0.6**
comp=Z,3.4nm,1.0s,baz=170,slow=5.2,SNR=17
CMAR LR LR 18 24 57.8
comp=Z,92nm,21.6s,baz=160,slow=34
comp=Z,3.4nm,1.0s
CMAR Chiang Mai Arr 77.72 321 P **P** **17 52 58.0 -0.1**
CHTO Chiang Mai 78.04 321 P **P** **17 53 00.5 +0.6**
CHTO IAmb IAmb 17 53 01.9
comp=Z,8.5nm,0.8s
SUR Sutherland 81.01 229 LR LR 18 21 12.5
comp=Z,153nm,21.4s,baz=146,slow=30
RPN Rapa Nui 81.53 123 LR LR 18 18 32.4
comp=Z,42nm,21.3s,baz=250,slow=28
BOSA Boshof 81.89 234 LR LR 18 22 04.9
comp=Z,190nm,21.6s,baz=176,slow=30
GYA Guiyang 82.34 331 ⇓P pmax pmax **17 53 24.3 +1.3**
GYA
comp=Z,8.0nm,1.0s
KMI Kunming 82.38 327 ⇑P **P** **17 53 25.3 +1.9**
KMI pP PcP 17 53 28.1 -0.5
KMI pmax pmax
comp=Z,10.0nm,1.1s
KMI LR LR
comp=Z,140nm,23.2s
KMI LR LR
comp=Z,100nm,17.1s
KMI LR LR
comp=Z,180nm,24.3s
JHJ Hachijo jima 2 83.71 0 LR LR 18 27 50.9
comp=Z,61nm,21.7s,baz=199,slow=34
PZH PanZhiHua 84.00 327 P **P** **17 53 32.0 +0.4**
PZH S **S** **18 03 58.9 +3.4**
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,170nm,7.4s
PZH LR LR
comp=Z,320nm,23.1s
PZH LR LR
comp=Z,720nm,22.1s
LBTB Lobatse 84.63 236 LR LR 18 25 30.9
comp=Z,146nm,18.6s,baz=159,slow=32
MJAR Matsushiro Arr 87.13 359 P **P** **17 53 46.3 -0.5**
comp=Z,1.9nm,1.0s,baz=160,slow=7.6,SNR=4.9
comp=Z,1.9nm,1.0s
MJAR Matsushiro Arr 87.13 359 IAmb IAmb 17 53 59.5
comp=Z,16nm,1.8s
CD2 Chengdu 87.39 330 *e*P **P** **17 53 49.0 +0.8**
KSAR Wonju Array Be 88.61 351 P **P** **17 53 53.6 -0.2**
KSRS Korea Array 88.62 351 P **P** **17 53 52.9 -0.9**
comp=Z,1.7nm,0.8s,baz=183,slow=4.2,SNR=10
comp=Z,1.7nm,0.8s
H03S2 Juan Fernandez 89.05 149 T T 19 33 27.3
baz=199,SNR=55
H03S1 Juan Fernandez 89.05 149 T T 19 33 31.2
baz=199,SNR=67
H03S3 Juan Fernandez 89.06 149 T T 19 33 28.7
baz=199,SNR=74
H03N3 Juan Fernandez 89.40 149 T T 19 34 02.7
baz=208
H03N2 Juan Fernandez 89.41 149 T T 19 33 59.8
baz=208
H03N1 Juan Fernandez 89.41 149 T T 19 34 01.8
baz=208
LSZ Lusaka 91.07 244 LR LR 18 28 29.0
comp=Z,257nm,20.0s,baz=146,slow=31
LZH Lanzhou 92.16 332 *e*P **P** **17 54 12.5 +1.9**
LZH sP pwP 17 54 19.4 +2.7
LZH pmax pmax
comp=Z,18nm,1.5s
LZH LR LR
comp=Z,120nm,17.4s
LZH LR LR
comp=Z,140nm,17.2s
LZH LR LR
comp=Z,160nm,19.7s
TSUM Tsumeb 93.58 234 LR LR 18 28 56.3
comp=Z,237nm,21.8s,baz=148,slow=31
HHC Hu-ho-hao-te 94.62 339 *e*P **P** **17 54 23.6 +1.8**
HHC pmax pmax
comp=Z,120nm,5.5s
ASAJ Asahikawa 94.73 2 LR LR 18 36 49.8
comp=Z,39nm,20.7s,baz=182,slow=35
KLR Kul'dur 100.02 355 LR LR 18 39 24.0
comp=Z,20nm,18.7s,baz=171,slow=35
TIXI Tiksi 122.53 356 PKP **PKPdf** **17 59 53.8 -1.4**
comp=Z,0.6nm,0.7s,baz=91,slow=23,SNR=3.8
YBH Yreka Blue Hor 125.32 65 PKP **PKPdf** **18 00 00.7 -0.9**
comp=Z,1.3nm,0.8s,baz=196,slow=7.6,SNR=3.0
NVAR Mina Array Bea 125.79 71 PKP **PKiKP** **18 00 03.1 0.0**
comp=Z,0.6nm,0.8s,baz=191,slow=2.8,SNR=3.7
FINES FINESS Array B 143.12 313 PKhKP PKPpre 18 00 30.5
comp=Z,1.1nm,0.7s,baz=93,slow=7.0,SNR=4.8
ARSA Arzberg 143.86 287 *e*P **PKPdf** **18 00 35.8 0.0**
comp=Z,6.0nm,1.3s
SOKA Soboth 143.89 285 *e*P **PKPdf** **18 00 35.8 -0.2**
comp=Z,8.9nm,1.5s
N41A Harden Midland 144.12 87 **PKPab** **18 00 34.4 +0.3**
Q44A Meyer Farm, Va 144.25 90 **PKPab** **18 00 34.0 -0.6**
I37A Lemond, Waseca 144.28 80 **PKPab** **18 00 34.5 0.0**
T47A Sharon Grove 144.31 95 **PKPab** **18 00 34.8 -0.2**
ARCES ARCESS Array B 144.63 326 PKP **PKPab** **18 00 34.8 -0.4**
comp=Z,3.8nm,0.8s,baz=94,slow=2.7,SNR=12
ARCES ARCESS Array B 144.63 326 **PKPab** **18 00 35.0 -0.1**
L40A Anamosa 144.63 84 **PKPab** **18 00 35.9 -0.1**
MYKA Terra Mystica 144.72 285 *e*P **PKPdf** **18 00 37.1 -0.3**
comp=Z,15nm,1.7s
AGMN Agassiz Nation 144.78 72 **PKPab** **18 00 36.2 -0.1**
U49A Red Boiling Sp 144.85 96 **PKPab** **18 00 35.6 -1.4**
MOA Molln 144.89 287 *e*P **PKPab** **18 00 36.1 -0.6**
comp=Z,6.7nm,1.6s
KBA Koelnbreinsper 145.11 285 *e*P **PKPab** **18 00 37.6 -0.2**
comp=Z,6.5nm,0.8s
BIOA Bad Ischl, Aus 145.20 286 *e*P **PKPab** **18 00 37.7 -0.2**
comp=Z,6.2nm,0.9s
ABTA Abfaltersbach 145.47 284 *e*P **PKPab** **18 00 39.3 +0.3**
comp=Z,13nm,1.2s
TKL Tuckaleechee C 145.57 99 PKPbc **PKPdf** **18 00 38.2 -0.9**
comp=Z,3.5nm,0.7s,baz=230,slow=6.9,SNR=3.3
ULM Lac du Bonnet 145.57 69 PKPbc **PKPdf** **18 00 38.2 -0.4**
comp=Z,1.9nm,0.6s,baz=225,slow=1.4,SNR=3.3
GERES GERESS Array B 145.65 288 PKPbc **PKPdf** **18 00 38.9 -0.1**
comp=Z,5.2nm,0.8s,baz=132,slow=6.7,SNR=30
GERES GERESS Array B 145.65 288 **PKPdf** **18 00 37.6 -1.3**
KHC Kasperske Hory 145.85 289 *e*PKP **PKPbc** **18 00 39.5 -0.3**
SPITS Spitsbergen Ar 146.01 342 PKPbc **PKPbc** **18 00 39.7 +0.2**
comp=Z,7.9nm,0.8s,baz=62,slow=13,SNR=8.2
WTTA Wattenberg 146.23 285 *e*P **PKPdf** **18 00 40.1 0.0**
comp=Z,29nm,1.6s
WATA Walderalm 146.30 285 *e*P **PKPab** **18 00 41.6 -0.6**
comp=Z,11nm,1.1s
BRG Berggiesshubel 146.31 292 *e*PKP **PKiKP** **18 00 48.0 +3.9**
BRG Amp 18 00 48.7
comp=Z,4.6nm,0.8s
SQTA Sankt Quirin 146.48 284 *e*P **PKPbc** **18 00 41.0 -0.9**
comp=Z,6.9nm,0.6s
MOTA Moosalm 146.59 284 *e*P **PKPbc** **18 00 41.6 -0.6**
comp=Z,11nm,0.8s
FETA Feichten 146.68 284 *e*P **PKPbc** **18 00 41.9 -0.6**
comp=Z,14nm,1.0s
RETA Reutte 146.87 284 *i* P **PKPab** **18 00 43.6 -0.7**
comp=Z,5.4nm,0.6s
CLL Collm 147.02 292 *e*PKPbc **PKPbc** **18 00 43.0 -0.1**
comp=Z,13nm,1.6s
CLL *ex* x 18 00 49.0
CLL *e*PP **PP** **18 04 06.0 -2.7**
DAVOX Davos/Dischmat 147.10 283 PKPbc **PKPbc** **18 00 43.6 -0.1**
comp=Z,2.9nm,0.6s,baz=116,slow=16,SNR=5.0
DAVA Damuels 147.32 284 *e*P **PKPbc** **18 00 44.8 +0.5**
comp=Z,11nm,0.8s
RES Resolute Bay 147.64 24 PKP **PKPdf** **18 00 37.6 -3.7**
comp=Z,4.7nm,0.9s,baz=140,slow=12,SNR=3.7
RES PKPbc **PKPbc** **18 00 43.6 -0.6**
comp=Z,6.5nm,0.7s,baz=280,slow=1.7,SNR=8.7
SENIN Lac Senin/Sane 148.51 281 **PKiKP** **18 00 48.7 -0.5**
NB2 NORSAR Subarra150.13 310 PKP **PKPbc** **18 00 50.2 -0.7**
comp=Z,9.4nm,1.7s,baz=80,slow=4.0
NOA NORSAR Array B150.13 310 PKPbc **PKPbc** **18 00 50.6 -0.3**
comp=Z,1.1nm,0.7s,baz=100,slow=1.9,SNR=5.4
ESDC Sonseca Array 152.19 260 PKPbc **PKiKP** **18 00 58.6 +1.9**
comp=Z,2.3nm,0.9s,baz=113,slow=1.7,SNR=12
ESDC PKPab **pPKPab** **18 01 08.3 -1.0**
comp=Z,5.3nm,1.0s,baz=119,slow=3.3,SNR=5.8

MAN 13 17:43:52.4, 16.22N×119.15E, h18km, mb4.2, ML3.0, MS2.6, Luzon

*MAN **13** 17:58:50.4, 3.88N×128.48E, h128km, mb5.4, ML4.4, MS4.7*
*IDC **13** 17:59:02.5±1.6, 4.43N×128.14E, h62km±14km, mb3.9/16, mbtmp4.2/19, MS3.6/11, Error ellipse: s-maj=24.8km s-min=8.6km az=62.0*
*BJI **13** 17:59:03.3±0.0, 4.30N×127.79E, h73km, mb4.5/38, mB4.9/19, Ms4.1/7, Ms7 3.8/6*
*DJA **13** 17:59:03.8±0.6, 4°N±5°×12°8E±°, h49km±7km, M4.6/24, mB5.0/6, mb4.6/24, MLv4.8/10, Mw(mB)4.3/6*
*NEIC **13** 17:59:04.4±1.7, 4.35N±0.07°×128.0E±0.1, h74km±7km, mb4.5/42, Error ellipse: s-maj=15.7km s-min=9.4km az=66.0*
ISC 13 17:59:02.7±0.4, **4.32N**±0.04×**128.02E**±0.06, **h66**km, **n130, s161/132, mb4.5/42, 4C-9D, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**2.56**	**256**	P		P	**Pn**	**17 59 40.3**	**-1.6**
SGSI				S		S	**Sn**	**18 00 09.9**	**-2.1**
DDMP	**Don Marcelino,**	**2.90**	**308**	⇓*e*P		P	**Pn**	**17 59 43.6**	**-2.9**
DDMP				*e*S		S	**Sn**	**18 00 16.8**	**-3.6**
MATI	**Mati**	**3.14**	**326**	⇓*e*P		P	**Pn**	**17 59 49.5**	**-0.4**
MATI				*e*S		S	**Sn**	**18 00 23.2**	**-3.0**
GSPH	**General Santos**	**3.53**	**300**	⇑*i*P		P	**Pn**	**17 59 50.6**	**-4.6**
GSPH				*i* S		Sn		18 00 25.6	-10
TNTI	**Ternate**	**3.58**	**191**	Pn		Pn	**Pn**	**17 59 58.3**	**+2.5**
TNTI	**Ternate**	**3.58**	**191**	P		Pn	**Pn**	**17 59 58.0**	**+2.2**
DAV	**Davao City (W)**	**3.66**	**318**	P		Pn	**Pn**	**17 59 57.3**	**+0.4**
	150nm,0.5s,baz=117,slow=2.3,SNR=1.6								
DAV				S			**Sn**	**18 00 39.6**	**+0.8**
	354nm,0.8s,baz=114,slow=20,SNR=4.8								
DAV				LR		LR		18 01 50.5	
	comp=Z,615nm,18.1s,baz=284,slow=46								
DAV	**Davao City (W)**	**3.66**	**318**	Pn		Pn	**Pn**	**17 59 57.8**	**+1.0**
DAV				Sn			**Sn**	**18 00 39.9**	**+1.1**
KCP	**Kidapawan**	**3.96**	**313**	⇑*i*P		P	**Pn**	**17 59 59.2**	**-1.7**
KCP				*i* S		S	**Sn**	**18 00 52.6**	**+6.4**
BIPH	**Bislig**	**4.18**	**337**	⇓*i*P		P	**Pn**	17 59 59.1	-4.8
BIPH				*i* S		S	**Sn**	**18 00 51.1**	**-0.5**
CTBH	**Cotabato--PC H**	**4.73**	**308**	I*e*P		P	**Pn**	**18 00 09.7**	**-1.9**
LBMI	**Labuha**	**4.95**	**186**	P		Pn	**Pn**	**18 00 18.0**	**+3.4**
	0.7nm719nm102nm,0.8s								
CGP	**Cagayan de Oro**	**5.27**	**321**	⇓*e*P		P	**Pn**	**18 00 19.2**	**+0.3**
CGP				*e*S		S	**Sn**	**18 01 21.9**	**+3.5**
KMSI	**Cibinong**	**5.49**	**227**	P		P	**Pn**	**18 00 23.0**	**+1.1**
	1.4nm3µm268nm,0.9s								
GLSP	**General Luna,**	**5.75**	**341**	⇓*e*P		P	**Pn**	**18 00 21.6**	**-3.8**
PAGZ	**Pagadian**	**5.79**	**307**	⇓*e*P		P	**Pn**	**18 00 25.0**	**-1.1**
SWI	**Sorong**	**6.08**	**148**	P		P	**Pn**	**18 00 29.8**	**-0.2**
SIJI	**Sorong**	**6.09**	**148**	P		P	**Pn**	**18 00 31.2**	**+1.1**
	7.5nm,0.4s,baz=330,slow=18,SNR=18								
SIJI				S			**Sn**	**18 01 37.9**	**-0.6**
	7.9nm,0.2s,baz=343,slow=19,SNR=6.1								
SIJI				LR		LR		18 02 49.0	
	comp=Z,409nm,21.8s,baz=321,slow=37								
MSLP	**Maasin**	**6.57**	**332**	⇓*e*P		P	**Pn**	**18 00 41.0**	**+4.2**
MSLP				*e*S		S	**Sn**	**18 01 52.2**	**+1.9**
SANI	**Sanana**	**6.64**	**198**	P		Pn	**Pn**	**18 00 37.4**	**-0.3**
TBP	**Tagbilaran**	**6.75**	**323**	*e*P		Pn	**Pn**	**18 00 37.6**	**-1.6**
TBP				*i* S		S	**Sn**	**18 01 58.5**	**+3.9**
MRSI	**Marisa**	**7.17**	**238**	P		Pn	**Pn**	**18 00 45.7**	**+0.7**
	0.9nm2µm272nm,0.7s								
LUWI	**Luwuk**	**7.47**	**225**				**Pn**	**18 00 52.0**	**+2.9**
LUWI				Sn			**Sn**	**18 02 10.9**	**-1.6**
LUWI	**Luwuk**	**7.47**	**225**	P		Pn	**Pn**	**18 00 51.7**	**+2.6**
	0.6nm2µm110nm,0.6s								
CNOP	**Candoni, Negro**	**7.64**	**316**	⇓*e*P		P	**Pn**	**18 00 50.3**	**-1.1**
TOLI2	**Tolitoli**	**7.90**	**246**	Pn		Pn	**Pn**	**18 00 54.5**	**-0.4**
APSI	**Anpana**	**8.22**	**231**	P		Pn	**Pn**	**18 01 00.4**	**+1.1**
	575nm52nm,0.6s								
MPSI	**Mapaga**	**9.03**	**244**	P		Pn	**Pn**	**18 01 11.6**	**+1.3**
	11nm,0.7s								
MYLDM	**Lahad Datu**	**9.53**	**276**	Pn		Pn	**Pn**	**18 01 18.9**	**+1.8**
BAKI	**Biak**	**9.76**	**124**	P		Pn	**Pn**	18 01 25.4	+5.0
	36nm,0.9s								
TTSI	**Tana Toraja**	**10.99**	**228**	P		P	**Pn**	**18 01 37.4**	**+0.3**
	22nm,0.7s								
BBSI	**Bau Bau**	**11.16**	**209**	P		Pn	**Pn**	**18 01 40.8**	**+1.3**
	6.3nm,0.8s								
SPSI	**Sidrap Palu**	**11.65**	**225**	P		Pn	**Pn**	**18 01 47.7**	**+1.5**
	13nm,1.8s								
BNSI	**Bone**	**11.73**	**222**	P		Pn	**Pn**	**18 01 47.4**	**+0.2**
	26nm,1.6s								
SMPI	**Sarmi**	**12.38**	**120**	P		P	**P**	**18 02 01.7**	**-4.2**
	19nm,1.0s								
BKSI	**Bulukumba**	**12.41**	**220**	P		Pn	**Pn**	**18 01 57.5**	**+1.0**
	18nm,1.0s								
BSSI	**Bau Bau, Buton**	**12.83**	**216**	P		Pn	**Pn**	**18 02 03.5**	**+1.2**
	23nm,1.2s								
GENI	**Genyem**	**13.95**	**119**	P		P	**P**	**18 02 22.5**	**-0.8**
	1µm123nm,1.0s								
BATI	**Baumata**	**15.07**	**197**	P		P	**P**	**18 02 35.6**	**-0.2**
	17nm,0.5s,baz=354,slow=19,SNR=5.0								
BATI	**Baumata**	**15.07**	**197**	P		P	**P**	**18 02 35.8**	**0.0**
	23nm,0.4s								
BBKI	**Banjar Baru**	**15.27**	**240**	P		P	**P**	**18 02 37.8**	**-0.2**
PLAI	**Plampang**	**16.58**	**218**	P		P	**P**	**18 02 53.7**	**+1.2**
	53nm,0.9s								
STKI	**Sintang**	**17.06**	**256**	P		P	**P**	**18 02 57.5**	**-0.3**
	11nm,1.1s								
KSM	**Kuching**	**17.91**	**261**	P		P	**P**	**18 03 07.2**	**-0.1**
KSM				IAmb		IAmb	IAmb	18 03 11.4	
	comp=Z,27nm,1.1s								
SSLB	**Suanglung**	**20.52**	**341**	P		P	**P**	**18 03 35.5**	**-0.2**
SSLB				IAmb		IAmb	IAmb	18 03 41.5	
	comp=Z,70nm,1.5s								
MYKOM	**Kota Tinggi**	**24.27**	**265**	P		P	**P**	**18 04 14.8**	**+0.9**
WB0	**Warramunga Arr**	**24.74**	**166**	P		P	**P**	**18 04 17.8**	**-0.4**
WB0				IAmb		IAmb	IAmb	18 04 25.0	
	comp=Z,8.4nm,0.7s								
WRAB	**Tennant Creek**	**24.89**	**166**	P		P	**P**	**18 04 18.6**	**-0.9**
WRAB				IAmb		IAmb	IAmb	18 04 26.9	
	comp=Z,9.7nm,0.6s								
WRA	**Warramunga Arr**	**24.90**	**166**	P		P	**P**	**18 04 20.6**	**+1.0**
	comp=Z,1.4nm,0.5s,baz=345,slow=10,SNR=22								
WRA				LR		LR	LR	18 16 40.0	
	comp=Z,118nm,19.1s,baz=84,slow=42								
	comp=Z,1.4nm,0.5s								
WRA	**Warramunga Arr**	**24.90**	**166**	P		P	**P**	**18 04 19.5**	**-0.1**
WB2	**Warramunga Arr**	**24.90**	**166**	P		P	**P**	**18 04 19.6**	**0.0**
WR0	**Warramunga Arr**	**24.96**	**165**	P		P	**P**	**18 04 21.2**	**+1.0**
MBWA	**Marble Bar**	**26.59**	**197**	P		P	**P**	**18 04 33.0**	**-1.9**
MBWA				IAmb		IAmb	IAmb	18 04 51.4	
	comp=Z,18nm,1.3s								
PSA00	**Pilbara Seismi**	**26.95**	**197**	P		P	**P**	**18 04 38.7**	**+0.6**
PSA00				IAmb		IAmb	IAmb	18 04 43.4	
	comp=Z,27nm,1.4s								
AS31	**Alice Springs**	**28.40**	**169**	P		P	**P**	**18 04 52.1**	**+1.0**
ASAR	**Alice Springs**	**28.40**	**169**	P		P	**P**	**18 04 52.2**	**+1.1**
	comp=Z,0.4nm,0.4s,baz=354,slow=7.4,SNR=16								
ASAR				PcP		**PcP**	**PcP**	**18 08 03.2**	**+0.9**
	comp=Z,0.4nm,0.7s,baz=345,slow=2.8,SNR=1.9								
ASAR				ScP		**ScP**	**ScP**	**18 11 39.6**	**+1.7**
	comp=Z,1.2nm,1.0s,baz=349,slow=3.8,SNR=4.8								
	comp=Z,0.4nm,0.4s								
NJ2	**Nanjing**	**28.90**	**344**	*e*P		P	**P**	**18 04 54.3**	**-1.1**
NJ2				pmax		pmax			
	comp=Z,10.0nm,0.5s								
CTA	**Charters Tower**	**30.16**	**144**	LR		LR	LR	18 18 52.5	
	comp=Z,104nm,18.3s,baz=288,slow=39								
ENH	**Enshi**	**31.19**	**328**	P		P	**P**	**18 05 16.5**	**+0.8**
ENH				IAmb		IAmb	IAmb	18 05 20.6	
	comp=Z,11nm,0.9s								
CMAR	**Chiang Mai Arr**	**31.70**	**299**	P		P	**P**	**18 05 20.4**	**0.0**
	comp=Z,1.3nm,0.7s,baz=100,slow=6.9,SNR=12								
	comp=Z,1.3nm,0.7s								
CMAR	**Chiang Mai Arr**	**31.70**	**299**	P		P	**P**	**18 05 19.9**	**-0.5**
CHTO	**Chiang Mai**	**31.84**	**299**	P		P	**P**	**18 05 21.6**	**0.0**
KSRS	**Korea Array**	**32.98**	**360**	P		P	**P**	**18 05 30.6**	**-0.6**
	comp=Z,1.7nm,0.6s,baz=177,slow=10.0,SNR=15								
	comp=Z,1.7nm,0.6s								
PZH	**PanZhiHua**	**33.44**	**314**	P		P	**P**	**18 05 33.8**	**-1.8**
PZH				pmax		pmax			
	comp=Z,10.0nm,0.6s								
PZH				pmax		pmax			
	comp=Z,80nm,5.3s								
XAN	**Xi'an**	**34.50**	**331**	P		P	**P**	**18 05 42.5**	**-2.1**
XAN				pmax		pmax			
	comp=Z,24nm,0.9s								
HNR	**Honiara**	**34.63**	**113**	LR		LR	LR	18 19 15.4	
	comp=Z,114nm,21.2s,baz=306,slow=35								
STKA	**Stephens Creek**	**38.25**	**161**	P		P	**P**	**18 06 17.6**	**+1.1**
	comp=Z,2.7nm,0.8s,baz=333,slow=11,SNR=9.7								
	comp=Z,2.7nm,0.8s								
STKA	**Stephens Creek**	**38.25**	**161**	IAmb		IAmb	IAmb	18 06 24.3	
	comp=Z,2.0nm,0.9s								
LZH	**Lanzhou**	**38.67**	**328**	⇑P		P	**P**	**18 06 24.3**	**+4.1**
LZH				pmax		pmax			
	comp=Z,15nm,1.3s								
HHC	**Hu-ho-hao-te**	**39.26**	**340**	*e*P		P	**P**	**18 06 27.6**	**+2.5**
HHC				pmax		pmax			
	comp=Z,20nm,0.9s								
HHC				pmax		pmax			
	comp=Z,110nm,6.7s								
SHL	**Shillong**	**40.58**	**305**	P		P	**P**	**18 06 35.9**	**-0.4**
GTA	**Gaotai**	**43.27**	**328**	⇓P		P	**P**	**18 06 58.6**	**+0.6**
GTA				pmax		pmax			
	comp=Z,4.0nm,1.0s								
GTA				pmax		pmax			
	comp=Z,62nm,6.5s								
GTA				LR		LR			
	comp=Z,78nm,16.7s								
GTA				LR		LR			
	comp=Z,140nm,18.5s								
GTA				LR		LR			
	comp=Z,110nm,17.4s								
RAMN	**Ramite**	**45.48**	**304**	*e*P		P	**P**	**18 07 16.3**	**+0.4**
JIRN	**Jiri**	**46.08**	**305**	*e*P		P	**P**	**18 07 21.0**	**+0.2**
	comp=Z,47nm,0.9s								
GUN	**Gumba**	**46.43**	**305**	*e*P		P	**P**	**18 07 23.8**	**+0.2**
	comp=Z,45nm,0.8s								
PKI	**Pulchoki**	**46.69**	**304**	*e*P		P	**P**	**18 07 25.1**	**-0.5**
ULN	**Ulaanbaatar**	**46.98**	**341**	P		P	**P**	**18 07 27.5**	**+0.2**
ULN				IAmb		IAmb	IAmb	18 07 30.4	
	comp=Z,6.2nm,0.9s								
SONM	**Songino Array**	**47.17**	**340**	P		P	**P**	**18 07 28.5**	**-0.2**
	comp=Z,2.9nm,1.0s,baz=147,slow=7.6,SNR=11								
	comp=Z,2.9nm,1.0s								
SONM	**Songino Array**	**47.17**	**340**	P		P	**P**	**18 07 29.3**	**+0.6**
SONM				IAmb		IAmb	IAmb	18 07 32.5	
	comp=Z,5.4nm,1.3s								
KOLN	**Koldanda**	**48.26**	**304**	*e*P		P	**P**	**18 07 37.5**	**-0.1**
DANN	**Dangsing**	**48.33**	**305**	*e*P		P	**P**	**18 07 38.3**	**0.0**
	comp=Z,49nm,0.7s								
PYUN	**Piuthan**	**48.88**	**304**	*e*P		P	**P**	**18 07 42.7**	**+0.3**
WMQ	**Urumqi**	**52.99**	**324**	*e*P		P	P	18 08 18.3	+5.5
WMQ				pmax		pmax			
	comp=Z,17nm,0.7s								
PETK	**Petropavlovsk-**	**54.41**	**22**	P		P	**P**	**18 08 22.8**	**-0.1**
	comp=Z,1.7nm,0.6s,baz=195,slow=10,SNR=7.9								
	comp=Z,1.7nm,0.6s								
PETK	**Petropavlovsk-**	**54.41**	**22**	P		P	**P**	**18 08 22.9**	**0.0**
MK31	**Makanchi Array**	**57.82**	**324**	P		P	**P**	**18 08 48.0**	**+0.6**
MK31				IAmb		IAmb	IAmb	18 08 52.7	
	comp=Z,5.2nm,0.8s								
MKAR	**Makanchi Array**	**57.82**	**324**	P		P	**P**	**18 08 48.1**	**+0.7**
	comp=Z,6.8nm,0.7s,baz=116,slow=7.8,SNR=33								
	comp=Z,6.8nm,0.7s								
MKAR	**Makanchi Array**	**57.82**	**324**	P		P	**P**	**18 08 47.6**	**+0.3**
MAKZ	**Makanchi**	**58.01**	**324**	P		P	**P**	**18 08 49.2**	**+0.5**
PRZ	**Przheval'sk**	**58.11**	**318**	P		P	**P**	**18 08 50.7**	**+1.0**
KSH	**Kashi**	**58.55**	**314**	P		P	**P**	**18 08 54.6**	**+1.9**
KSH				pmax		pmax			
	comp=Z,7.0nm,1.0s								
KDJ	**Kajisay**	**58.77**	**318**	P		P	**P**	**18 08 53.5**	**-0.8**
KDJ				IAmb		IAmb	IAmb	18 08 59.5	
	comp=Z,5.5nm,0.8

KKAR	**Karatay Array**	**63.69**	**316**	P	**P**	**18 09 27.8**	**+0.5**
KKAR				IAmb	IAmb	18 09 28.6	
	comp=Z,4.7nm,0.9s						
TIXI	**Tiksi**	**67.25**	**0**	P	**P**	**18 09 49.0**	**-0.7**
	comp=Z,2.0nm,0.5s,baz=211,slow=5.0,SNR=23						
	comp=Z,2.0nm,0.5s						
TIXI	**Tiksi**	**67.25**	**0**	P	**P**	**18 09 48.8**	**-0.9**
TIXI				IAmb	IAmb	18 09 50.0	
	comp=Z,2.6nm,0.5s						
BRVK	**Borovoye**	**67.61**	**326**	P	**P**	**18 09 51.6**	**-0.8**
BRVK				IAmb	IAmb	18 10 05.3	
	comp=Z,7.4nm,1.0s						
GEYT	**Alibeck**	**71.53**	**308**	LR	LR	18 44 49.2	
	comp=Z,40nm,19.2s,baz=158,slow=38						
GEYT	**Alibeck**	**71.53**	**308**	P	**P**	**18 10 16.7**	**-0.3**
GEYT				IAmb	IAmb	18 10 24.2	
	comp=Z,5.6nm,1.2s						
ABKAR	**Akbulak array**	**72.52**	**320**	P	**P**	**18 10 22.6**	**+0.1**
ABKAR	**Akbulak array**	**72.52**	**320**	P	**P**	**18 10 21.8**	**-0.7**
AKTO	**Aktyubinsk**	**74.00**	**321**	P	**P**	**18 10 31.3**	**+0.1**
	comp=Z,1.9nm,0.6s,baz=72,slow=9.2,SNR=4.2						
	comp=Z,1.9nm,0.6s						
BELG	**Belogornoye**	**80.73**	**322**	P	**P**	**18 11 09.5**	**+0.8**
	comp=Z,5.8nm,0.8s,baz=143,slow=2.8,SNR=4.6						
	comp=Z,5.8nm,0.8s						
IMAR	**Indian Mountai**	**81.28**	**24**	P	**P**	**18 11 12.5**	**+1.0**
RAYN	**Ar Rayn**	**81.44**	**293**	P	**P**	**18 11 13.0**	**-0.2**
SKT	**Skwentna**	**81.71**	**28**	P	**P**	**18 11 13.1**	**-0.7**
SKT				IAmb	IAmb	18 11 14.5	
	comp=Z,5.7nm,1.1s						
GEVA	**Gevas**	**83.39**	**308**	P	**P**	**18 11 23.7**	**+0.4**
GEVA				IAmb	IAmb	18 11 25.6	
	comp=Z,6.0nm,0.9s						
KBZ	**Khabaz**	**83.51**	**313**	LR	LR	18 52 21.7	
	comp=Z,34nm,22.0s,baz=86,slow=38						
H24K	**Noodor Dome**	**83.66**	**24**	P	**P**	**18 11 24.4**	**+0.5**
ILAR	**Eielson Array**	**84.02**	**25**	P	**P**	**18 11 25.2**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=234,slow=5.7,SNR=6.2						
	comp=Z,0.4nm,0.6s						
BMAR	**Burnt Mountain**	**85.04**	**23**	P	**P**	**18 11 32.7**	**+1.8**
ARCES	**ARCESS Array B**	**90.34**	**340**	P	**P**	**18 11 54.7**	**-1.5**
	comp=Z,1.6nm,0.9s,baz=69,slow=5.0,SNR=2.0						
	comp=Z,1.6nm,0.9s						
ARCES	**ARCESS Array B**	**90.34**	**340**	IAmb	IAmb	18 11 57.7	
	comp=Z,14nm,1.5s						
AKASG	**Malin Array Be**	**92.25**	**321**	P	**P**	**18 12 03.9**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=56,slow=4.0,SNR=5.2						
AKASG				LR	LR	18 58 41.1	
	comp=Z,41nm,19.2s,baz=92,slow=39						
	comp=Z,0.2nm,0.3s						
DLBC	**Dease Lake**	**92.58**	**31**	LR	LR	18 48 08.5	
	comp=Z,44nm,20.0s,baz=265,slow=32						
YKA	**Yellowknife Ar**	**98.43**	**25**	LR	LR	18 57 23.6	
	comp=Z,21nm,20.6s,baz=278,slow=36						
TORD	**Torodi Ar. Bea**	**123.95**	**289**	PKP	**PKPdf**	**18 17 54.3**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=56,slow=1.7,SNR=1.8						

NIED ***13*** *18:17:25.9, 38.62N× 141.90E, h48km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^14Nm; Mrr5.52; Mθθ-0.41; Mφφ-5.11; Mrθ2.07; Mrφ-1.68; Mθφ5.98; Fault plane solution: M0 8.44000×10^14 NP1: φs197.00000°, δ21.00000°, λ88.00000°. NP2:φs19.00000°, δ69.00000°, λ91.00000°.*

JMA ***13*** *18:17:25.9±0.1, 38.6N±0.2× 141.9E±0.5, h48km, MV3.9/40, KINKAZAN REGION*

JMA Felt I J1 at KINKAZAN REGION .

NEIC ***13*** *18:17:26.5±1.1, 38.63N±0.03× 142.0E±0.1, h57km±6km, mb4.1/13, Error ellipse: s-maj=11.9km s-min=4.8km az=85.0*

IDC ***13*** *18:17:27.5±2.3, 38.63N× 141.89E, h66km±21km, mb3.5/19, mbtmp3.8/23, MS2.8/1, Error ellipse: s-maj=20.6km s-min=15.2km az=106.0*

ISC 13 18:17:25.9±0.8, 38.59N±0.04× 141.96E±0.07, h52km±6km, n76, σ1.916/78, mb4.0/23, 19D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JKMT	**Kesennumamotoy**	**0.44**	**300**	⇓	P	**Pn**	**18 17 35.8**	**-0.7**
JKMT				⇓	S	**Sn**	**18 17 42.5**	**-1.7**
JIKH	**Ishinomakiboku**	**0.48**	**235**	⇓	P	**Pn**	**18 17 36.5**	**-0.5**
JIKH				⇓	S	**Sn**	**18 17 43.8**	**-1.1**
JIO	**Ouri**	**0.50**	**254**	⇓	P	**Pn**	**18 17 36.6**	**-0.6**
JIO				⇓	S	**Sn**	**18 17 43.9**	**-1.5**
OFUJ	**Ofunato**	**0.54**	**335**	⇓	*i* P	**Pn**	**18 17 37.0**	**-0.7**
OFUJ				⇓	S	**Sn**	**18 17 44.7**	**-1.6**
JMK	**Ichinoseki**	**0.68**	**302**	⇓	*i* P	**Pn**	**18 17 38.8**	**-0.6**
JMK				⇓	S	**Sn**	**18 17 48.0**	**-1.3**
JOM	**Ohasama**	**1.02**	**330**	⇓	*i* P	**Pn**	**18 17 43.5**	**-0.5**
JOM				⇓	S	**Sn**	**18 17 56.7**	**-0.6**
JOU	**Okura**	**1.04**	**258**	⇓	*i* P	**Pn**	**18 17 43.7**	**-0.5**
JOU				⇓	S	**Sn**	**18 17 57.0**	**-0.8**
JMM	**Marumori**	**1.17**	**232**			**Pn**	**18 17 45.1**	**-0.8**
JMM	**Marumori**	**1.17**	**232**	⇓	*i* P	**Pn**	**18 17 45.2**	**-0.7**
JMM				⇓	*e* S	**Sn**	**18 17 59.6**	**-1.2**
JYK	**Kaneyama**	**1.29**	**285**	⇓	*i* P	**Pn**	**18 17 47.1**	**-0.5**
JRG	**Rokugo**	**1.31**	**308**	⇓	*i* P	**Pn**	**18 17 47.2**	**-0.6**
JFK	**Kawauchi**	**1.49**	**215**		P	**Pn**	**18 17 50.1**	**-0.2**
JFK					*e* S	**Sn**	**18 18 07.6**	**-1.1**
JYS	**Shirataka**	**1.53**	**257**	⇓	P	**Pn**	**18 17 50.7**	**-0.2**
JTM	**Tenmabayashi**	**2.30**	**343**			**Pn**	**18 18 01.3**	**0.0**
JYT	**Yasato**	**2.75**	**211**			**Pn**	**18 18 07.2**	**-0.2**
JSD	**Sado**	**2.96**	**260**			**Pn**	**18 18 09.9**	**-0.5**
ERM	**Erimo**	**3.54**	**15**	Pn		**Pn**	**18 18 18.2**	**0.0**
MAJO	**Matsushiro**	**3.62**	**237**			**Pn**	**18 18 20.6**	**+1.2**
MJAR	**Matsushiro Arr**	**3.62**	**237**		P	**Pn**	**18 18 20.6**	**+1.3**
	10nm,0.6s,baz=40,slow=12,SNR=32							
MJAR					S	Sn	18 19 11.7	+11
	10nm,0.7s,baz=61,slow=19,SNR=5.1							
MJAR	**Matsushiro Arr**	**3.62**	**237**			**Pn**	**18 18 19.5**	**+0.1**
MJB9	**Matsu-Tunnel**	**3.62**	**237**			**Pn**	**18 18 21.0**	**+1.6**
JEW	**Eniwo**	**4.26**	**355**	Pn		**Pn**	**18 18 29.5**	**+1.3**
JGF	**Kuroka**	**4.74**	**232**	Pn		**Pn**	**18 18 37.8**	**+3.0**
INU	**Inuyama**	**5.11**	**232**			**Pn**	**18 18 41.8**	**+2.0**
JKA	**Kamikawa-asahi**	**5.54**	**5**	Pn		**Pn**	**18 18 45.6**	**-0.1**
JHJ	**Hachijo jima 2**	**5.74**	**199**	P		**Pn**	**18 18 49.6**	**+1.2**
	26nm,0.3s,baz=7.0,slow=20,SNR=1.2							
JHJ					S	**Sn**	**18 19 50.1**	**-2.9**
	49nm,0.4s,baz=78,slow=20,SNR=1.8							
JHS	**Saijyo**	**7.95**	**246**	Pn		**Pn**	**18 19 21.1**	**+2.3**
USRK	**Ussuriysk Ar.**	**9.35**	**310**	P		**Pn**	**18 19 38.4**	**+0.4**
	4.1nm,0.7s,baz=118,slow=14,SNR=3.5							
JNU	**Nakatsue**	**10.52**	**242**	P		**Pn**	**18 19 57.0**	**+3.1**
	baz=219,slow=20							
SEHB	**SEOHWA**	**10.76**	**273**	Pn		**Pn**	**18 19 57.9**	**+0.7**
KSRS	**Korea Array**	**11.13**	**269**	P		**Pn**	**18 20 04.6**	**+2.3**
	1.2nm,0.6s,baz=80,slow=14,SNR=7.6							
KSRS					LR	LR	18 24 07.6	
	comp=Z,45nm,18.7s,baz=160,slow=36							
KLR	**Kul'dur**	**12.92**	**329**	P		**Pn**	**18 20 30.2**	**+3.6**
	0.4nm,0.4s,baz=185,slow=11,SNR=2.3							
BJT	**Baijiatuan**	**19.99**	**282**	P		**Pn**	**18 21 54.8**	**-1.2**
BJT				IAmb		IAmb	18 22 03.1	
	comp=Z,3.6nm,0.5s							
MA2	**Magadan**	**21.74**	**12**	P		**P**	**18 22 12.4**	**-0.2**
	comp=Z,4.1nm,0.8s,baz=179,slow=10,SNR=4.4							
	comp=Z,4.1nm,0.8s							
MA2	**Magadan**	**21.74**	**12**	IAmb		IAmb	18 22 32.0	
	comp=Z,11nm,1.1s							
SEY	**Seymchan**	**25.18**	**11**	P		**P**	**18 22 47.6**	**+1.5**
	comp=Z,2.6nm,0.8s,baz=210,slow=7.2,SNR=12							
	comp=Z,2.6nm,0.8s							
SONM	**Songino Array**	**27.31**	**301**	P		**P**	**18 23 05.6**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=133,slow=55,SNR=2.5							
	comp=Z,0.4nm,0.4s							
SONM	**Songino Array**	**27.31**	**301**	IAmb		IAmb	18 23 08.4	
	comp=Z,0.5nm,0.7s							
ENH	**Enshi**	**27.93**	**263**	P		**P**	**18 23 10.5**	**-0.7**
ENH				IAmb		IAmb	18 23 16.0	
	comp=Z,9.7nm,0.7s							
H11N2	**WAKE ISLAND Hy**	**28.61**	**124**	T		T	18 53 45.5	
	baz=317,slow=75,SNR=1240							
H11N1	**WAKE ISLAND Hy**	**28.62**	**124**	T		T	18 53 47.1	
	baz=317,slow=75,SNR=658							
H11N3	**WAKE ISLAND Hy**	**28.63**	**124**	T		T	18 53 47.8	
	baz=317,slow=75,SNR=731							
H11S1	**WAKE ISLAND Hy**	**29.38**	**126**	T		T	18 54 44.3	
	baz=318,slow=76,SNR=116							
H11S3	**WAKE ISLAND Hy**	**29.38**	**126**	T		T	18 54 34.1	
	baz=318,slow=76,SNR=171							
H11S2	**WAKE ISLAND Hy**	**29.40**	**126**	T		T	18 54 44.4	
	baz=318,slow=76,SNR=95							

TIXI	**Tiksi**	**33.80**	**353**	P	**P**	**18 24 01.4**	**-1.0**
	comp=Z,0.6nm,0.5s,baz=89,slow=23,SNR=5.6						
	comp=Z,0.6nm,0.5s						
ZALV	**Zalesovo Beam**	**41.20**	**311**	P	**P**	**18 25 03.9**	**-1.4**
	comp=Z,2.3nm,0.4s,baz=83,slow=7.6,SNR=11						
ZALV				PcP	**PcP**	**18 27 03.5**	**+0.2**
	comp=Z,1.1nm,0.3s,baz=48,slow=2.1,SNR=5.8						
	comp=Z,2.3nm,0.4s						
CMAR	**Chiang Mai Arr**	**42.33**	**254**	P	**P**	**18 25 15.8**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=43,slow=6.5,SNR=1.8						
	comp=Z,0.2nm,0.5s						
MK31	**Makanchi Array**	**43.68**	**301**	P	**P**	**18 25 25.4**	**-0.1**
MK31				IAmb	IAmb	18 25 26.2	
	comp=Z,3.3nm,1.1s						
MKAR	**Makanchi Array**	**43.68**	**301**	P	**P**	**18 25 25.4**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=85,slow=10,SNR=15						
MKAR				PcP	**PcP**	**18 27 10.7**	**-1.1**
	comp=Z,0.3nm,0.6s,baz=70,slow=4.7,SNR=2.1						
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	**43.68**	**301**	P	**P**	**18 25 24.9**	**-0.6**
MAKZ	**Makanchi**	**43.88**	**301**	P	**P**	**18 25 27.3**	**+0.1**
MAKZ				IAmb	IAmb	18 25 29.9	
	comp=Z,1.9nm,0.7s						
KURK	**Kurchatov**	**45.33**	**307**	P	**P**	**18 25 38.2**	**-0.3**
KURBB	**Kurchatov Arra**	**45.40**	**307**	P	**P**	**18 25 38.8**	**-0.3**
	comp=Z,9.4nm,0.5s,baz=80,slow=7.9,SNR=113						
KURBB				PcP	**PcP**	**18 27 17.1**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=96,slow=2.9,SNR=2.5						
CAST	**Castle Rocks**	**45.70**	**35**	P	**P**	**18 25 40.6**	**-0.7**
ILAR	**Eielson Array**	**47.95**	**33**	P	**P**	**18 25 58.4**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=257,slow=7.1,SNR=3.2						
	comp=Z,0.3nm,0.6s						
KULM	**Kulim**	**49.98**	**239**	P	**P**	**18 26 15.7**	**+0.8**
INK	**Inuvik**	**52.81**	**28**	P	**P**	**18 26 35.4**	**0.0**
	comp=Z,1.3nm,1.0s,baz=339,slow=8.6,SNR=2.1						
	comp=Z,1.3nm,1.0s						
INK	**Inuvik**	**52.81**	**28**	IAmb	IAmb	18 27 03.2	
	comp=Z,3.5nm,1.3s						
ABKAR	**Akbulak array**	**57.28**	**310**	P	**P**	**18 27 07.7**	**-0.3**
WRA	**Warramunga Arr**	**58.66**	**188**	P	**P**	**18 27 17.5**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=3.8,slow=7.0,SNR=2.0						
WRA				pP	**pP**	**18 27 32.1**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=5.5,slow=7.2,SNR=3.9						
	comp=Z,0.5nm,0.6s						
ASAR	**Alice Springs**	**62.39**	**188**	P	**P**	**18 27 43.1**	**-0.2**
	comp=Z,0.4nm,0.9s,baz=25,slow=5.1,SNR=2.5						
ASAR				pP	**pP**	**18 27 58.5**	**+1.0**
	comp=Z,0.9nm,0.6s,baz=8.8,slow=4.7,SNR=5.8						
	comp=Z,0.4nm,0.9s						
ARCES	**ARCESS Array B**	**62.70**	**339**	P	**P**	**18 27 43.3**	**-1.5**
	comp=Z,1.7nm,0.8s,baz=35,slow=8.0,SNR=1.8						
	comp=Z,1.7nm,0.8s						
FINES	**FINESS Array B**	**67.64**	**332**	P	**P**	**18 28 16.4**	**-0.5**
	comp=Z,2.9nm,0.9s,baz=30,slow=12,SNR=4.9						
	comp=Z,2.9nm,0.9s						
KBZ	**Khabaz**	**70.22**	**310**	P	**P**	**18 28 33.1**	**-0.2**
	comp=Z,0.9nm,0.5s,baz=37,slow=5.1,SNR=3.6						
	comp=Z,0.9nm,0.5s						
NB2	**NORSAR Subarra**	**72.92**	**337**	P	**P**	**18 28 49.1**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=38,slow=6.2						
NOA	**NORSAR Array B**	**72.92**	**337**	P	**P**	**18 28 49.3**	**0.0**
	comp=Z,0.6nm,0.6s,baz=39,slow=5.9,SNR=4.3						
	comp=Z,0.6nm,0.6s						
AKASG	**Malin Array Be**	**73.33**	**322**	P	**P**	**18 28 50.9**	**-0.9**
	comp=Z,0.7nm,0.5s,baz=46,slow=6.8,SNR=5.5						
	comp=Z,0.7nm,0.5s						
AKASG	**Malin Array Be**	**73.33**	**322**	IAmb	IAmb	18 29 14.4	
	comp=Z,2.4nm,1.4s						
BRTR	**Keskin Array B**	**78.14**	**312**	P	**P**	**18 29 19.8**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=128,slow=3.1,SNR=1.7						
	comp=Z,0.2nm,0.4s						
CLL	**Collm**	**79.96**	**330**	*i* P	**P**	**18 29 29.7**	**+0.5**
GERES	**GERESS Array B**	**81.62**	**328**	P	**P**	**18 29 38.4**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=10,slow=6.0,SNR=2.2						
	comp=Z,0.3nm,0.4s						
TXAR	**Lajitas Array**	**88.83**	**53**	P	**P**	**18 30 16.1**	**+1.4**
	comp=Z,0.1nm,0.5s,baz=344,slow=2.0,SNR=1.8						
	comp=Z,0.1nm,0.5s						
H03N2	**Juan Fernandez**	**146.72**	**94**	T	T	21 21 29.9	
	baz=291,slow=76,SNR=7.8						
H03N3	**Juan Fernandez**	**146.74**	**94**	T	T	21 21 38.9	
	baz=291,slow=76,SNR=14						
H03N1	**Juan Fernandez**	**146.74**	**94**	T	T	21 21 33.2	
	baz=291,slow=76,SNR=11						

NEIC ***13*** *18:18:02.8±1.4, 41.14N±0.02× 112.84W±0.04, h0km±2km, ML1.9/36, Error ellipse: s-maj=4.9km s-min=3.0km az=267.0*

IDC ***13*** *18:18:04.6±1.3, 41.24N× 112.87W, h0km, mbtmp2.3/1, ML3.2/1, Error ellipse: s-maj=52.5km s-min=8.7km az=148.0*

ISC 13 18:18:00.4±1.0, 41.24N±0.04× 112.95W±0.04, h0km, n22, σ0.996/23, Utah

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BGU	**Big Grassy Mou**	**0.32**	**191**			**Pg**	**18 18 07.5**	**+0.9**
BGU					IAML		18 18 16.5	
	comp=N,149nm,0.4s							
HVU	**Hansel Valley**	**0.55**	**13**	Pg		**Pn**	**18 18 15.5**	**-0.3**
HVU					IAML		18 18 26.9	
	comp=N,76nm,0.4s							
HVU					IAML		18 18 28.9	
	comp=E,75nm,0.4s							
DUG	**Dugway, Tooele**	**1.05**	**174**	Pg		**Pg**	**18 18 21.1**	**+0.6**
DUG					IAML		18 18 41.1	
	comp=E,43nm,0.5s							
DUG					IAML		18 18 44.3	
	comp=E,37nm,0.4s							
HWUT	**Hardware Ranch**	**1.10**	**70**			**Pn**	**18 18 24.0**	**+0.7**
HWUT					IAML		18 18 47.7	
	comp=E,24nm,0.4s							
JLU	**Jordanelle**	**1.30**	**119**			**Pg**	**18 18 24.9**	**-0.5**
NLU	**North Lily Min**	**1.45**	**152**			**Pn**	**18 18 27.7**	**-0.4**
MPU	**Maple Canyon**	**1.58**	**140**	Pn		**Pn**	**18 18 29.2**	**-0.7**
ELK	**Elko**	**1.81**	**255**			**Pg**	**18 18 35.9**	**+0.9**
ELK					IAML		18 19 04.0	
	comp=E,8.9nm,0.3s							
AHID	**Auburn Hatcher**	**2.05**	**41**			**Pb**	**18 18 37.9**	**-0.8**
HLID	**Hailey**	**2.56**	**335**			**Pb**	**18 18 48.3**	**+0.9**
HLID					IAML		18 19 05.0	
	comp=E,4.6nm,3.8s							
HLID					IAML		18 19 33.7	
	comp=E,3.6nm,0.4s							
P18A	**Preston Nutter**	**2.62**	**127**	Pn		**Pn**	**18 18 45.2**	**+1.0**
P18A					IAML		18 19 11.0	
	comp=N,5.6nm,4.8s							
TPAW	**Teton Pass**	**2.69**	**33**	Pn		**Pb**	**18 18 49.5**	**-0.1**
MSU	**Marysvale**	**2.79**	**168**	Pn		**Pn**	**18 18 47.3**	**+0.8**
PSUT	**Pine Spring**	**2.79**	**195**	Pn		**Pn**	**18 18 47.2**	**+0.6**
PSUT					IAML		18 19 12.5	
	comp=E,4.4nm,3.7s							
PSUT					IAML		18 19 41.4	
	comp=N,3.8nm,1.0s							
SRU	**San Rafael Swe**	**2.82**	**138**	Pn		**Pn**	**18 18 48.0**	**+1.0**
SRU					IAML		18 19 32.8	
	comp=E,4.6nm,1.2s							
SRU					IAML		18 19 42.1	
	comp=N,4.0nm,0.5s							
LOHW	**Long Hollow**	**2.94**	**35**	Pn		**Pb**	**18 18 53.3**	**-0.5**
LOHW					IAML		18 20 10.4	
	comp=N,4.0nm,3.7s							
PD31	**Pinedale Array**	**2.95**	**58**	Pn		**Pb**	**18 18 52.5**	**-1.5**
PDAR	**Pinedale Array**	**2.95**	**58**	Pn		**Pb**	**18 18 53.3**	**-0.7**
	comp=N,0.4nm,0.3s,baz=230,slow=13,SNR=1.9							
PDAR					Pg	**Pg**	**18 18 58.0**	**+1.0**
	comp=N,1.4nm,0.3s,baz=233,slow=15,SNR=7.1							
PDAR					Lg	Lg	18 19 37.0	
	comp=N,1.6nm,0.3s,baz=233,slow=29,SNR=5.7							
	comp=N,0.7nm,0.3s							
MFID	**Camas Ranch**	**3.05**	**316**			**Pb**	**18 18 54.0**	**-1.6**
R11A	**Troy Canyon, C**	**3.53**	**216**	Pn		**Pn**	**18 18 57.7**	**+1.0**
R11A						**Pg**	**18 19 08.3**	**+0.2**
NVAR	**Mina Array Bea**	**4.99**	**237**	Pg		**Pg**	**18 19 34.2**	**-1.8**
	comp=N,0.2nm,0.3s,baz=54,slow=17,SNR=2.9							
NVAR					Lg	Lg	18 20 42.1	
	comp=N,0.3nm,0.3s,baz=62,slow=33,SNR=2.0							
I56US	**NEWPORT INFRAS**	**7.62**	**338**	*i*			19 01 10.0	
	comp=N,0.1nm,1.0s,baz=159,slow=316,SNR=4.3							

TRN ***13*** *18:31:31.0, 15.26N× 61.19W, h141km, MD3.9*

IDC ***13*** *18:31:31.2±2.8, 14.98N× 61.37W, h142km±27km, mb3.4/14, mbtmp3.9/16, Error ellipse: s-maj=35.4km s-min=15.1km az=19.0*

NEIC ***13*** *18:31:32.6±1.1, 15.25N±0.02× 61.25W±0.09, h135km±5km, mb4.1/6, Error ellipse: s-maj=12.1km s-min=3.5km az=88.0*

ISC 13 18:31:32.0±0.6, 15.25N±0.03× 61.20W±0.05, h141km±4km, n106, σ0.893/136, mb3.7/15, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DLPL	**La Plaine**	**0.10**	**332**			**Pn**	**18 31 51.1**	**+0.1**
DLPL	**La Plaine**	**0.10**	**332**	*e* P		**Pn**	**18 31 51.2**	**+0.1**
DLPL				*e* S		**Sn**	**18 32 05.4**	**-0.2**
MDN	**Morne-Daniel**	**0.20**	**291**	*e* P		**Pn**	**18 31 51.5**	**+0.3**
MDN				*e* S		**Sn**	**18 32 06.4**	**+0.6**
DSLB	**Salisbury**	**0.29**	**312**	*i* P		**Pn**	**18 31 52.0**	**+0.5**
DSLB				*e* S		**Sn**	**18 32 06.7**	**+0.4**
SVN	**Savane Anatole**	**0.40**	**176**			**Pn**	**18 31 52.1**	**+0.2**
SVN	**Savane Anatole**	**0.40**	**176**	*e* P		**Pn**	**18 31 52.3**	**+0.3**
MDVC	**Dominica, Viel**	**0.42**	**331**	*e* P		**Pn**	**18 31 52.8**	**+0.8**
MDVC				*e* S		**Sn**	**18 32 07.9**	**+0.8**
PCM	**Pelee Case Pet**	**0.43**	**182**	*e* P		**Pn**	**18 31 51.8**	**-0.2**
PCM	**Pelee Case Pet**	**0.43**	**182**	*e* P		**Pn**	**18 31 52.3**	**+0.2**
BAMF	**Morne Balai**	**0.43**	**174**	*e* P		**Pn**	**18 31 52.3**	**+0.1**
CXM	**Morne La Croix**	**0.43**	**176**	*e* P		**Pn**	**18 31 51.7**	**-0.5**
GBMF	**Grand Be**	**0.45**	**176**	*e* P		**Pn**	**18 31 52.3**	**+0.1**
MDCT	**Cottage Hill,**	**0.45**	**325**	*e* P		**Pn**	**18 31 52.6**	**+0.6**
MDCT				*e* S		**Sn**	**18 32 08.6**	**+1.2**
PML	**Morne Lenard**	**0.46**	**178**	*e* P		**Pn**	**18 31 52.5**	**+0.3**
FDF	**Fort de France**	**0.51**	**175**			**Pn**	**18 31 52.4**	**-0.1**
FDF	**Fort de France**	**0.51**	**175**	*i* P		**Pn**	**18 31 52.9**	**+0.4**
FDF				*e* S		**Sn**	**18 32 08.2**	**+0.1**
ILAM	**Ilet Lapin Mar**	**0.56**	**146**	Pn		**Pn**	**18 31 51.8**	**-0.9**
ILAM	**Ilet Lapin Mar**	**0.56**	**146**	*i* P		**Pn**	**18 31 52.6**	**-0.1**
ILAM				*e* S		**Sn**	**18 32 07.5**	**-0.9**
ZAM	**Aeronautique**	**0.69**	**166**	*e* P		**Pn**	**18 31 53.1**	**-0.4**
LPMF	**Morne Lapointe**	**0.70**	**161**	*e* P		**Pn**	**18 31 52.9**	**-0.7**
MAGL	**Barre de l'ile**	**0.70**	**353**			**Pn**	**18 31 53.5**	**-0.1**
MAGL	**Barre de l'ile**	**0.70**	**353**	*e* P		**Pn**	**18 31 53.4**	**-0.1**
MAGL				*e* S		**Sn**	**18 32 09.3**	**-0.7**
TDBA	**Terre de Bas,**	**0.73**	**325**			**Pn**	**18 31 54.1**	**+0.3**
TDBA	**Terre de Bas,**	**0.73**	**325**	*i* P		**Pn**	**18 31 53.9**	**+0.1**
TDBA				*e* S		**Sn**	**18 32 10.3**	**-0.1**
BIM	**Bigot**	**0.73**	**170**			**Pn**	**18 31 53.9**	**+0.1**
BIM	**Bigot**	**0.73**	**170**	*e* P		**Pn**	**18 31 54.0**	**+0.1**
BIM				*e* S		**Sn**	**18 32 10.8**	**+0.3**
TBG	**Guadaloupe-3**	**0.74**	**324**	*e* P		**Pn**	**18 31 54.2**	**+0.4**
TBG				*e* S		**Sn**	**18 32 11.2**	**+0.7**
MPOM	**Morne Pois Mar**	**0.86**	**158**	Pn		**Pn**	**18 31 54.3**	**-0.5**
MPOM	**Morne Pois Mar**	**0.86**	**158**	*i* P		**Pn**	**18 31 54.6**	**-0.2**
MPOM				*e* S		**Sn**	**18 32 11.3**	**-0.8**
H05S1	**Guadeloupe/Mar**	**0.89**	**157**	P		**Pn**	**18 31 54.4**	**-0.6**
CBE	**Ff, Capester**	**0.91**	**334**			**Pn**	**18 31 55.3**	**+0.1**
CBE	**Ff, Capester**	**0.91**	**334**	*i* P		**Pn**	**18 31 55.3**	**+0.1**
CBE				*e* S		**Sn**	**18 32 12.9**	**0.0**
GDSD	**La Dsirade Is**	**1.07**	**7**			**Pn**	**18 31 56.3**	**-0.3**
H05N1	**Guadeloupe/Mar**	**1.07**	**7**	P		**Pn**	**18 31 56.4**	**-0.3**
	SNR=2057							
GDHS	**Morne Mazeau,**	**1.16**	**332**			**Pn**	**18 31 57.6**	**+0.2**
SLB	**Saint Lucia, B**	**1.23**	**170**	*e* P		**Pn**	**18 31 57.3**	**-0.6**
SLBI				*e* S		**Sn**	**18 32 14.4**	**-2.7**
SLW	**Petit Monier**	**1.24**	**168**

TORD	**Torodi Ar. Bea**	**60.82**	**83**	P	**P**	18 41 30.2	**+0.4**
	comp=Z,0.6nm,0.5s,baz=278,slow=6.6,SNR=8.7						
	comp=Z,0.6nm,0.5s						
TORD	**Torodi Ar. Bea**	**60.82**	**83**	IAmb	IAmb	18 41 46.2	
	comp=Z,1.6nm,1.2s						
KEST	**Kesra**	**65.57**	**57**	P	**P**	18 42 02.8	**+1.9**
	comp=Z,4.0nm,0.7s,baz=347,slow=6.7,SNR=4.2						
	comp=Z,4.0nm,0.7s						
KEST	**Kesra**	**65.57**	**57**	IAmb	IAmb	18 42 04.3	
	comp=Z,4.5nm,0.8s						
NB2	**NORSAR Subarra**	**68.27**	**30**	P	**P**	18 42 18.7	**+1.3**
	comp=Z,0.7nm,0.6s,baz=262,slow=6.5						
NOA	**NORSAR Array B**	**68.27**	**30**	P	**P**	18 42 18.7	**+1.3**
	comp=Z,0.6nm,0.7s,baz=262,slow=6.5,SNR=4.5						
	comp=Z,0.6nm,0.7s						
GERES	**GERESS Array B**	**68.76**	**43**	P	**P**	18 42 21.4	**+0.6**
	comp=Z,0.3nm,0.6s,baz=279,slow=3.5,SNR=4.0						
	comp=Z,0.3nm,0.6s						
K27K	**Chicken**	**72.42**	**333**	P	**P**	18 42 43.2	**+0.6**
K27K				IAmb	IAmb	18 42 44.6	
	comp=Z,7.4nm,1.4s						
ILAR	**Eielson Array**	**74.50**	**334**	P	**P**	18 42 54.1	**-0.6**
	comp=Z,0.4nm,0.5s,baz=81,slow=5.5,SNR=5.0						
	comp=Z,0.4nm,0.5s						
ARCES	**ARCESS Array B**	**74.68**	**21**	P	**P**	18 42 57.5	**+1.8**
	comp=Z,0.4nm,0.4s,baz=257,slow=12,SNR=2.2						
	comp=Z,0.4nm,0.4s						
FINES	**FINESS Array B**	**75.45**	**30**	P	**P**	18 43 00.7	**+0.5**
	comp=Z,0.8nm,0.6s,baz=251,slow=3.4,SNR=6.5						
	comp=Z,0.8nm,0.6s						

*IDC **13** 18:45:59.8±2.7,36°.13N×69°.55E,h148km±24km,mb3.4/16, mbtmp3.9/22,MS3.3/1,Error ellipse: s-maj=19.4km s-min=13.2km az=14.0*
*NNC **13** 18:46:04.4±2.5,36°.74N×69°.29E,h127km±33km,mb3.6, mpv4.3,Error ellipse: s-maj=20.4km s-min=14.6km az=8.0*
ISC 13 18:45:59.8±0.6,36°.29N±0°.06×69°.57E±0°.05,h150km,n49, σ2s20/56,mb3.5/15,8C-3D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.85**	**6**	P	**Pn**	**18 47 37.8**	**+0.1**
	5.8nm,0.4s,baz=200,slow=13,SNR=210						
KK31				S	**Sn**	**18 48 50.2**	**-4.3**
	4.9nm,0.2s,baz=156,slow=13,SNR=8.6						
UCH	**Uchtor**	**7.07**	**31**	P	**Pn**	**18 47 42.2**	**+1.2**
	SNR=38						
EKS2	**Erkin-Say**	**7.15**	**26**	P	**Pn**	**18 47 43.2**	**+1.3**
	SNR=13						
AAK	**Ala-Archa**	**7.40**	**29**	P	**Pn**	**18 47 46.5**	**+1.3**
	SNR=9.7						
AAK	**Ala-Archa**	**7.40**	**29**	P	**Pn**	**18 47 46.9**	**+1.7**
	10.0nm,0.3s,baz=217,slow=9.2,SNR=20						
AAK				S	**Sn**	**18 49 06.0**	**-2.0**
	12nm,0.5s,baz=59,slow=19,SNR=11						
KBK	**Karagaybulak**	**7.60**	**32**	P	**Pn**	**18 47 49.8**	**+1.8**
	SNR=15						
CHMS	**Chumysh**	**7.80**	**29**	P	**Pn**	**18 47 51.3**	**+0.8**
	SNR=31						
CHMS	**Chumysh**	**7.80**	**29**	⇑P	**Pn**	**18 47 51.1**	**+0.5**
	40nm,0.8s						
CHMS				⇑S	**Sn**	**18 49 15.3**	**-2.2**
	30nm,0.9s						
ULHL	**Ulahol**	**7.89**	**39**	P	**Pn**	**18 47 53.2**	**+1.4**
	SNR=6.3						
USP	**Ospenovka**	**7.94**	**27**	P	**Pn**	**18 47 52.7**	**+0.4**
	SNR=19						
TKM2	**Tokmak 2**	**8.10**	**33**	P	**Pn**	**18 47 55.5**	**+0.9**
	SNR=13						
TKM2	**Tokmak 2**	**8.10**	**33**	⇑P	**Pn**	**18 47 55.1**	**+0.5**
	12nm,0.8s						
TKM2				⇑S	**Sn**	**18 49 24.4**	**-0.4**
	9.3nm,1.0s						
MDOK	**Medeo**	**8.96**	**38**	P	**Pn**	**18 48 07.9**	**+1.8**
	6.8nm,0.6s						
GEYT	**Alibeck**	**9.29**	**284**	P	**Pn**	**18 48 10.6**	**+0.2**
	3.8nm,0.4s,baz=101,slow=6.3,SNR=6.9						
GEYT				S	**Sn**	**18 49 49.2**	**-4.2**
	1.6nm,0.4s,baz=62,slow=32,SNR=1.2						
OTUK	**Ortayu**	**12.12**	**9**	⇑P	**Pn**	**18 48 47.2**	**-0.3**
	2.3nm,0.6s						
PYUN	**Piuthan**	**13.98**	**122**	*eP*	**P**	**18 49 13.8**	**-1.1**
	18nm,0.4s						
PYUN				*eS*	**Sn**	**18 51 38.3**	**-8.5**
MAKZ	**Makanchi**	**14.01**	**38**	⇓P	**P**	**18 49 15.1**	**+0.2**
	5.4nm,0.7s						
MK31	**Makanchi Array**	**14.16**	**38**	⇑P	**P**	**18 49 16.9**	**+0.4**
	3.3nm,0.7s,baz=225,slow=10,SNR=23						
MKAR	**Makanchi Array**	**14.16**	**38**	P	**Pn**	**18 49 15.6**	**+2.0**
	3.0nm,0.7s,baz=213,slow=13,SNR=29						
MKAR				S	**S**	**18 51 59.2**	**-0.5**
	0.1nm,0.5s,baz=293,slow=28,SNR=1.9						
DANN	**Dangsing**	**14.37**	**119**	*eP*	**P**	**18 49 17.6**	**-1.7**
	28nm,0.6s						
AB31	**Akbulak array**	**14.74**	**335**	P	**Pn**	**18 49 20.0**	**-0.8**
	1.4nm,0.4s,baz=146,slow=11,SNR=56						
AB31				⇑S	Sn	18 51 55.9	-8.4
	1.4nm,0.8s,baz=157,slow=24,SNR=5.7						
GKN	**Gorkha**	**15.19**	**119**	*eP*	**P**	**18 49 29.7**	**+1.4**
	13nm,0.3s						
KURBB	**Kurchatov Arra**	**15.72**	**21**	P	**Pn**	**18 49 33.0**	**+0.2**
	4.0nm,0.8s,baz=212,slow=10,SNR=19						
KURK	**Kurchatov**	**15.83**	**22**	⇓P	**Pn**	**18 49 36.2**	**+1.9**
	3.8nm,0.7s						
PKIN	**Phulchoki**	**15.98**	**118**	*eP*	**P**	**18 49 39.0**	**+1.8**
	18nm,0.4s						
PKI	**Pulchoki**	**16.00**	**118**	*eP*	**P**	**18 49 39.1**	**+1.7**
	14nm,0.5s						
AKTO	**Aktyubinsk**	**16.42**	**333**	P	**P**	**18 49 42.1**	**+0.6**
	1.2nm,0.5s,baz=142,slow=15,SNR=7.1						
AKTO				S	**S**	**18 52 36.3**	**-7.4**
	0.9nm,0.5s,baz=124,slow=17,SNR=2.5						
AKTO	**Aktyubinsk**	**16.42**	**333**	⇓P	**P**	**18 49 41.5**	**+0.1**
	2.9nm,0.8s						
JIRN	**Jiri**	**16.50**	**117**	*eP*	**P**	**18 49 47.1**	**+4.1**
	29nm,0.3s						
BRVK	**Borovoye**	**16.78**	**2**	⇑P	**P**	**18 49 46.5**	**+1.1**
	2.3nm,0.6s						
GNI	**Garni**	**19.86**	**289**	P	**P**	**18 50 21.3**	**+2.0**
	3.2nm,0.5s,baz=54,slow=19,SNR=1.8						
ZALV	**Zalesovo Beam**	**20.60**	**26**	P	**P**	**18 50 28.3**	**+1.4**
	5.4nm,0.5s,baz=220,slow=11,SNR=21						
	5.4nm,0.5s						
ARU	**Arti**	**21.48**	**343**	P	**P**	**18 50 38.3**	**+2.1**
	3.7nm,0.6s,baz=162,slow=6.5,SNR=9.4						
	3.7nm,0.6s						
BELG	**Belogornoye**	**22.35**	**323**	P	**P**	**18 50 46.5**	**+1.4**
	6.1nm,1.0s,baz=208,slow=4.6,SNR=4.7						
	6.1nm,1.0s						
SONM	**Songino Array**	**29.41**	**55**	P	**P**	**18 51 50.7**	**+1.6**
	0.5nm,0.5s,baz=251,slow=9.0,SNR=4.2						
	0.5nm,0.5s						
CMAR	**Chiang Mai Arr**	**31.38**	**117**	P	**P**	**18 52 06.7**	**+0.1**
	0.1nm,0.4s,baz=313,slow=8.1,SNR=1.2						
	0.1nm,0.4s						
AKASG	**Malin Array Be**	**32.18**	**309**	P	**P**	**18 52 14.6**	**+1.4**
	0.6nm,0.8s,baz=86,slow=6.1,SNR=5.7						
	0.6nm,0.5s						
NRIK	**Noril'sk**	**34.55**	**11**	P	**P**	**18 52 34.7**	**+1.2**
	2.8nm,0.5s,baz=197,slow=4.3,SNR=5.6						
	2.8nm,0.5s						
FINES	**FINESS Array B**	**37.02**	**327**	P	**P**	**18 52 55.6**	**+1.1**
	1.5nm,0.7s,baz=113,slow=14,SNR=4.3						
	1.5nm,0.7s						
ARCES	**ARCESS Array B**	**40.91**	**338**	P	**P**	**18 53 28.6**	**+1.7**
	1.3nm,0.6s,baz=110,slow=7.5,SNR=14						
	1.3nm,0.6s						
NB2	**NORSAR Subarra**	**43.86**	**323**	P	**P**	**18 53 51.5**	**+0.7**
	comp=Z,0.4nm,0.4s,baz=99,slow=7.9						
NOA	**NORSAR Array B**	**43.86**	**323**	P	**P**	**18 53 51.7**	**+0.9**
	comp=Z,0.6nm,0.5s,baz=100,slow=7.9,SNR=6.8						
	comp=Z,0.6nm,0.5s						
ESDC	**Sonseca Array**	**56.53**	**297**	P	**P**	**18 55 26.1**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=71,slow=7.6,SNR=5.0						
	comp=Z,0.5nm,0.7s						
DAV	**Davao City (W)**	**58.65**	**105**	LR	LR	19 22 41.7	
	comp=Z,22nm,18.1s,baz=155,slow=38						
TORD	**Torodi Ar. Bea**	**64.55**	**268**	P	**P**	**18 56 20.8**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=31,slow=7.7,SNR=1.8						
	comp=Z,0.3nm,0.6s						
INK	**Inuvik**	**74.30**	**9**	P	**P**	**18 57 21.5**	**+1.4**
	comp=Z,0.5nm,0.5s,baz=335,slow=5.7,SNR=4.5						
	comp=Z,0.5nm,0.5s						
ILAR	**Eielson Array**	**75.30**	**15**	P	**P**	**18 57 26.6**	**+0.8**
	comp=Z,0.4nm,0.8s,baz=311,slow=4.6,SNR=5.5						
	comp=Z,0.4nm,0.8s						
WRA	**Warramunga Arr**	**82.87**	**121**	P	**P**	**18 58 07.2**	**-0.5**
	comp=Z,0.7nm,0.8s,baz=328,slow=4.6,SNR=5.8						
	comp=Z,0.7nm,0.8s						
ASAR	**Alice Springs**	**85.09**	**124**	P	**P**	**18 58 18.8**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=313,slow=4.8,SNR=9.8						
	comp=Z,0.3nm,0.5s						

*WEL **13** 18:47:51.2±0.4,39°.5E×17°.5E±°,h5km,M3.4/25, ML3.6/25,MLv3.4/25,Error ellipse: s-maj=0.0km s-min=0.0km az=105.3*
*NOU **13** 18:47:51.7,38°.69S×175°.35E,h8km,MLv3.7/7,North Island, New Zealand*
ISC 13 18:47:51.3±1.0,38°.70S±0°.02×175°.35E±0°.02,h8km±11km, n142,σ0s77/158,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WATZ	**Wairara**	**0.30**	**91**	P	**Pg**	**18 47 57.7**	**+0.4**
WATZ				S	**Sg**	**18 48 01.6**	**+0.3**
RATZ	**Rangitukua**	**0.37**	**117**	P	**Pg**	**18 47 58.8**	**+0.2**
RATZ				S	**Sg**	**18 48 03.7**	**+0.3**
TWVZ	**Taurewa**	**0.38**	**169**	P	**Pg**	**18 47 58.4**	**-0.2**
TWVZ				S	**Sg**	**18 48 02.7**	**-0.9**
KATZ	**Kakaramea**	**0.39**	**135**	P	**Pg**	**18 47 58.9**	**0.0**
KATZ				S	**Sg**	**18 48 04.0**	**0.0**
TLZ	**Tolley Road**	**0.40**	**22**	P	**Pg**	**18 47 59.2**	**+0.1**
TLZ				S	**Sg**	**18 48 04.9**	**+0.6**
HIZ	**Hauiti**	**0.43**	**296**	P	**Pb**	**18 48 01.1**	**0.0**
HIZ				S	**Sb**	**18 48 07.7**	**0.0**
HIZ	**Hauiti**	**0.43**	**296**	P	**Pb**	**18 48 01.0**	**0.0**
KUTZ	**Kaahu Road**	**0.43**	**61**	P	**Pg**	**18 47 60.0**	**+0.3**
KRVZ	**Karewarewa**	**0.46**	**150**	P	**Pg**	**18 47 59.9**	**-0.3**
KRVZ				S	**Sg**	**18 48 06.0**	**-0.2**
WTVZ	**West Tongariro**	**0.46**	**155**	P	**Pg**	**18 47 59.9**	**-0.3**
NTVZ	**North Tongarir**	**0.47**	**147**	P	**Pg**	**18 48 00.3**	**-0.2**
NTVZ				S	**Sg**	**18 48 06.3**	**-0.4**
NNVZ	**North Ngauruho**	**0.48**	**154**	P	**Pg**	**18 48 00.4**	**-0.2**
WHTZ	**Whakaora**	**0.48**	**86**	P	**Pg**	**18 48 01.3**	**+0.7**
RITZ	**Rihia Road**	**0.48**	**125**	P	**Pg**	**18 48 01.0**	**+0.3**
RITZ				S	**Sg**	**18 48 07.6**	**+0.6**
TMVZ	**Te Maari**	**0.50**	**146**	P	**Pg**	**18 48 00.8**	**-0.1**
TMVZ				S	**Sg**	**18 48 06.8**	**-0.7**
NGZ	**Ngauruhoe**	**0.51**	**157**	P	**Pg**	**18 48 00.9**	**-0.4**
ETVZ	**East Tongariro**	**0.52**	**147**	P	**Pg**	**18 48 01.2**	**-0.1**
ETVZ				S	**Sg**	**18 48 07.7**	**-0.5**
OTVZ	**Oturere**	**0.52**	**152**	P	**Pg**	**18 48 01.2**	**-0.2**
SNVZ	**South Ngauruho**	**0.54**	**155**	P	**Pg**	**18 48 01.4**	**-0.3**
SNVZ				S	**Sg**	**18 48 08.3**	**-0.4**
FWVZ	**Far West T-bar**	**0.58**	**164**	P	**Pg**	**18 48 01.9**	**-0.6**
PKVZ	**Pokaka**	**0.59**	**180**	P	**Pg**	**18 48 02.1**	**-0.6**
PKVZ				S	**Sb**	**18 48 11.4**	**-0.9**
DRZ	**Dome Shelter**	**0.60**	**164**	P	**Pg**	**18 48 02.5**	**-0.4**
WHVZ	**Whangaehu Hut**	**0.61**	**162**	P	**Pg**	**18 48 02.4**	**-0.7**
WHVZ				S	**Sg**	**18 48 11.9**	**+0.8**
HATZ	**Hinemaiaia**	**0.61**	**108**	P	**Pg**	**18 48 02.9**	**-0.2**
HATZ				S	**Sg**	**18 48 10.1**	**-1.0**
TUVZ	**Tukino**	**0.61**	**157**	P	**Pg**	**18 48 02.9**	**-0.3**
TRVZ	**Turoa**	**0.62**	**165**	P	**Pg**	**18 48 02.6**	**-0.6**
TRVZ				S	**Sg**	**18 48 11.4**	**+0.1**
VRZ	**Vera Road**	**0.62**	**227**	P	**Pg**	**18 48 03.8**	**+0.5**
WNVZ	**Wahianoa**	**0.66**	**163**	P	**Pg**	**18 48 03.3**	**-0.6**
WPRZ	**Whakapapatarin**	**0.66**	**74**	P	**Pg**	**18 48 04.4**	**+0.4**
MTVZ	**Mangateitei**	**0.69**	**172**	P	**Pg**	**18 48 03.6**	**-0.9**
GRRZ	**Glasstos Road**	**0.69**	**60**	P	**Pg**	**18 48 05.0**	**+0.3**
MOVZ	**Moawhango**	**0.77**	**156**	P	**Pg**	**18 48 05.5**	**-0.7**
ALRZ	**Allen Road**	**0.79**	**80**	P	**Pg**	**18 48 06.7**	**+0.2**
HRRZ	**Handcock Road**	**0.80**	**67**	P	**Pg**	**18 48 06.9**	**+0.3**
HSRZ	**Hossack Road**	**0.81**	**61**	P	**Pg**	**18 48 07.0**	**+0.3**
PRRZ	**Plateau Road**	**0.84**	**76**	P	**Pg**	**18 48 07.5**	**+0.1**
MRHZ	**Matea Rd**	**0.85**	**99**	P	**Pg**	**18 48 07.3**	**-0.2**
UTU	**Utuhina**	**0.85**	**52**	P	**Pg**	**18 48 07.7**	**+0.2**
NGRZ	**Ngongotaha**	**0.89**	**48**	P	**Pg**	**18 48 08.5**	**+0.1**
HLRZ	**Highlands Stat**	**0.91**	**61**	P	**Pg**	**18 48 08.9**	**+0.2**
BHHZ	**Black Hill Sta**	**0.96**	**145**	P	**Pg**	**18 48 09.2**	**-0.6**
KMRZ	**Kaimai**	**0.97**	**29**	P	**Pg**	**18 48 09.6**	**-0.4**
TOZ	**Tahuroa Road**	**0.98**	**7**	P	**Pg**	**18 48 09.3**	**-0.7**
KARZ	**Kaharoa**	**0.98**	**46**	P	**Pg**	**18 48 09.9**	**-0.2**
OMRZ	**Omania**	**1.00**	**54**	P	**Pg**	**18 48 10.5**	**+0.1**
BKZ	**Black Stump Fm**	**1.01**	**118**	P	**Pg**	**18 48 09.9**	**-0.6**
BKZ	**Black Stump Fm**	**1.01**	**118**	P	**Pg**	**18 48 10.0**	**-0.6**
DREZ	**Durham Road**	**1.02**	**241**	P	**Pg**	**18 48 11.5**	**+0.3**
TARZ	**Mount Tarawera**	**1.02**	**63**	P	**Pg**	**18 48 11.1**	**+0.3**
LREZ	**Lake Rotokare**	**1.05**	**224**	P	**Pg**	**18 48 11.9**	**+0.3**
LIRZ	**Lichensteins R**	**1.07**	**50**	P	**Pg**	**18 48 11.8**	**-0.1**
WAZ	**Wanganui**	**1.09**	**195**	P	**Pg**	**18 48 11.4**	**-0.8**
KWHZ	**Kaweka Forest**	**1.11**	**131**	P	**Pg**	**18 48 12.3**	**-0.2**
PREZ	**Palmer Road**	**1.12**	**235**	P	**Pg**	**18 48 13.2**	**+0.4**
NEZ	**North Egmont**	**1.13**	**239**	P	**Pb**	**18 48 13.4**	**+0.3**
MUGZ	**Murupara**	**1.14**	**79**	P	**Pg**	**18 48 12.6**	**-0.5**
PKE	**Pukeiti**	**1.17**	**245**	P	**Pn**	**18 48 14.3**	**+0.3**
MTHZ	**Maungataniwha**	**1.18**	**98**	P	**Pg**	**18 48 13.2**	**-0.7**
KHEZ	**Kahui Hut**	**1.20**	**240**	P	**Pg**	**18 48 14.5**	**+0.3**
NMHZ	**Naumai**	**1.21**	**110**	P	**Pg**	**18 48 14.3**	**-0.2**
TGRZ	**Tauranga**	**1.21**	**37**	P	**Pg**	**18 48 13.5**	**-1.0**
KRHZ	**Kereru**	**1.23**	**140**	P	**Pg**	**18 48 14.0**	**-0.9**
OPRZ	**Ohinepanea**	**1.28**	**48**	P	**Pn**	**18 48 13.8**	**-1.6**
RTZ	**Ruatahuna**	**1.28**	**87**	P	**Pn**	**18 48 14.9**	**-0.6**
NBZZ	**Newall Road No**	**1.28**	**249**	P	**Pb**	**18 48 14.1**	**+0.4**
MCHZ	**McNeill Hill**	**1.29**	**126**	P	**Pn**	**18 48 16.7**	**+0.8**
NMEZ	**Namu Road**	**1.35**	**238**	P	**Pn**	**18 48 16.9**	**+0.6**
RAHZ	**Arahi**	**1.38**	**100**	P	**Pb**	**18 48 17.5**	**+0.3**
PNHZ	**Pukenui**	**1.38**	**152**	P	**Pn**	**18 48 16.3**	**-0.6**
ARHZ	**Aropaoanui**	**1.40**	**114**	P	**Pg**	**18 48 18.7**	**+0.5**
TSZ	**Takapari Road**	**1.44**	**161**	P	**Pn**	**18 48 17.5**	**-0.2**
URZ	**Urewera**	**1.45**	**73**	P	**Pn**	**18 48 18.0**	**+0.3**
URZ	**Urewera**	**1.45**	**73**	P	**Pn**	**18 48 18.1**	**+0.3**
OHWZ	**Ohakea**	**1.50**	**181**	P	**Pn**	**18 48 18.6**	**+0.1**
SNGZ	**Shannon Statio**	**1.56**	**94**	P	**Pb**	**18 48 20.9**	**+0.5**
MYRZ	**Mayor Island**	**1.58**	**27**	P	**Pb**	**18 48 20.9**	**+0.1**
MKAZ	**Moumakai**	**1.60**	**355**	P	**Pn**	**18 48 18.9**	**-1.0**
WPHZ	**Waipukurau**	**1.60**	**148**	P	**Pn**	**18 48 20.6**	**+0.7**
KAHZ	**Kahuranaki**	**1.61**	**133**	P	**Pb**	**18 48 21.2**	**-0.1**
CKHZ	**Cape Kidnapper**	**1.65**	**126**	P	**Pg**	**18 48 23.0**	**+0.1**
DVHZ	**Dannevirke**	**1.72**	**159**	P	**Pn**	**18 48 21.9**	**+0.4**
POWZ	**Post Office Ro**	**1.72**	**169**	P	**Pn**	**18 48 22.2**	**+0.7**
AWAZ	**Awhitu Peninsu**	**1.73**	**341**	P	**Pn**	**18 48 21.4**	**-0.1**
MWZ	**Matawai**	**1.75**	**79**	P	**Pn**	**18 48 22.8**	**+0.9**
PXZ	**Pawanui**	**1.77**	**139**	P	**Pb**	**18 48 25.7**	**+0.4**
ETAZ	**East Tamaki Re**	**1.78**	**349**	P	**Pn**	**18 48 21.7**	**-0.5**
PRHZ	**Porangahau**	**1.85**	**148**	P	**Pn**	**18 48 24.3**	**+0.9**
WTAZ	**Waiatarua**	**1.87**	**341**	P	**Pn**	**18 48 23.7**	**+0.2**
EPAZ	**Eden Park BICE**	**1.88**	**345**	P	**Pb**	**18 48 26.2**	**+0.3**
RIGZ	**Rimuhau**	**1.89**	**91**	P	**Pg**	**18 48 29.6**	**+2.1**
HBAZ	**Herne Bay Bore**	**1.91**	**345**	P	**Pn**	**18 48 23.9**	**-0.2**
PRWZ	**Pori Road**	**1.91**	**166**	P	**Pb**	**18 48 26.2**	**-0.2**
WIAZ	**Waiheke Island**	**1.91**	**355**	P	**Pn**	**18 48 23.2**	**-0.9**
ANWZ	**Angora Road**	**1.96**	**154**	P	**Pn**	**18 48 25.8**	**+1.0**
MBAZ	**Motutapu North**	**1.96**	**349**	P	**Pn**	**18 48 24.0**	**-0.8**
MRZ	**Mangatainoka R**	**1.96**	**175**	P	**Pn**	**18 48 25.8**	**+1.0**
KUZ	**Kuaotunu**	**1.98**	**9**	P	**Pn**	**18 48 24.2**	**-0.7**
RUGZ	**Raukumara Rang**	**1.98**	**69**	P	**Pb**	**18 48 27.2**	**-0.4**
PRGZ	**Paritu Road**	**1.99**	**97**	P	**Pg**	**18 48 30.8**	**+1.3**
RVAZ	**Riverhead Bore**	**2.02**	**342**	P	**Pn**	**18 48 26.3**	**+0.7**
BFZ	**Birch Farm**	**2.10**	**161**	P	**Pb**	**18 48 29.0**	**-0.6**
BFZ	**Birch Farm**	**2.10**	**161**	P	**Pb**	**18 48 28.7**	**-0.8**
TIWZ	**Tintock**	**2.11**	**169**	P	**Pb**	**18 48 29.6**	**-0.3**
OGWZ	**Otaki Gorge**	**2.12**	**184**	P	**Pn**	**18 48 27.9**	**+0.9**
TWGZ	**Tauwhareparae**	**2.13**	**77**	P	**Pb**	**18 48 29.9**	**-0.3**
ABAZ	**Army Bay**	**2.14**	**349**	P	**Pn**	**18 48 26.8**	**-0.4**
HAZ	**Te Kaha**	**2.14**	**65**	P	**Pn**	**18 48 28.6**	**+1.4**
KIW	**Kapiti Island**	**2.18**	**189**	P	**Pn**	**18 48 28.7**	**+0.8**
HOWZ	**Holdsworth Sta**	**2.20**	**177**	P	**Pn**	**18 48 29.4**	**+1.3**
PKGZ	**Pakihiroa**	**2.30**	**70**	P	**Pb**	**18 48 32.9**	**-0.1**
DUWZ	**D'Urville Isla**	**2.37**	**207**	P	**Pn**	**18 48 30.9**	**+0.5**
CAW	**Cannon Point**	**2.41**	**185**	P	**Pn**	**18 48 32.8**	**+1.8**
TMWZ	**Te Maipa**	**2.44**	**170**	P	**Pb**	**18 48 34.5**	**-0.9**
GRZ	**Great Barrier**	**2.45**	**2**	P	**Pn**	**18 48 30.0**	**-1.5**
MTW	**Mount Morrison**	**2.46**	**177**	P	**Pn**	**18 48 32.3**	**+0.7**
WEL	**Wellington**	**2.62**	**190**	P	**Pb**	**18 48 37.5**	**-0.9**
TCW	**Tory Channel**	**2.64**	**198**	P	**Pn**	**18 48 35.5**	**+1.4**
PAWZ	**Paruwai Farm**	**2.68**	**179**	P	**Pb**	**18 48 39.3**	**-0.2**
TRWZ	**Traveller**	**2.71**	**175**	P	**Pb**	**18 48 40.8**	**+0.9**
MSWZ	**Moikau Station**	**2.71**	**182**	P	**Pn**	**18 48 35.8**	**+0.7**
BHW	**Baring Head**	**2.73**	**188**	P	**Pn**	**18 48 37.4**	**+2.1**
PLWZ	**Palliser**	**2.87**	**181**	P	**Pb**	**18 48 42.3**	**-0.4**
WCZ	**Waipu Caves**	**2.87**	**344**	P	**Pn**	**18 48 38.7**	**+1.3**
TUWZ	**Tuamarina**	**2.93**	**201**	P	**Pn**	**18 48 40.1**	**+2.0**
NNZ	**Nelson**	**2.93**	**210**	P	**Pn**	**18 48 41.0**	**+2.8**
TKNZ	**Takaka Hill**	**2.97**	**218**	P	**Pn**	**18 48 39.1**	**+0.5**
QRZ	**Quartz Range**	**3.04**	**225**	P	**Pn**	**18 48 39.2**	**-0.4**
QRZ	**Quartz Range**	**3.04**	**225**	P	**Pn**	**18 48 39.3**	**-0.3**
BSWZ	**Blackbirch Sta**	**3.21**	**200**	P	**Pb**	**18 48 46.3**	**-2.3**
MRNZ	**Matariki Terra**	**3.35**	**216**	P	**Pn**	**18 48 44.6**	**+0.7**
THZ	**Tophouse**	**3.58**	**211**	P	**Pn**	**18 48 48.3**	**+1.1**
OUZ	**Omahuta**	**3.75**	**337**	P	**Pn**	**18 48 49.3**	**0.0**
OUZ	**Omahuta**	**3.75**	**337**	P	**Pn**	**18 48 49.4**	**0.0**
KHZ	**Kahutara**	**3.96**	**200**	P	**Pn**	**18 48 52.3**	**+0.1**
KHZ	**Kahutara**	**3.96**	**200**	P	**Pn**	**18 48 52.5**	**+0.3**
DSZ	**Denniston Nort**	**4.07**	**221**	P	**Pn**	**18 48 54.0**	**+0.1**
GVZ	**Greta Valley S**	**4.61**	**202**	P	**Pn**	**18 49 01.2**	**0.0**
LTZ	**Lake Taylor**	**4.70**	**209**	P	**Pn**	**18 49 04.8**	**+2.3**
INZ	**Inchbonnie**	**4.99**	**215**	P	**Pn**	**18 49 07.3**	**+0.8**
WVZ	**Waitaha Valley**	**5.59**	**217**	P	**Pn**	**18 49 16.5**	**+1.8**
TMZ	**Timaru**	**6.54**	**208**	P	**Pn**	**18 49 27.1**	**-0.7**
JCZ	**Jackson Bay**	**7.29**	**220**	P	**Pn**	**18 49 38.0**	**0.0**

*ANF **13** 19:17:05.0±0.2,60°.09N×134°.17W,h17km±2km,ML3.6/17, Error ellipse: s-maj=1.3km s-min=1.1km az=97.0*
*AEIC **13** 19:17:05±1.0,60°.09N±0°.01×134°.10W±0°.03,h28km±7km, Error ellipse: s-maj=2.5km s-min=1.7km az=49.0*
*NEIC **13** 19:17:05.0±0.6,60°.07N±0°.02×134°.18W±0°.05,h16km±2km, Error ellipse: s-maj=4.4km s-min=2.9km az=50.0*
*PGC **13** 19:17:05.3±0.2,60°.09N×134°.13W,h20km,ML3.6/15, 89km southeast of Whitehorse, Yt Southern Yukon Territory, Canada*
ISC 13 19:17:04.7±1.0,60°.08N±0°.02×134°.18W±0°.02,h11km±9km, n77,σ1s46/138,Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
P32M	**Atlin**	**0.54**	**154**	P	**Pg**	**19 17 16.2**	**+0.9**
	baz=337						
P32M				S	**Sg**	**19 17 23.7**	**+1.2**
	baz=337						
WHY	**Whitehorse**	**0.68**	**329**		**Pb**	**19 17 18.3**	**-0.4**
WHY					**Sg**	**19 17 27.9**	**+1.0**
WHY	**Whitehorse**	**0.68**	**329**	P	**Pb**	**19 17 18.3**	**-0.4**
WHY				S	**Sb**	**19 17 27.6**	**-0.5**
WHY	**Whitehorse**	**0.68**	**329**	P	**Pb**	**19 17 18.3**	**-0.4**
	baz=147,SNR=631						
WHY				S	**Sb**	**19 17 27.7**	**-0.5**
	baz=147		

baz=111
PINM Pinnacle 3.04 273 Pb Pb 19 17 59.6 +0.7
baz=88
PINM Sb Sb 19 18 39.8 +3.8
baz=88
PCA Pinnacle 3.05 273 Pb 19 18 00.3 +1.4
PCA Pinnacle 3.05 273 Pg Pb 19 18 00.5 +1.6
PCA Sg Sg 19 18 40.7 -1.8
SIT Sitka 3.09 192 Sb Sb 19 18 39.7 +2.5
baz=11
TGTN Hyland Airport 3.24 61 Sg Sg 19 18 47.7 -1.0
TGTN Hyland Airport 3.24 61 P Pn 19 17 55.1 -0.3
baz=246
TGTN S Sn 19 18 34.3 +0.3
baz=246
SAMH Samovar Hills 3.31 274 Pg Pb 19 18 03.6 +0.3
SAMH Sg Sg 19 18 48.4 -2.4
LOGN Logan Glacier 3.46 285 Pn 19 17 58.7 +0.1
TABL Table Mountain 3.49 279 Pn Pn 19 17 58.2 -0.8
YUK3 Moose Creek 3.51 302 Pn Pn 19 17 58.9 -0.3
YUK3 Pg Pb 19 18 09.0 +2.1
YUK3 Sg Sg 19 18 53.9 -3.4
YUK3 Moose Creek 3.51 302 P Pn 19 17 58.7 -0.6
baz=116,SNR=12
YUK3 Sb Sb 19 18 52.9 +3.4
baz=116
CTGM Chitina Glacie 3.65 287 Pn 19 18 00.8 -0.4
CTGM Chitina Glacie 3.65 287 Sg Sb 19 18 56.2 +2.7
CTG Chitna Glacier 3.65 287 Pb Pb 19 18 09.2 -0.1
baz=101
CTG S Sn 19 18 44.2 -0.1
baz=101
YUK2 White River 3.68 301 Pn Pn 19 18 01.0 -0.5
YUK2 Pg Pb 19 18 11.9 +2.2
YUK2 Sg Sg 19 18 59.8 -2.9
T35M Bob Quinn 3.73 145 P Pn 19 18 02.3 +0.2
baz=328
WRAK Wrangell Islan 3.79 164 Pn 19 18 02.6 -0.4
WRAK Wrangell Islan 3.79 164 P Pn 19 18 02.3 -0.7
baz=346
WRAK S Sn 19 18 47.4 -0.1
baz=346
GRNC Granite Creek 3.81 283 Pn 19 18 03.0 -0.5
GRNC Granite Creek 3.81 283 Sg Sg 19 19 03.5 -3.6
BVCY Beaver Creek 3.99 309 Sg Sg 19 19 10.2 -2.5
DAWY Dawson 4.69 331 Pn Pn 19 18 15.6 +0.2
DAWY Pg Pb 19 18 29.9 +3.0
DAWY Sg Sg 19 19 30.6 -4.6
DAWY Dawson 4.69 331 P Pn 19 18 15.4 0.0
baz=146,SNR=9.7
FNBB Fort Nelson 5.81 97 Sg Sg 19 20 03.8 -7.4
RIDG Independent Ri 6.23 311 P Pn 19 18 36.3 -0.2
baz=121

IDC 13 19:37:21.6±1.1, 10.30S×74.43W, h0km, mb4.0/5, mbtmp4.0/8, ML4.0/3, Error ellipse: s-maj=28.1km s-min=21.2km az=12.0
NEIC 13 19:37:24.0±0.9, 10.37S±0.07×74.54W±0.07, h10km±5km, mb4.3/8, ML4.3(ARE), Error ellipse: s-maj=11.6km s-min=8.4km az=134.0
ARE 13 19:37:24±3.7, 10.36S±0.04×74.78W±0.04, h19km±4km, Error ellipse: s-maj=0.0km s-min=0.0km az=57.0
VAO 13 19:37:35.8±1.2, 10.05S×74.24W, h0km, mb4.1
ISC 13 19:37:24.1±0.6, 10.23S±0.05×74.58W±0.06, h10km, n32, σ2s16/34, mb4.0/5, Central Peru

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
NNA Nana 2.82 232 Pn Pn 19 38 09.8 +0.4
21nm,0.3s,baz=48,slow=12,SNR=17
NNA Sn Sn 19 38 43.9 +0.4
64nm,0.3s,baz=215,slow=6.4,SNR=14
73nm,0.3s
NNA Nana 2.82 232 Pn 19 38 09.6 +0.2
CZSB Cruzeiro do Su 3.10 37 eP Pb 19 38 20.1 +0.7
CZSB eS Sg 19 39 05.0 +1.1
ATAH Atahualpa 4.87 309 Pn Pn 19 38 39.8 +2.0
7.5nm,0.3s,baz=56,slow=2.4,SNR=22
ATAH Sn Sn 19 39 38.0 +3.5
9.6nm,0.3s,baz=72,slow=16,SNR=4.7
8.9nm,0.3s
BOSC San Juan Bosco 8.04 331 Pn Pn 19 39 19.7 -1.5
BOSC Sn Sn 19 40 48.4 -3.9
ETMB Extrema 8.25 88 eP Pn 19 39 24.5 +0.5
ETMB eS Sn 19 40 57.0 -0.4
LPAZ La Paz 8.70 134 Pn Pn 19 39 32.9 +2.3
0.1nm,0.3s,baz=306,slow=12,SNR=3.6
LPAZ Lg Lg 19 41 51.3
0.6nm,0.3s,baz=153,slow=12,SNR=4.8
LPAZ La Paz 8.70 134 Pn 19 39 26.0 -4.6
LPAZ La Paz 8.70 134 eP Pn 19 39 33.4 +2.7
LPAZ eS Sg 19 41 33.4 -30
COHC Cochancay 9.00 329 Pn 19 39 35.6 +1.3
PB16 IPOC Station P 9.44 149 Pn Pn 19 39 38.3 -2.4
PORT Chimborazo Vol 9.66 334 Pn 19 39 43.6 -0.2
SAML Samuel 11.31 84 Pn 19 40 05.7 -0.3
SIV San Ignacio 14.35 115 Pn Pn 19 40 45.2 -2.3
0.1nm,0.3s,baz=284,slow=14,SNR=6.6
SIV Lg Lg 19 44 47.3
0.1nm,0.3s,baz=17,slow=21,SNR=4.3
0.8nm,0.3s
PTLB Pontes e Lacer 15.92 111 eP P 19 41 17.5 +5.4
PDRB Porto dos Gac 17.58 96 eP P 19 41 37.6 +7.1
BOAV Boa Vista 18.80 49 eP P 19 41 44.7 +0.8
NPGB Novo Progresso 19.27 82 eP Pn 19 41 53.5 +3.5
ITTB Itaituba 19.57 74 eP Pn 19 41 53.1 -0.6
SJCC San Jacinto, C 20.01 358 P P 19 41 57.7 +0.5
SJCC IAmb IAmb 19 42 06.7
comp=Z,11nm,0.7s
BAUV El Baul 20.13 19 P P 19 41 58.9 +0.4
BAUV IAmb IAmb 19 42 00.8
comp=Z,9.3nm,0.6s
CUPR Culebra, Puert 29.81 18 P P 19 43 30.5 -0.9
TXAR Lajitas Array 48.31 325 P P 19 46 06.0 0.0
comp=Z,0.4nm,0.5s,baz=149,slow=8.5,SNR=5.5
comp=Z,0.4nm,0.5s
PDAR Pinedale Array 61.67 331 P P 19 47 44.0 +1.4
comp=Z,0.3nm,0.5s,baz=52,slow=51,SNR=2.6
comp=Z,0.3nm,0.5s
ULM Lac du Bonnet 63.03 345 P P 19 47 49.8 -1.6
comp=Z,1.8nm,0.4s,baz=142,slow=5.2,SNR=4.9
comp=Z,1.8nm,0.4s
DBIC Dimbokro 71.43 79 P P 19 48 43.7 -1.7
comp=Z,5.1nm,0.9s,baz=266,slow=7.2,SNR=3.7
comp=Z,5.1nm,0.9s
DBIC Dimbokro 71.43 79 IAmb IAmb 19 48 48.1
comp=Z,18nm,1.3s
TORD Torodi Ar. Bea 79.19 74 P P 19 49 28.5 -1.5
comp=Z,1.5nm,0.8s,baz=278,slow=6.2,SNR=3.6
comp=Z,1.5nm,0.8s
TORD Torodi Ar. Bea 79.19 74 IAmb IAmb 19 49 33.7
comp=Z,1.3nm,0.8s
ZALV Zalesovo Beam 133.39 17 PKP PKPdf 19 56 39.8 -0.7
comp=Z,0.3nm,0.3s,baz=0.0,slow=3.6,SNR=2.3
ASAR Alice Springs 136.28 219 PKP PKPdf 19 56 44.5 -2.5
comp=Z,0.8nm,0.8s,baz=164,slow=2.0,SNR=6.6
WRA Warramunga Arr 138.65 224 PKP PKPdf 19 56 50.2 -1.2
comp=Z,0.5nm,0.5s,baz=129,slow=2.1,SNR=12

IDC 13 20:11:58.1±43.0, 15.71S×174.01W, h0km, mb4.1/3, mbtmp4.1/3, Error ellipse: s-maj=833.2km s-min=173.2km az=78.0, Tonga Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
STKA Stephens Creek 43.38 240 P P 20 20 03.1 +0.5
1.7nm,0.6s,baz=63,slow=6.7,SNR=6.1
1.7nm,0.6s
WRA Warramunga Arr 49.21 257 P P 20 20 47.9 -0.7
0.4nm,0.5s,baz=96,slow=7.3,SNR=8.7
0.4nm,0.5s
ASAR Alice Springs 49.46 252 P P 20 20 50.5 -0.1
5.7nm,0.6s,baz=88,slow=8.1,SNR=119
5.7nm,0.6s

MAN 13 20:32:00.8, 9.30N×123.20E, h5km, mb4.3, ML3.2, MS2.9, Negros

LSZ 13 20:41:14.1±0.3, 7.41S×32.55E, h10km, MD3.5
ISC 13 20:41:11.4±1.0, 7.53S±0.05×30.6E±0.3, h10km, n11, σ1s77/19, 3D, Lake Tanganyika region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KSMZ Kasama 2.70 166 ⇓ iP Pg 20 42 02.8 -0.5
KSMZ i 20 42 02.8
baz=26,slow=16
KSMZ iS Sg 20 42 38.3 0.0
KSMZ Kasama 2.70 166 ⇓ iP Pg 20 42 02.8 -0.5
KSMZ i 20 42 02.8
baz=26,slow=16
KSMZ iS Sg 20 42 38.3 0.0
KSMZ Kasama 2.70 166 ⇓ iP Pg 20 42 02.8 -0.5
KSMZ i 20 42 02.8
baz=26,slow=16
KSMZ iS Sg 20 42 38.3 0.0
MBAR Mbarara 6.88 1 eP Pn 20 42 55.9 +3.3
MBAR eS Sn 20 44 07.8 -3.4
MBAR Mbarara 6.88 1 eP Pn 20 42 55.9 +3.3
MBAR eS Sn 20 44 07.8 -3.4
MOPA Mopani 15.92 177 iP Pn 20 44 55.3 -0.4
MOPA iS Sn 20 47 53.1 +0.9
MOPA Mopani 15.92 177 iP Pn 20 44 55.3 -0.4
MOPA iS Sn 20 47 53.1 +0.9
MOPA Mopani 15.92 177 iP Pn 20 44 55.3 -0.4
MOPA iS Sn 20 47 53.1 +0.9
LBTB Lobatse 18.03 195 iP P 20 45 21.9 -0.9
LBTB Lobatse 18.03 195 iP P 20 45 21.9 -0.9
LBTB Lobatse 18.03 195 iP P 20 45 21.9 -0.9

IDC 13 20:47:17.0±0.8, 58.63S×29.41W, h0km, mb4.1/4, mbtmp4.0/5, ML3.2/1, MS3.7/17, Error ellipse: s-maj=40.5km s-min=25.9km az=72.0
NEIC 13 20:47:18.3±1.4, 58.66S±0.08×29.4W±0.1, h10km±1km, mb4.5/8, Error ellipse: s-maj=15.5km s-min=8.7km az=145.0
ISC 13 20:47:18.1±0.6, 58.6S±0.1×29.3W±0.1, h10km, n44, σ0s75/27, mb4.4/6, MS3.7/16, South Sandwich Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
HOPE Hope Point 5.91 314 Pn Pn 20 48 45.2 -0.3
HOPE Pg Pb 20 49 00.7 -0.4
ORCD Orcadas 8.10 248 Pn Pn 20 49 09.9 -5.7
SNAA Sanae 16.93 151 Pn P 20 51 17.2 +0.5
0.1nm,0.3s,baz=290,slow=14,SNR=2.7
0.9nm,0.7s
SNAA Sanae 16.93 151 Pn 20 51 14.5 -0.2
PMSA Palmer Station 17.41 235 LR LR 20 56 41.6
comp=Z,369nm,18.8s,baz=58,slow=32
PMSA Palmer Station 17.41 235 Pn 20 51 21.1 +0.4
USHA Ushuaia 21.59 263 LR LR 20 58 04.6
comp=Z,567nm,18.8s,baz=112,slow=30
PLCA Paso Flores 31.49 286 LR LR 21 05 42.1
comp=Z,63nm,18.2s,baz=194,slow=35
QSPA South Pole Qui 31.61 180 LR LR 21 05 40.4
comp=Z,106nm,20.0s,baz=206,slow=35
CPUP Villa Florida 37.79 316 LR LR 21 09 58.8
comp=Z,52nm,19.0s,baz=212,slow=36
AC02 Maricunga 42.14 301 P P 20 55 11.0 +0.1
AC02 IAmb IAmb 20 55 14.0
comp=Z,7.4nm,0.9s
SUR Sutherland 42.42 74 LR LR 21 08 52.3
comp=Z,50nm,19.4s,baz=166,slow=30
VNDA Vanda 43.93 183 P P 20 55 25.8 +1.4
comp=Z,0.8nm,0.8s,baz=171,slow=5.5,SNR=4.5
comp=Z,0.8nm,0.8s
VNDA Vanda 43.93 183 IAmb IAmb 20 55 34.9
comp=Z,2.6nm,0.9s
BOSA Boshof 47.71 75 LR LR 21 11 37.7
comp=Z,91nm,20.6s,baz=190,slow=31
LBTB Lobatse 50.84 73 LR LR 21 13 17.4
comp=Z,64nm,20.8s,baz=194,slow=31
LPAZ La Paz 51.04 309 P P 20 56 21.4 +0.4
comp=Z,1.7nm,0.4s,baz=159,slow=5.3,SNR=12
comp=Z,1.7nm,0.4s
LPAZ La Paz 51.04 309 P 20 56 20.9 -0.1
LPAZ IAmb IAmb 20 56 22.2
comp=Z,4.0nm,1.0s
CASY Casey 51.85 161 P P 20 56 24.1 -1.6
CASY IAmb IAmb 20 56 34.0
comp=Z,7.5nm,0.9s
TSUM Tsumeb 51.93 61 LR LR 21 13 13.0
comp=Z,27nm,21.5s,baz=152,slow=30
LSZ Lusaka 60.35 69 LR LR 21 19 38.3
comp=Z,51nm,19.7s,baz=139,slow=32
RPN Rapa Nui 62.16 263 LR LR 21 18 01.4
comp=Z,61nm,20.2s,baz=0.5,slow=30
MDP Montagnes des 66.23 334 LR LR 21 27 08.2
comp=Z,38nm,18.4s,baz=238,slow=36
DBIC Dimbokro 67.99 26 LR LR 21 21 25.4
comp=Z,50nm,19.8s,baz=165,slow=30
MBAR Mbarara 74.32 64 LR LR 21 29 07.0
comp=Z,42nm,18.0s,baz=160,slow=34
TOA0 Torodi Ar. Sit 75.86 31 P P 20 59 04.3 -0.1
TORD Torodi Ar. Bea 75.86 31 P P 20 59 05.9 +1.6
comp=Z,1.9nm,0.7s,baz=206,slow=4.2,SNR=15
comp=Z,1.9nm,0.7s
TORD Torodi Ar. Bea 75.86 31 P P 20 59 05.3 +1.0
TORD IAmb IAmb 21 01 19.1
comp=Z,8.1nm,1.7s
STKA Stephens Creek 89.51 172 LR LR 21 37 49.1
comp=Z,62nm,19.3s,baz=201,slow=34
PPT Papeete 89.77 235 LR LR 21 30 50.6
comp=Z,40nm,20.0s,baz=172,slow=29
MDT Midelt 93.40 21 LR LR 21 38 13.2
comp=Z,47nm,18.4s,baz=200,slow=33
ASAR Alice Springs 96.83 165 P P 21 00 48.2 -0.9
comp=Z,0.4nm,0.6s,baz=184,slow=3.8,SNR=5.7
comp=Z,0.4nm,0.6s
YKA Yellowknife Ar 137.31 317 PKP PKPdf 21 06 40.0 0.0
comp=Z,2.4nm,1.0s,baz=118,slow=2.3,SNR=5.9
ZALV Zalesovo Beam 144.46 68 PKP PKPab 21 06 51.4 -0.1
comp=Z,2.1nm,0.7s,baz=241,slow=3.6,SNR=9.8
ZALV Zalesovo Beam 144.46 68 PKPab 21 06 51.3 -0.3
HYT Haines Junctio 145.40 305 PKPab 21 06 56.3 +1.3
A36M Sachs Harbour 145.78 327 PKPdf PKPdf 21 06 55.3 +0.3
M30M Minto, Yukon 145.92 308 PKPdf PKPdf 21 06 55.7 +0.1
INK Inuvik 147.04 319 PKPbc PKPbc 21 06 59.1 -0.2
comp=Z,2.0nm,0.7s,baz=99,slow=4.5,SNR=2.8
KDAK Kodiak Island 150.87 293 PKPbc PKPbc 21 07 09.3 -0.1
comp=Z,6.6nm,0.6s,baz=153,slow=4.5,SNR=4.5
KDAK Kodiak Island 150.87 293 PKPdf 21 07 02.4 -1.3
KDAK PKPbc PKPbc 21 07 09.7 +0.3
ILAR Eielson Array 150.92 309 PKPbc PKPbc 21 07 09.2 -0.1
comp=Z,5.2nm,0.9s,baz=150,slow=1.6,SNR=31
ILAR Eielson Array 150.92 309 PKPbc 21 07 08.9 -0.4
SONM Songino Array 151.88 93 PKPbc PKPbc 21 07 12.3 0.0
comp=Z,0.7nm,0.5s,baz=272,slow=0.9,SNR=4.9

OMAN 13 20:49:03.6±1.1, 26.64N×55.68E, h0km±5km, mb5.8/1, ml3.4/17, ms2.5/1, Error ellipse: s-maj=8.9km s-min=5.8km az=50.0
DSN 13 20:49:04.1±2.0, 26.64N×55.82E, h10km, ML3.4/10, Error ellipse: s-maj=24.5km s-min=6.2km az=35.0
TEH 13 20:49:06.3, 26.44N×55.63E, h18km, ML3.5
ISC 13 20:49:07.1±1.1, 26.43N±0.02×55.68E±0.04, h11km±10km, n70, σ1s32/82, Southern Iran

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SHME Shamm 0.56 132 ePg Pb 20 49 17.8 -1.2
SHME Shamm 0.56 132 P Pb 20 49 16.8 -2.1
SNR=96
SHME S Sn 20 49 27.8 -2.5
SHME Shamm 0.56 132 eP Pb 20 49 16.0 -2.9
SNR=9.1
BANOM Banah 0.75 132 ePg Pb 20 49 21.1 -1.1
BANOM Banah 0.75 132 P Pg 20 49 22.0 +0.3
SNR=24
BANOM S Sg 20 49 32.3 +0.7
BANOM Banah 0.75 132 eP Pb 20 49 19.7 -2.5
SNR=25
BANOM S Sg 20 49 32.2 +0.7
UMQ Umm Al-Quwin 0.90 181 ePg Pn 20 49 26.0 +0.3
UMQ Umm Al-Quwin 0.90 181 P Pn 20 49 26.2 +0.5
SNR=9.6
UMQ S Sn 20 49 41.6 +2.9
UMQ Umm Al-Quwin 0.90 181 eP Pn 20 49 25.6 0.0
SNR=9.2
GENO Geno 1.06 24 ePg Pb 20 49 26.5 -1.0
GENO eSg Sg 20 49 42.4 +1.0
MASF Masafi 1.14 158 P Pg 20 49 28.9 -0.2
SNR=40
MSFE Esma-Masafi 1.15 158 ePg Pb 20 49 28.5 -0.5
MSFE Esma-Masafi 1.15 158 eP Pb 20 49 28.6 -0.5
SNR=39
IBND Bandar-abas 1.27 37 ePg Pg 20 49 31.4 -0.1
IBND eSg Sg 20 49 48.7 +0.6
IBND e 20 50 06.3
comp=Z,11µm,0.4s
NAZ Nazwa, Dubai 1.44 181 ePg Pg 20 49 34.2 -0.5
NAZ Nazwa, Dubai 1.44 181 P Pg 20 49 34.2 -0.5
SNR=15
NAZ S Sg 20 49 57.2 +3.8
NAZ Nazwa, Dubai 1.44 181 eP Pg 20 49 33.4 -1.3
SNR=14
UOSS Minazif 1.56 162 ePg Pb 20 49 35.4 -0.5
UOSS Minazif 1.56 162 P Pb 20 49 35.8 -1.1
UOSS S Sg 20 49 58.1 +1.0
UOSS Minazif 1.56 162 eP Pb 20 49 35.3 -0.6
SNR=12
HATD Hatta, Dubai 1.65 166 ePn Pb 20 49 36.8 -0.7
HATD Hatta, Dubai 1.65 166 P Pg 20 49 38.0 -0.8
SNR=9.5
HATD S Sg 20 50 00.4 +0.1
HATD Hatta, Dubai 1.65 166 eP Pb 20 49 36.6 -0.9
SNR=9.2
FAQ Al Faqa, Dubai 1.68 183 ePn Pb 20 49 37.4 -0.6
FAQ Al Faqa, Dubai 1.68 183 P Pg 20 49 38.0 -1.4
SNR=18
FAQ S Sg 20 50 02.5 +1.3
FAQ Al Faqa, Dubai 1.68 183 P Pb 20 49 37.4 -0.6
LAR1 LAR 1.69 317 ePg Pb 20 49 37.2 -1.1
ASHO Ashiyiah 1.77 169 ePn Pb 20 49 38.4 -1.2
ASHO Ashiyiah 1.77 169 P Pb 20 49 39.0 -0.7
SNR=20
ASHO S Sg 20 50 06.4 +2.2
ASHO Ashiyiah 1.77 169 eP Pb 20 49 38.1 -1.6
SNR=22
ASUD Al Ashush, Dub 1.83 190 ePn Pb 20 49 39.6 -0.9
ASUD Al Ashush, Dub 1.83 190 P Pb 20 49 39.6 -0.9
SNR=36
ASUD Al Ashush, Dub 1.83 190 eP Pb 20 49 39.4 -1.1
SNR=36
AJN Ajban 1.96 199 ePn Pb 20 49 41.4 -1.4
AJN Ajban 1.96 199 P Pb 20 49 40.9 -1.9
JASK Jask - Hormozg 2.05 105 ePn Pn 20 49 41.4 0.0
JASK e 20 49 51.1
comp=Z,3µm,0.6s
KHNJ Kahnooj 2.35 50 ePn Pn 20 49 46.5 +0.8
ALNE Al Ain 2.37 178 ePn Pb 20 49 46.7 -3.1
ALNE Al Ain 2.37 178 P Pb 20 49 46.6 -3.1
HOQ Hoqain 3.20 152 P Pn 20 49 59.3 +2.0
NGRK Negar Kerman 3.33 16 ePn Pn 20 49 59.7 +0.2
NGRK e 20 50 02.6
comp=Z,585nm,0.2s
KBAM BAM 3.65 42 ePn Pn 20 50 04.7 +1.2
KBAM e 20 50 53.8
comp=Z,632nm,0.4s
BIDO Bidbid 3.65 142 ePn Pn 20 50 03.0 -0.5
BIDO Bidbid 3.65 142 P Pn 20 50 04.6 +1.1
BIDO S Sn 20 50 48.5 +1.9
KRBR Kerman 3.66 15 ePn Pn 20 50 03.4 -0.5
TVBK TV Kerman 3.67 15 ePn Pn 20 50 04.9 +0.9
TVBK e 20 51 02.4
comp=Z,796nm,0.3s
UMZA Um Al Zommool 3.73 187 ePn Pn 20 50 03.7 -0.9
UMZA Um Al Zommool 3.73 187 P Pn 20 50 04.7 +0.1
CHMN Cheshme madani 3.79 25 e 20 50 53.5
comp=Z,939nm,0.4s
CHMN ePn Pn 20 50 07.1 +1.4
MZR Muzera 3.96 211 ePn Pn 20 50 07.5 -0.2
MZR Muzera 3.96 211 P Pn 20 50 09.7 +2.0
KHGB Koh Gabri 3.99 10 ePn Pn 20 50 09.3 +0.9
SMDO Samad 3.99 147 P Pn 20 50 10.0 +1.7
WSAR Wadi Sarin 4.16 139 P Pn 20 50 11.1 +0.6
CHBR Chabahar 4.40 100 ePn Pn 20 50 13.9 +0.1
JMDO Jabal Madar 4.61 151 P Pn 20 50 17.7 +1.0
WBK Wadi Bani Khal 4.84 141 P Pn 20 50 20.5 +0.5
IBAF Bafgh 5.14 359 ePn Pn 20 50 24.4 +0.3
ZHSF Zahedan 5.51 54 ePn Pn 20 50 29.2 0.0
KLNJ Kolanjah 5.80 323 ePn Pn 20 50 32.3 -1.1
MHTO MHTO 5.81 158 P Pn 20 50 32.8 -0.4
YZKH Yazd 6.01 351 ePn Pn 20 50 36.7 +0.7
IRAM Ramesheh 6.08 332 ePn Pn 20 50 37.5 +0.4
TPRV Parvadeh(Tabas 6.63 7 ePn Pn 20 50 45.7 +1.2
NASN Na'in 6.82 339 ePn Pn 20 50 48.1 +0.8
IZEF Zefreh 7.07 336 ePn Pn 20 50 50.0 -0.7
IPIR Pirpir 7.49 327 ePn Pn 20 50 56.4 -0.2
DOK Doka 7.91 191 P Pn 20 51 01.5 -0.6
WHFO Wadi Hawf 8.65 192 P Pn 20 51 12.0 -0.3
SNR=5.8
DMTO DMTO 8.70 185 P Pn 20 51 13.5 +0.6
SNR=6.6

IDC 13 21:06:45.9±1.2, 2.19N×99.62E, h193km±22km, mb3.0/4, mbtmp3.4/5, Error ellipse: s-maj=127.6km s-min=19.2km az=55.0
ISC 13 21:06:45.7±1.7, 2.1N±0.3×99.5E±0.4, h200km, n6, σ1s00/6, mb3.2/4, Northern Sumatera

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PSI Prapat 0.85 321 P Pn 21 07 14.2 -0.5
8.3nm,0.3s,baz=48,slow=21,SNR=13
CMAR Chiang Mai Arr 16.23 358 P Pn 21 10 22.2 -0.7
0.3nm,0.5s,baz=190,slow=8.2,SNR=2.0
WRA Warramunga Arr 40.65 124 P P 21 14 06.6 -0.1
0.7nm,0.5s,baz=303,slow=9.0,SNR=9.9
0.7nm,0.5s
MKAR Makanchi Array 46.93 344 P P 21 14 56.4 +0.1
0.2nm,0.4s,baz=164,slow=7.8,SNR=5.6
0.2nm,0.4s
KURBB Kurchatov Arra 51.46 343 P P 21 15 31.3 +0.7
0.3nm,0.7s,baz=172,slow=8.6,SNR=1.8
0.3nm,0.7s
ZALV Zalesovo Beam 53.03 349 P P 21 15 43.3 +1.3
0.4nm,0.4s,baz=160,slow=5.4,SNR=2.2
0.4nm,0.4s

MAN 13 21:28:03.6, 16.53N×120.55E, h33km, mb4.0, ML2.8, MS2.4, Luzon

IDC 13 21:31:49.4±0.9, 29.00N×141.64E, h0km, mb3.7/10, mbtmp3.7/13, ML3.3/3, MS2.5/3, Error ellipse: s-maj=34.0km s-min=14.9km az=73.0
ISC 13 21:31:55.8±0.8, 29.06N±0.08×141.7E±0.2, h56km, n16, σ2s22/17, mb3.8/10, Southeast of Honshu

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JCJ Chichijima 2.00 168 Pn Pn 21 32 25.5 -1.7
6.0nm,0.3s,baz=99,slow=18,SNR=2.0
JCJ Sn Sn 21 32 49.0 -2.1
25nm,0.3s,baz=268,slow=23,SNR=5.8
JHJ Hachijo jima 2 4.37 338 Pn Pn 21 32 58.6 -1.1
4.8nm,0.3s,baz=35,slow=14,SNR=1.6
JHJ Sn Sn 21 33 44.5 -4.8
6.5nm,0.3s,baz=49,slow=18,SNR=1.0
44nm,0.6s
MJAR Matsushiro Arr 8.02 339 Pn Pn 21 33 47.0 -2.7
0.2nm,0.3s,baz=135,slow=12,SNR=6.9
MJAR Sn Sn 21 35 16.1 -2.9
baz=130,slow=9.9,SNR=1.2
1.9nm,0.5s
JOW Kunigami 12.09 263 LR LR 21 38 13.4
comp=Z,14nm,19.0s,baz=305,slow=32
KSRS Korea Array 14.24 310 Pn Pn 21 35 13.8 -0.7
0.2nm,0.3s,baz=113,slow=10,SNR=2.0
KSRS LR LR 21 40 03.6
comp=Z,20nm,20.7s,baz=115,slow=35
0.5nm,0.5s
KLR Kul'dur 21.54 342 P P 21 36 41.3 +1.2
0.3nm,0.3s,baz=145,slow=16,SNR=1.8
0.3nm,0.3s
SONM Songino Array 33.03 314 P P 21 38 27.2 +1.4
0.3nm,0.5s,baz=129,slow=11,SNR=2.6
0.3nm,0.5s
CMAR Chiang Mai Arr 40.35 265 LR LR 21 56 46.6
comp=Z,11nm,19.3s,baz=225,slow=37
ZALV Zalesovo Beam 47.74 318 P P 21 40 26.4 -0.5
0.8nm,0.5s,baz=103,slow=11,SNR=5.2
0.8nm,0.5s

MKAR	**Makanchi Array**	**48.92**	**308**	P		**P**		**21 40 37.7**	**+1.5**
	0.5nm,0.5s,baz=89,slow=10,SNR=9.1								
	0.5nm,0.5s								
WRA	**Warramunga Arr**	**49.23**	**189**	P		**P**		**21 40 39.7**	**+0.9**
	0.8nm,0.5s,baz=11,slow=8.6,SNR=18								
	0.8nm,0.5s								
ASAR	**Alice Springs**	**52.96**	**189**	P		**P**		**21 41 05.5**	**-1.1**
	0.3nm,0.6s,baz=7.3,slow=6.8,SNR=2.4								
	0.3nm,0.6s								
FINES	**FINESS Array B**	**76.01**	**333**	P		**P**		**21 43 36.9**	**+0.3**
	1.2nm,0.9s,baz=89,slow=6.0,SNR=1.6								
	1.2nm,0.9s								
NVAR	**Mina Array Bea**	**79.64**	**52**	P		**P**		**21 43 58.7**	**+1.1**
	0.4nm,0.6s,baz=297,slow=5.9,SNR=2.7								
	0.4nm,0.6s								
PDAR	**Pinedale Array**	**83.11**	**45**	P		**P**		**21 44 19.1**	**+3.1**
	0.5nm,0.3s,baz=300,slow=2.7,SNR=4.2								
	0.5nm,0.3s								
BRTR	**Keskin Array B**	**84.37**	**313**	P		**P**		**21 44 23.7**	**+1.4**
	0.5nm,0.6s,baz=90,slow=2.9,SNR=2.4								
	0.5nm,0.6s								

IPEC ***13*** *21:34:13.8±0.2,51.°55N×16.°19E,h1km,ML2.4/4, Error ellipse: s-maj=2.0km s-min=1.1km az=36.0*
PRU ***13*** *21:34:14.0±0.0,51.°53N×16.°13E,h0km*
DNK ***13*** *21:34:14.6±1.9,51.°66N×15.°79E,h0km±46km, ML1.9*
VIE ***13*** *21:34:16.1±0.9,51.°37N×16.°08E,h0km, mb2.4/5, ml2.5/5, Error ellipse: s-maj=7.9km s-min=6.3km az=98.0 72 km WNW of Wroclaw Suspected Mining induced.*
UPP ***13*** *21:34:18.3±2.8,51.°83N×15.°63E,h0km, ML1.8, Suspected explosion*
ISC 13 21:34:12.7±0.8,51°62N±0.°02×16°12E±0.°03,h0km,n50,
σ1§25/97,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.79**	**172**	*i* Pg	**Pg**	**21 34 27.6**	**-0.2**
KSP				*i* Sg	**Sg**	**21 34 36.8**	**-1.1**
CHVC	**Chvalec**	**1.04**	**182**	*e*PG	**Pg**	**21 34 32.4**	**-0.1**
CHVC				*e*SG	**Sg**	**21 34 44.9**	**-1.0**
	comp=Z,37nm,0.6s						
OSTC	**Ostas**	**1.07**	**177**	*e*PG	**Pg**	**21 34 33.1**	**0.0**
OSTC				*e*SG	**Sg**	**21 34 45.8**	**-1.1**
	comp=Z,33nm,0.6s						
UPC	**Upice**	**1.12**	**184**	*e*PG	**Pg**	**21 34 33.4**	**-0.7**
UPC				*e*SG	**Sg**	**21 34 48.0**	**-0.5**
	comp=Z,57nm,0.4s						
PVCC	**Panska Ves**	**1.47**	**222**	*e*PG	**Pn**	**21 34 40.4**	**0.0**
PVCC				*e*SG	**Sn**	**21 35 00.6**	**+0.3**
	comp=Z,98nm,0.2s						
BRG	**Berggiesshubel**	**1.56**	**242**	Pg	**Pg**	**21 34 42.9**	**+0.3**
BRG				Sg	**Sg**	**21 35 03.3**	**+0.5**
BRG				Amp		21 35 04.3	
	comp=Z,68nm,0.3s						
KRLC	**Kraliky**	**1.60**	**165**	*e*PG	**Pn**	**21 34 41.5**	**-0.8**
KRLC				*e*SG	**Sn**	**21 35 02.4**	**-1.3**
	comp=Z,27nm,0.3s						
PRU	**Pruhonice**	**1.92**	**212**	*e*PG	**Pn**	**21 34 47.2**	**+0.6**
PRU				*e*SG	**Sb**	**21 35 12.3**	**-0.7**
	comp=Z,76nm,1.0s						
CLL	**Collm**	**1.98**	**262**	*e*Pn	**Pn**	**21 34 47.0**	**-0.4**
CLL				*e*Pg	**Pg**	**21 34 51.0**	**+0.5**
CLL				*e*Sg	**Sg**	**21 35 16.0**	**-0.1**
	comp=Z,17nm,0.8s						
MORC	**Moravsky Berou**	**2.06**	**153**	*e*Pn	**Pn**	**21 34 48.1**	**-0.4**
	baz=335						
MORC				*e*Sg	**Sn**	**21 35 15.6**	**+0.8**
	comp=Z,21nm,0.4s,baz=335						
MORC	**Moravsky Berou**	**2.06**	**153**	*e*PN	**Pn**	**21 34 48.1**	**-0.4**
MORC				*e*SG	**Sn**	**21 35 15.7**	**+0.9**
OKC	**Ostrava-Krasne**	**2.20**	**143**	*e*PG	**Pb**	**21 34 54.0**	**+0.7**
OKC				*e*SG	**Sb**	**21 35 21.8**	**+0.7**
	comp=Z,20nm,0.4s						
VRAC	**Vranov**	**2.34**	**172**	*e*Pn	**Pn**	**21 34 52.4**	**+0.1**
	baz=354						
VRAC				*e*Sg	**Sb**	**21 35 24.7**	**-0.3**
	comp=Z,21nm,0.7s,baz=354						
VRAC	**Vranov**	**2.34**	**172**	*e*PN	**Pn**	**21 34 52.4**	**+0.1**
VRAC				*e*SG	**Sb**	**21 35 24.7**	**-0.3**
TREC	**Trest**	**2.37**	**190**	*e*PG	**Pb**	**21 34 54.5**	**-1.6**
TREC				*e*SG	**Sb**	**21 35 26.2**	**+0.4**
	comp=Z,16nm,0.3s						
MAUC	**Maruska**	**2.51**	**154**	*e*PG	**Pb**	**21 34 59.3**	**+0.7**
MAUC				*e*SG	**Sb**	**21 35 31.5**	**+1.5**
	comp=Z,48nm,0.8s						
KRUC	**Moravsky**	**2.57**	**176**	*e*Pn	**Pn**	**21 34 55.6**	**+0.1**
	baz=357						
KRUC				*e*Sg	**Sb**	**21 35 31.9**	**+0.2**
	comp=Z,13nm,0.5s,baz=357						
KRUC	**Moravsky**	**2.57**	**176**	*e*PN	**Pn**	**21 34 55.7**	**+0.2**
KRUC				*e*SG	**Sb**	**21 35 31.9**	**+0.2**
NKC	**Novy Kostel**	**2.71**	**241**	*e*PN	**Pn**	**21 34 58.3**	**+0.8**
NKC				*e*PG	**Pg**	**21 35 04.3**	**-0.3**
NKC				*e*SG	**Sg**	**21 35 39.1**	**-0.5**
	comp=Z,35nm,0.4s						
JAVC	**Velka Javorina**	**2.94**	**160**	*e*Pn	**Pn**	**21 35 00.6**	**0.0**
	baz=341						
JAVC	**Velka Javorina**	**2.94**	**160**	*e*PN	**Pn**	**21 35 00.6**	**0.0**
KHC	**Kasperske Hory**	**2.98**	**214**	*e*PN	**Pn**	**21 35 00.8**	**-0.4**
KHC				*e*PG	**Pb**	**21 35 07.3**	**+0.7**
KHC				x		21 35 11.0	
KHC				*e*SN	**Sn**	**21 35 37.4**	**-0.2**
KHC				*e*SG	**Sb**	**21 35 45.9**	**+2.4**
	comp=Z,7.7nm,0.6s						
CKRC	**Cesky Krumlov**	**3.04**	**203**	*e*PN	**Pn**	**21 35 02.6**	**+0.6**
CKRC				*e*PG	**Pb**	**21 35 08.4**	**+0.8**
CKRC				*e*SG	**Sg**	**21 35 49.1**	**-1.1**
	comp=Z,13nm,0.7s						
SMOL	**Smolenice**	**3.22**	**164**	*e*SG	**Sg**	**21 35 56.5**	**+0.4**
LANS	**Liptovska Anna**	**3.27**	**138**	*e*PN	**Pn**	**21 35 05.7**	**+0.5**
LANS				*e*PG	**Pg**	**21 35 16.0**	**+0.7**
LANS				*e*SG	**Sg**	**21 35 56.0**	**-1.7**
MODS	**Modra-Piesok**	**3.34**	**167**	*e*PG	**Pb**	**21 35 13.2**	**+0.5**
MODS				*e*SG	**Sg**	**21 35 59.6**	**-0.2**
NIE	**Niedzica**	**3.46**	**128**	*e*P	**Pg**	**21 35 18.7**	**-0.3**
NIE				*e*S	**Sg**	**21 36 04.1**	**+0.3**
BSD	**Bornholm Skovb**	**3.57**	**349**	*i* P	**Pn**	**21 35 09.6**	**+0.3**
BSD				*i* S	**Sn**	**21 35 51.0**	**-1.1**
BSD				IAML		21 35 55.3	
	comp=Z,1.3nm,0.1s						
CONA	**Conrad Observa**	**3.70**	**183**	*i* Pn	**Pn**	**21 35 11.9**	**+0.7**
	comp=Z,0.4nm,0.1s						
CONA				*e*Sg	**Sg**	**21 36 08.6**	**-2.9**
	comp=Z,8.0nm,0.3s						
MOA	**Molln**	**3.96**	**198**	*i* Pn	**Pn**	**21 35 15.1**	**+0.4**
	comp=Z,0.4nm,0.1s						
MOA				*e*Sg	**Sg**	**21 36 17.9**	**-2.0**
	comp=Z,3.7nm,0.3s						
ARSA	**Arzberg**	**4.39**	**185**	*e*Sg	**Sg**	**21 36 33.8**	**+0.1**
	comp=Z,4.3nm,0.4s						
BLEU	**Blekinge**	**4.70**	**358**	P	**Pn**	**21 35 26.0**	**+1.3**
BLEU				*i* P	**Pn**	**21 35 26.2**	**+1.5**
BLEU				*i* S	**Sn**	**21 36 18.1**	**-1.7**
BLEU				S	**Sn**	**21 36 18.5**	**-1.3**
BLEU	**Blekinge**	**4.70**	**358**	P	**Pn**	**21 35 26.0**	**+1.3**
BLEU				S	**Sn**	**21 36 18.5**	**-1.3**
BJUU	**Bjuv**	**4.82**	**339**	*i* P	**Pn**	**21 35 28.8**	**+2.4**
BJUU				*i* S	**Sn**	**21 36 21.0**	**-1.9**
KBA	**Koelnbreinsper**	**4.90**	**203**	*e*Sg	**Sg**	**21 36 50.2**	**+0.3**
	comp=Z,7.7nm,0.5s						
DEL	**Delary**	**5.04**	**346**	*i* P	**Pn**	**21 35 30.0**	**+0.6**
DEL				P	**Pn**	**21 35 30.4**	**+1.1**
DEL				*i* S	**Sn**	**21 36 25.0**	**-3.2**
DEL				S	**Sn**	**21 36 26.0**	**-2.2**
DEL	**Delary**	**5.04**	**346**	P	**Pn**	**21 35 30.4**	**+1.1**
DEL				S	**Sn**	**21 36 26.0**	**-2.2**
GID	**Gilleleje**	**5.08**	**334**	*i* P	**Pn**	**21 35 29.8**	**-0.2**
WTTA	**Wattenberg**	**5.25**	**216**	Sg	**Sg**	**21 37 02.6**	**+1.3**
	comp=Z,3.1nm,0.4s						
VXJU	**Vaexsjoe**	**5.36**	**353**	P	**Pn**	**21 35 35.7**	**+2.0**
VXJU	**Vaexsjoe**	**5.36**	**353**	P	**Pn**	**21 35 35.7**	**+2.0**
OSKU	**Oskarshamn**	**5.58**	**360**	P	**Pn**	**21 35 38.6**	**+1.7**
OSKU	**Oskarshamn**	**5.58**	**360**	P	**Pn**	**21 35 38.6**	**+1.7**
BYXU	**Byxelkrok**	**5.70**	**5**	P	**Pn**	**21 35 40.4**	**+1.9**
BYXU				S	**Sn**	**21 36 43.1**	**-1.5**
BYXU	**Byxelkrok**	**5.70**	**5**	P	**Pn**	**21 35 40.4**	**+1.9**
BYXU				S	**Sn**	**21 36 43.1**	**-1.5**
VSTU	**Vaestervik**	**6.06**	**2**	P	**Pn**	**21 35 45.5**	**+2.1**
VSTU				S	**Sn**	**21 36 52.4**	**-0.9**
VSTU	**Vaestervik**	**6.06**	**2**	P	**Pn**	**21 35 45.5**	**+2.1**
VSTU				S	**Sn**	**21 36 52.4**	**-0.9**
ONAU	**Onsala**	**6.28**	**339**	*i* P	**Pn**	**21 35 46.1**	**-0.3**
ONAU				*i* S	**Sn**	**21 36 55.2**	**-3.6**
VIKU	**Vikbolandet**	**6.90**	**3**	P	**Pn**	**21 35 56.8**	**+1.8**
VIKU	**Vikbolandet**	**6.90**	**3**	P	**Pn**	**21 35 56.8**	**+1.8**

IDC ***13*** *21:59:03.3±0.7,4.°15N×82.°70W,h0km, mb4.1/13, mbtmp4.3/19, ML3.5/5, MS3.6/44, Error ellipse: s-maj=25.0km s-min=13.1km az=55.0*
UPA ***13*** *21:59:03.6±1.8,4.°22N×82.°69W,h0km±38km, MW4.5*
NEIC ***13*** *21:59:05.4±2.1,4.°21N±0.°06×82.°61W±0.°03,h10km±1km, mb4.6/90, Error ellipse: s-maj=10.7km s-min=4.4km az=182.0*
UCR ***13*** *21:59:17.2±1.9,5.°14N×82.°74W,h20km, mb4.6(NEIC)*
ISC 13 21:59:05.4±0.4,4.°20N±0.°05×82.°63W±0.°05,h14km,n250,
σ1§31/205,mb4.5/50,MS3.7/39,10C-1D,South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CACAO	**El Cacao, Vera**	**3.58**	**29**	*e*P	**Pn**	**21 59 59.4**	**-1.2**
CACAO				*e*S	**Sn**	**22 00 39.0**	**-3.8**
CACAO	**El Cacao, Vera**	**3.58**	**29**	*e*P	**Pn**	**21 59 60.0**	**-0.6**
CACAO				*e*S	**Sn**	**22 00 40.4**	**-2.4**
PTPM	**Petroterminale**	**3.99**	**356**	*i*/*e*P	**Pn**	**22 00 03.8**	**-2.3**
DVD	**David**	**4.21**	**2**	*e*P	**Pn**	**22 00 08.3**	**-0.9**
AZU	**Azuero**	**4.27**	**33**	*e*P	**Pn**	**22 00 10.0**	**+0.1**
AZU				*e*S	**Sn**	**22 00 57.2**	**-2.4**
AZU	**Azuero**	**4.27**	**33**	*e*P	**Pn**	**22 00 10.2**	**+0.2**
AZU				*e*S	**Sn**	**22 00 59.4**	**-0.2**
CHIT3	**Chitre**	**4.33**	**30**	*i*/*e*P	**Pn**	**22 00 11.5**	**+0.6**
CHIT3				*e*S	**Sn**	**22 00 59.9**	**-1.3**
CDITO	**Canoas**	**4.35**	**357**	Pn	**Pn**	**22 00 08.6**	**-2.6**
CDITO	**Canoas**	**4.35**	**357**	*e*P	**Pn**	**22 00 09.6**	**-1.6**
BCO2	**Palmira**	**4.49**	**1**	*e*P	**Pn**	**22 00 12.2**	**-1.0**
BCO2				*e*S	**Sn**	**22 01 05.6**	**+0.2**
BRU2	**Volcan**	**4.56**	**359**	Pn	**Pn**	**22 00 12.4**	**-1.8**
BRU2	**Volcan**	**4.56**	**359**	*i*/*e*P	**Pn**	**22 00 12.4**	**-1.8**
BRU2	**Volcan**	**4.56**	**359**	*e*P	**Pn**	**22 00 12.9**	**-1.3**
BRU2				*e*S	**Sn**	**22 01 06.4**	**-0.8**
MLIR3	**Monte Lirio, C**	**4.57**	**358**	*i*/*e*P	**Pn**	**22 00 13.5**	**-0.7**
EDPN	**Palmar Norte**	**4.80**	**350**	*e*P	**Pn**	**22 00 15.5**	**-1.8**
PNME	**Penonome**	**4.83**	**28**	*e*P	**Pn**	**22 00 19.2**	**+1.4**
POTG	**Potrero Grande**	**4.85**	**354**	*e*P	**Pn**	**22 00 16.6**	**-1.4**
SRBA	**San Rafael, Bu**	**5.05**	**352**		**Pn**	**22 00 19.3**	**-1.6**
SRBA	**San Rafael, Bu**	**5.05**	**352**	*e*P	**Pn**	**22 00 19.5**	**-1.4**
DRK0	**Durika**	**5.07**	**353**	Pn	**Pn**	**22 00 20.6**	**-0.6**
DRK0	**Durika**	**5.07**	**353**	*e*P	**Pn**	**22 00 20.6**	**-0.6**
EDDO	**Dominical**	**5.17**	**346**	*e*P	**Pn**	**22 00 19.8**	**-2.6**
CNI2	**El Empalme, Bo**	**5.19**	**2**	*e*P	**Pn**	**22 00 21.7**	**-1.0**
PEZE	**Perez Zeledon,**	**5.25**	**349**	Pn	**Pn**	**22 00 21.7**	**-1.9**
MALC	**Bahia Malaga**	**5.28**	**92**	*e*P	**Pn**	**22 00 26.0**	**+2.0**
CDM	**Cerro de Muert**	**5.44**	**348**	*e*P	**Pn**	**22 00 24.3**	**-2.2**
ZANG	**Zanguenga, Cho**	**5.46**	**30**	*e*P	**Pn**	**22 00 28.1**	**+1.6**
CHOR3	**La Chorrera**	**5.47**	**31**	*e*P	**Pn**	**22 00 28.5**	**+2.0**
PAC1	**Pacto, Paraso**	**5.47**	**135**	*e*P	Pn	22 00 21.1	-5.6
UPA	**Univ. de Panam**	**5.66**	**33**	*e*P	**Pn**	**22 00 28.9**	**-0.2**
UPA	**Univ. de Panam**	**5.66**	**33**	*e*P	**Pn**	**22 00 29.3**	**+0.2**
UPA				*e*S	**Sn**	**22 01 32.5**	**-1.5**
BCIP	**Isla Barro Col**	**5.66**	**29**	Pn	**Pn**	**22 00 30.2**	**+1.0**
BCIP	**Isla Barro Col**	**5.66**	**29**	*e*P	**Pn**	**22 00 30.7**	**+1.5**
BCIP				*e*S	**Sn**	**22 01 32.3**	**-1.6**
BCIP	**Isla Barro Col**	**5.66**	**29**	*i*/*e*P	**Pn**	**22 00 30.6**	**+1.5**
BCIP				*e*S	**Sn**	**22 01 32.7**	**-1.3**
RIMA	**Rio Macho**	**5.67**	**348**	Pn	**Pn**	**22 00 27.6**	**-1.8**
GAMB1	**Gamboa**	**5.68**	**31**	*e*P	**Pn**	**22 00 29.5**	**+0.1**
GAMB1				*e*S	**Sn**	**22 01 33.4**	**-1.1**
CUSE	**Cuicocha Este**	**5.73**	**132**	*e*P	Pn	22 00 23.1	-7.4
OTAV	**Otavalo**	**5.74**	**133**	Pn	Pn	22 00 26.9	-3.7
OTAV	**Otavalo**	**5.74**	**133**	*e*P	Pn	22 00 26.9	-3.7
FRIJ	**El Hiral**	**5.76**	**30**	*e*P	**Pn**	**22 00 31.6**	**+1.0**
BATAN	**Batan**	**5.91**	**353**	Pn	**Pn**	**22 00 32.6**	**+0.1**
TULM	**Tulcn-Chalpat**	**5.95**	**125**	Pn	**Pn**	**22 00 33.3**	**-0.2**
HDC	**Heredia**	**5.95**	**346**	Pn	**Pn**	**22 00 31.6**	**-1.7**
HDC	**Heredia**	**5.95**	**346**	*e*P	**Pn**	**22 00 32.5**	**-0.7**
HDC				*e*S	**Sn**	**22 01 40.5**	**-0.8**
LAFE	**Finca La Fe, P**	**6.01**	**338**	*e*P	**Pn**	**22 00 31.7**	**-2.3**
CCUFI	**Cufio, Nario**	**6.04**	**119**	*e*P	**Pn**	**22 00 34.7**	**-0.2**
GCUF	**Volcan Galeras**	**6.05**	**119**	*e*P	**Pn**	**22 00 34.7**	**-0.2**
POPC	**Popayan, Colom**	**6.17**	**105**	*e*P	**Pn**	**22 00 34.7**	**-1.6**
YOTC	**Yotoco, Valle**	**6.27**	**92**	*e*P	**Pn**	**22 00 38.6**	**+0.9**
INDI	**Punta indio, G**	**6.31**	**333**	*e*P	**Pn**	**22 00 36.5**	**-1.6**
SOTA	**Rioblanco**	**6.35**	**109**	*e*P	**Pn**	**22 00 39.5**	**+0.4**
PLMC	**San Jos del P**	**6.36**	**83**	*e*P	**Pn**	**22 00 38.6**	**-0.3**
SLOR	**San Lorenzo -**	**6.40**	**140**	Pn	**Pn**	**22 00 38.5**	**-1.3**
JTS	**Las Juntas de**	**6.48**	**339**	Pn	**Pn**	**22 00 38.6**	**-1.8**
	83nm,0.4s,baz=153,slow=6.7,SNR=61						
JTS				Sn	**Sn**	**22 01 52.9**	**-1.3**
	12nm,0.3s,baz=130,slow=23,SNR=8.8						
JTS	**Las Juntas de**	**6.48**	**339**	Pn	**Pn**	**22 00 39.7**	**-0.7**
JTS	**Las Juntas de**	**6.48**	**339**	*i*/*e*P	**Pn**	**22 00 38.6**	**-1.8**
JTS	**Las Juntas de**	**6.48**	**339**	*e*P	**Pn**	**22 00 38.5**	**-1.9**
JTS	**Las Juntas de**	**6.48**	**339**	*e*P	**Pn**	**22 00 39.2**	**-1.2**
JTS				*e*S	**Sn**	**22 01 52.2**	**-2.0**
PCON	**Cinco Dias**	**6.49**	**106**	*e*P	**Pn**	**22 00 42.4**	**+1.3**
DUNO	**Dulce Nombre,**	**6.50**	**334**	Pn	**Pn**	**22 00 38.8**	**-1.9**
CASO	**Castillo**	**6.54**	**341**	*e*P	**Pn**	**22 00 40.4**	**-0.8**
CEDE	**Laguna Cedeo**	**6.58**	**342**	*e*P	**Pn**	**22 00 42.1**	**+0.3**
GUAI	**GUAI**	**6.67**	**335**	*e*P	**Pn**	**22 00 41.2**	**-1.9**
ORTG	**Ortega, Santa**	**6.74**	**336**	Pn	**Pn**	**22 00 43.3**	**-0.8**
CBOC	**Ciudad Bolivar**	**6.79**	**76**	*i*/*e*P	**Pn**	**22 00 43.4**	**-1.5**
MARP	**Paez Belalcaza**	**6.79**	**101**	*e*P	**Pn**	**22 00 45.3**	**+0.3**
PORT	**Chimborazo Vol**	**6.82**	**146**	Pn	**Pn**	**22 00 45.1**	**-0.4**
ACAL	**Aguas Claras**	**6.82**	**340**	*e*P	**Pn**	**22 00 43.0**	**-2.2**
CAPC	**Capurgana**	**6.85**	**50**	*e*P	**Pn**	**22 00 47.2**	**+1.8**
CUI	**Cuipilapa**	**6.89**	**339**	*e*P	**Pn**	**22 00 45.9**	**-0.3**
COLC	**Colonia**	**6.91**	**338**	*e*P	**Pn**	**22 00 46.2**	**-0.2**
HORNC	**Hornillas**	**6.95**	**339**	*e*P	**Pn**	**22 00 47.0**	**+0.1**
GUAB	**Guayabo de Bag**	**6.96**	**338**	*e*P	**Pn**	**22 00 47.6**	**+0.5**
DBBC	**Dabeiba**	**6.97**	**66**	*e*P	**Pn**	**22 00 49.2**	**+1.9**
GPS2	**Hotel Rincn d**	**7.05**	**338**	*e*P	**Pn**	**22 00 49.1**	**+0.8**
LAPC	**Finca la Perla**	**7.09**	**337**	*e*P	**Pn**	**22 00 48.8**	**-0.1**
HZTE	**Horizontes, Gu**	**7.11**	**336**	Pn	**Pn**	**22 00 49.1**	**0.0**
GBS3	**Finca Las Img**	**7.12**	**337**	*e*P	**Pn**	**22 00 49.5**	**+0.4**
GB1A	**Borinquen Arri**	**7.13**	**337**	*e*P	**Pn**	**22 00 49.8**	**+0.4**
ANIL	**Santa Ana**	**7.21**	**87**	*e*P	**Pn**	**22 00 53.1**	**+2.4**
HELC	**Santa Helena**	**7.34**	**74**	*e*P	**Pn**	**22 00 53.1**	**+0.5**
ORTC	**Ortega, Tolima**	**7.37**	**92**	*i*/*e*P	**Pn**	**22 00 55.0**	**+2.3**
PRAC	**Prado**	**7.74**	**93**	*e*P	**Pn**	**22 00 58.9**	**+1.1**
CNOCA	**NORCASIA, CALD**	**7.84**	**80**	*i*/*e*P	**Pn**	**22 01 02.7**	**+3.5**
NORC	**Norcasia**	**7.85**	**80**	*i*/*e*P	**Pn**	**22 01 01.8**	**+2.5**
URCC	**San Jos de Ur**	**7.89**	**63**	*e*P	**Pn**	**22 01 01.8**	**+2.0**
ACON	**Acoyapa**	**8.12**	**342**	Pn	**Pn**	**22 01 01.6**	**-1.3**
ROSC	**El Rosal**	**8.31**	**85**	Pn	**Pn**	**22 01 08.5**	**+2.6**
	3.8nm,0.3s,baz=266,slow=6.9,SNR=7.2						
ROSC				LR	LR	22 04 24.4	
	comp=Z,491nm,18.1s,baz=1.5,slow=38						
	12nm,0.3s						
ROSC	**El Rosal**	**8.31**	**85**	*e*P	Pn	22 01 11.4	+5.6
BOSC	**San Juan Bosco**	**8.39**	**150**	Pn	**Pn**	**22 01 06.9**	**+0.1**
ZARC	**Zaragoza, Cauc**	**8.39**	**67**	Pn	**Pn**	**22 01 08.7**	**+2.0**
PTBC	**PUERTO BERRIO,**	**8.46**	**74**	*i*/*e*P	**Pn**	**22 01 10.5**	**+2.8**
SPBC	**San Pablo de B**	**8.64**	**80**	*e*P	**Pn**	**22 01 10.5**	**+0.2**
CHIC	**Chingaza**	**8.88**	**87**	*e*P	**Pn**	**22 01 16.3**	**+2.5**
PAYG	**Puerto Ayora**	**9.06**	**238**	Pn	**Pn**	**22 01 16.8**	**+1.0**
CNGN	**Cerro Negro**	**9.18**	**334**	Pn	**Pn**	**22 01 17.9**	**+0.4**
MATN	**Matagalpa**	**9.27**	**340**	Pn	**Pn**	**22 01 18.4**	**-0.4**
SJCC	**San Jacinto, C**	**9.31**	**52**		**Pn**	**22 01 21.4**	**+2.1**
SJCC	**San Jacinto, C**	**9.31**	**52**	*e*P	**Pn**	**22 01 21.1**	**+1.8**
CRIN	**San Cristobal**	**9.51**	**333**	Pn	**Pn**	**22 01 23.3**	**+1.2**
RUSC	**La Rusia**	**9.65**	**80**	*e*P	**Pn**	**22 01 26.9**	**+2.5**
BARC	**Barichara**	**9.70**	**75**	*e*P	**Pn**	**22 01 26.9**	**+2.1**
OCAC	**Ocana**	**10.08**	**66**	Pn	**Pn**	**22 01 32.2**	**+2.1**
PAMC	**Pamplona, Colo**	**10.36**	**72**	*e*P	**Pn**	**22 01 35.6**	**+1.5**
ATAH	**Atahualpa**	**12.03**	**159**	Pn	**Pn**	**22 01 56.1**	**-0.7**
	0.6nm,0.3s,baz=319,slow=4.3,SNR=3.7						
ATAH				LR	LR	22 06 17.5	
	comp=Z,1μm,19.6s,baz=337,slow=36						
	4.6nm,0.6s						
SDV	**Santo Domingo**	**12.79**	**68**	Pn	**Pn**	**22 02 08.5**	**+1.3**
	1.5nm,0.3s,baz=248,slow=12,SNR=4.7						
SDV				LR	LR	22 06 59.9	
	comp=Z,372nm,19.1s,baz=250,slow=37						
	7.6nm,0.4s						
SDV	**Santo Domingo**	**12.79**	**68**	Pn	**Pn**	**22 02 08.2**	**+1.1**
PETF	**Flores**	**14.50**	**331**	P	**P**	**22 02 40.1**	**+3.1**
CCIG	**Comitan**	**15.21**	**323**	Pn	**Pn**	**22 02 40.0**	**-0.1**
CCIG				IAmb	IAmb	22 02 42.9	
	comp=Z,20nm,0.7s						
BAUV	**El Baul**	**15.23**	**71**		**Pn**	**22 02 40.4**	**+0.2**
BAUV				IAmb	IAmb	22 02 47.0	
	comp=Z,31nm,0.9s						
NNA	**Nana**	**17.08**	**160**	P	**Pn**	**22 03 04.1**	**+0.1**
	comp=Z,1.4nm,0.3s,baz=314,slow=10,SNR=5.0						
NNA				LR	LR	22 09 40.6	
	comp=Z,108nm,21.0s,baz=316,slow=37						
	comp=Z,5.7nm,0.4s						
NNA	**Nana**	**17.08**	**160**	IAmb	IAmb	22 03 08.4	
	comp=Z,6.1nm,1.5s						
BIRV	**Birongo**	**17.37**	**68**		**Pn**	**22 03 08.1**	**+0.5**
CMIG	**Matias Romero**	**17.57**	**318**	P	**Pn**	**22 03 10.2**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=138,slow=8.8,SNR=6.0						
CMIG				LR	LR	22 08 40.4	
	comp=Z,345nm,20.4s,baz=154,slow=33						
	comp=Z,7.7nm,1.0s						
SDDR	**Presa de Saban**	**18.40**	**36**	P	**Pn**	**22 03 22.3**	**+2.0**
AOPR	**Arecibo Observ**	**20.95**	**47**	P	**P**	**22 03 48.9**	**+0.8**
SJG	**San Juan**	**21.24**	**48**	P	**P**	**22 03 53.0**	**+1.8**
	comp=Z,13nm,0.8s,baz=238,slow=9.5,SNR=6.4						
SJG				LR	LR	22 12 57.2	
	comp=Z,47nm,19.8s,baz=263,slow=39						
	comp=Z,13nm,0.8s						
SJG	**San Juan**	**21.24**	**48**	P	**P**	**22 03 53.7**	**+2.5**
SJG				IAmb	IAmb	22 03 55.2	
	comp=Z,33nm,1.1s						
GCPR	**Guaynabo City**	**21.41**	**48**	P	**P**	**22 03 53.6**	**+0.6**
CBYP	**Canovanas**	**21.56**	**48**	P	**P**	**22 03 53.6**	**-1.1**
SAML	**Samuel**	**23.38**	**124**	P	**P**	**22 04 12.3**	**-1.6**
LPAZ	**La Paz**	**24.90**	**145**	P	**P**	**22 04 29.1**	**+0.3**
	comp=Z,13nm,1.0s,baz=334,slow=7.7,SNR=30						
LPAZ				LR	LR	22 15 38.0	
	comp=Z,237nm,20.2s,baz=297,slow=40						
	comp=Z,13nm,1.0s						
LPAZ	**La Paz**	**24.90**	**145**	P	**P**	**22 04 28.9**	**+0.1**
PB18	**Visviri**	**25.24**	**149**	P	**P**	**22 04 32.7**	**+0.9**
PB16	**IPOC Station P**	**25.86**	**150**	IAmb	IAmb	22 04 46.5	
	comp=Z,10.0nm,0.9s						
PB11	**IPOC Station P**	**27.01**	**152**	P	**P**	**22 04 48.0**	**+0.6**
PB11				IAmb	IAmb	22 04 50.6	
	comp=Z,18nm,1.2s						
GO01	**Chusmiza**	**27.15**	**151**	IAmb	IAmb	22 05 07.8	
	comp=Z,12nm,1.1s						
SIV	**San Ignacio**	**29.28**	**134**	L

NV11	**Mina Array Sit**	**46.96**	**321**	P	**P**	**22 07 35.5**	**-0.7**
NV11				IAmb	IAmb	22 07 38.7	
	comp=Z,6.4nm,1.3s						
NVAR	**Mina Array Bea**	**47.05**	**321**	P	**P**	**22 07 37.8**	**+0.8**
	comp=Z,2.4nm,0.7s,baz=135,slow=6.7,SNR=20						
NVAR				LR	LR	22 27 17.8	
	comp=Z,138nm,19.0s,baz=99,slow=36						
	comp=Z,2.4nm,0.7s						
NVAR	**Mina Array Bea**	**47.05**	**321**	P	**P**	**22 07 38.1**	**+1.1**
ULM	**Lac du Bonnet**	**47.23**	**348**	P	**P**	**22 07 37.4**	**-0.5**
	comp=Z,3.7nm,0.8s,baz=137,slow=9.0,SNR=6.6						
	comp=Z,3.7nm,0.8s						
BMN	**Battle Mountai**	**47.65**	**324**	P	**P**	**22 07 41.7**	**+0.2**
BMN				IAmb	IAmb	22 07 43.8	
	comp=Z,4.6nm,1.0s						
RCBR	**Riachuelo**	**47.71**	**102**	LR	LR	22 29 58.0	
	comp=Z,72nm,18.4s,baz=74,slow=39						
HLID	**Hailey**	**48.22**	**329**	P	**P**	**22 07 46.8**	**+0.8**
BOZ	**Bozeman (W)**	**48.38**	**333**	IAmb	IAmb	22 07 53.2	
	comp=Z,6.5nm,1.4s						
WVOR	**Wild Horse Val**	**49.75**	**325**	IAmb	IAmb	22 07 59.4	
	comp=Z,7.3nm,1.1s						
YBH	**Yreka Blue Hor**	**51.73**	**322**	LR	LR	22 30 15.6	
	comp=Z,84nm,20.1s,baz=154,slow=36						
SCHQ	**Schefferville**	**52.08**	**12**	LR	LR	22 29 21.9	
	comp=Z,36nm,21.5s,baz=226,slow=35						
NEW	**Newport**	**52.89**	**332**	LR	LR	22 31 26.9	
	comp=Z,62nm,21.0s,baz=98,slow=37						
FRB	**Frobisher Bay**	**60.30**	**7**	LR	LR	22 34 05.1	
	comp=Z,63nm,21.7s,baz=196,slow=35						
YKA	**Yellowknife Ar**	**62.79**	**344**	P	**P**	**22 09 30.1**	**-0.1**
	comp=Z,5.1nm,0.9s,baz=138,slow=6.9,SNR=14						
YKA				LR	LR	22 39 52.0	
	comp=Z,37nm,18.1s,baz=114,slow=39						
	comp=Z,5.1nm,0.9s						
DLBC	**Dease Lake**	**65.36**	**335**	LR	LR	22 40 39.5	
	comp=Z,89nm,19.4s,baz=118,slow=38						
SFJD	**Kangerlussuaq**	**66.47**	**13**	LR	LR	22 37 55.3	
	comp=Z,26nm,21.5s,baz=224,slow=35						
PPT	**Papeete**	**69.47**	**250**	LR	LR	22 33 32.5	
	comp=Z,58nm,19.5s,baz=8.0,slow=30						
ICESG	**Greenland Ices**	**70.74**	**15**	*i* P	P	22 10 15.5	-5.7
RES	**Resolute Bay**	**70.78**	**357**	LR	LR	22 40 52.9	
	comp=Z,44nm,18.4s,baz=82,slow=35						
I29M	**Ogilvie Camp,**	**72.44**	**339**	IAmb	IAmb	22 10 33.0	
	comp=Z,8.7nm,1.1s						
INK	**Inuvik**	**72.46**	**342**	LR	LR	22 43 52.5	
	comp=Z,51nm,19.9s,baz=152,slow=37						
INK	**Inuvik**	**72.46**	**342**	P	**P**	**22 10 31.9**	**+0.8**
INK				IAmb	IAmb	22 10 35.1	
	comp=Z,5.4nm,1.0s						
BCAR	**Beaver Creek A**	**72.69**	**336**	P	**P**	**22 10 33.4**	**+0.7**
L27K	**Beaver Creek,**	**72.70**	**336**	IAmb	IAmb	22 10 44.7	
	comp=Z,6.3nm,1.2s						
SUMG	**Summit**	**73.45**	**13**	P	**P**	**22 10 36.2**	**-1.2**
SUMG	**Summit**	**73.45**	**13**	*i* P	**P**	**22 10 36.0**	**-1.4**
DOT	**Dot Lake**	**73.86**	**336**	P	**P**	**22 10 39.1**	**-0.5**
SCRK	**Sand Creek**	**73.97**	**336**	IAmb	IAmb	22 10 54.2	
	comp=Z,4.8nm,1.2s						
J26L	**Joseph Creek**	**74.02**	**337**	P	**P**	**22 10 41.4**	**+0.8**
J26L				IAmb	IAmb	22 10 54.7	
	comp=Z,5.3nm,1.1s						
RIDG	**Independent Ri**	**74.22**	**336**	IAmb	IAmb	22 10 45.5	
	comp=Z,7.5nm,1.1s						
BORG	**Borgarnes**	**74.27**	**23**	LR	LR	22 38 13.4	
	comp=Z,42nm,21.8s,baz=244,slow=32						
SCM	**Sheep Creek Mo**	**74.56**	**334**	IAmb	IAmb	22 10 47.1	
	comp=Z,8.1nm,1.0s						
ILAR	**Eielson Array**	**75.44**	**336**	P	**P**	**22 10 49.1**	**+0.4**
	comp=Z,1.1nm,0.8s,baz=120,slow=4.1,SNR=8.0						
ILAR				LR	LR	22 46 30.0	
	comp=Z,45nm,20.0s,baz=102,slow=38						
	comp=Z,1.1nm,0.8s						
ILAR	**Eielson Array**	**75.44**	**336**	P	**P**	**22 10 48.7**	**0.0**
BMAR	**Burnt Mountain**	**75.63**	**339**	P	**P**	**22 10 50.1**	**+0.3**
RND	**Reindeer**	**75.76**	**335**	IAmb	IAmb	22 10 59.5	
	comp=Z,6.4nm,0.8s						
DBIC	**Dimbokro**	**77.39**	**84**	P	**P**	**22 11 01.6**	**+0.8**
	comp=Z,5.3nm,0.9s,baz=241,slow=15,SNR=2.3						
	comp=Z,5.3nm,0.9s						
MDT	**Midelt**	**77.67**	**57**	LR	LR	22 39 07.0	
	comp=Z,33nm,21.1s,baz=286,slow=31						
K20K	**Telida**	**77.99**	**334**	P	**P**	**22 11 03.6**	**+0.5**
J20K	**Nowinta River**	**78.24**	**335**	IAmb	IAmb	22 11 06.0	
	comp=Z,5.5nm,1.1s						
ESDC	**Sonseca Array**	**78.61**	**51**	P	**P**	**22 11 07.5**	**+0.4**
	comp=Z,1.3nm,0.9s,baz=271,slow=6.1,SNR=8.0						
ESDC				LR	LR	22 45 41.1	
	comp=Z,25nm,18.2s,baz=274,slow=36						
	comp=Z,1.3nm,0.9s						
JMIC	**Jan Mayen**	**80.90**	**19**	LR	LR	22 48 33.3	
	comp=Z,7.2nm,18.7s,baz=266,slow=37						
TORD	**Torodi Ar. Bea**	**83.54**	**77**	P	**P**	**22 11 33.8**	**0.0**
	comp=Z,0.7nm,0.8s,baz=262,slow=3.1,SNR=3.2						
TORD				LR	LR	22 48 04.5	
	comp=Z,19nm,19.7s,baz=222,slow=35						
	comp=Z,0.7nm,0.8s						
SPITS	**Spitsbergen Ar**	**87.76**	**12**	LR	LR	22 51 23.4	
	comp=Z,16nm,20.7s,baz=246,slow=36						
NOA	**NORSAR Array B**	**88.22**	**29**	LR	LR	22 47 46.3	
	comp=Z,21nm,20.6s,baz=275,slow=33						
DAVOX	**Davos/Dischmat**	**88.69**	**43**	LR	LR	22 46 57.1	
	comp=Z,24nm,19.4s,baz=262,slow=32						
KEST	**Kesra**	**89.18**	**54**	LR	LR	22 51 33.4	
	comp=Z,30nm,21.0s,baz=288,slow=35						
HFS	**Hagfors**	**89.54**	**30**	LR	LR	22 46 23.9	
	comp=Z,24nm,20.1s,baz=276,slow=32						
ARCES	**ARCESS Array B**	**92.35**	**20**	LR	LR	22 47 43.7	
	comp=Z,19nm,22.0s,baz=251,slow=32						
VRAC	**Vranov**	**92.84**	**40**	LR	LR	22 47 54.2	
	comp=Z,33nm,21.8s,baz=278,slow=32						
FINES	**FINESS Array B**	**95.16**	**27**	LR	LR	22 51 04.2	
	comp=Z,24nm,19.9s,baz=292,slow=33						
H11N3	**WAKE ISLAND Hy**	**107.70**	**292**	T	T	00 13 46.0	
	baz=79,slow=75,SNR=18						
H11N2	**WAKE ISLAND Hy**	**107.71**	**292**	T	T	00 13 46.4	
	baz=79,slow=75,SNR=18						
H11N1	**WAKE ISLAND Hy**	**107.72**	**292**	T	T	00 13 50.0	
	baz=79,slow=75,SNR=18						
KURK	**Kurchatov**	**122.97**	**14**	PKPdf	**PKPdf**	**22 17 59.8**	**-1.7**
KURBB	**Kurchatov Arra**	**123.04**	**14**	PKP	**PKPdf**	**22 18 01.4**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=330,slow=2.3,SNR=4.9						
SONM	**Songino Array**	**127.58**	**352**	PKP	**PKPdf**	**22 18 10.7**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=120,slow=2.3,SNR=2.8						
SONM	**Songino Array**	**127.58**	**352**	PKPdf	**PKPdf**	**22 18 09.6**	**-1.0**
KS19	**Wonju Array Si**	**129.75**	**328**	PKPdf	**PKPdf**	**22 18 13.7**	**-1.1**
KSAR	**Wonju Array Be**	**129.78**	**328**	PKPdf	**PKPdf**	**22 18 12.9**	**-1.9**
LZH	**Lanzhou**	**139.47**	**352**	*e*PKP	**PKiKP**	**22 18 35.8**	**+0.2**
ASAR	**Alice Springs**	**139.80**	**238**	PKhKP	PKPpre	22 18 26.2	
	comp=Z,0.2nm,0.5s,baz=118,slow=2.4,SNR=2.0						
ASAR				PKP	**PKPdf**	**22 18 32.8**	**-1.2**
	comp=Z,0.6nm,0.6s,baz=101,slow=2.2,SNR=5.3						
WRA	**Warramunga Arr**	**140.75**	**243**	PKiKP	PKPpre	22 18 29.0	
	comp=Z,0.3nm,0.7s,baz=95,slow=3.1,SNR=7.1						
WRA				PKP	**PKPdf**	**22 18 36.9**	**+1.1**
	comp=Z,0.8nm,0.8s,baz=106,slow=1.9,SNR=3.7						
PZH	**PanZhiHua**	**149.19**	**352**	PKPbc	**PKPdf**	**22 18 49.3**	**-1.0**

*VIE **13** 22:03:58.5±0.7, 50.00N×18.61E, h0km, mb2.2/2, ml2.3/2, Error ellipse: s-maj=5.7km s-min=4.2km az=87.0 32 km NE of Ostrava Suspected Mining induced.*
*IPEC **13** 22:03:58.5±0.2, 50.03N×18.62E, h1km,2km, ML2.0/3, Error ellipse: s-maj=1.9km s-min=1.3km az=13.0*
*PRU **13** 22:03:59.9±0.0, 49.97N×18.53E, h0km*
*IDC **13** 22:04:01.5±3.0, 50.02N×18.34E, h0km, mbtmp3.2/3, ML2.4/3, Error ellipse: s-maj=53.0km s-min=10.9km az=135.0*

ISC 13 22:03:58.3±0.7, 50.00N±0.03×18.62E±0.02, h0km, n36, σ0s80/67, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.34**	**242**	*e*PG	**Pg**	**22 04 05.7**	**+0.9**
OKC				*e*SG	**Sg**	**22 04 10.8**	**+1.5**
	comp=Z,70nm,0.7s						
MORC	**Moravsky Berou**	**0.73**	**253**	*e*Pg	**Pg**	**22 04 12.5**	**+0.3**
	baz=70						
MORC				*e*Sg	**Sg**	**22 04 21.7**	**+0.1**
	23nm,0.2s,baz=70						
MORC	**Moravsky Berou**	**0.73**	**253**	*e*PG	**Pg**	**22 04 12.5**	**+0.3**
MORC				*e*SG	**Sg**	**22 04 21.8**	**+0.1**
ANAC	**Anensky vrch**	**0.80**	**276**	*e*Pg	**Pg**	**22 04 14.0**	**+0.4**
	baz=93						
MAUC	**Maruska**	**0.81**	**219**	*e*PG	**Pb**	**22 04 14.7**	**-0.6**
MAUC				*e*SG	**Sb**	**22 04 25.8**	**-1.1**
	comp=Z,85nm,0.8s						
LANS	**Liptovska Anna**	**1.01**	**147**	*e*PG	**Pb**	**22 04 18.6**	**-0.1**
LANS				*e*SG	**Sb**	**22 04 33.0**	**+0.4**
LANS				*e*LG	Lg	22 04 37.5	
KRLC	**Kraliky**	**1.19**	**274**	*e*PG	**Pg**	**22 04 20.5**	**-0.5**
KRLC				*e*SG	**Sg**	**22 04 37.2**	**+0.9**
	comp=Z,35nm,0.3s						
NIE	**Niedzica**	**1.24**	**117**	*e*Pg	**Pb**	**22 04 22.7**	**+0.2**
NIE				*e*Sg	**Sn**	**22 04 41.5**	**+1.2**
JAVC	**Velka Javorina**	**1.30**	**209**	*e*Pg	**Pb**	**22 04 23.5**	**-0.1**
	baz=28						
JAVC				*e*Sg	**Sb**	**22 04 40.2**	**-0.6**
	baz=28						
JAVC	**Velka Javorina**	**1.30**	**209**	*e*PG	**Pb**	**22 04 23.5**	**-0.1**
JAVC				*e*SG	**Sb**	**22 04 40.2**	**-0.6**
VRAC	**Vranov**	**1.48**	**243**	*e*Pg	**Pn**	**22 04 25.6**	**-0.6**
	baz=60						
VRAC				*e*Sg	**Sg**	**22 04 45.5**	**-0.4**
	19nm,0.3s,baz=60						
VRAC	**Vranov**	**1.48**	**243**	*e*PG	**Pn**	**22 04 25.7**	**-0.5**
VRAC				*e*SG	**Sg**	**22 04 45.6**	**-0.4**
OSTC	**Ostas**	**1.64**	**291**	*e*PG	**Pn**	**22 04 28.9**	**+0.5**
OSTC				*e*SG	**Sg**	**22 04 51.7**	**+0.8**
	comp=Z,25nm,0.9s						
SMOL	**Smolenice**	**1.68**	**208**	*e*PG	**Pn**	**22 04 29.0**	**+0.1**
SMOL				*e*SG	**Sn**	**22 04 51.0**	**-0.1**
SMOL				*e*LG	Lg	22 04 58.3	
KSP	**Ksiaz**	**1.71**	**301**	*e*Pg	**Pn**	**22 04 29.7**	**+0.4**
KSP				*e*SG	**Sn**	**22 04 51.9**	**0.0**
KRUC	**Moravsky**	**1.72**	**238**	*e*Pn	**Pn**	**22 04 29.7**	**+0.2**
	baz=55						
KRUC				*e*Sg	**Sb**	**22 04 53.0**	**0.0**
	13nm,0.3s,baz=55						
KRUC	**Moravsky**	**1.72**	**238**	*e*PN	**Pn**	**22 04 29.8**	**+0.2**
KRUC				*e*SG	**Sb**	**22 04 53.0**	**0.0**
CHVC	**Chvalec**	**1.75**	**291**	*e*PG	**Pn**	**22 04 30.4**	**+0.5**
CHVC				*e*SG	**Sg**	**22 04 55.0**	**+0.7**
	comp=Z,12nm,0.6s						
UPC	**Upice**	**1.75**	**288**	*e*PG	**Pb**	**22 04 31.6**	**+0.4**
UPC				*e*SG	**Sg**	**22 04 55.2**	**+0.8**
	comp=Z,11nm,0.4s						
MODS	**Modra-Piesok**	**1.85**	**209**	*e*PG	**Pn**	**22 04 31.6**	**+0.4**
MODS				*e*SG	**Sn**	**22 04 55.6**	**+0.3**
KECS	**Kecovo**	**1.95**	**140**	*e*PN	**Pn**	**22 04 32.4**	**-0.2**
TREC	**Trest**	**2.15**	**252**	*e*PG	**Pn**	**22 04 35.0**	**-0.4**
TREC				*e*SG	**Sb**	**22 05 05.3**	**-0.1**
	comp=Z,8.6nm,0.4s						
CRVS	**Cervenica-Dubn**	**2.16**	**120**	*e*PG	**Pg**	**22 04 39.5**	**-0.1**
SRO	**Srobarova**	**2.20**	**185**	*e*PG	**Pg**	**22 04 41.5**	**+1.2**
KOLS	**Kolonicke sedl**	**2.61**	**113**	*e*PG	**Pg**	**22 04 49.0**	**+0.7**
PRU	**Pruhonice**	**2.63**	**271**	*e*PG	**Pb**	**22 04 45.6**	**-0.6**
PRU				*e*SG	**Sb**	**22 05 19.5**	**+0.4**
	comp=Z,4.9nm,0.4s						
PVCC	**Panska Ves**	**2.65**	**283**	*e*PG	**Pg**	**22 04 48.3**	**-0.8**
PVCC				*e*SG	**Sg**	**22 05 23.5**	**+0.1**
	comp=Z,19nm,0.7s						
CONA	**Conrad Observa**	**2.75**	**222**	Pn	**Pn**	**22 04 43.0**	**-0.8**
	1.2nm,0.3s						
CONA				*e*Sn	**Sn**	**22 05 18.4**	**+0.6**
	0.7nm,0.2s						
CKRC	**Cesky Krumlov**	**3.05**	**249**	*e*PG	**Pb**	**22 04 54.6**	**+1.2**
CKRC				*e*SG	**Sb**	**22 05 32.5**	**+1.3**
	comp=Z,11nm,0.9s						
BRG	**Berggiesshubel**	**3.11**	**288**	Pg	**Pg**	**22 04 58.2**	**+0.3**
BRG				Sg	**Sg**	**22 05 37.6**	**-0.6**
BRG				Amp		22 05 41.1	
	comp=Z,4.1nm,0.6s						
KHC	**Kasperske Hory**	**3.39**	**257**	*e*PN	**Pn**	**22 04 51.8**	**-0.7**
KHC				*e*PG	**Pb**	**22 04 59.5**	**+0.2**
KHC				*e*SN	**Sn**	**22 05 33.0**	**-0.4**
KHC				*e*SG	**Sg**	**22 05 44.3**	**-2.9**
	comp=Z,5.6nm,0.5s						
GERES	**GERESS Array B**	**3.41**	**252**	Pn	**Pn**	**22 04 52.2**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=62,slow=13,SNR=5.1						
GERES				Pg	**Pb**	**22 05 01.3**	**+1.7**
	comp=Z,0.9nm,0.3s,baz=69,slow=17,SNR=19						
GERES				Lg	Lg	22 05 43.4	
	comp=Z,0.6nm,0.3s,baz=67,slow=22,SNR=1.8						
	comp=Z,0.3nm,0.3s						
MOA	**Molln**	**3.58**	**235**	*i* Pn	**Pn**	**22 04 55.0**	**-0.1**
	comp=Z,0.2nm,0.1s						
MOA				*e*Sn	**Sn**	**22 05 40.3**	**+2.1**
	comp=Z,0.6nm,0.3s						
CLL	**Collm**	**3.81**	**292**	*e*Pg	**Pg**	**22 05 12.0**	**+0.8**
CLL				*e*Sg	**Sg**	**22 06 01.0**	**+0.5**
	comp=Z,6.0nm,0.9s						
FINES	**FINESS Array B**	**12.21**	**17**	Pn	**Pn**	**22 06 51.5**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=199,slow=12,SNR=4.6						
FINES				Sn	Sn	22 09 01.3	-8.5
	comp=Z,0.1nm,0.3s,baz=211,slow=24,SNR=1.1						
	comp=Z,1.4nm,0.8s						
ARCES	**ARCESS Array B**	**19.88**	**7**	Pn	**P**	**22 08 30.7**	**-0.1**
	baz=185,slow=10.0,SNR=1.5						
	comp=Z,1.8nm,1.1s						

MAN 13 22:09:30.8, 9.18N×126.82E, h25km, mb4.3, ML3.1, MS2.8, Mindanao

IDC 13 22:14:22.4±4.0, 5.99S×147.02E, h0km, mb3.3/2, mbtmp3.5/3, ML3.8/1, Error ellipse: s-maj=118.3km s-min=34.9km az=105.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.56**	**220**	P	Pn	22 18 41.5	+0.4
	0.3nm,0.3s,baz=49,slow=12,SNR=22						
	1.2nm,0.5s						
ASAR	**Alice Springs**	**21.64**	**214**	P	P	22 19 15.6	+1.0
	0.8nm,0.7s,baz=46,slow=8.8,SNR=6.7						
	0.8nm,0.7s						
MKAR	**Makanchi Array**	**77.50**	**320**	P	P	22 26 19.3	-0.8
	0.3nm,0.7s,baz=130,slow=6.9,SNR=3.1						
	0.3nm,0.7s						

DJA 13 22:32:46.1±0.4, 5.3S×12.1E, h10km, M3.4/7, MLv3.4/7, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKSI	**Bulukumba**	**0.98**	**260**	P	Pg	22 33 05.0	+0.1
BKSI				S	Sn	22 33 19.1	-0.7
BSSI	**Bau Bau, Buton**	**1.14**	**211**	P	Pb	22 33 07.3	-0.7
BSSI				S	Sg	22 33 23.2	+0.2
BNSI	**Bone**	**1.24**	**308**	P	Pn	22 33 08.3	-1.2
BNSI				S	Sb	22 33 25.2	-0.4
BBSI	**Bau Bau**	**1.51**	**103**	P	Pn	22 33 12.6	-0.6
SPSI	**Sidrap Palu**	**1.77**	**312**	P	Pn	22 33 16.8	0.0
TTSI	**Tana Toraja**	**2.45**	**329**	P	Pn	22 33 26.5	+0.3
APSI	**Ampana**	**4.26**	**8**	P	Pn	22 33 51.2	+0.2
MTKI	**Muara Teweh, K**	**7.47**	**304**	P	Pn	22 34 13.3	-22

*IDC **13** 22:38:17.2±2.2, 41.69N×142.77E, h0km, mb3.7/6, mbtmp3.6/8, ML2.2/2, MS2.5/1, Error ellipse: s-maj=54.8km s-min=27.7km az=74.0*
*JMA **13** 22:38:27.9±0.1, 41.5N±0.4×142.0E±0.6, h63km±1km, MV3.3/37, E OFF AOMORI PREF*

ISC 13 22:38:28.0±0.9, 41.47N±0.04×141.97E±0.04, h66km±8km, n34, σ0s69/37, mb3.7/6, 10D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAHD	**Aomorihigashid**	**0.52**	**247**	↓*e*P	**Pn**	**22 38 40.9**	**+0.3**
JAHD				↓*e*S	**Sn**	**22 38 50.1**	**+0.3**
JARK	**Aomorirokkasho**	**0.65**	**224**	↓P	**Pn**	**22 38 41.9**	**-0.1**
JARK				↓*e*S	**Sn**	**22 38 51.8**	**-0.4**
JOT	**Ohata**	**0.70**	**263**	↓P	**Pn**	**22 38 42.5**	**0.0**
JOT				↓*e*S	**Sn**	**22 38 53.4**	**+0.1**
JKB	**Kayabe**	**0.81**	**301**	↓*e*P	**Pn**	**22 38 43.5**	**-0.4**
JTM	**Tenmabayashi**	**0.96**	**225**	↓*e*P	**Pn**	**22 38 46.2**	**+0.4**
JTM				↓*e*S	**Sn**	**22 38 59.2**	**+0.2**
JNBK	**Urakawa-nobuka**	**1.00**	**36**	*e*P	**Pn**	**22 38 45.5**	**-0.7**
JEM	**Erimo**	**1.04**	**58**	*e*P	**Pn**	**22 38 46.5**	**-0.3**
JEM				*e*S	**Sn**	**22 39 00.6**	**-0.2**
JIAM	**Iburiatsuma**	**1.15**	**358**	*e*P	**Pn**	**22 38 48.8**	**+0.6**
JIAM				*e*S	**Sn**	**22 39 04.4**	**+1.2**
JANG	**Nango**	**1.15**	**197**	*e*P	**Pn**	**22 38 48.2**	**-0.1**
JANG				*e*S	**Sn**	**22 39 02.3**	**-1.0**
JSR	**Shiriuchi**	**1.17**	**273**	*e*P	**Pn**	**22 38 48.7**	**+0.3**
JNB	**Noboribetsu**	**1.21**	**325**	*e*P	**Pn**	**22 38 48.4**	**-0.6**
JNB				*e*S	**Sn**	**22 39 03.4**	**-1.3**
JBT2	**Biratori 2**	**1.34**	**13**	*e*S	**Sn**	**22 39 08.3**	**+0.7**
JYM2	**Yakumo 2**	**1.36**	**299**	↓*e*P	**Pn**	**22 38 51.5**	**+0.6**
JEW	**Eniwo**	**1.42**	**344**	*e*P	**Pn**	**22 38 51.9**	**+0.1**
JEW				*e*S	**Sn**	**22 39 09.6**	**0.0**
JOMM	**Oshimamatsumae**	**1.47**	**273**	*e*P	**Pn**	**22 38 52.5**	**+0.1**
JCH	**Churui**	**1.54**	**42**	*e*P	**Pn**	**22 38 54.0**	**+0.7**
JCH				*e*S	**Sn**	**22 39 13.4**	**+0.9**
JAH	**Hinai**	**1.63**	**219**	*e*P	**Pn**	**22 38 55.6**	**+1.0**
JOSM	**Okushiri--Mats**	**1.96**	**289**	*e*P	**Pn**	**22 38 59.1**	**+0.1**
MJAR	**Matsushiro Arr**	**5.73**	**212**	Pn	**Pn**	**22 39 52.4**	**+1.9**
	0.1nm,0.3s,baz=57,slow=12,SNR=2.4						
	0.8nm,0.4s						
USRK	**Ussuriysk Ar.**	**7.82**	**294**	Pn	**Pn**	**22 40 19.8**	**+0.7**
	0.2nm,0.3s,baz=93,slow=13,SNR=4.0						
	1.0nm,0.5s						
KLR	**Kul'dur**	**10.57**	**321**	LR	LR	22 45 05.6	
	comp=Z,27nm,19.5s,baz=63,slow=38						
KSRS	**Korea Array**	**11.57**	**254**	Pn	**Pn**	**22 41 10.2**	**0.0**
	0.2nm,0.3s,baz=74,slow=14,SNR=1.8						
SONM	**Songino Array**	**25.93**	**296**	P	**P**	**22 43 54.9**	**+0.8**
	0.4nm,0.5s,baz=98,slow=11,SNR=2.9						
	0.4nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**30.31**	**128**	T	T	23 17 02.6	
	baz=321,slow=75,SNR=12						
H11N1	**WAKE ISLAND Hy**	**30.32**	**128**	T	T	23 17 03.6	
	baz=321,slow=75,SNR=15						
H11N3	**WAKE ISLAND Hy**	**30.32**	**128**	T	T	23 17 04.1	
	baz=321,slow=75,SNR=14						
H11S1	**WAKE ISLAND Hy**	**31.15**	**130**	T	T	23 18 05.4	
	baz=322,slow=76,SNR=14						
H11S3	**WAKE ISLAND Hy**	**31.15**	**130**	T	T	23 18 04.7	
	baz=322,slow=76,SNR=9.0						
H11S2	**WAKE ISLAND Hy**	**31.16**	**130**	T	T	23 18 11.7	
	baz=322,slow=76,SNR=10						
ZALV	**Zalesovo Beam**	**39.36**	**308**	P	**P**	**22 45 50.0**	**-0.8**
	0.5nm,0.4s,baz=75,slow=11,SNR=3.9						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**42.26**	**298**	P	**P**	**22 46 15.2**	**+0.4**
	0.3nm,0.5s,baz=88,slow=9.3,SNR=3.8						
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**43.73**	**304**	P	**P**	**22 46 26.2**	**-0.2**
	1.0nm,0.5s,baz=78,slow=8.8,SNR=9.8						
	1.0nm,0.5s						
WRA	**Warramunga Arr**	**61.51**	**188**	P	**P**	**22 48 37.2**	**-0.8**
	0.4nm,0.8s,baz=3.2,slow=6.7,SNR=1.5						
	0.4nm,0.8s						
FINES	**FINESS Array B**	**65.11**	**332**	P	**P**	**22 49 01.0**	**-0.3**
	1.4nm,0.8s,baz=57,slow=7.0,SNR=5.7						
	1.4nm,0.8s						

*IDC **13** 22:55:48.5±40.0, 21.44S×178.65W, h409km±334km, mb3.0/3, mbtmp3.8/3, Error ellipse: s-maj=435.1km s-min=67.0km az=135.0*

ISC 13 22:55:47.0±3.9, 22.3S±1.1×178.5W±0.7, h400km, n8, σ0s52/7, mb3.3/3, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**43.81**	**258**	P	**P**	**23 03 15.8**	**+0.2**
	1.2nm,0.7s,baz=97,slow=7.7,SNR=10.0						
	1.2nm,0.7s						
WRA	**Warramunga Arr**	**43.98**	**263**	P	**P**	**23 03 16.8**	**-0.2**
	0.7nm,0.6s,baz=90,slow=5.7,SNR=17						
	0.7nm,0.6s						
ILAR	**Eielson Array**	**89.45**	**13**	P	**P**	**23 07 59.2**	**0.0**
	0.3nm,0.5s,baz=216,slow=4.5,SNR=3.6						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**111.56**	**313**	PKiKP	**PKiKP**	**23 13 34.0**	**-0.5**
	0.2nm,0.4s,baz=134,slow=2.7,SNR=2.6						
ARCES	**ARCESS Array B**	**129.87**	**349**	PKP	**PKPdf**	**23 14 09.1**	**+0.2**
	0.6nm,0.4s,baz=353,slow=1.5,SNR=12						
FINES	**FINESS Array B**	**136.64**	**343**	PKP	**PKPdf**	**23 14 21.3**	**-0.5**
	2.4nm,1.1s,baz=90,slow=1.9,SNR=4.3						
AKASG	**Malin Array Be**	**143.69**	**330**	PKP	PKPbc	23 14 34.3	+1.1
	0.5nm,0.5s,baz=32,slow=4.2,SNR=4.9						
GERES	**GERESS Array B**	**151.08**	**343**	PKPbc	**PKPbc**	**23 14 54.1**	**+0.7**
	0.4nm,0.8s,baz=343,slow=2.8,SNR=4.2						

*IDC **13** 23:13:41.0±0.7, 10.93S×162.92E, h0km

GUMO	**Guam**	**30.32**	**323**	LR	LR	23 33 08.3			
	comp=Z,163nm,18.0s,baz=162,slow=39								
ASAR	**Alice Springs**	**30.40**	**242**	P	**P**	**23 19 54.5**	**-1.3**		
	comp=Z,1.7nm,0.8s,baz=65,slow=10,SNR=13								
ASAR				LR	LR	23 31 19.3			
	comp=Z,277nm,20.3s,baz=71,slow=35								
	comp=Z,1.7nm,0.8s								
BKZ	**Black Stump Fm**	**30.53**	**159**	P	**P**	**23 19 59.1**	**+2.3**		
BKZ				IAmb	IAmb	23 20 02.2			
	comp=Z,17nm,1.3s								
H11N1	**WAKE ISLAND Hy**	**30.76**	**7**	T	T	23 52 12.4			
	baz=188,slow=76,SNR=39								
TOO	**Toolangi**	**30.77**	**208**	P	**P**	**23 19 59.3**	**+0.3**		
TOO				IAmb	IAmb	23 20 01.7			
	comp=Z,23nm,1.4s								
H11N3	**WAKE ISLAND Hy**	**30.77**	**7**	T	T	23 52 18.4			
	baz=188,slow=76,SNR=40								
H11N2	**WAKE ISLAND Hy**	**30.78**	**7**	T	T	23 52 15.7			
	baz=188,slow=76,SNR=41								
FAKI	**Fak Fak**	**31.51**	**282**	P	**P**	**23 20 07.4**	**+1.6**		
BBOO	**Buckleboo**	**32.91**	**225**	P	**P**	**23 20 17.6**	**-0.2**		
BBOO				IAmb	IAmb	23 20 30.8			
	comp=Z,11nm,1.1s								
SIJI	**Sorong**	**33.06**	**286**	LR	LR	23 33 45.5			
	comp=Z,292nm,21.6s,baz=137,slow=36								
RPZ	**Rata Peaks**	**33.34**	**169**	LR	LR	23 33 44.7			
	comp=Z,259nm,18.1s,baz=354,slow=36								
KNRA	**Kununurra**	**33.58**	**258**	P	**P**	**23 20 23.3**	**-0.6**		
RAR	**Rarotonga**	**37.12**	**111**	LR	LR	23 33 17.6			
	comp=Z,56nm,18.9s,baz=290,slow=32								
DAV	**Davao City (W)**	**41.32**	**294**	LR	LR	23 37 35.4			
	comp=Z,87nm,21.0s,baz=112,slow=35								
PSA00	**Pilbara Seismi**	**42.58**	**250**	P	**P**	**23 21 38.6**	**-1.1**		
PSA00				IAmb	IAmb	23 21 44.6			
	comp=Z,12nm,1.2s								
MBWA	**Marble Bar**	**42.64**	**251**	P	**P**	**23 21 39.3**	**-0.9**		
KAPI	**Kappang**	**43.17**	**274**	LR	LR	23 41 24.0			
	comp=Z,60nm,18.9s,baz=96,slow=39								
PPT	**Papeete**	**46.35**	**104**	LR	LR	23 38 24.2			
	comp=Z,119nm,19.7s,baz=202,slow=32								
PPT2	**Papeete2**	**46.35**	**104**	*e*LR	LR	23 34 54.8			
	comp=Z,72nm,20.2s								
TBI	**Tubuai**	**46.88**	**112**	*e*LR	LR	23 35 11.4			
	comp=Z,235nm,31.5s								
JHJ	**Hachijo jima 2**	**49.13**	**334**	LR	LR	23 43 48.9			
	comp=Z,53nm,19.0s,baz=90,slow=37								
JOW	**Kunigami**	**50.49**	**319**	LR	LR	23 43 26.3			
	comp=Z,87nm,20.1s,baz=140,slow=35								
MJAR	**Matsushiro Arr**	**52.73**	**335**	P	**P**	**23 22 56.7**	**-1.4**		
	comp=Z,0.5nm,0.3s,baz=159,slow=11,SNR=1.8								
MJAR				LR	LR	23 43 34.3			
	comp=Z,118nm,21.5s,baz=144,slow=34								
	comp=Z,0.5nm,0.3s								
LEM	**Lembang**	**54.78**	**269**	LR	LR	23 51 50.9			
	comp=Z,58nm,18.9s,baz=168,slow=42								
ASAJ	**Asahikawa**	**57.90**	**343**	LR	LR	23 44 59.3			
	comp=Z,102nm,21.8s,baz=170,slow=32								
KSRS	**Korea Array**	**58.34**	**328**	P	**P**	**23 23 38.0**	**-0.4**		
	comp=Z,0.6nm,0.3s,baz=236,slow=25,SNR=2.5								
KSRS				LR	LR	23 47 02.5			
	comp=Z,66nm,19.9s,baz=140,slow=34								
	comp=Z,0.6nm,0.3s								
USRK	**Ussuriysk Ar.**	**61.72**	**335**	P	**P**	**23 24 01.6**	**+0.1**		
	comp=Z,2.1nm,0.7s,baz=156,slow=5.2,SNR=6.5								
USRK				LR	LR	23 47 29.8			
	comp=Z,72nm,21.7s,baz=164,slow=33								
	comp=Z,2.1nm,0.7s								
USRK	**Ussuriysk Ar.**	**61.72**	**335**		pP	23 24 13.4	+2.3		
PETK	**Petropavlovsk-**	**64.01**	**356**	P	**P**	**23 24 16.0**	**-0.6**		
	comp=Z,2.6nm,0.9s,baz=162,slow=11,SNR=3.9								
PETK				LR	LR	23 47 53.7			
	comp=Z,96nm,20.9s,baz=170,slow=32								
	comp=Z,2.6nm,0.9s								
PSI	**Prapat**	**65.17**	**278**	LR	LR	23 53 07.9			
	comp=Z,46nm,21.4s,baz=18,slow=36								
KLR	**Kul'dur**	**65.97**	**338**	LR	LR	23 49 00.1			
	comp=Z,42nm,21.7s,baz=165,slow=32								
VNDA	**Vanda**	**66.51**	**180**	P	**P**	**23 24 33.0**	**+0.5**		
	comp=Z,2.0nm,0.8s,baz=344,slow=6.2,SNR=16								
VNDA				LR	LR	23 48 14.5			
	comp=Z,98nm,21.1s,baz=338,slow=31								
	comp=Z,2.0nm,0.8s								
VNDA	**Vanda**	**66.51**	**180**	P	**P**	**23 24 33.7**	**+1.2**		
VNDA				IAmb	IAmb	23 24 33.8			
	comp=Z,6.5nm,1.2s								
XAN	**Xi'an**	**68.10**	**314**	P	**P**	**23 24 43.1**	**-0.2**		
XAN				pmax	pmax				
	comp=Z,7.0nm,0.8s								
CMAR	**Chiang Mai Arr**	**69.61**	**294**	P	**P**	**23 24 52.9**	**-0.1**		
	comp=Z,1.1nm,0.8s,baz=119,slow=5.9,SNR=5.4								
CMAR				LR	LR	23 57 02.8			
	comp=Z,16nm,18.5s,baz=120,slow=37								
	comp=Z,1.1nm,0.8s								
HHC	**Hu-ho-hao-te**	**70.06**	**321**	*e*P	**P**	**23 24 57.3**	**+1.9**		
HHC				pmax	pmax				
	comp=Z,20nm,1.1s								
HHC				pmax	pmax				
	comp=Z,130nm,4.5s								
PZH	**PanZhiHua**	**70.17**	**303**	P	**P**	**23 24 57.5**	**+1.1**		
PZH				pmax	pmax				
	comp=Z,10.0nm,0.5s								
PZH				pmax	pmax				
	comp=Z,80nm,4.0s								
MA2	**Magadan**	**71.02**	**353**	LR	LR	23 52 29.5			
	comp=Z,51nm,20.4s,baz=150,slow=33								
LZH	**Lanzhou**	**72.73**	**313**	⇑P	P	23 25 17.6	+5.9		
LZH				pP	pP	23 25 22.3	+1.4		
LZH				pmax	pmax				
	comp=Z,18nm,1.3s								
SEY	**Seymchan**	**74.16**	**355**	LR	LR	23 53 53.0			
	comp=Z,86nm,21.3s,baz=171,slow=33								
ULN	**Ulaanbaatar**	**76.69**	**325**	P	**P**	**23 25 35.1**	**+0.7**		
ULN				IAmb	IAmb	23 25 42.5			
	comp=Z,8.9nm,1.2s								
SONM	**Songino Array**	**77.04**	**325**	P	**P**	**23 25 35.8**	**-0.6**		
SONM				LR	LR	00 01 19.4			
	comp=Z,55nm,18.1s,baz=80,slow=37								
	comp=Z,2.4nm,0.9s								
SONM	**Songino Array**	**77.04**	**325**	P	**P**	**23 25 36.6**	**+0.3**		
SONM				IAmb	IAmb	23 25 44.2			
	comp=Z,8.7nm,1.3s								
GTA	**Gaotai**	**77.08**	**315**	*e*P	**P**	**23 25 37.4**	**+0.6**		
GTA				pP	pP	23 25 46.4	+0.4		
GTA				sP	pwP	23 25 50.1	-1.6		
GTA				pmax	pmax				
	comp=Z,4.0nm,0.9s								
GTA				pmax	pmax				
	comp=Z,55nm,5.5s								
GTA				LR	LR				
	comp=N,61nm,16.0s								
GTA				LR	LR				
	comp=E,70nm,14.9s								
GTA				LR	LR				
	comp=Z,66nm,16.0s								
YAK	**Yakutsk**	**77.31**	**345**	LR	LR	23 56 55.0			
	comp=Z,40nm,21.9s,baz=89,slow=34								
BILL	**Bilibino**	**78.87**	**1**	P	**P**	**23 25 45.7**	**-0.2**		
BILL				IAmb	IAmb	23 25 47.6			
	comp=Z,6.5nm,0.8s								
SVW2	**Sparrevohn**	**78.94**	**19**	P	**P**	**23 25 47.2**	**+0.8**		
SVW2				IAmb	IAmb	23 25 47.5			
	comp=Z,6.6nm,0.9s								
QSPA	**South Pole Qui**	**79.00**	**180**	LR	LR	23 56 54.3			
	comp=Z,60nm,20.3s,baz=32,slow=33								
QSPA	**South Pole Qui**	**79.00**	**180**	P	**P**	**23 25 47.5**	**+0.5**		
QSPA				IAmb	IAmb	23 25 48.0			
	comp=Z,5.4nm,0.9s								
CNPM	**China Poot**	**79.29**	**22**	P	**P**	**23 25 48.8**	**+0.3**		
M19K	**Big River Lodg**	**79.92**	**19**	P	**P**	**23 25 51.9**	**+0.1**		
M19K				IAmb	IAmb	23 25 54.3			
	comp=Z,6.7nm,0.8s								
L19K	**White Mountain**	**79.98**	**19**	P	**P**	**23 25 52.6**	**+0.4**		
L19K				IAmb	IAmb	23 25 54.5			
	comp=Z,4.7nm,0.8s								
M20K	**Styx River**	**80.31**	**19**	P	**P**	**23 25 55.3**	**+1.3**		
K20K	**Telida**	**81.10**	**18**	P	**P**	**23 25 58.6**	**+0.5**		
J20K	**Nowinta River**	**81.68**	**18**	P	**P**	**23 26 01.6**	**+0.5**		
J20K				IAmb	IAmb	23 26 12.5			
	comp=Z,7.3nm,1.4s								
GLI	**Glacier Island**	**81.73**	**22**	P	**P**	**23 26 00.9**	**-0.6**		
KLU	**Klutina**	**82.56**	**22**	P	**P**	**23 26 07.5**	**+1.6**		
KLU				IAmb	IAmb	23 26 22.9			
	comp=Z,6.6nm,0.7s								
WAX	**Waxell Ridge**	**83.10**	**24**	P	**P**	**23 26 08.9**	**+0.2**		
IMAR	**Indian Mountai**	**83.13**	**16**	P	**P**	**23 26 08.8**	**+0.2**		
H21K	**Melozitna Rive**	**83.16**	**17**	P	**P**	**23 26 09.4**	**+0.6**		
VRDI	**Verde Repeater**	**83.33**	**23**	P	**P**	**23 26 09.7**	**-0.3**		
VRDI				IAmb	IAmb	23 26 20.1			
	comp=Z,6.1nm,1.2s								
MAW	**Mawson**	**83.73**	**202**	P	**P**	**23 26 12.1**	**+0.3**		
	comp=Z,2.3nm,0.9s,baz=174,slow=6.3,SNR=3.6								
MAW				LR	LR	23 59 12.1			
	comp=Z,36nm,19.3s,baz=144,slow=33								
	comp=Z,2.3nm,0.9s								
MAW	**Mawson**	**83.73**	**202**	P	**P**	**23 26 12.4**	**+0.6**		
WRH	**Wood River Hil**	**83.77**	**19**	P	**P**	**23 26 10.8**	**-1.1**		
WRH				IAmb	IAmb	23 26 13.2			
	comp=Z,4.7nm,1.0s								
PALK	**Pallekele**	**83.85**	**279**	LR	LR	00 06 11.3			
	comp=Z,32nm,19.6s,baz=233,slow=38								
BARN	**Barnard Glacie**	**83.93**	**24**	P	**P**	**23 26 13.8**	**+0.7**		
BARN				IAmb	IAmb	23 26 15.8			
	comp=Z,8.5nm,1.0s								
CCB	**Clear Creek Bu**	**83.97**	**19**	IAmb	IAmb	23 26 13.5			
	comp=Z,4.3nm,0.8s								
MDM	**Murphy Dome**	**84.05**	**19**	IAmb	IAmb	23 26 14.2			
	comp=Z,6.0nm,0.9s								
HDA	**Harding Lake**	**84.10**	**20**	P	**P**	**23 26 13.3**	**-0.4**		
TCOL	**CIGO, UAF Yank**	**84.11**	**19**	P	**P**	**23 26 12.8**	**-0.8**		
COLA	**College**	**84.11**	**19**	P	**P**	**23 26 12.7**	**-1.0**		
H23K	**Yukon River**	**84.23**	**18**	P	**P**	**23 26 14.6**	**+0.2**		
H23K				IAmb	IAmb	23 26 16.1			
	comp=Z,5.2nm,0.8s								
IL31		**84.35**	**19**	P	**P**	**23 26 14.6**	**-0.2**		
IL31				IAmb	IAmb	23 26 16.7			
	comp=Z,5.5nm,1.4s								
ILAR	**Eielson Array**	**84.35**	**19**	P	**P**	**23 26 13.7**	**-1.3**		
	comp=Z,1.1nm,0.6s,baz=237,slow=4.0,SNR=14								
ILAR				LR	LR	23 59 49.5			
	comp=Z,111nm,19.6s,baz=231,slow=33								
	comp=Z,1.1nm,0.6s								
RIDG	**Independent Ri**	**84.38**	**21**	P	**P**	**23 26 14.7**	**-0.4**		
L26K	**Log Cabin Wild**	**84.46**	**22**	P	**P**	**23 26 15.7**	**+0.2**		
L26K				IAmb	IAmb	23 26 17.9			
	comp=Z,4.3nm,1.1s								
M27K	**Edge Creek, AK**	**84.61**	**23**	P	**P**	**23 26 16.5**	**+0.1**		
M27K				IAmb	IAmb	23 26 17.5			
	comp=Z,5.9nm,0.9s								
J25K	**Salcha River,**	**84.75**	**20**	P	**P**	**23 26 16.4**	**-0.6**		
J25K				IAmb	IAmb	23 26 19.3			
	comp=Z,5.5nm,0.8s								
SCRK	**Sand Creek**	**84.82**	**21**	P	**P**	**23 26 17.4**	**0.0**		
SCRK				IAmb	IAmb	23 26 19.3			
	comp=Z,2.7nm,0.8s								
L27K	**Beaver Creek,**	**85.04**	**22**	P	**P**	**23 26 17.9**	**-0.6**		
J26L	**Joseph Creek**	**85.29**	**20**	P	**P**	**23 26 19.3**	**-0.4**		
TIXI	**Tiksi**	**85.55**	**350**	LR	LR	00 07 15.9			
	comp=Z,29nm,18.0s,baz=181,slow=38								
YBH	**Yreka Blue Hor**	**85.82**	**46**	LR	LR	23 59 49.1			
	comp=Z,85nm,18.4s,baz=270,slow=32								
BBB	**Bella Bella**	**86.10**	**35**	LR	LR	00 03 11.0			
	comp=Z,54nm,18.2s,baz=254,slow=34								
WMQ	**Urumqi**	**87.15**	**315**	*e*P	**P**	**23 26 30.6**	**+1.2**		
I29M	**Ogilvie Camp,**	**87.62**	**21**	P	**P**	**23 26 30.8**	**-0.3**		
I29M				IAmb	IAmb	23 26 33.1			
	comp=Z,4.0nm,0.8s								
DLBC	**Dease Lake**	**87.68**	**29**	LR	LR	23 59 18.9			
	comp=Z,190nm,19.6s,baz=284,slow=31								
NVAR	**Mina Array Bea**	**88.08**	**50**	P	**P**	**23 26 33.5**	**-0.7**		
	comp=Z,0.7nm,0.7s,baz=226,slow=6.6,SNR=5.6								
NVAR				LR	LR	00 00 45.2			
	comp=Z,101nm,18.9s,baz=286,slow=32								
	comp=Z,0.7nm,0.7s								
PFO	**Pinyon Flats O**	**88.29**	**55**	LR	LR	23 58 54.5			
	comp=Z,66nm,20.1s,baz=248,slow=31								
BELA	**Belgrano 2**	**90.72**	**176**	P	**P**	**23 26 44.8**	**-0.8**		
INK	**Inuvik**	**90.75**	**19**	LR	LR	00 02 52.5			
	comp=Z,103nm,20.3s,baz=226,slow=32								
ELK	**Elko**	**90.96**	**49**	LR	LR	00 01 26.3			
	comp=Z,51nm,19.9s,baz=248,slow=32								
NEW	**Newport**	**91.49**	**41**	LR	LR	00 02 22.5			
	comp=Z,64nm,19.0s,baz=292,slow=32								
MK31	**Makanchi Array**	**91.64**	**317**	P	**P**	**23 26 49.7**	**-0.7**		
MK31				IAmb	IAmb	23 26 51.7			
	comp=Z,1.5nm,0.8s								
MKAR	**Makanchi Array**	**91.64**	**317**	P	**P**	**23 26 48.7**	**-1.7**		
	comp=Z,2.1nm,0.7s,baz=94,slow=6.4,SNR=20								
	comp=Z,2.1nm,0.7s								
MKAR	**Makanchi Array**	**91.64**	**317**	P	**P**	**23 26 49.6**	**-0.8**		
ZALV	**Zalesovo Beam**	**91.94**	**325**	P	**P**	**23 26 50.4**	**-1.1**		
	comp=Z,0.3nm,0.3s,baz=133,slow=8.1,SNR=2.3								
ZALV				LR	LR	00 07 17.3			
	comp=Z,68nm,20.9s,baz=76,slow=35								
	comp=Z,0.3nm,0.3s								
KURBB	**Kurchatov Arra**	**94.91**	**320**	LR	LR	00 10 37.8			
	comp=Z,66nm,19.6s,baz=73,slow=36								
NRIK	**Noril'sk**	**95.14**	**340**	LR	LR	00 08 40.3			
	comp=Z,63nm,21.8s,baz=64,slow=35								
YKA	**Yellowknife Ar**	**96.19**	**28**	P	**P**	**23 27 08.9**	**-1.9**		
	comp=Z,1.0nm,0.9s,baz=247,slow=6.4,SNR=3.1								
	comp=Z,1.0nm,0.9s								
AAK	**Ala-Archa**	**96.24**	**312**	LR	LR	00 12 46.5			
	comp=Z,37nm,19.4s,baz=66,slow=37								
ESDC	**Sonseca Array**	**149.18**	**340**	PKPbc	**PKPbc**	**23 33 32.9**	**+0.9**		
	comp=Z,0.7nm,0.9s,baz=42,slow=2.1,SNR=2.7								

TIR ***13*** *23:14:52.5, 40˚.08N× 19˚.94E, h25km± 1km, Md3.1, Ml2.8*
ATH ***13*** *23:14:52.5, 40˚.16N× 19˚.82E, h9km± 4km, ML2.6/8, Error ellipse: s-maj=4.3km s-min=1.1km az=197.0*
BEO ***13*** *23:14:53.5± 0.6, 40˚.06N× 19˚.77E, h6km± 4km, ML2.5/4*
THE ***13*** *23:14:53.8, 40˚.11N× 19˚.88E, h2km± 2km, ML2.5/12, Error ellipse: s-maj=2.2km s-min=0.9km az=19.0*

ISC 13 23:14:54.0± 1.0, 40˚.06N± 0˚.02× 19˚.90E± 0˚.02, h12km± 8km, n46, σ 1§13/72, 12C-1D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
				Op	ISC	h	m	s	ISC
SRN	**Sarande**	**0.20**	**156**	P	**Pb**	**23**	**14**	**58.3**	**-1.3**
SRN				S	**Sg**	**23**	**15**	**02.9**	**+1.6**
	1μm,0.4s								
KASA	**Kassiopi**	**0.32**	**174**	P	**Pb**	**23**	**15**	**00.5**	**-1.1**
KASA				S	**Sb**	**23**	**15**	**06.6**	**-0.2**
KASA				AML	AML	23	15	06.9	
	comp=E,2403μm,0.4s								
KASA				AML	AML	23	15	07.9	
	comp=N,2259μm,0.2s								
KEK	**Kerkira**	**0.36**	**192**	P	**Pg**	**23**	**15**	**01.0**	**-0.1**
KEK				S	**Sb**	**23**	**15**	**08.1**	**+0.2**
KEK				AML	AML	23	15	09.2	
	comp=E,2100μm,0.2s								
KEK				AML	AML	23	15	09.6	
	comp=N,1839μm,0.3s								
KEK	**Kerkira**	**0.36**	**192**	P	**Pg**	**23**	**15**	**01.1**	**-0.1**
KEK				S	**Sb**	**23**	**15**	**08.2**	**+0.3**
	comp=N,995nm,0.2s								
VLO	**Vlora**	**0.51**	**323**	P	**Pg**	**23**	**15**	**03.1**	**-0.8**
VLO				S	**Sg**	**23**	**15**	**09.6**	**-1.1**
	comp=N,2μm,0.2s								
LSK	**Leskovik**	**0.55**	**81**	P	**Pg**	**23**	**15**	**03.2**	**-1.5**
LSK				S	**Sb**	**23**	**15**	**13.1**	**-0.3**
	comp=N,705nm,0.6s								
IGT	**Igoumenitsa**	**0.63**	**147**	*e*Pg	**Pb**	**23**	**15**	**06.2**	**-0.7**
IGT				*e*Sg	**Sb**	**23**	**15**	**15.3**	**-0.4**
IGT	**Igoumenitsa**	**0.63**	**147**	P	**Pb**	**23**	**15**	**06.0**	**-0.8**
IGT				S	**Sn**	**23**	**15**	**16.7**	**-2.0**
IGT				AML	AML	23	15	24.0	
	comp=N,558μm,0.4s								
IGT				AML	AML	23	15	28.0	
	comp=E,579μm,0.5s								
IGT	**Igoumenitsa**	**0.63**	**147**	P	**Pb**	**23**	**15**	**06.1**	**-0.8**
IGT				S	**Sn**	**23**	**15**	**16.1**	**-2.6**
	comp=E,288nm,0.4s								
JAN	**Janina**	**0.84**	**119**	P	**Pb**	**23**	**15**	**09.8**	**-0.7**
JAN				AML	AML	23	15	27.5	
	comp=N,1011μm,0.5s								
JAN				AML	AML	23	15	27.6	
	comp=E,676μm,0.3s								
JAN	**Janina**	**0.84**	**119**	P	**Pg**	**23**	**15**	**09.2**	**-1.0**
JAN				S	**Sn**	**23**	**15**	**23.1**	**-0.9**
	comp=E,425nm,0.4s								
KBN	**Korca**	**0.88**	**50**	P	**Pg**	**23**	**15**	**09.2**	**-1.8**
KBN				S	**Sb**	**23**	**15**	**23.4**	**+0.3**
	comp=E,210nm,0.9s								
NEST	**Nestorio**	**0.95**	**68**	P	**Pg**	**23**	**15**	**10.9**	**-1.4**
NEST				AML	AML	23	15	28.5	
	comp=N,385μm,0.4s								
NEST				AML	AML	23	15	28.6	
	comp=E,744μm,0.6s								
NEST	**Nestorio**	**0.95**	**68**	P	**Pg**	**23**	**15**	**10.9**	**-1.4**
NEST				S	**Sn**	**23**	**15**	**26.6**	**-0.2**
	comp=E,220nm,0.5s								
PENT	**Pentalofos**	**0.96**	**82**	P	**Pg**	**23**	**15**	**11.6**	**-1.0**
KPRO	**Kipourio**	**1.13**	**95**	P	**Pb**	**23**	**15**	**14.7**	**-0.8**
KPRO				AML	AML	23	15	39.5	
	comp=E,392μm,0.6s								
KPRO				AML	AML	23	15	40.1	
	comp=N,394μm,0.7s								
KPRO	**Kipourio**	**1.13**	**95**	P	**Pb**	**23**	**15**	**14.7**	**-0.8**
KPRO				S	**Sn**	**23**	**15**	**32.6**	**+1.3**
	comp=N,195nm,0.6s								
OHR	**Ohrid**	**1.25**	**33**	*e*Pg	**Pn**	**23**	**15**	**17.3**	**-0.1**
OHR				*e*Sg	**Sg**	**23**	**15**	**35.1**	**+0.7**
TIR	**Tirane**	**1.28**	**359**	*e*Pg	**Pn**	**23**	**15**	**17.0**	**-0.7**
TIR				*e*Sg	**Sb**	**23**	**15**	**34.5**	**0.0**
TIR	**Tirane**	**1.28**	**359**	⇑P	**Pn**	**23**	**15**	**17.3**	**-0.4**
TIR				⇑S	**Sg**	**23**	**15**	**37.7**	**+2.4**
FNA	**Florina**	**1.34**	**57**	*e*Pg	**Pn**	**23**	**15**	**18.2**	**-0.4**
FNA				*e*Sg	**Sg**	**23**	**15**	**39.4**	**+2.2**
FNA	**Florina**	**1.34**	**57**	P	**Pn**	**23**	**15**	**17.6**	**-1.0**
FNA				AML	AML	23	15	43.6	
	comp=N,923μm,0.5s								
FNA				AML	AML	23	15	45.1	
	comp=E,522μm,0.4s								
FNA	**Florina**	**1.34**	**57**	P	**Pn**	**23**	**15**	**18.1**	**-0.5**
FNA				S	**Sg**	**23**	**15**	**37.0**	**-0.2**
	comp=E,362nm,0.4s								
TSLK	**Tsoukalades, L**	**1.37**	**154**	P	**Pg**	**23**	**15**	**20.9**	**+0.6**
TSLK				S	**Sg**	**23**	**15**	**40.0**	**+1.9**
	comp=E,230nm,0.5s								
KZN	**Kozani**	**1.46**	**80**	P	**Pn**	**23**	**15**	**20.3**	**+0.1**
KZN				AML	AML	23	15	51.5	
	comp=N,309μm,0.7s								
KZN				AML	AML	23	15	51.9	
	comp=E,315μm,0.5s								
NYDR	**Nydri-Lefkada**	**1.49**	**155**	P	**Pb**	**23**	**15**	**21.0**	**-0.5**
NYDR				S	**Sg**	**23**	**15**	**43.6**	**+1.8**
	comp=E,95nm,0.6s								
THL	**Klokotos Trika**	**1.71**	**106**	P	**Pb**	**23**	**15**	**25.2**	**-0.1**
LIT	**Litokhoron**	**1.99**	**88**	P	**Pb**	**23**	**15**	**28.9**	**-1.3**
GRG	**Griva**	**2.11**	**64**	P	**Pn**	**23**	**15**	**30.0**	**+0.9**
ANX	**Ano Chora**	**2.15**	**132**	P	**Pb**	**23**	**15**	**32.4**	**-0.5**
PDG	**Podgorica**	**2.41**	**349**	*e*Pn	**Pn**	**23**	**15**	**33.4**	**+0.1**
PDG				*e*Sn	**Sn**	**23**	**16**	**03.2**	**+0.5**
PDG	**Podgorica**	**2.41**	**349**	⇓P	**Pn**	**23**	**15**	**33.7**	**+0.4**
PDG				⇑S	**Sn**	**23**	**16**	**03.5**	**+0.8**
MATE	**Matera**	**2.51**	**285**	⇑P	**Pn**	**23**	**15**	**34.3**	**-0.2**
MATE				⇑S	**Sn**	**23**	**16**	**06.5**	**+1.5**
TIP	**Timpagrande**	**2.58**	**251**	⇑P	**Pn**	**23**	**15**	**34.9**	**-0.8**
TIP				⇑S	**Sn**	**23**	**16**	**06.8**	**-0.1**
PRVS	**Prvonek**	**2.94**	**33**	*e*Pn	**Pn**	**23**	**15**	**41.4**	**+0.8**
SRS	**Serrai**	**3.00**	**68**	*e*Pn	**Pn**	**23**	**15**	**43.2**	**+1.8**
KKB	**Krupnik**	**3.01**	**52**	P	**Pn**	**23**	**15**	**43.4**	**+1.9**
BARS	**Barje**	**3.11**	**27**	*e*Pn	**Pn**	**23**	**15**	**42.8**	**0.0**
BOSS	**Bosilegrad**	**3.11**	**38**	*e*Pn	**Pn**	**23**	**15**	**44.4**	**+1.5**
SJES	**Sjenica**	**3.19**	**1**	*e*Pn	**Pn**	**23**	**15**	**44.8**	**+0.7**
MMB	**Musomiste**	**3.28**	**61**	P	**Pn**	**23**	**15**	**46.0**	**+0.7**
SELS	**Selova**	**3.28**	**16**	*e*Pn	**Pn**	**23**	**15**	**46.6**	**+1.3**
VTS	**Vitosha**	**3.58**	**44**	⇑P	**Pn**	**23**	**15**	**49.7**	**+0.2**
VTS				⇑S	**Sn**	**23**	**16**	**33.8**	**+2.0**
GRUS	**Gruza**	**3.87**	**9**	*e*Pn	**Pn**	**23**	**15**	**53.0**	**-0.3**
BLKB	**Belogradchik**	**4.12**	**29**	⇑P	**Pn**	**23**	**15**	**57.9**	**+1.2**
BLKB				⇑S	**Sn**	**23**	**16**	**47.0**	**+2.1**
BZS	**Buzias**	**5.69**	**12**	⇑P	**Pn**	**23**	**16**	**18.8**	**+0.5**

IDC ***13*** *23:27:40.6± 0.8, 27˚.84N× 84˚.56E, h0km, mb3.9/14, mbtmp3.9/16, ML4.3/2, MS3.3/3, Error ellipse: s-maj=25.7km s-min=15.6km az=50.0*
NEIC ***13*** *23:27:42.5± 1.1, 27˚.93N± 0˚.04× 84˚.49E± 0˚.06, h10km± 1km, mb4.1/24, Error ellipse: s-maj=8.8

	comp=Z,3.0nm,0.5s,baz=189,slow=9.3,SNR=16 comp=Z,3.0nm,0.5s							
ZALV	**Zalesovo Beam**	**26.04**	**0**	P		**P**	**23 33 15.1**	**0.0**
SONM	**Songino Array**	**26.16**	**35**	P		**P**	**23 33 17.2**	**+0.7**
	comp=Z,0.9nm,0.5s,baz=232,slow=8.6,SNR=6.7 comp=Z,0.9nm,0.5s							
SONM	**Songino Array**	**26.16**	**35**	P		**P**	**23 33 17.1**	**+0.6**
ULN	**Ulaanbaatar**	**26.51**	**35**	P		**P**	**23 33 20.4**	**+0.7**
ULN				IAmb		IAmb	23 33 25.9	
	comp=Z,2.2nm,0.8s							
GNI	**Garni**	**34.95**	**301**	P		**P**	**23 34 32.9**	**-1.4**
GNI				IAmb		IAmb	23 34 35.7	
	comp=Z,8.2nm,1.4s							
KSRS	**Korea Array**	**37.42**	**64**	P		**P**	**23 34 55.1**	**-0.1**
	comp=Z,0.6nm,0.4s,baz=273,slow=8.5,SNR=4.7 comp=Z,0.6nm,0.4s							
NRIK	**Noril'sk**	**41.52**	**2**	P		**P**	**23 35 30.4**	**+1.4**
	comp=Z,1.5nm,0.4s,baz=184,slow=6.1,SNR=3.9 comp=Z,1.5nm,0.4s							
BRTR	**Keskin Array B**	**43.43**	**299**	P		**P**	**23 35 46.6**	**+1.5**
	comp=Z,0.9nm,1.0s,baz=149,slow=7.9,SNR=4.3 comp=Z,0.9nm,1.0s							
BRTR	**Keskin Array B**	**43.43**	**299**	P		**P**	**23 35 44.8**	**-0.2**
AKASG	**Malin Array Be**	**47.24**	**315**	P		**P**	**23 36 14.1**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=74,slow=37,SNR=2.2 comp=Z,0.2nm,0.3s							
TIXI	**Tiksi**	**50.05**	**17**	P		**P**	**23 36 36.6**	**+0.4**
SANT	**Santorini**	**50.12**	**295**	P		**P**	**23 36 35.2**	**-2.1**
JCJ	**Chichijima**	**50.67**	**77**	P		**P**	**23 36 40.6**	**-1.0**
FIA1	**FINESS Array S**	**50.94**	**328**	P		**P**	**23 36 44.1**	**+1.1**
FINES	**FINESS Array B**	**50.94**	**328**	P		**P**	**23 36 43.2**	**+0.2**
	comp=Z,3.4nm,0.7s,baz=112,slow=7.3,SNR=12 comp=Z,3.4nm,0.7s							
FINES	**FINESS Array B**	**50.94**	**328**	P		**P**	**23 36 42.8**	**-0.2**
PABE	**Paberze**	**50.98**	**320**	P		**P**	**23 36 43.0**	**-0.4**
ARCES	**ARCESS Array B**	**53.45**	**338**	P		**P**	**23 37 02.3**	**+0.7**
	comp=Z,1.5nm,0.6s,baz=81,slow=7.5,SNR=5.8 comp=Z,1.5nm,0.6s							
NB2	**NORSAR Subarra**	**58.02**	**327**	P		**P**	**23 37 36.2**	**+1.7**
	comp=Z,1.1nm,0.8s,baz=91,slow=6.9							
NOA	**NORSAR Array B**	**58.02**	**327**	P		**P**	**23 37 35.4**	**+0.9**
	comp=Z,0.2nm,0.4s,baz=90,slow=6.8,SNR=4.1 comp=Z,0.2nm,0.4s							
WRA	**Warramunga Arr**	**67.64**	**129**	P		**P**	**23 38 39.6**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=322,slow=6.4,SNR=11 comp=Z,0.6nm,0.6s							
ASAR	**Alice Springs**	**69.92**	**132**	P		**P**	**23 38 54.0**	**+0.8**
	comp=Z,0.9nm,0.6s,baz=312,slow=6.2,SNR=12 comp=Z,0.9nm,0.6s							
TORD	**Torodi Ar. Bea**	**77.78**	**278**	P		**P**	**23 39 39.3**	**-0.2**
	comp=Z,0.8nm,1.0s,baz=76,slow=4.8,SNR=3.3 comp=Z,0.8nm,1.0s							
ILAR	**Eielson Array**	**79.39**	**20**	P		**P**	**23 39 49.6**	**+2.1**
	comp=Z,0.6nm,0.7s,baz=295,slow=4.7,SNR=6.5 comp=Z,0.6nm,0.7s							
SFJD	**Kangerlussuaq**	**79.58**	**344**	LR		LR	00 21 26.6	
	comp=Z,69nm,18.2s,baz=333,slow=40							

*SOME **13** 23:28:17.8, 42.43N×80.33E, h5km*
*NNC **13** 23:28:18.7±1.3, 42.46N×80.36E, h0km, mb2.9, mpv2.8, Error ellipse: s-maj=8.4km s-min=7.5km az=48.0*
*KRNET **13** 23:28:22.2±0.1, 41.87N×80.13E, mb2.3*

ISC 13 23:28:21.9±2.1, 42.62N±0.06×80.20E±0.07, h9km±11km, n25,σ1°91/46, 8C-5D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**0.77**	**315**	*e*P	**Pg**	**23 28 34.2**	**-2.6**
	8.7nm,0.1s						
SHLS				*e*S	**Sg**	23 28 46.3	-0.5
	26nm,0.1s						
SHLS	**Shalkode**	**0.77**	**315**	P	**Pg**	**23 28 34.2**	**-2.6**
	8.7nm,0.1s						
SHLS				S	**Sg**	**23 28 46.3**	**-0.5**
	26nm,0.1s						
PDGK	**Podgornoye**	**0.88**	**324**	⇓P	**Pg**	**23 28 38.8**	**-0.1**
	1.1nm,0.3s						
PDGK				⇓S	**Sn**	**23 28 54.3**	**+0.7**
	8.5nm,0.8s						
UZB	**Uzynbulak**	**1.02**	**302**	*e*P	**Pg**	**23 28 40.8**	**-0.7**
	0.8nm,0.1s						
UZB				*e*S	**Sn**	**23 28 57.5**	**+0.5**
	5.4nm,0.1s						
UZB	**Uzynbulak**	**1.02**	**302**	P	**Pg**	**23 28 40.8**	**-0.7**
	0.8nm,0.1s						
UZB				S	**Sn**	**23 28 57.5**	**+0.5**
	5.4nm,0.1s						
PRZ	**Przheval'sk**	**1.34**	**265**	⇑*i*P	**Pg**	**23 28 48.8**	**+1.2**
	baz=97						
PRZ				⇑*i*S	**Sg**	**23 29 08.0**	**+3.0**
	baz=97						
SATY	**Saty**	**1.39**	**289**	*e*P	**Pg**	**23 28 48.4**	**-0.2**
	1.7nm,0.1s						
SATY				*e*S	**Sg**	**23 29 10.8**	**+4.0**
	24nm,0.1s						
SATY	**Saty**	**1.39**	**289**	P	**Pg**	**23 28 48.4**	**-0.2**
	1.7nm,0.1s						
SATY				S	**Sg**	**23 29 10.8**	**+4.0**
	24nm,0.1s						
KPKS	**Kokpek**	**1.40**	**308**	*e*P	**Pb**	**23 28 47.8**	**-0.5**
	3.5nm,0.1s						
KPKS				*e*S	**Sg**	**23 29 09.5**	**+2.5**
	30nm,0.3s						
KPKS	**Kokpek**	**1.40**	**308**	P	**Pb**	**23 28 47.8**	**-0.5**
	3.5nm,0.1s						
KPKS				S	**Sg**	**23 29 09.5**	**+2.5**
	30nm,0.3s						
KURS	**Kuram**	**1.73**	**301**	*e*P	**Pb**	**23 28 53.3**	**-0.5**
	3.3nm,0.4s						
KURS				*e*S	**Sg**	**23 29 18.8**	**+1.4**
	4.7nm,0.6s						
KURS	**Kuram**	**1.73**	**301**	P	**Pb**	**23 28 53.3**	**-0.5**
	3.3nm,0.4s						
KURS				S	**Sg**	**23 29 18.8**	**+1.4**
	4.7nm,0.6s						
DJR	**Jarkent**	**1.74**	**350**	*e*P	**Pg**	**23 28 54.6**	**-0.7**
	1.1nm,0.2s						
DJR				*e*S	**Sg**	**23 29 21.0**	**+3.1**
	12nm,0.3s						
DJR	**Jarkent**	**1.74**	**350**	Pg	**Pg**	**23 28 54.6**	**-0.7**
	1.1nm,0.2s						
DJR				Lg	Lg	23 29 21.0	
	12nm,0.3s						
ANVS	**Anan'yevo**	**1.88**	**276**	⇑*i*P	**Pg**	**23 28 58.8**	**+0.9**
	baz=98						
ANVS				⇑*i*S	**Sg**	**23 29 25.4**	**+3.2**
	baz=98						
KDJ	**Kajisay**	**2.29**	**259**	⇑*e*P	**Pb**	**23 29 00.8**	**-2.7**
	baz=78						
KDJ				⇑*i*S	**Sb**	**23 29 29.4**	**-2.6**
	baz=78						
ARXS	**Arharly**	**2.35**	**313**	*e*P	**Pb**	**23 29 04.8**	**+0.3**
	1.3nm,0.3s						
ARXS				*e*S	**Sg**	**23 29 38.6**	**+1.0**
	6.3nm,0.2s						
ARXS	**Arharly**	**2.35**	**313**	Pg	**Pb**	**23 29 04.8**	**+0.3**
	1.3nm,0.3s						
ARXS				Lg	Lg	23 29 38.6	
	6.3nm,0.2s						
CHKK	**Chushkaly**	**2.66**	**299**	*e*P	**Pb**	**23 29 09.8**	**+0.2**
	0.9nm,0.1s						
CHKK				*e*S	**Sg**	**23 29 47.0**	**-0.2**
	5.2nm,0.2s						
CHKK	**Chushkaly**	**2.66**	**299**	Pg	**Pb**	**23 29 09.8**	**+0.2**
	0.9nm,0.1s						
CHKK				Lg	Lg	23 29 47.0	
	5.2nm,0.2s						
ULHL	**Ulahol**	**2.96**	**264**	⇓*i*P	**Pn**	**23 29 10.7**	**+1.5**
	baz=79						
ULHL				⇓*e*S	**Sn**	**23 29 46.2**	**+1.3**
	baz=79						
KUU	**Kurty**	**3.10**	**296**	*e*P	**Pb**	**23 29 17.1**	**0.0**
	0.9nm,0.2s						
KUU				*e*S	**Sg**	**23 29 59.6**	**-1.8**
	2.6nm,0.3s						
KUU	**Kurty**	**3.10**	**296**	Pg	**Pb**	**23 29 17.1**	**0.0**
	0.9nm,0.2s						
KUU				Lg	Lg	23 29 59.6	
	2.6nm,0.3s						
BOOM	**Boomskoye usch**	**3.15**	**269**	⇑*e*P	**Pb**	**23 29 14.9**	**-3.3**
	baz=83						
BOOM				⇑*e*S	**Sb**	**23 29 52.8**	**-3.9**
	baz=83						
MK31	**Makanchi Array**	**4.43**	**19**	Pn	**Pn**	**23 29 29.1**	**-0.3**
	0.4nm,0.6s,baz=203,slow=14,SNR=9.4						
MK31				⇓Sn	**Sn**	**23 30 23.6**	**+2.6**
	0.1nm,0.2s,baz=202,slow=25,SNR=4.1						

*IDC **13** 23:34:58.1±0.8, 7.07S×117.21E, h482km±8km, mb3.7/18, mbtmp4.5/21, Error ellipse: s-maj=14.2km s-min=7.4km az=55.0*
*DJA **13** 23:34:58.7±0.3, 7.3S×117.7E, h463km±4km, M4.6/25, mb4.5/15, mB5.3/6, MLv4.5/25, Mw(mB)4.7/6*
*NEIC **13** 23:34:58.9±1.6, 7.08S±0.09×117.18E±0.10, h486km±7km, mb4.3/48, Error ellipse: s-maj=14.5km s-min=12.1km az=59.0*

ISC 13 23:34:59.0±0.3, 7°15S±0.05×117°16E±0.05, h500km, n169, σ1°69/176, mb4.2/49, 1C, Bali Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**1.78**	**160**	P	**P**	**23 35 59.3**	**-3.8**
PLAI				S	**S**	**23 36 46.8**	**-8.3**
PLAI	**Plampang**	**1.78**	**160**	P	**P**	**23 35 59.6**	**-3.5**
SRBI	**Singaraja**	**2.14**	**244**	P	**P**	**23 36 02.3**	**-2.5**
DNP	**Denpasar**	**2.46**	**232**	P	**P**	**23 36 03.4**	**-3.2**
DNP				S	**S**	**23 36 54.2**	**-7.2**
IGBI	**Denpasar**	**2.59**	**230**	P	**P**	**23 36 03.9**	**-3.5**
WBSI	**Waikabubak, Su**	**3.32**	**138**	P	**P**	**23 36 08.8**	**-3.5**
KAPI	**Kappang**	**3.34**	**51**	P	**P**	**23 36 10.2**	**-2.2**
	102nm,0.3s,baz=220,slow=7.3,SNR=58						
KAPI				S	**S**	**23 37 06.9**	**-5.2**
	20nm,0.8s,baz=53,slow=19,SNR=6.4						
KAPI	**Kappang**	**3.34**	**51**	P	**P**	**23 36 10.6**	**-1.8**
BSSI	**Bau Bau, Buton**	**3.46**	**73**	P	**P**	**23 36 10.6**	**-2.7**
BKSI	**Bulukumba**	**3.46**	**59**	P	**P**	**23 36 11.4**	**-1.9**
BLJI	**Banyuglugur**	**3.58**	**260**	P	**P**	**23 36 11.8**	**-2.4**
GMJI	**Gumukmas**	**3.85**	**253**	P	**P**	**23 36 13.3**	**-2.9**
BNSI	**Bone**	**4.01**	**47**	P	**P**	**23 36 15.7**	**-1.8**
SPSI	**Sidrap Palu**	**4.09**	**40**	P	**P**	**23 36 16.6**	**-1.6**
BBKI	**Banjar Baru**	**4.33**	**328**	P	**P**	**23 36 19.1**	**-1.1**
BASI	**Baing, Sumba**	**4.55**	**132**	P	**P**	**23 36 19.1**	**-3.0**
GRJI	**Gresik**	**4.65**	**273**	P	**P**	**23 36 21.1**	**-1.8**
EDFI	**Ende, Flores**	**4.76**	**110**	P	**P**	**23 36 20.7**	**-3.3**
TTSI	**Tana Toraja**	**4.86**	**33**	P	**P**	**23 36 23.8**	**-1.0**
MMRI	**Maumere**	**5.24**	**107**	P	**P**	**23 36 25.7**	**-2.5**
MMRI	**Maumere**	**5.24**	**107**	P	**P**	**23 36 25.4**	**-2.9**
	0.7nm3µm172nm,0.5s						
MMRI	**Maumere**	**5.24**	**107**	P	**P**	**23 36 25.8**	**-2.5**
PWJI	**Pagerwojo**	**5.38**	**260**	P	**P**	**23 36 26.8**	**-2.7**
	0.3nm60nm,0.7s						
BBSI	**Bau Bau**	**5.63**	**73**	P	**P**	**23 36 30.2**	**-1.6**
	0.1nm18nm,1.0s						
BKB	**Balikpapan**	**5.86**	**357**	P	**P**	**23 36 36.2**	**+2.2**
BKB	**Balikpapan**	**5.86**	**357**	P	**P**	**23 36 35.9**	**+1.9**
	2.0nm10µm464nm,0.8s						
PCJI	**Pacitan**	**6.02**	**260**	P	**P**	**23 36 33.2**	**-2.4**
	1.0nm66nm,0.5s						
MTKI	**Muara Teweh, K**	**6.56**	**340**	P	**P**	**23 36 39.9**	**-1.1**
	1.2nm5µm144nm,0.7s						
UGM	**Wanagama**	**6.62**	**263**	P	**P**	**23 36 40.4**	**-1.1**
UGM	**Wanagama**	**6.62**	**263**	P	**P**	**23 36 40.3**	**-1.2**
SMKI	**Samarinda**	**6.66**	**0**	P	**P**	**23 36 41.8**	**-0.1**
	1.9nm10µm404nm,0.8s						
PBKI	**Pangkalan Bun**	**7.03**	**309**	P	**P**	**23 36 45.2**	**-0.4**
	1.8nm5µm257nm,0.9s						
BATI	**Baumata**	**7.11**	**116**	P	**P**	**23 36 44.4**	**-2.1**
	57nm,0.5s,baz=242,slow=4.5,SNR=8.5						
BATI				S	**S**	**23 38 10.3**	**-4.1**
	80nm,0.4s,baz=229,slow=21,SNR=12						
MPSI	**Mapaga**	**7.92**	**20**	P	**P**	**23 36 53.7**	**-1.0**
	33nm,1.1s						
MRSI	**Maisa**	**8.95**	**32**	P	**P**	**23 37 05.5**	**+0.1**
	2µm44nm,0.5s						
TOLI2	**Tolitoli**	**8.97**	**24**	P	**P**	**23 37 04.1**	**-1.4**
TOLI2	**Tolitoli**	**8.97**	**24**	P	**P**	**23 37 04.3**	**-1.3**
STKI	**Sintang**	**9.14**	**321**	P	**P**	**23 37 07.9**	**+0.5**
LEM	**Lembang**	**9.48**	**271**	P	**P**	**23 37 10.7**	**-0.4**
	27nm,0.7s,baz=60,slow=7.2,SNR=4.5						
LEM				S	**S**	**23 38 58.4**	**-1.2**
	36nm,0.7s,baz=346,slow=18,SNR=4.8						
CNJI	**Cibinong**	**9.95**	**268**	P	**P**	**23 37 14.7**	**-1.2**
	64nm,0.6s						
SANI	**Sanana**	**10.15**	**60**	P	**P**	**23 37 17.6**	**-0.5**
	22nm,0.8s						
CBJI	**Citeko**	**10.26**	**273**	P	**P**	**23 37 17.3**	**-1.9**
	6µm57nm,0.5s						
SKJI	**Sukabumi**	**10.52**	**270**	P	**P**	**23 37 23.5**	**+1.5**
KSM	**Kuching**	**10.96**	**321**	P	**P**	**23 37 26.8**	**+0.1**
XMIS	**Christmas Isla**	**11.84**	**253**	P	**P**	**23 37 35.4**	**-0.7**
MYLDM	**Lahad Datu**	**12.32**	**6**	P	**P**	**23 37 42.2**	**+1.2**
MBWA	**Marble Bar**	**14.15**	**170**	P	**P**	**23 38 00.6**	**+0.3**
MBWA	**Marble Bar**	**14.15**	**170**	P	**P**	**23 38 00.5**	**+0.2**
KNRA	**Kununurra**	**14.18**	**128**	P	**P**	**23 38 00.3**	**-0.4**
MNAI	**Manna**	**14.40**	**280**	P	**P**	**23 38 01.0**	**-2.1**
MNAI	**Manna**	**14.40**	**280**	P	**P**	**23 38 01.2**	**-1.9**
PSA00	**Pilbara Seismi**	**14.57**	**170**	P	**P**	**23 38 05.1**	**+0.4**
PSA00	**Pilbara Seismi**	**14.57**	**170**	P	**P**	**23 38 05.0**	**+0.2**
MTN	**Manton Dam**	**14.88**	**113**	P	**P**	**23 38 06.6**	**-1.4**
MTN	**Manton Dam**	**14.88**	**113**	P	**P**	**23 38 06.9**	**-1.1**
FAKI	**Fak Fak**	**15.61**	**75**	P	**P**	**23 38 12.6**	**-3.1**
FAKI				IAmb	IAmb	23 38 19.1	
	comp=Z,13nm,0.9s						
GIRL	**Giralia**	**15.66**	**190**	P	**P**	**23 38 17.3**	**+1.2**
GIRL	**Giralia**	**15.66**	**190**	P	**P**	**23 38 17.4**	**+1.3**
MNSI	**Mandailing Nat**	**19.23**	**294**	P	**P**	**23 38 50.7**	**-0.1**
KULM	**Kulim**	**20.59**	**306**	P	**P**	**23 39 03.2**	**0.0**
KULM				IAmb	IAmb	23 39 09.6	
	comp=Z,9.1nm,1.0s						
RPSI	**Rantau Prapat**	**20.66**	**298**	P	**P**	**23 39 03.9**	**+0.1**
PSI	**Prapat**	**20.71**	**298**	P	**P**	**23 39 03.9**	**-0.5**
	comp=Z,3.9nm,0.4s,baz=120,slow=6.6,SNR=6.0 comp=Z,3.9nm,0.4s						
WRKA	**Warakurna**	**20.73**	**150**	P	**P**	**23 39 05.0**	**+0.6**
WB0	**Warramunga Arr**	**20.91**	**129**	P	**P**	**23 39 06.3**	**+0.3**
WB0				IAmb	IAmb	23 39 07.1	
	comp=Z,9.7nm,0.7s						
WRA	**Warramunga Arr**	**20.96**	**129**	P	**P**	**23 39 07.2**	**+0.6**
	comp=Z,11nm,0.5s,baz=310,slow=9.2,SNR=120 comp=Z,11nm,0.5s						
WRA	**Warramunga Arr**	**20.96**	**129**	P	**P**	**23 39 07.0**	**+0.5**
WRAB	**Tennant Creek**	**20.97**	**129**	P	**P**	**23 39 07.4**	**+0.8**
WRAB	**Tennant Creek**	**20.97**	**129**	P	**P**	**23 39 07.4**	**+0.8**
WB2	**Warramunga Arr**	**20.97**	**129**	P	**P**	**23 39 07.3**	**+0.7**
WR0	**Warramunga Arr**	**21.13**	**129**	P	**P**	**23 39 08.5**	**+0.5**
GSI	**Gunungsitoli**	**21.27**	**293**	P	**P**	**23 39 08.5**	**-0.9**
MORW	**Morawa**	**21.83**	**183**	P	**P**	**23 39 15.1**	**+0.9**
MORW				IAmb	IAmb	23 39 18.8	
	comp=Z,13nm,0.8s						
MORW	**Morawa**	**21.83**	**183**	P	**P**	**23 39 14.9**	**+0.7**
AS31	**Alice Springs**	**22.98**	**137**	P	**P**	**23 39 25.3**	**+0.6**
AS31				IAmb	IAmb	23 39 26.4	
	comp=Z,3.5nm,0.5s						
ASAR	**Alice Springs**	**22.98**	**137**	P	**P**	**23 39 25.1**	**+0.4**
	comp=Z,7.5nm,0.4s,baz=316,slow=8.2,SNR=87						
ASAR				S	**S**	**23 42 59.0**	**-0.2**
	comp=Z,1.6nm,0.8s,baz=304,slow=16,SNR=4.5						
ASAR				ScP	**ScP**	**23 45 48.5**	**+1.3**
	comp=Z,1.3nm,0.6s,baz=324,slow=2.2,SNR=7.9 comp=Z,7.5nm,0.4s						
ASAR	**Alice Springs**	**22.98**	**137**	P	**P**	**23 39 25.6**	**+0.9**
BLDU	**Ballidu**	**23.35**	**181**	P	**P**	**23 39 28.0**	**+0.2**
KLBR	**Kellerberrin**	**24.32**	**179**	P	**P**	**23 39 37.4**	**+0.9**
QIS	**Mount Isa**	**25.50**	**124**	P	**P**	**23 39 47.9**	**+0.8**
FORT	**Forrest**	**25.63**	**158**	P	**P**	**23 39 49.3**	**+1.2**
FORT				IAmb	IAmb	23 39 50.2	
	comp=Z,18nm,0.8s						
FORT	**Forrest**	**25.63**	**158**	P	**P**	**23 39 49.3**	**+1.2**
NWAO	**Narrogin (SRO)**	**25.65**	**180**	P	**P**	**23 39 48.9**	**+0.7**
NWAO				IAmb	IAmb	23 39 58.2	
	comp=Z,20nm,1.1s						
NWAO	**Narrogin (SRO)**	**25.65**	**180**	P	**P**	**23 39 49.3**	**+1.1**
COEN	**Coen**	**26.44**	**107**	P	**P**	**23 39 55.2**	**-0.2**
COEN				IAmb	IAmb	23 40 09.3	
	comp=Z,8.4nm,1.1s						
COEN	**Coen**	**26.44**	**107**	P	**P**	**23 39 55.3**	**-0.2**
OOD	**Oodnadatta**	**27.02**	**142**	P	**P**	**23 40 01.1**	**+0.8**
MULG	**Mulgathing**	**27.95**	**148**	P	**P**	**23 40 09.5**	**+1.0**
INKA	**Innaminka**	**30.31**	**135**	P	**P**	**23 40 30.4**	**+1.3**
LCRK	**Leigh Creek**	**30.45**	**142**	P	**P**	**23 40 31.4**	**+1.1**
BBOO	**Buckleboo**	**30.99**	**148**	P	**P**	**23 40 35.8**	**+0.8**
BBOO	**Buckleboo**	**30.99**	**148**	P	**P**	**23 40 35.7**	**+0.8**
CTAO	**Charters Tower**	**31.00**	**117**	P	**P**	**23 40 35.7**	**+0.6**
CTAO				IAmb	IAmb	23 40 37.0	
	comp=Z,12nm,1.1s						
CM31	**Chiang Mai Arr**	**31.15**	**325**		**PcP**	**23 43 14.2**	**-2.4**
CMAR	**Chiang Mai Arr**	**31.15**	**325**	P	**P**	**23 40 37.5**	**+1.0**
	comp=Z,2.5nm,0.5s,baz=156,slow=7.1,SNR=15 comp=Z,2.5nm,0.5s						
CMAR	**Chiang Mai Arr**	**31.15**	**325**	P	**P**	**23 40 36.5**	**+0.1**
CHTO	**Chiang Mai**	**31.43**	**325**	P	**P**	**23 40 37.9**	**-1.0**
YHNB	**Yeheng**	**31.89**	**7**	P	**P**	**23 40 42.3**	**-0.5**
QLP	**Quilpie**	**32.19**	**130**	P	**P**	**23 40 47.0**	**+1.7**
	comp=Z,39nm,0.6s						
NAPP	**Napperby**	**32.40**	**146**	P	**P**	**23 40 48.4**	**+1.4**
HTT	**Hallett**	**33.02**	**145**	P	**P**	**23 40 53.9**	**+1.6**
STKA	**Stephens Creek**	**33.53**	**140**	P	**P**	**23 40 57.9**	**+1.3**
	comp=Z,17nm,0.5s,baz=318,slow=8.9,SNR=58 comp=Z,17nm,0.5s						
STKA	**Stephens Creek**	**33.53**	**140**	P	**P**	**23 40 57.9**	**+1.3**
STKA	**Stephens Creek**	**33.53**	**140**	P	**P**	**23 40 57.9**	**+1.3**
CMSA	**Cobar Meteorol**	**36.03**	**136**	P	**P**	**23 41 19.3**	**+1.8**
PZH	**PanZhiHua**	**36.64**	**336**	P	**P**	**23 41 24.1**	**+1.3**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,4.0s						
ARPS	**Mount Arapiles**	**37.09**	**146**	P	**P**	**23 41 27.6**	**+1.4**
TOO	**Toolangi**	**39.73**	**144**	P	**P**	**23 41 49.7**	**+2.0**
TOO				IAmb	IAmb	23 42 01.4	
	comp=Z,9.9nm,1.1s						
ARMA	**Armidale**	**39.74**	**130**	P	**P**	**23 41 50.9**	**+2.9**
ARMA				IAmb	IAmb	23 41 51.2	
	comp=Z,13nm,1.1s						
CAN	**Canberra**	**40.49**	**138**	P	**P**	**23 41 53.4**	**-0.5**
CAN				IAmb	IAmb	23 42 12.7	
	comp=Z,7.7nm,1.1s						
MGCD	**Mangrove Creek**	**40.76**	**134**	P	**P**	**23 41 58.5**	**+2.5**
	comp=Z,18nm,1.2s						
TAPN	**Taplejung**	**44.59**	**321**	*e*P	**P**	**23 42 26.9**	**+0.3**
	comp=Z,18nm,0.5s						
RAMN	**Ramite**	**45.01**	**320**	*e*P	**P**	**23 42 30.3**	**+0.6**
	comp=Z,22nm,0.6s						
KSRS	**Korea Array**	**45.50**	**12**	P	**P**	**23 42 33.2**	**+0.3**
	comp=Z,3.0nm,0.8s,baz=191,slow=8.1,SNR=15 comp=Z,3.0nm,0.8s						
JIRN	**Jiri**	**45.76**	**320**	*e*P	**P**	**23 42 35.6**	**-0.1**
	comp=Z,30nm,0.5s						
GUN	**Gumba**	**46.13**	**320**	*e*P	**P**	**23 42 38.5**	**0.0**
	comp=Z,26nm,0.6s						
PKI	**Pulchoki**	**46.20**	**320**	*e*P	**P**	**23 42 38.5**	**-0.4**
PKIN	**Phulchoki**	**46.21**	**320**	*e*P	**P**	**23 42 38.3**	**-0.7**
	comp=Z,18nm,0.5s						
GKN	**Gorkha**	**46.99**	**319**	*e*P	**P**	**23 42 44.5**	**-0.2**
MJAR	**Matsushiro Arr**	**47.74**	**23**	P	**P**	**23 42 49.4**	**-0.7**
	comp=Z,3.2nm,0.8s,baz=196,slow=8.7,SNR=6.7 comp=Z,3.2nm,0.8s						
DANN	**Dangsing**	**47.79**	**319**	*e*P	**P**	**23 42 50.6**	**-0.4**
	comp=Z,38nm,0.5s						
HHC	**Hu-ho-hao-te**	**48.04**	**354**	*e*P	**P**	**23 42 54.3**	**+2.0**
HHC				pmax	pmax		
	comp=Z,16nm,1.1s						
HHC				pmax	pmax		
	comp=Z,89nm,5.2s						
PYUN	**Piuthan**	**48.13**	**318**	*e*P	**P**	**23 42 53.2**	**-0.2**
	comp=Z,22nm,0.5s						
GTA	**Gaotai**	**49.03**	**342**	⇑P	**P**	**23 43 00.9**	**+1.1**
GTA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
JSD	**Sado**	**49.07**	**22**	P	**P**	**23 42 59.2**	**-0.7**
JSD				IAmb	IAmb	23 43 00.5	
	comp=Z,8.8nm,0.8s						
USRK	**Ussuriysk Ar.**	**52.84**	**13**	P	**P**	**23 43 27.4**	**+0.1**
	comp=Z,2.9nm,0.7s,baz=118,slow=2.3,SNR=4.6 comp=Z,2.9nm,0.7s						
USRK	**Ussuriysk Ar.**	**52.84**	**13**	P	**P**	**23 43 27.0**	**-0.2**
SONM	**Songino Array**	**55.56**	**351**	P	**P**	**23 43 46.8**	**+0.2**
	comp=Z,7.1nm,0.6s,baz=168,slow=8.2,SNR=37						
SONM				PcP	**PcP**	**23 44 39.4**	**+0.3**
	comp=Z,0.8nm,0.5s,baz=180,slow=3.7,SNR=2.9 comp=Z,7.1nm,0.6s						
SONM	**Songino Array**	**55.56**	**351**	P	**P**	**23 43 47.1**	**+0.5**
WMQ	**Urumqi**	**57.31**	**335**	*e*P	**P**	**23 44 00.4**	**+1.7**
CASY	**Casey**	**59.22**	**183**	P	**P**	**23 44 12.2**	**+1.1**
RPZ	**Rata Peaks**	**59.39**	**137**	P	**P**	**23 44 13.7**	**+0.9**
	comp=Z,7.6nm,0.9s,baz=262,slow=7.1,SNR=1.9 comp=Z,7.6nm,0.9s						
RPZ	**Rata Peaks**	**59.39**	**137**	P	**P**	**23 44 14.2**	**+1.4**
THZ	**Tophouse**	**60.01**	**134**	P	**P**	**23 44 19.0**	**+2.0**
THZ				IAmb	IAmb	23 44 20.1	
	comp=Z,9.9nm,0.8s						
KSH	**Kashi**	**60.04**	**324**	P	**P**	**23 44 17.0**	**-0.3**
KSH				pmax	pmax		
	comp=Z,8.0nm,0.8s						

BALP	**Baler**	**0.89**	**125**	*e*P	Pb	23 44 14.6	+0.3
BALP				*e*S		23 44 27.1	
CAUP	**Cauayan**	**1.18**	**54**	*e*P	Pn	23 44 18.6	0.0
CAUP				*e*S		23 44 33.4	

IDC ***14*** *00:05:14.2±0.8, 15˚.21S×173˚.32W, h0km, mb3.8/7, mbtmp3.8/7, MS3.9/29, Error ellipse: s-maj=42.4km s-min=18.6km az=137.0*

NEIC ***14*** *00:05:16.8±1.1, 15˚.31S±0˚.07×173˚.10W±0˚.08, h10km±1km, mb4.5/70, Error ellipse: s-maj=17.0km s-min=7.5km az=312.0*

GCMT ***14*** *00:05:23.8±0.4, 15˚.38S±0˚.03×172˚.71W±0˚.03, h48km±2km, MW4.9/77, Moment Tensor Solution. s23,c25; s77,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.99±.19; $M_{\theta\theta}$2.14±.16; $M_{\phi\phi}$-0.15±.18; $M_{r\theta}$-1.33±.12; $M_{r\phi}$-1.33±.13; $M_{\theta\phi}$1.10±.10; Best double couple: M_o2.94900×10^{16} NP1:ϕ_s279.00000°, δ29.00000°, λ-115.00000°. NP2: ϕ_s126.00000°, δ64.00000°, λ-77.00000°. Principal axes: T 3.2820, Plg18.0000°, Azm207.0000°; N -0.6700, Plg12.0000°, Azm300.0000°; P -2.6160, Plg69.0000°, Azm62.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NOU ***14*** *00:05:34.1, 14˚.06S×172˚.08W, h96km, MLv3.7/4, Samoa Islands*

ISC 14 00:05:18.7±0.5, 15˚.31S±0˚.07×173˚.11W±0˚.08, h29km, n123, σ0§87/91, mb4.5/39, MS4.0/31, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.90**	**43**	Pn	**Pn**	**00 05 49.5**	**+0.3**
	408nm,0.3s,baz=206,slow=3.0,SNR=98						
AFI				Sn	**Sn**	**00 06 10.3**	**-1.9**
	462nm,0.3s,baz=35,slow=23,SNR=13						
AFI	**Afiamalu**	**1.90**	**43**		**Pn**	**00 05 49.4**	**+0.3**
AFI				Sn	**Sn**	**00 06 12.0**	**-0.2**
AFI	**Afiamalu**	**1.90**	**43**	P	**Pn**	**00 05 49.6**	**+0.3**
NIUE	**Niue**	**4.82**	**141**		**Pn**	**00 06 28.9**	**-0.4**
MSVF	**Nonsavu**	**8.82**	**253**	Pn	**Pn**	**00 07 24.0**	**-0.3**
RAR	**Rarotonga**	**13.95**	**117**	LR	LR	00 12 33.6	
	comp=Z,152nm,19.8s,baz=311,slow=31						
RAR	**Rarotonga**	**13.95**	**117**	Pn	**Pn**	**00 08 34.4**	**-0.1**
DZM	**Mont Dzumac**	**20.49**	**248**	*e*LR	LR	00 15 08.0	
	comp=Z,1μm,27.7s						
DZM	**Mont Dzumac**	**20.49**	**248**	LR	LR	00 17 18.6	
	comp=Z,105nm,19.0s,baz=40,slow=36						
PPT	**Papeete**	**22.68**	**99**	LR	LR	00 16 34.2	
	comp=Z,58nm,19.5s,baz=277,slow=30						
PPT2	**Papeete2**	**22.68**	**99**	*e*LR	LR	00 14 45.0	
	comp=Z,480nm,28.5s						
TBI	**Tubuai**	**23.68**	**113**	*e*LR	LR	00 15 22.0	
	comp=Z,365nm,28.5s						
URZ	**Urewera**	**24.43**	**199**	P	**P**	**00 10 34.4**	**-0.5**
	2.2nm,0.3s,baz=282,slow=22,SNR=2.1						
URZ				LR	LR	00 19 37.3	
	comp=Z,161nm,19.5s,baz=31,slow=35						
	2.2nm,0.3s						
URZ	**Urewera**	**24.43**	**199**	P	**P**	**00 10 34.7**	**-0.1**
BKZ	**Black Stump Fm**	**25.46**	**199**	P	**P**	**00 10 45.3**	**+1.1**
BKZ				IAmb	IAmb	00 10 58.8	
	comp=Z,9.7nm,1.1s						
TUWZ	**Tuamarina**	**28.34**	**201**	P	**P**	**00 11 10.8**	**+0.7**
RPZ	**Rata Peaks**	**31.37**	**202**	LR	LR	00 22 52.8	
	comp=Z,379nm,20.9s,baz=34,slow=34						
TAOE	**Nuku Hiva Isla**	**32.83**	**83**	*e*LR	LR	00 19 18.2	
	comp=Z,407nm,28.8s						
H11S2	**WAKE ISLAND Hy**	**39.04**	**329**	T	T	00 55 43.4	
	baz=146,slow=76						
H11S3	**WAKE ISLAND Hy**	**39.05**	**329**	T	T	00 55 44.4	
	baz=146,slow=76						
H11S1	**WAKE ISLAND Hy**	**39.05**	**329**	T	T	00 55 43.6	
	baz=146,slow=76						
H11N3	**WAKE ISLAND Hy**	**39.98**	**330**	T	T	00 56 48.9	
	baz=142,slow=76						
H11N1	**WAKE ISLAND Hy**	**39.98**	**330**	T	T	00 56 49.8	
	baz=142,slow=76						
H11N2	**WAKE ISLAND Hy**	**40.00**	**330**	T	T	00 56 50.7	
	baz=142,slow=76						
TOO	**Toolangi**	**42.74**	**231**	P	**P**	**00 13 13.8**	**+0.3**
WB2	**Warramunga Arr**	**50.13**	**257**	P	**P**	**00 14 13.6**	**+1.8**
WRA	**Warramunga Arr**	**50.14**	**257**	P	**P**	**00 14 10.3**	**-1.5**
	comp=Z,1.0nm,1.0s,baz=96,slow=7.7,SNR=3.0						
	comp=Z,1.0nm,1.0s						
WRA	**Warramunga Arr**	**50.14**	**257**	P	**P**	**00 14 11.1**	**-0.8**
ASAR	**Alice Springs**	**50.41**	**252**	P	**P**	**00 14 11.9**	**-2.0**
	comp=Z,0.8nm,0.8s,baz=87,slow=7.9,SNR=7.9						
ASAR				LR	LR	00 34 03.8	
	comp=Z,284nm,21.6s,baz=115,slow=34						
	comp=Z,0.8nm,0.8s						
ASAR	**Alice Springs**	**50.41**	**252**	P	**P**	**00 14 14.7**	**+0.8**
VNDA	**Vanda**	**63.49**	**186**	P	**P**	**00 15 47.0**	**+1.4**
	comp=Z,1.0nm,1.0s,baz=12,slow=4.9,SNR=4.0						
	comp=Z,1.0nm,1.0s						
VNDA	**Vanda**	**63.49**	**186**	P	**P**	**00 15 45.4**	**-0.3**
VNDA				IAmb	IAmb	00 16 11.6	
	comp=Z,3.4nm,1.2s						
SHEM	**Shemya Is, Ala**	**68.66**	**352**	LR	LR	00 40 00.5	
	comp=Z,154nm,21.4s,baz=304,slow=30						
KCPM	**Cahto Peak**	**71.55**	**38**	P	**P**	**00 16 37.8**	**+0.5**
PFO	**Pinyon Flats O**	**72.66**	**47**	LR	LR	00 42 03.7	
	comp=Z,121nm,19.1s,baz=252,slow=30						
LPIG	**La Paz**	**72.75**	**58**	LR	LR	00 41 00.2	
	comp=Z,84nm,19.4s,baz=187,slow=29						
YBH	**Yreka Blue Hor**	**73.36**	**37**	LR	LR	00 41 41.7	
	comp=Z,114nm,20.9s,baz=261,slow=30						
BEKR	**Beckworth**	**73.62**	**40**	P	**P**	**00 16 50.8**	**+1.1**
BEKR				IAmb	IAmb	00 16 51.3	
	comp=Z,6.8nm,1.4s						
PNTR	**Pine Nut**	**73.63**	**41**	P	**P**	**00 16 50.8**	**+1.0**
QSM	**Queen of Sheba**	**73.65**	**45**	P	**P**	**00 16 49.7**	**0.0**
QSM				IAmb	IAmb	00 16 51.1	
	comp=Z,8.7nm,1.4s						
NVAR	**Mina Array Bea**	**74.08**	**42**	P	**P**	**00 16 52.9**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=233,slow=8.0,SNR=5.1						
NVAR				LR	LR	00 41 57.9	
	comp=Z,135nm,21.8s,baz=235,slow=30						
	comp=Z,0.3nm,0.6s						
BLYC	**Blythe**	**74.10**	**48**	P	**P**	**00 16 53.8**	**+1.4**
BLYC				IAmb	IAmb	00 16 54.9	
	comp=Z,8.3nm,1.4s						
NV11	**Mina Array Sit**	**74.17**	**42**	P	**P**	**00 16 54.4**	**+1.5**
NV11				IAmb	IAmb	00 16 55.3	
	comp=Z,7.5nm,1.4s						
TPH	**Tonopah**	**74.58**	**43**	P	**P**	**00 16 55.4**	**+0.1**
QSPA	**South Pole Qui**	**74.73**	**180**	LR	LR	00 43 06.6	
	comp=Z,67nm,21.5s,baz=39,slow=30						
KDAK	**Kodiak Island**	**74.78**	**11**	LR	LR	00 43 59.5	
	comp=Z,118nm,20.4s,baz=226,slow=31						
K05A	**Summer Lake**	**75.03**	**37**	P	**P**	**00 16 59.2**	**+1.4**
SHPR	**Sheep Range**	**75.10**	**45**	P	**P**	**00 16 58.7**	**+0.4**
SHPR				IAmb	IAmb	00 17 23.5	
	comp=Z,3.5nm,0.9s						
PRN	**Pahroc Range**	**75.65**	**44**	P	**P**	**00 17 02.5**	**+1.0**
PRN				IAmb	IAmb	00 17 04.2	
	comp=Z,8.8nm,1.5s						
PINE	**Pine Mountain**	**75.66**	**36**	P	**P**	**00 17 02.4**	**+1.0**
BMN	**Battle Mountai**	**75.90**	**41**	P	**P**	**00 17 03.4**	**+0.5**
BMN				IAmb	IAmb	00 17 04.4	
	comp=Z,4.0nm,1.3s						
TUC	**Tucson**	**76.12**	**51**	P	**P**	**00 17 04.7**	**+0.5**
F04A	**Amboy**	**76.19**	**34**	P	**P**	**00 17 04.7**	**+0.6**
F04A				IAmb	IAmb	00 17 15.9	
	comp=Z,5.1nm,0.8s						
WVOR	**Wild Horse Val**	**76.19**	**38**	P	**P**	**00 17 04.8**	**+0.4**
WVOR				IAmb	IAmb	00 17 06.8	
	comp=Z,6.2nm,1.4s						
KSRS	**Korea Array**	**76.30**	**315**	LR	LR	00 45 19.5	
	comp=Z,20nm,21.6s,baz=195,slow=32						
X16A	**Lo Mia Camp, P**	**76.65**	**48**	P	**P**	**00 17 08.7**	**+1.4**
X16A				IAmb	IAmb	00 17 09.2	
	comp=Z,8.1nm,1.5s						
J08A	**Circle Bar Ran**	**76.83**	**38**	P	**P**	**00 17 08.7**	**+0.7**
CCUT	**Cedar City**	**76.87**	**45**	P	**P**	**00 17 09.4**	**+0.9**
CCUT				IAmb	IAmb	00 17 11.3	
	comp=Z,5.7nm,1.4s						
U15A	**North Rim**	**77.04**	**46**	P	**P**	**00 17 10.6**	**+1.1**
U15A				IAmb	IAmb	00 17 11.5	
	comp=Z,4.8nm,1.1s						
PSUT	**Pine Spring**	**77.05**	**44**	P	**P**	**00 17 10.3**	**+0.8**
SZCU	**Shurtz Canyon**	**77.08**	**45**	P	**P**	**00 17 10.3**	**+0.7**
SZCU				IAmb	IAmb	00 17 35.7	
	comp=Z,6.8nm,1.5s						
ELK	**Elko**	**77.33**	**41**	LR	LR	00 43 47.9	
	comp=Z,119nm,21.7s,baz=232,slow=30						
USRK	**Ussuriysk Ar.**	**77.49**	**323**	LR	LR	00 44 49.5	
	comp=Z,51nm,19.8s,baz=141,slow=31						
PKCU	**Pink Cliffs**	**77.53**	**45**	P	**P**	**00 17 13.2**	**+0.8**
BBB	**Bella Bella**	**77.68**	**26**	LR	LR	00 45 01.3	
	comp=Z,66nm,20.4s,baz=259,slow=31						
G08A	**Pilot Rock**	**77.70**	**36**	P	**P**	**00 17 13.7**	**+0.9**
MTPU	**Mount Pierson**	**77.92**	**45**	P	**P**	**00 17 15.5**	**+1.0**
MTPU				IAmb	IAmb	00 17 18.0	
	comp=Z,5.4nm,1.2s						
TCRU	**Three Creeks R**	**78.03**	**44**	P	**P**	**00 17 14.9**	**-0.1**
TCRU				IAmb	IAmb	00 17 17.1	
	comp=Z,3.9nm,1.0s						
HAWA	**Hanford**	**78.05**	**35**	P	**P**	**00 17 15.4**	**+0.8**
HAWA				IAmb	IAmb	00 17 17.7	
	comp=Z,6.0nm,1.1s						
MSU	**Marysvale**	**78.17**	**44**	P	**P**	**00 17 16.3**	**+0.6**
BMO	**Blue Mountains**	**78.39**	**37**	P	**P**	**00 17 16.7**	**+0.1**
MFID	**Camas Ranch**	**78.44**	**39**	P	**P**	**00 17 17.4**	**+0.4**
MFID				IAmb	IAmb	00 17 18.9	
	comp=Z,7.6nm,1.4s						
121A	**Cookes Peak, D**	**78.47**	**52**	P	**P**	**00 17 17.6**	**+0.1**
D08A	**Wollman Farm,**	**78.78**	**34**	P	**P**	**00 17 18.2**	**-0.4**
D08A				IAmb	IAmb	00 17 20.2	
	comp=Z,4.0nm,1.0s						
F10A	**Beach Ranch, E**	**79.08**	**36**	P	**P**	**00 17 19.7**	**-0.7**
F10A				IAmb	IAmb	00 17 21.4	
	comp=Z,6.7nm,1.2s						
TMUT	**Trail Mountain**	**79.21**	**44**	P	**P**	**00 17 21.8**	**+0.2**
TMUT				IAmb	IAmb	00 17 47.1	
	comp=Z,5.2nm,1.0s						
PLID	**Pearl Lake**	**79.28**	**37**	P	**P**	**00 17 21.1**	**-0.7**
HLID	**Hailey**	**79.38**	**39**	P	**P**	**00 17 23.4**	**+1.2**
HVU	**Hansel Valley**	**79.45**	**41**	P	**P**	**00 17 22.7**	**0.0**
HVU				IAmb	IAmb	00 17 24.0	
	comp=Z,7.9nm,1.4s						
SRU	**San Rafael Swe**	**79.58**	**45**	P	**P**	**00 17 23.0**	**-0.5**
SRU				IAmb	IAmb	00 17 49.2	
	comp=Z,9.9nm,1.5s						
P17A	**Butcher Ranch,**	**79.62**	**44**	P	**P**	**00 17 24.0**	**+0.4**
P17A				IAmb	IAmb	00 17 53.0	
	comp=Z,9.1nm,1.5s						
BCPM	**Bancas Point**	**79.73**	**16**	P	**P**	**00 17 24.8**	**+1.3**
MNTX	**Cornudas Mount**	**79.95**	**53**	P	**P**	**00 17 25.7**	**+0.4**
P18A	**Preston Nutter**	**80.03**	**44**	P	**P**	**00 17 25.5**	**-0.5**
M24K	**Tolsona, Glenn**	**80.04**	**12**	P	**P**	**00 17 25.9**	**+0.7**
PV13	**Radium Mtn., P**	**80.30**	**46**	P	**P**	**00 17 28.1**	**+0.7**
TX31	**Lajitas Ar. Si**	**80.33**	**56**	P	**P**	**00 17 28.5**	**+0.9**
TX32	**Lajitas Array**	**80.33**	**56**	P	**P**	**00 17 28.2**	**+0.6**
TX32				IAmb	IAmb	00 17 30.2	
	comp=Z,8.1nm,1.5s						
TXAR	**Lajitas Array**	**80.33**	**56**	P	**P**	**00 17 27.6**	**0.0**
	comp=Z,2.2nm,1.2s,baz=205,slow=4.0,SNR=8.4						
TXAR				LR	LR	00 46 01.9	
	comp=Z,76nm,19.8s,baz=215,slow=30						
	comp=Z,2.2nm,1.2s						
TXAR	**Lajitas Array**	**80.33**	**56**	P	**P**	**00 17 27.8**	**+0.2**
NEW	**Newport**	**80.48**	**34**	LR	LR	00 45 17.5	
	comp=Z,85nm,21.6s,baz=243,slow=30						
ANMO	**Albuquerque**	**80.53**	**50**	LR	LR	00 44 58.7	
	comp=Z,86nm,21.4s,baz=259,slow=30						
ANMO	**Albuquerque**	**80.53**	**50**	P	**P**	**00 17 28.6**	**0.0**
MSO	**Missoula**	**81.44**	**37**	P	**P**	**00 17 33.7**	**+0.5**
MSO				IAmb	IAmb	00 17 35.4	
	comp=Z,4.0nm,1.1s						
DLMT	**Dillon**	**81.44**	**38**	P	**P**	**00 17 33.7**	**+0.4**
TPAW	**Teton Pass**	**81.49**	**41**	P	**P**	**00 17 34.0**	**+0.4**
MOOW	**Moose Ponds**	**81.75**	**40**	P	**P**	**00 17 35.4**	**+0.4**
LOHW	**Long Hollow**	**81.77**	**41**	P	**P**	**00 17 35.5**	**+0.4**
LOHW				IAmb	IAmb	00 17 36.6	
	comp=Z,8.2nm,1.5s						
FLWY	**Flagg Ranch**	**81.94**	**40**	P	**P**	**00 17 36.6**	**+0.6**
YPP	**Pitchstone Pla**	**81.97**	**40**	P	**P**	**00 17 37.0**	**+0.8**
YPP				IAmb	IAmb	00 17 43.5	
	comp=Z,5.3nm,1.4s						
PD31	**Pinedale Array**	**82.01**	**42**	P	**P**	**00 17 36.7**	**+0.3**
PDAR	**Pinedale Array**	**82.01**	**42**	P	**P**	**00 17 36.5**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=197,slow=2.8,SNR=4.9						
PDAR				LR	LR	00 48 10.8	
	comp=Z,92nm,19.8s,baz=251,slow=31						
	comp=Z,0.5nm,0.6s						
YHL	**Hebgen Lake**	**82.03**	**39**	P	**P**	**00 17 37.8**	**+1.2**
BOZ	**Bozeman (W)**	**82.15**	**39**	P	**P**	**00 17 37.5**	**+0.6**
BOZ				IAmb	IAmb	00 17 38.5	
	comp=Z,5.3nm,1.3s						
ILAR	**Eielson Array**	**82.31**	**11**	LR	LR	00 47 46.3	
	comp=Z,34nm,20.8s,baz=205,slow=31						
T25A	**Trinidad**	**82.97**	**49**	P	**P**	**00 17 42.6**	**+1.1**
T25A				IAmb	IAmb	00 18 10.2	
	comp=Z,6.6nm,1.4s						
RWWY	**Rawlins**	**83.04**	**44**	P	**P**	**00 17 42.4**	**+0.6**
RWWY				IAmb	IAmb	00 17 42.7	
	comp=Z,5.8nm,1.1s						
Q24A	**Divide**	**83.23**	**47**	P	**P**	**00 17 42.8**	**-0.1**
Q24A				IAmb	IAmb	00 17 45.2	
	comp=Z,4.8nm,1.1s						
ISCO	**Idaho Springs**	**83.27**	**46**	P	**P**	**00 17 42.8**	**-0.3**
GCMT	**Greyclif**	**83.43**	**39**	P	**P**	**00 17 43.8**	**+0.2**
CMIG	**Matias Romero**	**83.59**	**77**	LR	LR	00 45 24.1	
	comp=Z,67nm,21.4s,baz=229,slow=29						
ABTX	**Abilene, Hawle**	**84.78**	**54**	P	**P**	**00 17 50.7**	**+0.1**
INK	**Inuvik**	**88.12**	**14**	LR	LR	00 50 13.1	
	comp=Z,83nm,21.8s,baz=206,slow=31						
PLCA	**Paso Flores**	**89.36**	**132**	LR	LR	00 51 45.4	
	comp=Z,86nm,18.1s,baz=203,slow=31						
ATAH	**Atahualpa**	**92.65**	**98**	LR	LR	00 49 28.1	
	comp=Z,50nm,20.3s,baz=232,slow=29						
ULM	**Lac du Bonnet**	**93.69**	**39**	LR	LR	00 54 07.8	
	comp=Z,117nm,20.3s,baz=290,slow=31						
TIXI	**Tiksi**	**95.00**	**344**	LR	LR	00 58 17.5	
	comp=Z,35nm,20.7s,baz=180,slow=34						
ROSC	**El Rosal**	**99.72**	**88**	LR	LR	00 57 04.1	
	comp=Z,38nm,18.0s,baz=237,slow=31						
OSTC	**Ostas**	**144.05**	**350**	*e*PKP	**PKPab**	**00 24 45.3**	**-3.6**
KHC	**Kasperske Hory**	**145.83**	**352**	*e*PKP	**PKPbc**	**00 24 55.2**	**0.0**
KHC				*ex*	x	00 25 15.6	
CKRC	**Cesky Krumlov**	**146.04**	**351**	*e*PKP	**PKPbc**	**00 24 55.7**	**-0.1**
CKRC				*ex*	x	00 25 16.1	
GERES	**GERESS Array B**	**146.10**	**352**	PKPbc	**PKPdf**	**00 24 55.6**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=82,slow=2.8,SNR=3.7						
BRTR	**Keskin Array B**	**146.27**	**321**	PKPbc	**PKPbc**	**00 24 56.7**	**-0.3**
	comp=Z,2.1nm,1.0s,baz=64,slow=2.9,SNR=6.8						

IDC ***14*** *00:27:15.3±0.6, 9˚.83S×124˚.57E, h0km, mb4.2/14, mbtmp4.3/15, ML4.8/1, MS3.4/6, Error ellipse: s-maj=16.5km s-min=10.0km az=142.0*

DJA ***14*** *00:27:18.6±1.1, 10˚S×124˚4E±˚, h18km±10km, M4.6/13, mb4.8/13, mB5.2/6, MLv4.5/13, Mw(mB)4.6/6*

NEIC ***14*** *00:27:19.0±2.4, 10˚10S±0˚.06×124˚.46E±0˚.06, h29km±5km, mb4.5/21, Error ellipse: s-maj=9.4km s-min=8.1km az=211.0*

ISC 14 00:27:16.9±0.4, 10˚14S±0˚.06×124˚58E±0˚.06, h19km, n82, σ1§93/72, mb4.4/22, MS3.6/4, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**0.91**	**266**	Pg	**Pg**	**00 27 34.5**	**-0.2**
	240nm,0.3s,baz=106,slow=3.7,SNR=73						
BATI				Lg	Lg	00 27 47.5	
	426nm,0.3s,baz=133,slow=21,SNR=7.7						
BATI	**Baumata**	**0.91**	**266**	P	**Pn**	**00 27 34.0**	**-0.7**
MMRI	**Maumere**	**2.76**	**303**		**Pn**	**00 28 00.3**	**+0.1**
MMRI	**Maumere**	**2.76**	**303**	P	**Pn**	**00 28 01.2**	**+1.1**
EDFI	**Ende, Flores**	**3.17**	**296**	P	**Pn**	**00 28 06.1**	**+0.2**
BBSI	**Bau Bau**	**5.03**	**337**	P	Pn	00 28 34.8	+3.3
	0.1nm18nm,0.9s						
WBSI	**Waikabubak, Su**	**5.14**	**275**	P	**Pn**	**00 28 33.1**	**+0.1**
	0.6nm1μm156nm,0.9s						
BSSI	**Bau Bau, Buton**	**5.67**	**314**	P	**Pn**	**00 28 42.5**	**+2.2**
	0.2nm52nm,0.7s						
BKSI	**Bulukumba**	**6.51**	**317**	P	**Pn**	**00 28 53.0**	**+1.2**
	0.1nm42nm,0.8s						
PLAI	**Plampang**	**6.84**	**280**	P	**Pn**	**00 28 56.7**	**+0.4**
	0.5nm137nm,0.6s						
KNRA	**Kununurra**	**6.85**	**144**		**Pn**	**00 28 58.6**	**+2.2**
MTN	**Manton Dam**	**6.96**	**113**		Pn	00 29 00.7	+2.8
KAPI	**Kappang**	**6.99**	**316**	Pn	**Pn**	**00 28 59.4**	**+1.0**
	0.9nm,0.3s,baz=140,slow=11,SNR=2.4						
KAPI				LR	LR	00 32 02.3	
	comp=Z,204nm,18.2s,baz=148,slow=42						
KAPI	**Kappang**	**6.99**	**316**	Pn	**Pn**	**00 28 57.7**	**-0.7**
BNSI	**Bone**	**7.23**	**322**	P	**Pn**	**00 29 03.8**	**+2.2**
	0.2nm566nm46nm,0.8s						
SPSI	**Sidrap Palu**	**7.78**	**322**	P	Pn	00 29 13.0	+3.9
SANI	**Sanana**	**8.16**	**10**	P	Pn	00 29 18.5	+4.1
	75nm,0.8s						
TTSI	**Tana Toraja**	**8.49**	**326**	P	Pb	00 29 29.9	-13
LUWI	**Luwuk**	**9.22**	**349**	Pn	**Pn**	**00 29 30.2**	**+1.3**
LUWI	**Luwuk**	**9.22**	**349**	P	Pn	00 29 39.9	+11
FAKI	**Fak Fak**	**10.46**	**47**	Pn	Pn	00 29 48.6	+2.6
MBWA	**Marble Bar**	**11.91**	**202**	Pn	**Pn**	**00 30 07.3**	**+1.5**
PSA00	**Pilbara Seismi**	**12.25**	**201**		**Pn**	**00 30 12.4**	**+1.9**
PSA00	**Pilbara Seismi**	**12.25**	**201**	Pn	**Pn**	**00 30 11.2**	**+0.8**
WB0	**Warramunga Arr**	**13.46**	**136**	Pn	**Pn**	**00 30 28.5**	**+1.4**
WRA	**Warramunga Arr**	**13.55**	**137**	Pn	**Pn**	**00 30 28.0**	**-0.3**
	1.1nm,0.3s,baz=317,slow=14,SNR=30						
WRA				Sn	**Sn**	**00 32 54.0**	**-4.4**
	3.1nm,0.3s,baz=299,slow=23,SNR=7.9						
WRA	**Warramunga Arr**	**13.55**	**137**		**Pn**	**00 30 28.6**	**+0.3**
WRAB	**Tennant Creek**	**13.55**	**137**	Pn	**Pn**	**00 30 28.3**	**0.0**
WRAB					**Sn**	**00 32 58.9**	**+0.5**
WB2	**Warramunga Arr**	**13.56**	**137**	Pn	**Pn**	**00 30 29.0**	**+0.6**
WR0	**Warramunga Arr**	**13.70**	**137**	Pn	**Pn**	**00 30 31.4**	**+1.2**
SMRI	**Semarang**	**14.32**	**281**	Pn	**Pn**	**00 30 38.4**	**-0.4**
AS31	**Alice Springs**	**16.13**	**148**	Pn	**Pn**	**00 31 02.2**	**-0.6**
ASAR	**Alice Springs**	**16.13**	**148**	Pn	**Pn**	**00 31 02.5**	**-0.3**
	1.5nm,0.3s,baz=321,slow=12,SNR=121						
ASAR				Sn	**Sn**	**00 33 54.7**	**-6.6**
	1.5nm,0.3s,baz=314,slow=20,SNR=8.3						
ASAR	**Alice Springs**	**16.13**	**148**	Pn	**Pn**	**00 31 02.5**	**-0.3**
ASAR					**Sn**	**00 33 53.2**	**-8.1**
MYLDM	**Lahad Datu**	**16.38**	**338**		**Pn**	**00 31 03.8**	**-2.2**
LEM	**Lembang**	**17.10**	**280**	P	**P**	**00 31 17.2**	**+0.3**
	3.4nm,0.3s,baz=69,slow=8.5,SNR=5.4						
	36nm,0.7s						
DAV	**Davao City (W)**	**17.12**	**3**	LR	LR	00 38 22.5	
	comp=Z,60nm,21.0s,baz=136,slow=40						
CNJI	**Cibinong**	**17.48**	**278**	P	**P**	**00 31 20.0**	**-0.9**
	2μm49nm,1.1s						
KASI	**Kota Agung**	**20.42**	**281**	P	**P**	**00 31 52.4**	**-0.8**
	91nm,1.1s						
FORT	**Forrest**	**20.79**	**172**	P	Pn	00 31 58.7	-0.8
RGRI	**Rengat**	**24.17**	**292**	P	P	00 32 42.3	+10
BBOO	**Buckleboo**	**24.92**	**157**	P	**P**	**00 32 40.8**	**+1.8**
BBOO				IAmb	IAmb	00 32 44.2	
	comp=Z,17nm,1.1s						
STKA	**Stephens Creek**	**26.76**	**146**	P	**P**	**00 32 59.4**	**+3.8**
	comp=Z,3.6nm,0.7s,baz=325,slow=11,SNR=7.1						
	comp=Z,3.6nm,0.7s						
STKA	**Stephens Creek**	**26.76**	**146**	P	**P**	**00 32 56.9**	**+1.3**
KULM	**Kulim**	**28.34**	**302**	P	**P**	**00 33 09.6**	**-0.4**
KULM				IAmb	IAmb	00 33 15.1	
	comp=Z,12nm,1.1s						
CMAR	**Chiang Mai Arr**	**38.05**	**318**	P	**P**	**00 34 33.0**	**-1.5**
	comp=Z,3.3nm,1.1s,baz=136,slow=6.1,SNR=10						
	comp=Z,3.3nm,1.1s						
CMAR	**Chiang Mai Arr**	**38.05**	**318**	P	**P**	**00 34 32.6**	**-1.9**
CHTO	**Chiang Mai**	**38.30**	**319**	P	**P**	**00 34 35.7**	**-0.9**
CHTO				IAmb	IAmb	00 34 37.1	
	comp=Z,4.3nm,0.9s						
JHS	**Saijyo**	**45.61**	**10**	P	**P**	**00 35 36.4**	**+0.3**
XAN	**Xi'an**	**46.39**	**342**	P	P	00 35 33.1	-9.2
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
JGF	**Kuroka**	**47.07**	**14**	P	**P**	**00 35 48.3**	**+0.7**
KSRS	**Korea Array**	**47.44**	**4**	P	**P**	**00 35 50.0**	**-0.3**
	comp=Z,1.3nm,0.6s,baz=180,slow=9.9,SNR=7.9						
KSRS				LR	LR	00 58 42.6	
	comp=Z,26nm,18.8s,baz=135,slow=40						
	comp=Z,1.3nm,0.6s						
MAJO	**Matsushiro**	**48.17**	**15**	P	**P**	**00 35 55.3**	**-0.8**
MAJO				IAmb	IAmb	00 35 57.0	
	comp=Z,9.4nm,0.8s						
MJAR	**Matsushiro Arr**	**48.17**	**15**	P	**P**	**00 35 54.6**	**-1.5**
	comp=Z,5.8nm,0.7s,baz=183,slow=9.0,SNR=16						
	comp=Z,5.8nm,0.7s						
MJAR	**Matsushiro Arr**	**48.17**	**15**	P	**P**	**00 35 55.1**	**-1.0**
MJAR	

KRVT Keravat (AS076 0.96 280 Pn **Pn 00 30 51.0 -1.3**
353nm,0.3s,baz=220,slow=1.0,SNR=164
KRVT Sn **Sn 00 31 03.2 -1.9**
2µm,0.3s,baz=264,slow=23,SNR=19
MANU Manus Island 6.09 293 Pn **Pn 00 32 03.2 +0.7**
PMG Port Moresby 7.57 229 Pn **Pn 00 32 22.1 -0.7**
4.6nm,0.3s,baz=31,slow=9.1,SNR=22
PMG Sn **Sn 00 33 45.2 -2.0**
9.8nm,0.3s,baz=288,slow=22,SNR=7.8
119nm,0.8s
PMG Port Moresby 7.57 229 Pn 00 32 24.0 +1.2
PMG Sn **Sn 00 33 46.3 -1.0**
HNR Honiara 8.50 126 Pn **Pn 00 32 34.0 -1.5**
38nm,0.3s,baz=180,slow=15,SNR=1.9
HNR Sn **Sn 00 34 09.7 -0.3**
26nm,0.3s,baz=202,slow=10,SNR=1.4
HNR Honiara 8.50 126 Pn **Pn 00 32 35.4 -0.1**
PATS Pohnpei 12.43 25 P **Pn 00 33 28.6 -0.7**
baz=12,SNR=7.3
PATS Pohnpei 12.43 25 Pn **Pn 00 33 27.7 -1.6**
COEN Coen 13.50 225 P **Pn 00 33 45.2 +1.4**
baz=14,SNR=4.8
COEN Coen 13.50 225 Pn 00 33 43.8 0.0
SMPI Sarmi 14.45 279 P **Pn 00 33 57.0 +0.4**
32nm,1.1s
MTSU Mount Surprise 16.00 211 P **P 00 34 20.2 +1.0**
baz=16,SNR=8.7
CTA Charters Tower 16.85 202 Pn **Pn 00 34 27.5 +0.3**
0.2nm,0.3s,baz=192,slow=4.9,SNR=3.1
CTA LR LR 00 40 18.9
comp=Z,468nm,20.9s,baz=58,slow=35
12nm,0.9s
CTA Charters Tower 16.85 202 P **Pn 00 34 26.7 -0.5**
baz=17
CTAO Charters Tower 16.85 202 Pn **Pn 00 34 25.9 -1.3**
KOUNC Koumac, New Ca 19.41 146 P **P 00 34 56.7 0.0**
KOUNC IAmb IAmb 00 35 05.3
comp=Z,91nm,0.9s
GUMO Guam 19.66 336 P **Pn 00 35 00.8 -0.6**
comp=Z,78nm,0.8s,baz=178,slow=4.3,SNR=4.2
GUMO LR LR 00 41 56.9
comp=Z,97nm,18.6s,baz=142,slow=35
GUMO Guam 19.66 336 P **P 00 34 60.0 +0.4**
FAKI Fak Fak 20.74 274 P Pn 00 35 13.4 -0.7
FAKI IAmb IAmb 00 35 38.0
comp=Z,50nm,1.2s
EIDS Eidsvold 20.86 185 P Pn 00 35 14.5 -0.9
baz=21
EIDS Eidsvold 20.86 185 P **P 00 35 13.2 +0.8**
DZM Mont Dzumac 21.83 144 *e*P **P 00 35 22.5 -0.5**
comp=Z,198nm,1.1s
DZM *e*LR LR 00 40 57.7
comp=Z,541nm,22.9s
DZM Mont Dzumac 21.83 144 P **P 00 35 23.3 +0.3**
comp=Z,56nm,0.5s,baz=294,slow=7.6,SNR=78
DZM LR LR 00 43 22.1
comp=Z,386nm,20.0s,baz=286,slow=35
Z,56nm,0.5s
DZM Mont Dzumac 21.83 144 P P 00 35 22.9 -0.1
KDU Kakadu 21.84 247 P **P 00 35 22.3 -0.7**
baz=22,SNR=13
SIJI Sorong 21.97 279 P **P 00 35 25.7 +1.2**
comp=Z,6.0nm,0.3s,baz=75,slow=8.0,SNR=6.1
SIJI LR LR 00 42 53.8
comp=Z,217nm,19.6s,baz=95,slow=34
comp=Z,6.0nm,0.3s
SWI Sorong 21.98 279 P **P 00 35 24.9 +0.3**
comp=Z,34nm,0.7s
RMQ Roma 22.26 190 P **P 00 35 29.2 +1.7**
baz=22
MARNC Mare, Loyalty 22.35 140 P **P 00 35 29.1 +0.6**
PINNC Pines Island, 22.84 143 P **P 00 35 33.8 +0.2**
QLP Quilpie 23.52 200 P **P 00 35 42.2 +1.9**
baz=24
WB0 Warramunga Arr 23.64 228 P **P 00 35 41.7 +0.1**
WB0 IAmb IAmb 00 35 42.4
comp=Z,40nm,0.9s
WR0 Warramunga Arr 23.65 228 P **P 00 35 42.4 +0.8**
WC3 Warramunga Arr 23.77 228 P **P 00 35 44.3 +1.6**
baz=24
WRAB Tennant Creek 23.78 228 P **P 00 35 44.3 +1.5**
WRAB IAmb IAmb 00 35 47.1
comp=Z,71nm,1.2s
WB2 Warramunga Arr 23.78 228 P **P 00 35 43.6 +0.8**
WB2 IAmb IAmb 00 36 06.3
comp=Z,32nm,0.8s
WRA Warramunga Arr 23.79 228 P **P 00 35 42.7 -0.2**
comp=Z,34nm,0.9s,baz=51,slow=9.4,SNR=9.8
WRA PcP **PcP 00 39 25.9 +0.5**
comp=Z,4.6nm,0.9s,baz=53,slow=2.9,SNR=5.4
WRA S **S 00 39 50.5 -4.3**
comp=Z,1.7nm,0.8s,baz=45,slow=15,SNR=3.4
WRA ScP **ScP 00 43 01.2 +1.9**
comp=Z,2.7nm,0.9s,baz=53,slow=3.4,SNR=6.8
WRA LR LR 00 45 09.0
comp=Z,278nm,20.6s,baz=48,slow=37
comp=Z,34nm,0.9s
WRA Warramunga Arr 23.79 228 P P 00 35 42.9 0.0
ARMA Armidale 25.84 183 P **P 00 36 03.2 +1.7**
baz=26,SNR=5.6
ARMA Armidale 25.84 183 P **P 00 36 03.0 +1.5**
ARMA IAmb IAmb 00 36 10.4
comp=Z,28nm,1.2s
KNRA Kununurra 26.27 243 P **P 00 36 07.2 +1.8**
baz=26,SNR=8.1
KNRA Kununurra 26.27 243 P **P 00 36 07.2 +1.8**
KNRA IAmb IAmb 00 36 10.4
comp=Z,52nm,1.0s
AS31 Alice Springs 26.50 222 P **P 00 36 07.1 -0.4**
ASAR Alice Springs 26.51 222 P **P 00 36 06.8 -0.8**
comp=Z,3.7nm,0.6s,baz=53,slow=9.2,SNR=2.5
ASAR PcP **PcP 00 39 31.8 +0.4**
comp=Z,0.8nm,0.6s,baz=43,slow=3.5,SNR=4.2
ASAR ScP **ScP 00 43 09.8 +2.8**
comp=Z,0.2nm,0.5s,baz=45,slow=2.8,SNR=3.9
ASAR LR LR 00 47 49.1
comp=Z,122nm,19.3s,baz=98,slow=39
comp=Z,3.7nm,0.6s
ASAR Alice Springs 26.51 222 P **P 00 36 08.5 +0.9**
SANI Sanana 27.05 274 P **P 00 36 13.8 +1.3**
comp=Z,19nm,1.1s
MSVF Nonsavu 27.86 120 P **P 00 36 17.8 -2.0**
comp=Z,1.2nm,0.5s,baz=229,slow=19,SNR=1.7
MSVF LR LR 00 47 25.2
comp=Z,157nm,18.2s,baz=339,slow=36
comp=Z,1.2nm,0.5s
MSVF Nonsavu 27.86 120 P **P 00 36 19.3 -0.5**
STKA Stephens Creek 29.28 200 P **P 00 36 31.5 -0.6**
comp=Z,5.2nm,0.8s,baz=9.5,slow=12,SNR=5.3
STKA LR LR 00 48 11.1
comp=Z,325nm,20.9s,baz=22,slow=36
comp=Z,5.2nm,0.8s
STKA Stephens Creek 29.28 200 P **P 00 36 31.4 -0.8**
baz=30,SNR=5.2
STKA Stephens Creek 29.28 200 P **P 00 36 31.6 -0.6**
BATI Baumata 29.61 257 LR LR 00 50 49.9
comp=Z,265nm,19.0s,baz=125,slow=41
DAV Davao City (W) 29.65 293 LR LR 00 48 23.7
comp=Z,77nm,18.1s,baz=158,slow=36
CAN Canberra 30.92 186 P **P 00 36 47.3 +0.7**
CAN IAmb IAmb 00 37 09.7
comp=Z,28nm,1.5s
WRKA Warakurna 31.31 227 P **P 00 36 49.2 -1.1**
baz=31
HTT Hallett 31.65 203 P **P 00 36 52.9 -0.3**
baz=32,SNR=4.8
BBOO Buckleboo 32.32 207 P **P 00 37 00.3 +1.3**
BBOO IAmb IAmb 00 37 21.2
comp=Z,24nm,1.4s
TOO Toolangi 33.65 191 P **P 00 37 10.7 +0.2**
TOO IAmb IAmb 00 37 27.7
comp=Z,8.9nm,1.1s
FORT Forrest 35.15 219 P **P 00 37 23.6 0.0**
MYLDM Lahad Datu 35.74 285 P **P 00 37 29.1 +0.2**
OUZ Omahuta 36.05 151 P **P 00 37 33.1 +1.8**
MBWA Marble Bar 36.28 240 P **P 00 37 33.0 -0.5**
MBWA IAmb IAmb 00 37 44.1
comp=Z,30nm,1.4s
MBWA Marble Bar 36.28 240 P **P 00 37 32.7 -0.8**
PSA00 Pilbara Seismi 36.34 239 P **P 00 37 34.6 +0.6**
PSA00 IAmb IAmb 00 37 37.8
comp=Z,35nm,1.4s
PSA00 Pilbara Seismi 36.34 239 P **P 00 37 34.6 +0.6**
PSA00 IAmb IAmb 00 37 37.9
comp=Z,11nm,1.4s
JOW Kunigami 39.23 324 LR LR 00 51 03.7
comp=Z,54nm,21.6s,baz=151,slow=31

HIZ Hauiti 39.30 153 P **P 00 38 00.8 +2.1**
URZ Urewera 40.18 150 P **P 00 38 06.2 +0.3**
comp=Z,11nm,0.6s,baz=75,slow=6.5,SNR=9.9
comp=Z,11nm,0.6s
URZ Urewera 40.18 150 P P 00 38 07.3 +1.4
URZ IAmb IAmb 00 38 08.8
comp=Z,12nm,0.6s
QRZ Quartz Range 40.24 157 P **P 00 38 07.8 +1.4**
MXZ Matakaoa Point 40.26 148 P **P 00 38 07.0 +0.3**
BKZ Black Stump Fm 40.59 152 P **P 00 38 10.3 +0.9**
BKZ IAmb IAmb 00 38 17.5
comp=Z,45nm,1.5s
NNZ Nelson 40.91 156 P **P 00 38 13.8 +1.9**
THZ Tophouse 41.19 157 P **P 00 38 15.1 +0.8**
TUWZ Tuamarina 41.31 156 P **P 00 38 16.2 +1.0**
BSWZ Blackbirch Sta 41.53 156 P **P 00 38 17.8 +0.8**
SNZO South Karori 41.53 155 P **P 00 38 17.6 +0.6**
GIRL Giralia 41.58 241 P **P 00 38 17.9 +0.1**
FOZ Fox Glacier 41.66 162 P **P 00 38 19.3 +1.3**
BHW Baring Head 41.68 155 P **P 00 38 18.9 +0.6**
BFZ Birch Farm 41.69 153 P **P 00 38 18.4 +0.1**
BFZ IAmb IAmb 00 38 19.7
comp=Z,25nm,0.6s
CMWZ Cape Campbell 41.69 156 P **P 00 38 19.9 +1.6**
NACB Ninganchiao 41.77 314 P **P 00 38 17.6 -1.6**
NACB IAmb IAmb 00 38 28.8
comp=Z,19nm,1.0s
LTZ Lake Taylor 41.83 159 P **P 00 38 20.6 +1.1**
MSWZ Moikau Station 41.85 155 P **P 00 38 19.8 +0.1**
PLWZ Palliser 41.98 155 P **P 00 38 20.8 +0.1**
KHZ Kahutara 41.99 157 P **P 00 38 20.6 -0.1**
OXZ Oxford 42.22 159 IAmb IAmb 00 38 24.4
comp=Z,30nm,0.8s
RPZ Rata Peaks 42.22 160 P **P 00 38 23.3 +0.6**
comp=Z,52nm,0.6s,baz=286,slow=3.1,SNR=42
RPZ LR LR 00 54 05.7
comp=Z,372nm,18.3s,baz=323,slow=34
RPZ Rata Peaks 42.22 160 P P 00 38 23.8 +1.1
LBZ Lake Benmore 42.54 162 P **P 00 38 26.2 +0.9**
LBZ IAmb IAmb 00 38 27.8
comp=Z,22nm,0.8s
WKZ Wanaka 42.59 163 P **P 00 38 27.2 +1.5**
DCZ Deep Cove 42.67 165 P **P 00 38 28.0 +1.7**
DCZ IAmb IAmb 00 38 28.9
comp=Z,33nm,0.9s
MORW Morawa 42.68 231 P **P 00 38 25.6 -1.0**
baz=43,SNR=3.2
MORW Morawa 42.68 231 P **P 00 38 25.6 -1.0**
MORW IAmb IAmb 00 38 38.1
comp=Z,39nm,1.4s
MQZ McQueen's Vall 42.77 159 P **P 00 38 28.1 +1.0**
MQZ IAmb IAmb 00 38 30.1
comp=Z,22nm,0.6s
MLZ Mavora Lakes 42.83 164 P **P 00 38 29.5 +1.8**
WHZ Wether Hill Ro 43.27 165 P **P 00 38 33.0 +1.8**
WHZ IAmb IAmb 00 38 33.1
comp=Z,26nm,0.9s
ODZ Otahua Downs 43.28 162 P **P 00 38 31.9 +0.7**
ODZ IAmb IAmb 00 38 38.2
comp=Z,23nm,1.2s
JTU Tsushima 44.70 332 P **P 00 38 42.9 +0.2**
JTM Tenmabayashi 46.34 347 P **P 00 38 55.6 0.0**
NAWB Namwon 46.38 331 P **P 00 38 56.1 +0.1**
NAWB IAmb IAmb 00 38 58.5
comp=Z,7.1nm,0.9s
TJN Taejon 47.17 332 P **P 00 39 02.4 +0.2**
KSRS Korea Array 47.79 333 P **P 00 39 07.5 +0.7**
comp=Z,4.7nm,1.0s,baz=152,slow=9.4,SNR=22
KSRS ScP **ScP 00 44 28.9 +3.9**
comp=Z,0.6nm,0.3s,baz=116,slow=5.5,SNR=1.8
comp=Z,4.7nm,1.0s
KSAR Wonju Array Be 47.79 333 P **P 00 39 07.9 +0.9**
SEHB SEOHWA 48.31 334 P **P 00 39 11.4 +0.4**
SEHB IAmb IAmb 00 39 27.7
comp=Z,12nm,1.2s
INCN Inchon 48.41 332 P **P 00 39 12.9 +1.1**
NJ2 Nanjing 48.70 321 *e*P **P 00 39 15.8 +1.8**
NJ2 pmax pmax
comp=Z,7.0nm,0.6s
RAR Rarotonga 48.76 114 LR LR 00 57 33.9
comp=Z,50nm,20.0s,baz=274,slow=33
ASAJ Asahikawa 49.26 350 LR LR 00 57 36.7
comp=Z,64nm,20.7s,baz=188,slow=33
RGRI Rengat 50.74 273 P **P 00 39 28.0 -2.0**
USA0B Ussuriysk Arra 51.99 341 P **P 00 39 38.7 0.0**
USA0B IAmb IAmb 00 39 40.4
comp=Z,8.3nm,0.8s
USRK Ussuriysk Ar. 51.99 341 P **P 00 39 39.8 +1.1**
comp=Z,3.2nm,0.7s,baz=145,slow=7.0,SNR=7.0
comp=Z,3.2nm,0.7s
USRK Ussuriysk Ar. 51.99 341 P **P 00 39 38.9 +0.1**
HNS HongShan 54.79 323 ⇓P **P 00 40 00.1 +0.7**
HNS pmax pmax
comp=Z,13nm,1.1s
BNX BinXian 54.93 338 ⇑P **P 00 40 00.5 +0.3**
BNX pmax pmax
comp=Z,19nm,4.7s
BNX pmax pmax
comp=Z,89nm,5.3s
XAN Xi'an 56.50 316 P **P 00 40 12.3 +0.5**
XAN sP pP 00 40 29.4 +2.5
XAN pmax pmax
comp=Z,9.0nm,1.0s
PEA0B Petropavlovsk- 57.50 3 P **P 00 40 18.9 +0.5**
PEA0B **pP 00 40 31.2 -2.5**
PETK Petropavlovsk- 57.50 3 P **P 00 40 19.0 +0.6**
comp=Z,2.9nm,0.5s,baz=165,slow=6.2,SNR=12
PETK LR LR 01 01 24.0
comp=Z,61nm,21.8s,baz=176,slow=32
comp=Z,2.9nm,0.5s
PETK Petropavlovsk- 57.50 3 P **P 00 40 18.9 +0.5**
PETK pP **pP 00 40 31.1 -2.6**
CMAR Chiang Mai Arr 57.89 295 P **P 00 40 22.9 +1.1**
comp=Z,5.3nm,0.9s,baz=113,slow=5.3,SNR=20
comp=Z,5.3nm,0.9s
CMAR Chiang Mai Arr 57.89 295 P P 00 40 22.3 +0.4
CHTO Chiang Mai 58.00 295 P **P 00 40 22.6 -0.1**
CHTO IAmb IAmb 00 40 25.2
comp=Z,8.4nm,1.1s
PZH PanZhiHua 58.33 305 P **P 00 40 28.3 +3.4**
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,60nm,5.9s
XLT XiLinHaoTe 58.47 329 *e*P **P 00 40 25.8 +0.3**
XLT pP pP 00 40 37.1 -3.9
XLT sP sP 00 40 42.8 -4.6
XLT pmax pmax
comp=Z,13nm,1.1s
XLT pmax pmax
comp=Z,83nm,4.1s
TBI Tubuai 58.54 115 *e*LR LR 00 58 24.6
comp=Z,122nm,26.0s
CD2 Chengdu 58.66 310 P **P 00 40 28.5 +1.5**
HHC Hu-ho-hao-te 58.88 324 *e*P **P 00 40 31.9 +3.4**
HHC pmax pmax
comp=Z,14nm,0.9s
HHC pmax pmax
comp=Z,190nm,5.3s
HHC LR LR
comp=Z,210nm,15.9s
HHC LR LR
comp=Z,210nm,14.6s
HHC LR LR
comp=Z,190nm,14.6s
SHEM Shemya Is, Ala 59.73 15 LR LR 01 03 16.3
comp=Z,135nm,20.1s,baz=325,slow=33
LZH Lanzhou 61.12 316 *e*P **P 00 40 48.3 +4.3**
LZH pP pP 00 41 02.0 +2.8
LZH sP sP 00 41 06.8 +1.3
LZH pmax pmax
comp=Z,19nm,1.3s
DRV Dumont d'Urvil 62.74 186 P **P 00 40 54.7 +0.7**
DRV **pP 00 41 05.7 -3.4**
MA2 Magadan 63.87 359 P **P 00 41 02.1 +0.4**
comp=Z,10nm,0.8s,baz=149,slow=8.8,SNR=5.4
comp=Z,10nm,0.8s
MA2 Magadan 63.87 359 P **P 00 41 01.7 0.0**
MA2 IAmb IAmb 00 41 02.9
comp=Z,15nm,1.0s
GTA Gaotai 65.53 317 ⇓P **P 00 41 14.4 +1.3**
GTA pP pP 00 41 26.4 -2.0
GTA sP sP 00 41 32.5 -2.2
GTA pmax pmax
comp=Z,6.0nm,1.2s
GTA pmax pmax
comp=Z,55nm,4.4s
GTA LR LR
comp=Z,57nm,16.7s
GTA LR LR
comp=Z,67nm,14.2s
GTA LR LR
comp=Z,99nm,18.2s
SONM Songino Array 66.14 328 P **P 00 41 18.0 +1.1**
comp=Z,0.9nm,0.6s,baz=150,slow=5.4,SNR=6.7
SONM LR LR 01 10 56.1
comp=Z,42nm,18.5s,baz=93,slow=37
comp=Z,0.9nm,0.6s
SONM Songino Array 66.14 328 P P 00 41 17.0 +0.2
SHL Shillong 66.29 300 P **P 00 41 18.2 -0.1**
SHL IAmb IAmb 00 41 19.8
comp=Z,1.1nm,1.0s
TAOE Nuku Hiva Isla 66.50 98 *e*LR LR 01 02 16.0
comp=Z,446nm,33.3s
SEY Seymchan 67.22 360 P **P 00 41 23.5 +0.3**
comp=Z,1.1nm,0.3s,baz=169,slow=9.7,SNR=4.4
SEY LR LR 01 13 58.3
comp=Z,16nm,18.0s,baz=180,slow=39
comp=Z,1.1nm,0.3s
BILL Bilibino 72.95 5 P **P 00 41 58.8 +0.6**
BILL IAmb IAmb 00 42 00.1
comp=Z,12nm,1.2s
VNDA Vanda 73.15 178 P **P 00 42 00.0 +0.7**
comp=Z,7.9nm,0.7s,baz=331,slow=6.6,SNR=42
comp=Z,7.9nm,0.7s
VNDA Vanda 73.15 178 P P 00 41 59.9 +0.6
VNDA IAmb IAmb 00 42 03.1
comp=Z,9.6nm,0.8s
SBA Scott Base 73.69 177 P **P 00 42 04.4 +2.0**
SBA IAmb IAmb 00 42 07.4
comp=Z,13nm,1.1s
WMQ Urumqi 75.62 317 *e*P **P 00 42 16.8 +2.5**
KDAK Kodiak Island 75.81 27 LR LR 01 11 32.1
comp=Z,61nm,19.3s,baz=248,slow=32
CNPM China Poot 77.35 26 P **P 00 42 25.1 +1.4**
CNPM IAmb IAmb 00 42 26.9
comp=Z,13nm,0.8s
L19K White Mountain 77.38 22 P **P 00 42 25.1 +1.3**
L19K IAmb IAmb 00 42 28.1
comp=Z,6.2nm,0.9s
TTA Tatalina 77.40 21 P **P 00 42 24.6 +0.5**
RC01 Rabbit Creek A 78.81 25 P **P 00 42 31.6 -0.1**
RC01 IAmb IAmb 00 42 32.8
comp=Z,12nm,1.2s
J20K Nowinta River 78.82 21 P **P 00 42 33.1 +1.4**
J20K IAmb IAmb 00 42 34.0
comp=Z,7.9nm,1.0s
SML Sawmill 79.75 24 P **P 00 42 37.2 +0.3**
SML IAmb IAmb 00 42 39.4
comp=Z,23nm,1.3s
KAAM Kaadhehdhoo 80.05 271 P **P 00 42 39.4 -0.1**
SCM Sheep Creek Mo 80.18 25 P **P 00 42 40.4 +1.1**
SCM IAmb IAmb 00 42 46.6
comp=Z,11nm,1.1s
MK31 Makanchi Array 80.19 319 P **P 00 42 40.1 +0.5**
MKAR Makanchi Array 80.19 319 P **P 00 42 40.0 +0.4**
comp=Z,1.7nm,0.5s,baz=100,slow=6.3,SNR=15
MKAR PKKPbc **PKKPbc 01 01 22.2 -2.8**
comp=Z,0.2nm,0.5s,baz=300,slow=2.8,SNR=3.6
comp=Z,1.7nm,0.5s
MKAR Makanchi Array 80.19 319 P P 00 42 39.9 +0.3
RND Reindeer 80.36 23 P **P 00 42 39.2 -1.1**
MAKZ Makanchi 80.40 319 P **P 00 42 40.8 0.0**
MAKZ IAmb IAmb 00 42 43.0
comp=Z,9.3nm,1.1s
MCK McKinley 80.50 23 P **P 00 42 40.9 0.0**
MCK IAmb IAmb 00 42 42.0
comp=Z,12nm,1.1s
DIV Divide 80.50 26 P **P 00 42 39.7 -1.3**
DIV IAmb IAmb 00 42 40.8
comp=Z,6.7nm,0.5s
MLY Manley 80.52 21 P **P 00 42 40.9 -0.2**
KLU Klutina 80.61 25 P **P 00 42 40.7 -0.9**
KLU IAmb IAmb 00 42 44.1
comp=Z,20nm,1.4s
NEA2 Nenana 80.89 22 P **P 00 42 42.6 -0.4**
BMRM Bremner River 80.94 26 P **P 00 42 42.9 -0.4**
ZAA0 Zalesovo Array 80.98 326 P **P 00 42 43.4 -0.2**
ZALV Zalesovo Beam 80.98 326 P **P 00 42 44.0 +0.3**
comp=Z,2.5nm,0.7s,baz=108,slow=4.8,SNR=9.8
ZALV LR LR 01 20 21.4
comp=Z,34nm,19.1s,baz=96,slow=37
comp=Z,2.5nm,0.7s
ZALV Zalesovo Beam 80.98 326 P P 00 42 43.1 -0.5
WRH Wood River Hil 81.19 22 P **P 00 42 44.0 -0.6**
N25K Chitina, Valde 81.22 25 P **P 00 42 44.4 -0.5**
H23K Yukon River 81.37 21 P **P 00 42 45.0 -0.4**
CCB Clear Creek Bu 81.39 22 P **P 00 42 44.7 -0.8**
GLB Gilahina Butte 81.49 26 P **P 00 42 46.6 +0.3**
GLB IAmb IAmb 00 42 48.4
comp=Z,12nm,1.2s
VRDI Verde Repeater 81.55 26 P **P 00 42 47.1 +0.3**
VRDI IAmb IAmb 00 42 48.2
comp=Z,13nm,1.2s
PRZ Przheval'sk 81.72 314 P **P 00 42 49.0 +1.0**
PRZ IAmb IAmb 00 42 50.8
comp=Z,11nm,0.9s
ILAR Eielson Array 81.79 22 P **P 00 42 46.9 -0.9**
comp=Z,2.4nm,0.9s,baz=255,slow=5.4,SNR=18
ILAR PKKPbc **PKKPbc 01 01 20.4 -1.6**
comp=Z,0.2nm,0.7s,baz=0.0,slow=0.0,SNR=4.3
ILAR LR LR 01 18 15.7
comp=Z,37nm,18.3s,baz=230,slow=35
comp=Z,2.4nm,0.9s
RIDG Independent Ri 82.09 23 P **P 00 42 49.3 0.0**
RIDG IAmb IAmb 00 42 50.5
comp=Z,8.5nm,1.2s
J25K Salcha River, 82.29 23 IAmb IAmb 00 42 52.0
comp=Z,17nm,1.5s
L26K Log Cabin Wild 82.38 24 P **P 00 42 51.5 +0.6**
L26K IAmb IAmb 00 42 52.9
comp=Z,9.7nm,1.4s
KDJ Kajisay 82.52 313 P **P 00 42 52.6 +0.3**
KDJ IAmb IAmb 00 42 54.2
comp=Z,6.1nm,0.9s
SCRK Sand Creek 82.54 23 P **P 00 42 52.1 +0.3**
M27K Edge Creek, AK 82.71 25 P **P 00 42 53.3 +0.5**
M27K IAmb IAmb 00 42 54.8
comp=Z,11nm,1.0s
TOLK Toolik Lake Re 82.85 18 P **P 00 42 52.9 -0.3**
KSH Kashi 82.85 311 P **P 00 42 56.3 +2.3**
KSH pP pP 00 43 08.8 -1.3
KSH pmax pmax
comp=Z,5.0nm,1.3s
L27K Beaver Creek, 83.02 25 P **P 00 42 55.1 +0.9**
K27K Chicken 83.32 24 P **P 00 42 56.7 +1.0**
BOOM Boomskoye usch 83.49 313 P **P 00 42 57.3 0.0**
KURK Kurchatov 83.62 322 P **P 00 42 57.6 +0.1**
KURK IAmb IAmb 00 42 58.7
comp=Z,16nm,1.4s
KURBB Kurchatov Arra 83.65 322 P **P 00 42 58.0 +0.4**
comp=Z,2.4nm,0.3s,baz=116,slow=4.2,SNR=3.2
comp=Z,2.4nm,0.3s
BMAR Burnt Mountain 83.88 20 P **P 00 42 59.5 +1.0**
HYT Haines Junctio 84.07 27 P **P 00 43 00.4 +0.6**
HYT IAmb IAmb 00 43 01.9
comp=Z,9.3nm,1.1s
DAWY Dawson 84.42 24 P **P 00 43 02.1 +0.8**
AAK Ala-Archa 84.57 313 P **P 00 43 03.2 +0.4**
comp=Z,3.7nm,0.5s,baz=111,slow=4.1,SNR=6.8
comp=Z,3.7nm,0.5s
AAK Ala-Archa 84.57 313 P P 00 43 03.2 +0.4
AAK IAmb IAmb 00 43 04.6
comp=Z,7.8nm,0.9s
M30M Minto, Yukon 84.98 26 P **P 00 43 04.6 +0.4**
QSPA South Pole Qui 85.49 180 LR LR 01 19 15.1
comp=Z,52nm,18.1s,baz=8.5,slow=34
QSPA South Pole Qui 85.49 180 P P 00 43 07.4 +0.5
NRIK Noril'sk 85.71 341 P **P 00 43 07.5 -0.2**
comp=Z,1.0nm,0.4s,baz=118,slow=4.3,SNR=2.2
comp=Z,1.0nm,0.4s
MAW Mawson 85.94 203 P **P 00 43 08.5 -0.3**
comp=Z,4.2nm,0.7s,baz=102,slow=6.6,SNR=14
comp=Z,4.2nm,0.7s
MAW Mawson 85.94 203 P **P 00 43 09.0 +0.2**
baz=86,SNR=10
MAW Mawson 85.94 203 P **P 00 43 09.1 +0.3**
EPYK Eagle Plains 86.30 22 P **P 00 43 11.3 +0.6**
BTK Batken 86.86 310 P **P 00 43 13.7 -0.4**
BTK IAmb IAmb 00 43 15.7
comp=Z,12nm,1.2s

DLBC	**Dease Lake**	**87.01**	**31**	P		**P**	**00 43 14.5**	**+0.1**	
	comp=Z,3.3nm,1.0s,baz=300,slow=7.5,SNR=5.0								
DLBC				LR		LR	01 16 29.2		
	comp=Z,123nm,20.0s,baz=274,slow=32								
	comp=Z,3.3nm,1.0s								
KKAR	**Karatay Array**	**87.53**	**313**	P		**P**	**00 43 17.0**	**-0.2**	
INK	**Inuvik**	**88.09**	**21**	P		**P**	**00 43 18.9**	**-0.3**	
	comp=Z,3.1nm,0.8s,baz=229,slow=3.6,SNR=6.1								
INK				LR		LR	01 18 04.8		
	comp=Z,43nm,21.6s,baz=196,slow=32								
	comp=Z,3.1nm,0.8s								
INK	**Inuvik**	**88.09**	**21**	P		**P**	**00 43 19.2**	**+0.1**	
INK				IAmb		IAmb	00 43 20.8		
	comp=Z,7.7nm,1.1s								
YBH	**Yreka Blue Hor**	**88.71**	**48**	LR		LR	01 20 42.8		
	comp=Z,38nm,18.1s,baz=290,slow=34								
NVAR	**Mina Array Bea**	**91.75**	**52**	P		**P**	**00 43 36.3**	**-1.0**	
	comp=Z,0.8nm,1.0s,baz=267,slow=5.6,SNR=3.9								
NVAR				LR		LR	01 17 35.6		
	comp=Z,112nm,21.0s,baz=292,slow=31								
	comp=Z,0.8nm,1.0s								
PFO	**Pinyon Flats O**	**92.92**	**57**	LR		LR	01 16 29.6		
	comp=Z,65nm,21.8s,baz=254,slow=30								
NEW	**Newport**	**93.24**	**42**	LR		LR	01 20 09.5		
	comp=Z,65nm,20.1s,baz=278,slow=32								
ELK	**Elko**	**94.24**	**50**	LR		LR	01 19 48.4		
	comp=Z,62nm,20.6s,baz=271,slow=31								
YKA	**Yellowknife Ar**	**95.06**	**28**	P		**P**	**00 43 51.5**	**-0.1**	
	comp=Z,0.7nm,0.7s,baz=244,slow=6.4,SNR=2.1								
	comp=Z,0.7nm,0.7s								
ABKAR	**Akbulak array**	**95.34**	**319**	P		**P**	**00 43 51.7**	**-1.5**	
ARU	**Arti**	**96.14**	**326**	LR		LR	01 27 49.2		
	comp=Z,37nm,20.8s,baz=74,slow=36								
LPIG	**La Paz**	**97.94**	**66**	LR		LR	01 23 40.6		
	comp=Z,73nm,18.7s,baz=214,slow=33								
PDAR	**Pinedale Array**	**98.50**	**48**	LR		LR	01 22 58.3		
	comp=Z,69nm,20.2s,baz=272,slow=32								
ARCES	**ARCESS Array B**	**106.61**	**343**	PKiKP		**PKiKP**	**00 48 54.4**	**+0.9**	
	comp=Z,1.1nm,0.8s,baz=96,slow=2.4,SNR=5.0								
FINES	**FINESS Array B**	**110.83**	**336**	PKiKP		**PKiKP**	**00 49 01.9**	**+0.3**	
	comp=Z,1.3nm,0.8s,baz=27,slow=0.3,SNR=6.5								
AKASG	**Malin Array Be**	**114.33**	**325**	PKP		**PKiKP**	**00 49 10.4**	**+1.8**	
	comp=Z,0.6nm,0.4s,baz=38,slow=2.3,SNR=2.4								
BRTR	**Keskin Array B**	**115.21**	**312**	PKP		**PKPdf**	**00 49 12.2**	**+1.4**	
	comp=Z,0.1nm,0.7s,baz=50,slow=2.3,SNR=3.6								
NOA	**NORSAR Array B**	**116.66**	**340**	PKP		**PKPdf**	**00 49 12.0**	**-0.9**	
	comp=Z,0.5nm,0.7s,baz=40,slow=1.7,SNR=3.3								
ANGG	**Ammassalik, Gr**	**118.51**	**5**	*i* P		**Pdif**	**00 45 38.0**	**+1.8**	
PLCA	**Paso Flores**	**119.94**	**143**	PKP		**PKiKP**	**00 49 20.1**	**+0.2**	
	comp=Z,2.2nm,0.9s,baz=246,slow=13,SNR=3.3								
MORC	**Moravsky Berou**	**121.29**	**328**	*e*PKP		**PKiKP**	**00 49 23.8**	**+1.6**	
KRLC	**Kraliky**	**121.52**	**328**	*e*PKPDF		**PKPdf**	**00 49 22.4**	**-0.1**	
OSTC	**Ostas**	**121.53**	**329**	*e*PKPDF		**PKiKP**	**00 49 23.8**	**+1.1**	
CHVC	**Chvalec**	**121.59**	**329**	*e*PKPDF		**PKiKP**	**00 49 25.2**	**+2.4**	
JAVC	**Velka Javorina**	**121.75**	**327**	*e*PKP		**PKiKP**	**00 49 25.2**	**+2.0**	
KRUC	**Moravsky**	**122.32**	**328**	*e*PKP		**PKiKP**	**00 49 24.6**	**+0.4**	
BRG	**Berggiesshubel**	**122.47**	**331**	*e*PKP		**PKiKP**	**00 49 25.0**	**+0.6**	
BRG				Amp			00 49 28.0		
	comp=Z,2.6nm,0.8s								
CLL	**Collm**	**122.65**	**331**	*i* PKPdf		**PKiKP**	**00 49 26.2**	**+1.4**	
	comp=Z,5.0nm,0.7s								
CLL				*ep*PKPdf		**pPKPdf**	**00 49 38.0**	**-3.2**	
RONA	**Rosalia, Austr**	**123.16**	**326**	*e*P		**PKiKP**	**00 49 26.5**	**+0.5**	
	comp=Z,1.8nm,0.8s								
CONA	**Conrad Observa**	**123.27**	**327**	*e*P		**PKiKP**	**00 49 28.2**	**+1.9**	
	comp=Z,6.4nm,0.8s								
CKRC	**Cesky Krumlov**	**123.56**	**328**	*e*PKPDF		**PKiKP**	**00 49 26.8**	**+0.1**	
NKC	**Novy Kostel**	**123.61**	**331**	*e*PKPDF		**PKiKP**	**00 49 26.9**	**+0.1**	
KHC	**Kasperske Hory**	**123.75**	**329**	*e*PKPDF		**PKiKP**	**00 49 27.2**	**+0.1**	
GERES	**GERESS Array B**	**123.86**	**329**	PKP		**PKiKP**	**00 49 27.4**	**0.0**	
	comp=Z,1.4nm,0.5s,baz=79,slow=2.1,SNR=13								
SOKA	**Soboth**	**124.46**	**326**	*e*P		**PKiKP**	**00 49 29.4**	**+0.8**	
	comp=Z,2.7nm,1.1s								
OBKA	**Obir**	**124.83**	**326**	*e*P		**PKiKP**	**00 49 29.5**	**+0.1**	
	comp=Z,1.9nm,0.6s								
KBA	**Koelnbreinsper**	**125.14**	**327**	*e*P		**PKiKP**	**00 49 32.1**	**+2.0**	
	comp=Z,1.1nm,0.5s								
ABTA	**Abfaltersbach**	**125.80**	**327**	*e*P		**PKPdf**	**00 49 30.8**	**-0.2**	
	comp=Z,2.8nm,0.9s								
WATA	**Walderalm**	**125.92**	**328**	*e*P		**PKPdf**	**00 49 30.3**	**-0.9**	
	comp=Z,2.1nm,0.5s								
WTTA	**Wattenberg**	**125.94**	**328**	*e*P		**PKiKP**	**00 49 32.0**	**+0.3**	
	comp=Z,6.5nm,0.9s								
MOTA	**Moosalm**	**126.16**	**329**	*e*P		**PKPdf**	**00 49 31.8**	**+0.1**	
	comp=Z,5.6nm,0.8s								
SQTA	**Sankt Quirin**	**126.19**	**328**	*e*P		**PKiKP**	**00 49 33.1**	**+1.0**	
	comp=Z,2.9nm,0.7s								
RETA	**Reutte**	**126.25**	**329**	*e*P		**PKiKP**	**00 49 33.1**	**+0.9**	
	comp=Z,3.5nm,1.2s								
MEM	**Membach**	**126.31**	**334**	*d*PKiKP		**PKiKP**	**00 49 33.3**	**+1.2**	
FETA	**Feichten**	**126.57**	**329**	*e*P		**PKiKP**	**00 49 33.5**	**+0.5**	
	comp=Z,5.9nm,1.1s								
DAVA	**Damuels**	**126.83**	**329**	*e*P		**PKiKP**	**00 49 33.9**	**+0.4**	
	comp=Z,4.9nm,0.9s								
BMRD	**Maredsous**	**127.07**	**335**	*d*PKiKP		**PKiKP**	**00 49 33.8**	**+0.2**	
DOU	**Dourbes**	**127.30**	**335**	*d*PKiKP		**PKiKP**	**00 49 35.2**	**+1.1**	
LPAZ	**La Paz**	**134.40**	**118**	P		**PKPdf**	**00 49 48.6**	**-0.1**	
	comp=Z,2.6nm,0.7s,baz=247,slow=2.1,SNR=10								
CPUP	**Villa Florida**	**137.59**	**138**	PKP		**PKPdf**	**00 49 52.2**	**-1.5**	
	comp=Z,3.7nm,0.8s,baz=256,slow=1.0,SNR=6.7								
TORD	**Torodi Ar. Bea**	**150.37**	**289**	PKPbc		**PKPbc**	**00 50 21.1**	**-0.3**	
	comp=Z,14nm,0.6s,baz=82,slow=2.5,SNR=144								
BDFB	**Brasilia**	**151.17**	**134**	PKPbc		**PKPbc**	**00 50 23.5**	**+0.1**	
	comp=Z,26nm,0.8s,baz=111,slow=2.8,SNR=4.9								

GCG ***14*** *00:30:41.0±0.6, 14°.60N×90°.91W, h157km±4km, MD3.9*
IDC ***14*** *00:30:46.5±2.9, 14°.66N×90°.52W, h188km±30km, mb3.2/6, mbtmp3.7/8, MS3.5/1, Error ellipse: s-maj=39.5km s-min=18.4km az=48.0*

ISC 14 00:30:41.7±0.9, 14°.3N±0°.1×91°.06W±0°.10, h165km±5km, n17, σ2s91/23, mb3.5/6, Guatemala

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**0.25**	**55**	*e*P			**Pn**	**00 31 03.0**	**-1.3**
FUG				*e*S			**Sn**	**00 31 19.3**	**-2.1**
PCG	**Pacaya**	**0.44**	**78**	*e*P			**Pn**	**00 31 03.6**	**-1.4**
PCG				*e*S			**Sn**	**00 31 21.4**	**-1.3**
STG3	**Santiaguito 3,**	**0.64**	**309**	*e*P			**Pn**	**00 31 04.5**	**-1.3**
STG3				*e*S			**Sn**	**00 31 23.4**	**-0.8**
NBG	**Las Nubes**	**0.74**	**67**	*e*P			**Pn**	**00 31 05.8**	**-0.7**
MRL	**Marmol**	**1.54**	**60**	*e*P			**Pn**	**00 31 12.3**	**-0.8**
CMIG	**Matias Romero**	**4.61**	**307**	P			**Pn**	**00 31 49.3**	**-1.1**
	17nm,0.3s,baz=154,slow=8.6,SNR=81								
CMIG				S			**Sn**	**00 32 36.0**	**-8.0**
	59nm,0.4s,baz=333,slow=16,SNR=12								
JTS	**Las Juntas de**	**7.17**	**123**	P			**Pn**	**00 32 25.9**	**+1.7**
	36nm,0.3s,baz=30,slow=15,SNR=21								
JTS				S			**Sn**	**00 33 39.0**	**-5.9**
	5.4nm,0.4s,baz=346,slow=21,SNR=1.3								
TXAR	**Lajitas Array**	**18.97**	**324**	P			**Pn**	**00 34 53.9**	**+0.8**
	0.2nm,0.5s,baz=148,slow=11,SNR=5.5								
TXAR				pP			**pP**	**00 35 23.2**	**+4.2**
	0.5nm,0.7s,baz=143,slow=13,SNR=5.0								
NVAR	**Mina Array Bea**	**34.02**	**320**	P			**P**	**00 37 13.7**	**+3.5**
	0.6nm,0.8s,baz=142,slow=10,SNR=4.2								
NVAR				pP			**pP**	**00 37 47.5**	**+1.4**
	0.7nm,0.8s,baz=133,slow=8.7,SNR=4.0								
	0.6nm,0.8s								
SIV	**San Ignacio**	**42.24**	**134**	P			**P**	**00 38 20.6**	**+1.7**
	0.6nm,0.4s,baz=286,slow=12,SNR=2.6								
	0.6nm,0.4s								
SCHQ	**Schefferville**	**44.63**	**20**	P			**P**	**00 38 36.9**	**-0.7**
	3.2nm,0.8s,baz=210,slow=7.6,SNR=7.5								
	3.2nm,0.8s								
YKA	**Yellowknife Ar**	**50.95**	**346**	P			**P**	**00 39 25.7**	**-0.3**
	0.2nm,0.4s,baz=150,slow=7.6,SNR=1.6								
	0.2nm,0.4s								
FRB	**Frobisher Bay**	**51.82**	**13**	LR			LR	01 03 21.4	
	comp=Z,46nm,18.9s,baz=14,slow=38								
ESDC	**Sonseca Array**	**78.81**	**52**	P			**P**	**00 42 24.9**	**-1.7**
	0.3nm,0.7s,baz=300,slow=5.4,SNR=4.2								
	0.3nm,0.7s								
ARCES	**ARCESS Array B**	**85.56**	**18**	P			**P**	**00 43 00.2**	**-0.8**
	0.4nm,0.4s,baz=280,slow=5.1,SNR=4.6								
	0.4nm,0.4s								
WRA	**Warramunga Arr**	**136.36**	**256**	PKP			**PKiKP**	**00 49 48.2**	**+1.9**
	0.4nm,0.6s,baz=83,slow=3.0,SNR=1.8								
ASAR	**Alice Springs**	**136.63**	**251**	PKP			**PKiKP**	**00 49 48.0**	**+1.1**
	0.2nm,0.4s,baz=72,slow=3.0,SNR=1.4								

RSNC 14 00:34:30.6±1.2, 6°.82N×76°.70W, h2km±4km, ML2.9, Mw3.5, 1C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DBBC	**Dabeiba**	**0.53**	**68**	⇑*i*P			Pg	00 34 40.5	-0.2
DBBC				*e*S			Sg	00 34 48.5	+1.0
SOLC	**Bahia Solano**	**0.92**	**230**	*e*P			Pg	00 34 47.4	-0.8
SOLC				*e*S			Sg	00 35 00.6	+0.4
SOLC				*i*				00 35 03.5	
	comp=Z,238nm,0.3s								
PTAC	**Punta Ardita,**	**1.15**	**286**	*e*P			Pg	00 34 50.0	-2.6
PTAC				*e*S			Sg	00 35 06.1	-1.4
PTAC				*i*				00 35 07.5	
	comp=Z,711nm,0.2s								
CBOC	**Ciudad Bolivar**	**1.17**	**144**	*e*P			Pg	00 34 51.0	-2.1
CBOC				*e*S			Sg	00 35 06.7	-1.6
CBOC				*i*				00 35 09.9	
	comp=Z,213nm,0.2s								
HELC	**Santa Helena**	**1.32**	**118**	*e*P			Pg	00 34 53.8	-2.2
HELC				*e*S			Sg	00 35 12.1	-1.0
HELC				*i*				00 35 13.8	
	comp=Z,139nm,0.3s								
UREC	**San Jos de Ur**	**1.48**	**51**	*e*P			Pn	00 34 56.4	-1.9
UREC				*e*S			Sb	00 35 15.6	-2.6
UREC				*i*				00 35 17.9	
	comp=Z,188nm,0.5s								
CAPC	**Capurgana**	**1.91**	**340**	*e*P			Pn	00 34 59.9	-4.3
CAPC				*e*S			Sn	00 35 28.5	-0.3
CAPC				*i*				00 35 40.5	
	comp=Z,53nm,0.5s								
ZARC	**Zaragoza, Cauc**	**1.95**	**70**	*e*P			Pn	00 35 03.4	-1.2
ZARC				*e*S			Sn	00 35 28.1	-1.6
ZARC				*i*				00 35 32.1	
	comp=Z,124nm,0.5s								
PLMC	**San Jos del P**	**1.95**	**168**	*e*P			Pn	00 35 00.2	-4.5
PLMC				*e*S			Sn	00 35 21.5	-8.3
PLMC				*i*				00 35 25.0	
	comp=Z,313nm,0.2s								
LCBC	**Los crdobas,**	**2.05**	**9**	*e*P			Pn	00 35 04.6	-1.4
LCBC				*e*S			Sn	00 35 30.7	-1.5
LCBC				*i*				00 35 44.4	
	comp=Z,36nm,0.4s								
GUY2C	**Guyana, Caldas**	**2.07**	**140**	*e*P			Pn	00 35 05.9	-0.8
GUY2C				*e*S			Sn	00 35 30.6	-2.8
GUY2C				*i*				00 35 39.4	
	comp=Z,77nm,0.6s								
NORC	**Norcasia**	**2.21**	**124**	*e*P			Pn	00 35 08.3	0.0
NORC				*e*S			Sn	00 35 35.4	-0.8
NORC				*i*				00 35 39.1	
	comp=Z,85nm,0.3s								
PTBC	**PUERTO BERRIO,**	**2.25**	**97**	*e*P			Pn	00 35 08.6	-0.2
PTBC				*e*S			Sn	00 35 36.9	-0.3
PTBC				*i*				00 35 40.3	
	comp=Z,164nm,0.6s								
ANIL	**Santa Ana**	**2.65**	**151**	*e*P			Pn	00 35 14.5	-0.1
ANIL				*e*S			Sn	00 35 45.7	-1.8
ANIL				*i*				00 35 49.9	
	comp=Z,94nm,0.4s								
YOTC	**Yotoco, Valle**	**2.84**	**173**	*e*P			Pn	00 35 12.9	-4.2
YOTC				*e*S			Sn	00 35 43.4	-8.5
YOTC				*i*				00 35 46.1	
	comp=Z,58nm,0.5s								
SPBC	**San Pablo de B**	**2.86**	**114**	*e*P			Pn	00 35 16.9	-0.4
SPBC				*e*S			Sn	00 35 54.3	+2.0
SPBC				*i*				00 36 01.6	
	comp=Z,42nm,0.8s								
BRRC	**Barranca, Sant**	**2.98**	**84**	*e*P			Pn	00 35 17.9	-1.0
BRRC				*e*S			Sn	00 35 54.8	-0.5
BRRC				*i*				00 36 05.7	
	comp=Z,26nm,0.4s								
ROSC	**El Rosal**	**3.08**	**130**	*e*P			Pn	00 35 22.4	+1.9
ROSC				*e*S			Sn	00 35 58.3	+0.1
ROSC				*i*				00 36 13.1	
	comp=Z,32nm,0.7s								
ORTC	**Ortega, Tolima**	**3.23**	**153**	*e*P			Pn	00 35 22.9	+0.5
ORTC				*e*S			Sn	00 36 02.3	+0.7
ORTC				*i*				00 36 07.1	
	comp=Z,22nm,0.5s								
BARC	**Barichara**	**3.50**	**94**	*e*P			Pn	00 35 27.1	+0.8
BARC				*e*S			Sn	00 36 08.4	0.0
BARC				*i*				00 36 19.7	
	comp=Z,28nm,0.6s								
PRAC	**Prado**	**3.58**	**150**	*e*P			Pn	00 35 28.4	+1.3
PRAC				*e*S			Sn	00 36 09.1	-0.9
PRAC				*i*				00 36 26.9	
	comp=Z,19nm,0.8s								
OCAC	**Ocana**	**3.64**	**67**	*e*P			Pn	00 35 27.8	-0.3
OCAC				*e*S			Sn	00 36 11.0	-0.6
OCAC				*i*				00 36 35.5	
	comp=Z,50nm,0.4s								
CHIC	**Chingaza**	**3.67**	**126**	*e*P			Pn	00 35 30.7	+2.0
CHIC				*e*S			Sn	00 36 13.0	+0.2
CHIC				*i*				00 36 33.4	
	comp=Z,12nm,0.4s								
RUSC	**La Rusia**	**3.71**	**104**	*e*P			Pn	00 35 29.9	+0.5
RUSC				*e*S			Sn	00 36 14.8	+0.9
RUSC				*i*				00 36 31.2	
	comp=Z,28nm,0.6s								
PAMC	**Pamplona, Colo**	**4.00**	**82**	*e*P			Pn	00 35 34.8	+1.4
PAMC				*e*S			Sn	00 36 20.3	-0.9
PAMC				*i*				00 36 40.6	
	comp=Z,35nm,0.5s								
POPC	**Popayan, Colom**	**4.25**	**180**	*e*P			Pn	00 35 35.0	-1.6
POPC				*e*S			Sn	00 36 23.0	-4.0
POPC				*i*				00 36 31.9	
	comp=Z,7.1nm,0.5s								

SOME ***14*** *00:34:38.4, 39°.93N×77°.82E, h15km*
KRNET ***14*** *00:34:39.0±0.1, 39°.83N×77°.77E, mb3.9*
IDC ***14*** *00:34:42.5±2.2, 40°.20N×77°.49E, h0km, mb3.5/3, mbtmp3.4/5, ML2.5/2, MS2.8/1, Error ellipse: s-maj=50.9km s-min=20.6km az=135.0*
NNC ***14*** *00:34:45.0±1.5, 40°.21N×77°.87E, h0km, mb4.4, mpv4.0, Error ellipse: s-maj=10.3km s-min=8.3km az=162.0*

ISC 14 00:34:44.4±2.0, 40°.22N±0°.07×77°.83E±0°.03, h1km±11km, n83, σ1s77/119, mb3.6/3, 26C-10D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**1.97**	**346**	⇑*e*P			**Pb**	**00 35 21.0**	**-0.2**
	baz=50								
KDJ				⇑*i*S			**Sg**	**00 35 51.6**	**+3.9**
	baz=50								
PRZ	**Przheval'sk**	**2.30**	**11**	⇑*i*P			**Pb**	**00 35 26.3**	**-0.6**
	baz=10.0								
PRZ				⇑*i*S			**Sg**	**00 36 00.7**	**+2.3**
	baz=10.0								
ULHL	**Ulahol**	**2.35**	**330**	P			**Pb**	**00 35 26.6**	**-1.1**
	SNR=89								
ULHL	**Ulahol**	**2.35**	**330**	⇑*e*P			**Pn**	**00 35 25.8**	**+1.4**
	baz=35								
ULHL				⇑*i*S			**Sg**	**00 35 59.9**	**-0.1**
	baz=35								
ANVS	**Anan'yevo**	**2.56**	**357**	⇑*i*P			**Pn**	**00 35 29.3**	**+2.0**
	baz=59								
ANVS				⇑*i*S			**Sg**	**00 36 07.1**	**+0.3**
	baz=59								
BOOM	**Boomskoye usch**	**2.68**	**328**	⇑*e*P			**Pn**	**00 35 30.1**	**+1.2**
	baz=33								
BOOM				⇑*i*S			**Sb**	**00 36 07.4**	**+0.7**
	baz=33								
SATY	**Saty**	**2.87**	**8**	*e*P			**Pb**	**00 35 36.5**	**0.0**
	79nm,0.6s								
SATY				*e*S			**Sg**	**00 36 18.0**	**+1.4**
	92nm,0.5s								
SATY	**Saty**	**2.87**	**8**	Pg			**Pb**	**00 35 37.4**	**+0.9**
	79nm,0.6s								
SATY				Lg			Lg	00 36 17.7	
	92nm,0.5s								
TNSS	**Tian-Shan**	**2.89**	**347**	*e*P			**Pb**	**00 35 36.8**	**-0.2**
	62nm,0.4s								
TNSS				*e*S			**Sg**	**00 36 18.6**	**+1.3**
	64nm,0.6s								
TNSS	**Tian-Shan**	**2.89**	**347**	Pg			**Pb**	**00 35 37.9**	**+0.8**
	62nm,0.4s								
TNSS				Lg			Lg	00 36 19.2	
	64nm,0.6s								
ZHN	**Zhinishke**	**2.98**	**9**	*e*P			**Pb**	**00 35 38.3**	**-0.1**
	44nm,0.3s								
ZHN				*e*S			**Sg**	**00 36 21.1**	**+0.9**
	121nm,0.4s								
ZHN	**Zhinishke**	**2.98**	**9**	Pg			**Pb**	**00 35 38.7**	**+0.4**
	44nm,0.3s								
ZHN				Lg			Lg	00 36 20.3	
	121nm,0.4s								
MDOK	**Medeo**	**3.00**	**349**	*e*P			**Pb**	**00 35 38.5**	**-0.2**
	56nm,0.4s								
MDOK				*e*S			**Sg**	**00 36 22.0**	**+1.2**
	112nm,0.6s								
MDOK	**Medeo**	**3.00**	**349**	Pg			**Pb**	**00 35 39.7**	**+1.0**
	56nm,0.4s								
MDOK				Lg			Lg	00 36 22.0	
	112nm,0.6s								
UZB	**Uzynbulak**	**3.06**	**17**	*e*P			**Pb**	**00 35 38.7**	**-1.1**
	1.7nm,0.1s								
UZB				*e*S			**Sg**	**00 36 21.9**	**-0.7**
	51nm,0.4s								
UZB	**Uzynbulak**	**3.06**	**17**	Pg			**Pb**	**00 35 39.7**	**0.0**
	1.7nm,0.1s								
UZB				Lg			Lg	00 36 22.0	
	51nm,0.4s								
KOTS	**Kotyrbulak**	**3.06**	**350**	*e*P			**Pb**	**00 35 40.2**	**+0.4**
	51nm,0.5s								
KOTS				*e*S			**Sg**	**00 36 24.8**	**+2.1**
	129nm,0.4s								
KOTS	**Kotyrbulak**	**3.06**	**350**	Pg			**Pb**	**00 35 41.3**	**+1.5**
	51nm,0.5s								
KOTS				Lg			Lg	00 36 24.8	
	129nm,0.4s								
KNDC	**Almaty**	**3.06**	**348**	⇓Pn			**Pb**	**00 35 41.5**	**+1.7**
	48nm,0.6s								
KNDC				⇓Lg			Lg	00 36 26.4	
	139nm,0.6s								
AAA	**Alma-Ata**	**3.06**	**347**	*e*P			**Pb**	**00 35 40.7**	**+0.9**
	135nm,0.5s								
AAA				*e*S			**Sg**	**00 36 25.4**	**+2.5**
	164nm,0.5s								
AAA	**Alma-Ata**	**3.06**	**347**	Pg			**Pb**	**00 35 41.8**	**+2.0**
	135nm,0.5s								
AAA				Lg			Lg	00 36 25.4	
	164nm,0.5s								
MTBS	**Maitube**	**3.09**	**341**	*e*P			**Pb**	**00 35 40.8**	**+0.5**
	41nm,0.4s								
MTBS				*e*S			**Sg**	**00 36 25.6**	**+1.8**
	74nm,0.4s								
MTBS	**Maitube**	**3.09**	**341**	Pg			**Pb**	**00 35 40.8**	**+0.5**
	41nm,0.4s								
MTBS				Lg			Lg	00 36 24.5	
	74nm,0.4s								
ARLS	**Aral**	**3.12**	**303**	⇑*e*P			**Pn**	**00 35 34.3**	**-0.6**
	baz=9.0								
ARLS				⇑*i*S			**Sn**	**00 36 14.7**	**+1.8**
	baz=9.0								
KST	**Kastek**	**3.15**	**334**	*e*P			**Pb**	**00 35 41.2**	**-0.1**
	28nm,0.7s								
KST				*e*S			**Sg**	**00 36 25.7**	**+0.1**
	63nm,0.5s								
KST	**Kastek**	**3.15**	**334**	Pg			**Pb**	**00 35 43.2**	**+1.9**
	28nm,0.7s								
KST				Lg			Lg	00 36 27.5	
	63nm,0.5s								
TKM2	**Tokmak 2**	**3.18**	**329**	P			**Pn**	**00 35 38.3**	**+2.6**
	SNR=21								
TKM2	**Tokmak 2**	**3.18**	**329**	⇓*i*P			**Pn**	**00 35 37.1**	**+1.3**
	baz=33								
TKM2				⇓*i*S			**Sb**	**00 36 19.5**	**-1.6**
	baz=33								
TKM2	**Tokmak 2**	**3.18**	**329**	⇑Pn			**Pn**	**00 35 37.0**	**+1.2**
	14nm,0.4s								
TKM2				⇓Lg			Lg	00 36 27.0	
	38nm,0.7s								
SHLS	**Shalkode**	**3.18**	**22**	*e*P			**Pb**	**00 35 43.4**	**+1.6**
	17nm,0.5s								
SHLS				*e*S			**Sg**	**00 36 30.5**	**+4.0**
	59nm,0.5s								
SHLS	**Shalkode**	**3.18**	**22**	Pg			**Pg**	**00 35 45.8**	**+0.5**
	17nm,0.5s								
SHLS				Lg			Lg	00 36 32.2	
	59nm,0.5s								
UCH	**Uchtor**	**3.21**	**310**	P			**Pn**	**00 35 37.7**	**+1.3**
	SNR=11								
UCH	**Uchtor**	**3.21**	**310**	⇓*i*P			**Pn**	**00 35 36.5**	**+0.1**
	baz=15								
UCH				⇓*i*S			**Sn**	**00 36 18.3**	**+2.8**
	baz=15								
KBK	**Karagaybulak**	**3.26**	**319**	P			**Pb**	**00 35 44.0**	**+0.8**
	SNR=24								
**KB

USP	**Ospenovka**	**3.94**	**322**	P	**Pb**	**00 35 55.5**	**+0.9**
	SNR=35						
ARXS	**Arharly**	**3.99**	**360**	*e*P	**Pb**	**00 35 55.5**	**-0.1**
	30nm,0.6s						
ARXS				*e*S	**Sg**	**00 36 50.6**	**-2.0**
	53nm,0.4s						
ARXS	**Arharly**	**3.99**	**360**	Pg	**Pb**	**00 35 56.8**	**+1.2**
	30nm,0.6s						
ARXS				Lg	Lg	00 36 50.6	
	53nm,0.4s						
SGDS	**Sogindy**	**4.02**	**325**	*e*P	**Pb**	**00 35 56.3**	**+0.2**
	24nm,0.6s						
SGDS				*e*S	**Sg**	**00 36 52.1**	**-1.4**
	18nm,0.5s						
SGDS	**Sogindy**	**4.02**	**325**	Pg	**Pb**	**00 35 57.0**	**+0.9**
	24nm,0.6s						
SGDS				Lg	Lg	00 36 51.3	
	18nm,0.5s						
MRKS	**Merke**	**4.28**	**308**	*e*P	**Pb**	**00 36 03.8**	**+3.2**
	14nm,0.4s						
MRKS				*e*S	**Sg**	**00 37 04.7**	**+2.7**
	29nm,0.6s						
MRKS	**Merke**	**4.28**	**308**	Pg	**Pg**	**00 36 04.7**	**-1.7**
	14nm,0.4s						
MRKS				Lg	Lg	00 37 04.5	
	29nm,0.6s						
DJR	**Jarkent**	**4.36**	**19**	*e*P	**Pb**	**00 36 02.2**	**+0.4**
	1.5nm,0.5s						
DJR				*e*S	**Sg**	**00 37 02.9**	**-1.5**
	3.3nm,0.4s						
DJR	**Jarkent**	**4.36**	**19**	Pg	**Pb**	**00 36 04.2**	**+2.4**
DJR				Lg	Lg	00 37 02.9	
	3.3nm,0.4s						
TDK	**Taldyqorghan**	**4.80**	**5**	*e*P	**Pb**	**00 36 10.2**	**+1.0**
	33nm,0.6s						
TDK				*e*S	**Sg**	**00 37 16.3**	**-2.2**
	69nm,0.6s						
TDK	**Taldyqorghan**	**4.80**	**5**	Pg	**Pb**	**00 36 11.5**	**+2.2**
	61nm,0.3s						
TDK				Lg	Lg	00 37 16.3	
	69nm,0.6s						
KAPS	**Kapalarasan**	**5.18**	**12**	*e*P	**Pb**	**00 36 18.3**	**+2.3**
	8.2nm,0.5s						
KAPS				*e*S	**Sg**	**00 37 29.6**	**-1.3**
	12nm,0.5s						
KAPS	**Kapalarasan**	**5.18**	**12**	Pg	**Pg**	**00 36 21.6**	**-2.2**
	8.2nm,0.5s						
KAPS				Lg	Lg	00 37 33.2	
	12nm,0.5s						
BTLS	**Baital**	**5.57**	**331**	*e*P	**Pb**	**00 36 24.0**	**+1.6**
	4.9nm,0.5s						
BTLS				*e*S	**Sg**	**00 37 40.2**	**-3.0**
	10.0nm,0.6s						
BTLS	**Baital**	**5.57**	**331**	Pg	**Pb**	**00 36 26.2**	**+3.8**
	4.9nm,0.5s						
BTLS				Lg	Lg	00 37 41.1	
	10.0nm,0.6s						
IUG	**Iuzhnay**	**6.19**	**291**	*e*P	**Pb**	**00 36 36.8**	**+3.7**
	118nm,0.5s						
IUG				*e*S	**Sg**	**00 38 02.5**	**-0.8**
	14nm,0.4s						
IUG	**Iuzhnay**	**6.19**	**291**	Pg	Pb	00 36 38.7	+5.6
	118nm,0.5s						
IUG				Lg	Lg	00 38 02.5	
	14nm,0.4s						
KK31	**Karatay Array**	**6.19**	**300**	⇑Pg	**Pb**	**00 36 36.4**	**+3.3**
	2.1nm,0.6s,baz=129,slow=17,SNR=12						
KK31				⇑Lg	Lg	00 38 01.5	
	2.2nm,0.4s,baz=115,slow=28,SNR=5.4						
MK31	**Makanchi Array**	**7.33**	**25**	⇓Pn	**Pn**	**00 36 34.8**	**+2.2**
	0.2nm,0.5s,baz=208,slow=13,SNR=4.8						
MK31				⇓Sn	**Sn**	**00 37 59.5**	**+3.2**
	1.9nm,0.7s						
MKAR	**Makanchi Array**	**7.33**	**25**	Pn	**Pn**	**00 36 32.3**	**-0.2**
	0.1nm,0.3s,baz=211,slow=15,SNR=1.1						
MKAR				Sn	**Sn**	**00 37 58.2**	**+1.9**
	0.3nm,0.3s,baz=202,slow=26,SNR=2.9						
MKAR				Lg	Lg	00 38 35.7	
	0.3nm,0.3s,baz=205,slow=27,SNR=2.2						
	0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**10.41**	**2**	Lg	Lg	00 40 12.8	
	baz=189,slow=27,SNR=1.7						
ZALV	**Zalesovo Beam**	**14.52**	**17**	Pn	**Pn**	**00 38 10.5**	**-0.4**
	0.1nm,0.3s,baz=201,slow=11,SNR=2.1						
	0.2nm,0.3s						
SONM	**Songino Array**	**21.81**	**60**	P	**P**	**00 39 40.2**	**+2.2**
	0.4nm,0.7s,baz=270,slow=11,SNR=2.1						
	0.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**28.30**	**134**	LR	LR	00 53 57.7	
	comp=Z,18nm,18.1s,baz=110,slow=41						
ARCES	**ARCESS Array B**	**39.94**	**334**	P	**P**	**00 42 18.6**	**-1.3**
	1.6nm,0.7s,baz=92,slow=8.5,SNR=4.3						
	1.6nm,0.7s						
TORD	**Torodi Ar. Bea**	**71.09**	**271**	P	**P**	**00 46 00.3**	**-4.3**
	0.4nm,0.7s,baz=49,slow=5.8,SNR=4.6						
	0.4nm,0.7s						

LSZ ***14*** *01:05:09.6±0.3,2°.62S×28°.64E, h10km, MD4.3*
IDC ***14*** *01:05:15.2±1.5,3°.92S×35°.25E, h0km, mb3.5/3, mbtmp3.7/6, ML4.0/4, MS2.5/1, Error ellipse: s-maj=27.6km s-min=22.1km az=3.0*
ISC 14 01:05:15.9±0.9,**3°.98S**±0°.06×**35°.33E**±0°.07,**h10km,n11,** σ1§**14/18, mb3.8/3, Tanzania**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMBO	**Kilima Mbogo**	**3.42**	**34**	Pn	**Pn**	**01 06 09.5**	**-0.2**
	4.0nm,0.3s,baz=218,slow=18,SNR=33						
KMBO				Sn	**Sn**	**01 06 49.2**	**-1.3**
	12nm,0.3s,baz=221,slow=20,SNR=3.0						
KMBO				Lg	Lg	01 06 57.8	
	17nm,0.3s,baz=299,slow=19,SNR=5.0						
KMBO				LR	LR	01 07 24.3	
	comp=Z,57nm,18.3s,baz=282,slow=38						
	8.7nm,0.3s						
TEBE	**Entebbe**	**4.92**	**324**	*e*P	**Pn**	**01 06 30.8**	**+0.6**
TEBE				*e*S	**Sn**	**01 07 26.6**	**-0.7**
MBAR	**Mbarara**	**5.68**	**306**	Pn	**Pn**	**01 06 41.6**	**+1.0**
	37nm,0.3s,baz=114,slow=20,SNR=71						
MBAR				Sn	**Sn**	**01 07 44.9**	**-1.3**
	104nm,0.3s,baz=234,slow=3.1,SNR=8.2						
MBAR				Lg	Lg	01 08 12.7	
	70nm,0.3s,baz=114,slow=18,SNR=5.1						
MBAR	**Mbarara**	**5.68**	**306**	*e*P	**Pn**	**01 06 41.4**	**+0.8**
MBAR				*e*S	**Sn**	**01 07 45.2**	**-0.9**
KSMZ	**Kasama**	**7.38**	**213**	*i* P	**Pn**	**01 07 04.3**	**+0.4**
KSMZ				*i*		01 07 04.4	
	baz=341,slow=5.3						
KSMZ				*i* S	**Sn**	**01 08 28.0**	**+0.2**
KSMZ	**Kasama**	**7.38**	**213**	*i* P	**Pn**	**01 07 04.3**	**+0.4**
KSMZ				*i*		01 07 04.4	
	baz=341,slow=5.3						
KSMZ				*i* S	**Sn**	**01 08 28.0**	**+0.2**
LSZ	**Lusaka**	**13.24**	**212**	Pn	**Pn**	**01 08 23.3**	**-1.0**
	0.2nm,0.3s,baz=125,slow=3.3,SNR=1.3						
LSZ				Sn	**Sn**	**01 10 49.2**	**-2.6**
	0.4nm,0.3s,baz=287,slow=7.9,SNR=3.6						
LSZ				Lg	Lg	01 12 04.8	
	1.0nm,0.3s,baz=55,slow=8.2,SNR=10						
	0.8nm,0.3s						
MATP	**Matopo**	**17.65**	**202**	Pn	**P**	**01 09 24.5**	**+1.3**
	0.1nm,0.3s,baz=13,slow=14,SNR=3.9						
MATP				Lg	Lg	01 14 21.6	
	0.1nm,0.3s,baz=307,slow=9.0,SNR=2.0						
	2.1nm,0.8s						
TORD	**Torodi Ar. Bea**	**37.48**	**298**	P	**P**	**01 12 29.4**	**-0.8**
	0.4nm,1.0s,baz=104,slow=7.3,SNR=3.5						
	0.4nm,1.0s						
MKAR	**Makanchi Array**	**65.31**	**34**	P	**P**	**01 15 59.2**	**+0.9**
	0.5nm,0.7s,baz=243,slow=5.3,SNR=4.9						
	0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**65.79**	**29**	P	**P**	**01 16 02.4**	**+1.2**
	0.5nm,0.7s,baz=232,slow=7.1,SNR=4.6						
	0.5nm,0.7s						

ISK ***14*** *01:09:04.5,35°.48N×26°.47E, h8km, ML3.1/20*
NIC ***14*** *01:09:05.6±0.0,35°.31N×26°.60E, h20km±1km, MI3.7/6*
ATH ***14*** *01:09:05.4,35°.46N×26°.50E, h14km±5km, ML3.2/6, Error ellipse: s-maj=6.5km s-min=1.1km az=155.0*
THE ***14*** *01:09:05.5,35°.43N×26°.50E, h9km±2km, ML3.0/14, Error ellipse: s-maj=3.0km s-min=0.7km az=152.0*
DDA ***14*** *01:09:07.0±0.0,35°.79N×26°.19E, h16km±77km, MW3.3*
ISC 14 01:09:03.3±1.2,**35°.43N**±0°.03×**26°.50E**±0°.02,**h1**km±10**km, n82,**σ1§**00**/113**, Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.39**	**216**	P	**Pb**	**01 09 13.5**	**+0.5**
ZKR				S	**Sb**	**01 09 19.5**	**-0.1**
ZKR				AML	AML	01 09 20.0	
	comp=E,7967μm,0.2s						
ZKR				AML	AML	01 09 20.0	
	comp=N,5938μm,0.2s						
ZKR	**Zakros**	**0.39**	**216**	P	**Pb**	**01 09 13.5**	**+0.5**
ZKR				S	**Sb**	**01 09 19.5**	**-0.1**
	comp=N,4μm,0.2s						
ZKR	**Zakros**	**0.39**	**216**	PG	**Pb**	**01 09 13.6**	**+0.5**
ZKR				SG	**Sb**	**01 09 19.4**	**-0.2**
ZKR	**Zakros**	**0.39**	**216**	P	**Pb**	**01 09 13.5**	**+0.5**
ZKR				AML	AML	01 09 18.5	
	comp=N,5.6nm,0.5s						
ZKR				AML	AML	01 09 18.5	
	comp=N,5.6nm,0.5s						
ZKR				AML	AML	01 09 19.0	
	comp=N,6.2nm,0.4s						
ZKR				AML	AML	01 09 19.0	
	comp=N,6.2nm,0.4s						
ZKR				S	**Sb**	**01 09 19.5**	**-0.1**
KARP	**Karpathos**	**0.55**	**78**	P	**Pb**	**01 09 16.2**	**+0.4**
KARP				S	**Sb**	**01 09 23.8**	**-0.4**
KARP				AML	AML	01 09 24.5	
	comp=E,7924μm,0.2s						
KARP				AML	AML	01 09 24.8	
	comp=N,6196μm,0.2s						
KARP	**Karpathos**	**0.55**	**78**	P	**Pb**	**01 09 16.2**	**+0.4**
KARP				S	**Sb**	**01 09 23.9**	**-0.4**
	comp=N,4μm,0.2s						
KARP	**Karpathos**	**0.55**	**78**	PG	**Pb**	**01 09 16.3**	**+0.4**
KARP				SG	**Sb**	**01 09 24.2**	**0.0**
KARP	**Karpathos**	**0.55**	**78**	P	**Pb**	**01 09 16.1**	**+0.4**
KARP				S	**Sb**	**01 09 23.9**	**-0.4**
KARP				AML	AML	01 09 24.2	
	comp=N,7.8nm,0.2s						
KARP				AML	AML	01 09 24.2	
	comp=N,7.8nm,0.2s						
KARP				AML	AML	01 09 24.4	
	comp=N,6.1nm,0.2s						
KARP				AML	AML	01 09 24.4	
	comp=N,6.1nm,0.2s						
NPS	**Neapolis**	**0.75**	**257**	P	**Pb**	**01 09 20.2**	**+1.1**
NPS				S	**Sb**	**01 09 29.3**	**-0.5**
NPS	**Neapolis**	**0.75**	**257**	P	**Pb**	**01 09 20.2**	**+1.1**
NPS				S	**Sb**	**01 09 29.7**	**-0.1**
FRMA	**Ierapetra Chan**	**0.75**	**237**	P	**Pg**	**01 09 18.3**	**+0.6**
FRMA				S	**Sg**	**01 09 27.6**	**0.0**
FRMA				AML	AML	01 09 27.8	
	comp=N,4198μm,0.4s						
FRMA				AML	AML	01 09 30.4	
	comp=E,6031μm,0.3s						
FRMA	**Ierapetra Chan**	**0.75**	**237**	P	**Pg**	**01 09 18.5**	**+0.7**
FRMA				S	**Sg**	**01 09 27.5**	**0.0**
	comp=E,870nm,0.3s						
HRKL	**Herakleio**	**1.15**	**264**	P	**Pn**	**01 09 26.8**	**+0.3**
HRKL				AML	AML	01 09 44.3	
	comp=E,5294μm,0.7s						
HRKL				AML	AML	01 09 55.8	
	comp=N,6722μm,0.5s						
HRKL	**Herakleio**	**1.15**	**264**	P	**Pn**	**01 09 26.8**	**+0.3**
HRKL				S	**Sb**	**01 09 42.0**	**+0.6**
	comp=N,975nm,0.5s						
HRKL	**Herakleio**	**1.15**	**264**	PN	**Pn**	**01 09 26.8**	**+0.3**
HRKL				SN	**Sn**	**01 09 42.4**	**-0.5**
IACM	**Heraklion**	**1.18**	**264**	P	**Pn**	**01 09 28.1**	**+1.2**
IACM	**Heraklion**	**1.18**	**264**	P	**Pb**	**01 09 27.0**	**+0.6**
IACM				S	**Sb**	**01 09 42.8**	**+0.7**
	comp=N,3μm,0.3s						
KSTL	**Kastelli Herak**	**1.18**	**264**	P	**Pg**	**01 09 24.5**	**-1.4**
KSTL				AML	AML	01 09 37.2	
	comp=N,1405μm,0.3s						
KSTL				AML	AML	01 09 41.5	
	comp=E,800μm,0.3s						
KSTL	**Kastelli Herak**	**1.18**	**264**	P	**Pg**	**01 09 24.7**	**-1.2**
KSTL				S	**Sg**	**01 09 36.8**	**-4.3**
	comp=E,188nm,0.3s						
SANT	**Santorini**	**1.26**	**318**	P	**Pg**	**01 09 27.8**	**+0.3**
SANT	**Santorini**	**1.26**	**318**	P	**Pg**	**01 09 28.0**	**+0.5**
SANT				S	**Sg**	**01 09 44.2**	**+0.3**
	comp=E,448nm,0.2s						
SANT	**Santorini**	**1.26**	**318**	PN	**Pg**	**01 09 28.1**	**+0.5**
THR8	**Santorini-Mono**	**1.28**	**320**	P	**Pn**	**01 09 28.2**	**-0.1**
NISR	**Nisiros**	**1.28**	**23**	P	**Pn**	**01 09 27.5**	**-0.9**
NISR	**Nisiros**	**1.28**	**23**	P	**Pn**	**01 09 27.5**	**-0.9**
NISR				S	**Sn**	**01 09 46.2**	**0.0**
	comp=E,1μm,0.5s						
THR6	**Thira Island,**	**1.29**	**316**	P	**Pn**	**01 09 28.5**	**+0.1**
SFIR	**Foira Santorin**	**1.32**	**319**	P	**Pn**	**01 09 29.1**	**+0.2**
SFIR				S	**Sg**	**01 09 45.8**	**+0.1**
	comp=E,1μm,0.6s						
THR3	**Thira Island,**	**1.32**	**318**	P	**Pn**	**01 09 28.4**	**-0.5**
IDI	**Anoyia**	**1.32**	**264**	P	**Pn**	**01 09 28.8**	**-0.2**
IDI	**Anoyia**	**1.32**	**264**	P	**Pn**	**01 09 28.8**	**-0.2**
IDI				S	**Sb**	**01 09 46.8**	**+0.3**
	comp=E,372nm,0.2s						
IDI	**Anoyia**	**1.32**	**264**	PN	**Pn**	**01 09 29.3**	**+0.3**
TMBK	**Timbaki Herakl**	**1.46**	**256**	P	**Pg**	**01 09 32.4**	**+1.0**
TMBK	**Timbaki Herakl**	**1.46**	**256**	P	**Pg**	**01 09 32.2**	**+0.8**
TMBK				S	**Sn**	**01 09 50.1**	**-0.6**
	comp=E,225nm,0.4s						
ARG	**Arkhangelos**	**1.54**	**59**	P	**Pn**	**01 09 32.1**	**+0.2**
ARG				AML	AML	01 09 54.5	
	comp=E,1225μm,0.3s						
ARG				AML	AML	01 09 59.5	
	comp=N,741μm,0.2s						
ARG	**Arkhangelos**	**1.54**	**59**	P	**Pn**	**01 09 32.1**	**+0.2**
ARG				S	**Sn**	**01 09 51.3**	**-1.2**
	comp=N,502nm,0.3s						
ARG	**Arkhangelos**	**1.54**	**59**	PN	**Pb**	**01 09 32.7**	**+0.1**
ARG	**Arkhangelos**	**1.54**	**59**	P	**Pn**	**01 09 32.0**	**+0.2**
ARG				S	**Sn**	**01 09 51.8**	**-0.7**
DAT	**Datca**	**1.56**	**34**	P	**Pn**	**01 09 31.7**	**-0.6**
DAT	**Datca**	**1.56**	**34**	PN	**Pb**	**01 09 33.2**	**+0.1**
DAT	**Datca**	**1.56**	**34**	P	**Pb**	**01 09 33.5**	**+0.4**
BODT	**Bodrum**	**1.75**	**22**	P	**Pn**	**01 09 35.3**	**+0.4**
BODT	**Bodrum**	**1.75**	**22**	PN	**Pn**	**01 09 35.4**	**+0.5**
BDRM	**Kayabasi**	**1.80**	**25**	P	**Pn**	**01 09 36.0**	**+0.5**
BDRM				S	**Sg**	**01 10 02.3**	**+1.1**
BDRM				*i* AML	AML	01 10 07.0	
	comp=N,28nm,0.9s						
BDRM				*i* AML	AML	01 10 08.0	
	comp=N,39nm,0.4s						
APE	**Apeiranthos**	**1.81**	**335**	PN	**Pn**	**01 09 35.5**	**-0.2**
TURN	**Turunc**	**1.95**	**46**	PN	**Pn**	**01 09 38.1**	**+0.6**
TURN	**Turunc**	**1.95**	**46**	P	**Pn**	**01 09 36.6**	**-0.9**
TURN				S	**Sn**	**01 10 00.8**	**-1.8**
IMMV	**Iera Moni Meta**	**2.06**	**272**	P	**Pn**	**01 09 39.1**	**0.0**
IMMV				S	**Sn**	**01 10 05.2**	**-0.1**
	comp=N,188nm,0.3s						
IMMV	**Iera Moni Meta**	**2.06**	**272**	PN	**Pn**	**01 09 39.8**	**+0.7**
GVD	**Gavdhos**	**2.06**	**254**	P	**Pn**	**01 09 39.6**	**+0.5**
GVD	**Gavdhos**	**2.06**	**254**	PN	**Pn**	**01 09 40.3**	**+1.2**
MLSB	**Milas**	**2.13**	**29**	PN	**Pn**	**01 09 40.7**	**+0.7**
DALY	**Dalyan (Mula)**	**2.23**	**51**	PN	**Pn**	**01 09 42.4**	**+1.1**
YER	**Yerkesik**	**2.23**	**40**	P	**Pn**	**01 09 41.6**	**+0.1**
YER	**Yerkesik**	**2.23**	**40**	PN	**Pn**	**01 09 42.4**	**+0.9**
RODP	**Rodopos**	**2.24**	**274**	P	**Pn**	**01 09 42.0**	**+0.4**
RODP				S	**Sn**	**01 10 08.4**	**-1.5**
	comp=N,52nm,0.6s						
RODP	**Rodopos**	**2.24**	**274**	PN	**Pn**	**01 09 42.6**	**+1.0**
MULA	**Mugla, Merkez-**	**2.34**	**38**	P	**Pn**	**01 09 44.8**	**+1.7**
MULA				S	**Sn**	**01 10 11.9**	**-0.5**
MULA				*i* AML	AML	01 10 23.0	
	comp=N,19nm,0.8s						
MULA				*i* AML	AML	01 10 28.0	
	comp=N,28nm,0.5s						
FETY	**Fethiye**	**2.41**	**59**	PN	**Pn**	**01 09 45.6**	**+1.6**
FETY	**Fethiye**	**2.41**	**59**	P	**Pb**	**01 09 47.7**	**+0.2**
AYDN	**Tasoluk**	**2.49**	**26**	P	**Pn**	**01 09 46.0**	**+1.0**
AKAS	**Kas**	**2.65**	**72**	PN	**Pn**	**01 09 48.9**	**+1.7**
AKAS	**Kas**	**2.65**	**72**	P	**Pn**	**01 09 49.0**	**+1.7**
CAME	**Cameli-Denizli**	**2.72**	**56**	PN	**Pn**	**01 09 49.8**	**+1.5**
AYDB	**Zeytinkoy-Aydi**	**2.75**	**24**	PN	**Pn**	**01 09 49.7**	**+1.1**
ZEYE	**Izmir, Urla-Ze**	**2.80**	**0**	P	**Pn**	**01 09 46.7**	**-2.6**
TAVA	**DENIZLI_Tavas**	**2.81**	**43**	P	**Pn**	**01 09 51.5**	**+1.9**
TAVA				S	**Sn**	**01 10 24.5**	**+0.4**
TAVA				*i* AML	AML	01 10 30.0	
	comp=N,23nm,0.3s						
CAEL	**Denizli, Camel**	**2.83**	**53**	P	**Pn**	**01 09 52.0**	**+2.2**
CAEL				S	**Sb**	**01 10 27.9**	**-2.2**
CAEL				*i* AML	AML	01 10 45.0	
	comp=N,72nm,0.5s						
CAEL				*i* AML	AML	01 10 50.0	
	comp=N,78nm,0.7s						
URLA	**Izmir**	**2.92**	**1**	PN	**Pn**	**01 09 51.9**	**+0.9**
CHOS	**Chios island**	**2.97**	**353**	PN	**Pn**	**01 09 52.4**	**+0.7**
APMY	**Acipayam-Deniz**	**3.04**	**47**	PN	**Pn**	**01 09 54.3**	**+1.6**
ELL	**Elmali**	**3.06**	**64**	PN	**Pn**	**01 09 54.7**	**+1.8**
ELL	**Elmali**	**3.06**	**64**	P	**Pn**	**01 09 54.1**	**+1.2**
GOLH	**Golhisar**	**3.06**	**53**	P	**Pn**	**01 09 54.4**	**+1.5**
GOLH				S	**Sn**	**01 10 33.0**	**+2.8**
GOLH				*i* AML	AML	01 10 43.0	
	comp=N,66nm,0.9s						
PASA	**Karahalli, USA**	**3.77**	**39**	P	**Pn**	**01 10 02.8**	**+0.1**
OSC1	**CSNet OBS 1**	**4.39**	**115**	P	**Pn**	**01 10 10.7**	**-0.4**
AKMS	**Akamas**	**4.79**	**93**	P	**Pn**	**01 10 16.3**	**-0.4**
AKMS				AML	AML	01 11 10.7	
	comp=N,0.2nm,0.5s						
AKMS				AML	AML	01 11 12.0	
	comp=N,0.3nm,0.7s						
ALFC	**Alefka**	**5.00**	**91**	P	**Pn**	**01 10 19.4**	**-0.1**
ALFC				AML	AML	01 11 15.7	
	comp=N,0.2nm,0.5s						
ALFC				AML	AML	01 11 16.3	
	comp=N,0.2nm,0.7s						
NATA	**Nata**	**5.02**	**96**	P	**Pn**	**01 10 19.6**	**-0.2**
SZAC	**Souni**	**5.28**	**96**	P	**Pn**	**01 10 22.7**	**-0.7**
SZAC				AML	AML	01 11 23.9	
	comp=N,0.2nm,0.5s						
SZAC				AML	AML	01 11 24.4	
	comp=N,0.2nm,0.4s						
OSC2	**CSNet OBS 4**	**5.32**	**115**	P	**Pn**	**01 10 22.8**	**-1.1**
ASGA	**Asgata**	**5.57**	**95**	P	**Pn**	**01 10 27.0**	**-0.4**
ASGA				AML	AML	01 11 30.9	
	comp=N,0.1nm,0.7s						
ASGA				AML	AML	01 11 31.8	
	comp=N,0.1nm,0.9s						
MVOU	**Mavrovouni**	**5.85**	**92**	P	**Pn**	**01 10 31.1**	**-0.2**

IDC 14 01:41:09.5±4.4,**20°.15S**×**11°.98W, h0**km,**mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=157.4km s-min=34.4km az=152.0, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H10S2	**ASCENSION HYDR**	**11.42**	**347**	T	T	01 56 02.2	
	baz=54,slow=74,SNR=3.5						
H10S3	**ASCENSION HYDR**	**11.43**	**347**	T	T	01 56 01.8	
	baz=166,slow=74,SNR=3.2						
BDFB	**Brasilia**	**34.53**	**272**	P	P	01 48 00.2	+0.1
	2.7nm,0.9s,baz=90,slow=17,SNR=1.9						
	2.7nm,0.9s						
TORD	**Torodi Ar. Bea**	**35.72**	**23**	P	P	01 48 10.2	+0.1
	5.7nm,0.8s,baz=197,slow=9.2,SNR=20						
	5.7nm,0.8s						
BRTR	**Keskin Array B**	**73.21**	**35**	P	P	01 52 43.4	+0.8
	0.8nm,0.8s,baz=212,slow=5.1,SNR=5.1						
	0.8nm,0.8s						
AKASG	**Malin Array Be**	**79.32**	**25**	P	P	01 53 15.8	-1.0
	0.2nm,0.3s,baz=232,slow=6.4,SNR=4.9						
	0.2nm,0.3s						

IDC ***14*** *01:45:34.2±0.5,20°.44S×11°.83W, h0km, mb4.1/19, mbtmp4.1/19, MS4.2/27, Error ellipse: s-maj=18.4km s-min=14.6km az=158.0*
NEIC ***14*** *01:45:35.8±1.7,20°.5S±0°.1×11°.7W±0°.1, h10km±1km, mb4.8/31, Error ellipse: s-maj=20.0km s-min=18.6km az=152.0*
GCMT ***14*** *01:45:37.8±0.2,20°.43S±0°.02×11°.58W±0°.02, h13km±1km, MW4.9/110, Moment Tension Solution. s32,c36; s110,c154; Duration: 0 Moment tensor: Scale 10*^{16}*Nm; Mrr-3.08±.17; Mθθ0.30±.10; Mϕϕ2.78±.13; Mrθ1.35±.29; Mθϕ-0.41±.07; Mϕr-0.05±.29; Best double couple: M03.20700×10*^{16} *NP1:ϕs189.00000°, δ45.00000°, λ-63.00000°. NP2:ϕs332.00000°, δ51.00000°, λ-115.00000°. Principal axes: T 2.8590, Plg3.0000°, Azm79.0000°; N 0.6950, Plg19.0000°, Azm348.0000°; P -3.5540, Plg71.0000°, Azm178.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 14 01:45:35.5±0.4,**20°.45S**±0°.09×**11°.78W**±0°.09,**h10**km,**n90,** σ1§**23/73, mb4.5/40, MS4.2/28, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H10S2	**ASCENSION HYDR**	**11.76**	**346**	T	T	02 00 33.5	
	baz=166,slow=74,SNR=6.5						
H10S3	**ASCENSION HYDR**	**11.77**	**346**	T	T	02 00 33.9	
	baz=54,slow=74,SNR=23						
RCBR	**Riachuelo**	**27.56**	**299**	LR	LR	01 59 48.6	
	comp=Z,725nm,20.9s,baz=258,slow=31						
TSUM	**Tsumeb**	**27.63**	**93**	P	**P**	**01 51 24.1**	**+0.5**
	0.6nm,0.3s,baz=117,slow=18,SNR=1.8						
TSUM				LR	LR	02 00 29.6	
	comp=Z,931nm,20.0s,baz=264,slow=32						
	0.6nm,0.3s						
TSUM	**Tsumeb**	**27.63**	**93**	P	**P**	**01 51 22.0**	**-1.7**
TSUM				IAmb	IAmb	01 52 04.2	
	comp=Z,18nm,1.6s						
DBIC	**Dimbokro**	**27.80**	**15**	LR	LR	01 59 42.6	
	comp=Z,357nm,20.8s,baz=194,slow=30						
SUR	**Sutherland**	**31.39**	**119**	LR	LR	02 01 47.2	
	comp=Z,513nm,21.5s,baz=296,slow=31						
BOSA	**Boshof**	**34.55**	**111**	P	**P**	**01 52 24.4**	**-0.1**
	comp=Z,3.5nm,1.0s,baz=280,slow=12,SNR=2.2						
BOSA				LR	LR	02 05 11.5	
	comp=Z,308nm,18.3s,baz=302,slow=34						
	comp=Z,3.5nm,1.0s						
BOSA	**Boshof**	**34.55**	**111**	P	**P**	**01 52 24.0**	**-0.5**
BOSA				IAmb	IAmb	01 53 02.4	
	comp=Z,42nm,2.0s						
**LB

VNA1 Neumayer--Stat 50.25 178 P **P** 01 54 32.8 +1.4
VNA3 Neumayer Olymp 50.82 179 P **P** 01 54 36.1 +0.3
SAML Samuel 50.83 275 P **P** 01 54 38.2 +1.5
SNAA Sanae 51.49 176 P **P** 01 54 41.5 +0.5
SNAA Sanae 51.49 176 P **P** 01 54 40.4 -0.5
comp=Z,4.2nm,1.1s,baz=333,slow=5.9,SNR=6.5
SNAA LR LR 02 11 31.0
comp=Z,107nm,21.2s,baz=318,slow=30
comp=Z,4.2nm,1.1s
SNAA Sanae 51.49 176 P **P** 01 54 40.4 -0.5
SNAA IAmb IAmb 01 54 43.5
comp=Z,38nm,1.9s
KMBO Kilima Mbogo 51.57 74 LR LR 02 15 12.5
comp=Z,388nm,19.2s,baz=269,slow=34
TROLL Troll, Antarti 52.23 174 P **P** 01 54 47.2 +0.7
LVC Limon Verde 52.91 257 LR LR 02 16 17.0
comp=Z,171nm,18.9s,baz=116,slow=35
MDT Midelt 53.41 8 LR LR 02 17 10.7
comp=Z,143nm,19.2s,baz=191,slow=36
LPAZ La Paz 53.43 265 P **P** 01 54 56.9 +0.1
comp=Z,0.4nm,0.5s,baz=146,slow=4.2,SNR=4.9
LPAZ LR LR 02 17 31.5
comp=Z,283nm,18.0s,baz=108,slow=36
comp=Z,0.4nm,0.5s
LPAZ La Paz 53.43 265 P **P** 01 54 57.1 +0.4
PLCA Paso Flores 53.47 234 P **P** 01 54 56.1 0.0
comp=Z,1.9nm,0.9s,baz=58,slow=9.5,SNR=3.1
PLCA LR LR 02 16 54.3
comp=Z,309nm,18.4s,baz=84,slow=35
comp=Z,1.9nm,0.9s
PLCA Paso Flores 53.47 234 P **P** 01 54 57.0 +0.8
GO01 Chusmiza 53.69 260 P **P** 01 54 58.5 0.0
GO01 IAmb IAmb 01 55 05.4
comp=Z,12nm,1.4s
PB01 IPOC Station P 53.71 258 P **P** 01 54 58.2 +0.1
PB01 IAmb IAmb 01 55 06.8
comp=Z,8.4nm,1.0s
PB16 IPOC Station P 54.26 262 P **P** 01 55 02.8 0.0
USHA Ushuaia 54.44 216 LR LR 02 16 28.6
comp=Z,129nm,19.1s,baz=103,slow=34
OPO Ambohidratompo 55.35 99 LR LR 02 15 57.0
comp=Z,102nm,21.2s,baz=1.5,slow=33
PMSA Palmer Station 55.96 204 LR LR 02 16 34.7
comp=Z,317nm,18.3s,baz=50,slow=33
BELA Belgrano 2 58.52 186 P **P** 01 55 32.0 +0.4
BELA IAmb IAmb 01 55 39.4
comp=Z,5.8nm,0.9s
KEST Kesra 59.35 20 LR LR 02 19 28.2
comp=Z,201nm,21.4s,baz=191,slow=34
ESDC Sonseca Array 60.25 7 P **P** 01 55 43.2 -0.9
comp=Z,0.8nm,0.8s,baz=188,slow=6.0,SNR=6.0
ESDC LR LR 02 21 18.5
comp=Z,64nm,20.6s,baz=169,slow=36
comp=Z,0.8nm,0.8s
ESDC Sonseca Array 60.25 7 P **P** 01 55 43.9 -0.1
ATD Arta Tunnel 62.41 64 LR LR 02 20 56.9
comp=Z,319nm,21.4s,baz=208,slow=34
NNA Nana 62.71 267 LR LR 02 22 21.9
comp=Z,154nm,18.7s,baz=104,slow=35
ZARC Zaragoza, Cauc 67.92 287 P **P** 01 56 34.7 -0.2
ZARC IAmb IAmb 01 56 39.4
comp=Z,18nm,1.9s
COHC Cochancay 68.06 276 P **P** 01 56 35.5 -0.3
COHC IAmb IAmb 01 56 46.3
comp=Z,3.7nm,0.9s
QSPA South Pole Qui 69.74 180 P **P** 01 56 44.8 -0.8
QSPA IAmb IAmb 01 56 55.7
comp=Z,9.2nm,1.1s
DAVA Damuels 70.19 15 *eP* **P** 01 56 48.6 +0.1
comp=Z,6.9nm,1.0s
ABTA Abfaltersbach 70.39 17 *eP* **P** 01 56 51.0 +1.3
comp=Z,5.6nm,1.2s
SQTA Sankt Quirin 70.47 16 *eP* **P** 01 56 51.3 +1.2
comp=Z,4.7nm,1.1s
RETA Reutte 70.60 16 *eP* **P** 01 56 51.8 +0.9
comp=Z,8.2nm,1.9s
MYKA Terra Mystica 70.61 18 *eP* **P** 01 56 53.1 +2.1
comp=Z,4.4nm,1.4s
WTTA Wattenberg 70.62 17 *eP* **P** 01 56 51.2 +0.1
comp=Z,7.9nm,1.1s
OBKA Obir 70.77 19 *eP* P 01 56 58.3 +6.3
comp=Z,6.3nm,1.2s
KBA Koelnbreinsper 70.93 18 *eP* **P** 01 56 54.5 +1.4
comp=Z,5.6nm,1.6s
SOKA Soboth 71.07 19 *eP* **P** 01 56 54.4 +0.6
comp=Z,7.9nm,1.4s
BIOA Bad Ischl, Aus 71.57 18 *eP* **P** 01 56 57.5 +0.8
comp=Z,1.2nm,0.4s
ARSA Arzberg 71.73 19 *eP* **P** 01 56 59.2 +1.4
comp=Z,3.5nm,0.8s
MOA Molln 71.89 18 *eP* **P** 01 57 03.2 +4.5
comp=Z,2.7nm,1.1s
RONA Rosalia, Austr 72.38 19 *eP* **P** 01 57 03.4 +1.9
comp=Z,2.7nm,1.0s
CONA Conrad Observa 72.44 19 *eP* **P** 01 57 03.7 +1.7
comp=Z,7.7nm,1.5s
GERES GERESS Array B 72.63 17 P **P** 01 57 03.3 +0.1
comp=Z,1.0nm,1.1s,baz=205,slow=5.7,SNR=4.2
comp=Z,1.0nm,1.1s
GERES GERESS Array B 72.63 17 P **P** 01 57 02.9 -0.3
MODS Modra-Piesok 73.28 20 *eP* **P** 01 57 08.4 +1.5
BR131 Keskin Array S 73.35 35 P **P** 01 57 08.2 +0.6
BR131 IAmb IAmb 01 57 21.2
comp=Z,9.7nm,1.1s
BRTR Keskin Array B 73.35 35 P **P** 01 57 09.2 +1.5
comp=Z,1.9nm,0.9s,baz=194,slow=6.3,SNR=8.7
comp=Z,1.9nm,0.9s
BRTR Keskin Array B 73.35 35 **P** 01 57 07.7 0.0
CLL Collm 74.69 16 *eP* **P** 01 57 18.0 +3.0
CLL Lm MLR 02 29 00.0
comp=Z,100nm,21.3s
CRVS Cervenica-Dubn 75.13 22 *eP* **P** 01 57 20.5 +2.8
AKASG Malin Array Be 79.52 25 P **P** 01 57 41.5 -0.7
comp=Z,0.8nm,0.4s,baz=223,slow=5.4,SNR=8.3
comp=Z,0.8nm,0.4s
AKASG Malin Array Be 79.52 25 P **P** 01 57 41.1 -1.0
SBA Scott Base 81.90 180 P **P** 01 57 54.2 -0.5
VNDA Vanda 82.17 179 P **P** 01 57 57.5 +1.4
comp=Z,2.0nm,0.9s,baz=215,slow=4.8,SNR=8.9
comp=Z,2.0nm,0.9s
VNDA Vanda 82.17 179 P **P** 01 57 54.9 -1.2
NOA NORSAR Array B 83.30 11 P **P** 01 58 03.5 +1.4
comp=Z,1.1nm,0.9s,baz=203,slow=5.4,SNR=4.6
comp=Z,1.1nm,0.9s
Q56A Snyder Ridge, 86.41 314 P **P** 01 58 16.4 -1.8
FINES FINESS Array B 87.07 17 P **P** 01 58 21.5 +0.6
comp=Z,1.0nm,0.7s,baz=162,slow=5.7,SNR=2.1
comp=Z,1.0nm,0.7s
250A Grady 88.28 305 P **P** 01 58 26.1 -1.3
V48A Smith Brothers 90.29 308 P **P** 01 58 35.0 -1.8
SONM Songino Array 123.71 46 PKP **PKPdf** 02 04 32.3 -1.3
comp=Z,0.4nm,0.5s,baz=2.9,slow=2.9,SNR=1.9
ASAR Alice Springs 124.85 141 PKP **PKPdf** 02 04 35.1 -1.4
comp=Z,0.3nm,0.7s,baz=240,slow=1.4,SNR=2.2
ILAR Eielson Array 126.77 338 PKP **PKPdf** 02 04 38.0 -0.7
comp=Z,0.7nm,1.0s,baz=22,slow=0.6,SNR=5.2
PETK Petropavlovsk- 146.40 11 PKPbc **PKPab** 02 05 17.3 -0.1
comp=Z,1.3nm,0.4s,baz=12,slow=17,SNR=4.1
MJAR Matsushiro Arr 149.30 52 PKPbc **PKiKP** 02 05 25.8 -0.3
comp=Z,0.8nm,0.3s,baz=280,slow=1.4,SNR=5.1

*IDC **14** 01:48:23.1±1.2,20.52S×11.68W,h0km,mb4.0/9, mbtmp4.0/9, Error ellipse: s-maj=59.9km s-min=26.3km az=122.0*
*NEIC **14** 01:48:24.2±1.2,20.7S±0.2×11.5W±0.2,h10km±1km, mb4.7/7, Error ellipse: s-maj=37.8km s-min=10.8km az=312.0*
ISC 14 01:48:24.1±0.7,20.6S±0.2×11.6W±0.2,h10km,n25, σ0981/22,mb4.1/12,Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHEL	**Horse Pasture**	**7.24**	**51**	Pn	**Pn**	**01 50 09.8**	**-0.2**
H10S2	**ASCENSION HYDR**	**11.96**	**345**	T	T	02 03 30.3	
	baz=166,slow=74,SNR=9.4						
H10S3	**ASCENSION HYDR**	**11.97**	**345**	T	T	02 03 30.7	
	baz=54,slow=74,SNR=11						
DBIC	**Dimbokro**	**27.92**	**14**	P	**P**	**01 54 14.5**	**-0.1**
DBIC				IAmb	IAmb	01 54 26.1	
	comp=Z,24nm,1.4s						
TOA0	**Torodi Ar. Sit**	**36.01**	**22**	P	**P**	**01 55 24.6**	**-1.0**
TOA0				IAmb	IAmb	01 55 36.9	
	comp=Z,15nm,1.1s						
TORD	**Torodi Ar. Bea**	**36.01**	**22**	P	**P**	**01 55 25.8**	**+0.2**
	comp=Z,4.8nm,0.6s,baz=201,slow=7.3,SNR=19						
TORD	**Torodi Ar. Bea**	**36.01**	**22**	P	**P**	**01 55 24.8**	**-0.8**
TORD				IAmb	IAmb	01 55 36.9	
	comp=Z,15nm,1.2s						
CPUP	**Villa Florida**	**42.16**	**253**	P	**P**	**01 56 17.1**	**+0.1**
	comp=Z,3.3nm,1.0s,baz=114,slow=6.4,SNR=3.2						
	comp=Z,3.3nm,1.0s						
CPUP	**Villa Florida**	**42.16**	**253**	P	**P**	**01 56 16.4**	**-0.6**
CPUP				IAmb	IAmb	01 56 24.7	
	comp=Z,8.6nm,1.1s						
ESDC	**Sonseca Array**	**60.40**	**7**	P	**P**	**01 58 33.6**	**-0.1**
	comp=Z,1.1nm,1.0s,baz=177,slow=9.9,SNR=4.2						
	comp=Z,1.1nm,1.0s						
ESDC	**Sonseca Array**	**60.40**	**7**	P	**P**	**01 58 32.9**	**-0.8**
QSPA	**South Pole Qui**	**69.57**	**180**	P	**P**	**01 59 32.2**	**-1.0**
QSPA	**South Pole Qui**	**69.57**	**180**	IAmb	IAmb	01 59 32.8	
	comp=Z,8.0nm,0.7s						
QSPA	**South Pole Qui**	**69.57**	**180**	P	**P**	**01 59 32.2**	**-1.0**
GERES	**GERESS Array B**	**72.75**	**17**	P	**P**	**01 59 54.4**	**+1.9**
	comp=Z,0.3nm,0.5s,baz=141,slow=6.3,SNR=2.1						
	comp=Z,0.3nm,0.5s						
GERES	**GERESS Array B**	**72.75**	**17**	P	**P**	**01 59 52.4**	**-0.1**
AKASG	**Malin Array Be**	**79.60**	**25**	P	**P**	**02 00 30.9**	**-0.3**
	comp=Z,0.3nm,0.2s,baz=227,slow=5.5,SNR=4.7						
	comp=Z,0.3nm,0.2s						
KBZ	**Khabaz**	**81.19**	**37**	P	**P**	**02 00 40.2**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=252,slow=6.5,SNR=2.4						
	comp=Z,1.3nm,0.7s						
VNDA	**Vanda**	**81.99**	**179**	P	**P**	**02 00 45.5**	**+1.7**
	comp=Z,1.0nm,1.0s,baz=207,slow=2.1,SNR=3.1						
	comp=Z,1.0nm,1.0s						
VNDA	**Vanda**	**81.99**	**179**	P	**P**	**02 00 44.0**	**+0.2**
VNDA				IAmb	IAmb	02 00 48.8	
	comp=Z,6.8nm,1.5s						
NOA	**NORSAR Array B**	**83.43**	**11**	P	**P**	**02 00 52.2**	**+0.9**
	comp=Z,1.1nm,1.1s,baz=183,slow=17,SNR=3.5						
	comp=Z,1.1nm,1.1s						
FINES	**FINESS Array B**	**87.18**	**17**	P	**P**	**02 01 10.0**	**0.0**
	comp=Z,0.6nm,0.6s,baz=204,slow=4.2,SNR=4.3						
	comp=Z,0.6nm,0.6s						
FINES	**FINESS Array B**	**87.18**	**17**	P	**P**	**02 01 10.4**	**+0.4**
PETK	**Petropavlovsk-**	**146.54**	**12**	PKPbc	**PKPdf**	**02 08 04.2**	**+0.1**
	comp=Z,2.2nm,0.9s,baz=266,slow=2.3,SNR=3.6						
PETK	**Petropavlovsk-**	**146.54**	**12**		**PKPbc**	**02 08 05.3**	**-0.2**

*NOU **14** 01:48:20.7, 14.68S×174.73W, h421km, mb4.6/18, Samoa Islands Region*
*NEIC **14** 01:49:08.9±2.0, 17.9S±0.1×178.2W±0.2, h622km±8km, mb4.2/47, Error ellipse: s-maj=23.5km s-min=16.2km az=121.0*
*IDC **14** 01:49:11.1±0.9, 18.04S×178.38W, h640km±9km, mb3.6/13, mbtmp4.6/15, Error ellipse: s-maj=16.2km s-min=10.8km az=132.0*
ISC 14 01:49:10.4±0.5, 17.96S±0.09×178.24W±0.09, h650km, n163, σ1979/161, mb4.1/35, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.55**	**273**	P	**P**	**01 50 36.1**	**-0.7**
	43nm,0.5s,baz=155,slow=3.1,SNR=74						
MSVF				S	**S**	**01 51 45.8**	**-1.4**
	11nm,0.9s,baz=274,slow=22,SNR=10.0						
MSVF	**Nonsavu**	**3.55**	**273**	P	**P**	**01 50 35.9**	**-0.9**
AFI	**Afiamalu**	**7.40**	**58**	P	**P**	**01 51 03.4**	**-2.9**
DZM	**Mont Dzumac**	**14.97**	**252**	P	**P**	**01 52 16.3**	**-0.1**
	13nm,0.9s,baz=120,slow=19,SNR=2.5						
DZM	**Mont Dzumac**	**14.97**	**252**	P	**P**	**01 52 15.6**	**-0.8**
DZM				IAmb	IAmb	01 52 17.7	
	comp=Z,26nm,1.1s						
DZM	**Mont Dzumac**	**14.97**	**252**	P	**P**	**01 52 17.5**	**+1.1**
OUZ	**Omahuta**	**18.66**	**201**	P	**P**	**01 52 51.2**	**+1.5**
OUZ	**Omahuta**	**18.66**	**201**	P	**P**	**01 52 51.1**	**+1.3**
MKAZ	**Moumakai**	**19.94**	**196**	P	**P**	**01 53 02.3**	**+1.0**
HAZ	**Te Kaha**	**20.03**	**189**	P	**P**	**01 53 00.9**	**-1.1**
PKGZ	**Pakihiroa**	**20.11**	**189**	P	**P**	**01 53 01.9**	**-0.9**
PUZ	**Puketiti**	**20.27**	**188**	P	**P**	**01 53 03.9**	**-0.3**
TWKZ	**Tauwhareparae**	**20.41**	**189**	P	**P**	**01 53 05.8**	**+0.3**
URZ	**Urewera**	**20.63**	**190**	P	**P**	**01 53 03.8**	**-3.5**
	comp=Z,5.4nm,0.3s,baz=179,slow=0.7,SNR=8.2						
URZ	**Urewera**	**20.63**	**190**	P	**P**	**01 53 04.3**	**-3.1**
URZ	**Urewera**	**20.63**	**190**	P	**P**	**01 53 05.4**	**-2.0**
MWZ	**Matawai**	**20.63**	**189**	P	**P**	**01 53 05.4**	**-2.0**
RTZ	**Ruatahuna**	**21.00**	**191**	P	**P**	**01 53 05.5**	**-5.3**
MTHZ	**Maungataniwha**	**21.25**	**191**	P	**P**	**01 53 11.6**	**-1.4**
NMHZ	**Naumai**	**21.50**	**191**	P	**P**	**01 53 13.4**	**-1.8**
BKZ	**Black Stump Fm**	**21.62**	**191**	P	**P**	**01 53 13.6**	**-2.7**
BKZ	**Black Stump Fm**	**21.62**	**191**	P	**P**	**01 53 13.7**	**-2.6**
TMVZ	**Te Maari**	**21.73**	**193**	P	**P**	**01 53 15.9**	**-1.4**
TWVZ	**Taurewa**	**21.74**	**193**	P	**P**	**01 53 16.0**	**-1.4**
ETVZ	**East Tongariro**	**21.75**	**193**	P	**P**	**01 53 16.1**	**-1.4**
OTVZ	**Oturere**	**21.78**	**193**	P	**P**	**01 53 15.8**	**-2.0**
TUVZ	**Tukino**	**21.88**	**193**	P	**P**	**01 53 16.9**	**-1.8**
WNVZ	**Whakaipo**	**21.95**	**193**	P	**P**	**01 53 17.4**	**-2.0**
BHHZ	**Black Hill Sta**	**22.02**	**192**	P	**P**	**01 53 16.8**	**-3.0**
KRHZ	**Kereru**	**22.11**	**191**	P	**P**	**01 53 19.6**	**-1.0**
TSZ	**Takapari Road**	**22.59**	**192**	P	**P**	**01 53 23.7**	**-1.1**
PRHZ	**Porangahau**	**22.66**	**190**	P	**P**	**01 53 23.7**	**-1.8**
ANWZ	**Angora Road**	**22.88**	**190**	P	**P**	**01 53 25.1**	**-2.2**
BFZ	**Birch Farm**	**23.14**	**191**	P	**P**	**01 53 27.1**	**-2.6**
BFZ	**Birch Farm**	**23.14**	**191**	P	**P**	**01 53 27.5**	**-2.1**
MRZ	**Mangatainoka R**	**23.24**	**192**	P	**P**	**01 53 27.4**	**-3.2**
OGWZ	**Otaki Gorge**	**23.47**	**193**	P	**P**	**01 53 29.8**	**-2.8**
HOWZ	**Holdsworth Sta**	**23.48**	**192**	P	**P**	**01 53 30.3**	**-2.5**
KIW	**Kapiti Island**	**23.57**	**193**	P	**P**	**01 53 27.9**	**-5.6**
TMWZ	**Te Maipa**	**23.61**	**191**	P	**P**	**01 53 30.6**	**-3.3**
MTW	**Mount Morrison**	**23.74**	**192**	P	**P**	**01 53 30.8**	**-4.1**
DUWZ	**D'Urville Isla**	**23.74**	**195**	P	**P**	**01 53 32.2**	**-2.8**
CAW	**Cannon Point**	**23.77**	**193**	P	**P**	**01 53 31.8**	**-3.5**
TRWZ	**Traveller**	**23.93**	**191**	P	**P**	**01 53 34.5**	**-2.2**
PAWZ	**Paruwai Farm**	**23.97**	**192**	P	**P**	**01 53 34.4**	**-2.6**
MSWZ	**Moiki Station**	**24.03**	**192**	P	**P**	**01 53 34.9**	**-2.7**
SNZO	**South Karori**	**24.05**	**193**	P	**P**	**01 53 35.9**	**-1.7**
TCW	**Tory Channel**	**24.05**	**194**	P	**P**	**01 53 35.3**	**-2.3**
BHW	**Baring Head**	**24.11**	**193**	P	**P**	**01 53 36.4**	**-1.8**
QRZ	**Quartz Range**	**24.13**	**197**	P	**P**	**01 53 37.5**	**-1.0**
QRZ	**Quartz Range**	**24.13**	**197**	P	**P**	**01 53 38.2**	**-0.2**
PLWZ	**Palliser**	**24.18**	**192**	P	**P**	**01 53 36.1**	**-2.8**
TKNZ	**Takaka Hill**	**24.21**	**196**	P	**P**	**01 53 37.2**	**-2.0**
NNZ	**Nelson**	**24.27**	**196**	P	**P**	**01 53 37.9**	**-1.7**
TUWZ	**Tuamarina**	**24.33**	**194**	P	**P**	**01 53 37.5**	**-2.7**
MRNZ	**Matariki Terra**	**24.60**	**196**	P	**P**	**01 53 39.9**	**-2.7**
BSWZ	**Blackbirch Sta**	**24.62**	**194**	P	**P**	**01 53 40.0**	**-2.7**
THZ	**Tophouse**	**24.90**	**196**	P	**P**	**01 53 43.6**	**-1.7**
THZ	**Tophouse**	**24.90**	**196**	P	**P**	**01 53 44.3**	**-1.0**
DSZ	**Denniston Nort**	**25.19**	**198**	P	**P**	**01 53 46.8**	**-1.0**
KHZ	**Kahutara**	**25.36**	**194**	P	**P**	**01 53 47.2**	**-2.0**
KHZ	**Kahutara**	**25.36**	**194**	P	**P**	**01 53 47.3**	**-1.9**
LTZ	**Lake Taylor**	**26.02**	**196**	P	**P**	**01 53 52.9**	**-2.2**
OXZ	**Oxford**	**26.59**	**196**	P	**P**	**01 53 58.2**	**-1.8**
MQZ	**McQueen's Vall**	**26.79**	**195**	P	**P**	**01 53 59.6**	**-2.1**
RPZ	**Rata Peaks**	**27.22**	**197**	P	**P**	**01 54 03.9**	**-1.6**
	comp=Z,6.1nm,0.4s,baz=303,slow=5.4,SNR=11						
	comp=Z,6.1nm,0.4s						
RPZ	**Rata Peaks**	**27.22**	**197**	P	**P**	**01 54 06.2**	**+0.8**
FOZ	**Fox Glacier**	**27.42**	**199**	P	**P**	**01 54 05.5**	**-1.6**
ODZ	**Otahua Downs**	**28.56**	**197**	P	**P**	**01 54 15.7**	**-1.3**
QLP	**Quilpie**	**35.67**	**249**	P	**P**	**01 55 17.4**	**+0.3**
STKA	**Stephens Creek**	**38.75**	**241**	P	**P**	**01 55 42.9**	**+1.0**
	comp=Z,12nm,0.7s,baz=84,slow=9.1,SNR=22						
	comp=Z,12nm,0.7s						
STKA	**Stephens Creek**	**38.75**	**241**	P	**P**	**01 55 42.8**	**+1.0**
HTT	**Hallett**	**41.26**	**240**	P	**P**	**01 56 02.6**	**+0.8**
LCRK	**Leigh Creek**	**41.38**	**244**	P	**P**	**01 56 03.2**	**+0.4**
NAPP	**Napperby**	**41.85**	**240**	P	**P**	**01 56 07.6**	**+1.2**
OOD	**Oodnadatta**	**43.35**	**248**	P	**P**	**01 56 19.1**	**+1.0**
BBOO	**Buckleboo**	**43.52**	**241**	P	**P**	**01 56 19.6**	**+0.2**
WB2	**Warramunga Arr**	**44.77**	**260**	P	**P**	**01 56 28.8**	**-0.3**
WRA	**Warramunga Arr**	**44.78**	**260**	P	**P**	**01 56 29.2**	**0.0**
	comp=Z,5.8nm,0.4s,baz=95,slow=6.9,SNR=224						
WRA				PcP	**PcP**	**01 57 57.3**	**+0.7**
	comp=Z,0.5nm,0.3s,baz=92,slow=3.4,SNR=2.2						
WRA				S	**S**	**02 02 18.0**	**-3.5**
	comp=Z,0.6nm,0.9s,baz=100,slow=13,SNR=2.0						
	comp=Z,5.8nm,0.4s						
WRA	**Warramunga Arr**	**44.78**	**260**	P	**P**	**01 56 28.4**	**-0.8**
WRA					**PcP**	**01 57 57.2**	**+0.6**
AS31	**Alice Springs**	**44.93**	**254**	P	**P**	**01 56 30.6**	**+0.2**
AS31				IAmb	IAmb	01 56 32.3	
	comp=Z,6.1nm,0.5s						
ASAR	**Alice Springs**	**44.94**	**254**	P	**P**	**01 56 30.7**	**+0.4**
	comp=Z,14nm,0.4s,baz=89,slow=8.0,SNR=188						
ASAR				PcP	**PcP**	**01 57 58.2**	**+1.1**
	comp=Z,1.1nm,0.4s,baz=103,slow=3.9,SNR=5.3						
ASAR				ScP	**ScP**	**02 00 53.2**	**+4.2**
	comp=Z,0.3nm,0.6s,baz=100,slow=4.7,SNR=2.1						
ASAR				S	**S**	**02 02 23.1**	**-0.5**
	comp=Z,1.3nm,0.7s,baz=92,slow=15,SNR=9.2						
	comp=Z,1.4nm,0.4s						
ASAR	**Alice Springs**	**44.94**	**254**	P	**P**	**01 56 30.4**	**+0.1**
MULG	**Mulgathing**	**44.94**	**245**	P	**P**	**01 56 30.4**	**+0.2**
SBA	**Scott Base**	**60.38**	**184**	P	**P**	**01 58 21.3**	**+2.9**
SBA				IAmb	IAmb	01 58 22.0	
	comp=Z,7.7nm,0.9s						
VNDA	**Vanda**	**60.41**	**185**	P	**P**	**01 58 20.4**	**+1.7**
	comp=Z,1.5nm,0.5s,baz=0.1,slow=7.8,SNR=13						
	comp=Z,1.5nm,0.5s						
MJAR	**Matsushiro Arr**	**68.05**	**323**	P	**P**	**01 59 08.1**	**+0.7**
	comp=Z,1.8nm,0.5s,baz=160,slow=6.1,SNR=5.3						
	comp=Z,1.8nm,0.5s						
PETK	**Petropavlovsk-**	**73.77**	**345**	P	**P**	**01 59 42.0**	**+1.8**
	comp=Z,3.8nm,0.6s,baz=139,slow=7.3,SNR=8.5						
	comp=Z,3.8nm,0.6s						
PETK	**Petropavlovsk-**	**73.77**	**345**	P	**P**	**01 59 41.2**	**+0.9**
ISA	**Isabella, Lake**	**77.73**	**46**	P	**P**	**02 00 02.6**	**0.0**
ISA				IAmb	IAmb	02 00 06.8	
	comp=Z,4.8nm,0.9s						
NVAR	**Mina Array Bea**	**79.35**	**44**	P	**P**	**02 00 13.9**	**+2.7**
	comp=Z,2.1nm,0.7s,baz=223,slow=8.6,SNR=17						
	comp=Z,2.1nm,0.7s						
KVN	**Kaiserville**	**79.82**	**43**	P	**P**	**02 00 14.9**	**+1.3**
MOD	**Modoc Plateau**	**80.02**	**40**	P	**P**	**02 00 15.3**	**+0.7**
MOD				IAmb	IAmb	02 00 18.0	
	comp=Z,4.2nm,0.7s						
K05A	**Summer Lake**	**80.14**	**39**	P	**P**	**02 00 15.9**	**+0.7**
K05A				IAmb	IAmb	02 00 19.6	
	comp=Z,7.9nm,1.0s						
PINE	**Pine Mountain**	**80.73**	**38**	P	**P**	**02 00 18.7**	**+0.5**
PINE				IAmb	IAmb	02 00 22.2	
	comp=Z,6.0nm,0.9s						
PRN	**Pahroc Range**	**81.00**	**46**	P	**P**	**02 00 18.7**	**-0.9**
PRN				IAmb	IAmb	02 00 23.6	
	comp=Z,3.8nm,0.8s						
BMN	**Battle Mountai**	**81.14**	**43**	P	**P**	**02 00 20.1**	**-0.2**
WVOR	**Wild Horse Val**	**81.34**	**40**	P	**P**	**02 00 20.9**	**-0.3**
WVOR				IAmb	IAmb	02 00 24.9	
	comp=Z,5.1nm,1.0s						
TUC	**Tucson**	**81.60**	**52**	P	**P**	**02 00 24.1**	**+1.3**
BELA	**Belgrano 2**	**82.09**	**173**	P	**P**	**02 00 24.0**	**-0.3**
BELA				IAmb	IAmb	02 00 26.0	
	comp=Z,8.9nm,0.8s						
X16A	**Lo Mia Camp, P**	**82.09**	**50**	P	**P**	**02 00 27.1**	**+1.8**
SUA	**Susitna One**	**82.15**	**13**	P	**P**	**02 00 25.4**	**+0.5**
SUA				IAmb	IAmb	02 00 27.1	
	comp=Z,8.4nm,0.9s						
U15A	**North Rim**	**82.43**	**48**	P	**P**	**02 00 27.7**	**+0.6**
U15A				IAmb	IAmb	02 00 31.2	
	comp=Z,5.2nm,0.8s						
TTA	**Tatalina**	**82.50**	**10**	P	**P**	**02 00 27.1**	**+0.6**
TTA				IAmb	IAmb	02 00 29.5	
	comp=Z,6.9nm,1.1s						
ELK	**Elko**	**82.58**	**43**	P	**P**	**02 00 28.7**	**+1.0**
G08A	**Pilot Rock**	**82.75**	**38**	P	**P**	**02 00 28.1**	**-0.2**
GHO	**Glory Hole Cre**	**82.82**	**14**	P	**P**	**02 00 27.0**	**-1.2**
K20K	**Telida**	**83.23**	**11**	P	**P**	**02 00 29.9**	**-0.1**
K20K				IAmb	IAmb	02 00 32.6	
	comp=Z,6.5nm,0.8s						
SCM	**Sheep Creek Mo**	**83.24**	**14**	P	**P**	**02 00 30.7**	**+0.4**
N25K	**Chitina, Valde**	**83.71**	**15**	P	**P**	**02 00 31.6**	**-1.0**
N25K				IAmb	IAmb	02 00 35.1	
	comp=Z,6.3nm,0.7s						
MAW	**Mawson**	**83.86**	**200**	P	**P**	**02 00 34.0**	**+0.7**
	comp=Z,2.2nm,0.5s,baz=101,slow=5.2,SNR=15						
	comp=Z,2.2nm,0.5s						
TRF	**Thorofare Moun**	**84.03**	**12**	P	**P**	**02 00 32.1**	**-2.1**
F10A	**Beach Ranch, E**	**84.14**	**38**	P	**P**	**02 00 34.1**	**-1.0**
F10A				IAmb	IAmb	02 00 38.1	
	comp=Z,4.0nm,0.9s						
RND	**Reindeer**	**84.28**	**13**	P	**P**	**02 00 36.7**	**+1.4**
DHY	**Denali Highway**	**84.31**	**14**	P	**P**	**02 00 36.9**	**+1.3**
DHY				IAmb	IAmb	02 00 41.2	
	comp=Z,5.1nm,1.2s						
HLID	**Hailey**	**84.56**	**41**	P	**P**	**02 00 37.5**	**+0.2**
HLID				IAmb	IAmb	02 00 41.0	
	comp=Z,3.3nm,0.9s						
HDA	**Harding Lake**	**85.57**	**13**	P	**P**	**02 00 42.8**	**+1.3**
HDA				IAmb	IAmb	02 00 44.1	
	comp=Z,4.2nm,0.4s						
CCB	**Clear Creek Bu**	**85.60**	**13**	P	**P**	**02 00 42.6**	**+1.1**
TX31	**Lajitas Ar. Si**	**85.88**	**58**	P	P	02 00 47.5	+3.6
TXAR	**Lajitas Array**	**85.89**	**58**	P	P	02 00 47.4	+3.5
	comp=Z,2.8nm,0.8s,baz=217,slow=5.9,SNR=34						
	comp=Z,2.8nm,0.8s						
TXAR	**Lajitas Array**	**85.89**	**58**	P	P	02 00 47.2	+3.3
IL31		**85.90**	**13**	P	**P**	**02 00 44.1**	**+1.2**
IL31				IAmb	IAmb	02 00 44.8	
	comp=Z,4.2nm,1.1s						
ILAR	**Eielson Array**	**85.90**	**13**	P	**P**	**02 00 43.9**	**+0.9**
	comp=Z,1.6nm,0.4s,baz=223,slow=5.0,SNR=37						
	comp=Z,1.6nm,0.4s						
ILAR	**Eielson Array**	**85.90**	**13**	P	**P**	**02 00

comp=Z,3.6nm,0.7s
WTTA Wattenberg 149.67 347 *eP* **PKiKP 02 07 50.2 +0.8**
comp=Z,3.7nm,0.5s
MYKA Terra Mystica 149.77 344 *eP* **PKPbc 02 07 46.2 -2.6**
comp=Z,1.2nm,0.5s
ABTA Abfaltersbach 149.95 345 *eP* **PKiKP 02 07 50.0 +0.2**
comp=Z,2.2nm,0.5s
TORD Torodi Ar. Bea 175.21 179 PKPab **PKPab 02 09 49.3 +0.4**
comp=Z,0.4nm,0.7s,baz=201,slow=4.1,SNR=4.7
TORD Torodi Ar. Bea 175.21 179 PKPab 02 09 48.0 -0.9

GII ***14*** *02:07:31.0±0.0,35.˝71N×37.˝48E,h1km,MD2.9/5,Mm3.0/3*
ISK ***14*** *02:07:36.4,34.˝87N×38.˝09E,h5km,ML3.3/12*
GRAL ***14*** *02:07:37.8±0.3,34.˝68N×38.˝47E,h33km±999km,MD3.9*
DDA ***14*** *02:07:38.0±0.0,35.˝08N×38.˝39E,h8km±27km,ML3.3*
ISC 14 02:07:35.7±1.8**,34.79N**±0.˝03×**38.˝17E**±0.˝05**,h5**km±13km**,**
n51,σ**2**≥**10/65,Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HWQ	**Hawqa**	**1.91**	**255**	*eP*		**Pb**	**02 08 10.3**	**-0.7**
HWQ				*eS*		**Sb**	**02 08 34.3**	**-0.9**
YAYL	**Yayladag**	**2.10**	**307**	PN		**Pb**	**02 08 12.8**	**-1.5**
YAYL				SN		**Sb**	**02 08 39.2**	**-1.5**
SURC	**SANLIURFA_SURC**	**2.12**	**10**	P		**Pn**	**02 08 12.6**	**+0.7**
SURC				S		**Sn**	**02 08 38.6**	**0.0**
SURC				*i* AML		AML	02 08 54.0	
	comp=N,233nm,0.8s							
KUZU	**Kuzuini**	**2.17**	**336**	P		**Pg**	**02 08 16.7**	**-0.7**
KUZU				S		**Sg**	**02 08 49.5**	**+4.0**
KUZU				*i* AML		AML	02 09 00.0	
	comp=E,408nm,0.3s							
KUZU				*i* AML		AML	02 09 07.0	
	comp=N,278nm,0.4s							
BHL	**Bhannes**	**2.26**	**248**	*eP*		**Pn**	**02 08 14.9**	**+1.0**
TAHT	**Tahtakopru-Hat**	**2.27**	**315**	PN		**Pb**	**02 08 14.8**	**-2.3**
TAHT				SN		**Sb**	**02 08 43.4**	**-2.1**
RCY	**Rachaya**	**2.33**	**237**	*eP*		**Pn**	**02 08 15.4**	**+0.6**
RCY				*eS*		**Sn**	**02 08 43.0**	**-0.8**
QRWL	**Qaraoun**	**2.41**	**240**	*eP*		**Pn**	**02 08 16.5**	**+0.7**
DQRL	**Deir Qamar**	**2.41**	**244**	*eP*		**Pn**	**02 08 16.7**	**+0.8**
DQRL				*eS*		**Sn**	**02 08 45.7**	**-0.1**
ASUZ	**Hatay-Arsuz**	**2.46**	**308**	P		**Pg**	**02 08 22.6**	**-0.3**
SHBL	**Chebaa**	**2.47**	**235**	*eP*		**Pn**	**02 08 17.2**	**+0.4**
NATI	**Neve Ativ**	**2.53**	**234**	P		**Pn**	**02 08 17.8**	**+0.4**
NATI	**Neve Ativ**	**2.53**	**234**	Pn		**Pn**	**02 08 17.4**	**0.0**
NATI				Sn		**Sb**	**02 08 52.6**	**-0.4**
GEM	**Giv'at Ha'Em**	**2.61**	**234**	P		**Pn**	**02 08 18.6**	**0.0**
GEM	**Giv'at Ha'Em**	**2.61**	**234**	Pn		**Pn**	**02 08 18.5**	**0.0**
GEM				Sn		**Sb**	**02 08 54.2**	**-1.1**
GZT	**Gaziantep**	**2.61**	**349**	P		**Pb**	**02 08 21.7**	**-1.4**
KSHT	**Keshet**	**2.66**	**228**	Pn		**Pn**	**02 08 19.6**	**+0.3**
KAMA	**Osmaniye**	**2.69**	**333**	P		**Pb**	**02 08 21.8**	**-2.6**
URFA	**Urfa**	**2.70**	**11**	PN		**Pn**	**02 08 21.1**	**+1.2**
HCB	**Kahramanmara**	**2.75**	**339**	P		**Pb**	**02 08 22.9**	**-2.5**
ASF	**Jabal al Asfar**	**2.82**	**203**	P		**Pn**	**02 08 19.6**	**-1.9**
SHMJ	**Saham**	**2.87**	**225**	P		**Pn**	**02 08 23.4**	**+1.3**
KAHM	**Kahramanmaras,**	**2.89**	**341**	P		**Pn**	**02 08 24.1**	**+1.7**
MMA0B	**Mount Meron ar**	**2.90**	**233**	Pn		**Pn**	**02 08 22.7**	**+0.1**
MMA0B				Sn		**Sb**	**02 09 01.9**	**-1.9**
HSUJ	**Al Zarqa**	**3.15**	**212**	P		**Pn**	**02 08 28.0**	**+2.1**
ANDN	**Andirin**	**3.15**	**333**	P		**Pb**	**02 08 28.7**	**-3.6**
MAZI	**Mazidag**	**3.24**	**34**	PN		**Pb**	**02 08 30.8**	**-3.0**
MMLI	**Mount Malkishu**	**3.28**	**225**	PN		**Pn**	**02 08 30.8**	**+3.0**
MMLI	**Mount Malkishu**	**3.28**	**225**	Pn		**Pn**	**02 08 29.2**	**+1.4**
MMLI				Sn		**Sb**	**02 09 13.6**	**-1.0**
KOZT	**Kozan**	**3.29**	**325**	PN		**Pn**	**02 08 29.8**	**+1.0**
HMDT	**Nahal Hemdat**	**3.36**	**222**	P		**Pn**	**02 08 28.6**	**-0.2**
HMDT	**Nahal Hemdat**	**3.36**	**222**	Pn		**Pn**	**02 08 31.5**	**+2.7**
OFRI	**`Ofer**	**3.42**	**232**	Pn		**Pn**	**02 08 29.8**	**0.0**
OFRI				Sn		**Sn**	**02 09 14.2**	**+3.4**
AKO	**Adana**	**3.46**	**321**	P		**Pn**	**02 08 32.8**	**+2.5**
AKCD	**Akcadag**	**3.51**	**357**	P		**Pn**	**02 08 32.7**	**+1.7**
UJAP	**Al Uja**	**3.62**	**219**	PN		**Pn**	**02 08 36.7**	**+4.3**
SLTI	**Sal'it**	**3.65**	**227**	Pn		**Pn**	**02 08 34.0**	**+1.2**
SLTI				Sn		**Sb**	**02 09 22.3**	**-2.8**
SVRC	**Sivrice-ELAZID**	**3.70**	**14**	PN		**Pn**	**02 08 35.6**	**+1.9**
DARE	**Darende-Malaty**	**3.82**	**352**	PN		**Pn**	**02 08 37.1**	**+1.9**
CMRD	**Camardi-Nigde**	**3.85**	**319**	PN		**Pn**	**02 08 37.1**	**+1.3**
SARI	**SarD1z-Kayseri**	**3.88**	**339**	PN		**Pn**	**02 08 37.3**	**+1.1**
DSI	**Dead Sea**	**3.97**	**217**	Pn		**Pn**	**02 08 39.5**	**+2.2**
CUGUR	**Gurin_SVAS**	**4.00**	**350**	P		**Pn**	**02 08 40.5**	**+2.8**
GHAJ	**Ghor Haditha**	**4.11**	**213**	Pn		**Pn**	**02 08 42.9**	**+3.8**
SVAN	**Silvan-Diyarba**	**4.15**	**35**	PN		**Pn**	**02 08 43.1**	**+3.3**
YTIR	**Yattir**	**4.27**	**218**	Pn		**Pn**	**02 08 44.7**	**+3.2**
YTIR				Sn		**Sb**	**02 09 41.5**	**-1.7**
ARPR	**Arapgir-MALATY**	**4.30**	**2**	PN		**Pn**	**02 08 44.2**	**+2.3**
TEKE	**Tekeli-Mersin**	**4.34**	**290**	PN		**Pn**	**02 08 44.7**	**+2.3**
BNN	**Bunyan**	**4.47**	**336**	PN		**Pn**	**02 08 46.0**	**+1.8**
BNGB	**Bingl**	**4.65**	**25**	PN		**Pn**	**02 08 50.1**	**+3.4**
EIL	**Elat**	**5.79**	**209**	PN		**Pn**	**02 09 06.8**	**+4.6**

IDC ***14*** *02:13:25.2±0.6,20.˝45S×11.˝23W,h0km,mb4.0/16,*
mbtmp4.0/16,MS4.6/41,Error ellipse: s-maj=21.2km
s-min=16.5km az=136.0
NEIC ***14*** *02:13:27.8±1.8,20.˝6S±0.˝1×10.˝7W±0.˝1,h10km±1km,*
mb4.9/32,Error ellipse: s-maj=20.2km s-min=17.2km
az=169.0
GCMT ***14*** *02:13:35.8±0.1,20.˝44S±0.˝01×11.˝54W±0.˝01,h12km,*
MW5.3/143,Moment Tensor Solution. s62,c90;
s143,c253; Duration: 1s1 Moment tensor: Scale 10^{17}
Nm; Mrr~0.94±.01; Mθθ0.09±.02; Mφφ0.85±.01;
Mrθ0.32±.05; Mθφ~0.14±.01; Mφr~0.24±.05; Best double
couple: M0.98900×10^{17} *NP1:*φ*182.00000°,*δ*37.00000°,*
λ*-68.00000°. NP2:*φ*335.00000°,*δ*56.00000°,*
λ*-106.00000°. Principal axes: T 0.9270, Plg9.0000°,*
Azm77.0000°; N 0.1240, Plg13.0000°, Azm345.0000°; P
-1.0510, Plg74.0000°, Azm201.0000°; nsta1 refers to
body waves, cutoff=40s. nsta2 refers to surface waves,
cutoff=50s. Triangular moment-rate function
ISC 14 02:13:27.9±0.4**,20.62S**±0.˝08×**10.63W**±0.˝08**,h10**km**,n126,**
σ**1s89/83,mb4.6/42,MS4.6/42,Southern Mid-Atlantic**
Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
H10S2	**ASCENSION HYDR**	**1.22**	**341**	T		T	02 28 32.0	
	baz=166,slow=74,SNR=48							
H10S3	**ASCENSION HYDR**	**1.23**	**341**	T		T	02 28 32.8	
	baz=54,slow=74,SNR=104							
NBRF	**Rio Formoso -**	**26.46**	**293**	*eP*		**P**	**02 19 06.5**	**+1.1**
TSUM	**Tsumeb**	**26.55**	**92**	P		**P**	**02 19 09.5**	**+3.2**
	0.8nm,0.5s,baz=225,slow=7.1,SNR=2.0							
	0.8nm,0.5s							
NBAN	**Anadia - AL**	**27.00**	**290**	*eP*		**P**	**02 19 11.6**	**+1.4**
DBIC	**Dimbokro**	**27.70**	**12**	LR		LR	02 27 38.8	
	comp=Z,1μm,20.7s,baz=197,slow=31							
NBLA	**Lagarto - SE**	**27.79**	**286**	*eP*		**P**	**02 19 17.6**	**+0.2**
RCBR	**Riachuelo**	**28.59**	**297**	LR		LR	02 27 34.4	
	comp=Z,2μm,21.4s,baz=260,slow=30							
SUR	**Sutherland**	**30.37**	**119**	LR		LR	02 29 43.1	
	comp=Z,2μm,21.7s,baz=280,slow=32							
BOSA	**Boshof**	**33.48**	**111**	LR		LR	02 31 54.9	
	comp=Z,1μm,21.2s,baz=280,slow=33							
LBTB	**Lobatse**	**33.61**	**104**	LR		LR	02 32 19.7	
	comp=Z,2μm,21.1s,baz=259,slow=33							
SDBA	**SAO DESIDERIO**	**33.80**	**279**	*eP*		**P**	**02 20 11.3**	**+0.8**
TOA0	**Torodi Ar. Sit**	**35.67**	**21**	P		**P**	**02 20 26.2**	**-0.3**
TOA0				IAmb		IAmb	02 20 48.1	
	comp=Z,23nm,1.1s							
TORD	**Torodi Ar. Bea**	**35.67**	**21**	P		**P**	**02 20 26.2**	**-0.3**
	comp=Z,7.5nm,0.7s,baz=202,slow=8.9,SNR=46							
TORD				LR		LR	02 32 23.8	
	comp=Z,1μm,20.9s,baz=198,slow=32							
	comp=Z,7.5nm,0.7s							
TORD	**Torodi Ar. Bea**	**35.67**	**21**	P		**P**	**02 20 26.2**	**-0.3**
TORD				IAmb		IAmb	02 20 48.1	
	comp=Z,20nm,1.1s							
BDFB	**Brasilia**	**35.82**	**272**	P		P	02 20 21.9	-6.1
	comp=Z,2.8nm,0.9s,baz=182,slow=14,SNR=2.2							
BDFB				LR		LR	02 32 08.5	
	comp=Z,2μm,20.1s,baz=117,slow=32							
	comp=Z,2.8nm,0.9s							
BDFB	**Brasilia**	**35.82**	**272**	P		**P**	**02 20 25.6**	**-2.4**
BDFB	**Brasilia**	**35.82**	**272**	*eP*		**P**	**02 20 29.6**	**+1.6**
MATP	**Matopo**	**36.58**	**97**	LR		LR	02 35 12.6	
	comp=Z,433nm,18.2s,baz=242,slow=35							
LSZ	**Lusaka**	**37.24**	**88**	P		P	02 20 45.0	+4.8
	comp=Z,0.8nm,0.2s,baz=276,slow=12,SNR=1.8							
LSZ				LR		LR	02 34 51.1	
	comp=Z,2μm,21.5s,baz=247,slow=34							
	comp=Z,0.8nm,0.2s							
LSZ	**Lusaka**	**37.24**	**88**	P		**P**	**02 20 39.3**	**-0.9**
CNLB	**Canela**	**37.33**	**248**	*eP*		**P**	**02 20 43.2**	**+2.4**
SMTB	**Santa Maria do**	**37.51**	**283**	*eP*		**P**	**02 20 44.6**	**+2.3**
PCMB	**Pacaembu**	**37.84**	**261**	*eP*		**P**	**02 20 47.9**	**+2.8**
ITAB	**Concordia**	**38.37**	**252**	P		**P**	**02 20 47.9**	**-1.5**
ITAB				IAmb		IAmb	02 20 57.6	
	comp=Z,49nm,1.4s							
ITAB	**Concordia**	**38.37**	**252**	*eP*		**P**	**02 20 50.5**	**+1.0**
PLTB	**Pedras Altas**	**39.90**	**245**	P		**P**	**02 21 01.2**	**-1.0**
PLTB				IAmb		IAmb	02 21 04.5	
	comp=Z,30nm,1.4s							
PLTB	**Pedras Altas**	**39.90**	**245**	*eP*		**P**	**02 21 03.7**	**+1.5**
PRPB	**Paranapebas**	**40.60**	**285**	*eP*		**P**	**02 21 08.9**	**+0.7**
TMAB	**Tom-Au,PA,Br**	**40.78**	**291**	*eP*		**P**	**02 21 12.1**	**+2.5**
ITQB	**Itaqui**	**42.38**	**248**	P		**P**	**02 21 20.8**	**-1.8**
ITQB	**Itaqui**	**42.38**	**248**	*eP*		**P**	**02 21 24.5**	**+2.0**
SALV	**Santo Antonio**	**42.95**	**269**	*eP*		**P**	**02 21 28.3**	**+0.9**
CPUP	**Villa Florida**	**43.03**	**253**	P		P	02 21 23.2	-4.7
	comp=Z,2.7nm,0.9s,baz=110,slow=5.6,SNR=6.8							
CPUP				LR		LR	02 37 12.6	
	comp=Z,2μm,18.2s,baz=86,slow=34							
	comp=Z,2.7nm,0.9s							
CPUP	**Villa Florida**	**43.03**	**253**	P		**P**	**02 21 26.0**	**-2.0**
CPUP	**Villa Florida**	**43.03**	**253**	*eP*		**P**	**02 21 28.0**	**+0.1**
CLDB	**Colider**	**44.41**	**275**	*eP*		**P**	**02 21 41.1**	**+1.9**
MBAR	**Mbarara**	**45.04**	**69**	LR		LR	02 39 09.1	
	comp=Z,506nm,20.6s,baz=226,slow=34							
MALB	**Monte Alegre**	**46.46**	**288**	*eP*		**P**	**02 21 58.4**	**+2.9**
ITTB	**Itaituba**	**46.71**	**284**	*eP*		**P**	**02 21 58.6**	**+1.2**
SIV	**San Ignacio**	**47.97**	**267**	P		P	02 22 01.8	-5.4
	comp=Z,0.8nm,0.3s,baz=90,slow=3.0,SNR=3.3							
	comp=Z,0.8nm,0.3s							
VNA1	**Neumayer--Stat**	**50.06**	**179**	P		**P**	**02 22 20.0**	**-2.4**
KMBO	**Kilima Mbogo**	**50.58**	**74**	LR		LR	02 41 43.0	
	comp=Z,1μm,21.9s,baz=254,slow=33							
VNA3	**Neumayer Olymp**	**50.64**	**180**	P		**P**	**02 22 23.8**	**-3.1**
SNAA	**Sanae**	**51.27**	**177**	P		**P**	**02 22 29.7**	**-1.9**
SNAA	**Sanae**	**51.27**	**177**	P		**P**	**02 22 31.6**	**0.0**
	comp=Z,2.7nm,1.0s,baz=356,slow=10,SNR=4.5							
SNAA				LR		LR	02 39 37.2	
	comp=Z,240nm,20.8s,baz=339,slow=30							
	comp=Z,2.7nm,1.0s							
SNAA	**Sanae**	**51.27**	**177**	P		**P**	**02 22 31.1**	**-0.5**
SAML	**Samuel**	**51.92**	**275**	P		**P**	**02 22 36.1**	**-1.2**
TROLL	**Troll, Antarti**	**51.96**	**175**	P		**P**	**02 22 35.9**	**-1.1**
MDT	**Midelt**	**53.44**	**6**	LR		LR	02 43 29.7	
	comp=Z,430nm,21.5s,baz=193,slow=34							
LVC	**Limon Verde**	**53.92**	**257**	LR		LR	02 45 32.1	
	comp=Z,515nm,20.3s,baz=101,slow=36							
LVC	**Limon Verde**	**53.92**	**257**	*eP*		**P**	**02 22 53.5**	**+1.1**
CO01	**Juntas del Tor**	**54.06**	**247**	P		**P**	**02 22 52.2**	**-1.0**
CO01				IAmb		IAmb	02 22 59.3	
	comp=Z,20nm,1.3s							
GO02	**Mina Guanaco**	**54.15**	**253**	P		**P**	**02 22 53.0**	**-1.0**
PLCA	**Paso Flores**	**54.25**	**234**	LR		LR	02 44 24.2	
	comp=Z,1μm,19.4s,baz=82,slow=34							
LPAZ	**La Paz**	**54.49**	**264**	P		P	02 22 52.0	-5.0
	comp=Z,0.8nm,0.8s,baz=85,slow=11,SNR=2.7							
LPAZ				LR		LR	02 45 45.8	
	comp=Z,1μm,18.3s,baz=116,slow=36							
	comp=Z,0.8nm,0.8s							
LPAZ	**La Paz**	**54.49**	**264**	P		**P**	**02 22 55.8**	**-1.1**
BO01	**Tunca**	**54.64**	**242**	P		**P**	**02 22 56.5**	**-0.6**
GO01	**Chusmiza**	**54.73**	**260**	P		**P**	**02 22 56.3**	**-2.2**
GO01				IAmb		IAmb	02 23 02.1	
	comp=Z,12nm,1.3s							
PB01	**IPOC Station P**	**54.73**	**258**	P		**P**	**02 22 57.2**	**-0.8**
PB01				IAmb		IAmb	02 23 01.9	
	comp=Z,12nm,1.2s							
USHA	**Ushuaia**	**54.95**	**217**	LR		LR	02 43 54.1	
	comp=Z,295nm,19.5s,baz=52,slow=33							
PB07	**IPOC Station P**	**54.97**	**257**	P		**P**	**02 22 59.1**	**-0.7**
PB11	**IPOC Station P**	**55.13**	**260**	P		**P**	**02 22 59.2**	**-1.8**
PB11				IAmb		IAmb	02 23 03.8	
	comp=Z,17nm,1.3s							
PB16	**IPOC Station P**	**55.30**	**262**	P		**P**	**02 23 00.7**	**-2.0**
PB16				IAmb		IAmb	02 23 07.7	
	comp=Z,12nm,1.4s							
PB12	**IPOC Station P**	**56.00**	**261**	P		**P**	**02 23 06.1**	**-1.1**
PB12				IAmb		IAmb	02 23 07.4	
	comp=Z,16nm,1.0s							
PMSA	**Palmer Station**	**56.26**	**204**	LR		LR	02 44 50.5	
	comp=Z,644nm,19.7s,baz=54,slow=34							
PMSA	**Palmer Station**	**56.26**	**204**	*eP*		**P**	**02 23 12.1**	**+4.0**
BELA	**Belgrano 2**	**58.46**	**186**	P		**P**	**02 23 24.4**	**+0.8**
BELA				IAmb		IAmb	02 23 30.7	
	comp=Z,26nm,1.6s							
KEST	**Kesra**	**59.15**	**19**	LR		LR	02 47 24.3	
	comp=Z,574nm,21.4s,baz=168,slow=34							
ESDC	**Sonseca Array**	**60.30**	**6**	P		**P**	**02 23 34.0**	**-2.7**
	comp=Z,1.6nm,1.1s,baz=190,slow=6.5,SNR=4.8							
ESDC				LR		LR	02 47 29.5	
	comp=Z,113nm,20.7s,baz=162,slow=34							
	comp=Z,1.6nm,1.1s							
ESDC	**Sonseca Array**	**60.30**	**6**	P		**P**	**02 23 35.2**	**-1.5**
ATD	**Arta Tunnel**	**61.52**	**64**	LR		LR	02 48 32.8	
	comp=Z,1μm,21.5s,baz=228,slow=34							
VAE	**Valguarnera**	**62.41**	**22**	LR		LR	02 50 24.4	
	comp=Z,539nm,19.4s,baz=161,slow=36							
NNA	**Nana**	**63.77**	**266**	LR		LR	02 49 29.5	
	comp=Z,673nm,21.6s,baz=118,slow=34							
MAW	**Mawson**	**64.83**	**156**	P		**P**	**02 24 08.4**	**+1.8**
	comp=Z,3.5nm,1.1s,baz=277,slow=8.1,SNR=2.9							
MAW				LR		LR	02 46 42.8	
	comp=Z,353nm,20.0s,baz=296,slow=31							
	comp=Z,3.5nm,1.1s							
MAW	**Mawson**	**64.83**	**156**	P		**P**	**02 24 07.8**	**+1.2**
EIL	**Elat**	**66.53**	**43**	LR		LR	02 50 26.7	
	comp=Z,518nm,21.9s,baz=234,slow=33							
SJG	**San Juan**	**66.66**	**301**	LR		LR	02 52 29.2	
	comp=Z,289nm,18.9s,baz=108,slow=36							
ZARC	**Zaragoza, Cauc**	**68.99**	**287**	P		**P**	**02 24 33.3**	**-0.8**
ZARC				IAmb		IAmb	02 24 35.0	
	comp=Z,14nm,1.6s							
MMAI	**Mount Meron Ar**	**69.11**	**40**	LR		LR	02 52 27.7	
	comp=Z,296nm,20.5s,baz=28,slow=34							
QSPA	**South Pole Qui**	**69.58**	**180**	P		**P**	**02 24 36.7**	**-0.3**
FETA	**Feichten**	**70.03**	**15**	*eP*		P	02 24 44.6	+4.7
	comp=Z,9.8nm,1.4s							
DAVA	**Damuels**	**70.07**	**15**	*eP*		**P**	**02 24 38.6**	**-1.6**
	comp=Z,12nm,1.4s							
ABTA	**Abfaltersbach**	**70.23**	**17**	*eP*		P	02 24 46.4	+5.3
	comp=Z,7.6nm,1.5s							
SQTA	**Sankt Quirin**	**70.33**	**16**	*eP*		P	02 24 49.0	+7.3
	comp=Z,10nm,1.3s							
MOTA	**Moosalm**	**70.42**	**16**	*eP*		P	02 24 48.9	+6.6
	comp=Z,5.2nm,1.2s							
RETA	**Reutte**	**70.47**	**15**	*eP*		**P**	**02 24 43.5**	**+1.0**
	comp=Z,6.2nm,1.3s							
WTTA	**Wattenberg**	**70.48**	**16**	*eP*		**P**	**02 24 42.1**	**-0.6**
	comp=Z,12nm,1.2s							
KBA	**Koelnbreinsper**	**70.77**	**17**	*eP*		**P**	**02 24 48.5**	**+4.1**
	comp=Z,4.2nm,1.1s							
SOKA	**Soboth**	**70.88**	**18**	*eP*		**P**	**02 24 45.0**	**0.0**
	comp=Z,6.1nm,1.3s							
ARSA	**Arzberg**	**71.54**	**18**	*eP*		**P**	**02 24 49.3**	**+0.4**
	comp=Z,5.2nm,1.3s							
MOA	**Molln**	**71.72**	**17**	*eP*		**P**	**02 24 53.9**	**+3.8**
	comp=Z,6.6nm,1.3s							
RONA	**Rosalia, Austr**	**72.18**	**19**	*eP*		**P**	**02 24 53.6**	**+0.9**
	comp=Z,8.1nm,1.6s							
CONA	**Conrad Observa**	**72.25**	**18**	*eP*		**P**	**02 24 52.9**	**-0.4**
	comp=Z,8.2nm,1.5s							
GERES	**GERESS Array B**	**72.48**	**17**	P		**P**	**02 24 53.1**	**-1.5**
	comp=Z,0.3nm,0.7s,baz=225,slow=9.5,SNR=4.5							
	comp=Z,0.3nm,0.7s							
GERES	**GERESS Array B**	**72.48**	**17**	P		**P**	**02 24 53.2**	**-1.4**
BRTR	**Keskin Array B**	**72.87**	**34**	P		**P**	**02 24 58.5**	**+1.3**
	comp=Z,0.8nm,0.8s,baz=202,slow=6.1,SNR=5.6							
	comp=Z,0.8nm,0.8s							
BRTR	**Keskin Array B**	**72.87**	**34**	P		**P**	**02 24 55.6**	**-1.7**
MODS	**Modra-Piesok**	**73.08**	**19**	*eP*		**P**	**02 24 57.5**	**-0.6**
VRAC	**Vranov**	**73.71**	**18**	LR		LR	02 56 13.4	
	comp=Z,479nm,21.5s,baz=212,slow=35							
CLL	**Collm**	**74.56**	**15**	*eP*		**P**	**02 25 06.0**	**-0.7**
	comp=Z,14nm,1.8s							
CLL				*eS*		**S**	**02 34 50.0**	**+8.0**
CLL				*ex*		x	02 38 42.0	
CLL					Lm	MLR	03 00 00.0	
	comp=N,200nm,19.7s							
CLL					Lm	MLR	03 00 00.0	
	comp=E,200nm,20.7s							
CLL					Lm	MLR	03 00 00.0	
	comp=Z,300nm,20.1s							
EKA	**Eskdalemuir Ar**	**75.91**	**4**	LR		LR	02 58 06.9	
	comp=Z,158nm,18.8s,baz=220,slow=35							
AKASG	**Malin Array Be**	**79.21**	**25**	P		**P**	**02 25 32.0**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=225,slow=5.1,SNR=6.6							
	comp=Z,0.2nm,0.3s							
AKASG	**Malin Array Be**	**79.21**	**25**	P		**P**	**02 25 31.9**	**-1.0**
JTS	**Las Juntas de**	**79.23**	**285**	LR		LR	03 02 09.6	
	comp=Z,520nm,18.6s,baz=178,slow=37							
SBA	**Scott Base**	**81.73**	**179**	P		**P**	**02 25 46.6**	**+0.4**
SBA				IAmb		IAmb	02 25 55.5	
	comp=Z,12nm,1.1s							
VNDA	**Vanda**	**81.97**	**178**	P		**P**	**02 25 47.5**	**0.0**
	comp=Z,0.7nm,0.8s,baz=216,slow=5.0,SNR=4.3							
	comp=Z,0.7nm,0.8s							
VNDA	**Vanda**	**81.97**	**178**	P		**P**	**02 25 46.7**	**-0.9**
VNDA				IAmb		IAmb	02 25 55.4	
	comp=Z,16nm,1.8s							
HFS	**Hagfors**	**82.87**	**12**	LR		LR	03 03 38.2	
	comp=Z,157nm,19.9s,baz=200,slow=36							
NB2	**NORSAR Subarra**	**83.26**	**11**	P		**P**	**02 25 53.0**	**-1.3**
	comp=Z,24nm,1.7s,baz=204,slow=5.6							
NOA	**NORSAR Array B**	**83.26**	**11**	P		**P**	**02 25 53.3**	**-1.0**
	comp=Z,0.8nm,0.9s,baz=201,slow=5.4,SNR=4.4							
	comp=Z,0.8nm,0.9s							
BORG	**Borgarnes**	**85.49**	**355**	LR		LR	02 57 25.2	
	comp=Z,181nm,20.8s,baz=172,slow=31							
GEYT	**Alibeck**	**86.89**	**48**	LR		LR	03 06 00.7	
	comp=Z,370nm,18.8s,baz=272,slow=36							
FINES	**FINESS Array B**	**86.91**	**17**	P		**P**	**02 26 11.7**	**-0.9**
	comp=Z,0.8nm,0.6s,baz=200,slow=2.8,SNR=1.7							
	comp=Z,0.8nm,0.6s							
KMSC	**Kings Mountain**	**86.96**	**309**	P		**P**	**02 26 11.1**	**-2.4**
RPN	**Rapa Nui**	**88.14**	**242**	LR		LR	02 58 25.3	
	comp=Z,422nm,18.4s,baz=100,slow=31							
TKL	**Tuckaleechee C**	**88.97**	**309**	LR		LR	02 59 32.4	
	comp=Z,134nm,20.2s,baz=140,slow=31							
SCHQ	**Schefferville**	**89.09**	**331**	LR		LR	03 00 37.5	
	comp=Z,121nm,18.0s,baz=153,slow=32							
SADO	**Sadowa**	**90.08**	**318**	LR		LR	02 57 50.3	
	comp=Z,137nm,21.4s,baz=94,slow=30							
CMIG	**Matias Romero**	**90.72**	**288**	LR		LR	03 06 28.3	
	comp=Z,376nm,21.4s,baz=137,slow=35							
SFJD	**Kangerlussuaq**	**92.28**	**345**	LR		LR	02 59 15.4	
	comp=Z,92nm,21.4s,baz=155,slow=30							
AKTO	**Aktyubinsk**	**92.92**	**37**	LR		LR	03 09 50.7	
	comp=Z,149nm,21.7s,baz=216,slow=36							
ASAR	**Alice Springs**	**124.04**	**140**	PKP		**PKiKP**	**02 32 26.9**	**-0.8**
	comp=Z,0.3nm,0.7s,baz=205,slow=1.9,SNR=2.2							
ILAR	**Eielson Array**	**127.32**	**338**	PKP		**PKPdf**	**02 32 30.3**	**-1.9**
	comp=Z,0.2nm,0.5s,baz=22,slow=0.3,SNR=2.4							
PETK	**Petropavlovsk-**	**146.34**	**13**	PKPbc		**PKPdf**	**02 33 06.6**	**-0.9**
	comp=Z,1.4nm,0.7s,baz=8.7,slow=2.7,SNR=8.1							
MJAR	**Matsushi

	comp=Z,9.7nm,1.4s								
CONA	**Conrad Observa**	**72.42**	**19**	*eP*		**P**		**02 28 15.0**	**+0.2**
	comp=Z,5.1nm,1.2s								
GERES	**GERESS Array B**	**72.62**	**17**	P		**P**		**02 28 14.0**	**-1.9**
	comp=Z,0.3nm,0.4s,baz=199,slow=8.3,SNR=5.1								
	comp=Z,0.3nm,0.4s								
CKRC	**Cesky Krumlov**	**72.77**	**18**	*eP*		**P**		**02 28 16.4**	**-0.3**
KHC	**Kasperske Hory**	**72.84**	**17**	*ex*		**P**		**02 28 16.8**	**-0.4**
BR131	**Keskin Array S**	**73.31**	**35**	P		**P**		**02 28 20.2**	**-0.1**
BR131				IAmb		IAmb		02 28 22.9	
	comp=Z,4.5nm,1.0s								
BRTR	**Keskin Array B**	**73.31**	**35**	P		**P**		**02 28 20.9**	**+0.7**
	comp=Z,2.4nm,1.0s,baz=190,slow=6.3,SNR=9.3								
	comp=Z,2.4nm,1.0s								
BRTR	**Keskin Array B**	**73.31**	**35**	P		**P**		**02 28 20.6**	**+0.3**
PSZ	**Piszkesteto**	**73.73**	**22**	P		**P**		**02 28 23.1**	**+0.6**
PSZ				IAmb		IAmb		02 28 25.7	
	comp=Z,9.9nm,1.2s								
OSTC	**Ostas**	**74.87**	**18**	*eP*		**P**		**02 28 28.9**	**-0.1**
AKASG	**Malin Array Be**	**79.49**	**25**	P		**P**		**02 28 53.8**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=226,slow=5.1,SNR=6.1								
	comp=Z,0.3nm,0.3s								
VNDA	**Vanda**	**82.16**	**179**	P		**P**		**02 29 09.3**	**+0.4**
	comp=Z,1.2nm,0.9s,baz=215,slow=4.3,SNR=5.2								
	comp=Z,1.2nm,0.9s								
NOA	**NORSAR Array B**	**83.29**	**11**	P		**P**		**02 29 15.3**	**+0.5**
	comp=Z,1.5nm,1.0s,baz=202,slow=5.3,SNR=3.7								
	comp=Z,1.5nm,1.0s								
FINES	**FINESS Array B**	**87.05**	**17**	P		**P**		**02 29 34.7**	**+1.1**
	comp=Z,1.5nm,0.7s,baz=184,slow=5.7,SNR=4.6								
	comp=Z,1.5nm,0.7s								
FINES	**FINESS Array B**	**87.05**	**17**	P		**P**		**02 29 34.1**	**+0.5**
ILAR	**Eielson Array**	**126.80**	**338**	PKP		**PKPdf**		**02 35 50.6**	**-1.1**
	comp=Z,0.7nm,1.0s,baz=29,slow=1.8,SNR=5.6								
PETK	**Petropavlovsk-**	**146.40**	**12**	PKPbc		**PKPdf**		**02 36 28.3**	**+0.2**
	comp=Z,1.7nm,0.4s,baz=9.0,slow=3.9,SNR=4.9								
PETK	**Petropavlovsk-**	**146.40**	**12**	PKPdf		**PKPdf**		**02 36 27.7**	**-0.4**
MJAR	**Matsushiro Arr**	**149.24**	**52**	PKPbc		**PKPbc**		**02 36 36.2**	**-1.4**
	comp=Z,0.7nm,0.4s,baz=311,slow=2.8,SNR=4.6								

IDC ***14*** *02:31:10.8≈4.1,4.7ˇ73S×102ˇ69E,h0km,mb3.6/6, mbtmp3.6/6,MS4.0/3,Error ellipse: s-maj=185.6km s-min=22.7km az=52.0*

ISC 14 02:31:18.5±3.7,**4.6S**±0.6×**102.9E**±0.9,**h50km**,**n16,** σ0**s75/7**,**mb3.7/6**,**MS4.1/3**,**Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**30.41**	**263**	T	T	03 09 26.5	
	baz=91						
H08S3	**Diego Garcia H**	**30.42**	**263**	T	T	03 09 31.1	
	baz=91						
H08S1	**Diego Garcia H**	**30.43**	**263**	T	T	03 09 40.1	
	baz=91						
H01W3	**Cape Leeuwin H**	**31.89**	**162**	T	T	03 10 55.3	
	baz=338						
H01W2	**Cape Leeuwin H**	**31.90**	**162**	T	T	03 10 55.3	
	baz=338						
H01W1	**Cape Leeuwin H**	**31.90**	**162**	T	T	03 10 53.6	
	baz=338						
WRA	**Warramunga Arr**	**34.18**	**119**	P	**P**	**02 37 58.6**	**-0.8**
	0.8nm,0.9s,baz=300,slow=10,SNR=6.2						
	0.8nm,0.9s						
ASAR	**Alice Springs**	**35.38**	**125**	P	**P**	**02 38 10.5**	**+0.8**
	0.3nm,0.7s,baz=299,slow=7.7,SNR=1.9						
	0.3nm,0.7s						
CTA	**Charters Tower**	**44.87**	**114**	LR	LR	03 00 13.4	
	comp=Z,116nm,18.9s,baz=246,slow=39						
SONM	**Songino Array**	**52.28**	**3**	P	**P**	**02 40 25.7**	**+0.7**
	0.4nm,0.5s,baz=184,slow=6.6,SNR=2.1						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**54.32**	**343**	P	**P**	**02 40 39.6**	**-0.3**
	0.6nm,0.6s,baz=140,slow=7.6,SNR=6.3						
	0.6nm,0.6s						
KURBB	**Kurchatov Arra**	**58.86**	**342**	P	**P**	**02 41 11.7**	**-0.3**
	0.3nm,0.6s,baz=151,slow=5.7,SNR=2.9						
	0.3nm,0.6s						
ZALV	**Zalesovo Beam**	**60.26**	**348**	P	**P**	**02 41 21.0**	**-0.6**
	0.5nm,0.3s,baz=172,slow=7.6,SNR=3.7						
	0.5nm,0.3s						
NRIK	**Noril'sk**	**74.52**	**354**	LR	LR	03 21 14.6	
	comp=Z,102nm,19.3s,baz=250,slow=40						
URZ	**Urewera**	**74.76**	**128**	LR	LR	03 15 53.3	
	comp=Z,106nm,22.0s,baz=211,slow=36						
TXAR	**Lajitas Array**	**144.78**	**43**	PKPbc	**PKPab**	**02 50 49.4**	**-0.3**
	0.1nm,0.4s,baz=270,slow=1.8,SNR=2.2						

IDC ***14*** *02:39:32.5±3.6,35˚81N×70˚16E,h75km±31km,mb3.5/11, mbtmp3.9/15,MS4.3/2,Error ellipse: s-maj=26.6km s-min=17.9km az=5.0*

NNC ***14*** *02:39:37.6±5.3,36˚21N×70˚24E,h113km±76km,mb4.0, mpv4.4,Error ellipse: s-maj=50.6km s-min=37.2km az=147.0*

ISC 14 02:39:37.1±1.0,**36˚23N**±0˚09×**70˚08E**±0˚07,**h100km**,**n34,** σ2**s14/37**,**mb3.6/11**,**3C-3D**,**Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**6.53**	**24**	P	**Pn**	**02 41 11.5**	**+0.7**
	SNR=68						
KK31	**Karatay Array**	**6.87**	**3**	P	**Pn**	**02 41 16.3**	**+1.1**
	7.8nm,0.3s,baz=192,slow=13,SNR=86						
KK31				⇓S	**Sn**	**02 42 33.8**	**+1.9**
	7.5nm,0.4s,baz=190,slow=23,SNR=5.5						
UCH	**Uchtor**	**6.91**	**28**	P	**Pn**	**02 41 16.6**	**+0.6**
	SNR=37						
EKS2	**Erkin-Say**	**7.03**	**23**	P	**Pn**	**02 41 18.4**	**+0.9**
	SNR=18						
AAK	**Ala-Archa**	**7.25**	**27**	P	**Pn**	**02 41 21.3**	**+0.8**
	SNR=14						
AAK	**Ala-Archa**	**7.25**	**27**	P	**Pn**	**02 41 21.1**	**+0.6**
	19nm,0.3s,baz=214,slow=7.7,SNR=20						
AAK				S	**Sn**	**02 42 39.2**	**-2.1**
	6.0nm,0.4s,baz=148,slow=20,SNR=1.6						
KBK	**Karagaybulak**	**7.44**	**29**	P	**Pn**	**02 41 23.8**	**+0.8**
	SNR=17						
CHMS	**Chumysh**	**7.66**	**27**	P	**Pn**	**02 41 26.6**	**+0.6**
	SNR=6.7						
ULHL	**Ulahol**	**7.67**	**37**	P	**Pn**	**02 41 27.5**	**+1.2**
	SNR=12						
USP	**Ospenovka**	**7.81**	**24**	P	**Pn**	**02 41 28.6**	**+0.6**
	SNR=40						
TKM2	**Tokmak 2**	**7.92**	**31**	P	**Pn**	**02 41 29.9**	**+0.2**
	SNR=27						
TKM2	**Tokmak 2**	**7.92**	**31**	⇓P	**Pn**	**02 41 29.8**	**+0.2**
	12nm,0.5s						
TKM2				⇑S	**Sn**	**02 42 57.7**	**0.0**
	1.7nm,0.3s						
GEYT	**Alibeck**	**9.71**	**284**	P	**Pn**	**02 41 53.3**	**-0.6**
	1.8nm,0.5s,baz=112,slow=16,SNR=2.6						
GEYT				S	**Sn**	**02 43 38.7**	**-2.4**
	1.9nm,0.5s,baz=69,slow=25,SNR=2.6						
OTUK	**Ortayu**	**12.12**	**7**	⇓P	**Pn**	**02 42 25.6**	**-0.7**
	3.7nm,0.7s						
MKAR	**Makanchi Array**	**13.95**	**37**	P	**Pn**	**02 42 49.1**	**-1.1**
	1.2nm,0.8s,baz=220,slow=14,SNR=6.2						
AB31	**Akbulak array**	**14.98**	**333**	⇑P	**Pn**	**02 43 02.9**	**-0.5**
	9.9nm,0.4s,baz=152,slow=12,SNR=335						
KURBB	**Kurchatov Arra**	**15.62**	**20**	P	**Pn**	**02 43 09.7**	**-1.8**
	2.5nm,0.6s,baz=210,slow=10,SNR=8.8						
AKTO	**Aktyubinsk**	**16.66**	**332**	P	**Pn**	**02 43 25.3**	**+1.0**
	7.3nm,0.6s,baz=140,slow=17,SNR=27						
AKTO				S	**Sn**	**02 46 20.8**	**-8.3**
	1.5nm,0.6s,baz=119,slow=18,SNR=3.1						
AKTO	**Aktyubinsk**	**16.66**	**332**	⇑P	**P**	**02 43 26.8**	**+1.8**
	8.5nm,0.8s						
ZALV	**Zalesovo Beam**	**20.47**	**25**	P	**P**	**02 44 07.5**	**+0.9**
	10.0nm,0.4s,baz=219,slow=11,SNR=40						
	10.0nm,0.4s						
ARU	**Arti**	**21.66**	**343**	P	**P**	**02 44 20.6**	**+1.4**
	3.7nm,0.6s,baz=163,slow=4.7,SNR=6.4						
	3.7nm,0.6s						
BELG	**Belogornoye**	**22.65**	**323**	P	**P**	**02 44 32.2**	**+2.6**
	9.3nm,0.8s,baz=109,slow=11,SNR=3.8						
	9.3nm,0.8s						
BRTR	**Keskin Array B**	**28.81**	**288**	P	**P**	**02 45 30.4**	**+4.5**
	0.6nm,0.7s,baz=102,slow=9.6,SNR=4.5						
AKASG	**Malin Array Be**	**32.54**	**309**	P	**P**	**02 45 59.4**	**+1.1**
	0.2nm,0.2s,baz=86,slow=7.5,SNR=4.3						
	0.2nm,0.2s						
FINES	**FINESS Array B**	**37.30**	**327**	P	**P**	**02 46 40.3**	**+1.2**
	0.6nm,0.6s,baz=124,slow=12,SNR=3.9						
	0.6nm,0.6s						
ARCES	**ARCESS Array B**	**41.12**	**338**	P	**P**	**02 47 12.3**	**+1.5**
	1.3nm,0.6s,baz=120,slow=7.4,SNR=8.1						
	1.3nm,0.6s						

NB2	**NORSAR Subarra**	**44.15**	**323**	P		**P**		**02 47 35.7**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=97,slow=8.6								
NOA	**NORSAR Array B**	**44.15**	**323**	P		**P**		**02 47 35.6**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=99,slow=7.9,SNR=3.9								
	comp=Z,0.2nm,0.5s								
LEM	**Lembang**	**55.44**	**133**	LR	LR			03 16 05.4	
	comp=Z,297nm,19.0s,baz=242,slow=40								
ESDC	**Sonseca Array**	**56.93**	**298**	P		**P**		**02 49 11.9**	**0.0**
	comp=Z,0.3nm,0.6s,baz=61,slow=8.0,SNR=4.4								
	comp=Z,0.3nm,0.6s								
KAPI	**Kappang**	**61.95**	**121**	LR	LR			03 23 16.5	
	comp=Z,214nm,19.3s,baz=242,slow=42								
TORD	**Torodi Ar. Bea**	**64.97**	**268**	P		**P**		**02 50 04.6**	**-2.0**
	comp=Z,0.6nm,0.7s,baz=49,slow=6.1,SNR=8.4								
	comp=Z,0.6nm,0.7s								
WRA	**Warramunga Arr**	**82.48**	**121**	P		**P**		**02 51 45.5**	**-3.2**
	comp=Z,1.0nm,1.1s,baz=326,slow=4.9,SNR=5.5								
	comp=Z,1.0nm,1.1s								
ASAR	**Alice Springs**	**84.71**	**124**	P		**P**		**02 51 57.3**	**-2.8**
	comp=Z,0.2nm,0.5s,baz=311,slow=5.2,SNR=1.8								
	comp=Z,0.2nm,0.5s								

TUL ***14*** *02:55:29.4±0.4,36˚22N±0˚01×97˚28W±0˚01,h7km±6km, ML3.0,mb_Lg2.9/61(NEIC),Error ellipse: s-maj=2.0km s-min=1.6km az=179.0*

ANF ***14*** *02:55:29.2±0.6,36˚27N×97˚30W,h5km,ML3.1/7,Error ellipse: s-maj=7.4km s-min=4.5km az=177.0*

NEIC ***14*** *02:55:30.0±0.3,36˚22N±0˚02×97˚29W±0˚01,h5km±6km, Error ellipse: s-maj=2.3km s-min=1.1km az=184.0*

ISC 14 02:55:29.6±1.1,**36˚23N**±0˚04×**97˚30W**±0˚03,**h10km**,**n49,** σ0**s91**/30,**Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKCFA	**Oklahoma City**	**0.82**	**189**	Pg	**Pg**	**02 55 44.9**	**-0.6**
OKCFA	**Oklahoma City**	**0.82**	**189**	P	**Pg**	**02 55 45.2**	**-0.3**
	baz=9.4						
OKCSW	**OKLAHOMA CITY**	**0.83**	**188**	Pg	**Pg**	**02 55 44.6**	**-1.0**
T35A	**Sooner Cattle**	**0.93**	**43**	Pg	**Pg**	**02 55 47.0**	**-0.7**
T35B	**Sooner Cattle**	**0.93**	**43**	P	**Pg**	**02 55 46.9**	**-0.7**
	baz=222						
FNO	**Franklin**	**0.97**	**185**	Pg	**Pg**	**02 55 47.6**	**-0.8**
TUL1	**Leonard**	**1.26**	**104**		**Pn**	**02 55 52.1**	**-1.3**
TUL1				IAmb_Lg		02 56 12.0	
	comp=Z,74nm,0.9s						
TUL1	**Leonard**	**1.26**	**104**	P	**Pn**	**02 55 52.1**	**-1.3**
	baz=285						
TUL1				S	**Sb**	**02 56 08.9**	**-0.9**
	baz=285						
U32A	**Winter Ranch,**	**1.38**	**277**		**Pn**	**02 55 54.6**	**-0.4**
U32A	**Winter Ranch,**	**1.38**	**277**	P	**Pn**	**02 55 54.9**	**-0.2**
	baz=96						
U32A				S	**Sb**	**02 56 14.1**	**+0.7**
	baz=96						
X34A	**Smith Ranch, M**	**1.68**	**195**	Pn	**Pn**	**02 55 59.8**	**+0.7**
WMOK	**Wichita Mounta**	**1.92**	**220**		**Pn**	**02 56 03.3**	**+0.9**
WMOK				IAmb_Lg		02 56 30.3	
	comp=Z,72nm,0.7s						
WMOK	**Wichita Mounta**	**1.92**	**220**	P	**Pn**	**02 56 03.3**	**+0.9**
	baz=39						
WMOK				S	**Sb**	**02 56 28.9**	**+0.2**
	baz=39						
X37A	**Clayton**	**2.27**	**136**	Pn	**Pn**	**02 56 08.0**	**+0.7**
X37A	**Clayton**	**2.27**	**136**	P	**Pn**	**02 56 07.9**	**+0.7**
	baz=317						
X37A				S	**Sb**	**02 56 40.0**	**+1.1**
	baz=317						
U38A	**Gravette**	**2.36**	**84**	P	**Pn**	**02 56 10.2**	**+1.7**
	baz=265						
KSU1	**Kansas State U**	**2.92**	**11**	IAmb_Lg		02 57 03.9	
	comp=Z,26nm,0.9s						
W39A	**Magazine**	**3.04**	**109**	Pn	**Pn**	**02 56 19.0**	**+1.2**
W39A				IAmb_Lg		02 57 12.7	
	comp=Z,37nm,0.8s						
MIAR	**Mount Ida**	**3.48**	**118**	Pn	**Pn**	**02 56 23.9**	**+0.1**
MIAR	**Mount Ida**	**3.48**	**118**	P	**Pn**	**02 56 24.7**	**+1.0**
	baz=300						
S39A	**Bolivar**	**3.50**	**64**	Pn	**Pn**	**02 56 24.9**	**+0.8**
U40A	**Yellville**	**3.59**	**87**	Pn	**Pn**	**02 56 26.4**	**+1.0**
U40A				IAmb_Lg		02 57 27.5	
	comp=Z,40nm,1.0s						
AMTX	**Amarillo**	**3.82**	**251**	IAmb_Lg		02 57 35.8	
	comp=Z,27nm,0.9s						
X40A	**Basin Creek Fa**	**4.04**	**114**	Pn	**Pn**	**02 56 32.9**	**+1.3**
X40A				IAmb_Lg		02 57 44.6	
	comp=Z,27nm,0.9s						
ABTX	**Abilene, Hawle**	**4.08**	**209**	IAmb_Lg		02 57 40.8	
	comp=Z,26nm,1.2s						
MGMO	**Mountain Grove**	**4.15**	**76**	Pn	**Pn**	**02 56 34.2**	**+1.1**
WHAR	**Wooly Hollow**	**4.18**	**101**	IAmb_Lg		02 57 48.0	
	comp=Z,30nm,0.9s						
FCAR	**Ozark Folk Cen**	**4.21**	**93**	Pn	**Pn**	**02 56 33.7**	**-0.1**
FCAR				IAmb_Lg		02 57 41.2	
	comp=Z,28nm,0.7s						
W41B	**Gary Mavity, V**	**4.24**	**103**	IAmb_Lg		02 57 49.7	
	comp=Z,25nm,0.8s						
WLAR	**White Oak Lake**	**4.27**	**125**	IAmb_Lg		02 57 54.6	
	comp=Z,25nm,1.0s						
UALR	**University of**	**4.30**	**108**	IAmb_Lg		02 57 48.2	
	comp=Z,31nm,1.2s						
R40A	**Maddies Stadio**	**4.51**	**61**	Pn	**Pn**	**02 56 37.7**	**-0.3**
R40A				IAmb_Lg		02 57 57.6	
	comp=Z,15nm,0.8s						
Z41A	**Richland Creek**	**4.74**	**127**	IAmb_Lg		02 58 12.4	
	comp=Z,26nm,1.2s						
N35A	**Tabor**	**4.80**	**15**	IAmb_Lg		02 58 07.7	
	comp=Z,22nm,0.8s						
KSCO	**Kaye Shedlock'**	**5.06**	**305**	IAmb_Lg		02 58 18.1	
	comp=Z,17nm,0.9s						
CCAR	**Cane Creek**	**5.09**	**115**	IAmb_Lg		02 58 18.5	
	comp=Z,15nm,0.8s						
N38A	**Joes South For**	**5.56**	**34**	IAmb_Lg		02 58 28.7	
	comp=Z,17nm,0.9s						
PBMO	**Poplar Bluff**	**5.56**	**82**	IAmb_Lg		02 58 27.1	
	comp=Z,21nm,0.7s						
FVM	**French Village**	**5.76**	**70**	IAmb_Lg		02 58 31.0	
	comp=Z,18nm,0.9s						
T25A	**Trinidad**	**5.79**	**281**	IAmb_Lg		02 58 36.6	
	comp=Z,14nm,0.9s						
OGNE	**Ogallala**	**5.99**	**323**	IAmb_Lg		02 58 47.8	
	comp=Z,13nm,0.9s						
JCT	**Junction City**	**6.11**	**201**	IAmb_Lg		02 58 46.8	
	comp=Z,12nm,1.0s						
K31A	**O'Neill**	**6.48**	**350**	IAmb_Lg		02 59 01.9	
	comp=Z,20nm,0.8s						
Q24A	**Divide**	**6.80**	**296**	IAmb_Lg		02 59 23.9	
	comp=Z,11nm,0.8s						
ECSD	**EROS Data Cent**	**7.51**	**4**	Pn	**Pn**	**02 57 19.7**	**+0.4**
PLAL	**Pickwick Lake**	**7.62**	**97**	IAmb_Lg		02 59 36.2	
	comp=Z,8.9nm,1.0s						
O44A	**Mansfield**	**7.98**	**58**	IAmb_Lg		02 59 46.8	
	comp=Z,12nm,0.7s						
N23A	**Red Feather La**	**8.22**	**307**	IAmb_Lg		03 00 04.3	
	comp=Z,10nm,0.8s						
JFWS	**Jewell Farm**	**8.61**	**37**	IAmb_Lg		03 00 02.8	
	comp=Z,8.1nm,0.7s						

IDC ***14*** *03:03:33.3±4.4,20˚29S×12˚16W,h0km,mb4.0/4, mbtmp4.0/4,MS4.0/34,Error ellipse: s-maj=410.8km s-min=33.9km az=105.0*

GCMT ***14*** *03:03:36.0±0.4,20˚21S±0˚05×11˚48W±0˚03,h19km±1km, MW4.9/82,Moment Tensor Solution. s9,c10; s82,c93; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=2.17±.23; Mθθ=0.08±.14; Mϕϕ=2.25±.18; Mrθ=1.90±.39; Mrϕ=0.03±.10; Mθϕ=0.57±.31; Best double couple: Mo=2.84400×10¹⁶ NP1:ϕ=203.00000°,δ=43.00000°,λ=-45.00000°. NP2: ϕ=330.00000°,δ=61.00000°,λ=-123.00000°. Principal axes: T 2.3480, Plg10.0000°, Azm83.0000°; N 0.9910, Plg29.0000°, Azm347.0000°; P -3.3400, Plg59.0000°, Azm190.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 14 03:03:34.9±4.4,**20˚3S**±0˚8×**1˚2W**±˚,**h10km**,**n38,** σ0**s10**/4,
mb3.9/4,**MS4.0**/34,**Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10S2	**ASCENSION HYDR1**	**1.47**	**348**	T	T	03 18 34.1	
	baz=166,slow=74,SNR=4.7						
H10S3	**ASCENSION HYDR1**	**1.48**	**348**	T	T	03 18 35.7	
	baz=54,slow=74,SNR=7.2						
RCBR	**Riachuelo**	**27.09**	**299**	LR	LR	03 17 35.9	
	comp=Z,360nm,21.8s,baz=269,slow=31						
DBIC	**Dimbokro**	**27.73**	**16**	LR	LR	03 17 40.0	
	comp=Z,204nm,20.5s,baz=190,slow=30						
TSUM	**Tsumeb**	**28.07**	**93**	LR	LR	03 18 46.8	
	comp=Z,489nm,18.6s,baz=266,slow=33						
SUR	**Sutherland**	**31.86**	**119**	LR	LR	03 19 35.2	
	comp=Z,279nm,21.5s,baz=304,slow=30						
BDFB	**Brasilia**	**34.30**	**272**	LR	LR	03 22 37.3	
	comp=Z,318nm,19.4s,baz=115,slow=33						
BOSA	**Boshof**	**35.02**	**111**	LR	LR	03 21 57.3	
	comp=Z,242nm,20.6s,baz=295,slow=32						
LBTB	**Lobatse**	**35.16**	**105**	LR	LR	03 22 21.9	
	comp=Z,363nm,20.7s,baz=265,slow=32						
TORD	**Torodi Ar. Bea**	**35.91**	**24**	P	**P**	**03 10 35.5**	**-0.1**
	4.6nm,0.7s,baz=200,slow=8.6,SNR=20						
TORD				LR	LR	03 22 14.7	
	comp=Z,253nm,21.1s,baz=212,slow=31						
	4.6nm,0.7s						
LSZ	**Lusaka**	**38.74**	**89**	LR	LR	03 24 42.9	
	comp=Z,316nm,21.8s,baz=270,slow=33						
CPUP	**Villa Florida**	**41.70**	**253**	LR	LR	03 26 38.3	
	comp=Z,250nm,21.5s,baz=86,slow=33						
MBAR	**Mbarara**	**46.33**	**70**	LR	LR	03 30 29.1	
	comp=Z,97nm,18.1s,baz=222,slow=35						
MDP	**Montagnes des**	**47.02**	**298**	LR	LR	03 31 15.1	
	comp=Z,68nm,18.6s,baz=122,slow=35						
KMBO	**Kilima Mbogo**	**51.94**	**75**	LR	LR	03 31 55.6	
	comp=Z,209nm,20.9s,baz=274,slow=33						
LVC	**Limon Verde**	**52.54**	**257**	LR	LR	03 35 32.8	
	comp=Z,122nm,19.2s,baz=136,slow=36						
LPAZ	**La Paz**	**53.02**	**265**	LR	LR	03 35 38.3	
	comp=Z,228nm,18.4s,baz=108,slow=36						
PLCA	**Paso Flores**	**53.24**	**234**	LR	LR	03 34 34.8	
	comp=Z,104nm,18.5s,baz=96,slow=35						
MDT	**Midelt**	**53.27**	**8**	LR	LR	03 32 44.8	
	comp=Z,115nm,20.5s,baz=196,slow=33						
PMSA	**Palmer Station**	**55.96**	**204**	LR	LR	03 32 45.8	
	comp=Z,386nm,18.1s,baz=355,slow=31						
ESDC	**Sonseca Array**	**60.12**	**7**	LR	LR	03 38 31.3	
	comp=Z,47nm,19.3s,baz=172,slow=35						
VAE	**Valguarnera**	**62.67**	**24**	LR	LR	03 37 46.4	
	comp=Z,141nm,21.9s,baz=158,slow=33						
ATD	**Arta Tunnel**	**62.72**	**65**	LR	LR	03 38 23.8	
	comp=Z,216nm,21.6s,baz=200,slow=33						
ATAH	**Atahualpa**	**65.22**	**271**	LR	LR	03 41 26.5	
	comp=Z,354nm,19.3s,baz=154,slow=35						
MAW	**Mawson**	**65.77**	**156**	LR	LR	03 36 23.9	
	comp=Z,72nm,21.9s,baz=265,slow=30						
EIL	**Elat**	**67.31**	**44**	LR	LR	03 40 28.2	
	comp=Z,135nm,21.3s,baz=269,slow=33						
DAVOX	**Davos/Dischmat**	**69.65**	**16**	LR	LR	03 44 06.4	
	comp=Z,67nm,20.5s,baz=240,slow=35						
QSPA	**South Pole Qui**	**69.93**	**180**	LR	LR	03 40 52.9	
	comp=Z,98nm,18.8s,baz=203,slow=32						
BRTR	**Keskin Array B**	**73.44**	**35**	P	**P**	**03 15 07.7**	**0.0**
	1.0nm,0.8s,baz=209,slow=2.6,SNR=5.2						
	1.0nm,0.8s						
VRAC	**Vranov**	**73.85**	**19**	LR	LR	03 46 46.6	
	comp=Z,97nm,19.9s,baz=224,slow=35						
AKASG	**Malin Array Be**	**79.53**	**25**	P	**P**	**03 15 41.7**	**+0.1**
	0.2nm,0.3s,baz=222,slow=5.3,SNR=4.6						
	0.2nm,0.3s						
GNI	**Garni**	**80.15**	**41**	LR	LR	03 51 08.6	
	comp=Z,37nm,18.1s,baz=282,slow=36						
KBZ	**Khabaz**	**81.26**	**37**	LR	LR	03 53 33.8	
	comp=Z,28nm,18.3s,baz=118,slow=37						
WSAR	**Wadi Sarin**	**81.49**	**61**	LR	LR	03 51 09.9	
	comp=Z,213nm,20.4s,baz=248,slow=35						
VNDA	**Vanda**	**82.37**	**179**	P	**P**	**03 15 56.6**	**0.0**
	0.6nm,0.8s,baz=194,slow=5.7,SNR=4.0						
VNDA				LR	LR	03 48 07.4	
	comp=Z,38nm,19.6s,baz=154,slow=32						
	0.6nm,0.8s						
NOA	**NORSAR Array B**	**83.19**	**11**	LR	LR	03 52 49.9	
	comp=Z,34nm,19.1s,baz=90,slow=36						
GEYT	**Alibeck**	**87.77**	**48**	LR	LR	03 53 59.4	
	comp=Z,81nm,21.4s,baz=249,slow=34						
PALK	**Pallekele**	**95.22**	**84**	LR	LR	03 54 46.5	
	comp=Z,175nm,19.4s,baz=1.2,slow=32						

IDC ***14*** *03:21:50.9±1.0,14˚44N×92˚02W,h0km,mb4.1/16, mbtmp4.1/17,ML3.8/1,MS3.7/10,Error ellipse: s-maj=36.8km s-min=14.7km az=52.0*

NEIC ***14*** *03:21:54.9±1.8,14˚06N±0˚06×92˚86W±0˚05,h43km±8km, mb4.4/130,Md4.3/36(MEX),Error ellipse: s-maj=9.0km s-min=6.6km az=195.0*

GCG ***14*** *03:21:55.9±1.5,14˚34N×92˚67W,h81km±40km,MD4.5*

MEX ***14*** *03:21:55.2±1.4,14˚08N×92˚79W,h35km±234km,MD4.3*

ISC 14 03:21:53.1±1.3,**14˚11N**±0˚05×**92˚80W**±0˚04,**h31**km±7km,
n202, σ1**s52**/220,**mb4.4**/65,**M

BOAB	BOACO BROADBAN	7.13	103			Pn	03 23 34.6 -0.7
HZTE	Horizontes, Gu	7.80	115			Pn	03 23 46.6 +2.1
ORTG	Ortega, Santa	8.08	117	Pn		Pn	03 23 50.2 +1.8
DUNO	Dulce Nombre,	8.19	119			Pn	03 23 51.2 +1.4
JTS	Las Juntas de	8.55	115	Pn		Pn	03 23 56.4 +1.5
	2.0nm,0.3s,baz=8.0,slow=23,SNR=14						
JTS			Sn			Sn	03 25 25.1 -5.3
	0.2nm,0.3s,baz=180,slow=24,SNR=0.5						
JTS	Las Juntas de	8.55	115	Pn		Pn	03 23 56.8 +1.9
RIMA	Rio Macho	9.75	115	Pn		Pn	03 24 13.4 +2.0
SRBA	San Rafael, Bu	10.44	117			Pn	03 24 23.2 +2.5
DRID	Durika	10.52	116			Pn	03 24 24.5 +2.5
HKT	Hockley	16.01	350	Pn		Pn	03 25 37.0 +1.0
JCT	Junction City	17.52	340	P		Pn	03 25 54.9 -0.3
TXAR	Lajitas Array	18.19	328	P		P	03 26 07.4 +4.0
	0.1nm,0.3s,baz=152,slow=14,SNR=18						
	2.6nm,0.8s						
TXAR	Lajitas Array	18.19	328	P		P	03 26 05.3 +1.9
TX31	Lajitas Ar. Si	18.19	328	P		P	03 26 05.3 +1.9
TX31				IAmb	IAmb		03 26 14.1
	comp=Z,29nm,1.1s						
TX32	Lajitas Array	18.19	328	P		P	03 26 05.2 +1.8
352A	Blakely	18.73	21	P		P	03 26 09.4 +0.1
352A				IAmb	IAmb		03 26 20.2
	comp=Z,17nm,0.8s						
146A	Union	18.75	10	P		P	03 26 10.0 +0.5
250A	Grady	18.76	17	P		Pn	03 26 10.7 +0.4
250A				IAmb	IAmb		03 26 17.1
	comp=Z,24nm,1.2s						
LPIG	La Paz	19.28	304	LR		LR	03 34 26.7
	comp=Z,157nm,18.7s,baz=206,slow=38						
GUY2C	Guyana, Caldas	19.30	116	eP		Pn	03 26 18.9 +1.6
ABTX	Abilene, Hawle	19.46	342	P		P	03 26 17.6 +0.3
Z47A	Carrollton	19.48	12	P		P	03 26 18.1 +0.6
Z47A				IAmb	IAmb		03 26 35.3
	comp=Z,16nm,0.9s						
PTBC	PUERTO BERRIO,	19.54	111	eP		P	03 26 16.4 -1.8
Z35A	Perchaven, San	19.56	349			Pn	03 26 19.7 -0.1
Z35A				IAmb	IAmb		03 26 26.5
	comp=Z,24nm,0.7s						
LRAL	Lakeview Retre	19.56	15	P		P	03 26 19.4 +1.0
POPC	Popayan, Colom	19.64	124	eP		Pn	03 26 24.6 +3.5
152A	Waverly Hall	19.89	20	P		P	03 26 21.0 -1.0
152A				IAmb	IAmb		03 26 30.3
	comp=Z,31nm,1.5s						
ORTC	Ortega, Tolima	20.06	119	eP		Pn	03 26 26.6 +0.6
SPBC	San Pablo de B	20.26	113	eP		P	03 26 21.6 -4.6
MIAR	Mount Ida	20.36	358	P		Pn	03 26 28.9 -0.3
MIAR				IAmb	IAmb		03 26 43.4
	comp=Z,12nm,0.9s						
ROSC	El Rosal	20.40	115	P		Pn	03 26 31.2 +0.9
	comp=Z,5.9nm,0.4s,baz=354,slow=2.8,SNR=6.6						
ROSC	El Rosal	20.40	115	P		P	03 26 28.3 +0.2
ROSC				IAmb	IAmb		03 26 45.9
	comp=Z,24nm,1.1s						
154A	Montrose	20.43	24	P		P	03 26 26.9 -0.9
154A				IAmb	IAmb		03 26 37.5
	comp=Z,27nm,1.1s						
X37A	Clayton	20.52	354	P		P	03 26 28.7 -0.1
PORT	Chimborazo Vol	20.80	137	P		P	03 26 31.2 -1.3
PORT				IAmb	IAmb		03 26 44.0
	comp=Z,11nm,0.8s						
X34A	Smith Ranch, M	20.90	348	P		P	03 26 32.3 -0.7
X34A				IAmb	IAmb		03 26 45.5
	comp=Z,14nm,0.9s						
X48A	Hartselle	20.91	13	P		P	03 26 32.8 -0.2
MNTX	Cornudas Mount	20.96	329	P		P	03 26 31.8 -1.8
W41B	Gary Mavity, V	20.98	1	P		P	03 26 33.6 -0.1
GOGA	Godfrey	21.00	22	P		P	03 26 35.4 +1.4
W39A	Magazine	21.01	358	P		P	03 26 33.0 -1.1
W39A				IAmb	IAmb		03 26 40.0
	comp=Z,8.8nm,0.8s						
CHIC	Chingaza	21.02	115	eP		P	03 26 37.1 +2.4
RUSC	La Rusia	21.05	111	eP		P	03 26 32.7 -2.5
Y52A	Lilburn	21.20	20	P		P	03 26 37.2 +1.1
Y52A				IAmb	IAmb		03 26 54.8
	comp=Z,12nm,0.8s						
WMOK	Wichita Mounta	21.24	346	P		P	03 26 35.3 -1.2
FPAL	Fort Paine	21.35	16	P		P	03 26 37.1 -0.7
FPAL				IAmb	IAmb		03 26 49.3
	comp=Z,8.8nm,0.8s						
FNO	Franklin	21.46	350			P	03 26 39.0 0.0
FCAR	Ozark Folk Cen	21.70	1	P		P	03 26 42.4 +1.0
MSTX	Muleshoe	21.74	337	P		P	03 26 42.1 +0.1
MSTX				IAmb	IAmb		03 27 08.4
	comp=Z,14nm,0.6s						
SWET	Sewanee	21.91	15	P		P	03 26 44.6 +0.9
HHAR	Hobbs	22.10	358	P		P	03 26 44.9 -0.9
U40A	Yellville	22.15	360	P		P	03 26 47.2 +0.9
V48A	Smith Brothers	22.20	13	P		P	03 26 47.8 +1.0
U38A	Gravette	22.28	357	P		P	03 26 48.6 +0.9
SDV	Santo Domingo	22.32	101	P		P	03 26 48.3 -0.3
	comp=Z,3.9nm,0.3s,baz=314,slow=7.6,SNR=3.8						
WVT	Waverly	22.37	11	P		P	03 26 47.9 -0.8
CLTN	Cedars of Leba	22.64	14	P		P	03 26 53.3 +1.8
CLTN				IAmb	IAmb		03 27 07.4
	comp=Z,14nm,1.3s						
PBMO	Poplar Bluff	22.67	5	P		P	03 26 51.8 -0.1
121A	Cookes Peak, D	22.88	326	P		P	03 26 55.8 +1.5
121A				IAmb	IAmb		03 27 01.8
	comp=Z,10nm,1.0s						
TKL	Tuckaleechee C	22.94	19	P		P	03 26 54.9 +0.2
	comp=Z,2.2nm,0.6s,baz=186,slow=13,SNR=6.8						
TKL				LR	LR		03 37 44.4
	comp=Z,182nm,18.1s,baz=173,slow=43						
MGMO	Mountain Grove	22.95	1	P		P	03 26 56.3 +1.4
V52A	Sevierville	23.16	19	P		P	03 26 56.5 -0.4
U49A	Red Boiling Sp	23.18	14	P		P	03 26 57.0 -0.1
U49A				IAmb	IAmb		03 27 10.6
	comp=Z,9.1nm,1.0s						
V53A	Saluda	23.27	21	P		P	03 26 58.0 -0.1
V53A				IAmb	IAmb		03 27 29.8
	comp=Z,16nm,1.2s						
T47A	Sharon Grove	23.34	12	P		P	03 26 57.7 -1.0
T47A				IAmb	IAmb		03 27 14.6
	comp=Z,13nm,0.8s						
KMSC	Kings Mountain	23.35	24	P		P	03 26 59.5 +0.6
KMSC				IAmb	IAmb		03 27 08.2
	comp=Z,6.9nm,0.8s						
CRNM	Carthage	23.45	330	P		P	03 27 01.1 +1.0
S39A	Bolivar	23.49	359	P		P	03 27 00.4 +0.2
S39A				IAmb	IAmb		03 27 02.2
	comp=Z,14nm,0.9s						
BNM	Barren Site	23.56	330	P		P	03 27 02.3 +1.1
S44A	Carbondale	23.70	7	P		P	03 27 03.1 +0.9
SIUC	Southern Illin	23.72	7	P		P	03 27 03.2 +0.9
SIUC				IAmb	IAmb		03 27 18.1
	comp=Z,20nm,0.9s						
TZTN	Tazewell	23.82	19	P		P	03 27 03.7 +0.3
TZTN				IAmb	IAmb		03 27 40.2
	comp=Z,12nm,0.9s						
V55A	Taylorsville	24.02	24	P		P	03 27 05.6 +0.4
V55A				IAmb	IAmb		03 27 07.0
	comp=Z,16nm,1.1s						
R40A	Maddies Statio	24.09	1	P		P	03 27 05.5 -0.3
R40A				IAmb	IAmb		03 27 08.9
	comp=Z,7.2nm,0.8s						
ANMO	Albuquerque	24.13	332	P		P	03 27 09.6 +3.1
	comp=Z,1.3nm,0.7s,baz=173,slow=13,SNR=4.0						
	comp=Z,1.3nm,0.7s						
ANMO	Albuquerque	24.13	332	P		P	03 27 06.5 0.0
TUC	Tucson	24.46	321	P		P	03 27 09.4 0.0
TUC				IAmb	IAmb		03 27 19.0
	comp=Z,10nm,1.3s						
R32A	Long Quarter,	24.77	349	P		P	03 27 13.1 +0.9
U56A	King	24.78	24	P		P	03 27 12.9 +0.8
U56A				IAmb	IAmb		03 27 13.0
	comp=Z,14nm,1.1s						
T25A	Trinidad	25.16	338	P		P	03 27 17.1 +1.2
T25A				IAmb	IAmb		03 27 21.3
	comp=Z,8.9nm,0.9s						
P40A	Paris	25.33	1	P		P	03 27 16.3 -0.8
ATAH	Atahualpa	25.49	145	P		P	03 27 20.8 +1.5
	comp=Z,3.0nm,0.6s,baz=346,slow=4.2,SNR=1.9						
	comp=Z,3.0nm,0.6s						
SJG	San Juan	25.89	78	P		P	03 27 17.9 -4.5
	comp=Z,7.3nm,0.8s,baz=208,slow=23,SNR=2.6						
	comp=Z,7.3nm,0.8s						
SDCO	Great Sand Dun	26.11	337	P		P	03 27 26.0 +1.5
SDCO				IAmb	IAmb		03 27 29.1
	comp=Z,11nm,1.2s						
X16A	Lo Mia Camp, P	26.32	323	P		P	03 27 25.7 -0.7
N38A	Joes South For	26.59	359	P		P	03 27 28.0 -0.5
S22A	4UR Ranch, Cre	26.64	335	P		P	03 27 29.5 +0.1
S22A				IAmb	IAmb		03 27 37.1
	comp=Z,9.0nm,1.1s						
MVCO	Mesa Verde	26.93	332	P		P	03 27 31.9 0.0
PV13	Radium Mtn., P	27.85	332	P		P	03 27 41.1 +1.0
PV13				IAmb	IAmb		03 27 48.2
	comp=Z,12nm,1.1s						
SMCO	Snowmass	27.92	336	P		P	03 27 41.3 +0.3
PV11	David Mesa, Pa	27.99	332	P		P	03 27 41.2 -0.2
PV11				IAmb	IAmb		03 27 56.1
	comp=Z,12nm,1.0s						
PV07	Paradox Valley	28.00	333	P		P	03 27 40.0 -1.4
PV07				IAmb	IAmb		03 27 43.7
	comp=Z,8.6nm,1.0s						
PV23	Carpenter Ridg	28.18	332	P		P	03 27 43.6 +0.5
PV23				IAmb	IAmb		03 27 50.9
	comp=Z,14nm,0.9s						
P57A	Homestead Farm	28.43	25	P		P	03 27 45.3 +0.3
P57A				IAmb	IAmb		03 27 46.5
	comp=Z,7.7nm,0.8s						
PFO	Pinyon Flats O	28.95	316	LR		LR	03 41 27.5
	comp=Z,90nm,18.4s,baz=146,slow=40						
ECSD	EROS Data Cent	29.70	354	P		P	03 27 56.6 +0.3
ECSD				IAmb	IAmb		03 27 59.9
	comp=Z,3.7nm,0.7s						
PSUT	Pine Spring	30.64	326	P		P	03 28 05.2 +0.4
SPMN	Marine on St.	31.01	360	P		P	03 28 09.1 +1.3
SPMN				IAmb	IAmb		03 28 11.6
	comp=Z,4.3nm,0.8s						
BW06	Boulder Array	32.00	336	P		P	03 28 17.6 +0.7
PD31	Pinedale Array	32.00	336	P		P	03 28 17.4 +0.5
PDAR	Pinedale Array	32.00	336	P		P	03 28 19.2 +2.3
	comp=Z,1.9nm,1.0s,baz=144,slow=11,SNR=8.2						
	comp=Z,1.9nm,1.0s						
PDAR	Pinedale Array	32.00	336	P		P	03 28 17.7 +0.8
HVU	Hansel Valley	32.56	332	P		P	03 28 22.7 +1.0
HVU				IAmb	IAmb		03 28 34.4
	comp=Z,4.1nm,0.9s						
SADO	Sadowa	32.69	18	LR		LR	03 42 47.9
	comp=Z,175nm,19.8s,baz=246,slow=39						
ELK	Elko	32.98	328	LR		LR	03 43 59.6
	comp=Z,128nm,19.5s,baz=140,slow=40						
ELK	Elko	32.98	328	P		P	03 28 25.9 +0.5
NV11	Mina Array Sit	33.02	322	P		P	03 28 26.6 +0.9
NV11				IAmb	IAmb		03 28 30.6
	comp=Z,4.1nm,0.9s						
REDW	Red Top Meadow	33.02	335	P		P	03 28 26.7 +1.0
SNOW	Snow King Moun	33.06	336	P		P	03 28 27.2 +1.0
MDPB	Devils Postpil	33.08	320	P		P	03 28 26.4 0.0
MDPB				IAmb	IAmb		03 28 29.3
	comp=Z,8.8nm,0.9s						
NVAR	Mina Array Bea	33.10	322	P		P	03 28 30.8 +4.3
	comp=Z,2.6nm,0.7s,baz=131,slow=8.5,SNR=19						
	comp=Z,2.6nm,0.7s						
NVAR	Mina Array Bea	33.10	322	P		P	03 28 26.7 +0.2
LOHW	Long Hollow	33.13	336	P		P	03 28 26.4 -0.3
LOHW				IAmb	IAmb		03 28 30.9
	comp=Z,6.3nm,0.9s						
TPAW	Teton Pass	33.16	336	P		P	03 28 26.6 -0.4
TPAW				IAmb	IAmb		03 28 35.0
	comp=Z,10nm,1.1s						
MOOW	Moose Ponds	33.30	336	P		P	03 28 28.2 +0.1
MOOW				IAmb	IAmb		03 28 32.3
	comp=Z,5.3nm,1.1s						
H17A	Grant Village	33.78	337	P		P	03 28 32.3 -0.1
H17A				IAmb	IAmb		03 28 39.7
	comp=Z,5.2nm,1.1s						
B35A	Bob, Littlefor	34.16	359	P		P	03 28 34.4 -0.9
B35A				IAmb	IAmb		03 28 51.4
	comp=Z,9.2nm,1.4s						
YMR	Madison River	34.16	337	P		P	03 28 35.1 -0.6
HLID	Hailey	34.71	332	P		P	03 28 40.5 +0.2
HLID				IAmb	IAmb		03 28 47.4
	comp=Z,6.5nm,1.4s						
MCMT	McKenzie Canyo	35.04	335	P		P	03 28 43.8 +0.5
BOZ	Bozeman (W)	35.19	337	P		P	03 28 45.1 +0.6
BOZ				IAmb	IAmb		03 28 48.8
	comp=Z,7.0nm,1.4s						
LRM	Limekiln Ridge	35.70	336	P		P	03 28 49.6 +0.6
ULM	Lac du Bonnet	36.13	357	P		P	03 28 52.0 -0.3
	comp=Z,1.8nm,0.4s,baz=178,slow=9.9,SNR=6.2						
	comp=Z,1.8nm,0.4s						
J08A	Circle Bar Ran	36.53	328	P		P	03 28 57.5 +1.5
J08A				IAmb	IAmb		03 29 00.4
	comp=Z,6.3nm,0.9s						
PLID	Pearl Lake	36.61	332	P		P	03 28 57.0 +0.2
PLID				IAmb	IAmb		03 29 00.7
	comp=Z,7.2nm,1.2s						
F10A	Beach Ranch, E	37.84	332	P		P	03 29 07.8 +0.7
LPAZ	La Paz	38.81	140	P		P	03 29 16.2 +0.2
	comp=Z,0.9nm,0.8s,baz=67,slow=12,SNR=3.0						
	comp=Z,0.9nm,0.8s						
LPAZ	La Paz	38.81	140	P		P	03 29 15.6 -0.5
NEW	Newport	39.56	334	LR		LR	03 48 45.0
	comp=Z,127nm,18.3s,baz=54,slow=41						
SIV	San Ignacio	43.33	133	P		P	03 29 52.2 -0.4
	comp=Z,1.2nm,0.8s,baz=303,slow=9.8,SNR=6.7						
	comp=Z,2.1nm,0.8s						
SCHQ	Schefferville	45.39	21	P		P	03 30 06.8 -1.8
	comp=Z,5.3nm,0.8s,baz=208,slow=8.5,SNR=4.1						
SCHQ				LR	LR		03 49 51.4
	comp=Z,195nm,20.7s,baz=196,slow=38						
	comp=Z,5.3nm,0.8s						
YKA	Yellowknife Ar	50.74	347	P		P	03 30 51.6 +1.8
	comp=Z,12nm,0.8s,baz=148,slow=7.7,SNR=42						
	comp=Z,12nm,0.8s						
YKA	Yellowknife Ar	50.74	347	P		P	03 30 51.1 +1.3
DLBC	Dease Lake	52.24	336	P		P	03 31 02.3 +1.1
DLBC				IAmb	IAmb		03 31 10.1
	comp=Z,5.8nm,1.0s						
FRB	Frobisher Bay	52.38	13	LR		LR	03 54 28.2
	comp=Z,90nm,20.0s,baz=200,slow=38						
M30M	Minto, Yukon	57.46	338	P		P	03 31 39.6 +0.8
M30M				IAmb	IAmb		03 31 43.9
	comp=Z,6.2nm,1.2s						
BCAR	Beaver Creek A	59.63	337	P		P	03 31 54.2 +0.2
L27K	Beaver Creek,	59.64	337	P		P	03 31 54.9 +0.8
L27K				IAmb	IAmb		03 31 57.9
	comp=Z,4.7nm,1.1s						
I29M	Ogilvie Camp,	59.67	340	P		P	03 31 55.9 +1.7
I29M				IAmb	IAmb		03 31 58.1
	comp=Z,3.8nm,1.0s						
N25K	Chitina, Valde	60.03	334	P		P	03 31 57.9 +1.1
K27K	Chicken	60.25	337	P		P	03 31 58.9 +0.8
RES	Resolute Bay	60.58	359	LR		LR	03 58 54.6
	comp=Z,57nm,20.5s,baz=2.0,slow=37						
J26L	Joseph Creek	61.05	337	P		P	03 32 04.4 +0.7
RIDG	Independent Ri	61.16	336	P		P	03 32 05.0 +0.5
J25K	Salcha River,	61.78	337	P		P	03 32 09.3 +0.7
J25K				IAmb	IAmb		03 32 14.5
	comp=Z,2.3nm,0.8s						
IL31		62.43	337	P		P	03 32 13.7 +0.8
IL31				IAmb	IAmb		03 32 18.6
	comp=Z,5.0nm,1.1s						
ILAR	Eielson Array	62.43	337	P		P	03 32 15.1 +2.1
	comp=Z,3.8nm,1.1s,baz=133,slow=4.2,SNR=20						
	comp=Z,3.8nm,1.1s						
ILAR	Eielson Array	62.43	337	P		P	03 32 13.6 +0.6
RND	Reindeer	62.60	335	P		P	03 32 14.6 +0.5
BMAR	Burnt Mountain	62.92	340	P		P	03 32 16.8 +0.6
H24K	Noodor Dome	63.30	338	P		P	03 32 19.1 +0.3
I23K	Minto, Yukon-K	63.55	337	P		P	03 32 21.0 +0.7
MLY	Manley	64.03	336	P		P	03 32 24.0 +0.4
MLY				IAmb	IAmb		03 32 28.7
	comp=Z,4.5nm,0.8s						
COLD	Coldfoot	64.75	339	P		P	03 32 29.4 +1.2
COLD				IAmb	IAmb		03 32 33.5
	comp=Z,5.3nm,1.1s						
ESDC	Sonseca Array	80.25	52	P		P	03 33 58.9 -2.2
	comp=Z,1.1nm,0.8s,baz=300,slow=5.6,SNR=6.7						
	comp=Z,1.1nm,0.8s						
NOA	NORSAR Array B	84.41	28	P		P	03 34 21.6 -0.8
	comp=Z,1.1nm,1.0s,baz=296,slow=4.0,SNR=4.0						
NOA				LR	LR		04 12 31.3
	comp=Z,21nm,18.6s,baz=275,slow=36						
	comp=Z,1.1nm,1.0s						
ARCES	ARCESS Array B	86.27	18	P		P	03 34 32.1 +0.6
	comp=Z,1.8nm,0.7s,baz=292,slow=4.8,SNR=3.8						
	comp=Z,1.8nm,0.7s						
ARCES	ARCESS Array B	86.27	18	P		P	03 34 31.1 -0.3
FINES	FINESS Array B	90.72	25	P		P	03 34 52.9 +0.2
	comp=Z,1.2nm,0.9s,baz=360,slow=24,SNR=3.7						
	comp=Z,1.2nm,0.9s						
TORD	Torodi Ar. Bea	91.10	76	P		P	03 34 54.5 -0.9
	comp=Z,0.3nm,0.6s,baz=282,slow=5.5,SNR=1.3						
	comp=Z,0.3nm,0.6s						
TORD	Torodi Ar. Bea	91.10	76	P		P	03 34 53.1 -2.3
TORD				IAmb	IAmb		03 35 27.7
	comp=Z,3.2nm,1.5s						
CMAR	Chiang Mai Arr	145.63	340	PKPbc		PKPab	03 41 31.4 +1.6
	comp=Z,3.8nm,0.8s,baz=344,slow=3.9,SNR=19						

IDC ***14*** *03:33:10.4±1.3,24˚.26N×126˚.23E, h0km, mb3.8/5, mbtmp3.8/6, ML3.4/1, MS3.5/1, Error ellipse: s-maj=35.2km s-min=25.5km az=86.0*
JMA ***14*** *03:33:13.2±0.2,24˚.2N±2˚×12˚.6E±˚, h71km±4km, MV3.6/22, NEAR MIYAKOJIMA ISLAND*
ISC 14 03:33:12.4±2.6, 24˚.14N±0˚.07×126˚.14E±0˚.04, h15km±15km, n25, σ1°07/34, mb3.6/5, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOGS	Gusukube	0.91	313	P	Pn	03 33 30.7	+0.1
JOGS				S	Sn	03 33 43.2	-0.2
JMJ2	Miyako jima3	0.95	309	P	Pn	03 33 31.0	-0.2
JMJ2				eS	Sb	03 33 43.9	+1.0
JIRB	Irabujima	1.11	308	eP	Pb	03 33 33.3	0.0
JIRB				eS	Sg	03 33 48.1	-0.3
JIKM	Ikemajima	1.12	314	P	Pb	03 33 33.5	0.0
JIKM				eS	Sn	03 33 48.8	+0.1
JTJ	Tarama	1.40	291	P	Pn	03 33 36.9	-0.4
JTJ				S	Sn	03 33 54.2	-1.3
JISG	Ishigakijimahi	1.72	285	P	Pn	03 33 41.3	-0.5
JIJI	Ishigaki jima	1.83	277	P	Pn	03 33 42.6	-0.7
JKRS	Kuro-shima	1.95	273	P	Pn	03 33 44.7	-0.2
JKRS				S	Sn	03 34 08.3	-0.7
HATJ	Hateruma jima	2.13	268	eP	Pn	03 33 46.4	-1.0
IRIF	Iriomote-Funau	2.21	275	P	Pn	03 33 47.9	-0.5
IRIF				eS	Sn	03 34 13.2	-2.2
JKE	Kume jima 2	2.25	15	P	Pn	03 33 48.6	-0.5
JKE				eS	Sn	03 34 15.8	-0.8
JJT3	Tamagusuku3	2.49	37	eP	Pn	03 33 52.7	+0.4
JAGN	Aguni-jima	2.63	22	eP	Pn	03 33 54.5	+0.2
YOJ	Yonaguni jima	2.87	277	P	Pn	03 33 57.0	-0.6
JNTH	Nagotoyohara	2.92	35	P	Pn	03 33 59.0	+0.7
JOW	Kunigami	3.30	35	Pn	Pn	03 34 00.8	-2.8
	8.3nm,0.3s,baz=172,slow=7.1,SNR=5.8						
JOW				Sn	Sn	03 34 41.4	-1.1
	12nm,0.3s,baz=107,slow=19,SNR=7.3						
	15nm,0.3s						
JOW	Kunigami	3.30	35	eS	Sn	03 34 41.0	-1.5
JIH	Iheya	3.32	29	eP	Pn	03 34 04.0	+0.3
JYRO	Yoronjima	3.55	36	P	Pn	03 34 07.2	+0.2
JYRO				eS	Sn	03 34 45.9	-2.7
MKAR	Makanchi Array	41.56	314	P	P	03 40 59.6	+0.1
	0.5nm,0.4s,baz=95,slow=10,SNR=8.0						
	0.5nm,0.4s						
ZALV	Zalesovo Beam	42.81	325	P	P	03 41 08.5	-0.9
	0.5nm,0.4s,baz=106,slow=8.7,SNR=2.3						
	0.5nm,0.4s						
WRA	Warramunga Arr	44.54	169	P	P	03 41 24.7	+0.9
	0.5nm,0.7s,baz=348,slow=8.9,SNR=5.9						
	0.5nm,0.7s						
AAK	Ala-Archa	46.15	307	LR	LR	04 02 54.6	
	comp=Z,48nm,18.8s,baz=204,slow=39						
FINES	FINESS Array B	73.74	330	P	P	03 44 46.7	+1.1
	1.0nm,0.6s,baz=81,slow=4.4,SNR=7.2						
	1.0nm,0.6s						
BRTR	Keskin Array B	76.81	308	P	P	03 45 04.3	+0.5
	1.0nm,0.7s,baz=78,slow=6.8,SNR=5.3						
	1.0nm,0.7s						

NOU ***14*** *03:35:46.9, 14˚.64S×167˚.58E, h135km, MLv4.8/5, Vanuatu Islands*
IDC ***14*** *03:35:46.5±9.8, 14˚.61S×166˚.73E, h91km±110km, mb4.0/3, mbtmp4.2/4, ML3.7/1, Error ellipse: s-maj=229.5km s-min=59.2km az=81.0*
ISC 14 03:35:42.1±4.4, 14˚.4S±0˚.2×167˚.4E±0˚.5, h100km, n6, σ2s26/7, mb4.2/3, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOUNC	Koumac, New Ca	6.81	206	P	Pn	03 37 22.3	+2.9
DZM	Mont Dzumac	7.69	187	P	Pn	03 37 32.8	+1.3
	1.2nm,0.3s,baz=18,slow=16,SNR=11						
DZM				S	Sn	03 38 54.8	-2.3
	8.0nm,0.5s,baz=13,slow=14,SNR=6.6						
	2.5nm,0.3s						
DZM	Mont Dzumac	7.69	187	P	Pn	03 37 33.2	+1.7
STKA	Stephens Creek	29.32	229	P	P	03 41 35.2	-0.2
	4.4nm,0.4s,baz=59,slow=8.9,SNR=21						
	4.4nm,0.4s						
WRA	Warramunga Arr	32.04	255	P	P	03 41 58.5	-1.0
	0.6nm,0.5s,baz=85,slow=9.0,SNR=12						
	0.6nm,0.5s						
ASAR	Alice Springs	32.92	249	P	P	03 42 06.1	-1.1
	1.7nm,0.4s,baz=76,slow=9.0,SNR=27						
	1.7nm,0.4s						

IDC ***14*** *03:39:28.0±0.8, 35˚.76N×141˚.01E, h0km, mb3.9/12, mbtmp3.9/14, ML3.3/2, MS3.1/4, Error ellipse: s-maj=20.5km s-min=18.7km az=57.0*
NIED ***14*** *03:39:32.4, 35˚.72N×141˚.00E, h35km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr=0.15; Mθθ=0.22; Mφφ=0.07; Mrθ=0.35; Mθφ=0.24; Mφr=1.95; Fault plane solution: Mo2.00000×10¹⁵ NP1: φs=268.00000°, δ8.00000°, λ=-171.00000°. NP2: φs=169.00000°, δ89.00000°, λ=-82.00000°.*
JMA ***14*** *03:39:32.4±0.

USRK	**Ussuriysk Ar.**	**10.95**	**324**	Pn		**Pn**	**03 42 09.3**	**+2.6**
	0.2nm,0.3s,baz=148,slow=41,SNR=2.3							
USRK	**Ussuriysk Ar.**	**10.95**	**324**			**Pn**	**03 42 04.5**	**-2.2**
KLR	**Kul'dur**	**15.13**	**336**	Pn		**Pn**	**03 43 05.6**	**+2.0**
	0.2nm,0.3s,baz=197,slow=11,SNR=2.5							
PETK	**Petropavlovsk-**	**20.99**	**29**	LR		LR	03 52 57.0	
	comp=Z,164nm,20.9s,baz=210,slow=39							
H11N2	**WAKE ISLAND Hy**	**27.77**	**118**	T		T	04 14 25.7	
	baz=311,slow=75,SNR=85							
H11N1	**WAKE ISLAND Hy**	**27.78**	**118**	T		T	04 14 26.9	
	baz=311,slow=75,SNR=86							
H11N3	**WAKE ISLAND Hy**	**27.79**	**118**	T		T	04 14 17.4	
	baz=311,slow=75,SNR=87							
SONM	**Songino Array**	**28.29**	**306**	P		**P**	**03 45 22.1**	**-0.9**
	0.7nm,0.5s,baz=114,slow=11,SNR=4.7							
	0.7nm,0.5s							
SONM	**Songino Array**	**28.29**	**306**	P		**P**	**03 45 22.1**	**-0.9**
H11S1	**WAKE ISLAND Hy**	**28.43**	**120**	T		T	04 15 15.1	
	baz=312,slow=75,SNR=126							
H11S3	**WAKE ISLAND Hy**	**28.43**	**120**	T		T	04 15 13.7	
	baz=312,slow=75,SNR=82							
H11S2	**WAKE ISLAND Hy**	**28.45**	**120**	T		T	04 15 15.8	
	baz=312,slow=75,SNR=97							
ZALV	**Zalesovo Beam**	**42.58**	**313**	P		**P**	**03 47 25.2**	**+0.1**
	1.6nm,0.5s,baz=76,slow=6.9,SNR=5.7							
	1.6nm,0.5s							
MK31	**Makanchi Array**	**44.57**	**303**	P		**P**	**03 47 41.5**	**+0.3**
MK31				IAmb		IAmb	03 47 46.3	
	comp=Z,2.1nm,0.8s							
MKAR	**Makanchi Array**	**44.57**	**303**	P		**P**	**03 47 41.3**	**0.0**
	comp=Z,1.9nm,0.8s,baz=91,slow=9.9,SNR=14							
	comp=Z,1.9nm,0.8s							
KURK	**Kurchatov**	**46.51**	**309**	P		**P**	**03 47 56.5**	**0.0**
KURK				IAmb		IAmb	03 47 59.6	
	comp=Z,4.3nm,0.6s							
KURBB	**Kurchatov Arra**	**46.58**	**309**	P		**P**	**03 47 57.0**	**-0.1**
	comp=Z,2.4nm,0.5s,baz=83,slow=7.7,SNR=16							
	comp=Z,2.4nm,0.5s							
ILAR	**Eielson Array**	**50.78**	**32**	P		**P**	**03 48 29.4**	**+0.2**
	comp=Z,1.0nm,0.8s,baz=266,slow=6.3,SNR=12							
	comp=Z,1.0nm,0.8s							
ILAR	**Eielson Array**	**50.78**	**32**	P		**P**	**03 48 28.6**	**-0.5**
WB2	**Warramunga Arr**	**55.71**	**188**	P		**P**	**03 49 05.8**	**0.0**
WB2				IAmb		IAmb	03 49 07.6	
	comp=Z,24nm,1.5s							
WRA	**Warramunga Arr**	**55.71**	**188**	P		**P**	**03 49 05.3**	**-0.6**
	comp=Z,1.3nm,0.6s,baz=5.4,slow=7.8,SNR=5.0							
	comp=Z,1.3nm,0.6s							
ABKAR	**Akbulak array**	**58.56**	**311**	P		**P**	**03 49 25.2**	**-0.6**
ABKAR				IAmb		IAmb	03 49 40.8	
	comp=Z,1.9nm,1.0s							
ASAR	**Alice Springs**	**59.44**	**188**	P		**P**	**03 49 33.4**	**+1.4**
	comp=Z,0.3nm,0.5s,baz=3.5,slow=7.0,SNR=2.2							
	comp=Z,0.3nm,0.5s							
FINES	**FINESS Array B**	**69.84**	**332**	P		**P**	**03 50 39.8**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=44,slow=8.3,SNR=3.4							
	comp=Z,0.8nm,0.6s							
FINES	**FINESS Array B**	**69.84**	**332**	P		**P**	**03 50 39.7**	**+0.2**
AKASG	**Malin Array Be**	**75.15**	**322**	P		**P**	**03 51 11.5**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=48,slow=5.8,SNR=5.8							
	comp=Z,0.5nm,0.5s							
AKASG	**Malin Array Be**	**75.15**	**322**	P		**P**	**03 51 10.7**	**-0.6**
AKASG				IAmb		IAmb	03 51 47.5	
	comp=Z,2.0nm,1.2s							
NB2	**NORSAR Subarra**	**75.28**	**337**	P		**P**	**03 51 11.9**	**-0.1**
	comp=Z,1.7nm,0.8s,baz=40,slow=6.2							
NOA	**NORSAR Array B**	**75.28**	**337**	P		**P**	**03 51 12.1**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=43,slow=5.4,SNR=8.5							
	comp=Z,0.7nm,0.7s							
NVAR	**Mina Array Bea**	**76.04**	**53**	P		**P**	**03 51 17.8**	**+0.8**
	comp=Z,1.0nm,0.8s,baz=287,slow=7.6,SNR=7.4							
	comp=Z,1.0nm,0.8s							
NVAR	**Mina Array Bea**	**76.04**	**53**	P		**P**	**03 51 16.8**	**-0.2**
PDAR	**Pinedale Array**	**78.82**	**45**	P		**P**	**03 51 33.1**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=176,slow=5.9,SNR=4.1							
	comp=Z,0.4nm,0.6s							
PV07	**Paradox Valley**	**82.08**	**48**	P		**P**	**03 51 49.6**	**-0.4**
H03N2	**Juan Fernandez**	**147.18**	**98**	T		T	06 43 52.7	
	baz=290,slow=76,SNR=5.6							
H03N3	**Juan Fernandez**	**147.19**	**98**	T		T	06 43 53.1	
	baz=290,slow=76,SNR=6.6							
H03N1	**Juan Fernandez**	**147.19**	**98**	T		T	06 43 55.8	
	baz=290,slow=76,SNR=7.5							
LPAZ	**La Paz**	**147.62**	**61**	PKPbc		**PKPbc**	**03 59 14.9**	**+0.1**
	comp=Z,2.4nm,0.7s,baz=0.0,slow=3.0,SNR=12							

IDC ***14*** *03:41:10.5±2.7, 4.°89S×130.°07E, h236km±34km, mb3.4/3, mbtmp4.2/6, Error ellipse: s-maj=70.4km s-min=10.5km az=75.0*

DJA ***14*** *03:41:13.5±5.5, 5.°5S±41.°×13.°0E±.°, h179km±47km, M4.3/6, MLv4.3/6*

ISC 14 03:41:08.0±0.9,**5.°07S**±0.°07×**129.°7E**±0.°2,**h200**km,**n9,**
σ2**19**/11,**mb3.8**/3,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**3.31**	**50**	P		Pn	03 42 04.9	+3.5
SIJI	**Sorong**	**4.45**	**21**	P		**Pn**	**03 42 16.9**	**+1.4**
	24nm,0.2s,baz=198,slow=20,SNR=89							
SIJI				S		**Sn**	**03 43 06.5**	**-2.2**
	102nm,0.2s,baz=221,slow=19,SNR=22							
SWI	**Sorong**	**4.46**	**20**	P		**Pn**	**03 42 16.7**	**+1.2**
LBMI	**Labuha**	**4.92**	**333**	P		**Pn**	**03 42 22.0**	**+0.5**
WRA	**Warramunga Arr**	**15.46**	**163**	P		**Pn**	**03 44 36.4**	**+0.6**
	2.1nm,0.2s,baz=342,slow=11,SNR=55							
WRA				S		**S**	**03 47 23.0**	**-4.5**
	2.1nm,0.7s,baz=347,slow=24,SNR=7.7							
ASAR	**Alice Springs**	**18.93**	**168**	P		**P**	**03 45 16.1**	**+2.1**
	8.0nm,0.4s,baz=350,slow=12,SNR=75							
ASAR				S		**S**	**03 48 37.2**	**-1.2**
	1.3nm,0.8s,baz=347,slow=20,SNR=6.0							
STKA	**Stephens Creek**	**28.90**	**159**	P		**P**	**03 46 49.4**	**+1.1**
	0.7nm,0.3s,baz=339,slow=8.6,SNR=3.4							
	0.7nm,0.3s							
MKAR	**Makanchi Array**	**66.46**	**327**	P		**P**	**03 51 35.1**	**-0.9**
	0.7nm,0.4s,baz=115,slow=8.2,SNR=11							
	0.7nm,0.4s							
KURBB	**Kurchatov Arra**	**70.72**	**328**	P		**P**	**03 52 01.2**	**-1.0**
	0.7nm,0.6s,baz=130,slow=5.4,SNR=6.6							
	0.7nm,0.6s							

INET ***14*** *03:45:28.6±0.8, 12.°88N×87.°05W, h6km±3km, MW5.2*

UCR ***14*** *03:45:28.7±1.9, 12.°95N×87.°02W, h5km±20km, mb5.2(NEIC)*

GCMT ***14*** *03:45:28.9±0.3, 12.°73N±0.°03×87.°14W±0.°02, h12km, MW4.9/98, Moment Tensor Solution. s25,c26; s98,c124; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=2.44±.07; Mθθ=0.11±.07; Mϕϕ2.55±.06; Mrθ=1.46±.35; Mθϕ0.12±.06; Mϕr=0.05±.23; Best double couple: M◎2.85100×10^16 NP1:ϕs160.00000°, δ49.00000°, λ=125.00000°. NP2: ϕs26.00000°, δ52.00000°, λ=57.00000°. Principal axes: T 2.5590, Plg2.0000°, Azm94.0000°; N 0.5850, Plg26.0000°, Azm184.0000°; P -3.1420, Plg64.0000°, Azm0.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***14*** *03:45:29.9±1.5, 12.°80N±0.°03×87.°03W±0.°05, h12km±3km, mb5.0/451, Mww5.2, Md5.0(SNET) Error ellipse: s-maj=6.6km s-min=4.6km az=94.0*

IDC ***14*** *03:45:32.8±1.4, 12.°82N×86.°90W, h44km±15km, mb4.4/32, mbtmp4.6/35, ML3.6/3, MS4.1/45, Error ellipse: s-maj=18.0km s-min=8.1km az=49.0*

NEIC ***14*** *03:45:33, 12.°66N×87.°07W, h12km, Moment Tensor Solution. Duration: 6s0 Moment tensor: Scale 10^16Nm; Mrr=4.50; Mθθ-0.06; Mϕϕ4.56; Mrθ-4.92; Mθϕ-1.68; Mϕr2.59; Fault plane solution: M◎7.37000×10^16 NP1:ϕs44.00000°, δ29.00000°, λ=42.00000°. NP2:ϕs132.00000°, δ71.00000°, λ=112.00000°. Principal axes: T 6.8170, Plg23.0000°, Azm239.0000°; N 0.9989, Plg21.0000°, Azm140.0000°; P -7.8159, Plg58.0000°, Azm12.0000°;*

GCG ***14*** *03:45:36.3±3.4, 13.°29N×87.°50W, h301km±224km, MD4.7*

ISC 14 03:45:28.6±0.7,**12.°82N**±0.°03×**87.°00W**±0.°03,**h12**km±4km,
n969,σ1**39**/857,**mb5.0**/261,**MS4.2**/53,**3C-2D,Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**0.13**	**205**		Pg	03 45 33.4	+1.6
CRIN				Sg	**Sg**	**03 45 35.3**	**+1.1**
TELN	**Telica**	**0.27**	**143**	*eP*	**Pb**	**03 45 35.9**	**+0.5**
CNGN	**Cerro Negro**	**0.43**	**138**		**Pn**	**03 45 38.8**	**-1.8**
CNGN				Sg	**Sb**	**03 45 44.0**	**-0.6**
CNGN	**Cerro Negro**	**0.43**	**138**	*eP*	**Pn**	**03 45 38.8**	**-1.8**
HUEN		**0.93**	**121**	*eP*	**Pn**	**03 45 47.4**	**-0.2**
CNCH	**Conchagua**	**0.94**	**299**	*eP*	**Pg**	**03 45 45.1**	**-1.6**
CNCH	**Conchagua**	**0.94**	**299**	*eP*	**Pg**	**03 45 44.8**	**-1.8**
CNCH				*eP*	**Pg**	**03 45 45.1**	**-1.6**
TISN	**Laguna Tiscapa**	**0.98**	**133**	*eP*	**Pn**	**03 45 48.4**	**+0.2**
LCND	**La Caada**	**1.00**	**299**	*eP*	**Pg**	**03 45 45.8**	**-2.0**
LCND	**La Caada**	**1.00**	**299**	*eP*	**Pg**	**03 45 45.8**	**-2.0**
WILN	**Americas 2**	**1.02**	**130**	*eP*	**Pn**	**03 45 48.8**	**0.0**
MATN	**Matagalpa**	**1.05**	**84**		**Pg**	**03 45 47.2**	**-1.6**
MATN				Sg	**Sg**	**03 46 01.4**	**-1.1**
MATN	**Matagalpa**	**1.05**	**84**	*eP*	**Pg**	**03 45 47.4**	**-1.5**
MATN	**Matagalpa**	**1.05**	**84**	*eP*	**Pg**	**03 45 47.2**	**-1.6**
TGUH	**Tegucigalpa,Un**	**1.26**	**348**		**Pn**	**03 45 50.4**	**-1.8**
TGUH	**Tegucigalpa,Un**	**1.26**	**348**	*eP*	**Pn**	**03 45 50.4**	**-1.8**
TGUH	**Tegucigalpa,Un**	**1.26**	**348**	*eP*	**Pn**	**03 45 50.4**	**-1.8**
TGUH	**Tegucigalpa,Un**	**1.26**	**348**	*eP*	**Pn**	**03 45 50.4**	**-1.8**
BOAB	**BOACO BROADBAN**	**.35**	**106**		**Pn**	**03 45 52.2**	**-1.0**
BOAB	**BOACO BROADBAN**	**.35**	**106**	*eP*	**Pn**	**03 45 53.4**	**+0.1**
BOAB				*eS*	**Sn**	**03 46 12.7**	**+1.5**
LCY	**Lacayo**	**1.40**	**296**	*eP*	**Pn**	**03 45 52.8**	**-1.4**
LCY	**Lacayo**	**1.40**	**296**	*eP*	**Pn**	**03 45 52.8**	**-1.4**
PACA	**Pacayal**	**1.45**	**297**	*eP*	**Pn**	**03 45 53.6**	**-1.2**
PACA	**Pacayal**	**1.45**	**297**	*eP*	**Pn**	**03 45 53.6**	**-1.2**
CAHU	**Cacacuatique**	**1.52**	**309**	*eP*	**Pn**	**03 45 54.6**	**-1.2**
CAHU	**Cacacuatique**	**1.52**	**309**	*eP*	**Pn**	**03 45 54.6**	**-1.2**
COEB	**Comit de Eme**	**1.64**	**294**	*eP*	**Pn**	**03 45 56.3**	**-1.1**
COEB				*eS*	**Sb**	**03 46 18.8**	**-0.8**
COEB	**Comit de Eme**	**1.64**	**294**	*eP*	**Pn**	**03 45 56.3**	**-1.1**
COEB				*eS*	**Sb**	**03 46 18.8**	**-0.8**
PQSS	**Presa 15 de Se**	**1.72**	**298**	*eP*	**Pn**	**03 45 57.7**	**-0.7**
PQSS	**Presa 15 de Se**	**1.72**	**298**	*eP*	**Pn**	**03 45 57.7**	**-0.7**
SCLA	**Alcaldia de Sa**	**1.90**	**298**	*eP*	**Pn**	**03 46 00.0**	**-0.9**
SCLA	**Alcaldia de Sa**	**1.90**	**298**	*eP*	**Pn**	**03 46 00.0**	**-0.9**
ACON	**Acoyapa**	**1.97**	**115**		**Pn**	**03 46 01.2**	**-0.6**
ACON	**Acoyapa**	**1.97**	**115**	*eP*	**Pn**	**03 46 01.8**	**0.0**
COEG	**Centro de Oper**	**2.00**	**294**	*eP*	**Pn**	**03 46 01.3**	**-1.0**
COEG	**Centro de Oper**	**2.00**	**294**	*eP*	**Pn**	**03 46 01.3**	**-1.0**
PAVA	**Las Pavas**	**2.09**	**295**	*eP*	**Pn**	**03 46 02.6**	**-1.0**
PAVA	**Las Pavas**	**2.09**	**295**	*eP*	**Pn**	**03 46 02.6**	**-1.0**
PAVA	**Las Pavas**	**2.09**	**295**	*eP*	**Pn**	**03 46 03.1**	**-0.5**
SJTE	**Alcalda de S**	**2.11**	**292**	*eP*	**Pn**	**03 46 03.1**	**-0.8**
SJTE	**Alcalda de S**	**2.11**	**292**	*eP*	**Pn**	**03 46 03.1**	**-0.8**
LFRS	**El Faro**	**2.17**	**292**	*eP*	**Pn**	**03 46 03.7**	**-0.9**
LFRS	**El Faro**	**2.17**	**292**	*eP*	**Pn**	**03 46 03.7**	**-0.9**
SNET	**Serv Nac Est T**	**2.34**	**292**		**Pn**	**03 46 07.7**	**+0.7**
SNET	**Serv Nac Est T**	**2.34**	**292**	*eP*	**Pn**	**03 46 07.5**	**+0.5**
SNET	**Serv Nac Est T**	**2.34**	**292**	*eP*	**Pn**	**03 46 07.5**	**+0.5**
BOQS	**Boqueron**	**2.40**	**293**	*eP*	**Pb**	**03 46 09.9**	**-2.1**
BOQS	**Boqueron**	**2.40**	**293**	*eP*	**Pb**	**03 46 09.9**	**-2.1**
HZTE	**Horizontes, Gu**	**2.50**	**147**		**Pb**	**03 46 10.3**	**-3.2**
HZTE	**Horizontes, Gu**	**2.50**	**147**	*eP*	**Pb**	**03 46 10.6**	**-2.9**
GBS3	**Finca Las Img**	**2.52**	**143**	*eP*	**Pb**	**03 46 11.3**	**-2.6**
BUAI	**Buenos Aires**	**2.52**	**140**	*eP*	**Pb**	**03 46 12.2**	**-1.7**
GB1A	**Borinquen Arri**	**2.53**	**142**	*eP*	**Pb**	**03 46 11.2**	**-2.8**
BUEV	**Buena Vista**	**2.54**	**142**	*eP*	**Pb**	**03 46 11.0**	**-3.2**
LAPC	**Finca la Perla**	**2.55**	**143**	*eP*	**Pb**	**03 46 11.5**	**-2.8**
VRLE	**La Escondida,**	**2.57**	**141**	*eP*	**Pb**	**03 46 11.6**	**-3.1**
GPS2	**Hotel Rincn d**	**2.61**	**142**	*eP*	**Pb**	**03 46 12.9**	**-2.4**
ESPN	**Las Esperanzas**	**2.70**	**103**		**Pn**	**03 46 12.7**	**+0.8**
VMAR	**Armenia, Volca**	**2.71**	**137**	*eP*	**Pb**	**03 46 14.4**	**-2.7**
LIM1	**Limonal**	**2.71**	**141**	*eP*	**Pb**	**03 46 14.4**	**-2.7**
GUAB	**Guayabo de Bag**	**2.72**	**140**	*eP*	**Pb**	**03 46 14.6**	**-2.7**
HORNC	**Hornillas**	**2.75**	**139**	*eP*	**Pb**	**03 46 15.2**	**-2.5**
SNJE	**San Jose**	**2.75**	**293**	*eP*	**Pb**	**03 46 15.4**	**-2.4**
CEVE	**Cerro Verde**	**2.75**	**292**	*eP*	**Pn**	**03 46 13.2**	**+0.4**
CEVE	**Cerro Verde**	**2.75**	**292**	*eP*	**Pn**	**03 46 13.2**	**+0.4**
SBLS	**San Blas**	**2.75**	**292**	*eP*	**Pn**	**03 46 12.5**	**-0.3**
SBLS	**San Blas**	**2.75**	**292**	*eP*	**Pn**	**03 46 12.5**	**-0.3**
COLC	**Colonia**	**2.77**	**140**	*eP*	**Pb**	**03 46 15.0**	**-3.0**
CUI	**Cuipilapa**	**2.80**	**140**	*eP*	**Pb**	**03 46 15.4**	**-3.2**
ESQI	**Esquipulas**	**2.86**	**307**		**Pn**	**03 46 13.7**	**-0.5**
ORTG	**Ortega, Santa**	**2.87**	**148**	Pn	**Pb**	**03 46 15.8**	**-4.0**
ORTG	**Ortega, Santa**	**2.87**	**148**	*eP*	**Pb**	**03 46 16.2**	**-3.6**
PTEN	**Parque Tenorio**	**2.87**	**137**	*eP*	**Pb**	**03 46 17.8**	**-2.1**
ACAL	**Aguas Claras**	**2.90**	**138**	*eP*	**Pb**	**03 46 17.4**	**-2.8**
NUBE	**Las Nubes**	**2.92**	**292**	*eP*	**Pb**	**03 46 17.2**	**-3.5**
NUBE	**Las Nubes**	**2.92**	**292**	*eP*	**Pb**	**03 46 17.2**	**-3.5**
GUAI	**GUAI**	**2.92**	**150**	*eP*	**Pb**	**03 46 17.3**	**-3.3**
PLVR	**Palo Verde**	**2.94**	**147**	*eP*	**Pb**	**03 46 17.4**	**-3.7**
SLOZ	**Alcaldia de Sa**	**2.97**	**294**	*eP*	**Pb**	**03 46 17.8**	**-3.7**
SAJU	**San Juanillo,**	**3.01**	**155**	*eP*	**Pb**	**03 46 17.9**	**-4.3**
DUNO	**Dulce Nombre,**	**3.09**	**151**		**Pb**	**03 46 18.7**	**-4.9**
DUNO	**Dulce Nombre,**	**3.09**	**151**	*eP*	**Pb**	**03 46 20.0**	**-3.6**
JTS	**Las Juntas de**	**3.21**	**141**	P	**Pn**	**03 46 20.1**	**+1.2**
	23nm,0.3s,baz=43,slow=8.6,SNR=90						
JTS				S	**Sn**	**03 46 56.5**	**-0.7**
	314nm,0.8s,baz=208,slow=21,SNR=4.1						
JTS				LR	LR	03 47 46.7	
	comp=Z,3μm,21.5s,baz=25,slow=42						
	83nm,0.5s						
JTS	**Las Juntas de**	**3.21**	**141**	*eP*	**Pn**	**03 46 20.4**	**+1.5**
JTS	**Las Juntas de**	**3.21**	**141**	*eP*	**Pn**	**03 46 20.5**	**+1.5**
CASO	**Castillo**	**3.24**	**137**	*eP*	**Pb**	**03 46 21.5**	**-4.7**
FORC	**Fortuna**	**3.26**	**135**	*eP*	**Pn**	**03 46 20.7**	**+1.0**
INDI	**Punta indio, G**	**3.28**	**153**	*eP*	**Pb**	**03 46 23.7**	**-3.1**
MRL	**Marmol**	**3.45**	**311**	*eP*	**Pb**	**03 46 28.2**	**-1.6**
MRL				*eS*	**Sb**	**03 47 14.3**	**+2.6**
LAFE	**Finca La Fe, P**	**3.62**	**145**	*eP*	Pb	03 46 27.5	-5.1
NBG	**Las Nubes**	**3.70**	**299**	*eP*	**Pb**	**03 46 33.4**	**-0.7**
HDC	**Heredia**	**3.98**	**134**		**Pn**	**03 46 30.6**	**+1.0**
HDC3	**Heredia 3**	**3.98**	**134**	*eP*	**Pb**	**03 46 34.6**	**-4.1**
FUG	**Fuego 3**	**4.08**	**294**	*eP*	**Pb**	**03 46 38.8**	**-1.7**
FUG				*eS*	**Sb**	**03 47 26.3**	**-3.5**
OCM	**Ochomogo**	**4.16**	**134**	*eP*	Pb	03 46 36.1	-5.8
CVTR	**Volcan Turrial**	**4.22**	**131**		**Pn**	**03 46 33.6**	**+0.4**
RAFA	**San Farael, Vo**	**4.22**	**132**	*eP*	**Pb**	**03 46 38.5**	**-4.6**
VTCV	**VTCV, Calle Va**	**4.27**	**131**	*eP*	**Pn**	**03 46 36.2**	**+2.5**
RIMA	**Rio Macho**	**4.32**	**134**	Pn	**Pn**	**03 46 35.1**	**+0.8**
RIMA	**Rio Macho**	**4.32**	**134**	*eP*	Pn	03 46 38.0	+3.7
BATAN	**Batan**	**4.46**	**127**		**Pn**	**03 46 37.7**	**+1.5**
CDM	**Cerro de Muert**	**4.54**	**135**	*eP*	Pb	03 46 41.6	-6.9
PEZE	**Perez Zeledon,**	**4.72**	**136**		**Pn**	**03 46 41.2**	**+1.4**
STG3	**Santiaguito 3,**	**4.83**	**293**	*eP*	Pn	03 46 45.3	+4.0
RTAL	**Retalhuleu**	**4.87**	**291**	Pn	**Pn**	**03 46 43.4**	**+1.6**
PETF	**Flores**	**4.93**	**326**		**Pn**	**03 46 43.0**	**+0.5**
SRBA	**San Rafael, Bu**	**5.04**	**135**		**Pn**	**03 46 45.6**	**+1.4**
SRBA	**San Rafael, Bu**	**5.04**	**135**	*eP*	Pn	03 46 48.1	+3.9
DRK0	**Durika**	**5.10**	**133**		**Pn**	**03 46 46.2**	**+1.1**
PRVC	**Isla de Provid**	**5.51**	**84**	Pn	**Pn**	**03 46 52.1**	**+1.5**
PRVC	**Isla de Provid**	**5.51**	**84**	*eP*	**Pn**	**03 46 52.2**	**+1.6**
BRU2	**Volcan**	**5.82**	**133**		**Pn**	**03 46 56.0**	**+1.0**
BRU2	**Volcan**	**5.82**	**133**	*eP*	Pn	03 46 58.9	+4.0
CCIG	**Comitan**	**6.05**	**305**		**Pn**	**03 46 59.5**	**+1.3**
GMAL	**Guarumal, Vera**	**7.57**	**131**	*eP*	**Pb**	**03 47 39.0**	**-1.0**
BCIP	**Isla Barro Col**	**7.91**	**117**	Pn	**Pn**	**03 47 23.8**	**+0.3**
BCIP	**Isla Barro Col**	**7.91**	**117**	*eP*	**Pn**	**03 47 20.8**	**-2.7**
CACAO	**El Cacao, Vera**	**8.13**	**131**	*eP*	Pb	03 47 38.9	-1.0
AZU	**Azuero**	**8.29**	**126**	*eP*	**Pn**	**03 47 30.1**	**+1.5**
CMIG	**Matias Romero**	**8.73**	**300**	P	**Pn**	**03 47 37.3**	**+2.6**
	0.5nm,0.3s,baz=106,slow=7.2,SNR=17						
CMIG				S	**Sn**	**03 49 17.7**	**+4.6**
	25nm,1.0s,baz=161,slow=11,SNR=2.6						
	21nm,0.8s						
CAPC	**Capurgana**	**10.35**	**113**	*eP*	**Pn**	**03 48 00.1**	**+3.2**
MTDJ	**Mount Denham**	**10.58**	**58**	Pn	**Pn**	**03 48 01.9**	**+1.7**
MTDJ	**Mount Denham**	**10.58**	**58**	*eP*	**Pn**	**03 48 01.7**	**+1.4**
SOR	**Soroa**	**10.62**	**20**	Pn	**Pn**	**03 48 03.5**	**+2.8**
SJCC	**San Jacinto, C**	**11.94**	**103**	Pn	**Pn**	**03 48 19.5**	**+0.6**
SJCC	**San Jacinto, C**	**11.94**	**103**	*eP*	**Pn**	**03 48 19.6**	**-0.2**
TLIG	**Tlapa**	**12.12**	**294**	Pn	**Pn**	**03 48 22.6**	**+1.2**
ZARC	**Zaragoza, Cauc**	**13.06**	**113**	*eP*	**Pn**	**03 48 35.5**	**+1.3**
HELC	**Santa Helena**	**13.08**	**119**	*eP*	**P**	**03 48 48.5**	**+3.4**
GTBY	**Guantanamo Bay**	**13.41**	**57**	Pn	**Pn**	**03 48 40.3**	**+1.4**
GTBY	**Guantanamo Bay**	**13.41**	**57**	*eP*	**Pn**	**03 48 42.0**	**+3.1**
YOTC	**Yotoco, Valle**	**13.71**	**129**	*eP*	**Pn**	**03 48 45.4**	**+2.3**
GUY2C	**Guyana, Caldas**	**13.74**	**122**	*eP*	**Pn**	**03 48 46.8**	**+3.0**
PTBC	**PUERTO BERRIO,**	**13.84**	**116**	*eP*	**Pn**	**03 48 48.3**	**+3.5**
NORC	**Norcasia**	**13.97**	**120**	*eP*	**P**	**03 48 52.8**	**-1.8**
OCAC	**Ocana**	**14.19**	**107**	P	**P**	**03 48 57.6**	**+0.3**
OCAC	**Ocana**	**14.19**	**107**	*eP*	**P**	**03 48 58.0**	**+0.7**
POPC	**Popayan, Colom**	**14.44**	**134**	*eP*	**P**	**03 48 56.5**	**-3.6**
ORTC	**Ortega, Tolima**	**14.60**	**126**	*eP*	**P**	**03 49 03.8**	**+2.1**
SPBC	**San Pablo de B**	**14.60**	**118**	*eP*	**P**	**03 49 00.5**	**-1.2**
MARP	**Paez Belalcaza**	**14.75**	**131**	*eP*	**P**	**03 49 03.4**	**-0.2**
SOTA	**Rioblanco**	**14.78**	**135**	*eP*	**Pn**	**03 48 59.1**	**+1.0**
ROSC	**El Rosal**	**14.81**	**121**	P	**P**	**03 49 08.1**	**+3.6**
	22nm,0.8s,baz=338,slow=7.7,SNR=13						
ROSC				LR	LR	03 55 00.4	
	comp=Z,1μm,18.8s,baz=13,slow=38						
ROSC	**El Rosal**	**14.81**	**121**	P	**P**	**03 49 04.9**	**+0.5**
ROSC	**El Rosal**	**14.81**	**121**	*eP*	**P**	**03 49 08.0**	**+3.6**
PRAC	**Prado**	**15.00**	**126**	*eP*	**P**	**03 49 05.1**	**-1.1**
PAMC	**Pamplona, Colo**	**15.09**	**110**	*eP*	**P**	**03 49 08.7**	**+1.1**
TULM	**Tulcn-Chalpat**	**15.10**	**142**	P	**P**	**03 49 07.8**	**+0.2**
RUSC	**La Rusia**	**15.35**	**115**	*eP*	**P**	**03 49 13.0**	**+2.5**
FLOC	**Florencia**	**15.84**	**134**	*eP*	**Pn**	**03 49 07.1**	**-4.5**
SLOR	**San Lorenzo -**	**15.88**	**147**	Pn	**P**	**03 49 13.2**	**-3.2**
DWPF	**Disney Wildern**	**16.08**	**18**	P	**Pn**	**03 49 16.5**	**+1.9**
	baz=200						
PORT	**Chimborazo Vol**	**16.37**	**150**	Pn	**P**	**03 49 19.4**	**-2.5**
SDV	**Santo Domingo**	**16.54**	**102**	P	**Pn**	**03 49 21.5**	**+0.8**
	0.8nm,0.3s,baz=280,slow=12,SNR=7.8						
SDV				LR	LR	03 55 55.8	
	comp=Z,1μm,21.9s,baz=276,slow=38						
	5.7nm,0.6s						
SDV	**Santo Domingo**	**16.54**	**102**	Pn	**Pn**	**03 49 21.7**	**+1.0**
SDV	**Santo Domingo**	**16.54**	**102**	*eP*	Pn	03 49 13.7	-7.1
MACC	**Macarena, Meta**	**16.79**	**128**	*eP*	**P**	**03 49 25.0**	**-1.0**
656A	**Willston**	**16.98**	**13**	P	**Pn**	**03 49 27.6**	**+1.5**
PTGC	**Puerto Gaitan,**	**17.00**	**119**	*eP*	**P**	**03 49 31.8**	**+3.5**
ZAIG	**Zacatecas**	**17.81**	**306**	P	**P**	**03 49 37.7**	**+0.2**
BRAL	**Brewton**	**18.26**	**360**	P	**P**	**03 49 43.6**	**+1.5**
	baz=180						
352A

WHTX IAmb IAmb 03 50 18.4
comp=Z,42nm,0.8s
WHTX Lake Whitney, 21.37 335 P **P** **03 50 17.1 +1.1**
baz=151,SNR=7.4
WHTX Lake Whitney, 21.37 335 P **P** **03 50 17.3 +1.3**
baz=151,SNR=7.4
CCAR Cane Creek 21.45 349 P **P** **03 50 18.1 +1.2**
CCAR IAmb IAmb 03 50 21.0
comp=Z,71nm,1.1s
WLAR White Oak Lake 21.51 346 P **P** **03 50 19.1 +1.6**
WLAR IAmb IAmb 03 50 24.0
comp=Z,52nm,0.8s
X48A Hartselle 21.54 360 P **P** **03 50 19.4 +1.7**
X48A IAmb IAmb 03 50 24.4
comp=Z,89nm,1.1s
X48A Hartselle 21.54 360 P **P** **03 50 19.3 +1.5**
baz=180,SNR=38
ATAH Atahualpa 21.59 156 P **P** **03 50 18.2 -0.6**
comp=Z,2.7nm,0.7s,baz=330,slow=9.4,SNR=4.1
ATAH LR LR 03 57 54.2
comp=Z,341nm,18.4s,baz=321,slow=34
comp=Z,2.7nm,0.7s
Z38A Mt. Pleasant 21.62 342 P **P** **03 50 20.3 +1.6**
Z38A Mt. Pleasant 21.62 342 P **P** **03 50 20.5 +1.9**
baz=158,SNR=36
FPAL Fort Paine 21.66 3 P **P** **03 50 21.1 +2.0**
FPAL IAmb IAmb 03 50 26.1
comp=Z,50nm,1.0s
OXF Oxford 21.71 355 P **P** **03 50 21.2 +1.6**
OXF Oxford 21.71 355 P **P** **03 50 20.8 +1.3**
baz=174,SNR=15
OXF Oxford 21.71 355 P **P** **03 50 20.9 +1.3**
baz=174,SNR=15
X51A Calhoun 21.74 5 P **P** **03 50 20.2 +0.3**
X51A IAmb IAmb 03 50 27.0
comp=Z,84nm,1.0s
X51A Calhoun 21.74 5 P **P** **03 50 21.3 +1.4**
baz=186,SNR=13
X51A P **P** **03 50 21.3 +1.4**
baz=186,SNR=13
HODGE Hodges 21.75 11 P **P** **03 50 20.2 +0.1**
HODGE Hodges 21.75 11 P **P** **03 50 20.4 +0.3**
baz=192,SNR=15
JSC Jenkinsville 22.00 13 P **P** **03 50 23.5 +0.8**
JSC Jenkinsville 22.00 13 P **P** **03 50 23.4 +0.8**
baz=195,SNR=8.5
Y58A Scranton 22.03 16 P **P** **03 50 24.3 +1.2**
Y58A IAmb IAmb 03 50 27.6
comp=Z,63nm,0.8s
Y58A Scranton 22.03 16 P **P** **03 50 25.0 +1.9**
baz=199,SNR=7.1
Y58A P **P** **03 50 25.0 +1.9**
baz=199,SNR=7.1
PLAL Pickwick Lake 22.09 358 P **P** **03 50 24.1 +0.4**
X40A Basin Creek Fa 22.21 347 P **P** **03 50 26.0 +1.0**
X40A Basin Creek Fa 22.21 347 P **P** **03 50 26.3 +1.3**
baz=165,SNR=6.6
X40A P **P** **03 50 26.3 +1.3**
baz=165,SNR=6.6
X40A Basin Creek Fa 22.21 347 P **P** **03 50 25.7 +0.6**
baz=165,SNR=6.6
SWET Sewanee 22.32 2 P **P** **03 50 26.3 +0.1**
SWET IAmb IAmb 03 50 33.3
comp=Z,40nm,0.9s
W45A Hickory Valley 22.33 355 P **P** **03 50 27.5 +1.2**
W45A IAmb IAmb 03 50 29.4
comp=Z,55nm,0.9s
W50A Signal Mountai 22.34 4 P **P** **03 50 27.3 +0.9**
W50A Signal Mountai 22.34 4 P **P** **03 50 27.6 +1.2**
baz=184,SNR=14
Y59A Loris 22.34 18 P **P** **03 50 27.9 +1.6**
baz=201
Y59A P **P** **03 50 27.9 +1.6**
baz=201
W52A Murphy 22.35 7 P **P** **03 50 27.6 +1.1**
W52A IAmb IAmb 03 50 32.6
comp=Z,44nm,0.8s
W52A Murphy 22.35 7 P **P** **03 50 28.3 +1.7**
baz=188,SNR=18
BG3 Lake Jocassee 22.38 9 P **P** **03 50 28.1 +1.2**
BG3 IAmb IAmb 03 50 34.2
comp=Z,32nm,0.9s
CASEE Lake Jocassee 22.38 9 P **P** **03 50 28.7 +1.9**
baz=190,SNR=16
UALR University of 22.39 348 P **P** **03 50 27.4 +0.4**
UALR IAmb IAmb 03 50 29.9
comp=Z,42nm,1.1s
PAULI Pauline 22.40 11 P **P** **03 50 29.1 +2.1**
baz=193
HPIG 22.44 312 P **P** **03 50 28.5 +0.7**
MIAR Mount Ida 22.44 346 P **P** **03 50 28.1 +0.6**
MIAR Mount Ida 22.44 346 P **P** **03 50 28.3 +0.8**
baz=163,SNR=19
MIAR Mount Ida 22.44 346 P **P** **03 50 28.1 +0.6**
baz=163,SNR=19
Z35A Perchaven, San 22.46 337 P **P** **03 50 29.0 +1.3**
Z35A IAmb IAmb 03 50 32.1
comp=Z,70nm,0.9s
Z35A Perchaven, San 22.46 337 P **P** **03 50 29.2 +1.5**
baz=153,SNR=17
BIRD Birdtown, Kers 22.52 14 P **P** **03 50 30.2 +1.9**
BIRD IAmb IAmb 03 50 31.8
comp=Z,54nm,1.3s
BIRD Birdtown, Kers 22.52 14 P **P** **03 50 30.3 +1.9**
baz=197,SNR=7.6
Y60A Bolivia 22.55 19 P **P** **03 50 30.3 +1.6**
Y60A IAmb IAmb 03 50 33.7
comp=Z,50nm,0.8s
TX32 Lajitas Array 22.58 319 P **P** **03 50 28.5 -0.6**
TXAR Lajitas Array 22.58 319 P **P** **03 50 29.7 +0.6**
comp=Z,6.8nm,0.8s,baz=140,slow=11,SNR=41
TXAR PcP **PcP** **03 54 22.3 -0.2**
comp=Z,0.2nm,0.7s,baz=130,slow=2.8,SNR=3.6
TXAR LR LR 03 59 52.8
comp=Z,218nm,21.7s,baz=108,slow=38
comp=Z,6.8nm,0.8s
TXAR Lajitas Array 22.58 319 P **P** **03 50 29.1 0.0**
TXAR PcP **PcP** **03 54 22.4 -0.2**
TX31 Lajitas Ar. Si 22.58 319 P **P** **03 50 28.2 -1.0**
TX31 IAmb IAmb 03 50 31.7
comp=Z,122nm,1.4s
TX31 Lajitas Ar. Si 22.58 319 P **P** **03 50 29.0 -0.2**
baz=133,SNR=33
CPCT Cooper Cave 22.64 5 P **P** **03 50 30.9 +1.2**
X58A Rowland 22.73 17 P **P** **03 50 31.8 +1.3**
X58A IAmb IAmb 03 50 34.3
comp=Z,46nm,1.1s
X58A Rowland 22.73 17 P **P** **03 50 33.4 +2.8**
baz=200,SNR=5.1
X58A P **P** **03 50 33.4 +2.8**
baz=200,SNR=5.1
W41B Gary Mavity, V 22.76 349 P **P** **03 50 31.8 +1.0**
W41B IAmb IAmb 03 50 33.3
comp=Z,49nm,1.3s
W41B Gary Mavity, V 22.76 349 P **P** **03 50 32.0 +1.2**
baz=167,SNR=19
W41B Gary Mavity, V 22.76 349 P **P** **03 50 31.3 +0.5**
baz=167,SNR=19
KMSC Kings Mountain 22.81 12 P **P** **03 50 33.2 +1.8**
KMSC Kings Mountain 22.81 12 P **P** **03 50 34.2 +2.8**
baz=194,SNR=8.3
KMSC Kings Mountain 22.81 12 P **P** **03 50 32.2 +0.8**
baz=194,SNR=8.3
V48A Smith Brothers 22.82 0 P **P** **03 50 33.5 +2.0**
V48A IAmb IAmb 03 50 34.7
comp=Z,98nm,1.3s
V48A Smith Brothers 22.82 0 P **P** **03 50 33.5 +2.0**
baz=180,SNR=28
ABTX Abilene, Hawle 22.87 332 P **P** **03 50 31.9 -0.1**
ABTX IAmb IAmb 03 50 35.2
comp=Z,90nm,1.4s
ABTX Abilene, Hawle 22.87 332 P **P** **03 50 32.3 +0.2**
baz=147,SNR=8.4
ABTX Abilene, Hawle 22.87 332 P **P** **03 50 31.7 -0.4**
baz=147,SNR=8.4
HBAR Harrisburg 22.88 352 P **P** **03 50 33.1 +1.1**
WHAR Wooly Hollow 22.88 349 P **P** **03 50 33.2 +1.1**
WHAR IAmb IAmb 03 50 34.9
comp=Z,60nm,1.2s
TKL Tuckaleechee C 22.93 7 P **P** **03 50 33.7 +1.1**
comp=Z,28nm,0.8s,baz=177,slow=9.5,SNR=40
comp=Z,28nm,0.8s
TKL Tuckaleechee C 22.93 7 P **P** **03 50 34.1 +1.5**
TKL IAmb IAmb 03 50 37.7
comp=Z,45nm,0.9s
TKL Tuckaleechee C 22.93 7 P **P** **03 50 34.5 +1.9**
baz=188,SNR=22

X37A Clayton 22.97 342 **P** **03 50 34.3 +1.2**
X37A IAmb IAmb 03 50 35.8
comp=Z,61nm,0.9s
X37A Clayton 22.97 342 P **P** **03 50 34.7 +1.7**
baz=159,SNR=31
V51A Loudon 23.01 6 P **P** **03 50 35.1 +1.6**
V51A IAmb IAmb 03 50 37.5
comp=Z,55nm,1.1s
V51A Loudon 23.01 6 P **P** **03 50 35.3 +1.9**
baz=186,SNR=25
V53A Saluda 23.06 9 P **P** **03 50 35.3 +1.2**
V53A IAmb IAmb 03 50 40.3
comp=Z,51nm,1.1s
V53A Saluda 23.06 9 P **P** **03 50 36.2 +2.1**
baz=190,SNR=18
V53A P **P** **03 50 36.2 +2.1**
baz=190,SNR=18
HALT Halls 23.09 355 P **P** **03 50 34.2 -0.1**
W39A Magazine 23.11 346 P **P** **03 50 35.0 +0.5**
W39A IAmb IAmb 03 50 37.0
comp=Z,66nm,1.5s
W39A Magazine 23.11 346 P **P** **03 50 35.9 +1.4**
baz=163,SNR=11
W39A Magazine 23.11 346 P **P** **03 50 35.4 +0.9**
baz=163,SNR=11
W57A Gilead 23.12 15 P **P** **03 50 35.7 +1.1**
W57A Gilead 23.12 15 P **P** **03 50 35.5 +0.9**
baz=198,SNR=8.0
W57A P **P** **03 50 35.5 +0.9**
baz=198,SNR=8.0
V52A Sevierville 23.13 7 P **P** **03 50 36.2 +1.5**
V52A IAmb IAmb 03 50 39.5
comp=Z,40nm,1.1s
V52A Sevierville 23.13 7 P **P** **03 50 36.7 +2.0**
baz=188,SNR=16
CLTN Cedars of Leba 23.18 1 P **P** **03 50 36.5 +1.3**
CLTN IAmb IAmb 03 50 37.6
comp=Z,57nm,1.0s
GNAR Gosnell 23.21 354 P **P** **03 50 36.2 +0.7**
WVT Waverly 23.22 358 P **P** **03 50 36.2 +0.5**
WVT IAmb IAmb 03 50 37.6
comp=Z,70nm,1.4s
WVT Waverly 23.22 358 P **P** **03 50 36.0 +0.4**
baz=178,SNR=23
WVT Waverly 23.22 358 P **P** **03 50 35.9 +0.3**
baz=178
LNXT Lenox 23.29 355 P **P** **03 50 37.3 +1.0**
PEBM Pemiscott Bayo 23.34 354 P **P** **03 50 37.6 +0.8**
FCAR Ozark Folk Cen 23.43 349 P **P** **03 50 37.8 0.0**
FCAR IAmb IAmb 03 50 39.1
comp=Z,54nm,1.0s
GLAT Glass 23.44 355 P **P** **03 50 39.0 +1.2**
LCAR Lake Charles 23.45 352 P **P** **03 50 38.1 +0.2**
LCAR IAmb IAmb 03 50 39.3
comp=Z,56nm,1.1s
LCAR Lake Charles 23.45 352 P **P** **03 50 38.0 +0.1**
baz=170,SNR=42
UTMT University of 23.48 356 P **P** **03 50 38.8 +0.5**
V55A Taylorsville 23.52 12 P **P** **03 50 39.8 +1.2**
V55A Taylorsville 23.52 12 P **P** **03 50 40.2 +1.6**
baz=194,SNR=7.6
V55A P **P** **03 50 40.2 +1.6**
baz=194,SNR=7.6
U49A Red Boiling Sp 23.62 2 P **P** **03 50 40.9 +1.3**
U49A IAmb IAmb 03 50 41.6
comp=Z,56nm,1.1s
U49A Red Boiling Sp 23.62 2 P **P** **03 50 41.0 +1.3**
baz=183,SNR=24
HICK Hickman 23.71 356 P **P** **03 50 41.2 +0.8**
CNNC Cliffs of the 23.80 19 P **P** **03 50 41.7 +0.4**
baz=202
X34A Smith Ranch, M 23.81 337 **P** **03 50 42.6 +1.1**
X34A IAmb IAmb 03 50 48.6
comp=Z,50nm,0.9s
TZTN Tazewell 23.83 7 P **P** **03 50 43.1 +1.5**
TZTN IAmb IAmb 03 50 45.7
comp=Z,59nm,1.0s
TZTN Tazewell 23.83 7 P **P** **03 50 43.8 +2.1**
baz=188,SNR=22
TZTN Tazewell 23.83 7 P **P** **03 50 42.0 +0.4**
baz=188,SNR=22
V58A Windy Hill, Pi 23.96 16 P **P** **03 50 44.4 +1.6**
V58A IAmb IAmb 03 50 45.6
comp=Z,50nm,0.9s
V58A Windy Hill, Pi 23.96 16 P **P** **03 50 44.6 +1.8**
baz=199,SNR=16
V58A P **P** **03 50 44.6 +1.8**
baz=199,SNR=16
U40A Yellville 24.02 348 P **P** **03 50 43.0 -0.5**
U40A Yellville 24.02 348 P **P** **03 50 43.7 +0.2**
baz=166,SNR=22
U40A P **P** **03 50 43.7 +0.2**
baz=166,SNR=22
U40A Yellville 24.02 348 P **P** **03 50 43.4 -0.1**
baz=166,SNR=22
U54A Nelsons Funny 24.06 10 P **P** **03 50 45.3 +1.5**
U54A IAmb IAmb 03 50 47.5
comp=Z,32nm,0.8s
U54A Nelsons Funny 24.06 10 P **P** **03 50 45.6 +1.8**
baz=192,SNR=12
U54A P **P** **03 50 45.6 +1.8**
baz=192,SNR=12
PBMO Poplar Bluff 24.06 353 P **P** **03 50 43.5 -0.3**
PBMO Poplar Bluff 24.06 353 P **P** **03 50 44.2 +0.5**
baz=172,SNR=8.5
T47A Sharon Grove 24.07 360 P **P** **03 50 45.1 +1.2**
baz=180
T45B Paducah 24.14 357 P **P** **03 50 45.4 +0.9**
baz=176,SNR=7.2
T45A Paducah 24.14 357 P **P** **03 50 45.0 +0.5**
U56A King 24.17 13 P **P** **03 50 46.0 +1.1**
U56A IAmb IAmb 03 50 49.4
comp=Z,55nm,1.1s
U56A King 24.17 13 P **P** **03 50 47.2 +2.4**
baz=196,SNR=9.3
U56A P **P** **03 50 47.2 +2.4**
baz=196,SNR=9.3
T50A Nancy 24.18 4 P **P** **03 50 45.8 +0.9**
T50A IAmb IAmb 03 50 46.9
comp=Z,27nm,0.9s
T50A Nancy 24.18 4 P **P** **03 50 45.9 +0.9**
baz=185
T50A P **P** **03 50 45.9 +0.9**
baz=185
HHAR Hobbs 24.18 346 P **P** **03 50 44.7 -0.3**
HHAR Hobbs 24.18 346 P **P** **03 50 45.3 +0.3**
baz=163
FNO Franklin 24.24 339 **P** **03 50 45.6 +0.1**
WMOK Wichita Mounta 24.30 336 P **P** **03 50 46.1 0.0**
WMOK IAmb IAmb 03 50 49.6
comp=Z,65nm,0.9s
WMOK Wichita Mounta 24.30 336 P **P** **03 50 45.7 -0.4**
baz=151,SNR=43
WMOK Wichita Mounta 24.30 336 P **P** **03 50 45.9 -0.1**
baz=151,SNR=43
TUL1 Leonard 24.32 342 **P** **03 50 46.2 0.0**
TUL1 Leonard 24.32 342 P **P** **03 50 46.3 0.0**
baz=159,SNR=57
TUL1 Leonard 24.32 342 P **P** **03 50 45.9 -0.4**
baz=159,SNR=57
OKCFA Oklahoma City 24.40 339 **P** **03 50 47.4 +0.3**
U38A Gravette 24.44 345 P **P** **03 50 47.4 0.0**
U38A Gravette 24.44 345 P **P** **03 50 46.8 -0.6**
baz=162,SNR=8.9
MGMO Mountain Grove 24.69 350 P **P** **03 50 49.4 -0.2**
LPIG La Paz 24.76 300 LR LR 04 00 04.0
comp=Z,997nm,21.9s,baz=132,slow=35
U59A Littleton 24.85 18 P **P** **03 50 52.7 +1.7**
U59A IAmb IAmb 03 50 54.7
comp=Z,26nm,0.9s
U59A Littleton 24.85 18 P **P** **03 50 52.7 +1.7**
baz=202,SNR=10.0
U59A P **P** **03 50 52.7 +1.7**
baz=202,SNR=10.0
S44A Carbondale 24.86 356 P **P** **03 50 51.4 +0.4**
S44A IAmb IAmb 03 50 52.7
comp=Z,56nm,1.0s
S44A Carbondale 24.86 356 P **P** **03 50 51.7 +0.7**
baz=175,SNR=23
SIUC Southern Illin 24.87 356 P **P** **03 50 51.1 -0.1**
S51A Beattyville 24.91 6 P **P** **03 50 53.0 +1.6**
S51A IAmb IAmb 03 50 54.3
comp=Z,30nm,0.8s
S51A Beattyville 24.91 6 P **P** **03 50 53.1 +1.6**
baz=188,SNR=19
S51A P **P** **03 50 53.1 +1.6**
baz=188,SNR=19

BLA Blacksburg 25.00 12 P **P** **03 50 53.8 +1.5**
BLA IAmb IAmb 03 50 56.4
comp=Z,28nm,0.9s
BLA Blacksburg 25.00 12 P **P** **03 50 54.5 +2.1**
baz=195,SNR=8.7
BLA Blacksburg 25.00 12 P **P** **03 50 52.7 +0.3**
baz=195,SNR=8.7
T57A Hurt 25.06 15 P **P** **03 50 53.7 +0.8**
T57A IAmb IAmb 03 50 56.3
comp=Z,47nm,0.9s
T57A Hurt 25.06 15 P **P** **03 50 54.7 +1.8**
baz=198,SNR=18
T57A P **P** **03 50 54.7 +1.8**
baz=198,SNR=18
FVM French Village 25.25 354 P **P** **03 50 54.4 -0.2**
FVM French Village 25.25 354 P **P** **03 50 54.4 -0.2**
baz=172
MNTX Cornudas Mount 25.28 321 P **P** **03 50 54.7 -0.2**
MNTX IAmb IAmb 03 50 56.1
comp=Z,63nm,1.4s
MNTX Cornudas Mount 25.28 321 P **P** **03 50 55.0 0.0**
baz=134,SNR=44
MNTX Cornudas Mount 25.28 321 P **P** **03 50 54.5 -0.5**
baz=134,SNR=44
S54A Dingess, Beckl 25.39 11 P **P** **03 50 55.8 -0.1**
S54A IAmb IAmb 03 50 59.8
comp=Z,22nm,0.9s
S39A Bolivar 25.41 348 P **P** **03 50 56.0 -0.1**
S39A IAmb IAmb 03 50 57.0
comp=Z,35nm,0.8s
S39A Bolivar 25.41 348 P **P** **03 50 56.2 +0.2**
baz=166,SNR=41
R49A Shelbyville 25.42 3 P **P** **03 50 57.1 +1.0**
R49A Shelbyville 25.42 3 P **P** **03 50 57.1 +1.0**
baz=184,SNR=19
R49A P **P** **03 50 57.1 +1.0**
baz=184,SNR=19
T35A Sooner Cattle 25.47 342 **P** **03 50 56.7 +0.1**
T35A IAmb IAmb 03 50 59.4
comp=Z,51nm,1.1s
T35B Sooner Cattle 25.47 342 P **P** **03 50 56.9 +0.3**
baz=158,SNR=18
R50A Paris 25.47 5 P **P** **03 50 58.1 +1.5**
R50A Paris 25.47 5 P **P** **03 50 57.8 +1.2**
baz=186,SNR=21
R50A P **P** **03 50 57.8 +1.2**
baz=186,SNR=21
MSTX Muleshoe 25.49 328 P **P** **03 50 57.5 +0.5**
MSTX Muleshoe 25.49 328 P **P** **03 50 57.0 +0.1**
baz=142,SNR=24
MSTX Muleshoe 25.49 328 P **P** **03 50 56.5 -0.5**
baz=142,SNR=24
T59A Double "B" Far 25.50 18 P **P** **03 50 58.0 +1.0**
T59A IAmb IAmb 03 50 59.8
comp=Z,51nm,1.1s
T59A Double "B" Far 25.50 18 P **P** **03 50 57.9 +1.0**
baz=202,SNR=14
T59A P **P** **03 50 57.9 +1.0**
baz=202,SNR=14
AMTX Amarillo 25.68 331 P **P** **03 50 59.1 +0.4**
AMTX IAmb IAmb 03 51 00.2
comp=Z,32nm,1.0s
AMTX Amarillo 25.68 331 P **P** **03 50 58.2 -0.6**
baz=145
R53A Hurricane 25.80 9 P **P** **03 51 01.2 +1.6**
R53A IAmb IAmb 03 51 04.3
comp=Z,47nm,0.9s
R53A Hurricane 25.80 9 P **P** **03 51 01.2 +1.6**
baz=191,SNR=10
R53A P **P** **03 51 01.2 +1.6**
baz=191,SNR=10
U32A Winter Ranch, 25.83 337 **P** **03 51 00.0 +0.1**
U32A IAmb IAmb 03 51 03.4
comp=Z,40nm,0.8s
U32A Winter Ranch, 25.83 337 P **P** **03 51 00.3 +0.4**
baz=152,SNR=14
S57A Dark Hollow, R 25.86 15 P **P** **03 50 59.9 -0.2**
S57A Dark Hollow, R 25.86 15 P **P** **03 51 01.6 +1.5**
baz=198,SNR=11
S57A P **P** **03 51 01.6 +1.5**
baz=198,SNR=11
Q44A Meyer Farm, Va 26.04 356 P **P** **03 51 01.4 -0.4**
Q44A Meyer Farm, Va 26.04 356 P **P** **03 51 02.1 +0.3**
baz=176,SNR=14
JSRW J. Sargeant Re 26.08 17 P **P** **03 51 03.0 +0.9**
R55A Marlinton 26.09 12 P **P** **03 51 04.1 +1.8**
R55A IAmb IAmb 03 51 07.0
comp=Z,40nm,1.1s
R55A Marlinton 26.09 12 P **P** **03 51 04.4 +2.1**
baz=195,SNR=8.9
R55A P **P** **03 51 04.4 +2.1**
baz=195,SNR=8.9
BLO Bloomington 26.25 1 P **P** **03 51 03.9 +0.2**
BLO IAmb IAmb 03 51 05.5
comp=Z,56nm,1.1s
Q51A Peebles 26.30 6 P **P** **03 51 05.4 +1.3**
Q51A Peebles 26.30 6 P **P** **03 51 06.0 +1.9**
baz=188,SNR=40
Q51A P **P** **03 51 06.0 +1.9**
baz=188,SNR=40
R58B Mineral 26.33 16 P **P** **03 51 06.1 +1.7**
R58B IAmb IAmb 03 51 09.5
comp=Z,31nm,1.1s
R58B Mineral 26.33 16 P **P** **03 51 06.5 +2.1**
baz=200,SNR=12
R58B P **P** **03 51 06.5 +2.1**
baz=200,SNR=12
Q52A Bidwell 26.38 8 P **P** **03 51 06.6 +1.8**
Q52A IAmb IAmb 03 51 08.7
comp=Z,68nm,1.2s
Q52A Bidwell 26.38 8 P **P** **03 51 06.6 +1.8**
baz=190,SNR=8.1
Q52A P **P** **03 51 06.6 +1.8**
baz=190,SNR=8.1
P48A Milroy 26.57 3 P **P** **03 51 06.9 +0.3**
P48A Milroy 26.57 3 P **P** **03 51 07.0 +0.5**
baz=183,SNR=22
P48A P **P** **03 51 07.0 +0.5**
baz=183,SNR=22
Q54A Coxs Mills 26.63 11 P **P** **03 51 07.8 +0.7**
Q54A IAmb IAmb 03 51 10.0
comp=Z,21nm,0.9s
Q54A Coxs Mills 26.63 11 P **P** **03 51 08.9 +1.8**
baz=193,SNR=7.9
Q54A P **P** **03 51 08.9 +1.8**
baz=193,SNR=7.9
P49A Miami Univ. Ec 26.69 4 P **P** **03 51 08.2 +0.5**
P49A Miami Univ. Ec 26.69 4 P **P** **03 51 08.3 +0.7**
baz=185,SNR=19
P49A Miami Univ. Ec 26.69 4 P **P** **03 51 07.8 +0.2**
baz=185,SNR=19
P46A Rosedale 26.70 360 P **P** **03 51 07.6 -0.1**
P46A IAmb IAmb 03 51 09.3
comp=Z,46nm,1.2s
P46A Rosedale 26.70 360 P **P** **03 51 08.2 +0.5**
baz=180,SNR=7.7
CBN Corbin Frederi 26.70 17 IAmb IAmb 03 51 11.0
comp=Z,58nm,1.1s
CBN Corbin Frederi 26.70 17 P **P** **03 51 10.2 +2.5**
baz=201
CBN Corbin Frederi 26.70 17 P **P** **03 51 07.1 -0.6**
baz=201
P51A Williamsport 26.79 7 P **P** **03 51 10.2 +1.8**
baz=188,SNR=10
P51A P **P** **03 51 10.2 +1.8**
baz=188,SNR=10
P43A Skaggs, Pawnee 26.81 356 P **P** **03 51 09.2 +0.5**
baz=174
P40A Paris 26.98 351 P **P** **03 51 10.2 0.0**
baz=169,SNR=10
Q56A Snyder Ridge, 27.02 13 P **P** **03 51 12.9 +2.2**
baz=197
Q56A P **P** **03 51 12.9 +2.2**
baz=197
P53A Whipple 27.02 10 IAmb IAmb 03 51 14.8
comp=Z,46nm,0.9s
P53A Whipple 27.02 10 P **P** **03 51 12.3 +1.6**
baz=192,SNR=16
P53A P **P** **03 51 12.3 +1.6**
baz=192,SNR=16
P52A Corning 27.05 8 IAmb IAmb 03 51 14.4
comp=Z,56nm,0.9s
P52A Corning 27.05 8 P **P** **03 51 10.7 -0.2**
baz=190,SNR=16
O44A Mansfield 27.26 358 IAmb IAmb 03 51 14.1
comp=Z,35nm,0.8s

O44A **Mansfield** 27.26 358 P P 03 51 13.3 +0.6
baz=177,SNR=5.0
P38A **Dawn** 27.32 349 IAmb IAmb 03 51 13.9
comp=Z,46nm,0.8s
P38A **Dawn** 27.32 349 P P 03 51 13.0 -0.3
baz=166,SNR=28
121A **Cookes Peak, D** 27.34 319 P P 03 51 15.3 +1.5
baz=131,SNR=10.0
121A **Cookes Peak, D** 27.34 319 P P 03 51 14.6 +0.8
baz=131,SNR=10.0
O49A **Covington** 27.36 4 P P 03 51 14.8 +1.1
baz=186,SNR=21
O49A P P 03 51 14.8 +1.1
baz=186,SNR=21
O48B **Farmland** 27.38 3 P P 03 51 14.6 +0.8
baz=184,SNR=14
O48B **Farmland** 27.38 3 P P 03 51 13.8 -0.1
baz=184,SNR=14
SFIN **Lafayette** 27.45 360 IAmb IAmb 03 51 15.8
comp=Z,31nm,0.9s
SFIN **Lafayette** 27.45 360 P P 03 51 14.8 +0.3
baz=180,SNR=7.8
SFIN **Lafayette** 27.45 360 P P 03 51 14.3 -0.2
baz=180,SNR=7.8
KSU1 **Kansas State U** 27.53 344 P P 03 51 15.3 0.0
baz=159
ACSO **Alum Creek Sta** 27.54 7 P P 03 51 16.8 +1.5
baz=188,SNR=7.7
ACSO **Alum Creek Sta** 27.54 7 P P 03 51 16.1 +0.8
baz=188,SNR=7.7
R32A **Long Quarter,** 27.55 340 IAmb IAmb 03 51 16.4
comp=Z,18nm,0.8s
R32A **Long Quarter,** 27.55 340 P P 03 51 15.7 +0.3
baz=155
O52A **Adamsville** 27.57 9 IAmb IAmb 03 51 19.1
comp=Z,48nm,1.1s
O52A **Adamsville** 27.57 9 P P 03 51 16.1 +0.6
baz=191,SNR=9.6
O52A P P 03 51 16.1 +0.6
baz=191,SNR=9.6
HDIL **Hopedale** 27.70 356 P P 03 51 17.2 +0.5
baz=175,SNR=8.7
HDIL **Hopedale** 27.70 356 P P 03 51 16.6 -0.1
baz=175,SNR=8.7
P57A **Homestead Farm** 27.72 15 IAmb IAmb 03 51 20.6
comp=Z,35nm,0.9s
P57A **Homestead Farm** 27.72 15 P P 03 51 19.6 +2.7
baz=199,SNR=10
P57A P P 03 51 19.6 +2.7
baz=199,SNR=10
Y22A **Socorro** 27.79 322 P P 03 51 19.0 +1.1
baz=134,SNR=24
O53A **New Philadelph** 27.80 10 IAmb IAmb 03 51 21.2
comp=Z,39nm,0.9s
O53A **New Philadelph** 27.80 10 P P 03 51 18.8 +1.3
baz=192,SNR=9.5
Y22D **IRIS PASSCAL I** 27.86 323 P P 03 51 19.0 +0.6
baz=135
O54A **Avella** 27.87 11 IAmb IAmb 03 51 24.8
comp=Z,22nm,1.0s
N47A **Urbana** 27.98 2 IAmb IAmb 03 51 20.3
comp=Z,27nm,1.1s
N47A **Urbana** 27.98 2 P P 03 51 19.2 0.0
baz=183
N47A P P 03 51 19.2 0.0
baz=183
N41A **Harden Midland** 27.99 354 IAmb IAmb 03 51 19.8
comp=Z,31nm,0.9s
N49A **Columbus Grove** 28.11 5 P P 03 51 21.4 +1.1
baz=186,SNR=28
N49A P P 03 51 21.4 +1.1
baz=186,SNR=28
ANMO **Albuquerque** 28.21 325 P P 03 51 22.6 +1.0
comp=Z,5.9nm,0.9s,baz=139,slow=15,SNR=19
ANMO LR LR 04 06 51.5
comp=Z,190nm,18.0s,baz=136,slow=45
comp=Z,5.9nm,0.9s
ANMO **Albuquerque** 28.21 325 P P 03 51 21.8 +0.1
ANMO **Albuquerque** 28.21 325 P P 03 51 22.6 +1.0
baz=137,SNR=17
ANMO **Albuquerque** 28.21 325 P P 03 51 22.0 +0.4
baz=137
CBKS **Cedar Bluff** 28.25 339 P P 03 51 21.9 +0.2
baz=153
N51A **Ashland** 28.29 7 P P 03 51 22.4 +0.4
baz=190,SNR=6.6
N51A P P 03 51 22.4 +0.4
baz=190,SNR=6.6
N53A **Lisbon** 28.40 10 IAmb IAmb 03 51 26.4
comp=Z,29nm,0.8s
N53A **Lisbon** 28.40 10 P P 03 51 24.5 +1.5
baz=193,SNR=9.5
N53A P P 03 51 24.5 +1.5
baz=193,SNR=9.5
N38A **Joes South For** 28.40 350 IAmb IAmb 03 51 25.1
comp=Z,25nm,1.0s
N38A **Joes South For** 28.40 350 P P 03 51 22.7 -0.3
baz=167,SNR=6.0
M44A **Midewin, Midew** 28.48 358 IAmb IAmb 03 51 24.3
comp=Z,31nm,0.9s
MVL **Millersville** 28.66 17 IAmb IAmb 03 51 28.7
comp=Z,26nm,1.1s
M50A **Fremont** 28.69 6 P P 03 51 26.5 +1.0
baz=188,SNR=8.2
M50A P P 03 51 26.5 +1.0
baz=188,SNR=8.2
SSPA **Standing Stone** 28.84 14 P P 03 51 28.3 +1.4
SSPA IAmb IAmb 03 51 29.8
comp=Z,22nm,0.9s
SSPA **Standing Stone** 28.84 14 P P 03 51 29.0 +2.1
baz=199,SNR=8.6
SSPA **Standing Stone** 28.84 14 P P 03 51 28.6 +1.7
baz=199
N35A **Tabor** 28.95 346 P P 03 51 27.9 0.0
baz=162,SNR=7.9
M53A **WI Miller and** 29.04 10 IAmb IAmb 03 51 31.2
comp=Z,35nm,0.9s
M53A **WI Miller and** 29.04 10 P P 03 51 29.7 +1.0
baz=193,SNR=6.9
L46A **Eue Claire** 29.09 1 P P 03 51 28.9 -0.2
baz=181,SNR=7.8
L46A P P 03 51 28.9 -0.2
baz=181,SNR=7.8
L48A **N Adams** 29.10 4 P P 03 51 29.3 +0.1
baz=185,SNR=12
L48A P P 03 51 29.3 +0.1
baz=185,SNR=12
TUPA **Temple Univers** 29.16 19 P P 03 51 31.5 +1.8
baz=204,SNR=6.3
L42A **Oliver, Polo** 29.17 356 IAmb IAmb 03 51 30.6
comp=Z,50nm,1.1s
TUC **Tucson** 29.19 316 P P 03 51 30.1 -0.1
TUC **Tucson** 29.19 316 P P 03 51 30.0 -0.2
baz=126
L44A **Lake County Fo** 29.26 359 P P 03 51 30.9 +0.3
baz=178
L44A **Lake County Fo** 29.26 359 P P 03 51 29.6 -1.0
baz=178
N33B **J Bar K, Exete** 29.29 344 P P 03 51 31.1 +0.2
baz=159,SNR=5.3
N58A **Sunbury** 29.34 16 P P 03 51 33.4 +2.1
baz=201
N58A P P 03 51 33.4 +2.1
baz=201
L40A **Anamosa** 29.37 354 IAmb IAmb 03 51 32.3
comp=Z,32nm,0.9s
L40A **Anamosa** 29.37 354 P P 03 51 31.2 -0.3
baz=172,SNR=12
M55A **Ridgway** 29.43 13 IAmb IAmb 03 51 38.1
comp=Z,38nm,1.4s
SCIA **State Center** 29.48 351 P P 03 51 33.1 +0.5
baz=168
SCIA **State Center** 29.48 351 P P 03 51 32.5 -0.1
baz=168
LUPA **Lehigh Univers** 29.50 18 IAmb IAmb 03 51 35.5
comp=Z,22nm,1.0s
PANJ **Princeton** 29.50 19 P P 03 51 34.9 +2.1
baz=205
AAM **Ann Arbor** 29.52 5 P P 03 51 34.3 +1.4
baz=187,SNR=5.3
AAM **Ann Arbor** 29.52 5 P P 03 51 33.3 +0.4
baz=187,SNR=5.3
KSCO **Kaye Shedlock'** 29.54 335 IAmb IAmb 03 51 36.8
comp=Z,12nm,0.7s
KSCO **Kaye Shedlock'** 29.54 335 P P 03 51 33.4 +0.1
baz=148
M57A **Sunshine Farm,** 29.69 15 IAmb IAmb 03 51 37.6
comp=Z,32nm,0.9s

M57A **Sunshine Farm,** 29.69 15 P P 03 51 36.6 +2.1
baz=200,SNR=12
M57A P P 03 51 36.6 +2.1
baz=200,SNR=12
K43A **Burlington** 29.80 358 IAmb IAmb 03 51 36.1
comp=Z,36nm,1.1s
SDCO **Great Sand Dun** 29.82 330 P P 03 51 37.0 +1.0
baz=142,SNR=18
SDCO **Great Sand Dun** 29.82 330 P P 03 51 37.2 +1.2
baz=142,SNR=18
ERPA **Erie** 29.82 11 P P 03 51 36.8 +1.3
baz=194,SNR=5.1
ERPA **Erie** 29.82 11 P P 03 51 36.5 +0.9
baz=194,SNR=5.1
BRNJ **Basking Ridge** 29.83 19 P P 03 51 37.7 +2.1
baz=205
BGNE **Belgrade** 30.11 343 P P 03 51 37.9 -0.2
baz=158
JFWS **Jewell Farm** 30.12 355 IAmb IAmb 03 51 39.1
comp=Z,24nm,1.1s
JFWS **Jewell Farm** 30.12 355 P P 03 51 37.9 -0.3
baz=174,SNR=6.6
JFWS **Jewell Farm** 30.12 355 P P 03 51 37.4 -0.8
baz=174,SNR=6.6
K38A **Parkersburg** 30.14 351 IAmb IAmb 03 51 38.5
comp=Z,22nm,1.0s
K38A **Parkersburg** 30.14 351 P P 03 51 38.1 -0.3
baz=169,SNR=5.0
L34A **Svendsen Farm,** 30.17 346 IAmb IAmb 03 51 39.0
comp=Z,14nm,0.8s
KSPA **Keystone Colle** 30.26 17 IAmb IAmb 03 51 43.6
comp=Z,24nm,1.1s
KSPA **Keystone Colle** 30.26 17 P P 03 51 41.2 +1.7
baz=202,SNR=5.8
W18A **Petrified Fore** 30.27 321 P P 03 51 40.2 +0.3
baz=132,SNR=5.8
PAL **Palisades** 30.33 20 P P 03 51 41.1 +1.1
baz=206
L56A **Greenwood** 30.34 14 IAmb IAmb 03 51 42.8
comp=Z,31nm,1.2s
J47A **Sunmer** 30.37 3 IAmb IAmb 03 51 43.2
comp=Z,38nm,0.9s
J47A **Sunmer** 30.37 3 P P 03 51 40.4 0.0
baz=184,SNR=8.2
J47A P P 03 51 40.4 0.0
baz=184,SNR=8.2
214A **Organ Pipe Nat** 30.40 313 P P 03 51 41.3 +0.4
baz=123,SNR=5.8
S22A **4UR Ranch, Cre** 30.49 328 P P 03 51 43.0 +1.1
baz=139,SNR=8.8
Q24A **Divide** 30.61 332 P P 03 51 43.8 +0.8
baz=143
BINY **Binghamton** 30.80 16 P P 03 51 46.1 +1.8
baz=201,SNR=11
BINY **Binghamton** 30.80 16 P P 03 51 45.8 +1.5
baz=201,SNR=11
NPNY **Mohonk Preserv** 30.93 19 P P 03 51 47.5 +2.1
baz=205
OGNE **Ogallala** 30.96 338 P P 03 51 46.4 +0.6
baz=151
MVCO **Mesa Verde** 30.99 325 P P 03 51 46.9 +0.7
baz=136,SNR=8.4
I42A **Draeger Farm,** 31.01 357 P P 03 51 46.1 +0.1
baz=176,SNR=19
L59A **Walton** 31.06 17 P P 03 51 48.8 +2.2
baz=203,SNR=8.1
L59A P P 03 51 48.8 +2.2
baz=203,SNR=8.1
I45A **Fountain** 31.12 1 P P 03 51 46.3 -0.7
baz=181,SNR=6.9
I45A P P 03 51 46.3 -0.7
baz=181,SNR=6.9
I40A **Norwalk** 31.12 355 IAmb IAmb 03 51 47.6
comp=Z,28nm,1.0s
I40A **Norwalk** 31.12 355 P P 03 51 46.6 -0.5
baz=173,SNR=5.7
K57A **Scipio Center** 31.16 15 IAmb IAmb 03 51 51.9
comp=Z,26nm,0.9s
I49A **Point Hope** 31.22 6 P P 03 51 47.8 -0.1
baz=188,SNR=13
I49A P P 03 51 47.8 -0.1
baz=188,SNR=13
K31A **O'Neill** 31.40 343 P P 03 51 50.7 +1.2
baz=158
ISCO **Idaho Springs** 31.50 332 P P 03 51 51.8 +1.1
baz=143,SNR=5.1
ISCO **Idaho Springs** 31.50 332 P P 03 51 51.4 +0.6
baz=143,SNR=5.1
WUAZ **Wupatki** 31.54 320 IAmb IAmb 03 51 53.9
comp=Z,17nm,0.9s
WUAZ **Wupatki** 31.54 320 P P 03 51 51.8 +0.8
baz=130,SNR=14
H43A **Windswept, Lux** 31.55 359 P P 03 51 50.4 -0.4
baz=178,SNR=9.2
I37A **Lemond, Waseca** 31.57 351 IAmb IAmb 03 51 51.6
comp=Z,37nm,1.1s
I37B **Waseca** 31.57 351 P P 03 51 50.5 -0.5
baz=168,SNR=9.5
HCNY **Howe Caverns** 31.71 18 P P 03 51 54.0 +1.8
baz=204,SNR=6.1
PV13 **Radium Mtn., P** 31.85 326 IAmb IAmb 03 51 56.0
comp=Z,19nm,1.2s
ECSD **EROS Data Cent** 31.90 347 IAmb IAmb 03 51 54.1
comp=Z,17nm,0.9s
ECSD **EROS Data Cent** 31.90 347 P P 03 51 53.1 -0.9
baz=162,SNR=17
ECSD **EROS Data Cent** 31.90 347 P P 03 51 52.7 -1.2
baz=162,SNR=17
TRY **Troy** 31.96 19 P P 03 51 56.6 +2.1
baz=205,SNR=6.7
PV11 **David Mesa, Pa** 31.98 326 IAmb IAmb 03 51 56.4
comp=Z,27nm,1.4s
L61B **Northampton** 32.03 20 IAmb IAmb 03 52 02.6
comp=Z,30nm,1.2s
L61B **Northampton** 32.03 20 P P 03 51 54.7 -0.3
baz=207
SAML **Samuel** 32.05 131 P P 03 51 55.3 -0.2
J58A **Remsen** 32.07 16 IAmb IAmb 03 51 58.8
comp=Z,15nm,0.9s
G45A **Suttons Bay** 32.13 2 P P 03 51 55.9 0.0
baz=182,SNR=21
G45A P P 03 51 55.9 0.0
baz=182,SNR=21
PV23 **Carpenter Ridg** 32.17 326 IAmb IAmb 03 51 58.6
comp=Z,21nm,1.2s
J59A **Piesco** 32.38 17 P P 03 51 59.7 +1.5
baz=203,SNR=7.9
J59A P P 03 51 59.7 +1.5
baz=203,SNR=7.9
G40A **Rib Lake** 32.46 356 IAmb IAmb 03 51 59.4
comp=Z,33nm,1.0s
G40A **Rib Lake** 32.46 356 P P 03 51 58.4 -0.4
baz=174,SNR=24
SADO **Sadowa** 32.54 10 P P 03 52 00.1 +0.6
comp=Z,15nm,0.6s,baz=212,slow=9.3,SNR=5.0
comp=Z,15nm,0.6s
ACCN **Adirondack Com** 32.56 18 IAmb IAmb 03 52 02.7
comp=Z,44nm,1.4s
ACCN **Adirondack Com** 32.56 18 P P 03 52 02.0 +2.4
baz=205
SPMN **Marine on St.** 32.67 352 P P 03 51 60.0 -0.7
baz=169,SNR=17
SPMN **Marine on St.** 32.67 352 P P 03 51 59.8 -0.9
baz=169,SNR=17
J61A **Chester** 32.88 20 P P 03 52 04.5 +2.0
baz=206,SNR=7.2
J61A P P 03 52 04.5 +2.0
baz=206,SNR=7.2
NCB **Newcomb** 32.93 17 IAmb IAmb 03 52 08.0
comp=Z,29nm,1.2s
O20A **White River Ci** 33.02 329 IAmb IAmb 03 52 06.6
comp=Z,39nm,1.2s
O20A **White River Ci** 33.02 329 P P 03 52 05.1 +1.1
baz=140,SNR=12
SUSD **Miller** 33.14 344 P P 03 52 04.1 -0.6
baz=158
SUSD **Miller** 33.14 344 P P 03 52 03.7 -1.1
baz=158
IKP **In-Ko-Pah, Jac** 33.15 311 P P 03 52 06.7 +1.6
baz=120
BC3 **Big Chuckawall** 33.19 313 P P 03 52 06.6 +1.1
baz=122
NEE2 **Needles Airpor** 33.22 316 P P 03 52 06.5 +1.0
baz=124
COWI **Conover** 33.22 357 P P 03 52 05.1 -0.4
baz=176
IRM **Iron Mountain** 33.24 314 P P 03 52 07.6 +1.8
baz=123

F36A **Milaca** 33.40 352 IAmb IAmb 03 52 07.1
comp=Z,26nm,0.9s
F36A **Milaca** 33.40 352 P P 03 52 06.2 -0.8
baz=168,SNR=22
LONY **Lake Ozonia** 33.43 16 P P 03 52 08.2 +0.9
baz=202,SNR=11
E43A **Lone Tree Farm** 33.45 360 P P 03 52 07.2 -0.2
baz=180,SNR=29
SRU **San Rafael Swe** 33.46 326 IAmb IAmb 03 52 09.8
comp=Z,23nm,1.2s
MONP2 **Monument Peak** 33.50 311 P P 03 52 08.2 -0.1
baz=120
E46A **Sault Ste Mari** 33.52 3 IAmb IAmb 03 52 12.1
comp=Z,16nm,1.1s
E46A **Sault Ste Mari** 33.52 3 P P 03 52 08.0 0.0
baz=185,SNR=7.0
BMNY **Brushton-Moira** 33.65 16 P P 03 52 10.4 +1.2
baz=202,SNR=10.0
P18A **Preston Nutter** 33.68 327 IAmb IAmb 03 52 11.9
comp=Z,16nm,1.1s
RWWY **Rawlins** 33.73 332 IAmb IAmb 03 52 12.7
comp=Z,29nm,1.3s
I62A **Tamworth** 33.75 21 P P 03 52 11.1 +1.1
baz=208,SNR=6.5
I62A P P 03 52 11.1 +1.1
baz=208,SNR=6.5
BELC **Belle Mtn. Jos** 33.76 314 P P 03 52 11.4 +1.0
baz=122
P17A **Butcher Ranch,** 33.84 326 IAmb IAmb 03 52 13.1
comp=Z,24nm,1.0s
F33A **5 Mile Ranch,** 33.85 348 P P 03 52 09.9 -1.0
baz=164,SNR=24
LBNH **Lisbon** 33.88 20 P P 03 52 13.2 +2.0
baz=207,SNR=5.1
LBNH **Lisbon** 33.88 20 P P 03 52 12.0 +0.8
baz=207,SNR=5.1
PFO **Pinyon Flats O** 33.88 313 P P 03 52 12.3 +0.8
comp=Z,5.0nm,0.8s,baz=119,slow=6.1,SNR=5.7
PFO LR LR 04 06 30.6
comp=Z,482nm,20.6s,baz=130,slow=37
comp=Z,5.0nm,0.8s
PFO **Pinyon Flats O** 33.88 313 P P 03 52 12.2 +0.7
PFO **Pinyon Flats O** 33.88 313 P P 03 52 12.9 +1.3
baz=121
E38A **The Farm, Brul** 33.90 354 P P 03 52 10.8 -0.5
baz=172,SNR=20
FRNY **Flat Rock** 33.90 17 P P 03 52 12.6 +1.2
baz=204,SNR=10
SZCU **Shurtz Canyon** 33.93 321 IAmb IAmb 03 52 14.3
comp=Z,17nm,1.0s
GMRC **Granite Mounta** 33.94 315 P P 03 52 12.1 +0.1
baz=123
TMUT **Trail Mountain** 33.97 325 IAmb IAmb 03 52 14.6
comp=Z,25nm,1.4s
RDMU **Red Mountain** 34.01 328 IAmb IAmb 03 52 14.5
comp=Z,29nm,1.5s
D41A **Chassel** 34.16 358 P P 03 52 13.3 -0.2
baz=177,SNR=7.4
K22A **Casper** 34.21 334 IAmb IAmb 03 52 16.4
comp=Z,19nm,1.2s
K22A **Casper** 34.21 334 P P 03 52 14.5 +0.2
baz=145,SNR=7.2
K22A **Casper** 34.21 334 P P 03 52 14.9 +0.6
baz=145,SNR=7.2
TCRU **Three Creeks R** 34.21 323 IAmb IAmb 03 52 20.2
comp=Z,15nm,0.9s
LPAZ **La Paz** 34.41 147 P P 03 52 16.2 -0.6
comp=Z,0.8nm,0.9s,baz=186,slow=5.5,SNR=2.4
LPAZ LR LR 04 08 09.7
comp=Z,204nm,18.0s,baz=338,slow=40
comp=Z,0.8nm,0.9s
LPAZ **La Paz** 34.41 147 P P 03 52 16.6 -0.2
RSSD **Black Hills** 34.45 338 P P 03 52 17.2 +0.8
RSSD IAmb IAmb 03 52 18.9
comp=Z,20nm,1.4s
RSSD **Black Hills** 34.45 338 P P 03 52 17.7 +1.2
baz=150,SNR=7.1
RSSD **Black Hills** 34.45 338 P P 03 52 17.3 +0.8
baz=150
TUQ **Turquoise Moun** 34.48 316 P P 03 52 16.9 +0.2
baz=124
SHPR **Sheep Range** 34.57 318 P P 03 52 18.5 +0.9
MPU **Maple Canyon** 34.71 326 IAmb IAmb 03 52 20.7
comp=Z,28nm,1.1s
MDP **Montagnes des** 34.76 100 LR LR 04 08 15.7
comp=Z,480nm,19.5s,baz=292,slow=39
NLU **North Lily Min** 34.91 325 IAmb IAmb 03 52 22.7
comp=Z,21nm,1.5s
WVL **Waterville** 34.95 22 P P 03 52 22.2 +1.8
baz=210,SNR=6.5
SHOC **Shoshone, Teco** 34.97 316 P P 03 52 21.5 +0.7
baz=124
GSC **Goldstone, Bar** 35.01 315 P P 03 52 22.0 +0.8
baz=122
G62A **West of Eustis** 35.21 20 P P 03 52 24.5 +1.8
baz=209,SNR=12
G62A P P 03 52 24.5 +1.8
baz=209,SNR=12
EYMN **Ely** 35.22 355 IAmb IAmb 03 52 22.8
comp=Z,20nm,0.9s
EYMN **Ely** 35.22 355 P P 03 52 21.8 -1.0
baz=172,SNR=12
EYMN **Ely** 35.22 355 P P 03 52 21.5 -1.3
baz=172,SNR=12
DUG **Dugway, Tooele** 35.48 325 IAmb IAmb 03 52 27.6
comp=Z,19nm,1.2s
DUG **Dugway, Tooele** 35.48 325 P P 03 52 25.8 +0.5
baz=133,SNR=15
TPNV **Topopah Spring** 35.54 318 IAmb IAmb 03 52 28.6
comp=Z,1nm,1.0s
TPNV **Topopah Spring** 35.54 318 P P 03 52 27.5 +1.5
baz=125,SNR=15
S11A **Rachel** 35.62 319 IAmb IAmb 03 52 29.9
comp=Z,27nm,0.9s
BW06 **Boulder Array** 35.66 331 P P 03 52 26.7 -0.2
baz=140,SNR=5.8
PDAR **Pinedale Array** 35.66 331 P P 03 52 27.3 +0.3
comp=Z,2.3nm,0.8s,baz=133,slow=10,SNR=18
comp=Z,3nm,0.8s
PKME **Peaks-Kenny Pk** 35.68 22 P P 03 52 28.4 +1.6
baz=210
FURC **Furnace Creek,** 35.68 317 P P 03 52 27.9 +1.1
baz=124
HWUT **Hardware Ranch** 35.80 328 IAmb IAmb 03 52 29.8
comp=Z,34nm,1.1s
B35A **Bob, Littlefor** 35.88 352 IAmb IAmb 03 52 28.3
comp=Z,20nm,1.1s
B35A **Bob, Littlefor** 35.88 352 P P 03 52 27.1 -1.2
baz=169,SNR=11
MPMC **Manual Prospec** 35.88 315 P P 03 52 29.8 +0.9
baz=122,SNR=5.9
R11A **Troy Canyon, C** 35.94 320 P P 03 52 30.3 +1.0
baz=127,SNR=22
VLDQ **Val d'Or** 36.08 11 IAmb IAmb 03 52 31.8
comp=Z,28nm,1.1s
BGU **Big Grassy Mou** 36.10 326 IAmb IAmb 03 52 32.8
comp=Z,31nm,1.3s
AGMN **Agassiz Nation** 36.13 350 IAmb IAmb 03 52 30.9
comp=Z,36nm,1.1s
AGMN **Agassiz Nation** 36.13 350 P P 03 52 29.8 -0.8
baz=165,SNR=23
AGMN **Agassiz Nation** 36.13 350 P P 03 52 29.3 -1.3
baz=165,SNR=23
GRAC **Grapevine Rang** 36.31 317 IAmb IAmb 03 52 34.9
comp=Z,20nm,1.3s
AHID **Auburn Hatcher** 36.41 330 IAmb IAmb 03 52 34.9
comp=Z,30nm,1.2s
MDND **Maddock** 36.48 346 P P 03 52 33.5 -0.1
baz=159,SNR=9.8
MDND **Maddock** 36.48 346 P P 03 52 33.3 -0.2
baz=159,SNR=9.8
F64A **Sherman** 36.53 22 P P 03 52 35.2 +1.2
F64A IAmb IAmb 03 52 37.1
comp=Z,39nm,1.1s
HVU **Hansel Valley** 36.56 327 IAmb IAmb 03 52 37.3
comp=Z,18nm,1.0s
LOHW **Long Hollow** 36.80 331 IAmb IAmb 03 52 38.7
comp=Z,32nm,1.2s
TPH **Tonopah** 36.82 318 IAmb IAmb 03 52 39.0
comp=Z,37nm,1.1s
TPAW **Teton Pass** 36.88 330 IAmb IAmb 03 52 43.4
comp=Z,46nm,1.1s
FLWY **Flagg Ranch** 37.21 331 IAmb IAmb 03 52 42.2
comp=Z,24nm,0.9s
ELK **Elko** 37.23 324 P P 03 52 41.0 +0.6
comp=Z,10nm,0.9s,baz=130,slow=5.0,SNR=38
ELK LR LR 04 11 08.7
comp=Z,267nm,19.4s,baz=140,slow=41

comp=Z,10nm,0.9s
ELK Elko 37.23 324 IAmb IAmb 03 52 42.5
comp=Z,20nm,1.1s
Q09A Carvers 37.23 320 IAmb IAmb 03 52 47.6
comp=Z,18nm,0.8s
D62A Allapoint, All 37.34 20 P **P** **03 52 42.2 +1.3**
baz=210,SNR=9.0
D62A P **P** **03 52 42.2 +1.3**
baz=210,SNR=9.0
PQI Presque Isle 37.34 22 IAmb IAmb 03 52 43.8
comp=Z,38nm,1.2s
RLMT Red Lodge 37.37 334 IAmb IAmb 03 52 43.1
comp=Z,18nm,1.0s
RLMT Red Lodge 37.37 334 P **P** **03 52 41.7 +0.3**
baz=142,SNR=13
H17A Grant Village 37.39 332 P **P** **03 52 42.3 +0.6**
baz=140
LAO LASA Array 37.45 338 IAmb IAmb 03 52 43.7
comp=Z,52nm,1.3s
LAO LASA Array 37.45 338 P **P** **03 52 42.9 +1.0**
baz=148,SNR=6.4
LAO LASA Array 37.45 338 P **P** **03 52 42.1 +0.2**
baz=148,SNR=6.4
YFT Old Faithful 37.55 332 IAmb IAmb 03 52 48.8
comp=Z,27nm,1.0s
MLAC Mammoth, Mammo 37.64 317 P **P** **03 52 44.3 +0.5**
baz=123
NVAR Mina Array Bea 37.72 318 P **P** **03 52 46.0 +1.4**
comp=Z,6.2nm,0.8s,baz=132,slow=7.7,SNR=36
NVAR PcP **PcP** **03 55 01.2 -0.4**
comp=Z,1.4nm,0.7s,baz=146,slow=4.3,SNR=3.9
NVAR LR LR 04 11 16.0
comp=Z,778nm,18.4s,baz=134,slow=41
comp=Z,6.2nm,0.8s
YMR Madison River 37.78 332 IAmb IAmb 03 52 47.4
comp=Z,37nm,1.1s
LMN Caledonia Moun 37.92 25 P **P** **03 52 46.9 +1.1**
KVN Kaiserville 37.94 319 P **P** **03 52 46.4 +0.1**
YHL Hebgen Lake 38.02 332 IAmb IAmb 03 52 51.2
comp=Z,34nm,1.1s
ULM Lac du Bonnet 38.03 351 P **P** **03 52 45.4 -1.3**
comp=Z,20nm,0.9s,baz=170,slow=8.3,SNR=33
comp=Z,20nm,0.9s
ULM Lac du Bonnet 38.03 351 IAmb IAmb 03 52 46.3
comp=Z,25nm,0.9s
BMN Battle Mountai 38.21 322 IAmb IAmb 03 52 50.7
comp=Z,28nm,1.1s
DGMT Dagmar 38.31 341 P **P** **03 52 49.8 +0.6**
baz=152,SNR=15
DGMT Dagmar 38.31 341 P **P** **03 52 49.4 +0.2**
baz=152,SNR=15
SIV San Ignacio 38.43 137 LR LR 04 09 24.9
comp=Z,251nm,18.5s,baz=343,slow=37
HLID Hailey 38.67 328 P **P** **03 52 52.7 +0.3**
baz=134,SNR=15
BOZ Bozeman (W) 38.79 332 P **P** **03 52 54.1 +0.8**
baz=140,SNR=30
EGMT Eagleton 39.90 336 P **P** **03 53 03.0 +0.5**
baz=144
PLID Pearl Lake 40.55 328 IAmb IAmb 03 53 09.1
comp=Z,28nm,1.1s
MSO Missoula 40.77 332 IAmb IAmb 03 53 11.3
comp=Z,33nm,1.1s
MSO Missoula 40.77 332 P **P** **03 53 09.6 -0.3**
baz=137,SNR=26
GO02 Mina Guanaco 41.39 156 IAmb IAmb 03 53 15.2
comp=Z,20nm,0.6s
F10A Beach Ranch, E 41.78 328 IAmb IAmb 03 53 18.9
comp=Z,22nm,1.1s
G08A Pilot Rock 42.24 326 P **P** **03 53 21.4 -0.5**
K04D Chiloquin, OR 42.25 321 P **P** **03 53 21.0 -1.1**
baz=124
J05D Fort Rock, OR 42.32 322 P **P** **03 53 22.4 -0.2**
baz=125
YBH Yreka Blue Hor 42.36 320 P **P** **03 53 21.6 -1.3**
comp=Z,1.9nm,0.9s,baz=14,slow=3.7,SNR=4.8
YBH LR LR 04 14 12.8
comp=Z,603nm,19.3s,baz=146,slow=40
comp=Z,1.9nm,0.9s
L04D Klamath Falls 42.37 320 P **P** **03 53 22.0 -1.0**
baz=123
PINE Pine Mountain 42.44 323 P **P** **03 53 23.4 -0.2**
KHMM Horse Mountain 42.57 318 P **P** **03 53 25.1 +0.4**
E09A Wood Farm, Sta 42.62 328 IAmb IAmb 03 53 26.5
comp=Z,27nm,1.2s
J04D Umpqua Nationa 42.81 322 IAmb IAmb 03 53 28.4
comp=Z,33nm,1.1s
J04D Umpqua Nationa 42.81 322 P **P** **03 53 26.0 -0.7**
baz=124
KSXB Camp Six Broad 43.15 319 P **P** **03 53 29.7 +0.3**
NEW Newport 43.30 331 P **P** **03 53 29.7 -0.6**
comp=Z,3.3nm,0.8s,baz=129,slow=8.2,SNR=8.6
NEW LR LR 04 14 39.6
comp=Z,312nm,21.0s,baz=149,slow=40
comp=Z,3.3nm,0.8s
NEW Newport 43.30 331 P **P** **03 53 29.9 -0.5**
baz=134,SNR=6.8
I04A Tendick Farm, 43.31 322 P **P** **03 53 30.3 -0.2**
baz=124
D08A Wollman Farm, 43.37 328 IAmb IAmb 03 53 32.0
comp=Z,20nm,0.9s
K02D Willamette Mer 43.47 320 P **P** **03 53 30.9 -0.9**
baz=122
G05D Wamic, OR 43.52 325 P **P** **03 53 32.7 +0.6**
baz=127
E07A Sunnyside 43.54 327 IAmb IAmb 03 53 33.4
comp=Z,40nm,1.0s
KBO Bosley Butte 43.57 319 P **P** **03 53 33.5 +0.8**
H04A Detroit Lake 43.69 323 P **P** **03 53 32.2 -1.4**
I03D Drain, OR 43.82 322 P **P** **03 53 34.9 +0.4**
baz=123
J01E Myrtle Point 43.88 321 P **P** **03 53 34.9 -0.1**
baz=122
H04D Lebanon 43.92 323 P **P** **03 53 34.9 -0.4**
baz=125
LTY Liberty 44.41 327 IAmb IAmb 03 53 40.4
comp=Z,16nm,1.0s
B08A Colville Reser 44.45 329 IAmb IAmb 03 53 40.3
comp=Z,18nm,1.1s
SCHQ Schefferville 44.80 16 P **P** **03 53 42.2 0.0**
comp=Z,40nm,1.0s,baz=211,slow=6.4,SNR=22
SCHQ LR LR 04 13 25.0
comp=Z,81nm,18.1s,baz=204,slow=37
comp=Z,40nm,1.0s
SCHQ Schefferville 44.80 16 P **P** **03 53 41.7 -0.5**
RPN Rapa Nui 45.24 208 LR LR 04 07 56.5
comp=Z,112nm,21.2s,baz=38,slow=30
D03D Eldon 45.88 326 P **P** **03 53 50.0 -0.8**
baz=127,SNR=5.1
NLWA Neilton Lookou 46.22 326 IAmb IAmb 03 53 55.1
comp=Z,28nm,1.1s
BDFB Brasilia 47.82 125 P **P** **03 54 05.9 -0.8**
comp=Z,4.9nm,0.8s,baz=310,slow=16,SNR=6.6
BDFB LR LR 04 15 08.4
comp=Z,488nm,19.5s,baz=307,slow=37
comp=Z,4.9nm,0.8s
BDFB Brasilia 47.82 125 P **P** **03 54 06.5 -0.1**
CPUP Villa Florida 48.44 144 LR LR 04 17 25.3
comp=Z,138nm,18.2s,baz=334,slow=40
BO01 Tunca 49.33 163 P **P** **03 54 18.2 +0.4**
TLCB Telegraph Cove 49.64 328 IAmb IAmb 03 54 21.9
comp=Z,28nm,1.1s
BBB Bella Bella 51.23 329 P **P** **03 54 31.6 -0.4**
comp=Z,22nm,1.0s,baz=79,slow=2.8,SNR=3.8
comp=Z,22nm,1.0s
FRB Frobisher Bay 52.49 10 LR LR 04 18 15.3
comp=Z,262nm,18.4s,baz=199,slow=37
GRNB Grenville Isla 53.09 330 IAmb IAmb 03 54 48.0
comp=Z,23nm,1.0s
YKA Yellowknife Ar 53.38 344 P **P** **03 54 47.3 -0.5**
comp=Z,20nm,0.8s,baz=136,slow=7.9,SNR=88
comp=Z,20nm,0.8s
RCBR Riachuelo 54.04 107 LR LR 04 20 40.5
comp=Z,237nm,18.5s,baz=88,slow=39
RCBR Riachuelo 54.04 107 P **P** **03 54 53.8 +0.4**
T35M Bob Quinn 55.01 333 P **P** **03 55 00.2 +0.4**
baz=125
PLCA Paso Flores 55.42 165 P **P** **03 55 03.0 0.0**
comp=Z,7.3nm,0.8s,baz=344,slow=8.8,SNR=16
comp=Z,7.3nm,0.8s
PLCA Paso Flores 55.42 165 P **P** **03 55 03.0 0.0**
PLCA IAmb IAmb 03 55 04.6
comp=Z,17nm,1.1s
CRAG Craig 55.52 330 P **P** **03 55 04.0 +0.5**
baz=122
DLBC Dease Lake 55.77 334 P **P** **03 55 06.6 +1.2**
comp=Z,27nm,0.9s,baz=125,slow=6.3,SNR=71
DLBC LR LR 04 24 03.5
comp=Z,300nm,18.1s,baz=136,slow=41
comp=Z,27nm,0.9s
DLBC Dease Lake 55.77 334 P **P** **03 55 05.9 +0.5**
baz=126,SNR=34
IVI Ivigtut 55.89 22 *i* P **P** **03 55 04.4 -1.6**
IVI IAmb IAmb 03 55 06.6
comp=Z,58nm,1.3s
WRGLY Wrigley 56.51 341 P **P** **03 55 10.1 -0.4**
baz=136
NUUK Nuuk 56.84 18 *i* P **P** **03 55 13.3 +0.5**
NUUK IAmb IAmb 03 55 15.7
comp=Z,40nm,0.9s
P33M Teslin, Yukon 57.97 335 P **P** **03 55 20.6 -0.3**
baz=124
P32M Atlin 58.00 334 P **P** **03 55 21.2 +0.1**
baz=123
MMPY Sheldon Lake, 58.77 338 P **P** **03 55 26.9 +0.3**
baz=127,SNR=27
WHY Whitehorse 59.07 335 P **P** **03 55 28.1 -0.6**
baz=122
PLBC Pleasant Camp 59.08 333 P **P** **03 55 28.7 +0.1**
baz=120
SFJD Kangerlussuaq 59.24 16 P **P** **03 55 28.9 -0.6**
comp=Z,25nm,1.0s,baz=197,slow=7.4,SNR=5.2
SFJD LR LR 04 22 07.7
comp=Z,96nm,18.6s,baz=221,slow=37
comp=Z,25nm,1.0s
SFJD Kangerlussuaq 59.24 16 P **P** **03 55 29.0 -0.6**
SFJD IAmb IAmb 03 55 31.0
comp=Z,19nm,0.9s
SFJD Kangerlussuaq 59.24 16 *i* P **P** **03 55 28.6 -1.0**
SFJD IAmb IAmb 03 55 30.5
comp=Z,18nm,0.9s
FARO Faro, Yukon 59.33 337 P **P** **03 55 30.0 -0.3**
baz=125
O30N Mendenhall 59.63 335 P **P** **03 55 32.3 -0.2**
baz=121,SNR=9.9
COYC Coyhaique 59.66 168 IAmb IAmb 03 55 34.6
comp=Z,18nm,0.9s
M31M Drury Creek, Y 59.72 336 P **P** **03 55 32.8 -0.2**
baz=124
N31M Braeburn, Yuko 59.88 335 IAmb IAmb 03 55 35.5
comp=Z,9.1nm,0.8s
N31M Braeburn, Yuko 59.88 335 P **P** **03 55 34.0 -0.1**
baz=122
DY2G Dye2 60.09 18 *i* P **P** **03 55 34.1 -1.6**
DY2G IAmb IAmb 03 55 35.6
comp=Z,80nm,1.5s
HYT Haines Junctio 60.26 334 IAmb IAmb 03 55 38.3
comp=Z,9.3nm,1.1s
HYT Haines Junctio 60.26 334 P **P** **03 55 36.9 +0.1**
baz=120
N30M Aishikik Lake 60.40 335 P **P** **03 55 37.9 +0.2**
baz=121,SNR=9.5
YUK6 Outpost Mounta 60.68 334 P **P** **03 55 40.4 +0.5**
baz=119
ILULI Ilulissat 60.79 14 *i* P **P** **03 55 38.5 -1.6**
ILULI IAmb IAmb 03 55 39.7
comp=Z,17nm,1.0s
M30M Minto, Yukon 60.86 336 IAmb IAmb 03 55 41.6
comp=Z,8.6nm,0.9s
M30M Minto, Yukon 60.86 336 P **P** **03 55 39.8 -1.1**
baz=122,SNR=10
YUK4 Talbot Arm 61.00 334 P **P** **03 55 41.4 -0.6**
baz=119
PINM Pinnacle 61.11 333 P **P** **03 55 42.2 -0.3**
baz=117
C36M Paulatuk 61.17 346 IAmb IAmb 03 55 42.2
comp=Z,11nm,1.1s
C36M Paulatuk 61.17 346 P **P** **03 55 41.6 -1.2**
baz=138
YUK8 Steele Glacier 61.44 334 P **P** **03 55 44.2 -0.9**
baz=118
ISOG Isortoq, Green 61.84 21 *i* P **P** **03 55 45.7 -1.6**
ISOG IAmb IAmb 03 55 48.6
comp=Z,47nm,0.8s
YUK3 Moose Creek 61.97 334 P **P** **03 55 47.3 -1.2**
baz=117
CTG Chitna Glacier 61.98 333 P **P** **03 55 47.9 -0.7**
baz=116
RES Resolute Bay 62.01 358 P **P** **03 55 48.0 -0.3**
comp=Z,12nm,0.7s,baz=181,slow=9.0,SNR=30
comp=Z,12nm,0.7s
RES Resolute Bay 62.01 358 P **P** **03 55 47.9 -0.4**
RES IAmb IAmb 03 55 50.0
comp=Z,12nm,0.8s
NUUG Nuugaatsiaq 62.15 12 *i* P **P** **03 55 47.5 -1.8**
NUUG IAmb IAmb 03 55 50.9
comp=Z,23nm,0.8s
ANGG Ammassalik, Gr 62.34 21 *i* P **P** **03 55 49.3 -1.3**
ANGG IAmb IAmb 03 55 51.9
comp=Z,32nm,0.8s
DAWY Dawson 62.63 337 IAmb IAmb 03 55 52.8
comp=Z,7.9nm,1.1s
DAWY Dawson 62.63 337 P **P** **03 55 51.5 -1.3**
baz=120,SNR=6.9
EPYK Eagle Plains 62.88 340 P **P** **03 55 52.9 -1.5**
baz=123,SNR=13
I29M Ogilvie Camp, 62.89 338 IAmb IAmb 03 55 55.0
comp=Z,14nm,1.0s
I29M Ogilvie Camp, 62.89 338 P **P** **03 55 53.2 -1.3**
baz=121,SNR=14
INK Inuvik 62.99 342 P **P** **03 55 54.7 -0.3**
comp=Z,20nm,0.9s,baz=119,slow=7.1,SNR=20
INK LR LR 04 27 30.7
comp=Z,198nm,20.4s,baz=123,slow=40
comp=Z,20nm,0.9s
INK Inuvik 62.99 342 P **P** **03 55 55.2 +0.2**
INK Inuvik 62.99 342 P **P** **03 55 54.3 -0.7**
baz=127,SNR=12
L27K Beaver Creek, 63.12 335 IAmb IAmb 03 55 57.0
comp=Z,13nm,0.9s
L27K Beaver Creek, 63.12 335 P **P** **03 55 55.5 -0.5**
baz=117,SNR=15
GLB Gilahina Butte 63.27 333 IAmb IAmb 03 55 58.2
comp=Z,8.5nm,0.9s
M26K Nabesna, AK 63.31 334 P **P** **03 55 56.4 -0.9**
baz=115
A36M Sachs Harbour 63.40 348 P **P** **03 55 56.9 -0.7**
baz=138,SNR=5.0
BMRM Bremner River 63.43 333 P **P** **03 55 57.3 -0.8**
baz=113
K27K Chicken 63.66 336 P **P** **03 55 58.6 -0.9**
baz=117
N25K Chitina, Valde 63.68 333 IAmb IAmb 03 56 01.1
comp=Z,8.4nm,0.8s
N25K Chitina, Valde 63.68 333 P **P** **03 55 59.2 -0.6**
baz=113
ICESG Greenland Ices 63.70 17 *i* P **P** **03 55 59.4 -0.8**
ICESG IAmb IAmb 03 56 01.0
comp=Z,65nm,0.9s
L26K Log Cabin Wild 63.73 335 P **P** **03 55 59.0 -1.0**
baz=115
EYAK Cordova Ski Ar 63.79 332 P **P** **03 55 59.6 -0.8**
baz=112
KLU Klutina 64.22 333 IAmb IAmb 03 56 04.3
comp=Z,6.5nm,0.9s
KLU Klutina 64.22 333 P **P** **03 56 02.9 -0.4**
baz=112
HARP HAARP 64.23 334 P **P** **03 56 01.8 -1.6**
baz=113
SCRK Sand Creek 64.39 336 P **P** **03 56 04.5 0.0**
SCRK Sand Creek 64.39 336 P **P** **03 56 04.1 -0.4**
baz=115,SNR=6.2
J26L Joseph Creek 64.45 336 IAmb IAmb 03 56 06.2
comp=Z,16nm,1.1s
J26L Joseph Creek 64.45 336 P **P** **03 56 04.1 -0.7**
baz=116,SNR=14
GLI Glacier Island 64.53 332 P **P** **03 56 05.1 -0.2**
baz=110
M24K Tolsona, Glenn 64.56 333 P **P** **03 56 04.9 -0.6**
baz=112
PAX Paxson 64.59 334 P **P** **03 56 04.3 -1.4**
baz=113
RIDG Independent Ri 64.64 335 P **P** **03 56 05.7 -0.3**
baz=114,SNR=7.5
SCM Sheep Creek Mo 64.97 333 P **P** **03 56 07.7 -0.5**
baz=111
K24K Donnelly Dome 65.05 335 P **P** **03 56 08.3 -0.3**
baz=113,SNR=5.2
M23K Glacier View 65.13 333 P **P** **03 56 08.3 -0.9**
baz=110
J25K Salcha River, 65.20 336 IAmb IAmb 03 56 10.8
comp=Z,9.7nm,0.8s
J25K Salcha River, 65.20 336 P **P** **03 56 08.8 -0.9**
baz=114,SNR=11
KNK Knik Glacier 65.33 332 IAmb IAmb 03 56 11.1
comp=Z,8.6nm,0.9s
KNK Knik Glacier 65.33 332 P **P** **03 56 09.5 -1.0**
baz=109
SEW Seward 65.37 331 P **P** **03 56 10.0 -0.8**
baz=108
SML Sawmill 65.41 333 P **P** **03 56 09.7 -1.3**
baz=110
WAT6 Susitna Watana 65.41 334 P **P** **03 56 10.0 -1.2**
baz=111,SNR=7.7
GHO Glory Hole Cre 65.66 333 IAmb IAmb 03 56 13.2
comp=Z,14nm,0.8s
HDA Harding Lake 65.75 336 P **P** **03 56 12.2 -1.0**
baz=112,SNR=9.6
SOEG Soedalen 65.78 20 *i* P **P** **03 56 12.6 -0.6**
SOEG IAmb IAmb 03 56 16.2
comp=Z,10.0nm,0.9s
RC01 Rabbit Creek A 65.81 332 P **P** **03 56 12.6 -1.0**
baz=108,SNR=5.0
ILAR Eielson Array 65.87 336 P **P** **03 56 13.2 -0.7**
comp=Z,7.9nm,1.0s,baz=107,slow=5.2,SNR=45
ILAR LR LR 04 30 16.4
comp=Z,197nm,18.5s,baz=106,slow=41
comp=Z,7.9nm,1.0s
BRSE Bradley Lake S 65.88 330 P **P** **03 56 13.7 -0.4**
baz=107
SUMG Summit 66.12 14 P **P** **03 56 15.9 0.0**
SUMG Summit 66.12 14 *i* P **P** **03 56 15.8 0.0**
SUMG IAmb IAmb 03 56 18.0
comp=Z,36nm,1.0s
POKR Poker Plat Res 66.21 336 P **P** **03 56 15.4 -0.8**
baz=112
KDAK Kodiak Island 66.29 328 LR LR 04 26 06.4
comp=Z,134nm,21.6s,baz=157,slow=37
MCK McKinley 66.32 335 IAmb IAmb 03 56 17.5
comp=Z,14nm,1.1s
MCK McKinley 66.32 335 P **P** **03 56 16.1 -0.8**
baz=110,SNR=5.0
SUA Susitna One 66.39 332 P **P** **03 56 17.3 -0.2**
baz=107
H24K Noodor Dome 66.66 337 IAmb IAmb 03 56 19.9
comp=Z,14nm,1.0s
H24K Noodor Dome 66.66 337 P **P** **03 56 18.2 -0.8**
baz=112,SNR=13
NEA2 Nenana 66.67 335 IAmb IAmb 03 56 19.4
comp=Z,6.3nm,0.8s
NEA2 Nenana 66.67 335 P **P** **03 56 18.3 -0.8**
baz=110
TRF Thorofare Moun 66.80 334 IAmb IAmb 03 56 20.6
comp=Z,12nm,0.9s
TRF Thorofare Moun 66.80 334 P **P** **03 56 19.6 -0.5**
baz=108,SNR=6.6
SKT Skwentna 66.90 332 IAmb IAmb 03 56 20.9
comp=Z,23nm,1.5s
SKT Skwentna 66.90 332 P **P** **03 56 19.0 -1.6**
baz=107
MACI Morro de la Ar 66.97 65 P **P** **03 56 22.2 +0.3**
I23K Minto, Yukon-K 66.98 336 P **P** **03 56 20.3 -0.7**
baz=110,SNR=11
Q19K Cape Douglas, 67.11 329 P **P** **03 56 20.9 -1.1**
baz=104
EUNU Eureka 67.25 0 P **P** **03 56 22.6 0.0**
H23K Yukon River 67.29 337 IAmb IAmb 03 56 23.8
comp=Z,12nm,1.3s
H23K Yukon River 67.29 337 P **P** **03 56 22.3 -0.7**
baz=110
BPAW Bear Paw Mtn. 67.30 335 IAmb IAmb 03 56 23.4
comp=Z,11nm,0.8s
BPAW Bear Paw Mtn. 67.30 335 P **P** **03 56 22.1 -1.0**
baz=108,SNR=7.1
MLY Manley 67.50 336 IAmb IAmb 03 56 24.9
comp=Z,13nm,0.8s
MLY Manley 67.50 336 P **P** **03 56 23.3 -1.1**
baz=109,SNR=13
COLD Coldfoot 68.02 338 P **P** **03 56 27.4 -0.2**
baz=110,SNR=19
L20K Farewell, AK 68.09 333 P **P** **03 56 26.7 -1.4**
baz=105
M19K Big River Lodg 68.18 332 P **P** **03 56 28.3 -0.4**
baz=104
R17K Ugashik Creek 68.25 327 P **P** **03 56 29.1 -0.1**
baz=101
TOLK Toolik Lake Re 68.30 340 IAmb IAmb 03 56 30.4
comp=Z,11nm,0.8s
TOLK Toolik Lake Re 68.30 340 P **P** **03 56 28.9 -0.5**
baz=111,SNR=9.0
K20K Telida 68.40 333 P **P** **03 56 28.3 -1.8**
baz=105,SNR=5.8
H21K Melozitna Rive 68.51 336 P **P** **03 56 29.0 -1.7**
baz=107
J20K Nowinta River 68.65 334 IAmb IAmb 03 56 42.7
comp=Z,10nm,1.4s
J20K Nowinta River 68.65 334 P **P** **03 56 30.0 -1.6**
baz=105
O17K Koliganek Bris 69.02 329 P **P** **03 56 32.0 -1.9**
baz=101
TTA Tatalina 69.16 333 P **P** **03 56 33.2 -1.6**
baz=103
DAG Danmarks Havn 72.70 13 *i* P **P** **03 56 55.0 -1.0**
DAG IAmb IAmb 03 56 56.2
comp=Z,10nm,0.8s
PCAS Casmilo, Conde 73.11 52 *e*P **P** **03 56 59.8 +0.7**
comp=Z,49nm,1.6s
MORF Marmelete 73.13 55 *e*P **P** **03 57 00.6 +1.2**
MORF IAmb IAmb 03 57 01.8
comp=Z,40nm,1.0s
MORF Marmelete 73.13 55 *e*P **P** **03 57 01.2 +1.8**
comp=Z,50nm,1.5s
COI Coimbra 73.16 52 *e*P **P** **03 57 00.8 +1.4**
PMTG Montargil 73.37 53 *e*P **P** **03 57 00.8 +0.1**
comp=Z,30nm,1.4s
MESJ Messejana 73.44 54 *e*P **P** **03 57 02.4 +1.3**
MESJ IAmb IAmb 03 57 02.6
comp=Z,14nm,1.0s
MESJ Messejana 73.44 54 *e*P **P** **03 57 02.1 +1.0**
PVIS Viseu 73.53 51 *e*P **P** **03 57 01.7 0.0**
comp=Z,29nm,1.3s
EVO Evora 73.56 53 *e*P **P** **03 57 02.3 +0.5**
PBEJ Beja 73.71 54 *e*P **P** **03 57 04.0 +1.3**
MTE Manteigas 73.82 51 *e*P **P** **03 57 04.1 +0.7**
MTE Manteigas 73.82 51 *e*LR LR 04 23 06.4
comp=Z,167nm,20.0s
PVAQ Vaqueiros 73.87 55 *e*LR LR 04 23 39.3
comp=Z,188nm,18.0s
PESTR Estremoz 73.87 53 *e*P **P** **03 57 04.5 +0.8**
comp=Z,21nm,1.7s
PESTR Estremoz 73.87 53 P **P** **03 57 03.8 +0.1**
PCBR Castelo Branco 73.90 52 *e*P **P** **03 57 04.3 +0.5**
comp=Z,33nm,1.4s
PMRV Marv??o 73.99 52 *e*P **P** **03 57 05.0 +0.6**
comp=Z,24nm,1.8s
PMRV Marv??o 73.99 52 *e*LR LR 04 20 21.9
comp=Z,135nm,18.0s
MVO Moncorvo 74.17 51 *e*P **P** **03 57 05.8 +0.4**
comp=Z,30nm,2.0s
MVO Moncorvo 74.17 51 *e*LR LR 04 23 49.9
comp=Z,101nm,18.0s
JMIC Jan Mayen 74.21 19 LR LR 04 29 50.8
comp=Z,53nm,19.4s,baz=249,slow=36
NOR Nord 74.55 8 *i* P **P** **03 57 06.1 -0.7**
NOR IAmb IAmb 03 57 07.8
comp=Z,106nm,2.2s
PAB San Pablo 76.33 52 P **P** **03 57 17.1 -0.9**
ESDC Sonseca Array 76.61 52 P **P** **03 57 19.3 -0.2**
comp=Z,7.8nm,0.9s,baz=286,slow=5.8,SNR=44
ESDC LR LR 04 26 32.2
comp=Z,149nm,21.0s,baz=273,slow=32
comp=Z,7.8nm,0.9s
ESDC Sonseca Array 76.61 52 IAmb IAmb 03 57 21.8
comp=Z,11nm,1.1s
ESBB Sonseca Array 76.61 52 IAmb IAmb 03 57 21.7
comp=Z,16nm,1.1s
MDT Midelt 76.84 59 LR LR 04 26 11.9
comp=Z,127nm,21.1s,baz=298,slow=32
RAR Rarotonga 79.04 245 LR LR 04 25 45.6
comp=Z,85nm,19.1s,baz=8.0,slow=30
KBS Kingsbay 79.22 11 P **P** **03 57 33.7 +0.5**
KBS IAmb IAmb 03 57 35.7
comp=Z,19nm,1.1s
SPITS Spitsbergen Ar 80.26 12 LR LR 04 33 25.2
comp=Z,30nm,18.4s,baz=260,slow=36
HSPB Hornsund (broa 80.40 13 *e*P **P** **03 57 40.8 +1.2**
TIC Toumodi 80.76 85 ⇑ *i*P **P** **03 57 42.2 -0.5**
comp=Z,34nm,1.0s
LIC Lamto 80.84 86 ⇑ *i*P **P** **03 57 43.3 +0.2**
comp=Z,30nm,1.1s
DBIC Dimbokro 80.91 85 P **P** **03 57 42.6 -1.0**
comp=Z,10nm,1.0s,baz=281,slow=16,SNR=4.0
DBIC LR LR 04 29 20.2
comp=Z,184nm,21.4s,baz=284,slow=32

comp=Z,10nm,1.0s
DBIC **Dimbokro** **80.91** **85** P **P** **03 57 42.5** **-1.0**
DBIC IAmb IAmb 03 57 43.9
comp=Z,11nm,1.0s
KIC **Kosan Boka** **81.09** **85**⇑ *iP* **P** **03 57 44.0** **-0.5**
comp=Z,29nm,1.1s
SMAI **San Martin Ant** **82.00** **173** P **P** **03 57 49.1** **+1.1**
SMAI IAmb IAmb 03 57 50.3
comp=Z,12nm,0.9s
NC204 **NORSAR Array S** **82.56** **29** IAmb IAmb 03 57 52.2
comp=Z,16nm,1.1s
NB2 **NORSAR Subarra** **82.83** **29** P **P** **03 57 52.0** **-0.8**
baz=283,slow=5.1
NB2 **NORSAR Subarra** **82.83** **29** P **P** **03 57 52.0** **-0.8**
comp=Z,24nm,1.2s,baz=283,slow=5.1
NOA **NORSAR Array B** **82.83** **29** P **P** **03 57 52.1** **-0.7**
comp=Z,6.4nm,1.0s,baz=285,slow=5.1,SNR=17
NOA LR LR 04 34 09.7
comp=Z,20nm,19.0s,baz=0.0,slow=35
comp=Z,6.4nm,1.0s
HFS **Hagfors** **84.24** **30** LR LR 04 33 51.2
comp=Z,38nm,21.2s,baz=280,slow=34
BILL **Bilibino** **84.34** **339** IAmb IAmb 03 58 01.0
comp=Z,7.3nm,0.9s
TUE **Stuetta** **85.13** **44** IAmb IAmb 03 58 08.3
comp=Z,12nm,0.9s
SHEM **Shemya Is, Ala** **85.23** **323** P **P** **03 58 05.3** **+0.2**
comp=Z,44nm,0.8s,baz=89,slow=9.3,SNR=2.2
comp=Z,44nm,0.8s
DAVA **Damuels** **85.30** **43** *eP* **P** **03 58 05.6** **-0.2**
comp=Z,9.2nm,0.9s
RETA **Reutte** **85.83** **42** *eP* **P** **03 58 07.7** **-0.7**
comp=Z,11nm,1.1s
TORD **Torodi Ar. Bea** **85.90** **78** P **P** **03 58 07.5** **-1.7**
comp=Z,2.7nm,1.1s,baz=267,slow=5.9,SNR=7.8
TORD LR LR 04 31 46.9
comp=Z,190nm,21.5s,baz=234,slow=32
comp=Z,2.7nm,1.1s
FETA **Feichten** **85.92** **43** *eP* **P** **03 58 08.5** **-0.4**
comp=Z,11nm,1.4s
MOTA **Moosalm** **86.09** **42** *eP* **P** **03 58 08.7** **-1.0**
comp=Z,5.5nm,1.1s
SQTA **Sankt Quirin** **86.19** **43** *eP* **P** **03 58 10.2** **0.0**
comp=Z,9.9nm,1.9s
NKC **Novy Kostel** **86.20** **39** *eP* **P** **03 58 09.6** **-0.5**
NKC AMS AMS 04 34 50.0
comp=Z,200nm,13.4s
CLL **Collm** **86.25** **38** IAmb IAmb 03 58 10.6
comp=Z,9.1nm,0.9s
CLL **Collm** **86.25** **38**⇓ *iP* **P** **03 58 09.2** **-1.1**
comp=Z,13nm,1.2s
CLL *i* pP **pP** **03 58 12.3** **-1.9**
comp=Z,22nm,1.8s
CLL LmV 04 45 00.0
comp=Z,100nm,20.8s
WATA **Walderalm** **86.40** **42** *eP* **P** **03 58 12.0** **+0.7**
comp=Z,3.7nm,0.7s
WTTA **Wattenberg** **86.46** **42** *eP* **P** **03 58 11.2** **-0.4**
comp=Z,1.8nm,0.5s
BRG **Berggiesshubel** **86.94** **39** *eP* **P** **03 58 13.4** **-0.3**
BRG Amp 03 58 15.1
comp=Z,5.7nm,1.2s
ABTA **Abfaltersbach** **87.18** **43** *eP* **P** **03 58 14.6** **-0.4**
comp=Z,9.4nm,1.1s
KHC **Kasperske Hory** **87.21** **40** IAmb IAmb 03 58 15.6
comp=Z,8.0nm,1.0s
KHC **Kasperske Hory** **87.21** **40** *eP* **P** **03 58 13.9** **-1.2**
KHC AMS AMS 04 31 50.0
comp=Z,200nm,17.3s
GEC2 **GERESS Array S** **87.37** **41** IAmb IAmb 03 58 16.2
comp=Z,9.0nm,1.2s
GERES **GERESS Array B** **87.37** **41** P **P** **03 58 15.0** **-0.9**
comp=Z,2.1nm,0.8s,baz=261,slow=5.0,SNR=16
comp=Z,2.1nm,0.8s
PVCC **Panska Ves** **87.43** **39** AMS AMS 04 37 10.0
comp=Z,100nm,21.1s
PRU **Pruhonice** **87.57** **39** AMS AMS 04 35 40.0
comp=Z,200nm,19.2s
KBA **Koelnbreinsper** **87.63** **42** *eP* **P** **03 58 16.5** **-0.8**
comp=Z,6.0nm,1.1s
BIOA **Bad Ischl, Aus** **87.65** **42** *eP* **P** **03 58 14.9** **-2.3**
comp=Z,0.9nm,0.4s
CKRC **Cesky Krumlov** **87.76** **40** *eP* **P** **03 58 16.5** **-1.2**
MYKA **Terra Mystica** **87.96** **43** *eP* **P** **03 58 17.8** **-0.9**
comp=Z,5.1nm,1.0s
MOA **Molln** **88.02** **41** *eP* **P** **03 58 18.3** **-0.7**
comp=Z,3.0nm,0.7s
UPC **Upice** **88.31** **38** AMS AMS 04 36 10.0
comp=Z,200nm,23.2s
TREC **Trest** **88.36** **40** AMS AMS 04 35 50.0
comp=Z,200nm,24.4s
OSTC **Ostas** **88.42** **38** *eP* P 03 58 14.3 -6.5
OSTC AMS AMS 04 38 10.0
comp=Z,100nm,16.9s
DPC **Dobruska-Polom** **88.55** **39** AMS AMS 04 38 00.0
comp=Z,100nm,14.8s
SOKA **Soboth** **88.86** **42** *eP* **P** **03 58 22.7** **-0.3**
comp=Z,4.2nm,1.1s
KRLC **Kraliky** **88.92** **39** AMS AMS 04 37 20.0
comp=Z,200nm,16.2s
ARSA **Arzberg** **89.01** **42** *eP* **P** **03 58 23.3** **-0.4**
comp=Z,4.6nm,1.0s
CONA **Conrad Observa** **89.02** **41** *eP* **P** **03 58 23.0** **-0.8**
comp=Z,4.4nm,0.9s
VRAC **Vranov** **89.04** **40** LR LR 04 36 59.5
comp=Z,132nm,18.5s,baz=292,slow=35
RONA **Rosalia, Austr** **89.36** **41** *eP* **P** **03 58 24.6** **-0.7**
comp=Z,6.9nm,1.4s
FINES **FINESS Array B** **89.45** **26** P **P** **03 58 24.5** **-0.8**
comp=Z,2.2nm,0.8s,baz=8.5,slow=3.9,SNR=5.7
FINES LR LR 04 38 22.3
comp=Z,50nm,18.9s,baz=334,slow=36
comp=Z,2.2nm,0.8s
MODS **Modra-Piesok** **89.77** **40** *eP* **P** **03 58 27.0** **-0.2**
MAUC **Maruska** **89.79** **39** AMS AMS 04 36 50.0
comp=Z,400nm,24.7s
SMOL **Smolenice** **89.82** **40** *eP* **P** **03 58 27.9** **+0.5**
OKC **Ostrava-Krasne** **89.83** **39** AMS AMS 04 38 00.0
comp=Z,200nm,17.0s
LANS **Liptovska Anna** **90.87** **39** *eP* **P** **03 58 33.2** **+0.9**
SEY **Seymchan** **91.79** **337** P **P** **03 58 35.2** **-1.0**
comp=Z,0.9nm,0.4s,baz=16,slow=23,SNR=3.3
SEY LR LR 04 44 31.7
comp=Z,135nm,20.5s,baz=107,slow=38
comp=Z,0.9nm,0.4s
NACGM **Naroch** **92.70** **32**⇓ *eP* **P** **03 58 38.6** **-2.0**
baz=297
MA2 **Magadan** **94.30** **334** LR LR 04 44 35.2
comp=Z,70nm,21.8s,baz=87,slow=38
KLMR **Klimovskoe** **95.27** **23** *eP* **P** **03 58 50.4** **-1.9**
KLMR AMP 03 59 07.0
comp=Z,10.0nm,1.2s
KLMR *e*PP **PP** **04 02 40.9** **-0.9**
AKASG **Malin Array Be** **95.96** **35** LR LR 04 40 39.7
comp=Z,59nm,20.2s,baz=284,slow=34
MLR **Muntele Rosu** **96.36** **41** LR LR 04 39 39.2
comp=Z,116nm,20.1s,baz=281,slow=34
OBN **Obninsk** **97.44** **29** LR LR 04 42 56.7
comp=Z,13nm,18.9s,baz=352,slow=35
MSVF **Nonsavu** **98.45** **254** LR LR 04 34 53.5
comp=Z,40nm,18.2s,baz=142,slow=30
IDI **Anoyia** **99.83** **50** LR LR 04 39 35.6
comp=Z,20nm,21.2s,baz=70,slow=32
ZALV **Zalesovo Beam** **113.13** **5** PP **PP** **04 04 52.8** **-1.6**
comp=Z,2.6nm,0.9s,baz=348,slow=6.9,SNR=6.5
KURBB **Kurchatov Arra** **115.57** **10** PKKPbc PKKPbc 04 14 42.2 -3.2
comp=Z,0.4nm,0.5s,baz=182,slow=2.9,SNR=4.6
KSRS **Korea Array** **120.20** **328** PKP **PKPdf** **04 04 18.5** **-1.5**
comp=Z,0.9nm,0.7s,baz=325,slow=1.5,SNR=5.6
WMQ **Urumqi** **123.43** **5** *e*PKP **PKiKP** **04 04 27.8** **+1.4**
HHC **Hu-ho-hao-te** **123.91** **343** *e*PKP **PKPdf** **04 04 24.1** **-3.2**
NJ2 **Nanjing** **128.97** **332** *e*PKP **PKiKP** **04 04 39.5** **+1.8**
LZH **Lanzhou** **130.29** **348** *e*PKP **PKiKP** **04 04 45.5** **+5.0**
STKA **Stephens Creek** **131.66** **239** PKP **PKPdf** **04 04 41.5** **-0.6**
comp=Z,1.8nm,0.6s,baz=45,slow=2.4,SNR=9.5
CD2 **Chengdu** **135.31** **347** PKP **PKPdf** **04 04 49.0** **-0.1**
WRA **Warramunga Arr** **139.80** **254** PKhKP PKPpre 04 04 49.5
comp=Z,1.9nm,0.9s,baz=87,slow=3.1,SNR=10
WRA PKP **PKPdf** **04 04 57.6** **0.0**
comp=Z,5.8nm,0.7s,baz=89,slow=1.9,SNR=37
ASAR **Alice Springs** **139.82** **248** PKhKP PKPpre 04 04 48.9
comp=Z,1.0nm,0.7s,baz=96,slow=2.8,SNR=7.4
ASAR PKP **PKPdf** **04 04 57.5** **0.0**
comp=Z,4.2nm,0.7s,baz=102,slow=2.0,SNR=26
ASAR **Alice Springs** **139.82** **248** PKPdf **PKPdf** **04 04 56.5** **-1.0**
PZH **PanZhiHua** **140.00** **348** PKP **PKPdf** **04 04 57.9** **-0.1**
CMAR **Chiang Mai Arr** **148.38** **349** PKPbc **PKPbc** **04 05 14.6** **-1.3**
comp=Z,1.8nm,0.3s,baz=328,slow=2.7,SNR=9.7

CMAR **Chiang Mai Arr** **148.38** **349** PKPdf **PKPdf** **04 05 11.1** **-1.5**

TAP ***14*** *04:17:28.9,24.˚65N×122.˚24E,h1km,ML3.0,C*
JMA ***14*** *04:17:30.2±0.1,24.˚6N±0.˚9×122.˚2E±0.˚4,h40km,MV2.3/10, TAIWAN REGION*
ISC 14 04:17:28.9±1.0,**24.˚63N**±0.˚02×**122.˚31E**±0.˚02,**h14**km±8km, **n75**,σ0**.92**/131,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
EGS		**0.41**	**302**	*i* P		**Pg**	**04 17 36.7**	**-0.4**
	baz=305							
EGS				*i* S		**Sg**	**04 17 42.7**	**0.0**
	baz=305							
TWC	**Suao**	**0.42**	**267**	*i* P		**Pg**	**04 17 36.6**	**-0.7**
	baz=263							
TWC				*i* S		**Sg**	**04 17 42.4**	**-0.7**
	baz=263							
TWB1	**Santiao Chiao**	**0.48**	**322**	*i* P		**Pb**	**04 17 38.8**	**-0.4**
	baz=328							
NTC	**Toucheng**	**0.49**	**297**	*i* P		**Pg**	**04 17 38.6**	**-0.1**
	baz=298							
NTC				S		**Sg**	**04 17 45.4**	**+0.1**
	baz=298							
EWUT	**Wuta**	**0.52**	**250**	P		**Pg**	**04 17 38.8**	**-0.3**
	baz=244							
EWUT				S		**Sg**	**04 17 46.4**	**+0.3**
	baz=244							
ILA	**Ilan**	**0.53**	**285**	S		**Sb**	**04 17 47.2**	**-0.3**
	baz=284							
NDS	**Dongshan**	**0.54**	**271**	P		**Pg**	**04 17 39.2**	**-0.3**
	baz=267							
NDS				S		**Sg**	**04 17 47.0**	**+0.1**
	baz=267							
ENA	**Nanau**	**0.56**	**249**	*i* P		**Pg**	**04 17 39.6**	**-0.2**
	baz=243							
ENA				S		**Sb**	**04 17 48.1**	**-0.2**
	baz=243							
TIPB	**Shuangxi**	**0.56**	**308**	*i* P		**Pg**	**04 17 39.9**	**0.0**
	baz=295							
TIPB				S		**Sg**	**04 17 47.4**	**0.0**
	baz=295							
TWE	**Neicheng**	**0.59**	**279**	*i* P		**Pg**	**04 17 40.0**	**-0.6**
	baz=277							
TWE				S		**Sg**	**04 17 48.5**	**0.0**
	baz=277							
JYNG	**Yonagunijimaku**	**0.60**	**107**	P		**Pn**	**04 17 42.7**	**-0.3**
JYNG				S		**Sn**	**04 17 53.4**	**+0.9**
SXI1	**Grass Mountain**	**0.61**	**320**	P		**Pb**	**04 17 41.5**	**+0.1**
	baz=322							
SXI1				S		**Sn**	**04 17 51.2**	**-1.7**
	baz=322							
NWF	**Wu-fen Shan**	**0.65**	**312**	P		**Pn**	**04 17 42.7**	**-1.1**
	baz=302							
NWF				*i* S		**Sn**	**04 17 52.2**	**-1.8**
	baz=302							
WFSB	**Wu-fen Shan**	**0.65**	**312**	P		**Pn**	**04 17 43.0**	**-0.7**
	baz=301							
WFSB				S		**Sb**	**04 17 51.9**	**+0.8**
	baz=301							
YOJ	**Yonaguni jima**	**0.66**	**104**	P		**Pn**	**04 17 43.7**	**0.0**
	baz=105							
YOJ				S		**Sn**	**04 17 54.9**	**+1.0**
	baz=105							
YOJ	**Yonaguni jima**	**0.66**	**104**	P		**Pn**	**04 17 43.6**	**-0.1**
YOJ				S		**Sn**	**04 17 54.5**	**+0.7**
FUSB	**Fushanzhiwuyua**	**0.67**	**281**	P		**Pg**	**04 17 41.6**	**-0.5**
	baz=280							
FUSB				S		**Sb**	**04 17 52.4**	**+0.8**
	baz=280							
ENTT	**Nioudou**	**0.68**	**271**	*i* P		**Pg**	**04 17 41.8**	**-0.3**
	baz=281							
ENTT				S		**Sb**	**04 17 51.2**	**-0.6**
	baz=281							
TNOU	**National Taiwa**	**0.71**	**317**	P		**Pn**	**04 17 43.8**	**-0.8**
	baz=307							
TNOU				S		**Sb**	**04 17 53.4**	**+0.6**
	baz=307							
LATG	**Datong**	**0.72**	**263**	P		**Pg**	**04 17 42.3**	**-0.7**
	baz=246							
LATG				S		**Sb**	**04 17 53.0**	**-0.1**
	baz=246							
TWA	**Mucha**	**0.75**	**298**	*i* P		**Pb**	**04 17 43.8**	**+0.1**
	baz=285							
TWA				*i* S		**Sg**	**04 17 52.9**	**-0.5**
	baz=285							
NWLT	**Wulai**	**0.75**	**282**	*i* P		**Pg**	**04 17 43.0**	**-0.6**
	baz=280							
NWLT				S		**Sb**	**04 17 54.4**	**+0.5**
	baz=280							
ETL	**Fush Village**	**0.78**	**234**	*e*P		**Pg**	**04 17 44.4**	**+0.3**
	baz=242							
NHDH	**Xindian Distri**	**0.79**	**295**	P		**Pn**	**04 17 44.8**	**-0.8**
	baz=295							
NHDH				S		**Sg**	**04 17 54.9**	**+0.2**
	baz=295							
NACB	**Ninganchiao**	**0.80**	**235**	P		**Pb**	**04 17 43.9**	**-0.6**
	baz=243							
NACB				S		**Sb**	**04 17 54.1**	**-1.1**
	baz=243							
YM01	**YM01**	**0.85**	**308**	P		**Pn**	**04 17 46.3**	**-0.2**
	baz=308							
YM01				S		**Sn**	**04 17 57.8**	**-0.9**
	baz=308							
TWD	**Chiawan**	**0.85**	**230**	*i* P		**Pg**	**04 17 45.7**	**+0.3**
	baz=237							
TWD				S		**Sn**	**04 17 58.2**	**-0.5**
	baz=237							
YHNB	**Yeheng**	**0.85**	**273**	P		**Pb**	**04 17 45.0**	**-0.5**
	baz=281							
YHNB				S		**Sn**	**04 17 57.5**	**-1.4**
	baz=281							
ETLH	**Xiulin Townshi**	**0.87**	**241**	P		**Pb**	**04 17 45.5**	**-0.2**
	baz=249							
ETLH				S		**Sb**	**04 17 56.6**	**-0.6**
	baz=249							
NNSB	**Datong**	**0.87**	**257**	P		**Pb**	**04 17 45.1**	**-0.7**
	baz=254							
NNSB				S		**Sg**	**04 17 57.8**	**+0.6**
	baz=254							
NSK	**Sanguang**	**0.87**	**273**	*i* P		**Pg**	**04 17 45.6**	**-0.1**
	baz=281							
NSK				*i* S		**Sb**	**04 17 56.8**	**-0.6**
	baz=281							
NNS	**Nan Shan**	**0.88**	**258**	*i* P		**Pg**	**04 17 46.0**	**+0.1**
	baz=254							
NNS				*i* S		**Sg**	**04 17 57.8**	**+0.4**
	baz=254							
TWY	**Chenhua**	**0.91**	**315**	*i* P		**Pn**	**04 17 47.7**	**+0.4**
	baz=316							
TWY				*i* S		**Sn**	**04 18 00.1**	**-0.1**
	baz=316							
TWS1	**Kuangyinshan**	**0.94**	**300**	P		**Pn**	**04 17 48.3**	**+0.6**
	baz=301							
PCYT	**Pengchaiyu**	**1.02**	**348**	P		**Pg**	**04 17 48.8**	**+0.2**
	baz=351							
FUSS	**Fushou**	**1.04**	**249**	*i* P		**Pg**	**04 17 49.2**	**+0.1**
	baz=246							
FUSS				S		**Sg**	**04 18 02.8**	**-0.1**
	baz=246							
WHF	**Hehuan Shan**	**1.07**	**243**	*i* P		**Pn**	**04 17 49.4**	**-0.4**
	baz=240							
WHF				S		**Sn**	**04 18 04.0**	**-0.7**
	baz=240							
NCUH	**Zhongli**	**1.08**	**288**	*e*P		**Pg**	**04 17 51.1**	**+1.3**
	baz=287							
NCUH				S		**Sn**	**04 18 06.8**	**+2.5**
	baz=287							
NFF	**Wufeng Townshi**	**1.09**	**270**	P		**Pg**	**04 17 50.7**	**+0.8**
	baz=256							
NFF				S		**Sn**	**04 18 05.5**	**+0.8**
	baz=256							
TWT	**Tachien**	**1.10**	**250**	*i* P		**Pg**	**04 17 52.1**	**+1.9**
	baz=248							
TWT				*i* S		**Sn**	**04 18 06.0**	**+0.8**
	baz=248							
TDCB	**Techi**	**1.12**	**251**	P		**Pg**	**04 17 50.9**	**+0.5**
	baz=248							
ESL	**Shilin**	**1.14**	**225**	*i* P		**Pg**	**04 17 51.5**	**+0.6**
	baz=197							
ESL				S		**Sg**	**04 18 09.6**	**+3.8**
	baz=197							
LIOB	**Emei**	**1.18**	**271**	*i* P		**Pg**	**04 17 52.6**	**+0.9**
	baz=257							
LIOB				S		**Sg**	**04 18 08.8**	**+1.8**
	baz=257							
CHGB	**Renai**	**1.18**	**242**	P		**Pg**	**04 17 52.1**	**+0.4**
	baz=239							
NSTT	**Nanjuang**	**1.19**	**270**	*i* P		**Pg**	**04 17 52.7**	**+0.8**
	baz=256							
NSTT				*i* S		**Sg**	**04 18 09.1**	**+1.6**
	baz=256							
SBCB	**Hsinchu**	**1.22**	**278**	*e*P		**Pg**	**04 17 53.9**	**+1.5**
	baz=275							
SBCB				S		**Sg**	**04 18 11.1**	**+2.9**
	baz=275							
OWD	**Renai**	**1.23**	**237**	*i* P		**Pg**	**04 17 52.9**	**+0.2**
	baz=246							
OWD				S		**Sg**	**04 18 09.4**	**+0.5**
	baz=246							
EGFH	**Guangfu**	**1.25**	**220**	*e*P		**Pg**	**04 17 53.9**	**+0.9**
	baz=195							
EGFH				S		**Sg**	**04 18 11.5**	**+2.2**
	baz=195							
WUSB	**Renai**	**1.26**	**240**	P		**Pg**	**04 17 52.8**	**-0.4**
	baz=237							
WUSB				S		**Sg**	**04 18 10.2**	**+0.5**
	baz=237							
WHP	**Taichung City**	**1.29**	**255**	*e*P		**Pg**	**04 17 54.6**	**+0.8**
	baz=252							
IRIF	**Iriomote-Funau**	**1.32**	**102**	P		**Pb**	**04 17 53.9**	**+0.4**
IRIF				S		**Sg**	**04 18 11.4**	**-0.3**
VWDT	**VWDT**	**1.38**	**231**	P		**Pg**	**04 17 55.4**	**-0.1**
	baz=226							
VWDT				S		**Sg**	**04 18 14.2**	**+0.9**
	baz=226							
NMLH	**Miaoli**	**1.39**	**267**	P		**Pg**	**04 17 56.5**	**+0.8**
	baz=254							
NMLH				*i* S		**Sg**	**04 18 15.8**	**+2.1**
	baz=254							
HGSD	**Ruisui**	**1.39**	**216**	P		**Pg**	**04 17 55.5**	**-0.2**
	baz=194							
WCS	**Beigang Elemen**	**1.40**	**246**	P		**Pg**	**04 17 56.9**	**+1.1**
	baz=244							
TWQ1	**Liyutan**	**1.43**	**259**	P		**Pg**	**04 17 57.6**	**+1.2**
	baz=243							
EHY	**Hungye**	**1.44**	**219**	*i* P		**Pb**	**04 17 55.4**	**-0.1**
	baz=215							
HATJ	**Hateruma jima**	**1.48**	**112**	P		**Pb**	**04 17 56.2**	**+0.2**
HATJ				S		**Sb**	**04 18 15.1**	**+0.4**
SMLT	**Sun Moon Lake**	**1.49**	**240**	P		**Pg**	**04 17 57.9**	**+0.4**
	baz=237							
SMLT				S		**Sg**	**04 18 16.9**	**0.0**
	baz=237							
SSLB	**Suanglung**	**1.50**	**236**	P		**Pg**	**04 17 58.0**	**+0.3**
	baz=243							
SSLB				S		**Sg**	**04 18 18.4**	**+1.3**
	baz=243							
YULB	**Yu-li**	**1.54**	**217**	P		**Pb**	**04 17 57.2**	**-0.1**
	baz=213							
EYUL	**Yuli**	**1.57**	**216**	P		**Pg**	**04 17 58.4**	**-0.6**
	baz=196							
JKRS	**Kuro-shima**	**1.59**	**104**	P		**Pb**	**04 17 57.9**	**-0.2**
JKRS				*e*S		**Sb**	**04 18 18.6**	**+0.4**
JIJ	**Ishigaki jima**	**1.69**	**99**	*e*P		**Pb**	**04 17 58.8**	**-0.9**
JIJ				S		**Sb**	**04 18 19.9**	**-0.9**
FULB	**Fuli**	**1.70**	**213**	*i* P		**Pb**	**04 17 59.8**	**-0.2**
	baz=191							
FULB				*e*S		**Sg**	**04 18 22.6**	**-1.2**
	baz=191							
ALS	**Alishan**	**1.77**	**231**	*i* P		**Pg**	**04 18 02.3**	**-0.6**
	baz=210							
ALS				*i* S		**Sg**	**04 18 28.4**	**+2.4**
	baz=210							
JISG	**Ishigakijimahi**	**1.82**	**91**	P		**Pb**	**04 18 01.1**	**-0.8**
WDLH	**Douliu**	**1.87**	**240**	*e*S		**Sg**	**04 18 30.4**	**+1.3**
	baz=236							
EDH	**Donghe**	**1.89**	**209**	P		**Pn**	**04 17 60.0**	**-0.7**
	baz=190							
EDH				*i* S		**Sn**	**04 18 24.5**	**+0.1**
	baz=190							
WRL	**Guolierlin Hig**	**1.91**	**248**	*e*P		**Pb**	**04 18 04.0**	**+0.6**
	baz=261							
WRL				*e*S		**Sg**	**04 18 29.9**	**-0.5**
	baz=261							
TPUB	**Ta-pu**	**2.03**	**230**	*e*S		**Sg**	**04 18 33.5**	**-0.7**
	baz=211							
WTP	**Ta-pu**	**2.08**	**229**	P		**Pb**	**04 18 06.5**	**+0.2**
	baz=206							
TWK	**Hsinying**	**2.15**	**231**	P		**Pb**	**04 18 07.1**	**-0.6**
	baz=208							
TWK				S		**Sg**	**04 18 37.1**	**-1.0**
	baz=208							
SNST	**Tainan City**	**2.17**	**230**	S		**Sg**	**04 18 38.1**	**-0.7**
	baz=205							
CHN1	**Nanshi**	**2.17**	**229**	*e*P		**Pg**	**04 18 09.5**	**-1.1**
	baz=225							
CHN1				S		**Sg**	**04 18 38.6**	**-0.2**
	baz=225							

JMA ***14*** *04:35:13.8±0.1,25.˚N±1.˚×122.˚5E±0.˚5,h21km±2km, MV2.0/9,NW OFF ISHIGAKIJIMA IS*
TAP ***14*** *04:35:13.1,24.˚67N×122.˚52E,h17km±1km,ML3.0,D*
ISC 14 04:35:13.4±1.1,**24.˚66N**±0.˚04×**122.˚53E**±0.˚02,**h20**km±3km, **n35**,σ0**.98**/62,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.43**	**119**	P		**Pg**	**04 35 22.4**	**0.0**
JYNG				*e*S		**Sb**	**04 35 28.6**	**-0.1**
YOJ	**Yonaguni jima**	**0.48**	**114**	*i* P		**Pb**	**04 35 23.3**	**0.0**
	baz=114							
YOJ				S		**Sb**	**04 35 30.2**	**+0.2**
	baz=114							
YOJ	**Yonaguni jima**	**0.48**	**114**	P		**Pg**	**04 35 23.2**	**-0.1**
YOJ				*e*S		**Sg**	**04 35 29.9**	**-0.1**
EGS		**0.57**	**289**	P		**Pb**	**04 35 24.8**	**0.0**
	baz=288							
TWB1	**Santiao Chiao**	**0.60**	**305**	*i* P		**Pb**	**04 35 25.1**	**-0.1**
	baz=305							
TWB1				*e*S		**Sb**	**04 35 32.9**	**-0.3**
	baz=305							
TWC	**Suao**	**0.62**	**265**	*e*P		**Pb**	**04 35 25.0**	**-0.6**
	baz=264							
TWC				*i* S		**Sg**	**04 35 34.8**	**+0.7**
	baz=264							
NTC	**Toucheng**	**0.66**	**287**	P		**Pb**	**04 35 26.2**	**-0.1**
	baz=286							
NTC				S		**Sg**	**04 35 35.9**	**+0.4**
	baz=286							
TIPB	**Shuangxi**	**0.71**	**296**	*i* P		**Pb**	**04 35 27.2**	**0.0**
	baz=295							
TIPB				S		**Sg**	**04 35 37.2**	**+0.2**
	baz=295							
EWUT	**Wuta**	**0.71**	**253**	P		**Pg**	**04 35 27.6**	**0.0**
	baz=252							
EWUT				*e*S		**Sb**	**04 35 36.6**	**0.0**
	baz=252							
ILA	**Ilan**	**0.71**	**279**	*i* P		**Pb**	**04 35 27.2**	**0.0**
	baz=277							
SXI1	**Grass Mountain**	**0.73**	**306**	P		**Pb**	**04 35 27.6**	**+0.1**
	baz=305							
SXI1				S		**Sg**	**04 35 38.3**	**+0.6**
	baz=305							
NDS	**Dongshan**	**0.74**	**268**	P		**Pg**	**04 35 28.1**	**+0.1**
	baz=267							
NDS				*e*S		**Sg**	**04 35 38.5**	**+0.7**
	baz=267							
ENA	**Nanau**	**0.75**	**252**	*i* P		**Pg**	**04 35 28.1**	**-0.1**
	baz=251							
ENA				*e*S		**Sg**	**04 35 38.0**	**-0.3**
	baz=251							
TWE	**Neicheng**	**0.78**	**275**	P		**Pb**	**04 35 28.1**	**-0.3**
	baz=273							
TWE				S		**Sg**	**04 35 39.4**	**+0.1**
	baz=273							
NWF	**Wu-fen Shan**	**0.79**	**301**	P		**Pb**	**04 35 28.7**	**+0.1**
	baz=300							
NWF				S		**Sg**	**04 35 40.0**	**+0.5**
	baz=300							
WFSB	**Wu-fen Shan**	**0.79**	**301**	*i* P		**Pg**	**04 35 28.8**	**-0.1**
	baz=300							
WFSB				*e*S		**Sg**	**04 35 39.3**	**-0.2**
	baz=300							
FUSB	**Fushanzhiwuyua**	**0.86**	**277**	P		**Pg**	**04 35 30.0**	**-0.2**
	baz=276							
FUSB				*e*S		**Sg**	**04 35 42.0**	**+0.3**
	baz=276							
ENTT	**Nioudou**	**0.87**	**269**	P		**Pg**	**04 35 30.3**	**-0.2**
	baz=268							
ENTT				*i* S		**Sg**	**04 35 41.8**	**-0.4**
	baz=268							
TWA	**Mucha**	**0.91**	**291**	P		**Pb**	**04 35 30.8**	**+0.1**

baz=290
TWA S **Sg** **04 35 43.5 +0.1**
baz=290
LATG Datong 0.92 262 P **Pg** **04 35 31.2 -0.2**
baz=261
LATG *e*S **Sb** **04 35 40.9 -1.8**
baz=261
NWLT Wulai 0.94 277 *e*P **Pg** **04 35 31.7 -0.1**
baz=276
NWLT S **Sn** **04 35 44.4 -0.1**
baz=276
ETL Fush Village 0.96 239 *e*S **Sn** **04 35 45.1 0.0**
baz=238
NACB Ninganchiao 0.98 240 P **Pb** **04 35 31.8 +0.1**
baz=239
NACB *e*S **Sb** **04 35 44.7 +0.4**
baz=239
YM01 YM01 0.99 299 P **Pb** **04 35 31.9 -0.1**
baz=298
YHNB Yeheng 1.05 271 *e*P **Pg** **04 35 33.6 -0.2**
baz=270
YHNB *e*S **Sb** **04 35 46.7 +0.4**
baz=270
PCYT Pengchaiyu 1.05 337 *e*S **Sg** **04 35 47.6 -0.1**
baz=337
ETLH Xiulin Townshi 1.05 245 P **Pn** **04 35 33.4 +0.2**
baz=244
ETLH S **Sg** **04 35 47.9 0.0**
baz=244
NSK Sanguang 1.06 271 *e*P **Pn** **04 35 33.6 +0.3**
baz=270
NSK S **Sn** **04 35 47.7 +0.1**
baz=270
NNSB Datong 1.07 258 *e*P **Pg** **04 35 33.8 -0.4**
baz=257
NNSB *e*S **Sb** **04 35 47.3 +0.4**
baz=257
NNS Nan Shan 1.07 258 *e*P **Pg** **04 35 34.2 -0.1**
baz=257
NNS S **Sn** **04 35 47.6 -0.4**
baz=257
IRIF Iriomote-Funau 1.14 106 P **Pn** **04 35 34.3 -0.1**
IRIF S **Sg** **04 35 50.2 -0.5**
FUSS Fushou 1.24 251 *e*S **Sn** **04 35 52.2 0.0**
baz=250
HATJ Hateruma jima 1.31 117 *e*S **Sb** **04 35 54.7 +0.8**
JKRS Kuro-shima 1.42 107 *e*P **Pn** **04 35 37.6 -0.5**
JIJ Ishigaki jima 1.50 101 *e*P **Pb** **04 35 41.0 +0.3**
JIJ *e*S **Sb** **04 35 59.3 0.0**

*IDC **14** 04:39:26.4±1.1, 14°.38N×92°.14W, h0km, mb4.1/12, mbtmp4.1/14, ML3.6/2, MS3.6/27, Error ellipse: s-maj=41.7km s-min=16.3km az=51.0*
*MEX **14** 04:39:26.8±0.7, 13°.80N×92°.86W, h11km±43km, MD4.2*
*GCG **14** 04:39:30.3±0.4, 14°.38N×92°.65W, h102km±11km, MD4.6*
*NEIC **14** 04:39:31.5±2.0, 14°.05N±0°.07×92°.68W±0°.06, h53km±8km, mb4.3/110, Md4.2/28(MEX), Error ellipse: s-maj=10.6km s-min=7.6km az=213.0*
ISC 14 04:39:30.6±1.2, 14°.05N±0°.06×92°.76W±0°.05, h46km±11km, n184, σ1°22/184, mb4.3/34, MS3.7/26, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
THIG		**0.98**	**29**				**Sn**	**04 40 00.6**	**-0.1**
THIG		**0.98**	**29**	*e*P			**Pn**	**04 39 46.8**	**-1.2**
THIG				*e*S			**Sn**	**04 40 00.6**	**-0.1**
RTAL	**Retalhuleu**	**1.13**	**65**	Pn			**Pn**	**04 39 49.5**	**-0.6**
RTAL							**Sn**	**04 40 03.5**	**-1.0**
PATR	**El Naranjo**	**1.18**	**25**	*e*P			**Pn**	**04 39 49.0**	**-1.9**
PATR				*i*S			**Sn**	**04 40 06.9**	**+1.0**
CHUJ	**Union Juarez**	**1.21**	**31**	*e*P			**Pn**	**04 39 49.9**	**-1.6**
CHUJ				*i*S			**Sn**	**04 40 07.8**	**+1.0**
PAVE	**Pavencul**	**1.27**	**26**	*e*P			**Pn**	**04 39 50.6**	**-1.6**
PAVE				*e*S			**Sn**	**04 40 09.4**	**+1.2**
STG3	**Santiaguito 3,**	**1.32**	**60**	*e*P			**Pn**	**04 39 52.7**	**-0.2**
PCIG		**1.71**	**345**				**Pn**	**04 39 55.6**	**-2.3**
PCIG							**Sn**	**04 40 19.5**	**+1.0**
PCIG		**1.71**	**345**	*e*P			**Pn**	**04 39 55.6**	**-2.3**
PCIG				*i*S			**Sn**	**04 40 19.5**	**+1.0**
HUEH	**Huehuetenango**	**1.75**	**44**	Pn			**Pn**	**04 39 59.4**	**+0.6**
FUG	**Fuego 3**	**1.90**	**78**	*e*P			**Pn**	**04 40 00.4**	**-0.4**
FUG				*e*S			**Sn**	**04 40 24.2**	**+0.6**
PCG	**Pacaya**	**2.11**	**80**	*e*P			**Pn**	**04 40 03.9**	**+0.2**
PCG				*e*S			**Sn**	**04 40 29.9**	**+0.9**
CCIG	**Comitan**	**2.30**	**15**	Pn			**Pn**	**04 40 07.5**	**+1.2**
CCIG	**Comitan**	**2.30**	**15**	*e*P			**Pn**	**04 40 07.6**	**+1.4**
CCIG				*e*S			**Sn**	**04 40 35.9**	**+2.4**
NBG	**Las Nubes**	**2.40**	**77**	*e*P			**Pn**	**04 40 09.4**	**+1.8**
CARR	**Arriaga**	**2.45**	**333**	*e*P			**Pn**	**04 40 06.2**	**-2.0**
CARR				*e*S			**Sn**	**04 40 37.4**	**+0.5**
TGIG		**2.74**	**353**				**Pn**	**04 40 12.0**	**-0.1**
TGIG							**Sn**	**04 40 45.7**	**+1.7**
TGIG		**2.74**	**353**	*e*P			**Pn**	**04 40 12.0**	**-0.1**
TGIG				*e*S			**Sn**	**04 40 45.7**	**+1.7**
ESQI	**Esquipulas**	**3.35**	**81**	Pn			**Pn**	**04 40 20.8**	**+0.1**
SNET	**Serv Nac Est T**	**3.44**	**96**	Pn			**Pn**	**04 40 21.9**	**+0.1**
UXUV	**UXUV**	**3.51**	**338**	*e*P			**Pn**	**04 40 23.1**	**+0.3**
UXUV				*e*S			**Sn**	**04 41 04.9**	**+1.8**
CMIG	**Matias Romero** 3.5nm,0.3s,baz=145,slow=10,SNR=57	**3.65**	**326**	Pn			**Pn**	**04 40 23.7**	**-0.9**
CMIG	9.7nm,0.3s,baz=113,slow=17,SNR=4.4 41nm,0.6s			Sn			**Sn**	**04 41 07.9**	**+1.3**
CMIG	**Matias Romero**	**3.65**	**326**				**Pn**	**04 40 23.0**	**-1.7**
CMIG							**Sn**	**04 41 06.2**	**-0.4**
CMIG	**Matias Romero**	**3.65**	**326**	*e*P			**Pn**	**04 40 23.0**	**-1.7**
CMIG				*e*S			**Sn**	**04 41 06.2**	**-0.4**
PETF	**Flores**	**3.99**	**44**	Pn			**Pn**	**04 40 29.9**	**+0.6**
NEUV	**Arroyo Zacate**	**4.67**	**322**	*e*P			**Pn**	**04 40 36.0**	**-2.7**
NEUV				*e*S			**Sn**	**04 41 32.2**	**+0.5**
TGUH	**Tegucigalpa,Un**	**5.32**	**89**				**Pn**	**04 40 48.1**	**+0.4**
CRIN	**San Cristobal**	**5.71**	**103**	Pn			**Pn**	**04 40 51.5**	**-1.6**
TOIG	**Toxpalan**	**5.77**	**315**	*e*P			**Pn**	**04 40 53.9**	**0.0**
TOIG				*e*S			**Sn**	**04 41 58.2**	**-0.7**
TXIG	**Tlaxiaco**	**5.78**	**304**	*e*P			**Pn**	**04 40 54.5**	**+0.3**
TXIG				*e*S			**Sn**	**04 41 57.9**	**-1.5**
FTIG	**Fresnillo de T**	**6.44**	**307**	*e*P			**Pn**	**04 41 03.2**	**+0.2**
FTIG				*e*S			**Sn**	**04 42 16.1**	**+0.8**
TLIG	**Tlapa**	**6.59**	**303**	Pn			**Pn**	**04 41 05.9**	**+0.7**
MATN	**Matagalpa**	**6.74**	**99**				**Pn**	**04 41 06.1**	**-1.0**
BOAB	**BOACO BROADBAN**	**7.08**	**102**				**Pn**	**04 41 10.5**	**-1.3**
ORTG	**Ortega, Santa**	**8.02**	**116**	Pn			**Pn**	**04 41 25.0**	**+0.3**
DUNO	**Dulce Nombre,**	**8.13**	**118**				**Pn**	**04 41 26.6**	**+0.4**
JTS	**Las Juntas de** 1.5nm,0.3s,baz=10.0,slow=21,SNR=7.4	**8.49**	**115**	Pn			**Pn**	**04 41 32.3**	**+1.1**
JTS	0.3nm,0.3s,baz=22,slow=20,SNR=0.7			Sn			**Sn**	**04 43 00.7**	**-5.1**
JTS	**Las Juntas de**	**8.49**	**115**				**Pn**	**04 41 30.9**	**-0.3**
RIMA	**Rio Macho**	**9.69**	**115**	Pn			**Pn**	**04 41 48.6**	**+0.9**
SRBA	**San Rafael, Bu**	**10.37**	**116**	Pn			**Pn**	**04 41 56.4**	**-0.7**
TX31	**Lajitas Ar. Si**	**18.26**	**328**	P			**Pn**	**04 43 42.6**	**+1.8**
TX31	comp=Z,27nm,1.1s				IAmb	IAmb	04 43 49.6		
TX32	**Lajitas Array**	**18.26**	**328**	P			**P**	**04 43 40.7**	**+0.2**
TXAR	**Lajitas Array** baz=148,slow=7.3,SNR=20 comp=Z,2.7nm,1.0s	**18.26**	**328**	P			**Pn**	**04 43 42.8**	**+2.0**
TXAR	**Lajitas Array**	**18.26**	**328**				**P**	**04 43 40.0**	**-0.5**
352A	**Blakely**	**18.78**	**21**	P			**Pn**	**04 43 46.8**	**-0.1**
352A	comp=Z,19nm,0.8s				IAmb	IAmb	04 43 55.4		
250A	**Grady**	**18.81**	**17**	P			**P**	**04 43 44.5**	**-1.9**
250A	comp=Z,20nm,1.1s				IAmb	IAmb	04 43 52.6		
Z41A	**Richland Creek**	**19.12**	**360**	P			**Pn**	**04 43 51.4**	**+0.4**
Z41A	comp=Z,12nm,0.5s				IAmb	IAmb	04 43 58.5		
GUY2C	**Guyana, Caldas**	**19.24**	**115**	*e*P			**P**	**04 43 53.5**	**+1.6**
LPIG	**La Paz** comp=Z,134nm,20.9s,baz=182,slow=38	**19.35**	**304**	LR			LR	04 52 02.0	
PTBC	**PUERTO BERRIO,**	**19.48**	**111**	*e*P			**P**	**04 43 53.4**	**-0.5**
NORC	**Norcasia**	**19.53**	**114**	*e*P			**P**	**04 43 55.4**	**+0.9**
Z47A	**Carrollton**	**19.54**	**12**	P			**P**	**04 43 52.8**	**-1.6**
Z47A	comp=Z,28nm,1.2s				IAmb	IAmb	04 44 10.4		
WLAR	**White Oak Lake**	**19.55**	**359**				**P**	**04 43 55.3**	**+0.8**
WLAR	comp=Z,15nm,0.9s				IAmb	IAmb	04 44 08.9		
POPC	**Popayan, Colom**	**19.57**	**124**	*e*P			**Pn**	**04 44 00.8**	**+4.0**
LRAL	**Lakeview Retre**	**19.61**	**15**	P			**Pn**	**04 43 56.1**	**-0.8**
Z35A	**Perchaven, San**	**19.63**	**349**				**Pn**	**04 43 56.9**	**-0.2**
Z35A	comp=Z,21nm,0.8s				IAmb	IAmb	04 44 02.0		
TULM	**Tulcn-Chalpat**	**19.87**	**131**	P			**P**	**04 43 56.9**	**-1.8**
ORTC	**Ortega, Tolima**	**20.00**	**119**	*e*P			**Pn**	**04 44 02.1**	**+0.4**
ROSC	**El Rosal** comp=Z,9.9nm,0.7s,baz=72,slow=6.2,SNR=6.5	**20.34**	**115**	P			Pn	04 44 07.7	+1.6
ROSC	**El Rosal**	**20.34**	**115**	P			**P**	**04 44 03.4**	**-0.4**
ROSC	comp=Z,22nm,1.1s				IAmb	IAmb	04 44 08.6		
MIAR	**Mount Ida**	**20.42**	**358**	P			**P**	**04 44 04.8**	**+0.8**
MIAR	comp=Z,14nm,0.9s				IAmb	IAmb	04 44 19.5		
X37A	**Clayton**	**20.59**	**354**				**P**	**04 44 06.4**	**+0.6**
X37A	comp=Z,11nm,1.0s				IAmb	IAmb	04 44 22.0		
CHIC	**Chingaza**	**20.96**	**115**	*e*P			Pn	04 44 13.2	-0.3
X48A	**Hartselle**	**20.96**	**13**	P			**P**	**04 44 10.8**	**+1.0**
X34A	**Smith Ranch, M**	**20.97**	**348**				**P**	**04 44 11.5**	**+1.6**
X34A	comp=Z,11nm,0.8s				IAmb	IAmb	04 44 21.1		
RUSC	**La Rusia**	**20.99**	**111**	*e*P			**P**	**04 44 11.4**	**+0.6**
MNTX	**Cormudas Mount**	**21.04**	**329**	P			**P**	**04 44 11.5**	**+0.8**
GOGA	**Godfrey**	**21.05**	**22**	P			**P**	**04 44 11.4**	**+0.7**
W39A	**Magazine**	**21.08**	**358**	P			**P**	**04 44 10.9**	**-0.1**
WHAR	**Wooly Hollow**	**21.15**	**1**	P			**P**	**04 44 12.0**	**+0.1**
Y52A	**Lilburn**	**21.25**	**20**	P			**P**	**04 44 12.7**	**-0.2**
Y52A	comp=Z,11nm,1.0s				IAmb	IAmb	04 44 29.9		
PLAL	**Pickwick Lake**	**21.27**	**11**	P			**P**	**04 44 12.6**	**-0.5**
WMOK	**Wichita Mounta**	**21.31**	**346**	P			**P**	**04 44 12.3**	**-1.2**
FPAL	**Fort Paine**	**21.40**	**16**	P			**P**	**04 44 14.2**	**-0.4**
FPAL	comp=Z,9.4nm,0.8s				IAmb	IAmb	04 44 24.9		
FNO	**Franklin**	**21.53**	**350**				**P**	**04 44 16.2**	**+0.3**
FCAR	**Ozark Folk Cen**	**21.76**	**1**	P			**P**	**04 44 18.5**	**+0.2**
MSTX	**Muleshoe**	**21.81**	**337**	P			**P**	**04 44 19.3**	**+0.2**
MSTX	comp=Z,8.2nm,0.9s				IAmb	IAmb	04 44 23.6		
TUL1	**Leonard**	**21.94**	**353**				**P**	**04 44 20.5**	**+0.2**
TUL1	comp=Z,11nm,0.9s				IAmb	IAmb	04 44 37.6		
SWET	**Sewanee**	**21.96**	**15**	P			**P**	**04 44 19.8**	**-0.7**
SWET	comp=Z,10nm,0.9s				IAmb	IAmb	04 44 31.1		
LCAR	**Lake Charles**	**21.98**	**3**	P			**P**	**04 44 19.2**	**-1.5**
HHAR	**Hobbs**	**22.16**	**357**	P			**P**	**04 44 23.0**	**+0.2**
U40A	**Yellville**	**22.21**	**360**	P			**P**	**04 44 22.6**	**-0.6**
V48A	**Smith Brothers**	**22.25**	**13**	P			**P**	**04 44 21.8**	**-1.9**
AMTX	**Amarillo**	**22.25**	**340**	P			**P**	**04 44 24.6**	**+0.8**
SDV	**Santo Domingo** comp=Z,4.1nm,0.4s,baz=24,slow=11,SNR=1.7	**22.27**	**101**	P			**P**	**04 44 25.8**	**+1.5**
SDV	comp=Z,73nm,18.8s,baz=263,slow=42				LR	LR	04 54 49.3		
U38A	**Gravette**	**22.34**	**357**	P			**P**	**04 44 24.2**	**-0.5**
U32A	**Winter Ranch,**	**22.93**	**347**				**P**	**04 44 30.8**	**-0.1**
U32A	comp=Z,15nm,1.1s				IAmb	IAmb	04 44 33.0		
121A	**Cookes Peak, D**	**22.95**	**326**	P			**P**	**04 44 32.5**	**+1.2**
121A	comp=Z,8.2nm,1.0s				IAmb	IAmb	04 44 37.3		
TKL	**Tuckaleechee C** comp=Z,7.0nm,1.0s,baz=190,slow=10,SNR=6.7	**22.98**	**19**	P			**P**	**04 44 31.3**	**-0.1**
TKL	comp=Z,157nm,19.6s,baz=191,slow=41				LR	LR	04 54 42.4		
TKL	**Tuckaleechee C**	**22.98**	**19**	P			**P**	**04 44 30.7**	**-0.7**
TKL	comp=Z,11nm,1.1s				IAmb	IAmb	04 44 32.8		
T35A	**Sooner Cattle**	**23.02**	**352**	P			**P**	**04 44 31.5**	**-0.2**
KMSC	**Kings Mountain**	**23.39**	**24**	P			**P**	**04 44 34.0**	**-1.4**
KMSC	comp=Z,12nm,1.1s				IAmb	IAmb	04 44 47.9		
T47A	**Sharon Grove**	**23.40**	**11**	P			**P**	**04 44 34.2**	**-1.2**
T47A	comp=Z,11nm,0.9s				IAmb	IAmb	04 44 49.8		
S39A	**Bolivar**	**23.55**	**359**	P			**P**	**04 44 35.1**	**-1.8**
S39A	comp=Z,12nm,0.9s				IAmb	IAmb	04 44 37.8		
BNM	**Barren Site**	**23.63**	**330**	P			**P**	**04 44 39.4**	**+1.4**
S44A	**Carbondale**	**23.75**	**7**	P			**P**	**04 44 38.3**	**-0.4**
S44A	comp=Z,15nm,0.8s				IAmb	IAmb	04 44 53.6		
SIUC	**Southern Illin**	**23.78**	**7**	P			**P**	**04 44 38.6**	**-0.4**
LENM	**Lemitar**	**23.81**	**330**	P			**P**	**04 44 37.6**	**-2.0**
TZTN	**Tazewell**	**23.87**	**19**	P			**P**	**04 44 39.3**	**-0.6**
TZTN	comp=Z,14nm,1.2s				IAmb	IAmb	04 44 46.2		
V55A	**Taylorsville**	**24.06**	**23**	P			**P**	**04 44 39.3**	**-2.3**
V55A	comp=Z,12nm,1.1s				IAmb	IAmb	04 44 42.6		
R40A	**Maddies Statio**	**24.15**	**1**	P			**P**	**04 44 41.1**	**-1.3**
ANMO	**Albuquerque** comp=Z,1.3nm,0.8s,baz=154,slow=13,SNR=6.9 comp=Z,1.3nm,0.8s	**24.20**	**332**	P			**P**	**04 44 45.1**	**+2.0**
ANMO	**Albuquerque**	**24.20**	**332**	P			**P**	**04 44 42.7**	**-0.5**
TUC	**Tucson**	**24.53**	**321**	P			**P**	**04 44 46.6**	**+0.5**
U56A	**King**	**24.82**	**24**	P			**P**	**04 44 47.6**	**-0.9**
U56A	comp=Z,15nm,1.1s				IAmb	IAmb	04 44 49.1		
R32A	**Long Quarter,**	**24.84**	**349**	P			**P**	**04 44 48.7**	**-0.1**
T25A	**Trinidad**	**25.24**	**338**	P			**P**	**04 44 52.5**	**0.0**
T25A	comp=Z,9.8nm,1.1s				IAmb	IAmb	04 44 56.3		
X18A	**Snowflake**	**25.64**	**326**	P			**P**	**04 44 57.5**	**+1.2**
SDCO	**Great Sand Dun**	**26.18**	**337**	P			**P**	**04 45 02.3**	**+1.1**
SDCO	comp=Z,7.4nm,1.1s				IAmb	IAmb	04 45 04.6		
X16A	**Lo Mia Camp, P**	**26.40**	**323**	P			**P**	**04 45 04.2**	**+1.1**
N38A	**Joes South For**	**26.65**	**359**	P			**P**	**04 45 04.8**	**-0.2**
N38A	comp=Z,10.0nm,0.7s				IAmb	IAmb	04 45 07.2		
S22A	**4UR Ranch, Cre**	**26.71**	**335**	P			**P**	**04 45 07.1**	**+1.0**
S22A	comp=Z,9.9nm,1.1s				IAmb	IAmb	04 45 12.6		
MVCO	**Mesa Verde**	**27.00**	**332**	P			**P**	**04 45 07.7**	**-0.9**
MVCO	comp=Z,18nm,1.3s				IAmb	IAmb	04 45 15.3		
PV13	**Radium Mtn., P**	**27.92**	**332**	P			**P**	**04 45 17.8**	**+0.9**
PV13	comp=Z,9.9nm,1.2s				IAmb	IAmb	04 45 23.7		
SMCO	**Snowmass**	**28.00**	**336**	P			**P**	**04 45 18.3**	**+0.7**
PV11	**David Mesa, Pa**	**28.06**	**332**	P			**P**	**04 45 18.3**	**+0.3**
PV11	comp=Z,10nm,1.0s				IAmb	IAmb	04 45 31.6		
PFO	**Pinyon Flats O** comp=Z,88nm,21.0s,baz=121,slow=37	**29.02**	**316**	LR			LR	04 57 35.3	
LCMT	**Little Creek M**	**29.28**	**325**	P			**P**	**04 45 30.2**	**+1.4**
ECSD	**EROS Data Cent**	**29.77**	**354**	P			**P**	**04 45 33.4**	**+0.5**
ECSD	comp=Z,9.4nm,1.4s				IAmb	IAmb	04 45 35.9		
P17A	**Butcher Ranch,**	**29.86**	**331**	P			**P**	**04 45 34.6**	**+0.6**
PDAR	**Pinedale Array** comp=Z,1.3nm,0.9s,baz=146,slow=8.2,SNR=7.5 comp=Z,1.3nm,0.9s	**32.08**	**336**	P			**P**	**04 45 55.2**	**+1.7**
HVU	**Hansel Valley**	**32.64**	**332**	P			**P**	**04 45 57.3**	**-1.0**
HVU	comp=Z,4.6nm,1.0s				IAmb	IAmb	04 46 09.9		
SADO	**Sadowa** comp=Z,215nm,18.3s,baz=248,slow=40	**32.74**	**18**	LR			LR	05 01 11.6	
ELK	**Elko** comp=Z,100nm,19.0s,baz=164,slow=40	**33.05**	**328**	LR			LR	05 01 35.6	
ELK	**Elko**	**33.05**	**328**	P			**P**	**04 46 02.4**	**+0.2**
REDW	**Red Top Meadow**	**33.09**	**335**	P			**P**	**04 46 04.0**	**+1.6**
SNOW	**Snow King Moun**	**33.13**	**336**	P			**P**	**04 46 02.2**	**-0.6**
NVAR	**Mina Array Bea** comp=Z,2.7nm,0.8s,baz=136,slow=8.5,SNR=22 comp=Z,2.7nm,0.8s	**33.17**	**322**	P			**P**	**04 46 06.4**	**+3.2**
NVAR	**Mina Array Bea**	**33.17**	**322**	P			**P**	**04 46 04.2**	**+1.1**
LOHW	**Long Hollow**	**33.20**	**336**	P			**P**	**04 46 03.0**	**-0.3**
TPAW	**Teton Pass**	**33.23**	**336**	P			**P**	**04 46 03.5**	**-0.2**
MOOW	**Moose Ponds**	**33.37**	**336**	P			**P**	**04 46 04.5**	**-0.3**
MOOW	comp=Z,5.7nm,1.2s				IAmb	IAmb	04 46 07.8		
MDND	**Maddock**	**34.18**	**352**	P			**P**	**04 46 10.2**	**-1.3**
YMR	**Madison River**	**34.23**	**337**	P			**P**	**04 46 12.5**	**+0.3**
BOZ	**Bozeman (W)**	**35.26**	**337**	P			**P**	**04 46 21.3**	**+0.2**
BOZ	comp=Z,4.0nm,1.4s				IAmb	IAmb	04 46 24.5		
LRM	**Limekiln Ridge**	**35.77**	**336**	P			**P**	**04 46 24.2**	**-1.4**
ULM	**Lac du Bonnet** comp=Z,1.4nm,0.5s,baz=172,slow=14,SNR=4.2 comp=Z,1.4nm,0.5s	**36.19**	**357**	P			**P**	**04 46 27.6**	**-1.2**
ULM	**Lac du Bonnet**	**36.19**	**357**	P			**P**	**04 46 27.3**	**-1.4**
ULM	comp=Z,4.6nm,1.2s				IAmb	IAmb	04 46 51.4		
J08A	**Circle Bar Ran**	**36.61**	**328**	P			**P**	**04 46 32.3**	**-0.2**
MSO	**Missoula**	**37.19**	**336**	P			**P**	**04 46 36.1**	**-1.3**
MSO	comp=Z,6.3nm,1.1s				IAmb	IAmb	04 46 40.2		
F10A	**Beach Ranch, E**	**37.92**	**332**	P			**P**	**04 46 42.1**	**-1.6**
LPAZ	**La Paz** comp=Z,1.6nm,1.1s,baz=45,slow=18,SNR=4.2 comp=Z,1.6nm,1.1s	**38.74**	**140**	P			**P**	**04 46 52.2**	**+0.8**
NEW	**Newport** comp=Z,10nm,18.3s,baz=127,slow=40	**39.63**	**334**	LR			LR	05 05 35.6	
MDP	**Montagnes des** comp=Z,90nm,18.9s,baz=296,slow=37	**40.49**	**99**	LR			LR	05 04 05.4	
SIV	**San Ignacio** comp=Z,1.2nm,0.6s,baz=304,slow=8.8,SNR=7.3 comp=Z,1.2nm,0.6s	**43.26**	**133**	P			**P**	**04 47 28.1**	**+0.1**
RPN	**Rapa Nui** comp=Z,50nm,19.4s,baz=86,slow=29	**43.98**	**201**	LR			LR	05 01 04.1	
SCHQ	**Schefferville** comp=Z,4.4nm,0.9s,baz=265,slow=16,SNR=4.3	**45.43**	**21**	P			**P**	**04 47 42.0**	**-2.8**
SCHQ	comp=Z,133nm,18.6s,baz=208,slow=38 comp=Z,4.4nm,0.9s				LR	LR	05 07 47.4		
YKA	**Yellowknife Ar** comp=Z,9.4nm,0.8s,baz=149,slow=7.6,SNR=40	**50.81**	**347**	P			**P**	**04 48 27.2**	**+1.0**
YKA	comp=Z,61nm,18.4s,baz=132,slow=42 comp=Z,9.4nm,0.8s				LR		05 14 27.9		
YKA	**Yellowknife Ar**	**50.81**	**347**	P			**P**	**04 48 25.5**	**-0.7**
DLBC	**Dease Lake** comp=Z,106nm,18.4s,baz=114,slow=40	**52.31**	**336**	LR			LR	05 14 08.4	
DLBC	**Dease Lake**	**52.31**	**336**	P			**P**	**04 48 37.4**	**-0.2**
FRB	**Frobisher Bay** comp=Z,65nm,19.7s,baz=224,slow=38	**52.43**	**13**	LR			LR	05 12 24.6	
CTGM	**Chitina Glacie**	**58.41**	**335**	P			**P**	**04 49 20.4**	**-1.1**
SFJD	**Kangerlussuaq** comp=Z,130nm,18.2s,baz=228,slow=38	**59.69**	**18**	LR			LR	05 17 17.3	
BCAR	**Beaver Creek A**	**59.70**	**337**	P			**P**	**04 49 29.6**	**-0.7**
L27K	**Beaver Creek,**	**59.71**	**337**	P			**P**	**04 49 29.3**	**-1.1**
L27K	comp=Z,2.7nm,0.9s				IAmb	IAmb	04 49 34.8		
RCBR	**Riachuelo** comp=Z,62nm,18.3s,baz=62,slow=40	**59.76**	**105**	LR			LR	05 19 20.7	
RES	**Resolute Bay** comp=Z,34nm,20.2s,baz=132,slow=40	**60.64**	**359**	LR			LR	05 19 56.7	
J26L	**Joseph Creek**	**61.12**	**337**	P			**P**	**04 49 39.4**	**-0.6**
RIDG	**Independent Ri**	**61.23**	**336**	P			**P**	**04 49 39.6**	**-1.1**
J25K	**Salcha River,**	**61.86**	**337**	P			**P**	**04 49 43.6**	**-1.4**
J25K	comp=Z,1.9nm,0.8s				IAmb	IAmb	04 49 50.0		
IL31		**62.51**	**337**	P			**P**	**04 49 45.9**	**+0.4**
ILAR	**Eielson Array** comp=Z,3.6nm,1.1s,baz=129,slow=4.5,SNR=17 comp=Z,3.6nm,1.1s	**62.51**	**337**	P			**P**	**04 49 50.9**	**+1.6**
ILAR	**Eielson Array**	**62.51**	**337**	P			**P**	**04 49 49.0**	**-0.2**
BMAR	**Burnt Mountain**	**62.99**	**340**	P			**P**	**04 49 52.2**	**-0.3**
H24K	**Noodor Dome**	**63.37**	**338**	P			**P**	**04 49 55.7**	**+0.7**
H24K	comp=Z,3.0nm,0.9s				IAmb	IAmb	04 49 59.4		
I23K	**Minto, Yukon-K**	**63.62**	**337**	P			**P**	**04 49 56.4**	**-0.2**
MLY	**Manley**	**64.10**	**336**	P			**P**	**04 50 00.5**	**+0.7**
MLY	comp=Z,3.8nm,0.7s				IAmb	IAmb	04 50 04.3		
BORG	**Borgarnes** comp=Z,15nm,21.8s,baz=271,slow=35	**69.48**	**26**	LR			LR	05 19 40.2	
JMIC	**Jan Mayen** comp=Z,79nm,20.6s,baz=252,slow=36	**74.94**	**20**	LR			LR	05 23 52.2	
SPITS	**Spitsbergen Ar** comp=Z,106nm,18.7s,baz=239,slow=38	**80.19**	**11**	LR			LR	05 30 37.1	
ESDC	**Sonseca Array** comp=Z,1.2nm,0.8s,baz=277,slow=5.3,SNR=6.4	**80.26**	**52**	P			**P**	**04 51 35.6**	**-1.3**
ESDC	comp=Z,28nm,19.8s,baz=274,slow=32 comp=Z,1.2nm,0.8s				LR	LR	05 22 11.3		
ESDC	**Sonseca Array**	**80.26**	**52**	P			**P**	**04 51 35.3**	**-1.6**
MDT	**Midelt** comp=Z,33nm,18.4s,baz=262,slow=33	**81.00**	**58**	LR			LR	05 23 26.0	
NOA	**NORSAR Array B** comp=Z,0.8nm,0.9s,baz=64,slow=21,SNR=3.8	**84.45**	**28**	P			**P**	**04 51 58.9**	**+0.6**
NOA	comp=Z,17nm,18.6s,baz=290,slow=36 comp=Z,0.8nm,0.9s				LR		05 30 18.7		
HFS	**Hagfors** comp=Z,32nm,21.4s,baz=290,slow=34	**85.91**	**29**	LR			LR	05 28 15.4	
ARCES	**ARCESS Array B** comp=Z,2.5nm,1.0s,baz=320,slow=3.2,SNR=3.7	**86.32**	**18**	P			**P**	**04 52 08.2**	**+0.8**
ARCES	comp=Z,25nm,18.0s,baz=228,slow=36 comp=Z,2.5nm,1.0s				LR		05 31 42.0		
ARCES	**ARCESS Array B**	**86.32**	**18**	P			**P**	**04 52 07.1**	**-0.4**
FINES	**FINESS Array B** comp=Z,21nm,18.6s,baz=292,slow=37	**90.76**	**25**	LR			LR	05 34 54.4	
VRAC	**Vranov** comp=Z,32nm,20.3s,baz=298,slow=35	**91.61**	**38**	LR			LR	05 32 49.6	
NRIK	**Norilʹsk** comp=Z,59nm,19.4s,baz=44,slow=38	**96.83**	**360**	LR			LR	05 40 53.0	
WRA	**Warramunga Arr** comp=Z,0.5nm,0.9s,baz=89,slow=3.3,SNR=1.8	**134.69**	**256**	PKP			**PKiKP**	**04 58 48.9**	**+2.4**
PZH	**PanZhiHua**	**137.30**	**341**	PKP			**PKiKP**	**04 58 52.3**	**+0.4**
CMAR	**Chiang Mai Arr** comp=Z,2.6nm,0.5s

GOG	**Mont Gurugu**	**0.69**	**117**	P	**Pg**	05 15 19.2	**0.0**	
GOG				S	**Sg**	**05 15 28.3**	**0.0**	
EALB	**Alboran**	**0.71**	**55**	Pg	**Pg**	**05 15 20.0**	**+0.4**	
EALB				Sg	**Sb**	**05 15 30.5**	**+1.0**	
EALB				*i* Vmb_Lg		05 15 33.2		
AKLM	**AKL**	**1.02**	**185**	P	**Pn**	**05 15 27.0**	**+1.1**	
AKLM	**AKL**	**1.02**	**185**	P	**Pn**	**05 15 27.1**	**+1.2**	
AKLM				S	**Sn**	**05 15 40.7**	**+0.6**	
CHAS	**Isla Isabel II**	**1.13**	**108**	P	**Pb**	**05 15 25.8**	**-1.3**	
CHAS				S	**Sb**	**05 15 40.1**	**-1.6**	
TAF	**Taforalt**	**1.30**	**123**	P	**Pn**	**05 15 28.9**	**-0.9**	
TAF				S	**Sb**	**05 15 46.9**	**+0.1**	
EMIJ	**Mijas**	**1.32**	**321**	Pg	**Pn**	**05 15 29.2**	**-0.8**	
EMIJ				Sg	**Sb**	**05 15 46.4**	**-1.0**	
EMIJ				*i* Vmb_Lg		05 15 50.6		
ELGU	**Los Guajares,**	**1.33**	**4**	Pn	**Pn**	**05 15 29.3**	**-0.9**	
ELGU				Sn	**Sb**	**05 15 48.2**	**+0.5**	
ELGU				*i* Vmb_Lg		05 15 53.5		
CHEFC	**Chefchaouen**	**1.37**	**252**	P	**Pg**	**05 15 34.1**	**+1.9**	
CHEFC	**Chefchaouen**	**1.37**	**252**	P	**Pn**	**05 15 31.0**	**+0.4**	
CEU	**Ceuta**	**1.37**	**286**	P	**Pn**	**05 15 28.1**	**-2.5**	
CEU				S	**Sn**	**05 15 44.9**	**-3.7**	
ECEU	**Ceuta**	**1.38**	**286**	Pg	**Pn**	**05 15 29.5**	**-1.1**	
ECEU				Sg	**Sn**	**05 15 46.4**	**-2.3**	
ECEU				*i* Vmb_Lg		05 15 50.3		
EBER	**Berja**	**1.53**	**27**	Pn	**Pn**	**05 15 33.6**	**+0.7**	
EBER				Sn	**Sb**	**05 15 54.6**	**+1.2**	
EBER				*i* Vmb_Lg		05 16 02.3		
JBK	**JBK**	**1.54**	**141**	P	**Pg**	**05 15 35.2**	**-0.2**	
JBK	**JBK**	**1.54**	**141**	P	**Pn**	**05 15 32.1**	**-1.0**	
JBK				S	**Sn**	**05 15 50.3**	**-2.6**	
EGOR	**Sierra Gorda,**	**1.60**	**350**	Pn	**Pn**	**05 15 34.2**	**+0.3**	
EGOR				Sn	**Sn**	**05 15 55.3**	**+0.9**	
EGOR				*i* Vmb_Lg		05 16 02.9		
ENIJ	**Nijar**	**1.90**	**40**	Sn	**Sn**	**05 16 01.4**	**-0.3**	
ESPR	**Espera**	**2.17**	**309**	Sn	**Sn**	**05 16 08.6**	**+0.4**	
EQES	**Quesada**	**2.33**	**13**	Pn	**Pb**	**05 15 46.7**	**-0.9**	
EQES				Sn	**Sb**	**05 16 15.9**	**-0.4**	
EQES				*i* Vmb_Lg		05 16 24.8		
EADA	**Adamuz**	**2.71**	**346**	Pn	**Pn**	**05 15 50.2**	**+1.1**	
EADA				Sn	**Sn**	**05 16 24.5**	**+2.8**	
EADA				*i* Vmb_Lg		05 16 33.0		
CZD	**Col de Zad**	**2.72**	**204**	P	**Pn**	**05 15 50.7**	**+1.4**	
CZD				S	**Sn**	**05 16 22.5**	**+0.4**	
MD31	**MD31**	**2.79**	**198**	P	**Pn**	**05 15 51.5**	**+1.4**	
MD31				S	**Sn**	**05 16 24.7**	**+1.0**	
MDT	**Midelt**	**2.81**	**195**	P	**Pn**	**05 15 51.7**	**+1.3**	
MDT				S	**Sn**	**05 16 25.4**	**+1.3**	
ECAB	**El Cabril**	**2.87**	**333**	Pn	**Pn**	**05 15 53.1**	**+1.8**	
ECAB				Sn	**Sn**	**05 16 26.1**	**+0.5**	
ECAB				*i* Vmb_Lg		05 16 40.1		
EMIN	**Mina Concepcio**	**3.24**	**314**	Pn	**Pn**	**05 15 57.0**	**+0.7**	
EMIN				Sn	**Sn**	**05 16 34.1**	**-0.6**	
EMIN				*i* Vmb_Lg		05 17 27.6		
ETOB	**Tobarra**	**3.57**	**29**	Pn	**Pn**	**05 16 02.8**	**+2.0**	
ETOB				*i* Vmb_Lg		05 16 32.6		
EGRO	**El Granado**	**3.61**	**305**	Pn	**Pn**	**05 16 01.7**	**+0.3**	
EGRO				Sn	**Sn**	**05 16 42.5**	**-1.4**	
PVAQ	**Vaqueiros**	**3.71**	**301**	*e*Pn	**Pn**	**05 16 03.5**	**+0.8**	
PVAQ				*e*Sn	**Sn**	**05 16 46.1**	**-0.1**	
PVAQ				A	A	05 16 52.4		
	4.3nm,0.6s							
PVAQ	**Vaqueiros**	**3.71**	**301**	P	**Pb**	**05 16 07.5**	**-3.5**	
PBAR	**Barrancos**	**3.73**	**316**	*e*Sn	**Sn**	**05 16 46.5**	**-0.3**	
PBDV	**Barranco-do-Ve**	**3.78**	**298**	*e*Pn	**Pn**	**05 16 04.2**	**+0.4**	
PBDV				*e*Sn	**Sn**	**05 16 47.0**	**-1.1**	
PBDV				A	A	05 16 54.8		
	4.8nm,0.5s							
PAB	**San Pablo**	**4.03**	**353**	Pn	**Pn**	**05 16 09.4**	**+2.1**	
PAB				*i* Vmb_Lg		05 17 56.7		
PCVE	**Castro Verde**	**4.04**	**302**	*e*Pn	**Pn**	**05 16 08.3**	**+1.0**	
PCVE				*e*Sn	**Sn**	**05 16 56.8**	**+2.4**	
EBAD	**Badajoz**	**4.14**	**322**	Pn	**Pn**	**05 16 09.1**	**+0.5**	
EBAD				Sn	**Sn**	**05 16 57.0**	**+0.1**	
EBAD				*i* Vmb_Lg		05 16 59.1		
MESJ	**Messejana**	**4.27**	**304**	*e*Pn	**Pn**	**05 16 10.6**	**+0.2**	
MESJ				*e*Sn	**Sn**	**05 16 59.2**	**-0.9**	
MESJ				A	A	05 17 03.1		
	2.8nm,0.6s							
PESTR	**Estremoz**	**4.53**	**318**	*e*Pn	**Pn**	**05 16 14.8**	**+0.8**	
PESTR				*e*Sn	**Sn**	**05 17 05.9**	**-0.5**	
PESTR				A	A	05 17 15.7		
	2.4nm,0.6s							
PNCL	**Nicolau / Gran**	**4.62**	**305**	*e*Pn	**Pn**	**05 16 15.9**	**+0.7**	
PNCL				*e*Sn	**Sn**	**05 17 07.3**	**-1.4**	
PMRV	**Marv??o**	**4.85**	**324**	*e*Pn	**Pn**	**05 16 21.0**	**+2.6**	
PMTG	**Montargil**	**5.02**	**316**	*e*Pn	**Pn**	**05 16 21.8**	**+1.1**	
PMTG				*e*Sn	**Sn**	**05 17 17.8**	**-0.8**	
PSBE	**So Bento**	**5.65**	**316**	*e*Pn	**Pn**	**05 16 32.8**	**+3.4**	
MVO	**Moncorvo**	**6.19**	**336**	*e*Pn	**Pn**	**05 16 39.4**	**+2.6**	

IDC 14 05:29:23.9±3.2, 54°43.N×86°85.E, h0km, mbtmp2.9/2, ML2.5/2, Error ellipse: s-maj=26.9km s-min=16.6km az=62.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.29**	**249**	*i*		05 38 00.0	
	baz=70,slow=312,SNR=4.0						
ZALV	**Zalesovo Beam**	**1.29**	**249**	Pg	Pg	05 29 46.9	-1.6
	0.9nm,0.3s,baz=63,slow=16,SNR=12						
ZALV				Lg	Lg	05 30 05.3	
	0.8nm,0.3s,baz=67,slow=29,SNR=5.2						
KURBB	**Kurchatov Arra**	**6.35**	**236**	Pn	Pn	05 30 59.5	+0.9
	0.1nm,0.3s,baz=56,slow=14,SNR=6.8						
KURBB				Lg	Lg	05 32 46.6	
	baz=55,slow=32						
	0.8nm,0.6s						
MKAR	**Makanchi Array**	**8.17**	**203**	Pn	Pn	05 31 25.1	+1.4
	0.1nm,0.3s,baz=21,slow=13,SNR=3.0						
MKAR				Sn	Sn	05 32 55.8	-0.9
	0.1nm,0.3s,baz=31,slow=25,SNR=2.4						
MKAR				Lg	Lg	05 33 43.9	
	0.1nm,0.3s,baz=16,slow=32,SNR=2.4						
	0.2nm,0.4s						

IDC 14 05:29:30.5±1.3, 39°.99N×106°.59E, h0km, mb3.5/4, mbtmp3.5/6, ML3.3/2, MS3.1/1, Error ellipse: s-maj=42.8km s-min=18.4km az=66.0

ISC 14 05:29:32.0±0.7, 39°.93N±0°.05×106°.36E±0°.04, h16km, n14, σ3s15/26, mb3.7/3, 1D, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTO	**Baotou**	**2.88**	**75**	*e*Pn	**Pn**	**05 30 13.8**	**-3.6**
BTO				Pg	**Pb**	**05 30 20.3**	**-2.8**
BTO				Sn	**Sn**	**05 30 49.9**	**-1.9**
BTO				Sg	**Sb**	**05 30 55.4**	**-2.8**
BTO				smax	smax		
	comp=E,2μm,0.3s						
LZH	**Lanzhou**	**4.32**	**208**	Pn	**Pn**	**05 30 33.8**	**-3.4**
LZH				Pg	**Pb**	**05 30 46.8**	**-0.9**
LZH				Sg	**Sb**	**05 31 39.1**	**-0.5**
LZH				smax	smax		
	comp=N,340nm,1.0s						
LZH				smax	smax		
	comp=E,330nm,1.3s						
LZH				LR	LR		
	comp=N,440nm,5.1s						
LZH				LR	LR		
	comp=E,540nm,5.4s						
LZH				LR	LR		
	comp=Z,540nm,6.8s						
GTA	**Gaotai**	**5.08**	**266**	*e*Pn	**Pn**	**05 30 46.4**	**-1.2**
GTA				Pg	**Pb**	**05 31 01.1**	**+0.6**
GTA				Sn	**Sn**	**05 31 40.4**	**-5.5**
GTA				Sg	**Sb**	**05 32 05.8**	**+4.4**
GTA				smax	smax		
	comp=N,160nm,0.8s						
GTA				smax	smax		
	comp=E,100nm,0.7s						
GTA				LR	LR		
	comp=N,380nm,12.0s						
GTA				LR	LR		
	comp=E,260nm,9.5s						
GTA				LR	LR		
	comp=Z,93nm,8.4s						
XAN	**Xi'an**	**6.22**	**160**	Pn	**Pn**	**05 31 02.6**	**-0.7**
XAN				Pg	**Pb**	**05 31 19.6**	**-0.5**
XAN				Sn	Sn	05 32 04.0	-10
XAN				Sg	**Sb**	**05 32 33.8**	**-0.5**
XAN				smax	smax		
	comp=N,160nm,0.5s						
XAN				smax	smax		
	comp=E,91nm,0.7s						
XAN				LR	LR		
	comp=N,230nm,4.3s						
XAN				LR	LR		
	comp=E,280nm,4.8s						
XAN				LR	LR		
	comp=Z,160nm,5.0s						
HNS	**HongShan**	**7.00**	**108**	⇓Pn	**Pn**	**05 31 12.3**	**-1.6**
HNS				Pg	**Pb**	**05 31 35.1**	**+1.9**
HNS				Sg	**Sb**	**05 33 03.3**	**+6.7**
HNS				smax	smax		
	comp=N,130nm,1.0s						
HNS				smax	smax		
	comp=E,96nm,1.0s						
BJI	**Beijing**	**7.54**	**86**	P	**Pn**	**05 31 18.0**	**-3.2**
BJI				S	**Sb**	**05 33 19.8**	**+7.9**
SONM	**Songino Array**	**7.90**	**0**	Pn	**Pn**	**05 31 26.1**	**-0.3**
	comp=E,0.4nm,0.3s,baz=182,slow=15,SNR=8.2						
SONM				Sn	**Sn**	**05 32 56.0**	**+0.5**
	comp=E,1.4nm,0.3s,baz=185,slow=20,SNR=4.7						
SONM				Lg	Lg	05 33 39.9	
	comp=E,1.7nm,0.3s,baz=205,slow=24,SNR=3.9						
	comp=E,1.3nm,0.5s						
WMQ	**Urumqi**	**14.44**	**292**	*e*P	**Pn**	**05 32 56.6**	**+0.9**
MKAR	**Makanchi Array**	**18.75**	**299**	P	**Pn**	**05 33 52.4**	**+1.8**
	comp=E,0.1nm,0.3s,baz=105,slow=13,SNR=4.3						
	comp=E,0.5nm,0.7s						
ZALV	**Zalesovo Beam**	**20.21**	**321**	P	Pn	05 34 07.6	-0.3
	comp=E,0.5nm,0.4s,baz=113,slow=9.0,SNR=2.7						
	comp=E,0.5nm,0.4s						
KURBB	**Kurchatov Arra**	**22.18**	**308**	P	**P**	**05 34 28.9**	**+1.7**
	comp=E,2.3nm,1.1s,baz=109,slow=12,SNR=6.4						
	comp=E,2.3nm,1.1s						
GUMO	**Guam**	**42.75**	**117**	LR	LR	05 55 54.1	
	comp=E,22nm,18.7s,baz=105,slow=37						
WRA	**Warramunga Arr**	**65.03**	**151**	P	**P**	**05 40 12.0**	**+0.6**
	comp=E,0.6nm,1.1s,baz=348,slow=7.4,SNR=1.3						
	comp=E,0.6nm,1.1s						
ASAR	**Alice Springs**	**68.29**	**153**	P	**P**	**05 40 33.3**	**+1.1**
	comp=E,0.5nm,0.6s,baz=338,slow=6.6,SNR=5.0						
	comp=E,0.5nm,0.6s						

KRNET 14 05:53:33.8±0.1, 41°.62N×74°.34E, h11km, mb2.4
SOME 14 05:53:33.5, 41°.58N×74°.33E, h5km
NNC 14 05:53:34.2±4.9, 41°.40N×74°.67E, h0km, mb3.1, mpv2.9, Error ellipse: s-maj=39.9km s-min=20.2km az=151.0

ISC 14 05:53:34.0±2.7, 41°.6N±0°.1×74°.28E±0°.04, h5km±16km, n15, σ0s87/27, 11C-2D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARLS	**Aral**	**0.25**	**7**	⇑*i*P	**Pg**	**05 53 38.2**	**-0.7**
	baz=58						
ARLS				⇑*i*S	**Sg**	**05 53 41.7**	**-0.6**
	baz=58						
UCH	**Uchtor**	**0.64**	**16**	⇑*i*P	**Pg**	**05 53 45.9**	**-0.4**
	baz=12						
UCH				⇑*i*S	**Sg**	**05 53 54.3**	**-0.4**
	baz=12						
EKS2	**Erkin-Say**	**1.11**	**341**	⇑*i*P	**Pg**	**05 53 54.8**	**-0.5**
	baz=38						
EKS2				⇑*i*S	**Sg**	**05 54 10.3**	**+0.5**
	baz=38						
KBK	**Karagaybulak**	**1.16**	**25**	⇓*i*P	**Pg**	**05 53 55.3**	**-0.9**
	baz=24						
KBK				⇓*i*S	**Sg**	**05 54 10.8**	**-0.4**
	baz=24						
BOOM	**Boomskoye usch**	**1.52**	**54**	⇑*i*P	**Pn**	**05 54 01.2**	**-0.8**
	baz=53						
BOOM				⇑*i*S	**Sn**	**05 54 21.4**	**-0.8**
	baz=53						
TKM2	**Tokmak 2**	**1.63**	**36**	⇑P	**Pn**	**05 54 03.9**	**+0.3**
	0.6nm,0.2s						
TKM2				⇑S	**Sg**	**05 54 27.4**	**+1.0**
	3.3nm,0.7s						
SGDS	**Sogindy**	**1.86**	**8**	*e*P	**Pb**	**05 54 09.2**	**+0.7**
	2.8nm,0.1s						
SGDS				*e*S	**Sg**	**05 54 34.6**	**+1.0**
	3.2nm,0.4s						
SGDS	**Sogindy**	**1.86**	**8**	P	**Pb**	**05 54 09.2**	**+0.7**
	2.8nm,0.1s						
SGDS				S	**Sg**	**05 54 34.6**	**+1.0**
	3.2nm,0.4s						
KST	**Kastek**	**1.90**	**41**	*e*P	**Pg**	**05 54 10.1**	**-0.3**
	1.6nm,0.3s						
KST				*e*S	**Sg**	**05 54 36.2**	**+1.3**
	5.2nm,0.3s						
KST	**Kastek**	**1.90**	**41**	Pg	**Pg**	**05 54 10.6**	**+0.2**
	3.2nm,0.2s						
KST				Lg	Lg	05 54 36.8	
	5.2nm,0.3s						
DGS	**Degeres**	**1.97**	**34**	*e*P	**Pg**	**05 54 11.3**	**-0.4**
	3.2nm,0.2s						
DGS				*e*S	**Sg**	**05 54 39.7**	**+2.5**
	4.2nm,0.2s						
DGS	**Degeres**	**1.97**	**34**	Pg	**Pg**	**05 54 12.3**	**+0.6**
	3.2nm,0.2s						
DGS				Lg	Lg	05 54 40.5	
	4.2nm,0.2s						
KRBS	**Karabastau**	**2.32**	**26**	*e*P	**Pb**	**05 54 16.4**	**0.0**
	3.2nm,0.2s						
KRBS				*e*S	**Sg**	**05 54 47.5**	**-1.1**
	4.3nm,0.4s						
KRBS	**Karabastau**	**2.32**	**26**	Pg	**Pb**	**05 54 16.4**	**0.0**
	2.7nm,0.2s						
KRBS				Lg	Lg	05 54 47.5	
	4.7nm,0.4s						
KK31	**Karatay Array**	**3.17**	**299**	P	**Pg**	**05 54 34.5**	**-0.1**
	0.9nm,0.4s,baz=122,slow=15,SNR=4.5						
KK31				⇑S	**Sg**	**05 55 16.1**	**+0.5**
	0.4nm,0.3s,baz=124,slow=28						

IDC 14 05:59:17.4±4.0, 5°.77N×95°.14E, h0km, mb3.7/4, mbtmp3.7/4, MS3.9/2, Error ellipse: s-maj=158.8km s-min=26.9km az=59.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S3	**Diego Garcia H**	**26.23**	**240**	T	T	06 31 52.3	
	baz=63						
H08S2	**Diego Garcia H**	**26.23**	**240**	T	T	06 31 57.6	
	baz=63						
H08S1	**Diego Garcia H**	**26.24**	**240**	T	T	06 31 46.8	
	baz=63						
MKAR	**Makanchi Array**	**42.35**	**347**	P	P	06 07 13.1	-0.1
	1.0nm,0.6s,baz=168,slow=7.3,SNR=9.8						
	2.0nm,0.6s						
SONM	**Songino Array**	**43.01**	**11**	P	P	06 07 19.1	+0.3
	0.4nm,0.7s,baz=211,slow=8.2,SNR=2.1						
	0.4nm,0.7s						
WRA	**Warramunga Arr**	**46.25**	**125**	P	P	06 07 44.7	-0.2
	0.4nm,0.7s,baz=305,slow=9.0,SNR=11						
	0.4nm,0.7s						
ZALV	**Zalesovo Beam**	**48.76**	**352**	P	P	06 08 03.4	-0.5
	0.6nm,0.2s,baz=152,slow=6.7,SNR=3.9						
	0.6nm,0.2s						
USRK	**Ussuriysk Ar.**	**50.06**	**34**	LR	LR	06 29 46.6	
	comp=Z,291nm,18.1s,baz=167,slow=36						
LSZ	**Lusaka**	**69.52**	**251**	LR	LR	06 39 29.9	
	comp=Z,33nm,18.2s,baz=148,slow=35						

IDC 14 06:07:00.7±0.9, 6°.35S×149°.35E, h0km, mb3.7/5, mbtmp3.9/7, ML4.3/1, MS3.1/7, Error ellipse: s-maj=50.9km s-min=18.6km az=115.0
NEIC 14 06:07:07.9±1.3, 6°.4S±0°.2×149°.3E±0°.2, h46km±8km, mb4.3/12, Error ellipse: s-maj=30.9km s-min=9.5km az=131.0

ISC 14 06:07:07.3±0.7, 6°.4S±0°.2×149°.3E±0°.2, h49km, n28, σ0s89/25, mb3.6/6, MS3.1/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.41**	**53**	Pn	**Pn**	**06 07 59.5**	**+1.4**
	14nm,0.3s,baz=21,slow=2.3,SNR=5.9						
KRVT				Sn	**Sn**	**06 08 36.5**	**-0.7**
	11nm,0.3s,baz=146,slow=20,SNR=4.2						
RABL	**Rabaul**	**3.59**	**53**	Pn	**Pn**	**06 08 01.0**	**+0.5**
PMG	**Port Moresby**	**3.67**	**215**	Pn	**Pn**	**06 08 01.5**	**-0.2**
	111nm,0.4s,baz=31,slow=4.7,SNR=29						
PMG				Sn	**Sn**	**06 08 46.1**	**+2.3**
	48nm,0.3s,baz=143,slow=21,SNR=9.4						
PMG				LR	LR	06 09 30.1	
	comp=Z,119nm,19.8s,baz=268,slow=40						
PMG	**Port Moresby**	**3.67**	**215**		**Pn**	**06 08 01.6**	**-0.1**
COEN	**Coen**	**9.64**	**218**	Pn	**Pn**	**06 09 22.4**	**-1.2**
CTA	**Charters Tower**	**13.94**	**192**	LR	LR	06 15 12.8	
	comp=Z,65nm,18.3s,baz=62,slow=35						
SIJI	**Sorong**	**18.81**	**286**	LR	LR	06 18 44.3	
	comp=Z,61nm,18.5s,baz=293,slow=37						
WB0	**Warramunga Arr**	**19.67**	**226**	P	**P**	**06 11 32.5**	**+0.1**
WB0				IAmb	IAmb	06 11 33.8	
	comp=Z,26nm,1.5s						
WR0	**Warramunga Arr**	**19.69**	**225**	P	**P**	**06 11 32.6**	**0.0**
WR0				IAmb	IAmb	06 11 33.9	
	comp=Z,14nm,1.1s						
WRAB	**Tennant Creek**	**19.80**	**226**	P	**P**	**06 11 33.7**	**-0.2**
WRAB				IAmb	IAmb	06 11 45.9	
	comp=Z,8.3nm,0.7s						
WB2	**Warramunga Arr**	**19.81**	**226**	P	**P**	**06 11 33.7**	**-0.3**
WB2				IAmb	IAmb	06 11 35.2	
	comp=Z,29nm,1.4s						
WRA	**Warramunga Arr**	**19.82**	**226**	P	**P**	**06 11 33.3**	**-0.8**
	comp=Z,0.9nm,0.3s,baz=51,slow=11,SNR=37						
	comp=Z,5.7nm,0.7s						
GUMO	**Guam**	**20.33**	**347**	LR	LR	06 18 27.5	
	comp=Z,22nm,21.5s,baz=100,slow=34						
KNRA	**Kununurra**	**22.15**	**244**	P	**P**	**06 11 59.4**	**+0.1**
AS31	**Alice Springs**	**22.68**	**219**	P	**P**	**06 12 03.8**	**-1.1**
ASAR	**Alice Springs**	**22.68**	**219**	P	**P**	**06 12 04.1**	**-0.8**
	comp=Z,1.4nm,0.6s,baz=52,slow=10.0,SNR=14						
ASAR				LR	LR	06 21 17.8	
	comp=Z,73nm,19.9s,baz=147,slow=38						
	comp=Z,1.4nm,0.6s						
STKA	**Stephens Creek**	**26.36**	**195**	P	**P**	**06 12 39.2**	**+0.2**
	comp=Z,1.7nm,0.9s,baz=350,slow=12,SNR=2.2						
STKA				LR	LR	06 23 09.0	
	comp=Z,63nm,18.7s,baz=17,slow=37						
	comp=Z,1.7nm,0.9s						
BBOO	**Buckleboo**	**29.04**	**203**	P	**P**	**06 13 01.7**	**-1.3**
BBOO				IAmb	IAmb	06 13 30.0	
	comp=Z,23nm,1.5s						
FORT	**Forrest**	**31.40**	**217**	P	**P**	**06 13 23.0**	**-0.9**
CMAR	**Chiang Mai Arr**	**55.46**	**297**	LR	LR	06 44 01.8	
	comp=Z,31nm,18.1s,baz=70,slow=40						
PEA0B	**Petropavlovsk-**	**59.70**	**6**	P	**P**	**06 17 07.8**	**+1.1**
PETK	**Petropavlovsk-**	**59.70**	**6**	P	**P**	**06 17 07.4**	**+0.7**
	comp=Z,1.4nm,0.5s,baz=169,slow=7.8,SNR=6.5						
	comp=Z,1.4nm,0.5s						
VNDA	**Vanda**	**71.40**	**177**	P	**P**	**06 18 22.6**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=324,slow=7.1,SNR=6.1						
	comp=Z,0.3nm,0.6s						
VNDA	**Vanda**	**71.40**	**177**	IAmb	IAmb	06 18 38.2	
	comp=Z,2.4nm,1.2s						
ILAR	**Eielson Array**	**84.94**	**23**	P	**P**	**06 19 36.3**	**-0.7**
	comp=Z,0.3nm,0.7s,baz=274,slow=3.9,SNR=4.1						
	comp=Z,0.3nm,0.7s						
LPAZ	**La Paz**	**136.64**	**122**	PKP	**PKiKP**	**06 26 27.4**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=243,slow=4.5,SNR=2.2						
TORD	**Torodi Ar. Bea**	**147.41**	**284**	PKPbc	**PKPbc**	**06 26 46.7**	**-0.2**
	comp=Z,1.3nm,0.6s,baz=77,slow=3.0,SNR=11						
BDFB	**Brasilia**	**152.19**	**142**	PKPbc	**PKiKP**	**06 26 59.2**	**+0.2**
	comp=Z,1.7nm,0.5s,baz=281,slow=3.0,SNR=4.4						

TUL 14 06:08:49.5±1.4, 36°.21N±0°.02×98°.77W±0°.02, h8km±5km, ML2.8,mb_Lg2.5/44(NEIC), Error ellipse: s-maj=3.2km s-min=1.4km az=222.0

NEIC 14 06:08:49.6±0.8, 36°.22N±0°.02×98°.77W±0°.03, h14km±4km, Error ellipse: s-maj=4.0km s-min=2.3km az=53.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
U32A	**Winter Ranch,**	**0.25**	**311**	Pg	Pg	06 08 55.0	0.0
U32A				Sg	Sg	06 08 58.1	-0.6
OKCFA	**Oklahoma City**	**1.33**	**126**	Pn	Pn	06 09 13.8	-0.1
OKCSW	**OKLAHOMA CITY**	**1.35**	**126**	Pn	Pn	06 09 14.1	0.0
FNO	**Franklin**	**1.47**	**130**	Pn	Pb	06 09 16.3	-0.4
WMOK	**Wichita Mounta**	**1.48**	**181**		Pn	06 09 15.5	-0.4
X34A	**Smith Ranch, M**	**1.78**	**154**		Pb	06 09 21.6	-0.4
X34A				IAmb_Lg		06 09 47.3	
	comp=Z,25nm,0.7s						
T35A	**Sooner Cattle**	**1.94**	**68**		Pn	06 09 23.5	+1.3
T35A				IAmb_Lg		06 09 52.2	
	comp=Z,20nm,0.8s						
R32A	**Long Quarter,**	**2.20**	**1**		Pn	06 09 27.5	+1.7
TUL1	**Leonard**	**2.43**	**96**		Pn	06 09 29.8	+0.9
TUL1				IAmb_Lg		06 10 04.8	
	comp=Z,15nm,1.0s						
AMTX	**Amarillo**	**2.72**	**242**	IAmb_Lg		06 10 17.2	
	comp=Z,12nm,0.8s						
X37A	**Clayton**	**3.21**	**119**		Pn	06 09 40.6	+0.9
X37A				IAmb_Lg		06 10 38.0	
	comp=Z,14nm,0.7s						
ABTX	**Abilene, Hawle**	**3.66**	**192**	Pn	Pn	06 09 46.5	+0.7
KSCO	**Kaye Shedlock'**	**4.15**	**313**	IAmb_Lg		06 11 06.8	
	comp=Z,13nm,0.9s						
W39A	**Magazine**	**4.18**	**103**	IAmb_Lg		06 11 01.6	
	comp=Z,12nm,0.9s						
Z38A	**Mt. Pleasant**	**4.29**	**132**	IAmb_Lg		06 11 13.6	
	comp=Z,10nm,0.9s						
WHTX	**Lake Whitney,**	**4.35**	**165**	IAmb_Lg		06 11 10.0	
	comp=Z,8.1nm,0.7s						
MIAR	**Mount Ida**	**4.55**	**110**		Pn	06 09 59.3	+1.2
S39A	**Bolivar**	**4.60**	**70**	IAmb_Lg		06 11 14.1	
	comp=Z,9.5nm,1.0s						
T25A	**Trinidad**	**4.63**	**283**	IAmb_Lg		06 11 20.6	
	comp=Z,12nm,0.9s						
U40A	**Yellville**	**4.78**	**87**	IAmb_Lg		06 11 22.5	
	comp=Z,9.1nm,0.8s						
X40A	**Basin Creek Fa**	**5.14**	**108**	IAmb_Lg		06 11 42.3	
	comp=Z,9.9nm,0.8s						
WHAR	**Wooly Hollow**	**5.35**	**98**	IAmb_Lg		06 11 45.9	
	comp=Z,12nm,1.2s						
P38A	**Dawn**	**5.36**	**49**	IAmb_Lg		06 11 43.9

TARA	Tarawa	22.05	334	P		P	06 23 17.4	-6.8
	comp=Z,112nm,0.4s							
PLWZ	Palliser	23.49	193	P		P	06 23 36.4	-0.2
THZ	Tophouse	24.26	197	P		P	06 23 44.0	+0.5
THZ				IAmb		IAmb	06 23 55.6	
	comp=Z,27nm,1.3s							
KHZ	Kahutara	24.70	196	P		P	06 23 46.9	-0.3
LBZ	Lake Benmore	27.46	199	P		P	06 24 10.7	-0.8
LBZ				IAmb		IAmb	06 24 37.9	
	comp=Z,33nm,1.4s							
EIDS	Eidsvold	29.63	252	P		P	06 24 29.5	-1.1
EIDS				IAmb		IAmb	06 24 56.2	
	comp=Z,24nm,1.3s							
ARMA	Armidale	30.11	242	P		P	06 24 35.5	+0.7
ARMA				IAmb		IAmb	06 24 37.0	
	comp=Z,13nm,1.2s							
RMQ	Roma	31.84	250	P		P	06 24 48.2	-1.2
CAN	Canberra	33.73	234	P		P	06 25 06.0	+0.7
CAN				IAmb		IAmb	06 25 07.2	
	comp=Z,16nm,1.0s							
CTAO	Charters Tower	33.99	262	P		P	06 25 07.8	+0.2
TOO	Toolangi	37.16	232	P		P	06 25 34.1	+0.6
TOO				IAmb		IAmb	06 25 35.1	
	comp=Z,14nm,0.8s							
COEN	Coen	37.81	271	P		P	06 25 39.3	+0.3
STKA	Stephens Creek	38.82	242	P		P	06 25 47.6	+0.6
	comp=Z,6.7nm,0.4s,baz=90,slow=11,SNR=21							
	comp=Z,6.7nm,0.4s							
STKA	Stephens Creek	38.82	242			P	06 25 47.7	+0.6
BBOO	Buckleboo	43.59	242	P		P	06 26 24.5	0.0
BBOO				IAmb		IAmb	06 26 24.9	
	comp=Z,10.0nm,0.6s							
WR0	Warramunga Arr	44.97	260	P		P	06 26 34.3	-1.0
WR0				IAmb		IAmb	06 26 35.4	
	comp=Z,11nm,0.5s							
WB0	Warramunga Arr	45.13	261	P		P	06 26 35.9	-0.6
WB2	Warramunga Arr	45.15	260	P		P	06 26 35.9	-0.8
WRAB	Tennant Creek	45.15	260	P		P	06 26 36.0	-0.7
WRAB				IAmb		IAmb	06 26 36.3	
	comp=Z,28nm,0.9s							
WRA	Warramunga Arr	45.16	260	P		P	06 26 35.9	-0.9
	comp=Z,16nm,0.4s,baz=98,slow=6.7,SNR=693							
WRA				PcP		PcP	06 28 03.5	-0.6
	comp=Z,0.6nm,0.4s,baz=289,slow=2.1,SNR=2.9							
	comp=Z,16nm,0.4s							
WRA	Warramunga Arr	45.16	260	P		P	06 26 35.9	-0.9
AS31	Alice Springs	45.22	255	P		P	06 26 36.7	-0.6
AS31				IAmb		IAmb	06 26 37.4	
	comp=Z,6.6nm,0.8s							
ASAR	Alice Springs	45.22	255	P		P	06 26 36.8	-0.5
	comp=Z,32nm,0.7s,baz=88,slow=8.0,SNR=340							
ASAR				PcP		PcP	06 28 03.4	-1.0
	comp=Z,1.9nm,0.5s,baz=99,slow=3.7,SNR=5.0							
ASAR				S		S	06 32 32.4	-2.5
	comp=Z,3.2nm,0.7s,baz=92,slow=16,SNR=16							
	comp=Z,32nm,0.7s							
ASAR	Alice Springs	45.22	255	P		P	06 26 37.0	-0.3
FORT	Forrest	50.26	245	P		P	06 27 13.6	-1.0
FORT				IAmb		IAmb	06 27 13.8	
	comp=Z,16nm,0.7s							
KNRA	Kununurra	51.09	265	P		P	06 27 19.7	-1.1
KNRA				IAmb		IAmb	06 27 20.6	
	comp=Z,27nm,0.8s							
FAKI	Fak Fak	51.43	282	P		P	06 27 22.1	-1.1
FAKI				IAmb		IAmb	06 27 23.6	
	comp=Z,59nm,1.3s							
PSA00	Pilbara Seismi	58.36	256	P		P	06 28 09.8	-1.5
MBWA	Marble Bar	58.53	256	P		P	06 28 11.5	-1.0
MBWA				IAmb		IAmb	06 28 13.0	
	comp=Z,36nm,1.4s							
MORW	Morawa	60.76	247	P		P	06 28 25.8	-1.4
MORW				IAmb		IAmb	06 28 27.0	
	comp=Z,21nm,1.2s							
GIRL	Giralia	63.30	254	P		P	06 28 44.1	+0.4
UGM	Wanagama	70.31	268	P		P	06 29 26.2	-0.7
JHS	Saijyo	71.02	319	P		P	06 29 29.8	-0.7
JHS				IAmb		IAmb	06 29 30.7	
	comp=Z,7.4nm,0.8s							
QSPA	South Pole Qui	71.26	180	P		P	06 29 32.8	+1.2
QSPA				IAmb		IAmb	06 29 38.2	
	comp=Z,5.9nm,1.3s							
YBH	Yreka Blue Hor	78.78	39	P		P	06 30 13.8	0.0
BEKR	Beckworth	79.09	41	P		P	06 30 15.0	-0.5
PNTR	Pine Nut	79.12	42	P		P	06 30 16.5	+0.8
PNTR				IAmb		IAmb	06 30 16.8	
	comp=Z,9.0nm,1.0s							
HUMO	Hull Mountain	79.17	38	P		P	06 30 16.4	+0.7
HUMO				IAmb		IAmb	06 30 26.8	
	comp=Z,7.5nm,1.4s							
LCH	Last Change Ra	79.36	45	P		P	06 30 16.9	0.0
NVAR	Mina Array Bea	79.59	43	P		P	06 30 18.4	+0.1
	comp=Z,1.0nm,0.7s,baz=223,slow=8.7,SNR=10.0							
	comp=Z,1.0nm,0.7s							
MOD	Modoc Plateau	80.32	40	P		P	06 30 21.8	-0.1
PRN	Pahroc Range	81.19	46	P		P	06 30 26.4	-0.1
U15A	North Rim	82.60	48	P		P	06 30 34.4	+0.6
TXAR	Lajitas Array	85.89	57	P		P	06 30 50.7	+0.9
	comp=Z,1.2nm,0.7s,baz=219,slow=6.5,SNR=18							
	comp=Z,1.2nm,0.7s							
ILAR	Eielson Array	86.59	13	P		P	06 30 50.3	-1.8
	comp=Z,0.6nm,0.4s,baz=223,slow=4.9,SNR=12							
	comp=Z,0.6nm,0.4s							
PDAR	Pinedale Array	87.52	43	P		P	06 30 56.9	-0.5
	comp=Z,0.6nm,0.7s,baz=196,slow=4.3,SNR=5.3							
	comp=Z,0.6nm,0.7s							
CMAR	Chiang Mai Arr	89.83	289	P		P	06 31 08.9	+0.6
	comp=Z,1.9nm,0.3s,baz=120,slow=2.8,SNR=5.6							
	comp=Z,1.9nm,0.3s							
MKAR	Makanchi Array	110.25	314	PKiKP		PKiKP	06 36 34.6	-2.0
	comp=Z,0.2nm,0.5s,baz=133,slow=0.9,SNR=4.4							
ARCES	ARCESS Array B	127.31	350	PKP		PKPdf	06 37 07.4	-1.2
	baz=46,slow=3.5,SNR=4.9							
BRTR	Keskin Array B	145.89	314	PKPbc		PKPdf	06 37 44.3	+0.6
	comp=Z,1.4nm,0.7s,baz=116,slow=4.3,SNR=5.5							
CLL	Collm	146.47	348	*e*PKPbc		PKPdf	06 37 45.0	+0.9

IDC **14** *06:19:59.1±0.9,29.65°N×130.39°E,h0km,mb3.8/10, mbtmp3.8/13,ML3.7/3,MS3.6/32,Error ellipse: s-maj=26.6km s-min=18.0km az=93.0*

JMA **14** *06:20:01.2±0.3,29.4°N±0.7°×130.6°E±1.0,h21km±4km, MD4.5/16,MW4.5/16,NEAR AMAMI-OSHIMA ISLAND*

JMA Felt I J1 at NEAR AMAMI-OSHIMA ISLAND.

NIED **14** *06:20:01.2,29.37°N×130.62°E,h21km,MW4.5,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr=2.64; Mθθ5.03; Mφφ-2.38; Mrθ-0.21; Mθφ-3.06; Mφr1.79; Fault plane solution: M₀5.47000×10¹⁵ NP1: φs251.00000°,δ60.00000°,λ-155.00000°. NP2: φs147.00000°,δ68.00000°,λ-33.00000°.*

NEIC **14** *06:20:04.1±2.3,29.54N±0.07°×130.43E±0.10,h38km±8km, mb4.4/7 Error ellipse: s-maj=12.6km s-min=9.5km az=111.0*

ISC 14 06:20:02.8±0.6,**29.40N**±0.04°×**130.54E**±0.06,**h34**km,**n82,** σ1s**55**/43,**mb3.8**/16,**MS3.8**/28,**Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
JNN	Nakanoshima	0.72	307	P		Pb	06 20 16.1	-1.0
JNN				*e*S		Sb	06 20 27.8	+1.0
JNN	Nakanoshima	0.72	307	A		A	06 20 16.1	
	comp=E,47nm,1.0s,comp=E,41nm,1.2s							
JYAK	Yakushimahirau	0.83	358	*e*P		Pb	06 20 17.4	-1.5
JYAK	Yakushimahirau	0.83	358	A		A	06 20 17.4	
	comp=E,25nm,2.9s,comp=E,25nm,2.1s							
JMTN	Minamitane	1.04	18	P		Pb	06 20 20.8	-1.6
JMTN	Minamitane	1.04	18	A		A	06 20 20.8	
	comp=E,36nm,1.4s,comp=E,47nm,3.2s							
JKC	Kuchinoerabu	1.10	344	*e*P		Pb	06 20 21.9	-1.4
JKC				*e*S		Sb	06 20 37.4	0.0
JTAJ	Takarajima	1.19	258	P		Pb	06 20 23.9	-1.1
JZK	Kikaishima	1.19	205	P		Pb	06 20 23.2	-1.8
JZK	Kikaishima	1.19	205	A		A	06 20 23.2	
	comp=E,37nm,4.2s,comp=E,51nm,3.4s							
JAM	Amami Oshima	1.28	220	P		Pb	06 20 24.5	-1.9
JAM	Amami Oshima	1.28	220	A		A	06 20 24.5	
	comp=E,15nm,1.3s,comp=E,11nm,2.8s							
JTN	Tanegashima 3	1.30	17	P		Pb	06 20 24.6	-2.3
JTN	Tanegashima 3	1.30	17	A		A	06 20 24.6	
	comp=E,27nm,2.6s,comp=E,21nm,2.4s							
JAMN	Amaminishikomi	1.66	226	P		Pb	06 20 29.7	-3.2
JAMN	Amaminishikomi	1.66	226	A		A	06 20 29.7	
	comp=E,9.0nm,2.0s,comp=E,8.0nm,4.8s							
JTSR	Tashiro 2	1.79	11	P		Pb	06 20 31.8	-3.2
JTSR	Tashiro 2	1.79	11	A		A	06 20 31.8	
	comp=E,9.0nm,3.1s,comp=E,8.0nm,1.0s							
JSU	Suzuyama	2.10	358			Pn	06 20 35.6	0.0
JTK	Tokunoshima	2.13	221	A		A	06 20 37.0	
	comp=E,5.0nm,4.3s,comp=E,7.0nm,3.4s							
JNAR	Kushima--Naru	2.21	17	A		A	06 20 37.9	
	comp=E,8.0nm,4.7s,comp=E,10.0nm,2.6s							
JNKG	Nichinankitago	2.37	18	A		A	06 20 40.1	
	comp=E,7.0nm,2.6s,comp=E,7.0nm,5.7s							
JOW	Kunigami	3.25	218	Pn		Pn	06 20 51.3	-0.1
	14nm,0.3s,baz=123,slow=24,SNR=90							
JOW				Sn		Sb	06 21 36.6	-2.4
	10nm,0.3s,baz=45,slow=20,SNR=1.9							
	49nm,0.3s							
JOW	Kunigami	3.25	218			Pn	06 20 51.4	0.0
JTU	Tsushima	5.20	350	Pn		Pn	06 21 19.4	+1.2
JHS	Saijyo	5.99	21	Pn		Pn	06 21 28.8	-0.3
INU	Inuyama	8.07	41	Pn		Pn	06 21 59.0	+1.3
KSRS	Korea Array	8.32	345	Pn		Pn	06 22 02.8	+1.8
	0.1nm,0.3s,baz=156,slow=14,SNR=7.1							
KSRS				LR		LR	06 25 03.9	
	comp=Z,133nm,21.8s,baz=160,slow=38							
JGF	Kuroka	8.45	41			Pn	06 22 04.0	+1.1
JHJ	Hachijo jima 2	8.74	63	LR		LR	06 25 09.3	
	comp=Z,222nm,20.8s,baz=238,slow=35							
MAJO	Matsushiro	9.60	40			Pn	06 22 18.1	-0.5
MJAR	Matsushiro Arr	9.60	40	Pn		Pn	06 22 17.9	-0.7
	0.5nm,0.3s,baz=6.1,slow=15,SNR=9.4							
	1.9nm,0.3s							
MJAR	Matsushiro Arr	9.60	40	Pn		Pn	06 22 18.1	-0.5
MJB9	Matsu-Tunnel	9.60	40	Pn		Pn	06 22 18.6	-0.1
JCJ	Chichijima	10.53	100	LR		LR	06 26 10.1	
	comp=Z,111nm,21.4s,baz=159,slow=35							
KLR	Kul'dur	19.82	2	P		P	06 24 29.4	-1.0
	0.4nm,0.3s,baz=172,slow=4.6,SNR=7.3							
KLR				LR		LR	06 32 45.6	
	comp=Z,134nm,19.5s,baz=182,slow=39							
	2.7nm,0.6s							
GUMO	Guam	20.59	137	LR		LR	06 33 01.7	
	comp=Z,320nm,18.1s,baz=246,slow=38							
SONM	Songino Array	26.18	321	P		P	06 25 33.5	-0.7
	1.6nm,0.7s,baz=137,slow=10,SNR=7.7							
SONM				LR		LR	06 36 49.0	
	comp=Z,142nm,18.7s,baz=126,slow=39							
	1.6nm,0.7s							
SIJI	Sorong	30.11	179	LR		LR	06 37 33.6	
	comp=Z,82nm,19.8s,baz=62,slow=35							
FAKI	Fak Fak	32.18	177	P		P	06 26 30.7	+3.1
YAK	Yakutsk	32.64	359	LR		LR	06 39 28.8	
	comp=Z,80nm,18.4s,baz=108,slow=36							
H11N2	WAKE ISLAND Hy	34.32	98	T		T	07 03 20.6	
	baz=296,slow=74,SNR=38							
H11N1	WAKE ISLAND Hy	34.33	98	T		T	07 03 24.2	
	baz=296,slow=74,SNR=16							
H11N3	WAKE ISLAND Hy	34.34	98	T		T	07 03 21.9	
	baz=296,slow=74,SNR=24							
KAPI	Kappang	35.75	199	LR		LR	06 42 15.8	
	comp=Z,39nm,19.1s,baz=33,slow=37							
MK31	Makanchi Array	41.05	309	P		P	06 27 40.4	-2.6
MK31				IAmb		IAmb	06 28 06.3	
	comp=Z,1.5nm,1.0s							
MKAR	Makanchi Array	41.05	309	P		P	06 27 42.7	-0.3
	comp=Z,0.5nm,0.6s,baz=89,slow=10,SNR=6.4							
	comp=Z,0.5nm,0.6s							
MKAR	Makanchi Array	41.05	309	P		P	06 27 41.4	-1.6
ZALV	Zalesovo Beam	41.05	320	LR		LR	06 46 48.4	
	comp=Z,72nm,19.3s,baz=104,slow=40							
KURK	Kurchatov	44.01	314	P		P	06 28 06.0	-0.9
KURK				IAmb		IAmb	06 28 11.4	
	comp=Z,3.5nm,0.8s							
KURBB	Kurchatov Arra	44.05	314	P		P	06 28 06.6	-0.7
	comp=Z,0.9nm,0.3s,baz=100,slow=8.8,SNR=11							
KURBB				LR		LR	06 47 35.8	
	comp=Z,119nm,20.9s,baz=103,slow=38							
	comp=Z,0.9nm,0.3s							
AAK	Ala-Archa	46.42	302	LR		LR	06 49 33.1	
	comp=Z,56nm,18.4s,baz=95,slow=38							
NRIK	Noril'sk	46.90	341	LR		LR	06 49 43.3	
	comp=Z,124nm,18.9s,baz=142,slow=38							
WRAB	Tennant Creek	49.19	175	P		P	06 28 52.1	+4.4
WRAB				IAmb		IAmb	06 29 04.3	
	comp=Z,16nm,1.1s							
WRA	Warramunga Arr	49.20	175	P		P	06 28 51.2	+3.4
	comp=Z,0.8nm,0.6s,baz=355,slow=7.7,SNR=2.3							
	comp=Z,0.8nm,0.6s							
KKAR	Kentay Array	49.32	303	P		P	06 28 48.7	+0.1
ASAR	Alice Springs	52.86	176	P		P	06 29 19.5	+4.1
	comp=Z,0.4nm,0.6s,baz=12,slow=13,SNR=1.7							
	comp=Z,0.4nm,0.6s							
ABKAR	Akbulak array	56.02	312	P		P	06 29 37.3	-0.7
AKTO	Aktyubinsk	57.10	313	LR		LR	06 55 42.0	
	comp=Z,115nm,19.4s,baz=82,slow=38							
J20K	Nowinta River	57.59	30	P		P	06 29 49.5	+0.6
J20K				IAmb		IAmb	06 29 55.7	
	comp=Z,8.1nm,1.3s							
MDM	Murphy Dome	60.09	29	P		P	06 30 06.0	-0.3
MDM				IAmb		IAmb	06 30 23.5	
	comp=Z,5.2nm,1.1s							
ILAR	Eielson Array	60.68	29	P		P	06 30 05.2	-5.2
	comp=Z,0.7nm,0.9s,baz=283,slow=8.0,SNR=5.9							
ILAR				LR		LR	06 57 49.9	
	comp=Z,56nm,18.6s,baz=341,slow=38							
BELG	Belogornoye	63.13	317	LR		LR	06 59 44.4	
	comp=Z,41nm,18.6s,baz=94,slow=38							
SPITS	Spitsbergen Ar	66.15	348	LR		LR	07 02 16.9	
	comp=Z,66nm,19.4s,baz=352,slow=38							
ARCES	ARCESS Array B	67.81	338	LR		LR	07 05 08.4	
	comp=Z,147nm,21.2s,baz=24,slow=40							
GNI	Garni	68.73	305	LR		LR	07 05 06.2	
	comp=Z,22nm,19.6s,baz=52,slow=40							
KBZ	Khabaz	68.75	309	LR		LR	07 07 08.4	
	comp=Z,51nm,18.1s,baz=78,slow=41							
FINES	FINESS Array B	71.11	331	P		P	06 31 16.9	-0.6
	comp=Z,0.7nm,0.7s,baz=38,slow=7.0,SNR=2.0							
FINES				LR		LR	07 05 52.4	
	comp=Z,69nm,19.1s,baz=93,slow=39							
	comp=Z,0.7nm,0.7s							
AKASG	Malin Array Be	74.45	320	LR		LR	07 07 13.7	
	comp=Z,61nm,18.4s,baz=58,slow=38							
YKA	Yellowknife Ar	74.79	26	P		P	06 31 40.2	+0.9
	comp=Z,0.3nm,0.6s,baz=314,slow=5.3,SNR=2.1							
	comp=Z,0.3nm,0.6s							
JMIC	Jan Mayen	75.79	347	LR		LR	07 08 24.3	
	comp=Z,19nm,18.2s,baz=250,slow=38							
BRTR	Keskin Array B	76.70	308	P		P	06 31 50.9	+0.1
	comp=Z,1.1nm,0.8s,baz=77,slow=5.5,SNR=4.7							
	comp=Z,1.1nm,0.8s							
NOA	NORSAR Array B	77.37	334	P		P	06 31 52.2	-1.8
	comp=Z,0.7nm,0.7s,baz=48,slow=5.6,SNR=3.4							
NOA				LR		LR	07 11 05.3	
	comp=Z,51nm,18.9s,baz=40,slow=40							
	comp=Z,0.7nm,0.7s							
MLR	Muntele Rosu	78.90	316	LR		LR	07 09 26.9	
	comp=Z,60nm,18.7s,baz=111,slow=38							
VRAC	Vranov	82.09	323	LR		LR	07 10 03.2	
	comp=Z,42nm,18.4s,baz=54,slow=37							
BORG	Borgarnes	83.62	348	LR		LR	07 11 56.9	
	comp=Z,27nm,18.4s,baz=30,slow=37							
SFJD	Kangerlussuaq	83.90	0	LR		LR	07 10 31.0	
	comp=Z,34nm,19.5s,baz=342,slow=36							
FRB	Frobisher Bay	85.94	8	LR		LR	07 13 58.8	
	comp=Z,34nm,19.3s,baz=14,slow=38							
EKA	Eskdalemuir Ar	86.77	336	LR		LR	07 16 56.5	
	comp=Z,70nm,19.0s,baz=358,slow=40							
NVAR	Mina Array Bea	86.85	47	P		P	06 32 45.3	+0.9
	comp=Z,0.3nm,0.5s,baz=316,slow=6.2,SNR=3.6							
	comp=Z,0.3nm,0.5s							
DAVOX	Davos/Dischmat	87.19	324	LR		LR	07 13 26.1	
	comp=Z,37nm,20.9s,baz=75,slow=37							
ESDC	Sonseca Array	99.29	326	LR		LR	07 21 23.1	
	comp=Z,48nm,18.3s,baz=16,slow=37							

NIED **14** *06:21:23.2,40.02°N×138.72E,h36km,MW3.5,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr2.12; Mθθ-0.23; Mφφ-1.89; Mrθ0.52; Mθφ-0.56; Mφr0.95; Fault plane solution: M₀2.35000×10¹⁴ NP1: φs192.00000°,δ32.00000°,λ81.00000°. NP2:φs22.00000°, δ59.00000°,λ95.00000°.*

JMA 14 06:21:23.2±0.1,**40.0N**±0.3°×**138.7E**±0.6,**h36**km±1km, **MV3.8**/38,**W OFF AKITA PREF,Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
JOG3	Oga3	0.30	109	*i* P		Pn	06 21 38.9	+7.6
JOG3				S		Sn	06 21 50.2	+12
JTB	Tobi-shima	1.05	141	P		Pn	06 21 41.8	+0.4
JNTW	Noshirotokiwa	1.14	77	*i* P		Pn	06 21 43.6	+1.0
JNTW				*e*S		Sn	06 21 57.9	+0.9
JIW	Iwasaki	1.14	59	*i* P		Pn	06 21 43.2	+0.5
JIW				*e*S		Sn	06 21 57.8	+0.6
JAH	Hinai	1.48	83	*e*S		Sn	06 22 05.6	+0.1
JRG	Rokugo	1.60	112	P		Pn	06 21 49.9	+0.9
JRG				S		Sn	06 22 09.8	+1.3
JAW	Awa shima	1.61	165	P		Pn	06 21 49.8	+0.7
JYA	Atsumi	1.62	151	P		Pn	06 21 49.9	+0.7
JYK	Kaneyama	1.68	130	P		Pn	06 21 51.0	+0.9
JYK				S		Sn	06 22 11.3	+0.9
JOMM	Oshimamatsumae	1.80	33	P		Pn	06 21 52.6	+0.9
JOMM				S		Sn	06 22 12.6	-0.6
JTM	Tenmabayashi	1.96	66	P		Pn	06 21 56.0	+2.2
JTM				*e*S		Sn	06 22 19.4	+2.2
JSR	Shiriuchi	1.99	40	*e*P		Pn	06 21 55.2	+0.9
JSR				S		Sn	06 22 18.6	+0.6
JSD	Sado	2.01	190	*i* P		Pn	06 21 56.2	+1.6
JSD				*e*S		Sn	06 22 20.5	+2.0
JOM	Ohasama	2.06	104	P		Pn	06 21 56.6	+1.3
JOM				*e*S		Sn	06 22 21.1	+1.4
JOSM	Okushiri--Mats	2.14	15	*e*P		Pn	06 21 57.0	+0.5
JOSM				*e*S		Sn	06 22 21.2	-0.5
JANG	Nango	2.17	80	P		Pn	06 21 58.5	+1.6
JMK	Ichinoseki	2.21	118	P		Pn	06 21 59.0	+1.6
JMK				*e*S		Sn	06 22 25.3	+1.9
JOT	Ohata	2.24	52	*e*P		Pn	06 21 59.5	+1.8
JOT				*e*S		Sn	06 22 25.9	+1.8
JNS	Sasagawa	2.25	168	*e*P		Pn	06 21 59.4	+1.5
JNS				*e*S		Sn	06 22 25.7	+1.4

IDC 14 06:30:32.7±3.1,**54.18N**×**86.63E**,**h0**km,**mbtmp2.9**/2, **ML2.1**/2,**Error ellipse: s-maj=25.1km s-min=14.4km az=61.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
I46RU	ZALESOVINFRA	1.09	258	*i*			06 36 50.7	
	baz=76,slow=318,SNR=5.9							
ZALV	Zalesovo Beam	1.09	258	Pg		Pg	06 30 53.4	-0.2
	0.3nm,0.3s,baz=80,slow=16,SNR=6.7							
ZALV				Lg		Lg	06 31 08.6	
	0.9nm,0.3s,baz=76,slow=30,SNR=11							
KURBB	Kurchatov Arra	6.10	238	Pn		Pn	06 32 05.1	+1.0
	0.1nm,0.3s,baz=55,slow=14,SNR=5.6							
	1.0nm,0.6s							
MKAR	Makanchi Array	7.90	202	Pn		Pn	06 32 29.2	+0.5
	baz=24,slow=14,SNR=2.6							
MKAR				Lg		Lg	06 34 43.1	
	baz=16,slow=28,SNR=3.7							
	0.4nm,0.6s							

TUL **14** *06:33:30.2±0.9,36.616N±0.008×98.43W±0.01,h6km±7km, ML3.1,mb_Lg2.7/63(NEIC),Error ellipse: s-maj=1.8km s-min=0.9km az=125.0*

NEIC 14 06:33:30.4±0.9,**36.611N**±0.005°×**98.42W**±0.01,**h8**km±7km, **Error ellipse: s-maj=1.7km s-min=0.7km az=96.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
U32A	Winter Ranch,	0.53	244	Pg		Pg	06 33 40.6	0.0
OKCFA	Oklahoma City	1.43	146			Pn	06 33 56.2	-0.4
OKCSW	OKLAHOMA CITY	1.44	146			Pn	06 33 56.6	-0.3
T35A	Sooner Cattle	1.56	78			Pn	06 33 58.7	+0.3
T35A				IAmb_Lg			06 34 20.8	
	comp=Z,26nm,0.7s							
FNO	Franklin	1.58	148			Pn	06 33 58.6	-0.1
R32A	Long Quarter,	1.82	353			Pb	06 34 03.4	-0.6
WMOK	Wichita Mounta	1.89	189	Pn		Pn	06 34 04.1	+1.0
X34A	Smith Ranch, M	2.06	166			Pn	06 34 06.6	+1.3
TUL1	Leonard	2.23	107			Pn	06 34 08.2	+0.5
TUL1				IAmb_Lg			06 34 43.4	
	comp=Z,25nm,1.0s							
CBKS	Cedar Bluff	2.44	335			Pn	06 34 11.7	+1.1
X37A	Clayton	3.20	128			Pn	06 34 21.5	+0.5
X37A				IAmb_Lg			06 35 17.5	
	comp=Z,18nm,0.9s							
U38A	Gravette	3.25	92			Pn	06 34 23.7	+2.0
U38A				IAmb_Lg			06 35 16.8	
	comp=Z,16nm,0.8s							
HHAR	Hobbs	3.62	94			Pn	06 34 28.5	+1.6
W39A	Magazine	4.02	109	IAmb_Lg			06 35 39.0	
	comp=Z,16nm,0.9s							
ABTX	Abilene, Hawle	4.10	195	IAmb_Lg			06 35 49.0	
	comp=Z,12nm,0.7s							
KSCO	Kaye Shedlock'	4.11	307	IAmb_Lg			06 35 46.9	
	comp=Z,14nm,0.8s							
N33A	J Bar K, Exete	4.19	10	IAmb_Lg			06 35 49.2	
	comp=Z,23nm,0.8s							
Z38A	Mt. Pleasant	4.37	139	IAmb_

	6.4nm,0.6s							
ASAR	**Alice Springs**	**31.01**	**161**	P	**P**	**06 43 34.0**	**+0.6**
	7.7nm,0.9s,baz=340,slow=7.4,SNR=80							
ASAR				S	**S**	**06 47 58.9**	**-1.1**
	1.5nm,0.8s,baz=340,slow=14,SNR=9.8							
ASAR				ScP	**ScP**	**06 49 03.1**	**-0.2**
	0.5nm,0.3s,baz=339,slow=3.3,SNR=7.5							
	7.7nm,0.9s							
STKA	**Stephens Creek**	**41.27**	**156**	P	**P**	**06 44 58.2**	**+0.4**
	3.2nm,0.6s,baz=336,slow=7.6,SNR=9.7							
	3.2nm,0.6s							
SONM	**Songino Array**	**44.35**	**344**	P	**P**	**06 45 22.0**	**+0.1**
	1.7nm,0.8s,baz=163,slow=11,SNR=7.3							
	1.7nm,0.8s							
MKAR	**Makanchi Array**	**54.02**	**326**	P	**P**	**06 46 34.1**	**+1.1**
	3.0nm,0.5s,baz=118,slow=7.6,SNR=43							
MKAR				PcP	**PcP**	**06 47 29.7**	**+0.3**
	1.4nm,0.5s,baz=118,slow=4.3,SNR=11							
	3.0nm,0.5s							
ZALV	**Zalesovo Beam**	**57.30**	**334**	P	**P**	**06 46 55.5**	**0.0**
	0.9nm,0.4s,baz=124,slow=4.3,SNR=5.1							
	0.9nm,0.4s							
NRIK	**Noril'sk**	**67.67**	**347**	P	**P**	**06 48 02.3**	**0.0**
	2.1nm,0.5s,baz=110,slow=7.8,SNR=3.7							
	2.1nm,0.5s							
BRTR	**Keskin Array B**	**86.20**	**309**	P	**P**	**06 49 43.6**	**-0.4**
	0.4nm,0.3s,baz=113,slow=5.1,SNR=2.9							
	0.4nm,0.3s							
ARCES	**ARCESS Array B**	**87.39**	**340**	P	**P**	**06 49 48.1**	**-0.6**
	3.1nm,0.9s,baz=90,slow=4.9,SNR=4.6							
	3.1nm,0.9s							
FINES	**FINESS Array B**	**88.48**	**332**	P	**P**	**06 49 53.2**	**-0.6**
	1.0nm,0.5s,baz=67,slow=6.4,SNR=5.7							
	1.0nm,0.5s							
TORD	**Torodi Ar. Bea**	**119.19**	**288**	PKP	**PKPdf**	**06 55 48.0**	**0.0**
	0.5nm,0.5s,baz=71,slow=2.3,SNR=5.3							

KRSC 14 07:51:22.3±0.2, 60.71N×165.95E, h42km±6km, ML4.3, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TILK	**Tilichiki**	**0.28**	**159**	*e*P	Pn	07 51 30.6	+0.1
TILK				*e*S	Sn	07 51 37.1	+0.9
KMSK	**Kamenskaya**	**1.77**	**4**	*e*P	Pn	07 51 52.1	+1.8
KMSK				*e*S	Sn	07 52 14.5	+2.9
OSSR	**Ossora**	**2.06**	**226**	*e*P	Pn	07 51 56.7	+2.4
OSSR				*e*S	Sn	07 52 22.1	+3.4
PALN	**Palana**	**3.42**	**244**	*e*P	Pn	07 52 16.0	+3.0
KBTR	**Krutoberegovo**	**4.80**	**201**	*e*P	Pn	07 52 36.6	+4.6
BKI	**Bering**	**5.52**	**180**	*e*P	Pn	07 52 47.0	+5.2

*AUST **14** 08:05:43.8±0.7, 25°.52S×129°.86E, h0km, Error ellipse: s-maj=9.5km s-min=7.2km az=23.0*
*IDC **14** 08:05:44.3±4.6, 25°.50S×130°.00E, h0km, mbtmp3.7/3, ML3.7/3, Error ellipse: s-maj=37.9km s-min=24.8km az=78.0*
*NOU **14** 08:05:45.9, 25°.47S×129°.86E, h10km, MLv4.4/8, Northern Territory, Australia*

ISC 14 08:05:44.2±0.7, 25°.54S±0°.05×129°.85E±0°.04, h10km, n29, σ2s03/42, Northern Territory

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRKA	**Warakurna**	**1.49**	**289**	P	**Pg**	**08 06 12.5**	**-0.4**
	baz=1.5,SNR=275						
WRKA				S	**Sg**	**08 06 32.3**	**+0.1**
	baz=1.5						
WRKA	**Warakurna**	**1.49**	**289**	P	**Pg**	**08 06 12.6**	**-0.3**
ASPA	**Alice Springs**	**4.13**	**64**	P	**Pn**	**08 06 49.4**	**+2.0**
	baz=4.1						
ASPA				S	**Sn**	**08 07 36.3**	**+0.4**
	baz=4.1						
ASAR	**Alice Springs**	**4.13**	**64**	Pn	**Pn**	**08 06 48.8**	**+1.3**
	2.6nm,0.3s,baz=244,slow=12,SNR=77						
ASAR				Pg	**Pb**	**08 07 00.4**	**+3.3**
	4.1nm,0.3s,baz=243,slow=16,SNR=32						
ASAR				Sn	**Sn**	**08 07 37.1**	**+1.2**
	2.8nm,0.3s,baz=248,slow=16,SNR=5.6						
ASAR				Lg	Lg	08 07 49.8	
	5.5nm,0.3s,baz=237,slow=28,SNR=9.3						
	4.4nm,0.3s						
FORT	**Forrest**	**5.46**	**196**	P	**Pn**	**08 07 08.5**	**+2.9**
	baz=5.5						
FORT				S	**Sn**	**08 08 11.1**	**+2.6**
	baz=5.5						
FORT	**Forrest**	**5.46**	**196**	P	**Pn**	**08 07 08.5**	**+2.9**
OOD	**Oodnadatta**	**5.69**	**115**	P	**Pn**	**08 07 10.6**	**+1.8**
	baz=5.7,SNR=6.0						
OOD				S	**Sn**	**08 08 17.1**	**+2.9**
	baz=5.7						
OOD	**Oodnadatta**	**5.69**	**115**	P	**Pn**	**08 07 10.9**	**+2.1**
MULG	**Mulgathing**	**6.02**	**143**	P	**Pn**	**08 07 13.9**	**+0.6**
	baz=6.0						
MULG				S	**Sn**	**08 08 24.8**	**+2.5**
	baz=6.0						
MULG	**Mulgathing**	**6.02**	**143**	P	**Pn**	**08 07 15.7**	**+2.4**
WRA	**Warramunga Arr**	**6.94**	**38**	Pn	**Pn**	**08 07 25.8**	**-0.3**
	0.9nm,0.3s,baz=220,slow=14,SNR=41						
WRA				Pg	**Pb**	**08 07 49.0**	**+4.0**
	0.6nm,0.3s,baz=209,slow=12,SNR=6.3						
WRA				Sn	**Sn**	**08 08 44.0**	**-1.2**
	1.7nm,0.3s,baz=218,slow=22,SNR=8.9						
WRA				Lg	Lg	08 09 20.4	
	2.4nm,0.3s,baz=218,slow=29,SNR=10.0						
	1.6nm,0.3s						
WB2	**Warramunga Arr**	**6.95**	**38**	P	**Pn**	**08 07 27.1**	**+0.9**
	baz=6.9						
WB2				S	**Sn**	**08 08 42.6**	**-2.7**
	baz=6.9						
WRAB	**Tennant Creek**	**6.95**	**38**	P	**Pn**	**08 07 27.4**	**+1.2**
LCRK	**Leigh Creek**	**8.87**	**125**	P	**Pn**	**08 07 52.9**	**+0.5**
	baz=8.9,SNR=3.8						
LCRK				S	**Sn**	**08 09 30.2**	**-2.2**
	baz=8.9						
LCRK	**Leigh Creek**	**8.87**	**125**	P	**Pn**	**08 07 54.1**	**+1.7**
BBOO	**Buckleboo**	**9.05**	**145**	P	**Pn**	**08 07 54.8**	**-0.2**
	baz=9.1,SNR=17						
BBOO				S	**Sn**	**08 09 34.2**	**-2.8**
	baz=9.1						
KNRA	**Kununurra**	**9.86**	**354**	P	**Pn**	**08 08 07.6**	**+1.4**
	baz=9.9						
KNRA	**Kununurra**	**9.86**	**354**	P	**Pn**	**08 08 06.9**	**+0.8**
QIS	**Mount Isa**	**10.26**	**63**	P	**Pn**	**08 08 12.2**	**+0.6**
	baz=10						
MBWA	**Marble Bar**	**10.27**	**293**	P	**Pn**	**08 08 12.6**	**+0.9**
	10nm,0.6s						
HTT	**Hallett**	**11.15**	**137**	P	**Pn**	**08 08 22.0**	**-1.7**
	baz=11						
STKA	**Stephens Creek**	**12.09**	**124**	Pn	**Pn**	**08 08 36.1**	**-0.4**
	0.5nm,0.3s,baz=313,slow=18,SNR=2.5						
STKA				Sn	**Sn**	**08 10 46.5**	**-5.0**
	0.8nm,0.3s,baz=218,slow=14,SNR=4.0						
STKA				Lg	Lg	08 12 03.2	
	0.7nm,0.3s,baz=315,slow=20,SNR=1.5						
	1.7nm,0.3s						
KLBR	**Kellerberrin**	**12.22**	**238**	P	**Pn**	**08 08 37.0**	**-1.3**
	baz=12						
BLDU	**Ballidu**	**12.65**	**243**	P	**Pn**	**08 08 43.6**	**-0.7**
	baz=13						
MTN	**Manton Dam**	**12.69**	**6**	P	**Pn**	**08 08 43.2**	**-1.6**
	baz=13						
MORW	**Morawa**	**12.77**	**251**	P	**Pn**	**08 08 44.2**	**-1.7**
	baz=13						
KDU	**Kakadu**	**13.02**	**11**	P	**Pn**	**08 08 46.9**	**-2.4**
	baz=13						
MUN	**Mundaring**	**13.57**	**239**	P	**Pn**	**08 08 55.6**	**-1.2**
	baz=14						
GIRL	**Giralia**	**14.55**	**278**	P	**Pn**	**08 09 09.4**	**-0.9**
	baz=14						

*FUNV **14** 08:10:34.6, 10°.48N×62°.82W, h26km, MW3.2*

ISC 14 08:10:34.5±1.4, 10°.5N±0°.1×62°.89W±0°.05, h50km, n7, σ1s38/12, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRN	**Trinidad (W)**	**1.47**	**84**	*e*P	**Pn**	**08 10 58.6**	**0.0**
TRN				*e*S	**Sn**	**08 11 16.7**	**0.0**
PCRV	**Puerto La Cruz**	**1.75**	**259**	*e*P	**Pn**	**08 11 03.3**	**+0.8**
PCRV				*e*S	**Sn**	**08 11 24.6**	**+1.0**
PRGV	**PARIAGUAN**	**2.45**	**225**	*e*P	**Pn**	**08 11 12.8**	**+0.7**
PRGV				*e*S	**Sn**	**08 11 40.9**	**0.0**
BIRV	**Birongo**	**3.32**	**270**	*e*P	**Pn**	**08 11 24.6**	**+0.5**
BIRV				*e*S	**Sn**	**08 12 02.4**	**0.0**
MERV	**Las Mercedes**	**3.58**	**250**	*e*P	**Pn**	**08 11 28.6**	**+1.0**
MERV				*e*S	**Sn**	**08 12 07.8**	**-0.9**
CACV	**CAICARA DEL OR**	**4.64**	**231**	*e*P	Pn	08 11 37.0	-5.1
CACV				*e*S	Sn	08 12 23.7	-11
BAUV	**El Baul**	**5.31**	**253**	*e*P	**Pn**	**08 11 51.4**	**+0.1**
BAUV				*e*S	**Sn**	**08 12 47.7**	**-3.6**

*IDC **14** 08:16:42.4±1.3, 27°.03N×130°.18E, h0km, mb3.5/6, mbtmp3.5/7, ML3.3/1, Error ellipse: s-maj=30.1km s-min=23.0km az=63.0*
*JMA **14** 08:16:44.7±0.1, 26°.9N±0°.3×130°.3E±0°.3, h59km, MV3.4/20, NEAR MINAMI-DAITOJIMA IS*

ISC 14 08:16:42.8±0.7, 26°.95N±0°.04×130°.30E±0°.05, h10km, n23, σ0s99/32, mb3.5/6, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKDJ	**Kitadaitoujima**	**1.34**	**138**	P	**Pn**	**08 17 07.3**	**-0.3**
JKDJ				*e*S	**Sb**	**08 17 24.1**	**-1.1**
JMZ	**Minamidaito 2**	**1.40**	**143**	P	**Pn**	**08 17 08.4**	**0.0**
JMZ				*e*S	**Sb**	**08 17 25.8**	**-1.0**
JTK	**Tokunoshima**	**1.46**	**305**	P	**Pn**	**08 17 09.6**	**+0.3**
JAM	**Amami Oshima**	**1.58**	**337**	P	**Pn**	**08 17 11.2**	**+0.3**
JAM				*e*S	**Sn**	**08 17 30.9**	**-0.5**
JOKE	**Okinoerabujima**	**1.59**	**285**	P	**Pn**	**08 17 11.2**	**+0.2**
JAMN	**Amaminishikomi**	**1.63**	**323**	P	**Pn**	**08 17 11.6**	**+0.1**
JAMN				*e*S	**Sn**	**08 17 31.3**	**-1.3**
JYRO	**Yoronjima**	**1.65**	**273**	P	**Pn**	**08 17 11.7**	**-0.1**
JYRO				*e*S	**Sn**	**08 17 32.0**	**-1.0**
JOW	**Kunigami**	**1.81**	**267**	Pn	**Pn**	**08 17 14.2**	**+0.1**
	45nm,0.3s,baz=126,slow=16,SNR=164						
JOW				Sn	**Sn**	**08 17 35.9**	**-1.2**
	50nm,0.3s,baz=109,slow=28,SNR=12						
JOW	**Kunigami**	**1.81**	**267**	P	**Pn**	**08 17 14.2**	**+0.1**
JNTH	**Nagotoyohara**	**2.08**	**259**	P	**Pn**	**08 17 17.5**	**-0.2**
JNTH				*e*S	**Sn**	**08 17 42.3**	**-1.4**
JIH	**Iheya**	**2.08**	**273**	*e*P	**Pn**	**08 17 17.9**	**+0.1**
JIH				*e*S	**Sn**	**08 17 43.0**	**-0.7**
JJT3	**Tamagusuku3**	**2.39**	**251**	P	**Pn**	**08 17 22.1**	**+0.1**
JAGN	**Aguni-jima**	**2.75**	**263**	P	**Pn**	**08 17 27.2**	**+0.2**
JAGN				*e*S	**Sn**	**08 17 58.5**	**-1.9**
JNN	**Nakanoshima**	**2.91**	**353**	S	**Sn**	**08 18 03.2**	**-0.9**
JKE	**Kume jima 2**	**3.20**	**260**	P	**Pn**	**08 17 32.9**	**-0.3**
JYAK	**Yakushimahirau**	**3.28**	**3**	*e*S	**Sn**	**08 18 11.3**	**-2.1**
KSRS	**Korea Array**	**10.67**	**350**	Pn	**Pn**	**08 19 14.7**	**-0.9**
	0.2nm,0.3s,baz=167,slow=15,SNR=1.4						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**42.45**	**311**	P	**P**	**08 24 38.3**	**+0.4**
	0.2nm,0.6s,baz=125,slow=9.0,SNR=1.7						
	0.2nm,0.6s						
ZALV	**Zalesovo Beam**	**42.81**	**322**	P	**P**	**08 24 41.3**	**+0.6**
	0.2nm,0.3s,baz=141,slow=9.3,SNR=1.9						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**46.78**	**175**	P	**P**	**08 25 13.7**	**+1.1**
	0.7nm,0.8s,baz=353,slow=8.4,SNR=3.0						
	0.7nm,0.8s						
ASAR	**Alice Springs**	**50.44**	**176**	P	**P**	**08 25 43.3**	**+2.6**
	0.5nm,0.7s,baz=6.6,slow=10,SNR=2.3						
	0.5nm,0.7s						
BRTR	**Keskin Array B**	**78.05**	**308**	P	**P**	**08 28 41.6**	**-0.4**
	0.2nm,0.3s,baz=72,slow=4.7,SNR=1.7						
	0.2nm,0.3s						
NOA	**NORSAR Array B**	**79.48**	**334**	P	**P**	**08 28 50.1**	**+0.7**
	0.3nm,0.7s,baz=54,slow=5.3,SNR=1.6						
	0.3nm,0.7s						

*IDC **14** 08:16:53.9±0.9, 26°.95N×130°.17E, h0km, mb3.8/12, mbtmp3.8/13, ML3.3/1, MS3.5/1, Error ellipse: s-maj=22.4km s-min=19.0km az=80.0*
*JMA **14** 08:16:56.5±0.1, 26°.9N±0°.5×130°.3E±0°.5, h53km, MV3.7/22, NEAR MINAMI-DAITOJIMA IS*
*NIED **14** 08:16:56.5, 26°.93N×130°.28E, h53km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-6.06; $M_{\theta\theta}$1.81; $M_{\phi\phi}$4.25; $M_{r\theta}$-1.89; $M_{\theta\phi}$1.60; $M_{\phi r}$-2.49; Fault plane solution: $M_0$6.37000×10^{14} NP1: ϕ_s203.00000°, δ31.00000°, λ-97.00000°. NP2:ϕ_s31.00000°, δ60.00000°, λ-86.00000°.*

ISC 14 08:16:55.1±4.6, 26°.94N±0°.04×130°.29E±0°.04, h12km±29km, n33, σ1s26/43, mb3.8/12, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKDJ	**Kitadaitoujima**	**1.34**	**137**	P	**Pn**	**08 17 19.2**	**-0.5**
JKDJ				*e*S	**Sb**	**08 17 36.2**	**-1.1**
JMZ	**Minamidaito 2**	**1.40**	**143**	P	**Pn**	**08 17 19.9**	**-0.5**
JMZ				*e*S	**Sn**	**08 17 37.0**	**-1.9**
JTK	**Tokunoshima**	**1.46**	**306**	P	**Pn**	**08 17 21.2**	**-0.1**
JTK				*e*S	**Sn**	**08 17 38.7**	**-1.6**
JAM	**Amami Oshima**	**1.58**	**338**	*e*S	**Sn**	**08 17 42.0**	**-1.5**
JOKE	**Okinoerabujima**	**1.59**	**286**	P	**Pn**	**08 17 23.2**	**+0.1**
JOKE				*e*S	**Sn**	**08 17 42.3**	**-1.2**
JAMN	**Amaminishikomi**	**1.63**	**323**	*e*S	**Sn**	**08 17 42.7**	**-1.9**
JYRO	**Yoronjima**	**1.64**	**273**	P	**Pn**	**08 17 23.6**	**-0.2**
JYRO				*e*S	**Sn**	**08 17 43.3**	**-1.6**
JOW	**Kunigami**	**1.80**	**267**	Pn	**Pn**	**08 17 25.5**	**-0.6**
	86nm,0.3s,baz=112,slow=11,SNR=22						
JOW				Sn	**Sn**	**08 17 47.4**	**-1.5**
	68nm,0.3s,baz=90,slow=19,SNR=19						
JOW	**Kunigami**	**1.80**	**267**	P	**Pn**	**08 17 25.4**	**-0.6**
JOW				S	**Sn**	**08 17 47.5**	**-1.4**
JNTH	**Nagotoyohara**	**2.07**	**259**	P	**Pn**	**08 17 29.3**	**-0.4**
JNTH				S	**Sn**	**08 17 52.9**	**-2.6**
JIH	**Iheya**	**2.07**	**273**	P	**Pn**	**08 17 30.2**	**+0.5**
JIH				*e*S	**Sn**	**08 17 54.4**	**-1.2**
JJT3	**Tamagusuku3**	**2.38**	**251**	P	**Pn**	**08 17 33.8**	**-0.2**
JJT3				*e*S	**Sn**	**08 18 01.2**	**-1.9**
JTAJ	**Takarajima**	**2.40**	**337**	S	**Sn**	**08 18 01.1**	**-2.5**
JAGN	**Aguni-jima**	**2.75**	**263**	*e*P	**Pn**	**08 17 38.9**	**-0.1**
JAGN				*e*S	**Sn**	**08 18 10.5**	**-1.6**
JNN	**Nakanoshima**	**2.91**	**353**	S	**Sn**	**08 18 14.6**	**-1.6**
JKE	**Kume jima 2**	**3.19**	**260**	P	**Pn**	**08 17 45.5**	**+0.3**
JYAK	**Yakushimahirau**	**3.29**	**3**	*e*S	**Sn**	**08 18 23.7**	**-1.9**
JKC	**Kuchinoerabu**	**3.51**	**359**	*e*S	**Sn**	**08 18 28.6**	**-2.4**
KSRS	**Korea Array**	**10.67**	**350**	Pn	**Pn**	**08 19 26.9**	**-0.9**
	0.3nm,0.3s,baz=168,slow=14,SNR=2.4						
	1.0nm,0.5s						
KLR	**Kul'dur**	**22.28**	**3**	P	**P**	**08 21 52.8**	**+0.7**
	1.3nm,0.7s,baz=181,slow=8.4,SNR=5.8						
	1.3nm,0.7s						
MKAR	**Makanchi Array**	**42.45**	**311**	P	**P**	**08 24 50.2**	**+0.3**
	0.8nm,0.8s,baz=116,slow=8.2,SNR=3.6						
	0.8nm,0.8s						
ZALV	**Zalesovo Beam**	**42.81**	**322**	P	**P**	**08 24 53.0**	**+0.3**
	0.9nm,0.6s,baz=114,slow=9.9,SNR=3.6						
	0.9nm,0.6s						
WRA	**Warramunga Arr**	**46.77**	**175**	P	**P**	**08 25 25.0**	**+0.4**
	1.1nm,0.7s,baz=356,slow=8.6,SNR=6.4						
	1.1nm,0.7s						
ASAR	**Alice Springs**	**50.43**	**176**	P	**P**	**08 25 53.5**	**+0.8**
	1.0nm,0.8s,baz=7.1,slow=11,SNR=5.7						
	1.0nm,0.8s						
ARU	**Arti**	**57.98**	**322**	LR	LR	08 55 01.7	
	comp=Z,34nm,18.2s,baz=184,slow=40						
ILAR	**Eielson Array**	**62.94**	**29**	P	**P**	**08 27 22.2**	**+1.0**
	0.2nm,0.6s,baz=256,slow=7.3,SNR=2.3						
	0.2nm,0.6s						
KBZ	**Khabaz**	**70.13**	**310**	P	**P**	**08 28 06.9**	**-0.6**
	2.9nm,0.9s,baz=136,slow=5.2,SNR=4.1						
	2.9nm,0.9s						
FINES	**FINESS Array B**	**73.14**	**331**	P	**P**	**08 28 26.0**	**+0.7**
	1.6nm,0.8s,baz=15,slow=6.0,SNR=2.2						
	1.6nm,0.8s						
AKASG	**Malin Array Be**	**76.18**	**320**	P	**P**	**08 28 43.7**	**+0.5**
	0.2nm,0.3s,baz=48,slow=6.7,SNR=4.7						
	0.2nm,0.3s						
BRTR	**Keskin Array B**	**78.04**	**308**	P	**P**	**08 28 54.6**	**+0.5**
	0.9nm,0.7s,baz=81,slow=4.5,SNR=3.9						
	0.9nm,0.7s						
NB2	**NORSAR Subarra**	**79.48**	**334**	P	**P**	**08 29 01.4**	**0.0**
	comp=Z,2.1nm,1.0s,baz=52,slow=5.9						
NOA	**NORSAR Array B**	**79.48**	**334**	P	**P**	**08 29 01.1**	**-0.3**
	comp=Z,1.1nm,0.8s,baz=51,slow=5.6,SNR=5.2						
	comp=Z,1.1nm,0.8s						
PDAR	**Pinedale Array**	**91.45**	**40**	P	**P**	**08 30 03.1**	**+1.3**
	comp=Z,0.2nm,0.5s,baz=294,slow=6.8,SNR=2.3						
	comp=Z,0.2nm,0.5s						

*IDC **14** 08:19:52.6±1.6, 2°.05S×127°.94E, h0km, mb3.4/2, mbtmp3.5/4, ML3.5/2, MS3.2/1, Error ellipse: s-maj=41.2km s-min=26.3km az=70.0*
*DJA **14** 08:19:57.1±0.7, 2°.S±2°×12°8E±°, h20km±7km, M3.6/10, mb4.1/1, MLv3.4/10*

ISC 14 08:19:57.4±0.9, 1°.97S±0°.04×128°.10E±0°.06, h33km, n13, σ1s54/18, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBMI	**Labuha**	**1.45**	**336**	P	**Pn**	**08 20 22.1**	**+0.7**
LBMI				S	**Sb**	**08 20 41.1**	**-0.9**
MSAI	**Masohi**	**1.60**	**149**	P	**Pn**	**08 20 24.4**	**+1.0**
MSAI				S	**Sb**	**08 20 47.8**	**+1.5**
AAI	**Ambon**	**1.71**	**177**	P	**Pn**	**08 20 26.5**	**+1.6**
AAI				S	**Sb**	**08 20 48.5**	**-0.9**
SANI	**Sanana**	**2.11**	**268**	P	**Pn**	**08 20 31.0**	**+0.6**
TNTI	**Ternate**	**2.82**	**345**	P	**Pn**	**08 20 41.4**	**+1.2**
SWI	**Sorong**	**3.34**	**71**	P	**Pn**	**08 20 49.1**	**+1.7**
SWI				S	**Sn**	**08 21 26.3**	**+0.3**
SIJI	**Sorong**	**3.35**	**71**	Pn	**Pn**	**08 20 48.0**	**+0.5**
	12nm,0.3s,baz=113,slow=12,SNR=36						
SIJI				Sn	**Sn**	**08 21 27.0**	**+0.9**
	4.5nm,0.3s,baz=169,slow=22,SNR=10						
	47nm,0.5s						
FAKI	**Fak Fak**	**4.25**	**103**	P	**Pn**	**08 21 00.2**	**+0.3**
FAKI				S	**Sn**	**08 21 44.1**	**-4.3**
APSI	**Ampana**	**6.53**	**279**	P	**Pn**	**08 21 32.4**	**+1.1**
WRA	**Warramunga Arr**	**18.88**	**162**	P	**P**	**08 24 14.0**	**-1.1**
	0.1nm,0.3s,baz=338,slow=12,SNR=8.8						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**22.29**	**166**	P	**P**	**08 24 52.5**	**+0.3**
	0.6nm,0.5s,baz=347,slow=11,SNR=9.6						
	0.6nm,0.5s						
PSI	**Prapat**	**29.55**	**279**	LR	LR	08 40 23.2	
	comp=Z,44nm,18.5s,baz=224,slow=42						
MKAR	**Makanchi Array**	**63.01**	**326**	P	**P**	**08 30 21.0**	**-0.2**
	0.4nm,0.6s,baz=133,slow=7.3,SNR=5.2						
	0.4nm,0.6s						

*JMA **14** 08:25:23.7±0.1, 26°.9N±0°.4×130°.3E±0°.4, h54km, MV3.5/19, NEAR MINAMI-DAITOJIMA IS*
*NIED **14** 08:25:23.7, 26°.93N×130°.28E, h54km, MW3.5, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.50; $M_{\theta\theta}$0.41; $M_{\phi\phi}$1.09; $M_{r\theta}$0.24; $M_{\theta\phi}$0.88; $M_{\phi r}$1.45; Fault plane solution: $M_0$2.18000×10^{14} NP1:ϕ_s52.00000°, δ27.00000°, λ-59.00000°. NP2:ϕ_s198.00000°, δ67.00000°, λ-105.00000°.*

ISC 14 08:25:24.5±6.6, 26°.94N±0°.04×130°.29E±0°.04, h36km±7km, n15, σ0s44/26, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKDJ	**Kitadaitoujima**	**1.33**	**137**	P	**Pn**	**08 25 46.3**	**-0.3**
JKDJ				S	**Sn**	**08 26 03.5**	**+0.4**
JMZ	**Minamidaito 2**	**1.39**	**143**	P	**Pn**	**08 25 47.3**	**-0.1**
JMZ				S	**Sn**	**08 26 04.1**	**-0.4**
JTK	**Tokunoshima**	**1.46**	**306**	P	**Pn**	**08 25 48.2**	**-0.1**
JOKE	**Okinoerabujima**	**1.59**	**286**	P	**Pn**	**08 25 50.1**	**0.0**
JOKE				*e*S	**Sn**	**08 26 09.2**	**-0.2**
JAM	**Amami Oshima**	**1.59**	**338**	P	**Pn**	**08 25 50.1**	**0.0**
JAM				*e*S	**Sn**	**08 26 09.0**	**-0.4**
JAMN	**Amaminishikomi**	**1.64**	**323**	P	**Pn**	**08 25 50.5**	**-0.2**
JAMN				S	**Sn**	**08 26 10.6**	**+0.1**
JYRO	**Yoronjima**	**1.64**	**273**	P	**Pn**	**08 25 50.7**	**-0.1**
JYRO				*e*S	**Sn**	**08 26 10.4**	**-0.3**
JOW	**Kunigami**	**1.80**	**267**	P	**Pn**	**08 25 53.1**	**+0.1**
JOW				*e*S	**Sn**	**08 26 15.1**	**+0.4**
JNTH	**Nagotoyohara**	**2.07**	**259**	P	**Pn**	**08 25 56.2**	**-0.5**
JNTH				S	**Sn**	**08 26 20.1**	**-1.2**
JIH	**Iheya**	**2.07**	**273**	P	**Pn**	**08 25 57.4**	**+0.7**
JIH				S	**Sn**	**08 26 21.6**	**+0.3**
JJT3	**Tamagusuku3**	**2.38**	**251**	P	**Pn**	**08 26 01.2**	**+0.3**
JJT3				*e*S	**Sn**	**08 26 28.7**	**-0.2**
JAGN	**Aguni-jima**	**2.75**	**263**	P	**Pn**	**08 26 05.9**	**-0.1**
JAGN				*e*S	**Sn**	**08 26 37.4**	**-0.6**
JKE	**Kume jima 2**	**3.19**	**260**	P	**Pn**	**08 26 11.7**	**-0.4**
JYAK	**Yakushimahirau**	**3.29**	**3**	*e*S	**Sn**	**08 26 50.8**	**-0.7**
JMTN	**Minamitane**	**3.49**	**9**	S	**Sn**	**08 26 56.4**	**+0.1**

*JMA **14** 08:55:38.4±0.2, 34°.6N±0°.6×140°.4E±0°.7, h60km±2km, MV3.3/39, SE OFF BOSO PENINSULA*
*IDC **14** 08:55:40.6±1.7, 34°.50N×140°.27E, h67km±16km, mb3.4/7, mbtmp3.6/8, MS2.5/3, Error ellipse: s-maj=29.7km s-min=6.8km az=76.0*

ISC 14 08:55:39.3±0.9, 34°.56N±0°.04×140°.34E±0°.05, h55km±8km, n33, σ0s66/34, mb3.5/7, 13D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO3	**Boso 3**	**0.28**	**31**	*i* P	**Pn**	**08 55 48.4**	**0.0**
BSO4	**Boso 4**	**0.43**	**0**	⇓P	**

*IDC **14** 09:08:02.5±2.9,54˚.32N×87˚.01E,h0km,mbtmp3.0/2, ML2.6/2,Error ellipse: s-maj=24.0km s-min=19.0km az=54.0*

*NNC **14** 09:08:02.7±3.5,54˚.34N×86˚.91E,h0km,mb3.1,mpv2.9, Error ellipse: s-maj=35.1km s-min=20.8km az=171.0, Suspected Mining explosion.*

ISC 14 09:08:02.5±3.9,54˚.3N×0˚.2×87˚.0E±0˚.2,h0km,n8,σ1≤96/11, 6C-3D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.31**	**256**	*i*		09 16 30.0	
	0.1nm,1.0s,baz=73,slow=316,SNR=8.4						
ZAA0	**Zalesovo Array**	**1.31**	**256**	⇑P	**Pg**	**09 08 26.3**	**-1.2**
	0.4nm,0.3s						
ZAA0				⇑S	**Sb**	**09 08 44.5**	**-0.7**
	3.6nm,0.7s						
ZALV	**Zalesovo Beam**	**1.31**	**256**	Pg	**Pb**	**09 08 26.6**	**-1.3**
	2.4nm,0.3s,baz=73,slow=17,SNR=21						
ZALV				Lg	Lg	09 08 45.1	
	1.9nm,0.3s,baz=73,slow=25,SNR=8.5						
ZALV				Rg	Rg	09 08 49.6	
	7.0nm,0.4s,baz=76,slow=27,SNR=8.4						
KURK	**Kurchatov**	**6.22**	**238**	⇓Pn	**Pn**	**09 09 37.2**	**+1.7**
	2.2nm,0.9s						
KURK				⇑Sn	**Sn**	**09 10 51.2**	**+4.0**
	1.7nm,0.9s						
KURK				⇑Lg	Lg	09 11 24.2	
	3.7nm,1.1s						
KURBB	**Kurchatov Arra**	**6.32**	**238**	Pn	**Pn**	**09 09 38.9**	**+2.0**
	0.1nm,0.3s,baz=54,slow=14,SNR=13						
KURBB				Sn	**Sn**	**09 10 49.7**	**-0.1**
	baz=46,slow=20,SNR=1.0						
KURBB				Lg	Lg	09 11 24.9	
	baz=48,slow=30,SNR=5.0						
	1.3nm,0.5s						
KURBB	**Kurchatov Arra**	**6.32**	**238**	⇓Pn	**Pn**	**09 09 37.9**	**+1.0**
	4.0nm,0.9s						
KURBB				⇑Sn	**Sn**	**09 10 50.5**	**+0.7**
	2.6nm,0.5s						
KURBB				⇓Lg	Lg	09 11 24.2	
	4.0nm,0.7s						
MK31	**Makanchi Array**	**8.06**	**204**	Sn	**Sn**	**09 11 31.3**	**-1.4**
	0.1nm,0.2s,baz=187,slow=14,SNR=5.2						
MK31				⇑Lg	Lg	09 12 18.8	
	0.2nm,0.4s,baz=27,slow=26,SNR=4.0						
MKAR	**Makanchi Array**	**8.06**	**204**	Pn	**Pn**	**09 10 01.9**	**+1.0**
	0.1nm,0.3s,baz=26,slow=14,SNR=3.2						
MKAR				Lg	Lg	09 12 20.6	
	0.1nm,0.3s,baz=27,slow=26,SNR=2.5						
	0.2nm,0.3s						

*IDC **14** 09:11:31.4±0.7,29˚.18S×61˚.16E,h0km,mb4.0/8, mbtmp4.1/9,ML4.7/1,MS3.5/15,Error ellipse: s-maj=29.2km s-min=23.5km az=75.0*

*NEIC **14** 09:11:32.7±2.2,29˚.1S×0˚.1×60˚.99E±0˚.08,h10km±1km, mb4.6/7,Error ellipse: s-maj=19.2km s-min=10.2km az=196.0*

ISC 14 09:11:32.3±0.6,29˚.1S±0˚.1×61˚.0E±0˚.1,h10km,n46, σ1≤12/26,mb4.3/9,MS3.5/15,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RER	**Riviere de l'E**	**9.28**	**328**	Pn	**Pn**	**09 13 45.2**	**-1.0**
FOMA	**Nahampoana Res**	**13.19**	**285**	Pn	**Pn**	**09 14 38.2**	**-1.5**
VOI	**Vohitsoka**	**14.73**	**296**		**Pn**	**09 15 02.2**	**+1.4**
ABPO	**Ambohimpanom**	**16.12**	**306**	Pn	**Pn**	**09 15 18.2**	**-1.1**
ABPO				IAmb	IAmb	09 15 35.8	
	comp=Z,61nm,1.6s						
OPO	**Ambohidratompo**	**16.45**	**307**	Pn	**Pn**	**09 15 24.8**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=123,slow=15,SNR=12						
OPO				Sn	Sn	09 18 11.7	-14
	comp=Z,0.1nm,0.3s,baz=221,slow=13,SNR=2.4						
	comp=Z,5.4nm,0.5s						
H08S1	**Diego Garcia H**	**23.94**	**29**	T	T	09 42 28.7	
	baz=204,slow=75,SNR=9.8						
H08S2	**Diego Garcia H**	**23.95**	**29**	T	T	09 42 28.6	
	baz=204,slow=75,SNR=5.6						
H08S3	**Diego Garcia H**	**23.96**	**29**	T	T	09 42 29.6	
	baz=204,slow=75,SNR=11						
BOSA	**Boshof**	**31.26**	**262**	LR	LR	09 27 45.2	
	comp=Z,47nm,20.3s,baz=150,slow=31						
LBTB	**Lobatse**	**31.75**	**269**	LR	LR	09 29 09.6	
	comp=Z,48nm,18.0s,baz=114,slow=33						
SUR	**Sutherland**	**34.57**	**254**	LR	LR	09 30 26.9	
	comp=Z,83nm,18.1s,baz=110,slow=33						
MAW	**Mawson**	**38.51**	**179**	LR	LR	09 30 46.0	
	comp=Z,57nm,18.6s,baz=190,slow=30						
MBAR	**Mbarara**	**40.50**	**309**	LR	LR	09 34 39.5	
	comp=Z,48nm,18.1s,baz=140,slow=34						
TSUM	**Tsumeb**	**40.66**	**274**	LR	LR	09 35 06.1	
	comp=Z,34nm,18.1s,baz=164,slow=35						
ATD	**Arta Tunnel**	**44.08**	**334**	LR	LR	09 35 37.4	
	comp=Z,79nm,19.7s,baz=12,slow=33						
H01W2	**Cape Leeuwin H**	**44.96**	**112**	T	T	10 08 19.6	
	baz=261,slow=75,SNR=10						
H01W3	**Cape Leeuwin H**	**44.96**	**111**	T	T	10 08 22.7	
	baz=261,slow=75,SNR=11						
H01W1	**Cape Leeuwin H**	**44.97**	**112**	T	T	10 08 19.1	
	baz=261,slow=75,SNR=12						
WSAR	**Wadi Sarin**	**52.13**	**357**	LR	LR	09 37 03.8	
	comp=Z,39nm,20.6s,baz=169,slow=29						
SNAA	**Sanae**	**54.45**	**200**	P	**P**	**09 20 59.1**	**-0.4**
	comp=Z,1.0nm,1.0s,baz=48,slow=17,SNR=1.8						
	comp=Z,1.0nm,1.0s						
SNAA	**Sanae**	**54.45**	**200**	P	**P**	**09 20 59.7**	**+0.2**
SNAA				IAmb	IAmb	09 21 16.4	
	comp=Z,8.3nm,1.5s						
CMAR	**Chiang Mai Arr**	**59.82**	**42**	P	**P**	**09 21 37.9**	**-0.2**
	comp=Z,1.6nm,0.2s,baz=230,slow=7.0,SNR=2.1						
CMAR				LR	LR	09 44 11.1	
	comp=Z,22nm,19.5s,baz=235,slow=33						
	comp=Z,1.6nm,0.2s						
QSPA	**South Pole Qui**	**61.02**	**180**	P	**P**	**09 21 44.7**	**-1.2**
EIL	**Elat**	**63.56**	**335**	LR	LR	09 46 48.2	
	comp=Z,52nm,18.5s,baz=154,slow=33						
VNDA	**Vanda**	**64.08**	**166**	P	**P**	**09 22 06.5**	**+0.5**
	comp=Z,1.0nm,0.9s,baz=275,slow=4.2,SNR=5.2						
VNDA				LR	LR	09 47 52.2	
	comp=Z,81nm,18.1s,baz=238,slow=34						
	comp=Z,1.0nm,0.9s						
VNDA	**Vanda**	**64.08**	**166**	IAmb	IAmb	09 22 12.4	
	comp=Z,5.2nm,1.5s						
ASAR	**Alice Springs**	**64.56**	**104**	P	**P**	**09 22 10.1**	**+0.1**
	comp=Z,1.1nm,0.8s,baz=247,slow=5.9,SNR=11						
	comp=Z,1.1nm,0.8s						
GEYT	**Alibeck**	**66.78**	**357**	P	**P**	**09 22 22.8**	**-1.0**
GYA0B	**ALIBECK ARRAY**	**66.78**	**357**	P	**P**	**09 22 22.7**	**-1.1**
GYA0B				IAmb	IAmb	09 23 12.3	
	comp=Z,5.9nm,0.6s						
GNI	**Garni**	**70.58**	**347**	LR	LR	09 51 57.0	
	comp=Z,29nm,19.8s,baz=180,slow=34						
TORD	**Torodi Ar. Bea**	**71.03**	**298**	P	**P**	**09 22 52.6**	**+1.9**
	comp=Z,1.3nm,0.9s,baz=152,slow=4.8,SNR=4.7						
	comp=Z,1.3nm,0.9s						
TORD	**Torodi Ar. Bea**	**71.03**	**298**	P	**P**	**09 22 49.9**	**-0.8**
TORD				IAmb	IAmb	09 22 58.7	
	comp=Z,12nm,1.8s						
KBZ	**Khabaz**	**74.40**	**346**	LR	LR	09 54 07.1	
	comp=Z,25nm,20.4s,baz=198,slow=34						
MKAR	**Makanchi Array**	**77.98**	**15**	P	**P**	**09 23 31.0**	**+0.4**
	comp=Z,1.0nm,0.8s,baz=181,slow=4.9,SNR=6.8						
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**77.98**	**15**	P	**P**	**09 23 30.1**	**-0.5**
AKTO	**Aktyubinsk**	**79.27**	**358**	LR	LR	09 56 21.9	
	comp=Z,21nm,19.2s,baz=175,slow=34						
KURBB	**Kurchatov Arra**	**80.91**	**11**	P	**P**	**09 23 47.5**	**+1.2**
	comp=Z,0.7nm,0.7s,baz=206,slow=6.0,SNR=6.3						
	comp=Z,0.7nm,0.7s						
KURK	**Kurchatov**	**81.01**	**11**	P	**P**	**09 23 47.3**	**+0.5**
ZALV	**Zalesovo Beam**	**85.27**	**14**	P	**P**	**09 24 09.6**	**+0.8**
	comp=Z,1.0nm,0.4s,baz=204,slow=3.2,SNR=4.0						
	comp=Z,1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**85.27**	**14**	P	**P**	**09 24 09.4**	**+0.7**
MDT	**Midelt**	**87.56**	**310**	LR	LR	10 03 19.1	
	comp=Z,47nm,18.5s,baz=168,slow=35						
YKA	**Yellowknife Ar**	**146.52**	**356**	PKPbc	**PKPbc**	**09 31 13.8**	**+0.7**
	comp=Z,1.1nm,0.6s,baz=352,slow=3.1,SNR=11						
ULM	**Lac du Bonnet**	**152.63**	**327**	PKPbc	**PKPbc**	**09 31 28.9**	**+0.1**
	comp=Z,2.5nm,0.7s,baz=56,slow=4.3,SNR=5.0						
PDAR	**Pinedale Array**	**164.43**	**333**	PKP	**PKPdf**	**09 31 37.0**	**+0.6**
	comp=Z,0.4nm,0.8s,baz=69,slow=4.9,SNR=3.0						
TXAR	**Lajitas Array**	**166.64**	**275**	PKP	**PKPdf**	**09 31 40.7**	**+2.2**
	comp=Z,0.2nm,0.7s,baz=106,slow=2.1,SNR=3.9						
TXAR	**Lajitas Array**	**166.64**	**275**		**PKPdf**	**09 31 36.6**	**-1.9**

*IDC **14** 09:16:20.5±1.4,46˚.35N×53˚.19E,h0km,mb3.3/2, mbtmp3.3/6,ML3.2/5,MS2.9/1,Error ellipse: s-maj=29.9km s-min=9.5km az=147.0*

ISC 14 09:16:21.0±1.0,46˚.2N±0˚.1×53˚.22E±0˚.06,h10km,n9, σ1≤25/14,1C-2D,Western Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKTO	**Aktyubinsk**	**5.28**	**36**	Pn	**Pn**	**09 17 40.4**	**+0.6**
	0.4nm,0.3s,baz=220,slow=13,SNR=10						
AKTO				Sn	**Sn**	**09 18 38.2**	**-2.4**
	0.3nm,0.3s,baz=220,slow=23,SNR=1.3						
	0.9nm,0.3s						
AKTO	**Aktyubinsk**	**5.28**	**36**	⇓Pn	**Pn**	**09 17 40.6**	**+0.8**
	3.0nm,0.7s						
AKTO				⇓Sn	**Sn**	**09 18 42.2**	**+1.6**
	1.5nm,0.3s						
AB31	**Akbulak array**	**5.45**	**54**	Pn	**Pn**	**09 17 42.4**	**+0.2**
	0.8nm,0.3s,baz=238,slow=12,SNR=57						
AB31				⇑Sn	**Sn**	**09 18 44.1**	**-0.7**
	1.2nm,0.3s,baz=234,slow=25,SNR=6.0						
BELG	**Belogornoye**	**7.16**	**331**	Pn	**Pn**	**09 18 06.3**	**+0.7**
	0.6nm,0.3s,baz=233,slow=10,SNR=1.3						
BELG				Sn	**Sn**	**09 19 25.6**	**-1.3**
	1.2nm,0.3s,baz=231,slow=23,SNR=9.1						
	2.3nm,0.3s						
KBZ	**Khabaz**	**7.74**	**255**	Pn	**Pn**	**09 18 14.6**	**+0.9**
	0.7nm,0.3s,baz=85,slow=11,SNR=18						
KBZ				Sn	**Sn**	**09 19 40.0**	**-1.3**
	0.9nm,0.3s,baz=119,slow=19,SNR=5.9						
KURBB	**Kurchatov Arra**	**17.32**	**66**	P	**P**	**09 20 22.9**	**-1.2**
	0.1nm,0.3s,baz=265,slow=12,SNR=4.2						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**19.97**	**78**	P	**Pn**	**09 20 55.4**	**+0.5**
	baz=268,slow=10,SNR=1.6						
	0.2nm,0.7s						
FINES	**FINESS Array B**	**21.85**	**324**	P	**P**	**09 21 14.4**	**+1.0**
	0.6nm,0.3s,baz=131,slow=11,SNR=7.1						
FINES				LR	LR	09 30 03.0	
	comp=Z,34nm,20.3s,baz=254,slow=38						
	0.6nm,0.3s						
TORD	**Torodi Ar. Bea**	**54.31**	**250**	P	**P**	**09 25 47.1**	**-0.5**
	0.4nm,1.0s,baz=35,slow=7.4,SNR=1.4						
	0.4nm,1.0s						

*IDC **14** 09:17:38.7±1.7,6˚.47S×150˚.01E,h0km,mb3.6/3, mbtmp3.7/5,ML2.2/2,MS3.1/2,Error ellipse: s-maj=73.7km s-min=25.2km az=128.0*

ISC 14 09:17:42.0±1.2,6˚.3S±0˚.3×150˚.0E±0˚.4,h35km,n8,σ1≤86/6, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**2.89**	**46**	Pn	**Pn**	**09 18 24.9**	**-0.6**
	1.3nm,0.3s,baz=56,slow=22,SNR=2.4						
	16nm,0.7s						
PMG	**Port Moresby**	**4.11**	**222**	Pn	**Pn**	**09 18 42.8**	**+0.4**
	4.4nm,0.3s,baz=41,slow=11,SNR=8.0						
PMG				Sn	**Sn**	**09 19 27.0**	**-2.3**
	6.6nm,0.3s,baz=34,slow=14,SNR=5.6						
	15nm,0.4s						
WRA	**Warramunga Arr**	**20.32**	**227**	P	Pn	09 22 15.3	-2.1
	4.3nm,0.7s,baz=52,slow=11,SNR=31						
	4.3nm,0.7s						
GUMO	**Guam**	**20.43**	**346**	LR	LR	09 29 40.6	
	comp=Z,17nm,21.9s,baz=54,slow=35						
ASAR	**Alice Springs**	**23.13**	**220**	P	**P**	**09 22 44.5**	**-0.7**
	0.5nm,0.6s,baz=54,slow=9.7,SNR=11						
	0.5nm,0.6s						
STKA	**Stephens Creek**	**26.58**	**196**	P	**P**	**09 23 18.4**	**+1.5**
	1.7nm,0.9s,baz=22,slow=11,SNR=3.0						
	1.7nm,0.9s						
MKAR	**Makanchi Array**	**79.64**	**320**	LR	LR	10 05 51.0	
	comp=Z,29nm,19.1s,baz=157,slow=36						
TORD	**Torodi Ar. Bea**	**148.01**	**285**	PKPbc	**PKPab**	**09 37 28.9**	**+1.3**
	0.6nm,0.8s,baz=62,slow=2.9,SNR=2.9						

MAN 14 09:18:48.1,15˚.70N×120˚.13E,h33km,mb3.9,ML2.6, MS2.1,Luzon

*NEIC **14** 09:29:20.7±1.8,8˚.68S±0˚.06×124˚.23E±0˚.09,h55km±9km, mb4.0/6,Error ellipse: s-maj=13.3km s-min=7.5km az=105.0*

*IDC **14** 09:29:21.5±4.3,8˚.78S×124˚.08E,h62km±41km,mb3.3/3, mbtmp3.8/5,ML4.3/2,Error ellipse: s-maj=44.2km s-min=25.1km az=57.0*

*DJA **14** 09:29:24.4±0.3,9˚.S±3˚×12˚.4E±˚,h95km±5km,M4.1/12, mb4.5/5,MLv3.9/12*

ISC 14 09:29:21.6±0.7,8˚.93S±0˚.06×124˚.06E±0˚.07,h74km,n35, σ2≤55/40,mb3.5/5,Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**1.33**	**197**	P	**Pn**	**09 29 47.5**	**+2.9**
	223nm,0.4s,baz=139,slow=2.5,SNR=34						
BATI				S	**Sn**	**09 30 04.2**	**+2.4**
	442nm,0.3s,baz=14,slow=8.9,SNR=8.4						
BATI	**Baumata**	**1.33**	**197**	P	**Pn**	**09 29 46.7**	**+2.2**
BATI				S	**Sn**	**09 30 03.8**	**+2.0**
MMRI	**Maumere**	**1.82**	**279**		**Pn**	**09 29 52.2**	**+1.3**
MMRI	**Maumere**	**1.82**	**279**	P	**Pn**	**09 29 52.3**	**+1.3**
MMRI				S	**Sn**	**09 30 13.0**	**-0.3**
EDFI	**Ende, Flores**	**2.35**	**274**	P	**Pn**	**09 29 59.3**	**+1.2**
EDFI				S	**Sn**	**09 30 25.1**	**-0.9**
BASI	**Baing, Sumba**	**3.66**	**249**	P	**Pn**	**09 30 15.0**	**-0.9**
BASI				S	**Sn**	**09 30 55.0**	**-3.0**
BBSI	**Bau Bau**	**3.72**	**337**	P	**Pn**	**09 30 20.3**	**+3.6**
BSSI	**Bau Bau, Buton**	**4.49**	**308**	P	**Pn**	**09 30 30.4**	**+3.2**
WBSI	**Waikabubak, Su**	**4.66**	**261**	P	**Pn**	**09 30 29.5**	**-0.1**
BKSI	**Bulukumba**	**5.30**	**312**	P	**Pn**	**09 30 40.9**	**+2.7**
	0.1nm21nm,0.8s						
KAPI	**Kappang**	**5.78**	**312**	Pn	**Pn**	**09 30 41.5**	**-3.3**
PLAI	**Plampang**	**6.21**	**270**	P	**Pn**	**09 30 51.3**	**+0.6**
	0.2nm26nm,0.5s						
LUWI	**Luwuk**	**7.94**	**351**	Pn	**Pn**	**09 31 09.8**	**-4.5**
KNRA	**Kununurra**	**8.13**	**146**		**Pn**	**09 31 18.6**	**+1.6**
IGBI	**Denpasar**	**8.81**	**270**	P	**Pn**	**09 31 26.5**	**+0.3**
WB0	**Warramunga Arr**	**14.70**	**138**	Pn	**Pn**	**09 32 45.4**	**-0.4**
WRA	**Warramunga Arr**	**14.79**	**139**	P	**Pn**	**09 32 47.0**	**+0.1**
	1.6nm,0.3s,baz=323,slow=13,SNR=125						
WRA				S	**Sn**	**09 35 21.7**	**-8.1**
	6.2nm,0.7s,baz=312,slow=23,SNR=13						
	2.0nm,0.3s						
WRA	**Warramunga Arr**	**14.79**	**139**		**Pn**	**09 32 46.5**	**-0.4**
WRAB	**Tennant Creek**	**14.79**	**139**	Pn	**Pn**	**09 32 46.6**	**-0.3**
WB2	**Warramunga Arr**	**14.80**	**139**		**Pn**	**09 32 47.1**	**+0.1**
WR0	**Warramunga Arr**	**14.94**	**138**		**Pn**	**09 32 49.1**	**+0.4**
WR0				IAmb	IAmb	09 33 06.6	
	comp=Z,16nm,1.4s						
AS31	**Alice Springs**	**17.43**	**148**		**P**	**09 33 22.2**	**+2.0**
ASAR	**Alice Springs**	**17.43**	**148**	P	**P**	**09 33 21.4**	**+1.2**
	comp=Z,0.7nm,0.3s,baz=318,slow=12,SNR=50						
ASAR				S	**Sn**	**09 36 26.1**	**-7.4**
	comp=Z,2.5nm,0.6s,baz=311,slow=18,SNR=9.2						
	comp=Z,2.4nm,0.5s						
ASAR	**Alice Springs**	**17.43**	**148**		**P**	**09 33 21.2**	**+1.0**
FORT	**Forrest**	**22.06**	**171**	P	**P**	**09 34 10.7**	**+0.3**
FORT				IAmb	IAmb	09 34 11.7	
	comp=Z,15nm,0.9s						
BBOO	**Buckleboo**	**26.23**	**157**	P	**P**	**09 34 51.7**	**+1.9**
STKA	**Stephens Creek**	**28.05**	**147**	P	**P**	**09 35 08.7**	**+2.6**
	comp=Z,0.9nm,0.7s,baz=319,slow=7.2,SNR=3.5						
	comp=Z,0.9nm,0.7s						
STKA	**Stephens Creek**	**28.05**	**147**	IAmb	IAmb	09 35 49.0	
	comp=Z,1.1nm,1.2s						
MKAR	**Makanchi Array**	**66.78**	**330**	P	**P**	**09 40 05.3**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=148,slow=6.0,SNR=2.4						
	comp=Z,0.3nm,0.4s						
KKAR	**Karatay Array**	**71.03**	**321**	P	**P**	**09 40 31.4**	**-0.3**
KURBB	**Kurchatov Arra**	**71.21**	**331**	P	**P**	**09 40 32.9**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=139,slow=5.4,SNR=1.5						
	comp=Z,0.2nm,0.4s						
KURK	**Kurchatov**	**71.23**	**331**	P	**P**	**09 40 32.9**	**+0.2**
KURK	**Kurchatov**	**71.23**	**331**	IAmb	IAmb	09 40 36.7	
	comp=Z,3.4nm,1.4s						
CPUP	**Villa Florida**	**144.93**	**178**	PKPbc	**PKPdf**	**09 48 51.7**	**+0.6**
	comp=Z,2.5nm,0.8s,baz=180,slow=2.0,SNR=4.8						
CPUP	**Villa Florida**	**144.93**	**178**		**PKPdf**	**09 48 51.2**	**+0.2**

*TUL **14** 09:33:48.5±0.2,36˚.62N±0˚.02×98˚.42W±0˚.01,h6km±5km, ML2.5,mb_Lg2.3/20(NEIC),Error ellipse: s-maj=2.4km s-min=0.9km az=160.0*

NEIC 14 09:33:49.0±0.1,36˚.61N±0˚.02×98˚.43W±0˚.01,h2km±6km, Error ellipse: s-maj=2.8km s-min=1.1km az=153.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
U32A	**Winter Ranch,**	**0.52**	**243**	Pg	Pg	09 33 58.7	-0.2
T35A	**Sooner Cattle**	**1.57**	**78**		Pn	09 34 17.1	-0.8
FNO	**Franklin**	**1.59**	**148**		Pn	09 34 17.3	-0.9
WMOK	**Wichita Mounta**	**1.89**	**189**		Pn	09 34 22.5	+0.1
X34A	**Smith Ranch, M**	**2.07**	**166**	IAmb_Lg		09 34 56.3	
	comp=Z,9.0nm,0.8s						
W39A	**Magazine**	**4.03**	**109**	IAmb_Lg		09 35 57.9	
	comp=Z,6.2nm,0.8s						
KSCO	**Kaye Shedlock'**	**4.10**	**307**	IAmb_Lg		09 35 59.4	
	comp=Z,6.8nm,0.7s						
S39A	**Bolivar**	**4.22**	**74**	IAmb_Lg		09 36 07.3	
	comp=Z,4.3nm,0.8s						
MIAR	**Mount Ida**	**4.46**	**116**	IAmb_Lg		09 36 11.4	
	comp=Z,5.1nm,0.9s						
U40A	**Yellville**	**4.50**	**92**	IAmb_Lg		09 36 20.6	
	comp=Z,7.7nm,0.7s						
T25A	**Trinidad**	**4.82**	**278**	IAmb_Lg		09 36 31.5	
	comp=Z,6.3nm,0.8s						
MGMO	**Mountain Grove**	**4.97**	**82**	IAmb_Lg		09 36 26.2	
	comp=Z,4.2nm,0.9s						
FCAR	**Ozark Folk Cen**	**5.15**	**96**	IAmb_Lg		09 36 38.8	
	comp=Z,6.2nm,1.0s						

IDC 14 09:40:28.4±2.6,53˚.61N×86˚.87E,h0km,mbtmp2.7/2, ML2.2/2,Error ellipse: s-maj=23.3km s-min=14.2km az=76.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.27**	**287**	*i*		09 48 54.7	
	baz=103,slow=314,SNR=6.5						
ZALV	**Zalesovo Beam**	**1.27**	**287**	Pg	Pg	09 40 51.1	-1.6
	0.9nm,0.3s,baz=102,slow=17,SNR=13						
ZALV				Lg	Lg	09 41 09.9	
	1.0nm,0.3s,baz=108,slow=28,SNR=13						
KURBB	**Kurchatov Arra**	**5.94**	**243**	Pn	Pn	09 41 59.0	+1.3
	baz=61,slow=13,SNR=5.0						
KURBB				Lg	Lg	09 43 35.0	
	baz=63,slow=34,SNR=4.3						
	0.7nm,0.7s						
MKAR	**Makanchi Array**	**7.43**	**205**	Pn	Pn	09 42 19.4	+1.4
	0.1nm,0.3s,baz=26,slow=11,SNR=4.3						
MKAR				Lg	Lg	09 44 21.4	
	baz=32,slow=30,SNR=6.9						
	0.2nm,0.3s						

*NEIC **14** 09:40:42.8±1.3,23˚.734N±0˚.009×121˚.42E±0˚.02, h17km±3km,mb4.2/11,ML4.3(TAP),Error ellipse: s-maj=2.5km s-min=1.2km az=78.0*

*NIED **14** 09:40:42.5,23˚.71N×121˚.50E,h15km,MW3.6,Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁴Nm; M_{rr}1.31; $M_{\theta\theta}$-1.05; $M_{\phi\phi}$-0.27; $M_{r\theta}$0.17; $M_{\theta\phi}$-2.45; $M_{\phi r}$-1.86; Fault plane solution: $M_0$3.30000×10¹⁴ NP1:φ88.00000°, δ50.00000°,λ157.00000°. NP2:φ193.00000°,δ73.00000°, λ42.00000°.*

*JMA **14** 09:40:42.5±0.1,23˚.7N±0˚.3×121˚.5E±0˚.6,h15km±1km, MV3.6/12,TAIWAN REGION*

*TAP **14** 09:40:43.1,23˚.74N×121˚.40E,h21km,ML4.2,B*

*ASIES **14** 09:40:43.4,23˚.74N×121˚.35E,h26km,MW3.6*

*IDC **14** 09:40:47.5±4.5,23˚.69N×121˚.82E,h66km±49km,mb3.5/7, mbtmp3.8/9,ML3.6/2,MS2.8/3,Error ellipse: s-maj=34.7km s-min=17.3km az=58.0*

ISC 14 09:40:43.2±0.5,23˚.73N±0˚.01×121˚.44E±0˚.02,h21km±1km, n175,σ0≤93/272,mb3.9/13,17C-29D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EGFH	**Guangfu**	**0.06**	**192**	⇓*i*P	**Pb**	**09 40 46.8**	**-0.2**
	baz=159						
EGFH				*i* S	**Sb**	**09 40 49.4**	**-0.2**
	baz=159						
ESL	**Shilin**	**0.09**	**355**	⇓*i*P	**Pb**	**09 40 47.0**	**-0.2**
	baz=27						
ESL				*i* S	**Sb**	**09 40 49.6**	**-0.4**
	baz=27						
TEGC	**Jichi Village**	**0.09**	**101**	⇓*i*P	**Pb**	**09 40 48.0**	**+0.8**
	baz=102						
TEGC				*i* S	**Sb**	**09 40 51.9**	**+1.9**
	baz=102						
TEYL	**Yanliau Villag**	**0.20**	**46**	⇑*i*P	**Pb**	**09 40 49.3**	**+0.2**
	baz=48						
TEYL				*e*S	**Sb**	**09 40 54.2**	**+0.9**
	baz=48						
HGSD	**Ruisui**	**0.23**	**184**	⇓*i*P	**Pb**	**09 40 49.2**	**0.0**
	baz=175						
HGSD				*e*S	**Sb**	**09 40 54.1**	**+0.7**
	baz=175						
ETM	**Tongmen**	**0.24**	**11**	⇑*i*P	**Pb**	**09 40 48.8**	**-0.5**
	baz=21						
ETM				S	**Sb**	**09 40 52.8**	**-0.7**
	baz=21						
EHY	**Hungye**	**0.25**	**206**	⇓*i*P	**Pb**	**09 40 48.5**	**-0.8**
	baz=195						
EHY				S	**Sb**	**09 40 52.6**	**-1.0**
	baz

ETLH				eS		Sb	09 40 58.7	-0.9	YHNB	Yeheng		0.94	356	Pg		Pb	09 41 00.5	-0.3	EAST	Anshuo		1.45	202	eP		Pn	09 41 08.3	+0.2
	baz=9.0								YHNB					Sg		Sb	09 41 12.6	-0.3		baz=200								
YUS	Yu-Shan	0.51	242	⇑iP		Pb	09 40 53.5	-0.2	YHNB	Yeheng		0.94	356	⇑eP		Pb	09 41 00.5	-0.3	TNOU	National Taiwa		1.45	12	eP		Pb	09 41 08.8	-0.6
YUS	baz=238			i S		Sb	09 41 00.1	-0.7	YHNB	baz=359				eS		Sb	09 41 12.6	-0.3		baz=14								
SMLT	Sun Moon Lake	0.52	287	⇓iP		Pb	09 40 53.2	-0.5	NSK	Sanguang		0.95	355	eP		Pb	09 41 00.4	-0.5	YM08	YM08		1.46	5	eP		Pn	09 41 08.5	+0.1
SMLT	baz=288			S		Sb	09 40 59.9	-1.0	NSK	baz=358				eS		Sb	09 41 12.7	-0.4		baz=7.0								
WPL	Puli Township	0.53	303	⇓P		Pb	09 40 53.3	-0.5	NFF	Wufeng Townshi		0.95	342	⇓eP		Pn	09 41 01.1	-0.2	TAWH	Dawu Township		1.47	200	eP		Pn	09 41 08.5	0.0
WPL	baz=304			eS		Sb	09 40 59.8	-1.2	NFF	baz=344				eS		Sb	09 41 12.8	-0.3		baz=199								
WHYT	Xinyi Township	0.54	267	eP		Pb	09 40 53.6	-0.5	TWC	Suao		0.95	23	eP		Pb	09 40 59.8	-1.2	SSPT	Xinbi		1.48	213	eP		Pb	09 41 09.4	-0.5
WHYT	baz=265			eS		Sb	09 41 00.4	-1.0	TWC	baz=26				eS		Sn	09 41 13.9	-0.4		baz=212								
FULB	Fuli	0.54	194	⇓P		Pb	09 40 53.5	-0.6	WDJ	Dajia District		0.96	310	eP		Pn	09 41 02.4	+1.0	SCZT	Fangliau		1.55	209	eP		Pb	09 41 10.2	-0.9
FULB	baz=190			eS		Sn	09 41 03.6	-0.6	WDJ	baz=311				eS		Sn	09 41 14.7	+0.3		baz=208								
FUSS	Fushou	0.55	341	⇓iP		Pb	09 40 54.1	-0.3	CHY	Chiayi		0.96	256	eP		Pn	09 41 01.5	+0.1	JYNG	Yonagunijimaku		1.55	62	P		Pn	09 41 09.6	0.0
FUSS	baz=344			S		Sb	09 41 00.9	-1.0	CHY	baz=255				eS		Sn	09 41 14.1	-0.4	YOJ	Yonaguni jima		1.61	63	Pn		Pn	09 41 10.6	+0.2
DPDB	Guoxing	0.56	303	⇓iP		Pb	09 40 54.0	-0.4	TWG	Pinlang		0.96	201			Pb	09 41 01.1	-0.1	YOJ	Yonaguni jima		1.61	63	⇑P		Pn	09 41 10.5	+0.2
DPDB	baz=304			eS		Sb	09 41 01.1	-1.0	TWG							Sn	09 41 15.3	+0.8	YOJ	baz=64				eS		Sb	09 41 32.1	0.0
TYC	Yuchr	0.56	288	⇓iP		Pb	09 40 53.8	-0.7	TWG	Pinlang		0.96	201	eP		Pb	09 40 58.8	-2.4	YOJ	Yonaguni jima		1.61	63	P		Pn	09 41 10.3	0.0
TYC	baz=289			eS		Sb	09 41 00.7	-1.4	TWG	baz=198				eS		Sn	09 41 15.0	+0.5	YOJ					eS		Sb	09 42 07.6	0.0
TWT	Tachien	0.58	335	⇓P		Pb	09 40 54.7	-0.1	TWGBT	Beinan		0.96	200	eP		Pb	09 40 58.8	-2.4	SLIU	Shizi		1.62	202	eP		Pn	09 41 10.6	+0.1
TWT	baz=337			eS		Sb	09 41 01.7	-1.0	TWGBT	baz=198				eS		Sn	09 41 14.9	+0.3		baz=200								
TDCB	Techi	0.58	334	⇓P		Pb	09 40 54.7	-0.2	WTK	Tuku		0.97	268	eP		Pn	09 41 01.5	0.0	WDGT	Dungji		1.70	254	eP		Pn	09 41 11.7	+0.1
TDCB	baz=337			eS		Sb	09 41 01.6	-1.3	WTK	baz=267				eS		Sn	09 41 14.1	-0.4	WDGT	baz=253				eS		Sn	09 41 31.9	-0.8
WCS	Beigang Elemen	0.59	304	⇓iP		Pb	09 40 54.4	-0.4	NSTT	Nanjuang		0.98	336	⇓eP		Pn	09 41 02.1	+0.4	IRIF	Iriomote-Funau		2.18	73	eP		Pn	09 41 18.5	+0.3
WCS	baz=305			S		Sb	09 41 01.4	-1.4	NSTT	baz=338				eS		Sn	09 41 14.2	-0.9	IRIF					S		Sn	09 41 45.8	+1.3
ALS	Alishan	0.62	250	⇑iP		Pb	09 40 55.5	-0.2	TWK	Hsinying		0.99	243	eP		Pn	09 41 01.9	+0.1	HATJ	Hateruma jima		2.19	81	P		Pn	09 41 18.4	+0.1
ALS	baz=247			eS		Sb	09 41 03.6	-0.6	TWK	baz=240				eS		Sn	09 41 14.9	-0.3	HATJ					eS		Sn	09 41 44.1	-0.7
CHKT	Chengkung	0.63	186	eP		Pb	09 40 54.9	-0.6	WRL	Guolierlin Hig		0.99	280	eP		Pn	09 41 01.6	-0.2	JKRS	Kuro-shima		2.40	77	P		Pn	09 41 21.8	+0.5
CHKT	baz=182			eS		Sb	09 41 04.9	+0.9	WRL	baz=280				eS		Sn	09 41 14.8	-0.4	JKRS					S		Sn	09 41 50.9	+0.8
WJS	Zhushan	0.66	278	eP		Pn	09 40 56.3	-1.0	LIOB	Emei		0.99	337	⇓eP		Pn	09 41 02.4	+0.5	JIJ	Ishigaki jima		2.55	75	P		Pn	09 41 23.2	-0.1
WJS	baz=278			eS		Sn	09 41 06.0	-1.0	LIOB	baz=339				eS		Sn	09 41 14.7	-0.6	JIJ					eS		Sn	09 41 52.9	-0.8
ECS	Chishang	0.66	198	eP		Pb	09 40 56.2	+0.1	CHN1	Nanshi		1.00	237	eP		Pn	09 41 02.2	+0.2	KNMB	Chin-men Tao		2.88	285	Pn		Pn	09 41 27.6	-0.3
ECS	baz=195			eS		Sn	09 41 06.3	-0.8	CHN1	baz=236				eS		Sn	09 41 16.5	+1.1	JTJ	Tarama		3.11	72	P		Pn	09 41 31.3	+0.2
ELDTW	Lidau	0.66	216	eP		Pb	09 40 55.0	-1.2	NMLH	Miaoli		1.00	324	eP		Pn	09 41 02.8	+0.8	JTJ					eS		Sn	09 42 07.6	0.0
ELDTW	baz=212			eS		Sb	09 41 04.0	-1.1	NMLH	baz=325				eS		Sn	09 41 15.5	0.0	JIRB	Irabujima		3.58	71	eS		Sn	09 42 20.0	+1.0
NNSB	Datong	0.70	356	⇑P		Pb	09 40 56.5	-0.3	SNST	Tainan City		1.00	240	eP		Pn	09 41 02.2	+0.2	JMJ2	Miyako jima3		3.69	73	eS		Sn	09 42 21.7	-0.1
NNSB	baz=359			eS		Sb	09 41 05.7	-0.4	SNST	baz=238				eS		Sn	09 41 15.8	+0.3	JOW	Kunigami		6.91	62	P		Pn	09 42 21.7	-1.6
WNT	Mingjian	0.71	282	⇓eP		Pn	09 40 57.6	-0.4	TTN	Taitung		1.01	196	eP		Pb	09 41 00.5	-1.4		3.5nm,0.3s,baz=169,slow=13,SNR=29								
WNT	baz=282			eS		Sn	09 41 07.8	-0.5	TWE	baz=193				eS		Sn	09 41 15.4	-0.3		13nm,0.2s								
WHP	Taichung City	0.71	321	⇓eP		Pb	09 40 56.7	-0.2	TWE	Neicheng		1.01	12	eP		Pb	09 41 00.5	-1.5	JOW	Kunigami		6.91	62	Pn		Pn	09 42 22.4	-0.9
WHP	baz=322			eS		Sb	09 41 06.4	0.0	SGST	baz=15				eS		Sn	09 41 15.4	-0.3	KSRS	Korea Array		14.77	21	P		Pn	09 44 12.7	+1.9
CHN5	Tsauling	0.71	260	eP		Pn	09 40 57.3	-0.8	SLGT	Jiashian		1.02	231	eP		Pb	09 41 01.7	-0.4		0.1nm,0.3s,baz=197,slow=11,SNR=1.7								
NNS	baz=258			eS		Sb	09 41 06.5	+0.1	NWLT	Liugui		1.03	225	eP		Pn	09 41 02.8	+0.4		0.5nm,0.4s								
NNS	Nan Shan	0.71	355	⇑eP		Pb	09 40 56.8	-0.2	NWLT	baz=223				eS		Sb	09 41 15.5	-0.4	JHJ	Hachijo jima 2		18.63	56	LR		LR	09 51 20.1	
WNT1	Nantou City	0.72	285	eP		Pn	09 40 58.0	-0.1	WULA	Wulai		1.05	3	eP		Pb	09 41 02.0	-0.6		comp=Z,29nm,20.0s,baz=326,slow=34								
WNT1	baz=284			eS		Sn	09 41 08.4	-0.1	LDUT	baz=5.0				eS		Sb	09 41 15.5	-0.4	CMAR	Chiang Mai Arr		21.63	260	P		P	09 45 36.1	+4.0
ENA	Nanau	0.75	21	eP		Pb	09 40 56.6	-0.9	LDUT	Ludao		1.05	179	eP		Pn	09 41 00.6	-2.0		1.0nm,0.3s,baz=60,slow=8.7,SNR=5.4								
ENA	baz=25			eS		Sn	09 41 08.4	-0.9	HSN1	baz=177		1.11	340	eP		Pb	09 41 14.7	-1.2	CMAR					LR		LR	09 53 35.9	
WWF	Wufeng	0.75	295	eP		Pn	09 40 58.4	-0.1	WSF	Hsinchu		1.12	266	eP		Pb	09 41 05.0	+1.2		comp=Z,15nm,21.5s,baz=250,slow=35								
WWF	baz=295			eS		Sn	09 41 09.3	+0.1	ICHU	baz=341		1.13	251	eP		Pb	09 41 03.7	-0.1		1.0nm,0.3s								
EDH	Donghe	0.76	190	⇓eP		Pb	09 40 56.4	-1.3	WSL	Yijhu		1.13	260	eP		Pb	09 41 04.3	+0.4	CMAR	Chiang Mai Arr		21.63	260	P		P	09 45 32.7	+0.6
EDH	baz=187			eS		Sn	09 41 08.6	-0.9	WSL	baz=250				eS		Sn	09 41 19.2	+0.7	USA0B	Ussuriysk Arra		22.18	20	P		P	09 45 37.1	-0.7
EWUT	Wuta	0.78	23	eP		Pb	09 40 57.0	-1.0	HSN	baz=259		1.15	338	eP		Pb	09 41 04.2	+0.2	USA0B					IAmb		IAmb	09 46 20.0	
EWUT	baz=26			eS		Sb	09 41 08.4	+0.2	NTC	Hsinchu		1.18	17	eP		Pn	09 41 18.8	+0.1		comp=Z,4.2nm,0.6s								
WGK	Gukeng	0.81	267	eP		Pn	09 40 59.1	-0.2	NTC	baz=342				eS		Sn	09 41 05.7	+1.3	USRK	Ussuriysk Ar.		22.18	20	P		P	09 45 37.0	-0.8
WGK	baz=266			eS		Sn	09 41 10.6	-0.1	TSMG	baz=19		1.19	252	eP		Pn	09 41 03.7	-0.7	SONM	Songino Array		26.88	337	P		P	09 46 24.5	+1.9
LATG	Datong	0.81	6	⇑eP		Pb	09 40 57.7	-0.9	CHN8	baz=19		1.19	252	eP		Pn	09 41 20.7	+0.9		comp=Z,1.4nm,0.8s,baz=158,slow=11,SNR=4.9								
LATG	baz=8.0			eS		Sb	09 41 08.9	-0.2	EGS	Yiju		1.20	22	eP		Pb	09 41 04.1	-0.5		comp=Z,1.4nm,0.8s								
TCU	Taichung	0.82	301	⇓eP		Pn	09 40 59.5	0.0	SCST	baz=250		1.21	226	eP		Pb	09 41 05.7	+0.5	SONM	Songino Array		26.88	337	IAmb		IAmb	09 46 25.8	
TCU	baz=302			eS		Sn	09 41 11.1	+0.2	ECL	baz=24		1.21	202	eP		Pn	09 41 06.2	+0.9		comp=Z,1.9nm,1.1s								
WYL	Yuanlin Townsh	0.82	287	eP		Pn	09 40 59.6	+0.1	SHHT	baz=225		1.23	235	eP		Pb	09 41 24.1	+3.5	MK31	Makanchi Array		38.83	316	P		P	09 48 06.7	+0.1
WYL	baz=287			eS		Sn	09 41 11.5	+0.5	SSD	baz=225		1.23	217	eP		Pb	09 41 07.3	+1.6	MK31					IAmb		IAmb	09 48 08.9	
STYH	Taoyuan	0.82	228	⇓P		Pb	09 40 58.6	-0.2	NHDH	baz=234		1.23	4	eP		Pb	09 41 05.5	-0.1		comp=Z,1.8nm,1.1s								
STYH	baz=226			eS		Sb	09 41 09.2	-0.3	ECL	baz=215		1.21	202	eP		Pb	09 41 05.5	-0.3	MKAR	Makanchi Array		38.83	316	P		P	09 48 07.9	+1.2
WDLH	Douliu	0.83	268	eP		Pn	09 40 59.4	-0.2	SHHT	baz=200		1.23	235	eP		Pb	09 41 22.0	+0.7		comp=Z,0.8nm,0.6s,baz=107,slow=10,SNR=8.9								
WDLH	baz=267			eS		Sn	09 41 10.8	-0.3	SSD	baz=5.0		1.23	217	eP		Pb	09 41 05.5	-0.1		comp=Z,0.8nm,0.6s								
TPUB	Ta-pu	0.86	240	Pg		Pn	09 40 59.8	-0.3	TATO	Taipei		1.24	2			Pn	09 41 05.1	-0.2	MKAR	Makanchi Array		38.83	316	P		P	09 48 07.0	+0.4
TPUB						Sn	09 41 11.7	-0.3	TATO					Sn		Sb	09 41 21.6	+0.1	ZAA0	Zalesovo Array		40.75	327	P		P	09 48 22.1	-0.4
TPUB	Ta-pu	0.86	240	⇑eP		Pn	09 40 59.7	-0.3	TATO	Taipei		1.24	2	eP		Pn	09 41 05.4	+0.1	ZAA0					IAmb		IAmb	09 48 27.8	
TPUB	baz=238			eS		Sn	09 41 11.5	-0.5	TSMG	baz=4.0		1.25	216	⇑eP		Pb	09 41 06.0	-0.1		comp=Z,5.9nm,1.4s								
LONT	Longtian	0.87	199	eP		Pb	09 40 57.6	-1.9	TWM1	Majia		1.30	226	eP		Pb	09 41 08.4	+1.5	ZALV	Zalesovo Beam		40.75	327	P		P	09 48 22.8	+0.3
LONT	baz=197			eS		Sn	09 41 12.5	+0.4	NHW	baz=214		1.32	344	eP		Pb	09 41 29.4	+6.2		comp=Z,0.8nm,0.3s,baz=110,slow=7.8,SNR=2.7								
TWQ1	Liyutan	0.87	315	⇓eP		Pn	09 41 00.3	+0.1	MASBT	Shuangxi		1.29	16	eP		Pn	09 41 05.3	-0.7		comp=Z,0.8nm,0.3s								
TWQ1	baz=317			eS		Sn	09 41 12.2	-0.1	TWS1	baz=18		1.37	359	eP		Pb	09 41 07.8	-0.2	ZALV	Zalesovo Beam		40.75	327	P		P	09 48 23.4	+0.8
NDT	Datong Townshi	0.87	4	eP		Pb	09 40 59.1	-0.6	TWB1	Shoushan		1.30	226	eP		Pb	09 41 08.4	+1.5		comp=Z,0.8nm,0.3s								
NDT	baz=7.0			eS		Sb	09 41 10.6	-0.3	NWF	baz=224		1.37	13	eP		Pn	09 41 07.3	+0.1		comp=Z,0.8nm,0.3s								
WCHH	Zhanghua	0.88	294	eP		Pn	09 41 00.5	+0.1	WFSB	Shuangxi		1.29	16	eP		Pn	09 41 05.3	-0.7	H11N1	WAKE ISLAND Hy		42.28	86	T		T	10 33 38.4	
WTP	Ta-pu	0.90	238	⇑eP		Pn	09 41 00.4	-0.2	TIPB	baz=18		1.37	13	eP		Pb	09 41 07.3	+0.2		baz=283								
WTP	baz=235			eS		Sn	09 41 11.9	-1.1	WFSB	Wu-fen Shan		1.37	13	eP		Pn	09 41 07.3	+0.2	H11N2	WAKE ISLAND Hy		42.28	86	T		T	10 33 36.2	
CHN2	Minshiung	0.91	258	eP		Pn	09 41 01.0	+0.3	SXI1	baz=15		1.42	16	eP		Pn	09 41 07.7	-0.1		baz=283								
CHN2	baz=256			eS		Sn	09 41 13.7	+0.6	YM01	Grass Mountain		1.42	5	eP		Pn	09 41 07.6	-0.2	H11N3	WAKE ISLAND Hy		42.30	86	T		T	10 33 38.2	
ENTT	Nioudou	0.92	7	eP		Pb	09 40 59.7	-0.7		baz=18										baz=283								
ENTT	baz=10.0			eS		Sb	09 41 12.1	0.0		baz=6.0									H11S3	WAKE ISLAND Hy		42.40	88	T		T	10 33 48.8	
NSY	Sanyi	0.93	318	⇓eP		Pn	09 41 01.6	+0.7												baz=284,slow=75,SNR=17								
NSY	baz=320			eS		Sn	09 41 13.9	+0.2											H11S1	WAKE ISLAND Hy		42.41	88	T		T	10 33 50.6	
NDS	Dongshan	0.94	15	eP		Pb	09 40 59.5	-1.2												baz=284,slow=75,SNR=11								
NDS	baz=18			eS		Sn	09 41 13.3	-0.5											H11S2	WAKE ISLAND Hy		42.41	88	T		T	10 33 45.7	
	baz=18																			baz=284,slow=75,SNR=9.2								
																			PSA00	Pilbara Seismi		45.05	182	P		P	09 48 57.1	-0.5
																			WRA	Warramunga Arr		45.19	163	P		P	09 48 56.5	-2.3
																				comp=Z,3.9nm,0.5s,baz=344,slow=8.9,SNR=4.8								
																				comp=Z,0.3nm,0.5s								
																			WB2	Warramunga Arr		45.19	163	P		P	09 48 57.6	-1.1
																			WB2					IAmb		IAmb	09 49 41.0	
																				comp=Z,13nm,1.4s								
																			WR0	Warramunga Arr		45.26	163	P		P	09 48 58.1	-1.2
																			ASAR	Alice Springs		48.64	165	P		P	09 49 24.8	-1.0
																				comp=Z,0.2nm,0.4s,baz=342,slow=6.8,SNR=7.5								
																				comp=Z,0.2nm,0.4s								
																			ABKAR	Akbulak array		53.93	315	P		P	09 50 05.2	0.0
																			STKA	Stephens Creek		58.55	160	P		P	09 50 35.6	-2.6
																				comp=Z,0.7nm,0.6s,baz=330,slow=8.1,SNR=1.7								
																				comp=Z,0.7nm,0.6s								
																			STKA	Stephens Creek		58.55	160	P		P	09 50 37.6	-0.7
																			STKA					IAmb		IAmb	09 50 51.8	
																				comp=Z,2.2nm,1.4s								
																			K20K	Telida		66.62	29	P		P	09 51 30.9	-0.9
																			K20K					IAmb		IAmb	09 52 03.5	
																				comp=Z,5.7nm,1.5s								
																			H21K	Melozitna Rive		66.91	27	P		P	09 51 33.7	+0.1
																			H21K					IAmb		IAmb	09 51 49.4	
																				comp=Z,3.3nm,1.2s								
																			BCAR	Beaver Creek A		72.12	28	P		P	09 52 05.9	0.0
																			NOA	NORSAR Array B		78.74	332	LR		LR	10 31 28.2	
																				comp=Z,11nm,19.5s,baz=220,slow=38								

IDC **14** *09:41:24.5±12.0, 20.30S×174.94W, h207km±89km, mb3.2/3, mbtmp3.9/5, Error ellipse: s-maj=149.0km s-min=55.2km az=140.0*

ISC 14 09:41:23.0±2.6, 20.4S±0.4×174.8W±0.3, h200km, n9, σ0 47/6, mb3.4/3, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	7.24	290	P	P	Pn	09 43 06.3	-0.2
	3.0nm,0.6s,baz=89,slow=15,SNR=4.4							
DZM	Mont Dzumac	17.54	261	P	P	P	09 45 14.1	+0.1
	15nm,1.0s,baz=86,slow=13,SNR=2.7							
STKA	Stephens Creek	40.51	245	P	P	P	09 48 42.1	-0.5
	1.7nm,0.8s,baz=72,slow=11,SNR=3.6							
	1.7nm,0.8s							
ASAR	Alice Springs	47.43	256	P	P	P	09 49 38.1	+0.3
	1.2nm,0.8s,baz=96,slow=8.6,SNR=12							
	1.2nm,0.8s							
WRA	Warramunga Arr	47.56	261	P	P	P	09 49 39.3	+0.6
	0.5nm,0.6s,baz=96,slow=7.9,SNR=12							
	0.5nm,0.6s							
H03S2	Juan Fernandez	83.58	124	T	T		11 25 42.7	
	baz=245							
H03S1	Juan Fernandez	83.59	124	T	T		11 25 45.7	
	baz=245							
H03S3	Juan Fernandez	83.59	124	T	T		11 25 43.6	
	baz=245							
KEST	Kesra	164.30	347	PKP	PKPdf		10 01 02.8	-0.1
	3.3nm,0.5s,baz=26,slow=1.8,SNR=4.4							

KRSC **14** *09:42:42.7±1.5, 56.20N×163.61E, h5km±18km, ML4.1*
IDC **14** *09:42:42.8±1.5, 56.40N×163.29E, h0km, mb3.6/6, mbtmp3.6/7, Error ellipse: s-maj=52.7km s-min=21.5km az=164.0*

ISC 14 09:42:43.7±1.5, 56.32N±0.05×163.55E±0.04, h9km±10km, n47, σ1 9 75/51, mb3.6/6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.42	255	eP	P	Pg	09 42 51.6	-0.3
KBG	Krutoberegovo	0.47	263	eP	P	Pg	09 42 52.5	-0.4
KBG				eS	S	Sg	09 42 59.6	+0.5
SMKR	Semkarok	1.18	284	eP	P	Pn	09 43 05.3	-1.1
BDR	Baidarnaya	1.32	282	eP	P	Pn	09 43 07.8	-0.5
SRKR	Sorokina	1.36	285	eP	P	Pn	09 43 08.7	-0.2
ZLN	Zelenaya	1.56	260	eP	P	Pb	09 43 13.4	+0.6

ZLN				eS		Sg	09 43 34.5	+0.6
CIRR	Tsirk	1.58	264	eP		Pb	09 43 13.5	+0.5
KLY	Klyuchi	1.61	271	eP		Pn	09 43 10.8	-1.4
KLY				eS		Sn	09 43 31.6	-1.5
LGNR	Loginova	1.61	263	eP		Pb	09 43 13.6	-0.2
BZGR	Bezymyannyi-Gr	1.64	258	eP		Pn	09 43 13.2	+0.5
KRSR	Krestovskiy	1.67	268	eP		Pn	09 43 13.5	+0.4
KRSR				eS		Sb	09 43 35.6	0.0
BKI	Bering	1.77	128	eP		Pn	09 43 13.5	-0.8
BKI				eS		Sn	09 43 35.8	-1.1
KIRR	Kirishev	1.83	260	eP		Pb	09 43 16.8	-0.6
KPT	Kopyto	1.89	261	eP		Pn	09 43 17.4	+1.2
KPT				eS		Sb	09 43 42.7	+0.5
KMNR	Kamenistaya	1.94	255	eP		Pb	09 43 18.6	-0.6
MKZ	Mys Kozlova	2.05	211	eP		Pn	09 43 17.2	-1.0
TUMR	Tumrok	2.18	243	eP		Pn	09 43 21.7	+1.5
TUMR				eS		Sb	09 43 49.6	-0.9
ESO	Esso	2.74	264	eP		Pn	09 43 29.4	+1.6
OSSR	Ossora	2.95	355	eP		Pn	09 43 31.7	+1.1
KII	Karymskiy	3.28	227	eP		Pn	09 43 37.1	+1.9
PALN	Palana	3.38	327	eP		Pb	09 43 42.4	-1.2
SPN	Mys Shipunski	3.82	214	eP		Pn	09 43 41.6	-0.9
NLC	Nalytchevo	3.98	219	eP		Pn	09 43 47.5	+2.7
SDLR	Sedlovina	4.07	223	eP		Pn	09 43 47.1	+1.0
KRX	Arik	4.10	226	eP		Pn	09 43 48.0	+1.5
KRER	Koryakskii	4.10	225	eP		Pn	09 43 49.9	+3.3
SMAR	Somma	4.11	224	eP		Pn	09 43 48.1	+1.3
AVH	Avacha	4.13	224	eP		Pn	09 43 49.3	+2.3
UGLR	Uglovaya	4.14	223	eP		Pn	09 43 48.3	+1.2
KOK	Koryaka	4.15	225	eP		Pn	09 43 49.6	+2.3
GNL	Ganaly	4.16	233	eP		Pn	09 43 50.2	+2.8
DALK	Dalny	4.31	222	eP		Pn	09 43 50.3	+1.0
PETK	Petropavlovsk- 1.7nm,0.6s,baz=59,slow=17,SNR=1.5	4.67	229	Pn		Pn	09 43 55.1	+0.8
PETK				Sn		Sb	09 44 56.3	-5.7
	0.2nm,0.3s,baz=186,slow=13,SNR=1.0							
KRMR	Karymshinskiy	4.70	224	eP		Pn	09 43 57.7	+3.0
GRL	Gorelyy	4.94	223	eP		Pn	09 44 01.9	+3.8
MTVR	Mutnovka	4.96	221	eP		Pn	09 44 00.4	+2.1
APC	Apacha	5.03	230	eP		Pn	09 44 04.3	+5.1
ASAK	Asacha	5.14	222	eP		Pn	09 44 02.9	+2.1
KDAK	Kodiak Island 7.2nm,1.0s,baz=300,slow=17,SNR=2.1	23.60	68	P		P	09 47 55.3	+0.9
	7.2nm,1.0s							
ILAR	Eielson Array 0.9nm,0.5s,baz=270,slow=9.7,SNR=20	25.16	50	P		P	09 48 09.8	+1.0
	0.9nm,0.5s							
H11N2	WAKE ISLAND Hy baz=357,slow=76,SNR=1340	36.62	175	T		T	10 28 34.2	
H11N3	WAKE ISLAND Hy baz=357,slow=76,SNR=1493	36.63	175	T		T	10 28 36.5	
H11N1	WAKE ISLAND Hy baz=357,slow=76,SNR=1215	36.63	175	T		T	10 28 37.8	
YKA	Yellowknife Ar 0.5nm,0.5s,baz=301,slow=8.5,SNR=8.7	39.45	46	P		P	09 50 15.4	+1.8
	0.5nm,0.5s							
KURBB	Kurchatov Arra 0.3nm,0.3s,baz=56,slow=7.9,SNR=2.6	47.86	301	P		P	09 51 20.6	-0.7
	0.3nm,0.3s							
MKAR	Makanchi Array 0.2nm,0.4s,baz=56,slow=9.3,SNR=3.1	48.58	295	P		P	09 51 25.4	-1.6
	0.2nm,0.4s							
TXAR	Lajitas Array 0.1nm,0.6s,baz=297,slow=6.0,SNR=2.4	67.60	71	P		P	09 53 41.2	+0.6
	0.1nm,0.6s							

*IDC **14** 09:45:16.9±2.5, 53.62N×86.90E, h0km, mbtmp3.0/2, ML2.4/2, Error ellipse: s-maj=22.8km s-min=12.8km az=75.0*
*NNC **14** 09:45:19.9±5.6, 53.37N×86.53E, h0km, mb2.8, mpv2.6, Error ellipse: s-maj=43.1km s-min=18.1km az=73.0, Suspected Mining explosion.*

ISC 14 09:45:22.5±3.1, 53.5N±0.1×86.3E±0.2, h0km, n8, σ2.8 02/12, 5C-5D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
I46RU	ZALESOVO INFRA	1.01	300	*i*			09 53 44.6	
	0.1nm,1.1s,baz=103,slow=316,SNR=6.2							
ZAA0	Zalesovo Array	1.01	300	⇑P		Pg	09 45 40.5	-1.4
	0.4nm,0.4s							
ZAA0				⇓S		Sb	09 45 59.4	+2.6
	6.2nm,0.8s							
ZALV	Zalesovo Beam	1.01	300	Pg		Pg	09 45 40.7	-1.2
	1.0nm,0.3s,baz=107,slow=18,SNR=19							
ZALV				Lg		Lg	09 45 58.3	
	1.8nm,0.3s,baz=105,slow=27,SNR=13							
KURK	Kurchatov	5.48	243	⇑Pn		Pn	09 46 45.9	+0.6
	0.9nm,0.6s							
KURK				⇑Sn		Sn	09 47 50.6	+1.7
	0.6nm,0.6s							
KURK				⇑Lg		Lg	09 48 21.8	
	6.6nm,1.0s							
KURBB	Kurchatov Arra	5.57	243	Pn		Pn	09 46 47.1	+0.5
	baz=59,slow=14,SNR=6.6							
KURBB				Lg		Lg	09 48 23.8	
	baz=60,slow=35,SNR=5.7							
	1.4nm,0.8s							
KURBB	Kurchatov Arra	5.57	243	⇓Pn		Pn	09 46 47.2	+0.6
	2.0nm,0.8s							
KURBB				⇑Sn		Sn	09 47 47.4	-3.9
	1.3nm,0.7s							
KURBB				⇓Lg		Lg	09 48 24.7	
	7.0nm,0.9s							
MK31	Makanchi Array	7.15	203	Pn		Pn	09 47 09.0	+0.7
	0.2nm,0.5s,baz=26,slow=12,SNR=6.4							
MK31				⇓Sn		Sn	09 48 28.8	-1.4
	0.3nm,0.5s							
MK31				⇓Lg		Lg	09 49 12.0	
	2.2nm,0.8s,baz=27,slow=31,SNR=4.9							
MKAR	Makanchi Array	7.15	203	Pn		Pn	09 47 08.0	-0.3
	0.1nm,0.3s,baz=25,slow=12,SNR=7.6							
MKAR				Sn		Sn	09 48 32.4	+2.2
	0.1nm,0.3s,baz=26,slow=26,SNR=3.4							
MKAR				Lg		Lg	09 49 13.3	
	0.1nm,0.3s,baz=28,slow=31,SNR=5.7							
	0.5nm,0.6s							

HLW 14 09:57:33.2, 25.07N×34.99E, h5km±21km, Md2.5, Egypt

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
NADB	Abo Dabab	0.52	301	P		Pg	09 57 41.9	-1.3
	baz=316							
NADB	Abo Dabab	0.52	301	P		Pg	09 57 41.9	-1.3
	baz=302							
NADB				S		Sg	09 57 47.8	-2.1
	baz=302							
HAGS	Hagol	0.69	180	P		Pg	09 57 45.4	-1.2
	baz=168							
HAGS	Hagol	0.69	180	P		Pg	09 57 45.3	-1.2
	baz=181							
HAGS				S		Sg	09 57 52.6	-2.9
	baz=181							
BRNS	Bernies	1.45	213	P		Pn	09 57 56.3	-3.8
	baz=211							
BRNS				S		Sb	09 58 11.2	-8.3
	baz=211							
BRNS	Bernies	1.45	213	P		Pn	09 57 56.0	-4.1
	baz=214							
BRNS				S		Sb	09 58 13.0	-6.5
	baz=214							
KASR	Kasr	2.26	230	P		Pn	09 58 08.6	-2.7
	baz=231							
NGWR	NGWR	2.44	236	P		Pn	09 58 09.7	-4.1
	baz=235							
NGWR	NGWR	2.44	236	P		Pn	09 58 10.7	-3.1
	baz=236							
HHRG	Al Ghardaqah	2.49	329	P		Pn	09 58 12.3	-2.1
	baz=329							

MAN 14 09:59:02.7, 10.27N×122.36E, h33km, mb3.6, ML2.4, MS1.8, Panay

*IDC **14** 10:22:00.5±0.8, 54.32N×162.05E, h0km, mb3.8/10, mbtmp3.8/13, ML3.8/3, MS2.7/4, Error ellipse: s-maj=20.8km s-min=17.4km az=177.0*
*KRSC **14** 10:22:03.2±1.0, 53.99N×162.27E, h41km±17km, ML4.2*
*MOS **14** 10:22:05.2±0.7, 54.03N×162.23E, h59km, mb4.4/4, Error ellipse: s-maj=7.5km s-min=5.3km az=73.1*

ISC 14 10:22:06.0±1.0, 54.08N±0.04×162.22E±0.04, h43km±9km, n103, σ1.24/137, mb3.7/12, 1C-5D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MKZ	Mys Kozlova	0.56	329	PN		Pn	10 22 16.8	-0.8
MKZ				S		Sn	10 22 25.1	-0.8
MKZ	Mys Kozlova	0.56	329	*e*P		Pn	10 22 16.8	-0.8
MKZ				*e*S		Sn	10 22 25.1	-0.8
KII	Karymskiy	1.64	270	PN		Pn	10 22 31.8	-0.5
KII				S		Sn	10 22 51.4	-0.8
KII	Karymskiy	1.64	270	*e*P		Pn	10 22 31.8	-0.5
KII				*e*S		Sn	10 22 51.4	-0.8
SPN	Mys Shipunski	1.64	234	PN		Pn	10 22 31.2	-1.0
SPN				S		Sn	10 22 50.4	-1.6
SPN	Mys Shipunski	1.64	234	*e*P		Pn	10 22 31.2	-1.0
SPN				*e*S		Sn	10 22 50.4	-1.6
TUMR	Tumrok	1.71	316	PN		Pn	10 22 33.7	+0.4
TUMR	Tumrok	1.71	316	*e*P		Pn	10 22 33.7	+0.4
NLC	Nalytchevo	1.94	243	PN		Pn	10 22 35.8	-0.5
NLC				S		Sn	10 22 58.7	-0.7
NLC	Nalytchevo	1.94	243	*e*P		Pn	10 22 35.8	-0.5
NLC				*e*S		Sn	10 22 58.7	-0.7
KMNR	Kamenistaya	2.04	327	PN		Pn	10 22 39.2	+1.4
KMNR	Kamenistaya	2.04	327	*e*P		Pn	10 22 39.2	+1.4
BZGR	Bezymyannyi-Gr	2.07	335	PN		Pn	10 22 39.5	+1.3
BZGR	Bezymyannyi-Gr	2.07	335	*e*P		Pn	10 22 39.5	+1.3
BZWR	Bezymyannyi-We	2.14	333	PN		Pn	10 22 40.6	+1.3
BZWR	Bezymyannyi-We	2.14	333	*e*P		Pn	10 22 40.6	+1.3
SDLR	Sedlovina	2.14	249	PN		Pn	10 22 39.2	-0.1
SDLR				S		Sn	10 23 04.7	+0.1
SDLR	Sedlovina	2.14	249	*e*P		Pn	10 22 39.2	-0.1
SDLR				*e*S		Sn	10 23 04.7	+0.1
KBTR	Krutoberegovo	2.17	9	PN		Pn	10 22 40.4	+0.9
KBTR	Krutoberegovo	2.17	9	*e*P		Pn	10 22 40.4	+0.9
KIRR	Kirishev	2.17	331	PN		Pn	10 22 41.1	+1.4
KIRR	Kirishev	2.17	331	*e*P		Pn	10 22 41.1	+1.4
SMAR	Somma	2.19	250	PN		Pn	10 22 40.2	+0.1
SMAR				S		Sn	10 23 06.4	+0.4
SMAR	Somma	2.19	250	*e*P		Pn	10 22 40.2	+0.1
SMAR				*e*S		Sn	10 23 06.4	+0.4
UGLR	Uglovaya	2.20	248	PN		Pn	10 22 40.3	+0.2
UGLR				S		Sn	10 23 07.0	+0.9
UGLR	Uglovaya	2.20	248	*e*P		Pn	10 22 40.3	+0.2
UGLR				*e*S		Sn	10 23 07.0	+0.9
KBG	Krutoberegovo	2.20	7	PN		Pn	10 22 41.1	+1.1
KBG	Krutoberegovo	2.20	7	*e*P		Pn	10 22 41.1	+1.1
KRER	Koryakskii	2.20	251	PN		Pn	10 22 40.5	+0.3
KRER				S		Sn	10 23 06.4	+0.1
KRER	Koryakskii	2.20	251	*e*P		Pn	10 22 40.5	+0.3
KRER				*e*S		Sn	10 23 06.4	+0.1
KPT	Kopyto	2.22	330	PN		Pn	10 22 42.3	+2.0
KPT	Kopyto	2.22	330	*e*P		Pn	10 22 42.3	+2.0
AVH	Avacha	2.23	250	PN		Pn	10 22 40.8	+0.4
AVH				S		Sn	10 23 07.9	+1.2
AVH	Avacha	2.23	250	*e*P		Pn	10 22 40.8	+0.4
AVH				*e*S		Sn	10 23 07.9	+1.2
KRX	Arik	2.24	253	PN		Pn	10 22 40.8	+0.1
KRX				S		Sn	10 23 06.8	-0.4
KRX	Arik	2.24	253	*e*P		Pn	10 22 40.8	+0.1
KRX				*e*S		Sn	10 23 06.8	-0.4
KOK	Koryaka	2.27	251	PN		Pn	10 22 41.2	+0.1
KOK	Koryaka	2.27	251	*e*P		Pn	10 22 41.2	+0.1
DALK	Dalny	2.32	245	PN		Pn	10 22 41.5	-0.1
DALK				S		Sn	10 23 08.2	-0.6
DALK	Dalny	2.32	245	*e*P		Pn	10 22 41.5	-0.1
DALK				*e*S		Sn	10 23 08.2	-0.6
KRSR	Krestovskiy	2.35	337	PN		Pn	10 22 43.2	+1.1
KRSR	Krestovskiy	2.35	337	*e*P		Pn	10 22 43.2	+1.1
PET	Petropavlovsk	2.38	245	*e*PN		Pn	10 22 42.4	+0.1
PET				*e*S		Sn	10 23 09.8	-0.4
PET				pmax		pmax		
	comp=Z,79nm,0.6s							
PET				smax		smax		
	comp=N,372nm,0.9s							
PET				MLR		MLR		
	comp=Z,300nm,13.0s							
PET	Petropavlovsk	2.38	245	*e*P		Pn	10 22 42.5	+0.1
PET				*e*S		Sn	10 23 09.8	-0.4
KLY	Klyuchi	2.42	339	PN		Pn	10 22 43.9	+1.0
KLY	Klyuchi	2.42	339	*e*P		Pn	10 22 43.9	+1.0
BKI	Bering	2.46	61	PN		Pn	10 22 43.9	+0.4
BKI				S		Sn	10 23 10.6	-1.6
BKI	Bering	2.46	61	*e*P		Pn	10 22 43.9	+0.4
BKI				*e*S		Sn	10 23 10.6	-1.6
GNL	Ganaly	2.56	263	PN		Pn	10 22 45.9	+0.9
GNL	Ganaly	2.56	263	*e*P		Pn	10 22 45.9	+0.9
KRMR	Karymshinskiy	2.75	245	PN		Pn	10 22 47.8	+0.4
KRMR	Karymshinskiy	2.75	245	*e*P		Pn	10 22 47.8	+0.4
ESO	Esso	2.75	314	PN		Pn	10 22 47.6	+0.1
ESO	Esso	2.75	314	*e*P		Pn	10 22 47.6	+0.1
RUS	Russkaya	2.77	235	PN		Pn	10 22 47.8	0.0
RUS				S		Sn	10 23 19.0	-0.9
RUS	Russkaya	2.77	235	*e*P		Pn	10 22 47.8	0.0
RUS				*e*S		Sn	10 23 19.0	-0.9
PEA0B	Petropavlovsk-	2.86	252	*d* iPN		Pn	10 22 50.1	+1.0
PETK	Petropavlovsk- comp=Z,6.9nm,0.3s,baz=78,slow=17,SNR=82	2.86	252	Pn		Pn	10 22 49.2	+0.1
PETK				Sn		Sn	10 23 24.2	+1.9
	comp=Z,5.7nm,0.3s,baz=66,slow=18,SNR=4.0							
PETK				LR		LR	10 23 44.8	
	comp=Z,20nm,18.3s,baz=98,slow=36							
	comp=Z,13nm,0.4s							
MTVR	Mutnovka	2.90	238	PN		Pn	10 22 50.1	+0.4
MTVR				S		Sn	10 23 23.2	-0.2
MTVR	Mutnovka	2.90	238	*e*P		Pn	10 22 50.1	+0.4
MTVR				*e*S		Sn	10 23 23.2	-0.2
GRL	Gorelyy	2.92	240	PN		Pn	10 22 51.1	+1.1
GRL				S		Sn	10 23 24.9	+1.1
GRL	Gorelyy	2.92	240	*e*P		Pn	10 22 51.1	+1.1
GRL				*e*S		Sn	10 23 24.9	+1.1
ASAK	Asacha	3.10	239	PN		Pn	10 22 53.4	+1.0
ASAK				S		Sn	10 23 28.9	+0.7
ASAK	Asacha	3.10	239	*e*P		Pn	10 22 53.4	+1.0
ASAK				*e*S		Sn	10 23 28.9	+0.7
APC	Apacha	3.24	251	PN		Pn	10 22 56.1	+1.9
APC				S		Sn	10 23 34.1	+2.7
APC	Apacha	3.24	251	*e*P		Pn	10 22 56.1	+1.9
APC				*e*S		Sn	10 23 34.1	+2.7
KDTR	Khodutka, Kamc	3.38	230	PN		Pn	10 22 56.3	+0.1
KDTR				S		Sn	10 23 33.6	-1.4
KDTR	Khodutka, Kamc	3.38	230	*e*P		Pn	10 22 56.3	+0.1
KDTR				*e*S		Sn	10 23 33.6	-1.4
MIPR	Malaya Ipel'ka	3.75	243	PN		Pn	10 23 03.0	+1.8
MIPR	Malaya Ipel'ka	3.75	243	*e*P		Pn	10 23 03.0	+1.8
SKR	Severo-Kuril's	5.05	230	⇓*e*PN		Pn	10 23 19.6	+0.5
SHEM	Shemya Is, Ala	7.23	96	Pn		Pn	10 23 50.3	+1.4
	comp=Z,3.8nm,0.3s,baz=287,slow=1.8,SNR=8.7							
SHEM				Sn		Sn	10 25 07.2	-2.5
	comp=Z,1.5nm,0.3s,baz=296,slow=22,SNR=2.0							
	comp=Z,14nm,0.3s							
MA2	Magadan	8.35	316	Pn		Pn	10 24 02.8	-1.5
	comp=Z,0.2nm,0.3s,baz=307,slow=20,SNR=2.0							
MA2				LR		LR	10 27 39.6	
	comp=Z,36nm,19.9s,baz=162,slow=42							
	comp=Z,7.1nm,0.7s							
MA2	Magadan	8.35	316	⇑*e*PN		Pn	10 24 07.1	+2.8
SEY	Seymchan	10.25	334	⇓*e*PN		Pn	10 24 32.1	+1.8
BILL	Bilibino	14.14	6	*e*P		P	10 25 27.6	-2.4
BILL				pmax		pmax		
	comp=Z,2.0nm,1.2s							
BILL				MLR		MLR		
	comp=Z,25nm,14.0s							
KLR	Kul'dur	19.43	268	⇓*e*P		P	10 26 28.5	+0.1
KLR				pmax		pmax		
	comp=Z,6.0nm,2.2s							
ILAR	Eielson Array comp=Z,0.3nm,0.6s,baz=265,slow=8.9,SNR=2.8	27.22	47	P		P	10 27 45.3	-0.1
	comp=Z,0.3nm,0.6s							
H11N2	WAKE ISLAND Hy baz=355,slow=76,SNR=91	34.47	172	T		T	11 06 09.2	
H11N3	WAKE ISLAND Hy baz=355,slow=76,SNR=52	34.48	172	T		T	11 06 11.5	
H11N1	WAKE ISLAND Hy baz=355,slow=76,SNR=76	34.49	172	T		T	11 06 12.1	
SONM	Songino Array comp=Z,34nm,18.1s,baz=48,slow=37	34.91	283	LR		LR	10 43 33.3	
H11S1	WAKE ISLAND Hy baz=352	35.67	173	T		T	11 07 28.7	
H11S3	WAKE ISLAND Hy baz=352	35.68	173	T		T	11 07 22.9	
H11S2	WAKE ISLAND Hy baz=352	35.69	173	T		T	11 07 29.4	
KURK	Kurchatov	48.29	302	P		P	10 30 40.8	-1.6
KURBB	Kurchatov Arra comp=Z,0.5nm,0.6s,baz=57,slow=7.3,SNR=4.3	48.39	302	P		P	10 30 40.8	-2.4
	comp=Z,0.5nm,0.6s							
MKAR	Makanchi Array comp=Z,0.4nm,0.6s,baz=55,slow=8.8,SNR=4.8	48.87	296	P		P	10 30 45.9	-1.1
	comp=Z,0.4nm,0.6s							
ARU	Arti comp=Z,2.2nm,0.4s,baz=54,slow=3.8,SNR=3.2	53.53	318	P		P	10 31 20.9	-0.8
	comp=Z,2.2nm,0.4s							
ARU	Arti	53.53	318	*d* iP		P	10 31 21.4	-0.3
ARU							10 33 19.4	
ARU				S		S	10 38 49.7	-1.5
ARU				SS		SS	10 42 25.1	-5.9
ARU				pmax		pmax		
	comp=Z,2.0nm,0.5s							
NVAR	Mina Array Bea comp=Z,0.3nm,0.6s,baz=311,slow=8.2,SNR=3.8	54.22	72	P		P	10 31 31.2	+3.8
CMAR	Chiang Mai Arr comp=Z,1.3nm,0.6s,baz=23,slow=6.4,SNR=6.0	59.62	259	P		P	10 32 05.8	+0.3
	comp=Z,1.3nm,0.6s							
FINES	FINESS Array B comp=Z,1.8nm,0.6s,baz=46,slow=9.0,SNR=7.2	59.71	337	P		P	10 32 04.5	-1.0
	comp=Z,1.8nm,0.6s							
FINES	FINESS Array B	59.71	337	*i* P		P	10 32 05.6	+0.1
FINES				pmax		pmax		
	comp=Z,2.0nm,0.6s							
OBN	Obninsk	62.36	328	*e*P		P	10 32 25.4	+1.9
OBN				*e*			10 32 59.3	
OBN				pmax		pmax		
	comp=Z,4.0nm,0.8s							
NB2	NORSAR Subarra comp=Z,0.6nm,0.6s,baz=21,slow=6.9	62.94	345	P		P	10 32 27.5	+0.1
NOA	NORSAR Array B comp=Z,0.9nm,0.6s,baz=19,slow=6.8,SNR=5.1	62.94	345	P		P	10 32 26.7	-0.7
	comp=Z,0.9nm,0.6s							
NOA	NORSAR Array B	62.94	345	*e*P		P	10 32 27.7	+0.3
NOA				pmax		pmax		
	comp=Z,1.0nm,0.6s							
TXAR	Lajitas Array comp=Z,0.4nm,0.5s,baz=300,slow=5.0,SNR=5.7	69.09	69	P		P	10 33 08.1	+0.6
	comp=Z,0.4nm,0.5s							
KBZ	Khabaz comp=Z,20nm,18.3s,baz=35,slow=40	69.68	318	LR		LR	11 07 47.1	
WRA	Warramunga Arr comp=Z,1.0nm,1.1s,baz=24,slow=6.1,SNR=5.9	77.52	207	P		P	10 33 58.2	+1.4
	comp=Z,1.0nm,1.1s							
WRA	Warramunga Arr	77.52	207	*i* P		P	10 33 56.7	-0.2
ASAR	Alice Springs comp=Z,0.3nm,0.8s,baz=16,slow=5.0,SNR=2.4	81.19	206	P		P	10 34 18.8	+1.9
	comp=Z,0.3nm,0.8s							

IDC 14 10:35:46.9±3.0, 8.44S×159.94E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=65.5km s-min=22.8km az=74.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HNR	Honiara	0.98	179	Pn		Pn	10 36 08.1	+0.1
	51nm,0.3s,baz=101,slow=2.2,SNR=49							
HNR				Sn		Sn	10 36 22.6	+0.1
	112nm,0.3s,baz=53,slow=23,SNR=10.0							
WRA	Warramunga Arr	27.28	242	P		P	10 41 34.1	+0.8
	0.2nm,0.4s,baz=67,slow=9.1,SNR=6.6							
	0.2nm,0.4s							
H11S2	WAKE ISLAND Hy baz=193,slow=76,SNR=18	27.58	14	T		T	11 10 12.5	
H11S3	WAKE ISLAND Hy baz=193,slow=76,SNR=6.2	27.58	14	T		T	11 10 10.1	
H11S1	WAKE ISLAND Hy baz=193,slow=76,SNR=2.0	27.60	14	T		T	11 10 16.5	
H11N1	WAKE ISLAND Hy baz=193,slow=76,SNR=16	28.81	14	T		T	11 11 45.8	
H11N3	WAKE ISLAND Hy baz=193,slow=76,SNR=12	28.81	14	T		T	11 11 44.5	
H11N2	WAKE ISLAND Hy baz=193,slow=76,SNR=18	28.82	14	T		T	11 11 45.1	
ASAR	Alice Springs 0.2nm,0.6s,baz=64,slow=10,SNR=1.8	29.16	236	P		P	10 41 49.3	-0.8
	0.2nm,0.6s							
MKAR	Makanchi Array 0.1nm,0.4s,baz=100,slow=6.0,SNR=1.7	87.74	318	P		P	10 48 37.7	-0.1
	0.1nm,0.4s							

*INET **14** 10:38:19.8±0.6, 12.91N×87.04W, h4km±2km, MW3.4*
*SNET **14** 10:38:20.4±1.1, 12.92N×87.09W, h0km±25km, ML3.2*

ISC 14 10:38:20.0±1.0, 12.96N±0.06×87.00W±0.05, h13km, n14, σ0.84/17, 1C, Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CRIN	San Cristobal	0.27	192	*e*P		Pg	10 38 25.1	-0.5
CRIN				*e*S		Sg	10 38 29.3	-0.1
TELN	Telica	0.39	156	⇑*e*P		Pg	10 38 28.1	+0.3
CNGN	Cerro Negro	0.54	148	*e*P		Pg	10 38 30.6	0.0
CSGN	Cosiguina Volc	0.55	272	*e*P		Pg	10 38 30.4	-0.4
CNCH	Conchagua	0.88	291	*e*P		Pg	10 38 36.4	-0.6
CNCH				IAML			10 38 53.0	
	comp=Z,1μm,0.2s							
LCND	La Caada	0.94	292	*e*P		Pg	10 38 37.4	-0.7
LCND				IAML			10 38 38.2	
	comp=Z,550nm,0.4s							
LCND				*e*S		Sb	10 38 51.5	+0.9
HUEN		1.01	128	*e*P		Pb	10 38 39.1	-0.4
MATN	Matagalpa	1.04	92	*e*P		Pb	10 38 38.6	-1.4
TGUH	Tegucigalpa,Un	1.12	346	*e*P		Pb	10 38 42.0	+0.7
PACA	Pacayal	1.39	291	*e*P		Pn	10 38 45.2	0.0
BOAB	BOACO BROADBAN	1.39	111	*e*P		Pn

SUTC	**Sutluce-Ispart**	**1.49**	**349**	PN		**Pn**		**10 41 07.9**	**+0.3**
SUTC				SN		**Sn**		**10 41 27.1**	**+0.2**
BERE	**Bereket-Mersin**	**1.54**	**77**	PN		**Pn**		**10 41 08.3**	**+0.1**
NATA	**Nata**	**1.58**	**141**	P		**Pb**		**10 41 10.4**	**+0.4**
TEVE	**Tevekalti-Mers**	**1.73**	**75**	PN		**Pn**		**10 41 11.3**	**+0.5**
TEVE				SN		**Sn**		**10 41 33.5**	**+0.7**
KKBE	**Karaman, Kazim**	**1.74**	**46**	P		**Pn**		**10 41 11.8**	**+0.7**
KKBE				S		**Sn**		**10 41 33.9**	**+0.6**
KKBE				*i* AML		AML		10 41 39.0	
	comp=E,46nm,0.6s								
AKK1	**Akkuyu-Mersin**	**1.76**	**85**	PN		**Pn**		**10 41 11.5**	**+0.3**
SZAC	**Souni**	**1.76**	**135**	P		**Pb**		**10 41 13.1**	**-0.1**
SZAC				S		**Sn**		**10 41 31.6**	**-2.0**
SZAC				AML		AML		10 41 41.1	
	0.2nm,0.6s								
SZAC				AML		AML		10 41 41.1	
	0.2nm,0.6s								
SZAC				AML		AML		10 41 41.8	
	0.2nm,0.5s								
SZAC				AML		AML		10 41 41.8	
	0.2nm,0.5s								
AKK2	**Akkuyu-Mersin**	**1.77**	**85**	PN		**Pn**		**10 41 11.7**	**+0.4**
AKKU	**Akkuyu-Mersin**	**1.77**	**85**	PN		**Pn**		**10 41 11.6**	**+0.2**
TEPK	**Tepekoy-MERSIN**	**1.77**	**83**	PN		**Pn**		**10 41 11.7**	**+0.3**
TISA	**Tisan-Mersin**	**1.88**	**85**	PN		**Pn**		**10 41 13.4**	**+0.6**
IKL	**Isikli**	**1.89**	**83**	PN		**Pn**		**10 41 13.6**	**+0.7**
GOLH	**Golhisar**	**1.90**	**310**	P		**Pb**		**10 41 15.4**	**-0.2**
GOLH				S		**Sb**		**10 41 38.8**	**-0.4**
KARG	**Kargicak-Mersi**	**1.90**	**84**	PN		**Pn**		**10 41 13.7**	**+0.5**
CSS	**Mathiatis**	**1.92**	**123**	PN		**Pn**		**10 41 13.1**	**-0.2**
KEBE	**Keben-Mersin**	**1.94**	**77**	PN		**Pn**		**10 41 14.4**	**+0.6**
ASGA	**Asgata**	**1.96**	**128**	S		**Sn**		**10 41 36.1**	**-2.4**
ASGA				AML		AML		10 41 50.6	
	0.2nm,1.2s								
ASGA				AML		AML		10 41 51.9	
	0.2nm,0.4s								
KONT	**Konya--Tatoy**	**2.08**	**22**	PN		**Pn**		**10 41 16.5**	**+0.8**
KONT	**Konya--Tatoy**	**2.08**	**22**	P		**Pb**		**10 41 17.5**	**-1.2**
KONT				*i* AML		AML		10 41 35.0	
	comp=E,52nm,2.0s								
KONT				*i* AML		AML		10 41 54.0	
	comp=N,35nm,0.6s								
MVOU	**Mavrovouni**	**2.10**	**118**	S		**Sn**		**10 41 40.0**	**-1.8**
YVAC	**Isparta, Yalva**	**2.25**	**357**	P		**Pn**		**10 41 18.5**	**+0.4**
YVAC				S		**Sn**		**10 41 44.5**	**-1.3**
LADK	**Ladik-KONYA**	**2.32**	**20**	PN		**Pn**		**10 41 19.9**	**+0.9**
LADK				SN		**Sn**		**10 41 47.9**	**+0.4**
EREN	**Erenkoy**	**2.33**	**101**	PN		**Pn**		**10 41 19.9**	**+0.9**
EREN				SN		**Sn**		**10 41 48.7**	**+1.2**
EREN	**Erenkoy**	**2.33**	**101**	P		**Pn**		**10 41 20.8**	**+1.8**
EREN				S		**Sn**		**10 41 47.4**	**-0.1**
EREN				*i* AML		AML		10 41 52.0	
	comp=N,36nm,0.5s								
EREN				*i* AML		AML		10 41 52.0	
	comp=E,44nm,0.7s								
OSC1	**CSNet OBS 1**	**2.51**	**182**	S		**Sn**		**10 41 53.5**	**+1.6**
KERG	**Konya-Eregli**	**2.62**	**57**	P		**Pn**		**10 41 24.7**	**+1.6**
KERG				S		**Sn**		**10 41 56.2**	**+1.4**
GULE	**Gulek**	**3.02**	**64**	P		**Pn**		**10 41 31.2**	**+2.5**
GULE				S		**Sn**		**10 42 07.4**	**+2.6**
OSC2	**CSNet OBS 4**	**3.03**	**166**	P		**Pn**		**10 41 31.1**	**+2.5**
OSC2				S		**Sn**		**10 42 04.4**	**-0.3**

*GCG **14** 10:49:47.1±0.3, 14°.18N×93°.93W, h208km±488km, MD4.5*
*IDC **14** 10:50:03.6±0.9, 14°.24N×92°.47W, h0km, mb4.1/17, mbtmp4.1/19, ML3.8/2, MS3.6/31, Error ellipse: s-maj=32.6km s-min=13.5km az=48.0*
*MEX **14** 10:50:07.2±1.0, 13°.92N×92°.90W, h20km, MD4.3*
*NEIC **14** 10:50:08.8±1.8, 14°.06N±0°.06×92°.75W±0°.05, h32km±6km, mb4.4/152, Md4.3/33(MEX), Error ellipse: s-maj=9.4km s-min=7.0km az=202.0*

ISC 14 10:50:04.9±1.7, **14°.05N**±0°.05×**92°.79W**±0°.04, **h12**km±10km, **n332**, σ1$**44**/330, **mb4.3**/66, **MS3.7**/29, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
THIG		**1.00**	**31**			**Pn**	**10 50 25.2**	**+0.5**
THIG						**Sn**	**10 50 38.8**	**+0.1**
THIG		**1.00**	**31**	*e*P		**Pn**	**10 50 25.2**	**+0.5**
THIG				*e*S		**Sn**	**10 50 38.8**	**+0.1**
RTAL	**Retalhuleu**	**1.17**	**66**			**Pn**	**10 50 27.7**	**+0.6**
PATR	**El Naranjo**	**1.19**	**27**	*e*P		**Pn**	**10 50 27.8**	**+0.1**
PATR				*e*S		**Sn**	**10 50 44.8**	**+0.8**
CHUJ	**Union Juarez**	**1.23**	**32**	*e*P		**Pg**	**10 50 28.6**	**-0.2**
CHUJ				*e*S		**Sn**	**10 50 45.6**	**+0.6**
PAVE	**Pavencul**	**1.29**	**28**	*e*P		**Pg**	**10 50 29.1**	**-0.6**
PAVE				*e*S		**Sn**	**10 50 46.2**	**0.0**
STG3	**Santiaguito 3,**	**1.35**	**61**	*e*P		**Pg**	**10 50 31.3**	**+0.2**
PCIG		**1.70**	**346**			**Pn**	**10 50 34.1**	**-0.3**
PCIG						**Sn**	**10 50 54.5**	**-1.6**
PCIG		**1.70**	**346**	*e*P		**Pn**	**10 50 34.1**	**-0.3**
PCIG				*e*S		**Sn**	**10 50 54.5**	**-1.6**
HUEH	**Huehuetenango**	**1.78**	**45**			**Pg**	**10 50 37.7**	**-1.4**
FUG	**Fuego 3**	**1.93**	**78**	*e*P		**Pb**	**10 50 38.9**	**-1.4**
PCG	**Pacaya**	**2.15**	**81**	*e*P		**Pn**	**10 50 41.9**	**+1.0**
CCIG	**Comitan**	**2.31**	**16**			**Pb**	**10 50 45.8**	**-0.9**
CCIG	**Comitan**	**2.31**	**16**	*e*P		**Pb**	**10 50 46.1**	**-0.6**
CCIG				*e*S		**Sb**	**10 51 12.6**	**-2.6**
NBG	**Las Nubes**	**2.43**	**77**	*e*P		**Pb**	**10 50 47.2**	**-1.6**
CARR	**Arriaga**	**2.44**	**334**	*e*P		**Pn**	**10 50 44.9**	**+0.3**
CARR				*e*S		**Sn**	**10 51 13.2**	**-1.3**
TGIG		**2.73**	**353**			**Pn**	**10 50 50.7**	**+2.0**
TGIG						**Sn**	**10 51 23.9**	**+2.1**
TGIG		**2.73**	**353**	*e*P		**Pn**	**10 50 50.7**	**+2.0**
TGIG				*e*S		**Sn**	**10 51 23.9**	**+2.1**
ESQI	**Esquipulas**	**3.38**	**81**			**Pn**	**10 50 58.9**	**+1.2**
SNET	**Serv Nac Est T**	**3.48**	**95**	Pn		**Pn**	**10 50 59.5**	**+0.6**
UXUV	**UXUV**	**3.50**	**338**	*e*P		**Pn**	**10 51 01.5**	**+2.2**
UXUV				*e*S		**Sn**	**10 51 39.8**	**-0.9**
CMIG	**Matias Romero**	**3.64**	**327**	Pn		**Pn**	**10 51 01.5**	**+0.4**
	5.0nm,0.3s,baz=144,slow=10,SNR=80							
CMIG					Sn	**Sn**	**10 51 44.4**	**+0.4**
	16nm,0.3s,baz=123,slow=15,SNR=6.5							
CMIG					Lg	Lg	10 51 57.5	
	15nm,0.3s,baz=239,slow=21,SNR=6.5							
	33nm,0.5s							
CMIG	**Matias Romero**	**3.64**	**327**			**Pn**	**10 51 01.5**	**+0.4**
CMIG						**Sn**	**10 51 44.7**	**+0.7**
CMIG	**Matias Romero**	**3.64**	**327**	*e*P		**Pn**	**10 51 01.5**	**+0.4**
CMIG				*i* S		**Sn**	**10 51 44.7**	**+0.7**
PETF	**Flores**	**4.01**	**44**			**Pn**	**10 51 07.4**	**+1.1**
NEUV	**Arroyo Zacate**	**4.65**	**322**	*e*P		**Pn**	**10 51 15.2**	**+0.1**
NEUV				*e*S		**Sn**	**10 52 05.0**	**-4.1**
VHO	**Vista Hermosa**	**4.84**	**309**	*e*P		**Pn**	**10 51 19.9**	**+2.0**
VHO				*e*S		**Sn**	**10 52 10.9**	**-3.2**
TGUH	**Tegucigalpa,Un**	**5.36**	**89**	Pn		**Pn**	**10 51 26.0**	**+1.1**
PNIG	**Pinotepa**	**5.65**	**295**			**Pn**	**10 51 29.5**	**+0.6**
PNIG	**Pinotepa**	**5.65**	**295**	*e*P		**Pn**	**10 51 29.5**	**+0.6**
CRIN	**San Cristobal**	**5.75**	**103**			**Pn**	**10 51 31.0**	**+0.7**
TOIG	**Toxpalan**	**5.75**	**315**	*e*P		**Pn**	**10 51 32.1**	**+1.8**
TOIG				*e*S		**Sn**	**10 52 34.0**	**-2.3**
TXIG	**Tlaxiaco**	**5.75**	**304**	*e*P		**Pn**	**10 51 33.4**	**+2.9**
TXIG				*e*S		**Sn**	**10 52 31.7**	**-5.0**
CNGN	**Cerro Negro**	**6.13**	**104**	Pn		**Pn**	**10 51 36.2**	**+0.8**
FTIG	**Fresnillo de T**	**6.41**	**307**	*e*P		**Pn**	**10 51 42.7**	**+3.3**
FTIG				*e*S		**Sn**	**10 52 51.7**	**-0.9**
MGIG	**Malinaltepec**	**6.46**	**300**	*e*P		**Pn**	**10 51 42.6**	**+2.5**
TLIG	**Tlapa**	**6.56**	**303**	Pn		**Pn**	**10 51 44.3**	**+2.8**
TLIG	**Tlapa**	**6.56**	**303**	*e*P		**Pn**	**10 51 43.0**	**+1.5**
MATN	**Matagalpa**	**6.77**	**99**			**Pn**	**10 51 44.2**	**-0.1**
BOAB	**BOACO BROADBAN**	**7.12**	**102**			**Pn**	**10 51 48.3**	**-0.7**
ACON	**Acoyapa**	**7.71**	**105**	Pn		**Pn**	**10 51 56.8**	**-0.3**
HZTE	**Horizontes, Gu**	**7.77**	**114**	Pn		**Pn**	**10 51 59.5**	**+1.5**
ORTG	**Ortega, Santa**	**8.05**	**116**	Pn		**Pn**	**10 52 03.6**	**+1.8**
DUNO	**Dulce Nombre,**	**8.15**	**118**			**Pn**	**10 52 04.9**	**+1.6**
JTS	**Las Juntas de**	**8.53**	**115**	Pn		**Pn**	**10 52 10.0**	**+1.6**
	1.2nm,0.3s,baz=4.7,slow=23,SNR=6.2							
JTS					Lg	Lg	10 54 24.5	
	0.2nm,0.3s,baz=285,slow=23,SNR=2.3							
RIMA	**Rio Macho**	**9.72**	**115**	Pn		**Pn**	**10 52 27.7**	**+2.8**
BATAN	**Batan**	**10.01**	**112**	Pn		**Pn**	**10 52 28.0**	**-0.7**
PEZE	**Perez Zeledon,**	**10.06**	**116**	Pn		**Pn**	**10 52 30.8**	**+1.4**
SRBA	**San Rafael, Bu**	**10.40**	**116**	Pn		**Pn**	**10 52 34.7**	**+0.5**
DRK0	**Durika**	**10.49**	**116**	Pn		**Pn**	**10 52 34.5**	**-1.0**
BRU2	**Volcan**	**11.19**	**117**	Pn		**Pn**	**10 52 44.8**	**-0.2**
SOR	**Soroa**	**12.72**	**45**	Pn		**Pn**	**10 53 04.7**	**-1.0**
833A	**Chaparral WMA,**	**15.47**	**338**	Pn		**Pn**	**10 53 43.8**	**+0.7**
833A				IAmb		IAmb	10 53 55.8	
	comp=Z,13nm,0.8s							
833A	**Chaparral WMA,**	**15.47**	**338**	P		**Pn**	**10 53 45.4**	**+2.3**
	baz=155							
HKT	**Hockley**	**16.07**	**350**	Pn		**Pn**	**10 53 52.3**	**+1.5**
JCT	**Junction City**	**17.58**	**340**			**Pn**	**10 54 09.4**	**-0.6**
H06S1	**SOCORRO T**	**18.04**	**287**	T		T	11 14 25.7	
	SNR=14							
TX32	**Lajitas Array**	**18.24**	**328**			**Pn**	**10 54 16.9**	**-1.3**
TXAR	**Lajitas Array**	**18.24**	**328**	P		**P**	**10 54 20.4**	**+2.0**
	comp=Z,0.1nm,0.3s,baz=145,slow=13,SNR=6.3							
TXAR					LR	LR	11 02 37.2	
	comp=Z,74nm,19.6s,baz=139,slow=41							
	comp=Z,3.3nm,1.1s							
TXAR	**Lajitas Array**	**18.24**	**328**			**Pn**	**10 54 18.1**	**0.0**
TX31	**Lajitas Ar. Si**	**18.24**	**328**			**Pn**	**10 54 18.0**	**-0.2**
TX31					IAmb	IAmb	10 54 28.1	
	comp=Z,35nm,1.2s							
352A	**Blakely**	**18.79**	**21**	P		**P**	**10 54 24.2**	**0.0**
352A					IAmb	IAmb	10 54 34.3	
	comp=Z,15nm,0.8s							
Z41A	**Richland Creek**	**19.12**	**360**	P		**P**	**10 54 27.4**	**-0.4**
LPIG	**La Paz**	**19.32**	**304**	LR		LR	11 02 40.4	
	comp=Z,178nm,19.0s,baz=190,slow=39							
ABTX	**Abilene, Hawle**	**19.52**	**342**	P		**Pn**	**10 54 34.9**	**+1.3**
ABTX	**Abilene, Hawle**	**19.52**	**342**	P		**Pn**	**10 54 34.3**	**+0.7**
	baz=160							
WLAR	**White Oak Lake**	**19.55**	**359**			**P**	**10 54 33.2**	**+0.6**
WLAR					IAmb	IAmb	10 54 47.3	
	comp=Z,18nm,1.1s							
Z35A	**Perchaven, San**	**19.62**	**349**	P		**P**	**10 54 33.2**	**-0.2**
Z35A					IAmb	IAmb	10 54 40.5	
	comp=Z,24nm,0.8s							
LRAL	**Lakeview Retre**	**19.62**	**15**	P		**P**	**10 54 33.9**	**+0.4**
LRAL	**Lakeview Retre**	**19.62**	**15**	P		**P**	**10 54 33.8**	**+0.4**
	baz=197							
OTAV	**Otavalo**	**19.74**	**133**	P		**P**	**10 54 36.1**	**+0.8**
CCAR	**Cane Creek**	**19.80**	**3**	P		**P**	**10 54 36.1**	**+0.8**
CCAR					IAmb	IAmb	10 54 49.7	
	comp=Z,12nm,0.7s							
152A	**Waverly Hall**	**19.95**	**20**	P		**P**	**10 54 36.9**	**0.0**
ROSC	**El Rosal**	**20.37**	**115**	P		Pn	10 54 46.2	+2.1
	comp=Z,9.8nm,0.4s,baz=174,slow=13,SNR=5.8							
Z51A	**Franklin**	**20.40**	**19**	P		**P**	**10 54 42.1**	**+0.3**
Z51A					IAmb	IAmb	10 55 03.6	
	comp=Z,7.7nm,0.5s							
MIAR	**Mount Ida**	**20.42**	**358**	P		**P**	**10 54 42.4**	**+0.3**
MIAR					IAmb	IAmb	10 55 00.1	
	comp=Z,10nm,0.9s							
MIAR	**Mount Ida**	**20.42**	**358**	P		**P**	**10 54 42.4**	**+0.3**
	baz=178,SNR=8.2							
Y49A	**Blount Mountai**	**20.55**	**15**	P		**P**	**10 54 43.6**	**0.0**
Y49A					IAmb	IAmb	10 54 59.0	
	comp=Z,18nm,1.4s							
X37A	**Clayton**	**20.59**	**354**			**P**	**10 54 43.8**	**-0.1**
OXF	**Oxford**	**20.60**	**8**	P		**P**	**10 54 42.7**	**-1.4**
OXF					IAmb	IAmb	10 55 07.3	
	comp=Z,12nm,0.8s							
OXF	**Oxford**	**20.60**	**8**	P		**P**	**10 54 44.9**	**+0.9**
	baz=189							
UALR	**University of**	**20.64**	**1**	P		**P**	**10 54 44.8**	**+0.4**
UALR					IAmb	IAmb	10 55 14.8	
	comp=Z,30nm,1.4s							
PORT	**Chimborazo Vol**	**20.75**	**137**	P		**P**	**10 54 46.6**	**+0.2**
PORT					IAmb	IAmb	10 55 02.9	
	comp=Z,11nm,0.9s							
X34A	**Smith Ranch, M**	**20.96**	**348**			**P**	**10 54 47.3**	**-0.7**
X34A					IAmb	IAmb	10 54 59.5	
	comp=Z,23nm,1.2s							
X48A	**Hartselle**	**20.97**	**13**	P		**P**	**10 54 47.8**	**-0.2**
MNTX	**Cornudas Mount**	**21.02**	**329**	P		**P**	**10 54 49.7**	**+1.1**
MNTX	**Cornudas Mount**	**21.02**	**329**	P		**P**	**10 54 50.0**	**+1.4**
	baz=144,SNR=11							
W41B	**Gary Mavity, V**	**21.04**	**1**	P		**P**	**10 54 50.0**	**+1.3**
	baz=181							
GOGA	**Godfrey**	**21.06**	**22**	P		**P**	**10 54 48.6**	**-0.4**
GOGA	**Godfrey**	**21.06**	**22**	P		**P**	**10 54 48.9**	**-0.1**
	baz=206							
W39A	**Magazine**	**21.08**	**358**	P		**P**	**10 54 49.7**	**+0.6**
W39A					IAmb	IAmb	10 54 54.5	
	comp=Z,9.7nm,0.8s							
W39A	**Magazine**	**21.08**	**358**	P		**P**	**10 54 51.3**	**+2.1**
	baz=177							
WHAR	**Wooly Hollow**	**21.16**	**1**	P		**P**	**10 54 50.1**	**+0.1**
Y52A	**Lilburn**	**21.26**	**20**	P		**P**	**10 54 51.8**	**+0.7**
Y52A					IAmb	IAmb	10 55 08.9	
	comp=Z,11nm,0.7s							
PLAL	**Pickwick Lake**	**21.27**	**11**	P		**P**	**10 54 51.3**	**0.0**
WMOK	**Wichita Mounta**	**21.30**	**346**	P		**P**	**10 54 51.8**	**+0.2**
FPAL	**Fort Paine**	**21.41**	**16**	P		**P**	**10 54 52.4**	**-0.4**
FNO	**Franklin**	**21.52**	**350**			**P**	**10 54 54.8**	**+0.8**
OKCFA	**Oklahoma City**	**21.69**	**350**	P		**P**	**10 54 56.0**	**+0.3**
FCAR	**Ozark Folk Cen**	**21.76**	**1**	P		**P**	**10 54 57.0**	**+0.5**
SC01	**Santiago de lo**	**21.79**	**73**	P		**P**	**10 54 57.2**	**+0.2**
MSTX	**Muleshoe**	**21.80**	**337**	P		**P**	**10 54 58.3**	**+1.2**
MSTX					IAmb	IAmb	10 55 02.1	
	comp=Z,8.3nm,0.8s							
MSTX	**Muleshoe**	**21.80**	**337**	P		**P**	**10 54 58.2**	**+1.1**
	baz=153							
SWET	**Sewanee**	**21.97**	**15**	P		**P**	**10 54 58.4**	**-0.4**
LCAR	**Lake Charles**	**21.98**	**4**	P		**P**	**10 54 58.8**	**0.0**
W50A	**Signal Mountai**	**22.11**	**16**	P		**P**	**10 55 00.0**	**-0.4**
W50A					IAmb	IAmb	10 55 15.0	
	comp=Z,18nm,1.4s							
HHAR	**Hobbs**	**22.16**	**358**	P		**P**	**10 55 01.0**	**+0.1**
U40A	**Yellville**	**22.21**	**360**	P		**P**	**10 55 01.6**	**+0.2**
U40A	**Yellville**	**22.21**	**360**	P		**P**	**10 55 02.3**	**+0.9**
	baz=180							
AMTX	**Amarillo**	**22.24**	**340**	P		**P**	**10 55 03.2**	**+1.3**
AMTX	**Amarillo**	**22.24**	**340**	P		**P**	**10 55 03.6**	**+1.8**
	baz=156							
V48A	**Smith Brothers**	**22.26**	**13**	P		**P**	**10 55 02.0**	**+0.2**
SDV	**Santo Domingo**	**22.31**	**101**	P		**P**	**10 55 02.2**	**-0.5**
	comp=Z,3.0nm,0.3s,baz=32,slow=11,SNR=1.3							
SDV					LR	LR	11 04 33.9	
	comp=Z,85nm,18.4s,baz=272,slow=40							
	comp=Z,3.0nm,0.3s							
U38A	**Gravette**	**22.34**	**357**	P		**P**	**10 55 03.5**	**+0.7**
WVT	**Waverly**	**22.43**	**11**	P		**P**	**10 55 03.8**	**+0.1**
WVT	**Waverly**	**22.43**	**11**	P		**P**	**10 55 03.8**	**+0.1**
	baz=192							
CPCT	**Cooper Cave**	**22.57**	**18**	P		**P**	**10 55 06.1**	**+0.8**
HICK	**Hickman**	**22.63**	**7**	P		**P**	**10 55 04.0**	**-1.8**
BG3	**Lake Jocassee**	**22.67**	**21**	P		**P**	**10 55 07.0**	**+0.6**
U32A	**Winter Ranch,**	**22.92**	**347**	P		**P**	**10 55 09.1**	**+0.1**
U32A					IAmb	IAmb	10 55 11.4	
	comp=Z,16nm,1.1s							
121A	**Cookes Peak, D**	**22.93**	**326**	P		**P**	**10 55 09.9**	**+0.6**
121A					IAmb	IAmb	10 55 16.3	
	comp=Z,7.9nm,0.9s							
121A	**Cookes Peak, D**	**22.93**	**326**	P		**P**	**10 55 11.0**	**+1.7**
	baz=140,SNR=6.2							
TKL	**Tuckaleechee C**	**23.00**	**19**	P		**P**	**10 55 07.3**	**-2.4**
	comp=Z,4.1nm,0.9s,baz=178,slow=11,SNR=3.9							
	comp=Z,4.1nm,0.9s							
TKL	**Tuckaleechee C**	**23.00**	**19**	P		**P**	**10 55 10.0**	**+0.3**
TKL					IAmb	IAmb	10 55 18.0	
	comp=Z,15nm,1.1s							
T35A	**Sooner Cattle**	**23.02**	**352**			**P**	**10 55 09.8**	**0.0**
T35A					IAmb	IAmb	10 55 20.1	
	comp=Z,7.4nm,0.8s							
V52A	**Sevierville**	**23.22**	**19**	P		**P**	**10 55 11.1**	**-0.9**
V52A					IAmb	IAmb	10 55 12.9	
	comp=Z,9.1nm,0.9s							
U49A	**Red Boiling Sp**	**23.24**	**14**	P		**P**	**10 55 10.5**	**-1.6**
U49A					IAmb	IAmb	10 55 24.1	
	comp=Z,8.2nm,1.1s							
V53A	**Saluda**	**23.33**	**21**	P		**P**	**10 55 13.4**	**+0.3**
V53A					IAmb	IAmb	10 55 30.4	
	comp=Z,11nm,1.2s							
T47A	**Sharon Grove**	**23.40**	**12**	P		**P**	**10 55 12.8**	**-0.9**
T47A					IAmb	IAmb	10 55 28.6	
	comp=Z,9.5nm,0.8s							
KMSC	**Kings Mountain**	**23.41**	**24**	P		**P**	**10 55 13.2**	**-0.7**
KMSC					IAmb	IAmb	10 55 14.1	
	comp=Z,11nm,1.2s							
CRNM	**Carthage**	**23.51**	**330**	P		**P**	**10 55 15.4**	**+0.4**
S39A	**Bolivar**	**23.55**	**359**	P		**P**	**10 55 14.9**	**-0.4**
S39A					IAmb	IAmb	10 55 16.3	
	comp=Z,13nm,0.9s							
BNM	**Barren Site**	**23.61**	**330**	P		**P**	**10 55 16.1**	**-0.1**
S44A	**Carbondale**	**23.76**	**7**	P		**P**	**10 55 15.8**	**-1.5**
S44A					IAmb	IAmb	10 55 32.0	
	comp=Z,13nm,0.8s							
SIUC	**Southern Illin**	**23.79**	**7**	P		**P**	**10 55 16.8**	**-0.8**
SIUC					IAmb	IAmb	10 55 32.2	
	comp=Z,16nm,0.9s							
TZTN	**Tazewell**	**23.88**	**19**	P		**P**	**10 55 18.4**	**-0.1**
TZTN					IAmb	IAmb	10 55 44.6	
	comp=Z,7.2nm,0.8s							
TZTN	**Tazewell**	**23.88**	**19**	P		**P**	**10 55 19.0**	**+0.5**
	baz=202							
T50A	**Nancy**	**23.95**	**16**	P		**P**	**10 55 19.0**	**-0.2**
R40A	**Maddies Statio**	**24.15**	**1**	P		**P**	**10 55 19.4**	**-1.5**
R40A					IAmb	IAmb	10 55 22.9	
	comp=Z,5.4nm,0.8s							
ANMO	**Albuquerque**	**24.19**	**332**			**P**	**10 55 20.7**	**-0.9**
	comp=Z,1.2nm,0.7s,baz=146,slow=13,SNR=7.7							
	comp=Z,1.2nm,0.7s							
ANMO	**Albuquerque**	**24.19**	**332**	P		**P**	**10 55 22.3**	**+0.7**
ANMO	**Albuquerque**	**24.19**	**332**	P		**P**	**10 55 23.5**	**+1.9**
	baz=146							
U54A	**Nelsons Funny**	**24.44**	**22**	P		**P**	**10 55 23.2**	**-0.5**
U54A					IAmb	IAmb	10 55 24.3	
	comp=Z,10nm,1.0s							
TUC	**Tucson**	**24.51**	**321**	P		**P**	**10 55 25.4**	**+1.0**
TUC	**Tucson**	**24.51**	**321**	P		**P**	**10 55 27.2**	**+2.7**
	baz=134							
BAUV	**El Baul**	**24.77**	**99**	P		**P**	**10 55 26.2**	**-0.7**
U56A	**King**	**24.83**	**24**	P		**P**	**10 55 26.6**	**-0.7**
U56A					IAmb	IAmb	10 55 27.5	
	comp=Z,14nm,1.1s							
R32A	**Long Quarter,**	**24.84**	**349**	P		**P**	**10 55 27.9**	**+0.6**
T25A	**Trinidad**	**25.23**	**338**	P		**P**	**10 55 31.5**	**+0.5**
T25A					IAmb	IAmb	10 55 41.2	
	comp=Z,7.2nm,0.8s							
T25A	**Trinidad**	**25.23**	**338**	P		**P**	**10 55 32.9**	**+1.8**
	baz=152,SNR=10.0							
R50A	**Paris**	**25.28**	**16**	P		**P**	**10 55 29.3**	**-1.9**
R50A					IAmb	IAmb	10 55 48.6	
	comp=Z,6.7nm,1.0s							
CBKS	**Cedar Bluff**	**25.42**	**347**	P		**P**	**10 55 33.0**	**+0.4**
CBKS	**Cedar Bluff**	**25.42**	**347**	P		**P**	**10 55 34.5**	**+1.9**
	baz=164							
214A	**Organ Pipe Nat**	**25.56**	**318**	P		**P**	**10 55 36.0**	**+2.1**
	baz=130							
SDCO	**Great Sand Dun**	**26.17**	**337**	P		**P**	**10 55 41.6**	**+1.9**
SDCO					IAmb	IAmb	10 55 43.1	
	comp=Z,8.0nm,1.1s							
SDCO	**Great Sand Dun**	**26.17**	**337**	P		**P**	**10 55 41.5**	**+1.9**
	baz=151,SNR=14							
CBYP	**Canovanas**	**26.20**	**77**	P		**P**	**10 55 37.5**	**-2.3**
KSCO	**Kaye Shedlock'**	**26.34**	**343**	P		**P**	**10 55 41.8**	**+0.8**
KSCO					IAmb	IAmb	10 55 43.6	
	comp=Z,8.5nm,1.1s							
X16A	**Lo Mia Camp, P**	**26.38**	**323**	P		**P**	**10 55 44.1**	**+2.6**
N38A	**Joes South For**	**26.65**	**359**	P		**P**	**10 55 44.0**	**+0.4**
N38A					IAmb	IAmb	10 55 45.7	
	comp=Z,12nm,0.8s							
S22A	**4UR Ranch, Cre**	**26.70**	**335**	P		**P**	**10 55 45.0**	**+0.5**
S22A	**4UR Ranch, Cre**	**26.70**	**335**	P		**P**	**10 55 46.1**	**+1.6**
	baz=148,SNR=8.8							
MVCO	**Mesa Verde**	**26.99**	**332**	P		**P**	**10 55 47.1**	**+0.1**
MVCO					IAmb	IAmb	10 55 53.8	
	comp=Z,9.5nm,1.1s							
MVCO	**Mesa Verde**	**26.99**	**332**	P		**P**	**10 55 49.2**	**+2.2**
	baz

ULM LR LR 11 14 55.7
comp=Z,54nm,18.0s,baz=116,slow=41
comp=Z,2.0nm,0.5s
ULM Lac du Bonnet 36.19 357 IAmb IAmb 10 57 08.8
comp=Z,2.8nm,0.8s
HRY Holter Researc 36.27 338 P **P** **10 57 10.2 +1.9**
J08A Circle Bar Ran 36.59 328 P **P** **10 57 13.2 +2.1**
J08A IAmb IAmb 10 57 14.4
comp=Z,4.8nm,0.8s
MSO Missoula 37.17 336 P **P** **10 57 18.2 +2.2**
MSO IAmb IAmb 10 57 18.7
comp=Z,4.2nm,0.9s
MSO Missoula 37.17 336 P **P** **10 57 18.2 +2.2**
baz=144,SNR=5.2
YBH Yreka Blue Hor 37.86 323 LR LR 11 14 05.8
comp=Z,91nm,18.5s,baz=154,slow=38
F10A Beach Ranch, E 37.90 332 P **P** **10 57 23.6 +1.4**
F10A IAmb IAmb 10 57 29.3
comp=Z,8.1nm,0.9s
JTMT Jette 38.06 336 P **P** **10 57 25.4 +1.9**
JTMT IAmb IAmb 10 57 26.1
comp=Z,5.0nm,0.8s
J04D Umpqua Nationa 38.46 325 P **P** **10 57 29.3 +2.2**
baz=130
L02F Cave Junction 38.60 322 P **P** **10 57 30.5 +2.4**
baz=127
NEW Newport 39.62 334 LR LR 11 17 00.6
comp=Z,99nm,19.2s,baz=102,slow=41
D03D Eldon 41.83 329 P **P** **10 57 57.3 +2.7**
baz=133
SIV San Ignacio 43.29 132 P **P** **10 58 05.8 -1.1**
comp=Z,2.0nm,0.8s,baz=302,slow=14,SNR=3.5
comp=Z,2.0nm,0.8s
LVC Limon Verde 43.30 147 LR LR 11 16 03.9
comp=Z,108nm,18.1s,baz=282,slow=36
RPN Rapa Nui 43.97 201 LR LR 11 11 42.5
comp=Z,79nm,20.6s,baz=149,slow=29
SCHQ Schefferville 45.45 21 P **P** **10 58 21.1 -2.6**
comp=Z,4.7nm,0.8s,baz=184,slow=7.3,SNR=4.1
SCHQ LR LR 11 18 16.4
comp=Z,167nm,20.1s,baz=206,slow=38
comp=Z,4.7nm,0.8s
YKA Yellowknife Ar 50.81 347 P **P** **10 59 05.3 +0.4**
comp=Z,11nm,0.7s,baz=148,slow=7.6,SNR=76
YKA PcP **PcP** **11 00 21.8 +0.1**
comp=Z,1.0nm,0.9s,baz=151,slow=3.8,SNR=3.8
YKA LR LR 11 24 57.9
comp=Z,49nm,18.5s,baz=152,slow=41
comp=Z,11nm,0.7s
YKA Yellowknife Ar 50.81 347 P **P** **10 59 06.2 +1.2**
DLBC Dease Lake 52.30 336 P **P** **10 59 18.8 +2.5**
DLBC IAmb IAmb 10 59 24.6
comp=Z,7.0nm,1.2s
DLBC Dease Lake 52.30 336 P **P** **10 59 18.9 +2.6**
baz=132
FRB Frobisher Bay 52.44 13 LR LR 11 23 34.8
comp=Z,88nm,18.2s,baz=259,slow=38
CPUP Villa Florida 52.92 139 P **P** **10 59 22.1 +0.9**
comp=Z,0.8nm,0.3s,baz=23,slow=9.2,SNR=2.3
comp=Z,0.8nm,0.3s
P32M Atlin 54.50 336 P **P** **10 59 34.0 +1.6**
baz=129
P33M Teslin, Yukon 54.55 337 P **P** **10 59 34.1 +1.3**
baz=130
MMPY Sheldon Lake, 55.59 340 P **P** **10 59 42.0 +1.7**
baz=133,SNR=11
WHY Whitehorse 55.62 336 P **P** **10 59 42.8 +2.2**
baz=128
FARO Faro, Yukon 56.05 338 P **P** **10 59 45.7 +2.1**
baz=130
O30N Mendenhall 56.16 336 P **P** **10 59 46.0 +1.5**
baz=127
M31M Drury Creek, Y 56.41 338 P **P** **10 59 47.0 +0.9**
baz=129
N31M Braeburn, Yuko 56.48 337 P **P** **10 59 48.6 +1.9**
N31M Braeburn, Yuko 56.48 337 P **P** **10 59 47.9 +1.2**
baz=127
PNL Peninsula 56.89 334 P **P** **10 59 51.1 +1.4**
baz=123
N30M Aishikik Lake 56.97 336 P **P** **10 59 52.2 +2.1**
baz=126
M30M Minto, Yukon 57.52 338 P **P** **10 59 55.5 +1.5**
M30M IAmb IAmb 10 59 57.8
comp=Z,5.8nm,1.2s
M30M Minto, Yukon 57.52 338 P **P** **10 59 55.3 +1.3**
baz=127
YUK8 Steele Glacier 57.93 335 P **P** **10 59 58.4 +1.2**
baz=123
YUK3 Moose Creek 58.47 336 P **P** **11 00 02.8 +1.9**
baz=123
MCARA McCarthy VSAT 59.32 335 P **P** **11 00 08.1 +1.5**
baz=120
DAWY Dawson 59.35 338 P **P** **11 00 08.2 +1.4**
baz=125
BCAR Beaver Creek A 59.69 337 P **P** **11 00 10.7 +1.5**
L27K Beaver Creek, 59.70 337 P **P** **11 00 11.1 +1.9**
L27K IAmb IAmb 11 00 14.1
comp=Z,2.7nm,0.8s
L27K Beaver Creek, 59.70 337 P **P** **11 00 10.4 +1.2**
baz=122
SFJD Kangerlussuaq 59.70 18 LR LR 11 27 46.8
comp=Z,140nm,18.1s,baz=222,slow=38
I29M Ogilvie Camp, 59.73 340 P **P** **11 00 10.2 +0.8**
I29M IAmb IAmb 11 00 12.1
comp=Z,4.8nm,1.1s
I29M Ogilvie Camp, 59.73 340 P **P** **11 00 10.7 +1.3**
baz=127
RCBR Riachuelo 59.80 105 LR LR 11 26 59.4
comp=Z,79nm,18.8s,baz=78,slow=37
M26K Nabesna, AK 59.82 336 P **P** **11 00 11.7 +1.6**
baz=120
EPYK Eagle Plains 59.84 341 P **P** **11 00 11.6 +1.5**
baz=129
N25K Chitina, Valde 60.09 334 P **P** **11 00 13.8 +1.8**
N25K Chitina, Valde 60.09 334 P **P** **11 00 13.3 +1.3**
baz=118
INK Inuvik 60.18 344 P **P** **11 00 12.8 +0.4**
comp=Z,3.4nm,0.7s,baz=109,slow=8.3,SNR=4.0
INK LR LR 11 30 26.5
comp=Z,70nm,18.8s,baz=138,slow=40
comp=Z,3.4nm,0.7s
INK Inuvik 60.18 344 P **P** **11 00 13.2 +0.9**
INK Inuvik 60.18 344 P **P** **11 00 13.8 +1.5**
baz=133
K27K Chicken 60.31 337 P **P** **11 00 15.2 +1.8**
K27K Chicken 60.31 337 P **P** **11 00 14.9 +1.5**
baz=122
KLU Klutina 60.59 334 P **P** **11 00 16.3 +0.9**
KLU Klutina 60.59 334 P **P** **11 00 17.3 +1.9**
baz=117
RES Resolute Bay 60.64 359 LR LR 11 29 33.6
comp=Z,40nm,20.5s,baz=80,slow=39
M24K Tolsona, Glenn 60.98 334 P **P** **11 00 19.2 +1.2**
baz=117
SCRK Sand Creek 61.00 337 P **P** **11 00 20.1 +1.8**
baz=120
PAX Paxson 61.09 335 P **P** **11 00 20.4 +1.6**
baz=118
J26L Joseph Creek 61.11 337 P **P** **11 00 20.6 +1.7**
J26L Joseph Creek 61.11 337 P **P** **11 00 20.4 +1.5**
baz=121
RIDG Independent Ri 61.22 336 P **P** **11 00 21.2 +1.6**
baz=119
SCM Sheep Creek Mo 61.35 334 P **P** **11 00 22.1 +1.5**
baz=116
M23K Glacier View 61.50 334 P **P** **11 00 22.4 +0.8**
baz=115
K24K Donnelly Dome 61.61 336 P **P** **11 00 23.5 +1.2**
baz=118
SML Sawmill 61.77 334 P **P** **11 00 24.2 +0.9**
baz=115
J25K Salcha River, 61.84 337 P **P** **11 00 25.0 +1.2**
baz=119
WAT6 Susitna Watana 61.85 335 P **P** **11 00 25.1 +1.1**
baz=116
RC01 Rabbit Creek A 62.09 333 P **P** **11 00 26.6 +1.2**
baz=113
KDAK Kodiak Island 62.27 328 P **P** **11 00 28.1 +1.4**
baz=108
HDA Harding Lake 62.35 337 P **P** **11 00 28.3 +1.2**
baz=117
IL31 62.49 337 P **P** **11 00 29.7 +1.6**
IL31 IAmb IAmb 11 00 30.1
comp=Z,5.4nm,1.1s
ILAR Eielson Array 62.49 337 P **P** **11 00 28.2 +0.1**
comp=Z,4.0nm,1.1s,baz=137,slow=5.0,SNR=17
ILAR LR LR 11 31 57.9
comp=Z,56nm,19.5s,baz=68,slow=40
comp=Z,4.0nm,1.1s
ILAR Eielson Array 62.49 337 P **P** **11 00 29.0 +0.9**
RND Reindeer 62.66 335 P **P** **11 00 30.9 +1.5**
BMAR Burnt Mountain 62.98 340 P **P** **11 00 32.9 +1.5**
SKT Skwentna 63.23 333 P **P** **11 00 33.9 +0.9**
baz=112
NEA2 Nenana 63.25 336 P **P** **11 00 34.2 +1.0**
baz=115
TRF Thorofare Moun 63.27 335 P **P** **11 00 34.4 +1.0**
TRF Thorofare Moun 63.27 335 P **P** **11 00 34.6 +1.2**
baz=114
H24K Noodor Dome 63.35 338 P **P** **11 00 35.0 +1.1**
H24K IAmb IAmb 11 00 37.8
comp=Z,3.5nm,0.8s
H24K Noodor Dome 63.35 338 P **P** **11 00 34.6 +0.7**
baz=117,SNR=5.5
I23K Minto, Yukon-K 63.60 337 P **P** **11 00 36.1 +0.6**
baz=115
BPAW Bear Paw Mtn. 63.81 335 P **P** **11 00 38.0 +1.1**
baz=113
PPLA Purkeypile 63.85 334 P **P** **11 00 37.9 +0.6**
baz=111
M20K Styx River 63.90 333 P **P** **11 00 38.9 +1.3**
baz=110
H23K Yukon River 63.97 337 P **P** **11 00 39.2 +1.3**
baz=115
MLY Manley 64.09 336 P **P** **11 00 39.7 +1.0**
MLY Manley 64.09 336 P **P** **11 00 39.7 +1.0**
baz=114,SNR=5.2
PPT Papeete 64.23 242 LR LR 11 23 22.3
comp=Z,43nm,19.7s,baz=114,slow=31
L20K Farewell, AK 64.43 333 P **P** **11 00 41.7 +0.7**
baz=110
N18K Kilae Creek 64.78 331 P **P** **11 00 44.1 +0.8**
baz=107
K20K Telida 64.81 334 P **P** **11 00 44.4 +0.9**
K20K IAmb IAmb 11 00 58.2
comp=Z,2.6nm,0.8s
K20K Telida 64.81 334 P **P** **11 00 44.3 +0.9**
baz=110
J20K Nowinta River 65.13 335 P **P** **11 00 46.7 +1.2**
baz=110
H21K Melozitna Rive 65.13 337 P **P** **11 00 46.4 +0.9**
baz=112
TOLK Toolik Lake Re 65.22 340 P **P** **11 00 47.6 +1.6**
TOLK Toolik Lake Re 65.22 340 P **P** **11 00 47.7 +1.6**
baz=116
IMAR Indian Mountai 65.61 337 P **P** **11 00 48.9 +0.3**
BORG Borgarnes 69.50 26 LR LR 11 31 41.5
comp=Z,15nm,18.4s,baz=286,slow=36
JMIC Jan Mayen 74.96 20 LR LR 11 35 31.6
comp=Z,72nm,18.7s,baz=256,slow=36
SPITS Spitsbergen Ar 80.19 11 LR LR 11 41 24.6
comp=Z,122nm,18.4s,baz=234,slow=38
ESDC Sonseca Array 80.29 52 P **P** **11 02 13.8 -2.3**
comp=Z,0.8nm,0.8s,baz=289,slow=5.0,SNR=4.8
comp=Z,0.8nm,0.8s
MDT Midelt 81.03 58 LR LR 11 34 06.0
comp=Z,21nm,19.0s,baz=336,slow=33
NOA NORSAR Array B 84.47 28 LR LR 11 41 06.6
comp=Z,16nm,19.0s,baz=290,slow=36
HFS Hagfors 85.93 29 LR LR 11 38 41.8
comp=Z,46nm,21.8s,baz=283,slow=34
ARCES ARCESS Array B 86.33 18 P **P** **11 02 45.9 -0.8**
comp=Z,3.1nm,1.0s,baz=342,slow=3.1,SNR=4.7
ARCES LR LR 11 41 34.4
comp=Z,40nm,18.7s,baz=292,slow=36
comp=Z,3.1nm,1.0s
SEY Seymchan 88.39 335 P **P** **11 02 56.9 +0.3**
comp=Z,1.0nm,0.7s,baz=49,slow=3.2,SNR=4.1
comp=Z,1.0nm,0.7s
FINES FINESS Array B 90.78 25 LR LR 11 45 33.5
comp=Z,30nm,18.1s,baz=252,slow=37
TORD Torodi Ar. Bea 91.11 76 P **P** **11 03 09.3 -1.1**
comp=Z,0.3nm,0.6s,baz=294,slow=5.6,SNR=2.0
comp=Z,0.3nm,0.6s
VRAC Vranov 91.63 38 LR LR 11 46 25.1
comp=Z,27nm,18.3s,baz=288,slow=37
NRIK Noril'sk 96.83 360 LR LR 11 51 59.9
comp=Z,48nm,18.4s,baz=73,slow=38
AKASG Malin Array Be 98.11 33 LR LR 11 48 56.5
comp=Z,22nm,20.5s,baz=348,slow=36
MKAR Makanchi Array 119.28 4 PKP **PKPdf** **11 08 54.6 +0.1**
comp=Z,0.4nm,0.8s,baz=46,slow=8.3,SNR=3.0
WRA Warramunga Arr 134.66 256 PKP **PKPdf** **11 09 23.2 -1.2**
comp=Z,0.7nm,1.0s,baz=93,slow=3.3,SNR=2.1
ASAR Alice Springs 134.96 251 PKP **PKPdf** **11 09 23.6 -1.3**
comp=Z,0.4nm,1.0s,baz=33,slow=2.2,SNR=2.4
CMAR Chiang Mai Arr 145.69 340 PKPbc **PKPdf** **11 09 44.0 -0.3**
comp=Z,4.7nm,0.8s,baz=334,slow=3.8,SNR=19

*NEIC **14** 10:50:44.8±1.1, 18°.85N±0°.05×145°.4E±0°.2, h203km±5km, mb4.2/15, ML3.9/6, Error ellipse: s-maj=21.3km s-min=7.7km az=95.0*
*IDC **14** 10:50:48.2±2.7, 18°.81N×145°.35E, h244km±28km, mb3.2/8, mbtmp3.8/10, Error ellipse: s-maj=29.4km s-min=13.3km az=96.0*
ISC 14 10:50:45.1±0.6, 18°.82N±0°.06×145°.4E±0°.1, h214km, n29, σ1s02/28, mb3.8/14, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.22**	**186**	P	**Pn**	**10 52 05.8**	**+3.0**
	31nm,0.9s,baz=353,slow=18,SNR=1.6						
GUMO				S	**S**	**10 53 01.7**	**-2.3**
	18nm,0.3s,baz=14,slow=23,SNR=5.8						
GUMO	**Guam**	**5.22**	**186**		**Pn**	**10 52 02.1**	**-0.6**
GUMO	**Guam**	**5.22**	**186**	IAML		10 53 08.2	
	65nm,1.1s						
GUMO				IAML		10 53 14.4	
	70nm,0.7s						
PATS	**Pohnpei**	**17.32**	**132**	P	**P**	**10 54 31.3**	**-1.4**
JGF	**Kuroka**	**18.17**	**339**	P	**Pn**	**10 54 44.1**	**-0.2**
JGF				IAmb	IAmb	10 54 49.9	
	comp=Z,9.2nm,1.1s						
MJAR	**Matsushiro Arr**	**18.75**	**342**	P	**Pn**	**10 54 50.1**	**-1.2**
	comp=Z,1.6nm,0.7s,baz=170,slow=9.8,SNR=5.0						
MJAR	**Matsushiro Arr**	**18.75**	**342**	P	**P**	**10 54 46.8**	**-1.3**
MAJO	**Matsushiro**	**18.76**	**342**	P	**P**	**10 54 47.7**	**-0.4**
MAJO				IAmb	IAmb	10 54 55.5	
	comp=Z,6.1nm,1.0s						
MJB9	**Matsu-Tunnel**	**18.76**	**342**	P	**P**	**10 54 48.2**	**-0.1**
MJB9				IAmb	IAmb	10 54 55.4	
	comp=Z,6.0nm,1.0s						
COEN	**Coen**	**32.64**	**184**	P	**P**	**10 56 57.0**	**-0.1**
KNRA	**Kununurra**	**37.99**	**207**	P	**P**	**10 57 43.5**	**+0.8**
KNRA				IAmb	IAmb	10 57 54.1	
	comp=Z,18nm,1.1s						
WB0	**Warramunga Arr**	**39.84**	**196**	P	**P**	**10 57 58.6**	**+0.7**
WB0				IAmb	IAmb	10 57 59.5	
	comp=Z,17nm,1.2s						
WRA	**Warramunga Arr**	**40.02**	**196**	P	**P**	**10 57 59.9**	**+0.4**
	comp=Z,7.6nm,0.7s,baz=40,slow=10,SNR=103						
	comp=Z,7.6nm,0.7s						
WRA	**Warramunga Arr**	**40.02**	**196**	P	**P**	**10 57 59.6**	**+0.1**
AS31	**Alice Springs**	**43.69**	**195**	P	**P**	**10 58 29.8**	**+0.7**
ASAR	**Alice Springs**	**43.69**	**195**	P	**P**	**10 58 29.1**	**0.0**
	comp=Z,1.0nm,0.6s,baz=19,slow=7.2,SNR=20						
	comp=Z,1.0nm,0.6s						
SEY	**Seymchan**	**44.34**	**5**	P	**P**	**10 58 34.9**	**+1.2**
	comp=Z,0.5nm,0.6s,baz=9.1,slow=23,SNR=2.0						
	comp=Z,0.5nm,0.6s						
MBWA	**Marble Bar**	**47.01**	**214**	P	**P**	**10 58 55.5**	**+0.3**
MBWA				IAmb	IAmb	10 59 14.2	
	comp=Z,23nm,1.5s						
PSA00	**Pilbara Seismi**	**47.29**	**213**	P	**P**	**10 58 57.5**	**+0.1**
PSA00				IAmb	IAmb	10 59 32.2	
	comp=Z,16nm,1.4s						
UNV	**Unalaska Valle**	**50.72**	**35**	P	**P**	**10 59 23.2**	**+0.3**
UNV				IAmb	IAmb	10 59 31.0	
	comp=Z,11nm,1.0s						
AKUT	**Akutan**	**51.24**	**35**	P	**P**	**10 59 26.9**	**+0.2**
MHA	**Mahukona**	**55.10**	**78**	P	**P**	**10 59 55.7**	**+0.2**
MKAR	**Makanchi Array**	**58.17**	**314**	P	**P**	**11 00 17.0**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=95,slow=8.8,SNR=2.5						
	comp=Z,0.3nm,0.6s						
KURK	**Kurchatov**	**60.99**	**318**	P	**P**	**11 00 35.2**	**-0.6**
KURK	**Kurchatov**	**60.99**	**318**	IAmb	IAmb	11 00 54.0	
	comp=Z,4.5nm,1.5s						
KURBB	**Kurchatov Arra**	**61.04**	**318**	P	**P**	**11 00 35.2**	**-0.9**
	comp=Z,0.5nm,0.6s,baz=96,slow=7.4,SNR=6.7						
	comp=Z,0.5nm,0.6s						
ILAR	**Eielson Array**	**63.67**	**26**	P	**P**	**11 00 52.4**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=256,slow=4.6,SNR=5.4						
	comp=Z,0.4nm,0.4s						
YKA	**Yellowknife Ar**	**78.02**	**28**	P	**P**	**11 02 19.6**	**0.0**
	comp=Z,0.6nm,0.7s,baz=291,slow=5.4,SNR=4.9						
	comp=Z,0.6nm,0.7s						
NVAR	**Mina Array Bea**	**83.29**	**52**	P	**P**	**11 02 49.3**	**+0.9**
	comp=Z,0.6nm,0.6s,baz=266,slow=5.8,SNR=8.6						
	comp=Z,0.6nm,0.6s						

*IDC **14** 10:52:15.9±0.8, 21°.59S×68°.18W, h118km±9km, mb3.9/5, mbtmp4.1/8, Error ellipse: s-maj=21.7km s-min=12.5km az=104.0*
*GUC **14** 10:52:17.1±0.8, 21°.58S×68°.41W, h125km±5km, ML3.5*
ISC 14 10:52:15.7±0.8, 21°.53S±0°.05×68°.29W±0°.06, h120km±7km, n24, σ1s34/40, mb4.1/5, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.93**	**253**	*e*P	**Pn**	**10 52 37.9**	**+0.7**
PB09				*i* S	**Sn**	**10 52 54.1**	**+0.5**
PB09				IAML		10 52 58.2	
	comp=N,590nm,0.7s						
PB01	**IPOC Station P**	**1.22**	**293**	*e*P	**Pn**	**10 52 40.4**	**+0.3**
PB01				*i* S	**Sn**	**10 52 58.1**	**-0.5**
PB01				IAML		10 53 00.9	
	comp=N,614nm,0.4s						
LVC	**Limon Verde**	**1.22**	**208**	P	**Pn**	**10 52 41.0**	**+0.6**
	comp=N,384nm,0.3s,baz=10,slow=7.4,SNR=847						
LVC				S	**Sn**	**10 52 58.9**	**-0.3**
	comp=N,298nm,0.6s,baz=203,slow=18,SNR=79						
LVC	**Limon Verde**	**1.22**	**208**	*e*P	**Pn**	**10 52 40.7**	**+0.2**
LVC				*i* S	**Sn**	**10 52 59.2**	**0.0**
PB07	**IPOC Station P**	**1.50**	**262**	*e*P	**Pn**	**10 52 43.1**	**-0.2**
PB07				*i* S	**Sn**	**10 53 03.1**	**-1.3**
PB07				IAML		10 53 04.9	
	comp=E,821nm,0.3s						
PB02	**IPOC Station P**	**1.51**	**278**	*e*P	**Pn**	**10 52 43.2**	**-0.2**
PB02				*i* S	**Sn**	**10 53 03.8**	**-0.7**
PB02				IAML		10 53 05.4	
	comp=E,1μm,0.4s						
PB08	**IPOC Station P**	**1.60**	**329**	*e*P	**Pn**	**10 52 46.5**	**+1.8**
PB08				*i* S	**Sn**	**10 53 08.5**	**+1.7**
PB08				IAML		10 53 12.6	
	comp=E,663nm,0.6s						
PB06	**IPOC Station P**	**1.67**	**225**	*e*P	**Pn**	**10 52 45.4**	**0.0**
PB06				*i* S	**Sn**	**10 53 07.5**	**-0.5**
PB06				IAML		10 53 08.2	
	comp=E,632nm,0.7s						
PATCX	**Punta Patache**	**1.88**	**292**	*e*P	**Pn**	**10 52 47.6**	**-0.2**
PATCX				*i* S	**Sn**	**10 53 11.0**	**-1.2**
PATCX				IAML		10 53 13.0	
	comp=N,1μm,0.4s						
PB04	**IPOC Station P**	**1.91**	**245**	*e*P	**Pn**	**10 52 47.5**	**-0.7**
PB04				*i* S	**Sn**	**10 53 11.4**	**-1.6**
PB04				IAML		10 53 16.8	
	comp=N,445nm,0.6s						
TA01	**Diego Aracena**	**2.01**	**298**	*e*P	**Pn**	**10 52 49.2**	**-0.1**
TA01				*i* S	**Sn**	**10 53 13.5**	**-1.5**
TA01				IAML		10 53 15.2	
	comp=E,817nm,0.2s						
GO01	**Chusmiza**	**2.04**	**335**	*e*P	**Pn**	**10 52 51.6**	**+1.5**
GO01				*i* S	**Sn**	**10 53 18.0**	**+1.7**
TA02	**Huaiquique**	**2.13**	**306**	*e*P	**Pn**	**10 52 50.5**	**-0.2**
TA02				*i* S	**Sn**	**10 53 16.1**	**-1.6**
PB11	**IPOC Station P**	**2.17**	**324**	*e*P	**Pn**	**10 52 52.0**	**+0.5**
PB11				*i* S	**Sn**	**10 53 18.9**	**0.0**
LPAZ	**La Paz**	**5.21**	**2**	P	**Pn**	**10 53 34.4**	**+2.3**
	comp=E,3.5nm,0.4s,baz=208,slow=1.3,SNR=36						
LPAZ				S	**Sn**	**10 54 33.0**	**+1.5**
	comp=E,2.7nm,0.6s,baz=206,slow=16,SNR=1.4						
SIV	**San Ignacio**	**8.77**	**52**	P	**Pn**	**10 54 18.4**	**-1.3**
	comp=E,12nm,0.6s,baz=238,slow=11,SNR=51						
SIV				S	**Sn**	**10 55 52.1**	**-4.9**
	comp=E,2.5nm,0.6s,baz=135,slow=22,SNR=5.5						
CPUP	**Villa Florida**	**11.10**	**118**	P	**Pn**	**10 54 49.5**	**-1.5**
	comp=E,1.5nm,0.5s,baz=338,slow=8.6,SNR=3.9						
ULM	**Lac du Bonnet**	**75.52**	**342**	P	**P**	**11 03 46.5**	**-0.1**
	comp=E,1.3nm,0.5s,baz=153,slow=5.4,SNR=4.2						
	comp=E,1.3nm,0.5s						
NVAR	**Mina Array Bea**	**75.87**	**322**	P	**P**	**11 03 50.2**	**+1.0**
	comp=E,0.3nm,0.5s,baz=162,slow=6.0,SNR=4.0						
	comp=E,0.3nm,0.5s						
TORD	**Torodi Ar. Bea**	**76.82**	**70**	P	**P**	**11 03 55.2**	**+0.5**
	comp=E,1.7nm,0.5s,baz=253,slow=5.5,SNR=28						
	comp=E,1.7nm,0.5s						
BOSA	**Boshof**	**82.92**	**118**	P	**P**	**11 04 26.4**	**-1.2**
	comp=E,1.5nm,0.5s,baz=111,slow=8.6,SNR=2.2						
	comp=E,1.5nm,0.5s						
YKA	**Yellowknife Ar**	**91.41**	**340**	P	**P**	**11 05 08.8**	**+1.2**
	comp=E,2.1nm,0.6s,baz=132,slow=4.7,SNR=27						
	comp=E,2.1nm,0.6s						
WRA	**Warramunga Arr**	**133.22**	**210**	PKP	**PKPdf**	**11 11 17.7**	**-0.4**
	comp=E,0.1nm,0.4s,baz=150,slow=1.8,SNR=1.5						
MKAR	**Makanchi Array**	**145.31**	**36**	PKPbc	**PKPdf**	**11 11 39.8**	**+0.6**
	comp=E,0.7nm,0.4s,baz=329,slow=4.0,SNR=9.1						

MAN 14 10:59:53.4, 13°.59N×120°.39E, h32km, mb3.6, ML2.4, MS1.8, Mindoro

*SNET **14** 11:01:06.4±0.6, 12°.78N×87°.15W, h0km±13km, ML3.2*
*INET **14** 11:01:07.8±0.4, 12°.79N×87°.02W, h2km±3km, MW3.1*
ISC 14 11:01:06.8±1.6, 12°.7N±0°.2×87°.1W±0°.1, h20km±7km, n11, σ0s32/14, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**0.10**	**112**	*e*P	**Pg**	**11 01 10.7**	**-0.1**
CNGN	**Cerro Negro**	**0.49**	**119**	*e*P	**Pg**	**11 01 17.1**	**+0.2**
MOMN	**Momotombo**	**0.67**	**119**	*e*P	**Pg**	**11 01 20.1**	**-0.1**
MOMN				*e*S	**Sg**	**11 01 29.6**	**+0.3**
CNCH	**Conchagua**	**0.86**	**309**	*e*P	**Pb**	**11 01 23.1**	**-0.2**
CNCH				*e*S	**Sn**	**11 01 36.7**	**+0.6**
CNCH				IAML		11 01 43.3	
	comp=Z,1μm,0.5s						
LCND	**La Caada**	**0.93**	**308**	*e*P	**Pb**	**11 01 23.9**	**-0.3**
LCND				*e*S	**Sn**	**11 01 37.9**	**+0.4**
LCND				IAML		11 01 40.0	
	comp=Z,480nm,0.3s						
HUEN		**1.03**	**113**	*e*P	**Pn**	**11 01 26.0**	**-0.1**
TGUH	**Tegucigalpa,Un**	**1.32**	**354**	*e*P	**Pn**	**11 01 30.2**	**-0.1**
PACA	**Pacayal**	**1.36**	**302**	*e*P	**Pb**	**11 01 31.8**	**0.0**
BOAB	**BOACO BROADBAN**	**1.47**	**101**	*e*P	**Pn**	**11 01 32.0**	**-0.3**
COEB	**Comit de Eme**	**1.55**	**299**	*e*P	**Pb**	**11 01 34.6**	**-0.4**
SCLA	**Alcaldia de Sa**	**1.82**	**302**	*e*P	**Pb**	**11 01 39.4**	**-0.1**

RSPR 14 11:09:20.3, 19°.25N×65°.73W, h70km±8km, MD3.3/10, 11C, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBYP	**Canovanas**	**0.98**	**187**	*e*P	Pn	11 09 37.4	-1.3
CBYP	**Canovanas**	**0.98**	**187**	*e*S	Sn	11 09 50.3	-2.0
CBYP	**Canovanas**	**0.98**	**187**	IAML		11 09 54.7	
	comp=E,689nm,0.2s						
CBYP	**Canovanas**	**0.98**	**187**		Pn	11 09 37.4	-1.3
CBYP					Sn	11 09 50.3	-2.0
GCPR	**Guaynabo City**	**0.99**	**200**	Pn	Pn	11 09 37.6	-1.2
CUPR	**Culebra, Puert**	**1.03**	**156**	*e*P	Pn	11 09 38.5	-0.8
CUPR	**Culebra, Puert**	**1.03**	**156**	*e*S	Sn	11 09 52.6	-0.6
CUPR	**Culebra, Puert**	**1.03**	**156**		Pn	11 09 38.5	-0.8
CUPR					Sn	11 09 52.6	-0.6
EMPR	**Esperanza - Ma**	**1.08**	**225**	*e*P	Pn	11 09 38.9	-1.0
EMPR	**Esperanza - Ma**	**1.08**	**225**	*e*S	Sn	11 09 54.4	0.0
EMPR	**Esperanza - Ma**	**1.08**	**225**		Sn	11 09 54.4	0.0
EMPR	**Esperanza - Ma**	**1.08**	**225**		Pn	11 09 38.7	-1.2
EMPR				IAML		11 10 00.1	
	comp=E,245nm,0.6s						
EMPR				IAML		11 10 11.5	
	comp=N,140nm,0.5s						
HUMP	**Col San Antoni**	**1.11**	**186**	*e*P	Pn	11 09 39.2	-1.0
HUMP	**Col San Antoni**	**1.11**	**186**	*e*S	Sn	11 09 54.1	-0.9
HUMP	**Col San Antoni**	**1.11**	**186**		Pn	11 09 39.2	-1.0
HUMP					Sn	11 09 54.1	-0.9
HUMP	**Col San Antoni**	**1.11**	**186**	IAML		11 09 58.0	
	comp=N,141nm,0.3s						
STVI	**Saint Thomas**	**1.16**	**141**	*e*P	Pn	11 09 41.0	+0.2
STVI	**Saint Thomas**	**1.16**	**141**	*e*S	Sn	11 09 55.8	-0.3
STVI	**Saint Thomas**	**1.16**	**141**		Sn	11 09 55.8	-0.3
STVI	**Saint Thomas**	**1.16**	**141**	Pn	Pn	11 09 41.3	+0.5
STVI	**Saint Thomas**	**1.16**	**141**	IAML		11 10 04.5	
	comp=N,122nm,0.4s						
MTP	**Monte Pirata**	**1.16**	**172**	*e*P	Pn	11 09 40.6	-0.3
MTP	**Monte Pirata**	**1.16**	**172**	*e*S	Sn	11 09 55.2	-1.0

SJG	**San Juan**	**1.20 200**	Pn	Pn	11 09 41.2	-0.2
SJG			IAML		11 09 59.9	
	comp=N,169nm,0.5s					
SJG			IAML		11 10 00.0	
	comp=N,127nm,0.4s					
PDPR	**Patillas Dam,**	**1.26 193**	Pn	Pn	11 09 40.8	-1.3
PDPR			IAML		11 10 14.7	
	comp=E,317nm,2.9s					
SJVI	**Gifft Hill Sch**	**1.29 135**ǁ	*eP*	Pn	11 09 41.8	-0.7
SJVI	**Gifft Hill Sch**	**1.29 135**	*eS*	Sn	11 09 58.3	-0.8
SJVI	**Gifft Hill Sch**	**1.29 135**		Pn	11 09 41.8	-0.7
SJVI				Sn	11 09 58.3	-0.8
AOPR	**Arecibo Observ**	**1.32 227**ǁ	*eP*	Pn	11 09 41.8	-1.2
AOPR	**Arecibo Observ**	**1.32 227**	*eS*	Sn	11 09 59.8	-0.3
AOPR	**Arecibo Observ**	**1.32 227**		Pn	11 09 41.8	-1.3
AOPR	**Arecibo Observ**	**1.32 227**		Sn	11 09 59.8	-0.3
IGPR	**InterUniversit**	**1.33 196**ǁ	*eP*	Pn	11 09 42.4	-0.7
IGPR	**InterUniversit**	**1.33 196**	*eS*	Sn	11 10 00.3	+0.3
CELP	**Cerrillos**	**1.42 215**	Pn	Pn	11 09 43.8	-0.5
CELP			IAML		11 10 03.8	
	comp=N,68nm,0.4s					
AGPR	**Aguadilla, PR**	**1.52 240**ǁ	*eP*	Pn	11 09 44.7	-1.0
AGPR	**Aguadilla, PR**	**1.52 240**	*eS*	Sn	11 10 07.3	+2.6
AGPR	**Aguadilla, PR**	**1.52 240**		Pn	11 09 44.7	-1.0
AGPR				Sn	11 10 07.3	+2.6
AGPR	**Aguadilla, PR**	**1.52 240**	IAML		11 10 13.9	
	comp=N,72nm,0.4s					
AGPR			IAML		11 10 20.5	
	comp=E,71nm,0.7s					
PRSN	**Puerto Rico Se**	**1.69 233**	Pn	Pn	11 09 47.3	-0.6
PRSN			IAML		11 10 13.4	
	comp=N,267nm,0.3s					
PRSN			IAML		11 10 17.6	
	comp=E,189nm,0.3s					
CDVI	**St. Croix**	**1.75 148**	Pn	Pn	11 09 48.6	0.0
CRPR	**Cabo Rojo, PR**	**1.80 227**ǁ	*eP*	Pn	11 09 49.1	-0.3
CRPR	**Cabo Rojo, PR**	**1.80 227**	*eS*	Sn	11 10 10.4	-0.9
CRPR	**Cabo Rojo, PR**	**1.80 227**		Pn	11 09 49.1	-0.3
CRPR				Sn	11 10 10.4	-0.9
CRPR	**Cabo Rojo, PR**	**1.80 227**	IAML		11 10 18.7	
	comp=N,41nm,0.6s					
DR12	**Loma Pena Alta**	**3.49 263**	Pn	Pn	11 10 11.4	-0.8

IDC 14 11:13:44.6±7.2, 18°.99S×177°.95W, *h*0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=313.2km s-min=38.9km az=144.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**44.88**	**261**	P	P	11 22 01.5	+0.3
	0.3nm,0.7s,baz=96,slow=7.7,SNR=16						
	0.3nm,0.7s						
ASAR	**Alice Springs**	**44.93**	**255**	P	P	11 22 00.9	-0.7
	0.6nm,0.8s,baz=92,slow=8.2,SNR=5.3						
	0.6nm,0.8s						
ILAR	**Eielson Array**	**86.84**	**13**	P	P	11 26 30.6	0.0
	0.2nm,0.4s,baz=221,slow=5.9,SNR=4.9						
	0.2nm,0.4s						

*SNET **14** 11:36:46.2±2.9, 14°.29N×90°.50W, h1km±6km, ML3.9*
*UCR **14** 11:36:46.3±2.9, 14°.29N×90°.50W, h1km±6km, ML3.8, mb4.3(NEIC)*
*IDC **14** 11:36:46.2±1.7, 14°.50N×90°.41W, h0km, mb3.9/7, mbtmp3.9/10, ML3.6/3, MS3.3/13, Error ellipse: s-maj=48.9km s-min=19.4km az=31.0*
*GCG **14** 11:36:47.3±0.3, 14°.44N×90°.50W, h4km±4km, MD4.4*
*NEIC **14** 11:36:48.2±1.8, 14°.37N±0°.09×90°.53W±0°.08, h10km±1km, mb4.3/65, Md4.4(SNET), Error ellipse: s-maj=17.9km s-min=8.6km az=217.0*

ISC 14 11:36:46.1±1.2, 14°.37N±0°.04×90°.48W±0°.03, h0km±8km, n130, σ1º06/147, mb4.2/21, MS3.2/12, 1C, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCG	**Pacaya**	**0.13**	**280**	*eP*	**Pg**	**11 36 49.7**	**+1.1**
NBG	**Las Nubes**	**0.25**	**30**	*eP*	**Pb**	**11 36 53.1**	**-0.6**
FUG	**Fuego 3**	**0.36**	**282**	*eP*	**Pb**	**11 36 55.1**	**-0.5**
SLOZ	**Alcaldia de Sa**	**0.76**	**117**	*eP*	**Pg**	**11 37 00.7**	**+0.2**
NUBE	**Las Nubes**	**0.82**	**124**	*eP*	**Pg**	**11 37 01.9**	**0.0**
NUBE				*eS*	**Sg**	**11 37 12.6**	**+0.1**
NUBE				*eS*	**Sb**	**11 37 13.0**	**-2.0**
NUBE				IAML		11 37 16.1	
	comp=N,4μm,0.5s						
NUBE	**Las Nubes**	**0.82**	**124**	*eP*	**Pg**	**11 37 01.9**	**0.0**
NUBE				*eS*	**Sg**	**11 37 12.6**	**+0.1**
NUBE				*eS*	**Sb**	**11 37 13.0**	**-2.0**
NUBE				IAML		11 37 16.1	
	comp=N,4μm,0.5s						
RTR	**El Retiro**	**0.93**	**120**	*eP*	**Pg**	**11 37 04.2**	**+0.2**
RTR	**El Retiro**	**0.93**	**120**	*eP*	**Pg**	**11 37 04.2**	**+0.2**
SNJE	**San Jose**	**0.98**	**120**	*eP*	**Pg**	**11 37 05.0**	**0.0**
SNJE	**San Jose**	**0.98**	**120**	*eP*	**Pg**	**11 37 05.0**	**0.0**
SBLS	**San Blas**	**0.98**	**122**	*eP*	**Pg**	**11 37 05.7**	**+0.8**
SBLS	**San Blas**	**0.98**	**122**	*eP*	**Pg**	**11 37 05.7**	**+0.8**
CEVE	**Cerro Verde**	**0.99**	**123**	*eP*	**Pg**	**11 37 05.5**	**+0.5**
CEVE				*eS*	**Sg**	**11 37 18.6**	**+0.7**
CEVE				*eS*	**Sb**	**11 37 21.2**	**+1.3**
CEVE	**Cerro Verde**	**0.99**	**123**	*eP*	**Pg**	**11 37 05.5**	**+0.5**
CEVE				*eS*	**Sg**	**11 37 18.6**	**+0.7**
CEVE				*eS*	**Sb**	**11 37 21.2**	**+1.3**
MRL	**Marmol**	**1.04**	**47**	*eP*	**Pb**	**11 37 07.1**	**-0.1**
STG3	**Santiaguito 3,**	**1.11**	**288**	*eP*	**Pb**	**11 37 07.8**	**-0.5**
ESQI	**Esquipulas**	**1.12**	**80**ǁ	*iP*	**Pg**	**11 37 07.3**	**-0.2**
ESQI				IAML		11 37 27.7	
	comp=Z,5μm,0.7s						
RTAL	**Retalhuleu**	**1.19**	**278**		**Pg**	**11 37 08.8**	**-0.1**
RTAL	**Retalhuleu**	**1.19**	**278**	*i* P	**Pg**	**11 37 08.4**	**-0.5**
RTAL				*eP*	**Pb**	**11 37 09.6**	**0.0**
BOQS	**Boqueron**	**1.32**	**118**	*eP*	**Pg**	**11 37 11.5**	**0.0**
BOQS	**Boqueron**	**1.32**	**118**	*eP*	**Pg**	**11 37 11.5**	**0.0**
UEES	**Universidad Ev**	**1.37**	**118**	*eP*	**Pn**	**11 37 12.0**	**-0.5**
UEES				*eS*	**Sn**	**11 37 32.8**	**+1.4**
UEES				*eS*	**Sb**	**11 37 33.1**	**+2.5**
UEES	**Universidad Ev**	**1.37**	**118**	*eP*	**Pn**	**11 37 12.0**	**-0.5**
UEES				*eS*	**Sn**	**11 37 32.8**	**+1.4**
UEES				*eS*	**Sb**	**11 37 33.1**	**+2.5**
HUEH	**Huehuetenango**	**1.37**	**314**		**Pg**	**11 37 12.3**	**0.0**
HUEH	**Huehuetenango**	**1.37**	**314**	*eP*	**Pg**	**11 37 12.1**	**-0.3**
HUEH				*eS*	**Sn**	**11 37 33.5**	**+1.9**
HUEH	**Huehuetenango**	**1.37**	**314**	*eP*	**Pg**	**11 37 12.1**	**-0.3**
HUEH				*eS*	**Sn**	**11 37 33.5**	**+1.9**
SNET	**Serv Nac Est T**	**1.39**	**119**	Pn	**Pn**	**11 37 12.1**	**-0.7**
SNET	**Serv Nac Est T**	**1.39**	**119**	*eS*	**Sg**	**11 37 31.0**	**+0.3**
SNET				IAML		11 37 32.9	
	comp=N,2μm,0.4s						
SNET	**Serv Nac Est T**	**1.39**	**119**	*eS*	**Sg**	**11 37 31.0**	**+0.3**
SNET				IAML		11 37 32.9	
	comp=N,2μm,0.4s						
LFU	**La Fuente**	**1.46**	**115**	*eP*	**Pn**	**11 37 11.3**	**-2.5**
LFU	**La Fuente**	**1.46**	**115**	*eP*	**Pn**	**11 37 11.3**	**-2.5**
SJTE	**Alcalda de S**	**1.61**	**118**	*eP*	**Pn**	**11 37 16.1**	**+0.2**
SJTE				*eS*	**Sn**	**11 37 38.1**	**+0.6**
SJTE	**Alcalda de S**	**1.61**	**118**	*eP*	**Pn**	**11 37 16.1**	**+0.2**
SJTE				*eS*	**Sn**	**11 37 38.1**	**+0.6**
PAVA	**Las Pavas**	**1.63**	**113**	*eP*	**Pn**	**11 37 16.1**	**-0.1**
PAVA				*eS*	**Sn**	**11 37 37.9**	**0.0**
PAVA	**Las Pavas**	**1.63**	**113**	*eP*	**Pn**	**11 37 16.1**	**-0.1**
PAVA				*eS*	**Sn**	**11 37 37.9**	**0.0**
COEG	**Centro de Oper**	**1.72**	**115**	*eP*	**Pn**	**11 37 17.2**	**-0.2**
COEG	**Centro de Oper**	**1.72**	**115**	*eP*	**Pn**	**11 37 17.2**	**-0.2**
SCLA	**Alcaldia de Sa**	**1.82**	**111**	*i* P	**Pn**	**11 37 18.6**	**-0.2**
SCLA				*eS*	**Sb**	**11 37 44.5**	**+0.7**
SCLA				IAML		11 37 50.8	
	comp=N,359nm,0.7s						
SCLA	**Alcaldia de Sa**	**1.82**	**111**	*i* P	**Pn**	**11 37 18.6**	**-0.2**
SCLA				*eS*	**Sb**	**11 37 44.5**	**+0.7**
SCLA				IAML		11 37 50.8	
	comp=N,359nm,0.7s						
PQSS	**Presa 15 de Se**	**2.00**	**111**	*eP*	**Pn**	**11 37 22.6**	**+1.4**
PQSS				*eS*	**Sb**	**11 37 49.4**	**+0.5**
PQSS				IAML		11 37 53.6	
	comp=E,1μm,0.3s						
PQSS	**Presa 15 de Se**	**2.00**	**111**	*eP*	**Pn**	**11 37 22.6**	**+1.4**
PQSS				*eS*	**Sb**	**11 37 49.4**	**+0.5**
PQSS				IAML		11 37 53.6	
	comp=E,1μm,0.3s						
COEB	**Comit de Eme**	**2.08**	**114**	*eP*	**Pn**	**11 37 23.8**	**+1.5**
COEB				*eS*	**Sb**	**11 37 52.5**	**+1.3**
COEB	**Comit de Eme**	**2.08**	**114**	*eP*	**Pn**	**11 37 23.8**	**+1.5**
COEB				*eS*	**Sb**	**11 37 52.5**	**+1.3**
CAHU	**Cacacuatique**	**2.28**	**105**	*eP*	**Pn**	**11 37 27.0**	**+1.8**
CAHU	**Cacacuatique**	**2.28**	**105**	*eP*	**Pn**	**11 37 27.0**	**+1.8**
CCIG	**Comitan**	**2.49**	**320**		**Pn**	**11 37 29.0**	**+1.0**
PETF	**Flores**	**2.60**	**13**	Pn	**Pn**	**11 37 29.6**	**+0.2**
TGUH	**Tegucigalpa,Un**	**3.12**	**95**		**Pn**	**11 37 38.4**	**+1.6**
CRIN	**San Cristobal**	**3.72**	**116**	Pn	**Pn**	**11 37 45.1**	**+0.2**
CNGN	**Cerro Negro**	**4.12**	**116**		**Pn**	**11 37 51.4**	**+1.0**
MATN	**Matagalpa**	**4.65**	**107**		**Pn**	**11 37 55.9**	**-1.8**
CMIG	**Matias Romero**	**5.03**	**303**	Pn	**Pn**	**11 38 02.2**	**-0.7**
	comp=E,1.0nm,0.3s,baz=134,slow=10,SNR=8.6						
CMIG				Sn	**Sn**	**11 39 06.3**	**+4.5**
	comp=E,3.6nm,0.3s,baz=276,slow=19,SNR=1.8						
CMIG				Lg	Lg	11 39 21.6	
	comp=E,6.6nm,0.3s,baz=266,slow=20,SNR=8.9						
	comp=E,4.4nm,0.4s						
BOAB	**BOACO BROADBAN**	**5.06**	**112**		**Pn**	**11 38 03.5**	**+0.3**
ACON	**Acoyapa**	**5.69**	**114**	Pn	**Pn**	**11 38 12.5**	**+0.5**
ORTG	**Ortega, Santa**	**6.32**	**129**		**Pn**	**11 38 21.9**	**+1.3**
DUNO	**Dulce Nombre,**	**6.47**	**131**	Pn	**Pn**	**11 38 24.6**	**+1.9**
JTS	**Las Juntas de**	**6.75**	**126**	Pn	**Pn**	**11 38 27.2**	**+0.7**
	comp=E,0.3nm,0.3s,baz=16,slow=22,SNR=1.5						
	comp=E,1.4nm,0.3s						
JTS	**Las Juntas de**	**6.75**	**126**	Pn	**Pn**	**11 38 27.6**	**+1.1**
RIMA	**Rio Macho**	**7.92**	**125**	Pn	**Pn**	**11 38 44.6**	**+1.8**
TLIG	**Tlapa**	**8.40**	**293**	Pn	**Pn**	**11 38 46.9**	**-2.4**
SRBA	**San Rafael, Bu**	**8.64**	**125**		**Pn**	**11 38 52.0**	**-0.5**
DRK0	**Durika**	**8.71**	**125**	Pn	**Pn**	**11 38 53.9**	**+0.3**
SOR	**Soroa**	**10.97**	**39**	Pn	**Pn**	**11 39 25.2**	**+0.8**
344A	**Westbrook Farm**	**17.01**	**359**		**P**	**11 40 48.9**	**+1.5**
BRAL	**Brewton**	**17.02**	**10**	Pn	**Pn**	**11 40 46.2**	**+0.7**
NATX	**Nacogdoches**	**17.73**	**348**		**Pn**	**11 40 54.4**	**0.0**
NATX				IAmb	IAmb	11 41 06.4	
	comp=Z,16nm,0.6s						
JCT	**Junction City**	**18.19**	**333**	P	**Pn**	**11 40 58.8**	**-1.4**
TXAR	**Lajitas Array**	**19.25**	**323**	P	**P**	**11 41 12.2**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=139,slow=12,SNR=9.0						
TXAR				LR	LR	11 49 19.1	
	comp=Z,32nm,18.4s,baz=146,slow=39						
	comp=Z,2.2nm,0.9s						
TXAR	**Lajitas Array**	**19.25**	**323**	P	**P**	**11 41 10.9**	**-1.4**
TX31	**Lajitas Ar. Si**	**19.25**	**323**		**P**	**11 41 12.0**	**-0.3**
TX32	**Lajitas Array**	**19.25**	**323**	P	**P**	**11 41 12.0**	**-0.3**
ABTX	**Abilene, Hawle**	**20.00**	**337**	P	**P**	**11 41 20.5**	**+0.1**
ABTX				IAmb	IAmb	11 41 26.2	
	comp=Z,26nm,1.4s						
SDV	**Santo Domingo**	**20.18**	**103**	P	**P**	**11 41 22.6**	**0.0**
	comp=Z,3.8nm,0.4s,baz=4.9,slow=9.8,SNR=1.6						
SDV				LR	LR	11 50 47.6	
	comp=Z,46nm,20.6s,baz=264,slow=42						
	comp=Z,3.8nm,0.4s						
SDV	**Santo Domingo**	**20.18**	**103**	P	**P**	**11 41 23.6**	**+0.9**
SDV				IAmb	IAmb	11 41 30.9	
	comp=Z,13nm,0.9s						
MIAR	**Mount Ida**	**20.28**	**353**	P	**P**	**11 41 23.6**	**+0.2**
UALR	**University of**	**20.39**	**356**	P	**P**	**11 41 25.5**	**+1.0**
UALR				IAmb	IAmb	11 41 27.4	
	comp=Z,20nm,1.3s						
FPAL	**Fort Paine**	**20.56**	**12**	P	**P**	**11 41 26.7**	**+0.2**
FPAL				IAmb	IAmb	11 41 28.0	
	comp=Z,9.1nm,0.8s						
X37A	**Clayton**	**20.61**	**348**	P	**P**	**11 41 27.6**	**+0.7**
X37A				IAmb	IAmb	11 41 32.6	
	comp=Z,13nm,0.9s						
W39A	**Magazine**	**20.95**	**352**	P	**P**	**11 41 30.2**	**-0.5**
W39A				IAmb	IAmb	11 41 37.1	
	comp=Z,12nm,1.2s						
LPIG	**La Paz**	**21.05**	**300**	LR	LR	11 50 17.9	
	comp=Z,74nm,18.9s,baz=344,slow=39						
SWET	**Sewanee**	**21.16**	**10**	P	**P**	**11 41 32.6**	**-0.3**
SWET				IAmb	IAmb	11 41 34.3	
	comp=Z,7.5nm,0.8s						
W50A	**Signal Mountai**	**21.26**	**12**	P	**P**	**11 41 32.4**	**-1.6**
FCAR	**Ozark Folk Cen**	**21.48**	**356**	P	**P**	**11 41 36.3**	**-0.1**
V48A	**Smith Brothers**	**21.53**	**8**	P	**P**	**11 41 37.4**	**+0.5**
V48A				IAmb	IAmb	11 41 39.5	
	comp=Z,16nm,1.3s						
LCAR	**Lake Charles**	**21.62**	**359**	P	**P**	**11 41 37.9**	**+0.1**
WMOK	**Wichita Mounta**	**21.62**	**341**	P	**P**	**11 41 37.4**	**-0.5**
CPCT	**Cooper Cave**	**21.66**	**13**	P	**P**	**11 41 38.4**	**0.0**
CPCT				IAmb	IAmb	11 41 39.7	
	comp=Z,11nm,1.2s						
FNO	**Franklin**	**21.71**	**345**	P	**P**	**11 41 39.7**	**+0.8**
WVT	**Waverly**	**21.80**	**6**	P	**P**	**11 41 40.6**	**+0.8**
CLTN	**Cedars of Leba**	**21.95**	**9**	P	**P**	**11 41 42.2**	**+0.9**
CLTN				IAmb	IAmb	11 41 43.9	
	comp=Z,7.1nm,1.0s						
MNTX	**Cornudas Mount**	**21.99**	**324**	P	**P**	**11 41 42.0**	**+0.1**
U40A	**Yellville**	**22.00**	**355**	P	**P**	**11 41 42.7**	**+0.8**
U40A				IAmb	IAmb	11 41 44.5	
	comp=Z,8.9nm,1.1s						
TKL	**Tuckaleechee C**	**22.04**	**15**	P	**P**	**11 41 40.3**	**-2.1**
	comp=Z,1.1nm,0.3s,baz=7.8,slow=20,SNR=1.8						
TKL				LR	LR	11 50 53.9	
	comp=Z,73nm,18.9s,baz=189,slow=39						
	comp=Z,1.1nm,0.3s						
HHAR	**Hobbs**	**22.04**	**353**	P	**P**	**11 41 42.0**	**-0.4**
HHAR				IAmb	IAmb	11 41 48.1	
	comp=Z,7.7nm,1.0s						
U38A	**Gravette**	**22.25**	**352**	P	**P**	**11 41 44.6**	**-0.1**
PBMO	**Poplar Bluff**	**22.32**	**0**	P	**P**	**11 41 45.3**	**0.0**
PBMO				IAmb	IAmb	11 41 47.0	
	comp=Z,6.2nm,0.6s						
U49A	**Red Boiling Sp**	**22.45**	**10**	P	**P**	**11 41 47.5**	**+0.7**
MSTX	**Muleshoe**	**22.47**	**332**	P	**P**	**11 41 44.9**	**-2.3**
T47A	**Sharon Grove**	**22.73**	**7**	P	**P**	**11 41 49.8**	**+0.1**
T47A				IAmb	IAmb	11 41 51.9	
	comp=Z,16nm,1.0s						
MGMO	**Mountain Grove**	**22.75**	**356**	P	**P**	**11 41 50.2**	**+0.2**
MGMO				IAmb	IAmb	11 41 56.8	
	comp=Z,5.9nm,0.8s						
AMTX	**Amarillo**	**22.79**	**336**	P	**P**	**11 41 49.4**	**-1.1**
AMTX				IAmb	IAmb	11 41 50.5	
	comp=Z,5.4nm,0.7s						
S44A	**Carbondale**	**23.26**	**2**	P	**P**	**11 41 55.4**	**+0.3**
SIUC	**Southern Illin**	**23.28**	**3**	P	**P**	**11 41 55.9**	**+0.5**
S39A	**Bolivar**	**23.36**	**354**	P	**P**	**11 41 56.3**	**0.0**
S39A				IAmb	IAmb	11 41 59.4	
	comp=Z,6.9nm,0.8s						
SJG	**San Juan**	**23.64**	**78**	P	**P**	**11 41 58.4**	**-0.9**
	comp=Z,4.0nm,0.2s,baz=297,slow=18,SNR=0.5						
SJG				LR	LR	11 50 49.5	
	comp=Z,68nm,19.3s,baz=264,slow=36						
	comp=Z,4.0nm,0.2s						
SJG	**San Juan**	**23.64**	**78**	IAmb	IAmb	11 42 05.5	
	comp=Z,14nm,0.9s						
R40A	**Maddies Statio**	**23.88**	**357**	P	**P**	**11 42 01.1**	**-0.3**
R40A				IAmb	IAmb	11 42 10.4	
	comp=Z,5.3nm,0.9s						
S51A	**Beattyville**	**23.97**	**14**	P	**P**	**11 42 02.1**	**-0.1**
ATAH	**Atahualpa**	**24.50**	**150**	LR	LR	11 49 54.8	
	comp=Z,69nm,18.9s,baz=176,slow=32						
PFO	**Pinyon Flats O**	**30.36**	**314**	LR	LR	11 56 36.9	
	comp=Z,103nm,20.3s,baz=179,slow=39						
COWI	**Conover**	**31.65**	**2**	P	**P**	**11 43 09.9**	**-1.1**
COWI				IAmb	IAmb	11 43 11.2	
	comp=Z,3.6nm,0.8s						
E43A	**Lone Tree Farm**	**32.04**	**5**	P	**P**	**11 43 13.3**	**-1.1**
PDAR	**Pinedale Array**	**32.72**	**334**	P	**P**	**11 43 18.9**	**-1.9**
	comp=Z,0.1nm,0.3s,baz=159,slow=7.7,SNR=2.2						
PDAR				LR	LR	12 00 56.7	
	comp=Z,49nm,18.5s,baz=178,slow=44						
	comp=Z,0.1nm,0.3s						
REDW	**Red Top Meadow**	**33.77**	**333**	P	**P**	**11 43 29.5**	**-0.3**
REDW				IAmb	IAmb	11 43 30.0	
	comp=Z,2.7nm,0.9s						
LOHW	**Long Hollow**	**33.86**	**333**	P	**P**	**11 43 29.8**	**-0.9**
ELK	**Elko**	**34.01**	**325**	LR	LR	11 58 00.5	
	comp=Z,53nm,19.7s,baz=155,slow=38						
NVAR	**Mina Array Bea**	**34.33**	**319**	P	**P**	**11 43 34.8**	**0.0**
	comp=Z,1.9nm,1.0s,baz=134,slow=8.8,SNR=9.0						
	comp=Z,1.9nm,1.0s						
SAML	**Samuel**	**35.63**	**129**	P	**P**	**11 43 46.2**	**+0.2**
PLID	**Pearl Lake**	**37.48**	**330**	P	**P**	**11 44 00.9**	**-0.8**
NEW	**Newport**	**40.34**	**332**	LR	LR	12 02 25.5	
	comp=Z,69nm,18.9s,baz=189,slow=38						
SCHQ	**Schefferville**	**44.38**	**19**	P	**P**	**11 44 59.5**	**+1.3**
SCHQ				IAmb	IAmb	11 45 12.8	
	comp=Z,5.2nm,1.0s						
YKA	**Yellowknife Ar**	**51.02**	**346**	P	**P**	**11 45 49.1**	**-0.5**
	comp=Z,4.0nm,0.7s,baz=146,slow=8.1,SNR=32						
	comp=Z,4.0nm,0.7s						
INK	**Inuvik**	**60.51**	**343**	LR	LR	12 16 51.5	
	comp=Z,46nm,19.0s,baz=105,slow=40						
ILAR	**Eielson Array**	**63.09**	**336**	P	**P**	**11 47 15.6**	**+0.4**
	comp=Z,0.7nm,1.0s,baz=127,slow=3.1,SNR=4.0						
	comp=Z,0.7nm,1.0s						
KDAK	**Kodiak Island**	**63.18**	**328**	P	**P**	**11 47 16.9**	**+1.0**
BMAR	**Burnt Mountain**	**63.46**	**340**	P	**P**	**11 47 17.7**	**+0.1**
EUNU	**Eureka**	**65.74**	**1**	P	**P**	**11 47 32.1**	**-0.2**
BORG	**Borgarnes**	**68.24**	**26**	LR	LR	12 19 39.0	
	comp=Z,21nm,18.2s,baz=312,slow=38						
DBIC	**Dimbokro**	**84.15**	**85**	LR	LR	12 24 26.8	
	comp=Z,26nm,19.9s,baz=190,slow=34						
WRA	**Warramunga Arr**	**136.92**	**256**	PKP	**PKPdf**	**11 56 10.1**	**-1.6**
	comp=Z,0.5nm,0.9s,baz=86,slow=2.7,SNR=2.1						

*IDC **14** 11:43:18.7±0.8, 30°.36S×71°.44W, h0km, mb3.9/5, mbtmp3.8/10, ML3.7/5, MS3.4/6, Error ellipse: s-maj=27.8km s-min=20.9km az=141.0*
*SJA **14** 11:43:18.4±0.8, 30°.11S×71°.98W, h14km±3km, ML4.4, MW4.1*
*NEIC **14** 11:43:24.3±1.9, 30°.15S±0°.04×71°.66W±0°.04, h34km±6km, mb4.3/8, ML4.4(GUC), Error ellipse: s-maj=6.7km s-min=3.8km az=134.0*
*GUC **14** 11:43:24.0±0.7, 30°.18S×71°.60W, h40km±2km, ML4.6*

ISC 14 11:43:20.1±1.3, 30°.19S±0°.02×71°.67W±0°.03, h7km±8km, n121, σ2º01/167, mb4.2/7, 5C-7D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CO05	**La Serena**	**0.46**	**55**		**Pn**	**11 43 33.5**	**+0.4**
CO05				Sg	**Sb**	**11 43 39.8**	**+2.3**
CO05	**La Serena**	**0.46**	**55**ǁ	*eP*	**Pn**	**11 43 33.5**	**+0.4**
CO05				*i* S	**Sb**	**11 43 39.8**	**+2.3**
CO06	**Fray Jorge**	**0.49**	**176**		**Pn**	**11 43 34.4**	**+0.9**
CO06				Sn	**Sb**	**11 43 41.8**	**+3.4**
CO06	**Fray Jorge**	**0.49**	**176**ǁ	*eP*	**Pn**	**11 43 34.3**	**+0.8**
CO06				*i* S	**Sb**	**11 43 41.8**	**+3.4**
CO06				IAML		11 43 42.0	
	comp=E,42μm,0.3s						
GO04	**Tololo Observa**	**0.76**	**89**		**Pn**	**11 43 38.1**	**+0.8**
GO04				Sn	**Sn**	**11 43 48.1**	**-1.1**
GO04	**Tololo Observa**	**0.76**	**89**	*eP*	**Pn**	**11 43 37.8**	**+0.4**
GO04				*i* S	**Sn**	**11 43 47.8**	**-1.4**
GO04				IAML		11 43 52.8	
	comp=N,49μm,0.4s						
GO04	**Tololo Observa**	**0.76**	**89**	*eP*	**Pn**	**11 43 38.0**	**+0.6**
GO04				*eS*	**Sn**	**11 43 48.4**	**-0.8**
CO03	**El Pedregal**	**1.07**	**128**		**Pn**	**11 43 42.8**	**+1.2**
CO03				Sn	**Sn**	**11 43 56.4**	**-0.3**
CO03	**El Pedregal**	**1.07**	**128**ǁ	*eP*	**Pn**	**11 43 42.8**	**+1.2**
CO03				*i* S	**Sn**	**11 43 56.4**	**-0.3**
CO03				IAML		11 43 57.6	
	comp=N,12μm,0.2s						
CO03	**El Pedregal**	**1.07**	**128**	*eP*	**Pn**	**11 43 42.9**	**+1.4**
CO03				*eS*	**Sn**	**11 43 57.2**	**+0.5**
CO03				IAML		11 43 58.1	
	comp=Z,8μm,0.3s						
CO02	**Combarbal**	**1.17**	**150**		**Pn**	**11 43 44.8**	**+1.8**
CO02	**Combarbal**	**1.17**	**150**ǁ	*eP*	**Pn**	**11 43 44.6**	**+1.7**
CO02				*i* S	**Sn**	**11 43 59.6**	**+0.4**
CO02				IAML		11 44 03.0	
	comp=N,60μm,0.4s						
CO02	**Combarbal**	**1.17**	**150**	*eP*	**Pg**	**11 43 41.5**	**-1.0**
CO02				*eP*	**Pn**	**11 43 44.1**	**+1.2**
CO02				*eS*	**Sn**	**11 44 00.3**	**+1.0**
CO02				IAML		11 44 02.7	
	comp=Z,8μm,0.3s						
CO01	**Juntas del Tor**	**1.38**	**82**		**Pb**	**11 43 47.1**	**+0.7**
CO01	**Juntas del Tor**	**1.38**	**82**ǁ	*eP*	**Pb**	**11 43 47.7**	**+1.3**
CO01				*eS*	**Sn**	**11 44 04.7**	**0.0**
CO01	**Juntas del Tor**	**1.38**	**82**	*eP*	**Pb**	**11 43 47.7**	**+1.3**
CO01				*eS*	**Sn**	**11 44 05.8**	**+1.1**
CO01				IAML		11 44 07.6	
	comp=Z,4μm,0.3s						
LCO	**Las Campanas**	**

MT03	**Universidad Ad**	**3.44**	**164**	*eP*	**Pn**	**11 44 17.7**	**+3.5**
MT03				*eS*	**Sn**	**11 44 55.0**	**-0.3**
MT03				*eS*	**Sb**	**11 44 59.8**	**-3.7**
MT03				IAML		11 45 14.4	
	comp=Z,1μm,0.6s						
VA05	**Santo Domingo**	**3.46**	**179**	*eP*	**Pn**	**11 44 16.0**	**+1.6**
ARCO	**CERRO ARCO**	**3.53**	**139**	*eP*	**Pb**	**11 44 22.0**	**-1.0**
ARCO				*eS*	**Sb**	**11 45 03.5**	**-2.7**
ARCO				IAML		11 45 19.8	
	comp=Z,642nm,0.7s						
MT09	**Talagante**	**3.63**	**171**		**Pn**	**11 44 19.8**	**+3.0**
MT09	**Talagante**	**3.63**	**171**	*eP*	**Pn**	**11 44 19.6**	**+2.8**
MT09				*i* S	**Sn**	**11 45 01.1**	**+1.2**
MT01	**Popeta**	**3.69**	**175**	*eP*	**Pn**	**11 44 19.4**	**+2.0**
MT01	**Popeta**	**3.69**	**175**	*eP*	**Pn**	**11 44 20.0**	**+2.5**
MT01				*eS*	**Sb**	**11 45 07.5**	**-2.9**
MT01				IAML		11 45 23.5	
	comp=Z,360nm,0.8s						
AAGR	**Agrelo**	**3.77**	**141**	*eP*	**Pb**	**11 44 25.0**	**-2.1**
AAGR				*eS*	**Sb**	**11 45 12.0**	**-1.1**
LMEL	**Las Melosas**	**3.86**	**162**	*eP*	**Pn**	**11 44 24.1**	**+4.1**
LMEL				*eS*	**Sn**	**11 45 07.8**	**+2.1**
BO04	**La Punta**	**3.90**	**167**		**Pn**	**11 44 23.9**	**+3.5**
BO04	**La Punta**	**3.90**	**167**	*eP*	**Pn**	**11 44 23.4**	**+2.9**
AC02	**Maricunga**	**4.02**	**34∥**	*eP*	**Pn**	**11 44 25.1**	**+2.6**
AC01	**Pan de Azucar**	**4.13**	**14**		**Pn**	**11 44 23.6**	**0.0**
AC01	**Pan de Azucar**	**4.13**	**14∥**	*eP*	**Pn**	**11 44 23.5**	**-0.2**
AC01	**Pan de Azucar**	**4.13**	**14**	*eP*	**Pn**	**11 44 23.7**	**0.0**
AC01				*eS*	**Sb**	**11 45 22.5**	**-0.8**
AC01				IAML		11 45 35.9	
	comp=Z,257nm,0.7s						
ACLC	**CERRO LA CRUZ**	**4.17**	**81**	*eP*	**Pn**	**11 44 22.5**	**-1.8**
ACLC				*eP*	Pb	11 44 28.2	-5.7
ACLC				*eS*	**Sb**	**11 45 21.0**	**-3.6**
ACLC				IAML		11 45 26.1	
	comp=Z,622nm,1.8s						
BO01	**Tunca**	**4.22**	**173**	Pn	**Pn**	**11 44 27.0**	**+2.1**
BO01	**Tunca**	**4.22**	**173**	*eP*	**Pn**	**11 44 27.0**	**+2.1**
BO01	**Tunca**	**4.22**	**173**	*eP*	**Pn**	**11 44 22.5**	**-2.4**
BO01				*eP*	Pb	11 44 27.3	-7.4
BO01				*eS*	**Sn**	**11 45 18.0**	**+3.6**
BO01				*eS*	**Sb**	**11 45 22.5**	**-3.4**
BO01				IAML		11 45 40.1	
	comp=Z,222nm,0.5s						
BO03	**Pichilemu**	**4.30**	**183**	*eP*	**Pn**	**11 44 26.8**	**+0.8**
APLL	**PUNTA DE LOS L**	**4.45**	**94**	*eP*	**Pn**	**11 44 32.0**	**+3.9**
APLL				*eS*	**Sn**	**11 45 25.8**	**+5.6**
GO05	**Huala**	**4.81**	**183**		**Pn**	**11 44 34.3**	**+1.2**
GO05	**Huala**	**4.81**	**183∥**	*eP*	**Pn**	**11 44 33.8**	**+0.8**
GO05	**Huala**	**4.81**	**183**	*eP*	**Pn**	**11 44 34.0**	**+1.0**
GO05				*eS*	**Sb**	**11 45 46.0**	**+3.0**
GO02	**Mina Guanaco**	**5.33**	**21**	*eP*	**Pn**	**11 44 39.5**	**-0.9**
GO02	**Mina Guanaco**	**5.33**	**21**	*eP*	**Pn**	**11 44 41.0**	**+0.6**
GO02				*eS*	**Sb**	**11 45 54.5**	**-3.7**
ML02	**Panimavida**	**5.57**	**178**		**Pn**	**11 44 44.7**	**+1.4**
BI05	**Punta Hualpn**	**6.67**	**191**	Pn	**Pn**	**11 44 59.5**	**+1.1**
H03N1	**Juan Fernandez**	**6.96**	**240**	Pn	**Pn**	**11 45 02.9**	**+0.6**
	baz=113,slow=18						
H03N1				Sn	Sn	11 46 14.5	-7.1
	baz=251,slow=6.1						
H03N1				T	T	11 52 10.7	
	baz=69,slow=72						
H03N2	**Juan Fernandez**	**6.98**	**240**	Pn	**Pn**	**11 45 03.0**	**+0.6**
	baz=113,slow=18						
H03N2				Sn	Sn	11 46 14.6	-7.4
	baz=251,slow=6.1						
H03N2				T	T	11 52 10.2	
	baz=69,slow=72						
H03N3	**Juan Fernandez**	**6.98**	**240**	Pn	**Pn**	**11 45 02.9**	**+0.4**
	baz=113,slow=18						
H03N3				Sn	Sn	11 46 14.2	-7.9
	baz=251,slow=6.1						
H03N3				T	T	11 52 09.4	
	baz=69,slow=72						
H03S3	**Juan Fernandez**	**7.14**	**238**	Pn	**Pn**	**11 45 04.5**	**-0.2**
	baz=105						
H03S3				Sn	Sn	11 46 17.0	-8.9
	baz=247						
H03S1	**Juan Fernandez**	**7.14**	**237**	Pn	**Pn**	**11 45 04.3**	**-0.5**
	baz=105						
H03S1				Sn	**Sn**	**11 46 21.9**	**-4.1**
	baz=247						
H03S2	**Juan Fernandez**	**7.16**	**238**	Pn	**Pn**	**11 45 04.3**	**-0.6**
	baz=105						
H03S2				Sn	Sn	11 46 19.2	-7.1
	baz=247						
LVC	**Limon Verde**	**7.94**	**19**	Pn	**Pn**	**11 45 15.3**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=349,slow=11,SNR=1.7						
LVC				Sn	**Sn**	**11 46 47.2**	**+0.6**
	comp=Z,1.3nm,0.3s,baz=152,slow=23,SNR=3.2						
	comp=Z,2.8nm,0.7s						
PLCA	**Paso Flores**	**10.56**	**175**	Pn	**Pn**	**11 45 49.8**	**-2.1**
	comp=Z,0.1nm,0.3s,baz=265,slow=13,SNR=1.4						
PLCA				Sn	Sn	11 47 39.2	-11
	comp=Z,0.1nm,0.3s,baz=242,slow=1.2,SNR=2.1						
PLCA				Lg	Lg	11 48 51.8	
	comp=Z,0.1nm,0.3s,baz=53,slow=5.6,SNR=2.2						
PLCA				LR	LR	11 49 58.6	
	comp=Z,219nm,18.7s,baz=342,slow=39						
	comp=Z,0.3nm,0.4s						
ITQB	**Itaqui**	**13.06**	**92**	Pn	**Pn**	**11 46 26.5**	**+0.4**
CPUP	**Villa Florida**	**13.21**	**77**	Pn	**Pn**	**11 46 24.5**	**-3.6**
	comp=Z,0.3nm,0.3s,baz=17,slow=11,SNR=1.7						
CPUP				Sn	**Sn**	**11 48 52.9**	**-2.4**
	comp=Z,0.1nm,0.3s,baz=7.3,slow=18,SNR=1.3						
CPUP				LR	LR	11 52 12.0	
	comp=Z,109nm,19.0s,baz=238,slow=41						
	comp=Z,1.7nm,0.9s						
LPAZ	**La Paz**	**14.21**	**14**	Pn	**Pn**	**11 46 44.4**	**+2.0**
	comp=Z,0.2nm,0.3s,baz=172,slow=6.2,SNR=9.4						
LPAZ				LR	LR	11 52 21.9	
	comp=Z,88nm,18.7s,baz=183,slow=38						
	comp=Z,2.8nm,0.8s						
PLTB	**Pedras Altas**	**15.58**	**100**	Pn	**Pn**	**11 46 59.1**	**-1.1**
SIV	**San Ignacio**	**17.15**	**37**	P	**Pn**	**11 47 20.7**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=214,slow=9.7,SNR=38						
SIV				LR	LR	11 54 22.3	
	comp=Z,80nm,21.4s,baz=156,slow=39						
	comp=Z,11nm,0.8s						
SAML	**Samuel**	**22.57**	**22**	P	**P**	**11 48 19.0**	**-2.1**
BDFB	**Brasilia**	**26.09**	**62**	P	**P**	**11 48 52.9**	**-1.7**
	comp=Z,2.5nm,0.5s,baz=185,slow=5.9,SNR=4.0						
	comp=Z,2.5nm,0.5s						
BDFB	**Brasilia**	**26.09**	**62**	IAmb	IAmb	11 48 55.1	
	comp=Z,5.0nm,0.8s						
ROSC	**El Rosal**	**34.92**	**355**	LR	LR	12 05 01.9	
	comp=Z,88nm,18.0s,baz=254,slow=37						
SMAI	**San Martin Ant**	**38.07**	**177**	P	**P**	**11 50 40.1**	**+1.2**
SMAI				IAmb	IAmb	11 51 16.6	
	comp=Z,7.0nm,1.3s						
BELA	**Belgrano 2**	**50.57**	**171**	P	**P**	**11 52 19.2**	**+0.3**
BELA				IAmb	IAmb	11 52 21.1	
	comp=Z,2.2nm,0.8s						
SNAA	**Sanae**	**55.01**	**159**	P	**P**	**11 52 52.1**	**+0.3**
SNAA	**Sanae**	**55.01**	**159**	P	**P**	**11 52 52.3**	**+0.5**
TROLL	**Troll, Antarti**	**56.72**	**159**	P	**P**	**11 53 04.0**	**-0.1**
TXAR	**Lajitas Array**	**66.59**	**330**	P	**P**	**11 54 12.4**	**+1.2**
	comp=Z,0.7nm,0.6s,baz=146,slow=9.1,SNR=4.9						
	comp=Z,0.7nm,0.6s						
PDAR	**Pinedale Array**	**80.52**	**333**	P	**P**	**11 55 34.6**	**+1.6**
	comp=Z,0.3nm,0.7s,baz=202,slow=6.8,SNR=1.7						
	comp=Z,0.3nm,0.7s						
NVAR	**Mina Array Bea**	**80.95**	**325**	P	**P**	**11 55 37.1**	**+1.7**
	comp=Z,0.3nm,0.6s,baz=177,slow=5.3,SNR=2.6						
	comp=Z,0.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**82.62**	**70**	P	**P**	**11 55 44.2**	**-0.3**
	comp=Z,2.4nm,0.8s,baz=278,slow=6.4,SNR=11						
	comp=Z,2.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**82.62**	**70**	IAmb	IAmb	11 55 45.5	
	comp=Z,3.3nm,0.9s						
LBTB	**Lobatse**	**83.63**	**115**	LR	LR	12 27 37.2	
	comp=Z,33nm,18.8s,baz=216,slow=32						
ASAR	**Alice Springs**	**121.09**	**208**	PKP	**PKPdf**	**12 02 12.9**	**-1.3**
	comp=Z,0.7nm,1.1s,baz=151,slow=2.4,SNR=2.3						
WRA	**Warramunga Arr**	**124.22**	**210**	PKP	**PKPdf**	**12 02 19.1**	**-1.1**
	comp=Z,0.4nm,0.5s,baz=151,slow=1.7,SNR=10						
H11S2	**WAKE ISLAND Hyl**	**26.06**	**272**	T	T	14 21 13.5	
	baz=115,slow=75,SNR=42						
H11S1	**WAKE ISLAND Hyl**	**26.07**	**272**	T	T	14 21 13.8	
	baz=115,slow=75,SNR=50						
H11S3	**WAKE ISLAND Hyl**	**26.07**	**272**	T	T	14 21 10.6	
	baz=115,slow=75,SNR=51						
H11N3	**WAKE ISLAND Hyl**	**26.37**	**273**	T	T	14 21 32.3	
	baz=113,slow=74						
H11N1	**WAKE ISLAND Hyl**	**26.39**	**273**	T	T	14 21 39.0	
	baz=113						
H11N2	**WAKE ISLAND Hyl**	**26.39**	**273**	T	T	14 21 39.0	
	baz=113,slow=74						
ZALV	**Zalesovo Beam**	**150.79**	**29**	PKPbc	**PKPbc**	**12 03 13.0**	**+0.3**
	comp=Z,5.3nm,0.7s,baz=298,slow=3.5,SNR=22						
MKAR	**Makanchi Array**	**153.90**	**43**	PKPbc	**PKPbc**	**12 03 20.0**	**0.0**
	comp=Z,0.4nm,0.8s,baz=290,slow=4.3,SNR=2.5						

IDC 14 12:05:55.8±3.0, 4°.53S×131°.00E, h149km±45km, mb2.9/1, mbtmp3.3/4, Error ellipse: s-maj=115.2km s-min=21.4km az=78.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
SIJI	**Sorong**	**3.65**	**4**	P	Pn		12 06 51.7	+0.2
	5.6nm,0.3s,baz=170,slow=23,SNR=14							
SIJI				S	Sn		12 07 30.1	-4.7
	14nm,0.2s,baz=154,slow=23,SNR=7.5							
WRA	**Warramunga Arr**	**15.66**	**168**	P	Pn		12 09 27.1	-1.4
	0.1nm,0.4s,baz=350,slow=13,SNR=8.1							
WRA				S	Sn		12 12 08.3	-15
	0.4nm,0.6s,baz=332,slow=22,SNR=6.7							
ASAR	**Alice Springs**	**19.23**	**172**	P	P		12 10 09.4	+0.8
	0.6nm,0.4s,baz=350,slow=11,SNR=22							
MKAR	**Makanchi Array**	**66.74**	**326**	P	P		12 16 30.6	-0.3
	0.1nm,0.4s,baz=122,slow=5.2,SNR=1.9							
	0.1nm,0.4s							

*GCG **14** 12:11:56.9±0.8, 14°.32N×90°.40W, h14km±28km, MD3.4*
*SNET **14** 12:11:58.1±0.6, 14°.38N×90°.44W, h29km±3km, ML2.4*
ISC 14 12:11:57.3±1.7, 14°.33N±0°.06×90°.42W±0°.05, h15km±14km, n8, g0°85/14, Guatemala

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
PCG	**Pacaya**	**0.19**	**290**	*eP*	**Pb**		**12 12 02.3**	**-0.4**
PCG				*eS*	**Sb**		**12 12 07.6**	**+1.3**
NBG	**Las Nubes**	**0.27**	**16**	*eP*	**Pb**		**12 12 04.0**	**0.0**
NBG				*eS*	**Sb**		**12 12 08.9**	**+0.3**
FUG	**Fuego 3**	**0.42**	**287**	*eP*	**Pg**		**12 12 06.0**	**+0.1**
SLOZ	**Alcaldia de Sa**	**0.69**	**116**	*eP*	**Pn**		**12 12 11.8**	**-0.8**
SLOZ				*eS*	**Sn**		**12 12 22.7**	**-0.3**
SLOZ				IAML			12 12 26.0	
	comp=Z,109nm,0.3s							
NUBE	**Las Nubes**	**0.75**	**124**	*eP*	**Pn**		**12 12 13.1**	**-0.4**
NUBE				*eS*	**Sn**		**12 12 24.0**	**-0.7**
NUBE				IAML			12 12 25.1	
	comp=Z,164nm,0.2s							
CEVE	**Cerro Verde**	**0.92**	**122**	*eP*	**Pn**		**12 12 16.1**	**+0.1**
CEVE				*eS*	**Sn**		**12 12 30.7**	**+1.7**
MRL	**Marmol**	**1.04**	**43**	*eP*	**Pn**		**12 12 17.8**	**+0.3**
MRL				*eS*	**Sn**		**12 12 31.0**	**-0.9**
STG3	**Santiaguito 3,**	**1.18**	**289**	*eP*	**Pn**		**12 12 18.9**	**-0.5**

IDC 14 12:38:24.9±6.3, 27°.86S×23°.25E, h0km, Error ellipse: s-maj=44.9km s-min=38.0km az=22.0, South Africa

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
I47ZA	**BOSHOF INFRASO**	**1.91**	**114**	*i*			12 49 30.0	
	baz=292,slow=289							
BOSA	**Boshof**	**1.93**	**114**	Pn	Pn		12 38 59.1	0.0
	0.7nm,0.3s,baz=296,slow=18,SNR=12							
BOSA				Lg	Lg		12 39 26.3	
	1.9nm,0.3s,baz=208,slow=20,SNR=20							
BOSA				Rg	Rg		12 39 38.2	
	16nm,0.9s,baz=81,slow=2.8,SNR=10.0							
I35NA	**TSUMEB INFRASO**	**10.07**	**328**	*i*			13 38 30.0	
	baz=150,slow=314,SNR=3.5							

*JMA **14** 12:46:04.3±0.1, 23°.7N±0°.7×121°.7E±0°.8, h38km±1km, MV2.4/10, TAIWAN REGION*
*TAP **14** 12:46:05.0, 23°.74N×121°.73E, h43km, ML2.9, C*
ISC 14 12:46:05.7±1.0, 23°.75N±0°.02×121°.73E±0°.02, h34km±2km, n104, g0°89/180, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
TEYL	**Yanliau Villag**	**0.17**	**315**	P	**Pb**		**12 46 12.9**	**+0.8**
	baz=332							
TEYL				S	**Sb**		**12 46 19.0**	**+2.6**
	baz=332							
TEGC	**Jichi Village**	**0.18**	**258**	P	**Pb**		**12 46 12.5**	**+0.4**
	baz=267							
TEGC				S	**Sb**		**12 46 18.7**	**+2.1**
	baz=267							
HWA	**Hwalien**	**0.26**	**334**	P	**Pn**		**12 46 13.2**	**+0.5**
	baz=342							
HWA				S	**Sb**		**12 46 19.5**	**+1.6**
	baz=342							
ESL	**Shilin**	**0.28**	**284**	*i* P	**Pb**		**12 46 13.2**	**-0.1**
	baz=286							
ESL				S	**Sb**		**12 46 18.7**	**+0.3**
	baz=286							
EGFH	**Guangfu**	**0.29**	**254**	*i* P	**Pb**		**12 46 13.4**	**+0.1**
	baz=265							
EGFH				S	**Sb**		**12 46 19.6**	**+1.0**
	baz=265							
ETM	**Tongmen**	**0.31**	**315**	P	**Pb**		**12 46 13.7**	**0.0**
	baz=317							
TWD	**Chiawan**	**0.35**	**340**	*i* P	**Pb**		**12 46 14.0**	**-0.2**
	baz=346							
TWD				*i* S	**Sb**		**12 46 20.5**	**+0.5**
	baz=346							
HGSD	**Ruisui**	**0.38**	**228**	P	**Pb**		**12 46 14.4**	**-0.1**
	baz=226							
HGSD				S	**Sn**		**12 46 22.2**	**+1.5**
	baz=226							
ETL	**Fush Village**	**0.42**	**347**	P	**Pb**		**12 46 14.9**	**-0.3**
	baz=351							
ETL				S	**Sb**		**12 46 21.9**	**+0.2**
	baz=351							
EHY	**Hungye**	**0.44**	**237**	*i* P	**Pb**		**12 46 14.8**	**-0.7**
	baz=248							
EHY				*i* S	**Sb**		**12 46 21.6**	**-0.6**
	baz=248							
NACB	**Ninganchiao**	**0.44**	**344**	P	**Pb**		**12 46 14.9**	**-0.6**
	baz=348							
NACB				S	**Sb**		**12 46 22.2**	**0.0**
	baz=348							
ETLH	**Xiulin Townshi**	**0.51**	**334**	P	**Pb**		**12 46 16.0**	**-0.5**
	baz=325							
ETLH				S	**Sb**		**12 46 23.5**	**-0.6**
	baz=325							
YULB	**Yu-li**	**0.53**	**228**	P	**Pb**		**12 46 16.0**	**-0.8**
	baz=239							
YULB				S	**Sb**		**12 46 23.6**	**-0.8**
	baz=239							
VWDT	**VWDT**	**0.54**	**271**	P	**Pb**		**12 46 16.7**	**-0.2**
	baz=272							
VWDT				S	**Sb**		**12 46 24.8**	**+0.1**
	baz=272							
EYUL	**Yuli**	**0.55**	**224**	*i* P	**Pb**		**12 46 16.5**	**-0.6**
	baz=235							
OWD	**Renai**	**0.55**	**292**	*i* P	**Pb**		**12 46 16.7**	**-0.5**
	baz=293							
OWD				*i* S	**Sb**		**12 46 24.1**	**-1.0**
	baz=293							
TWF1	**Yuli**	**0.56**	**225**	*i* P	**Pb**		**12 46 16.4**	**-0.9**
	baz=236							
TWF1				S	**Sb**		**12 46 24.5**	**-0.7**
	baz=236							
WHF	**Hehuan Shan**	**0.58**	**313**	*i* P	**Pb**		**12 46 16.4**	**-1.6**
	baz=308							
WHF				*i* S	**Sb**		**12 46 25.5**	**-0.8**
	baz=308							
CHGB	**Renai**	**0.60**	**302**	P	**Pn**		**12 46 17.5**	**-0.4**
	baz=310							
CHGB				S	**Sb**		**12 46 26.1**	**-0.3**
	baz=310							
WUSB	**Renai**	**0.61**	**294**	P	**Pn**		**12 46 17.6**	**-0.4**
	baz=295							
WUSB				S	**Sb**		**12 46 26.3**	**-0.5**
	baz=295							
FULB	**Fuli**	**0.68**	**216**	*i* P	**Pn**		**12 46 18.8**	**-0.1**
	baz=229							
FULB				S	**Sb**		**12 46 29.2**	**+0.9**
	baz=229							
ENA	**Nanau**	**0.68**	**1**	*i* P	**Pn**		**12 46 18.3**	**-0.6**
	baz=2.0							
ENA				S	**Sn**		**12 46 27.0**	**-1.3**
	baz=2.0							
EWUT	**Wuta**	**0.70**	**4**	S	**Sn**		**12 46 28.7**	**-0.1**
	baz=4.0							
SSLB	**Suanglung**	**0.71**	**273**	P	**Pn**		**12 46 18.7**	**-0.7**
	baz=275							
SSLB				*eS*	**Sn**		**12 46 29.1**	**0.0**
	baz=275							
TWT	**Tachien**	**0.71**	**315**	*i* P	**Pn**		**12 46 19.3**	**-0.3**
	baz=311							
TWT				*i* S	**Sn**		**12 46 28.8**	**-0.6**
	baz=311							
TDCB	**Techi**	**0.73**	**314**	P	**Pn**		**12 46 19.3**	**-0.3**
	baz=315							
TDCB				S	**Sn**		**12 46 28.8**	**-0.9**
	baz=315							
NNSB	**Datong**	**0.75**	**335**	P	**Pn**		**12 46 19.5**	**-0.5**
	baz=336							
NNSB				S	**Sn**		**12 46 29.4**	**-0.9**
	baz=336							
YUS	**Yu-Shan**	**0.76**	**250**	*i* P	**Pn**		**12 46 20.1**	**-0.3**
	baz=251							
YUS				*i* S	**Sn**		**12 46 30.0**	**-0.9**
	baz=251							
NNS	**Nan Shan**	**0.76**	**335**	*i* P	**Pn**		**12 46 19.7**	**-0.5**
	baz=336							
NNS				*i* S	**Sn**		**12 46 29.9**	**-0.7**
	baz=336							
SMLT	**Sun Moon Lake**	**0.77**	**280**	*i* P	**Pn**		**12 46 20.0**	**-0.3**
	baz=286							
SMLT				*i* S	**Sb**		**12 46 31.9**	**+0.8**
	baz=286							
LATG	**Datong**	**0.81**	**347**	P	**Pn**		**12 46 19.9**	**-0.8**
	baz=346							
WCS	**Beigang Elemen**	**0.81**	**293**	P	**Pn**		**12 46 20.4**	**-0.3**
	baz=294							
TYC	**Yuchr**	**0.81**	**281**	*i* P	**Pn**		**12 46 20.5**	**-0.2**
	baz=287							
TYC				S	**Sn**		**12 46 31.5**	**-0.1**
	baz=287							
ELDTW	**Lidau**	**0.86**	**230**	*i* P	**Pn**		**12 46 20.4**	**-1.0**
	baz=226							
ELDTW				*i* S	**Sn**		**12 46 31.7**	**-1.2**
	baz=226							
EDH	**Donghe**	**0.86**	**207**	*i* P	**Pn**		**12 46 20.2**	**-1.2**
	baz=200							
EDH				*i* S	**Sn**		**12 46 31.9**	**-0.9**
	baz=200							
TWC	**Suao**	**0.87**	**7**	*i* P	**Pn**		**12 46 21.7**	**+0.2**
	baz=8.0							
TWC				*i* S	**Sn**		**12 46 33.3**	**+0.4**
	baz=8.0							
ALS	**Alishan**	**0.88**	**255**	*i* P	**Pn**		**12 46 22.3**	**+0.4**
	baz=262							
ALS				S	**Sn**		**12 46 34.1**	**+0.5**
	baz=262							
NDS	**Dongshan**	**0.88**	**359**	P	**Pn**		**12 46 21.6**	**-0.1**
	baz=348							
NDS				S	**Sn**		**12 46 33.7**	**+0.4**
	baz=348							
WHP	**Taichung City**	**0.89**	**307**	*i* P	**Pn**		**12 46 22.5**	**+0.6**
	baz=313							
WHP				*i* S	**Sn**		**12 46 34.2**	**+0.5**
	baz=313							
ENTT	**Nioudou**	**0.90**	**351**	*i* P	**Pn**		**12 46 21.7**	**-0.3**
	baz=351							
ENTT				S	**Sn**		**12 46 33.4**	**-0.4**
	baz=351							
WJS	**Zhushan**	**0.92**	**275**	*i* P	**Pn**		**12 46 22.6**	**+0.4**
	baz=276							
WJS				S	**Sb**		**12 46 35.9**	**+0.7**
	baz=276							
WNT	**Mingjian**	**0.97**	**278**	*i* P	**Pn**		**12 46 23.7**	**+0.8**
	baz=279							
WNT				*i* S	**Sb**		**12 46 37.1**	**+0.6**
	baz=279							
TWE	**Neicheng**	**0.97**	**357**	P	**Pn**		**12 46 22.9**	**-0.1**
	baz=347							
YHNB	**Yeheng**	**0.97**	**341**	P	**Pn**		**12 46 23.0**	**0.0**
	baz=341							
YHNB				*i* S	**Sn**		**12 46 35.2**	**-0.6**
	baz=341							
CHN5	**Tsauling**	**0.97**	**261**	*i* P	**Pn**		**12 46 23.8**	**+0.8**
	baz=263							
CHN5				*i* S	**Sb**		**12 46 37.3**	**+0.4**
	baz=263							
NSK	**Sanguang**	**0.98**	**340**	*i* P	**Pn**		**12 46 23.2**	**0.0**
	baz=341							
NSK				*i* S	**Sn**		**12 46 35.4**	**-0.6**
	baz=341							
LONT	**Longtian**	**1.00**	**213**	*i* P	**Pn**		**12 46 22.7**	**-0.6**
	baz=214							
FUSB	**Fushanzhiwuyua**	**1.02**	**353**	P	**Pn**		**12 46 23.3**	**-0.3**
	baz=353							
FUSB				*i* S	**Sn**		**12 46 37.0**	**+0.2**
	baz=353							
NFF	**Wufeng Townshi**	**1.04**	**328**	P	**Pn**		**12 46 24.4**	**+0.4**
	baz=329							
NFF				S	**Sn**		**12 46 37.1**	**-0.3**
	baz=329							
TCU	**Taichung**	**1.04**	**293**	*i* P	**Pn**		**12 46 25.1**	**+1.2**
	baz=294							
STYH	**Taoyuan**	**1.05**	**237**	S	**Sn**		**12 46 37.6**	**+0.3**
	baz=238							
NWLT	**Wulai**	**1.05**	**349**	*i* P	**Pn**		**12 46 23.9**	**-0.1**
	baz=342							
NWLT				*i* S	**Sn**		**12 46 37.1**	**-0.4**
	baz=342							
TWQ1	**Liyutan**	**1.06**	**305**	S	**Sb**		**12 46 39.3**	**+0.1**
	baz=306							
WDLH	**Douliu**	**1.09**	**267**	P	**Pn**		**12 46 25.4**	**+0.8**
	baz=268							
WDLH				*i* S	**Sb**		**12 46 40.4**	**+0.3**
	baz=268							
LDUT	**Ludao**	**1.09**	**193**	*i* P	**Pn**		**12 46 23.0**	**-1.6**
	baz=184							
LDUT				*i* S	**Sn**		**12 46 36.6**	**-1.9**
	baz=184							
TWGBT	**Beinan**	**1.10**	**213**	P	**Pn**		**12 46 23.4**	**-1.3**
	baz=213							
TWGBT				S	**Sn**		**12 46 37.8**	**-1.0**
	baz=213							
TPUB	**Ta-pu**	**1.10**	**246**	P	**Pn**		**12 46 25.5**	**+0.8**
	baz=247							
TPUB				S	**Sn**		**12 46 40.1**	**+1.3**
	baz=247							
TWG	**Pinlang**	**1.10**	**213**	*i* P	**Pn**		**12 46 23.4**	**-1.3**
	baz=213							
TWG				S	**Sn**

CHN1	Nanshi	1.24	243	*i*	P		Pn	12 46 27.8	+1.2
	baz=244								
CHN1				*i*	S		Sb	12 46 44.0	-0.2
	baz=244								
SGST	Jiashian	1.24	238		P		Pn	12 46 27.2	+0.5
	baz=239								
SGST				*i*	S		Sb	12 46 44.0	-0.3
	baz=239								
SNST	Tainan City	1.25	245	*i*	P		Pn	12 46 27.8	+1.1
	baz=246								
SNST				*i*	S		Sn	12 46 43.5	+1.2
	baz=246								
WRL	Guolierlin Hig	1.25	277		P		Pn	12 46 27.4	+0.7
	baz=279								
WRL					S		Sn	12 46 43.7	+1.4
	baz=279								
TWB1	Santiao Chiao	1.28	11		P		Pb	12 46 29.0	-0.2
	baz=11								
TWB1					S		Sn	12 46 42.9	-0.2
	baz=11								
JYNG	Yonagunijimaku	1.31	57		S		Sn	12 46 44.0	0.0
NWF	Wu-fen Shan	1.32	2		S		Sb	12 46 46.1	-0.6
	baz=350								
ECL	Taimali	1.35	212	*e*	P		Pn	12 46 27.1	-1.0
	baz=212								
SXI1	Grass Mountain	1.35	6		P		Pn	12 46 29.4	+1.2
	baz=351								
YOJ	Yonaguni jima	1.37	58		P		Pn	12 46 29.3	+0.9
	baz=58								
YOJ					S		Sn	12 46 46.9	+1.5
	baz=58								
ICHU	Yijhu	1.39	254	*e*	P		Pn	12 46 30.1	+1.5
	baz=255								
WSF	Szhu	1.39	266		S		Sb	12 46 48.3	-0.1
	baz=255								
WSL	Shuilin Townsh	1.40	261		P		Pn	12 46 29.2	+0.5
	baz=262								
WSL					S		Sn	12 46 46.9	+0.9
	baz=262								
SSD	Sandimen	1.42	226	*i*	P		Pn	12 46 30.8	+1.7
	baz=226								
SSD				*i*	S		Sn	12 46 48.3	+1.8
	baz=226								
SCST	Cishan	1.42	233	*i*	P		Pb	12 46 31.3	-0.4
	baz=247								
SCST				*i*	S		Sb	12 46 50.7	+1.2
	baz=247								
TSMG	Majia	1.44	224	*i*	P		Pn	12 46 31.0	+1.7
	baz=224								
TSMG				*i*	S		Sn	12 46 49.0	+1.9
	baz=224								
CHN8	Yiju	1.45	254		S		Sn	12 46 48.9	+1.6
	baz=255								
MASBT	Mashibuluo	1.51	222		P		Pn	12 46 31.5	+1.1
	baz=222								
MASBT					S		Sb	12 46 51.7	-0.4
	baz=222								
TAW	Tawu	1.58	209		S		Sn	12 46 49.3	-1.3
	baz=200								
TAWH	Dawu Township	1.60	209		P		Pn	12 46 32.4	+0.8
	baz=209								
SSPT	Xinbi	1.65	221		P		Pn	12 46 33.9	+1.6
	baz=221								
SCZT	Fangliau	1.71	217		P		Pn	12 46 34.3	+1.2
	baz=205								
SCZT					S		Sn	12 46 56.0	+2.3
	baz=205								
SLIU	Shizi	1.75	210	*i*	P		Pn	12 46 34.9	+1.2
	baz=212								
IRIF	Iriomote-Funau	1.92	72		P		Pn	12 46 36.6	+0.6
IRIF					S		Sn	12 46 59.8	+0.9
HATJ	Hateruma jima	1.93	80	*e*	S		Sn	12 46 59.1	0.0
WDGT	Dungji	1.96	256		P		Pn	12 46 36.2	-0.3
	baz=257								
WDGT					S		Sn	12 46 59.0	-0.9
	baz=257								
PHUB	P'eng-hu	1.99	264		P		Pn	12 46 36.3	-0.6
	baz=253								
PHUB				*i*	S		Sn	12 46 59.6	-1.1
	baz=253								
JKRS	Kuro-shima	2.14	76		P		Pn	12 46 39.6	+0.6
JKRS				*e*	S		Sn	12 47 05.4	+1.0
VCHM	Qimei	2.18	256		P		Pn	12 46 38.7	-0.8
	baz=257								
VCHM					S		Sn	12 47 04.9	-0.4
	baz=257								
JIJ	Ishigaki jima	2.29	74		P		Pn	12 46 41.0	0.0
JIJ					S		Sn	12 47 07.2	-0.9
VWUC	VWUC	2.42	301		P		Pn	12 46 42.0	-0.9
	baz=302								
JISG	Ishigakijimahi	2.50	70		P		Pn	12 46 44.0	0.0
JISG					S		Sn	12 47 12.2	-1.1
PTMZ	Houxiangcun	2.71	299		P		Pn	12 46 45.6	-1.2
	baz=300								
MATB	Ma-tsu	2.89	326		P		Pn	12 46 48.5	-0.8
	baz=315								

IDC ***14*** *12:51:35.0±0.7,56.˙61N×158.˙48W,h0km,mb3.9/12, mbtmp3.9/15,ML3.6/3,MS3.3/21,Error ellipse: s-maj=22.4km s-min=12.0km az=3.0*

AEIC ***14*** *12:51:36±2.0,57.˙05N±0.˙04×158.˙15W±0.˙07,h10km±3km, ML4.1,mb4.3/23(NEIC),ML4.1/36(NEIC),Error ellipse: s-maj=6.0km s-min=4.8km az=117.0*

NEIC ***14*** *12:51:37.9±2.1,57.˙00N±0.˙02×158.˙16W±0.˙05,h22km±5km, Error ellipse: s-maj=4.2km s-min=1.7km az=122.0*

ISC 14 12:51:36.7±1.1,57.˙05N±0.˙03×158.˙15W±0.˙04,h11km±7km, n289,σ1§23/280,mb4.1/26,MS3.2/19,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANNW	Aniakchak Nort	0.09	203		Pg	12 51 39.7	+0.3
ANPB	Aniakchak Plen	0.26	196		Pg	12 51 41.7	-0.4
PLBL	Peulik Blue Cr	0.97	47		Pn	12 51 56.4	+0.1
PLBL					Sn	12 52 10.2	+0.2
VNHG	Veniaminof 1	1.00	214		Pb	12 51 55.7	-0.4
VNSG	Veniaminof 6	1.06	210		Pb	12 51 56.1	-1.1
R17K	Ugashik Creek	1.12	58	P	Pb	12 51 57.0	-1.1
	baz=239,SNR=260						
PLK1	Peulik 1	1.12	47		Pb	12 51 58.0	-0.2
PLK5	Peulik 5	1.17	35		Pg	12 51 59.5	+0.3
PLK5					Sn	12 52 15.8	+0.9
PLK3	Peulik 3	1.20	57		Pg	12 52 00.2	+0.4
PLK2	Peulik 2	1.22	53		Pg	12 52 00.3	+0.2
CHIR	Chirikof Islan	1.87	130		Pn	12 52 08.9	+0.3
CHIR				IAML		12 52 36.1	
	comp=E,2μm,1.2s						
CHIR				IAML		12 52 40.0	
	comp=N,2μm,1.0s						
CHIR	Chirikof Islan	1.87	130		Sb	12 52 34.3	+0.2
CHIR	Chirikof Islan	1.87	130	P	Pn	12 52 08.9	+0.3
	baz=312,SNR=22						
KELA	Mount Kelaz	1.90	42		Pn	12 52 09.6	+0.5
P16K	Nushagak River	1.99	2		Pn	12 52 11.4	+1.1
P16K	Nushagak River	1.99	2	P	Pn	12 52 11.2	+0.9
	baz=183,SNR=24						
KCG	Knife Ck. Glac	2.06	51		Pn	12 52 11.5	+0.2
SDPT	Sand Point	2.15	218		Pn	12 52 13.2	+0.9
SDPT					Sn	12 52 40.4	+1.4
SDPT	Sand Point	2.15	218	IAML		12 52 50.1	
	comp=N,1μm,1.1s						
SDPT				IAML		12 52 58.8	
	comp=E,2μm,1.1s						
SDPT	Sand Point	2.15	218	P	Pn	12 52 13.1	+0.8
	baz=36,SNR=38						
SII	Sitkinak Islan	2.23	101		Pn	12 52 15.0	+1.3
SII					Sb	12 52 45.0	+0.3
SII	Sitkinak Islan	2.23	101	P	Pn	12 52 13.5	-0.1
	baz=284,SNR=15						
P17K	Kvichak River	2.33	22		Pn	12 52 15.9	+1.0
CHNA	Chernabura Isl	2.37	201	P	Pn	12 52 15.3	-0.2
	baz=19,SNR=101						
CNBA	Chernabura Isl	2.38	201		Pn	12 52 15.6	0.0
CNBA					Sn	12 52 47.0	+2.3
CNBA	Chernabura Isl	2.38	201	IAML		12 52 59.4	
	comp=N,873nm,1.2s						
O16K	Kokwok River B	2.55	1		Pn	12 52 18.4	+0.5
O16K					Sb	12 52 52.6	-1.2
O16K	Kokwok River B	2.55	1	P	Pn	12 52 18.3	+0.3
	baz=181,SNR=109						
BLHA	Black Hill	2.56	240		Pn	12 52 19.3	+1.1
OHAK	Old Harbor	2.66	84		Pn	12 52 20.2	+0.8
OHAK	Old Harbor	2.66	84	IAML		12 53 13.6	
	comp=N,563nm,0.9s						
OHAK	Old Harbor	2.66	84	P	Pn	12 52 19.9	+0.5
	baz=268,SNR=46						
PS4A	Pavlof South-4	2.69	232		Pn	12 52 20.9	+1.0
HAG	Hague Volcano	2.73	232		Pn	12 52 22.0	+1.6
O17K	Koliganek Bris	2.79	11		Pn	12 52 21.7	+0.5
O17K	Koliganek Bris	2.79	11	P	Pn	12 52 21.7	+0.5
	baz=192,SNR=118						
P18K	Big Mountain,	2.81	32		Pn	12 52 22.1	+0.5
P18K	Big Mountain,	2.81	32	IAML		12 53 10.1	
	comp=E,454nm,0.8s						
P18K	Big Mountain,	2.81	32	P	Pn	12 52 22.1	+0.5
	baz=215,SNR=6.4						
Q19K	Cape Douglas,	3.05	50		Pn	12 52 25.1	+0.3
Q19K	Cape Douglas,	3.05	50	IAML		12 53 44.7	
	comp=N,998nm,1.2s						
Q19K	Cape Douglas,	3.05	50	P	Pn	12 52 25.8	+0.9
	baz=234						
KDAK	Kodiak Island	3.10	74	Pn	Pn	12 52 26.7	+1.2
	comp=N,29nm,0.3s,baz=262,slow=6.0,SNR=442						
KDAK				Sn	Sb	12 53 09.6	+0.1
	comp=N,5.4nm,0.3s,baz=107,slow=22,SNR=2.3						
KDAK				Lg	Lg	12 53 16.7	
	comp=N,10nm,0.3s,baz=118,slow=20,SNR=3.7						
	comp=N,56nm,0.3s						
KDAK	Kodiak Island	3.10	74		Pn	12 52 26.8	+1.3
KDAK	Kodiak Island	3.10	74	P	Pn	12 52 26.4	+0.9
	baz=259						
O18K	Koktuh Hills	3.21	28		Pn	12 52 26.8	-0.2
O18K				IAML		12 53 21.7	
	comp=N,596nm,0.6s						
O18K				IAML		12 53 40.5	
	comp=E,432nm,0.9s						
O18K	Koktuh Hills	3.21	28	P	Pn	12 52 27.9	+0.9
	baz=210						
N16K	Nishlik Lake	3.45	355		Pn	12 52 31.7	+1.3
N16K	Nishlik Lake	3.45	355	P	Pn	12 52 31.4	+1.0
	baz=175,SNR=34						
Q20K	Shuyak Island	3.45	61	P	Pn	12 52 31.2	+0.9
	baz=246						
SYI	Shuyak Island	3.45	61		Pn	12 52 31.0	+0.6
FALS	False Pass	3.69	236		Pn	12 52 33.4	-0.2
FALS	False Pass	3.69	236	P	Pn	12 52 34.4	+0.9
	baz=51						
O19K	Port Alsworth	3.73	31		Pn	12 52 34.7	+0.5
O19K	Port Alsworth	3.73	31	P	Pn	12 52 34.9	+0.7
	baz=214,SNR=18						
N18K	Kilae Creek	3.82	17		Pn	12 52 36.2	+0.7
N18K	Kilae Creek	3.82	17	IAML		12 53 40.6	
	comp=N,263nm,0.8s						
N18K				IAML		12 53 48.0	
	comp=E,399nm,1.0s						
N18K	Kilae Creek	3.82	17	P	Pn	12 52 36.2	+0.7
	baz=199,SNR=17						
ISLZ	Isanotski Laza	3.90	236		Pn	12 52 37.0	+0.4
IVE	Iliamna Volcan	4.01	40		Pn	12 52 38.8	+0.6
O20K	Slope Mountain	4.20	41		Pn	12 52 41.3	+0.7
N19K	Bonanza Creek	4.22	25		Pn	12 52 42.5	+1.4
N19K	Bonanza Creek	4.22	25	IAML		12 53 59.7	
	comp=E,288nm,0.9s						
N19K				IAML		12 54 09.8	
	comp=N,351nm,0.8s						
N19K	Bonanza Creek	4.22	25	P	Pn	12 52 42.2	+1.2
	baz=208,SNR=14						
SVW2	Sparrevohn	4.27	17		Pn	12 52 42.2	+0.6
SVW2	Sparrevohn	4.27	17	IAML		12 54 18.7	
	comp=N,268nm,1.1s						
HOM	Homer	4.31	50	Pn	Pn	12 52 42.9	+0.8
RED	Redoubt Volcan	4.39	37		Pn	12 52 44.2	+0.9
CNPM	China Poot	4.41	53	Pn	Pn	12 52 43.9	+0.3
RDSO	Redoubt South	4.42	37		Pn	12 52 44.4	+0.6
RSO	Redoubt South	4.43	37	Pn	Pn	12 52 42.3	-1.6
RDJH	Redoubt Jeurge	4.51	36		Pn	12 52 45.9	+0.9
DFR	Drift River	4.55	36		Pn	12 52 47.2	+1.7
BRLK	Bradley Lake	4.69	52	Pn	Pn	12 52 44.9	-2.5
AKSA	Akutan Strait	5.18	239		Pn	12 52 55.6	+1.5
SPU	Mount Spurr	5.20	35	Pn	Pn	12 52 53.6	-0.8
AKUT	Akutan	5.22	239	Pn	Pn	12 52 52.4	-2.2
AKUT				IAML		12 54 39.2	
	comp=N,79nm,1.2s						
M19K	Big River Lodg	5.23	20		Pn	12 52 52.6	-2.2
M19K				IAML		12 54 36.5	
	comp=N,203nm,1.1s						
L19K	White Mountain	5.41	17		Pn	12 52 58.0	+0.7
L19K	White Mountain	5.41	17	P	Pn	12 52 58.0	+0.7
	baz=200,SNR=25						
M20K	Styx River	5.48	26		Pn	12 52 59.3	+1.0
M20K	Styx River	5.48	26	P	Pn	12 52 59.0	+0.7
	baz=210,SNR=27						
SEW	Seward	5.48	52	Pn	Pn	12 52 57.7	-0.5
O22K	Cooper Landing	5.57	48	Pn	Pn	12 52 57.7	-1.7
UNV	Unalaska Valle	5.74	239		Pn	12 53 02.3	+0.6
UNV	Unalaska Valle	5.74	239	P	Pn	12 53 04.2	+2.5
	baz=52						
SUA	Susitna One	5.83	38	Pn	Pn	12 53 00.7	-2.4
L20K	Farewell, AK	5.86	20		Pn	12 53 04.6	+1.3
L20K	Farewell, AK	5.86	20	P	Pn	12 53 04.2	+0.9
	baz=204,SNR=12						
RC01	Rabbit Creek A	5.93	43	Pn	Pn	12 53 02.3	-2.1
RC01	Rabbit Creek A	5.93	43	P	Pn	12 53 06.9	+2.5
	baz=231						
TT01	Tatalina	5.97	9		Pn	12 53 05.6	+0.6
SKT	Skwentna	5.98	31		Pn	12 53 03.0	-2.1
SKT	Skwentna	5.98	31	P	Pn	12 53 06.5	+1.4
	baz=217						
TTA	Tatalina	6.00	9		Pn	12 53 05.5	+0.2
TTA	Tatalina	6.00	9	P	Pn	12 53 05.4	0.0
	baz=191,SNR=6.2						
M22K	Willow	6.25	38	Pn	Pn	12 53 08.4	-0.2
M22K	Willow	6.25	38	P	Pn	12 53 09.8	+1.2
	baz=225						
PMR	Palmer	6.48	42	Pn	Pn	12 53 11.2	-0.7
PMR	Palmer	6.48	42	P	Pn	12 53 12.9	+1.0
	baz=229						
PPLA	Purkeypile	6.58	25		Pn	12 53 15.5	+2.1
PPLA	Purkeypile	6.58	25	P	Pn	12 53 14.8	+1.4
	baz=210,SNR=8.8						
SPIA	Saint Paul Isl	6.59	276		Pn	12 53 13.1	-0.3
SPIA	Saint Paul Isl	6.59	276	P	Pn	12 53 15.0	+1.5
	baz=86,SNR=12						
KNK	Knik Glacier	6.62	45	Pn	Pn	12 53 11.9	-1.9
K20K	Telida	6.64	16		Pn	12 53 14.0	-0.1
K20K	Telida	6.64	16	P	Pn	12 53 15.0	+0.8
	baz=200						
GHO	Glory Hole Cre	6.67	41		Pn	12 53 12.0	-2.7
SML	Sawmill	6.91	42	P	Pn	12 53 19.4	+1.5
	baz=231						
CAST	Castle Rocks	7.06	23		Pn	12 53 18.3	-1.6
CAST	Castle Rocks	7.06	23	P	Pn	12 53 20.6	+0.6
	baz=208,SNR=18						
SCM	Sheep Creek Mo	7.30	44	P	Pn	12 53 24.7	+1.5
	baz=234						
EYAK	Cordova Ski Ar	7.33	56		Pn	12 53 22.8	-0.8
EYAK	Cordova Ski Ar	7.33	56	P	Pn	12 53 24.9	+1.4
	baz=247						
J20K	Nowinta River	7.41	14		Pn	12 53 23.8	-0.9
J20K	Nowinta River	7.41	14	P	Pn	12 53 25.1	+0.4
	baz=197						
CHUM	Lake Minchumin	7.43	20		Pn	12 53 26.0	+1.1
CHUM	Lake Minchumin	7.43	20	P	Pn	12 53 26.1	+1.2
	baz=206,SNR=6.9						
KTH	Kantishna Hill	7.44	26	Pn	Pn	12 53 25.9	+0.8
TRF	Thorofare Moun	7.51	28		Pn	12 53 26.9	+0.7
TRF	Thorofare Moun	7.51	28	P	Pn	12 53 26.9	+0.7
	baz=215,SNR=17						
WAT6	Susitna Watana	7.63	39	P	Pn	12 53 29.0	+1.2
	baz=228						
KLU	Klutina	7.68	49		Pn	12 53 29.1	+0.6
KLU	Klutina	7.68	49	P	Pn	12 53 29.3	+0.9
	baz=240						
RND	Reindeer	7.87	32	Pn	Pn	12 53 30.7	-0.3
BPAW	Bear Paw Mtn.	7.90	23		Pn	12 53 31.2	-0.1
BPAW	Bear Paw Mtn.	7.90	23	P	Pn	12 53 32.3	+1.0
	baz=210,SNR=22						
M24K	Tolsona, Glenn	7.91	45	Pn	Pn	12 53 31.1	-0.4
M24K	Tolsona, Glenn	7.91	45	P	Pn	12 53 31.6	+0.1
	baz=236						
BMRM	Bremner River	8.01	55	P	Pn	12 53 33.1	+0.1
	baz=247						
DHY	Denali Highway	8.09	37	P	Pn	12 53 34.1	0.0
	baz=227						
MCK	McKinley	8.10	30	Pn	Pn	12 53 35.2	+1.1
MCK	McKinley	8.10	30	P	Pn	12 53 35.3	+1.2
	baz=218						
N25K	Chitina, Valde	8.29	51	Pn	Pn	12 53 37.5	+0.6
N25K	Chitina, Valde	8.29	51	P	Pn	12 53 37.8	+1.0
	baz=243						
ANM	Nome	8.32	338		Pn	12 53 38.4	+1.3
ANM	Nome	8.32	338	P	Pn	12 53 39.0	+1.9
	baz=152						
HARP	HAARP	8.47	45	P	Pn	12 53 40.7	+1.6
	baz=237						
I21K	Tanana	8.68	17		Pn	12 53 43.1	+1.1
I21K	Tanana	8.68	17	P	Pn	12 53 42.3	+0.2
	baz=203,SNR=15						
PAX	Paxson	8.68	42		Pn	12 53 44.3	+2.1
PAX	Paxson	8.68	42	P	Pn	12 53 42.9	+0.8
	baz=233						
TGL	Tana Glacier	8.75	59	Pn	Pn	12 53 44.0	+0.9
NEA2	Nenana	8.76	27	P	Pn	12 53 44.4	+1.3
	baz=215						
MLY	Manley	8.77	21		Pn	12 53 44.1	+0.8
MLY	Manley	8.77	21	P	Pn	12 53 44.6	+1.2
	baz=208						
MCARA	McCarthy VSAT	8.88	54	P	Pn	12 53 46.3	+1.5
	baz=248						
WRH	Wood River Hil	8.91	29		Pn	12 53 46.7	+1.4
H21K	Melozitna Rive	9.01	14		Pn	12 53 46.5	0.0
H21K	Melozitna Rive	9.01	14	P	Pn	12 53 47.1	+0.6
	baz=199,SNR=13						
CCB	Clear Creek Bu	9.13	29		Pn	12 53 49.3	+1.2
YAH	Yahtse	9.15	62	Pn	Pn	12 53 49.2	+0.4
I23K	Minto, Yukon-K	9.16	24		Pn	12 53 48.1	-0.5
I23K	Minto, Yukon-K	9.16	24	P	Pn	12 53 48.5	-0.1
	baz=212						
HDA	Harding Lake	9.18	32	Pn	Pn	12 53 50.6	+1.7
HDA	Harding Lake	9.18	32	P	Pn	12 53 49.8	+0.9
	baz=222						
IM03		9.20	11		Pn	12 53 49.8	+0.6
IMAR	Indian Mountai	9.20	11	Pn	Pn	12 53 50.0	+0.8
GRNC	Granite Creek	9.25	60		Pn	12 53 49.9	-0.2
MDM	Murphy Dome	9.27	27	Pn	Pn	12 53 50.3	+0.2
MENT	Mentasta	9.32	45	Pn	Pn	12 53 49.9	-0.9
M26K	Nabesna, AK	9.33	49	Pn	Pn	12 53 51.5	+0.5
M26K	Nabesna, AK	9.33	49	P	Pn	12 53 52.5	+1.5
	baz=242						
RIDG	Independent Ri	9.38	39	Pn	Pn	12 53 50.8	-0.9
RIDG	Independent Ri	9.38	39	P	Pn	12 53 53.3	+1.6
	baz=230						
TABL	Table Mountain	9.46	62		Pn	12 53 50.9	-2.1
IL31		9.47	31		Pn	12 53 50.1	-2.8
ILAR	Eielson Array	9.47	31	Pn	Pn	12 53 54.4	+1.5
	comp=N,0.5nm,0.3s,baz=218,slow=13,SNR=39						
ILAR				Lg	Lg	12 56 37.4	
	comp=N,0.1nm,0.3s,baz=232,slow=22,SNR=1.6						
ILAR				LR	LR	12 57 42.0	
	comp=N,128nm,21.7s,baz=160,slow=37						
	comp=N,2.8nm,0.6s						
ILAR	Eielson Array	9.47	31		Pn	12 53 53.3	+0.3
GAMB	Gambell	9.49	321	P	Pn	12 53 54.9	+1.8
	baz=129						
CTG	Chitna Glacier	9.51	59	P	Pn	12 53 55.0	+1.5
	baz=253						
L26K	Log Cabin Wild	9.51	45	P	Pn	12 53 54.6	+1.2
	baz=238						
CTGM	Chitina Glacie	9.51	59	Pn	Pn	12 53 53.2	-0.4
POKR	Poker Flat Res	9.60	28	Pn	Pn	12 53 56.3	+1.7
POKR	Poker Flat Res	9.60	28	P	Pn	12 53 56.7	+2.1
	baz=218						
H23K	Yukon River	9.71	21		Pn	12 53 56.5	+0.4
H23K	Yukon River	9.71	21	P	Pn	12 53 57.0	+0.9
	baz=209						
TNA	Tin City	9.73	335	P	Pn	12 53 58.8	+2.4
	baz=147						
J25K	Salcha River,	9.80	34		Pn	12 53 58.4	+1.0
J25K	Salcha River,	9.80	34	P	Pn	12 53 59.5	+2.1
	baz=225						
PCA	Pinnacle	9.82	64	Pn	Pn	12 53 55.6	-2.2
SCRK	Sand Creek	9.83	39	P	Pn	12 54 00.1	+2.2
	baz=232						
H24K	Noodor Dome	10.08	25	Pn	Pn	12 54 01.6	+0.4
H24K	Noodor Dome	10.08	25	P	Pn	12 54 02.4	+1.2
	baz=214						
L27K	Beaver Creek,	10.12	47	Pn	Pn	12 53 59.4	-2.4
L27K	Beaver Creek,	10.12	47	P	Pn	12 54 02.3	+0.5
	baz=241						
BCAR	Beaver Creek A	10.14	47	Pn	Pn	12 54 00.2	-1.9
YUK3	Moose Creek	10.17	55	P	Pn	12 54 02.5	-0.1
	baz=250						
PNL	Peninsula	10.19	67	P	Pn	12 54 02.7	-0.1
	baz=263						
J26L	Joseph Creek	10.30	38	Pn	Pn	12 54 04.9	+0.5
J26L	Joseph Creek	10.30	38	P	Pn	12 54 05.4	+1.0
	baz=230						
YUK8	Steele Glacier	10.33	58	P	Pn	12 54 05.9	+0.9
	baz=254						
K27K	Chicken	10.54	42	P	Pn	12 54 08.0	+0.5
	baz=236						
COLD	Coldfoot	10.86	17	P	Pn	12 54 15.4	+3.6
	baz=204						
DAWY	Dawson	11.56	45		Pn	12 54 22.8	+1.3
DAWY	Dawson	11.56	45	P	Pn	12 54 22.3	+0.7
	baz=241						
N30M	Aishikik Lake	11.62	59	P	Pn	12 54 20.5	-1.9
	baz=257						
BMAR	Burnt Mountain	12.14	26	Pn	Pn	12 54 29.3	-0.2
TOLK	Toolik Lake Re	12.26	15	Pn	Pn	12 54 30.0	-1.0
TOLK	Toolik Lake Re	12.26	15	P	Pn	12 54 32.0	+1.0
	baz=203						
M31M	Drury Creek, Y	13.04	57	P	Pn	12 54 41.9	+0.2
	baz=257						
P32M	Atlin	13.06	69	P	Pn	12 54 41.2	-0.9
	baz=269						
FARO	Faro, Yukon	13.52	57	P	Pn	12 54 51.3	+3.0
	baz=259						
EPYK	Eagle Plains	13.72	38		Pn	12 54 51.2	+0.3
EPYK	Eagle Plains	13.72	38	P	Pn	12 54 51.7	+0.8
	baz=237						
CRAG	Craig	13.97	86	Pn	Pn	12 54 53.4	-1.0
A21K	Barrow	14.35	2	Pn	Pn	12 54 57.4	-1.9
MMPY	Sheldon Lake,	14.55	56	P	Pn	12 55 03.0	+0.7
	baz=260						
DLBC	Dease Lake	15.03	73	Pn	Pn	12 55 11.4	+2.5
	comp=N,0.1nm,0.3s,baz=262,slow=13,SNR=3.8						
	comp=N,1.4nm,0.7s						
DLBC	Dease Lake	15.03	73		Pn	12 55 06.6	-2.3
INK	Inuvik	15.82	35	Pn	Pn	12 55 21.0	+2.0
	comp=N,0.2nm,0.3s,baz=210,slow=9.8,SNR=2.4						

NVAR	**Mina Array Bea**	**32.01**	**108**	P		**P**	**12 58 01.9**	**-1.3**
NVAR						**PcP**	**13 00 50.8**	**-1.9**
R11A	**Troy Canyon, C**	**33.49**	**105**	P		**P**	**12 58 14.3**	**-1.7**
R11A				IAmb		IAmb	12 58 19.0	
	comp=Z,1.7nm,0.8s							
R11A	**Troy Canyon, C**	**33.49**	**105**	P		**P**	**12 58 17.2**	**+1.1**
	baz=318							
GRAC	**Grapevine Rang**	**33.58**	**109**	P		**P**	**12 58 18.0**	**+1.3**
	baz=320							
BW06	**Boulder Array**	**33.62**	**94**	P		**P**	**12 58 15.6**	**-1.5**
PDAR	**Pinedale Array**	**33.62**	**94**	P		**P**	**12 58 18.1**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=312,slow=4.6,SNR=5.7							
	comp=Z,0.4nm,0.5s							
TPNV	**Topopah Spring**	**34.20**	**108**	P		**P**	**12 58 20.3**	**-1.9**
TPNV				IAmb		IAmb	12 58 27.9	
	comp=Z,2.1nm,0.8s							
TPNV	**Topopah Spring**	**34.20**	**108**	P		**P**	**12 58 22.9**	**+0.8**
	baz=320							
MPMC	**Manual Prospec**	**34.24**	**110**	P		**P**	**12 58 23.7**	**+1.2**
	baz=321							
FURC	**Furnace Creek,**	**34.25**	**109**	P		**P**	**12 58 23.8**	**+1.4**
	baz=320							
YAK	**Yakutsk**	**35.17**	**309**	LR		LR	13 14 55.6	
	comp=Z,75nm,18.8s,baz=87,slow=40							
SRU	**San Rafael Swe**	**35.64**	**99**	P		**P**	**12 58 33.5**	**-1.0**
SRU				IAmb		IAmb	12 58 44.2	
	comp=Z,5.3nm,1.0s							
RSSD	**Black Hills**	**35.73**	**87**	P		**P**	**12 58 36.2**	**+0.8**
RSSD				IAmb		IAmb	12 58 39.9	
	comp=Z,3.1nm,0.8s							
RSSD	**Black Hills**	**35.73**	**87**	P		**P**	**12 58 34.7**	**-0.7**
	baz=311							
O20A	**White River Ci**	**36.15**	**96**	P		**P**	**12 58 37.7**	**-1.2**
	baz=315							
GMRC	**Granite Mounta**	**36.17**	**110**	P		**P**	**12 58 38.9**	**-0.2**
	baz=321							
ULM	**Lac du Bonnet**	**36.36**	**73**	P		**P**	**12 58 41.3**	**+0.9**
	comp=Z,1.6nm,0.4s,baz=311,slow=10,SNR=5.4							
ULM				LR		LR	13 13 51.1	
	comp=Z,38nm,19.1s,baz=4.5,slow=36							
	comp=Z,1.6nm,0.4s							
BELC	**Belle Mtn. Jos**	**36.61**	**111**	P		**P**	**12 58 44.4**	**+1.6**
	baz=322							
IRM	**Iron Mountain**	**36.92**	**110**	P		**P**	**12 58 46.4**	**+1.0**
	baz=322							
AGMN	**Agassiz Nation**	**37.52**	**76**	P		**P**	**12 58 48.7**	**-1.6**
AGMN				IAmb		IAmb	12 58 54.7	
	comp=Z,4.6nm,0.8s							
AGMN	**Agassiz Nation**	**37.52**	**76**	P		**P**	**12 58 50.5**	**+0.1**
	baz=308							
ASAJ	**Asahikawa**	**38.54**	**277**	LR		LR	13 16 43.8	
	comp=Z,11nm,19.2s,baz=102,slow=39							
EYMN	**Ely**	**40.04**	**74**	P		**P**	**12 59 11.9**	**+0.4**
EYMN				IAmb		IAmb	12 59 13.3	
	comp=Z,8.0nm,0.8s							
EYMN	**Ely**	**40.04**	**74**	P		**P**	**12 59 11.9**	**+0.4**
	baz=309							
KLR	**Kul'dur**	**41.03**	**290**	LR		LR	13 16 44.5	
	comp=Z,27nm,19.1s,baz=27,slow=37							
E43A	**Lone Tree Farm**	**43.41**	**72**	P		**P**	**12 59 39.1**	**+0.1**
E43A				IAmb		IAmb	12 59 40.8	
	comp=Z,6.9nm,0.8s							
MNTX	**Cornudas Mount**	**43.97**	**102**	P		**P**	**12 59 42.4**	**-1.3**
MNTX	**Cornudas Mount**	**43.97**	**102**	P		**P**	**12 59 45.3**	**+1.6**
	baz=321							
TUL1	**Leonard**	**45.98**	**90**	P		**P**	**13 00 01.4**	**+1.7**
	baz=318							
TX31	**Lajitas Ar. Si**	**46.73**	**103**	P		**P**	**13 00 06.3**	**+0.6**
TX32	**Lajitas Array**	**46.73**	**103**	P		**P**	**13 00 06.7**	**+0.9**
TX32				IAmb		IAmb	13 00 08.1	
	comp=Z,1.8nm,0.8s							
TXAR	**Lajitas Array**	**46.73**	**103**	P		**P**	**13 00 06.8**	**+1.1**
	comp=Z,1.0nm,0.7s,baz=299,slow=5.1,SNR=15							
TXAR				PcP		**PcP**	**13 01 39.7**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=294,slow=2.9,SNR=2.6							
	comp=Z,1.0nm,0.7s							
TXAR	**Lajitas Array**	**46.73**	**103**	P		**P**	**13 00 06.7**	**+0.9**
SCHQ	**Schefferville**	**47.48**	**52**	P		**P**	**13 00 11.1**	**0.0**
	comp=Z,3.6nm,0.8s,baz=286,slow=8.0,SNR=3.9							
JCT	**Junction City**	**47.91**	**98**	P		**P**	**13 00 15.2**	**+0.3**
JCT				IAmb		IAmb	13 00 18.9	
	comp=Z,5.3nm,0.9s							
JCT	**Junction City**	**47.91**	**98**	P		**P**	**13 00 16.4**	**+1.5**
	baz=321							
Z41A	**Richland Creek**	**49.60**	**90**	P		**P**	**13 00 28.4**	**+0.7**
	baz=319							
WVT	**Waverly**	**50.16**	**83**	P		**P**	**13 00 32.6**	**+0.6**
	baz=318							
KSRS	**Korea Array**	**51.13**	**281**	P		**P**	**13 00 39.3**	**0.0**
	comp=Z,1.5nm,0.9s,baz=46,slow=6.9,SNR=5.8							
KSRS				LR		LR	13 22 36.8	
	comp=Z,15nm,19.8s,baz=5.0,slow=36							
	comp=Z,1.5nm,0.9s							
L56A	**Greenwood**	**51.23**	**70**	P		**P**	**13 00 40.5**	**+0.6**
BINY	**Binghamton**	**51.99**	**69**	P		**P**	**13 00 46.3**	**+0.7**
	baz=317							
SSPA	**Standing Stone**	**52.15**	**72**	P		**P**	**13 00 46.7**	**-0.1**
G62A	**West of Eustis**	**52.52**	**63**	P		**P**	**13 00 50.5**	**+0.9**
ARCES	**ARCESS Array B**	**53.69**	**358**	LR		LR	13 26 23.5	
	comp=Z,20nm,18.3s,baz=126,slow=39							
SONM	**Songino Array**	**54.28**	**304**	P		**P**	**13 01 03.9**	**+1.3**
	comp=Z,1.4nm,0.7s,baz=62,slow=6.5,SNR=4.1							
SONM				PcP		**PcP**	**13 02 06.8**	**+0.2**
	comp=Z,1.2nm,0.7s,baz=53,slow=3.1,SNR=4.1							
SONM				LR		LR	13 26 19.3	
	comp=Z,70nm,18.7s,baz=61,slow=38							
	comp=Z,1.4nm,0.7s							
SONM	**Songino Array**	**54.28**	**304**	P		**P**	**13 01 01.6**	**-1.0**
SONM				IAmb		IAmb	13 01 08.4	
	comp=Z,1.5nm,0.8s							
BCX	**Boston College**	**54.32**	**66**	P		**P**	**13 01 01.9**	**-0.8**
GOGA	**Godfrey**	**54.57**	**82**	P		**P**	**13 01 03.6**	**-1.1**
	baz=320							
TIGA	**Tifton**	**56.01**	**84**	P		**P**	**13 01 13.4**	**-1.7**
	baz=321							
ZALV	**Zalesovo Beam**	**58.08**	**322**	P		**P**	**13 01 29.7**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=32,slow=5.9,SNR=4.2							
ZALV				LR		LR	13 29 01.4	
	comp=Z,56nm,18.4s,baz=33,slow=38							
	comp=Z,0.5nm,0.4s							
NOA	**NORSAR Array B**	**61.95**	**6**	P		**P**	**13 01 56.1**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=355,slow=6.7,SNR=3.5							
HFS	**Hagfors**	**62.98**	**5**	LR		LR	13 30 36.5	
	comp=Z,12nm,19.1s,baz=356,slow=37							
ARU	**Arti**	**63.06**	**338**	LR		LR	13 32 19.5	
	comp=Z,40nm,18.3s,baz=277,slow=38							
MKAR	**Makanchi Array**	**64.96**	**319**	P		**P**	**13 02 16.0**	**0.0**
	comp=Z,0.3nm,0.5s,baz=21,slow=5.2,SNR=4.2							
	comp=Z,0.3nm,0.5s							
AKTO	**Aktyubinsk**	**68.79**	**336**	LR		LR	13 35 21.6	
	comp=Z,22nm,19.2s,baz=0.7,slow=38							
BELG	**Belogornoye**	**68.89**	**343**	LR		LR	13 36 23.5	
	comp=Z,42nm,19.0s,baz=120,slow=39							
ABKAR	**Akbulak array**	**69.46**	**334**	P		**P**	**13 02 42.9**	**-1.6**
AAK	**Ala-Archa**	**71.31**	**322**	LR		LR	13 36 57.7	
	comp=Z,23nm,20.4s,baz=108,slow=38							
AKASG	**Malin Array Be**	**72.44**	**355**	LR		LR	13 36 22.6	
	comp=Z,11nm,21.1s,baz=60,slow=37							
KBZ	**Khabaz**	**78.05**	**345**	LR		LR	13 44 20.2	
	comp=Z,18nm,18.2s,baz=82,slow=40							
CMAR	**Chiang Mai Arr**	**81.51**	**291**	P		**P**	**13 03 53.1**	**-1.0**
	comp=Z,0.6nm,0.3s,baz=16,slow=5.2,SNR=5.6							
	comp=Z,0.6nm,0.3s							
BOSA	**Boshof**	**151.47**	**354**	PKPbc		**PKPbc**	**13 11 29.9**	**-0.5**
	comp=Z,3.1nm,0.9s,baz=284,slow=10,SNR=1.7							

*TAP **14** 12:52:08.5,24.˚78N×122.˚42E,h14km±1km, ML2.9, C*
*JMA **14** 12:52:09.4±0.2,24.˚7N±1.˚0×122.˚4E±0.˚5, h12km±4km, MV2.1/7, NW OFF ISHIGAKIJIMA IS*
ISC 14 12:52:08.9±1.0, 24.˚77N±0.˚03×122.˚43E±0.˚02, h14km±9km**, n45, σ0s44/86, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
EGS		**0.45**	**280**	*i* P		**Pg**	**12 52 18.1**	**+0.2**
	baz=277							
EGS				*i* S		**Sb**	**12 52 25.1**	**-0.2**
	baz=277							
TWB1	**Santiao Chiao**	**0.46**	**301**	*i* P		**Pg**	**12 52 18.1**	**-0.1**
	baz=299							
TWB1				*e*S		**Sg**	**12 52 23.9**	**-0.5**
	baz=299							
TWC	**Suao**	**0.55**	**253**	*e*P		**Pg**	**12 52 19.5**	**-0.2**
	baz=251							
TWC				*e*S		**Sb**	**12 52 29.0**	**+1.0**
	baz=251							
NTC	**Toucheng**	**0.55**	**279**	*i* P		**Pg**	**12 52 19.8**	**+0.2**
	baz=277							
NTC				*e*S		**Sb**	**12 52 28.2**	**+0.2**
	baz=277							
JYNG	**Yonagunijimaku**	**0.57**	**123**	P		**Pg**	**12 52 20.3**	**+0.2**
JYNG				S		**Sg**	**12 52 27.3**	**-0.3**
TIPB	**Shuangxi**	**0.58**	**291**	*i* P		**Pg**	**12 52 20.4**	**+0.1**
	baz=289							
TIPB				*e*S		**Sb**	**12 52 29.7**	**+0.7**
	baz=289							
SXI1	**Grass Mountain**	**0.60**	**303**	P		**Pg**	**12 52 20.9**	**+0.3**
	baz=301							
SXI1				S		**Sg**	**12 52 28.8**	**+0.3**
	baz=301							
YOJ	**Yonaguni jima**	**0.61**	**120**	P		**Pg**	**12 52 21.0**	**+0.1**
	baz=120							
YOJ				*i* S		**Sg**	**12 52 29.3**	**+0.3**
	baz=120							
YOJ	**Yonaguni jima**	**0.61**	**120**	P		**Pg**	**12 52 20.9**	**0.0**
YOJ				S		**Sg**	**12 52 28.8**	**-0.3**
NDS	**Dongshan**	**0.66**	**259**	P		**Pg**	**12 52 21.4**	**-0.3**
	baz=256							
NDS				*i* S		**Sb**	**12 52 31.7**	**+0.5**
	baz=256							
NWF	**Wu-fen Shan**	**0.66**	**298**	P		**Pb**	**12 52 22.2**	**0.0**
	baz=296							
NWF				*i* S		**Sb**	**12 52 31.2**	**-0.1**
	baz=296							
WFSB	**Wu-fen Shan**	**0.66**	**298**	P		**Pb**	**12 52 22.2**	**0.0**
	baz=296							
WFSB				S		**Sb**	**12 52 31.5**	**+0.3**
	baz=296							
EWUT	**Wuta**	**0.67**	**242**	*i* P		**Pb**	**12 52 22.3**	**-0.1**
	baz=240							
EWUT				S		**Sb**	**12 52 31.7**	**+0.2**
	baz=240							
TWE	**Neicheng**	**0.69**	**266**	*e*P		**Pg**	**12 52 22.2**	**-0.2**
	baz=264							
TWE				S		**Sb**	**12 52 32.8**	**+0.7**
	baz=264							
TNOU	**National Taiwa**	**0.70**	**303**	P		**Pg**	**12 52 22.6**	**0.0**
	baz=301							
TNOU				S		**Sg**	**12 52 32.3**	**+0.4**
	baz=301							
ENA	**Nanau**	**0.71**	**242**	*i* P		**Pb**	**12 52 22.9**	**-0.2**
	baz=239							
ENA				*e*S		**Sg**	**12 52 31.9**	**-0.1**
	baz=239							
FUSB	**Fushanzhiwuyua**	**0.76**	**270**	P		**Pg**	**12 52 23.6**	**-0.1**
	baz=268							
FUSB				*e*S		**Sb**	**12 52 34.5**	**+0.3**
	baz=268							
ENTT	**Nioudou**	**0.79**	**261**	P		**Pb**	**12 52 24.8**	**+0.3**
	baz=259							
TWA	**Mucha**	**0.79**	**286**	P		**Pg**	**12 52 24.1**	**-0.2**
	baz=284							
TWA				*i* S		**Sb**	**12 52 35.1**	**0.0**
	baz=284							
NWRT	**Kuosheng**	**0.82**	**302**	P		**Pg**	**12 52 24.5**	**-0.3**
	baz=301							
NWRT				S		**Sg**	**12 52 35.4**	**-0.1**
	baz=301							
NWLT	**Wulai**	**0.84**	**271**	P		**Pg**	**12 52 25.2**	**0.0**
	baz=269							
NWLT				S		**Sb**	**12 52 37.1**	**+0.6**
	baz=269							
NHDH	**Xindian Distri**	**0.84**	**284**	*e*P		**Pb**	**12 52 25.5**	**+0.2**
	baz=282							
LATG	**Datong**	**0.85**	**254**	P		**Pg**	**12 52 25.1**	**-0.3**
	baz=253							
LATG				S		**Sb**	**12 52 36.8**	**0.0**
	baz=253							
YM01	**YM01**	**0.86**	**296**	P		**Pg**	**12 52 25.4**	**-0.2**
	baz=295							
YM01				*i* S		**Sg**	**12 52 37.0**	**+0.1**
	baz=295							
YM08	**YM08**	**0.87**	**299**	*e*P		**Pg**	**12 52 25.2**	**-0.5**
	baz=298							
YM08				*e*S		**Sg**	**12 52 36.5**	**-0.5**
	baz=298							
TATO	**Taipei**	**0.88**	**284**	*e*P		**Pb**	**12 52 26.4**	**+0.5**
	baz=282							
TATO				*i* S		**Sb**	**12 52 37.6**	**+0.1**
	baz=282							
TWY	**Chenhua**	**0.90**	**304**	P		**Pb**	**12 52 26.7**	**+0.3**
	baz=303							
TWY				S		**Sb**	**12 52 38.6**	**+0.4**
	baz=303							
PCYT	**Pengchaiyu**	**0.92**	**340**	P		**Pg**	**12 52 25.4**	**-1.3**
	baz=339							
ETL	**Fush Village**	**0.95**	**231**	P		**Pg**	**12 52 27.1**	**-0.2**
	baz=229							
ETL				S		**Sn**	**12 52 40.6**	**-0.6**
	baz=229							
NACB	**Ninganchiao**	**0.96**	**232**	P		**Pb**	**12 52 26.9**	**-0.4**
	baz=231							
NACB				S		**Sb**	**12 52 40.3**	**+0.4**
	baz=231							
YHNB	**Yeheng**	**0.96**	**264**	P		**Pb**	**12 52 27.6**	**+0.2**
	baz=263							
YHNB				*i* S		**Sg**	**12 52 39.9**	**-0.1**
	baz=263							
NSK	**Sanguang**	**0.97**	**265**	P		**Pb**	**12 52 27.3**	**-0.3**
	baz=263							
NSK				S		**Sg**	**12 52 40.1**	**-0.4**
	baz=263							
NNSB	**Datong**	**1.01**	**251**	P		**Pb**	**12 52 27.7**	**-0.5**
	baz=249							
NNSB				*e*S		**Sg**	**12 52 40.9**	**-0.7**
	baz=249							
NNS	**Nan Shan**	**1.01**	**251**	P		**Pg**	**12 52 28.6**	**+0.1**
	baz=250							
NNS				S		**Sg**	**12 52 42.2**	**+0.5**
	baz=250							
TWD	**Chiawan**	**1.02**	**228**	P		**Pn**	**12 52 28.6**	**-0.1**
	baz=226							
TWD				*e*S		**Sn**	**12 52 42.2**	**-0.7**
	baz=226							
ETLH	**Xiulin Townshi**	**1.02**	**237**	*e*P		**Pb**	**12 52 28.3**	**-0.1**
	baz=236							
ETLH				*e*S		**Sb**	**12 52 41.4**	**-0.5**
	baz=236							
FUSS	**Fushou**	**1.19**	**245**	P		**Pg**	**12 52 31.7**	**-0.2**
	baz=243							
FUSS				S		**Sn**	**12 52 48.2**	**+0.7**
	baz=243							
NFF	**Wufeng Townshi**	**1.20**	**264**	P		**Pn**	**12 52 31.3**	**0.0**
	baz=262							
NFF				S		**Sg**	**12 52 47.4**	**-0.2**
	baz=262							
WHF	**Hehuan Shan**	**1.23**	**240**	*e*P		**Pg**	**12 52 32.5**	**-0.1**
	baz=238							
WHF				*e*S		**Sb**	**12 52 47.8**	**-0.2**
	baz=238							
TDCB	**Techi**	**1.26**	**246**	*e*P		**Pg**	**12 52 33.3**	**+0.1**
	baz=245							
TDCB				S		**Sg**	**12 52 49.7**	**0.0**
	baz=245							
IRIF	**Iriomote-Funau**	**1.26**	**110**	P		**Pb**	**12 52 32.8**	**+0.3**
IRIF				*e*S		**Sb**	**12 52 48.9**	**+0.3**
LIOB	**Emei**	**1.29**	**265**	*e*P		**Pn**	**12 52 32.7**	**+0.2**
	baz=263							
LIOB				*e*S		**Sg**	**12 52 52.5**	**+2.1**
	baz=263							
CHGB	**Renai**	**1.34**	**239**	*e*P		**Pg**	**12 52 34.3**	**-0.5**
	baz=237							
CHGB				*e*S		**Sg**	**12 52 52.8**	**+0.7**
	baz=237							
OWD	**Renai**	**1.40**	**235**	*e*P		**Pg**	**12 52 35.4**	**-0.4**
	baz=234							
OWD				S		**Sg**	**12 52 53.4**	**-0.6**
	baz=234							
JIJ	**Ishigaki jima**	**1.61**	**104**	*e*S		**Sb**	**12 52 59.0**	**+0.3**

*ARE **14** 12:53:49±4.0, 7.˚26S±0.˚07×79.˚8W±0.˚1, h45km±9km, Error ellipse: s-maj=0.0km s-min=0.0km az=162.0*
*NEIC **14** 12:53:52.1±1.4, 7.˚21S±0.˚09×79.˚4W±0.˚1, h35km±2km, mb4.1/4, ML4.6(ARE), Error ellipse: s-maj=25.0km s-min=10.9km az=243.0*
*IDC **14** 12:53:58.9±1.6, 7.˚83S×78.˚90W, h0km, mb3.3/2, mbtmp3.8/5, ML3.5/3, MS2.9/1, Error ellipse: s-maj=27.9km s-min=14.1km az=126.0*
ISC 14 12:53:49.1±2.1, 7.˚31S±0.˚10×79.˚7W±0.˚3, h35km**, n21, σ1s83/16, Near coast of northern Peru**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ATAH	**Atahualpa**	**1.32**	**83**	Pg		**Pn**	**12 54 14.3**	**+2.9**
	baz=277,slow=17							
ATAH				Lg		Lg	12 54 28.2	
	355nm,0.3s,baz=127,slow=23,SNR=4.1							
ATAH				LR		LR	12 54 48.2	
	comp=Z,279nm,20.7s,baz=263,slow=58							
ARNL	**Arenillas**	**3.75**	**355**	Pn		**Pn**	**12 54 44.3**	**-0.3**
BOSC	**San Juan Bosco**	**4.31**	**16**	Pn		**Pn**	**12 54 52.5**	**+0.2**
COHC	**Cochancay**	**4.83**	**5**	Pn		**Pn**	**12 55 00.9**	**+1.5**
NNA	**Nana**	**5.44**	**149**	Pn		**Pn**	**12 55 10.1**	**+2.3**
	9.4nm,0.3s,baz=332,slow=13,SNR=14							
NNA				Sn		**Sn**	**12 56 09.0**	**-0.3**
	19nm,0.3s,baz=134,slow=11,SNR=4.7							
	27nm,0.3s							
NNA	**Nana**	**5.44**	**149**	Pn		**Pn**	**12 55 09.4**	**+1.6**
PORT	**Chimborazo Vol**	**5.88**	**9**	Pn		**Pn**	**12 55 17.2**	**+2.8**
SLOR	**San Lorenzo -**	**6.65**	**11**	Pn		**Pn**	**12 55 26.9**	**+2.1**
OTAV	**Otavalo**	**7.60**	**10**	Pn		**Pn**	**12 55 38.9**	**+1.0**
MACC	**Macarena, Meta**	**11.07**	**32**	*e*P		**Pn**	**12 56 26.2**	**+1.2**
MACC				*e*S		Sn	12 58 17.9	-10
MACC				*i*			12 59 03.3	
	comp=Z,45nm,0.7s							
ROSC	**El Rosal**	**13.22**	**24**	Pn		P	12 57 12.1	+7.9
	comp=Z,2.0nm,0.3s,baz=210,slow=20,SNR=1.6							
ROSC				Sn		S	12 59 35.5	-9.1
	comp=Z,0.9nm,0.3s,baz=186,slow=22,SNR=1.5							
ROSC				LR		LR	13 02 04.3	
	comp=Z,55nm,21.4s,baz=236,slow=36							
	comp=Z,8.1nm,0.4s							
LPAZ	**La Paz**	**14.42**	**129**	Pn		**Pn**	**12 57 12.5**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=301,slow=12,SNR=2.2							
	comp=Z,0.5nm,0.5s							
SAML	**Samuel**	**16.45**	**97**	Pn		**Pn**	**12 57 35.5**	**-1.9**
PB10	**IPOC Station P**	**18.36**	**152**	P		**Pn**	**12 58 00.4**	**-0.6**
PB10				IAmb		IAmb	12 58 10.1	
	comp=Z,25nm,1.0s							
BAUV	**El Baul**	**19.90**	**36**	P		**P**	**12 58 15.6**	**-2.1**
SIV	**San Ignacio**	**20.18**	**117**	P		**P**	**12 58 20.0**	**-0.8**
	comp=Z,2.1nm,0.5s,baz=277,slow=12,SNR=9.8							
H03N2	**Juan Fernandez**	**26.01**	**179**	T		T	13 26 04.5	
	baz=357,slow=76,SNR=4.3							
H03N1	**Juan Fernandez**	**26.01**	**178**	T		T	13 26 02.6	
	baz=357,slow=76,SNR=10							
H03N3	**Juan Fernandez**	**26.03**	**178**	T		T	13 26 11.0	
	baz=357,slow=76,SNR=8.6							
TXAR	**Lajitas Array**	**43.12**	**329**	P		P	13 02 09.0	+23
	comp=Z,0.1nm,0.5s,baz=144,slow=7.8,SNR=2.0							
	comp=Z,0.1nm,0.5s							
NVAR	**Mina Array Bea**	**57.94**	**325**	P		P	13 03 59.3	+21
	comp=Z,0.5nm,0.7s,baz=119,slow=7.3,SNR=4.2							
	comp=Z,0.5nm,0.7s							

IDC 14 12:58:46.3±6.0, 28.˚21S×23.˚37E, h0km, Error ellipse: s-maj=36.5km s-min=33.1km az=107.0, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
I47ZA	**BOSHOF INFRASO**	**1.69**	**104**	*i*			13 08 50.0	
	0.1nm,0.5s,baz=282,slow=318,SNR=0.8							
BOSA	**Boshof**	**1.71**	**104**	Pn		Pn	12 59 17.5	+0.1
	1.0nm,0.3s,baz=287,slow=16,SNR=14							
BOSA				Lg		Lg	12 59 40.5	
	5.6nm,0.3s,baz=207,slow=21,SNR=31							
BOSA				Rg		Rg	12 59 48.1	
	5.2nm,0.4s,baz=235,slow=13,SNR=7.0							
I35NA	**TSUMEB INFRASO**	**10.43**	**328**	*i*			14 00 30.0	
	baz=152,slow=318,SNR=4.8							

LVSN 14 13:30:04.4±4.0, 58.˚41N×25.˚27E, h0km±123km, ML1.7, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
VSU	**Vasula**	**0.78**	**86**	AML		AML	13 30 27.1	
	comp=N,93nm,0.6s							
VSU				*e*S		Sg	13 30 28.0	-1.2
VSU				AML		AML	13 30 29.3	
	comp=E,115nm,0.5s							
VSU				AML		AML	13 30 53.4	
	comp=Z,68nm,0.7s							
MTSE	**Matsula**	**0.82**	**292**	*e*S		Sg	13 30 29.3	-1.4

HEL 14 13:30:08.3±0.1, 60.˚58N×27.˚56E, h0km, ML1.3, Explosion, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
VJF	**Virojoki**	**0.04**	**182**	PG		Pg	13 30 09.0	0.0
VJF				SG		Sg	13 30 09.4	0.0
PVF	**Pernaja**	**0.84**	**269**	PG		Pg	13 30 23.3	-1.0
	baz=84							
RUFX	**Ruokolahti**	**1.09**	**38**	PG		Pg	13 30 28.1	-1.2
	baz=215							
RUFX				SB		Sg	13 30 43.0	-0.4
FIA0	**FINESS Array S**	**1.13**	**321**	PG		Pg	13 30 28.5	-1.4
FIA0				SN		Sn	13 30 48.0	+0.4
NUR	**Nurmijrvi**	**1.44**	**269**	PG		Pn	13 30 34.1	-1.4
NUR				SN		Sn	13 30 56.8	+1.6
MEF	**Metsahovi**	**1.61**	**258**	*e*P		Pn	13 30 37.4	-0.5
MEF				*e*S		Sn	13 30 58.0	-1.4
MEF				AML		AML	13 31 02.4	
	comp=N,6.6nm,0.7s							
MEF				AML		AML	13 31 02.8	
	comp=E,4.3nm,0.7s							
MEF				AML		AML	13 31 08.9	
	comp=Z,5.3nm,0.8s							
MEF	**Metsahovi**	**1.61**	**258**	PG		Pn	13 30 37.4	-0.5
MEF				MSG			13 30 56.5	
	comp=Z,2.3nm,0.2s							
MEF				SN		Sg	13 31 01.0	+1.1
KAF	**Kangasniemi**	**1.66**	**339**	PG		Pn	13 30 37.8	-0.7
KAF				MSG			13 30 57.8	
	comp=Z,1.7nm,0.2s							
KAF				SN		Sb	13 31 00.9	-0.1
KEF	**Keuruu**	**2.06**	**322**	PG		Pn	13 30 44.6	+0.6
KEF				MSG			13 31 09.2	
	comp=Z,1.5nm,0.2s							
KEF				SG		Sb	13 31 12.1	-0.4
SUF	**Sumiainen**	**2.25**	**

	119nm,0.7s							
YAK				*e*Sn	**Sn**	13 50 35.0	-2.3	
YAK				*e*Sg	**Sg**	13 50 57.3	-1.3	
	27nm,0.2s							
TBGR	**Tabaga**	**4.34**	**210**	*e*Pn	**Pn**	13 49 49.6	-2.0	
TBGR				*e*Pg	**Pg**	13 50 05.8	-3.0	
	2µm,0.8s							
TBGR				*e*Sn	**Sn**	13 50 39.4	-2.9	
TBGR				*e*Sg	**Sg**	13 51 04.1	-0.9	
	2µm,0.6s							
DEPR	**Deputatskiy**	**4.35**	**27**	*e*Pn	**Pn**	13 49 49.9	-1.8	
DEPR				*e*Pg	**Pg**	13 50 05.5	-3.4	
	67nm,0.5s							
DEPR				*e*Sn	**Sn**	13 50 40.5	-1.9	
DEPR				*e*Sg	**Sg**	13 51 04.4	-0.8	
	231nm,0.5s							
ATKR	**Artyk**	**4.87**	**103**	*e*Sg	**Sg**	13 51 22.3	+0.5	
	144nm,0.6s							
BLSR	**Buluus**	**4.89**	**211**	*i* Pn	**Pn**	13 49 57.5	-1.6	
BLSR				*i* Pg	**Pg**	13 50 16.4	-2.7	
	428nm,0.3s							
BLSR				*e*Sn	**Sn**	13 50 53.0	-2.6	
BLSR				*e*Sg	**Sg**	13 51 22.4	0.0	
	292nm,0.8s							
TIXI	**Tiksi**	**6.34**	**344**	*i* Lg	Lg	13 52 01.6		
	808nm,0.6s							
SUUS	**Susuman**	**6.72**	**109**	*e*P	**Pn**	13 50 26.5	+2.1	
SUUS				*e*Sg	**Sg**	13 52 21.3	+0.1	
SUUS				Sgmax		13 52 28.0		
	70nm,0.4s							
SEY	**Seymchan**	**8.34**	**101**	Pn	**Pn**	13 50 46.3	-0.1	
	0.4nm,0.2s,baz=283,slow=23,SNR=2.2							
SEY				Lg	Lg	13 53 09.3		
	0.7nm,0.3s,baz=352,slow=17,SNR=4.2							
SEY	**Seymchan**	**8.34**	**101**	*e*P	**Pn**	13 50 47.6	+1.1	
SEY				*e*Sg	**Sg**	13 53 13.8	+0.9	
SEY				Sgmax		13 53 24.3		
	30nm,0.7s							
SEY				Sgmax		13 53 24.3		
	20nm,0.5s							
TLAR	**Talaya**	**9.31**	**111**	*e*P	**Pn**	13 51 02.1	+2.3	
TLAR				*e*		13 51 43.4		
TLAR				*e*Sg		13 53 45.8		
TLAR				Sgmax		13 54 11.6		
	20nm,0.5s							
MGD	**Magadan 1**	**9.38**	**119**	*e*Sg		13 53 47.2		
MA2	**Magadan**	**9.73**	**121**	Pn	**Pn**	13 51 06.4	+1.0	
	0.9nm,0.3s,baz=66,slow=21,SNR=7.9							
MA2				Lg	Lg	13 53 54.3		
	0.6nm,0.3s,baz=208,slow=21,SNR=3.6							
	2.6nm,0.5s							
MA2	**Magadan**	**9.73**	**121**		**Pn**	13 51 06.1	+0.6	
MA2	**Magadan**	**9.73**	**121**	*e*P	**Pn**	13 51 06.6	+1.1	
MA2				*e*Sg	Sn	13 53 54.0	+59	
MA2				Sgmax		13 54 05.5		
	20nm,0.6s							
MA2				Sgmax		13 54 05.5		
	20nm,0.8s							
GADL	**Gadlja**	**9.86**	**119**	*e*		13 54 12.5		
EVEN	**Evensk**	**11.63**	**97**	*e*		13 55 05.0		
KLR	**Kul'dur**	**16.51**	**186**	Lg	Lg	13 57 21.1		
	0.1nm,0.3s,baz=104,slow=22,SNR=3.4							
NRIK	**Noril'sk**	**17.88**	**303**	Lg	Lg	13 58 04.9		
	0.2nm,0.3s,baz=14,slow=18,SNR=3.0							
USRK	**Ussuriysk Ar.**	**21.53**	**184**	P	**P**	13 53 35.5	+0.9	
	1.0nm,0.5s,baz=358,slow=8.5,SNR=2.3							
	1.0nm,0.5s							
SONM	**Songino Array**	**23.14**	**233**	P	**P**	13 53 54.3	+2.4	
	0.2nm,0.3s,baz=27,slow=9.7,SNR=2.1							
	0.2nm,0.3s							
ZALV	**Zelesovo Beam**	**26.69**	**268**	P	**P**	13 54 24.7	+0.2	
	0.3nm,0.3s,baz=50,slow=12,SNR=1.6							
	0.3nm,0.3s							
IMAR	**Indian Mountai**	**28.04**	**56**	P	**P**	13 54 37.5	+1.0	
H21K	**Melozitna Rive**	**28.55**	**56**	P	**P**	13 54 42.6	+1.5	
H21K				IAmb	IAmb	13 55 04.4		
	comp=Z,2.7nm,1.2s							
I21K	**Tanana**	**29.10**	**56**	P	**P**	13 54 45.4	-0.6	
I21K				IAmb	IAmb	13 54 46.5		
	comp=Z,7.0nm,1.5s							
H24K	**Noodor Dome**	**30.11**	**53**	P	**P**	13 54 55.0	+0.1	
H24K				IAmb	IAmb	13 55 18.3		
	comp=Z,3.3nm,1.2s							
ILAR	**Eielson Array**	**31.09**	**55**	P	**P**	13 55 04.0	+0.4	
	comp=Z,0.7nm,0.7s,baz=295,slow=7.9,SNR=8.6							
	comp=Z,0.7nm,0.7s							
MK31	**Makanchi Array**	**33.19**	**261**	P	**P**	13 55 22.2	0.0	
MKAR	**Makanchi Array**	**33.19**	**261**	P	**P**	13 55 22.5	+0.3	
	comp=Z,0.4nm,0.6s,baz=34,slow=7.4,SNR=6.1							
	comp=Z,0.4nm,0.6s							
MKAR	**Makanchi Array**	**33.19**	**261**	P	**P**	13 55 22.3	+0.1	
SEW	**Seward**	**33.21**	**63**	P	**P**	13 55 22.6	+0.4	
MAKZ	**Makanchi**	**33.31**	**261**	P	**P**	13 55 24.0	+0.8	
MAKZ				IAmb	IAmb	13 55 35.5		
	comp=Z,1.7nm,0.9s							
YKA	**Yellowknife Ar**	**42.58**	**40**	P	**P**	13 56 41.9	+0.8	
	comp=Z,0.2nm,0.6s,baz=327,slow=7.1,SNR=2.2							
	comp=Z,0.2nm,0.6s							
NB2	**NORSAR Subarra**	**46.77**	**326**	P	**P**	13 57 18.8	+4.2	
	comp=Z,0.8nm,0.7s,baz=30,slow=7.9							
NOA	**NORSAR Array B**	**46.77**	**326**	P	**P**	13 57 16.9	+2.3	
	comp=Z,0.8nm,0.7s,baz=30,slow=7.8,SNR=3.6							
	comp=Z,0.8nm,0.7s							

MOS ***14*** *13:49:21.1±0.8, 18°.77S×168°.80E, h112km, mb5.8/37, Error ellipse: s-maj=6.6km s-min=6.2km az=124.2*

BJI ***14*** *13:49:21.4±0.0, 18°.63S×168°.87E, h115km, mb5.7/87, mB6.0/76*

NEIC ***14*** *13:49:22.6, 18°.78S×168°.82E, h114km, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr0.80; Mθθ0.22; Mϕϕ-1.03; Mrθ-1.44; Mθϕ 1.13; Mϕr-1.92; Fault plane solution: M₀2.81000×10¹⁸ NP1:ϕs197.52000°, δ81.18000°, λ120.95000°. NP2:ϕs301.86000°, δ32.06000°, λ16.78000°. Principal axes: T 3.1518, Plg45.0000°, Azm138.0000°; N -0.8944, Plg31.0000°, Azm12.0000°; P -2.2575, Plg29.0000°, Azm263.0000°;*

NEIC ***14*** *13:49:22.6±1.5, 18°.76S±0°.06×168°.83E±0°.06, h111km±1km, mb5.8/368, Mwb6.2/49, Mww6.2 Error ellipse: s-maj=11.2km s-min=9.5km az=140.0*

IDC ***14*** *13:49:24.8±0.3, 18°.82S×168°.67E, h130km±2km, mb5.6/42, mbtmp6.0/46, MS5.2/43, Error ellipse: s-maj=6.0km s-min=5.4km az=60.0*

GCMT ***14*** *13:49:26.6±0.1, 18°.83S×168°.70E, h127km, MW6.2/172, Moment Tensor Solution. s169,c414; s172,c651; Duration: 3s2 Moment tensor: Scale 10¹⁸Nm; Mrr0.05±.01; Mθθ1.00±.01; Mϕϕ-1.05±.01; Mrθ-1.15±.01; Mθϕ 1.32±.01; Mϕr-1.94±.01; Best double couple: M₀2.78100×10¹⁸ NP1:ϕs293.00000°, δ37.00000°, λ1.00000°. NP2:ϕs202.00000°, δ89.00000°, λ127.00000°. Principal axes: T 3.0010, Plg35.0000°, Azm143.0000°; N -0.4390, Plg37.0000°, Azm21.0000°; P -2.5620, Plg34.0000°, Azm261.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***14*** *13:49:28, 18°.71S×168°.63E, h110km, Moment Tensor Solution. Duration: 6s6 Moment tensor: Scale 10¹⁸Nm; Mrr0.01; Mθθ0.67; Mϕϕ-0.68; Mrθ-0.83; Mθϕ 1.10; Mϕr-2.02; Fault plane solution: M₀2.54000×10¹⁸ NP1: ϕs288.00000°, δ30.00000°, λ0.00000°. NP2:ϕs19.00000°, δ90.00000°, λ-120.00000°. Principal axes: T 2.6376, Plg37.0000°, Azm135.0000°; N -0.2162, Plg30.0000°, Azm19.0000°; P -2.4214, Plg38.0000°, Azm262.0000°;*

ISC 14 13:49:23.1±0.2, 18°.84S±0°.03×168°.81E±0°.03, h121km±1km, h121km:pP-P,n1694,σ1s63/2163,mb5.8/347,116C-229D, Fault plane solution: NP1:ϕs189.95705°, δ89.15999°, λ132.49739°. **NP2:**ϕs280.87372°, δ42.50411°, λ1.24333°. **Principal axes:** T Plg32.1181°, Azm134.2906°; N Plg42.4918°, Azm9.1875°; P Plg30.7260°, Azm246.1981°;

Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**2.73**	**195**				**Pn**	**13 50 05.5**	**-0.3**
MARNC	**Mare, Loyalty**	**2.73**	**195**			⇑P	**Pn**	**13 50 04.7**	**-1.1**
I22FR	**PORTLAGUERRE I**	**3.80**	**209**	P			**Pn**	**13 50 21.8**	**+1.8**
	baz=1.3,slow=49								
I22FR				S			**Sn**	**13 51 03.6**	**-0.5**
	baz=325,slow=205								
I22FR				*i*				14 15 40.0	
	baz=34,slow=325,SNR=1.6								
DZM	**Mont Dzumac**	**3.90**	**214**	*e*Pn			**Pn**	**13 50 22.0**	**+0.6**
	52µm,25.9s								
DZM				*e*Sn			**Sn**	**13 51 06.6**	**-0.1**
	56µm,38.5s								
DZM	**Mont Dzumac**	**3.90**	**214**	P			**Pn**	**13 50 22.5**	**+1.1**
	8µm,0.4s,baz=52,slow=18,SNR=1970								
DZM				S			**Sn**	**13 51 06.1**	**-0.6**
	18µm,0.5s,baz=144,slow=23,SNR=32								
DZM				LR			LR	13 51 35.3	
	comp=Z,40µm,19.0s,baz=30,slow=34								
DZM	**Mont Dzumac**	**3.90**	**214**				**Pn**	**13 50 21.9**	**+0.6**
DZM	**Mont Dzumac**	**3.90**	**214**	⇑P			**Pn**	**13 50 22.1**	**+0.6**
PINNC	**Pines Island,**	**3.96**	**198**				**Pn**	**13 50 23.1**	**+0.9**
KOUNC	**Koumac, New Ca**	**4.58**	**247**				**Pn**	**13 50 31.7**	**+1.2**
KOUNC	**Koumac, New Ca**	**4.58**	**247**	⇑P			**Pn**	**13 50 30.9**	**+0.5**
MSVF	**Nonsavu**	**8.85**	**84**	P			**Pn**	**13 51 31.6**	**+3.5**
	262nm,1.0s,baz=236,slow=9.6,SNR=94								
MSVF				S			**Sn**	**13 53 12.1**	**+5.8**
	79nm,1.0s,baz=221,slow=16,SNR=0.6								
MSVF				LR			LR	13 53 51.3	
	comp=Z,30µm,21.4s,baz=251,slow=30								
MSVF	**Nonsavu**	**8.85**	**84**	Pn			**Pn**	**13 51 28.9**	**+0.8**
MSVF	**Nonsavu**	**8.85**	**84**	P			**Pn**	**13 51 27.5**	**-0.7**
MSVF	**Nonsavu**	**8.85**	**84**	⇑P			**Pn**	**13 51 32.2**	**+4.1**
NFK	**Norfolk Island**	**10.19**	**184**	P			**Pn**	**13 51 49.5**	**+3.5**
	baz=10,SNR=146								
NFK	**Norfolk Island**	**10.19**	**184**	⇑P			**Pn**	**13 51 48.6**	**+2.5**
HNR	**Honiara**	**12.69**	**316**	P			**Pn**	**13 52 20.0**	**+0.6**
	2µm,0.7s,baz=162,slow=6.8,SNR=20								
HNR				S			**Sn**	**13 54 38.0**	**-1.4**
	422nm,0.6s,baz=203,slow=21,SNR=1.3								
HNR	**Honiara**	**12.69**	**316**	Pn			**Pn**	**13 52 17.9**	**-1.5**
HNR	**Honiara**	**12.69**	**316**	⇓P			**Pn**	**13 52 20.2**	**+0.8**
HNR				⇑S			**Sn**	**13 54 45.5**	**+6.1**
FUNA	**Funafuti**	**14.38**	**46**	Pn			**Pn**	**13 52 40.8**	**-0.3**
FUNA	**Funafuti**	**14.38**	**46**	⇑P			**P**	**13 52 43.0**	**-1.5**
LHI	**Lord Howe Isla**	**15.39**	**213**	P			**P**	**13 52 55.6**	**0.0**
	baz=16,SNR=5.3								
LHI	**Lord Howe Isla**	**15.39**	**213**	Pn			**Pn**	**13 52 54.0**	**+0.4**
LHI	**Lord Howe Isla**	**15.39**	**213**	⇓P			**P**	**13 52 56.2**	**+0.7**
RAO	**Raoul Island**	**15.94**	**133**	P			**P**	**13 53 02.3**	**+0.6**
	227nm,0.3s,baz=319,slow=15,SNR=1.7								
RAO	**Raoul Island**	**15.94**	**133**	Pn			**Pn**	**13 52 54.7**	**-5.8**
GLKZ	**Green Lake**	**15.94**	**133**	P			**P**	**13 53 06.8**	**+5.1**
OUZ	**Omahuta**	**16.86**	**166**	P			**P**	**13 53 13.4**	**+1.6**
OUZ	**Omahuta**	**16.86**	**166**	⇑P			**P**	**13 53 13.7**	**+1.9**
EIDS	**Eidsvold**	**17.65**	**245**	P			**Pn**	**13 53 23.7**	**+2.3**
	baz=18,SNR=89								
EIDS	**Eidsvold**	**17.65**	**245**	Pn			**Pn**	**13 53 22.7**	**+1.2**
EIDS	**Eidsvold**	**17.65**	**245**	⇓P			**Pn**	**13 53 24.1**	**+2.6**
WCZ	**Waipu Caves**	**17.72**	**165**	P			**Pn**	**13 53 24.9**	**+2.8**
GRZ	**Great Barrier**	**18.31**	**163**	P			**Pn**	**13 53 30.1**	**+1.0**
ABAZ	**Army Bay**	**18.47**	**165**	P			**Pn**	**13 53 31.6**	**+0.6**
RVAZ	**Riverhead Bore**	**18.57**	**165**	P			**Pn**	**13 53 34.1**	**+1.9**
MBAZ	**Motutapu North**	**18.65**	**165**	P			**Pn**	**13 53 34.0**	**+0.9**
WTAZ	**Waiatarua**	**18.72**	**165**	P			**Pn**	**13 53 35.2**	**+1.1**
WIAZ	**Waiheke Island**	**18.73**	**164**	P			**Pn**	**13 53 34.5**	**+0.3**
ETAZ	**East Tamaki Re**	**18.83**	**165**	P			**Pn**	**13 53 37.2**	**+1.9**
KUZ	**Kuaotunu**	**18.84**	**163**	P			**Pn**	**13 53 35.1**	**-0.3**
AWAZ	**Awhitu Peninsu**	**18.86**	**165**	P			**Pn**	**13 53 36.4**	**+0.7**
MKAZ	**Moumakai**	**19.03**	**164**	P			**Pn**	**13 53 37.5**	**-0.2**
AFI	**Afiamalu**	**19.26**	**78**	P			**P**	**13 53 38.5**	**+0.1**
AFI	**Afiamalu**	**19.26**	**78**	P			**P**	**13 53 38.5**	**+0.1**
AFI	**Afiamalu**	**19.26**	**78**	⇑P			**P**	**13 53 37.8**	**-0.6**
ARMA	**Armidale**	**19.38**	**230**	P			**Pn**	**13 53 42.5**	**+0.6**
	baz=20,SNR=183								
ARMA	**Armidale**	**19.38**	**230**	Pn			**Pn**	**13 53 42.5**	**+0.6**
ARMA	**Armidale**	**19.38**	**230**	⇓P			**Pn**	**13 53 42.5**	**+0.6**
MYRZ	**Mayor Island**	**19.49**	**162**	P			**Pn**	**13 53 44.1**	**+1.0**
TGRZ	**Tauranga**	**19.92**	**162**	P			**Pn**	**13 53 47.3**	**-0.7**
RMQ	**Roma**	**19.99**	**244**	P			**Pn**	**13 53 48.4**	**-0.6**
	baz=20,SNR=198								
NIUE	**Niue**	**20.12**	**94**	P			**P**	**13 53 47.6**	**+0.1**
	baz=20,SNR=24								
NIUE	**Niue**	**20.12**	**94**	P			**P**	**13 53 47.2**	**-0.4**
NIUE	**Niue**	**20.12**	**94**	⇑P			**P**	**13 53 46.9**	**-0.7**
MXZ	**Matakaoa Point**	**20.42**	**158**	P			**P**	**13 53 52.2**	**+1.6**
TARA	**Tarawa**	**20.47**	**12**	P			**P**	**13 53 51.1**	**-0.3**
TARA	**Tarawa**	**20.47**	**12**	⇓P			**P**	**13 53 51.5**	**+0.1**
URZ	**Urewera**	**20.66**	**161**	P			Pn	13 53 55.5	-1.2
	1µm,0.8s,baz=304,slow=23,SNR=304								
URZ				S			**S**	**13 57 39.6**	**+2.3**
	19nm,0.9s,baz=118,slow=21,SNR=1.0								
URZ				ScP			**ScP**	**14 01 23.4**	**-0.7**
	34nm,1.0s,baz=303,slow=23,SNR=4.7								
	1µm,0.8s								
URZ	**Urewera**	**20.66**	**161**	P			Pn	13 53 55.2	-1.5
URZ	**Urewera**	**20.66**	**161**	⇑P			Pn	13 53 55.4	-1.2
CTA	**Charters Tower**	**21.30**	**263**	P			**P**	**13 54 01.4**	**+1.2**
	466nm,0.8s,baz=84,slow=10,SNR=168								
CTA				S			**S**	**13 57 49.5**	**-0.6**
	19nm,0.8s,baz=262,slow=12,SNR=1.5								
CTA				ScP			**ScP**	**14 01 25.8**	**-0.3**
	40nm,1.2s,baz=117,slow=8.4,SNR=3.2								
CTA				LR			LR	14 01 42.7	
	comp=Z,15µm,18.2s,baz=80,slow=35								
	466nm,0.8s								
CTAO	**Charters Tower**	**21.30**	**263**	P			**P**	**13 54 01.2**	**+0.9**
CTAO	**Charters Tower**	**21.30**	**263**	P			**P**	**13 54 01.2**	**+0.9**
CTAO	**Charters Tower**	**21.30**	**263**	⇑P			**P**	**13 54 01.0**	**+0.8**
BKZ	**Black Stump Fm**	**21.32**	**163**	P			**P**	**13 54 01.9**	**+1.6**
MGCD	**Mangrove Creek**	**21.35**	**224**	P			**P**	**13 54 03.1**	**+2.5**
	baz=22,SNR=90								
RABL	**Rabaul**	**21.83**	**310**	P			**P**	**13 54 04.2**	**-1.7**
RABL	**Rabaul**	**21.83**	**310**	⇓P			**P**	**13 54 04.0**	**-1.9**
KRVT	**Keravat (AS076**	**21.85**	**309**	P			**P**	**13 54 05.2**	**-0.9**
	2µm,1.1s,baz=139,slow=1.0,SNR=57								
KRVT				S			**S**	**13 58 00.1**	**0.0**
	95nm,1.0s,baz=330,slow=21,SNR=1.8								
KRVT				ScP			**ScP**	**14 01 27.3**	**-0.2**
	160nm,1.2s,baz=145,slow=2.5,SNR=5.5								
	2µm,1.1s								
QRZ	**Quartz Range**	**22.14**	**172**	P			**P**	**13 54 12.0**	**+3.1**
NNZ	**Nelson**	**22.64**	**171**	P			**P**	**13 54 15.4**	**+1.5**
BFZ	**Birch Farm**	**22.69**	**165**	P			**P**	**13 54 14.7**	**+0.4**
TUWZ	**Tuamarina**	**22.94**	**170**	P			**P**	**13 54 17.9**	**+1.2**
SNZO	**South Karori**	**22.96**	**169**	P			**P**	**13 54 17.9**	**+0.9**
SNZO	**South Karori**	**22.96**	**169**	⇑P			**P**	**13 54 18.0**	**+1.1**
PMG	**Port Moresby**	**22.97**	**291**	P			**P**	**13 54 17.5**	**+0.2**
	2µm,1.0s,baz=102,slow=6.0,SNR=123								
PMG				S			**S**	**13 58 18.9**	**+0.5**
	21nm,0.9s,baz=293,slow=13,SNR=1.3								
PMG				ScP			**ScP**	**14 01 30.0**	**-0.4**
	73nm,1.3s,baz=20,slow=5.1,SNR=3.8								
	2µm,1.0s								
PMG	**Port Moresby**	**22.97**	**291**	P			**P**	**13 54 17.0**	**-0.3**
PMG	**Port Moresby**	**22.97**	**291**	*d* P			**P**	**13 54 18.3**	**+1.0**
PMG						pmax	pmax		
	comp=Z,2µm,1.0s								
PMG	**Port Moresby**	**22.97**	**291**	⇓P			**P**	**13 54 18.6**	**+1.3**
BHW	**Baring Head**	**23.08**	**168**	P			**P**	**13 54 18.9**	**+0.8**
THZ	**Tophouse**	**23.11**	**172**	P			**P**	**13 54 19.1**	**+0.6**
MSWZ	**Moikau Station**	**23.17**	**168**	P			**P**	**13 54 19.5**	**+0.6**
BSWZ	**Blackbirch Sta**	**23.21**	**170**	P			**P**	**13 54 20.2**	**+1.0**
MTSU	**Mount Surprise**	**23.23**	**268**	P			**P**	**13 54 20.8**	**+1.0**
	baz=23,SNR=490								
PLWZ	**Palliser**	**23.31**	**168**	P			**P**	**13 54 20.6**	**+0.3**
CNB	**Canberra Magne**	**23.78**	**222**	P			**P**	**13 54 26.4**	**+1.8**
	baz=24,SNR=440								
KHZ	**Kahutara**	**23.84**	**171**	P			**P**	**13 54 25.2**	**+0.2**
KHZ	**Kahutara**	**23.84**	**171**	⇓P			**P**	**13 54 25.3**	**+0.2**
QLP	**Quilpie**	**23.91**	**247**	P			**P**	**13 54 26.6**	**+0.8**
	baz=24,SNR=383								
QLP	**Quilpie**	**23.91**	**247**	⇓P			**P**	**13 54 26.6**	**+0.8**
CAN	**Canberra**	**24.02**	**223**	P			**P**	**13 54 27.6**	**+0.8**
CAN	**Canberra**	**24.02**	**223**	P			**P**	**13 54 27.6**	**+0.8**
CAN	**Canberra**	**24.02**	**223**	⇓P			**P**	**13 54 28.2**	**+1.4**
LTZ	**Lake Taylor**	**24.05**	**174**	P			**P**	**13 54 28.2**	**+1.3**
CMSA	**Cobar Meteorol**	**24.38**	**234**	P			**P**	**13 54 31.1**	**+1.1**
	baz=24,SNR=864								
OXZ	**Oxford**	**24.56**	**174**	P			**P**	**13 54 32.6**	**+1.0**
FOZ	**Fox Glacier**	**24.63**	**178**	P			**P**	**13 54 33.7**	**+1.5**
RPZ	**Rata Peaks**	**24.87**	**176**	P			**P**	**13 54 35.5**	**+1.1**
	comp=Z,574nm,0.8s,baz=329,slow=2.5,SNR=136								
RPZ				S			**S**	**13 58 47.9**	**-0.6**
	comp=Z,13nm,0.8s,baz=60,slow=20,SNR=1.0								
RPZ				LR			LR	14 02 50.5	
	comp=Z,5µm,20.0s,baz=354,slow=32								
	comp=Z,574nm,0.8s								
RPZ	**Rata Peaks**	**24.87**	**176**	P			**P**	**13 54 35.7**	**+1.3**
MQZ	**McQueen's Vall**	**25.00**	**173**	P			**P**	**13 54 36.6**	**+1.1**
COEN	**Coen**	**25.05**	**277**	P			**P**	**13 54 37.2**	**+0.9**
	baz=25,SNR=153								
COEN	**Coen**	**25.05**	**277**	P			**P**	**13 54 37.2**	**+0.9**
COEN						IAmb	IAmb	13 54 41.0	
	comp=Z,624nm,0.9s								
COEN	**Coen**	**25.05**	**277**	⇓P			**P**	**13 54 37.4**	**+1.1**
LBZ	**Lake Benmore**	**25.50**	**178**	P			**P**	**13 54 41.2**	**+1.2**
LBZ						IAmb	IAmb	13 54 44.2	
	comp=Z,377nm,0.8s								
WKZ	**Wanaka**	**25.91**	**180**	P			**P**	**13 54 44.9**	**+1.1**
ODZ	**Otahua Downs**	**26.17**	**177**	P			**P**	**13 54 46.9**	**+0.8**
ODZ						IAmb	IAmb	13 54 49.2	
	comp=Z,286nm,1.1s								
ODZ	**Otahua Downs**	**26.17**	**177**	⇑P			**P**	**13 54 46.6**	**+0.5**
MLZ	**Mavora Lakes**	**26.46**	**181**	P			**P**	**13 54 49.7**	**+1.0**
MLZ						IAmb	IAmb	13 55 36.1	
	comp=Z,699nm,1.6s								
DCZ	**Deep Cove**	**26.58**	**183**	P			**P**	**13 54 50.6**	**+0.8**
DCZ						IAmb	IAmb	13 54 53.5	
	comp=Z,367nm,1.1s								
MANU	**Manus Island**	**26.83**	**306**	P			**P**	**13 54 51.9**	**-0.5**
MANU						IAmb	IAmb	13 54 54.8	
	comp=Z,275nm,1.0s								
MANU	**Manus Island**	**26.83**	**306**	⇓P			**P**	**13 54 52.8**	**+0.5**
WHZ	**Wether Hill Ro**	**26.99**	**181**	P			**P**	**13 54 54.3**	**+0.9**
WHZ						IAmb	IAmb	13 54 56.7	
	comp=Z,653nm,1.6s								
QIS	**Mount Isa**	**27.53**	**262**	P			**P**	**13 54 59.1**	**+0.5**
	baz=28,SNR=170								
PATS	**Pohnpei**	**27.53**	**337**	P			**P**	**13 54 57.9**	**-0.7**
	baz=28,SNR=16								
PATS	**Pohnpei**	**27.53**	**337**	P			**P**	**13 54 57.5**	**-1.0**
TOO	**Toolangi**	**27.63**	**223**	P			**P**	**13 55 00.8**	**+1.4**
	baz=28,SNR=36								
TOO	**Toolangi**	**27.63**	**223**	P			**P**	**13 54 59.9**	**+0.6**
TOO						IAmb	IAmb	13 55 03.4	
	comp=Z,195nm,1.1s								
TOO	**Toolangi**	**27.63**	**223**	P			**P**	**13 54 59.9**	**+0.6**
TOO						pmax	pmax		
	comp=Z,195nm,1.2s								
TOO	**Toolangi**	**27.63**	**223**	⇑P			**P**	**13 55 00.7**	**+1.4**
STKA	**Stephens Creek**	**27.71**	**237**	P			**P**	**13 55 01.2**	**+1.1**
	comp=Z,196nm,0.5s,baz=69,slow=9.4,SNR=353								
STKA				S			**S**	**13 59 29.5**	**-4.2**
	comp=Z,8.9nm,0.9s,baz=352,slow=18,SNR=0.9								
STKA				LR			LR	14 05 01.3	
	comp=Z,5µm,20.7s,baz=64,slow=34								
	comp=Z,196nm,0.5s								
STKA	**Stephens Creek**	**27.71**	**237**	P			**P**	**13 55 01.4**	**+1.2**
	baz=28,SNR=912								
STKA	**Stephens Creek**	**27.71**	**237**	P			**P**	**13 55 00.6**	**+0.5**
STKA	**Stephens Creek**	**27.71**	**237**	*d* P			**P**	**13 55 01.9**	**+1.8**
RAR	**Rarotonga**	**29.59**	**100**	P			**P**	**13 55 18.0**	**+1.1**
	comp=Z,134nm,1.2s,baz=250,slow=12,SNR=5.1								
RAR				LR			LR	14 05 22.2	
	comp=Z,2µm,19.8s,baz=258,slow=32								
	comp=Z,134nm,1.2s								
RAR	**Rarotonga**	**29.59**	**100**	P			**P**	**13 55 15.9**	**-0.9**
RAR						IAmb	IAmb	13 55 22.6	
	comp=Z,685nm,1.9s								
RAR	**Rarotonga**	**29.59**	**100**	P			**P**	**13 55 18.0**	**+1.1**
ARPS	**Mount Arapiles**	**29.64**	**227**	P			**P**	**13 55 18.5**	**+1.3**
	baz=30,SNR=70								
MOO	**Moorlands**	**29.82**	**213**	P			**P**	**13 55 20.7**	**+2.0**
	baz=30,SNR=19								
TAU	**Tasmania Unive**	**30.09**	**212**	P			**P**	**13 55 22.3**	**+1.3**
TAU	**Tasmania

PPT **Papeete** 39.49 95 P **P** 13 56 42.4 +0.4
comp=Z,98nm,0.7s,baz=173,slow=1.8,SNR=12
PPT pP **pwP** 13 57 14.0 +2.7
comp=Z,80nm,0.8s,baz=255,slow=22,SNR=2.9
comp=Z,98nm,0.7s
PPTF Pamatai, Papee 39.50 95 P **P** 13 56 41.3 -0.9
PPTF lAmb lAmb 13 56 50.5
comp=Z,213nm,1.0s
PPTF Pamatai, Papee 39.50 95 ⇓P **P** 13 56 42.9 +0.6
PPTF Pamatai, Papee 39.50 95 P **P** 13 56 42.6 +0.4
PPTF pP **pP** 13 57 04.1 -4.8
PPTF sP **pwP** 13 57 15.5 +4.0
TIAR Tiarei 39.71 95 *e*P **P** 13 56 44.4 +0.5
comp=Z,58nm,1.3s
TIAR *e*pP **pP** 13 57 11.0 +0.5
comp=Z,58nm,1.3s
GUMO Guam 39.94 322 P **P** 13 56 45.8 +0.1
comp=Z,102nm,0.6s,baz=160,slow=9.9,SNR=18
GUMO LR LR 14 11 59.2
comp=Z,2µm,20.7s,baz=138,slow=34
comp=Z,102nm,0.6s
GUMO Guam 39.94 322 P **P** 13 56 44.7 -1.0
GUMO Guam 39.94 322 ⇓P **P** 13 56 45.8 +0.1
GUMO Guam 39.94 322 P **P** 13 56 46.9 +1.2
MEH Mehetia 40.87 96 *e*P **P** 13 56 54.0 +0.5
comp=Z,136nm,1.4s
MEH *e*pP **pP** 13 57 20.1 -0.1
comp=Z,136nm,1.4s
SIJI Sorong 40.91 292 P **P** 13 56 54.1 +0.3
comp=Z,788nm,0.8s,baz=96,slow=6.3,SNR=312
SIJI S **S** 14 02 53.2 -3.6
comp=Z,4.3nm,0.8s,baz=216,slow=23,SNR=1.2
SIJI LR LR 14 14 42.2
comp=Z,5µm,18.5s,baz=116,slow=37
comp=Z,788nm,0.8s
PMOR Pomariorio Ree 41.53 92 *e*P **P** 13 56 59.0 +0.2
comp=Z,666nm,1.3s
PMOR *e*pP **pP** 13 57 25.5 0.0
comp=Z,666nm,1.3s
VAH Vaihoa 41.73 92 *e*P **P** 13 57 00.6 +0.1
comp=Z,321nm,1.3s
VAH *e*pP **pP** 13 57 27.4 +0.2
comp=Z,321nm,1.3s
MSAI Masohi 41.91 287 P **P** 13 57 00.9 -1.1
comp=Z,360nmcomp=Z,50nm,0.8s
AAI Ambon 42.44 286 P **P** 13 57 05.6 -0.7
comp=Z,13µmcomp=Z,6µmcomp=Z,468nm,0.9s
LBMI Labuha 44.36 289 P **P** 13 57 22.9 +1.2
comp=Z,9µmcomp=Z,8µmcomp=Z,363nm,0.9s
BATI Baumata 44.43 275 P **P** 13 57 23.7 +1.5
comp=Z,1µm,0.8s,baz=155,slow=1.1,SNR=115
BATI S **S** 14 03 45.0 -3.4
comp=Z,24nm,0.6s,baz=352,slow=1.0,SNR=4.5
BATI LR LR 14 17 17.8
comp=Z,5µm,18.7s,baz=128,slow=38
comp=Z,1µm,0.8s
BATI Baumata 44.43 275 **S** 14 03 45.0 -3.4
BATI Baumata 44.43 275 P **S** 13 57 23.8 +1.5
comp=Z,7µmcomp=Z,9µmcomp=Z,896nm,0.8s
SANI Sanana 45.12 287 P **P** 13 57 27.8 +0.1
comp=Z,14µmcomp=Z,10µmcomp=Z,794nm,0.8s
SANI Sanana 45.12 287 ⇓P **P** 13 57 27.6 -0.1
TNTI Ternate 45.12 291 P **P** 13 57 25.3 -2.4
TNTI Ternate 45.12 291 P **P** 13 57 28.4 +0.7
comp=Z,8µmcomp=Z,6µmcomp=Z,169nm,2.2s
TNTI Ternate 45.12 291 ⇓P **P** 13 57 28.4 +0.7
PSA00 Pilbara Seismi 45.88 258 P **P** 13 57 33.8 +0.1
PSA00 Pilbara Seismi 45.88 258 P **P** 13 57 33.4 -0.2
PSA00 lAmb lAmb 13 57 36.8
comp=Z,278nm,0.8s
MBWA Marble Bar 46.03 258 P **P** 13 57 35.0 +0.2
MBWA Marble Bar 46.03 258 ⇓P **P** 13 57 35.2 +0.4
MBWA ⇓P **P** 13 57 35.3 +0.4
MBWA Marble Bar 46.03 258 P **P** 13 57 36.0 +1.2
MMRI Maumere 46.23 276 P **P** 13 57 35.8 -0.7
MMRI Maumere 46.23 276 P **P** 13 57 36.5 0.0
comp=Z,13µmcomp=Z,8µmcomp=Z,454nm,0.9s
MMRI Maumere 46.23 276 ⇓P **P** 13 57 36.7 +0.2
EDFI Ende, Flores 46.72 276 P **P** 13 57 40.2 -0.2
comp=Z,7µmcomp=Z,3µmcomp=Z,172nm,1.0s
BBSI Bau Bau 46.95 280 P **P** 13 57 43.4 +1.3
comp=Z,367nmcomp=Z,34nm,1.0s
BASI Baing, Sumba 47.34 273 P **P** 13 57 46.3 +1.2
comp=Z,7µmcomp=Z,7µmcomp=Z,482nm,0.9s
KLBR Kellerberrin 47.52 244 P **P** 13 57 46.0 -0.3
baz=48,SNR=114
NWAO Narrogin (SRO) 48.03 242 P **P** 13 57 49.7 -0.5
NWAO Narrogin (SRO) 48.03 242 P **P** 13 57 49.7 -0.5
NWAO pmax pmax
comp=Z,418nm,0.8s
NWAO Narrogin (SRO) 48.03 242 P **P** 13 57 50.3 +0.1
NWAO pP **pP** 13 58 12.6 -4.7
NWAO sP **pwP** 13 58 24.6 +2.8
NWAO PP **PP** 13 59 43.5 +0.2
KMSI Cibinong 48.05 289 P **P** 13 57 51.4 +0.8
comp=Z,502nmcomp=Z,5µmcomp=Z,611nm,0.9s
SGSI Sangihe 48.12 293 P **P** 13 57 51.8 +0.7
comp=Z,5µmcomp=Z,538nm,1.0s
RKGY Rocky Gully 48.37 240 P **P** 13 57 53.6 +0.8
baz=48,SNR=35
BLDU Ballidu 48.38 246 P **P** 13 57 52.6 -0.3
baz=48,SNR=112
LUWI Luwuk 48.46 286 P **P** 13 57 53.6 -0.1
LUWI Luwuk 48.46 286 P **P** 13 57 54.7 +1.0
comp=Z,13µmcomp=Z,9µmcomp=Z,576nm,0.9s
LUWI Luwuk 48.46 286 ⇓P **P** 13 57 54.7 +1.0
WBSI Waikabubak, Su 48.63 274 P **P** 13 57 55.5 +0.4
comp=Z,8µmcomp=Z,802nm,0.9s
BSSI Bau Bau, Buton 48.67 279 P **P** 13 57 55.1 -0.3
comp=Z,6µmcomp=Z,3µmcomp=Z,98nm,1.0s
MUN Mundaring 48.85 244 P **P** 13 57 56.9 +0.4
baz=49,SNR=42
MORW Morawa 48.94 248 P **P** 13 57 57.2 -0.1
baz=49,SNR=154
MORW Morawa 48.94 248 P **P** 13 57 56.9 -0.4
MORW Morawa 48.94 248 ⇑P **P** 13 57 57.1 -0.1
BKSI Bulukumba 49.29 279 P **P** 13 58 00.3 +0.2
comp=Z,9µmcomp=Z,4µmcomp=Z,282nm,1.0s
APSI Ampana 49.53 285 P **P** 13 58 03.2 +1.3
comp=Z,8µmcomp=Z,5µmcomp=Z,354nm,1.5s
BNSI Bone 49.63 281 P **P** 13 58 03.2 +0.6
comp=Z,11µmcomp=Z,6µmcomp=Z,325nm,1.3s
BIPH Bislig 49.73 299 ⇓*e*P **P** 13 58 02.7 -0.6
KAPI Kappang 49.74 280 P **P** 13 58 04.4 +0.9
comp=Z,303nm,0.8s,baz=115,slow=5.9,SNR=111
KAPI S **S** 14 05 00.8 -3.0
comp=Z,16nm,0.4s,baz=35,slow=22,SNR=2.9
comp=Z,303nm,0.8s
KAPI Kappang 49.74 280 P **P** 13 58 03.3 -0.2
KAPI Kappang 49.74 280 *d* iP **P** 13 58 04.7 +1.2
KAPI pmax pmax
comp=Z,456nm,1.0s
KAPI Kappang 49.74 280 ⇓P **P** 13 58 04.7 +1.2
KAPI Kappang 49.74 280 P **P** 13 58 04.8 +1.3
KAPI sP **pwP** 13 58 38.3 +3.5
KAPI x x 14 00 05.4
DAV Davao City (W) 49.78 297 P **P** 13 58 04.6 +0.8
comp=Z,436nm,0.6s,baz=265,slow=0.5,SNR=8.1
comp=Z,436nm,0.6s
DAV Davao City (W) 49.78 297 P **P** 13 58 04.0 +0.2
MRSI Marisa 49.84 287 P **P** 13 58 03.4 -0.9
comp=Z,12µmcomp=Z,3µmcomp=Z,172nm,0.9s
SPSI Sidrap Palu 50.10 281 P **P** 13 58 06.0 -0.2
comp=Z,11µmcomp=Z,4µmcomp=Z,246nm,0.7s
PLAI Plampang 50.39 274 P **P** 13 58 08.9 +0.5
comp=Z,12µmcomp=Z,8µmcomp=Z,631nm,0.9s
TTSI Tana Toraja 50.39 282 P **P** 13 58 09.1 +0.7
comp=Z,12µmcomp=Z,3µmcomp=Z,185nm,0.9s
TAOE Nuku Hiva Isla 50.39 86 *e*P **P** 13 58 09.0 +0.5
comp=Z,502nm,1.2s
TAOE Nuku Hiva Isla 50.39 86 P **P** 13 58 08.3 -0.2
TAOE Nuku Hiva Isla 50.39 86 P **P** 13 58 10.0 +1.4
TAOE pP **pP** 13 58 32.9 -3.5
TAOE sP **sP** 13 58 45.9 -3.9
GIRL Giralia 50.95 256 P **P** 13 58 14.1 +1.6
baz=51,SNR=25
GIRL Giralia 50.95 256 P **P** 13 58 13.3 +0.8
GIRL Giralia 50.95 256 ⇓P **P** 13 58 14.0 +1.6
CTBH Cotabato--PC H 50.99 296 ⇓*i* P **P** 13 58 13.6 +0.7
TOLI2 Tolitoli 51.16 287 P **P** 13 58 13.4 -0.8
DRV Dumont d'Urvil 51.31 194 P **P** 13 58 15.6 +1.2
MPSI Mapaga 51.64 286 P **P** 13 58 18.2 +0.5
comp=Z,14µmcomp=Z,6µmcomp=Z,609nm,0.9s
MWH Moku'aweowe 51.68 44 P **P** 13 58 16.9 -1.6
MLOA Mauna Loa Obse 51.73 44 P **P** 13 58 18.1 -0.7
MLH Mauna Loa 51.82 45 P **P** 13 58 19.5 +0.3

HMH Humu'ula Sheep 51.84 44 P **P** 13 58 18.6 -0.8
PUH Pauahi 51.85 45 P **P** 13 58 19.8 +0.5
MHA Mahukona 51.98 44 P **P** 13 58 20.5 +0.4
MHA Mahukona 51.98 44 P **P** 13 58 20.5 +0.4
HPAH Hawaii Prepara 52.00 44 P **P** 13 58 20.6 +0.2
PAGZ Pagadian 52.05 296 ⇓*i* P **P** 13 58 22.0 +1.3
JCJ Chichijima 52.46 330 P **P** 13 58 23.5 0.0
comp=Z,969nm,0.7s,baz=117,slow=7.2,SNR=21
JCJ LR LR 14 18 50.4
comp=Z,1µm,21.4s,baz=132,slow=34
comp=Z,969nm,0.7s
JCJ Chichijima 52.46 330 P **P** 13 58 23.2 -0.3
JCJ Chichijima 52.46 330 ⇓P **P** 13 58 23.5 0.0
DNP Denpasar 52.85 273 P **P** 13 58 27.8 +1.1
comp=Z,20µmcomp=Z,2µm,0.7s
IGBI Denpasar 52.88 273 P **P** 13 58 27.5 +0.6
comp=Z,6µmcomp=Z,9µmcomp=Z,1µm,0.9s
SRBI Singaraja 53.03 274 P **P** 13 58 28.4 +0.4
comp=Z,12µmcomp=Z,8µmcomp=Z,522nm,1.0s
BKB Balikpapan 53.76 283 P **P** 13 58 34.8 +1.4
BKB Balikpapan 53.76 283 P **P** 13 58 36.0 +2.6
comp=Z,17µmcomp=Z,7µmcomp=Z,243nm,0.9s
SMKI Samarinda 53.79 284 P **P** 13 58 35.1 +1.5
comp=Z,14µmcomp=Z,12µmcomp=Z,309nm,1.1s
ABJI Asem Bagus 54.04 274 P **P** 13 58 35.8 +0.4
comp=Z,10µmcomp=Z,8µmcomp=Z,824nm,1.0s
KMMI Kalianget 54.52 275 P **P** 13 58 38.9 0.0
comp=Z,12µmcomp=Z,6µmcomp=Z,404nm,1.2s
GMJI Gumukmas 54.64 273 P **P** 13 58 39.5 -0.3
comp=Z,5µmcomp=Z,367nm,1.0s
BLJI Banyuwangur 54.68 274 P **P** 13 58 40.1 +0.2
comp=Z,8µmcomp=Z,4µmcomp=Z,246nm,0.8s
BBKI Banjar Baru 54.87 279 P **P** 13 58 42.4 +1.0
comp=Z,7µmcomp=Z,5µmcomp=Z,284nm,0.9s
MYLDM Lahad Datu 54.99 291 P **P** 13 58 41.4 -0.8
MYLDM Lahad Datu 54.99 291 ⇑P **P** 13 58 44.3 +2.0
MTKI Muara Teweh, K 55.73 282 P **P** 13 58 48.1 +0.5
comp=Z,7µmcomp=Z,4µmcomp=Z,152nm,0.9s
GRJI Gresik 55.96 274 P **P** 13 58 50.6 +1.4
comp=Z,2µmcomp=Z,192nm,0.8s
GQP Gunyangan 56.08 302 ⇓*e*P **P** 13 58 50.2 +0.2
JCNP Jose Panganiba 56.09 303 ⇓*i* P **P** 13 58 50.6 +0.5
PWJI Pagerwojo 56.27 273 P **P** 13 58 51.1 -0.3
comp=Z,5µmcomp=Z,342nm,0.9s
TBJI Tambak Boyo 56.59 274 P **P** 13 58 54.7 +1.0
comp=Z,6µmcomp=Z,7µmcomp=Z,1µm,0.9s
PCJI Pacitan 56.81 272 P **P** 13 58 55.9 +0.7
comp=Z,10µmcomp=Z,9µmcomp=Z,745nm,1.1s
PGP Puerto Galera 57.06 301 ⇓*e*P **P** 13 58 56.4 -0.6
WOJI Wonogiri, Jawa 57.16 273 P **P** 13 58 58.6 +0.9
comp=Z,6µmcomp=Z,5µmcomp=Z,590nm,1.0s
TGY Tagaytay City 57.41 301 P **P** 13 59 00.5 +1.0
UGM Wanagama 57.51 273 P **P** 13 59 00.5 +0.2
UGM Wanagama 57.51 273 P **P** 13 59 00.8 +0.6
comp=Z,11µmcomp=Z,9µmcomp=Z,984nm,0.9s
UWJI Ujung Watu 57.56 274 P **P** 13 59 01.4 +0.9
comp=Z,9µmcomp=Z,744nm,1.0s
YOGI Yogyakarta 57.76 273 P **P** 13 59 03.1 +1.2
comp=Z,6µmcomp=Z,818nm,0.9s
LUBP Lubang 57.77 301 ⇓*i* P **P** 13 59 01.1 -0.8
SMRI Semarang 57.85 273 P **P** 13 59 02.3 -0.3
SMRI Semarang 57.85 273 P **P** 13 59 03.9 +1.3
comp=Z,11µmcomp=Z,8µmcomp=Z,472nm,0.9s
PCPH Palayan 58.09 303 ⇑*e*P **P** 13 59 04.8 +0.7
PBKI Pangkalan Bun 58.10 279 P **P** 13 59 05.4 +1.1
comp=Z,6µmcomp=Z,513nm,1.0s
JHJ Hachijo jima 2 58.64 332 P **P** 13 59 07.5 -0.1
comp=Z,279nm,0.7s,baz=193,slow=10,SNR=6.4
JHJ LR LR 14 22 31.9
comp=Z,660nm,20.9s,baz=162,slow=34
comp=Z,279nm,0.7s
VNDA Vanda 58.81 182 P **P** 13 59 09.7 +1.4
comp=Z,49nm,0.8s,baz=358,slow=7.5,SNR=104
VNDA S **S** 14 07 01.5 -2.3
comp=Z,1.9nm,1.0s,baz=110,slow=11,SNR=2.1
comp=Z,49nm,0.8s
VNDA Vanda 58.81 182 P **P** 13 59 09.1 +0.9
VNDA Vanda 58.81 182 P **P** 13 59 09.7 +1.4
SBA Scott Base 59.06 181 P **P** 13 59 11.9 +2.0
SBA Scott Base 59.06 181 P **P** 13 59 11.9 +2.0
SBA pmax pmax
comp=Z,935nm,1.2s
SBA Scott Base 59.06 181 P **P** 13 59 12.5 +2.6
SBA pP **pP** 13 59 39.3 +0.7
SBA sP **sP** 13 59 52.2 +0.4
STKI Sintang 59.28 282 P **P** 13 59 13.5 +1.0
comp=Z,119nm,1.4s
CMJI Cimerak 59.51 272 P **P** 13 59 13.5 -0.6
comp=Z,5µmcomp=Z,3µmcomp=Z,345nm,0.8s
JOW Kunigami 60.06 318 P **P** 13 59 18.9 +1.4
comp=Z,230nm,0.7s,baz=153,slow=6.7,SNR=66
JOW S **S** 14 07 21.2 +0.1
comp=Z,2.7nm,0.5s,baz=123,slow=29,SNR=1.3
comp=Z,230nm,0.7s
JOW Kunigami 60.06 318 P **P** 13 59 17.6 +0.1
JOW Kunigami 60.06 318 ⇓P **P** 13 59 18.8 +1.2
JOW Kunigami 60.06 318 *e*P **P** 13 59 18.8 +1.2
JCJI Jatiwangi 60.07 273 P **P** 13 59 18.3 +0.4
comp=Z,13µmcomp=Z,712nm,0.9s
CASY Casey 60.33 203 P **P** 13 59 19.5 +0.7
CASY Casey 60.33 203 ⇑P **P** 13 59 20.1 +1.3
CASY Casey 60.33 203 P **P** 13 59 20.1 +1.3
JAM Amami Oshima 60.36 320 P **P** 13 59 20.6 +1.1
LEM Lembang 60.59 273 P **P** 13 59 22.4 +0.8
comp=Z,743nm,0.7s,baz=70,slow=4.9,SNR=127
LEM LR LR 14 25 41.6
comp=Z,2µm,20.7s,baz=120,slow=36
comp=Z,743nm,0.7s
LEM Lembang 60.59 273 P **P** 13 59 22.4 +0.8
comp=Z,6µmcomp=Z,5µmcomp=Z,635nm,0.9s
JSG Sagara 60.66 331 P **P** 13 59 23.0 +1.5
JOD2 Odawara 2 60.75 332 P **P** 13 59 21.3 -0.8
KSM Kuching 60.89 283 P **P** 13 59 23.3 -0.1
KSM Kuching 60.89 283 ⇑P **P** 13 59 23.6 +0.2
CNJI Cibinong 60.90 272 P **P** 13 59 23.1 -0.4
comp=Z,8µmcomp=Z,7µmcomp=Z,980nm,0.8s
JYT Yasato 61.09 334 P **P** 13 59 24.1 -0.2
JYT Yasato 61.09 334 ⇓P **P** 13 59 25.2 +0.9
JYT Yasato 61.09 334 P **P** 13 59 25.1 +0.7
JIE Ise 61.12 330 *e*P **P** 13 59 25.2 +0.6
CCD Concordia, Ant 61.20 192 P **P** 13 59 26.2 +1.2
CCD pP **pP** 13 59 55.4 +1.3
XMI Christmas Isla 61.37 268 ⇓P **P** 13 59 27.9 +1.1
XMI ⇑P **P** 13 59 28.2 +1.5
XMIS Christmas Isla 61.40 268 P **P** 13 59 26.9 -0.1
CBJI Citeko 61.43 273 P **P** 13 59 26.5 -0.6
comp=Z,10µmcomp=Z,10µmcomp=Z,1µm,0.8s
JRY Ryogami san 61.47 333 *e*P **P** 13 59 27.2 +0.3
DBJI Dramaga 61.49 273 P **P** 13 59 28.1 +0.6
comp=Z,28µmcomp=Z,614nm,1.3s
SKJI Sukabumi 61.53 272 P **P** 13 59 27.9 +0.1
comp=Z,5µmcomp=Z,477nm,1.0s
INU Inuyama 61.76 331 P **P** 13 59 29.0 +0.2
INU lAmb lAmb 14 00 13.3
comp=Z,95nm,1.1s
INU Inuyama 61.76 331 ⇓P **P** 13 59 29.4 +0.6
INU Inuyama 61.76 331 P **P** 13 59 29.6 +0.7
INU sP **PcP** 14 00 06.2 -2.7
JGF Kuroka 61.81 331 P **P** 13 59 28.8 -0.5
JGF lAmb lAmb 13 59 33.9
comp=Z,44nm,0.6s
JGF Kuroka 61.81 331 ⇑P **P** 13 59 29.2 0.0
JGF Kuroka 61.81 331 P **P** 13 59 29.9 +0.7
JMN Monobe 61.98 327 P **P** 13 59 31.5 +1.0
YOJ Yonaguni jima 61.99 312 P **P** 13 59 31.0 +0.4
YOJ Yonaguni jima 61.99 312 P **P** 13 59 31.0 +0.4
YOJ pmax pmax
comp=Z,571nm,0.8s
YOJ Yonaguni jima 61.99 312 ⇑P **P** 13 59 31.9 +1.3
YOJ Yonaguni jima 61.99 312 *e*P **P** 13 59 31.8 +1.1
JSU Suzuyama 62.13 323 P **P** 13 59 31.7 +0.2
JSU Suzuyama 62.13 323 ⇓P **P** 13 59 32.4 +0.9
JSU Suzuyama 62.13 323 P **P** 13 59 32.4 +0.9
SBJI Serang 62.21 273 P **P** 13 59 32.8 +0.5
comp=Z,8µmcomp=Z,757nm,1.0s
MJAR Matsushiro Arr 62.21 332 P **P** 13 59 31.3 -0.6
comp=Z,124nm,1.1s,baz=166,slow=6.7,SNR=93
MJAR PKPPKP **P'P'df** 14 28 36.8 +0.4
comp=Z,1.6nm,0.9s,baz=329,slow=4.4,SNR=4.2
MJAR LR LR 14 29 25.0
comp=Z,505nm,18.0s,baz=144,slow=39
comp=Z,124nm,1.1s
MJAR Matsushiro Arr 62.21 332 P **P** 13 59 31.1 -0.8
MJAR lAmb lAmb 13 59 34.5
comp=Z,98nm,1.0s

MAJO Matsushiro 62.21 332 P **P** 13 59 31.4 -0.5
MAJO lAmb lAmb 13 59 34.0
comp=Z,256nm,1.3s
MAJO Matsushiro 62.21 332 *d* iP **P** 13 59 32.1 +0.2
MAJO pmax pmax
comp=Z,107nm,0.7s
MAJO Matsushiro 62.21 332 ⇑P **P** 13 59 31.7 -0.2
MAJO Matsushiro 62.21 332 P **P** 13 59 32.4 +0.5
MAT Matsushiro 62.21 332 P **P** 13 59 32.2 +0.3
MJB9 Matsu-Tunnel 62.22 332 P **P** 13 59 31.4 -0.6
MJB9 lAmb lAmb 13 59 34.0
comp=Z,250nm,1.3s
JMM Marumori 62.26 335 P **P** 13 59 32.6 +0.5
JMM Marumori 62.26 335 ⇑P **P** 13 59 33.4 +1.3
JMM ⇑P **P** 13 59 33.5 +1.5
JMM Marumori 62.26 335 P **P** 13 59 33.1 +1.0
JGN Niukaw 62.34 332 P **P** 13 59 32.9 +0.1
TWG Pinlang 62.36 310 P **P** 13 59 32.5 -0.6
TWG lAmb lAmb 13 59 40.5
comp=Z,131nm,0.7s
JWT Wachi 62.47 329 P **P** 13 59 34.0 +0.4
YULB Yu-li 62.55 310 P **P** 13 59 33.7 -0.6
YULB lAmb lAmb 13 59 40.2
comp=Z,143nm,0.7s
JAD Aida 62.80 328 P **P** 13 59 36.5 +0.7
NACB Ninganchiao 62.81 311 P **P** 13 59 35.7 -0.4
TPUB Ta-pu 62.97 310 P **P** 13 59 36.4 -0.8
SSLB Suanglung 63.04 310 P **P** 13 59 36.9 -0.7
JNU Nakatsue 63.11 325 P **P** 13 59 37.9 -0.1
baz=232,slow=19
JNU S **S** 14 07 57.2 -2.3
JNU Nakatsue 63.11 325 P **P** 13 59 38.6 +0.7
BLSI Bandar Lampung 63.28 273 P **P** 13 59 39.2 -0.2
comp=Z,4µmcomp=Z,308nm,1.0s
YHNB Yeheng 63.28 311 P **P** 13 59 39.4 +0.1
JYA Atsumi 63.31 335 P **P** 13 59 39.7 +0.6
JHS Saijyo 63.37 328 P **P** 13 59 40.0 +0.4
JHS lAmb lAmb 13 59 42.7
comp=Z,128nm,0.6s
JHS Saijyo 63.37 328 ⇑P **P** 13 59 40.0 +0.4
JHS Saijyo 63.37 328 P **P** 13 59 40.2 +0.6
TATO Taipei 63.39 312 P **P** 13 59 39.9 0.0
TATO Taipei 63.39 312 P **P** 13 59 40.4 +0.5
TATO sP **PcP** 14 00 17.7 +1.9
JSD Sado 63.44 333 P **P** 13 59 40.2 +0.3
JSD Sado 63.44 333 ⇑P **P** 13 59 40.5 +0.4
JSD Sado 63.44 333 P **P** 13 59 40.4 +0.4
PPBI Pangkal Pinang 63.48 277 P **P** 13 59 41.5 +0.7
comp=Z,10µmcomp=Z,9µmcomp=Z,102nm,1.4s
KLI Kotabumi 63.80 274 P **P** 13 59 42.1 -0.8
comp=Z,9µmcomp=Z,233nm,1.2s
KASI Kota Agung 63.94 273 P **P** 13 59 43.5 -0.2
comp=Z,8µmcomp=Z,5µmcomp=Z,563nm,0.9s
JFU Fukue jima 2 63.95 323 P **P** 13 59 44.2 +0.8
PMBI Palembang 64.51 276 P **P** 13 59 48.2 +0.7
PMBI Palembang 64.51 276 P **P** 13 59 48.8 +1.3
comp=Z,9µmcomp=Z,780nm,1.0s
LWLI Liwa 64.51 273 P **P** 13 59 47.0 -0.6
comp=Z,5µmcomp=Z,4µmcomp=Z,349nm,1.0s
JTM Tenmabayashi 64.68 337 P **P** 13 59 48.7 +0.7
JTM lAmb lAmb 13 59 53.4
comp=Z,174nm,1.0s
JTM Tenmabayashi 64.68 337 ⇑P **P** 13 59 48.5 +0.4
JTM ⇑P **P** 13 59 49.0 +0.9
JTM Tenmabayashi 64.68 337 P **P** 13 59 48.9 +0.9
JTU Tsushima 64.97 325 P **P** 13 59 50.5 +0.5
JTU lAmb lAmb 14 00 25.1
comp=Z,306nm,2.0s
JTU Tsushima 64.97 325 ⇑P **P** 13 59 50.6 +0.7
JTU ⇑P **P** 13 59 50.8 +0.7
JOT Ohata 65.21 337 P **P** 13 59 52.1 +0.7
KNMB Chin-men Tao 65.31 309 P **P** 13 59 53.3 +0.9
QZH Quanzhou 65.45 310 ⇓*i* P **P** 13 59 54.3 +1.0
QZH pP **pP** 14 00 21.3 -1.4
QZH sP **sP** 14 00 35.8 0.0
QZH S **S** 14 08 30.8 +2.3
QZH sS **sS** 14 09 14.1 -2.1
QZH pmax pmax
comp=Z,210nm,0.6s
QZH pmax pmax
comp=Z,1µm,4.5s
QZH LR LR
comp=Z,2µm,18.5s
QZH LR LR
comp=Z,1µm,21.3s
QZH LR LR
comp=Z,3µm,29.8s
DSRI Dabo 65.52 278 P **P** 13 59 54.7 +0.7
comp=Z,5µmcomp=Z,70nm,1.1s
MNAI Manna 65.76 274 P **P** 13 59 54.7 -0.8
MNAI Manna 65.76 274 P **P** 13 59 55.3 -0.3
comp=Z,8µmcomp=Z,538nm,1.0s
MNAI Manna 65.76 274 ⇑P **P** 13 59 55.6 0.0
JMBI JAMBI 66.00 277 P **P** 13 59 59.1 +2.0
comp=Z,4µmcomp=Z,348nm,1.0s
TPRI Tanjung Pinang 66.06 280 P **P** 13 59 58.2 +0.7
comp=Z,4µmcomp=Z,141nm,1.1s
JEW Eniwo 66.35 338 P **P** 13 59 58.6 -0.1
JEW lAmb lAmb 14 00 33.0
comp=Z,208nm,1.1s
JEW Eniwo 66.35 338 ⇑P **P** 14 00 00.8 +2.1
KUR Kuril'sk 66.56 344 *e*P **P** 13 59 59.4 -0.5
KUR *e* 14 00 28.1
KUR *e*S **S** 14 08 43.3 +2.2
KUR *e* 14 09 47.0
JSH Shimam 66.68 337 P **P** 14 00 01.5 +0.7
NAWB Namwon 66.74 324 P **P** 14 00 01.4 +0.1
JMP Maruseppu 66.74 340 P **P** 13 59 59.9 -1.3
MYKOM Kota Tinggi 67.00 280 P **P** 14 00 03.4 -0.1
JKA Kamikawa-asahi 67.09 340 P **P** 14 00 04.2 +0.9
JKA lAmb lAmb 14 00 10.7
comp=Z,186nm,0.9s
ASAJ Asahikawa 67.09 340 LR LR 14 24 17.8
comp=Z,2µm,21.9s,baz=166,slow=31
ASAJ Asahikawa 67.09 340 P **P** 14 00 04.3 +1.0
ASAJ pmax pmax
comp=Z,186nm,0.9s
TJN Taejon 67.46 325 P **P** 14 00 06.4 +0.5
TJN Taejon 67.46 325 *d* iP **P** 14 00 06.2 +0.4
KSCHJ Chungju 67.49 325 P **P** 14 00 05.7 -0.3
KSCHJ lAmb lAmb 14 00 09.3
comp=Z,65nm,0.8s
SSE Sheshan 67.50 317 P **P** 14 00 07.1 +0.9
SSE S **S** 14 08 56.1 +3.0
SSE pmax pmax
comp=Z,55nm,0.9s
SSE pmax pmax
comp=Z,550nm,9.4s
SSE LR LR
comp=Z,890nm,22.2s
SSE LR LR
comp=Z,790nm,19.6s
SSE Sheshan 67.50 317 P **P** 14 00 06.7 +0.5
SSE pP **PcP** 14 00 33.8 +1.1
KRJI Kerinci 67.90 276 P **P** 14 00 08.8 -0.5
comp=Z,9µmcomp=Z,8µmcomp=Z,659nm,0.9s
KSRS Korea Array 67.95 326 P **P** 14 00 09.9 +1.1
comp=Z,22nm,0.6s,baz=140,slow=6.2,SNR=68
KSRS pP **pP** 14 00 39.5 +0.9
comp=Z,23nm,1.1s,baz=145,slow=6.2,SNR=3.3
KSRS PKPPKP **P'P'df** 14 28 27.7 +0.5
comp=Z,16nm,1.1s,baz=310,slow=2.4,SNR=20
comp=Z,22nm,0.6s
KSAR Wonju Array Be 67.96 326 P **P** 14 00 07.5 -1.5
KSAR Wonju Array Be 67.96 326 P **P** 14 00 07.5 -1.5
KS19 Wonju Array Si 68.01 326 P **P** 14 00 07.7 -1.6
KS19 lAmb lAmb 14 00 41.3
comp=Z,171nm,1.8s
SEHB SEOHWA 68.38 327 P **P** 14 00 12.3 +0.7
SEHB lAmb lAmb 14 00 15.3
comp=Z,75nm,0.8s
INCN Inchon 68.66 325 P **P** 14 00 13.8 +0.4
INCN lAmb lAmb 14 00 50.1
comp=Z,330nm,1.4s
INCN Inchon 68.66 325 P **P** 14 00 13.8 +0.4
INCN pmax pmax
comp=Z,330nm,1.4s
INCN Inchon 68.66 325 P **P** 14 00 14.8 +1.3
INCN x x 14 00 44.0
QIZ Qiongzhong 69.03 300 P **P** 14 00 16.6 +0.6
QIZ lAmb lAmb 14 00 19.1
comp=Z,152nm,1.1s
QIZ Qiongzhong 69.03 300 ⇓*i* P **P** 14 00 17.8 +1.8
QIZ pP **pP** 14 00 45.4 0.0

QIZ sP **sP** **14 00 59.8 +1.5**
QIZ S **S** **14 09 14.3 +2.6**
QIZ sS **sS** **14 10 01.3 +1.0**
QIZ pmax pmax
comp=Z,120nm,1.1s
QIZ pmax pmax
comp=Z,1µm,6.5s
QIZ LR LR
comp=Z,1µm,23.7s
QIZ LR LR
comp=Z,1µm,33.1s
QIZ LR LR
comp=Z,3µm,34.7s
QIZ Qiongzhong 69.03 300 P **P** **14 00 17.9 +1.9**
QIZ pP **pP** **14 00 45.3 -0.2**
QIZ sP **sP** **14 00 54.5 -3.8**
PPSI Pulau Pagai 69.05 274 P **P** **14 00 17.7 +1.4**
comp=Z,11µmcomp=Z,6µmcomp=Z,385nm,0.8s
BKNI Bangkinang 69.11 278 P **P** **14 00 17.0 +0.3**
BKNI Bangkinang 69.11 278 P **P** **14 00 17.6 +0.9**
comp=Z,10µmcomp=Z,11µmcomp=Z,608nm,1.1s
HJU Haeju 69.56 325 P **P** **14 00 19.7 +0.8**
HJU sP **pP** **14 00 46.7 -2.1**
HJU S **S** **14 09 19.4 +2.1**
HJU AmB
comp=Z,942nm,1.8s
HJU AMS AMS
comp=N,4µm,19.0s
HJU AMS AMS
comp=E,220nm,1.1s
HJU AMS AMS
comp=Z,2µm,8.6s
YSS Yuzh-Sakhalins 69.57 341 P **P** **14 00 18.6 -0.1**
YSS IAmb IAmb 14 00 57.2
comp=Z,208nm,1.0s
YSS Yuzh-Sakhalins 69.57 341κ *i*P **P** **14 00 20.6 +1.9**
YSS *e**PP **pP** **14 00 48.4 -0.1**
YSS *e**SP **sP** **14 01 01.1 -0.4**
YSS *e* 14 02 54.8
YSS *e*S **S** **14 09 19.6 +2.6**
YSS *e*PS PnS 14 09 40.7 -20
YSS *e*PPS PPS 14 09 53.8
YSS *e**SS **ScS** **14 10 08.9 +0.1**
YSS pmax pmax
comp=Z,100nm,0.9s
YSS pmax pmax
comp=Z,1µm,3.7s
YSS pmax pmax
comp=N,500nm,3.6s
YSS smax smax
comp=N,2µm,10.8s
YSS Yuzh-Sakhalins 69.57 341 ⇓P **P** **14 00 20.4 +1.7**
YSS Yuzh-Sakhalins 69.57 341 P **P** **14 00 20.7 +2.0**
YSS pP **PcP** **14 00 43.3 +2.3**
YSS sP **sP** **14 00 55.1 -6.3**
NJ2 Nanjing 69.64 316⇓ *i*P **P** **14 00 20.5 +1.0**
NJ2 pP **pP** **14 00 49.6 +0.2**
NJ2 sP **sP** **14 01 01.6 -0.9**
NJ2 S **S** **14 09 21.0 +2.6**
NJ2 sS **SKKSac** **14 10 09.3 +0.3**
NJ2 SS **SS** **14 13 49.6 +0.4**
NJ2 pmax pmax
comp=N,86nm,0.9s
NJ2 pmax pmax
comp=N,1µm,4.3s
NJ2 LR LR
comp=N,2µm,19.9s
NJ2 LR LR
comp=N,2µm,15.2s
NJ2 LR LR
comp=N,2µm,24.6s
HHU Hamhung 69.99 327 P **P** **14 00 22.7 +1.2**
TEY Ternei 70.01 336⇓ *e*P **P** **14 00 22.1 +0.6**
TEY *e* 14 00 51.0
TEY *e* 14 09 17.4
TEY pmax pmax
comp=Z,10.0nm,1.3s
TEY pmax pmax
comp=Z,100nm,5.4s
SKR Severo-Kuril's 70.12 351⇑ *i*P **P** **14 00 22.0 0.0**
SKR *e**PP **pP** **14 00 50.0 -1.7**
SKR *e* 14 01 04.0
SKR *i*S **S** **14 09 24.8 +1.7**
SKR pmax pmax
comp=Z,70nm,0.9s
SKR pmax pmax
comp=Z,500nm,3.6s
VLA Vladivostok 70.38 332*d i*P **P** **14 00 24.8 +1.0**
VLA pmax pmax
comp=Z,106nm,1.3s
SISI Saibi 70.39 275 P **P** **14 00 25.3 +0.8**
comp=Z,3µmcomp=Z,109nm,1.1s
IPM Ipoh 70.60 282 P **P** **14 00 25.1 -0.7**
IPM IAmb IAmb 14 00 57.7
comp=Z,85nm,0.9s
MNSI Mandailing Nat 70.64 278 P **P** **14 00 25.7 -0.4**
comp=Z,4µmcomp=Z,201nm,0.7s
USA0B Ussuriysk Arra 71.20 333 P **P** **14 00 29.2 +0.5**
USA0B IAmb IAmb 14 00 31.5
comp=Z,137nm,1.1s
USA0B Ussuriysk Arra 71.20 333 P **P** **14 00 29.2 +0.5**
USA0B pmax pmax
comp=Z,137nm,1.1s
USRK Ussuriysk Ar. 71.20 333 P **P** **14 00 29.9 +1.2**
comp=Z,135nm,1.0s,baz=137,slow=4.7,SNR=108
USRK pP **pP** **14 01 00.1 +1.3**
comp=Z,31nm,0.8s,baz=178,slow=5.3,SNR=2.7
USRK S **S** **14 09 38.0 +2.1**
comp=Z,2.3nm,0.6s,baz=152,slow=32,SNR=2.7
comp=Z,135nm,1.0s
USRK Ussuriysk Ar. 71.20 333 P **P** **14 00 29.0 +0.3**
QSPA South Pole Qui 71.21 180 P **P** **14 00 29.7 +1.0**
comp=Z,821nm,1.0s,baz=3.4,slow=1.0,SNR=395
QSPA LR LR 14 29 24.7
comp=Z,913nm,18.1s,baz=28,slow=34
comp=Z,821nm,1.0s
QSPA South Pole Qui 71.21 180 P **P** **14 00 29.8 +1.0**
QSPA South Pole Qui 71.21 180 P **P** **14 00 30.2 +1.4**
KULM Kulim 71.25 283 P **P** **14 00 29.1 -0.6**
KULM IAmb IAmb 14 01 01.7
comp=Z,140nm,1.2s
SHEM Shemya Is, Ala 71.42 3 P **P** **14 00 30.8 +1.0**
comp=Z,53nm,0.5s,baz=75,slow=6.1,SNR=11
SHEM LR LR 14 24 54.8
comp=Z,2µm,21.8s,baz=190,slow=30
comp=Z,53nm,0.5s
CNSH ChangSha 71.44 310 ⇓P **P** **14 00 29.8 -0.8**
CNSH pP **pP** **14 00 58.6 -1.9**
CNSH S **S** **14 09 40.3 +0.8**
CNSH pmax pmax
comp=Z,1µm,3.8s
CNSH LR LR
comp=Z,1µm,21.7s
CNSH LR LR
comp=Z,1µm,21.9s
CNSH LR LR
comp=Z,2µm,20.1s
KIWB Kanaga Island 71.45 9 P **P** **14 00 29.9 -0.2**
UGL Uglegorsk 71.68 342 *e*P **P** **14 00 33.0 +1.5**
UGL *e* 14 01 02.4
UGL *e*S **S** **14 09 42.0 +0.7**
UGL pmax pmax
comp=Z,130nm,1.1s
UGL pmax pmax
comp=Z,690nm,4.0s
UGL smax smax
comp=E,3µm,8.0s
UGL smax smax
comp=N,1µm,7.0s
SUJ Sinuiju 71.71 326 P **P** **14 00 33.0 +1.1**
SUJ sP **pP** **14 01 00.1 -1.7**
SUJ S **S** **14 09 45.8 +3.8**
SUJ AmB
comp=Z,584nm,1.4s
SUJ AMS AMS
comp=N,238nm,11.3s
SUJ AMS AMS
comp=E,281nm,13.4s
SUJ AMS AMS
comp=Z,25nm,1.2s
WHN Wuhan 71.78 312 ⇓P **P** **14 00 33.1 +0.6**
WHN S **S** **14 09 43.6 +0.4**
WHN pmax pmax
comp=Z,370nm,1.0s
WHN LR LR
comp=Z,24µm,36.8s
WHN LR LR
comp=Z,6µm,24.2s
WHN LR LR
comp=Z,14µm,44.0s
GULI GuiLin 71.80 306 ⇓P **P** **14 00 30.4 -2.4**
GULI pP **pP** **14 00 58.6 -4.1**
GULI S **S** **14 09 42.3 -1.4**
GULI pmax pmax
comp=Z,200nm,1.0s
GULI LR LR
comp=Z,1µm,17.0s
GULI LR LR
comp=Z,1µm,17.8s
GULI LR LR
comp=Z,2µm,21.8s
RPSI Rantau Prapat 71.92 279 P **P** **14 00 33.5 -0.3**
PSI Prapat 71.95 279 P **P** **14 00 33.5 -0.6**
comp=Z,76nm,0.9s,baz=144,slow=3.7,SNR=44
PSI S **S** **14 09 39.8 -6.4**
comp=Z,1.8nm,0.5s,baz=160,slow=3.7,SNR=1.5
PSI LR LR 14 35 12.6
comp=Z,2µm,18.9s,baz=128,slow=38
comp=Z,76nm,0.9s
PET Petropavlovsk 72.10 354 P **P** **14 00 33.8 -0.1**
PET IAmb IAmb 14 01 10.2
comp=Z,171nm,1.7s
PET Petropavlovsk 72.10 354 *e*P **P** **14 00 34.7 +0.8**
PET *e**PP **pP** **14 01 01.4 -2.3**
PET *e**SP **sP** **14 01 17.1 +0.5**
PET *e* 14 03 12.9
PET *e*S **S** **14 09 48.3 +2.3**
PET *e**SS **sS** **14 10 33.5 -4.0**
PET *e*SS **SS** **14 14 25.6 -0.6**
PET pmax pmax
comp=Z,53nm,0.7s
PET pmax pmax
comp=Z,400nm,10.9s
PET MLR MLR
comp=Z,1µm,18.0s
PET MLR MLR
comp=Z,1µm,15.0s
PEA0B Petropavlovsk- 72.29 353 P **P** **14 00 34.9 -0.2**
PEA0B IAmb IAmb 14 01 26.9
comp=Z,157nm,1.2s
PEA0B Petropavlovsk- 72.29 353*d i*P **P** **14 00 35.8 +0.7**
PETK Petropavlovsk- 72.29 353 P **P** **14 00 35.6 +0.6**
comp=Z,58nm,0.8s,baz=182,slow=8.7,SNR=119
PETK pP **pP** **14 01 06.2 +1.3**
comp=Z,24nm,0.9s,baz=193,slow=6.1,SNR=3.2
PETK LR LR 14 28 08.0
comp=Z,2µm,20.0s,baz=167,slow=32
comp=Z,58nm,0.8s
PETK Petropavlovsk- 72.29 353 P **P** **14 00 34.8 -0.3**
DL2 Dalian 72.45 323 P **P** **14 00 37.4 +1.1**
DL2 pP **pP** **14 01 07.3 +0.9**
DL2 S **S** **14 09 53.8 +3.2**
DL2 pmax pmax
comp=Z,380nm,0.8s
DL2 pmax pmax
comp=Z,830nm,8.2s
DL2 LR LR
comp=Z,2µm,34.2s
DL2 LR LR
comp=Z,2µm,24.7s
DL2 LR LR
comp=Z,4µm,29.9s
TSI Tuntungan 72.54 280 P **P** **14 00 37.3 -0.1**
comp=Z,8µmcomp=Z,186nm,0.9s
MDJ Mudanjiang 72.58 332 P **P** **14 00 37.1 +0.1**
MDJ IAmb IAmb 14 00 40.2
comp=Z,202nm,0.9s
MDJ Mudanjiang 72.58 332 P **P** **14 00 38.4 +1.4**
MDJ pP pP 14 01 07.8 +0.7
MDJ S **SKiKP** **14 09 56.0 -3.6**
MDJ pmax pmax
comp=Z,240nm,1.0s
MDJ pmax pmax
comp=Z,1µm,7.4s
MDJ LR LR
comp=Z,2µm,24.5s
MDJ LR LR
comp=Z,1µm,24.5s
MDJ LR LR
comp=Z,2µm,23.3s
GSI Gunungsitoli 72.70 278 P **P** **14 00 38.0 -0.4**
GSI Gunungsitoli 72.70 278 P **P** **14 00 38.9 +0.5**
comp=Z,10µmcomp=Z,5µmcomp=Z,234nm,1.0s
GSI Gunungsitoli 72.70 278 ⇓P **P** **14 00 39.0 +0.6**
GSI ⇓P **P** **14 00 39.0 +0.6**
TYV Tymovskoe 73.12 343 *e*P **P** **14 00 41.0 +1.0**
TYV *e*S **S** **14 09 57.9 +0.3**
TYV pmax pmax
comp=Z,47nm,1.3s
TYV pmax pmax
comp=Z,700nm,4.0s
TYV smax smax
comp=N,1µm,7.9s
TYV smax smax
comp=E,2µm,7.9s
KCSI Kotacane, Aceh 73.28 280 P **P** **14 00 40.8 -1.1**
comp=E,2µmcomp=E,51nm,0.7s
TIA Tai'an 73.38 319 ⇓P **P** **14 00 42.5 +0.6**
TIA pP **pP** **14 01 10.3 -1.8**
TIA S **SKiKP** **14 10 00.5 -0.5**
TIA sS **ScS** **14 10 45.6 +6.0**
TIA pmax pmax
comp=E,110nm,0.9s
TIA pmax pmax
comp=E,1µm,7.5s
TIA LR LR
comp=E,1µm,24.1s
TIA LR LR
comp=E,2µm,23.1s
TIA LR LR
comp=E,4µm,18.0s
SNY Shenyang 73.43 326 ⇓P **P** **14 00 42.8 +0.8**
SNY pP **pP** **14 01 10.5 -1.6**
SNY S **S** **14 10 02.4 +0.9**
SNY pmax pmax
comp=E,110nm,0.8s
SNY LR LR
comp=E,970nm,22.7s
SNY LR LR
comp=E,700nm,18.5s
SNY LR LR
comp=E,2µm,19.2s
CN2 Changchun 73.91 329 *e*P **P** **14 00 45.3 +0.5**
CN2 PP **PP** **14 03 34.9 +3.3**
CN2 S **S** **14 10 07.3 +0.4**
CN2 pmax pmax
comp=E,50nm,1.0s
CN2 pmax pmax
comp=E,100nm,3.0s
CN2 LR LR
comp=E,1µm,24.0s
CN2 LR LR
comp=E,1µm,24.0s
CN2 LR LR
comp=E,1µm,29.0s
NIKH Nikolski High 74.09 14 P **P** **14 00 45.2 -0.4**
NIKH IAmb IAmb 14 01 22.1
comp=Z,328nm,1.0s
NIKH Nikolski High 74.09 14 P **P** **14 00 41.4 -4.2**
baz=202
NIKH S **SKiKP** **14 10 04.7 +3.2**
baz=202
BNX BinXian 74.43 331 ⇓P P 14 00 57.9 +10
BNX pP pP 14 01 19.8 +1.7
BNX sP sP 14 01 32.5 +1.5
BNX PP **PP** **14 03 37.3 +1.3**
BNX S **S** **14 10 14.8 +2.2**
BNX BinXian 74.43 331 sS **sS** **14 11 06.5 +1.8**
BNX pmax pmax
comp=Z,210nm,1.1s
BNX pmax pmax
comp=Z,2µm,3.8s
BNX LR LR
comp=N,5µm,23.3s
BNX LR LR
comp=E,2µm,15.7s
BNX LR LR
comp=Z,5µm,30.4s
RPN Rapa Nui 74.63 114 P **P** **14 00 50.1 +0.7**
comp=Z,259nm,1.1s,baz=258,slow=4.6,SNR=4.1
RPN LR LR 14 28 41.7
comp=Z,597nm,19.2s,baz=264,slow=32
comp=Z,259nm,1.1s
RPN Rapa Nui 74.63 114 IAmb IAmb 14 00 53.5
comp=Z,582nm,1.3s
GRNR Gornyy 74.94 339⇓ *i*P **P** **14 00 52.7 +2.1**
GRNR *e* 14 01 20.6
GRNR *e*S **S** **14 10 21.6 +3.5**
GRNR pmax pmax
comp=E,20nm,1.0s
GRNR pmax pmax
comp=Z,90nm,1.0s
GRNR pmax pmax
comp=N,20nm,0.8s
GRNR smax smax
comp=N,1.0nm,0.9s
GRNR MLR MLR
comp=E,340nm,16.0s
GRNR MLR MLR
comp=Z,520nm,16.0s
ENH Enshi 75.10 310 P **P** **14 00 51.9 -0.2**
GYA Guiyang 75.26 305⇓ *i*P **P** **14 00 54.3 +1.1**
GYA pP pP 14 01 23.6 +0.3
GYA PP **PP** **14 03 43.5 0.0**
GYA S **S** **14 10 23.3 +0.4**
GYA SS **SS** **14 15 19.3 +3.7**
GYA pmax pmax
comp=Z,94nm,1.0s
GYA pmax pmax
comp=Z,2µm,3.7s
GYA LR LR
comp=Z,420nm,18.6s
GYA LR LR
comp=Z,360nm,15.1s
GYA LR LR
comp=Z,850nm,20.0s
KLR Kul'dur 75.34 336 P **P** **14 00 54.1 +1.1**
comp=Z,51nm,0.9s,baz=133,slow=3.9,SNR=62
KLR pP **pP** **14 01 26.1 +3.1**
comp=Z,40nm,1.0s,baz=148,slow=5.2,SNR=3.0
KLR S **S** **14 10 20.6 -2.0**
comp=Z,0.2nm,0.3s,baz=145,slow=24,SNR=1.3
KLR LR LR 14 31 15.3
comp=Z,459nm,20.8s,baz=142,slow=33
comp=Z,51nm,0.9s
KLR Kul'dur 75.34 336*d i*P **P** **14 00 54.0 +1.1**
KLR pmax pmax
comp=Z,85nm,1.0s
LYN LuoYang 75.40 315⇓ *i*P **P** **14 00 54.6 +1.0**
LYN pP pP 14 01 24.1 +0.2
LYN S **S** **14 10 25.6 +1.8**
LYN pmax pmax
comp=Z,190nm,1.1s
LYN pmax pmax
comp=Z,2µm,10.2s
LYN LR LR
comp=Z,3µm,29.4s
LYN LR LR
comp=Z,2µm,30.8s
LYN LR LR
comp=Z,3µm,30.0s
UNV Unalaska Valle 75.44 15 P **P** **14 00 52.7 -0.7**
UNV Unalaska Valle 75.44 15 P **P** **14 00 50.4 -3.0**
baz=204
UNV S **S** **14 10 18.3 -5.1**
baz=204
HNS HongShan 75.63 318 ⇑P **P** **14 00 56.1 +1.2**
HNS pP **pP** **14 01 23.8 -1.4**
HNS S **S** **14 10 28.6 +2.4**
HNS sS **sS** **14 11 20.4 +2.9**
HNS SS **SS** **14 15 20.8 +0.2**
HNS pmax pmax
comp=Z,110nm,1.0s
HNS pmax pmax
comp=Z,2µm,6.7s
HNS LR LR
comp=Z,1µm,22.0s
HNS LR LR
comp=Z,2µm,22.6s
NKL Nikolayevsk 75.71 343 *e*P **P** **14 00 54.8 -0.1**
NKL *e* 14 01 24.1
NKL *e*S **S** **14 10 26.0 -0.4**
NKL pmax pmax
comp=Z,112nm,0.8s
NKL pmax pmax
comp=Z,78nm,3.7s
NKL smax smax
comp=E,4.0nm,2.3s
NKL smax smax
comp=N,3.0nm,0.9s
NKL MLR MLR
comp=Z,517nm,16.0s
AKUT Akutan 75.89 15 P **P** **14 00 56.3 +0.4**
BJT Baijiatuau 76.36 321 P **P** **14 00 59.4 +0.4**
BJT IAmb IAmb 14 01 02.4
comp=Z,112nm,0.8s
BJT Baijiatuau 76.36 321 P **P** **14 00 59.4 +0.4**
BJT pmax pmax
comp=Z,112nm,0.8s
BJI Beijing 76.37 321 P **P** **14 00 59.5 +0.5**
BJI PcP **PcP** **14 01 10.1 -0.2**
BJI pP **pP** **14 01 28.4 -1.0**
BJI sP **sP** **14 01 40.0 -2.3**
BJI S **S** **14 10 37.6 +3.3**
BJI ScS **SKKSac** **14 11 00.9 +1.2**
BJI sS **sS** **14 11 26.4 +0.3**
BJI pmax pmax
comp=Z,140nm,0.8s
BJI pmax pmax
comp=Z,1µm,8.5s
BJI LR LR
comp=Z,190nm,23.3s
BJI LR LR
comp=Z,1µm,22.4s
BJI LR LR
comp=Z,2µm,23.5s
FALS False Pass 77.14 16 P **P** **14 01 01.0 -1.9**
baz=207
FALS S **S** **14 10 38.1 -3.8**
baz=207
TIY Taiyuan 77.27 317 ⇓P **P** **14 01 05.8 +1.6**
TIY pP **pP** **14 01 35.4 +0.8**
TIY S **S** **14 10 48.3 +4.0**
TIY sS **sS** **14 11 37.8 +2.2**
TIY pmax pmax
comp=Z,51nm,0.6s
TIY pmax pmax
comp=Z,1µm,3.7s
XAN Xi'an 77.54 313 ⇓P **P** **14 01 06.9 +1.1**
XAN pP pP 14 01 36.9 +0.7
XAN sP sP 14 01 48.9 -0.2
XAN PP **PP** **14 04 03.5 +1.0**
XAN S **S** **14 10 48.3 +0.9**
XAN SKS **SKSac** **14 11 03.8 -4.3**
XAN ScS **SKKSac** **14 11 10.5 +1.5**
XAN sS sS 14 11 35.8 -2.3
XAN pmax pmax
comp=Z,160nm,0.9s
XAN pmax pmax
comp=Z,2µm,5.2s
XAN LR LR
comp=Z,1µm,21.0s
XAN LR LR
comp=Z,980nm,21.8s
XAN LR LR
comp=Z,2µm,21.0s
KMI Kunming 77.72 302 ⇓P **P** **14 01 09.3 +2.1**
KMI pP pP 14 01 40.0 +2.5
KMI sP sP 14 01 51.0 +0.7
KMI S **S** **14 10 51.8 +1.8**
KMI sS sS 14 11 39.3 -1.3
KMI SS **SS** **14 15 53.3 +0.3**
KMI pmax pmax
comp=Z,280nm,1.0s
KMI pmax pmax
comp=Z,2µm,4.1s
KMI LR LR
comp=Z,460nm,16.3s
KMI LR LR
comp=Z,760nm,19.9s
KMI LR LR
comp=Z,880nm,17.3s
SPIA Saint Paul Isl 77.73 11 P **P** **14 01 06.4 +0.2**
SPIA IAmb IAmb 14 01 43.3
comp=Z,179nm,1.4s
SPIA Saint Paul Isl 77.73 11 P **P** **14 01 05.0 -1.2**
baz=200

CM31 Chiang Mai Arr 77.97 294 P **P** 14 01 09.3 +0.9
CM31 IAmb IAmb 14 01 12.2
comp=Z,201nm,0.9s
CMAR Chiang Mai Arr 77.97 294 P **P** 14 01 10.1 +1.7
comp=Z,129nm,0.9s,baz=131,slow=4.3,SNR=282
CMAR pP **pP** 14 01 40.3 +1.5
comp=Z,71nm,1.1s,baz=131,slow=4.0,SNR=4.0
CMAR PKKPbc **PKKPbc** 14 20 09.3 +1.0
comp=Z,3.5nm,0.8s,baz=288,slow=3.9,SNR=12
CMAR PKPPKP **P'P'df** 14 28 11.6 -0.4
comp=Z,6.3nm,1.1s,baz=288,slow=4.3,SNR=6.0
comp=Z,129nm,0.9s
CMAR Chiang Mai Arr 77.97 294 P **P** 14 01 09.4 +1.0
CHTO Chiang Mai 78.11 295 P **P** 14 01 09.8 +0.5
CHTO IAmb IAmb 14 01 12.7
comp=Z,154nm,0.8s
CHTO Chiang Mai 78.11 295 P **P** 14 01 09.8 +0.5
CHTO pmax pmax
comp=Z,154nm,0.8s
CNBA Chernabura Isl 78.17 18 P **P** 14 01 08.8 +0.2
CHNA Chernabura Isl 78.18 18 P **P** 14 01 06.9 -1.8
baz=210
CHNA S **S** 14 10 49.7 -3.4
baz=210
SDPT Sand Point 78.37 17 P **P** 14 01 09.8 0.0
SDPT IAmb IAmb 14 01 44.3
comp=Z,125nm,1.3s
SDPT Sand Point 78.37 17 P **P** 14 01 08.4 -1.3
baz=210
MAW Mawson 78.65 202 P **P** 14 01 13.5 +2.2
comp=Z,149nm,0.7s,baz=117,slow=7.2,SNR=34
MAW S **S** 14 10 57.2 -0.8
comp=Z,4.7nm,1.1s,baz=195,slow=23,SNR=2.2
MAW LR LR 14 30 45.0
comp=Z,1µm,21.8s,baz=106,slow=32
comp=Z,149nm,0.7s
MAW Mawson 78.65 202 P **P** 14 01 13.7 +2.4
baz=79,SNR=142
MAW Mawson 78.65 202 P **P** 14 01 13.3 +2.1
XLT XiLinHaoTe 78.88 324⇓ *i*P **P** 14 01 14.3 +1.3
XLT PcP **PcP** 14 01 21.6 +0.4
XLT pP pP 14 01 43.0 -0.5
XLT sP sP 14 01 54.9 -1.5
XLT S **S** 14 11 04.3 +2.9
XLT pmax pmax
comp=Z,130nm,1.0s
XLT pmax pmax
comp=Z,3µm,5.6s
XLT LR LR
comp=Z,1µm,21.1s
XLT LR LR
comp=Z,3µm,21.1s
PZH PanZhiHua 79.15 303 P **P** 14 01 15.1 +0.2
PZH pP **pP** 14 01 43.6 -1.7
PZH sP **sP** 14 01 57.8 -0.3
PZH PP **PP** 14 04 19.0 +2.8
PZH S **S** 14 11 05.5 +0.5
PZH ScS **SKKSac** 14 11 21.3 -0.3
PZH pmax pmax
comp=Z,130nm,0.9s
PZH pmax pmax
comp=Z,1µm,4.9s
MA2 Magadan 79.51 351 P **P** 14 01 16.4 +0.5
comp=Z,31nm,0.8s,baz=149,slow=6.4,SNR=29
MA2 pP **pP** 14 01 48.1 +1.8
comp=Z,24nm,0.8s,baz=157,slow=8.4,SNR=3.7
MA2 S **S** 14 11 02.7 -4.5
comp=Z,1.8nm,0.7s,baz=14,slow=19,SNR=1.7
MA2 LR LR 14 31 02.7
comp=Z,1µm,21.3s,baz=166,slow=31
comp=Z,31nm,0.8s
MA2 Magadan 79.51 351 P **P** 14 01 16.0 0.0
MA2 IAmb IAmb 14 01 51.1
comp=Z,341nm,2.0s
MA2 Magadan 79.51 351 *d i*P **P** 14 01 15.6 -0.3
MA2 pmax pmax
comp=Z,49nm,0.9s
HHC Hu-ho-hao-te 79.65 320 *e*P **P** 14 01 18.4 +1.1
HHC pP pP 14 01 44.1 -3.8
HHC sP sP 14 01 58.4 -2.3
HHC S **S** 14 11 12.8 +3.1
HHC pmax pmax
comp=Z,180nm,1.0s
HHC pmax pmax
comp=Z,2µm,5.1s
CD2 Chengdu 79.67 308⇓ P **P** 14 01 18.9 +1.4
CD2 pP pP 14 01 47.3 -0.8
CD2 sP sP 14 01 59.6 -1.4
CD2 PP **PP** 14 04 18.3 -2.0
CD2 S **S** 14 11 12.5 +2.3
CD2 SS **SS** 14 16 25.5 +3.7
CD2 pmax pmax
comp=Z,80nm,0.9s
CD2 pmax pmax
comp=Z,1µm,5.0s
CD2 LR LR
comp=Z,3µm,29.4s
CD2 LR LR
comp=Z,3µm,28.9s
CHIR Chirikof Isln 80.23 19 P **P** 14 01 17.5 -2.3
baz=214
BTO Baotou 80.47 319 *e*P **P** 14 01 23.6 +1.9
BTO S **S** 14 11 19.3 +1.0
BTO LR LR
comp=Z,6µm,23.5s
BTO LR LR
comp=Z,4µm,19.6s
HIA Hailar 80.56 330 P **P** 14 01 21.8 -0.1
HIA Hailar 80.56 330 P **P** 14 01 21.8 -0.1
HIA pmax pmax
comp=Z,90nm,1.1s
ZEA Zeya 80.63 336 *e*P **P** 14 01 23.1 +1.0
ZEA *e**SP **sP** 14 02 08.0 +2.6
ZEA *e* 14 04 36.6
ZEA *e*S **S** 14 11 21.2 +2.1
ZEA *e* 14 12 03.5
ZEA pmax pmax
comp=N,30nm,0.9s
ZEA pmax pmax
comp=Z,50nm,1.0s
ZEA pmax pmax
comp=N,400nm,6.8s
ZEA pmax pmax
comp=Z,1µm,8.1s
ZEA smax smax
comp=Z,300nm,14.8s
ZEA smax smax
comp=N,2µm,13.7s
SII Sitkinak Islan 81.29 20 P **P** 14 01 25.8 +0.3
SII IAmb IAmb 14 02 13.5
comp=Z,113nm,1.0s
SII Sitkinak Islan 81.29 20 P **P** 14 01 25.5 0.0
baz=215
PAF Port-aux-Franc 81.36 221 P **P** 14 01 27.6 +1.4
PAF IAmb IAmb 14 01 29.8
comp=Z,234nm,1.0s
PAF Port-aux-Franc 81.36 221 P **P** 14 01 27.6 +1.4
PAF pmax pmax
comp=Z,234nm,1.0s
R17K Ugashik Creek 81.51 18 P **P** 14 01 26.9 +0.3
baz=213
R17K S **S** 14 11 24.7 -3.4
baz=213
OHAK Old Harbor 82.12 20 P **P** 14 01 30.2 +0.4
OHAK IAmb IAmb 14 02 08.7
comp=Z,94nm,1.0s
OHAK Old Harbor 82.12 20 P **P** 14 01 29.4 -0.4
baz=216
OHAK S **S** 14 11 32.2 -2.1
baz=216
LZH Lanzhou 82.16 312⇓ P **P** 14 01 33.0 +2.2
LZH pP pP 14 02 01.9 +0.4
LZH sP sP 14 02 13.3 -1.1
LZH PP **PP** 14 04 44.4 +3.5
LZH S **S** 14 11 39.6 +3.5
LZH SS **SS** 14 17 01.1 +2.2
LZH pmax pmax
comp=Z,200nm,1.3s
LZH pmax pmax
comp=Z,2µm,6.8s
LZH LR LR
comp=Z,2µm,17.0s
LZH LR LR
comp=Z,1µm,17.2s
LZH LR LR
comp=Z,4µm,19.1s

P16K Nushagak River 82.24 17 P **P** 14 01 30.5 +0.1
baz=212
P16K S **S** 14 11 31.9 -3.6
baz=212
SEY Seymchan 82.52 353 P **P** 14 01 32.5 +0.7
comp=Z,16nm,0.8s,baz=155,slow=4.8,SNR=28
SEY pP **pP** 14 02 04.0 +1.6
comp=Z,31nm,0.9s,baz=140,slow=3.8,SNR=6.6
SEY S **S** 14 11 32.4 -5.9
comp=Z,0.8nm,0.8s,baz=355,slow=23,SNR=1.1
SEY PKKPbc **PKKPbc** 14 19 59.0 -1.5
comp=Z,1.6nm,0.7s,baz=72,slow=3.7,SNR=5.1
SEY LR LR 14 34 02.3
comp=Z,2µm,20.9s,baz=157,slow=32
comp=Z,16nm,0.8s
SEY Seymchan 82.52 353 *d i*P **P** 14 01 32.4 +0.6
SEY pmax pmax
comp=Z,46nm,1.1s
BELA Belgrano 2 82.53 175 P **P** 14 01 31.6 -0.3
BELA IAmb IAmb 14 01 34.2
comp=Z,329nm,1.1s
O16K Kokwok River B 82.69 16 P **P** 14 01 33.0 +0.3
baz=211
O16K S **S** 14 11 34.2 -5.8
baz=211
KDAK Kodiak Island 82.80 20 LR LR 14 31 29.5
comp=Z,2µm,21.4s,baz=229,slow=30
KDAK Kodiak Island 82.80 20 P **P** 14 01 33.6 +0.3
KDAK IAmb IAmb 14 02 11.0
comp=Z,110nm,1.2s
KDAK Kodiak Island 82.80 20 *ce*P **P** 14 01 33.3 0.0
KDAK pmax pmax
comp=Z,94nm,1.1s
KDAK Kodiak Island 82.80 20 P **P** 14 01 33.5 +0.2
baz=216
KDAK S **S** 14 11 40.1 -1.1
baz=216
O17K Koliganek Bris 83.11 17 P **P** 14 01 35.4 +0.5
baz=212
O17K S **S** 14 11 41.3 -3.0
baz=212
N16K Nishlik Lake 83.27 16 P **P** 14 01 37.1 +1.3
baz=211,SNR=18
N16K S **S** 14 11 45.5 -0.5
baz=211
P18K Big Mountain, 83.31 18 P **P** 14 01 35.6 -0.5
P18K IAmb IAmb 14 02 12.7
comp=Z,208nm,1.1s
P18K Big Mountain, 83.31 18 P **P** 14 01 35.9 -0.1
baz=214,SNR=9.1
P18K S **S** 14 11 44.2 -2.3
baz=214
Q19K Cape Douglas, 83.40 19 P **P** 14 01 37.2 +0.7
Q19K IAmb IAmb 14 02 15.8
comp=Z,250nm,1.1s
Q19K Cape Douglas, 83.40 19 P **P** 14 01 36.4 -0.1
baz=216
Q19K S **S** 14 11 46.1 -1.2
baz=216
Q20K Shuyak Island 83.52 19 P **P** 14 01 36.1 -0.9
baz=217
Q20K S **S** 14 11 46.8 -1.7
baz=217
O18K Koktuh Hills 83.70 17 P **P** 14 01 36.2 -1.8
baz=214
O18K S **S** 14 11 47.7 -2.7
baz=214
GAMB Gambell 83.74 9 P **P** 14 01 37.7 -0.3
GAMB Gambell 83.74 9 P **P** 14 01 36.7 -1.3
baz=198
GAMB S **S** 14 11 50.4 0.0
baz=198
N18K Kilae Creek 84.20 17 P **P** 14 01 40.8 +0.3
N18K Kilae Creek 84.20 17 P **P** 14 01 40.4 -0.1
baz=213,SNR=6.1
N18K S **S** 14 11 54.6 -0.7
baz=213
O19K Port Alsworth 84.24 18 P **P** 14 01 40.7 0.0
O19K IAmb IAmb 14 02 20.4
comp=Z,308nm,1.3s
O19K Port Alsworth 84.24 18 P **P** 14 01 40.2 -0.4
baz=215,SNR=8.9
O19K S **S** 14 11 51.8 -3.7
baz=215
SMAI San Martin Ant 84.33 162 P **P** 14 01 41.4 +0.2
HOM Homer 84.60 19 P **P** 14 01 41.9 -0.5
baz=217
HOM S **S** 14 11 57.5 -1.7
baz=217
CNPM China Poot 84.62 19 P **P** 14 01 42.7 0.0
CNPM IAmb IAmb 14 02 19.1
comp=Z,244nm,1.2s
SVW2 Sparrevohn 84.64 17 P **P** 14 01 42.9 +0.2
SVW2 IAmb IAmb 14 02 33.0
comp=Z,154nm,1.4s
N19K Bonanza Creek 84.70 17 P **P** 14 01 43.1 -0.1
N19K Bonanza Creek 84.70 17 P **P** 14 01 42.3 -0.8
baz=215,SNR=9.1
N19K S **S** 14 11 58.6 -1.9
baz=215
RSO Redoubt South 84.91 18 P **P** 14 01 43.8 -0.6
BRLK Bradley Lake 84.91 19 P **P** 14 01 44.1 0.0
BRLK IAmb IAmb 14 02 20.3
comp=Z,137nm,1.2s
BRSE Bradley Lake S 84.94 19 P **P** 14 01 41.3 -2.9
baz=218
BRSE S **S** 14 12 02.2 -0.5
baz=218
ANM Nome 85.49 11 P **P** 14 01 47.4 +0.6
ANM IAmb IAmb 14 02 24.9
comp=Z,310nm,2.0s
ANM Nome 85.49 11 P **P** 14 01 47.4 +0.6
ANM pmax pmax
comp=Z,310nm,2.0s
ANM Nome 85.49 11 P **P** 14 01 47.3 +0.5
baz=204
ANM S **S** 14 12 08.9 +1.0
baz=204
M19K Big River Lodg 85.63 17 P **P** 14 01 48.0 +0.4
M19K IAmb IAmb 14 02 25.4
comp=Z,428nm,1.9s
M19K Big River Lodg 85.63 17 P **P** 14 01 48.4 +0.8
baz=215
M19K S **S** 14 12 09.0 -0.3
baz=215
CAPN Captain Cook N 85.63 18 P **P** 14 01 48.1 +0.6
baz=218
CAPN S **S** 14 12 10.5 +1.2
baz=218
SEW Seward 85.63 20 P **P** 14 01 48.1 +0.6
baz=219
SEW S **S** 14 12 07.5 -1.8
baz=219
SPCR Spurr Chakacha 85.66 18 P **P** 14 01 48.3 +0.4
baz=217
SPCR S **S** 14 12 07.2 -2.6
baz=217
SPU Mount Spurr 85.69 18 P **P** 14 01 47.3 -0.7
SNCC San Nicolas Is 85.73 53 P **P** 14 01 48.6 -0.2
baz=244
L19K White Mountain 85.73 16 P **P** 14 01 47.6 -0.6
L19K IAmb IAmb 14 02 26.0
comp=Z,363nm,1.6s
L19K White Mountain 85.73 16 P **P** 14 01 48.8 +0.6
baz=214,SNR=18
L19K S **S** 14 12 11.5 +1.1
baz=214
HOPS Hopland Field 85.77 46 P **P** 14 01 48.5 -0.4
HOPS IAmb IAmb 14 02 25.5
comp=Z,204nm,1.4s
O22K Cooper Landing 85.84 19 P **P** 14 01 49.1 +0.5
O22K IAmb IAmb 14 02 44.4
comp=Z,111nm,0.8s
O22K Cooper Landing 85.84 19 P **P** 14 01 49.4 +0.8
baz=219
O22K S **S** 14 12 09.5 -1.8
baz=219
GDXM Geysers 85.87 47 P **P** 14 01 50.0 +0.5
GDXM IAmb IAmb 14 02 26.4
comp=Z,133nm,1.6s
SAO San Andreas Ge 85.87 49 P **P** 14 01 49.4 0.0
SAO IAmb IAmb 14 02 25.4
comp=Z,72nm,1.1s
SAO San Andreas Ge 85.87 49 P **P** 14 01 49.4 0.0
SAO pmax pmax
comp=Z,72nm,1.1s
BRDH Bariadhala 85.91 295 P **P** 14 01 51.8 +1.9

comp=Z,1.0nm,0.3s,baz=360,slow=24,SNR=2.3
KMRM Mail Ridge 85.92 45 P **P** 14 01 50.1 +0.4
KMRM IAmb IAmb 14 02 26.7
comp=Z,186nm,1.2s
M20K Styx River 85.95 17 P **P** 14 01 49.9 +0.6
M20K Styx River 85.95 17 P **P** 14 01 49.6 +0.3
baz=216,SNR=11
M20K S **S** 14 12 12.1 -0.6
baz=216
SCZ2 Santa Cruz Isl 85.97 52 P **P** 14 01 48.7 -1.3
baz=244
TNA Tin City 85.98 9 P **P** 14 01 50.0 +0.7
TNA IAmb IAmb 14 02 31.2
comp=Z,174nm,1.4s
TNA Tin City 85.98 9 P **P** 14 01 49.1 -0.1
baz=202
TNA S **S** 14 12 14.2 +1.7
baz=202
JCC Jacoby Creek, 85.99 45 P **P** 14 01 50.0 +0.1
JCC IAmb IAmb 14 02 26.8
comp=Z,126nm,1.4s
TTA Tatalina 86.06 15 P **P** 14 01 49.8 0.0
TTA IAmb IAmb 14 02 26.5
comp=Z,112nm,1.4s
TTA Tatalina 86.06 15 P **P** 14 01 49.8 0.0
TTA pmax pmax
comp=Z,112nm,1.4s
TTA Tatalina 86.06 15 P **P** 14 01 50.3 +0.5
baz=213,SNR=7.6
TTA S **S** 14 12 14.6 +0.9
baz=213
PMPB Monarch Peak 86.09 50 P **P** 14 01 50.3 -0.3
PMPB IAmb IAmb 14 02 27.6
comp=Z,249nm,1.5s
SBC Santa Barbara 86.11 52 P **P** 14 01 49.8 -0.8
baz=244
KHMM Horse Mountain 86.22 45 P **P** 14 01 51.6 +0.5
KHMM IAmb IAmb 14 02 28.3
comp=Z,132nm,1.1s
PKM Mcpherson Peak 86.23 51 P **P** 14 01 50.6 -0.8
baz=244
PKM S **S** 14 12 16.9 +0.1
baz=244
L20K Farewell, AK 86.24 16 P **P** 14 01 50.6 -0.1
baz=215,SNR=26
L20K S **S** 14 12 16.9 +1.6
baz=215
PAGB Antelope Grade 86.28 50 P **P** 14 01 51.6 +0.1
PAGB IAmb IAmb 14 01 57.4
comp=Z,102nm,1.3s
SMMC Simmler 86.28 51 P **P** 14 01 49.6 -1.9
baz=244
SUA Susitna One 86.30 18 P **P** 14 01 51.1 0.0
SUA IAmb IAmb 14 02 31.7
comp=Z,77nm,1.2s
SUA Susitna One 86.30 18 P **P** 14 01 50.6 -0.5
baz=218
SUA S **S** 14 12 13.3 -2.9
baz=218
ULN Ulaanbaatar 86.30 324 P **P** 14 01 51.6 +0.1
ULN IAmb IAmb 14 01 53.9
comp=Z,241nm,1.1s
ULN Ulaanbaatar 86.30 324 *d i*P **P** 14 01 52.3 +0.8
ULN pmax pmax
comp=Z,282nm,1.3s
RC01 Rabbit Creek A 86.31 19 P **P** 14 01 51.8 +0.9
RC01 IAmb IAmb 14 02 30.5
comp=Z,91nm,1.2s
RC01 Rabbit Creek A 86.31 19 P **P** 14 01 49.1 -1.9
baz=219
RC01 S **S** 14 12 13.3 -2.7
baz=219
SCI2 San Clemente I 86.36 54 P **P** 14 01 50.1 -1.7
baz=245
SCI2 S **S** 14 12 20.4 +2.7
baz=245
YAK Yakutsk 86.37 343 P **P** 14 01 51.3 +0.1
comp=Z,69nm,0.8s,baz=116,slow=0.6,SNR=41
YAK pP **pP** 14 02 23.4 +1.5
comp=Z,82nm,0.8s,baz=205,slow=1.2,SNR=6.0
YAK S **SKSac** 14 12 02.4 -3.5
comp=Z,2.2nm,0.4s,baz=154,slow=23,SNR=16
YAK LR LR 14 40 11.8
comp=Z,445nm,18.5s,baz=118,slow=35
comp=Z,69nm,0.8s
YAK Yakutsk 86.37 343 P **P** 14 01 51.3 +0.1
YAK IAmb IAmb 14 02 26.9
comp=Z,159nm,0.8s
YAK Yakutsk 86.37 343 *d i*P **P** 14 01 51.6 +0.4
YAK *e**PP **pP** 14 02 22.4 +0.5
YAK *e* 14 05 13.1
YAK *e*PPP PPP 14 07 08.2
YAK *e*S **SKSac** 14 12 04.4 -1.5
YAK *e* 14 12 17.7
YAK pmax pmax
comp=Z,116nm,0.9s
YAK pmax pmax
comp=N,24nm,1.2s
YAK pmax pmax
comp=E,11nm,1.0s
YAK pmax pmax
comp=Z,150nm,3.0s
YAK pmax pmax
comp=N,101nm,3.3s
YAK pmax pmax
comp=E,89nm,2.9s
YAK smax smax
comp=N,282nm,1.7s
YAK smax smax
comp=E,92nm,1.6s
SKT Skwentna 86.48 18 P **P** 14 01 50.8 -1.0
SKT Skwentna 86.48 18 P **P** 14 01 50.6 -1.2
baz=217
SKT S **S** 14 12 14.6 -3.0
baz=217
BCW Bitter Crk WRg 86.55 51 P **P** 14 01 53.9 +1.0
BCW IAmb IAmb 14 02 29.1
comp=Z,132nm,1.4s
GTA Gaotai 86.56 314⇓ P **P** 14 01 53.6 +0.7
GTA pP pP 14 02 24.1 +0.2
GTA sP sP 14 02 37.5 +0.9
GTA PP **PP** 14 05 14.4 -2.2
GTA SKS **SKSac** 14 12 06.9 -1.6
GTA S **S** 14 12 22.6 +3.0
GTA SS **SS** 14 18 05.5 +1.9
GTA pmax pmax
comp=Z,100nm,1.1s
GTA pmax pmax
comp=Z,750nm,8.0s
GTA LR LR
comp=Z,990nm,19.6s
GTA LR LR
comp=Z,1µm,22.9s
GTA LR LR
comp=Z,2µm,23.1s
CIS Catalina Islan 86.64 53 P **P** 14 01 52.1 -1.1
baz=245
BILL Bilibino 86.65 359 P **P** 14 01 52.2 -0.3
BILL IAmb IAmb 14 02 29.1
comp=Z,130nm,1.2s
BILL Bilibino 86.65 359 *c i*P **P** 14 01 53.0 +0.5
BILL *i**PP **pP** 14 02 23.9 +0.7
BILL *e**SP **sP** 14 02 36.6 +0.7
BILL *e* 14 05 16.2
BILL *e*PPP PPP 14 07 11.8
BILL *i*S **S** 14 12 15.7 -3.3
BILL *e*SS **SS** 14 18 05.5 +2.1
BILL pmax pmax
comp=Z,94nm,1.3s
BILL MLR MLR
comp=Z,364nm,17.0s
SONM Songino Array 86.66 323 P **P** 14 01 53.9 +0.8
comp=Z,113nm,0.8s,baz=138,slow=4.3,SNR=255
SONM pP **pP** 14 02 25.5 +1.3
comp=Z,58nm,1.0s,baz=166,slow=7.3,SNR=3.3
SONM S **SKSac** 14 12 06.2 -2.5
comp=Z,1.1nm,0.9s,baz=107,slow=9.1,SNR=2.6
SONM PKKPbc **PKKPbc** 14 19 48.8 -1.2
comp=Z,5.9nm,0.8s,baz=264,slow=2.0,SNR=19
SONM PKPPKP **P'P'df** 14 27 52.0 -2.2
comp=Z,2.1nm,1.0s,baz=263,slow=2.3,SNR=8.7
comp=Z,113nm,0.8s
SONM Songino Array 86.66 323 P **P** 14 01 53.1 0.0
SONM IAmb IAmb 14 01 55.9
comp=Z,138nm,1.0s
M22K Willow 86.71 18 P **P** 14 01 52.1 -0.8

M22K IAmb IAmb 14 02 34.4
comp=Z,88nm,1.0s
M22K Willow 86.71 18 P **P** **14 01 53.4 +0.5**
baz=218
M22K S **S** **14 12 18.7 -1.1**
baz=218
SHL Shillong 86.80 298 P **P** **14 01 54.4 -0.1**
SHL Shillong 86.80 298 P **P** **14 01 54.4 -0.1**
SHL pmax pmax
comp=Z,330nm,1.4s
HIN Hinchinbrook I 86.81 20 P **P** **14 01 52.8 -0.7**
FMP Fort Macarthur 86.86 53 P **P** **14 01 53.6 -0.6**
baz=245
PMR Palmer 86.89 19 P **P** **14 01 53.7 0.0**
PMR Palmer 86.89 19 P **P** **14 01 53.7 0.0**
PMR pmax pmax
comp=Z,60nm,1.2s
PMR Palmer 86.89 19 P **P** **14 01 53.9 +0.2**
baz=219,SNR=9.8
PMR S **S** **14 12 20.0 -1.5**
baz=219
K20K Telida 86.91 16 P **P** **14 01 53.5 -0.4**
K20K Telida 86.91 16 P **P** **14 01 53.1 -0.8**
baz=215
K20K S **S** **14 12 22.6 +0.8**
baz=215
OSI Osito Audit: C 86.92 52 P **P** **14 01 54.8 +0.2**
baz=245
OSI S **S** **14 12 24.1 +1.0**
baz=245
L02F Cave Junction 86.92 44 P **P** **14 01 55.6 +1.1**
baz=241,SNR=7.8
L02F S **S** **14 12 23.3 +0.5**
baz=241
KNK Knik Glacier 86.95 19 P **P** **14 01 53.8 -0.3**
KNK Knik Glacier 86.95 19 P **P** **14 01 53.9 -0.2**
baz=220
KNK S **S** **14 12 21.8 -0.5**
baz=220
GLI Glacier Island 86.98 20 P **P** **14 01 53.8 -0.4**
GLI Glacier Island 86.98 20 P **P** **14 01 53.4 -0.9**
baz=221
GLI S **S** **14 12 21.4 -1.1**
baz=221
PPLA Purkeypile 87.03 17 P **P** **14 01 54.5 -0.2**
PPLA Purkeypile 87.03 17 P **P** **14 01 53.2 -1.4**
baz=217
PPLA S **S** **14 12 20.7 -2.5**
baz=217
DECC Green Verdugo 87.06 52 P **P** **14 01 55.5 +0.2**
baz=245
ARVC Arvin 87.06 51 P **P** **14 01 55.1 -0.2**
baz=245
ARVC S **S** **14 12 25.8 +1.4**
baz=245
FID Port Fidalgo 87.08 20 P **P** **14 01 54.2 -0.6**
GHO Glory Hole Cre 87.09 19 P **P** **14 01 54.0 -0.8**
ORV Oroville 87.11 47 P **P** **14 01 55.2 -0.2**
ORV IAmb IAmb 14 02 31.7
comp=Z,158nm,1.5s
ORV Oroville 87.11 47 P **P** **14 01 55.2 -0.2**
ORV pmax pmax
comp=Z,158nm,1.5s
PASC Pasadena Art C 87.13 53 P **P** **14 01 55.3 -0.3**
K02D Willamette Mer 87.14 43 P **P** **14 01 56.6 +1.1**
baz=241,SNR=8.9
K02D S **S** **14 12 26.3 +1.3**
baz=241
VOG Valley Oaks Go 87.17 50 P **P** **14 01 55.2 -0.5**
baz=244
EYAK Cordova Ski Ar 87.17 21 P **P** **14 01 54.6 -0.5**
EYAK Cordova Ski Ar 87.17 21 P **P** **14 01 54.1 -1.1**
baz=222
EYAK S **S** **14 12 23.8 -0.5**
baz=222
VES Vestal, Richgr 87.18 51 P **P** **14 01 55.8 0.0**
baz=244,SNR=16
VES S **S** **14 12 26.3 +0.9**
baz=244
CUT Chulitna 87.18 18 P **P** **14 01 53.7 -1.4**
baz=218
CUT S **S** **14 12 21.9 -2.4**
baz=218
J01E Myrtle Point 87.19 43 P **P** **14 01 55.2 -0.4**
J01E IAmb IAmb 14 02 34.8
comp=Z,133nm,1.2s
J01E Myrtle Point 87.19 43 P **P** **14 01 54.7 -0.9**
baz=241
J01E S **S** **14 12 24.6 -0.6**
baz=241
CMB Columbia Colle 87.20 48 P **P** **14 01 54.2 -1.7**
CMB IAmb IAmb 14 02 31.6
comp=Z,76nm,1.1s
CMB Columbia Colle 87.20 48 P **P** **14 01 54.2 -1.7**
CMB pmax pmax
comp=Z,76nm,1.1s
SML Sawmill 87.30 19 P **P** **14 01 54.5 -1.3**
SML Sawmill 87.30 19 P **P** **14 01 55.5 -0.3**
baz=220
SML S **S** **14 12 24.9 -0.7**
baz=220
YBH Yreka Blue Hor 87.30 44 LR LR 14 33 04.6
comp=Z,2µm,21.2s,baz=244,slow=30
YBH Yreka Blue Hor 87.30 44 P **P** **14 01 56.2 -0.2**
YBH IAmb IAmb 14 02 33.4
comp=Z,116nm,1.3s
YBH Yreka Blue Hor 87.30 44 P **P** **14 01 56.2 -0.2**
YBH pmax pmax
comp=Z,116nm,1.3s
GCSA Galena City Sc 87.39 14 P **P** **14 01 57.3 +1.2**
baz=212
GCSA S **S** **14 12 27.3 +1.2**
baz=212
PMSA Palmer Station 87.42 160 P **P** **14 01 57.5 +1.1**
comp=Z,259nm,1.0s,baz=243,slow=4.0,SNR=17
PMSA LR LR 14 34 47.4
comp=Z,597nm,21.0s,baz=236,slow=31
comp=Z,259nm,1.0s
PMSA Palmer Station 87.42 160 *e*P **P** **14 01 57.4 +1.0**
M23K Glacier View 87.47 19 P **P** **14 01 56.6 0.0**
baz=221
M23K S **S** **14 12 25.2 -2.0**
baz=221
CAST Castle Rocks 87.48 17 P **P** **14 01 54.8 -1.8**
CAST IAmb IAmb 14 02 34.6
comp=Z,64nm,0.9s
CAST Castle Rocks 87.48 17 P **P** **14 01 55.0 -1.6**
baz=217,SNR=25
ELS Elsinore Mount 87.49 53 P **P** **14 01 56.0 -1.5**
HMT Hamilton 87.52 21 P **P** **14 01 55.9 -1.0**
ISA Isabella, Lake 87.55 51 P **P** **14 01 57.5 -0.2**
ISA IAmb IAmb 14 02 36.7
comp=Z,100nm,1.3s
ISA Isabella, Lake 87.55 51 P **P** **14 01 57.5 -0.2**
ISA pmax pmax
comp=Z,99nm,1.3s
ISA Isabella, Lake 87.55 51 P **P** **14 01 58.3 +0.6**
baz=245,SNR=17
ISA S **S** **14 12 29.6 +0.4**
baz=245
HUMO Hull Mountain 87.55 43 P **P** **14 01 57.0 -0.5**
HUMO IAmb IAmb 14 02 34.5
comp=Z,85nm,1.2s
BFSC Mount Baldy Ra 87.56 53 P **P** **14 01 58.2 +0.4**
baz=245,SNR=12
BFSC S **S** **14 12 30.1 +0.6**
baz=245
J20K Nowinta River 87.56 15 P **P** **14 01 56.6 -0.3**
J20K Nowinta River 87.56 15 P **P** **14 01 56.7 -0.3**
baz=215,SNR=18
J20K S **S** **14 12 28.6 +0.7**
baz=215
EDW2 Edwards Air Fo 87.58 52 P **P** **14 01 57.0 -0.9**
baz=245,SNR=8.3
EDW2 S **S** **14 12 32.1 +2.7**
baz=245
DBO Dodson Butte 87.61 43 P **P** **14 01 57.7 -0.1**
DBO IAmb IAmb 14 02 36.9
comp=Z,77nm,1.3s
SCM Sheep Creek Mo 87.63 19 P **P** **14 01 57.2 -0.2**
SCM IAmb IAmb 14 02 36.9
comp=Z,57nm,0.9s
SCM Sheep Creek Mo 87.63 19 P **P** **14 01 57.2 -0.2**
SCM pmax pmax
comp=Z,57nm,0.9s
SCM Sheep Creek Mo 87.63 19 P **P** **14 01 57.7 +0.3**
baz=221
SCM S **S** **14 12 27.4 -1.4**
baz=221
MURC Murrieta 87.64 53 P **P** **14 01 58.0 -0.1**
baz=246
MURC S **S** **14 12 32.9 +2.8**
baz=246
BGLC Bering Glacier 87.71 22 P **P** **14 01 57.2 -0.4**
baz=225
DIB Dawson Inlet, 87.74 31 P **P** **14 01 58.4 +0.4**
DIB IAmb IAmb 14 02 35.0
comp=Z,223nm,1.6s
L04D Klamath Falls 87.80 44 P **P** **14 01 59.1 +0.3**
L04D IAmb IAmb 14 02 35.3
comp=Z,143nm,1.2s
L04D Klamath Falls 87.80 44 P **P** **14 01 59.4 +0.6**
baz=242,SNR=18
L04D S **S** **14 12 31.8 +0.4**
baz=242
CHUM Lake Minchumin 87.80 16 P **P** **14 01 57.5 -0.6**
baz=216
CHUM S **S** **14 12 27.2 -2.8**
baz=216
KLU Klutina 87.82 20 P **P** **14 01 57.8 -0.6**
KLU Klutina 87.82 20 P **P** **14 01 58.4 +0.1**
baz=222,SNR=7.3
KLU S **S** **14 12 29.3 -1.3**
baz=222
I03D Drain, OR 87.82 42 P **P** **14 01 58.6 -0.1**
baz=241
I03D S **S** **14 12 31.5 +0.3**
baz=241
BMRM Bremner River 87.86 21 P **P** **14 01 56.4 -2.2**
BMRM IAmb IAmb 14 02 35.9
comp=Z,146nm,2.0s
BMRM Bremner River 87.86 21 P **P** **14 01 58.6 +0.1**
baz=224,SNR=6.2
BMRM S **S** **14 12 29.0 -2.0**
baz=224
KTH Kantishna Hill 87.91 17 P **P** **14 01 56.8 -1.9**
MONP2 Monument Peak 87.95 54 P **P** **14 02 00.3 +0.5**
baz=246,SNR=12
MONP2 S **S** **14 12 35.8 +2.4**
baz=246
MDPB Devils Postpil 87.95 49 P **P** **14 01 59.7 -0.1**
MDPB IAmb IAmb 14 02 35.7
comp=Z,70nm,1.1s
OMMB Old Mammoth Mi 88.00 49 P **P** **14 01 59.8 -0.3**
OMMB IAmb IAmb 14 02 36.8
comp=Z,144nm,1.6s
TRF Thorofare Moun 88.00 17 P **P** **14 01 58.2 -1.1**
TRF Thorofare Moun 88.00 17 P **P** **14 01 57.4 -1.9**
baz=218
TRF S **S** **14 12 29.2 -3.3**
baz=218
WAT1 Susitna Watana 88.02 18 P **P** **14 01 58.7 -0.5**
baz=220
WAT1 S **S** **14 12 29.7 -2.6**
baz=220
BEKR Beckworth 88.03 47 P **P** **14 02 00.1 +0.1**
BEKR IAmb IAmb 14 02 37.6
comp=Z,371nm,1.9s
LRMC Laurel Mtn Rad 88.06 52 P **P** **14 02 01.3 +1.1**
baz=245,SNR=9.3
LRMC S **S** **14 12 35.9 +1.7**
baz=245
WAT6 Susitna Watana 88.07 19 P **P** **14 01 59.1 -0.5**
baz=221,SNR=11
WAT6 S **S** **14 12 31.9 -1.2**
baz=221
IKP In-Ko-Pah, Jac 88.09 55 P **P** **14 02 01.2 +0.8**
baz=246,SNR=6.8
IKP S **S** **14 12 38.4 +3.9**
baz=246
WAX Waxell Ridge 88.09 22 P **P** **14 01 59.5 -0.2**
WAX IAmb IAmb 14 05 05.8
comp=Z,50nm,0.9s
RMX La Rumorosa 88.10 55 P **P** **14 02 00.1 -0.4**
BBRC Big Bear Solar 88.12 53 P **P** **14 01 58.4 -2.3**
baz=246
MLAC Mammoth, Mammo 88.12 49 P **P** **14 01 58.4 -2.2**
baz=244
CWC Cottonwood Cre 88.17 51 P **P** **14 01 58.4 -2.3**
baz=245
CWC S **S** **14 12 36.9 +1.7**
baz=245
M24K Tolsona, Glenn 88.19 19 P **P** **14 02 00.1 0.0**
M24K IAmb IAmb 14 02 37.1
comp=Z,85nm,1.1s
M24K Tolsona, Glenn 88.19 19 P **P** **14 02 00.6 +0.5**
baz=222
M24K S **S** **14 12 34.0 -0.1**
baz=222
PFO Pinyon Flats O 88.21 54 LR LR 14 34 10.5
comp=Z,1µm,20.2s,baz=250,slow=30
PFO Pinyon Flats O 88.21 54 P **P** **14 01 59.8 -1.1**
PFO Pinyon Flats O 88.21 54 *e*P **P** **14 02 02.2 +1.3**
PFO pmax pmax
comp=Z,57nm,1.8s
PFO Pinyon Flats O 88.21 54 P **P** **14 02 01.6 +0.7**
baz=246,SNR=7.5
PFO S **S** **14 12 37.5 +1.9**
baz=246
PNTR Pine Nut 88.22 48 P **P** **14 02 00.0 -1.0**
PNTR IAmb IAmb 14 02 37.8
comp=Z,342nm,1.8s
MESA MESA 88.22 22 P **P** **14 02 00.5 +0.1**
baz=226
MESA S **S** **14 12 33.6 -1.2**
baz=226
YUH Yuha Desert 88.23 55 P **P** **14 02 00.5 -0.4**
YUH IAmb IAmb 14 02 38.8
comp=Z,122nm,1.9s
VCNR Virginia City 88.27 47 P **P** **14 02 00.6 -0.6**
VCNR IAmb IAmb 14 02 38.0
comp=Z,75nm,1.4s
TIN Tinemaha, Big 88.32 50 P **P** **14 02 00.6 -0.7**
baz=245
TIN S **S** **14 12 38.6 +2.1**
baz=245
RRX Edison Barstow 88.32 52 P **P** **14 02 01.0 -0.3**
baz=246
TGL Tana Glacier 88.32 22 P **P** **14 02 00.5 -0.2**
TGL IAmb IAmb 14 02 50.0
comp=Z,84nm,1.5s
BPAW Bear Paw Mtn. 88.32 16 P **P** **14 01 59.5 -1.1**
BPAW Bear Paw Mtn. 88.32 16 P **P** **14 02 00.4 -0.2**
baz=218
BPAW S **S** **14 12 30.2 -5.0**
baz=218
N25K Chitina, Valde 88.33 20 P **P** **14 01 59.6 -1.1**
N25K Chitina, Valde 88.33 20 P **P** **14 02 00.2 -0.5**
baz=224,SNR=7.0
N25K S **S** **14 12 34.6 -0.9**
baz=224
K04D Chiloquin, OR 88.34 44 P **P** **14 02 02.3 +1.0**
baz=242
K04D S **S** **14 12 36.9 +0.3**
baz=242
RND Reindeer 88.37 18 P **P** **14 01 59.7 -1.2**
RND Reindeer 88.37 18 P **P** **14 01 59.7 -1.2**
RND pmax pmax
comp=Z,57nm,1.2s
ISLE Juniper Island 88.38 22 P **P** **14 01 59.8 -1.3**
J04D Umpqua Nationa 88.40 43 P **P** **14 02 02.6 +0.9**
baz=242,SNR=10
J04D S **S** **14 12 37.6 +0.4**
baz=242
YERR Yerington 88.42 48 P **P** **14 02 02.0 +0.1**
YERR IAmb IAmb 14 02 39.6
comp=Z,264nm,1.8s
YAH Yahtse 88.43 22 P **P** **14 02 01.6 +0.2**
YAH IAmb IAmb 14 02 39.3
comp=Z,115nm,1.6s
MPMC Manual Prospec 88.44 51 P **P** **14 02 02.3 +0.2**
baz=245,SNR=33
MPMC S **S** **14 12 40.1 +2.2**
baz=245
VRDI Verde Repeater 88.44 21 P **P** **14 02 01.2 -0.2**
SWSC Sam W. Stewart 88.45 54 P **P** **14 01 59.9 -2.0**
baz=246
SWSC S **S** **14 12 37.7 0.0**
baz=246
I04A Tendick Farm, 88.46 42 P **P** **14 02 02.2 +0.4**
baz=242,SNR=8.9
I04A S **S** **14 12 36.4 -1.0**
baz=242
GLB Gilahina Butte 88.47 21 P **P** **14 02 01.1 -0.4**
HOLB Holberg 88.53 35 P **P** **14 02 02.4 +0.5**
DHY Denali Highway 88.55 18 P **P** **14 02 00.8 -1.0**
DHY Denali Highway 88.55 18 P **P** **14 02 01.4 -0.5**
baz=221,SNR=8.2
DHY S **S** **14 12 34.7 -3.0**
baz=221
H04D Lebanon 88.60 42 P **P** **14 02 02.8 +0.5**
baz=242,SNR=6.6
H04D S **S** **14 12 38.6 0.0**
baz=242
MCK McKinley 88.60 17 P **P** **14 02 00.6 -1.3**
MCK McKinley 88.60 17 P **P** **14 02 00.6 -1.3**
MCK pmax pmax
comp=Z,81nm,1.6s
MCK McKinley 88.60 17 P **P** **14 02 00.8 -1.1**
baz=220
MCK S **S** **14 12 33.5 -4.4**
baz=220
LHV Little Huntoon 88.63 49 P **P** **14 02 01.8 -0.8**
LHV IAmb IAmb 14 02 39.8
comp=Z,191nm,1.5s
PAHR Pah Rah Range 88.64 47 P **P** **14 02 03.1 +0.2**
PAHR IAmb IAmb 14 02 39.5
comp=Z,204nm,1.5s
GSC Goldstone, Bar 88.64 52 P **P** **14 02 03.0 +0.1**
GSC IAmb IAmb 14 02 40.6
comp=Z,181nm,1.9s
GSC Goldstone, Bar 88.64 52 P **P** **14 02 03.0 +0.1**
GSC pmax pmax
comp=Z,181nm,1.9s
GSC Goldstone, Bar 88.64 52 P **P** **14 02 02.5 -0.3**
baz=246,SNR=12
GSC S **S** **14 12 42.0 +2.5**
baz=246
GRNC Granite Creek 88.68 22 P **P** **14 02 02.5 -0.2**
TABL Table Mountain 88.70 22 P **P** **14 02 02.5 -0.2**
TABL IAmb IAmb 14 02 38.1
comp=Z,68nm,1.3s
MCARA McCarthy VSAT 88.70 21 P **P** **14 02 02.3 -0.1**
baz=225
MCARA S **S** **14 12 36.8 -2.0**
baz=225
GOMU GeErMu 88.71 309 P **P** **14 02 04.5 +1.0**
GOMU PP **PP** **14 05 32.9 -1.4**
GOMU pmax pmax
comp=Z,190nm,4.6s
GOMU LR LR
comp=Z,350nm,17.0s
GOMU LR LR
comp=Z,400nm,16.8s
GOMU LR LR
comp=Z,610nm,16.5s
BELC Belle Mtn. Jos 88.72 53 P **P** **14 02 03.6 +0.2**
baz=246,SNR=28
BELC S **S** **14 12 42.4 +1.9**
baz=246
HARP HAARP 88.73 20 P **P** **14 02 03.1 +0.6**
baz=223
HARP S **S** **14 12 37.0 -2.1**
baz=223
SIT Sitka 88.77 27 P **P** **14 02 02.8 0.0**
baz=232
RYN Ryan 88.78 48 P **P** **14 02 03.5 -0.1**
RYN IAmb IAmb 14 02 40.2
comp=Z,211nm,1.8s
CRAG Craig 88.78 29 P **P** **14 02 01.7 -1.1**
baz=234
CRAG S **S** **14 12 40.0 +0.4**
baz=234
PCA Pinnacle 88.78 23 P **P** **14 02 02.2 -0.7**
PINM Pinnacle 88.78 23 P **P** **14 02 01.6 -1.3**
baz=227
PINM S **S** **14 12 37.7 -2.1**
baz=227
BWN Browne 88.79 17 P **P** **14 02 01.9 -0.9**
BWN IAmb IAmb 14 02 40.5
comp=Z,130nm,1.1s
HEC Hector,Ludlow 88.80 53 P **P** **14 02 03.9 +0.3**
baz=246,SNR=24
HEC S **S** **14 12 41.8 +0.7**
baz=246
BOD Bodaibo 88.80 334 *e*P **P** **14 02 02.4 -0.5**
BOD pmax pmax
comp=Z,86nm,1.2s
PNL Peninsula 88.81 24 P **P** **14 02 02.4 -0.6**
baz=228
PNL S **S** **14 12 37.3 -2.7**
baz=228
LCH Last Change Ra 88.82 50 P **P** **14 02 03.8 +0.1**
LCH IAmb IAmb 14 02 40.3
comp=Z,129nm,1.8s
NVAR Mina Array Bea 88.85 49 P **P** **14 02 04.9 +0.9**
comp=Z,28nm,1.1s,baz=228,slow=5.6,SNR=73
NVAR pP **pP** **14 02 37.9 +2.6**
comp=Z,19nm,0.9s,baz=231,slow=7.2,SNR=6.4
NVAR PKKPbc **PKKPbc** **14 19 44.6 +0.4**
comp=Z,0.9nm,0.7s,baz=96,slow=3.4,SNR=6.5
NVAR PKKPab PKKPab 14 20 19.4
comp=Z,0.6nm,0.7s,baz=67,slow=3.5,SNR=4.2
NVAR PKPPKP **P'P'df** **14 27 51.9 +0.8**
comp=Z,0.7nm,0.7s,baz=67,slow=3.6,SNR=4.8
NVAR LR LR 14 35 02.2
comp=Z,2µm,19.6s,baz=250,slow=31
comp=Z,28nm,1.1s
NVAR Mina Array Bea 88.85 49 P **P** **14 02 03.6 -0.3**
QSM Queen of Sheba 88.86 51 P **P** **14 02 03.9 +0.1**
QSM IAmb IAmb 14 02 07.2
comp=Z,74nm,1.3s
TROLL Troll, Antarti 88.90 184 P **P** **14 02 04.2 +0.6**
BCPM Bancas Point 88.92 23 pP **pP** 14 02 33.2 -1.2
GRAC Grapevine Rang 88.92 50 P **P** **14 02 03.6 -0.5**
GRAC IAmb IAmb 14 02 45.5
comp=Z,251nm,1.9s
GRAC Grapevine Rang 88.92 50 P **P** **14 02 05.0 +0.9**
baz=245,SNR=20
GRAC S **S** **14 12 45.8 +3.8**
baz=245
I21K Tanana 88.93 15 P **P** **14 02 03.2 -0.2**
I21K Tanana 88.93 15 P **P** **14 02 02.8 -0.5**
baz=217,SNR=18
I21K S **S** **14 12 40.4 -0.3**
baz=217
BARN Barnard Glacie 88.94 22 P **P** **14 02 02.9 -0.9**
BARN IAmb IAmb 14 02 39.4
comp=Z,55nm,1.1s
NV11 Mina Array Sit 88.95 49 P **P** **14 02 04.5 +0.2**
NV11 IAmb IAmb 14 02 41.1
comp=Z,231nm,1.9s
K05A Summer Lake 88.95 44 P **P** **14 02 04.6 +0.3**
LSA Lhasa 88.97 302 P **P** **14 02 04.8 -0.3**
LSA IAmb IAmb 14 02 38.1
comp=Z,149nm,1.8s
LSA Lhasa 88.97 302 P **P** **14 02 04.8 -0.3**
LSA pmax pmax
comp=Z,149nm,1.8s
LSA Lhasa 88.97 302 P **P** **14 02 05.9 +0.9**
LSA LR LR
comp=Z,900nm,5.0s
LSA LR LR
comp=Z,3µm,9.6s
LSA LR LR
comp=Z,720nm,6.1s
MOD Modoc Plateau 88.98 45 P **P** **14 02 04.5 +0.2**
MOD IAmb IAmb 14 02 41.0
comp=Z,157nm,1.4s
J05D Fort Rock, OR 88.99 43 P **P** **14 02 05.2 +0.8**
baz=243,SNR=73
J05D S **S** **14 12 41.8 -0.8**
baz=243
CTG Chitna Glacier 88.99 22 P **P** **14 02 03.3 -0.7**
baz=226,SNR=9.2
CTG S **S** **14 12 37.7 -4.1**
baz=226
CTGM Chitina Glacie 88.99 22 P **P** **14 02 03.8 -0.2**
CTGM IAmb IAmb 14 02 41.5
comp=Z,86nm,1.5s
BC3 Big Chuckawall 89.00 54 P **P** **14 02 05.1 +0.5**
baz=247,SNR=9.5
BC3 S **S** **14 12 45.6 +2.6**
baz=247
LOGN Logan Glacier 89.01 22 P **P** **14 02 03.2 -0.8**
H04A Detroit Lake 89.02 42 P **P** **14 02 04.6 +0.2**
PAX Paxson 89.05 19 P **P** **14 02 02.5 -1.7**
baz=223
PAX S **S** **14 12 39.0 -3.3**
baz=223
FURC Furnace Creek, 89.07 51 P **P** **14 02 03.3 -1.4**

baz=246,SNR=14
RDOG Red Dog Mine 89.08 10 P **P** **14 02 02.7 -1.3**
RDOG Red Dog Mine 89.08 10 P **P** **14 02 01.2 -2.9**
RDOG S **S** **14 12 38.7 -3.4**
baz=207
GWY Greenwater Val 89.10 51 P **P** **14 02 05.1 0.0**
H21K Melozitna Rive 89.11 15 P **P** **14 02 04.0 -0.2**
H21K Melozitna Rive 89.11 15 P **P** **14 02 04.2 0.0**
baz=216,SNR=13
H21K S **S** **14 12 42.7 +0.2**
baz=216
MLY Manley 89.13 16 P **P** **14 02 02.9 -1.5**
MLY Manley 89.13 16 P **P** **14 02 04.1 -0.3**
baz=218,SNR=11
MLY S **S** **14 12 39.8 -2.9**
baz=218
IMAR Indian Mountai 89.15 14 P **P** **14 02 04.2 -0.2**
NVL N'lazarevskaya 89.20 187 *jj iP* **P** **14 02 04.4 -0.4**
NVL pmax pmax
comp=Z,87nm,1.0s
WISH Wishkah 89.21 39 P **P** **14 02 06.0 +0.9**
NEA2 Nenana 89.23 17 P **P** **14 02 04.0 -0.8**
NEA2 IAmb IAmb 14 02 41.6
comp=Z,96nm,1.9s
NEA2 Nenana 89.23 17 P **P** **14 02 03.7 -1.1**
baz=219
NEA2 S **S** **14 12 38.8 -4.8**
baz=219
GLA Glamis 89.24 55 P **P** **14 02 06.1 +0.4**
GLA IAmb IAmb 14 02 09.9
comp=Z,134nm,1.4s
GLA Glamis 89.24 55 P **P** **14 02 06.1 +0.4**
GLA pmax pmax
comp=Z,134nm,1.4s
GLA Glamis 89.24 55 P **P** **14 02 06.1 +0.4**
baz=247,SNR=22
GLA S **S** **14 12 48.7 +3.5**
baz=247
KVN Kaiserville 89.25 48 P **P** **14 02 06.2 +0.4**
KVN IAmb IAmb 14 02 42.4
comp=Z,201nm,1.8s
KVN Kaiserville 89.25 48 P **P** **14 02 06.2 +0.4**
KVN pmax pmax
comp=Z,201nm,1.8s
SHOC Shoshone, Teco 89.27 52 P **P** **14 02 06.6 +0.8**
baz=246
SHOC S **S** **14 12 47.0 +1.6**
baz=246
NLWA Neilton Lookou 89.28 39 P **P** **14 02 06.0 +0.5**
GMRC Granite Mounta 89.29 53 P **P** **14 02 06.6 +0.6**
baz=246,SNR=13
GMRC S **S** **14 12 49.0 +3.2**
baz=246
GRNB Grenville Isla 89.34 31 P **P** **14 02 06.4 +0.8**
TUQ Turquoise Moun 89.35 52 P **P** **14 02 05.2 -1.1**
baz=246
TUQ S **S** **14 12 48.8 +2.5**
baz=246
BBB Bella Bella 89.37 33 LR LR 14 38 03.6
comp=Z,983nm,18.0s,baz=244,slow=33
BBB Bella Bella 89.37 33 P **P** **14 02 06.0 +0.3**
I05D Terrebonne, OR 89.40 42 P **P** **14 02 07.0 +0.8**
baz=243,SNR=15
I05D S **S** **14 12 48.2 +2.0**
baz=243
PINE Pine Mountain 89.41 43 P **P** **14 02 06.1 -0.3**
PINE IAmb IAmb 14 02 43.4
comp=Z,118nm,1.1s
WRH Wood River Hil 89.41 17 P **P** **14 02 04.2 -1.4**
WRH IAmb IAmb 14 02 42.7
comp=Z,78nm,1.4s
IRM Iron Mountain 89.43 54 P **P** **14 02 07.2 +0.7**
baz=247,SNR=29
IRM S **S** **14 12 48.1 +1.3**
baz=247
M26K Nabesna, AK 89.43 20 P **P** **14 02 04.7 -1.2**
M26K IAmb IAmb 14 02 43.3
comp=Z,77nm,1.5s
M26K Nabesna, AK 89.43 20 P **P** **14 02 05.1 -0.8**
baz=225,SNR=9.9
M26K S **S** **14 12 43.7 -2.0**
baz=225
F04A Amboy 89.46 41 P **P** **14 02 06.3 0.0**
SNAA Sanae 89.54 183 P **P** **14 02 06.7 +0.2**
SNAA Sanae 89.54 183 LR LR 14 41 52.6
comp=Z,808nm,18.3s,baz=172,slow=35
SNAA Sanae 89.54 183 P **P** **14 02 06.1 -0.4**
SNAA Sanae 89.54 183 *c iP* **P** **14 02 06.2 -0.3**
SNAA pmax pmax
comp=Z,213nm,1.3s
K24K Donnelly Dome 89.58 18 P **P** **14 02 06.6 +0.1**
baz=222,SNR=12
K24K S **S** **14 12 45.8 -1.1**
baz=222
I23K Minto, Yukon-K 89.58 16 P **P** **14 02 05.6 -0.9**
I23K Minto, Yukon-K 89.58 16 P **P** **14 02 05.0 -1.5**
baz=219
I23K S **S** **14 12 42.9 -3.9**
baz=219
LPIG La Paz 89.61 64 LR LR 14 32 42.4
comp=Z,2µm,21.4s,baz=252,slow=29
CCB Clear Creek Bu 89.62 17 P **P** **14 02 05.0 -1.6**
CCB IAmb IAmb 14 02 43.4
comp=Z,81nm,1.8s
HOOD Mount Hood Mea 89.65 41 P **P** **14 02 07.4 0.0**
HOOD IAmb IAmb 14 02 43.8
comp=Z,158nm,1.2s
HDA Harding Lake 89.69 18 P **P** **14 02 05.8 -1.2**
HDA IAmb IAmb 14 02 47.7
comp=Z,59nm,1.0s
HDA Harding Lake 89.69 18 P **P** **14 02 05.8 -1.2**
baz=221,SNR=27
HDA S **S** **14 12 44.4 -3.5**
baz=221
HDA S **S** **14 12 44.4 -3.5**
baz=221
WRAK Wrangell Islan 89.69 28 P **P** **14 02 07.2 +0.1**
WRAK IAmb IAmb 14 02 45.2
comp=Z,167nm,1.6s
WRAK Wrangell Islan 89.69 28 P **P** **14 02 07.1 0.0**
baz=234,SNR=8.5
WRAK S **S** **14 12 47.2 -0.9**
baz=234
TPNV Topopah Spring 89.72 51 P **P** **14 02 08.2 +0.2**
TPNV IAmb IAmb 14 02 10.9
comp=Z,65nm,1.2s
TPNV Topopah Spring 89.72 51 P **P** **14 02 08.2 +0.2**
TPNV pmax pmax
comp=Z,65nm,1.3s
TPNV Topopah Spring 89.72 51 P **P** **14 02 08.5 +0.5**
baz=246,SNR=35
TPNV S **S** **14 12 53.0 +3.2**
baz=246
CBB Campbell River 89.73 36 P **P** **14 02 08.2 +0.7**
ZAK Zakamensk 89.74 324 *eP* **P** **14 02 07.4 -0.3**
ZAK pmax pmax
comp=Z,50nm,1.2s
MDM Murphy Dome 89.74 17 P **P** **14 02 05.8 -1.4**
BLYC Blythe 89.75 54 P **P** **14 02 07.9 -0.1**
BLYC IAmb IAmb 14 02 11.9
comp=Z,127nm,1.4s
L26K Log Cabin Wild 89.76 20 P **P** **14 02 07.9 +0.5**
baz=225
L26K S **S** **14 12 45.7 -3.0**
baz=225
YUK8 Steele Glacier 89.77 22 P **P** **14 02 07.3 -0.4**
baz=228,SNR=16
YUK8 S **S** **14 12 48.1 -1.1**
baz=228
TCOL CIGO, UAF Yank 89.78 17 P **P** **14 02 05.7 -1.6**
TCOL IAmb IAmb 14 02 44.2
comp=Z,73nm,1.4s
TCOL CIGO, UAF Yank 89.78 17 P **P** **14 02 06.3 -1.0**
baz=220,SNR=7.4
TCOL S **S** **14 12 43.3 -5.3**
baz=220
COLA College 89.78 17 P **P** **14 02 05.7 -1.7**
COLA IAmb IAmb 14 02 44.2
comp=Z,66nm,1.3s
COLA College 89.78 17 *deP* **P** **14 02 06.4 -0.9**
COLA pmax pmax
comp=Z,22nm,1.0s
COLA College 89.78 17 P **P** **14 02 06.5 -0.8**
baz=220
COLA S **S** **14 12 42.9 -5.8**

baz=220
RIDG Independent Ri 89.81 19 P **P** **14 02 06.7 -1.0**
RIDG IAmb IAmb 14 02 45.0
comp=Z,69nm,1.4s
RIDG Independent Ri 89.81 19 P **P** **14 02 06.4 -1.2**
baz=223,SNR=8.9
RIDG S **S** **14 12 46.4 -2.7**
baz=223
Q09A Carvers 89.81 49 P **P** **14 02 07.3 -1.0**
Q09A IAmb IAmb 14 02 44.4
comp=Z,78nm,1.0s
D03D Eldon 89.81 39 P **P** **14 02 07.3 -0.7**
baz=241,SNR=14
D03D S **S** **14 12 51.1 +1.4**
baz=241
B04A Port Angeles 89.82 38 P **P** **14 02 07.8 -0.2**
CLRS Cowichan Lake 89.83 37 P **P** **14 02 07.9 0.0**
CLRS IAmb IAmb 14 02 46.6
comp=Z,288nm,1.9s
G05D Wamic, OR 89.83 42 P **P** **14 02 06.7 -1.4**
baz=243,SNR=5.5
G05D S **S** **14 12 50.2 +0.1**
baz=243
PLBC Pleasant Camp 89.85 25 P **P** **14 02 07.9 +0.1**
baz=231,SNR=10
PLBC S **S** **14 12 48.0 -1.5**
baz=231
YUK3 Moose Creek 89.85 22 P **P** **14 02 07.8 -0.3**
baz=227,SNR=7.8
YUK3 S **S** **14 12 49.0 -0.9**
baz=227
BESE Bessie Mountai 89.91 26 P **P** **14 02 08.4 +0.2**
BESE IAmb IAmb 14 02 44.8
comp=Z,68nm,1.2s
JIS Juneau Island 89.92 26 P **P** **14 02 08.6 +0.4**
113A Mohawk Valley, 89.96 55 P **P** **14 02 08.8 -0.2**
113A IAmb IAmb 14 02 12.8
comp=Z,86nm,1.5s
IL31 89.97 17 P **P** **14 02 06.8 -1.4**
ILAR Eielson Array 89.97 17 P **P** **14 02 07.0 -1.2**
comp=Z,8.1nm,0.6s,baz=236,slow=5.2,SNR=63
ILAR pP **pP** **14 02 41.5 +2.3**
comp=Z,11nm,0.8s,baz=236,slow=6.2,SNR=5.7
ILAR PKKPbc **PKKPdf** **14 19 37.9 -0.3**
comp=Z,2.3nm,1.0s,baz=356,slow=2.8,SNR=7.3
ILAR PKPPKP **P'P'df** **14 27 48.5 +1.8**
comp=Z,0.7nm,1.0s,baz=348,slow=1.9,SNR=5.8
ILAR LR LR 14 36 33.1
comp=Z,2µm,21.7s,baz=222,slow=31
comp=Z,8.1nm,0.6s
ILAR Eielson Array 89.97 17 P **P** **14 02 06.8 -1.5**
DOT Dot Lake 89.98 19 P **P** **14 02 08.0 -0.4**
DOT **pP** **14 02 38.4 -1.0**
YUK6 Outpost Mounta 90.05 23 P **P** **14 02 08.6 -0.5**
baz=229
YUK6 S **S** **14 12 47.0 -4.8**
baz=229
H23K Yukon River 90.06 16 P **P** **14 02 08.3 -0.4**
H23K Yukon River 90.06 16 P **P** **14 02 09.5 +0.8**
baz=219
H23K S **S** **14 12 49.1 -2.3**
baz=219
NEE2 Needles Airpor 90.07 53 P **P** **14 02 09.1 -0.3**
baz=247
NEE2 S **S** **14 12 54.1 +1.4**
baz=247
POKR Poker Plat Res 90.08 17 P **P** **14 02 08.3 -0.5**
baz=221
POKR S **S** **14 12 47.7 -3.8**
baz=221
BWNR Bhubaneshwar 90.13 291 *eP* **P** **14 02 11.7 +1.6**
PGC Sidney 90.14 38 P **P** **14 02 08.5 -0.9**
VNA3 Neumayer Olymp 90.14 180 P **P** **14 02 09.3 0.0**
BVCY Beaver Creek 90.15 21 P **P** **14 02 09.7 +0.5**
baz=227
IRK Irkutsk 90.16 326 *eP* **P** **14 02 08.7 -0.7**
IRK *e* 14 02 41.4
IRK *eS* **SKSac** **14 12 30.3 +1.2**
IRK pmax pmax
comp=Z,103nm,2.8s
YUK4 Talbot Arm 90.21 22 P **P** **14 02 09.3 -0.4**
baz=229
SCRK Sand Creek 90.25 19 P **P** **14 02 08.7 -1.0**
SCRK Sand Creek 90.25 19 P **P** **14 02 08.4 -1.3**
baz=224,SNR=25
SCRK S **S** **14 12 51.8 -1.5**
baz=224
PDMCI Parker Dam,Lak 90.25 54 P **P** **14 02 10.9 +0.6**
baz=247,SNR=32
PDMCI S **S** **14 12 55.9 +1.5**
baz=247
SKAG Skagway 90.26 25 P **P** **14 02 08.3 -1.4**
SKAG IAmb IAmb 14 02 46.3
comp=Z,93nm,1.4s
SKAG Skagway 90.26 25 P **P** **14 02 09.3 -0.4**
baz=232,SNR=8.1
SKAG S **S** **14 12 51.4 -1.9**
baz=232
L27K Beaver Creek, 90.28 20 P **P** **14 02 08.6 -1.2**
L27K Beaver Creek, 90.28 20 P **P** **14 02 09.2 -0.6**
baz=226,SNR=10.0
L27K S **S** **14 12 51.0 -2.5**
baz=226
HYT Haines Junctio 90.29 23 P **P** **14 02 08.3 -1.7**
HYT Haines Junctio 90.29 23 P **P** **14 02 09.0 -1.0**
baz=230
HYT S **S** **14 12 50.5 -3.3**
baz=230
J25K Salcha River, 90.29 18 P **P** **14 02 08.5 -1.3**
J25K IAmb IAmb 14 02 47.2
comp=Z,71nm,1.4s
J25K Salcha River, 90.29 18 P **P** **14 02 08.7 -1.2**
baz=223,SNR=21
J25K S **S** **14 12 50.6 -3.0**
baz=223
BCAR Beaver Creek A 90.30 20 P **P** **14 02 08.6 -1.3**
D05A Enumclaw 90.31 40 P **P** **14 02 10.8 +0.5**
WVOR Wild Horse Val 90.32 45 P **P** **14 02 10.9 +0.3**
WVOR IAmb IAmb 14 02 47.4
comp=Z,154nm,1.3s
WVOR Wild Horse Val 90.32 45 P **P** **14 02 10.9 +0.3**
WVOR pmax pmax
comp=Z,154nm,1.3s
SHPR Sheep Range 90.34 51 P **P** **14 02 10.7 -0.2**
SHPR IAmb IAmb 14 02 48.9
comp=Z,243nm,2.0s
S11A Rachel 90.36 50 P **P** **14 02 10.6 -0.3**
214A Organ Pipe Nat 90.40 56 P **P** **14 02 11.2 +0.1**
214A IAmb IAmb 14 02 15.2
comp=Z,110nm,1.5s
214A Organ Pipe Nat 90.40 56 P **P** **14 02 11.1 0.0**
baz=248
214A S **S** **14 12 59.5 +3.5**
baz=248
BMN Battle Mountai 90.44 47 P **P** **14 02 11.2 -0.1**
BMN IAmb IAmb 14 02 47.9
comp=Z,109nm,1.3s
BMN Battle Mountai 90.44 47 P **P** **14 02 11.2 -0.1**
BMN pmax pmax
comp=Z,109nm,1.3s
I07A Izee 90.47 43 P **P** **14 02 11.3 +0.1**
I07A IAmb IAmb 14 02 48.0
comp=Z,116nm,1.2s
H24K Noodor Dome 90.51 16 P **P** **14 02 10.0 -0.8**
H24K Noodor Dome 90.51 16 P **P** **14 02 10.7 -0.1**
baz=220
H24K S **S** **14 12 50.2 -5.3**
baz=220
PALK Pallekele 90.53 277 P **P** **14 02 12.2 +0.1**
comp=Z,57nm,1.1s,baz=164,slow=8.3,SNR=5.5
PALK LR LR 14 45 26.3
comp=Z,1µm,18.2s,baz=216,slow=37
comp=Z,57nm,1.1s
VNA1 Neumayer--Stat 90.72 181 P **P** **14 02 12.2 +0.3**
J26L Joseph Creek 90.75 19 P **P** **14 02 11.6 -0.4**
J26L Joseph Creek 90.75 19 P **P** **14 02 11.4 -0.7**
baz=224,SNR=14
J26L S **S** **14 12 56.1 -1.7**
baz=224
W13A Hualapai Mount 90.75 53 P **P** **14 02 12.1 -0.8**
W13A IAmb IAmb 14 02 16.6
comp=Z,50nm,1.2s
R11A Troy Canyon, C 90.76 50 P **P** **14 02 12.3 -0.4**
R11A IAmb IAmb 14 02 50.4
comp=Z,103nm,2.0s
R11A Troy Canyon, C 90.76 50 P **P** **14 02 12.4 -0.4**

baz=246,SNR=24
R11A S **S** **14 12 57.8 -1.5**
baz=246
PRN Pahroc Range 90.78 51 P **P** **14 02 13.0 +0.1**
PRN IAmb IAmb 14 02 16.8
comp=Z,114nm,1.2s
O30N Mendenhall 90.79 24 P **P** **14 02 11.3 -1.0**
baz=231,SNR=9.4
O30N S **S** **14 12 57.3 -1.0**
baz=231
J08A Circle Bar Ran 90.83 44 P **P** **14 02 12.7 -0.2**
J08A IAmb IAmb 14 02 49.5
comp=Z,101nm,1.2s
N30M Aishikik Lake 90.85 23 P **P** **14 02 11.8 -0.7**
baz=230,SNR=7.7
N30M S **S** **14 12 57.1 -1.8**
baz=230
T35M Bob Quinn 90.96 29 P **P** **14 02 13.2 +0.1**
baz=236,SNR=7.7
T35M S **S** **14 12 58.5 -1.4**
baz=236
Y14A Wickenburg 90.99 54 P **P** **14 02 13.2 -0.6**
F07A Phinny Hill Vi 90.99 41 P **P** **14 02 13.2 -0.3**
F07A IAmb IAmb 14 02 50.0
comp=Z,112nm,1.3s
P32M Atlin 90.99 25 P **P** **14 02 12.5 -0.7**
baz=233,SNR=8.5
P32M S **S** **14 12 58.2 -2.0**
baz=233
COLD Coldfoot 91.00 15 P **P** **14 02 13.1 +0.1**
COLD Coldfoot 91.00 15 P **P** **14 02 12.6 -0.4**
baz=218
COLD S **S** **14 13 00.2 +0.5**
baz=218
WHY Whitehorse 91.18 24 P **P** **14 02 13.2 -1.0**
WHY **pP** **14 02 42.7 -2.5**
WHY IAmb IAmb 14 02 49.9
comp=Z,78nm,1.9s
WHY Whitehorse 91.18 24 P **P** **14 02 13.8 -0.4**
baz=232
WHY S **S** **14 13 00.5 -1.4**
baz=232
B06A Marblemount 91.23 39 P **P** **14 02 13.2 -1.2**
B06A IAmb IAmb 14 02 52.5
comp=Z,150nm,1.5s
E07A Sunnyside 91.33 41 P **P** **14 02 15.1 0.0**
E07A IAmb IAmb 14 02 51.7
comp=Z,107nm,1.1s
G08A Pilot Rock 91.34 42 P **P** **14 02 14.9 -0.4**
G08A IAmb IAmb 14 02 51.7
comp=Z,115nm,1.3s
N31M Braeburn, Yuko 91.36 23 P **P** **14 02 14.0 -0.8**
N31M Braeburn, Yuko 91.36 23 P **P** **14 02 14.3 -0.5**
baz=231,SNR=9.3
N31M S **S** **14 13 01.8 -1.5**
baz=231
HAWA Hanford 91.46 41 P **P** **14 02 16.3 +0.7**
HAWA IAmb IAmb 14 02 52.3
comp=Z,129nm,1.2s
MG03 Isla Dawson 91.61 149 P **P** **14 02 16.9 +0.6**
MOY Mondy 91.63 325 *eP* **P** **14 02 16.9 +0.5**
MOY pmax pmax
comp=Z,62nm,1.4s
MG04 Isla Riesco 91.64 148 P **P** **14 02 16.5 +0.1**
M30M Minto, Yukon 91.68 22 P **P** **14 02 15.6 -0.6**
M30M Minto, Yukon 91.68 22 P **P** **14 02 15.7 -0.6**
baz=230,SNR=20
M30M S **S** **14 13 04.3 -1.9**
baz=230
RAMN Ramite 91.72 298 *eP* **P** **14 02 18.0 +0.4**
GO10 Punta Arenas 91.73 149 P **P** **14 02 18.4 +1.5**
P33M Teslin, Yukon 91.73 25 P **P** **14 02 15.9 -0.7**
P33M Teslin, Yukon 91.73 25 P **P** **14 02 16.1 -0.5**
baz=234,SNR=11
P33M S **S** **14 13 06.5 -0.4**
baz=234
DAWY Dawson 91.76 20 P **P** **14 02 16.3 -0.4**
DAWY Dawson 91.76 20 P **P** **14 02 16.7 0.0**
baz=228,SNR=16
DAWY S **S** **14 13 04.2 -2.7**
baz=228
E08A Dider Farm, El 91.80 41 P **P** **14 02 17.4 +0.2**
MG05 Puerto Natales 91.83 147 P **P** **14 02 17.5 +0.1**
RAGD RAYAGADA 91.87 290 *eP* **P** **14 02 19.4 +1.2**
DLBC Dease Lake 91.88 27 LR LR 14 40 09.2
comp=Z,1µm,18.3s,baz=242,slow=33
DLBC Dease Lake 91.88 27 P **P** **14 02 17.5 +0.1**
DLBC IAmb IAmb 14 02 54.3
comp=Z,130nm,1.4s
DLBC Dease Lake 91.88 27 P **P** **14 02 17.6 +0.2**
baz=236,SNR=13
DLBC S **S** **14 13 06.6 -1.6**
baz=236
ELK Elko 91.95 48 LR LR 14 38 50.1
comp=Z,735nm,19.0s,baz=258,slow=32
ELK Elko 91.95 48 P **P** **14 02 18.2 -0.2**
ELK Elko 91.95 48 P **P** **14 02 18.2 -0.2**
ELK pmax pmax
comp=Z,30nm,1.2s
LCMT Little Creek M 91.96 52 P **P** **14 02 18.2 -0.1**
LCMT IAmb IAmb 14 02 22.0
comp=Z,59nm,1.2s
LLLB Lillooet 91.96 37 P **P** **14 02 17.6 -0.3**
LLLB IAmb IAmb 14 02 56.2
comp=Z,102nm,1.3s
CCUT Cedar City 92.07 51 P **P** **14 02 19.3 +0.3**
CCUT IAmb IAmb 14 02 57.0
comp=Z,71nm,1.4s
PSUT Pine Spring 92.08 50 P **P** **14 02 18.1 -0.9**
PSUT IAmb IAmb 14 02 55.8
comp=Z,39nm,1.3s
D08A Wollman Farm, 92.13 41 P **P** **14 02 18.5 -0.2**
D08A IAmb IAmb 14 02 56.4
comp=Z,179nm,1.7s
TUC Tucson 92.13 57 P **P** **14 02 20.6 +1.4**
TUC Tucson 92.13 57 P **P** **14 02 17.5 -1.7**
baz=249
TUC S **S** **14 13 14.8 +3.1**
baz=249
GO09 Cerro Castillo 92.14 147 P **P** **14 02 19.0 +0.2**
BMO Blue Mountains 92.22 43 P **P** **14 02 18.9 -0.4**
BMO IAmb IAmb 14 02 56.6
comp=Z,179nm,2.0s
BMO Blue Mountains 92.22 43 P **P** **14 02 18.9 -0.4**
BMO pmax pmax
comp=Z,179nm,2.0s
TOLK Toolik Lake Re 92.25 14 P **P** **14 02 18.8 -0.1**
TOLK Toolik Lake Re 92.25 14 P **P** **14 02 18.6 -0.3**
baz=219
TOLK S **S** **14 13 09.9 -1.2**
baz=219
SZCU Shurtz Canyon 92.29 51 P **P** **14 02 19.7 -0.3**
SZCU IAmb IAmb 14 02 57.9
comp=Z,120nm,1.7s
MG01 Puerto William 92.30 151 P **P** **14 02 20.5 +1.1**
JIRN Jiri 92.31 298 *eP* **P** **14 02 20.7 +0.2**
comp=Z,36nm,0.7s
M31M Drury Creek, Y 92.32 23 P **P** **14 02 19.1 -0.2**
baz=232,SNR=7.1
M31M S **S** **14 13 07.2 -4.7**
baz=232
X16A Lo Mia Camp, P 92.37 55 P **P** **14 02 20.4 0.0**
X16A IAmb IAmb 14 02 24.3
comp=Z,59nm,1.2s
E09A Wood Farm, Sta 92.38 41 P **P** **14 02 19.4 -0.5**
E09A IAmb IAmb 14 02 58.1
comp=Z,107nm,1.4s
J29M Klondike Camp 92.41 20 P **P** **14 02 19.2 -0.5**
baz=229
JHSG JHARSUGUGA 92.41 292 *eP* **P** **14 02 21.9 +1.3**
B08A Colville Reser 92.44 39 P **P** **14 02 20.2 +0.1**
U15A North Rim 92.45 52 P **P** **14 02 20.5 -0.3**
U15A IAmb IAmb 14 02 58.8
comp=Z,48nm,1.0s
BMAR Burnt Mountain 92.58 16 P **P** **14 02 20.7 +0.3**
DSPA Despedida 92.60 150 P **P** **14 02 21.5 +0.6**
MFID Camas Ranch 92.61 45 P **P** **14 02 21.2 0.0**
MFID IAmb IAmb 14 02 58.6
comp=Z,48nm,1.2s
GUN Gumba 92.65 298 *eP* **P** **14 02 22.2 +0.2**
FARO Faro, Yukon 92.72 23 P **P** **14 02 21.2 0.0**
baz=233,SNR=8.6
F10A Beach Ranch, E 92.73 42 P **P** **14 02 21.7 0.0**
F10A IAmb IAmb 14 02 59.8
comp=Z,166nm,1.6s
WUAZ Wupatki 92.81 54 P **P** **14 02 23.1 +0.7**

WUAZ					IAmb	IAmb	14 03 00.2		
	comp=Z,82nm,1.4s								
WUAZ	**Wupatki**	**92.81**	**54**	S		**S**	**14 13 22.4**	**+4.6**	
	baz=249								
MG02	**Cerro Sombrero**	**92.84**	**149**	P		**P**	**14 02 22.9**	**+0.9**	
PKI	**Pulchoki**	**92.93**	**298**	*e*P		**P**	**14 02 23.5**	**+0.2**	
	comp=Z,91nm,1.1s								
PKIN	**Phulchoki**	**92.94**	**298**	*e*P		**P**	**14 02 23.2**	**-0.1**	
I29M	**Ogilvie Camp,**	**92.97**	**20**	P		**P**	**14 02 21.8**	**-0.4**	
	baz=229,SNR=14								
A21K	**Barrow**	**93.02**	**11**	P		**P**	**14 02 22.5**	**+0.3**	
	baz=212								
A21K				S		**S**	**14 13 15.9**	**-1.7**	
	baz=212								
KNGR	**Kungurtug, Tuv**	**93.08**	**323**	*e*P		**P**	**14 02 24.4**	**+1.2**	
KNGR				pmax		pmax			
	comp=Z,29nm,0.9s								
MTPU	**Mount Pierson**	**93.12**	**51**	P		**P**	**14 02 23.2**	**-0.8**	
PLID	**Pearl Lake**	**93.16**	**43**	P		**P**	**14 02 23.4**	**-0.4**	
PLID				IAmb		IAmb	14 03 02.0		
	comp=Z,62nm,1.6s								
DMN	**Daman**	**93.20**	**298**	*e*P		**P**	**14 02 24.8**	**+0.4**	
	comp=Z,216nm,1.1s								
MSU	**Marysvale**	**93.30**	**50**	P		**P**	**14 02 24.9**	**+0.3**	
MSU	**Marysvale**	**93.30**	**50**	P		**P**	**14 02 24.9**	**+0.3**	
DUG	**Dugway, Tooele**	**93.45**	**49**	P		**P**	**14 02 26.1**	**+0.9**	
DUG	**Dugway, Tooele**	**93.45**	**49**	P		**P**	**14 02 25.8**	**+0.6**	
	baz=248,SNR=8.6								
DUG				S		**S**	**14 13 24.9**	**+1.7**	
	baz=248								
X18A	**Snowflake**	**93.56**	**55**	P		**P**	**14 02 25.1**	**-0.7**	
BGU	**Big Grassy Mou**	**93.57**	**48**	P		**P**	**14 02 25.0**	**-0.8**	
HLID	**Hailey**	**93.61**	**45**	P		**P**	**14 02 25.4**	**-0.5**	
HLID	**Hailey**	**93.61**	**45**	P		**P**	**14 02 27.1**	**+1.2**	
	baz=248,SNR=22								
HLID				S		**S**	**14 13 25.2**	**+0.7**	
	baz=248								
GKN	**Gorkha**	**93.72**	**298**	*e*P		**P**	**14 02 26.3**	**-0.4**	
NEW	**Newport**	**93.74**	**40**	P		**P**	**14 02 26.2**	**0.0**	
NEW	**Newport**	**93.74**	**40**	P		**P**	**14 02 26.2**	**0.0**	
NEW				pmax		pmax			
	comp=Z,27nm,1.2s								
NEW	**Newport**	**93.74**	**40**	P		**P**	**14 02 26.4**	**+0.2**	
	baz=246								
NEW				S		**S**	**14 13 24.3**	**-0.7**	
	baz=246								
MMPY	**Sheldon Lake,**	**93.74**	**24**	P		**P**	**14 02 25.8**	**0.0**	
	baz=235,SNR=12								
MMPY				S		**S**	**14 13 25.0**	**+0.5**	
	baz=235								
NLU	**North Lily Min**	**93.89**	**49**	P		**P**	**14 02 26.6**	**-0.7**	
NLU				IAmb		IAmb	14 03 04.9		
	comp=Z,58nm,1.9s								
W18A	**Petrified Fore**	**93.93**	**54**	P		**P**	**14 02 26.6**	**-0.9**	
W18A				IAmb		IAmb	14 03 05.1		
	comp=Z,72nm,1.6s								
W18A	**Petrified Fore**	**93.93**	**54**	P		**P**	**14 02 26.7**	**-0.9**	
	baz=250								
W18A				S		**S**	**14 13 29.9**	**+2.3**	
	baz=250								
HVU	**Hansel Valley**	**94.06**	**47**	P		**P**	**14 02 27.2**	**-0.7**	
HVU				IAmb		IAmb	14 03 05.5		
	comp=Z,64nm,1.6s								
HVU	**Hansel Valley**	**94.06**	**47**	P		**P**	**14 02 27.3**	**-0.7**	
HVU				pmax		pmax			
	comp=Z,64nm,1.6s								
EPYK	**Eagle Plains**	**94.13**	**19**	P		**P**	**14 02 27.4**	**-0.2**	
EPYK				IAmb		IAmb	14 03 05.5		
	comp=Z,92nm,1.5s								
EPYK	**Eagle Plains**	**94.13**	**19**	P		**P**	**14 02 28.3**	**+0.7**	
	baz=231,SNR=13								
EPYK				S		**S**	**14 13 28.7**	**+1.0**	
	baz=231								
MPU	**Maple Canyon**	**94.23**	**49**	P		**P**	**14 02 28.4**	**-0.4**	
MPU				IAmb		IAmb	14 03 05.3		
	comp=Z,65nm,2.0s								
SALM	**Salem**	**94.26**	**281**	*e*P		**P**	**14 02 30.6**	**+1.3**	
TMUT	**Trail Mountain**	**94.28**	**50**	P		**P**	**14 02 28.8**	**-0.4**	
TGTN	**Hyland Airport**	**94.31**	**25**	P		**P**	**14 02 28.1**	**-0.4**	
	baz=238								
TGTN				S		**S**	**14 13 27.5**	**-1.9**	
	baz=238								
KOD	**Kodaikanal**	**94.50**	**279**	*e*P		**P**	**14 02 31.7**	**+0.9**	
DANN	**Dangsing**	**94.56**	**298**	*e*P		**P**	**14 02 30.2**	**-0.5**	
BCYI	**Bear Canyon**	**94.57**	**45**	P		**P**	**14 02 29.5**	**-0.8**	
JLU	**Jordanelle**	**94.57**	**49**	P		**P**	**14 02 29.4**	**-1.1**	
JLU				IAmb		IAmb	14 03 06.8		
	comp=Z,58nm,1.9s								
121A	**Cookes Peak, D**	**94.59**	**57**	P		**P**	**14 02 29.8**	**-0.8**	
121A	**Cookes Peak, D**	**94.59**	**57**	P		**P**	**14 02 32.4**	**+1.8**	
	baz=251								
121A	**Cookes Peak, D**	**94.59**	**57**	P		**P**	**14 02 30.5**	**-0.1**	
	baz=251								
121A				S		**S**	**14 13 36.3**	**+2.8**	
	baz=251								
SRU	**San Rafael Swe**	**94.72**	**50**	P		**P**	**14 02 31.0**	**-0.1**	
SRU	**San Rafael Swe**	**94.72**	**50**	P		**P**	**14 02 31.0**	**-0.1**	
SRU				pmax		pmax			
	comp=Z,14nm,1.0s								
HWUT	**Hardware Ranch**	**94.85**	**48**	P		**P**	**14 02 31.2**	**-0.4**	
P18A	**Preston Nutter**	**95.10**	**50**	P		**P**	**14 02 32.4**	**-0.6**	
PYUN	**Piuthan**	**95.13**	**298**	*e*P		**P**	**14 02 32.5**	**-0.7**	
	comp=Z,67nm,1.0s								
MSO	**Missoula**	**95.16**	**42**	P		**P**	**14 02 32.4**	**-0.4**	
	baz=248								
MSO				S		**S**	**14 13 37.1**	**-0.5**	
	baz=248								
MVCO	**Mesa Verde**	**95.58**	**53**	P		**P**	**14 02 34.6**	**-0.5**	
	baz=251								
MVCO				S		**S**	**14 13 43.3**	**+1.3**	
	baz=251								
Y22A	**Socorro**	**95.69**	**56**	P		**P**	**14 02 36.9**	**+1.3**	
	baz=251								
HYBB	**Hyderabad (bro**	**95.71**	**286**	*e*P		**P**	**14 02 35.7**	**-0.2**	
HYBB				*e*pP		**pP**	**14 03 04.9**	**-2.1**	
HYBB				*e*PP		**PP**	**14 06 27.9**	**-1.3**	
HYBB				*e*SKSac		**SKSac**	**14 13 00.5**	**-0.9**	
LRM	**Limekiln Ridge**	**95.75**	**44**	P		**P**	**14 02 35.0**	**-0.7**	
Y22D	**IRIS PASSCAL I**	**95.77**	**56**	P		**P**	**14 02 35.4**	**-0.5**	
	baz=251								
CRNM	**Carthage**	**95.88**	**56**	P		**P**	**14 02 35.2**	**-1.3**	
RDMU	**Red Mountain**	**95.91**	**49**	P		**P**	**14 02 35.6**	**-0.9**	
RDMU				IAmb		IAmb	14 03 13.6		
	comp=Z,35nm,1.6s								
REDW	**Red Top Meadow**	**95.95**	**46**	P		**P**	**14 02 36.8**	**+0.1**	
REDW				IAmb		IAmb	14 03 12.8		
	comp=Z,51nm,1.6s								
PV15	**Paradox Valley**	**95.96**	**52**	P		**P**	**14 02 36.9**	**0.0**	
MOOW	**Moose Ponds**	**96.16**	**46**	P		**P**	**14 02 37.5**	**0.0**	
JBP	**Jabalpur**	**96.18**	**292**	*e*S		**SKSac**	**14 13 02.8**	**-0.6**	
BOZ	**Bozeman (W)**	**96.21**	**44**	P		**P**	**14 02 37.5**	**-0.2**	
BOZ	**Bozeman (W)**	**96.21**	**44**	P		**P**	**14 02 37.5**	**-0.2**	
BOZ				pmax		pmax			
	comp=Z,14nm,1.3s								
BOZ	**Bozeman (W)**	**96.21**	**44**	P		**P**	**14 02 37.2**	**-0.4**	
	baz=250,SNR=11								
BOZ				S		**S**	**14 13 46.2**	**-0.7**	
	baz=250								
YHL	**Hebgen Lake**	**96.25**	**45**	P		**P**	**14 02 37.7**	**-0.3**	
MNTX	**Cornudas Mount**	**96.25**	**59**	P		**P**	**14 02 37.7**	**-0.3**	
MNTX				IAmb		IAmb	14 02 41.3		
	comp=Z,25nm,1.4s								
MNTX	**Cornudas Mount**	**96.25**	**59**	P		**P**	**14 02 38.5**	**+0.5**	
	baz=252								
MNTX	**Cornudas Mount**	**96.25**	**59**	P		**P**	**14 02 36.9**	**-1.1**	
	baz=252								
MNTX				S		**S**	**14 13 51.6**	**+4.1**	
	baz=252								
INK	**Inuvik**	**96.30**	**18**	P		**P**	**14 02 36.9**	**-0.4**	
	comp=Z,5.9nm,0.9s,baz=221,slow=6.5,SNR=7.3								
INK				pP		**pP**	**14 03 10.7**	**+2.3**	
	comp=Z,3.8nm,0.6s,baz=233,slow=8.6,SNR=3.3								
INK				PKKPbc		**PKKPbc**	**14 19 23.3**	**-2.4**	
	comp=Z,2.8nm,0.4s,baz=85,slow=3.4,SNR=8.4								
INK				LR		LR	14 40 55.3		
	comp=Z,862nm,21.9s,baz=224,slow=32								
	comp=Z,5.9nm,0.9s								
INK	**Inuvik**	**96.30**	**18**	P		**P**	**14 02 37.5**	**+0.2**	
	baz=234								
INK				S		**S**	**14 13 43.4**	**-2.8**	
	baz=234								
ANMO	**Albuquerque**	**96.41**	**55**	LR		LR	14 39 52.5		
	comp=Z,842nm,19.9s,baz=252,slow=31								
ANMO	**Albuquerque**	**96.41**	**55**	*c* I P		**P**	**14 02 40.3**	**+1.4**	
ANMO				pmax		pmax			
	comp=Z,14nm,1.3s								
ANMO	**Albuquerque**	**96.41**	**55**	P		**P**	**14 02 38.5**	**-0.4**	
	baz=252								
ANMO	**Albuquerque**	**96.41**	**55**	P		**P**	**14 02 38.3**	**-0.6**	
	baz=252								
ANMO				S		**S**	**14 13 45.5**	**-3.7**	
	baz=252								
HRY	**Holter Researc**	**96.47**	**43**	P		**P**	**14 02 38.5**	**-0.3**	
H17A	**Grant Village**	**96.50**	**45**	P		**P**	**14 02 40.5**	**+1.4**	
	baz=250								
WMQ	**Urumqi**	**96.64**	**314**	P		**P**	**14 02 40.8**	**+1.3**	
WMQ				pP		pP	14 03 10.0	-0.7	
WMQ				SKS		**SKSac**	**14 13 05.5**	**+0.4**	
WMQ				S		**S**	**14 13 48.3**	**-2.2**	
WMQ				SS		**SS**	**14 20 31.4**	**+3.3**	
WMQ				pmax		pmax			
	comp=Z,47nm,0.9s								
WMQ				pmax		pmax			
	comp=Z,390nm,5.1s								
WMQ				LR		LR			
	comp=Z,1μm,16.9s								
WMQ				LR		LR			
	comp=Z,1μm,20.9s								
WMQ				LR		LR			
	comp=Z,2μm,23.3s								
BW06	**Boulder Array**	**96.65**	**47**	P		**P**	**14 02 39.2**	**-0.7**	
BW06	**Boulder Array**	**96.65**	**47**	P		**P**	**14 02 38.4**	**-1.5**	
	baz=251								
BW06				S		**S**	**14 13 49.6**	**-1.3**	
	baz=251								
PD31	**Pinedale Array**	**96.65**	**47**	P		**P**	**14 02 38.4**	**-1.3**	
PDAR	**Pinedale Array**	**96.65**	**47**	P		**P**	**14 02 39.6**	**-0.2**	
	comp=Z,5.6nm,1.2s,baz=222,slow=2.0,SNR=16								
PDAR				pP		**pP**	**14 03 12.9**	**+1.7**	
	comp=Z,2.0nm,0.9s,baz=256,slow=3.1,SNR=2.4								
PDAR				PP		**PP**	**14 06 38.4**	**+2.2**	
	comp=Z,1.9nm,1.0s,baz=251,slow=4.1,SNR=3.7								
PDAR				PKKPbc		**PKKPbc**	**14 19 21.4**	**-2.7**	
	comp=Z,0.8nm,0.9s,baz=82,slow=3.1,SNR=3.8								
PDAR				LR		LR	14 42 59.1		
	comp=Z,497nm,18.7s,baz=260,slow=33								
	comp=Z,5.6nm,1.2s								
PDAR	**Pinedale Array**	**96.65**	**47**	P		**P**	**14 02 38.5**	**-1.3**	
O20A	**White River Ci**	**96.72**	**50**	P		**P**	**14 02 38.6**	**-1.6**	
O20A	**White River Ci**	**96.72**	**50**	P		**P**	**14 02 39.1**	**-1.1**	
	baz=251								
O20A				S		**S**	**14 13 51.9**	**+0.2**	
	baz=251								
LL02	**Futaleuf**	**96.92**	**140**	P		**P**	**14 02 41.4**	**+0.5**	
LL02				IAmb		IAmb	14 02 43.7		
	comp=Z,60nm,1.0s								
TX31	**Lajitas Ar. Si**	**96.94**	**61**	P		**P**	**14 02 41.5**	**+0.3**	
TX31	**Lajitas Ar. Si**	**96.94**	**61**	P		**P**	**14 02 42.4**	**+1.1**	
	baz=252								
TX32	**Lajitas Array**	**96.94**	**61**	P		**P**	**14 02 41.8**	**+0.5**	
TX32				IAmb		IAmb	14 03 19.1		
	comp=Z,45nm,1.6s								
TXAR	**Lajitas Array**	**96.94**	**61**	P		**P**	**14 02 42.3**	**+1.0**	
	comp=Z,8.5nm,1.0s,baz=235,slow=4.4,SNR=50								
TXAR				pP		**pP**	**14 03 14.6**	**+1.8**	
	comp=Z,7.2nm,0.9s,baz=224,slow=5.2,SNR=6.3								
TXAR				PKKPbc		**PKKPbc**	**14 19 22.2**	**-0.4**	
	comp=Z,1.4nm,0.9s,baz=89,slow=1.9,SNR=9.1								
TXAR				PKKPab		PKKPab	14 19 48.3		
	comp=Z,1.0nm,1.0s,baz=202,slow=1.3,SNR=3.5								
TXAR				LR		LR	14 39 26.5		
	comp=Z,876nm,19.7s,baz=247,slow=31								
	comp=Z,8.5nm,1.0s								
TXAR	**Lajitas Array**	**96.94**	**61**	P		**P**	**14 02 41.1**	**-0.2**	
S22A	**4UR Ranch, Cre**	**97.00**	**53**	P		**P**	**14 02 39.5**	**-2.2**	
	baz=252								
S22A				S		**S**	**14 13 56.6**	**+2.2**	
	baz=252								
WRGLY	**Wrigley**	**97.11**	**25**	P		**P**	**14 02 40.6**	**-0.4**	
	baz=242								
GCMT	**Greycliff**	**97.57**	**44**	P		**P**	**14 02 43.1**	**-0.7**	
RLMT	**Red Lodge**	**97.62**	**45**	P		**P**	**14 02 43.7**	**-0.4**	
RLMT	**Red Lodge**	**97.62**	**45**	P		**P**	**14 02 42.9**	**-1.2**	
	baz=251								
RLMT				S		**S**	**14 13 59.4**	**+0.2**	
	baz=251								
LL03	**Petrohue**	**97.71**	**138**	P		**P**	**14 02 43.9**	**-0.6**	
LL04	**Puerto Octay**	**97.83**	**138**	P		**P**	**14 02 44.5**	**-0.6**	
LL04				IAmb		IAmb	14 02 47.6		
	comp=Z,83nm,1.4s								
LGTI	**Lohaghat**	**97.83**	**298**	*e*P		Pdif	14 02 45.4	+0.2	
SDCO	**Great Sand Dun**	**98.01**	**53**	P		**P**	**14 02 45.3**	**-0.8**	
SDCO	**Great Sand Dun**	**98.01**	**53**	P		Pdif	14 02 46.3	+0.1	
	baz=252								
SDCO	**Great Sand Dun**	**98.01**	**53**	Pdiff		**P**	**14 02 42.9**	**-3.3**	
	baz=252								
SDCO				S		**S**	**14 14 03.5**	**+0.5**	
	baz=252								
AKL	**Akola**	**98.08**	**289**	*e*P		Pdif	14 02 46.6	0.0	
EGMT	**Eagleton**	**98.24**	**42**	Pdiff		**P**	**14 02 44.0**	**-2.7**	
	baz=251								
EGMT				S		**S**	**14 14 04.6**	**+0.6**	
	baz=251								
ISCO	**Idaho Springs**	**98.54**	**51**	Pdiff		**P**	**14 02 47.0**	**-1.6**	
	baz=253								
ISCO				S		**S**	**14 14 09.3**	**+1.9**	
	baz=253								
N23A	**Red Feather La**	**98.62**	**50**	Pdiff		**P**	**14 02 46.9**	**-1.9**	
	baz=253								
N23A				S		**S**	**14 14 09.6**	**+1.7**	
	baz=253								
Q24A	**Divide**	**98.63**	**52**	Pdiff		**P**	**14 02 46.7**	**-2.2**	
	baz=253								
Q24A				S		**S**	**14 14 08.7**	**+0.5**	
	baz=253								
T25A	**Trinidad**	**98.66**	**54**	Pdiff		**P**	**14 02 47.0**	**-2.0**	
	baz=253								
T25A				S		**S**	**14 14 08.8**	**+0.5**	
	baz=253								
K22A	**Casper**	**98.73**	**48**	P		Pdif	14 02 50.4	+1.2	
	baz=253								
K22A	**Casper**	**98.73**	**48**	Pdiff		**P**	**14 02 47.6**	**-1.5**	
	baz=253								
MSTX	**Muleshoe**	**99.02**	**57**			**Pdif**	**14 02 50.2**	**-0.4**	
MSTX	**Muleshoe**	**99.02**	**57**	P		**Pdif**	**14 02 50.9**	**+0.3**	
	baz=253								
MSTX	**Muleshoe**	**99.02**	**57**	Pdiff		**Pdif**	**14 02 49.0**	**-1.5**	
	baz=253								
PLCA	**Paso Flores**	**99.10**	**139**	P		**Pdif**	**14 02 51.4**	**+0.6**	
	comp=Z,12nm,1.0s,baz=232,slow=5.1,SNR=18								
PLCA				PP		**PP**	**14 06 51.2**	**-2.9**	
	comp=Z,16nm,1.2s,baz=215,slow=9.5,SNR=5.3								
PLCA				PKKPbc		**PKKPbc**	**14 19 15.4**	**-1.2**	
	comp=Z,0.9nm,0.5s,baz=355,slow=2.6,SNR=3.5								
PLCA				LR		LR	14 37 50.0		
	comp=Z,1μm,21.8s,baz=252,slow=29								
	comp=Z,12nm,1.0s								
PLCA	**Paso Flores**	**99.10**	**139**	*e*P		**Pdif**	**14 02 52.4**	**+1.6**	
ZSN	**Zaisan**	**99.67**	**317**	*e*P		**Pdif**	**14 02 52.8**	**-0.2**	
ZSN				*e**PP		**pP**	**14 03 24.1**	**-0.2**	
ZSN				*e*			14 06 58.2		
ZSN				*e*S		**SKSac**	**14 13 20.2**	**+0.1**	
ZSN				*e**SS		**S**	**14 14 18.6**	**+2.8**	
ZSN	**Zaisan**	**99.67**	**317**	*e*P		**Pdif**	**14 02 52.8**	**-0.2**	
	baz=317								
ZSN				*e*pP		**pP**	**14 03 24.1**	**-0.2**	
	baz=317								
ZSN				*e*PP		**PP**	**14 06 58.2**	**-0.6**	
	baz=317								
ZSN				*e*S		**SKSac**	**14 13 20.3**	**+0.1**	
	baz=317								
ZSN				*e*sS		**S**	**14 14 18.7**	**+2.8**	
	baz=317								
C36M	**Paulatuk**	**99.76**	**19**	Pdiff		**Pdif**	**14 02 51.7**	**-1.1**	
	baz=242								
LAO	**LASA Array**	**100.12**	**44**	Pdiff		**Pdif**	**14 02 52.7**	**-2.3**	
	baz=253								
AMTX	**Amarillo**	**100.14**	**57**	P		**Pdif**	**14 02 56.2**	**+0.7**	
	baz=254								
AMTX	**Amarillo**	**100.14**	**57**	Pdiff		**Pdif**	**14 02 52.7**	**-2.8**	
	baz=254								
833A	**Chaparral WMA,**	**100.24**	**64**	Pdiff		**Pdif**	**14 02 53.1**	**-2.9**	
	baz=254								
JCT	**Junction City**	**100.48**	**61**	Pdiff		**Pdif**	**14 02 53.7**	**-3.3**	
	baz=254								
YKA	**Yellowknife Ar**	**100.50**	**27**	P		**Pdif**	**14 02 56.7**	**+0.5**	
	comp=Z,3.0nm,0.6s,baz=256,slow=4.6,SNR=34								
YKA				pP		pP	14 03 30.7	+3.2	
	comp=Z,4.1nm,0.6s,baz=251,slow=4.7,SNR=4.9								
YKA				PKKPbc		**PKKPbc**	**14 19 11.7**	**-2.0**	
	comp=Z,1.1nm,0.7s,baz=64,slow=2.8,SNR=6.0								
YKA				PKKPab		PKKPab	14 19 35.3		
	comp=Z,2.1nm,1.0s,baz=62,slow=5.2,SNR=6.6								
YKA				PKPPKP		**P'P'df**	**14 27 29.2**	**+1.9**	
	comp=Z,0.6nm,0.9s,baz=62,slow=2.5,SNR=4.1								
YKA	**Yellowknife Ar**	**100.50**	**27**	Pdif		**Pdif**	**14 02 56.5**	**+0.2**	
KSCO	**Kaye Shedlock'**	**100.53**	**52**	Pdiff		**Pdif**	**14 02 53.8**	**-3.3**	
	baz=254								
A36M	**Sachs Harbour**	**100.66**	**17**	Pdiff		**Pdif**	**14 02 53.8**	**-3.0**	
	baz=242								
RSSD	**Black Hills**	**100.89**	**47**	P		**Pdif**	**14 02 59.8**	**+1.1**	
RSSD	**Black Hills**	**100.89**	**47**	P		**Pdif**	**14 02 59.6**	**+0.9**	
	baz=254								
RSSD	**Black Hills**	**100.89**	**47**	Pdiff		**Pdif**	**14 02 55.0**	**-3.7**	
	baz=254								
MK31	**Makanchi Array**	**101.17**	**316**	*d* I P		**Pdif**	**14 02 59.9**	**+0.2**	
MKAR	**Makanchi Array**	**101.17**	**316**	P		**Pdif**	**14 02 59.7**	**0.0**	
	comp=Z,7.8nm,0.6s,baz=95,slow=5.3,SNR=42								
MKAR				PP		**PP**	**14 07 09.1**	**-1.2**	
	comp=Z,5.7nm,0.9s,baz=119,slow=7.1,SNR=5.0								
MKAR				S		**SKSac**	**14 13 23.7**	**-3.8**	
	comp=Z,0.7nm,0.9s,baz=82,slow=3.1,SNR=1.5								
MKAR				PKKPbc		**PKKPbc**	**14 19 09.0**	**-2.3**	
	comp=Z,3.5nm,0.5s,baz=268,slow=4.1,SNR=29								
MKAR				PKKPab		PKKPab	14 19 33.4		
	comp=Z,2.9nm,0.9s,baz=305,slow=4.3,SNR=5.7								
MKAR				PKPPKP		**P'P'df**	**14 27 27.2**	**-0.1**	
	comp=Z,0.6nm,0.8s,baz=318,slow=1.6,SNR=5.7								
MKAR	**Makanchi Array**	**101.17**	**316**	Pdif		**Pdif**	**14 02 59.4**	**-0.3**	
ABTX	**Abilene, Hawle**	**101.18**	**59**	Pdiff		**Pdif**	**14 02 58.6**	**-1.5**	
	baz=255								
ZALV	**Zalesovo Beam**	**101.55**	**323**	P		**Pdif**	**14 03 00.4**	**-0.7**	
	comp=Z,13nm,1.1s,baz=108,slow=4.8,SNR=20								
ZALV				pP		pP	14 03 33.8	+1.3	
	comp=Z,5.6nm,0.9s,baz=117,slow=5.2,SNR=2.9								
ZALV				PP		**PP**	**14 07 11.3**	**-1.6**	
	comp=Z,15nm,1.1s,baz=104,slow=6.1,SNR=4.5								
ZALV				PKKPbc		**PKKPbc**	**14 19 08.2**	**-2.1**	
	comp=Z,2.8nm,0.5s,baz=290,slow=4.0,SNR=11								
ZALV				PKPPKP		**P'P'df**	**14 27 27.1**	**+1.2**	
	comp=Z,0.9nm,0.3s,baz=251,slow=4.5,SNR=4.7								
ZALV	**Zalesovo Beam**	**101.55**	**323**	Pdif		**Pdif**	**14 03 00.6**	**-0.6**	
ZALV	**Zalesovo Beam**	**101.55**	**323**	P		**Pdif**	**14 03 00.6**	**-0.6**	
SHLS	**Shalkode**	**102.17**	**312**	*e*P		**Pdif**	**14 03 03.5**	**-0.8**	
SHLS				*e*			14 07 14.3		
SHLS				*e*S		**SKSac**	**14 13 31.8**	**-0.9**	
SHLS	**Shalkode**	**102.17**	**312**	*e*P		**Pdif**	**14 03 03.6**	**-0.8**	
	baz=312								
SHLS				*e*PP		**PP**	**14 07 14.4**	**-3.6**	
	baz=312								
SHLS				*e*S		**SKSac**	**14 13 31.9**	**-0.8**	
	baz=312								
CBKS	**Cedar Bluff**	**102.66**	**53**	Pdiff		**Pdif**	**14 03 06.1**	**-0.5**	
	baz=256								
KPKS	**Kokpek**	**102.80**	**312**	*e*P		**Pdif**	**14 03 05.8**	**-1.3**	
KPKS				*e*			14 07 20.2		
KPKS				*e*S		**SKSac**	**14 13 36.4**	**+0.8**	
KPKS				*e**SS		**sSKSac**	**14 14 31.1**	**-1.0**	
KPKS	**Kokpek**	**102.80**	**312**	*e*P		**Pdif**	**14 03 05.9**	**-1.3**	
	baz=312								
KPKS				*e*pP		**pPdif**	**14 03 37.8**	**-0.6**	
	baz=312								
KPKS				*e*PP		**PP**	**14 07 20.2**	**-2.5**	
	baz=312								
KPKS				*e*S		**SKSac**	**14 13 36.5**	**+0.8**	
	baz=312								
KPKS				*e*sS		**sSKSac**	**14 14 31.1**	**-1.0**	
	baz=312								
WHTX	**Lake Whitney,**	**102.81**	**60**	Pdiff		**Pdif**	**14 03 06.0**	**-1.3**	
	baz=256								
SATY	**Saty**	**102.90**	**311**	*e*P		**Pdif**	**14 03 06.5**	**-1.1**	
SATY				*e*			14 07 21.2		
SATY				*e*S		**SKSac**	**14 13 37.1**	**+1.0**	
SATY	**Saty**	**102.90**	**311**	*e*P		**Pdif**	**14 03 06.5**	**-1.1**	
	baz=311								
SATY				*e*PP		**PP**	**14 07 21.2**	**-2.2**	
	baz=311								
SATY				*e*S		**SKSac**	**14 13 37.1**	**+1.0**	
	baz=311								
TDK	**Taldyqorghan**	**103.35**	**313**	*e*PP		**PP**	**14 07 24.4**	**-2.2**	
	baz=313								
SEM	**Semipalatinsk**	**103.38**	**319**	*e*PP		**PP**	**14 07 24.4**	**-2.6**	
	baz=319								
MDOK	**Medeo**	**103.89**	**311**	*e*PKiKP		**PKiKP**	**14 07 27.8**	**-1.4**	
	baz=311								
MDOK				*e*pPKiKP		**pPKiKP**	**14 07 57.4**	**-4.1**	
	baz=311								
MDOK				*e*PS		**PS**	**14 16 40.0**	**-4.7**	
	baz=311								
MDOK

comp=Z,485nm,4.0s
M55A Ridgway 118.90 53 PKPdf 14 07 56.9 -0.6
WVNY West Valley, N 119.02 51 PKPdf 14 07 57.1 -0.6
SPITS Spitsbergen Ar 119.16 354 PKIKP PKiKP 14 07 57.1 +0.1
SPB2 Spitsbergen Ar 119.16 354 PKPdf 14 07 56.9 0.0
ITAB Concordia 119.40 138 PKPdf PKPdf 14 07 58.5 -0.4
VLDQ Val d'Or 119.59 45 PKPdf 14 07 57.1 -1.4
SIV San Ignacio 119.94 122 PKP PKPdf 14 07 59.7 -0.6
comp=Z,11nm,0.7s,baz=247,slow=2.5,SNR=37
SIV PP **PP 14 09 24.7 -0.6**
comp=Z,6.8nm,0.8s,baz=238,slow=10.0,SNR=8.6
SIV PKKPbc **PKKPbc 14 18 07.9 -1.3**
comp=Z,1.4nm,0.7s,baz=154,slow=3.2,SNR=2.0
MCR1 Marechal Candi 120.04 134 *eP* **PKPdf 14 08 00.1 -0.1**
M57A Sunshine Farm, 120.14 53 PKPdf 14 07 59.6 -0.2
ANTJ Antonio Joao (120.27 131 *eP* **PKiKP 14 08 00.7 0.0**
TER01 Tubaro-SC 120.31 141 *eP* **PKiKP 14 08 01.7 +1.0**
AMBA Amambai (Brazi 120.39 132 *eP* **PKiKP 14 08 01.7 +0.7**
MOPA Mopani 120.84 226 *iP* PKPdf 14 07 50.6 -11
MOPA Mopani 120.84 226 *iP* PKPdf 14 07 50.6 -11
MOPA Mopani 120.84 226 *iP* PKPdf 14 07 50.6 -11
BOSA Boshof 121.12 218 PKP **PKiKP 14 08 03.3 +0.8**
comp=Z,16nm,0.7s,baz=176,slow=1.9,SNR=26
BOSA PKKPbc **PKKPbc 14 18 04.2 -1.1**
comp=Z,4.8nm,1.1s,baz=342,slow=14,SNR=3.0
BOSA Boshof 121.12 218 PKPdf **PKiKP 14 08 02.6 +0.2**
BOSA Boshof 121.12 218 *iP* **PKiKP 14 08 02.7 +0.2**
BOSA Boshof 121.12 218 *iP* **PKiKP 14 08 02.7 +0.2**
BOSA Boshof 121.12 218 *iP* **PKiKP 14 08 02.7 +0.2**
KIRV Kirov 121.12 328 PKP **PKPdf 14 08 01.1 0.0**
comp=Z,17nm,0.4s,baz=75,slow=1.4,SNR=12
KIRV Kirov 121.12 328*d* iPKIKP **PKiKP 14 08 01.2 0.0**
PTGB Pitanga 121.19 136 *eP* **PKiKP 14 08 02.7 +0.1**
AQDB Aquidauana 121.44 130 *eP* **PKPdf 14 08 02.9 -0.1**
VBST Vila Bela da S 121.59 121 *eP* **PKPdf 14 08 03.0 -0.4**
SDV Santo Domingo 121.67 91 *eP* **PKiKP 14 08 04.0 +0.1**
SAML Samuel 121.78 114 PKPdf 14 08 02.6 -1.2
SAML Samuel 121.78 114 PKIKP **PKPdf 14 08 02.6 -1.2**
PTLB Pontes e Lacer 121.79 123 *eP* **PKPdf 14 08 03.7 0.0**
LONY Lake Ozonia 121.85 49 PKPdf 14 08 02.0 -1.0
DAG Danmarks Havn 121.91 2 *iP* **PKPdf 14 08 00.0 -2.2**
DAG IAMs_20 IAMs_20 14 46 51.9
comp=Z,3μm,42.7s
BJO1 Bjornoya 121.96 351 *e*PKPdf **PKiKP 14 08 03.4 +0.9**
BJO1 *e*PP **PP 14 09 39.0 +1.2**
BJO1 *e*SP SP 14 19 19.1 +1.3
BJO1 IVMs_BB IVMs_BB 14 56 21.8
comp=Z,1μm,3.8s
PRGR Permogore 121.97 332 *e*PKIKP **PKPdf 14 08 02.3 -0.4**
PRGR *e* 14 08 34.1
PRGR *e* 14 09 38.5
TRCB Terra Rica 122.11 134 PKPdf 14 08 03.8 -0.5
TRCB Terra Rica 122.11 134 *eP* **PKiKP 14 08 04.6 +0.1**
VILB Vilhena 122.29 119 *eP* **PKPdf 14 08 04.6 -0.2**
MUSN Musina, Limpop 122.71 226 *iP* **PKPdf 14 08 00.3 -5.1**
MUSN Musina, Limpop 122.71 226 *iP* **PKPdf 14 08 00.3 -5.1**
MUSN Musina, Limpop 122.71 226 *iP* **PKPdf 14 08 00.3 -5.1**
TIJ01 Guaruva-PR 122.72 139 *eP* **PKiKP 14 08 05.8 +0.1**
POCN Pocone 123.00 125 *eP* **PKiKP 14 08 06.6 +0.4**
LVZ Lovozero 123.15 341*d* iPKIKP **PKiKP 14 08 06.3 +1.2**
PTET Porto Estrela 123.39 124 *eP* **PKPdf 14 08 06.5 -0.3**
L61B Northampton 123.40 51 PKiKP **PKiKP 14 08 06.8 +0.6**
baz=275
LBTB Lobatse 123.58 221 *iP* **PKiKP 14 08 08.3 +1.0**
LBTB Lobatse 123.58 221 *iP* **PKiKP 14 08 08.3 +1.0**
LBTB Lobatse 123.58 221 *iP* **PKiKP 14 08 08.3 +1.0**
BELG Belogornoye 123.65 321 PKP **PKiKP 14 08 06.7 +0.2**
comp=Z,124nm,1.1s,baz=47,slow=0.4,SNR=30
BELG Belogornoye 123.65 321*d* iPKIKP **PKPdf 14 08 06.0 -0.1**
APA Apatity 123.73 341*d* iPKIKP **PKPdf 14 08 04.9 -1.0**
APA *i* *PP **pPKPdf 14 08 36.2 -2.0**
APA pmax pmax
comp=Z,20nm,0.9s
FRTB Fartura 123.78 137 *eP* **PKiKP 14 08 08.3 +0.6**
PP1B Ponte de Pedra 123.83 128 *eP* **PKiKP 14 08 08.2 +0.3**
PCMB Pacaembu 123.84 134 *eP* **PKiKP 14 08 08.1 +0.2**
ILULI Ilulissat 124.00 16 *iP* **PKPdf 14 08 05.5 -0.9**
SUMG Summit 124.04 10 PKPdf 14 08 07.0 +0.1
SUMG Summit 124.04 10 PKIKP **PKPdf 14 08 07.0 +0.1**
SUMG Summit 124.04 10 *iP* **PKPdf 14 08 06.0 -0.9**
SUMG IAMs_20 IAMs_20 14 48 10.5
comp=Z,2μm,43.8s
BAUV El Baul 124.14 92 PKPdf 14 08 07.7 -0.6
HAMF Hammerfest 124.17 347 *e*PKPdf **PKPdf 14 08 05.9 -0.7**
HAMF *e*SP SP 14 19 35.2 -2.3
HAMF *e*SS **SS 14 26 37.3 +3.6**
HAMF IVMs_BB IVMs_BB 14 49 27.4
comp=Z,1μm,3.8s
HRV Adam Dziewonsk 124.22 51 PKiKP **PKPdf 14 08 05.5 -2.1**
baz=276
SALV Santo Antonio 124.23 125 *eP* **PKiKP 14 08 09.2 +0.5**
DBG Daneborg 124.30 3 *iP* **PKPdf 14 08 07.0 +0.1**
DBG IAMs_20 IAMs_20 14 48 14.9
comp=Z,2μm,45.1s
PET01 Itanhaem-SP 124.55 139 *eP* **PKiKP 14 08 09.9 +0.8**
ARCES ARCESS Array B 124.58 345 PKP **PKPdf 14 08 07.4 -0.1**
comp=Z,9.1nm,0.4s,baz=45,slow=2.4,SNR=52
ARCES PKKPbc **PKKPab 14 17 50.5 +1.8**
comp=Z,8.2nm,1.0s,baz=225,slow=2.7,SNR=9.4
ARCES ARCESS Array B 124.58 345 PKPdf **PKPdf 14 08 07.5 0.0**
ARCES ARCESS Array B 124.58 345 PKIKP **PKPdf 14 08 07.5 0.0**
C2SB Chapadao do Su 124.61 130 *eP* **PKiKP 14 08 10.5 +1.1**
SCHQ Schefferville 124.83 36 PKP **PKPdf 14 08 08.5 +0.1**
comp=Z,8.6nm,1.0s,baz=286,slow=8.6,SNR=4.1
MATP Matopo 124.90 227 *iP* **PKiKP 14 08 11.0 +0.8**
MATP Matopo 124.90 227 *iP* **PKiKP 14 08 11.0 +0.8**
MATP Matopo 124.90 227 *iP* **PKiKP 14 08 11.0 +0.8**
KLMR Klimovskoe 124.99 332 *e*PKIKP **PKPdf 14 08 06.5 -2.0**
KLMR *e* 14 08 38.8
KLMR *e* 14 09 56.7
KLMR *e* 14 14 58.4
KLMR *e*PS **PS 14 19 58.6 -1.9**
KLMR *e* 14 21 25.8
KLMR *e*SSS SSS 14 31 22.9
KLMR pmax pmax
comp=Z,79nm,1.1s
KLMR Klimovskoe 124.99 332 *e*PKPdf **PKPdf 14 08 06.5 -2.0**
KLMR AMP 14 08 10.2
comp=Z,79nm,1.1s
KLMR *ep*PKPdf **pPKPdf 14 08 38.8 -2.0**
KLMR *e*PP **PP 14 09 56.8 -1.8**
KLMR *e*SKSac **SKSac 14 14 58.4 -2.5**
KLMR *e*SKSac **SKSac 14 14 58.4 -2.5**
KLMR *e*PKKPbc **PKKPab 14 17 48.3 +1.1**
KLMR *e*PS **PS 14 19 58.7 -1.8**
KLMR *e*PS **PS 14 19 58.7 -1.8**
KLMR *e*SKKPbc **SKKPbc 14 21 25.8 -6.0**
KLMR *e*PKKS 14 22 02.5
KLMR *e*PKKS 14 22 02.5
KLMR *e*SSS SSS 14 31 23.0
KLMR *e*SSS SSS 14 31 23.0
BLWY Bulawayo 125.01 227 *iP* **PKiKP 14 08 10.9 +0.5**
BLWY Bulawayo 125.01 227 *iP* **PKiKP 14 08 10.9 +0.5**
BLWY Bulawayo 125.01 227 *iP* **PKiKP 14 08 10.9 +0.5**
NBRS Nobres 125.09 124 *eP* **PKiKP 14 08 10.4 -0.1**
D62A Allapoint, All 125.36 45 PKPdf **PKPdf 14 08 08.6 -1.0**
MAK Makhachkala 125.39 310 *iP* **Pdif 14 04 45.3 -2.1**
MAK *i* 14 08 08.8
MAK *e* 14 08 41.5
MAK *e* 14 10 00.0
MAK *e*PPP PPP 14 12 40.5
MAK *e* 14 15 00.8
MAK *e*PS **PS 14 20 08.4 +3.6**
MAK *e*SS SS 14 26 48.2 -2.8
MAK *e*SSS SSS 14 31 26.9
MAK pmax pmax
comp=Z,241nm,1.4s
KTK1 Kautokeino 125.51 346 *e*PKPdf **PKPdf 14 08 08.8 -0.5**
KTK1 *e*PP **PP 14 09 59.8 -2.0**
KTK1 *e*SS SS 14 26 51.0 +0.4
VAO Valinhos 125.68 138 *eP* **PKiKP 14 08 11.9 +0.4**
RCLB Rio Claro- Sao 125.75 138 *eP* **PKiKP 14 08 11.9 +0.3**
ITRB Iturama 125.75 133 *eP* **PKiKP 14 08 12.2 +0.5**
PDRB Porto dos Gac 125.86 120 *eP* **PKiKP 14 08 11.9 -0.1**
TRO Tromso 125.98 347 *e*PKPdf **PKPdf 14 08 10.1 0.0**
TRO *e*PP **PP 14 10 05.6 +0.8**
TRO *e*SP SP 14 19 50.4 -2.9
TRO *e* 14 26 48.3
TRO IVMs_BB IVMs_BB 14 54 12.7
comp=Z,556nm,3.7s
F64A Sherman 126.06 47 PKPdf **PKPdf 14 08 10.6 -0.4**
BB19B Bebedouro 126.06 136 *eP* **PKiKP 14 08 13.1 +0.8**

PQI Presque Isle 126.13 46 PKPdf 14 08 10.4 -0.7
PARB Paraibuna 126.27 140 *eP* **PKiKP 14 08 12.8 +0.1**
DVLD Doverlandia 126.45 129 *eP* **PKiKP 14 08 13.0 -0.2**
SLP01 Ubatuba-SP 126.56 140 *eP* **PKiKP 14 08 13.4 0.0**
GROC Groznyy 126.60 310 *i* PKIKP **PKPdf 14 08 10.5 -1.6**
GROC *e* 14 08 40.4
GROC *e* 14 08 53.2
GROC *e* 14 10 11.7
GROC pmax pmax
comp=Z,40nm,0.5s
MACA Manacapuru-AM 126.63 109 *eP* **PKPdf 14 08 13.2 +0.2**
ICESG Greenland Ices 126.76 12 *iP* **PKPdf 14 08 11.8 -0.4**
CLDB Colider 127.03 120 *eP* **PKiKP 14 08 14.3 -0.1**
RAYN Ar Rayn 127.21 286↑ PKIKP **PKiKP 14 08 14.9 +0.4**
ESAR Angra dos Reis 127.22 141 *eP* **PKiKP 14 08 15.4 +0.9**
ARAG Araguaiana, MT 127.30 128 *eP* **PKPdf 14 08 14.6 +0.3**
BATG Bathurst New B 127.32 44 PKPdf **PKPdf 14 08 12.8 -0.5**
VRH Novokhopyorsk 127.50 321 *e*PKIKP **PKiKP 14 08 14.2 +0.1**
VRH *e**PP **pPKPdf 14 08 46.7 +0.8**
VRH pmax pmax
comp=Z,40nm,0.8s
MAN01 Angra dos Reis 127.62 141 *eP* **PKiKP 14 08 15.7 +0.3**
GNI Garni 127.79 307 PKP **PKiKP 14 08 16.4 +1.1**
comp=Z,5.7nm,0.4s,baz=237,slow=3.0,SNR=9.4
GNI Garni 127.79 307 PKiKP 14 08 15.1 -0.2
GNI Garni 127.79 307*d* iPKIKP **PKiKP 14 08 16.0 +0.7**
JMIC Jan Mayen 127.83 359 *e*PKPdf **PKiKP 14 08 14.5 +0.2**
JMIC *e*PP **PP 14 10 17.1 +0.2**
JMIC *e*SP SP 14 20 07.0 -2.3
JMIC *e*SS **SS 14 27 22.1 +3.0**
ZEI Tsey 128.04 310 *i* PKIKP **PKPdf 14 08 14.4 -0.8**
ZEI pmax pmax
comp=Z,21nm,1.3s
SJG San Juan 128.05 81 PKPdf 14 08 14.5 -1.1
SJG San Juan 128.05 81 PKIKP **PKPdf 14 08 14.5 -1.1**
MOS Moscow 128.13 327 *i* PKIKP **PKPdf 14 08 13.4 -1.2**
MOS *e* 14 10 16.8
MOS *e*PS **PS 14 20 14.4 -14**
MOS pmax pmax
comp=Z,55nm,1.1s
STEI Steigen 128.15 348 *e*PKPdf **PKiKP 14 08 14.8 -0.1**
PDPR Patillas Dam, 128.16 82 PKPdf 14 08 14.6 -1.2
GOF Gofitskoye 128.22 313↑ *e*PKIKP **PKPdf 14 08 12.9 -2.3**
LOF Lofoten 128.31 348 *e*PKPdf **PKPdf 14 08 08.6 -6.0**
LOF *e*SS SS 14 27 23.4 -1.8
VALR Valaam 128.31 336*d* iPKIKP **PKiKP 14 08 15.5 +0.1**
HUMP Col San Antoni 128.34 81 PKPdf **PKPdf 14 08 15.2 -0.9**
VAS01 Vassouras-RJ 128.38 141 *eP* **PKiKP 14 08 17.9 +1.0**
IPMB Ipameri, GO 128.40 133 *eP* **PKiKP 14 08 17.0 -0.1**
KMBO Kilima Mbogo 128.45 253 PKP **PKiKP 14 08 17.4 -0.1**
comp=Z,3.0nm,0.6s,baz=191,slow=1.1,SNR=4.8
KMBO pPKP **pPKPdf 14 08 51.9 +2.6**
comp=Z,3.2nm,0.9s,baz=46,slow=4.3,SNR=2.4
LMN Caledonia Moun 128.48 46 PKPdf 14 08 14.8 -0.8
KBZ Khabaz 128.59 311 PKP **PKiKP 14 08 16.8 +0.3**
comp=Z,2.1nm,0.4s,baz=30,slow=6.6,SNR=6.4
KBZ Khabaz 128.59 311 ||*j* PKIKP **PKiKP 14 08 17.6 +1.1**
FAUS Fauske 128.60 347 *e*PKPdf **PKPdf 14 08 15.0 -0.2**
FAUS *e*PP **PP 14 10 19.9 -2.1**
FAUS *e*SS SS 14 27 27.8 -1.0
LPSR Galich'ya Gora 128.66 323 *e*PKIKP **PKiKP 14 08 16.6 +0.2**
LPSR *e**PP **pPKPdf 14 08 48.5 +0.4**
LPSR pmax pmax
comp=Z,110nm,1.4s
KVAR Kislovodsk Arr 128.69 312 PKP **PKiKP 14 08 18.0 +1.1**
comp=Z,2.7nm,0.4s,baz=89,slow=22,SNR=2.1
KIV Kislovodsk 128.70 312 *iP* **Pdif 14 05 03.0 +0.7**
KIV *i* 14 08 17.4
KIV *e**PP **pPKPdf 14 08 48.9 +0.3**
KIV *e**SP **sPKPdf 14 08 55.7 -5.2**
KIV *e* 14 10 23.1
KIV *e* 14 15 12.2
KIV *e*PS **PS 14 20 32.0 -1.9**
KIV *e*SS SS 14 27 31.3 -0.9
KIV *e*SSS SSS 14 32 17.5
KIV pmax pmax
comp=Z,19nm,1.1s
KIV MLR MLR
comp=Z,527nm,23.0s
VORR Voronezh 128.84 322 *e*PKIKP **PKiKP 14 08 17.4 +0.6**
VORR pmax pmax
comp=Z,70nm,0.4s
OBN Obninsk 128.94 327 PKP **PKPdf 14 08 16.5 +0.3**
comp=Z,4.7nm,0.4s,baz=75,slow=2.3,SNR=15
OBN SKPbc SKPbc 14 11 25.8
comp=Z,3.4nm,0.3s,baz=50,slow=6.2,SNR=6.0
OBN Obninsk 128.94 327 PKPdf 14 08 16.2 +0.1
OBN Obninsk 128.94 327*d* iPKIKP **PKPdf 14 08 16.5 +0.3**
OBN *e* 14 08 48.4
OBN *e* 14 10 25.2
OBN *e* 14 15 13.8
OBN *e*SS SS 14 27 35.5 +1.6
OBN pmax pmax
comp=Z,63nm,1.0s
OBN MLR MLR
comp=Z,908nm,22.0s
VSR Storozhevoye 129.02 321 *e*PKIKP **PKPdf 14 08 16.2 -0.3**
VSR *e**PP **pPKPdf 14 08 48.4 -0.4**
VSR pmax pmax
comp=Z,60nm,1.4s
BOAV Boa Vista 129.05 103 *eP* **PKPdf 14 08 17.7 0.0**
DUB01 Friburgo-RJ 129.17 142 *eP* **PKiKP 14 08 19.0 +0.5**
NPGB Novo Progresso 129.44 116 *eP* **PKPdf 14 08 18.3 -0.1**
PUL Pulkovo 129.47 334↑ *i*PKIKP **PKiKP 14 08 19.0 +1.2**
CAM01 Campos-RJ 129.78 142 *eP* **PKiKP 14 08 19.9 +0.2**
MOR8 Moi Rana 129.81 347 *e*PKPdf **PKPdf 14 08 17.9 +0.4**
MOR8 *e*PP **PP 14 10 29.0 -1.0**
MOR8 *e*SS SS 14 27 42.3 -1.5
BATM Batumi 129.86 309 ||*j* PKIKP **PKiKP 14 08 20.1 +0.9**
BATM Batumi 129.86 309 ||*j* PKIKP **PKiKP 14 08 20.1 +0.9**
SNDB Serra Nova Dou 129.99 125 *eP* **PKiKP 14 08 19.9 -0.4**
FIA1 FINESS Array S 130.06 338 PKPdf 14 08 18.0 -0.1
FINES FINESS Array B 130.06 338 PKhKP PKPpre 14 08 01.4
comp=Z,7.2nm,1.2s,baz=35,slow=5.1,SNR=3.8
FINES PKP **PKiKP 14 08 18.8 -0.2**
comp=Z,18nm,0.9s,baz=66,slow=2.5,SNR=16
FINES SKPbc **SKPbc 14 11 29.9 -0.1**
comp=Z,8.9nm,0.5s,baz=78,slow=3.7,SNR=25
BDFB Brasilia 130.12 131 PKP **PKiKP 14 08 20.3 -0.3**
comp=Z,42nm,0.8s,baz=182,slow=1.6,SNR=34
BDFB SKPbc **SKPbc 14 11 31.9 +0.1**
comp=Z,43nm,1.1s,baz=255,slow=0.7,SNR=9.2
BDFB Brasilia 130.12 131 PKPdf 14 08 18.9 -0.9
BDFB Brasilia 130.12 131 *eP* **PKPdf 14 08 20.2 +0.4**
ITTB Itaituba 130.45 113 *eP* **PKPdf 14 08 20.5 +0.1**
SOC Sochi 130.88 312 *i* PKIKP **PKiKP 14 08 21.0 -0.2**
SOC *e* 14 10 36.5
SOC *e*PPP PPP 14 13 25.1
SOC *e* 14 15 13.7
SOC *e*PS **PS 14 20 38.7 -14**
SOC *e*SS SS 14 27 56.0 -2.8
SOC *e*SSS SSS 14 32 48.7
ALF01 Guarapari-ES 131.26 142 *eP* **PKiKP 14 08 23.6 +1.0**
MEF Metsahovi 131.50 337 *eP* **PKiKP 14 08 21.5 -0.3**
VSU Vasula 131.74 334*d* iPKIKP **PKiKP 14 08 23.3 +0.9**
VSU Vasula 131.74 334 *eP* **PKiKP 14 08 22.9 +0.5**
RAF Rauma 131.86 339 *eP* **PKiKP 14 08 22.2 -0.4**
ANN Anapa 132.15 314 *i* PKIKP **PKPdf 14 08 23.1 +0.5**
ANN *e* 14 10 45.3
ANN *e* 14 15 21.0
ANN pmax pmax
comp=Z,48nm,1.5s
PEXB Peixe 132.21 127 *eP* **PKiKP 14 08 24.4 -0.4**
SJMB Sao Joao De Ma 132.47 140 *eP* **PKPdf 14 08 24.2 +0.2**
RIB01 Linhares ES 132.47 141 *eP* **PKiKP 14 08 25.2 +0.1**
BSFB Barra de Sao F 132.57 140 *eP* **PKiKP 14 08 25.5 +0.2**
MTSE Matsula 132.74 336 *eP* **PKiKP 14 08 24.0 -0.4**
MALB Monte Alegre 132.94 111 *eP* **PKiKP 14 08 26.2 0.0**
AAL Aland 133.08 339 *eP* **PKiKP 14 08 24.6 -0.4**
JANB Januaria 133.12 134 *eP* **PKiKP 14 08 26.1 -0.5**
MNK Minsk 133.60 329 *i* PKIKP **PKiKP 14 08 27.5 +1.2**
MNK *i* 14 08 59.9
MNK *i* 14 10 54.3
MNK *i* PPP PPP 14 13 50.5
MNK *i* 14 15 27.4
MNK *i*PS **PS 14 21 16.0 +0.8**
MNK *i*SS SS 14 28 33.1 +2.5
MNK *i*SSS SSS 14 33 30.8
MNK pmax pmax
comp=Z,36nm,1.0s
MNK pmax pmax
comp=E,2.0nm,0.9s
MNK MLR MLR
comp=E,74nm,20.0s
MNK MLR MLR
comp=N,1μm,19.0s
MNK MLR MLR
comp=Z,3μm,25.0s
MNK Minsk 133.60 329 *i* PKP **PKiKP 14 08 27.6 +1.2**
comp=E,2.0nm,0.8s
MNK *i* PKP **PKiKP 14 08 27.6 +1.2**
MNK *i* PKP **PKiKP 14 08 27.6 +1.2**
comp=Z,36nm,0.9s,baz=56
MNK *i* pPKP **pPKPdf 14 08 59.9 +2.5**
MNK *i* PP **PP 14 10 54.4 -0.3**
MNK *i* SKP 14 11 51.3
MNK *i* PKS **PKSdf 14 12 03.6 +2.5**
MNK *i* PPP PPP 14 13 50.5
MNK *i* SKS **SKSdf 14 15 27.4 +2.5**
MNK *i* PS **PS 14 21 16.0 +0.8**
MNK *i* SKKS **SKKSdf 14 25 17.5 0.0**
MNK *i* SS **SS 14 28 33.2 +2.6**
MNK *i* SSS SSS 14 33 30.9
MNK *i* LRM MLR 15 06 26.6
comp=E,74nm,19.9s
MNK *i* LRM MLR 15 07 11.5
comp=N,1μm,19.1s
MNK *i* LRM MLR 15 07 18.7
comp=Z,3μm,25.0s
BORG Borgarnes 133.62 6 SKPab **SKPbc 14 11 43.2 +0.9**
comp=Z,31nm,1.2s,baz=0.2,slow=2.9,SNR=3.9
IDID Didziasalis 133.66 331 *eP* **PKiKP 14 08 26.8 +0.4**
NAN01 Guarapari, ES 133.77 140 *eP* **PKiKP 14 08 27.3 -0.6**
ISAL Salakas 133.79 332 *eP* **PKiKP 14 08 27.5 +0.8**
IIGN Ignalina 133.88 331 *eP* **PKiKP 14 08 27.7 +0.9**
NACGM Naroch 133.88 330↓ *e*PKP **PKiKP 14 08 26.3 -0.6**
baz=54
VSVD Vaisvydziai 134.50 333 *eP* **PKiKP 14 08 28.4 +0.3**
SDBA SAO DESIDERIO 134.52 131 *eP* **PKiKP 14 08 29.9 +0.4**
PRPB Parauapebas 134.54 119 *eP* **PKPdf 14 08 28.7 +0.6**
DOMB Dombas 134.57 347 *e*PKPdf **PKPdf 14 08 26.7 0.0**
DOMB IVmB_BB 14 08 29.3
comp=Z,245nm,3.0s
DOMB *e*PP **PP 14 11 00.1 -0.5**
DOMB *e*SKPdf **SKPab 14 11 48.5 -0.6**
DOMB *e* 14 28 49.1
DOMB IVMs_BB IVMs_BB 14 59 29.6
comp=Z,634nm,31.5s
NC303 NORSAR Array S 134.76 345 PKPdf 14 08 27.4 +0.3
SMTB Santa Maria do 134.77 124 *eP* **PKiKP 14 08 29.6 -0.4**
PABE Paberze 134.79 333 PKPdf **PKPdf 14 08 26.9 -0.3**
PABE Paberze 134.79 333 *eP* **PKPdf 14 08 27.3 +0.1**
AKN Aaknes 134.88 348 *e*PKPdf **PKPdf 14 08 27.8 +0.6**
GUA01 Guaratinga, BA 134.93 140 *eP* **PKiKP 14 08 30.9 +0.7**
AKASG Malin Array Be 134.93 324 PKhKP PKPpre 14 08 14.1
comp=Z,1.0nm,0.4s,baz=64,slow=3.0,SNR=5.9
AKASG PKP **PKPdf 14 08 27.8 +0.1**
comp=Z,6.6nm,0.5s,baz=54,slow=3.0,SNR=22
AKASG SKPbc **SKPbc 14 11 47.2 +0.1**
comp=Z,28nm,1.0s,baz=44,slow=4.9,SNR=13
AKASG SKKPbc **SKKPbc 14 20 51.4 -4.4**
comp=Z,3.4nm,0.9s,baz=241,slow=4.8,SNR=6.6
AKBB Malin Array Si 134.93 324*de* PKIKP **PKPdf 14 08 27.5 -0.1**
KIEV Kiev 134.94 324 PKIKP **PKPdf 14 08 28.0 +0.3**
NB2 NORSAR Subarra1 134.96 345 PKPdf PKPdf 14 08 19.6 -7.9
baz=31,slow=1.9
NB2 NORSAR Subarra1 134.96 345 PKPdf PKPdf 14 08 19.6 -7.9
comp=Z,36nm,1.7s,baz=31,slow=1.9
NOA NORSAR Array B 134.96 345 PKhKP PKPpre 14 08 11.1
comp=Z,0.1nm,0.4s,baz=53,slow=1.8,SNR=1.8
NOA PP **PP 14 11 04.9 +1.9**
comp=Z,2.4nm,0.9s,baz=32,slow=5.8,SNR=3.8
NOA SKPbc **SKPbc 14 11 47.4 +0.4**
comp=Z,0.8nm,0.9s,baz=8.3,slow=12,SNR=2.4
HFS Hagfors 135.06 343 PKhKP PKPpre 14 08 15.6
comp=Z,1.3nm,0.5s,baz=86,slow=4.6,SNR=6.1
HFS SKPbc **SKPbc 14 11 47.1 -0.1**
comp=Z,7.5nm,0.9s,baz=116,slow=3.4,SNR=4.0
HFS SKKPbc **SKKPbc 14 20 56.2 +0.2**
comp=Z,6.4nm,1.0s,baz=183,slow=10,SNR=4.5
NC602 NORSAR Array S 135.13 344 PKPdf PKPdf 14 08 28.2 +0.5
NC602 NORSAR Array S 135.13 344 *e*PKPdf **PKPdf 14 08 26.4 -1.4**
NC602 *e*PP **PP 14 11 07.3 +3.2**
MCPB Macapa, AP 135.58 111 *eP* **PKPdf 14 08 28.1 -1.9**
SKAR Skarslia 135.96 346 *e*PKPdf **PKPdf 14 08 29.9 +0.5**
SKAR *e*PP **PP 14 11 11.1 +1.8**
SKAR *e*SKPdf **SKPbc 14 11 47.0 -3.0**
SKAR *e*SP **SP 14 21 19.1 -0.3**
SKAR *e* 14 29 05.4
SKAR IVMs_BB IVMs_BB 15 01 25.4
comp=Z,593nm,21.3s
CMC01 Camacan, BA 136.04 139 *eP* **PKiKP 14 08 32.2 -0.3**
SUW Suwalki 136.09 331 *eP* **PKiKP 14 08 31.2 -0.1**
BR131 Keskin Array S 136.25 308*de* PKIKP **PKiKP 14 08 29.8 -0.9**
BRTR Keskin Array B 136.25 308 PKhKP PKPpre 14 08 19.4
comp=Z,0.4nm,0.4s,baz=166,slow=11,SNR=2.1
BRTR PP **PP 14 11 13.8 +1.4**
comp=Z,9.3nm,1.0s,baz=98,slow=5.2,SNR=6.7
BRTR SKPbc **SKPbc 14 11 51.5 -0.3**
comp=Z,10nm,1.0s,baz=147,slow=2.9,SNR=6.7
BRTR SKKPbc **SKKPbc 14 20 45.0 -5.5**
comp=Z,1.7nm,0.8s,baz=250,slow=3.3,SNR=4.0
SUE Sulen 136.34 349 *e*PKPdf **PKPdf 14 08 30.0 0.0**
KONO Kongsberg 136.56 345 *e*PKPdf **PKPdf 14 08 27.8 -2.7**
KONO *e*PP **PP 14 11 15.2 +2.2**
KONO *e*SP SP 14 21 24.8 +0.3
KONO *e*SS **SS 14 29 03.6 -1.7**
KONO IVMs_BB IVMs_BB 15 03 50.0
comp=Z,496nm,24.6s
BER Bergen 136.85 348 *e*PP **PP 14 11 14.6 -0.1**
BER *e*SKPdf **SKPbc 14 11 52.5 -0.2**
BER *e*SS **SS 14 29 13.3 +4.7**
KIS Kishinev 136.93 320 *e*PKP **PKPdf 14 08 31.0 -0.5**
KIS *ep*PKP **pPKPdf 14 09 04.0 +0.1**
KIS Kishinev 136.93 320 *e*PKIKP **PKPdf 14 08 31.0 -0.5**
KIS *e* 14 09 04.0
KIS pmax pmax
comp=Z,700nm,7.8s
MILM Milestii Mici 136.97 320 *e*PKP **PKPdf 14 08 30.0 -1.6**
MILM *ep*PKP **pPKPdf 14 09 01.0 -2.9**
MILM Milestii Mici 136.97 320 *e*PS PS 14 21 57.0 +13
MILM *e*L L 14 54 44.0
MILM LRM MLR 15 14 08.0
comp=Z,700nm,21.0s
MILM Milestii Mici 136.97 320↑ *i*P **PKiKP 14 08 32.8 -0.6**
MILM Milestii Mici 136.97 320 *e*PKIKP **PKPdf 14 08 30.0 -1.6**
MILM *e* 14 09 01.0
MILM *e* 14 09 17.0
MILM *e*PS **PS 14 21 37.0 -7.2**
MILM pmax pmax
comp=Z,2μm,8.4s
KLNR Kaliningrad 137.00 334↑ *i*PKIKP **PKiKP 14 08 33.2 0.0**
GDU01 Guandu, BA 137.23 137 *eP* **PKPdf 14 08 33.3 +0.3**
MDP Montagnes des 137.35 103 PKP PKPdf 14 08 33.4 +0.1
comp=Z,50nm,1.1s,baz=222,slow=2.0,SNR=10
BLS5 Blasjo 137.50 347 *e*PKPdf **PKiKP 14 08 33.5 -0.7**
BLS5 *e*SKPdf **SKPbc 14 11 53.9 -0.8**
CSS Mathiatis 137.53 301 PKPdf 14 08 32.5 -0.5
TMAB Tom-Au,PA,Br 138.03 116 *eP* **PKiKP 14 08 35.9 -0.7**
HOMB Homborsund 138.05 345 *e*PKPdf **PKPdf 14 08 33.5 +0.3**
HOMB *ep*PP **PP 14 11 23.7 +1.4**
HOMB *e*SKPdf **SKPdf 14 11 57.3 +0.3**
HOMB *e*SS **SS 14 29 23.8 +0.9**
TPGR Topolog 138.12 317↑ *i*P PKPpre 14 08 23.3
CFR Carcaliu 138.16 318 ||*j*P PKPpre 14 08 23.7
CFR Carcaliu 138.16 318 ||*j*PKHKP PKPpre 14 08 23.7
LVV L'vov 138.22 326 *e*PKIKP **PKPdf 14 08 34.1 +0.3**
LVV *e**PP **pPKPdf 14 09 07.6 +1.4**
LVV *e* 14 11 23.2
LVV *e*PS PS 14 21 52.3 -2.2
LVV *e*SS SS 14 29 20.4 -5.6
LVV MLR MLR
comp=N,400nm,23.0s
LVV MLR MLR
comp=E,700nm,23.0s
LVV MLR MLR
comp=Z,900nm,23.0s
TESR Tescani 138.48 320 ||*j*P **PKPdf 14 08 34.9 +0.5**
PETR Petresti 138.49 319 ||*j*P **PKPdf 14 08 33.3 -1.1**
HARR Harsova 138.51 317↑ *i*P **PKPdf 14 08 29.6 -4.9**
HARR Harsova 138.51 317↑ *i*PKIKP **PKPdf 14 08 29.6 -4.9**
BIZ Bicaz 138.59 321 ||*j*P **PKPdf 14 08 27.9 -6.7**
MORS Morshin 138.68 325 PKIKP **PKiKP 14 08 36.2 -0.6**
VRI Vrincioaia 138.74 319↑ *i*P **PKiKP 14 08 39.2 +2.1**
VRI Vrincioaia 138.74 319↑ *i*PKIKP **PKiKP 14 08 39.2 +2.1**

BUR01	Bucovina Ar. S	138.77 322	⇓P	PKPdf	14 08 34.3	-0.7
BURAR	Bucovina Array	138.77 322	PKPdf	PKPdf	14 08 34.9	-0.2
PLOR	Plostina	138.79 319	⇓P	PKPdf	14 08 34.4	-0.7
PLOR	Plostina	138.79 319	⇓PKIKP	PKPdf	14 08 34.4	-0.7
MLR	Muntele Rosu	139.40 319	⇓P	PKPdf	14 08 35.8	-0.5
MLR	Muntele Rosu	139.40 319	PKhKP	PKPpre	14 08 29.4	
	comp=Z,5.8nm,0.9s,baz=174,slow=4.2,SNR=6.3					
MLR			SKPbc	SKPbc	14 12 00.6	0.0
	comp=Z,93nm,1.4s,baz=354,slow=4.3,SNR=10					
MLR	Muntele Rosu	139.40 319	PKPdf	PKPdf	14 08 36.2	0.0
MLR	Muntele Rosu	139.40 319	PKIKP	PKPdf	14 08 36.3	0.0
PRD	Provadia	139.49 315	P	PKPdf	14 08 32.0	-4.3
DOPR	Dopca	139.50 320	⇓P	PKPdf	14 08 30.7	-5.6
UZH	Uzhgorod	139.84 325	ePKHKP	PKPpre	14 08 30.1	
UZH			e		14 08 39.1	
UZH			e		14 09 12.7	
UZH			e		14 14 36.7	
UZH			e		14 15 33.3	
VOIR		139.97 320	⇑P	PKiKP	14 08 40.7	+1.0
VOIR		139.97 320	⇑PKIKP	PKiKP	14 08 40.7	+1.0
CRVS	Cervenica-Dubn	140.12 326	ePKIKP	PKPdf	14 08 37.5	+0.2
CRVS	Cervenica-Dubn	140.12 326	ePKP	PKPdf	14 08 37.5	+0.2
CRVS			e		14 12 03.4	
CRVS			e		14 20 37.3	
CJR	Cluj-Napoca	140.18 322	⇓P	PKPdf	14 08 32.3	-5.2
CJR	Cluj-Napoca	140.18 322	⇓PKIKP	PKPdf	14 08 32.3	-5.2
MESR	Meseseni	140.32 323	⇑P	PKiKP	14 08 40.3	0.0
NIE	Niedzica	140.40 328	ePKP	PKPdf	14 08 38.8	+1.0
LANS	Liptovska Anna	140.99 328	ePKIKP	PKPdf	14 08 38.0	-0.9
LANS	Liptovska Anna	140.99 328	ePKP	PKPdf	14 08 38.0	-0.9
LANS			e		14 12 07.9	
ROSB	Rosrio	141.06 120	eP	PKPdf	14 08 40.4	+0.3
KAC	Achnashellach	141.15 355	eP	PKPdf	14 08 33.4	-5.5
OKC	Ostrava-Krasne	141.19 330	ePKIKP	PKPdf	14 08 35.8	-3.4
OKC			MLR	MLR		
	comp=Z,1μm,24.3s					
OKC	Ostrava-Krasne	141.19 330	ePKP	PKPdf	14 08 35.8	-3.4
OKC			eSKP		14 12 02.2	
OKC			AMS	AMS	15 08 30.0	
	comp=Z,1μm,24.3s					
KPL	Plockton	141.34 355	eP	PKPdf	14 08 34.7	-4.5
KSP	Ksiaz	141.34 332	ePKP	PKPdf	14 08 34.1	-5.3
KSP			eL	L	15 03 09.1	
	comp=Z,2μm,30.5s					
GZR	Gura Zlata	141.37 321	⇑P	PKPdf	14 08 36.3	-3.5
GZR	Gura Zlata	141.37 321	⇑PKHKP	PKPpre	14 08 36.3	
MORC	Moravsky Berou	141.51 330	⇑P	PKPdf	14 08 35.3	-4.6
MORC	Moravsky Berou	141.51 330	⇑PKIKP	PKPdf	14 08 35.3	-4.6
MORC	Moravsky Berou	141.51 330	ePKP	PKPdf	14 08 36.3	-3.6
MORC			e		14 09 07.2	
MORC			e		14 12 03.9	
MORC			e		14 20 28.7	
MORC			e		14 21 27.9	
PSZ	Piszkesteto	141.54 326	⇓P	PKPdf	14 08 35.3	-4.7
PSZ	Piszkesteto	141.54 326	⇓PKIKP	PKPdf	14 08 35.3	-4.7
SIRR	Siria	141.55 323	⇑P	PKPdf	14 08 35.6	-4.4
OSTC	Ostas	141.58 332	ePKP	PKPpre	14 08 20.7	
OSTC			ex	x	14 09 11.2	
OSTC			eSKP		14 12 02.8	
OSTC			AMS	AMS	15 02 50.0	
	comp=Z,2μm,32.4s					
CHVC	Chvalec	141.63 332	ePKP	PKPpre	14 08 31.8	
CHVC			eSKP		14 12 04.9	
CHVC			AMS	AMS	15 02 50.0	
	comp=Z,3μm,32.1s					
MAUC	Maruska	141.66 329	ePKP	PKPdf	14 08 40.9	+0.8
MAUC			ex	x	14 09 26.3	
MAUC			eSKP		14 12 05.9	
MAUC			AMS	AMS	15 06 20.0	
	comp=Z,2μm,23.8s					
KRLC	Kraliky	141.66 331	ePKIKP	PKPdf	14 08 39.3	-0.8
KRLC			MLR	MLR		
	comp=Z,1μm,25.9s					
KRLC	Kraliky	141.66 331	ePKP	PKPdf	14 08 39.3	-0.8
KRLC			eSKP		14 12 04.4	
KRLC			AMS	AMS	15 04 20.0	
	comp=Z,1μm,25.9s					
DPC	Dobruska-Polom	141.68 331	ePKHKP	PKPpre	14 08 35.3	
DPC	Dobruska-Polom	141.68 331	ePKP	PKPdf	14 08 35.3	-4.8
DPC			epPKP	pPKPdf	14 09 13.0	+0.5
DPC			eSKP		14 12 00.0	
DPC			AMS	AMS	15 03 10.0	
	comp=Z,3μm,36.5s					
UPC	Upice	141.71 332	ePKIKP	PKPdf	14 08 35.8	-4.3
UPC	Upice	141.71 332	ePKP	PKPdf	14 08 35.8	-4.3
UPC			eSKP		14 12 02.6	
UPC			AMS	AMS	15 02 40.0	
	comp=Z,3μm,32.1s					
HERR	Herculane	141.86 320	⇓P	PKPdf	14 08 33.0	-7.5
KOLL	Kolacno	141.90 328	ePKP	PKPdf	14 08 38.3	-2.2
RZN	Rozhen	141.93 315	P	PKPdf	14 08 36.0	-5.0
BZS	Buzias	141.94 322	⇑P	PKPdf	14 08 36.5	-4.2
BZS	Buzias	141.94 322	⇑PKIKP	PKPdf	14 08 36.5	-4.2
JAVC	Velka Javorina	142.07 329	ePKP	PKPdf	14 08 37.9	-3.0
JAVC			e		14 09 08.3	
JAVC			e		14 12 09.0	
JAVC			e		14 20 27.1	
JAVC			e		14 21 26.5	
INVG	Invergeldie, C	142.09 354	eP	PKPdf	14 08 36.8	-3.8
VRAC	Vranov	142.29 330	⇓P	PKPdf	14 08 38.1	-3.1
VRAC	Vranov	142.29 330	PKhKP	PKPpre	14 08 38.2	
	comp=Z,8.2nm,0.9s,baz=110,slow=1.9,SNR=10					
VRAC			SKKPbc	SKKPbc	14 20 25.5	-1.8
	comp=Z,3.4nm,0.5s,baz=208,slow=1.9,SNR=4.5					
VRAC	Vranov	142.29 330	⇓PKIKP	PKPdf	14 08 38.1	-3.1
VRAC	Vranov	142.29 330	ePKP	PKPdf	14 08 38.3	-2.9
VRAC			e		14 09 09.7	
VRAC			e		14 12 10.2	
VRAC			e		14 20 26.1	
VRAC			e		14 21 24.3	
PVCC	Panska Ves	142.33 333	ePKHKP	PKPpre	14 08 33.6	
PVCC	Panska Ves	142.33 333	ePKP	PKPdf	14 08 33.6	-7.6
PVCC			eSKP		14 12 05.1	
PVCC			AMS	AMS	15 04 50.0	
	comp=Z,2μm,27.4s					
BRG	Berggiesshubel	142.33 334	ePKP	PKPdf	14 08 37.9	-3.3
BRG			Amp		14 08 42.8	
	comp=Z,24nm,1.0s					
BRG			pPKP	pPKPdf	14 09 11.5	-2.1
BRG			Amp		14 09 14.7	
	comp=Z,30nm,1.2s					
BRG			SKP		14 12 08.8	
BRG			Amp		14 12 12.7	
	comp=Z,53nm,1.3s					
BRG	Berggiesshubel	142.33 334	ePKIKP	PKPdf	14 08 37.9	-3.3
BRG					14 09 11.5	
BRG			SS	SS	14 30 21.0	+7.5
BRG			pmax	pmax		
	comp=Z,24nm,1.0s					
MDVR	Moldovita	142.34 321	⇓P	PKPdf	14 08 38.9	-2.6
BLKB	Belogradchik	142.35 319	⇓P	PKPdf	14 08 38.5	-3.1
CLL	Collm	142.39 335	i PKIKP	PKPdf	14 08 37.1	-4.2
CLL			e		14 09 11.0	
CLL			pmax	pmax		
	comp=Z,38nm,1.5s					
CLL	Collm	142.39 335	i PKPpre	PKPpre	14 08 37.1	
	comp=Z,38nm,1.5s					
CLL			ePKPdf	PKPdf	14 08 41.0	-0.3
CLL			epPKPdf	pPKPdf	14 09 11.0	-2.7
CLL			esPKiKP	sPKiKP	14 09 28.0	-1.0
CLL			ePP	PP	14 11 47.0	-2.0
CLL			i SKPdf	SKPbc	14 12 07.4	-0.6
CLL			ePKSdf	PKSdf	14 12 16.0	-0.9
CLL			ePKSbc	PKSbc	14 12 20.0	-0.2
CLL			esPP		14 12 29.0	
CLL			esPPP		14 15 30.0	
CLL			eSKKSac	SKKSac	14 18 30.0	-0.7
CLL			ex	x	14 21 18.0	
CLL			ePSKS		14 22 00.0	
CLL			ePPS	PPS	14 24 12.0	
CLL			ex	x	14 26 00.0	
CLL			eSS	SS	14 30 14.0	0.0
CLL			esSS		14 31 10.0	
CLL			eSKSSKSac	S'S'ac	14 31 42.0	-2.2
CLL			ex	x	14 32 36.0	
CLL			eSSS	SSS	14 35 30.0	
CLL			eSSSS		14 39 06.0	
SMOL	Smolenice	142.42 329	ePKIKP	PKPdf	14 08 41.1	-0.4
SMOL	Smolenice	142.42 329	ePKP	PKPdf	14 08 41.0	-0.4
SMOL			e		14 12 25.7	
VTS	Vitosha	142.48 317	⇓P	PKPdf	14 08 38.8	-3.2
VTS	Vitosha	142.48 317	⇓PKIKP	PKPdf	14 08 38.8	-3.2
VTS	Vitosha	142.48 317	P	PKPdf	14 08 35.3	-6.7
KRUC	Moravsky	142.55 330	ePKP	PKPdf	14 08 39.1	-2.6
KRUC			e		14 09 09.7	
KRUC			e		14 12 10.1	
KRUC			e		14 20 25.3	
KRUC			e		14 21 23.0	
MODS	Modra-Piesok	142.59 328	ePKIKP	PKPdf	14 08 40.6	-1.2
MODS	Modra-Piesok	142.59 328	ePKP	PKPdf	14 08 40.6	-1.2
MODS			e		14 12 23.2	
EBL	Broad Law	142.62 352	eP	PKPdf	14 08 38.1	-3.5
MMB	Musomiste	142.63 315	P	PKPdf	14 08 38.0	-4.1
PRU	Pruhonice	142.74 332	ePKIKP	PKPdf	14 08 38.1	-3.9
PRU			MLR	MLR		
	comp=Z,2μm,23.2s					
PRU	Pruhonice	142.74 332	ePKP	PKPdf	14 08 38.1	-3.9
PRU			ex	x	14 09 26.9	
PRU			eSKP		14 12 10.8	
PRU			AMS	AMS	15 05 10.0	
	comp=Z,2μm,23.2s					
ZST	Bratislava	142.80 328	ePKIKP	PKPdf	14 08 41.7	-0.4
ZST	Bratislava	142.80 328	ePKP	PKPdf	14 08 41.7	-0.4
TREC	Trest	142.81 331	ePKHKP	PKPpre	14 08 36.9	
TREC			e		14 12 01.4	
TREC	Trest	142.81 331	ePKP	PKPdf	14 08 36.9	-5.3
TREC			eSKP		14 12 01.4	
TREC			AMS	AMS	15 04 00.0	
	comp=Z,2μm,28.7s					
KKB	Krupnik	142.94 316	P	PKPdf	14 08 39.0	-3.6
SRS	Serrai	142.94 314	P	PKPdf	14 08 38.2	-4.4
BOVS	Bovan	142.95 319	⇓P	PKPdf	14 08 37.5	-5.1
NBPB	Pedra_Branca-C	142.99 128	eP	PKPdf	14 08 44.6	+1.0
EKA	Eskdalemuir Ar	143.06 352	PKhKP	PKPpre	14 08 39.6	
	comp=Z,3.1nm,0.3s,baz=357,slow=2.9,SNR=50					
ESK	Eskdalemuir	143.08 352	PKIKP	PKPdf	14 08 42.2	-0.2
FRGS	Fruska Gora	143.25 322	⇓P	PKPbc	14 08 40.5	+0.1
FRGS	Fruska Gora	143.25 322	⇓i P	PKPbc	14 08 40.2	-0.2
MPLH	Magyarpolny	143.25 327	PKP	PKPbc	14 08 40.8	+0.4
MORH	Mrgy, Hungar	143.27 325	⇑P	PKPbc	14 08 40.6	+0.2
MORH	Mrgy, Hungar	143.27 325	⇓i P	PKPbc	14 08 40.2	-0.2
PLG	Polygyros	143.36 313	P	PKPab	14 08 39.5	-0.2
KNT	Kendrikon	143.38 315	P	PKPab	14 08 40.2	+0.5
EDMD	Edmundbyers	143.39 351	eP	PKPbc	14 08 40.4	-0.1
SOP	Sopron	143.41 328	PKP	PKPbc	14 08 41.1	+0.4
NKC	Novy Kostel	143.44 334	ePKIKP	PKPbc	14 08 41.4	+0.6
NKC			e		14 09 15.9	
NKC			e		14 12 02.3	
NKC	Novy Kostel	143.44 334	ePKP	PKPbc	14 08 41.4	+0.6
NKC			epPKP	pPKPdf	14 09 15.9	+0.3
NKC			eSKP		14 12 02.3	
NKC			AMS	AMS	15 05 00.0	
	comp=Z,2μm,35.3s					
RONA	Rosalia, Austr	143.53 328	i P	PKPbc	14 08 42.3	+1.1
	comp=Z,9.6nm,0.4s,SNR=26					
RONA			eP	pPKPdf	14 09 19.4	+3.5
	comp=Z,38nm,1.2s					
RONA			eS	SKPbc	14 12 10.8	-0.2
	comp=Z,27nm,1.1s					
RONA			eS	SKKPab	14 20 20.2	-0.6
	comp=Z,9.8nm,1.0s					
CONA	Conrad Observa	143.59 329	i P	PKPdf	14 08 43.1	-0.6
	comp=Z,98nm,1.2s,SNR=43					
CONA			eP	pPKPdf	14 09 19.4	+3.3
	comp=Z,29nm,1.1s					
CONA			eS	SKPbc	14 12 11.1	-0.1
	comp=Z,22nm,1.0s					
CONA			eS	SKKPab	14 20 21.2	+0.6
	comp=Z,12nm,1.4s					
KOVH	Kovagotottos	143.64 325	PKP	PKPbc	14 08 41.9	+0.4
CKRC	Cesky Krumlov	143.69 331	ePKP	PKPab	14 08 38.7	-2.0
CKRC			ex	x	14 09 16.3	
CKRC			eSKP		14 12 06.8	
DIVS	Divibare	143.74 321			PKPab 14 08 41.4	+0.3
DIVS	Divibare	143.74 321	⇓i P	PKPab	14 08 41.3	+0.2
TEKS	Tekeris	143.76 322	⇓i P	PKPbc	14 08 41.5	-0.4
KHC	Kasperske Hory	143.79 332		PKPbc	14 08 41.8	-0.1
KHC	Kasperske Hory	143.79 332	d iPKIKP	PKPbc	14 08 41.5	-0.4
KHC	Kasperske Hory	143.79 332	ePKP	PKPab	14 08 38.5	-2.6
KHC			epPKP	pPKPdf	14 09 14.5	-1.8
KHC			eSKP		14 12 11.0	
KHC			AMS	AMS	15 06 50.0	
	comp=Z,2μm,26.2s					
GRG	Griva	143.81 315	P	PKPab	14 08 40.5	-0.9
NBRF	Rio Formoso -	143.88 137	eP	PKPab	14 08 42.1	-0.2
GEC2	GERESS Array S	143.95 332	PKPdf	PKPbc	14 08 42.8	+0.4
GERES	GERESS Array B	143.95 332	PKP	PKPbc	14 08 43.1	+0.7
	comp=Z,23nm,0.7s,baz=48,slow=2.0,SNR=62					
GERES			SKPbc	SKPbc	14 12 12.2	+0.2
	comp=Z,4.2nm,0.7s,baz=90,slow=1.3,SNR=4.1					
GERES	GERESS Array B	143.95 332	PKIKP	PKPbc	14 08 42.9	+0.5
XOR	Korichi	143.97 312	P	PKPab	14 08 41.5	-0.6
NBMO	Morrinhos-CE	144.07 125	eP	PKPbc	14 08 43.7	0.0
ATHU	Athens Univers	144.09 309	P	PKPab	14 08 41.5	-1.1
BEHE	Becsehely	144.11 326	⇓i P	PKPbc	14 08 43.5	+0.7
VLY	Voula,Athens	144.13 309	P	PKPab	14 08 41.8	-0.9
LIT	Litokhoron	144.14 313	P	PKPab	14 08 42.4	-0.3
LIT	Litokhoron	144.14 313	PKPdf	PKPbc	14 08 43.2	0.0
LIT	Litokhoron	144.14 313	PKIKP	PKPbc	14 08 43.2	0.0
IDI	Anoyia	144.17 305	⇓P	PKPbc	14 08 43.3	-0.1
IDI	Anoyia	144.17 305	P	PKPbc	14 08 43.7	+0.2
IDI	Anoyia	144.17 305	PKPdf	PKPbc	14 08 43.6	+0.1
SJES	Sjenica	144.21 320	⇓i P	PKPdf	14 08 44.4	-0.5
BBLS	Lazići	144.22 321	⇓i P	PKPbc	14 08 43.9	+0.5
ARSA	Arzberg	144.22 328	i P	PKPdf	14 08 44.1	-0.6
	comp=Z,66nm,1.2s,SNR=35					
ARSA			eP	sPKPdf	14 09 25.0	-4.5
	comp=Z,46nm,1.2s					
ARSA			eS	SKPbc	14 12 08.3	-4.3
	comp=Z,28nm,1.6s					
ARSA			eS	SKKPab	14 20 14.6	-3.0
	comp=Z,12nm,1.2s					
GRA1	Grafenberg Arr	144.36 335		PKPbc	14 08 43.9	+0.4
GRF	Grafenberg Arr	144.36 335	PKIKP	PKPbc	14 08 43.9	+0.4
GRFO	Grafenberg	144.36 335		PKPbc	14 08 44.0	+0.5
GRFO	Grafenberg	144.36 335	PKIKP	PKPbc	14 08 44.0	+0.5
ATAL	Atalanti	144.36 311	P	PKPab	14 08 42.4	-1.2
RUDO	Rudo	144.38 321	⇓iP	PKPab	14 08 43.4	-0.1
KOGS	Kog	144.40 327	i PKPbc	PKPbc	14 08 44.3	+0.6
LKR	Lokris	144.40 311	P	PKPab	14 08 41.1	-2.6
MOA	Molln	144.41 330	i P	PKPdf	14 08 44.4	-0.6
	comp=Z,58nm,0.6s,SNR=77					
MOA			eP	pPKPdf	14 09 22.8	+5.4
	comp=Z,136nm,1.4s					
MOA			eS	SKPbc	14 12 12.9	-0.1
	comp=Z,23nm,1.3s					
KZN	Kozani	144.54 314	P	PKPab	14 08 43.0	-1.3
FNA	Florina	144.58 315	P	PKPab	14 08 43.7	-0.7
FNA	Florina	144.58 315		PKPab	14 08 44.4	0.0
FNA	Florina	144.58 315	PKIKP	PKPab	14 08 44.4	0.0
ILTH	Belurgan, Co L	144.68 355	eP	PKPab	14 08 42.9	-1.2
THL	Klokotos Trika	144.70 313	P	PKPab	14 08 43.0	-1.8
EPID	Epidavros	144.72 309	P	PKPab	14 08 43.4	-1.6
LBWR	Ladybower, Pea	144.73 350	eP	PKPbc	14 08 44.5	0.0
LBWR			IAmb	IAmb	14 08 50.1	
	comp=Z,219nm,1.0s					
GRC1	Grafenberg Arr	144.78 334	PKIKP	PKPdf	14 08 45.3	-0.3
KRND	KRANIDI	144.78 309	P	PKPab	14 08 43.7	-1.5
BIOA	Bad Ischl, Aus	144.82 330	i P	PKPbc	14 08 45.2	+0.2
	comp=Z,106nm,0.9s,SNR=43					
BIOA			eP	pPKPdf	14 09 24.0	+5.8
	comp=Z,28nm,0.7s					
BIOA			eS	SKPbc	14 12 13.0	-1.0
	comp=Z,28nm,1.5s					
IMMV	Iera Moni Meta	144.82 305	P	PKPbc	14 08 45.6	+0.2
PERS	Pernice	144.85 328	i PKPbc	PKPdf	14 08 45.7	-0.1
PERS			ePP	PKSbc	14 12 31.5	+5.0
MAKR	Makrakomi, Fth	144.86 312	P	PKPab	14 08 44.6	-0.9
SOKA	Soboth	144.86 328	i P	PKPab	14 08 45.1	-0.2
	comp=Z,167nm,1.0s,SNR=96					
SOKA			eP	pPKPdf	14 09 19.5	+1.2
	comp=Z,69nm,1.0s					
SOKA			eS	SKPbc	14 12 14.3	+0.1
	comp=Z,30nm,1.4s					
SOKA			eS	SKKPab	14 20 13.3	-1.6
	comp=Z,12nm,1.3s					
UPM	Unac-Piva	144.90 320	⇓i P	PKPab	14 08 45.7	0.0
KPRO	Kipourio	144.98 314	P	PKPbc	14 08 45.0	-0.9
BLY	Banja Luka	144.98 324	⇓i P	PKPdf	14 08 46.5	+0.5
TNS	Taunus Mts	144.98 338	PKIKP	PKPdf	14 08 46.4	+0.4
WME	Myndd Eilian	145.10 353	eP	PKPdf	14 08 46.0	0.0
STNC	Stoke	145.11 351	eP	PKPdf	14 08 46.3	+0.3
STNC			IAmb	IAmb	14 08 51.6	
	comp=Z,514nm,1.2s					
PDG	Podgorica	145.11 319	⇑P	PKPdf	14 08 47.4	+1.0
PDG	Podgorica	145.11 319		PKPbc	14 08 46.1	+0.1
PDG	Podgorica	145.11 319	⇓iP	PKPdf	14 08 46.4	+0.1
WPS	Cemaes, Angles	145.12 353	eP	PKPbc	14 08 45.2	-0.5
WPS			IAmb	IAmb	14 08 51.0	
	comp=Z,101nm,1.0s					
KNDR	Palaiochora Ch	145.12 305	P	PKPdf	14 08 46.6	0.0
EVR	Evrytania	145.13 312	P	PKPbc	14 08 45.9	-0.5
GUR	Goura	145.16 310	P	PKPbc	14 08 45.9	-0.6
VLI	Veliai	145.19 308	P	PKPbc	14 08 45.6	-0.9
ANX	Ano Chora	145.19 311	P	PKPbc	14 08 46.6	0.0
ANKY	Antikythira Is	145.21 306	P	PKPab	14 08 47.5	+0.7
WLF1	Llynfaes	145.22 353	eP	PKPdf	14 08 46.1	0.0
WLF1			IAmb	IAmb	14 08 51.1	
	comp=Z,376nm,0.8s					
OBKA	Obir	145.22 328	i P	PKPab	14 08 46.9	+0.3
	comp=Z,87nm,1.1s,SNR=34					
OBKA			eP	pPKPdf	14 09 21.2	+2.3
	comp=Z,73nm,1.2s					
OBKA			eS	SKPbc	14 12 11.6	-3.5
	comp=Z,20nm,1.4s					
OBKA			eS	SKKPab	14 20 12.8	-0.5
	comp=Z,16nm,1.5s					
CRES	Cresnjev	145.22 327	⇓iP	PKPab	14 08 46.9	+0.4
MGRS	Mrkonjic Grad	145.24 323	eP	PKPab	14 08 47.6	+0.9
KLV	Kalavryta, Ach	145.25 310	P	PKPdf	14 08 46.9	+0.1
KTHA	Kythira Island	145.26 307	P	PKPbc	14 08 46.3	-0.5
EFP	Efpalio	145.27 311	P	PKPab	14 08 47.5	+0.6
YRC	Rhoscolyn	145.27 353	eP	PKPdf	14 08 46.3	0.0
DRME	Dracevica, Mon	145.29 319	⇓iP	PKPab	14 08 47.2	+0.3
BRY	Bratogost	145.29 320	⇓iP	PKPab	14 08 47.3	+0.2
LAKA	Lakka	145.29 311	P	PKPdf	14 08 46.6	-0.2
TIR	Tirane	145.29 317	⇑P	PKPab	14 08 48.2	+1.2
TIR	Tirane	145.29 317	⇑PKIKP	PKPab	14 08 48.2	+1.2
KTHR	Kythira	145.30 307	P	PKPbc	14 08 46.9	0.0
CWF	Charnwood Fore	145.30 349	eP	PKPbc	14 08 46.3	0.0
YLL	Llanberis	145.34 353	eP	PKPbc	14 08 46.2	-0.1
KBA	Koelnbreinsper	145.40 330	i P	PKPdf	14 08 46.4	-0.5
	comp=Z,120nm,1.0s,SNR=89					
KBA			eP	pPKPdf	14 09 20.9	+1.6
	comp=Z,87nm,0.8s					
KBA			eS	SKPbc	14 12 10.5	-5.1
	comp=Z,40nm,1.8s					
KBA			eS	SKKPab	14 20 12.1	-0.5
	comp=Z,9.8nm,1.2s					
BEBN	Eben Emael	145.41 341	dPKP	PKPab	14 08 47.2	+0.2
BEBN			dpPKP	pPKPdf	14 09 19.1	+0.1
SRKY	Kupres RS	145.41 323	⇓iP	PKPab	14 08 47.6	+0.2
RCBR	Riachuelo	145.45 133	PKPdf	PKPdf	14 08 46.9	-1.0
RCBR	Riachuelo	145.45 133	PKIKP	PKPdf	14 08 46.9	-1.0
RCBR	Riachuelo	145.45 133	eP	PKPdf	14 08 47.6	-0.2
FOEL	Foel Wylfa	145.45 351	eP	PKPab	14 08 47.2	0.0
FOEL			IAmb	IAmb	14 08 52.8	
	comp=Z,255nm,0.9s					
BTNL	Ternell	145.45 340	dPKP	PKPab	14 08 47.5	+0.3
BTNL			dpPKP	pPKPdf	14 09 19.7	+0.6
PVO	Paravola	145.46 312	P	PKPab	14 08 47.9	+0.3
DSB	Dublin	145.46 355	PKPdf	PKPdf	14 08 46.4	-0.2
ELMS	Elmsett, Ipswi	145.46 347	eP	PKPab	14 08 47.0	-0.1
JAN	Janina	145.46 314	P	PKPdf	14 08 46.9	-0.2
MEM	Membach	145.47 341	PKP2	PKPab	14 08 48.0	+0.7
MEM	Membach	145.47 341	dPKP	PKPab	14 08 47.9	+0.7
MEM			dpPKP	pPKPab	14 09 18.8	0.0
TREB	Trebinje	145.51 320	⇓iP	PKPbc	14 08 47.5	+0.2
BOJS	Bojanci	145.54 326	i PKPbc	PKPab	14 08 48.6	+0.9
BOJS			epPKPbc	pPKPab	14 09 18.7	-0.7
BOJS			e		14 22 12.4	
BOJS			e		14 25 19.5	
LJU	Ljubljana	145.55 328	⇓iP	PKPab	14 08 48.2	+0.4
LJU	Ljubljana	145.55 328	i PKPbc	PKPab	14 08 48.4	+0.6
LJU			epPKPbc	pPKPbc	14 09 18.3	-1.0
LJU			e		14 09 32.1	
HCY	Herceg Novi	145.57 320	⇓iP	PKPbc	14 08 47.7	+0.2
MYKA	Terra Mystica	145.58 329	i P	PKPdf	14 08 46.7	-0.4
	comp=Z,67nm,1.0s,SNR=35					
MYKA			eP	pPKPab	14 09 24.2	+4.6
	comp=Z,25nm,0.6s					
MYKA			eS	SKPbc	14 12 13.4	-2.5
	comp=Z,15nm,1.1s					
MYKA			eS	SKKPab	14 20 12.1	+0.4
	comp=Z,12nm,1.5s					
BSTI	Sart Tilman	145.63 341	dPKP	PKPab	14 08 47.7	-0.2
BSTI			dpPKP	pPKPdf	14 09 17.0	-2.4
BHOU	Houvegnez	145.69 340	dPKP	PKPab	14 08 48.8	+0.6
BHOU			dpPKP	pPKPab	14 09 20.6	+0.9
ITM	Ithomi	145.76 309	PKPdf	PKPdf	14 08 47.5	-0.1
HLM1	Long Mynd	145.77 351	eP	PKPdf	14 08 47.2	0.0
HLM1			IAmb	IAmb	14 08 53.6	
	comp=Z,195nm,1.0s					
CEY	Cerknica	145.81 327	⇓iP	PKPab	14 08 48.9	+0.1
STON	Ston	145.81 321	⇓iP	PKPbc	14 08 48.1	-0.1
IGT	Igoumenitsa	145.88 314	P	PKPbc	14 08 48.5	-0.1
STU	Stuttgart	145.90 336	PKPbc	PKPbc	14 08 48.4	+0.1
STU	Stuttgart	145.90 336	PKP2	PKPbc	14 08 48.4	+0.1
BGES	Gesves	145.95 341	dPKP	PKPab	14 08 48.9	-0.2
NYDR	Nydri-Lefkada	146.00 312	P	PKPdf	14 08 48.2	+0.3
PYL	PYLOS	146.01 309	P	PKPdf	14 08 48.2	+0

comp=Z,187nm,0.9s
SWN1 Swindon 146.56 349 *e*P **PKPbc 14 08 50.8 +0.6**
SWN1 IAmb IAmb 14 08 56.1
comp=Z,391nm,0.9s
RSBS Rosebush, Pemb 146.57 353 *e*P **PKPbc 14 08 49.9 -0.3**
BFO Black Forest 146.59 336 PKPdf **PKPdf 14 08 48.4 -0.3**
BFO PKPbc **PKPbc 14 08 50.4 -0.1**
BFO Black Forest 146.59 336 PKIKP **PKPdf 14 08 48.4 -0.3**
BFO 14 08 50.4
FETA Feichten 146.64 332 *i* P **PKPdf 14 08 49.5 +0.4**
comp=Z,152nm,1.0s,SNR=74
FETA *e*P pPKPab 14 09 25.4 +1.6
comp=Z,156nm,0.9s
FETA *e*S **SKKPab 14 20 08.7 +1.5**
comp=Z,9.6nm,1.1s
WOL Wolverton 146.65 349 *e*P **PKPbc 14 08 50.5 +0.1**
DAVA Damuels 146.80 333 *i* P **PKPbc 14 08 50.9 -0.4**
comp=Z,205nm,1.1s,SNR=40
DAVA *e*P pPKPab 14 09 28.9 +4.5
comp=Z,216nm,1.0s
DAVA *e*S **SKKPab 14 20 03.6 -2.9**
comp=Z,11nm,1.2s
SCTE Santa Cesarea 146.86 316 PKPab **PKPbc 14 08 51.2 -0.2**
CTI Castel Tesino 146.95 330 PKPdf **PKPdf 14 08 49.5 0.0**
CTI Castel Tesino 146.95 330 PKIKP **PKPdf 14 08 49.5 0.0**
SLE Schleitheim 146.99 335 PKP2 **PKPbc 14 08 52.3 +0.7**
ECH Echery 147.12 337 **PKPdf 14 08 49.5 -0.1**
ECH Echery 147.12 337 PKIKP **PKPdf 14 08 49.5 -0.1**
DAVOX Davos/Dischmat 147.19 333 PKPbc **PKPbc 14 08 53.1 +0.7**
comp=Z,129nm,0.4s,baz=0.3,slow=1.8,SNR=179
TEOL Teolo 147.45 329 PKPdf **PKPdf 14 08 50.3 +0.1**
TEOL **PKPbc 14 08 53.2 +0.3**
SGRT San Giovanni R 147.64 321 **PKPbc 14 08 53.2 -0.5**
TUE Stuetta 147.66 333 PKPdf **PKPdf 14 08 50.6 -0.2**
TUE **PKPbc 14 08 53.8 +0.1**
MATE Matera 147.69 318 ⇑P **PKPbc 14 08 53.0 -0.6**
CCA1 Carnmenellis 148.36 353 *e*P **PKPbc 14 08 55.6 +0.5**
TIP Timpagrande 148.45 316 ⇓P **PKPbc 14 08 56.0 +0.1**
TIP Timpagrande 148.45 316 PKPdf **PKPdf 14 08 51.2 -0.9**
TIP PKPbc **PKPbc 14 08 55.9 +0.1**
NRCA Norcia 148.47 325 **PKPdf 14 08 50.8 -1.3**
NRCA PKPbc **PKPbc 14 08 56.0 +0.3**
MURB Monte Urbino 148.50 326 **PKPdf 14 08 51.4 -0.7**
ZCCA Zocca 148.52 329 PKPdf **PKPdf 14 08 52.2 +0.1**
SENIN Lac Senin/Sane 148.60 335 PKPbc **PKPbc 14 08 56.2 0.0**
JQE Queens East 148.83 348 *e*P **PKPbc 14 08 56.4 +0.1**
JSA Saint Aubin 148.86 349 *e*P **PKPbc 14 08 56.5 +0.1**
CLF Chambon-Foret 148.90 342 PKPbc **PKPbc 14 08 57.1 +0.6**
OSSC Osservatorio P 148.98 327 **PKPbc 14 08 56.4 -0.5**
MSSA Maissana 149.25 330 **PKPbc 14 08 57.1 -0.6**
BNI Bardonecchia 149.92 334 PKPbc **PKPbc 14 08 59.7 +0.3**
BNI Bardonecchia 149.92 334 PKP2 **PKPbc 14 08 59.7 +0.3**
SSB Saint Sauveur 150.57 337 **PKPbc 14 09 01.0 +0.2**
SSB Saint Sauveur 150.57 337 PKIKP **PKPbc 14 09 01.0 +0.2**
VAE Valguarnera 150.92 315 PKPab **PKPab 14 09 09.8 +0.2**
comp=Z,45nm,0.8s,baz=147,slow=11,SNR=8.3
KEST Kesra 155.26 317 PKP **PKPdf 14 09 02.8 +0.3**
comp=Z,4.0nm,0.8s,baz=90,slow=7.8,SNR=4.2
KEST PKPab **PKPab 14 09 29.1 +1.1**
comp=Z,66nm,1.1s,baz=112,slow=20,SNR=5.6
KEST Kesra 155.26 317 PKPdf **PKPdf 14 09 02.6 +0.1**
PGAV Gavieira, Arco 156.81 354 *e*SS SS 14 33 02.2 +8.0
PCAB Cabril 157.04 354 *e*PKPab **PKPab 14 09 36.5 +1.2**
POLO Lamas de Olo 157.35 353 *e*PKPdf **PKPdf 14 09 06.8 +1.7**
POLO Lamas de Olo 157.35 353 *e*PKPab **PKPab 14 09 37.9 +1.1**
POLO Lamas de Olo 157.35 353 *e*SS SS 14 33 14.1 +14
PVRL Vila Real 157.44 353 *e*PKPab **PKPab 14 09 38.2 +1.1**
MVO Moncorvo 157.47 352 *e*PKPdf **PKPdf 14 09 05.5 +0.3**
MVO Moncorvo 157.47 352 *e*PKPab **PKPab 14 09 38.1 +0.9**
MVO Moncorvo 157.47 352 *e*SS SS 14 33 11.2 +10
PVIS Viseu 158.01 353 *e*PKPab **PKPab 14 09 40.0 +0.4**
MTE Manteigas 158.28 352 *e*PKPdf **PKPdf 14 09 07.4 +1.2**
MTE Manteigas 158.28 352 *e*PKPab **PKPab 14 09 41.0 +0.2**
MTE Manteigas 158.28 352 *e*SS SS 14 33 19.8 +10
MTE Manteigas 158.28 352 PKPab **PKPab 14 09 41.1 +0.4**
ESDC Sonseca Array 158.32 345 PKP **PKPdf 14 09 05.6 -0.7**
comp=Z,1.2nm,1.0s,baz=336,slow=3.3,SNR=5.0
ESDC PKPab **PKPab 14 09 41.9 +0.9**
comp=Z,7.5nm,0.8s,baz=16,slow=3.8,SNR=15
ESDC pPKPab **pPKPab 14 10 13.1 +1.0**
comp=Z,4.8nm,1.0s,baz=12,slow=2.4,SNR=4.5
ESDC PP **PP 14 13 21.6 +1.2**
comp=Z,3.6nm,1.0s,baz=14,slow=5.2,SNR=4.2
COI Coimbra 158.57 354 *e*PKPab **PKPab 14 09 42.9 +1.0**
COI Coimbra 158.57 354 *e*SS SS 14 33 20.4 +7.8
PCAS Casmilo, Conde 158.73 354 *e*PKPab **PKPab 14 09 41.9 -0.7**
PCAS Casmilo, Conde 158.73 354 *e*SS SS 14 33 22.6 +8.2
PCBR Castelo Branco 158.83 352 *e*PKPdf **PKPdf 14 09 06.9 +0.1**
PCBR Castelo Branco 158.83 352 *e*PKPab **PKPab 14 09 44.0 +1.0**
PMRV Marv??o 159.22 352 *e*SS SS 14 33 25.5 +5.9
PMTG Montargil 159.68 353 *e*PKPab **PKPab 14 09 48.7 +1.9**
PESTR Estremoz 159.80 352 *e*PKPab **PKPab 14 09 48.7 +0.8**
PESTR Estremoz 159.80 352 *e*SS SS 14 33 35.1 +9.4
PMAFR Mafra 159.89 356 *e*SS SS 14 33 33.5 +7.0
PBAR Barrancos 160.40 350 *e*SS SS 14 33 41.4 +9.4
PNCL Nicolau / Gran 160.66 354 *e*SS SS 14 33 46.3 +12
PBEJ Beja 160.66 352 *e*PKPab **PKPab 14 09 52.7 +1.6**
MESJ Messejana 160.89 353 *e*PKPdf **PKPdf 14 09 08.8 -0.3**
MESJ *e*PP **PP 14 13 35.6 +1.5**
MESJ Messejana 160.89 353 *e*PKPab **PKPab 14 09 53.5 +1.4**
PCVE Castro Verde 161.07 352 *e*PKPdf **PKPdf 14 09 10.7 +1.3**
PCVE Castro Verde 161.07 352 *e*PKPab **PKPab 14 09 54.2 +1.3**
PVAQ Vaqueiros 161.26 351 *e*PKPab **PKPab 14 09 55.2 +1.5**
PVAQ Vaqueiros 161.26 351 *e*SS SS 14 33 50.0 +9.1
PBDV Barranco-do-Ve 161.44 352 *e*PKPab **PKPab 14 09 56.5 +2.0**
PBDV Barranco-do-Ve 161.44 352 *e*SS SS 14 33 51.2 +8.3
MORF Marmelete 161.47 354 *e*PKPdf **PKPdf 14 09 09.5 -0.3**
MORF *e*PP **PP 14 13 38.5 +1.3**
MDT Midelt 164.88 338 PKP **PKPdf 14 09 14.1 +0.8**
comp=Z,16nm,1.2s,baz=50,slow=2.6,SNR=7.5
MDT PKPab **PKPab 14 10 10.5 +0.6**
comp=Z,6.0nm,0.7s,baz=112,slow=2.4,SNR=7.0
KIC Kosan Boka 166.09 208⇑ *e*PKIKP **PKPdf 14 09 14.5 -0.2**
comp=Z,81nm,1.2s
KIC Kosan Boka 166.09 208⇑ *e*P **PKPab 14 10 17.6 +2.1**
comp=Z,26nm,0.8s
LIC Lamto 166.09 206⇑ *e*PKIKP **PKPdf 14 09 14.9 +0.2**
comp=Z,68nm,1.2s
LIC Lamto 166.09 206⇑ *e*P **PKPab 14 10 18.3 +2.8**
comp=Z,26nm,0.8s
TORD Torodi Ar. Bea 166.38 247 PKP **PKPdf 14 09 15.3 +0.4**
comp=Z,35nm,1.1s,baz=12,slow=0.4,SNR=56
TORD pPKP **pPKPdf 14 09 48.6 +1.1**
comp=Z,8.7nm,0.9s,baz=23,slow=1.2,SNR=2.8
TORD PKPab **PKPab 14 10 17.6 +0.5**
comp=Z,29nm,1.0s,baz=93,slow=2.6,SNR=10
TORD pPKPab **pPKPab 14 10 48.6 +0.5**
comp=Z,13nm,1.1s,baz=98,slow=4.0,SNR=3.9
TORD PP **PP 14 14 08.0 +3.0**
comp=Z,6.2nm,1.0s,baz=113,slow=3.1,SNR=2.0
TORD Torodi Ar. Bea 166.38 247 **PKPdf 14 09 14.2 -0.7**
DBIC Dimbokro 166.42 208 PKP **PKPdf 14 09 15.3 +0.4**
comp=Z,63nm,1.2s,baz=198,slow=2.6,SNR=7.4
DBIC PKPab **PKPab 14 10 18.8 +1.8**
comp=Z,29nm,1.1s,baz=181,slow=3.9,SNR=5.6
DBIC Dimbokro 166.42 208 ⇑PKIKP **PKPdf 14 09 15.8 +0.8**
TIC Toumodi 166.47 207⇑ *e*PKIKP **PKPdf 14 09 14.5 -0.5**
comp=Z,1.0nm,0.2s
TIC Toumodi 166.47 207⇑ *e*P **PKPab 14 10 19.4 +2.2**
comp=Z,92nm,0.9s

IDC **14** *13:54:22.6±1.4,23.°91N×121.°97E, h0km, mb3.8/6, mbtmp3.8/8, ML3.8/2 Error ellipse: s-maj=36.1km s-min=26.1km az=52.0*
JMA **14** *13:54:26.7±0.2,24.°1N×121.°9E±1.0, h32km±3km, MV3.9/9, TAIWAN REGION*
NIED **14** *13:54:26.7,23.°81N×121.°94E, h32km, MW4.1, Moment Tensor Solution. s2 Moment tensor: Scale 10^15Nm; Mrr0.88; Mθθ0.27; Mφφ-1.15; Mrθ0.88; Mθφ0.19; Mφr-0.10; Fault plane solution: M0 1.35000×10^15 NP1:φs21.00000°, δ48.00000°, λ140.00000°. NP2:φs140.00000°, δ61.00000°, λ50.00000°.*
NEIC **14** *13:54:28.2±1.1,23.°93N±0.°04×121.°93E±0.°05, h35km±2km Error ellipse: s-maj=6.2km s-min=5.3km az=125.0*
TAP **14** *13:54:29.0,24.°01N×121.°91E, h39km, ML4.4, B*
ISC 14 13:54:28.3±0.8, 23.°95N±0.°02×122.°00E±0.°02, h37km±1km, n204, σ1§41/345, mb3.8/11, 32C-52D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		ISC	
HWA	**Hwalien**	**0.36**	**275**⇑	*i*P		**Pn**	**13 54 37.0 +0.2**
HWA				*e*S		**Sn**	**13 54 43.3 -0.2**
TEYL	**Yanliau Villag**	**0.37**	**258**⇑	*i*P		**Pn**	**13 54 37.2 +0.3**
TEYL				*e*S		**Sn**	**13 54 44.3 +0.7**
TWD	**Chiawan**	**0.39**	**290**⇑	*i*P		**Pn**	**13 54 36.9 -0.2**
TWD				S		**Sn**	**13 54 43.0 -0.8**
ETL	**Fush Village**	**0.40**	**302**⇑	*i*P		**Pn**	**13 54 37.0 -0.3**
ETL				*e*S		**Sn**	**13 54 43.3 -0.8**
EHP	**Heping Village**	**0.43**	**327**	*e*P		**Pn**	**13 54 37.5 -0.2**
EHP				*e*S		**Sn**	**13 54 44.6 0.0**
NACB	**Ninganchiao**	**0.43**	**302**	Pn		**Pn**	**13 54 37.2 -0.6**
NACB				Sn		**Sn**	**13 54 43.1 -1.6**
NACB	**Ninganchiao**	**0.43**	**302**⇑	*i*P		**Pn**	**13 54 37.4 -0.4**
NACB				S		**Sn**	**13 54 43.8 -0.8**
ETM	**Tongmen**	**0.46**	**272**	P		**Pn**	**13 54 38.0 -0.2**
ETM				*e*S		**Sn**	**13 54 44.8 -0.6**
TEGC	**Jichi Village**	**0.48**	**240**	⇑P		**Pn**	**13 54 38.8 +0.3**
TEGC				*e*S		**Sn**	**13 54 46.9 +1.1**
ENA	**Nanau**	**0.53**	**334**⇑	*i*P		**Pn**	**13 54 39.1 -0.4**
ENA				S		**Sn**	**13 54 46.9 -0.3**
ESL	**Shilin**	**0.53**	**256**	*i* P		**Pn**	**13 54 38.8 -0.6**
ESL				*e*S		**Sn**	**13 54 47.0 -0.2**
EWUT	**Wuta**	**0.53**	**338**⇑	*i*P		**Pn**	**13 54 39.2 -0.3**
EWUT				*e*S		**Sn**	**13 54 47.0 -0.2**
ETLH	**Xiulin Townshi**	**0.54**	**299**⇓	*i*P		**Pn**	**13 54 38.9 -0.7**
ETLH				*e*S		**Sn**	**13 54 46.5 -0.9**
EGFH	**Guangfu**	**0.59**	**242**⇑	*i*P		**Pn**	**13 54 39.9 -0.4**
EGFH				*e*S		**Sn**	**13 54 48.8 +0.1**
TWC	**Suao**	**0.67**	**348**	⇑P		**Pn**	**13 54 41.4 0.0**
TWC				*e*S		**Sn**	**13 54 51.0 +0.4**
HGSD	**Ruisui**	**0.69**	**229**⇑	*i*P		**Pn**	**13 54 41.5 -0.2**
HGSD				*e*S		**Sn**	**13 54 51.3 +0.2**
WHF	**Hehuan Shan**	**0.70**	**287**⇓	*i*P		**Pn**	**13 54 41.5 -0.6**
WHF				*e*S		**Sn**	**13 54 51.1 -0.7**
LATG	**Datong**	**0.72**	**324**⇑	*i*P		**Pn**	**13 54 41.9 -0.3**
LATG				S		**Sn**	**13 54 51.5 -0.6**
NDS	**Dongshan**	**0.73**	**339**⇑	*i*P		**Pn**	**13 54 42.0 -0.1**
NDS				*e*S		**Sn**	**13 54 51.8 -0.2**
NNSB	**Datong**	**0.74**	**311**⇓	*i*P		**Pn**	**13 54 41.9 -0.3**
NNSB				*e*S		**Sn**	**13 54 51.6 -0.7**
FUSS	**Fushou**	**0.75**	**294**⇓	*i*P		**Pn**	**13 54 42.4 -0.1**
FUSS				*e*S		**Sn**	**13 54 52.2 -0.6**
NNS	**Nan Shan**	**0.75**	**311**⇓	*e*P		**Pn**	**13 54 42.1 -0.4**
NNS				*e*S		**Sn**	**13 54 52.1 -0.6**
OWD	**Renai**	**0.75**	**271**⇓	*i*P		**Pn**	**13 54 42.2 -0.3**
OWD				*e*S		**Sn**	**13 54 51.8 -0.9**
EHY	**Hungye**	**0.76**	**235**	⇓P		**Pn**	**13 54 42.1 -0.3**
EHY				*e*S		**Sn**	**13 54 52.9 +0.2**
CHGB	**Renai**	**0.76**	**279**	⇓P		**Pn**	**13 54 42.5 -0.2**
CHGB				*e*S		**Sn**	**13 54 52.8 -0.3**
NDT	**Datong Townshi**	**0.79**	**326**	*e*P		**Pn**	**13 54 42.9 0.0**
NDT				*e*S		**Sn**	**13 54 53.0 -0.5**
ENTT	**Nioudou**	**0.79**	**330**	⇑P		**Pn**	**13 54 42.9 -0.1**
ENTT				*e*S		**Sn**	**13 54 53.3 -0.3**
ECBN	**Changbin**	**0.80**	**219**	*e*P		**Pn**	**13 54 43.3 +0.3**
ECBN				*e*S		**Sn**	**13 54 54.0 +0.2**
WUSB	**Renai**	**0.81**	**273**	⇓P		**Pn**	**13 54 43.3 0.0**
WUSB				*e*S		**Sn**	**13 54 54.1 0.0**
VWDT	**VWDT**	**0.81**	**256**	⇓P		**Pn**	**13 54 43.4 +0.3**
VWDT				*e*S		**Sn**	**13 54 53.8 -0.1**
TWT	**Tachien**	**0.81**	**292**⇓	*e*P		**Pn**	**13 54 43.6 +0.3**
TWT				*e*S		**Sn**	**13 54 53.9 -0.4**
TDCB	**Techi**	**0.82**	**292**	⇓P		**Pn**	**13 54 43.6 +0.1**
TDCB				*e*S		**Sn**	**13 54 53.9 -0.7**
TWE	**Neicheng**	**0.83**	**339**⇑	*e*P		**Pn**	**13 54 43.6 +0.2**
TWE				*e*S		**Sn**	**13 54 54.1 -0.3**
ILA	**Ilan**	**0.84**	**344**	*e*P		**Pn**	**13 54 44.2 +0.5**
YULB	**Yu-li**	**0.85**	**229**			**Pn**	**13 54 43.0 -0.6**
YULB	**Yu-li**	**0.85**	**229**⇓	*e*P		**Pn**	**13 54 43.4 -0.3**
YULB				*e*S		**Sn**	**13 54 54.3 -0.6**
EYUL	**Yuli**	**0.86**	**226**⇓	*e*P		**Pn**	**13 54 44.0 +0.1**
EYUL				*e*S		**Sn**	**13 54 55.4 +0.1**
TWF1	**Yuli**	**0.87**	**227**	⇓P		**Pn**	**13 54 44.0 -0.1**
TWF1				*e*S		**Sn**	**13 54 55.4 -0.2**
FUSB	**Fushanzhiwuyua**	**0.89**	**335**	⇑P		**Pn**	**13 54 44.5 +0.2**
FUSB				*e*S		**Sn**	**13 54 55.9 -0.2**
EGS		**0.90**	**356**⇑	*e*P		**Pn**	**13 54 45.2 +0.8**
EGS				*e*S		**Sn**	**13 54 57.2 +1.1**
NTC	**Toucheng**	**0.92**	**350**⇑	*e*P		**Pn**	**13 54 45.1 +0.5**
NTC				*e*S		**Sn**	**13 54 57.1 +0.5**
YHNB	**Yeheng**	**0.92**	**322**			**Pn**	**13 54 44.1 -0.5**
YHNB				Sn		**Sn**	**13 54 54.8 -2.0**
YHNB	**Yeheng**	**0.92**	**322**	⇓P		**Pn**	**13 54 44.8 +0.1**
YHNB				*e*S		**Sn**	**13 54 56.0 -0.7**
NSK	**Sanguang**	**0.93**	**321**⇓	*e*P		**Pn**	**13 54 44.9 +0.1**
NSK				*e*S		**Sn**	**13 54 56.6 -0.5**
NWLT	**Wulai**	**0.94**	**331**⇑	*e*P		**Pn**	**13 54 45.2 +0.2**
NWLT				*e*S		**Sn**	**13 54 56.8 -0.5**
WPL	**Puli Township**	**0.95**	**274**⇓	*e*P		**Pn**	**13 54 45.5 +0.4**
WPL				*e*S		**Sn**	**13 54 57.6 +0.1**
SSLB	**Suanglung**	**0.97**	**261**	Pn		**Pn**	**13 54 45.1 -0.3**
SSLB	**Suanglung**	**0.97**	**261**⇓	*e*P		**Pn**	**13 54 45.6 +0.2**
SSLB				*e*S		**Sn**	**13 54 56.9 -1.0**
DPDB	**Guoxing**	**0.98**	**275**⇓	*e*P		**Pn**	**13 54 46.1 +0.6**
DPDB				*e*S		**Sn**	**13 54 58.8 +0.5**
FULB	**Fuli**	**0.99**	**221**⇑	*e*P		**Pn**	**13 54 45.4 -0.2**
FULB				*e*S		**Sn**	**13 54 59.0 +0.7**
WCS	**Beigang Elemen**	**1.00**	**276**⇓	*e*P		**Pn**	**13 54 46.2 +0.5**
WCS				*e*S		**Sn**	**13 54 58.7 +0.2**
JYNG	**Yonagunijimaku**	**1.00**	**60**	P		**Pn**	**13 54 46.6 +0.9**
JYNG				S		**Sn**	**13 54 59.6 +0.9**
SMLT	**Sun Moon Lake**	**1.01**	**267**⇓	*e*P		**Pn**	**13 54 46.5 +0.5**
SMLT				*e*S		**Sn**	**13 54 59.2 +0.2**
WHP	**Taichung City**	**1.01**	**289**⇓	*e*P		**Pn**	**13 54 46.7 +0.6**
WHP				*e*S		**Sn**	**13 54 59.4 +0.3**
CHKT	**Chengkung**	**1.02**	**215**⇑	*e*P		**Pn**	**13 54 45.5 -0.6**
CHKT				*e*S		**Sn**	**13 54 58.0 -1.2**
TIPB	**Shuangxi**	**1.03**	**351**	⇑P		**Pn**	**13 54 47.2 +1.0**
TIPB				*e*S		**Sn**	**13 54 59.9 +0.4**
TYC	**Yuchr**	**1.04**	**268**	⇓P		**Pn**	**13 54 46.9 +0.5**
TYC				*e*S		**Sn**	**13 54 59.8 +0.1**
NFF	**Wufeng Townshi**	**1.05**	**311**⇓	*e*P		**Pn**	**13 54 47.0 +0.5**
NFF				*e*S		**Sn**	**13 54 59.5 -0.5**
TWB1	**Santiao Chiao**	**1.06**	**360**	⇑P		**Pn**	**13 54 47.1 +0.5**
TWB1				*e*S		**Sn**	**13 55 00.3 +0.3**
YOJ	**Yonaguni jima**	**1.06**	**61**			**Pn**	**13 54 47.1 +0.5**
YOJ	**Yonaguni jima**	**1.06**	**61**	⇓ *i*P		**Pn**	**13 54 47.4 +0.9**
YOJ				S		**Sn**	**13 55 01.2 +1.2**
YOJ	**Yonaguni jima**	**1.06**	**61**	P		**Pn**	**13 54 47.4 +0.9**
YOJ				*e*S		**Sn**	**13 55 01.6 +1.6**
YUS	**Yu-Shan**	**1.06**	**245**	⇓P		**Pn**	**13 54 47.6 +0.5**
YUS				*e*S		**Sn**	**13 55 00.6 -0.2**
TWA	**Mucha**	**1.09**	**340**	*e*P		**Pn**	**13 54 48.0 +0.9**
TWA				*e*S		**Sn**	**13 55 02.1 +1.1**
NHDH	**Xindian Distri**	**1.10**	**337**⇑	*e*P		**Pn**	**13 54 48.1 +1.0**
NHDH				*e*S		**Sn**	**13 55 01.8 +0.7**
ECS	**Chishang**	**1.11**	**220**	*e*P		**Pn**	**13 54 47.5 +0.2**
ECS				*e*S		**Sn**	**13 55 02.5 +1.2**
TATO	**Taipei**	**1.12**	**336**	Pn		**Pn**	**13 54 48.2 +0.7**
TATO				Sn		**Sn**	**13 55 01.1 -0.5**
TATO	**Taipei**	**1.12**	**336**	*e*P		**Pn**	**13 54 48.4 +0.9**
TATO				*e*S		**Sn**	**13 55 02.2 +0.6**
LIOB	**Emei**	**1.13**	**308**⇓	*e*P		**Pn**	**13 54 49.0 +1.4**
LIOB				*e*S		**Sn**	**13 55 02.9 +0.9**
NSTT	**Nanjuang**	**1.14**	**307**⇓	*e*P		**Pn**	**13 54 48.9 +1.3**
NSTT				*e*S		**Sn**	**13 55 02.6 +0.7**
NWF	**Wu-fen Shan**	**1.14**	**350**⇑	*e*P		**Pn**	**13 54 48.9 +1.2**
NWF				*e*S		**Sn**	**13 55 03.7 +1.6**
WFSB	**Wu-fen Shan**	**1.14**	**350**⇑	*e*P		**Pn**	**13 54 48.9 +1.3**
WFSB				*e*S		**Sn**	**13 55 03.8 +1.8**
NJD	**Zhudong**	**1.14**	**314**	*e*P		**Pn**	**13 54 49.4 +1.7**
SXI1	**Grass Mountain**	**1.15**	**355**⇑	*e*P		**Pn**	**13 54 48.6 +0.7**
SXI1				*e*S		**Sn**	**13 55 03.7 +1.3**
EDH	**Donghe**	**1.16**	**213**⇑	*e*P		**Pn**	**13 54 47.5 -0.5**
EDH				*e*S		**Sn**	**13 55 01.6 -0.9**
WJS	**Zhushan**	**1.17**	**264**⇓	*e*P		**Pn**	**13 54 49.6 +1.5**
WJS				*e*S		**Sn**	**13 55 05.1 +2.3**
ELDTW	**Lidau**	**1.17**	**230**⇓	*e*P		**Pn**	**13 54 48.1 -0.2**
ELDTW				*e*S		**Sn**	**13 55 02.3 -0.8**
ALS	**Alishan**	**1.18**	**248**⇓	*e*P		**Pn**	**13 54 49.4 +0.9**
ALS				*e*S		**Sn**	**13 55 04.0 +0.6**
TWQ1	**Liyutan**	**1.19**	**290**⇓	*e*P		**Pn**	**13 54 50.0 +1.6**
TWQ1				*e*S		**Sn**	**13 55 04.3 +1.0**
WWF	**Wufeng**	**1.19**	**275**⇓	*e*P		**Pn**	**13 54 50.5 +2.1**
WWF				*e*S		**Sn**	**13 55 06.6 +3.3**
WNT	**Mingjian**	**1.20**	**267**⇓	*e*P		**Pn**	**13 54 50.2 +1.7**
WNT				*e*S		**Sn**	**13 55 05.9 +2.3**
WNT1	**Nantou City**	**1.21**	**268**	*e*P		**Pn**	**13 54 50.6 +2.1**
TNOU	**National Taiwa**	**1.21**	**350**	*e*P		**Pn**	**13 54 49.5 +0.8**
HSN1	**Hsinchu**	**1.22**	**313**	*e*P		**Pn**	**13 54 50.4 +1.7**
HSN1				*e*S		**Sn**	**13 55 05.8 +1.9**
NSY	**Sanyi**	**1.22**	**293**⇓	*e*P		**Pn**	**13 54 50.5 +1.6**
NSY				*e*S		**Sn**	**13 55 06.7 +2.6**
TCU	**Taichung**	**1.22**	**280**⇓	*e*P		**Pn**	**13 54 50.7 +1.8**
TCU				*e*S		**Sn**	**13 55 06.8 +2.7**
NTY	**Taoyuan**	**1.23**	**329**	*e*P		**Pn**	**13 54 49.8 +0.9**
NMLH	**Miaoli**	**1.25**	**298**	*e*P		**Pn**	**13 54 50.7 +1.5**
NMLH				*e*S		**Sn**	**13 55 07.2 +2.5**
SBCB	**Hsinchu**	**1.25**	**313**	*e*P		**Pn**	**13 54 50.6 +1.5**
SBCB				*e*S		**Sn**	**13 55 06.4 +1.7**
YM01	**YM01**	**1.25**	**342**⇑	*e*P		**Pn**	**13 54 50.0 +0.7**
YM01				*e*S		**Sn**	**13 55 06.0 +1.0**
NCUH	**Zhongli**	**1.26**	**324**	*e*P		**Pn**	**13 54 50.4 +1.1**
NCUH				*e*S		**Sn**	**13 55 06.5 +1.6**
NCU	**National Centr**	**1.26**	**324**	*e*P		**Pn**	**13 54 50.5 +1.2**

NCU					*e*S		**Sn**	13 55 06.8	+1.8
	baz=326								
NJN	**Zhunan**	**1.26**	**306**	*e*P		**Pn**	13 54 51.2	+1.9	
	baz=305								
TWS1	**Kuangyinshan**	**1.26**	**335**	*e*P		**Pn**	13 54 50.5	+1.1	
	baz=338								
TWS1					*e*S		**Sn**	13 55 06.7	+1.6
	baz=338								
HSN	**Hsinchu**	**1.27**	**312**	*e*P		**Pn**	13 54 50.7	+1.3	
	baz=315								
HSN					*e*S		**Sn**	13 55 07.1	+2.0
	baz=315								
YM08	**YM08**	**1.29**	**343**	*e*P		**Pn**	13 54 50.7	+0.9	
	baz=346								
WYL	**Yuanlin Townsh**	**1.30**	**271**	*e*P		**Pn**	13 54 51.9	+2.0	
	baz=268								
WDJ	**Dajia District**	**1.30**	**288**	*e*P		**Pn**	13 54 51.3	+1.4	
	baz=286								
LONT	**Longtian**	**1.31**	**218**	*e*P		**Pn**	13 54 49.8	-0.2	
	baz=213								
LONT					*e*S		**Sn**	13 55 05.7	-0.5
	baz=213								
NTST	**Danshui**	**1.31**	**338**	*e*P		**Pn**	13 54 51.1	+1.1	
	baz=340								
WCHH	**Zhanghua**	**1.32**	**276**⇓	*e*P		**Pn**	13 54 52.0	+1.8	
	baz=273								
WCHH					*e*S		**Sn**	13 55 09.1	+2.6
	baz=273								
WGK	**Gukeng**	**1.34**	**259**	*e*P		**Pn**	13 54 52.2	+1.8	
	baz=255								
WGK					*e*S		**Sn**	13 55 09.6	+2.6
	baz=255								
LDUT	**Ludao**	**1.36**	**201**	*i* P		**Pn**	13 54 49.9	-0.8	
	baz=197								
LDUT					*e*S		**Sn**	13 55 05.2	-2.3
	baz=197								
WDLH	**Douliu**	**1.36**	**259**⇓	*e*P		**Pn**	13 54 52.4	+1.7	
	baz=256								
WDLH					*e*S		**Sn**	13 55 10.0	+2.5
	baz=256								
STYH	**Taoyuan**	**1.36**	**236**⇓	*e*P		**Pn**	13 54 51.7	+1.0	
	baz=231								
STYH					*e*S		**Sn**	13 55 08.7	+1.2
	baz=231								
NHW	**Xinwu Township**	**1.36**	**321**	*e*P		**Pn**	13 54 51.8	+1.1	
	baz=322								
NHW					*e*S		**Sn**	13 55 08.9	+1.4
	baz=322								
TWY	**Chenhua**	**1.37**	**345**	*e*P		**Pn**	13 54 52.0	+1.2	
	baz=348								
TWGBT	**Beinan**	**1.41**	**217**⇑	*e*P		**Pn**	13 54 50.9	-0.4	
	baz=213								
TWGBT					*e*S		**Sn**	13 55 07.4	-1.2
	baz=213								
TWG	**Pinlang**	**1.41**	**217**	Pn		**Pn**	13 54 50.6	-0.8	
TWG	**Pinlang**	**1.41**	**217**⇑	*e*P		**Pn**	13 54 50.9	-0.5	
	baz=213								
TWG					*e*S		**Sn**	13 55 07.6	-1.1
	baz=213								
TPUB	**Ta-pu**	**1.41**	**243**	Pn		**Pn**	13 54 50.5	-0.9	
TPUB	**Ta-pu**	**1.41**	**243**⇓	*e*P		**Pn**	13 54 53.0	+1.6	
	baz=239								
TPUB					*e*S		**Sn**	13 55 10.9	+2.1
	baz=239								
TTN	**Taitung**	**1.42**	**213**	*e*P		**Pn**	13 54 51.7	+0.2	
	baz=209								
TTN					*e*S		**Sn**	13 55 09.1	+0.1
	baz=209								
WTP	**Ta-pu**	**1.45**	**241**⇓	*e*P		**Pn**	13 54 53.6	+1.6	
	baz=237								
WTP					*e*S		**Sn**	13 55 12.5	+2.8
	baz=237								
CHN2	**Minshiung**	**1.45**	**254**	*e*P		**Pn**	13 54 54.3	+2.3	
	baz=250								
CHN2					*e*S		**Sn**	13 55 13.7	+3.9
	baz=250								
WRL	**Guolierlin Hig**	**1.48**	**269**⇓	*e*P		**Pn**	13 54 54.1	+1.7	
	baz=266								
WRL					*e*S		**Sn**	13 55 12.9	+2.4
	baz=266								
WTK	**Tuku**	**1.50**	**260**⇓	*e*P		**Pn**	13 54 54.3	+1.7	
	baz=257								
WTK					*e*S		**Sn**	13 55 13.1	+2.3
	baz=257								
CHY	**Chiayi**	**1.51**	**253**⇓	*e*P		**Pn**	13 54 54.5	+1.8	
	baz=249								
CHY					*e*S		**Sn**	13 55 14.0	+2.9
	baz=249								
TWK	**Hsinying**	**1.54**	**244**	*e*P		**Pn**	13 54 54.8	+1.5	
	baz=240								
TWK					*e*S		**Sn**	13 55 14.8	+2.7
	baz=240								
CHN1	**Nanshi**	**1.55**	**241**	*e*P		**Pn**	13 54 55.0	+1.7	
	baz=237								
CHN1					*e*S		**Sn**	13 55 14.8	+2.7
	baz=237								
SNST	**Tainan City**	**1.56**	**243**⇓	*e*P		**Pn**	13 54 55.1	+1.7	
	baz=239								
SNST					*e*S		**Sn**	13 55 14.5	+2.2
	baz=239								
SGST	**Jiashian**	**1.56**	**237**	*e*P		**Pn**	13 54 54.5	+1.0	
	baz=233								
SLGT	**Liugui**	**1.56**	**233**	*e*P		**Pn**	13 54 55.6	+2.1	
	baz=229								
SLGT					*e*S		**Sn**	13 55 15.0	+2.5
	baz=229								
WTCT	**Ta-ch'eng**	**1.57**	**267**	*e*P		**Pn**	13 54 55.1	+1.5	
	baz=264								
IRIF	**Iriomote-Funau**	**1.63**	**76**	P		**Pn**	13 54 55.5	+1.1	
IRIF					*e*S		**Sn**	13 55 15.4	+1.3
ECL	**Taimali**	**1.65**	**216**	*e*P		**Pn**	13 54 54.3	-0.4	
	baz=212								
ECL					*e*S		**Sn**	13 55 13.5	-1.2
	baz=212								
WSF	**Szhu**	**1.66**	**260**	*e*P		**Pn**	13 54 56.5	+1.7	
	baz=256								
WSF					*e*S		**Sn**	13 55 18.0	+3.3
	baz=256								
HATJ	**Hateruma jima**	**1.66**	**86**	P		**Pn**	13 54 55.8	+1.0	
HATJ					S		**Sn**	13 55 16.4	+1.6
WSL	**Shuilin Townsh**	**1.68**	**256**⇓	*e*P		**Pn**	13 54 56.8	+1.7	
	baz=253								
WSL					*e*S		**Sn**	13 55 17.4	+2.1
	baz=253								
PCYT	**Pengchaiyu**	**1.68**	**2**	P		**Pn**	13 54 55.4	+0.4	
	baz=6.0								
PCYT					*e*S		**Sn**	13 55 15.2	-0.1
	baz=6.0								
ICHU	**Yijhu**	**1.68**	**250**	*e*P		**Pn**	13 54 56.7	+1.6	
	baz=247								
ICHU					*e*S		**Sn**	13 55 17.3	+2.0
	baz=247								
CHN3	**Shinhua**	**1.73**	**240**	*e*P		**Pn**	13 54 58.5	+2.7	
	baz=237								
SSD	**Sandimen**	**1.73**	**227**	*e*P		**Pn**	13 54 56.7	+0.8	
	baz=223								
SSD					*e*S		**Sn**	13 55 18.4	+1.7
	baz=223								
SCST	**Cishan**	**1.74**	**233**	*e*P		**Pn**	13 54 58.6	+2.6	
	baz=229								
SCST					*e*S		**Sn**	13 55 20.6	+3.7
	baz=229								
CHN8	**Yiju**	**1.74**	**250**⇓	*e*P		**Pn**	13 54 57.6	+1.6	
	baz=247								
CHN8					*e*S		**Sn**	13 55 19.7	+2.8
	baz=247								
TSMG	**Majia**	**1.75**	**225**	*e*P		**Pn**	13 54 57.0	+0.8	
	baz=222								
SHHT	**Tainan City**	**1.77**	**239**	*e*P		**Pn**	13 54 59.1	+2.8	
	baz=235								
SCLT	**Jiali**	**1.82**	**245**	*e*P		**Pn**	13 54 59.1	+2.0	
	baz=242								
SCLT					*e*S		**Sn**	13 55 22.0	+3.1
	baz=242								
MASBT	**Mashibuluo**	**1.83**	**224**	*e*P		**Pn**	13 54 58.1	+0.9	
	baz=220								
MASBT					*e*S		**Sn**	13 55 20.3	+1.3
	baz=220								
TWM1	**Shoushan**	**1.83**	**233**	*e*P		**Pn**	13 55 00.8	+3.6	
	baz=229								
TWM1					*e*S		**Sn**	13 55 24.0	+4.8
	baz=229								
SGLT	**Jiouru**	**1.84**	**229**	*e*P		**Pn**	13 55 01.0	+3.6	
	baz=225								
SGLT					*e*S		**Sn**	13 55 25.2	+5.8
	baz=225								
JKRS	**Kuro-shima**	**1.86**	**81**	P		**Pn**	13 54 59.2	+1.6	
TAW	**Tawu**	**1.88**	**213**	*e*P		**Pn**	13 54 57.9	+0.1	
	baz=209								
TAW					*e*S		**Sn**	13 55 19.8	-0.5
	baz=209								
EAST	**Anshuo**	**1.88**	**214**	*e*P		**Pn**	13 54 57.9	0.0	
	baz=211								
EAST					*e*S		**Sn**	13 55 21.3	+0.8
	baz=211								
TAWH	**Dawu Township**	**1.90**	**213**	*e*P		**Pn**	13 54 58.2	+0.1	
	baz=209								
TAWH					*e*S		**Sn**	13 55 19.9	-0.8
	baz=209								
LAY	**Lan-yu**	**1.94**	**192**⇑	*e*P		**Pn**	13 54 57.7	-1.1	
	baz=189								
LAY					*e*S		**Sn**	13 55 17.8	-4.2
	baz=189								
SSPT	**Xinbi**	**1.96**	**222**	*e*P		**Pn**	13 55 00.9	+1.9	
	baz=219								
SSPT					*e*S		**Sn**	13 55 26.6	+4.3
	baz=219								
LYUB	**Lan-yu**	**1.97**	**191**	*e*P		**Pn**	13 54 57.8	-1.4	
	baz=188								
LYUB					*e*S		**Sn**	13 55 19.2	-3.4
	baz=188								
JIJ	**Ishigaki jima**	**2.00**	**78**	P		**Pn**	13 55 00.5	+0.9	
SCZT	**Fangliau**	**2.02**	**219**	*e*P		**Pn**	13 55 01.1	+1.3	
	baz=216								
SCZT					*e*S		**Sn**	13 55 25.4	+1.7
	baz=216								
SLIU	**Shizi**	**2.05**	**213**	*e*P		**Pn**	13 55 00.3	+0.2	
	baz=210								
SLIU					*e*S		**Sn**	13 55 23.9	-0.5
	baz=210								
SMST	**Manzhou Townsh**	**2.20**	**209**	*e*P		**Pn**	13 55 02.9	+0.7	
	baz=206								
SMST					*e*S		**Sn**	13 55 27.9	-0.2
	baz=206								
WDGT	**Dungji**	**2.25**	**253**⇓	*e*P		**Pn**	13 55 03.9	+0.9	
	baz=250								
WDGT					*e*S		**Sn**	13 55 30.0	+0.6
	baz=250								
PHUB	**P'eng-hu**	**2.26**	**259**⇓	*e*P		**Pn**	13 55 03.9	+0.7	
	baz=257								
PHUB					*e*S		**Sn**	13 55 29.7	-0.1
	baz=257								
PNG	**Penghu**	**2.27**	**261**	*e*P		**Pn**	13 55 03.9	+0.7	
	baz=258								
PNG					*e*S		**Sn**	13 55 30.9	+1.0
	baz=258								
TSEB	**Hengchuen, Pin**	**2.27**	**207**	*e*P		**Pn**	13 55 03.8	+0.5	
	baz=205								
TSEB					*e*S		**Sn**	13 55 31.4	+1.3
	baz=205								
TWKBT	**Hengchun**	**2.28**	**209**	*e*P		**Pn**	13 55 03.9	+0.5	
	baz=206								
TWKBT					*e*S		**Sn**	13 55 30.7	+0.6
	baz=206								
VCHM	**Qimei**	**2.47**	**253**	*e*P		**Pn**	13 55 06.8	+0.8	
	baz=251								
VCHM					*e*S		**Sn**	13 55 34.9	+0.1
	baz=251								
VWUC	**VWUC**	**2.54**	**295**	*e*P		**Pn**	13 55 06.8	-0.1	
	baz=294								
VWUC					*e*S		**Sn**	13 55 34.7	-2.0
	baz=294								
PTMZ	**Houxiangcun**	**2.84**	**293**⇓	*e*P		**Pn**	13 55 10.9	-0.1	
	baz=292								
PTMZ					*e*S		**Sn**	13 55 41.1	-2.8
	baz=292								
MATB	**Ma-tsu**	**2.88**	**320**	*e*P		**Pn**	13 55 11.0	-0.6	
	baz=320								
MATB					*e*S		**Sn**	13 55 42.4	-2.5
	baz=320								
MSUT	**Lienchiang**	**2.90**	**320**	*e*P		**Pn**	13 55 11.8	-0.2	
	baz=320								
MSUT					*e*S		**Sn**	13 55 43.5	-2.1
	baz=320								
JMJ	**Miyako jima 2**	**3.13**	**73**	*e*P		**Pn**	13 55 16.7	+1.7	
	baz=75								
JMJ					*e*S		**Sn**	13 55 51.0	-0.2
	baz=75								
KNM	**Kinmen**	**3.29**	**279**	*e*P		**Pn**	13 55 18.9	+1.7	
	baz=277								
KNM					*e*S		**Sn**	13 55 55.7	+0.7
	baz=277								
LYJJ	**Jianjiangzhen**	**3.29**	**322**	*e*P		**Pn**	13 55 17.0	-0.2	
	baz=323								
LYJJ					*e*S		**Sn**	13 55 52.7	-2.4
	baz=323								
KNMB	**Chin-men Tao**	**3.33**	**280**	Pn		**Pn**	13 55 17.4	-0.5	
KNMB	**Chin-men Tao**	**3.33**	**280**	*e*P		**Pn**	13 55 17.8	-0.1	
	baz=278								
KNMB					*e*S		**Sn**	13 55 55.1	-1.2
	baz=278								
XPSS	**Dashiqiu**	**3.39**	**332**	*e*P		**Pn**	13 55 18.2	-0.4	
	baz=332								
XPSS					*e*S		**Sn**	13 55 54.8	-2.8
	baz=332								
MHZQ	**Yeshan**	**3.44**	**309**	*e*P		**Pn**	13 55 19.0	-0.3	
	baz=309								
MHZQ					*e*S		**Sn**	13 55 56.7	-2.1
	baz=309								
AXDP	**Jialang**	**3.79**	**285**	*e*P		**Pn**	13 55 24.2	0.0	
	baz=284								
AXDP					*e*S		**Sn**	13 56 05.1	-2.3
	baz=284								
ZPLA	**Ao Xicun**	**3.88**	**271**⇓	*e*P		**Pn**	13 55 25.7	+0.3	
	baz=269								
ZPLA					*e*S		**Sn**	13 56 07.3	-2.6
	baz=269								
DSXP	**Dongshan**	**4.19**	**268**	*e*P		**Pn**	13 55 29.9	+0.3	
	baz=266								
DSXP					*e*S		**Sn**	13 56 14.7	-2.7
	baz=266								
JOW	**Kunigami**	**6.36**	**62**	Pn		**Pn**	13 55 58.9	-0.6	
	6.9nm,0.3s,baz=209,slow=9.4,SNR=9.3								
JOW						Sn	**Sn**	13 57 07.8	-3.1
	0.8nm,0.3s,baz=119,slow=26,SNR=1.2								
	11nm,0.3s								
KSRS	**Korea Array**	**14.39**	**19**	Pn		**Pn**	13 57 49.8	+0.5	
	0.2nm,0.3s,baz=202,slow=12,SNR=5.7								
	1.0nm,0.8s								
SEHB	**SEOHWA**	**15.24**	**19**	P		**P**	13 58 05.6	+0.3	
SEHB				IAmb		IAmb	13 58 12.7		
	comp=Z,8.1nm,1.1s								
ERM	**Erimo**	**25.18**	**39**	P		**P**	13 59 51.9	+1.7	
ULN	**Ulaanbaatar**	**26.66**	**337**	P		**P**	14 00 03.5	-0.3	
ULN				IAmb		IAmb	14 00 04.3		
	comp=Z,2.0nm,0.8s								
SONM	**Songino Array**	**26.88**	**336**	P		**P**	14 00 05.4	-0.3	
	comp=Z,1.2nm,0.7s,baz=150,slow=9.2,SNR=7.9								
	comp=Z,1.2nm,0.7s								
SONM	**Songino Array**	**26.88**	**336**	P		**P**	14 00 04.9	-0.8	
MK31	**Makanchi Array**	**39.02**	**316**	P		**P**	14 01 51.4	+0.1	
MKAR	**Makanchi Array**	**39.02**	**316**	P		**P**	14 01 51.4	0.0	
	comp=Z,0.5nm,0.4s,baz=102,slow=9.6,SNR=6.9								
	comp=Z,0.5nm,0.4s								
ZALV	**Zalesovo Beam**	**40.85**	**327**	P		**P**	14 02 05.5	-0.9	
	comp=Z,0.6nm,0.4s,baz=120,slow=8.8,SNR=4.3								
	comp=Z,0.6nm,0.4s								
H11N1	**WAKE ISLAND Hy**	**41.76**	**87**	T		T	14 47 37.4		
	baz=285								
H11N2	**WAKE ISLAND Hy**	**41.76**	**87**	T		T	14 47 34.1		
	baz=285								
H11N3	**WAKE ISLAND Hy**	**41.77**	**87**	T		T	14 47 47.6		
	baz=285								
H11S2	**WAKE ISLAND Hy**	**41.88**	**89**	T		T	14 47 44.3		
	baz=284,slow=75,SNR=7.9								
H11S1	**WAKE ISLAND Hy**	**41.89**	**89**	T		T	14 47 34.9		
	baz=284,slow=75,SNR=5.6								
H11S2	**WAKE ISLAND Hy**	**41.90**	**89**	T		T	14 47 46.6		
	baz=284,slow=75,SNR=5.6								
KURK	**Kurchatov**	**42.75**	**320**	P		**P**	14 02 21.9	0.0	
KURK	**Kurchatov**	**42.75**	**320**	IAmb		IAmb	14 02 24.6		
	comp=Z,1.5nm,0.9s								
KURBB	**Kurchatov Arra**	**42.77**	**320**	P		**P**	14 02 21.9	-0.1	
	comp=Z,0.2nm,0.4s,baz=107,slow=9.1,SNR=3.0								
	comp=Z,0.2nm,0.4s								
WRA	**Warramunga Arr**	**45.25**	**164**	P		**P**	14 02 41.9	-0.4	
	comp=Z,2.8nm,0.8s,baz=344,slow=8.2,SNR=1.6								
	comp=Z,2.8nm,0.8s								
WRA	**Warramunga Arr**	**45.25**	**164**	IAmb		IAmb	14 02 43.4		
	comp=Z,2.1nm,1.3s								
PSA00	**Pilbara Seismi**	**45.30**	**183**	P		**P**	14 02 41.8	-0.8	
ABKAR	**Akbulak array**	**54.14**	**314**	P		**P**	14 03 49.2	-0.4	
J20K	**Nowinta River**	**66.06**	**28**	P		**P**	14 05 12.0	+0.9	
MLY	**Manley**	**67.42**	**27**	P		**P**	14 05 19.4	-0.4	
MLY				IAmb		IAmb	14 05 35.6		
	comp=Z,13nm,1.4s								
SCM	**Sheep Creek Mo**	**69.50**	**30**	P		**P**	14 05 33.0	0.0	
SCM				IAmb		IAmb	14 05 40.1		
	comp=Z,8.6nm,1.0s								
GLB	**Gilahina Butte**	**71.23**	**30**	P		**P**	14 05 43.3	-0.2	
GLB				IAmb		IAmb	14 06 09.8		
	comp=Z,6.7nm,1.1s								
M26K	**Nabesna, AK**	**71.34**	**29**	P		**P**	14 05 44.3	+0.2	
BCAR	**Beaver Creek A**	**71.69**	**28**	P		**P**	14 05 47.0	+0.7	
CTGM	**Chitina Glacie**	**72.51**	**31**	P		**P**	14 05 52.3	+1.0	
M30M	**Minto, Yukon**	**74.01**	**28**	P		**P**	14 06 00.6	+0.6	
M30M				IAmb		IAmb	14 06 21.7		
	comp=Z,16nm,1.4s								
YKA	**Yellowknife Ar**	**82.90**	**23**	P		**P**	14 06 48.0	-0.9	
	comp=Z,0.4nm,0.4s,baz=308,slow=4.9,SNR=5.3								
	comp=Z,0.4nm,0.4s								

TAP 14 13:56:38.1, 23.11N×120.82E, h5km, ML1.3, 1C, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STYH	**Taoyuan**	**0.07**	**323**⇑	*i*P	Pg	13 56 40.3	+0.6
	baz=331						
STYH				*i* S	Sg	13 56 41.6	+0.7
	baz=331						
SLGT	**Liugui**	**0.20**	**233**	P	Pg	13 56 43.1	+1.0
	baz=233						
SLGT				S	Sg	13 56 46.1	+1.3
	baz=233						
WTP	**Ta-pu**	**0.23**	**305**	*i* P	Pg	13 56 43.7	+1.0
	baz=305						
WTP				S	Sg	13 56 47.3	+1.6
	baz=305						
TPUB	**Ta-pu**	**0.26**	**317**	*e*P	Pb	13 56 44.6	-0.7
	baz=317						
TPUB				*e*S	Sb	13 56 48.4	-1.7
	baz=317						
CHN1	**Nanshi**	**0.28**	**285**	*e*P	Pb	13 56 44.9	-0.8
	baz=285						
CHN1				*e*S	Sb	13 56 49.5	-1.1
	baz=285						
TWK	**Hsinying**	**0.34**	**296**	*e*P	Pb	13 56 46.0	-0.8
	baz=297						

MAN 14 14:01:54.1, 17.29N×120.28E, h23km, mb3.9, ML2.7, MS2.3, Luzon

*IDC **14** 14:23:43.6±1.0, 29.32S×61.14E, h0km, mb3.7/8, mbtmp3.7/9, ML4.1/1, Error ellipse: s-maj=37.2km s-min=26.0km az=46.0*
*NEIC **14** 14:23:45.8±1.0, 29.3S±0.2×61.1E±0.1, h15km±4km, mb4.5/5, Error ellipse: s-maj=27.3km s-min=10.6km az=200.0*
ISC 14 14:23:45.4±0.7, 29.4S±0.2×61.2E±0.1, h14km, n24, σ1s09/17, mb3.8/9, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RER	**Riviere de l'E**	**9.52**	**328**	Pn	Pn	14 25 57.8	-4.3
VOI	**Vohitsoka**	**14.92**	**297**	Pn	**Pn**	**14 27 15.7**	**-0.4**
OPO	**Ambohidratompo**	**16.66**	**307**	Pn	**Pn**	**14 27 39.9**	**+1.1**
	0.1nm,0.3s,baz=123,slow=16,SNR=1.8						
	2.8nm,0.5s						
H08S1	**Diego Carcia H**	**24.08**	**28**	T	T	14 53 51.8	
	baz=204,slow=75,SNR=8.4						
H08S2	**Diego Garcia H**	**24.09**	**29**	T	T	14 53 52.8	
	baz=204,slow=75,SNR=4.1						
H08S3	**Diego Garcia H**	**24.10**	**28**	T	T	14 53 55.8	
	baz=204,slow=75,SNR=5.1						
H01W2	**Cape Leeuwin H**	**44.78**	**111**	T	T	15 19 45.1	
	baz=113,slow=74,SNR=8.1						
H01W3	**Cape Leeuwin H**	**44.78**	**111**	T	T	15 19 40.2	
	baz=261,slow=74,SNR=12						
H01W1	**Cape Leeuwin H**	**44.80**	**111**	T	T	15 19 45.1	
	SNR=8.6						
CMAR	**Chiang Mai Arr**	**59.91**	**42**	P	**P**	**14 33 52.2**	**+1.0**
	0.4nm,0.5s,baz=233,slow=8.9,SNR=1.7						
	0.4nm,0.5s						
QSPA	**South Pole Qui**	**60.80**	**180**	P	**P**	**14 33 57.0**	**+0.1**
QSPA				IAmb	IAmb	14 34 23.1	
	comp=Z,7.5nm,1.5s						
VNDA	**Vanda**	**63.84**	**166**	P	**P**	**14 34 17.6**	**+0.7**
	comp=Z,0.7nm,0.7s,baz=284,slow=6.4,SNR=4.4						
	comp=Z,0.7nm,0.7s						
VNDA	**Vanda**	**63.84**	**166**	P	**P**	**14 34 17.3**	**+0.4**
VNDA				IAmb	IAmb	14 34 28.8	
	comp=Z,3.2nm,1.3s						
ASAR	**Alice Springs**	**64.40**	**104**	P	**P**	**14 34 22.4**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=242,slow=6.0,SNR=6.5						
	comp=Z,0.5nm,0.7s						
WRA	**Warramunga Arr**	**66.24**	**100**	P	**P**	**14 34 34.1**	**+0.7**
	comp=Z,0.7nm,0.9s,baz=245,slow=6.2,SNR=2.8						
	comp=Z,0.7nm,0.9s						
WR0	**Warramunga Arr**	**66.40**	**100**	P	**P**	**14 34 32.5**	**-1.9**
MTN	**Manton Dam**	**66.47**	**92**	P	**P**	**14 34 32.7**	**-2.2**
TORD	**Torodi Ar. Bea**	**71.22**	**298**	P	**P**	**14 35 04.9**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=84,slow=6.5,SNR=2.5						
	comp=Z,0.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**71.22**	**298**	P	**P**	**14 35 03.5**	**-0.9**
MKAR	**Makanchi Array**	**78.17**	**15**	P	**P**	**14 35 44.7**	**+0.7**
	comp=Z,0.5nm,0.7s,baz=190,slow=4.1,SNR=3.0						
	comp=Z,0.5nm,0.7s						
ABKAR	**Akbulak array**	**78.27**	**359**	P	**P**	**14 35 44.4**	**-0.1**
ZALV	**Zalesovo Beam**	**85.46**	**14**	P	**P**	**14 36 21.0**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=318,slow=28,SNR=1.7						
	comp=Z,0.3nm,0.3s						
SONM	**Songino Array**	**86.92**	**29**	P	**P**	**14 36 30.1**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=183,slow=5.8,SNR=1.9						
	comp=Z,0.2nm,0.3s						
YKA	**Yellowknife Ar**	**146.74**	**356**	PKPbc	**PKPbc**	**14 43 25.5**	**-0.7**
	comp=Z,0.6nm,0.6s,baz=358,slow=3.1,SNR=6.1						

MAN 14 14:28:37.4, 16.54N×120.82E, h31km, mb4.0, ML2.8, MS2.4, Luzon

*IDC **14** 14:30:27.4±1.3, 26.99N×130.27E, h0km, mb3.7/8, mbtmp3.7/8, Error ellipse: s-maj=67.8km s-min=19.0km az=73.0*
*JMA **14** 14:30:29.8±0.1, 26.9N±0.3×130.3E±0.3, h51km, MV3.7/25, NEAR MINAMI-DAITOJIMA IS*
ISC 14 14:30:28.2±0.7, 26.94N±0.03×130.27E±0.04, h10km, n27, σ1s52/43, mb3.8/8, Southeast of Ryukyu Islands

| Code | Station Name |

JTN	Tanegashima 3	3.76	9	eS		Sn	14 32 08.1	-2.4
KLR	Kul'dur	22.29	3	P		P	14 35 26.5	+1.0
	1.0nm,0.5s,baz=170,slow=13,SNR=2.6							
	1.0nm,0.5s							
MKAR	Makanchi Array	42.44	311	P		P	14 38 24.2	+1.1
	0.3nm,0.6s,baz=96,slow=9.0,SNR=3.8							
	0.3nm,0.6s							
KURBB	Kurchatov Arra	45.61	316	P		P	14 38 48.7	+0.1
	0.5nm,0.7s,baz=101,slow=8.8,SNR=4.6							
	0.5nm,0.7s							
WRA	Warramunga Arr	46.77	175	P		P	14 38 58.6	+0.7
	1.4nm,0.6s,baz=354,slow=8.4,SNR=22							
	1.4nm,0.6s							
ASAR	Alice Springs	50.43	176	P		P	14 39 27.6	+1.6
	0.9nm,0.7s,baz=6.4,slow=14,SNR=25							
	0.9nm,0.7s							
AKASG	Malin Array Be	76.17	320	P		P	14 42 16.3	-0.2
	0.3nm,0.4s,baz=49,slow=5.6,SNR=4.5							
	0.3nm,0.4s							
BRTR	Keskin Array B	78.03	308	P		P	14 42 28.9	+1.6
	0.6nm,0.7s,baz=82,slow=5.9,SNR=3.6							
	0.6nm,0.7s							
NB2	NORSAR Subarra	79.48	334	P		P	14 42 35.0	+0.2
	comp=Z,0.5nm,0.6s,baz=50,slow=5.9							
NOA	NORSAR Array B	79.48	334	P		P	14 42 35.0	+0.2
	comp=Z,0.9nm,0.7s,baz=50,slow=5.5,SNR=4.6							
	comp=Z,0.9nm,0.7s							

IDC ***14*** *14:35:27.5±0.7, 44°.87N×111°.52W, h0km, mb3.4/2, mbtmp3.4/8, ML1.3/1, Error ellipse: s-maj=12.2km s-min=6.3km az=53.0*

NEIC ***14*** *14:35:28.7, 44°.73N×111°.76W, h9km, Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr0.38; Mθθ2.04; Mθφ-2.42; Mrθ0.95; Mφφ-1.62; Mφr-0.29; Fault plane solution: M₀2.95000×10¹⁴ NP1:φ155.00000°, δ75.00000°, λ15.00000°. NP2:φ61.00000°, δ76.00000°, λ164.00000°. Principal axes: T 2.9480, Plg21.0000°, Azm18.0000°; N -0.0009, Plg69.0000°, Azm199.0000°; P -2.9471, Plg0.0000°, Azm108.0000°;*

BUT ***14*** *14:35:28.7±2.0, 44°.73N±0°.04×111°.77W±0°.02, h10km±5km, ML4.0/29, ML3.6/50(NEIC), Mwr3.6/14(SLM) Error ellipse: s-maj=5.3km s-min=2.3km az=175.0*

NEIC ***14*** *14:35:29.6±1.4, 44°.73N±0°.03×111°.79W±0°.03, h14km±6km, Error ellipse: s-maj=4.2km s-min=2.9km az=170.0*

ISC 14 14:35:28.9±1.0, **44°.75N**±0°.03×**111°.77W**±0°.02, **h16**km±8km, **n82**, σ1°**15**/86, **Hebgen Lake region, Montana**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMI	Centennial Mou	0.25	154		Pg	14 35 35.0	+0.4
QLMT	Earthquake Lak	0.26	71		Pb	14 35 35.1	-0.1
YPDC	Denny Creek	0.38	96		Pb	14 35 37.5	+0.1
YHB	Horse Butte	0.41	89		Pb	14 35 38.1	+0.2
YHB					Sb	14 35 43.6	-0.5
YHL	Hebgen Lake	0.43	76		Pb	14 35 38.3	-0.1
YHL				Sg	Sg	14 35 43.8	0.0
GCR	Grayling Creek	0.48	84		Pb	14 35 39.5	+0.5
YPWB	West Boundary	0.50	106		Pb	14 35 40.1	+0.7
YMC	Maple Creek	0.55	88		Pb	14 35 40.7	+0.5
PZCI	Patelzick Cree	0.56	224		Pb	14 35 41.0	+0.5
YMR	Madison River	0.58	98	Pg	Pb	14 35 41.3	+0.4
YMR				Sg	Sg	14 35 48.0	-0.3
YPM	Purple Mountai	0.65	98		Pb	14 35 43.0	+0.9
YHH	Holmes Hill	0.66	86		Pb	14 35 42.7	+0.5
MCID	Moose Creek	0.70	143		Pb	14 35 43.6	+0.7
YFT	Old Faithful	0.73	114	Pg	Pb	14 35 43.8	+0.4
YFT				Sg	Sb	14 35 53.2	0.0
YFT				IAML		14 35 54.0	
	comp=N,2μm,0.4s						
YNM	Yellowstone No	0.76	91		Pb	14 35 44.7	+0.8
MCMT	McKenzie Canyo	0.77	276		Pb	14 35 45.1	+1.0
YNR	Norris Junctio	0.78	92		Pb	14 35 44.8	+0.6
YNR				IAML		14 35 55.4	
	comp=E,4μm,0.3s						
YNR				IAML		14 35 56.9	
	comp=N,3μm,0.2s						
YMV	Mammoth Vault	0.80	73		Pb	14 35 45.3	+0.8
YPP	Pitchstone Pla	0.84	124		Pb	14 35 45.9	+0.6
YPP				Sg	Sb	14 35 57.0	+0.5
YPP				IAML		14 35 57.8	
	comp=N,2μm,0.3s						
YPP				IAML		14 35 58.0	
	comp=E,2μm,0.2s						
BOZ	Bozeman (W)	0.85	7		Pb	14 35 46.2	+0.8
BOZ				IAML		14 36 02.3	
	comp=E,2μm,0.3s						
BOZ				IAML		14 36 02.3	
	comp=E,2μm,0.2s						
YUF	Upper Falls	0.90	92		Pn	14 35 47.1	0.0
YUF				IAML		14 36 01.0	
	comp=E,1μm,0.3s						
YLT	Little Thumb C	0.90	110		Pn	14 35 47.6	+0.4
H17A	Grant Village	0.93	112		Pn	14 35 47.7	+0.3
ICI	Italian Canyon	0.94	244		Pn	14 35 47.5	+0.6
LKWY	Lake	1.00	100		Pn	14 35 49.2	+0.8
YMS	Mount Sheridan	1.01	118		Pn	14 35 49.3	+0.6
YJC	Joseph's Coat	1.01	89		Pn	14 35 49.8	+1.1
FLWY	Flagg Ranch	1.02	130		Pn	14 35 48.8	+0.1
FLWY				IAML		14 36 03.3	
	comp=E,2μm,0.5s						
FLWY				IAML		14 36 04.7	
	comp=E,2μm,0.6s						
EMI	Eightmile Cany	1.07	231		Pn	14 35 49.6	+0.2
YPLA	Lake Butte	1.10	102		Pn	14 35 51.2	+1.3
YTP	The Promontory	1.12	108		Pn	14 35 51.1	+1.0
YPPC	Pelican Cone	1.13	94		Pn	14 35 52.9	+2.6
YPSB	Soda Butte	1.16	83		Pn	14 35 51.9	+1.2
LRM	Limekiln Ridge	1.18	336		Pn	14 35 52.2	+1.2
FXWY	Fox Creek	1.23	154	Pn	Pg	14 35 52.1	-0.6
MOOW	Moose Ponds	1.24	143	Pn	Pg	14 35 52.2	-0.6
MOOW				IAML		14 36 09.5	
	comp=E,756nm,0.3s						
MOOW				IAML		14 36 13.9	
	comp=E,788nm,1.1s						
BCYI	Bear Canyon	1.25	250		Pg	14 35 53.3	+0.3
TPAW	Teton Pass	1.39	155		Pg	14 35 55.3	-0.4
TPAW				IAML		14 36 17.4	
	comp=E,1μm,0.4s						
TPAW				IAML		14 36 20.2	
	comp=E,2μm,0.8s						
LOHW	Long Hollow	1.41	143		Pg	14 35 55.4	-0.7
LOHW				IAML		14 36 14.9	
	comp=E,887nm,0.7s						
LOHW				IAML		14 36 16.2	
	comp=E,2μm,0.5s						
SNOW	Snow King Moun	1.48	150		Pg	14 35 56.7	-0.7
SNOW				IAML		14 36 17.7	
	comp=E,978nm,1.1s						
SNOW				IAML		14 36 20.9	
	comp=E,1μm,0.6s						
REDW	Red Top Meadow	1.54	154		Pg	14 35 57.9	-0.5
REDW				IAML		14 36 24.5	
	comp=E,2μm,0.6s						
ECR	Eagle Creek	1.72	170		Pb	14 36 00.1	-0.1
GCMT	Greycliff	1.82	54		Pn	14 36 01.1	+1.5
RLMT	Red Lodge	1.82	77	Pg	Pb	14 36 02.6	+0.7
RLMT				IAML		14 36 36.3	
	comp=E,959nm,0.5s						
HRY	Holter Researc	1.96	359		Pb	14 36 04.1	-0.3
AHID	Auburn Hatcher	2.04	166		Pn	14 36 03.1	+0.3
AHID				IAML		14 36 36.6	
	comp=E,486nm,0.9s						
AHID				IAML		14 36 39.3	
	comp=E,527nm,0.5s						
PDAR	Pinedale Array	2.55	140	Pn	Pb	14 36 13.2	-1.1
	comp=E,20nm,0.5s,baz=344,slow=21,SNR=164						
PDAR				Pg	Pg	14 36 14.7	-3.1
	comp=E,7.2nm,0.3s,baz=335,slow=16,SNR=126						
PDAR				Lg	Lg	14 36 47.1	
	comp=E,21nm,0.3s,baz=295,slow=24,SNR=16						
MSO	Missoula	2.58	325	Pn	Pn	14 36 09.9	-0.1
HVU	Hansel Valley	3.06	194	Pn	Pn	14 36 16.8	+0.2
HWUT	Hardware Ranch	3.14	177		Pn	14 36 17.9	0.0
MFID	Camas Ranch	3.21	247		Pn	14 36 18.4	-0.4
BGU	Big Grassy Mou	3.93	194		Pn	14 36 29.4	+0.7
BMO	Blue Mountains	3.94	273		Pn	14 36 29.6	+0.8
BMO				IAML		14 37 35.0	
	comp=E,73nm,0.7s						
BMO				IAML		14 37 38.2	
	comp=E,84nm,0.3s						
JLU	Jordanelle	4.15	177	Pn	Pn	14 36 32.1	+0.3
K22A	Casper	4.34	117		Pn	14 36 34.4	0.0
K22A				IAML		14 38 14.0	
	comp=E,67nm,0.7s						
K22A				IAML		14 38 16.9	
	comp=N,66nm,0.8s						
RWWY	Rawlins	4.52	131		Pn	14 36 36.0	-1.0
WALA	Waterton Lakes	4.55	342		Pn	14 36 37.1	-0.2
LNOR	Lincton Mounta	4.73	286		Pn	14 36 44.1	+4.6
MPU	Maple Canyon	4.73	179		Pn	14 36 39.1	-0.6
ELK	Elko	4.75	214	Pn	Pn	14 36 45.5	+5.5
	comp=N,14nm,0.6s,baz=28,slow=13,SNR=50						
ELK				Lg	Lg	14 37 54.1	
	comp=N,2.2nm,0.3s,baz=204,slow=6.4,SNR=5.7						
ELK	Elko	4.75	214	Pn	Pn	14 36 40.1	+0.1
NLU	North Lily Min	4.79	183		Pn	14 36 40.5	-0.1
E09A	Wood Farm, Sta	4.81	294		Pn	14 36 41.2	+0.6
NEW	Newport	5.10	315	Pn	Pn	14 36 47.1	+2.5
	comp=N,8.2nm,0.5s,baz=140,slow=14,SNR=14						
NEW				Pg	Pg	14 37 03.2	-3.3
	comp=N,2.0nm,0.3s,baz=96,slow=16,SNR=3.9						
NEW				Lg	Lg	14 38 08.0	
	comp=N,12nm,0.3s,baz=236,slow=21,SNR=18						
NEW	Newport	5.10	315	Pn	Pn	14 36 44.2	-0.4
G08A	Pilot Rock	5.12	279	Pn	Pn	14 36 45.1	+0.1
P18A	Preston Nutter	5.24	167	Pn	Pn	14 36 46.3	-0.5
P17A	Butcher Ranch,	5.33	171	Pn	Pn	14 36 48.2	+0.3
C09A	Chrisman Ranch	5.44	306		Pn	14 36 49.6	+0.3
D08A	Wollman Farm,	5.50	297		Pn	14 36 49.3	-0.7
OD2	Odessa Site #2	5.50	301		Pn	14 36 52.9	+2.8
RSSD	Black Hills	5.58	94	Pn	Pn	14 36 51.8	+0.4
PHWY	Pilot Hill	5.77	124	Pn	Pn	14 36 53.5	-0.5
DGMT	Dagmar	6.41	52		Pn	14 37 02.4	-0.2
PV07	Paradox Valley	6.72	159	Pn	Pn	14 37 06.7	-0.4
PNT	Penticton	7.04	313		Pn	14 37 14.6	+3.3
NVAR	Mina Array Bea	7.99	220	Pn	Pn	14 37 30.4	+6.0
	comp=N,0.4nm,0.6s,baz=30,slow=13,SNR=3.0						
NVAR				Lg	Lg	14 39 38.4	
	comp=N,0.2nm,0.3s,baz=281,slow=10,SNR=1.9						
ULM	Lac du Bonnet	12.07	57	Pn	Pn	14 38 15.7	-4.4
	baz=147,slow=20,SNR=1.4						
ULM				Pg		14 39 04.3	
	comp=N,0.3nm,0.3s,baz=254,slow=13,SNR=2.0						
ULM				Lg	Lg	14 41 33.2	
	comp=N,0.4nm,0.3s,baz=342,slow=19,SNR=2.0						
	comp=N,1.2nm,0.6s						
TXAR	Lajitas Array	16.68	155	Pn	Pn	14 39 23.1	+1.2
	baz=322,slow=42,SNR=1.4						
YKA	Yellowknife Ar	17.86	356	P	Pn	14 39 33.9	-2.4
	comp=N,0.3nm,0.5s,baz=177,slow=13,SNR=4.5						
YKA				Lg	Lg	14 44 38.0	
	comp=N,0.1nm,0.3s,baz=170,slow=27,SNR=4.0						
ILAR	Eielson Array	27.91	328	P	P	14 41 18.9	+1.1
	comp=N,0.1nm,0.5s,baz=122,slow=8.8,SNR=3.3						
	comp=N,0.1nm,0.5s						
PETK	Petropavlovsk-	56.23	314	P	P	14 45 08.7	+0.7
	comp=N,1.1nm,0.8s,baz=50,slow=12,SNR=3.7						
	comp=N,1.1nm,0.8s						

ISK ***14*** *14:43:57.6, 37°.18N×26°.85E, h4km, ML3.6/40*

ATH ***14*** *14:43:57.9, 37°.19N×26°.91E, h22km±1km, ML3.5/12, Error ellipse: s-maj=2.3km s-min=1.1km az=78.0*

THE ***14*** *14:43:58.3, 37°.18N×26°.88E, h1km±1km, ML3.4/6, Error ellipse: s-maj=1.8km s-min=0.6km az=85.0*

DDA ***14*** *14:43:58.0±0.0, 37°.14N×26°.86E, h7km±2km, MW3.6*

ISC 14 14:43:58.5±1.0, **37°.19N**±0°.02×**26°.87E**±0°.02, **h8**km±9km, **n87**, σ0°**81**/119, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BODT	Bodrum	0.37	109	P	Pg	14 44 05.9	+0.2
BODT				S	Sg	14 44 11.2	+0.7
BODT	Bodrum	0.37	109	PG	Pb	14 44 06.1	-1.2
BODT				SG	Sg	14 44 11.3	+0.7
DDIM	Aydin, Didim	0.40	47	P	Pb	14 44 06.7	-1.2
DDIM				S	Sb	14 44 13.6	-0.5
KOSK	Kos Island	0.44	169	P	Pg	14 44 07.3	+0.2
KOSK				S	Sg	14 44 13.0	+0.2
KOSK				AML	AML	14 44 17.4	
	comp=E,36458μm,0.3s						
KOSK				AML	AML	14 44 22.8	
	comp=N,35916μm,0.3s						
KOSK	Kos Island	0.44	169	P	Pg	14 44 07.2	+0.2
KOSK				S	Sb	14 44 13.7	-1.6
	comp=N,6μm,0.3s						
KOSK	Kos Island	0.44	169	PG	Pb	14 44 07.4	-1.1
KOSK				SG	Sg	14 44 13.5	+0.7
BDRM	Kayabasi	0.47	105	P	Pg	14 44 07.2	-0.4
BDRM				S	Sg	14 44 14.3	+0.5
SMG	Samos	0.52	357	P	Pb	14 44 09.1	-0.8
SMG				S	Sg	14 44 16.1	+0.6
SMG				AML	AML	14 44 18.3	
	comp=N,29190μm,0.3s						
SMG				AML	AML	14 44 18.5	
	comp=E,19753μm,0.3s						
SMG	Samos	0.52	357	P	Pb	14 44 09.0	-0.9
SMG				S	Sb	14 44 16.7	-1.0
	comp=E,12μm,0.3s						
GCAM	G?zelcaml?	0.59	29	PG	Pb	14 44 10.3	-0.7
GCAM				SG	Sb	14 44 19.7	+0.2
GCAM	G?zelcaml?	0.59	29	P	Pb	14 44 10.6	-0.4
GCAM				S	Sb	14 44 19.9	+0.4
NISR	Nisiros	0.61	160	P	Pg	14 44 10.3	+0.1
NISR	Nisiros	0.61	160	P	Pg	14 44 10.1	-0.1
NISR				S	Sb	14 44 19.6	-0.5
	comp=E,3μm,0.3s						
NIS1	Nisyros Isl.	0.63	157	P	Pg	14 44 10.5	-0.1
NIS1				S	Sg	14 44 19.1	+0.3
NIS1	Nisyros Isl.	0.63	157	P	Pg	14 44 10.3	-0.3
NIS1				S	Sb	14 44 21.1	+0.3
	comp=E,5μm,0.4s						
NIS1	Nisyros Isl.	0.63	157	PG	Pg	14 44 10.6	-0.1
DAT	Datca	0.72	129	P	Pg	14 44 12.1	-0.3
DAT				S	Sb	14 44 22.3	-1.3
DAT	Datca	0.72	129	PG	Pg	14 44 12.4	0.0
DAT				SG	Sb	14 44 23.1	-0.5
DAT	Datca	0.72	129	P	Pb	14 44 12.5	-0.9
DAT				S	Sb	14 44 24.3	+0.8
MLSB	Milas	0.73	81	PG	Pg	14 44 12.4	-0.1
MLSB				SG	Sb	14 44 23.5	-0.1
DGB	zmir	0.86	0	P	Pb	14 44 15.4	-0.3
DGB				S	Sb	14 44 27.8	+0.3
AYDN	Tasoluk	0.93	59	P	Pg	14 44 15.7	-0.7
AYDN				S	Sb	14 44 30.1	+0.6
APE	Apeiranthos	1.08	264	P	Pg	14 44 18.9	-0.3
APE				AML	AML	14 44 36.9	
	comp=N,3872μm,0.3s						
APE				AML	AML	14 44 38.3	
	comp=E,2287μm,0.4s						
APE	Apeiranthos	1.08	264	P	Pb	14 44 19.0	-0.4
APE				S	Sb	14 44 33.7	0.0
	comp=E,2μm,0.4s						
APE	Apeiranthos	1.08	264	PG	Pg	14 44 18.9	-0.3
ZEYE	Izmir, Urla-Ze	1.09	345	P	Pg	14 44 19.0	-0.4
ZEYE				S	Sn	14 44 35.4	0.0
AYDB	Zeytinkoy-Aydi	1.11	46	PN	Pg	14 44 19.1	-0.7
YER	Yerkesik	1.13	92	P	Pn	14 44 20.1	-0.5
YER	Yerkesik	1.13	92	PN	Pb	14 44 19.9	-0.4
MULA	Mugla, Merkez-	1.16	86	P	Pb	14 44 20.5	-0.3
MULA				S	Sn	14 44 36.7	-0.5
TURN	Turunc	1.17	110	PN	Pg	14 44 20.3	-0.6
TURN	Turunc	1.17	110	P	Pg	14 44 20.1	-0.8
TURN				S	Sb	14 44 35.9	-0.4
URLA	Izmir	1.19	349	PN	Pn	14 44 21.1	-0.4
URLA	Izmir	1.19	349	P	Pn	14 44 21.4	-0.1
URLA				S	Sn	14 44 39.2	+1.3
BLCB	Balcova	1.21	6	P	Pg	14 44 20.3	-1.3
BLCB				S	Sn	14 44 38.0	-0.2
BLCB	Balcova	1.21	6	PN	Pg	14 44 20.6	-1.0
CHOS	Chios island	1.36	332	P	Pn	14 44 22.9	-1.0
CHOS				S	Sn	14 44 43.1	+0.9
CHOS				AML	AML	14 44 46.2	
	comp=E,1731μm,0.4s						
CHOS				AML	AML	14 44 48.4	
	comp=N,2196μm,0.6s						
CHOS	Chios island	1.36	332	P	Pn	14 44 23.1	-0.9
CHOS				S	Sn	14 44 43.4	+1.2
	comp=N,990nm,0.5s						
CHOS	Chios island	1.36	332	PN	Pn	14 44 23.0	-0.9
CMBO	Columbo, Santo	1.38	239	P	Pb	14 44 23.9	-0.5
CMBO				S	Sg	14 44 42.9	+0.1
CMBO				AML	AML	14 44 51.3	
	comp=E,5481μm,0.6s						
CMBO				AML	AML	14 44 51.8	
	comp=N,6749μm,0.5s						
ARG	Arkhangelos	1.40	133	P	Pn	14 44 23.2	-1.0
ARG				S	Sg	14 44 42.8	-0.5
ARG				AML	AML	14 44 47.8	
	comp=N,1540μm,0.4s						
ARG				AML	AML	14 44 51.5	
	comp=E,1834μm,0.9s						
ARG	Arkhangelos	1.40	133	PN	Pg	14 44 24.9	-0.3
SANT	Santorini	1.40	235	P	Pg	14 44 24.8	-0.5
SANT				S	Sg	14 44 44.7	+1.3
SANT				AML	AML	14 44 48.1	
	comp=N,1591μm,0.5s						
SANT				AML	AML	14 44 50.7	
	comp=E,2680μm,0.3s						
SANT	Santorini	1.40	235	PN	Pb	14 44 24.3	-0.5
TNSA	Tinos	1.41	285	P	Pn	14 44 23.8	-0.6
TNSA				S	Sg	14 44 44.0	+0.2
TNSA				AML	AML	14 44 46.4	
	comp=E,2030μm,0.3s						
TNSA				AML	AML	14 44 46.9	
	comp=N,3742μm,0.4s						
THR6	Thira Island,	1.45	236	P	Pg	14 44 26.7	+0.5
DALY	Dalyan (Mula)	1.47	104	PN	Pb	14 44 25.9	-0.2
FOCM	Foa	1.53	356	PN	Pb	14 44 26.6	-0.5
TAVA	DENIZLI_Tavas	1.65	80	P	Pb	14 44 28.5	-0.7
KARP	Karpathos	1.65	172	P	Pb	14 44 28.7	-0.5
KARP				AML	AML	14 44 55.6	
	comp=E,1112μm,0.4s						
KARP				AML	AML	14 44 59.9	
	comp=N,1244μm,0.7s						
KARP	Karpathos	1.65	172	PN	Pn	14 44 26.2	-1.6
GOMA	Golmarmara-Man	1.73	28	PN	Pb	14 44 30.1	-0.4
AKS	Akhisar	1.85	23	PN	Pb	14 44 31.6	-0.9
FETY	Fethiye	1.85	107	PN	Pb	14 44 31.7	-0.9
DKL	Dikili	1.88	1	PN	Pb	14 44 32.1	-1.0
KULA	Kula-Manisa	1.94	46	P	Pn	14 44 32.0	+0.2
KULA	Kula-Manisa	1.94	46	PN	Pb	14 44 33.0	-1.1
APMY	Acipayam-Deniz	1.96	81	PN	Pn	14 44 32.8	+0.7
CAME	Cameli-Denizli	1.96	96	PN	Pb	14 44 33.4	-1.1
MHLO	Agia Marina, M	2.04	257	P	Pb	14 44 34.8	-1.0
PRK	Paraskevi	2.11	347	P	Pn	14 44 34.5	+0.4
PRK				AML	AML	14 45 17.7	
	comp=N,833μm,0.4s						
PRK				AML	AML	14 45 18.1	
	comp=E,1296μm,0.6s						
PRK	Paraskevi	2.11	347	P	Pn	14 44 34.5	+0.4
ZKR	Zakros	2.13	195	PN	Pn	14 44 35.1	+0.7
SIGR	SIGRI	2.18	339	P	Pn	14 44 34.4	-0.6
SIGR	SIGRI	2.18	339	P	Pn	14 44 34.2	-0.8
AKAS	Kas	2.39	113	PN	Pn	14 44 39.0	+0.9
ELL	Elmali	2.47	99	PN	Pn	14 44 40.3	+1.1
IDI	Anoyia	2.48	221	P	Pn	14 44 38.5	-0.7
IDI				AML	AML	14 45 23.1	
	comp=N,469μm,0.5s						
IDI				AML	AML	14 45 24.0	
	comp=E,560μm,0.5s						
IDI	Anoyia	2.48	221	PN	Pn	14 44 39.5	+0.2
DION	Dionisos Attik	2.50	292	P	Pn	14 44 39.7	+0.2
DION				AML	AML	14 45 22.4	
	comp=N,1139μm,0.4s						
DION				AML	AML	14 45 23.3	
	comp=E,1185μm,0.4s						
SIMA	Simav-Kutahya	2.52	41	PN	Pn	14 44 41.2	+1.4
BALB	Balikesir	2.58	18	PN	Pn	14 44 41.9	+1.4
BOZC	Bozcaada	2.73	347	PN	Pn	14 44 42.6	0.0
KORT	Korkueli	2.79	93	PN	Pn	14 44 44.9	+1.4
IMMV	Iera Moni Meta	2.90	234	P	Pn	14 44 45.8	+0.8
IMMV	Iera Moni Meta	2.90	234	PN	Pn	14 44 46.0	+1.0
TVSB	Tavsanli	3.04	41	PN	Pn	14 44 48.6	+1.6
GADA	Gvkgeada	3.10	346	PN	Pn	14 44 48.6	+1.0
SHUT	Suhut-Afyon	3.21	64	PN	Pn	14 44 50.9	+1.5
KRBG	Karabiga-Canak	3.22	6	PN	Pn	14 44 49.7	+0.4
GELI	Tayfur-Gelibol	3.22	355	PN	Pn	14 44 49.8	+0.4
KNDR	Palaiochora Ch	3.23	234	PN	Pn	14 44 51.1	+1.6
EDC	Edincik	3.25	13	PN	Pn	14 44 51.4	+1.6
GVD	Gavdhos	3.25	225	PN	Pn	14 44 50.5	+0.7
KCTX	Karacabey (Bur	3.29	20	PN	Pn	14 44 51.9	+1.6
SUTC	Sutluce-Ispart	3.30	84	PN	Pn	14 44 52.1	+1.5
MRMT	Marmara Adasi	3.46	9	PN	Pn	14 44 54.5	+1.8

BJI ***14*** *15:01:54.0±0.0, 26°.82N×130°.39E, h9km, mb4.9/84, mB5.4/73, Ms5.5/93, Ms7 5.4/88*

IDC ***14*** *15:01:55.5±0.3, 26°.90N×130°.23E, h0km, mb5.1/29, mbtmp5.0/35, ML4.4/5, MS5.0/78, Error ellipse: s-maj=12.2km s-min=8.1km az=77.0*

NEIC ***14*** *15:01:56.9, 26°.95N×130°.19E, h8km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr-2.32; Mθθ0.03; Mθφ2.29; Mrθ-0.19; Mφφ1.93; Mφr-0.02; Fault plane solution: M₀3.01000×10¹⁷ NP1:φ36.71000°, δ46.53000°, λ-80.23000°. NP2:φ202.66000°, δ44.34000°, λ-100.15000°. Principal axes: T 3.4006, Plg1.0000°, Azm120.0000°; N -1.0590, Plg7.0000°, Azm210.0000°; P -2.3416, Plg83.0000°, Azm21.0000°;*

NEIC ***14*** *15:01:56.9±1.2, 26°.96N±0°.06×130°.19E±0°.05, h5km±3km, mb5.4/312, Ms_20 5.1/121, Mwb5.6/19, Mww5.6 Error ellipse: s-maj=8.3km s-min=6.6km az=198.0*

JMA ***14*** *15:01:57.0±0.1, 26°.9N±0°.4×130°.3E±0°.5, h72km±4km, MD5.2/27, MW5.6/27, NEAR MINAMI-DAITOJIMA IS*

JMA Felt I J1 at NEAR MINAMI-DAITOJIMA IS.

MOS ***14*** *15:01:57.1±1.1, 26°.96N×130°.30E, h18km, mb5.5/138, MS5.6/29, Error ellipse: s-maj=6.0km s-min=3.2km az=110.2*

NIED ***14*** *15:01:57.0, 26°.91N×130°.27E, h72km, MW5.6, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁷Nm; Mrr-2.46; Mθθ0.87; Mθφ 1.59; Mrθ0.29; Mφφ0.90; Mφr-0.54; Fault plane solution: M₀2.40000×10¹⁷ NP1: φ224.00000°, δ42.00000°, λ-74.00000°. NP2:φ23.00000°, δ50.00000°, λ-104.00000°.*

GCMT ***14*** *15:02:00.8±0.1, 26°.88N±0°.01×130°.25E±0°.01, h12km, MW5.6/158, Moment Tensor Solution. s70

comp=E,45nm,5.9s,comp=E,36nm,7.5s
JYRO Yoronjima 1.63 274 P **Pn** **15 02 24.1 -1.9**
JYRO *e*S **Sn** **15 02 44.2 -2.8**
JYRO Yoronjima 1.63 274 A A 15 02 24.1
comp=E,91nm,6.0s,comp=E,70nm,6.0s
JAMN Amaminishikomi 1.64 324 P **Pn** **15 02 24.1 -2.0**
JAMN *e*S **Sn** **15 02 44.5 -2.6**
JAMN Amaminishikomi 1.64 324 A A 15 02 24.1
comp=E,41nm,6.6s,comp=E,47nm,7.1s
JOW Kunigami 1.79 267 Pn **Pn** **15 02 26.7 -1.6**
2µm,0.3s,baz=106,slow=15,SNR=903
JOW Sn **Sn** **15 02 48.4 -2.5**
2µm,0.3s,baz=54,slow=30,SNR=19
JOW Kunigami 1.79 267 P **Pn** **15 02 27.5 -0.8**
JOW Kunigami 1.79 267 P **Pn** **15 02 26.6 -1.7**
JOW *e*S **Sn** **15 02 47.5 -3.4**
JOW Kunigami 1.79 267 A A 15 02 26.6
comp=E,57nm,5.2s,comp=E,82nm,1.9s
JNTH Nagotoyohara 2.06 259 P **Pn** **15 02 30.1 -1.8**
JNTH S **Sn** **15 02 53.6 -3.8**
JNTH Nagotoyohara 2.06 259 A A 15 02 30.1
comp=E,56nm,6.0s,comp=E,58nm,5.5s
JIH Iheya 2.06 274 P **Pn** **15 02 30.4 -1.6**
JIH S **Sn** **15 02 55.3 -2.3**
JIH Iheya 2.06 274 A A 15 02 30.4
comp=E,79nm,5.9s,comp=E,61nm,6.4s
JJT3 Tamagusuku3 2.37 251 P **Pn** **15 02 34.7 -1.5**
JJT3 *e*S **Sn** **15 03 02.7 -2.4**
JJT3 Tamagusuku3 2.37 251 A A 15 02 34.7
comp=E,181nm,5.6s,comp=E,195nm,5.4s
JTAJ Takarajima 2.41 337 P **Pn** **15 02 34.9 -1.9**
JTAJ *e*S **Sn** **15 03 02.3 -3.9**
JTAJ Takarajima 2.41 337 A A 15 02 34.9
comp=E,26nm,6.7s,comp=E,35nm,9.4s
JAGN Aguni-jima 2.73 264 P **Pn** **15 02 39.5 -1.7**
JAGN S **Sn** **15 03 10.9 -3.2**
JAGN Aguni-jima 2.73 264 A A 15 02 39.5
comp=E,67nm,6.8s,comp=E,47nm,5.6s
JNN Nakanoshima 2.93 353 P **Pn** **15 02 42.5 -1.4**
JNN S **Sn** **15 03 15.7 -3.2**
JKE Kume jima 2 3.18 260 P **Pn** **15 02 45.1 -2.3**
JKE Kume jima 2 3.18 260 A A 15 02 45.1
comp=E,25nm,7.7s,comp=E,27nm,6.0s
JYAK Yakushimahirau 3.31 3 P **Pn** **15 02 47.6 -1.5**
JYAK *e*S **Sn** **15 03 24.5 -3.8**
JMTN Minamitane 3.50 9 P **Pn** **15 02 50.4 -1.4**
JMTN S **Sn** **15 03 29.4 -3.7**
JKC Kuchinoerabu 3.52 359 P **Pn** **15 02 50.8 -1.3**
JKC S **Sn** **15 03 29.9 -3.8**
JKC Kuchinoerabu 3.52 359 A A 15 02 50.8
comp=E,11nm,7.9s,comp=E,17nm,6.2s
JTN Tanegashima 3 3.77 9 P **Pn** **15 02 53.8 -1.6**
JTN *e*S **Sn** **15 03 36.2 -3.5**
JTSR Tashiro 2 4.26 7 A A 15 03 01.1
comp=E,5.0nm,6.9s,comp=E,5.0nm,3.9s
JSU Suzuyama 4.57 2 Pn **Pn** **15 03 05.3 -1.1**
JMJ Miyako jima 2 4.96 246 P **Pn** **15 03 10.7 -1.1**
YOJ Yonaguni jima 7.00 251 Pn **Pn** **15 03 37.4 -2.5**
YOJ Yonaguni jima 7.00 251 P **Pn** **15 03 37.4 -2.5**
YOJ Yonaguni jima 7.00 251 P **Pn** **15 03 37.7 -2.1**
JTU Tsushima 7.61 355 Pn **Pn** **15 03 46.6 -1.6**
TATO Taipei 8.15 258 Pn **Pn** **15 03 52.8 -2.9**
NACB Ninganchiao 8.31 253 Pn **Pn** **15 03 54.2 -3.6**
YHNB Yeheng 8.33 256 Pn **Pn** **15 03 56.7 -1.5**
YHNB Yeheng 8.33 256 P **Pn** **15 03 57.8 -0.4**
JHS Saijyo 8.41 16 Pn **Pn** **15 03 58.7 -0.5**
NAWB Namwon 8.82 344 Pn **Pn** **15 04 03.9 -0.9**
YULB Yu-li 8.86 249 Pn 15 03 59.9 -5.6
SSE Sheshan 8.98 300 P **Pn** **15 04 05.6 -1.4**
SSE S **Sn** **15 05 47.8 -0.2**
SSE pmax pmax
comp=Z,20nm,0.7s
SSE pmax pmax
comp=Z,110nm,3.9s
SSE LR LR
comp=N,7µm,17.4s
SSE LR LR
comp=E,9µm,18.8s
SSLB Suanglung 8.99 252 Pn **Pn** **15 04 02.7 -4.6**
SSLB Suanglung 8.99 252 P **Pn** **15 04 04.0 -3.3**
TWG Pinlang 9.30 246 Pn Pn 15 04 05.2 -6.3
TPUB Ta-pu 9.46 250 **Pn** **15 04 10.0 -3.7**
TPUB Ta-pu 9.46 250 P **Pn** **15 04 13.3 -0.3**
TJN Taejon 9.74 346 Pn **Pn** **15 04 16.9 -0.6**
TJN Taejon 9.74 346 *de*P **Pn** **15 04 20.6 +3.1**
INU Inuyama 10.19 33 Pn **Pn** **15 04 23.1 -0.5**
INU Inuyama 10.19 33 P **Pn** **15 04 28.3 +4.8**
JHJ Hachijo jima 2 10.29 51 Pn **Pn** **15 04 25.5 +0.5**
54nm,0.3s,baz=339,slow=9.6,SNR=6.1
JHJ LR LR 15 07 02.4
comp=Z,2µm,21.2s,baz=261,slow=30
112nm,0.4s
JHJ2 Mitsune 10.31 51 **Pn** **15 04 25.8 +0.5**
JGF Kuroka 10.55 33 Pn **Pn** **15 04 28.1 -0.5**
JCJ Chichijima 10.62 86 Pn **Pn** **15 04 31.1 +1.5**
12nm,0.3s,baz=113,slow=23,SNR=1.9
JCJ LR LR 15 08 01.8
comp=Z,3µm,18.6s,baz=300,slow=34
56nm,0.5s
KSAR Wonju Array Be 10.68 350 Pn **Pn** **15 04 30.3 0.0**
KSAR Wonju Array Be 10.68 350 P **Pn** **15 04 30.3 0.0**
KSRS Korea Array 10.68 350 Pn **Pn** **15 04 30.6 +0.3**
0.3nm,0.3s,baz=168,slow=14,SNR=40
KSRS LR LR 15 09 06.9
comp=Z,6µm,18.4s,baz=175,slow=40
23nm,1.0s
QZH Quanzhou 10.70 262 ⇑*i*P **Pn** **15 04 32.3 +1.7**
QZH S **Sn** **15 06 29.8 -0.6**
QZH LR LR
comp=N,9µm,18.0s
QZH LR LR
comp=E,5µm,19.4s
QZH LR LR
comp=Z,9µm,9.9s
KS19 Wonju Array Si 10.74 350 **Pn** **15 04 31.7 +0.5**
KNMB Chin-men Tao 11.00 260 Pn **Pn** **15 04 32.3 -2.5**
NJ2 Nanjing 11.18 300 ⇑P **Pn** **15 04 39.6 +2.4**
NJ2 sP 15 04 46.1
NJ2 S **Sn** **15 06 44.6 +2.5**
NJ2 sS 15 06 56.0
NJ2 pmax pmax
comp=Z,13nm,0.6s
NJ2 pmax pmax
comp=Z,2µm,8.5s
NJ2 LR LR
comp=N,18µm,9.5s
NJ2 LR LR
comp=E,23µm,11.4s
NJ2 LR LR
comp=Z,26µm,17.7s
SEHB SEOHWA 11.44 352 **Pn** **15 04 40.5 -0.2**
MAJO Matsushiro 11.72 33 **Pn** **15 04 45.2 +0.7**
MAJO Matsushiro 11.72 33 ⇓*e*P **Pn** **15 04 46.1 +1.6**
MAJO Matsushiro 11.72 33 P Pn 15 04 49.7 +5.2
MJAR Matsushiro Arr 11.72 33 Pn **Pn** **15 04 45.0 +0.4**
0.4nm,0.3s,baz=194,slow=12,SNR=14
MJAR LR LR 15 09 13.8
comp=Z,4µm,19.1s,baz=218,slow=37
4.0nm,0.7s
MJAR Matsushiro Arr 11.72 33 **Pn** **15 04 44.3 -0.2**
MJAR Matsushiro Arr 11.72 33 P **Pn** **15 04 45.0 +0.4**
MJB9 Matsu-Tunnel 11.72 33 Pn **Pn** **15 04 44.8 +0.2**
JSD Sado 12.96 29 Pn **Pn** **15 05 01.5 0.0**
DL2 Dalian 13.97 331 P **Pn** **15 05 19.3 +4.0**
DL2 S Sn 15 08 00.9 +11
DL2 pmax pmax
comp=Z,46nm,1.1s
DL2 pmax pmax
comp=Z,1µm,9.2s
DL2 LR LR
comp=N,8µm,14.7s
DL2 LR LR
comp=E,12µm,16.6s
DL2 LR LR
comp=Z,12µm,20.4s
JMM Marumori 14.05 36 Pn **Pn** **15 05 17.4 +0.9**
JCNP Jose Panganiba 14.43 211 *i*P **Pn** **15 05 22.0 +0.3**
WHN Wuhan 14.43 288 ⇑P **P** **15 05 26.1 -2.4**
WHN S **S** **15 08 13.8 -7.6**
WHN LR LR
comp=N,47µm,16.3s
WHN LR LR
comp=E,20µm,24.7s
WHN LR LR
comp=Z,38µm,21.3s
TIA Tai'an 14.53 313 *e*P **Pn** **15 05 24.6 +1.7**
TIA pmax pmax
comp=Z,60nm,1.1s
TIA pmax pmax
comp=Z,2µm,9.4s
TIA LR LR
comp=N,18µm,14.5s
TIA LR LR
comp=E,14µm,15.7s
TIA LR LR
comp=Z,18µm,15.2s
CNSH ChangSha 15.44 279 ⇑P **Pn** **15 05 37.3 +2.1**
CNSH S **Sn** **15 08 32.6 +6.5**
CNSH LR LR
comp=N,18µm,13.8s
CNSH LR LR
comp=E,14µm,14.0s
CNSH LR LR
comp=Z,17µm,13.9s
SNY Shenyang 15.85 341 ⇓P **Pn** **15 05 41.3 +0.9**
SNY S **S** **15 08 44.6 -5.8**
SNY pmax pmax
comp=Z,16nm,0.6s
SNY LR LR
comp=N,10µm,12.3s
SNY LR LR
comp=E,15µm,12.8s
SNY LR LR
comp=Z,12µm,13.0s
PGP Puerto Galera 15.96 215 ⇑*e*P **P** **15 05 44.3 -1.2**
LUBP Lubang 16.14 218 *i*P **P** **15 05 46.6 -0.8**
VLA Vladivostok 16.21 4 ⇓*e*P **P** **15 05 48.5 +0.4**
VLA pmax pmax
comp=Z,152nm,1.2s
HNS HongShan 16.80 312 ⇑P **Pn** **15 05 52.4 -0.1**
HNS S **S** **15 09 07.6 -2.1**
HNS SS Sn 15 09 25.3 +26
HNS pmax pmax
comp=Z,210nm,1.0s
HNS LR LR
comp=Z,17µm,16.2s
HNS LR LR
comp=Z,15µm,13.2s
RCP Roxas 16.85 206 ⇓*e*P **P** **15 05 56.7 +1.3**
LYN LuoYang 17.08 301 ⇑P **P** **15 05 58.0 +0.1**
LYN sP pwP 15 06 07.8 +0.7
LYN PP **PnPn** **15 06 12.9 +7.0**
LYN S **S** **15 09 15.5 -0.1**
LYN pmax pmax
comp=Z,140nm,1.4s
LYN pmax pmax
comp=Z,4µm,9.3s
LYN LR LR
comp=Z,15µm,12.7s
LYN LR LR
comp=Z,12µm,13.1s
LYN LR LR
comp=Z,22µm,18.0s
CN2 Changchun 17.29 348 *e*P **P** **15 06 00.4 +0.3**
CN2 S **Sn** **15 09 12.3 +1.5**
CN2 pmax pmax
comp=Z,10.0nm,1.2s
USA0B Ussuriysk Arra 17.29 4 P **P** **15 06 00.3 +0.2**
USA0B Ussuriysk Arra 17.29 4 P **P** **15 06 00.3 +0.2**
USA0B pmax pmax
comp=Z,138nm,1.2s
USRK Ussuriysk Ar. 17.29 4 P **Pn** **15 05 58.8 +0.1**
comp=Z,22nm,1.0s,baz=174,slow=9.3,SNR=28
USRK LR LR 15 13 09.0
comp=Z,2µm,18.1s,baz=177,slow=39
USRK Ussuriysk Ar. 17.29 4 P **P** **15 05 59.8 -0.3**
BJT Baijiatuan 17.55 322 P **Pn** **15 06 02.5 +0.5**
BJT Baijiatuan 17.55 322 P **Pn** **15 06 02.5 +0.5**
BJT pmax pmax
comp=Z,174nm,0.9s
BJI Beijing 17.56 322 P **P** **15 06 02.8 -0.3**
BJI S **Sn** **15 09 20.6 +3.1**
BJI pmax pmax
comp=Z,130nm,1.1s
BJI pmax pmax
comp=Z,3µm,10.5s
BJI LR LR
comp=Z,2µm,17.5s
BJI LR LR
comp=Z,7µm,19.2s
BJI LR LR
comp=Z,8µm,21.0s
MDJ Mudanjiang 17.66 358 P **Pn** **15 06 03.4 +0.1**
MDJ Mudanjiang 17.66 358 P **P** **15 06 04.4 +0.2**
MDJ S **S** **15 09 28.9 +1.6**
MDJ pmax pmax
comp=Z,10.0nm,0.5s
MDJ pmax pmax
comp=Z,1µm,8.6s
MDJ LR LR
comp=Z,3µm,15.2s
MDJ LR LR
comp=Z,7µm,16.7s
MDJ LR LR
comp=Z,5µm,12.2s
GULI GuiLin 17.96 269 P **Pn** **15 06 05.5 -1.6**
GULI S **Sn** **15 09 30.3 +2.9**
GULI pmax pmax
comp=Z,70nm,1.9s
GULI LR LR
comp=Z,31µm,17.1s
GULI LR LR
comp=Z,6µm,17.6s
GULI LR LR
comp=Z,31µm,13.1s
TBP Tagbilaran 18.18 201 ⇓*i*P **P** **15 06 12.2 +2.1**
ERM Erimo 18.39 32 P **Pn** **15 06 16.8 +4.6**
CNOP Candoni, Negro 18.48 204 ⇑*i*P **Pn** **15 06 15.2 +1.8**
ENH Enshi 18.56 285 P **P** **15 06 12.8 -1.4**
TEY Ternei 18.77 14 *ce*P **P** **15 06 15.3 -1.1**
TEY pmax pmax
comp=Z,100nm,6.4s
TEY pmax pmax
comp=N,100nm,6.4s
BNX BinXian 18.91 354 ⇑P **Pn** **15 06 21.3 +2.7**
BNX pP **pwP** **15 06 27.1 -0.4**
BNX sP sP 15 06 29.8 +8.7
BNX PP **PnPn** **15 06 40.5 +9.4**
BNX S **Sn** **15 09 46.5 -3.7**
BNX sS **sS** **15 09 54.8 -1.1**
BNX pmax pmax
comp=N,23nm,0.8s
BNX pmax pmax
comp=N,190nm,6.3s
BNX LR LR
comp=N,8µm,12.2s
BNX LR LR
comp=N,12µm,11.8s
BNX LR LR
comp=N,9µm,12.8s
GUMO Guam 19.04 131 P **Pn** **15 06 19.9 -0.4**
comp=N,2.0nm,0.3s,baz=322,slow=12,SNR=2.3
GUMO LR LR 15 12 07.2
comp=N,8µm,20.2s,baz=283,slow=32
comp=N,64nm,1.0s
GUMO Guam 19.04 131 IAmb IAmb 15 06 37.3
comp=Z,192nm,0.9s
GUMO Guam 19.04 131 P **Pn** **15 06 24.0 +3.7**
XAN Xi'an 19.70 296 ⇑P **P** **15 06 26.4 -0.4**
XAN sP pwP 15 06 35.1 -0.9
XAN PP **PnPn** **15 06 43.8 +1.9**
XAN S **S** **15 10 07.6 -1.2**
XAN sS pS 15 10 16.6 -4.3
XAN SS **SnSn** **15 10 33.9 +10**
XAN pmax pmax
comp=Z,170nm,1.2s
XAN pmax pmax
comp=Z,3µm,5.2s
XAN LR LR
comp=Z,16µm,14.4s
XAN LR LR
comp=Z,12µm,15.6s
XAN LR LR
comp=Z,21µm,17.0s
ASAJ Asahikawa 19.83 27 LR LR 15 14 43.7
comp=Z,3µm,19.2s,baz=224,slow=39
ASAJ Asahikawa 19.83 27 P **P** **15 06 28.2 +0.2**
ASAJ pmax pmax
comp=Z,27nm,0.8s
JKA Kamikawa-asahi 19.83 27 P **P** **15 06 28.1 +0.1**
PAGZ Pagadian 20.07 200 ⇑*i*P Pn 15 06 32.4 -0.3
DAV Davao City (W) 20.25 194 LR LR 15 14 35.1
comp=Z,2µm,18.1s,baz=14,slow=38
PPR Puerto Princes 20.25 215 ⇓*i*P Pn 15 06 33.9 -0.9
QIZ Qiongzhong 20.37 252 P Pn 15 06 37.0 +0.8
QIZ S Sn 15 10 26.8 +1.1
QIZ pmax pmax
comp=Z,69nm,1.8s
QIZ pmax pmax
comp=Z,3µm,4.5s
QIZ LR LR
comp=Z,4µm,23.7s
QIZ LR LR
comp=Z,3µm,15.8s
QIZ LR LR
comp=Z,3µm,33.1s
KCP Kidapawan 20.41 195 ⇓*i*P **P** **15 06 35.3 +0.7**
CTBH Cotabato--PC H 20.42 197 ⇑*e*P Pn 15 06 37.8 +1.1
XLT XiLinHaoTe 20.46 330 *e*P **P** **15 06 32.8 -2.2**
XLT pP pP 15 06 36.4 -0.6
XLT S **S** **15 10 24.6 +0.8**
XLT sS pS 15 10 31.8 -0.8
XLT pmax pmax
comp=Z,62nm,1.1s
XLT pmax pmax
comp=Z,940nm,4.6s
XLT LR LR
comp=Z,790nm,18.1s
XLT LR LR
comp=Z,8µm,19.8s
XLT LR LR
comp=Z,9µm,15.2s
HHC Hu-ho-hao-te 20.78 317 *e*P Pn 15 06 40.0 -0.9
HHC S **S** **15 10 25.3 -4.9**
HHC pmax pmax
comp=Z,37nm,1.0s
HHC pmax pmax
comp=Z,2µm,8.6s
HHC LR LR
comp=Z,14µm,15.2s
HHC LR LR
comp=Z,19µm,15.9s
HHC LR LR
comp=Z,23µm,15.5s
GYA Guiyang 21.10 274 ⇑P **P** **15 06 44.3 +2.2**
GYA S **S** **15 10 38.3 +1.4**
GYA pmax pmax
comp=Z,52nm,1.4s
GYA pmax pmax
comp=Z,2µm,9.4s
GYA LR LR
comp=Z,18µm,15.5s
GYA LR LR
comp=Z,5µm,15.5s
GYA LR LR
comp=Z,8µm,15.7s
BTO Baotou 21.61 314 *e*P **P** **15 06 50.4 +3.0**
BTO S **S** **15 10 50.4 +3.8**
BTO LR LR
comp=Z,33µm,18.0s
BTO LR LR
comp=Z,31µm,14.3s
YSS Yuzh-Sakhalins 22.29 23 P **P** **15 06 54.3 -0.2**
YSS IAMs_20 IAMs_20 15 15 44.3
comp=Z,4µm,18.0s
YSS Yuzh-Sakhalins 22.29 23 *e*P **P** **15 06 54.5 0.0**
YSS *e*S **S** **15 10 56.5 -2.8**
YSS pmax pmax
comp=Z,2µm,9.1s
YSS pmax pmax
comp=N,700nm,7.1s
YSS pmax pmax
comp=Z,170nm,1.2s
YSS smax smax
comp=N,2µm,10.5s
YSS MLR MLR
comp=N,4µm,16.0s
YSS MLR MLR
comp=Z,4µm,16.0s
YSS Yuzh-Sakhalins 22.29 23 P **P** **15 06 59.2 +4.7**
KLR Kul'dur 22.30 3 P **P** **15 06 54.4 -0.2**
comp=Z,22nm,0.7s,baz=179,slow=7.1,SNR=42
KLR LR LR 15 15 24.7
comp=Z,2µm,21.3s,baz=180,slow=36
comp=Z,22nm,0.7s
KLR Kul'dur 22.30 3 *c*P **P** **15 06 54.3 -0.3**
KLR pmax pmax
comp=Z,84nm,2.5s
KUR Kuril'sk 23.06 33 *e*P **P** **15 07 02.6 -0.1**
KUR *e**PP **pP** **15 07 04.4 -0.4**
KUR *e* 15 07 27.8
KUR *e* 15 10 51.3
KUR *e*S **S** **15 11 16.3 +3.0**
KUR *e*SS Sn 15 11 48.1 +18
KUR *e* 15 18 20.4
KUR pmax pmax
comp=Z,405nm,1.4s
KUR MLR MLR
comp=Z,2µm,13.0s
KUR MLR MLR
comp=N,2µm,17.0s
KUR MLR MLR
comp=E,2µm,14.0s
CD2 Chengdu 23.53 286 P **P** **15 07 06.5 -1.2**
CD2 sP sP 15 07 11.3 +0.7
CD2 S **S** **15 11 17.8 -3.6**
CD2 pmax pmax
comp=E,50nm,0.4s
CD2 pmax pmax
comp=E,1µm,6.0s
CD2 LR LR
comp=E,13µm,13.7s
CD2 LR LR
comp=E,12µm,11.8s
SGSI Sangihe 23.55 192 P **P** **15 07 07.0 -0.9**
comp=E,2µmcomp=E,261nm,0.9s
HIA Hailar 23.75 343 P **P** **15 07 08.2 -1.4**
HIA Hailar 23.75 343 P **P** **15 07 08.2 -1.4**
HIA pmax pmax
comp=Z,50nm,1.1s
HIA MLR MLR
comp=Z,3µm,20.0s
UGL Uglegorsk 23.93 19 *e*P **P** **15 07 11.8 +0.6**
UGL *e*S **S** **15 11 31.4 +4.1**
UGL *e* 15 12 11.3
UGL pmax pmax
comp=Z,2µm,4.5s
UGL pmax pmax
comp=Z,110nm,1.0s
UGL smax smax
comp=E,1µm,6.0s
UGL smax smax
comp=N,3µm,9.0s
UGL MLR MLR
comp=N,2µm,13.0s
UGL MLR MLR
comp=Z,4µm,16.0s
LZH Lanzhou 24.26 299 ⇓P **P** **15 07 14.8 +0.1**
LZH sP sP 15 07 20.8 +2.8
LZH S **S** **15 11 31.3 -1.9**
LZH SS **SnSn** **15 12 18.6 +3.0**
LZH pmax pmax
comp=Z,58nm,1.1s
LZH pmax pmax
comp=Z,2µm,4.7s
LZH LR LR
comp=Z,13µm,13.0s
LZH LR LR
comp=Z,15µm,12.5s
LZH LR LR
comp=Z,16µm,15.2s
GRNR Gornyy 24.27 10 *e*P **P** **15 07 10.5 -3.9**
GRNR MLR MLR
comp=E,2µm,15.0s
GRNR MLR MLR
comp=N,2µm,14.0s
GRNR MLR MLR
comp=Z,3µm,15.0s
MYLDM Lahad Datu 24.37 210 IAMs_20 IAMs_20 15 12 50.2
comp=Z,5µm,18.0s
KMI Kunming 24.79 272 ⇑P **P** **15 07 20.8 +1.1**
KMI pP sP 15 07 22.6 -0.4
KMI S **S** **15 11 35.9 -6.3**
KMI pmax pmax
comp=Z,46nm,1.1s
KMI pmax pmax

comp=Z,2µm,8.0s
KMI LR LR
comp=Z,7µm,12.5s
KMI LR LR
comp=Z,15µm,15.2s
KMI LR LR
comp=Z,16µm,14.8s
PZH PanZhiHua 25.47 276 P **P** **15 07 25.3 -0.4**
PZH S **S** **15 11 54.3 +1.5**
PZH sS **sS** **15 11 59.3 +2.7**
PZH SS **SnSn** **15 12 48.8 +3.4**
PZH pmax pmax
comp=Z,60nm,1.8s
PZH pmax pmax
comp=Z,1µm,7.5s
PZH LR LR
comp=Z,10µm,14.0s
PZH LR LR
comp=Z,10µm,15.0s
PZH LR LR
comp=Z,13µm,16.6s
TYV Tymovskoe 25.70 18 *e*P **P** **15 07 28.4 +1.0**
TYV *e*S **S** **15 11 59.7 +4.1**
TYV pmax pmax
comp=Z,38nm,1.0s
TYV pmax pmax
comp=Z,1µm,6.3s
TYV smax smax
comp=N,500nm,7.4s
TYV smax smax
comp=E,700nm,7.4s
TYV MLR MLR
comp=E,3µm,15.0s
TYV MLR MLR
comp=Z,2µm,15.0s
SPMM Sapulut 25.73 213 P **P** **15 07 29.0 +1.0**
TNTI Ternate 26.16 187 P **P** **15 07 30.9 -0.8**
TNTI IAmb IAmb 15 07 46.3
comp=Z,131nm,1.2s
TNTI Ternate 26.16 187 P **P** **15 07 31.4 -0.4**
comp=Z,2µmcomp=Z,85nm,1.2s
ZEA Zeya 26.88 356 *e*P **P** **15 07 38.2 +0.2**
ZEA *e*S **S** **15 12 09.4 -4.8**
ZEA pmax pmax
comp=E,100nm,5.5s
ZEA pmax pmax
comp=N,500nm,6.6s
ZEA pmax pmax
comp=Z,600nm,6.7s
ZEA pmax pmax
comp=E,10.0nm,0.8s
ZEA pmax pmax
comp=N,30nm,1.1s
ZEA pmax pmax
comp=Z,50nm,1.0s
ZEA smax smax
comp=E,400nm,12.4s
ZEA smax smax
comp=N,600nm,10.5s
ZEA MLR MLR
comp=E,1µm,13.0s
ZEA MLR MLR
comp=Z,1µm,13.0s
ZEA MLR MLR
comp=N,2µm,15.0s
KMSI Cibinong 26.89 194 P **P** **15 07 39.0 +0.6**
comp=N,3µmcomp=N,300nm,1.0s
TOLI2 Tolitoli 27.24 201 P **P** **15 07 40.2 -1.3**
TOLI2 Tolitoli 27.24 201 P **P** **15 07 41.8 +0.2**
NKL Nikolayevsk 27.32 14 *e*P **P** **15 07 40.4 -1.5**
NKL *e*S **S** **15 12 21.8 +0.7**
NKL pmax pmax
comp=E,4.0nm,0.9s
NKL pmax pmax
comp=Z,65nm,1.1s
NKL smax smax
comp=E,3.0nm,1.9s
NKL smax smax
comp=N,3.0nm,1.0s
NKL MLR MLR
comp=Z,3µm,16.0s
MRSI Marisa 27.49 198 P **P** **15 07 44.5 +0.7**
comp=Z,1µmcomp=Z,99nm,1.3s
LBMI Labuha 27.54 186 P **P** **15 07 43.9 -0.3**
comp=Z,1µmcomp=Z,83nm,1.1s
SWI Sorong 27.64 178 P **P** **15 07 45.1 -0.1**
SWI pmax pmax
comp=Z,25nm,1.2s
SWI Sorong 27.64 178 P **P** **15 07 44.6 -0.6**
comp=Z,721nmcomp=Z,25nm,1.2s
SIJI Sorong 27.65 178 P **P** **15 07 44.3 -1.0**
comp=Z,14nm,0.3s,baz=357,slow=13,SNR=7.9
SIJI LR LR 15 17 18.7
comp=Z,2µm,19.7s,baz=345,slow=33
comp=Z,14nm,0.3s
ULN Ulaanbaatar 27.69 325 P **P** **15 07 44.1 -1.5**
ULN Ulaanbaatar 27.69 325 IAMs_20 IAMs_20 15 19 38.2
comp=Z,6µm,20.0s
ULN Ulaanbaatar 27.69 325 *ce*P **P** **15 07 46.8 +1.2**
ULN pmax pmax
comp=Z,28nm,1.3s
SONM Songino Array 28.01 324 P **P** **15 07 47.9 -0.5**
comp=Z,4.0nm,0.9s,baz=128,slow=9.0,SNR=16
SONM LR LR 15 20 00.3
comp=Z,5µm,20.4s,baz=134,slow=39
comp=Z,4.0nm,0.9s
SONM Songino Array 28.01 324 P **P** **15 07 47.0 -1.4**
GTA Gaotai 28.24 304 *e*P **P** **15 07 48.9 -1.6**
GTA pP sP 15 07 54.3 +0.5
GTA sP pP 15 07 56.3 +3.6
GTA S **S** **15 12 32.3 -3.9**
GTA sS sS 15 12 51.9 +12
GTA pmax pmax
comp=Z,5.0nm,1.0s
GTA pmax pmax
comp=Z,590nm,7.6s
GTA LR LR
comp=Z,12µm,14.2s
GTA LR LR
comp=Z,10µm,18.2s
GTA LR LR
comp=Z,14µm,18.9s
MPSI Mapaga 28.26 202 P **P** **15 07 51.7 +1.0**
comp=Z,1µmcomp=Z,38nm,1.0s
BAKI Biak 28.51 168 P **P** **15 07 53.5 +0.5**
comp=Z,966nmcomp=Z,66nm,1.1s
LUWI Luwuk 28.73 196 P **P** **15 07 53.2 -1.7**
LUWI Luwuk 28.73 196 P **P** **15 07 56.1 +1.2**
comp=Z,2µmcomp=Z,112nm,1.1s
APSI Ampana 28.90 198 P **P** **15 07 56.8 +0.4**
comp=Z,707nmcomp=Z,67nm,1.1s
SANI Sanana 29.10 189 P **P** **15 07 56.4 -1.8**
comp=Z,714nmcomp=Z,61nm,0.9s
FAKI Fak Fak 29.73 176 P **P** **15 08 02.5 -1.3**
FAKI IAMs_20 IAMs_20 15 21 22.5
comp=Z,2µm,18.0s
FAKI Fak Fak 29.73 176 P **P** **15 08 04.0 +0.2**
comp=Z,1µmcomp=Z,115nm,1.1s
SMPI Sarmi 29.88 163 P **P** **15 08 06.2 +1.1**
comp=Z,663nmcomp=Z,41nm,1.1s
CHTO Chiang Mai 29.92 261 IAMs_20 IAMs_20 15 20 19.4
comp=Z,3µm,20.0s
CHTO Chiang Mai 29.92 261 P **P** **15 08 06.4 +0.9**
CHTO pmax pmax
comp=Z,57nm,0.9s
CHTO Chiang Mai 29.92 261 P **P** **15 08 04.9 -0.6**
CMAR Chiang Mai Arr 30.05 260 P **P** **15 08 07.5 +0.8**
comp=Z,9.7nm,0.9s,baz=50,slow=7.8,SNR=36
CMAR PcP **PcP** **15 11 09.4 +0.8**
comp=Z,6.5nm,0.9s,baz=45,slow=1.4,SNR=9.6
CMAR LR LR 15 21 04.6
comp=Z,3µm,18.9s,baz=70,slow=38
comp=Z,9.7nm,0.9s
CMAR Chiang Mai Arr 30.05 260 P **P** **15 08 06.1 -0.6**
AAI Ambon 30.50 184 P **P** **15 08 11.5 +0.9**
AAI pmax pmax
comp=Z,88nm,1.2s
AAI Ambon 30.50 184 P **P** **15 08 11.4 +0.9**
comp=Z,1µmcomp=Z,88nm,1.1s
SKR Severo-Kuril's 30.83 33 *e*P P 15 08 08.3 -4.8
SKR *e*S **S** **15 13 12.6 -3.7**
SKR pmax pmax
comp=Z,200nm,9.8s
SKR MLR MLR
comp=Z,1µm,16.0s
GENI Genyem 30.86 160 P **P** **15 08 15.4 +1.6**
comp=Z,1µmcomp=Z,61nm,1.4s

ZAK Zakamensk 31.20 326 *e*P **P** **15 08 16.1 -0.6**
ZAK pmax pmax
comp=Z,7.0nm,1.0s
GOMU GeErMu 31.46 296 P **P** **15 08 19.1 -0.2**
GOMU pP pP 15 08 21.3 -0.3
GOMU sP pwP 15 08 26.6 -2.2
GOMU PcP **PcP** **15 11 13.8 +1.3**
GOMU S **S** **15 13 24.3 -3.0**
GOMU pmax pmax
comp=Z,4.0nm,0.6s
GOMU LR LR
comp=Z,3µm,16.7s
GOMU LR LR
comp=Z,2µm,16.8s
GOMU LR LR
comp=Z,3µm,16.5s
TTSI Tana Toraja 31.46 200 P **P** **15 08 19.1 +0.1**
comp=Z,26nm,1.3s
KSM Kuching 31.75 220 P **P** **15 08 21.3 -0.3**
KSM IAmb IAmb 15 08 30.2
comp=Z,74nm,1.4s
KSM Kuching 31.75 220 P **P** **15 08 23.0 +1.4**
IRK Irkutsk 31.94 329 *e*P **P** **15 08 23.7 +0.7**
IRK pmax pmax
comp=Z,25nm,1.8s
STKI Sintang 32.25 217 P **P** **15 08 27.3 +1.2**
comp=Z,7.2nm,0.4s
SPSI Sidrap Palu 32.35 200 P **P** **15 08 29.5 +2.7**
comp=Z,15nm,1.3s
BBSI Bau Bau 33.08 194 P **P** **15 08 35.3 +2.1**
comp=Z,142nmcomp=Z,14nm,1.0s
MOY Mondy 33.13 326 *e*P **P** **15 08 34.7 +1.1**
MOY pmax pmax
comp=Z,12nm,1.4s
PEA0B Petropavlovsk- 33.16 31 P **P** **15 08 33.1 -0.5**
PEA0B IAmb IAmb 15 09 00.1
comp=Z,34nm,0.9s
PEA0B Petropavlovsk- 33.16 31 *d i*P **P** **15 08 33.7 +0.1**
PETK Petropavlovsk- 33.16 31 P **P** **15 08 33.2 -0.4**
comp=Z,5.9nm,0.9s,baz=213,slow=11,SNR=18
PETK PcP **PcP** **15 11 17.2 +0.8**
comp=Z,1.7nm,0.8s,baz=240,slow=4.8,SNR=2.2
PETK LR LR 15 22 55.9
comp=Z,2µm,18.4s,baz=221,slow=38
comp=Z,5.9nm,0.9s
PETK Petropavlovsk- 33.16 31 P **P** **15 08 32.9 -0.7**
PATS Pohnpei 33.30 122 IAMs_20 IAMs_20 15 19 00.4
comp=Z,4µm,22.0s
KAPI Kappang 33.35 199⇑ *e*P **P** **15 08 36.9 +1.3**
KAPI pmax pmax
comp=Z,49nm,1.4s
BKSI Bulukumba 33.53 199 P **P** **15 08 40.2 +3.0**
comp=Z,38nm,1.0s
PET Petropavlovsk 33.54 31 P **P** **15 08 36.6 -0.4**
PET IAmb IAmb 15 09 03.6
comp=Z,52nm,1.4s
PET Petropavlovsk 33.54 31 *e*P **P** **15 08 37.6 +0.7**
PET *e*S **S** **15 13 58.1 -0.5**
PET pmax pmax
comp=Z,400nm,6.2s
PET pmax pmax
comp=Z,29nm,1.3s
PET pmax pmax
comp=Z,400nm,6.3s
PET MLR MLR
comp=Z,2µm,17.0s
BBKI Banjar Baru 33.69 209 P **P** **15 08 38.6 0.0**
comp=Z,7µmcomp=Z,47nm,1.0s
BSSI Bau Bau, Buton 34.21 197 P **P** **15 08 42.3 -0.8**
comp=Z,2µmcomp=Z,98nm,1.1s
WAKE Wake Island 34.22 95 IAMs_20 IAMs_20 15 19 36.6
comp=Z,2µm,20.0s
LSA Lhasa 34.45 284 IAMs_20 IAMs_20 15 24 31.5
comp=Z,4µm,18.0s
YAK Yakutsk 35.10 360 P **P** **15 08 49.2 -1.1**
YAK Yakutsk 35.10 360 *d i*P **P** **15 08 49.7 -0.6**
YAK *e**PP **pwP** **15 08 56.9 -2.7**
YAK *e* 15 10 06.1
YAK *e*PPP PPP 15 10 25.9
YAK *e* 15 11 19.5
YAK *e*S **S** **15 14 22.3 -0.2**
YAK *e**SS sS 15 14 34.3 +8.0
YAK *e*SS **SnSn** **15 16 36.6 -2.2**
YAK *e*SSS SSS 15 16 59.8
YAK pmax pmax
comp=Z,50nm,1.1s
YAK pmax pmax
comp=N,29nm,1.2s
YAK pmax pmax
comp=E,6.0nm,1.5s
YAK pmax pmax
comp=Z,63nm,2.0s
YAK pmax pmax
comp=N,56nm,1.8s
YAK pmax pmax
comp=E,27nm,1.9s
YAK smax smax
comp=N,143nm,2.5s
YAK smax smax
comp=E,147nm,2.5s
KULM Kulim 35.50 238 P **P** **15 08 56.0 +1.6**
MA2 Magadan 35.57 18 LR LR 15 25 08.5
comp=E,622nm,18.2s,baz=210,slow=39
MA2 Magadan 35.57 18 P **P** **15 08 53.7 -0.8**
MA2 Magadan 35.57 18 *d i*P **P** **15 08 53.6 -0.9**
MA2 pmax pmax
comp=Z,33nm,1.7s
MYKOM Kota Tinggi 35.60 230 P **P** **15 08 54.6 -0.5**
MYKOM IAmb IAmb 15 09 08.9
comp=Z,50nm,1.1s
MYKOM Kota Tinggi 35.60 230 P **P** **15 08 57.0 +1.9**
IPM Ipoh 35.75 236 P **P** **15 08 55.0 -1.5**
IPM IAmb IAmb 15 09 15.6
comp=Z,54nm,1.2s
IPM Ipoh 35.75 236 P **P** **15 08 58.0 +1.5**
IPM Ipoh 35.75 236 P **P** **15 08 57.0 +0.5**
MMRI Maumere 36.20 194 P **P** **15 08 59.6 -0.7**
MMRI Maumere 36.20 194 P **P** **15 09 00.4 +0.2**
comp=Z,2µmcomp=Z,154nm,1.3s
EDFI Ende, Flores 36.43 194 P **P** **15 09 00.5 -1.8**
comp=Z,410nmcomp=Z,26nm,0.8s
DSRI Dabo 36.80 226 P **P** **15 09 06.8 +1.4**
comp=Z,21nm,1.1s
BATI Baumata 37.47 191 P **P** **15 09 09.5 -1.5**
comp=Z,78nm,0.7s
KRVT Keravat (AS076 37.50 143 P **P** **15 09 12.3 +0.9**
comp=Z,105nm,0.9s,baz=298,slow=2.0,SNR=11
KRVT LR LR 15 21 42.1
comp=Z,1µm,21.8s,baz=119,slow=32
comp=Z,105nm,0.9s
PLAI Plampang 37.55 201 P **P** **15 09 11.6 -0.2**
comp=Z,1µmcomp=Z,101nm,1.0s
PLAI Plampang 37.55 201 P **P** **15 09 10.9 -0.9**
ODAN Odare 38.11 280 *e*P **P** **15 09 16.7 -0.1**
comp=Z,36nm,0.9s
WMQ Urumqi 38.13 308 *e*P **P** **15 09 16.0 -0.5**
WMQ pP sP 15 09 20.8 +0.9
WMQ sP pwP 15 09 23.5 -2.6
WMQ S **S** **15 15 07.0 -2.4**
WMQ pmax pmax
comp=Z,25nm,0.7s
WMQ pmax pmax
comp=Z,430nm,5.3s
WMQ LR LR
comp=Z,7µm,14.5s
WMQ LR LR
comp=Z,5µm,19.7s
WMQ LR LR
comp=Z,6µm,17.9s
JMBI JAMBI 38.28 226 P **P** **15 09 20.7 +2.7**
comp=Z,118nm,0.9s
PSI Prapat 38.43 237 LR LR 15 24 36.4
comp=Z,791nm,21.8s,baz=16,slow=35
BKNI Bangkinang 38.59 232 P **P** **15 09 22.8 +2.2**
comp=Z,3µmcomp=Z,110nm,1.0s
RAMN Ramite 38.79 280 *e*P **P** **15 09 22.9 +0.4**
comp=Z,86nm,1.0s
SEY Seymchan 38.84 16 LR LR 15 26 32.2
comp=Z,2µm,19.0s,baz=214,slow=38
SEY Seymchan 38.84 16 *d i*P **P** **15 09 21.9 -0.2**
SEY pmax pmax
comp=Z,13nm,0.7s
JIRN Jiri 39.03 281 *e*P **P** **15 09 26.3 +1.6**
PWJI Pagerwojo 39.09 210 P **P** **15 09 24.2 -0.5**
comp=Z,60nm,1.2s
GUN Gumba 39.26 282 *e*P **P** **15 09 27.6 +1.0**
comp=Z,149nm,0.6s
MNSI Mandailing Nat 39.30 234 P **P** **15 09 27.6 +1.1**
comp=Z,44nm,0.9s
WOJI Wonogiri, Jawa 39.32 211 P **P** **15 09 27.0 +0.3**
comp=Z,76nm,1.2s
MTN Manton Dam 39.54 179 P **P** **15 09 27.3 -1.1**
MTN IAmb IAmb 15 09 33.4
comp=Z,78nm,1.0s
MTN Manton Dam 39.54 179 P **P** **15 09 27.5 -0.9**
UGM Wanagama 39.58 212 P **P** **15 09 28.0 -0.9**
UGM Wanagama 39.58 212 P **P** **15 09 28.8 0.0**
comp=Z,263nm,1.1s
YOGI Yogyakarta 39.60 212 P **P** **15 09 29.9 +0.9**
comp=Z,151nm,1.5s
KWAJ Kwajalein Atol 39.64 110 IAMs_20 IAMs_20 15 22 30.3
comp=Z,2µm,21.0s
PMG Port Moresby 39.66 153 P **P** **15 09 29.5 0.0**
comp=Z,24nm,1.0s,baz=358,slow=22,SNR=3.5
PMG LR LR 15 23 25.2
comp=Z,3µm,21.2s,baz=320,slow=32
comp=Z,24nm,1.0s
PMG Port Moresby 39.66 153 P **P** **15 09 28.9 -0.5**
PMG Port Moresby 39.66 153 IAMs_20 IAMs_20 15 23 25.3
comp=Z,3µm,20.0s
PKI Pulchoki 39.73 282 *e*P **P** **15 09 30.2 -0.2**
comp=Z,101nm,0.6s
PKIN Phulchoki 39.74 282 *e*P **P** **15 09 30.5 +0.1**
comp=Z,104nm,0.6s
DMN Daman 39.99 282 *e*P **P** **15 09 33.5 +1.0**
comp=Z,160nm,1.0s
LEM Lembang 40.10 216 P **P** **15 09 33.9 +0.5**
comp=Z,50nm,0.8s,baz=360,slow=11,SNR=11
LEM LR LR 15 27 09.2
comp=Z,436nm,20.7s,baz=354,slow=38
comp=Z,50nm,0.8s
CBJI Citeko 40.17 218 P **P** **15 09 36.6 +2.9**
comp=Z,84nm,0.8s
SBJI Serang 40.32 219 P **P** **15 09 36.2 +1.2**
comp=Z,103nm,0.4s
GKN Gorkha 40.33 282 *e*P **P** **15 09 35.7 +0.5**
DBJI Dramaga 40.34 218 P **P** **15 09 36.2 +1.1**
comp=Z,4µmcomp=Z,31nm,0.8s
GSI Gunungsitoli 40.42 236 P **P** **15 09 35.1 -0.8**
GSI IAmb IAmb 15 09 41.1
comp=Z,84nm,1.2s
GSI Gunungsitoli 40.42 236 P **P** **15 09 36.0 +0.1**
comp=Z,65nm,1.4s
LWLI Liwa 40.64 223 P **P** **15 09 37.5 -0.3**
comp=Z,2µmcomp=Z,62nm,0.8s
CNJI Cibinong 40.76 217 P **P** **15 09 40.3 +1.7**
comp=Z,102nm,1.2s
ZSN Zaisan 40.87 312 *e*P **P** **15 09 40.1 +0.8**
ZSN pmax pmax
comp=Z,37nm,2.9s
ZSN Zaisan 40.87 312 *e*P **P** **15 09 40.1 +0.8**
comp=Z,37nm,2.9s,baz=312
DANN Dangsing 41.04 283 *e*P **P** **15 09 42.4 +1.2**
comp=Z,158nm,0.7s
SISI Saibi 41.13 232 P **P** **15 09 42.6 +0.9**
comp=Z,22nm,1.0s
KOLN Koldanda 41.27 282 *e*P **P** **15 09 43.1 0.0**
SHEM Shemya Is, Ala 41.47 39 LR LR 15 25 14.6
comp=Z,344nm,19.6s,baz=268,slow=34
PYUN Piuthan 41.75 283 *e*P **P** **15 09 47.9 +0.9**
comp=Z,235nm,1.0s
KNRA Kununurra 42.37 182 P **P** **15 09 51.2 -0.6**
KNRA IAmb IAmb 15 09 57.2
comp=Z,92nm,0.8s
KNRA Kununurra 42.37 182 P **P** **15 09 51.5 -0.3**
MK31 Makanchi Array 42.45 311 P **P** **15 09 51.0 -1.3**
MK31 Makanchi Array 42.45 311 *d i*P **P** **15 09 52.6 +0.3**
MKAR Makanchi Array 42.45 311 P **P** **15 09 51.4 -0.9**
comp=Z,15nm,0.9s,baz=98,slow=9.3,SNR=28
MKAR PcP **PcP** **15 11 43.7 -1.4**
comp=Z,7.4nm,1.0s,baz=99,slow=8.9,SNR=1.6
MKAR LR LR 15 29 25.4
comp=Z,4µm,18.3s,baz=100,slow=39
comp=Z,15nm,0.9s
MKAR Makanchi Array 42.45 311 P **P** **15 09 50.9 -1.4**
COEN Coen 42.53 161 P **P** **15 09 54.0 +1.0**
COEN Coen 42.53 161 P **P** **15 09 54.6 +1.5**
MAKZ Makanchi 42.67 311 P **P** **15 09 53.7 -0.3**
MAKZ IAMs_20 IAMs_20 15 29 30.3
comp=Z,5µm,18.0s
MAKZ Makanchi 42.67 311 P **P** **15 09 53.8 -0.2**
MAKZ pmax pmax
comp=Z,29nm,1.2s
ZAA0 Zalesovo Array 42.82 322 P **P** **15 09 54.2 -0.9**
ZALV Zalesovo Beam 42.82 322 P **P** **15 09 54.5 -0.6**
comp=Z,19nm,0.7s,baz=108,slow=8.4,SNR=29
ZALV PcP **PcP** **15 11 44.7 -1.4**
comp=Z,8.5nm,1.0s,baz=106,slow=3.1,SNR=2.3
ZALV LR LR 15 29 43.1
comp=Z,3µm,18.9s,baz=122,slow=39
comp=Z,19nm,0.7s
ZALV Zalesovo Beam 42.82 322 P **P** **15 09 54.2 -0.9**
ZALV Zalesovo Beam 42.82 322 *i* P **P** **15 09 56.0 +0.9**
ZALV pmax pmax
comp=Z,24nm,0.8s
PDGK Podgornoye 43.96 305 P **P** **15 10 03.2 -1.4**
SHLS Shalkode 43.96 305 *e*P **P** **15 10 02.4 -2.2**
SHLS Shalkode 43.96 305 *e*P **P** **15 10 02.5 -2.2**
baz=305
SEM Semipalatinsk 44.51 316 *e*P **P** **15 10 07.7 -1.3**
SEM pmax pmax
comp=Z,12nm,0.8s
SEM MLR MLR
comp=Z,2µm,15.0s
SEM Semipalatinsk 44.51 316 *e*P **P** **15 10 07.7 -1.3**
comp=Z,12nm,0.8s,baz=316
SEM *e*LR LR 15 28 25.2
comp=Z,2µm,15.4s,baz=316
KPKS Kokpek 44.55 306 *e*P **P** **15 10 09.2 -0.1**
KPKS pmax pmax
comp=Z,49nm,2.9s
KPKS Kokpek 44.55 306 *e*P **P** **15 10 09.3 -0.1**
comp=Z,50nm,2.9s,baz=306
ZHN Zhinishke 44.71 305 *e*P **P** **15 10 09.6 -1.0**
ZHN Zhinishke 44.71 305 *e*P **P** **15 10 09.7 -1.0**
baz=305
SATY Saty 44.73 305 *e*P **P** **15 10 11.2 +0.4**
SATY pmax pmax
comp=Z,76nm,3.1s
SATY Saty 44.73 305 *e*P **P** **15 10 11.3 +0.4**
comp=Z,76nm,3.1s,baz=305
TDK Taldyqorghan 44.88 308 *e*P **P** **15 10 11.8 -0.1**
TDK MLR MLR
comp=Z,6µm,16.0s
TDK Taldyqorghan 44.88 308 *e*P **P** **15 10 11.9 0.0**
comp=Z,354nm,4.7s,baz=308
TDK *e*LR LR 15 27 54.1
comp=Z,6µm,16.2s,baz=308
ARXS Arharly 45.23 307 *e*P **P** **15 10 15.0 +0.3**
KDJ Kajisay 45.59 304 P **P** **15 10 16.9 -0.8**
KDJ Kajisay 45.59 304 P **P** **15 10 16.9 -0.8**
KDJ pmax pmax
comp=Z,20nm,1.0s
KURBB Kurchatov Arra 45.63 316 LR LR 15 31 09.1
comp=Z,8µm,19.5s,baz=86,slow=38
KURBB Kurchatov Arra 45.63 316 P **P** **15 10 16.7 -0.9**
KURBB pmax pmax
comp=Z,32nm,1.0s
MDOK Medeo 45.73 305 P **P** **15 10 18.6 -0.1**
MDOK pmax pmax
comp=Z,18nm,1.0s
MDOK Medeo 45.73 305 *e*P **P** **15 10 18.4 -0.4**
baz=305
MDOK *e*S **S** **15 17 00.7 -1.2**
baz=305
MDOK *e*LR LR 15 29 56.4
comp=Z,2µm,16.6s,baz=305
TNSS Tian-Shan 45.80 305 *e*P **P** **15 10 20.5 +0.9**
TNSS Tian-Shan 45.80 305 *e*P **P** **15 10 20.5 +0.9**
baz=305
AAA Alma-Ata 45.83 305 *e*P **P** **15 10 18.6 -0.8**
AAA Alma-Ata 45.83 305 *e*P **P** **15 10 18.6 -0.8**
baz=305
HNR Honiara 46.20 137 LR LR 15 29 39.8
comp=Z,369nm,18.9s,baz=338,slow=36
KUU Kurty 46.28 306 *e*P **P** **15 10 23.2 +0.3**
KUU Kurty 46.28 306 *e*P **P** **15 10 23.2 +0.3**
baz=306
KIWB Kanaga Island 46.38 43 P **P** **15 10 23.3 -0.2**
BILL Bilibino 46.44 18 P **P** **15 10 23.1 -0.7**
BILL IAmb IAmb 15 10 40.6
comp=Z,36nm,1.1s
BILL IAMs_20 IAMs_20 15 31 11.5

comp=Z,1µm,19.0s
BILL Bilibino 46.44 18*c i*P **P** **15 10 23.8 0.0**
BILL *e* 15 11 58.3
BILL *e* 15 12 09.2
BILL *e*S **S** **15 17 13.5 +2.3**
BILL *e*SSS SSS 15 21 34.8
BILL pmax pmax
comp=Z,43nm,1.7s
BILL MLR MLR
comp=Z,1µm,18.0s
KSH Kashi 46.49 300 P **P** **15 10 28.9 +4.1**
KSH PcP **PcP** **15 12 01.4 +2.2**
KSH S **S** **15 17 18.0 +5.0**
KSH pmax pmax
comp=Z,13nm,1.9s
KSH LR LR
comp=Z,5µm,14.1s
KSH LR LR
comp=Z,3µm,14.8s
KSH LR LR
comp=Z,6µm,14.8s
WB0 Warramunga Arr 46.59 175 P **P** **15 10 24.8 -0.6**
NDI New Delhi 46.65 285 *e*P P 15 10 31.5 +5.5
WRAB Tennant Creek 46.75 175*d i*P **P** **15 10 26.9 +0.2**
WRAB pmax pmax
comp=Z,86nm,1.3s
WRAB Tennant Creek 46.75 175 P **P** **15 10 26.8 +0.1**
WRA Warramunga Arr 46.76 175 P **P** **15 10 26.4 -0.4**
comp=Z,59nm,1.1s,baz=354,slow=8.4,SNR=110
WRA S **S** **15 17 14.9 -1.7**
comp=Z,4.5nm,1.3s,baz=345,slow=14,SNR=5.2
WRA LR LR 15 29 07.3
comp=Z,319nm,20.0s,baz=20,slow=35
comp=Z,59nm,1.1s
WRA Warramunga Arr 46.76 175 P **P** **15 10 25.2 -1.6**
WRA Warramunga Arr 46.76 175 *i*P **P** **15 10 26.3 -0.4**
WRA pmax pmax
comp=Z,38nm,0.9s
WB2 Warramunga Arr 46.76 175 P **P** **15 10 25.4 -1.4**
WR0 Warramunga Arr 46.79 174 P **P** **15 10 26.6 -0.5**
MTSU Mount Surprise 46.82 162 P **P** **15 10 29.9 +2.6**
SGDS Sogindy 47.50 305 *e*P **P** **15 10 33.2 +0.7**
SGDS pmax pmax
comp=Z,20nm,2.5s
SGDS Sogindy 47.50 305 *e*P **P** **15 10 33.2 +0.7**
comp=Z,20nm,2.5s,baz=305
AAK Ala-Archa 47.59 304 LR LR 15 32 19.2
comp=Z,4µm,19.9s,baz=86,slow=38
AAK Ala-Archa 47.59 304‖ *e*P **P** **15 10 34.4 +1.0**
AAK pmax pmax
comp=Z,19nm,2.5s
BTLS Baital 47.97 307 *e*P **P** **15 10 35.5 -0.6**
BTLS pmax pmax
comp=Z,49nm,2.6s
BTLS Baital 47.97 307 *e*P **P** **15 10 35.6 -0.6**
comp=Z,49nm,2.6s,baz=308
QIS Mount Isa 48.06 168 P **P** **15 10 37.3 +0.4**
TARA Tarawa 48.16 115 IAMs_20 IAMs_20 15 26 25.1
comp=Z,2µm,22.0s
AML Almayashu 48.18 304 *i*P **P** **15 10 39.8 +1.6**
SNR=6.9
HYBB Hyderabad (bro 48.55 270 *e*P **P** **15 10 40.5 -0.4**
HYBB *e*PcP **PcP** **15 12 06.3 -0.4**
HYBB *e*S **S** **15 17 42.1 -0.3**
HYBB IVMs_BB IVMs_BB 15 37 20.5
comp=Z,672nm,15.2s
MBWA Marble Bar 48.88 193 P **P** **15 10 43.0 -0.3**
MBWA Marble Bar 48.88 193 P **P** **15 10 43.5 +0.3**
NRIK Noril'sk 49.16 341 P **P** **15 10 44.7 -0.2**
comp=Z,19nm,0.9s,baz=121,slow=8.4,SNR=11
NRIK LR LR 15 32 29.6
comp=Z,2µm,19.1s,baz=134,slow=37
comp=Z,19nm,0.9s
NRIK Noril'sk 49.16 341 P **P** **15 10 44.6 -0.3**
NRIK IAmb IAmb 15 10 48.3
comp=Z,33nm,1.1s
NRIK Noril'sk 49.16 341*d i*P **P** **15 10 44.1 -0.8**
NRIK pmax pmax
comp=Z,35nm,1.0s
CTA Charters Tower 49.23 160 P **P** **15 10 46.2 +0.2**
comp=Z,104nm,1.0s,baz=342,slow=8.3,SNR=32
CTA LR LR 15 29 31.0
comp=Z,987nm,21.9s,baz=345,slow=34
comp=Z,104nm,1.0s
CTA Charters Tower 49.23 160 P **P** **15 10 46.8 +0.8**
CTAO Charters Tower 49.23 160 P **P** **15 10 46.4 +0.4**
CTAO Charters Tower 49.23 160 P **P** **15 10 46.4 +0.4**
CTAO pmax pmax
comp=Z,140nm,0.9s
CTAO Charters Tower 49.23 160 P **P** **15 10 47.0 +1.0**
BRZS Berezniki 49.24 314 *e*P **P** **15 10 45.7 -0.1**
BRZS *e*S **S** **15 17 51.4 0.0**
BRZS Berezniki 49.24 314 *e*P **P** **15 10 45.8 -0.1**
baz=314
BRZS *e*S **S** **15 17 51.5 0.0**
baz=314
PSA00 Pilbara Seismi 49.26 193 P **P** **15 10 45.8 -0.3**
PSA00 Pilbara Seismi 49.26 193 P **P** **15 10 46.0 -0.1**
PSA00 IAmb IAmb 15 11 01.2
comp=Z,59nm,0.9s
PSA00 Pilbara Seismi 49.26 193 P **P** **15 10 46.4 +0.3**
AS31 Alice Springs 50.42 176 P **P** **15 10 54.9 0.0**
ASAR Alice Springs 50.42 176 P **P** **15 10 54.9 -0.1**
comp=Z,24nm,0.9s,baz=6.3,slow=14,SNR=142
ASAR PcP **PcP** **15 12 11.8 -1.5**
comp=Z,5.2nm,1.0s,baz=352,slow=4.7,SNR=0.9
ASAR S **S** **15 18 09.4 +1.2**
comp=Z,1.1nm,1.1s,baz=10,slow=16,SNR=2.9
comp=Z,24nm,0.9s
KK31 Karatay Array 50.51 305 P **P** **15 10 55.8 +0.2**
KK31 Karatay Array 50.51 305 *i*P **P** **15 10 55.9 +0.3**
KK31 pmax pmax
comp=Z,23nm,1.0s
KKAR Karatay Array 50.51 305 P **P** **15 10 55.6 +0.1**
KKAR Karatay Array 50.51 305 P **P** **15 10 55.7 +0.1**
KKAR IAmb IAmb 15 11 15.1
comp=Z,28nm,1.1s
KKAR Karatay Array 50.51 305 P **P** **15 10 55.7 +0.1**
PALK Pallekele 50.88 257 LR LR 15 33 25.2
comp=Z,991nm,21.6s,baz=160,slow=37
PALK Pallekele 50.88 257 IAMs_20 IAMs_20 15 33 24.9
comp=Z,1µm,20.0s
IUG Iuzhnay 50.90 304 *e*P **P** **15 10 58.9 +0.3**
IUG Iuzhnay 50.90 304 *e*P **P** **15 10 59.0 +0.3**
baz=304
GAR Garm 50.91 300 P **P** **15 10 58.5 -0.2**
GAR IAmb IAmb 15 11 02.3
comp=Z,66nm,1.0s
BRVK Borovoye 51.05 318 P **P** **15 10 59.4 0.0**
BRVK Borovoye 51.05 318*d i*P **P** **15 10 59.9 +0.4**
BRVK pmax pmax
comp=Z,93nm,1.0s
SPIA Saint Paul Isl 51.34 37 P **P** **15 10 59.4 -2.1**
baz=260
NIKH Nikolski High 51.57 42 P **P** **15 11 01.2 -2.1**
baz=265
WRKA Warakurna 51.70 182 P **P** **15 11 04.5 -0.1**
CHGR Chuyangaron 51.84 299 P **P** **15 11 06.0 +0.3**
CHGR Chuyangaron 51.84 299 P **P** **15 11 06.0 +0.3**
CHGR pmax pmax
comp=Z,58nm,0.8s
GAMB Gambell 52.15 29 P **P** **15 11 05.8 -1.7**
baz=254
KBL Kabul 52.49 294 P **P** **15 11 10.4 -0.3**
KBL IAmb IAmb 15 11 30.2
comp=Z,57nm,0.9s
KBL Kabul 52.49 294 P **P** **15 11 10.5 -0.3**
KBL pmax pmax
comp=Z,57nm,0.9s
UNV Unalaska Valle 53.04 41 P **P** **15 11 12.3 -1.9**
baz=266
PCHI Peechi 53.22 263 *e*P **P** **15 11 15.1 -1.0**
PCHI *e*S **S** **15 18 42.5 -4.8**
TNA Tin City 54.19 27 P **P** **15 11 23.5 +1.1**
TNA IAmb IAmb 15 11 24.8
comp=Z,44nm,1.0s
TNA Tin City 54.19 27 P **P** **15 11 20.4 -2.1**
baz=256
OOD Oodnadatta 54.66 174 P **P** **15 11 26.3 +0.1**
QLP Quilpie 54.87 165 P **P** **15 11 30.1 +2.3**
comp=Z,83nm,1.1s
ANM Nome 55.03 28 P **P** **15 11 26.9 -1.7**
baz=259
EIDS Eidsvold 55.73 157 P **P** **15 11 33.6 -0.5**
EIDS IAmb IAmb 15 11 40.0
comp=Z,46nm,0.9s
RMQ Roma 56.01 160 P **P** **15 11 38.2 +2.2**
SDPT Sand Point 56.60 40 P **P** **15 11 37.9 -2.1**
baz=270
RDOG Red Dog Mine 56.67 24 P **P** **15 11 41.0 +0.7**
RDOG IAMs_20 IAMs_20 15 37 41.2
comp=Z,935nm,20.0s
RDOG Red Dog Mine 56.67 24 P **P** **15 11 36.1 -4.2**
baz=259,SNR=9.9
SVE Sverdlovsk 56.84 322 *e*P **P** **15 11 43.6 +1.9**
SVE *e*S **S** **15 19 40.3 +5.7**
SVE pmax pmax
comp=Z,50nm,1.1s
SVE MLR MLR
comp=Z,6µm,16.0s
MULG Mulgathing 57.00 176 P **P** **15 11 43.5 +0.5**
CHNA Chernabura Isl 57.12 40 P **P** **15 11 42.0 -1.6**
baz=271
CNBA Chernabura Isl 57.12 40 P **P** **15 11 44.0 +0.4**
CNBA IAmb IAmb 15 12 10.4
comp=Z,72nm,1.3s
MORW Morawa 57.33 195 P **P** **15 11 45.2 -0.1**
MORW IAmb IAmb 15 11 51.0
comp=Z,43nm,1.2s
MORW Morawa 57.33 195 P **P** **15 11 45.7 +0.3**
FORT Forrest 57.42 182 P **P** **15 11 45.8 -0.2**
FORT Forrest 57.42 182 P **P** **15 11 46.1 +0.1**
AB31 Akbulak array 57.51 313 *i*P **P** **15 11 46.6 0.0**
AB31 pmax pmax
comp=Z,30nm,0.8s
ABKAR Akbulak array 57.51 313 P **P** **15 11 46.1 -0.5**
ABKAR Akbulak array 57.51 313 P **P** **15 11 46.1 -0.5**
ABKAR IAmb IAmb 15 11 51.6
comp=Z,67nm,1.1s
LCRK Leigh Creek 57.55 172 P **P** **15 11 48.1 +1.2**
N16K Nishlik Lake 57.62 34 P **P** **15 11 46.4 -0.8**
baz=268,SNR=6.6
O16K Kokwok River B 57.93 35 P **P** **15 11 48.8 -0.5**
baz=269
P16K Nushagak River 57.98 35 P **P** **15 11 48.2 -1.4**
baz=270
ARU Arti 57.99 322 LR LR 15 39 42.6
comp=Z,7µm,18.1s,baz=84,slow=39
ARU Arti 57.99 322 P **P** **15 11 48.0 -1.8**
ARU IAmb IAmb 15 11 53.9
comp=Z,39nm,1.0s
ARU Arti 57.99 322*c i*P **P** **15 11 50.1 +0.3**
ARU 15 13 56.7
ARU S **S** **15 19 55.9 +6.2**
ARU SS **SS** **15 23 43.5 +3.1**
ARU pmax pmax
comp=Z,133nm,2.6s
ARU MLR MLR
comp=Z,6µm,17.0s
HRA Herat 58.03 295 P **P** **15 11 49.6 -1.2**
HRA IAmb IAmb 15 11 56.3
comp=Z,31nm,1.1s
O17K Koliganek Bris 58.44 35 P **P** **15 11 50.8 -2.1**
baz=270
AKTO Aktyubinsk 58.65 315 LR LR 15 38 54.2
comp=Z,3µm,19.6s,baz=85,slow=38
GCSA Galena City Sc 58.68 29 P **P** **15 11 52.8 -1.6**
baz=270
P17K Kvichak River 58.78 35 P **P** **15 11 54.3 -0.9**
baz=271
TTA Tatalina 59.00 31 P **P** **15 11 56.5 -0.3**
TTA Tatalina 59.00 31 P **P** **15 11 56.6 -0.3**
TTA pmax pmax
comp=Z,16nm,1.0s
TTA Tatalina 59.00 31 P **P** **15 11 54.8 -2.0**
baz=269,SNR=7.3
N18K Kilae Creek 59.04 33 P **P** **15 11 55.8 -1.2**
baz=270
Q17K Contact Creek 59.09 36 P **P** **15 11 55.0 -2.6**
baz=272
SVW2 Sparrevohn 59.19 33 P **P** **15 11 58.4 +0.3**
A21K Barrow 59.34 21 P **P** **15 11 58.1 -0.8**
baz=263
CHIR Chirikof Islan 59.34 39 P **P** **15 11 58.3 -0.9**
baz=274
O18K Koktuh Hills 59.39 34 P **P** **15 11 58.9 -0.7**
baz=272
P18K Big Mountain, 59.39 35 P **P** **15 11 58.3 -1.3**
baz=272
STKA Stephens Creek 59.46 169 P **P** **15 12 00.0 -0.2**
comp=Z,7.5nm,0.6s,baz=348,slow=7.2,SNR=10
STKA LR LR 15 36 57.4
comp=Z,434nm,21.3s,baz=349,slow=35
comp=Z,7.5nm,0.6s
STKA Stephens Creek 59.46 169 P **P** **15 12 00.1 -0.2**
STKA Stephens Creek 59.46 169‖ *e*P **P** **15 12 00.5 +0.3**
STKA Stephens Creek 59.46 169 P **P** **15 12 00.5 +0.3**
L19K White Mountain 59.53 32 P **P** **15 12 00.8 +0.4**
L19K White Mountain 59.53 32 P **P** **15 11 59.1 -1.4**
baz=270,SNR=8.5
Q18K Katmai Hardscr 59.53 36 P **P** **15 11 59.1 -1.6**
baz=272
BBOO Buckleboo 59.66 174 P **P** **15 12 01.4 -0.2**
BBOO IAmb IAmb 15 12 08.5
comp=Z,43nm,1.2s
BBOO Buckleboo 59.66 174 P **P** **15 12 02.0 +0.4**
N19K Bonanza Creek 59.73 33 P **P** **15 12 02.0 0.0**
N19K Bonanza Creek 59.73 33 P **P** **15 12 01.4 -0.6**
baz=272
M19K Big River Lodg 59.75 32 P **P** **15 12 00.3 -1.6**
baz=271
O19K Port Alsworth 59.83 34 P **P** **15 12 02.7 +0.3**
O19K IAmb IAmb 15 12 13.7
comp=Z,28nm,1.1s
O19K Port Alsworth 59.83 34 P **P** **15 12 01.7 -0.7**
baz=272
J20K Nowinta River 59.84 29 P **P** **15 12 03.1 +0.5**
J20K IAmb IAmb 15 12 23.2
comp=Z,42nm,1.1s
J20K Nowinta River 59.84 29 P **P** **15 12 02.0 -0.5**
baz=270,SNR=15
K20K Telida 59.88 30 P **P** **15 12 03.9 +1.1**
K20K IAmb IAmb 15 12 23.5
comp=Z,34nm,0.9s
K20K IAMs_20 IAMs_20 15 39 23.6
comp=Z,786nm,18.0s
K20K Telida 59.88 30 P **P** **15 12 02.9 0.0**
baz=270,SNR=22
CMSA Cobar Meteorol 59.97 165 P **P** **15 12 05.7 +2.0**
L20K Farewell, AK 59.98 31 P **P** **15 12 04.3 +0.8**
baz=271,SNR=13
DZM Mont Dzumac 59.98 141 *e*S **S** **15 20 18.2 +1.7**
comp=Z,2µm,25.2s
DZM *e*LR LR 15 29 28.7
comp=Z,4µm,28.1s
DZM Mont Dzumac 59.98 141 LR LR 15 34 50.6
comp=Z,1µm,21.8s,baz=333,slow=33
DZM Mont Dzumac 59.98 141 P **P** **15 12 03.8 -0.3**
DZM IAmb IAmb 15 12 27.0
comp=Z,31nm,1.2s
DZM Mont Dzumac 59.98 141 P **P** **15 12 06.6 +2.5**
IMAR Indian Mountai 60.03 27 P **P** **15 12 03.7 -0.1**
SII Sitkinak Islan 60.10 38 P **P** **15 12 04.5 +0.1**
baz=274
Q19K Cape Douglas, 60.23 35 P **P** **15 12 05.9 +0.6**
Q19K Cape Douglas, 60.23 35 P **P** **15 12 04.7 -0.6**
baz=273
NAPP Napperby 60.24 172 P **P** **15 12 06.1 +0.5**
M20K Styx River 60.35 32 P **P** **15 12 06.8 +0.6**
M20K Styx River 60.35 32 P **P** **15 12 06.5 +0.4**
baz=272
H21K Melozitna Rive 60.42 28 P **P** **15 12 07.0 +0.5**
H21K IAmb IAmb 15 12 27.0
comp=Z,26nm,1.0s
H21K Melozitna Rive 60.42 28 P **P** **15 12 07.3 +0.8**
baz=270,SNR=24
GEYT Alibeck 60.53 300 P **P** **15 12 08.0 +0.2**
comp=Z,15nm,0.9s,baz=280,slow=3.6,SNR=14
GEYT LR LR 15 43 02.5
comp=Z,5µm,18.7s,baz=95,slow=41
comp=Z,15nm,0.9s
GEYT Alibeck 60.53 300 P **P** **15 12 07.8 +0.1**
GYA0B ALIBECK ARRAY 60.53 300 P **P** **15 12 07.9 +0.1**
GYA0B IAmb IAmb 15 12 15.0
comp=Z,34nm,1.1s
OHAK Old Harbor 60.54 37 P **P** **15 12 07.2 -0.2**
OHAK IAmb IAmb 15 12 32.3
comp=Z,39nm,1.1s
OHAK Old Harbor 60.54 37 P **P** **15 12 06.3 -1.1**
baz=275
ARMA Armidale 60.57 159 P **P** **15 12 07.8 -0.2**
ARMA IAmb IAmb 15 12 10.4
comp=Z,44nm,1.1s
ARMA Armidale 60.57 159 P **P** **15 12 09.2 +1.2**
HTT Hallett 60.58 172 P **P** **15 12 08.2 +0.2**
RSO Redoubt South 60.59 34 P **P** **15 12 08.3 +0.3**
CHUM Lake Minchumin 60.66 30 P **P** **15 12 06.9 -1.2**
baz=272,SNR=12
O20K Slope Mountain 60.68 34 P **P** **15 12 07.1 -1.3**
baz=274
PPLA Purkeypile 60.75 31 P **P** **15 12 09.5 +0.5**
PPLA Purkeypile 60.75 31 P **P** **15 12 08.2 -0.7**
baz=272,SNR=9.3
I21K Tanana 60.77 28 P **P** **15 12 09.8 +1.0**
I21K IAmb IAmb 15 12 25.6
comp=Z,45nm,1.2s
I21K Tanana 60.77 28 P **P** **15 12 09.9 +1.0**
baz=271,SNR=11
CAST Castle Rocks 60.77 30 P **P** **15 12 09.8 +0.9**
CAST IAmb IAmb 15 12 26.8
comp=Z,26nm,0.9s
CAST Castle Rocks 60.77 30 P **P** **15 12 09.5 +0.5**
baz=272,SNR=24
NWAO Narrogin (SRO) 60.80 193 P **P** **15 12 09.5 +0.1**
NWAO IAmb IAmb 15 12 15.2
comp=Z,44nm,1.2s
NWAO Narrogin (SRO) 60.80 193 P **P** **15 12 09.5 +0.1**
NWAO pmax pmax
comp=Z,44nm,1.2s
NWAO Narrogin (SRO) 60.80 193 P **P** **15 12 10.1 +0.7**
N20K Mount Spurr 60.82 33 P **P** **15 12 09.3 -0.1**
baz=273
SPCR Spurr Chakacha 60.82 33 P **P** **15 12 09.3 -0.1**
baz=273
KDAK Kodiak Island 60.87 37 P **P** **15 12 09.8 +0.1**
comp=Z,19nm,0.7s,baz=271,slow=9.0,SNR=11
KDAK LR LR 15 38 20.5
comp=Z,336nm,21.1s,baz=263,slow=36
comp=Z,19nm,0.7s
KDAK Kodiak Island 60.87 37 P **P** **15 12 09.8 +0.1**
KDAK Kodiak Island 60.87 37*de*P **P** **15 12 09.9 +0.3**
KDAK pmax pmax
comp=Z,103nm,1.2s
KDAK Kodiak Island 60.87 37 P **P** **15 12 10.2 +0.6**
baz=275
SPU Mount Spurr 60.90 33 P **P** **15 12 09.8 -0.1**
Q20K Shuyak Island 60.90 36 P **P** **15 12 08.6 -1.2**
baz=275
SKT Skwentna 61.10 32 P **P** **15 12 11.0 -0.2**
SKT Skwentna 61.10 32 P **P** **15 12 11.0 -0.2**
baz=274,SNR=8.7
HOM Homer 61.20 35 P **P** **15 12 11.4 -0.5**
baz=275
BPAW Bear Paw Mtn. 61.23 29 P **P** **15 12 12.4 +0.3**
BPAW Bear Paw Mtn. 61.23 29 P **P** **15 12 12.6 +0.5**
baz=273,SNR=11
KTH Kantishna Hill 61.29 30 P **P** **15 12 12.9 +0.4**
KTH IAmb IAmb 15 12 32.0
comp=Z,42nm,1.2s
KTH IAMs_20 IAMs_20 15 40 17.7
comp=Z,863nm,20.0s
MLY Manley 61.30 28 P **P** **15 12 13.2 +0.6**
MLY IAmb IAmb 15 12 30.5
comp=Z,25nm,1.0s
MLY Manley 61.30 28 P **P** **15 12 13.6 +1.1**
baz=272,SNR=19
COLD Coldfoot 61.44 26 P **P** **15 12 12.9 -0.4**
baz=272
SUA Susitna One 61.51 32 P **P** **15 12 14.2 +0.1**
SUA IAmb IAmb 15 12 18.5
comp=Z,21nm,0.6s
SUA Susitna One 61.51 32 P **P** **15 12 13.5 -0.6**
baz=274
BRLK Bradley Lake 61.58 34 P **P** **15 12 14.5 +0.1**
BRLK IAmb IAmb 15 12 32.7
comp=Z,25nm,0.9s
TRF Thorofare Moun 61.58 30 P **P** **15 12 14.9 +0.3**
TRF Thorofare Moun 61.58 30 P **P** **15 12 13.9 -0.7**
baz=274
TOLK Toolik Lake Re 61.64 24 P **P** **15 12 15.4 +0.7**
TOLK IAmb IAmb 15 12 44.2
comp=Z,21nm,1.0s
TOLK Toolik Lake Re 61.64 24 P **P** **15 12 14.6 -0.2**
baz=272,SNR=12
BRSE Bradley Lake S 61.65 34 P **P** **15 12 14.5 -0.5**
baz=275
H23K Yukon River 61.76 27 P **P** **15 12 16.6 +1.0**
H23K IAmb IAmb 15 12 36.5
comp=Z,43nm,1.1s
H23K Yukon River 61.76 27 P **P** **15 12 16.2 +0.5**
baz=273,SNR=23
M22K Willow 61.78 32 P **P** **15 12 15.3 -0.5**
M22K Willow 61.78 32 P **P** **15 12 15.2 -0.5**
baz=275,SNR=6.7
I23K Minto, Yukon-K 61.88 28 P **P** **15 12 17.2 +0.9**
I23K IAmb IAmb 15 12 34.2
comp=Z,24nm,1.1s
I23K Minto, Yukon-K 61.88 28 P **P** **15 12 17.3 +0.9**
baz=274,SNR=17
BWN Browne 61.90 29 P **P** **15 12 17.4 +0.9**
RC01 Rabbit Creek A 62.02 33 P **P** **15 12 17.5 +0.1**
RC01 IAmb IAmb 15 12 35.1
comp=Z,38nm,1.1s
RC01 Rabbit Creek A 62.02 33 P **P** **15 12 17.2 -0.3**
baz=276
NEA2 Nenana 62.04 29 P **P** **15 12 17.5 0.0**
NEA2 IAmb IAmb 15 12 19.6
comp=Z,34nm,0.9s
NEA2 Nenana 62.04 29 P **P** **15 12 17.8 +0.3**
baz=274,SNR=36
O22K Cooper Landing 62.09 33 P **P** **15 12 17.3 -0.6**
baz=276
MCK McKinley 62.16 30 P **P** **15 12 18.3 0.0**
MCK IAMs_20 IAMs_20 15 39 11.8
comp=Z,804nm,21.0s
MCK McKinley 62.16 30 P **P** **15 12 18.3 0.0**
MCK pmax pmax
comp=Z,97nm,1.3s
MCK MLR MLR
comp=Z,800nm,21.0s
MCK McKinley 62.16 30 P **P** **15 12 17.8 -0.5**
baz=275,SNR=17
RND Reindeer 62.23 30 P **P** **15 12 18.3 -0.5**
RND IAMs_20 IAMs_20 15 40 57.4
comp=Z,787nm,20.0s
RND Reindeer 62.23 30 P **P** **15 12 18.3 -0.5**
RND pmax pmax
comp=Z,42nm,0.9s
RND MLR MLR
comp=Z,800nm,20.0s
SEW Seward 62.26 34 P **P** **15 12 18.5 -0.5**
SEW Seward 62.26 34 P **P** **15 12 18.8 -0.2**
baz=276
PMR Palmer 62.27 32 P **P** **15 12 19.1 +0.1**
PMR IAmb IAmb 15 12 37.4
comp=Z,35nm,1.1s
PMR Palmer 62.27 32 P **P** **15 12 19.1 +0.1**
PMR pmax pmax
comp=Z,35nm,1.1s
PMR Palmer 62.27 32 P **P** **15 12 18.3 -0.7**
baz=276
GHO Glory Hole Cre 62.34 32 P **P** **15 12 19.8 +0.2**
GHO IAmb IAmb 15 12 46.1
comp=Z,24nm,1.0s
MDM Murphy Dome 62.37 28 P **P** **15 12 20.2 +0.5**
WAT1 Susitna Watana 62.41 31 P **P** **15 12 19.8 -0.3**
baz=276
H24K Noodor Dome 62.44 27 P **P** **15 12 20.5 +0.3**
H24K IAmb IAmb 15 12 47.0
comp=Z,29nm,1.1s
H24K Noodor Dome 62.44 27 P **P** **15 12 21.4 +1.2**
baz=275,SNR=20
WRH Wood River Hil 62.47 29 P **P** **15 12 20.3 0.0**
WRH IAmb IAmb 15 12 38.6
comp=Z,19nm,1.0s
TCOL CIGO, UAF Yank 62.53 28 P **P** **15 12 20.6 -0.1**
baz=275
COLA College 62.53 28*d i*P **P** **15 12 21.0 +0.3**
COLA pmax pmax
comp=Z,15nm,1.0s
COLA College 62.53 28 P **P** **15 12 20.8 0.0**
baz=275
CCB Clear Creek Bu 62.58 29 P **P** **15 12 20.8 -0.2**
CCB IAmb IAmb 15 12 40.0
comp=Z,26nm,1.3s
CCB IAMs_20 IAMs_20 15 36 12.7
comp=Z,724nm,18.0s

KNK	**Knik Glacier**	**62.60**	**32**	P	**P**	**15 12 21.1**	**-0.3**		
KNK				IAMs_20	IAMs_20	15 43 10.7			
	comp=Z,649nm,18.0s								
KNK	**Knik Glacier**	**62.60**	**32**	P	**P**	**15 12 21.4**	**+0.1**		
	baz=276,SNR=7.6								
SML	**Sawmill**	**62.62**	**32**	P	**P**	**15 12 21.3**	**-0.2**		
SML	**Sawmill**	**62.62**	**32**	P	**P**	**15 12 21.3**	**-0.2**		
SML				pmax	pmax				
	comp=Z,61nm,1.3s								
SML	**Sawmill**	**62.62**	**32**	P	**P**	**15 12 21.1**	**-0.4**		
	baz=276								
POKR	**Poker Plat Res**	**62.69**	**28**	P	**P**	**15 12 22.0**	**+0.1**		
POKR				IAmb	IAmb	15 12 48.4			
	comp=Z,34nm,0.9s								
POKR	**Poker Plat Res**	**62.69**	**28**	P	**P**	**15 12 21.9**	**+0.1**		
	baz=275,SNR=28								
KIRV	**Kirov**	**62.74**	**324**	LR	LR	15 42 48.6			
	comp=Z,7µm,18.2s,baz=85,slow=39								
KIRV	**Kirov**	**62.74**	**324**	*de*P	**P**	**15 12 24.1**	**+1.9**		
WAT6	**Susitna Watana**	**62.81**	**31**	P	**P**	**15 12 22.8**	**-0.1**		
	baz=276,SNR=15								
M23K	**Glacier View**	**62.91**	**32**	P	**P**	**15 12 23.4**	**+0.1**		
	baz=277								
DHY	**Denali Highway**	**62.92**	**30**	P	**P**	**15 12 23.4**	**-0.2**		
DHY	**Denali Highway**	**62.92**	**30**	P	**P**	**15 12 23.0**	**-0.6**		
	baz=276								
IL31		**62.95**	**29**	P	**P**	**15 12 22.9**	**-0.6**		
ILAR	**Eielson Array**	**62.95**	**29**	P	**P**	**15 12 23.1**	**-0.6**		
	comp=Z,3.9nm,0.7s,baz=272,slow=5.8,SNR=51								
ILAR				LR	LR	15 42 46.9			
	comp=Z,318nm,18.3s,baz=270,slow=39								
	comp=Z,3.9nm,0.7s								
ILAR	**Eielson Array**	**62.95**	**29**	P	**P**	**15 12 22.7**	**-0.9**		
HDA	**Harding Lake**	**62.97**	**29**	P	**P**	**15 12 22.9**	**-0.8**		
HDA				IAmb	IAmb	15 12 40.5			
	comp=Z,36nm,1.0s								
HDA	**Harding Lake**	**62.97**	**29**	P	**P**	**15 12 23.7**	**0.0**		
	baz=276,SNR=31								
MGCD	**Mangrove Creek**	**63.00**	**160**	P	**P**	**15 12 26.5**	**+2.3**		
SCM	**Sheep Creek Mo**	**63.09**	**32**	P	**P**	**15 12 24.5**	**-0.1**		
SCM	**Sheep Creek Mo**	**63.09**	**32**	P	**P**	**15 12 24.5**	**-0.1**		
SCM				pmax	pmax				
	comp=Z,69nm,1.2s								
SCM	**Sheep Creek Mo**	**63.09**	**32**	P	**P**	**15 12 25.1**	**+0.4**		
	baz=277,SNR=9.2								
GLI	**Glacier Island**	**63.33**	**33**	P	**P**	**15 12 26.1**	**0.0**		
GLI				IAmb	IAmb	15 12 44.8			
	comp=Z,33nm,1.0s								
GLI	**Glacier Island**	**63.33**	**33**	P	**P**	**15 12 26.1**	**0.0**		
	baz=278								
K24K	**Donnelly Dome**	**63.55**	**30**	P	**P**	**15 12 27.5**	**-0.1**		
	baz=278,SNR=7.9								
BMAR	**Burnt Mountain**	**63.60**	**25**	P	**P**	**15 12 28.7**	**+0.9**		
M24K	**Tolsona, Glenn**	**63.60**	**31**	P	**P**	**15 12 28.2**	**+0.3**		
M24K	**Tolsona, Glenn**	**63.60**	**31**	P	**P**	**15 12 28.1**	**+0.1**		
	baz=278								
J25K	**Salcha River,**	**63.62**	**29**	P	**P**	**15 12 27.6**	**-0.6**		
J25K	**Salcha River,**	**63.62**	**29**	P	**P**	**15 12 27.8**	**-0.4**		
	baz=278,SNR=6.5								
FID	**Port Fidalgo**	**63.64**	**33**	P	**P**	**15 12 27.6**	**-0.7**		
FID				IAmb	IAmb	15 12 47.6			
	comp=Z,33nm,1.1s								
PAX	**Paxson**	**63.80**	**30**	P	**P**	**15 12 29.5**	**+0.2**		
PAX				IAmb	IAmb	15 12 48.5			
	comp=Z,19nm,1.1s								
PAX	**Paxson**	**63.80**	**30**	P	**P**	**15 12 29.5**	**+0.2**		
PAX				pmax	pmax				
	comp=Z,19nm,1.1s								
PAX	**Paxson**	**63.80**	**30**	P	**P**	**15 12 29.4**	**+0.1**		
	baz=278,SNR=13								
KLU	**Klutina**	**63.80**	**32**	P	**P**	**15 12 29.4**	**0.0**		
KLU				IAmb	IAmb	15 12 55.2			
	comp=Z,45nm,1.4s								
KLU	**Klutina**	**63.80**	**32**	P	**P**	**15 12 29.0**	**-0.4**		
	baz=278								
Q23K	**Middleton Isla**	**63.91**	**34**	P	**P**	**15 12 29.4**	**-0.5**		
	baz=279								
DIV	**Divide**	**63.93**	**32**	P	**P**	**15 12 30.2**	**+0.1**		
DIV				IAmb	IAmb	15 12 43.4			
	comp=Z,25nm,0.8s								
RIDG	**Independent Ri**	**63.97**	**30**	P	**P**	**15 12 29.9**	**-0.5**		
RIDG				IAmb	IAmb	15 12 50.3			
	comp=Z,33nm,1.0s								
RIDG	**Independent Ri**	**63.97**	**30**	P	**P**	**15 12 30.6**	**+0.2**		
	baz=278,SNR=12								
HARP	**HAARP**	**64.03**	**31**	P	**P**	**15 12 30.7**	**-0.1**		
	baz=279								
EYAK	**Cordova Ski Ar**	**64.03**	**33**	P	**P**	**15 12 31.1**	**+0.3**		
	baz=279								
MSVF	**Nonsavu**	**64.18**	**128**	LR	LR	15 38 27.0			
	comp=Z,587nm,18.9s,baz=326,slow=34								
PRGR	**Permogore**	**64.18**	**328**	*e*P	**P**	**15 12 33.4**	**+1.7**		
WSAR	**Wadi Sarin**	**64.20**	**284**	LR	LR	15 43 39.9			
	comp=Z,1µm,18.8s,baz=155,slow=39								
SCRK	**Sand Creek**	**64.31**	**29**	P	**P**	**15 12 32.1**	**-0.6**		
SCRK				IAmb	IAmb	15 12 49.5			
	comp=Z,24nm,0.9s								
SCRK	**Sand Creek**	**64.31**	**29**	P	**P**	**15 12 32.5**	**-0.2**		
	baz=279,SNR=26								
DOT	**Dot Lake**	**64.33**	**30**	P	**P**	**15 12 31.7**	**-1.0**		
CAN	**Canberra**	**64.39**	**163**	P	**P**	**15 12 33.3**	**-0.1**		
CAN	**Canberra**	**64.39**	**163**	P	**P**	**15 12 33.3**	**-0.1**		
CAN				pmax	pmax				
	comp=Z,108nm,1.5s								
CAN	**Canberra**	**64.39**	**163**	P	**P**	**15 12 35.7**	**+2.3**		
J26L	**Joseph Creek**	**64.41**	**29**	P	**P**	**15 12 32.7**	**-0.6**		
J26L				IAmb	IAmb	15 12 37.1			
	comp=Z,23nm,0.8s								
J26L	**Joseph Creek**	**64.41**	**29**	P	**P**	**15 12 33.3**	**-0.1**		
	baz=279,SNR=36								
N25K	**Chitina, Valde**	**64.41**	**32**	P	**P**	**15 12 33.7**	**+0.3**		
N25K				IAmb	IAmb	15 12 55.4			
	comp=Z,19nm,1.1s								
N25K	**Chitina, Valde**	**64.41**	**32**	P	**P**	**15 12 32.9**	**-0.5**		
	baz=280								
CNB	**Canberra Magne**	**64.48**	**163**	P	**P**	**15 12 35.7**	**+1.7**		
BMRM	**Bremner River**	**64.52**	**33**	P	**P**	**15 12 33.8**	**-0.2**		
BMRM	**Bremner River**	**64.52**	**33**	P	**P**	**15 12 34.1**	**+0.1**		
	baz=280,SNR=16								
MENT	**Mentasta**	**64.59**	**30**	P	**P**	**15 12 34.6**	**+0.2**		
MENT				IAmb	IAmb	15 12 43.2			
	comp=Z,25nm,0.9s								
L26K	**Log Cabin Wild**	**64.75**	**30**	P	**P**	**15 12 35.9**	**+0.5**		
L26K				IAmb	IAmb	15 12 56.1			
	comp=Z,29nm,1.1s								
L26K				IAMs_20	IAMs_20	15 42 54.2			
	comp=Z,900nm,20.0s								
L26K	**Log Cabin Wild**	**64.75**	**30**	P	**P**	**15 12 35.5**	**0.0**		
	baz=280,SNR=12								
BELG	**Belogornoye**	**64.79**	**318**	LR	LR	15 43 04.5			
	comp=Z,5µm,18.4s,baz=76,slow=38								
BELG	**Belogornoye**	**64.79**	**318**	*de*P	**P**	**15 12 35.6**	**-0.2**		
BELG				pmax	pmax				
	comp=Z,13nm,1.2s								
GLB	**Gilahina Butte**	**64.81**	**32**	P	**P**	**15 12 36.1**	**+0.1**		
GLB				IAmb	IAmb	15 12 55.2			
	comp=Z,33nm,1.0s								
M26K	**Nabesna, AK**	**65.02**	**31**	P	**P**	**15 12 37.5**	**+0.2**		
M26K				IAMs_20	IAMs_20	15 42 16.4			
	comp=Z,745nm,20.0s								
M26K	**Nabesna, AK**	**65.02**	**31**	P	**P**	**15 12 37.0**	**-0.3**		
	baz=281,SNR=32								
VRDI	**Verde Repeater**	**65.02**	**32**	P	**P**	**15 12 37.5**	**0.0**		
VRDI				IAmb	IAmb	15 12 41.8			
	comp=Z,17nm,0.7s								
K27K	**Chicken**	**65.13**	**29**	P	**P**	**15 12 37.7**	**-0.2**		
	baz=281								
MCARA	**McCarthy VSAT**	**65.19**	**32**	P	**P**	**15 12 38.8**	**+0.4**		
MCARA				IAmb	IAmb	15 12 45.5			
	comp=Z,32nm,0.9s								
MCARA	**McCarthy VSAT**	**65.19**	**32**	P	**P**	**15 12 37.8**	**-0.5**		
	baz=281,SNR=8.8								
BANOM	**Banah**	**65.31**	**288**	*i* P	**P**	**15 12 41.1**	**+1.3**		
	SNR=6.1								
BGLC	**Bering Glacier**	**65.31**	**33**	P	**P**	**15 12 37.8**	**-1.3**		
	baz=281								
SHME	**Shamm**	**65.40**	**288**	P	**P**	**15 12 41.1**	**+0.8**		
BRAT	**Ballarat**	**65.41**	**168**	P	**P**	**15 12 41.9**	**+2.1**		
TGL	**Tana Glacier**	**65.41**	**33**	P	**P**	**15 12 39.8**	**-0.1**		
L27K	**Beaver Creek,**	**65.42**	**30**	P	**P**	**15 12 40.4**	**+0.5**		
L27K				IAmb	IAmb	15 12 58.8			
	comp=Z,21nm,1.1s								
L27K				IAMs_20	IAMs_20	15 41 45.0			
	comp=Z,714nm,21.0s								
L27K	**Beaver Creek,**	**65.42**	**30**	P	**P**	**15 12 39.6**	**-0.2**		
	baz=281,SNR=12								

BCAR	**Beaver Creek A**	**65.44**	**30**	P	**P**	**15 12 40.3**	**+0.3**		
WAX	**Waxell Ridge**	**65.46**	**33**	P	**P**	**15 12 40.4**	**+0.2**		
SNH	**Sunshine Point**	**65.52**	**33**	P	**P**	**15 12 41.4**	**+0.8**		
M27K	**Edge Creek, AK**	**65.54**	**31**	IAMs_20	IAMs_20	15 42 52.1			
	comp=Z,758nm,21.0s								
MSFE	**Esma-Masafi**	**65.61**	**287**	P	**P**	**15 12 43.6**	**+1.9**		
ISLE	**Juniper Island**	**65.68**	**33**	P	**P**	**15 12 41.5**	**-0.1**		
ISLE				IAmb	IAmb	15 13 01.0			
	comp=Z,19nm,0.8s								
UOSS	**Minazif**	**65.71**	**287**	IAMs_20	IAMs_20	15 45 13.9			
	comp=Z,1µm,21.0s								
UOSS	**Minazif**	**65.71**	**287**	P	**P**	**15 12 46.4**	**+4.1**		
TOO	**Toolangi**	**65.73**	**167**	P	**P**	**15 12 42.6**	**+0.6**		
TOO	**Toolangi**	**65.73**	**167**	P	**P**	**15 12 42.6**	**+0.6**		
TOO				pmax	pmax				
	comp=Z,54nm,1.1s								
TOO	**Toolangi**	**65.73**	**167**	P	**P**	**15 12 44.1**	**+2.1**		
HATD	**Hatta, Dubai**	**65.81**	**287**	*i* P	**P**	**15 12 44.7**	**+1.7**		
	SNR=6.4								
BARN	**Barnard Glacie**	**65.91**	**32**	P	**P**	**15 12 43.4**	**+0.2**		
ASHO	**Ashiyiah**	**65.92**	**287**	*i* P	**P**	**15 12 44.7**	**+1.0**		
	SNR=13								
GRNC	**Granite Creek**	**65.93**	**33**	P	**P**	**15 12 43.2**	**-0.2**		
MESA	**MESA**	**65.95**	**33**	P	**P**	**15 12 43.7**	**+0.1**		
	baz=282								
BVCY	**Beaver Creek**	**65.99**	**31**	P	**P**	**15 12 42.4**	**-1.2**		
	baz=282								
YAH	**Yahtse**	**66.01**	**33**	P	**P**	**15 12 43.8**	**-0.2**		
YAH				IAmb	IAmb	15 13 03.2			
	comp=Z,29nm,1.3s								
CTG	**Chitna Glacier**	**66.08**	**32**	P	**P**	**15 12 44.2**	**0.0**		
	baz=283,SNR=7.7								
CTGM	**Chitina Glacie**	**66.08**	**32**	P	**P**	**15 12 44.3**	**0.0**		
CTGM				IAmb	IAmb	15 13 01.2			
	comp=Z,24nm,1.0s								
NAZ	**Nazwa, Dubai**	**66.16**	**287**	P	**P**	**15 12 45.8**	**+0.6**		
LOGN	**Logan Glacier**	**66.27**	**32**	P	**P**	**15 12 46.0**	**+0.5**		
LOGN				IAmb	IAmb	15 12 59.0			
	comp=Z,19nm,1.0s								
DAWY	**Dawson**	**66.28**	**29**	P	**P**	**15 12 45.3**	**-0.1**		
DAWY	**Dawson**	**66.28**	**29**	P	**P**	**15 12 45.7**	**+0.3**		
	baz=283,SNR=8.9								
TABL	**Table Mountain**	**66.29**	**33**	P	**P**	**15 12 44.5**	**-1.3**		
TABL				IAmb	IAmb	15 13 04.8			
	comp=Z,20nm,1.0s								
FAQ	**Al Faqa, Dubai**	**66.30**	**287**	*i* P	**P**	**15 12 46.4**	**+0.3**		
	SNR=7.5								
YUK3	**Moose Creek**	**66.31**	**31**	P	**P**	**15 12 45.7**	**-0.1**		
	baz=283,SNR=16								
I29M	**Ogilvie Camp,**	**66.44**	**27**	P	**P**	**15 12 46.8**	**+0.4**		
I29M				IAmb	IAmb	15 13 06.7			
	comp=Z,29nm,1.1s								
I29M	**Ogilvie Camp,**	**66.44**	**27**	P	**P**	**15 12 46.5**	**+0.1**		
	baz=283,SNR=13								
YUK8	**Steele Glacier**	**66.75**	**32**	P	**P**	**15 12 49.1**	**+0.4**		
	baz=284,SNR=12								
PCA	**Pinnacle**	**66.80**	**33**	P	**P**	**15 12 48.9**	**+0.1**		
PINM	**Pinnacle**	**66.80**	**33**	P	**P**	**15 12 49.3**	**+0.5**		
	baz=284,SNR=8.5								
EPYK	**Eagle Plains**	**66.84**	**26**	P	**P**	**15 12 49.1**	**+0.2**		
EPYK				IAmb	IAmb	15 12 53.1			
	comp=Z,22nm,0.8s								
EPYK				IAMs_20	IAMs_20	15 43 52.1			
	comp=Z,890nm,20.0s								
EPYK	**Eagle Plains**	**66.84**	**26**	P	**P**	**15 12 49.5**	**+0.7**		
	baz=284,SNR=16								
BCPM	**Bancas Point**	**67.14**	**33**	P	**P**	**15 12 50.6**	**-0.2**		
MAK	**Makhachkala**	**67.15**	**308**	*e*P	P	15 12 45.8	-5.4		
MAK				*e*PPP	PPP	15 16 52.2			
MAK				*e*S	**S**	**15 21 37.9**	**-7.4**		
MAK				pmax	pmax				
	comp=Z,302nm,1.8s								
KLMR	**Klimovskoe**	**67.23**	**328**	*e*P	**P**	**15 12 50.9**	**-0.5**		
KLMR				*e*		15 15 17.1			
KLMR				*e*S	**S**	**15 21 46.5**	**+0.8**		
KLMR				pmax	pmax				
	comp=Z,54nm,1.5s								
KLMR				MLR	MLR				
	comp=Z,4µm,15.0s								
KLMR	**Klimovskoe**	**67.23**	**328**	*e*P	**P**	**15 12 50.9**	**-0.5**		
KLMR				AMP		15 13 07.8			
	comp=Z,54nm,1.5s								
KLMR				*e*PP	**PP**	**15 15 17.2**	**-2.0**		
KLMR				*e*S	**S**	**15 21 46.6**	**+0.8**		
KLMR				*e*S	**S**	**15 21 46.6**	**+0.8**		
KLMR				LQ	LQ	15 37 24.6			
KLMR				LQ	LQ	15 37 24.6			
KLMR				LR	LR	15 41 26.3			
KLMR				AMP		15 46 06.6			
	comp=Z,4µm,14.9s								
YUK4	**Talbot Arm**	**67.26**	**32**	P	**P**	**15 12 52.2**	**+0.3**		
	baz=285								
PNL	**Peninsula**	**67.32**	**33**	P	**P**	**15 12 50.8**	**-1.3**		
	baz=285								
YUK6	**Outpost Mounta**	**67.50**	**32**	P	**P**	**15 12 53.3**	**-0.1**		
	baz=285								
INK	**Inuvik**	**67.52**	**24**	LR	LR	15 45 42.3			
	comp=Z,395nm,18.8s,baz=284,slow=39								
INK	**Inuvik**	**67.52**	**24**	P	**P**	**15 12 53.3**	**+0.2**		
	baz=286								
M30M	**Minto, Yukon**	**67.78**	**30**	P	**P**	**15 12 55.3**	**+0.3**		
M30M	**Minto, Yukon**	**67.78**	**30**	P	**P**	**15 12 55.0**	**0.0**		
	baz=286,SNR=8.5								
HYT	**Haines Junctio**	**67.93**	**32**	P	**P**	**15 12 56.6**	**+0.5**		
HYT				IAmb	IAmb	15 13 16.4			
	comp=Z,40nm,1.2s								
HYT	**Haines Junctio**	**67.93**	**32**	P	**P**	**15 12 56.5**	**+0.5**		
	baz=286,SNR=8.1								
N30M	**Aishikik Lake**	**67.95**	**31**	P	**P**	**15 12 56.8**	**+0.7**		
	baz=286,SNR=5.4								
APA	**Apatity**	**67.98**	**336**	⇓*i* P	**P**	**15 12 58.1**	**+2.1**		
APA				*i* PPP	PPP	15 17 05.0			
APA				*i* S	**S**	**15 21 59.0**	**+4.5**		
APA				*i* PS	**PnS**	**15 22 17.0**	**-0.3**		
APA				*i* SS	**SS**	**15 26 17.0**	**+1.1**		
APA				pmax	pmax				
	comp=Z,16nm,0.9s								
APA				MLR	MLR				
	comp=Z,2µm,15.0s								
GROC	**Groznyy**	**68.28**	**308**	*e*P	**P**	**15 12 56.1**	**-2.3**		
GROC				*e*		15 13 21.0			
GROC				pmax	pmax				
	comp=Z,42nm,0.6s								
LGD	**Lagodekhi**	**68.37**	**307**	P	**P**	**15 13 02.8**	**+3.8**		
SPB2	**Spitsbergen Ar**	**68.52**	**348**	P	**P**	**15 12 59.1**	**-0.2**		
SPB2				IAmb	IAmb	15 13 11.0			
	comp=Z,40nm,1.1s								
SPA0	**Spitsbergen Ar**	**68.52**	**348**	*e*P	**P**	**15 12 59.1**	**-0.2**		
SPA0				*e*S	**S**	**15 21 56.1**	**-4.7**		
SPA0				IVMs_BB	IVMs_BB	15 48 09.4			
	comp=Z,580nm,6.2s								
SPITS	**Spitsbergen Ar**	**68.52**	**348**	P	**P**	**15 12 59.1**	**-0.2**		
SPITS				pmax	pmax				
	comp=Z,57nm,1.2s								
N31M	**Braeburn, Yuko**	**68.55**	**31**	P	**P**	**15 13 00.1**	**+0.4**		
N31M	**Braeburn, Yuko**	**68.55**	**31**	P	**P**	**15 13 00.4**	**+0.6**		
	baz=287,SNR=13								
O30N	**Mendenhall**	**68.61**	**32**	P	**P**	**15 13 00.7**	**+0.5**		
	baz=287,SNR=6.1								
VRH	**Novokhopyorsk**	**68.64**	**318**	*e*P	**P**	**15 12 59.4**	**-1.0**		
VRH				pmax	pmax				
	comp=Z,20nm,0.8s								
VRH				MLR	MLR				
	comp=Z,2µm,17.0s								
PLBC	**Pleasant Camp**	**68.87**	**33**	P	**P**	**15 13 02.1**	**+0.3**		
	baz=287,SNR=8.4								
KBS	**Kingsbay**	**68.90**	**349**	IAMs_20	IAMs_20	15 41 57.0			
	comp=Z,2µm,19.0s								
KBS	**Kingsbay**	**68.90**	**349**	*e*P	**P**	**15 12 58.7**	**-3.0**		
KBS				*e*S	**S**	**15 22 02.7**	**-2.5**		
M31M	**Drury Creek, Y**	**68.96**	**30**	P	**P**	**15 13 02.8**	**+0.4**		
M31M				IAmb	IAmb	15 13 21.1			
	comp=Z,20nm,1.1s								
M31M				IAMs_20	IAMs_20	15 45 22.6			
	comp=Z,617nm,19.0s								
M31M	**Drury Creek, Y**	**68.96**	**30**	P	**P**	**15 13 02.3**	**-0.1**		
	baz=288,SNR=9.2								
A36M	**Sachs Harbour**	**68.98**	**19**	P	**P**	**15 13 02.8**	**+0.5**		
A36M	**Sachs Harbour**	**68.98**	**19**	P	**P**	**15 13 02.1**	**-0.1**		
	baz=292,SNR=8.2								
WHY	**Whitehorse**	**69.21**	**32**	P	**P**	**15 13 04.5**	**+0.5**		
WHY				IAmb	IAmb	15 13 23.8			
	comp=Z,24nm,1.1s								
WHY	**Whitehorse**	**69.21**	**32**	P	**P**	**15 13 04.2**	**+0.2**		
	baz=288,SNR=12								

SKAG	**Skagway**	**69.37**	**33**	P	**P**	**15 13 04.9**	**+0.1**		
SKAG				IAmb	IAmb	15 13 25.9			
	comp=Z,53nm,1.4s								
SKAG	**Skagway**	**69.37**	**33**	P	**P**	**15 13 04.9**	**+0.1**		
	baz=288								
FARO	**Faro, Yukon**	**69.42**	**30**	P	**P**	**15 13 05.4**	**+0.3**		
	baz=289,SNR=22								
KEV	**Kevo**	**69.46**	**339**	IAMs_20	IAMs_20	15 47 42.5			
	comp=Z,2µm,19.0s								
GOF	**Gofitskoye**	**69.62**	**311**	⇑*e*P	**P**	**15 13 07.8**	**+1.1**		
GOF				pmax	pmax				
	comp=Z,108nm,1.0s								
MOS	**Moscow**	**69.63**	**323**	*e*P	**P**	**15 13 05.6**	**-0.9**		
MOS				*e*		15 13 28.4			
MOS				*e*S	**S**	**15 22 17.4**	**+3.0**		
MOS				*e*		15 23 06.2			
MOS				pmax	pmax				
	comp=Z,200nm,1.7s								
MOS				pmax	pmax				
	comp=Z,69nm,1.1s								
MOS				MLR	MLR				
	comp=Z,4µm,19.0s								
BJO1	**Bjornoya**	**69.71**	**345**	*e*P	**P**	**15 13 07.5**	**+0.8**		
BJO1				*e*S	**S**	**15 22 13.1**	**-1.7**		
ZEI	**Tsey**	**69.73**	**308**	*e*P	**P**	**15 13 07.1**	**-0.6**		
ZEI				pmax	pmax				
	comp=Z,62nm,0.9s								
LPSR	**Galich'ya Gora**	**69.87**	**320**	*e*P	**P**	**15 13 07.7**	**-0.3**		
LPSR				pmax	pmax				
	comp=Z,50nm,1.2s								
LPSR				MLR	MLR				
	comp=Z,5µm,17.0s								
BESE	**Bessie Mountai**	**69.88**	**34**	P	**P**	**15 13 08.7**	**+0.6**		
GNI	**Garni**	**69.97**	**306**	LR	LR	15 48 19.2			
	comp=Z,2µm,18.4s,baz=68,slow=40								
GNI	**Garni**	**69.97**	**306**	P	**P**	**15 13 08.5**	**-0.6**		
GNI	**Garni**	**69.97**	**306**	IAMs_20	IAMs_20	15 48 07.8			
	comp=Z,2µm,19.0s								
GNI	**Garni**	**69.97**	**306**	*de*P	**P**	**15 13 10.5**	**+1.4**		
GNI				pmax	pmax				
	comp=Z,41nm,1.3s								
GNI	**Garni**	**69.97**	**306**	P	**P**	**15 13 10.7**	**+1.6**		
VORR	**Voronezh**	**70.00**	**319**	*e*P	**P**	**15 13 10.7**	**+1.9**		
VORR				pmax	pmax				
	comp=Z,50nm,0.5s								
ARCES	**ARCESS Array B**	**70.03**	**339**	P	**P**	**15 13 08.9**	**+0.1**		
	comp=Z,29nm,1.1s,baz=62,slow=7.8,SNR=16								
ARCES				LR	LR	15 48 18.0			
	comp=Z,2µm,19.7s,baz=43,slow=40								
	comp=Z,29nm,1.1s								
ARCES	**ARCESS Array B**	**70.03**	**339**	P	**P**	**15 13 08.7**	**-0.1**		
ARCES				IAmb	IAmb	15 13 15.0			
	comp=Z,48nm,1.3s								
P32M	**Atlin**	**70.11**	**33**	P	**P**	**15 13 09.8**	**+0.3**		
	baz=289								
ONI	**Oni**	**70.11**	**308**	P	**P**	**15 13 11.5**	**+1.7**		
KBZ	**Khabaz**	**70.13**	**310**	P	**P**	**15 13 10.4**	**+0.6**		
	comp=Z,86nm,0.9s,baz=146,slow=2.9,SNR=31								
KBZ				LR	LR	15 46 41.0			
	comp=Z,3µm,20.6s,baz=61,slow=38								
KBZ	**Khabaz**	**70.13**	**310**	*d* *i* P	**P**	**15 13 10.6**	**+0.8**		
KBZ				pmax	pmax				
	comp=Z,121nm,1.0s								
SIT	**Sitka**	**70.13**	**35**	P	**P**	**15 13 09.0**	**-0.6**		
	baz=289								
HAMF	**Hammerfest**	**70.15**	**340**	*e*P	**P**	**15 13 09.5**	**+0.1**		
HAMF				*e*S	**S**	**15 22 17.1**	**-2.9**		
MSF	**Maaselka**	**70.16**	**335**	P	**P**	**15 13 10.2**	**+0.6**		
MSF				pmax	pmax				
	comp=Z,28nm,1.6s								
VSR	**Storozhevoye**	**70.17**	**318**	*e*P	**P**	**15 13 08.1**	**-1.8**		
VSR				pmax	pmax				
	comp=Z,70nm,1.3s								
VSR				MLR	MLR				
	comp=Z,4µm,20.0s								
KVAR	**Kislovodsk Arr**	**70.20**	**310**	LR	LR	15 46 33.4			
	comp=Z,2µm,19.6s,baz=277,slow=38								
MMPY	**Sheldon Lake,**	**70.20**	**29**	P	**P**	**15 13 10.2**	**+0.2**		
	baz=290,SNR=8.6								
KIV	**Kislovodsk**	**70.20**	**310**	⇓P	**P**	**15 13 10.7**	**+0.3**		
KIV	**Kislovodsk**	**70.20**	**310**	P	**P**	**15 13 10.1**	**-0.3**		
KIV				IAMs_20	IAMs_20	15 46 51.9			
	comp=Z,2µm,21.0s								
KIV	**Kislovodsk**	**70.20**	**310**	*e*P	**P**	**15 13 10.7**	**+0.3**		
KIV				*e*S	**S**	**15 22 23.1**	**+1.2**		
KIV				pmax	pmax				
	comp=Z,127nm,4.

SOCY IAMs_20 IAMs_20 15 48 50.6
comp=Z,900nm,19.0s
T35M Bob Quinn 72.75 34 P **P** **15 13 24.4 -1.0**
baz=293
FIA1 FINESS Array S 73.15 331 P **P** **15 13 27.2 -0.4**
FIA1 IAmb IAmb 15 13 32.2
comp=Z,60nm,1.2s
FINES FINESS Array B 73.16 331 P **P** **15 13 27.8 +0.1**
comp=Z,26nm,0.9s,baz=63,slow=5.4,SNR=26
FINES LR LR 15 49 53.6
comp=Z,2µm,19.6s,baz=65,slow=39
comp=Z,26nm,0.9s
FINES FINESS Array B 73.16 331 P **P** **15 13 27.1 -0.6**
ANN Anapa 73.45 312 *e*P **P** **15 13 26.0 -3.8**
ANN *e**PP **pP** **15 13 30.6 -1.5**
ANN *e* 15 13 40.2
ANN *e*S **S** **15 22 54.5 -4.5**
ANN pmax pmax
comp=Z,65nm,0.9s
ANN MLR MLR
comp=Z,3µm,23.0s
ANN MLR MLR
comp=E,1µm,19.0s
ANN MLR MLR
comp=N,2µm,22.0s
STEI Steigen 74.08 339 *e*P **P** **15 13 32.8 -0.2**
VSU Vasula 74.14 328*c i*P **P** **15 13 34.2 +0.7**
VSU pmax pmax
comp=Z,224nm,1.0s
VSU Vasula 74.14 328 *e*P **P** **15 13 34.2 +0.7**
FAUS Fauske 74.37 339 *e*P **P** **15 13 34.3 -0.4**
FAUS *e*S **S** **15 23 10.1 +1.6**
FAUS IVMs_BB IVMs_BB 15 54 11.1
comp=Z,1µm,14.2s
MEF Metsahovi 74.44 330 *e*P **P** **15 13 36.0 +0.8**
LOF Lofoten 74.51 340 *e*P **P** **15 13 35.9 +0.4**
LOF IVMs_BB IVMs_BB 15 54 23.6
comp=Z,1µm,13.6s
RES Resolute Bay 74.52 11 LR LR 15 49 00.5
comp=Z,242nm,18.8s,baz=319,slow=38
RES Resolute Bay 74.52 11 P **P** **15 13 35.2 -0.2**
RES Resolute Bay 74.52 11 P **P** **15 13 35.2 -0.2**
RES pmax pmax
comp=Z,18nm,1.0s
RAO Raoul Island 74.72 135 LR LR 15 40 35.9
comp=Z,2µm,21.3s,baz=358,slow=31
DAG Danmarks Havn 74.80 353 P **P** **15 13 36.9 -0.2**
DAG pmax pmax
comp=Z,45nm,1.0s
DAG Danmarks Havn 74.80 353 *i* P **P** **15 13 36.0 -1.1**
DAG IAmb IAmb 15 13 42.2
comp=Z,25nm,0.8s
RAF Rauma 75.20 331 *e*P **P** **15 13 40.2 +0.5**
MNK Minsk 75.28 324 *i* P **P** **15 13 41.0 +0.8**
MNK *i* 15 16 29.6
MNK *i* PPP PPP 15 18 15.7
MNK *i* S **S** **15 23 21.6 +2.5**
MNK *i* SS **SS** **15 28 12.1 +4.0**
MNK pmax pmax
comp=N,15nm,0.9s
MNK pmax pmax
comp=E,6.0nm,0.9s
MNK pmax pmax
comp=Z,56nm,0.9s
MNK MLR MLR
comp=N,763nm,9.0s
MNK MLR MLR
comp=Z,4µm,17.0s
MNK MLR MLR
comp=E,467nm,20.0s
MNK Minsk 75.28 324 *i* P **P** **15 13 41.0 +0.8**
comp=E,6.0nm,0.9s
MNK *i* P **P** **15 13 41.0 +0.8**
comp=N,15nm,0.9s
MNK *i* P **P** **15 13 41.0 +0.8**
comp=Z,56nm,0.9s,baz=64
MNK *i* PP **PP** **15 16 29.7 +1.3**
MNK *i* PPP PPP 15 18 15.7
MNK *i* S **S** **15 23 21.6 +2.5**
MNK *i* SS **SS** **15 28 12.1 +4.0**
MNK *i* SSS SSS 15 31 34.1
MNK *i* LQ LQ 15 41 50.2
MNK *i* LR LR 15 47 01.6
MNK *i* LRM MLR 15 48 27.2
comp=N,763nm,8.9s
MNK *i* LRM MLR 15 48 28.5
comp=Z,4µm,16.9s
MNK *i* LRM MLR 15 49 18.7
comp=E,467nm,20.1s
MOR8 Moi Rana 75.31 338 *e*P **P** **15 13 38.4 -1.9**
MOR8 IVmB_BB 15 13 41.8
comp=Z,348nm,1.2s
MOR8 *e*S **S** **15 23 17.0 -2.2**
MOR8 IVMs_BB IVMs_BB 15 50 33.8
comp=Z,992nm,19.1s
RAYN Ar Rayn 75.32 289 P **P** **15 13 40.7 -0.4**
RAYN Ar Rayn 75.32 289 IAMs_20 IAMs_20 15 50 49.4
comp=Z,2µm,21.0s
RAYN Ar Rayn 75.32 289 ⇑P **P** **15 13 42.3 +1.2**
RAYN Ar Rayn 75.32 289 *i* P **P** **15 13 41.9 +0.8**
SNR=69
MTSE Matsula 75.39 329 *e*P **P** **15 13 41.5 +0.7**
IDID Didziasalis 75.52 325 *e*P **P** **15 13 42.5 +1.0**
KONS Konsvik 75.57 338 *e*P **P** **15 13 42.1 +0.5**
SIM Simferopol' 75.58 313 *e*P **P** **15 13 41.8 -0.3**
SIM *e* 15 16 36.0
SIM *e*S **S** **15 23 25.0 +2.2**
SIM pmax pmax
comp=Z,59nm,0.9s
NACGM Naroch 75.68 325⇑ *e*P **P** **15 13 43.4 +0.9**
baz=63
ISAL Salakas 75.72 325 *e*P **P** **15 13 43.6 +0.9**
IIGN Ignalina 75.77 325 *e*P **P** **15 13 43.7 +0.7**
KVT Kavak 75.81 309 P **P** **15 13 45.3 +1.7**
TULEG Thule 76.10 5 IAMs_20 IAMs_20 15 51 10.5
comp=Z,1µm,18.0s
DIKM Dikmen 76.13 310 ⇑P **P** **15 13 46.7 +1.3**
AKASG Malin Array Be 76.19 320 P **P** **15 13 44.7 -0.8**
comp=Z,22nm,0.8s,baz=50,slow=6.4,SNR=62
AKASG LR LR 15 50 13.7
comp=Z,7µm,18.2s,baz=64,slow=38
comp=Z,22nm,0.8s
AKBB Malin Array Si 76.19 320*d i*P **P** **15 13 45.0 -0.5**
AKBB pmax pmax
comp=Z,30nm,0.8s
AAL Aland 76.38 331 *e*P **P** **15 13 46.6 +0.3**
SLIT Slitere, Latvi 76.62 328 *e*P **P** **15 13 48.1 +0.4**
VSVD Vaisvydziai 76.63 326 *e*P **P** **15 13 48.2 +0.4**
PABE Paberze 76.83 326 P **P** **15 13 49.4 +0.3**
PABE Paberze 76.83 326 *e*P **P** **15 13 49.9 +0.8**
BZK Bozkurt 76.86 310 P **P** **15 13 48.7 -0.8**
NSS Namsos 77.11 337 *e*P **P** **15 13 48.2 -2.3**
NSS IVmB_BB 15 13 52.9
comp=Z,332nm,0.7s
NSS *e*S **S** **15 23 39.3 +0.5**
NSS IVMs_BB IVMs_BB 15 53 53.9
comp=Z,1µm,15.2s
YKA Yellowknife Ar 77.12 26 P **P** **15 13 50.4 -0.2**
comp=Z,5.8nm,0.7s,baz=301,slow=5.5,SNR=50
YKA PKKPbc **PKKPbc** **15 32 57.4 -1.1**
comp=Z,0.2nm,0.6s,baz=119,slow=2.6,SNR=3.6
YKA LR LR 15 50 44.7
comp=Z,272nm,20.5s,baz=316,slow=38
comp=Z,5.8nm,0.7s
YKA Yellowknife Ar 77.12 26 P **P** **15 13 50.0 -0.5**
YKA Yellowknife Ar 77.12 26 *i* P **P** **15 13 50.7 +0.2**
YKA pmax pmax
comp=Z,6.0nm,0.7s
DBG Daneborg 77.18 352 *i* P **P** **15 13 49.0 -1.7**
DBG IAmb IAmb 15 13 54.1
comp=Z,23nm,1.0s
SUW Suwalki 77.95 325 P **P** **15 13 55.0 -0.4**
SUW Suwalki 77.95 325 P **P** **15 13 55.0 -0.4**
SUW pmax pmax
comp=Z,207nm,1.1s
SUW MLR MLR
comp=Z,3µm,18.0s
SUW Suwalki 77.95 325 *e*P **P** **15 13 55.7 +0.4**
BR131 Keskin Array S 78.05 308 P **P** **15 13 55.5 -0.8**
BR131 Keskin Array S 78.05 308*d i*P **P** **15 13 56.6 +0.2**
BRTR Keskin Array B 78.05 308 P **P** **15 13 56.4 0.0**
comp=Z,44nm,1.0s,baz=100,slow=4.3,SNR=57
BRTR LR LR 15 53 27.6
comp=Z,2µm,21.3s,baz=50,slow=40
comp=Z,44nm,1.0s

BRTR Keskin Array B 78.05 308 P **P** **15 13 56.0 -0.4**
KIS Kishinev 78.06 317 *e*P **P** **15 13 57.0 +0.9**
KIS Kishinev 78.06 317 *e*PP PP 15 16 57.0 +5.1
KIS *e*L L 15 42 10.0
KIS LRM MLR 15 51 21.0
comp=Z,700nm,17.5s
KIS Kishinev 78.06 317 *e*P **P** **15 13 57.0 +0.9**
KIS *e* 15 16 57.0
MILM Milestii Mici 78.09 317⇓ *e*P **P** **15 13 56.0 -0.3**
comp=Z,50nm,0.9s
MILM *e*S **S** **15 23 46.0 -4.2**
MILM *e*L L 15 40 25.0
MILM LRM MLR 15 51 25.0
comp=Z,2µm,18.0s
MILM Milestii Mici 78.09 317 *e*P **P** **15 13 56.0 -0.3**
MILM *e*S **S** **15 23 46.0 -4.2**
MILM pmax pmax
comp=Z,50nm,0.9s
JMIC Jan Mayen 78.14 347 LR LR 15 51 55.3
comp=Z,401nm,19.0s,baz=70,slow=38
URZ Urewera 78.28 144 P **P** **15 13 56.9 -0.3**
comp=Z,22nm,1.1s,baz=116,slow=23,SNR=5.4
comp=Z,22nm,1.1s
URZ Urewera 78.28 144 P **P** **15 13 56.4 -0.8**
URZ IAmb IAmb 15 13 58.4
comp=Z,36nm,1.1s
TBLU Trondheim 78.49 336 *e*P **P** **15 13 57.1 -1.0**
ANTO Ankara 78.57 309 P **P** **15 13 58.9 -0.3**
ANTO IAMs_20 IAMs_20 15 53 10.5
comp=Z,2µm,21.0s
ANTO Ankara 78.57 309 P **P** **15 13 58.9 -0.3**
ANTO pmax pmax
comp=Z,69nm,1.3s
ANTO MLR MLR
comp=Z,2µm,21.0s
BKZ Black Stump Fm 78.64 145 P **P** **15 13 59.2 -0.1**
BKZ IAmb IAmb 15 14 05.6
comp=Z,54nm,1.3s
ASF Jabal al Asfar 78.81 300 LR LR 15 55 01.0
comp=Z,644nm,18.8s,baz=77,slow=40
TLCR 78.87 315 ⇓P **P** **15 14 01.0 +0.4**
TLCR 78.87 315 ⇓P **P** **15 14 01.0 +0.4**
HFS Hagfors 79.05 333 LR LR 15 53 36.1
comp=Z,2µm,18.4s,baz=42,slow=39
NC405 NORSAR Array S 79.25 334 P **P** **15 14 01.4 -1.1**
TPGR Topolog 79.27 315 ⇑P **P** **15 14 02.9 +0.1**
CFR Carcaliu 79.30 315 ⇓P **P** **15 14 03.0 0.0**
CFR Carcaliu 79.30 315 ⇓P **P** **15 14 03.0 0.0**
NC303 NORSAR Array S 79.32 334 P **P** **15 14 01.6 -1.2**
NC303 IAmb IAmb 15 14 05.9
comp=Z,35nm,0.9s
IZVR Izvoarele 79.37 316 ⇓P **P** **15 14 05.6 +2.4**
MDUB Mudurnu 79.41 310 P **P** **15 14 03.4 -0.5**
NB201 NORSAR Array S 79.45 334 P **P** **15 14 02.2 -1.3**
TIRR Tirgusor 79.46 315 ⇓P **P** **15 14 04.3 +0.5**
TIRR Tirgusor 79.46 315 ⇓P **P** **15 14 04.3 +0.5**
TIRR Tirgusor 79.46 315 P **P** **15 14 03.7 -0.1**
TIRR Tirgusor 79.46 315 ⇓P **P** **15 14 04.3 +0.5**
NB2 NORSAR Subarra 79.49 334 P **P** **15 14 00.4 -3.4**
NB2 pmax pmax
comp=Z,8.0nm,1.0s
NB2 NORSAR Subarra 79.49 334 P **P** **15 14 02.4 -1.3**
baz=51,slow=5.6
NB2 NORSAR Subarra 79.49 334 P **P** **15 14 02.4 -1.3**
comp=Z,25nm,0.8s,baz=51,slow=5.6
NOA NORSAR Array B 79.49 334 P **P** **15 14 02.5 -1.3**
comp=Z,22nm,0.8s,baz=50,slow=5.5,SNR=37
NOA LR LR 15 53 42.1
comp=Z,2µm,18.7s,baz=55,slow=39
comp=Z,22nm,0.8s
NC204 NORSAR Array S 79.52 335 P **P** **15 14 02.8 -1.1**
NC204 NORSAR Array S 79.52 335 *e*P **P** **15 14 03.2 -0.8**
NC602 NORSAR Array S 79.55 334 P **P** **15 14 03.2 -0.9**
NC602 IAmb IAmb 15 14 06.7
comp=Z,31nm,1.0s
NC602 NORSAR Array S 79.55 334 *e*P **P** **15 14 03.5 -0.5**
NORES NORESS Array B 79.55 334 P **P** **15 14 05.8 +1.8**
LVV L'vov 79.55 321 *e*P **P** **15 14 04.1 -0.1**
LVV *e* 15 14 18.5
LVV *e* 15 17 08.2
LVV *e*PPP PPP 15 19 02.1
LVV *e*S **S** **15 24 00.8 -4.9**
LVV *e*PS PnS 15 24 28.0 -21
LVV *e*SS **SS** **15 29 16.8 +4.1**
LVV MLR MLR
comp=N,2µm,19.0s
LVV MLR MLR
comp=E,4µm,19.0s
LVV MLR MLR
comp=Z,4µm,18.0s
MMAI Mount Meron Ar 79.60 302 LR LR 15 54 31.1
comp=Z,869nm,21.0s,baz=222,slow=40
TESR Tescani 79.60 317 ⇓P **P** **15 14 05.0 +0.3**
RPZ Rata Peaks 79.63 151 LR LR 15 47 12.5
comp=Z,653nm,20.7s,baz=310,slow=34
HARR Harsova 79.66 315 ⇓P **P** **15 14 05.3 +0.4**
HARR Harsova 79.66 315 ⇓P **P** **15 14 05.3 +0.4**
NBO00 NORSAR Array S 79.66 334 P **P** **15 14 04.1 -0.6**
NBO00 IAmb IAmb 15 14 07.7
comp=Z,29nm,0.7s
DOMB Dombas 79.68 336 *e*P **P** **15 14 04.5 -0.2**
DOMB IVmB_BB 15 14 10.0
comp=Z,461nm,0.9s
DOMB *e*S **S** **15 24 07.1 +0.5**
DOMB IVMs_BB IVMs_BB 15 54 50.2
comp=Z,2µm,18.2s
BIZ Bicaz 79.73 318 ⇓P **P** **15 14 05.6 +0.3**
NAO01 NORSAR Array S 79.74 334 P **P** **15 14 04.3 -0.8**
NAO01 IAmb IAmb 15 14 10.6
comp=Z,38nm,0.9s
VRI Vrincioaia 79.86 316 ⇑P **P** **15 14 07.7 +1.7**
VRI Vrincioaia 79.86 316 ⇑P **P** **15 14 07.7 +1.7**
MOL Molde 79.88 337 *e*P **P** **15 14 06.9 +1.2**
BUR08 Bucovina Ar. S 79.93 318 P **P** **15 14 06.0 -0.5**
BUR01 Bucovina Ar. S 79.94 318 ⇓P **P** **15 14 06.0 -0.5**
BURAR Bucovina Array 79.94 318 P **P** **15 14 06.2 -0.3**
BURAR Bucovina Array 79.94 318 P **P** **15 14 06.2 -0.3**
BURAR pmax pmax
comp=Z,22nm,0.8s
PSN Preselentsi 79.96 314 *i* P **P** **15 14 10.9 +4.3**
ICOR Ion Corvin 80.01 314 ⇓P **P** **15 14 08.3 +1.5**
BISRR Bisoca 80.02 316 ⇓P **P** **15 14 08.1 +1.2**
LLLB Lillooet 80.05 38 P **P** **15 14 07.4 +0.4**
COVR Voineasa-Covas 80.19 317 ⇑P **P** **15 14 08.4 +0.5**
GHAJ Ghor Haditha 80.20 300 P **P** **15 14 07.6 -0.5**
GHAJ IAmb IAmb 15 14 12.4
comp=Z,31nm,0.7s
CSS Mathiatis 80.31 304 P **P** **15 14 07.7 -1.0**
AKN Aaknes 80.33 337 *e*P **P** **15 14 08.1 -0.2**
OSL Oslo 80.36 334 *e*P **P** **15 14 08.3 -0.1**
UPNV Upernavik 80.46 2 *e*P **P** **15 14 08.5 -0.2**
UPNV IAmb IAmb 15 14 23.4
comp=Z,16nm,0.8s
SUMG Summit 80.46 357 P **P** **15 14 09.3 0.0**
SUMG IAMs_20 IAMs_20 15 52 27.6
comp=Z,622nm,19.0s
SUMG Summit 80.46 357 P **P** **15 14 09.3 0.0**
SUMG pmax pmax
comp=Z,87nm,1.1s
SUMG MLR MLR
comp=Z,600nm,19.0s
SUMG Summit 80.46 357 *i* P **P** **15 14 08.8 -0.4**
SUMG IAmb IAmb 15 14 31.6
comp=Z,89nm,1.1s
MLR Muntele Rosu 80.52 316 ⇓P **P** **15 14 10.6 +0.9**
MLR Muntele Rosu 80.52 316 LR LR 15 53 04.0
comp=Z,2µm,18.9s,baz=55,slow=38
MLR Muntele Rosu 80.52 316 P **P** **15 14 09.8 0.0**
MLR IAmb IAmb 15 14 35.7
comp=Z,31nm,0.9s
MLR IAMs_20 IAMs_20 15 53 02.6
comp=Z,2µm,20.0s
MLR Muntele Rosu 80.52 316 ⇓P **P** **15 14 10.6 +0.9**
DOPR Dopca 80.63 317 ⇑P **P** **15 14 10.8 +0.6**
SECR 80.66 316 ⇑P **P** **15 14 11.0 +0.6**
PRD Provadia 80.69 314 *i* P **P** **15 14 11.7 +1.2**
SKAR Skarslia 80.83 335 *e*P **P** **15 14 10.5 -0.5**
SKAR IVmBBB 15 14 12.3
comp=Z,186nm,1.7s
SKAR *e*S **S** **15 24 15.9 -3.0**
SKAR IVMs_BB IVMs_BB 15 56 19.2
comp=Z,1µm,15.2s
SCO Scoresbysund 80.87 351 *e*P **P** **15 14 07.8 -3.1**
SCO IAmb IAmb 15 14 12.4

comp=Z,42nm,1.2s
D03D Eldon 80.90 41 P **P** **15 14 10.8 -0.8**
baz=300
BMR Baia Mare 80.92 319 P **P** **15 14 12.9 +1.2**
BMR pmax pmax
comp=Z,42nm,0.9s
KONO Kongsberg 80.98 334 IAMs_20 IAMs_20 15 55 33.3
comp=Z,2µm,18.0s
KONO Kongsberg 80.98 334 ⇓P **P** **15 14 10.6 -1.2**
KONO Kongsberg 80.98 334 *e*P **P** **15 14 11.2 -0.6**
KONO *e*S **S** **15 24 21.8 +1.5**
KONO IVMs_BB IVMs_BB 15 56 05.6
comp=Z,1µm,15.4s
KOLS Kolonicke sedl 80.99 321 *e*P **P** **15 14 14.2 +2.2**
KOLS pmax pmax
comp=Z,17nm,0.8s
KOLS Kolonicke sedl 80.99 321 *e*P **P** **15 14 14.2 +2.2**
VOIR 81.10 317 ⇑P **P** **15 14 15.1 +2.3**
VOIR 81.10 317 ⇑P **P** **15 14 15.1 +2.3**
UZH Uzhgorod 81.13 320 *e*P **P** **15 14 12.5 -0.3**
UZH *e* 15 14 19.7
UZH *e* 15 19 10.3
UZH *e*S **S** **15 24 16.5 -5.8**
UZH *e* 15 25 24.9
HYA Hoyanger 81.29 336 *e*P **P** **15 14 12.5 -0.9**
EIL Elat 81.39 299 LR LR 15 55 09.6
comp=Z,902nm,21.4s,baz=70,slow=39
BSD Bornholm Skovb 81.43 328 *i* P **P** **15 14 12.5 -1.7**
BSD IAmb IAmb 15 14 19.7
comp=Z,56nm,0.9s
CRVS Cervenica-Dubn 81.46 321 *e*P **P** **15 14 16.0 +1.4**
CRVS pmax pmax
comp=Z,71nm,1.1s
CRVS Cervenica-Dubn 81.46 321 *e*P **P** **15 14 16.0 +1.4**
SZH Strazhica 81.60 314 *i* P **P** **15 14 16.1 +0.7**
DRGR 81.83 319 ⇓P **P** **15 14 17.0 +0.4**
DRGR 81.83 319 ⇓P **P** **15 14 17.0 +0.4**
NIE Niedzica 81.84 322 *e*P **P** **15 14 18.3 +1.7**
NIE *e*L L 15 54 16.1
comp=Z,2µm,16.9s
NIE Niedzica 81.84 322 P **P** **15 14 17.8 +1.2**
NIE pmax pmax
comp=Z,24nm,1.1s
SUE Sulen 81.88 336 *e*P **P** **15 14 15.5 -1.0**
ODD1 Odda 81.96 335 *e*P **P** **15 14 15.5 -1.5**
ELL Elmali 82.00 307 P **P** **15 14 17.3 -0.4**
ELL Elmali 82.00 307 P **P** **15 14 17.3 -0.4**
ELL pmax pmax
comp=Z,101nm,0.8s
BALB Balikesir 82.06 310 P **P** **15 14 16.8 -1.0**
F04A Amboy 82.11 42 P **P** **15 14 18.0 0.0**
F04A IAmb IAmb 15 14 37.2
comp=Z,38nm,1.2s
KECS Kecovo 82.23 321 *e*P **P** **15 14 23.1 +4.5**
KECS Kecovo 82.23 321 *e*P **P** **15 14 23.1 +4.5**
BLS5 Blasjo 82.35 335 IVmBBB 15 14 18.3
comp=Z,489nm,2.3s
BLS5 *e*P **P** **15 14 18.5 -0.6**
BLS5 *e*S **S** **15 24 37.4 +2.8**
BLS5 IVMs_BB IVMs_BB 15 55 56.9
comp=Z,1µm,19.8s
LANS Liptovska Anna 82.44 322 *e*P **P** **15 14 23.0 +3.2**
LANS Liptovska Anna 82.44 322 *e*P **P** **15 14 23.0 +3.2**
LTY Liberty 82.46 41 P **P** **15 14 20.4 +0.5**
GZR Gura Zlata 82.50 317 ⇑P **P** **15 14 21.8 +1.6**
GZR Gura Zlata 82.50 317 ⇑P **P** **15 14 21.8 +1.6**
J01E Myrtle Point 82.57 45 P **P** **15 14 19.7 -0.8**
baz=300
ATD Arta Tunnel 82.61 279 LR LR 15 50 49.1
comp=Z,370nm,21.7s,baz=48,slow=36
H04D Lebanon 82.63 44 P **P** **15 14 20.0 -0.8**
baz=301
B08A Colville Reser 82.64 39 P **P** **15 14 21.0 +0.2**
B08A IAmb IAmb 15 14 38.2
comp=Z,18nm,0.9s
I03D Drain, OR 82.67 45 P **P** **15 14 20.8 -0.2**
baz=300
KDZ Kurdzhali 82.73 313 *i* P **P** **15 14 24.6 +3.3**
SNART Snartemo 82.78 334 *e*P **P** **15 14 18.9 -2.3**
OKC Ostrava-Krasne 82.79 323 *e*P **P** **15 14 22.6 +1.1**
OKC MLR MLR
comp=Z,3µm,14.9s
OKC Ostrava-Krasne 82.79 323 *e*P **P** **15 14 22.6 +1.1**
OKC AMS AMS 15 54 40.0
comp=Z,3µm,14.9s
PSZ Piszkesteto 82.87 321 ⇑P **P** **15 14 22.5 +0.5**
PSZ Piszkesteto 82.87 321 P **P** **15 14 21.3 -0.7**
PSZ IAmb IAmb 15 14 40.7
comp=Z,25nm,1.0s
PSZ Piszkesteto 82.87 321 ⇑P **P** **15 14 22.5 +0.5**
PSZ Piszkesteto 82.87 321 P **P** **15 14 22.8 +0.7**
HOOD Mount Hood Mea 82.89 43 P **P** **15 14 23.4 +1.1**
HOOD IAmb IAmb 15 14 33.5
comp=Z,37nm,1.1s
H04A Detroit Lake 82.89 43 P **P** **15 14 22.9 +0.8**
H04A IAmb IAmb 15 14 28.9
comp=Z,28nm,1.2s
RDO Rodhopi 82.89 313 P **P** **15 14 22.3 +0.1**
RDO IAmb IAmb 15 14 27.1
comp=Z,40nm,1.1s
RAR Rarotonga 82.90 118 LR LR 15 44 57.0
comp=Z,260nm,19.8s,baz=298,slow=31
K02D Willamette Mer 82.98 46 P **P** **15 14 22.4 -0.4**
baz=300
HERR Herculane 82.99 317 ⇓P **P** **15 14 23.0 +0.4**
DBO Dodson Butte 83.03 45 P **P** **15 14 22.7 -0.3**
DBO IAmb IAmb 15 14 42.5
comp=Z,20nm,0.9s
DJES Djerdap 83.03 317 ⇑P **P** **15 14 24.9 +2.1**
PGB Panagyurishte 83.08 314 *i* P **P** **15 14 23.6 +0.4**
BZS Buzias 83.09 318 ⇑P **P** **15 14 22.8 -0.3**
BZS Buzias 83.09 318 ⇑P **P** **15 14 22.8 -0.3**
G05D Wamic, OR 83.13 42 P **P** **15 14 22.3 -1.1**
baz=302
MORC Moravsky Berou 83.15 323 ⇓P **P** **15 14 22.7 -0.7**
MORC Moravsky Berou 83.15 323 P **P** **15 14 23.4 0.0**
MORC IAmb IAmb 15 14 28.9
comp=Z,28nm,1.1s
MORC Moravsky Berou 83.15 323 P **P** **15 14 23.4 0.0**
MORC pmax pmax
comp=Z,29nm,1.1s
MORC Moravsky Berou 83.15 323 *e*P **P** **15 14 23.9 +0.5**
RZN Rozhen 83.16 313 *i* P **P** **15 14 24.6 +0.8**
MUD Monsted U'grnd 83.19 331 P **P** **15 14 24.0 +0.6**
MUD pmax pmax
comp=Z,43nm,1.0s
MUD Monsted U'grnd 83.19 331 *i* P **P** **15 14 23.0 -0.3**
MUD IAmb IAmb 15 14 35.0
comp=Z,57nm,1.3s
I04A Tendick Farm, 83.21 44 P **P** **15 14 23.2 -0.7**
baz=301
KSP Ksiaz 83.21 324 *e*P **P** **15 14 24.6 +0.9**
KSP *e*L L 15 53 47.2
comp=Z,2µm,23.6s
KSP Ksiaz 83.21 324 P **P** **15 14 24.7 +1.1**
KSP pmax pmax
comp=Z,70nm,1.1s
MAUC Maruska 83.23 323 *e*P **P** **15 14 26.5 +2.7**
MAUC AMS AMS 15 54 50.0
comp=Z,6µm,14.6s
KSXB Camp Six Broad 83.28 46 P **P** **15 14 24.4 +0.1**
KSXB IAmb IAmb 15 14 32.1
comp=Z,35nm,1.1s
E07A Sunnyside 83.30 41 P **P** **15 14 24.9 +0.7**
E07A IAmb IAmb 15 14 36.2
comp=Z,19nm,0.9s
L02F Cave Junction 83.33 46 P **P** **15 14 24.1 -0.4**
baz=300
KOLL Kolacno 83.35 322 *e*P **P** **15 14 26.6 +2.2**
KRLC Kraliky 83.39 323 *e*P **P** **15 14 24.7 0.0**
KRLC MLR MLR
comp=Z,4µm,14.6s
KRLC Kraliky 83.39 323 *e*P **P** **15 14 24.7 0.0**
KRLC AMS AMS 15 55 10.0
comp=Z,4µm,14.6s
OSTC Ostas 83.41 324 *e*P **P** **15 14 25.7 +1.0**
OSTC AMS AMS 15 54 20.0
comp=Z,3µm,17.1s
MDVR Moldovita 83.47 317 ⇓P **P** **15 14 25.1 -0.1**
DPC Dobruska-Polom 83.47 324 *e*P **P** **15 14 26.0 +0.9**
DPC MLR MLR
comp=Z,3µm,17.8s
DPC Dobruska-Polom 83.47 324 *e*P **P** **15 14 26.0 +0.9**
DPC AMS AMS 15 54 10.0

comp=Z,3µm,17.8s
BLKB Belogradchik 83.48 316 ⇓P **P** **15 14 25.6 +0.4**
CHVC Chvalec 83.48 324 *e*P **P** **15 14 25.7 +0.6**
CHVC AMS AMS 15 55 10.0
comp=Z,3µm,14.5s
KRPM Rodgers 83.52 47 P **P** **15 14 25.6 +0.1**
KRPM IAmb IAmb 15 14 34.3
comp=Z,34nm,1.1s
C09A Chrisman Ranch 83.54 39 P **P** **15 14 25.6 +0.2**
C09A IAmb IAmb 15 14 44.7
comp=Z,27nm,1.1s
UPC Upice 83.55 324 *e*P **P** **15 14 26.1 +0.7**
UPC MLR MLR
comp=Z,3µm,17.6s
UPC Upice 83.55 324 *e*P **P** **15 14 26.1 +0.7**
UPC AMS AMS 15 54 20.0
comp=Z,3µm,17.6s
I05D Terrebonne, OR 83.59 43 P **P** **15 14 25.8 0.0**
baz=302
JAVC Velka Javorina 83.59 322 *e*P **P** **15 14 27.6 +1.9**
MQOL MQOL 83.63 290 *i*P **P** **15 14 25.5 -0.8**
MQOL *i* 15 14 33.6
baz=252,slow=14
VTS Vitosha 83.64 315 ⇑P **P** **15 14 27.5 +1.3**
VTS Vitosha 83.64 315 P **P** **15 14 26.1 -0.1**
VTS Vitosha 83.64 315 P **P** **15 14 26.1 -0.1**
VTS pmax pmax
comp=Z,61nm,1.1s
VTS Vitosha 83.64 315 *i*P **P** **15 14 27.2 +1.0**
J04D Umpqua National 83.68 44 P **P** **15 14 26.7 +0.2**
J04D Umpqua National 83.68 44 P **P** **15 14 25.5 -1.0**
baz=301
E08A Dider Farm, El 83.80 41 P **P** **15 14 27.3 +0.5**
E08A IAmb IAmb 15 14 44.5
comp=Z,16nm,0.8s
MMB Musomiste 83.85 314 *i*P **P** **15 14 27.9 +0.7**
SMOL Smolenice 83.92 322 *e*P **P** **15 14 29.0 +1.6**
SMOL pmax pmax
comp=Z,21nm,1.1s
SMOL Smolenice 83.92 322 *e*P **P** **15 14 29.0 +1.6**
NEW Newport 83.92 38 P **P** **15 14 27.2 -0.3**
NEW Newport 83.92 38 P **P** **15 14 27.2 -0.3**
NEW pmax pmax
comp=Z,12nm,0.9s
NEW Newport 83.92 38 P **P** **15 14 26.7 -0.7**
baz=304
VRAC Vranov 83.93 323 ⇑P **P** **15 14 29.0 +1.6**
VRAC Vranov 83.93 323 LR LR 15 55 09.6
comp=Z,3µm,18.1s,baz=61,slow=38
VRAC Vranov 83.93 323 ⇑P **P** **15 14 29.0 +1.6**
VRAC Vranov 83.93 323 *e*P **P** **15 14 28.3 +0.9**
ICESG Greenland Ices 83.98 356 *i*P **P** **15 14 27.1 -0.6**
ICESG IAmb IAmb 15 14 49.3
comp=Z,154nm,2.0s
YBH Yreka Blue Hor 84.08 46 LR LR 15 43 35.5
comp=Z,259nm,21.7s,baz=318,slow=30
YBH Yreka Blue Hor 84.08 46 P **P** **15 14 28.8 +0.4**
YBH Yreka Blue Hor 84.08 46 P **P** **15 14 28.8 +0.4**
YBH pmax pmax
comp=Z,12nm,1.1s
MODS Modra-Piesok 84.08 322 *e*P **P** **15 14 29.8 +1.6**
MODS pmax pmax
comp=Z,110nm,1.2s
MODS Modra-Piesok 84.08 322 *e*P **P** **15 14 29.8 +1.6**
L04D Klamath Falls 84.09 45 P **P** **15 14 28.6 +0.1**
L04D IAmb IAmb 15 14 34.5
comp=Z,28nm,0.9s
L04D Klamath Falls 84.09 45 P **P** **15 14 28.2 -0.4**
baz=301
CSKK Cskako 84.10 321 P **P** **15 14 28.8 +0.5**
PINE Pine Mountain 84.12 44 P **P** **15 14 29.6 +0.9**
KKB Krupnik 84.12 314 *i*P **P** **15 14 29.2 +0.7**
ILULI Ilulissat 84.14 0 IAMs_20 IAMs_20 15 52 09.8
comp=Z,704nm,19.0s
KRUC Moravsky 84.17 323 P **P** **15 14 29.6 +0.9**
KRUC pmax pmax
comp=Z,24nm,1.1s
KRUC Moravsky 84.17 323 *e*P **P** **15 14 29.5 +0.9**
SRS Serrai 84.18 313 P **P** **15 14 28.6 -0.2**
SRS pmax pmax
comp=Z,27nm,1.0s
J05D Fort Rock, OR 84.20 44 P **P** **15 14 28.7 -0.4**
baz=302
K04D Chiloquin, OR 84.22 45 P **P** **15 14 28.8 -0.3**
baz=302
ZST Bratislava 84.28 322 *e*P **P** **15 14 30.7 +1.5**
ZST pmax pmax
comp=Z,78nm,1.3s
ZST Bratislava 84.28 322 *e*P **P** **15 14 30.7 +1.5**
BSEG Bad Segeberg 84.28 329 P **P** **15 14 29.8 +0.8**
BSEG pmax pmax
comp=Z,66nm,1.0s
PVCC Panska Ves 84.29 325 *e*P **P** **15 14 30.4 +1.2**
PVCC MLR MLR
comp=Z,4µm,15.5s
PVCC Panska Ves 84.29 325 *e*P **P** **15 14 30.4 +1.2**
PVCC AMS AMS 15 56 30.0
comp=Z,4µm,15.5s
E09A Wood Farm, Sta 84.32 40 P **P** **15 14 30.2 +0.8**
E09A IAmb IAmb 15 14 31.9
comp=Z,23nm,1.0s
BRG Berggiesshubel 84.40 325 *e*P **P** **15 14 30.7 +0.9**
BRG Amp 15 14 31.6
comp=Z,19nm,1.1s
BRG *ex* x 15 14 33.2
BRG Amp 15 14 35.0
comp=Z,32nm,1.1s
BRG *ex* x 15 14 41.1
BRG Amp 15 14 43.9
comp=Z,25nm,1.2s
BRG Amp 15 56 50.0
comp=N,2.0nm,16.1s
BRG Amp 15 56 58.0
comp=E,3.0nm,18.0s
BRG Amp 15 57 02.0
comp=Z,4.8nm,16.6s
BRG Berggiesshubel 84.40 325 *e*P **P** **15 14 30.6 +0.9**
BRG *e* 15 14 33.2
BRG *e* 15 14 41.0
BRG pmax pmax
comp=Z,19nm,1.1s
FRGS Fruska Gora 84.41 318 ⇓P **P** **15 14 30.3 +0.3**
FRGS Fruska Gora 84.41 318 *e*P **P** **15 14 29.4 -0.5**
SOH Sokhos 84.49 313 P **P** **15 14 29.2 -1.2**
SOH pmax pmax
comp=Z,9.0nm,0.9s
G08A Pilot Rock 84.51 42 P **P** **15 14 30.9 +0.3**
MORH Mrgy, Hungar 84.52 320 ⇓P **P** **15 14 30.5 0.0**
MORH Mrgy, Hungar 84.52 320 ⇓*i*P **P** **15 14 30.4 0.0**
MORH Mrgy, Hungar 84.52 320 P **P** **15 14 30.7 +0.3**
KARP Karpathos 84.52 307 IAMs_20 IAMs_20 15 59 09.0
comp=Z,1µm,18.0s
TREC Trest 84.53 323 *e*P **P** **15 14 31.5 +1.1**
TREC MLR MLR
comp=Z,4µm,15.1s
TREC Trest 84.53 323 *e*P **P** **15 14 31.5 +1.1**
TREC AMS AMS 15 55 50.0
comp=Z,4µm,15.1s
EGYH Egyhazaskeszo 84.59 321 P **P** **15 14 32.5 +1.7**
KNT Kendrikon 84.61 314 P **P** **15 14 31.4 +0.4**
KNT pmax pmax
comp=Z,25nm,1.3s
MPLH Magyarpolny 84.61 321 P **P** **15 14 31.7 +0.8**
CLL Collm 84.62 326 P **P** **15 14 30.5 -0.3**
CLL Collm 84.62 326 ⇓*i*P **P** **15 14 31.2 +0.4**
CLL *i* 15 14 33.4
CLL pmax pmax
comp=Z,39nm,1.1s
CLL Collm 84.62 326 ⇓*i*P **P** **15 14 31.2 +0.4**
comp=Z,39nm,1.1s
CLL *i* Pmax 15 14 33.4
comp=Z,53nm,0.9s
CLL *e*S **S** **15 25 03.0 +5.3**
CLL LmH 15 50 00.0
comp=N,6µm,18.6s
CLL LmH 15 50 00.0
comp=E,4µm,21.1s
PRU Pruhonice 84.62 324 *e*P **P** **15 14 31.7 +0.9**
PRU MLR MLR
comp=Z,3µm,14.9s
PRU Pruhonice 84.62 324 *e*P **P** **15 14 31.7 +0.9**
PRU AMS AMS 15 56 00.0
comp=Z,3µm,14.9s
K05A Summer Lake 84.71 44 P **P** **15 14 31.7 -0.1**
K05A IAmb IAmb 15 14 49.4

comp=Z,23nm,1.0s
PAIG Paliouri 84.73 312 P **P** **15 14 29.5 -2.1**
PAIG pmax pmax
comp=Z,38nm,1.1s
I07A Izee 84.84 43 P **P** **15 14 32.3 +0.1**
SOP Sopron 84.87 322 P **P** **15 14 32.8 +0.6**
SOP pmax pmax
comp=Z,13nm,1.7s
SOP Sopron 84.87 322 P **P** **15 14 33.4 +1.2**
DIVS Divibare 84.87 317 IAMs_20 IAMs_20 15 55 28.7
comp=Z,2µm,19.0s
DIVS Divibare 84.87 317 ⇓*i*P **P** **15 14 32.2 -0.2**
KOVH Kovagototos 84.90 320 P **P** **15 14 33.1 +0.7**
RONA Rosalia, Austr 85.01 322 *i*P **P** **15 14 34.7 +1.8**
comp=Z,20nm,1.3s,SNR=9.8
GRG Griva 85.03 314 P **P** **15 14 33.3 +0.1**
GRG pmax pmax
comp=Z,19nm,2.0s
CONA Conrad Observa 85.12 322 *i*P **P** **15 14 34.9 +1.4**
comp=Z,41nm,1.1s,SNR=36
F10A Beach Ranch, E 85.15 40 P **P** **15 14 34.5 +0.8**
SANT Santorini 85.32 308 IAMs_20 IAMs_20 15 58 18.0
comp=Z,947nm,20.0s
SJES Sjenica 85.34 317 ⇓*i*P **P** **15 14 34.9 +0.1**
BBLS Lazići 85.36 317 ⇓*i*P **P** **15 14 35.1 +0.3**
LIT Litokhoron 85.42 313 P **P** **15 14 33.9 -1.2**
LIT IAmb IAmb 15 14 46.1
comp=Z,48nm,1.4s
LIT Litokhoron 85.42 313 P **P** **15 14 33.9 -1.2**
LIT pmax pmax
comp=Z,48nm,1.4s
CKRC Cesky Krumlov 85.43 323 *e*P **P** **15 14 35.4 +0.4**
RUDO Rudo 85.51 317 ⇓*i*P **P** **15 14 35.4 -0.1**
MOD Modoc Plateau 85.52 45 P **P** **15 14 36.1 +0.4**
MOD IAmb IAmb 15 14 40.9
comp=Z,21nm,1.1s
NKC Novy Kostel 85.55 325 *e*P **P** **15 14 33.3 -2.3**
NKC MLR MLR
comp=Z,6µm,16.5s
NKC Novy Kostel 85.55 325 *e*P **P** **15 14 33.3 -2.3**
NKC AMS AMS 15 56 50.0
comp=Z,6µm,16.5s
KHC Kasperske Hory 85.63 324 P **P** **15 14 35.8 -0.2**
KHC Kasperske Hory 85.63 324 *e*P **P** **15 14 36.5 +0.5**
KHC MLR MLR
comp=Z,4µm,17.9s
KHC Kasperske Hory 85.63 324 *e*P **P** **15 14 36.5 +0.5**
KHC *ex* x 15 14 52.5
KHC AMS AMS 15 55 40.0
comp=Z,4µm,17.9s
ARSA Arzberg 85.70 322 *i*P **P** **15 14 37.4 +1.0**
comp=Z,20nm,1.6s,SNR=8.1
MOX Moxa 85.72 326 P **P** **15 14 36.0 -0.4**
MOX pmax pmax
comp=Z,12nm,2.7s
BMO Blue Mountains 85.73 41 P **P** **15 14 36.9 +0.2**
BMO IAmb IAmb 15 14 44.1
comp=Z,19nm,1.0s
BMO Blue Mountains 85.73 41 P **P** **15 14 36.9 +0.2**
BMO pmax pmax
comp=Z,19nm,1.0s
GEC2 GERESS Array S 85.74 324 P **P** **15 14 35.9 -0.7**
GERES GERESS Array B 85.74 324 P **P** **15 14 36.8 +0.2**
comp=Z,8.9nm,0.9s,baz=48,slow=2.0,SNR=28
GERES LR LR 15 56 17.2
comp=Z,4µm,18.4s,baz=61,slow=38
comp=Z,8.9nm,0.9s
GERES GERESS Array B 85.74 324 P **P** **15 14 35.9 -0.7**
FNA Florina 85.79 314 P **P** **15 14 36.8 -0.2**
FNA pmax pmax
comp=Z,15nm,1.7s
J08A Circle Bar Ran 85.86 43 P **P** **15 14 38.0 +0.6**
J08A IAmb IAmb 15 14 45.2
comp=Z,26nm,0.9s
BORG Borgarnes 85.99 348 LR LR 15 54 25.4
comp=Z,426nm,20.6s,baz=50,slow=37
WET Wettzell 85.99 324 P **P** **15 14 39.3 +1.5**
WET pmax pmax
comp=Z,10.0nm,1.6s
ORV Oroville 86.00 47 P **P** **15 14 37.7 -0.3**
ORV Oroville 86.00 47 P **P** **15 14 37.7 -0.3**
ORV pmax pmax
comp=Z,12nm,0.9s
UPM Unac-Piva 86.02 317 *e*P **P** **15 14 38.0 -0.3**
MOA Molln 86.03 323 *i*P **P** **15 14 39.1 +1.1**
comp=Z,39nm,1.1s,SNR=19
GROS Grobnik 86.17 321 *i*P **P** **15 14 38.8 0.0**
BLY Banja Luka 86.19 319 ⇓*i*P **P** **15 14 39.1 +0.3**
PDG Podgorica 86.23 316 ⇓P **P** **15 14 39.9 +0.8**
PDG Podgorica 86.23 316 P **P** **15 14 38.8 -0.2**
PDG IAMs_20 IAMs_20 15 56 32.7
comp=Z,2µm,21.0s
PDG Podgorica 86.23 316 *e*P **P** **15 14 39.4 +0.4**
KBN Korca 86.25 314 P **P** **15 14 38.8 -0.5**
KBN IAmb IAmb 15 14 43.9
comp=Z,31nm,0.9s
KBN Korca 86.25 314 P **P** **15 14 38.8 -0.5**
KBN pmax pmax
comp=Z,31nm,0.9s
IDI Anoyia 86.26 308 LR LR 15 59 14.0
comp=Z,794nm,20.7s,baz=40,slow=40
WVOR Wild Horse Val 86.27 44 P **P** **15 14 39.6 +0.2**
WVOR IAmb IAmb 15 14 49.1
comp=Z,19nm,0.9s
WVOR Wild Horse Val 86.27 44 P **P** **15 14 39.6 +0.2**
WVOR pmax pmax
comp=Z,19nm,1.0s
SOKA Soboth 86.30 321 *i*P **P** **15 14 40.2 +0.7**
comp=Z,16nm,0.7s,SNR=14
SFJD Kangerlussuaq 86.37 0 LR LR 15 54 22.4
comp=Z,470nm,18.8s,baz=11,slow=36
SFJD Kangerlussuaq 86.37 0 IAMs_20 IAMs_20 15 51 23.7
comp=Z,767nm,22.0s
SFJD Kangerlussuaq 86.37 0 *e*P P 15 14 34.0 -5.2
SFJD IAmb IAmb 15 15 01.3
comp=Z,21nm,0.8s
DRME Dracevica, Mon 86.41 316 *e*P **P** **15 14 39.0 -1.0**
BRY Bratogost 86.41 317 *e*P **P** **15 14 39.1 -1.0**
MGRS Mrkonjic Grad 86.44 319 *e*P **P** **15 14 40.8 +0.7**
TIR Tirane 86.45 315 ⇓P **P** **15 14 38.1 -2.1**
TIR Tirane 86.45 315 P **P** **15 14 40.0 -0.2**
TIR Tirane 86.45 315 P **P** **15 14 40.0 -0.2**
TIR pmax pmax
comp=Z,72nm,1.1s
BIOA Bad Ischl, Aus 86.47 323 *e*P **P** **15 14 41.7 +1.6**
comp=Z,22nm,1.1s
GRA1 Grafenberg Arr 86.51 325 P **P** **15 14 39.7 -0.6**
GRA1 IAmb IAmb 15 14 55.7
comp=Z,29nm,1.2s
GRF Grafenberg Arr 86.51 325 P **P** **15 14 39.7 -0.6**
GRF pmax pmax
comp=Z,29nm,1.2s
GRFO Grafenberg 86.51 325 P **P** **15 14 39.6 -0.7**
GRFO IAmb IAmb 15 15 02.3
comp=Z,58nm,1.5s
GRFO Grafenberg 86.51 325 P **P** **15 14 39.6 -0.7**
GRFO pmax pmax
comp=Z,58nm,1.5s
MSO Missoula 86.51 38 P **P** **15 14 40.4 -0.2**
MSO Missoula 86.51 38 P **P** **15 14 39.2 -1.3**
baz=306
CRES Cresnjev 86.56 321 *e*P **P** **15 14 40.4 -0.2**
BEKR Beckworth 86.57 47 P **P** **15 14 41.0 0.0**
BEKR IAmb IAmb 15 14 43.0
comp=Z,21nm,0.9s
OBKA Obir 86.67 321 *e*P **P** **15 14 41.9 +0.6**
comp=Z,12nm,1.1s
HCY Herceg Novi 86.69 316 *e*P **P** **15 14 41.1 -0.2**
LJU Ljubljana 86.96 321 *e*P **P** **15 14 42.6 0.0**
LJU Ljubljana 86.96 321 *i*P **P** **15 14 43.0 +0.5**
KBA Koelnbreinsper 87.00 322 *e*P **P** **15 14 43.2 +0.2**
comp=Z,22nm,1.2s
KBA Koelnbreinsper 87.00 322 P **P** **15 14 43.4 +0.5**
KBA pmax pmax
comp=Z,24nm,0.9s
MYKA Terra Mystica 87.10 322 *e*P **P** **15 14 43.6 +0.3**
comp=Z,17nm,0.9s
CEY Cerknica 87.20 321 *e*P **P** **15 14 43.5 -0.3**
PAHR Pah Rah Range 87.29 46 P **P** **15 14 44.6 +0.1**
PAHR IAmb IAmb 15 15 01.9
comp=Z,15nm,0.9s
ITM Ithomi 87.33 311 P **P** **15 14 43.2 -1.4**
MFID Camas Ranch 87.42 42 P **P** **15 14 45.6 +0.6**
MFID IAmb IAmb 15 15 02.5
comp=Z,15nm,0.9s

FURI Furi 87.44 279 IAMs_20 IAMs_20 16 01 41.2
comp=Z,713nm,22.0s
PNTR Pine Nut 87.49 47 P **P** **15 14 44.8 -0.8**
PNTR IAmb IAmb 15 15 04.5
comp=Z,14nm,0.8s
CMB Columbia Colle 87.54 48 P **P** **15 14 45.5 -0.1**
CMB Columbia Colle 87.54 48 P **P** **15 14 45.5 -0.1**
CMB pmax pmax
comp=Z,12nm,0.9s
SKDS Skadanscina 87.55 321 *e*P **P** **15 14 47.0 +1.6**
TNS Taunus Mts 87.55 327 P **P** **15 14 45.9 +0.5**
TNS pmax pmax
comp=Z,13nm,0.9s
ABTA Abfaltersbach 87.65 322 *i*P **P** **15 14 45.8 -0.2**
comp=Z,25nm,0.9s,SNR=14
HRY Holter Researc 87.74 37 P **P** **15 14 46.8 +0.3**
WATA Walderalm 87.79 323 *e*P **P** **15 14 46.7 0.0**
comp=Z,16nm,1.2s
WTTA Wattenberg 87.80 323 *e*P **P** **15 14 47.0 +0.2**
comp=Z,18nm,1.4s
WTTA Wattenberg 87.80 323 P **P** **15 14 47.3 +0.5**
WTTA pmax pmax
comp=Z,19nm,1.4s
STAL STALIGIAL 87.84 322 P **P** **15 14 46.3 -0.5**
LRM Limekiln Ridge 87.94 38 P **P** **15 14 47.5 -0.1**
EGMT Eagleton 88.03 36 P **P** **15 14 47.0 -0.8**
baz=310
MOTA Moosalm 88.04 324 *e*P **P** **15 14 46.6 -1.3**
comp=Z,5.3nm,1.1s
SQTA Sankt Quirin 88.06 323 *e*P **P** **15 14 48.2 +0.2**
comp=Z,7.9nm,1.1s
RETA Reutte 88.13 324 *e*P **P** **15 14 48.5 +0.3**
comp=Z,8.2nm,1.2s
HLID Hailey 88.17 41 P **P** **15 14 49.9 +1.2**
HLID Hailey 88.17 41 P **P** **15 14 48.5 -0.2**
baz=306
BMN Battle Mountai 88.27 45 P **P** **15 14 49.4 +0.2**
BMN IAmb IAmb 15 14 52.1
comp=Z,20nm,1.1s
BMN Battle Mountai 88.27 45 P **P** **15 14 49.4 +0.2**
BMN pmax pmax
comp=Z,20nm,1.1s
BCYI Bear Canyon 88.31 40 P **P** **15 14 49.5 +0.1**
FRB Frobisher Bay 88.42 8 LR LR 15 55 13.1
comp=Z,987nm,21.9s,baz=354,slow=36
FETA Feichten 88.44 323 *e*P **P** **15 14 48.7 -1.2**
comp=Z,6.1nm,1.3s
RYN Ryan 88.44 47 P **P** **15 14 50.5 +0.4**
RYN IAmb IAmb 15 15 07.3
comp=Z,19nm,1.3s
KVN Kaiserville 88.48 46 P **P** **15 14 50.8 +0.5**
KVN IAmb IAmb 15 15 07.5
comp=Z,24nm,1.4s
KVN Kaiserville 88.48 46 P **P** **15 14 50.8 +0.5**
KVN pmax pmax
comp=Z,24nm,1.4s
BOZ Bozeman (W) 88.53 38 P **P** **15 14 50.8 +0.5**
BOZ IAmb IAmb 15 15 08.2
comp=Z,18nm,1.1s
BOZ Bozeman (W) 88.53 38 P **P** **15 14 50.8 +0.5**
BOZ pmax pmax
comp=Z,18nm,1.1s
BOZ Bozeman (W) 88.53 38 P **P** **15 14 49.0 -1.3**
baz=308,SNR=18
CTI Castel Tesino 88.55 322 P **P** **15 14 50.3 0.0**
CTI IAmb IAmb 15 15 02.4
comp=Z,17nm,1.0s
CTI Castel Tesino 88.55 322 P **P** **15 14 50.3 0.0**
CTI pmax pmax
comp=Z,17nm,1.0s
BHOU Houvegnez 88.64 328 *d*PcP **P** **15 14 50.5 0.0**
NVAR Mina Array Bea 88.70 47 P **P** **15 14 52.3 +1.0**
comp=Z,4.6nm,0.8s,baz=281,slow=4.9,SNR=27
NVAR LR LR 15 48 23.6
comp=Z,158nm,21.0s,baz=346,slow=31
comp=Z,4.6nm,0.8s
NVAR Mina Array Bea 88.70 47 P **P** **15 14 51.7 +0.3**
DAVA Damuels 88.72 324 *e*P **P** **15 14 50.5 -0.6**
comp=Z,14nm,1.2s
NV11 Mina Array Sit 88.79 47 P **P** **15 14 51.6 -0.1**
BFO Black Forest 88.84 326 P **P** **15 14 52.2 +0.7**
BFO pmax pmax
comp=Z,14nm,1.1s
EKA Eskdalemuir Ar 88.92 335 LR LR 16 00 13.6
comp=Z,3µm,18.6s,baz=40,slow=39
EKA Eskdalemuir Ar 88.92 335 P **P** **15 14 50.0 -1.7**
BCLA Clavier 88.92 328 *d*PcP **P** **15 14 51.5 -0.3**
ESK Eskdalemuir 88.95 335 P **P** **15 14 51.1 -0.7**
ESK IAmb IAmb 15 14 57.3
comp=Z,14nm,0.8s
ESK Eskdalemuir 88.95 335 P **P** **15 14 51.2 -0.7**
TEOL Teolo 88.97 322 P **P** **15 14 51.8 -0.3**
WLF Walferdange 89.03 327 P **P** **15 14 51.9 -0.4**
WLF IAmb IAmb 15 14 57.1
comp=Z,29nm,1.1s
WLF Walferdange 89.03 327 P **P** **15 14 51.9 -0.4**
WLF pmax pmax
comp=Z,29nm,1.1s
WLF Walferdange 89.03 327 *d*PcP **P** **15 14 52.5 +0.2**
DAVOX Davos/Dischmat 89.04 324 LR LR 15 58 33.9
comp=Z,3µm,18.0s,baz=46,slow=38
BGES Gesves 89.05 328 *d*PcP **P** **15 14 52.7 +0.3**
RCHB Rochefort 89.14 328 *d*PcP **P** **15 14 52.5 -0.3**
YHL Hebgen Lake 89.25 39 P **P** **15 14 53.8 -0.1**
YHL IAmb IAmb 15 15 04.7
comp=Z,28nm,1.1s
BMRD Maredsous 89.25 329 *d*PcP **P** **15 14 53.2 -0.1**
ELK Elko 89.33 44 LR LR 15 53 09.4
comp=Z,80nm,18.4s,baz=340,slow=34
GIVF Givet 89.36 328 *e*P **P** **15 14 53.6 -0.3**
GIVF pmax pmax
comp=Z,16nm,1.0s
PPT Papeete 89.39 110 LR LR 15 46 57.9
comp=Z,771nm,21.9s,baz=302,slow=30
PPT2 Papeete2 89.40 110 *e*LR LR 15 43 02.8
comp=Z,2µm,23.5s
DOU Dourbes 89.47 328 *d*PcP **P** **15 14 54.2 -0.2**
GCMT Greycliff 89.49 37 P **P** **15 14 54.4 -0.4**
ECH Echery 89.51 326 P **P** **15 14 54.0 -0.7**
ECH Echery 89.51 326 P **P** **15 14 54.0 -0.7**
ECH pmax pmax
comp=Z,9.0nm,1.2s
TUE Stuetta 89.52 324 P **P** **15 14 53.6 -1.4**
TUE IAmb IAmb 15 15 01.3
comp=Z,29nm,1.1s
PKM Mcpherson Peak 89.62 51 P **P** **15 14 55.9 +0.2**
baz=303
TIP Timpagrande 89.63 315 P **P** **15 14 54.7 -0.8**
TIP IAmb IAmb 15 14 59.7
comp=Z,25nm,1.1s
TIP IAMs_20 IAMs_20 16 00 55.7
comp=Z,1µm,21.0s
BAIF Baives 89.68 329 *e*P **P** **15 14 53.6 -1.8**
BAIF pmax pmax
comp=Z,4.0nm,0.4s
NRCA Norcia 89.70 319 P **P** **15 14 55.3 -0.4**
NRCA IAmb IAmb 15 15 01.6
comp=Z,20nm,1.1s
LCH Last Change Ra 89.80 48 P **P** **15 14 56.8 +0.4**
AQU L'Aquila 89.82 319 P **P** **15 14 58.2 +1.9**
AQU pmax pmax
comp=Z,41nm,1.1s
H17A Grant Village 89.87 39 P **P** **15 14 57.2 +0.5**
baz=309,SNR=14
HINF Hinteralfeld 89.93 326 *e*P **P** **15 14 55.3 -1.4**
HINF pmax pmax
comp=Z,18nm,1.6s
SBC Santa Barbara 89.94 51 P **P** **15 14 57.8 +0.9**
baz=303
CWC Cottonwood Cre 89.95 49 P **P** **15 14 55.5 -1.7**
baz=304
GRAC Grapevine Rang 90.11 48 P **P** **15 14 58.3 +0.6**
baz=304
ISA Isabella, Lake 90.12 49 P **P** **15 14 58.2 +0.3**
baz=304
RLMT Red Lodge 90.13 38 P **P** **15 14 58.5 +0.6**
RLMT IAmb IAmb 15 15 05.8
comp=Z,25nm,1.2s
RLMT Red Lodge 90.13 38 P **P** **15 14 59.1 +1.2**
baz=310,SNR=8.6
ARVC Arvin 90.17 50 P **P** **15 14 58.2 +0.2**
baz=304
HVU Hansel Valley 90.21 42 P **P** **15 14 58.8 +0.5**
HVU IAmb IAmb 15 15 06.5
comp=Z,21nm,1.0s
HVU Hansel Valley 90.21 42 P **P** **15 14 58.8 +0.5**

HVU					pmax	pmax			
	comp=Z,21nm,1.0s								
TPAW	**Teton Pass**	**90.22**	**40**	P	**P**		**15 14 58.5**	**0.0**	
SCZ2	**Santa Cruz Isl**	**90.23**	**51**	P	**P**		**15 14 56.6**	**-1.7**	
	baz=303								
LOHW	**Long Hollow**	**90.34**	**39**	P	**P**		**15 14 59.7**	**+0.7**	
REDW	**Red Top Meadow**	**90.36**	**40**	P	**P**		**15 14 59.5**	**+0.5**	
REDW				IAmb	IAmb		15 15 04.8		
	comp=Z,35nm,1.5s								
R11A	**Troy Canyon, C**	**90.50**	**46**	P	**P**		**15 15 00.6**	**+0.9**	
R11A	**Troy Canyon, C**	**90.50**	**46**	P	**P**		**15 14 59.8**	**0.0**	
	baz=306								
DGMT	**Dagmar**	**90.52**	**33**	P	**P**		**15 14 59.0**	**-0.4**	
DGMT				IAmb	IAmb		15 15 06.7		
	comp=Z,37nm,1.3s								
DGMT	**Dagmar**	**90.52**	**33**	P	**P**		**15 14 59.4**	**0.0**	
	baz=314								
OSI	**Osito Audit: C**	**90.53**	**50**	P	**P**		**15 14 59.9**	**+0.1**	
	baz=304								
MPMC	**Manual Prospec**	**90.56**	**49**	P	**P**		**15 14 59.2**	**-0.9**	
	baz=304								
BGU	**Big Grassy Mou**	**90.57**	**43**	P	**P**		**15 14 59.0**	**-1.0**	
BGU				IAmb	IAmb		15 15 11.7		
	comp=Z,31nm,1.4s								
CEL	**Celeste**	**90.71**	**314**	P	**P**		**15 14 60.0**	**-0.5**	
CEL				IAMs_20	IAMs_20		16 01 19.4		
	comp=Z,1µm,20.0s								
LAO	**LASA Array**	**90.72**	**35**	P	**P**		**15 15 00.4**	**0.0**	
LAO				IAmb	IAmb		15 15 05.7		
	comp=Z,20nm,1.0s								
LAO	**LASA Array**	**90.72**	**35**	P	**P**		**15 15 02.2**	**+1.8**	
	baz=312								
LAO	**LASA Array**	**90.72**	**35**	P	**P**		**15 14 59.5**	**-0.9**	
	baz=312								
SNCC	**San Nicolas Is**	**90.72**	**52**	P	**P**		**15 15 00.5**	**-0.1**	
	baz=303								
FURC	**Furnace Creek,**	**90.75**	**48**	P	**P**		**15 15 00.6**	**0.0**	
	baz=305								
TPNV	**Topopah Spring**	**90.88**	**47**	P	**P**		**15 15 01.6**	**+0.1**	
TPNV	**Topopah Spring**	**90.88**	**47**	P	**P**		**15 15 01.6**	**+0.1**	
TPNV				pmax	pmax				
	comp=Z,12nm,1.1s								
TPNV	**Topopah Spring**	**90.88**	**47**	P	**P**		**15 15 01.6**	**+0.1**	
	baz=305								
EDW2	**Edwards Air Fo**	**90.88**	**50**	P	**P**		**15 15 01.0**	**-0.3**	
	baz=304								
QSM	**Queen of Sheba**	**91.03**	**48**	P	**P**		**15 15 02.0**	**0.0**	
DUG	**Dugway, Tooele**	**91.14**	**43**	P	**P**		**15 15 03.2**	**+0.6**	
DUG				IAmb	IAmb		15 15 08.3		
	comp=Z,20nm,1.0s								
DUG	**Dugway, Tooele**	**91.14**	**43**	P	**P**		**15 15 03.2**	**+0.6**	
DUG				pmax	pmax				
	comp=Z,20nm,1.0s								
DUG	**Dugway, Tooele**	**91.14**	**43**	P	**P**		**15 15 03.2**	**+0.6**	
	baz=307,SNR=21								
BFSC	**Mount Baldy Ra**	**91.47**	**50**	P	**P**		**15 15 04.0**	**-0.2**	
	baz=304								
BW06	**Boulder Array**	**91.47**	**40**	P	**P**		**15 15 04.0**	**-0.1**	
BW06	**Boulder Array**	**91.47**	**40**	P	**P**		**15 15 04.1**	**-0.1**	
	baz=310,SNR=16								
PD31	**Pinedale Array**	**91.47**	**40**	P	**P**		**15 15 04.2**	**0.0**	
PDAR	**Pinedale Array**	**91.47**	**40**	P	**P**		**15 15 04.5**	**+0.4**	
	comp=Z,6.8nm,0.9s,baz=318,slow=2.0,SNR=35								
	comp=Z,6.8nm,0.9s								
PSUT	**Pine Spring**	**91.49**	**45**	P	**P**		**15 15 04.8**	**+0.5**	
PSUT				IAmb	IAmb		15 15 09.1		
	comp=Z,12nm,0.9s								
LPL	**La Plagne**	**91.52**	**324**	*e*P	**P**		**15 15 06.7**	**+2.3**	
LPL				pmax	pmax				
	comp=Z,5.0nm,0.7s								
LPG	**La Plagne**	**91.53**	**324**	*e*P	**P**		**15 15 06.8**	**+2.3**	
LPG				pmax	pmax				
	comp=Z,7.0nm,0.8s								
SCI2	**San Clemente I**	**91.55**	**52**	P	**P**		**15 15 04.0**	**-0.5**	
	baz=304								
JLU	**Jordanelle**	**91.72**	**42**	P	**P**		**15 15 05.6**	**+0.2**	
JLU				IAmb	IAmb		15 15 19.6		
	comp=Z,29nm,1.4s								
DSB	**Dublin**	**91.73**	**336**	IAMs_20	IAMs_20		16 01 36.3		
	comp=Z,2µm,20.0s								
NLU	**North Lily Min**	**91.74**	**43**	P	**P**		**15 15 06.2**	**+0.7**	
NLU				IAmb	IAmb		15 15 08.3		
	comp=Z,18nm,1.0s								
SHPR	**Sheep Range**	**91.85**	**47**	P	**P**		**15 15 06.3**	**+0.3**	
TUQ	**Turquoise Moun**	**91.96**	**48**	P	**P**		**15 15 06.7**	**+0.2**	
	baz=305								
MPU	**Maple Canyon**	**91.97**	**43**	P	**P**		**15 15 06.9**	**+0.4**	
MPU				IAmb	IAmb		15 15 09.3		
	comp=Z,20nm,1.0s								
HEC	**Hector,Ludlow**	**92.03**	**49**	P	**P**		**15 15 06.6**	**-0.2**	
	baz=305								
VAE	**Valguarnera**	**92.12**	**314**	LR	LR		16 01 03.5		
	comp=Z,601nm,19.7s,baz=66,slow=38								
MURC	**Murrieta**	**92.14**	**50**	P	**P**		**15 15 07.3**	**+0.1**	
	baz=305								
IVI	**Ivigtut**	**92.18**	**359**	*e*P	**P**		**15 15 07.5**	**+0.8**	
TBI	**Tubuai**	**92.22**	**115**	*e*LR	LR		15 44 09.6		
	comp=Z,2µm,33.0s								
SMF	**Signal de Mont**	**92.23**	**326**	*e*P	**P**		**15 15 09.9**	**+2.6**	
SMF				pmax	pmax				
	comp=Z,19nm,1.4s								
PGF	**Pioggiola**	**92.24**	**321**	*e*P	**P**		**15 15 11.2**	**+3.6**	
PGF				pmax	pmax				
	comp=Z,37nm,1.2s								
AVF	**Avril sur Loir**	**92.37**	**327**	*e*P	**P**		**15 15 09.0**	**+1.1**	
AVF				pmax	pmax				
	comp=Z,10.0nm,1.2s								
CCUT	**Cedar City**	**92.39**	**45**	P	**P**		**15 15 08.6**	**+0.1**	
GMRC	**Granite Mounta**	**92.51**	**49**	P	**P**		**15 15 08.7**	**-0.4**	
	baz=306								
PFO	**Pinyon Flats O**	**92.64**	**50**	LR	LR		15 49 41.5		
	comp=Z,362nm,21.3s,baz=319,slow=31								
PFO	**Pinyon Flats O**	**92.64**	**50**	P	**P**		**15 15 10.2**	**+0.5**	
PFO				IAmb	IAmb		15 15 27.9		
	comp=Z,24nm,1.0s								
PFO	**Pinyon Flats O**	**92.64**	**50**	P	**P**		**15 15 10.2**	**+0.5**	
PFO				pmax	pmax				
	comp=Z,24nm,1.0s								
PFO	**Pinyon Flats O**	**92.64**	**50**	P	**P**		**15 15 09.4**	**-0.2**	
	baz=305,SNR=8.9								
LDF	**La Druitiere**	**92.71**	**330**	*e*P	**P**		**15 15 11.8**	**+2.3**	
LDF				pmax	pmax				
	comp=Z,31nm,1.3s								
BELC	**Belle Mtn. Jos**	**92.73**	**50**	P	**P**		**15 15 10.1**	**0.0**	
	baz=305,SNR=7.6								
FLN	**La Foliniere**	**92.75**	**330**	*e*P	**P**		**15 15 12.0**	**+2.3**	
FLN				pmax	pmax				
	comp=Z,51nm,1.6s								
LCMT	**Little Creek M**	**92.79**	**46**	P	**P**		**15 15 10.7**	**+0.4**	
LCMT				IAmb	IAmb		15 15 28.4		
	comp=Z,17nm,1.0s								
MTPU	**Mount Pierson**	**92.84**	**45**	P	**P**		**15 15 10.3**	**-0.5**	
MTPU				IAmb	IAmb		15 15 29.4		
	comp=Z,20nm,1.0s								
P17A	**Butcher Ranch,**	**92.85**	**43**	P	**P**		**15 15 11.2**	**+0.7**	
ULM	**Lac du Bonnet**	**92.96**	**28**	P	**P**		**15 15 10.5**	**-0.1**	
	comp=Z,8.2nm,0.9s,baz=326,slow=4.7,SNR=10								
	comp=Z,8.2nm,0.9s								
ULM	**Lac du Bonnet**	**92.96**	**28**	P	**P**		**15 15 10.3**	**-0.3**	
ULM				IAmb	IAmb		15 15 12.0		
	comp=Z,12nm,1.0s								
VIVF	**Saint-Julien-l**	**93.04**	**325**	*e*P	**P**		**15 15 15.1**	**+3.9**	
VIVF				pmax	pmax				
	comp=Z,8.0nm,0.8s								
MONP2	**Monument Peak**	**93.08**	**51**	P	**P**		**15 15 12.0**	**+0.2**	
	baz=305,SNR=7.9								
MDND	**Maddock**	**93.13**	**31**	P	**P**		**15 15 11.9**	**+0.4**	
	baz=317								
GRR	**Gorron**	**93.19**	**330**	*e*P	**P**		**15 15 13.3**	**+1.6**	
GRR				pmax	pmax				
	comp=Z,94nm,1.8s								
SRU	**San Rafael Swe**	**93.20**	**43**	P	**P**		**15 15 12.7**	**+0.5**	
SRU				IAmb	IAmb		15 15 16.9		
	comp=Z,14nm,0.9s								
SRU	**San Rafael Swe**	**93.20**	**43**	P	**P**		**15 15 12.7**	**+0.5**	
SRU				pmax	pmax				
	comp=Z,14nm,0.9s								
KMBO	**Kilima Mbogo**	**93.20**	**270**	P	**P**		**15 15 13.0**	**+0.3**	
NEE2	**Needles Airpor**	**93.22**	**48**	P	**P**		**15 15 12.6**	**+0.5**	
	baz=306								
IRM	**Iron Mountain**	**93.22**	**49**	P	**P**		**15 15 13.1**	**+0.9**	
	baz=306,SNR=7.1								
CBX	**Cerro Bola**	**93.24**	**51**	P	**P**		**15 15 12.3**	**-0.1**	
K22A	**Casper**	**93.24**	**38**	P	**P**		**15 15 12.9**	**+0.6**	
K22A	**Casper**	**93.24**	**38**	P	**P**		**15 15 11.9**	**-0.4**	
	baz=312								
BC3	**Big Chuckawall**	**93.30**	**50**	P	**P**		**15 15 12.6**	**-0.1**	
	baz=306								
IKP	**In-Ko-Pah, Jac**	**93.43**	**51**	P	**P**		**15 15 12.7**	**-0.5**	
	baz=305								
SWSC	**Sam W. Stewart**	**93.47**	**50**	P	**P**		**15 15 13.7**	**+0.4**	
	baz=305								
RMX	**La Rumorosa**	**93.48**	**51**	P	**P**		**15 15 14.4**	**+0.9**	
RMX				IAmb	IAmb		15 15 16.4		
	comp=Z,25nm,1.1s								
W13A	**Hualapai Mount**	**93.51**	**48**	P	**P**		**15 15 14.5**	**+0.8**	
W13A				IAmb	IAmb		15 15 16.2		
	comp=Z,11nm,1.0s								
YUH	**Yuha Desert**	**93.56**	**51**	P	**P**		**15 15 14.5**	**+0.8**	
YUH				IAmb	IAmb		15 15 16.3		
	comp=Z,23nm,1.1s								
TAOE	**Nuku Hiva Isla**	**93.57**	**98**	*e*LR	LR		15 44 47.8		
	comp=Z,1µm,28.0s								
RSSD	**Black Hills**	**93.59**	**36**	P	**P**		**15 15 13.3**	**-0.6**	
RSSD				IAmb	IAmb		15 15 26.4		
	comp=Z,17nm,1.3s								
RSSD	**Black Hills**	**93.59**	**36**	P	**P**		**15 15 13.3**	**-0.6**	
RSSD				pmax	pmax				
	comp=Z,17nm,1.3s								
RSSD	**Black Hills**	**93.59**	**36**	P	**P**		**15 15 13.6**	**-0.3**	
	baz=314								
RSSD	**Black Hills**	**93.59**	**36**	P	**P**		**15 15 13.7**	**-0.3**	
	baz=314								
U15A	**North Rim**	**93.75**	**46**	P	**P**		**15 15 15.0**	**+0.1**	
U15A				IAmb	IAmb		15 15 24.1		
	comp=Z,16nm,0.9s								
PDMCI	**Parker Dam,Lak**	**93.81**	**48**	P	**P**		**15 15 15.5**	**+0.7**	
	baz=306,SNR=5.5								
O20A	**White River Ci**	**93.91**	**41**	P	**P**		**15 15 15.0**	**-0.5**	
O20A	**White River Ci**	**93.91**	**41**	P	**P**		**15 15 15.0**	**-0.5**	
	baz=310								
SGMF	**Saint Gilles**	**94.05**	**331**	*e*P	**P**		**15 15 18.3**	**+2.7**	
SGMF				pmax	pmax				
	comp=Z,27nm,1.2s								
GLA	**Glamis**	**94.08**	**50**	P	**P**		**15 15 15.6**	**-0.6**	
GLA	**Glamis**	**94.08**	**50**	P	**P**		**15 15 15.6**	**-0.6**	
GLA				pmax	pmax				
	comp=Z,31nm,1.0s								
GLA	**Glamis**	**94.08**	**50**	P	**P**		**15 15 16.5**	**+0.3**	
	baz=306,SNR=8.8								
AGMN	**Agassiz Nation**	**94.46**	**29**	P	**P**		**15 15 17.5**	**-0.1**	
	baz=320								
PV10	**Paradox Valley**	**94.57**	**43**	P	**P**		**15 15 19.2**	**+0.6**	
PV11	**David Mesa, Pa**	**94.72**	**43**	P	**P**		**15 15 19.6**	**+0.4**	
PV11				IAmb	IAmb		15 15 31.5		
	comp=Z,15nm,1.0s								
N23A	**Red Feather La**	**94.73**	**39**	P	**P**		**15 15 19.5**	**+0.2**	
	baz=312								
Y14A	**Wickenburg**	**94.78**	**48**	P	**P**		**15 15 19.5**	**+0.1**	
PV13	**Radium Mtn., P**	**94.84**	**43**	P	**P**		**15 15 19.0**	**-0.8**	
PV13				IAmb	IAmb		15 15 31.9		
	comp=Z,24nm,1.4s								
WUAZ	**Wupatki**	**94.89**	**46**	P	**P**		**15 15 20.7**	**+0.6**	
WUAZ				IAmb	IAmb		15 15 22.9		
	comp=Z,25nm,1.1s								
WUAZ	**Wupatki**	**94.89**	**46**	P	**P**		**15 15 19.5**	**-0.5**	
	baz=308								
LFF	**La Frestale**	**94.97**	**327**	*e*P	**P**		**15 15 23.8**	**+3.9**	
LFF				pmax	pmax				
	comp=Z,9.0nm,0.8s								
113A	**Mohawk Valley,**	**94.97**	**49**	P	**P**		**15 15 21.2**	**+1.0**	
113A				IAmb	IAmb		15 15 22.7		
	comp=Z,14nm,0.9s								
SMCO	**Snowmass**	**95.28**	**41**	IAMs_20	IAMs_20		15 47 37.8		
	comp=Z,435nm,18.0s								
B35A	**Bob, Littlefor**	**95.32**	**28**	P	**P**		**15 15 21.8**	**+0.3**	
B35A	**Bob, Littlefor**	**95.32**	**28**	P	**P**		**15 15 21.6**	**+0.1**	
	baz=322								
MVCO	**Mesa Verde**	**95.64**	**43**	P	**P**		**15 15 24.1**	**+0.6**	
MVCO	**Mesa Verde**	**95.64**	**43**	P	**P**		**15 15 22.9**	**-0.6**	
	baz=310								
ISCO	**Idaho Springs**	**95.66**	**40**	P	**P**		**15 15 23.0**	**-0.6**	
	baz=312								
SUSD	**Miller**	**95.93**	**33**	P	**P**		**15 15 23.8**	**-0.6**	
	baz=317								
214A	**Organ Pipe Nat**	**96.10**	**50**	P	**P**		**15 15 26.3**	**+0.9**	
214A				IAmb	IAmb		15 15 31.6		
	comp=Z,22nm,1.4s								
214A	**Organ Pipe Nat**	**96.10**	**50**	P	**P**		**15 15 24.2**	**-1.3**	
	baz=307								
S22A	**4UR Ranch, Cre**	**96.30**	**42**	P	**P**		**15 15 26.1**	**-0.4**	
	baz=311								
KEST	**Kesra**	**96.40**	**315**	LR	LR		16 05 17.6		
	comp=Z,1µm,18.4s,baz=7.0,slow=39								
EYMN	**Ely**	**96.56**	**27**	P	**P**		**15 15 26.7**	**-0.4**	
EYMN	**Ely**	**96.56**	**27**	P	**P**		**15 15 25.9**	**-1.2**	
	baz=323								
SDCO	**Great Sand Dun**	**97.09**	**41**	P	**P**		**15 15 29.3**	**-0.8**	
	baz=312								
TUC	**Tucson**	**97.25**	**48**	P	Pdif		15 15 32.9	+2.1	
TUC				pmax	pmax				
	comp=Z,6.0nm,1.4s								
TUC	**Tucson**	**97.25**	**48**	P	**P**		**15 15 29.8**	**-0.9**	
	baz=308								
SCHQ	**Schefferville**	**97.26**	**10**	LR	LR		16 00 33.5		
	comp=Z,954nm,21.3s,baz=24,slow=36								
ECSD	**EROS Data Cent**	**97.58**	**32**	P	**P**		**15 15 30.6**	**-1.2**	
	baz=319								
T25A	**Trinidad**	**98.14**	**41**	P	**P**		**15 15 33.7**	**-1.1**	
	baz=313								
ANMO	**Albuquerque**	**98.36**	**44**	*e*P	Pdif		15 15 37.7	+1.9	
ANMO				pmax	pmax				
	comp=Z,13nm,3.5s								
CBKS	**Cedar Bluff**	**99.61**	**37**	IAMs_20	IAMs_20		16 04 47.1		
	comp=Z,630nm,21.0s								
MNTX	**Cornudas Mount**	**101.17**	**46**	IAMs_20	IAMs_20		16 07 55.4		
	comp=Z,640nm,18.0s								
ESDC	**Sonseca Array**	**101.20**	**326**	P	**Pdif**		**15 15 47.2**	**-0.9**	
	comp=Z,1.6nm,1.0s,baz=31,slow=4.9,SNR=5.4								
ESDC				PP	**PP**		**15 19 52.6**	**-3.7**	
	comp=Z,0.9nm,0.8s,baz=32,slow=7.5,SNR=3.1								
PAB	**San Pablo**	**101.50**	**326**	IAMs_20	IAMs_20		16 04 40.2		
	comp=Z,1µm,21.0s								
TXAR	**Lajitas Array**	**103.84**	**47**	Pdiff	**Pdif**		**15 16 01.0**	**+0.8**	
	comp=Z,1.1nm,0.7s,baz=253,slow=3.8,SNR=12								
TXAR				PP	**PP**		**15 20 13.4**	**-3.2**	
	comp=Z,2.3nm,1.3s,baz=352,slow=2.5,SNR=4.7								
TXAR				PKKPbc	**PKKPbc**		**15 31 51.0**	**+0.5**	
	comp=Z,0.7nm,1.0s,baz=126,slow=1.7,SNR=3.8								
U40A	**Yellville**	**105.08**	**35**	IAMs_20	IAMs_20		16 10 13.4		
	comp=Z,574nm,18.0s								
H06E1	**SOCORRO T-PHAS**	**105.27**	**59**	T	T		17 14 12.8		
	SNR=8.5								
WSPT	**Westport, CT**	**108.80**	**19**	IAMs_20	IAMs_20		15 57 06.1		
	comp=Z,682nm,22.0s								
BOSA	**Bosnof**	**114.71**	**249**	PKP	**PKiKP**		**15 20 38.6**	**+0.2**	
	comp=Z,2.7nm,0.9s,baz=46,slow=2.1,SNR=4.0								
TORD	**Torodi Ar. Bea**	**116.14**	**302**	PKP	**PKPdf**		**15 20 40.6**	**-0.8**	
	comp=Z,1.1nm,0.8s,baz=26,slow=3.0,SNR=4.4								
TORD				PP	**PP**		**15 21 44.3**	**-1.6**	
	comp=Z,2.8nm,0.9s,baz=84,slow=5.2,SNR=7.0								
TORD				PKKPbc	**PKKPab**		**15 31 14.4**	**-2.8**	
	comp=Z,1.0nm,0.8s,baz=276,slow=2.8,SNR=3.5								
TROLL	**Troll, Antarti**	**126.72**	**198**	PKPdf	**PKiKP**		**15 21 00.8**	**+0.1**	
SNAA	**Sanae**	**128.34**	**197**	PKPdf	**PKPdf**		**15 21 03.2**	**+0.1**	
SNAA	**Sanae**	**128.34**	**197**	PKPdf	**PKPdf**		**15 21 03.4**	**+0.2**	
SNAA	**Sanae**	**128.34**	**197**	PKIKP	**PKPdf**		**15 21 03.4**	**+0.2**	
BELA	**Belgrano 2**	**128.50**	**184**	PKPdf	**PKPdf**		**15 21 03.0**	**-0.3**	
JTS	**Las Juntas de**	**129.62**	**47**	IAMs_20	IAMs_20		16 06 08.4		
	comp=Z,509nm,19.0s								
VNA3	**Neumayer Olymp**	**130.34**	**196**	PKPdf	**PKPdf**		**15 21 07.0**	**+0.1**	
VNA1	**Neumayer--Stat**	**130.37**	**197**	PKPdf	**PKiKP**		**15 21 07.8**	**0.0**	
SDV	**Santo Domingo**	**139.03**	**33**	*e*P	**PKiKP**		**15 21 27.5**	**+0.1**	
ROSC	**El Rosal**	**140.46**	**41**	PKP	**PKPdf**		**15 21 28.2**	**+0.2**	
	comp=Z,5.7nm,0.3s,baz=24,slow=15,SNR=4.4								
OTAV	**Otavalo**	**141.36**	**50**	*e*P	**PKiKP**		**15 21 32.4**	**0.0**	
ATAH	**Atahualpa**	**146.40**	**59**	PKPbc	**PKPab**		**15 21 40.5**	**-0.1**	
	comp=Z,17nm,0.9s,baz=357,slow=4.7,SNR=4.5								
MDP	**Montagnes des**	**148.04**	**5**	PKPbc	**PKPbc**		**15 21 43.9**	**+0.1**	
	comp=Z,20nm,0.8s,baz=330,slow=1.5,SNR=10								
BOAV	**Boa Vista**	**149.04**	**21**	*e*P	**PKPbc**		**15 21 45.2**	**-1.2**	
NNA	**Nana**	**150.52**	**65**	PKPbc	**PKPbc**		**15 21 49.6**	**-0.4**	
	comp=Z,24nm,0.7s,baz=340,slow=3.2,SNR=9.2								
NNA	**Nana**	**150.52**	**65**	PKIKP	**PKPbc**		**15 21 49.5**	**-0.5**	
RCBR	**Riachuelo**	**155.23**	**325**	*e*P	**PKPdf**		**15 21 53.8**	**+2.2**	
ITTB	**Itaituba**	**156.84**	**15**	*e*P	**PKPdf**		**15 21 55.9**	**+2.3**	
NBMA	**Muriti-CE**	**157.94**	**330**	*e*P	**PKPdf**		**15 21 57.1**	**+2.0**	
PLCA	**Paso Flores**	**157.96**	**134**	PKPab	**PKPab**		**15 22 27.9**	**+0.3**	
	comp=Z,13nm,1.2s,baz=215,slow=5.8,SNR=4.9								
LPAZ	**La Paz**	**159.90**	**62**	PKP	**PKPdf**		**15 21 59.0**	**+1.0**	
	comp=Z,4.2nm,1.2s,baz=204,slow=2.2,SNR=8.3								
LPAZ				PKPab	**PKPab**		**15 22 36.6**	**-0.6**	
	comp=Z,6.0nm,1.1s,baz=301,slow=6.6,SNR=5.1								
LPAZ	**La Paz**	**159.90**	**62**	PKPdf	**PKPdf**		**15 21 56.6**	**-1.4**	
LPAZ	**La Paz**	**159.90**	**62**	PKIKP	**PKPdf**		**15 21 56.6**	**-1.4**	
LPAZ	**La Paz**	**159.90**	**62**	*e*P	**PKPdf**		**15 22 00.3**	**+2.3**	
LVC	**Limon Verde**	**162.06**	**80**	PKP	**PKPdf**		**15 22 01.1**	**+1.2**	
	comp=Z,1.6nm,0.4s,baz=215,slow=1.6,SNR=3.8								
LVC	**Limon Verde**	**162.06**	**80**	*e*P	**PKPdf**		**15 22 03.2**	**+3.3**	
VILB	**Vilhena**	**162.98**	**37**	*e*P	**PKPdf**		**15 22 02.5**	**+1.9**	
VBST	**Vila Bela da S**	**164.37**	**40**	*e*P	**PKPdf**		**15 22 04.9**	**+3.2**	
SIV	**San Ignacio**	**164.85**	**46**	PKP	**PKPdf**		**15 22 03.1**	**+0.9**	
	comp=Z,4.6nm,1.0s,baz=155,slow=1.1,SNR=10								
SIV				PKPab	**PKPab**		**15 22 57.2**	**-0.8**	
	comp=Z,4.4nm,0.9s,baz=260,slow=3.2,SNR=3.9								
BDFB	**Brasilia**	**168.66**	**352**	PKP	**PKPdf**		**15 22 05.8**	**+0.6**	
	comp=Z,1.7nm,0.3s,baz=207,slow=2.3,SNR=2.5								
CPUP	**Villa Florida**	**173.17**	**87**	PKP	**PKPdf**		**15 22 07.9**	**+0.7**	
	comp=Z,2.1nm,0.7s,baz=84,slow=4.8,SNR=4.2								

IDC ***14*** *15:28:18.9±2.1, 16°.90S×177°.54W, h421km±17km, mb3.1/5, mbtmp3.9/6, Error ellipse: s-maj=43.2km s-min=22.9km az=149.0*

ISC 14 15:28:17.3±1.1, 16°.9S±0°.2×177°.4W±0°.1, h403km, n8, σ1°32/8, mb3.4/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.43**	**258**	P	**P**	**15 29 34.1**	**+0.4**
	34nm,0.7s,baz=95,slow=23,SNR=41						
MSVF				S	**S**	15 30 37.9	+1.9
	4.7nm,0.7s,baz=138,slow=21,SNR=6.5						
RAO	**Raoul Island**	**12.35**	**182**	P	**P**	**15 31 01.1**	**+0.4**
	408nm,0.3s,baz=355,slow=22,SNR=4.7						
STKA	**Stephens Creek**	**39.98**	**240**	P	**P**	**15 35 14.2**	**-0.9**
	1.3nm,0.5s,baz=71,slow=9.4,SNR=8.8						
	1.3nm,0.5s						
WRA	**Warramunga Arr**	**45.78**	**258**	P	**P**	**15 35 59.9**	**-1.2**
	0.4nm,0.6s,baz=93,slow=8.0,SNR=9.8						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**46.01**	**253**	P	**P**	**15 36 01.5**	**-1.4**
	3.5nm,0.7s,baz=88,slow=8.2,SNR=56						
	3.5nm,0.7s						
TXAR	**Lajitas Array**	**84.62**	**57**	P	**P**	**15 40 08.0**	**+0.8**
	0.3nm,0.8s,baz=232,slow=6.2,SNR=4.2						
	0.3nm,0.8s						
ILAR	**Eielson Array**	**84.65**	**13**	P	**P**	**15 40 06.4**	**0.0**
	0.7nm,1.1s,baz=230,slow=5.9,SNR=5.1						
	0.7nm,1.1s						
BRTR	**Keskin Array B**	**144.71**	**317**	PKP	PKPbc	15 47 06.8	-0.4
	0.4nm,0.8s,baz=1.1,slow=7.2,SNR=1.9						

OSPL ***14*** *15:43:21.7±1.3, 20°.22N×72°.08W, h1km±6km, ML3.0*
SSNC ***14*** *15:43:23.7±3.1, 20°.23N×71°.96W, h7km±29km, MD3.2, ML2.6*

ISC 14 15:43:19.1±1.2, 20°.23N±0°.04×72°.04W±0°.04, h8km±12km, n11, σ0°91/19, Haiti region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LODA1	**ITESIL, Dajabo**	**0.75**	**155**	*i* P	**Pn**	**15 43 35.5**	**-0.5**
LODA1				IAML		15 43 49.6	
	comp=Z,912nm,0.4s						
LOPP1	**Punta Rusia, P**	**0.87**	**115**	*i* P	**Pn**	**15 43 37.8**	**+0.1**
LOPP1				IAML		15 43 57.5	
	comp=Z,2µm,4.6s						
SDDR	**Presa de Saban**	**1.43**	**150**	*e*P	**Pb**	**15 43 45.5**	**-0.5**
SDDR				*e*S	**Sg**	**15 44 04.8**	**-0.2**
SDDR	**Presa de Saban**	**1.43**	**150**	*i* P	**Pg**	**15 43 46.4**	**-0.1**
SDDR				*e*S	**

NEHR	**Nehoiu**	**2.46**	**340**	⇑S		**Sn**	**16 35 26.1 +1.5**
RDO	**Rodhopi**	**2.46**	**217**	PN		**Pn**	**16 34 54.2 +0.1**
ALN	**Alexandroupoli**	**2.48**	**206**	PN		**Pn**	**16 34 53.5 -0.9**
BISRR	**Bisoca**	**2.48**	**347**	⇑S		**Sb**	**16 35 27.6 -1.9**
ENEZ	**Enez**	**2.59**	**203**	PN		**Pn**	**16 34 55.7 -0.2**
MLR	**Muntele Rosu**	**2.61**	**335**	⇑P		**Pn**	**16 34 57.3 +0.9**
MLR				⇑S		**Sn**	**16 35 30.0 +1.5**
KRBG	**Karabiga-Canak**	**2.74**	**183**	PN		**Pn**	**16 34 58.5 +0.6**
VLDR	**Vladesti**	**2.75**	**9**	⇑P		**Pn**	**16 34 59.1 +1.0**
VLDR				⇓S		**Sb**	**16 35 33.5 -3.5**
ARMT	**Armutlu**	**2.75**	**158**	PN		**Pn**	**16 34 59.9 +1.7**
MPEP	**Malo Peshtene**	**2.75**	**276**	*i* P		**Pb**	**16 35 03.1 0.0**
VARL	**Varlezi**	**2.78**	**5**	⇑S		**Sb**	**16 35 35.0 -2.9**
PLOR	**Plostina**	**2.79**	**348**	⇓P		**Pb**	**16 34 59.2 +0.5**
PLOR				⇑S		**Sb**	**16 35 36.4 -1.8**
VRI	**Vrincioaia**	**2.79**	**349**	⇑P		**Pn**	**16 34 58.4 -0.3**
GELI	**Tayfur-Gelibol**	**2.83**	**196**	PN		**Pn**	**16 34 59.4 +0.1**
VOIR		**2.90**	**324**	⇑P		**Pn**	**16 35 01.9 +1.6**
VTS	**Vitosha**	**3.17**	**262**	*e*P		**Pb**	**16 35 10.1 -0.2**
DOPR	**Dopca**	**3.21**	**333**	⇑P		**Pn**	**16 35 04.9 +0.3**
DOPR				⇓S		**Sn**	**16 35 45.5 +2.2**
VASR	**Vaslui**	**3.52**	**3**	⇑S		**Sb**	**16 35 54.9 -4.2**
LOT	**Lotru**	**3.54**	**312**	⇑P		**Pn**	**16 35 09.9 +0.7**
BLKB	**Belogradchik**	**3.55**	**280**	⇑P		**Pb**	**16 35 17.5 +0.8**
BLKB				⇓S		**Sb**	**16 36 03.8 +3.7**
MDB	**Medias**	**3.75**	**325**	⇑P		**Pn**	**16 35 12.6 +0.8**
BIZ	**Bicaz**	**3.94**	**346**	⇑P		**Pn**	**16 35 15.5 +1.1**
BIZ				⇓S		**Sn**	**16 36 03.2 +2.1**
HERR	**Herculane**	**4.06**	**297**	⇓S		**Sn**	**16 36 01.9 -2.3**
MDVR	**Moldovita**	**4.49**	**294**	⇑P		**Pn**	**16 35 20.6 -1.6**
MDVR				⇑S		**Sn**	**16 36 12.9 -1.9**
BZS	**Buzias**	**4.89**	**303**	⇓P		**Pn**	**16 35 25.5 -2.1**

NOU 14 16:49:01.0, 16°.08S × 168°.04E, h0 km, MLv3.7/4, Vanuatu Islands, Vanuatu Islands

*NIC **14** 17:01:34.2± 0.0, 35°.72N × 29°.42E, h32 km ± 26 km, Ml3.2/4*
*ISK **14** 17:01:34.0, 35°.83N × 29°.30E, h28 km, ML2.8/18*
*DDA **14** 17:01:36.0± 0.0, 35°.90N × 29°.50E, h44 km ± 14 km, ML2.4*

ISC 14 17:01:34.0±1.2, 35°.80N±0°.04 × 29°.42E±0°.02, h28 km±13 km, n47, σ 0s.85/61, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKAS	**Kas**	**0.46**	**19**	PG	**Pn**	**17 01 44.4**	**-0.4**
AKAS				SG	**Sn**	**17 01 52.5**	**+0.4**
AKAS	**Kas**	**0.46**	**19**	P	**Pn**	**17 01 44.5**	**-0.3**
AKAS				S	**Sn**	**17 01 53.1**	**+1.0**
DEMR	**Demre-Antalya**	**0.58**	**42**	PG	**Pn**	**17 01 47.7**	**+1.3**
FETY	**Fethiye**	**0.88**	**342**	PG	**Pn**	**17 01 49.5**	**-1.0**
FETY				SG	**Sn**	**17 02 01.2**	**-1.1**
FETY	**Fethiye**	**0.88**	**342**	P	**Pb**	**17 01 51.0**	**+0.3**
AKUM	**Antalya-Kumluc**	**0.91**	**55**	P	**Pb**	**17 01 51.0**	**-0.2**
AKUM				S	**Sb**	**17 02 03.1**	**+0.2**
AKUM				*i* AML	AML	17 02 05.0	
	comp=E,131nm,0.4s						
AKUM				*i* AML	AML	17 02 05.0	
	comp=N,99nm,0.3s						
ELL	**Elmali**	**1.02**	**22**	PG	**Pn**	**17 01 52.4**	**-0.2**
ARG	**Arkhangelos**	**1.13**	**292**	PG	**Pn**	**17 01 52.9**	**-1.0**
ARG	**Arkhangelos**	**1.13**	**292**	P	**Pn**	**17 01 53.8**	**-0.1**
ARG				S	**Sb**	**17 02 09.2**	**-0.1**
CAME	**Cameli-Denizli**	**1.15**	**355**	PN	**Pn**	**17 01 54.0**	**-0.3**
DALY	**Dalyan (Mula)**	**1.19**	**329**	PN	**Pn**	**17 01 54.0**	**-0.7**
CAEL	**Denizli, Camel**	**1.32**	**356**	P	**Pb**	**17 01 57.3**	**-1.0**
CAEL				*i* AML	AML	17 02 32.0	
	comp=E,76nm,0.6s						
CAEL				*i* AML	AML	17 02 37.0	
	comp=N,74nm,0.6s						
TURN	**Turunc**	**1.36**	**316**	PN	**Pn**	**17 01 56.5**	**-0.6**
TURN	**Turunc**	**1.36**	**316**	P	**Pb**	**17 02 00.3**	**+1.4**
TURN				S	**Sb**	**17 02 15.7**	**-0.1**
TURN				*i* AML	AML	17 02 19.0	
	comp=E,45nm,0.5s						
TURN				*i* AML	AML	17 02 27.0	
	comp=N,45nm,0.5s						
KORT	**Korkueli**	**1.41**	**32**	PN	**Pb**	**17 01 58.9**	**-0.9**
KORT	**Korkueli**	**1.41**	**32**	P	**Pb**	**17 01 58.9**	**-0.9**
KORT				*i* AML	AML	17 02 27.0	
	comp=E,61nm,0.6s						
GOLH	**Golhisar**	**1.44**	**4**	P	**Pb**	**17 01 59.4**	**-0.8**
YER	**Yerkesik**	**1.62**	**326**	PN	**Pn**	**17 02 00.4**	**-0.3**
APMY	**Acipayam-Deniz**	**1.67**	**357**	PN	**Pn**	**17 02 01.8**	**+0.3**
MULA	**Mugla, Merkez-**	**1.70**	**329**	P	**Pb**	**17 02 06.0**	**+1.3**
TAVA	**DENIZLI_Tavas**	**1.71**	**346**	P	**Pn**	**17 02 01.8**	**-0.3**
TAVA				S	**Sb**	**17 02 25.5**	**-0.5**
TAVA				*i* AML	AML	17 02 28.0	
	comp=N,37nm,0.7s						
DAT	**Datca**	**1.76**	**302**	PN	**Pn**	**17 02 01.9**	**-0.7**
BUCA	**Burdur, Bucak-**	**1.78**	**31**	P	**Pb**	**17 02 05.6**	**-0.3**
KARP	**Karpathos**	**1.86**	**263**	P	**Pn**	**17 02 04.1**	**+0.1**
KARP				S	**Sn**	**17 02 26.5**	**0.0**
KARP				AML	AML	17 02 27.5	
	0.2nm,0.1s						
KARP				AML	AML	17 02 27.5	
	0.2nm,0.1s						
BRDR	**BURDUR-Merkez**	**1.96**	**15**	P	**Pb**	**17 02 07.0**	**-2.1**
NIS1	**Nisyros Isl.**	**1.98**	**294**	PN	**Pn**	**17 02 05.2**	**-0.5**
MLSB	**Milas**	**2.00**	**319**	PN	**Pn**	**17 02 05.5**	**-0.4**
BDRM	**Kayabasi**	**2.04**	**309**	P	**Pb**	**17 02 11.4**	**+1.1**
KEPZ	**Antalya-Kepez**	**2.07**	**57**	P	**Pn**	**17 02 08.2**	**+1.3**
KEPZ				S	**Sn**	**17 02 30.9**	**-1.0**
SUTC	**Sutluce-Ispart**	**2.10**	**37**	PN	**Pn**	**17 02 08.7**	**+1.3**
BODT	**Bodrum**	**2.12**	**307**	PN	**Pn**	**17 02 07.2**	**-0.3**
AYDN	**Tasoluk**	**2.23**	**327**	P	**Pb**	**17 02 14.6**	**+0.9**
AYDB	**Zeytinkoy-Aydi**	**2.47**	**331**	PN	**Pn**	**17 02 12.7**	**+0.2**
AKMS	**Akamas**	**2.50**	**107**	P	**Pn**	**17 02 12.7**	**-0.1**
AKMS				S	**Sn**	**17 02 42.6**	**+0.2**
AKMS				AML	AML	17 02 42.6	
	0.2nm,0.3s						
AKMS				AML	AML	17 02 42.6	
	0.2nm,0.3s						
AKMS				AML	AML	17 02 43.0	
	0.3nm,0.2s						
AKMS				AML	AML	17 02 43.0	
	0.3nm,0.2s						
SEYD	**Seydisehir-KON**	**2.52**	**50**	PN	**Pn**	**17 02 15.1**	**+2.0**
GCAM	**G?zelcaml?**	**2.59**	**318**	PN	**Pn**	**17 02 14.2**	**+0.3**
ALFC	**Alefka**	**2.67**	**103**	P	**Pn**	**17 02 14.8**	**-0.4**
ALFC				AML	AML	17 02 46.6	
	0.4nm,0.2s						
ALFC				AML	AML	17 02 46.6	
	0.4nm,0.2s						
ALFC				AML	AML	17 02 46.6	
	0.2nm,0.1s						
ALFC				AML	AML	17 02 46.6	
	0.2nm,0.1s						
ALFC				S	**Sn**	**17 02 46.8**	**+0.2**
ZKR	**Zakros**	**2.71**	**256**	P	**Pn**	**17 02 16.2**	**+0.6**
ZKR				S	**Sn**	**17 02 47.6**	**+0.2**
HDMB	**Hadim**	**2.73**	**64**	PN	**Pn**	**17 02 18.3**	**+2.2**
OSC1	**CSNet OBS 1**	**2.76**	**146**	S	**Sn**	**17 02 47.5**	**-1.1**
NATA	**Nata**	**2.77**	**111**	P	**Pn**	**17 02 16.6**	**+0.1**
SHUT	**Suhut-Afyon**	**2.89**	**18**	PN	**Pn**	**17 02 19.7**	**+1.4**
SZAC	**Souni**	**3.02**	**109**	P	**Pn**	**17 02 19.2**	**-0.6**
SZAC				S	**Sn**	**17 02 54.9**	**-0.2**
SZAC				AML	AML	17 02 56.7	
	0.2nm,0.2s						
SZAC				AML	AML	17 02 56.7	
	0.2nm,0.2s						
SZAC				AML	AML	17 02 56.8	
	0.2nm,0.3s						
SZAC				AML	AML	17 02 56.8	
	0.2nm,0.3s						
ASGA	**Asgata**	**3.29**	**107**	P	**Pn**	**17 02 23.9**	**+0.3**
ASGA				S	**Sn**	**17 03 01.9**	**+0.2**
CSS	**Mathiatis**	**3.30**	**104**	P	**Pn**	**17 02 24.3**	**+0.5**
MVOU	**Mavrovouni**	**3.52**	**102**	P	**Pn**	**17 02 26.7**	**-0.2**
OSC2	**CSNet OBS 4**	**3.59**	**138**	S	**Sn**	**17 03 08.5**	**-0.7**

*IDC **14** 17:05:41.9± 0.7, 29°.24S × 61°.10E, h0 km, mb3.9/12, mbtmp3.9/13, ML4.2/1, Error ellipse: s-maj=27.5km s-min=20.3km az=45.0*
*NEIC **14** 17:05:44.2± 2.4, 29°.2S ± 0°.1 × 61°.0E ± 0°.2, h14 km ± 4km, mb4.4/13, Error ellipse: s-maj=21.1km s-min=14.2km az=54.0*

ISC 14 17:05:43.5±0.6, 29°.2S±0°.1 × 61°.0E±0°.1, h10 km, n41, σ 0s88/33, mb4.2/15, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RER	**Riviere de l'E**	**9.32**	**328**	Pn	**Pn**	**17 07 56.6**	**-1.4**
FOMA	**Nahampoana Res**	**13.20**	**285**	Pn	**Pn**	**17 08 49.1**	**-1.9**
VOI	**Vohitsoka**	**14.74**	**296**	Pn	**Pn**	**17 09 13.6**	**+1.3**
ABPO	**Ambohimpanom**	**16.15**	**306**	Pn	**Pn**	**17 09 30.2**	**-0.6**
ABPO				IAmb	IAmb	17 09 57.6	
	comp=Z,52nm,1.5s						
OPO	**Ambohidratompo**	**16.47**	**307**	Pn	**Pn**	**17 09 35.7**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=115,slow=16,SNR=5.9						
OPO				Sn	Sn	17 12 23.3	-15
	comp=Z,0.1nm,0.3s,baz=140,slow=18,SNR=2.1						
	comp=Z,2.9nm,0.6s						
H08S1	**Diego Garcia H**	**23.99**	**29**	T	T	17 35 41.9	
	baz=204,slow=75,SNR=7.0						
H08S2	**Diego Garcia H**	**24.00**	**29**	T	T	17 35 45.1	
	baz=204,slow=75,SNR=6.9						
H08S3	**Diego Garcia H**	**24.01**	**29**	T	T	17 35 46.4	
	baz=204,slow=75,SNR=13						
H01W2	**Cape Leeuwin H**	**44.94**	**111**	T	T	18 01 35.5	
	baz=261,slow=75,SNR=14						
H01W3	**Cape Leeuwin H**	**44.95**	**111**	T	T	18 01 36.7	
	baz=261,slow=75,SNR=15						
H01W1	**Cape Leeuwin H**	**44.96**	**111**	T	T	18 01 39.6	
	baz=261,slow=75,SNR=14						
PSA00	**Pilbara Seismi**	**53.22**	**96**	P	**P**	**17 15 03.2**	**+0.8**
CMAR	**Chiang Mai Arr**	**59.86**	**42**	P	**P**	**17 15 49.4**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=230,slow=5.5,SNR=6.1						
	comp=Z,0.8nm,0.7s						
QSPA	**South Pole Qui**	**60.97**	**180**	P	**P**	**17 15 55.8**	**-0.9**
	comp=Z,2.4nm,1.1s,baz=279,slow=6.0,SNR=2.2						
	comp=Z,2.4nm,1.1s						
QSPA	**South Pole Qui**	**60.97**	**180**	P	**P**	**17 15 56.2**	**-0.5**
QSPA				IAmb	IAmb	17 15 58.8	
	comp=Z,7.7nm,1.5s						
VNDA	**Vanda**	**64.03**	**166**	P	**P**	**17 16 17.1**	**+0.3**
	comp=Z,0.9nm,0.9s,baz=276,slow=8.9,SNR=3.6						
	comp=Z,0.9nm,0.9s						
VNDA	**Vanda**	**64.03**	**166**	IAmb	IAmb	17 16 28.7	
	comp=Z,4.1nm,1.4s						
ASAR	**Alice Springs**	**64.55**	**104**	P	**P**	**17 16 20.1**	**-1.0**
	comp=Z,1.1nm,0.8s,baz=247,slow=5.8,SNR=11						
	comp=Z,1.1nm,0.8s						
SBA	**Scott Base**	**64.91**	**167**	P	**P**	**17 16 23.6**	**+1.0**
WRA	**Warramunga Arr**	**66.38**	**100**	P	**P**	**17 16 32.5**	**-0.5**
	comp=Z,1.3nm,0.9s,baz=250,slow=5.3,SNR=4.4						
	comp=Z,1.3nm,0.9s						
WB0	**Warramunga Arr**	**66.50**	**100**	P	**P**	**17 16 31.9**	**-1.8**
TORD	**Torodi Ar. Bea**	**71.05**	**298**	P	**P**	**17 17 02.7**	**+0.7**
	comp=Z,1.8nm,0.8s,baz=118,slow=5.9,SNR=7.5						
	comp=Z,1.8nm,0.8s						
TORD	**Torodi Ar. Bea**	**71.05**	**298**	IAmb	IAmb	17 17 04.1	
	comp=Z,3.2nm,1.0s						
SIJI	**Sorong**	**72.37**	**81**	P	**P**	**17 17 11.1**	**+1.0**
	comp=Z,2.9nm,0.7s,baz=270,slow=5.1,SNR=2.9						
	comp=Z,2.9nm,0.7s						
KK31	**Karatay Array**	**72.47**	**7**	P	**P**	**17 17 11.2**	**+1.2**
KK31				IAmb	IAmb	17 17 12.1	
	comp=Z,3.4nm,1.1s						
KKAR	**Karatay Array**	**72.47**	**7**	P	**P**	**17 17 10.6**	**+0.6**
KKAR	**Karatay Array**	**72.47**	**7**	P	**P**	**17 17 10.9**	**+0.9**
KKAR				IAmb	IAmb	17 17 12.1	
	comp=Z,3.4nm,1.1s						
BRTR	**Keskin Array B**	**73.15**	**338**	P	**P**	**17 17 14.4**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=198,slow=14,SNR=2.8						
	comp=Z,0.4nm,0.6s						
MK31	**Makanchi Array**	**78.04**	**15**	P	**P**	**17 17 41.8**	**-0.2**
MKAR	**Makanchi Array**	**78.04**	**15**	P	**P**	**17 17 42.7**	**+0.7**
	comp=Z,1.0nm,0.8s,baz=198,slow=6.4,SNR=8.8						
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**78.04**	**15**	P	**P**	**17 17 41.7**	**-0.3**
ABKAR	**Akbulak array**	**78.10**	**359**	P	**P**	**17 17 42.5**	**+0.3**
ABKAR	**Akbulak array**	**78.10**	**359**	P	**P**	**17 17 42.2**	**0.0**
ABKAR				IAmb	IAmb	17 17 43.8	
	comp=Z,3.1nm,1.1s						
KURK	**Kurchatov**	**81.07**	**11**	P	**P**	**17 17 58.0**	**-0.3**
KURK				IAmb	IAmb	17 18 03.2	
	comp=Z,5.3nm,1.4s						
ZALV	**Zalesovo Beam**	**85.32**	**14**	P	**P**	**17 18 20.6**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=197,slow=4.6,SNR=5.7						
	comp=Z,0.6nm,0.4s						
ZALV	**Zalesovo Beam**	**85.32**	**14**	P	**P**	**17 18 19.8**	**-0.5**
SONM	**Songino Array**	**86.83**	**29**	P	**P**	**17 18 26.8**	**-1.3**
	comp=Z,0.2nm,0.6s,baz=192,slow=5.6,SNR=2.9						
	comp=Z,0.2nm,0.6s						
ESDC	**Songino Array**	**91.33**	**316**	P	**P**	**17 18 50.1**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=48,slow=1.9,SNR=2.4						
	comp=Z,0.5nm,0.6s						
YKA	**Yellowknife Ar**	**146.57**	**356**	PKPbc	**PKPbc**	**17 25 24.5**	**0.0**
	comp=Z,1.5nm,0.8s,baz=359,slow=3.2,SNR=9.2						
YKA	**Yellowknife Ar**	**146.57**	**356**		**PKPbc**	**17 25 23.6**	**-0.8**
ULM	**Lac du Bonnet**	**152.67**	**327**	PKPbc	**PKPbc**	**17 25 39.6**	**-0.4**
	comp=Z,3.4nm,0.6s,baz=92,slow=5.9,SNR=4.3						

*JMA **14** 17:07:15.6± 0.9, 36°.N ± 4°.× 13°.0E ± °, h0 km, MV2.6/6, S KOREAN PENINSULA REG*
*KMA **14** 17:07:18.0± 0.5, 35°.87N × 129°.69E, h20 km ± 3km, Error ellipse: s-maj=4.4km s-min=1.7km az=118.0*

ISC 14 17:07:16.8±1.4, 35°.87N±0°.04 × 129°.77E±0°.05, h11 km±14km, n16, σ 0s32/32, South Korea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSPHA	**Pohang**	**0.46**	**315**	P	**Pb**	**17 07 26.7**	**-0.3**
	SNR=144						
KSPHA				P	**Pb**	**17 07 26.7**	**-0.3**
	SNR=144						
KSUSN	**Ulsan**	**0.55**	**252**	P	**Pb**	**17 07 28.0**	**-0.5**
	SNR=264						
KSUSN				P	**Pb**	**17 07 28.0**	**-0.5**
	SNR=264						
KSUSN				S	**Sg**	**17 07 35.0**	**+0.2**
KSUSN				S	**Sg**	**17 07 35.0**	**+0.2**
YOCB	**Yeongcheon**	**0.67**	**279**	P	**Pb**	**17 07 30.2**	**-0.4**
	SNR=46						
YOCB				P	**Pb**	**17 07 30.2**	**-0.4**
	SNR=46						
YOCB				S	**Sg**	**17 07 38.7**	**+0.1**
YOCB				S	**Sg**	**17 07 38.7**	**+0.1**
KSDAG	**Daegu**	**0.71**	**262**	P	**Pg**	**17 07 30.8**	**+0.1**
	SNR=225						
KSDAG				P	**Pg**	**17 07 30.8**	**+0.1**
	SNR=225						
YODB	**Yeongdeok**	**0.72**	**336**	P	**Pb**	**17 07 31.4**	**0.0**
	SNR=116						
YODB				P	**Pb**	**17 07 31.4**	**0.0**
	SNR=116						
KSBUS	**Busan**	**0.82**	**221**	P	**Pg**	**17 07 32.8**	**+0.1**
	SNR=43						
KSBUS				P	**Pg**	**17 07 32.8**	**+0.1**
	SNR=43						
KSADO	**Andong**	**0.86**	**309**	P	**Pb**	**17 07 33.4**	**-0.4**
	SNR=47						
KSADO				P	**Pb**	**17 07 33.4**	**-0.4**
	SNR=47						
KSULJ	**Ulleung**	**0.88**	**341**	P	**Pb**	**17 07 34.0**	**-0.1**
	SNR=117						
KSULJ				P	**Pb**	**17 07 34.0**	**-0.1**
	SNR=117						
MIYA	**Miryang-si**	**0.92**	**246**	P	**Pg**	**17 07 34.4**	**-0.1**
	SNR=11						
KSDAU	**Deagu-acc**	**0.93**	**271**	P	**Pb**	**17 07 34.8**	**-0.3**
	SNR=15						
EUSB	**Uiseong**	**1.00**	**299**	P	**Pb**	**17 07 35.9**	**-0.3**
	SNR=18						
EUSB				P	**Pb**	**17 07 35.9**	**-0.3**
	SNR=18						
KSCHR	**CHANGNYEONG**	**1.09**	**253**	P	**Pg**	**17 07 37.5**	**-0.3**
	SNR=15						
JTU	**Tsushima**	**1.38**	**193**	*e*P	**Pn**	**17 07 42.5**	**+0.5**
JTU				*e*S	**Sb**	**17 08 00.4**	**+0.2**
JTSM	**Tsushimamitsus**	**1.56**	**192**	*e*P	**Pb**	**17 07 45.5**	**-0.2**
JTSM				*e*S	**Sb**	**17 08 06.2**	**+0.7**
JHGM	**Hagimishima**	**1.56**	**134**	*e*P	**Pn**	**17 07 44.4**	**-0.1**
JHGM				*e*S	**Sg**	**17 08 07.0**	**-0.1**
JTY	**Toyota**	**1.92**	**146**	*e*P	**Pn**	**17 07 49.1**	**-0.4**

NNC 14 17:11:23.6±6.1, 37°.24N × 69°.69E, h0 km, mb3.8, mpv3.6, 2C-2D, Error ellipse: s-maj=92.3km s-min=36.4km az=115.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**5.89**	**6**	⇓P	Pn	17 12 52.5	+0.3
	2.8nm,0.5s,baz=178,slow=12,SNR=42						
KK31				⇑S	Sn	17 14 01.5	+1.1
	9.3nm,0.6s,baz=178,slow=16,SNR=17						
AB31	**Akbulak array**	**13.94**	**333**	⇓P	Pn	17 14 42.8	+0.5
	0.2nm,0.3s,baz=148,slow=13,SNR=4.7						
AKTO	**Aktyubinsk**	**15.62**	**331**	⇑P	Pn	17 15 04.2	-0.9
	1.0nm,0.4s						

*BJI **14** 17:13:23.2± 0.0, 51°.47N × 176°.92W, h46 km, mb5.1/66, mB5.0/44, Ms4.5/36, Ms7 4.3/39*
*MOS **14** 17:13:24.9± 1.1, 51°.65N × 176°.96W, h46 km, mb5.1/37, Error ellipse: s-maj=6.2km s-min=4.8km az=84.7*
*AEIC **14** 17:13:25± 2.9, 51°.36N ± 0°.04 × 176°.91W ± 0°.05, h30 km ± 3km, Error ellipse: s-maj=6.8km s-min=4.2km az=157.0*
*NEIC **14** 17:13:27.5± 2.5, 51°.63N ± 0°.07 × 177°.05W ± 0°.05, h54 km ± 3km, mb5.1/504, ML5.1(AEIC), Error ellipse: s-maj=9.7km s-min=4.1km az=170.0*
*IDC **14** 17:13:27.2± 1.5, 51°.62N × 177°.00W, h53 km ± 12km, mb4.6/51, mbtmp4.9/56, MS4.0/70, Error ellipse: s-maj=10.7km s-min=7.0km az=157.0*
*GCMT **14** 17:13:27.5± 0.5, 51°.47N ± 0°.04 × 176°.74W ± 0°.06, h43 km ± 1km, MW5.1/65, Moment Tensor Solution. s26,c32; s65,c77; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 4.29±.42; Mθθ -3.31±.31; Mφφ -0.97±.29; Mrθ 1.87±.23; Mrφ -2.06±.18; Mθφ 1.38±.19; Best double couple: M0 4.97700×10^16 NP1: φs 243.00000°, δ 31.00000°, λ 95.00000°. NP2: φs 57.00000°, δ 59.00000°, λ 87.00000°. Principal axes: T 4.8720, Plg 76.0000°, Azm 317.0000°; N 0.2100, Plg 3.0000°, Azm 58.0000°; P -5.0820, Plg 14.0000°, Azm 149.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 17:13:26.8±0.3, 51°.57N±0°.05 × 176°.96W±0°.02, h52 km±2km, h51 km: pP-P, n1382, σ 1s14/1465, mb5.1/346, MS4.0/90, 40C-32D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KIMD	**Kanaga Island**	**0.26**	**318**		**Pn**	**17 13 35.4**	**-0.3**
KIWB	**Kanaga Island**	**0.31**	**337**		**Pn**	**17 13 36.2**	**0.0**
KIKV	**Kanaga Island**	**0.34**	**337**		**Pn**	**17 13 36.9**	**+0.5**
ADK	**Adak**	**0.36**	**28**		**Pn**	**17 13 36.3**	**-0.3**
ADK				Sn	**Sn**	**17 13 44.5**	**+0.9**
ADK	**Adak**	**0.36**	**28**	P	**Pn**	**17 13 36.3**	**-0.3**
ADK	**Adak**	**0.36**	**28**	P	**Pn**	**17 13 36.9**	**+0.3**
KICM	**Kanaga Island**	**0.38**	**337**		**Pn**	**17 13 37.6**	**+0.8**
ETKA	**Kagalaska Isla**	**0.45**	**49**		**Pn**	**17 13 37.4**	**-0.2**
ETKA					**Sn**	**17 13 46.2**	**+0.8**
TAPA	**Tanaga Point A**	**0.59**	**295**		**Pn**	**17 13 39.3**	**+0.1**
GSCK	**Great Sitkin C**	**0.67**	**48**		**Pn**	**17 13 40.7**	**+0.6**
GSTD	**Great Sitkin T**	**0.70**	**45**		**Pn**	**17 13 41.2**	**+0.6**
TAFP	**Tanaga Falls P**	**0.72**	**298**		**Pn**	**17 13 41.2**	**+0.4**
TASE	**Tanaga Southea**	**0.72**	**292**		**Pn**	**17 13 41.4**	**+0.5**
GSMY	**Great Sitkin M**	**0.73**	**49**		**Pn**	**17 13 41.5**	**+0.5**
GSTR	**Great Sitkin T**	**0.77**	**46**		**Pn**	**17 13 42.2**	**+0.8**
GAEA	**Gareloi East**	**1.14**	**282**		**Pn**	**17 13 46.8**	**+0.5**
GALAA	**Gareloi Lava P**	**1.15**	**281**		**Pn**	**17 13 46.9**	**+0.4**
GASW	**Gareloi Southw**	**1.20**	**281**		**Pn**	**17 13 47.3**	**+0.1**
ATKA	**Atka Island**	**1.83**	**69**		**Pn**	**17 13 55.2**	**-0.5**
ATKA					**Sn**	**17 14 18.5**	**+0.7**
ATKA	**Atka Island**	**1.83**	**69**	P	**Pn**	**17 13 55.5**	**-0.2**
KOSE	**Korovin Southe**	**1.96**	**65**		**Pn**	**17 13 58.3**	**+0.7**
CEAP	**Semis' Anvil P**	**2.20**	**283**		**Pn**	**17 14 01.4**	**+0.7**
AMKA	**Amchitka**	**2.35**	**267**	Pn	**Pn**	**17 14 02.1**	**-0.7**
AMKA				Sn	**Sn**	**17 14 25.9**	**-4.5**
NIKH	**Nikolski High**	**5.17**	**71**	Pn	**Pn**	**17 14 42.3**	**+0.8**
NIKH	**Nikolski High**	**5.17**	**71**		**Sn**	**17 15 43.7**	**+3.9**
NIKH	**Nikolski High**	**5.17**	**71**	P	**Pn**	**17 14 41.8**	**+0.4**
	baz=255,SNR=10						
SHEM	**Shemya Is, Ala**	**5.63**	**285**	P	**Pn**	**17 14 47.6**	**-0.2**
	205nm,0.5s,baz=143,slow=18,SNR=5.6						
SHEM				S	**Sn**	**17 15 52.2**	**+1.2**
	171nm,0.7s,baz=143,slow=20,SNR=1.7						
SHEM				LR	LR	17 17 05.9	
	comp=Z,3μm,20.9s,baz=116,slow=39						
SMY	**Shemya**	**5.63**	**285**	Pn	**Pn**	**17 14 46.3**	**-1.4**
SMY				Sn	**Sn**	**17 15 51.3**	**+0.3**
SMY	**Shemya**	**5.63**	**285**	P	**Pn**	**17 14 47.9**	**+0.2**
OKTU	**Okmok Mt. Tuli**	**5.74**	**68**		**Pn**	**17 14 51.7**	**+2.3**
OKFG	**Magazine Ridge**	**5.83**	**68**		**Pn**	**17 14 52.4**	**+1.9**
MREP	**Makushin Rep't**	**6.60**	**66**		**Pn**	**17 15 03.2**	**+2.1**
**MS

PET Petropavlovsk 14.98 285 P P 17 16 58.7 -0.8
Q19K Cape Douglas, 15.14 52 Pn 17 16 57.3 +0.2
Q19K IAmb IAmb 17 17 05.2
comp=Z,110nm,0.5s
Q19K Cape Douglas, 15.14 52 P Pn 17 16 57.8 +0.7
baz=250,SNR=6.5
SVW2 Sparrevohn 15.14 43 P P 17 17 00.4 -0.9
SVW2 IAmb IAmb 17 17 05.4
comp=Z,139nm,0.8s
O19K Port Alsworth 15.29 47 Pn 17 17 00.4 +1.5
O19K Port Alsworth 15.29 47 P Pn 17 16 58.3 -0.6
baz=245
KDAK Kodiak Island 15.36 57 P Pn 17 16 58.1 -1.8
comp=Z,39nm,0.7s,baz=281,slow=7.3,SNR=42
KDAK S Sn 17 19 48.5 -0.2
comp=Z,9.7nm,0.7s,baz=334,slow=18,SNR=2.4
KDAK Kodiak Island 15.36 57 Pn 17 16 57.7 -2.2
KDAK IAmb IAmb 17 17 03.7
comp=Z,70nm,0.6s
KDAK Kodiak Island 15.36 57 *e*P Pn 17 16 57.8 -2.0
KDAK Kodiak Island 15.36 57 P Pn 17 16 59.9 0.0
baz=256
N19K Bonanza Creek 15.48 45 Pn 17 17 02.1 +0.6
N19K Bonanza Creek 15.48 45 P Pn 17 17 01.6 0.0
baz=243,SNR=19
PEA0B Petropavlovsk- 15.55 286 Pn 17 17 00.5 -1.8
PEA0B Petropavlovsk- 15.55 286 *d* *i*P P 17 17 05.6 -0.2
PETK Petropavlovsk- 15.55 286 P Pn 17 17 03.6 +1.3
comp=Z,7.5nm,0.6s,baz=101,slow=16,SNR=26
PETK S Sn 17 19 52.6 -0.8
comp=Z,1.2nm,0.6s,baz=90,slow=16,SNR=1.4
PETK PcP PcP 17 22 02.4 +0.9
comp=Z,1.7nm,0.8s,baz=116,slow=3.4,SNR=4.0
PETK LR LR 17 22 42.7
comp=Z,796nm,21.3s,baz=91,slow=36
PETK ScP ScP 17 25 30.8 -0.3
comp=Z,1.3nm,0.9s,baz=74,slow=6.6,SNR=2.9
PETK Petropavlovsk- 15.55 286 Pn 17 17 01.3 -1.1
Q20K Shuyak Island 15.66 54 P Pn 17 17 04.1 +0.3
baz=253
TTA Tatalina 15.97 36 P Pn 17 17 07.0 -0.7
baz=234
L19K White Mountain 16.00 40 P P 17 17 10.8 +0.1
L19K IAmb IAmb 17 17 15.7
comp=Z,149nm,0.9s
L19K White Mountain 16.00 40 P Pn 17 17 08.6 +0.6
baz=238,SNR=88
O20K Slope Mountain 16.03 48 P Pn 17 17 08.2 -0.3
baz=248
M19K Big River Lodg 16.04 41 P Pn 17 17 08.5 -0.1
baz=240
RSO Redoubt South 16.11 47 P P 17 17 12.0 -0.2
HOM Homer 16.35 50 Pn 17 17 12.6 +0.1
HOM IAmb IAmb 17 17 21.6
comp=Z,142nm,0.9s
HOM Homer 16.35 50 P Pn 17 17 11.2 -1.3
baz=251
CNPM China Poot 16.50 51 P P 17 17 15.6 -0.8
L20K Farewell, AK 16.54 40 P Pn 17 17 15.4 +0.5
baz=239,SNR=54
M20K Styx River 16.55 42 P P 17 17 17.6 +0.6
M20K IAmb IAmb 17 17 25.1
comp=Z,102nm,0.9s
M20K Styx River 16.55 42 P Pn 17 17 15.2 +0.1
baz=242,SNR=68
N20K Mount Spurr 16.65 45 P Pn 17 17 15.8 -0.6
baz=245
SPCR Spurr Chakacha 16.65 45 P Pn 17 17 16.1 -0.2
baz=245,SNR=8.3
SPU Mount Spurr 16.71 45 P P 17 17 18.8 +0.1
BRLK Bradley Lake 16.75 51 Pn 17 17 18.0 +0.5
BRSE Bradley Lake S 16.81 51 P Pn 17 17 18.6 +0.3
baz=252
GCSA Galena City Sc 16.82 31 P Pn 17 17 18.6 +0.4
baz=227
K20K Telida 16.94 37 P P 17 17 22.6 +1.4
K20K Telida 16.94 37 P Pn 17 17 20.3 +0.5
baz=236,SNR=38
CAPN Captain Cook N 16.96 47 P P 17 17 21.1 -0.2
baz=248
SKT Skwentna 17.27 43 P P 17 17 26.5 +1.6
SKT IAmb IAmb 17 17 33.9
comp=Z,157nm,0.9s
SKT Skwentna 17.27 43 P P 17 17 24.5 -0.4
baz=244,SNR=94
J20K Nowinta River 17.38 35 P P 17 17 28.4 +2.4
J20K Nowinta River 17.38 35 P P 17 17 25.7 -0.3
baz=234,SNR=50
SUA Susitna One 17.40 45 P Pn 17 17 25.4 -0.3
SUA Susitna One 17.40 45 P P 17 17 26.6 +0.2
baz=247,SNR=18
PPLA Purkeypile 17.43 40 P P 17 17 28.9 +2.2
PPLA IAmb IAmb 17 17 37.1
comp=Z,130nm,0.8s
PPLA Purkeypile 17.43 40 P P 17 17 27.9 +1.3
baz=240,SNR=70
O22K Cooper Landing 17.52 49 P P 17 17 28.2 +0.6
O22K IAmb IAmb 17 17 38.7
comp=Z,105nm,0.6s
O22K Cooper Landing 17.52 49 P Pn 17 17 27.2 +0.1
baz=251
SEW Seward 17.54 50 P Pn 17 17 26.9 -0.3
SEW Sn 17 20 35.4 -6.0
SEW Seward 17.54 50 P Pn 17 17 27.2 +0.1
baz=252,SNR=11
RC01 Rabbit Creek A 17.72 47 P Pn 17 17 28.3 -1.1
RC01 Rabbit Creek A 17.72 47 P P 17 17 30.0 +0.2
baz=249
CAST Castle Rocks 17.73 38 P P 17 17 32.3 +2.4
CAST IAmb IAmb 17 17 35.7
comp=Z,73nm,0.8s
CAST Castle Rocks 17.73 38 P P 17 17 31.2 +1.3
baz=239,SNR=28
M22K Willow 17.79 45 P Pn 17 17 29.9 -0.4
M22K IAmb IAmb 17 17 37.3
comp=Z,114nm,0.9s
M22K Willow 17.79 45 P P 17 17 31.3 +0.8
baz=247,SNR=11
CHUM Lake Minchumin 17.88 37 P P 17 17 32.7 +1.2
baz=237,SNR=33
RDOG Red Dog Mine 17.90 17 P Pn 17 17 25.7 -5.9
RDOG Red Dog Mine 17.90 17 P Pn 17 17 31.6 0.0
baz=209
CUT Chulitna 17.99 43 P P 17 17 32.4 -0.3
CUT IAmb IAmb 17 17 40.1
comp=Z,164nm,1.1s
CUT Chulitna 17.99 43 P Pn 17 17 33.7 +0.9
baz=245,SNR=14
PMR Palmer 18.17 46 P P 17 17 32.2 -2.5
PMR Palmer 18.17 46 P P 17 17 32.2 -2.5
PMR pmax pmax
comp=Z,12nm,0.4s
PMR Palmer 18.17 46 P P 17 17 34.0 -0.7
baz=249
KTH Kantishna Hill 18.25 39 P Pn 17 17 36.4 +0.5
KTH IAmb IAmb 17 17 38.8
comp=Z,119nm,0.8s
GHO Glory Hole Cre 18.33 45 P P 17 17 35.8 -0.7
KNK Knik Glacier 18.41 47 P P 17 17 37.6 +0.2
KNK Knik Glacier 18.41 47 P P 17 17 37.3 -0.1
baz=250,SNR=9.6
BILL Bilibino 18.43 340 P Pn 17 17 38.8 +0.8
BILL Bilibino 18.43 340 *d* *i*P Pn 17 17 39.7 +1.6
BILL pmax pmax
comp=Z,68nm,1.3s
BILL MLR MLR
comp=Z,440nm,17.0s
TRF Thorofare Moun 18.45 40 P Pn 17 17 39.1 +0.6
TRF IAmb IAmb 17 17 45.2
comp=Z,112nm,0.9s
TRF Thorofare Moun 18.45 40 P P 17 17 38.0 +0.1
baz=242,SNR=72
BPAW Bear Paw Mtn. 18.49 37 P Pn 17 17 39.4 +0.5
BPAW IAmb IAmb 17 17 48.9
comp=Z,67nm,0.7s
BPAW Bear Paw Mtn. 18.49 37 P Pn 17 17 39.4 +0.5
baz=239,SNR=64
SML Sawmill 18.60 45 P P 17 17 39.7 +0.2
SML Sawmill 18.60 45 P P 17 17 39.7 +0.2
SML pmax pmax
comp=Z,69nm,1.0s
SML Sawmill 18.60 45 P P 17 17 39.6 +0.2
baz=249
IMAR Indian Mountai 18.62 30 P P 17 17 40.0 +0.4
IMAR PcP 17 22 06.5 +0.4
I21K Tanana 18.72 34 P P 17 17 41.1 +0.4
I21K Tanana 18.72 34 P Pn 17 17 42.2 +0.6
baz=235,SNR=16
H21K Melozitna Rive 18.72 32 P Pn 17 17 42.3 +0.6
H21K Melozitna Rive 18.72 32 P Pn 17 17 42.7 +1.0
baz=232,SNR=50
M23K Glacier View 18.87 46 P Pn 17 17 43.3 -0.1
baz=250,SNR=14
GLI Glacier Island 18.88 49 P P 17 17 42.2 -0.3
GLI Glacier Island 18.88 49 P P 17 17 42.4 0.0
baz=253
WAT1 Susitna Watana 18.89 42 P P 17 17 42.3 -0.3
baz=246
Q23K Middleton Isla 18.90 53 P P 17 17 41.7 -1.0
Q23K IAmb IAmb 17 17 57.4
comp=Z,94nm,0.8s
Q23K Middleton Isla 18.90 53 P P 17 17 42.0 -0.7
baz=258
MID Middleton Isla 18.90 53 P P 17 17 41.5 -1.2
MID IAmb IAmb 17 17 57.4
comp=Z,93nm,0.8s
MID Middleton Isla 18.90 53 P P 17 17 41.5 -1.2
MID pmax pmax
comp=Z,93nm,0.8s
RND Reindeer 19.00 41 P P 17 17 43.9 0.0
RND IAmb IAmb 17 17 50.1
comp=Z,107nm,0.6s
RND Reindeer 19.00 41 P P 17 17 43.9 0.0
RND pmax pmax
comp=Z,107nm,0.6s
HIN Hinchinbrook I 19.03 51 P P 17 17 43.6 -0.6
SCM Sheep Creek Mo 19.06 46 P P 17 17 44.7 +0.2
SCM Sheep Creek Mo 19.06 46 P P 17 17 44.7 +0.2
SCM pmax pmax
comp=Z,34nm,0.7s
SCM Sheep Creek Mo 19.06 46 P P 17 17 44.7 +0.2
baz=250,SNR=11
MLY Manley 19.07 35 P Pn 17 17 46.1 +0.3
MLY PcP 17 22 07.7 +0.6
MLY Manley 19.07 35 P P 17 17 45.3 +0.6
baz=237,SNR=75
BWN Browne 19.11 38 P Pn 17 17 46.3 +0.1
BWN IAmb IAmb 17 17 53.6
comp=Z,159nm,1.1s
MCK McKinley 19.12 40 P P 17 17 44.6 -0.5
MCK IAmb IAmb 17 17 51.9
comp=Z,63nm,0.8s
MCK McKinley 19.12 40 P P 17 17 44.6 -0.5
MCK pmax pmax
comp=Z,63nm,0.8s
MCK McKinley 19.12 40 P P 17 17 44.5 -0.5
baz=243,SNR=34
FID Port Fidalgo 19.13 49 P P 17 17 44.9 -0.4
WAT6 Susitna Watana 19.14 44 P P 17 17 44.8 -0.7
baz=248,SNR=36
EYAK Cordova Ski Ar 19.43 50 P P 17 17 48.2 -0.3
baz=256
NEA2 Nenana 19.46 37 P P 17 17 49.1 +0.2
NEA2 Nenana 19.46 37 P P 17 17 49.3 +0.4
baz=241,SNR=23
DHY Denali Highway 19.48 42 P P 17 17 49.3 +0.1
DHY IAmb IAmb 17 17 57.6
comp=Z,336nm,1.7s
DHY Denali Highway 19.48 42 P P 17 17 49.1 -0.1
baz=247,SNR=108
DIV Divide 19.57 49 P P 17 17 49.4 -0.6
KLU Klutina 19.59 48 P P 17 17 50.3 -0.1
KLU IAmb IAmb 17 17 57.2
comp=Z,70nm,1.2s
KLU Klutina 19.59 48 P P 17 17 50.6 +0.2
baz=253,SNR=26
I23K Minto, Yukon-K 19.63 36 P P 17 17 51.2 +0.5
I23K IAmb IAmb 17 17 58.5
comp=Z,121nm,1.2s
I23K Minto, Yukon-K 19.63 36 P P 17 17 50.9 +0.2
baz=239,SNR=74
M24K Tolsona, Glenn 19.66 46 P P 17 17 50.8 -0.4
M24K IAmb IAmb 17 17 59.4
comp=Z,65nm,0.8s
M24K Tolsona, Glenn 19.66 46 P P 17 17 51.0 -0.1
baz=251,SNR=11
MA2 Magadan 19.76 306 P Pn 17 17 53.4 -0.6
comp=Z,13nm,0.8s,baz=80,slow=11,SNR=12
MA2 PcP PcP 17 22 08.5 +0.2
comp=Z,3.3nm,0.7s,baz=191,slow=10,SNR=2.7
MA2 LR LR 17 24 51.2
comp=Z,315nm,21.6s,baz=106,slow=35
MA2 Magadan 19.76 306 P P 17 17 51.5 -0.6
MA2 Magadan 19.76 306 *d* *i*P Pn 17 17 56.1 +2.1
MA2 pmax pmax
comp=Z,25nm,0.8s
MA2 Magadan 19.76 306 P Pn 17 17 56.3 +2.3
WRH Wood River Hil 19.78 38 P P 17 17 51.7 -0.6
SEY Seymchan 19.89 317 P Pn 17 17 54.8 -0.7
comp=Z,58nm,0.9s,baz=107,slow=10,SNR=50
SEY PcP PcP 17 22 08.4 0.0
comp=Z,3.3nm,0.6s,baz=129,slow=2.9,SNR=5.9
SEY LR LR 17 25 10.1
comp=Z,984nm,21.8s,baz=104,slow=35
SEY Seymchan 19.89 317 *c* *i*P Pn 17 17 55.2 -0.2
SEY pmax pmax
comp=Z,63nm,0.9s
H23K Yukon River 19.92 34 P P 17 17 53.9 0.0
H23K Yukon River 19.92 34 P P 17 17 54.8 +1.0
baz=237,SNR=31
MDM Murphy Dome 19.96 37 P P 17 17 53.9 -0.4
MDM IAmb IAmb 17 18 04.8
comp=Z,52nm,0.8s
CCB Clear Creek Bu 19.97 38 P P 17 17 53.0 -1.3
TCOL CIGO, UAF Yank 20.05 37 P P 17 17 55.8 +0.5
TCOL IAmb IAmb 17 18 10.8
comp=Z,68nm,0.7s
TCOL CIGO, UAF Yank 20.05 37 P P 17 17 56.3 +1.0
baz=242
COLA College 20.06 37 P P 17 17 55.2 -0.1
COLA IAmb IAmb 17 18 10.8
comp=Z,68nm,0.7s
COLA College 20.06 37 *de*P P 17 17 54.7 -0.6
COLA pmax pmax
comp=Z,16nm,0.7s
COLA College 20.06 37 P P 17 17 56.1 +0.8
baz=242
BMRM Bremner River 20.07 50 P P 17 17 55.4 -0.2
BMRM IAmb IAmb 17 18 09.1
comp=Z,84nm,1.3s
BMRM Bremner River 20.07 50 P P 17 17 54.8 -0.8
baz=256,SNR=16
HMT Hamilton 20.11 51 P P 17 17 56.2 +0.3
HDA Harding Lake 20.20 39 P P 17 17 56.4 -0.5
HDA Harding Lake 20.20 39 P P 17 17 56.7 -0.1
baz=244,SNR=43
HARP HAARP 20.21 45 P P 17 17 56.6 -0.3
baz=252,SNR=14
N25K Chitina, Valde 20.23 48 P P 17 17 57.3 -0.1
N25K IAmb IAmb 17 18 02.8
comp=Z,38nm,0.7s
N25K Chitina, Valde 20.23 48 P P 17 17 57.4 +0.1
baz=254,SNR=31
PAX Paxson 20.25 44 P P 17 17 57.4 -0.1
PAX IAmb IAmb 17 18 15.7
comp=Z,75nm,1.1s
PAX S S 17 21 42.0 +0.3
PAX Paxson 20.25 44 P P 17 17 57.4 -0.1
PAX S S 17 21 42.0 +0.3
PAX pmax pmax
comp=Z,75nm,1.1s
PAX Paxson 20.25 44 P P 17 17 57.7 +0.1
baz=250,SNR=43
SUCK Suckling Hills 20.30 52 P P 17 17 57.4 -0.5
POKR Poker Plat Res 20.33 37 P P 17 17 57.2 -1.1
POKR Poker Plat Res 20.33 37 P P 17 17 58.7 +0.4
baz=242
IL31 20.38 38 P P 17 17 57.6 -1.1
ILAR Eielson Array 20.38 38 P P 17 17 57.6 -1.2
comp=Z,12nm,0.8s,baz=238,slow=10,SNR=57
ILAR S S 17 21 44.4 +0.4
comp=Z,0.9nm,0.8s,baz=213,slow=13,SNR=2.7
ILAR PcP PcP 17 22 08.9 -0.4
comp=Z,4.2nm,0.6s,baz=283,slow=3.5,SNR=11
ILAR ScP ScP 17 25 39.8 -1.4
comp=Z,0.9nm,0.7s,baz=288,slow=3.2,SNR=5.3
ILAR LR LR 17 26 59.8
comp=Z,486nm,18.5s,baz=229,slow=40
comp=Z,12nm,0.8s
ILAR Eielson Array 20.38 38 P P 17 17 56.8 -2.0
K24K Donnelly Dome 20.42 41 P P 17 17 58.9 -0.4
baz=247,SNR=20
COLD Coldfoot 20.51 30 P P 17 18 00.3 +0.2
COLD Coldfoot 20.51 30 P P 17 18 00.4 +0.2
baz=233,SNR=49
H24K Noodor Dome 20.52 35 P P 17 17 59.6 -0.7
H24K Noodor Dome 20.52 35 P P 17 18 00.4 +0.1
baz=240,SNR=46
GLB Gilahina Butte 20.56 48 P P 17 18 00.9 +0.1
VRDI Verde Repeater 20.68 49 P P 17 18 02.9 +0.7
SNH Sunshine Point 20.78 52 P P 17 18 02.8 -0.4
RIDG Independent Ri 20.79 42 P P 17 18 02.8 -0.5
RIDG IAmb IAmb 17 18 20.4
comp=Z,61nm,0.7s
RIDG Independent Ri 20.79 42 P P 17 18 02.5 -0.8
baz=249,SNR=52
WAX Waxell Ridge 20.82 51 P P 17 18 03.0 -0.6
TGL Tana Glacier 20.88 51 P P 17 18 03.5 -0.9
J25K Salcha River, 20.91 39 P P 17 18 03.2 -1.4
J25K Salcha River, 20.91 39 P P 17 18 03.5 -1.0
baz=246,SNR=35
MCARA McCarthy VSAT 20.91 49 P P 17 18 04.0 -0.7
MCARA IAmb IAmb 17 18 24.5
comp=Z,52nm,0.9s
MCARA McCarthy VSAT 20.91 49 P P 17 18 04.7 +0.1
baz=257,SNR=10
MENT Mentasta 21.00 44 P P 17 18 04.6 -1.0
DOT Dot Lake 21.08 42 P P 17 18 05.9 -0.5
DOT IAmb IAmb 17 18 10.0
comp=Z,81nm,0.6s
ISLE Juniper Island 21.09 51 P P 17 18 06.0 -0.6
M26K Nabesna, AK 21.17 46 P P 17 18 06.8 -0.6
M26K Nabesna, AK 21.17 46 P P 17 18 07.5 +0.1
baz=254,SNR=24
L26K Log Cabin Wild 21.19 44 P P 17 18 07.0 -0.5
L26K IAmb IAmb 17 18 20.5
comp=Z,60nm,1.1s
L26K Log Cabin Wild 21.19 44 P P 17 18 07.1 -0.5
baz=252,SNR=14
MESA MESA 21.21 52 P P 17 18 07.5 -0.5
MESA IAmb IAmb 17 18 16.8
comp=Z,127nm,0.8s
MESA MESA 21.21 52 P P 17 18 07.6 -0.4
baz=261,SNR=9.4
SCRK Sand Creek 21.23 42 P P 17 18 07.3 -0.7
SCRK IAmb IAmb 17 18 19.2
comp=Z,68nm,0.8s
SCRK Sand Creek 21.23 42 P P 17 18 07.2 -0.9
baz=249,SNR=49
YAH Yahtse 21.34 52 P P 17 18 08.0 -1.4
GRNC Granite Creek 21.40 51 P P 17 18 09.8 -0.2
BARN Barnard Glacie 21.50 50 P P 17 18 09.8 -1.3
TOLK Toolik Lake Re 21.56 27 P P 17 18 10.7 -0.8
TOLK IAmb IAmb 17 18 22.0
comp=Z,37nm,0.8s
TOLK Toolik Lake Re 21.56 27 P P 17 18 11.5 0.0
baz=231,SNR=30
J26L Joseph Creek 21.58 40 P P 17 18 11.2 -0.6
J26L IAmb IAmb 17 18 32.9
comp=Z,59nm,0.5s
J26L Joseph Creek 21.58 40 P P 17 18 11.2 -0.6
baz=249,SNR=56
CTG Chitna Glacier 21.64 50 P P 17 18 12.9 +0.4
baz=260
CTGM Chitina Glacie 21.64 50 P P 17 18 11.8 -0.7
TABL Table Mountain 21.65 52 P P 17 18 12.0 -0.7
M27K Edge Creek, AK 21.67 47 P P 17 18 12.1 -0.6
baz=256
LOGN Logan Glacier 21.77 51 P P 17 18 13.8 -0.2
A21K Barrow 21.84 18 P P 17 18 13.4 -1.0
A21K IAmb IAmb 17 18 35.9
comp=Z,225nm,1.4s
A21K Barrow 21.84 18 P P 17 18 14.2 -0.2
baz=215,SNR=8.5
L27K Beaver Creek, 21.87 45 P P 17 18 14.0 -0.8
L27K Beaver Creek, 21.87 45 P P 17 18 15.4 +0.6
baz=254,SNR=17
BCAR Beaver Creek A 21.89 45 P P 17 18 14.5 -0.6
K27K Chicken 22.04 42 P P 17 18 16.3 -0.3
baz=252
PCA Pinnacle 22.04 53 P P 17 18 15.4 -1.4
PINM Pinnacle 22.05 53 P P 17 18 16.6 -0.2
baz=263
BVCY Beaver Creek 22.14 47 P P 17 18 17.5 -0.3
baz=257
YUK3 Moose Creek 22.20 48 P P 17 18 18.3 -0.3
baz=259,SNR=18
BCPM Bancas Point 22.34 53 P P 17 18 19.5 -0.4
BCPM IAmb IAmb 17 18 40.8
comp=Z,23nm,0.6s
PNL Peninsula 22.44 54 P P 17 18 20.8 -0.1
baz=265
YUK8 Steele Glacier 22.44 50 P P 17 18 20.7 -0.6
baz=261
BMAR Burnt Mountain 22.45 33 P P 17 18 21.0 0.0
BMAR PcP 17 22 13.9 +0.5
YUK4 Talbot Arm 22.98 50 P P 17 18 25.7 -1.1
baz=262
YUK6 Outpost Mounta 23.07 51 P P 17 18 26.5 -1.3
baz=263
DAWY Dawson 23.18 43 P P 17 18 28.2 -0.5
DAWY Dawson 23.18 43 P P 17 18 27.8 -0.8
baz=255,SNR=13
HYT Haines Junctio 23.48 51 P P 17 18 30.3 -1.3
HYT Haines Junctio 23.48 51 P P 17 18 30.2 -1.3
baz=264
N30M Aishikik Lake 23.74 50 P P 17 18 32.3 -1.7
baz=263
PLBC Pleasant Camp 23.97 55 P P 17 18 34.6 -1.3
baz=268
I29M Ogilvie Camp, 23.98 40 P P 17 18 35.0 -1.1
I29M IAmb IAmb 17 18 36.4
comp=Z,33nm,0.7s
I29M Ogilvie Camp, 23.98 40 P P 17 18 35.1 -1.0
baz=253,SNR=70
M30M Minto, Yukon 24.03 47 P P 17 18 33.4 -3.2
M30M Minto, Yukon 24.03 47 P P 17 18 36.5 -0.1
baz=261
KUR Kuril'sk 24.03 269 *e*P P 17 18 35.8 -0.8
KUR *e**PP pP 17 18 48.2 -1.0
KUR *e* 17 19 05.8
O30N Mendenhall 24.16 52 P P 17 18 36.8 -1.0
baz=266
N31M Braeburn, Yuko 24.37 50 P P 17 18 39.4 -0.2
N31M Braeburn, Yuko 24.37 50 P P 17 18 38.9 -0.7
baz=264
SKAG Skagway 24.50 55 P P 17 18 39.2 -1.5
SKAG Skagway 24.50 55 P P 17 18 40.7 -0.1
baz=269
SIT Sitka 24.60 61 P P 17 18 41.1 -0.6
SIT Sitka 24.60 61 P P 17 18 41.1 -0.6
SIT pmax pmax
comp=Z,15nm,0.6s
SIT Sitka 24.60 61 P P 17 18 42.3 +0.7
baz=274
WHY Whitehorse 24.75 52 P P 17 18 40.1 -3.1
WHY Whitehorse 24.75 52 P P 17 18 42.7 -0.5
baz=267
BESE Bessie Mountai 24.75 57 P P 17 18 42.2 -1.0
EPYK Eagle Plains 24.90 38 P P 17 18 43.0 -1.4
EPYK Eagle Plains 24.90 38 P P 17 18 43.7 -0.7
baz=253,SNR=14
JIS Juneau Island 25.02 58 P P 17 18 44.4 -1.0
TYV Tymovskoe 25.09 284 *e*P P 17 18 47.1 +0.9
TYV *e*S S 17 23 11.9 +5.0
TYV pmax pmax
comp=Z,19nm,1.1s
TYV pmax pmax
comp=Z,200nm,3.5s
TYV smax smax
comp=N,7.0nm,1.3s
TYV smax smax
comp=E,10.0nm,1.3s
TYV smax smax
comp=N,400nm,3.8s
TYV smax smax
comp=E,400nm,3.8s
M31M Drury Creek, Y 25.09 48 P P 17 18 45.6 -0.6
M31M Drury Creek, Y 25.09 48 P P 17 18 44.8 -1.4
baz=264
P32M Atlin 25.32 55 P P 17 18 48.2 -0.1
baz=270
SHO Shikotan 25.34 267 *e*P P 17 18 47.5 -1.0
SHO pmax pmax
comp=Z,44nm,0.8s
SHO pmax pmax
comp=N,15nm,0.5s

SHO pmax pmax
comp=E,19nm,0.6s
FARO Faro, Yukon 25.58 48 P **P** **17 18 50.8 +0.1**
baz=265
P33M Teslin, Yukon 25.76 53 P **P** **17 18 51.7 -0.6**
P33M Teslin, Yukon 25.76 53 P **P** **17 18 51.8 -0.6**
baz=270
CRAG Craig 26.02 64 P **P** **17 18 54.0 -0.6**
CRAG Craig 26.02 64 P **P** **17 18 54.9 +0.3**
baz=279
UGL Uglegorsk 26.04 281 *e*P **P** **17 18 56.4 +1.6**
UGL pmax pmax
comp=Z,180nm,0.9s
WRAK Wrangell Islan 26.30 62 P **P** **17 18 55.3 -1.8**
WRAK Wrangell Islan 26.30 62 P **P** **17 18 57.5 +0.4**
baz=278
YSS Yuzh-Sakhalins 26.45 276 P **P** **17 18 58.5 -0.1**
YSS IAmb IAmb 17 19 01.6
comp=Z,51nm,1.0s
YSS Yuzh-Sakhalins 26.45 276 *e*P **P** **17 18 59.8 +1.3**
YSS *e*S **S** **17 23 30.3 +1.9**
YSS *e*SS **SnSn** **17 24 43.7 +10**
YSS pmax pmax
comp=Z,50nm,0.9s
YSS MLR MLR
comp=Z,300nm,16.0s
MMPY Sheldon Lake, 26.58 48 P **P** **17 18 59.8 +0.2**
baz=266,SNR=6.6
INK Inuvik 26.64 35 P **P** **17 19 00.2 +0.2**
comp=Z,5.7nm,0.3s,baz=234,slow=4.3,SNR=15
INK PcP **PcP** **17 22 22.9 +0.4**
comp=Z,6.5nm,0.4s,baz=250,slow=1.6,SNR=7.6
comp=Z,5.7nm,0.3s
INK Inuvik 26.64 35 P **P** **17 18 59.1 -1.0**
INK Inuvik 26.64 35 P **P** **17 18 59.4 -0.7**
baz=253
DIB Dawson Inlet, 26.87 69 P **P** **17 19 02.7 +0.4**
DIB IAmb IAmb 17 19 07.4
comp=Z,33nm,0.9s
DLBC Dease Lake 27.29 57 P **P** **17 19 07.3 +1.2**
comp=Z,2.3nm,0.7s,baz=287,slow=12,SNR=5.4
DLBC PcP **PcP** **17 22 24.9 +0.6**
comp=Z,3.2nm,0.7s,baz=267,slow=3.9,SNR=3.0
DLBC LR LR 17 31 03.6
comp=Z,364nm,19.0s,baz=266,slow=39
comp=Z,2.3nm,0.7s
DLBC Dease Lake 27.29 57 P **P** **17 19 05.7 -0.5**
DLBC Dease Lake 27.29 57 P **P** **17 19 06.2 +0.1**
baz=276
T35M Bob Quinn 27.36 60 P **P** **17 19 06.9 +0.1**
baz=278
JKA Kamikawa-asahi 27.86 271 P **P** **17 19 10.7 -0.6**
JKA IAmb IAmb 17 19 13.3
comp=Z,45nm,1.0s
ASAJ Asahikawa 27.86 271 LR LR 17 28 38.9
comp=Z,94nm,21.7s,baz=82,slow=33
ASAJ Asahikawa 27.86 271 P **P** **17 19 10.7 -0.5**
ASAJ pmax pmax
comp=Z,45nm,1.0s
GRNB Grenville Isla 28.16 67 P **P** **17 19 14.6 +0.8**
GRNB IAmb IAmb 17 19 21.4
comp=Z,21nm,0.8s
ERM Erimo 28.61 266⇓ *e*P **P** **17 19 18.4 +0.5**
ERM pmax pmax
comp=Z,60nm,1.4s
ERM Erimo 28.61 266 P **P** **17 19 19.1 +1.2**
GRNR Gornyy 28.86 287 *e*P **P** **17 19 21.2 +1.1**
GRNR MLR MLR
comp=E,140nm,16.0s
BBB Bella Bella 29.71 69 P **P** **17 19 29.4 +1.9**
comp=E,18nm,1.0s,baz=255,slow=7.7,SNR=5.3
BBB LR LR 17 29 08.1
comp=E,160nm,21.4s,baz=288,slow=32
comp=E,18nm,1.0s
BBB Bella Bella 29.71 69 IAmb IAmb 17 20 31.4
comp=Z,47nm,1.3s
YAK Yakutsk 30.16 311 P **P** **17 19 31.9 +0.5**
comp=Z,6.4nm,0.5s,baz=72,slow=2.1,SNR=9.1
YAK PcP **PcP** **17 22 31.0 -0.3**
comp=Z,12nm,0.7s,baz=180,slow=0.5,SNR=13
YAK LR LR 17 32 49.4
comp=Z,320nm,18.2s,baz=89,slow=39
comp=Z,6.4nm,0.5s
YAK Yakutsk 30.16 311 P **P** **17 19 29.9 -1.5**
YAK IAmb IAmb 17 19 36.1
comp=Z,15nm,0.6s
YAK **PcP** **17 22 30.6 -0.7**
YAK Yakutsk 30.16 311 *e*P **P** **17 19 31.7 +0.3**
YAK pmax pmax
comp=Z,9.0nm,0.8s
YAK pmax pmax
comp=N,2.0nm,0.8s
YAK Yakutsk 30.16 311 P **P** **17 19 32.0 +0.5**
YAK sP **sP** **17 19 49.4 -1.3**
C36M Paulatuk 30.22 34 P **P** **17 19 31.6 -0.3**
C36M PcP **PcP** **17 22 31.5 +0.2**
C36M Paulatuk 30.22 34 P **P** **17 19 31.1 -0.8**
baz=261
A36M Sachs Harbour 30.36 29 P **P** **17 19 31.8 -1.3**
A36M IAmb IAmb 17 19 37.2
comp=Z,24nm,0.8s
A36M PcP **PcP** **17 22 32.1 +0.5**
A36M Sachs Harbour 30.36 29 P **P** **17 19 32.2 -0.9**
baz=256
KLR Kul'dur 32.23 286 P **P** **17 19 49.9 +0.1**
comp=Z,26nm,0.7s,baz=61,slow=8.4,SNR=90
KLR LR LR 17 32 51.8
comp=Z,338nm,20.2s,baz=66,slow=36
comp=Z,26nm,0.7s
KLR Kul'dur 32.23 286*c i*P **P** **17 19 49.8 -0.1**
KLR pmax pmax
comp=Z,56nm,1.3s
ZEA Zeya 33.18 296 *e*P **P** **17 19 58.4 +0.3**
ZEA *e* 17 30 23.3
ZEA pmax pmax
comp=Z,10.0nm,1.1s
CLRS Cowichan Lake 33.32 73 P **P** **17 19 58.8 -0.5**
CLRS IAmb IAmb 17 20 07.3
comp=Z,16nm,0.9s
LLLB Lillooet 33.92 69 P **P** **17 20 04.2 -0.3**
LLLB IAmb IAmb 17 20 08.2
comp=Z,28nm,0.6s
JYT Yasato 33.93 260 P **P** **17 20 04.2 -0.5**
JSD Sado 33.98 264 P **P** **17 20 04.1 -1.1**
JSD IAmb IAmb 17 20 06.8
comp=Z,36nm,1.0s
H11N2 WAKE ISLAND Hy 34.21 208 T T 17 56 22.4
baz=18,slow=75
H11N3 WAKE ISLAND Hy 34.22 208 T T 17 56 26.2
baz=18,slow=75
H11N1 WAKE ISLAND Hy 34.23 208 T T 17 56 27.0
baz=18,slow=75
YKA Yellowknife Ar 34.26 47 P **P** **17 20 07.2 -0.1**
comp=Z,7.1nm,0.8s,baz=284,slow=7.7,SNR=62
YKA PcP **PcP** **17 22 43.1 +0.6**
comp=Z,7.2nm,0.6s,baz=287,slow=2.2,SNR=22
YKA ScP **ScP** **17 26 22.7 -0.3**
comp=Z,1.3nm,0.8s,baz=283,slow=3.2,SNR=6.0
YKA LR LR 17 34 52.9
comp=Z,280nm,21.7s,baz=265,slow=38
comp=Z,7.1nm,0.8s
YKA Yellowknife Ar 34.26 47 P **P** **17 20 06.3 -1.1**
YKA PcP **PcP** **17 22 42.6 +0.1**
YKA Yellowknife Ar 34.26 47 *i* P **P** **17 20 07.8 +0.5**
YKA pmax pmax
comp=Z,7.0nm,0.7s
USA0B Ussuriysk Arra 34.41 278 P **P** **17 20 07.8 -1.1**
USA0B IAmb IAmb 17 20 09.6
comp=Z,24nm,0.7s
USA0B Ussuriysk Arra 34.41 278 P **P** **17 20 07.8 -1.1**
USA0B pmax pmax
comp=Z,24nm,0.7s
USRK Ussuriysk Ar. 34.41 278 P **P** **17 20 08.7 -0.2**
comp=Z,26nm,0.6s,baz=57,slow=9.6,SNR=43
USRK PcP **PcP** **17 22 44.5 +1.2**
comp=Z,2.9nm,0.6s,baz=20,slow=4.6,SNR=2.9
USRK LR LR 17 33 13.4
comp=Z,123nm,21.3s,baz=47,slow=34
comp=Z,26nm,0.6s
USRK Ussuriysk Ar. 34.41 278 P **P** **17 20 07.7 -1.2**
D03D Eldon 34.52 75 P **P** **17 20 09.2 -0.5**
baz=297,SNR=7.6
MJAR Matsushiro Arr 34.95 262 P **P** **17 20 13.3 -0.3**
comp=Z,12nm,0.6s,baz=41,slow=7.0,SNR=35
MJAR PcP **PcP** **17 22 45.3 +0.3**
comp=Z,2.3nm,0.9s,baz=81,slow=7.7,SNR=5.5
MJAR LR LR 17 32 18.8
comp=Z,240nm,21.6s,baz=72,slow=32
comp=Z,12nm,0.6s
MJAR Matsushiro Arr 34.95 262 P **P** **17 20 12.7 -1.0**
MJAR PcP **PcP** **17 22 44.5 -0.5**
MAJO Matsushiro 34.95 262 P **P** **17 20 12.9 -0.7**
MAJO IAmb IAmb 17 20 15.5
comp=Z,53nm,1.1s
MAJO Matsushiro 34.95 262*c i*P **P** **17 20 14.4 +0.8**
MAJO pmax pmax
comp=Z,55nm,1.1s
MAJO Matsushiro 34.95 262 P **P** **17 20 15.0 +1.4**
MAJO Matsushiro 34.95 262 P **P** **17 20 14.5 +0.9**
MAJO pP **pP** **17 20 26.9 +0.3**
MAJO sP **sP** **17 20 33.4 +0.8**
MJB9 Matsu-Tunnel 34.95 262 P **P** **17 20 13.1 -0.6**
MJB9 IAmb IAmb 17 20 15.5
comp=Z,50nm,1.0s
VLA Vladivostok 35.04 277*c e*P **P** **17 20 14.5 +0.2**
VLA pmax pmax
comp=Z,51nm,0.9s
H11S1 WAKE ISLAND Hy 35.43 207 T T 17 58 06.0
baz=17,slow=76
H11S2 WAKE ISLAND Hy 35.44 207 T T 17 58 04.9
baz=17,slow=76,SNR=8738
H11S3 WAKE ISLAND Hy 35.44 207 T T 17 58 06.3
baz=17,slow=76,SNR=6739
MDJ Mudanjiang 35.68 280 P **P** **17 20 19.1 -0.6**
MDJ pmax pmax
comp=Z,15nm,0.8s
MDJ pmax pmax
comp=Z,48nm,3.6s
MDJ LR LR
comp=Z,110nm,5.7s
MDJ LR LR
comp=Z,250nm,13.9s
MDJ LR LR
comp=Z,190nm,8.2s
MDJ Mudanjiang 35.68 280 P **P** **17 20 19.3 -0.4**
F04A Amboy 35.68 77 P **P** **17 20 20.2 +0.4**
F04A IAmb IAmb 17 20 31.4
comp=Z,25nm,0.8s
JGF Kuroka 36.09 262 P **P** **17 20 23.8 +0.4**
JGF IAmb IAmb 17 20 25.5
comp=Z,34nm,0.7s
LTY Liberty 36.10 74 P **P** **17 20 23.9 +0.5**
J01E Myrtle Point 36.17 82 P **P** **17 20 22.7 -1.3**
baz=302
H04D Lebanon 36.19 79 P **P** **17 20 23.9 -0.2**
baz=301
I03D Drain, OR 36.25 81 P **P** **17 20 23.8 -0.9**
baz=302
JHJ Hachijo jima 2 36.26 257 LR LR 17 32 34.1
comp=Z,146nm,20.9s,baz=86,slow=32
B08A Colville Reser 36.38 72 P **P** **17 20 26.4 +0.6**
B08A IAmb IAmb 17 20 29.6
comp=Z,32nm,0.9s
BNX BinXian 36.45 283⇑ P **P** **17 20 25.6 -0.7**
BNX pmax pmax
comp=Z,44nm,0.6s
BNX pmax pmax
comp=Z,190nm,4.7s
H04A Detroit Lake 36.45 79 P **P** **17 20 27.3 +0.9**
H04A IAmb IAmb 17 20 29.7
comp=Z,27nm,0.9s
INU Inuyama 36.46 262 P **P** **17 20 26.2 -0.3**
INU IAmb IAmb 17 20 27.8
comp=Z,13nm,0.8s
K02D Willamette Mer 36.59 83 P **P** **17 20 26.6 -1.1**
baz=303
G05D Wamic, OR 36.70 77 P **P** **17 20 28.3 -0.2**
baz=300
I04A Tendick Farm, 36.77 80 P **P** **17 20 29.1 -0.1**
baz=302,SNR=5.6
E07A Sunnyside 36.93 75 P **P** **17 20 30.8 +0.4**
E07A IAmb IAmb 17 20 48.3
comp=Z,12nm,0.7s
L02F Cave Junction 36.96 83 P **P** **17 20 30.3 -0.4**
baz=303
I05D Terrebonne, OR 37.15 79 P **P** **17 20 31.9 -0.5**
baz=301
HAWA Hanford 37.20 75 P **P** **17 20 33.0 +0.2**
HAWA IAmb IAmb 17 20 44.5
comp=Z,23nm,0.7s
F07A Phinny Hill Vi 37.21 76 P **P** **17 20 32.9 +0.1**
F07A IAmb IAmb 17 20 37.4
comp=Z,27nm,0.7s
D08A Wollman Farm, 37.24 73 P **P** **17 20 32.6 -0.4**
D08A IAmb IAmb 17 20 36.9
comp=Z,14nm,0.8s
J04D Umpqua Nationa 37.26 81 P **P** **17 20 33.8 +0.3**
J04D IAmb IAmb 17 20 42.2
comp=Z,30nm,0.7s
J04D Umpqua Nationa 37.26 81 P **P** **17 20 33.3 -0.1**
baz=302
C09A Chrisman Ranch 37.27 72 P **P** **17 20 33.7 +0.3**
C09A IAmb IAmb 17 20 36.9
comp=Z,50nm,1.4s
E08A Dider Farm, El 37.44 74 P **P** **17 20 34.6 -0.1**
E08A IAmb IAmb 17 20 37.7
comp=Z,27nm,1.3s
KHMM Horse Mountain 37.56 85 P **P** **17 20 37.0 +1.0**
KHMM IAmb IAmb 17 20 58.4
comp=Z,41nm,1.4s
PINE Pine Mountain 37.68 79 P **P** **17 20 39.0 +1.9**
PINE IAmb IAmb 17 20 50.0
comp=Z,16nm,0.9s
L04D Klamath Falls 37.69 82 P **P** **17 20 37.0 -0.1**
L04D IAmb IAmb 17 20 40.5
comp=Z,18nm,1.0s
L04D Klamath Falls 37.69 82 P **P** **17 20 37.5 +0.4**
baz=303
YBH Yreka Blue Hor 37.71 83 LR LR 17 32 49.8
comp=Z,227nm,21.1s,baz=306,slow=31
YBH Yreka Blue Hor 37.71 83 P **P** **17 20 37.8 +0.6**
YBH Yreka Blue Hor 37.71 83 P **P** **17 20 37.8 +0.6**
YBH pmax pmax
comp=Z,10.0nm,1.1s
NEW Newport 37.73 71 LR LR 17 33 54.8
comp=Z,178nm,20.3s,baz=296,slow=32
NEW Newport 37.73 71 P **P** **17 20 38.0 +0.7**
NEW Newport 37.73 71 P **P** **17 20 38.0 +0.7**
NEW pmax pmax
comp=Z,98nm,1.4s
NEW Newport 37.73 71 P **P** **17 20 37.7 +0.4**
baz=298,SNR=40
J05D Fort Rock, OR 37.77 80 P **P** **17 20 37.4 -0.3**
baz=302,SNR=10
K04D Chiloquin, OR 37.81 81 P **P** **17 20 37.0 -1.1**
baz=303
KMRM Mail Ridge 37.95 86 P **P** **17 20 39.1 -0.2**
KMRM IAmb IAmb 17 20 49.7
comp=Z,19nm,0.9s
E09A Wood Farm, Sta 37.98 74 P **P** **17 20 41.3 +2.1**
E09A IAmb IAmb 17 20 50.5
comp=Z,14nm,0.8s
G08A Pilot Rock 38.10 76 P **P** **17 20 41.3 +0.8**
K05A Summer Lake 38.28 81 P **P** **17 20 42.9 +0.7**
K05A IAmb IAmb 17 20 54.5
comp=Z,34nm,0.9s
I07A Izee 38.40 78 P **P** **17 20 44.3 +1.3**
I07A IAmb IAmb 17 20 46.2
comp=Z,20nm,0.8s
CN2 Changchun 38.64 282 *e*P **P** **17 20 42.6 -2.3**
CN2 S **S** **17 26 34.3 -3.2**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=Z,300nm,19.9s
CN2 LR LR
comp=Z,300nm,19.9s
CN2 LR LR
comp=Z,400nm,19.9s
RES Resolute Bay 39.09 25 LR LR 17 39 21.7
comp=Z,239nm,20.3s,baz=262,slow=40
RES Resolute Bay 39.09 25 P **P** **17 20 48.9 +0.7**
RES **PcP** **17 22 56.2 -0.7**
RES Resolute Bay 39.09 25 P **P** **17 20 48.9 +0.7**
RES 17 22 56.2
RES pmax pmax
comp=Z,14nm,1.4s
MOD Modoc Plateau 39.11 81 P **P** **17 20 51.4 +2.4**
MOD IAmb IAmb 17 20 52.2
comp=Z,15nm,0.8s
JHS Saijyo 39.11 265 P **P** **17 20 49.6 +0.7**
JHS IAmb IAmb 17 20 50.8
comp=Z,18nm,0.8s
JCJ Chichijima 39.21 247 P **P** **17 20 50.4 +0.6**
comp=Z,87nm,0.6s,baz=37,slow=20,SNR=2.0
JCJ LR LR 17 33 38.9
comp=Z,162nm,21.7s,baz=304,slow=31
comp=Z,87nm,0.6s
WALA Waterton Lakes 39.23 68 P **P** **17 20 50.7 +0.7**
WALA IAmb IAmb 17 20 52.5
comp=Z,43nm,0.9s
WALA PcP **PcP** **17 22 56.2 -1.8**
BMO Blue Mountains 39.33 76 P **P** **17 20 50.8 0.0**
BMO Blue Mountains 39.33 76 P **P** **17 20 50.8 0.0**
BMO pmax pmax
comp=Z,11nm,0.9s
J08A Circle Bar Ran 39.42 78 P **P** **17 20 53.8 +2.2**
J08A IAmb IAmb 17 21 09.6
comp=Z,19nm,0.6s
JTMT Jette 39.65 70 P **P** **17 20 55.0 +1.6**
JTMT IAmb IAmb 17 20 56.1
comp=Z,28nm,0.8s
WVOR Wild Horse Val 39.83 80 P **P** **17 20 54.7 -0.3**
WVOR IAmb IAmb 17 20 58.1
comp=Z,27nm,0.8s
WVOR Wild Horse Val 39.83 80 P **P** **17 20 54.7 -0.3**
WVOR pmax pmax
comp=Z,27nm,0.9s
PLID Pearl Lake 39.99 74 P **P** **17 20 57.8 +1.3**
SEHB SEOHWA 40.08 273 P **P** **17 20 56.5 -0.4**
SEHB IAmb IAmb 17 20 59.3
comp=Z,20nm,1.1s
BEKR Beckworth 40.24 84 P **P** **17 21 00.6 +2.1**
MSO Missoula 40.32 71 P **P** **17 20 59.0 +0.2**
MSO Missoula 40.32 71 P **P** **17 20 59.1 +0.2**
baz=300,SNR=30
KSRS Korea Array 40.79 272 P **P** **17 21 03.9 +1.2**
comp=Z,9.9nm,0.8s,baz=57,slow=7.8,SNR=37
KSRS LR LR 17 37 24.3
comp=Z,33nm,21.5s,baz=60,slow=35
comp=Z,9.9nm,0.8s
KS19 Wonju Array Si 40.79 272 P **P** **17 21 04.2 +1.4**
KS19 IAmb IAmb 17 21 05.0
comp=Z,16nm,0.9s
KSAR Wonju Array Be 40.82 272 P **P** **17 21 02.4 -0.6**
KSAR Wonju Array Be 40.82 272 P **P** **17 21 02.4 -0.6**
SNY Shenyang 40.88 280⇑ P **P** **17 21 04.4 +1.0**
SNY S **S** **17 27 11.5 +0.5**
SNY pmax pmax
comp=Z,77nm,0.8s
SNY LR LR
comp=Z,190nm,18.0s
SNY LR LR
comp=Z,250nm,20.4s
SNY LR LR
comp=Z,280nm,21.8s
PAHR Pah Rah Range 40.94 84 P **P** **17 21 06.3 +2.1**
PAHR IAmb IAmb 17 21 07.1
comp=Z,16nm,0.8s
MFID Camas Ranch 41.00 77 P **P** **17 21 06.3 +1.6**
KSCHJ Chungju 41.12 271 P **P** **17 21 04.5 -0.9**
KSCHJ IAmb IAmb 17 21 07.4
comp=Z,23nm,0.9s
PNTR Pine Nut 41.18 84 P **P** **17 21 08.9 +2.7**
PNTR IAmb IAmb 17 21 19.6
comp=Z,34nm,0.7s
CMB Columbia Colle 41.33 86 P **P** **17 21 05.7 -1.6**
CMB Columbia Colle 41.33 86 P **P** **17 21 05.7 -1.6**
CMB pmax pmax
comp=Z,10.0nm,1.2s
YERR Yerington 41.47 84 P **P** **17 21 08.3 -0.3**
YERR IAmb IAmb 17 21 45.7
comp=Z,26nm,1.2s
INCN Inchon 41.57 273 P **P** **17 21 10.3 +1.0**
HRY Holter Researc 41.62 70 P **P** **17 21 09.3 -0.3**
LRM Limekiln Ridge 41.72 72 P **P** **17 21 12.0 +1.3**
HLID Hailey 41.78 76 P **P** **17 21 12.2 +1.2**
HLID Hailey 41.78 76 P **P** **17 21 11.4 +0.4**
baz=304,SNR=23
TJN Taejon 41.81 271 P **P** **17 21 12.1 +0.9**
TJN Taejon 41.81 271*c i*P **P** **17 21 11.9 +0.8**
BMN Battle Mountai 41.85 81 P **P** **17 21 13.9 +2.2**
BMN Battle Mountai 41.85 81 P **P** **17 21 13.9 +2.2**
BMN pmax pmax
comp=Z,11nm,0.7s
MCMT McKenzie Canyo 42.02 73 P **P** **17 21 14.7 +1.6**
RYN Ryan 42.13 84 P **P** **17 21 16.0 +2.1**
KVN Kaiserville 42.13 83 P **P** **17 21 15.9 +1.9**
KVN Kaiserville 42.13 83 P **P** **17 21 15.9 +1.9**
KVN pmax pmax
comp=Z,7.0nm,0.7s
EGMT Eagleton 42.15 67 P **P** **17 21 14.5 +0.6**
baz=301
ALE Alert 42.23 10 P **P** **17 21 14.5 +0.4**
BOZ Bozeman (W) 42.33 71 P **P** **17 21 16.4 +0.9**
BOZ IAmb IAmb 17 21 18.6
comp=Z,25nm,0.8s
BOZ Bozeman (W) 42.33 71 P **P** **17 21 16.4 +0.9**
BOZ pmax pmax
comp=Z,25nm,0.8s
BOZ Bozeman (W) 42.33 71 P **P** **17 21 15.7 +0.2**
baz=302,SNR=25
LHV Little Huntoon 42.37 85 P **P** **17 21 18.5 +2.8**
NVAR Mina Array Bea 42.38 84 P **P** **17 21 17.4 +1.3**
comp=Z,7.1nm,0.8s,baz=291,slow=7.9,SNR=45
NVAR PcP **PcP** **17 23 09.4 +0.9**
comp=Z,3.7nm,0.7s,baz=286,slow=2.5,SNR=5.6
NVAR ScP **ScP** **17 26 55.0 +0.4**
comp=Z,0.5nm,0.5s,baz=312,slow=4.2,SNR=3.7
NVAR LR LR 17 35 39.5
comp=Z,120nm,21.0s,baz=282,slow=31
comp=Z,7.1nm,0.8s
NVAR Mina Array Bea 42.38 84 P **P** **17 21 17.9 +1.8**
NAWB Namwon 42.40 270 P **P** **17 21 16.9 +0.9**
OMMB Old Mammoth Mi 42.45 86 P **P** **17 21 19.4 +2.6**
NV11 Mina Array Sit 42.48 84 P **P** **17 21 18.6 +1.9**
Q09A Carvers 42.83 83 P **P** **17 21 21.1 +1.4**
Q09A IAmb IAmb 17 21 22.8
comp=Z,28nm,0.7s
QLMT Earthquake Lak 42.87 72 P **P** **17 21 21.6 +1.7**
ELK Elko 42.89 79 LR LR 17 39 29.7
comp=Z,129nm,18.1s,baz=304,slow=36
ELK Elko 42.89 79 P **P** **17 21 20.0 -0.2**
ELK Elko 42.89 79 P **P** **17 21 20.0 -0.2**
ELK pmax pmax
comp=Z,13nm,0.7s
YHL Hebgen Lake 43.00 72 P **P** **17 21 22.9 +1.7**
YHL IAmb IAmb 17 21 25.7
comp=Z,35nm,0.9s
JSU Suzuyama 43.10 263 P **P** **17 21 21.6 -0.1**
JSU IAmb IAmb 17 21 23.5
comp=Z,38nm,0.9s
YMR Madison River 43.23 72 P **P** **17 21 25.3 +2.4**
YMR IAmb IAmb 17 21 26.4
comp=Z,39nm,1.0s
TPH Tonopah 43.27 84 P **P** **17 21 25.4 +2.1**
TPH IAmb IAmb 17 21 26.0
comp=Z,57nm,0.8s
TPH Tonopah 43.27 84 P **P** **17 21 25.4 +2.1**
TPH pmax pmax
comp=Z,57nm,0.8s
TIN Tinemaha, Big 43.28 86 P **P** **17 21 25.0 +1.7**
baz=309
YNR Norris Junctio 43.38 72 P **P** **17 21 26.6 +2.5**
YNR IAmb IAmb 17 21 28.0
comp=Z,141nm,1.9s
GCMT Greycliff 43.38 70 P **P** **17 21 25.6 +1.6**
LCH Last Change Ra 43.53 85 P **P** **17 21 27.2 +1.9**
YPP Pitchstone Pla 43.55 72 P **P** **17 21 25.9 +0.3**
PKM Mcpherson Peak 43.68 89 P **P** **17 21 28.0 +1.5**
baz=310
FLWY Flagg Ranch 43.72 73 P **P** **17 21 29.2 +2.4**
FLWY IAmb IAmb 17 21 30.9
comp=Z,20nm,0.8s
CWC Cottonwood Cre 43.76 86 P **P** **17 21 28.4 +1.2**
baz=309
HVU Hansel Valley 43.79 77 P **P** **17 21 29.3 +2.0**
HVU Hansel Valley 43.79 77 P **P** **17 21 29.3 +2.0**
HVU pmax pmax
comp=Z,14nm,0.8s
GRAC Grapevine Rang 43.86 85 P **P** **17 21 29.3 +1.5**
baz=309
TPAW Teton Pass 43.90 74 P **P** **17 21 30.6 +2.2**
RLMT Red Lodge 43.98 71 P **P** **17 21 30.6 +1.6**
RLMT Red Lodge 43.98 71 P **P** **17 21 30.5 +1.6**
baz=304,SNR=28

ISA Isabella, Lake 44.01 88 P P 17 21 30.0 +0.9
baz=310
SBC Santa Barbara 44.03 90 P P 17 21 30.2 +1.1
baz=311
REDW Red Top Meadow 44.03 74 P P 17 21 28.2 -1.2
LOHW Long Hollow 44.04 73 P P 17 21 31.0 +1.6
R11A Troy Canyon, C 44.12 82 P P 17 21 31.5 +1.5
R11A Troy Canyon, C 44.12 82 P P 17 21 30.8 +0.7
baz=308,SNR=25
AHID Auburn Hatcher 44.23 74 P P 17 21 33.0 +2.1
AHID lAmb lAmb 17 21 36.8
comp=Z,15nm,0.8s
XLT XiLinHaoTe 44.24 288 *e*P P 17 21 30.0 -0.8
XLT pP pP 17 21 44.3 0.0
XLT sP sP 17 21 47.6 -2.6
XLT S S 17 27 56.8 -3.8
XLT pmax pmax
comp=Z,36nm,1.1s
XLT pmax pmax
comp=Z,100nm,5.5s
XLT LR LR
comp=Z,250nm,20.6s
XLT LR LR
comp=Z,250nm,23.2s
MPMC Manual Prospec 44.37 86 P P 17 21 32.6 +0.5
baz=310,SNR=8.2
S11A Rachel 44.46 83 P P 17 21 35.4 +2.7
S11A lAmb lAmb 17 21 35.5
comp=Z,15nm,0.8s
FURC Furnace Creek, 44.50 85 P P 17 21 33.6 +0.7
baz=309,SNR=8.8
TPNV Topopah Spring 44.58 84 P P 17 21 35.5 +1.8
TPNV lAmb lAmb 17 21 36.3
comp=Z,28nm,0.7s
TPNV Topopah Spring 44.58 84 P P 17 21 35.5 +1.8
TPNV pmax pmax
comp=Z,28nm,0.7s
TPNV Topopah Spring 44.58 84 P P 17 21 34.3 +0.6
baz=309,SNR=22
HWUT Hardware Ranch 44.62 76 P P 17 21 36.0 +1.9
DUG Dugway, Tooele 44.70 78 P P 17 21 36.6 +2.0
DUG pmax pmax
comp=Z,29nm,1.1s
DUG Dugway, Tooele 44.70 78 P P 17 21 35.0 +0.4
baz=307,SNR=5.1
GWY Greenwater Val 44.80 86 P P 17 21 36.9 +1.4
EDW2 Edwards Air Fo 44.82 88 P P 17 21 34.6 -0.9
baz=310
NRIK Noril'sk 44.83 330 P P 17 21 35.4 +0.3
comp=Z,7.2nm,0.7s,baz=81,slow=9.9,SNR=9.2
NRIK PcP PcP 17 23 15.6 -0.3
comp=Z,4.7nm,0.8s,baz=44,slow=0.5,SNR=4.3
NRIK LR LR 17 42 11.2
comp=Z,215nm,19.1s,baz=27,slow=38
comp=Z,7.2nm,0.7s
NRIK Noril'sk 44.83 330 P P 17 21 34.7 -0.4
NRIK Noril'sk 44.83 330⇓ *e*P P 17 21 35.6 +0.6
NRIK pmax pmax
comp=Z,8.0nm,0.8s
LAO LASA Array 44.89 67 P P 17 21 37.6 +1.7
LAO LASA Array 44.89 67 P P 17 21 37.5 +1.5
baz=304,SNR=25
LAO LASA Array 44.89 67 P P 17 21 36.8 +0.9
baz=303,SNR=25
SNCC San Nicolas Is 44.94 91 P P 17 21 36.2 -0.2
baz=312
PRN Pahroc Range 45.04 83 P P 17 21 39.3 +2.0
PRN lAmb lAmb 17 21 51.2
comp=Z,39nm,0.9s
DGMT Dagmar 45.07 64 P P 17 21 38.0 +0.7
DGMT lAmb lAmb 17 21 39.0
comp=Z,44nm,1.2s
DGMT Dagmar 45.07 64 P P 17 21 37.5 +0.2
baz=302
PSUT Pine Spring 45.08 81 P P 17 21 37.8 +0.1
PSUT lAmb lAmb 17 21 40.1
comp=Z,14nm,0.7s
BW06 Boulder Array 45.15 74 P P 17 21 39.6 +1.3
BW06 lAmb lAmb 17 21 41.1
comp=Z,28nm,0.7s
BW06 Boulder Array 45.15 74 P P 17 21 39.2 +0.9
baz=305,SNR=48
PD31 Pinedale Array 45.15 74 P P 17 21 39.4 +1.1
PD31 lAmb lAmb 17 21 41.1
comp=Z,24nm,0.7s
PDAR Pinedale Array 45.15 74 P P 17 21 39.6 +1.3
comp=Z,34nm,0.8s,baz=307,slow=4.5,SNR=172
PDAR PcP PcP 17 23 18.2 +0.3
comp=Z,2.4nm,0.6s,baz=134,slow=1.3,SNR=1.3
PDAR LR LR 17 37 36.2
comp=Z,130nm,20.8s,baz=299,slow=32
comp=Z,34nm,0.8s
PDAR Pinedale Array 45.15 74 P P 17 21 39.0 +0.8
SHOC Shoshone, Teco 45.23 86 P P 17 21 40.0 +1.2
baz=310
GSC Goldstone, Bar 45.28 87 P P 17 21 40.8 +1.5
GSC lAmb lAmb 17 21 41.7
comp=Z,22nm,0.9s
GSC Goldstone, Bar 45.28 87 P P 17 21 40.8 +1.5
GSC pmax pmax
comp=Z,22nm,0.9s
GSC Goldstone, Bar 45.28 87 P P 17 21 40.1 +0.8
baz=310,SNR=16
JLU Jordanelle 45.29 77 P P 17 21 41.5 +2.1
JLU lAmb lAmb 17 21 42.1
comp=Z,15nm,1.0s
NLU North Lily Min 45.30 78 P P 17 21 38.9 -0.6
BFSC Mount Baldy Ra 45.45 88 P P 17 21 41.6 +1.1
baz=311,SNR=5.9
MPU Maple Canyon 45.53 78 P P 17 21 43.4 +2.1
MPU lAmb lAmb 17 21 43.8
comp=Z,13nm,0.7s
SHPR Sheep Range 45.54 84 P P 17 21 41.8 +0.5
HEC Hector,Ludlow 45.88 87 P P 17 21 44.7 +0.7
baz=311
TCRU Three Creeks R 45.89 80 P P 17 21 46.7 +2.5
TCRU lAmb lAmb 17 21 55.7
comp=Z,16nm,0.8s
CCUT Cedar City 45.99 82 P P 17 21 44.4 -0.6
MSU Marysvale 46.12 80 P P 17 21 48.0 +2.0
MSU Marysvale 46.12 80 P P 17 21 48.0 +2.0
SZCU Shurtz Canyon 46.13 82 P P 17 21 48.0 +1.9
MURC Murrieta 46.16 89 P P 17 21 46.9 +0.8
baz=311
TMUT Trail Mountain 46.23 78 P P 17 21 46.2 -0.7
TMUT lAmb lAmb 17 21 49.8
comp=Z,22nm,0.9s
GMRC Granite Mounta 46.34 86 P P 17 21 48.4 +0.8
baz=311,SNR=11
LCMT Little Creek M 46.40 82 P P 17 21 50.1 +2.0
LCMT lAmb lAmb 17 21 51.0
comp=Z,16nm,0.9s
MTPU Mount Pierson 46.41 80 P P 17 21 46.9 -1.5
MTPU lAmb lAmb 17 21 51.5
comp=Z,12nm,0.8s
RDMU Red Mountain 46.45 76 P P 17 21 50.4 +1.9
RDMU lAmb lAmb 17 21 51.3
comp=Z,41nm,0.9s
BJI Beijing 46.46 283 P P 17 21 48.8 +0.5
BJI pP pP 17 22 01.0 -0.9
BJI sP sP 17 22 06.3 -1.5
BJI PcP PcP 17 23 21.8 -0.3
BJI PP PP 17 23 37.1 -0.7
BJI S S 17 28 28.9 -3.5
BJI pmax pmax
comp=Z,55nm,0.8s
BJI pmax pmax
comp=Z,130nm,3.5s
BJI LR LR
comp=Z,54nm,21.6s
BJI LR LR
comp=Z,230nm,22.5s
BJI LR LR
comp=Z,330nm,20.4s
BJT Baijiatuau 46.48 283 P P 17 21 49.6 +1.1
PFO Pinyon Flats O 46.61 88 LR LR 17 37 25.8
comp=Z,157nm,21.0s,baz=296,slow=31
PFO Pinyon Flats O 46.61 88 P P 17 21 50.3 +0.6
baz=312
BELC Belle Mtn. Jos 46.64 87 P P 17 21 50.3 +0.3
baz=311
NOR Nord 46.65 4 *i* P P 17 21 50.9 +1.6
NOR lAmb lAmb 17 21 55.3
comp=Z,2.1nm,0.8s
PKCU Pink Cliffs 46.71 81 P P 17 21 53.1 +2.4
PKCU lAmb lAmb 17 22 17.4
comp=Z,14nm,0.8s
NEE2 Needles Airpor 46.99 86 P P 17 21 52.9 +0.4
baz=311
K22A Casper 47.03 72 P P 17 21 52.6 -0.4
K22A lAmb lAmb 17 21 54.8
comp=Z,23nm,0.9s
K22A Casper 47.03 72 P P 17 21 53.8 +0.9
baz=307
K22A Casper 47.03 72 P P 17 21 53.3 +0.4
baz=306
IRM Iron Mountain 47.07 87 P P 17 21 53.5 +0.3
baz=311
MONP2 Monument Peak 47.11 89 P P 17 21 54.5 +0.8
baz=312
RWWY Rawlins 47.19 73 P P 17 21 53.2 -1.1
RWWY lAmb lAmb 17 22 19.2
comp=Z,35nm,1.1s
BC3 Big Chuckawall 47.21 87 P P 17 21 55.0 +0.6
baz=312
ULN Ulaanbaatar 47.21 297 P P 17 21 53.1 -1.2
ULN PcP PcP 17 23 24.9 0.0
ULN lAmb lAmb 17 23 26.5
comp=Z,15nm,0.8s
ULN Ulaanbaatar 47.21 297 *ce*P P 17 21 54.3 0.0
ULN pmax pmax
comp=Z,11nm,0.6s
ULN Ulaanbaatar 47.21 297 P P 17 21 55.3 +1.0
ULN x PcP 17 23 25.6 +0.7
W13A Hualapai Mount 47.23 85 P P 17 21 56.0 +1.3
W13A lAmb lAmb 17 21 56.8
comp=Z,9.7nm,0.7s
CBX Cerro Bola 47.35 90 P P 17 21 55.0 -0.5
U15A North Rim 47.37 82 P P 17 21 57.8 +2.0
U15A lAmb lAmb 17 21 58.6
comp=Z,26nm,0.8s
IKP In-Ko-Pah, Jac 47.47 89 P P 17 21 57.2 +0.8
baz=312
O20A White River Ci 47.52 76 P P 17 21 58.2 +1.4
O20A White River Ci 47.52 76 P P 17 21 57.5 +0.7
baz=308,SNR=8.3
SONM Songino Array 47.59 297 P P 17 21 57.2 0.0
comp=Z,10nm,0.7s,baz=60,slow=7.5,SNR=70
SONM PcP PcP 17 23 26.5 +0.3
comp=Z,13nm,0.6s,baz=65,slow=2.9,SNR=18
SONM ScP ScP 17 27 16.0 +0.2
comp=Z,0.8nm,0.8s,baz=22,slow=4.0,SNR=4.2
SONM LR LR 17 43 25.4
comp=Z,250nm,18.6s,baz=48,slow=38
comp=Z,10nm,0.7s
SONM Songino Array 47.59 297 P P 17 21 55.9 -1.3
SONM PcP PcP 17 23 24.7 -1.6
SONM lAmb lAmb 17 23 27.8
comp=Z,16nm,0.7s
PDMCI Parker Dam,Lak 47.59 86 P P 17 21 57.8 +0.6
baz=311,SNR=5.0
RSSD Black Hills 47.62 69 P P 17 21 57.4 -0.2
RSSD lAmb lAmb 17 22 02.1
comp=Z,24nm,0.6s
RSSD PcP PcP 17 23 26.5 0.0
RSSD Black Hills 47.62 69 P P 17 21 57.4 -0.2
RSSD 17 23 26.5
RSSD pmax pmax
comp=Z,24nm,0.6s
RSSD Black Hills 47.62 69 P P 17 21 58.3 +0.7
baz=306,SNR=22
RSSD Black Hills 47.62 69 P P 17 21 58.0 +0.4
baz=306
RSSD Black Hills 47.62 69 P P 17 21 58.3 +0.7
BLYC Blythe 47.72 87 P P 17 21 59.9 +1.7
BLYC lAmb lAmb 17 22 00.4
comp=Z,12nm,0.8s
JOW Kunigami 47.74 260 P P 17 21 57.8 -0.6
comp=Z,7.3nm,0.4s,baz=315,slow=16,SNR=3.0
comp=Z,7.3nm,0.4s
ZAK Zakamensk 47.84 302 *e*P P 17 22 00.5 +1.4
ZAK pmax pmax
comp=Z,8.0nm,1.1s
MDND Maddock 47.97 62 P P 17 21 59.4 -0.6
baz=305
GLA Glamis 48.00 88 P P 17 21 59.6 -0.8
GLA lAmb lAmb 17 22 11.6
comp=Z,11nm,0.7s
GLA Glamis 48.00 88 P P 17 21 59.6 -0.8
GLA pmax pmax
comp=Z,11nm,0.7s
GLA Glamis 48.00 88 P P 17 22 01.4 +0.9
baz=312
E28A Huff 48.10 64 P P 17 22 01.8 +0.7
E28A lAmb lAmb 17 22 02.8
comp=Z,31nm,0.8s
E28A Huff 48.10 64 P P 17 22 01.7 +0.7
baz=306,SNR=7.2
PV23 Carpenter Ridg 48.10 78 P P 17 22 02.9 +1.5
PV23 lAmb lAmb 17 22 03.5
comp=Z,24nm,0.8s
PV10 Paradox Valley 48.13 78 P P 17 22 03.6 +1.9
PV11 David Mesa, Pa 48.28 78 P P 17 22 03.1 +0.4
TIA Tai'an 48.28 278 *e*P P 17 22 03.3 +0.8
TIA pmax pmax
comp=Z,33nm,1.3s
MOY Mondy 48.31 304 *e*P P 17 22 04.9 +2.2
MOY pmax pmax
comp=Z,7.0nm,1.2s
PV13 Radium Mtn., P 48.40 78 P P 17 22 05.0 +1.3
N23A Red Feather La 48.43 73 P P 17 22 05.5 +1.5
N23A lAmb lAmb 17 22 06.6
comp=Z,22nm,1.1s
N23A Red Feather La 48.43 73 P P 17 22 05.2 +1.2
baz=308,SNR=8.0
PV15 Paradox Valley 48.49 78 P P 17 22 05.8 +1.4
PV15 lAmb lAmb 17 22 06.4
comp=Z,23nm,0.7s
WUAZ Wupatki 48.52 83 P P 17 22 04.7 +0.2
WUAZ lAmb lAmb 17 22 07.2
comp=Z,24nm,0.8s
WUAZ Wupatki 48.52 83 P P 17 22 05.7 +1.1
baz=310,SNR=18
Y14A Wickenburg 48.54 85 P P 17 22 06.7 +2.0
ULM Lac du Bonnet 48.61 58 P P 17 22 04.3 -0.6
comp=Z,2.6nm,0.5s,baz=315,slow=7.3,SNR=4.7
ULM LR LR 17 44 54.1
comp=Z,128nm,18.1s,baz=297,slow=39
comp=Z,2.6nm,0.5s
GUMO Guam 48.74 233 P P 17 22 04.5 -1.7
comp=Z,32nm,0.9s,baz=345,slow=16,SNR=1.7
GUMO LR LR 17 38 26.4
comp=Z,25nm,20.2s,baz=79,slow=31
comp=Z,32nm,0.9s
HHC Hu-ho-hao-te 48.74 287 *e*P P 17 22 07.8 +1.7
HHC pmax pmax
comp=Z,53nm,1.0s
HHC pmax pmax
comp=Z,240nm,4.4s
HHC LR LR
comp=Z,230nm,16.5s
HHC LR LR
comp=Z,380nm,15.9s
HHC LR LR
comp=Z,410nm,15.2s
SMCO Snowmass 48.88 76 P P 17 22 08.5 +0.9
SMCO lAmb lAmb 17 22 09.5
comp=Z,7.5nm,0.7s
HNS HongShan 49.00 281 ⇑P P 17 22 09.3 +1.3
HNS S S 17 29 10.3 +1.8
HNS pmax pmax
comp=Z,76nm,1.2s
HNS LR LR
comp=Z,150nm,18.4s
HNS LR LR
comp=Z,250nm,21.0s
MVCO Mesa Verde 49.20 79 P P 17 22 11.4 +1.5
MVCO lAmb lAmb 17 22 31.5
comp=Z,14nm,0.8s
MVCO Mesa Verde 49.20 79 P P 17 22 10.5 +0.7
baz=310,SNR=6.4
X16A Lo Mia Camp, P 49.20 84 P P 17 22 09.5 -0.3
X16A lAmb lAmb 17 22 21.5
comp=Z,7.7nm,0.7s
ISCO Idaho Springs 49.31 74 P P 17 22 12.6 +1.9
ISCO lAmb lAmb 17 22 13.5
comp=Z,14nm,1.1s
ISCO Idaho Springs 49.31 74 P P 17 22 12.6 +1.9
ISCO pmax pmax
comp=Z,14nm,1.1s
ISCO Idaho Springs 49.31 74 P P 17 22 12.7 +1.9
baz=309,SNR=8.7
ISCO Idaho Springs 49.31 74 P P 17 22 11.4 +0.6
baz=309,SNR=8.7
KBS Kingsbay 49.66 358⇓ *e*P P 17 22 13.1 +0.6
KBS Kingsbay 49.66 358 *i* P P 17 22 11.8 -0.7
KBS Kingsbay 49.66 358 *e*P P 17 22 11.5 -1.0
AGMN Agassiz Nation 49.75 60 P P 17 22 13.9 +0.3
baz=306
W18A Petrified Fore 49.79 82 P P 17 22 16.1 +1.7
W18A lAmb lAmb 17 22 17.0
comp=Z,20nm,0.8s
W18A Petrified Fore 49.79 82 P P 17 22 15.4 +1.1
baz=311,SNR=11
S22A 4UR Ranch, Cre 49.87 77 P P 17 22 14.9 -0.1
S22A lAmb lAmb 17 22 18.2
comp=Z,23nm,1.2s
S22A 4UR Ranch, Cre 49.87 77 P P 17 22 15.9 +0.8
baz=310,SNR=14
NJ2 Nanjing 49.95 273 *e*P P 17 22 15.4 +0.1
NJ2 pmax pmax
comp=Z,14nm,0.7s
214A Organ Pipe Nat 49.99 87 P P 17 22 16.8 +1.1
214A lAmb lAmb 17 22 17.8
comp=Z,11nm,1.1s
214A Organ Pipe Nat 49.99 87 P P 17 22 16.6 +0.9
baz=313,SNR=5.5
X18A Snowflake 50.05 82 P P 17 22 18.4 +2.2
X18A lAmb lAmb 17 22 28.0
comp=Z,12nm,0.9s
TIY Taiyuan 50.19 283 ⇓P P 17 22 19.1 +1.9
TIY pmax pmax
comp=Z,68nm,0.5s
TIY LR LR
comp=Z,210nm,16.7s
SPA0 Spitsbergen Ar 50.26 356 *e*P P 17 22 16.6 -0.5
SPITS Spitsbergen Ar 50.26 356 P P 17 22 16.8 -0.4
comp=Z,7.0nm,0.5s,baz=52,slow=6.8,SNR=22
SPITS LR LR 17 45 00.3
comp=Z,113nm,18.1s,baz=329,slow=38
comp=Z,7.0nm,0.5s
SPITS Spitsbergen Ar 50.26 356 P P 17 22 17.1 0.0
SPITS pmax pmax
comp=Z,44nm,1.3s
SPB2 Spitsbergen Ar 50.27 356 P P 17 22 16.1 -1.0
SUSD Miller 50.35 66 P P 17 22 17.9 -0.3
SUSD PcP 17 23 34.8 -1.4
SUSD Miller 50.35 66 P P 17 22 19.0 +0.8
baz=308,SNR=6.7
SUSD Miller 50.35 66 P P 17 22 18.3 +0.1
baz=307,SNR=6.7
SDCO Great Sand Dun 50.68 76 P P 17 22 22.8 +1.6
SDCO lAmb lAmb 17 22 23.8
comp=Z,14nm,0.8s
SDCO Great Sand Dun 50.68 76 P P 17 22 22.8 +1.6
baz=310,SNR=18
SDCO Great Sand Dun 50.68 76 P P 17 22 22.6 +1.5
baz=310,SNR=18
OGNE Ogallala 50.73 71 P P 17 22 23.6 +2.4
OGNE Ogallala 50.73 71 P P 17 22 22.4 +1.1
baz=309
B35A Bob, Littlefor 50.86 59 P P 17 22 21.3 -0.7
B35A lAmb lAmb 17 23 40.2
comp=Z,9.7nm,0.8s
B35A Bob, Littlefor 50.86 59 P P 17 22 21.4 -0.5
baz=307,SNR=5.4
F33A 5 Mile Ranch, 50.99 63 P P 17 22 22.8 -0.2
F33A lAmb lAmb 17 22 23.6
comp=Z,14nm,1.0s
TUC Tucson 51.02 85 P P 17 22 23.4 -0.1
TUC lAmb lAmb 17 22 25.8
comp=Z,11nm,0.8s
TUC Tucson 51.02 85 P P 17 22 23.4 -0.1
TUC pmax pmax
comp=Z,11nm,0.9s
TUC Tucson 51.02 85 P P 17 22 24.6 +1.2
baz=313
TUC Tucson 51.02 85 P P 17 22 24.8 +1.3
TUC x x 17 22 34.1
DAG Danmarks Havn 51.19 6 *i* P P 17 22 23.0 -1.1
DAG lAmb lAmb 17 22 41.0
comp=Z,3.3nm,0.9s
HSPB Hornsund (broa 51.46 356 *e*P P 17 22 25.4 -0.7
K31A O'Neill 51.59 67 P P 17 22 28.8 +1.2
KSCO Kaye Shedlock' 51.60 73 P P 17 22 29.3 +1.5
KSCO Kaye Shedlock' 51.60 73 P P 17 22 29.3 +1.5
baz=310,SNR=5.8
KSCO Kaye Shedlock' 51.60 73 P P 17 22 28.5 +0.7
baz=310,SNR=5.8
T25A Trinidad 51.73 76 P P 17 22 30.8 +1.8
T25A Trinidad 51.73 76 P P 17 22 30.8 +1.8
baz=310,SNR=19
ANMO Albuquerque 51.93 80 LR LR 17 42 10.5
comp=Z,112nm,21.2s,baz=310,slow=33
ANMO Albuquerque 51.93 80 P P 17 22 30.5 +0.1
ANMO Albuquerque 51.93 80‖ *e*P P 17 22 30.8 +0.4
ANMO pmax pmax
comp=Z,11nm,1.3s
ANMO Albuquerque 51.93 80 P P 17 22 31.9 +1.5
baz=312,SNR=8.0
ANMO Albuquerque 51.93 80 P P 17 22 31.3 +0.9
baz=312
ANMO Albuquerque 51.93 80 P P 17 22 32.2 +1.8
ECSD EROS Data Cent 52.11 65 P P 17 22 31.1 -0.3
ECSD lAmb lAmb 17 22 32.0
comp=Z,16nm,0.8s
ECSD EROS Data Cent 52.11 65 P P 17 22 31.1 -0.3
baz=309,SNR=17
ECSD EROS Data Cent 52.11 65 P P 17 22 30.8 -0.6
baz=309,SNR=17
LENM Lemitar 52.13 81 P P 17 22 34.3 +2.5
LYN LuoYang 52.24 280 *e*P P 17 22 33.3 +0.9
LYN pP pP 17 22 48.5 +2.3
LYN pmax pmax
comp=Z,30nm,1.2s
LYN LR LR
comp=Z,210nm,27.9s
FRB Frobisher Bay 52.26 32 LR LR 17 47 18.3
comp=Z,224nm,18.2s,baz=329,slow=39
FRB Frobisher Bay 52.26 32 P P 17 22 32.0 -0.1
FRB pmax pmax
comp=Z,22nm,0.6s
Y22A Socorro 52.29 81 P P 17 22 34.2 +1.1
baz=312,SNR=8.0
EYMN Ely 52.30 58 P P 17 22 32.1 -0.6
EYMN Ely 52.30 58 P P 17 22 31.7 -1.0
baz=308
BNM Barren Site 52.35 81 P P 17 22 35.2 +1.6
CRNM Carthage 52.42 81 P P 17 22 36.2 +2.2
F36A Milaca 52.50 61 P P 17 22 34.0 -0.2
F36A Milaca 52.50 61 P P 17 22 33.9 -0.4
baz=309,SNR=5.1
BGNE Belgrade 52.70 68 P P 17 22 36.6 +0.8
baz=310
BGNE Belgrade 52.70 68 P P 17 22 36.5 +0.6
baz=310
121A Cookes Peak, D 52.73 83 P P 17 22 35.0 -1.3
121A Cookes Peak, D 52.73 83 P P 17 22 37.6 +1.3
baz=313,SNR=8.7
121A Cookes Peak, D 52.73 83 P P 17 22 37.1 +0.8
baz=313,SNR=8.7
SUMG Summit 52.83 15 P P 17 22 36.1 -0.7
SUMG Summit 52.83 15 P P 17 22 36.1 -0.7
SUMG pmax pmax
comp=Z,12nm,1.3s
SUMG Summit 52.83 15 *i* P P 17 22 36.4 -0.4
SUMG lAmb lAmb 17 22 40.1
comp=Z,159nm,3.1s
E38A The Farm, Brul 53.10 59 P P 17 22 38.6 -0.1
E38A lAmb lAmb 17 22 57.9
comp=Z,16nm,0.7s
SPMN Marine on St. 53.29 61 P P 17 22 40.6 +0.5
baz=309
L34A Svendsen Farm, 53.37 66 P P 17 22 41.3 +0.6
L34A Svendsen Farm, 53.37 66 P P 17 22 41.3 +0.6
baz=310,SNR=9.0
DBG Daneborg 53.44 8 *i* P P 17 22 38.4 -2.4
DBG lAmb lAmb 17 22 41.6
comp=Z,1.8nm,0.5s
CBKS Cedar Bluff 53.45 72 P P 17 22 41.4 0.0
CBKS Cedar Bluff 53.45 72 P P 17 22 41.4 0.0
CBKS pmax pmax
comp=Z,49nm,0.8s
CBKS Cedar Bluff 53.45 72 P P 17 22 42.6 +1.2
baz=311,SNR=6.2
CBKS Cedar Bluff 53.45 72 P P 17 22 42.1 +0.8
baz=311,SNR=6.2
I37A Lemond, Waseca 53.73 63 P P 17 22 44.0 +0.7

I37B	**Waseca**	**53.73**	**63**	P		**P**	**17 22 43.9**	**+0.5**
	baz=310,SNR=5.5								
WHN	**Wuhan**	**53.79**	**275**	P		**P**	**17 22 44.0**	**+0.1**
SSLB	**Suanglung**	**54.48**	**264**	P		**P**	**17 22 49.4**	**+0.4**
N35A	**Tabor**	**54.50**	**67**	P		**P**	**17 22 49.8**	**+0.8**
N35A	**Tabor**	**54.50**	**67**	P		**P**	**17 22 50.0**	**+1.0**
	baz=311,SNR=29								
G40A	**Rib Lake**	**54.68**	**60**	P		**P**	**17 22 49.4**	**-0.9**
G40A				IAmb		IAmb	17 23 54.3		
	comp=Z,27nm,1.4s								
G40A	**Rib Lake**	**54.68**	**60**	P		**P**	**17 22 50.3**	**0.0**
	baz=310								
COWI	**Conover**	**54.71**	**58**	P		**P**	**17 22 50.1**	**-0.4**
COWI				IAmb		IAmb	17 23 09.6		
	comp=Z,8.5nm,0.6s								
COWI	**Conover**	**54.71**	**58**	P		**P**	**17 22 50.0**	**-0.4**
	baz=310								
ZALV	**Zalesovo Beam**	**54.73**	**314**	P		**P**	**17 22 51.3**	**+0.8**
	comp=Z,0.8nm,0.4s,baz=46,slow=7.3,SNR=4.2								
ZALV				PcP		**PcP**	**17 23 52.9**	**+0.5**
	comp=Z,16nm,0.7s,baz=31,slow=4.0,SNR=49								
ZALV				LR		LR	17 48 28.9		
	comp=Z,144nm,18.6s,baz=36,slow=38								
	comp=Z,0.8nm,0.4s								
ZALV	**Zalesovo Beam**	**54.73**	**314**	P		**P**	**17 22 50.3**	**-0.1**
ZALV				PcP		**PcP**	**17 23 53.0**	**+0.5**
ZALV	**Zalesovo Beam**	**54.73**	**314**	*i* P		**P**	**17 22 51.7**	**+1.3**
ZALV				pmax		pmax			
	comp=Z,1.0nm,0.4s								
XAN	**Xi'an**	**54.75**	**282**	⇑P		**P**	**17 22 51.3**	**+0.3**
XAN				pP		pP	17 23 04.4	-0.5	
XAN				sP		sP	17 23 09.9	-0.9	
XAN				S		**S**	**17 30 28.1**	**+0.4**	
XAN				pmax		pmax			
	comp=Z,61nm,0.8s								
XAN				pmax		pmax			
	comp=Z,150nm,3.6s								
XAN				LR		LR			
	comp=Z,170nm,19.2s								
XAN				LR		LR			
	comp=Z,210nm,19.9s								
XAN				LR		LR			
	comp=Z,230nm,19.6s								
XAN	**Xi'an**	**54.75**	**282**	P		**P**	**17 22 51.2**	**+0.3**
XAN				x		x	17 22 56.7		
MNTX	**Cornudas Mount**	**54.78**	**82**	P		**P**	**17 22 52.6**	**+1.5**
MNTX				IAmb		IAmb	17 22 53.6		
	comp=Z,20nm,0.8s								
MNTX	**Cornudas Mount**	**54.78**	**82**	P		**P**	**17 22 52.7**	**+1.5**
	baz=314,SNR=38								
MNTX	**Cornudas Mount**	**54.78**	**82**	P		**P**	**17 22 52.6**	**+1.5**
	baz=313,SNR=38								
MSTX	**Muleshoe**	**54.84**	**78**	P		**P**	**17 22 52.6**	**+1.0**
MSTX				IAmb		IAmb	17 22 54.2		
	comp=Z,30nm,0.8s								
MSTX	**Muleshoe**	**54.84**	**78**	P		**P**	**17 22 52.7**	**+1.0**
	baz=313,SNR=12								
MSTX	**Muleshoe**	**54.84**	**78**	P		**P**	**17 22 52.4**	**+0.7**
	baz=313,SNR=12								
AMTX	**Amarillo**	**54.88**	**76**	P		**P**	**17 22 53.2**	**+1.3**
AMTX				IAmb		IAmb	17 22 53.9		
	comp=Z,20nm,0.7s								
AMTX	**Amarillo**	**54.88**	**76**	P		**P**	**17 22 53.0**	**+1.0**
	baz=313								
AMTX	**Amarillo**	**54.88**	**76**	P		**P**	**17 22 52.8**	**+0.8**
	baz=312								
K38A	**Parkersburg**	**54.97**	**64**	P		**P**	**17 22 51.5**	**-0.9**
K38A				IAmb		IAmb	17 22 52.8		
	comp=Z,13nm,0.8s								
SFJD	**Kangerlussuaq**	**55.03**	**23**	LR		LR	17 49 57.0		
	comp=Z,160nm,19.4s,baz=322,slow=40								
KSU1	**Kansas State U**	**55.10**	**69**	P		**P**	**17 22 53.9**	**+0.6**
	baz=311								
SCIA	**State Center**	**55.20**	**65**	P		**P**	**17 22 55.0**	**+1.0**
	baz=311,SNR=5.2								
SCIA	**State Center**	**55.20**	**65**	P		**P**	**17 22 54.1**	**+0.1**
	baz=311,SNR=5.2								
I40A	**Norwalk**	**55.35**	**61**	P		**P**	**17 22 55.4**	**+0.3**
I40A				IAmb		IAmb	17 22 56.0		
	comp=Z,14nm,0.7s								
F42A	**Maple Grove Fa**	**55.47**	**58**	P		**P**	**17 22 56.0**	**+0.1**
F42A				IAmb		IAmb	17 22 58.2		
	comp=Z,17nm,0.6s								
U32A	**Winter Ranch,**	**55.49**	**73**	P		**P**	**17 22 57.5**	**+1.2**
	baz=312,SNR=6.1								
ICESG	**Greenland Ices**	**55.63**	**17**	*i* P		**P**	**17 22 55.3**	**-1.8**
ICESG				IAmb		IAmb	17 22 58.7		
	comp=Z,6.7nm,0.4s								
E43A	**Lone Tree Farm**	**55.66**	**57**	P		**P**	**17 22 57.5**	**+0.2**
E43A				IAmb		IAmb	17 22 58.8		
	comp=Z,24nm,0.7s								
E43A	**Lone Tree Farm**	**55.66**	**57**	P		**P**	**17 22 57.5**	**+0.2**
	baz=311,SNR=19								
N38A	**Joes South For**	**55.92**	**66**	P		**P**	**17 22 59.5**	**+0.3**
N38A	**Joes South For**	**55.92**	**66**	P		**P**	**17 22 59.4**	**+0.2**
	baz=312								
JFWS	**Jewell Farm**	**56.19**	**62**	P		**P**	**17 23 01.0**	**-0.1**
JFWS				IAmb		IAmb	17 23 01.5		
	comp=Z,24nm,0.8s								
JFWS	**Jewell Farm**	**56.19**	**62**	P		**P**	**17 23 01.0**	**-0.1**
JFWS				pmax		pmax			
	comp=Z,24nm,0.8s								
JFWS	**Jewell Farm**	**56.19**	**62**	P		**P**	**17 23 01.1**	**0.0**
	baz=312,SNR=6.2								
JFWS	**Jewell Farm**	**56.19**	**62**	P		**P**	**17 23 00.6**	**-0.5**
	baz=311,SNR=6.2								
L40A	**Anamosa**	**56.22**	**63**	P		**P**	**17 23 01.3**	**+0.1**
L40A				IAmb		IAmb	17 23 01.8		
	comp=Z,15nm,0.7s								
L40A	**Anamosa**	**56.22**	**63**	P		**P**	**17 23 01.4**	**+0.1**
	baz=312,SNR=5.4								
LZH	**Lanzhou**	**56.43**	**287**	⇑P		**P**	**17 23 04.5**	**+1.4**
LZH				pP		pP	17 23 18.0	+0.9	
LZH				sP		sP	17 23 23.8	+0.9	
LZH				pmax		pmax			
	comp=Z,93nm,1.3s								
LZH				pmax		pmax			
	comp=Z,160nm,5.8s								
LZH				LR		LR			
	comp=Z,270nm,16.0s								
LZH				LR		LR			
	comp=Z,280nm,16.2s								
LZH				LR		LR			
	comp=Z,420nm,18.0s								
H43A	**Windswept, Lux**	**56.51**	**59**	P		**P**	**17 23 03.6**	**+0.3**
H43A				IAmb		IAmb	17 23 23.1		
	comp=Z,18nm,0.8s								
P38A	**Dawn**	**56.53**	**67**	P		**P**	**17 23 03.6**	**+0.1**
P38A	**Dawn**	**56.53**	**67**	P		**P**	**17 23 03.7**	**+0.1**
	baz=312,SNR=18								
GTA	**Gaotai**	**56.56**	**293**	*e*P		**P**	**17 23 04.0**	**0.0**
GTA				pP		pP	17 23 19.1	+1.2	
GTA				sP		sP	17 23 26.8	+3.1	
GTA				PcP		**PcP**	**17 24 01.0**	**+1.0**	
GTA				pmax		pmax			
	comp=Z,15nm,0.7s								
GTA				pmax		pmax			
	comp=Z,98nm,5.1s								
GTA				LR		LR			
	comp=Z,140nm,20.0s								
GTA				LR		LR			
	comp=Z,260nm,20.4s								
GTA				LR		LR			
	comp=Z,310nm,19.6s								
T35A	**Sooner Cattle**	**56.61**	**71**	P		**P**	**17 23 04.5**	**+0.3**
T35A				IAmb		IAmb	17 23 05.4		
	comp=Z,22nm,0.9s								
T35B	**Sooner Cattle**	**56.61**	**71**	P		**P**	**17 23 03.9**	**-0.3**
	baz=313,SNR=7.9								
WMOK	**Wichita Mounta**	**56.73**	**75**	P		**P**	**17 23 06.1**	**+1.0**
WMOK				IAmb		IAmb	17 23 24.7		
	comp=Z,15nm,0.8s								
WMOK	**Wichita Mounta**	**56.73**	**75**	P		**P**	**17 23 06.1**	**+1.0**
WMOK				pmax		pmax			
	comp=Z,15nm,0.8s								
WMOK	**Wichita Mounta**	**56.73**	**75**	P		**P**	**17 23 06.3**	**+1.2**
	baz=313,SNR=7.2								
WMOK	**Wichita Mounta**	**56.73**	**75**	P		**P**	**17 23 05.6**	**+0.4**
	baz=313,SNR=7.2								
ENH	**Enshi**	**56.99**	**278**	P		**P**	**17 23 06.8**	**-0.2**
ENH				pP		**pP**	**17 23 20.4**	**-0.7**
E46A	**Sault Ste Mari**	**57.06**	**56**	P		**P**	**17 23 07.5**	**+0.2**
LPIG	**La Paz**	**57.09**	**92**	LR		LR	17 41 54.7		
	comp=Z,84nm,21.0s,baz=248,slow=30								
L42A	**Oliver, Polo**	**57.12**	**62**	P		**P**	**17 23 07.5**	**-0.2**
L42A				IAmb		IAmb	17 23 08.1		
	comp=Z,36nm,1.1s								
N41A	**Harden Midland**	**57.33**	**64**	P		**P**	**17 23 09.6**	**+0.4**
N41A				IAmb		IAmb	17 23 09.6		
	comp=Z,25nm,0.8s								
P40A	**Paris**	**57.44**	**66**	P		**P**	**17 23 10.1**	**0.0**
P40A	**Paris**	**57.44**	**66**	P		**P**	**17 23 10.2**	**+0.2**
	baz=313,SNR=48								
JMIC	**Jan Mayen**	**57.47**	**4**	LR		LR	17 49 09.5		
	comp=Z,44nm,19.1s,baz=26,slow=37								
TX31	**Lajitas Ar. Si**	**57.48**	**83**	P		**P**	**17 23 10.1**	**-0.5**
TX31	**Lajitas Ar. Si**	**57.48**	**83**	P		**P**	**17 23 11.3**	**+0.8**
	baz=315,SNR=40								
TX32	**Lajitas Array**	**57.48**	**83**	P		**P**	**17 23 11.2**	**+0.7**
TX32				IAmb		IAmb	17 23 12.5		
	comp=Z,22nm,1.1s								
TXAR	**Lajitas Array**	**57.49**	**83**	P		**P**	**17 23 10.9**	**+0.3**
	comp=Z,14nm,0.8s,baz=300,slow=5.0,SNR=138								
TXAR				PcP		**PcP**	**17 24 03.9**	**+0.2**	
	comp=Z,4.9nm,0.8s,baz=254,slow=2.2,SNR=1.8								
TXAR				LR		LR	17 45 06.8		
	comp=Z,74nm,21.8s,baz=298,slow=33								
	comp=Z,14nm,0.8s								
TXAR	**Lajitas Array**	**57.49**	**83**	P		**P**	**17 23 11.4**	**+0.8**
TXAR	**Lajitas Array**	**57.49**	**83**	P		**P**	**17 23 11.4**	**+0.8**
SLBS	**Sierra La Lagu**	**57.62**	**92**	P		**P**	**17 23 12.7**	**+1.1**
SLBS				x		x	17 23 23.2		
SLBS				pP		**pP**	**17 23 27.0**	**+1.5**	
SLBS				sP		**sP**	**17 23 33.9**	**+2.6**	
ABTX	**Abilene, Hawle**	**57.66**	**77**	P		**P**	**17 23 13.1**	**+1.4**
ABTX				IAmb		IAmb	17 23 13.7		
	comp=Z,25nm,1.1s								
ABTX	**Abilene, Hawle**	**57.66**	**77**	P		**P**	**17 23 12.7**	**+1.0**
	baz=314								
ABTX	**Abilene, Hawle**	**57.66**	**77**	P		**P**	**17 23 12.2**	**+0.5**
	baz=314								
TUL1	**Leonard**	**57.72**	**72**	P		**P**	**17 23 13.0**	**+1.0**
TUL1				IAmb		IAmb	17 23 13.6		
	comp=Z,29nm,0.8s								
TUL1	**Leonard**	**57.72**	**72**	P		**P**	**17 23 12.7**	**+0.7**
	baz=313,SNR=5.5								
TUL1	**Leonard**	**57.72**	**72**	P		**P**	**17 23 12.2**	**+0.2**
	baz=313,SNR=5.5								
S39A	**Bolivar**	**57.95**	**68**	P		**P**	**17 23 11.6**	**-2.0**
S39A	**Bolivar**	**57.95**	**68**	P		**P**	**17 23 12.8**	**-0.9**
	baz=313,SNR=14								
ARA0	**ARCESS Array S**	**58.09**	**351**	*e*P		**P**	**17 23 13.3**	**-0.8**
ARCES	**ARCESS Array B**	**58.09**	**351**	P		**P**	**17 23 13.1**	**-1.1**
	comp=Z,3.9nm,0.7s,baz=26,slow=9.7,SNR=12								
ARCES				PcP		**PcP**	**17 24 05.2**	**-0.1**	
	comp=Z,3.9nm,0.6s,baz=34,slow=4.5,SNR=6.2								
ARCES				LR		LR	17 49 30.6		
	comp=Z,245nm,20.1s,baz=4.0,slow=37								
	comp=Z,3.9nm,0.7s								
R40A	**Maddies Statio**	**58.16**	**67**	P		**P**	**17 23 14.4**	**-0.6**
R40A	**Maddies Statio**	**58.16**	**67**	P		**P**	**17 23 14.4**	**-0.6**
	baz=313,SNR=52								
U38A	**Gravette**	**58.19**	**70**	P		**P**	**17 23 15.3**	**+0.1**
U38A				IAmb		IAmb	17 23 16.2		
	comp=Z,25nm,0.8s								
U38A	**Gravette**	**58.19**	**70**	P		**P**	**17 23 15.4**	**+0.1**
	baz=313,SNR=11								
HDIL	**Hopedale**	**58.30**	**63**	P		**P**	**17 23 16.6**	**+0.6**
	baz=313,SNR=6.5								
HDIL	**Hopedale**	**58.30**	**63**	P		**P**	**17 23 15.8**	**-0.2**
	baz=313,SNR=6.5								
JETT	**Jettan, Norway**	**58.52**	**353**	*e*P		**P**	**17 23 16.9**	**-0.2**
LVZ	**Lovozero**	**58.53**	**347**	P		**P**	**17 23 15.9**	**-1.4**
LVZ				x		x	17 23 26.8		
LVZ				pP		**pP**	**17 23 30.3**	**-1.1**	
TRO	**Tromso**	**58.55**	**354**	*e*P		**P**	**17 23 17.0**	**-0.3**
HHAR	**Hobbs**	**58.56**	**70**	P		**P**	**17 23 18.0**	**+0.1**
HHAR	**Hobbs**	**58.56**	**70**	P		**P**	**17 23 17.5**	**-0.4**
	baz=314								
P43A	**Skaggs, Pawnee**	**58.80**	**64**	P		**P**	**17 23 18.6**	**-0.9**
P43A	**Skaggs, Pawnee**	**58.80**	**64**	P		**P**	**17 23 19.9**	**+0.4**
	baz=313,SNR=14								
KTK1	**Kautokeino**	**58.82**	**352**	*e*P		**P**	**17 23 16.8**	**-2.4**
X37A	**Clayton**	**58.88**	**72**	P		**P**	**17 23 21.4**	**+1.4**
X37A				IAmb		IAmb	17 23 22.1		
	comp=Z,29nm,0.9s								
X37A	**Clayton**	**58.88**	**72**	P		**P**	**17 23 21.5**	**+1.4**
	baz=314,SNR=16								
CCM	**Cathedral Cave**	**58.91**	**67**	P		**P**	**17 23 18.8**	**-1.5**
CCM				IAmb		IAmb	17 23 20.7		
	comp=Z,22nm,0.8s								
CCM	**Cathedral Cave**	**58.91**	**67**	P		**P**	**17 23 18.8**	**-1.5**
CCM				pmax		pmax			
	comp=Z,22nm,0.8s								
CCM	**Cathedral Cave**	**58.91**	**67**	P		**P**	**17 23 19.8**	**-0.4**
	baz=314,SNR=17								
CCM	**Cathedral Cave**	**58.91**	**67**	P		**P**	**17 23 19.5**	**-0.7**
	baz=313								
CCM	**Cathedral Cave**	**58.91**	**67**	P		**P**	**17 23 19.7**	**-0.5**
CCM				x		x	17 23 30.6		
CCM				sP		**sP**	**17 23 40.1**	**-0.1**	
MGMO	**Mountain Grove**	**58.93**	**68**	P		**P**	**17 23 19.7**	**-0.8**
JCT	**Junction City**	**59.06**	**79**	P		**P**	**17 23 19.8**	**-1.7**
JCT				PcP		**PcP**	**17 24 10.4**	**+0.6**	
JCT				IAmb		IAmb	17 24 11.6		
	comp=Z,13nm,0.6s								
JCT	**Junction City**	**59.06**	**79**	P		**P**	**17 23 19.8**	**-1.7**
JCT				pmax		pmax			
	comp=Z,13nm,0.6s								
JCT	**Junction City**	**59.06**	**79**	P		**P**	**17 23 21.8**	**+0.3**
	baz=315,SNR=5.5								
JCT	**Junction City**	**59.06**	**79**	P		**P**	**17 23 21.5**	**0.0**
	baz=315,SNR=5.5								
SCHQ	**Schefferville**	**59.13**	**39**	P		**P**	**17 23 20.6**	**-1.0**
	comp=Z,2.8nm,0.6s,baz=290,slow=6.7,SNR=4.6								
	comp=Z,2.8nm,0.6s								
U40A	**Yellville**	**59.14**	**69**	P		**P**	**17 23 21.5**	**-0.4**
U40A	**Yellville**	**59.14**	**69**	P		**P**	**17 23 21.7**	**-0.3**
	baz=314,SNR=28								
U40A				P		**P**	**17 23 21.7**	**-0.3**	
	baz=314,SNR=28								
U40A	**Yellville**	**59.14**	**69**	P		**P**	**17 23 21.5**	**-0.4**
	baz=314,SNR=28								
VLDQ	**Val d'Or**	**59.28**	**50**	P		**P**	**17 23 20.9**	**-1.7**
VLDQ				IAmb		IAmb	17 23 22.8		
	comp=Z,12nm,0.9s								
W39A	**Magazine**	**59.40**	**71**	P		**P**	**17 23 24.3**	**+0.6**
W39A	**Magazine**	**59.40**	**71**	P		**P**	**17 23 24.3**	**+0.6**
	baz=314,SNR=12								
W39A	**Magazine**	**59.40**	**71**	P		**P**	**17 23 23.8**	**+0.1**
	baz=314,SNR=12								
FVM	**French Village**	**59.42**	**66**	P		**P**	**17 23 23.9**	**+0.1**
FVM	**French Village**	**59.42**	**66**	P		**P**	**17 23 24.0**	**+0.1**
FVM				pmax		pmax			
	comp=Z,48nm,0.7s								
FVM	**French Village**	**59.42**	**66**	P		**P**	**17 23 24.0**	**+0.1**
	baz=314,SNR=13								
WHTX	**Lake Whitney,**	**59.43**	**76**	P		**P**	**17 23 25.5**	**+1.5**
WHTX	**Lake Whitney,**	**59.43**	**76**	P		**P**	**17 23 24.6**	**+0.7**
	baz=314								
Q44A	**Meyer Farm, Va**	**59.59**	**65**	P		**P**	**17 23 24.1**	**-0.9**
Q44A	**Meyer Farm, Va**	**59.59**	**65**	P		**P**	**17 23 25.3**	**+0.3**
	baz=314,SNR=10.0								
SFIN	**Lafayette**	**59.65**	**62**	P		**P**	**17 23 25.9**	**+0.7**
SFIN	**Lafayette**	**59.65**	**62**	P		**P**	**17 23 26.0**	**+0.7**
	baz=314,SNR=16								
SFIN	**Lafayette**	**59.65**	**62**	P		**P**	**17 23 25.4**	**+0.1**
	baz=314,SNR=16								
KURK	**Kurchatov**	**59.72**	**315**	P		**P**	**17 23 24.8**	**-0.8**
KURK	**Kurchatov**	**59.72**	**315**			**PcP**	**17 24 12.3**	**+0.3**	
KURK	**Kurchatov**	**59.72**	**315**	IAmb		IAmb	17 24 13.9		
	comp=Z,12nm,0.8s								
KURK	**Kurchatov**	**59.72**	**315**	P		**P**	**17 23 24.8**	**-0.8**
KURK				pmax		pmax			
	comp=Z,12nm,0.8s								
KURK	**Kurchatov**	**59.72**	**315**	P		**P**	**17 23 24.9**	**-0.7**
KURBB	**Kurchatov Arra**	**59.82**	**314**	P		**P**	**17 23 25.6**	**-0.8**
	comp=Z,5.0nm,0.7s,baz=43,slow=6.5,SNR=30								
KURBB				PcP		**PcP**	**17 24 12.3**	**-0.2**	
	comp=Z,6.6nm,0.9s,baz=43,slow=4.6,SNR=4.2								
	comp=Z,5.0nm,0.7s								
KURBB	**Kurchatov Arra**	**59.82**	**314**	P		**P**	**17 23 24.8**	**-1.6**
KURBB				pmax		pmax			
	comp=Z,4.0nm,0.6s								
FCAR	**Ozark Folk Cen**	**59.89**	**69**	P		**P**	**17 23 26.9**	**-0.2**
MIAR	**Mount Ida**	**59.97**	**71**	P		**P**	**17 23 28.5**	**+0.9**
MIAR	**Mount Ida**	**59.97**	**71**	P		**P**	**17 23 28.5**	**+0.9**
MIAR				pmax		pmax			
	comp=Z,41nm,0.9s								
MIAR	**Mount Ida**	**59.97**	**71**	P		**P**	**17 23 28.6**	**+0.9**
	baz=314,SNR=19								
MIAR	**Mount Ida**	**59.97**	**71**	P		**P**	**17 23 28.3**	**+0.7**
	baz=314,SNR=19								
L48A	**N Adams**	**60.02**	**59**	P		**P**	**17 23 28.4**	**+0.5**
L48A				IAmb		IAmb	17 24 26.1		
	comp=Z,16nm,0.7s								
CD2	**Chengdu**	**60.06**	**283**	*e*P		**P**	**17 23 26.0**	**-2.4**
CD2				pmax		pmax			
	comp=Z,10.0nm,0.5s								
N47A	**Urbana**	**60.07**	**61**	P		**P**	**17 23 27.2**	**-1.0**
N47A	**Urbana**	**60.07**	**61**	P		**P**	**17 23 28.5**	**+0.3**
	baz=314,SNR=6.5								
N47A				P		**P**	**17 23 28.5**	**+0.3**	
	baz=314,SNR=6.5								
P46A	**Rosedale**	**60.11**	**63**	P		**P**	**17 23 29.1**	**+0.6**
P46A	**Rosedale**	**60.11**	**63**	P		**P**	**17 23 29.0**	**+0.4**
	baz=314,SNR=7.3								
WMQ	**Urumqi**	**60.20**	**304**	*e*P		**P**	**17 23 29.0**	**-0.2**
WMQ				pP		pP	17 23 42.3	-1.1	
WMQ				pmax		pmax			
	comp=Z,22nm,0.8s								
WMQ				LR		LR			
	comp=Z,260nm,15.9s								
WMQ				LR		LR			
	comp=Z,260nm,20.3s								
435B	**Jarrell**	**60.20**	**77**	P		**P**	**17 23 29.8**	**+0.5**
	baz=315								
WHAR	**Wooly Hollow**	**60.21**	**70**	P		**P**	**17 23 29.6**	**+0.3**
WHAR				IAmb		IAmb	17 23 32.6		
	comp=Z,26nm,0.9s								
PBMO	**Poplar Bluff**	**60.26**	**67**	P		**P**	**17 23 29.4**	**-0.1**
PBMO	**Poplar Bluff**	**60.26**	**67**	P		**P**	**17 23 29.5**	**-0.1**
	baz=314,SNR=15								
S44A	**Carbondale**	**60.29**	**66**	P		**P**	**17 23 29.9**	**+0.1**
S44A	**Carbondale**	**60.29**	**66**	P		**P**	**17 23 29.7**	**-0.1**
	baz=314,SNR=9.2								
SIUC	**Southern Illin**	**60.30**	**66**	P		**P**	**17 23 30.1**	**+0.3**
W41B	**Gary Mavity, V**	**60.32**	**70**	P		**P**	**17 23 30.1**	**+0.1**
W41B	**Gary Mavity, V**	**60.32**	**70**	P		**P**	**17 23 30.1**	**+0.1**
	baz=314,SNR=14								
W41B	**Gary Mavity, V**	**60.32**	**70**	P		**P**	**17 23 29.6**	**-0.4**
	baz=314,SNR=14								
LCAR	**Lake Charles**	**60.33**	**68**	P		**P**	**17 23 29.5**	**-0.6**
	baz=314								
LOF	**Lofoten**	**60.37**	**355**	*e*P		**P**	**17 23 29.3**	**-0.5**
X40A	**Basin Creek Fa**	**60.45**	**71**	P		**P**	**17 23 30.6**	**-0.4**
X40A				IAmb		IAmb	17 23 32.5		
	comp=Z,19nm,0.9s								
X40A	**Basin Creek Fa**	**60.45**	**71**	P		**P**	**17 23 31.3**	**+0.4**
	baz=315,SNR=7.4								
X40A				P		**P**	**17 23 31.3**	**+0.4**	
	baz=315,SNR=7.4								
X40A	**Basin Creek Fa**	**60.45**	**71**	P		**P**	**17 23 31.1**	**+0.2**
	baz=314,SNR=7.4								
UALR	**University of**	**60.54**	**70**	P		**P**	**17 23 32.3**	**+0.8**
UALR				IAmb		IAmb	17 23 33.0		
	comp=Z,34nm,1.4s								
H06N1	**SOCORRO T-PHAS**	**60.54**	**97**	T		T	18 29 27.4		
	SNR=7.4								
SADO	**Sadowa**	**60.80**	**54**	LR		LR	17 50 49.2		
	comp=Z,114nm,19.7s,baz=324,slow=37								
SADO	**Sadowa**	**60.80**	**54**	P		**P**	**17 23 33.3**	**+0.2**
SADO				IAmb		IAmb	17 24 18.4		
	comp=Z,16nm,0.8s								
O48B	**Farmland**	**60.80**	**61**	P		**P**	**17 23 33.2**	**0.0**
	baz=315,SNR=14								
O48B	**Farmland**	**60.80**	**61**	P		**P**	**17 23 32.5**	**-0.7**
	baz=314,SNR=14								
MK31	**Makanchi Array**	**60.81**	**309**	P		**P**	**17 23 31.9**	**-1.4**
MK31	**Makanchi Array**	**60.81**	**309**	*d* P		**P**	**17 23 32.3**	**-1.0**
MKAR	**Makanchi Array**	**60.81**	**309**	P		**P**	**17 23 31.6**	**-1.7**
	comp=Z,2.1nm,0.5s,baz=47,slow=6.3,SNR=27								
MKAR				PcP		**PcP**	**17 24 16.8**	**+0.2**	
	comp=Z,2.8nm,0.7s,baz=45,slow=4.6,SNR=6.0								
	comp=Z,2.1nm,0.5s								
MKAR	**Makanchi Array**	**60.81**	**309**	*i* P		**P**	**17 23 32.5**	**-0.8**
MKAR				pmax		pmax			
	comp=Z,2.0nm,0.5s								
833A	**Chaparral WMA,**	**60.84**	**80**	P		**P**	**17 23 34.1**	**+0.5**
	baz=316								
WLAR	**White Oak Lake**	**60.85**	**72**	P		**P**	**17 23 32.7**	**-0.9**
N49A	**Columbus Grove**	**60.86**	**60**	P		**P**	**17 23 33.8**	**+0.2**
N49A	**Columbus Grove**	**60.86**	**60**	P		**P**	**17 23 33.7**	**+0.1**
	baz=315,SNR=7.2								
N49A				P		**P**	**17 23 33.7**	**+0.1**	
	baz=315,SNR=7.2								
MAKZ	**Makanchi**	**60.95**	**310**	P		**P**	**17 23 32.4**	**-1.8**
MAKZ	**Makanchi**	**60.95**	**310**	P		**P**	**17 23 33.0**	**-1.2**
MAKZ				pmax		pmax			
	comp=Z,1.0nm,0.5s								
MAKZ	**Makanchi**	**60.95**	**310**	P		**P**	**17 23 33.1**	**-1.1**
FAUS	**Fauske**	**61.02**	**355**	*e*P		**P**	**17 23 34.4**	**+0.2**
NRS	**Narsarsuaq**	**61.14**	**24**	P		**P**	**17 23 34.9**	**-0.3**
NRS	**Narsarsuaq**	**61.14**	**

WVT pmax pmax
comp=Z,17nm,0.7s
WVT Waverly 62.20 66 P **P** **17 23 43.4 +0.7**
baz=315,SNR=14
WVT Waverly 62.20 66 P **P** **17 23 43.1 +0.4**
baz=315
WVT Waverly 62.20 66 P **P** **17 23 43.3 +0.7**
ERPA Erie 62.24 57 P **P** **17 23 43.1 +0.1**
baz=316
MEDO Medina 62.29 55 P **P** **17 23 44.7 +1.5**
M53A WI Miller and 62.37 58 P **P** **17 23 44.6 +0.9**
M53A WI Miller and 62.37 58 P **P** **17 23 43.7 -0.1**
baz=315,SNR=6.1
OXF Oxford 62.44 69 P **P** **17 23 45.0 +0.7**
OXF Oxford 62.44 69 P **P** **17 23 45.0 +0.7**
OXF pmax pmax
comp=Z,140nm,0.9s
OXF Oxford 62.44 69 P **P** **17 23 44.9 +0.7**
baz=316,SNR=12
OXF Oxford 62.44 69 P **P** **17 23 44.9 +0.5**
baz=315,SNR=12
P51A Williamsport 62.49 61 P **P** **17 23 45.3 +0.7**
P51A Williamsport 62.49 61 P **P** **17 23 45.0 +0.4**
baz=316
P51A P **P** **17 23 45.0 +0.4**
baz=316
BORG Borgarnes 62.49 12 LR LR 17 51 33.6
comp=Z,79nm,20.7s,baz=348,slow=37
ALLY Alegheny Colle 62.50 57 P **P** **17 23 44.5 -0.1**
J55A Hilton 62.54 54 P **P** **17 23 46.2 +1.4**
J55A IAmb IAmb 17 23 46.8
comp=Z,21nm,0.7s
J55A Hilton 62.54 54 P **P** **17 23 46.1 +1.2**
baz=316,SNR=5.5
J55A P **P** **17 23 46.1 +1.2**
baz=316,SNR=5.5
R50A Paris 62.65 62 P **P** **17 23 46.5 +0.8**
R50A Paris 62.65 62 P **P** **17 23 46.5 +0.8**
baz=316,SNR=15
R50A P **P** **17 23 46.5 +0.8**
baz=316,SNR=15
Q51A Peebles 62.66 61 P **P** **17 23 46.9 +1.1**
Q51A Peebles 62.66 61 P **P** **17 23 46.6 +0.8**
baz=316,SNR=12
Q51A P **P** **17 23 46.6 +0.8**
baz=316,SNR=12
O52A Adamsville 62.70 59 P **P** **17 23 46.7 +0.7**
O52A Adamsville 62.70 59 P **P** **17 23 46.3 +0.4**
baz=316,SNR=16
O52A P **P** **17 23 46.3 +0.4**
baz=316,SNR=16
N53A Lisbon 62.73 58 P **P** **17 23 47.6 +1.4**
N53A IAmb IAmb 17 23 48.4
comp=Z,13nm,0.8s
N53A Lisbon 62.73 58 P **P** **17 23 47.4 +1.2**
baz=316
N53A P **P** **17 23 47.4 +1.2**
baz=316
Y45A Yeager Farm, C 62.82 69 P **P** **17 23 46.1 -0.8**
PLAL Pickwick Lake 62.88 67 P **P** **17 23 47.6 +0.4**
MMNY Mt. Morris Dam 62.88 55 P **P** **17 23 48.3 +1.2**
P52A Corning 62.88 60 P **P** **17 23 47.6 +0.4**
P52A IAmb IAmb 17 23 48.4
comp=Z,21nm,0.7s
P52A Corning 62.88 60 P **P** **17 23 47.0 -0.3**
baz=316,SNR=5.0
O53A New Philadelph 62.93 59 P **P** **17 23 48.8 +1.2**
O53A IAmb IAmb 17 23 49.0
comp=Z,31nm,1.0s
O53A New Philadelph 62.93 59 P **P** **17 23 47.3 -0.3**
baz=316
J56A Wolcott 63.02 54 P **P** **17 23 49.0 +1.0**
J56A IAmb IAmb 17 23 49.7
comp=Z,18nm,0.8s
ARU Arti 63.04 329 P **P** **17 23 48.3 +0.3**
comp=Z,14nm,0.4s,baz=35,slow=4.3,SNR=23
comp=Z,14nm,0.4s
ARU Arti 63.04 329 P **P** **17 23 47.6 -0.4**
ARU Arti 63.04 329 *d* *i*P **P** **17 23 49.0 +1.0**
ARU *PP **pP** **17 24 00.2 -2.0**
ARU 17 24 23.9
ARU S **S** **17 32 18.1 +3.8**
ARU SS **SS** **17 36 19.6 0.0**
ARU pmax pmax
comp=Z,6.0nm,0.4s
ARU MLR MLR
comp=Z,239nm,24.0s
ARU Arti 63.04 329 P **P** **17 23 49.2 +1.2**
V48A Smith Brothers 63.05 66 P **P** **17 23 49.0 +0.6**
V48A Smith Brothers 63.05 66 P **P** **17 23 49.0 +0.6**
baz=316,SNR=8.9
CLTN Cedars of Leba 63.08 65 P **P** **17 23 49.9 +1.3**
U49A Red Boiling Sp 63.09 65 P **P** **17 23 49.4 +0.8**
U49A IAmb IAmb 17 23 50.3
comp=Z,36nm,1.1s
U49A Red Boiling Sp 63.09 65 P **P** **17 23 49.3 +0.6**
baz=316,SNR=11
LONY Lake Ozonia 63.17 51 P **P** **17 23 49.3 +0.2**
baz=317
T50A Nancy 63.26 64 P **P** **17 23 50.5 +0.7**
T50A Nancy 63.26 64 P **P** **17 23 50.5 +0.7**
baz=316
T50A P **P** **17 23 50.5 +0.7**
baz=316
Q52A Bidwell 63.29 60 P **P** **17 23 49.5 -0.4**
Q52A Bidwell 63.29 60 P **P** **17 23 50.3 +0.4**
baz=316,SNR=11
Q52A P **P** **17 23 50.3 +0.4**
baz=316,SNR=11
M55A Ridgway 63.35 56 P **P** **17 23 51.5 +1.2**
M55A IAmb IAmb 17 24 28.9
comp=Z,19nm,0.8s
M55A Ridgway 63.35 56 P **P** **17 23 51.2 +0.9**
baz=316,SNR=5.8
M55A P **P** **17 23 51.2 +0.9**
baz=316,SNR=5.8
P53A Whipple 63.39 59 P **P** **17 23 51.8 +1.2**
P53A Whipple 63.39 59 P **P** **17 23 51.8 +1.2**
baz=316,SNR=8.2
P53A P **P** **17 23 51.8 +1.2**
baz=316,SNR=8.2
VBMS Vicksburg 63.42 71 P **P** **17 23 51.3 +0.4**
baz=316
O54A Avella 63.43 58 P **P** **17 23 51.3 +0.4**
O54A Avella 63.43 58 P **P** **17 23 52.2 +1.4**
baz=316,SNR=6.6
O54A P **P** **17 23 52.2 +1.4**
baz=316,SNR=6.6
L56A Greenwood 63.48 55 P **P** **17 23 51.7 +0.4**
L56A Greenwood 63.48 55 P **P** **17 23 51.6 +0.4**
baz=317,SNR=16
L56A P **P** **17 23 51.6 +0.4**
baz=316,SNR=16
S51A Beattyville 63.51 62 P **P** **17 23 51.2 -0.2**
S51A Beattyville 63.51 62 P **P** **17 23 52.2 +0.8**
baz=316,SNR=14
S51A P **P** **17 23 52.2 +0.8**
baz=316,SNR=14
K57A Scipio Center 63.58 54 P **P** **17 23 52.9 +1.1**
K57A Scipio Center 63.58 54 P **P** **17 23 53.0 +1.2**
baz=317,SNR=5.6
X48A Hartselle 63.85 67 P **P** **17 23 53.7 +0.1**
X48A IAmb IAmb 17 23 54.5
comp=Z,50nm,1.4s
X48A Hartselle 63.85 67 P **P** **17 23 53.8 +0.1**
baz=316,SNR=10.0
KIRV Kirov 63.90 335 P **P** **17 23 54.0 +0.4**
comp=Z,15nm,0.5s,baz=23,slow=15,SNR=7.2
comp=Z,15nm,0.5s
KIRV Kirov 63.90 335 *ce*P **P** **17 23 54.6 +1.0**
R53A Hurricane 63.91 61 P **P** **17 23 55.4 +1.3**
R53A Hurricane 63.91 61 P **P** **17 23 55.3 +1.3**
baz=316,SNR=13
R53A P **P** **17 23 55.3 +1.3**
baz=316,SNR=13
SWET Sewanee 63.94 66 P **P** **17 23 53.6 -0.7**
SWET IAmb IAmb 17 23 55.3
comp=Z,41nm,1.1s
146A Union 63.98 70 P **P** **17 23 56.0 +1.4**
Q54A Coxs Mills 64.05 60 P **P** **17 23 56.2 +1.3**
Q54A IAmb IAmb 17 23 56.7
comp=Z,28nm,0.8s
Q54A Coxs Mills 64.05 60 P **P** **17 23 56.1 +1.2**
baz=316,SNR=8.9
Q54A P **P** **17 23 56.1 +1.2**
baz=316,SNR=8.9

MCWV Mont Chateau 64.09 58 P **P** **17 23 56.7 +1.5**
MCWV IAmb IAmb 17 23 57.0
comp=Z,25nm,0.8s
MCWV Mont Chateau 64.09 58 P **P** **17 23 55.1 0.0**
baz=316
Z47A Carrollton 64.15 69 P **P** **17 23 55.0 -0.7**
Z47A Carrollton 64.15 69 P **P** **17 23 56.3 +0.7**
baz=316,SNR=6.5
KLMR Klimovskoe 64.18 341 *e*P **P** **17 23 54.0 -1.3**
KLMR pmax pmax
comp=Z,9.0nm,1.0s
KLMR Klimovskoe 64.18 341 *e*P **P** **17 23 54.1 -1.3**
KLMR AMP 17 24 01.5
comp=Z,9.0nm,1.0s
BINY Binghamton 64.24 54 P **P** **17 23 54.5 -1.6**
BINY IAmb IAmb 17 23 58.2
comp=Z,20nm,0.8s
BINY Binghamton 64.24 54 P **P** **17 23 57.2 +1.0**
baz=317
BINY Binghamton 64.24 54 P **P** **17 23 55.9 -0.3**
baz=317
M57A Sunshine Farm, 64.29 55 P **P** **17 23 57.2 +0.8**
M57A IAmb IAmb 17 23 58.4
comp=Z,15nm,0.7s
M57A Sunshine Farm, 64.29 55 P **P** **17 23 57.0 +0.5**
baz=317,SNR=5.4
M57A P **P** **17 23 57.0 +0.5**
baz=317,SNR=5.4
W50A Signal Mountai 64.30 65 P **P** **17 23 57.3 +0.6**
W50A Signal Mountai 64.30 65 P **P** **17 23 57.4 +0.7**
baz=316,SNR=20
TZTN Tazewell 64.32 63 P **P** **17 23 57.8 +1.0**
TZTN IAmb IAmb 17 23 58.7
comp=Z,28nm,0.8s
TZTN Tazewell 64.32 63 P **P** **17 23 57.7 +1.0**
baz=316,SNR=14
TZTN Tazewell 64.32 63 P **P** **17 23 57.0 +0.3**
baz=316,SNR=14
SSPA Standing Stone 64.41 56 P **P** **17 23 57.6 +0.3**
SSPA IAmb IAmb 17 24 33.1
comp=Z,19nm,0.8s
SSPA Standing Stone 64.41 56 P **P** **17 23 57.8 +0.6**
baz=317,SNR=7.1
SSPA Standing Stone 64.41 56 P **P** **17 23 57.5 +0.3**
baz=317
SSPA Standing Stone 64.41 56 P **P** **17 23 58.5 +1.2**
SSPA sP **sP** **17 24 17.0 -0.5**
V51A Loudon 64.41 64 P **P** **17 23 58.0 +0.7**
V51A Loudon 64.41 64 P **P** **17 23 58.0 +0.7**
baz=316,SNR=12
PZH PanZhiHua 64.44 281 P **P** **17 23 58.6 +0.7**
PZH pP **pP** **17 24 10.9 -1.2**
PZH S **S** **17 32 30.8 -2.1**
PZH pmax pmax
comp=Z,110nm,1.0s
PZH pmax pmax
comp=Z,110nm,5.2s
PZH LR LR
comp=Z,270nm,21.6s
PZH LR LR
comp=Z,250nm,21.6s
PZH LR LR
comp=Z,430nm,22.5s
CPCT Cooper Cave 64.57 65 P **P** **17 23 58.9 +0.5**
CPCT IAmb IAmb 17 23 59.7
comp=Z,53nm,1.3s
FPAL Fort Paine 64.60 66 P **P** **17 23 58.0 -0.7**
DAV Davao City (W) 64.61 248 LR LR 17 47 16.3
comp=Z,110nm,21.0s,baz=14,slow=31
Y49A Blount Mountai 64.64 67 P **P** **17 23 59.0 +0.1**
Y49A IAmb IAmb 17 23 59.4
comp=Z,22nm,0.8s
Y49A Blount Mountai 64.64 67 P **P** **17 23 58.7 -0.2**
baz=316,SNR=12
S54A Dingess, Beckl 64.65 61 P **P** **17 24 00.3 +1.4**
S54A Dingess, Beckl 64.65 61 P **P** **17 24 00.2 +1.3**
baz=317,SNR=10
S54A P **P** **17 24 00.2 +1.3**
baz=317,SNR=10
L59A Walton 64.72 54 P **P** **17 24 00.7 +1.3**
L59A IAmb IAmb 17 24 34.4
comp=Z,18nm,0.8s
V52A Sevierville 64.80 64 P **P** **17 24 00.8 +0.9**
V52A Sevierville 64.80 64 P **P** **17 24 00.8 +0.9**
baz=317,SNR=15
KSPA Keystone Colle 64.82 54 P **P** **17 24 01.4 +1.5**
KSPA IAmb IAmb 17 24 01.8
comp=Z,13nm,0.6s
KSPA Keystone Colle 64.82 54 P **P** **17 24 00.9 +0.9**
baz=318
TKL Tuckaleechee C 64.84 64 LR LR 17 50 50.5
comp=Z,119nm,20.3s,baz=330,slow=35
TKL Tuckaleechee C 64.84 64 P **P** **17 23 59.4 -0.7**
TKL Tuckaleechee C 64.84 64 P **P** **17 23 59.4 -0.7**
TKL pmax pmax
comp=Z,44nm,0.9s
TKL Tuckaleechee C 64.84 64 P **P** **17 24 00.8 +0.7**
baz=317,SNR=30
KMI Kunming 64.84 279 ⇑P **P** **17 24 01.3 +0.7**
KMI pmax pmax
comp=Z,87nm,3.5s
KMI Kunming 64.84 279 P **P** **17 24 01.3 +0.7**
KMI pP **pP** **17 24 14.9 +0.1**
H62A Milan 64.85 49 P **P** **17 23 59.8 -0.2**
N58A Sunbury 64.86 56 P **P** **17 24 01.9 +1.7**
N58A IAmb IAmb 17 24 03.3
comp=Z,45nm,1.6s
LRAL Lakeview Retre 64.89 68 P **P** **17 24 00.5 0.0**
LRAL IAmb IAmb 17 24 01.4
comp=Z,18nm,0.8s
LRAL Lakeview Retre 64.89 68 P **P** **17 24 00.5 0.0**
baz=317,SNR=11
LRAL Lakeview Retre 64.89 68 P **P** **17 24 00.0 -0.5**
baz=316,SNR=11
QIZ Qiongzhong 64.92 269 P **P** **17 24 00.0 -0.9**
QIZ S **S** **17 32 35.1 -3.5**
QIZ LR LR
comp=Z,200nm,23.7s
QIZ LR LR
comp=Z,140nm,16.6s
QIZ LR LR
comp=Z,130nm,22.1s
R55A Marlinton 64.94 60 P **P** **17 24 01.9 +1.1**
R55A IAmb IAmb 17 24 02.9
comp=Z,19nm,0.8s
R55A Marlinton 64.94 60 P **P** **17 24 01.6 +0.8**
baz=317,SNR=7.4
R55A P **P** **17 24 01.6 +0.8**
baz=317,SNR=7.4
X51A Calhoun 65.02 65 P **P** **17 24 01.9 +0.6**
X51A Calhoun 65.02 65 P **P** **17 24 01.9 +0.6**
baz=317,SNR=7.3
X51A P **P** **17 24 01.9 +0.6**
baz=317,SNR=7.3
W52A Murphy 65.16 64 P **P** **17 24 01.5 -0.7**
W52A Murphy 65.16 64 P **P** **17 24 03.0 +0.8**
baz=317,SNR=8.0
P57A Homestead Farm 65.18 57 P **P** **17 24 03.4 +1.1**
P57A IAmb IAmb 17 24 04.0
comp=Z,12nm,0.8s
P57A Homestead Farm 65.18 57 P **P** **17 24 03.2 +0.9**
baz=317
P57A P **P** **17 24 03.2 +0.9**
baz=317
PKME Peaks-Kenny Pk 65.20 48 P **P** **17 24 02.4 0.0**
baz=319
U54A Nelsons Funny 65.30 62 P **P** **17 24 04.5 +1.3**
U54A Nelsons Funny 65.30 62 P **P** **17 24 04.3 +1.2**
baz=317,SNR=13
U54A P **P** **17 24 04.3 +1.2**
baz=317,SNR=13
V53A Saluda 65.36 63 P **P** **17 24 04.7 +1.1**
V53A Saluda 65.36 63 P **P** **17 24 04.8 +1.1**
baz=317,SNR=18
V53A P **P** **17 24 04.8 +1.1**
baz=317,SNR=18
BLA Blacksburg 65.56 61 P **P** **17 24 06.2 +1.4**
BLA Blacksburg 65.56 61 P **P** **17 24 06.3 +1.4**
BLA pmax pmax
comp=Z,33nm,0.7s
BLA Blacksburg 65.56 61 P **P** **17 24 06.1 +1.3**
baz=317,SNR=7.3
BLA Blacksburg 65.56 61 P **P** **17 24 04.7 -0.2**
baz=317,SNR=7.3
LUPA Lehigh Univers 65.73 55 P **P** **17 24 07.4 +1.6**
LUPA IAmb IAmb 17 24 07.7
comp=Z,20nm,0.7s
ODNJ Ogdensburg 65.76 54 P **P** **17 24 05.0 -1.0**
ODNJ IAmb IAmb 17 24 08.0
comp=Z,12nm,0.8s
BG3 Lake Jocassee 65.79 64 P **P** **17 24 07.5 +1.1**
CASEE Lake Jocassee 65.79 64 P **P** **17 24 07.5 +1.2**
baz=317,SNR=24
FINES FINESS Array B 65.85 348 P **P** **17 24 04.7 -1.6**
comp=Z,1.5nm,0.5s,baz=9.0,slow=8.5,SNR=16
FINES LR LR 17 54 40.5
comp=Z,159nm,20.7s,baz=12,slow=38
comp=Z,1.5nm,0.5s
FINES FINESS Array B 65.85 348 *i* P **P** **17 24 06.3 +0.1**
FINES pmax pmax
comp=Z,2.0nm,0.5s
S57A Dark Hollow, R 65.95 59 P **P** **17 24 08.7 +1.4**
baz=318
S57A P **P** **17 24 08.7 +1.4**
baz=318
Y52A Lilburn 65.98 65 P **P** **17 24 07.1 -0.4**
Y52A Lilburn 65.98 65 P **P** **17 24 08.1 +0.6**
baz=317,SNR=11
Y52A P **P** **17 24 08.1 +0.6**
baz=317,SNR=11
BRNJ Basking Ridge 66.08 54 P **P** **17 24 09.6 +1.5**
BRNJ IAmb IAmb 17 24 10.3
comp=Z,28nm,0.8s
BRNJ Basking Ridge 66.08 54 P **P** **17 24 09.4 +1.4**
baz=318
250A Grady 66.08 68 P **P** **17 24 08.9 +0.7**
250A Grady 66.08 68 P **P** **17 24 08.9 +0.7**
baz=317,SNR=19
V55A Taylorsville 66.12 62 P **P** **17 24 09.5 +1.1**
V55A Taylorsville 66.12 62 P **P** **17 24 09.5 +1.1**
baz=317,SNR=18
V55A P **P** **17 24 09.5 +1.1**
baz=317,SNR=18
MOL Molde 66.15 358 *e*P **P** **17 24 08.8 +0.7**
PAL Palisades 66.17 54 P **P** **17 24 07.7 -0.9**
baz=318
U56A King 66.21 61 P **P** **17 24 10.0 +1.0**
U56A King 66.21 61 P **P** **17 24 10.0 +1.0**
baz=318,SNR=8.5
U56A P **P** **17 24 10.0 +1.0**
baz=318,SNR=8.5
BRAL Brewton 66.22 70 P **P** **17 24 09.5 +0.4**
baz=317
T57A Hurt 66.35 60 P **P** **17 24 11.0 +1.2**
T57A IAmb IAmb 17 24 11.5
comp=Z,19nm,0.8s
T57A Hurt 66.35 60 P **P** **17 24 10.9 +1.0**
baz=318,SNR=7.9
T57A P **P** **17 24 10.9 +1.0**
baz=318,SNR=7.9
R58B Mineral 66.37 58 P **P** **17 24 09.2 -0.8**
R58B IAmb IAmb 17 24 11.8
comp=Z,9.1nm,0.8s
152A Waverly Hall 66.47 67 P **P** **17 24 10.2 -0.6**
152A IAmb IAmb 17 24 11.5
comp=Z,23nm,0.8s
152A Waverly Hall 66.47 67 P **P** **17 24 10.7 -0.1**
baz=317,SNR=7.6
PAULI Pauline 66.54 63 P **P** **17 24 11.9 +0.8**
baz=318
KMSC Kings Mountain 66.57 63 P **P** **17 24 12.3 +1.0**
KMSC Kings Mountain 66.57 63 P **P** **17 24 12.4 +1.1**
baz=318,SNR=26
KMSC Kings Mountain 66.57 63 P **P** **17 24 12.1 +0.8**
baz=317,SNR=26
DOMB Dombas 66.64 357 *e*P **P** **17 24 10.7 -0.6**
GOGA Godfrey 66.64 65 P **P** **17 24 12.1 +0.3**
GOGA Godfrey 66.64 65 P **P** **17 24 12.1 +0.3**
GOGA pmax pmax
comp=Z,50nm,0.9s
GOGA Godfrey 66.64 65 P **P** **17 24 12.2 +0.3**
baz=318,SNR=23
GOGA Godfrey 66.64 65 P **P** **17 24 12.0 +0.2**
baz=317,SNR=23
HODGE Hodges 66.72 64 P **P** **17 24 13.3 +1.0**
HODGE Hodges 66.72 64 P **P** **17 24 13.3 +1.0**
baz=318,SNR=43
352A Blakely 67.22 68 P **P** **17 24 15.1 -0.4**
352A Blakely 67.22 68 P **P** **17 24 15.9 +0.5**
baz=318,SNR=5.2
JSC Jenkinsville 67.25 63 P **P** **17 24 16.8 +1.2**
JSC Jenkinsville 67.25 63 P **P** **17 24 16.8 +1.2**
JSC pmax pmax
comp=Z,73nm,0.6s
JSC Jenkinsville 67.25 63 P **P** **17 24 16.8 +1.2**
baz=318,SNR=26
T59A Double "B" Far 67.28 59 P **P** **17 24 17.3 +1.5**
T59A IAmb IAmb 17 24 17.7
comp=Z,16nm,0.8s
T59A Double "B" Far 67.28 59 P **P** **17 24 17.0 +1.3**
baz=318
T59A P **P** **17 24 17.0 +1.3**
baz=318
W57A Gilead 67.31 62 P **P** **17 24 16.8 +0.9**
W57A IAmb IAmb 17 24 17.6
comp=Z,25nm,0.6s
W57A Gilead 67.31 62 P **P** **17 24 16.8 +0.9**
baz=318,SNR=11
W57A P **P** **17 24 16.8 +0.9**
baz=318,SNR=11
V58A Windy Hill, Pi 67.31 61 P **P** **17 24 17.3 +1.3**
V58A IAmb IAmb 17 24 17.9
comp=Z,40nm,1.1s
V58A Windy Hill, Pi 67.31 61 P **P** **17 24 17.1 +1.1**
baz=318,SNR=10
V58A P **P** **17 24 17.1 +1.1**
baz=318,SNR=10
BIRD Birdtown, Kers 67.42 63 P **P** **17 24 17.8 +1.1**
BIRD Birdtown, Kers 67.42 63 P **P** **17 24 17.8 +1.1**
baz=318,SNR=9.6
154A Montrose 67.44 66 P **P** **17 24 17.5 +0.7**
NB201 NORSAR Array S 67.54 356 P **P** **17 24 18.3 +1.2**
NB201 IAmb IAmb 17 26 42.6
comp=Z,59nm,1.6s
NB2 NORSAR Subarra 67.55 356 P **P** **17 24 16.4 -0.8**
baz=7.1,slow=6.5
NB2 NORSAR Subarra 67.55 356 P **P** **17 24 16.4 -0.8**
comp=Z,2.1nm,0.9s,baz=7.1,slow=6.5
NOA NORSAR Array B 67.55 356 P **P** **17 24 16.2 -1.0**
comp=Z,1.5nm,0.7s,baz=39,slow=15,SNR=9.2
NOA LR LR 17 51 51.6
comp=Z,93nm,21.9s,baz=355,slow=34
comp=Z,1.5nm,0.7s
AAK Ala-Archa 67.62 311 LR LR 17 57 11.7
comp=Z,136nm,18.1s,baz=22,slow=39
AAK Ala-Archa 67.62 311 P **P** **17 24 17.3 -0.8**
AAK Ala-Archa 67.62 311⇑ *e*P **P** **17 24 19.2 +1.2**
AAK pmax pmax
comp=Z,6.0nm,0.7s
HAW Hawthorne Fire 67.73 64 P **P** **17 24 19.7 +1.1**
baz=318,SNR=27
NC602 NORSAR Array S 67.84 356 *e*P **P** **17 24 17.6 -1.4**
NORES NORESS Array B 67.84 356 P **P** **17 24 21.0 +2.1**
Y57A Sumter 67.93 63 P **P** **17 24 21.4 +1.5**
TAOE Nuku Hiva Isla 68.01 140 *e*LR LR 17 44 08.9
comp=Z,258nm,22.7s
TAOE Nuku Hiva Isla 68.01 140 *e*T T 18 38 27.6
comp=Z,74nm,0.2s
SIJI Sorong 68.02 238 P **P** **17 24 20.2 -0.4**
comp=Z,75nm,0.8s,baz=33,slow=6.1,SNR=76
SIJI LR LR 17 49 29.4
comp=Z,44nm,19.8s,baz=87,slow=32
comp=Z,75nm,0.8s
SKAR Skarslia 68.03 357 *e*P **P** **17 24 20.4 +0.3**
AKTO Aktyubinsk 68.19 326 P **P** **17 24 21.4 +0.2**
comp=Z,21nm,0.6s,baz=51,slow=7.0,SNR=85
AKTO LR LR 17 57 39.5
comp=Z,334nm,19.6s,baz=36,slow=39
comp=Z,21nm,0.6s
255A Hazlehurst 68.30 66 P **P** **17 24 23.4 +1.2**
255A Hazlehurst 68.30 66 P **P** **17 24 23.5 +1.2**
baz=318,SNR=5.7
HFS Hagfors 68.32 354 P **P** **17 24 20.9 -1.0**
comp=Z,2.3nm,0.6s,baz=31,slow=3.5,SNR=14
comp=Z,2.3nm,0.6s
LSA Lhasa 68.46 291 P **P** **17 24 25.9 +2.0**
553A Crawfordville 68.46 68 P **P** **17 24 24.7 +1.4**
553A IAmb IAmb 17 24 41.0
comp=Z,38nm,0.8s
553A Crawfordville 68.46 68 P **P** **17 24 24.5 +1.3**
baz=318
AB31 Akbulak array 68.47 324 *i* P **P** **17 24 23.5 +0.4**
AB31 pmax pmax

comp=Z,6.0nm,0.7s
ABKAR **Akbulak array** 68.47 324 P **P** 17 24 22.9 -0.2
ABKAR **Akbulak array** 68.47 324 P **P** 17 24 23.6 +0.5
ABKAR IAmb IAmb 17 24 25.4
comp=Z,7.3nm,0.8s
VSU **Vasula** 68.64 347⇓ *i*P **P** 17 24 23.4 -0.5
VSU pmax pmax
comp=Z,22nm,0.9s
NHSC **New Hope** 68.72 63 P **P** 17 24 26.7 +1.8
NHSC **New Hope** 68.72 63 P **P** 17 24 26.6 +1.8
baz=318,SNR=6.7
NHSC **New Hope** 68.72 63 P **P** 17 24 25.9 +1.1
baz=318,SNR=6.7
KONO **Kongsberg** 69.01 356 *e*P **P** 17 24 25.6 -0.7
KK31 **Karatay Array** 69.10 314 P **P** 17 24 26.6 -0.5
KK31 IAmb IAmb 17 24 28.1
comp=Z,8.8nm,0.7s
KK31 **Karatay Array** 69.10 314 *e*P **P** 17 24 26.8 -0.3
KK31 pmax pmax
comp=Z,6.0nm,0.6s
KKAR **Karatay Array** 69.10 314 P **P** 17 24 27.1 0.0
KKAR IAmb IAmb 17 24 28.1
comp=Z,8.8nm,0.7s
KKAR **Karatay Array** 69.10 314 P **P** 17 24 26.6 -0.5
KKAR **Karatay Array** 69.10 314 P **P** 17 24 26.6 -0.5
KKAR pmax pmax
comp=Z,9.0nm,0.7s
MSVF **Nonsavu** 69.14 185 LR LR 17 50 20.2
comp=Z,111nm,19.7s,baz=108,slow=32
FAKI **Fak Fak** 69.24 236 P **P** 17 24 27.8 -0.4
FAKI IAmb IAmb 17 24 29.5
comp=Z,32nm,0.9s
FAKI **Fak Fak** 69.24 236 P **P** 17 24 28.4 +0.2
MOS **Moscow** 69.29 340 *e*P P 17 24 38.6 +11
KSH **Kashi** 69.30 308 P **P** 17 24 31.5 +2.9
KSH sP PcP 17 24 50.5 -1.4
KSH pmax pmax
comp=Z,11nm,1.1s
BLS5 **Blasjo** 69.33 358 *e*P **P** 17 24 28.1 -0.1
456A **Hilliard** 69.45 66 P **P** 17 24 31.1 +1.7
BELG **Belogornoye** 69.82 333 P **P** 17 24 31.2 -0.1
comp=Z,23nm,0.8s,baz=10,slow=2.0,SNR=8.4
comp=Z,23nm,0.8s
BELG **Belogornoye** 69.82 333*c* *i*P **P** 17 24 31.0 -0.3
BELG pmax pmax
comp=Z,4.0nm,0.8s
OBN **Obninsk** 70.09 340 *e*P **P** 17 24 34.3 +1.4
OBN *e**PP **pP** 17 24 47.0 -0.4
OBN *e**SP **sP** 17 24 53.6 +0.4
OBN *e* 17 24 55.5
OBN *e* 17 27 11.0
OBN *e*PPP PPP 17 28 51.9
OBN pmax pmax
comp=Z,5.0nm,0.9s
OBN MLR MLR
comp=Z,104nm,22.0s
656A **Willston** 70.17 68 P **P** 17 24 35.6 +1.7
656A IAmb IAmb 17 24 36.2
comp=Z,53nm,1.1s
656A **Willston** 70.17 68 P **P** 17 24 35.5 +1.7
baz=319
MYLDM **Lahad Datu** 70.29 253 P **P** 17 24 37.0 +2.3
MYLDM IAmb IAmb 17 24 37.8
comp=Z,51nm,1.0s
SNART **Snartemo** 70.40 358 *e*P **P** 17 24 34.8 0.0
PMOR **Pomariorio Ree** 70.96 150 *e*T T 18 42 11.2
comp=Z,25nm,0.2s
SHL **Shillong** 71.10 287 P **P** 17 24 40.5 +0.7
SHL **Shillong** 71.10 287 P **P** 17 24 40.5 +0.7
SHL pmax pmax
comp=Z,78nm,0.8s
BTK **Batken** 71.36 311 P **P** 17 24 41.0 -0.1
BTK IAmb IAmb 17 24 44.8
comp=Z,16nm,1.0s
BTK **Batken** 71.36 311 P **P** 17 24 41.0 -0.1
BTK pmax pmax
comp=Z,16nm,1.0s
DWPF **Disney Wildern** 71.75 68 P **P** 17 24 44.9 +1.5
DWPF pP **PcP** 17 25 00.3 -1.9
CHTO **Chiang Mai** 71.87 277 P **P** 17 24 44.2 -0.1
CHTO IAmb IAmb 17 24 45.6
comp=Z,14nm,1.0s
CHTO **Chiang Mai** 71.87 277 P **P** 17 24 44.2 -0.1
CHTO **Chiang Mai** 71.87 277 P **P** 17 24 44.5 +0.2
CHTO pP **pP** 17 24 59.6 +0.9
PABE **Paberze** 71.89 348 P **P** 17 24 41.6 -2.2
PABE IAmb IAmb 17 24 44.7
comp=Z,21nm,1.1s
NACGM **Naroch** 72.07 346⇑ *e*P P 17 24 37.4 -7.6
baz=15
CM31 **Chiang Mai Arr** 72.14 277 P **P** 17 24 46.8 +0.9
CM31 IAmb IAmb 17 24 47.6
comp=Z,22nm,0.8s
CMAR **Chiang Mai Arr** 72.14 277 P **P** 17 24 46.5 +0.6
comp=Z,18nm,0.7s,baz=27,slow=6.7,SNR=118
CMAR LR LR 17 59 28.5
comp=Z,57nm,19.3s,baz=50,slow=38
comp=Z,18nm,0.7s
CMAR **Chiang Mai Arr** 72.14 277 P **P** 17 24 46.0 +0.1
CMAR **Chiang Mai Arr** 72.14 277 *i*P **P** 17 24 46.5 +0.6
CMAR pmax pmax
comp=Z,20nm,0.8s
TOLI2 **Tolitoli** 72.21 248 P **P** 17 24 46.0 -0.3
TOLI2 IAmb IAmb 17 24 47.0
comp=Z,29nm,0.9s
TOLI2 **Tolitoli** 72.21 248 P **P** 17 24 46.2 -0.1
GAR **Garm** 72.44 311 P **P** 17 24 47.2 -0.4
GAR IAmb IAmb 17 24 48.8
comp=Z,25nm,0.6s
VORR **Voronezh** 72.69 337 *e*P **P** 17 24 49.2 +0.5
VORR pmax pmax
comp=Z,50nm,0.4s
LUWI **Luwuk** 72.82 245 P **P** 17 24 48.8 -1.2
LUWI **Luwuk** 72.82 245 P **P** 17 24 49.5 -0.4
GUN **Gumba** 72.85 293 *e*P **P** 17 24 51.2 +0.7
comp=Z,138nm,0.6s
JIRN **Jiri** 72.86 293 *e*P **P** 17 24 51.5 +0.9
comp=Z,138nm,0.6s
PPT **Papeete** 72.88 153 LR LR 17 50 14.8
comp=Z,116nm,19.6s,baz=327,slow=30
PPT2 **Papeete2** 72.90 153 *e*LR LR 17 46 21.0
comp=Z,197nm,22.8s
PAE **Paea** 72.97 153 *e*T T 18 44 41.5
comp=Z,3.5nm,0.3s
RAMN **Ramite** 73.16 292 *e*P **P** 17 24 53.0 +0.8
comp=Z,170nm,0.5s
CHGR **Chuyangaron** 73.25 312 P **P** 17 24 52.7 +0.3
CHGR **Chuyangaron** 73.25 312 P **P** 17 24 52.7 +0.3
CHGR pmax pmax
comp=Z,34nm,0.7s
KKN **Kakani** 73.28 294 *e*P **P** 17 24 54.0 +1.1
EKA **Eskdalemuir Ar** 73.34 4 P **P** 17 24 52.1 -0.4
comp=Z,1.7nm,0.4s,baz=355,slow=4.6,SNR=24
EKA LR LR 18 00 10.0
comp=Z,55nm,18.4s,baz=352,slow=38
comp=Z,1.7nm,0.4s
PKI **Pulchoki** 73.38 293 *e*P **P** 17 24 54.2 +0.6
comp=Z,34nm,0.6s
PKIN **Phulchoki** 73.38 293 *e*P **P** 17 24 54.3 +0.8
comp=Z,35nm,0.6s
GKN **Gorkha** 73.49 294 *e*P **P** 17 24 54.5 +0.5
comp=Z,39nm,0.7s
DMN **Daman** 73.52 294 *e*P **P** 17 24 55.8 +1.5
DANN **Dangsing** 73.72 295 *e*P **P** 17 24 56.4 +0.9
comp=Z,46nm,0.6s
061Z **Ochoppi** 73.76 69 P **P** 17 24 56.1 +0.8
COEN **Coen** 73.87 220 P **P** 17 24 56.4 +0.4
RAR **Rarotonga** 74.02 163 LR LR 17 51 13.6
comp=Z,277nm,19.5s,baz=5.5,slow=31
KOLN **Koldanda** 74.25 295 *e*P **P** 17 24 58.8 +0.3
PYUN **Piuthan** 74.35 295 *e*P **P** 17 24 59.7 +0.6
SOR **Soroa** 74.86 73 P **P** 17 25 03.5 +1.7
SOR IAmb IAmb 17 25 21.8
comp=Z,27nm,1.1s
SOR **Soroa** 74.86 73 P **P** 17 25 03.5 +1.7
SOR pmax pmax
comp=Z,27nm,1.1s
AKASG **Malin Array Be** 75.71 343 P **P** 17 25 04.8 -1.4
AKASG LR LR 18 02 04.2
comp=Z,79nm,19.7s,baz=22,slow=39
comp=Z,1.4nm,0.3s
AKBB **Malin Array Si** 75.71 343⇑ *e*P **P** 17 25 05.4 -0.9
AKBB pmax pmax
comp=Z,8.0nm,1.0s

KBL **Kabul** 76.62 309 P **P** 17 25 10.1 -1.9
KBL IAmb IAmb 17 25 14.5
comp=Z,15nm,0.7s
KBL **Kabul** 76.62 309 P **P** 17 25 10.1 -1.9
KBL pmax pmax
comp=Z,15nm,0.7s
CLL **Collm** 77.15 354 *i*P **P** 17 25 14.5 +0.1
CLL pmax pmax
comp=Z,4.0nm,0.6s
CLL **Collm** 77.15 354 *i*P **P** 17 25 14.5 +0.1
comp=Z,4.0nm,0.6s
KDU **Kakadu** 77.50 231 P **P** 17 25 17.1 +0.3
BRG **Berggiesshubel** 77.52 353 *e*P **P** 17 25 16.7 +0.1
BRG Amp 17 25 17.8
comp=Z,4.6nm,0.9s
BRG **Berggiesshubel** 77.52 353 *e*P **P** 17 25 16.6 +0.1
BRG pmax pmax
comp=Z,5.0nm,1.0s
KAPI **Kappang** 77.78 246 P **P** 17 25 18.5 +0.1
comp=Z,15nm,0.6s,baz=52,slow=1.5,SNR=7.4
comp=Z,15nm,0.6s
KAPI **Kappang** 77.78 246 IAmb IAmb 17 25 30.9
comp=Z,32nm,1.1s
DPC **Dobruska-Polom** 77.83 351 *e*P **P** 17 25 18.1 -0.2
DPC **Dobruska-Polom** 77.83 351 *e*P **P** 17 25 18.1 -0.2
NKC **Novy Kostel** 78.26 354 *e*P **P** 17 25 21.6 +0.9
NKC **Novy Kostel** 78.26 354 *e*P **P** 17 25 21.6 +0.9
CTA **Charters Tower** 78.28 215 P **P** 17 25 20.0 -1.0
comp=Z,8.1nm,0.8s,baz=52,slow=6.5,SNR=6.3
comp=Z,8.1nm,0.8s
CTA **Charters Tower** 78.28 215 P **P** 17 25 21.0 0.0
CTAO **Charters Tower** 78.28 215 P **P** 17 25 20.7 -0.3
MTN **Manton Dam** 78.29 232 P **P** 17 25 21.7 +0.6
MTN **Manton Dam** 78.29 232 P **P** 17 25 21.5 +0.4
SORM **Soroca** 78.34 343 ⇑P **P** 17 25 21.2 +0.1
SORM **Soroca** 78.34 343 ⇑P **P** 17 25 21.2 +0.1
TBI **Tubuai** 78.41 154 *e*LR LR 17 48 49.3
comp=Z,250nm,29.5s
KOLS **Kolonicke sedl** 78.54 347 *e*P **P** 17 25 23.3 +1.1
KOLS pmax pmax
comp=Z,6.0nm,0.8s
KOLS **Kolonicke sedl** 78.54 347 *e*P **P** 17 25 23.3 +1.1
CRVS **Cervenica-Dubn** 78.68 348 *e*P **P** 17 25 24.0 +1.0
CRVS pmax pmax
comp=Z,9.0nm,1.0s
CRVS **Cervenica-Dubn** 78.68 348 *e*P **P** 17 25 24.0 +1.0
LANS **Liptovska Anna** 78.69 349 *e*P **P** 17 25 25.0 +1.9
LANS pmax pmax
comp=Z,3.0nm,0.9s
LANS **Liptovska Anna** 78.69 349 *e*P **P** 17 25 25.0 +1.9
GEYT **Alibeck** 78.72 319 P **P** 17 25 23.6 +0.1
comp=Z,4.3nm,0.8s,baz=7.6,slow=6.5,SNR=7.4
GEYT LR LR 18 03 40.5
comp=Z,381nm,19.3s,baz=34,slow=38
comp=Z,4.3nm,0.8s
GEYT **Alibeck** 78.72 319 P **P** 17 25 24.8 +1.4
GYA0B **ALIBECK ARRAY** 78.72 319 P **P** 17 25 24.9 +1.5
VRAC **Vranov** 78.84 351 LR LR 18 00 18.3
comp=Z,76nm,21.4s,baz=8.5,slow=36
VRAC **Vranov** 78.84 351 *e*P **P** 17 25 22.8 -1.1
KVAR **Kislovodsk Arr** 78.85 332 LR LR 18 07 14.2
comp=Z,73nm,18.2s,baz=270,slow=41
KIV **Kislovodsk** 78.86 332 *e*P **P** 17 25 24.2 +0.1
KIV pmax pmax
comp=Z,6.0nm,1.1s
KBZ **Khabaz** 79.00 332 P **P** 17 25 24.1 -0.7
comp=Z,3.6nm,0.8s,baz=55,slow=5.2,SNR=8.4
KBZ LR LR 18 03 46.1
comp=Z,144nm,21.9s,baz=22,slow=38
comp=Z,3.6nm,0.8s
KBZ **Khabaz** 79.00 332⇑ *e*P **P** 17 25 25.8 +1.0
KBZ pmax pmax
comp=Z,5.0nm,0.9s
KRUC **Moravsky** 79.10 351 *e*P **P** 17 25 25.0 -0.3
JAVC **Velka Javorina** 79.17 350 *e*P **P** 17 25 26.8 +1.0
KHC **Kasperske Hory** 79.28 353 P **P** 17 25 26.6 +0.3
KHC **Kasperske Hory** 79.28 353 *e*P **P** 17 25 26.2 -0.1
KHC **Kasperske Hory** 79.28 353 *e*P **P** 17 25 26.2 -0.1
KHC *ex* x 17 26 03.0
BUR08 **Bucovina Ar. S** 79.36 345 P **P** 17 25 27.0 +0.2
BURAR **Bucovina Array** 79.38 345 ⇑P **P** 17 25 26.8 -0.2
BURAR **Bucovina Array** 79.38 345 P **P** 17 25 26.9 -0.2
BURAR IAmb IAmb 17 25 28.9
comp=Z,9.4nm,0.7s
BURAR **Bucovina Array** 79.38 345 ⇑P **P** 17 25 26.8 -0.2
MILM **Milestii Mici** 79.42 342 *e*P **P** 17 25 25.0 -2.0
comp=Z,140nm,4.9s
MILM *e*S **S** 17 35 21.0 -2.8
MILM *e*L L 18 04 46.0
MILM LRM MLR 18 05 20.0
comp=Z,200nm,19.0s
MILM **Milestii Mici** 79.42 342 *e*P **P** 17 25 25.0 -2.0
MILM *e*S **S** 17 35 21.0 -2.8
MILM pmax pmax
comp=Z,140nm,4.9s
GERES **GERESS Array B** 79.55 353 P **P** 17 25 27.1 -0.8
comp=Z,1.6nm,0.8s,baz=38,slow=6.8,SNR=11
comp=Z,1.6nm,0.8s
ZEI **Tsey** 79.56 331 *e*P **P** 17 25 28.6 +0.5
ZEI pmax pmax
comp=Z,10.0nm,0.6s
BIZ **Bicaz** 79.89 344 ⇓P **P** 17 25 30.1 +0.4
BATI **Baumata** 79.90 239 P **P** 17 25 30.4 +0.3
comp=Z,56nm,0.6s,baz=17,slow=19,SNR=12
BATI LR LR 17 56 09.9
comp=Z,70nm,21.8s,baz=167,slow=32
comp=Z,56nm,0.6s
HRA **Herat** 79.92 314 P **P** 17 25 29.7 -0.6
SOC **Sochi** 80.04 334 *e*P **P** 17 25 29.8 -0.7
SOC *e* 17 28 32.1
SOC *e*S **S** 17 35 31.3 +0.9
SOC *e*SS **SS** 17 40 43.2 +3.3
SOC *e*SSS SSS 17 44 09.6
SOC MLR MLR
comp=Z,142nm,22.0s
SIM **Simferopol'** 80.18 338 P **P** 17 25 31.5 +0.3
SIM pmax pmax
comp=Z,11nm,0.8s
CONA **Conrad Observa** 80.28 351 *e*P **P** 17 25 30.4 -1.4
comp=Z,3.8nm,0.9s
RONA **Rosalia, Austr** 80.46 351 *e*P **P** 17 25 29.5 -3.2
comp=Z,5.3nm,1.3s
MOA **Molln** 80.50 352 *e*P **P** 17 25 30.4 -2.5
comp=Z,2.9nm,0.8s
VLDR **Vladesti** 80.59 343 ⇑P **P** 17 25 33.8 +0.4
MATN **Matagalpa** 80.63 81 P **P** 17 25 34.8 +0.6
MATN IAmb IAmb 17 25 34.8
comp=Z,7.6nm,0.6s
BIOA **Bad Ischl, Aus** 80.70 353 *e*P **P** 17 25 35.0 +0.9
comp=Z,1.0nm,0.4s
VRI **Vrincioaia** 80.82 343 ⇓P **P** 17 25 35.9 +1.2
VRI **Vrincioaia** 80.82 343 ⇓P **P** 17 25 35.9 +1.2
COVR **Voineasa-Covas** 80.93 344 ⇑P **P** 17 25 36.6 +1.4
DOPR **Dopca** 80.95 344 ⇓P P 17 25 25.6 -10
ARSA **Arzberg** 80.98 351 *e*P **P** 17 25 34.3 -1.2
comp=Z,5.6nm,1.1s
TLCR 81.09 342 ⇓P **P** 17 25 36.4 +0.4
TLCR 81.09 342 ⇓P **P** 17 25 36.4 +0.4
RETA **Reutte** 81.10 355 *e*P **P** 17 25 34.6 -1.6
comp=Z,2.7nm,1.1s
WATA **Walderalm** 81.20 354 *e*P **P** 17 25 35.8 -1.1
comp=Z,2.1nm,0.6s
MOTA **Moosalm** 81.22 354 *e*P **P** 17 25 36.5 -0.4
comp=Z,5.2nm,1.2s
CFR **Carcaliu** 81.23 342 ⇓P **P** 17 25 37.1 +0.3
CFR **Carcaliu** 81.23 342 ⇓P **P** 17 25 37.1 +0.3
QIS **Mount Isa** 81.26 221 P **P** 17 25 36.4 -0.7
WTTA **Wattenberg** 81.27 354 *e*P **P** 17 25 37.2 0.0
comp=Z,2.9nm,0.6s
MLR **Muntele Rosu** 81.32 344 ⇑P **P** 17 25 39.1 +1.6
MLR **Muntele Rosu** 81.32 344 P **P** 17 25 38.4 +1.0
comp=Z,11nm,0.6s,baz=72,slow=5.6,SNR=14
MLR LR LR 18 04 17.6
comp=Z,100nm,21.8s,baz=30,slow=38
comp=Z,11nm,0.6s
MLR **Muntele Rosu** 81.32 344 P **P** 17 25 39.0 +1.6
MLR IAmb IAmb 17 25 40.3
comp=Z,14nm,0.8s
KBA **Koelnbreinsper** 81.34 353 *e*P **P** 17 25 37.1 -0.5
comp=Z,8.0nm,0.6s
SQTA **Sankt Quirin** 81.34 354 *e*P **P** 17 25 35.4 -2.1
comp=Z,6.1nm,1.0s
DAVA **Damuels** 81.35 355 *e*P **P** 17 25 35.2 -2.5
comp=Z,6.9nm,1.1s
TPGR **Topolog** 81.48 342 ⇑P **P** 17 25 38.8 +0.6

VOIR 81.53 345 ⇑P **P** 17 25 40.6 +2.1
VOIR 81.53 345 ⇑P **P** 17 25 40.6 +2.1
FETA **Feichten** 81.57 355 *e*P **P** 17 25 36.6 -2.2
comp=Z,3.6nm,0.8s
SOKA **Soboth** 81.59 352 *e*P **P** 17 25 38.7 -0.1
comp=Z,9.4nm,0.9s
GNI **Garni** 81.69 329 P **P** 17 25 39.9 +0.4
comp=Z,2.9nm,0.4s,baz=340,slow=20,SNR=1.9
GNI LR LR 18 07 02.0
comp=Z,245nm,19.6s,baz=43,slow=39
comp=Z,2.9nm,0.4s
GNI **Garni** 81.69 329*ce*P **P** 17 25 40.7 +1.2
GNI pmax pmax
comp=Z,9.0nm,1.3s
ABTA **Abfaltersbach** 81.73 353 *e*P **P** 17 25 38.5 -1.0
comp=Z,11nm,1.7s
MTUR **Matau** 81.73 344 ⇓P P 17 25 46.7 +7.1
MTUR **Matau** 81.73 344 ⇓P P 17 25 46.7 +7.1
HARR **Harsova** 81.74 342 ⇑P **P** 17 25 38.5 -0.9
HARR **Harsova** 81.74 342 ⇑P **P** 17 25 38.5 -0.9
MYKA **Terra Mystica** 81.76 353 *e*P **P** 17 25 38.6 -1.0
comp=Z,4.5nm,0.8s
OBKA **Obir** 81.80 352 *e*P **P** 17 25 40.5 +0.6
comp=Z,8.4nm,0.9s
DAVOX **Davos/Dischmat** 81.86 355 P **P** 17 25 40.0 -0.3
comp=Z,1.6nm,0.5s,baz=319,slow=12,SNR=3.6
DAVOX LR LR 18 02 04.2
comp=Z,84nm,20.9s,baz=82,slow=36
comp=Z,1.6nm,0.5s
TIRR **Tirgusor** 81.87 342 ⇓P **P** 17 25 40.7 +0.6
TIRR **Tirgusor** 81.87 342 ⇓P **P** 17 25 40.7 +0.6
BZS **Buzias** 81.88 347 ⇓P **P** 17 25 40.5 +0.3
BZS **Buzias** 81.88 347 ⇓P **P** 17 25 40.5 +0.3
KNRA **Kununurra** 81.88 232 P **P** 17 25 40.2 -0.3
KNRA IAmb IAmb 17 25 41.7
comp=Z,21nm,0.8s
KNRA **Kununurra** 81.88 232 P **P** 17 25 40.7 +0.2
MYKOM **Kota Tinggi** 81.88 263 P **P** 17 25 41.6 +0.9
MYKOM IAmb IAmb 17 25 42.6
comp=Z,24nm,1.3s
GZR **Gura Zlata** 81.93 346 ⇓P **P** 17 25 40.1 -0.5
GZR **Gura Zlata** 81.93 346 ⇓P **P** 17 25 40.1 -0.5
PLAI **Plampang** 82.01 245 P **P** 17 25 40.3 -1.0
TSMN **Mangalia Port-** 82.46 342 ⇑P **P** 17 25 38.8 -4.5
MDVR **Moldovita** 82.68 347 ⇓P **P** 17 25 44.0 -0.5
WR0 **Warramunga Arr** 82.88 225 P **P** 17 25 45.2 -0.4
WR0 IAmb IAmb 17 25 46.1
comp=Z,12nm,0.8s
ORTG **Ortega, Santa** 82.90 82 P **P** 17 25 46.0 -0.1
ORTG IAmb IAmb 17 25 48.6
comp=Z,29nm,0.9s
WRAB **Tennant Creek** 82.94 225*ce*P **P** 17 25 45.3 -0.7
WRAB pmax pmax
comp=Z,24nm,2.5s
WRAB **Tennant Creek** 82.94 225 P **P** 17 25 45.8 -0.2
WB2 **Warramunga Arr** 82.95 225 P **P** 17 25 45.8 -0.2
WB2 IAmb IAmb 17 25 46.7
comp=Z,24nm,1.2s
WRA **Warramunga Arr** 82.96 225 P **P** 17 25 45.3 -0.7
comp=Z,7.4nm,0.6s,baz=33,slow=5.7,SNR=85
WRA PKKPbc **PKKPbc** 17 44 07.6 +0.6
comp=Z,1.0nm,1.0s,baz=208,slow=2.0,SNR=4.7
comp=Z,7.4nm,0.6s
WRA **Warramunga Arr** 82.96 225 P **P** 17 25 45.1 -0.9
WRA **Warramunga Arr** 82.96 225 *i*P **P** 17 25 45.7 -0.3
WRA pmax pmax
comp=Z,8.0nm,0.6s
TEOL **Teolo** 83.17 354 P **P** 17 25 47.5 +0.6
TEOL IAmb IAmb 17 25 48.7
comp=Z,30nm,0.7s
JTS **Las Juntas de** 83.27 82 LR LR 18 03 54.0
comp=Z,30nm,18.4s,baz=4.5,slow=36
DIVS **Divibare** 83.59 348 P **P** 17 25 48.6 -0.7
DIVS IAmb IAmb 17 25 50.6
comp=Z,17nm,1.5s
BLKB **Belogradchik** 83.67 346 ⇓P **P** 17 25 48.6 -1.1
PSI **Prapat** 84.16 267 P **P** 17 25 52.6 0.0
comp=Z,41nm,0.8s,baz=13,slow=4.0,SNR=37
comp=Z,41nm,0.8s
RPSI **Rantau Prapat** 84.24 267 P **P** 17 25 52.6 -0.2
VTS **Vitosha** 84.57 345 ⇓P **P** 17 25 52.5 -1.8
VTS **Vitosha** 84.57 345 P **P** 17 25 54.0 -0.3
VTS IAmb IAmb 17 25 55.7
comp=Z,7.7nm,0.7s
VTS **Vitosha** 84.57 345 P **P** 17 25 54.0 -0.3
VTS pmax pmax
comp=Z,8.0nm,0.7s
OSSC **Osservatorio P** 85.02 354 P **P** 17 25 56.3 -0.1
OSSC IAmb IAmb 17 25 58.1
comp=Z,17nm,0.8s
HYBB **Hyderabad (bro** 85.22 292 *e*P **P** 17 25 59.2 +1.4
BR131 **Keskin Array S** 85.24 337 P **P** 17 25 58.0 +0.2
BR131 IAmb IAmb 17 25 59.4
comp=Z,19nm,0.8s
BR131 **Keskin Array S** 85.24 337*d* *i*P **P** 17 25 57.9 +0.2
BRTR **Keskin Array B** 85.24 337 P **P** 17 25 58.0 +0.2
comp=Z,9.8nm,0.6s,baz=39,slow=2.5,SNR=66
comp=Z,9.8nm,0.6s
BRTR **Keskin Array B** 85.24 337 P **P** 17 25 57.7 -0.1
PDG **Podgorica** 85.33 348 ⇑P **P** 17 25 57.7 -0.2
PDG **Podgorica** 85.33 348 P **P** 17 25 57.4 -0.5
UGM **Wanagama** 85.48 251 P **P** 17 25 58.5 -0.5
comp=Z,92nm,2.1s
MARD **Mardin** 85.52 331 P **P** 17 26 00.4 +1.2
NRCA **Norcia** 85.57 353 P **P** 17 26 00.0 +0.8
NRCA IAmb IAmb 17 26 01.4
comp=Z,13nm,0.8s
RDO **Rodhopi** 85.61 343 P **P** 17 26 00.5 +1.2
RDO IAmb IAmb 17 26 02.5
comp=Z,9.1nm,0.8s
GSI **Gunungsitoli** 86.16 267 P **P** 17 26 03.2 +0.7
GSI **Gunungsitoli** 86.16 267 P **P** 17 26 03.1 +0.7
ARMA **Armidale** 86.19 207 P **P** 17 26 03.6 +1.4
LEM **Lembang** 86.35 254 LR LR 18 09 40.5
comp=Z,14nm,18.1s,baz=156,slow=39
AS31 **Alice Springs** 86.41 224 P **P** 17 26 03.1 -0.3
ASAR **Alice Springs** 86.41 224 P **P** 17 26 03.2 -0.2
comp=Z,17nm,0.8s,baz=24,slow=5.3,SNR=182
ASAR PKKPbc **PKKPbc** 17 43 59.2 +0.2
comp=Z,0.3nm,0.8s,baz=212,slow=2.5,SNR=5.7
ASAR LR LR 17 58 57.6
comp=Z,74nm,21.8s,baz=48,slow=32
comp=Z,17nm,0.8s
ASAR **Alice Springs** 86.41 224 P **P** 17 26 03.1 -0.3
FNA **Florina** 86.65 346 P **P** 17 26 04.9 +0.3
FNA IAmb IAmb 17 26 05.1
comp=Z,6.2nm,0.7s
FNA **Florina** 86.65 346 P **P** 17 26 04.9 +0.3
FNA pmax pmax
comp=Z,6.0nm,0.7s
GCPR **Guaynabo City** 88.13 63 P **P** 17 26 13.6 +1.6
MTP **Monte Pirata** 88.59 62 P **P** 17 26 15.7 +1.6
ESDC **Sonseca Array** 88.93 5 P **P** 17 26 14.5 -1.0
comp=Z,1.6nm,0.8s,baz=351,slow=4.4,SNR=8.2
comp=Z,1.6nm,0.8s
CMSA **Cobar Meteorol** 89.03 211 P **P** 17 26 16.8 +1.1
OOD **Oodnadatta** 89.30 221 P **P** 17 26 16.7 -0.3
URZ **Urewera** 89.60 185 LR LR 18 01 19.9
comp=Z,86nm,19.4s,baz=31,slow=32
STKA **Stephens Creek** 90.72 214 P **P** 17 26 23.7 +0.2
comp=Z,12nm,0.6s,baz=352,slow=5.9,SNR=30
comp=Z,12nm,0.6s
STKA **Stephens Creek** 90.72 214 P **P** 17 26 24.0 +0.4
STKA **Stephens Creek** 90.72 214*ce*P **P** 17 26 24.4 +0.8
VAE **Valguarnera** 90.77 351 LR LR 18 09 31.7
comp=Z,54nm,20.7s,baz=350,slow=37
MBWA **Marble Bar** 91.07 237 P **P** 17 26 24.5 -1.0
MMAI **Mount Meron Ar** 91.11 333 LR LR 18 14 27.0
comp=Z,95nm,18.2s,baz=216,slow=40
PSA00 **Pilbara Seismi** 91.35 236 P **P** 17 26 27.0 +0.2
PSA00 IAmb IAmb 17 26 27.1
comp=Z,7.3nm,0.8s
IDI **Anoyia** 91.41 342 LR LR 18 13 09.4
comp=Z,40nm,18.2s,baz=46,slow=39
ZARC **Zaragoza, Cauc** 91.63 76 P **P** 17 26 29.3 +0.9
ZARC IAmb IAmb 17 26 30.2
comp=Z,4.9nm,0.9s
EIL **Elat** 94.38 333 LR LR 18 15 29.1
comp=Z,84nm,19.3s,baz=84,slow=40
RPZ **Rata Peaks** 95.47 189 LR LR 18 06 51.4
comp=Z,126nm,18.2s,baz=340,slow=34
MDT **Midelt** 95.71 6 LR LR 18 10 50.1
comp=Z,26nm,20.1s,baz=342,slow=36
RAYN **Ar Rayn** 96.47 321 P **P** 17 26 48.8 -1.7
RAYN IAmb IAmb 17 26 50.9

comp=Z,3.1nm,0.8s
RAYN Ar Rayn 96.47 321 P **P** **17 26 48.8 -1.7**
RAYN pmax pmax
comp=Z,3.0nm,0.8s
RPN Rapa Nui 98.20 124 LR LR 18 00 42.2
comp=Z,82nm,20.1s,baz=229,slow=29
TORD Torodi Ar. Bea 115.55 1 PKP **PKiKP** **17 32 02.7 -0.4**
comp=Z,3.6nm,0.5s,baz=353,slow=2.4,SNR=19
TORD PKKPbc **PKKPbc** **17 42 33.4 -0.8**
comp=Z,1.3nm,0.6s,baz=166,slow=2.3,SNR=3.9
TORD Torodi Ar. Bea 115.55 1 PKPdf 17 32 03.1 0.0
SIV San Ignacio 118.42 80 PKP **PKPdf** **17 32 07.8 -0.7**
comp=Z,0.3nm,0.3s,baz=350,slow=2.1,SNR=6.0
SIV PP **PP** **17 33 25.0 -0.7**
comp=Z,1.4nm,0.8s,baz=327,slow=7.4,SNR=2.9
H03N2 Juan Fernandez 120.09 107 T T 19 43 47.5
baz=317,slow=77,SNR=378
H03N1 Juan Fernandez 120.10 107 T T 19 43 50.8
baz=317,slow=77,SNR=826
H03N3 Juan Fernandez 120.11 107 T T 19 43 48.1
baz=317,slow=77,SNR=1196
H03S2 Juan Fernandez 120.37 107 T T 19 44 13.3
baz=323
H03S3 Juan Fernandez 120.37 107 T T 19 44 23.4
baz=323
H03S1 Juan Fernandez 120.39 107 T T 19 44 20.0
baz=323
DBIC Dimbokro 121.60 9 PKP **PKPdf** **17 32 13.8 -1.0**
comp=Z,6.9nm,0.5s,baz=27,slow=2.2,SNR=18
TIC Toumodi 121.61 9 *e*PKP2 **PKPdf** **17 32 14.3 -0.5**
comp=Z,8.8nm,0.3s
KIC Kosan Boka 121.92 9 *e*PKP2 **PKPdf** **17 32 15.2 -0.2**
comp=Z,14nm,0.6s
LIC Lamto 122.02 9 *e*PKP2 **PKiKP** **17 32 16.0 +0.2**
comp=Z,21nm,0.7s
KMBO Kilima Mbogo 122.10 318 PKP **PKPdf** **17 32 15.9 -0.1**
comp=Z,1.2nm,0.5s,baz=20,slow=8.1,SNR=4.2
KMBO Kilima Mbogo 122.10 318 PKIKP **PKPdf** **17 32 16.0 -0.1**
CPUP Villa Florida 128.43 85 PKP **PKPdf** **17 32 26.4 -1.0**
comp=Z,1.9nm,0.6s,baz=336,slow=4.2,SNR=4.8
VNDA Vanda 129.49 186 PKP **PKPdf** **17 32 27.3 -0.6**
comp=Z,1.5nm,1.0s,baz=6.8,slow=2.0,SNR=7.2
VNDA SKPbc SKPab 17 35 44.2 -0.2
comp=Z,2.9nm,1.0s,baz=325,slow=4.5,SNR=6.8
VNDA Vanda 129.49 186 SKPbc 17 35 46.9 +1.7
PLCA Paso Flores 129.93 108 PKP **PKPdf** **17 32 29.9 0.0**
comp=Z,4.3nm,0.8s,baz=272,slow=2.1,SNR=14
PLCA SKPbc SKPab 17 35 47.5 -0.1
comp=Z,1.9nm,0.8s,baz=320,slow=15,SNR=5.2
PLCA Paso Flores 129.93 108 PKPdf **PKPdf** **17 32 28.8 -1.1**
LSZ Lusaka 138.58 322 PKhKP PKPpre 17 32 40.0
comp=Z,1.1nm,0.3s,baz=94,slow=10,SNR=1.6
MATP Matopo 143.09 318 PKhKP PKPpre 17 32 51.9
comp=Z,4.0nm,0.5s,baz=1.0,slow=3.6,SNR=19
TSUM Tsumeb 145.73 335 PKPdf **PKPdf** **17 32 58.8 -0.8**
MAW Mawson 147.34 218 PKPbc **PKPbc** **17 33 03.2 +0.2**
comp=Z,30nm,0.9s,baz=99,slow=2.7,SNR=35
LBTB Lobatse 148.38 318 PKPbc **PKPbc** **17 33 07.6 +0.3**
comp=Z,51nm,0.6s,baz=9.3,slow=1.3,SNR=75
LBTB Lobatse 148.38 318 PKPbc 17 33 07.4 +0.1
BELA Belgrano 2 150.24 165 PKPbc 17 33 09.9 -0.4
BOSA Boshof 151.68 316 PKP **PKPdf** **17 33 09.9 +1.0**
comp=Z,16nm,0.5s,baz=33,slow=2.4,SNR=4.8
BOSA PKPbc **PKPbc** **17 33 15.4 +0.1**
comp=Z,14nm,0.4s,baz=32,slow=2.2,SNR=83
BOSA PKPab **pPKPdf** **17 33 24.6 +0.3**
comp=Z,14nm,0.5s,baz=20,slow=2.1,SNR=16
BOSA Boshof 151.68 316 PKiKP 17 33 15.8 +0.2
SUR Sutherland 156.83 319 PKPab **PKPab** **17 33 44.5 -1.5**
comp=Z,6.3nm,0.9s,baz=306,slow=6.9,SNR=1.5
VNA3 Neumayer Olymp 159.43 168 PKPdf **PKPdf** **17 33 16.3 -1.5**
TROLL Troll, Antarti 159.48 180 PKPdf **PKPdf** **17 33 16.2 -1.8**
SNAA Sanae 159.65 175 PKPdf **PKPdf** **17 33 16.3 -1.8**

IDC 14 17:16:40.9±1.9, 2.12N×127.02E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=168.3km s-min=22.8km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.07**	**162**	P		P	P	17 21 48.6	+0.3
	0.5nm,0.5s,baz=340,slow=11,SNR=12								
	0.5nm,0.5s								
ASAR	**Alice Springs**	**26.49**	**166**	P		P	P	17 22 20.1	-0.1
	0.3nm,0.7s,baz=353,slow=7.7,SNR=8.6								
	0.3nm,0.7s								
MKAR	**Makanchi Array**	**59.04**	**326**	P		P	P	17 26 43.3	+0.5
	0.2nm,0.4s,baz=109,slow=7.8,SNR=1.7								
	0.2nm,0.4s								
KURBB	**Kurchatov Arra**	**63.24**	**328**	P		P	P	17 27 10.5	-0.7
	0.4nm,0.4s,baz=124,slow=6.1,SNR=2.8								
	0.4nm,0.4s								

MAN 14 17:37:51.0, 9.18N×126.80E, h16km, mb4.0, ML2.8, MS2.4, Mindanao

*INET **14** 17:47:01.3±0.9, 13.63N×90.52W, h15km±14km, MW4.0*
*SNET **14** 17:47:01.9±1.1, 13.57N×90.53W, h34km±561km, ML4.2*
*UCR **14** 17:47:01.8±1.0, 13.37N×90.42W, h17km±16km, ML4.1*
*GCG **14** 17:47:03.5±0.9, 13.87N×90.57W, h82km±12km, MD4.0*

ISC 14 17:47:01.8±1.8, 13.56N±0.08×90.53W±0.06, h31km±13km, n25, σ0.977/42, 1D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NUBE	**Las Nubes**	**0.81**	**65**	*e*P			**Pn**	**17 47 16.8**	**-0.4**
NUBE				*e*S			**Sb**	**17 47 28.4**	**+0.3**
NUBE	**Las Nubes**	**0.81**	**65**	*e*P			**Pn**	**17 47 16.8**	**-0.4**
NUBE				*e*S			**Sb**	**17 47 28.4**	**+0.3**
PCG	**Pacaya**	**0.83**	**355**	*i* P			**Pb**	**17 47 18.0**	**+0.1**
CEVE	**Cerro Verde**	**0.92**	**73**	*e*P			**Pn**	**17 47 18.7**	**-0.1**
CEVE				*e*S			**Sb**	**17 47 32.3**	**+0.8**
CEVE				IAML				17 47 37.7	
	comp=Z,14μm,0.5s								
CEVE	**Cerro Verde**	**0.92**	**73**	*e*P			**Pn**	**17 47 18.7**	**-0.1**
CEVE				*e*S			**Sb**	**17 47 32.3**	**+0.8**
CEVE				IAML				17 47 37.7	
	comp=Z,14μm,0.5s								
FUG	**Fuego 3**	**0.93**	**341**	*e*P			**Pn**	**17 47 19.2**	**+0.2**
FUG				*e*S			**Sb**	**17 47 32.0**	**+0.3**
NBG	**Las Nubes**	**1.04**	**10**	*e*P			**Pb**	**17 47 21.2**	**-0.2**
NBG				*e*S			**Sb**	**17 47 36.1**	**+1.4**
SJTE	**Alcalda de S**	**1.48**	**88**	*e*P			**Pn**	**17 47 26.9**	**+0.5**
SJTE				*e*S			**Sn**	**17 47 45.7**	**+0.8**
SJTE	**Alcalda de S**	**1.48**	**88**	*e*P			**Pn**	**17 47 26.9**	**+0.5**
SJTE				*e*S			**Sn**	**17 47 45.7**	**+0.8**
STG3	**Santiaguito 3,**	**1.52**	**319**	*e*P			**Pn**	**17 47 27.1**	**0.0**
STG3				*e*S			**Sn**	**17 47 45.1**	**+0.9**
PAVA	**Las Pavas**	**1.56**	**84**	*e*P			**Pn**	**17 47 27.7**	**+0.2**
PAVA	**Las Pavas**	**1.56**	**84**	*e*P			**Pn**	**17 47 27.7**	**+0.2**
PAVA	**Las Pavas**	**1.56**	**84**	*e*P			**Pb**	**17 47 29.1**	**-1.0**
COEG	**Centro de Oper**	**1.61**	**88**	*e*P			**Pn**	**17 47 29.0**	**+0.8**
COEG				*e*S			**Sn**	**17 47 48.5**	**+0.6**
COEG				IAML				17 47 56.7	
	comp=Z,1μm,0.5s								
COEG	**Centro de Oper**	**1.61**	**88**	*e*P			**Pn**	**17 47 29.0**	**+0.8**
COEG				*e*S			**Sn**	**17 47 48.5**	**+0.6**
COEG				IAML				17 47 56.7	
	comp=Z,1μm,0.5s								
COEG	**Centro de Oper**	**1.61**	**88**	*e*P			**Pn**	**17 47 29.3**	**+1.2**
MRL	**Marmol**	**1.72**	**28**	*e*P			**Pn**	**17 47 30.0**	**+0.2**
MRL				*e*S			**Sn**	**17 47 49.4**	**-1.5**
SCLA	**Alcaldia de Sa**	**1.76**	**85**	*e*P			**Pn**	**17 47 29.9**	**-0.3**
SCLA				*e*S			**Sb**	**17 47 53.4**	**-1.7**
SCLA	**Alcaldia de Sa**	**1.76**	**85**	*e*P			**Pn**	**17 47 29.9**	**-0.3**
SCLA				*e*S			**Sb**	**17 47 53.4**	**-1.7**
COEB	**Comit de Eme**	**1.95**	**92**	*e*P			**Pn**	**17 47 32.6**	**-0.3**
COEB				*e*S			**Sn**	**17 47 57.1**	**+0.7**
COEB	**Comit de Eme**	**1.95**	**92**	*e*P			**Pn**	**17 47 32.6**	**-0.3**
COEB				*e*S			**Sn**	**17 47 57.1**	**+0.7**
CSGN	**Cosiguina Volc**	**2.95**	**101**	*e*P			**Pn**	**17 47 46.7**	**0.0**
CRIN	**San Cristobal**	**3.50**	**104**	*e*P			**Pn**	**17 47 54.4**	**+0.2**
CRIN				*e*S			**Sn**	**17 48 35.7**	**+1.0**
MOMN	**Momotombo**	**4.06**	**106**	*e*P			**Pn**	**17 48 01.5**	**-0.3**
APYN	**Apoyeque**	**4.29**	**107**	*e*P			**Pn**	**17 48 05.5**	**+0.5**

*JMA **14** 18:05:00.9±0.1, 26.9N±0.4×130.2E±0.5, h59km, MV3.5/16, NEAR MINAMI-DAITOJIMA IS*
*NIED **14** 18:05:00.9, 26.87N×130.22E, h59km, MW3.7, Moment Tensor Solution. s2 Moment tensor: Scale 10^14^Nm; Mrr=3.07; Mθθ 0.87; Mφφ 2.20; Mrθ 0.30; Mrφ 2.04; Mθφ -1.53; Fault plane solution: M0 3.76000×10^14^ NP1: φs 236.00000°, δ40.00000°, λ -58.00000°. NP2: φs 17.00000°, δ57.00000°, λ -114.00000°.*
*IDC **14** 18:05:02.6±1.4, 26.27N×129.71E, h0km, mb3.5/3, mbtmp3.5/4, ML2.4/1, MS2.6/1 Error ellipse: s-maj=30.3km s-min=19.1km az=54.0*

ISC 14 18:04:58.3±2.5, 26.88N±0.04×130.22E±0.05, h7km±19km, n19, σ0.994/28, mb3.7/3, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JKDJ	**Kitadaitoujima**	**1.34**	**133**	P			**Pb**	**18 05 23.7**	**0.0**
JKDJ				S			**Sg**	**18 05 40.7**	**-0.6**
JMZ	**Minamidaito 2**	**1.38**	**139**	P			**Pn**	**18 05 24.1**	**+0.1**
JMZ				*e*S			**Sb**	**18 05 41.4**	**-0.9**
JTK	**Tokunoshima**	**1.45**	**309**	P			**Pn**	**18 05 25.4**	**+0.5**
JTK				*e*S			**Sb**	**18 05 42.8**	**-1.4**
JZK	**Kikaishima**	**1.45**	**351**	P			**Pn**	**18 05 25.6**	**+0.7**
JZK				*e*S			**Sb**	**18 05 44.7**	**+0.4**
JOKE	**Okinoerabujima**	**1.55**	**289**	*e*P			**Pn**	**18 05 27.0**	**+0.7**
JOKE				*e*S			**Sn**	**18 05 45.8**	**-0.8**
JYRO	**Yoronjima**	**1.59**	**276**	*e*P			**Pn**	**18 05 27.4**	**+0.6**
JYRO				S			**Sn**	**18 05 46.4**	**-1.0**
JAM	**Amami Oshima**	**1.62**	**341**	P			**Pn**	**18 05 27.7**	**+0.4**
JAM				S			**Sn**	**18 05 47.4**	**-1.1**
JAMN	**Amaminishikomi**	**1.65**	**326**	*e*P			**Pn**	**18 05 28.0**	**+0.4**
JAMN				S			**Sn**	**18 05 47.1**	**-1.9**
JOW	**Kunigami**	**1.74**	**269**	Pn			**Pn**	**18 05 29.6**	**+0.7**
	67nm,0.3s,baz=116,slow=28,SNR=422								
JOW				Sn			**Sn**	**18 05 50.2**	**-1.0**
	65nm,0.3s,baz=269,slow=28,SNR=18								
JOW	**Kunigami**	**1.74**	**269**	P			**Pn**	**18 05 29.8**	**+0.9**
JNTH	**Nagotoyohara**	**2.00**	**260**	*e*P			**Pn**	**18 05 32.9**	**+0.5**
JNTH				*e*S			**Sn**	**18 05 56.5**	**-1.2**
JIH	**Iheya**	**2.02**	**275**	P			**Pn**	**18 05 33.6**	**+1.0**
JIH				*e*S			**Sn**	**18 05 57.6**	**-0.6**
JJT3	**Tamagusuku3**	**2.30**	**252**	*e*P			**Pn**	**18 05 36.7**	**+0.1**
JJT3				*e*S			**Sn**	**18 06 04.3**	**-0.8**
JAGN	**Aguni-jima**	**2.68**	**265**	P			**Pn**	**18 05 42.6**	**+0.8**
MJAR	**Matsushiro Arr**	**11.79**	**33**	Pn			Pn	18 08 01.8	+15
	baz=191,slow=35,SNR=1.5								
	0.3nm,0.4s								
GUMO	**Gumi**	**19.04**	**131**	LR			LR	18 16 01.4	
	comp=Z,18nm,19.8s,baz=135,slow=35								
MKAR	**Makanchi Array**	**42.45**	**311**	P			P	18 12 59.2	+5.5
	0.2nm,0.7s,baz=92,slow=8.3,SNR=2.0								
	0.2nm,0.7s								
WRA	**Warramunga Arr**	**46.71**	**175**	P			**P**	**18 13 29.1**	**+1.1**
	0.9nm,0.6s,baz=354,slow=8.4,SNR=5.0								
	0.9nm,0.6s								
ASAR	**Alice Springs**	**50.37**	**176**	P			**P**	**18 13 57.4**	**+1.3**
	0.7nm,0.7s,baz=7.1,slow=10,SNR=9.4								
	0.7nm,0.7s								

*NEIC **14** 18:24:35.0±0.6, 21.01S±0.1×178.3W±0.1, h590km±11km, mb4.5/10, Error ellipse: s-maj=22.2km s-min=15.7km az=47.0*
*IDC **14** 18:24:35.9±2.1, 21.01S×178.53W, h594km±23km, mb2.8/6, mbtmp3.8/8, Error ellipse: s-maj=36.2km s-min=20.3km az=142.0*

ISC 14 18:24:34.5±0.7, 21.05S±0.1×178.5W±0.1, h579km, n18, σ1.910/18, mb3.5/10, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.65**	**314**	P			**P**	**18 26 04.7**	**+1.2**
	4.3nm,0.6s,baz=125,slow=23,SNR=6.0								
URZ	**Urewera**	**17.58**	**192**	P			**P**	**18 28 07.6**	**+0.6**
	2.7nm,0.4s,baz=334,slow=8.1,SNR=1.6								
URZ	**Urewera**	**17.58**	**192**	P			**P**	**18 28 07.7**	**+0.7**
URZ				IAmb		IAmb	IAmb	18 28 48.4	
	comp=Z,38nm,1.4s								
BKZ	**Black Stump Fm**	**18.58**	**192**	P			**P**	**18 28 16.4**	**+0.2**
BKZ				IAmb		IAmb	IAmb	18 28 21.4	
	comp=Z,24nm,1.3s								
KHZ	**Kahutara**	**22.35**	**196**	P			**P**	**18 28 50.8**	**+0.8**
PPTF	**Pamatai, Papee**	**27.48**	**88**	P			**P**	**18 29 33.3**	**-2.4**
ARMA	**Armidale**	**28.44**	**245**	P			**P**	**18 29 42.1**	**-1.9**
ARMA				IAmb		IAmb	IAmb	18 29 54.4	
	comp=Z,27nm,1.5s								
WR0	**Warramunga Arr**	**43.90**	**263**	P			**P**	**18 31 51.0**	**-0.1**
WR0				IAmb		IAmb	IAmb	18 31 52.6	
	comp=Z,13nm,1.4s								
ASAR	**Alice Springs**	**43.97**	**257**	P			**P**	**18 31 52.0**	**+0.4**
	comp=Z,0.7nm,0.5s,baz=92,slow=8.2,SNR=25								
ASAR				PcP			**PcP**	**18 33 23.3**	**-1.2**
	comp=Z,0.2nm,0.6s,baz=93,slow=3.7,SNR=4.7								
	comp=Z,0.7nm,0.5s								
WB0	**Warramunga Arr**	**44.07**	**263**	P			**P**	**18 31 52.3**	**-0.2**
WB0				IAmb		IAmb	IAmb	18 32 10.6	
	comp=Z,19nm,1.5s								
WRA	**Warramunga Arr**	**44.09**	**263**	P			**P**	**18 31 52.4**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=98,slow=8.4,SNR=7.7								
	comp=Z,0.5nm,0.3s								
KNRA	**Kununurra**	**50.19**	**267**	P			**P**	**18 32 38.2**	**-0.1**
KNRA				IAmb		IAmb	IAmb	18 32 51.4	
	comp=Z,29nm,1.4s								
SBA	**Scott Base**	**57.30**	**184**	P			**P**	**18 33 28.8**	**+1.4**
NVAR	**Mina Array Bea**	**81.72**	**44**	P			**P**	**18 35 55.1**	**+1.4**
	comp=Z,0.3nm,0.5s,baz=226,slow=7.4,SNR=2.6								
	comp=Z,0.3nm,0.5s								
SEY	**Seymchan**	**86.80**	**347**	P			**P**	**18 36 17.4**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=168,slow=14,SNR=4.5								
	comp=Z,0.3nm,0.5s								
TXAR	**Lajitas Array**	**87.72**	**57**	P			**P**	**18 36 23.1**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=207,slow=5.7,SNR=3.7								
	comp=Z,0.2nm,0.5s								
ILAR	**Eielson Array**	**88.94**	**13**	P			**P**	**18 36 27.0**	**-0.6**
	comp=Z,0.2nm,0.4s,baz=216,slow=4.8,SNR=2.2								
	comp=Z,0.2nm,0.4s								
AKASG	**Malin Array Be**	**143.27**	**330**	PKP			PKPab	18 43 00.9	-0.5
	comp=Z,1.0nm,0.4s,baz=42,slow=4.2,SNR=8.5								

MAN 14 18:29:46.9, 8.61N×126.77E, h17km, mb4.0, ML2.8, MS2.8, Mindanao

*NEIC **14** 18:36:09.7±2.0, 0.31N±0.06×121.87E±0.04, h204km±6km, mb4.4/36, Error ellipse: s-maj=8.7km s-min=6.2km az=174.0*
*DJA **14** 18:36:10.2±0.2, 0°N±3°×12°2E±°, h204km±3km, M4.1/21, mB4.5/6, mb4.3/21, MLv4.3/17, Mw(mB)3.7/6*
*IDC **14** 18:36:11.3±1.4, 0.21N×121.96E, h224km±14km, mb3.5/13, mbtmp4.1/17, Error ellipse: s-maj=15.5km s-min=8.6km az=66.0*

ISC 14 18:36:08.8±0.4, 0.30N±0.05×121.91E±0.05, h200km, n94, σ1.924/102, mb4.4/36, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.18**	**9**	P			**Pn**	**18 36 36.0**	**+0.9**
APSI	**Ampana**	**1.23**	**192**	P			**Pn**	**18 36 42.1**	**+1.8**
TOLI2	**Tolitoli**	**1.39**	**305**				**Pn**	**18 36 42.1**	**+0.6**
TOLI2							**Sn**	**18 37 05.7**	**-1.2**
LUWI	**Luwuk**	**1.59**	**147**				**Pn**	**18 36 44.9**	**+1.6**
LUWI					Sn		**Sn**	**18 37 10.3**	**+0.2**
LUWI	**Luwuk**	**1.59**	**147**	P			**Pn**	**18 36 44.9**	**+1.6**
MPSI	**Mapaga**	**2.01**	**271**	P			**Pn**	**18 36 47.8**	**+0.3**
KMSI	**Cibinong**	**2.09**	**83**	P			**Pn**	**18 36 50.8**	**+2.6**
TTSI	**Tana Toraja**	**3.93**	**212**	P			**Pn**	**18 37 10.8**	**+1.1**
SANI	**Sanana**	**4.70**	**120**	P			**Pn**	**18 37 18.8**	**-0.6**
SPSI	**Sidrap Palu**	**4.75**	**207**	P			**Pn**	**18 37 21.6**	**+1.6**
BNSI	**Bone**	**5.01**	**201**	P			**Pn**	**18 37 26.0**	**+2.7**
BKB	**Balikpapan**	**5.25**	**253**	Pn			**Pn**	**18 37 25.0**	**-1.4**
TNTI	**Ternate**	**5.47**	**85**				**Pn**	**18 37 29.9**	**+0.5**
TNTI					Sn		**Sn**	**18 38 29.9**	**-2.9**
TNTI	**Ternate**	**5.47**	**85**	P			**Pn**	**18 37 30.4**	**+1.1**
	0.3nm639nm44nm,0.8s								
LBMI	**Labuha**	**5.67**	**99**	P			**Pn**	**18 37 32.2**	**+0.4**
	0.6nm766nm37nm,0.6s								
KAPI	**Kappang**	**5.70**	**202**	P			**Pn**	**18 37 33.3**	**+1.1**
	40nm,0.5s,baz=16,slow=6.1,SNR=19								
BBSI	**Bau Bau**	**5.79**	**173**	P			**Pn**	**18 37 35.4**	**+2.0**
	0.0nm112nm6.6nm,0.9s								
BKSI	**Bulukumba**	**5.86**	**198**	P			**Pn**	**18 37 35.2**	**+0.8**
	0.1nm574nm50nm,0.8s								
SIJI	**Sorong**	**9.43**	**97**	P			**Pn**	**18 38 22.7**	**+2.0**
	1.1nm,0.4s,baz=172,slow=15,SNR=2.6								
SIJI						S	**Sn**	**18 40 07.9**	**+1.6**
	1.2nm,0.5s,baz=253,slow=19,SNR=1.4								
BATI	**Baumata**	**10.58**	**171**	P			**Pn**	**18 38 36.9**	**+1.2**
	32nm,0.9s,baz=9.9,slow=4.1,SNR=4.2								
KSM	**Kuching**	**11.66**	**276**				**P**	**18 38 56.6**	**+1.9**
LEM	**Lembang**	**15.92**	**243**	P			**P**	**18 39 42.7**	**+0.5**
	30nm,0.8s,baz=9.2,slow=8.7,SNR=7.8								
LEM	**Lembang**	**15.92**	**243**	P			**Pn**	**18 39 42.9**	**+0.4**
	21nm,0.8s								
MTN	**Manton Dam**	**15.94**	**145**	P			**P**	**18 39 43.1**	**+0.9**
CBJI	**Citeko**	**16.45**	**246**	P			**Pn**	**18 39 48.8**	**+0.1**
	7μm134nm,0.8s								
CNJI	**Cibinong**	**16.57**	**243**	P			**Pn**	**18 39 51.2**	**+1.1**
	128nm,1.0s								
KNRA	**Kununurra**	**17.26**	**157**	P			**P**	**18 39 57.0**	**+0.3**
KNRA				IAmb		IAmb	IAmb	18 40 00.2	
	comp=Z,10nm,0.7s								
MYKOM	**Kota Tinggi**	**18.12**	**275**	P			**P**	**18 40 07.4**	**+1.3**
MYKOM				IAmb		IAmb	IAmb	18 40 08.2	
	comp=Z,11nm,0.8s								
KASI	**Kota Agung**	**18.33**	**251**	P			**P**	**18 40 09.5**	**+1.2**
	comp=Z,36nm,1.0s								
LWLI	**Liwa**	**18.60**	**253**	P			**P**	**18 40 12.0**	**+0.6**
	comp=Z,31nm,0.8s								
KRJI	**Kerinci**	**20.58**	**263**	P			**P**	**18 40 35.5**	**+2.8**
	comp=Z,133nm,0.8s								
IPM	**Ipoh**	**21.27**	**282**	P			**P**	**18 40 38.3**	**-1.6**
IPM				IAmb		IAmb	IAmb	18 40 42.5	
	comp=Z,15nm,1.0s								
KULM	**Kulim**	**21.80**	**284**	P			**P**	**18 40 45.1**	**-0.2**
KULM				IAmb		IAmb	IAmb	18 40 46.4	
	comp=Z,12nm,1.0s								
PSA00	**Pilbara Seismi**	**21.83**	**185**	P			**P**	**18 40 43.7**	**-1.8**
PSA00				IAmb		IAmb	IAmb	18 40 45.3	
	comp=Z,19nm,1.2s								
MNSI	**Mandailing Nat**	**22.34**	**271**	P			**P**	**18 40 51.3**	**+0.9**
	comp=Z,13nm,0.5s								
TWG	**Pinlang**	**22.40**	**358**	P			**P**	**18 40 51.8**	**+1.0**
TWG				IAmb		IAmb	IAmb	18 41 16.4	
	comp=Z,24nm,1.3s								
SISI	**Saibi**	**22.88**	**266**	P			**P**	**18 40 57.0**	**+1.7**
	comp=Z,31nm,0.7s								
YULB	**Yu-li**	**22.96**	**359**	P			**P**	**18 40 55.6**	**-0.3**
YULB				IAmb		IAmb	IAmb	18 40 57.1	
	comp=Z,25nm,1.5s								
RPSI	**Rantau Prapat**	**23.10**	**276**	P			**P**	**18 40 58.2**	**+1.0**
PSI	**Prapat**	**23.11**	**276**	P			**P**	**18 40 58.2**	**+0.7**
	comp=Z,4.6nm,0.4s,baz=97,slow=10,SNR=4.6								
	comp=Z,4.6nm,0.4s								
SSLB	**Suanglung**	**23.36**	**358**	P			**P**	**18 40 59.9**	**+0.4**
SSLB				IAmb		IAmb	IAmb	18 41 05.4	
	comp=Z,11nm,0.6s								
WB0	**Warramunga Arr**	**23.40**	**149**	P			**P**	**18 40 59.2**	**-0.7**
WB0				IAmb		IAmb	IAmb	18 41 00.8	
	comp=Z,8.1nm,0.6s								
WRA	**Warramunga Arr**	**23.52**	**150**	P			**P**	**18 41 00.1**	**-0.9**
	comp=Z,2.6nm,0.5s,baz=326,slow=11,SNR=88								
	comp=Z,2.6nm,0.5s								
WRA	**Warramunga Arr**	**23.52**	**150**	P			**P**	**18 40 59.9**	**-1.1**
WB2	**Warramunga Arr**	**23.52**	**149**	P			**P**	**18 41 00.7**	**-0.4**
WB2				IAmb		IAmb	IAmb	18 41 02.2	
	comp=Z,6.4nm,0.6s								
WR0	**Warramunga Arr**	**23.63**	**149**	P			**P**	**18 41 01.4**	**-0.7**
GIRL	**Giralia**	**24.00**	**198**	P			**P**	**18 41 05.2**	**-0.2**
GSI	**Gunungsitoli**	**24.35**	**272**	P			**P**	**18 41 08.8**	**+0.1**
GSI	**Gunungsitoli**	**24.35**	**272**	P			**P**	**18 41 09.3**	**+0.6**
AS31	**Alice Springs**	**26.52**	**155**	P			**P**	**18 41 27.7**	**-0.4**
ASAR	**Alice Springs**	**26.52**	**155**	P			**P**	**18 41 28.1**	**0.0**
	comp=Z,2.5nm,0.6s,baz=344,slow=14,SNR=105								
ASAR				PcP			**PcP**	**18 44 46.6**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=347,slow=2.1,SNR=5.3								
ASAR				S			**S**	**18 45 45.1**	**-2.4**
	comp=Z,2.4nm,1.3s,baz=346,slow=22,SNR=4.1								
ASAR				ScP			**ScP**	**18 48 05.2**	**-3.6**
	comp=Z,0.6nm,0.9s,baz=347,slow=3.3,SNR=3.7								
	comp=Z,2.5nm,0.6s								
ASAR	**Alice Springs**	**26.52**	**155**	P			**P**	**18 41 27.6**	**-0.5**
CMAR	**Chiang Mai Arr**	**28.89**	**310**	P			**P**	**18 41 51.1**	**+2.0**
	comp=Z,1.0nm,0.6s,baz=132,slow=7.4,SNR=7.6								
	comp=Z,1.0nm,0.6s								
CMAR	**Chiang Mai Arr**	**28.89**	**310**	P			**P**	**18 41 47.6**	**-1.6**
MORW	**Morawa**	**29.74**	**190**	P			**P**	**18 41 55.5**	**-1.0**
FORT	**Forrest**	**31.46**	**170**	P			**P**	**18 42 11.1**	**-0.5**
BBOO	**Buckleboo**	**35.54**	**159**	P			**P**	**18 42 46.3**	**-0.6**
BBOO				IAmb		IAmb	IAmb	18 43 26.4	
	comp=Z,22nm,1.4s								
STKA	**

WEL ***14*** *18:41:13.1±1.0, 33˚S±7˚×17˚9W±1˚7, h287km±15km, M4.3/12, mB4.7/7, ML4.5/5, MLv4.6/12, Mw(mB)3.9/7, Error ellipse: s-maj=0.0km s-min=0.0km az=109.1*
NOU ***14*** *18:42:33.1, 38˚86S×176˚79E, h0km, MLv4.3/6, North Island, New Zealand*

ISC 14 18:41:11.0±0.9, 32˚31S±0˚06×180˚0W±0˚1, h300km, n32, σ1s89/42, mb3.7/4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**3.51**	**30**	P	**Pn**	**18 42 13.9**	**+1.9**
GLKZ				S	**S**	**18 43 00.6**	**-0.2**
MXZ	**Matakaoa Point**	**5.43**	**195**	P	**Pn**	**18 42 34.6**	**+1.2**
MXZ				S	**S**	**18 43 39.2**	**-0.5**
GRZ	**Great Barrier**	**5.46**	**223**	P	**Pn**	**18 42 38.6**	**+4.7**
WMGZ	**Waiomatatini S**	**5.66**	**193**	P	**Pn**	**18 42 38.0**	**+1.9**
WMGZ				S	**S**	**18 43 45.2**	**+0.6**
KUZ	**Kuaotunu**	**5.68**	**218**	P	Pn	18 42 41.5	+5.1
HAZ	**Te Kaha**	**5.74**	**198**	P	**Pn**	**18 42 37.9**	**+0.9**
HAZ				S	**S**	**18 43 49.7**	**+3.3**
PKGZ	**Pakihiroa**	**5.79**	**196**	P	**Pn**	**18 42 38.8**	**+1.0**
PKGZ				S	**S**	**18 43 47.9**	**+0.2**
PUZ	**Puketiti**	**5.93**	**194**	P	**Pn**	**18 42 40.6**	**+1.2**
PUZ				S	**S**	**18 43 50.9**	**+0.3**
WCZ	**Waipu Caves**	**5.95**	**231**	P	Pn	18 42 44.7	+5.0
RUGZ	**Raukumara Rang**	**5.96**	**198**	P	**Pn**	**18 42 41.8**	**+1.9**
RUGZ				S	**S**	**18 43 52.1**	**+0.6**
WIAZ	**Waiheke Island**	**6.03**	**221**	P	**Pn**	**18 42 44.4**	**+3.8**
TWGZ	**Tauwhareparae**	**6.09**	**196**	P	**Pn**	**18 42 44.4**	**+3.1**
TWGZ				S	**S**	**18 43 57.4**	**+3.2**
OPRZ	**Ohinepanea**	**6.22**	**206**	P	**Pn**	**18 42 43.7**	**+0.9**
CNGZ	**Carnagh Statio**	**6.34**	**193**	P	**Pn**	**18 42 44.5**	**+0.3**
MWZ	**Matawai**	**6.35**	**198**	P	**Pn**	**18 42 45.2**	**+0.8**
MWZ				S	**S**	**18 43 59.5**	**-0.4**
TKGZ	**Te Karaka**	**6.37**	**196**	P	**Pn**	**18 42 45.3**	**+0.7**
TKGZ				S	**S**	**18 43 58.9**	**-1.3**
URZ	**Urewera**	**6.40**	**201**	P	**Pn**	**18 42 45.2**	**+0.2**
	8.1nm,0.3s,baz=253,slow=3.2,SNR=21						
URZ				S	**S**	**18 44 02.3**	**+1.4**
	38nm,0.6s,baz=229,slow=19,SNR=5.0						
URZ	**Urewera**	**6.40**	**201**	P	**Pn**	**18 42 45.2**	**+0.2**
URZ				S	**S**	**18 44 02.1**	**+1.3**
URZ	**Urewera**	**6.40**	**201**	P	**Pn**	**18 42 45.5**	**+0.5**
HIZ	**Hauiti**	**7.50**	**213**	P	**Pn**	**18 43 01.2**	**+2.9**
QRZ	**Quartz Range**	**10.42**	**213**	P	**Pn**	**18 43 33.0**	**-1.2**
KHZ	**Kahutara**	**11.33**	**205**	P	**Pn**	**18 43 41.4**	**-3.8**
RPZ	**Rata Peaks**	**13.40**	**209**	P	**Pn**	**18 44 09.5**	**-0.8**
	15nm,0.9s,baz=222,slow=2.4,SNR=8.0						
RPZ	**Rata Peaks**	**13.40**	**209**	P	**Pn**	**18 44 09.4**	**-0.8**
MSVF	**Nonsavu**	**14.63**	**352**	P	**P**	**18 44 24.4**	**+0.3**
	3.3nm,0.5s,baz=146,slow=14,SNR=4.9						
ODZ	**Otahua Downs**	**14.67**	**207**	P	**Pn**	**18 44 25.1**	**-0.2**
STKA	**Stephens Creek**	**32.46**	**260**	P	**P**	**18 47 12.9**	**-1.1**
	0.6nm,0.5s,baz=93,slow=3.2,SNR=4.4						
	0.6nm,0.5s						
KRVT	**Keravat (AS076**	**38.27**	**311**	P	**P**	**18 48 02.7**	**-0.6**
	11nm,0.6s,baz=252,slow=3.6,SNR=4.9						
	11nm,0.6s						
ASAR	**Alice Springs**	**41.39**	**270**	P	**P**	**18 48 26.6**	**-2.1**
	1.0nm,0.6s,baz=107,slow=7.6,SNR=31						
	1.0nm,0.6s						
WRA	**Warramunga Arr**	**42.55**	**275**	P	**P**	**18 48 35.8**	**-2.3**
	2.8nm,0.3s,baz=112,slow=8.0,SNR=92						
	2.8nm,0.3s						
FINES	**FINESS Array B**	**146.32**	**338**	PKPbc	**PKPdf**	**19 00 12.9**	**-1.1**
	1.3nm,0.6s,baz=46,slow=4.0,SNR=11						
NOA	**NORSAR Array B**	**150.34**	**349**	PKPbc	**PKPdf**	**19 00 23.6**	**+3.0**
	0.5nm,0.5s,baz=20,slow=4.3,SNR=3.5						

IDC ***14*** *18:52:01.0±1.8, 33˚37S×179˚04W, h0km, mb3.9/2, mbtmp4.0/3, ML3.7/1, Error ellipse: s-maj=58.6km s-min=35.3km az=143.0*
NEIC ***14*** *18:52:06.5±1.5, 33˚8S±0˚1×179˚0W±0˚2, h35km±2km, mb4.6/4, Error ellipse: s-maj=34.6km s-min=13.4km az=115.0*
WEL ***14*** *18:52:07.4±0.6, 34˚S±6˚×17˚9W±1˚3, h139km±19km, M4.4/18, mB4.9/6, ML4.8/22, MLv4.5/18, Mw(mB)4.1/6, Error ellipse: s-maj=0.0km s-min=0.0km az=112.6*

ISC 14 18:52:04.7±1.1, 33˚71S±0˚08×178˚7W±0˚1, h35km, n58, σ2s47/81, mb4.2/4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**4.48**	**8**	P	**Pn**	**18 53 09.6**	**-0.5**
GLKZ				S	**Sn**	**18 54 00.6**	**-0.4**
RAO	**Raoul Island**	**4.49**	**8**	Pn	**Pn**	**18 53 12.8**	**+2.6**
MXZ	**Matakaoa Point**	**4.56**	**212**	Pn	**Pn**	**18 53 12.8**	**+1.6**
MXZ	**Matakaoa Point**	**4.56**	**212**	P	**Pn**	**18 53 12.1**	**+0.9**
MXZ				S	**Sn**	**18 54 07.5**	**+4.5**
WMGZ	**Waiomatatini S**	**4.74**	**209**	P	**Pn**	**18 53 16.5**	**+2.9**
WMGZ				S	**Sn**	**18 54 10.1**	**+2.8**
PKGZ	**Pakihiroa**	**4.94**	**211**	P	**Pn**	**18 53 18.6**	**+2.2**
PKGZ				S	**Sn**	**18 54 16.0**	**+3.7**
HAZ	**Te Kaha**	**4.96**	**215**	P	**Pn**	**18 53 19.9**	**+3.2**
HAZ				S	**Sn**	**18 54 17.8**	**+4.9**
PUZ	**Puketiti**	**5.01**	**209**	P	**Pn**	**18 53 20.9**	**+3.4**
PUZ				S	**Sn**	**18 54 16.6**	**+2.4**
RUGZ	**Raukumara Rang**	**5.18**	**214**	P	**Pn**	**18 53 23.0**	**+3.2**
RUGZ				S	**Sn**	**18 54 22.0**	**+3.6**
TWGZ	**Tauwhareparae**	**5.22**	**210**	P	Pn	18 53 26.0	+5.7
TWGZ				S	**Sn**	**18 54 21.6**	**+2.3**
GRZ	**Great Barrier**	**5.45**	**241**	P	**Pn**	**18 53 26.4**	**+3.0**
TKGZ	**Te Karaka**	**5.50**	**210**	P	Pn	18 53 28.7	+4.7
TKGZ				S	**Sn**	**18 54 26.8**	**+0.8**
KUZ	**Kuaotunu**	**5.50**	**235**	P	**Pn**	**18 53 27.3**	**+3.2**
MWZ	**Matawai**	**5.55**	**213**	P	**Pn**	**18 53 26.9**	**+2.0**
MWZ				S	**Sn**	**18 54 29.5**	**+2.1**
OPRZ	**Ohinepanea**	**5.66**	**222**	P	Pn	18 53 30.7	+4.4
OPRZ				S	**Sn**	**18 54 32.7**	**+2.6**
URZ	**Urewera**	**5.68**	**216**	Pn	**Pn**	**18 53 28.3**	**+1.7**
	2.3nm,0.3s,baz=252,slow=3.2,SNR=38						
URZ				Sn	**Sn**	**18 54 30.4**	**-0.2**
	7.2nm,0.3s,baz=125,slow=3.9,SNR=6.6						
	12nm,0.3s						
URZ	**Urewera**	**5.68**	**216**		**Pn**	**18 53 27.3**	**+0.7**
URZ	**Urewera**	**5.68**	**216**	P	**Pn**	**18 53 28.7**	**+2.1**
URZ				S	**Sn**	**18 54 30.9**	**+0.3**
RIGZ	**Rimuhau**	**5.76**	**209**	P	**Pn**	**18 53 32.0**	**+4.3**
RIGZ				S	**Sn**	**18 54 34.6**	**+2.1**
PRGZ	**Paritu Road**	**5.90**	**207**	P	**Pn**	**18 53 31.6**	**+2.0**
PRGZ				S	**Sn**	**18 54 35.8**	**-0.2**
SNGZ	**Shannon Statio**	**6.00**	**211**	P	**Pn**	**18 53 33.8**	**+2.8**
SNGZ				S	**Sn**	**18 54 37.9**	**-0.6**
MUGZ	**Murupara**	**6.02**	**217**	P	**Pn**	**18 53 32.9**	**+1.6**
MUGZ				S	**Sn**	**18 54 37.9**	**-1.1**
RTZ	**Ruatahuna**	**6.03**	**214**	P	**Pn**	**18 53 35.4**	**+3.9**
MHGZ	**Mahia Peninsul**	**6.09**	**206**	P	**Pn**	**18 53 34.7**	**+2.4**
MHGZ				S	**Sn**	**18 54 40.3**	**-0.3**
TOZ	**Tahuroa Road**	**6.21**	**228**	P	Pn	18 53 37.6	+3.7
MTHZ	**Maungataniwha**	**6.28**	**214**	P	**Pn**	**18 53 38.8**	**+3.9**
MTHZ				S	**Sn**	**18 54 45.9**	**+0.5**
ARHZ	**Aropaoanui**	**6.55**	**211**	P	**Pn**	**18 53 40.8**	**+2.3**
ARHZ				S	**Sn**	**18 54 54.0**	**+2.1**
BKZ	**Black Stump Fm**	**6.70**	**214**		**Pn**	**18 53 41.8**	**+1.2**
BKZ	**Black Stump Fm**	**6.70**	**214**	P	**Pn**	**18 53 42.6**	**+2.0**
BKZ				S	**Sn**	**18 54 54.5**	**-1.2**
TMVZ	**Te Maari**	**7.05**	**218**	P	**Pn**	**18 53 48.1**	**+2.6**
HIZ	**Hauiti**	**7.10**	**226**	Pn	**Pn**	**18 53 46.9**	**+0.9**
HIZ	**Hauiti**	**7.10**	**226**	P	Pn	18 53 50.4	+4.3
BHHZ	**Black Hill Sta**	**7.15**	**215**	P	**Pn**	**18 53 49.8**	**+2.9**
BHHZ				S	**Sn**	**18 55 06.9**	**-0.1**
MOVZ	**Moawhango**	**7.24**	**217**	P	**Pn**	**18 53 49.9**	**+1.8**
MOVZ				S	**Sn**	**18 55 05.3**	**-3.8**
PXZ	**Pawanui**	**7.25**	**208**	P	**Pn**	**18 53 50.2**	**+2.1**
PXZ				S	**Sn**	**18 55 08.4**	**-0.9**
VRZ	**Vera Road**	**7.56**	**223**	P	**Pn**	**18 53 55.9**	**+3.5**
BFZ	**Birch Farm**	**8.05**	**209**	P	**Pn**	**18 54 00.9**	**+1.7**
MRZ	**Mangatainoka R**	**8.31**	**212**	P	**Pn**	**18 54 03.6**	**+0.8**
MRZ				S	**Sn**	**18 55 30.1**	**-5.3**
HOWZ	**Holdsworth Sta**	**8.54**	**211**	P	**Pn**	**18 54 05.5**	**-0.3**
HOWZ				S	**Sn**	**18 55 35.5**	**-5.4**
OGWZ	**Otaki Gorge**	**8.62**	**213**	P	**Pn**	**18 54 06.6**	**-0.4**
OGWZ				S	**Sn**	**18 55 38.3**	**-4.6**
PLWZ	**Palliser**	**9.20**	**210**	Pn	**Pn**	**18 54 13.4**	**-1.6**
SNZO	**South Karori**	**9.23**	**213**	Pn	**Pn**	**18 54 13.9**	**-1.4**
TUWZ	**Tuamarina**	**9.68**	**215**	Pn	**Pn**	**18 54 20.9**	**-0.5**
NNZ	**Nelson**	**9.80**	**218**	Pn	**Pn**	**18 54 20.9**	**-2.2**
QRZ	**Quartz Range**	**9.98**	**222**	Pn	**Pn**	**18 54 23.4**	**-2.2**
THZ	**Tophouse**	**10.44**	**217**	Pn	**Pn**	**18 54 29.5**	**-2.5**
KHZ	**Kahutara**	**10.64**	**213**	Pn	**Pn**	**18 54 32.3**	**-2.2**
RPZ	**Rata Peaks**	**12.80**	**216**	Pn	**Pn**	**18 54 59.8**	**-4.3**
	0.4nm,0.3s,baz=41,slow=20,SNR=1.4						
RPZ				Sn	Sn	18 57 13.2	-12
	0.8nm,0.3s,baz=352,slow=19,SNR=1.8						
BBOO	**Buckleboo**	**37.64**	**258**	P	**P**	**18 59 16.1**	**-0.3**
ASAR	**Alice Springs**	**42.48**	**271**	P	**P**	**18 59 55.2**	**-1.4**
	1.1nm,0.7s,baz=107,slow=7.4,SNR=18						
ASAR				PcP	**PcP**	**19 01 49.1**	**0.0**
	0.3nm,0.6s,baz=114,slow=4.5,SNR=2.2						
	1.1nm,0.7s						
WR0	**Warramunga Arr**	**43.59**	**276**	P	**P**	**19 00 04.6**	**-1.1**
WR0				IAmb	IAmb	19 00 32.5	
	comp=Z,17nm,1.5s						
WB2	**Warramunga Arr**	**43.76**	**276**	P	**P**	**19 00 04.9**	**-2.1**
WB2				IAmb	IAmb	19 00 18.5	
	comp=Z,16nm,1.4s						
WRA	**Warramunga Arr**	**43.77**	**276**	P	**P**	**19 00 05.7**	**-1.4**
	comp=Z,1.0nm,0.4s,baz=117,slow=7.6,SNR=40						
	comp=Z,1.0nm,0.4s						
WB0	**Warramunga Arr**	**43.80**	**276**	P	**P**	**19 00 05.8**	**-1.6**
FINES	**FINESS Array B**	**148.02**	**338**	PKPbc	**PKPbc**	**19 11 46.1**	**+0.4**
	comp=Z,0.7nm,0.5s,baz=15,slow=5.8,SNR=9.4						
NB2	**NORSAR Subarra**	**151.92**	**350**	PKP	**PKPbc**	**19 11 57.1**	**+1.9**
	comp=Z,3.6nm,1.4s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**151.92**	**350**	PKPbc	**PKPbc**	**19 11 56.1**	**+0.9**
	comp=Z,0.3nm,0.5s,baz=27,slow=0.6,SNR=2.5						
HFS	**Hagfors**	**152.35**	**347**	PKPbc	**PKPbc**	**19 11 56.9**	**+0.8**
	comp=Z,1.0nm,0.8s,baz=52,slow=2.6,SNR=1.5						

CRAAG ***14*** *19:00:27.7, 36˚20N×3˚92E, Ml3.8, Hypocentre not reviewed by the ISC*
IDC ***14*** *19:00:27.2±1.3, 36˚22N×4˚13E, h0km, mb3.3/3, mbtmp3.4/8, ML3.5/5, MS2.5/1, Error ellipse: s-maj=24.7km s-min=18.2km az=149.0*
MDD ***14*** *19:00:28.9±0.6, 36˚05N×4˚15E, h10km±4km, Mb4.3/25, M_mb3.7/19, Error ellipse: s-maj=4.2km s-min=2.7km az=171.0*
LDG ***14*** *19:00:31.6±0.4, 36˚25N×3˚60E, h10km, Ml3.1/20, Error ellipse: s-maj=8.8km s-min=3.9km az=149.0*

ISC 14 19:00:29.6±0.9, 36˚35N±0˚07×4˚04E±0˚05, h16km, n77, σ2s36/103, mb3.2/3, 21C, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKET	**Djebel Ketaf**	**0.32**	**203**	P		19 00 31.9	
ADJB	**Djebel Djouab**	**0.52**	**249**	P		19 00 37.6	
SET	**Setif**	**1.11**	**97**	P		19 00 52.0	
CKHR	**Kef el Ahmar**	**1.24**	**105**	P		19 00 51.9	
DFRA	**Djebel Bou Aff**	**1.50**	**82**	P		19 00 57.8	
CTEI	**Djebel Teioual**	**1.94**	**98**	P		19 01 06.6	
CASM	**Ain Smara**	**1.98**	**92**	P		19 01 08.3	
EBNR	**Beni Rached**	**2.02**	**269**	P		19 01 04.8	
ECHA	**Ech Chlef**	**2.17**	**266**	P		19 01 07.1	
CKFL	**Kef-Lekhel**	**2.17**	**88**	P		19 01 11.6	
EANR	**'Ain N'Sour**	**2.41**	**261**	P		19 01 10.3	
CMAH	**Djebel Manchou**	**2.74**	**83**	P		19 01 03.8	
OKGL	**Djebel Kef Gue**	**2.76**	**265**	P		19 01 28.0	
ABSA	**Djebel Ababsia**	**2.78**	**90**	P		19 01 18.4	
OJBR	**Djebel Berber**	**3.09**	**257**	P		19 01 29.0	
EIBI	**Ibiza**	**3.42**	**322**	P	**Pn**	**19 01 24.4**	**+2.1**
EIBI				i Vmb_V		19 01 25.4	
	630nm,SNR=1.6						
EIBI				S	**Sn**	**19 02 02.6**	**+0.1**
ODJA	**Bouhanifia**	**3.55**	**255**	P		19 01 35.0	
ETOS	**Mallorca**	**3.55**	**345**	P	**Pn**	**19 01 26.3**	**+2.2**
ETOS				i Vmb_V		19 01 26.7	
	554nm,SNR=1.2						
ETOS				S	**Sn**	**19 02 05.8**	**+0.1**
EBEN2	**Beniarda presa**	**4.09**	**306**	P	**Pn**	**19 01 33.3**	**+1.9**
EBEN2				i Vmb_V		19 01 35.5	
	426nm,SNR=1.0						
AFON	**Font Roja**	**4.31**	**304**	P	**Pn**	**19 01 36.7**	**+2.1**
AFON				i Vmb_V		19 01 40.8	
	254nm,SNR=1.2						
KEST	**Kesra**	**4.35**	**97**	Pn	**Pn**	**19 01 35.4**	**+0.3**
	0.9nm,0.3s,baz=70,slow=13,SNR=27						
KEST				Sn	**Sn**	**19 02 24.4**	**-1.1**
	0.9nm,0.3s,baz=357,slow=18,SNR=1.2						
	11nm,0.5s						
ECOL	**Islas Columbre**	**4.42**	**324**	P	**Pn**	**19 01 37.9**	**+1.9**
ECOL				S	**Sn**	**19 02 28.3**	**+1.2**
EMUR	**La Murta**	**4.47**	**291**	P	**Pn**	**19 01 37.0**	**+0.2**
EMUR				i Vmb_V		19 01 40.9	
	319nm,SNR=1.5						
EZAR	**Zarzadilla de**	**4.83**	**290**	P	**Pn**	**19 01 42.6**	**+0.9**
EZAR				S	**Sn**	**19 02 38.8**	**+1.5**
ETOB	**Tobarra**	**5.00**	**299**	P	**Pn**	**19 01 45.7**	**+1.7**
ETOB				i Vmb_V		19 01 49.0	
	295nm,SNR=1.8						
ETOB				S	**Sn**	**19 02 42.7**	**+1.3**
ECHE	**Chera**	**5.11**	**311**	P	**Pn**	**19 01 48.2**	**+2.7**
ECHE				i Vmb_V		19 01 49.3	
	471nm,SNR=2.0						
ECHE				S	**Sn**	**19 02 46.4**	**+2.2**
VSL	**Villasalto**	**5.26**	**52**	P	**Pn**	**19 01 48.9**	**+1.2**
VSL				S	**Sn**	**19 02 45.4**	**-2.6**
EMOS	**Mosqueruela**	**5.35**	**320**	P	**Pn**	**19 01 50.9**	**+1.9**
EMOS				i Vmb_V		19 01 52.2	
	244nm,SNR=1.7						
EMOS				S	**Sn**	**19 02 51.7**	**+1.4**
ERTA	**Horta de San J**	**5.44**	**329**	P	**Pn**	**19 01 52.1**	**+2.1**
ERTA				i Vmb_V		19 01 59.1	
	130nm,SNR=0.9						
ERTA				S	**Sn**	**19 02 51.8**	**-0.5**
EPOB	**Poblet**	**5.50**	**336**	P	**Pn**	**19 01 53.0**	**+2.1**
EPOB				i Vmb_V		19 01 54.6	
	279nm,SNR=2.4						
EPOB				S	**Sn**	**19 02 53.1**	**-0.9**
EBER	**Berja**	**5.60**	**278**	P	**Pn**	**19 01 52.1**	**-0.2**
EBER				i Vmb_V		19 01 58.5	
	211nm,SNR=1.6						
EBER				S	**Sn**	**19 02 56.5**	**+0.1**
EQES	**Quesada**	**5.87**	**286**	P	**Pn**	**19 01 58.7**	**+2.8**
EQES				i Vmb_V		19 02 01.9	
	206nm,SNR=2.9						
EQES				S	**Sn**	**19 03 03.0**	**+0.1**
EQUE	**Quentar**	**6.06**	**280**	P	**Pn**	**19 01 59.7**	**+1.1**
EQUE				i Vmb_V		19 02 05.4	
	74nm,SNR=1.2						
EQUE				S	**Sn**	**19 03 06.1**	**-1.6**
EJON	**La Jonquera**	**6.16**	**352**	P	**Pn**	**19 02 03.1**	**+3.2**
EJON				i Vmb_V		19 02 04.5	
	416nm,SNR=2.8						
EJON				S	**Sn**	**19 03 12.2**	**+2.2**
ESAC	**San Caprasio**	**6.41**	**328**	P	**Pn**	**19 02 05.9**	**+2.5**
ESAC				i Vmb_V		19 02 13.2	
	374nm,SNR=1.3						
ETOR	**Torete**	**6.53**	**315**	P	**Pn**	**19 02 09.3**	**+4.2**
ETOR				i Vmb_V		19 02 11.1	
	115nm,SNR=0.8						
ECHI	**Chisagues Biel**	**6.97**	**336**	P	**Pn**	**19 02 14.6**	**+3.4**
ECHI				i Vmb_V		19 02 16.7	
	46nm,SNR=0.6						
EADA	**Adamuz**	**7.11**	**287**	P	**Pn**	**19 02 14.6**	**+1.7**
EADA				i Vmb_V		19 02 16.5	
	59nm,SNR=0.8						
MTLF	**Montolieu**	**7.12**	**349**	ePn	**Pn**	**19 02 14.4**	**+1.3**
MTLF	**Montolieu**	**7.12**	**349**	eP	**Pn**	**19 02 17.0**	**+3.9**
MTLF				eSn	**Sn**	**19 03 31.7**	**-2.0**
	1.6nm,0.4s						
ESDC	**Sonseca Array**	**7.13**	**300**	Pn	**Pn**	**19 02 14.1**	**+0.8**
	0.3nm,0.3s,baz=108,slow=13,SNR=10						
	0.8nm,0.4s						
LMR	**La Mourre**	**7.23**	**14**	ePn	**Pn**	**19 02 16.3**	**+1.7**
LMR				eSn	**Sn**	**19 03 35.0**	**-1.4**
	1.6nm,0.3s						
EPF	**Esparros**	**7.26**	**338**	ePn	**Pn**	**19 02 14.9**	**-0.1**
EPF	**Esparros**	**7.26**	**338**	eP	**Pn**	**19 02 18.7**	**+3.7**
EPF				eSn	**Sn**	**19 03 32.0**	**-5.1**
	3.6nm,0.3s						
PGF	**Pioggiola**	**7.29**	**30**	eP	Pb	19 02 26.8	-8.9
PGF				eSn	**Sn**	**19 03 40.5**	**+2.6**
	1.5nm,0.3s						
PAB	**San Pablo**	**7.35**	**298**	P	**Pn**	**19 02 17.6**	**+1.3**
PAB				i Vmb_V		19 02 23.2	
	32nm,SNR=0.5						
ETSF	**Etsaut**	**7.44**	**333**	ePn	**Pn**	**19 02 16.9**	**-0.6**
ETSF	**Etsaut**	**7.44**	**333**	eP	**Pn**	**19 02 20.9**	**+3.4**
ETSF				eSn	**Sn**	**19 03 35.4**	**-6.2**
	0.4nm,0.2s						
SMRF	**Simiane la Rot**	**7.71**	**8**	ePn	**Pn**	**19 02 23.9**	**+2.7**
SMRF				eSn	**Sn**	**19 03 48.6**	**+0.4**
	1.0nm,0.3s						
SMRF				eSg	Sb	19 04 35.1	+21
	1.0nm,0.3s						
LASF	**Ste Croix**	**7.72**	**359**	ePn	**Pn**	**19 02 23.1**	**+1.8**
LASF				eSn	**Sn**	**19 03 46.1**	**-2.4**
	1.2nm,0.3s						
EORO	**Oroz-Betelu**	**7.73**	**329**	P	**Pn**	**19 02 24.3**	**+2.8**
EORO				i Vmb_V		19 02 26.6	
	86nm,SNR=0.7						
ECAB	**El Cabril**	**7.74**	**286**	P	**Pn**	**19 02 21.9**	**+0.3**
ECAB				i Vmb_V		19 02 25.0	
	76nm,SNR=1.1						
SJPF	**Ste Jean**	**7.88**	**331**	ePn	**Pn**	**19 02 22.6**	**-0.9**
SJPF	**Ste Jean**	**7.88**	**331**	eP	**Pn**	**19 02 27.7**	**+4.2**
SJPF				eSn	**Sn**	**19 03 46.6**	**-5.7**
	1.7nm,0.4s						
SBF	**Sospel**	**7.95**	**18**	ePn	**Pn**	**19 02 26.9**	**+2.4**
SBF				eSn	**Sn**	**19 03 53.6**	**-0.4**
	1.4nm,0.2s						
SBF				eSg	Sb	19 04 42.3	+21
	4.2nm,0.5s						
MDT	**Midelt**	**7.95**	**246**	Pn	**Pn**	**19 02 24.2**	**-0.4**
	0.2nm,0.3s,baz=337,slow=7.7,SNR=2.5						
MDT				Lg	Lg	19 04 41.0	
	0.3nm,0.3s,baz=228,slow=14,SNR=2.3						
	1.9nm,0.7s						
VIVF	**Saint-Julien-l**	**8.51**	**3**	ePn	**Pn**	**19 02 34.4**	**+2.2**
VIVF				eSn	**Sn**	**19 04 07.0**	**-1.0**
	0.6nm,0.2s						
MBDF	**Montbardon**	**8.63**	**13**	ePn	**Pn**	**19 02 37.2**	**+3.3**
MBDF				eSn	**Sn**	**19 04 11.0**	**+0.1**
	0.9nm,0.3s						
ORIF	**Oris-en-Rattie**	**8.68**	**9**	ePn	**Pn**	**19 02 38.2**	**+3.7**
CAF	**Calviac**	**8.70**	**351**	ePn	**Pn**	**19 02 36.0**	**+1.2**
CAF	**Calviac**	**8.70**	**351**	eP	Pn	19 02 40.4	+5.6
CAF				eSn	**Sn**	**19 04 09.7**	**-2.8**
	1.4nm,0.3s						
LFF	**La Frestale**	**8.94**	**345**	ePn	**Pn**	**19 02 38.5**	**+0.5**
LFF	**La Frestale**	**8.94**	**345**	eP	**Pn**	**19 02 42.2**	**+4.2**
LFF				eSn	**Sn**	**19 04 12.5**	**-5.8**
	2.0nm,0.4s						
RJF	**Les Rejaudoux**	**9.15**	**349**	ePn	**Pn**	**19 02 41.5**	**+0.6**
RJF				eSn	**Sn**	**19 04 19.6**	**-3.9**
	0.7nm,0.3s						
LPG	**La Plagne**	**9.37**	**12**	ePn	**Pn**	**19 02 47.7**	**+3.5**
LPG				eSn	**Sn**	**19 04 29.1**	**-0.2**
	0.7nm,0.3s						
LPL	**La Plagne**	**9.38**	**12**	ePn	**Pn**	**19 02 47.9**	**+3.6**
TCF	**Toulx Ste Croi**	**10.03**	**353**	ePn	**Pn**	**19 02 54.6**	**+1.7**
BGF	**Bois d'Agland**	**10.24**	**355**	ePn	**Pn**	**19 02 58.4**	**+2.5**
BGF				eSn	**Sn**	**19 04 47.9**	**-2.4**
	1.9nm,0.3s						
SMF	**Signal de Mont**	**10.29**	**359**	eP	Pn	19 03 04.0	+7.5
CABF	**La Chapelle**	**10.37**	**8**	ePn	**Pn**	**19 02 59.5**	**+1.8**
AVF	**Avril sur Loir**	**10.45**	**357**	ePn	**Pn**	**19 03 00.5**	**+1.8**
MFF	**Saint Martin d**	**10.71**	**344**	ePn	**Pn**	**19 03 03.0**	**+0.7**
SSF	**Saint Saulge**	**10.71**	**358**	eP	Pn	19 03 12.2	+10
LOR	**Lormes**	**10.91**	**359**	eP	Pn	19 03 12.7	+7.6
	baz=180						
DAVOX	**Davos/Dischmat**	**11.30**	**21**	LR	LR	19 07 29.2	
	comp=Z,26nm,21.7s,baz=238,slow=37						
HINF	**Hinteralfeld**	**11.65**	**9**	ePn	**Pn**	**19 03 17.1**	**+1.9**
HINF				eSn	**Sn**	**19 05 23.1**	**-1.8**
	1.0nm,0.3s						
HAU	**Haudompre**	**11.78**	**8**	ePn	**Pn**	**19 03 19.6**	**+2.7**
PAGF	**Fort de Pagny**	**12.26**	**5**	ePn	**Pn**	**19 03 25.3**	**+1.8**
CDF	**Champ du Feu**	**12.29**	**10**	ePn	**Pn**	**19 03 25.8**	**+1.8**
GRR	**Gorron**	**12.56**	**345**	ePn	**Pn**	**19 03 28.2**	**+0.6**
LDF	**La Druitiere**	**12.62**	**347**	ePn	**Pn**	**19 03 29.9**	**+1.6**
QUIF	**Quistinic**	**12.73**	**338**	ePn	**Pn**	**19 03 29.3**	**-0.5**
QUIF	**Quistinic**	**12.73**	**338**	eP	**P

WRAB					IAmb	IAmb	19 12 03.0	
	comp=Z,12nm,1.2s							
WRAB	**Tennant Creek**	**24.64**	**162**	P	**P**	**P**	**19 11 26.6**	**-1.1**
WRA	**Warramunga Arr**	**24.64**	**162**	P	**P**	**P**	**19 11 26.2**	**-1.6**
	comp=Z,1.1nm,0.4s,baz=338,slow=11,SNR=44							
WRA					PcP	**PcP**	**19 15 04.8**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=338,slow=2.2,SNR=1.8							
	comp=Z,1.1nm,0.4s							
WRA	**Warramunga Arr**	**24.64**	**162**	P	**P**	**P**	**19 11 25.3**	**-2.5**
WR0	**Warramunga Arr**	**24.72**	**161**	P	**P**	**P**	**19 11 27.5**	**-1.0**
WR0					IAmb	IAmb	19 11 32.9	
	comp=Z,8.6nm,1.2s							
BKNI	**Bangkinang**	**25.56**	**263**	P	**P**	**P**	**19 11 36.1**	**-0.1**
QIS	**Mount Isa**	**27.26**	**152**	P	**P**	**P**	**19 11 52.3**	**+0.8**
ASAR	**Alice Springs**	**28.05**	**165**	P	**P**	**P**	**19 11 58.5**	**0.0**
	comp=Z,0.3nm,0.4s,baz=340,slow=7.3,SNR=17							
ASAR					PcP	**PcP**	**19 15 13.1**	**+0.7**
	comp=Z,0.5nm,0.4s,baz=352,slow=2.0,SNR=11							
	comp=Z,0.3nm,0.4s							
WRKA	**Warakurna**	**28.51**	**176**	P	**P**	**P**	**19 12 02.3**	**-0.3**
CMAR	**Chiang Mai Arr**	**30.67**	**301**	P	**P**	**P**	**19 12 21.2**	**-0.7**
	comp=Z,0.5nm,0.9s,baz=118,slow=9.4,SNR=3.1							
	comp=Z,0.5nm,0.9s							
KSRS	**Korea Array**	**33.73**	**2**	P	**P**	**P**	**19 12 48.5**	**+0.2**
	comp=Z,2.0nm,0.5s,baz=179,slow=9.8,SNR=14							
	comp=Z,2.0nm,0.5s							
KS19	**Wonju Array Si**	**33.78**	**2**	P	**P**	**P**	**19 12 48.2**	**-0.6**
BBOO	**Buckleboo**	**37.34**	**167**	P	**P**	**P**	**19 13 18.9**	**-0.4**
STKA	**Stephens Creek**	**38.11**	**159**	P	**P**	**P**	**19 13 26.7**	**+0.8**
	comp=Z,1.1nm,0.4s,baz=333,slow=7.2,SNR=3.6							
STKA					PcP	**PcP**	**19 15 40.8**	**+0.6**
	comp=Z,1.0nm,0.4s,baz=311,slow=2.2,SNR=3.7							
	comp=Z,1.1nm,0.4s							
STKA	**Stephens Creek**	**38.11**	**159**	P	**P**	**P**	**19 13 25.7**	**-0.2**
USRK	**Ussuriysk Ar.**	**40.74**	**6**	P	**P**	**P**	**19 13 48.1**	**+0.4**
	comp=Z,1.7nm,0.5s,baz=183,slow=9.8,SNR=4.6							
	comp=Z,1.7nm,0.5s							
KLR	**Kul'dur**	**45.70**	**5**	P	**P**	**P**	**19 14 27.4**	**-0.2**
	comp=Z,0.6nm,0.4s,baz=225,slow=2.9,SNR=2.7							
	comp=Z,0.6nm,0.4s							
SONM	**Songino Array**	**47.33**	**342**	P	**P**	**P**	**19 14 40.7**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=157,slow=8.2,SNR=3.1							
SONM					LR	LR	19 38 18.1	
	comp=Z,25nm,18.1s,baz=73,slow=41							
	comp=Z,0.4nm,0.6s							
MK31	**Makanchi Array**	**57.49**	**325**	P	**P**	**P**	**19 15 55.4**	**-0.4**
MKAR	**Makanchi Array**	**57.49**	**325**	P	**P**	**P**	**19 15 55.0**	**-0.7**
	comp=Z,1.1nm,0.4s,baz=120,slow=8.0,SNR=29							
MKAR					PcP	**PcP**	**19 16 49.1**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=150,slow=2.9,SNR=2.2							
	comp=Z,1.1nm,0.4s							
MAKZ	**Makanchi**	**57.68**	**325**	P	**P**	**P**	**19 15 56.6**	**-0.5**
MAKZ					IAmb	IAmb	19 16 13.4	
	comp=Z,5.2nm,1.5s							
ZALV	**Zalesovo Beam**	**60.57**	**333**	P	**P**	**P**	**19 16 16.6**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=106,slow=5.1,SNR=2.2							
	comp=Z,0.3nm,0.3s							
KURBB	**Kurchatov Arra**	**61.69**	**328**	P	**P**	**P**	**19 16 23.6**	**-0.9**
	comp=Z,0.9nm,0.7s,baz=128,slow=6.2,SNR=11							
	comp=Z,0.9nm,0.7s							
KURK	**Kurchatov**	**61.69**	**328**	P	**P**	**P**	**19 16 23.6**	**-0.9**
KURK	**Kurchatov**	**61.69**	**328**		IAmb	IAmb	19 16 30.9	
	comp=Z,1.6nm,0.7s							
BRVK	**Borovoye**	**67.34**	**327**	P	**P**	**P**	**19 17 01.5**	**+0.1**
BRVK					IAmb	IAmb	19 17 15.2	
	comp=Z,1.9nm,0.8s							
ABKAR	**Akbulak array**	**72.06**	**321**	P	**P**	**P**	**19 17 29.1**	**-1.5**
ABKAR	**Akbulak array**	**72.06**	**321**	P	**P**	**P**	**19 17 29.3**	**-1.2**
ABKAR					IAmb	IAmb	19 17 43.9	
	comp=Z,1.9nm,1.2s							
IMAR	**Indian Mountai**	**82.60**	**24**	P	**P**	**P**	**19 18 31.1**	**+1.9**
VNDA	**Vanda**	**83.33**	**173**	P	**P**	**P**	**19 18 35.1**	**+2.4**
VNDA					IAmb	IAmb	19 18 38.5	
	comp=Z,3.0nm,0.8s							
MAW	**Mawson**	**83.51**	**200**	LR	LR	LR	19 58 15.3	
	comp=Z,14nm,18.5s,baz=194,slow=38							
TBI	**Tubuai**	**86.02**	**114**	*e*LR	LR	LR	19 19 00.8	
	comp=Z,159nm,32.8s							
ARCES	**ARCESS Array B**	**90.47**	**340**	P	**P**	**P**	**19 19 09.1**	**+1.4**
	comp=Z,2.9nm,0.9s,baz=78,slow=5.6,SNR=1.8							
	comp=Z,2.9nm,0.9s							
FINES	**FINESS Array B**	**91.81**	**332**	P	**P**	**P**	**19 19 13.9**	**0.0**
	comp=Z,1.2nm,0.9s,baz=81,slow=8.6,SNR=4.3							
	comp=Z,1.2nm,0.9s							
TORD	**Torodi Ar. Bea**	**122.66**	**288**	PKP	**PKiKP**		**19 25 03.1**	**0.0**
	comp=Z,0.2nm,0.4s,baz=126,slow=2.2,SNR=1.8							

*NEIC **14** 19:08:58.8±1.3, 17°.82S±0°.06×172°.7W±0°.1, h10km±1km, mb4.7/27, Error ellipse: s-maj=19.9km s-min=2.9km az=240.0*
*IDC **14** 19:09:08.7±4.5, 17°.96S×172°.88W, h87km±39km, mb3.8/10, mbtmp4.2/11, MS3.5/11, Error ellipse: s-maj=30.5km s-min=19.6km az=141.0*

ISC 14 19:08:58.4±0.5, 18°.1S±0°.1×172°.7W±0°.1, h10km, n83, σ1°25/70, mb4.7/24, MS3.5/9, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
NIUE	**Niue**	**2.78**	**112**			**Pn**	**19 09 40.6**	**-2.3**
NIUE					Sn	Sn	19 10 08.1	-8.4
AFI	**Afiamalu**	**4.21**	**12**	Pn		Pn	19 09 54.0	-8.7
AFI					Sn	Sn	19 10 32.4	-20
MSVF	**Nonsavu**	**8.86**	**271**	P		Pn	19 11 12.0	+5.4
	8.0nm,0.8s,baz=104,slow=17,SNR=7.4							
MSVF					LR	LR	19 13 49.2	
	comp=Z,145nm,21.2s,baz=102,slow=32							
MSVF	**Nonsavu**	**8.86**	**271**			Pn	19 11 12.5	+5.9
RAR	**Rarotonga**	**12.54**	**107**	LR		LR	19 16 14.6	
	comp=Z,209nm,18.8s,baz=272,slow=33							
RAR	**Rarotonga**	**12.54**	**107**	Pn		Pn	19 11 51.9	-5.0
PPT	**Papeete**	**21.98**	**92**	LR		LR	19 21 00.6	
	comp=Z,155nm,18.0s,baz=266,slow=32							
URZ	**Urewera**	**22.03**	**202**	P		**P**	**19 13 56.5**	**+3.5**
	24nm,0.7s,baz=40,slow=2.0,SNR=11							
	24nm,0.7s							
URZ	**Urewera**	**22.03**	**202**	P		**P**	**19 13 51.0**	**-2.0**
BKZ	**Black Stump Fm**	**23.05**	**202**			**P**	**19 14 01.4**	**-2.5**
HIZ	**Hauiti**	**23.11**	**206**			**P**	**19 14 03.3**	**-1.2**
TUWZ	**Tuamarina**	**25.97**	**203**	P		**P**	**19 14 30.6**	**-0.6**
NNZ	**Nelson**	**26.01**	**205**	P		**P**	**19 14 32.1**	**+0.6**
QRZ	**Quartz Range**	**26.03**	**206**	P		**P**	**19 14 32.6**	**+0.9**
THZ	**Tophouse**	**26.66**	**205**	P		**P**	**19 14 38.1**	**+0.6**
THZ					IAmb	IAmb	19 15 06.9	
	comp=Z,23nm,1.1s							
KHZ	**Kahutara**	**26.98**	**203**	P		**P**	**19 14 40.9**	**+0.7**
KHZ					IAmb	IAmb	19 15 01.2	
	comp=Z,29nm,1.2s							
RPZ	**Rata Peaks**	**29.04**	**205**	P		P	19 15 06.1	+7.4
	comp=Z,9.3nm,0.6s,baz=18,slow=23,SNR=1.8							
RPZ	**Rata Peaks**	**29.04**	**205**	P		**P**	**19 14 59.2**	**+0.5**
CTA	**Charters Tower**	**38.82**	**260**	LR		LR	19 32 03.8	
	comp=Z,86nm,18.9s,baz=108,slow=36							
CTAO	**Charters Tower**	**38.82**	**260**	P		**P**	**19 16 23.1**	**-0.7**
CTAO					IAmb	IAmb	19 16 27.0	
	comp=Z,25nm,1.4s							
STKA	**Stephens Creek**	**43.39**	**243**	P		**P**	**19 17 01.4**	**0.0**
	comp=Z,2.5nm,0.8s,baz=66,slow=10,SNR=5.2							
	comp=Z,2.5nm,0.8s							
STKA	**Stephens Creek**	**43.39**	**243**	P		**P**	**19 17 00.7**	**-0.6**
BBOO	**Buckleboo**	**48.15**	**242**	P		**P**	**19 17 38.1**	**-0.9**
BBOO					IAmb	IAmb	19 17 59.6	
	comp=Z,8.6nm,1.1s							
WR0	**Warramunga Arr**	**49.79**	**259**	P		**P**	**19 17 50.4**	**-1.3**
WB0	**Warramunga Arr**	**49.96**	**259**	P		**P**	**19 17 51.8**	**-1.2**
WB0					IAmb	IAmb	19 18 02.9	
	comp=Z,6.7nm,1.1s							
WB2	**Warramunga Arr**	**49.97**	**259**	P		**P**	**19 17 51.7**	**-1.4**
WB2					IAmb	IAmb	19 18 20.1	
	comp=Z,14nm,1.3s							
WRA	**Warramunga Arr**	**49.98**	**259**	P		**P**	**19 17 51.8**	**-1.4**
	comp=Z,2.9nm,0.5s,baz=98,slow=7.0,SNR=50							
	comp=Z,2.9nm,0.5s							
WRA	**Warramunga Arr**	**49.98**	**259**	P		**P**	**19 17 51.9**	**-1.4**
AS31	**Alice Springs**	**50.02**	**254**	P		**P**	**19 17 53.0**	**-0.5**
AS31					IAmb	IAmb	19 17 54.1	
	comp=Z,4.5nm,0.6s							
ASAR	**Alice Springs**	**50.02**	**254**	P		**P**	**19 17 52.6**	**-0.8**
	comp=Z,14nm,0.6s,baz=90,slow=8.6,SNR=305							
ASAR					PcP	**PcP**	**19 19 12.7**	**-0.7**
	comp=Z,0.9nm,0.7s,baz=101,slow=4.2,SNR=1.3							
	comp=Z,14nm,0.6s							
ASAR	**Alice Springs**	**50.02**	**254**	P		**P**	**19 17 52.8**	**-0.7**
GUMO	**Guam**	**52.39**	**304**	LR		LR	19 39 47.8	
	comp=Z,17nm,18.1s,baz=102,slow=35							
FORT	**Forrest**	**54.90**	**245**	P		**P**	**19 18 29.2**	**-0.3**
KNRA	**Kununurra**	**55.91**	**263**	P		**P**	**19 18 36.6**	**-0.4**
RPN	**Rapa Nui**	**58.64**	**111**	LR		LR	19 36 04.8	
	comp=Z,38nm,21.7s,baz=176,slow=28							
MJAR	**Matsushiro Arr**	**71.42**	**320**	LR		LR	19 47 52.3	
	comp=Z,23nm,20.8s,baz=139,slow=33							
QSPA	**South Pole Qui**	**72.00**	**180**	P		**P**	**19 20 25.2**	**+3.0**
PFO	**Pinyon Flats O**	**74.22**	**46**	LR		LR	19 47 52.2	
	comp=Z,71nm,19.5s,baz=188,slow=31							
YBH	**Yreka Blue Hor**	**75.29**	**36**	LR		LR	19 50 55.3	
	comp=Z,72nm,18.1s,baz=281,slow=33							
NVAR	**Mina Array Bea**	**75.83**	**41**	P		**P**	**19 20 45.7**	**+0.5**
	comp=Z,1.3nm,0.8s,baz=223,slow=10,SNR=7.2							
	comp=Z,1.3nm,0.8s							
KSRS	**Korea Array**	**78.55**	**316**	P		**P**	**19 21 01.1**	**+0.9**
	comp=Z,1.9nm,1.0s,baz=112,slow=8.2,SNR=5.3							
	comp=Z,1.9nm,1.0s							
TXAR	**Lajitas Array**	**81.50**	**56**	P		**P**	**19 21 17.9**	**+1.4**
	comp=Z,0.3nm,0.8s,baz=248,slow=7.3,SNR=2.7							
	comp=Z,0.3nm,0.8s							
TRF	**Thorofare Moun**	**83.10**	**10**	P		**P**	**19 21 23.2**	**-0.9**
TRF					IAmb	IAmb	19 21 25.7	
	comp=Z,4.4nm,0.9s							
J20K	**Nowinta River**	**83.22**	**8**	P		**P**	**19 21 24.2**	**-0.2**
MCK	**McKinley**	**83.59**	**10**	P		**P**	**19 21 24.9**	**-1.5**
MCK					IAmb	IAmb	19 21 28.5	
	comp=Z,6.5nm,1.0s							
PDAR	**Pinedale Array**	**83.77**	**41**	P		**P**	**19 21 28.1**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=212,slow=3.2,SNR=4.0							
	comp=Z,0.5nm,0.6s							
PDAR	**Pinedale Array**	**83.77**	**41**	P		**P**	**19 21 27.1**	**-1.1**
WRH	**Wood River Hil**	**84.42**	**10**	P		**P**	**19 21 29.9**	**-0.8**
WRH					IAmb	IAmb	19 21 33.0	
	comp=Z,5.9nm,1.0s							
MLY	**Manley**	**84.51**	**9**	P		**P**	**19 21 31.4**	**+0.2**
HDA	**Harding Lake**	**84.56**	**11**	P		**P**	**19 21 31.6**	**+0.3**
HDA					IAmb	IAmb	19 21 33.9	
	comp=Z,5.5nm,1.1s							
CCB	**Clear Creek Bu**	**84.63**	**10**	P		**P**	**19 21 30.7**	**-1.0**
CCB					IAmb	IAmb	19 21 33.7	
	comp=Z,4.5nm,0.9s							
ILAR	**Eielson Array**	**84.90**	**11**	P		**P**	**19 21 32.6**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=227,slow=6.0,SNR=9.7							
	comp=Z,0.7nm,0.6s							
J26L	**Joseph Creek**	**85.29**	**12**	P		**P**	**19 21 35.9**	**+0.8**
J26L					IAmb	IAmb	19 21 38.3	
	comp=Z,5.6nm,0.9s							
ATAH	**Atahualpa**	**91.84**	**98**	LR		LR	19 55 23.8	
	comp=Z,71nm,20.3s,baz=346,slow=30							
YKA	**Yellowknife Ar**	**92.24**	**23**	P		**P**	**19 22 07.8**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=240,slow=3.9,SNR=4.5							
	comp=Z,0.5nm,0.8s							
CMAR	**Chiang Mai Arr**	**94.12**	**288**	LR		LR	20 01 43.9	
	comp=Z,18nm,20.4s,baz=180,slow=34							
CLL	**Collm**	**146.52**	**354**	*i* PKPbc		**PKPbc**	**19 28 39.7**	**-0.1**
	comp=Z,10.0nm,1.1s							
CLL				*i* (pPKPdf)			19 28 42.2	
	comp=Z,15nm,1.0s							
CLL				*i* PKiKP		**PKiKP**	**19 28 44.4**	**+1.6**
CLL				*i* x		x	19 28 50.9	
CLL				*i* x		x	19 29 06.2	
CHVC	**Chvalec**	**146.81**	**350**	*e*PKP		**PKiKP**	**19 28 42.5**	**-0.9**
OSTC	**Ostas**	**146.81**	**350**	*e*PKP		**PKPab**	**19 28 41.3**	**-0.7**
UPC	**Upice**	**146.89**	**350**	*e*PKP		**PKPab**	**19 28 42.5**	**+0.2**
DPC	**Dobruska-Polom**	**146.99**	**349**	*e*PKP		**PKPab**	**19 28 41.8**	**-0.9**
PVCC	**Panska Ves**	**147.09**	**352**	*e*PKP		**PKPab**	**19 28 43.1**	**+0.1**
KRLC	**Kraliky**	**147.17**	**349**	*e*PKP		**PKPab**	**19 28 43.0**	**-0.4**
KHC	**Kasperske Hory**	**148.59**	**352**	*e*PKP		**PKPbc**	**19 28 44.7**	**-1.0**
BRTR	**Keskin Array B**	**148.64**	**319**	PKPbc		**PKPbc**	**19 28 46.0**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=131,slow=4.0,SNR=3.8							
CKRC	**Cesky Krumlov**	**148.80**	**351**	*e*PKP		**PKiKP**	**19 28 46.7**	**-0.9**
GERES	**GERESS Array B**	**148.86**	**352**	PKPbc		**PKPbc**	**19 28 46.5**	**+0.1**
	comp=Z,1.1nm,0.8s,baz=288,slow=1.3,SNR=7.9							
CONA	**Conrad Observa**	**149.40**	**349**	*e*P		**PKiKP**	**19 28 49.3**	**+0.3**
	comp=Z,6.3nm,1.3s							
RONA	**Rosalia, Austr**	**149.54**	**348**	*e*P		**PKPbc**	**19 28 47.8**	**-0.3**
	comp=Z,5.8nm,1.3s							
BIOA	**Bad Ischl, Aus**	**150.00**	**351**	*e*P		**PKPab**	**19 28 53.9**	**-0.9**
	comp=Z,0.7nm,0.3s							
ARSA	**Arzberg**	**150.12**	**349**	*e*P		**PKPdf**	**19 28 46.8**	**+2.3**
	comp=Z,2.7nm,0.7s							
RETA	**Reutte**	**150.51**	**355**	*e*P		**PKiKP**	**19 28 51.9**	**+0.7**
	comp=Z,2.8nm,0.8s							
MOTA	**Moosalm**	**150.63**	**355**	*e*P		**PKiKP**	**19 28 51.8**	**+0.2**
	comp=Z,4.6nm,0.9s							
KBA	**Koelnbreinsper**	**150.64**	**352**	*e*P		**PKPdf**	**19 28 47.7**	**+2.2**
	comp=Z,5.0nm,1.2s							
WTTA	**Wattenberg**	**150.66**	**354**	*e*P		**PKiKP**	**19 28 51.5**	**-0.2**
	comp=Z,3.7nm,0.7s							
SQTA	**Sankt Quirin**	**150.74**	**355**	*e*P		**PKiKP**	**19 28 53.7**	**+1.9**
	comp=Z,6.4nm,1.2s							
SOKA	**Soboth**	**150.76**	**349**	*e*P		**PKPbc**	**19 28 49.6**	**-1.6**
	comp=Z,6.2nm,1.7s							
DAVA	**Damuels**	**150.78**	**356**	*e*P		**PKPdf**	**19 28 45.2**	**-0.5**
	comp=Z,2.1nm,0.5s							
FETA	**Feichten**	**150.98**	**355**	*e*P		**PKiKP**	**19 28 54.5**	**+2.1**
	comp=Z,6.8nm,1.1s							
OBKA	**Obir**	**151.01**	**350**	*e*P		**PKPbc**	**19 28 51.4**	**-0.3**
	comp=Z,11nm,1.2s							
MYKA	**Tersa Mystica**	**151.03**	**351**	*e*P		**PKPbc**	**19 28 49.0**	**-2.8**
	comp=Z,0.8nm,0.6s							
ABTA	**Abfaltersbach**	**151.07**	**353**	*e*P		**PKiKP**	**19 28 52.3**	**-0.2**
	comp=Z,7.2nm,0.9s							
TORD	**Torodi Ar. Bea**	**172.69**	**131**	PKPab		**PKPab**	**19 30 36.0**	**+1.8**
	comp=Z,0.5nm,0.7s,baz=251,slow=4.4,SNR=2.6							

*KRNET **14** 19:16:54.2±0.1, 41°.60N×80°.91E, mb3.0*
*SOME **14** 19:16:55.6, 41°.68N×80°.30E, h10km*
*NNC **14** 19:16:57.3±1.3, 41°.73N×80°.30E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=8.8km s-min=7.1km az=156.0*

ISC 14 19:16:59.7±2.0, 41°.80N±0°.08×80°.21E±0°.06, h10km, n34, σ1°70/55, 9C-7D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**1.46**	**338**	*e*P		**Pn**	**19 17 24.1**	**-2.2**
	67nm,0.2s							
SHLS					*e*S	**Sn**	**19 17 44.7**	**-0.9**
	78nm,0.2s							
SHLS	**Shalkode**	**1.46**	**338**	P		**Pn**	**19 17 24.1**	**-2.2**
	67nm,0.2s							
SHLS					S	**Sn**	**19 17 44.7**	**-0.9**
	78nm,0.2s							
UZB	**Uzynbulak**	**1.60**	**327**	*e*P		**Pb**	**19 17 28.2**	**-1.3**
	5.3nm,0.2s							
UZB					*e*S	**Sg**	**19 17 51.5**	**+0.2**
	20nm,0.2s							
UZB	**Uzynbulak**	**1.60**	**327**	P		**Pb**	**19 17 28.2**	**-1.3**
	5.3nm,0.2s							
UZB					S	**Sg**	**19 17 51.5**	**+0.2**
	20nm,0.2s							
PDGK	**Podgornoye**	**1.61**	**341**	⇑Pn		**Pn**	**19 17 27.8**	**-0.6**
	3.4nm,0.3s							
PDGK				⇓Sn		**Sg**	**19 17 51.8**	**+0.1**
	43nm,0.6s							
SATY	**Saty**	**1.83**	**314**	*e*P		**Pg**	**19 17 33.9**	**-1.0**
	10nm,0.3s							
SATY					*e*S	**Sg**	**19 18 01.3**	**+2.6**
	50nm,0.3s							
SATY	**Saty**	**1.83**	**314**	Pg		**Pg**	**19 17 33.9**	**-1.0**
	10nm,0.3s							
SATY					Lg	Lg	19 18 01.3	
	50nm,0.3s							
ZHN	**Zhinishke**	**1.89**	**317**	*e*P		**Pg**	**19 17 34.6**	**-1.4**
	29nm,0.3s							
ZHN					*e*S	**Sg**	**19 18 03.1**	**+2.4**
	175nm,0.3s							
ZHN	**Zhinishke**	**1.89**	**317**	Pg		**Pg**	**19 17 34.6**	**-1.4**
	29nm,0.3s							
ZHN					Lg	Lg	19 18 03.1	
	175nm,0.3s							
KPKS	**Kokpek**	**2.01**	**326**	*e*P		**Pb**	**19 17 35.4**	**-1.0**
	6.9nm,0.3s							
KPKS					*e*S	**Sg**	**19 18 04.0**	**-0.3**
	44nm,0.3s							
KPKS	**Kokpek**	**2.01**	**326**	Pg		**Pb**	**19 17 35.4**	**-1.0**
	6.9nm,0.3s							
KPKS					Lg	Lg	19 18 03.9	
	44nm,0.3s							
ANVS	**Anan'yevo**	**2.13**	**298**	⇓*i* P		**Pb**	**19 17 37.7**	**-0.8**
	baz=97							
ANVS					⇓*i* S	**Sg**	**19 18 09.7**	**+1.6**
	baz=97							
KURS	**Kuram**	**2.26**	**319**	*e*P		**Pb**	**19 17 39.9**	**-0.7**
	11nm,0.4s							
KURS					*e*S	**Sg**	**19 18 11.7**	**-0.7**
	12nm,0.4s							
KURS	**Kuram**	**2.26**	**319**	Pg		**Pb**	**19 17 39.9**	**-0.7**
	11nm,0.4s							
KURS					Lg	Lg	19 18 11.7	
	12nm,0.4s							
KDJ	**Kajisay**	**2.29**	**279**	⇑*i* P		**Pb**	**19 17 39.9**	**-1.3**
	baz=82							
KDJ				⇑*i* S		**Sg**	**19 18 12.9**	**-0.3**
	baz=82							
DJR	**Jarkent**	**2.55**	**353**	*e*P		**Pb**	**19 17 44.3**	**-1.3**
	3.4nm,0.2s							
DJR					*e*S	**Sg**	**19 18 19.4**	**-2.1**
	36nm,0.4s							
DJR	**Jarkent**	**2.55**	**353**	Pg		**Pb**	**19 17 44.3**	**-1.3**
	3.4nm,0.2s							
DJR					Lg	Lg	19 18 19.4	
	36nm,0.4s							
KOTS	**Kotyrbulak**	**2.70**	**303**	*e*P		**Pb**	**19 17 47.6**	**-0.6**
	4.7nm,0.2s							
KOTS					*e*S	**Sg**	**19 18 25.0**	**-1.6**
	21nm,0.5s							
KOTS	**Kotyrbulak**	**2.70**	**303**	Pg		**Pb**	**19 17 47.6**	**-0.6**
	4.7nm,0.2s							
KOTS					Lg	Lg	19 18 25.0	
	21nm,0.5s							
TNSS	**Tian-Shan**	**2.71**	**298**	*e*P		**Pb**	**19 17 47.5**	**-1.2**
	6.0nm,0.3s							
TNSS					*e*S	**Sg**	**19 18 25.2**	**-1.7**
	9.0nm,0.4s							
TNSS	**Tian-Shan**	**2.71**	**298**	Pg		**Pb**	**19 17 47.5**	**-1.2**
	6.0nm,0.3s							
TNSS					Lg	Lg	19 18 25.2	
	9.0nm,0.4s							
KTBS	**Karatobe**	**3.22**	**307**	*e*P		**Pb**	**19 17 56.8**	**-0.3**
	4.4nm,0.3s							
KTBS					*e*S	**Sg**	**19 18 40.9**	**-2.4**
	14nm,0.4s							
KTBS	**Karatobe**	**3.22**	**307**	Pg		**Pb**	**19 17 56.8**	**-0.3**
	4.4nm,0.3s							
KTBS					Lg	Lg	19 18 40.9	
	14nm,0.4s							
BOOM	**Boomskoye usch**	**3.25**	**284**	⇑*i* P		**Pn**	**19 17 53.0**	**+2.1**
	baz=85							
BOOM				⇑*i* S		**Sb**	**19 18 36.9**	**-0.4**
	baz=85							
KST	**Kastek**	**3.38**	**293**	*e*P		**Pb**	**19 17 59.4**	**-0.4**
	3.0nm,0.4s							
KST					*e*S	**Sg**	**19 18 45.1**	**-3.2**
	14nm,0.6s							
KST	**Kastek**	**3.38**	**293**	Pg		**Pb**	**19 17 59.4**	**-0.4**
	3.0nm,0.4s							
KST					Lg	Lg	19 18 45.1	
	14nm,0.6s							
KUU	**Kurty**	**3.53**	**308**	*e*P		**Pb**	**19 18 03.2**	**+0.9**
	1.4nm,0.4s							
KUU					*e*S	**Sg**	**19 18 51.7**	**-1.4**
	7.7nm,0.4s							
KUU	**Kurty**	**3.53**	**308**	Pg		**Pb**	**19 18 03.2**	**+0.9**
	1.4nm,0.4s							
KUU					Lg	Lg	19 18 51.7	
	7.7nm,0.4s							
KAPS	**Kapalarasan**	**3.54**	**350**	*e*P		**Pb**	**19 18 01.6**	**-0.8**
	2.4nm,0.2s							
KAPS					*e*S	**Sb**	**19 18 49.3**	**+3.9**
	11nm,0.4s							
KAPS	**Kapalarasan**	**3.54**	**350**	Pg		**Pb**	**19 18 01.6**	**-0.8**
	2.4nm,0.2s							
KAPS					Lg	Lg	19 18 49.3	
	11nm,0.4s							
TKM2	**Tokmak 2**	**3.60**	**290**	⇑Pn		**Pn**	**19 17 58.4**	**+2.7**
	0.7nm,0.2s							
TKM2				⇑Lg		Lg	19 18 53.1	
	9.5nm,0.7s							
MAKZ	**Makanchi**	**5.16**	**14**	⇓Pn		**Pn**	**19 18 17.0**	**0.0**
	0.6nm,0.3s							
MAKZ				⇓Sn		**Sn**	**19 19 19.7**	**+3.1**
	0.4nm,0.3s					

comp=Z,15nm,19.4s,baz=60,slow=37
MKAR Makanchi Array 61.38 330 P **P** **19 42 18.8 +2.5**
0.2nm,0.6s,baz=128,slow=6.3,SNR=2.2
0.2nm,0.6s

IDC 14 19:35:02.7±1.4, 4°58S×150°75E, h170km±24km, mb2.9/3, mbtmp3.5/4, Error ellipse: s-maj=68.6km s-min=15.7km az=129.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.31**	**78**	P	Pn	19 35 30.4	-1.6
KRVT	44nm,0.4s,baz=184,slow=1.2,SNR=6.2			S	Sn	19 35 55.1	+0.6
	28nm,0.4s,baz=328,slow=18,SNR=3.6						
PMG	**Port Moresby**	**5.97**	**216**	P	Pn	19 36 30.0	+0.8
PMG	24nm,0.6s,baz=35,slow=10,SNR=9.1			S	Sn	19 37 37.7	+0.5
	7.7nm,0.4s,baz=180,slow=16,SNR=1.6						
WRA	**Warramunga Arr**	**22.10**	**225**	P	P	19 39 44.7	+0.2
	0.5nm,0.4s,baz=52,slow=9.9,SNR=12						
	0.5nm,0.4s						
ASAR	**Alice Springs**	**24.98**	**219**	P	P	19 40 11.1	+0.2
	0.3nm,0.4s,baz=53,slow=9.2,SNR=16						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**78.82**	**319**	P	P	19 46 46.5	-0.4
	0.1nm,0.4s,baz=117,slow=7.9,SNR=1.6						
	0.1nm,0.4s						

MAN 14 19:37:26.4, 7°76N×121°90E, h34km, mb3.9, ML2.7, MS2.2, Mindanao

MAN 14 19:44:38.0, 10°97N×122°13E, h13km, mb3.8, ML2.6, MS2.1, Panay

*IDC **14** 19:45:20.4±2.5, 7°06S×129°99E, h94km±29km, mb2.9/2, mbtmp3.4/6, Error ellipse: s-maj=41.6km s-min=24.0km az=92.0*
ISC 14 19:45:19.0±0.8, 7°13S±0°06×130°0E±0°1, h100km, n6, σ3°85/10, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.33**	**11**	P	**Pn**	**19 46 50.3**	**+0.4**
SIJI	1.1nm,0.3s,baz=219,slow=23,SNR=12			S	**Sn**	**19 47 55.3**	**-5.6**
	3.7nm,0.2s,baz=241,slow=23,SNR=9.2						
BATI	**Baumata**	**7.01**	**244**	P	**Pn**	**19 47 00.5**	**+1.4**
BATI	7.2nm,0.3s,baz=98,slow=6.7,SNR=4.5			S	**Sn**	**19 48 13.3**	**-4.0**
	15nm,0.9s,baz=78,slow=20,SNR=1.3						
WRA	**Warramunga Arr**	**13.41**	**162**	P	**Pn**	**19 48 26.9**	**+1.5**
WRA	0.4nm,0.5s,baz=345,slow=13,SNR=11			S	**Sn**	**19 50 48.9**	**-4.0**
	0.4nm,0.3s,baz=340,slow=22,SNR=6.9						
ASAR	**Alice Springs**	**16.86**	**168**	P	**P**	**19 49 12.7**	**+3.2**
ASAR	0.3nm,0.5s,baz=343,slow=10.0,SNR=10			S	**Sn**	**19 52 11.9**	**-4.5**
	0.4nm,0.9s,baz=350,slow=25,SNR=2.2						
SONM	**Songino Array**	**58.57**	**342**	P	**P**	**19 55 07.7**	**+2.3**
	0.1nm,0.3s,baz=171,slow=4.1,SNR=2.0						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**68.35**	**327**	P	**P**	**19 56 10.3**	**+0.6**
	0.1nm,0.4s,baz=124,slow=7.6,SNR=2.5						
	0.1nm,0.4s						

*AEIC **14** 20:17:39±1.1, 52°6N±0°2×174°6W±0°1, h190km±7km, Error ellipse: s-maj=30.1km s-min=8.4km az=166.0*
NEIC 14 20:17:38.5±1.2, 52°7N±0°3×174°6W±0°2, h191km±10km, mb3.7/8, ML3.0/23(AEIC), Error ellipse: s-maj=38.9km s-min=6.5km az=161.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOKL	**Mount Kliuchef**	**0.45**	**147**		Pn	20 18 04.8	+0.3
ATKA	**Atka Island**	**0.56**	**153**		Pn	20 18 04.3	-0.5
ATKA					Sn	20 18 25.0	-0.1
GSTR	**Great Sitkin T**	**1.08**	**236**		Pn	20 18 08.2	+0.2
GSMY	**Great Sitkin M**	**1.11**	**234**		Pn	20 18 08.0	-0.2
GSSP	**Great Sitkin S**	**1.14**	**238**		Pn	20 18 08.5	+0.1
GSTD	**Great Sitkin T**	**1.14**	**236**		Pn	20 18 08.2	-0.3
GSTD					Sn	20 18 31.1	-0.6
GSCK	**Great Sitkin C**	**1.18**	**235**		Pn	20 18 08.7	-0.1
ADK	**Adak**	**1.52**	**238**		Pn	20 18 11.5	-0.1
ADK					Sn	20 18 36.7	-0.5
KINC	**Kanaga Island**	**1.73**	**245**		Pn	20 18 13.9	+0.2
KIKV	**Kanaga Island**	**1.78**	**244**		Pn	20 18 14.4	+0.2
KIWB	**Kanaga Island**	**1.78**	**243**	Pn	Pn	20 18 14.3	+0.2
KIMD	**Kanaga Island**	**1.87**	**241**		Pn	20 18 15.2	+0.2
KIMD					Sn	20 18 42.5	-0.8
TAFP	**Tanaga Falls P**	**2.22**	**250**		Pn	20 18 19.1	+0.3
TAFP					Sn	20 18 49.7	-0.4
TASE	**Tanaga Southea**	**2.28**	**249**		Pn	20 18 19.9	+0.4
GANO	**Gareloi North**	**2.73**	**253**		Pn	20 18 25.1	+0.6
AMKA	**Amchitka**	**3.99**	**253**		Pn	20 18 39.4	-0.4
MREP	**Makushin Rep't**	**4.85**	**74**		Pn	20 18 50.6	-0.1
UNV	**Unalaska Valle**	**5.00**	**73**		Pn	20 18 52.2	-0.4
SDPT	**Sand Point**	**8.73**	**67**	Pn	Pn	20 19 40.0	-1.1
SVW2	**Sparrevohn**	**13.33**	**43**	Pn	Pn	20 20 39.1	-1.0
KDAK	**Kodiak Island**	**13.53**	**59**	Pn	Pn	20 20 43.0	+0.4
L19K	**White Mountain**	**14.20**	**40**		P	20 20 53.7	+0.9
CNPM	**China Poot**	**14.66**	**53**		Pn	20 20 57.0	+0.3
PPLA	**Purkeypile**	**15.62**	**40**		Pn	20 21 08.3	-0.2
SEW	**Seward**	**15.70**	**52**	Pn	Pn	20 21 07.1	-2.2
MLY	**Manley**	**17.31**	**35**		Pn	20 21 28.0	-0.6
I23K	**Minto, Yukon-K**	**17.86**	**36**	P	P	20 21 33.3	+0.2
I23K				IAmb	IAmb	20 21 33.9	
	comp=Z,5.6nm,1.4s						
PAX	**Paxson**	**18.43**	**45**	P	P	20 21 40.3	+1.0
PAX				IAmb	IAmb	20 21 44.7	
	comp=Z,2.5nm,1.0s						
H24K	**Noodor Dome**	**18.76**	**35**	P	P	20 21 43.5	+0.7
SCRK	**Sand Creek**	**19.41**	**43**	P	P	20 21 48.8	-1.1
SCRK				IAmb	IAmb	20 22 12.5	
	comp=Z,2.7nm,1.2s						
J26L	**Joseph Creek**	**19.78**	**41**	P	P	20 21 53.3	-0.5
J26L				IAmb	IAmb	20 21 54.9	
	comp=Z,3.6nm,1.2s						

MAN 14 20:17:51.2, 15°48N×120°67E, h145km, mb4.0, ML2.8, MS2.5, Luzon

*IDC **14** 20:24:47.0±1.5, 35°63N×22°47E, h0km, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=65.4km s-min=27.7km az=136.0*
*THE **14** 20:24:50.8, 35°92N×22°14E, h6km±1km, ML3.1/9, Error ellipse: s-maj=1.4km s-min=0.5km az=44.0*
*ATH **14** 20:24:50.2, 35°88N×22°10E, h6km±2km, ML3.0/11, Error ellipse: s-maj=2.5km s-min=0.7km az=49.0*
ISC 14 20:24:49.3±1.7, 35°85N±0°05×22°08E±0°05, h8km±10km, n30, σ0°92/50, mb3.8/5, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTHR	**Kythira**	**0.85**	**61**	P	**Pg**	**20 25 05.4**	**-0.3**
KTHR				S	**Sg**	**20 25 16.7**	**-0.2**
KTHR				AML	AML	20 25 19.3	
	comp=N,17749μm,0.3s						
KTHR				AML	AML	20 25 19.9	
	comp=E,13700μm,0.4s						
KTHR	**Kythira**	**0.85**	**61**	P	**Pg**	**20 25 05.4**	**-0.3**
KTHR				S	**Sg**	**20 25 16.7**	**-0.2**
	comp=E,3μm,0.3s						
KTHA	**Kythira Island**	**0.90**	**63**	P	**Pg**	**20 25 06.4**	**-0.1**
KTHA				S	**Sb**	**20 25 18.1**	**-1.0**
KTHA				AML	AML	20 25 18.5	
	comp=E,5473μm,0.4s						
KTHA				AML	AML	20 25 21.0	
	comp=N,2036μm,0.4s						
KTHA	**Kythira Island**	**0.90**	**63**	P	**Pg**	**20 25 06.4**	**-0.1**
KTHA				S	**Sb**	**20 25 18.1**	**-1.0**
	comp=N,2μm,0.4s						
ANKY	**Antikythira Is**	**0.99**	**89**	P	**Pg**	**20 25 08.7**	**+0.3**
ANKY				S	**Sb**	**20 25 22.0**	**0.0**
ANKY				AML	AML	20 25 25.6	
	comp=N,1485μm,0.4s						
ANKY				AML	AML	20 25 25.6	
	comp=E,1919μm,0.5s						
ANKY	**Antikythira Is**	**0.99**	**89**	P	**Pg**	**20 25 08.7**	**+0.3**
ANKY				S	**Sb**	**20 25 22.0**	**0.0**
	comp=E,852nm,0.4s						
PYL	**PYLOS**	**1.08**	**346**	P	**Pg**	**20 25 09.6**	**-0.3**
PYL				S	**Sb**	**20 25 24.9**	**+0.5**
PYL				AML	AML	20 25 31.9	
	comp=E,1532μm,0.4s						
PYL				AML	AML	20 25 32.1	
	comp=N,1086μm,0.4s						
PYL	**PYLOS**	**1.08**	**346**	P	**Pg**	**20 25 09.7**	**-0.3**
PYL				S	**Sb**	**20 25 24.9**	**+0.5**
	comp=N,658nm,0.4s						
VLI	**Velíai**	**1.11**	**38**	P	**Pg**	**20 25 10.4**	**-0.3**
VLI				S	**Sb**	**20 25 25.3**	**0.0**
VLI				AML	AML	20 25 27.6	
	comp=N,2530μm,0.6s						
VLI				AML	AML	20 25 27.6	
	comp=E,1601μm,0.6s						
VLI	**Velíai**	**1.11**	**38**	P	**Pg**	**20 25 10.4**	**-0.3**
VLI				S	**Sb**	**20 25 25.3**	**0.0**
	comp=E,1μm,0.6s						
MNVA	**Monemvasia**	**1.14**	**43**	P	**Pb**	**20 25 11.6**	**+0.4**
ITM	**Ithomi**	**1.33**	**355**	P	**Pn**	**20 25 14.4**	**+0.2**
ITM				S	**Sb**	**20 25 32.1**	**+0.3**
ITM				AML	AML	20 25 39.0	
	comp=N,1296μm,0.8s						
ITM				AML	AML	20 25 39.7	
	comp=E,953μm,0.6s						
ITM	**Ithomi**	**1.33**	**355**	P	**Pn**	**20 25 14.4**	**+0.2**
ITM				S	**Sb**	**20 25 32.0**	**+0.3**
	comp=E,565nm,0.7s						
KNDR	**Palaiochora Ch**	**1.45**	**115**	P	**Pn**	**20 25 15.9**	**+0.2**
KNDR				S	**Sb**	**20 25 35.0**	**0.0**
KNDR				AML	AML	20 25 42.3	
	comp=E,882μm,0.8s						
KNDR				AML	AML	20 25 45.1	
	comp=N,787μm,0.6s						
KNDR	**Palaiochora Ch**	**1.45**	**115**	P	**Pn**	**20 25 15.9**	**+0.2**
KNDR				S	**Sb**	**20 25 35.0**	**0.0**
	comp=N,142nm,0.6s						
IMMV	**Iera Moni Meta**	**1.60**	**104**	P	**Pn**	**20 25 19.5**	**+1.7**
IMMV				S	**Sb**	**20 25 40.4**	**+1.0**
IMMV				AML	AML	20 25 49.4	
	comp=E,661μm,0.7s						
IMMV				AML	AML	20 25 50.8	
	comp=N,839μm,0.4s						
IMMV	**Iera Moni Meta**	**1.60**	**104**	P	**Pn**	**20 25 19.2**	**+1.4**
IMMV				S	**Sb**	**20 25 40.4**	**+1.0**
	comp=N,375nm,0.6s						
EPID	**Epidavros**	**1.95**	**25**	P	**Pb**	**20 25 24.8**	**-0.2**
GUR	**Goura**	**2.09**	**6**	P	**Pb**	**20 25 27.5**	**-0.1**
GUR				S	**Sb**	**20 25 54.5**	**+0.7**
GUR				AML	AML	20 26 08.0	
	comp=N,656μm,0.5s						
GUR				AML	AML	20 26 10.7	
	comp=E,692μm,0.5s						
GUR	**Goura**	**2.09**	**6**	P	**Pn**	**20 25 25.8**	**+1.1**
GUR				S	**Sn**	**20 25 51.8**	**+0.8**
	comp=E,350nm,0.5s						
KLV	**Kalavryta, Ach**	**2.19**	**1**	P	**Pb**	**20 25 28.7**	**-0.5**
KLV				S	**Sb**	**20 25 56.8**	**+0.3**
KLV				AML	AML	20 26 10.6	
	comp=E,274μm,0.9s						
KLV				AML	AML	20 26 15.0	
	comp=N,186μm,0.7s						
RLS	**Riolos of Patr**	**2.26**	**348**	P	**Pb**	**20 25 30.3**	**0.0**
RLS				S	**Sb**	**20 25 59.3**	**+1.0**
RLS				AML	AML	20 26 17.3	
	comp=N,222μm,0.6s						
RLS				AML	AML	20 26 18.5	
	comp=E,306μm,0.9s						
LAKA	**Lakka**	**2.39**	**358**	P	**Pb**	**20 25 32.2**	**-0.3**
VIL2	**Platees**	**2.54**	**22**	P	**Pb**	**20 25 34.3**	**-0.9**
BRTR	**Keskin Array B**	**9.93**	**64**	Pn	**Pn**	**20 27 15.3**	**+2.9**
	baz=249,slow=12,SNR=3.4						
TORD	**Torodi Ar. Bea**	**29.12**	**224**	P	**P**	**20 30 50.2**	**-0.5**
	comp=E,0.3nm,0.7s,baz=34,slow=9.3,SNR=1.5						
	comp=E,0.3nm,0.7s						
ARCES	**ARCESS Array B**	**33.79**	**2**	P	**P**	**20 31 32.3**	**+1.0**
	comp=E,4.0nm,1.1s,baz=189,slow=12,SNR=1.6						
	comp=E,4.0nm,1.1s						
KURBB	**Kurchatov Arra**	**42.65**	**52**	P	**P**	**20 32 43.9**	**-2.2**
	comp=E,0.4nm,0.5s,baz=276,slow=8.7,SNR=5.1						
	comp=E,0.4nm,0.5s						
MKAR	**Makanchi Array**	**45.50**	**57**	P	**P**	**20 33 07.3**	**-1.7**
	comp=E,1.9nm,0.5s,baz=268,slow=7.8,SNR=32						
	comp=E,1.9nm,0.5s						
ZALV	**Zalesovo Beam**	**46.35**	**47**	P	**P**	**20 33 12.9**	**-2.7**
	comp=E,0.4nm,0.4s,baz=276,slow=8.4,SNR=3.2						
	comp=E,0.4nm,0.4s						

MAN 14 20:26:12.7, 9°45N×122°61E, h16km, mb3.8, ML2.5, MS2.0, Negros

*TUL **14** 20:42:29.3±1.6, 36°62N±0°01×98°43W±0°01, h6km±6km, ML2.7, mb_Lg2.2/7(NEIC), Error ellipse: s-maj=2.0km s-min=1.4km az=148.0*
NEIC 14 20:42:29.2±1.6, 36°62N±0°02×98°42W±0°02, h12km±5km, Error ellipse: s-maj=2.5km s-min=1.5km az=144.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
U32A	**Winter Ranch,**	**0.52**	**243**	Pg	Pg	20 42 39.5	0.0
U32A				Sg	Sg	20 42 45.9	-0.6
T35A	**Sooner Cattle**	**1.56**	**79**	Pn	Pb	20 42 57.5	-0.6
T35A				IAmb_Lg		20 43 19.8	
	comp=Z,15nm,1.3s						
FNO	**Franklin**	**1.60**	**148**	Pn	Pn	20 42 57.7	+0.3
R32A	**Long Quarter,**	**1.81**	**353**	Pn	Pb	20 43 02.6	+0.2
R32A				IAmb_Lg		20 43 27.4	
	comp=Z,8.3nm,0.9s						
WMOK	**Wichita Mounta**	**1.90**	**189**	Pn	Pb	20 43 03.1	-0.8
X34A	**Smith Ranch, M**	**2.07**	**166**		Pb	20 43 05.9	-0.9
TUL1	**Leonard**	**2.24**	**108**	Pn	Pn	20 43 07.0	+0.8
CBKS	**Cedar Bluff**	**2.42**	**335**	Pn	Pn	20 43 09.1	+0.3
AMTX	**Amarillo**	**3.17**	**238**	Pn	Pn	20 43 18.6	-0.4
X37A	**Clayton**	**3.21**	**128**	Pn	Pn	20 43 18.9	-0.6
U38A	**Gravette**	**3.26**	**92**	Pn	Pn	20 43 17.9	-2.3
HHAR	**Hobbs**	**3.63**	**94**	Pn	Pn	20 43 25.9	+0.6
S39A	**Bolivar**	**4.21**	**74**	Pn	Pn	20 43 31.9	-1.4
MIAR	**Mount Ida**	**4.46**	**116**	Pn	Pn	20 43 35.0	-1.7
U40A	**Yellville**	**4.50**	**92**	IAmb_Lg		20 44 53.7	
	comp=Z,7.7nm,1.0s						
T25A	**Trinidad**	**4.83**	**278**	IAmb_Lg		20 45 12.2	
	comp=Z,4.8nm,0.9s						
FCAR	**Ozark Folk Cen**	**5.14**	**96**	Pn	Pn	20 43 43.4	-2.7
WHAR	**Wooly Hollow**	**5.15**	**103**	Pn	Pn	20 43 43.5	-2.7
CCM	**Cathedral Cave**	**5.90**	**74**	Pn	Pn	20 43 57.5	+1.1

*IDC **14** 21:14:42.1±0.6, 55°25S×27°97W, h0km, mb4.5/8, mbtmp4.5/9, ML4.5/1, MS3.4/1, Error ellipse: s-maj=26.8km s-min=17.3km az=54.0*
*NEIC **14** 21:14:43.9±1.3, 55°2S±0°1×28°0W±0°2, h10km±1km, mb4.7/32, Error ellipse: s-maj=17.7km s-min=15.7km az=202.0*
ISC 14 21:14:43.5±0.4, 55°22S±0°08×27°99W±0°08, h10km, n104, σ0°51/102, mb4.6/17, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.01**	**277**		**Pn**	**21 15 58.4**	**-0.2**
ORCD	**Orcadas**	**10.45**	**231**	Pn	**Pn**	**21 17 13.1**	**-0.1**
VNA1	**Neumayer--Stat**	**17.73**	**158**	P	**P**	**21 18 51.5**	**+0.6**
VNA3	**Neumayer Olymp**	**17.92**	**161**	P	**P**	**21 18 54.2**	**+1.2**
SNAA	**Sanae**	**19.68**	**156**	P	**P**	**21 19 12.4**	**0.0**
SNAA	**Sanae**	**19.68**	**156**	P	**P**	**21 19 12.4**	**0.0**
	1.4nm,0.3s,baz=296,slow=9.4,SNR=49						
	6.4nm,0.6s						
SNAA	**Sanae**	**19.68**	**156**	P	**P**	**21 19 12.2**	**-0.2**
TROLL	**Troll, Antarti**	**21.19**	**154**	P	**P**	**21 19 29.9**	**+1.1**
BELA	**Belgrano 2**	**22.87**	**184**	P	**P**	**21 19 45.9**	**-0.7**
DSPA	**Despedida**	**23.15**	**256**	P	**P**	**21 19 50.3**	**+0.7**
MG03	**Isla Dawson**	**24.41**	**256**	P	**P**	**21 20 01.9**	**+0.2**
PLTB	**Pedras Altas**	**29.61**	**312**	P	**P**	**21 20 48.5**	**-0.1**
PLTB				IAmb	IAmb	21 20 50.0	
	comp=Z,6.6nm,0.9s						

QSPA	**South Pole Qui**	**35.03**	**180**	P	**P**	**21 21 36.3**	**+0.3**
CPUP	**Villa Florida**	**35.92**	**311**	P	**P**	**21 21 43.3**	**-0.5**
	comp=Z,10nm,0.8s,baz=146,slow=8.8,SNR=17						
CPUP				LR	LR	21 38 33.4	
	comp=Z,54nm,18.1s,baz=126,slow=40						
	comp=Z,10nm,0.8s						
CPUP	**Villa Florida**	**35.92**	**311**	P	**P**	**21 21 43.8**	**0.0**
CPUP				IAmb	IAmb	21 21 44.5	
	comp=Z,12nm,0.8s						
MT09	**Talagante**	**36.62**	**288**	P	**P**	**21 21 49.3**	**-0.6**
MT09				IAmb	IAmb	21 21 55.6	
	comp=Z,12nm,1.1s						
MT01	**Popeta**	**36.70**	**287**	P	**P**	**21 21 50.2**	**-0.2**
MT01				IAmb	IAmb	21 21 57.9	
	comp=Z,21nm,1.3s						
CO01	**Juntas del Tor**	**39.08**	**293**	P	**P**	**21 22 11.4**	**+0.6**
SUR	**Sutherland**	**40.88**	**77**	P	**P**	**21 22 26.9**	**+1.2**
SUR				IAmb	IAmb	21 22 29.1	
	comp=Z,15nm,1.4s						
MAW	**Mawson**	**41.09**	**144**	P	**P**	**21 22 26.0**	**-0.7**
	comp=Z,1.1nm,0.6s,baz=260,slow=14,SNR=1.4						
	comp=Z,1.1nm,0.6s						
MAW	**Mawson**	**41.09**	**144**	P	**P**	**21 22 26.8**	**+0.1**
BDFB	**Brasilia**	**42.42**	**331**	P	**P**	**21 22 39.1**	**+0.8**
	comp=Z,1.7nm,0.4s,baz=81,slow=7.0,SNR=3.4						
	comp=Z,1.7nm,0.4s						
GO02	**Mina Guanaco**	**42.71**	**297**	P	**P**	**21 22 41.2**	**+0.4**
GO02				IAmb	IAmb	21 22 42.0	
	comp=Z,7.6nm,0.8s						
LVC	**Limon Verde**	**44.49**	**300**	P	**P**	**21 22 55.9**	**+0.6**
LVC				IAmb	IAmb	21 22 59.7	
	comp=Z,7.7nm,1.1s						
PB09	**IPOC Station P**	**45.34**	**301**	P	**P**	**21 23 02.7**	**+0.9**
PB01	**IPOC Station P**	**46.10**	**301**	P	**P**	**21 23 08.2**	**+0.5**
PB01				IAmb	IAmb	21 23 09.5	
	comp=Z,11nm,0.9s						
BOSA	**Boshof**	**46.22**	**77**	P	**P**	**21 23 08.8**	**+0.1**
	comp=Z,9.3nm,0.8s,baz=212,slow=6.9,SNR=21						
	comp=Z,9.3nm,0.8s						
BOSA	**Boshof**	**46.22**	**77**	P	**P**	**21 23 08.4**	**-0.2**
BOSA				IAmb	IAmb	21 23 09.7	
	comp=Z,7.6nm,0.8s						
PB08	**IPOC Station P**	**46.70**	**302**	P	**P**	**21 23 13.4**	**+0.6**
PB08				IAmb	IAmb	21 23 16.7	
	comp=Z,8.8nm,0.8s						
GO01	**Chusmiza**	**47.12**	**302**	P	**P**	**21 23 16.6**	**+0.4**
PB11	**IPOC Station P**	**47.27**	**302**	P	**P**	**21 23 17.0**	**0.0**
VNDA	**Vanda**	**47.38**	**183**	P	**P**	**21 23 17.1**	**+0.1**
	comp=Z,2.2nm,0.7s,baz=191,slow=6.3,SNR=16						
	comp=Z,2.2nm,0.7s						
VNDA	**Vanda**	**47.38**	**183**	P	**P**	**21 23 17.3**	**+0.3**
VNDA				IAmb	IAmb	21 23 31.1	
	comp=Z,3.4nm,0.8s						
PB16	**IPOC Station P**	**48.41**	**303**	P	**P**	**21 23 26.4**	**+0.1**
LBTB	**Lobatse**	**49.22**	**75**	P	**P**	**21 23 31.6**	**-0.3**
LBTB				IAmb	IAmb	21 23 34.7	
	comp=Z,4.6nm,0.8s						
LPAZ	**La Paz**	**49.53**	**306**	P	**P**	**21 23 35.6**	**+0.7**
	comp=Z,5.6nm,0.7s,baz=126,slow=4.7,SNR=28						
	comp=Z,5.6nm,0.7s						
LPAZ	**La Paz**	**49.53**	**306**	P	**P**	**21 23 35.3**	**+0.4**
LPAZ				IAmb	IAmb	21 23 36.6	
	comp=Z,5.9nm,0.7s						
TSUM	**Tsumeb**	**49.69**	**62**	P	**P**	**21 23 35.4**	**-0.2**
TSUM				IAmb	IAmb	21 23 36.5	
	comp=Z,8.5nm,1.1s						
SAML	**Samuel**	**53.90**	**315**	P	**P**	**21 24 06.6**	**-0.3**
BAUV	**El Baul**	**72.14**	**318**	P	**P**	**21 26 07.7**	**-0.3**
TOA0	**Torodi Ar. Sit**	**72.56**	**30**	P	**P**	**21 26 10.7**	**+0.1**
TORD	**Torodi Ar. Bea**	**72.56**	**30**	P	**P**	**21 26 10.9**	**+0.3**
	comp=Z,10.0nm,0.7s,baz=201,slow=6.5,SNR=60						
	comp=Z,10.0nm,0.7s						
TORD	**Torodi Ar. Bea**	**72.56**	**30**	P	**P**	**21 26 10.8**	**+0.3**
TORD				IAmb	IAmb	21 26 11.8	
	comp=Z,8.3nm,0.8s						
ASAR	**Alice Springs**	**99.92**	**163**	P	**Pdif**	**21 28 27.1**	**-1.4**
	comp=Z,0.3nm,0.6s,baz=171,slow=3.9,SNR=5.0						
	comp=Z,0.3nm,0.6s						
ASAR	**Alice Springs**	**99.92**	**163**		**Pdif**	**21 28 27.5**	**-1.0**
PDAR	**Pinedale Array**	**119.51**	**303**	PKP	**PKPdf**	**21 33 31.8**	**-1.0**
	comp=Z,0.3nm,0.5s,baz=130,slow=2.8,SNR=2.4						
NVAR	**Mina Array Bea**	**120.65**	**294**	PKP	**PKiKP**	**21 33 36.2**	**+1.0**
	comp=Z,0.4nm,0.6s,baz=147,slow=4.0,SNR=1.7						
FINES	**FINESS Array B**	**123.86**	**28**	PKP	**PKPdf**	**21 33 39.7**	**-0.4**
	comp=Z,0.7nm,0.8s,baz=164,slow=2.5,SNR=2.1						
CMAR	**Chiang Mai Arr**	**125.78**	**111**	PKP	**PKiKP**	**21 33 45.7**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=224,slow=4.3,SNR=6.4						
CMAR	**Chiang Mai Arr**	**125.78**	**111**	PKPdf	**PKPdf**	**21 33 44.9**	**-0.3**
YKA	**Yellowknife Ar**	**135.25**	**319**	PKP	**PKPdf**	**21 34 01.6**	**-0.1**
	comp=Z,1.5nm,0.7s,baz=123,slow=2.4,SNR=7.4						
YKA	**Yellowknife Ar**	**135.25**	**319**		**PKPdf**	**21 34 01.5**	**-0.2**
MKAR	**Makanchi Array**	**137.05**	**71**	PKP	**PKPdf**	**21 34 04.8**	**-0.9**
	comp=Z,0.5nm,0.8s,baz=279,slow=2.3,SNR=4.9						
MKAR	**Makanchi Array**	**137.05**	**71**		**PKiKP**	**21 34 06.5**	**-0.9**
ZALV	**Zalesovo Beam**	**142.41**	**63**	PKhKP	PKPpre	21 34 10.9	
	comp=Z,0.3nm,0.3s,baz=264,slow=2.9,SNR=2.6						
ZALV				PKP	pPKPdf	21 34 15.9	-0.5
	comp=Z,0.6nm,0.4s,baz=222,slow=2.0,SNR=4.0						
ZALV	**Zalesovo Beam**	**142.41**	**63**		**PKPdf**	**21 34 16.5**	**+1.4**
M30M	**Minto, Yukon**	**144.29**	**311**	P	PKPbc	21 34 16.8	+0.2
	baz=112						
YUK4	**Talbot Arm**	**144.64**	**309**	P	**PKPdf**	**21 34 18.6**	**-0.5**
	baz=112						
INK	**Inuvik**	**144.87**	**321**	P	**PKPdf**	**21 34 18.9**	**-0.1**
	baz=106						
YUK8	**Steele Glacier**	**145.12**	**308**	P	**PKPdf**	**21 34 20.6**	**+0.6**
	baz=112						
EPYK	**Eagle Plains**	**145.51**	**318**	P	**PKPab**	**21 34 20.7**	**0.0**
	baz=107						
YUK3	**Moose Creek**	**145.60**	**309**	P	**PKPbc**	**21 34 21.1**	**0.0**
	baz=110						
I29M	**Ogilvie Camp,**	**145.84**	**316**	P	**PKPab**	**21 34 21.6**	**-0.3**
	baz=107						
L27K	**Beaver Creek,**	**146.63**	**311**	P	**PKPab**	**21 34 24.4**	**-0.6**
	baz=108						
J26L	**Joseph Creek**	**147.77**	**313**	P	**PKPbc**	**21 34 27.5**	**+0.5**
	baz=

MLY	**Manley**	**150.88**	**313**	P	**PKPbc**	**21 34 34.5**	**-0.2**
	baz=98,SNR=5.5						
COLD	**Coldfoot**	**150.91**	**317**	P	**PKiKP**	**21 34 36.0**	**+0.7**
	baz=94						
SONM	**Songino Array**	**151.12**	**86**	PKPbc	**PKiKP**	**21 34 36.3**	**-0.2**
	comp=Z,5.2nm,0.7s,baz=222,slow=3.2,SNR=32						
SONM	**Songino Array**	**151.12**	**86**		**PKPbc**	**21 34 36.1**	**+0.1**
PPLA	**Purkeypile**	**151.17**	**308**	P	**PKPbc**	**21 34 35.7**	**+0.1**
	baz=101,SNR=5.2						
CAST	**Castle Rocks**	**151.22**	**309**	P	**PKPbc**	**21 34 35.4**	**-0.1**
	baz=100,SNR=6.1						
CHUM	**Lake Minchumin**	**151.39**	**310**	P	**PKiKP**	**21 34 36.0**	**-0.3**
	baz=99,SNR=12						
M20K	**Styx River**	**151.40**	**306**	P	**PKPbc**	**21 34 35.9**	**-0.2**
	baz=102,SNR=5.4						
N19K	**Bonanza Creek**	**151.81**	**303**	P	**PKPbc**	**21 34 36.4**	**-0.6**
	baz=103						
H21K	**Melozitna Rive**	**151.82**	**314**	P	**PKiKP**	**21 34 37.0**	**-0.2**
	baz=95,SNR=9.6						
L20K	**Farewell, AK**	**151.86**	**307**	P	**PKPbc**	**21 34 37.2**	**+0.1**
	baz=100						
K20K	**Telida**	**152.09**	**309**	P	**PKiKP**	**21 34 37.8**	**0.0**
	baz=98						
J20K	**Nowinta River**	**152.23**	**311**	P	**PKPbc**	**21 34 37.7**	**-0.1**
	baz=97						
TTA	**Tatalina**	**152.90**	**308**	P	**PKiKP**	**21 34 39.7**	**+0.1**
	baz=98						

IASPEI **14** *21:23:22.0±1.0, 32°.98N±0°.02×115°.58W±0°.02, h17km±8km, Error ellipse: s-maj=3.4km s-min=3.1km az=150.9, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*

ANF **14** *21:23:22.0±0.2, 32°.99N×115°.58W, h15km, ML3.5/22, Error ellipse: s-maj=2.2km s-min=1.4km az=148.0*

PAS **14** *21:23:22.9±2.4, 32°.97N±0°.03×115°.57W±0°.04, h14km±5km, ML3.6/277, ML3.5/48(NEIC), Error ellipse: s-maj=5.2km s-min=4.6km az=143.0*

NEIC **14** *21:23:22.8±3.0, 32°.99N±0°.03×115°.59W±0°.04, h20km±5km, Error ellipse: s-maj=4.4km s-min=3.9km az=124.0*

ECX **14** *21:23:23.5±0.6, 32°.97N×115°.59W, h11km±4km, MD3.3, ML3.5*

ISC 14 21:23:21.8±0.8, 32°.98N±0°.02×115°.57W±0°.02, h17km±6km, n83, σ0 97/108, 19C-10D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WEMD	**Westmorland, C**	**0.06**	**352**	⇓	*iP*		**Pg**	**21 23 25.4**	**+0.4**
COK2	**Cook Ranch 2**	**0.18**	**227**	⇓	*iP*		**Pb**	**21 23 27.3**	**+0.6**
SWSC	**Sam W. Stewart**	**0.19**	**261**		P		**Pb**	**21 23 26.9**	**0.0**
	baz=83,SNR=1000								
SWSC					S		**Sg**	**21 23 30.2**	**+0.4**
	baz=83								
SWSC	**Sam W. Stewart**	**0.19**	**261**	⇑	*iP*		**Pb**	**21 23 27.1**	**+0.2**
SWSC					*eS*		**Sg**	**21 23 30.1**	**+0.4**
DREC	**Desert Rsrch C**	**0.20**	**148**		*eP*		**Pb**	**21 23 27.8**	**+0.8**
SUP	**Superstition M**	**0.21**	**265**				**Pb**	**21 23 27.5**	**+0.2**
SUP							**Sg**	**21 23 30.8**	**+0.6**
WESC	**Westside Schoo**	**0.25**	**212**	⇓	*iP*		**Pb**	**21 23 28.4**	**+0.5**
SGL	**Mount Signal**	**0.35**	**202**	⇓	*iP*		**Pb**	**21 23 29.6**	**+0.1**
SGL					*i* S		**Sb**	**21 23 34.7**	**-0.2**
UABX	**UABC, Campus M**	**0.36**	**162**				**Pb**	**21 23 30.6**	**+0.9**
UABX	**UABC, Campus M**	**0.36**	**162**		*eP*		**Pb**	**21 23 30.6**	**+0.9**
COA	**Coachella**	**0.39**	**106**	⇑	*iP*		**Pb**	**21 23 30.7**	**+0.4**
YUH2	**Yuha Desert**	**0.44**	**222**	⇓	*iP*		**Pb**	**21 23 31.3**	**+0.1**
YUH2					*i* S		**Sg**	**21 23 37.1**	**+0.4**
YUH	**Yuha Desert**	**0.44**	**222**		Pg		**Pb**	**21 23 31.1**	**0.0**
YUH					IAML			21 23 38.1	
	comp=E,3μm,0.3s								
YUH					IAML			21 23 38.6	
	comp=N,3μm,0.4s								
YUCAX	**Ej. Yucatn**	**0.55**	**132**		*eP*		**Pb**	**21 23 33.6**	**+0.7**
EMSC	**East Mesa**	**0.55**	**115**		*eP*		**Pb**	**21 23 33.5**	**+0.6**
IKP	**In-Ko-Pah, Jac**	**0.56**	**235**		P		**Pb**	**21 23 33.5**	**+0.3**
	baz=55,SNR=130								
IKP					S		**Sb**	**21 23 41.0**	**+0.1**
	baz=55								
IKP	**In-Ko-Pah, Jac**	**0.56**	**235**	⇑	*eP*		**Pb**	**21 23 33.5**	**+0.3**
IKP					*eS*		**Sb**	**21 23 40.8**	**-0.1**
RMX	**La Rumorosa**	**0.57**	**229**		Pg		**Pb**	**21 23 33.7**	**+0.3**
RMX					IAML			21 23 42.5	
	comp=N,3μm,0.3s								
RMX	**La Rumorosa**	**0.57**	**229**		*eP*		**Pb**	**21 23 33.7**	**+0.3**
RMX					*eS*		**Sb**	**21 23 41.2**	**-0.1**
RMX				⇓	*e*			21 23 42.3	
RMX					IAML			21 23 42.3	
	comp=N,3μm,0.4s								
RMX					*e*			21 23 42.5	
RMX					IAML			21 23 42.5	
	comp=E,6μm,0.2s								
CPBX	**Cerro Prieto**	**0.60**	**158**				**Pb**	**21 23 34.2**	**+0.4**
CPBX					IAML			21 23 51.9	
	comp=N,5μm,0.4s								
CPBX	**Cerro Prieto**	**0.60**	**158**		*eP*		**Pb**	**21 23 34.1**	**+0.3**
CPBX					*eS*		**Sb**	**21 23 42.3**	**+0.3**
CPBX				⇑	*e*			21 23 46.5	
CPBX					IAML			21 23 46.5	
	comp=E,9μm,0.3s								
CPBX					IAML			21 23 52.0	
	comp=N,6μm,0.3s								
CPBX				⇑	*e*			21 23 52.0	
SLH	**Sleepy Hollow**	**0.61**	**291**		*eP*		**Pb**	**21 23 34.6**	**+0.5**
GLA	**Glamis**	**0.63**	**83**		Pg		**Pb**	**21 23 34.5**	**+0.1**
GLA					IAML			21 23 44.5	
	comp=N,5μm,0.6s								
GLA					IAML			21 23 44.7	
	comp=E,3μm,0.7s								
GLA	**Glamis**	**0.63**	**83**		P		**Pb**	**21 23 34.6**	**+0.1**
	baz=262,SNR=400								
GLA					S		**Sb**	**21 23 43.2**	**+0.3**
	baz=262								
GLA	**Glamis**	**0.63**	**83**	⇑	*iP*		**Pb**	**21 23 34.5**	**+0.1**
SALX	**Saltillo**	**0.67**	**146**	⇑	*eP*		**Pg**	**21 23 32.3**	**-2.6**
BC3	**Big Chuckawall**	**0.69**	**8**		P		**Pn**	**21 23 36.0**	**-0.9**
	baz=188,SNR=458								
BC3					S		**Sb**	**21 23 45.5**	**+0.8**
	baz=188								
MONP2	**Monument Peak**	**0.72**	**264**		P		**Pb**	**21 23 36.4**	**+0.3**
	baz=84,SNR=517								
MONP2					S		**Sb**	**21 23 46.0**	**+0.2**
	baz=84								
MONP2	**Monument Peak**	**0.72**	**264**	⇑	*iP*		**Pb**	**21 23 36.4**	**+0.3**
RITX	**Riito Sonora**	**0.96**	**147**		*eP*		**Pg**	**21 23 39.7**	**-0.6**
TKX	**Tecate**	**0.96**	**245**				**Pb**	**21 23 40.0**	**0.0**
ALAMX	**Rancho Alamar**	**0.97**	**187**	⇓	*iP*		**Pg**	**21 23 40.1**	**-0.6**
ALAMX					*eS*		**Sg**	**21 23 53.2**	**-0.2**
ALAMX					IAML			21 23 55.9	
	comp=N,644nm,0.5s								
ALAMX				⇑	*e*			21 23 55.9	
ALAMX				⇓	*e*			21 23 56.5	
ALAMX					IAML			21 23 56.5	
	comp=E,821nm,0.3s								
BAR	**Barrett**	**0.97**	**253**				**Pb**	**21 23 40.2**	**0.0**
BAR					IAML			21 23 54.0	
	comp=E,2μm,0.2s								
BAR	**Barrett**	**0.97**	**253**	⇑	*eP*		**Pb**	**21 23 40.1**	**-0.1**
BAR					*eS*		**Sg**	**21 23 52.8**	**-0.7**
BAR				⇑	*e*			21 23 53.9	
BAR					IAML			21 23 53.9	
	comp=N,4μm,0.8s								
BAR					IAML			21 23 54.0	
	comp=E,2μm,0.2s								
BAR				⇑	*e*			21 23 54.0	
PFO	**Pinyon Flats O**	**0.98**	**311**				**Pb**	**21 23 40.2**	**-0.2**
PFO					IAML			21 24 01.3	
	comp=E,958nm,0.8s								
PFO	**Pinyon Flats O**	**0.98**	**311**		P		**Pb**	**21 23 40.2**	**-0.2**
	baz=131								
PFO					S		**Sb**	**21 23 53.2**	**+0.1**
	baz=131								
EML	**El Monte Cty P**	**1.07**	**266**	⇑	*eP*		**Pb**	**21 23 41.5**	**-0.5**
BELC	**Belle Mtn. Jos**	**1.08**	**341**		P		**Pb**	**21 23 41.7**	**-0.5**
	baz=161,SNR=39								
BELC					S		**Sb**	**21 23 56.0**	**-0.2**
	baz=161								
CBX	**Cerro Bola**	**1.13**	**235**				**Pb**	**21 23 43.0**	**-0.1**
CBX					IAML			21 23 59.1	
	comp=E,2μm,0.4s								
CBX	**Cerro Bola**	**1.13**	**235**	⇑	*eP*		**Pb**	**21 23 43.0**	**-0.1**
CBX					*eS*		**Sb**	**21 23 57.8**	**+0.3**
CBX					IAML			21 23 59.2	
	comp=E,2μm,0.3s								
CBX				⇑	*e*			21 23 59.2	
CBX				⇑	*e*			21 24 02.5	
CBX					IAML			21 24 02.5	
	comp=N,2μm,0.5s								
BLYC	**Blythe**	**1.17**	**48**		Pn		**Pg**	**21 23 43.9**	**-0.5**
BLYC					IAML			21 24 08.6	
	comp=E,1μm,0.8s								
BLYC					IAML			21 24 09.2	
	comp=N,789nm,0.6s								
SDRC	**San Diego Road**	**1.18**	**259**		*eP*		**Pb**	**21 23 43.2**	**-0.6**
SDRC					IAML			21 23 58.7	
	comp=E,801nm,0.2s								
SDRC				⇓	*e*			21 23 58.7	
SDRC				⇓	*e*			21 23 59.5	
SDRC					IAML			21 23 59.5	
	comp=N,2μm,0.2s								
OLP	**Otay Lakes Par**	**1.20**	**253**	⇑	*eP*		**Pn**	**21 23 43.8**	**-0.1**
IRM	**Iron Mountain**	**1.23**	**17**		P		**Pn**	**21 23 44.1**	**-0.3**
	baz=197,SNR=276								
IRM					S		**Sn**	**21 24 01.2**	**+0.5**
	baz=197								
TJX	**Tijuana**	**1.33**	**250**				**Pb**	**21 23 46.2**	**-0.2**
CCX	**Cícese**	**1.44**	**220**				**Pn**	**21 23 47.5**	**+0.4**
MURC	**Murrieta**	**1.50**	**295**		P		**Pn**	**21 23 48.0**	**+0.1**
	baz=114								
MURC					S		**Sb**	**21 24 07.8**	**-0.2**
	baz=114								
113A	**Mohawk Valley,**	**1.53**	**97**		Pn		**Pn**	**21 23 47.9**	**-0.6**
ECBX	**El Chinero**	**1.56**	**163**		*eP*		**Pn**	**21 23 49.7**	**+0.9**
ECBX					*eS*		**Sb**	**21 24 10.8**	**+1.1**
ECBX					IAML			21 24 16.0	
	comp=E,279nm,1.0s								
ECBX				⇑	*e*			21 24 16.0	
ECBX				⇓	*e*			21 24 21.5	
ECBX					IAML			21 24 21.5	
	comp=N,403nm,1.1s								
ELS	**Elsinore Mount**	**1.69**	**294**		Pn		**Pn**	**21 23 49.2**	**-1.5**
PDMCI	**Parker Dam,Lak**	**1.78**	**42**		Sb		**Sg**	**21 24 18.0**	**-1.2**
	baz=222								
GMRC	**Granite Mounta**	**1.81**	**358**		P		**Pn**	**21 23 52.1**	**-0.2**
	baz=178								
GMRC					Sb		**Sg**	**21 24 19.7**	**-0.3**
	baz=178								
HEC	**Hector,Ludlow**	**1.96**	**341**		Sg		**Sg**	**21 24 26.8**	**+2.0**
	baz=161								
NEE2	**Needles Airpor**	**1.96**	**24**		P		**Pn**	**21 23 54.6**	**+0.4**
	baz=204								
NEE2					Sb		**Sg**	**21 24 24.2**	**-0.6**
	baz=204								
SFX	**San Felipe**	**2.03**	**162**				**Pb**	**21 23 58.3**	**+0.1**
BFSC	**Mount Baldy Ra**	**2.15**	**306**		Pg		**Pg**	**21 24 03.4**	**+0.3**
	baz=126								
RRX	**Edison Barstow**	**2.24**	**328**		Sb		**Sg**	**21 24 32.7**	**-1.0**
	baz=148								
Y14A	**Wickenburg**	**2.35**	**65**				**Pn**	**21 24 01.4**	**+1.6**
Y14A					IAML			21 24 44.0	
	comp=N,430nm,0.8s								
Y14A					IAML			21 24 49.8	
	comp=E,278nm,0.6s								
FMP	**Fort Macarthur**	**2.40**	**289**		Sb		**Sb**	**21 24 35.6**	**+1.8**
	baz=107								
CIS	**Catalina Islan**	**2.42**	**281**		Pb		**Pb**	**21 24 05.2**	**+0.3**
	baz=100								
CIS					Sb		**Sb**	**21 24 36.5**	**+1.9**
	baz=100								
PASC	**Pasadena Art C**	**2.49**	**299**				**Pn**	**21 24 03.4**	**+1.9**
PASC					IAML			21 24 42.2	
	comp=E,118nm,0.4s								
PASC					IAML			21 24 46.3	
	comp=N,132nm,0.7s								
GSC	**Goldstone, Bar**	**2.54**	**337**				**Pb**	**21 24 05.5**	**-1.5**
GSC					IAML			21 25 04.5	
	comp=E,134nm,0.9s								
214A	**Organ Pipe Nat**	**2.54**	**113**		Pn		**Pn**	**21 24 01.6**	**-0.8**
214A					IAML			21 24 52.9	
	comp=N,126nm,0.6s								
214A	**Organ Pipe Nat**	**2.54**	**113**		P		**Pn**	**21 24 01.5**	**-0.9**
	baz=294,SNR=12								
DECC	**Green Verdugo**	**2.63**	**300**		Pg		**Pg**	**21 24 12.4**	**+0.1**
	baz=118								
DECC					Sb		**Sg**	**21 24 43.7**	**-2.8**
	baz=118								
EDW2	**Edwards Air Fo**	**2.77**	**314**		Pg		**Pg**	**21 24 14.6**	**-0.3**
	baz=133								
EDW2					Sb		**Sg**	**21 24 48.1**	**-2.8**
	baz=133								
QSM	**Queen of Sheba**	**3.17**	**341**				**Pn**	**21 24 13.9**	**+2.9**
GWY	**Greenwater Val**	**3.33**	**345**				**Pn**	**21 24 15.3**	**+2.0**
GWY					IAML			21 25 22.7	
	comp=N,64nm,1.0s								
ARVC	**Arvin**	**3.45**	**309**		Pg		**Pg**	**21 24 28.0**	**0.0**
	baz=128								
SHPR	**Sheep Range**	**3.54**	**5**				**Pn**	**21 24 17.0**	**+0.9**
X16A	**Lo Mia Camp, P**	**3.73**	**66**		Pn		**Pn**	**21 24 20.6**	**+1.8**
TUC	**Tucson**	**4.09**	**98**		Pn		**Pn**	**21 24 24.0**	**+0.3**
TUC	**Tucson**	**4.09**	**98**		P		**Pn**	**21 24 23.7**	**0.0**
	baz=281								
U15A	**North Rim**	**4.38**	**37**				**Pn**	**21 24 30.0**	**+2.1**
U15A					IAML			21 25 43.8	
	comp=N,35nm,1.0s								
U15A					IAML			21 26 01.6	
	comp=E,51nm,1.0s								
LCMT	**Little Creek M**	**4.46**	**25**				**Pn**	**21 24 30.3**	**+1.5**
LCMT					IAML			21 25 58.6	
	comp=E,24nm,0.8s								
CCUT	**Cedar City**	**4.91**	**21**		Pn		**Pn**	**21 24 36.8**	**+1.7**
X18A	**Snowflake**	**4.93**	**70**				**Pn**	**21 24 37.1**	**+1.8**
SZCU	**Shurtz Canyon**	**5.04**	**23**				**Pn**	**21 24 38.7**	**+1.9**
W18A	**Petrified Fore**	**5.29**	**65**				**Pn**	**21 24 40.1**	**-0.3**
121A	**Cookes Peak, D**	**6.57**	**92**		Pn		**Pn**	**21 24 58.6**	**+0.7**
121A	**Cookes Peak, D**	**6.57**	**92**		P		**Pn**	**21 24 58.7**	**+0.8**
	baz=276,SNR=12								
ANMO	**Albuquerque**	**7.82**	**73**		P		**Pn**	**21 25 14.7**	**-0.4**
	baz=258								
MNTX	**Cornudas Mount**	**8.71**	**96**		P		**Pn**	**21 25 28.2**	**+1.1**
	baz=281								

MCSM **14** *21:47:20.4±0.4, 50°.N±5°×1°.9E±°, h6km±2km, ML3.2*

IPEC **14** *21:47:20.8±0.1, 50°.25N×18°.98E, h1km, ML2.9/4, Error ellipse: s-maj=2.0km s-min=0.7km az=174.0*

IDC **14** *21:47:21.9±0.7, 50°.23N×18°.77E, h0km, mb3.5/2, mbtmp3.3/10, ML2.9/8, Error ellipse: s-maj=13.7km s-min=6.5km az=144.0*

PRU **14** *21:47:21.2±0.0, 50°.19N×18°.97E, h0km*

ISC 14 21:47:20.2±0.6, 50°.29N±0°.03×18°.98E±0°.02, h0km, n107, σ1 9 45/159, 7C-6D, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.53**	**97**		*eP*		**Pg**	**21 47 30.9**	**+0.6**
OJC					*eS*		**Sg**	**21 47 38.3**	**+1.1**
OJC	**Ojcow**	**0.53**	**97**		Pg		**Pg**	**21 47 30.7**	**+0.4**
OJC					Sg		**Sg**	**21 47 37.9**	**+0.7**
RAC	**Raciborz**	**0.54**	**248**		*ePG*		**Pb**	**21 47 32.6**	**+0.1**
RAC					*eSG*		**Sb**	**21 47 41.1**	**+0.2**
OKC	**Ostrava-Krasne**	**0.70**	**230**		*ePG*		**Pg**	**21 47 33.7**	**+0.2**
OKC					*eSG*		**Sg**	**21 47 40.7**	**-1.8**
	comp=Z,76nm,0.3s								
OKC	**Ostrava-Krasne**	**0.70**	**230**		Pg		**Pg**	**21 47 34.3**	**+0.8**
ANAC	**Anensky vrch**	**1.05**	**259**		*ePg*		**Pb**	**21 47 41.1**	**-0.1**
	baz=80								
MORC	**Moravsky Berou**	**1.06**	**242**	⇑	P		**Pb**	**21 47 40.9**	**-0.4**
MORC				⇑	S		**Sb**	**21 47 55.5**	**-0.3**
MORC	**Moravsky Berou**	**1.06**	**242**		*ePg*		**Pg**	**21 47 40.7**	**+0.4**
	baz=62								
MORC					*eSg*		**Sg**	**21 47 53.5**	**-0.5**
	140nm,0.3s,baz=62								
MORC	**Moravsky Berou**	**1.06**	**242**		*ePG*		**Pg**	**21 47 40.8**	**+0.4**
MORC					*eSG*		**Sg**	**21 47 53.6**	**-0.5**
MORC	**Moravsky Berou**	**1.06**	**242**		Pg		**Pg**	**21 47 40.7**	**+0.4**
LANS	**Liptovska Anna**	**1.18**	**164**		*ePG*		**Pb**	**21 47 43.1**	**-0.3**
LANS					*eSG*		**Sg**	**21 47 58.3**	**+0.3**
LANS					*eLG*		Lg	21 48 01.7	
MAUC	**Maruska**	**1.18**	**219**		*ePG*		**Pg**	**21 47 41.8**	**-1.0**
MAUC					*eSG*		**Sg**	**21 47 56.9**	**-1.2**
	comp=Z,450nm,1.0s								
NIE	**Niedzica**	**1.22**	**135**		*ePg*		**Pg**	**21 47 43.3**	**-0.2**
NIE					*eSg*		**Sb**	**21 48 00.3**	**-0.1**
NIE	**Niedzica**	**1.22**	**135**		Pg		**Pg**	**21 47 43.2**	**-0.3**
KRLC	**Kraliky**	**1.43**	**262**		*ePG*		**Pn**	**21 47 47.2**	**-0.2**
KRLC					*eSG*		**Sn**	**21 48 06.8**	**-0.1**
	comp=Z,121nm,0.7s								
JAVC	**Velka Javorina**	**1.66**	**211**		*ePn*		**Pn**	**21 47 50.3**	**-0.3**
	baz=31								
JAVC	**Velka Javorina**	**1.66**	**211**		*ePN*		**Pn**	**21 47 50.4**	**-0.2**
DPC	**Dobruska-Polom**	**1.70**	**273**		*ePG*		**Pb**	**21 47 52.0**	**-0.4**
DPC					*eSG*		**Sg**	**21 48 15.2**	**+0.3**
	comp=Z,81nm,0.5s								
OSTC	**Ostas**	**1.79**	**280**		*ePG*		**Pn**	**21 47 52.7**	**+0.4**
OSTC					*eSG*		**Sg**	**21 48 18.5**	**+0.9**
	comp=Z,79nm,0.9s								
KSP	**Ksiaz**	**1.80**	**289**		*ePn*		**Pn**	**21 47 53.0**	**+0.5**
KSP					*ePg*		**Pg**	**21 47 55.9**	**+1.2**
KSP					*eSg*		**Sg**	**21 48 20.7**	**+2.7**
VRAC	**Vranov**	**1.83**	**239**	⇑	P		**Pn**	**21 47 53.0**	**+0.1**
VRAC				⇓	S		**Sb**	**21 48 18.2**	**+0.3**
VRAC	**Vranov**	**1.83**	**239**		Pg		**Pn**	**21 47 53.3**	**+0.4**
	9.4nm,0.3s,baz=59,slow=14,SNR=59								
VRAC					Lg		Lg	21 48 17.1	
	15nm,0.3s,baz=151,slow=20,SNR=20								
VRAC	**Vranov**	**1.83**	**239**		*ePn*		**Pn**	**21 47 52.8**	**-0.1**
	baz=58								
VRAC					*eSg*		**Sb**	**21 48 17.8**	**-0.1**
	93nm,0.5s,baz=58								
VRAC	**Vranov**	**1.83**	**239**		*ePN*		**Pn**	**21 47 52.9**	**+0.1**
VRAC					*eSG*		**Sb**	**21 48 17.9**	**0.0**
CHVC	**Chvalec**	**1.89**	**280**		*ePG*		**Pn**	**21 47 54.6**	**+0.8**
CHVC					*eSG*		**Sg**	**21 48 22.5**	**+1.5**
	comp=Z,34nm,0.6s								
UPC	**Upice**	**1.91**	**278**		*ePG*		**Pb**	**21 47 56.1**	**+0.2**
UPC					*eSG*		**Sg**	**21 48 23.0**	**+1.5**
	comp=Z,52nm,0.8s								
SMOL	**Smolenice**	**2.04**	**210**		*ePN*		**Pn**	**21 47 55.4**	**-0.4**
SMOL					*eLG*		Lg	21 48 34.7	
KECS	**Kecovo**	**2.06**	**151**		*ePN*		**Pn**	**21 47 55.4**	**-0.6**
KECS					*ePG*		**Pb**	**21 47 58.8**	**+0.5**
KECS					*eSN*		**Sn**	**21 48 20.4**	**-1.9**
KECS					*eLG*		Lg	21 48 28.9	
KRUC	**Moravsky**	**2.08**	**235**		*ePn*		**Pn**	**21 47 55.9**	**-0.4**
	baz=54								
KRUC					*eSg*		**Sb**	**21 48 25.5**	**+0.5**
	75nm,0.9s,baz=54								
KRUC	**Moravsky**	**2.08**	**235**		*ePN*		**Pn**	**21 47 55.9**	**-0.4**
KRUC					*eSG*		**Sb**	**21 48 25.5**	**+0.5**
CRVS	**Cervenica-Dubn**	**2.13**	**130**		*ePN*		**Pn**	**21 47 57.2**	**+0.2**
CRVS					*ePG*		**Pg**	**21 48 00.4**	**-0.5**
MODS	**Modra-Piesok**	**2.21**	**211**		*ePN*		**Pn**	**21 47 58.1**	**0.0**
MODS					*ePG*		**Pg**	**21 48 04.1**	**+1.6**
PSZ	**Piszkesteto**	**2.44**	**165**	⇑	P		**Pn**	**21 48 01.5**	**+0.1**
PSZ	**Piszkesteto**	**2.44**	**165**		P		**Pn**	**21 48 01.1**	**-0.3**
PSZ	**Piszkesteto**	**2.44**	**165**		PG		**Pg**	**21 48 07.5**	**+0.5**
PSZ	**Piszkesteto**	**2.44**	**165**		Pn		**Pn**	**21 48 01.0**	**-0.4**
TREC	**Trest**	**2.47**	**248**		*ePG*		**Pb**	**21 48 04.2**	**-1.2**
TREC					*eSG*		**Sg**	**21 48 38.1**	**-1.4**
	comp=Z,55nm,0.6s								
SRO	**Srobarova**	**2.51**	**190**		*ePG*		**Pg**	**21 48 09.4**	**+1.1**
SRO					*eLG*		Lg	21 48 51.2	
KOLS	**Kolonicke sedl**	**2.54**	**121**		*ePN*		**Pn**	**21 48 02.4**	**-0.2**
KOLS					*ePG*		**Pg**	**21 48 09.0**	**+0.3**
KOLS					*eSN*		**Sn**	**21 48 33.3**	**-0.8**
PVCC	**Panska Ves**	**2.83**	**277**		*ePN*		**Pn**	**21 48 06.7**	**+0.1**
PVCC					*eSG*		**Sg**	**21 48 51.1**	**0.0**
	comp=Z,44nm,0.3s								
PVCC	**Panska Ves**	**2.83**	**277**		Pn		**Pn**	**21 48 06.9**	**+0.3**
PRU	**Pruhonice**	**2.87**	**266**		*ePN*		**Pn**	**21 48 07.2**	**+0.1**
PRU					*ePG*		**Pb**	**21 48 11.8**	**-0.4**
PRU					*eSG*		**Sg**	**21 48 51.5**	**-0.8**
	comp=Z,17nm,0.4s								
PRU	**Pruhonice**	**2.87**	**266**		Pn		**Pn**	**21 48 06.9**	**-0.2**
CSKK	**Cskako**	**2.96**	**189**		P		**Pn**	**21 48 09.0**	**+0.6**
SOP	**Sopron**	**3.05**	**212**		P		**Pn**	**21 48 10.2**	**+0.5**
CONA	**Conrad Observa**	**3.12**	**222**		*ePn*		**Pn**	**21 48 10.4**	**-0.3**
	0.5nm,0.1s								
CONA					*eSg*		**Sg**	**21 49 04.7**	**+4.2**
	12nm,0.5s								
RONA	**Rosalia, Austr**	**3.13**	**215**		*ePn*		**Pn**	**21 48 11.0**	**+0.2**
	1.2nm,0.3s								
RONA					*eSn*		**Sn**	**21 48 48.6**	**-0.3**
	6.3nm,0.5s								
GKP	**Gorka Klasztor**	**3.18**	**341**		*eP*		**Pn**	**21 48 12.2**	**+0.8**
MPLH	**Magyarpolny**	**3.26**	**198**		P		**Pn**	**21 48 12.6**	**+0.1**
BRG	**Berggiesshubel**	**3.26**	**282**		Pg		**Pg**	**21 48 22.9**	**+0.2**
BRG					Sg		**Sg**	**21 49 06.3**	**+1.3**
BRG					Amp			21 49 10.1	
	comp=Z,18nm,0.6s			

RETA	**Reutte**	**6.10**	**246**	*e*Sg		**Sb**	**21 50 25.7**	**+4.9**
	comp=Z,2.7nm,0.2s								
FETA	**Feichten**	**6.37**	**242**	*e*Sg		**Sg**	**21 50 43.5**	**-1.0**
	comp=Z,2.2nm,0.6s								
AK16	**Malin Array Si**	**6.48**	**83**	Pn		**Pn**	**21 48 55.7**	**-1.0**
AK15	**Malin Array Si**	**6.49**	**82**	Pn		**Pn**	**21 48 56.0**	**-0.8**
SORM	**Soroca**	**6.51**	**106**	Pn		**Pn**	**21 48 56.2**	**-0.9**
AK04	**Malin Array Si**	**6.52**	**82**	Pn		**Pn**	**21 48 56.3**	**-0.9**
AK01	**Malin Array Si**	**6.55**	**83**	Pn		**Pn**	**21 48 57.0**	**-0.6**
AKASG	**Malin Array Be**	**6.55**	**82**	Pn		**Pn**	**21 48 59.3**	**+1.6**
	comp=Z,0.6nm,0.3s,baz=274,slow=15,SNR=1.7								
AKASG				Pg		**Pb**	**21 49 16.7**	**+1.8**
	comp=Z,0.6nm,0.3s,baz=270,slow=13,SNR=6.7								
AKASG				Sn		**Sn**	**21 50 07.0**	**-6.1**
	comp=Z,1.0nm,0.3s,baz=267,slow=21,SNR=4.8								
AKASG				Lg		Lg	21 50 45.0		
	comp=Z,1.1nm,0.3s,baz=270,slow=28,SNR=6.5								
	comp=Z,0.1nm,0.2s								
AKBB	**Malin Array Si**	**6.55**	**82**	Pn		**Pn**	**21 48 56.4**	**-1.3**
DAVA	**Damuels**	**6.72**	**247**	*e*Sg		**Sg**	**21 50 59.6**	**+3.8**
	comp=Z,6.5nm,0.5s								
DEL	**Delary**	**6.91**	**336**	*e*P		**Pn**	**21 49 03.0**	**+0.5**
DAVOX	**Davos/Dischmat**	**6.98**	**243**	Pn		**Pn**	**21 49 03.4**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=17,slow=17,SNR=2.9								
DAVOX				Lg		Lg	21 51 01.1		
	comp=Z,0.3nm,0.3s,baz=319,slow=19,SNR=4.4								
	comp=Z,2.0nm,0.5s								
MTSE	**Matsula**	**8.90**	**17**	*e*P		**Pn**	**21 49 31.0**	**+1.2**
VSU	**Vasula**	**9.35**	**26**	*e*P		**Pn**	**21 49 37.2**	**+1.2**
HFS	**Hagfors**	**10.32**	**345**	Pn		**Pn**	**21 49 46.0**	**-3.3**
	comp=Z,0.1nm,0.3s,baz=160,slow=13,SNR=2.2								
	comp=Z,2.8nm,1.0s								
MEF	**Metsahovi**	**10.42**	**15**	*e*P		**Pn**	**21 49 51.4**	**+0.8**
RAF	**Rauma**	**10.88**	**7**	*e*P		**Pn**	**21 49 55.8**	**-1.1**
NOA	**NORSAR Array B**	**11.62**	**341**	Pn		**Pn**	**21 50 03.4**	**-3.9**
	baz=152,slow=12,SNR=1.9								
	comp=Z,0.1nm,0.5s								
FINES	**FINESS Array B**	**11.86**	**17**	Pn		**Pn**	**21 50 08.2**	**-2.2**
	comp=Z,0.3nm,0.3s,baz=192,slow=12,SNR=20								
FINES				Sn		Sn	21 52 13.2	-10	
	comp=Z,0.2nm,0.3s,baz=213,slow=15,SNR=3.2								
	comp=Z,2.1nm,0.6s								
EKA	**Eskdalemuir Ar**	**14.28**	**299**	Pn		**Pn**	**21 50 43.0**	**-0.5**
	baz=107,slow=19								
	comp=Z,0.1nm,0.5s								
BRTR	**Keskin Array B**	**14.77**	**130**	Pn		**Pn**	**21 50 53.1**	**+2.8**
	comp=Z,0.1nm,0.3s,baz=339,slow=11,SNR=2.3								
	comp=Z,0.4nm,0.5s								
ARCES	**ARCESS Array B**	**19.57**	**7**	P		**P**	**21 51 46.8**	**-2.4**
	comp=Z,0.9nm,0.5s,baz=193,slow=12,SNR=8.6								
TORD	**Torodi Ar. Bea**	**39.64**	**207**	P		**P**	**21 54 54.0**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=17,slow=8.7,SNR=5.1								
	comp=Z,0.3nm,0.5s								
SONM	**Songino Array**	**54.10**	**56**	P		**P**	**21 56 48.8**	**+2.2**
	comp=Z,0.6nm,0.9s,baz=289,slow=9.0,SNR=4.0								
	comp=Z,0.6nm,0.9s								

*AEIC **14** 21:48:38.8±1.7,52.8°N±0.2°×173.6°W±0.1,h242km±8km, Error ellipse: s-maj=31.2km s-min=8.4km az=165.0*

NEIC 14 21:48:38.5±1.5,**53.2°N**±0.3°×**173.7°W**±0.1,**h223**km±15km, **mb3.8**/18,**ML3.1**(AEIC),**Error ellipse: s-maj=39.1km s-min=7.4km az=166.0,Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOSE	**Korovin Southe**	**0.90**	**195**		Pn	21 49 10.1	-0.1
KOKL	**Mount Kliuchef**	**0.95**	**200**		Pn	21 49 10.2	-0.3
KOFP	**Korovin Flat P**	**0.98**	**195**		Pn	21 49 10.6	-0.1
ATKA	**Atka Island**	**1.06**	**198**		Pn	21 49 10.4	-0.7
GSTR	**Great Sitkin T**	**1.84**	**233**	Pn	Pn	21 49 16.9	-0.3
GSTR				Sn	S	21 49 46.8	-0.6
GSMY	**Great Sitkin M**	**1.87**	**232**		Pn	21 49 17.0	-0.6
GSTD	**Great Sitkin T**	**1.90**	**233**		Pn	21 49 17.4	-0.5
GSCK	**Great Sitkin C**	**1.94**	**233**		Pn	21 49 17.6	-0.6
ADK	**Adak**	**2.27**	**235**		Pn	21 49 20.9	-0.6
ADK	**Adak**	**2.27**	**235**	Sn	S	21 49 53.7	-1.2
KINC	**Kanaga Island**	**2.47**	**240**		Pn	21 49 23.5	0.0
KICM	**Kanaga Island**	**2.51**	**240**		Pn	21 49 24.0	0.0
KIKV	**Kanaga Island**	**2.52**	**239**		Pn	21 49 24.0	-0.1
KIWB	**Kanaga Island**	**2.52**	**239**	Pn	Pn	21 49 23.6	-0.5
KIWB				Sn	S	21 50 00.2	+0.5
KIMD	**Kanaga Island**	**2.62**	**238**		Pn	21 49 24.8	-0.4
TAPA	**Tanaga Point A**	**2.89**	**243**		Pn	21 49 27.8	-0.5
TAFP	**Tanaga Falls P**	**2.94**	**245**		Pn	21 49 28.6	-0.2
TASE	**Tanaga Southea**	**3.00**	**244**		Pn	21 49 29.4	-0.1
GANO	**Gareloi North**	**3.43**	**248**		Pn	21 49 34.3	-0.1
MREP	**Makushin Rep't**	**4.18**	**79**		Pn	21 49 43.5	+0.2
UNV	**Unalaska Valle**	**4.32**	**79**	Pn	Pn	21 49 44.6	-0.4
UNV				Sn	S	21 50 35.4	-2.0
AMKA	**Amchitka**	**4.69**	**250**	Pn	Pn	21 49 47.9	-1.7
AMKA				Sn	S	21 50 41.4	-4.2
WECS	**Westdahl Cape**	**5.43**	**72**		Pn	21 49 58.6	-0.2
SDPT	**Sand Point**	**8.02**	**69**	Pn	Pn	21 50 29.6	-2.1
Q19K	**Cape Douglas,**	**12.54**	**55**	Pn	Pn	21 51 29.2	-0.1
KDAK	**Kodiak Island**	**12.78**	**61**	Pn	Pn	21 51 30.4	-1.8
L19K	**White Mountain**	**13.44**	**41**		P	21 51 43.4	+1.0
CNPM	**China Poot**	**13.90**	**54**	Pn	Pn	21 51 45.5	-0.7
SKT	**Skwentna**	**14.69**	**45**	P	P	21 51 56.9	+0.6
SUA	**Susitna One**	**14.81**	**47**	P	P	21 51 58.6	+0.9
PPLA	**Purkeypile**	**14.86**	**41**	P	P	21 51 59.6	+1.3
RC01	**Rabbit Creek A**	**15.12**	**49**	P	P	21 52 01.0	0.0
KTH	**Kantishna Hill**	**15.70**	**40**	P	Pn	21 52 08.3	+0.4
KTH				IAmb	IAmb	21 52 09.7	
	comp=Z,3.2nm,0.9s						
KNK	**Knik Glacier**	**15.81**	**49**	P	P	21 52 08.3	-0.4
KNK				IAmb	IAmb	21 52 24.7	
	comp=Z,7.4nm,1.2s						
TRF	**Thorofare Moun**	**15.89**	**41**	P	Pn	21 52 10.1	-0.2
TRF				IAmb	IAmb	21 52 31.7	
	comp=Z,6.4nm,1.4s						
BPAW	**Bear Paw Mtn.**	**15.96**	**38**	P	Pn	21 52 11.3	+0.3
BPAW				IAmb	IAmb	21 52 15.8	
	comp=Z,2.2nm,0.8s						
SCM	**Sheep Creek Mo**	**16.46**	**48**	P	Pn	21 52 17.1	+0.1
MLY	**Manley**	**16.56**	**35**	P	P	21 52 17.0	+0.1
DHY	**Denali Highway**	**16.90**	**44**	P	P	21 52 20.8	+0.1
DHY				IAmb	IAmb	21 52 21.9	
	comp=Z,2.3nm,0.7s						
WRH	**Wood River Hil**	**17.23**	**39**	P	Pn	21 52 26.0	-0.1
CCB	**Clear Creek Bu**	**17.43**	**39**	P	Pn	21 52 27.5	-0.8
CCB				IAmb	IAmb	21 52 28.5	
	comp=Z,2.2nm,1.0s						
HMT	**Hamilton**	**17.51**	**54**	P	Pn	21 52 28.8	-0.5
HDA	**Harding Lake**	**17.64**	**40**	P	P	21 52 29.4	+0.8
HDA				IAmb	IAmb	21 52 30.3	
	comp=Z,2.7nm,0.5s						
PAX	**Paxson**	**17.67**	**45**	P	P	21 52 29.7	+0.7
PAX				IAmb	IAmb	21 52 32.6	
	comp=Z,5.7nm,1.2s						
IL31		**17.84**	**39**	P	Pn	21 52 31.8	-1.2
H24K	**Noodor Dome**	**18.01**	**35**	P	P	21 52 33.5	+0.9
J25K	**Salcha River,**	**18.35**	**40**	P	P	21 52 36.4	+0.1
J25K				IAmb	IAmb	21 52 38.6	
	comp=Z,1.4nm,0.5s						
SCRK	**Sand Creek**	**18.65**	**43**	P	P	21 52 38.8	-0.8
SCRK				IAmb	IAmb	21 52 40.4	
	comp=Z,3.6nm,0.9s						
J26L	**Joseph Creek**	**19.02**	**42**	P	P	21 52 43.5	0.0

DJA 14 21:52:56.8±0.7,**9°S**-6°×**12°4E**±°,**h84**km±10km,**M3.5**/8, **mb3.9**/3,**MLv3.3**/8,**Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**1.24**	**204**	P	Pn	21 53 20.4	+1.4
MMRI	**Maumere**	**1.97**	**283**	P	Pn	21 53 28.6	+0.2
EDFI	**Ende, Flores**	**2.48**	**277**	P	Pn	21 53 35.4	+0.1
WBSI	**Waikabubak, Su**	**4.76**	**263**	P	Pn	21 54 04.7	-1.5
PLAI	**Plampang**	**6.33**	**272**	P	Pn	21 54 27.8	+0.2
	0.2nm29nm,1.2s						

*IDC **14** 21:54:54.5±2.2,9.66N×127.89E,h0km,mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=179.0km s-min=22.9km az=70.0*

*MAN **14** 21:55:00.6,9.17N×126.70E,h5km,mb4.4,ML3.2,MS3.0*

ISC 14 21:54:56.9±1.2,**9°24N**±0.07°×**127°1E**±0.1,**h10**km,**n8, σ2s18**/12,**mb3.7**/4,**1C-1D,Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**1.25**	**213**	⇑*e*P	**Pn**	**21 55 19.9**	**-0.6**
BIPH				*e*S	**Sb**	**21 55 33.2**	**-3.6**
SCPH	**Surigao**	**1.63**	**289**	*e*P	**Pn**	**21 55 25.0**	**-0.7**
SCPH				*e*S	**Sn**	**21 55 46.4**	**-0.4**
KCP	**Kidapawan**	**2.95**	**221**	⇓*e*P	**Pn**	**21 55 42.8**	**-1.1**
KCP				*i* S	**Sn**	**21 56 23.3**	**+3.9**
TBP	**Tagbilaran**	**3.18**	**278**	*e*P	**Pn**	**21 55 47.5**	**+0.6**
TBP				*i* S	**Sn**	**21 56 27.6**	**+2.6**
WRA	**Warramunga Arr**	**29.88**	**166**	P	**P**	**22 01 05.8**	**+0.9**
	1.7nm,1.2s,baz=350,slow=9.1,SNR=2.3						
	1.7nm,1.2s						
ASAR	**Alice Springs**	**33.38**	**169**	P	**P**	**22 01 37.2**	**+1.5**
	0.3nm,0.3s,baz=348,slow=7.2,SNR=5.8						
	0.3nm,0.3s						
SONM	**Songino Array**	**42.25**	**339**	P	**P**	**22 02 49.1**	**-1.3**
	0.1nm,0.3s,baz=149,slow=7.8,SNR=1.9						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**53.31**	**323**	P	**P**	**22 04 16.4**	**+0.2**
	1.1nm,0.7s,baz=120,slow=7.5,SNR=14						
	1.1nm,0.7s						

*IDC **14** 22:00:19.6±0.7,2.44N×97.84E,h60km±5km,mb3.8/17, mbtmp4.1/18,MS3.3/1,Error ellipse: s-maj=16.2km s-min=8.6km az=18.0*

*NEIC **14** 22:00:20.5±1.8,2.45N±0.05°×97.85E±0.05,h62km±7km, mb4.5/36, Error ellipse: s-maj=8.4km s-min=5.7km az=133.0*

*DJA **14** 22:00:21.5±0.3,2.°N±3.°×9.8E±.°,h57km±6km,M4.5/13, mb4.7/6,mB5.3/1,MLv4.4/13,Mw(mB)4.7/1*

ISC 14 22:00:20.5±0.4,**2.42N**±0.04°×**97.85E**±0.04,**h67**km,**n91,** σ1§**13**/99,**mb4.4**/35,**Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCSI	**Kotacane, Aceh**	**1.09**	**356**	P	**Pn**	**22 00 39.9**	**-0.2**
RPSI	**Rantau Prapat**	**1.11**	**76**		**Pn**	**22 00 40.6**	**+0.4**
RPSI					**Sn**	**22 00 53.5**	**-1.3**
PSI	**Prapat**	**1.14**	**71**	P	**Pn**	**22 00 40.6**	**-0.1**
	281nm,0.3s,baz=294,slow=8.8,SNR=243						
PSI				S	**Sn**	**22 00 53.5**	**-2.2**
	227nm,0.4s,baz=168,slow=18,SNR=4.9						
PSI				LR	LR	22 01 26.1	
	comp=Z,398nm,22.0s,baz=278,slow=60						
GSI	**Gunungsitoli**	**1.15**	**194**	Pn	**Pn**	**22 00 41.4**	**+0.7**
GSI				Sn	**Sn**	**22 00 54.6**	**-1.2**
GSI	**Gunungsitoli**	**1.15**	**194**	P	**Pn**	**22 00 41.5**	**+0.8**
TSI	**Tuntungan**	**1.29**	**34**	P	**Pn**	**22 00 43.5**	**+1.0**
SNSI	**Sinabang, Aceh**	**1.52**	**269**	P	**Pn**	**22 00 46.5**	**+0.9**
MNSI	**Mandailing Nat**	**2.37**	**133**	P	**Pn**	**22 00 58.4**	**+1.3**
LHMI	**Lhok Sumawe**	**2.93**	**342**	Pn	**Pn**	**22 01 05.5**	**+0.8**
LHMI	**Lhok Sumawe**	**2.93**	**342**	P	**Pn**	**22 01 05.7**	**+1.0**
IPM	**Ipoh**	**3.77**	**57**	Pn	**Pn**	**22 01 17.2**	**+1.0**
BKNI	**Bangkinang**	**3.81**	**123**	Pn	**Pn**	**22 01 17.9**	**+1.1**
BKNI	**Bangkinang**	**3.81**	**123**	P	**Pn**	**22 01 17.9**	**+1.1**
PPI	**Padang Panjang**	**3.83**	**138**	P	**Pn**	**22 01 18.2**	**+1.2**
SISI	**Saibi**	**3.93**	**162**	P	**Pn**	**22 01 18.6**	**+0.3**
KULM	**Kulim**	**3.99**	**44**	Pn	**Pn**	**22 01 20.0**	**+0.8**
KRJI	**Kerinci**	**5.76**	**141**	P	**Pn**	**22 01 45.8**	**+2.3**
	1.6nm214nm,0.7s						
MYKOM	**Kota Tinggi**	**6.03**	**96**	Pn	**Pn**	**22 01 47.5**	**+0.4**
SRIT	**Nakonsritamara**	**6.37**	**16**		**Pn**	**22 01 52.1**	**+0.3**
LEM	**Lembang**	**13.40**	**133**	LR	LR	22 08 33.3	
	comp=Z,106nm,18.3s,baz=310,slow=37						
JCJI	**Jatiwangi**	**13.66**	**130**	P	**P**	**22 03 35.5**	**-2.3**
	178nm,0.5s						
CMAR	**Chiang Mai Arr**	**15.97**	**4**	P	**Pn**	**22 04 01.9**	**+0.8**
	2.0nm,0.3s,baz=195,slow=10,SNR=1.6						
CMAR				LR	LR	22 10 26.3	
	comp=Z,22nm,20.4s,baz=215,slow=38						
PALK	**Pallekele**	**17.75**	**286**		**P**	**22 04 23.5**	**+0.3**
PALK				IAmb	IAmb	22 04 36.3	
	comp=Z,45nm,1.4s						
MYLDM	**Lahad Datu**	**20.79**	**82**	P	**P**	**22 04 56.5**	**+0.2**
MYLDM				IAmb	IAmb	22 04 59.4	
	comp=Z,16nm,0.8s						
PLAI	**Plampang**	**22.79**	**120**	P	**P**	**22 05 17.7**	**-0.1**
	comp=Z,32nm,1.2s						
TOLI2	**Tolitoli**	**22.96**	**93**	P	**P**	**22 05 18.5**	**-1.1**
KAPI	**Kappang**	**23.10**	**109**	P	**P**	**22 05 20.8**	**-0.1**
	comp=Z,4.2nm,0.5s,baz=259,slow=16,SNR=1.4						
	comp=Z,4.2nm,0.5s						
BKSI	**Bulukumba**	**23.54**	**109**	P	**P**	**22 05 26.8**	**+1.7**
SHL	**Shillong**	**23.71**	**347**	P	**P**	**22 05 23.9**	**-2.8**
SHL				IAmb	IAmb	22 05 28.3	
	comp=Z,15nm,1.4s						
PZH	**PanZhiHua**	**24.23**	**9**	P	**P**	**22 05 33.8**	**+2.5**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,80nm,4.9s						
H08S2	**Diego Garcia H**	**27.20**	**248**	T	T	22 33 29.7	
	baz=70,slow=75,SNR=41						
H08S3	**Diego Garcia H**	**27.20**	**248**	T	T	22 33 30.2	
	baz=70,slow=75,SNR=61						
H08S1	**Diego Carcia H**	**27.22**	**248**	T	T	22 33 30.9	
	baz=70,slow=75,SNR=27						
MBWA	**Marble Bar**	**31.75**	**139**	P	**P**	**22 06 37.6**	**-0.9**
MBWA				IAmb	IAmb	22 06 55.5	
	comp=Z,20nm,1.4s						
PSA00	**Pilbara Seismi**	**32.12**	**139**	P	**P**	**22 06 41.1**	**-0.6**
PSA00				IAmb	IAmb	22 07 02.7	
	comp=Z,18nm,1.4s						
KNRA	**Kununurra**	**35.47**	**121**	P	**P**	**22 07 09.4**	**-1.5**
MORW	**Morawa**	**35.84**	**152**	P	**P**	**22 07 15.4**	**+1.5**
MORW				IAmb	IAmb	22 07 18.8	
	comp=Z,21nm,1.3s						
NWAO	**Narrogin (SRO)**	**39.65**	**154**	P	**P**	**22 07 47.2**	**+1.2**
H01W3	**Cape Leeuwin H**	**40.14**	**159**	T	T	22 51 32.7	
	baz=332						
H01W2	**Cape Leeuwin H**	**40.15**	**159**	T	T	22 51 31.9	
	baz=332						
H01W1	**Cape Leeuwin H**	**40.15**	**159**	T	T	22 51 32.7	
	baz=332						
HHC	**Hu-ho-hao-te**	**40.21**	**16**	*e*P	**P**	**22 07 53.5**	**+2.9**
HHC				pmax	pmax		
	comp=Z,20nm,0.9s						
HHC				pmax	pmax		
	comp=Z,150nm,5.2s						
HHC				LR	LR		
	comp=N,810nm,19.7s						
HHC				LR	LR		
	comp=E,640nm,19.0s						
HHC				LR	LR		
	comp=Z,1μm,19.0s						
WB0	**Warramunga Arr**	**42.11**	**123**	P	**P**	**22 08 05.7**	**-0.7**
WB0				IAmb	IAmb	22 08 06.8	
	comp=Z,9.2nm,0.8s						
WRA	**Warramunga Arr**	**42.15**	**124**	P	**P**	**22 08 06.5**	**-0.3**
	comp=Z,5.9nm,0.5s,baz=302,slow=9.0,SNR=113						
WRA				PcP	**PcP**	**22 10 00.9**	**+0.7**
	comp=Z,1.1nm,0.6s,baz=310,slow=2.5,SNR=5.8						
	comp=Z,5.9nm,0.5s						
WRA	**Warramunga Arr**	**42.15**	**124**	P	**P**	**22 08 05.9**	**-0.8**
WMQ	**Urumqi**	**42.20**	**349**	*e*P	**P**	**22 08 08.8**	**+2.0**
ASAR	**Alice Springs**	**43.63**	**129**	P	**P**	**22 08 18.2**	**-0.5**
	comp=Z,1.8nm,0.4s,baz=297,slow=7.7,SNR=26						
ASAR				PcP	**PcP**	**22 10 04.6**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=313,slow=4.5,SNR=2.4						
	comp=Z,1.8nm,0.4s						
ASAR	**Alice Springs**	**43.63**	**129**	P	**P**	**22 08 17.7**	**-1.0**
AS31	**Alice Springs**	**43.63**	**129**	P	**P**	**22 08 18.0**	**-0.7**
KDJ	**Kajisay**	**43.66**	**338**	P	**P**	**22 08 19.0**	**+0.2**
FORT	**Forrest**	**43.80**	**141**	P	**P**	**22 08 20.7**	**+0.8**
DRK	**Karamyk**	**43.84**	**331**	P	**P**	**22 08 20.4**	**0.0**
GAR	**Garm**	**44.22**	**329**	P	**P**	**22 08 23.2**	**-0.1**
GAR				IAmb	IAmb	22 08 41.3	
	comp=Z,5.1nm,0.8s						
XLT	**XiLinHaoTe**	**44.36**	**19**	*e*P	**P**	**22 08 25.9**	**+1.7**
XLT				pP	pP	22 08 41.8	+0.7
XLT				sP	sP	22 08 51.3	+2.4
XLT				PcP	**PcP**	**22 10 07.3**	**0.0**
XLT				ScP	**ScP**	**22 13 53.4**	**-0.3**
XLT				PcS	**PcS**	**22 14 02.8**	**+2.2**
XLT				S	**S**	**22 14 57.3**	**+3.5**
XLT				pmax	pmax		
	comp=Z,11nm,0.8s						
XLT				pmax	pmax		
	comp=Z,86nm,4.3s						
XLT				LR	LR		
	comp=N,45nm,21.1s						
XLT				LR	LR		
	comp=E,390nm,21.5s						
XLT				LR	LR		
	comp=Z,730nm,20.2s						

BTK	**Batken**	**44.77**	**330**	P		**P**	**22 08 27.8**	**+0.2**	
BTK				IAmb	IAmb		22 08 29.9		
	comp=Z,5.4nm,1.1s								
SONM	**Songino Array**	**45.84**	**8**	P		**P**	**22 08 35.6**	**-0.3**	
	comp=Z,0.7nm,0.4s,baz=189,slow=9.9,SNR=9.0								
SONM				pP		**pP**	**22 08 51.3**	**-1.6**	
	comp=Z,0.5nm,0.4s,baz=198,slow=7.4,SNR=3.5								
	comp=Z,0.7nm,0.4s								
JHS	**Saijyo**	**46.08**	**41**	P		**P**	**22 08 37.7**	**-0.3**	
JHS				IAmb	IAmb		22 08 45.9		
	comp=Z,18nm,1.5s								
MK31	**Makanchi Array**	**46.22**	**345**	P		**P**	**22 08 38.5**	**-0.5**	
MKAR	**Makanchi Array**	**46.22**	**345**	P		**P**	**22 08 38.2**	**-0.7**	
	comp=Z,1.5nm,0.5s,baz=159,slow=8.7,SNR=34								
	comp=Z,1.5nm,0.5s								
MKAR	**Makanchi Array**	**46.22**	**345**	P		**P**	**22 08 38.4**	**-0.5**	
MAKZ	**Makanchi**	**46.32**	**345**	P		**P**	**22 08 39.2**	**-0.4**	
BBOO	**Buckleboo**	**50.32**	**137**	P		**P**	**22 09 10.5**	**-0.2**	
GEYT	**Alibeck**	**50.70**	**319**	P		**P**	**22 09 13.8**	**+0.3**	
	comp=Z,3.8nm,0.7s,baz=209,slow=13,SNR=7.0								
GEYT				pP		**pP**	**22 09 29.1**	**-1.6**	
	comp=Z,1.8nm,0.5s,baz=182,slow=13,SNR=3.4								
	comp=Z,3.8nm,0.7s								
GEYT	**Alibeck**	**50.70**	**319**	P		**P**	**22 09 13.7**	**+0.2**	
GYA0B	**ALIBECK ARRAY**	**50.70**	**319**	P		**P**	**22 09 13.8**	**+0.3**	
GYA0B				IAmb	IAmb		22 09 15.1		
	comp=Z,5.1nm,0.7s								
KURBB	**Kurchatov Arra**	**50.73**	**344**	P		**P**	**22 09 13.1**	**-0.3**	
	baz=171,slow=6.4								
KURK	**Kurchatov**	**50.79**	**344**	P		**P**	**22 09 13.4**	**-0.5**	
KURK				IAmb	IAmb		22 09 14.7		
	comp=Z,3.2nm,0.9s								
ZAA0	**Zalesovo Array**	**52.46**	**350**	P		**P**	**22 09 26.1**	**-0.2**	
ZAA0				IAmb	IAmb		22 09 26.8		
	comp=Z,4.5nm,1.1s								
ZALV	**Zalesovo Beam**	**52.46**	**350**	P		**P**	**22 09 25.9**	**-0.4**	
	comp=Z,3.5nm,0.3s,baz=163,slow=7.2,SNR=29								
	comp=Z,3.5nm,0.3s								
ZALV	**Zalesovo Beam**	**52.46**	**350**	P		**P**	**22 09 26.0**	**-0.3**	
STKA	**Stephens Creek**	**53.70**	**133**	P		**P**	**22 09 35.9**	**0.0**	
	comp=Z,2.9nm,0.7s,baz=298,slow=9.6,SNR=8.2								
	comp=Z,2.9nm,0.7s								
STKA	**Stephens Creek**	**53.70**	**133**	P		**P**	**22 09 35.8**	**0.0**	
BRVK	**Borovoye**	**55.38**	**340**	P		**P**	**22 09 47.3**	**-0.4**	
BRVK				IAmb	IAmb		22 09 47.8		
	comp=Z,4.5nm,0.7s								
ABKAR	**Akbulak array**	**56.75**	**331**	P		**P**	**22 09 57.2**	**-0.3**	
ABKAR	**Akbulak array**	**56.75**	**331**	P		**P**	**22 09 57.2**	**-0.3**	
ABKAR				IAmb	IAmb		22 09 58.1		
	comp=Z,2.1nm,0.9s								
EIDS	**Eidsvold**	**58.46**	**122**	P		**P**	**22 10 10.3**	**+0.4**	
KBZ	**Khabaz**	**63.58**	**318**	P		**P**	**22 10 42.9**	**-1.4**	
	comp=Z,2.6nm,0.8s,baz=141,slow=6.9,SNR=5.3								
	comp=Z,2.6nm,0.8s								
BRTR	**Keskin Array B**	**68.78**	**312**	P		**P**	**22 11 16.2**	**-1.7**	
	comp=Z,0.7nm,0.6s,baz=125,slow=6.5,SNR=4.9								
BRTR				pP		**pP**	**22 11 34.3**	**-1.5**	
	comp=Z,1.3nm,0.7s,baz=132,slow=7.6,SNR=5.9								
	comp=Z,0.7nm,0.6s								
BRTR	**Keskin Array B**	**68.78**	**312**	P		**P**	**22 11 16.7**	**-1.2**	
SEY	**Seymchan**	**72.39**	**23**	P		**P**	**22 11 39.1**	**-0.1**	
	comp=Z,0.6nm,0.4s,baz=87,slow=23,SNR=2.8								
	comp=Z,0.6nm,0.4s								
AKASG	**Malin Array Be**	**74.69**	**322**	P		**P**	**22 11 52.7**	**-0.2**	
	comp=Z,0.1nm,0.3s,baz=78,slow=4.2,SNR=4.2								
AKASG				pP		**PcP**	**22 12 08.5**	**+1.6**	
	comp=Z,0.8nm,0.5s,baz=82,slow=4.7,SNR=3.3								
	comp=Z,1.0nm,0.3s								
BURAR	**Bucovina Array**	**76.54**	**318**	P		**P**	**22 12 04.6**	**+0.9**	
BUR08	**Bucovina Ar. S**	**76.56**	**318**	P		**P**	**22 12 04.7**	**+0.9**	
BUR08				IAmb	IAmb		22 12 26.0		
	comp=Z,7.0nm,1.4s								
FIA1	**FINESS Array S**	**79.22**	**332**	P		**P**	**22 12 17.6**	**-0.5**	
FIA1				IAmb	IAmb		22 12 38.2		

LPAZ	**La Paz**	**4.12**	**13**	P	**Pn**	**22 09 29.4**	**+4.1**
	comp=E,27nm,0.5s,baz=203,slow=11,SNR=97							
LPAZ				S	**Sn**	**22 10 15.3**	**+2.6**
	comp=E,3.4nm,0.5s,baz=263,slow=12,SNR=1.0							
SIV	**San Ignacio**	**8.78**	**62**	P	**Pn**	**22 10 25.6**	**-2.7**
	comp=E,0.8nm,0.3s,baz=228,slow=12,SNR=8.9							
SIV				S	**Sn**	**22 12 01.6**	**-4.1**
	comp=E,0.6nm,0.6s,baz=172,slow=23,SNR=0.9							
CPUP	**Villa Florida**	**12.37**	**121**	P	**Pn**	**22 11 15.1**	**-2.0**
	comp=E,1.9nm,0.7s,baz=307,slow=10,SNR=3.7							
H03N1	**Juan Fernandez**	**15.70**	**212**	T	T	22 27 24.9		
	baz=33,slow=72,SNR=8.2							
H03N2	**Juan Fernandez**	**15.71**	**212**	T	T	22 27 21.4		
	baz=33,slow=72,SNR=7.7							
H03N3	**Juan Fernandez**	**15.72**	**212**	T	T	22 27 22.7		
	baz=33,slow=72,SNR=10							
PLCA	**Paso Flores**	**20.38**	**183**	P	**P**	**22 12 53.5**	**-0.4**
	comp=E,1.4nm,0.7s,baz=4.1,slow=14,SNR=5.3							
	comp=E,1.4nm,0.7s							
TORD	**Torodi Ar. Bea**	**77.16**	**71**	P	**P**	**22 20 07.3**	**-1.6**
	comp=E,0.5nm,0.5s,baz=253,slow=5.0,SNR=8.3							
	comp=E,0.5nm,0.5s							
H11S2	**WAKE ISLAND Hyd**	**27.52**	**278**	T	T	00 47 06.2		
	baz=101,slow=75,SNR=16							
H11S1	**WAKE ISLAND Hyd**	**27.53**	**278**	T	T	00 47 05.2		
	baz=101,slow=75,SNR=8.9							
H11S3	**WAKE ISLAND Hyd**	**27.54**	**278**	T	T	00 47 08.2		
	baz=101,slow=75,SNR=9.7							
H11N3	**WAKE ISLAND Hyd**	**27.57**	**280**	T	T	00 47 11.4		
	baz=102,slow=74,SNR=6.2							
H11N2	**WAKE ISLAND Hyd**	**27.59**	**280**	T	T	00 47 13.7		
	baz=102,slow=74,SNR=6.9							
H11N1	**WAKE ISLAND Hyd**	**27.59**	**280**	T	T	00 47 14.9		
	baz=102,slow=74,SNR=7.4							

NEIC **14** *22:09:25.4,4.˚63S×137.˚96E,h26km,Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr5.86; Mθθ-7.61; Mϕϕ 1.76; Mrθ-2.86; Mθϕ3.01; Mrϕ1.12; Fault plane solution: M₀8.14000×10¹⁶ NP1:ϕs101.62000°, δ33.62000°,λ83.05000°. NP2:ϕs289.96000°,δ56.66000°, λ94.60000°. Principal axes: T 6.5000, Plg78.0000°, Azm216.0000°; N 2.6240, Plg4.0000°, Azm107.0000°; P -9.1239, Plg12.0000°, Azm17.0000°;*

BJI **14** *22:09:25.9±0.0,4.˚79S×138.˚28E,h49km,mb5.3/75, mB5.2/51,Ms4.7/69,Ms7 4.6/65*

MOS **14** *22:09:27.2±0.9,4.˚52S×137.˚92E,h33km,mb5.5/55, MS4.8/11,Error ellipse: s-maj=8.0km s-min=4.4km az=122.6*

NEIC **14** *22:09:28.1±1.5,4.˚60S±0.˚07×137.˚97E±0.˚06,h27km±3km, mb5.5/141,Ms_20 5.0/162,Mwb5.2/27,Mww5.2,Error ellipse: s-maj=10.0km s-min=9.0km az=206.0*

IDC **14** *22:09:28.7±2.1,4.˚57S×137.˚96E,h37km±17km,mb4.9/30, mbtmp5.2/38,ML4.8/6,MS4.6/43,Error ellipse: s-maj=12.4km s-min=9.3km az=60.0*

DJA **14** *22:09:29.3±0.3,5.˚5S±2.˚x13.˚8E±.˚,h40km±3km,M5.3/97, mb5.5/97,mB5.7/69,MLv5.8/8,Mw(mB)5.3/69, MwMwp4.9/9,Mwp5.2/9*

KLM **14** *22:09:30,5.˚16S×137.˚38E,h0km,mb5.5*

GCMT **14** *22:09:31.1±0.1,4.˚63S±0.˚01×138.˚00E±0.˚01,h39km, MW5.2/117,Moment Tensor Solution. s96,c156; s117,c182; Duration: 1s0 Moment tensor: Scale 10¹⁷ Nm; Mrr0.46±.02; Mθθ-0.75±.01; Mϕϕ0.29±.02; Mrθ-0.33±.01; Mθϕ-0.12±.01; Mϕr0.39±.02; Best double couple: M₀0.84500×10¹⁷ NP1:ϕs51.00000°,δ44.00000°, λ33.00000°. NP2:ϕs296.00000°,δ68.00000°,λ129.00000°. Principal axes: T 0.8510, Plg51.0000°, Azm251.0000°; N -0.0120, Plg35.0000°, Azm99.0000°; P -0.8390, Plg14.0000°, Azm359.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC **14** *22:09:33,4.˚51S×138.˚27E,h36km,Moment Tensor Solution. Duration: 14s0 Moment tensor: Scale 10¹⁶Nm; Mrr4.46; Mθθ-6.36; Mϕϕ 1.90; Mrθ-4.43; Mθϕ-2.50; Mrϕ3.36; Fault plane solution: M₀8.31000×10¹⁶ NP1:ϕs43.00000°, δ40.00000°,λ33.00000°. NP2:ϕs287.00000°,δ70.00000°, λ125.00000°. Principal axes: T 8.5027, Plg52.0000°, Azm238.0000°; N -0.3908, Plg33.0000°, Azm93.0000°; P -8.1119, Plg17.0000°, Azm352.0000°;*

ISC 14 22:09:28.7±0.3,**4.˚66S**±0.˚03×**137.˚92E**±0.˚04,**h40**km±2km, **h40**km:**pP-P,n1098,**σ1s**38**/1098,**mb5.5**/211,**MS4.9**/152, **169C-55D,Fault plane solution: NP1:**ϕs263.10837°, δ45.83062°,λ116.81509°. **NP2:**ϕs47.15008°,δ50.19688°, λ65.09052°. **Principal axes:** T Plg70.9712°, Azm251.1641°; N Plg18.8793°, Azm63.7061°; P Plg2.2950°, Azm154.4913°; **Fault plane solution: NP1:**ϕs116.63646°,δ33.29730°,λ84.47717°. **NP2:** ϕs303.23526°,δ56.87722°,λ93.61703°. **Principal axes:** T Plg77.7987°, Azm225.4205°; N Plg3.0287°, Azm121.2569°; P Plg11.8082°, Azm30.6232°; **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WAMI	**Wamena**	**1.10**	**46**	P	**Pn**	**22 09 47.4**	**-0.3**
WAMI				S	**Sn**	**22 10 01.2**	**-0.5**
SMPI	**Sarmi**	**2.77**	**17**	P	**Pn**	**22 10 11.3**	**+0.7**
GENI	**Genyem**	**3.04**	**48**	P	**Pn**	**22 10 14.7**	**+0.3**
GENI	**Genyem**	**3.04**	**48**	P	**Pn**	**22 10 16.2**	**+1.8**
SRPI	**Serui, Papua**	**3.24**	**329**	P	**Pn**	**22 10 18.5**	**+1.4**
BAKI	**Biak**	**3.89**	**332**	P	**Pn**	**22 10 28.0**	**+1.9**
FAKI	**Fak Fak**	**5.92**	**287**	Pn	**Pn**	**22 10 54.6**	**+0.6**
FAKI	**Fak Fak**	**5.92**	**287**	P	**Pn**	**22 10 55.1**	**+1.1**
	3.1nm7µm6µm453nm,0.9s						
FAKI	**Fak Fak**	**5.92**	**287**	P	**Pn**	**22 10 55.6**	**+1.6**
	454nm,0.9s						
SAUI	**Saumlaki**	**7.36**	**243**	Pn	**Pn**	**22 11 15.7**	**+1.9**
SAUI	**Saumlaki**	**7.36**	**243**	P	**Pn**	**22 11 17.4**	**+3.6**
	25nm1µm,0.9s						
SIJI	**Sorong**	**7.64**	**299**	Pn	**Pn**	**22 11 17.9**	**+0.3**
	37nm,0.3s,baz=104,slow=9.4,SNR=242						
SIJI				Sn	**Sn**	**22 12 41.3**	**-1.7**
	16nm,0.3s,baz=332,slow=23,SNR=7.9						
SIJI				Lg	Lg	22 13 26.8	
	7.2nm,0.3s,baz=239,slow=23,SNR=2.0						
SIJI				LR	LR	22 14 48.9	
	comp=Z,6µm,21.5s,baz=106,slow=42						
	276nm,0.6s						
SWI	**Sorong**	**7.65**	**299**	P	**Pn**	**22 11 18.4**	**+0.7**
SWI				pmax	pmax		
	comp=Z,661nm,0.8s						
SWI	**Sorong**	**7.65**	**299**	P	**Pn**	**22 11 18.6**	**+0.9**
	comp=Z,1.1nmcomp=Z,3µmcomp=Z,6µmcomp=Z,662nm,0.8s						
BNDI	**Bandanaira**	**8.00**	**271**	P	**Pn**	**22 11 24.3**	**+1.8**
	comp=Z,2µm,1.6s						
MSAI	**Masohi**	**9.07**	**278**	P	**Pn**	**22 11 39.7**	**+2.5**
	comp=Z,1µmcomp=Z,41nm,0.8s						
KDU	**Kakadu**	**9.62**	**214**	P	**Pn**	**22 11 45.6**	**+0.8**
	baz=9.6,SNR=177						
KDU	**Kakadu**	**9.62**	**214**	P	**Pn**	**22 11 46.1**	**+1.3**
	comp=Z,1µm,1.4s						
AAI	**Ambon**	**9.75**	**275**	P	**Pn**	**22 11 48.6**	**+2.0**
AAI				pmax	pmax		
	comp=Z,734nm,0.8s						
AAI	**Ambon**	**9.75**	**275**	P	**Pn**	**22 11 48.3**	**+1.7**
	comp=Z,5µmcomp=Z,748nm,0.8s						
MANU	**Manus Island**	**9.78**	**75**		**Pn**	**22 11 46.2**	**-0.8**
PMG	**Port Moresby**	**10.31**	**118**	Pn	**Pn**	**22 11 54.2**	**+0.1**
	comp=Z,38nm,0.4s,baz=32,slow=2.3,SNR=12						
PMG				Lg	Lg	22 15 00.6	
	baz=58,slow=15						
PMG				LR	LR	22 16 27.7	
	comp=Z,2µm,19.5s,baz=311,slow=41						
PMG	**Port Moresby**	**10.31**	**118**	**Pn**	**Pn**	**22 11 53.5**	**-0.7**
PMG	**Port Moresby**	**10.31**	**118**	*ePn*	**Pn**	**22 11 54.5**	**+0.3**
PMG	**Port Moresby**	**10.31**	**118**	P	**Pn**	**22 11 56.1**	**+1.9**
	comp=Z,362nm,1.1s						
MTN	**Manton Dam**	**10.54**	**219**	P	**Pn**	**22 11 58.3**	**+0.9**
	baz=11,SNR=650						
MTN	**Manton Dam**	**10.54**	**219**	Pn	**Pn**	**22 11 58.1**	**+0.7**
MTN	**Manton Dam**	**10.54**	**219**	P	**Pn**	**22 11 58.7**	**+1.3**
	comp=Z,605nm,0.9s						
COEN	**Coen**	**10.59**	**151**	P	**Pn**	**22 11 57.7**	**-0.3**
	baz=11,SNR=106						
COEN	**Coen**	**10.59**	**151**	Pn	**Pn**	**22 11 57.5**	**-0.6**
COEN	**Coen**	**10.59**	**151**	P	**Pn**	**22 11 58.0**	**-0.1**
	comp=Z,228nm,0.7s						
LBMI	**Labuha**	**11.15**	**291**	P	**Pn**	**22 12 06.2**	**+0.5**
	comp=Z,3µmcomp=Z,400nm,1.0s						
TNTI	**Ternate**	**11.85**	**297**	Pn	**Pn**	**22 12 15.5**	**+0.2**
TNTI	**Ternate**	**11.85**	**297**	P	**Pn**	**22 12 16.8**	**+1.5**
	comp=Z,1µmcomp=Z,96nm,1.2s						
SANI	**Sanana**	**12.19**	**282**	P	**Pn**	**22 12 19.4**	**-0.6**
	comp=Z,1µmcomp=Z,3µmcomp=Z,377nm,0.9s						
SANI	**Sanana**	**12.19**	**282**	P	**Pn**	**22 12 20.0**	**0.0**
	comp=Z,379nm,0.8s						
KRVT	**Keravat (AS076**	**14.06**	**89**	Pn	**Pn**	**22 12 45.0**	**-0.6**
	comp=Z,3.4nm,0.3s,baz=138,slow=22,SNR=1.4						
KRVT				LR	LR	22 18 16.8	
	comp=Z,2µm,18.3s,baz=46,slow=38						
	comp=Z,11nm,0.4s						
KNRA	**Kununurra**	**14.18**	**219**	P	**Pn**	**22 12 45.9**	**-1.2**
	baz=14,SNR=86						
KNRA	**Kununurra**	**14.18**	**219**	Pn	**Pn**	**22 12 45.3**	**-1.7**
KNRA	**Kununurra**	**14.18**	**219**	P	**Pn**	**22 12 46.4**	**-0.6**
	comp=Z,597nm,1.0s						
MTSU	**Mount Surprise**	**14.78**	**155**	P	**Pn**	**22 12 53.7**	**-1.5**
	baz=15,SNR=21						
MTSU	**Mount Surprise**	**14.78**	**155**	P	**Pn**	**22 12 54.6**	**-0.6**
	comp=Z,135nm,0.8s						
KMSI	**Cibinong**	**14.87**	**290**	P	**Pn**	**22 12 56.7**	**+0.3**
	comp=Z,5µmcomp=Z,311nm,0.7s						
SGSI	**Sangihe**	**14.90**	**304**	P	**Pn**	**22 12 57.6**	**+0.8**
	comp=Z,137nm,0.6s						
BATI	**Baumata**	**15.17**	**248**	Pn	**Pn**	**22 12 60.0**	**-0.4**
	comp=Z,50nm,0.3s,baz=127,slow=1.8,SNR=48						
BATI				Sn	**Sn**	**22 15 42.1**	**-5.4**
	comp=Z,6.7nm,0.3s,baz=316,slow=8.2,SNR=2.2						
BATI	**Baumata**	**15.17**	**248**	P	**Pn**	**22 12 59.2**	**-1.2**
	comp=Z,2µmcomp=Z,3µmcomp=Z,357nm,0.9s						
BBSI	**Bau Bau**	**15.31**	**266**	P	**P**	**22 13 04.5**	**-2.0**
	comp=Z,427nmcomp=Z,44nm,1.2s						
WB0	**Warramunga Arr**	**15.41**	**193**	Pn	**Pn**	**22 13 00.7**	**-2.8**
LUWI	**Luwuk**	**15.55**	**283**		**Pn**	**22 13 03.9**	**-1.4**
LUWI	**Luwuk**	**15.55**	**283**	P	**Pn**	**22 13 06.9**	**+1.6**
	comp=Z,3µmcomp=Z,260nm,1.3s						
WRAB	**Tennant Creek**	**15.58**	**193**	*ieP*	**Pn**	**22 13 03.3**	**-2.3**
WRAB				pmax	pmax		
	comp=Z,93nm,1.7s						
WRAB	**Tennant Creek**	**15.58**	**193**	P	**Pn**	**22 13 04.4**	**-1.2**
	comp=Z,1µm,0.7s						
WRA	**Warramunga Arr**	**15.59**	**193**	Pn	**Pn**	**22 13 03.9**	**-1.9**
	comp=Z,2.5nm,0.3s,baz=16,slow=13,SNR=69						
WRA				Sn	Sn	22 15 44.2	-13
	comp=Z,12nm,0.3s,baz=13,slow=22,SNR=14						
WRA				Lg	Lg	22 17 29.2	
	baz=350,slow=38						
WRA				LR	LR	22 19 27.0	
	comp=Z,8µm,18.2s,baz=12,slow=38						
WRA	**Warramunga Arr**	**15.59**	**193**	Pn	**Pn**	**22 13 02.5**	**-3.3**
WRA	**Warramunga Arr**	**15.59**	**193**	*i*P	**Pn**	**22 13 02.7**	**-3.1**
WRA				pmax	pmax		
	comp=Z,17nm,0.6s						
QIS	**Mount Isa**	**15.89**	**174**	P	**Pn**	**22 13 06.7**	**-3.0**
	baz=16,SNR=71						
QIS	**Mount Isa**	**15.89**	**174**	P	**Pn**	**22 13 07.7**	**-1.9**
	comp=Z,803nm,1.0s						
MMRI	**Maumere**	**16.07**	**255**	Pn	**Pn**	**22 13 10.7**	**-1.3**
MMRI	**Maumere**	**16.07**	**255**	P	**Pn**	**22 13 12.2**	**+0.2**
	comp=Z,3µmcomp=Z,219nm,1.1s						
EDFI	**Ende, Flores**	**16.62**	**255**	P	**Pn**	**22 13 19.4**	**+0.3**
	comp=Z,764nmcomp=Z,58nm,0.8s						
APSI	**Ampana**	**16.67**	**282**	P	**P**	**22 13 21.5**	**-0.1**
	comp=Z,3µmcomp=Z,306nm,1.0s						
MRSI	**Marisa**	**16.67**	**282**	P	**Pn**	**22 13 21.3**	**+0.6**
	comp=Z,1µmcomp=Z,165nm,1.0s						
DAV	**Davao City (W)**	**16.96**	**313**	Pn	**Pn**	**22 13 23.6**	**+0.4**
	comp=Z,9.4nm,0.3s,baz=225,slow=6.5,SNR=1.0						
DAV				Sn	**Sn**	**22 16 31.1**	**+0.4**
	comp=Z,22nm,0.3s,baz=319,slow=9.8,SNR=1.5						
DAV				LR	LR	22 20 07.7	
	comp=Z,799nm,19.2s,baz=111,slow=38						
	comp=Z,112nm,0.3s						
DAV	**Davao City (W)**	**16.96**	**313**	P	**P**	**22 13 25.1**	**+0.4**
DAV				IAmb	IAmb	22 13 27.6	
	comp=Z,162nm,0.3s						
CTA	**Charters Tower**	**17.35**	**153**	P	**P**	**22 13 29.7**	**+0.7**
	comp=Z,2.6nm,0.3s,baz=329,slow=11,SNR=29						
CTA				S	**Sn**	**22 16 33.8**	**-6.5**
	comp=Z,23nm,0.8s,baz=228,slow=20,SNR=1.9						
CTA				Lg	Lg	22 18 19.5	
	comp=Z,2.0nm,0.3s,baz=65,slow=20,SNR=1.9						
CTA				LR	LR	22 20 45.2	
	comp=Z,3µm,18.8s,baz=334,slow=39						
	comp=Z,74nm,0.8s						
CTAO	**Charters Tower**	**17.35**	**153**	P	**P**	**22 13 29.4**	**+0.4**
CTAO	**Charters Tower**	**17.35**	**153**	P	**P**	**22 13 29.4**	**+0.4**
CTAO				pmax	pmax		
	comp=Z,95nm,0.9s						
BSSI	**Bau Bau, Buton**	**17.42**	**264**	P	**P**	**22 13 33.1**	**+3.3**
	comp=Z,2µmcomp=Z,204nm,1.4s						
BKSI	**Bulukumba**	**17.75**	**267**	P	**P**	**22 13 34.4**	**+1.0**
	comp=Z,2µmcomp=Z,168nm,1.2s						
BNSI	**Bone**	**17.76**	**270**	P	**P**	**22 13 36.5**	**+2.9**
	comp=Z,4µmcomp=Z,410nm,1.1s						
BASI	**Baing, Sumba**	**18.06**	**251**	P	**P**	**22 13 37.9**	**+1.0**
	comp=Z,1µmcomp=Z,3µmcomp=Z,310nm,1.0s						
TOLI2	**Tolitoli**	**18.06**	**288**	P	**Pn**	**22 13 36.3**	**-0.5**
TOLI2	**Tolitoli**	**18.06**	**288**	P	**P**	**22 13 39.4**	**+2.5**
	comp=Z,108nm,1.4s						
KAPI	**Kappang**	**18.11**	**268**	P	**P**	**22 13 39.0**	**+1.6**
	comp=Z,1.2nm,0.3s,baz=31,slow=6.6,SNR=14						
KAPI				LR	LR	22 22 18.0	
	comp=Z,824nm,20.4s,baz=93,slow=42						
	comp=Z,56nm,0.9s						
KAPI	**Kappang**	**18.11**	**268**	P	**P**	**22 13 37.6**	**+0.2**
KAPI	**Kappang**	**18.11**	**268**	*ceP*	**P**	**22 13 39.3**	**+1.8**
KAPI				pmax	pmax		
	comp=Z,152nm,1.3s						
KAPI	**Kappang**	**18.11**	**268**	P	**P**	**22 13 38.8**	**+1.3**
KAPI				P	**P**	**22 13 38.8**	**+1.3**
SPSI	**Sidrap Palu**	**18.12**	**271**	P	**P**	**22 13 39.4**	**+1.9**
	comp=Z,2µmcomp=Z,154nm,1.1s						
TTSI	**Tana Toraja**	**18.13**	**274**	P	**Pn**	**22 13 40.0**	**+2.3**
	comp=Z,4µmcomp=Z,216nm,1.0s						
MPSI	**Mapaga**	**18.68**	**285**	P	**Pn**	**22 13 45.9**	**+1.6**
	comp=Z,2µmcomp=Z,1µmcomp=Z,77nm,1.6s						
WBSI	**Waikabubak, Su**	**19.04**	**254**	P	**P**	**22 13 47.9**	**+0.2**
	comp=Z,2µmcomp=Z,266nm,0.9s						
AS31	**Alice Springs**	**19.29**	**191**	P	**Pn**	**22 13 51.8**	**+0.2**
AS31				IAmb	IAmb	22 14 04.6	
	comp=Z,440nm,1.4s						
ASAR	**Alice Springs**	**19.29**	**191**	P	**Pn**	**22 13 53.1**	**+1.4**
	comp=Z,218nm,0.7s,baz=13,slow=11,SNR=764						
ASAR				S	S	22 17 13.3	-14
	comp=Z,26nm,0.7s,baz=6.1,slow=27,SNR=3.8						
ASAR				Lg	Lg	22 19 31.3	
	baz=250,slow=24						
ASAR				LR	LR	22 21 60.0	
	comp=Z,6µm,20.1s,baz=18,slow=39						
ASAR	**Alice Springs**	**19.29**	**191**	P	**Pn**	**22 13 51.9**	**+0.2**
GUMO	**Guam**	**19.40**	**21**	P	**P**	**22 13 52.0**	**+0.5**
	comp=Z,1.8nm,0.3s,baz=203,slow=19,SNR=1.3						
GUMO				LR	LR	22 21 50.1	
	comp=Z,1µm,18.4s,baz=206,slow=38						
	comp=Z,15nm,0.4s						
GUMO	**Guam**	**19.40**	**21**	P	**P**	**22 13 51.8**	**+0.2**
PLAI	**Plampang**	**20.43**	**257**	P	**P**	**22 14 03.3**	**+0.5**
	comp=Z,121nm,0.9s						
PLAI	**Plampang**	**20.43**	**257**	P	**P**	**22 14 03.1**	**+0.3**
	comp=Z,123nm,0.9s						
SMKI	**Samarinda**	**21.11**	**281**	P	**P**	**22 14 14.7**	**+4.5**
	comp=Z,3µmcomp=Z,10µmcomp=Z,506nm,0.9s						
BKB	**Balikpapan**	**21.27**	**278**	P	**P**	**22 14 14.1**	**+2.2**
BKB	**Balikpapan**	**21.27**	**278**	P	**P**	**22 14 16.3**	**+4.4**
	comp=Z,6µmcomp=Z,398nm,0.9s						
MYLDM	**Lahad Datu**	**21.72**	**297**	P	**P**	**22 14 17.9**	**+1.2**
WRKA	**Warakurna**	**22.27**	**204**	P	**P**	**22 14 23.3**	**+0.7**
	baz=22,SNR=318						
WRKA	**Warakurna**	**22.27**	**204**	P	**P**	**22 14 23.8**	**+1.2**
	comp=Z,765nm,0.9s						
HNR	**Honiara**	**22.36**	**103**	P	**P**	**22 14 23.1**	**-0.5**
	comp=Z,179nm,0.8s,baz=150,slow=4.9,SNR=8.1						
HNR				LR	LR	22 23 37.3	
	comp=Z,867nm,21.3s,baz=300,slow=38						
	comp=Z,179nm,0.8s						
HNR	**Honiara**	**22.36**	**103**	P	**P**	**22 14 23.7**	**+0.1**
HNR	**Honiara**	**22.36**	**103**	P	**P**	**22 14 23.7**	**+0.1**
HNR				pmax	pmax		
	comp=Z,474nm,0.9s						
QLP	**Quilpie**	**22.62**	**165**	P	**P**	**22 14 27.2**	**+0.9**
	baz=23,SNR=15						
QLP	**Quilpie**	**22.62**	**165**	P	**P**	**22 14 27.9**	**+1.6**
	comp=Z,711nm,1.1s						
SRBI	**Singaraja**	**22.82**	**260**	P	**P**	**22 14 28.2**	**-0.3**
	comp=Z,3µmcomp=Z,129nm,1.1s						
IGBI	**Denpasar**	**22.99**	**258**	P	**P**	**22 14 32.9**	**+2.7**
	comp=Z,140nm,1.0s						
BBKI	**Banjar Baru**	**23.05**	**272**	P	**P**	**22 14 32.9**	**+2.0**
	comp=Z,314nm,1.4s						
OOD	**Oodnadatta**	**23.11**	**185**	P	**P**	**22 14 32.1**	**+0.8**
	comp=Z,1µm,0.8s						
INKA	**Innaminka**	**23.11**	**174**	P	**P**	**22 14 32.3**	**+1.0**
	comp=Z,373nm,0.9s						
MTKI	**Muara Teweh, K**	**23.29**	**278**	P	**P**	**22 14 34.3**	**+1.0**
	comp=Z,2µmcomp=Z,152nm,1.0s						
PATS	**Pohnpei**	**23.34**	**61**	P	**P**	**22 14 32.9**	**-0.8**
PATS				IAmb	IAmb	22 14 57.4	
	comp=Z,142nm,1.0s						
SPMM	**Sapulut**	**23.37**	**293**	P	**P**	**22 14 37.0**	**+2.9**
ABJI	**Asem Bagus**	**23.75**	**261**	P	**P**	**22 14 39.2**	**+1.5**
	comp=Z,4µmcomp=Z,225nm,1.2s						
KMMI	**Kalianget**	**23.95**	**263**	P	**P**	**22 14 41.8**	**+2.3**
	comp=Z,3µmcomp=Z,8µmcomp=Z,507nm,1.4s						
RMQ	**Roma**	**24.05**	**156**	P	**P**	**22 14 42.6**	**+2.3**
	baz=24,SNR=7.1						
MBWA	**Marble Bar**	**24.10**	**226**	P	**P**	**22 14 41.9**	**+1.0**
MBWA	**Marble Bar**	**24.10**	**226**	P	**P**	**22 14 42.6**	**+1.7**
MBWA	**Marble Bar**	**24.10**	**226**	P	**P**	**22 14 42.6**	**+1.7**
	comp=Z,165nm,1.1s						
EIDS	**Eidsvold**	**24.16**	**150**	P	**P**	**22 14 45.4**	**+4.1**
	baz=24,SNR=4.5						
EIDS	**Eidsvold**	**24.16**	**150**	P	**P**	**22 14 41.0**	**-0.3**
EIDS	**Eidsvold**	**24.16**	**150**	P	**P**	**22 14 42.5**	**+1.2**
	comp=Z,79nm,1.0s						
PSA00	**Pilbara Seismi**	**24.29**	**225**	P	**P**	**22 14 43.8**	**+1.1**
PSA00	**Pilbara Seismi**	**24.29**	**225**	P	**P**	**22 14 43.1**	**+0.5**
PSA00				IAmb	IAmb	22 14 45.4	
	comp=Z,75nm,0.9s						
PSA00	**Pilbara Seismi**	**24.29**	**225**	P	**P**	**22 14 44.2**	**+1.6**
	comp=Z,286nm,0.9s						
BLJI	**Banyuglugur**	**24.38**	**262**	P	**P**	**22 14 43.0**	**-0.4**
	comp=Z,1µmcomp=Z,121nm,1.1s						
GMJI	**Gumukmas**	**24.58**	**260**	P	**P**	**22 14 45.8**	**+0.5**
	comp=Z,78nm,1.1s						
TGY	**Tagaytay City**	**25.13**	**318**	P	**P**	**22 14 50.3**	**0.0**
	comp=Z,126nm,0.3s,baz=293,slow=5.4,SNR=8.9						
GRJI	**Gresik**	**25.41**	**264**	P	**P**	**22 14 55.4**	**+2.6**
	comp=Z,1µmcomp=Z,137nm,0.8s						
LCRK	**Leigh Creek**	**25.65**	**179**	P	**P**	**22 14 56.0**	**+1.2**
	comp=Z,267nm,0.8s						
MULG	**Mulgathing**	**25.75**	**188**	P	**P**	**22 14 56.9**	**+1.2**
	comp=Z,281nm,1.0s						
PWJI	**Pagerwojo**	**26.17**	**261**	P	**P**	**22 14 59.7**	**0.0**
	comp=Z,76nm,1.1s						
PBKI	**Pangkalan Bun**	**26.27**	**273**	P	**P**	**22 15 02.6**	**+1.9**
	comp=Z,9µmcomp=Z,1µm,1.1s						
PCJI	**Pacitan**	**26.80**	**261**	P	**P**	**22 15 07.0**	**+1.6**
	comp=Z,88nm,1.3s						
STKI	**Sintang**	**26.83**	**279**	P	**P**	**22 15 07.5**	**+1.8**
	comp=Z,6µmcomp=Z,76nm,1.2s						
WOJI	**Wonogiri, Jawa**	**27.02**	**262**	P	**P**	**22 15 07.2**	**-0.2**
	comp=Z,57nm,1.3s						
STKA	**Stephens Creek**	**27.29**	**173**	P	**P**	**22 15 09.2**	**-0.5**
	comp=Z,4.2nm,0.7s,baz=347,slow=9.6,SNR=8.9						
STKA				S	**S**	**22 19 50.9**	**+4.4**
	comp=Z,17nm,0.9s,baz=327,slow=21,SNR=1.4						
STKA				Lg	Lg	22 23 48.6	
	comp=Z,0.3nm,0.3s,baz=57,slow=23,SNR=1.4						
	comp=Z,4.2nm,0.7s						
STKA	**Stephens Creek**	**27.29**	**173**	P	**P**	**22 15 09.5**	**-0.2**
	baz=27,SNR=5.3						
STKA	**Stephens Creek**	**27.29**	**173**	P	**P**	**22 15 09.1**	**-0.5**
STKA	**Stephens Creek**	**27.29**	**173**	*ieP*	**P**	**22 15 08.9**	**-0.8**
STKA	**Stephens Creek**	**27.29**	**173**	P	**P**	**22 15 09.7**	**0.0**
	comp=Z,25nm,1.0s						
SMRI	**Semarang**	**27.44**	**264**	P	**P**	**22 15 11.3**	**+0.1**
SMRI				IAmb	IAmb	22 15 15.4	
	comp=Z,117nm,1.0s						
SMRI	**Semarang**	**27.44**	**264**	P	**P**	**22 15 12.2**	**+1.0**
	comp=Z,111nm,1.4s						
FORT	**Forrest**	**27.59**	**199**	P	**P**	**22 15 13.3**	**+1.0**
	baz=28,SNR=7.6						
FORT	**Forrest**	**27.59**	**199**	P	**P**	**22 15 12.8**	**+0.5**
FORT	**Forrest**	**27.59**	**199**	P	**P**	**22 15 13.6**	**+1.3**
	comp=Z,384nm,1.1s						
CMSA	**Cobar Meteorol**	**27.72**	**166**	P	**P**	**22 15 13.3**	**-0.1**
	baz=28,SNR=12						
BBOO	**Buckleboo**	**28.06**	**183**	P	**P**

QZH LR LR
comp=Z,320nm,20.8s
QZH LR LR
comp=Z,430nm,19.4s
QZH LR LR
comp=Z,810nm,23.2s
RKGY Rocky Gully 35.57 210 P **P** **22 16 24.6 +2.2**
baz=36,SNR=22
RKGY Rocky Gully 35.57 210 P **P** **22 16 25.4 +3.0**
comp=Z,686nm,1.0s
QIZ Qiongzhong 36.31 311 P **P** **22 16 29.6 +0.7**
QIZ S **S** **22 22 05.4 -1.9**
QIZ pmax pmax
comp=Z,38nm,1.6s
QIZ LR LR
comp=Z,370nm,19.7s
QIZ LR LR
comp=Z,300nm,22.9s
QIZ LR LR
comp=Z,530nm,20.5s
JRMM Jerantut 36.42 283 P **P** **22 16 31.0 +1.1**
KRJI Kerinci 36.48 273 P **P** **22 16 31.2 +0.6**
comp=Z,8µmcomp=Z,889nm,1.0s
JSU Suzuyama 36.66 349 P **P** **22 16 31.3 -0.4**
JSU IAmb IAmb 22 16 43.2
comp=Z,50nm,1.0s
BKNI Bangkinang 37.18 277 P **P** **22 16 36.8 +0.4**
BKNI Bangkinang 37.18 277 P **P** **22 16 37.4 +1.0**
comp=Z,3µmcomp=Z,344nm,1.1s
JHJ Hachijo jima 2 37.61 3 LR LR 22 29 33.5
comp=Z,1µm,21.4s,baz=198,slow=32
IPM Ipoh 37.96 283 P **P** **22 16 43.1 0.0**
IPM IAmb IAmb 22 16 45.1
comp=Z,75nm,1.1s
IPM Ipoh 37.96 283 P **P** **22 16 44.0 +1.0**
KULM Kulim 38.52 284 P **P** **22 16 47.5 -0.2**
MNSI Mandailing Nat 38.69 277 P **P** **22 16 49.3 +0.2**
comp=Z,805nmcomp=Z,40nm,1.3s
SISI Saibi 38.91 274 P **P** **22 16 50.5 -0.5**
comp=Z,71nm,1.4s
SSE Sheshan 38.98 337 P **P** **22 16 52.4 +1.1**
SSE S **S** **22 22 54.1 +6.6**
SSE pmax pmax
comp=Z,40nm,0.8s
SSE pmax pmax
comp=Z,64nm,3.7s
SSE LR LR
comp=Z,270nm,22.0s
SSE LR LR
comp=Z,220nm,22.0s
PSI Prapat 39.66 280 P **P** **22 16 57.1 -0.4**
comp=Z,54nm,1.1s,baz=124,slow=4.6,SNR=26
PSI LR LR 22 37 49.4
comp=Z,301nm,18.5s,baz=106,slow=43
comp=Z,54nm,1.1s
JHS Saijyo 39.70 354 P **P** **22 16 57.1 -0.2**
JTU Tsushima 39.79 349 P **P** **22 16 58.3 +0.2**
INU Inuyama 39.80 359 P **P** **22 16 57.4 -0.7**
INU IAMs_20 IAMs_20 22 30 48.4
comp=Z,2µm,21.0s
JGF Kuroka 40.05 359 P **P** **22 17 00.2 0.0**
TSI Tuntungan 40.15 281 P **P** **22 17 02.1 +0.8**
comp=Z,76nm,1.1s
SRIT Nakonsritamara 40.42 289 P **P** **22 17 04.0 +0.5**
SRIT IAmb IAmb 22 17 05.8
comp=Z,109nm,1.0s
CNSH ChangSha 40.57 325 ⇑P **P** **22 17 05.8 +1.2**
CNSH pP **pP** **22 17 16.3 +0.2**
CNSH S **S** **22 23 15.8 +4.4**
CNSH pmax pmax
comp=Z,51nm,1.1s
CNSH LR LR
comp=Z,400nm,19.7s
CNSH LR LR
comp=Z,470nm,18.4s
JYT Yasato 40.73 3 P **P** **22 17 05.1 -0.6**
JYT IAmb IAmb 22 17 22.8
comp=Z,120nm,0.9s
GSI Gunungsitoli 40.74 277 P **P** **22 17 05.2 -1.1**
GSI Gunungsitoli 40.74 277 P **P** **22 17 05.3 -1.0**
comp=Z,82nm,1.0s
GSI Gunungsitoli 40.74 277 P **P** **22 17 07.4 +1.1**
comp=Z,82nm,1.0s
NJ2 Nanjing 40.77 335 ⇑P **P** **22 17 07.3 +1.2**
NJ2 S **S** **22 23 15.5 +1.3**
NJ2 pmax pmax
comp=Z,27nm,1.0s
NJ2 LR LR
comp=Z,650nm,18.9s
NJ2 LR LR
comp=Z,510nm,18.5s
NJ2 LR LR
comp=Z,1µm,21.6s
KCSI Kotacane, Aceh 40.93 281 P **P** **22 17 07.6 -0.2**
comp=Z,43nm,1.7s
MJAR Matsushiro Arr 40.99 0 P **P** **22 17 06.6 -1.3**
comp=Z,0.9nm,0.4s,baz=194,slow=8.8,SNR=2.3
MJAR PcP **PcP** **22 19 06.8 -0.8**
comp=Z,11nm,0.9s,baz=160,slow=4.0,SNR=11
MJAR LR LR 22 32 07.5
comp=Z,925nm,20.1s,baz=162,slow=33
MJAR Matsushiro Arr 40.99 0 P **P** **22 17 07.7 -0.2**
MJAR Matsushiro Arr 40.99 0 P **P** **22 17 07.7 -0.2**
MJAR pmax pmax
comp=Z,4.0nm,1.0s
MAJO Matsushiro 40.99 0⇓*e*P **P** **22 17 07.3 -0.6**
MAJO pmax pmax
comp=Z,17nm,0.9s
MJB9 Matsu-Tunnel 40.99 0 P **P** **22 17 07.3 -0.7**
FUNA Funafuti 41.16 98 P **P** **22 17 09.3 -0.4**
MSVF Nonsavu 41.34 112 P **P** **22 17 11.5 +0.3**
comp=Z,11nm,0.8s,baz=280,slow=7.6,SNR=12
MSVF LR LR 22 35 00.4
comp=Z,510nm,18.8s,baz=287,slow=37
comp=Z,11nm,0.8s
MSVF Nonsavu 41.34 112 P **P** **22 17 11.9 +0.7**
MSVF Nonsavu 41.34 112 P **P** **22 17 11.9 +0.7**
MSVF pmax pmax
comp=Z,51nm,1.3s
TJN Taejon 42.00 347 P **P** **22 17 16.1 -0.1**
TJN Taejon 42.00 347⇓*e*P **P** **22 17 16.7 +0.5**
SLVN Son La 42.18 309 P **P** **22 17 18.3 +0.3**
JMM Marumori 42.39 3 P **P** **22 17 19.3 0.0**
JMM IAmb IAmb 22 17 41.4
comp=Z,122nm,1.0s
JSD Sado 42.48 0 P **P** **22 17 19.8 -0.2**
JSD IAmb IAmb 22 17 31.2
comp=Z,121nm,1.0s
KSAR Wonju Array Be 42.92 348 P **P** **22 17 24.1 +0.5**
KSAR Wonju Array Be 42.92 348 P **P** **22 17 24.1 +0.5**
KSRS Korea Array 42.92 348 P **P** **22 17 22.7 -0.9**
comp=Z,7.5nm,0.9s,baz=166,slow=9.5,SNR=21
KSRS PcP **PcP** **22 19 14.8 +1.0**
comp=Z,3.9nm,0.9s,baz=176,slow=4.4,SNR=3.1
KSRS LR LR 22 33 05.3
comp=Z,1µm,22.0s,baz=165,slow=33
comp=Z,7.5nm,0.9s
KS19 Wonju Array Si 42.98 348 P **P** **22 17 24.1 0.0**
GYA Guiyang 43.28 317 ⇓P **P** **22 17 28.3 +1.4**
GYA S **S** **22 23 52.3 +0.6**
GYA pmax pmax
comp=Z,38nm,1.3s
GYA pmax pmax
comp=Z,120nm,3.5s
GYA LR LR
comp=Z,330nm,15.8s
GYA LR LR
comp=Z,300nm,14.5s
GYA LR LR
comp=Z,570nm,20.6s
SEHB SEOHWA 43.64 349 P **P** **22 17 30.3 +0.8**
SEHB IAmb IAmb 22 17 41.7
comp=Z,65nm,0.9s
HJU Haeju 43.97 346 P **P** **22 17 33.2 +1.2**
HJU pP **pP** **22 17 41.1 -2.6**
HJU S **S** **22 24 04.4 +3.2**
HJU AmB
comp=Z,326nm,1.7s
HJU AMS AMS
comp=N,426nm,4.1s
HJU AMS AMS
comp=E,207nm,2.0s
HJU AMS AMS
comp=Z,159nm,1.5s
ENH Enshi 44.13 324 P **P** **22 17 33.5 -0.1**
ENH IAmb IAmb 22 17 35.2
comp=Z,64nm,0.8s
CM31 Chiang Mai Arr 44.76 302 P **P** **22 17 39.3 +0.6**
CM31 IAmb IAmb 22 17 41.2
comp=Z,123nm,1.2s
CM31 Chiang Mai Arr 44.76 302 P **P** **22 17 40.2 +1.5**
SNR=24
CM31 P **P** **22 17 40.2 +1.5**
SNR=24
CMAR Chiang Mai Arr 44.76 302 P **P** **22 17 39.5 +0.7**
comp=Z,40nm,1.0s,baz=127,slow=6.3,SNR=122
CMAR PcP **PcP** **22 19 22.1 +1.5**
comp=Z,7.4nm,0.8s,baz=148,slow=2.6,SNR=5.2
CMAR ScP **ScP** **22 23 11.0 +1.0**
comp=Z,0.7nm,0.3s,baz=112,slow=2.4,SNR=1.5
CMAR LR LR 22 36 21.0
comp=Z,113nm,20.8s,baz=125,slow=36
comp=Z,40nm,1.0s
CMAR Chiang Mai Arr 44.76 302 P **P** **22 17 39.4 +0.6**
CMAR Chiang Mai Arr 44.76 302 *i*P **P** **22 17 39.9 +1.1**
CMAR pmax pmax
comp=Z,43nm,1.0s
CHTO Chiang Mai 44.92 302 P **P** **22 17 40.7 +0.6**
CHTO IAmb IAmb 22 17 42.2
comp=Z,82nm,1.1s
CHTO Chiang Mai 44.92 302 P **P** **22 17 40.7 +0.6**
CHTO pmax pmax
comp=Z,82nm,1.2s
CHTO Chiang Mai 44.92 302 P **P** **22 17 40.9 +0.9**
CHTO P **P** **22 17 40.9 +0.9**
PYAG Pyongyang 44.92 347 P **P** **22 17 41.9 +2.2**
PYAG pP **pP** **22 17 49.8 -1.4**
PYAG S **S** **22 24 18.5 +3.5**
PYAG AmB
comp=Z,210nm,1.6s
PYAG AMS AMS
comp=N,131nm,2.1s
PYAG AMS AMS
comp=E,322nm,5.2s
PYAG AMS AMS
comp=Z,65nm,1.1s
TIA Tai'an 45.08 336 *e*P **P** **22 17 40.5 -0.5**
TIA S **S** **22 24 16.1 -1.4**
TIA SS **ScS** **22 27 33.8 -1.2**
TIA pmax pmax
comp=Z,20nm,1.2s
TIA LR LR
comp=Z,480nm,25.0s
TIA LR LR
comp=Z,280nm,24.5s
TIA LR LR
comp=Z,950nm,23.5s
KMI Kunming 45.22 313 ⇑P **P** **22 17 44.0 +1.4**
KMI S **S** **22 24 26.8 +6.5**
KMI pmax pmax
comp=Z,34nm,1.1s
KMI pmax pmax
comp=Z,180nm,6.7s
KMI LR LR
comp=Z,310nm,19.4s
KMI LR LR
comp=Z,280nm,22.4s
KMI LR LR
comp=Z,630nm,27.3s
JTM Tenmabayashi 45.32 3 P **P** **22 17 42.9 +0.2**
HHU Hamhung 45.39 349 P **P** **22 17 44.5 +1.2**
HHU pP **pP** **22 17 54.4 -0.5**
HHU S **S** **22 24 21.6 -0.1**
HHU AmB
comp=Z,37nm,0.9s
HHU AMS AMS
comp=N,161nm,4.6s
HHU AMS AMS
comp=E,2µm,59.3s
HHU AMS AMS
comp=Z,92nm,2.6s
LYN LuoYang 45.79 330 ⇑P **P** **22 17 46.8 +0.1**
LYN pP pP 22 17 57.3 -1.0
LYN sP sP 22 18 04.3 +1.2
LYN S **S** **22 24 26.4 -1.3**
LYN sS sS 22 24 55.3 +8.6
LYN pmax pmax
comp=Z,50nm,1.0s
LYN pmax pmax
comp=Z,130nm,8.2s
LYN LR LR
comp=Z,290nm,22.5s
LYN LR LR
comp=Z,280nm,27.7s
LYN LR LR
comp=Z,540nm,29.0s
DL2 Dalian 45.90 342 P P 22 17 41.8 -5.6
DL2 S **S** **22 24 21.8 -7.3**
DL2 pmax pmax
comp=Z,42nm,1.6s
DL2 pmax pmax
comp=Z,300nm,7.7s
DL2 LR LR
comp=N,650nm,23.4s
DL2 LR LR
comp=E,430nm,20.8s
DL2 LR LR
comp=Z,630nm,19.8s
SUJ Sinuiju 46.23 346 P **P** **22 17 51.0 +1.1**
SUJ pP **pP** **22 18 01.9 +0.4**
SUJ S **S** **22 24 35.4 +1.7**
SUJ AmB
comp=Z,150nm,1.0s
SUJ AMS AMS
comp=N,345nm,5.3s
SUJ AMS AMS
comp=E,216nm,3.3s
SUJ AMS AMS
comp=Z,200nm,3.1s
PZH PanZhiHua 46.76 313 P **P** **22 17 54.9 +0.4**
PZH S **S** **22 24 39.5 -2.6**
PZH pmax pmax
comp=Z,30nm,1.0s
PZH pmax pmax
comp=Z,110nm,3.5s
PZH LR LR
comp=Z,930nm,25.5s
PZH LR LR
comp=Z,890nm,26.5s
PZH LR LR
comp=Z,3µm,27.5s
HNS HongShan 47.10 335 ⇑P **P** **22 17 56.9 0.0**
HNS PP **PP** **22 19 45.8 -2.3**
HNS S **S** **22 24 44.3 -2.1**
HNS pmax pmax
comp=Z,45nm,1.2s
HNS LR LR
comp=Z,470nm,21.8s
HNS LR LR
comp=Z,780nm,24.3s
XAN Xi'an 47.24 327 ⇑P **P** **22 17 57.8 -0.3**
XAN pP pP 22 18 08.3 -1.3
XAN sP sP 22 18 13.3 -1.0
XAN PP **PP** **22 19 45.0 -4.6**
XAN S **S** **22 24 47.9 -0.7**
XAN ScS **ScS** **22 27 44.0 -5.3**
XAN SS **SS** **22 28 12.3 -4.3**
XAN pmax pmax
comp=Z,38nm,0.8s
XAN pmax pmax
comp=Z,150nm,3.8s
XAN LR LR
comp=Z,380nm,22.0s
XAN LR LR
comp=Z,360nm,21.8s
XAN LR LR
comp=Z,640nm,22.5s
QRZ Quartz Range 47.54 144 P **P** **22 18 03.1 +2.8**
comp=Z,78nm,1.3s
SNY Shenyang 48.08 346 ⇑P **P** **22 18 04.3 -0.1**
SNY S **S** **22 24 58.1 -2.0**
SNY SS **SS** **22 28 21.8 -8.0**
SNY pmax pmax
comp=Z,35nm,1.4s
SNY LR LR
comp=Z,790nm,20.4s
SNY LR LR
comp=Z,500nm,21.6s
SNY LR LR
comp=Z,1µm,21.1s
CD2 Chengdu 48.12 320 P **P** **22 18 05.8 +0.8**
CD2 S **S** **22 25 06.3 +5.1**
CD2 pmax pmax
comp=Z,120nm,0.7s
CD2 LR LR
comp=Z,300nm,15.7s
CD2 LR LR
comp=Z,420nm,19.1s
THZ Tophouse 48.35 145 P **P** **22 18 07.5 +0.9**
THZ IAmb IAmb 22 18 09.7
comp=Z,130nm,1.6s
RPZ Rata Peaks 48.64 148 LR LR 22 37 36.4
comp=Z,552nm,21.1s,baz=303,slow=35
RPZ Rata Peaks 48.64 148 P **P** **22 18 09.9 +1.1**
RPZ Rata Peaks 48.64 148 P **P** **22 18 11.1 +2.3**
ASAJ Asahikawa 48.73 4 LR LR 22 37 41.3
comp=Z,530nm,21.7s,baz=190,slow=35
BJT Baijiatuau 48.76 338 P **P** **22 18 10.1 +0.4**
BJT IAmb IAmb 22 18 23.3
comp=Z,48nm,0.9s
BJT Baijiatuau 48.76 338 P **P** **22 18 10.1 +0.4**
BJT pmax pmax
comp=Z,48nm,0.9s
BJT MLR MLR
comp=Z,700nm,21.0s
URZ Urewera 48.86 139 LR LR 22 38 30.8
comp=Z,1µm,19.9s,baz=30,slow=36
URZ Urewera 48.86 139 P **P** **22 18 11.0 +0.5**
URZ IAmb IAmb 22 18 24.8
comp=Z,40nm,1.0s
USA0B Ussuriysk Arra 48.93 354 P **P** **22 18 11.5 +0.6**
USA0B Ussuriysk Arra 48.93 354 P **P** **22 18 11.5 +0.6**
USA0B pmax pmax
comp=Z,43nm,1.5s
USRK Ussuriysk Ar. 48.93 354 P **P** **22 18 11.2 +0.3**
comp=Z,5.0nm,0.6s,baz=176,slow=8.2,SNR=13
USRK PcP **PcP** **22 19 34.4 -0.3**
comp=Z,6.5nm,1.0s,baz=177,slow=2.9,SNR=1.6
USRK LR LR 22 35 50.0
comp=Z,2µm,21.6s,baz=162,slow=32
comp=Z,5.0nm,0.6s
USRK Ussuriysk Ar. 48.93 354 P **P** **22 18 11.6 +0.7**
USRK Ussuriysk Ar. 48.93 354 P **P** **22 18 11.6 +0.7**
BKZ Black Stump Fm 48.96 140 P **P** **22 18 12.2 +0.9**
BKZ IAmb IAmb 22 18 13.0
comp=Z,38nm,0.8s
BKZ Black Stump Fm 48.96 140 P **P** **22 18 14.4 +3.0**
comp=Z,221nm,1.1s
KHZ Kahutara 49.14 145 P **P** **22 18 13.2 +0.6**
comp=Z,68nm,1.3s
CN2 Changchun 49.53 348 *e*P P 22 18 09.8 -5.7
CN2 *e*S **S** **22 25 18.3 -2.3**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=N,800nm,22.0s
CN2 LR LR
comp=E,500nm,22.0s
CN2 LR LR
comp=Z,1µm,21.0s
MDJ Mudanjiang 49.62 352 P **P** **22 18 16.8 +0.6**
MDJ IAmb IAmb 22 18 27.9
comp=Z,38nm,1.0s
MDJ Mudanjiang 49.62 352 P **P** **22 18 17.3 +1.1**
MDJ S **S** **22 25 25.9 +4.1**
MDJ pmax pmax
comp=Z,22nm,0.9s
MDJ pmax pmax
comp=Z,130nm,4.1s
MDJ LR LR
comp=Z,750nm,18.1s
MDJ LR LR
comp=Z,580nm,23.0s
MDJ LR LR
comp=Z,1µm,23.5s
BNX BinXian 51.05 351 ⇑P **P** **22 18 27.4 +0.5**
BNX pP **pP** **22 18 39.8 +1.1**
BNX sP **sP** **22 18 46.3 +2.9**
BNX PP **PP** **22 20 23.6 -0.3**
BNX S **S** **22 25 37.5 -4.0**
BNX pmax pmax
comp=Z,70nm,1.1s
BNX pmax pmax
comp=Z,300nm,4.4s
BNX LR LR
comp=Z,750nm,16.3s
BNX LR LR
comp=Z,1µm,20.1s
HHC Hu-ho-hao-te 51.32 334 *e*P **P** **22 18 29.8 +0.5**
HHC S **S** **22 25 47.0 +1.2**
HHC pmax pmax
comp=Z,45nm,0.9s
HHC pmax pmax
comp=Z,340nm,5.1s
HHC LR LR
comp=Z,660nm,18.4s
HHC LR LR
comp=Z,520nm,19.7s
HHC LR LR
comp=Z,1µm,19.0s
YSS Yuzh-Sakhalins 51.57 4 P **P** **22 18 30.7 -0.1**
YSS IAmb IAmb 22 18 41.8
comp=Z,57nm,1.0s
YSS Yuzh-Sakhalins 51.57 4 *e*P **P** **22 18 31.0 +0.2**
YSS *e**PP **pP** **22 18 40.7 -1.9**
YSS *e*S **S** **22 25 46.8 -1.9**
YSS *e*PS PKiKP 22 26 06.0 -20
YSS *e*SS **SS** **22 29 22.8 -2.6**
YSS pmax pmax
comp=Z,20nm,1.1s
YSS pmax pmax
comp=Z,200nm,5.5s
LZH Lanzhou 51.58 325 ⇑P **P** **22 18 32.8 +1.4**
LZH pP pP 22 18 43.1 +0.1
LZH sP sP 22 18 50.0 +2.3
LZH PP **PP** **22 20 26.3 -2.9**
LZH S **S** **22 25 50.6 +0.9**
LZH sS pS 22 26 13.3 +0.5
LZH pmax pmax
comp=Z,67nm,1.3s
LZH pmax pmax
comp=Z,230nm,5.8s
LZH LR LR
comp=Z,290nm,14.5s
LZH LR LR
comp=Z,350nm,14.7s
LZH LR LR
comp=Z,630nm,16.5s
XLT XiLinHaoTe 52.19 340⇓*i*P P 22 18 45.9 +10
XLT pP pP 22 18 49.5 +2.0
XLT sP sP 22 18 53.0 +0.7
XLT S **S** **22 25 53.5 -4.1**
XLT sS pS 22 26 03.6 -8.8
XLT pmax pmax
comp=Z,26nm,0.9s
XLT pmax pmax
comp=Z,120nm,4.0s
XLT LR LR
comp=N,46nm,20.2s
XLT LR LR
comp=E,390nm,21.9s
XLT LR LR
comp=Z,790nm,22.3s
SHL Shillong 53.82 306 P **P** **22 18 48.4 +0.2**
SHL Shillong 53.82 306 P **P** **22 18 48.4 +0.2**
SHL pmax pmax
comp=Z,123nm,1.1s
SHL Shillong 53.82 306 P **P** **22 18 49.5 +1.4**
SNR=19
SHL Shillong 53.82 306 *e*P **P** **22 18 47.3 -0.9**
SHL IAML 22 18 49.6
comp=Z,68nm,0.9s
KLR Kul'dur 53.94 355 P **P** **22 18 48.6 +0.4**
comp=Z,9.7nm,0.8s,baz=193,slow=3.5,SNR=39
KLR LR LR 22 38 55.9
comp=Z,1µm,21.5s,baz=174,slow=33
comp=Z,9.7nm,0.8s
KLR Kul'dur 53.94 355*c i*P **P** **22 18 48.9 +0.6**
KLR pmax pmax
comp=Z,38nm,1.7s
GRNR Gornyy 55.22 359⇑*i*P **P** **22 18 58.5 +0.9**
GRNR pmax pmax
comp=Z,4.0nm,0.7s
GRNR MLR MLR
comp=Z,120nm,13.0s
HIA Hailar 55.99 346 P **P** **22 19 03.6 +0.4**

HIA Hailar 55.99 346 P **P** **22 19 03.6 +0.4**
HIA pmax pmax
comp=Z,23nm,1.1s
HIA MLR MLR
comp=Z,600nm,21.0s
GTA Gaotai 56.18 325 ⇑P **P** **22 19 05.8 +0.9**
GTA S **S** **22 26 54.8 +3.1**
GTA pmax pmax
comp=Z,19nm,1.0s
GTA pmax pmax
comp=Z,120nm,6.2s
GTA LR LR
comp=Z,230nm,21.1s
GTA LR LR
comp=Z,190nm,19.3s
GTA LR LR
comp=Z,330nm,21.4s
LSA Lhasa 56.35 310 P **P** **22 19 07.9 +1.2**
LSA IAmb IAmb 22 19 09.6
comp=Z,41nm,0.7s
LSA Lhasa 56.35 310 P **P** **22 19 07.9 +1.2**
LSA pmax pmax
comp=Z,41nm,0.7s
LSA Lhasa 56.35 310 P **P** **22 19 08.5 +1.8**
LSA Lhasa 56.35 310 P **P** **22 19 08.4 +1.8**
BWNR Bhubaneshwar 56.86 298 *e*P **P** **22 19 10.2 +0.3**
GOMU GeErMu 57.24 319 P **P** **22 19 13.9 +1.1**
GOMU PcP **PcP** **22 20 07.8 +0.9**
GOMU S **S** **22 27 07.8 +1.5**
GOMU pmax pmax
comp=Z,9.0nm,0.8s
GOMU pmax pmax
comp=Z,110nm,4.1s
GOMU LR LR
comp=Z,130nm,14.9s
GOMU LR LR
comp=Z,85nm,14.6s
GOMU LR LR
comp=Z,160nm,14.1s
SKR Severo-Kuril's 57.31 14 *e*P **P** **22 19 16.4 +4.0**
SKR *e* 22 20 06.6
SKR *e*S **S** **22 27 09.6 +3.8**
SKR pmax pmax
comp=Z,17nm,1.0s
SKR pmax pmax
comp=Z,100nm,3.6s
SKR pmax pmax
comp=Z,200nm,4.2s
ODAN Odare 58.01 306 *e*P **P** **22 19 18.5 +0.3**
comp=Z,51nm,1.1s
BOK Bokaro 58.05 302 *e*P **P** **22 19 18.2 0.0**
PALK Pallekele 58.32 281 LR LR 22 46 47.6
comp=Z,163nm,19.3s,baz=207,slow=38
RAGD RAYAGADA 58.61 296 *e*P **P** **22 19 22.3 +0.1**
RAMN Ramite 58.69 305 *e*P **P** **22 19 24.3 +1.3**
ZEA Zeya 58.87 353 *e*P **P** **22 19 24.5 +1.2**
ZEA *e* 22 19 34.6
ZEA pmax pmax
comp=N,10.0nm,1.4s
ZEA pmax pmax
comp=Z,20nm,1.1s
ULN Ulaanbaatar 58.91 336 P **P** **22 19 24.3 +0.3**
ULN Ulaanbaatar 58.91 336 *c i*P **P** **22 19 24.7 +0.8**
ULN pmax pmax
comp=Z,24nm,1.7s
JHSG JHARSUGUGA 59.14 299 *e*P **P** **22 19 27.4 +1.5**
SONM Songino Array 59.15 336 P **P** **22 19 25.8 +0.2**
comp=Z,1.8nm,0.7s,baz=155,slow=7.7,SNR=15
SONM LR LR 22 44 00.5
comp=Z,786nm,21.9s,baz=139,slow=35
SONM PKPPKP **P'P'df** **22 48 58.7 +1.6**
comp=Z,0.2nm,0.3s,baz=338,slow=1.6,SNR=4.0
SONM PKP2bc **P'P'bc** **22 49 09.9 +2.3**
comp=Z,1.5nm,0.9s,baz=287,slow=1.5,SNR=8.2
SONM Songino Array 59.15 336 P **P** **22 19 25.5 -0.1**
JIRN Jiri 59.32 306 *e*P **P** **22 19 28.6 +1.2**
GUN Gumba 59.67 306 *e*P **P** **22 19 31.1 +1.2**
comp=Z,247nm,0.9s
PKI Pulchoki 59.91 306 *e*P **P** **22 19 32.3 +0.8**
comp=Z,104nm,1.0s
PKIN Phulchoki 59.93 306 *e*P **P** **22 19 32.3 +0.8**
PEA0B Petropavlovsk- 59.93 14 P **P** **22 19 31.4 +0.8**
PEA0B IAmb IAmb 22 19 42.8
comp=Z,52nm,1.2s
PEA0B Petropavlovsk- 59.93 14 ⇓*i*P **P** **22 19 31.8 +1.1**
PETK Petropavlovsk- 59.93 14 P **P** **22 19 30.4 -0.3**
comp=Z,9.1nm,0.9s,baz=200,slow=12,SNR=26
comp=Z,9.1nm,0.9s
PETK Petropavlovsk- 59.93 14 P **P** **22 19 30.7 0.0**
PETK Petropavlovsk- 59.93 14 P **P** **22 19 30.7 0.0**
PET Petropavlovsk 60.08 14 *e*P P 22 19 38.7 +7.0
PET *e*S **S** **22 27 48.4 +6.6**
PET *e*PS **PnS** **22 28 02.4 +3.4**
PET pmax pmax
comp=Z,200nm,16.3s
KKN Kakani 60.11 306 *e*P **P** **22 19 32.9 +0.2**
comp=Z,39nm,1.2s
CIT Chita 60.16 343 *e*P **P** **22 19 34.0 +1.6**
CIT *e* 22 19 43.6
CIT *e* 22 19 47.8
CIT pmax pmax
comp=Z,133nm,1.8s
DMN Daman 60.17 305 *e*P **P** **22 19 34.4 +1.2**
comp=Z,322nm,1.1s
BLSP Bilaspur 60.70 298 *e*P **P** **22 19 37.4 +0.8**
GKN Gorkha 60.71 306 *e*P **P** **22 19 37.8 +1.0**
comp=Z,416nm,1.0s
KOLN Koldanda 61.46 305 *e*P **P** **22 19 42.0 +0.1**
DANN Dangsing 61.56 306 *e*P **P** **22 19 43.6 +0.9**
comp=Z,229nm,0.9s
KOD Kodaikanal 62.00 284 *e*P **P** **22 19 46.9 +1.0**
ALBI Allahabad 62.05 302 *e*P **P** **22 19 46.5 +0.9**
PYUN Piuthan 62.09 305 *e*P **P** **22 19 47.3 +1.2**
comp=Z,685nm,0.9s
ZAK Zakamensk 62.42 336 *e*P **P** **22 19 47.9 +0.1**
ZAK pmax pmax
comp=Z,27nm,1.4s
RAR Rarotonga 62.53 111 LR LR 22 46 09.1
comp=Z,91nm,19.2s,baz=258,slow=35
HYBB Hyderabad (bro 62.56 292 *e*P **P** **22 19 49.8 +0.6**
HYBB *es*P **pP** **22 20 01.2 +0.1**
HYBB *e*ScP **ScP** **22 24 28.4 +1.1**
PCHI Peechi 63.14 284 *e*P **P** **22 19 53.9 +0.8**
PCHI *e*S **S** **22 28 18.8 -3.1**
IRK Irkutsk 63.48 338 *e*P **P** **22 19 54.9 +0.3**
IRK pmax pmax
comp=Z,75nm,1.8s
MOY Mondy 64.34 335 *e*P **P** **22 20 01.1 +0.7**
MOY pmax pmax
comp=Z,56nm,2.0s
CASY Casey 64.42 192 P **P** **22 20 00.5 0.0**
CASY IAmb IAmb 22 20 03.2
comp=Z,35nm,1.1s
LGTI Lohaghat 64.83 305 *e*P **P** **22 20 04.7 +0.8**
AKL Akola 64.83 295 *e*P **P** **22 20 04.6 +0.5**
SHEM Shemya Is, Ala 64.83 23 P **P** **22 20 03.3 -0.1**
comp=Z,37nm,0.7s,baz=106,slow=12,SNR=2.5
comp=Z,37nm,0.7s
MA2 Magadan 64.84 7 P **P** **22 20 03.4 0.0**
comp=Z,22nm,0.8s,baz=175,slow=5.3,SNR=16
MA2 LR LR 22 47 16.8
comp=Z,214nm,20.5s,baz=187,slow=35
comp=Z,22nm,0.8s
MA2 Magadan 64.84 7 P **P** **22 20 03.5 0.0**
MA2 IAmb IAmb 22 20 15.3
comp=Z,40nm,1.0s
MA2 Magadan 64.84 7 *ce*P **P** **22 20 04.0 +0.6**
MA2 pmax pmax
comp=Z,25nm,0.7s
JHNI Jhansi 64.89 301 *e*P **P** **22 20 03.5 -1.0**
KNGR Kungurtug, Tuv 65.07 333 ⇓*e*P **P** **22 20 05.4 +0.1**
BHPL Bhopal 65.18 298 *e*P **P** **22 20 06.6 +0.2**
BHPL IAmb IAmb 22 20 08.0
comp=Z,20nm,0.5s
BOD Bodaibo 65.20 346 *e*P **P** **22 20 06.3 +0.5**
BOD pmax pmax
comp=Z,80nm,2.1s
WMQ Urumqi 66.06 323 *e*P **P** **22 20 12.6 +0.9**
WMQ pmax pmax
comp=Z,44nm,1.1s
WMQ pmax pmax
comp=Z,150nm,4.1s
WMQ LR LR
comp=Z,270nm,18.5s
WMQ LR LR
comp=Z,180nm,22.1s
KAD Karad 66.58 291 *e*P **P** **22 20 15.3 -0.3**
YAK Yakutsk 66.80 356 P **P** **22 20 15.5 -0.4**
comp=Z,40nm,0.7s,baz=264,slow=0.5,SNR=14
YAK LR LR 22 46 51.1
comp=Z,1µm,21.2s,baz=248,slow=34
comp=Z,40nm,0.7s
YAK Yakutsk 66.80 356 P **P** **22 20 16.3 +0.3**
YAK IAMs_20 IAMs_20 22 46 38.7
comp=Z,1µm,21.0s
YAK Yakutsk 66.80 356 *e*P **P** **22 20 16.4 +0.5**
YAK *e**PP **pP** **22 20 26.7 -1.2**
YAK *e* 22 20 43.6
YAK *e* 22 22 45.3
YAK *e*S **S** **22 29 06.6 +1.4**
YAK *e**SS **sS** **22 29 26.8 +1.2**
YAK *e* 22 30 08.7
YAK *e*SS **SS** **22 33 30.2 +6.2**
YAK pmax pmax
comp=Z,86nm,1.0s
YAK pmax pmax
comp=N,14nm,0.9s
YAK pmax pmax
comp=E,5.0nm,1.0s
YAK pmax pmax
comp=Z,78nm,3.5s
YAK pmax pmax
comp=N,41nm,3.0s
YAK pmax pmax
comp=E,43nm,3.2s
YAK smax smax
comp=N,50nm,2.8s
YAK smax smax
comp=E,57nm,2.8s
DDI Dehra Dun 66.91 306 *e*P **P** **22 20 18.7 +1.3**
DDI IAmb IAmb 22 20 20.8
comp=Z,176nm,0.8s
SONA Sohna 67.02 303 *e*P **P** **22 20 17.8 -0.2**
KUDL Kundal 67.48 303 *e*P **P** **22 20 20.4 -0.5**
SMLA Simla 67.91 306 *e*P **P** **22 20 24.6 +0.9**
SMLA IAmb IAmb 22 20 26.0
comp=Z,64nm,0.6s
KIWB Kanaga Island 68.01 28 P **P** **22 20 23.9 +0.1**
ADK Adak 68.25 28 P **P** **22 20 25.6 +0.4**
ADK Adak 68.25 28 P **P** **22 20 25.7 +0.4**
ADK pmax pmax
comp=Z,171nm,1.6s
SEY Seymchan 68.30 7 P **P** **22 20 25.7 +0.3**
comp=Z,6.0nm,0.8s,baz=182,slow=5.0,SNR=22
SEY LR LR 22 49 05.5
comp=Z,259nm,21.1s,baz=201,slow=35
comp=Z,6.0nm,0.8s
SEY Seymchan 68.30 7 *ce*P **P** **22 20 26.0 +0.6**
SEY pmax pmax
comp=Z,24nm,1.7s
AJM Ajmer 68.54 301 *e*P **P** **22 20 27.7 0.0**
BHK Bhakra 68.61 306 *e*P **P** **22 20 28.5 +0.5**
THN Thein Dam 69.52 307 *e*P **P** **22 20 34.0 +0.4**
ZSN Zaisan 69.68 325 *e*P **P** **22 20 34.4 +0.1**
ZSN pmax pmax
comp=Z,31nm,3.7s
ZSN Zaisan 69.68 325 *e*P **P** **22 20 34.5 +0.1**
comp=Z,31nm,3.7s,baz=325
JMU Jammu 70.26 307 *e*P **P** **22 20 39.3 +1.1**
MK31 Makanchi Array 70.86 323 P **P** **22 20 42.0 +0.4**
MK31 IAmb IAmb 22 20 53.6
comp=Z,28nm,1.0s
MK31 Makanchi Array 70.86 323 *c i*P **P** **22 20 42.1 +0.5**
MKAR Makanchi Array 70.86 323 P **P** **22 20 42.2 +0.6**
comp=Z,20nm,0.8s,baz=112,slow=8.2,SNR=185
MKAR LR LR 22 52 09.7
comp=Z,171nm,21.8s,baz=99,slow=36
comp=Z,20nm,0.8s
SHLS Shalkode 70.94 319 *e*P **P** **22 20 41.3 -1.0**
SHLS pmax pmax
comp=Z,23nm,1.0s
SHLS Shalkode 70.94 319 *e*P **P** **22 20 41.3 -1.0**
comp=Z,23nm,1.0s,baz=319
MAKZ Makanchi 71.05 323 P **P** **22 20 43.4 +0.6**
MAKZ IAmb IAmb 22 20 54.6
comp=Z,38nm,0.9s
MAKZ Makanchi 71.05 323 P **P** **22 20 43.4 +0.6**
MAKZ pmax pmax
comp=Z,38nm,0.9s
MAKZ MLR MLR
comp=Z,200nm,18.0s
UZB Uzunbulak 71.23 319 *e*P **P** **22 20 44.7 +0.6**
UZB pmax pmax
comp=Z,14nm,0.9s
UZB Uzunbulak 71.23 319 *e*P **P** **22 20 44.7 +0.6**
comp=Z,14nm,0.9s,baz=319
TARG Taragay, Kyrgy 71.45 317 P **P** **22 20 46.9 +1.2**
TARG IAmb IAmb 22 20 58.4
comp=Z,74nm,1.2s
TARG Taragay, Kyrgy 71.45 317 P **P** **22 20 46.9 +1.2**
TARG pmax pmax
comp=Z,74nm,1.2s
KPKS Kokpek 71.59 319 *e*P **P** **22 20 46.5 +0.4**
KPKS pmax pmax
comp=Z,44nm,1.2s
KPKS Kokpek 71.59 319 *e*P **P** **22 20 46.6 +0.4**
comp=Z,44nm,1.2s,baz=319
SATY Saty 71.60 318 *e*P **P** **22 20 46.2 -0.1**
SATY Saty 71.60 318 *e*P **P** **22 20 46.2 -0.1**
baz=318
ZHN Zhinishke 71.62 318 *e*P **P** **22 20 45.9 -0.5**
ZHN Zhinishke 71.62 318 *e*P **P** **22 20 46.0 -0.5**
baz=318
KSH Kashi 71.86 314 P **P** **22 20 49.6 +1.7**
KSH PcP **PcP** **22 21 06.0 -0.6**
KSH S **S** **22 30 08.5 +2.4**
KSH pmax pmax
comp=Z,79nm,1.0s
PPT Papeete 71.93 107 LR LR 22 48 20.5
comp=Z,158nm,21.8s,baz=280,slow=32
PPT2 Papete2 71.93 107 *e*LR LR 22 43 20.7
comp=Z,299nm,22.5s
KDJ Kajisay 72.04 317 P **P** **22 20 49.9 +0.9**
KDJ IAmb IAmb 22 20 51.3
comp=Z,57nm,0.8s
KDJ Kajisay 72.04 317 P **P** **22 20 49.9 +0.9**
KDJ pmax pmax
comp=Z,57nm,0.9s
TBI Tubuai 72.21 113 *e*LR LR 22 43 28.6
comp=Z,246nm,26.8s
TDK Taldyqorghan 72.43 320 *e*P **P** **22 20 51.8 +0.7**
TDK Taldyqorghan 72.43 320 *e*P **P** **22 20 51.9 +0.7**
baz=320
ARXS Arharly 72.47 319 *e*P **P** **22 20 51.5 +0.1**
TNSS Tian-Shan 72.56 318 *e*P **P** **22 20 52.0 -0.4**
TNSS Tian-Shan 72.56 318 *e*P **P** **22 20 52.0 -0.4**
baz=318
AAA Alma-Ata 72.65 318 *e*P **P** **22 20 53.1 +0.6**
AAA Alma-Ata 72.65 318 *e*P **P** **22 20 53.2 +0.7**
baz=318
ULHL Ulahol 72.72 317 P **P** **22 20 54.2 +1.1**
SNR=11
NIKH Nikolski High 72.74 30 P **P** **22 20 52.2 -0.5**
baz=237
CHKK Chushkaly 72.87 319 *e*P **P** **22 20 53.0 -0.7**
CHKK Chushkaly 72.87 319 *e*P **P** **22 20 53.0 -0.7**
baz=319
BOOM Boomskoye usch 73.02 317 P **P** **22 20 55.4 +0.5**
BOOM IAmb IAmb 22 20 57.0
comp=Z,53nm,0.8s
BOOM Boomskoye usch 73.02 317 P **P** **22 20 55.4 +0.5**
BOOM pmax pmax
comp=Z,53nm,0.9s
ZAA0 Zalesovo Array 73.22 330 P **P** **22 20 55.0 -0.5**
ZALV Zalesovo Beam 73.22 330 P **P** **22 20 54.7 -0.8**
comp=Z,9.0nm,0.7s,baz=105,slow=5.8,SNR=42
ZALV PKPPKP **P'P'df** **22 48 35.1 +1.3**
comp=Z,0.5nm,0.5s,baz=307,slow=3.1,SNR=3.6
ZALV LR LR 22 53 39.9
comp=Z,258nm,21.8s,baz=116,slow=36
comp=Z,9.0nm,0.7s
ZALV Zalesovo Beam 73.22 330 P **P** **22 20 54.8 -0.7**
ZALV Zalesovo Beam 73.22 330 *i* P **P** **22 20 54.9 -0.7**
ZALV pmax pmax
comp=Z,9.0nm,0.8s
KUU Kurty 73.31 318 *ce*P **P** **22 20 56.9 +0.6**
KUU Kurty 73.31 318 ⇑*e*P **P** **22 20 57.0 +0.6**
baz=318
TKM2 Tokmak 2 73.42 317 P **P** **22 20 58.3 +1.0**
SNR=17
KBK Karagaybulak 73.76 317 P **P** **22 21 00.2 +1.0**
SNR=20
SEM Semipalatinsk 73.80 326 *e*P **P** **22 20 56.0 -3.3**
SEM Semipalatinsk 73.80 326 *e*P **P** **22 20 56.0 -3.3**
baz=326
UCH Uchtor 73.90 316 P **P** **22 21 01.9 +1.5**
SNR=67
VNDA Vanda 73.92 175 P **P** **22 21 00.1 +0.8**
comp=Z,42nm,0.8s,baz=324,slow=6.3,SNR=269
VNDA LR LR 22 53 04.4
comp=Z,2µm,19.8s,baz=358,slow=35
comp=Z,42nm,0.8s
VNDA Vanda 73.92 175 P **P** **22 21 00.0 +0.8**
VNDA IAmb IAmb 22 21 01.2
comp=Z,47nm,0.8s
CHMS Chumysh 74.03 317 P **P** **22 21 01.2 +0.6**
SNR=31
AAK Ala-Archa 74.07 317 P **P** **22 21 01.7 +0.7**
SNR=11
AAK Ala-Archa 74.07 317 LR LR 22 55 14.7
comp=Z,170nm,21.8s,baz=110,slow=37
AAK Ala-Archa 74.07 317 P **P** **22 21 01.4 +0.5**
AAK IAmb IAmb 22 21 03.3
comp=Z,50nm,1.1s
AAK Ala-Archa 74.07 317 *c i*P **P** **22 21 01.9 +0.9**
AAK pmax pmax
comp=Z,45nm,1.0s
AAK Ala-Archa 74.07 317 *i* P **P** **22 21 02.0 +1.1**
SNR=7.2
SGDS Sogindy 74.28 317 *ce*P **P** **22 21 02.0 -0.1**
SGDS pmax pmax
comp=Z,18nm,1.2s
SGDS Sogindy 74.28 317 ⇑*e*P **P** **22 21 02.1 -0.1**
comp=Z,18nm,1.2s,baz=318
USP Ospenovka 74.30 317 P **P** **22 21 03.0 +0.8**
SNR=62
UNV Unalaska Valle 74.40 30 P **P** **22 21 02.2 -0.2**
baz=238
AML Almayashu 74.43 316 P **P** **22 21 04.8 +1.4**
SNR=58
AML Almayashu 74.43 316 P **P** **22 21 04.7 +1.2**
AML Almayashu 74.43 316 *i* P **P** **22 21 04.6 +1.2**
SNR=59
SPIA Saint Paul Isl 74.47 26 P **P** **22 21 03.3 +0.6**
baz=234
EKS2 Erkin-Say 74.57 316 P **P** **22 21 05.1 +1.3**
SNR=34
SBA Scott Base 74.70 174 P **P** **22 21 05.2 +1.4**
SBA IAmb IAmb 22 21 07.0
comp=Z,59nm,0.9s
SBA Scott Base 74.70 174 P **P** **22 21 05.2 +1.4**
SBA pmax pmax
comp=Z,59nm,1.0s
KURK Kurchatov 74.86 326 P **P** **22 21 04.7 -0.5**
KURK IAmb IAmb 22 21 06.6
comp=Z,52nm,1.2s
KURK Kurchatov 74.86 326 P **P** **22 21 05.0 -0.2**
DRK Karamyk 74.86 313 P **P** **22 21 06.6 +0.7**
DRK IAmb IAmb 22 21 08.2
comp=Z,68nm,1.1s
KURBB Kurchatov Arra 74.87 325 P **P** **22 21 05.0 -0.2**
comp=Z,22nm,1.0s,baz=122,slow=5.1,SNR=65
KURBB PP **PP** **22 23 54.3 +1.1**
comp=Z,2.4nm,1.0s,baz=116,slow=9.2,SNR=5.0
comp=Z,22nm,1.0s
BILL Bilibino 75.22 11 P **P** **22 21 07.2 +0.3**
BILL Bilibino 75.22 11 *d i*P **P** **22 21 07.0 +0.1**
BILL *e**PP **pP** **22 21 17.2 -1.8**
BILL *e**SP **sP** **22 21 22.2 -1.3**
BILL *e* 22 23 55.1
BILL *e*PPP PPP 22 25 40.5
BILL pmax pmax
comp=Z,9.0nm,1.0s
BILL MLR MLR
comp=Z,222nm,18.0s
BTLS Baital 75.27 319 *ce*P **P** **22 21 07.3 -0.4**
BTLS Baital 75.27 319 ⇑*e*P **P** **22 21 07.4 -0.4**
baz=319
KBL Kabul 75.47 307 P **P** **22 21 09.0 -0.3**
KBL IAmb IAmb 22 21 10.6
comp=Z,59nm,0.8s
KBL Kabul 75.47 307 P **P** **22 21 09.0 -0.3**
KBL pmax pmax
comp=Z,59nm,0.9s
KBL Kabul 75.47 307 P **P** **22 21 09.8 +0.5**
SNR=22
BTK Batken 75.77 313 P **P** **22 21 11.1 +0.3**
BTK IAmb IAmb 22 21 25.4
comp=Z,64nm,1.1s
BTK Batken 75.77 313 P **P** **22 21 11.1 +0.3**
BTK pmax pmax
comp=Z,64nm,1.2s
GAR Garm 75.80 312 P **P** **22 21 11.4 +0.4**
DZA Taraz 76.33 316 *e*P **P** **22 21 14.1 +0.3**
DZA Taraz 76.33 316 *e*P **P** **22 21 14.2 +0.3**
baz=316
FALS False Pass 76.47 31 P **P** **22 21 14.2 -0.1**
baz=241
CHGR Chuyangaron 76.56 311 P **P** **22 21 15.4 +0.1**
CHGR Chuyangaron 76.56 311 P **P** **22 21 15.4 +0.1**
CHGR pmax pmax
comp=Z,136nm,0.9s
KK31 Karatay Array 76.97 316 P **P** **22 21 17.8 +0.3**
KK31 IAmb IAmb 22 21 19.1
comp=Z,39nm,0.9s
KK31 Karatay Array 76.97 316 P **P** **22 21 17.8 +0.3**
KK31 pmax pmax
comp=Z,39nm,1.0s
KKAR Karatay Array 76.97 316 P **P** **22 21 17.6 +0.2**
KKAR Karatay Array 76.97 316 P **P** **22 21 17.6 +0.2**
IUG luzhnay 77.00 315 *e*P **P** **22 21 17.4 -0.3**
IUG luzhnay 77.00 315 *e*P **P** **22 21 17.4 -0.3**
baz=315
TAS Tashkent 77.26 314 P **P** **22 21 19.4 +0.3**
TAS Tashkent 77.26 314 P **P** **22 21 19.4 +0.3**
TAS pmax pmax
comp=Z,152nm,1.1s
GAMB Gambell 77.87 20 P **P** **22 21 22.1 +0.2**
baz=232
BRZS Berezniki 78.01 323 *e*P **P** **22 21 22.4 -0.6**
BRZS pmax pmax
comp=Z,19nm,1.4s
BRZS Berezniki 78.01 323 *e*P **P** **22 21 22.4 -0.6**
comp=Z,19nm,1.4s,baz=323
SDPT Sand Point 78.20 31 P **P** **22 21 24.1 +0.2**
baz=244
CHNA Chernabura Isl 78.43 32 P **P** **22 21 25.5 +0.3**
baz=244
MAW Mawson 80.03 202 P **P** **22 21 35.3 +1.5**
comp=Z,58nm,0.9s,baz=80,slow=6.1,SNR=60
MAW LR LR 22 54 50.0
comp=Z,901nm,19.5s,baz=22,slow=34
comp=Z,58nm,0.9s
MAW Mawson 80.03 202 P **P** **22 21 35.6 +1.8**
baz=80,SNR=16
MAW Mawson 80.03 202 P **P** **22 21 35.1 +1.3**
TNA Tin City 80.24 20 P **P** **22 21 35.3 +0.5**
baz=235
BRVK Borovoye 80.53 326 P **P** **22 21 36.9 +0.1**
BRVK IAmb IAmb 22 21 48.6
comp=Z,65nm,0.9s
BRVK Borovoye 80.53 326 *c i*P **P** **22 21 37.1 +0.4**
BRVK pmax pmax
comp=Z,77nm,1.1s
ANM Nome 80.59 21 IAMs_20 IAMs_20 22 54 04.1
comp=Z,433nm,20.0s
ANM Nome 80.59 21 P **P** **22 21 37.5 +0.7**
baz=238
HRA Herat 80.88 306 P **P** **22 21 39.2 -0.1**
CHIR Chirikof Islan 80.90 32 P **P** **22 21 39.8 +1.1**
baz=248
P16K Nushagak River 81.01 28 P **P** **22 21 39.5 +0.4**
baz=245,SNR=6.4
O16K Kokwok River B 81.20 28 P **P** **22 21 40.4 +0.2**
baz=245,SNR=7.8
R17K Ugashik Creek 81.22 30 P **P** **22 21 41.2 +0.8**
baz=247
N16K Nishlik Lake 81.28 27 P **P** **22 21 41.1 +0.5**
baz=244,SNR=12
TAOE Nuku Hiva Isla 81.34 98 *e*LR LR 22 47 28.3
comp=Z,368nm,22.6s
NRIK Noril'sk 81.36 344 P **P** **22 21 41.1 +0.3**
comp=Z,32nm,0.9s,baz=126,slow=5.1,SNR=36
NRIK LR LR 22 56 54.5
comp=Z,555nm,21.6s,baz=143,slow=35
comp=Z,32nm,0.9s
NRIK Noril'sk 81.36 344 P **P** **22 21 41.3 +0.5**

NRIK IAmb IAmb 22 21 52.9
comp=Z,83nm,1.1s
NRIK Noril'sk 81.36 344 P **P** **22 21 41.3 +0.5**
NRIK pmax pmax
comp=Z,83nm,1.1s
WBK Wadi Bani Khal 81.63 294 P **P** **22 21 44.4 +1.1**
O17K Koliganek Bris 81.74 28 P **P** **22 21 43.8 +0.8**
baz=246,SNR=20
P17K Kvichak River 81.81 28 P **P** **22 21 43.1 -0.2**
baz=246
SII Sitkinak Islan 81.92 31 P **P** **22 21 43.7 -0.4**
baz=249
WSAR Wadi Sarin 82.03 294 P **P** **22 21 45.1 -0.3**
comp=Z,14nm,0.9s,baz=110,slow=6.3,SNR=5.6
comp=Z,14nm,0.9s
WSAR Wadi Sarin 82.03 294 P **P** **22 21 46.2 +0.8**
MSEY Mahe Island 82.12 266 P **P** **22 21 46.4 +0.3**
Q18K Katmai Hardscr 82.28 29 P **P** **22 21 45.3 -0.8**
baz=248
MHTO MHTO 82.31 292 P **P** **22 21 47.8 +0.9**
MHTO P **P** **22 21 47.8 +0.9**
P18K Big Mountain, 82.46 28 IAMs_20 IAMs_20 22 54 22.8
comp=Z,761nm,21.0s
P18K Big Mountain, 82.46 28 P **P** **22 21 46.2 -0.7**
baz=248
BIDO Bidbid 82.53 294 P **P** **22 21 49.1 +1.1**
SMDO Samad 82.53 294 P **P** **22 21 48.6 +0.5**
DQM DQM 82.57 291 P **P** **22 21 49.1 +0.9**
OHAK Old Harbor 82.62 31 P **P** **22 21 47.6 -0.1**
baz=250
O18K Koktuh Hills 82.65 28 IAMs_20 IAMs_20 22 52 52.8
comp=Z,624nm,21.0s
O18K Koktuh Hills 82.65 28 P **P** **22 21 47.7 -0.1**
baz=248
N18K Kilae Creek 82.66 27 P **P** **22 21 48.2 +0.3**
N18K IAmb IAmb 22 22 00.5
comp=Z,38nm,1.1s
N18K Kilae Creek 82.66 27 P **P** **22 21 47.5 -0.3**
baz=247,SNR=5.8
Q19K Cape Douglas, 83.05 29 IAMs_20 IAMs_20 22 54 07.4
comp=Z,825nm,21.0s
Q19K Cape Douglas, 83.05 29 P **P** **22 21 48.8 -1.2**
baz=249
KDAK Kodiak Island 83.17 30 P **P** **22 21 50.4 -0.1**
comp=Z,9.9nm,0.8s,baz=215,slow=9.0,SNR=4.0
KDAK LR LR 22 55 42.6
comp=Z,838nm,20.1s,baz=261,slow=33
comp=Z,9.9nm,0.8s
O19K Port Alsworth 83.19 28 IAMs_20 IAMs_20 22 53 23.1
comp=Z,518nm,22.0s
RDOG Red Dog Mine 83.27 19 P **P** **22 21 46.9 -4.0**
baz=240
HOQ Hoqain 83.28 294 P **P** **22 21 54.0 +2.1**
SNR=6.6
HOQ P **P** **22 21 54.0 +2.1**
SNR=6.6
N19K Bonanza Creek 83.34 27 P **P** **22 21 51.9 +0.4**
N19K IAmb IAmb 22 22 03.7
comp=Z,63nm,1.1s
N19K Bonanza Creek 83.34 27 P **P** **22 21 51.7 +0.2**
baz=248,SNR=6.6
TTA Tatalina 83.50 25 P **P** **22 21 52.7 +0.5**
TTA IAmb IAmb 22 22 04.4
comp=Z,45nm,1.2s
TTA Tatalina 83.50 25 P **P** **22 21 52.7 +0.5**
TTA pmax pmax
comp=Z,45nm,1.2s
TTA Tatalina 83.50 25 P **P** **22 21 52.6 +0.3**
baz=246,SNR=14
Q20K Shuyak Island 83.55 30 P **P** **22 21 53.5 +1.0**
baz=250
L19K White Mountain 83.70 26 IAMs_20 IAMs_20 22 54 03.4
comp=Z,736nm,22.0s
L19K White Mountain 83.70 26 P **P** **22 21 53.8 +0.6**
baz=248,SNR=24
M19K Big River Lodg 83.80 26 P **P** **22 21 54.2 +0.5**
M19K IAmb IAmb 22 22 06.2
comp=Z,35nm,1.1s
M19K IAMs_20 IAMs_20 22 54 19.0
comp=Z,544nm,22.0s
M19K Big River Lodg 83.80 26 P **P** **22 21 54.5 +0.8**
baz=248
GCSA Galena City Sc 83.89 23 P **P** **22 21 54.3 +0.3**
baz=246,SNR=5.5
O20K Slope Mountain 83.94 28 P **P** **22 21 53.8 -0.8**
baz=250
L20K Farewell, AK 84.23 26 P **P** **22 21 56.4 +0.5**
baz=248,SNR=15
HOM Homer 84.26 29 P **P** **22 21 55.7 -0.3**
baz=251
M20K Styx River 84.34 26 P **P** **22 21 57.0 +0.5**
M20K IAmb IAmb 22 22 08.8
comp=Z,46nm,0.9s
M20K IAMs_20 IAMs_20 22 53 26.5
comp=Z,681nm,22.0s
M20K Styx River 84.34 26 P **P** **22 21 57.2 +0.6**
baz=249,SNR=14
UOSS Minazif 84.46 296 P **P** **22 21 57.9 -0.1**
UOSS IAmb IAmb 22 21 59.0
comp=Z,43nm,0.9s
UOSS Minazif 84.46 296 P **P** **22 21 58.6 +0.7**
UOSS Minazif 84.46 296 *i* P **P** **22 21 57.8 -0.1**
SNR=9.2
K20K Telida 84.48 25 IAMs_20 IAMs_20 22 55 28.0
comp=Z,458nm,22.0s
K20K Telida 84.48 25 P **P** **22 21 57.3 +0.2**
baz=248,SNR=19
BANOM Banah 84.51 296 P **P** **22 21 60.0 +1.8**
SNR=5.8
BANOM Banah 84.51 296 *i* P **P** **22 21 58.9 +0.7**
SNR=18
HATD Hatta, Dubai 84.51 295 P **P** **22 22 00.0 +1.9**
SNR=5.7
HATD P **P** **22 22 00.0 +1.9**
SNR=5.7
HATD Hatta, Dubai 84.51 295 *i* P **P** **22 21 58.5 +0.3**
SNR=11
MSFE Esma-Masafi 84.56 296 *i* P **P** **22 21 59.1 +0.7**
SNR=15
ASHO Ashiyiah 84.56 295 P **P** **22 21 59.3 +0.9**
ASHO Ashiyiah 84.56 295 *i* P **P** **22 21 58.7 +0.3**
SNR=8.1
MASF Masafi 84.56 296 P **P** **22 22 00.0 +1.6**
SNR=7.7
MASF P **P** **22 22 00.0 +1.6**
SNR=7.7
BRLK Bradley Lake 84.66 29 IAMs_20 IAMs_20 22 53 55.7
comp=Z,744nm,20.0s
SHME Shamm 84.67 297 P **P** **22 21 59.9 +1.0**
SHME P **P** **22 21 59.9 +1.0**
SHME Shamm 84.67 297 *i* P **P** **22 21 59.6 +0.7**
SNR=9.5
BRSE Bradley Lake S 84.72 29 P **P** **22 21 59.1 +0.6**
baz=252
J20K Nowinta River 84.75 24 P **P** **22 21 59.1 +0.7**
baz=248,SNR=23
ALNE Al Ain 84.76 295 P **P** **22 22 00.3 +0.9**
SNR=7.7
ALNE P **P** **22 22 00.3 +0.9**
SNR=7.7
ALNE Al Ain 84.76 295 *i* P **P** **22 22 00.1 +0.7**
SNR=10
GEYT Alibeck 84.83 309 P **P** **22 22 00.7 +1.1**
comp=Z,42nm,1.1s,baz=240,slow=15,SNR=49
comp=Z,42nm,1.1s
GEYT Alibeck 84.83 309 P **P** **22 22 00.6 +1.1**
GYA0B ALIBECK ARRAY 84.83 309 P **P** **22 22 00.3 +0.8**
CAPN Captain Cook N 84.86 28 P **P** **22 21 58.4 -0.6**
baz=251
NAZ Nazwa, Dubai 84.96 295 P **P** **22 22 01.1 +0.7**
NAZ P **P** **22 22 01.1 +0.7**
NAZ Nazwa, Dubai 84.96 295 *i* P **P** **22 22 00.8 +0.4**
SNR=7.2
FAQ Al Faqa, Dubai 84.99 295 P **P** **22 22 01.1 +0.6**
FAQ P **P** **22 22 01.1 +0.6**
FAQ Al Faqa, Dubai 84.99 295 *i* P **P** **22 22 01.0 +0.4**
SNR=11
SKT Skwentna 85.09 27 IAMs_20 IAMs_20 22 55 00.2
comp=Z,566nm,22.0s
SKT Skwentna 85.09 27 P **P** **22 21 58.4 -1.8**
baz=251,SNR=6.7
PPLA Purkeypile 85.11 26 P **P** **22 22 00.4 -0.1**
PPLA IAmb IAmb 22 22 21.6
comp=Z,23nm,1.0s
PPLA Purkeypile 85.11 26 P **P** **22 21 60.0 -0.5**
baz=250,SNR=5.1
UMZA Um Al Zommool 85.13 293 P **P** **22 22 01.8 +0.6**
UMZA P **P** **22 22 01.8 +0.6**
ASUD Al Ashush, Dub 85.21 295 P **P** **22 22 02.4 +0.8**
ASUD P **P** **22 22 02.4 +0.8**
ASUD Al Ashush, Dub 85.21 295 *i* P **P** **22 22 02.8 +1.2**
SNR=7.2
SUA Susitna One 85.27 27 P **P** **22 22 00.6 -0.7**
baz=251
QSPA South Pole Qui 85.30 180 LR LR 23 00 29.6
comp=Z,1µm,20.0s,baz=2.5,slow=36
QSPA South Pole Qui 85.30 180 P **P** **22 22 01.7 +0.3**
CAST Castle Rocks 85.33 25 P **P** **22 22 01.6 +0.2**
CAST IAmb IAmb 22 22 12.9
comp=Z,25nm,1.0s
CAST IAMs_20 IAMs_20 22 56 06.7
comp=Z,433nm,20.0s
CAST Castle Rocks 85.33 25 P **P** **22 22 01.2 -0.2**
baz=250,SNR=14
CHUM Lake Minchumin 85.40 25 P **P** **22 22 02.3 +0.7**
baz=250,SNR=36
RBK Rabkut 85.42 288 P **P** **22 22 03.8 +0.9**
RBK P **P** **22 22 03.8 +0.9**
O22K Cooper Landing 85.44 28 IAMs_20 IAMs_20 22 59 26.6
comp=Z,508nm,20.0s
O22K Cooper Landing 85.44 28 P **P** **22 22 01.7 -0.2**
baz=252
SEW Seward 85.45 29 P **P** **22 22 02.1 0.0**
SEW IAmb IAmb 22 22 13.4
comp=Z,51nm,1.0s
SEW Seward 85.45 29 P **P** **22 22 01.7 -0.3**
baz=253
IMAR Indian Mountai 85.58 22 P **P** **22 22 03.4 +0.8**
DOK Doka 85.61 289 P **P** **22 22 04.6 +0.9**
DOK P **P** **22 22 04.6 +0.9**
RC01 Rabbit Creek A 85.62 28 IAMs_20 IAMs_20 22 55 00.2
comp=Z,836nm,22.0s
RC01 Rabbit Creek A 85.62 28 P **P** **22 22 02.6 -0.2**
baz=252
M22K Willow 85.65 27 P **P** **22 22 02.4 -0.5**
baz=252
ABKAR Akbulak array 85.70 320 P **P** **22 22 03.0 -0.6**
ABKAR IAmb IAmb 22 22 04.7
comp=Z,33nm,0.9s
ABKAR Akbulak array 85.70 320 P **P** **22 22 02.8 -0.7**
H21K Melozitna Rive 85.83 23 IAMs_20 IAMs_20 22 56 33.6
comp=Z,659nm,20.0s
H21K Melozitna Rive 85.83 23 P **P** **22 22 04.5 +0.6**
baz=249,SNR=10
KTH Kantishna Hill 85.87 25 P **P** **22 22 03.9 -0.3**
KTH IAmb IAmb 22 22 15.2
comp=Z,34nm,0.9s
KTH IAMs_20 IAMs_20 22 56 04.8
comp=Z,573nm,22.0s
WHFO Wadi Hawf 85.87 288 P **P** **22 22 05.7 +0.6**
WHFO P **P** **22 22 05.7 +0.6**
I21K Tanana 85.98 23 P **P** **22 22 05.3 +0.8**
baz=250
BPAW Bear Paw Mtn. 86.02 25 P **P** **22 22 04.4 -0.5**
BPAW IAmb IAmb 22 22 17.7
comp=Z,38nm,1.5s
BPAW Bear Paw Mtn. 86.02 25 P **P** **22 22 04.5 -0.3**
baz=251,SNR=6.1
PMR Palmer 86.05 27 P **P** **22 22 04.6 -0.3**
baz=253
TRF Thorofare Moun 86.11 25 P **P** **22 22 04.7 -0.7**
TRF IAMs_20 IAMs_20 22 55 58.1
comp=Z,477nm,21.0s
TRF Thorofare Moun 86.11 25 P **P** **22 22 04.8 -0.7**
baz=252
GHO Glory Hole Cre 86.19 27 IAMs_20 IAMs_20 22 54 29.5
comp=Z,588nm,20.0s
ABTO Aybut 86.26 288 P **P** **22 22 07.4 +0.4**
ABTO P **P** **22 22 07.4 +0.4**
KNK Knik Glacier 86.30 28 IAMs_20 IAMs_20 22 56 26.4
comp=Z,607nm,20.0s
KNK Knik Glacier 86.30 28 P **P** **22 22 06.3 +0.1**
baz=253,SNR=6.7
MLY Manley 86.43 24 P **P** **22 22 06.9 +0.1**
MLY Manley 86.43 24 P **P** **22 22 07.1 +0.2**
baz=251,SNR=20
SML Sawmill 86.47 27 IAMs_20 IAMs_20 22 55 30.9
comp=Z,801nm,22.0s
SML Sawmill 86.47 27 P **P** **22 22 07.1 -0.1**
baz=253,SNR=9.3
WAT1 Susitna Watana 86.67 26 P **P** **22 22 07.7 -0.4**
baz=253
RND Reindeer 86.71 26 IAMs_20 IAMs_20 22 56 29.9
comp=Z,549nm,21.0s
A21K Barrow 86.73 17 P **P** **22 22 07.7 -0.4**
baz=245
M23K Glacier View 86.75 27 P **P** **22 22 08.2 -0.3**
baz=254
MCK McKinley 86.77 25 P **P** **22 22 08.0 -0.5**
MCK IAmb IAmb 22 22 19.5
comp=Z,38nm,0.9s
MCK McKinley 86.77 25 P **P** **22 22 08.0 -0.5**
MCK pmax pmax
comp=Z,38nm,0.9s
MCK MLR MLR
comp=Z,400nm,21.0s
MCK McKinley 86.77 25 P **P** **22 22 07.8 -0.7**
baz=253,SNR=7.8
Q23K Middleton Isla 86.78 30 P **P** **22 22 08.9 +0.3**
baz=255
GLI Glacier Island 86.79 28 P **P** **22 22 08.3 -0.4**
baz=255
SCM Sheep Creek Mo 86.94 27 P **P** **22 22 09.7 +0.2**
baz=254,SNR=7.6
HIN Hinchinbrook I 86.95 29 IAMs_20 IAMs_20 22 56 40.5
comp=Z,788nm,21.0s
SVE Sverdlovsk 86.95 328 *e* P **P** **22 22 08.5 -1.0**
SVE pmax pmax
comp=Z,24nm,1.1s
SVE MLR MLR
comp=Z,365nm,23.0s
WAT6 Susitna Watana 86.96 27 P **P** **22 22 09.2 -0.5**
baz=254,SNR=7.7
NEA2 Nenana 86.97 24 P **P** **22 22 09.4 -0.1**
NEA2 IAmb IAmb 22 22 22.5
comp=Z,20nm,1.0s
NEA2 Nenana 86.97 24 P **P** **22 22 08.7 -0.8**
baz=253,SNR=9.9
I23K Minto, Yukon-K 87.02 24 P **P** **22 22 09.9 +0.3**
I23K IAMs_20 IAMs_20 22 59 37.1
comp=Z,413nm,20.0s
I23K Minto, Yukon-K 87.02 24 P **P** **22 22 10.1 +0.4**
baz=252,SNR=23
AKTO Aktyubinsk 87.15 321 P **P** **22 22 09.6 -1.0**
comp=Z,13nm,1.0s,baz=76,slow=5.8,SNR=18
comp=Z,13nm,1.0s
H23K Yukon River 87.15 23 IAMs_20 IAMs_20 22 58 52.7
comp=Z,404nm,18.0s
H23K Yukon River 87.15 23 P **P** **22 22 10.9 +0.6**
baz=252,SNR=19
DHY Denali Highway 87.26 26 P **P** **22 22 11.0 0.0**
DHY IAMs_20 IAMs_20 22 56 48.5
comp=Z,663nm,21.0s
DHY Denali Highway 87.26 26 P **P** **22 22 11.1 0.0**
baz=254,SNR=17
COLD Coldfoot 87.34 22 P **P** **22 22 11.9 +0.7**
COLD IAmb IAmb 22 22 24.0
comp=Z,48nm,1.1s
COLD Coldfoot 87.34 22 P **P** **22 22 12.1 +0.9**
baz=252,SNR=14
EYAK Cordova Ski Ar 87.35 29 P **P** **22 22 11.2 -0.2**
baz=256
MDM Murphy Dome 87.42 24 P **P** **22 22 10.4 -1.2**
MDM IAmb IAmb 22 22 22.5
comp=Z,49nm,1.7s
MDM IAMs_20 IAMs_20 22 59 57.8
comp=Z,427nm,21.0s
DIV Divide 87.48 28 P **P** **22 22 12.0 -0.1**
KLU Klutina 87.50 28 P **P** **22 22 12.6 +0.4**
KLU IAmb IAmb 22 22 24.8
comp=Z,47nm,1.0s
KLU IAMs_20 IAMs_20 22 57 07.0
comp=Z,742nm,21.0s
KLU Klutina 87.50 28 P **P** **22 22 12.6 +0.4**
baz=256,SNR=11
CCB Clear Creek Bu 87.51 25 P **P** **22 22 10.8 -1.2**
M24K Tolsona, Glenn 87.54 27 P **P** **22 22 12.9 +0.5**
baz=255,SNR=7.4
TCOL CIGO, UAF Yank 87.55 24 P **P** **22 22 11.5 -0.7**
baz=254
COLA College 87.55 24 *c i* P **P** **22 22 11.4 -0.8**
COLA pmax pmax
comp=Z,20nm,1.0s
COLA College 87.55 24 P **P** **22 22 11.3 -0.8**
baz=254
POKR Poker Plat Res 87.79 24 P **P** **22 22 12.1 -1.3**
baz=254
HDA Harding Lake 87.80 25 P **P** **22 22 12.5 -0.9**
baz=255,SNR=8.9
H24K Noodor Dome 87.81 23 IAMs_20 IAMs_20 22 59 14.1
comp=Z,403nm,20.0s
H24K Noodor Dome 87.81 23 P **P** **22 22 14.0 +0.4**
baz=254,SNR=37
IL31 87.92 24 P **P** **22 22 13.1 -0.9**
IL31 IAmb IAmb 22 22 24.4
comp=Z,36nm,0.9s
ILAR Eielson Array 87.92 24 P **P** **22 22 12.8 -1.2**
comp=Z,16nm,0.9s,baz=263,slow=4.6,SNR=101
comp=Z,16nm,0.9s
ILAR Eielson Array 87.92 24 P **P** **22 22 12.9 -1.1**
ARU Arti 87.99 327 LR LR 23 00 27.1
comp=Z,234nm,21.8s,baz=84,slow=37
ARU Arti 87.99 327 P **P** **22 22 13.3 -1.2**
ARU IAmb IAmb 22 22 14.5
comp=Z,29nm,1.0s
ARU Arti 87.99 327 *c i* P **P** **22 22 13.3 -1.2**
ARU 22 25 41.4
ARU PPP PPP 22 27 37.6
ARU S **SKSac 22 32 39.1 -0.6**
ARU pmax pmax
comp=Z,37nm,1.1s
ARU MLR MLR
comp=Z,317nm,22.0s
BMRM Bremner River 87.99 28 P **P** **22 22 14.5 -0.1**
baz=257,SNR=12
TOLK Toolik Lake Re 88.01 20 IAMs_20 IAMs_20 23 00 38.3
comp=Z,429nm,20.0s
TOLK Toolik Lake Re 88.01 20 P **P** **22 22 14.9 +0.5**
baz=252,SNR=15
PAX Paxson 88.07 26 P **P** **22 22 15.0 +0.2**
baz=256,SNR=10
HARP HAARP 88.07 27 P **P** **22 22 15.1 +0.2**
baz=256
K24K Donnelly Dome 88.14 26 P **P** **22 22 15.0 -0.1**
baz=256
N25K Chitina, Valde 88.14 28 P **P** **22 22 15.6 +0.4**
baz=257,SNR=9.8
GLB Gilahina Butte 88.47 28 IAMs_20 IAMs_20 22 57 52.8
comp=Z,653nm,21.0s
J25K Salcha River, 88.51 25 IAMs_20 IAMs_20 22 58 01.6
comp=Z,461nm,21.0s
J25K Salcha River, 88.51 25 P **P** **22 22 16.3 -0.6**
baz=256,SNR=24
RIDG Independent Ri 88.53 26 IAMs_20 IAMs_20 22 57 35.1
comp=Z,688nm,21.0s
RIDG Independent Ri 88.53 26 P **P** **22 22 16.9 -0.1**
baz=256,SNR=16
VRDI Verde Repeater 88.60 28 P **P** **22 22 17.8 +0.2**
VRDI IAmb IAmb 22 22 29.4
comp=Z,28nm,1.0s
VRDI IAMs_20 IAMs_20 22 59 11.0
comp=Z,690nm,19.0s
SNH Sunshine Point 88.67 29 P **P** **22 22 18.8 +1.1**
WAX Waxell Ridge 88.72 29 IAMs_20 IAMs_20 22 54 19.4
comp=Z,582nm,20.0s
TGL Tana Glacier 88.80 29 IAMs_20 IAMs_20 22 56 38.3
comp=Z,634nm,22.0s
MCARA McCarthy VSAT 88.83 28 IAMs_20 IAMs_20 22 58 17.3
comp=Z,652nm,20.0s
MCARA McCarthy VSAT 88.83 28 P **P** **22 22 18.7 +0.3**
baz=258
SCRK Sand Creek 88.95 26 IAMs_20 IAMs_20 22 59 49.2
comp=Z,537nm,20.0s
SCRK Sand Creek 88.95 26 P **P** **22 22 19.2 +0.1**
baz=257,SNR=7.9
ISLE Juniper Island 89.00 29 IAMs_20 IAMs_20 22 59 27.8
comp=Z,563nm,20.0s
L26K Log Cabin Wild 89.03 27 IAMs_20 IAMs_20 22 57 22.3
comp=Z,724nm,22.0s
L26K Log Cabin Wild 89.03 27 P **P** **22 22 19.6 +0.3**
baz=258
M26K Nabesna, AK 89.05 27 P **P** **22 22 20.0 +0.5**
baz=258
MESA MESA 89.11 30 IAMs_20 IAMs_20 22 58 14.7
comp=Z,645nm,22.0s
MESA MESA 89.11 30 P **P** **22 22 20.5 +0.5**
baz=259
J26L Joseph Creek 89.25 25 P **P** **22 22 20.6 +0.2**
baz=258,SNR=28
YAH Yahtse 89.25 29 IAMs_20 IAMs_20 22 59 01.2
comp=Z,651nm,21.0s
GRNC Granite Creek 89.31 29 IAMs_20 IAMs_20 22 56 41.9
comp=Z,544nm,21.0s
VOI Vohitsoka 89.33 248 P **P** **22 22 22.1 +0.3**
VOI IAmb IAmb 22 22 42.4
comp=Z,50nm,1.3s
VOI Vohitsoka 89.33 248 P **P** **22 22 22.6 +0.8**
BARN Barnard Glacie 89.42 29 IAMs_20 IAMs_20 22 56 33.7
comp=Z,663nm,22.0s
BMAR Burnt Mountain 89.49 22 P **P** **22 22 22.7 +1.2**
CTG Chitna Glacier 89.55 29 P **P** **22 22 22.8 +0.8**
baz=260,SNR=16
TABL Table Mountain 89.55 29 IAMs_20 IAMs_20 22 59 22.4
comp=Z,590nm,20.0s
CTGM Chitina Glacie 89.56 29 IAMs_20 IAMs_20 22 56 14.3
comp=Z,609nm,22.0s
M27K Edge Creek, AK 89.56 27 P **P** **22 22 22.3 +0.4**
baz=259,SNR=11
LOGN Logan Glacier 89.69 29 IAMs_20 IAMs_20 22 59 57.9
comp=Z,459nm,20.0s
L27K Beaver Creek, 89.71 27 IAMs_20 IAMs_20 23 01 40.4
comp=Z,434nm,20.0s
L27K Beaver Creek, 89.71 27 P **P** **22 22 23.2 +0.6**
baz=259,SNR=12
BCAR Beaver Creek A 89.73 27 P **P** **22 22 23.0 +0.4**
K27K Chicken 89.78 26 P **P** **22 22 24.1 +1.3**
baz=259
PINM Pinnacle 89.93 30 P **P** **22 22 24.2 +0.5**
baz=261
BVCY Beaver Creek 90.03 27 P **P** **22 22 24.7 +0.6**
baz=260
YUK3 Moose Creek 90.11 28 P **P** **22 22 24.9 +0.3**
baz=260,SNR=17
PNL Peninsula 90.29 30 P **P** **22 22 25.6 +0.3**
baz=261
YUK8 Steele Glacier 90.36 29 P **P** **22 22 26.1 +0.2**
baz=261
YUK4 Talbot Arm 90.90 29 P **P** **22 22 29.0 +0.6**
baz=262
DAWY Dawson 90.95 26 P **P** **22 22 28.6 +0.3**
DAWY IAmb IAmb 22 22 41.4
comp=Z,28nm,1.2s
DAWY Dawson 90.95 26 P **P** **22 22 28.7 +0.4**
baz=261
YUK6 Outpost Mounta 90.98 29 P **P** **22 22 29.2 +0.4**
baz=262
HYT Haines Junctio 91.38 29 P **P** **22 22 31.1 +0.6**
HYT IAmb IAmb 22 22 43.3
comp=Z,32nm,1.1s
HYT Haines Junctio 91.38 29 P **P** **22 22 31.4 +0.9**
baz=263
I29M Ogilvie Camp, 91.60 25 P **P** **22 22 31.8 +0.5**
baz=262
N30M Aishikik Lake 91.66 29 P **P** **22 22 32.2 +0.5**
baz=263,SNR=6.2
PLBC Pleasant Camp 91.79 31 P **P** **22 22 32.2 0.0**
baz=264,SNR=5.5
M30M Minto, Yukon 91.92 27 P **P** **22 22 33.3 +0.4**
baz=264
O30N Mendenhall 92.07 29 P **P** **22 22 34.0 +0.5**
baz=264
N31M Braeburn, Yuko 92.29 29 IAMs_20 IAMs_20 23 00 49.6
comp=Z,642nm,21.0s
N31M Braeburn, Yuko 92.29 29 P **P** **22 22 35.3 +0.7**
baz=264
SKAG Skagway 92.32 31 P **P** **22 22 35.4 +0.8**
baz=265
EPYK Eagle Plains 92.37 24 IAMs_20 IAMs_20 23 03 22.5
comp=Z,394nm,20.0s
EPYK Eagle Plains 92.37 24 P **P** **22 22 35.2 +0.4**
baz=264
WHY Whitehorse 92.65 30 P **P** **22 22 36.6 +0.3**
baz=265
M31M Drury Creek, Y 93.00 28 IAMs_20 IAMs_20 22 59 16.6
comp=Z,583nm,21.0s
M31M Drury Creek, Y 93.00 28 P **P** **22 22 38.3 +0.5**
baz=266
P32M Atlin 93.15 31 P **P** **22 22 39.6 +1.0**
baz=266
KIRV Kirov 93.16 328 LR LR 23 06 51.2
comp=Z,390nm,21.2s,baz=72,slow=37
KIRV Kirov 93.16 328 *c i* P **P** **22 22 37.4 -1.1**

CRAG Craig 93.21 35 P **P** **22 22 38.9 +0.1**
baz=266
FARO Faro, Yukon 93.49 28 P **P** **22 22 40.5 +0.4**
baz=267
P33M Teslin, Yukon 93.64 30 P **P** **22 22 41.5 +0.6**
baz=267
INK Inuvik 93.76 22 P **P** **22 22 39.8 -1.3**
comp=Z,1.6nm,0.5s,baz=280,slow=3.8,SNR=1.8
INK LR LR 23 04 41.3
comp=Z,208nm,19.2s,baz=225,slow=35
comp=Z,1.6nm,0.5s
BELG Belogornoye 93.84 322 P **P** **22 22 40.8 -1.0**
comp=Z,53nm,1.0s,baz=141,slow=2.1,SNR=5.8
comp=Z,53nm,1.0s
BELG Belogornoye 93.84 322*c i*P **P** **22 22 40.1 -1.7**
BELG pmax pmax
comp=Z,14nm,1.1s
RAYN Ar Rayn 94.05 293 P **P** **22 22 43.2 -0.4**
RAYN IAmb IAmb 22 22 44.6
comp=Z,13nm,1.0s
RAYN Ar Rayn 94.05 293 P **P** **22 22 43.2 -0.4**
RAYN pmax pmax
comp=Z,13nm,1.0s
RAYN Ar Rayn 94.05 293 P **P** **22 22 44.2 +0.7**
RAYN Ar Rayn 94.05 293 *i* P **P** **22 22 43.5 -0.1**
SNR=13
MMPY Sheldon Lake, 94.48 28 P **P** **22 22 45.1 +0.4**
baz=269
DLBC Dease Lake 95.01 32 LR LR 23 02 22.6
comp=Z,319nm,20.1s,baz=281,slow=33
PRGR Permogore 95.16 331 *e*P **P** **22 22 44.9 -2.8**
PRGR *e**PP **pP** **22 22 56.2 -3.9**
PRGR *e* 22 26 36.9
PRGR *e*S **SKSac** **22 33 17.3 -2.8**
GNI Garni 95.41 310 P **P** **22 22 49.3 -0.3**
comp=Z,3.5nm,0.8s,baz=168,slow=5.8,SNR=4.4
comp=Z,3.5nm,0.8s
GNI Garni 95.41 310 P **P** **22 22 48.9 -0.7**
GNI Garni 95.41 310↓ *e*P **P** **22 22 49.0 -0.5**
GNI pmax pmax
comp=Z,13nm,1.6s
BBB Bella Bella 96.08 38 LR LR 22 58 17.4
comp=Z,354nm,21.8s,baz=222,slow=30
ZEI Tsey 96.09 312 *e*P **P** **22 22 50.9 -1.7**
ZEI pmax pmax
comp=Z,16nm,1.4s
A36M Sachs Harbour 96.52 18 IAMs_20 IAMs_20 23 03 30.0
comp=Z,455nm,22.0s
GEVA Gevas 96.68 308 P **P** **22 22 54.6 -0.8**
GEVA IAmb IAmb 22 22 56.4
comp=Z,21nm,1.2s
KBZ Khabaz 96.83 313 P **P** **22 22 54.0 -1.7**
comp=Z,2.9nm,1.0s,baz=167,slow=1.5,SNR=3.6
comp=Z,2.9nm,1.0s
KBZ Khabaz 96.83 313*ce*P **P** **22 22 54.1 -1.6**
KBZ pmax pmax
comp=Z,8.0nm,1.5s
KIV Kislovodsk 96.98 314 *e*P **P** **22 22 55.2 -1.3**
KIV pmax pmax
comp=Z,5.0nm,1.1s
C36M Paulatuk 97.16 21 IAMs_20 IAMs_20 23 02 31.1
comp=Z,452nm,18.0s
BELA Belgrano 2 97.47 182 P **P** **22 22 57.7 -0.3**
GURO Guroymak-BITLI 97.49 308 P **P** **22 22 58.6 -0.4**
GURO IAmb IAmb 22 23 01.0
comp=Z,21nm,1.5s
VRH Novokhopyorsk 97.50 321 *e*P **P** **22 22 56.1 -2.4**
VRH pmax pmax
comp=Z,30nm,0.9s
KLMR Klimovskoe 98.14 331 *e*P **P** **22 22 58.5 -2.7**
KLMR *e* 22 26 59.6
KLMR pmax pmax
comp=Z,29nm,1.1s
KLMR Klimovskoe 98.14 331 *e*P **P** **22 22 58.5 -2.7**
KLMR AMP 22 23 00.8
comp=Z,29nm,1.1s
KLMR *e*PP **PP** **22 26 59.7 -1.0**
TROLL Troll, Antarti 98.27 193 Pdiff Pdif 22 23 02.9 +1.1
VORR Voronezh 99.04 321 *e*P **Pdif** **22 23 03.7 -1.7**
VORR pmax pmax
comp=Z,30nm,0.7s
VSR Storozhevoye 99.10 321 *e*P **Pdif** **22 23 02.5 -3.2**
VSR pmax pmax
comp=Z,20nm,0.9s
SOC Sochi 99.14 313 *e*P **Pdif** **22 23 04.0 -2.1**
SOC *e* 22 27 06.3
SOC *e*S **SKSac** **22 33 39.4 -2.0**
SOC *e*SSS SSS 22 45 12.5
LPSR Galich'ya Gora 99.15 322 *e*P **Pdif** **22 23 04.2 -1.7**
LPSR pmax pmax
comp=Z,20nm,1.0s
MOS Moscow 99.63 326 *e*P **Pdif** **22 23 05.2 -2.8**
MOS *e* 22 23 15.7
MOS *e* 22 27 10.6
MOS *e* 22 33 40.8
MOS pmax pmax
comp=Z,30nm,0.9s
MOS MLR MLR
comp=Z,300nm,24.0s
SNAA Sanae 99.65 192 Pdiff **Pdif** **22 23 08.6 +0.7**
SNAA Sanae 99.65 192 Pdif **Pdif** **22 23 08.3 +0.4**
SNAA Sanae 99.65 192 P **Pdif** **22 23 08.3 +0.4**
SNAA pmax pmax
comp=Z,10.0nm,1.2s
SNAA MLR MLR
comp=Z,2µm,20.0s
APA Apatity 99.81 338↓ *i*P **Pdif** **22 23 04.3 -4.2**
APA pmax pmax
comp=Z,8.0nm,1.2s
YBH Yreka Blue Hor 100.07 49 P **Pdif** **22 23 09.2 -1.3**
comp=Z,9.8nm,1.4s,baz=155,slow=9.8,SNR=3.3
YBH LR LR 23 00 21.5
comp=Z,502nm,21.7s,baz=286,slow=30
comp=Z,9.8nm,1.4s
OBN Obninsk 100.30 325 P **Pdif** **22 23 09.6 -1.3**
comp=Z,3.1nm,0.4s,baz=162,slow=4.6,SNR=2.3
OBN Obninsk 100.30 325 IAMs_20 IAMs_20 23 10 48.0
comp=Z,549nm,22.0s
OBN Obninsk 100.30 325*c i*P **Pdif** **22 23 09.6 -1.3**
OBN *e* 22 27 16.3
OBN pmax pmax
comp=Z,30nm,1.2s
OBN MLR MLR
comp=Z,535nm,22.0s
KMBO Kilima Mbogo 100.54 268 P **Pdif** **22 23 13.0 -0.3**
comp=Z,1.6nm,0.7s,baz=58,slow=3.9,SNR=6.8
KMBO Kilima Mbogo 100.54 268 P **Pdif** **22 23 14.5 +1.1**
ANN Anapa 100.71 315 *e*P **Pdif** **22 23 08.9 -4.1**
ANN *e*S **SKSac** **22 33 45.2 -3.9**
ANN pmax pmax
comp=Z,37nm,0.9s
J05D Fort Rock, OR 101.07 47 Pdiff **Pdif** **22 23 16.0 +1.0**
baz=274
VNA3 Neumayer Olymp 101.30 190 Pdiff **Pdif** **22 23 13.9 -1.3**
VNA1 Neumayer--Stat 101.53 191 Pdiff **Pdif** **22 23 16.8 +0.7**
ASF Jabal al Asfar 101.80 302 P **Pdif** **22 23 18.6 +0.3**
comp=Z,4.2nm,0.7s,baz=206,slow=1.9,SNR=8.8
ARCES ARCESS Array B 102.08 341 P **Pdif** **22 23 17.6 -1.0**
comp=Z,3.9nm,1.0s,baz=92,slow=6.3,SNR=4.6
YKA Yellowknife Ar 102.15 27 PKKPab PKKPdf 22 39 43.0 +12
comp=Z,2.7nm,0.9s,baz=92,slow=4.9,SNR=9.6
MMAI Mount Meron Ar 103.02 303 Pdiff **Pdif** **22 23 24.1 +0.4**
comp=Z,3.5nm,0.9s,baz=74,slow=9.6,SNR=6.8
NVAR Mina Array Bea 103.67 52 Pdiff **Pdif** **22 23 24.9 -1.8**
comp=Z,0.3nm,0.5s,baz=248,slow=4.5,SNR=2.6
NVAR PP **PKiKP** **22 27 45.8 +0.9**
comp=Z,0.2nm,0.3s,baz=259,slow=9.1,SNR=2.7
NVAR PKKPab PKKPdf 22 39 38.4 +10
comp=Z,1.2nm,0.8s,baz=100,slow=5.4,SNR=7.2
BMO Blue Mountains 103.74 45 IAMs_20 IAMs_20 23 04 22.7
comp=Z,364nm,20.0s
BRTR Keskin Array B 103.95 310 Pdiff **Pdif** **22 23 26.5 -1.3**
comp=Z,1.2nm,0.8s,baz=116,slow=5.6,SNR=6.9
BRTR PP **PP** **22 27 46.2 +0.8**
comp=Z,1.3nm,1.0s,baz=106,slow=4.4,SNR=3.6
BRTR Keskin Array B 103.95 310 Pdif **Pdif** **22 23 26.1 -1.7**
BRTR Keskin Array B 103.95 310 P **Pdif** **22 23 26.1 -1.7**
FINES FINESS Array B 104.42 333 Pdiff **Pdif** **22 23 27.8 -1.3**
comp=Z,3.7nm,0.9s,baz=85,slow=4.0,SNR=10
FINES PKiKP **PKiKP** **22 27 45.3 +0.1**
comp=Z,1.3nm,0.6s,baz=106,slow=3.0,SNR=3.8
FINES PKKPab **PKKPab** **22 39 33.5 -1.1**
comp=Z,1.5nm,0.9s,baz=251,slow=4.3,SNR=3.7
FINES FINESS Array B 104.42 333 Pdif **Pdif** **22 23 28.3 -0.8**
FINES FINESS Array B 104.42 333 P **Pdif** **22 23 28.3 -0.8**
PLID Pearl Lake 104.62 45 IAMs_20 IAMs_20 23 06 56.2
comp=Z,528nm,21.0s
MNK Minsk 105.35 325 *i* P **Pdif** **22 23 32.2 -1.2**
MNK *i* 22 27 50.7
MNK *i* 22 34 50.3
MNK *i* SS SS 22 42 45.9 -2.6
MNK *i* SSS SSS 22 46 46.0
MNK MLR MLR
comp=N,416nm,24.0s
MNK MLR MLR
comp=E,55nm,26.0s
MNK Minsk 105.35 325 *i* P **Pdif** **22 23 32.3 -1.2**
MNK *i* P **Pdif** **22 23 32.3 -1.2**
MNK *i* P **Pdif** **22 23 32.3 -1.2**
baz=76
MNK *i* PP **PKiKP** **22 27 50.7 +3.5**
MNK *i* PPP PPP 22 30 04.3
MNK *i* SKS **SKSdf** **22 34 50.4 -5.4**
MNK *i* SS **SS** **22 42 46.0 -2.6**
MNK *i* SSS SSS 22 46 46.1
MNK *i* LQ LQ 23 05 11.8
MNK *i* LR LR 23 08 15.2
MNK *i* LRM MLR 23 11 05.4
comp=N,416nm,23.5s
MNK *i* LRM MLR 23 11 22.6
comp=E,55nm,26.1s
MNK *i* LRM MLR 23 11 41.6
comp=Z,6µm,21.6s
AKASG Malin Array Be 105.40 321 Pdiff **Pdif** **22 23 32.0 -1.7**
comp=Z,1.8nm,0.8s,baz=60,slow=4.8,SNR=7.6
AKASG PKiKP **PKiKP** **22 27 47.4 0.0**
comp=Z,0.6nm,0.5s,baz=52,slow=2.6,SNR=5.9
HEC Hector,Ludlow 105.56 55 PKiKP **PKiKP** **22 27 48.9 +0.6**
baz=275
ELK Elko 105.77 49 PP **PP** **22 27 59.1 +0.1**
comp=Z,0.5nm,0.4s,baz=203,slow=3.2,SNR=3.7
BELC Belle Mtn. Jos 105.92 56 PKiKP **PKiKP** **22 27 49.8 +0.7**
baz=275
IKP In-Ko-Pah, Jac 105.94 58 PKiKP **PKiKP** **22 27 49.5 +0.4**
baz=275
HLID Hailey 105.98 46 PKiKP **PKiKP** **22 27 49.7 +0.7**
baz=279
GMRC Granite Mounta 106.12 55 PKiKP **PKiKP** **22 27 49.7 +0.3**
baz=276
SWSC Sam W. Stewart 106.17 57 PKiKP **PKiKP** **22 27 50.3 +0.9**
baz=275
MBAR Mbarara 107.08 268 IAMs_20 IAMs_20 23 06 34.2
comp=Z,599nm,21.0s
PABE Paberze 107.25 327 IAMs_20 IAMs_20 23 15 30.7
comp=Z,342nm,20.0s
DUG Dugway, Tooele 107.68 49 IAMs_20 IAMs_20 23 08 23.6
comp=Z,469nm,18.0s
DUG Dugway, Tooele 107.68 49 PKiKP **PKiKP** **22 27 53.5 +1.3**
baz=279
SUW Suwalki 108.14 326 IAMs_20 IAMs_20 23 17 27.3
comp=Z,487nm,20.0s
HWUT Hardware Ranch 108.38 48 IAMs_20 IAMs_20 23 05 59.8
comp=Z,412nm,20.0s
MLR Muntele Rosu 108.65 316 PP **PP** **22 28 20.4 +0.6**
comp=Z,6.4nm,0.9s,baz=52,slow=3.6,SNR=5.1
WUAZ Wupatki 109.52 54 PKiKP **PKiKP** **22 27 55.8 0.0**
baz=278
PDAR Pinedale Array 109.61 46 Pdiff **Pdif** **22 23 54.9 +1.9**
comp=Z,0.2nm,0.6s,baz=270,slow=3.4,SNR=1.9
PDAR PKiKP **PKiKP** **22 27 56.1 +0.3**
comp=Z,0.6nm,0.7s,baz=202,slow=1.6,SNR=5.0
PDAR PKKPab **PKKPab** **22 39 12.0 0.0**
comp=Z,0.3nm,0.5s,baz=48,slow=2.7,SNR=1.7
LAO LASA Array 110.96 42 PKiKP **PKiKP** **22 27 58.4 +0.4**
baz=286
NOA NORSAR Array B 111.13 335 PKiKP **PKiKP** **22 27 57.4 -0.5**
comp=Z,1.0nm,0.8s,baz=57,slow=1.7,SNR=3.8
O20A White River Ci 111.14 49 PKiKP **PKiKP** **22 27 58.9 +0.1**
baz=282
MVCO Mesa Verde 111.52 52 PKiKP **PKiKP** **22 27 59.5 -0.1**
baz=281
PSZ Piszkesteto 112.01 320 IAMs_20 IAMs_20 23 22 45.3
comp=Z,315nm,20.0s
KONO Kongsberg 112.54 334 IAMs_20 IAMs_20 23 17 13.8
comp=Z,443nm,21.0s
N23A Red Feather La 112.67 48 PKiKP **PKiKP** **22 28 01.5 -0.2**
baz=284
MORC Moravsky Berou 112.84 323 *e*PKiKP **PKiKP** **22 28 02.3 +0.8**
MORC *e* 22 35 57.6
PHWY Pilot Hill 112.93 47 IAMs_20 IAMs_20 23 01 24.2
comp=Z,236nm,19.0s
121A Cookes Peak, D 112.93 57 PKiKP **PKiKP** **22 28 03.2 +0.8**
baz=280
JAVC Velka Javorina 113.09 322 *e*PKiKP **PKiKP** **22 28 03.9 +1.9**
JAVC *e* 22 36 00.6
DIVS Divibare 113.10 316 IAMs_20 IAMs_20 23 26 37.6
comp=Z,222nm,18.0s
ISCO Idaho Springs 113.18 49 PKiKP **PKiKP** **22 28 03.3 +0.5**
baz=284
KRLC Kraliky 113.19 323 *e*PKiKP **PKiKP** **22 28 01.8 -0.3**
KRLC *e* 22 28 07.9
KRLC Kraliky 113.19 323 *e*PKP **PKiKP** **22 28 01.8 -0.3**
KRLC *ex* x 22 28 07.9
OSTC Ostas 113.35 324 *e*PKP **PKiKP** **22 28 03.1 +0.7**
DPC Dobruska-Polom 113.36 324 *e*PKiKP **PKiKP** **22 28 02.9 +0.4**
DPC Dobruska-Polom 113.36 324 *e*PKP **PKiKP** **22 28 02.9 +0.4**
Y22D IRIS PASSCAL I 113.37 55 PKiKP **PKiKP** **22 28 04.0 +0.9**
baz=281
CHVC Chvalec 113.43 324 *e*PKP **PKiKP** **22 28 03.2 +0.6**
ANMO Albuquerque 113.58 54 PKiKP **PKiKP** **22 28 04.1 +0.6**
comp=Z,3.1nm,1.0s,baz=228,slow=3.2,SNR=6.1
ANMO Albuquerque 113.58 54 PKiKP **PKiKP** **22 28 04.4 +0.9**
baz=281
SDCO Great Sand Dun 113.75 51 PKiKP **PKiKP** **22 28 04.5 +0.6**
baz=283
KRUC Moravsky 113.80 322 *e*PKiKP **PKiKP** **22 28 03.9 +0.6**
KRUC *e* 22 36 00.8
TIR Tirane 113.96 313 IAMs_20 IAMs_20 23 26 34.8
comp=Z,301nm,18.0s
PDG Podgorica 114.09 315 IAMs_20 IAMs_20 23 21 37.1
comp=Z,342nm,22.0s
TREC Trest 114.27 323 *e*PKiKP **PKiKP** **22 28 04.4 +0.2**
TREC Trest 114.27 323 *e*PKP **PKiKP** **22 28 04.4 +0.2**
PVCC Panska Ves 114.32 324 *e*PKiKP **PKiKP** **22 28 04.9 +0.7**
PVCC Panska Ves 114.32 324 *e*PKP **PKiKP** **22 28 04.9 +0.7**
RONA Rosalia, Austr 114.37 321 *e*P PKPdf 22 28 04.2 -0.2
comp=Z,4.3nm,1.0s
BRG Berggiesshubel 114.54 325 *e*PKP PKPdf 22 28 05.2 +0.6
BRG Amp 22 28 06.0
comp=Z,5.4nm,1.0s
BRG Berggiesshubel 114.54 325 *e*PKiKP PKPdf 22 28 05.2 +0.6
BRG pmax pmax
comp=Z,5.0nm,1.0s
CONA Conrad Observa 114.55 321 *e*P **PKiKP** **22 28 04.1 -0.8**
comp=Z,3.8nm,0.8s
PRU Pruhonice 114.56 324 *e*PKiKP PKPdf 22 28 04.8 +0.1
PRU Pruhonice 114.56 324 *e*PKP PKPdf 22 28 04.8 +0.1
T25A Trinidad 114.73 51 PKiKP **PKiKP** **22 28 06.6 +0.9**
baz=284
CLL Collm 114.89 325 IAMs_20 IAMs_20 23 25 24.9
comp=Z,358nm,21.0s
CLL Collm 114.89 325 *i* PKiKP PKPdf 22 28 05.6 +0.3
CLL *e* 22 38 42.0
CLL pmax pmax
comp=Z,6.0nm,0.8s
CLL Collm 114.89 325 *e*Pdif **Pdif** **22 24 16.0 0.0**
CLL *i* PKiKP PKPdf 22 28 05.6 +0.3
comp=Z,6.0nm,0.8s
CLL *e*PP **PP** **22 29 06.0 +2.0**
CLL *ex* x 22 38 12.0
CLL *e*PKKPbc **PKKPbc** **22 38 42.0 -1.8**
CLL *e*PS **PKKPbc** **22 38 42.0 -1.8**
CLL *e*PKKPab **PKKPab** **22 38 50.0 +1.9**
CLL *e*PPS PPS 22 39 54.0
CLL *ex* x 22 40 54.0
CLL *e*SS SS 22 45 00.0 +3.7
CLL Lm MLR 23 25 00.0
comp=N,200nm,20.4s
CLL Lm MLR 23 25 00.0
comp=E,200nm,20.8s
ARSA Arzberg 115.02 321 *e*P **PKPdf** **22 28 06.3 +0.6**
comp=E,2.9nm,0.7s
MNTX Cornudas Mount 115.08 57 IAMs_20 IAMs_20 23 05 39.2
comp=Z,238nm,20.0s
MNTX Cornudas Mount 115.08 57 PKiKP **PKiKP** **22 28 06.7 +0.5**
baz=281
CKRC Cesky Krumlov 115.17 323 *e*PKP **PKPdf** **22 28 06.1 +0.2**
CKRC *ex* x 22 28 16.9
KHC Kasperske Hory 115.48 323↓ *i*/PKiKP **PKPdf** **22 28 06.9 +0.3**
KHC Kasperske Hory 115.48 323 *e*PKP **PKiKP** **22 28 02.2 -4.4**
KHC *ex* x 22 28 17.2
GEC2 GERESS Array S 115.52 323 **PKPdf** **22 28 06.8 0.0**
GERES GERESS Array B 115.52 323 PKP **PKPdf** **22 28 06.9 +0.2**
comp=Z,1.5nm,0.6s,baz=66,slow=3.2,SNR=19
GERES PKKPab **PKKPab** **22 38 45.2 -0.4**
comp=Z,0.8nm,0.9s,baz=235,slow=4.7,SNR=4.2
GERES GERESS Array B 115.52 323 **PKiKP** **22 28 06.3 -0.4**
SOKA Soboth 115.54 320 *i* P **PKPdf** **22 28 06.9 +0.1**
comp=Z,8.3nm,1.0s,SNR=5.4
MOA Molln 115.58 322 *e*P **PKiKP** **22 28 06.7 0.0**
comp=Z,3.2nm,0.9s
NKC Novy Kostel 115.68 325 *e*PKiKP **PKPdf** **22 28 07.6 +0.7**
NKC Novy Kostel 115.68 325 *e*PKP **PKPdf** **22 28 07.6 +0.7**
BIOA Bad Ischl, Aus 116.03 322 *e*P **PKiKP** **22 28 07.3 -0.4**
comp=Z,3.1nm,0.7s
ULM Lac du Bonnet 116.09 35 PKP **PKiKP** **22 28 06.3 -1.3**
comp=Z,0.9nm,0.3s,baz=271,slow=6.3,SNR=3.2
MYKA Terra Mystica 116.45 321 *e*P **PKiKP** **22 28 08.7 +0.2**
comp=Z,3.2nm,0.8s
KBA Koelnbreinsper 116.46 321 *e*P **PKPdf** **22 28 08.2 -0.5**
comp=Z,5.3nm,0.9s
GRA1 Grafenberg Arr 116.63 324 IAMs_20 IAMs_20 23 24 21.9
comp=Z,326nm,21.0s
GRFO Grafenberg 116.63 324 IAMs_20 IAMs_20 23 24 23.0
comp=Z,331nm,21.0s
MSTX Muleshoe 116.76 54 PKiKP **PKiKP** **22 28 09.8 +0.2**
baz=283
TIP Timpagrande 116.85 312 IAMs_20 IAMs_20 23 22 38.5
comp=Z,469nm,20.0s
TX31 Lajitas Ar. Si 116.96 60 PKPdf **PKPdf** **22 28 09.9 -0.2**
TXAR Lajitas Array 116.96 60 PKP **PKiKP** **22 28 10.1 0.0**
comp=Z,2.0nm,0.9s,baz=271,slow=1.2,SNR=17
TXAR PKKPbc **PKKPbc** **22 38 37.2 +1.2**
comp=Z,2.8nm,0.8s,baz=122,slow=6.3,SNR=20
ABTA Abfaltersbach 117.11 321 *e*P **PKPdf** **22 28 09.4 -0.5**
comp=Z,13nm,0.8s
STAL STALIGIAL 117.19 320 **PKPdf** **22 28 09.3 -0.6**
AMTX Amarillo 117.42 53 PKiKP **PKiKP** **22 28 11.1 +0.3**
baz=284
WTTA Wattenberg 117.44 322 *i* P **PKiKP** **22 28 10.8 +0.2**
comp=Z,14nm,0.7s,SNR=9.2
WATA Walderalm 117.45 322 *i* P **PKPdf** **22 28 10.4 -0.2**
comp=Z,11nm,1.1s,SNR=4.6
SQTA Sankt Quirin 117.72 322 *e*P **PKiKP** **22 28 11.3 +0.2**
comp=Z,15nm,1.2s
MOTA Moosalm 117.73 322 *e*P **PKPdf** **22 28 10.9 -0.2**
comp=Z,18nm,1.1s
CBKS Cedar Bluff 117.83 48 IAMs_20 IAMs_20 23 28 26.1
comp=Z,395nm,20.0s
CBKS Cedar Bluff 117.83 48 PKiKP **PKPdf** **22 28 11.4 0.0**
baz=288
RETA Reutte 117.88 322 *e*P **PKiKP** **22 28 11.7 +0.4**
CTI Castel Tesino 117.94 321 **PKPdf** **22 28 11.4 0.0**
CTI Castel Tesino 117.94 321 PKiKP **PKPdf** **22 28 11.5 0.0**
FRB Frobisher Bay 117.97 13 PKP **PKPdf** **22 28 10.2 -0.7**
comp=Z,4.5nm,0.8s,baz=353,slow=4.7,SNR=5.9
FETA Feichten 118.11 322 *e*P **PKPdf** **22 28 11.5 -0.3**
comp=Z,7.2nm,0.8s
ECSD EROS Data Cent 118.34 42 PKPdf **PKPdf** **22 28 11.4 -0.8**
ECSD EROS Data Cent 118.34 42 PKiKP **PKPdf** **22 28 12.1 -0.1**
baz=293
DAVA Damuels 118.51 322 *e*P **PKiKP** **22 28 12.8 +0.1**
comp=Z,10nm,0.9s
BFO Black Forest 118.95 324 IAMs_20 IAMs_20 23 24 33.3
comp=Z,341nm,19.0s
MEM Membach 119.11 327 *d*PKPdf **PKiKP** **22 28 13.8 +0.3**
U32A Winter Ranch, 119.12 51 **PKiKP** **22 28 14.0 0.0**
TUE Stuetta 119.20 322 PKPdf **PKPdf** **22 28 13.6 -0.4**
BHOU Houvegnez 119.24 327 *d*PKPdf **PKiKP** **22 28 14.6 +0.8**
WLF Walferdange 119.52 326 IAMs_20 IAMs_20 23 23 01.3
comp=Z,431nm,22.0s
BCLA Clavier 119.59 327 *d*PKPdf **PKiKP** **22 28 14.8 +0.4**
ABTX Abilene, Hawle 119.63 55 PKiKP **PKiKP** **22 28 15.2 +0.1**
baz=285
ECH Echery 119.69 324 IAMs_20 IAMs_20 23 22 44.9
comp=Z,254nm,20.0s
EYMN Ely 119.71 36 PKiKP **PKiKP** **22 28 14.8 0.0**
baz=299
WMOK Wichita Mounta 119.76 52 PKiKP **PKiKP** **22 28 15.5 +0.3**
baz=286
RCHB Rochefort 119.77 327 *d*PKPdf **PKiKP** **22 28 15.5 +0.8**
BMRD Maredsous 119.94 327 *d*PKPdf **PKiKP** **22 28 15.3 +0.2**
JCT Junction City 120.01 57 PKPdf **PKPdf** **22 28 15.4 -0.4**
JCT Junction City 120.01 57 PKiKP **PKPdf** **22 28 15.4 -0.4**
JCT Junction City 120.01 57 PKiKP **PKiKP** **22 28 15.9 0.0**
baz=283
GIVF Givet 120.02 327 *e*PKiKP **PKiKP** **22 28 15.4 +0.1**
GIVF pmax pmax
comp=Z,16nm,1.0s
HINF Hinteralfeld 120.06 324 *e*PKiKP **PKPdf** **22 28 14.9 -0.5**
HINF pmax pmax
comp=Z,16nm,1.1s
SNF Seneffe 120.09 328 *d*PKPdf **PKiKP** **22 28 15.7 +0.3**
DOU Dourbes 120.15 327 *d*PKPdf **PKiKP** **22 28 15.5 0.0**
HAU Haudompre 120.26 324 *e*PKiKP **PKPdf** **22 28 15.5 -0.3**
HAU pmax pmax
comp=Z,12nm,1.0s
BAIF Baives 120.38 327 *e*PKiKP **PKiKP** **22 28 16.1 +0.1**
BAIF pmax pmax
comp=Z,12nm,1.0s
833A Chaparral WMA, 120.84 60 PKiKP **PKiKP** **22 28 17.7 +0.2**
baz=282
LPG La Plagne 121.26 322 *e*PKiKP **PKPdf** **22 28 18.0 -0.1**
LPG pmax pmax
comp=Z,13nm,0.8s
LPL La Plagne 121.26 322 *e*PKiKP **PKPdf** **22 28 17.9 -0.1**
LPL pmax pmax
comp=Z,14nm,0.8s
MBDF Montbardon 121.61 321 *e*PKiKP **PKPdf** **22 28 18.0 -0.6**
MBDF pmax pmax
comp=Z,7.0nm,0.7s
TUL1 Leonard 121.73 50 PKiKP **PKPdf** **22 28 18.8 -0.1**
baz=289
G40A Rib Lake 121.80 38 **PKPdf** **22 28 18.2 -0.6**
ORIF Oris-en-Rattie 122.08 321 *e*PKiKP **PKPdf** **22 28 19.2 -0.2**
ORIF pmax pmax
comp=Z,9.0nm,0.7s
LOR Lormes 122.08 325 *e*PKiKP **PKPdf** **22 28 19.2 -0.1**
LOR pmax pmax
comp=Z,12nm,1.2s
SSF Saint Saulge 122.40 325 *e*PKiKP **PKiKP** **22 28 20.0 -0.1**
SSF pmax pmax
comp=Z,17nm,1.0s
SMF Signal de Mont 122.43 324 *e*PKiKP **PKPdf** **22 28 19.9 -0.1**
SMF pmax pmax
comp=Z,17nm,1.1s
CLF Chambon-Foret 122.57 326 **PKiKP** **22 28 21.1 +0.8**
AVF Avril sur Loir 122.63 324 *e*PKiKP **PKPdf** **22 28 20.0 -0.3**
AVF pmax pmax
comp=Z,6.0nm,0.9s
VIVF Saint-Julien-l 122.85 322 *e*PKiKP **PKPdf** **22 28 20.8 -0.1**
VIVF pmax pmax
comp=Z,11nm,0.8s
JFWS Jewell Farm 122.89 41 **PKPdf** **22 28 19.7 -1.3**
JFWS Jewell Farm 122.89 41 PKiKP **PKPdf** **22 28 19.7 -1.3**
JFWS Jewell Farm 122.89 41 PKiKP **PKPdf** **22 28 20.2 -0.8**
baz=298
HHAR Hobbs 123.02 49 **PKPdf** **22 28 20.3 -1.1**
BGF Bois d'Agland 123.05 324 *e*PKiKP **PKiKP** **22 28 21.3 -0.1**
BGF pmax pmax
comp=Z,29nm,1.2s
W39A Magazine 123.52 50 PKiKP **PKPdf** **22 28 22.0 -0.4**
baz=290
LDF La Druitiere 123.54 328 *e*PKiKP **PKPdf** **22 28 21.9 -0.1**
LDF pmax pmax
comp=Z,25nm,1.4s
KEST Kesra 123.55 310 PKP **PKiKP** **22 28 23.1 +0.3**
comp=Z,9.1nm,0.9s,baz=53,slow=0.3,SNR=9.1
TCF Toulx Ste Croi 123.57 324 *e*PKiKP **PKiKP** **22 28 22.3 -0.1**
TCF pmax pmax
comp=Z,23nm,0.9s
FLN La Foliniere 123.62 328 *e*PKiKP **PKPdf** **22 28 22.1 -0.1**
FLN pmax pmax
comp=Z,11nm,0.9s
U40A Yellville 123.81 49 PKiKP **PKPdf** **22 28 22.7 -0.3**
baz=292
MIAR Mount Ida 123.90 51 PKPdf **PKPdf** **22 28 22.9 -0.2**
MIAR Mount Ida 123.90 51 PKiKP **PKPdf** **22 28 22.9 -0.2**
MIAR MLR MLR
comp=Z,500nm,21.0s
MIAR Mount Ida 123.90 51 PKiKP **PKiKP** **22 28 23.3 -0.1**
baz=290
NATX Nacogdoches 123.93 55 PKiKP **PKPdf** **22 28 23.2 -0.1**
baz=288
CCM Cathedral Cave 124.33 46 **PKPdf** **22 28 22.6 -1.2**
CCM Cathedral Cave 124.33 46 PKiKP **PKPdf** **22 28 22.7 -1.2**
CCM Cathedral Cave 124.33 46 PKiKP **PKPdf** **22 28 23.8 -0.1**

baz=294
CAF Calviac 124.40 323 *e*PKIKP **PKiKP 22 28 24.3 +0.2**
CAF pmax pmax
comp=Z,22nm,1.1s
X40A Basin Creek Fa 124.49 51 PKiKP **PKiKP 22 28 25.0 +0.4**
baz=291
RJF Les Rejaudoux 124.52 324 *e*PKIKP **PKiKP 22 28 24.3 0.0**
RJF pmax pmax
comp=Z,9.0nm,0.8s
HDIL Hopedale 124.62 43 PKiKP **PKPdf 22 28 23.9 -0.4**
baz=297
W41B Gary Mavity, V 124.70 50 PKiKP **PKPdf 22 28 24.5 -0.1**
baz=292
MFF Saint Martin d 124.73 326 *e*PKIKP **PKPdf 22 28 24.3 -0.1**
MFF pmax pmax
comp=Z,10.0nm,0.8s
FVM French Village 124.95 46 **PKPdf 22 28 24.4 -0.7**
FVM French Village 124.95 46 PKiKP **PKPdf 22 28 24.4 -0.7**
LFF La Frestale 125.17 324 *e*PKIKP **PKiKP 22 28 25.6 0.0**
LFF pmax pmax
comp=Z,25nm,1.0s
LCAR Lake Charles 125.19 49 PKPdf **PKPdf 22 28 24.5 -1.0**
LL02 Futaleuf 125.29 154 **PKiKP 22 28 25.8 -0.2**
MAHO Mahon 125.52 317 IAMs_20 IAMs_20 23 17 49.1
comp=Z,424nm,20.0s
SCHQ Schefferville 126.12 17 PKP **PKPdf 22 28 26.8 0.0**
comp=Z,6.5nm,0.9s,baz=248,slow=4.0,SNR=5.1
SFIN Lafayette 126.18 42 PKiKP **PKPdf 22 28 27.5 +0.2**
baz=299
EPF Esparros 126.47 322 *e*PKIKP **PKPdf 22 28 28.0 +0.1**
EPF pmax pmax
comp=Z,13nm,1.1s
CMIG Matias Romero 126.86 72 PKP **PKPdf 22 28 29.0 -0.2**
comp=Z,4.6nm,0.8s,baz=256,slow=3.1,SNR=6.8
ETSF Etsaut 127.10 322 *e*PKIKP **PKiKP 22 28 30.8 +1.2**
ETSF pmax pmax
comp=Z,13nm,1.0s
OXF Oxford 127.11 50 PKiKP **PKPdf 22 28 29.1 -0.2**
baz=293
VLDQ Val d'Or 127.19 29 **PKPdf 22 28 27.6 -1.3**
O48B Farmland 127.52 41 PKiKP **PKPdf 22 28 29.9 0.0**
baz=301
WVT Waverly 127.62 47 PKPdf **PKPdf 22 28 28.9 -1.3**
WVT Waverly 127.62 47 PKIKP **PKPdf 22 28 28.9 -1.3**
WVT Waverly 127.62 47 PKiKP **PKPdf 22 28 29.8 -0.4**
baz=296
PLCA Paso Flores 127.83 153 PKP **PKiKP 22 28 31.8 +0.6**
comp=Z,10.0nm,0.8s,baz=211,slow=2.8,SNR=35
P49A Miami Univ. Ec 128.18 42 PKiKP **PKPdf 22 28 31.2 0.0**
baz=301
SADO Sadowa 128.55 33 PKP **PKPdf 22 28 31.8 +0.1**
comp=Z,1.6nm,0.5s,baz=336,slow=4.2,SNR=4.2
ACSO Alum Creek Sta 128.95 40 **PKPdf 22 28 32.1 -0.5**
ACSO Alum Creek Sta 128.95 40 PKiKP **PKPdf 22 28 32.7 +0.1**
baz=303
SWET Sewanee 129.41 47 **PKPdf 22 28 32.8 -0.9**
LRAL Lakeview Retre 129.54 50 PKPdf **PKPdf 22 28 33.4 -0.6**
LRAL Lakeview Retre 129.54 50 PKiKP **PKPdf 22 28 34.0 0.0**
baz=294
M53A Wi Miller and 129.71 38 PKiKP **PKPdf 22 28 34.1 +0.1**
baz=306
ERPA Erie 129.72 36 PKiKP **PKPdf 22 28 33.8 -0.2**
baz=307
P52A Corning 129.82 40 PKiKP **PKPdf 22 28 34.5 +0.2**
baz=304
FPAL Fort Paine 129.94 48 **PKPdf 22 28 34.3 -0.4**
O53A New Philadelph 130.06 39 PKiKP **PKiKP 22 28 35.1 -0.4**
baz=305
TZTN Tazewell 130.49 45 PKiKP **PKiKP 22 28 36.1 -0.5**
baz=300
TKL Tuckaleechee C 130.76 46 PKP **PKPdf 22 28 36.1 -0.1**
comp=Z,12nm,0.9s,baz=159,slow=3.2,SNR=16
TKL Tuckaleechee C 130.76 46 **PKPdf 22 28 35.9 -0.3**
ESDC Sonseca Array 131.04 321 PKP **PKPdf 22 28 36.0 -0.7**
comp=Z,1.5nm,0.8s,baz=7.7,slow=3.1,SNR=8.9
ESDC SKPbc **SKPbc 22 31 58.0 -0.1**
comp=Z,6.0nm,1.2s,baz=32,slow=4.2,SNR=8.2
ESDC Sonseca Array 131.04 321 PKPdf **PKPdf 22 28 36.8 +0.1**
LONY Lake Ozonia 131.06 31 PKiKP **PKPdf 22 28 36.8 +0.3**
baz=315
NCB Newcomb 131.69 31 **PKPdf 22 28 38.1 +0.4**
SSPA Standing Stone 131.87 37 PKiKP **PKPdf 22 28 38.3 +0.1**
baz=309
BINY Binghamton 131.96 34 PKiKP **PKPdf 22 28 38.6 +0.2**
baz=312
MVO Moncorvo 131.99 324 *e*PKPdf **PKiKP 22 28 40.5 +1.0**
MVO Moncorvo 131.99 324 *e*LR LR 23 14 49.7
comp=Z,241nm,22.0s
GOGA Godfrey 132.04 48 PKPdf **PKPdf 22 28 38.8 +0.1**
GOGA Godfrey 132.04 48 PKIKP **PKPdf 22 28 38.8 +0.1**
GOGA Godfrey 132.04 48 PKiKP **PKiKP 22 28 39.5 -0.2**
baz=298
PGAV Gavieira, Arco 132.18 326 *e*LR LR 23 13 42.7
comp=Z,292nm,20.0s
BLA Blacksburg 132.28 42 PKiKP **PKPdf 22 28 39.5 +0.4**
baz=303
POLO Lamas de Olo 132.30 325 *e*PKPdf **PKiKP 22 28 40.3 +0.2**
PVRL Vila Real 132.31 325 *e*PKPdf **PKiKP 22 28 41.2 +1.1**
LBNH Lisbon 132.65 29 PKiKP **PKiKP 22 28 40.6 0.0**
baz=318
KMSC Kings Mountain 132.75 45 PKiKP **PKiKP 22 28 40.9 -0.2**
baz=301
MTE Manteigas 132.78 324 *e*PKPdf **PKiKP 22 28 42.0 +0.9**
MTE Manteigas 132.78 324 *e*LR LR 23 13 08.6
comp=Z,326nm,20.0s
PKME Peaks-Kenny Pk 133.09 26 PKiKP **PKiKP 22 28 41.1 -0.4**
baz=322
PCBR Castelo Branco 133.09 323 *e*PKPdf **PKiKP 22 28 41.8 +0.1**
PMRV Marv??o 133.30 323 *e*PKPdf **PKiKP 22 28 42.8 +0.7**
PMRV Marv??o 133.30 323 *e*LR LR 23 13 31.0
comp=Z,239nm,22.0s
L61B Northampton 133.57 31 PKiKP **PKPdf 22 28 41.8 +0.5**
baz=316
PESTR Estremoz 133.77 322 *e*PKPdf **PKiKP 22 28 43.3 +0.2**
PAL Palisades 133.92 34 PKiKP **PKPdf 22 28 42.1 +0.1**
baz=313
HRV Adam Dziewonsk 134.10 30 PKiKP **PKPdf 22 28 42.9 +0.6**
baz=317
EVO Evora 134.24 322 *e*PKPdf **PKiKP 22 28 43.7 -0.3**
PBEJ Beja 134.46 322 *e*PKPdf **PKiKP 22 28 44.5 0.0**
NHSC New Hope 134.60 47 PKiKP **PKPdf 22 28 44.0 +0.5**
baz=300
PVAQ Vaqueiros 134.75 321 *e*LR LR 23 10 27.6
comp=Z,168nm,20.0s
MESJ Messejana 134.80 322 *e*PKPdf **PKiKP 22 28 44.8 -0.4**
MESJ IAMs_20 IAMs_20 23 13 24.7
comp=Z,446nm,22.1s
MESJ Messejana 134.80 322 *e*PKPdf **PKiKP 22 28 46.4 +1.2**
MESJ Messejana 134.80 322 *e*PKIKP **PKiKP 22 28 44.7 -0.4**
PNCL Nicolau / Gran 134.82 322 *e*PKPdf **PKiKP 22 28 44.9 -0.3**
MORF Marmelete 135.40 321 *e*PKPdf **PKiKP 22 28 45.9 -0.7**
MORF IAMs_20 IAMs_20 23 13 38.4
comp=Z,620nm,20.9s
MORF Marmelete 135.40 321 *e*PKIKP **PKiKP 22 28 45.8 -0.7**
DWPF Disney Wildern 135.94 54 IAMs_20 IAMs_20 23 28 30.3
comp=Z,284nm,20.0s
TOA0 Torodi Ar. Sit 136.00 284 PKPdf **PKPdf 22 28 46.4 -0.2**
TORD Torodi Ar. Bea 136.00 284 PKhKP PKPpre 22 28 33.5
comp=Z,2.1nm,0.9s,baz=54,slow=2.6,SNR=7.0
TORD PKP **PKPdf 22 28 46.6 +0.1**
comp=Z,13nm,0.8s,baz=61,slow=0.7,SNR=24
TORD SKPbc **SKPbc 22 32 14.6 -0.9**
comp=Z,7.5nm,1.2s,baz=97,slow=3.5,SNR=4.6
TORD Torodi Ar. Bea 136.00 284 **PKPdf 22 28 46.4 -0.2**
GO02 Mina Guanaco 140.08 139 PKPdf **PKPdf 22 28 53.9 -0.3**
PLTB Pedras Altas 142.15 164 *e*P **PKPdf 22 28 52.6 -4.9**
LVC Limon Verde 142.28 137 PKPdf **PKPdf 22 28 55.4 -3.0**
LVC Limon Verde 142.28 137 PKIKP **PKPdf 22 28 55.4 -3.0**
LVC Limon Verde 142.28 137 *e*P **PKPdf 22 28 55.2 -3.1**
BOSC San Juan Bosco 142.79 101 PKPdf **PKPdf 22 28 56.0 -3.3**
KIC Kosan Boka 142.80 274 *e*P **PKPdf 22 28 55.7 -3.3**
comp=Z,10nm,0.7s
PORT Chimborazo Vol 142.83 99 **PKPdf 22 28 57.7 -2.2**
DBIC Dimbokro 142.91 275 PKhKP PKPpre 22 28 55.6
comp=Z,7.9nm,0.7s,baz=138,slow=2.3,SNR=9.4
RODS Rosario do Sul 142.99 161 *e*P **PKPdf 22 28 56.2 -2.7**
TIC Toumodi 143.08 275 *e*P PKPab 22 28 54.6 -0.3
comp=Z,3.7nm,0.3s
LIC Lamto 143.09 274 *e*P **PKPdf 22 28 58.9 -0.6**
comp=Z,22nm,0.8s
ITQB Itaqui 143.12 159 PKPbc 22 28 56.8 +0.8
ITQB Itaqui 143.12 159 *e*P PKPbc 22 28 56.5 +0.5
SLOR San Lorenzo - 143.22 97 PKPbc 22 28 57.9 +0.5
TUMC Tumaco 143.31 93 *e*P **PKiKP 22 29 07.4 +4.2**
OTAV Otavalo 143.40 96 PKPbc 22 28 57.5 -0.4

OTAV Otavalo 143.40 96 PKIKP PKPbc 22 28 57.5 -0.4
OTAV MLR MLR
comp=Z,700nm,19.0s
OTAV Otavalo 143.40 96 *e*P PKPab 22 28 55.9 -0.9
OTAV Otavalo 143.40 96 *e*P PKPab 22 28 56.7 -0.1
CPSB Cacapava Do Su 143.48 163 *e*P PKPbc 22 28 57.6 +0.5
PMOZ Porto Moniz, M 143.60 323 *e*LR LR 23 07 44.1
comp=Z,244nm,20.0s
PB11 IPOC Station P 143.61 133 PKPdf PKPbc 22 28 58.2 +0.3
PB08 IPOC Station P 143.73 134 PKPbc 22 28 58.6 +0.1
ROSA Rosais 143.84 342 PKPdf PKPbc 22 28 58.8 +0.9
GR1C Gorgona, Isla 143.96 91 *e*P PKPbc 22 28 58.8 -0.2
PB16 IPOC Station P 144.60 131 PKPbc 22 29 01.8 +0.3
GCUF Volcan Galeras 144.62 94 *e*P PKPbc 22 29 01.7 0.0
CAPC Capurgana 144.75 82 *e*P **PKPab 22 29 00.7 -0.6**
MALC Bahia Malaga 144.84 90 *e*P **PKiKP 22 29 08.4 +2.0**
CRUC La Cruz 145.05 94 *e*P **PKPdf 22 29 03.6 +0.1**
ALGR Alto Alegre (B 145.11 163 *e*P **PKPbc 22 28 58.1 -4.2**
CNLB Canela 145.19 167 *e*P **PKPbc 22 28 58.2 -4.3**
POPC Popayan, Colom 145.41 92 *e*P **PKPbc 22 29 03.6 -0.3**
SOTA Rioblanco 145.44 93 *e*P **PKPbc 22 29 02.6 -1.7**
PCON Cinco Dias 145.67 93 *e*P **PKPab 22 29 05.5 +0.1**
YOTC Yotoco, Valle 145.82 90 *e*P **PKPdf 22 29 00.7 -3.8**
CPUP Villa Florida 145.83 155 PKPbc **PKPab 22 29 05.1 +0.2**
comp=Z,61nm,0.9s,baz=228,slow=2.8,SNR=84
CPUP Villa Florida 145.83 155 *e*P **PKPdf 22 29 01.2 -2.7**
PLMC San Jos del P 145.91 88 *e*P **PKPdf 22 29 03.6 -1.0**
DBBC Dabeiba 145.97 84 *e*P **PKPbc 22 29 05.5 +0.1**
CRSM Crissiumal (Br 146.01 161 *e*P **PKPdf 22 29 01.0 -3.3**
MARP Paez Belalcaza 146.15 92 *e*P **PKPdf 22 29 05.5 +0.3**
CBOC Ciudad Bolivar 146.19 86 *e*P **PKiKP 22 29 09.4 0.0**
TER01 Tubaro-SC 146.31 169 *e*P **PKPdf 22 29 02.1 -2.7**
FLOC Florencia 146.34 94 *e*P **PKPdf 22 29 05.5 +0.3**
GARC Garzon, Huila 146.56 93 *e*P **PKPdf 22 29 05.5 -0.4**
BETC Betania 146.65 92 *e*P **PKPab 22 29 08.4 -0.2**
HELC Santa Helena 146.67 86 *e*P **PKPdf 22 29 05.5 -0.7**
SJCC San Jacinto, C 146.77 79 **PKPdf 22 29 06.8 +0.8**
SJCC San Jacinto, C 146.77 79 *e*P **PKPbc 22 29 07.4 -0.3**
ANIL Santa Ana 146.78 89 *e*P **PKiKP 22 29 10.3 -0.4**
GUY2C Guyana, Caldas 146.83 88 *e*P **PKPdf 22 29 05.5 -1.1**
LPAZ La Paz 146.87 129 PKPbc **PKPbc 22 29 08.1 -0.5**
comp=Z,66nm,0.9s,baz=344,slow=0.8,SNR=126
LPAZ La Paz 146.87 129 **PKPbc 22 29 08.3 -0.3**
LPAZ La Paz 146.87 129 PKP2 **PKPbc 22 29 08.3 -0.3**
ORTC Ortega, Tolima 146.92 90 *e*P **PKPdf 22 29 06.5 +0.3**
PTLC Puerto Leguiza 147.01 97 *e*P **PKPdf 22 29 06.5 +0.1**
PRAC Prado 147.27 90 *e*P **PKPdf 22 29 07.4 +0.6**
ZARC Zaragoza, Cauc 147.29 83 **PKPdf 22 29 06.9 +0.2**
ZARC Zaragoza, Cauc 147.29 83 *e*P **PKPdf 22 29 04.5 -2.2**
NORC Norcasia 147.33 87 *e*P **PKPdf 22 29 07.4 +0.5**
SMRC Santa Marta, M 147.53 77 *e*P **PKiKP 22 29 18.0 +6.2**
PTBC PUERTO BERRIO 147.72 85 *e*P **PKPbc 22 29 09.4 -1.0**
ROSC El Rosal 147.87 88 PKPbc **PKPbc 22 29 11.1 -0.1**
comp=Z,40nm,0.8s,baz=188,slow=5.3,SNR=11
ROSC El Rosal 147.87 88 **PKPdf 22 29 08.8 +0.6**
ROSC El Rosal 147.87 88 PKIKP **PKPdf 22 29 08.8 +0.6**
ROSC El Rosal 147.87 88 *e*P **PKPbc 22 29 10.3 -0.9**
SPBC San Pablo de B 148.12 87 *e*P **PKPdf 22 29 09.4 +1.1**
SDDR Presa de Saban 148.14 91 **PKPbc 22 29 10.6 -0.8**
CHIC Chingaza 148.45 89 *e*P **PKPbc 22 29 11.3 -1.5**
VILC Villavicencio, 148.47 90 *e*P **PKPdf 22 29 10.3 +1.4**
LL6C La Loma 6 Bece 148.66 79 *e*P **PKPbc 22 29 12.2 -0.5**
OCAC Ocana 148.76 82 **PKPdf 22 29 08.9 -0.5**
OCAC Ocana 148.76 82 *e*P **PKPbc 22 29 13.2 0.0**
CRJC Cerrejon, Guaj 148.85 76 *e*P **PKPdf 22 29 11.3 +1.9**
BARC Barichara 148.99 85 *e*P **PKPdf 22 29 11.3 +1.4**
RUSC La Rusia 149.10 86 *e*P **PKPbc 22 29 14.2 -0.3**
TAMC Tame, Arauca 150.37 85 *e*P **PKPab 22 29 20.9 -2.6**
DABV Dabajuro 151.04 76 *e*P **PKiKP 22 29 19.0 -0.1**
SOCV Socops 151.19 81 *e*P **PKPbc 22 29 18.0 -0.9**
CRPR Cabo Rojo, PR 152.16 60 **PKPbc 22 29 19.6 -1.3**
MLPR Magueyes Islan 152.23 60 **PKPbc 22 29 20.1 -1.0**
AOPR Arecibo Observ 152.31 59 **PKPbc 22 29 19.4 -2.0**
CELP Cerrillos 152.58 59 PKPbc **PKPbc 22 29 21.2 -0.8**
ELOV Elorza 152.64 84 *e*P **PKPbc 22 29 21.9 -0.4**
GCPR Guayabo City 152.90 58 **PKPbc 22 29 21.2 -1.4**
SJG San Juan 152.93 58 **PKPbc 22 29 21.7 -1.0**
SJG San Juan 152.93 58 PKIKP **PKPbc 22 29 21.7 -1.0**
SJG San Juan 152.93 58 *e*P **PKPbc 22 29 21.9 -0.8**
PDPR Patillas Dam, 153.08 59 **PKPbc 22 29 22.5 -0.5**
BAUV El Baul 153.88 79 **PKPbc 22 29 24.1 -0.8**
BDFB Brasilia 158.99 164 PKP **PKPdf 22 29 24.0 +0.3**
comp=Z,5.3nm,0.8s,baz=180,slow=3.9,SNR=6.0
BDFB PKPab **PKPab 22 30 00.0 +0.1**
comp=Z,15nm,0.7s,baz=190,slow=4.3,SNR=15
BDFB Brasilia 158.99 164 **PKPab 22 30 00.1 +0.3**

MAN 14 22:13:04.2, 13.92N×120.63E, h1km, mb3.6, ML2.4, MS1.8, Mindoro

NOU 14 22:16:26.6, 22.06S×170.60E, h0km, MLv4.7/6, Southeast of Loyalty Islands, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	2.46	283	P		Pn	22 17 07.0	-0.9
PINNC	Pines Island,	2.97	259	P		Pn	22 17 14.8	-0.2
NOUC	Port Laguerre	3.99	269	P		Pn	22 17 29.0	0.0
KOUNC	Koumac, New Ca	6.08	283	P		Pn	22 17 58.4	+0.7

IDC 14 22:25:25.3±5.7, 23.31S×178.23W, h0km, mb3.9/2, mbtmp3.9/2, Error ellipse: s-maj=261.4km s-min=52.0km az=151.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.73	260	P		P	22 33 32.6	-0.1
	0.6nm,0.6s,baz=100,slow=7.3,SNR=6.7							
	0.6nm,0.6s							
WRA	Warramunga Arr	44.07	265	P		P	22 33 35.2	-0.2
	1.5nm,0.5s,baz=104,slow=8.7,SNR=81							
	1.5nm,0.5s							
AKASG	Malin Array Be	145.33	329	PKPbc		PKPbc	22 45 02.2	-2.5
	0.7nm,0.4s,baz=40,slow=4.1,SNR=4.3							
BRTR	Keskin Array B	148.50	309	PKPbc		PKiKP	22 45 15.4	-0.5
	0.6nm,0.7s,baz=85,slow=2.5,SNR=3.3							

*IDC **14** 22:42:15.2±0.4, 20.62S×11.60W, h0km, mb4.5/26, mbtmp4.5/26, MS4.5/48, Error ellipse: s-maj=15.3km s-min=12.6km az=129.0*
*MOS **14** 22:42:15.3±1.0, 20.57S×11.62W, h10km, mb5.1/25, MS4.6/8, Error ellipse: s-maj=12.7km s-min=7.4km az=61.9*
*NEIC **14** 22:42:17.4±1.2, 20.65S±0.1×11.6W±0.1, h10km±1km, mb5.0/72, Error ellipse: s-maj=19.5km s-min=16.4km az=148.0*
*GCMT **14** 22:42:19.4±0.2, 20.52S±0.02×11.52W±0.01, h12km, MW5.2/134, Moment Tensor Solution. s64,c81; s134,c215; Duration: 1s0 Moment tensor: Scale 10^16 Nm; Mrr=6.40±.12; Mθθ=0.47±.12; Mϕϕ=5.93±.10; Mrθ=3.26±.45; Mrϕ=-0.77±.10; Mθϕ=-2.97±.41; Best double couple: Mo7.56200×10^16 NP1:ϕs187.00000°, δ33.00000°, λ-60.00000°. NP2:ϕs332.00000°, δ62.00000°, λ-108.00000°. Principal axes: T 6.9780, Plg15.0000°, Azm75.0000°; N 1.1640, Plg16.0000°, Azm341.0000°; P -8.1470, Plg68.0000°, Azm208.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 14 22:42:16.8±0.3, 20.63S±0.07×11.60W±0.07, h10km, n262, σ1.906/224, mb4.8/97, MS4.7/69, 14C-14D, Fault plane solution: NP1:ϕs178.95419°, δ17.57630°, λ-62.95551°. **NP2:**ϕs330.78497°, δ74.39787°, λ-98.19576°. **Principal axes:** T Plg28.9414°, Azm67.3994°; N Plg7.8918°, Azm333.0033°; P Plg59.8002°, Azm229.2249°; **Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
H10S2	ASCENSION HYDR	1.97	345	T		T	22 57 14.7	
	baz=54,slow=74,SNR=48							
H10S3	ASCENSION HYDR	1.98	345	T		T	22 57 12.8	
	baz=166,slow=74,SNR=79							
LIC	Lamto	27.45	14	*e*P		P	22 48 03.9	+0.8
	27nm,1.2s							

TSUM Tsumeb 27.46 92 P **P 22 48 04.1 +0.8**
2.1nm,0.6s,baz=246,slow=14,SNR=3.6
TSUM LR LR 22 57 18.6
comp=Z,2μm,19.2s,baz=272,slow=33
2.1nm,0.6s
TSUM Tsumeb 27.46 92 P **P 22 48 02.2 -1.1**
KIC Kosan Boka 27.65 15 *e*P **P 22 48 04.9 0.0**
7.0nm,0.9s
RCBR Riachuelo 27.80 299 LR LR 22 56 19.8
comp=Z,2μm,21.1s,baz=262,slow=30
TIC Toumodi 27.86 14 ||*e*P **P 22 48 06.7 -0.1**
2.5nm,0.2s
DBIC Dimbokro 27.92 14 P **P 22 48 07.0 -0.3**
8.1nm,0.9s,baz=203,slow=7.8,SNR=4.6
DBIC LR LR 22 56 24.6
comp=Z,895nm,20.8s,baz=196,slow=30
8.1nm,0.9s
DBIC Dimbokro 27.92 14 P **P 22 48 07.2 -0.1**
DBIC IAmb IAmb 22 48 28.4
comp=Z,34nm,1.6s
DBIC Dimbokro 27.92 14 P **P 22 48 07.2 -0.1**
DBIC pmax pmax
comp=Z,34nm,1.6s
SUR Sutherland 31.16 119 LR LR 22 58 25.9
comp=Z,1μm,21.3s,baz=296,slow=31
BOSA Boshof 34.33 111 P **P 22 49 03.6 -0.3**
comp=Z,16nm,1.1s,baz=278,slow=7.2,SNR=8.9
BOSA LR LR 23 00 27.1
comp=Z,993nm,21.7s,baz=282,slow=32
comp=Z,16nm,1.1s
BOSA Boshof 34.33 111 P **P 22 49 03.5 -0.4**
BOSA IAmb IAmb 22 49 04.5
comp=Z,25nm,1.2s
LBTB Lobatse 34.49 104 P **P 22 49 04.9 -0.5**
comp=Z,2.0nm,0.7s,baz=274,slow=17,SNR=2.7
LBTB LR LR 23 01 12.6
comp=Z,2μm,19.8s,baz=252,slow=33
comp=Z,2.0nm,0.7s
LBTB Lobatse 34.49 104 P **P 22 49 04.8 -0.5**
LBTB IAmb IAmb 22 49 16.0
comp=Z,33nm,1.6s
BDFB Brasilia 34.91 272 P **P 22 49 08.9 -0.2**
comp=Z,4.9nm,0.8s,baz=54,slow=5.1,SNR=2.4
BDFB LR LR 23 00 52.7
comp=Z,1μm,19.6s,baz=120,slow=32
comp=Z,4.9nm,0.8s
BDFB Brasilia 34.91 272 P **P 22 49 08.7 -0.4**
TOA0 Torodi Ar. Sit 36.02 22 P **P 22 49 17.8 -0.6**
TORD Torodi Ar. Bea 36.02 22 P **P 22 49 18.2 -0.1**
comp=Z,37nm,0.8s,baz=203,slow=8.7,SNR=133
TORD LR LR 23 01 09.4
comp=Z,1μm,20.6s,baz=198,slow=32
comp=Z,37nm,0.8s
TORD Torodi Ar. Bea 36.02 22 P **P 22 49 18.0 -0.3**
MATP Matopo 37.48 97 P **P 22 49 30.3 -0.7**
comp=Z,1.9nm,0.7s,baz=264,slow=7.6,SNR=5.8
comp=Z,1.9nm,0.7s
ITAB Concordia 37.51 252 P **P 22 49 32.0 +1.0**
ITAB IAmb IAmb 22 49 39.2
comp=Z,26nm,1.0s
LSZ Lusaka 38.15 89 P **P 22 49 37.0 +0.3**
comp=Z,3.6nm,0.7s,baz=268,slow=9.5,SNR=7.0
LSZ LR LR 23 03 35.0
comp=Z,1μm,21.6s,baz=244,slow=34
comp=Z,3.6nm,0.7s
LSZ Lusaka 38.15 89 P **P 22 49 36.2 -0.5**
LSZ Lusaka 38.15 89 P **P 22 49 37.0 +0.3**
PLTB Pedras Altas 39.08 245 P **P 22 49 45.0 +0.8**
CPUP Villa Florida 42.16 253 P **P 22 50 10.5 +0.8**
comp=Z,8.0nm,1.0s,baz=82,slow=9.0,SNR=6.1
CPUP LR LR 23 05 19.6
comp=Z,1μm,18.2s,baz=89,slow=33
comp=Z,8.0nm,1.0s
CPUP Villa Florida 42.16 253 P **P 22 50 09.9 +0.1**
MBAR Mbarara 45.89 70 LR LR 23 09 11.3
comp=Z,425nm,18.5s,baz=212,slow=35
MBAR Mbarara 45.89 70 P **P 22 50 39.7 -0.3**
MBAR IAmb IAmb 22 50 56.1
comp=Z,11nm,1.0s
MBAR Mbarara 45.89 70 *c*P **P 22 50 43.2 +3.2**
SIV San Ignacio 47.06 267 P **P 22 50 49.2 +0.1**
comp=Z,1.4nm,0.8s,baz=119,slow=16,SNR=2.1
SIV LR LR 23 08 05.2
comp=Z,2μm,21.8s,baz=118,slow=33
comp=Z,1.4nm,0.8s
MDP Montagnes des 47.72 298 LR LR 23 09 27.9
comp=Z,382nm,19.7s,baz=128,slow=34
VNA1 Neumayer--Stat 50.07 179 P **P 22 51 12.6 +1.2**
VNA3 Neumayer Olymp 50.64 179 P **P 22 51 15.7 -0.1**
SAML Samuel 51.02 275 P **P 22 51 19.4 0.0**
SAML Samuel 51.02 275 P **P 22 51 19.4 0.0**
SAML pmax pmax
comp=Z,4.0nm,1.1s
SNAA Sanae 51.31 176 P **P 22 51 21.3 +0.5**
SNAA Sanae 51.31 176 P **P 22 51 21.1 +0.2**
comp=Z,7.5nm,1.0s,baz=341,slow=5.9,SNR=13
comp=Z,7.5nm,1.0s
SNAA Sanae 51.31 176 P **P 22 51 20.8 -0.1**
SNAA Sanae 51.31 176 *de*P **P 22 51 20.7 -0.1**
SNAA pmax pmax
comp=Z,12nm,1.3s
KMBO Kilima Mbogo 51.46 74 P **P 22 51 25.9 +2.9**
comp=Z,7.1nm,1.2s,baz=220,slow=8.5,SNR=4.4
KMBO LR LR 23 12 18.8
comp=Z,782nm,18.2s,baz=242,slow=35
KMBO Kilima Mbogo 51.46 74 ||*e*P **P 22 51 25.5 +2.5**
LODK Lodwar 51.87 68 P **P 22 51 26.1 +0.2**
NVL N'lazarevskaya 52.03 170 *e*P **P 22 51 24.2 -1.9**
NVL pmax pmax
comp=Z,12nm,0.8s
TROLL Troll, Antarti 52.04 174 P **P 22 51 27.0 +0.6**
CO01 Juntas del Tor 53.22 247 P **P 22 51 37.5 +1.6**
CO01 IAmb IAmb 22 51 48.4
comp=Z,50nm,1.9s
PLCA Paso Flores 53.51 234 P **P 22 51 36.7 -1.0**
comp=Z,1.6nm,0.8s,baz=86,slow=7.0,SNR=4.6
comp=Z,1.6nm,0.8s
MDT Midelt 53.56 7 LR LR 23 12 60.0
comp=Z,334nm,18.9s,baz=192,slow=34
LPAZ La Paz 53.58 265 P **P 22 51 38.4 -0.8**
comp=Z,1.3nm,0.8s,baz=85,slow=1.7,SNR=4.7
LPAZ LR LR 23 14 20.5
comp=Z,903nm,18.4s,baz=112,slow=36
comp=Z,1.3nm,0.8s
LPAZ La Paz 53.58 265 P **P 22 51 38.4 -0.8**
PB08 IPOC Station P 53.70 260 P **P 22 51 39.4 -0.3**
PB08 IAmb IAmb 22 51 40.5
comp=Z,14nm,1.1s
MT09 Talagante 53.77 243 P **P 22 51 39.1 -0.6**
BO01 Tunca 53.83 242 P **P 22 51 39.4 -0.7**
BO01 IAmb IAmb 22 51 46.2
comp=Z,18nm,1.1s
PB11 IPOC Station P 54.24 260 P **P 22 51 43.1 -0.3**
PB11 IAmb IAmb 22 51 50.3
comp=Z,17nm,1.0s
USHA Ushuaia 54.40 217 LR LR 23 11 08.6
comp=Z,513nm,21.4s,baz=60,slow=32
OPO Ambohidratompo 55.16 99 LR LR 23 15 21.2
comp=Z,281nm,18.1s,baz=348,slow=36
PMSA Palmer Station 55.87 204 P **P 22 51 54.9 +0.7**
comp=Z,1.1nm,0.4s,baz=216,slow=21,SNR=2.7
PMSA LR LR 23 11 06.9
comp=Z,574nm,19.3s,baz=55,slow=31
comp=Z,1.1nm,0.4s
GO09 Cerro Castillo 55.94 221 P **P 22 51 55.8 +0.8**
BELA Belgrano 2 58.36 186 P **P 22 52 12.1 +0.3**
BELA IAmb IAmb 22 52 13.1
comp=Z,17nm,1.2s
KEST Kesra 59.46 20 P **P 22 52 20.9 +1.0**
comp=Z,6.7nm,0.9s,baz=228,slow=2.9,SNR=6.2
KEST LR LR 23 16 09.9
comp=Z,424nm,20.9s,baz=175,slow=34
comp=Z,6.7nm,0.9s
KEST Kesra 59.46 20 P **P 22 52 20.4 +0.4**
KEST IAmb IAmb 22 52 27.7
comp=Z,9.1nm,0.9s
ESDC Sonseca Array 60.41 7 P **P 22 52 26.1 -0.2**
comp=Z,2.0nm,1.1s,baz=186,slow=8.7,SNR=5.9
comp=Z,2.0nm,1.1s
VAE Valguarnera 62.77 23 LR LR 23 19 17.7
comp=Z,520nm,18.3s,baz=163,slow=35
NNA Nana 62.87 267 LR LR 23 18 14.0
comp=Z,501nm,21.6s,baz=116,slow=34
SDV Santo Domingo 65.01 291 LR LR 23 19 54.0
comp=Z,1μm,18.2s,baz=114,slow=35
MAW Mawson 65.19 156 P **P 22 52 58.0 +0.1**
comp=Z,7.6nm,1.0s,baz=251,slow=6.8,SNR=6.6

MAW LR LR 23 15 04.0
comp=Z,248nm,19.4s,baz=290,slow=30
comp=Z,7.6nm,1.0s
MAW Mawson 65.19 156 P **P** **22 52 58.5 +0.7**
MAW Mawson 65.19 156 P **P** **22 52 58.5 +0.7**
MAW pmax pmax
comp=Z,4.0nm,1.4s
ATAH Atahualpa 65.83 271 LR LR 23 20 28.4
comp=Z,1um,18.4s,baz=128,slow=35
SJG San Juan 65.89 302 LR LR 23 19 03.7
comp=Z,140nm,19.7s,baz=66,slow=34
ROSC El Rosal 66.52 285 LR LR 23 20 33.3
comp=Z,964nm,19.3s,baz=148,slow=35
ROSC El Rosal 66.52 285 P **P** **22 53 08.2 +0.4**
ROSC El Rosal 66.52 285 P **P** **22 53 08.2 +0.4**
ROSC pmax pmax
comp=Z,67nm,2.0s
EIL Elat 67.16 43 LR LR 23 19 01.2
comp=Z,510nm,21.3s,baz=219,slow=33
ZARC Zaragoza, Cauc 68.13 287 P **P** **22 53 16.1 -1.4**
COHC Cochancay 68.24 276 P **P** **22 53 18.8 +0.5**
LIT Litokhoron 68.26 28 P **P** **22 53 17.3 -0.5**
LIT IAmb IAmb 22 53 25.2
comp=Z,13nm,1.1s
LIT Litokhoron 68.26 28 P **P** **22 53 17.3 -0.5**
LIT pmax pmax
comp=Z,13nm,1.1s
OTAV Otavalo 68.49 279 P **P** **22 53 20.2 -0.2**
OTAV IAmb IAmb 22 53 32.2
comp=Z,18nm,1.8s
OTAV Otavalo 68.49 279 P **P** **22 53 20.2 -0.2**
OTAV pmax pmax
comp=Z,18nm,1.8s
GHAJ Ghor Haditha 68.65 42 P **P** **22 53 20.4 0.0**
QSPA South Pole Qui 69.57 180 LR LR 23 19 24.5
comp=Z,343nm,20.2s,baz=214,slow=32
QSPA South Pole Qui 69.57 180 P **P** **22 53 25.9 +0.1**
QSPA IAmb IAmb 22 53 28.3
comp=Z,20nm,1.2s
MMAI Mount Meron Ar 69.71 41 LR LR 23 21 32.9
comp=Z,248nm,20.9s,baz=34,slow=34
CSS Mathiatis 69.82 38 P **P** **22 53 27.6 -0.1**
CSS IAmb IAmb 22 53 29.8
comp=Z,19nm,1.4s
FETA Feichten 70.28 16 *e*P **P** **22 53 29.9 -0.5**
comp=Z,6.7nm,1.1s
DAVA Damuels 70.31 15 *e*P **P** **22 53 30.1 -0.5**
comp=Z,9.7nm,1.1s
ABTA Abfaltersbach 70.51 17 *e*P **P** **22 53 29.5 -2.2**
comp=Z,5.4nm,1.1s
SQTA Sankt Quirin 70.59 16 *e*P **P** **22 53 31.5 -0.6**
comp=Z,9.5nm,1.4s
DIVS Divibare 70.61 24 P **P** **22 53 32.1 -0.2**
VTS Vitosha 70.65 27 P **P** **22 53 32.9 +0.2**
VTS Vitosha 70.65 27 P **P** **22 53 32.9 +0.2**
VTS pmax pmax
comp=Z,6.0nm,1.0s
MOTA Moosalm 70.68 16 *e*P **P** **22 53 35.6 +2.9**
comp=Z,9.0nm,1.9s
RETA Reutte 70.72 16 *e*P **P** **22 53 37.5 +4.5**
comp=Z,4.3nm,1.1s
MYKA Terra Mystica 70.72 18 *e*P **P** **22 53 34.0 +1.0**
comp=Z,7.9nm,1.2s
WTTA Wattenberg 70.74 17 *e*P **P** **22 53 33.5 +0.3**
comp=Z,11nm,1.2s
WTTA Wattenberg 70.74 17 P **P** **22 53 33.2 0.0**
WTTA pmax pmax
comp=Z,12nm,1.3s
WATA Walderalm 70.79 16 *e*P **P** **22 53 31.5 -1.9**
comp=Z,4.5nm,1.0s
RAYN Ar Rayn 70.85 55 P **P** **22 53 34.2 0.0**
RAYN Ar Rayn 70.85 55 P **P** **22 53 34.2 0.0**
RAYN pmax pmax
comp=Z,8.0nm,1.2s
OBKA Obir 70.88 19 *e*P P 22 53 40.1 +6.1
comp=Z,6.3nm,1.8s
KBA Koelnbreinsper 71.05 18 *e*P **P** **22 53 38.1 +3.1**
comp=Z,6.7nm,1.5s
SOKA Soboth 71.18 19 *e*P **P** **22 53 36.5 +0.8**
comp=Z,8.4nm,1.1s
BIOA Bad Ischl, Aus 71.69 18 *e*P **P** **22 53 37.4 -1.3**
comp=Z,5.4nm,1.1s
WLF Walferdange 71.73 12 *d*P **P** **22 53 39.3 +0.4**
ARSA Arzberg 71.84 19 *e*P **P** **22 53 40.2 +0.5**
comp=Z,7.7nm,1.1s
MOA Molln 72.01 18 *e*P **P** **22 53 40.0 -0.7**
comp=Z,6.5nm,1.0s
BGES Gesves 72.22 11 *d*P **P** **22 53 42.0 +0.2**
RONA Rosalia, Austr 72.48 19 *e*P **P** **22 53 44.3 +0.8**
comp=Z,8.7nm,1.2s
BZS Buzias 72.51 24 P **P** **22 53 43.5 -0.1**
BZS pmax pmax
comp=Z,7.0nm,1.1s
CONA Conrad Observa 72.55 19 *e*P **P** **22 53 44.4 +0.4**
comp=Z,7.3nm,1.1s
MEM Membach 72.61 12 *d*P **P** **22 53 44.8 +0.7**
GERES GERESS Array B 72.75 17 P **P** **22 53 44.9 -0.2**
comp=Z,0.8nm,0.6s,baz=195,slow=8.3,SNR=8.1
GERES PP **PP** **22 56 30.6 +3.2**
comp=Z,1.3nm,1.0s,baz=201,slow=7.1,SNR=3.6
comp=Z,0.8nm,0.6s
GERES GERESS Array B 72.75 17 P **P** **22 53 45.2 +0.1**
GERES GERESS Array B 72.75 17 P **P** **22 53 45.2 +0.1**
WET Wettzell 72.80 17 P **P** **22 53 45.0 -0.3**
WET pmax pmax
comp=Z,7.0nm,1.4s
CKRC Cesky Krumlov 72.90 18 *e*P **P** **22 53 45.2 -0.7**
KHC Kasperske Hory 72.98 17‖ *e*P **P** **22 53 45.7 -0.7**
KHC pmax pmax
comp=Z,15nm,1.5s
KHC Kasperske Hory 72.98 17 *e*P **P** **22 53 45.5 -0.9**
KHC AMS AMS 23 20 40.0
comp=Z,500nm,22.5s
ANTO Ankara 73.05 34 P **P** **22 53 47.5 +0.4**
ANTO IAmb IAmb 22 53 56.9
comp=Z,14nm,1.1s
ANTO Ankara 73.05 34 P **P** **22 53 47.5 +0.4**
ANTO pmax pmax
comp=Z,14nm,1.2s
ZST Bratislava 73.17 20 *e*P **P** **22 53 48.1 +0.6**
ZST pmax pmax
comp=Z,48nm,1.6s
ZST Bratislava 73.17 20 *e*P **P** **22 53 48.1 +0.6**
MODS Modra-Piesok 73.39 20 *e*P **P** **22 53 49.1 +0.3**
MODS pmax pmax
comp=Z,30nm,1.3s
MODS Modra-Piesok 73.39 20 *e*P **P** **22 53 49.1 +0.3**
BR131 Keskin Array S 73.39 35 P **P** **22 53 49.6 +0.4**
BR131 IAmb IAmb 22 53 51.3
comp=Z,12nm,0.9s
BR131 Keskin Array S 73.39 35 *d i*P **P** **22 53 50.1 +0.9**
BRTR Keskin Array B 73.39 35 P **P** **22 53 49.5 +0.3**
comp=Z,7.2nm,0.9s,baz=196,slow=6.0,SNR=33
comp=Z,7.2nm,0.9s
BRTR Keskin Array B 73.39 35 *i*P **P** **22 53 50.5 +1.3**
BRTR pmax pmax
comp=Z,7.0nm,0.9s
TREC Trest 73.66 18 *e*P **P** **22 53 51.0 +0.6**
TREC MLR MLR
comp=Z,300nm,23.9s
TREC Trest 73.66 18 *e*P **P** **22 53 51.0 +0.6**
TREC AMS AMS 23 21 00.0
comp=Z,300nm,23.9s
NKC Novy Kostel 73.69 16 AMS AMS 23 21 50.0
comp=Z,400nm,20.6s
KRUC Moravsky 73.72 19 *e*P **P** **22 53 50.5 -0.3**
PSZ Piszkesteto 73.85 21 P **P** **22 53 51.6 0.0**
PSZ IAmb IAmb 22 53 52.7
comp=Z,14nm,1.2s
PSZ Piszkesteto 73.85 21 P **P** **22 53 51.6 0.0**
PSZ pmax pmax
comp=Z,14nm,1.2s
KOLL Kolacno 73.93 20 *e*P **P** **22 53 52.1 +0.2**
JAVC Velka Javorina 73.94 20 *e*P **P** **22 53 54.5 +2.4**
BNN Bunyan 73.99 37 P **P** **22 53 52.5 -0.2**
VRAC Vranov 74.00 19 LR LR 23 25 19.8
comp=Z,451nm,20.9s,baz=159,slow=35
VRAC Vranov 74.00 19 *e*P **P** **22 53 51.8 -0.6**
PRU Pruhonice 74.02 17 AMS AMS 23 24 50.0
comp=Z,500nm,20.0s
MLR Muntele Rosu 74.13 26 P **P** **22 53 52.9 -0.5**
MLR IAmb IAmb 22 53 54.1
comp=Z,13nm,1.0s
MLR Muntele Rosu 74.13 26 P **P** **22 53 52.9 -0.5**
MLR pmax pmax
comp=Z,13nm,1.0s

MAUC Maruska 74.43 19 AMS AMS 23 25 30.0
comp=Z,900nm,23.0s
PVCC Panska Ves 74.52 17 AMS AMS 23 20 20.0
comp=Z,400nm,22.7s
BRG Berggiesshubel 74.66 16 *e*P **P** **22 53 56.4 +0.2**
BRG Amp 22 54 14.6
comp=Z,10nm,1.5s
BRG Amp 23 21 30.0
comp=E,0.3nm,22.6s
BRG Amp 23 21 36.0
comp=Z,0.5nm,21.9s
BRG Amp 23 21 41.0
comp=N,0.3nm,18.4s
BRG Berggiesshubel 74.66 16 *e*P **P** **22 53 56.4 +0.2**
BRG pmax pmax
comp=Z,11nm,1.5s
BRG MLR MLR
comp=E,300nm,22.6s
BRG MLR MLR
comp=Z,530nm,21.9s
BRG MLR MLR
comp=N,330nm,18.4s
KRLC Kraliky 74.74 19 *e*P **P** **22 53 57.0 +0.3**
KRLC MLR MLR
comp=Z,300nm,18.2s
KRLC Kraliky 74.74 19 *e*P **P** **22 53 57.0 +0.3**
KRLC AMS AMS 23 20 20.0
comp=Z,300nm,18.2s
CLL Collm 74.81 16 *i* P **P** **22 53 57.0 0.0**
DPC Dobruska-Polom 74.85 18 *e*P **P** **22 53 55.2 -2.2**
DPC MLR MLR
comp=Z,300nm,20.3s
DPC Dobruska-Polom 74.85 18 *e*P **P** **22 53 55.2 -2.2**
DPC AMS AMS 23 19 10.0
comp=Z,300nm,20.3s
UPC Upice 74.90 18 AMS AMS 23 19 40.0
comp=Z,400nm,22.4s
OKC Ostrava-Krasne 74.95 19 AMS AMS 23 26 50.0
comp=Z,400nm,18.7s
CHVC Chvalec 74.99 18 *e*P **P** **22 53 57.9 -0.2**
CHVC AMS AMS 23 19 30.0
comp=Z,500nm,20.6s
OSTC Ostas 75.00 18 *e*P **P** **22 53 58.1 -0.1**
OSTC AMS AMS 23 19 30.0
comp=Z,400nm,22.0s
CRVS Cervenica-Dubn 75.23 22 *e*P **P** **22 53 59.7 +0.1**
CRVS pmax pmax
comp=Z,13nm,1.2s
CRVS Cervenica-Dubn 75.23 22 *e*P **P** **22 53 59.7 +0.1**
UZH Uzhgorod 75.30 22 *e*P **P** **22 53 58.8 -1.1**
UZH *e* 22 54 04.1
UZH *e* 22 54 08.9
BURAR Bucovina Array 75.55 25 P **P** **22 54 03.6 +2.1**
OJC Ojcow 75.81 20 P **P** **22 54 02.8 0.0**
OJC IAmb IAmb 22 54 03.0
comp=Z,21nm,1.7s
OJC Ojcow 75.81 20 P **P** **22 54 02.8 0.0**
OJC pmax pmax
comp=Z,21nm,1.7s
MARD Mardin 75.85 41 P **P** **22 54 02.9 -0.6**
ESK Eskdalemuir 75.97 5 P **P** **22 54 03.8 +0.2**
ESK pmax pmax
comp=Z,76nm,1.9s
GURO Guroymak-BITLI 77.40 40 P **P** **22 54 13.3 +1.0**
SIM Simferopol' 77.42 31 *e*P **P** **22 54 10.0 -2.0**
SIM pmax pmax
comp=Z,15nm,1.0s
JTS Las Juntas de 78.35 286 LR LR 23 27 51.9
comp=Z,286nm,21.8s,baz=176,slow=35
AKASG Malin Array Be 79.60 25 P **P** **22 54 23.1 -0.9**
comp=Z,9.5nm,0.9s,baz=223,slow=4.9,SNR=30
comp=Z,9.5nm,0.9s
AKASG Malin Array Be 79.60 25 *i* P **P** **22 54 23.6 -0.3**
AKASG pmax pmax
comp=Z,8.0nm,0.8s
AKBB Malin Array Si 79.60 25 *de*P **P** **22 54 23.1 -0.8**
AKBB pmax pmax
comp=Z,13nm,0.9s
UOSS Minazif 79.96 59 P **P** **22 54 27.1 +0.6**
UOSS IAmb IAmb 22 54 28.0
comp=Z,21nm,1.0s
GNI Garni 80.03 40 P **P** **22 54 28.3 +1.5**
comp=Z,4.9nm,0.7s,baz=352,slow=5.3,SNR=5.0
GNI LR LR 23 27 29.3
comp=Z,134nm,21.7s,baz=252,slow=34
comp=Z,4.9nm,0.7s
GNI Garni 80.03 40 P **P** **22 54 26.7 -0.1**
GNI IAmb IAmb 22 54 45.7
comp=Z,13nm,1.1s
GNI Garni 80.03 40 *c i*P **P** **22 54 28.4 +1.6**
GNI pmax pmax
comp=Z,10.0nm,1.3s
SUW Suwalki 80.13 20 P **P** **22 54 26.1 -0.6**
SUW Suwalki 80.13 20 P **P** **22 54 26.1 -0.6**
SUW pmax pmax
comp=Z,30nm,1.1s
WSAR Wadi Sarin 81.14 61 LR LR 23 30 02.8
comp=Z,900nm,20.2s,baz=248,slow=35
ZEI Tsey 81.17 38 *e*P **P** **22 54 31.9 -1.0**
ZEI pmax pmax
comp=Z,8.0nm,1.1s
KBZ Khabaz 81.19 37 P **P** **22 54 32.8 +0.2**
comp=Z,4.2nm,1.0s,baz=255,slow=8.0,SNR=6.1
comp=Z,4.2nm,1.0s
KBZ Khabaz 81.19 37 *c i*P **P** **22 54 34.7 +2.1**
KBZ pmax pmax
comp=Z,5.0nm,0.9s
KIV Kislovodsk 81.22 36 P **P** **22 54 33.3 +0.3**
KIV Kislovodsk 81.22 36 *e*P **P** **22 54 33.2 +0.3**
KIV pmax pmax
comp=Z,9.0nm,1.0s
VNDA Vanda 81.99 179 P **P** **22 54 37.4 +0.9**
comp=Z,3.3nm,1.0s,baz=228,slow=5.4,SNR=12
VNDA LR LR 23 26 48.5
comp=Z,144nm,19.7s,baz=168,slow=33
comp=Z,3.3nm,1.0s
VNDA Vanda 81.99 179 P **P** **22 54 37.3 +0.9**
NB2 NORSAR Subarra 83.44 11 P **P** **22 54 44.3 +0.2**
comp=Z,18nm,1.2s,baz=201,slow=5.9
NOA NORSAR Array B 83.44 11 P **P** **22 54 44.7 +0.6**
comp=Z,3.8nm,1.0s,baz=201,slow=5.3,SNR=7.5
NOA LR LR 23 31 35.4
comp=Z,83nm,19.7s,baz=55,slow=36
comp=Z,3.8nm,1.0s
NC204 NORSAR Array S 83.58 11 P **P** **22 54 46.1 +1.2**
VSR Storozhevoye 84.24 29 *e*P **P** **22 54 48.4 +0.1**
VSR pmax pmax
comp=Z,50nm,1.2s
VORR Voronezh 84.57 29 *e*P P 22 54 45.0 -5.0
VORR pmax pmax
comp=Z,20nm,0.4s
VSU Vasula 84.94 19‖ *e*P **P** **22 54 51.6 -0.1**
VSU pmax pmax
comp=Z,31nm,1.5s
LPSR Galich'ya Gora 85.08 28 *e*P **P** **22 54 51.7 -0.9**
LPSR pmax pmax
comp=Z,20nm,1.3s
VRH Novokhopyorsk 85.42 30 *e*P **P** **22 54 52.9 -1.4**
VRH pmax pmax
comp=Z,8.0nm,0.8s
OBN Obninsk 85.85 25 *e*P **P** **22 54 55.6 -0.7**
OBN *e*S **SKSac** **23 05 20.1 -1.7**
OBN pmax pmax
comp=Z,10.0nm,0.4s
OBN MLR MLR
comp=Z,89nm,18.0s
HODGE Hodges 86.51 308 P **P** **22 55 00.7 +0.6**
HODGE IAmb IAmb 22 55 12.4
comp=Z,22nm,1.5s
MOS Moscow 86.72 25 *e*P **P** **22 54 59.9 -0.7**
MOS *e* 22 55 08.5
FINES FINESS Array B 87.19 17 P **P** **22 55 02.8 +0.1**
comp=Z,4.4nm,0.9s,baz=225,slow=4.3,SNR=8.0
FINES LR LR 23 34 59.6
comp=Z,240nm,19.9s,baz=60,slow=36
comp=Z,4.4nm,0.9s
FINES FINESS Array B 87.19 17 P **P** **22 55 03.0 +0.3**
FINES FINESS Array B 87.19 17 P **P** **22 55 03.0 +0.3**
U54A Nelsons Funny 87.26 311 P **P** **22 55 03.4 -0.5**
U54A IAmb IAmb 22 55 06.3
comp=Z,9.3nm,0.8s
352A Blakely 87.27 305 P **P** **22 55 04.4 +0.5**
RPN Rapa Nui 87.34 242 LR LR 23 27 08.7
comp=Z,325nm,18.9s,baz=108,slow=31
BG3 Lake Jocassee 87.35 309 P **P** **22 55 04.8 +0.6**
GEYT Alibeck 87.57 48 LR LR 23 34 26.9
comp=Z,333nm,18.8s,baz=278,slow=36
GEYT Alibeck 87.57 48 P **P** **22 55 05.7 +0.4**
GEYT IAmb IAmb 22 55 18.1
comp=Z,9.0nm,1.6s
TKL Tuckaleechee C 88.27 309 LR LR 23 26 04.2
comp=Z,198nm,21.2s,baz=326,slow=30
250A Grady 88.52 305 P **P** **22 55 09.8 0.0**
SCHQ Schefferville 88.66 332 LR LR 23 27 44.1
comp=Z,199nm,18.9s,baz=333,slow=31
ERPA Erie 88.70 316 P **P** **22 55 09.2 -1.3**
V51A Loudon 88.75 309 P **P** **22 55 10.1 -0.8**
V51A IAmb IAmb 22 55 11.4
comp=Z,14nm,1.3s
HRA Herat 88.93 53 P **P** **22 55 12.5 +0.5**
HRA IAmb IAmb 22 55 14.4
comp=Z,6.5nm,1.1s
O52A Adamsville 88.96 314 P **P** **22 55 11.5 -0.3**
BELG Belogornoye 89.03 32 P **P** **22 55 11.6 -0.1**
comp=Z,16nm,1.0s,baz=173,slow=4.8,SNR=5.3
comp=Z,16nm,1.0s
BELG Belogornoye 89.03 32 *de*P **P** **22 55 11.8 +0.1**
BELG pmax pmax
comp=Z,4.0nm,1.1s
FPAL Fort Paine 89.12 307 P **P** **22 55 12.2 -0.5**
FPAL IAmb IAmb 22 55 20.8
comp=Z,17nm,1.4s
Y49A Blount Mountai 89.43 307 P **P** **22 55 13.6 -0.6**
Y49A IAmb IAmb 22 56 18.0
comp=Z,14nm,1.5s
SWET Sewanee 89.65 308 P **P** **22 55 14.3 -0.9**
SWET IAmb IAmb 22 55 16.5
comp=Z,9.2nm,1.1s
CLTN Cedars of Leba 90.32 309 P **P** **22 55 18.1 -0.1**
CLTN IAmb IAmb 22 55 19.4
comp=Z,12nm,1.2s
V48A Smith Brothers 90.53 308 P **P** **22 55 18.8 -0.4**
JMIC Jan Mayen 91.39 1 LR LR 23 31 03.1
comp=Z,73nm,21.4s,baz=168,slow=32
PCHI Peechi 91.75 79 *e*P **P** **22 55 22.2 -3.1**
PCHI *e*S **SKSac** **23 06 02.5 +3.7**
AKTO Aktyubinsk 93.47 37 LR LR 23 43 20.8
comp=Z,74nm,18.0s,baz=228,slow=39
KIRV Kirov 93.47 27 LR LR 23 36 50.0
comp=Z,79nm,21.7s,baz=243,slow=35
ARCES ARCESS Array B 93.73 12 LR LR 23 37 13.2
comp=Z,169nm,21.1s,baz=234,slow=35
PALK Pallekele 94.66 84 LR LR 23 33 18.2
comp=Z,842nm,20.5s,baz=358,slow=32
CCM Cathedral Cave 94.71 309 P **P** **22 55 38.0 -0.5**
CCM IAmb IAmb 22 55 39.6
comp=Z,11nm,1.3s
CCM Cathedral Cave 94.71 309 P **P** **22 55 38.0 -0.5**
CCM pmax pmax
comp=Z,11nm,1.3s
ARU Arti 96.58 32 LR LR 23 40 36.4
comp=Z,78nm,20.8s,baz=226,slow=36
ARU Arti 96.58 32 *c i*P **P** **22 55 45.8 -0.7**
ARU **22 59 40.8**
ARU PPP PPP 23 01 43.5
ARU S **SKSac** **23 06 22.6 -0.5**
ARU SP **SP** **23 08 30.6 +3.2**
ARU pmax pmax
comp=Z,5.0nm,1.1s
SPITS Spitsbergen Ar 99.91 6 LR LR 23 41 23.5
comp=Z,76nm,19.4s,baz=180,slow=36
WMQ Urumqi 110.56 50 *e*P **PKiKP** **23 00 49.6 -0.1**
WMQ LR LR
comp=Z,260nm,25.5s
PZH PanZhiHua 119.21 70 PKP **PKPdf** **23 01 06.6 -0.3**
TBI Tubuai 120.03 225 *e*LR LR 23 38 26.0
comp=Z,156nm,32.5s
TAOE Nuku Hiva Isla 121.56 245 *e*LR LR 23 39 15.4
comp=Z,148nm,24.7s
CD2 Chengdu 121.58 66 PKP **PKPdf** **23 01 11.0 -0.2**
LZH Lanzhou 122.09 60 *e*PKP **PKPdf** **23 01 09.3 -2.9**
LZH sPKP 23 01 14.0
LZH LR LR
comp=N,210nm,18.0s
LZH LR LR
comp=E,230nm,17.9s
LZH LR LR
comp=Z,300nm,20.1s
SONM Songino Array 123.71 46 PKP **PKPdf** **23 01 13.7 -1.2**
comp=Z,0.4nm,0.6s,baz=277,slow=2.4,SNR=4.5
PPT2 Papeete2 123.95 230 *e*LR LR 23 40 26.6
comp=Z,193nm,23.8s
ASAR Alice Springs 124.61 141 PKP **PKPdf** **23 01 16.3 -1.0**
comp=Z,0.7nm,0.7s,baz=197,slow=2.8,SNR=4.7
QIZ Qiongzhong 125.15 81 PKP **PKiKP** **23 01 20.4 +1.7**
QIZ PP **PP** **23 03 06.5 -1.5**
QIZ Qiongzhong 125.15 81 SS SS 23 20 06.9 +1.3
QIZ LR LR
comp=N,230nm,18.6s
QIZ LR LR
comp=E,280nm,20.6s
QIZ LR LR
comp=Z,280nm,22.1s
ILAR Eielson Array 126.99 338 PKP **PKPdf** **23 01 19.5 -1.0**
comp=Z,1.1nm,1.0s,baz=20,slow=0.7,SNR=6.7
ILAR Eielson Array 126.99 338 **PKPdf** **23 01 20.3 -0.2**
ILAR Eielson Array 126.99 338 PKIKP **PKPdf** **23 01 20.3 -0.2**
WRA Warramunga Arr 127.68 138 PKP **PKPdf** **23 01 22.1 -1.2**
comp=Z,0.8nm,0.9s,baz=153,slow=1.9,SNR=3.0
HHC Hu-ho-hao-te 128.09 54 *e*P **PKPdf** **23 01 20.3 -3.2**
HHC LR LR
comp=N,230nm,19.7s
HHC LR LR
comp=E,270nm,19.0s
HHC LR LR
comp=Z,400nm,19.7s
BILL Bilibino 132.57 1 *d i*PKIKP **PKPdf** **23 01 30.9 -0.1**
BILL *e* 23 03 53.7
BILL *e*PPP PPP 23 06 45.5
BILL *e* 23 08 42.9
BILL *e*SS SS 23 21 34.9 +1.1
BILL *e*SSS SSS 23 26 25.4
BILL pmax pmax
comp=Z,7.0nm,1.3s
NJ2 Nanjing 134.51 65 *e*P **PKPdf** **23 01 35.6 -0.1**
NJ2 pmax pmax
comp=Z,13nm,0.6s
SEY Seymchan 136.32 11‖ *e*PKIKP **PKiKP** **23 01 39.1 -0.8**
MA2 Magadan 139.09 14‖ *e*PKIKP **PKPdf** **23 01 43.3 -0.1**
YSS Yuzh-Sakhalins 146.47 32 *e*PKP2 **PKPdf** **23 01 57.0 +0.2**
YSS pmax pmax
comp=Z,200nm,7.0s
PEA0B Petropavlovsk- 146.54 12 **PKPbc** **23 01 57.7 -0.5**
PEA0B Petropavlovsk- 146.54 12 *d i*PKP2 **PKPdf** **23 01 57.3 +0.5**
PETK Petropavlovsk- 146.54 12 PKPbc **PKPbc** **23 01 58.0 -0.3**
comp=Z,17nm,1.1s,baz=81,slow=4.9,SNR=22
PETK Petropavlovsk- 146.54 12 **PKPdf** **23 01 57.3 +0.5**
PETK Petropavlovsk- 146.54 12 PKP2 **PKPdf** **23 01 57.3 +0.5**
PET Petropavlovsk 146.80 11‖ *e*PKP2 **PKPbc** **23 01 58.4 -0.5**
MAJO Matsushiro 149.27 52‖ *i*PKP2 **PKPbc** **23 02 06.0 -0.1**
MJAR Matsushiro Arr 149.27 52 PKPbc **PKPbc** **23 02 05.7 -0.4**
comp=Z,2.5nm,0.7s,baz=296,slow=3.5,SNR=9.8
MJAR Matsushiro Arr 149.27 52 **PKPbc** **23 02 04.7 -1.4**
MJAR Matsushiro Arr 149.27 52 PKP2 **PKPbc** **23 02 04.7 -1.4**

SJA **14** *22:42:23.2±0.7,21.1°14S×69.1°02W,h130km±3km, ML4.6, MW4.3*
NEIC **14** *22:42:24.8±1.7,21.1°11S±0.1°04×68.1°96W±0.1°06,h114km±4km, mb4.7/42, Mwr4.6(GUC), Error ellipse: s-maj=8.1km s-min=5.3km az=89.0*
VAO **14** *22:42:25.0±0.5,21.0°02S×68.0°73W,h110km±4km, mb4.8*
GUC **14** *22:42:25.3±0.7,21.1°13S×68.1°92W,h114km±3km, ML4.6*
IDC **14** *22:42:25.4±0.4,21.1°15S×68.1°74W,h118km±3km, mb4.0/15, mbtmp4.4/19, MS3.1/2, Error ellipse: s-maj=14.2km s-min=6.7km az=98.0*
ISC 14 22:42:24.4±0.4,**21.10S**±0.03×**68.90W**±0.04,**h115**km±3km, **n222,σ1s30**/270,**mb4.5**/28,**17C-1D,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.55**	**275**			**Pn**	**22 42 41.8**	**-0.4**
PB01					Sn	**Sn**	**22 42 55.1**	**-0.6**
PB01	**IPOC Station P**	**0.55**	**275**	⇑*i*P		**Pn**	**22 42 42.3**	**0.0**
PB01				*i* S		**Sn**	**22 42 55.2**	**-0.4**
PB01				IAML			22 42 56.0	
	comp=N,57μm,0.3s							
PB01	**IPOC Station P**	**0.55**	**275**	*e*P		**Pn**	**22 42 42.3**	**0.0**
PB01				*e*S		**Sn**	**22 42 56.0**	**+0.3**

PB01 IAML 22 42 56.6
comp=Z,23µm,0.2s
PB09 IPOC Station P 0.77 205 Pn 22 42 44.2 +0.2
PB09 Sn **Sn 22 42 59.0 +0.2**
PB09 IPOC Station P 0.77 205⇑ *iP* **Pn 22 42 44.2 +0.2**
PB09 *i* S **Sn 22 42 59.0 +0.2**
PB09 IAML 22 43 01.0
comp=N,11µm,0.3s
PB09 IPOC Station P 0.77 205 *eP* **Pn 22 42 44.3 +0.2**
PB09 *eS* **Sn 22 42 59.9 +1.0**
PB09 IAML 22 43 00.3
comp=Z,7µm,0.2s
PB02 IPOC Station P 0.96 256 Pn 22 42 45.3 -0.4
PB02 Sn **Sn 22 43 01.5 -0.2**
PB02 IPOC Station P 0.96 256⇑ *iP* **Pn 22 42 45.8 +0.1**
PB02 *i* S **Sn 22 43 01.5 -0.2**
PB02 IAML 22 43 02.6
comp=N,39µm,0.2s
PB02 IPOC Station P 0.96 256 *eP* **Pn 22 42 45.8 +0.1**
PB02 *eS* **Sn 22 43 02.1 +0.3**
PB02 IAML 22 43 05.9
comp=Z,26µm,0.3s
PB08 IPOC Station P 0.98 346 Pn 22 42 46.7 +0.5
PB08 Sn **Sn 22 43 03.7 +1.1**
PB08 IPOC Station P 0.98 346⇑ *iP* **Pn 22 42 47.1 +0.9**
PB08 *i* S **Sn 22 43 03.7 +1.1**
PB08 IAML 22 43 05.5
comp=E,12µm,0.4s
PB08 IPOC Station P 0.98 346 *eP* **Pn 22 42 47.3 +1.1**
PB08 *eS* **Sn 22 43 04.5 +1.8**
PB08 IAML 22 43 07.3
comp=Z,5µm,0.6s
PB07 IPOC Station P 1.11 235 Pn **Pn 22 42 46.7 -0.7**
PB07 Sn **Sn 22 43 04.0 -0.7**
PB07 IPOC Station P 1.11 235⇑ *iP* **Pn 22 42 47.2 -0.1**
PB07 *i* S **Sn 22 43 04.1 -0.7**
PB07 IAML 22 43 06.1
comp=E,11µm,0.3s
PB07 IPOC Station P 1.11 235 *eP* **Pn 22 42 47.2 -0.1**
PB07 *eS* **Sn 22 43 04.5 -0.3**
PB07 *eS* **Sn 22 43 04.8 0.0**
PB07 IAML 22 43 07.7
comp=Z,7µm,0.2s
PATCX Punta Patache 1.20 283 Pn 22 42 48.1 -0.1
PATCX Sn **Sn 22 43 06.0 -0.3**
PATCX Punta Patache 1.20 283⇑ *iP* **Pn 22 42 48.5 +0.3**
PATCX *i* S **Sn 22 43 06.1 -0.1**
PATCX IAML 22 43 07.7
comp=N,16µm,0.2s
PATCX Punta Patache 1.20 283 *eP* Pn 22 42 38.4 -10
PATCX *eP* **Pn 22 42 47.9 -0.3**
PATCX *eP* **Pn 22 42 48.5 +0.3**
PATCX *eP* **Pn 22 42 48.5 +0.3**
PATCX *eP* **Pn 22 42 48.6 +0.3**
PATCX IAML 22 43 07.4
comp=Z,6µm,0.4s
HMBC Humberstone 1.23 311 *i* P **Pn 22 42 48.7 +0.1**
HMBC *i* S **Sn 22 43 06.9 0.0**
HMBC IAML 22 43 08.6
comp=E,16µm,0.5s
TA01 Diego Aracena 1.31 293 Pn 22 42 49.2 -0.1
TA01 Diego Aracena 1.31 293⇑ *iP* **Pn 22 42 49.2 -0.1**
TA01 *i* S **Sn 22 43 07.5 -0.7**
TA01 IAML 22 43 10.9
comp=E,17µm,0.2s
TA01 Diego Aracena 1.31 293 *eP* **Pn 22 42 49.2 -0.1**
TA01 *eS* **Sn 22 43 08.4 +0.2**
TA01 IAML 22 43 11.2
comp=Z,5µm,0.3s
TA02 Huaiquique 1.42 305 Pn 22 42 50.4 -0.1
TA02 Huaiquique 1.42 305⇑ *iP* **Pn 22 42 50.4 -0.1**
TA02 *i* S **Sn 22 43 09.7 -0.6**
TA02 IAML 22 43 16.5
comp=N,12µm,0.1s
TA02 Huaiquique 1.42 305 *eP* **Pn 22 42 50.5 -0.1**
TA02 *eS* **Sn 22 43 10.8 +0.5**
TA02 IAML 22 43 14.6
comp=Z,4µm,0.1s
GO01 Chusmiza 1.45 349 Pn 22 42 52.2 +0.8
GO01 Chusmiza 1.45 349⇑ *iP* **Pn 22 42 52.1 +0.8**
GO01 *i* S **Sn 22 43 12.6 +0.8**
GO01 Chusmiza 1.45 349 *eP* **Pn 22 42 52.3 +0.9**
GO01 *eP* **Pn 22 42 52.5 +1.1**
GO01 *eS* **Sn 22 43 14.2 +2.4**
PB11 IPOC Station P 1.50 332 Pn 22 42 51.6 -0.2
PB11 IPOC Station P 1.50 332⇑ *iP* **Pn 22 42 52.1 +0.4**
PB11 *i* S **Sn 22 43 13.3 +0.8**
PB11 IAML 22 43 14.5
comp=E,13µm,0.2s
PB11 IPOC Station P 1.50 332 *eP* **Pn 22 42 52.1 +0.4**
PB11 *eS* **Sn 22 43 13.7 +1.2**
PB11 IAML 22 43 15.1
comp=Z,4µm,0.8s
LVC Limon Verde 1.51 180 P **Pn 22 42 52.5 +0.6**
comp=Z,373nm,0.3s,baz=32,slow=10,SNR=1905
LVC S **Sn 22 43 12.8 -0.1**
comp=Z,2µm,0.4s,baz=273,slow=18,SNR=42
LVC Limon Verde 1.51 180⇑ *iP* **Pn 22 42 52.5 +0.6**
LVC *i* S **Sn 22 43 13.4 +0.5**
LVC Limon Verde 1.51 180 *eP* **Pn 22 42 52.5 +0.6**
LVC *eS* **Sn 22 43 14.2 +1.3**
LVC Limon Verde 1.51 180 *eP* **Pn 22 42 52.6 +0.6**
PB04 IPOC Station P 1.69 223 Pn 22 42 53.7 -0.3
PB04 IPOC Station P 1.69 223⇑ *iP* **Pn 22 42 53.7 -0.3**
PB04 *i* S **Sn 22 43 14.9 -1.6**
PB04 IAML 22 43 21.7
comp=N,6µm,0.5s
PB04 IPOC Station P 1.69 223 *eP* **Pn 22 42 53.1 -0.9**
PB04 *eS* **Sn 22 43 15.8 -0.8**
PB04 IAML 22 43 20.9
comp=Z,4µm,0.2s
PB06 IPOC Station P 1.72 201 Pn 22 42 54.2 -0.1
PB06 IPOC Station P 1.72 201⇑ *iP* **Pn 22 42 54.3 -0.1**
PB06 *i* S **Sn 22 43 16.4 -0.7**
PB06 IAML 22 43 18.6
comp=E,6µm,0.1s
PB06 IPOC Station P 1.72 201 *eP* **Pn 22 42 54.0 -0.3**
PB06 *eS* **Sn 22 43 16.8 -0.3**
PB06 *eS* **Sn 22 43 17.5 +0.3**
PB06 IAML 22 43 20.1
comp=Z,5µm,0.2s
AF01 San Pedro de A 1.96 160 Pn 22 42 58.8 +1.4
PB15 IPOC Station P 2.17 194 Pn 22 42 59.9 0.0
PB15 IPOC Station P 2.17 194⇑ *iP* **Pn 22 42 60.0 0.0**
PB15 *i* S **Sn 22 43 25.7 -1.5**
PB15 IPOC Station P 2.17 194 *eP* **Pn 22 42 59.5 -0.5**
PB15 *eS* **Sn 22 43 26.7 -0.5**
PB15 IAML 22 43 31.6
comp=Z,10µm,0.3s
PB16 IPOC Station P 2.81 348 Pn 22 43 09.6 +1.0
PB16 IPOC Station P 2.81 348⇑ *iP* **Pn 22 43 09.7 +1.2**
PB16 IPOC Station P 2.81 348 *eP* **Pn 22 43 09.7 +1.2**
PB16 *eS* Sn 22 43 33.3 -9.1
PB12 IPOC Station P 2.81 331 Pn **Pn 22 43 07.2 -0.9**
PB12 IPOC Station P 2.81 331⇑ *iP* **Pn 22 43 07.4 -0.8**
PB12 *i* S **Sn 22 43 40.6 -1.2**
PB12 IAML 22 43 42.1
comp=N,989nm,0.1s
PB12 IPOC Station P 2.81 331 *eP* **Pn 22 43 08.0 -0.2**
PB12 *eS* **Sn 22 43 41.4 -0.4**
PB12 IAML 22 44 02.3
comp=Z,648nm,0.2s
PB10 IPOC Station P 2.85 212 Pn **Pn 22 43 07.3 -1.3**
PB10 IPOC Station P 2.85 212⇑ *iP* **Pn 22 43 07.2 -1.4**
PB10 IPOC Station P 2.85 212 *eP* **Pn 22 43 07.6 -1.0**
PB10 *eS* **Sn 22 43 38.9 -3.8**
AP01 Chacalluta 3.03 333 Pn **Pn 22 43 09.7 -1.3**
AP01 Chacalluta 3.03 333 *eP* **Pn 22 43 11.5 +0.6**
AP01 IAML 22 43 53.8
comp=Z,758nm,0.2s
YJA Yavi 3.33 109 *eP* **Pn 22 43 17.5 +2.2**
YJA *eS* **Sn 22 43 58.6 +4.1**
PB18 Visviri 3.53 351 *eP* **Pn 22 43 21.5 +3.4**
PB14 IPOC Station P 3.78 201 Pn **Pn 22 43 18.9 -2.2**
PB14 IPOC Station P 3.78 201 *eP* Pn 22 43 15.8 -5.4
PB14 *eP* **Pn 22 43 20.4 -0.7**
PB14 *eS* **Sn 22 44 02.8 -2.3**
PB14 IAML 22 44 04.7
comp=Z,446nm,0.2s
HJA Humahuaca 3.86 124 *eP* **Pn 22 43 24.0 +1.7**
GO02 Mina Guanaco 4.10 189 Pn **Pn 22 43 24.2 -1.2**
GO02 Mina Guanaco 4.10 189 *eP* **Pn 22 43 24.1 -1.4**

GO02 Mina Guanaco 4.10 189 *eP* **Pn 22 43 24.0 -1.4**
GO02 *eP* **Pn 22 43 24.4 -1.0**
GO02 *eS* **Sn 22 44 12.4 -0.4**
LPAZ La Paz 4.84 9 P **Pn 22 43 37.8 +2.1**
comp=Z,30nm,0.5s,baz=178,slow=6.0,SNR=149
LPAZ S **Sn 22 44 23.8 -7.2**
comp=Z,26nm,0.6s,baz=171,slow=14,SNR=4.2
LPAZ LR LR 22 46 04.5
comp=Z,108nm,21.8s,baz=162,slow=45
LPAZ La Paz 4.84 9 Pn **Pn 22 43 38.0 +2.4**
LPAZ La Paz 4.84 9 *eP* **Pn 22 43 36.6 +1.0**
AC01 Pan de Azucar 5.27 197 Pn 22 43 37.9 -2.9
AC02 Maricunga 5.72 182 Pn **Pn 22 43 46.4 -1.0**
AC06 Mina Casimiro 6.38 192 Pn 22 43 52.8 -3.1
GO03 Copiap 6.58 190 Pn 22 43 55.7 -3.0
AC04 Llanos de Chal 7.35 195 Pn 22 44 03.9 -5.2
LCO Las Campanas 8.05 191 Pn 22 44 14.2 -4.6
CO01 Juntas del Tor 8.91 187 Pn 22 44 27.0 -3.4
SIV San Ignacio 8.99 57 P **Pn 22 44 29.2 -2.2**
comp=Z,81nm,0.6s,baz=245,slow=9.8,SNR=339
SIV S **Sn 22 46 04.2 -6.8**
comp=Z,5.4nm,0.7s,baz=294,slow=15,SNR=1.4
CO03 El Pedregal 9.84 189 Pn 22 44 37.6 -5.2
ZON Zonda 10.41 179 Pn **Pn 22 44 47.3 -3.2**
PTLB Pontes e Lacer 10.84 60 *eP* **Pn 22 44 53.4 -2.9**
ETMB Extrema 11.51 13 *eP* **Pn 22 45 03.1 -2.1**
VILB Vilhena 11.60 47 *eP* **Pn 22 45 04.6 -2.0**
CPUP Villa Florida 11.81 118 P **Pn 22 45 06.9 -2.2**
comp=Z,5.0nm,0.8s,baz=301,slow=12,SNR=10
CPUP Villa Florida 11.81 118 Pn 22 45 07.1 -2.1
AQDB Aquidauana 12.36 89 *eP* **Pn 22 45 14.4 -2.1**
SAML Samuel 13.27 25 Pn **Pn 22 45 26.7 -1.7**
SALV Santo Antonio 13.55 70 *eP* **Pn 22 45 30.3 -1.6**
PP1B Ponte de Pedra 13.68 78 *eP* **Pn 22 45 31.6 -2.1**
NBRS Nobres 14.20 64 *eP* **Pn 22 45 38.9 -1.5**
UNIS Unistalda (Bra 14.82 125 *eP* **Pn 22 45 46.5 -1.7**
CRSM Crissiumal (Br 14.96 118 *eP* **Pn 22 45 49.7 -0.2**
PDRB Porto dos Gac 15.00 53 *eP* **Pn 22 45 49.0 -1.6**
H03N1 Juan Fernandez 15.17 214 T T 23 00 45.0
baz=35,slow=74
H03N2 Juan Fernandez 15.18 214 T T 23 00 35.8
baz=35
H03N3 Juan Fernandez 15.19 214 T T 23 00 41.5
baz=35,slow=74
TRCB Terra Rica 15.19 99 P 22 45 54.1 -1.1
TRCB Terra Rica 15.19 99 *eP* **Pn 22 45 53.0 +0.1**
FRBT Francisco Belt 15.31 112 *eP* **Pn 22 45 53.8 -0.6**
PTGB Pitanga 15.92 106 *eP* **P 22 46 03.0 -0.4**
CLDB Colider 16.17 53 *eP* **Pn 22 46 04.5 -0.7**
ALGR Alto Alegre (B 16.30 121 *eP* **Pn 22 46 06.6 0.0**
PCMB Pacaembu 16.44 95 *eP* **Pn 22 46 08.5 +0.1**
DVLD Doverlandia 16.44 77 *eP* **Pn 22 46 07.4 -1.1**
ITAB Concordia 16.47 115 P **Pn 22 46 08.7 0.0**
ITAB IAmb IAmb 22 46 10.1
comp=Z,35nm,0.6s
ITAB Concordia 16.47 115 *eP* **Pn 22 46 08.8 +0.1**
CPSB Cacapava Do Su 16.71 127 *eP* **Pn 22 46 11.4 -0.3**
TBTG Tabatinga, AM 16.84 357 *eP* **P 22 46 13.7 +0.3**
ARAG Araguaiana, MT 17.07 75 *eP* **P 22 46 14.9 -1.1**
PLTB Pedras Altas 17.32 131 P **P 22 46 17.1 -1.5**
PLTB Pedras Altas 17.32 131 *eP* **P 22 46 17.5 -1.2**
ITRB Iturama 17.44 89 *eP* **P 22 46 20.2 +0.1**
FRTB Fartura 18.04 101 *eP* **P 22 46 25.7 -1.1**
CNLB Canela 18.25 120 *eP* **P 22 46 29.2 +0.2**
BB19B Bebedouro 19.01 94 *eP* **P 22 46 36.4 -0.9**
SNDB Serra Nova Dou 19.14 64 *eP* **P 22 46 37.4 -1.4**
NPGB Nova Progresso 19.15 45 *eP* **P 22 46 37.0 -1.8**
MACA Manacapuru-AM 19.54 25 *eP* **P 22 46 41.7 -1.3**
PLCA Paso Flores 19.63 184 P **P 22 46 44.2 +0.3**
comp=Z,6.6nm,0.7s,baz=4.1,slow=11,SNR=29
PLCA Paso Flores 19.63 184 P **P 22 46 44.2 +0.3**
PLCA Paso Flores 19.63 184 *eP* **Pn 22 46 45.7 -0.7**
IPMB Ipameri, GO 19.74 85 *eP* **P 22 46 44.1 -1.2**
RCLB Rio Claro- Sao 19.89 98 *eP* **P 22 46 45.3 -1.6**
LL04 Puerto Octay 19.98 188 P **P 22 46 47.5 -0.1**
BOSC San Juan Bosco 20.13 331 P **P 22 46 49.4 -0.3**
BOSC IAmb IAmb 22 47 03.2
comp=Z,29nm,0.5s
PET01 Itanhaem-SP 20.20 103 *eP* **P 22 46 49.2 -0.9**
VAO Valinhos 20.42 99 *eP* **P 22 46 50.6 -2.0**
BDFB Brasilia 20.54 78 P **P 22 46 52.4 -1.7**
comp=Z,20nm,0.4s,baz=261,slow=8.7,SNR=20
comp=Z,20nm,0.4s
BDFB Brasilia 20.54 78 P **P 22 46 53.1 -0.9**
BDFB IAmb IAmb 22 46 57.4
comp=Z,26nm,0.5s
BDFB Brasilia 20.54 78 *eP* **P 22 46 53.6 -0.4**
ITTB Itaituba 20.98 39 *eP* **P 22 46 57.0 -1.6**
COHC Cochancay 21.09 330 P **P 22 47 01.8 +2.1**
PEXB Peixe 21.65 69 *eP* **P 22 47 05.2 -0.5**
PARB Paraibuna 21.66 100 *eP* **P 22 47 05.0 -0.9**
SLOR San Lorenzo - 22.30 334 P **P 22 47 12.7 -0.4**
BSCB Bom Sucesso 22.51 94 *eP* **P 22 47 13.7 -1.1**
PRPB Parauapebas 23.70 54 *eP* **P 22 47 25.0 -1.0**
MALB Monte Alegre 23.86 39 *eP* **P 22 47 26.9 -0.4**
SMTB Santa Maria do 23.87 63 *eP* **P 22 47 26.8 -0.7**
DIAM Diamantina, MG 23.91 88 *eP* **P 22 47 27.9 0.0**
JANB Januaria 24.12 80 *eP* **P 22 47 28.5 -1.2**
SDBA SAO DESIDERIO 24.52 73 *eP* **P 22 47 33.3 -0.1**
COYC Coyhaique 24.55 185 P **P 22 47 33.6 +0.3**
COYC IAmb IAmb 22 47 34.5
comp=Z,13nm,0.7s
BOAV Boa Vista 24.75 20 *eP* **P 22 47 35.8 +0.5**
CAM01 Campos-RJ 25.35 97 *eP* **P 22 47 40.5 -0.4**
SJMB Sao Joao De Ma 26.16 90 *eP* **P 22 47 48.0 -0.1**
MCPB Macapa, AP 26.37 41 *eP* **P 22 47 49.9 -0.1**
BSFB Barra de Sao F 26.45 90 *eP* **P 22 47 50.5 -0.2**
RIB01 Linhares ES 26.80 91 *eP* **P 22 47 53.6 -0.3**
NAN01 Guarapari, ES 27.30 88 *eP* **P 22 47 57.8 -0.7**
GUA01 Guaratinga, BA 27.88 86 *eP* **P 22 48 03.7 +0.1**
CMC01 Camacan, BA 28.45 83 *eP* **P 22 48 08.4 -0.3**
GDU01 Guandu, BA 28.89 80 *eP* **P 22 48 12.1 -0.5**
ZARC Zaragoza, Cauc 29.01 348 P **P 22 48 12.3 -1.2**
SDV Santo Domingo 29.84 357 LR LR 23 01 12.0
comp=Z,68nm,21.8s,baz=142,slow=38
ROSB Rosrio 30.15 56 *eP* **P 22 48 23.3 -0.4**
MDP Montagnes des 30.53 33 P **P 22 48 26.6 -0.5**
comp=Z,5.3nm,0.9s,baz=125,slow=6.8,SNR=1.8
comp=Z,5.3nm,0.9s
SJCC San Jacinto, C 31.41 348 P **P 22 48 35.4 +0.6**
SJCC IAmb IAmb 22 48 43.2
comp=Z,6.3nm,0.7s
NBLA Lagarto - SE 31.48 76 *eP* **P 22 48 35.0 -0.5**
MG02 Cerro Sombrero 31.63 180 P **P 22 48 36.5 +0.2**
NBPB Pedra_Branca-C 32.35 66 *eP* **P 22 48 42.8 -0.3**
NBMO Morrinhos-CE 33.17 62 *eP* **P 22 48 50.2 0.0**
NBAN Anadia - AL 33.37 75 *eP* **P 22 48 51.8 -0.2**
NBCA Caruaru-PE 34.20 73 *eP* **P 22 48 59.2 0.0**
RCBR Riachuelo 35.39 69 P **P 22 49 09.4 0.0**
comp=Z,30nm,0.6s,baz=24,slow=8.7,SNR=22
comp=Z,30nm,0.6s
RCBR Riachuelo 35.39 69 P **P 22 49 10.2 +0.8**
RCBR Riachuelo 35.39 69 *eP* **P 22 49 09.6 +0.2**
FDF Fort de France 36.41 13 P **P 22 49 18.4 +0.4**
CELP Cerrillos 38.99 4 P **P 22 49 39.3 -0.4**
JSC Jenkinsville 56.31 348 P **P 22 51 53.2 0.0**
JSC IAmb IAmb 22 51 54.3
comp=Z,6.3nm,0.7s
BIRD Birdtown, Kers 56.51 349 P **P 22 51 55.3 +0.8**
BIRD IAmb IAmb 22 51 56.2
comp=Z,9.3nm,0.8s
X48A Hartselle 57.87 342 P **P 22 52 04.0 -0.2**
X48A IAmb IAmb 22 52 04.7
comp=Z,5.1nm,0.7s
TKL Tuckaleechee C 58.18 346 P **P 22 52 06.2 -0.1**
TKL IAmb IAmb 22 52 07.7
comp=Z,4.7nm,0.9s
SWET Sewanee 58.29 344 P **P 22 52 07.0 -0.2**
SWET IAmb IAmb 22 52 07.9
comp=Z,7.6nm,0.7s
V48A Smith Brothers 59.02 343 P **P 22 52 11.9 -0.2**
V48A IAmb IAmb 22 52 13.0
comp=Z,6.2nm,0.8s
CLTN Cedars of Leba 59.22 344 P **P 22 52 13.5 0.0**
CLTN IAmb IAmb 22 52 14.4
comp=Z,6.1nm,0.7s
WVT Waverly 59.67 342 P **P 22 52 15.8 -0.8**
MIAR Mount Ida 60.10 337 P **P 22 52 19.4 -0.2**
MIAR IAmb IAmb 22 52 20.8
comp=Z,3.2nm,0.7s
TXAR Lajitas Array 60.30 325 P **P 22 52 22.1 +0.9**
comp=Z,0.7nm,0.5s,baz=154,slow=8.6,SNR=18
TXAR PcP **PcP 22 53 06.8 +1.4**

comp=Z,0.4nm,0.7s,baz=172,slow=6.9,SNR=4.1
comp=Z,0.7nm,0.5s
TXAR Lajitas Array 60.30 325 P **P 22 52 21.9 +0.7**
TX31 Lajitas Ar. Si 60.30 325 P **P 22 52 22.1 +0.9**
TX31 IAmb IAmb 22 52 22.6
comp=Z,2.5nm,0.6s
VNA3 Neumayer Olymp 60.45 161 P **P 22 52 21.7 +0.1**
Q54A Coxs Mills 60.80 349 P **P 22 52 24.3 +0.1**
Q54A IAmb IAmb 22 52 25.4
comp=Z,5.7nm,0.6s
CCM Cathedral Cave 62.47 340 P **P 22 52 35.4 -0.1**
CCM IAmb IAmb 22 52 36.5
comp=Z,6.2nm,0.7s
SNAA Sanae 62.66 161 P **P 22 52 37.1 +0.7**
SNAA Sanae 62.66 161 P **P 22 52 37.3 +0.9**
comp=Z,4.3nm,0.8s,baz=264,slow=8.9,SNR=11
SNAA pP **pP 22 53 06.5 +0.8**
comp=Z,2.2nm,0.7s,baz=229,slow=7.5,SNR=3.2
comp=Z,4.3nm,0.8s
SNAA Sanae 62.66 161 P **P 22 52 37.4 +0.9**
SNAA IAmb IAmb 22 52 53.0
comp=Z,14nm,1.5s
MNTX Cornudas Mount 63.07 325 P **P 22 52 39.1 -0.5**
TROLL Troll, Antarti 64.37 161 P **P 22 52 49.0 +1.2**
D62A Allapoint, All 67.86 360 P **P 22 53 10.7 +0.7**
D62A IAmb IAmb 22 53 25.6
comp=Z,13nm,1.2s
DBIC Dimbokro 68.61 74 P **P 22 53 15.0 -0.5**
comp=Z,8.1nm,1.0s,baz=261,slow=3.4,SNR=3.9
comp=Z,8.1nm,1.0s
DBIC Dimbokro 68.61 74 P **P 22 53 14.7 -0.8**
DBIC IAmb IAmb 22 53 41.5
comp=Z,24nm,1.4s
QSPA South Pole Qui 69.09 180 P **P 22 53 19.4 +1.6**
PDAR Pinedale Array 73.77 330 P **P 22 53 46.9 +0.6**
comp=Z,0.3nm,0.4s,baz=165,slow=7.2,SNR=2.8
comp=Z,0.3nm,0.4s
ULM Lac du Bonnet 74.94 342 P **P 22 53 52.7 +0.2**
comp=Z,2.9nm,0.5s,baz=159,slow=6.3,SNR=5.5
comp=Z,2.9nm,0.5s
ULM Lac du Bonnet 74.94 342 P **P 22 53 53.0 +0.4**
NVAR Mina Array Bea 75.18 322 P **P 22 53 56.1 +1.5**
comp=Z,0.7nm,0.7s,baz=156,slow=7.5,SNR=5.5
comp=Z,0.7nm,0.7s
TOA0 Torodi Ar. Sit 77.21 70 P **P 22 54 06.2 -0.1**
TORD Torodi Ar. Bea 77.21 70 P **P 22 54 05.9 -0.3**
comp=Z,3.0nm,0.5s,baz=254,slow=5.3,SNR=35
TORD pP **pP 22 54 36.0 -0.9**
comp=Z,2.6nm,0.7s,baz=253,slow=5.4,SNR=2.6
TORD sP **sP 22 54 49.4 -0.4**
comp=Z,3.5nm,0.8s,baz=248,slow=5.4,SNR=2.5
comp=Z,3.0nm,0.5s
TORD Torodi Ar. Bea 77.21 70 P **P 22 54 06.0 -0.3**
TORD IAmb IAmb 22 54 13.1
comp=Z,8.4nm,0.6s
VNDA Vanda 77.25 190 P **P 22 54 07.8 +2.4**
comp=Z,0.6nm,0.8s,baz=111,slow=5.7,SNR=5.1
comp=Z,0.6nm,0.8s
TSUM Tsumeb 80.15 107 P **P 22 54 22.8 +0.2**
comp=Z,3.6nm,0.9s,baz=303,slow=0.8,SNR=2.0
comp=Z,3.6nm,0.9s
BOSA Boshof 83.63 118 P **P 22 54 40.8 +0.2**
comp=Z,1.5nm,0.7s,baz=323,slow=22,SNR=1.5
comp=Z,1.5nm,0.7s
BOSA Boshof 83.63 118 P **P 22 54 41.7 +1.1**
BOSA IAmb IAmb 22 54 59.9
comp=Z,8.5nm,1.3s
MAW Mawson 84.71 163 P **P 22 54 46.0 +0.9**
comp=Z,3.0nm,0.7s,baz=173,slow=5.3,SNR=7.2
comp=Z,3.0nm,0.7s
MAW Mawson 84.71 163 P **P 22 54 46.2 +1.0**
YKA Yellowknife Ar 90.81 341 P **P 22 55 14.9 +0.7**
comp=Z,1.1nm,0.6s,baz=131,slow=4.8,SNR=7.2
YKA pP **pP 22 55 46.2 +1.2**
comp=Z,2.6nm,0.8s,baz=132,slow=4.7,SNR=8.5
comp=Z,1.1nm,0.6s
YKA Yellowknife Ar 90.81 341 P **P 22 55 14.7 +0.6**
H11S2 WAKE ISLAND Hy 127.84 277 T T 01 21 11.3
baz=102,slow=74,SNR=87
H11S1 WAKE ISLAND Hy 127.84 277 T T 01 21 19.4
baz=102,slow=74,SNR=65
H11S3 WAKE ISLAND Hy 127.85 277 T T 01 21 27.3
baz=102,slow=74,SNR=66
H11N3 WAKE ISLAND Hy 127.91 279 T T 01 21 26.3
baz=103,slow=74,SNR=51
H11N2 WAKE ISLAND Hy 127.92 279 T T 01 21 27.4
baz=103,slow=74,SNR=46
H11N1 WAKE ISLAND Hy 127.92 279 T T 01 21 27.6
baz=103,slow=74,SNR=38
WRA Warramunga Arr 133.31 211 PKP **PKiKP 23 01 28.3 -0.6**
comp=Z,0.3nm,0.5s,baz=155,slow=1.9,SNR=2.0
WRA pPKP **pPKPdf 23 02 01.1 +1.1**
comp=Z,0.4nm,0.7s,baz=139,slow=2.0,SNR=1.6
ZALV Zalesovo Beam 141.58 25 PKP **PKiKP 23 01 43.2 -1.4**
comp=Z,1.2nm,0.5s,baz=276,slow=2.8,SNR=6.3
ZALV pPKP **pPKPdf 23 02 14.2 -0.1**
comp=Z,1.4nm,0.6s,baz=305,slow=5.2,SNR=4.1
ZALV Zalesovo Beam 141.58 25 PKPdf 23 01 42.5 +0.8
KSH Kashi 144.84 51 PKP **PKPdf 23 01 48.4 +0.2**
MK31 Makanchi Array 145.30 36 PKPdf **PKPab 23 01 49.6 +0.8**
MKAR Makanchi Array 145.30 36 PKPbc **PKPab 23 01 49.5 +0.7**
comp=Z,3.5nm,0.7s,baz=332,slow=3.2,SNR=29
MKAR pPKPbc **pPKPdf 23 02 21.5 +0.1**
comp=Z,4.8nm,0.8s,baz=328,slow=3.6,SNR=11
MKAR Makanchi Array 145.30 36 PKPdf **PKPab 23 01 49.7 +0.8**
USRK Ussuriysk Ar. 151.17 328 PKPbc **PKiKP 23 02 05.3 +0.6**
comp=Z,3.1nm,0.6s,baz=35,slow=2.2,SNR=5.0
USRK pPKPbc **pPKPbc 23 02 36.4 -0.1**
comp=Z,2.2nm,0.8s,baz=67,slow=3.7,SNR=2.3
SONM Songino Array 153.05 7 PKPbc **PKiKP 23 02 09.4 +0.7**
comp=Z,0.4nm,0.5s,baz=277,slow=0.6,SNR=4.0
SONM pPKPbc **pPKPbc 23 02 39.2 -1.8**
comp=Z,0.7nm,0.6s,baz=324,slow=2.1,SNR=4.0
LZH Lanzhou 163.77 21 ||PKP **PKPdf 23 02 16.3 +2.0**
LZH pPKP pPKPdf 23 02 32.8 -14
PZH PanZhiHua 169.88 56 PKP **PKPdf 23 02 17.8 -1.3**

MOS **14** *22:44:08.7*±*0.0*, *43.09N*×*46.97E*, *h11km*, *MPVA3.6*
DRS **14** *22:44:09.3*±*0.0*, *43.23N*×*46.87E*, *h18km*
NORS **14** *22:44:11.9*±*0.0*, *42.97N*×*46.92E*, *h5km*, *MPVA3.5*

ISC 14 22:44:08.6±1.2, **43.17N**±0.03×**47.05E**±0.03, **h8**km±9km,
n36, σ**1**s**06**/**71**, **Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
DBC	**Dubki**	**0.22**	**227**	*i* Pg	**Sg**		**22 44 12.9**	**-0.1**
DBC				*eS*g	**Sg**		**22 44 15.6**	**-0.3**
DLMR	**Dylym**	**0.32**	**252**	*i* Pg	**Pb**		**22 44 15.3**	**-1.2**
DLMR				*eS*g	**Sg**		**22 44 19.4**	**+0.3**
KANR	**Karaman**	**0.32**	**85**	*eP*g	**Pn**		**22 44 17.0**	**-2.6**
KANR				*eS*g	**Sb**		**22 44 22.9**	**+0.9**
BUJR	**Buynaksk**	**0.35**	**173**	*eP*g	**Pb**		**22 44 16.8**	**-0.3**
BUJR				*eS*g	**Sb**		**22 44 22.7**	**-0.1**
KRNR	**Karanay**	**0.36**	**197**	*i* Pg	**Pg**		**22 44 15.5**	**-0.1**
KRNR				*eS*g	**Sg**		**22 44 20.6**	**+0.2**
MAK	**Makhachkala**	**0.40**	**122**	*eP*g	**Pn**		**22 44 19.1**	**-1.4**
MAK				*eS*g	**Sb**		**22 44 26.7**	**+2.6**
UNCR	**Uncukul**	**0.49**	**202**	*eP*g	**Pg**		**22 44 18.0**	**-0.1**
UNCR				*eS*g	**Sg**		**22 44 25.0**	**+0.4**
ARKR	**Arakani**	**0.57**	**184**	*eP*g	**Pb**		**22 44 19.7**	**-1.1**
ARKR				*eS*g	**Sb**		**22 44 28.2**	**-0.9**
XNZR	**Khunzakh**	**0.68**	**202**	*eP*g	**Pb**		**22 44 21.8**	**-1.0**
XNZR				*eS*g	**Sg**		**22 44 31.1**	**+0.7**
DVE	**Vedeno**	**0.71**	**253**	*i* Pg	**Pb**		**22 44 22.5**	**-0.7**
DVE				*eS*g	**Sg**		**22 44 31.8**	**+0.4**
GNBR	**Gunib**	**0.78**	**185**	*eP*g	**Pn**		**22 44 24.5**	**-1.5**
GNBR				*eS*g	**Sb**		**22 44 35.4**	**+0.1**
BTLR	**Botlikh**	**0.79**	**230**	*eP*g	**Pg**		**22 44 23.6**	**-0.1**
BTLR				*eS*g	**Sg**		**22 44 33.7**	**-0.3**
SGKR	**Sergokala**	**0.84**	**147**	*eP*g	**Pn**		**22 44 26.3**	**-0.5**
SGKR				*eS*g	**Sn**		**22 44 38.8**	**-0.5**
GROC	**Groznyy**	**0.92**	**272**	*eP*g	**Pn**		**22 44 27.8**	**0.0**
GROC				*eS*g	**Sn**		**22 44 40.1**	**-1.0**
KMKR	**Kumukh**	**1.04**	**178**	*eP*g	**Pn**		**22 44 29.9**	**+0.2**
KMKR				*eS*g	**Sn**		**22 44 44.3**	**-0.2**
URKR	**Urkarakh**	**1.09**	**157**	*eP*g	**Pn**		**22 44 31.0**	**+0.7**
URKR				*eS*g	**Sn**		**22 44 47.5**	**+1.7**
LGD	**Lagodekhi**	**1.46**	**204**	P	**Pg**		**22 44 36.5**	**-0.1**
LGD				S	**Sg**		**22 44 55.3**	**-0.2**
DRN	**Derbent**	**1.48**	**140**	*eP*g	**Pg**		**22 44 37.4**	**+0.4**
DRN				*eS*g	**Sg**		**22 44 58.8**	**+2.7**
KMGR	**Komgaron**	**1.60**	**267**	*eP*g	**Pg**		**22 44 39.1**	**-0.2**
KMGR				*eS*g	**Sg**		**22 45 00.1**	**0.0**
KSMR	**Kasumkent**	**1.76**	**153**	*eP*g	**Pg**		**22 44 41.5**	**-0.8**

KSMR eSg **Sg** **22 45 06.0 +0.9**
AKT Akhty 1.76 163 ePg **Pg** **22 44 41.3 -1.1**
AKT eSg **Sg** **22 45 05.8 +0.6**
TRKR Terskaya 1.77 289 ePg **Pg** **22 44 41.9 -0.6**
TRKR eSg **Sg** **22 45 06.9 +1.3**
BTKR Batakoyurt 1.84 277 ePg **Pg** **22 44 44.3 +0.4**
BTKR eSg **Sg** **22 45 10.4 +2.7**
DDFL Dedoflistskaro 1.86 202 P **Pg** **22 44 46.8 +2.7**
PNSH Pansheti 1.86 254 P **Pb** **22 44 41.7 -1.3**
PNSH S **Sb** **22 45 06.4 -0.2**
MTEO Meteo 1.91 256 P **Pb** **22 44 42.9 -1.0**
MTEO S **Sb** **22 45 08.8 +0.7**
LACR Lac 2.05 261 ePg **Pb** **22 44 46.3 +0.2**
LACR eSg **Sb** **22 45 12.4 +0.7**
PRTR Priterechnaya 2.10 287 ePg **Pg** **22 44 48.5 -0.2**
PRTR eSg **Sg** **22 45 16.4 +0.6**
KORR Kora 2.18 269 ePg **Pb** **22 44 47.5 -0.8**
KORR eSg **Sb** **22 45 15.4 -0.2**
STDR Stavd-Durt 2.19 276 ePg **Pg** **22 44 49.7 -0.8**
STDR eSg **Sg** **22 45 19.3 +0.5**
ZEI Tsey 2.34 262 ePn **Pg** **22 44 52.0 -1.4**
ZEI eSn **Sb** **22 45 21.1 +0.8**
LSNR Lesken 2.36 274 ePn **Pb** **22 44 50.5 -0.9**
LSNR eSn **Sb** **22 45 20.9 +0.4**
PYA1 Pyatigorsk 3.00 289 ePn **Pn** **22 44 57.9 +1.4**
PYA1 eSn **Sn** **22 45 32.9 +0.1**
KBZ Khabaz 3.07 282 ePn **Pn** **22 44 59.1 +1.7**
KBZ eSn **Sn** **22 45 34.2 -0.1**
SHA1 Shidzhatmaz 3.25 282 ePn **Pn** **22 45 00.1 0.0**
SHA1 eSn **Sn** **22 45 37.9 -1.1**
KIV Kislovodsk 3.27 285 ePn **Pn** **22 45 01.9 +1.7**
KIV eSn **Sn** **22 45 38.9 -0.3**

*IDC **14** 22:50:28.3±1.2,20°55'×11°48'W,h0km,mb4.1/7, mbtmp4.1/7,MS3.6/1,Error ellipse: s-maj=47.7km s-min=23.2km az=132.0*
ISC 14 22:50:30.0±1.0,20°55'±0'2×11°5'W±0'2,h10km,n9,σ1s01/8, mb4.0/7,Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DBIC	**Dimbokro**	**27.81**	**14**	P		**P**	**22 56 18.7**	**-0.9**
	4.1nm,1.0s,baz=61,slow=19,SNR=1.9 4.1nm,1.0s							
RCBR	**Riachuelo**	**27.83**	**298**	LR		LR	23 04 52.5	
	comp=Z,125nm,20.1s,baz=291,slow=31							
BDFB	**Brasilia**	**35.00**	**272**	P		**P**	**22 57 23.5**	**+0.5**
	1.4nm,0.5s,baz=135,slow=6.3,SNR=2.3 1.4nm,0.5s							
TORD	**Torodi Ar. Bea**	**35.90**	**22**	P		**P**	**22 57 31.3**	**+0.8**
	5.2nm,0.8s,baz=204,slow=8.3,SNR=15 5.2nm,0.8s							
CPUP	**Villa Florida**	**42.27**	**253**	P		**P**	**22 58 23.8**	**-0.2**
	2.9nm,1.0s,baz=174,slow=9.7,SNR=3.0 2.9nm,1.0s							
BRTR	**Keskin Array B**	**73.27**	**35**	P		**P**	**23 02 02.6**	**+0.8**
	0.6nm,0.8s,baz=213,slow=5.0,SNR=2.5 0.6nm,0.8s							
AKASG	**Malin Array Be**	**79.48**	**25**	P		**P**	**23 02 36.1**	**-0.5**
	0.7nm,0.6s,baz=219,slow=5.3,SNR=4.5 0.7nm,0.6s							
VNDA	**Vanda**	**82.08**	**179**	P		**P**	**23 02 50.5**	**+0.2**
	1.1nm,1.0s,baz=198,slow=3.2,SNR=3.5 1.1nm,1.0s							
PETK	**Petropavlovsk-**	**146.43**	**12**	PKPbc		**PKPdf**	**23 10 08.3**	**-1.6**
	0.8nm,0.5s,baz=72,slow=4.7,SNR=5.9							

*IDC **14** 22:50:34.6±1.2,37°46N×78°18E,h0km,mb3.6/8, mbtmp3.6/13,ML3.4/4,MS3.4/2,Error ellipse: s-maj=25.0km s-min=20.8km az=33.0*
*NNC **14** 22:50:44.5±3.8,37°89N×78°19E,h0km,mb4.3,mpv3.9, Error ellipse: s-maj=27.3km s-min=23.9km az=46.0*
ISC 14 22:50:36.5±1.1,37°51N±0'08×78°18E±0'08,h10km,n28, σ2s60/28,mb3.6/8,7C-3D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SATY	**Saty**	**5.54**	**2**	Pg		**Pg**	**22 52 20.8**	**-1.8**
	23nm,0.8s							
SATY				Lg		Lg	22 53 29.0	
	44nm,1.1s							
TNSS	**Tian-Shan**	**5.60**	**351**	Pg		**Pg**	**22 52 21.2**	**-2.5**
	14nm,0.6s							
TNSS				Lg		Lg	22 53 30.3	
	22nm,1.0s							
SHLS	**Shalkode**	**5.72**	**9**	Pg		**Pg**	**22 52 26.9**	**+0.8**
	12nm,0.6s							
SHLS				Lg		Lg	22 53 39.4	
	42nm,0.9s							
TKM2	**Tokmak 2**	**5.75**	**341**	⇓Pg		**Pb**	**22 52 20.9**	**+3.9**
	5.7nm,0.6s							
TKM2				⇑Lg		Lg	22 53 42.0	
	31nm,1.2s							
KNDC	**Almaty**	**5.77**	**351**	⇑Pg		**Pb**	**22 52 21.9**	**+4.6**
	25nm,0.6s							
KNDC				⇑Lg		Lg	22 53 37.6	
	89nm,1.1s							
AAK	**Ala-Archa**	**5.85**	**332**	Pn		**Pn**	**22 52 07.3**	**+4.0**
	0.6nm,0.3s,baz=300,slow=6.2,SNR=3.8							
AAK				Pg		**Pb**	**22 52 22.0**	**+3.4**
	1.8nm,0.3s,baz=358,slow=23,SNR=7.0							
AAK				Lg		Lg	22 53 34.8	
	0.7nm,0.3s,baz=179,slow=19,SNR=1.3 2.5nm,0.4s							
PDGK	**Podgornoye**	**5.89**	**9**	⇑Pg		**Pg**	**22 52 26.0**	**-3.4**
	16nm,0.8s							
PDGK				⇑Lg		Lg	22 53 41.0	
	70nm,1.3s							
KPKS	**Kokpek**	**5.96**	**4**	Pg		Pb	22 52 26.0	+5.5
	12nm,0.5s							
KPKS				Lg		Lg	22 53 37.9	
	20nm,0.8s							
DGS	**Degeres**	**6.01**	**343**	Pg		**Pg**	**22 52 29.0**	**-2.6**
	14nm,0.6s							
DGS				Lg		Lg	22 53 43.3	
KRBS	**Karabastau**	**6.46**	**344**	Pg		**Pg**	**22 52 36.9**	**-3.3**
	5.3nm,0.5s							
KRBS				Lg		Lg	22 53 56.7	
	5.7nm,0.7s							
KUU	**Kurty**	**6.53**	**348**	Pg		Pb	22 52 36.4	+6.3
	5.8nm,0.8s							
KUU				Lg		Lg	22 53 55.7	
	7.7nm,0.7s							
KK31	**Karatay Array**	**8.09**	**316**	⇑Pg		**Pg**	**22 53 08.0**	**-3.3**
	0.5nm,0.4s,baz=139,slow=13,SNR=3.5							
KK31				⇓Lg		Lg	22 54 57.3	
	10nm,1.1s							
MK31	**Makanchi Array**	**9.76**	**17**	Pn		**Pn**	**22 52 58.0**	**+1.1**
	2.9nm,0.6s,baz=199,slow=12,SNR=31							
MK31				⇓Sn		**Sn**	**22 54 43.7**	**-2.9**
	6.5nm,0.9s,baz=204,slow=25,SNR=3.8							
MKAR	**Makanchi Array**	**9.76**	**17**	Pn		**Pn**	**22 52 58.1**	**+1.2**
	0.5nm,0.3s,baz=199,slow=12,SNR=22							
MKAR				Sn		**Sn**	**22 54 41.1**	**-5.4**
	0.1nm,0.3s,baz=183,slow=19,SNR=2.5 1.0nm,0.4s							
OTUK	**Ortayu**	**11.55**	**340**	⇑Lg		Lg	22 56 39.7	
	8.8nm,1.3s							
KURBB	**Kurchatov Arra**	**13.11**	**1**	Pn		**Pn**	**22 53 45.2**	**+2.6**
	baz=183,slow=11							
KURBB				Lg		Lg	22 57 32.0	
	baz=184,slow=27							
GEYT	**Alibeck**	**15.89**	**278**	Pn		**Pn**	**22 54 18.7**	**-1.4**
	0.2nm,0.3s,baz=84,slow=22,SNR=1.8							
GEYT				LR		LR	23 02 29.0	
	comp=Z,159nm,19.1s,baz=102,slow=45 0.9nm,0.6s							
ZALV	**Zalesovo Beam**	**17.06**	**13**	P		**Pn**	**22 54 33.1**	**-1.8**
	0.5nm,0.5s,baz=192,slow=13,SNR=1.7							
AKTO	**Aktyubinsk**	**19.35**	**318**	P		**P**	**22 55 01.8**	**-0.2**
	0.1nm,0.3s,baz=96,slow=9.2,SNR=1.6 0.4nm,0.3s							
ARU	**Arti**	**23.03**	**332**	P		**P**	**22 55 41.6**	**+0.1**
	1.1nm,0.7s,baz=278,slow=23,SNR=1.4 1.1nm,0.7s							
SONM	**Songino Array**	**23.05**	**54**	P		**P**	**22 55 42.5**	**+0.6**
	0.4nm,0.4s,baz=243,slow=9.5,SNR=3.7							
SONM				LR		LR	23 06 06.6	
	comp=Z,94nm,19.4s,baz=157,slow=40 0.4nm,0.4s							
CMAR	**Chiang Mai Arr**	**26.29**	**131**	P		**P**	**22 56 11.5**	**-0.7**
	1.0nm,0.3s,baz=312,slow=11,SNR=1.6 1.0nm,0.3s							
BRTR	**Keskin Array B**	**34.61**	**288**	P		**P**	**22 57 26.1**	**+0.3**
	0.7nm,0.9s,baz=122,slow=9.3,SNR=3.7 0.7nm,0.9s							
FINES	**FINESS Array B**	**39.96**	**324**	P		**P**	**22 58 10.8**	**+0.1**
	0.6nm,0.6s,baz=111,slow=10,SNR=4.8 0.6nm,0.6s							
GERES	**GERESS Array B**	**47.04**	**305**	P		**P**	**22 59 08.4**	**+0.3**
	0.6nm,0.8s,baz=60,slow=6.0,SNR=3.9 0.6nm,0.8s							
NB2	**NORSAR Subarra**	**47.07**	**322**	P		**P**	**22 59 08.4**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=88,slow=7.9							
NOA	**NORSAR Array B**	**47.07**	**322**	P		**P**	**22 59 07.6**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=89,slow=7.7,SNR=3.7 comp=Z,0.6nm,0.7s							
TORD	**Torodi Ar. Bea**	**71.46**	**273**	P		**P**	**23 01 56.6**	**-0.9**
	comp=Z,0.6nm,0.8s,baz=42,slow=6.2,SNR=4.9 comp=Z,0.6nm,0.8s							

IDC 14 22:52:18.2±2.2,6°07S×128°76E,h0km,mb3.5/1, mbtmp3.5/3,ML3.7/2,Error ellipse: s-maj=123.9km s-min=32.4km az=67.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.82**	**159**	Pn		Pn	22 55 48.8	-0.4
	0.3nm,0.3s,baz=337,slow=13,SNR=19							
WRA				Sn		Sn	22 58 18.3	-16
	0.5nm,0.3s,baz=333,slow=23,SNR=3.0 0.4nm,0.4s							
ASAR	**Alice Springs**	**18.18**	**165**	P		Pn	22 56 32.2	-0.1
	0.3nm,0.3s,baz=349,slow=10.0,SNR=20							
ASAR				S		Sn	22 59 46.9	-9.1
	0.6nm,0.5s,baz=355,slow=28,SNR=6.1 0.8nm,0.4s							
MKAR	**Makanchi Array**	**66.78**	**327**	P		P	23 03 11.6	+0.1
	0.3nm,0.5s,baz=125,slow=5.8,SNR=1.1 0.3nm,0.5s							

*TUL **14** 23:01:49.7±0.6,35°836N±0'009×97°26W±0'01,h6km±4km, ML2.7,mb_Lg2.3/25(NEIC),Error ellipse: s-maj=1.3km s-min=1.1km az=192.0*
NEIC 14 23:01:50.3±0.5,35°840N±0'007×97°27W±0'01,h3km±5km, Error ellipse: s-maj=1.5km s-min=1.0km az=104.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OKCFA	**Oklahoma City**	**0.45**	**200**	Pg		Pg	23 01 58.7	-0.3
OKCFA				Sg		Sg	23 02 05.2	+0.4
OKCSW	**OKLAHOMA CITY**	**0.46**	**198**			Pg	23 01 58.7	-0.4
OKCSW				Sg		Sg	23 02 05.3	+0.3
FNO	**Franklin**	**0.59**	**191**	Pg		Pg	23 02 01.2	-0.5
FNO				Sg		Sg	23 02 09.6	+0.2
TUL1	**Leonard**	**1.20**	**86**	Pg		Pg	23 02 11.4	-1.9
T35A	**Sooner Cattle**	**1.23**	**29**	Pg		Pg	23 02 12.6	-1.4
X34A	**Smith Ranch, M**	**1.32**	**201**	Pg		Pg	23 02 14.5	-1.2
U32A	**Winter Ranch,**	**1.51**	**291**			Pn	23 02 17.4	-0.8
WMOK	**Wichita Mounta**	**1.66**	**229**			Pn	23 02 19.7	-0.6
X37A	**Clayton**	**1.99**	**128**	Pn		Pn	23 02 24.6	-0.3
X37A				IAmb_Lg			23 02 56.9	
	comp=Z,18nm,0.8s							
U38A	**Gravette**	**2.41**	**75**	Pn		Pn	23 02 31.1	+0.4
Z35A	**Perchaven, San**	**2.50**	**180**	Pn		Pn	23 02 32.3	+0.3
HHAR	**Hobbs**	**2.73**	**80**	Pn		Pn	23 02 35.5	+0.4
R32A	**Long Quarter,**	**2.83**	**336**	Pn		Pn	23 02 36.7	+0.2
R32A				IAmb_Lg			23 03 21.6	
	comp=Z,8.5nm,0.8s							
W39A	**Magazine**	**2.91**	**102**	Pn		Pn	23 02 37.1	-0.4
W39A				IAmb_Lg			23 03 28.9	
	comp=Z,11nm,0.9s							
CBKS	**Cedar Bluff**	**3.56**	**327**	IAmb_Lg			23 03 47.5	
	comp=Z,8.5nm,0.7s							
S39A	**Bolivar**	**3.67**	**59**	Pn		Pn	23 02 47.6	-0.4
AMTX	**Amarillo**	**3.73**	**256**	IAmb_Lg			23 03 48.4	
	comp=Z,6.3nm,0.9s							
X40A	**Basin Creek Fa**	**3.87**	**109**	IAmb_Lg			23 03 55.7	
	comp=Z,9.4nm,0.7s							
WHAR	**Wooly Hollow**	**4.09**	**96**	Pn		Pn	23 02 53.6	-0.2
WHAR				IAmb_Lg			23 03 58.5	
	comp=Z,6.8nm,1.1s							
W41B	**Gary Mavity, V**	**4.15**	**98**	Pn		Pn	23 02 54.2	-0.4
W41B				IAmb_Lg			23 04 01.7	
	comp=Z,7.1nm,0.8s							
FCAR	**Ozark Folk Cen**	**4.18**	**88**	Pn		Pn	23 02 53.8	-1.2
MGMO	**Mountain Grove**	**4.23**	**70**	IAmb_Lg			23 04 08.0	
	comp=Z,5.9nm,0.9s							
CCM	**Cathedral Cave**	**5.30**	**64**	IAmb_Lg			23 04 40.4	
	comp=Z,5.1nm,0.7s							
X43A	**Marvell**	**5.39**	**102**	IAmb_Lg			23 04 51.4	
	comp=Z,4.8nm,1.1s							
PBMO	**Poplar Bluff**	**5.60**	**78**	IAmb_Lg			23 04 52.5	
	comp=Z,6.0nm,0.7s							
T25A	**Trinidad**	**5.90**	**285**	IAmb_Lg			23 05 03.0	
	comp=Z,4.6nm,0.7s							

*SJA **14** 23:05:17.8±0.8,32°36S×72°15W,h12km±2km,ML4.0, MW3.8*
*IDC **14** 23:05:18.8±1.0,32°23S×71°33W,h0km,mb3.7/5, mbtmp3.6/10,ML3.6/5,Error ellipse: s-maj=34.4km s-min=23.0km az=102.0*
*NEIC **14** 23:05:19.7±2.1,32°27S±0'04×72°03W±0'04,h10km±1km, mb3.9/3,ML4.0(GUC),Error ellipse: s-maj=6.6km s-min=5.6km az=212.0*
*GUC **14** 23:05:20.6±0.8,32°26S×71°87W,h37km±4km,ML4.0*
ISC 14 23:05:18.3±1.4,32°27S±0'03×72°04W±0'04,h2km±9km, n97,σ1s67/126,mb4.0/5,4C-6D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VA06	**Catapilco**	**0.69**	**115**			**Pg**	**23 05 32.8**	**+1.3**
VA06				Sg		**Sg**	**23 05 40.3**	**-0.2**
VA06	**Catapilco**	**0.69**	**115**	⇓iP		**Pg**	**23 05 32.8**	**+1.3**
VA06				*i* S		**Sg**	**23 05 40.2**	**-0.3**
VA06				IAML			23 05 44.1	
	comp=E,16μm,0.2s							
VA01	**Torpederas**	**0.82**	**156**			**Pb**	**23 05 35.9**	**+0.6**
VA01	**Torpederas**	**0.82**	**156**	*e*P		**Pb**	**23 05 35.7**	**+0.4**
VA01				*i* S		**Sb**	**23 05 47.3**	**+0.5**
VA01				IAML			23 05 49.7	
	comp=N,4μm,0.1s							
VA01	**Torpederas**	**0.82**	**156**	*e*P		**Pg**	**23 05 33.5**	**-0.5**
VA01				*e*S		**Sg**	**23 05 45.8**	**+1.2**
ROC1	**El Roble**	**1.11**	**129**	Pn		**Pg**	**23 05 39.9**	**+0.3**
ROC1	**El Roble**	**1.11**	**129**	*e*P		Pg	23 05 34.5	-5.2
ROC1				*e*P		**Pg**	**23 05 40.3**	**+0.3**
ROCH	**El Roble**	**1.11**	**129**	⇓iP		**Pg**	**23 05 40.0**	**+0.4**
ROCH				*i* S		**Sg**	**23 05 54.0**	**-0.1**
ROCH				IAML			23 05 57.3	
	comp=N,10μm,0.3s							
MT02	**Curacav**	**1.24**	**143**			**Pn**	**23 05 42.2**	**-0.6**
MT02	**Curacav**	**1.24**	**143**	⇓iP		**Pn**	**23 05 42.2**	**-0.6**
MT02				*i* S		**Sb**	**23 05 58.0**	**-1.1**
MT02	**Curacav**	**1.24**	**143**	*e*P		**Pn**	**23 05 42.0**	**-0.8**
MT02				*e*S		**Sb**	**23 05 58.6**	**-0.5**
MT02				IAML			23 05 59.7	
	comp=Z,3μm,0.4s							
VA03	**San Esteban**	**1.35**	**112**	Pn		**Pn**	**23 05 43.4**	**-1.0**
VA03	**San Esteban**	**1.35**	**112**	⇓iP		**Pn**	**23 05 43.3**	**-1.0**
VA03				*i* S		**Sb**	**23 06 00.2**	**-2.0**
VA03	**San Esteban**	**1.35**	**112**	*e*P		**Pn**	**23 05 43.1**	**-1.2**
VA03				*e*S		**Sb**	**23 06 01.3**	**-0.8**
VA03				IAML			23 06 02.7	
	comp=Z,5μm,0.1s							
CO02	**Combarbal**	**1.39**	**40**			**Pn**	**23 05 44.0**	**-0.9**
CO02	**Combarbal**	**1.39**	**40**	⇓iP		**Pn**	**23 05 43.9**	**-0.9**
CO02				IAML			23 06 09.1	
	comp=E,8μm,0.2s							
VA05	**Santo Domingo**	**1.43**	**166**			**Pn**	**23 05 45.3**	**+0.1**
VA05	**Santo Domingo**	**1.43**	**166**	*e*P		**Pn**	**23 05 44.8**	**-0.5**
VA05				IAML			23 06 10.8	
	comp=E,6μm,0.3s							
PEL	**Peldehue**	**1.43**	**128**	Pn		**Pn**	**23 05 45.1**	**-0.3**
PEL	**Peldehue**	**1.43**	**128**	*e*P		**Pn**	**23 05 44.9**	**-0.6**
PEL				*i* S		**Sn**	**23 06 02.9**	**-2.1**
PEL				IAML			23 06 07.2	
	comp=N,5μm,0.7s							
PEL	**Peldehue**	**1.43**	**128**	*e*P		**Pn**	**23 05 45.2**	**-0.3**
PEL				*e*S		**Sg**	**23 06 05.7**	**+1.3**
MT05	**Renca**	**1.56**	**136**			**Pn**	**23 05 47.5**	**+0.3**
MT05	**Renca**	**1.56**	**136**	*e*P		**Pn**	**23 05 47.2**	**0.0**
MT05				*i* S		**Sn**	**23 06 07.6**	**-0.6**
MT05				IAML			23 06 11.3	
	comp=E,7μm,0.1s							
MT05	**Renca**	**1.56**	**136**	*e*P		**Pn**	**23 05 47.0**	**-0.2**
MT05				*e*S		**Sg**	**23 06 09.3**	**+0.7**
MT05				IAML			23 06 10.1	
	comp=Z,2μm,0.2s							
CO06	**Fray Jorge**	**1.63**	**12**	Pn		**Pn**	**23 05 47.1**	**-1.0**
CO06	**Fray Jorge**	**1.63**	**12**	⇓iP		**Pn**	**23 05 47.1**	**-1.0**
MT01	**Popeta**	**1.72**	**158**			**Pn**	**23 05 49.5**	**+0.2**
MT01	**Popeta**	**1.72**	**158**	*e*P		**Pn**	**23 05 49.6**	**+0.2**
MT01				*i* S		**Sn**	**23 06 10.7**	**-1.3**
MT01				IAML			23 06 16.7	
	comp=E,2μm,0.1s							
MT01	**Popeta**	**1.72**	**158**	*e*P		**Pn**	**23 05 49.0**	**-0.3**
MT01				*e*S		**Sn**	**23 06 10.9**	**-1.1**
MT01				IAML			23 06 17.8	
	comp=Z,1μm,0.5s							
MT09	**Talagante**	**1.74**	**150**			**Pn**	**23 05 50.6**	**+0.9**
MT09	**Talagante**	**1.74**	**150**	*e*P		**Pn**	**23 05 50.3**	**+0.6**
MT09				*i* S		**Sn**	**23 06 11.3**	**-1.3**
MT09				IAML			23 06 19.4	
	comp=N,2μm,0.6s							
MT03	**Universidad Ad**	**1.77**	**134**			**Pn**	**23 05 50.7**	**+0.5**
MT03	**Universidad Ad**	**1.77**	**134**	*e*P		**Pn**	**23 05 50.4**	**+0.3**
MT03				*i* S		**Sn**	**23 06 12.9**	**-0.4**
MT03				IAML			23 06 16.9	
	comp=E,4μm,0.3s							
MT03	**Universidad Ad**	**1.77**	**134**	*e*P		**Pn**	**23 05 50.7**	**+0.5**
MT03				*e*S		**Sb**	**23 06 15.1**	**+0.7**
MT03				IAML			23 06 17.1	
	comp=Z,2μm,0.3s							
FCH	**Farellones**	**1.81**	**126**	⇑iP		**Pn**	**23 05 50.6**	**-0.3**
FCH				*i* S		**Sn**	**23 06 12.9**	**-1.7**
FCH				IAML			23 06 16.1	
	comp=E,2μm,0.3s							
CO03	**El Pedregal**	**1.84**	**39**	Pn		**Pn**	**23 05 51.2**	**+0.2**
CO03	**El Pedregal**	**1.84**	**39**	⇑iP		**Pn**	**23 05 50.9**	**-0.1**
CO03				*i* S		**Sn**	**23 06 13.2**	**-1.7**
CO03				IAML			23 06 18.6	
	comp=E,2μm,0.4s							
BO04	**La Punta**	**2.09**	**145**			**Pn**	**23 05 55.5**	**+1.1**
BO04	**La Punta**	**2.09**	**145**	⇑iP		**Pn**	**23 05 55.5**	**+1.1**
BO04				*i* S		**Sn**	**23 06 21.6**	**+0.5**
BO04				IAML			23 06 27.8	
	comp=N,2μm,0.3s							
LMEL	**Las Melosas**	**2.20**	**136**			**Pn**	**23 05 57.1**	**+1.0**
LMEL	**Las Melosas**	**2.20**	**136**	⇑iP		**Pn**	**23 05 57.2**	**+1.1**
LMEL				*i* S		**Sn**	**23 06 24.9**	**+0.8**
LMEL				IAML			23 06 32.4	
	comp=N,2μm,0.1s							
AUSP	**Uspallata**	**2.25**	**89**	*e*P		**Pb**	**23 05 59.3**	**-0.6**
AUSP				*e*S		**Sn**	**23 06 23.5**	**-1.9**
BO01	**Tunca**	**2.26**	**160**	Pn		**Pn**	**23 05 57.4**	**+0.6**
BO01	**Tunca**	**2.26**	**160**	*e*P		**Pn**	**23 05 57.3**	**+0.5**
BO01	**Tunca**	**2.26**	**160**	*e*P		**Pn**	**23 05 57.0**	**+0.2**
BO01				*e*S		**Sn**	**23 06 25.5**	**+0.2**
BO01				IAML			23 06 38.0	
	comp=Z,488nm,0.7s							
GO04	**Tololo Observa**	**2.35**	**27**			**Pn**	**23 05 57.7**	**-0.5**
GO04	**Tololo Observa**	**2.35**	**27**	*e*P		**Pn**	**23 05 57.8**	**-0.5**
RTLS	**Leoncito**	**2.38**	**79**	*e*P		**Pb**	**23 06 01.1**	**-1.0**
RTLS				*e*S		**Sb**	**23 06 33.3**	**+1.3**
RTLS				IAML			23 06 33.9	
	comp=Z,581nm,0.4s							
CO05	**La Serena**	**2.44**	**17**	Pn		**Pn**	**23 06 00.0**	**+0.7**
CO05	**La Serena**	**2.44**	**17**	*e*P		**Pb**	**23 06 02.1**	**-0.9**
CO05				IAML			23 06 46.0	
	comp=N,704nm,0.4s							
ARCO	**CERRO ARCO**	**2.68**	**103**	*e*P		**Pb**	**23 06 06.0**	**-1.2**
ARCO				*e*S		**Sb**	**23 06 40.0**	**-0.7**
ARCO				IAML			23 06 52.4	
	comp=Z,396nm,0.6s							
ASAL	**Salagasta**	**2.73**	**98**	*e*P		**Pb**	**23 06 07.0**	**-0.9**
ASAL				*e*S		**Sb**	**23 06 42.5**	**+0.6**
GO05	**Huala**	**2.73**	**178**	Pn		**Pn**	**23 06 03.0**	**-0.3**
GO05	**Huala**	**2.73**	**178**	*e*P		**Pn**	**23 06 03.1**	**-0.1**
GO05	**Huala**	**2.73**	**178**	*e*P		**Pn**	**23 06 03.0**	**-0.3**
GO05				*e*S		**Sn**	**23 06 35.9**	**-1.1**
AAGR	**Agrelo**	**2.83**	**108**	*e*P		**Pb**	**23 06 08.0**	**-1.6**
AAGR				*e*S		**Sg**	**23 06 49.0**	**-0.2**
CO01	**Juntas del Tor**	**2.83**	**37**	Pn		**Pn**	**23 06 05.5**	**+0.7**
CO01	**Juntas del Tor**	**2.83**	**37**	*e*P		**Pn**	**23 06 05.6**	**+0.7**
CO01				IAML			23 06 47.7	
	comp=E,515nm,0.1s							
ZON	**Zonda**	**2.95**	**77**	Pn		**Pn**	**23 06 08.6**	**+2.3**
AROD	**Rodeo**	**3.04**	**47**	*e*P		**Pb**	**23 06 12.0**	**-1.4**
AROD				*e*S		**Sn**	**23 06 46.0**	**+1.0**
ACCO	**Cerro Coronel**	**3.05**	**57**	*e*P		**Pn**	**23 06 10.9**	**+3.0**
ACCO				*e*P		**Pb**	**23 06 11.0**	**-2.5**
ACCO				*e*S		**Sb**	**23 06 52.3**	**+1.0**
RTLL	**Cerro Villicun**	**3.18**	**74**	*e*P		**Pb**	**23 06 12.0**	**+2.6**
RTLL				*e*S		**Sb**	**23 06 53.5**	**-1.3**
ACDV	**Cuesta del Vie**	**3.26**	**51**	*e*P		**Pb**	**23 06 17.0**	**-0.1**
ACDV				*e*S		**Sb**	**23 06 59.9**	**+2.5**
ACDV				IAML			23 07 08.1	
	comp=Z,209nm,0.6s							
LCO	**Las Campanas**	**3.45**	**20**			**Pn**	**23 06 12.8**	**-0.5**
RFA	**San Rafael**	**3.89**	**131**	*e*P		**Pn**	**23 06 21.6**	**+2.4**
RFA				*e*S		**Sb**	**23 07 18.5**	**+3.2**
AC04	**Llanos de Chal**	**4.14**	**12**	Pn		**Pn**	**23 06 21.0**	**-1.6**
VCA	**Vinchina**	**4.83**	**44**	*e*P		**Pn**	**23 06 36.0**	**+3.7**
VCA				*e*S		**Sn**	**23 07 34.5**	**+5.5**
VCA				IAML			23 08 01.6	
	comp=Z,368nm,0.8s							
GO03	**Copiap**	**4.92**	**19**	Pn		**Pn**	**23 06

H11S2	**WAKE ISLAND Hyl**	**25.78**	**270**	T	T	01 43 28.7		
	baz=118,slow=75,SNR=16							
H11S1	**WAKE ISLAND Hyl**	**25.79**	**270**	T	T	01 43 29.1		
	baz=118,slow=75,SNR=22							
H11S3	**WAKE ISLAND Hyl**	**25.80**	**270**	T	T	01 43 30.2		
	baz=118,slow=75,SNR=17							
ZALV	**Zalesovo Beam**	**152.75**	**30**	PKPbc	**PKiKP**	**23 25 16.8**	**+0.2**	
	comp=Z,0.7nm,0.6s,baz=161,slow=14,SNR=3.5							
ZALV				PKPab	**PKPab**	**23 25 25.0**	**-2.2**	
	comp=Z,0.4nm,0.3s,baz=325,slow=2.1,SNR=3.8							
MKAR	**Makanchi Array**	**155.60**	**46**	PKPab	**PKPab**	**23 25 36.7**	**-2.9**	
	comp=Z,0.4nm,0.7s,baz=293,slow=3.2,SNR=3.6							

IDC 14 23:08:46.5±3.0, 4°.58S×136°.50E, h0km, mb3.4/1, mbtmp3.3/3, ML3.3/2, MS3.5/2, Error ellipse: s-maj=110.7km s-min=34.1km az=81.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.41**	**188**	Pn	Pn	23 12 24.1	-1.4
	0.1nm,0.3s,baz=9.4,slow=13,SNR=1.5						
WRA				Sn	Sn	23 15 04.6	-12
	baz=6.3,slow=24,SNR=1.2						
	0.2nm,0.3s						
CTA	**Charters Tower**	**18.11**	**149**	LR	LR	23 19 33.6	
	comp=Z,100nm,21.6s,baz=272,slow=36						
ASAR	**Alice Springs**	**19.14**	**187**	P	Pn	23 13 12.0	-0.3
	0.2nm,0.3s,baz=15,slow=10,SNR=10						
ASAR				S	Sn	23 16 32.7	-15
	0.1nm,0.2s,baz=5.6,slow=23,SNR=1.6						
	0.6nm,0.4s						
RAR	**Rarotonga**	**63.88**	**111**	LR	LR	23 46 04.4	
	comp=Z,56nm,20.5s,baz=66,slow=35						
MKAR	**Makanchi Array**	**69.95**	**324**	P	P	23 19 59.8	0.0
	0.2nm,0.6s,baz=123,slow=5.3,SNR=2.3						
	0.2nm,0.6s						

WEL 14 23:13:45.6±0.8, 39°.5S±4°.7×177°.7E±°, h32km±10km, M3.3/10, ML3.6/10, MLv3.3/10, Error ellipse: s-maj=0.0km s-min=0.0km az=101.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARHZ	**Aropaoanui**	**0.10**	**263**	P	Pb	23 13 52.2	+1.0
ARHZ				S	Sb	23 13 57.3	+2.2
NMHZ	**Naumai**	**0.29**	**302**	P	Pn	23 13 54.4	+0.8
NMHZ				S	Sn	23 14 00.9	+2.1
RAHZ	**Arahi**	**0.34**	**356**	P	Pn	23 13 55.1	+0.8
RAHZ				S	Sn	23 14 02.2	+2.3
MCHZ	**McNeill Hill**	**0.38**	**240**	P	Pn	23 13 55.6	+0.8
MCHZ				S	Sn	23 14 03.3	+2.2
CKHZ	**Cape Kidnapper**	**0.41**	**185**	P	Pn	23 13 55.7	+0.5
CKHZ				S	Sn	23 14 03.6	+1.8
MTHZ	**Maungataniwha**	**0.45**	**331**	P	Pn	23 13 56.5	+0.6
MTHZ				S	Sn	23 14 04.7	+1.8
KNZ	**Kokohu**	**0.49**	**62**	P	Pn	23 13 56.7	+0.5
BKZ	**Black Stump Fm**	**0.49**	**280**	P	Pn	23 13 56.9	+0.5
SNGZ	**Shannon Statio**	**0.50**	**20**	P	Pn	23 13 57.5	+1.0
KWHZ	**Kaweka Forest**	**0.57**	**252**	P	Pn	23 13 58.2	+0.7
KAHZ	**Kahuranaki**	**0.57**	**199**	P	Pn	23 13 58.2	+0.7
MHGZ	**Mahia Peninsul**	**0.62**	**81**	P	Pn	23 13 59.1	+0.9
RTZ	**Ruatahuna**	**0.65**	**350**	P	Pn	23 13 59.4	+0.9
PRGZ	**Paritu Road**	**0.68**	**61**	P	Pb	23 13 59.9	+0.8
MRHZ	**Matea Rd**	**0.69**	**307**	P	Pb	23 14 00.1	+0.9
KRHZ	**Kereru**	**0.70**	**236**	P	Pb	23 13 59.8	+0.4
RIGZ	**Rimuhau**	**0.74**	**43**	P	Pb	23 14 00.4	+0.4
RAGZ	**Rawiri**	**0.79**	**17**	P	Pb	23 14 01.6	+0.6
PXZ	**Pawanui**	**0.80**	**194**	P	Pn	23 14 00.3	-0.4
MUGZ	**Murupara**	**0.82**	**340**	P	Pb	23 14 02.1	+0.7
BHHZ	**Black Hill Sta**	**0.85**	**254**	P	Pb	23 14 02.0	0.0
HATZ	**Hinemaiaia**	**0.88**	**294**	P	Pb	23 14 03.2	+0.8
ALRZ	**Allen Road**	**0.92**	**318**	P	Pb	23 14 03.7	+0.7
PRRZ	**Plateau Road**	**0.94**	**323**	P	Pb	23 14 04.1	+0.7
WPHZ	**Waipukurau**	**0.97**	**213**	P	Pn	23 14 02.9	0.0
PNHZ	**Pukenui**	**0.97**	**227**	P	Pn	23 14 03.2	+0.2
MWZ	**Matawai**	**0.97**	**19**	P	Pb	23 14 03.6	-0.3
URZ	**Urewera**	**0.99**	**360**	P	Pb	23 14 04.1	-0.2
RITZ	**Rihia Road**	**1.02**	**285**	P	Pb	23 14 05.6	+0.9
RRRZ	**Republican Roa**	**1.03**	**332**	P	Pb	23 14 05.7	+0.8
WPRZ	**Whakapapaterin**	**1.04**	**314**	P	Pb	23 14 05.4	+0.3
MOVZ	**Moawhango**	**1.07**	**261**	P	Pb	23 14 05.9	+0.3
WHTZ	**Whakaora**	**1.08**	**302**	P	Pb	23 14 06.7	+1.0
HRRZ	**Handcock Road**	**1.08**	**323**	P	Pb	23 14 06.1	+0.3
PRHZ	**Porangahau**	**1.08**	**200**	P	Pn	23 14 04.0	-0.5
ETVZ	**East Tongariro**	**1.10**	**276**	P	Pb	23 14 06.7	+0.5
TMVZ	**Te Maari**	**1.11**	**277**	P	Pb	23 14 06.7	+0.4
RATZ	**Rangitukua**	**1.12**	**290**	P	Pb	23 14 06.7	+0.3
TARZ	**Mount Tarawera**	**1.12**	**335**	P	Pb	23 14 06.8	+0.3
NTVZ	**North Tongarir**	**1.13**	**277**	P	Pb	23 14 07.0	+0.3
TUVZ	**Tukino**	**1.14**	**269**	P	Pb	23 14 07.5	+0.7
HSRZ	**Hossack Road**	**1.16**	**324**	P	Pb	23 14 07.2	0.0
HLRZ	**Highlands Stat**	**1.17**	**329**	P	Pb	23 14 08.2	+1.6
NNVZ	**North Ngauruho**	**1.18**	**275**	P	Pb	23 14 07.8	+0.4
NGZ	**Ngauruhoe**	**1.18**	**273**	P	Pb	23 14 07.6	0.0
WNVZ	**Wahianoa**	**1.18**	**266**	P	Pb	23 14 08.4	+0.8
WHVZ	**Whangaehu Hut**	**1.19**	**268**	P	Pb	23 14 07.4	-0.3
WTVZ	**West Tongariro**	**1.20**	**276**	P	Pb	23 14 08.2	+0.4
TSZ	**Takapari Road**	**1.20**	**228**	P	Pn	23 14 06.0	-0.2
FWVZ	**Far West T-bar**	**1.22**	**269**	P	Pb	23 14 07.8	-0.4
TRVZ	**Turoa**	**1.22**	**267**	P	Pb	23 14 08.5	+0.3
KUTZ	**Kaahu Road**	**1.27**	**307**	P	Pb	23 14 08.5	-0.4
TWGZ	**Tauwhareparae**	**1.27**	**32**	P	Pb	23 14 08.6	-0.3
DVHZ	**Dannevirke**	**1.28**	**215**	P	Pn	23 14 06.5	-0.7
OMRZ	**Omania**	**1.28**	**333**	P	Pb	23 14 10.8	+1.6
MTVZ	**Mangateitei**	**1.29**	**264**	P	Pb	23 14 09.0	-0.3
MARZ	**Manawahe**	**1.31**	**344**	P	Pb	23 14 11.1	+1.5
TWVZ	**Taurewa**	**1.32**	**277**	P	Pb	23 14 09.5	-0.4
RUGZ	**Raukumara Rang**	**1.36**	**19**	P	Pn	23 14 09.1	+0.7
PKVZ	**Pokaka**	**1.38**	**268**	P	Pb	23 14 10.1	-0.7
WHVZ	**Whale Island**	**1.40**	**355**	P	Pn	23 14 09.9	+1.1
OPRZ	**Ohinepanea**	**1.47**	**342**	P	Pn	23 14 10.5	+0.7
POWZ	**Post Office Ro**	**1.54**	**222**	P	Pn	23 14 10.6	-0.3
PKGZ	**Pakihiroa**	**1.56**	**29**	P	Pn	23 14 11.9	+0.9
PRWZ	**Pori Road**	**1.57**	**214**	P	Pn	23 14 10.8	-0.5
BFZ	**Birch Farm**	**1.58**	**205**	P	Pn	23 14 10.3	-1.0
HAZ	**Te Kaha**	**1.58**	**19**	P	Pn	23 14 12.0	+0.7
WAZ	**Wanganui**	**1.73**	**252**	P	Pb	23 14 15.8	-0.9
MRZ	**Mangatainoka R**	**1.84**	**220**	P	Pn	23 14 13.9	-1.0
HIZ	**Hauiti**	**1.92**	**292**	P	Pn	23 14 17.4	+1.5
MXZ	**Matakaoa Point**	**1.93**	**29**	P	Pn	23 14 16.9	+0.8
TMWZ	**Te Maipa**	**2.08**	**207**	P	Pn	23 14 16.5	-1.8
OGWZ	**Otaki Gorge**	**2.16**	**223**	P	Pn	23 14 18.2	-1.2
MTW	**Mount Morrison**	**2.27**	**213**	P	Pn	23 14 18.8	-2.0
KIW	**Kapiti Island**	**2.34**	**226**	P	Pn	23 14 20.6	-1.1
TRWZ	**Traveller**	**2.41**	**207**	P	Pn	23 14 20.6	-2.1
CAW	**Cannon Point**	**2.43**	**220**	P	Pn	23 14 21.2	-1.8
MSWZ	**Moikau Station**	**2.59**	**213**	P	Pn	23 14 22.6	-2.7
PLWZ	**Palliser**	**2.72**	**211**	P	Pn	23 14 24.5	-2.5
TCW	**Tory Channel**	**2.93**	**227**	P	Pn	23 14 28.2	-1.7
TKNZ	**Takaka Hill**	**3.65**	**240**	P	Pn	23 14 38.4	-1.4
MRNZ	**Matariki Terra**	**3.96**	**236**	P	Pn	23 14 42.8	-1.4

IDC 15 00:00:12.8±9.8, 21°.01S×169°.81E, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=439.1km s-min=38.7km az=150.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**33.21**	**265**	P	P	00 06 51.1	-0.6
	0.4nm,1.0s,baz=89,slow=7.2,SNR=1.3						
	0.4nm,1.0s						
ASAR	**Alice Springs**	**33.27**	**259**	P	P	00 06 52.6	+0.4
	0.3nm,0.5s,baz=92,slow=8.4,SNR=5.7						
	0.3nm,0.5s						
ILAR	**Eielson Array**	**91.75**	**17**	P	P	00 13 21.9	0.0
	0.6nm,0.8s,baz=233,slow=5.9,SNR=7.8						
	0.6nm,0.8s						

*LJU **15** 00:09:20.3, 46°.07N×13°.63E, h16km, ML1.8*
*VIE **15** 00:09:20.6±0.1, 46°.07N×13°.64E, h14km, mb2.0/10, ml2.1/18, Error ellipse: s-maj=0.8km s-min=0.5km az=36.0 15 km SSW of Tolmin*
*ROM **15** 00:09:20.7±0.1, 46°.079N±0°.004×13°.619E±0°.006, h10km, ML2.1/4, Error ellipse: s-maj=0.5km s-min=0.4km az=73.0*
ISC 15 00:09:20.8±0.8, 46°.07N±0°.01×13°.63E±0°.01, h14km±4km, n89, σ0s59/153, 3C-9D, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SABO	**M.te Sabotino**	**0.09**	**192**	*e*Pg	**Pg**	**00 09 23.7**	**-0.2**
SABO				*e*Sg	**Sg**	**00 09 25.8**	**-0.1**
SABO	**M.te Sabotino**	**0.09**	**192**	⇑P	**Pg**	**00 09 23.6**	**-0.2**
SABO				S	**Sg**	**00 09 25.8**	**-0.1**
SABO				AML	AML		
	comp=E,25950μm,0.4s						
SABO				AML	AML		
	comp=N,4445μm,0.4s						
SABO				AML	AML		
	comp=E,6825μm,0.4s						
SABO				AML	AML		
	comp=E,26000μm,0.4s						
SABO				AML	AML		
	comp=N,17600μm,1.1s						
DRE	**Drenchia**	**0.11**	**6**	⇓*e*Pg	**Pg**	**00 09 23.9**	**-0.2**
DRE				*e*Sg	**Sg**	**00 09 26.2**	**-0.1**
DRE	**Drenchia**	**0.11**	**6**	⇓P	**Pg**	**00 09 23.9**	**-0.2**
DRE				S	**Sg**	**00 09 26.2**	**-0.1**
CADS	**Cadrg**	**0.18**	**26**	⇓*i* Pg	**Pg**	**00 09 24.9**	**-0.1**
CADS				*i* Sg	**Sg**	**00 09 28.1**	**+0.1**
CADS				IAML		00 09 29.0	
	comp=Z,97nm,0.1s						
VOJS	**Vojsko**	**0.18**	**101**	⇑*i* Pg	**Pg**	**00 09 25.1**	**0.0**
VOJS				*i* Sg	**Sb**	**00 09 28.6**	**-0.9**
VOJS				IAML		00 09 28.7	
	comp=Z,504nm,0.1s						
COLI	**Coloredo**	**0.18**	**291**	⇓*e*Pg	**Pg**	**00 09 25.1**	**0.0**
COLI				*e*Sg	**Sg**	**00 09 28.4**	**+0.4**
ROBS	**Robic**	**0.20**	**335**	⇓*i* Pg	**Pg**	**00 09 25.0**	**-0.3**
ROBS				*i* Sg	**Sg**	**00 09 28.4**	**+0.1**
ROBS				IAML		00 09 28.5	
	comp=Z,86nm,0.1s						
VINO	**Villanova**	**0.30**	**308**	⇓*e*Pg	**Pg**	**00 09 26.7**	**-0.4**
VINO				*e*Sg	**Sg**	**00 09 31.7**	**+0.2**
VINO	**Villanova**	**0.30**	**308**	⇓P	**Pg**	**00 09 26.7**	**-0.4**
VINO				S	**Sg**	**00 09 31.7**	**+0.2**
VINO				AML	AML		
	comp=N,185μm,0.2s						
VINO				AML	AML		
	comp=E,110μm,0.5s						
BAD	**Bernadia**	**0.32**	**303**	*e*Pg	**Pg**	**00 09 27.0**	**-0.3**
BAD	**Bernadia**	**0.32**	**303**	P	**Pg**	**00 09 27.1**	**-0.3**
BAD				S	**Sg**	**00 09 32.1**	**+0.3**
JAVS	**Javornik**	**0.35**	**119**	*i* Pg	**Pg**	**00 09 27.8**	**-0.2**
JAVS				*e*Sg	**Sg**	**00 09 33.1**	**+0.3**
JAVS				IAML		00 09 35.0	
	comp=Z,20nm,0.1s						
GORS	**Gorjuse**	**0.36**	**46**	*i* Pg	**Pg**	**00 09 27.8**	**-0.3**
GORS				*i* Sg	**Sg**	**00 09 33.4**	**+0.3**
GORS				IAML		00 09 34.3	
	comp=Z,21nm,0.1s						
TRI	**Trieste**	**0.37**	**165**	*e*Pg	**Pg**	**00 09 27.9**	**-0.4**
TRI	**Trieste**	**0.37**	**165**	P	**Pg**	**00 09 28.1**	**-0.1**
TRI				S	**Sb**	**00 09 33.9**	**-0.9**
TRI				AML	AML		
	comp=E,520μm,0.4s						
TRI				AML	AML		
	comp=N,456μm,0.2s						
PRED	**Cave del Predi**	**0.38**	**354**	*e*Pg	**Pg**	**00 09 27.9**	**-0.6**
PRED	**Cave del Predi**	**0.38**	**354**	P	**Pg**	**00 09 27.9**	**-0.6**
PRED				S	**Sg**	**00 09 34.1**	**+0.4**
BUA	**Buia**	**0.38**	**294**	⇓*e*Pg	**Pg**	**00 09 28.6**	**+0.1**
BUA				*e*Sg	**Sb**	**00 09 34.8**	**-0.3**
PTCC	**Patocco-Chiusa**	**0.39**	**331**	P	**Pg**	**00 09 28.1**	**-0.6**
PTCC				S	**Sg**	**00 09 34.2**	**+0.2**
PTCC				AML	AML		
	comp=E,152μm,0.3s						
PTCC				AML	AML		
	comp=N,128μm,0.3s						
TLI	**Talmassons**	**0.39**	**248**	*e*Pg	**Pg**	**00 09 28.9**	**+0.2**
GEPF	**Gemona**	**0.40**	**302**	P	**Pg**	**00 09 28.4**	**-0.4**
GEPF				S	**Sb**	**00 09 35.0**	**-0.6**
GEPF				AML	AML		
	comp=E,206μm,1.0s						
GEPF				AML	AML		
	comp=N,215μm,1.1s						
LSR	**Lussari**	**0.41**	**351**	*e*Pg	**Pg**	**00 09 28.7**	**-0.5**
A300A	**Muzzana del Tu**	**0.43**	**235**	P	**Pg**	**00 09 29.3**	**0.0**
A300A				S	**Sb**	**00 09 36.0**	**-0.4**
CRNS	**Crni Vrh**	**0.44**	**88**	*i* Pg	**Pg**	**00 09 29.3**	**-0.3**
CRNS				*e*Sg	**Sb**	**00 09 36.1**	**-0.9**
CRNS				IAML		00 09 37.6	
	comp=Z,12nm,0.1s						
BOO	**Bordano**	**0.44**	**305**	*e*Pg	**Pg**	**00 09 29.2**	**-0.5**
BOO	**Bordano**	**0.44**	**305**	P	**Pg**	**00 09 29.3**	**-0.4**
BOO				S	**Sg**	**00 09 36.2**	**+0.5**
MPRI	**Monte Prat**	**0.48**	**292**	*e*Pg	**Pg**	**00 09 30.4**	**+0.1**
MPRI	**Monte Prat**	**0.48**	**292**	P	**Pg**	**00 09 30.1**	**-0.1**
MPRI				S	**Sb**	**00 09 37.5**	**-0.4**
MPRI				AML	AML		
	comp=N,359μm,0.6s						
MPRI				AML	AML		
	comp=E,196μm,0.4s						
ACOM	**Acomizza, Ital**	**0.49**	**351**	*e*Pg	**Pg**	**00 09 30.0**	**-0.5**
ACOM	**Acomizza, Ital**	**0.49**	**351**	P	**Pg**	**00 09 30.1**	**-0.5**
ACOM				S	**Sb**	**00 09 37.8**	**-0.6**
ACOM				AML	AML		
	comp=N,107μm,0.2s						
ACOM				AML	AML		
	comp=E,154μm,0.2s						
ACOM				AML	AML		
	comp=N,146μm,1.3s						
ACOM				AML	AML		
	comp=E,151μm,0.2s						
FUSE	**Fusea**	**0.56**	**309**	*e*Pg	**Pg**	**00 09 31.0**	**-0.7**
FUSE	**Fusea**	**0.56**	**309**	P	**Pg**	**00 09 31.0**	**-0.7**
FUSE				S	**Sg**	**00 09 39.4**	**+0.3**
MYKA	**Terra Mystica**	**0.56**	**1**	*e*Pg	**Pg**	**00 09 31.6**	**-0.3**
	comp=E,0.6nm,0.1s,SNR=9.1						
MYKA				*e*Sg	**Sb**	**00 09 39.7**	**-0.8**
	comp=E,6.3nm,0.2s						
GBAS	**Gorenja Brezov**	**0.58**	**103**	*i* Pg	**Pg**	**00 09 31.6**	**-0.6**
GBAS				*e*Sg	**Sb**	**00 09 40.8**	**-0.2**
GBAS				IAML		00 09 42.4	
	comp=Z,12nm,0.1s						
PLRO	**Paularo**	**0.58**	**326**	*e*Pg	**Pg**	**00 09 32.0**	**-0.4**
PLRO	**Paularo**	**0.58**	**326**	P	**Pg**	**00 09 31.8**	**-0.5**
PLRO				S	**Sg**	**00 09 40.4**	**+0.3**
SKDS	**Skadanscina**	**0.59**	**152**	*i* Pg	**Pg**	**00 09 31.8**	**-0.5**
SKDS				*e*Sg	**Sb**	**00 09 40.6**	**-0.5**
SKDS				IAML		00 09 42.4	
	comp=Z,22nm,0.1s						
MOZS	**Mozjanca**	**0.61**	**68**	*i* Pg	**Pb**	**00 09 33.0**	**-0.3**
LJU	**Ljubljana**	**0.63**	**92**	P	**Pb**	**00 09 33.0**	**-0.5**
LJU				S	**Sb**	**00 09 42.2**	**0.0**
LJU				AML	AML		
	comp=E,522μm,0.2s						
LJU				AML	AML		
	comp=N,810μm,0.2s						
CLUD	**Cludinico**	**0.65**	**307**	*e*Pg	**Pg**	**00 09 32.9**	**-0.5**
CLUD	**Cludinico**	**0.65**	**307**	P	**Pg**	**00 09 32.7**	**-0.7**
CLUD				S	**Sb**	**00 09 42.9**	**0.0**
STAL	**STALIGIAL**	**0.67**	**287**	P	**Pg**	**00 09 33.0**	**-0.7**
STAL				S	**Sg**	**00 09 42.3**	**-0.3**
STAL				AML	AML		
	comp=E,334μm,0.2s						
STAL				AML	AML		
	comp=N,270μm,0.2s						
ZOU	**Zoufplan**	**0.67**	**317**	*e*Pg	**Pg**	**00 09 33.7**	**-0.2**
ZOU	**Zoufplan**	**0.67**	**317**	P	**Pg**	**00 09 33.3**	**-0.6**
ZOU				S	**Sb**	**00 09 43.3**	**-0.2**
ZOU				AML	AML		
	comp=N,52μm,0.6s						
ZOU				AML	AML		
	comp=E,70μm,1.0s						
MLNI	**Malnisio**	**0.71**	**277**	*e*Pg	**Pg**	**00 09 34.3**	**-0.4**
VNDS	**Vrh nad Dolski**	**0.75**	**87**	*e*Pg	**Pg**	**00 09 35.1**	**-0.2**
VNDS	**Vrh nad Dolski**	**0.75**	**87**	*i* Pg	**Pg**	**00 09 35.1**	**-0.2**
KNDS	**Knezji Dol**	**0.76**	**135**	*i* Pg	**Pb**	**00 09 35.7**	**-0.1**
KNDS				*i* Sg	**Sb**	**00 09 46.0**	**+0.1**
KNDS				IAML		00 09 51.9	
	comp=Z,6.3nm,0.1s						
OBKA	**Obir**	**0.78**	**55**	*e*Pg	**Pg**	**00 09 35.3**	**-0.6**
	comp=Z,0.5nm,0.1s						
OBKA				*e*Sg	**Sb**	**00 09 47.0**	**+0.4**
	comp=Z,2.2nm,0.1s,SNR=5.8						
FVI	**Forni Avoltri**	**0.79**	**312**	P	Pg	00 09 29.0	-7.1
CAE	**Caneva**	**0.83**	**266**	*e*Pg	**Pb**	**00 09 37.2**	**+0.1**
CAE	**Caneva**	**0.83**	**266**	P	**Pb**	**00 09 37.4**	**+0.4**
CAE				S	**Sb**	**00 09 48.0**	**-0.1**
CIMO	**Cimolais**	**0.86**	**287**	P	**Pg**	**00 09 36.6**	**-0.8**
CIMO				S	**Sg**	**00 09 48.3**	**-0.4**
CIMO				AML	AML		
CIMO				AML	AML		
RIY	**Rijeka**	**0.95**	**141**	*e*Pg	**Pg**	**00 09 39.3**	**0.0**
RIY				Sg	**Sg**	**00 09 51.8**	**0.0**
ABTA	**Abfaltersbach**	**1.03**	**312**	*e*Pg	**Pn**	**00 09 40.8**	**-0.1**
	comp=Z,2.0nm,0.2s,SNR=10						
ABTA				*e*Sg	**Sn**	**00 09 55.3**	**+0.1**
	comp=Z,1.4nm,0.1s						
KBA	**Koelnbreinsper**	**1.03**	**349**	*e*Pg	**Pn**	**00 09 41.0**	**0.0**
	comp=Z,1.2nm,0.1s,SNR=12						
KBA				*e*Sg	**Sn**	**00 09 55.6**	**+0.2**
	comp=Z,9.0nm,0.4s						
VARN	**Col Varnada, M**	**1.06**	**267**	P	**Pb**	**00 09 40.8**	**-0.2**
VARN				AML	AML		
	comp=E,251μm,0.3s						
VARN				AML	AML		
	comp=N,181μm,1.5s						
SMRN	**Sveta Marina**	**1.10**	**160**	*e*Pg	**Pg**	**00 09 41.8**	**-0.1**
SMRN				Sg	**Sn**	**00 09 56.6**	**0.0**
AGOR	**Agordo**	**1.12**	**282**	P	**Pb**	**00 09 41.0**	**-1.0**
SOKA	**Soboth**	**1.15**	**57**	*e*Pg	**Pn**	**00 09 42.5**	**-0.1**
	comp=N,0.3nm,0.1s						
SOKA				*e*Sg	**Sn**	**00 09 58.5**	**+0.4**
	comp=N,4.5nm,0.2s,SNR=6.9						
BRJN	**Brijuni**	**1.17**	**176**	*e*Pg	**Pn**	**00 09 42.5**	**-0.2**
BRJN				Sg	**Sn**	**00 09 58.2**	**-0.1**
BRJN	**Brijuni**	**1.17**	**176**	P	**Pn**	**00 09 42.4**	**-0.2**
BRJN				S	**Sn**	**00 09 58.2**	**-0.1**
ASOL	**Asolo**	**1.23**	**258**	P	**Pn**	**00 09 43.6**	**0.0**
BOJS	**Bojanci**	**1.27**	**116**	P	**Pb**	**00 09 44.3**	**-0.2**
BOJS				S	**Sg**	**00 10 01.8**	**+0.1**
BOJS				AML	AML		
	comp=N,225μm,1.4s						
BOJS				AML	AML		
	comp=E,192μm,0.2s						
A250A	**Rusevo Krmpots**	**1.33**	**137**	*e*Pg	**Pg**	**00 09 45.9**	**-0.6**
A250A				Sg	**Sg**	**00 10 03.7**	**-0.1**
OZLJ	**Ozalj**	**1.36**	**109**	*e*Pg	**Pg**	**00 09 46.3**	**-0.7**
OZLJ				Sg	**Sg**	**00 10 04.1**	**-0.7**
RISI	**Rein**	**1.39**	**310**	P	**Pn**	**00 09 45.5**	**-0.4**
RISI				AML	AML		
	comp=E,218μm,0.5s						
RISI				AML	AML		
	comp=N,156μm,1.4s						
BIOA	**Bad Ischl, Aus**	**1.62**	**0**	*e*Pg	**Pg**	**00 09 51.9**	**-0.1**
	comp=N,2.4nm,0.2s						
BIOA				*e*Sg	**Sg**	**00 10 14.3**	**+1.1**
	comp=N,3.4nm,0.3s						
PTJ	**Puntijarka**	**1.64**	**95**	*e*Pg	**Pb**	**00 09 50.9**	**0.0**
PTJ				Sg	**Sg**	**00 10 13.4**	**-0.2**
DOSS	**Dosso del Somm**	**1.71**	**265**	P	**Pn**	**00 09 51.0**	**+0.6**
DOSS				S	**Sb**	**00 10 13.5**	**0.0**
DOSS				AML	AML		
	comp=N,63μm,1.5s						
DOSS				AML	AML		
	comp=E,51μm,1.4s						
ABSI	**Aberstueckl**	**1.73**	**293**	P	**Pb**	**00 09 51.9**	**-0.5**
ABSI				AML	AML		
	comp=E,124μm,0.5s						
ABSI				AML	AML		
	comp=N,188μm,0.4s						
NVLJ	**Novalja**	**1.74**	**149**	*e*Pn	**Pb**	**00 09 51.6**	**-0.9**
NVLJ				Sn	**Sb**	**00 10 14.3**	**0.0**
ARSA	**Arzberg**	**1.76**	**47**	*e*Pn	**Pn**	**00 09 51.0**	**+0.1**
	comp=N,0.1nm,0.1s						
ARSA				*e*Sg	**Sb**	**00 10 14.0**	**-1.0**
	comp=N,0.8nm,0.2s						
WTTA	**Wattenberg**	**1.82**	**312**	*e*Pg	**Pb**	**00 09 54.4**	**+0.4**
	comp=N,0.5nm,0.1s,SNR=4.9						
WTTA				*e*Sn	**Sn**	**00 10 15.6**	**+0.7**
	comp=N,5.7nm,0.4s						
MOA	**Molln**	**1.84**	**14**	*e*Pg	**Pb**	**00 09 54.1**	**0.0**
	comp=N,0.2nm,0.1s						
MOA				*e*Sn	**Sn**	**00 10 15.1**	**+0.1**
	comp=N,0.7nm,0.2s						
PLIT	**Plitvice**	**1.84**	**130**	*e*Pn	**Pb**	**00 09 53.8**	**-0.4**
PLIT				Sn	**Sb**	**00 10 17.7**	**+0.5**
WATA	**Walderalm**	**1.90**	**313**	*e*Pg	**Pb**	**00 09 55.6**	**+0.3**
	comp=N,0.8nm,0.1s,SNR=4.2						
WATA				*e*Sn	**Sn**	**00 10 17.1**	**+0.4**
	comp=N,1.1nm,0.2s						
SQTA	**Sankt Quirin**	**2.03**	**306**	*e*Pn	**Pn**	**00 09 55.0**	**+0.4**
	comp=N,0.4nm,0.1s						
SQTA				*e*Sn	**Sb**	**00 10 21.2**	**-1.4**
	comp=N,5.0nm,0.3s						
VIRC	**Vir**	**2.04**	**150**	*e*Pn	**Pn**	**00 09 55.1**	**+0.4**
VIRC				Sn	**Sb**	**00 10 21.9**	**-1.0**
MOTA	**Moosalm**	**2.15**	**307**	*e*Pn	**Pn**	**00 09 56.3**	**-0.2**
	comp=N,0.6nm,0.2s						

comp=Z,0.8nm,0.9s,baz=243,slow=6.8,SNR=6.4
comp=Z,0.8nm,0.9s
WRA Warramunga Arr 66.30 100 P **P** **00 23 15.9 +0.1**
comp=Z,1.0nm,0.9s,baz=245,slow=5.8,SNR=5.3
comp=Z,1.0nm,0.9s
WRA Warramunga Arr 66.30 100 P **P** **00 23 16.3 +0.5**
TOAD Torodi Ar. Sit 71.10 298 P **P** **00 23 46.1 +0.3**
TORD Torodi Ar. Bea 71.10 298 P **P** **00 23 46.5 +0.7**
comp=Z,1.3nm,0.8s,baz=102,slow=5.3,SNR=7.9
comp=Z,1.3nm,0.8s
TORD Torodi Ar. Bea 71.10 298 P **P** **00 23 46.1 +0.4**
TORD IAmb IAmb 00 23 49.5
comp=Z,1.4nm,0.9s
KK31 Karatay Array 72.41 7 P **P** **00 23 53.6 +0.5**
KK31 IAmb IAmb 00 23 58.3
comp=Z,3.4nm,1.1s
KKAR Karatay Array 72.41 7 P **00 23 53.8 +0.8**
MKAR Makanchi Array 77.97 15 P **P** **00 24 25.7 +0.7**
comp=Z,0.8nm,0.7s,baz=180,slow=3.4,SNR=7.3
comp=Z,0.8nm,0.7s
MKAR Makanchi Array 77.97 15 P **00 24 25.4 +0.4**
ABKAR Akbulak array 78.06 359 P **P** **00 24 26.1 +0.7**
AKTO Aktyubinsk 79.28 358 LR LR 00 58 07.8
comp=Z,21nm,18.4s,baz=47,slow=34
ZALV Zalesovo Beam 85.26 14 P **P** **00 25 03.8 +0.5**
comp=Z,0.5nm,0.4s,baz=191,slow=5.6,SNR=5.3
comp=Z,0.5nm,0.4s
YKA Yellowknife Ar 146.53 356 PKPbc **PKPbc** **00 32 07.8 +0.1**
comp=Z,0.7nm,0.6s,baz=350,slow=3.2,SNR=9.3
YKA Yellowknife Ar 146.53 356 PKPbc PKPbc **00 32 07.4 -0.3**
ULM Lac du Bonnet 152.68 327 PKPbc **PKPbc** **00 32 21.9 -1.6**
comp=Z,1.1nm,0.5s,baz=360,slow=3.4,SNR=5.0
TXAR Lajitas Array 166.72 275 PKP **PKPdf** **00 32 34.6 +1.5**
comp=Z,0.3nm,0.7s,baz=148,slow=2.8,SNR=5.0
TXAR Lajitas Array 166.72 275 PKPdf **00 32 32.9 -0.3**

*IDC **15** 00:25:01.6±1.5,28°.82S×61°.25E, h0km, mb3.6/4, mbtmp3.7/5, ML4.1/1, Error ellipse: s-maj=82.1km s-min=29.0km az=25.0*
*NEIC **15** 00:25:03.9±1.4,29°.5S±0°.1×59°.9E±0°.2, h10km±1km, mb4.3/7, Error ellipse: s-maj=31.2km s-min=10.3km az=52.0*

ISC 15 00:25:03.3±0.7,**29°.4S**±0°.2×**59°.9E**±0°.1,**h10**km,**n28,**
σ1§**67**/20,**mb3.9**/7,**Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FOMA	**Nahampoana Res**	**12.33**	**288**	Pn	**Pn**	**00 27 57.4**	**-1.6**
VOI	**Vohitsoka**	**13.99**	**299**	Pn	**Pn**	**00 28 20.2**	**-1.6**
ABPO	**Ambohimpanom**	**15.52**	**309**	Pn	**Pn**	**00 28 44.0**	**+1.5**
ABPO				IAmb	IAmb	00 28 54.3	
	comp=Z,16nm,1.2s						
OPO	**Ambohidratompo**	**15.86**	**310**	Pn	**P**	**00 28 53.3**	**+2.7**
	comp=Z,0.1nm,0.3s,baz=120,slow=17,SNR=2.4						
OPO				Sn	**Sn**	**00 31 42.2**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=270,slow=20,SNR=1.5						
	comp=Z,2.3nm,0.5s						
H08S1	**Diego Carcia H**	**24.68**	**31**	T	T	00 55 00.8	
	baz=204,slow=76,SNR=13						
H08S2	**Diego Garcia H**	**24.69**	**31**	T	T	00 55 00.1	
	baz=204,slow=76,SNR=5.1						
H08S3	**Diego Garcia H**	**24.70**	**31**	T	T	00 55 02.0	
	baz=204,slow=76,SNR=12						
H01W2	**Cape Leeuwin H**	**45.77**	**111**	T	T	01 20 57.4	
	baz=261,slow=74,SNR=12						
H01W3	**Cape Leeuwin H**	**45.77**	**111**	T	T	01 20 56.9	
	baz=261,slow=74,SNR=13						
H01W1	**Cape Leeuwin H**	**45.78**	**111**	T	T	01 20 57.5	
	baz=261,slow=74,SNR=11						
MORW	**Morawa**	**48.56**	**104**	P	**P**	**00 33 46.5**	**-0.4**
MORW				IAmb	IAmb	00 33 52.8	
	comp=Z,20nm,1.3s						
NWAO	**Narrogin (SRO)**	**48.66**	**109**	P	**P**	**00 33 47.7**	**0.0**
QSPA	**South Pole Qui**	**60.73**	**180**	P	**P**	**00 35 15.6**	**+0.7**
QSPA				IAmb	IAmb	00 35 24.2	
	comp=Z,3.7nm,1.5s						
VNDA	**Vanda**	**64.03**	**166**	P	**P**	**00 35 36.2**	**-0.5**
VNDA				IAmb	IAmb	00 35 56.4	
	comp=Z,3.9nm,1.4s						
SBA	**Scott Base**	**64.90**	**167**		**P**	**00 35 43.0**	**+0.7**
ASAR	**Alice Springs**	**65.44**	**104**	P	P	00 35 40.2	-6.6
	comp=Z,0.5nm,0.8s,baz=238,slow=5.2,SNR=2.2						
	comp=Z,0.5nm,0.8s						
WRA	**Warramunga Arr**	**67.29**	**101**	P	P	00 35 51.6	-7.1
	comp=Z,0.6nm,0.9s,baz=248,slow=5.8,SNR=2.1						
	comp=Z,0.6nm,0.9s						
TORD	**Torodi Ar. Bea**	**70.30**	**298**	P	**P**	**00 36 21.4**	**+4.1**
	comp=Z,0.5nm,0.8s,baz=107,slow=4.0,SNR=4.2						
	comp=Z,0.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**70.30**	**298**	P	**P**	**00 36 16.9**	**-0.4**
TORD				IAmb	IAmb	00 36 40.6	
	comp=Z,2.3nm,1.2s						
ABKAR	**Akbulak array**	**78.33**	**0**	P	**P**	**00 37 01.0**	**-2.3**
MKAR	**Makanchi Array**	**78.52**	**15**	P	P	00 36 59.3	-5.2
	comp=Z,0.3nm,0.5s,baz=178,slow=7.7,SNR=2.1						
	comp=Z,0.3nm,0.5s						
MKAR	**Makanchi Array**	**78.52**	**15**	P	**P**	**00 37 05.3**	**+0.8**
YKA	**Yellowknife Ar**	**146.73**	**355**	PKPbc	**PKPdf**	**00 44 43.5**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=357,slow=3.1,SNR=5.8						
YKA	**Yellowknife Ar**	**146.73**	**355**	PKPdf	**PKPdf**	**00 44 41.9**	**-1.2**
W50A	**Signal Mountai**	**150.15**	**290**		**PKPbc**	**00 44 54.2**	**-0.5**
U49A	**Red Boiling Sp**	**150.47**	**293**	PKPbc	**PKPbc**	**00 44 54.1**	**-1.2**
TXAR	**Lajitas Array**	**165.68**	**274**	PKP	**PKPdf**	**00 45 09.8**	**+1.1**
	comp=Z,0.2nm,0.6s,baz=96,slow=3.8,SNR=4.0						
TXAR	**Lajitas Array**	**165.68**	**274**	PKPdf	**PKPdf**	**00 45 07.0**	**-1.8**

MAN 15 00:50:40.4, 9°.27N×126°.94E, h24km, mb4.3, ML3.1, MS2.8, Mindanao

NEIC 15 00:55:36.5±0.5,**37°.08N**±0°.01×**97°.725W**±0°.008,**h4**km±3km,
Error ellipse: s-maj=1.9km s-min=0.5km az=204.0,
Kansas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T35A	**Sooner Cattle**	**0.98**	**99**		Pg	00 55 54.4	-0.9
R32A	**Long Quarter,**	**1.56**	**330**		Pn	00 56 04.6	-0.4
OKCFA	**Oklahoma City**	**1.67**	**172**	Pn	Pn	00 56 05.8	-0.7
OKCSW	**OKLAHOMA CITY**	**1.68**	**172**	Pn	Pn	00 56 05.9	-0.9
FNO	**Franklin**	**1.83**	**172**	Pn	Pn	00 56 08.6	-0.2
TUL1	**Leonard**	**1.94**	**126**	Pn	Pn	00 56 10.8	+0.5
TUL1				IAmb_Lg		00 56 38.2	
	comp=Z,42nm,0.9s						
KSU1	**Kansas State U**	**2.21**	**23**	Pn	Pn	00 56 14.5	+0.6
KSU1				IAmb_Lg		00 56 48.2	
	comp=Z,49nm,0.8s						
X34A	**Smith Ranch, M**	**2.47**	**182**	Pn	Pn	00 56 16.7	-0.9
X34A				IAmb_Lg		00 56 56.4	
	comp=Z,34nm,1.1s						
WMOK	**Wichita Mounta**	**2.48**	**200**		Pn	00 56 17.5	-0.3
U38A	**Gravette**	**2.76**	**102**	Pn	Pn	00 56 22.1	+0.6
X37A	**Clayton**	**3.13**	**142**	Pn	Pn	00 56 26.8	+0.1
HHAR	**Hobbs**	**3.14**	**103**	Pn	Pn	00 56 25.7	-1.2
HHAR				IAmb_Lg		00 57 20.1	
	comp=Z,14nm,1.0s						
N33A	**J Bar K, Exete**	**3.66**	**3**	IAmb_Lg		00 57 36.4	
	comp=Z,15nm,0.7s						
W39A	**Magazine**	**3.70**	**119**	IAmb_Lg		00 57 39.9	
	comp=Z,19nm,0.7s						
AMTX	**Amarillo**	**3.88**	**237**	IAmb_Lg		00 57 48.0	
	comp=Z,18nm,0.8s						
U40A	**Yellville**	**3.98**	**99**	Pn	Pn	00 56 38.3	-0.1
MIAR	**Mount Ida**	**4.21**	**126**	Pn	Pn	00 56 42.2	+0.7
MIAR				IAmb_Lg		00 57 49.8	
	comp=Z,13nm,0.8s						
KSCO	**Kaye Shedlock'**	**4.33**	**298**	IAmb_Lg		00 57 55.0	
	comp=Z,11nm,0.8s						
MGMO	**Mountain Grove**	**4.36**	**87**	Pn	Pn	00 56 43.9	+0.3
MGMO				IAmb_Lg		00 57 52.4	
	comp=Z,12nm,0.8s						
Z38A	**Mt. Pleasant**	**4.42**	**149**	IAmb_Lg		00 58 06.0	
	comp=Z,18nm,0.8s						
R40A	**Maddies Statio**	**4.50**	**73**	Pn	Pn	00 56 46.1	+0.7
R40A				IAmb_Lg		00 58 09.2	
	comp=Z,9.8nm,0.8s						
FCAR	**Ozark Folk Cen**	**4.67**	**103**	IAmb_Lg		00 58 02.8	
	comp=Z,12nm,1.0s						
WHAR	**Wooly Hollow**	**4.74**	**110**	Pn	Pn	00 56 46.7	-2.1
WHAR				IAmb_Lg		00 58 16.8	
	comp=Z,19nm,1.1s						
W41B	**Gary Mavity, V**	**4.82**	**112**	IAmb_Lg		00 58 06.1	
	comp=Z,11nm,0.7s						
L34A	**Svendsen Farm,**	**5.00**	**12**	IAmb_Lg		00 58 16.0	
	comp=Z,20nm,0.7s						
WLAR	**White Oak Lake**	**5.06**	**131**	IAmb_Lg		00 58 27.9	
	comp=Z,14nm,0.9s						
N38A	**Joes South For**	**5.10**	**42**	IAmb_Lg		00 58 31.2	
	comp=Z,17nm,0.7s						
CCM	**Cathedral Cave**	**5.24**	**77**	IAmb_Lg		00 58 34.5	
	comp=Z,8.2nm,0.7s						
T25A	**Trinidad**	**5.34**	**273**	IAmb_Lg		00 58 32.6	
	comp=Z,9.2nm,0.8s						
Z41A	**Richland Creek**	**5.55**	**132**	IAmb_Lg		00 58 40.5	
	comp=Z,9.7nm,0.8s						
PBMO	**Poplar Bluff**	**5.85**	**91**	IAmb_Lg		00 58 38.7	
	comp=Z,7.6nm,0.9s						
FVM	**French Village**	**5.87**	**79**	IAmb_Lg		00 58 49.8	
	comp=Z,14nm,1.1s						
S44A	**Carbondale**	**6.77**	**82**	IAmb_Lg		00 59 12.2	
	comp=Z,14nm,0.7s						
SIUC	**Southern Illin**	**6.80**	**82**	IAmb_Lg		00 59 18.9	
	comp=Z,13nm,1.0s						
N23A	**Red Feather La**	**7.45**	**303**	IAmb_Lg		00 59 49.2	
	comp=Z,8.0nm,0.8s						
JFWS	**Jewell Farm**	**8.18**	**42**	IAmb_Lg		01 00 13.9	
	comp=Z,8.4nm,0.7s						

*NEIC **15** 01:01:26.2±1.6,30°.9S±0°.1×179°.9E±0°.2, h417km±10km, mb4.0/10, Error ellipse: s-maj=25.8km s-min=8.7km az=122.0*
*WEL **15** 01:01:28.2±0.7,31°.S±15°×17°.9W±4°.1, h389km±13km, M4.3/10, mB4.5/7, ML5.3/9, MLv5.0/10, Mw(mB)3.6/7, Error ellipse: s-maj=0.1km s-min=0.0km az=110.0*
*IDC **15** 01:01:33.4±6.5,31°.67S×179°.66E, h503km±74km, mb3.0/2, mbtmp3.9/2, Error ellipse: s-maj=95.5km s-min=32.2km az=14.0*

ISC 15 01:01:24.5±0.7,**30°.92S**±0°.07×**179°.9E**±0°.1,**h400**km,**n50,**
σ1§**95**/60,**mb3.9**/8,**Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.48**	**49**	P	**Pn**	**01 02 24.8**	**+1.0**
GLKZ				S	**S**	**01 03 12.0**	**+0.4**
RAO	**Raoul Island**	**2.49**	**49**	P	**Pn**	**01 02 26.1**	**+2.2**
MXZ	**Matakaoa Point**	**6.77**	**191**	P	**Pn**	**01 03 06.4**	**+1.0**
MXZ				S	**S**	**01 04 26.5**	**-1.4**
OUZ	**Omahuta**	**6.84**	**229**		**P**	**01 03 10.9**	**+4.0**
TWGZ	**Tauwhareparae**	**7.42**	**192**	S	**S**	**01 04 43.3**	**+1.8**
URZ	**Urewera**	**7.69**	**197**	P	**P**	**01 03 19.0**	**+2.7**
	104nm,0.3s,baz=298,slow=0.5,SNR=63						
URZ				S	**S**	**01 04 44.2**	**-2.7**
	11nm,0.4s,baz=24,slow=20,SNR=3.1						
URZ	**Urewera**	**7.69**	**197**	P	**P**	**01 03 18.7**	**+2.4**
URZ	**Urewera**	**7.69**	**197**	P	**P**	**01 03 18.9**	**+2.6**
URZ				S	**S**	**01 04 44.0**	**-3.0**
RIGZ	**Rimuhau**	**7.97**	**192**	P	**P**	**01 03 22.4**	**+2.9**
RIGZ				S	**S**	**01 04 53.4**	**+0.4**
MUGZ	**Murupara**	**7.98**	**198**	P	**P**	**01 03 22.2**	**+2.7**
MUGZ				S	**S**	**01 04 51.7**	**-1.4**
HRRZ	**Handcock Road**	**8.04**	**201**	P	**P**	**01 03 24.4**	**+4.1**
RTZ	**Ruatahuna**	**8.06**	**197**	P	**P**	**01 03 22.9**	**+2.4**
RTZ				S	**S**	**01 04 51.3**	**-3.6**
MTHZ	**Maungataniwha**	**8.32**	**197**	P	**P**	**01 03 25.8**	**+2.4**
MTHZ				S	**S**	**01 04 59.1**	**-1.1**
NMHZ	**Naumai**	**8.56**	**197**	P	**P**	**01 03 28.9**	**+2.9**
HIZ	**Hauiti**	**8.66**	**208**	P	P	01 03 32.2	+5.2
ARHZ	**Aropaoanui**	**8.67**	**195**	P	**P**	**01 03 29.1**	**+1.9**
ARHZ				S	**S**	**01 05 03.2**	**-4.5**
BKZ	**Black Stump Fm**	**8.70**	**198**		**P**	**01 03 28.7**	**+1.1**
CKHZ	**Cape Kidnapper**	**9.03**	**194**	P	**Pn**	**01 03 33.5**	**+2.3**
CKHZ				S	**S**	**01 05 12.1**	**-3.2**
WNVZ	**Wahianoa**	**9.11**	**202**	P	**Pn**	**01 03 34.5**	**+2.2**
BHHZ	**Black Hill Sta**	**9.12**	**199**	P	**P**	**01 03 32.3**	**0.0**
PKVZ	**Pokaka**	**9.16**	**203**	P	**Pn**	**01 03 34.2**	**+1.5**
KAHZ	**Kahuranaki**	**9.20**	**195**	P	**Pn**	**01 03 35.0**	**+1.7**
KAHZ				S	**S**	**01 05 15.5**	**-3.5**
TSZ	**Takapari Road**	**9.68**	**198**	P	**P**	**01 03 39.4**	**+0.9**
MRZ	**Mangatainoka R**	**10.35**	**199**	P	**P**	**01 03 46.1**	**+0.3**
HOWZ	**Holdsworth Sta**	**10.59**	**199**	P	**P**	**01 03 48.1**	**-0.4**
MSWZ	**Moikau Station**	**11.14**	**199**	P	**P**	**01 03 54.9**	**+0.3**
TCW	**Tory Channel**	**11.24**	**202**	P	**P**	**01 03 55.3**	**-0.5**
TUWZ	**Tuamarina**	**11.55**	**203**		**P**	**01 03 58.6**	**-0.6**
TUWZ	**Tuamarina**	**11.55**	**203**	P	**P**	**01 03 58.6**	**-0.6**
THZ	**Tophouse**	**12.21**	**206**	P	**P**	**01 04 06.8**	**+0.3**
KHZ	**Kahutara**	**12.57**	**202**	P	**P**	**01 04 11.5**	**+1.2**
CTAO	**Chartres Tower**	**32.15**	**282**	P	**P**	**01 07 16.8**	**-0.3**
STKA	**Stephens Creek**	**32.63**	**258**	P	**P**	**01 07 22.7**	**+1.6**
ASAR	**Alice Springs**	**41.31**	**268**	P	**P**	**01 08 32.8**	**-0.6**
	0.4nm,0.3s,baz=105,slow=7.1,SNR=6.1						
	0.4nm,0.3s						
WR0	**Warramunga Arr**	**42.17**	**274**	P	**P**	**01 08 39.6**	**-0.6**
WR0				IAmb	IAmb	01 09 03.0	
	comp=Z,17nm,1.5s						
WB2	**Warramunga Arr**	**42.34**	**274**	P	**P**	**01 08 41.1**	**-0.4**
WB2				IAmb	IAmb	01 09 03.2	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**42.35**	**274**	P	**P**	**01 08 41.2**	**-0.5**
	comp=Z,1.1nm,0.3s,baz=111,slow=8.0,SNR=30						
	comp=Z,1.1nm,0.3s						
WRA	**Warramunga Arr**	**42.35**	**274**	P	**P**	**01 08 40.6**	**-1.0**
WB0	**Warramunga Arr**	**42.38**	**274**	P	**P**	**01 08 41.6**	**-0.3**
WB0				IAmb	IAmb	01 09 00.1	
	comp=Z,12nm,1.4s						
CASY	**Casey**	**53.85**	**208**	P	**P**	**01 10 06.9**	**-0.8**
CASY				IAmb	IAmb	01 10 14.6	
	comp=Z,13nm,1.1s						
QSPA	**South Pole Qui**	**59.19**	**180**	P	**P**	**01 10 46.5**	**+1.5**
QSPA				IAmb	IAmb	01 10 47.4	
	comp=Z,5.0nm,1.1s						
BELA	**Belgrano 2**	**69.51**	**173**	P	**P**	**01 11 50.8**	**+0.1**
BELA				IAmb	IAmb	01 12 18.4	
	comp=Z,4.2nm,1.4s						
SNAA	**Sanae**	**77.68**	**179**	P	**P**	**01 12 37.8**	**0.0**
MKAR	**Makanchi Array**	**116.75**	**310**	PKP	**PKPdf**	**01 19 20.4**	**-1.4**
	comp=Z,0.2nm,0.5s,baz=77,slow=2.5,SNR=1.7						
ABKAR	**Akbulak array**	**131.89**	**310**	PKPdf	**PKPdf**	**01 19 48.9**	**-1.8**
FIA1	**FINESS Array S**	**144.99**	**338**	PKPdf	**PKPdf**	**01 20 13.4**	**-0.7**
FINES	**FINESS Array B**	**144.99**	**338**	PKPbc	**PKPdf**	**01 20 13.3**	**-0.8**
	comp=Z,1.8nm,0.6s,baz=58,slow=4.5,SNR=21						
NC303	**NORSAR Array S**	**148.76**	**349**	PKPbc	**PKPbc**	**01 20 23.7**	**-1.1**
AKASG	**Malin Array Be**	**150.60**	**321**	PKPbc	**PKPbc**	**01 20 28.7**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=55,slow=3.5,SNR=3.5						
BRTR	**Keskin Array B**	**151.27**	**297**	PKPbc	**PKPbc**	**01 20 30.0**	**-1.6**
	comp=Z,0.5nm,0.6s,baz=142,slow=4.8,SNR=5.1						

*IDC **15** 01:18:30.9±1.3,14°.41S×166°.77E, h0km, mb4.0/4, mbtmp4.0/5, ML3.9/1, MS3.3/7, Error ellipse: s-maj=51.0km s-min=25.4km az=130.0*
*NEIC **15** 01:18:37.3±1.5,14°.52S±0°.05×166°.8E±0°.1, h40km±10km, mb4.4/11, Error ellipse: s-maj=17.8km s-min=6.9km az=82.0*

ISC 15 01:18:37.2±0.9,**14°.62S**±0°.10×**166°.8E**±0°.1,**h35**km,**n28,**
σ1§**83**/27,**mb4.2**/9,**MS3.2**/5,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOUNC	**Koumac, New Ca**	**6.37**	**202**	Pn	**Pn**	**01 20 09.6**	**+1.0**
MARNC	**Mare, Loyalty**	**6.92**	**171**	Pn	**Pn**	**01 20 18.3**	**+2.2**
DZM	**Mont Dzumac**	**7.42**	**183**	Pn	**Pn**	**01 20 22.9**	**-0.1**
	1.9nm,0.3s,baz=320,slow=21,SNR=19						
DZM				Sn	**Sn**	**01 21 41.9**	**-4.1**
	baz=288,slow=19						
DZM				LR	LR	01 22 55.7	
	comp=Z,203nm,19.5s,baz=24,slow=35						
	5.0nm,0.4s						
DZM	**Mont Dzumac**	**7.42**	**183**	Pn	**Pn**	**01 20 23.5**	**+0.5**
PINNC	**Pines Island,**	**7.97**	**176**	Pn	**Pn**	**01 20 31.1**	**+0.6**
EIDS	**Eidsvold**	**18.22**	**232**	P	**Pn**	**01 22 49.7**	**+2.2**
EIDS				IAmb	IAmb	01 23 09.0	
	comp=Z,28nm,1.2s						
PMG	**Port Moresby**	**19.91**	**283**	LR	LR	01 29 19.2	
	comp=Z,75nm,19.4s,baz=118,slow=33						
CTA	**Charters Tower**	**20.36**	**252**	P	**P**	**01 23 12.6**	**+1.7**
	comp=Z,15nm,1.0s,baz=89,slow=10,SNR=5.5						
CTA				LR	LR	01 30 05.4	
	comp=Z,66nm,20.7s,baz=92,slow=34						
CTAO	**Charters Tower**	**20.36**	**252**	P	**P**	**01 23 12.7**	**+1.8**
CTAO				IAmb	IAmb	01 23 13.2	
	comp=Z,30nm,1.1s						
STKA	**Stephens Creek**	**28.73**	**229**	P	**P**	**01 24 31.8**	**+0.4**
	comp=Z,0.9nm,0.4s,baz=39,slow=11,SNR=3.7						
STKA				LR	LR	01 35 42.6	
	comp=Z,58nm,19.1s,baz=23,slow=36						
	comp=Z,0.9nm,0.4s						
STKA	**Stephens Creek**	**28.73**	**229**	P	**P**	**01 24 30.6**	**-0.7**
WR0	**Warramunga Arr**	**31.24**	**256**	P	**P**	**01 24 52.6**	**-1.1**
WR0				IAmb	IAmb	01 25 14.8	
	comp=Z,16nm,1.4s						
WB0	**Warramunga Arr**	**31.36**	**256**	P	**P**	**01 24 53.4**	**-1.5**
WB0				IAmb	IAmb	01 25 02.4	
	comp=Z,13nm,1.4s						
WB2	**Warramunga Arr**	**31.41**	**256**	P	**P**	**01 24 53.5**	**-1.8**
WB2				IAmb	IAmb	01 25 11.2	
	comp=Z,11nm,1.3s						
WRA	**Warramunga Arr**	**31.42**	**256**	P	**P**	**01 24 54.0**	**-1.4**
	comp=Z,0.8nm,0.6s,baz=86,slow=9.7,SNR=11						
WRA				LR	LR	01 37 12.1	
	comp=Z,80nm,18.9s,baz=54,slow=36						
	comp=Z,0.8nm,0.6s						
WRA	**Warramunga Arr**	**31.42**	**256**	P	**P**	**01 24 53.7**	**-1.7**
ASAR	**Alice Springs**	**32.30**	**249**	P	**P**	**01 25 01.6**	**-1.5**
	comp=Z,1.2nm,0.7s,baz=68,slow=9.7,SNR=11						
ASAR				LR	LR	01 36 12.0	
	comp=Z,57nm,20.5s,baz=154,slow=33						
	comp=Z,1.2nm,0.7s						
BBOO	**Buckleboo**	**33.30**	**232**	P	**P**	**01 25 11.4**	**-0.2**
MORW	**Morawa**	**48.92**	**244**	P	**P**	**01 27 19.1**	**-1.0**
VNDA	**Vanda**	**62.96**	**181**	P	**P**	**01 29 02.9**	**+3.1**
	comp=Z,0.4nm,0.3s,baz=1.2,slow=4.8,SNR=9.0						
VNDA	**Vanda**	**62.96**	**181**	P	**P**	**01 29 02.8**	**+3.1**
VNDA				IAmb	IAmb	01 29 04.7	
	comp=Z,3.1nm,1.2s						
MA2	**Magadan**	**75.08**	**352**	LR	LR	02 03 48.0	
	comp=Z,7.3nm,18.9s,baz=82,slow=36						
QSPA	**South Pole Qui**	**75.40**	**180**	P	**P**	**01 30 16.4**	**-0.8**
QSPA				IAmb	IAmb	01 30 43.6	
	comp=Z,4.2nm,1.3s						
ILAR	**Eielson Array**	**86.56**	**18**	P	**P**	**01 31 14.1**	**-2.2**
	comp=Z,1.1nm,0.7s,baz=238,slow=5.4,SNR=12						
	comp=Z,1.1nm,0.7s						
ILAR	**Eielson Array**	**86.56**	**18**	P	**P**	**01 31 15.8**	**-0.5**
ARCES	**ARCESS Array B**	**120.04**	**345**	PKP	**PKPdf**	**01 37 22.2**	**-1.3**
	comp=Z,3.3nm,0.9s,baz=72,slow=1.8,SNR=16						
FINES	**FINESS Array B**	**125.46**	**338**	PKP	**PKiKP**	**01 37 36.3**	**+1.8**
	comp=Z,0.5nm,0.5s,baz=82,slow=4.0,SNR=4.2						
KEST	**Kesra**	**150.85**	**320**	PKPbc	**PKiKP**	**01 38 26.5**	**-0.7**
	comp=Z,3.5nm,0.8s,baz=169,slow=2.8,SNR=6.2						

*IDC **15** 01:33:50.0±2.4,30°.89N×138°.80E, h392km±29km, mb3.0/4, mbtmp3.7/6, Error ellipse: s-maj=65.9km s-min=18.3km az=72.0*

ISC 15 01:33:50.3±1.5,**31°.0N**±0°.2×**138°.9E**±0°.3,**h400**km,**n6,**
σ0§**56**/6,**mb3.2**/4,**Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**5.61**	**354**	P	**Pn**	**01 35 18.3**	**-0.3**
	0.9nm,0.4s,baz=181,slow=9.5,SNR=4.1						
KSRS	**Korea Array**	**11.16**	**308**	P	**P**	**01 36 20.6**	**0.0**
	1.8nm,0.7s,baz=121,slow=10,SNR=5.2						
MKAR	**Makanchi Array**	**45.84**	**307**	P	**P**	**01 41 34.1**	**-0.2**
	0.3nm,0.4s,baz=95,slow=10,SNR=4.7						
	0.3nm,0.4s						
WRA	**Warramunga Arr**	**50.79**	**186**	P	**P**	**01 42 11.3**	**-0.5**
	1.2nm,0.7s,baz=0.9,slow=7.7,SNR=12						
	1.2nm,0.7s						
ASAR	**Alice Springs**	**54.52**	**186**	P	**P**	**01 42 39.1**	**+0.4**
	0.5nm,0.5s,baz=19,slow=12,SNR=5.7						
	0.5nm,0.5s						
FINES	**FINESS Array B**	**73.22**	**332**	P	**P**	**01 44 39.2**	**+0.6**
	1.7nm,1.0s,baz=48,slow=5.7,SNR=4.5						
	1.7nm,1.0s						

*DJA **15** 02:10:48.6±0.2,12°.S±2°.×11°.6E±°, h10km, M4.8/22, mb4.9/22, mB5.3/6, MLv4.9/20, Mw(mB)4.7/6, MwMwp5.0/2, Mwp5.3/2*
*IDC **15** 02:10:49.2±0.6,11°.25S×116°.38E, h0km, mb4.5/15, mbtmp4.5/17, ML4.3/2, MS3.4/19, Error ellipse: s-maj=22.9km s-min=14.5km az=68.0*
*NEIC **15** 02:10:54.3±2.9,11°.39S±0°.09×116°.28E±0°.06, h30km±4km, mb4.7/44, Error ellipse: s-maj=12.6km s-min=8.4km az=192.0*

ISC 15 02:10:50.0±0.3,**11°.45S**±0°.05×**116°.34E**±0°.05,**h10**km,**n157,**
σ1§**54**/139,**mb4.8**/45,**MS3.4**/16,**1C**,**South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGBI	**Denpasar**	**2.87**	**336**	P	**Pn**	**02 11 34.3**	**-1.5**
PLAI	**Plampang**	**2.96**	**29**	P	**Pn**	**02 11 36.9**	**-0.3**
DNP	**Denpasar**	**2.97**	**338**	P	**Pn**	**02 11 37.9**	**+0.6**
WBSI	**Waikabubak, Su**	**3.50**	**59**	P	**Pn**	**02 11 44.6**	**0.0**
SRBI	**Singaraja**	**3.52**	**342**	P	**Pn**	**02 11 45.1**	**+0.2**
ABJI	**Asem Bagus**	**4.18**	**330**	P	**Pn**	**02 11 53.3**	**-0.6**
GMJI	**Gumukmas**	**4

WB0 Warramunga Arr 19.24 118 P **P** **02 15 15.5 +0.7**
WRA Warramunga Arr 19.26 118 P **P** **02 15 15.7 +0.7**
comp=Z,0.9nm,0.3s,baz=291,slow=14,SNR=30
WRA S Sn 02 18 37.7 -14
comp=Z,5.9nm,0.9s,baz=290,slow=22,SNR=7.9
comp=Z,5.3nm,0.8s
WRA Warramunga Arr 19.26 118 P **P** **02 15 15.8 +0.9**
WRAB Tennant Creek 19.27 118 P **P** **02 15 15.4 +0.4**
WB2 Warramunga Arr 19.27 118 **P** **02 15 15.6 +0.6**
WR0 Warramunga Arr 19.44 118 P **P** **02 15 17.4 +0.4**
DAV Davao City (W) 20.57 27 LR LR 02 23 46.5
comp=Z,131nm,21.9s,baz=168,slow=38
AS31 Alice Springs 20.66 128 P **P** **02 15 31.4 +1.1**
ASAR Alice Springs 20.66 128 P **P** **02 15 32.0 +1.8**
comp=Z,12nm,0.6s,baz=300,slow=10,SNR=103
ASAR S **S** **02 19 13.2 -8.0**
comp=Z,6.5nm,0.7s,baz=310,slow=25,SNR=11
comp=Z,12nm,0.6s
ASAR Alice Springs 20.66 128 P **P** **02 15 31.5 +1.2**
NWAO Narrogin (SRO) 21.39 178 P **P** **02 15 38.2 +0.2**
NWAO IAmb IAmb 02 15 53.7
comp=Z,28nm,0.8s
FORT Forrest 22.09 152 P **P** **02 15 44.8 -0.7**
PSI Prapat 22.37 308 LR LR 02 24 53.7
comp=Z,121nm,18.1s,baz=128,slow=38
BBOO Buckleboo 27.93 143 P **P** **02 16 41.8 +1.2**
BBOO IAmb IAmb 02 16 53.9
comp=Z,19nm,1.1s
STKA Stephens Creek 30.91 135 P **P** **02 17 09.0 +1.9**
comp=Z,3.3nm,0.6s,baz=318,slow=8.7,SNR=6.9
STKA LR LR 02 30 38.2
comp=Z,103nm,18.0s,baz=307,slow=38
comp=Z,3.3nm,0.6s
STKA Stephens Creek 30.91 135 P **P** **02 17 08.8 +1.7**
CMAR Chiang Mai Arr 34.32 330 P **P** **02 17 37.4 +0.3**
comp=Z,1.6nm,0.3s,baz=154,slow=6.6,SNR=8.6
CMAR LR LR 02 33 49.6
comp=Z,65nm,18.0s,baz=135,slow=40
comp=Z,1.6nm,0.3s
CMAR Chiang Mai Arr 34.32 330 P **P** **02 17 37.2 +0.2**
TOO Toolangi 36.87 140 P **P** **02 18 02.1 +3.3**
TOO IAmb IAmb 02 18 03.0
comp=Z,31nm,1.3s
KMI Kunming 38.69 340 ⇑P **P** **02 18 15.3 +0.8**
KMI pmax pmax
comp=Z,14nm,0.9s
PZH PanZhiHua 40.30 340 P **P** **02 18 29.1 +1.2**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,130nm,4.8s
H08S2 Diego Garcia H 43.37 271 T T 03 05 15.8
baz=97,slow=75,SNR=10
H08S3 Diego Garcia H 43.38 271 T T 03 05 15.8
baz=97,slow=75,SNR=9.3
H08S1 Diego Garcia H 43.39 271 T T 03 05 18.1
baz=97,slow=75,SNR=8.6
SHL Shillong 43.83 327 P **P** **02 18 55.1 -1.6**
SHL IAmb IAmb 02 18 58.2
comp=Z,16nm,0.9s
XAN Xi'an 45.78 351 P **P** **02 19 12.5 +0.5**
XAN pP pwP 02 19 24.4 +2.8
XAN pmax pmax
comp=Z,8.0nm,1.0s
LSA Lhasa 47.57 330 P **P** **02 19 28.0 +1.3**
LSA IAmb IAmb 02 19 29.7
comp=Z,8.4nm,0.9s
RAMN Ramite 47.86 323 *eP* **P** **02 19 29.5 +0.8**
JIRN Jiri 48.63 324 *eP* **P** **02 19 33.9 -0.9**
comp=Z,57nm,0.8s
GUN Gumba 49.00 324 *eP* **P** **02 19 36.9 -0.7**
comp=Z,66nm,0.8s
PKI Pulchoki 49.02 323 *eP* **P** **02 19 38.0 +0.2**
JHJ Hachijo jima 2 49.64 26 LR LR 02 39 22.4
comp=Z,24nm,21.9s,baz=160,slow=35
GKN Gorkha 49.80 323 *eP* **P** **02 19 43.3 -0.2**
comp=Z,51nm,0.9s
KSAR Wonju Array Be 49.82 12 P **P** **02 19 42.8 -0.4**
KSRS Korea Array 49.84 12 P **P** **02 19 41.9 -1.5**
comp=Z,2.3nm,0.8s,baz=190,slow=7.5,SNR=6.4
comp=Z,2.3nm,0.8s
DANN Dangsing 50.58 322 *eP* **P** **02 19 48.7 -0.9**
comp=Z,71nm,0.8s
PYUN Piuthan 50.87 321 *eP* **P** **02 19 50.6 -1.0**
comp=Z,52nm,0.9s
GOMU GeErMu 51.56 338 P **P** **02 19 56.6 -0.2**
GOMU pP sP 02 20 00.0 +1.5
GOMU sP pwP 02 20 02.0 -4.4
GOMU pmax pmax
comp=Z,3.0nm,0.5s
GOMU pmax pmax
comp=Z,86nm,5.7s
MJAR Matsushiro Arr 51.99 22 P **P** **02 19 57.2 -2.4**
comp=Z,3.1nm,0.8s,baz=194,slow=6.7,SNR=8.3
MJAR LR LR 02 42 59.2
comp=Z,16nm,19.6s,baz=198,slow=37
comp=Z,3.1nm,0.8s
HHC Hu-ho-hao-te 52.22 355 *eP* **P** **02 20 05.3 +3.9**
HHC pmax pmax
comp=Z,26nm,1.0s
HHC pmax pmax
comp=Z,120nm,6.0s
GTA Gaotai 52.88 344 *eP* **P** **02 20 08.8 +2.4**
GTA pP pwP 02 20 17.9 +1.9
GTA sP sP 02 20 22.4 +14
GTA pmax pmax
comp=Z,6.0nm,1.0s
JSD Sado 53.34 22 P **P** **02 20 07.9 -1.6**
JSD IAmb IAmb 02 20 10.2
comp=Z,9.7nm,0.8s
MDJ Mudanjiang 57.08 11 P **P** **02 20 35.8 -0.6**
MDJ pmax pmax
comp=Z,12nm,0.7s
MDJ pmax pmax
comp=Z,98nm,3.8s
USRK Ussuriysk Ar. 57.18 13 P **P** **02 20 36.0 -1.2**
comp=Z,7.3nm,0.8s,baz=178,slow=5.4,SNR=17
comp=Z,7.3nm,0.8s
USA0B Ussuriysk Arra 57.18 13 P **P** **02 20 35.9 -1.3**
USA0B IAmb IAmb 02 20 38.8
comp=Z,9.4nm,0.9s
ULN Ulaanbaatar 59.62 353 P **P** **02 20 53.4 -1.0**
ULN IAmb IAmb 02 20 57.2
comp=Z,2.7nm,0.8s
SONM Songino Array 59.68 352 P **P** **02 20 54.0 -0.7**
comp=Z,3.1nm,0.8s,baz=166,slow=7.6,SNR=15
comp=Z,3.1nm,0.8s
SONM Songino Array 59.68 352 P **P** **02 20 54.4 -0.3**
SONM IAmb IAmb 02 21 06.9
comp=Z,3.0nm,0.8s
BKZ Black Stump Fm 59.78 129 P **P** **02 20 57.5 +1.8**
BKZ IAmb IAmb 02 20 58.3
comp=Z,13nm,1.1s
ASAJ Asahikawa 60.23 22 LR LR 02 49 12.8
comp=Z,10nm,18.4s,baz=124,slow=38
WMQ Urumqi 60.88 337 *eP* **P** **02 21 04.1 +1.2**
WMQ pmax pmax
comp=Z,33nm,0.7s
KSH Kashi 63.08 326 P **P** **02 21 18.0 +0.1**
KSH pP pwP 02 21 26.3 -0.5
KSH sP sP 02 21 30.3 +10
KSH pmax pmax
comp=Z,22nm,0.8s
TARG Taragay, Kyrgy 63.69 329 P **P** **02 21 22.3 0.0**
TARG IAmb IAmb 02 21 40.2
comp=Z,10nm,0.9s
KBL Kabul 64.05 318 P **P** **02 21 24.1 -0.5**
KBL IAmb IAmb 02 21 25.6
comp=Z,7.0nm,0.6s
KDJ Kajisay 64.30 329 P **P** **02 21 27.1 +1.1**
KDJ IAmb IAmb 02 21 41.3
comp=Z,7.1nm,0.9s
BOOM Boomskoye usch 65.20 328 P **P** **02 21 32.3 +0.5**
DRK Karamyk 65.42 323 P **P** **02 21 34.8 +1.3**
MK31 Makanchi Array 65.49 335 P **P** **02 21 32.7 -0.7**
MKAR Makanchi Array 65.49 335 P **P** **02 21 33.0 -0.4**
comp=Z,16nm,0.8s,baz=146,slow=5.9,SNR=87
comp=Z,16nm,0.8s
MAKZ Makanchi 65.63 335 P **P** **02 21 34.7 +0.3**
MAKZ IAmb IAmb 02 21 36.4
comp=Z,7.0nm,0.8s
GAR Garm 65.99 322 P **P** **02 21 37.5 +0.5**
AAK Ala-Archa 66.06 327 LR LR 02 53 40.3
comp=Z,26nm,21.0s,baz=152,slow=39
AAK Ala-Archa 66.06 327 P **P** **02 21 38.4 +1.0**
MAW Mawson 66.06 200 LR LR 02 44 06.2
comp=Z,59nm,20.6s,baz=38,slow=30
BTK Batken 66.37 323 P **P** **02 21 37.9 -1.4**
KK31 Karatay Array 68.53 326 P **P** **02 21 54.0 +1.2**
KKAR Karatay Array 68.53 326 P **P** **02 21 53.9 +1.0**
VNDA Vanda 70.01 170 P **P** **02 22 03.0 +1.6**
comp=Z,1.9nm,0.8s,baz=325,slow=5.4,SNR=8.6
comp=Z,1.9nm,0.8s
VNDA Vanda 70.01 170 P **P** **02 22 03.1 +1.6**
VNDA IAmb IAmb 02 22 03.9
comp=Z,5.5nm,1.1s
KURK Kurchatov 70.08 336 P **P** **02 22 01.7 -0.5**
ZAA0 Zalesovo Array 70.43 341 P **P** **02 22 03.4 -0.9**
ZALV Zalesovo Beam 70.43 341 P **P** **02 22 03.3 -1.1**
comp=Z,13nm,0.7s,baz=138,slow=5.5,SNR=51
ZALV LR LR 02 53 46.6
comp=Z,23nm,20.9s,baz=166,slow=37
comp=Z,13nm,0.7s
ZALV Zalesovo Beam 70.43 341 P **P** **02 22 03.4 -0.9**
GEYT Alibeck 73.29 315 P **P** **02 22 23.2 +1.3**
comp=Z,2.4nm,0.9s,baz=118,slow=15,SNR=3.7
comp=Z,2.4nm,0.9s
GEYT Alibeck 73.29 315 P **P** **02 22 21.2 -0.8**
GYA0B ALIBECK ARRAY 73.29 315 P **P** **02 22 22.6 +0.6**
GYA0B IAmb IAmb 02 22 43.3
comp=Z,3.4nm,0.8s
PETK Petropavlovsk- 73.36 25 P **P** **02 22 22.9 +0.8**
comp=Z,2.1nm,0.6s,baz=192,slow=5.6,SNR=5.5
PETK LR LR 02 55 07.8
comp=Z,13nm,20.4s,baz=117,slow=36
comp=Z,2.1nm,0.6s
PETK Petropavlovsk- 73.36 25 P **P** **02 22 20.7 -1.3**
BRVK Borovoye 75.32 333 P **P** **02 22 32.5 -0.9**
BRVK IAmb IAmb 02 22 47.2
comp=Z,9.4nm,1.1s
RAYN Ar Rayn 77.46 297 P **P** **02 22 44.8 -1.4**
ABKAR Akbulak array 78.08 326 P **P** **02 22 49.4 +0.3**
QSPA South Pole Qui 78.56 180 LR LR 02 57 11.0
comp=Z,46nm,18.9s,baz=350,slow=35
QSPA South Pole Qui 78.56 180 P **P** **02 22 51.9 +0.2**
QSPA IAmb IAmb 02 22 54.4
comp=Z,16nm,1.4s
SEY Seymchan 79.21 16 P **P** **02 22 55.8 +0.8**
comp=Z,3.4nm,0.8s,baz=216,slow=2.7,SNR=6.7
comp=Z,3.4nm,0.8s
ARU Arti 82.74 332 LR LR 03 02 41.7
comp=Z,32nm,20.2s,baz=130,slow=38
BOSA Boshof 85.55 242 P **P** **02 23 29.9 +0.7**
comp=Z,5.3nm,0.8s,baz=98,slow=5.7,SNR=7.7
comp=Z,5.3nm,0.8s
BOSA Boshof 85.55 242 P **P** **02 23 29.6 +0.4**
LBTB Lobatse 85.91 245 LR LR 02 59 31.9
comp=Z,45nm,18.1s,baz=132,slow=34
SNAA Sanae 87.94 196 LR LR 03 00 30.3
comp=Z,30nm,20.4s,baz=135,slow=34
SNAA Sanae 87.94 196 P **P** **02 23 40.4 +0.4**
SNAA IAmb IAmb 02 23 42.1
comp=Z,3.6nm,0.8s
BRTR Keskin Array B 91.69 310 P **P** **02 23 58.4 +0.2**
comp=Z,1.3nm,0.9s,baz=98,slow=5.1,SNR=8.3
comp=Z,1.3nm,0.9s
BRTR Keskin Array B 91.69 310 P **P** **02 23 58.1 -0.1**
FINES FINESS Array B 100.08 331 LR LR 03 13 49.6
comp=Z,19nm,19.1s,baz=356,slow=38
TORD Torodi Ar. Bea 116.28 279 PKP **PKPdf** **02 29 35.0 +0.1**
comp=Z,0.7nm,0.9s,baz=54,slow=2.5,SNR=3.7
TORD Torodi Ar. Bea 116.28 279 **PKPdf** **02 29 34.5 -0.3**
YKA Yellowknife Ar 117.48 24 PKP **PKPdf** **02 29 35.8 0.0**
comp=Z,0.5nm,0.7s,baz=318,slow=1.5,SNR=6.3
YKA Yellowknife Ar 117.48 24 **PKPdf** **02 29 35.9 +0.1**
NVAR Mina Array Bea 124.58 51 PKP **PKPdf** **02 29 51.0 +0.6**
comp=Z,0.7nm,0.7s,baz=225,slow=3.0,SNR=4.8
U40A Yellville 143.83 42 PKPdf PKPbc 02 30 25.0 +1.3
MIAR Mount Ida 144.36 45 PKPdf PKPbc 02 30 26.2 +0.8
WHAR Wooly Hollow 144.82 43 PKPdf PKPbc 02 30 27.8 +0.9
HKT Hockley 144.90 53 PKPdf **PKPab** **02 30 27.3 +0.1**
DELO Deloro Mine 144.93 17 PKPdf **PKPdf** **02 30 28.6 +0.9**
LCAR Lake Charles 145.10 41 PKPdf **PKPbc** **02 30 28.0 +0.2**
WLAR White Oak Lake 145.15 46 PKPdf **PKPdf** **02 30 29.2 +0.8**
WVT Waverly 147.12 38 **PKPbc** **02 30 34.2 +0.4**
M57A Sunshine Farm, 147.96 19 PKPbc **PKPdf** **02 30 35.0 +2.0**
U49A Red Boiling Sp 148.05 35 PKPbc **PKPbc** **02 30 36.4 0.0**
S51A Beattyville 148.38 31 PKPbc **PKPbc** **02 30 37.3 +0.1**
BDFB Brasília 148.95 210 PKPbc **PKiKP** **02 30 40.6 -0.1**
comp=Z,1.8nm,0.6s,baz=135,slow=4.3,SNR=3.1
Y49A Blount Mountai 149.51 39 PKPbc **PKPbc** **02 30 39.1 -1.1**
V53A Saluda 150.29 33 PKPbc **PKPbc** **02 30 42.2 +0.1**
LPAZ La Paz 152.09 171 PKPbc **PKiKP** **02 30 49.4 +1.5**
comp=Z,1.7nm,0.9s,baz=70,slow=3.7,SNR=6.1

IDC 15 02:46:53.8±3.5, 5.79S×131.04E, h0km, mb3.8/1, mbtmp3.7/3, ML3.7/2, MS3.0/1, Error ellipse: s-maj=253.8km s-min=31.3km az=72.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.43**	**167**	Pn	Pn	02 50 19.7	+0.2
	0.4nm,0.3s,baz=349,slow=11,SNR=13						
WRA				Sn	Sn	02 52 47.9	-12
	0.5nm,0.3s,baz=333,slow=24,SNR=8.1						
	0.8nm,0.5s						
PMG	**Port Moresby**	**16.37**	**104**	LR	LR	02 58 02.2	
	comp=Z,56nm,20.2s,baz=268,slow=41						
ASAR	**Alice Springs**	**17.98**	**171**	P	Pn	02 51 05.3	-0.1
	0.2nm,0.3s,baz=340,slow=8.8,SNR=10						
	0.8nm,0.6s						
MKAR	**Makanchi Array**	**67.80**	**326**	P	P	02 57 53.7	0.0
	0.6nm,0.5s,baz=115,slow=8.2,SNR=6.4						
	0.6nm,0.5s						

UPA ***15*** *02:54:32.6±1.8, 5.38N×77.76W, h10km±42km, MW3.9*
IDC ***15*** *02:54:33.5±0.6, 5.59N×77.52W, h0km, mb4.3/19, mbtmp4.3/21, ML4.1/2, MS3.3/14, Error ellipse: s-maj=20.9km s-min=12.5km az=54.0*
NEIC ***15*** *02:54:36.3±2.5, 5.74N±0.06×77.57W±0.06, h9km±4km, mb4.6/56, Error ellipse: s-maj=8.8km s-min=8.1km az=217.0*
VAO ***15*** *02:54:37.7±2.3, 5.89N×78.00W, h89km±4km, mb4.5*
RSNC ***15*** *02:54:37.1±1.1, 5.68N×77.63W, h32km±5km, ML3.6, Mw4.2, Fault plane solution: NP1:φs0.00000°, δ48.00000°, λ-89.00000°.*

ISC 15 02:54:35.8±1.3, 5.62N±0.02×77.60W±0.03, h16km±8km, n369, σ1§61/416, mb4.5/47, MS3.3/11, 14C-4D, Near west coast of Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOLC	**Bahia Solano**	**0.63**	**17**	⇑*eP*	**Pg**	**02 54 47.5**	**-0.7**
SOLC				*eS*	**Sg**	**02 54 57.0**	**+0.5**
PIZC	**Pizarro, Choco**	**0.70**	**160**	⇓*iP*	**Pb**	**02 54 50.1**	**+0.5**
PIZC				*eS*	**Sn**	**02 55 01.4**	**-0.1**
PLMC	**San Jos del P**	**1.49**	**119**	⇑*iP*	**Pn**	**02 55 00.3**	**-1.8**
PLMC				*eS*	**Sn**	**02 55 18.9**	**-2.3**
PLMC				*i*		02 55 29.3	
	comp=Z,1μm,0.7s						
PTAC	**Punta Ardita,**	**1.53**	**352**	*eP*	**Pn**	**02 54 59.9**	**-2.6**
PTAC				*eS*	**Sn**	**02 55 19.5**	**-2.5**
PTAC				*i*		02 55 21.5	
	comp=Z,724nm,0.7s						
PTAC	**Punta Ardita,**	**1.53**	**352**	⇑*iP*	**Pn**	**02 55 00.1**	**-2.4**
PTAC				*eS*	**Sn**	**02 55 20.3**	**-1.7**
PTAC	**Punta Ardita,**	**1.53**	**352**	⇑*iP*	**Pn**	**02 55 00.1**	**-2.4**
PTAC				*eS*	**Sn**	**02 55 20.3**	**-1.7**
CBOC	**Ciudad Bolivar**	**1.59**	**81**	⇑*iP*	**Pn**	**02 55 01.5**	**-2.1**
CBOC				*eS*	**Sn**	**02 55 22.7**	**-1.3**
CBOC				*i*		02 55 28.0	
	comp=Z,1μm,0.8s						
MALC	**Bahia Malaga**	**1.62**	**171**	*eP*	**Pn**	**02 55 03.8**	**0.0**
MALC				⇓*eP*	**Pn**	**02 55 03.8**	**0.0**
MALC				*i*		02 55 19.5	
	comp=Z,1μm,0.4s						
MALC				*eS*	**Sn**	**02 55 24.1**	**-0.3**
DBBC	**Dabeiba**	**1.95**	**45**	*eP*	**Pn**	**02 55 07.0**	**-1.4**
YOTC	**Yotoco, Valle**	**2.05**	**143**	⇑*eP*	**Pn**	**02 55 08.5**	**-1.3**
YOTC				*eS*	**Sn**	**02 55 32.5**	**-2.7**
YOTC				*i*		02 55 48.8	
	comp=Z,270nm,0.5s						
HELC	**Santa Helena**	**2.13**	**75**	⇑*eP*	**Pn**	**02 55 10.4**	**-0.8**
HELC				*eS*	**Sn**	**02 55 33.2**	**-4.3**
HELC				*i*		02 55 51.8	
	comp=Z,321nm,0.7s						
GUY2C	**Guyana, Caldas**	**2.26**	**100**	⇑*eP*	**Pn**	**02 55 12.5**	**-0.5**
GUY2C				*eS*	**Sn**	**02 55 40.3**	**-0.4**
GUY2C				*i*		02 55 46.8	
	comp=Z,330nm,0.6s						
ANIL	**Santa Ana**	**2.46**	**117**	*eP*	**Pn**	**02 55 15.6**	**0.0**
ANIL				*i*		02 56 03.7	
	comp=Z,613nm,0.4s						
GR1C	**Gorgona, Isla**	**2.67**	**192**	*eP*	**Pn**	**02 55 20.3**	**+2.2**
NORC	**Norcasia**	**2.72**	**91**	*eP*	**Pn**	**02 55 19.1**	**+0.2**
NORC				*i*		02 55 59.6	
	comp=Z,168nm,0.5s						
ORTC	**Ortega, Tolima**	**2.90**	**126**	*eP*	**Pn**	**02 55 22.4**	**+1.0**
ORTC				*eS*	**Sn**	**02 55 57.6**	**+1.7**
ORTC				*i*		02 56 14.3	
	comp=Z,267nm,0.5s						
UREC	**San Jos de Ur**	**2.94**	**44**	*eP*	**Pn**	**02 55 22.6**	**+0.5**
UREC				*i*		02 56 24.6	
	comp=Z,184nm,0.7s						
UREC	**San Jos de Ur**	**2.94**	**44**	*eP*	**Pn**	**02 55 21.9**	**-0.2**
UREC				*eS*	**Sb**	**02 56 01.9**	**-1.9**
UREC	**San Jos de Ur**	**2.94**	**44**	*eP*	**Pn**	**02 55 21.9**	**-0.2**
UREC				*eS*	**Sb**	**02 56 01.9**	**-1.9**
CAPC	**Capurgana**	**3.00**	**5**	*eP*	**Pn**	**02 55 23.8**	**+1.0**
CAPC				*eS*	**Sn**	**02 56 01.8**	**+3.3**
CAPC				*i*		02 56 20.4	
	comp=Z,77nm,0.6s						
POPC	**Popayan, Colom**	**3.20**	**163**	*eP*	**Pn**	**02 55 25.9**	**+0.2**
POPC				*eS*	**Sn**	**02 56 02.6**	**-1.0**
POPC				*i*		02 56 06.5	
	comp=Z,82nm,0.5s						
MARP	**Paez Belalcaza**	**3.21**	**149**	*eP*	**Pn**	**02 55 28.5**	**+2.6**
PTBC	**PUERTO BERRIO,**	**3.25**	**74**	⇑*eP*	**Pn**	**02 55 27.0**	**+0.7**
PTBC				*eS*	**Sn**	**02 56 04.4**	**-0.3**
PTBC				*i*		02 56 12.4	
	comp=Z,120nm,0.6s						
ZARC	**Zaragoza, Cauc**	**3.29**	**56**	Pn	**Pn**	**02 55 27.2**	**+0.3**
ZARC	**Zaragoza, Cauc**	**3.29**	**56**	⇑*eP*	**Pn**	**02 55 27.4**	**+0.6**
ZARC				*eS*	**Sn**	**02 55 59.6**	**-6.1**
ZARC				*i*		02 56 17.0	
	comp=Z,136nm,0.5s						
PRAC	**Prado**	**3.30**	**125**	*eP*	**Pn**	**02 55 28.2**	**+1.2**
PRAC				*eS*	**Sn**	**02 56 06.5**	**+0.6**
PRAC				*i*		02 56 37.2	
	comp=Z,153nm,0.6s						
ROSC	**El Rosal**	**3.35**	**103**	Pn	**Pn**	**02 55 31.2**	**+3.2**
	comp=Z,17nm,0.3s,baz=236,slow=20,SNR=19						
ROSC	**El Rosal**	**3.35**	**103**	Pn	**Pn**	**02 55 31.0**	**+3.0**
ROSC	**El Rosal**	**3.35**	**103**	*eP*	**Pn**	**02 55 30.2**	**+2.2**
ROSC				*eS*	**Sb**	**02 56 13.4**	**-2.6**
ROSC				*i*		02 56 44.5	
	comp=Z,99nm,0.6s						
AZU	**Azuero**	**3.42**	**309**	⇑*iP*	**Pn**	**02 55 26.6**	**-2.0**
AZU				*eS*	**Sn**	**02 56 05.9**	**-2.9**
AZU	**Azuero**	**3.42**	**309**	*i P*	**Pn**	**02 55 26.6**	**-2.0**
AZU				*eS*	**Sn**	**02 56 06.3**	**-2.5**
AZU	**Azuero**	**3.42**	**309**	*i P*	**Pn**	**02 55 26.6**	**-2.0**
AZU				*eS*	**Sn**	**02 56 06.3**	**-2.5**
LCBC	**Los crdobas,**	**3.44**	**21**	*eP*	**Pn**	**02 55 29.7**	**+1.0**
LCBC				*eS*	**Sn**	**02 56 08.9**	**-0.3**
LCBC				*i*		02 56 26.7	
	comp=Z,106nm,0.6s						
LCBC	**Los crdobas,**	**3.44**	**21**	*eP*	**Pn**	**02 55 30.2**	**+1.4**
LCBC				*eS*	**Sb**	**02 56 16.1**	**-1.8**
LCBC	**Los crdobas,**	**3.44**	**21**	*eP*	**Pn**	**02 55 30.2**	**+1.4**
LCBC				*eS*	**Sb**	**02 56 16.1**	**-1.8**
PCON	**Cinco Dias**	**3.49**	**160**	*eP*	**Pn**	**02 55 33.1**	**+3.1**
PCON				*i*		02 56 18.7	
	comp=Z,124nm,0.5s						
SPBC	**San Pablo de B**	**3.51**	**89**	*eP*	**Pn**	**02 55 31.1**	**+1.2**
SPBC				*eS*	**Sn**	**02 56 09.8**	**-1.4**
SPBC				*i*		02 56 14.9	
	comp=Z,71nm,0.7s						
BBAC	**Balboa, Cauca**	**3.60**	**174**	*eP*	**Pn**	**02 55 30.5**	**-0.7**
BBAC				*eS*	**Sn**	**02 56 10.6**	**-2.9**
SOTA	**Rioblanco**	**3.60**	**164**	*eP*	**Pn**	**02 55 33.1**	**+1.6**
SOTA				*eS*	**Sn**	**02 56 13.5**	**-0.5**
SOTA				*i*		02 56 20.1	
	comp=Z,167nm,0.6s						
BETC	**Betania**	**3.63**	**144**	*eP*	**Pn**	**02 55 34.4**	**+3.0**
CHIT3	**Chitre**	**3.63**	**310**	*eP*	**Pn**	**02 55 28.1**	**-3.4**
CHIT3				*eS*	**Sn**	**02 56 10.5**	**-3.6**
CHIT3	**Chitre**	**3.63**	**310**	*eP*	**Pn**	**02 55 28.1**	**-3.4**
CHIT3				*eS*	**Sn**	**02 56 10.5**	**-3.6**
CACAO	**El Cacao, Vera**	**3.67**	**298**	⇑*eP*	**Pn**	**02 55 29.5**	**-2.4**
CACAO				*eS*	**Sn**	**02 56 11.0**	**-3.8**
CACAO				*i*		02 56 21.5	
	comp=Z,58nm,0.4s						
CACAO	**El Cacao, Vera**	**3.67**	**298**	*eP*	**Pn**	**02 55 29.5**	**-2.4**
CACAO				*eS*	**Sn**	**02 56 12.0**	**-2.8**
CACAO	**El Cacao, Vera**	**3.67**	**298**	*eP*	**Pn**	**02 55 29.5**	**-2.4**
CACAO				*eS*	**Sn**	**02 56 12.0**	**-2.8**
CHPC	**Chepo, Panama**	**3.83**	**337**	*eP*	**Pn**	**02 55 32.3**	**-1.9**
CHPO	**Chepo, Panama**	**3.83**	**337**	*eP*	**Pn**	**02 55 32.3**	**-1.9**
UPA	**Univ. de Panam**	**3.85**	**330**	⇓*eP*	**Pn**	**02 55 32.2**	**-2.2**
UPA				*eS*	**Sn**	**02 56 17.9**	**-1.4**
UPA				*i*		02 56 26.1	
	comp=Z,32nm,0.6s						
UPA	**Univ. de Panam**	**3.85**	**330**	*eP*	**Pn**	**02 55 32.4**	**-2.0**
UPA				*eS*	**Sn**	**02 56 21.2**	**+1.8**
UPA	**Univ. de Panam**	**3.85**	**330**	*eP*	**Pn**	**02 55 32.4**	**-2.0**
UPA				*eS*	**Sn**	**02 56 21.2**	**+1.8**
VTON	**El Valle, Cocl**	**3.88**	**320**	*i P*	**Pn**	**02 55 33.5**	**-1.4**
VTON				*eS*	**Sn**	**02 56 18.4**	**-1.8**
VTON	**El Valle, Cocl**	**3.88**	**320**	*i P*	**Pn**	**02 55 33.5**	**-1.4**
VTON				*eS*	**Sn**	**02 56 18.4**	**-1.8**
CHIC	**Chingaza**	**3.98**	**104**	*eP*	**Pn**	**02 55 38.8**	**+2.2**
CHIC				*eS*	**Sn**	**02 56 21.7**	**-1.4**
CHIC				*i*		02 56 47.3	
	comp=Z,45nm,0.6s						
ZANG	**Zanguenga, Cho**	**4.00**	**326**	*eP*	**Pn**	**02 55 34.4**	**-2.1**
ZANG				*eS*	**Sn**	**02 56 23.9**	**+0.7**
ZANG	**Zanguenga, Cho**	**4.00**	**326**	*eP*	**Pn**	**02 55 34.4**	**-2.1**
ZANG				*eS*	**Sn**	**02 56 23.9**	**+0.7**
GARC	**Garzon, Huila**	**4.01**	**148**	*eP*	**Pn**	**02 55 39.0**	**+2.1**
GARC				*i*		02 56 30.3	
	comp=Z,138nm,0.3s						
CRUC	**La Cruz**	**4.08**	**171**	*eP*	**Pn**	**02 55 39.3**	**+1.3**
BRRC	**Barranca, Sant**	**4.13**	**69**	*eP*	**Pn**	**02 55 39.2**	**+0.8**
BRRC				*eS*	**Sn**	**02 56 27.2**	**+0.8**
BRRC				*i*		02 57 21.3	
	comp=Z,46nm,0.6s						
FRIJ	**El Hiral**	**4.15**	**330**	*eP*	**Pn**	**02 55 36.2**	**-2.4**
FRIJ	**El Hiral**	**4.15**	**330**	*eP*	**Pn**	**02 55 36.2**	**-2.4**
STIA3	**Santiago, Vera**	**4.16**	**306**	*eP*	**Pn**	**02 55 38.2**	**-0.5**
STIA3	**Santiago, Vera**	**4.16**	**306**	*eP*	**Pn**	**02 55 38.2**	**-0.5**
BCIP	**Isla Barro Col**	**4.16**	**328**	Pn	**Pn**	**02 55 35.9**	**-2.9**
BCIP	**Isla Barro Col**	**4.16**	**328**	*eP*	**Pn**	**02 55 36.4**	**-2.4**
BCIP				*eS*	**Sn**	**02 56 27.7**	**+0.6**
BCIP				*i*		02 56 45.2	
	comp=Z,37nm,0.5s						
BCIP	**Isla Barro Col**	**4.16**	**328**	*eP*	**Pn**	**02 55 36.4**	**-2.4**
BCIP				*eS*	**Sn**	**02 56 26.9**	**-0.2**
BCIP	**Isla Barro Col**	**4.16**	**328**	*eP*	**Pn**	**02 55 36.4**	**-2.4**
BCIP				*eS*	**Sn**	**02 56 26.9**	**-0.2**
MLIR	**Monte Lirio**	**4.23**	**328**	*eP*	**Pn**	**02 55 37.6**	**-2.2**
MLIR	**Monte Lirio**	**4.23**	**328**	*eP*	**Pn**	**02 55 37.6**	**-2.2**
GCUF	**Volcan Galeras**	**4.38**	**177**	*eP*	**Pn**	**02 55 44.2**	**+2.0**
GCUF				*eS*	**Sn**	**02 56 28.4**	**-4.7**
GCUF				*i*		02 56 43.3	
	comp=Z,52nm,0.5s						
FLOC	**Florencia**	**4.46**	**154**	*eP*	**Pn**	**02 55 44.9**	**+2.0**
FLOC				*eS*	**Sn**	**02 56 31.1**	**-3.4**
FLOC				*i*		02 56 51.2	
	comp=Z,44nm,0.5s						
BARC	**Barichara**	**4.49**	**77**	*eP*	**Pn**	**02 55 45.0**	**+1.5**
BARC				*i*		02 56 52.4	
	comp=Z,81nm,0.6s						
RUSC	**La Rusia**	**4.50**	**86**	*eP*	**Pn**	**02 55 47.8**	**+3.9**
RUSC				*eS*

MACC *e*S **Sn** **02 56 48.2 -1.9**
MACC *i* 02 56 54.9
comp=Z,67nm,0.5s
PAMC Pamplona, Colo 5.16 70 *e*P **Pn** **02 55 54.5 +1.7**
PAMC *e*S **Sn** **02 56 57.1 +4.8**
PAMC *i* 02 57 09.6
comp=Z,72nm,0.7s
CUSE Cuicocha Este 5.34 189 *e*P **Pn** **02 55 59.8 +4.4**
OTAV Otavalo 5.42 189 Pn **Pn** **02 55 56.8 +0.4**
OTAV Otavalo 5.42 189 *e*P **Pn** **02 55 57.2 +0.8**
OTAV Otavalo 5.42 189 *e*P **Pn** **02 55 59.1 +2.7**
PTGC Puerto Gaitan, 5.62 104 *e*P **Pn** **02 56 00.5 +1.6**
TAMC Tame, Arauca 5.83 82 *e*P **Pn** **02 56 04.1 +2.3**
TAMC *e*S **Sn** **02 57 06.2 -2.2**
TAMC *i* 02 57 36.7
comp=Z,35nm,0.7s
LL6C La Loma 6 Bece 5.92 46 *e*P **Pn** **02 56 03.2 +0.3**
LL6C *i* 02 57 26.8
comp=Z,19nm,0.6s
PTLC Puerto Leguiza 6.10 153 *e*P **Pn** **02 56 09.1 +3.8**
SMRC Santa Marta, M 6.44 31 *e*P **Pn** **02 56 12.8 +2.8**
DRK0 Durika 6.67 303 Pn **Pn** **02 56 14.2 +0.8**
SRBA San Rafael, Bu 6.75 302 Pn **Pn** **02 56 14.7 +0.3**
PEZE Perez Zeledon, 7.09 302 Pn **Pn** **02 56 18.7 -0.4**
CRJC Cerrejon, Guaj 7.11 41 *i* Pg **Pn** **02 56 18.6 -0.8**
CRJC *i* 02 57 49.8
comp=Z,20nm,0.6s
SOCV Socops 7.20 68 *e*P **Pn** **02 56 21.2 +0.7**
RIMA Rio Macho 7.45 304 Pn **Pn** **02 56 24.7 +0.5**
SDV Santo Domingo 7.63 64 Pn **Pn** **02 56 29.8 +3.2**
comp=Z,5.9nm,0.3s,baz=18,slow=6.7,SNR=1.9
SDV LR LR 03 00 03.2
comp=Z,326nm,19.4s,baz=299,slow=44
SDV Santo Domingo 7.63 64 Pn **Pn** **02 56 27.6 +1.0**
SDV Santo Domingo 7.63 64 *e*P **Pn** **02 56 28.0 +1.4**
SDV Santo Domingo 7.63 64 *e*P **Pn** **02 56 29.9 +3.2**
JACO JACO, Garabito 8.07 300 Pn **Pn** **02 56 34.1 +1.7**
URIC Uribia, Colomb 8.19 42 Pn **Pn** **02 56 35.3 +1.1**
JTS Las Juntas de 8.63 303 Pn **Pn** **02 56 41.5 +1.2**
comp=Z,1.0nm,0.3s,baz=141,slow=5.9,SNR=4.7
comp=Z,3.2nm,0.4s
JTS Las Juntas de 8.63 303 Pn **Pn** **02 56 41.0 +0.8**
BOSC San Juan Bosco 8.76 186 Pn Pn 02 56 47.7 +5.5
ORTG Ortega, Santa 9.10 302 Pn **Pn** **02 56 47.9 +1.3**
BAUV El Baul 10.04 70 Pn **Pn** **02 56 57.6 -1.9**
BIRV Birongo 12.21 66 Pn **Pn** **02 57 28.2 -1.0**
CZSB Cruzeiro do Su 14.13 160 *e*P **P** **02 58 00.2 -3.0**
SDDR Presa de Saban 14.63 24 Pn **Pn** **02 58 03.5 +1.1**
CELP Cerrillos 16.40 40 P **P** **02 58 27.8 -0.5**
SJG San Juan 16.70 41 LR LR 03 05 56.9
comp=Z,104nm,18.1s,baz=263,slow=41
PDPR Patillas Dam, 16.72 42 P **Pn** **02 58 30.1 +0.5**
NNA Nana 17.51 178 P **Pn** **02 58 38.0 -1.6**
comp=Z,1.4nm,0.3s,baz=254,slow=15,SNR=1.9
NNA LR LR 03 06 19.9
comp=Z,96nm,18.2s,baz=346,slow=40
comp=Z,3.7nm,0.4s
NNA Nana 17.51 178 **P** **02 58 41.7 +1.0**
NNA IAmb IAmb 02 58 50.8
comp=Z,30nm,1.1s
SKI Saint Kitts 18.62 50 P **Pn** **02 58 54.7 +1.5**
ETMB Extrema 19.08 143 *e*P **P** **02 58 56.5 -1.3**
SAML Samuel 20.40 135 P **P** **02 59 10.4 -1.9**
SAML IAmb IAmb 02 59 16.4
comp=Z,40nm,1.1s
CMIG Matias Romero 20.40 305 P **P** **02 59 12.3 0.0**
comp=Z,2.5nm,0.8s,baz=80,slow=8.6,SNR=5.1
comp=Z,2.5nm,0.8s
LPAZ La Paz 23.70 157 P **P** **02 59 46.1 -1.7**
comp=Z,2.3nm,0.6s,baz=324,slow=12,SNR=16
LPAZ LR LR 03 10 14.1
comp=Z,37nm,21.0s,baz=313,slow=40
comp=Z,2.3nm,0.6s
LPAZ La Paz 23.70 157 P **P** **02 59 46.5 -1.4**
ITTB Itaituba 23.98 114 *e*P **P** **02 59 49.7 -0.2**
MDP Montagnes des 24.85 90 P **P** **02 59 58.1 +0.2**
comp=Z,7.1nm,0.9s,baz=273,slow=9.9,SNR=5.2
MDP LR LR 03 10 11.5
comp=Z,105nm,21.5s,baz=255,slow=38
comp=Z,7.1nm,0.9s
PB16 IPOC Station P 25.11 162 P **P** **03 00 00.1 -0.6**
VILB Vilhena 25.29 137 *e*P **P** **03 00 00.7 -1.2**
NPGB Novo Progresso 25.51 119 *e*P **P** **03 00 01.2 -2.7**
NPGB *e*pP sP 03 00 21.9 +11
MCPB Macapa, AP 26.19 102 *e*P **P** **03 00 07.9 -2.1**
PB11 IPOC Station P 26.41 163 P **P** **03 00 12.4 +0.3**
PB11 IAmb IAmb 03 00 40.8
comp=Z,13nm,0.9s
PDRB Porto dos Gac 26.91 130 *e*P **P** **03 00 16.3 -0.3**
SIV San Ignacio 27.00 143 P **P** **03 00 15.8 -1.5**
comp=Z,4.7nm,0.5s,baz=322,slow=10,SNR=36
SIV LR LR 03 11 49.0
comp=Z,100nm,21.9s,baz=329,slow=38
comp=Z,4.7nm,0.5s
CLDB Colider 27.20 127 *e*P **P** **03 00 17.5 -1.6**
PTLB Pontes e Lacer 27.80 139 *e*P **P** **03 00 22.5 -1.9**
GOGA Godfrey 28.18 350 P **P** **03 00 28.9 +1.2**
baz=168
LRAL Lakeview Retre 28.64 343 P **P** **03 00 33.2 +1.4**
baz=160,SNR=5.6
Y49A Blount Mountai 29.26 345 P **P** **03 00 38.4 +1.1**
Y49A IAmb IAmb 03 00 39.6
comp=Z,6.4nm,0.7s
LVC Limon Verde 29.32 163 LR LR 03 12 48.8
comp=Z,78nm,21.7s,baz=291,slow=37
NBRS Nobres 29.35 133 *e*P **P** **03 00 36.4 -1.9**
X48A Hartselle 29.99 344 P **P** **03 00 45.0 +1.3**
X48A IAmb IAmb 03 00 45.8
comp=Z,8.6nm,0.7s
PRPB Parauapebas 30.11 112 *e*P **P** **03 00 44.2 -0.8**
TKL Tuckaleechee C 30.43 350 LR LR 03 14 01.1
comp=Z,39nm,18.2s,baz=176,slow=38
833A Chaparral WMA, 30.61 320 P **P** **03 00 49.9 +0.5**
baz=133
V48A Smith Brothers 31.15 345 P **P** **03 00 55.2 +1.2**
W45A Hickory Valley 31.27 342 P **P** **03 00 55.3 +0.2**
SNDB Serra Nova Dou 31.46 124 *e*P **P** **03 00 55.0 -2.0**
WVT Waverly 31.78 344 P **P** **03 00 59.2 -0.4**
WVT IAmb IAmb 03 01 00.8
comp=Z,5.7nm,0.7s
WVT Waverly 31.78 344 P **P** **03 00 59.9 +0.3**
baz=160
X40A Basin Creek Fa 32.00 336 P **P** **03 01 02.6 +1.1**
baz=150
MIAR Mount Ida 32.36 335 P **P** **03 01 04.8 +0.2**
baz=149
WHAR Wooly Hollow 32.48 337 P **P** **03 01 04.8 -0.9**
WHAR IAmb IAmb 03 01 19.5
comp=Z,7.9nm,1.4s
W39A Magazine 33.00 335 P **P** **03 01 10.6 +0.3**
baz=149
PBMO Poplar Bluff 33.16 341 P **P** **03 01 09.9 -1.7**
PBMO IAmb IAmb 03 01 13.1
comp=Z,12nm,1.2s
U40A Yellville 33.64 337 P **P** **03 01 15.9 +0.1**
baz=152,SNR=8.1
SIUC Southern Illin 33.65 343 P **P** **03 01 15.8 -0.1**
AQDB Aquidauana 33.70 141 *e*P **P** **03 01 14.8 -1.7**
ABTX Abilene, Hawle 33.83 325 P **P** **03 01 17.5 -0.1**
baz=138
TXAR Lajitas Array 34.10 317 P **P** **03 01 21.3 +1.2**
comp=Z,0.6nm,0.7s,baz=146,slow=9.1,SNR=6.2
TXAR PcP **PcP** **03 03 58.5 +1.0**
comp=Z,1.5nm,1.0s,baz=152,slow=6.6,SNR=6.3
TXAR LR LR 03 17 55.8
comp=Z,52nm,18.4s,baz=136,slow=41
comp=Z,0.6nm,0.7s
TXAR Lajitas Array 34.10 317 P **P** **03 01 20.5 +0.5**
P52A Corning 34.10 354 P **P** **03 01 21.3 +1.4**
baz=172
FVM French Village 34.26 342 P **P** **03 01 20.6 -0.6**
FVM IAmb IAmb 03 01 22.5
comp=Z,7.8nm,0.7s
P49A Miami Univ. Ec 34.37 350 P **P** **03 01 22.4 +0.3**
baz=167
TUL1 Leonard 34.47 333 P **P** **03 01 23.2 +0.1**
baz=147
CCM Cathedral Cave 34.59 341 P **P** **03 01 24.1 0.0**
baz=156
SSPA Standing Stone 34.86 360 P **P** **03 01 27.4 +1.1**
baz=179
WMOK Wichita Mounta 34.97 329 P **P** **03 01 27.9 +0.5**
baz=141
O48B Farmland 35.15 350 P **P** **03 01 29.3 +0.4**
baz=167,SNR=5.3

PAL Palisades 35.38 5 P **P** **03 01 31.1 +0.3**
baz=186
T35A Sooner Cattle 35.63 334 P **P** **03 01 32.2 -0.9**
T35A IAmb IAmb 03 01 34.3
comp=Z,10nm,1.1s
SFIN Lafayette 35.64 348 P **P** **03 01 33.0 0.0**
baz=164
AMBA Amambai (Brazi 35.97 143 *e*P **P** **03 01 33.8 -2.3**
HDIL Hopedale 36.33 345 P **P** **03 01 37.8 -1.2**
HDIL Hopedale 36.33 345 P **P** **03 01 38.5 -0.5**
baz=160
MSTX Muleshoe 36.61 324 P **P** **03 01 42.0 +0.4**
baz=135
MNTX Cornudas Mount 36.73 318 P **P** **03 01 43.1 +0.5**
baz=129,SNR=5.9
L61B Northampton 36.93 6 P **P** **03 01 46.6 +2.5**
baz=188
CPUP Villa Florida 37.35 149 *e*P **P** **03 01 45.1 -2.7**
CBKS Cedar Bluff 38.65 332 P **P** **03 01 59.6 +0.8**
baz=143
JFWS Jewell Farm 38.79 345 P **P** **03 01 59.4 -0.4**
baz=160
LONY Lake Ozonia 38.93 3 P **P** **03 02 01.9 +0.9**
baz=185
SADO Sadowa 39.01 358 LR LR 03 18 55.6
comp=Z,46nm,18.3s,baz=217,slow=37
BNM Barren Site 39.10 320 P **P** **03 02 03.2 +0.4**
ANMO Albuquerque 39.51 321 P **P** **03 02 07.7 +1.6**
baz=131
T25A Trinidad 39.80 326 P **P** **03 02 10.3 +1.8**
baz=135,SNR=7.2
CRSM Crissiumal (Br 40.03 146 *e*P P 03 02 07.1 -3.2
KSCO Kaye Shedlock' 40.22 329 P **P** **03 02 13.1 +1.2**
KSCO IAmb IAmb 03 02 14.3
comp=Z,12nm,0.9s
TUC Tucson 40.79 315 P **P** **03 02 18.5 +1.8**
baz=124
SDCO Great Sand Dun 40.84 325 P **P** **03 02 18.9 +1.7**
SDCO Great Sand Dun 40.84 325 P **P** **03 02 19.3 +2.1**
baz=135,SNR=14
OGNE Ogallala 41.41 332 P **P** **03 02 23.3 +1.6**
baz=142
ECSD EROS Data Cent 41.49 339 P **P** **03 02 21.0 -1.2**
baz=151
X18A Snowflake 41.49 318 P **P** **03 02 24.7 +2.1**
S22A 4UR Ranch, Cre 41.60 324 P **P** **03 02 25.5 +1.9**
baz=133,SNR=5.3
SPMN Marine on St. 41.62 344 P **P** **03 02 23.0 -0.2**
baz=157
214A Organ Pipe Nat 42.06 313 P **P** **03 02 29.7 +2.6**
baz=121,SNR=8.9
ISCO Idaho Springs 42.36 328 P **P** **03 02 29.2 -0.5**
ISCO Idaho Springs 42.36 328 P **P** **03 02 30.9 +1.2**
baz=136,SNR=5.0
WUAZ Wupatki 43.02 318 P **P** **03 02 36.3 +1.3**
WUAZ IAmb IAmb 03 02 38.3
comp=Z,7.8nm,0.9s
WUAZ Wupatki 43.02 318 P **P** **03 02 37.2 +2.2**
baz=126
N23A Red Feather La 43.32 328 P **P** **03 02 39.0 +1.5**
baz=136
O20A White River Ci 44.03 326 P **P** **03 02 44.0 +0.9**
O20A White River Ci 44.03 326 P **P** **03 02 44.4 +1.3**
baz=133
PDMCI Parker Dam,Lak 44.23 315 P **P** **03 02 46.9 +2.4**
baz=122
W13A Hualapai Mount 44.48 316 P **P** **03 02 47.5 +0.7**
W13A IAmb IAmb 03 02 50.4
comp=Z,6.2nm,1.1s
SWSC Sam W. Stewart 44.74 312 P **P** **03 02 50.8 +2.2**
baz=119
RSSD Black Hills 44.82 333 P **P** **03 02 50.7 +1.3**
baz=141
IRM Iron Mountain 44.87 314 P **P** **03 02 51.9 +2.2**
baz=121
K22A Casper 44.90 330 P **P** **03 02 51.1 +1.1**
baz=137
P17A Butcher Ranch, 45.04 323 P **P** **03 02 52.3 +1.2**
P17A IAmb IAmb 03 02 53.8
comp=Z,7.9nm,1.0s
RDMU Red Mountain 45.07 325 P **P** **03 02 50.9 -0.6**
RDMU IAmb IAmb 03 02 53.6
comp=Z,6.2nm,0.8s
MSU Marysvale 45.31 321 P **P** **03 02 54.8 +1.4**
BELC Belle Mtn. Jos 45.40 314 P **P** **03 02 56.4 +2.4**
baz=120
GMRC Granite Mounta 45.55 315 P **P** **03 02 57.0 +1.7**
baz=121
MURC Murrieta 46.08 312 P **P** **03 03 01.0 +1.7**
baz=118
BW06 Boulder Array 46.55 328 P **P** **03 03 04.2 +1.0**
BW06 IAmb IAmb 03 03 05.7
comp=Z,5.4nm,1.1s
BW06 Boulder Array 46.55 328 P **P** **03 03 04.6 +1.4**
baz=134
PDAR Pinedale Array 46.55 328 P **P** **03 03 04.1 +0.9**
comp=Z,1.7nm,0.7s,baz=133,slow=11,SNR=14
comp=Z,1.7nm,0.7s
PLCA Paso Flores 46.58 173 P **P** **03 03 04.4 +1.3**
comp=Z,3.6nm,0.8s,baz=344,slow=9.5,SNR=13
PLCA LR LR 03 21 54.3
comp=Z,32nm,18.7s,baz=177,slow=35
comp=Z,3.6nm,0.8s
PLCA Paso Flores 46.58 173 P **P** **03 03 04.0 +0.8**
PLCA IAmb IAmb 03 03 08.5
comp=Z,4.5nm,0.8s
DUG Dugway, Tooele 46.73 323 P **P** **03 03 05.8 +1.2**
baz=128,SNR=10
ULM Lac du Bonnet 47.05 344 P **P** **03 03 05.8 -0.9**
comp=Z,5.2nm,0.6s,baz=158,slow=9.2,SNR=13
ULM LR LR 03 24 05.8
comp=Z,26nm,18.1s,baz=240,slow=38
comp=Z,5.2nm,0.6s
ULM Lac du Bonnet 47.05 344 P **P** **03 03 05.2 -1.4**
TPNV Topopah Spring 47.08 317 P **P** **03 03 09.2 +1.8**
baz=122
EDW2 Edwards Air Fo 47.27 314 P **P** **03 03 10.4 +1.8**
baz=119
BGU Big Grassy Mou 47.31 323 P **P** **03 03 08.8 -0.2**
R11A Troy Canyon, C 47.40 319 P **P** **03 03 11.6 +1.8**
baz=124
MPMC Manual Prospec 47.48 315 P **P** **03 03 12.0 +1.5**
baz=120
REDW Red Top Meadow 47.66 327 P **P** **03 03 12.3 +0.6**
MOOW Moose Ponds 47.86 328 P **P** **03 03 13.5 +0.2**
MOOW IAmb IAmb 03 03 15.1
comp=Z,4.6nm,0.8s
CWC Cottonwood Cre 48.09 315 P **P** **03 03 16.6 +1.4**
baz=120
ELK Elko 48.54 322 P **P** **03 03 18.1 -0.5**
GCMT Greycliff 48.73 330 P **P** **03 03 20.5 +0.6**
NVAR Mina Array Bea 49.25 317 P **P** **03 03 26.3 +2.2**
comp=Z,3.5nm,0.6s,baz=126,slow=6.9,SNR=25
comp=Z,3.5nm,0.6s
NVAR Mina Array Bea 49.25 317 P **P** **03 03 25.5 +1.4**
BOZ Bozeman (W) 49.58 329 P **P** **03 03 27.4 +0.9**
baz=133,SNR=7.4
HLID Hailey 49.76 325 P **P** **03 03 28.8 +1.0**
baz=129,SNR=14
SCHQ Schefferville 49.83 8 P **P** **03 03 28.8 +0.8**
comp=Z,5.3nm,0.6s,baz=186,slow=6.2,SNR=13
comp=Z,5.3nm,0.6s
SCHQ Schefferville 49.83 8 P **P** **03 03 27.7 -0.2**
SCHQ IAmb IAmb 03 03 35.7
comp=Z,6.1nm,0.8s
EGMT Eagleton 50.37 332 P **P** **03 03 32.5 +0.2**
baz=136
MSO Missoula 51.60 329 P **P** **03 03 41.8 +0.2**
baz=131
J08A Circle Bar Ran 52.01 323 P **P** **03 03 45.3 +0.5**
J08A IAmb IAmb 03 03 46.6
comp=Z,5.8nm,0.7s
G08A Pilot Rock 53.40 324 P **P** **03 03 55.8 +0.8**
G08A IAmb IAmb 03 03 57.1
comp=Z,4.9nm,1.0s
L04D Klamath Falls 53.80 320 P **P** **03 03 58.5 +0.5**
baz=120
NEW Newport 54.17 328 P **P** **03 04 01.1 +0.6**
baz=129
J04D Umpqua Nationa 54.19 321 P **P** **03 04 01.8 +0.9**
baz=121
I05D Terrebonne, OR 54.28 322 P **P** **03 04 02.9 +1.5**
baz=122
L02F Cave Junction 54.57 319 P **P** **03 04 04.4 +0.9**
baz=118
I04A Tendick Farm, 54.66 321 P **P** **03 04 05.3 +1.1**
baz=121

G05D Wamic, OR 54.76 323 P **P** **03 04 07.2 +2.4**
baz=123
K02D Willamette Mer 54.91 320 P **P** **03 04 07.1 +1.0**
baz=119
HOOD Mount Hood Mea 55.00 323 P **P** **03 04 08.4 +1.7**
J01E Myrtle Point 55.31 320 P **P** **03 04 10.4 +1.6**
baz=119
YKA Yellowknife Ar 62.92 342 P **P** **03 05 00.9 -0.3**
comp=Z,4.2nm,0.6s,baz=120,slow=8.6,SNR=79
comp=Z,4.2nm,0.6s
YKA Yellowknife Ar 62.92 342 P **P** **03 05 00.3 -0.9**
DY2G Dye2 64.51 13 *i* P **P** **03 05 10.5 -1.4**
DY2G IAmb IAmb 03 05 17.3
comp=Z,3.0nm,1.1s
T35M Bob Quinn 65.67 331 P **P** **03 05 20.8 +1.5**
baz=120
DLBC Dease Lake 66.30 333 P **P** **03 05 24.5 +1.1**
baz=120
ICESG Greenland Ices 68.12 14 *i* P **P** **03 05 32.0 -3.2**
ICESG IAmb IAmb 03 05 34.8
comp=Z,5.1nm,0.6s
P33M Teslin, Yukon 68.42 334 P **P** **03 05 37.4 +0.5**
baz=118
P32M Atlin 68.53 333 P **P** **03 05 38.5 +1.0**
baz=117
MMPY Sheldon Lake, 68.96 336 P **P** **03 05 41.4 +1.2**
baz=121
M31M Drury Creek, Y 70.03 335 P **P** **03 05 48.0 +1.3**
baz=118
O30N Mendenhall 70.12 334 P **P** **03 05 48.6 +1.3**
baz=116,SNR=6.9
N30M Aishikik Lake 70.85 334 P **P** **03 05 53.3 +1.5**
baz=115
SUMG Summit 71.01 12 P **P** **03 05 53.4 +0.4**
SUMG Summit 71.01 12 *i* P **P** **03 05 53.6 +0.7**
SUMG IAmb IAmb 03 05 54.0
comp=Z,11nm,0.7s
BORG Borgarnes 71.03 22 LR LR 03 33 41.2
comp=Z,17nm,20.4s,baz=271,slow=33
M30M Minto, Yukon 71.20 335 P **P** **03 05 55.0 +1.1**
baz=115,SNR=10
YUK4 Talbot Arm 71.49 334 P **P** **03 05 56.0 +0.1**
baz=113
YUK8 Steele Glacier 71.96 333 P **P** **03 05 59.9 +1.1**
baz=112
TIC Toumodi 72.11 85 *e*P **P** **03 05 58.9 -1.4**
comp=Z,0.6nm,0.2s
LIC Lamto 72.13 85⇑ *e*P **P** **03 06 00.6 +0.2**
comp=Z,14nm,0.6s
DBIC Dimbokro 72.27 85 P **P** **03 06 01.4 +0.2**
comp=Z,7.8nm,0.8s,baz=278,slow=7.7,SNR=7.2
comp=Z,7.8nm,0.8s
DBIC Dimbokro 72.27 85 P **P** **03 06 00.8 -0.4**
KIC Kosan Boka 72.40 85⇑ *e*P **P** **03 06 01.6 -0.4**
comp=Z,21nm,0.9s
YUK3 Moose Creek 72.45 334 P **P** **03 06 02.9 +1.2**
baz=112,SNR=5.8
CTG Chitna Glacier 72.56 333 P **P** **03 06 04.0 +1.8**
baz=111
INK Inuvik 72.68 341 P **P** **03 06 02.9 +0.4**
baz=120
EPYK Eagle Plains 72.84 339 P **P** **03 06 04.2 +0.6**
baz=117
BVCY Beaver Creek 72.87 334 P **P** **03 06 05.2 +1.3**
baz=112
DAWY Dawson 72.89 336 P **P** **03 06 04.6 +0.6**
baz=113
MCARA McCarthy VSAT 73.47 333 P **P** **03 06 09.3 +1.9**
baz=109
BCAR Beaver Creek A 73.50 335 P **P** **03 06 09.0 +1.4**
L27K Beaver Creek, 73.52 335 P **P** **03 06 09.0 +1.2**
baz=111,SNR=7.4
M26K Nabesna, AK 73.79 334 P **P** **03 06 10.4 +1.0**
baz=110
ESDC Sonseca Array 73.84 50 P **P** **03 06 10.6 +0.5**
comp=Z,1.9nm,0.9s,baz=271,slow=6.0,SNR=6.5
comp=Z,1.9nm,0.9s
ESDC Sonseca Array 73.84 50 P **P** **03 06 09.7 -0.4**
SMAI San Martin Ant 73.95 176 P **P** **03 06 11.6 +1.6**
K27K Chicken 73.97 336 P **P** **03 06 11.8 +1.6**
baz=111
BMRM Bremner River 74.06 332 P **P** **03 06 12.3 +1.3**
baz=108
L26K Log Cabin Wild 74.16 334 P **P** **03 06 12.8 +1.4**
baz=109
N25K Chitina, Valde 74.25 333 P **P** **03 06 13.1 +0.9**
baz=108
J26L Joseph Creek 74.74 336 P **P** **03 06 16.0 +1.1**
baz=110,SNR=6.9
SCRK Sand Creek 74.74 335 P **P** **03 06 15.4 +0.5**
SCRK IAmb IAmb 03 06 26.8
comp=Z,4.4nm,1.2s
SCRK Sand Creek 74.74 335 P **P** **03 06 16.1 +1.2**
baz=109
KLU Klutina 74.83 332 P **P** **03 06 15.9 +0.5**
baz=106
RIDG Independent Ri 75.03 335 P **P** **03 06 17.6 +1.1**
baz=108,SNR=6.5
PAX Paxson 75.06 334 P **P** **03 06 17.5 +0.7**
baz=107
M24K Tolsona, Glenn 75.12 333 P **P** **03 06 18.1 +1.1**
baz=106
K24K Donnelly Dome 75.44 335 P **P** **03 06 19.9 +1.0**
baz=107
J25K Salcha River, 75.51 336 P **P** **03 06 19.5 +0.1**
J25K IAmb IAmb 03 06 20.6
comp=Z,2.8nm,0.7s
J25K Salcha River, 75.51 336 P **P** **03 06 20.0 +0.7**
baz=108,SNR=5.4
SCM Sheep Creek Mo 75.56 333 P **P** **03 06 20.7 +1.0**
baz=105
M23K Glacier View 75.74 333 P **P** **03 06 21.5 +0.9**
baz=105
WAT6 Susitna Watana 75.95 333 P **P** **03 06 22.6 +0.6**
baz=105
KNK Knik Glacier 75.98 332 P **P** **03 06 23.0 +1.0**
baz=104
SML Sawmill 76.02 332 P **P** **03 06 23.0 +0.7**
baz=104
HDA Harding Lake 76.11 335 P **P** **03 06 23.3 +0.7**
baz=106
DBG Daneborg 76.13 14 *i* P **P** **03 06 21.3 -1.2**
DBG IAmb IAmb 03 06 23.4
comp=Z,0.9nm,0.8s
ILAR Eielson Array 76.18 336 P **P** **03 06 23.3 +0.2**
comp=Z,1.4nm,0.7s,baz=117,slow=4.4,SNR=29
comp=Z,1.4nm,0.7s
ILAR Eielson Array 76.18 336 P **P** **03 06 22.8 -0.3**
WAT1 Susitna Watana 76.37 333 P **P** **03 06 24.5 +0.3**
baz=104
RC01 Rabbit Creek A 76.50 332 P **P** **03 06 25.1 +0.2**
baz=103
POKR Poker Plat Res 76.50 336 P **P** **03 06 25.0 +0.1**
baz=106
BRSE Bradley Lake S 76.70 330 P **P** **03 06 26.5 +0.4**
baz=102
H24K Noodor Dome 76.88 337 P **P** **03 06 27.7 +0.7**
baz=106
NEA2 Nenana 77.04 335 P **P** **03 06 28.1 +0.2**
baz=104
SUA Susitna One 77.06 332 P **P** **03 06 28.6 +0.4**
baz=102
KDAK Kodiak Island 77.27 328 P **P** **03 06 29.8 +0.5**
baz=100
TRF Thorofare Moun 77.29 334 P **P** **03 06 29.7 +0.1**
baz=103
I23K Minto, Yukon-K 77.30 336 P **P** **03 06 29.9 +0.6**
baz=104
SKT Skwentna 77.53 332 P **P** **03 06 31.1 +0.4**
baz=102
H23K Yukon River 77.54 336 P **P** **03 06 31.1 +0.3**
baz=104
BPAW Bear Paw Mtn. 77.74 334 P **P** **03 06 32.3 +0.4**
baz=102
MLY Manley 77.84 335 P **P** **03 06 32.7 +0.3**
baz=103,SNR=5.1
PPLA Purkeypile 78.02 333 P **P** **03 06 34.1 +0.6**
baz=101
CAST Castle Rocks 78.07 334 P **P** **03 06 34.2 +0.5**
baz=101
COLD Coldfoot 78.14 338 P **P** **03 06 34.7 +0.7**
COLD IAmb IAmb 03 06 36.5
comp=Z,9.2nm,1.5s
COLD Coldfoot 78.14 338 P **P** **03 06 35.1 +1.1**
baz=104
TOLK Toolik Lake Re 78.26 339 P **P** **03 06 34.9 +0.2**
baz=105
TORD Torodi Ar. Bea 78.34 78 P **P** **03 06 36.0 -0.2**

	comp=Z,3.0nm,0.7s,baz=280,slow=6.6,SNR=73							
	comp=Z,3.0nm,0.7s							
TORD	**Torodi Ar. Bea**	**78.34**	**78**	P		**P**	**03 06 35.6**	**-0.5**
TORD				IAmb		IAmb	03 06 37.8	
	comp=Z,4.3nm,0.9s							
I21K	**Tanana**	**78.39**	**335**	P		**P**	**03 06 35.0**	**-0.3**
	baz=102							
L20K	**Farewell, AK**	**78.71**	**333**	P		**P**	**03 06 36.7**	**-0.6**
	baz=100							
N19K	**Bonanza Creek**	**78.72**	**331**	P		**P**	**03 06 37.1**	**-0.3**
	baz=99							
H21K	**Melozitna Rive**	**78.82**	**336**	P		**P**	**03 06 37.5**	**-0.3**
	baz=101							
M19K	**Big River Lodg**	**78.85**	**332**	P		**P**	**03 06 37.7**	**-0.3**
	baz=99							
P18K	**Big Mountain,**	**78.89**	**329**	P		**P**	**03 06 37.8**	**-0.5**
	baz=98							
K20K	**Telida**	**78.94**	**333**	P		**P**	**03 06 38.1**	**-0.4**
	baz=100							
O18K	**Koktuh Hills**	**78.94**	**330**	P		**P**	**03 06 39.2**	**+0.7**
	baz=98							
J20K	**Nowinta River**	**79.11**	**334**	P		**P**	**03 06 39.8**	**+0.4**
J20K				IAmb		IAmb	03 06 40.6	
	comp=Z,9.1nm,1.4s							
J20K	**Nowinta River**	**79.11**	**334**	P		**P**	**03 06 39.5**	**+0.1**
	baz=100							
N18K	**Kilae Creek**	**79.39**	**331**	P		**P**	**03 06 41.0**	**0.0**
	baz=97							
O17K	**Koliganek Bris**	**79.88**	**330**	P		**P**	**03 06 43.6**	**0.0**
	baz=96							
NOR	**Nord**	**80.36**	**7**	*i* P		**P**	**03 06 43.7**	**-2.2**
NOR				IAmb		IAmb	03 06 46.8	
	comp=Z,0.8nm,0.7s							
O16K	**Kokwok River B**	**80.36**	**329**	P		**P**	**03 06 46.6**	**+0.3**
	baz=95							
VSL	**Villasalto**	**84.13**	**51**	P		**P**	**03 07 07.6**	**+1.1**
NOA	**NORSAR Array B**	**84.54**	**29**	P		**P**	**03 07 08.7**	**+0.6**
	comp=Z,1.3nm,1.0s,baz=292,slow=2.3,SNR=3.2							
	comp=Z,1.3nm,1.0s							
KHC	**Kasperske Hory**	**86.56**	**41**	*e*P		**P**	**03 07 18.0**	**-0.5**
GERES	**GERESS Array B**	**86.67**	**41**	P		**P**	**03 07 19.7**	**+0.7**
	comp=Z,1.6nm,0.9s,baz=253,slow=4.1,SNR=9.7							
	comp=Z,1.6nm,0.9s							
SPIA	**Saint Paul Isl**	**86.76**	**327**	P		**P**	**03 07 20.3**	**+1.1**
	baz=85							
GAMB	**Gambell**	**86.81**	**334**	P		**P**	**03 07 20.7**	**+1.5**
	baz=84							
OSTC	**Ostas**	**88.12**	**40**	*e*P		**P**	**03 07 27.5**	**+1.6**
KRLC	**Kraliky**	**88.54**	**40**	*e*P		**P**	**03 07 29.4**	**+1.4**
ARCES	**ARCESS Array B**	**89.33**	**20**	P		**P**	**03 07 31.0**	**-0.2**
	comp=Z,2.1nm,0.7s,baz=344,slow=3.9,SNR=9.3							
	comp=Z,2.1nm,0.7s							
FINES	**FINESS Array B**	**91.59**	**28**	P		**P**	**03 07 41.8**	**0.0**
	comp=Z,1.9nm,1.0s,baz=242,slow=4.1,SNR=4.8							
	comp=Z,1.9nm,1.0s							
AKASG	**Malin Array Be**	**96.20**	**38**	LR		LR	03 48 50.7	
	comp=Z,13nm,20.7s,baz=109,slow=34							
MKAR	**Makanchi Array**	**124.85**	**17**	PKP		**PKPdf**	**03 13 35.1**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=282,slow=2.8,SNR=2.6							
SONM	**Songino Array**	**126.65**	**357**	PKP		**PKPdf**	**03 13 39.2**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=90,slow=0.4,SNR=3.6							
SONM	**Songino Array**	**126.65**	**357**			**PKPdf**	**03 13 38.3**	**-0.6**
XLT	**XiLinHaoTe**	**129.18**	**347**	*e*PKP		**PKiKP**	**03 13 48.1**	**+3.6**
AS31	**Alice Springs**	**144.78**	**236**	PKPdf		**PKPab**	**03 14 11.0**	**-0.9**
ASAR	**Alice Springs**	**144.78**	**236**	PKP		**PKPab**	**03 14 11.6**	**-0.3**
	comp=Z,9.0nm,0.7s,baz=116,slow=3.9,SNR=54							
ASAR	**Alice Springs**	**144.78**	**236**	PKPdf		**PKPab**	**03 14 10.7**	**-1.1**
WR0	**Warramunga Arr**	**145.67**	**243**	PKPdf		**PKPdf**	**03 14 14.6**	**0.0**
WB2	**Warramunga Arr**	**145.84**	**242**	PKPdf		**PKPdf**	**03 14 14.8**	**0.0**
WRA	**Warramunga Arr**	**145.85**	**242**	PKPbc		**PKPdf**	**03 14 15.2**	**+0.3**
	comp=Z,5.2nm,0.9s,baz=101,slow=3.1,SNR=33							
WRA	**Warramunga Arr**	**145.85**	**242**	PKPdf		**PKPdf**	**03 14 15.0**	**+0.1**
WB0	**Warramunga Arr**	**145.86**	**243**	PKPdf		**PKPdf**	**03 14 15.3**	**+0.4**
PZH	**PanZhiHua**	**148.06**	**1**	PKPbc		**PKPbc**	**03 14 21.6**	**-0.1**
MTN	**Manton Dam**	**150.77**	**254**	PKPbc		**PKPbc**	**03 14 27.9**	**-0.6**
KNRA	**Kununurra**	**152.27**	**247**	PKPbc		**PKPbc**	**03 14 32.0**	**+0.1**

*IDC **15** 03:13:12.8±1.3,0.°09S×125.°17E,h0km,mb3.8/4, mbtmp3.8/4,Error ellipse: s-maj=138.1km s-min=21.4km az=67.0*
*DJA **15** 03:13:14.5±0.4,0.°N±3.°×12.°6E±.°,h10km,M3.3/7,MLv3.3/7*
ISC 15 03:13:13.8±1.0,0.°38N±0.°08×126.°41E±0.°07,h10km,n8, σ0s78/10,mb3.8/4,Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**1.03**	**68**	P		**Pn**	**03 13 34.8**	**+0.4**
TNTI				S		**Sn**	**03 13 49.8**	**+0.9**
LBMI	**Labuha**	**1.49**	**133**	P		**Pn**	**03 13 41.0**	**+0.4**
LBMI				S		**Sn**	**03 13 59.0**	**-1.1**
SANI	**Sanana**	**2.45**	**190**	P		**Pn**	**03 13 54.8**	**+0.9**
APSI	**Ampana**	**4.93**	**255**	P		**Pn**	**03 14 28.5**	**+0.5**
WRA	**Warramunga Arr**	**21.64**	**159**	P		**P**	**03 18 04.5**	**-0.1**
	1.7nm,0.6s,baz=331,slow=11,SNR=13							
	1.7nm,0.6s							
ASAR	**Alice Springs**	**24.99**	**164**	P		**P**	**03 18 38.5**	**+0.6**
	2.7nm,0.8s,baz=352,slow=15,SNR=19							
	2.7nm,0.8s							
SONM	**Songino Array**	**50.37**	**343**	P		**P**	**03 22 10.8**	**-0.4**
	0.4nm,0.5s,baz=148,slow=6.3,SNR=2.2							
	0.4nm,0.5s							
MKAR	**Makanchi Array**	**60.13**	**327**	P		**P**	**03 23 21.0**	**-0.6**
	0.6nm,0.4s,baz=124,slow=8.5,SNR=8.4							
	0.6nm,0.4s							

*DSN **15** 03:14:42.3±0.3,27.°96N×56.°24E,h10km,ML3.4/5,Error ellipse: s-maj=30.4km s-min=4.8km az=264.0*
*IDC **15** 03:14:44.4±3.2,27.°23N×54.°34E,h0km,mb3.6/5, mbtmp3.6/5,Error ellipse: s-maj=67.7km s-min=33.6km az=145.0*
*TEH **15** 03:14:44.2,26.°87N×54.°45E,h8km,ML3.4*
ISC 15 03:14:43.8±0.7,26.°76N±0.°04×54.°40E±0.°05,h10km,n37, σ1s44/39,mb3.5/5,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LAR1	**LAR**	**0.91**	**359**	*e*Pg		**Pg**	**03 15 00.4**	**-0.9**
LAR1				*e*			03 15 19.4	
	comp=Z,20μm,0.6s							
LMD1	**Lamerd**	**1.25**	**298**	*e*Sg		**Sn**	**03 15 25.6**	**+1.4**
LMD1				*e*Pg		**Pn**	**03 15 08.3**	**+1.0**
LMD1				*e*			03 15 50.6	
	comp=Z,9μm,0.6s							
GENO	**Geno**	**1.71**	**68**	*e*Pg		**Pn**	**03 15 15.1**	**+1.4**
GENO				*e*			03 15 48.7	
	comp=Z,2μm,0.4s							
SHME	**Shamm**	**1.71**	**114**	*e*Pn		**Pb**	**03 15 16.4**	**+1.1**
SHME	**Shamm**	**1.71**	**114**	P		**Pn**	**03 15 14.6**	**+0.9**
JHRM	**Jahrom**	**1.89**	**337**	*e*Pg		**Pn**	**03 15 17.6**	**+1.4**
JHRM				*e*			03 15 53.0	
	comp=Z,8μm,0.4s							
BANOM	**Banah**	**1.90**	**116**	*e*Pn		**Pb**	**03 15 18.3**	**-0.2**
BANOM	**Banah**	**1.90**	**116**	P		**Pn**	**03 15 16.6**	**+0.4**
BANOM				S		**Sb**	**03 15 43.0**	**+0.8**
IBND	**Bandar-abas**	**2.03**	**70**	*e*Pn		**Pn**	**03 15 19.5**	**+1.5**
IBND				*e*			03 16 03.3	
	comp=Z,4μm,0.5s							
QIR1	**Qir**	**2.09**	**325**	*e*Pn		**Pn**	**03 15 21.1**	**+2.1**
NAZ	**Nazwa, Dubai**	**2.10**	**147**	*e*Pn		**Pg**	**03 15 23.1**	**-0.8**
MSFE	**Esma-Masafi**	**2.11**	**131**	*e*Pn		**Pg**	**03 15 23.7**	**-0.5**
MSFE	**Esma-Masafi**	**2.11**	**131**	P		**Pg**	**03 15 24.9**	**+0.7**
FAQ	**Al Faqa, Dubai**	**2.27**	**152**	*e*Pn		**Pb**	**03 15 25.4**	**+0.5**
UOSS	**Minazif**	**2.43**	**138**	*e*Pn		**Pb**	**03 15 27.6**	**+0.1**
UOSS	**Minazif**	**2.43**	**138**	P		**Pg**	**03 15 30.1**	**-0.2**
HATD	**Hatta, Dubai**	**2.48**	**141**	*e*Pn		**Pb**	**03 15 27.6**	**-0.8**
HATD	**Hatta, Dubai**	**2.48**	**141**	P		**Pg**	**03 15 32.4**	**+1.2**
ASHO	**Ashiyiah**	**2.55**	**144**	*e*Pn		**Pb**	**03 15 29.3**	**-0.3**
ASHO	**Ashiyiah**	**2.55**	**144**	P		**Pg**	**03 15 33.7**	**+1.1**
KHNJ	**Kahnooj**	**3.17**	**67**	*e*Pn		**Pn**	**03 15 34.6**	**+0.9**
SOHO	**SOHO**	**3.25**	**143**	*e*Pn		**Pb**	**03 15 38.6**	**-2.9**
MZR	**Muzera**	**3.83**	**193**	*e*Pn		**Pn**	**03 15 44.0**	**+1.2**
TVBK	**TV Kerman**	**3.83**	**32**	*e*Pn		**Pn**	**03 15 44.1**	**+1.0**
KHGB	**Koh Gabri**	**4.04**	**26**	*e*Pn		**Pn**	**03 15 47.2**	**+1.3**
CHMN	**Cheshme madani**	**4.15**	**41**	*e*Pn		**Pn**	**03 15 49.6**	**+2.1**
CHMN				*e*			03 15 53.4	
	comp=Z,261nm,0.2s							
KBAM	**BAM**	**4.30**	**56**	*e*Pn		**Pn**	**03 15 50.6**	**+1.3**
KBAM				*e*			03 15 52.3	
	comp=Z,766nm,0.8s							
IMEH	**Mehriz**	**4.62**	**2**	*e*Pn		**Pn**	**03 15 55.5**	**+1.6**
IMEH				*e*			03 15 59.5	
	comp=Z,257nm,0.2s							
KLNJ	**Kolanjah**	**4.90**	**330**	*e*Pn		**Pn**	**03 15 59.9**	**+2.1**
IBAF	**Bafgh**	**4.92**	**12**	*e*Pn		**Pn**	**03 15 59.0**	**+1.0**
IRAM	**Ramesheh**	**5.33**	**341**	*e*Pn		**Pn**	**03 16 04.7**	**+1.0**
TPRV	**Parvadeh(Tabas**	**6.56**	**17**	*e*Pn		**Pn**	**03 16 22.6**	**+2.2**
BRTR	**Keskin Array B**	**21.59**	**312**	P		**P**	**03 19 30.8**	**-3.0**
	comp=Z,0.5nm,0.8s,baz=112,slow=11,SNR=2.1							
	comp=Z,0.5nm,0.8s							
ZALV	**Zalesovo Beam**	**35.22**	**31**	P		**P**	**03 21 36.3**	**-1.7**
	comp=Z,0.9nm,0.5s,baz=239,slow=9.4,SNR=4.6							
	comp=Z,0.9nm,0.5s							
FINES	**FINESS Array B**	**39.56**	**339**	P		**P**	**03 22 13.3**	**-1.4**
	comp=Z,0.5nm,0.4s,baz=147,slow=8.7,SNR=11							
	comp=Z,0.5nm,0.4s							
ARCES	**ARCESS Array B**	**46.01**	**346**	P		**P**	**03 23 06.5**	**-0.5**
	comp=Z,1.8nm,0.9s,baz=152,slow=8.1,SNR=4.0							
	comp=Z,1.8nm,0.9s							
TORD	**Torodi Ar. Bea**	**51.03**	**265**	P		**P**	**03 23 48.5**	**+2.1**
	comp=Z,0.5nm,0.9s,baz=64,slow=7.4,SNR=6.1							
	comp=Z,0.5nm,0.9s							

*GUC **15** 03:17:25.1±0.9,32.°03S×71.°54W,h38km±3km,ML4.0*
*IDC **15** 03:17:27.6±4.9,32.°03S×71.°56W,h52km±38km,mb4.0/2, mbtmp4.0/5,ML4.0/3,MS3.6/6,Error ellipse: s-maj=85.5km s-min=34.0km az=107.0*
ISC 15 03:17:25.6±1.7,32.°03S±0.°03×71.°71W±0.°08,h30km±15km, n39,σ1s05/58,MS3.7/4,7D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VA06	**Catapilco**	**0.64**	**147**	*i* P		**Pn**	**03 17 37.5**	**-1.0**
VA06				*e*S		**Sn**	**03 17 46.0**	**-1.7**
VA06				IAML			03 17 49.2	
	comp=N,14μm,0.4s							
VA06	**Catapilco**	**0.64**	**147**	↓*i* P		**Pn**	**03 17 37.6**	**-1.0**
VA06				*e*S		**Sn**	**03 17 46.4**	**-1.3**
VA06				IAML			03 17 49.4	
	comp=N,14μm,0.4s							
VA01	**Torpederas**	**0.99**	**177**	*e*P		**Pn**	**03 17 43.5**	**+0.1**
CO02	**Combarbal**	**1.02**	**36**	↓*i* P		**Pn**	**03 17 43.4**	**-0.6**
CO02				*i* S		**Sn**	**03 17 56.7**	**-0.7**
CO02				IAML			03 17 57.4	
	comp=E,15μm,0.4s							
CO02	**Combarbal**	**1.02**	**36**	↓*i* P		**Pn**	**03 17 43.4**	**-0.6**
CO02				*e*S		**Sn**	**03 17 56.8**	**-0.7**
CO02				IAML			03 17 57.6	
	comp=E,14μm,0.4s							
ROCH	**El Roble**	**1.11**	**148**	*e*P		**Pn**	**03 17 45.0**	**-0.3**
ROCH				*e*P		**Pn**	**03 17 45.0**	**-0.3**
ROCH				*e*S		**Sn**	**03 17 59.4**	**-0.3**
ROCH				*e*S			03 18 00.2	
ROCH				IAML			03 18 03.3	
	comp=N,6μm,0.5s							
ROCH	**El Roble**	**1.11**	**148**	*i* P		**Pn**	**03 17 45.3**	**-0.1**
ROCH				*e*S		**Sn**	**03 17 59.5**	**-0.3**
ROCH				IAML			03 18 03.6	
	comp=N,6μm,0.6s							
VA03	**San Esteban**	**1.22**	**127**	*e*P		**Pn**	**03 17 46.4**	**-0.4**
VA03				*i* S		**Sn**	**03 18 02.0**	**-0.4**
VA03				IAML			03 18 03.7	
	comp=N,9μm,0.4s							
MT02	**Curacav**	**1.32**	**159**	*e*P		**Pn**	**03 17 48.0**	**+0.1**
MT02				*e*S		**Sn**	**03 18 04.5**	**-0.1**
CO06	**Fray Jorge**	**1.35**	**3**	*i* P		**Pn**	**03 17 48.4**	**-0.1**
CO06				*i* S		**Sb**	**03 18 06.7**	**-0.5**
PEL	**Peldehue**	**1.41**	**142**	*e*P		**Pn**	**03 17 49.3**	**0.0**
PEL				*e*S		**Sn**	**03 18 07.0**	**+0.1**
CO03	**El Pedregal**	**1.47**	**37**	↓*i* P		**Pn**	**03 17 50.4**	**+0.2**
CO03				*e*S		**Sn**	**03 18 09.4**	**+0.9**
CO03				IAML			03 18 12.2	
	comp=E,3μm,0.4s							
MT05	**Renca**	**1.59**	**149**	*i* P		**Pn**	**03 17 52.4**	**+0.7**
MT05				*i* S		**Sn**	**03 18 12.3**	**+1.0**
MT05				IAML			03 18 14.7	
	comp=E,4μm,0.2s							
VA05	**Santo Domingo**	**1.62**	**177**	*e*P		**Pn**	**03 17 52.1**	**-0.1**
VA05				*e*S		**Sb**	**03 18 14.6**	**-0.4**
VA05	**Santo Domingo**	**1.62**	**177**	*e*P		**Pn**	**03 17 52.1**	**-0.1**
VA05				*e*S		**Sb**	**03 18 15.2**	**+0.1**
VA05				IAML			03 18 20.1	
	comp=E,9μm,0.4s							
FCH	**Farellones**	**1.76**	**138**	*i* P		**Pn**	**03 17 55.1**	**+0.7**
FCH				*e*S		**Sn**	**03 18 17.2**	**+1.2**
FCH				IAML			03 18 19.2	
	comp=N,2μm,0.3s							
MT03	**Universidad Ad**	**1.78**	**146**	*i* P		**Pn**	**03 17 55.3**	**+0.9**
MT03				*e*S		**Sn**	**03 18 17.3**	**+1.3**
MT03				IAML			03 18 20.2	
	comp=E,5μm,0.4s							
MT09	**Talagante**	**1.84**	**161**	*e*P		**Pn**	**03 17 56.6**	**+1.3**
MT09				*e*S		**Sn**	**03 18 19.4**	**+1.6**
MT09				IAML			03 18 28.1	
	comp=N,3μm,0.3s							
MT01	**Popeta**	**1.87**	**168**	↓*i* P		**Pn**	**03 17 56.1**	**+0.5**
MT01				*e*S		**Sb**	**03 18 21.1**	**-1.0**
GO04	**Tololo Observa**	**2.01**	**23**	*e*P		**Pn**	**03 17 58.4**	**+0.7**
GO04				*e*S		**Sb**	**03 18 25.5**	**-0.8**
CO05	**La Serena**	**2.14**	**11**	*e*P		**Pn**	**03 18 00.2**	**+0.9**
CO05				*e*S		**Sn**	**03 18 27.2**	**+2.4**
CO05				IAML			03 18 36.1	
	comp=E,2μm,0.8s							
BO04	**La Punta**	**2.16**	**155**	*e*P		**Pn**	**03 18 00.8**	**+1.2**
BO04				*e*S		**Sn**	**03 18 27.5**	**+2.0**
BO04				IAML			03 18 35.1	
	comp=N,2μm,0.5s							
LMEL	**Las Melosas**	**2.21**	**145**	*e*P		**Pn**	**03 18 01.8**	**+1.4**
LMEL				*e*S		**Sn**	**03 18 29.3**	**+2.5**
LMEL				IAML			03 18 38.2	
	comp=N,1μm,0.2s							
BO01	**Tunca**	**2.41**	**168**	*e*P		**Pn**	**03 18 03.6**	**+0.6**
BO03	**Pichilemu**	**2.47**	**185**	*e*P		**Pn**	**03 18 03.3**	**-0.5**
CO01	**Juntas del Tor**	**2.47**	**35**	*e*P		**Pn**	**03 18 06.3**	**+2.2**
CO01				IAML			03 18 41.8	
	comp=N,599nm,0.4s							
GO05	**Huala**	**2.98**	**183**	↓*i* P		**Pn**	**03 18 10.2**	**-0.7**
LCO	**Las Campanas**	**3.13**	**16**	*e*P		**Pn**	**03 18 13.7**	**+0.6**
ML02	**Panimavida**	**3.73**	**176**	*e*P		**Pn**	**03 18 21.2**	**+0.1**
AC04	**Llanos de Chal**	**3.85**	**8**	*e*P		**Pn**	**03 18 23.1**	**+0.2**
PLCA	**Paso Flores**	**8.74**	**174**	P		**Pn**	**03 19 30.9**	**+1.0**
	comp=N,0.6nm,0.3s,baz=334,slow=11,SNR=12							
	comp=N,1.5nm,0.3s							
LVC	**Limon Verde**	**9.71**	**16**	LR		LR	03 23 47.5	
	comp=N,68nm,20.8s,baz=212,slow=39							
CPUP	**Villa Florida**	**13.78**	**69**	P		**Pn**	**03 20 40.0**	**+1.1**
	comp=N,0.4nm,0.3s,baz=241,slow=14,SNR=2.2							
CPUP				LR		LR	03 26 32.9	
	comp=N,147nm,18.3s,baz=236,slow=40							
	comp=N,0.9nm,0.3s							
LPAZ	**La Paz**	**16.01**	**13**	P		**Pn**	**03 21 10.3**	**+1.1**
	comp=N,0.1nm,0.3s,baz=194,slow=8.3,SNR=7.4							
	comp=N,1.3nm,0.6s							
USHA	**Ushuaia**	**22.91**	**175**	LR		LR	03 32 09.7	
	comp=N,588nm,20.4s,baz=203,slow=38							
BDFB	**Brasilia**	**27.03**	**58**	P		**P**	**03 23 02.8**	**-2.6**
	comp=N,2.2nm,0.5s,baz=239,slow=5.9,SNR=4.1							
BDFB				LR		LR	03 35 15.4	
	comp=N,117nm,18.5s,baz=328,slow=40							
	comp=N,2.2nm,0.5s							
RCBR	**Riachuelo**	**42.39**	**60**	LR		LR	03 44 08.1	
	comp=N,161nm,19.1s,baz=338,slow=38							
DBIC	**Dimbokro**	**74.29**	**72**	LR		LR	04 00 33.5	
	comp=N,27nm,18.7s,baz=182,slow=35							
TORD	**Torodi Ar. Bea**	**83.28**	**70**	P		**P**	**03 29 49.1**	**-0.7**
	comp=N,2.1nm,0.9s,baz=253,slow=4.3,SNR=12							
	comp=N,2.1nm,0.9s							

*TUL **15** 03:26:02.3±1.1,36.°22N±0.°02×97.°28W±0.°02,h8km±7km, ML2.9,mb_Lg3.0/81(NEIC),Error ellipse: s-maj=2.4km s-min=2.2km az=93.0*
*ANF **15** 03:26:02.1±0.3,36.°23N×97.°27W,h5km,ML3.3/10,Error ellipse: s-maj=3.4km s-min=2.6km az=132.0*
*NEIC **15** 03:26:02.2±0.9,36.°23N±0.°02×97.°30W±0.°02,h5km±2km, Error ellipse: s-maj=3.1km s-min=3.0km az=69.0*
ISC 15 03:26:01.7±1.4,36.°23N±0.°03×97.°29W±0.°04,h0km±12km, n66,σ0s65/44,Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OKCFA	**Oklahoma City**	**0.82**	**189**	Pg		**Pg**	**03 26 17.8**	**+0.3**
OKCFA	**Oklahoma City**	**0.82**	**189**	P		**Pg**	**03 26 17.8**	**+0.3**
	baz=8.3,SNR=11							
OKCFA				S		**Sg**	**03 26 29.0**	**+0.8**
	baz=8.3							
OKCSW	**OKLAHOMA CITY**	**0.83**	**188**			**Pg**	**03 26 17.7**	**0.0**
T35A	**Sooner Cattle**	**0.93**	**42**			**Pg**	**03 26 19.9**	**+0.3**
T35B	**Sooner Cattle**	**0.93**	**42**	P		**Pg**	**03 26 19.9**	**+0.3**
	baz=223							
T35B				S		**Sg**	**03 26 32.1**	**+0.5**
	baz=223							
FNO	**Franklin**	**0.98**	**185**	Pg		**Pg**	**03 26 20.1**	**-0.3**
TUL1	**Leonard**	**1.26**	**104**			**Pg**	**03 26 25.0**	**-0.9**
TUL1				IAmb_Lg			03 26 44.8	
	comp=Z,117nm,0.9s							
TUL1	**Leonard**	**1.26**	**104**	P		**Pg**	**03 26 24.7**	**-1.1**
	baz=285							
TUL1				S		**Sg**	**03 26 41.9**	**-0.3**
	baz=285							
U32A	**Winter Ranch,**	**1.39**	**277**	S		**Sn**	**03 26 47.1**	**-0.3**
	baz=96							
X34A	**Smith Ranch, M**	**1.69**	**195**	Pn		**Pn**	**03 26 32.1**	**-0.3**
WMOK	**Wichita Mounta**	**1.92**	**220**			**Pn**	**03 26 36.2**	**+0.5**
WMOK				IAmb_Lg			03 27 03.2	
	comp=Z,98nm,0.7s							
WMOK	**Wichita Mounta**	**1.92**	**220**	P		**Pn**	**03 26 36.2**	**+0.5**
	baz=39,SNR=47							
WMOK				S		**Sb**	**03 27 02.2**	**0.0**
	baz=39							
X37A	**Clayton**	**2.27**	**136**			**Pn**	**03 26 40.8**	**+0.4**
X37A	**Clayton**	**2.27**	**136**	P		**Pn**	**03 26 40.8**	**+0.4**
	baz=317,SNR=68							
U38A	**Gravette**	**2.36**	**84**			**Pn**	**03 26 42.8**	**+1.1**
R32A	**Long Quarter,**	**2.46**	**333**	Pn		**Pn**	**03 26 43.0**	**-0.1**
R32A	**Long Quarter,**	**2.46**	**333**	S		**Sn**	**03 27 14.3**	**+0.4**
	baz=153							
HHAR	**Hobbs**	**2.71**	**88**			**Pn**	**03 26 46.4**	**-0.1**
Z35A	**Perchaven, San**	**2.89**	**179**	P		**Pn**	**03 26 49.3**	**+0.3**
	baz=359,SNR=5.9							
Z35A				S		**Sn**	**03 27 25.1**	**+0.6**
	baz=359							
W39A	**Magazine**	**3.04**	**109**			**Pn**	**03 26 52.6**	**+1.6**
W39A				IAmb_Lg			03 27 45.6	
	comp=Z,57nm,0.8s							
CBKS	**Cedar Bluff**	**3.23**	**324**	Pn		**Pn**	**03 26 53.2**	**-0.4**
MIAR	**Mount Ida**	**3.47**	**118**			**Pn**	**03 26 57.1**	**+0.1**
MIAR				IAmb_Lg			03 27 54.5	
	comp=Z,25nm,0.7s							
MIAR	**Mount Ida**	**3.47**	**118**	P		**Pn**	**03 26 57.6**	**+0.6**
	baz=300,SNR=11							
S39A	**Bolivar**	**3.50**	**64**			**Pn**	**03 26 57.7**	**+0.3**
S39A	**Bolivar**	**3.50**	**64**	P		**Pn**	**03 26 57.9**	**+0.6**
	baz=246							
Z38A	**Mt. Pleasant**	**3.52**	**147**	IAmb_Lg			03 27 59.3	
	comp=Z,24nm,0.8s							
U40A	**Yellville**	**3.59**	**87**			**Pn**	**03 26 58.0**	**-0.6**
AMTX	**Amarillo**	**3.82**	**251**	Pn		**Pn**	**03 27 01.0**	**-0.8**
AMTX				IAmb_Lg			03 28 11.6	
	comp=Z,33nm,0.7s							
X40A	**Basin Creek Fa**	**4.04**	**114**	Pn		**Pn**	**03 27 05.4**	**+0.7**
X40A				IAmb_Lg			03 28 18.3	
	comp=Z,23nm,0.7s							
ABTX	**Abilene, Hawle**	**4.09**	**209**	Pn		**Pn**	**03 27 05.0**	**-0.5**
MGMO	**Mountain Grove**	**4.14**	**76**	Pn		**Pn**	**03 27 05.8**	**-0.4**
WHAR	**Wooly Hollow**	**4.18**	**102**			**Pn**	**03 27 06.1**	**-0.6**
WHAR				IAmb_Lg			03 28 14.0	
	comp=Z,38nm,0.8s							
FCAR	**Ozark Folk Cen**	**4.20**	**93**			**Pn**	**03 27 06.3**	**-0.7**
FCAR				IAmb_Lg			03 28 13.0	
	comp=Z,42nm,0.9s							
W41B	**Gary Mavity, V**	**4.24**	**103**	IAmb_Lg			03 28 22.6	
	comp=Z,31nm,0.8s							
W41B	**Gary Mavity, V**	**4.24**	**103**	P		**Pn**	**03 27 07.5**	**0.0**
	baz=286,SNR=12							
WLAR	**White Oak Lake**	**4.27**	**125**			**Pn**	**03 27 07.5**	**-0.4**
WLAR				IAmb_Lg			03 28 22.1	
	comp=Z,31nm,0.9s							
UALR	**University of**	**4.29**	**108**	Pn		**Pn**	**03 27 06.8**	**-1.4**
UALR				IAmb_Lg			03 28 20.7

0.1nm,0.3s,baz=299,slow=8.0,SNR=2.2
0.1nm,0.3s
MKAR Makanchi Array 54.65 343 P **P** **03 36 28.5 -1.0**
0.2nm,0.3s,baz=145,slow=7.4,SNR=5.3
0.2nm,0.3s
TXAR Lajitas Array 144.97 43 PKPbc **PKPab** **03 46 36.5 -1.0**
0.2nm,0.5s,baz=248,slow=1.0,SNR=5.0

DJA 15 03:31:44.3±0.4, 12°S±3°×11°6E±°, h50km±23km, M4.0/7, mb4.3/4, MLv3.9/7, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGBI	**Denpasar**	**2.81**	**342**	P	Pn	03 32 27.1	+0.3
IGBI				S	Sn	03 32 59.8	+0.4
PLAI	**Plampang**	**3.18**	**33**	P	Pn	03 32 32.4	+0.6
PLAI				S	Sn	03 33 03.8	-4.7
SRBI	**Singaraja**	**3.50**	**347**	P	Pn	03 32 36.5	+0.3
WBSI	**Waikabubak, Su**	**3.80**	**61**	P	Pn	03 32 39.9	-0.5
GMJI	**Gumukmas**	**4.10**	**321**	P	Pn	03 32 44.7	+0.3
PCJI	**Pacitan**	**5.80**	**304**	P	Pn	03 33 11.1	+3.3
EDFI	**Ende, Flores**	**6.22**	**64**	P	Pn	03 33 13.8	+0.1
	0.0nm6.0nm,1.4s						
BSSI	**Bau Bau, Buton**	**6.92**	**40**	P	Pn	03 33 23.3	0.0
	0.3nm42nm,1.3s						
BNSI	**Bone**	**8.14**	**30**	P	Pn	03 33 39.8	-0.1

IDC 15 03:50:40.6±2.2, 0°.76N×127°.06E, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=169.2km s-min=27.4km az=66.0
DJA 15 03:50:45.6±0.8, 0°N±4°×12°6E±°, h54km±48km, M3.0/6, MLv3.0/6

ISC 15 03:50:46.3±1.3, 0°.29N±0°.09×126°.3E±0°.1, h35km, n6, σ1§07/7, mb3.8/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.14**	**65**	P	**Pn**	**03 51 05.4**	**-0.4**
LBMI	**Labuha**	**1.49**	**128**	P	**Pn**	**03 51 10.1**	**-0.5**
LBMI				S	**Sn**	**03 51 28.7**	**-0.2**
SANI	**Sanana**	**2.35**	**188**	P	**Pn**	**03 51 21.8**	**-0.6**
WRA	**Warramunga Arr**	**21.59**	**159**	P	**P**	**03 55 33.5**	**+0.4**
	1.0nm,0.5s,baz=340,slow=11,SNR=12						
	1.0nm,0.5s						
ASAR	**Alice Springs**	**24.93**	**163**	P	**P**	**03 56 08.2**	**+1.9**
	2.5nm,0.8s,baz=350,slow=14,SNR=20						
	2.5nm,0.8s						
MKAR	**Makanchi Array**	**60.16**	**327**	P	**P**	**04 00 50.2**	**-0.3**
	0.3nm,0.4s,baz=116,slow=8.2,SNR=3.5						
	0.3nm,0.4s						

IDC 15 04:02:31.4±1.3, 2°.89S×126°.55E, h0km, mb3.5/3, mbtmp3.5/5, ML3.6/2, MS2.5/1, Error ellipse: s-maj=45.6km s-min=24.6km az=63.0
DJA 15 04:02:33.9±0.4, 3°S±4°×12°7E±°, h10km, M3.6/7, mb4.8/1, mB4.8/1, MLv2.9/7, Mw(mB)4.0/1

ISC 15 04:02:32.0±0.9, 2°.79S±0°.09×126°.62E±0°.07, h10km, n10, σ1§43/11, mb3.7/3, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANI	**Sanana**	**0.97**	**319**	P	**Pn**	**04 02 50.5**	**-1.2**
SANI				S	**Sb**	**04 03 02.4**	**-1.4**
AAI	**Ambon**	**1.81**	**120**	P	**Pg**	**04 03 06.1**	**-0.6**
LBMI	**Labuha**	**2.31**	**22**	P	**Pn**	**04 03 10.2**	**0.0**
SIJI	**Sorong**	**5.02**	**68**	Pn	**Pn**	**04 03 49.4**	**+2.0**
	2.6nm,0.3s,baz=202,slow=23,SNR=7.3						
SIJI				Sn	**Sn**	**04 04 43.8**	**-1.8**
	2.0nm,0.3s,baz=79,slow=14,SNR=4.5						
	7.5nm,0.4s						
APSI	**Ampana**	**5.31**	**290**	P	**Pn**	**04 03 52.8**	**+1.4**
WRA	**Warramunga Arr**	**18.64**	**157**	P	**Pn**	**04 06 50.4**	**+0.1**
	0.2nm,0.3s,baz=336,slow=9.7,SNR=7.5						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**21.92**	**162**	P	**P**	**04 07 25.4**	**-0.2**
	0.4nm,0.3s,baz=342,slow=12,SNR=4.9						
	0.4nm,0.3s						
CMAR	**Chiang Mai Arr**	**34.47**	**309**	LR	LR	04 25 45.2	
	comp=Z,7.8nm,18.4s,baz=290,slow=40						
MKAR	**Makanchi Array**	**62.89**	**327**	P	**P**	**04 12 59.7**	**+1.3**
	0.5nm,0.7s,baz=124,slow=7.5,SNR=5.5						
	0.5nm,0.7s						
KURBB	**Kurchatov Arra**	**67.19**	**329**	P	**P**	**04 13 27.6**	**+1.3**
	0.2nm,0.3s,baz=133,slow=5.2,SNR=2.2						
	0.2nm,0.3s						

DJA 15 04:04:24.2±0.2, 12°S±2°×11°7E±°, h10km, M4.5/19, mb4.4/14, mB5.3/3, MLv4.5/19, Mw(mB)4.8/3, MwMwp5.2/1, Mwp5.4/1
IDC 15 04:04:26.5±2.5, 10°.49S×117°.45E, h0km, mb3.8/3, mbtmp3.7/4, ML3.7/1, Error ellipse: s-maj=190.5km s-min=24.6km az=50.0

ISC 15 04:04:24.9±1.2, 11°.3S±0°.1×116°.69E±0°.08, h10km, n24, σ1§33/25, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**2.72**	**23**	P	**Pn**	**04 05 09.6**	**+0.9**
PLAI				S	**Sn**	**04 05 38.9**	**-2.8**
IGBI	**Denpasar**	**2.93**	**329**	P	**Pn**	**04 05 11.8**	**+0.2**
IGBI				S	**Sn**	**04 05 44.2**	**-2.6**
DNP	**Denpasar**	**3.02**	**331**	P	**Pn**	**04 05 13.2**	**+0.4**
WBSI	**Waikabubak, Su**	**3.15**	**58**	P	**Pn**	**04 05 15.2**	**+0.5**
SRBI	**Singaraja**	**3.55**	**336**	P	**Pn**	**04 05 21.3**	**+1.2**
BASI	**Baing, Sumba**	**3.98**	**74**	P	**Pn**	**04 05 26.1**	**0.0**
ABJI	**Asem Bagus**	**4.27**	**325**	P	**Pn**	**04 05 30.4**	**+0.4**
GMJI	**Gumukmas**	**4.42**	**313**	P	**Pn**	**04 05 32.2**	**+0.2**
BLJI	**Banyuglugur**	**4.70**	**319**	P	**Pn**	**04 05 36.2**	**+0.3**
KMMI	**Kalianget**	**5.04**	**328**	P	**Pn**	**04 05 41.9**	**+1.3**
	0.3nm79nm,1.7s						
EDFI	**Ende, Flores**	**5.56**	**63**	P	**Pn**	**04 05 48.1**	**+0.2**
	0.1nm5.0nm,0.5s						
PWJI	**Pagerwojo**	**5.83**	**304**	P	**Pn**	**04 05 51.6**	**+0.1**
	0.4nm35nm,0.6s						
PCJI	**Pacitan**	**6.26**	**299**	P	**Pn**	**04 05 58.4**	**+1.0**
	0.4nm58nm,2.3s						
BSSI	**Bau Bau, Buton**	**6.39**	**36**	P	**Pn**	**04 06 01.0**	**+1.8**
	0.2nm36nm,1.7s						
BKSI	**Bulukumba**	**6.88**	**30**	P	**Pn**	**04 06 08.4**	**+2.5**
BATI	**Baumata**	**6.95**	**81**	P	**Pn**	**04 06 07.0**	**+0.1**
	0.1nm21nm,1.5s						
UGM	**Wanagama**	**6.96**	**299**	P	**Pn**	**04 06 07.5**	**+0.4**
	0.7nm116nm,2.2s						
BNSI	**Bone**	**7.68**	**26**	P	**Pn**	**04 06 19.6**	**+2.7**
	0.1nm18nm,0.6s						
CMJI	**Cimerak**	**8.86**	**293**	P	**Pn**	**04 06 32.7**	**-0.4**
	31nm,1.6s						
CNJI	**Cibinong**	**10.24**	**292**	P	**Pn**	**04 06 51.9**	**-0.2**
	7µm2µm52nm,1.1s						
WRA	**Warramunga Arr**	**19.02**	**119**	P	**P**	**04 08 47.4**	**+0.3**
	0.3nm,0.3s,baz=292,slow=13,SNR=8.8						
WRA				S	Sn	04 12 05.8	-15
	1.2nm,0.7s,baz=290,slow=22,SNR=6.9						
	0.3nm,0.4s						
ASAR	**Alice Springs**	**20.46**	**129**	P	**P**	**04 09 04.0**	**+1.1**
	0.6nm,0.5s,baz=299,slow=9.5,SNR=2.5						
ASAR				S	S	04 12 39.7	-12
	1.5nm,0.8s,baz=304,slow=23,SNR=7.5						
	0.6nm,0.5s						
STKA	**Stephens Creek**	**30.75**	**135**	P	P	04 10 46.0	+5.5
	1.0nm,0.4s,baz=337,slow=13,SNR=3.2						
	1.0nm,0.4s						
MKAR	**Makanchi Array**	**65.54**	**335**	P	**P**	**04 15 08.8**	**+0.2**
	0.7nm,0.4s,baz=148,slow=7.6,SNR=8.7						
	0.7nm,0.4s						

IDC 15 04:07:32.7±1.0, 51°.44N×16°.22E, h0km, mbtmp3.2/5, ML2.6/5, Error ellipse: s-maj=26.9km s-min=9.8km az=108.0
PRU 15 04:07:33.4±0.0, 51°.42N×16°.16E, h0km
VIE 15 04:07:37.4±1.4, 51°.19N×16°.12E, h0km, mb2.8/12, ml2.5/13, Error ellipse: s-maj=8.6km s-min=5.9km az=168.0 62 km W of Wroclaw Suspected Mining induced.

ISC 15 04:07:31.4±0.8, 51°.51N±0°.04×16°.26E±0°.03, h0km, n40, σ1§38/68, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.66**	**178**	*i* Pg	**Pg**	**04 07 44.3**	**+0.2**
KSP				*e*Sg	**Sg**	**04 07 51.7**	**-1.0**
CHVC	**Chvalec**	**0.93**	**188**	*e*PG	**Pg**	**04 07 49.2**	**0.0**
OSTC	**Ostas**	**0.95**	**182**	*e*PG	**Pg**	**04 07 49.8**	**+0.2**
OSTC				*e*SG	**Sg**	**04 08 01.4**	**-0.5**
UPC	**Upice**	**1.01**	**189**	*e*PG	**Pg**	**04 07 50.6**	**-0.2**
UPC				*e*SG	**Sg**	**04 08 03.5**	**-0.4**
	comp=Z,120nm,0.3s						
DPC	**Dobruska-Polom**	**1.16**	**178**	*e*PG	**Pg**	**04 07 53.3**	**-0.3**
DPC				*e*SG	**Sg**	**04 08 08.1**	**-0.5**
	comp=Z,35nm,0.5s						
PVCC	**Panska Ves**	**1.45**	**228**	*e*PG	**Pg**	**04 07 59.1**	**0.0**
PVCC				*e*SG	**Sg**	**04 08 17.5**	**-0.4**
	comp=Z,152nm,0.3s						
KRLC	**Kraliky**	**1.47**	**167**	*e*PG	**Pn**	**04 07 58.8**	**-0.4**
KRLC				*e*SG	**Sg**	**04 08 17.6**	**-1.0**
	comp=Z,15nm,0.3s						
BRG	**Berggiesshubel**	**1.59**	**247**	Pn	**Pn**	**04 08 00.3**	**-0.5**
BRG				Pg	**Pg**	**04 08 01.7**	**-0.1**
BRG				Sg	**Sg**	**04 08 22.3**	**-0.2**
BRG				Amp		04 08 24.2	
	comp=Z,31nm,0.3s						
PRU	**Pruhonice**	**1.87**	**216**	*e*PG	**Pb**	**04 08 05.7**	**-0.7**
PRU				*e*SG	**Sn**	**04 08 29.2**	**+0.2**
	comp=Z,23nm,0.4s						
MORC	**Moravsky Berou**	**1.91**	**154**	*e*PN	**Pn**	**04 08 04.9**	**-0.4**
MORC				*e*SG	**Sb**	**04 08 31.5**	**-0.1**
CLL	**Collm**	**2.05**	**266**	*e*Pn	**Pn**	**04 08 06.0**	**-1.1**
CLL				*e*Pg	**Pb**	**04 08 10.0**	**+0.5**
CLL				*e*Sg	**Sg**	**04 08 37.0**	**-0.2**
	comp=Z,14nm,0.5s						
VRAC	**Vranov**	**2.21**	**174**	Pn	**Pn**	**04 08 09.7**	**+0.4**
	comp=Z,1.3nm,0.3s,baz=341,slow=14,SNR=6.2						
VRAC				Lg	Lg	04 08 37.5	
	comp=Z,4.2nm,0.3s,baz=67,slow=22,SNR=9.2						
	comp=Z,2.8nm,0.3s						
VRAC	**Vranov**	**2.21**	**174**	*e*PN	**Pn**	**04 08 09.5**	**+0.2**
VRAC				*e*SG	**Sb**	**04 08 40.1**	**0.0**
KRUC	**Moravsky**	**2.45**	**178**	*e*PN	**Pn**	**04 08 12.9**	**+0.3**
KRUC				*e*SG	**Sb**	**04 08 47.7**	**+0.7**
OJC	**Ojcow**	**2.59**	**119**	*e*Pg	**Pg**	**04 08 21.9**	**+1.0**
OJC				*e*Sg	**Sg**	**04 08 56.3**	**+1.9**
NKC	**Novy Kostel**	**2.73**	**244**	*e*PN	**Pn**	**04 08 16.6**	**+0.1**
NKC				*e*PG	**Pg**	**04 08 23.4**	**-0.3**
JAVC	**Velka Javorina**	**2.80**	**161**	*e*PN	**Pn**	**04 08 18.0**	**+0.5**
KHC	**Kasperske Hory**	**2.93**	**217**	*e*PN	**Pn**	**04 08 19.4**	**+0.1**
KHC				*e*PG	**Pb**	**04 08 25.0**	**+0.4**
KHC				*e*SN	**Sn**	**04 08 52.5**	**-2.7**
KHC				*e*SG	**Sb**	**04 09 02.2**	**+1.2**
	comp=Z,9.0nm,0.3s						
CKRC	**Cesky Krumlov**	**2.97**	**206**	*e*PG	**Pb**	**04 08 25.8**	**+0.7**
CKRC				*e*SG	**Sb**	**04 09 03.7**	**+1.8**
	comp=Z,11nm,0.4s						
LANS	**Liptovska Anna**	**3.13**	**138**	*e*PG	**Pg**	**04 08 31.4**	**+0.1**
LANS				*e*SG	**Sg**	**04 09 12.6**	**+0.8**
GERES	**GERESS Array B**	**3.13**	**213**	Pn	**Pn**	**04 08 22.6**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=33,slow=13,SNR=9.9						
GERES				Pg	**Pb**	**04 08 28.4**	**+0.4**
	comp=Z,4.2nm,0.3s,baz=29,slow=17,SNR=60						
GERES				Lg	Lg	04 09 08.1	
	comp=Z,1.5nm,0.3s,baz=48,slow=20,SNR=4.5						
	comp=Z,0.7nm,0.4s						
MODS	**Modra-Piesok**	**3.20**	**168**	*e*PG	**Pg**	**04 08 32.4**	**-0.4**
MODS				*e*SG	**Sg**	**04 09 14.2**	**-0.1**
CONA	**Conrad Observa**	**3.59**	**184**	*e*Pn	**Pn**	**04 08 29.2**	**+0.8**
	comp=Z,0.9nm,0.3s						
CONA				*e*Sg	**Sg**	**04 09 24.9**	**-1.8**
	comp=Z,11nm,0.4s						
RONA	**Rosalia, Austr**	**3.81**	**180**	*e*Pn	**Pn**	**04 08 33.8**	**+2.5**
	comp=Z,0.6nm,0.2s						
RONA				*e*Sg	**Sg**	**04 09 32.5**	**-1.2**
	comp=Z,5.2nm,0.4s						
MOA	**Molln**	**3.88**	**200**	*e*Pn	**Pn**	**04 08 32.6**	**+0.3**
	comp=Z,0.6nm,0.3s						
MOA				*e*Sg	**Sg**	**04 09 35.6**	**-0.5**
	comp=Z,3.8nm,0.3s						
BIOA	**Bad Ischl, Aus**	**4.18**	**205**	*e*Sg	**Sg**	**04 09 44.0**	**-1.7**
	comp=Z,5.6nm,0.3s						
ARSA	**Arzberg**	**4.29**	**187**	*e*Pn	**Pn**	**04 08 41.5**	**+3.6**
	comp=Z,2.2nm,0.5s						
ARSA				*e*Sg	**Sg**	**04 09 48.3**	**-0.7**
	comp=Z,5.4nm,0.5s						
KBA	**Koelnbreinsper**	**4.83**	**204**	*e*Pn	**Pn**	**04 08 48.7**	**+3.3**
	comp=Z,1.4nm,0.4s						
KBA				*e*Sg	**Sg**	**04 10 07.1**	**+0.7**
	comp=Z,9.9nm,0.8s						
OBKA	**Obir**	**5.13**	**193**	*e*Sg	**Sg**	**04 10 15.0**	**-1.0**
WATA	**Walderalm**	**5.17**	**218**	*e*Sg	**Sg**	**04 10 18.1**	**+0.6**
	comp=Z,5.3nm,0.6s						
MYKA	**Terra Mystica**	**5.17**	**200**	*e*Sg	**Sg**	**04 10 17.3**	**-0.2**
	comp=Z,1.7nm,0.4s						
WTTA	**Wattenberg**	**5.21**	**217**	*e*Sg	**Sg**	**04 10 17.6**	**-1.1**
	comp=Z,4.8nm,0.5s						
MOTA	**Moosalm**	**5.35**	**221**	*e*Sg	**Sg**	**04 10 23.6**	**+0.3**
	comp=Z,3.0nm,0.5s						
ABTA	**Abfaltersbach**	**5.36**	**209**	*e*Sg	**Sg**	**04 10 20.7**	**-2.8**
	comp=Z,1.7nm,0.4s						
RETA	**Reute**	**5.38**	**224**	*e*Sg	**Sg**	**04 10 26.0**	**+1.7**
	comp=Z,2.0nm,0.4s						
FETA	**Feichten**	**5.77**	**221**	*e*Sg	**Sg**	**04 10 42.0**	**+5.5**
	comp=Z,1.4nm,0.5s						
DAVA	**Damuels**	**5.93**	**227**	*e*Sg	**Sg**	**04 10 45.0**	**+3.2**
	comp=Z,1.4nm,0.4s						
HFS	**Hagfors**	**8.77**	**352**	Pn	**Pn**	**04 09 39.1**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=174,slow=14,SNR=1.3						
	comp=Z,0.4nm,0.3s						
FINES	**FINESS Array B**	**11.33**	**25**	Pn	**Pn**	**04 10 12.2**	**-2.1**
	comp=Z,0.1nm,0.3s,baz=215,slow=14,SNR=4.4						
	comp=Z,0.3nm,0.3s						
ARCES	**ARCESS Array B**	**18.61**	**10**	P	**P**	**04 11 50.0**	**0.0**
	comp=Z,0.1nm,0.3s,baz=184,slow=11,SNR=4.3						
	comp=Z,2.3nm,0.9s						

MAN 15 04:09:27.7, 6°.08N×126°.62E, h8km, mb4.2, ML3.0, MS2.7, Mindanao

TRN 15 04:12:07.7, 11°.53N×61°.68W, h73km, MD3.4
FUNV 15 04:12:08.2, 11°.44N×61°.86W, h5km, MW3.4

ISC 15 04:12:06.9±1.3, 11°.53N±0°.04×61°.74W±0°.05, h80km±10km, n31, σ1§14/49, Windward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GRFF	**Grenada Fort F**	**0.51**	**0**	*e*P	**Pn**	**04 12 21.1**	**+0.2**
GRFF				*e*S	**Sn**	**04 12 31.1**	**0.0**
GRGR	**Grenville**	**0.60**	**8**	*e*P	**Pn**	**04 12 21.6**	**-0.1**
GRGR				*e*S	**Sn**	**04 12 32.7**	**+0.2**
TRN	**Trinidad (W)**	**0.94**	**159**	*e*P	**Pn**	**04 12 25.7**	**+0.5**
TRN				*e*S	**Sn**	**04 12 38.5**	**-0.4**
GCMP	**Grenada, Carri**	**1.00**	**18**	*e*P	**Pn**	**04 12 25.7**	**-0.3**
GCMP				*e*S	**Sn**	**04 12 39.6**	**-0.6**
TOSP	**Speyside**	**1.20**	**101**	*e*P	**Pn**	**04 12 28.3**	**-0.1**
TOSP				*e*S	**Sn**	**04 12 44.6**	**0.0**
SVOC	**Richmond Hill,**	**1.69**	**17**	*e*P	**Pn**	**04 12 35.0**	**+0.3**
SVOC				*e*S	**Sn**	**04 12 55.4**	**-0.4**
CRUV	**Carupano**	**1.70**	**240**	*e*P	**Pn**	**04 12 35.6**	**+0.8**
CRUV				*e*S	**Sn**	**04 12 56.2**	**+0.2**
SVB	**Belmont**	**1.79**	**15**	*e*P	**Pn**	**04 12 36.3**	**+0.1**
SVB				*e*S	**Sn**	**04 12 58.5**	**+0.2**
SVV	**Soufriere Volc**	**1.85**	**16**	*e*P	**Pn**	**04 12 37.1**	**+0.3**
SVV				*e*S	**Sn**	**04 12 59.9**	**+0.3**
MCLT	**Moule a Chique**	**2.30**	**20**	*e*P	**Pn**	**04 12 43.2**	**+0.3**
MCLT				*e*S	**Sn**	**04 13 10.2**	**-0.2**
SLB	**Belfond**	**2.38**	**17**	*e*P	**Pn**	**04 12 45.3**	**+1.3**
SLB				*e*S	**Sn**	**04 13 10.2**	**-2.2**
SLBI	**Saint Lucia, B**	**2.59**	**17**	*e*P	**Pn**	**04 12 46.9**	**+0.2**
SLBI				*e*S	**Sn**	**04 13 16.3**	**-0.9**
CUMV	**Cumana_UDO**	**2.65**	**246**	*e*P	**Pn**	**04 12 48.9**	**+1.4**
CUMV				*e*S	**Sn**	**04 13 18.9**	**+0.1**
MPOM	**Morne Pois Mar**	**3.02**	**16**	*e*P	**Pn**	**04 12 53.0**	**+0.4**
MPOM				*e*S	**Sn**	**04 13 27.2**	**-0.5**
BIM	**Bigot**	**3.04**	**12**	*e*P	**Pn**	**04 12 53.2**	**+0.3**
BIM				*e*S	**Sn**	**04 13 27.1**	**-1.2**
ZAM	**Aeronautique**	**3.10**	**13**	*e*P	**Pn**	**04 12 54.5**	**+0.9**
LPMF	**Morne Lapointe**	**3.12**	**14**	*e*P	**Pn**	**04 12 54.4**	**+0.5**
FDF	**Fort de France**	**3.23**	**10**	*e*S	**Sn**	**04 13 33.1**	**+0.1**
PML	**Morne Lenard**	**3.27**	**9**	*e*P	**Pn**	**04 12 57.0**	**+1.0**
GBMF	**Grand Be**	**3.29**	**10**	*e*P	**Pn**	**04 12 57.4**	**+1.0**
PCM	**Pelee Case Pet**	**3.30**	**9**	*e*P	**Pn**	**04 12 57.4**	**+0.9**
BAMF	**Morne Balai**	**3.31**	**10**	*e*P	**Pn**	**04 12 57.6**	**+1.0**
DSLB	**Salisbury**	**3.90**	**5**	*e*P	**Pn**	**04 13 06.3**	**+1.9**
DSLB				*e*S	**Sn**	**04 13 47.8**	**-1.3**
MAGL	**Barre de l'ile**	**4.41**	**6**	*e*P	**Pn**	**04 13 13.6**	**+2.1**
MAGL	**Barre de l'ile**	**4.41**	**6**	*e*S	**Sn**	**04 14 01.1**	**-0.7**
BIRV	**Birongo**	**4.57**	**257**	*e*P	**Pn**	**04 13 15.0**	**+1.3**
BIRV				*e*S	**Sn**	**04 14 03.8**	**-1.8**
BENV	**Beln**	**5.97**	**255**	*e*P	**Pn**	**04 13 34.1**	**+1.3**
BENV				*e*S	**Sn**	**04 14 36.7**	**-3.1**
CACV	**CAICARA DEL OR**	**6.16**	**231**	*e*P	Pn	04 13 30.2	-5.2
CACV				*e*S	Sn	04 14 32.3	-12
BAUV	**El Baul**	**6.72**	**248**	*e*P	**Pn**	**04 13 43.5**	**+0.6**
BAUV	**El Baul**	**6.72**	**248**	*e*S	**Sn**	**04 14 57.4**	**-0.7**
BAUV	**El Baul**	**6.72**	**248**	*e*P	**Pn**	**04 13 43.4**	**+0.4**
BAUV				*e*S	**Sn**	**04 14 54.4**	**-3.7**

NNC 15 04:30:01.4±4.4, 40°.20N×70°.24E, h0km, mb3.3, mpv2.8, Error ellipse: s-maj=40.2km s-min=25.1km az=22.0
SOME 15 04:30:03.4, 40°.33N×70°.50E, h5km
KRNET 15 04:30:04.8±0.1, 40°.29N×70°.42E, h18km, mb3.6
ISU 15 04:30:05.3, 40°.32N×70°.47E, h15km

ISC 15 04:30:04.5±1.0, 40°.26N±0°.02×70°.36E±0°.02, h10km±9km, n34, σ2§32/67, 24C-4D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BTK	**Batken**	**0.40**	**120**	⇓*e*P	**Pg**	**04 30 12.1**	**-0.4**
	baz=27						
BTK				⇓*i*S	**Sg**	**04 30 17.9**	**+0.1**
	baz=27						
BTK	**Batken**	**0.40**	**120**	P	**Pg**	**04 30 11.7**	**-0.8**
BTK				S	**Sg**	**04 30 17.7**	**-0.1**
CHMI	**Chimion**	**0.89**	**89**	P	**Pb**	**04 30 22.4**	**+0.4**
CHMI				S	**Sg**	**04 30 32.5**	**-0.6**
FRG	**Fergana**	**1.09**	**84**	P	**Pg**	**04 30 25.2**	**-0.3**
FRG				S	**Sg**	**04 30 39.3**	**-0.3**
SHAK	**Shakhimardan**	**1.10**	**106**	P	**Pn**	**04 30 26.5**	**+0.4**
SHAK				S	**Sb**	**04 30 40.6**	**+0.5**
GAR	**Garm**	**1.26**	**182**	⇑*i*P	**Pg**	**04 30 28.6**	**-0.1**
	baz=84						
GAR				⇑*i*S	**Sn**	**04 30 46.1**	**+0.7**
	baz=84						
CHMG	**Chimgan**	**1.31**	**348**	P	**Pn**	**04 30 28.4**	**-0.6**
CHMG				S	**Sb**	**04 30 45.9**	**-0.4**
TGS	**TashGRES**	**1.32**	**331**	P	**Pg**	**04 30 30.0**	**+0.1**
TGS				S	**Sn**	**04 30 48.7**	**+2.0**
TAS	**Tashkent**	**1.33**	**323**	⇑*i*P	**Pg**	**04 30 29.7**	**-0.4**
	baz=21						
TAS				⇑*i*S	**Sg**	**04 30 47.8**	**+0.4**
	baz=21						
TAS	**Tashkent**	**1.33**	**323**	P	**Pg**	**04 30 30.0**	**-0.1**
TAS				S	**Sg**	**04 30 48.4**	**+1.0**
DRK	**Karamyk**	**1.35**	**125**	⇑*i*P	**Pn**	**04 30 29.6**	**-0.1**
	baz=27						
DRK				⇑*i*S	**Sb**	**04 30 47.5**	**-0.1**
	baz=27						
TRKS	**Terek-Say**	**1.40**	**25**	⇑*i*P	**Pn**	**04 30 28.8**	**-1.4**
	baz=26						
TRKS				⇑*i*S	**Sb**	**04 30 46.4**	**-2.2**
	baz=26						
CHRV	**Charvak**	**1.41**	**347**	P	**Pn**	**04 30 30.0**	**-0.3**
CHRV				S	**Sb**	**04 30 48.8**	**-0.2**
TSTA	**Tashata**	**1.64**	**78**	P	**Pb**	**04 30 34.7**	**-0.2**
TSTA				S	**Sb**	**04 30 56.8**	**+1.1**
CHGR	**Chuyangaron**	**1.86**	**211**	⇑*i*P	**Pg**	**04 30 39.2**	**-0.9**
	baz=11						
CHGR				⇑*i*S	**Sg**	**04 31 04.1**	**-0.1**
	baz=11						
OHH	**Osh**	**1.87**	**81**	⇑*i*P	**Pb**	**04 30 38.3**	**-0.4**
	baz=82						
OHH				⇑*i*S	**Sb**	**04 31 02.4**	**+0.2**
	baz=82						
BXML	**Bakhmal**	**1.88**	**253**	P	**Pg**	**04 30 44.1**	**+3.5**
BXML				S	Sg	04 31 12.9	+7.9
IUG	**Iuzhnay**	**1.90**	**353**	*e*P	**Pb**	**04 30 39.0**	**-0.3**
	baz=51						
IUG				*e*S	**Sb**	**04 31 04.5**	**+1.4**
	baz=51						
IUG	**Iuzhnay**	**1.90**	**353**	*e*P	**Pb**	**04 30 39.0**	**-0.3**
	3µm,0.2s						
IUG				*e*S	**Sb**	**04 31 04.5**	**+1.4**
	272nm,0.2s						
ARK	**Arkit**	**1.95**	**38**	⇑*i*P	**Pn**	**04 30 39.3**	**+1.5**
	baz=37						
ARK				⇑*i*S	**Sn**	**04 31 04.2**	**+1.8**
	baz=37						
BRLS	**Borolday**	**2.79**	**352**	*e*P	**Pn**	**04 30 50.8**	**+1.5**
	2.7nm,0.1s						
BRLS				*e*S	**Sn**	**04 31 24.6**	**+1.6**
	42nm,0.1s						
KK31	**Karatay Array**	**2.84**	**2**	Pn	**Pn**	**04 30 50.2**	**+0.3**
	0.4nm,0.3s,baz=189,slow=15,SNR=154						
KK31				⇑Pg	**Pb**	**04 30 55.6**	**+0.3**
	4.5nm,0.3s,baz=189,slow=17,SNR=7.1						
KK31				Lg	Lg	04 31 32.5	
	21nm,0.4s,baz=185,slow=35,SNR=43						
KKAR	**Karatay Array**	**2.84**	**2**	⇑*i*P	**Pn**	**04 30 51.7**	**+1.8**

LUWI	**Luwuk**	**1.76**	**207**	P	**Pn**	04 33 45.3	**+0.8**
LUWI				S	**S**	04 34 16.8	**-0.7**
LUWI	**Luwuk**	**1.76**	**207**	P	**Pn**	04 33 45.6	**+1.1**
APSI	**Ampana**	**2.41**	**233**	P	**Pn**	04 33 51.6	**+1.4**
APSI				S	**S**	04 34 27.5	**-0.3**
TOLI2	**Tolitoli**	**2.85**	**282**	Pn	**Pn**	04 33 56.2	**+1.5**
TOLI2	**Tolitoli**	**2.85**	**282**	P	**Pn**	04 33 56.1	**+1.5**
SANI	**Sanana**	**3.52**	**137**	P	**Pn**	04 34 02.4	**+0.5**
SANI				S	**S**	04 34 45.1	**-3.8**
SANI	**Sanana**	**3.52**	**137**	P	**Pn**	04 34 02.4	**+0.5**
MPSI	**Mapaga**	**3.68**	**267**	P	**Pn**	04 34 04.9	**+1.2**
TNTI	**Ternate**	**3.80**	**86**	Pn	**Pn**	04 34 07.5	**+2.5**
TNTI	**Ternate**	**3.80**	**86**	P	**Pn**	04 34 06.8	**+1.8**
LBMI	**Labuha**	**4.09**	**107**	P	**Pn**	04 34 10.6	**+2.2**
TTSI	**Tana Toraja** 0.2nm45nm,0.7s	**5.17**	**227**	P	**Pn**	04 34 22.9	**+1.7**
SPSI	**Sidrap Palu** 0.1nm20nm,0.6s	**5.87**	**220**	P	**Pn**	04 34 30.8	**+1.1**
BNSI	**Bone** 0.1nm25nm,0.9s	**6.01**	**215**	P	**Pn**	04 34 32.5	**+1.1**
MYLDM	**Lahad Datu**	**6.85**	**312**		**Pn**	04 34 43.4	**+1.5**
BSSI	**Bau Bau, Buton** 0.2nm48nm,1.4s	**7.32**	**205**	P	**Pn**	04 34 48.3	**+0.6**
SIJI	**Sorong** 12nm,0.7s,baz=304,slow=19,SNR=6.7	**7.81**	**100**	P	**Pn**	04 34 57.2	**+3.2**
FAKI	**Fak Fak**	**9.32**	**112**	Pn	**Pn**	04 35 15.2	**+2.3**
FAKI	**Fak Fak** 15nm,1.0s	**9.32**	**112**	P	**Pn**	04 35 15.8	**+2.9**
EDFI	**Ende, Flores** 10nm,0.8s	**9.41**	**191**	P	**Pn**	04 35 15.8	**+1.7**
BATI	**Baumata** 70nm,0.5s,baz=297,slow=10.0,SNR=7.0	**10.67**	**180**	P	**P**	04 35 33.0	**-1.1**
BATI	**Baumata** 50nm,0.6s	**10.67**	**180**	P	**Pn**	04 35 29.5	**-0.3**
MTN	**Manton Dam**	**15.26**	**151**	P	**P**	04 36 26.3	**+1.4**
MTN	**Manton Dam**	**15.26**	**151**	P	**Pn**	04 36 26.5	**+0.7**
KDU	**Kakadu**	**15.83**	**146**	P	**Pn**	04 36 33.2	**+0.7**
KNRA	**Kununurra**	**16.91**	**163**	P	**P**	04 36 44.1	**+1.3**
KNRA	**Kununurra**	**16.91**	**163**	P	**P**	04 36 43.5	**+0.7**
MBWA	**Marble Bar**	**21.89**	**190**	P	**P**	04 37 33.3	**-1.5**
PSA00	**Pilbara Seismi**	**22.27**	**189**	P	**P**	04 37 38.0	**-0.3**
PSA00	comp=Z,5.2nm,1.1s			IAmb	IAmb	04 37 46.1	
PSA00	**Pilbara Seismi**	**22.27**	**189**	P	**P**	04 37 38.9	**+0.6**
PSA00	**Pilbara Seismi**	**22.27**	**189**	P	**P**	04 37 37.8	**-0.5**
WB0	**Warramunga Arr**	**22.80**	**153**	P	**P**	04 37 43.2	**+0.1**
WB0	comp=Z,9.6nm,0.8s			IAmb	IAmb	04 37 45.7	
WRAB	**Tennant Creek**	**22.92**	**153**	P	**P**	04 37 44.7	**+0.4**
WRAB	comp=Z,11nm,1.1s			IAmb	IAmb	04 37 47.0	
WRA	**Warramunga Arr** comp=Z,7.4nm,0.6s,baz=336,slow=9.7,SNR=165	**22.92**	**153**	P	**P**	04 37 44.6	**+0.3**
WRA	comp=Z,3.2nm,0.8s,baz=332,slow=16,SNR=6.9			S	**S**	04 41 30.1	**-4.2**
WRA	comp=Z,7.4nm,0.6s **Warramunga Arr**	**22.92**	**153**	P	**P**	04 37 43.4	**-0.9**
WB2	**Warramunga Arr**	**22.93**	**153**	P	**P**	04 37 44.8	**+0.5**
WB2	comp=Z,14nm,1.1s			IAmb	IAmb	04 37 47.0	
WR0	**Warramunga Arr**	**23.03**	**153**	P	**P**	04 37 45.5	**+0.3**
WR0	comp=Z,12nm,0.8s			IAmb	IAmb	04 37 47.5	
WRKA	**Warakurna**	**25.83**	**170**	P	**P**	04 38 10.9	**+0.4**
AS31	**Alice Springs**	**26.07**	**158**	P	**P**	04 38 13.5	**+0.9**
AS31	comp=Z,1.3nm,0.3s			IAmb	IAmb	04 38 16.3	
ASAR	**Alice Springs** comp=Z,0.6nm,0.3s,baz=346,slow=13,SNR=14	**26.07**	**158**	P	**P**	04 38 13.2	**+0.5**
ASAR	comp=Z,1.1nm,0.7s,baz=328,slow=1.8,SNR=6.0			PcP	**PcP**	04 41 33.3	**+0.2**
ASAR	comp=Z,0.9nm,0.7s,baz=348,slow=2.5,SNR=7.9			ScP	**ScP**	04 44 46.3	**-1.2**
QIS	**Mount Isa**	**26.19**	**144**	P	**P**	04 38 14.8	**+1.1**
FORT	**Forrest**	**31.43**	**173**	P	**P**	04 39 00.6	**+0.8**
FORT	**Forrest** comp=Z,34nm,1.3s	**31.43**	**173**	P	**P**	04 38 59.9	**0.0**
STKA	**Stephens Creek** comp=Z,2.8nm,0.6s,baz=337,slow=8.8,SNR=6.1	**36.48**	**154**	P	**P**	04 39 44.1	**+1.0**
STKA	**Stephens Creek**	**36.48**	**154**	P	**P**	04 39 44.3	**+1.2**
MJAR	**Matsushiro Arr** comp=Z,2.0nm,0.5s,baz=182,slow=8.8,SNR=8.1	**38.31**	**19**	P	**P**	04 39 58.2	**-0.2**
USRK	**Ussuriysk Ar.** comp=Z,1.9nm,0.4s,baz=213,slow=9.5,SNR=3.1	**44.12**	**9**	P	**P**	04 40 45.8	**+0.5**
USRK	**Ussuriysk Ar.**	**44.12**	**9**	P	**P**	04 40 45.7	**+0.4**
SONM	**Songino Array** comp=Z,1.3nm,0.3s,baz=163,slow=9.0,SNR=5.6	**49.42**	**345**	P	**P**	04 41 25.9	**-0.5**
SONM	comp=Z,3.5nm,0.4s,baz=134,slow=4.2,SNR=6.5			PcP	**PcP**	04 42 44.3	**-0.1**
MKAR	**Makanchi Array** comp=Z,2.4nm,0.5s,baz=125,slow=8.5,SNR=20	**58.47**	**328**	P	**P**	04 42 30.9	**-0.5**
MKAR	comp=Z,0.8nm,0.5s,baz=141,slow=1.6,SNR=5.2			PcP	**PcP**	04 43 18.2	**-0.8**
PETK	**Petropavlovsk-** comp=Z,1.5nm,0.6s,baz=202,slow=11,SNR=5.0	**59.57**	**23**	P	**P**	04 42 38.9	**0.0**
ZALV	**Zalesovo Beam** comp=Z,0.8nm,0.4s,baz=108,slow=9.5,SNR=3.8	**62.07**	**335**	P	**P**	04 42 54.4	**-1.2**
ILAR	**Eielson Array** comp=Z,0.2nm,0.5s,baz=241,slow=6.2,SNR=5.0	**89.32**	**25**	P	**P**	04 45 27.4	**-1.7**
TORD	**Torodi Ar. Bea** comp=Z,0.6nm,0.6s,baz=264,slow=3.6,SNR=5.0	**120.82**	**286**	PKP	**PKPdf**	04 51 23.3	**-1.4**

*KRSC **15** 04:34:21.6±1.4,56.˚14N×163.˚53E,h6km±11km,ML3.6*
*IDC **15** 04:34:22.0±2.7,55.˚73N×164.˚36E,h0km,mb3.1/2,*
mbtmp3.1/3,ML2.1/1,Error ellipse: s-maj=239.8km
s-min=32.1km az=145.0
ISC 15 04:34:17.1±3.3,55.˚97N±0.˚06×163.˚8E±0.˚2,h9km±11km,
n36,σ1s57/40,Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**0.60**	**295**	*e*P	**Pb**	**04 34 30.1**	**+0.5**
KBTR				*e*S	**Sg**	**04 34 35.5**	**-0.9**
KBG	**Krutoberegovo**	**0.67**	**296**	*e*P	**Pb**	**04 34 31.1**	**+0.2**
KBG				*e*S	**Sg**	**04 34 36.5**	**-2.4**
SMKR	**Semkarok**	**1.44**	**297**	*e*P	**Pb**	**04 34 44.0**	**0.0**
SMKR				*e*S	**Sn**	**04 35 01.8**	**-0.5**
BKI	**Bering**	**1.45**	**121**	*e*P	P*g*	04 34 52.2	+7.3
BKI				*e*S	Sg	04 35 14.2	+10
BDR	**Baidarnaya**	**1.56**	**294**	*e*P	**Pb**	**04 34 46.1**	**0.0**
BDR				*e*S	**Sn**	**04 35 05.2**	**-0.2**
SRKR	**Sorokina**	**1.62**	**296**	*e*P	**Pb**	**04 34 47.1**	**+0.1**
BZGR	**Bezymyannyi-Gr**	**1.74**	**270**	*e*P	**Pg**	**04 34 51.7**	**+1.3**
BZGR				*e*S	**Sb**	**04 35 11.8**	**+0.7**
KLY	**Klyuchi**	**1.79**	**283**	*e*P	**Pb**	**04 34 48.9**	**-1.1**
KLY				*e*S	**Sn**	**04 35 09.9**	**-1.0**
KRSR	**Krestovskiy**	**1.82**	**279**	*e*P	**Pg**	**04 34 52.0**	**0.0**
MKZ	**Mys Kozlova**	**1.84**	**221**	*e*P	**Pg**	**04 34 55.8**	**+3.5**
BZWR	**Bezymyannyi-We**	**1.85**	**271**	*e*P	**Pg**	**04 34 52.6**	**+0.1**
BZWR				*e*S	**Sb**	**04 35 16.0**	**+1.6**
KIRR	**Kirishev**	**1.94**	**271**	*e*P	**Pg**	**04 34 54.8**	**+0.6**
KIRR				*e*S	**Sb**	**04 35 19.2**	**+2.3**
KPT	**Kopyto**	**2.01**	**272**	*e*P	**Pg**	**04 34 56.6**	**+1.1**
KPT				*e*S	**Sb**	**04 35 21.0**	**+2.2**
KMNR	**Kamenistaya**	**2.01**	**266**	*e*P	**Pg**	**04 34 56.1**	**+0.5**
TUMR	**Tumrok**	**2.18**	**253**	*e*P	**Pg**	**04 35 00.2**	**+1.5**
KOZ	**Kozyrevsk**	**2.20**	**274**	*e*P	**Pg**	**04 34 59.1**	**-0.1**
ESO	**Esso**	**2.86**	**271**	*e*P	**Pb**	**04 35 08.5**	**+0.2**
KII	**Karymskiy**	**3.16**	**234**	*e*P	**Pb**	**04 35 14.8**	**+1.5**
SPN	**Mys Shipunski**	**3.62**	**219**	*e*P	**Pb**	**04 35 19.8**	**-1.2**
SPN				*e*S	**Sb**	**04 36 04.0**	**-0.9**
SDLR	**Sedlovina**	**3.92**	**229**	*e*P	**Pb**	**04 35 25.8**	**-0.5**
KRER	**Koryakskii**	**3.96**	**230**	*e*P	**Pb**	**04 35 27.7**	**+0.6**
KRX	**Arik**	**3.97**	**231**	*e*P	**Pb**	**04 35 27.6**	**+0.5**
SMAR	**Somma**	**3.97**	**229**	*e*P	**Pb**	**04 35 27.8**	**+0.6**
AVH	**Avacha**	**3.99**	**229**	*e*P	**Pb**	**04 35 27.9**	**+0.4**
UGLR	**Uglovaya**	**4.00**	**228**	*e*P	**Pb**	**04 35 28.5**	**+0.9**
KOK	**Koryaka**	**4.02**	**230**	*e*P	**Pb**	**04 35 27.9**	**-0.1**
GNL	**Ganaly**	**4.08**	**239**	*e*P	**Pb**	**04 35 26.9**	**-2.1**
PETK	**Petropavlovsk-** 0.4nm,0.3s,baz=67,slow=11,SNR=3.4	**4.56**	**234**	Pn	**Pb**	**04 35 34.0**	**-3.1**
	0.7nm,0.4s						
RUS	**Russkaya**	**4.70**	**223**	*e*P	**Pb**	**04 35 36.4**	**-3.2**
MTVR	**Mutnovka**	**4.79**	**226**	*e*P	**Pb**	**04 35 37.9**	**-3.3**
ASAK	**Asacha**	**4.98**	**226**	*e*P	**Pb**	**04 35 41.8**	**-2.6**
ILAR	**Eielson Array** 0.3nm,0.6s,baz=269,slow=9.9,SNR=5.4	**25.28**	**50**	P	P	04 39 48.4	+5.2
	0.3nm,0.6s						
H11N2	**WAKE ISLAND Hy** baz=357,slow=76,SNR=95	**36.25**	**175**	T	T	05 20 09.1	
H11N3	**WAKE ISLAND Hy** baz=357,slow=76,SNR=122	**36.27**	**175**	T	T	05 20 14.8	
H11N1	**WAKE ISLAND Hy** baz=357,slow=76,SNR=106	**36.27**	**175**	T	T	05 20 15.7	
YKA	**Yellowknife Ar** 0.1nm,0.5s,baz=300,slow=8.4,SNR=5.2	**39.60**	**46**	P	P	04 41 54.1	+5.9
	0.1nm,0.5s						

*IDC **15** 04:41:37.1±1.1,0.˚46N×126.˚58E,h0km,mb4.1/5,*
mbtmp4.1/5,Error ellipse: s-maj=64.9km s-min=20.1km
az=73.0
*DJA **15** 04:41:39.1±0.3,0.˚1N±3.˚3×12.˚6E±.˚,h10km,M3.6/9,MLv3.6/9*
*NEIC **15** 04:41:41.0±1.1,1.˚3N±0.˚1×128.˚6E±0.˚1,h45km±11km,*
mb4.1/7,Error ellipse: s-maj=21.9km s-min=14.8km
az=159.0
ISC 15 04:41:38.7±0.8,0.˚30N±0.˚07×126.˚35E±0.˚05,h10km,n22,
σ1s05/24,mb4.2/10,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.12**	**65**		**Pg**	**04 42 00.6**	**+0.2**
TNTI				Sn	**Sn**	**04 42 19.2**	**+3.1**
TNTI	**Ternate**	**1.12**	**65**	P	**Pb**	**04 42 00.0**	**-0.3**
TNTI				S	**Sg**	**04 42 14.9**	**-0.1**
LBMI	**Labuha**	**1.48**	**129**	P	**Pn**	**04 42 05.0**	**-0.5**
LBMI				S	**Sn**	**04 42 24.5**	**-0.5**
SANI	**Sanana**	**2.36**	**189**	P	**Pn**	**04 42 18.1**	**+0.5**
KMSI	**Cibinong**	**2.38**	**277**	P	**Pn**	**04 42 17.5**	**-0.3**
LUWI	**Luwuk**	**3.81**	**250**	Pn	Sn	04 43 11.7	-11
AAI	**Ambon**	**4.37**	**155**	P	**Pn**	**04 42 46.4**	**+1.2**
APSI	**Ampana**	**4.85**	**256**	P	**Pn**	**04 42 53.6**	**+1.8**
WB0	**Warramunga Arr**	**21.45**	**159**	P	**P**	**04 46 27.8**	**+0.4**
WB0	comp=Z,20nm,1.5s			IAmb	IAmb	04 47 00.3	
WRA	**Warramunga Arr** comp=Z,3.0nm,0.5s,baz=340,slow=11,SNR=26	**21.59**	**159**	P	**P**	**04 46 29.4**	**+0.5**
	comp=Z,3.0nm,0.5s						
WRA	**Warramunga Arr**	**21.59**	**159**	P	**P**	**04 46 29.4**	**+0.5**
WB2	**Warramunga Arr**	**21.59**	**159**	P	**P**	**04 46 29.5**	**+0.6**
WB2	comp=Z,9.5nm,0.9s			IAmb	IAmb	04 46 33.8	
WR0	**Warramunga Arr**	**21.68**	**159**	P	**P**	**04 46 30.5**	**+0.7**
WR0	comp=Z,15nm,1.4s			IAmb	IAmb	04 46 50.7	
AS31	**Alice Springs**	**24.93**	**163**	P	**P**	**04 47 02.4**	**+0.1**
AS31	comp=Z,1.5nm,0.7s			IAmb	IAmb	04 47 05.2	
ASAR	**Alice Springs** comp=Z,5.1nm,0.8s,baz=349,slow=13,SNR=38	**24.93**	**163**	P	**P**	**04 47 03.8**	**+1.5**
	comp=Z,5.1nm,0.8s						
ASAR	**Alice Springs**	**24.93**	**163**	P	**P**	**04 47 02.6**	**+0.3**
STKA	**Stephens Creek** comp=Z,1.7nm,0.7s,baz=344,slow=15,SNR=4.0	**35.11**	**157**	P	**P**	**04 48 31.6**	**-0.8**
	comp=Z,1.7nm,0.7s						
PETK	**Petropavlovsk-** comp=Z,1.4nm,0.6s,baz=193,slow=10,SNR=4.7	**58.74**	**22**	P	**P**	**04 51 35.6**	**-1.1**
	comp=Z,1.4nm,0.6s						
MK31	**Makanchi Array**	**60.16**	**327**	P	**P**	**04 51 46.8**	**0.0**
MK31	comp=Z,0.9nm,0.7s			IAmb	IAmb	04 51 49.2	
MKAR	**Makanchi Array** comp=Z,0.8nm,0.4s,baz=124,slow=7.0,SNR=12	**60.16**	**327**	P	**P**	**04 51 46.4**	**-0.4**
	comp=Z,0.8nm,0.4s						
MKAR	**Makanchi Array**	**60.16**	**327**	P	**P**	**04 51 45.9**	**-0.8**
KURK	**Kurchatov**	**64.43**	**329**	P	**P**	**04 52 14.1**	**-1.1**

*MDD **15** 04:46:29.1±1.0,37.˚02N×10.˚93W,h15km±25km,*
mb_Lg2.8/7,Error ellipse: s-maj=29.7km s-min=6.4km
az=55.0
*INMG **15** 04:46:30.0±1.0,36.˚97N×10.˚86W,h10km,ML2.0,Error*
ellipse: s-maj=4.7km s-min=3.3km az=83.0
*IGIL **15** 04:46:30.1,36.˚95N×10.88W,h17km,ML1.8*
*CNRM **15** 04:46:40.8,35.˚95N×9.˚93W,h0km*
ISC 15 04:46:23.8±1.8,36.˚81N±0.˚05×10.˚88W±0.˚09,h10km,n37,
σ2s77/65,3C-1D,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**1.68**	**78**	*i*P*n*	**Pg**	**04 46 56.7**	**+0.7**
PFVI				*e*Sn	**Sg**	**04 47 17.0**	**-0.7**
PFVI				A	A	04 47 17.7	
	11nm,0.3s						
MORF	**Marmelete**	**1.85**	**74**	*e*P	**Pg**	**04 46 59.0**	**-0.3**
MORF				*e*S	**Sn**	**04 47 20.1**	**+0.9**
MORF				IAML		04 47 22.8	
	comp=N,16nm,0.3s						
MORF	**Marmelete**	**1.85**	**74**	*e*P*n*	**Pg**	**04 46 59.0**	**-0.3**
MORF				*e*Sn	**Sb**	**04 47 21.1**	**0.0**
MORF				A	A	04 47 27.0	
	comp=N,5.2nm,0.5s						
PTEO	**Sao Teotonio**	**1.87**	**66**	*e*P*n*	**Pg**	**04 46 59.2**	**-0.6**
PTEO				*e*Sn	**Sb**	**04 47 20.9**	**-0.7**
PTEO				A	A	04 47 23.3	
	comp=N,4.4nm,0.4s						
PNCL	**Nicolau / Gran**	**2.28**	**54**	*e*P*n*	**Pb**	**04 47 04.3**	**-0.8**
PNCL				*e*Sn	**Sn**	**04 47 29.9**	**+0.2**
PNCL				A	A	04 47 32.1	
	comp=N,4.9nm,0.1s						
MESJ	**Messejana**	**2.36**	**63**	*e*P	**Pb**	**04 47 05.7**	**-0.7**
MESJ				*e*S	**Sn**	**04 47 31.6**	**0.0**
MESJ				IAML		04 47 32.5	
	comp=N,3.1nm,0.2s						
MESJ	**Messejana**	**2.36**	**63**	*e*P*n*	**Pb**	**04 47 05.7**	**-0.7**
MESJ				*e*Sn	**Sn**	**04 47 32.3**	**+0.7**
MESJ				A	A	04 47 34.4	
	comp=N,2.7nm,0.2s						
PBDV	**Barranco-do-Ve**	**2.40**	**79**	*i*P*n*	**Pb**	**04 47 07.0**	**-0.1**
PBDV				*e*Sn	**Sn**	**04 47 34.6**	**+1.9**
PBDV				A	A	04 47 38.3	
	comp=N,2.2nm,0.3s						
PCVE	**Castro Verde**	**2.41**	**69**	*i*P*n*	**Pb**	**04 47 06.8**	**-0.5**
PCVE				*e*Sn	**Sn**	**04 47 33.7**	**+0.7**
PCVE				A	A	04 47 35.8	
	comp=N,2.9nm,0.2s						
PMAFR	**Mafra**	**2.49**	**30**	*e*P*n*	**Pn**	**04 47 06.6**	**+2.2**
PMAFR				*e*Sn	**Sn**	**04 47 33.2**	**-1.7**
PMAFR				A	A	04 47 37.2	
	comp=N,18nm,0.7s						
PVAQ	**Vaqueiros**	**2.60**	**76**	*e*P*n*	**Pb**	**04 47 09.7**	**-0.8**
PVAQ				*e*Sn	**Sn**	**04 47 39.7**	**+2.2**
PVAQ				A	A	04 47 42.3	
	comp=N,4.4nm,0.5s						
PBEJ	**Beja**	**2.69**	**62**	*e*Sn	**Sn**	**04 47 40.1**	**+0.3**
PBEJ				A	A	04 47 41.3	
	comp=N,3.8nm,0.2s						
EGRO	**El Granado**	**2.81**	**74**	P*n*	**Pb**	**04 47 12.2**	**-1.9**
EGRO				Sn	**Sn**	**04 47 44.6**	**+1.9**
EGRO				*i* Vmb_Lg		04 47 48.9	
EVO	**Evora**	**2.85**	**52**	P	**Pb**	**04 47 13.8**	**-1.1**
EVO				S	**Sn**	**04 47 43.1**	**-0.7**
EVO	**Evora**	**2.85**	**52**	*e*P*n*	**Pn**	**04 47 12.2**	**+2.8**
EVO				*e*Sn	**Sn**	**04 47 43.3**	**-0.5**
EVO				A	A	04 47 45.0	
	comp=N,7.6nm,0.1s						
PMTG	**Montargil**	**3.08**	**42**	*e*P*n*	**Pn**	**04 47 14.9**	**+2.3**
PMTG				*e*Sn	**Sn**	**04 47 48.0**	**-1.5**
PMTG				A	A	04 47 51.8	
	comp=N,2.4nm,0.1s						
PSBE	**So Bento**	**3.16**	**31**	*e*Sn	**Sn**	**04 47 50.8**	**-0.7**
PSBE				A	A	04 47 51.9	
	comp=N,5.4nm,0.7s						
PESTR	**Estremoz**	**3.32**	**51**	*e*P*n*	**Pn**	**04 47 18.5**	**+2.7**
PESTR				*e*Sn	**Sn**	**04 47 54.9**	**-0.4**
PESTR				A	A	04 47 57.3	
	comp=N,2.4nm,0.6s						
PBAR	**Barrancos**	**3.35**	**65**	*e*Sn	**Sn**	**04 47 55.6**	**-0.4**
EMIN	**Mina Concepcio**	**3.49**	**73**	P*n*	**Pn**	**04 47 21.3**	**+3.1**
EMIN				Sn	**Sn**	**04 47 59.8**	**+0.2**
EMIN				*i* Vmb_Lg		04 48 04.0	
EBAD	**Badajoz**	**3.63**	**56**	P*n*	**Pn**	**04 47 22.7**	**+2.6**
EBAD				Sn	**Sn**	**04 48 02.6**	**-0.3**
EBAD				*i* Vmb_Lg		04 48 04.9	
PCAS	**Casmilo, Conde**	**3.74**	**29**	*e*Sn	**Sn**	**04 48 04.2**	**-1.6**
PCAS				A	A	04 48 04.8	
	comp=N,4.1nm,0.5s						
PMRV	**Marv??o**	**3.80**	**45**	*e*P*n*	**Pn**	**04 47 24.4**	**+2.0**
PMRV				*e*Sn	**Sn**	**04 48 05.8**	**-1.3**
PMRV				A	A	04 48 07.7	
	comp=N,2.4nm,0.2s						
PCBR	**Castelo Branco**	**4.04**	**40**	*e*Sn	**Sn**	**04 48 11.2**	**-1.9**
MTE	**Manteigas**	**4.44**	**35**	*e*Sn	**Sn**	**04 48 21.0**	**-2.0**
ECAB	**El Cabril**	**4.53**	**72**	P*n*	**Pn**	**04 47 35.7**	**+3.2**
ECAB				Sn	**Sn**	**04 48 24.6**	**-0.6**
ECAB				*i* Vmb_Lg		04 48 28.4	
PVIS	**Viseu**	**4.55**	**30**	*e*Sn	**Sn**	**04 48 23.3**	**-2.4**
EPLA	**Plasencia**	**4.98**	**48**	Sn	**Sn**	**04 48 34.0**	**-2.2**
EADA	**Adamuz**	**5.19**	**73**	P*n*	**Pn**	**04 47 44.7**	**+3.1**
EADA				Sn	**Sn**	**04 48 42.1**	**+0.5**
EADA				*i* Vmb_Lg		04 48 44.5	
MVO	**Moncorvo**	**5.29**	**33**	*e*Sn	**Sn**	**04 48 40.8**	**-3.1**
MVO				A	A	04 48 42.8	
	comp=N,3.9nm,0.5s						
ELOB	**Lobios**	**5.51**	**23**	P*n*	**Pn**	**04 47 46.9**	**+1.0**
ELOB				Sn	**Sn**	**04 48 44.1**	**-5.3**
ELOB				*i* Vmb_Lg		04 48 47.0	
PAB	**San Pablo**	**5.83**	**60**	P*n*	**Pn**	**04 47 52.9**	**+2.5**
PAB				Sn	**Sn**	**04 48 55.2**	**-2.1**
PAB				*i* Vmb_Lg		04 49 09.6	
OUK	**Oukaimeden**	**6.12**	**155**	P	**Pn**	**04 47 57.5**	**+2.8**
OUK				S	**Sn**	**04 48 57.9**	**-7.0**
MD31	**MD31**	**6.39**	**126**	P	**Pn**	**04 48 01.8**	**+3.8**
MD31				S	**Sn**	**04 49 02.9**	**-8.1**
MDT	**Midelt**	**6.52**	**126**	P	**Pn**	**04 48 01.8**	**+2.0**
MDT				S	**Sn**	**04 49 06.0**	**-8.4**
TTIG	**Tnine Tigouga,**	**6.57**	**161**	P	**Pn**	**04 48 05.2**	**+4.6**
TTIG				S	**Sn**	**04 49 08.7**	**-6.9**
OUZM	**OUZ**	**6.81**	**149**	P	**Pn**	**04 48 06.9**	**+3.0**
OUZM				S	**Sn**	**04 49 17.4**	**-4.1**

*IDC **15** 04:50:19.5±0.4,13.˚90N×144.˚94E,h125km±3km,mb3.9/11,*
mbtmp4.4/12,MS2.9/5,Error ellipse: s-maj=28.5km
s-min=12.8km az=99.0
*NEIC **15** 04:50:20.9±0.8,13.87N±0.˚09×144.˚9E±0.˚2,h129km±2km,*
mb4.5/32,Error ellipse: s-maj=23.1km s-min=8.7km
az=114.0
ISC 15 04:50:19.8±0.4,13.˚92N±0.˚07×144.˚9E±0.˚1,h125km,n92,
σ0s94/86,mb4.3/24,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam** 3µm,0.3s,baz=140,slow=1.6,SNR=340	**0.33**	**179**	P	**Pn**	**04 50 39.0**	**+1.5**
GUMO				S	**Sn**	**04 50 51.8**	**+1.0**
	9µm,0.3s,baz=17,slow=11,SNR=32						
GUMO	**Guam**	**0.33**	**179**	P*n*	**Pn**	**04 50 38.9**	**+1.4**
GUMO				Sn	**Sn**	**04 50 52.1**	**+1.3**
GUMO	**Guam**	**0.33**	**179**	P	**Pn**	**04 50 39.0**	**+1.5**
PATS	**Pohnpei**	**14.98**	**117**	P	**Pn**	**04 53 45.4**	**+0.1**
RABL	**Rabaul**	**19.40**	**158**	P	**P**	**04 54 37.0**	**+0.7**
JHJ2	**Mitsune**	**19.65**	**347**	P	**P**	**04 54 39.1**	**+0.3**
JHJ	**Hachijo jima 2** 124nm,0.4s,baz=239,slow=22,SNR=5.4	**19.66**	**347**	P	**P**	**04 54 39.6**	**+0.6**
SIJI	**Sorong** 27nm,0.8s,baz=33,slow=9.4,SNR=16	**19.93**	**224**	P	**Pn**	**04 54 46.7**	**+1.8**
DAV	**Davao City (W)** comp=Z,12nm,19.5s,baz=336,slow=39	**20.14**	**252**	LR	LR	05 03 30.3	
FAKI	**Fak Fak**	**20.89**	**218**	P	**P**	**04 54 52.7**	**+0.4**
FAKI	**Fak Fak**	**20.89**	**218**	P	**P**	**04 54 53.0**	**+0.7**
H11S3	**WAKE ISLAND Hy** baz=262,slow=75,SNR=28	**21.44**	**75**	T	T	05 16 41.7	
H11S1	**WAKE ISLAND Hy** baz=262,slow=75,SNR=24	**21.45**	**75**	T	T	05 16 44.2	
H11S2	**WAKE ISLAND Hy** baz=262,slow=75,SNR=25	**21.46**	**75**	T	T	05 16 43.5	
TNTI	**Ternate**	**21.69**	**234**	P	**P**	**04 55 00.7**	**-0.2**
H11N1	**WAKE ISLAND Hy** baz=257,slow=75,SNR=14	**21.85**	**72**	T	T	05 18 15.1	
H11N2	**WAKE ISLAND Hy** baz=257,slow=75,SNR=7.0	**21.86**	**72**	T	T	05 18 16.1	
H11N3	**WAKE ISLAND Hy** baz=257,slow=75,SNR=9.9	**21.87**	**72**	T	T	05 18 16.5	
MJAR	**Matsushiro Arr** comp=Z,13nm,19.0s,baz=168,slow=36	**23.30**	**346**	LR	LR	05 04 17.3	
ASAJ	**Asahikawa** comp=Z,12nm,19.1s,baz=182,slow=39	**30.15**	**357**	LR	LR	05 09 49.9	
KNRA	**Kununurra**	**33.44**	**209**	P	**P**	**04 56 46.3**	**-0.7**
QIS	**Mount Isa**	**34.65**	**189**	P	**P**	**04 56 56.6**	**-0.8**
WB0	**Warramunga Arr**	**35.03**	**197**	P	**P**	**04 56 59.8**	**-0.8**
WB0	comp=Z,23nm,1.2s			IAmb	IAmb	04 57 00.3	
WR0	**Warramunga Arr** comp=Z,16nm,1.1s	**35.17**	**197**	P	**P**	**04 57 01.1**	**-0.8**
WR0				IAmb	IAmb	04 57 01.6	
WRAB	**Tennant Creek**	**35.

BMO					IAmb	IAmb	05 02 46.1	
	comp=Z,4.0nm,0.9s							
KVN	**Kaiserville**	**86.71**	**51**	P		**P**	**05 02 50.4**	**+0.2**
KVN					IAmb	IAmb	05 02 51.4	
	comp=Z,2.9nm,0.6s							
NVAR	**Mina Array Bea**	**86.72**	**51**	P		**P**	**05 02 51.0**	**+0.7**
	comp=Z,1.8nm,0.5s,baz=265,slow=6.3,SNR=17							
	comp=Z,1.8nm,0.5s							
NVAR	**Mina Array Bea**	**86.72**	**51**	P		**P**	**05 02 50.5**	**+0.2**
ARCES	**ARCESS Array B**	**86.77**	**342**	P		**P**	**05 02 49.8**	**+0.1**
	comp=Z,2.1nm,0.8s,baz=63,slow=5.6,SNR=4.2							
	comp=Z,2.1nm,0.8s							
ARCES	**ARCESS Array B**	**86.77**	**342**	P		**P**	**05 02 49.4**	**-0.2**
ARCES					IAmb	IAmb	05 03 28.8	
	comp=Z,7.0nm,1.1s							
MFID	**Camas Ranch**	**87.18**	**46**	P		**P**	**05 02 52.8**	**+0.5**
MFID					IAmb	IAmb	05 02 53.4	
	comp=Z,6.4nm,0.8s							
TPH	**Tonopah**	**87.63**	**51**	P		**P**	**05 02 55.0**	**+0.3**
HLID	**Hailey**	**88.12**	**46**	P		**P**	**05 02 57.3**	**+0.4**
HLID					IAmb	IAmb	05 02 58.0	
	comp=Z,3.2nm,0.9s							
ELK	**Elko**	**88.36**	**48**	P		**P**	**05 02 58.1**	**0.0**
ELK					IAmb	IAmb	05 02 59.3	
	comp=Z,5.2nm,0.8s							
TPNV	**Topopah Spring**	**88.69**	**52**	P		**P**	**05 02 58.8**	**-0.9**
TPNV					IAmb	IAmb	05 03 00.9	
	comp=Z,2.7nm,0.7s							
R11A	**Troy Canyon, C**	**88.80**	**51**	P		**P**	**05 03 00.1**	**-0.1**
PSUT	**Pine Spring**	**90.04**	**50**	P		**P**	**05 03 06.6**	**+0.6**
PSUT					IAmb	IAmb	05 03 07.7	
	comp=Z,3.1nm,0.8s							
FINES	**FINESS Array B**	**90.86**	**335**	P		**P**	**05 03 07.1**	**-1.9**
	comp=Z,0.4nm,0.4s,baz=84,slow=5.9,SNR=5.6							
	comp=Z,0.4nm,0.4s							
FINES	**FINESS Array B**	**90.86**	**335**	P		**P**	**05 03 07.3**	**-1.7**
TCRU	**Three Creeks R**	**91.06**	**50**	P		**P**	**05 03 10.7**	**-0.1**
PDAR	**Pinedale Array**	**91.74**	**45**	P		**P**	**05 03 13.4**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=199,slow=2.7,SNR=5.1							
	comp=Z,0.3nm,0.5s							
VNDA	**Vanda**	**91.80**	**176**	P		**P**	**05 03 13.1**	**+0.2**
	comp=Z,0.9nm,0.8s,baz=305,slow=6.1,SNR=5.2							
	comp=Z,0.9nm,0.8s							
VNDA	**Vanda**	**91.80**	**176**	P		**P**	**05 03 13.5**	**+0.7**
TORD	**Torodi Ar. Bea**	**134.67**	**305**	PKP		**PKPdf**	**05 09 24.3**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=5.7,slow=2.1,SNR=2.3							
TORD	**Torodi Ar. Bea**	**134.67**	**305**			**PKPdf**	**05 09 24.4**	**-0.2**
PLCA	**Paso Flores**	**139.18**	**138**	PKP		**PKPdf**	**05 09 32.2**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=271,slow=3.8,SNR=3.6							
DBIC	**Dimbokro**	**143.64**	**302**	PKP		PKPab	05 09 38.5	+0.7
	comp=Z,1.0nm,0.3s,baz=84,slow=4.9,SNR=8.6							
LPAZ	**La Paz**	**148.08**	**98**	PKPbc		**PKPbc**	**05 09 53.2**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=260,slow=1.5,SNR=11							

*NNC **15** 04:53:26.0±3.7, 41.56N×80.47E, h0km, mb3.2, mpv2.8,*
Error ellipse: s-maj=28.8km s-min=22.6km az=28.0
*KRNET **15** 04:53:26.4±0.1, 41.10N×80.58E, mb2.8*
*SOME **15** 04:53:26.2, 41.63N×80.33E, h15km*

ISC 15 04:53:29.0±3.1, 41.74N±0.08×80.34E±0.07, h1km±16km, n21, σ1°89/42, 13C-4D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	**1.56**	**336**	***e*P**	**Pn**	**04 53 55.4**	**-2.6**
	51nm,0.2s						
SHLS				***e*S**	**Sn**	**04 54 16.1**	**-2.7**
	58nm,0.0s						
PDGK	**Podgornoye**	**1.71**	**339**	⇑Pn	**Pn**	**04 53 59.4**	**-0.6**
	2.5nm,0.3s						
PDGK				⇑*i*Sn	**Sg**	**04 54 26.1**	**+2.3**
	38nm,0.6s						
UZB	**Uzynbulak**	**1.71**	**326**	***e*P**	**Pn**	**04 53 59.4**	**-0.6**
	4.6nm,0.3s						
UZB				***e*S**	**Sb**	**04 54 22.9**	**-0.5**
	86nm,0.2s						
TARG	**Taragay, Kyrgy**	**1.90**	**270**	⇑***e*P**	**Pn**	**04 54 02.7**	**-0.1**
	baz=88						
TARG				⇑*i*S	**Sb**	**04 54 29.8**	**+0.8**
	baz=88						
SATY	**Saty**	**1.94**	**313**	***e*P**	**Pn**	**04 54 03.4**	**+0.1**
	8.6nm,0.1s						
SATY				***e*S**	**Sb**	**04 54 30.5**	**+0.4**
	40nm,0.2s						
ZHN	**Zhinishke**	**2.00**	**316**	***e*P**	**Pb**	**04 54 05.2**	**-1.1**
	20nm,0.2s						
ZHN				***e*S**	**Sg**	**04 54 33.5**	**+0.1**
	150nm,0.2s						
ANVS	**Anan'yevo**	**2.24**	**299**	⇑***i*P**	**Pb**	**04 54 10.9**	**+0.6**
	baz=9.0						
ANVS				⇑*i*S	**Sg**	**04 54 43.2**	**+2.3**
	baz=9.0						
KURS	**Kuram**	**2.37**	**318**	***e*P**	**Pb**	**04 54 11.0**	**-1.5**
	9.3nm,0.5s						
KURS				***e*S**	**Sb**	**04 54 43.1**	**+0.9**
	14nm,0.4s						
KDJ	**Kajisay**	**2.39**	**280**	⇑***i*P**	**Pn**	**04 54 10.5**	**+1.1**
	baz=93						
KDJ				⇑*i*S	**Sb**	**04 54 42.8**	**-0.1**
	baz=93						
DJR	**Jarkent**	**2.62**	**351**	***e*P**	**Pb**	**04 54 15.2**	**-1.6**
	2.8nm,0.1s						
DJR				***e*S**	**Sb**	**04 54 50.6**	**+1.1**
	36nm,0.1s						
TNSS	**Tian-Shan**	**2.83**	**298**	***e*P**	**Pb**	**04 54 18.7**	**-1.8**
	3.9nm,0.4s						
TNSS				***e*S**	**Sb**	**04 54 56.7**	**+1.0**
	7.9nm,0.4s						
ARXS	**Arharly**	**3.08**	**324**	***e*P**	**Pb**	**04 54 23.3**	**-1.3**
	2.3nm,0.3s						
ARXS				***e*S**	**Sb**	**04 55 04.8**	**+2.0**
	13nm,0.1s						
ULHL	**Ulahol**	**3.09**	**281**	⇑***i*P**	**Pn**	**04 54 20.3**	**+1.2**
	baz=91						
ULHL				⇑*i*S	**Sb**	**04 55 00.3**	**-3.0**
	baz=91						
CHKK	**Chushkaly**	**3.25**	**312**	***e*P**	**Pb**	**04 54 26.1**	**-1.3**
	2.4nm,0.1s						
CHKK				***e*S**	**Sb**	**04 55 09.1**	**+1.7**
	13nm,0.3s						
BOOM	**Boomskoye usch**	**3.36**	**284**	⇑***i*P**	**Pn**	**04 54 24.6**	**+1.9**
	baz=93						
BOOM				⇑*i*S	**Sb**	**04 55 06.7**	**-4.0**
	baz=93						
KST	**Kastek**	**3.49**	**293**	***e*P**	**Pb**	**04 54 30.4**	**-1.2**
	2.6nm,0.2s						
KST				***e*S**	**Sb**	**04 55 16.8**	**+2.2**
	11nm,0.3s						
KAPS	**Kapalarasan**	**3.61**	**349**	***e*P**	**Pb**	**04 54 33.9**	**+0.2**
	1.8nm,0.0s						
KAPS				***e*S**	**Sg**	**04 55 22.4**	**-2.7**
	9.4nm,0.1s						
KUU	**Kurty**	**3.64**	**308**	***e*P**	**Pb**	**04 54 33.6**	**-0.6**
	1.7nm,0.2s						
KUU				***e*S**	**Sb**	**04 55 21.5**	**+2.6**
	6.6nm,0.1s						
TKM2	**Tokmak 2**	**3.71**	**290**	⇓***i*P**	**Pn**	**04 54 30.6**	**+3.0**
	baz=98						
TKM2				⇓*i*S	**Sb**	**04 55 16.5**	**-4.4**
	baz=98						
MAKZ	**Makanchi**	**5.20**	**13**	⇓Pn	**Pn**	**04 54 48.4**	**+0.5**
	0.7nm,0.4s						
MAKZ				⇑Sn	**Sn**	**04 55 50.6**	**+2.1**
	0.5nm,0.5s						
MK31	**Makanchi Array**	**5.24**	**15**	Pn	**Pn**	**04 54 48.8**	**+0.3**
	0.2nm,0.2s,baz=202,slow=13,SNR=21						
MK31				⇓Sn	**Sn**	**04 55 50.6**	**+1.0**
	0.2nm,0.2s,baz=204,slow=22,SNR=4.3						

*KRNET **15** 05:02:23.1±0.1, 40.75N×72.52E, h16km, mb2.5*

ISC 15 05:02:22.3±2.1, 40.74N±0.05×72.5E±0.1, h10km, n5, σ0°78/9, 10C, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRKS	**Terek-Say**	**1.31**	**308**	⇑***i*P**	**Pn**	**05 02 46.4**	**-0.4**
	baz=6.0						
TRKS				⇑*i*S	**Sb**	**05 03 03.3**	**-0.7**
	baz=6.0						
DRK	**Karamyk**	**1.37**	**204**	⇑***i*P**	**Pg**	**05 02 48.8**	**+0.2**
	baz=4.0						
DRK				⇑*i*S	**Sg**	**05 03 07.4**	**+1.0**
	baz=4.0						
BTK	**Batken**	**1.47**	**243**	⇑***i*P**	**Pg**	**05 02 50.4**	**0.0**
	baz=43						
BTK				⇑*i*S	**Sg**	**05 03 10.4**	**+1.0**
	baz=43						
GAR	**Garm**	**2.43**	**225**	⇑***i*P**	**Pb**	**05 03 05.4**	**-0.7**
	baz=25						
GAR				⇑*i*S	**Sb**	**05 03 36.2**	**+0.1**
	baz=25						
KK31	**Karatay Array**	**2.80**	**328**	⇑Pg	**Pg**	**05 03 16.7**	**+0.8**
	0.5nm,0.3s,baz=144,slow=14,SNR=16						
KK31				⇑Lg	Lg	05 03 48.0	
	3.0nm,0.6s,baz=142,slow=29,SNR=8.5						

MAN 15 05:30:36.8, 13.69N×120.76E, h16km, mb3.7, ML2.4, MS1.9, Mindoro

*IDC **15** 05:51:02.0±1.0, 31.19N×139.72E, h162km±10km, mb3.7/19, mbtmp4.2/23, Error ellipse: s-maj=14.6km s-min=9.9km az=64.0*
*NEIC **15** 05:51:03.2±2.2, 31.19N±0.07×139.8E±0.1, h170km±8km, mb4.3/45, Error ellipse: s-maj=16.9km s-min=9.6km az=70.0*
*NIED **15** 05:51:04.0, 31.40N×139.98E, h185km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr=0.12; Mθθ=0.05; Mϕϕ=0.17; Mrθ=0.07; Mϕθ=-1.82; Mϕr=0.46; Fault plane solution: M₀1.88000×10¹⁵ NP1:φs92.00000°, δ76.00000°, λ179.00000°. NP2:φs182.00000°, δ89.00000°, λ14.00000°.*
*JMA **15** 05:51:04.0±0.3, 31.2°N×142.2°E, h185km±2km, MV3.7/33, NEAR TORISHIMA IS*

ISC 15 05:51:02.9±0.5, 31.27N±0.05×139.90E±0.08, h170km, n99, σ1°36/99, mb4.2/41, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAOM	**Aogashimamukai**	**1.20**	**355**	***e*S**	**Sn**	**05 51 55.2**	**+2.1**
JHCJ	**Hachijojimakas**	**1.80**	**357**	***e*P**	**Pn**	**05 51 38.3**	**+1.3**
JHCJ				***e*S**	**Sn**	**05 52 04.3**	**+0.7**
JHJ2	**Mitsune**	**1.84**	**358**	Pn	**Pn**	**05 51 38.5**	**+1.1**
JHJ2	**Mitsune**	**1.84**	**358**	P	**Pn**	**05 51 38.9**	**+1.5**
JHJ	**Hachijo jima 2**	**1.85**	**357**	P	**Pn**	**05 51 38.9**	**+1.4**
	219nm,0.3s,baz=28,slow=21,SNR=19						
JHJ				S	**Sn**	**05 52 02.8**	**-1.7**
	451nm,0.6s,baz=63,slow=20,SNR=8.8						
JKO	**Kozu shima**	**2.98**	**348**	***e*P**	**Pn**	**05 51 51.9**	**+1.2**
TK02	**Tokai 2**	**3.22**	**326**	P	**Pn**	**05 51 55.2**	**+1.6**
BSO1	**Boso 1**	**3.50**	**15**	***e*P**	**Pn**	**05 51 56.5**	**-0.1**
BSO1				S	**Sn**	**05 52 37.7**	**-1.0**
TTO1	**TONANKAI O.B.S**	**3.53**	**313**	***e*P**	**Pn**	**05 51 59.0**	**+1.7**
JOD2	**Odawara 2**	**4.04**	**351**	***e*P**	**Pn**	**05 52 05.1**	**+0.9**
JOD2				***e*S**	**Sn**	**05 52 50.4**	**-1.7**
JIE	**Ise**	**4.11**	**320**	***e*P**	**Pn**	**05 52 06.3**	**+1.2**
JTNC	**Tanabenakahech**	**4.42**	**306**	P	**Pn**	**05 52 10.1**	**+1.0**
CBIJ	**Chichi jima**	**4.61**	**154**	***e*P**	**Pn**	**05 52 10.7**	**-0.9**
CBIJ				S	**Sn**	**05 53 04.2**	**-1.2**
JCJ	**Chichijima**	**4.61**	**154**	P	**Pn**	**05 52 10.8**	**-0.9**
	83nm,0.3s,baz=90,slow=23,SNR=10						
JCJ				S	**Sn**	**05 53 02.8**	**-2.7**
	283nm,0.4s,baz=294,slow=22,SNR=14						
JCJ	**Chichijima**	**4.61**	**154**	Pn	**Pn**	**05 52 10.4**	**-1.2**
INU	**Inuyama**	**4.73**	**330**	Pn	**Pn**	**05 52 14.0**	**+1.0**
JRY	**Ryogami san**	**4.81**	**350**	P	**Pn**	**05 52 14.5**	**+0.4**
JRY				S	**Sn**	**05 53 07.0**	**-2.9**
JGF	**Kuroka**	**4.81**	**334**	Pn	**Pn**	**05 52 14.8**	**+0.6**
MJAR	**Matsushiro Arr**	**5.44**	**346**	P	**Pn**	**05 52 21.7**	**-0.7**
	3.2nm,0.5s,baz=157,slow=12,SNR=11						
MJAR	**Matsushiro Arr**	**5.44**	**346**	Pn	**Pn**	**05 52 21.9**	**-0.5**
MAJO	**Matsushiro**	**5.45**	**345**		**Pn**	**05 52 22.7**	**+0.3**
MJB9	**Matsu-Tunnel**	**5.45**	**345**	Pn	**Pn**	**05 52 23.4**	**+1.0**
JTO	**Tosashimizu**	**6.23**	**287**	P	**Pn**	**05 52 34.4**	**+1.7**
JMM	**Marumori**	**6.62**	**6**		**Pn**	**05 52 36.1**	**-1.8**
JHS	**Saijyo**	**6.80**	**305**	Pn	**Pn**	**05 52 40.6**	**+0.4**
JHS	**Saijyo**	**6.80**	**305**	***e*P**	**Pn**	**05 52 41.7**	**+1.4**
JSD	**Sado**	**6.88**	**349**	Pn	**Pn**	**05 52 38.7**	**-2.7**
JMK	**Ichinoseki**	**7.74**	**8**	***e*P**	**Pn**	**05 52 50.9**	**-1.8**
JMK				***e*S**	Sn	05 54 10.4	-9.0
KSRS	**Korea Array**	**11.66**	**305**	P	**Pn**	**05 53 46.0**	**+2.0**
	3.9nm,0.9s,baz=117,slow=14,SNR=9.1						
USA0B	**Ussuriysk Arra**	**14.34**	**336**	Pn	**Pn**	**05 54 14.4**	**-3.6**
USRK	**Ussuriysk Ar.**	**14.34**	**336**	P	**Pn**	**05 54 16.2**	**-1.8**
	5.7nm,0.6s,baz=153,slow=12,SNR=14						
USRK	**Ussuriysk Ar.**	**14.34**	**336**	Pn	**Pn**	**05 54 16.0**	**-2.0**
KLR	**Kul'dur**	**18.97**	**343**	P	**P**	**05 55 10.0**	**-1.0**
	5.3nm,0.5s,baz=162,slow=8.8,SNR=17						
PETK	**Petropavlovsk-**	**25.36**	**25**	P	**P**	**05 56 15.4**	**+1.4**
	1.5nm,0.8s,baz=231,slow=13,SNR=4.0						
	1.5nm,0.8s						
SONM	**Songino Array**	**30.37**	**313**	P	**P**	**05 56 58.1**	**-0.7**
	3.0nm,0.5s,baz=109,slow=8.1,SNR=12						
	3.0nm,0.5s						
SONM	**Songino Array**	**30.37**	**313**	P	**P**	**05 56 57.6**	**-1.2**
YAK	**Yakutsk**	**31.48**	**351**	P	**P**	**05 57 08.4**	**+0.3**
UNV	**Unalaska Valle**	**44.18**	**43**	P	**P**	**05 58 57.1**	**+2.5**
ZALV	**Zalesovo Beam**	**45.06**	**317**	P	**P**	**05 59 01.9**	**+0.3**
	1.8nm,0.3s,baz=81,slow=8.9,SNR=1.6						
	1.8nm,0.3s						
MK31	**Makanchi Array**	**46.33**	**307**	P	**P**	**05 59 10.4**	**-1.3**
MKAR	**Makanchi Array**	**46.33**	**307**	P	**P**	**05 59 10.6**	**-1.1**
	3.4nm,0.5s,baz=88,slow=10.0,SNR=35						
	3.4nm,0.5s						
MKAR	**Makanchi Array**	**46.33**	**307**	P	**P**	**05 59 10.3**	**-1.3**
MAKZ	**Makanchi**	**46.55**	**307**	P	**P**	**05 59 12.4**	**-0.9**
MAKZ				IAmb	IAmb	05 59 12.7	
	comp=Z,3.9nm,0.5s						
SDPT	**Sand Point**	**47.83**	**42**	P	**P**	**05 59 22.7**	**-0.4**
NRIK	**Noril'sk**	**48.05**	**338**	P	**P**	**05 59 24.4**	**-0.2**
	comp=Z,2.1nm,0.4s,baz=142,slow=7.3,SNR=2.5						
	comp=Z,2.1nm,0.4s						
CNBA	**Chernabura Isl**	**48.31**	**42**	P	**P**	**05 59 27.6**	**+0.9**
KURK	**Kurchatov**	**48.68**	**312**	P	**P**	**05 59 28.4**	**-1.2**
KURK				IAmb	IAmb	05 59 29.3	
	comp=Z,8.8nm,0.8s						
N18K	**Kilae Creek**	**50.73**	**35**	P	**P**	**05 59 46.5**	**+1.4**
N18K				IAmb	IAmb	05 59 48.2	
	comp=Z,5.6nm,1.1s						
P18K	**Big Mountain,**	**50.96**	**37**	P	**P**	**05 59 48.0**	**+1.2**
P18K				IAmb	IAmb	06 00 16.2	
	comp=Z,8.2nm,1.1s						
WR0	**Warramunga Arr**	**51.19**	**186**	P	**P**	**05 59 50.3**	**+1.4**
WR0				IAmb	IAmb	06 00 02.4	
	comp=Z,15nm,1.5s						
WB2	**Warramunga Arr**	**51.20**	**187**	P	**P**	**05 59 50.0**	**+1.2**
WRA	**Warramunga Arr**	**51.20**	**187**	P	**P**	**05 59 48.7**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=5.1,slow=7.9,SNR=12						
	comp=Z,0.2nm,0.3s						
WRA	**Warramunga Arr**	**51.20**	**187**	P	**P**	**05 59 50.2**	**+1.3**
K20K	**Telida**	**51.84**	**32**	P	**P**	**05 59 55.0**	**+1.8**
K20K				IAmb	IAmb	05 59 56.0	
	comp=Z,3.9nm,0.7s						
J20K	**Nowinta River**	**51.89**	**31**	P	**P**	**05 59 55.6**	**+2.1**
J20K				IAmb	IAmb	05 59 56.2	
	comp=Z,3.6nm,0.7s						
M20K	**Styx River**	**52.15**	**34**	P	**P**	**05 59 57.4**	**+1.8**
M20K				IAmb	IAmb	05 59 58.4	
	comp=Z,6.1nm,1.2s						
IMAR	**Indian Mountai**	**52.28**	**28**	P	**P**	**05 59 57.6**	**+1.2**
KDAK	**Kodiak Island**	**52.30**	**39**	P	**P**	**05 59 57.4**	**+0.8**
	comp=Z,6.5nm,0.3s,baz=305,slow=7.6,SNR=36						
	comp=Z,6.5nm,0.3s						
KDAK	**Kodiak Island**	**52.30**	**39**	IAmb	IAmb	05 59 58.1	
	comp=Z,16nm,1.1s						
H21K	**Melozitna Rive**	**52.62**	**29**	P	**P**	**06 00 00.5**	**+1.6**
PPLA	**Purkeypile**	**52.65**	**32**	P	**P**	**06 00 01.1**	**+1.7**
PPLA				IAmb	IAmb	06 00 01.7	
	comp=Z,4.4nm,0.6s						
SKT	**Skwentna**	**52.91**	**33**	P	**P**	**06 00 02.5**	**+1.4**
SKT				IAmb	IAmb	06 00 08.5	
	comp=Z,7.0nm,1.3s						
CNPM	**China Poot**	**53.01**	**37**	P	**P**	**06 00 02.0**	**+0.1**
BPAW	**Bear Paw Mtn.**	**53.27**	**31**	P	**P**	**06 00 05.0**	**+1.4**
SUA	**Susitna One**	**53.27**	**34**	P	**P**	**06 00 04.4**	**+0.5**
SUA				IAmb	IAmb	06 00 06.3	
	comp=Z,6.1nm,0.8s						
MLY	**Manley**	**53.43**	**30**	P	**P**	**06 00 06.7**	**+1.8**
TRF	**Thorofare Moun**	**53.54**	**32**	P	**P**	**06 00 07.6**	**+1.8**
RC01	**Rabbit Creek A**	**53.75**	**35**	P	**P**	**06 00 08.2**	**+0.9**
H23K	**Yukon River**	**53.98**	**29**	P	**P**	**06 00 10.4**	**+1.6**
SML	**Sawmill**	**54.42**	**34**	P	**P**	**06 00 12.9**	**+0.7**
SML				IAmb	IAmb	06 00 13.4	
	comp=Z,3.9nm,0.7s						
MDM	**Murphy Dome**	**54.49**	**30**	P	**P**	**06 00 13.8**	**+1.2**
MDM				IAmb	IAmb	06 00 14.8	
	comp=Z,4.1nm,0.9s						
WRH	**Wood River Hil**	**54.54**	**30**	P	**P**	**06 00 13.1**	**+0.2**
H24K	**Noodor Dome**	**54.67**	**29**	P	**P**	**06 00 15.3**	**+1.4**
CCB	**Clear Creek Bu**	**54.67**	**30**	P	**P**	**06 00 15.2**	**+1.4**
DHY	**Denali Highway**	**54.86**	**32**	P	**P**	**06 00 16.6**	**+1.2**
DHY				IAmb	IAmb	06 00 42.8	
	comp=Z,6.0nm,1.5s						
SCM	**Sheep Creek Mo**	**54.90**	**34**	P	**P**	**06 00 17.0**	**+1.4**
SCM				IAmb	IAmb	06 00 17.2	
	comp=Z,4.9nm,0.7s						
HDA	**Harding Lake**	**55.04**	**30**	P	**P**	**06 00 16.8**	**+0.3**
HDA				IAmb	IAmb	06 00 17.0	
	comp=Z,3.5nm,0.5s						
ILAR	**Eielson Array**	**55.06**	**30**	P	**P**	**06 00 16.6**	**-0.1**
	comp=Z,1.3nm,0.8s,baz=278,slow=6.2,SNR=14						
	comp=Z,1.3nm,0.8s						
KK31	**Karatay Array**	**55.08**	**303**	P	**P**	**06 00 15.9**	**-1.2**
KK31				IAmb	IAmb	06 00 16.6	
	comp=Z,2.7nm,0.6s						
KKAR	**Karatay Array**	**55.08**	**303**	P	**P**	**06 00 16.1**	**-1.1**
SCRK	**Sand Creek**	**56.35**	**31**	IAmb	IAmb	06 00 27.4	
	comp=Z,5.2nm,1.0s						
J26L	**Joseph Creek**	**56.50**	**30**	IAmb	IAmb	06 00 28.5	
	comp=Z,3.4nm,0.8s						
L26K	**Log Cabin Wild**	**56.69**	**32**	IAmb	IAmb	06 00 30.7	
	comp=Z,3.6nm,0.7s						
K27K	**Chicken**	**57.18**	**31**	IAmb	IAmb	06 00 34.4	
	comp=Z,3.6nm,0.9s						
INK	**Inuvik**	**60.10**	**25**	P	**P**	**06 00 52.2**	**+0.6**
	comp=Z,2.1nm,0.6s,baz=265,slow=4.0,SNR=8.4						
	comp=Z,2.1nm,0.6s						
INK	**Inuvik**	**60.10**	**25**	IAmb	IAmb	06 00 54.8	
	comp=Z,6.4nm,1.4s						
ABKAR	**Akbulak array**	**60.79**	**312**	P	**P**	**06 00 55.9**	**-0.7**
ABKAR				IAmb	IAmb	06 00 56.4	
	comp=Z,3.2nm,0.7s						
ARCES	**ARCESS Array B**	**68.95**	**340**	P	**P**	**06 01 48.4**	**-0.7**
	comp=Z,2.7nm,1.0s,baz=72,slow=9.6,SNR=3.6						
	comp=Z,2.7nm,1.0s						
ARCES	**ARCESS Array B**	**68.95**	**340**	IAmb	IAmb	06 01 57.4	
	comp=Z,18nm,1.4s						
YKA	**Yellowknife Ar**	**69.44**	**29**	P	**P**	**06 01 52.3**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=299,slow=6.1,SNR=8.4						
	comp=Z,0.6nm,0.6s						
FINES	**FINESS Array B**	**73.33**	**333**	P	**P**	**06 02 15.8**	**+0.3**
	comp=Z,0.7nm,0.5s,baz=66,slow=4.6,SNR=6.6						
	comp=Z,0.7nm,0.5s						
KBZ	**Khabaz**	**73.73**	**311**	P	**P**	**06 02 18.0**	**-0.2**
	comp=Z,3.2nm,0.8s,baz=36,slow=2.5,SNR=7.4						
	comp=Z,3.2nm,0.8s						
AKASG	**Malin Array Be**	**78.09**	**323**	P	**P**	**06 02 41.8**	**-1.0**
	comp=Z,1.1nm,0.3s,baz=48,slow=6.5,SNR=12						
	comp=Z,1.1nm,0.3s						
NVAR	**Mina Array Bea**	**79.50**	**51**	P	**P**	**06 02 52.8**	**+1.8**
	comp=Z,1.0nm,0.6s,baz=299,slow=5.8,SNR=7.5						
	comp=Z,1.0nm,0.6s						
ELK	**Elko**	**80.27**	**48**	P	**P**	**06 02 56.2**	**+1.1**
	comp=Z,1.3nm,0.8s,baz=345,slow=20,SNR=4.6						
	comp=Z,1.3nm,0.8s						
BRTR	**Keskin Array B**	**81.73**	**312**	P	**P**	**06 03 02.6**	**-0.1**
	comp=Z,1.7nm,0.7s,baz=107,slow=3.7,SNR=8.1						
	comp=Z,1.7nm,0.7s						
PDAR	**Pinedale Array**	**82.64**	**44**	P	**P**	**06 03 08.5**	**+1.0**
	comp=Z,0.5nm,0.5s,baz=270,slow=1.5,SNR=6.0						
	comp=Z,0.5nm,0.5s						
TXAR	**Lajitas Array**	**94.65**	**52**	P	**P**	**06 04 06.9**	**+1.9**
	comp=Z,0.8nm,0.7s,baz=301,slow=3.0,SNR=13						
	comp=Z,0.8nm,0.7s						
LPAZ	**La Paz**	**150.44**	**66**	PKPbc	**PKiKP**	**06 10 36.8**	**+0.5**
	comp=Z,1.3nm,0.5s,baz=283,slow=1.7,SNR=10						

IDC 15 05:57:11.0±1.8, 28.94S×61.27E, h0km, mb3.7/4, mbtmp3.8/5, ML3.9/1, Error ellipse: s-maj=86.1km s-min=28.0km az=27.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OPO	**Ambohidratompo**	**16.50**	**306**	Pn	Pn	06 01 02.1	-2.0
	baz=337,slow=15,SNR=1.4						
	2.2nm,0.8s						
ASAR	**Alice Springs**	**64.40**	**104**	P	P	06 07 49.2	-0.1
	0.6nm,0.7s,baz=249,slow=6.5,SNR=5.7						
	0.6nm,0.7s						
WRA	**Warramunga Arr**	**66.21**	**100**	P	P	06 08 01.1	-0.1
	1.0nm,0.9s,baz=246,slow=5.9,SNR=6.4						
	1.0nm,0.9s						
TORD	**Torodi Ar. Bea**	**71.12**	**297**	P	P	06 08 32.3	+0.5
	0.6nm,0.8s,baz=126,slow=3.6,SNR=2.

Suspected Mining explosion.

ISC 15 06:55:29.9±3.2, 53.6N±0.1×87.5E±0.2, h0km, n7, σ0.998/11, 3C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.65**	**285**	*i*		07 06 40.0	
	0.1nm,0.8s,baz=100,slow=318,SNR=2.8						
ZAA0	**Zalesovo Array**	**1.65**	**285**	⇑P	**Pb**	**06 56 00.7**	**-0.5**
	0.4nm,0.3s,baz=100,slow=11						
ZAA0				⇓S	**Sg**	**06 56 23.5**	**+0.6**
	5.5nm,0.8s,baz=108,slow=23						
ZALV	**Zalesovo Beam**	**1.65**	**285**	Pg	**Pn**	**06 56 00.1**	**0.0**
	2.6nm,0.3s,baz=104,slow=12,SNR=14						
ZALV				Lg	Lg	06 56 22.4	
	1.4nm,0.3s,baz=101,slow=27,SNR=5.9						
KURBB	**Kurchatov Arra**	**6.26**	**246**	Pn	**Pn**	**06 57 04.7**	**+1.2**
	0.2nm,0.3s,baz=63,slow=14,SNR=4.4						
KURBB				Sn	**Sn**	**06 58 15.6**	**-0.1**
	0.1nm,0.3s,baz=67,slow=19,SNR=2.7						
KURBB				Lg	Lg	06 58 48.8	
	0.1nm,0.3s,baz=63,slow=32,SNR=10.0						
	1.7nm,0.5s						
KURBB	**Kurchatov Arra**	**6.26**	**246**	⇓Pn	**Pn**	**06 57 04.2**	**+0.8**
	1.8nm,0.5s						
KURBB				⇑Sn	**Sn**	**06 58 14.5**	**-1.2**
	5.4nm,0.8s						
KURBB				⇓Lg	Lg	06 58 47.2	
	11nm,0.6s						
MK31	**Makanchi Array**	**7.54**	**208**	Pn	**Pn**	**06 57 20.8**	**-0.3**
	0.5nm,0.5s,baz=25,slow=11,SNR=15						
MK31				⇑Sn	**Sn**	**06 58 45.9**	**-1.4**
	1.8nm,0.8s,baz=33,slow=26,SNR=4.9						
MK31				⇓Lg	Lg	06 59 27.4	
	3.8nm,0.8s,baz=40,slow=33,SNR=6.1						
MKAR	**Makanchi Array**	**7.54**	**208**	Pn	**Pn**	**06 57 22.4**	**+1.3**
	0.4nm,0.3s,baz=29,slow=13,SNR=17						
MKAR				Sn	**Sn**	**06 58 47.4**	**0.0**
	0.1nm,0.3s,baz=31,slow=26,SNR=8.3						
MKAR				Lg	Lg	06 59 29.5	
	0.1nm,0.3s,baz=24,slow=30,SNR=9.7						
	1.2nm,0.5s						

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*NEIC **15** 06:58:27.3±2.6, 62.37S×166.6E±0.3, h10km±1km, mb5.2/47, Ms_20 5.2/171, Mwb5.6/10, Mww5.7, Error ellipse: s-maj=21.1km s-min=3.0km az=89.0*

*NEIC **15** 06:58:27, 62.50S×166.29E, h22km, Moment Tensor Solution. Duration: 28s0 Moment tensor: Scale 10^17^Nm; Mrr0.85; Mθθ2.48; Mφφ-3.33; Mrθ-3.12; Mθφ-1.54; Mφr-0.32; Fault plane solution: Mo4.61000×10^17^ NP1: φs336.00000°, δ52.00000°, λ16.00000°. NP2: φs236.00000°, δ77.00000°, λ141.00000°. Principal axes: T 5.0215, Plg36.0000°, Azm189.0000°; N -0.9949, Plg49.0000°, Azm41.0000°; P -4.0266, Plg16.0000°, Azm291.0000°;*

*IDC **15** 06:58:30.1±0.6, 62.47S×165.37E, h0km, mb4.4/9, mbtmp4.4/11, ML4.4/2, MS4.9/42 Error ellipse: s-maj=27.5km s-min=15.9km az=74.0*

*GCMT **15** 06:58:35.3±0.1, 62.39S±0.01×165.52E±0.02, h20km, MW5.6/137, Moment Tensor Solution. s107, c159; s137, c237; Duration: 15 Moment tensor: Scale 10^17^ Nm; Mrr-0.41±.04; Mθθ2.77±.04; Mφφ-2.35±.04; Mrθ-0.78±.09; Mθφ-0.93±.03; Mφr-0.34±.09; Best double couple: Mo2.84700×10^17^ NP1:φs325.00000°, δ73.00000°, λ-1.00000°. NP2:φs55.00000°, δ89.00000°, λ-163.00000°. Principal axes: T 3.0770, Plg12.0000°, Azm189.0000°; N -0.4560, Plg73.0000°, Azm57.0000°; P -2.6160, Plg12.0000°, Azm282.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **15** 06:58:37, 62.78S×167.80E, h24km, Moment Tensor Solution. Moment tensor: Scale 10^17^Nm; Mrr0.84; Mθθ2.32; Mφφ-3.16; Mrθ-0.35; Mθφ-1.55; Mφr-1.06; Fault plane solution: Mo3.42000×10^17^ NP1:φs328.82000°, δ78.86000°, λ-7.84000°. NP2:φs60.34000°, δ82.31000°, λ-168.75000°. Principal axes: T 2.7269, Plg2.0000°, Azm194.0000°; N 1.1052, Plg76.0000°, Azm94.0000°; P -3.8322, Plg13.0000°, Azm285.0000°;*

ISC 15 06:58:28.5±0.4, 62.33S±0.06×166.3E±0.1, h10km, n205, σ2.8s42/81, mb5.0/22, MS5.1/126, 1C, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MCQ	**Macquarie Isla**	**8.74**	**331**	Pn	**Pn**	**07 00 34.4**	**-0.4**
VNDA	**Vanda**	**15.33**	**184**	Pn	**Pn**	**07 02 04.1**	**-0.4**
	1.2nm,0.3s,baz=356,slow=13,SNR=60						
VNDA				LR	LR	07 07 05.5	
	comp=Z,11μm,18.0s,baz=12,slow=34						
	12nm,0.6s						
VNDA	**Vanda**	**15.33**	**184**	Pn	**Pn**	**07 02 01.7**	**-2.8**
VNDA				IAmb	IAmb	07 02 06.1	
	comp=Z,212nm,2.1s						
SBA	**Scott Base**	**15.60**	**180**		**Pn**	**07 02 06.9**	**-1.2**
SBA				IAmb	IAmb	07 02 30.2	
	comp=Z,178nm,1.4s						
WHZ	**Wether Hill Ro**	**16.50**	**4**	Pn	**Pn**	**07 02 19.1**	**-0.7**
DCZ	**Deep Cove**	**16.91**	**2**	Pn	**Pn**	**07 02 23.0**	**-1.9**
MLZ	**Mavora Lakes**	**17.03**	**4**	P	**Pn**	**07 02 23.6**	**-2.9**
MLZ				IAmb	IAmb	07 02 41.9	
	comp=Z,264nm,1.7s						
ODZ	**Otahua Downs**	**17.50**	**10**	P	**Pn**	**07 02 30.2**	**-2.2**
ODZ				IAmb	IAmb	07 02 40.4	
	comp=Z,736nm,2.5s						
LBZ	**Lake Benmore**	**18.12**	**9**	P	**Pn**	**07 02 35.1**	**-4.9**
LBZ				IAmb	IAmb	07 02 56.4	
	comp=Z,596nm,2.3s						
RPZ	**Rata Peaks**	**18.86**	**11**	P	**Pn**	**07 02 54.3**	**+5.3**
	comp=Z,1.3nm,0.3s,baz=217,slow=11,SNR=5.4						
RPZ				LR	LR	07 09 08.4	
	comp=Z,10μm,20,3s,baz=235,slow=34						
	comp=Z,11nm,0.7s						
RPZ	**Rata Peaks**	**18.86**	**11**	P	**P**	**07 02 44.3**	**-4.2**
RPZ				IAmb	IAmb	07 03 23.3	
	comp=Z,262nm,1.7s						
FOZ	**Fox Glacier**	**18.94**	**8**	P	**P**	**07 02 45.6**	**-3.8**
MQZ	**McQueen's Vall**	**19.02**	**14**	P	**P**	**07 02 47.8**	**-2.5**
OXZ	**Oxford**	**19.33**	**13**	P	**P**	**07 02 51.3**	**-2.4**
OXZ				IAmb	IAmb	07 03 05.4	
	comp=Z,277nm,1.9s						
LTZ	**Lake Taylor**	**19.90**	**13**	P	**P**	**07 02 57.0**	**-2.9**
KHZ	**Kahutara**	**20.40**	**15**	P	**P**	**07 03 03.5**	**-1.9**
KHZ				IAmb	IAmb	07 03 14.9	
	comp=Z,193nm,1.5s						
THZ	**Tophouse**	**20.97**	**14**	P	**P**	**07 03 08.8**	**-2.8**
QRZ	**Quartz Range**	**21.86**	**13**	IAMs_20	IAMs_20	07 11 26.3	
	comp=Z,8μm,18.0s						
TAU	**Tasmania Unive**	**22.45**	**321**	P	**P**	**07 03 26.9**	**-0.4**
TAU				IAmb	IAmb	07 03 50.5	
	comp=Z,241nm,1.9s						
BFZ	**Birch Farm**	**22.49**	**20**	P	**P**	**07 03 26.3**	**-1.5**
BFZ				IAMs_20	IAMs_20	07 10 31.5	
	comp=Z,8μm,20.0s						
CASY	**Casey**	**23.80**	**236**	P	**P**	**07 03 39.4**	**-1.5**
CASY				IAmb	IAmb	07 04 02.6	
	comp=Z,57nm,1.6s						
BKZ	**Black Stump Fm**	**24.01**	**20**	P	**P**	**07 03 42.5**	**-0.8**
BKZ				IAMs_20	IAMs_20	07 12 40.7	
	comp=Z,8μm,18.0s						
URZ	**Urewera**	**25.00**	**20**	P	**P**	**07 03 58.2**	**+6.1**
	comp=Z,37nm,1.0s,baz=240,slow=7.2,SNR=8.4						
URZ				LR	LR	07 13 42.6	
	comp=Z,7μm,18.4s,baz=210,slow=36						
	comp=Z,37nm,1.0s						
URZ	**Urewera**	**25.00**	**20**	P	**P**	**07 03 53.5**	**+1.4**
URZ				IAmb	IAmb	07 04 00.6	
	comp=Z,92nm,1.4s						
URZ				IAMs_20	IAMs_20	07 12 01.7	
	comp=Z,7μm,20.0s						
OUZ	**Omahuta**	**27.52**	**13**	IAMs_20	IAMs_20	07 14 53.1	
	comp=Z,5μm,19.0s						
QSPA	**South Pole Qui**	**27.76**	**180**	P	**P**	**07 04 18.0**	**+0.9**
	comp=Z,7.8nm,1.0s,baz=15,slow=2.6,SNR=16						
QSPA				LR	LR	07 13 41.3	
	comp=Z,4μm,21.3s,baz=28,slow=33						
	comp=Z,7.8nm,1.0s						
QSPA	**South Pole Qui**	**27.76**	**180**	P	**P**	**07 04 15.6**	**-1.6**
QSPA	**South Pole Qui**	**27.76**	**180**	IAMs_20	IAMs_20	07 13 56.7	
	comp=Z,4μm,18.0s						
TOO	**Toolangi**	**27.91**	**323**	P	**P**	**07 04 19.2**	**+0.7**
CAN	**Canberra**	**29.14**	**330**	P	**P**	**07 04 29.0**	**-0.4**
ARMA	**Armidale**	**33.32**	**337**	P	**P**	**07 05 06.5**	**+0.2**
STKA	**Stephens Creek**	**34.36**	**321**	P	**P**	**07 05 17.6**	**+2.4**
	comp=Z,4.0nm,0.8s,baz=158,slow=8.1,SNR=7.7						
STKA				LR	LR	07 16 55.4	
	comp=Z,3μm,19.0s,baz=153,slow=32						
	comp=Z,4.0nm,0.8s						
STKA	**Stephens Creek**	**34.36**	**321**	P	**P**	**07 05 14.2**	**-1.1**
RAO	**Raoul Island**	**34.66**	**25**	LR	LR	07 18 52.2	
	comp=Z,978nm,18.1s,baz=136,slow=35						
BBOO	**Buckleboo**	**35.27**	**313**	P	**P**	**07 05 23.2**	**+0.1**
BBOO				IAmb	IAmb	07 05 42.3	
	comp=Z,47nm,1.5s						
EIDS	**Eidsvold**	**38.34**	**337**	P	**P**	**07 05 48.1**	**-1.3**
EIDS				IAmb	IAmb	07 06 14.6	
	comp=Z,41nm,1.4s						
MAW	**Mawson**	**39.17**	**216**	P	**P**	**07 05 57.4**	**+1.6**
	comp=Z,3.2nm,1.0s,baz=348,slow=3.2,SNR=2.9						
MAW				LR	LR	07 22 02.3	
	comp=Z,5μm,18.4s,baz=124,slow=36						
	comp=Z,3.2nm,1.0s						
MAW	**Mawson**	**39.17**	**216**	P	**P**	**07 05 53.3**	**-2.5**
BELA	**Belgrano 2**	**39.45**	**173**	P	**P**	**07 05 55.5**	**-2.6**
DZM	**Mont Dzumac**	**40.23**	**0**	*e*LR	LR	07 16 30.9	
	comp=Z,1μm,24.4s						
DZM	**Mont Dzumac**	**40.23**	**0**	LR	LR	07 21 34.1	
	comp=Z,1μm,18.6s,baz=187,slow=34						
H01W1	**Cape Leeuwin H**	**42.35**	**286**	T	T	07 51 20.5	
	baz=146,slow=75,SNR=515						
H01W2	**Cape Leeuwin H**	**42.36**	**285**	T	T	07 51 20.9	
	baz=146,slow=75,SNR=482						
H01W3	**Cape Leeuwin H**	**42.37**	**285**	T	T	07 51 21.7	
	baz=146,slow=75,SNR=530						
NWAO	**Narrogin (SRO)**	**42.64**	**290**	IAMs_20	IAMs_20	07 19 40.5	
	comp=Z,2μm,19.0s						
ASAR	**Alice Springs**	**44.41**	**315**	P	**P**	**07 06 39.9**	**+0.7**
	comp=Z,5.9nm,0.9s,baz=159,slow=8.1,SNR=34						
ASAR				PcP	**PcP**	**07 08 24.6**	**+1.7**
	comp=Z,0.6nm,0.7s,baz=152,slow=4.2,SNR=1.6						
ASAR				LR	LR	07 22 32.8	
	comp=Z,944nm,18.3s,baz=164,slow=33						
	comp=Z,5.9nm,0.9s						
ASAR	**Alice Springs**	**44.41**	**315**	P	**P**	**07 06 39.0**	**-0.3**
AS31	**Alice Springs**	**44.41**	**315**	P	**P**	**07 06 38.1**	**-1.1**
CTA	**Charters Tower**	**44.43**	**333**	LR	LR	07 22 34.6	
	comp=Z,2μm,18.7s,baz=160,slow=33						
CTAO	**Charters Tower**	**44.43**	**333**	IAMs_20	IAMs_20	07 20 27.1	
	comp=Z,3μm,19.0s						
MSVF	**Nonsavu**	**45.30**	**16**	LR	LR	07 23 48.4	
	comp=Z,2μm,18.9s,baz=208,slow=33						
MSVF	**Nonsavu**	**45.30**	**16**	P	**P**	**07 06 45.5**	**-0.8**
MSVF				IAmb	IAmb	07 06 50.5	
	comp=Z,34nm,1.6s						
MSVF	**Nonsavu**	**45.30**	**16**	IAMs_20	IAMs_20	07 23 37.7	
	comp=Z,2μm,20.0s						
SNAA	**Sanae**	**46.06**	**185**	pP	**P**	**07 06 52.0**	**+0.2**
SNAA	**Sanae**	**46.06**	**185**	LR	LR	07 25 15.8	
	comp=Z,3μm,20.1s,baz=181,slow=35						
SNAA	**Sanae**	**46.06**	**185**	P	**P**	**07 06 49.0**	**-2.9**
SNAA				IAMs_20	IAMs_20	07 25 04.6	
	comp=Z,3μm,20.0s						
VNA3	**Neumayer Olymp**	**46.67**	**182**	pP	**P**	**07 06 56.4**	**-0.1**
RAR	**Rarotonga**	**47.19**	**45**	LR	LR	07 23 19.9	
	comp=Z,1μm,19.6s,baz=200,slow=31						
VNA1	**Neumayer--Stat**	**47.24**	**182**	pP	**P**	**07 06 60.0**	**-1.0**
WB2	**Warramunga Arr**	**47.74**	**318**	P	**P**	**07 07 05.2**	**-0.2**
WB2				IAmb	IAmb	07 07 28.0	
	comp=Z,17nm,1.2s						
WRA	**Warramunga Arr**	**47.75**	**318**	P	**P**	**07 07 05.6**	**+0.1**
	comp=Z,2.9nm,1.1s,baz=162,slow=6.5,SNR=6.4						
WRA				PcP	**PcP**	**07 08 35.5**	**+1.0**
	comp=Z,1.2nm,0.9s,baz=152,slow=3.7,SNR=2.0						
WRA				LR	LR	07 25 10.9	
	comp=Z,1μm,19.0s,baz=134,slow=34						
	comp=Z,2.9nm,1.1s						
WRA	**Warramunga Arr**	**47.75**	**318**	P	**P**	**07 07 05.8**	**+0.3**
WRAB	**Tennant Creek**	**47.75**	**318**	P	**P**	**07 07 04.2**	**-1.4**
WRAB				IAmb	IAmb	07 07 17.6	
	comp=Z,23nm,1.5s						
PMSA	**Palmer Station**	**47.82**	**154**	LR	LR	07 23 57.1	
	comp=Z,784nm,20.5s,baz=222,slow=32						
WB0	**Warramunga Arr**	**47.90**	**318**	P	**P**	**07 07 06.9**	**+0.3**
WB0				IAmb	IAmb	07 07 49.3	
	comp=Z,15nm,1.2s						
TBI	**Tubuai**	**49.01**	**58**	*e*LR	LR	07 20 30.9	
	comp=Z,37μm,23.2s						
TBI				*e*LR	LR	07 20 32.1	
	comp=Z,2μm,24.2s						
TBI	**Tubuai**	**49.01**	**58**	*e*T	T	08 00 08.3	
	comp=Z,44nm,0.4s						
PSA00	**Pilbara Seismi**	**51.50**	**300**	P	**P**	**07 07 36.2**	**+2.2**
PSA00				IAmb	IAmb	07 07 47.3	
	comp=Z,64nm,1.7s						
PSA00	**Pilbara Seismi**	**51.50**	**300**	P	**P**	**07 07 33.6**	**-0.4**
PSA00				IAmb	IAmb	07 07 52.4	
	comp=Z,16nm,1.4s						
HNR	**Honiara**	**53.01**	**352**	LR	LR	07 27 26.7	
	comp=Z,903nm,18.2s,baz=192,slow=33						
KNRA	**Kununurra**	**53.56**	**313**	P	**P**	**07 07 49.3**	**0.0**
KNRA				IAmb	IAmb	07 08 08.4	
	comp=Z,37nm,1.2s						
PAE	**Paea**	**54.11**	**55**	*e*T	T	08 06 30.2	
	comp=Z,8.0nm,0.2s						
TVO	**Taravao**	**54.12**	**55**	*e*T	T	08 06 28.5	
	comp=Z,7.0nm,0.3s						
PPT2	**Papeete2**	**54.17**	**55**	*e*LR	LR	07 22 51.9	
	comp=Z,1μm,23.5s						
PPT2				*e*LR	LR	07 22 56.4	
	comp=Z,1μm,22.5s						
PPT2	**Papeete2**	**54.17**	**55**	*e*T	T	08 06 31.8	
	comp=Z,16nm,0.3s						
PPT	**Papeete**	**54.19**	**55**	LR	LR	07 26 44.8	
	comp=Z,906nm,18.2s,baz=208,slow=31						
TIAR	**Tiarei**	**54.29**	**55**	*e*T	T	08 06 36.1	
	comp=Z,2.1nm,0.2s						
PMG	**Port Moresby**	**54.64**	**337**	LR	LR	07 27 38.1	
	comp=Z,1μm,19.9s,baz=169,slow=32						
PMG	**Port Moresby**	**54.64**	**337**	IAMs_20	IAMs_20	07 27 06.5	
	comp=Z,2μm,18.0s						
ORCD	**Orcadas**	**54.99**	**162**	P	**P**	**07 07 56.2**	**-3.0**
ORCD				IAmb	IAmb	07 08 13.2	
	comp=Z,18nm,0.8s						
VAH	**Vaihoa**	**57.07**	**56**	*e*T	T	08 10 14.4	
	comp=Z,622nm,0.3s						
PMOR	**Pomariorio Ree**	**57.18**	**56**	*e*T	T	08 10 21.6	
	comp=Z,3.6nm,0.3s						
BATI	**Baumata**	**60.42**	**310**	LR	LR	07 34 18.8	
	comp=Z,1μm,18.2s,baz=166,slow=36						
RPN	**Rapa Nui**	**63.77**	**99**	LR	LR	07 29 29.7	
	comp=Z,647nm,20.5s,baz=204,slow=29						
FAKI	**Fak Fak**	**64.47**	**322**	P	**P**	**07 09 04.2**	**-0.8**
TAOE	**Nuku Hiva Isla**	**65.83**	**61**	*e*LR	LR	07 28 15.5	
	comp=Z,963nm,23.4s						
KAPI	**Kappang**	**66.64**	**308**	LR	LR	07 37 44.9	
	comp=Z,587nm,19.1s,baz=154,slow=36						
SIJI	**Sorong**	**66.71**	**321**	LR	LR	07 38 51.2	
	comp=Z,848nm,18.6s,baz=175,slow=36						
PLCA	**Paso Flores**	**67.61**	**137**	P	**P**	**07 09 29.2**	**+4.1**
	comp=Z,1.8nm,0.9s,baz=220,slow=10,SNR=7.3						
	comp=Z,1.8nm,0.9s						
PLCA	**Paso Flores**	**67.61**	**137**	P	**P**	**07 09 22.8**	**-2.3**
PLCA				IAmb	IAmb	07 09 41.9	
	comp=Z,21nm,1.4s						
MT01	**Popeta**	**73.61**	**133**	P	**P**	**07 10 00.5**	**-1.2**
MT01				IAmb	IAmb	07 10 26.8	
	comp=Z,44nm,1.4s						
VA05	**Santo Domingo**	**73.67**	**133**	P	**P**	**07 10 00.6**	**-1.5**
BO04	**La Punta**	**73.72**	**134**	P	**P**	**07 10 01.2**	**-1.1**
BO04				IAmb	IAmb	07 10 28.3	
	comp=Z,62nm,1.8s						
DAV	**Davao City (W)**	**75.94**	**318**	LR	LR	07 43 41.4	
	comp=Z,235nm,19.0s,baz=148,slow=36						
GUMO	**Guam**	**77.53**	**339**	LR	LR	07 42 13.5	
	comp=Z,134nm,19.4s,baz=160,slow=34						
SUR	**Sutherland**	**81.62**	**209**	LR	LR	07 45 25.2	
	comp=Z,1μm,19.2s,baz=158,slow=35						
KULM	**Kulin**	**83.65**	**294**	IAMs_20	IAMs_20	07 41 17.2	
	comp=Z,908nm,22.0s						
TGY	**Tagaytay City**	**84.03**	**316**	LR	LR	07 47 20.5	
	comp=Z,322nm,21.4s,baz=122,slow=35						
BOSA	**Boshof**	**84.14**	**214**	LR	LR	07 45 36.9	
	comp=Z,950nm,20.1s,baz=163,slow=34						
LVC	**Limon Verde**	**84.72**	**130**	LR	LR	07 41 16.0	
	comp=Z,508nm,19.8s,baz=201,slow=30						
CPUP	**Villa Florida**	**85.01**	**142**	P	**P**	**07 11 07.8**	**+3.8**
	comp=Z,2.0nm,0.8s,baz=175,slow=1.1,SNR=4.3						
CPUP				LR	LR	07 45 32.5	
	comp=Z,497nm,19.3s,baz=195,slow=33						
	comp=Z,2.0nm,0.8s						
H08S2	**Diego Garcia H**	**85.06**	**263**	T	T	08 44 59.5	
	baz=152,slow=76,SNR=128						
H08S1	**Diego Carcia H**	**85.07**	**263**	T	T	08 45 00.1	
	baz=152,slow=76,SNR=100						
H08S3	**Diego Garcia H**	**85.08**	**263**	T	T	08 45 01.0	
	baz=152,slow=76,SNR=275						
LBTB	**Lobatse**	**87.47**	**215**	LR	LR	07 46 34.0	
	comp=Z,1μm,21.0s,baz=162,slow=33						
LPAZ	**La Paz**	**90.81**	**129**	P	**P**	**07 11 37.2**	**+4.6**
	comp=Z,0.9nm,0.7s,baz=205,slow=6.4,SNR=3.9						
LPAZ				LR	LR	07 43 17.0	
	comp=Z,350nm,22.0s,baz=188,slow=30						
	comp=Z,0.9nm,0.7s						
LPAZ	**La Paz**	**90.81**	**129**	P	**P**	**07 11 30.7**	**-1.9**
LPAZ				IAmb	IAmb	07 12 00.6	
	comp=Z,14nm,1.4s						
MATP	**Matopo**	**91.01**	**219**	LR	LR	07 50 07.7	
	comp=Z,848nm,19.1s,baz=227,slow=34						
MIDW	**Midway**	**91.18**	**14**	IAMs_20	IAMs_20	07 45 03.7	
	comp=Z,934nm,21.0s						
NNA	**Nana**	**91.36**	**119**	LR	LR	07 43 26.3	
	comp=Z,628nm,21.3s,baz=202,slow=29						
QIZ	**Qiongzhong**	**92.45**	**308**	P	**P**	**07 11 39.9**	**+0.7**
QIZ				S	**S**	**07 22 44.4**	**+1.7**
QIZ				SS	**SS**	**07 28 57.6**	**+3.1**
QIZ				LR	LR		
	comp=Z,290nm,21.5s						
QIZ				LR	LR		
	comp=Z,370nm,16.7s						
QIZ				LR	LR		
	comp=Z,300nm,20.7s						
SIV	**San Ignacio**	**93.55**	**135**	LR	LR	07 47 30.5	
	comp=Z,325nm,20.6s,baz=194,slow=31						
JOW	**Kunigami**	**93.93**	**327**	LR	LR	07 50 10.6	
	comp=Z,310nm,21.4s,baz=107,slow=33						
PALK	**Pallekele**	**94.35**	**277**	LR	LR	07 47 27.3	
	comp=Z,577nm,18.8s,baz=254,slow=31						
PALK	**Pallekele**	**94.35**	**277**	IAMs_20	IAMs_20	07 47 07.5	
	comp=Z,769nm,20.0s						
TSUM	**Tsumeb**	**95.05**	**210**	LR	LR	07 51 50.5	
	comp=Z,2μm,21.7s,baz=158,slow=34						
ATAH	**Atahualpa**	**95.09**	**116**	LR	LR	07 45 19.2	
	comp=Z,459nm,21.2s,baz=224,slow=29						
LSZ	**Lusaka**	**95.97**	**220**	LR	LR	07 53 56.1	
	comp=Z,329nm,18.6s,baz=160,slow=35						
CMAR	**Chiang Mai Arr**	**96.19**	**298**	LR	LR	07 52 56.5	
	comp=Z,394nm,19.2s,baz=175,slow=34						
JHJ	**Hachijo jima 2**	**97.49**	**338**	LR	LR	07 53 56.1	
	comp=Z,276nm,19.1s,baz=199,slow=34						
BDFB	**Brasilia**	**97.73**	**147**	LR	LR	07 55 42.3	
	comp=Z,276nm,18.3s,baz=139,slow=35						
GYA	**Guiyang**	**100.40**	**308**	⇑P	**Pdif**	**07 12 17.0**	**+1.7**
GYA				S	**Sdif**	**07 23 45.4**	**-5.8**
GYA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,110nm,5.7s						
GYA				LR	LR		
	comp=Z,230nm,13.9s						
NJ2	**Nanjing**	**101.48**	**320**	*e*P	**Pdif**	**07 12 20.8**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2	**Chengdu**	**105.49**	**308**	Pdif	**Pdif**	**07 12 38.0**	**+0.3**
CD2				LR	LR		
	comp=Z,280nm,19.1s						
CD2				LR	LR		
	comp=Z,370nm,16.3s						
LZH	**Lanzhou**	**110.11**	**310**	*e*PKP	**PKiKP**	**07 16 56.9**	**-2.8**
LZH				LR	LR		
	comp=Z,280nm,18.4s						
LZH				LR	LR		
	comp=Z,240nm,19.5s						
LZH				LR	LR		
	comp=Z,270nm,19.5s						
YSS	**Yuzh-Sakhalins**	**110.56**	**343**	IAMs_20	IAMs_20	07 58 56.5	
	comp=Z,462nm,20.0s						
HHC	**Hu-ho-hao-te**	**111.83**	**318**	*e*PKP	**PKiKP**	**07 16 58.4**	**-4.3**
XLT	**XiLinHaoTe**	**113.28**	**323**	*e*PKP	**PKiKP**	**07 17 05.6**	**+0.3**
XLT				AMB	AMB		
	comp=Z,130nm,3.8s						
XLT				LR	LR		
	comp=Z,28nm,22.6s						
XLT				LR	LR		
	comp=Z,210nm,23.0s						
XLT				LR	LR		
	comp=Z,330nm,20.1s						
PET	**Petropavlovsk**	**115.17**	**355**	IAMs_20	IAMs_20	07 57 37.6	
	comp=Z,592nm,22.0s						
CMB	**Columbia Colle**	**115.89**	**57**	IAMs_20	IAMs_20	07 54 29.0	
	comp=Z,512nm,22.0s						
EPT	**El Paso**	**116.35**	**72**	IAMs_20	IAMs_20	07 56 45.4	
	comp=Z,628nm,18.0s						
ORV	**Oroville**	**116.78**	**56**	IAMs_20	IAMs_20	07 53 57.5	
	comp=Z,488nm,20.0s						
MOD	**Modoc Plateau**	**119.26**	**55**	IAMs_20	IAMs_20	07 58 59.2	
	comp=Z,513nm,20.0s						
DUG	**Dugway, Tooele**	**120.78**	**62**	IAMs_20	IAMs_20	07 58 38.2	
	comp=Z,440nm,20.0s						
MFID	**Camas Ranch**	**122.28**	**57**	IAMs_20	IAMs_20	07 59 28.1	
	comp=Z,422nm,20.0s						
BMO	**Blue Mountains**	**122.92**	**55**	IAMs_20	IAMs_20	07 58 03.0	
	comp=Z,550nm,21.0s						
WMQ	**Urumqi**	**122.92**	**302**	*e*PKP	**PKiKP**	**07 17 24.3**	**+0.2**
WMQ				LR	LR		
	comp=Z,120nm,23.1s						
AHID	**Auburn Hatcher**	**123.64**	**61**	IAMs_20	IAMs_20	08 01 30.8	
	comp=Z,440nm,20.0s						
KDAK	**Kodiak Island**	**123.94**	**25**	IAMs_20	IAMs_20	08 07 46.4	
	comp=Z,572nm,20.0s

KTH	**Kantishna Hill**	**129.59**	**23**	IAMs_20	IAMs_20	08 05 55.9
	comp=Z,593nm,20.0s					
J20K	**Nowinta River**	**129.59**	**21**	IAMs_20	IAMs_20	08 09 15.1
	comp=Z,404nm,20.0s					
TORD	**Torodi Ar. Bea**	**129.67**	**200**	PKP	**PKiKP**	**07 17 41.0 +2.6**
	comp=Z,0.8nm,0.9s,baz=191,slow=2.5,SNR=3.1					
RND	**Reindeer**	**129.85**	**24**	IAMs_20	IAMs_20	08 03 41.6
	comp=Z,598nm,22.0s					
BPAW	**Bear Paw Mtn.**	**130.08**	**23**	IAMs_20	IAMs_20	08 07 10.8
	comp=Z,561nm,21.0s					
BWN	**Browne**	**130.42**	**24**	IAMs_20	IAMs_20	08 06 01.8
	comp=Z,550nm,20.0s					
L26K	**Log Cabin Wild**	**130.63**	**28**	IAMs_20	IAMs_20	08 18 15.2
	comp=Z,435nm,19.0s					
NEA2	**Nenana**	**130.88**	**24**	IAMs_20	IAMs_20	08 04 60.0
	comp=Z,521nm,21.0s					
I21K	**Tanana**	**130.89**	**22**	IAMs_20	IAMs_20	08 09 03.3
	comp=Z,371nm,19.0s					
WRH	**Wood River Hil**	**130.96**	**24**	IAMs_20	IAMs_20	08 05 49.0
	comp=Z,410nm,21.0s					
MLY	**Manley**	**130.97**	**23**	IAMs_20	IAMs_20	08 10 14.5
	comp=Z,456nm,20.0s					
N31M	**Braeburn, Yuko**	**131.06**	**33**	IAMs_20	IAMs_20	08 08 17.4
	comp=Z,525nm,20.0s					
CCB	**Clear Creek Bu**	**131.17**	**24**	IAMs_20	IAMs_20	08 04 57.5
	comp=Z,491nm,22.0s					
H21K	**Melozitna Rive**	**131.19**	**21**	IAMs_20	IAMs_20	08 10 22.2
	comp=Z,494nm,19.0s					
I23K	**Minto, Yukon-K**	**131.33**	**23**	IAMs_20	IAMs_20	08 07 49.9
	comp=Z,515nm,20.0s					
TCOL	**CIGO, UAF Yank**	**131.36**	**24**	IAMs_20	IAMs_20	08 05 02.7
	comp=Z,578nm,21.0s					
COLA	**College**	**131.36**	**24**	IAMs_20	IAMs_20	08 05 02.7
	comp=Z,549nm,21.0s					
MDM	**Murphy Dome**	**131.37**	**24**	IAMs_20	IAMs_20	08 05 25.9
	comp=Z,490nm,22.0s					
ILAR	**Eielson Array**	**131.46**	**25**	PKP	**PKiKP**	**07 17 42.5 +2.2**
	comp=Z,0.6nm,0.9s,baz=212,slow=4.4,SNR=4.5					
J25K	**Salcha River,**	**131.62**	**26**	IAMs_20	IAMs_20	08 07 39.4
	comp=Z,397nm,20.0s					
POKR	**Poker Flat Res**	**131.66**	**24**	IAMs_20	IAMs_20	08 05 35.6
	comp=Z,506nm,22.0s					
H24K	**Noodor Dome**	**132.22**	**23**	IAMs_20	IAMs_20	08 05 41.5
	comp=Z,498nm,21.0s					
J29M	**Klondike Camp**	**133.01**	**29**	IAMs_20	IAMs_20	08 07 20.1
	comp=Z,375nm,21.0s					
I29M	**Ogilvie Camp,**	**133.76**	**29**	IAMs_20	IAMs_20	08 08 03.0
	comp=Z,330nm,20.0s					
GHAJ	**Ghor Haditha**	**135.89**	**249**	IAMs_20	IAMs_20	08 26 53.4
	comp=Z,457nm,21.0s					
YLE	**Yale**	**139.59**	**93**	IAMs_20	IAMs_20	08 22 08.6
	comp=Z,350nm,19.0s					
BRTR	**Keskin Array B**	**143.80**	**254**	PKP	**PKiKP**	**07 18 07.2 +0.7**
	comp=Z,0.9nm,0.9s,baz=45,slow=2.2,SNR=4.3					
BRTR	**Keskin Array B**	**143.80**	**254**		**PKiKP**	**07 18 11.8 +5.2**
CEL	**Celeste**	**149.88**	**231**	IAMs_20	IAMs_20	08 24 43.0
	comp=Z,351nm,21.0s					
TIP	**Timpagrande**	**150.37**	**233**	IAMs_20	IAMs_20	08 30 24.5
	comp=Z,295nm,19.0s					
MLR	**Muntele Rosu**	**151.82**	**252**	IAMs_20	IAMs_20	08 30 23.3
	comp=Z,398nm,22.0s					
PDG	**Podgorica**	**152.19**	**240**	IAMs_20	IAMs_20	08 29 12.3
	comp=Z,335nm,21.0s					
VSL	**Vilasalto**	**153.20**	**222**	IAMs_20	IAMs_20	08 32 18.9
	comp=Z,384nm,19.0s					
OBN	**Obninsk**	**153.55**	**277**	IAMs_20	IAMs_20	08 33 06.9
	comp=Z,294nm,20.0s					
CART	**Cartagena**	**154.02**	**203**	IAMs_20	IAMs_20	08 25 17.6
	comp=Z,400nm,21.0s					
AKASG	**Malin Array Be**	**154.15**	**263**	PKPab	**PKPab**	**07 18 42.5 +1.4**
	comp=Z,0.2nm,0.3s,baz=118,slow=2.5,SNR=4.2					
ALE	**Alert**	**156.52**	**14**	IAMs_20	IAMs_20	08 30 51.4
	comp=Z,308nm,20.0s					

*JSN **15** 07:18:52.5±0.7, 19°.66N×80°.50W, h15km, MD4.4*
*OSPL **15** 07:18:59.5±1.4, 18°.77N×73°.44W, h0km±8km, ML3.1*
*SSNC **15** 07:19:00.6±1.7, 18°.52N×73°.61W, h35km±999km, MD3.5, ML3.0, MW3.2*

ISC 15 07:18:55.3±1.6, 18°.67N±0°.05×73°.52W±0°.03, h6km±13km, n17, σ1°08/29, Haiti region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JAKH	**Jacmel**	**1.04**	**114**	*i* P		**Pn**	**07 19 17.3**	**+0.9**
JAKH				*e*S		**Sn**	**07 19 31.2**	**-0.1**
JAKH				IAML			07 19 35.5	
	comp=Z,486nm,0.6s							
MASC	**Masc**	**1.64**	**336**	*e*P		**Pg**	**07 19 27.0**	**+0.2**
MASC				*e*S		**Sb**	**07 19 46.5**	**-0.3**
MASC				IAML			07 19 49.2	
	comp=E,179nm,0.4s							
MASC				IAML			07 19 49.9	
	comp=N,113nm,0.5s							
MASC	**Masc**	**1.64**	**336**	*i* P		**Pg**	**07 19 27.0**	**+0.2**
MASC				*e*S		**Sb**	**07 19 46.6**	**-0.3**
MASC				IAML			07 19 49.3	
	comp=Z,87nm,0.4s							
LOPE2	**Hotel El Peder**	**1.80**	**110**	*i* P		**Pg**	**07 19 29.2**	**-0.6**
LOPE2				*e*S		**Sb**	**07 19 51.5**	**+0.1**
LOPE2				IAML			07 19 54.5	
	comp=Z,460nm,0.4s							
LODA1	**ITESIL, Dajabo**	**1.93**	**63**	*i* P		**Pb**	**07 19 29.6**	**-1.2**
LODA1				*e*S		**Sn**	**07 19 51.9**	**-1.1**
LODA1				IAML			07 19 58.6	
	comp=Z,2μm,1.3s							
GTBY	**Guantanamo Bay**	**1.96**	**310**	*e*P		**Pb**	**07 19 31.3**	**0.0**
GTBY				*e*S		**Sb**	**07 19 56.4**	**+0.4**
GTBY	**Guantanamo Bay**	**1.96**	**310**	*i* P		**Pb**	**07 19 31.4**	**+0.1**
GTBY				*e*S		**Sb**	**07 19 56.1**	**+0.2**
GTBY				IAML			07 20 06.8	
	comp=Z,24nm,0.6s							
SDDR	**Presa de Saban**	**2.14**	**81**	*e*P		**Pb**	**07 19 34.4**	**0.0**
SDDR				*e*S		**Sn**	**07 19 59.1**	**+0.7**
SDDR				IAML			07 20 03.9	
	comp=Z,298nm,0.6s							
SDDR				IAML			07 20 04.1	
	comp=Z,207nm,0.7s							
SDDR	**Presa de Saban**	**2.14**	**81**	*i* P		**Pb**	**07 19 34.1**	**-0.3**
SDDR				*e*S		**Sn**	**07 19 58.9**	**+0.5**
SDDR				IAML			07 20 03.6	
	comp=Z,226nm,0.7s							
LOBA2	**Hotel Casa Bon**	**2.38**	**104**	*i* P		**Pb**	**07 19 38.2**	**-0.2**
LOBA2				IAML			07 20 20.2	
	comp=Z,72nm,1.7s							
MOAC	**Moa**	**2.40**	**326**	*e*P		**Pb**	**07 19 39.0**	**+0.2**
MOAC				IAML			07 20 13.2	
	comp=N,31nm,0.3s							
MOAC				IAML			07 20 21.4	
	comp=E,45nm,0.4s							
RCC	**Rio Carpintero**	**2.44**	**303**	*e*P		**Pn**	**07 19 36.8**	**+1.2**
RCC				*e*S		**Sn**	**07 20 06.0**	**+0.2**
RCC				IAML			07 20 19.5	
	comp=N,34nm,0.3s							
RCC				IAML			07 20 21.2	
	comp=E,33nm,0.4s							
GWJ	**Greenwich**	**3.10**	**260**	*i* P		**Pb**	**07 19 51.3**	**+0.4**
HOJ	**Hope**	**3.14**	**258**	*i* P		**Pb**	**07 19 51.4**	**-0.1**
STH	**Stony Hill**	**3.18**	**260**	*i* P		**Pb**	**07 19 49.6**	**-2.6**
STH				*i* S		**Sb**	**07 20 33.3**	**+2.1**
LMGC	**Las Mercedes**	**3.57**	**293**	*e*P		**Pn**	**07 19 51.6**	**+0.5**
LMGC				*e*S		**Sn**	**07 20 30.4**	**-3.3**
CCCC	**Cccc**	**4.72**	**303**	*e*P		**Pn**	**07 20 07.1**	**+0.1**

*IDC **15** 07:24:29.1±0.6, 11°.32S×116°.29E, h0km, mb4.2/12, mbtmp4.2/14, ML3.9/2, MS4.2/11, Error ellipse: s-maj=29.9km s-min=15.0km az=70.0*
*DJA **15** 07:24:31.1±0.3, 12°.S±3°×11°.6E±°, h53km±10km, M4.8/18, mb4.7/12, mB5.4/4, MLv4.8/18, Mw(mB)4.8/4*
*NEIC **15** 07:24:33.2±1.9, 11°.48S±0°.07×116°.30E±0°.05, h24km±5km, mb4.2/19, Error ellipse: s-maj=11.2km s-min=6.4km az=159.0*

ISC 15 07:24:33.4±0.4, 11°.42S±0°.05×116°.29E±0°.05, h35km, n79, σ2°15/72, mb4.4/17, MS4.4/11, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
IGBI	**Denpasar**	**2.82**	**336**	P		**Pn**	**07 25 14.5**	**-1.5**
IGBI				S		**Sn**	**07 25 45.0**	**-3.8**
DNP	**Denpasar**	**2.93**	**339**	P		**Pn**	**07 25 16.7**	**-0.8**
PLAI	**Plampang**	**2.97**	**30**	P		**Pn**	**07 25 17.2**	**-0.8**
PLAI				S		**Sn**	**07 25 49.6**	**-2.8**
SRBI	**Singaraja**	**3.48**	**342**	P		**Pn**	**07 25 24.4**	**-0.7**
WBSI	**Waikabubak, Su**	**3.53**	**60**	P		**Pn**	**07 25 24.8**	**-1.0**
WBSI				S		**Sn**	**07 26 04.1**	**-2.2**
ABJI	**Asem Bagus**	**4.13**	**330**	P		**Pn**	**07 25 33.0**	**-1.1**
ABJI				S		**Sn**	**07 26 18.9**	**-2.3**
GMJI	**Gumukmas**	**4.20**	**318**	P		**Pn**	**07 25 32.8**	**-2.2**
GMJI				S		**Sn**	**07 26 19.1**	**-3.8**
BLJI	**Banyuglugur**	**4.52**	**324**	P		**Pn**	**07 25 37.5**	**-1.8**
BLJI				S		**Sn**	**07 26 28.1**	**-2.6**
KMMI	**Kalianget**	**4.91**	**332**	P		**Pn**	**07 25 43.3**	**-1.5**
	0.4nm98nm,1.0s							
PWJI	**Pagerwojo**	**5.56**	**307**	P		**Pn**	**07 25 51.8**	**-1.9**
	1.3nm3μm54nm,0.5s							
PWJI				S		**Sn**	**07 26 49.7**	**-6.8**
	1.3nm3μm54nm,0.5s							
EDFI	**Ende, Flores**	**5.95**	**64**	P		**Pn**	**07 25 57.7**	**-1.4**
	0.1nm17nm,0.5s							
PCJI	**Pacitan**	**5.97**	**302**	P		**Pn**	**07 25 57.7**	**-1.6**
	0.7nm53nm,0.5s							
WOJI	**Wonogiri, Jawa**	**6.38**	**303**	P		**Pn**	**07 26 02.5**	**-2.4**
	0.5nm24nm,0.5s							
UGM	**Wanagama**	**6.67**	**301**	Pn		**Pn**	**07 26 09.7**	**+0.7**
UGM	**Wanagama**	**6.67**	**301**	P		**Pn**	**07 26 07.3**	**-1.6**
	1.0nm108nm,1.6s							
BSSI	**Bau Bau, Buton**	**6.69**	**39**	P		**Pn**	**07 26 09.4**	**+0.2**
	0.4nm80nm,0.6s							
BKSI	**Bulukumba**	**7.15**	**32**	P		**Pn**	**07 26 16.3**	**+0.8**
	0.3nm761nm84nm,0.7s							
KAPI	**Kappang**	**7.23**	**29**	Pn		**Pn**	**07 26 16.8**	**+0.1**
	3.2nm,0.3s,baz=194,slow=10,SNR=11							
KAPI				Sn		**Sn**	**07 27 33.5**	**-4.1**
	3.6nm,0.3s,baz=180,slow=20,SNR=6.1							
	19nm,0.6s							
KAPI	**Kappang**	**7.23**	**29**			**Pn**	**07 26 17.2**	**+0.5**
BATI	**Baumata**	**7.34**	**81**	Sn		**Sn**	**07 27 37.6**	**-2.8**
	7.7nm,0.3s,baz=165,slow=23,SNR=1.8							
BNSI	**Bone**	**7.94**	**29**	P		**Pn**	**07 26 26.1**	**-0.2**
	46nm,0.7s							
BBKI	**Banjar Baru**	**8.04**	**350**	P		**Pn**	**07 26 30.8**	**+3.1**
CMJI	**Cimerak**	**8.53**	**294**	P		**Pn**	**07 26 32.6**	**-1.9**
	39nm,1.3s							
MBWA	**Marble Bar**	**10.23**	**162**	Pn		Pn	07 26 53.4	-4.3
PSA00	**Pilbara Seismi**	**10.65**	**162**	Pn		Pn	07 26 59.1	-4.5
SMKI	**Samarinda**	**10.94**	**5**	P		Pn	07 27 12.5	+4.9
GIRL	**Giralia**	**11.33**	**190**	Pn		**Pn**	**07 27 09.3**	**-3.5**
KNRA	**Kununurra**	**12.84**	**111**	Pn		**Pn**	**07 27 30.7**	**-2.8**
MORW	**Morawa**	**17.56**	**181**			**Pn**	**07 28 34.8**	**-0.6**
MORW				IAmb		IAmb	07 29 02.9	
	comp=Z,19nm,1.2s							
FAKI	**Fak Fak**	**17.94**	**63**			**Pn**	**07 28 37.9**	**-2.3**
FAKI				IAmb		IAmb	07 28 44.3	
	comp=Z,16nm,0.8s							
FAKI	**Fak Fak**	**17.94**	**63**	P		**Pn**	**07 28 38.0**	**-2.2**
	comp=Z,24nm,1.0s							
WB0	**Warramunga Arr**	**19.30**	**118**	P		**P**	**07 28 55.4**	**0.0**
WRA	**Warramunga Arr**	**19.32**	**118**	P		**P**	**07 28 56.0**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=284,slow=14,SNR=16							
WRA				S		S	07 32 18.3	-14
	comp=Z,2.5nm,0.8s,baz=290,slow=24,SNR=8.5							
	comp=Z,1.3nm,0.6s							
WRAB	**Tennant Creek**	**19.32**	**118**	P		**P**	**07 28 55.9**	**+0.1**
WRAB				IAmb		IAmb	07 29 19.0	
	comp=Z,7.5nm,0.9s							
WB2	**Warramunga Arr**	**19.33**	**118**	P		**P**	**07 28 55.5**	**-0.4**
WB2				IAmb		IAmb	07 28 57.8	
	comp=Z,7.1nm,1.1s							
WR0	**Warramunga Arr**	**19.50**	**118**	P		**P**	**07 28 58.1**	**+0.4**
WR0				IAmb		IAmb	07 29 35.2	
	comp=Z,9.8nm,1.1s							
ASAR	**Alice Springs**	**20.71**	**128**	P		**P**	**07 29 12.1**	**+1.2**
	comp=Z,3.3nm,0.6s,baz=301,slow=10,SNR=69							
ASAR				S		**S**	**07 32 52.3**	**-8.2**
	comp=Z,1.4nm,0.7s,baz=304,slow=19,SNR=2.6							
	comp=Z,3.3nm,0.6s							
ASAR	**Alice Springs**	**20.71**	**128**	P		**P**	**07 29 11.6**	**+0.7**
AS31	**Alice Springs**	**20.72**	**128**	P		**P**	**07 29 11.6**	**+0.6**
NWAO	**Narrogin (SRO)**	**21.42**	**178**	P		**P**	**07 29 19.9**	**+1.5**
FORT	**Forrest**	**22.14**	**152**	P		**P**	**07 29 26.3**	**+0.2**
BBOO	**Buckleboo**	**27.98**	**143**	P		**P**	**07 30 20.9**	**0.0**
STKA	**Stephens Creek**	**30.96**	**135**	P		**P**	**07 30 48.8**	**+1.5**
	comp=Z,1.2nm,0.4s,baz=307,slow=10,SNR=5.1							
	comp=Z,1.2nm,0.4s							
STKA	**Stephens Creek**	**30.96**	**135**	IAmb		IAmb	07 30 53.3	
	comp=Z,1.2nm,1.1s							
CMAR	**Chiang Mai Arr**	**34.27**	**330**	P		**P**	**07 31 17.2**	**+0.8**
	comp=Z,1.8nm,0.3s,baz=239,slow=16,SNR=1.8							
	comp=Z,1.8nm,0.3s							
TOO	**Toolangi**	**36.92**	**140**	P		**P**	**07 31 40.2**	**+1.2**
TOO				IAmb		IAmb	07 31 43.3	
	comp=Z,14nm,1.3s							
NJ2	**Nanjing**	**43.30**	**3**	*e*P		**P**	**07 32 34.3**	**+2.5**
NJ2				pmax		pmax		
	comp=Z,13nm,0.5s							
KSRS	**Korea Array**	**49.83**	**12**	P		**P**	**07 33 21.7**	**-1.3**
	comp=Z,0.7nm,0.5s,baz=198,slow=5.3,SNR=1.8							
KSRS				LR		LR	07 56 09.2	
	comp=Z,107nm,19.7s,baz=150,slow=38							
	comp=Z,0.7nm,0.5s							
USRK	**Ussuriysk Ar.**	**57.17**	**13**	LR		LR	07 59 36.1	
	comp=Z,217nm,21.7s,baz=149,slow=37							
SONM	**Songino Array**	**59.65**	**352**	P		**P**	**07 34 34.9**	**+0.8**
	comp=Z,1.8nm,0.3s,baz=188,slow=5.0,SNR=0.4							
	comp=Z,1.8nm,0.3s							
KSH	**Kashi**	**63.03**	**326**	P		**P**	**07 34 58.9**	**+1.7**
KSH				sP		pP	07 35 06.9	+1.1
KSH				pmax		pmax		
	comp=Z,9.0nm,0.7s							
TARG	**Taragay, Kyrgy**	**63.64**	**329**	P		**P**	**07 35 01.4**	**-0.2**
TARG				IAmb		IAmb	07 35 17.5	
	comp=Z,2.9nm,0.7s							
MK31	**Makanchi Array**	**65.45**	**335**	P		**P**	**07 35 13.4**	**+0.7**
MK31				IAmb		IAmb	07 35 15.9	
	comp=Z,2.6nm,0.8s							
MKAR	**Makanchi Array**	**65.45**	**335**	P		**P**	**07 35 13.2**	**+0.4**
	comp=Z,2.3nm,0.5s,baz=151,slow=7.5,SNR=20							
	comp=Z,2.3nm,0.5s							
MAKZ	**Makanchi**	**65.59**	**335**	P		**P**	**07 35 15.3**	**+1.6**
MAKZ				IAmb		IAmb	07 35 16.7	
	comp=Z,2.5nm,1.0s							
AAK	**Ala-Archa**	**66.01**	**327**	LR		LR	08 08 32.0	
	comp=Z,267nm,19.9s,baz=126,slow=40							
VNDA	**Vanda**	**70.04**	**170**	P		**P**	**07 35 43.3**	**+2.1**
	comp=Z,1.1nm,0.9s,baz=291,slow=8.0,SNR=5.3							
	comp=Z,1.1nm,0.9s							
VNDA	**Vanda**	**70.04**	**170**	IAmb		IAmb	07 35 44.8	
	comp=Z,3.5nm,1.2s							
ZALV	**Zalesovo Beam**	**70.39**	**341**	P		**P**	**07 35 43.0**	**-0.6**
	comp=Z,1.7nm,0.5s,baz=138,slow=5.2,SNR=7.2							
	comp=Z,1.7nm,0.5s							
ZALV	**Zalesovo Beam**	**70.39**	**341**	P		**P**	**07 35 44.7**	**+1.0**
PETK	**Petropavlovsk-**	**73.36**	**25**	P		**P**	**07 36 02.7**	**+1.2**
	comp=Z,1.1nm,0.8s,baz=232,slow=7.1,SNR=3.0							
	comp=Z,1.1nm,0.8s							
YAK	**Yakutsk**	**73.97**	**7**	LR		LR	08 08 52.2	
	comp=Z,190nm,21.9s,baz=100,slow=36							
ABKAR	**Akbulak array**	**78.03**	**326**	P		**P**	**07 36 29.1**	**+0.8**
QSPA	**South Pole Qui**	**78.59**	**180**	P		**P**	**07 36 33.0**	**+1.6**
	comp=Z,3.3nm,0.9s,baz=286,slow=1.5,SNR=10							
	comp=Z,3.3nm,0.9s							
QSPA	**South Pole Qui**	**78.59**	**180**	IAmb		IAmb	07 36 35.5	
	comp=Z,4.4nm,0.9s							
AKTO	**Aktyubinsk**	**79.72**	**326**	LR		LR	08 15 18.9	
	comp=Z,176nm,19.5s,baz=114,slow=38							
ARU	**Arti**	**82.69**	**332**	LR		LR	08 18 09.8	
	comp=Z,177nm,20.2s,baz=117,slow=39							
BELG	**Belogornoye**	**86.38**	**325**	LR		LR	08 21 08.6	
	comp=Z,225nm,19.6s,baz=138,slow=39							
SNAA	**Sanae**	**87.95**	**196**	P		**P**	**07 37 21.1**	**+1.7**
	comp=Z,1.7nm,0.7s,baz=149,slow=5.7,SNR=9.4							
	comp=Z,1.7nm,0.7s							
PPT	**Papeete**	**90.48**	**108**	LR		LR	08 14 51.9	
	comp=Z,33nm,20.4s,baz=223,slow=33							
BRTR	**Keskin Array B**	**91.63**	**310**	P		**P**	**07 37 39.1**	**+1.8**
	comp=Z,0.7nm,0.6s,baz=126,slow=2.0,SNR=2.4							
	comp=Z,0.7nm,0.6s							
AKASG	**Malin Array Be**	**96.89**	**320**	LR		LR	08 29 33.7	
	comp=Z,87nm,18.3s,baz=133,slow=40							
IDI	**Anqing**	**97.63**	**304**	LR		LR	08 31 40.4	
	comp=Z,285nm,18.1s,baz=209,slow=41							
MLR	**Muntele Rosu**	**98.28**	**315**	LR		LR	08 28 10.4	
	comp=Z,180nm,21.7s,baz=158,slow=39							
BRG	**Berggiesshubel**	**106.56**	**320**	*ex*		**PP**	**07 43 10.0**	**+0.6**
YKA	**Yellowknife Ar**	**117.48**	**24**	PKP		**PKPdf**	**07 43 14.8**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=289,slow=1.9,SNR=3.2							
NVAR	**Mina Array Bea**	**124.61**	**51**	PKP		**PKiKP**	**07 43 31.6**	**+1.5**
	comp=Z,0.4nm,0.7s,baz=290,slow=3.7,SNR=2.4							
LPAZ	**La Paz**	**152.12**	**171**	PKPbc		**PKiKP**	**07 44 29.1**	**+1.9**
	comp=Z,1.3nm,0.7s,baz=178,slow=4.4,SNR=6.5							
LPAZ	**La Paz**	**152.12**	**171**			**PKPbc**	**07 44 26.2**	**-0.7**

*NEIC **15** 07:41:02.8±2.3, 32°.93N±0°.03×115°.56W±0°.03, h20km±2km, Error ellipse: s-maj=4.9km s-min=3.2km az=160.0*
*ANF **15** 07:41:02.1±0.2, 32°.98N×115°.59W, h22km±3km, ML2.7/14, Error ellipse: s-maj=2.2km s-min=1.3km az=140.0*
*ECX **15** 07:41:03.3±0.7, 32°.99N×115°.60W, h16km±1km, MD2.8, ML3.0*
*PAS **15** 07:41:03.0±2.3, 32°.97N±0°.02×115°.57W±0°.01, h13km±2km, ML3.0/106, ML2.9/32(NEIC), Error ellipse: s-maj=2.6km s-min=0.7km az=150.0*

ISC 15 07:41:02.5±0.9, 32°.97N±0°.02×115°.58W±0°.02, h18km±4km, n59, σ0°76/85, 15C-9D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WEMD	**Westmorland, C**	**0.07**	**358**	⇓*i*P		**Pg**	**07 41 05.5**	**-0.4**
WEMD				*i* S		**Sg**	**07 41 08.3**	**+0.1**
COK2	**Cook Ranch 2**	**0.17**	**227**	⇑*i*P		**Pg**	**07 41 07.5**	**+0.5**
COK2				*i* S		**Sg**	**07 41 11.0**	**+1.0**
SWSC	**Sam W. Stewart**	**0.19**	**263**	P		**Pg**	**07 41 07.3**	**0.0**
	baz=84,SNR=155							
SWSC				S		**Sg**	**07 41 10.2**	**-0.2**
	baz=84							
SWSC	**Sam W. Stewart**	**0.19**	**263**	⇑*i*P		**Pg**	**07 41 07.3**	**0.0**
SWSC				*i* S		**Sg**	**07 41 10.3**	**-0.2**
SWSC				*e*			07 41 10.6	
SWSC				IAML			07 41 10.6	
	comp=N,2μm,0.2s							
DREC	**Desert Rsrch C**	**0.20**	**145**	⇓*i*P		**Pg**	**07 41 08.0**	**+0.6**
SUP	**Superstition M**	**0.21**	**267**			**Pg**	**07 41 07.6**	**+0.1**
SUP	**Superstition M**	**0.21**	**267**			**Sg**	**07 41 10.9**	**-0.1**
WESC	**Westside Schoo**	**0.24**	**212**	⇓*i*P		**Pg**	**07 41 08.6**	**+0.5**
WESC				*i* S		**Sg**	**07 41 13.0**	**+1.1**
CRR	**Carrizo Plain**	**0.34**	**256**	⇑*i*P		**Pg**	**07 41 09.9**	**+0.3**
SGL	**Mount Signal**	**0.34**	**201**	⇓*i*P		**Pg**	**07 41 09.8**	**+0.1**
SGL				*i* S		**Sg**	**07 41 14.8**	**+0.2**
UABX	**UABC, Campus M**	**0.35**	**161**	Pg		**Pb**	**07 41 10.5**	**+0.3**
UABX				IAML			07 41 17.4	
	comp=N,1μm,0.7s							
UABX				IAML			07 41 18.0	
	comp=E,2μm,0.4s							
UABX	**UABC, Campus M**	**0.35**	**161**	⇓*i*P		**Pb**	**07 41 10.8**	**+0.5**
COA	**Coachella**	**0.40**	**105**	⇑*i*P		**Pg**	**07 41 10.8**	**+0.1**
YUH	**Yuha Desert**	**0.43**	**222**	Pg		**Pg**	**07 41 11.5**	**+0.2**
YUH				Sg		**Sg**	**07 41 17.3**	**+0.1**
YUH				IAML			07 41 17.6	
	comp=N,659nm,0.2s							
YUH				IAML			07 41 17.7	
	comp=E,598nm,0.1s							
YUH2	**Yuha Desert**	**0.43**	**222**	*e*P		**Pg**	**07 41 11.4**	**+0.1**
YUH2				*e*S		**Sg**	**07 41 17.3**	**+0.1**
IKP	**In-Ko-Pah, Jac**	**0.55**	**235**	P		**Pb**	**07 41 13.6**	**0.0**
	baz=55,SNR=36							
IKP				S		**Sb**	**07 41 20.9**	**-0.2**
	baz=55							
IKP	**In-Ko-Pah, Jac**	**0.55**	**235**	⇑*e*P		**Pb**	**07 41 13.6**	**0.0**
IKP				*e*S		**Sb**	**07 41 20.8**	**-0.3**
EMSC	**East Mesa**	**0.55**	**114**	*e*P		**Pg**	**07 41 13.9**	**+0.5**
RMX	**La Rumorosa**	**0.56**	**229**			**Pb**	**07 41 13.8**	**+0.1**
RMX				Sg		**Sb**	**07 41 21.1**	**-0.3**
RMX				IAML			07 41 22.6	
	comp=E,863nm,0.2s							
RMX				IAML			07 41 22.9	
	comp=N,497nm,0.2s							
RMX	**La Rumorosa**	**0.56**	**229**	*e*P		**Pb**	**07 41 13.9**	**+0.1**
RMX				*e*S		**Sb**	**07 41 21.3**	**-0.2**
RMX				⇓*e*			07 41 22.6	
RMX				IAML			07 41 22.6	
	comp=E,833nm,0.2s							
CPBX	**Cerro Prieto**	**0.59**	**157**	Pg		**Pb**	**07 41 14.1**	**-0.1**
CPBX	**Cerro Prieto**	**0.59**	**157**	*e*		**Pb**	**07 41 14.2**	**-0.1**
CPBX				⇑*e*			07 41 32.8	
CPBX				IAML

NEE2	**Needles Airpor** baz=204	**1.97**	**24**	S		**Sn**	07 41 59.0	**-0.2**
Y14A	**Wickenburg**	**2.36**	**65**	Pn		**Pn**	07 41 42.4	**+2.0**
CIS	**Catalina Islan** baz=100	**2.42**	**281**	Sb		**Sb**	07 42 16.6	**+1.6**
214A	**Organ Pipe Nat**	**2.55**	**113**	Pn		**Pn**	07 41 41.9	**-1.1**
214A	**Organ Pipe Nat** baz=294	**2.55**	**113**	P		**Pn**	07 41 41.9	**-1.1**
X16A	**Lo Mia Camp, P**	**3.74**	**66**	Pn		**Pn**	07 42 00.9	**+1.4**
LCMT	**Little Creek M**	**4.47**	**25**	Pn		**Pn**	07 42 10.8	**+1.3**
X18A	**Snowflake**	**4.94**	**70**	Pn		**Pn**	07 42 17.0	**+1.0**

IDC 15 07:58:56.5±2.8, 53.76N×86.94E, h0km, mbtmp2.6/2, ML2.5/2, Error ellipse: s-maj=25.1km s-min=16.1km az=73.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** 0.1nm,0.8s,baz=98,slow=324,SNR=4.2	**1.27**	**279**	*i*		08 04 50.0	
ZALV	**Zalesovo Beam** 1.0nm,0.3s,baz=98,slow=16,SNR=10	**1.27**	**279**	Pg	Pg	07 59 20.0	-0.8
ZALV	0.8nm,0.3s,baz=102,slow=30,SNR=5.7			Lg	Lg	07 59 37.3	
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=58,slow=8.7,SNR=4.4	**6.05**	**242**	Pn	Pn	08 00 27.6	+0.5
KURBB	baz=99,slow=34,SNR=2.9 0.2nm,0.3s			Lg	Lg	08 02 12.8	
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=24,slow=13,SNR=1.7 0.2nm,0.3s	**7.58**	**205**	Pn	Pn	08 00 49.6	+1.4

IDC 15 08:00:38.8±2.2, 1.37N×126.44E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=185.0km s-min=27.5km az=66.0
DJA 15 08:00:43.8±0.3, 1°S±3'×12°2E±°, h10km, M3.9/10, mb4.2/3, MLv3.8/10
ISC 15 08:00:43.6±1.0, 0.59S±0.05×122.45E±0.06, h10km, n11, σ0s87/14, mb3.4/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.55**	**144**	P	**Pg**	**08 00 54.6**	**+0.2**
LUWI				S	**Sg**	**08 01 01.8**	**+0.1**
APSI	**Ampana**	**0.86**	**248**	P	**Pg**	**08 00 59.3**	**-0.8**
APSI				S	**Sb**	**08 01 11.8**	**-0.3**
MRSI	**Marisa**	**1.18**	**335**	P	**Pn**	**08 01 05.4**	**-0.7**
MRSI				S	**Sb**	**08 01 21.2**	**-0.1**
MPSI	**Mapaga**	**2.71**	**290**	P	**Pn**	**08 01 28.5**	**+1.3**
TTSI	**Tana Toraja**	**3.58**	**227**	P	**Pn**	**08 01 39.3**	**+0.1**
SPSI	**Sidrap Palu**	**4.29**	**219**	P	**Pn**	**08 01 48.9**	**0.0**
SGKI	**Sangatta, Kali**	**4.84**	**271**	P	**Pn**	**08 01 58.7**	**+2.1**
BSSI	**Bau Bau, Buton**	**5.85**	**199**	P	**Pn**	**08 02 10.6**	**+0.2**
WRA	**Warramunga Arr** 0.9nm,0.9s,baz=340,slow=12,SNR=5.1 0.9nm,0.9s	**22.48**	**150**	P	**P**	**08 05 42.7**	**-0.6**
ASAR	**Alice Springs** 0.5nm,0.6s,baz=337,slow=8.8,SNR=11 0.5nm,0.6s	**25.49**	**155**	P	**P**	**08 06 11.7**	**-0.5**
MKAR	**Makanchi Array** 0.2nm,0.4s,baz=116,slow=8.2,SNR=3.6 0.2nm,0.4s	**58.83**	**329**	P	**P**	**08 10 42.7**	**+0.3**

IDC 15 08:03:45.1±3.4, 54.29N×87.21E, h0km, mbtmp3.0/2, ML2.8/2, Error ellipse: s-maj=31.9km s-min=20.3km az=48.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** baz=76,slow=311,SNR=1.5	**1.45**	**257**	*i*		08 12 40.0	
ZALV	**Zalesovo Beam** 2.0nm,0.3s,baz=76,slow=16,SNR=4.8	**1.45**	**257**	Pg	Pn	08 04 10.2	-2.4
ZALV	2.0nm,0.3s,baz=78,slow=25,SNR=5.8			Lg	Lg	08 04 31.2	
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=53,slow=13,SNR=6.5 0.5nm,0.3s	**6.45**	**239**	Pn	Pn	08 05 22.1	+1.0
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=27,slow=14,SNR=4.6 0.3nm,0.3s	**8.13**	**205**	Pn	Pn	08 05 45.5	+1.2

JSN 15 08:46:42.3±1.1, 17.75N×73.02W, h15km±999km, MD4.6
OSPL 15 08:46:46.7±2.3, 18.69N×73.54W, h0km±12km, ML3.5
SSNC 15 08:46:47.2±1.7, 18.62N×73.59W, h4km±16km, MD3.8, ML3.4, MW3.7
ISC 15 08:46:44.5±1.8, 18.74N±0.05×73.51W±0.03, h1km±14km, n40, σ1s22/52, 1C-3D, Haiti region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAKH	**Jacmel**	**1.06**	**118**	⇓*i*P	**Pg**	**08 47 04.8**	**-0.2**
JAKH				*e*S	**Sg**	**08 47 19.3**	**+0.5**
JAKH	comp=Z,1μm,0.8s			IAML		08 47 23.4	
MASC	**Masc**	**1.58**	**335**	*e*P	**Pn**	**08 47 14.4**	**+0.7**
MASC				*e*S	**Sn**	**08 47 34.1**	**-0.7**
MASC	comp=E,770nm,0.4s			IAML		08 47 36.7	
MASC	comp=N,438nm,0.5s			IAML		08 47 37.4	
MASC	**Masc**	**1.58**	**335**	⇓*i*P	**Pn**	**08 47 14.4**	**+0.7**
MASC				*e*S	**Sn**	**08 47 34.2**	**-0.7**
MASC	comp=Z,358nm,0.4s			IAML		08 47 36.8	
LOPE2	**Hotel El Peder**	**1.82**	**112**	*i* P	**Pn**	**08 47 16.8**	**-0.1**
LOPE2				*e*S	**Sn**	**08 47 40.4**	**-0.2**
LOPE2	comp=Z,1μm,0.4s			IAML		08 47 42.1	
LODA1	**ITESIL, Dajabo**	**1.89**	**64**	*i* P	**Pn**	**08 47 18.3**	**+0.4**
LODA1				*e*S	**Sn**	**08 47 42.3**	**-0.1**
LODA1	comp=Z,2μm,2.1s			IAML		08 47 45.0	
GTBY	**Guantanamo Bay**	**1.92**	**308**	*e*P	**Pn**	**08 47 18.8**	**+0.4**
GTBY	**Guantanamo Bay**	**1.92**	**308**	*i* P	**Pn**	**08 47 18.8**	**+0.4**
GTBY				*e*S	**Sn**	**08 47 43.1**	**0.0**
GTBY	comp=Z,57nm,0.1s			IAML		08 47 50.8	
SDDR	**Presa de Saban**	**2.12**	**83**	*e*P	**Pn**	**08 47 22.2**	**+1.1**
SDDR				*e*S	**Sn**	**08 47 48.0**	**-0.1**
SDDR	**Presa de Saban**	**2.12**	**83**	*i* P	**Pn**	**08 47 21.6**	**+0.4**
SDDR				*e*S	**Sn**	**08 47 48.4**	**+0.2**
SDDR	comp=Z,576nm,0.7s			IAML		08 47 51.2	
MOAC	**Moa**	**2.35**	**325**	*e*P	**Pn**	**08 47 25.3**	**+1.1**
MOAC	comp=E,153nm,0.4s			IAML		08 47 58.1	
MOAC	comp=N,103nm,0.3s			IAML		08 47 59.9	
LOBA2	**Hotel Casa Bon**	**2.39**	**105**	*i* P	**Pn**	**08 47 25.8**	**+1.1**
LOBA2				*e*S	**Sb**	**08 47 56.7**	**-1.6**
LOBA2	comp=Z,189nm,0.9s			IAML		08 48 08.7	
RCC	**Rio Carpintero**	**2.41**	**302**	*e*P	**Pn**	**08 47 25.0**	**-0.1**
GWJ	**Greenwich**	**3.12**	**258**	*i* P	**Pn**	**08 47 35.7**	**+0.7**
HOJ	**Hope**	**3.16**	**257**	*i* P	**Pn**	**08 47 36.5**	**+1.1**
STH	**Stony Hill**	**3.20**	**259**	*i* P	**Pn**	**08 47 36.8**	**+0.8**
GRTK	**Grand Turk**	**3.55**	**39**	*e*P	**Pn**	**08 47 41.8**	**+1.0**
GRTK				*e*S	**Sn**	**08 48 23.7**	**+0.3**
GRTK	**Grand Turk**	**3.55**	**39**	*i* P	**Pn**	**08 47 42.4**	**+1.6**
GRTK				*e*S	**Sn**	**08 48 23.0**	**-0.4**
GRTK	comp=Z,80nm,1.0s			IAML		08 48 25.7	
LMGC	**Las Mercedes**	**3.55**	**292**	*e*P	**Pn**	**08 47 39.4**	**-1.4**
MTDJ	**Mount Denham**	**3.85**	**263**	*e*P	**Pn**	**08 47 44.3**	**-0.7**
CVJ	**Coleyville**	**3.85**	**263**	*i* P	**Pn**	**08 47 47.4**	**+2.4**
MCJ	**Malvern**	**4.05**	**259**	*i* P	**Pn**	**08 47 48.6**	**+0.9**
MCJ				*i* S	**Sn**	**08 48 38.0**	**+2.2**
CCCC	**Cccc**	**4.69**	**302**	⇓*e*P	**Pn**	**08 47 54.0**	**-2.5**
CRJC	**Cerrejon, Guaj**	**7.70**	**175**	*e*P	**Pn**	**08 48 36.6**	**-1.2**
OCAC	**Ocana**	**10.44**	**179**	*e*P	**Pn**	**08 49 15.2**	**-0.3**
UREC	**San Jos de Ur**	**11.09**	**190**	*e*P	**Pn**	**08 49 25.8**	**+1.4**
ZARC	**Zaragoza, Cauc**	**11.25**	**187**	*e*P	**Pn**	**08 49 26.8**	**+0.2**
BCIP	**Isla Barro Col**	**11.32**	**214**	*e*P	**Pn**	**08 49 23.9**	**-3.6**
PAMC	**Pamplona, Colo**	**11.36**	**176**	*e*P	**Pn**	**08 49 28.7**	**+0.3**
DBBC	**Dabeiba**	**11.94**	**193**	*e*P	**Pn**	**08 49 34.5**	**-1.6**
BARC	**Barichara**	**12.07**	**178**	*e*P	**Pn**	**08 49 37.4**	**-0.7**
PTBC	**PUERTO BERRIO,**	**12.16**	**184**	*e*P	**Pn**	**08 49 39.3**	**+0.3**
HELC	**Santa Helena**	**12.62**	**189**	⇑*e*P	**Pn**	**08 49 43.1**	**-2.5**
RUSC	**La Rusia**	**12.77**	**178**	*e*P	**Pn**	**08 49 48.0**	**+0.2**
SPBC	**San Pablo de B**	**13.02**	**182**	*e*P	**Pn**	**08 49 51.8**	**+1.0**
CBOC	**Ciudad Bolivar**	**13.03**	**191**	*e*P	**Pn**	**08 49 50.9**	**-0.1**
NORC	**Norcasia**	**13.16**	**186**	*e*P	**Pn**	**08 49 53.8**	**+1.0**
GUY2C	**Guyana, Caldas**	**13.55**	**188**	*e*P	**Pn**	**08 49 59.5**	**+1.1**
PLMC	**San Jos del P**	**14.01**	**191**	*e*P	**Pn**	**08 50 05.3**	**+1.0**
CHIC	**Chingaza**	**14.02**	**181**	*e*P	**Pn**	**08 50 07.3**	**+2.4**
ORTC	**Ortega, Tolima**	**14.83**	**187**	*e*P	**Pn**	**08 50 15.9**	**+0.3**

IDC 15 08:51:36.5±43.0, 15.71S×179.57W, h436km±46km, mb3.2/3, mbtmp3.9/4, Error ellipse: s-maj=803.0km s-min=124.3km az=74.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu** 4.3nm,0.6s,baz=60,slow=16,SNR=8.4	**3.04**	**228**	P	P	08 52 42.9	+0.1
STKA	**Stephens Creek** 1.2nm,0.9s,baz=73,slow=14,SNR=1.9 1.2nm,0.9s	**38.77**	**238**	P	P	08 58 22.2	+0.2
WRA	**Warramunga Arr** 0.5nm,0.4s,baz=92,slow=7.1,SNR=63 0.5nm,0.4s	**43.97**	**257**	P	P	08 59 03.5	-0.3
ASAR	**Alice Springs** 5.9nm,0.5s,baz=86,slow=8.8,SNR=111 5.9nm,0.5s	**44.35**	**252**	P	P	08 59 06.5	-0.2

IDC 15 08:59:05.3±7.0, 15.64S×168.00E, h144km±65km, mb3.3/3, mbtmp3.8/4, Error ellipse: s-maj=82.4km s-min=33.0km az=163.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac** 13nm,0.4s,baz=25,slow=19,SNR=4.4	**6.57**	**193**	P	Pn	09 00 39.6	0.0
WRA	**Warramunga Arr** 0.2nm,0.4s,baz=81,slow=6.8,SNR=16	**32.30**	**257**	P	P	09 05 20.7	-0.1
WRA	0.3nm,0.6s,baz=87,slow=4.0,SNR=1.3 0.2nm,0.4s			PcP	PcP	09 08 05.3	-0.3
ASAR	**Alice Springs** 2.6nm,0.5s,baz=77,slow=8.9,SNR=48	**33.02**	**251**	P	P	09 05 26.9	-0.1
ASAR	0.3nm,0.6s,baz=88,slow=2.4,SNR=4.4 2.6nm,0.5s			PcP	PcP	09 08 07.2	-0.3
ILAR	**Eielson Array** 0.2nm,0.6s,baz=232,slow=5.6,SNR=1.8 0.2nm,0.6s	**87.17**	**18**	P	P	09 11 34.5	-0.2
ARCES	**ARCESS Array B** 2.9nm,0.9s,baz=42,slow=1.5,SNR=7.1	**121.30**	**345**	PKP	PKPdf	09 17 40.6	-0.1

NNC 15 09:01:06.0±2.0, 54.40N×86.11E, h0km, mb3.3, mpv2.5, Error ellipse: s-maj=10.6km s-min=8.0km az=55.0, Suspected Mining explosion.
IDC 15 09:01:07.6±2.4, 54.33N×86.12E, h0km, mbtmp3.3/2, ML3.1/2, Error ellipse: s-maj=18.6km s-min=11.5km az=53.0
ISC 15 09:01:02.6±3.6, 54.9N±0.2×84.17E±0.09, h0km, n7, σ1s56/9, 6C, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** baz=66,slow=323,SNR=2.0	**1.04**	**158**	*i*		09 06 40.0	
ZAA0	**Zalesovo Array** 0.2nm,0.2s,baz=59,slow=17	**1.04**	**158**	⇑P	**Pb**	**09 01 22.7**	**-0.8**
ZAA0	1.3nm,0.3s,baz=59,slow=27			⇑S	**Sg**	**09 01 35.3**	**-0.7**
ZALV	**Zalesovo Beam** 1.9nm,0.3s,baz=61,slow=17,SNR=26	**1.04**	**158**	Pg	**Pg**	**09 01 22.1**	**-0.4**
ZALV	6.0nm,0.3s,baz=65,slow=27,SNR=16			Lg	Lg	09 01 36.0	
KURBB	**Kurchatov Arra** 0.2nm,0.3s,baz=51,slow=13,SNR=25	**5.50**	**221**	Pn	**Pb**	**09 02 37.8**	**-1.6**
KURBB	baz=50,slow=31,SNR=2.0 0.9nm,0.3s			Lg	Lg	09 04 17.1	
KURBB	**Kurchatov Arra** 0.6nm,0.2s	**5.50**	**221**	⇑Pn	**Pb**	**09 02 37.6**	**-1.8**
KURBB	0.7nm,0.3s			⇑Sn	**Sb**	**09 03 47.1**	**+1.4**
KURBB	3.5nm,0.6s			⇑Lg	Lg	09 04 15.7	
MK31	**Makanchi Array** 0.1nm,0.2s,baz=26,slow=15,SNR=28	**8.22**	**189**	⇑Pn	**Pn**	**09 03 04.8**	**+1.8**
MKAR	**Makanchi Array** 0.5nm,0.3s,baz=19,slow=12,SNR=11	**8.22**	**189**	Pn	**Pn**	**09 03 04.6**	**+1.6**
MKAR	0.1nm,0.3s,baz=23,slow=27,SNR=2.6			Sn	**Sn**	**09 04 36.6**	**0.0**
MKAR	baz=18,slow=31 0.7nm,0.3s			Lg	Lg	09 05 20.7	

MOS 15 09:02:15.0±1.0, 36.11N×70.51E, h117km, mb5.0/83, Error ellipse: s-maj=4.2km s-min=3.0km az=100.0
BJI 15 09:02:15.9±0.0, 36.24N×70.49E, h115km, mb4.7/54, mB4.8/36
NEIC 15 09:02:16.4±2.2, 36.09N±0.05×70.34E±0.07, h109km±5km, mb4.8/133, Error ellipse: s-maj=9.6km s-min=6.4km az=123.0
IDC 15 09:02:17.6±0.8, 36.07N×70.49E, h131km±7km, mb4.4/34, mbtmp4.8/38, MS3.6/33, Error ellipse: s-maj=10.5km s-min=8.3km az=7.0
GCMT 15 09:02:18.4±0.3, 36.06N±0.02×70.27E±0.02, h121km±4km, MW4.9/109, Moment Tensor Solution. s24,c24; s109,c148; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=0.55±.13; Mθθ=0.76±.18; Mφφ=1.31±.15; Mrθ=2.82±.09; Mrφ=0.77±.17; Mθφ=0.76±.07; Best double couple: M=3.19000×10^16 NP1=φs346.00000°, δ24.00000°, λ=-170.00000°. NP2=φs247.00000°, δ86.00000°, λ=-66.00000°. Principal axes: T 2.9020, Plg36.0000°, Azm316.0000°; N 0.5740, Plg24.0000°, Azm65.0000°; P =3.4780, Plg44.0000°, Azm180.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
NNC 15 09:02:19.7±2.8, 36.53N×70.14E, h127km±32km, mb4.8, mpv5.3 Error ellipse: s-maj=26.3km s-min=12.6km az=161.0
ISC 15 09:02:15.8±0.3, 36.08N±0.03×70.49E±0.03, h112km±2km, h112km: pP-P, n755, σ1s69/823, mb4.8/199, 75C-23D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**1.94**	**218**		**Pn**	**09 02 48.7**	**+0.4**
KBL				Sn	**Sn**	**09 03 12.8**	**-0.3**
KBL	**Kabul**	**1.94**	**218**	PN	**Pn**	**09 02 48.7**	**+0.4**
KBL	SNR=373					09 03 12.8	
KBL	**Kabul**	**1.94**	**218**	P	**Pn**	**09 02 48.8**	**+0.4**
KBL				S	**Sn**	**09 03 13.2**	**+0.1**
CHGR	**Chuyangaron**	**2.78**	**338**		**Pn**	**09 02 59.6**	**+0.5**
CHGR	**Chuyangaron**	**2.78**	**338**	PN	**Pn**	**09 02 59.6**	**+0.5**
GAR	**Garm**	**2.92**	**357**		**Pn**	**09 03 01.9**	**+1.0**
CHCP	**Chirah Chowk**	**3.32**	**136**	⇓P	**Pn**	**09 03 07.4**	**+1.2**
CHCP				S	**Sn**	**09 03 45.0**	**0.0**
THW	**Thamme Wali**	**3.44**	**162**	P	**Pn**	**09 03 07.9**	**+0.2**
THW				S	**Sn**	**09 03 46.0**	**-1.8**
DRK	**Karamyk**	**3.55**	**17**		**Pn**	**09 03 11.7**	**+2.3**
SARP	**Sargodha**	**4.53**	**156**	⇓P	**Pn**	**09 03 21.5**	**-0.7**
SARP				S	**Sn**	**09 04 10.0**	**-3.9**
JMU	**Jammu**	**4.95**	**131**	*e*P	**Pn**	**09 03 28.2**	**+0.2**
JMU				*e*S	**Sn**	**09 04 22.0**	**-2.1**
TAS	**Tashkent**	**5.32**	**350**		**Pn**	**09 03 33.9**	**+1.0**
TAS	**Tashkent**	**5.32**	**350**	PN	**Pn**	**09 03 33.9**	**+1.0**
KSH	**Kashi**	**5.53**	**50**	P	**Pn**	**09 03 32.6**	**-3.3**
KSH				S	**Sn**	**09 04 30.9**	**-7.4**
KSH	comp=N,2μm,0.7s			smax	smax		
KSH	comp=E,2μm,0.5s			smax	smax		
THN	**Thein Dam**	**5.65**	**129**	*e*P	**Pn**	**09 03 37.6**	**+0.2**
THN				*e*S	**Sn**	**09 04 39.9**	**-1.1**
IUG	**luzhnay**	**6.07**	**357**	*d*iPN	**Pn**	**09 03 43.7**	**+0.6**
IUG	**luzhnay** baz=357	**6.07**	**357**	⇓*i*P	**Pn**	**09 03 43.8**	**+0.6**
IUG	baz=357			*e*S	**Sn**	**09 04 49.3**	**-2.0**

CHM	**Chimkent**	**6.27**	**354**	*e*PN		**Pn**	09 03 44.1	**-1.6**
CHM	**Chimkent** baz=354	**6.27**	**354**	*e*P		**Pn**	09 03 44.2	**-1.6**
CHM				*e*S		**Sn**	09 04 54.0	**-2.0**
AML	**Almayashu** SNR=835	**6.54**	**21**	P		**Pn**	09 03 50.5	**+0.8**
AML	**Almayashu**	**6.54**	**21**	P		**Pn**	09 03 50.6	**+0.8**
AML	**Almayashu** SNR=843	**6.54**	**21**	*i* P		**Pn**	09 03 50.5	**+0.8**
BHK	**Bhakra**	**6.78**	**132**	*e*P		**Pn**	09 03 51.9	**-0.8**
BHK				*e*S		**Sn**	09 05 05.7	**-2.8**
DZA	**Taraz**	**6.83**	**5**	*e*PN		**Pn**	09 03 53.1	**-0.3**
DZA	**Taraz** baz=5.5	**6.83**	**5**	*e*P		**Pn**	09 03 53.1	**-0.3**
DZA	baz=5.5			*e*S		**Sn**	09 05 08.1	**-1.6**
UCH	**Uchtor** SNR=246	**6.89**	**26**	P		**Pn**	09 03 55.3	**+0.7**
HRA	**Herat**	**6.96**	**258**	Pn		**Pn**	09 03 55.6	**+0.3**
BRLS	**Borolday**	**6.96**	**356**	*e*PN		Pn	09 03 50.2	-4.9
BRLS	**Borolday** baz=355	**6.96**	**356**	*e*P		Pn	09 03 50.2	-4.9
BRLS	baz=355			*e*S		**Sn**	09 05 05.3	**-7.4**
KK31	**Karatay Array**	**7.01**	**0**	Pn		**Pn**	09 03 55.8	**-0.1**
KK31	**Karatay Array**	**7.01**	**0**	PN		**Pn**	09 03 55.8	**-0.1**
KK31	**Karatay Array** 121nm,0.5s,baz=190,slow=13,SNR=1228	**7.01**	**0**	P		**Pn**	09 03 55.8	**-0.1**
KK31	138nm,0.4s,baz=185,slow=18,SNR=10			S		**Sn**	09 05 10.9	**-3.1**
KKAR	**Karatay Array**	**7.01**	**0**	Pn		**Pn**	09 03 55.8	**0.0**
KKAR	**Karatay Array**	**7.01**	**0**			**Pn**	09 03 55.8	**0.0**
KKAR	**Karatay Array**	**7.01**	**0**	PN		**Pn**	09 03 55.8	**0.0**
EKS2	**Erkin-Say** SNR=100	**7.05**	**20**	P		**Pn**	09 03 57.4	**+1.0**
AAK	**Ala-Archa** SNR=54	**7.25**	**24**	P		**Pn**	09 04 00.2	**+1.1**
AAK	**Ala-Archa** 116nm,0.4s,baz=196,slow=6.2,SNR=81	**7.25**	**24**	P		**Pn**	09 04 00.2	**+1.1**
AAK	260nm,0.4s,baz=341,slow=20,SNR=14			S		**Sn**	09 05 18.8	**-1.1**
AAK	**Ala-Archa**	**7.25**	**24**			**Pn**	09 04 00.4	**+1.3**
AAK	**Ala-Archa**	**7.25**	**24**	*ce*PN		**Pn**	09 04 00.1	**+1.0**
AAK	comp=Z,96nm,0.6s			pmax		pmax		
AAK	**Ala-Archa**	**7.25**	**24**	P		**Pn**	09 04 00.3	**+1.3**
AAK				S		**Sn**	09 05 19.4	**-0.5**
AAK	**Ala-Archa** SNR=56	**7.25**	**24**	*i* P		**Pn**	09 04 00.2	**+1.1**
KBK	**Karagaybulak** SNR=68	**7.42**	**26**	P		**Pn**	09 04 02.9	**+1.4**
ULHL	**Ulahol** SNR=37	**7.61**	**34**	P		**Pn**	09 04 06.2	**+2.2**
CHMS	**Chumysh** SNR=39	**7.65**	**24**	P		**Pn**	09 04 05.3	**+0.8**
CHMS	**Chumysh** comp=Z,82nm,0.4s	**7.65**	**24**	⇑P		**Pn**	09 04 04.8	**+0.3**
CHMS	comp=Z,708nm,1.1s			⇓S		**Sn**	09 05 29.1	**-0.5**
BOOM	**Boomskoye usch**	**7.67**	**32**	Pn		**Pn**	09 04 06.2	**+1.3**
BOOM	**Boomskoye usch**	**7.67**	**32**	PN		**Pn**	09 04 06.2	**+1.3**
USP	**Ospenovka** SNR=107	**7.81**	**22**	P		**Pn**	09 04 08.4	**+1.7**
TKM2	**Tokmak 2** SNR=14	**7.89**	**28**	P		**Pn**	09 04 09.1	**+1.2**
TKM2	**Tokmak 2**	**7.89**	**28**	PN		**Pn**	09 04 08.5	**+0.7**
TKM2	comp=Z,78nm,0.6s			pmax		pmax		
TKM2	**Tokmak 2** comp=Z,78nm,0.6s	**7.89**	**28**	⇓P		**Pn**	09 04 08.6	**+0.7**
TKM2	comp=Z,232nm,1.1s			⇑S		**Sn**	09 05 33.7	**-1.8**
KDJ	**Kajisay**	**7.97**	**39**			**Pn**	09 04 09.7	**+0.8**
KDJ	**Kajisay**	**7.97**	**39**	PN		**Pn**	09 04 09.7	**+0.8**
TARG	**Taragay, Kyrgy**	**8.02**	**43**	Pn		**Pn**	09 04 10.6	**+0.8**
TARG	**Taragay, Kyrgy**	**8.02**	**43**	PN		**Pn**	09 04 10.6	**+0.8**
SGDS	**Sogindy**	**8.02**	**22**	*de*PN		**Pn**	09 04 08.9	**-0.6**
SGDS	comp=Z,11nm,0.5s			pmax		pmax		
SGDS	**Sogindy** comp=Z,11nm,0.5s,baz=22	**8.02**	**22**	⇓*e*P		**Pn**	09 04 08.1	**-1.4**
SGDS	baz=22			*e*S		**Sn**	09 05 37.0	**-1.6**
TNSS	**Tian-Shan**	**8.55**	**34**	*e*PN		**Pn**	09 04 16.5	**-0.4**
TNSS	**Tian-Shan** baz=34	**8.55**	**34**	*e*P		**Pn**	09 04 16.6	**-0.4**
TNSS	baz=34			*e*S		**Sn**	09 05 50.5	**-1.3**
AAA	**Alma-Ata**	**8.67**	**33**	*e*PN		**Pn**	09 04 20.6	**+2.3**
AAA	**Alma-Ata** baz=33	**8.67**	**33**	*e*P		**Pn**	09 04 18.1	**-0.3**
AAA	baz=33			*e*S		**Sn**	09 05 53.6	**-0.8**
KUU	**Kurty**	**9.00**	**28**	*e*PN		**Pn**	09 04 21.8	**-0.9**
KUU	comp=Z,19nm,0.4s			pmax		pmax		
KUU	**Kurty** comp=Z,19nm,0.4s,baz=28	**9.00**	**28**	*e*P		**Pn**	09 04 21.8	**-0.9**
KUU	baz=28			*e*S		**Sn**	09 06 01.4	**-0.8**
BHGR	**Bahadurgarh**	**9.16**	**142**	*e*P		**Pn**	09 04 23.3	**-1.8**
KHET	**Khetri**	**9.16**	**149**	*e*P		**Pn**	09 04 21.8	**-3.3**
KHET				*e*S		Sn	09 05 57.7	-9.5
CHKK	**Chushkaly**	**9.22**	**31**	*e*P		**Pn**	09 04 25.2	**-0.6**
CHKK				*e*S		**Sn**	09 06 06.9	**-0.8**
CHKK	**Chushkaly** baz=31	**9.22**	**31**	*e*P		**Pn**	09 04 25.2	**-0.6**
CHKK	baz=31			*e*S		**Sn**	09 06 06.9	**-0.8**
SATY	**Saty**	**9.27**	**39**	*ce*P		**Pn**	09 04 26.8	**+0.4**
SATY				*e*S		**Sn**	09 06 08.5	**-0.4**
SATY	comp=Z,10.0nm,0.8s			pmax		pmax		
SATY	**Saty** comp=Z,10nm,0.8s,baz=39	**9.27**	**39**	⇑*e*P		**Pn**	09 04 26.9	**+0.4**
SATY	baz=39			*e*S		**Sn**	09 06 08.5	**-0.4**
NDI	**New Delhi**	**9.31**	**140**	*e*P		Pn	09 04 21.5	-5.5
NDI				*e*P		**Pn**	09 04 25.2	**-1.8**
NDI				*e*S		Sn	09 06 00.9	-9.0
NDI				*e*S		**Sn**	09 06 03.0	**-6.9**
BTLS	**Baital**	**9.35**	**16**	*de*P		**Pn**	09 04 26.4	**-1.0**
BTLS				*e*S		**Sn**	09 06 08.9	**-1.8**
BTLS	comp=Z,4.0nm,0.2s			pmax		pmax		
BTLS	**Baital** comp=Z,4.3nm,0.2s,baz=16	**9.35**	**16**	⇓*e*P		**Pn**	09 04 26.4	**-1.0**
BTLS	baz=16			*e*S		**Sn**	09 06 08.9	**-1.8**
ZHN	**Zhinishke**	**9.36**	**38**	*e*P		**Pn**	09 04 26.4	**-1.3**
ZHN				*e*S		**Sn**	09 06 10.6	**-0.5**
ZHN	**Zhinishke** baz=39	**9.36**	**38**	*e*P		**Pn**	09 04 26.4	**-1.3**
ZHN	baz=39			*e*S		**Sn**	09 06 10.6	**-0.5**
KUDL	**Kundal**	**9.40**	**146**	*e*P		**Pn**	09 04 26.0	**-2.2**
KUDL				*e*S		Sn	09 06 01.0	-11
AYAN	**Aya Nagar**	**9.43**	**142**	*e*P		**Pn**	09 04 26.1	**-2.5**
AYAN				*e*S		Sn	09 06 03.2	-10

SHLS eS Sn 09 06 29.2 +5.3
baz=43
PDGK Podgornoye 10.02 41 P Pn 09 04 36.4 -0.3
PDGK S Sn 09 06 26.3 -0.8
PDGK Podgornoye 10.02 41 ⇑P Pn 09 04 36.4 -0.3
comp=Z,29nm,0.7s
PDGK ⇓S Sn 09 06 26.3 -0.8
comp=Z,49nm,1.0s
GEYT Alibeck 10.07 284 P Pn 09 04 34.9 -2.4
comp=Z,41nm,0.4s,baz=100,slow=14,SNR=38
GEYT S Sn 09 06 25.1 -3.2
comp=Z,52nm,0.4s,baz=65,slow=19,SNR=3.8
GEYT Alibeck 10.07 284 Pn Pn 09 04 34.7 -2.5
GYA0 ALIBECK ARRAY 10.07 284 P Pn 09 04 34.7 -2.6
GYA0 S Sn 09 06 23.4 -4.9
GYA0B ALIBECK ARRAY 10.07 284 Pn Pn 09 04 34.7 -2.6
GYA0B ALIBECK ARRAY 10.07 284 ⇑P Pn 09 04 34.7 -2.6
GYA0B ⇑S Sn 09 06 23.4 -4.8
AJM Ajmer 10.21 159 eP Pn 09 04 36.4 -2.8
AJM eS Sn 09 06 22.5 -9.2
AJM IAML 09 06 24.0
comp=N,763nm,0.3s
AJM IAML 09 06 26.2
comp=E,828nm,0.4s
PTH Pithoragarh 10.45 126 eP Pn 09 04 39.5 -3.2
PTH eS Sn 09 06 28.1 -10
LGTI Lohaghat 10.54 126 eP Pn 09 04 40.1 -3.5
LGTI eP Pn 09 04 47.8 +4.2
LGTI eS Sn 09 06 28.9 -11
LGTI eS Sn 09 06 34.7 -5.0
TDK Taldyqorghan 10.75 32 eP Pn 09 04 45.4 -1.0
TDK Taldyqorghan 10.75 32 eP Pn 09 04 45.5 -1.0
baz=32
OTUK Ortayu 12.23 6 P Pn 09 05 04.9 -1.2
OTUK S Sn 09 07 10.2 -10
OTUK pmax pmax
comp=Z,55nm,0.9s
OTUK smax smax
comp=N,66nm,0.8s
OTUK Ortayu 12.23 6 ⇓P Pn 09 05 05.0 -1.2
comp=N,55nm,0.8s
OTUK ⇑S Sn 09 07 10.2 -10
comp=N,36nm,0.7s
JHNI Jhansi 12.63 145 eP Pn 09 05 07.2 -4.3
JHNI eS Sn 09 07 17.9 -13
DANN Dangsing 13.61 121 eP Pn 09 05 20.7 -3.8
comp=N,199nm,0.4s
DANN eS Sn 09 07 43.0 -12
comp=N,189nm,0.5s
MAKZ Makanchi 13.73 35 P Pn 09 05 25.3 -0.4
MAKZ Makanchi 13.73 35 P Pn 09 05 25.3 -0.4
MAKZ Makanchi 13.73 35 ⇓P Pn 09 05 25.7 0.0
comp=N,98nm,0.7s
KOLN Koldanda 13.87 123 eP Pn 09 05 23.7 -4.0
comp=N,52nm,0.6s
MK31 Makanchi Array 13.87 36 Pn Pn 09 05 27.8 +0.3
MK31 Makanchi Array 13.87 36 i P Pn 09 05 27.3 -0.1
MK31 pmax pmax
comp=Z,56nm,0.8s
MK31 Makanchi Array 13.87 36 ⇓P Pn 09 05 27.3 -0.1
comp=Z,56nm,0.8s,baz=216,slow=12,SNR=20
MKAR Makanchi Array 13.87 36 P Pn 09 05 27.3 -0.1
comp=Z,13nm,0.7s,baz=221,slow=16,SNR=48
MKAR Makanchi Array 13.87 36 P Pn 09 05 26.5 -0.9
BRZS Berezniki 13.99 6 deP Pn 09 05 27.3 -1.6
BRZS eS Sn 09 08 01.7 -1.2
BRZS Berezniki 13.99 6 ⇓eP Pn 09 05 27.3 -1.6
baz=6.0
BRZS eS Sn 09 08 01.7 -1.2
baz=6.0
VLK Valmikinagar 14.34 124 eP Pn 09 05 31.0 -2.5
GKN Gorkha 14.44 120 eP Pn 09 05 31.1 -3.9
ALBI Allahabad 14.48 135 eP Pn 09 05 31.3 -4.1
DMN Daman 15.01 120 eP Pn 09 05 38.3 -4.0
KKN Kakani 15.02 119 eP Pn 09 05 39.5 -2.9
PKIN Phulchoki 15.23 120 eP Pn 09 05 41.5 -3.6
comp=Z,191nm,0.5s
PKI Pulchoki 15.24 120 eP Pn 09 05 41.0 -4.3
comp=Z,126nm,0.5s
AB31 Akbulak array 15.26 333 i P Pn 09 05 44.2 -0.8
AB31 pmax pmax
comp=Z,110nm,0.5s
AB31 Akbulak array 15.26 333 P Pn 09 05 44.2 -0.8
comp=Z,110nm,0.5s,baz=143,slow=10,SNR=2441
AB31 ⇑S Sn 09 08 18.8 -15
comp=Z,107nm,0.7s,baz=142,slow=25,SNR=6.2
ABKAR Akbulak array 15.26 333 P Pn 09 05 44.0 -1.0
ABKAR Akbulak array 15.26 333 Pn Pn 09 05 44.0 -1.0
ABKAR IAmb IAmb 09 05 45.6
comp=Z,258nm,0.6s
JBP Jabalpur 15.27 145 eP Pn 09 05 41.9 -3.5
WMQ Urumqi 15.28 54 eP P 09 05 48.3 +0.7
WMQ pmax pmax
comp=Z,37nm,0.7s
WMQ pmax pmax
comp=Z,210nm,4.5s
GUN Gumba 15.38 118 eP Pn 09 05 43.4 -3.6
ZSN Zaisan 15.59 39 eP Pn 09 05 48.6 -0.6
ZSN Zaisan 15.59 39 eP Pn 09 05 48.6 -0.6
baz=39
KURBB Kurchatov Arra 15.65 19 P Pn 09 05 47.9 -2.0
comp=Z,54nm,0.7s,baz=209,slow=10,SNR=60
KURBB S Sn 09 08 40.7 -2.4
comp=Z,1.7nm,0.6s,baz=215,slow=19,SNR=1.1
KURBB Kurchatov Arra 15.65 19 P Pn 09 05 47.6 -2.3
KURBB pmax pmax
comp=Z,62nm,0.7s
KURBB Kurchatov Arra 15.65 19 ⇑P Pn 09 05 47.7 -2.3
comp=Z,62nm,0.7s
JIRN Jiri 15.74 118 eP Pn 09 05 47.8 -3.8
comp=Z,301nm,0.5s
KURK Kurchatov 15.76 19 Pn 09 05 49.8 -1.4
KURK IAmb IAmb 09 05 58.2
comp=Z,26nm,0.7s
KURK Kurchatov 15.76 19 P Pn 09 05 49.8 -1.4
KURK pmax pmax
comp=Z,26nm,0.7s
BANOM Banah 15.81 234 P P 09 05 54.3 +0.7
SNR=14
BANOM S S 09 08 52.0 -1.6
BANOM Banah 15.81 234 i P P 09 05 53.9 +0.2
SNR=28
SHME Shamm 15.83 235 P P 09 05 55.0 +1.2
SNR=5.7
SHME S S 09 08 51.3 -2.6
SHME Shamm 15.83 235 i P P 09 05 53.8 -0.1
SNR=23
SEM Semipalatinsk 15.97 23 eP Pn 09 05 52.2 -1.8
SEM Semipalatinsk 15.97 23 eP Pn 09 05 52.2 -1.8
baz=23
MASF Masafi 16.28 233 P P 09 06 00.5 +1.6
SNR=10
MASF S S 09 09 02.9 -0.3
MSFE Esma-Masafi 16.29 233 i P P 09 05 59.6 +0.6
SNR=16
AKL Akola 16.35 158 eP Pn 09 05 57.9 -0.9
WSAR Wadi Sarin 16.41 222 P P 09 06 00.1 -0.1
comp=Z,35nm,0.8s,baz=62,slow=9.4,SNR=12
WSAR LR LR 09 14 13.9
comp=Z,128nm,19.5s,baz=71,slow=44
WSAR Wadi Sarin 16.41 222 P P 09 06 03.1 +2.8
WSAR S S 09 09 07.6 +1.7
RAMN Ramite 16.46 119 eP Pn 09 05 56.6 -3.7
comp=Z,270nm,0.5s
UOSS Minazif 16.55 232 P Pn 09 06 00.0 -1.2
UOSS Minazif 16.55 232 P P 09 06 03.4 +1.6
UOSS S S 09 09 08.3 -0.5
UOSS Minazif 16.55 232 P Pn 09 06 00.5 -0.8
HATD Hatta, Dubai 16.68 232 P P 09 06 05.2 +1.9
HATD S S 09 09 12.1 +0.5
HATD Hatta, Dubai 16.68 232 P Pn 09 06 02.3 -0.6
WBK Wadi Bani Khal 16.74 220 P P 09 06 06.9 +2.9
WBK S S 09 09 15.8 +2.9
ASHO Ashiyiah 16.83 232 P P 09 06 07.6 +2.7
SNR=7.7
ASHO S S 09 09 15.5 +0.7
ASHO Ashiyiah 16.83 232 i P P 09 06 06.0 +1.0
SNR=22
NAZ Nazwa, Dubai 16.87 233 P P 09 06 07.8 +2.5
NAZ S S 09 09 15.7 +0.2
NAZ Nazwa, Dubai 16.87 233 i P P 09 06 06.2 +0.8
SNR=6.2
SMDO Samad 16.87 223 P P 09 06 08.6 +3.1
SMDO S S 09 09 20.1 +4.3
HOQ Hoqain 16.89 226 P P 09 06 08.3 +2.8

JLN Jalan Bani Buh 16.90 218 P P 09 06 08.7 +3.0
SOHO SOHO 16.93 229 P P 09 06 08.7 +2.7
BVAR Borovoye Array 16.94 360 LR LR 09 12 30.6
comp=Z,208nm,20.5s,baz=108,slow=36
AKTO Aktyubinsk 16.95 332 P P 09 06 06.1 +0.1
comp=Z,101nm,0.6s,baz=140,slow=14,SNR=223
AKTO S Sn 09 09 01.7 -13
comp=Z,20nm,0.7s,baz=153,slow=20,SNR=3.1
AKTO Aktyubinsk 16.95 332 ⇑P Pn 09 06 05.4 -0.4
comp=Z,139nm,0.8s
AKTO ⇑S Sn 09 09 04.7 -10
comp=Z,121nm,0.8s
BRVK Borovoye 16.98 360 P Pn 09 06 05.8 -0.3
BRVK IAmb IAmb 09 06 08.5
comp=Z,102nm,1.0s
BRVK Borovoye 16.98 360 ceP Pn 09 06 06.0 -0.2
BRVK pmax pmax
comp=Z,108nm,1.0s
BRVK Borovoye 16.98 360 P Pn 09 06 05.9 -0.3
BRVK S S 09 09 21.2 +3.9
ODAN Odare 17.08 118 eP P 09 06 05.3 -2.6
comp=Z,86nm,0.6s
BLSP Bilaspur 17.20 141 eP P 09 06 06.7 -2.4
ASUD Al Ashush, Dub 17.34 233 P Pn 09 06 13.4 +2.6
ASUD S S 09 09 29.4 +4.2
ASUD Al Ashush, Dub 17.34 233 P Pn 09 06 11.9 +1.1
JMDO Jabal Madar 17.40 222 P Pn 09 06 14.5 +3.0
ALNE Al Ain 17.48 231 P Pn 09 06 14.1 +1.6
SNR=6.7
ALNE S S 09 09 32.2 +4.1
ALNE Al Ain 17.48 231 i P Pn 09 06 13.3 +0.8
SNR=13
AJN Ajban 17.61 234 P Pn 09 06 15.9 +1.9
AJN S S 09 09 35.1 +4.4
POO Poona 17.73 169 eP P 09 06 13.0 -1.9
LSA Lhasa 18.46 104 P Pn 09 06 24.9 +0.2
LSA IAmb IAmb 09 06 27.9
comp=Z,50nm,0.6s
LSA Lhasa 18.46 104 P Pn 09 06 25.0 +0.2
LSA pmax pmax
comp=Z,50nm,0.6s
LSA Lhasa 18.46 104 P Pn 09 06 24.4 -0.4
MHTO MHTO 18.60 219 P Pn 09 06 27.0 +1.0
MHTO S Sn 09 09 54.7 +0.3
JRN Qarnain Island 18.79 239 P Pn 09 06 27.7 -0.4
JRN S Sn 09 09 59.9 +1.1
UMZA Um Al Zommool 18.83 229 P Pn 09 06 28.4 -0.2
UMZA S Sn 09 10 03.8 +4.0
KAD Karad 18.98 169 eP P 09 06 27.8 -0.7
MAK Makhachkala 18.99 298 eP P 09 06 27.5 -0.9
MAK eS S 09 09 56.4 -1.5
MAK pmax pmax
comp=Z,319nm,1.3s
MAK MLR MLR
comp=Z,217nm,16.0s
KHOR Al-Khor Airpor 19.31 243 P P 09 06 32.9 +0.9
KHOR S Sn 09 10 09.0 -2.3
GHWR Ruwais 19.42 236 P P 09 06 33.3 +0.1
SHMA Al-Shehemyia 19.57 244 P Pn 09 06 36.4 -0.8
GOMU GeErMu 19.64 82 P Pn 09 06 37.8 -0.6
GOMU pmax pmax
comp=Z,98nm,4.2s
MZR Muzera 19.68 233 P P 09 06 37.2 +1.1
SNR=9.1
MZR Muzera 19.68 233 i P P 09 06 35.7 -0.4
SNR=23
BTLR Botlikh 19.84 297 i P P 09 06 38.1 +0.3
HYBB Hyderabad (bro 19.91 157 eP P 09 06 39.5 +0.8
HYBB eSn Sn 09 10 28.0 +2.1
GROC Groznyy 20.26 298 eP P 09 06 43.6 +1.4
GROC e*PP pP 09 07 06.3 +2.9
GROC e*SP sP 09 07 21.7 +4.1
GROC eS S 09 10 25.0 +1.8
GROC e*SS sS 09 11 02.3 +2.4
GROC pmax pmax
comp=Z,155nm,0.7s
SMRA Abu-Samra 20.34 242 P P 09 06 43.1 -0.1
ZAA0 Zalesovo Array 20.47 25 P P 09 06 44.9 +0.6
ZAA0 Zalesovo Array 20.47 25 ⇑P P 09 06 44.6 +0.3
comp=Z,23nm,0.7s
ZALV Zalesovo Beam 20.47 25 P P 09 06 44.9 +0.6
comp=Z,166nm,0.6s,baz=222,slow=11,SNR=574
comp=Z,166nm,0.6s
ZALV Zalesovo Beam 20.47 25 i P P 09 06 44.9 +0.6
ZALV pmax pmax
comp=Z,168nm,0.6s
GNI Garni 20.64 289 P Pn 09 06 49.3 -0.5
comp=Z,311nm,0.8s,baz=74,slow=1.1,SNR=76
GNI Garni 20.64 289 P Pn 09 06 49.3 -0.5
GNI Garni 20.64 289 i P Pn 09 06 48.4 -1.4
GNI pmax pmax
comp=Z,315nm,0.8s
GNI Garni 20.64 289 P Pn 09 06 49.7 -0.1
GNI Garni 20.64 289 P P 09 06 48.0 +1.6
SHL Shillong 21.11 114 P P 09 06 52.0 +0.4
SHL Shillong 21.11 114 P P 09 06 52.0 +0.4
SHL pmax pmax
comp=Z,578nm,1.9s
SHL Shillong 21.11 114 P P 09 06 52.5 +0.9
SNR=21
ZEI Tsey 21.55 296 eP P 09 06 56.0 -0.2
ZEI pmax pmax
comp=Z,29nm,0.7s
AKH Akhalkalaki 21.68 292 ⇓P P 09 07 00.5 +2.9
AKH Akhalkalaki 21.68 292 P P 09 07 00.5 +2.9
SVE Sverdlovsk 21.79 345 eP P 09 06 59.4 +1.0
SVE eS S 09 10 58.8 +6.5
SVE pmax pmax
comp=Z,73nm,0.8s
ONI Oni 21.85 296 P P 09 06 58.8 -0.4
ONI IAmb IAmb 09 07 04.8
comp=Z,49nm,0.8s
ONI Oni 21.85 296 P P 09 06 58.8 -0.4
ONI pmax pmax
comp=Z,49nm,0.8s
ARU Arti 21.90 342 P P 09 07 00.2 +0.6
comp=Z,110nm,0.7s,baz=161,slow=7.2,SNR=82
ARU S S 09 10 56.6 +2.3
comp=Z,9.7nm,0.2s,baz=131,slow=21,SNR=1.5
ARU LR LR 09 16 02.8
comp=Z,318nm,18.5s,baz=160,slow=38
comp=Z,110nm,0.7s
ARU Arti 21.90 342 P P 09 07 00.2 +0.6
ARU Arti 21.90 342 c i P P 09 07 00.6 +1.0
ARU 09 07 32.9
ARU S S 09 10 55.8 +1.5
ARU SS SnSn 09 11 42.9 +12
ARU pmax pmax
comp=Z,126nm,0.8s
KARS Kars 21.93 290 P P 09 06 59.7 -0.5
KARS IAmb IAmb 09 07 24.3
comp=Z,81nm,0.8s
KARS Kars 21.93 290 P P 09 06 59.7 -0.5
KARS pmax pmax
comp=Z,81nm,0.8s
KBZ Khabaz 22.43 298 P P 09 07 04.4 -0.7
comp=Z,27nm,0.9s,baz=122,slow=7.5,SNR=29
KBZ S S 09 11 06.8 +3.3
comp=Z,4.3nm,0.8s,baz=126,slow=17,SNR=1.7
KBZ LR LR 09 17 46.4
comp=Z,86nm,21.2s,baz=79,slow=41
comp=Z,27nm,0.9s
KBZ Khabaz 22.43 298 ceP P 09 07 04.5 -0.7
KBZ pmax pmax
comp=Z,30nm,0.9s
SHA1 Shidzhatmaz 22.61 298 i P P 09 07 07.1 -0.1
DOK Doka 22.61 224 P P 09 07 08.9 +1.7
GOF Gofitskoye 22.61 302 ⇓eP P 09 07 07.7 +0.7
GOF pmax pmax
comp=Z,46nm,0.6s
KVAR Kislovodsk Arr 22.62 299 P P 09 07 07.8 +0.6
comp=Z,9.2nm,0.6s,baz=117,slow=16,SNR=3.4
comp=Z,9.2nm,0.6s
KIV Kislovodsk 22.62 299 ⇑P P 09 07 08.8 +1.5
KIV Kislovodsk 22.62 299 P P 09 07 07.1 -0.2
KIV IAmb IAmb 09 07 24.1
comp=Z,62nm,1.0s
KIV Kislovodsk 22.62 299 eP P 09 07 08.2 +0.9
KIV eS S 09 11 07.6 +0.8
KIV pmax pmax
comp=Z,42nm,1.0s
KIV MLR MLR
comp=Z,65nm,14.0s
KIV Kislovodsk 22.62 299 P P 09 07 09.0 +1.7

KIV Kislovodsk 22.62 299 P P 09 07 08.7 +1.5
CHVG Ch'k'valeri 22.86 296 ⇓P P 09 07 11.2 +1.6
BELG Belogornoye 22.97 322 P P 09 07 10.4 +0.1
comp=Z,107nm,0.7s,baz=118,slow=0.9,SNR=39
BELG S S 09 11 15.1 +3.4
comp=Z,19nm,0.6s,baz=203,slow=6.2,SNR=2.2
BELG LR LR 09 17 12.7
comp=Z,130nm,20.7s,baz=44,slow=39
comp=Z,107nm,0.7s
BELG Belogornoye 22.97 322 i P P 09 07 10.5 +0.1
BELG pmax pmax
comp=Z,17nm,0.7s
BATM Batumi 23.04 293 ⇑P P 09 07 13.0 +1.7
BATM Batumi 23.04 293 P P 09 07 12.9 +1.7
WHFO Wadi Hawf 23.37 224 P P 09 07 15.3 +0.9
GTA Gaotai 23.38 73 eP P 09 07 16.1 +1.6
GTA S S 09 11 20.9 +1.9
GTA sS sS 09 12 02.1 -0.1
GTA pmax pmax
comp=Z,12nm,0.9s
GTA pmax pmax
comp=Z,76nm,5.5s
GTA LR LR
comp=Z,390nm,16.7s
GTA LR LR
comp=Z,180nm,17.8s
GTA LR LR
comp=Z,160nm,16.4s
RBK Rabkut 23.47 222 P P 09 07 16.3 +0.9
MARD Mardin 23.82 282 P P 09 07 18.2 -0.3
MARD IAmb IAmb 09 07 57.8
comp=Z,23nm,1.1s
ABTO Aybut 24.09 224 P P 09 07 21.6 +0.6
RAYN Ar Rayn 24.95 247 P P 09 07 27.6 -1.2
RAYN IAmb IAmb 09 07 30.0
comp=Z,17nm,0.8s
RAYN Ar Rayn 24.95 247 P P 09 07 27.6 -1.2
RAYN pmax pmax
comp=Z,17nm,0.8s
RAYN Ar Rayn 24.95 247 P P 09 07 28.7 -0.1
RAYN Ar Rayn 24.95 247 i P P 09 07 28.2 -0.7
SNR=25
VRH Novokhopyorsk 25.51 315 eP P 09 07 32.7 -0.8
VRH pmax pmax
comp=Z,10.0nm,0.6s
KIRV Kirov 26.44 335 P P 09 07 43.0 +1.2
comp=Z,52nm,0.7s,baz=127,slow=0.6,SNR=16
comp=Z,52nm,0.7s
KIRV Kirov 26.44 335 ceP P 09 07 43.2 +1.4
ANN Anapa 26.48 299 eP P 09 07 42.5 +0.2
MOY Mondy 26.69 45 eP P 09 07 46.0 +1.7
MOY pmax pmax
comp=Z,5.0nm,1.0s
LZH Lanzhou 26.88 80 eP P 09 07 45.8 -0.5
LZH pP pP 09 08 11.4 -0.7
LZH sP sP 09 08 28.9 +3.2
LZH S S 09 12 15.8 +1.0
LZH pmax pmax
comp=Z,18nm,1.4s
LZH pmax pmax
comp=Z,110nm,5.4s
VSR Storozhevoye 26.99 314 eP P 09 07 46.3 -0.6
VSR pmax pmax
comp=Z,20nm,1.0s
VORR Voronezh 27.14 315 eP P 09 07 46.9 -1.3
VORR pmax pmax
comp=Z,70nm,0.5s
BNN Bunyan 27.54 286 P P 09 07 50.7 -1.4
BNN IAmb IAmb 09 07 54.8
comp=Z,16nm,0.7s
ZAK Zakamensk 27.58 48 eP P 09 07 52.2 0.0
ZAK pmax pmax
comp=Z,6.0nm,1.5s
LPSR Galich'ya Gora 27.67 317 eP P 09 07 53.3 +0.4
LPSR pmax pmax
comp=Z,30nm,0.8s
CD2 Chengdu 28.13 91 eP P 09 07 59.0 +1.7
CD2 pmax pmax
comp=Z,10.0nm,0.5s
PZH PanZhiHua 28.26 101 P P 09 07 59.9 +1.3
PZH pmax pmax
comp=Z,10.0nm,0.6s
PZH pmax pmax
comp=Z,100nm,5.3s
SONM Songino Array 28.91 55 P P 09 08 05.5 +1.3
comp=Z,8.1nm,0.8s,baz=255,slow=9.8,SNR=40
comp=Z,8.1nm,0.8s
SONM Songino Array 28.91 55 P P 09 08 05.6 +1.4
SONM Songino Array 28.91 55 P P 09 08 05.6 +1.4
SONM pmax pmax
comp=Z,7.0nm,0.9s
MMAI Mount Meron Ar 28.97 274 P P 09 08 05.5 +0.8
comp=Z,2.1nm,0.5s,baz=79,slow=10,SNR=3.7
comp=Z,2.1nm,0.5s
ILGA Ilgaz 29.03 291 IAmb IAmb 09 08 09.2
comp=Z,34nm,0.9s
BR131 Keskin Array S 29.17 288 P P 09 08 07.3 +0.7
BR131 IAmb IAmb 09 08 08.6
comp=Z,20nm,0.7s
BR131 Keskin Array S 29.17 288 i P P 09 08 06.8 +0.2
BR131 Keskin Array S 29.17 288 P P 09 08 07.9 +1.3
SNR=9.2
BRTR Keskin Array B 29.17 288 P P 09 08 07.3 +0.7
comp=Z,13nm,0.8s,baz=94,slow=8.3,SNR=62
BRTR pP pP 09 08 35.0 +3.0
comp=Z,3.1nm,0.8s,baz=102,slow=8.4,SNR=3.3
comp=Z,13nm,0.8s
BRTR Keskin Array B 29.17 288 P P 09 08 07.1 +0.6
ULN Ulaanbaatar 29.35 55 P P 09 08 09.0 +0.9
ULN Ulaanbaatar 29.35 55 ceP P 09 08 09.4 +1.3
ULN pmax pmax
comp=Z,8.0nm,0.8s
ULN Ulaanbaatar 29.35 55 P P 09 08 09.4 +1.3
MOS Moscow 29.73 322 eP P 09 08 09.6 -1.5
MOS e*SP sP 09 08 53.4 +3.8
MOS e 09 09 06.6
MOS eS S 09 12 54.4 -4.4
MOS pmax pmax
comp=Z,55nm,0.9s
PRGR Permogore 29.99 336 eP P 09 08 14.0 +0.7
OBN Obninsk 29.99 320 P P 09 08 13.6 +0.3
comp=Z,8.2nm,0.4s,baz=143,slow=10,SNR=7.3
comp=Z,8.2nm,0.4s
OBN Obninsk 29.99 320 P P 09 08 13.7 +0.3
OBN Obninsk 29.99 320 i P P 09 08 13.2 -0.2
OBN i *PP pP 09 08 38.2 -0.4
OBN pmax pmax
comp=Z,42nm,0.8s
PALK Pallekele 30.16 160 LR LR 09 21 04.6
comp=Z,170nm,18.8s,baz=60,slow=37
PALK Pallekele 30.16 160 P P 09 08 15.9 +0.6
PALK Pallekele 30.16 160 P P 09 08 15.9 +0.6
PALK pmax pmax
comp=Z,97nm,1.6s
CHTO Chiang Mai 30.39 117 P P 09 08 18.1 +0.7
CHTO IAmb IAmb 09 08 37.4
comp=Z,60nm,2.4s
CHTO Chiang Mai 30.39 117 P P 09 08 18.1 +0.7
CHTO pmax pmax
comp=Z,60nm,2.4s
EIL Elat 30.41 268 LR LR 09 21 26.6
comp=Z,52nm,19.9s,baz=94,slow=38
CMAR Chiang Mai Arr 30.62 117 P P 09 08 20.6 +1.2
comp=Z,4.2nm,0.6s,baz=299,slow=8.1,SNR=24
CMAR ScP ScP 09 14 45.5 -1.8
comp=Z,1.0nm,0.2s,baz=298,slow=4.6,SNR=4.7
comp=Z,4.2nm,0.6s
CMAR Chiang Mai Arr 30.62 117 P P 09 08 20.2 +0.9
CMAR Chiang Mai Arr 30.62 117 ceP P 09 08 21.0 +1.6
CMAR pmax pmax
comp=Z,3.0nm,0.4s
XAN Xi'an 31.39 82 P P 09 08 24.9 -1.2
XAN pmax pmax
comp=Z,14nm,0.7s
BORA Eskisehir 31.60 289 P P 09 08 25.4 -2.5
BORA IAmb IAmb 09 08 29.3
comp=Z,11nm,0.8s
KLMR Klimovskoe 31.65 331 eP P 09 08 27.3 -0.6
KLMR e*SP sP 09 09 06.4 +0.1
KLMR e 09 11 15.8
KLMR pmax pmax
comp=Z,28nm,0.7s
KLMR Klimovskoe 31.65 331 eP P 09 08 27.3 -0.6
KLMR AMP 09 08 29.1
comp=Z,28nm,0.7s

KLMR esP sP 09 09 06.4 +0.1
KLMR ePcP PcP 09 11 15.9 -1.2
KLMR eScP ScP 09 14 46.7 -3.3
GYA Guiyang 32.22 97 ⇓P P 09 08 37.8 +4.3
GYA pmax pmax
comp=Z,11nm,0.8s
HHC Hu-ho-hao-te 32.30 69 eP P 09 08 36.1 +2.1
HHC pmax pmax
comp=Z,32nm,0.9s
HHC pmax pmax
comp=Z,210nm,6.4s
TLCR 32.60 299 ⇑P P 09 08 37.3 +0.8
MILM Milestii Mici 32.69 302⇑ iP P 09 08 37.2 0.0
comp=Z,60nm,0.9s
MILM Milestii Mici 32.69 302 ⇑P P 09 08 37.5 +0.3
MILM Milestii Mici 32.69 302 *c iP P 09 08 37.2 0.0
MILM pmax pmax
comp=Z,60nm,0.9s
TPGR Topolog 32.88 299 ⇑P P 09 08 39.8 +0.9
AKASG Malin Array Be 32.89 309 P P 09 08 38.8 -0.1
comp=Z,11nm,0.5s,baz=80,slow=6.5,SNR=51
AKASG LR LR 09 25 21.8
comp=Z,84nm,18.5s,baz=118,slow=42
comp=Z,11nm,0.5s
AKASG Malin Array Be 32.89 309 *ceP P 09 08 38.7 -0.2
AKASG pmax pmax
comp=Z,20nm,0.6s
AKBB Malin Array Si 32.89 309 *ceP P 09 08 39.1 +0.2
CFR Carcaliu 33.08 299 ⇑P P 09 08 41.2 +0.6
CFR Carcaliu 33.08 299 P P 09 08 41.2 +0.6
SORM Soroca 33.10 305 ⇑P P 09 08 40.8 0.0
SORM Soroca 33.10 305 P P 09 08 40.7 0.0
VLDR Vladesti 33.14 300 ⇑P P 09 08 41.8 +0.7
VRI Vrincioaia 34.08 300 ⇑P P 09 08 50.6 +1.3
VRI Vrincioaia 34.08 300 P P 09 08 51.2 +1.8
VRI pmax pmax
comp=Z,16nm,0.9s
LYN LuoYang 34.10 80 ⇑P P 09 08 52.3 +2.7
LYN pmax pmax
comp=Z,10.0nm,0.5s
PLOR Plostina 34.14 300 ⇑P P 09 08 51.5 +1.6
PLOR Plostina 34.14 300 P P 09 08 51.5 +1.6
TESR Tescani 34.15 302 ⇑P P 09 08 50.5 +0.6
ISR Istrita 34.21 299 ⇑P P 09 08 52.9 +2.4
ISR Istrita 34.21 299 P P 09 08 52.9 +2.4
COVR Voineasa-Covas 34.45 300 ⇑P P 09 08 54.2 +1.7
MNK Minsk 34.51 316 iP P 09 08 52.5 -0.4
MNK *iPP pP 09 09 18.0 -0.5
MNK *iSP sP 09 09 33.1 +1.5
MNK i 09 10 11.3
MNK i 09 11 24.9
MNK iS S 09 14 11.8 -1.3
MNK *SS sS 09 14 59.0 +0.1
MNK pmax pmax
comp=E,2.0nm,0.9s
MNK pmax pmax
comp=Z,42nm,0.9s
MNK pmax pmax
comp=N,21nm,0.9s
MNK MLR MLR
comp=E,44nm,15.0s
MNK MLR MLR
comp=N,250nm,14.0s
MNK MLR MLR
comp=Z,3µm,14.0s
MNK Minsk 34.51 316 iP P 09 08 52.5 -0.4
comp=E,2.0nm,0.9s
MNK iP P 09 08 52.5 -0.4
comp=N,21nm,0.9s
MNK iP P 09 08 52.5 -0.4
comp=Z,42nm,0.9s,baz=284
MNK ipP pP 09 09 18.1 -0.5
MNK isP sP 09 09 33.2 +1.5
MNK iPP PnPn 09 10 11.3 -0.6
MNK iS S 09 14 11.8 -1.3
MNK isS sS 09 14 59.0 +0.1
MNK iSS SnSn 09 16 40.2 +3.8
MNK iLR LR 09 19 48.2
MNK iLRM MLR 09 23 21.7
comp=E,44nm,15.1s
MNK iLRM MLR 09 23 23.0
comp=N,250nm,13.8s
MNK iLRM MLR 09 23 53.8
comp=Z,3µm,14.1s
BIZ Bicaz 34.54 302 ⇑P P 09 08 54.3 +1.0
MLR Muntele Rosu 34.63 300 ⇑P P 09 08 56.4 +2.2
MLR Muntele Rosu 34.63 300 LR LR 09 28 17.7
comp=Z,74nm,18.8s,baz=88,slow=45
MLR Muntele Rosu 34.63 300 P P 09 08 55.7 +1.5
MLR Muntele Rosu 34.63 300 P P 09 08 55.7 +1.5
MLR pmax pmax
comp=Z,64nm,0.9s
ATD Arta Tunnel 34.94 233 LR LR 09 24 35.3
comp=Z,77nm,19.9s,baz=2.0,slow=38
DOPR Dopca 35.02 301 ⇑P P 09 08 58.4 +1.0
BURAR Bucovina Array 35.17 303 ⇑P P 09 08 59.5 +0.7
BURAR Bucovina Array 35.17 303 P P 09 08 59.3 +0.5
BURAR Bucovina Array 35.17 303 P P 09 08 59.3 +0.5
BURAR pmax pmax
comp=Z,18nm,0.6s
BUR08 Bucovina Ar. S 35.18 303 P P 09 08 59.1 +0.2
BUR08 IAmb IAmb 09 09 00.8
comp=Z,9.0nm,0.7s
RDO Rodhopi 35.19 292 P P 09 08 59.5 +0.6
RDO IAmb IAmb 09 09 00.5
comp=Z,9.4nm,0.8s
HNS HongShan 35.22 74 ⇓P P 09 09 01.0 +1.8
HNS pmax pmax
comp=Z,11nm,1.1s
NACGM Naroch 35.23 316⇑ eP P 09 09 00.1 +1.0
baz=104
VOIR 35.26 300 ⇓P P 09 09 00.6 +1.0
VOIR 35.26 300 P P 09 09 00.2 +0.6
IDID Didziasalis 35.35 317 eP P 09 09 00.7 +0.5
XLT XiLinHaoTe 35.42 63 eP P 09 08 58.4 -2.6
XLT sP sP 09 09 37.8 -3.0
XLT S S 09 14 26.4 -1.1
XLT sS sS 09 15 08.8 -4.6
XLT SS SnSn 09 16 50.4 -8.4
XLT pmax pmax
comp=Z,12nm,0.7s
XLT pmax pmax
comp=Z,91nm,4.0s
IIGN Ignalina 35.65 317 eP P 09 09 03.3 +0.6
ARCR ARCALIA 35.74 302 ⇑P P 09 09 05.1 +1.5
ISAL Salakas 35.76 317 eP P 09 09 04.2 +0.7
APE Apeiranthos 35.87 285 ⇑P P 09 09 05.0 +0.2
APE Apeiranthos 35.87 285 P P 09 09 05.0 +0.2
LVV L'vov 36.08 307 eP P 09 09 06.6 +0.1
LOT Lotru 36.16 300 ⇓P P 09 09 08.3 +1.2
VSU Vasula 36.26 322 eP P 09 09 08.3 +0.6
BMR Baia Mare 36.34 303 ⇑P P 09 09 10.6 +1.9
BMR Baia Mare 36.34 303 P P 09 09 10.4 +1.8
BMR pmax pmax
comp=Z,37nm,0.8s
SRS Serrai 36.65 292 P P 09 09 12.1 +0.7
SRS pmax pmax
comp=Z,15nm,0.8s
VTS Vitosha 36.74 295 ⇑P P 09 09 13.5 +1.3
VTS Vitosha 36.74 295 P P 09 09 12.8 +0.5
VTS IAmb IAmb 09 09 14.7
comp=Z,12nm,0.8s
VTS Vitosha 36.74 295 P P 09 09 12.8 +0.5
VTS pmax pmax
comp=Z,12nm,0.8s
DEV Deva 36.75 300 ⇑P P 09 09 14.3 +2.1
DEV Deva 36.75 300 P P 09 09 14.0 +1.8
DEV pmax pmax
comp=Z,40nm,0.8s
IDI Anoyia 36.79 283 P P 09 09 11.6 -1.1
comp=Z,9.1nm,0.4s,baz=86,slow=13,SNR=8.6
comp=Z,9.1nm,0.4s
GZR Gura Zlata 36.86 300 ⇑P P 09 09 13.7 +0.5
DRGR 36.87 302 ⇑P P 09 09 14.5 +1.3
DRGR 36.87 302 P P 09 09 14.5 +1.3
DRGR pmax pmax
comp=Z,15nm,0.8s
SOH Sokhos 36.87 292 P P 09 09 14.0 +0.7
SOH pmax pmax
comp=Z,6.0nm,0.8s
PABE Paberze 36.94 317 P P 09 09 13.8 +0.3
PABE Paberze 36.94 317 eP P 09 09 14.2 +0.6
BLKB Belogradchik 37.05 297 ⇑P P 09 09 15.7 +0.9
VSVD Vaisvydziai 37.06 317 eP P 09 09 15.2 +0.6

SUW Suwalki 37.11 314 P P 09 09 14.7 -0.4
SUW Suwalki 37.11 314 P P 09 09 14.7 -0.4
SUW pmax pmax
comp=Z,35nm,0.9s
SUW Suwalki 37.11 314 eP P 09 09 15.3 +0.2
HERR Herculane 37.14 299 ⇑P P 09 09 15.3 -0.1
UZH Uzhgorod 37.16 305 eP P 09 09 19.2 +3.6
KNT Kendrikon 37.16 293 P P 09 09 15.6 -0.1
KNT pmax pmax
comp=Z,19nm,0.8s
KOLS Kolonicke sedl 37.18 306 eP P 09 09 16.9 +1.1
KOLS pmax pmax
comp=Z,16nm,0.8s
KOLS Kolonicke sedl 37.18 306 eP P 09 09 16.9 +1.1
GRG Griva 37.56 292 P P 09 09 19.6 +0.4
GRG pmax pmax
comp=Z,7.0nm,0.8s
FINES FINESS Array B 37.60 327 P P 09 09 19.7 +0.6
comp=Z,27nm,0.7s,baz=111,slow=11,SNR=94
FINES LR LR 09 25 39.8
comp=Z,93nm,19.5s,baz=76,slow=37
comp=Z,27nm,0.7s
FINES FINESS Array B 37.60 327 P P 09 09 19.1 -0.1
SIRR Siria 37.61 301 ⇑P P 09 09 20.7 +1.3
LIT Litokhoron 37.63 291 IAmb IAmb 09 09 20.9
comp=Z,11nm,0.7s
LIT Litokhoron 37.63 291 P P 09 09 20.1 +0.4
LIT pmax pmax
comp=Z,17nm,0.8s
MDVR Moldovita 37.65 299 ⇑P P 09 09 20.8 +1.0
BZS Buzias 37.66 300 ⇑P P 09 09 21.1 +1.1
BZS Buzias 37.66 300 P P 09 09 21.0 +1.1
BZS pmax pmax
comp=Z,12nm,0.7s
LVZ Lovozero 37.70 339 P P 09 09 20.5 +0.5
LVZ Lovozero 37.70 339 *ceP P 09 09 21.2 +1.3
LVZ pmax pmax
comp=Z,65nm,2.5s
LVZ Lovozero 37.70 339 P P 09 09 20.6 +0.7
LVZ pP pP 09 09 39.7 -5.9
LVZ sP sP 09 09 48.5 -10
CRVS Cervenica-Dubn 37.72 305 eP P 09 09 22.3 +2.0
CRVS pmax pmax
comp=Z,9.0nm,0.9s
CRVS Cervenica-Dubn 37.72 305 eP P 09 09 22.3 +2.0
BOVS Bovan 37.75 297 ⇑P P 09 09 21.2 +0.6
MTSE Matsula 37.80 322 eP P 09 09 21.3 +0.6
APA Apatity 37.87 338⇓ iP P 09 09 18.8 -2.5
APA i 09 11 33.0
APA iS S 09 15 00.0 -3.9
APA pmax pmax
comp=Z,10.0nm,0.7s
APA MLR MLR
comp=Z,500nm,15.0s
MEF Metsahovi 37.96 324 eP P 09 09 22.9 +0.8
PBUR Paburge 38.17 317 eP P 09 09 24.7 +0.8
SLIT Slitere, Latvi 38.30 320 eP P 09 09 25.4 +0.4
FNA Florina 38.36 292 P P 09 09 26.1 +0.2
FNA IAmb IAmb 09 09 27.1
comp=Z,17nm,0.7s
FNA Florina 38.36 292 P P 09 09 26.1 +0.2
FNA pmax pmax
comp=Z,17nm,0.7s
KECS Kecovo 38.36 305 eP P 09 09 28.3 +2.6
KECS Kecovo 38.36 305 eP P 09 09 28.3 +2.6
MSF Maaselka 38.38 334 P P 09 09 26.4 +0.7
MSF pmax pmax
comp=Z,33nm,0.8s
NIE Niedzica 38.49 306 eP P 09 09 28.3 +1.5
NIE Niedzica 38.49 306 P P 09 09 28.4 +1.6
NIE pmax pmax
comp=Z,10.0nm,0.8s
ITM Ithomi 38.65 287 P P 09 09 27.4 -0.9
PSZ Piszkesteto 38.76 304 ⇑P P 09 09 30.2 +1.1
PSZ Piszkesteto 38.76 304 IAmb IAmb 09 09 31.9
comp=Z,11nm,0.9s
PSZ Piszkesteto 38.76 304 P P 09 09 30.6 +1.4
PSZ pmax pmax
comp=Z,14nm,0.8s
PSZ Piszkesteto 38.76 304 P P 09 09 30.2 +1.1
OJC Ojcow 38.83 308 eP P 09 09 27.7 -2.0
OJC Ojcow 38.83 308 IAmb IAmb 09 09 30.7
comp=Z,13nm,1.0s
OJC Ojcow 38.83 308 P P 09 09 28.8 -0.8
OJC pmax pmax
comp=Z,14nm,1.0s
DIVS Divíbare 38.94 298 P P 09 09 31.6 +0.9
DIVS IAmb IAmb 09 09 32.6
comp=Z,12nm,0.8s
OUL Oulu 39.15 332 P P 09 09 32.8 +0.8
OUL pmax pmax
comp=Z,41nm,0.9s
RAF Rauma 39.44 325 eP P 09 09 34.5 0.0
SRO2 Moca 39.78 304 eP P 09 09 38.3 +0.8
SRO2 Moca 39.78 304 eP P 09 09 38.3 +0.8
SRO Srobarova 39.83 304 eP P 09 09 39.6 +1.7
SRO pmax pmax
comp=Z,25nm,0.8s
SRO Srobarova 39.83 304 eP P 09 09 39.6 +1.7
NJ2 Nanjing 39.94 81 eP P 09 09 37.3 -1.7
NJ2 pmax pmax
comp=Z,13nm,0.5s
SGF Sodankyl 40.01 335 P P 09 09 38.3 -0.9
SGF pmax pmax
comp=Z,49nm,2.3s
AAL Aland 40.06 323 eP P 09 09 39.5 -0.1
KOVH Kovagotottos 40.09 301 P P 09 09 40.3 +0.2
MAUC Maruska 40.10 306 eP P 09 09 41.4 +1.2
JAVC Velka Javorina 40.22 305 eP P 09 09 42.6 +1.4
MORC Moravsky Berou 40.28 307 ⇑P P 09 09 42.6 +0.8
MORC Moravsky Berou 40.28 307 P P 09 09 42.4 +0.7
MORC IAmb IAmb 09 09 44.2
comp=Z,9.2nm,0.8s
MORC Moravsky Berou 40.28 307 P P 09 09 42.4 +0.7
MORC pmax pmax
comp=Z,9.0nm,0.8s
MORC Moravsky Berou 40.28 307 eP P 09 09 42.5 +0.8
MODS Modra-Piesok 40.50 305 eP P 09 09 44.9 +1.4
MODS Modra-Piesok 40.50 305 eP P 09 09 44.9 +1.4
KRLC Kraliky 40.77 307 eP P 09 09 46.6 +0.9
KRLC Kraliky 40.77 307 eP P 09 09 46.6 +0.9
VRAC Vranov 40.91 306 ⇑P P 09 09 47.8 +1.0
VRAC Vranov 40.91 306 LR LR 09 28 50.0
comp=Z,54nm,19.5s,baz=81,slow=39
VRAC Vranov 40.91 306 P P 09 09 47.9 +1.0
VRAC pmax pmax
comp=Z,11nm,0.8s
VRAC Vranov 40.91 306 eP P 09 09 47.7 +0.8
KEV Kevo 41.04 339 P P 09 09 48.5 +0.9
KEV sP pP 09 10 15.3 +1.5
KRUC Moravsky 41.05 306 eP P 09 09 48.7 +0.7
DPC Dobruska-Polom 41.06 308 eP P 09 09 49.2 +1.1
DPC Dobruska-Polom 41.06 308 eP P 09 09 49.2 +1.1
OSTC Ostas 41.13 308 eP P 09 09 50.2 +1.6
RONA Rosalia, Austr 41.20 304 eP P 09 09 49.7 +0.5
comp=Z,5.8nm,0.6s
CHVC Chvalec 41.23 308 eP P 09 09 50.3 +0.9
UPC Upice 41.26 308 eP P 09 09 50.3 +0.7
UPC Upice 41.26 308 eP P 09 09 50.3 +0.7
ARA0 ARCESS Array S 41.38 338 eP P 09 09 51.5 +1.1
ARCES ARCESS Array B 41.38 338 P P 09 09 51.4 +1.0
comp=Z,29nm,0.7s,baz=112,slow=8.1,SNR=82
ARCES pP pP 09 10 19.2 +2.6
comp=Z,9.3nm,0.7s,baz=110,slow=7.0,SNR=3.5
ARCES LR LR 09 28 44.7
comp=Z,62nm,18.2s,baz=105,slow=38
comp=Z,29nm,0.7s
ARCES ARCESS Array B 41.38 338 P P 09 09 50.9 +0.5
ARCES IAmb IAmb 09 09 52.2
comp=Z,35nm,0.8s
CONA Conrad Observa 41.47 304 eP P 09 09 51.9 +0.4
comp=Z,9.2nm,0.8s
KTK1 Kautokeino 41.84 337 eP P 09 09 54.2 +0.1
SOKA Soboth 42.14 302 eP P 09 09 57.7 +0.7
comp=Z,12nm,0.7s
CN2 Changchun 42.17 62 eP P 09 09 58.3 +1.2
CN2 pmax pmax
comp=Z,10.0nm,0.5s
IPM Ipoh 42.17 131 P P 09 09 57.2 -0.3
PRU Pruhonice 42.22 307 eP P 09 09 58.4 +0.9
PRU Pruhonice 42.22 307 eP P 09 09 58.4 +0.9
CKRC Cesky Krumlov 42.44 306 eP P 09 09 59.9 +0.6
HAMF Hammerfest 42.47 339 eP P 09 10 00.2 +1.0
OBKA Obir 42.49 302 eP P 09 10 00.3 +0.4

comp=Z,7.9nm,0.9s
MOA Molln 42.55 304 eP P 09 10 00.5 +0.3
comp=Z,5.7nm,0.6s
BRG Berggiesshubel 42.56 309 eP P 09 10 01.1 +0.9
BRG Amp 09 10 02.2
comp=Z,8.2nm,0.8s
BRG pP sP 09 10 41.6 +2.1
BRG Amp 09 10 42.4
comp=Z,5.5nm,0.6s
BRG Berggiesshubel 42.56 309 eP P 09 10 01.1 +0.9
BRG 09 10 41.6
BRG pmax pmax
comp=Z,8.0nm,0.8s
ZEA Zeya 42.66 47 eP P 09 10 02.9 +2.0
ZEA pmax pmax
comp=Z,20nm,0.6s
GERES GERESS Array B 42.84 306 P P 09 10 02.9 +0.3
comp=Z,1.5nm,0.7s,baz=95,slow=8.2,SNR=12
GERES pP pP 09 10 31.8 +2.6
comp=Z,1.1nm,0.7s,baz=78,slow=10,SNR=2.8
comp=Z,1.5nm,0.7s
KHC Kasperske Hory 42.90 306 eP P 09 10 03.9 +0.9
KHC Kasperske Hory 42.90 306 eP P 09 10 03.9 +0.9
JETT Jettan, Norway 42.98 337 eP P 09 10 04.1 +0.7
MYKA Terra Mystica 43.10 302 eP P 09 10 04.7 0.0
comp=Z,4.9nm,0.6s
CLL Collm 43.14 309 eP P 09 10 04.0 -0.9
CLL e*PP pP 09 10 27.0 -4.2
CLL pmax pmax
comp=Z,4.0nm,0.6s
CLL Collm 43.14 309 eP P 09 10 04.0 -0.9
comp=Z,4.0nm,0.6s
CLL epP pP 09 10 27.0 -4.2
CLL esP sP 09 10 42.0 -2.1
CLL ePP PP 09 11 47.0 0.0
CLL ex x 09 11 59.0
CLL ex x 09 12 15.0
CLL eSS SS 09 19 36.0 -3.1
CLL eSSS SSS 09 20 42.0
HFS Hagfors 43.15 322 LR LR 09 30 27.4
comp=Z,94nm,18.8s,baz=101,slow=39
KBA Koelnbreinsper 43.25 303 eP P 09 10 05.7 -0.4
comp=Z,7.5nm,0.8s
TRO Tromso 43.49 337 eP P 09 10 08.1 +0.7
ABTA Abfaltersbach 43.86 303 eP P 09 10 10.2 -0.6
comp=Z,3.8nm,0.9s
MOR8 Moi Rana 43.98 331 eP P 09 10 10.7 -0.7
FAUS Fauske 43.99 333 eP P 09 10 11.8 +0.4
STEI Steigen 44.16 334 eP P 09 10 12.5 -0.3
NC405 NORSAR Array S 44.24 323 IAmb IAmb 09 10 16.4
comp=Z,33nm,0.8s
NC602 NORSAR Array S 44.28 323 eP P 09 10 13.7 -0.2
NORES NORESS Array B 44.28 323 P P 09 10 13.4 -0.5
MNSI Mandailing Nat 44.28 136 P P 09 10 15.3 +0.9
comp=Z,4µmcomp=Z,44nm,1.2s
WTTA Wattenberg 44.38 304 eP P 09 10 14.6 -0.5
comp=Z,6.1nm,0.6s
MURB Monte Urbino 44.41 298 IAmb IAmb 09 10 17.8
comp=Z,32nm,0.9s
WATA Walderalm 44.41 304 eP P 09 10 14.0 -1.4
comp=Z,3.9nm,0.5s
NB2 NORSAR Subarra 44.47 323 P P 09 10 14.9 -0.5
baz=97,slow=7.9
NB2 NORSAR Subarra 44.47 323 P P 09 10 14.9 -0.5
comp=Z,10nm,0.5s,baz=97,slow=7.9
NOA NORSAR Array B 44.47 323 P P 09 10 15.0 -0.4
comp=Z,17nm,0.7s,baz=98,slow=7.9,SNR=91
NOA PP PP 09 12 02.2 +1.1
comp=Z,2.8nm,0.7s,baz=95,slow=9.6,SNR=3.9
NOA LR LR 09 29 46.0
comp=Z,60nm,18.0s,baz=100,slow=37
comp=Z,17nm,0.7s
KONS Konsvik 44.58 331 eP P 09 10 16.7 +0.5
OSL Oslo 44.61 322 eP P 09 10 16.3 -0.2
NSS Namsos 44.64 328 eP P 09 10 16.9 +0.3
SQTA Sankt Quirin 44.68 304 eP P 09 10 16.0 -1.4
comp=Z,5.4nm,0.9s
NBO00 NORSAR Array S 44.68 323 IAmb IAmb 09 10 18.3
comp=Z,33nm,0.8s
NC204 NORSAR Array S 44.71 324 P P 09 10 16.7 -0.7
MOTA Moosalm 44.73 304 eP P 09 10 17.1 -0.7
comp=Z,7.5nm,0.7s
LOF Lofoten 44.84 334 eP P 09 10 18.5 +0.4
MDJ Mudanjiang 44.97 60 P P 09 10 21.4 +1.8
MDJ pmax pmax
comp=Z,7.0nm,0.5s
MDJ pmax pmax
comp=Z,170nm,4.5s
FETA Feichten 45.03 303 eP P 09 10 19.4 -0.9
comp=Z,6.5nm,0.9s
KONO Kongsberg 45.15 321 eP P 09 10 20.5 -0.3
KONO Kongsberg 45.15 321 P P 09 10 20.7 -0.1
KONO x P 09 10 25.9 +5.1
KONO pP pP 09 10 44.2 -3.3
CLTB Caltabellotta 45.25 290 IAmb IAmb 09 10 22.4
comp=Z,22nm,0.5s
HOPEN Hopen 45.31 346 eP P 09 10 22.2 +0.4
KSAR Wonju Array Be 45.38 70 P P 09 10 23.5 +0.6
KSAR Wonju Array Be 45.38 70 P P 09 10 23.5 +0.6
KSRS Korea Array 45.41 70 P P 09 10 22.9 -0.1
comp=Z,6.2nm,1.0s,baz=275,slow=6.4,SNR=10
comp=Z,6.2nm,1.0s
KSRS Korea Array 45.41 70 P P 09 10 23.0 -0.1
BJO1 Bjornoya 45.55 343 eP P 09 10 24.0 +0.3
DAVA Damueis 45.56 304 eP P 09 10 24.1 -0.4
comp=Z,26nm,0.9s
DOMB Dombas 45.59 325 eP P 09 10 24.6 +0.3
DAVOX Davos/Dischmat 45.64 303 LR LR 09 34 42.5
comp=Z,47nm,18.1s,baz=82,slow=43
KLR Kul'dur 45.72 53 *ceP P 09 10 26.6 +1.1
KLR pmax pmax
comp=Z,13nm,2.5s
MOL Molde 46.35 325 eP P 09 10 30.2 +0.1
HSPB Hornsund (broa 47.44 345 eP P 09 10 39.9 +1.5
SENIN Lac Senin/Sane 47.47 303 P P 09 10 38.8 -0.6
SENIN IAmb IAmb 09 10 40.3
comp=Z,9.3nm,0.8s
SPB2 Spitsbergen Ar 47.80 347 P P 09 10 42.8 +1.6
SPA0 Spitsbergen Ar 47.81 347 eP P 09 10 42.5 +1.1
SPITS Spitsbergen Ar 47.81 347 LR LR 09 34 27.4
comp=Z,142nm,19.3s,baz=82,slow=40
SBF Sospel 47.90 300 eP P 09 10 44.9 +2.3
SBF pmax pmax
comp=Z,9.0nm,0.6s
LPG La Plagne 48.02 302 eP P 09 10 44.4 +0.7
LPG pmax pmax
comp=Z,9.0nm,0.8s
LPL La Plagne 48.03 302 eP P 09 10 43.7 0.0
LPL pmax pmax
comp=Z,12nm,0.9s
MBDF Montbardon 48.17 301 eP P 09 10 44.1 -0.7
MBDF pmax pmax
comp=Z,8.0nm,0.7s
CABF La Chapelle 48.24 304 eP P 09 10 45.2 0.0
CABF pmax pmax
comp=Z,10.0nm,0.8s
DSRI Dabo 48.24 131 P P 09 10 45.9 +0.5
comp=Z,32nm,0.8s
KMBO Kilima Mbogo 48.24 227 P P 09 10 46.3 +0.6
comp=Z,4.0nm,0.6s,baz=32,slow=13,SNR=9.6
KMBO LR LR 09 31 59.7
comp=Z,67nm,18.8s,baz=25,slow=37
comp=Z,4.0nm,0.6s
KMBO Kilima Mbogo 48.24 227 P P 09 10 46.6 +0.9
KMBO Kilima Mbogo 48.24 227 *ceP P 09 10 46.7 +1.0
KMBO pmax pmax
comp=Z,4.0nm,0.6s
KMBO Kilima Mbogo 48.24 227 P P 09 10 46.6 +0.9
KIBK Kibwezi 48.75 225 IAmb IAmb 09 10 52.0
comp=Z,24nm,1.5s
KEST Kesra 48.78 289 P P 09 10 50.1 +0.6
comp=Z,10nm,0.5s,baz=346,slow=2.3,SNR=14
comp=Z,10nm,0.5s
KEST Kesra 48.78 289 IAmb IAmb 09 10 51.2
comp=Z,23nm,1.1s
KEST Kesra 48.78 289 P P 09 10 50.6 +1.1
BAIF Baives 48.83 308 eP P 09 10 50.2 +0.7
BAIF pmax pmax
comp=Z,8.0nm,0.8s
KBS Kingsbay 48.93 347 P P 09 10 50.7 +0.8
KBS Kingsbay 48.93 347 *ceP P 09 10 51.4 +1.5
KBS pmax pmax
comp=Z,82nm,1.7s
KBS Kingsbay 48.93 347 iP P 09 10 50.0 +0.2
KBS Kingsbay 48.93 347 eP P 09 10 51.3 +1.4

KBS Kingsbay 48.93 347 P **P** **09 10 51.3 +1.4**
KBS x P 09 10 57.5 +7.6
KBS pP **pP** **09 11 10.0 -7.0**
KBS sP sP 09 11 17.0 -13
SMF Signal de Mont 49.75 304 *eP* **P** **09 10 56.2 -0.4**
SMF pmax pmax
comp=Z,12nm,0.8s
AVF Avril sur Loir 50.04 304 *eP* **P** **09 10 58.4 -0.4**
AVF pmax pmax
comp=Z,9.0nm,0.7s
TCF Toulx Ste Croi 50.93 304 *eP* P 09 11 00.5 -5.0
TCF pmax pmax
comp=Z,10.0nm,0.8s
SBUM Sibu 51.03 121 P **P** **09 11 07.5 +1.0**
SBUM IAmb IAmb 09 11 09.2
comp=Z,6.6nm,0.8s
CAF Calviac 51.37 302 *eP* **P** **09 11 09.0 +0.2**
CAF pmax pmax
comp=Z,7.0nm,0.8s
RJF Les Rejaudoux 51.65 303 *eP* **P** **09 11 11.2 +0.4**
RJF pmax pmax
comp=Z,39nm,1.8s
MTLF Montolieu 51.70 300 *eP* **P** **09 11 15.7 +4.4**
MTLF pmax pmax
comp=Z,12nm,1.1s
MBAR Mbarara 51.93 234 P **P** **09 11 14.3 +0.8**
comp=Z,13nm,0.7s,baz=25,slow=8.4,SNR=13
MBAR LR LR 09 36 11.6
comp=Z,58nm,18.2s,baz=18,slow=39
comp=Z,13nm,0.7s
MBAR Mbarara 51.93 234 P **P** **09 11 13.1 -0.3**
MBAR IAmb IAmb 09 11 15.4
comp=Z,15nm,0.8s
MBAR Mbarara 51.93 234 *ce* **P** **09 11 14.5 +1.0**
MBAR pmax pmax
comp=Z,25nm,1.3s
MBAR Mbarara 51.93 234 P **P** **09 11 14.9 +1.5**
MBAR Mbarara 51.93 234 P **P** **09 11 14.7 +1.2**
FLN La Foliniere 52.09 308 *eP* **P** **09 11 13.3 -0.8**
FLN pmax pmax
comp=Z,10.0nm,0.8s
EKA Eskdalemuir Ar 52.30 316 LR LR 09 37 27.6
comp=Z,69nm,18.2s,baz=168,slow=40
GRR Gorron 52.43 307 *eP* **P** **09 11 15.8 -0.8**
GRR pmax pmax
comp=Z,16nm,1.0s
EPF Esparros 53.10 300 *eP* **P** **09 11 20.3 -1.4**
EPF pmax pmax
comp=Z,61nm,2.2s
YSS Yuzh-Sakhalins 53.40 54 *ce* **P** **P** **09 11 25.7 +2.0**
YSS pmax pmax
comp=Z,15nm,1.3s
MJAR Matsushiro Arr 53.49 68 P **P** **09 11 24.6 0.0**
comp=Z,3.5nm,0.8s,baz=291,slow=6.7,SNR=8.5
MJAR pP **pP** **09 11 55.5 +2.7**
comp=Z,2.4nm,0.9s,baz=286,slow=8.7,SNR=3.7
comp=Z,3.5nm,0.8s
MJAR Matsushiro Arr 53.49 68 P **P** **09 11 24.1 -0.5**
MJAR IAmb IAmb 09 11 57.6
comp=Z,12nm,1.8s
SGMF Saint Gilles 53.56 307 *eP* **P** **09 11 24.7 -0.2**
SGMF pmax pmax
comp=Z,27nm,1.2s
SBJI Serang 53.66 134 P **P** **09 11 27.0 +1.1**
comp=Z,297µmcomp=Z,10µmcomp=Z,568nm,0.9s
QUIF Quistinic 54.04 307 *eP* **P** **09 11 27.9 -0.5**
QUIF pmax pmax
comp=Z,62nm,1.7s
NOR Nord 54.14 350 *i* P **P** **09 11 28.9 +0.3**
NOR IAmb IAmb 09 11 30.1
comp=Z,5.6nm,0.9s
MA2 Magadan 54.95 38 *ce* **P** **P** **09 11 36.5 +1.8**
MA2 pmax pmax
comp=Z,5.0nm,1.0s
SEY Seymchan 54.99 34 *ce* **P** **P** **09 11 36.3 +1.3**
SEY pmax pmax
comp=Z,6.0nm,1.0s
DAG Danmarks Havn 55.02 344 P **P** **09 11 35.7 +0.7**
DAG pmax pmax
comp=Z,36nm,0.9s
DAG Danmarks Havn 55.02 344 *i* P **P** **09 11 35.7 +0.7**
DAG IAmb IAmb 09 11 36.8
comp=Z,25nm,0.8s
DBG Daneborg 55.84 341 *i* P **P** **09 11 42.0 +1.1**
DBG IAmb IAmb 09 11 42.9
comp=Z,8.2nm,1.0s
ESDC Sonseca Array 57.29 298 P **P** **09 11 51.5 -0.3**
comp=Z,8.8nm,0.7s,baz=59,slow=7.4,SNR=46
comp=Z,8.8nm,0.7s
ESDC Sonseca Array 57.29 298 P **P** **09 11 50.8 -1.0**
ESDC IAmb IAmb 09 11 52.3
comp=Z,4.7nm,0.8s
MPSI Mapaga 57.96 116 P **P** **09 11 57.8 +1.1**
comp=Z,34nm,1.1s
MVO Moncorvo 58.89 301 *eP* **P** **09 12 03.3 +0.3**
comp=Z,27nm,1.6s
ABPO Ambohimpanom 59.06 206 P **P** **09 12 05.3 +1.0**
ABPO Ambohimpanom 59.06 206 P **P** **09 12 05.3 +1.0**
ABPO pmax pmax
comp=Z,33nm,0.7s
ABPO Ambohimpanom 59.06 206 P **P** **09 12 05.1 +0.8**
BILL Bilibino 59.16 26 P **P** **09 12 05.1 +0.8**
BILL IAmb IAmb 09 12 06.1
comp=Z,6.9nm,0.5s
BILL Bilibino 59.16 26 *i* P **P** **09 12 05.2 +0.9**
BILL *i* *PP **pP** **09 12 34.6 +2.2**
BILL *i* 09 12 45.3
BILL *i* 09 12 52.4
BILL pmax pmax
comp=Z,10.0nm,1.3s
BILL Bilibino 59.16 26 P **P** **09 12 05.2 +0.9**
MRSI Marisa 59.36 115 P **P** **09 12 07.5 +1.1**
comp=Z,38nm,1.2s
MTE Manteigas 59.55 300 *eP* **P** **09 12 08.2 +0.7**
comp=Z,46nm,1.9s
PVIS Viseu 59.67 300 *eP* **P** **09 12 09.0 +0.7**
PCBR Castelo Branco 59.73 299 *eP* **P** **09 12 09.4 +0.8**
comp=Z,29nm,1.5s
APSI Ampana 60.08 116 P **P** **09 12 12.5 +1.2**
comp=Z,619nmcomp=Z,31nm,1.3s
PESTR Estremoz 60.20 298 *eP* **P** **09 12 12.0 +0.1**
comp=Z,35nm,1.4s
TTSI Tana Toraja 60.25 119 P **P** **09 12 13.6 +1.2**
comp=Z,19nm,0.8s
MDT Midelt 60.55 291 P **P** **09 12 14.5 0.0**
comp=Z,7.1nm,0.9s,baz=97,slow=7.6,SNR=6.3
comp=Z,7.1nm,0.9s
PETK Petropavlovsk- 60.56 44 LR LR 09 39 13.3
comp=Z,39nm,20.7s,baz=332,slow=37
PBEJ Beja 60.74 298 *eP* **P** **09 12 15.9 +0.3**
PVAQ Vaqueiros 60.89 297 *eP* **P** **09 12 16.8 +0.2**
MESJ Messejana 61.07 297 *eP* **P** **09 12 18.0 +0.1**
MESJ IAmb IAmb 09 12 19.2
comp=Z,22nm,1.1s
MESJ Messejana 61.07 297 *eP* **P** **09 12 18.7 +0.9**
MESJ Messejana 61.07 297 *eP* **P** **09 12 17.9 +0.1**
PNCL Nicolau / Gran 61.18 298 *eP* **P** **09 12 18.9 +0.4**
comp=Z,36nm,1.6s
SUMG Summit 61.33 341 P **P** **09 12 20.2 +0.8**
SUMG IAmb IAmb 09 12 23.0
comp=Z,23nm,0.8s
SUMG Summit 61.33 341 P **P** **09 12 20.3 +0.8**
SUMG pmax pmax
comp=Z,23nm,0.8s
SUMG Summit 61.33 341 *i* P **P** **09 12 19.2 -0.2**
SUMG IAmb IAmb 09 12 22.5
comp=Z,26nm,0.9s
VOI Vohitsoka 61.88 205 P **P** **09 12 24.2 +0.9**
VOI Vohitsoka 61.88 205 P **P** **09 12 24.8 +1.4**
ICESG Greenland Ices 63.44 338 *i* P **P** **09 12 34.4 +0.8**
ICESG IAmb IAmb 09 12 34.9
comp=Z,12nm,0.7s
FOMA Nahampoana Res 64.66 204 P **P** **09 12 43.4 +1.9**
LSZ Lusaka 64.87 226 P **P** **09 12 44.2 +1.0**
LSZ IAmb IAmb 09 12 44.7
comp=Z,6.0nm,0.6s
LSZ Lusaka 64.87 226 P **P** **09 12 44.2 +1.0**
LSZ pmax pmax
comp=Z,6.0nm,0.6s
LSZ Lusaka 64.87 226 P **P** **09 12 44.0 +0.8**
TOA0 Torodi Ar. Sit 65.30 269 P **P** **09 12 44.4 -1.7**
TOA0 IAmb IAmb 09 12 45.3
comp=Z,10nm,1.0s
TORD Torodi Ar. Bea 65.30 269 P **P** **09 12 44.2 -1.8**
comp=Z,6.4nm,0.4s,baz=50,slow=6.1,SNR=116
comp=Z,6.4nm,0.4s

TORD Torodi Ar. Bea 65.30 269 P **P** **09 12 44.4 -1.7**
TORD IAmb IAmb 09 12 45.3
comp=Z,7.4nm,0.9s
ILULI Ilulissat 66.66 341 P **P** **09 12 54.6 +0.7**
ILULI Ilulissat 66.66 341 P **P** **09 12 54.6 +0.7**
ILULI pmax pmax
comp=Z,110nm,1.5s
ILULI Ilulissat 66.66 341 *i* P **P** **09 12 53.5 -0.4**
ILULI IAmb IAmb 09 12 54.2
comp=Z,20nm,0.6s
DY2G Dye2 67.01 337 *i* P **P** **09 12 56.8 +0.4**
DY2G IAmb IAmb 09 12 57.6
comp=Z,22nm,0.7s
SIJI Sorong 67.25 109 LR LR 09 46 08.5
comp=Z,47nm,18.2s,baz=107,slow=39
A21K Barrow 67.83 15 P **P** **09 13 02.0 +0.9**
A21K IAmb IAmb 09 13 03.1
comp=Z,10.0nm,0.7s
A21K Barrow 67.83 15 P **P** **09 13 01.1 -0.1**
baz=320
SFJD Kangerlussuaq 68.00 339 LR LR 09 42 12.9
comp=Z,66nm,19.0s,baz=36,slow=35
GAMB Gambell 69.06 25 P **P** **09 13 09.3 +0.4**
baz=310
RES Resolute Bay 69.09 356 LR LR 09 45 58.3
comp=Z,50nm,18.1s,baz=41,slow=38
KOWA Kowa 69.18 273 P **P** **09 13 09.3 -1.2**
ANM Nome 70.58 22 P **P** **09 13 18.8 +0.5**
baz=315
TOLK Toolik Lake Re 71.43 14 IAmb IAmb 09 13 26.1
comp=Z,13nm,0.8s
TOLK Toolik Lake Re 71.43 14 P **P** **09 13 23.8 +0.3**
baz=327
COLD Coldfoot 72.48 15 IAmb IAmb 09 14 04.3
comp=Z,9.3nm,1.0s
COLD Coldfoot 72.48 15 P **P** **09 13 29.9 +0.2**
baz=327
H21K Melozitna Rive 73.19 17 P **P** **09 13 33.8 -0.1**
baz=326
I21K Tanana 73.78 17 P **P** **09 13 37.6 +0.3**
baz=326
H23K Yukon River 73.81 16 P **P** **09 13 38.3 +0.8**
baz=327,SNR=8.3
PSA00 Pilbara Seismi 73.93 133 P **P** **09 13 39.0 +0.2**
J20K Nowinta River 74.06 19 P **P** **09 13 39.7 +0.7**
J20K IAmb IAmb 09 14 12.9
comp=Z,13nm,1.2s
J20K Nowinta River 74.06 19 P **P** **09 13 39.3 +0.3**
baz=324,SNR=8.2
LBTB Lobatse 74.09 222 P **P** **09 13 39.8 0.0**
LBTB IAmb IAmb 09 13 42.3
comp=Z,18nm,0.9s
LBTB Lobatse 74.09 222 P **P** **09 13 39.8 0.0**
LBTB pmax pmax
comp=Z,18nm,0.9s
H24K Noodor Dome 74.16 15 P **P** **09 13 40.0 +0.4**
baz=329,SNR=9.8
MLY Manley 74.20 17 P **P** **09 13 39.9 0.0**
baz=326
DBIC Dimbokro 74.26 267 P **P** **09 13 39.6 -1.3**
comp=Z,9.6nm,0.9s,baz=66,slow=4.2,SNR=5.6
DBIC LR LR 09 49 43.2
comp=Z,50nm,18.8s,baz=90,slow=38
comp=Z,9.6nm,0.9s
C36M Paulatuk 74.33 5 IAmb IAmb 09 13 41.4
comp=Z,18nm,0.5s
C36M Paulatuk 74.33 5 P **P** **09 13 40.1 -0.3**
baz=348,SNR=13
KIC Kosan Boka 74.35 266 ǁ *eP* **P** **09 13 40.6 -0.9**
comp=Z,14nm,0.6s
INK Inuvik 74.38 9 IAmb IAmb 09 14 15.6
comp=Z,22nm,1.4s
INK Inuvik 74.38 9 P **P** **09 13 41.0 +0.3**
baz=340,SNR=9.2
TIC Toumodi 74.41 267 ǁ *eP* **P** **09 13 39.4 -2.5**
comp=Z,4.8nm,0.2s
I23K Minto, Yukon-K 74.42 16 P **P** **09 13 41.2 +0.2**
baz=328,SNR=6.8
TTA Tatalina 74.56 20 P **P** **09 13 43.0 +1.1**
TTA Tatalina 74.56 20 P **P** **09 13 43.1 +1.1**
TTA pmax pmax
comp=Z,7.0nm,1.2s
TTA Tatalina 74.56 20 P **P** **09 13 42.1 +0.1**
baz=323
LIC Lamto 74.66 267 ǁ *eP* **P** **09 13 42.1 -1.2**
comp=Z,10nm,0.5s
K20K Telida 74.74 19 P **P** **09 13 43.3 +0.3**
baz=324,SNR=9.0
CHUM Lake Minchumin 74.77 18 P **P** **09 13 43.2 +0.2**
baz=325,SNR=6.3
POKR Poker Plat Res 74.88 16 P **P** **09 13 44.0 +0.3**
baz=329
BPAW Bear Paw Mtn. 74.92 18 P **P** **09 13 43.5 -0.4**
baz=326,SNR=5.7
NEA2 Nenana 74.96 17 IAmb IAmb 09 13 44.9
comp=Z,12nm,1.1s
NEA2 Nenana 74.96 17 P **P** **09 13 43.8 -0.4**
baz=328,SNR=7.7
TCOL CIGO, UAF Yank 74.99 16 IAmb IAmb 09 14 19.1
comp=Z,8.2nm,0.8s
TCOL CIGO, UAF Yank 74.99 16 P **P** **09 13 44.3 -0.1**
baz=329
COLA College 74.99 16 P **P** **09 13 44.5 +0.2**
COLA IAmb IAmb 09 14 19.1
comp=Z,8.2nm,0.7s
COLA College 74.99 16 P **P** **09 13 44.5 +0.2**
COLA pmax pmax
comp=Z,8.0nm,0.7s
COLA College 74.99 16 P **P** **09 13 44.2 -0.2**
baz=329
CAST Castle Rocks 75.21 18 P **P** **09 13 45.6 -0.1**
baz=326,SNR=6.9
ILAR Eielson Array 75.29 16 P **P** **09 13 45.5 -0.6**
comp=Z,1.7nm,0.7s,baz=299,slow=4.5,SNR=33
ILAR PP **PP** **09 16 36.7 +1.3**
comp=Z,1.1nm,0.8s,baz=323,slow=7.3,SNR=4.4
comp=Z,1.7nm,0.7s
FRB Frobisher Bay 75.34 342 LR LR 09 47 58.1
comp=Z,48nm,19.1s,baz=7.0,slow=36
KTH Kantishna Hill 75.39 18 IAmb IAmb 09 13 48.0
comp=Z,11nm,1.1s
L19K White Mountain 75.48 20 P **P** **09 13 47.7 +0.5**
L19K White Mountain 75.48 20 P **P** **09 13 47.6 +0.3**
baz=324
L20K Farewell, AK 75.51 20 P **P** **09 13 47.5 0.0**
baz=324
HDA Harding Lake 75.59 16 P **P** **09 13 47.2 -0.6**
baz=330
I26K Coal Creek Min 75.59 14 P **P** **09 13 47.9 +0.1**
baz=333
PPLA Purkeypile 75.61 19 IAmb IAmb 09 14 13.9
comp=Z,35nm,1.9s
PPLA Purkeypile 75.61 19 P **P** **09 13 47.9 -0.2**
baz=326
TRF Thorofare Moun 75.63 18 P **P** **09 13 48.2 -0.1**
baz=327
N16K Nishlik Lake 75.67 23 P **P** **09 13 49.2 +0.9**
baz=321,SNR=6.8
MCK McKinley 75.72 17 P **P** **09 13 48.4 -0.2**
baz=328
EPYK Eagle Plains 75.75 11 P **P** **09 13 48.6 -0.1**
baz=338
J25K Salcha River, 75.76 15 P **P** **09 13 48.2 -0.7**
baz=324,SNR=7.4
M19K Big River Lodg 75.83 20 P **P** **09 13 49.0 -0.2**
baz=324
J26L Joseph Creek 76.23 14 P **P** **09 13 51.4 -0.2**
baz=332,SNR=8.7
K24K Donnelly Dome 76.38 16 P **P** **09 13 51.6 -0.7**
baz=331,SNR=11
I29M Ogilvie Camp, 76.42 12 IAmb IAmb 09 14 26.1
comp=Z,7.5nm,0.8s
I29M Ogvie Camp, 76.42 12 P **P** **09 13 52.2 -0.4**
baz=336
SKT Skwentna 76.55 19 P **P** **09 13 52.4 -0.9**
baz=326,SNR=7.9
O16K Kokwok River B 76.57 23 P **P** **09 13 54.1 +0.7**
baz=322,SNR=5.7
SCRK Sand Creek 76.61 15 P **P** **09 13 53.5 -0.2**
baz=332,SNR=11
RIDG Independent Ri 76.64 15 P **P** **09 13 53.0 -0.8**
baz=331,SNR=9.3
DHY Denali Highway 76.65 17 IAmb IAmb 09 13 56.3
comp=Z,6.2nm,0.6s
DHY Denali Highway 76.65 17 P **P** **09 13 53.1 -1.0**
baz=330,SNR=12
N19K Bonanza Creek 76.69 21 P **P** **09 13 54.1 -0.1**
baz=324

O17K Koliganek Bris 76.75 23 P **P** **09 13 54.1 -0.3**
baz=322
K27K Chicken 76.95 14 P **P** **09 13 55.8 +0.3**
baz=334
WAT6 Susitna Watana 76.99 17 P **P** **09 13 54.9 -1.0**
baz=329,SNR=5.6
M22K Willow 77.11 19 P **P** **09 13 55.9 -0.5**
baz=327
BOSA Boshof 77.16 220 P **P** **09 13 57.0 -0.2**
comp=Z,12nm,0.8s,baz=27,slow=5.2,SNR=18
comp=Z,12nm,0.8s
BOSA Boshof 77.16 220 P **P** **09 13 57.0 -0.2**
BOSA IAmb IAmb 09 13 59.3
comp=Z,14nm,0.8s
BOSA Boshof 77.16 220 P **P** **09 13 57.0 -0.2**
PAX Paxson 77.17 16 P **P** **09 13 56.9 0.0**
PAX IAmb IAmb 09 14 06.4
comp=Z,20nm,1.7s
PAX Paxson 77.17 16 P **P** **09 13 56.9 0.0**
PAX pmax pmax
comp=Z,20nm,1.7s
PAX Paxson 77.17 16 P **P** **09 13 56.4 -0.5**
baz=331,SNR=8.6
SUA Susitna One 77.19 19 P **P** **09 13 56.6 -0.4**
baz=327
O18K Koktuh Hills 77.26 22 P **P** **09 13 57.7 +0.4**
baz=324
P17K Kvichak River 77.41 23 P **P** **09 13 58.7 +0.6**
baz=323
DAWY Dawson 77.42 13 P **P** **09 13 58.1 -0.1**
baz=336
PMR Palmer 77.50 18 P **P** **09 13 57.9 -0.6**
baz=328
SML Sawmill 77.51 18 IAmb IAmb 09 13 59.8
comp=Z,11nm,0.8s
SML Sawmill 77.51 18 P **P** **09 13 58.3 -0.4**
baz=329,SNR=6.9
L26K Log Cabin Wild 77.59 15 IAmb IAmb 09 14 33.0
comp=Z,87nm,3.0s
L26K Log Cabin Wild 77.59 15 P **P** **09 13 59.3 +0.2**
baz=333
M23K Glacier View 77.67 18 P **P** **09 13 59.3 -0.3**
baz=329
SCM Sheep Creek Mo 77.73 17 IAmb IAmb 09 14 00.5
comp=Z,19nm,1.3s
SCM Sheep Creek Mo 77.73 17 P **P** **09 13 59.4 -0.6**
baz=330
HARP HAARP 77.75 16 P **P** **09 14 00.5 +0.5**
baz=331,SNR=5.5
Q16K King Salmon 77.75 23 P **P** **09 14 00.0 0.0**
baz=323
M24K Tolsona, Glenn 77.77 17 IAmb IAmb 09 14 35.1
comp=Z,19nm,0.8s
M24K Tolsona, Glenn 77.77 17 P **P** **09 14 00.6 +0.4**
baz=330,SNR=6.1
KNK Knik Glacier 77.82 18 P **P** **09 14 00.3 -0.1**
baz=329
L27K Beaver Creek, 77.87 14 IAmb IAmb 09 14 02.1
comp=Z,60nm,2.7s
L27K Beaver Creek, 77.87 14 P **P** **09 14 00.6 -0.1**
baz=334
M26K Nabesna, AK 78.22 15 P **P** **09 14 02.5 -0.2**
baz=333
KLU Klutina 78.36 17 P **P** **09 14 03.5 0.0**
baz=331,SNR=5.2
M27K Edge Creek, AK 78.49 15 IAmb IAmb 09 14 39.3
comp=Z,14nm,1.2s
M27K Edge Creek, AK 78.49 15 P **P** **09 14 04.4 +0.1**
baz=334
N25K Chitina, Valde 78.57 16 P **P** **09 14 04.6 0.0**
baz=332
BVCY Beaver Creek 78.65 14 P **P** **09 14 05.3 +0.3**
baz=335,SNR=5.2
MCARA McCarthy VSAT 79.12 16 P **P** **09 14 06.0 -1.5**
baz=333
BMRM Bremner River 79.13 17 P **P** **09 14 07.1 -0.6**
baz=332
EYAK Cordova Ski Ar 79.23 17 IAmb IAmb 09 14 09.3
comp=Z,9.1nm,0.9s
EYAK Cordova Ski Ar 79.23 17 P **P** **09 14 07.7 -0.4**
baz=331
M30M Minto, Yukon 79.26 12 P **P** **09 14 07.4 -1.0**
baz=338
YUK3 Moose Creek 79.31 14 P **P** **09 14 08.8 0.0**
baz=335,SNR=6.0
KDAK Kodiak Island 79.74 22 P **P** **09 14 10.4 -0.5**
baz=326
CTG Chitna Glacier 79.86 15 P **P** **09 14 11.3 -0.4**
baz=334
YUK8 Steele Glacier 79.89 14 P **P** **09 14 11.4 -0.7**
baz=336
OHAK Old Harbor 79.99 22 P **P** **09 14 12.3 +0.1**
baz=326
M31M Drury Creek, Y 80.02 12 P **P** **09 14 12.6 +0.2**
baz=340
YUK4 Talbot Arm 80.06 14 P **P** **09 14 12.5 -0.4**
baz=337
MMPY Sheldon Lake, 80.09 10 P **P** **09 14 12.9 0.0**
baz=342
FARO Faro, Yukon 80.16 11 P **P** **09 14 13.0 -0.1**
baz=341
N30M Aishikik Lake 80.25 13 P **P** **09 14 13.6 -0.1**
baz=338
N31M Braeburn, Yuko 80.45 12 IAmb IAmb 09 14 54.0
comp=Z,10nm,1.1s
N31M Braeburn, Yuko 80.45 12 P **P** **09 14 14.5 -0.3**
baz=339
YUK6 Outpost Mounta 80.48 14 P **P** **09 14 15.2 0.0**
baz=337
HYT Haines Junctio 80.76 13 P **P** **09 14 16.4 -0.1**
baz=338
PINM Pinnacle 80.88 15 P **P** **09 14 17.4 +0.3**
baz=335
O30N Mendenhall 81.07 13 P **P** **09 14 17.9 -0.2**
baz=339
P30M Million Dollar 81.51 13 P **P** **09 14 20.8 +0.4**
baz=338
YKA Yellowknife Ar 81.68 2 P **P** **09 14 20.6 -0.6**
comp=Z,2.1nm,0.5s,baz=352,slow=5.4,SNR=20
YKA PP **PP** **09 17 29.2 +0.7**
comp=Z,0.9nm,0.8s,baz=356,slow=8.5,SNR=4.0
YKA LR LR 09 54 26.3
comp=Z,34nm,18.7s,baz=6.5,slow=38
comp=Z,2.1nm,0.5s
YKA Yellowknife Ar 81.68 2 *i* P **P** **09 14 20.8 -0.4**
YKA pmax pmax
comp=Z,2.0nm,0.5s
WRA Warramunga Arr 82.12 122 P **P** **09 14 22.6 -1.5**
comp=Z,1.5nm,0.4s,baz=325,slow=4.9,SNR=53
WRA PKKPbc **PKKPbc** **09 32 52.0 +0.2**
comp=Z,0.3nm,0.6s,baz=119,slow=3.2,SNR=7.1
comp=Z,1.5nm,0.4s
WRA Warramunga Arr 82.12 122 P **P** **09 14 23.2 -0.9**
WRA Warramunga Arr 82.12 122 *i* P **P** **09 14 23.0 -1.1**
WRA pmax pmax
comp=Z,2.0nm,0.4s
WB2 Warramunga Arr 82.13 122 P **P** **09 14 23.2 -1.0**
WB2 IAmb IAmb 09 14 59.4
comp=Z,9.9nm,1.1s
P33M Teslin, Yukon 82.15 12 P **P** **09 14 23.9 0.0**
P33M IAmb IAmb 09 14 58.7
comp=Z,7.5nm,0.8s
P33M Teslin, Yukon 82.15 12 P **P** **09 14 23.3 -0.5**
baz=341
PLBC Pleasant Camp 82.24 13 P **P** **09 14 24.3 +0.1**
baz=338
SCHQ Schefferville 82.32 337 P **P** **09 14 23.8 -0.9**
comp=Z,2.9nm,0.6s,baz=37,slow=7.8,SNR=4.4
SCHQ LR LR 09 50 05.7
comp=Z,38nm,18.5s,baz=112,slow=35
comp=Z,2.9nm,0.6s
SCHQ Schefferville 82.32 337 P **P** **09 14 24.7 0.0**
SCHQ IAmb IAmb 09 14 25.5
comp=Z,38nm,1.6s
SKAG Skagway 82.43 13 P **P** **09 14 25.2 +0.1**
baz=339
P32M Atlin 82.59 12 P **P** **09 14 25.4 -0.7**
baz=341
DLBC Dease Lake 84.28 11 LR LR 09 57 09.7
comp=Z,50nm,18.6s,baz=86,slow=39
DLBC Dease Lake 84.28 11 P **P** **09 14 34.9 +0.1**
baz=344
ASAR Alice Springs 84.35 125 P **P** **09 14 34.5 -1.0**
comp=Z,2.0nm,0.7s,baz=312,slow=4.8,SNR=20
comp=Z,2.0nm,0.7s
ASAR Alice Springs 84.35 125 P **P** **09 14 35.1 -0.4**
ASAR Alice Springs 84.35 125 P **P** **09 14 35.1 -0.4**
BBB Bella Bella 90.61 11 LR LR 09 59 45.5

	comp=Z,61nm,18.2s,baz=289,slow=38								
CTA	**Charters Tower**	**90.74**	**114**	P		**P**	**09 15 05.0**	**-1.3**	
	comp=Z,4.3nm,0.8s,baz=270,slow=5.1,SNR=1.8								
	comp=Z,4.3nm,0.8s								
CTA	**Charters Tower**	**90.74**	**114**	P		**P**	**09 15 05.0**	**-1.3**	
LBNH	**Lisbon**	**93.08**	**334**	P		**P**	**09 15 14.4**	**-2.4**	
	baz=30								
ULM	**Lac du Bonnet**	**93.20**	**351**	P		**P**	**09 15 16.0**	**-1.3**	
	comp=Z,1.8nm,0.7s,baz=41,slow=7.4,SNR=3.5								
ULM				LR		LR	10 00 10.9		
	comp=Z,30nm,18.8s,baz=9.0,slow=37								
	comp=Z,1.8nm,0.7s								
ULM	**Lac du Bonnet**	**93.20**	**351**	P		**P**	**09 15 16.0**	**-1.3**	
LONY	**Lake Ozonia**	**93.66**	**336**	P		**P**	**09 15 18.8**	**-0.7**	
	baz=28								
SADO	**Sadowa**	**94.95**	**339**	LR		LR	09 59 35.0		
	comp=Z,38nm,18.0s,baz=38,slow=36								
NEW	**Newport**	**95.76**	**5**	LR		LR	10 02 48.1		
	comp=Z,48nm,20.6s,baz=320,slow=38								
NHSC	**New Hope**	**105.90**	**335**	P		**PKiKP**	**09 20 26.5**	**+0.1**	
	baz=24								
TXAR	**Lajitas Array**	**114.70**	**354**	PKKPab		PKKPab	09 31 28.5	-2.3	
	comp=Z,0.1nm,0.3s,baz=193,slow=6.3,SNR=4.0								
CPUP	**Villa Florida**	**134.78**	**267**	PKP		**PKPdf**	**09 21 20.7**	**-0.7**	
	comp=Z,1.8nm,0.7s,baz=53,slow=1.8,SNR=4.2								
CPUP	**Villa Florida**	**134.78**	**267**	PKP		**PKPdf**	**09 21 20.9**	**-0.6**	
CPUP	**Villa Florida**	**134.78**	**267**	PKIKP		**PKPdf**	**09 21 20.9**	**-0.6**	
PLCA	**Paso Flores**	**149.29**	**249**	PKPbc		**PKPbc**	**09 21 51.1**	**-0.2**	
	comp=Z,3.2nm,0.9s,baz=54,slow=2.6,SNR=11								
PLCA	**Paso Flores**	**149.29**	**249**			**PKiKP**	**09 21 52.3**	**-0.1**	

*IDC **15** 09:05:40.3±2.9, 24°.23S×179°.61W, h524km±30km, mb2.7/4, mbtmp3.8/6, Error ellipse: s-maj=49.3km s-min=35.9km az=108.0*

ISC 15 09:05:39.4±1.8, 24°.3S±0°.1×179°.7W±0°.3, h500km, n7, σ1s53/8, mb3.3/4, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**6.92**	**342**	P	**P**	**09 07 25.7**	**+0.7**
	3.8nm,0.4s,baz=162,slow=12,SNR=21						
URZ	**Urewera**	**14.14**	**190**	P	**P**	**09 08 42.3**	**+1.9**
	2.1nm,0.4s,baz=19,slow=11,SNR=1.3						
URZ				S	**S**	**09 11 08.3**	**-1.4**
	4.6nm,0.9s,baz=11,slow=15,SNR=1.7						
CTA	**Charters Tower**	**31.79**	**271**	P	**P**	**09 11 22.8**	**+0.4**
	1.9nm,0.5s,baz=97,slow=11,SNR=1.8						
	1.9nm,0.5s						
STKA	**Stephens Creek**	**34.85**	**249**	P	**P**	**09 11 48.0**	**-0.1**
	0.9nm,0.7s,baz=95,slow=11,SNR=2.4						
	0.9nm,0.7s						
ASAR	**Alice Springs**	**42.27**	**261**	P	**P**	**09 12 48.3**	**-0.3**
	0.5nm,1.0s,baz=87,slow=7.1,SNR=2.1						
	0.5nm,1.0s						
WRA	**Warramunga Arr**	**42.69**	**267**	P	**P**	**09 12 51.1**	**-0.8**
	0.4nm,0.5s,baz=104,slow=8.3,SNR=13						
	0.4nm,0.5s						
HFS	**Hagfors**	**143.04**	**349**	PKP	**PKPdf**	**09 24 13.2**	**-2.2**
	1.1nm,0.6s,baz=46,slow=4.2,SNR=2.6						

*SNET **15** 09:06:45.4±1.0, 13°.28N×89°.91W, h33km±2km, ML3.7*
*UCR **15** 09:06:45.5±0.9, 13°.28N×89°.91W, h33km±2km, ML3.7, mb4.0(NEIC)*
*NEIC **15** 09:06:46.7±0.7, 13°.6N±0°.2×89°.80W±0°.07, h77km±25km, Md4.0(SNET), Error ellipse: s-maj=25.5km s-min=7.1km az=195.0*
*INET **15** 09:06:47.3±1.0, 13°.36N×89°.81W, h53km±13km, MW3.6*
*GCG **15** 09:06:47.5±0.4, 13°.37N×90°.10W, h22km±136km, MD3.7*

ISC 15 09:06:47.0±1.3, 13°.36N±0°.07×89°.86W±0°.05, h50km±14km, n70, σ0s84/87, 2C-21D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAYA	**Jayaque - finc**	**0.49**	**54**	↓*iP*	**Pn**	**09 06 57.5**	**-0.9**
JAYA				*eS*	**Sn**	**09 07 06.7**	**+0.2**
JAYA				IAML		09 07 08.8	
	comp=Z,5μm,0.3s						
JAYA	**Jayaque - finc**	**0.49**	**54**	↓*iP*	**Pn**	**09 06 57.5**	**-0.9**
JAYA				*eS*	**Sn**	**09 07 06.7**	**+0.2**
JAYA				IAML		09 07 08.8	
	comp=Z,5μm,0.3s						
CEVE	**Cerro Verde**	**0.51**	**26**	↓*iP*	**Pn**	**09 06 58.1**	**-0.6**
CEVE				*eS*	**Sn**	**09 07 07.9**	**+0.8**
CEVE				IAML		09 07 15.5	
	comp=Z,3μm,0.5s						
CEVE	**Cerro Verde**	**0.51**	**26**	↓*iP*	**Pn**	**09 06 58.1**	**-0.6**
CEVE				*eS*	**Sn**	**09 07 07.9**	**+0.8**
CEVE				IAML		09 07 15.5	
	comp=Z,3μm,0.5s						
SBLS	**San Blas**	**0.53**	**25**	↓*eP*	**Pn**	**09 06 58.2**	**-0.6**
SBLS	**San Blas**	**0.53**	**25**	↓*eP*	**Pn**	**09 06 58.2**	**-0.6**
NUBE	**Las Nubes**	**0.54**	**8**	↓*iP*	**Pn**	**09 06 58.2**	**-0.8**
NUBE	**Las Nubes**	**0.54**	**8**	↓*iP*	**Pn**	**09 06 58.2**	**-0.8**
SNJE	**San Jose**	**0.56**	**26**	↓*eP*	**Pn**	**09 06 58.6**	**-0.6**
SNJE	**San Jose**	**0.56**	**26**	↓*eP*	**Pn**	**09 06 58.6**	**-0.6**
RTR	**El Retiro**	**0.57**	**21**	↓*eP*	**Pn**	**09 06 58.9**	**-0.4**
RTR	**El Retiro**	**0.57**	**21**	↓*eP*	**Pn**	**09 06 58.9**	**-0.4**
CEDA	**San Andres**	**0.63**	**46**	↓*iP*	**Pn**	**09 06 59.3**	**-0.6**
CEDA				*eS*	**Sn**	**09 07 10.8**	**+1.6**
CEDA				IAML		09 07 17.4	
	comp=Z,4μm,0.3s						
CEDA	**San Andres**	**0.63**	**46**	↓*iP*	**Pn**	**09 06 59.3**	**-0.6**
CEDA				*eS*	**Sn**	**09 07 10.8**	**+1.6**
CEDA				IAML		09 07 17.4	
	comp=Z,4μm,0.3s						
CEDA	**San Andres**	**0.63**	**46**	*eP*	**Pn**	**09 06 59.3**	**-0.6**
CEDA				*eS*	**Sn**	**09 07 10.2**	**+1.0**
SLOZ	**Alcaldia de Sa**	**0.66**	**6**	↓*iP*	**Pn**	**09 06 59.9**	**-0.5**
SLOZ				*eS*	**Sn**	**09 07 11.2**	**+1.2**
BOQS	**Boqueron**	**0.67**	**56**	*eP*	**Pn**	**09 07 00.3**	**-0.3**
BOQS	**Boqueron**	**0.67**	**56**	*eP*	**Pn**	**09 07 00.3**	**-0.3**
SNET	**Serv Nac Est T**	**0.69**	**62**		**Pn**	**09 06 59.9**	**-0.8**
SNET	**Serv Nac Est T**	**0.69**	**62**	*eP*	**Pn**	**09 07 00.1**	**-0.7**
SNET				*eS*	**Sn**	**09 07 11.0**	**+0.4**
SNET				IAML		09 07 17.2	
	comp=Z,2μm,0.3s						
SNET	**Serv Nac Est T**	**0.69**	**62**	*eP*	**Pn**	**09 07 00.1**	**-0.7**
SNET				*eS*	**Sn**	**09 07 11.0**	**+0.4**
SNET				IAML		09 07 17.2	
	comp=Z,2μm,0.3s						
SNET	**Serv Nac Est T**	**0.69**	**62**	*eP*	**Pn**	**09 07 00.2**	**-0.5**
UEES	**Universidad Ev**	**0.69**	**60**	*eP*	**Pn**	**09 07 00.1**	**-0.7**
UEES				IAML		09 07 15.2	
	comp=Z,2μm,0.4s						
UEES	**Universidad Ev**	**0.69**	**60**	*eP*	**Pn**	**09 07 00.1**	**-0.7**
UEES				IAML		09 07 15.2	
	comp=Z,2μm,0.4s						
LFRS	**El Faro**	**0.81**	**71**	*eP*	**Pn**	**09 07 01.5**	**-0.9**
LFRS	**El Faro**	**0.81**	**71**	*eP*	**Pn**	**09 07 01.5**	**-0.9**
SJTE	**Alcalda de S**	**0.86**	**73**	↓*eP*	**Pn**	**09 07 02.2**	**-0.8**
SJTE	**Alcalda de S**	**0.86**	**73**	↓*eP*	**Pn**	**09 07 02.2**	**-0.8**
LBRS	**Las Brisas**	**0.87**	**65**	*eP*	**Pn**	**09 07 03.1**	**0.0**
LBRS	**Las Brisas**	**0.87**	**65**	*eP*	**Pn**	**09 07 03.1**	**0.0**
PAVA	**Las Pavas**	**0.96**	**69**	↑*eP*	**Pn**	**09 07 04.7**	**+0.3**
PAVA	**Las Pavas**	**0.96**	**69**	↑*eP*	**Pn**	**09 07 04.7**	**+0.3**
PAVA	**Las Pavas**	**0.96**	**69**	*eP*	**Pn**	**09 07 04.6**	**+0.3**
COEG	**Centro de Oper**	**0.98**	**75**	↓*eP*	**Pn**	**09 07 04.0**	**-0.6**
COEG				IAML		09 07 24.2	
	comp=Z,3μm,0.3s						
COEG	**Centro de Oper**	**0.98**	**75**	↓*eP*	**Pn**	**09 07 04.0**	**-0.6**
COEG				IAML		09 07 24.2	
	comp=Z,3μm,0.3s						
SCLA	**Alcaldia de Sa**	**1.15**	**73**	*eP*	**Pn**	**09 07 06.6**	**-0.2**
SCLA	**Alcaldia de Sa**	**1.15**	**73**	*eP*	**Pn**	**09 07 06.6**	**-0.2**
PQSS	**Presa 15 de Se**	**1.29**	**78**	*eP*	**Pn**	**09 07 08.4**	**-0.3**
PQSS	**Presa 15 de Se**	**1.29**	**78**	*eP*	**Pn**	**09 07 08.4**	**-0.3**
ESQI	**Esquipulas**	**1.29**	**23**	Pn	**Pn**	**09 07 08.9**	**+0.1**
ESQI					**Sn**	**09 07 22.3**	**-2.7**
ESQI	**Esquipulas**	**1.29**	**23**	↓*iP*	**Pn**	**09 07 08.9**	**+0.1**
ESQI				*eS*	**Sn**	**09 07 27.1**	**+2.0**
COEB	**Comit de Eme**	**1.30**	**84**	*eP*	**Pn**	**09 07 08.1**	**-0.8**
COEB	**Comit de Eme**	**1.30**	**84**	*eP*	**Pn**	**09 07 08.1**	**-0.8**
COEB	**Comit de Eme**	**1.30**	**84**	*eP*	**Pn**	**09 07 08.1**	**-0.8**
COEB				*eS*	**Sn**	**09 07 24.8**	**-0.4**
NBG	**Las Nubes**	**1.31**	**339**	↓*eP*	**Pn**	**09 07 10.2**	**+0.9**
NBG				*eS*	**Sn**	**09 07 28.1**	**+2.4**
FUG	**Fuego 3**	**1.44**	**319**	*eP*	**Pn**	**09 07 10.7**	**-0.3**
FUG				*eS*	**Sn**	**09 07 27.3**	**-1.6**
CAHU	**Cacacuatique**	**1.65**	**76**	*eP*	**Pn**	**09 07 13.4**	**-0.4**
CAHU	**Cacacuatique**	**1.65**	**76**	*eP*	**Pn**	**09 07 13.4**	**-0.4**
LCND	**La Caada**	**1.91**	**91**	*eP*	**Pn**	**09 07 16.7**	**-0.5**
LCND				IAML		09 07 46.5	
	comp=Z,656nm,0.3s						
LCND	**La Caada**	**1.91**	**91**	*eP*	**Pn**	**09 07 16.7**	**-0.5**
LCND				IAML		09 07 46.5	
	comp=Z,656nm,0.3s						
CNCH	**Conchagua**	**1.97**	**92**	*eP*	**Pn**	**09 07 17.9**	**-0.2**
CNCH	**Conchagua**	**1.97**	**92**	*eP*	**Pn**	**09 07 17.9**	**-0.2**
RTAL	**Retalhuleu**	**2.13**	**303**	Pn	**Pn**	**09 07 20.1**	**-0.1**
RTAL				Sn	**Sn**	**09 07 44.6**	**-0.8**
STG3	**Santiaguito 3,**	**2.14**	**309**	*eP*	**Pn**	**09 07 20.2**	**-0.3**
STG3				*eS*	**Sn**	**09 07 45.3**	**-0.6**
CSGN	**Cosiguina Volc**	**2.27**	**99**	*eP*	**Pn**	**09 07 21.9**	**-0.2**
HUEH	**Huehuetenango**	**2.52**	**321**	Pn	**Pn**	**09 07 24.1**	**-1.6**
TGUH	**Tegucigalpa,Un**	**2.60**	**74**		**Pn**	**09 07 25.3**	**-1.5**
TGUH	**Tegucigalpa,Un**	**2.60**	**74**	*eP*	**Pn**	**09 07 26.3**	**-0.5**
CRIN	**San Cristobal**	**2.81**	**103**		**Pn**	**09 07 30.3**	**+0.7**
CNGN	**Cerro Negro**	**3.19**	**105**		**Pn**	**09 07 34.7**	**-0.2**
MATN	**Matagalpa**	**3.85**	**96**		**Pn**	**09 07 42.6**	**-1.3**
BOAB	**BOACO BROADBAN**	**4.18**	**102**		**Pn**	**09 07 47.7**	**-0.7**
ACON	**Acoyapa**	**4.77**	**106**	Pn	**Pn**	**09 07 56.0**	**-0.4**
HZTE	**Horizontes, Gu**	**4.93**	**122**	Pn	**Pn**	**09 07 58.9**	**+0.3**
ORTG	**Ortega, Santa**	**5.24**	**124**	Pn	**Pn**	**09 08 03.3**	**+0.4**
DUNO	**Dulce Nombre,**	**5.38**	**127**	Pn	**Pn**	**09 08 05.0**	**+0.3**
JTS	**Las Juntas de**	**5.69**	**122**	Pn	**Pn**	**09 08 09.7**	**+0.7**
RIMA	**Rio Macho**	**6.87**	**121**	Pn	**Pn**	**09 08 25.8**	**+0.3**
PEZE	**Perez Zeledon,**	**7.23**	**123**	Pn	**Pn**	**09 08 29.3**	**-1.0**
SRBA	**San Rafael, Bu**	**7.58**	**122**	Pn	**Pn**	**09 08 34.3**	**-0.7**

*NORS **15** 09:16:12.8±0.0, 43°.77N×43°.53E, h20km, MPVA3.9*
*MOS **15** 09:16:14.2±0.0, 43°.74N×43°.51E, h20km, MPVA3.9*

ISC 15 09:16:14.8±0.8, 43°.74N±0°.02×43°.53E±0°.02, h14km±6km, n46, σ0s95/92, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTC	**Kuba-Taba**	**0.12**	**312**	*i* Pg	**Pg**	**09 16 17.8**	**-0.4**
KBTC				*eSg*	**Sg**	**09 16 21.1**	**+0.5**
NCK	**Nalchik**	**0.24**	**169**	*eP*g	**Pg**	**09 16 19.4**	**-0.7**
NCK				*eSg*	**Sg**	**09 16 24.4**	**+0.8**
PYA1	**Pyatigorsk**	**0.46**	**316**	*eP*g	**Pg**	**09 16 23.1**	**-0.8**
PYA1				*eSg*	**Sg**	**09 16 29.8**	**-0.2**
KBZ	**Khabaz**	**0.46**	**269**	*eP*g	**Pg**	**09 16 23.9**	**0.0**
KBZ				*eSg*	**Sg**	**09 16 30.5**	**+0.4**
LSNR	**Lesken**	**0.50**	**155**	*eP*g	**Pb**	**09 16 24.8**	**-0.7**
LSNR				*eSg*	**Sb**	**09 16 32.5**	**-0.2**
STDR	**Stavd-Durt**	**0.53**	**133**	*eP*g	**Pg**	**09 16 24.9**	**-0.3**
STDR				*eSg*	**Sb**	**09 16 33.4**	**-0.1**
PRTR	**Priterechnaya**	**0.54**	**88**	*eP*g	**Pg**	**09 16 24.5**	**-0.9**
PRTR				*eSg*	**Sb**	**09 16 33.3**	**-0.5**
BEYR	**Belyy Ugol+**	**0.59**	**298**	*eP*g	**Pg**	**09 16 25.7**	**-0.6**
BEYR				*eSg*	**Sg**	**09 16 33.8**	**-0.4**
SHA1	**Shidzhatmaz**	**0.64**	**271**	*eP*g	**Pg**	**09 16 26.8**	**-0.5**
SHA1				*eSg*	**Sg**	**09 16 35.0**	**-0.7**
KIV0	**Kislovodsk Arr**	**0.65**	**290**	*eP*g	**Pg**	**09 16 26.4**	**-1.0**
KIV0				*eSg*	**Sg**	**09 16 35.4**	**-0.6**
KIV	**Kislovodsk**	**0.65**	**290**	*eP*g	**Pg**	**09 16 26.9**	**-0.6**
KIV				*eSg*	**Sg**	**09 16 35.8**	**-0.4**
KORR	**Kora**	**0.76**	**149**	*eP*g	**Pg**	**09 16 28.9**	**-0.6**
KORR				*eSg*	**Sb**	**09 16 40.8**	**+0.8**
NEY	**Neytrino**	**0.76**	**231**	*eP*g	**Pg**	**09 16 29.4**	**-0.3**
NEY				*eSg*	**Sg**	**09 16 39.9**	**+0.2**
ARNR	**Ardon**	**0.78**	**135**	*eP*g	**Pb**	**09 16 30.3**	**+0.1**
ARNR				*eSg*	**Sb**	**09 16 41.3**	**+0.7**
BTKR	**Batakoyurt**	**0.82**	**116**	*eP*g	**Pg**	**09 16 30.1**	**-0.5**
BTKR				*eSg*	**Sb**	**09 16 42.5**	**+0.7**
DIGR	**Digorskoe uzhe**	**0.84**	**178**	*eP*g	**Pg**	**09 16 29.7**	**-1.4**
DIGR				*eSg*	**Sg**	**09 16 40.9**	**-1.1**
TRKR	**Terskaya**	**0.87**	**90**	*eP*g	**Pg**	**09 16 30.7**	**-0.9**
TRKR				*eSg*	**Sb**	**09 16 43.1**	**-0.1**
ZEI	**Tsey**	**0.98**	**164**	*eP*g	**Pg**	**09 16 32.5**	**-1.4**
ZEI				*eSg*	**Sb**	**09 16 47.4**	**+0.7**
LACR	**Lac**	**1.06**	**148**	*i* Pg	**Pg**	**09 16 34.0**	**-1.3**
LACR				*eSg*	**Sn**	**09 16 50.2**	**+0.1**
VLKR	**Vladikavkaz**	**1.08**	**129**	*eP*g	**Pg**	**09 16 34.9**	**-0.8**
VLKR				*eSg*	**Sn**	**09 16 50.8**	**+0.4**
ALER	**Alexandrovskoy**	**1.12**	**337**	*eP*g	**Pg**	**09 16 36.2**	**-0.2**
ALER				*eSg*	**Sb**	**09 16 51.6**	**+1.2**
ONI	**Oni**	**1.15**	**183**	P	**Pg**	**09 16 36.0**	**-0.9**
ONI				S	**Sb**	**09 16 51.8**	**+0.6**
ONI	**Oni**	**1.15**	**183**	*i* Pg	**Pg**	**09 16 36.0**	**-0.9**
ONI				*eSg*	**Sb**	**09 16 51.9**	**+0.7**
KMGR	**Komgaron**	**1.18**	**124**	*eP*g	**Pg**	**09 16 36.7**	**-0.9**
KMGR				*eSg*	**Sb**	**09 16 53.1**	**+0.8**
MTEO	**Meteo**	**1.28**	**145**	P	**Pg**	**09 16 37.7**	**-1.9**
MTEO				S	**Sg**	**09 16 55.2**	**-1.1**
PNSH	**Pansheti**	**1.35**	**144**	P	**Pn**	**09 16 38.4**	**-1.1**
PNSH				S	**Sg**	**09 16 56.7**	**-1.8**
GOF	**Gofitskoye**	**1.37**	**345**	*eP*g	**Pn**	**09 16 39.3**	**-0.3**
GOF				*eSg*	**Sb**	**09 16 57.9**	**+0.3**
NVNR	**Nevinnomyssk**	**1.43**	**308**	*eP*g	**Pn**	**09 16 41.2**	**+0.8**
NVNR				*eSg*	**Sb**	**09 17 00.5**	**+1.1**
DOMB	**Dombai**	**1.46**	**253**	*eP*g	**Pn**	**09 16 41.2**	**+0.3**
DOMR				*eSg*	**Sb**	**09 17 00.5**	**+0.2**
CHVG	**Ch'k'valeri**	**1.47**	**227**	*eP*g	**Pn**	**09 16 41.1**	**+0.2**
CHVG				*eSg*	**Sn**	**09 17 01.4**	**+1.4**
ARXR	**Arkhyz**	**1.65**	**265**	*eP*g	**Pn**	**09 16 42.8**	**-0.8**
ARXR				*eSg*	**Sn**	**09 17 04.4**	**-0.2**
GROC	**Groznyy**	**1.73**	**107**	*eP*g	**Pn**	**09 16 44.2**	**-0.3**
GROC				*eSg*	**Sn**	**09 17 07.2**	**+0.8**
AHMR	**Akhmetovskaya**	**1.85**	**284**	*eP*g	**Pn**	**09 16 46.1**	**0.0**
AHMR				*eSg*	**Sn**	**09 17 07.7**	**-1.7**
DVE	**Vedeno**	**2.04**	**111**	*eP*g	**Pn**	**09 16 49.6**	**+0.7**
DVE				*eSg*	**Sb**	**09 17 16.4**	**-0.8**
ABS	**Abastumani**	**2.05**	**195**	P	**Pb**	**09 16 52.5**	**+0.6**
ABS				S	**Sg**	**09 17 21.4**	**+0.8**
BTLR	**Botlikh**	**2.24**	**118**	*eP*n	**Pn**	**09 16 52.5**	**+0.9**
BTLR				*eSn*	**Sn**	**09 17 18.3**	**-0.7**
AKH	**Akhalkalaki**	**2.32**	**181**	*eP*n	**Pn**	**09 16 53.2**	**+0.4**
AKH				*eSn*	**Sn**	**09 17 22.3**	**+1.0**
DLMR	**Dylym**	**2.35**	**105**	*eP*n	**Pn**	**09 16 53.5**	**+0.6**
DLMR				*eSn*	**Sn**	**09 17 21.2**	**-0.6**
DBC	**Dubki**	**2.51**	**105**	*eP*n	**Pn**	**09 16 55.9**	**+0.6**
DBC				*eSn*	**Sn**	**09 17 26.8**	**+1.1**
UNCR	**Uncukul**	**2.59**	**112**	*eP*n	**Pn**	**09 16 58.5**	**+2.1**
UNCR				*eSn*	**Sn**	**09 17 27.9**	**+0.2**
XNZR	**Khunzakh**	**2.61**	**116**	*eP*n	**Pn**	**09 16 57.7**	**+1.0**
XNZR				*eSn*	**Sn**	**09 17 28.2**	**-0.2**
KRNR	**Karanay**	**2.62**	**109**	*eP*n	**Pn**	**09 16 58.7**	**+1.8**
KRNR				*eSn*	**Sn**	**09 17 30.2**	**+1.5**
BUJR	**Buynaksk**	**2.76**	**108**	*eP*n	**Pn**	**09 16 59.7**	**+1.0**
BUJR				*eSn*	**Sn**	**09 17 33.7**	**+1.8**
ARKR	**Arakani**	**2.77**	**113**	*eP*n	**Pn**	**09 17 01.7**	**+2.8**
ARKR				*eSn*	**Sn**	**09 17 32.1**	**-0.1**
GNBR	**Gunib**	**2.85**	**117**	*eP*n	**Pn**	**09 17 01.6**	**+1.7**
GNBR				*eSn*	**Sn**	**09 17 35.9**	**+1.7**
ERBR	**Yeremizino-Bor**	**2.94**	**313**	*eP*n	**Pn**	**09 17 00.8**	**-0.4**
ERBR				*eSn*	**Sn**	**09 17 34.6**	**-1.6**

*IDC **15** 09:33:38.6±3.9, 2°.35N×128°.15E, h149km±42km, mb3.5/6, mbtmp3.9/7, Error ellipse: s-maj=94.3km s-min=14.5km az=68.0*
*DJA **15** 09:33:38.4±0.5, 2°.N±5°.×12°.8E±°, h133km±5km, M4.3/10, mb4.4/6, mB5.1/2, MLv4.2/10, Mw(mB)4.5/2*
*NEIC **15** 09:33:39.6±1.0, 2°.39N±0°.09×128°.16E±0°.10, h154km±7km, mb4.0/13, Error ellipse: s-maj=14.1km s-min=13.0km az=74.0*

ISC 15 09:33:38.7±0.6, 2°.38N±0°.07×128°.18E±0°.08, h150km, n45, σ0s54/44, mb3.9/13, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.79**	**207**		**Pn**	**09 34 12.1**	**+0.7**
TNTI	**Ternate**	**1.79**	**207**	P	**Pn**	**09 34 11.3**	**-0.1**
TNTI				S	**Sn**	**09 34 36.7**	**+0.2**
SGSI	**Sangihe**	**2.95**	**296**	P	**Pn**	**09 34 24.5**	**-0.9**
SIJI	**Sorong**	**4.46**	**136**	P	**Pn**	**09 34 46.2**	**+1.1**
	4.8nm,0.3s,baz=332,slow=15,SNR=6.1						
SIJI				S	**Sn**	**09 35 36.4**	**-0.4**
	7.8nm,0.4s,baz=192,slow=23,SNR=1.8						
KMSI	**Cibinong**	**4.56**	**247**	P	**Pn**	**09 34 46.7**	**+0.4**
SANI	**Sanana**	**4.91**	**206**	P	**Pn**	**09 34 50.2**	**-0.8**
LUWI	**Luwuk**	**6.38**	**238**	Pn	**Pn**	**09 35 10.6**	**+0.1**
LUWI	**Luwuk**	**6.38**	**238**	P	**Pn**	**09 35 10.5**	**0.0**
	0.8nm8μm115nm,0.7s						
MRSI	**Marisa**	**6.51**	**253**	P	**Pn**	**09 35 12.3**	**0.0**
	0.1nm35nm,0.5s						
FAKI	**Fak Fak**	**6.65**	**142**		**Pn**	**09 35 15.2**	**+1.1**
FAKI	**Fak Fak**	**6.65**	**142**	P	**Pn**	**09 35 15.0**	**+0.8**
	0.1nm20nm,0.9s						
APSI	**Ampana**	**7.30**	**243**	P	**Pn**	**09 35 22.3**	**-0.5**
	0.1nm608nm11nm,0.6s						
TOLI2	**Tolitoli**	**7.50**	**260**		**Pn**	**09 35 25.4**	**0.0**
SRPI	**Serui, Papua**	**9.10**	**118**	P	**Pn**	**09 35 46.8**	**0.0**
TTSI	**Tana Toraja**	**9.94**	**237**	P	**Pn**	**09 35 58.2**	**+0.2**
KNRA	**Kununurra**	**17.95**	**178**	P	**Pn**	**09 37 38.2**	**-0.8**
WB0	**Warramunga Arr**	**22.84**	**165**	P	**P**	**09 38 28.9**	**-0.2**
WB0				IAmb	IAmb	09 39 02.1	
	comp=Z,11nm,1.3s						
WRAB	**Tennant Creek**	**22.98**	**165**	P	**P**	**09 38 30.4**	**-0.1**
WRAB				IAmb	IAmb	09 38 40.2	
	comp=Z,10nm,1.1s						
WRA	**Warramunga Arr**	**22.99**	**165**	P	**P**	**09 38 30.1**	**-0.4**
	comp=Z,0.8nm,0.3s,baz=343,slow=9.9,SNR=18						
WRA				PcP	**PcP**	**09 42 15.5**	**-0.2**
	comp=Z,0.3nm,0.8s,baz=359,slow=2.3,SNR=1.8						
	comp=Z,0.8nm,0.3s						
WRA	**Warramunga Arr**	**22.99**	**165**	P	**P**	**09 38 29.2**	**-1.3**
WB2	**Warramunga Arr**	**22.99**	**165**	P	**P**	**09 38 30.1**	**-0.4**
WB2				IAmb	IAmb	09 38 44.3	
	comp=Z,8.6nm,1.2s						
WR0	**Warramunga Arr**	**23.06**	**165**	P	**P**	**09 38 31.3**	**+0.1**
WR0				IAmb	IAmb	09 38 35.5	
	comp=Z,5.4nm,1.2s						
ASAR	**Alice Springs**	**26.48**	**168**	P	**P**	**09 39 01.8**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=350,slow=7.9,SNR=7.7						
ASAR				PcP	**PcP**	**09 42 23.4**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=347,slow=1.9,SNR=8.2						
	comp=Z,0.2nm,0.5s						
BBOO	**Buckleboo**	**35.78**	**169**	P	**P**	**09 40 23.4**	**-0.1**
STKA	**Stephens Creek**	**36.37**	**161**	P	**P**	**09 40 28.6**	**+0.1**
	comp=Z,1.0nm,0.4s,baz=335,slow=12,SNR=9.8						
	comp=Z,1.0nm,0.4s						
STKA	**Stephens Creek**	**36.37**	**161**	P	**P**	**09 40 28.7**	**+0.2**
H11S3	**WAKE ISLAND Hy**	**40.98**	**64**	T	T	10 24 37.0	
	baz=252						
H11S2	**WAKE ISLAND Hy**	**40.99**	**64**	T	T	10 24 40.3	
	baz=252						
H11S1	**WAKE ISLAND Hy**	**41.00**	**64**	T	T	10 24 44.4	
	baz=252						
H11N1	**WAKE ISLAND Hy**	**41.56**	**63**	T	T	10 25 18.8	
	baz=250,slow=75						
H11N2	**WAKE ISLAND Hy**	**41.57**	**63**	T	T	10 25 19.7	
	baz=250						
H11N3	**WAKE ISLAND Hy**	**41.58**	**63**	T	T	10 25 20.5	
	baz=250,slow=75						
SONM	**Songino Array**	**49.04**	**341**	P	**P**	**09 42 10.6**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=153,slow=9.7,SNR=2.0						
	comp=Z,0.7nm,0.5s						
MK31	**Makanchi Array**	**59.48**	**325**	P	**P**	**09 43 26.1**	**+0.1**
MK31

WRAB				IAmb	IAmb	09 59 38.2	
	comp=Z,7.0nm,0.8s						
WRA	**Warramunga Arr**	**44.42 272**		P	**P**	**09 59 37.8**	**+0.3**
	comp=Z,6.4nm,0.6s,baz=110,slow=8.1,SNR=63						
	comp=Z,6.4nm,0.6s						
WRA	**Warramunga Arr**	**44.42 272**		P	**P**	**09 59 36.3**	**-1.2**
WB0	**Warramunga Arr**	**44.44 272**		P	**P**	**09 59 36.5**	**-1.2**
WB0				IAmb	IAmb	09 59 39.4	
	comp=Z,8.4nm,0.7s						
FORT	**Forrest**	**46.41 255**		P	**P**	**09 59 53.1**	**-0.1**
SBA	**Scott Base**	**48.26 184**		P	**P**	**10 00 08.8**	**+1.9**
KNRA	**Kununurra**	**51.02 274**		P	**P**	**10 00 29.6**	**+0.9**
CASY	**Casey**	**55.47 208**		P	**P**	**10 01 00.8**	**+0.1**
CASY				IAmb	IAmb	10 01 20.5	
	comp=Z,16nm,1.4s						
QSPA	**South Pole Qui**	**59.91 180**		P	**P**	**10 01 35.0**	**+2.8**
	comp=Z,0.7nm,0.7s,baz=93,slow=1.3,SNR=5.6						
	comp=Z,0.7nm,0.7s						
QSPA	**South Pole Qui**	**59.91 180**		P	**P**	**10 01 34.9**	**+2.8**
H10N3	**ASCENSION HYDR**	**38.85 154**		T	T	12 46 45.2	
	baz=203,slow=75,SNR=6.2						
H10N1	**ASCENSION HYDR**	**38.85 154**		T	T	12 46 40.9	
	baz=203,slow=75,SNR=5.6						
H10N2	**ASCENSION HYDR**	**38.86 154**		T	T	12 46 47.4	
	baz=203,slow=75,SNR=6.6						
FINES	**FINESS Array B**	**145.07 340**		PKPbc	**PKPbc**	**10 11 02.0**	**-0.2**
	comp=Z,5.5nm,0.7s,baz=62,slow=4.4,SNR=16						
NOA	**NORSAR Array B**	**148.60 352**		PKPbc	**PKPbc**	**10 11 12.4**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=10,slow=3.2,SNR=1.9						
AKASG	**Malin Array Be**	**151.34 323**		PKPbc	**PKPbc**	**10 11 18.9**	**-0.5**
	comp=Z,0.7nm,0.4s,baz=42,slow=1.8,SNR=6.2						
TORD	**Torodi Ar. Bea**	**163.02 178**		PKPab	**PKPab**	**10 12 19.8**	**+1.2**
	comp=Z,0.6nm,0.6s,baz=186,slow=4.1,SNR=4.2						

*HEL **15** 09:58:45.5±0.5, 67.72N×34.14E, h0km, ML2.0, Explosion*
*KOLA **15** 09:58:45.1, 67.65N×34.23E, h0km, ML2.2*
*IDC **15** 09:58:49.4±2.4, 67.75N×33.56E, h0km, mbtmp2.8/2, ML2.1/2, Error ellipse: s-maj=24.0km s-min=10.2km az=79.0*

ISC 15 09:58:45.5±1.0, **67.72N**±0.04×**34.09E**±0.05, **h0**km, **n13, σ0.61/25, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVZ	**Lovozero**	**0.28**	**50**	P	**Pg**	**09 58 50.1**	**-0.7**
LVZ				S	**Sg**	**09 58 54.2**	**-0.2**
APA	**Apatity**	**0.30**	**240**	P	**Pg**	**09 58 51.2**	**0.0**
APA				S	**Sg**	**09 58 54.9**	**-0.2**
APA0	**Apatity Array**	**0.43**	**255**	P	**Pg**	**09 58 53.2**	**-0.5**
APA0				S	**Sg**	**09 58 59.5**	**+0.2**
VRF	**Varrio**	**1.71**	**273**	*eP*	**Pn**	**09 59 15.7**	**-0.7**
VRF				*eS*	**Sn**	**09 59 38.5**	**-0.4**
VRF				MSG		09 59 40.9	
	comp=Z,12nm,0.2s						
PRVG	**Vayda Guba**	**2.15**	**342**	P	**Pn**	**09 59 23.4**	**+0.8**
PRVG				S	**Sn**	**09 59 53.1**	**+0.7**
OLKF	**Oulanka, Finla**	**2.31**	**235**	*eP*	**Pn**	**09 59 25.4**	**+0.6**
OLKF				*eS*	**Sn**	**09 59 54.5**	**+0.6**
OLKF				MSG		09 59 59.4	
	comp=Z,5.5nm,0.2s						
KU6	**Riekki**	**2.38**	**226**	*eP*	**Pn**	**09 59 25.8**	**+0.2**
KU6				*eS*	**Sn**	**09 59 55.5**	**+0.1**
KEV	**Kevo**	**3.29**	**312**	*eP*	**Pn**	**09 59 38.6**	**+0.4**
KEV				*eS*	**Sn**	**10 00 18.2**	**+0.2**
RNF	**Rovaniemi**	**3.34**	**254**	*eP*	**Pn**	**09 59 38.3**	**-0.5**
RNF				*eS*	**Sn**	**10 00 18.0**	**-1.2**
ARCES	**ARCESS Array B**	**3.63**	**304**	Pn	**Pn**	**09 59 42.8**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=119,slow=14,SNR=12						
ARCES				Pg	**Pb**	**09 59 50.9**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=119,slow=15,SNR=7.5						
ARCES				Sn	**Sn**	**10 00 25.6**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=114,slow=32,SNR=8.1						
ARCES				Lg	Lg	10 00 37.5	
	comp=Z,1.4nm,0.3s,baz=120,slow=28,SNR=16						
	comp=Z,0.8nm,0.5s						
ARCES	**ARCESS Array B**	**3.63**	**304**	P	**Pn**	**09 59 42.9**	**0.0**
ARCES				S	**Sn**	**10 00 25.8**	**-0.6**
I37NO	**I37NO**	**5.88**	**290**	*i*		10 32 20.0	
	comp=Z,0.1nm,0.8s,baz=98,slow=322,SNR=6.5						
FINES	**FINESS Array B**	**7.17**	**212**	Pn	**Pn**	**10 00 32.2**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=30,slow=11,SNR=2.0						
FINES				Sn	**Sn**	**10 01 52.5**	**-1.0**
	comp=Z,0.4nm,0.3s,baz=30,slow=28,SNR=5.5						
	comp=Z,1.4nm,1.0s						

DJA 15 10:04:12.1±2.7, **6°S**±4°×**10°3E**±°, **h18**km±26km, **M4.0/6, mb4.7/2, MLv3.6/6, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KASI	**Kota Agung**	**1.36**	**60**	P	Pn	10 04 36.1	-0.1
KASI				S	Sn	10 04 53.9	0.0
LWLI	**Liwa**	**1.40**	**32**	P	Pn	10 04 36.6	-0.3
LWLI				S	Sb	10 04 55.3	-0.1
MNAI	**Manna**	**1.87**	**349**	P	Pn	10 04 43.2	-0.1
MDSI	**Maura Dua**	**1.92**	**27**	P	Pn	10 04 44.3	+0.4
PPSI	**Pulau Pagai**	**4.75**	**316**	P	Pn	10 05 23.0	+0.2
UGM	**Wanagama**	**7.36**	**104**	P	Pn	10 05 59.0	+0.3
	0.8nm158nm,1.7s						
PCJI	**Pacitan**	**8.05**	**105**	P	Pn	10 06 08.4	+0.2

*REN **15** 10:12:24.1±1.4, 38.72N±0.03×117.84W±0.02, h10km±8km, Mwr3.2, ML3.5/70(NEIC), Error ellipse: s-maj=4.5km s-min=2.4km az=177.0*
*NEIC **15** 10:12:26, 38.72N×117.84W, h8km, Moment Tensor Solution. Moment tensor: Scale 10^{13}Nm; Mrr-0.99; Mθθ-4.96; Mφφ5.95; Mrθ3.06; Mrφ6.31; Mθφ-0.24; Fault plane solution: Mo8.93000×10^{13} NP1:φs248.00000°, δ80.00000°, λ-19.00000°. NP2:φs341.00000°, δ71.00000°, λ-170.00000°. Principal axes: T 8.9537, Plg6.0000°, Azm296.0000°; N -0.0494, Plg69.0000°, Azm42.0000°; P -8.9043, Plg20.0000°, Azm203.0000°;*

NEIC 15 10:12:22.7±1.3, **38.726N**±0.006×**117.85W**±0.02, **h10**km±2km **Error ellipse: s-maj=3.1km s-min=2.9km az=72.0, Nevada**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KVN	**Kaiserville**	**0.38**	**329**	Pg	Pb	10 12 31.8	+0.2
KVN				IAML		10 12 37.5	
	comp=N,3μm,0.4s						
NV11	**Mina Array Sit**	**0.38**	**219**		Pb	10 12 31.6	0.0
NV11				Sg	Sb	10 12 37.1	-0.5
NV11				IAML		10 12 37.5	
	comp=N,3μm,0.5s						
NV11				IAML		10 12 37.6	
	comp=E,5μm,0.3s						
NVAR	**Mina Array Bea**	**0.46**	**230**		Pb	10 12 32.8	-0.3
Q09A	**Carvers**	**0.53**	**78**	Pg	Pb	10 12 34.5	+0.3
Q09A				Sg	Sb	10 12 42.4	+0.3
RYN	**Ryan**	**0.54**	**260**		Pb	10 12 34.6	+0.4
RYN				Sg	Sb	10 12 42.2	+0.1
RYN				IAML		10 12 43.0	
	comp=N,4μm,0.3s						
LHV	**Little Huntoon**	**0.70**	**228**		Pb	10 12 37.6	+0.6
LHV				Sg	Sb	10 12 47.4	+0.8
LHV				IAML		10 12 48.0	
	comp=E,2μm,0.7s						
LHV				IAML		10 12 51.9	
	comp=N,2μm,0.3s						
TPH	**Tonopah**	**0.81**	**143**		Pb	10 12 39.4	+0.4
TPH				Sg	Sb	10 12 50.2	+0.1
YERR	**Yerington**	**1.12**	**284**	Pg	Pn	10 12 44.9	+0.3
YERR				IAML		10 13 01.7	
	comp=N,1μm,0.4s						
YERR				IAML		10 13 05.8	
	comp=E,1μm,0.4s						
PNTR	**Pine Nut**	**1.41**	**285**	Pg	Pb	10 12 49.2	-0.1
PNTR				IAML		10 13 13.7	
	comp=N,703nm,0.7s						
OMMB	**Old Mammoth Mi**	**1.44**	**220**	Pn	Pg	10 12 50.2	-0.1
MDPB	**Devils Postpil**	**1.46**	**222**		Pg	10 12 50.5	-0.3
LCH	**Last Change Ra**	**1.50**	**174**		Pb	10 12 50.5	-0.1
LCH				IAML		10 13 15.1	
	comp=E,611nm,0.3s						
LCH				IAML		10 13 15.4	
	comp=N,484nm,0.3s						
VCNR	**Virginia City**	**1.52**	**293**	Pg	Pb	10 12 50.6	-0.4
PAHR	**Pah Rah Range**	**1.54**	**310**		Pn	10 12 50.9	+0.5
GRAC	**Grapevine Rang**	**1.77**	**167**		Pb	10 12 54.5	-0.7
BMN	**Battle Mountai**	**1.77**	**16**		Pn	10 12 54.0	+0.5
BMN				IAML		10 13 22.4	
	comp=N,481nm,0.3s						
BMN				IAML		10 13 22.4	
	comp=E,371nm,0.3s						
EMB	**Emerald Bay**	**1.78**	**279**		Pn	10 12 54.3	+0.6
EMB				IAML		10 13 21.6	
	comp=N,576nm,0.3s						
EMB				IAML		10 13 22.3	
	comp=E,536nm,0.3s						
R11A	**Troy Canyon, C**	**1.81**	**101**		Pn	10 12 54.4	+0.3
R11A				IAML		10 13 22.0	
	comp=N,423nm,0.8s						
KCC	**Kaiser Creek**	**1.82**	**220**		Pb	10 12 55.3	-0.8
S11A	**Rachel**	**1.98**	**122**		Pn	10 12 57.4	+1.1
CMB	**Columbia Colle**	**2.11**	**252**		Pn	10 12 58.9	+0.8
CMB				IAML		10 13 30.6	
	comp=N,226nm,0.5s						
CMB				IAML		10 13 30.7	
	comp=E,235nm,0.2s						
TPNV	**Topopah Spring**	**2.18**	**144**	Pn	Pn	10 13 00.1	+1.0
TPNV				IAML		10 13 39.3	
	comp=E,398nm,0.9s						
BEKR	**Beckworth**	**2.26**	**301**		Pn	10 13 01.4	+1.2
PRN	**Pahroc Range**	**2.57**	**120**		Pn	10 13 05.5	+1.0
PRN				IAML		10 13 49.8	
	comp=N,214nm,0.5s						
PRN				IAML		10 13 57.8	
	comp=E,212nm,0.7s						
GWY	**Greenwater Val**	**2.70**	**159**		Pn	10 13 07.5	+1.2
ELK	**Elko**	**2.85**	**44**		Pn	10 13 09.2	+0.8
ELK				IAML		10 13 55.1	
	comp=E,98nm,0.7s						
QSM	**Queen of Sheba**	**2.87**	**164**	Pn	Pn	10 13 09.9	+1.5
ORV	**Oroville**	**2.96**	**287**		Pn	10 13 11.1	+1.4
SHPR	**Sheep Range**	**3.08**	**135**	Pn	Pn	10 13 12.9	+1.4
PSUT	**Pine Spring**	**3.13**	**92**	Pn	Pn	10 13 13.4	+1.1
LCMM	**Colby Mountain**	**3.18**	**298**		Pn	10 13 14.8	+2.0
ICU	**Indian Springs**	**3.48**	**116**		Pn	10 13 17.8	+0.8
MOD	**Modoc Plateau**	**3.69**	**330**		Pn	10 13 23.2	+3.4
MOD	**Modoc Plateau**	**3.69**	**330**	IAML		10 14 25.9	
	comp=N,60nm,0.7s						
MOD				IAML		10 14 31.6	
	comp=E,66nm,0.8s						
CCUT	**Cedar City**	**3.73**	**107**		Pn	10 13 21.6	+1.1
LCMT	**Little Creek M**	**4.03**	**114**		Pn	10 13 25.6	+1.1
HOPS	**Hopland Field**	**4.09**	**275**		Pn	10 13 26.5	+1.3
HOPS				IAML		10 14 36.5	
	comp=E,44nm,3.2s						
HOPS				IAML		10 15 24.5	
	comp=N,48nm,2.4s						
BGU	**Big Grassy Mou**	**4.31**	**58**		Pn	10 13 30.0	+1.6
BGU				IAML		10 14 39.9	
	comp=E,62nm,0.7s						
BGU				IAML		10 14 43.9	
	comp=N,42nm,1.0s						

IDC 15 10:18:27.5±1.1, **9.39N×40.49W, h0**km, **mb3.9/6, mbtmp3.9/6, MS3.6/36, Error ellipse: s-maj=47.2km s-min=23.5km az=176.0, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MDP	**Montagnes des**	**12.78**	**251**	LR	LR	10 25 41.1	
	comp=Z,202nm,21.9s,baz=65,slow=34						
H05S1	**Guadeloupe/Mar**	**20.52**	**286**	T	T	10 44 20.8	
	SNR=19						
SJG	**San Juan**	**26.36**	**292**	LR	LR	10 32 31.7	
	comp=Z,123nm,21.9s,baz=92,slow=32						
H10N3	**ASCENSION HYDR**	**31.04**	**123**	T	T	10 57 27.7	
	baz=302,slow=75,SNR=23						
H10N2	**ASCENSION HYDR**	**31.05**	**123**	T	T	10 57 23.5	
	baz=302,slow=75,SNR=25						
H10N1	**ASCENSION HYDR**	**31.06**	**123**	T	T	10 57 21.9	
	baz=302,slow=75,SNR=20						
SIV	**San Ignacio**	**32.42**	**219**	LR	LR	10 37 59.3	
	comp=Z,123nm,18.1s,baz=90,slow=36						
ROSC	**El Rosal**	**33.85**	**265**	LR	LR	10 39 06.7	
	comp=Z,198nm,18.9s,baz=98,slow=37						
DBIC	**Dimbokro**	**35.38**	**92**	P	P	10 25 26.1	+0.8
	8.4nm,1.1s,baz=264,slow=9.2,SNR=2.0						
DBIC				LR	LR	10 37 07.0	
	comp=Z,86nm,18.9s,baz=262,slow=32						
	8.4nm,1.1s						
LPAZ	**La Paz**	**37.41**	**227**	P	P	10 25 43.3	0.0
	0.9nm,0.9s,baz=45,slow=8.6,SNR=2.4						
LPAZ				LR	LR	10 41 33.3	
	comp=Z,66nm,18.2s,baz=22,slow=37						
	0.9nm,0.9s						
CPUP	**Villa Florida**	**39.10**	**204**	LR	LR	10 42 10.0	
	comp=Z,100nm,18.2s,baz=51,slow=36						
MDT	**Midelt**	**40.48**	**50**	LR	LR	10 39 08.2	
	comp=Z,94nm,20.6s,baz=38,slow=31						
ATAH	**Atahualpa**	**41.18**	**248**	LR	LR	10 42 16.5	
	comp=Z,100nm,21.7s,baz=117,slow=35						
TORD	**Torodi Ar. Bea**	**41.51**	**81**	P	P	10 26 15.3	-1.6
	1.1nm,0.7s,baz=274,slow=9.1,SNR=3.9						
TORD				LR	LR	10 42 08.1	
	comp=Z,139nm,19.1s,baz=201,slow=34						
	1.1nm,0.7s						
NNA	**Nana**	**41.91**	**240**	LR	LR	10 43 52.2	
	comp=Z,92nm,18.5s,baz=34,slow=36						
LVC	**Limon Verde**	**42.27**	**221**	LR	LR	10 44 46.6	
	comp=Z,69nm,18.0s,baz=14,slow=37						
JTS	**Las Juntas de**	**43.79**	**275**	LR	LR	10 45 47.3	
	comp=Z,68nm,19.8s,baz=244,slow=37						
ESDC	**Sonseca Array**	**44.35**	**41**	LR	LR	10 41 46.1	
	comp=Z,64nm,19.3s,baz=245,slow=32						
TKL	**Tuckaleechee C**	**47.23**	**310**	LR	LR	10 44 35.0	
	comp=Z,56nm,18.9s,baz=136,slow=33						
SADO	**Sadowa**	**48.49**	**324**	LR	LR	10 47 01.8	
	comp=Z,33nm,18.0s,baz=58,slow=35						
KEST	**Kesra**	**52.26**	**52**	LR	LR	10 49 57.8	
	comp=Z,56nm,19.8s,baz=236,slow=36						
EKA	**Eskdalemuir Ar**	**54.45**	**25**	LR	LR	10 47 43.5	
	comp=Z,40nm,18.4s,baz=175,slow=32						
DAVOX	**Davos/Dischmat**	**55.61**	**39**	LR	LR	10 48 29.8	
	comp=Z,45nm,21.8s,baz=262,slow=32						
PLCA	**Paso Flores**	**57.07**	**207**	LR	LR	10 54 39.0	
	comp=Z,46nm,18.2s,baz=114,slow=38						
VRAC	**Vranov**	**61.74**	**39**	LR	LR	10 54 31.0	
	comp=Z,27nm,18.1s,baz=262,slow=35						
TXAR	**Lajitas Array**	**62.10**	**298**	P	P	10 28 50.2	-0.6
	0.3nm,0.6s,baz=96,slow=9.2,SNR=5.3						
	0.3nm,0.6s						
NOA	**NORSAR Array B**	**63.95**	**25**	LR	LR	10 51 59.5	
	comp=Z,19nm,21.6s,baz=270,slow=32						
IDI	**Anoyia**	**64.56**	**55**	LR	LR	10 56 15.9	
	comp=Z,19nm,21.8s,baz=273,slow=35						
HFS	**Hagfors**	**64.57**	**27**	LR	LR	10 51 35.5	
	comp=Z,26nm,21.2s,baz=226,slow=31						
ANMO	**Albuquerque**	**65.00**	**304**	LR	LR	10 56 02.2	
	comp=Z,33nm,18.6s,baz=146,slow=35						
PDAR	**Pinedale Array**	**68.32**	**312**	LR	LR	10 57 52.8	
	comp=Z,29nm,18.7s,baz=132,slow=35						
MBAR	**Mbarara**	**71.59**	**94**	LR	LR	10 59 49.8	
	comp=Z,34nm,18.0s,baz=156,slow=35						
BRTR	**Keskin Array B**	**71.86**	**51**	P	P	10 29 53.5	+0.7
	0.5nm,0.6s,baz=262,slow=7.6,SNR=3.9						
BRTR				LR	LR	11 00 12.1	
	comp=Z,21nm,21.6s,baz=273,slow=35						
	0.5nm,0.6s						
ELK	**Elko**	**72.38**	**310**	P	P	10 29 56.5	+0.5
	1.3nm,1.0s,baz=80,slow=6.1,SNR=3.2						
ELK				LR	LR	10 58 51.2	
	comp=Z,59nm,20.2s,baz=144,slow=34						
	1.3nm,1.0s						
EIL	**Elat**	**72.80**	**62**	LR	LR	11 03 44.9	
	comp=Z,69nm,18.7s,baz=268,slow=37						
LBTB	**Lobatse**	**72.86**	**120**	LR	LR	10 55 52.3	
	comp=Z,67nm,18.9s,baz=250,slow=31						
PFO	**Pinyon Flats O**	**73.20**	**302**	LR	LR	11 01 52.8	
	comp=Z,2nm,18.2s,baz=201,slow=36						
BOSA	**Boshof**	**73.80**	**123**	LR	LR	10 55 01.3	
	comp=Z,64nm,21.7s,baz=197,slow=30						
KMBO	**Kilima Mbogo**	**78.10**	**93**	LR	LR	11 05 49.0	
	comp=Z,18nm,18.1s,baz=82,slow=36						
BELG	**Belogornoye**	**81.49**	**38**	LR	LR	11 04 13.4	
	comp=Z,26nm,21.5s,baz=176,slow=34						
WSAR	**Wadi Sarin**	**94.61**	**66**	LR	LR	11 15 12.6	
	comp=Z,51nm,20.5s,baz=274,slow=36						

*NOU **15** 10:23:01.0, 37.81S×177.34E, h112km, MLv3.7/4, Off E. Coast of N. Island, N.Z.*
*WEL **15** 10:23:02.5±0.7, 38°S±5°×17°7E±°, h104km±5km, M2.9/31, ML3.2/30, MLv2.9/31, Error ellipse: s-maj=0.0km s-min=0.0km az=18.8*

ISC 15 10:23:00.7±1.7, **37.84S**±0.04×**177.17E**±0.05, **h129**km±9km, **n78, σ0.91/91, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WHRZ	**Whale Island**	**0.15**	**263**	P	**Pn**	**10 23 18.6**	**+0.3**
WIZ	**White Island**	**0.31**	**3**	P	**Pn**	**10 23 18.5**	**-0.3**
WIZ				S	**Sn**	**10 23 29.4**	**-2.9**
MARZ	**Manawahe**	**0.42**	**249**	P	**Pn**	**10 23 19.4**	**+0.2**
RUGZ	**Raukumara Rang**	**0.42**	**108**	P	**Pn**	**10 23 18.8**	**-0.5**
RUGZ				S	**Sn**	**10 23 32.5**	**-1.0**
URZ	**Urewera**	**0.42**	**186**	P	**Pn**	**10 23 19.1**	**-0.1**
URZ				S	**Sn**	**10 23 32.8**	**-0.4**
URZ	**Urewera**	**0.42**	**186**	P	**Pn**	**10 23 19.3**	**+0.1**
OPRZ	**Ohinepanea**	**0.49**	**269**	P	**Pn**	**10 23 19.4**	**-0.1**
OPRZ				S	**Sn**	**10 23 33.3**	**-0.4**
HAZ	**Te Kaha**	**0.49**	**81**	P	**Pn**	**10 23 19.4**	**-0.2**
HAZ				S	**Sn**	**10 23 33.1**	**-0.6**
MWZ	**Matawai**	**0.57**	**150**	P	**Pn**	**10 23 20.3**	**+0.3**
MWZ				S	**Sn**	**10 23 34.9**	**0.0**
TARZ	**Mount Tarawera**	**0.66**	**232**	P	**Pn**	**10 23 21.3**	**+0.6**
TARZ				S	**Sn**	**10 23 36.7**	**+0.7**
OMRZ	**Omania**	**0.69**	**247**	P	**Pn**	**10 23 21.3**	**+0.5**
RAGZ	**Rawiri**	**0.69**	**164**	P	**Pn**	**10 23 21.3**	**+0.4**
RAGZ				S	**Sn**	**10 23 37.6**	**+1.3**
MUGZ	**Murupara**	**0.71**	**206**	P	**Pn**	**10 23 21.2**	**+0.2**
MUGZ				S	**Sn**	**10 23 35.8**	**-0.7**
RRRZ	**Republican Roa**	**0.72**	**226**	P	**Pn**	**10 23 21.3**	**+0.2**
PKGZ	**Pakihiroa**	**0.72**	**94**	P	**Pn**	**10 23 21.7**	**+0.5**
TWGZ	**Tauwhareparae**	**0.73**	**118**	P	**Pn**	**10 23 22.0**	**+0.8**
TWGZ				S	**Sn**	**10 23 37.9**	**+1.2**
TGRZ	**Tauranga**	**0.73**	**278**	P	**Pn**	**10 23 21.0**	**-0.1**
TGRZ				S	**Sn**	**10 23 36.3**	**-0.3**
RTZ	**Ruatahuna**	**0.79**	**191**	P	**Pn**	**10 23 21.9**	**+0.1**
RTZ				S	**Sn**	**10 23 38.0**	**+0.3**
TKGZ	**Te Karaka**	**0.81**	**139**	P	**Pn**	**10 23 22.5**	**+0.8**
TKGZ				S	**Sn**	**10 23 38.4**	**+0.7**
HRDZ	**Handcock Road**	**0.89**	**231**	P	**Pn**	**10 23 23.1**	**+0.5**
PUZ	**Puketiti**	**0.89**	**106**	P	**Pn**	**10 23 22.8**	**+0.3**
PRRZ	**Plateau Road**	**0.90**	**222**	P	**Pn**	**10 23 22.8**	**+0.3**
MYRZ	**Mayor Island**	**0.92**	**307**	P	**Pn**	**10 23 22.9**	**+0.1**
MXZ	**Matakaoa Point**	**0.94**	**74**	P	**Pn**	**10 23 23.5**	**+0.5**
SNGZ	**Shannon Statio**	**0.95**	**172**	P	**Pn**	**10 23 23.8**	**+0.7**
KMRZ	**Kaimai**	**0.97**	**269**	P	**Pn**	**10 23 23.4**	**+0.2**
ALRZ	**Allen Road**	**0.97**	**222**	P	**Pn**	**10 23 23.7**	**+0.4**
RIGZ	**Rimuhau**	**0.99**	**152**	P	**Pn**	**10 23 24.4**	**+1.1**
WMGZ	**Waiomatatini S**	**0.99**	**89**	P	**Pn**	**10 23 24.0**	**+0.7**
CNGZ	**Carnagh Statio**	**1.04**	**129**	P	**Pn**	**10 23 25.1**	**+1.2**
MTHZ	**Maungataniwha**	**1.05**	**194**	P	**Pn**	**10 23 24.1**	**+0.2**
RAHZ	**Arahi**	**1.08**	**183**	P	**Pn**	**10 23 25.1**	**+0.9**
MRHZ	**Matea Rd**	**1.16**	**210**	P	**Pn**	**10 23 25.2**	**+0.1**
PRGZ	**Paritu Road**	**1.22**	**153**	P	**Pn**	**10 23 26.4**	**+0.7**
KUTZ	**Kaahu Road**	**1.25**	**238**	P	**Pn**	**10 23 26.8**	**+0.9**
KNZ	**Kokohu**	**1.25**	**162**	P	**Pn**	**10 23 26.6**	**+0.7**
NMHZ	**Naumai**	**1.29**	**193**	P	**Pn**	**10 23 27.4**	**+0.9**
TOZ	**Tahuroa Road**	**1.32**	**274**	P	**Pn**	**10 23 27.1**	**+0.4**
TLZ	**Tolley Road**	**1.38**	**249**	P	**Pn**	**10 23 28.0**	**+0.6**
BKZ	**Black Stump Fm**	**1.43**	**202**	P	**Pn**	**10 23 27.8**	**-0.2**
BKZ	**Black Stump Fm**	**1.43**	**202**	P	**Pn**	**10 23 28.2**	**+0.2**
ARHZ	**Aropaoanui**	**1.43**	**185**	P	**Pn**	**10 23 28.6**	**+0.7**
MHGZ	**Mahia Peninsul**	**1.44**	**156**	P	**Pn**	**10 23 29.0**	**+1.0**
KUZ	**Kuaotunu**	**1.59**	**313**	P	**Pn**	**10 23 29.3**	**-0.3**
MCHZ	**McNeill Hill**	**1.65**	**193**	P	**Pn**	**10 23 30.8**	**+0.4**
KWHZ	**Kaweka Forest**	**1.69**	**200**	P	**Pn**	**10 23 31.0**	**+0.1**
TMVZ	**Te Maari**	**1.72**	**222**	P	**Pn**	**10 23 31.8**	**+0.5**
NTVZ	**North Tongariro**	**1.72**	**222**	P	**Pn**	**10 23 32.0**	**+0.6**
ETVZ	**East Tongariro**	**1.73**	**221**	P	**Pn**	**10 23 32.0**	**+0.5**
MKAZ	**Moumakai**	**1.76**	**294**	P	**Pn**	**10 23 32.0**	**+0.3**
NNVZ	**North Ngauruho**	**1.78**	**223**	P	**Pn**	**10 23 33.6**	**+1.6**
CKHZ	**Cape Kidnapper**	**1.82**	**182**	P	**Pn**	**10 23 32.7**	**+0.3**
TWVZ	**Taurewa**	**1.83**	**227**	P	**Pn**	**10 23 36.5**	**+3.8**
BHHZ	**Black Hill Sta**	**1.86**	**207**	P	**Pn**	**10 23 32.7**	**-0.3**
KRHZ	**Kereru**	**1.91**	**199**	P	**Pn**	**10 23 33.2**	**-0.3**
MOHZ	**Moawhango**	**1.92**	**215**	P	**Pn**	**10 23 33.3**	**+0.4**
WIAZ	**Waiheke Island**	**1.93**	**302**	P	**Pn**	**10 23 34.1**	**+0.4**
HIZ	**Hauiti**	**1.94**	**249**	P	**Pn**	**10 23 34.9**	**+1.0**
HIZ	**Hauiti**	**1.94**	**249**	P	**Pn**	**10 23 35.1**	**+1.2**
KAHZ	**Kahuranaki**	**1.97**	**187**	P	**Pn**	**10 23 34.4**	**+0.2**
ETAZ	**East Tamaki Re**	**1.99**	**296**	P	**Pn**	**10 23 35.1**	**+0.7**
MTVZ	**Mangateitei**	**2.04**	**220**	P	**Pn**	**10 23 37.2**	**+2.1**
GRZ	**Great Barrier**	**2.09**	**319**	P	**Pn**	**10

	0.2nm,0.7s,baz=301,slow=8.6,SNR=4.6							
ASAR				PcP	**PcP**	**10 58 50.7**	**+0.2**	
	0.1nm,0.5s,baz=290,slow=2.0,SNR=1.4							
	0.2nm,0.7s							
H08S2	**Diego Garcia H**	**33.93**	**268**	T	T	11 32 02.0		
	baz=90,slow=76							
H08S3	**Diego Garcia H**	**33.94**	**268**	T	T	11 32 19.7		
	baz=90,slow=76							
H08S1	**Diego Carcia H**	**33.95**	**268**	T	T	11 32 20.1		
	baz=90,slow=76							
STKA	**Stephens Creek**	**40.47**	**131**	P	**P**	**10 57 18.8**	**+1.4**	
	1.8nm,0.4s,baz=302,slow=8.4,SNR=8.2							
	1.8nm,0.4s							
SONM	**Songino Array**	**55.15**	**360**	PcP	**PcP**	**11 00 10.0**	**-1.4**	
	0.3nm,0.4s,baz=181,slow=5.0,SNR=1.9							
MKAR	**Makanchi Array**	**58.32**	**340**	P	**P**	**10 59 29.2**	**-4.0**	
	0.3nm,0.6s,baz=139,slow=7.3,SNR=3.2							
	0.3nm,0.6s							
BRTR	**Keskin Array B**	**82.00**	**312**	P	**P**	**11 01 57.1**	**-1.2**	
	0.8nm,0.7s,baz=142,slow=7.3,SNR=3.2							
	0.8nm,0.7s							
TXAR	**Lajitas Array**	**144.14**	**49**	PKP	**PKPab**	**11 09 12.4**	**+0.4**	
	0.2nm,0.4s,baz=318,slow=1.2,SNR=8.4							

IDC ***15*** *10:54:08.7±1.4,6˚.21S×103˚.11E,h0km,mb4.0/9, mbtmp4.0/10,ML3.8/1,Error ellipse: s-maj=52.0km s-min=16.3km az=52.0*
DJA ***15*** *10:54:12.8±2.6,6˚S±4˚×10˚3E±˚,h23km±27km,M4.4/12, mb4.5/4,MLv4.4/12*
NEIC ***15*** *10:54:15.3±1.1,6˚.03S±0˚.06×103˚.31E±0˚.04,h35km±6km, mb4.3/14,Error ellipse: s-maj=8.7km s-min=4.6km az=155.0*

ISC 15 10:54:14.3±0.6,**6˚13S**±0˚.06×**103˚.25E**±0˚.06,**h33**km,**n47,** σ1**9**05/48,**mb4.2**/16,**Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LWLI	**Liwa**	**1.36**	**36**	P	**Pn**	**10 54 37.9**	**+0.7**
LWLI				S	**Sn**	**10 54 56.8**	**+2.6**
KASI	**Kota Agung**	**1.38**	**64**	P	**Pn**	**10 54 37.1**	**-0.2**
KASI				S	**Sn**	**10 54 56.2**	**+1.8**
MNAI	**Manna**	**1.78**	**351**		**Pn**	**10 54 43.6**	**+0.8**
MNAI				Sn	**Sn**	**10 55 00.8**	**-3.5**
MNAI	**Manna**	**1.78**	**351**	P	**Pn**	**10 54 43.4**	**+0.6**
MDSI	**Maura Dua**	**1.87**	**30**	P	**Pn**	**10 54 44.9**	**+0.8**
BLSI	**Bandar Lampung**	**2.12**	**69**	P	**Pn**	**10 54 47.9**	**+0.3**
TNG	**Tangerang**	**3.38**	**94**	P	**Pn**	**10 55 04.7**	**-0.1**
CNJI	**Cibinong**	**4.03**	**107**	P	**Pn**	**10 55 12.8**	**-1.0**
LEM	**Lembang**	**4.40**	**99**	Pn	**Pn**	**10 55 20.2**	**+1.3**
	5.1nm,0.3s,baz=289,slow=19,SNR=2.2						
LEM				Sn	**Sn**	**10 56 06.9**	**-2.3**
	2.3nm,0.3s,baz=233,slow=20,SNR=3.7						
	13nm,0.4s						
PPSI	**Pulau Pagai**	**4.65**	**316**	P	**Pn**	**10 55 22.3**	**+0.1**
CMJI	**Cimerak**	**5.42**	**108**	P	**Pn**	**10 55 32.8**	**-0.1**
	0.2nm28nm,1.0s						
SISI	**Saibi**	**6.32**	**319**	P	**Pn**	**10 55 45.1**	**-0.2**
	0.2nm20nm,0.7s						
UGM	**Wanagama**	**7.43**	**104**	Pn	**Pn**	**10 56 00.1**	**-0.6**
UGM	**Wanagama**	**7.43**	**104**	P	**Pn**	**10 56 00.2**	**-0.4**
	0.8nm194nm,1.5s						
PCJI	**Pacitan**	**8.13**	**105**	P	**Pn**	**10 56 09.7**	**-0.4**
COCO	**West Island**	**8.74**	**226**		**Pn**	**10 56 20.3**	**+1.9**
TOLI2	**Tolitoli**	**18.92**	**68**	P	**P**	**10 58 33.0**	**+0.4**
CMAR	**Chiang Mai Arr**	**24.79**	**350**	P	**P**	**10 59 32.6**	**-0.8**
	0.8nm,0.2s,baz=185,slow=9.3,SNR=6.5						
	0.8nm,0.2s						
CMAR	**Chiang Mai Arr**	**24.79**	**350**	P	**P**	**10 59 32.4**	**-1.1**
MORW	**Morawa**	**25.82**	**154**	P	**P**	**10 59 43.3**	**+0.6**
MORW				IAmb	IAmb	10 59 46.7	
	comp=Z,16nm,1.2s						
H01W3	**Cape Leeuwin H**	**30.33**	**162**	T	T	11 32 18.5	
	baz=339						
H01W2	**Cape Leeuwin H**	**30.34**	**162**	T	T	11 32 40.6	
	baz=339						
H01W1	**Cape Leeuwin H**	**30.35**	**162**	T	T	11 32 42.0	
	baz=339						
WB0	**Warramunga Arr**	**33.16**	**117**	P	**P**	**11 00 47.5**	**-0.6**
WB0				IAmb	IAmb	11 01 27.4	
	comp=Z,10nm,1.3s						
WRA	**Warramunga Arr**	**33.17**	**117**	P	**P**	**11 00 47.3**	**-0.9**
	comp=Z,0.7nm,0.8s,baz=287,slow=9.7,SNR=8.2						
	comp=Z,0.7nm,0.8s						
WRA	**Warramunga Arr**	**33.17**	**117**	P	**P**	**11 00 47.5**	**-0.7**
WR0	**Warramunga Arr**	**33.36**	**117**	P	**P**	**11 00 49.2**	**-0.6**
ASAR	**Alice Springs**	**34.25**	**124**	P	**P**	**11 00 56.5**	**-1.0**
	comp=Z,0.9nm,0.9s,baz=296,slow=8.2,SNR=7.3						
	comp=Z,0.9nm,0.9s						
ASAR	**Alice Springs**	**34.25**	**124**	P	**P**	**11 00 59.0**	**+1.4**
STKA	**Stephens Creek**	**44.01**	**131**	P	**P**	**11 02 18.8**	**-0.2**
	comp=Z,3.1nm,0.5s,baz=304,slow=10,SNR=12						
	comp=Z,3.1nm,0.5s						
STKA	**Stephens Creek**	**44.01**	**131**	P	**P**	**11 02 19.2**	**+0.2**
KSRS	**Korea Array**	**49.09**	**26**	P	**P**	**11 02 58.2**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=220,slow=8.4,SNR=3.0						
	comp=Z,1.0nm,0.7s						
JHS	**Saijyo**	**49.66**	**32**	P	**P**	**11 03 03.0**	**-0.1**
KDJ	**Kajisay**	**53.59**	**336**	P	**P**	**11 03 33.5**	**+1.0**
KDJ				IAmb	IAmb	11 03 34.3	
	comp=Z,2.7nm,0.8s						
SONM	**Songino Array**	**53.80**	**3**	P	**P**	**11 03 34.2**	**+0.4**
	comp=Z,3.0nm,0.6s,baz=183,slow=9.2,SNR=17						
	comp=Z,3.0nm,0.6s						
SONM	**Songino Array**	**53.80**	**3**	P	**P**	**11 03 34.7**	**+0.8**
SONM				IAmb	IAmb	11 03 35.2	
	comp=Z,3.0nm,0.8s						
JSD	**Sado**	**54.69**	**34**	P	**P**	**11 03 39.3**	**-1.1**
MK31	**Makanchi Array**	**55.88**	**343**	P	**P**	**11 03 48.8**	**0.0**
MK31				IAmb	IAmb	11 03 49.2	
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**55.88**	**343**	P	**P**	**11 03 48.4**	**-0.5**
	comp=Z,1.2nm,0.5s,baz=152,slow=8.6,SNR=14						
	comp=Z,1.2nm,0.5s						
MAKZ	**Makanchi**	**55.98**	**343**	P	**P**	**11 03 48.5**	**-1.1**
MAKZ				IAmb	IAmb	11 04 24.0	
	comp=Z,3.0nm,0.7s						
ZAA0	**Zalesovo Array**	**61.83**	**348**	P	**P**	**11 04 29.4**	**-0.5**
ZAA0				IAmb	IAmb	11 04 42.3	
	comp=Z,3.0nm,0.9s						
ZALV	**Zalesovo Beam**	**61.83**	**348**	P	**P**	**11 04 29.3**	**-0.7**
	comp=Z,2.0nm,0.4s,baz=158,slow=5.4,SNR=11						
	comp=Z,2.0nm,0.4s						
ZALV	**Zalesovo Beam**	**61.83**	**348**	P	**P**	**11 04 29.6**	**-0.4**
ABKAR	**Akbulak array**	**66.80**	**331**	P	**P**	**11 05 02.5**	**-0.1**
ABKAR				IAmb	IAmb	11 05 15.3	
	comp=Z,1.1nm,0.8s						
BRTR	**Keskin Array B**	**78.48**	**312**	P	**P**	**11 06 12.3**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=104,slow=6.1,SNR=2.4						
	comp=Z,0.4nm,0.5s						
TXAR	**Lajitas Array**	**145.68**	**45**	PKPbc	**PKPab**	**11 13 51.0**	**+0.1**
	comp=Z,2.7nm,0.7s,baz=296,slow=1.4,SNR=45						
TXAR	**Lajitas Array**	**145.68**	**45**		**PKPab**	**11 13 51.2**	**+0.3**

CNRM ***15*** *10:58:09.2,35˚.65N×3˚.79W,h18km,ml3.1*
MDD ***15*** *10:58:11.2±0.5,35˚.49N×3˚.84W,h0km,mb_Lg2.7/15, Error ellipse: s-maj=4.7km s-min=2.7km az=2.0*
IGIL ***15*** *10:58:11.9,35˚.49N×3˚.84W,h1km*
SFS ***15*** *10:58:11.0,35˚.40N×3˚.80W,ML2.6,ALBORAN SUR*
INMG ***15*** *10:58:12.3±1.1,35˚.50N×3˚.93W,h0km,ML2.3,Error ellipse: s-maj=3.1km s-min=2.5km az=96.0*

ISC 15 10:58:09.6±1.1,**35˚51N**±0˚.02×**3˚81W**±0˚.02,**h7**km±10km, **n60,** σ1**9**36/97,**Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.31**	**200**	P	**Pn**	**10 58 23.0**	**+2.3**
PALE	**Palemas**	**0.31**	**200**	P	**Pb**	**10 58 18.0**	**+0.4**
PALE				S	**Pn**	**10 58 22.9**	**+2.3**
GOG	**Mont Gurugu**	**0.72**	**113**	P	**Pb**	**10 58 25.0**	**+0.3**
GOG	**Mont Gurugu**	**0.72**	**113**	P	**Pg**	**10 58 24.0**	**+0.5**
GOG				S	**Sg**	**10 58 32.8**	**-0.2**
WMELI	**Melilla**	**0.72**	**105**	P	**Pg**	**10 58 24.2**	**+0.7**
WMELI				S	**Sg**	**10 58 32.6**	**-0.4**
EMEL	**Melilla**	**0.73**	**106**	Pg	**Pg**	**10 58 23.9**	**+0.4**
EMEL				Sg	**Sg**	**10 58 33.2**	**+0.2**
EALB	**Alboran**	**0.76**	**55**	Pg	**Pb**	**10 58 25.6**	**+0.3**
EALB				Sg	**Sb**	**10 58 35.5**	**-0.4**
EALB				*i* Vmb_Lg		10 58 38.9	
AKLM	**AKL**	**1.00**	**183**	P	**Pn**	**10 58 30.7**	**+0.6**
AKLM				S	**Sn**	**10 58 45.2**	**+0.7**
CHAS	**Isla Isabel II**	**1.17**	**106**	P	**Pg**	**10 58 30.3**	**-1.9**
CHAS				S	**Sg**	**10 58 44.7**	**-2.6**

SMIR	**Smir Dam**	**1.29**	**278**	P	**Pn**	**10 58 33.6**	**-0.6**	
SMIR				S	**Sb**	**10 58 48.3**	**-2.8**	
EMIJ	**Mijas**	**1.31**	**324**	Pg	**Pn**	**10 58 34.4**	**0.0**	
EMIJ				Sg	**Sb**	**10 58 52.0**	**+0.2**	
EMIJ				*i* Vmb_Lg		10 58 57.2		
CHEFC	**Chefchaouen**	**1.31**	**253**	P	**Pg**	**10 58 36.0**	**+1.2**	
CHEFC				S	**Sb**	**10 58 48.7**	**-3.1**	
CEU	**Ceuta**	**1.33**	**288**	P	**Pn**	**10 58 32.9**	**-1.8**	
CEU				S	**Sb**	**10 58 49.5**	**-2.8**	
TAF	**Taforalt**	**1.34**	**121**	P	**Pn**	**10 58 33.5**	**-1.3**	
TAF				S	**Sn**	**10 58 54.2**	**+1.3**	
ELGU	**Los Guajares,**	**1.37**	**6**	Pg	**Pn**	**10 58 34.8**	**-0.4**	
ELGU				Sg	**Sb**	**10 58 52.7**	**-0.7**	
ELGU				*i* Vmb_Lg		10 58 56.6		
JBK	**JBK**	**1.55**	**139**	P	**Pn**	**10 58 38.0**	**+0.1**	
JBK	**JBK**	**1.55**	**139**	P	**Pn**	**10 58 36.6**	**-1.3**	
JBK				S	**Sn**	**10 58 58.1**	**-0.3**	
EBER	**Berja**	**1.57**	**28**	Pg	**Pn**	**10 58 38.3**	**+0.1**	
EBER				Sg	**Sn**	**10 58 58.6**	**-0.4**	
EBER				*i* Vmb_Lg		10 59 03.7		
EGOR	**Sierra Gorda,**	**1.62**	**351**	Pg	**Pb**	**10 58 39.9**	**-0.1**	
EGOR				Sg	**Sg**	**10 59 02.1**	**+0.4**	
EGOR				*i* Vmb_Lg		10 59 08.5		
EJIF	**Jimena Fronter**	**1.64**	**305**	Pg	**Pb**	**10 58 40.9**	**+0.6**	
EJIF				Sg	**Sn**	**10 59 00.4**	**0.0**	
EQUE	**Quentar**	**1.72**	**10**	Pn	**Pb**	**10 58 41.3**	**-0.4**	
EQUE				Sn	**Sb**	**10 59 03.6**	**+0.1**	
EQUE				*i* Vmb_Lg		10 59 08.6		
SICH	**Sidi Chahed**	**1.87**	**222**	P	**Pn**	**10 58 41.5**	**-0.6**	
SICH				S	**Sg**	**10 59 09.7**	**0.0**	
LIJA	**Lijar**	**1.90**	**318**	P	**Pb**	**10 58 45.0**	**+0.3**	
LCRM	**LCR**	**2.01**	**206**	P	**Pb**	**10 58 47.0**	**+0.3**	
LCRM				S	**Sg**	**10 59 14.3**	**0.0**	
IFR	**Ifrane**	**2.26**	**209**	P	**Pn**	**10 58 48.2**	**+0.5**	
IFR				S	**Sn**	**10 59 15.0**	**-1.0**	
EQES	**Quesada**	**2.37**	**14**	Pn	**Pb**	**10 58 51.4**	**-1.3**	
EQES				Sn	**Sb**	**10 59 21.6**	**-0.6**	
EQES				*i* Vmb_Lg		10 59 23.2		
CZD	**Col de Zad**	**2.67**	**203**	P	**Pn**	**10 58 55.3**	**+1.9**	
CZD				S	**Sn**	**10 59 26.1**	**-0.1**	
EADA	**Adamuz**	**2.73**	**347**	Pn	**Pn**	**10 58 56.0**	**+2.1**	
EADA				Sn	**Sn**	**10 59 28.1**	**+0.9**	
EADA				*i* Vmb_Lg		10 59 50.2		
MD31	**MD31**	**2.75**	**197**	P	**Pn**	**10 58 55.8**	**+1.6**	
MD31				S	**Sn**	**10 59 30.0**	**+2.2**	
MDT	**Midelt**	**2.77**	**194**	P	**Pn**	**10 58 56.5**	**+2.0**	
MDT	**Midelt**	**2.77**	**194**	P	**Pn**	**10 58 55.6**	**+1.1**	
TDRA	**Tendrara**	**2.87**	**149**	P	**Pn**	**10 58 56.9**	**+0.9**	
TDRA				S	**Sn**	**10 59 30.7**	**-0.3**	
ECAB	**El Cabril**	**2.87**	**334**	Pn	**Pn**	**10 58 57.7**	**+1.8**	
ECAB				Sn	**Sb**	**10 59 33.8**	**-2.8**	
ECAB				*i* Vmb_Lg		10 59 41.1		
ZHG	**ZHG**	**3.12**	**230**	P	**Pn**	**10 59 00.0**	**+0.7**	
ZHG	**ZHG**	**3.12**	**230**	P	**Pn**	**10 58 60.0**	**+0.7**	
EMIN	**Mina Concepcio**	**3.22**	**315**	Pn	**Pn**	**10 59 01.8**	**+1.1**	
EMIN				*i* Vmb_Lg		10 59 06.2		
EMIN				Sn	**Sn**	**10 59 39.2**	**-0.1**	
EGRO	**El Granado**	**3.58**	**305**	Pn	**Pn**	**10 59 06.8**	**+1.2**	
EGRO				*i* Vmb_Lg		10 59 10.8		
EGRO				Sn	**Sn**	**10 59 47.5**	**-0.8**	
ETOB	**Tobarra**	**3.62**	**29**	Pn	**Pn**	**10 59 08.8**	**+2.6**	
ETOB				Sn	**Sn**	**10 59 51.9**	**+2.7**	
ETOB				*i* Vmb_Lg		11 01 06.7		
PVAQ	**Vaqueiros**	**3.67**	**302**	*e*Pn	**Pn**	**10 59 07.9**	**+1.0**	
PVAQ				*e*Sn	**Sn**	**10 59 50.0**	**-0.5**	
PVAQ				A	A	10 59 53.3		
	6.0nm,0.4s							
PBAR	**Barrancos**	**3.71**	**317**	*e*Sn	**Sn**	**10 59 50.4**	**-1.1**	
PBDV	**Barranco-do-Ve**	**3.75**	**299**	*e*Sn	**Sn**	**10 59 52.4**	**0.0**	
PCVE	**Castro Verde**	**4.01**	**303**	*e*Pn	**Pn**	**10 59 13.2**	**+1.7**	
PCVE				*e*Sn	**Sn**	**10 59 58.3**	**-0.5**	
PCVE				A	A	11 00 02.8		
	5.6nm,0.3s							
PAB	**San Pablo**	**4.05**	**354**	Pn	**Pn**	**10 59 14.7**	**+2.4**	
PAB				*i* Vmb_Lg		11 00 51.0		
EBAD	**Badajoz**	**4.13**	**323**	Pn	**Pn**	**10 59 14.4**	**+1.2**	
EBAD				Sn	**Sn**	**11 00 02.2**	**+0.4**	
EBAD				*i* Vmb_Lg		11 00 12.2		
MESJ	**Messejana**	**4.24**	**305**	*e*P	**Pn**	**10 59 15.6**	**+0.9**	
MESJ	**Messejana**	**4.24**	**305**	*e*Pn	**Pn**	**10 59 16.0**	**+1.3**	
MESJ				*e*Sn	**Sn**	**11 00 04.0**	**-0.5**	
MESJ				A	A	11 00 07.3		
	5.1nm,0.3s							
MORF	**Marmelete**	**4.30**	**296**	*e*Sn	**Sn**	**11 00 06.0**	**0.0**	
MORF				A	A	11 00 09.6		
	4.9nm,0.5s							
PFVI	**Vila Bisbo**	**4.36**	**293**	*e*Sn	**Sn**	**11 00 06.7**	**-0.8**	
PTEO	**Sao Teotonio**	**4.45**	**299**	*e*Sn	**Sn**	**11 00 08.5**	**-1.1**	
PESTR	**Estremoz**	**4.51**	**319**	*e*Sn	**Sn**	**11 00 11.3**	**+0.1**	
EVO	**Evora**	**4.52**	**313**	*e*Pn	**Pn**	**10 59 18.7**	**+0.2**	
PNCL	**Nicolau / Gran**	**4.59**	**306**	*e*Pn	**Pn**	**10 59 21.2**	**+1.7**	
PNCL				*e*Sn	**Sn**	**11 00 12.4**	**-0.7**	
PNCL				A	A	11 00 17.4		
	2.3nm,0.3s							
PMRV	**Marv??o**	**4.84**	**325**	*e*Pn	**Pn**	**10 59 24.8**	**+1.8**	
PMRV				*e*Sn	**Sn**	**11 00 18.3**	**-1.0**	
PMTG	**Montargil**	**5.00**	**317**	*e*Pn	**Pn**	**10 59 26.8**	**+1.6**	
PMTG				*e*Sn	**Sn**	**11 00 22.3**	**-1.0**	
PMTG				A	A	11 00 40.3		
	3.4nm,0.6s							
OUZM	**OUZ**	**5.21**	**209**	P	**Pn**	**10 59 29.8**	**+1.6**	
PCBR	**Castelo Branco**	**5.21**	**327**	*e*Pn	**Pn**	**10 59 30.4**	**+2.4**	
OUK	**Oukaimeden**	**5.47**	**219**	P	**Pn**	**10 59 32.6**	**+0.7**	
PSBE	**So Bento**	**5.63**	**317**	*e*Pn	**Pn**	**10 59 36.1**	**+2.3**	
MVO	**Moncorvo**	**6.19**	**337**	*e*Pn	**Pn**	**10 59 43.8**	**+2.3**	
PBRG	**Braganca**	**6.69**	**341**	*e*Pn	**Pn**	**10 59 51.3**	**+2.9**	

IDC ***15*** *11:22:42.6±1.4,49˚.64N×127˚.47W,h0km,mb3.3/3, mbtmp3.3/9,ML3.4/6,MS2.7/2,Error ellipse: s-maj=26.5km s-min=7.4km az=60.0*
PGC ***15*** *11:22:42.0±0.2,49˚.52N×127˚.74W,h10km,MLSn3.1/46, Mw3.8/46,119km west of Gold R., Bc Vancouver Island, Canada Region*

ISC 15 11:22:42.0±1.2,**49˚54N**±0˚.03×**127˚72W**±0˚.03,**h16**km±8km, **n87,** σ1**9**66/106,**Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDB	**Eliza Dome**	**0.51**	**49**	P	**Pg**	**11 22 52.5**	**+0.3**
EDB				S	**Sg**	**11 22 59.1**	**+0.1**
BPBC	**Brooks Peninsu**	**0.62**	**357**	P	**Pg**	**11 22 54.6**	**+0.5**
ETB	**Estevan Point**	**0.79**	**102**	P	**Pg**	**11 22 56.9**	**-0.5**
PACB	**Port Alice, BC**	**0.91**	**9**	P	**Pg**	**11 22 58.7**	**-0.9**
PACB				S	**Sg**	**11 23 10.1**	**-1.3**
MAYB	**Maynard**	**0.93**	**22**	P	**Pg**	**11 22 59.3**	**-0.8**
WOSB	**Woss**	**0.97**	**50**	P	**Pg**	**11 22 59.6**	**-1.2**
NC89	**ODP889**	**1.04**	**146**	P	**Pb**	**11 23 01.0**	**-0.6**
NC89				S	**Sb**	**11 23 14.6**	**-0.3**
GDR	**Gold River**	**1.12**	**77**	P	**Pb**	**11 23 01.4**	**-1.6**
HOLB	**Holberg**	**1.13**	**347**	P	**Pb**	**11 23 02.0**	**-1.2**
HOLB				S	**Sb**	**11 23 15.2**	**-2.5**
TLCB	**Telegraph Cove**	**1.16**	**29**	P	**Pb**	**11 23 02.7**	**-0.9**
TLCB				S	**Sb**	**11 23 16.7**	**-1.6**
PHC	**Port Hardy**	**1.18**	**9**	P	**Pn**	**11 23 02.9**	**-1.0**
PHC				S	**Sb**	**11 23 16.8**	**-2.2**
TOFB	**Tofino**	**1.25**	**107**	P	**Pn**	**11 23 03.0**	**-1.8**
TOFB				S	**Sb**	**11 23 17.5**	**-3.5**
NCRB	**Newcastle Ridg**	**1.38**	**51**	Pn	**Pn**	**11 23 05.9**	**-0.8**
SPLB	**Strathcona Par**	**1.39**	**75**	Pn	**Pn**	**11 23 05.2**	**-1.4**
BTB	**Buttle Lake**	**1.44**	**92**	Pn	**Pn**	**11 23 06.1**	**-1.4**
OZB	**Mount Ozzard**	**1.57**	**111**	Pn	**Pn**	**11 23 07.6**	**-1.7**
OZB				Sn	**Sn**	**11 23 25.8**	**-3.5**
MWAB	**Mount Washingt**	**1.58**	**82**	Pn	**Pn**	**11 23 08.4**	**-1.1**
CBB	**Campbell River**	**1.60**	**71**	Pn	**Pn**	**11 23 08.7**	**-1.0**
CBB				Sn	**Sn**	**11 23 28.5**	**-1.6**
NC27	**ODP1027**	**1.78**	**181**	Pn	**Pn**	**11 23 10.2**	**-1.6**
NC27				Sn	**Sn**	**11 23 30.1**	**-3.8**
BFSB	**Bamfield**	**1.84**	**112**	Pn	**Pn**	**11 23 12.4**	**-0.4**
B928	**Bamfield**	**1.84**	**112**	Pn	**Pn**	**11 23 12.2**	**-0.6**
KEMF	**NEPTUNE Canada**	**1.84**	**210**	Pn	**Pn**	**11 23 11.3**	**-1.3**
B927	**Port Alberni**	**1.93**	**99**	Pn	**Pn**	**11 23 13.3**	**-0.8**
MGB	**Mount Grey**	**2.06**	**104**	Pn	**Pn**	**11 23 14.7**	**-1.4**
MGB				Sn	**Sn**	**11 23 37.8**	**-3.6**
TXB	**Texada**	**2.14**	**85**	Pn	**Pn**	**11 23 16.1**	**-0.9**
GHNB	**Nanoose**	**2.29**	**95**	Pn	**Pn**	**11 23 18.5**	**-0.6**
PFB	**Port Renfrew**	**2.37**	**113**	Pn	**Pn**	**11 23 19.6**	**-0.6**
OCP	**Olym-Cheeka Pk**	**2.39**	**120**	Pn	**Pn**	**11 23 20.5**	**0.0**
NLLB	**Nanaimo Lost L**	**2.46**	**96**	Pn	**Pn**	**11 23 20.8**	**-0.6**
CLRS	**Cowichan Lake**	**2.46**	**106**	Pn	**Pn**	**11 23 21.6**	**+0.2**

SHB	**Sechelt**	**2.50**	**87**	Pn	**Pn**	**11 23 21.4**	**-0.7**	
BBB	**Bella Bella**	**2.66**	**355**	Pn	**Pn**	**11 23 23.8**	**-0.3**	
	12nm,0.3s,baz=168,slow=9.3,SNR=794							
BBB				Pg	**Pb**	**11 23 29.2**	**+0.1**	
	15nm,0.3s,baz=170,slow=11,SNR=12							
BBB				Sn	**Sn**	**11 23 53.4**	**-2.6**	
	24nm,0.3s,baz=85,slow=16,SNR=9.4							
BBB				LR	LR	11 24 02.6		
	comp=Z,79nm,21.0s,baz=98,slow=31							
BBB				Lg	Lg	11 24 03.5		
	17nm,0.3s,baz=36,slow=15,SNR=3.8							
	32nm,0.3s							
BBB	**Bella Bella**	**2.66**	**355**	Pn	**Pn**	**11 23 23.7**	**-0.4**	
BBB				Sn	**Sn**	**11 23 53.5**	**-2.5**	
GOBB	**Galiano Island**	**2.82**	**101**	Pn	**Pn**	**11 23 27.0**	**+0.6**	
OBC	**Olympics--Boni**	**2.84**	**121**	Pn	**Pn**	**11 23 25.6**	**-1.2**	
BIB	**Bowen Island**	**2.88**	**91**	Pn	**Pn**	**11 23 27.4**	**+0.2**	
WPB	**Watts Point**	**2.94**	**86**	Pn	**Pn**	**11 23 27.9**	**-0.1**	
B009	**North Saanich**	**2.94**	**106**	Pn	**Pn**	**11 23 28.2**	**+0.2**	
B009				Sn	**Sn**	**11 24 00.3**	**-2.8**	
B010	**North Saanich**	**2.94**	**106**	Pn	**Pn**	**11 23 28.3**	**+0.2**	
PGC	**Sidney**	**2.94**	**106**	Pn	**Pn**	**11 23 28.2**	**+0.2**	
PGC				Sn	**Sn**	**11 24 00.4**	**-2.6**	
B011	**North Saanich**	**2.95**	**106**	Pn	**Pn**	**11 23 28.3**	**+0.2**	
B011				Sn	**Sn**	**11 24 00.3**	**-2.8**	
STW	**Striped Peak**	**3.02**	**116**	Pn	**Pn**	**11 23 29.1**	**0.0**	
SNB	**Saturna Island**	**3.08**	**103**	Pn	**Pn**	**11 23 29.0**	**-1.0**	
VGZ	**Gonzales**	**3.11**	**110**	Pn	**Pn**	**11 23 30.4**	**0.0**	
VGZ				Sn	**Sn**	**11 24 04.0**	**-3.1**	
WSLR	**Whistler**	**3.16**	**78**	Pn	**Pn**	**11 23 30.9**	**-0.2**	
OSD	**Olympics--Snow**	**3.17**	**121**	Pn	**Pn**	**11 23 30.9**	**-0.5**	
MCW	**Mount Constitu**	**3.33**	**103**	Pn	**Pn**	**11 23 32.2**	**-1.2**	
HNBB	**Haney**	**3.37**	**92**	Pn	**Pn**	**11 23 33.9**	**0.0**	
HG4B	**Hotspring**	**3.52**	**323**	Pn	**Pn**	**11 23 34.9**	**-1.2**	
HG4B				Sn	**Sn**	**11 24 13.6**	**-3.8**	
BUTB	**Butedale**	**3.56**	**353**	Pn	**Pn**	**11 23 36.0**	**-0.6**	
BUTB				Sn	**Sn**	**11 24 15.7**	**-2.6**	
VDB	**Vedder Mountai**	**3.71**	**96**	Pn	**Pn**	**11 23 38.1**	**+0.2**	
A05A	**Maple Falls**	**3.73**	**96**	Pn	**Pn**	**11 23 38.5**	**-0.4**	
CMW	**Cultus Mountai**	**3.85**	**105**	Pn	**Pn**	**11 23 40.0**	**-0.7**	
MBW	**Mount Baker**	**3.89**	**99**	Pn	**Pn**	**11 23 41.2**	**-0.1**	
LLLB	**Lillooet**	**3.91**	**72**	Pn	**Pn**	**11 23 40.9**	**-0.5**	
BNB	**Barry Inlet**	**3.96**	**322**	Pn	**Pn**	**11 23 41.7**	**-0.4**	
BNKB	**Banks Island**	**4.03**	**341**	Pn	**Pn**	**11 23 42.1**	**-0.9**	
BNKB				Sn	**Sn**	**11 24 27.3**	**-2.7**	
HOPB	**Hope**	**4.11**	**90**	Pn	**Pn**	**11 23 44.1**	**0.0**	
HWKB	**Hawksbury Isla**	**4.16**	**348**	Pn	**Pn**	**11 23 44.5**	**-0.3**	
HWKB				Sn	**Sn**	**11 24 30.4**	**-2.7**	
B06A	**Marblemount**	**4.23**	**102**	Pn	**Pn**	**11 23 46.3**	**+0.6**	
RPW	**Rockport**	**4.23**	**103**	Pn	**Pn**	**11 23 46.5**	**+0.6**	
BNAB	**Bonilla**	**4.36**	**336**	Pn	**Pn

ZARC				*e*S	**Sn**	**11 30 48.9**	**-0.6**
ZARC				*i*		11 30 55.2	
	comp=Z,235nm,0.3s						
NORC	**Norcasia**	**2.15**	**234**	*e*P	**Pn**	**11 30 27.1**	**+0.3**
NORC				*e*S	**Sn**	**11 30 55.4**	**-0.2**
NORC				*i*		11 31 00.8	
	comp=Z,155nm,0.2s						
CHIC	**Chingaza**	**2.27**	**196**	*e*P	**Pn**	**11 30 29.1**	**+0.4**
CHIC				*e*S	**Sn**	**11 30 58.5**	**-0.3**
CHIC				*i*		11 31 02.2	
	comp=Z,124nm,0.4s						
ROSC	**El Rosal**	**2.31**	**211**	P	**Pn**	**11 30 30.5**	**+1.4**
	comp=Z,91nm,0.3s,baz=81,slow=19,SNR=99						
ROSC				S	**Sn**	**11 30 57.0**	**-2.6**
	comp=Z,100nm,0.5s,baz=88,slow=15,SNR=8.5						
ROSC	**El Rosal**	**2.31**	**211**	*e*P	**Pn**	**11 30 30.9**	**+1.8**
ROSC				*e*S	**Sn**	**11 30 59.8**	**+0.2**
ROSC				*i*		11 31 04.8	
	comp=Z,211nm,0.3s						
HELC	**Santa Helena**	**2.48**	**255**	*e*P	**Pn**	**11 30 32.4**	**+1.3**
HELC				*e*S	**Sn**	**11 31 03.0**	**-0.1**
HELC				*i*		11 31 08.6	
	comp=Z,61nm,0.3s						
UREC	**San Jos de Ur**	**2.57**	**291**	*e*P	**Pn**	**11 30 31.2**	**-0.6**
UREC				*e*S	**Sn**	**11 31 02.1**	**-2.4**
UREC				*i*		11 31 13.0	
	comp=Z,112nm,0.2s						
GUY2C	**Guyana, Caldas**	**2.75**	**235**	*e*P	**Pn**	**11 30 35.7**	**+1.3**
GUY2C				*e*S	**Sn**	**11 31 09.4**	**+0.2**
GUY2C				*i*		11 31 21.4	
	comp=Z,96nm,0.4s						
PTGC	**Puerto Gaitan,**	**2.79**	**159**	*e*P	**Pn**	**11 30 34.3**	**-0.2**
PTGC				*e*S	**Sn**	**11 31 07.7**	**-1.8**
PTGC				*i*		11 31 10.4	
	comp=Z,167nm,0.3s						
LL6C	**La Loma 6 Bece**	**2.89**	**357**	*e*P	**Pn**	**11 30 35.7**	**-0.1**
LL6C				*e*S	**Sn**	**11 31 10.8**	**-1.0**
LL6C				*i*		11 31 18.1	
	comp=Z,51nm,0.3s						
CBOC	**Ciudad Bolivar**	**3.03**	**252**	*e*P	**Pn**	**11 30 39.1**	**+1.4**
CBOC				*e*S	**Sn**	**11 31 13.6**	**-1.4**
CBOC				*i*		11 31 26.4	
	comp=Z,25nm,0.5s						
DBBC	**Dabeiba**	**3.08**	**274**	*e*P	**Pn**	**11 30 38.5**	**+0.3**
DBBC				*e*S	**Sn**	**11 31 13.8**	**-2.1**
DBBC				*i*		11 31 18.8	
	comp=Z,224nm,0.7s						
ARGC	**Ariguani, Magd**	**3.21**	**340**	*e*P	**Pn**	**11 30 41.2**	**+1.3**
ARGC				*e*S	**Sn**	**11 31 19.1**	**+0.2**
ARGC				*i*		11 31 26.5	
	comp=Z,29nm,0.5s						
ANIL	**Santa Ana**	**3.25**	**225**	*e*P	**Pn**	**11 30 42.6**	**+2.0**
ANIL				*e*S	**Sn**	**11 31 21.2**	**+1.0**
ANIL				*i*		11 31 28.2	
	comp=Z,214nm,0.2s						
PRAC	**Prado**	**3.56**	**210**	*e*P	**Pn**	**11 30 44.5**	**+0.1**
PRAC				*e*S	**Sn**	**11 31 27.2**	**+0.2**
PRAC				*i*		11 31 31.9	
	comp=Z,71nm,0.4s						
ORTC	**Ortega, Tolima**	**3.59**	**216**	*e*P	**Pn**	**11 30 45.4**	**+0.7**
ORTC				*e*S	**Sn**	**11 31 28.7**	**+1.1**
ORTC				*i*		11 31 35.0	
	comp=Z,50nm,0.3s						
SJCC	**San Jacinto, C**	**3.67**	**326**	*e*P	**Pn**	**11 30 45.3**	**-0.4**
SJCC				*e*S	**Sn**	**11 31 26.6**	**-3.0**
SJCC				*i*		11 31 30.0	
	comp=Z,32nm,0.4s						
PLMC	**San Jos del P**	**3.68**	**239**	*e*P	**Pn**	**11 30 46.8**	**+0.9**
PLMC				*e*S	**Sn**	**11 31 29.2**	**-0.6**
PLMC				*i*		11 31 32.8	
	comp=Z,25nm,0.2s						
CRJC	**Cerrejon, Guaj**	**4.17**	**3**	*e*P	**Pn**	**11 30 51.3**	**-1.0**
CRJC				*e*S	**Sn**	**11 31 39.0**	**-2.3**
CRJC				*i*		11 31 42.3	
	comp=Z,40nm,0.1s						
YOTC	**Yotoco, Valle**	**4.28**	**229**	*e*P	**Pn**	**11 30 54.1**	**+0.4**
YOTC				*e*S	**Sn**	**11 31 43.9**	**+0.1**
GUVC	**San Jose del G**	**4.28**	**173**	*e*P	**Pn**	**11 30 53.6**	**-0.1**
GUVC				*e*S	**Sn**	**11 31 41.9**	**-1.8**
GUVC				*i*		11 31 48.4	
	comp=Z,92nm,0.2s						
MACC	**Macarena, Meta**	**4.71**	**189**	*e*P	**Pn**	**11 30 58.2**	**-1.1**
MACC				*e*S	**Sn**	**11 31 49.6**	**-4.1**
MACC				*i*		11 31 55.1	
	comp=Z,19nm,0.2s						
GARC	**Garzon, Huila**	**5.18**	**207**	*e*P	**Pn**	**11 31 05.2**	**-0.5**
GARC				*e*S	**Sn**	**11 32 01.2**	**-4.0**
GARC				*i*		11 32 07.5	
	comp=Z,28nm,0.3s						
TXAR	**Lajitas Array**	**36.46**	**312**	P	**P**	**11 36 40.7**	**+1.2**
	comp=Z,0.1nm,0.4s,baz=116,slow=9.2,SNR=2.7						
	comp=Z,0.1nm,0.4s						
YKA	**Yellowknife Ar**	**63.26**	**340**	P	**P**	**11 40 01.7**	**+0.7**
	comp=Z,0.5nm,0.7s,baz=141,slow=6.8,SNR=2.9						
	comp=Z,0.5nm,0.7s						
ASAR	**Alice Springs**	**149.12**	**234**	PKPbc	**PKPbc**	**11 49 19.4**	**-0.7**
	comp=Z,0.4nm,0.8s,baz=120,slow=3.6,SNR=5.1						
WRA	**Warramunga Arr**	**150.34**	**241**	PKPbc	**PKPbc**	**11 49 22.8**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=106,slow=2.8,SNR=7.4						

MAN 15 11:47:38.8, 9.25N×127.21E, h34km, mb3.9, ML2.7, MS2.2, Philippine Islands region

*JMA **15** 12:01:52.7±0.1, 36.3N±0.3×140.0E±0.4, h72km, MV3.1/38, SW IBARAKI PREF*
*IDC **15** 12:01:52.5±2.8, 36.25N×139.90E, h82km±20km, mb3.1/3, mbtmp3.5/4, Error ellipse: s-maj=36.4km s-min=10.7km az=64.0*
ISC 15 12:01:51.8±1.0, 36.30N±0.04×140.03E±0.06, h79km±7km, n15, σ0§72/26, mb3.5/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JYT	**Yasato**	**0.15**	**118**	P		**Pn**	**12 02 03.5**	**+0.2**
JYT				S		**Sn**	**12 02 11.4**	**-0.4**
JAG	**Ashikaga**	**0.48**	**285**	P		**Pn**	**12 02 05.5**	**+0.1**
JAG				S		**Sn**	**12 02 14.8**	**-0.6**
JKT	**Katashina**	**0.78**	**307**	P		**Pn**	**12 02 08.8**	**+0.3**
JKT				S		**Sn**	**12 02 21.1**	**+0.3**
JRY	**Ryogami san**	**0.95**	**253**	P		**Pn**	**12 02 10.9**	**+0.6**
JRY				*e*S		**Sn**	**12 02 24.2**	**+0.1**
JUON	**Uonuma**	**1.20**	**320**	P		**Pn**	**12 02 13.7**	**+0.4**
JUON				S		**Sn**	**12 02 29.9**	**+0.5**
JFT	**Otama**	**1.24**	**11**	*i* P		**Pn**	**12 02 14.6**	**+0.8**
JFT				*e*S		**Sn**	**12 02 30.2**	**-0.2**
JOD2	**Odawara 2**	**1.28**	**217**	P		**Pn**	**12 02 14.9**	**+0.5**
JOD2				S		**Sn**	**12 02 30.8**	**-0.5**
JYN	**Shimob**	**1.45**	**237**	P		**Pn**	**12 02 17.7**	**+1.2**
JYN				*e*S		**Sn**	**12 02 35.8**	**+0.8**
MJAR	**Matsushiro Arr**	**1.49**	**280**	P		**Pn**	**12 02 16.4**	**-0.6**
	19nm,0.3s,baz=93,slow=16,SNR=65							
MJAR				S		**Sn**	**12 02 33.8**	**-2.2**
	7.7nm,0.4s,baz=102,slow=27,SNR=4.5							
MAT	**Matsushiro**	**1.49**	**280**	P		**Pn**	**12 02 17.9**	**+0.9**
JFNN	**Fujinakano**	**1.55**	**225**	P		**Pn**	**12 02 18.4**	**+0.6**
JFNN				*e*S		**Sn**	**12 02 37.8**	**+0.4**
JHJ	**Hachijo jima 2**	**3.18**	**184**	P		**Pn**	**12 02 39.5**	**-0.1**
	46nm,0.5s,baz=356,slow=14,SNR=1.4							
JHJ				S		**Sn**	**12 03 16.2**	**-0.2**
	34nm,0.4s,baz=279,slow=23,SNR=1.6							
MKAR	**Makanchi Array**	**43.57**	**303**	P		**P**	**12 09 48.0**	**+0.1**
	0.3nm,0.7s,baz=92,slow=8.8,SNR=3.7							
	0.3nm,0.7s							
KURBB	**Kurchatov Arra**	**45.58**	**308**	P		**P**	**12 10 03.2**	**-0.5**
	0.3nm,0.3s,baz=84,slow=7.7,SNR=2.9							
	0.3nm,0.3s							
WRA	**Warramunga Arr**	**56.19**	**186**	P		**P**	**12 11 23.4**	**-0.2**
	0.2nm,0.4s,baz=2.7,slow=7.4,SNR=8.0							
	0.2nm,0.4s							

*GUC **15** 12:20:07.7±0.8, 32.08S×71.20W, h56km±4km, ML3.8*
*IDC **15** 12:20:07.2±0.9, 31.99S×71.28W, h54km±6km, mb3.3/3, mbtmp3.6/6, MS3.7/2, Error ellipse: s-maj=35.1km s-min=27.4km az=80.0*
ISC 15 12:20:07.2±0.7, 31.95S±0.04×71.30W±0.08, h54km±6km, n46, σ0§61/46, mb3.5/3, 1C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
VA06	**Catapilco**	**0.61**	**180**	⇑*i* P		**Pn**	**12 20 20.0**	**0.0**
VA06				*i* S		**Sn**	**12 20 29.3**	**+0.1**
VA06				IAML			12 20 31.9	
	comp=E,14μm,0.5s							
CO02	**Combarbal**	**0.79**	**19**	⇓*i* P		**Pn**	**12 20 22.3**	**-0.2**
CO02				*i* S		**Sn**	**12 20 33.1**	**-0.4**
CO02				IAML			12 20 36.6	
	comp=E,9μm,0.3s							
VA03	**San Esteban**	**1.03**	**142**	⇓*i* P		**Pn**	**12 20 25.2**	**-0.3**
VA03				*i* S		**Sn**	**12 20 38.6**	**-0.4**
VA03				IAML			12 20 39.5	
	comp=E,8μm,0.3s							
ROCH	**El Roble**	**1.05**	**166**	*i* P			12 20 25.7	
ROCH				*e*P		**Pn**	**12 20 25.6**	**-0.2**
ROCH				*i* S		**Sn**	**12 20 40.0**	**+0.4**
ROCH				*e*S			12 20 40.1	
ROCH				IAML			12 20 43.1	
	comp=N,9μm,0.4s							
VA01	**Torpederas**	**1.11**	**195**	*e*P		**Pn**	**12 20 26.4**	**0.0**
CO03	**El Pedregal**	**1.23**	**25**	⇓*i* P		**Pn**	**12 20 28.4**	**+0.2**
CO06	**Fray Jorge**	**1.31**	**347**	*i* P		**Pn**	**12 20 29.9**	**+0.7**
CO06				IAML			12 20 52.5	
	comp=E,1μm,0.5s							
MT02	**Curacav**	**1.31**	**174**	*i* P		**Pn**	**12 20 29.3**	**0.0**
MT02				*i* S		**Sn**	**12 20 45.6**	**0.0**
MT05	**Renca**	**1.51**	**162**	*i* P		**Pn**	**12 20 32.1**	**+0.1**
MT05				*e*S		**Sn**	**12 20 51.0**	**+0.4**
MT05				IAML			12 20 58.5	
	comp=E,4μm,0.3s							
FCH	**Farellones**	**1.61**	**148**	*i* P		**Pn**	**12 20 33.8**	**+0.1**
FCH				*i* S		**Sn**	**12 20 54.0**	**+0.4**
FCH				IAML			12 20 56.2	
	comp=E,1μm,0.4s							
MT03	**Universidad Ad**	**1.68**	**157**	*e*P		**Pn**	**12 20 34.6**	**+0.4**
MT03				*e*S		**Sn**	**12 20 55.6**	**+0.9**
MT03				IAML			12 21 01.3	
	comp=N,3μm,0.3s							
VA05	**Santo Domingo**	**1.72**	**189**	*e*P		**Pn**	**12 20 34.9**	**+0.1**
VA05				IAML			12 21 01.4	
	comp=N,2μm,0.5s							
GO04	**Tololo Observa**	**1.83**	**14**	*e*P		**Pn**	**12 20 36.9**	**+0.4**
MT09	**Talagante**	**1.84**	**172**	*i* P		**Pn**	**12 20 37.1**	**+0.5**
MT09				*e*S		**Sn**	**12 20 59.1**	**+0.4**
MT09				IAML			12 21 01.5	
	comp=E,2μm,0.3s							
MT01	**Popeta**	**1.91**	**179**	*i* P		**Pn**	**12 20 38.0**	**+0.7**
MT01				IAML			12 21 06.7	
	comp=E,1μm,0.5s							
CO05	**La Serena**	**2.03**	**2**	*e*P		**Pn**	**12 20 40.9**	**+1.9**
CO05				IAML			12 21 15.9	
	comp=E,762nm,0.5s							
LMEL	**Las Melosas**	**2.10**	**154**	*e*P		**Pn**	**12 20 41.0**	**+0.8**
LMEL				IAML			12 21 11.5	
	comp=N,2μm,0.2s							
BO04	**La Punta**	**2.11**	**164**	*e*P		**Pn**	**12 20 40.7**	**+0.5**
BO04				*e*S		**Sn**	**12 21 05.8**	**+0.5**
BO04				IAML			12 21 08.4	
	comp=E,1μm,0.2s							
CO01	**Juntas del Tor**	**2.23**	**28**	*e*P		**Pn**	**12 20 43.4**	**+1.4**
CO01				IAML			12 21 26.9	
	comp=N,378nm,0.4s							
BO01	**Tunca**	**2.44**	**176**	*e*P		**Pn**	**12 20 45.1**	**+0.5**
BO03	**Pichilemu**	**2.60**	**192**	*e*P		**Pn**	**12 20 46.0**	**-0.7**
GO05	**Huala**	**3.09**	**190**	*e*P		**Pn**	**12 20 53.1**	**-0.5**
H03N1	**Juan Fernandez**	**6.58**	**255**	T		T	12 28 22.2	
	baz=82,slow=73,SNR=1220							
H03N3	**Juan Fernandez**	**6.60**	**255**	T		T	12 28 25.1	
	baz=82,slow=73,SNR=682							
H03N2	**Juan Fernandez**	**6.60**	**255**	T		T	12 28 27.7	
	baz=82,slow=73,SNR=958							
H03S3	**Juan Fernandez**	**6.67**	**252**	T		T	12 28 21.3	
	baz=80							
H03S1	**Juan Fernandez**	**6.67**	**252**	T		T	12 28 19.9	
	baz=80							
H03S2	**Juan Fernandez**	**6.68**	**252**	T		T	12 28 19.4	
	baz=80							
PLCA	**Paso Flores**	**8.78**	**176**	P		**Pn**	**12 22 11.9**	**+0.3**
	comp=N,0.5nm,0.4s,baz=354,slow=16,SNR=1.5							
LVC	**Limon Verde**	**9.55**	**13**	LR		LR	12 25 58.9	
	comp=N,102nm,20.4s,baz=253,slow=37							
LPAZ	**La Paz**	**15.86**	**11**	P		**Pn**	**12 23 48.4**	**+0.7**
	comp=N,1.6nm,0.7s,baz=145,slow=7.3,SNR=5.8							
SIV	**San Ignacio**	**18.42**	**33**	P		**Pn**	**12 24 18.0**	**-0.7**
	comp=N,0.9nm,0.3s,baz=224,slow=10,SNR=6.0							
USHA	**Ushuaia**	**22.96**	**176**	LR		LR	12 34 22.7	
	comp=N,695nm,19.6s,baz=256,slow=37							
TXAR	**Lajitas Array**	**68.27**	**330**	P		**P**	**12 31 02.5**	**-0.1**
	comp=N,0.1nm,0.5s,baz=160,slow=8.3,SNR=2.1							
TXAR				pP		**pP**	**12 31 17.7**	**+0.2**
	comp=N,0.3nm,0.7s,baz=155,slow=6.5,SNR=4.4							
	comp=N,0.1nm,0.5s							
NVAR	**Mina Array Bea**	**82.57**	**325**	P		**P**	**12 32 25.5**	**+1.0**
	comp=N,0.3nm,0.6s,baz=163,slow=6.5,SNR=3.1							
	comp=N,0.3nm,0.6s							
TORD	**Torodi Ar. Bea**	**82.93**	**70**	P		**P**	**12 32 26.2**	**-0.5**
	comp=N,1.9nm,1.0s,baz=265,slow=5.2,SNR=6.5							
TORD				pP		**pP**	**12 32 42.4**	**+0.1**
	comp=N,0.7nm,0.7s,baz=248,slow=5.5,SNR=2.2							
	comp=N,1.9nm,1.0s							
WRA	**Warramunga Arr**	**122.85**	**209**	PKP		**PKPdf**	**12 38 56.5**	**-1.4**
	comp=N,0.4nm,0.9s,baz=164,slow=1.6,SNR=6.9							
H11S2	**WAKE ISLAND Hyl**	**26.40**	**270**	T		T	14 58 22.8	
	baz=118,slow=75							
H11S1	**WAKE ISLAND Hyl**	**26.41**	**270**	T		T	14 58 25.0	
	baz=118,slow=75							
H11S3	**WAKE ISLAND Hyl**	**26.42**	**270**	T		T	14 58 23.7	
	baz=118,slow=75							
H11N3	**WAKE ISLAND Hyl**	**26.76**	**272**	T		T	14 58 35.9	
	baz=117							
H11N1	**WAKE ISLAND Hyl**	**26.78**	**272**	T		T	14 58 35.6	
	baz=117							
H11N2	**WAKE ISLAND Hyl**	**26.78**	**272**	T		T	14 58 39.0	
	baz=117							
KURBB	**Kurchatov Arra**	**150.94**	**41**	PKPbc		**PKPbc**	**12 39 53.5**	**0.0**
	comp=N,1.1nm,0.6s,baz=304,slow=2.8,SNR=12							
KURBB				pPKPbc		**pPKPbc**	**12 40 09.4**	**-0.3**
	comp=N,0.9nm,0.6s,baz=303,slow=2.9,SNR=6.6							
ZALV	**Zalesovo Beam**	**152.16**	**31**	PKPbc		**PKiKP**	**12 39 56.2**	**-0.3**
	comp=N,2.4nm,0.5s,baz=299,slow=4.7,SNR=9.8							
ZALV				pPKPbc		**sPKPdf**	**12 40 11.5**	**-0.1**
	comp=N,1.1nm,0.5s,baz=296,slow=3.0,SNR=3.8							
MKAR	**Makanchi Array**	**154.93**	**46**	PKPab		**PKPab**	**12 40 17.9**	**-0.2**
	comp=N,0.4nm,0.7s,baz=281,slow=4.7,SNR=2.9							

*HEL **15** 12:30:35.2±0.1, 68.05N×33.37E, h0km, ML1.8, Explosion*
*KOLA **15** 12:30:35.5, 68.06N×33.47E, h0km, ML2.2*
*IDC **15** 12:30:39.0±2.3, 68.09N×32.43E, h0km, mbtmp2.6/2, ML2.1/2, Error ellipse: s-maj=22.2km s-min=11.6km az=80.0*
ISC 15 12:30:34.6±0.8, 68.08N±0.03×33.42E±0.03, h0km, n25, σ1§48/44, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LVZ	**Lovozero**	**0.50**	**111**	PG		**Pg**	**12 30 44.1**	**+0.1**
LVZ				SG		**Sg**	**12 30 50.5**	**0.0**
APA0	**Apatity Array**	**0.50**	**199**	P		**Pg**	**12 30 43.2**	**-0.9**
APA0				S		**Sg**	**12 30 50.3**	**-0.3**
APA	**Apatity**	**0.51**	**181**	P		**Pg**	**12 30 43.9**	**-0.5**
APA				S		**Sg**	**12 30 51.9**	**+1.0**
TERR	**Teriberka**	**1.29**	**28**	P		**Pg**	**12 30 58.2**	**-1.1**
TERR				S		**Sb**	**12 31 16.5**	**-0.2**
VRF	**Varrio**	**1.48**	**259**	PG		**Pn**	**12 31 00.8**	**-1.7**
	baz=72							
VRF				MSG			12 31 19.0	
	comp=Z,9.1nm,0.2s							
VRF				SG		**Sg**	**12 31 19.5**	**-2.6**
PRVG	**Vayda Guba**	**1.74**	**346**	P		**Pn**	**12 31 05.9**	**-0.1**
PRVG				S		**Sn**	**12 31 28.4**	**-0.4**
OLKF	**Oulanka, Finla**	**2.36**	**224**	PG		**Pn**	**12 31 15.2**	**+0.6**
OLKF				SG		**Sb**	**12 31 46.2**	**-1.3**
KU6	**Riekki**	**2.48**	**216**	PG		**Pn**	**12 31 17.6**	**+1.4**
KU6				MSG			12 31 47.5	
	comp=Z,3.5nm,0.2s							
KU6				SG		**Sb**	**12 31 51.5**	**+0.4**
SGF	**Sodankyl**	**2.70**	**260**	PN		**Pn**	**12 31 19.3**	**+0.1**
SGF				SN		**Sn**	**12 31 51.4**	**-1.1**
MSF	**Maaselka**	**2.77**	**220**	PG		**Pb**	**12 31 24.6**	**-0.4**
MSF				SB		**Sb**	**12 31 58.0**	**-1.5**
KEV	**Kevo**	**2.87**	**309**	PN		**Pn**	**12 31 22.3**	**+0.8**
KEV				SB		**Sn**	**12 31 57.6**	**+1.0**
KEV				MSG			12 31 59.7	

	comp=Z,3.7nm,0.2s							
RNF	**Rovaniemi**	**3.23**	**246**	PN		**Pn**	**12 31 26.2**	**-0.3**
RNF				SN		**Sn**	**12 32 06.5**	**+1.0**
ARA0	**ARCESS Array S**	**3.23**	**301**	PG		**Pb**	**12 31 32.7**	**0.0**
ARA0				SN		**Sn**	**12 32 05.0**	**-0.6**
ARCES	**ARCESS Array B**	**3.23**	**301**	Pn		**Pn**	**12 31 26.2**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=119,slow=14,SNR=20							
ARCES				Sn		**Sn**	**12 32 01.7**	**-3.9**
	comp=Z,0.2nm,0.3s,baz=116,slow=23,SNR=5.3							
ARCES				Lg		Lg	12 32 10.5	
	comp=Z,0.5nm,0.3s,baz=114,slow=33,SNR=3.5							
	comp=Z,0.5nm,0.4s							
ARCES	**ARCESS Array B**	**3.23**	**301**	P		**Pn**	**12 31 27.1**	**+0.7**
ARCES				S		**Sn**	**12 32 06.8**	**+1.2**
HEF	**Hetta**	**3.65**	**280**	PN		**Pn**	**12 31 32.0**	**-0.3**
	baz=95							
HEF				SN		**Sn**	**12 32 15.3**	**-0.7**
KLF	**Kolari**	**3.71**	**261**	PN		**Pn**	**12 31 34.3**	**+1.2**
KTK1	**Kautokeino**	**3.86**	**289**	PN		**Pn**	**12 31 35.3**	**+0.2**
KTK1				SG		**Sb**	**12 32 33.7**	**+3.0**
PAJU	**Pajala**	**4.09**	**260**	PG		**Pb**	**12 31 48.5**	**+1.0**
PAJU				SG		**Sb**	**12 32 41.2**	**+3.7**
LANU	**Lannavaara**	**4.29**	**275**	PN		**Pn**	**12 31 42.6**	**+1.5**
LANU				SG		**Sb**	**12 32 46.6**	**+3.5**
ERTU	**Ertsjaerv**	**4.61**	**256**	PN		**Pn**	**12 31 45.3**	**-0.2**
	baz=63							
ERTU				SN		**Sn**	**12 32 37.6**	**-2.0**
OBF4	**Vikkela, Lumij**	**4.68**	**229**	PN		**Pn**	**12 31 47.5**	**+1.2**
KIF	**Kilpisjarvi**	**4.73**	**287**	SN		**Sn**	**12 32 41.0**	**-1.4**
I37NO	**I37NO**	**5.52**	**287**	*i*			13 02 50.0	
	baz=95,slow=324,SNR=3.3							
FINES	**FINESS Array B**	**7.36**	**209**	Pn		**Pn**	**12 32 23.6**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=21,slow=12,SNR=1.9							
	comp=Z,0.6nm,0.6s							

NOU 15 12:32:29.7, 14.66S×167.60E, h134km, ML4.6/9, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DVP	**Devils Point**	**3.10**	**170**	P		Pn	12 33 17.9	+0.2
KOUNC	**Koumac, New Ca**	**6.66**	**208**	P		Pn	12 34 04.9	-0.2
DZM	**Mont Dzumac**	**7.45**	**188**	P		Pn	12 34 15.5	-0.4
NOUC	**Port Laguerre**	**7.50**	**189**	P		Pn	12 34 16.8	+0.3
PINNC	**Pines Island,**	**7.91**	**181**	P		Pn	12 34 22.2	+0.3

*NNC **15** 12:39:25.8±2.0, 52.85N×63.17E, h0km, mb3.2, mpv2.8, Error ellipse: s-maj=33.9km s-min=7.6km az=154.0, Suspected Mining explosion.*
*IDC **15** 12:39:26.1±3.0, 53.07N×62.84E, h0km, mb3.4/1, mbtmp3.5/3, ML3.1/2, Error ellipse: s-maj=114.2km s-min=21.8km az=24.0*
ISC 15 12:39:25.9±1.3, 53.0N±0.1×63.04E±0.08, h0km, n8, σ1§66/6, 4C-2D, Western Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AKTO	**Aktyubinsk**	**4.03**	**233**	Lg		Lg	12 41 33.2	
	1.0nm,0.3s,baz=170,slow=19,SNR=3.5							
AKTO	**Aktyubinsk**	**4.03**	**233**	⇑Pg		**Pb**	**12 40 39.5**	**+1.7**
	0.9nm,0.5s							
AKTO				⇑Lg		Lg	12 41 32.4	
	6.3nm,0.6s							
I31KZ	**AKTYUBINSK INF**	**4.04**	**232**	*i*			13 03 30.0	
	baz=46,slow=309,SNR=4.2							
AB31	**Akbulak array**	**4.21**	**209**	⇑Pg		**Pb**	**12 40 40.9**	**+0.2**
	0.6nm,0.5s,baz=26,slow=14,SNR=4.7							
AB31				⇓Lg		Lg	12 41 37.9	
	4.1nm,0.5s,baz=23,slow=25,SNR=15							
BRVK	**Borovoye**	**4.37**	**86**	⇓Pg		**Pb**	**12 40 44.8**	**+1.3**
	3.2nm,0.7s							
BRVK				⇑Lg		Lg	12 41 40.8	
	5.1nm,0.5s							
KURBB	**Kurchatov Arra**	**9.88**	**98**	Pn		**Pn**	**12 41 49.4**	**+0.3**
	0.1nm,0.3s,baz=290,slow=14,SNR=7.8							
	0.7nm,0.4s							
MKAR	**Makanchi Array**	**13.85**	**109**	Pn		**Pn**	**12 42 42.0**	**-1.3**
	0.2nm,0.3s,baz=298,slow=10,SNR=5.3							
	0.4nm,0.5s							
FINES	**FINESS Array B**	**21.46**	**308**	P		**P**	**12 44 14.2**	**-1.4**
	1.1nm,0.5s,baz=96,slow=13,SNR=4.5							
	1.1nm,0.5s							

*MOS **15** 12:47:38.7±0.0, 42.69N×44.61E, h14km, MPVA3.3*
*NORS **15** 12:47:39.1±0.0, 42.71N×44.62E, h6km, MPVA3.2*
ISC 15 12:47:42.2±0.9, 42.79N±0.03×44.64E±0.03, h10km±7km, n19, σ0§95/35, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MTEO	**Meteo**	**0.13**	**215**	P		**Pg**	**12 47 44.9**	**-0.7**
PNSH	**Pansheti**	**0.15**	**186**	P		**Pg**	**12 47 45.5**	**-0.3**
PNSH				S		**Sg**	**12 47 50.0**	**+1.8**
LACR	**Lac**	**0.25**	**279**	*e*Pg		**Pg**	**12 47 45.7**	**-1.7**
LACR				*e*Sg		**Sg**	**12 47 51.4**	**+0.5**
VLKR	**Vladikavka

DIGR	**Digorskoe uzhe**	**0.85**	**179**	*e*Pg	**Pb**	**13 10 40.8**	**-1.0**
DIGR				*e*Sg	**Sb**	**13 10 52.0**	**-1.2**
TRKR	**Terskaya**	**0.86**	**91**	*e*Pg	**Pn**	**13 10 43.2**	**+0.4**
TRKR				*e*Sg	**Sn**	**13 10 54.4**	**-0.8**
ZEI	**Tsey**	**0.99**	**165**	*e*Pg	**Pb**	**13 10 43.6**	**-0.8**
ZEI				*e*Sg	**Sb**	**13 10 57.2**	**-0.2**
LACR	**Lac**	**1.07**	**149**	*e*Pg	**Pg**	**13 10 46.2**	**+0.3**
LACR				*e*Sg	**Sn**	**13 11 01.1**	**+0.5**
ALER	**Alexandrovskoy**	**1.11**	**336**	*e*Pg	**Pg**	**13 10 47.4**	**+0.6**
ALER				*e*Sg	**Sg**	**13 11 02.9**	**+1.6**
ONI	**Oni**	**1.16**	**184**	P	**Pg**	**13 10 47.1**	**-0.4**
ONI				S	**Sg**	**13 11 03.2**	**+0.6**
MTEO	**Meteo**	**1.29**	**146**	P	**Pb**	**13 10 49.1**	**-0.4**
MTEO				S	**Sg**	**13 11 06.8**	**0.0**
PNSH	**Pansheti**	**1.36**	**145**	P	**Pb**	**13 10 49.9**	**-0.6**
PNSH				S	**Sg**	**13 11 08.4**	**-0.6**
AHMR	**Akhmetovskaya**	**1.86**	**284**	*e*Pg	**Pg**	**13 11 00.4**	**-0.4**
AHMR				*e*Sg	**Sg**	**13 11 24.8**	**-0.2**
DVE	**Vedeno**	**2.04**	**112**	*e*Pg	**Pb**	**13 11 00.9**	**-1.1**
DVE				*i* Sg	**Sb**	**13 11 26.6**	**-0.7**
BTLR	**Botlikh**	**2.23**	**118**	*e*Pg	**Pb**	**13 11 03.8**	**-1.6**
BTLR				*i* Sg	**Sn**	**13 11 30.3**	**+1.0**

ASRS ***15*** *13:27:36.9,54˚N±2˚×8˚7E±˚, h0km±1km, MLh3.1/14, Error ellipse: s-maj=3.3km s-min=1.7km az=56.7, confirmed*
NNC ***15*** *13:27:37.4±2.0,54˚.11N×86˚.48E, h0km, mb3.8, mpv3.1, Error ellipse: s-maj=10.3km s-min=5.8km az=66.0, Suspected Mining explosion.*
IDC ***15*** *13:27:40.2-2.2,54˚.05N×86˚.28E, h0km, mbtmp3.4/2, ML3.1/2, Error ellipse: s-maj=16.9km s-min=10.5km az=62.0*

ISC 15 13:27:37.3±0.7,**54˚.10N**±0˚.02×**86˚.43E**±0˚.02,**h0**km,**n29,** σ1§**21**/55,**6C-8D,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KOTO	**Kotino, Kuzbas**	**0.30**	**73**	⇓P		**Pg**	**13 27 42.9**	**-0.1**
KOTO				Sg		**Sg**	**13 27 48.0**	**+1.1**
POMOR	**Pomortsevo, Ku**	**0.31**	**10**	⇓Pg		**Pg**	**13 27 43.5**	**+0.2**
POMOR				Sg		**Sg**	**13 27 48.5**	**+1.2**
SALR	**Pechorkino, Sa**	**0.53**	**307**	⇓Pg		**Pg**	**13 27 46.8**	**-0.7**
SALR				Sg		**Sg**	**13 27 54.3**	**-0.1**
ERU	**Erunakovo, Kuz**	**0.56**	**86**	⇓Pg		**Pg**	**13 27 48.2**	**+0.1**
ERU				Sg		**Sg**	**13 27 56.5**	**+1.2**
ELT	**Eltsovka**	**0.85**	**188**	Pg		**Pg**	**13 27 54.1**	**+0.5**
ELT				Sg		**Sb**	**13 28 07.0**	**+0.1**
I46RU	**ZALESOVO INFRA**	**0.96**	**261**	*i*			13 33 30.0	
	baz=84,slow=327,SNR=0.8							
ZAA0	**Zalesovo Array**	**0.96**	**261**	⇓P		**Pg**	**13 27 55.2**	**-0.7**
	1.0nm,0.3s,baz=76,slow=16							
ZAA0				⇑S		**Sb**	**13 28 10.2**	**+0.1**
	11nm,0.8s,baz=81,slow=30							
ZALV	**Zalesovo Beam**	**0.96**	**261**	Pg		**Pg**	**13 27 55.3**	**-0.5**
	6.0nm,0.3s,baz=79,slow=16,SNR=78							
ZALV				Lg		Lg	13 28 09.5	
	28nm,0.3s,baz=82,slow=28,SNR=59							
ZALV				Rg		Rg	13 28 15.2	
	18nm,0.4s,baz=74,slow=36,SNR=6.8							
KEM	**Kemerovo**	**1.26**	**351**	Pg		**Pg**	**13 27 59.4**	**-2.0**
KEM				Sg		**Sg**	**13 28 17.4**	**-0.3**
LUZB	**Luzhba, Kemero**	**1.53**	**106**	Pg		**Pn**	**13 28 04.6**	**-1.3**
LUZB				Sg		**Sn**	**13 28 27.6**	**+1.2**
TASR	**Tashtagol**	**1.60**	**147**	Pg		**Pn**	**13 28 05.6**	**-1.3**
TASR				Sg		**Sg**	**13 28 29.7**	**+1.1**
KHAR	**Kharino, NSO,**	**1.74**	**288**	Pg		**Pb**	**13 28 09.7**	**-0.5**
KHAR				Sg		**Sg**	**13 28 33.4**	**+0.1**
BRCR	**Berchikul'**	**1.89**	**35**	Pn		**Pn**	**13 28 09.4**	**-1.4**
BRCR				S		**Sn**	**13 28 34.7**	**-0.6**
NVSII	**Novosibirsk**	**2.01**	**293**	Pn		**Pn**	**13 28 12.7**	**+0.3**
NVSII				S		**Sn**	**13 28 38.0**	**-0.2**
NVSII				Sg		**Sg**	**13 28 42.3**	**+0.5**
GALT	**Gorno-Altaysk,**	**2.17**	**188**	Pn		**Pn**	**13 28 15.5**	**+0.9**
ARTR	**Artybash**	**2.37**	**167**	Pg		**Pb**	**13 28 19.6**	**-1.2**
ARTR				Sg		**Sg**	**13 28 52.4**	**-0.9**
DJO	**Djoy, Khakassi**	**3.15**	**113**	P		**Pn**	**13 28 29.9**	**+1.7**
DJO				S		**Sn**	**13 29 06.8**	**+0.3**
CERR	**Cheremushki**	**3.23**	**111**	P		**Pn**	**13 28 28.7**	**-0.6**
CERR				S		**Sn**	**13 29 09.4**	**+1.0**
DJKS	**Djoyskaya Sosn**	**3.25**	**112**	S		**Sn**	**13 29 09.4**	**+0.6**
UKR	**Ust'-Kan**	**3.33**	**198**	MLh				
ULGR	**Ulagan, Altay**	**3.61**	**164**	P		**Pn**	**13 28 33.1**	**-1.4**
ULGR				Pg		**Pg**	**13 28 44.5**	**-1.9**
ULGR				S		**Sn**	**13 29 16.8**	**-1.1**
ULGR				Sg		**Sg**	**13 29 34.0**	**+0.8**
CHBI	**Chibit, Altay**	**3.85**	**170**	Sg		**Sg**	**13 29 40.9**	**-0.1**
CUR	**Chagan-Uzun**	**4.18**	**163**	P		**Pn**	**13 28 40.8**	**-1.6**
CUR				S		**Sn**	**13 29 30.4**	**-1.6**
CUR				Sg		**Sg**	**13 29 52.7**	**+1.2**
MINR	**Mina**	**4.60**	**77**	Pg		**Pb**	**13 28 59.9**	**+1.1**
MINR				S		**Sn**	**13 29 40.9**	**-1.2**
MINR				Sg		**Sg**	**13 30 04.4**	**-0.5**
KURBB	**Kurchatov Arra**	**5.96**	**237**	Pn		**Pn**	**13 29 09.2**	**+2.4**
	0.2nm,0.3s,baz=55,slow=14,SNR=19							
KURBB				Sn		**Sn**	**13 30 15.4**	**-0.3**
	0.1nm,0.3s,baz=45,slow=19,SNR=1.2							
KURBB				Lg		Lg	13 30 45.3	
	0.1nm,0.3s,baz=51,slow=31,SNR=7.6							
	2.4nm,0.6s							
KURBB	**Kurchatov Arra**	**5.96**	**237**	⇓Pn		**Pn**	**13 29 08.4**	**+1.6**
	2.3nm,0.6s							
KURBB				⇑Sn		**Sn**	**13 30 16.6**	**+0.9**
	5.4nm,0.7s							
KURBB				⇓Lg		Lg	13 30 48.7	
	13nm,0.8s							
MK31	**Makanchi Array**	**7.78**	**202**	Pn		**Pn**	**13 29 34.8**	**+3.0**
	0.6nm,0.3s,baz=24,slow=13,SNR=19							
MK31				⇑Sn		**Sn**	**13 31 01.2**	**+0.7**
	0.2nm,0.1s,baz=292,slow=29,SNR=4.1							
MK31				⇑Lg		Lg	13 31 44.1	
	5.8nm,1.0s,baz=30,slow=29,SNR=5.1							
MKAR	**Makanchi Array**	**7.78**	**202**	Pn		**Pn**	**13 29 34.6**	**+2.9**
	0.6nm,0.3s,baz=23,slow=13,SNR=15							
MKAR				Sn		**Sn**	**13 31 00.2**	**-0.3**
	0.2nm,0.3s,baz=24,slow=24,SNR=4.9							
MKAR				Lg		Lg	13 31 43.9	
	0.2nm,0.3s,baz=22,slow=30,SNR=12							
	1.2nm,0.4s							
MAKZ	**Makanchi**	**7.84**	**203**	⇑Pn		**Pn**	**13 29 33.0**	**+0.5**
	4.1nm,1.5s							
MAKZ				⇑Sn		**Sn**	**13 31 04.2**	**+2.3**
	1.8nm,1.0s							
MAKZ				⇓Lg		Lg	13 31 47.7	
	4.3nm,1.1s							

IDC ***15*** *13:31:13.9±0.6,13˚.42S×167˚.26E, h188km±4km, mb5.0/34, mbtmp5.5/36, MS4.2/7, Error ellipse: s-maj=8.8km s-min=7.5km az=80.0*
NEIC ***15*** *13:31:16.0±1.5,13˚.43S±0˚.08×167˚.22E±0˚.08, h204km±1km, mb5.4/136, Error ellipse: s-maj=11.8km s-min=11.4km az=221.0*
GCMT ***15*** *13:31:16.0±0.1,13˚.39S±0˚.01×167˚.04E±0˚.01, h201km, MW5.5/148, Moment Tensor Solution. s122,c198; s148,c272; Duration: 1§4 Moment tensor: Scale 10¹⁷ Nm; Mrr1.93±.02; Mθθ-0.36±.03; Mϕϕ-1.57±.03; Mrθ0.30±.03; Mrϕ-0.75±.03; Mθϕ-0.89±.03; Best double couple: Mo2.13900×10¹⁷ NP1:ϕs41.00000°, δ37.00000°, λ116.00000°. NP2:ϕs189.00000°, δ57.00000°, λ72.00000°. Principal axes: T 2.2280, Plg72.0000°, Azm54.0000°; N -0.1760, Plg15.0000°, Azm200.0000°; P -2.0500, Plg10.0000°, Azm292.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
MOS ***15*** *13:31:17.0±1.2,13˚.36S×167˚.10E, h223km, mb5.5/43 Error ellipse: s-maj=7.7km s-min=6.0km az=117.2*
BJI ***15*** *13:31:18.5±0.0,12˚.88S×166˚.87E, h213km, mb5.4/81, mB5.2/47*

ISC 15 13:31:15.8±0.2,**13˚.50S**±0˚.03×**167˚.25E**±0˚.03,**h210**km±1km, **h211**km;**pP-P,n1077,**σ1§**44**/1198,**mb5.3**/189,**87C-42D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KOUNC	**Koumac, New Ca**	**7.56**	**202**	Pn		**Pn**	**13 33 03.5**	**+0.1**
MARNC	**Mare, Loyalty**	**7.97**	**175**	Pn		**Pn**	**13 33 08.1**	**-0.6**
HNR	**Honiara**	**8.22**	**299**	P		**Pn**	**13 33 10.8**	**-1.2**
	694nm,0.8s,baz=209,slow=3.2,SNR=36							
HNR				S		**S**	**13 34 50.6**	**+5.7**
	220nm,0.6s,baz=281,slow=22,SNR=0.9							
						LR	LR	13 36 22.7
	comp=Z,1μm,19.9s,baz=144,slow=38							
HNR	**Honiara**	**8.22**	**299**	Pn		**Pn**	**13 33 10.3**	**-1.7**
PINNC	**Pines Island,**	**9.07**	**179**			**Pn**	**13 33 23.0**	**+0.2**
MSVF	**Nonsavu**	**11.22**	**113**	P		**P**	**13 33 54.3**	**-2.0**
	205nm,1.0s,baz=278,slow=8.5,SNR=128							
MSVF	**Nonsavu**	**11.22**	**113**	Pn		**P**	**13 33 54.6**	**-1.6**
MSVF	**Nonsavu**	**11.22**	**113**	*i*P		**P**	**13 33 54.9**	**-1.3**
FUNA	**Funafuti**	**12.72**	**68**	P		**P**	**13 34 11.9**	**-0.9**
TARA	**Tarawa**	**15.79**	**21**	P		**Pn**	**13 34 47.2**	**-0.1**
TARA					IAmb	IAmb	13 34 48.9	
	comp=Z,212nm,1.1s							
RABL	**Rabaul**	**17.53**	**300**	P		**P**	**13 35 05.2**	**-0.8**
KRVT	**Keravat (AS076**	**17.59**	**300**	P		**P**	**13 35 04.9**	**-1.7**
	comp=Z,356nm,1.1s,baz=351,slow=3.3,SNR=19							
KRVT					S	**S**	**13 38 26.0**	**+7.6**
	comp=Z,124nm,1.2s,baz=172,slow=22,SNR=1.7							
EIDS	**Eidsvold**	**19.26**	**230**	P		**Pn**	**13 35 26.7**	**-1.5**
	baz=19,SNR=23							
EIDS	**Eidsvold**	**19.26**	**230**	P		**P**	**13 35 25.7**	**+1.1**
EIDS					IAmb	IAmb	13 35 28.8	
	comp=Z,62nm,0.8s							
LHI	**Lord Howe Isla**	**19.45**	**201**	P		**Pn**	**13 35 30.7**	**+0.3**
	baz=20,SNR=17							
LHI	**Lord Howe Isla**	**19.45**	**201**	P		**Pn**	**13 35 30.0**	**-0.4**
PMG	**Port Moresby**	**20.11**	**280**	P		**P**	**13 35 34.3**	**+0.5**
	comp=Z,236nm,1.0s,baz=69,slow=5.5,SNR=23							
	comp=Z,236nm,1.0s							
PMG	**Port Moresby**	**20.11**	**280**	P		**P**	**13 35 33.5**	**-0.2**
PMG	**Port Moresby**	**20.11**	**280**	*ce*P		**P**	**13 35 34.0**	**+0.2**
PMG					pmax	pmax		
	comp=Z,155nm,1.0s							
AFI	**Afiamalu**	**20.38**	**94**	P		**P**	**13 35 38.2**	**+1.5**
	comp=Z,160nm,0.9s,baz=32,slow=2.1,SNR=18							
	comp=Z,160nm,0.9s							
AFI	**Afiamalu**	**20.38**	**94**	P		**P**	**13 35 38.6**	**+1.8**
AFI	**Afiamalu**	**20.38**	**94**	P		**P**	**13 35 38.6**	**+1.8**
AFI					pmax	pmax		
	comp=Z,233nm,1.1s							
CTA	**Charters Tower**	**21.13**	**249**	P		**P**	**13 35 45.0**	**+0.4**
	comp=Z,68nm,0.8s,baz=80,slow=11,SNR=30							
	comp=Z,68nm,0.8s							
CTA	**Charters Tower**	**21.13**	**249**	P		**P**	**13 35 45.0**	**+0.4**
CTAO	**Charters Tower**	**21.13**	**249**	P		**P**	**13 35 44.4**	**-0.2**
CTAO					IAmb	IAmb	13 35 47.4	
	comp=Z,75nm,0.8s							
CTAO	**Charters Tower**	**21.13**	**249**	P		**P**	**13 35 44.4**	**-0.2**
CTAO					pmax	pmax		
	comp=Z,75nm,0.8s							
RMQ	**Roma**	**21.62**	**231**	P		**P**	**13 35 51.2**	**+1.7**
	baz=22,SNR=66							
PATS	**Pohnpei**	**22.07**	**336**	P		**P**	**13 35 54.0**	**+0.1**
	baz=22,SNR=14							
PATS	**Pohnpei**	**22.07**	**336**	P		**P**	**13 35 53.0**	**-1.0**
ARMA	**Armidale**	**22.17**	**218**	P		**P**	**13 35 56.5**	**+1.7**
	baz=22,SNR=79							
ARMA	**Armidale**	**22.17**	**218**	P		**P**	**13 35 55.5**	**+0.6**
MTSU	**Mount Surprise**	**22.54**	**255**	P		**P**	**13 35 59.2**	**+0.9**
	baz=22,SNR=56							
NIUE	**Niue**	**22.59**	**107**	P		**P**	**13 36 00.1**	**+1.4**
	baz=23,SNR=18							
NIUE	**Niue**	**22.59**	**107**	P		**P**	**13 35 59.0**	**+0.4**
MANU	**Manus Island**	**22.73**	**298**	P		**P**	**13 35 59.4**	**-0.6**
MANU					IAmb	IAmb	13 36 15.6	
	comp=Z,134nm,1.2s							
KNTN	**Kanton**	**23.36**	**65**	P		**P**	**13 36 06.2**	**+0.5**
COEN	**Coen**	**23.39**	**266**	P		**P**	**13 36 07.4**	**+1.4**
	baz=23,SNR=17							
COEN	**Coen**	**23.39**	**266**	P		**P**	**13 36 06.8**	**+0.8**
COEN					IAmb	IAmb	13 36 09.1	
	comp=Z,97nm,0.9s							
MGCD	**Mangrove Creek**	**24.52**	**214**	P		**P**	**13 36 18.1**	**+2.0**
	baz=25,SNR=34							
QLP	**Quilpie**	**25.18**	**235**	P		**P**	**13 36 22.7**	**+0.5**
	baz=25,SNR=9.6							
HIZ	**Hauiti**	**25.81**	**166**	P		**P**	**13 36 28.9**	**+1.2**
HIZ					IAmb	IAmb	13 36 31.2	
	comp=Z,84nm,0.8s							
URZ	**Urewera**	**26.17**	**162**	P		**P**	**13 36 31.8**	**+1.0**
	comp=Z,16nm,0.5s,baz=2.0,slow=1.2,SNR=17							
URZ					PcP	**PcP**	**13 39 51.5**	**-0.7**
	comp=Z,22nm,0.8s,baz=346,slow=4.0,SNR=5.3							
URZ					S	**S**	**13 40 47.1**	**+0.2**
	comp=Z,15nm,0.6s,baz=210,slow=23,SNR=1.8							
URZ					LR	LR	13 44 52.0	
	comp=Z,630nm,21.9s,baz=30,slow=31							
	comp=Z,16nm,0.5s							
URZ	**Urewera**	**26.17**	**162**	P		**P**	**13 36 31.7**	**+0.9**
URZ					IAmb	IAmb	13 36 43.1	
	comp=Z,29nm,0.8s							
CMSA	**Cobar Meteorol**	**26.72**	**224**	P		**P**	**13 36 36.5**	**+0.6**
	baz=27,SNR=68							
BKZ	**Black Stump Fm**	**26.84**	**164**	P		**P**	**13 36 37.8**	**+0.9**
BKZ					IAmb	IAmb	13 36 39.7	
	comp=Z,61nm,1.1s							
CNB	**Canberra Magne**	**27.06**	**214**	P		**P**	**13 36 40.5**	**+1.6**
	baz=27,SNR=84							
CAN	**Canberra**	**27.26**	**214**	P		**P**	**13 36 41.6**	**+0.9**
CAN					IAmb	IAmb	13 36 43.1	
	comp=Z,72nm,0.9s							
CAN	**Canberra**	**27.26**	**214**	P		**P**	**13 36 41.6**	**+0.9**
CAN					pmax	pmax		
	comp=Z,72nm,0.9s							
QIS	**Mount Isa**	**27.32**	**251**	P		**P**	**13 36 42.0**	**+0.6**
	baz=27,SNR=9.5							
BFZ	**Birch Farm**	**28.20**	**165**	P		**P**	**13 36 49.2**	**+0.2**
BFZ					IAmb	IAmb	13 36 50.9	
	comp=Z,55nm,0.5s							
MSWZ	**Moikau Station**	**28.67**	**167**	P		**P**	**13 36 53.5**	**+0.4**
LTZ	**Lake Taylor**	**29.50**	**172**	P		**P**	**13 37 01.6**	**+1.2**
LTZ					IAmb	IAmb	13 37 02.7	
	comp=Z,77nm,0.7s							
STKA	**Stephens Creek**	**29.79**	**228**	P		**P**	**13 37 04.1**	**+1.1**
	comp=Z,81nm,0.5s,baz=48,slow=8.7,SNR=243							
STKA					PcP	**PcP**	**13 40 02.1**	**+0.8**
	comp=Z,65nm,0.8s,baz=12,slow=2.5,SNR=14							
STKA					ScP	**ScP**	**13 43 26.8**	**+3.4**
	comp=Z,86nm,0.9s,baz=42,slow=3.7,SNR=44							
STKA					LR	LR	13 49 04.6	
	comp=Z,356nm,18.6s,baz=68,slow=36							
	comp=Z,81nm,0.5s							
STKA	**Stephens Creek**	**29.79**	**228**	P		**P**	**13 37 04.2**	**+1.1**
	baz=30,SNR=178							
STKA	**Stephens Creek**	**29.79**	**228**	P		**P**	**13 37 04.0**	**+1.1**
STKA	**Stephens Creek**	**29.79**	**228**	*c*P		**P**	**13 37 03.6**	**+0.5**
FOZ	**Fox Glacier**	**30.01**	**176**	P		**P**	**13 37 06.3**	**+1.5**
FOZ					IAmb	IAmb	13 37 09.1	
	comp=Z,87nm,0.7s							
RPZ	**Rata Peaks**	**30.29**	**175**	P		**P**	**13 37 08.6**	**+1.3**
	comp=Z,96nm,0.8s,baz=297,slow=1.5,SNR=37							
	comp=Z,96nm,0.8s							
MQZ	**McQueen's Vall**	**30.46**	**172**	P		**P**	**13 37 09.6**	**+0.8**
MQZ					IAmb	IAmb	13 37 10.7	
	comp=Z,101nm,0.9s							
SMPI	**Sarmi**	**30.46**	**290**	P		**P**	**13 37 09.5**	**+0.3**
	comp=Z,83nm,1.0s							
TOO	**Toolangi**	**30.83**	**215**	P		**P**	**13 37 13.6**	**+1.3**
	baz=31,SNR=116							
LBZ	**Lake Benmore**	**30.88**	**176**	P		**P**	**13 37 13.5**	**+1.0**
LBZ					IAmb	IAmb	13 37 18.2	
	comp=Z,39nm,0.8s							
WR0	**Warramunga Arr**	**31.94**	**254**	P		**P**	**13 37 21.2**	**-0.9**
WB0	**Warramunga Ar**	**32.06**	**254**	P		**P**	**13 37 22.2**	**-0.9**
WRAB	**Tennant Creek**	**32.12**	**254**	P		**P**	**13 37 22.6**	**-1.0**
WRAB	**Tennant Creek**	**32.12**	**254**	*ce*P		**P**	**13 37 23.0**	**-0.7**
WRAB					pmax	pmax		
	comp=Z,15nm,0.8s							
WRAB	**Tennant Creek**	**32.12**	**254**	P		**P**	**13 37 23.0**	**-0.7**
WRAB					pP	pP	13 38 14.9	+8.7
WRAB					sP	**sP**	**13 38 30.1**	**-0.2**
WRAB					x	**PcP**	**13 40 08.6**	**+0.8**
WRAB					ScP	**ScP**	**13 43 34.5**	**+3.1**
WRA	**Warramunga Arr**	**32.13**	**254**	P		**P**	**13 37 23.1**	**-0.6**
	comp=Z,15nm,0.7s,baz=85,slow=9.1,SNR=126							
WRA					PcP	**PcP**	**13 40 08.4**	**+0.6**
	comp=Z,41nm,1.0s,baz=82,slow=3.5,SNR=13							
WRA					S	**S**	**13 42 17.2**	**-3.5**
	comp=Z,20nm,1.0s,baz=86,slow=14,SNR=9.5							
WRA					ScP	**ScP**	**13 43 34.6**	**+3.1**
	comp=Z,49nm,1.1s,baz=80,slow=3.5,SNR=21							
WRA					PKiKP	**PKiKP**	**13 47 34.7**	**-0.9**
	comp=Z,4.6nm,1.0s,baz=347,slow=0.6,SNR=14							
WRA					LR	LR	13 49 56.9	
	comp=Z,615nm,20.8s,baz=76,slow=35							
	comp=Z,15nm,0.7s							
RAR	**Rarotonga**	**32.34**	**108**	P		**P**	**13 37 27.1**	**+1.5**
	comp=Z,21nm,0.8s,baz=265,slow=9.3,SNR=3.6							
	comp=Z,21nm,0.8s							
ARPS	**Mount Arapiles**	**32.46**	**220**	P		**P**	**13 37 27.5**	**+1.0**
	baz=33,SNR=19							
HTT	**Hallett**	**32.52**	**228**	P		**P**	**13 37 27.9**	**+0.9**
	baz=33,SNR=41							
ASAR	**Alice Springs**	**33.11**	**247**	P		**P**	**13 37 31.6**	**-0.7**
	comp=Z,40nm,0.6s,baz=74,slow=9.4,SNR=1079							
ASAR					PcP	**PcP**	**13 40 10.8**	**+0.3**
	comp=Z,41nm,0.8s,baz=81,slow=3.1,SNR=22							
ASAR					S	**S**	**13 42 33.1**	**-2.8**
	comp=Z,27nm,1.1s,baz=78,slow=16,SNR=22							
ASAR					ScP	**ScP**	**13 43 37.7**	**+2.9**
	comp=Z,55nm,0.9s,baz=86,slow=3.3,SNR=40							
ASAR					PKiKP	**PKiKP**	**13 47 35.6**	**-0.7**
	comp=Z,6.1nm,1.0s,baz=60,slow=7.3,SNR=8.2							
ASAR					LR	LR	13 49 49.7	
	comp=Z,734nm,20.0s,baz=81,slow=34							
	comp=Z,40nm,0.6s							
MOO	**Moorlands**	**33.66**	**207**	P		**P**	**13 37 38.7**	**+1.9**
	baz=34,SNR=8.8							
KDU	**Kakadu**	**33.87**	**267**	P		**P**	**13 37 38.6**	**-0.2**
	baz=34,SNR=17							
TAU	**Tasmania Unive**	**33.98**	**207**	P		**P**	**13 37 40.2**	**+0.8**
TAU					IAmb	IAmb	13 37 41.8	
	comp=Z,94nm,1.1s							
TAU	**Tasmania Unive**	**33.98**	**207**	P		**P**	**13 37 40.2**	**+0.8**
TAU					pmax	pmax		
	comp=Z,94nm,1.1s							
TAU	**Tasmania Unive**	**33.98**	**207**	P		**P**	**13 37 40.7**	**+1.3**
TAU					pP	**pP**	**13 38 22.8**	**+0.3**
TAU					sP	**sP**	**13 38 40.9**	**-5.8**
BBOO	**Buckleboo**	**34.33**	**231**	P		**P**	**13 37 43.1**	**+0.5**
	baz=34,SNR=47							
BBOO	**Buckleboo**	**34.33**	**231**	P		**P**	**13 37 42.7**	**+0.1**
BBOO					IAmb	IAmb	13 37 44.1	
	comp=Z,92nm,0.8s							
GUMO	**Guam**	**34.87**	**320**	P		**P**	**13 37 47.9**	**+0.5**
	comp=Z,45nm,0.9s,baz=135,slow=11,SNR=2.2							
	comp=Z,45nm,0.9s							
MTN	**Manton Dam**	**35.16**	**267**	P		**P**	**13 37 50.6**	**+0.7**
	baz=35,SNR=7.7							
MTN	**Manton Dam**	**35.16**	**267**	P		**P**	**13 37 50.5**	**+0.6**
FAKI	**Fak Fak**	**36.15**	**284**	P		**P**	**13 37 57.7**	**-0.7**
FAKI	**Fak Fak**	**36.15**	**284**	P		**P**	**13 37 57.1**	**-1.3**
	comp=Z,15nm,1.1s							
KNRA	**Kununurra**	**37.28**	**262**	P		**P**	**13 38 08.0**	**+0.2**
	baz=37,SNR=19							
KNRA	**Kununurra**	**37.28**	**262**	P		**P**	**13 38 07.5**	**-0.4**
KNRA					IAmb	IAmb	13 38 11.8	
	comp=Z,84nm,1.2s							
SWI	**Sorong**	**37.78**	**286**	P		**P**	**13 38 13.3**	**+1.2**
	comp=Z,66nm,1.0s							
XMAS	**Kiritimati**	**38.27**	**69**	P		**P**	**13 38 16.9**	**+0.8**
XMAS	**Kiritimati**	**38.27**	**69**	P		**P**	**13 38 16.9**	**+0.8**
XMAS					pP	**pwP**	**13 39 09.3**	**+5.9**
XMAS					pwP	**sP**	**13 39 17.9**	**-4.7**
WRKA	**Warakurna**	**38.39**	**247**	P		**P**	**13 38 16.9**	**-0.2**
	baz=38,SNR=507							
AAI	**Ambon**	**39.77**	**281**	P		**P**	**13 38 30.9**	**+2.3**
	comp=Z,45nm,0.8s							
FORT	**Forrest**	**39.92**	**238**	P		**P**	**13 38 29.8**	**+0.1**
	baz=40,SNR=76							
FORT	**Forrest**	**39.92**	**238**	P		**P**	**13 38 29.3**	**-0.3**
FORT					IAmb	IAmb	13 38 30.7	
	comp=Z,152nm,0.8s							
LBMI	**Labuha**	**41.38**	**285**	P		**P**	**13 38 43.0**	**+1.2**
	comp=Z,206nmcomp=Z,36nm,0.9s							
PPT2	**Papeete2**	**41.73**	**101**	*e*S		**S**	**13 44 46.8**	**+0.8**
	comp=Z,263nm,16.0s							
PPT	**Papeete**	**41.73**	**101**	P		**P**	**13 38 44.4**	**-0.1**
	comp=Z,44nm,0.8s,baz=103,slow=16,SNR=5.0							
	comp=Z,44nm,0.8s							
PPTF	**Pamatai, Papee**	**41.74**	**101**	P		**P**	**13 38 46.4**	**+1.7**
PPTF					IAmb	IAmb	13 38 51.4	
	comp=Z,138nm,1.2s							
TBI	**Tubuai**	**42.08**	**110**	*e*S		**S**	**13 44 52.5**	**+1.6**
	comp=Z,791nm,20.0s							
SANI	**Sanana**	**42.36**	**282**	P		**P**	**13 38 49.5**	**-0.2**
	comp=Z,634nmcomp=Z,63nm,1.0s							

comp=Z,48nm,1.9s
JOW Kunigami 55.14 317 P P 13 40 26.8 +0.1
comp=Z,35nm,0.5s,baz=114,slow=7.2,SNR=7.3
comp=Z,35nm,0.5s
JOW Kunigami 55.14 317 P P 13 40 27.3 +0.6
JOW IAmb IAmb 13 40 28.1
comp=Z,43nm,0.7s
PCJI Pacitan 55.23 269 P P 13 40 28.0 +0.4
comp=Z,193nm,1.4s
WOJI Wonogiri, Jawa 55.55 270 P P 13 40 30.0 +0.2
comp=Z,71nm,1.7s
JYT Yasato 55.67 334 P P 13 40 30.5 +0.3
JYT IAmb IAmb 13 40 31.5
comp=Z,86nm,0.8s
UGM Wanagama 55.92 270 P P 13 40 32.8 +0.3
UGM IAmb IAmb 13 40 40.2
comp=Z,94nm,0.8s
DRV Dumont d'Urvil 56.13 193 P P 13 40 34.2 +1.1
INU Inuyama 56.40 330 P P 13 40 34.8 -0.6
INU Inuyama 56.40 330 P P 13 40 35.6 +0.2
INU pP PcP **13 41 30.4 +0.5**
JGF Kuroka 56.44 331 P P 13 40 35.1 -0.6
JGF IAmb IAmb 13 40 37.2
comp=Z,42nm,0.8s
JMM Marumori 56.81 335 P P 13 40 38.6 +0.3
JMM IAmb IAmb 13 40 41.0
comp=Z,82nm,1.1s
MJAR Matsushiro Arr 56.81 332 P P 13 40 36.6 -1.7
comp=Z,37nm,1.0s,baz=163,slow=8.8,SNR=80
MJAR PcP PcP **13 41 32.2 +0.7**
comp=Z,14nm,0.8s,baz=159,slow=5.8,SNR=7.2
comp=Z,37nm,1.0s
MJAR Matsushiro Arr 56.81 332 P P 13 40 35.2 -3.2
MAJO Matsushiro 56.82 332 P P 13 40 38.0 -0.3
MAJO IAmb IAmb 13 40 38.6
comp=Z,51nm,0.7s
MAJO Matsushiro 56.82 332*c i* P P **13 40 37.9 -0.5**
MAJO pmax pmax
comp=Z,52nm,0.7s
MAJO Matsushiro 56.82 332 P P 13 40 38.1 -0.3
MAJO pP PcP **13 41 32.6 +1.0**
MJB9 Matsu-Tunnel 56.82 332 P P 13 40 37.6 -0.8
MJB9 IAmb IAmb 13 40 38.6
comp=Z,50nm,0.7s
SBUM Sibu 56.83 282 P P 13 40 38.5 -0.4
STKI Sintang 56.85 279 P P 13 40 39.8 +0.7
comp=Z,20nm,0.7s
JSU Suzuyama 57.00 322 P P 13 40 40.0 +0.3
JSU IAmb IAmb 13 40 41.3
comp=Z,76nm,1.1s
JSD Sado 58.03 333 P P 13 40 46.6 -0.1
JSD IAmb IAmb 13 40 48.5
comp=Z,85nm,0.9s
JHS Saijyo 58.09 327 P P 13 40 47.4 +0.1
JHS IAmb IAmb 13 40 48.9
comp=Z,48nm,0.9s
KSM Kuching 58.37 280 P P 13 40 49.7 +0.1
KSM IAmb IAmb 13 40 51.0
comp=Z,40nm,1.1s
YHNB Yeheng 58.68 310 P P 13 40 52.1 +0.5
YHNB IAmb IAmb 13 40 52.6
comp=Z,66nm,0.8s
LEM Lembang 58.96 270 LR LR 14 08 05.7
comp=Z,212nm,18.2s,baz=44,slow=38
JTM Tenmabayashi 59.21 337 P P 13 40 55.2 +0.4
JTM IAmb IAmb 13 40 56.3
comp=Z,157nm,1.2s
ERM Erimo 59.53 339 P P 13 40 57.6 +0.6
ERM IAmb IAmb 13 40 59.2
comp=Z,42nm,0.7s
ERM Erimo 59.53 339*ce* P P **13 40 58.0 +0.9**
ERM pmax pmax
comp=Z,35nm,0.6s
ERM Erimo 59.53 339 P P 13 40 57.9 +0.9
ERM pP **pwP 13 41 50.2 +3.6**
CBJI Citeko 59.79 270 P P 13 40 58.9 -0.5
comp=Z,92nm,0.7s
DBJI Dramaga 59.86 270 P P 13 40 59.8 -0.1
comp=Z,5µmcomp=Z,136nm,1.5s
XMIS Christmas Isla 60.20 266 P P 13 41 02.7 +0.5
XMIS IAmb IAmb 13 41 03.8
comp=Z,98nm,1.1s
KUR Kuril'sk 61.04 344*e* P P **13 41 08.3 +1.2**
KUR *e*S S **13 49 16.1 +7.2**
KUR pmax pmax
comp=Z,310nm,1.5s
KUR pmax pmax
comp=Z,943nm,5.3s
KUR MLR MLR
comp=Z,154nm,19.0s
JKA Kamikawa-asahi 61.59 340 P P 13 41 12.2 +1.3
ASAJ Asahikawa 61.59 340 P P 13 41 12.2 +1.3
ASAJ pmax pmax
comp=Z,92nm,0.6s
KASI Kota Agung 62.26 271 P P 13 41 15.1 -0.9
comp=Z,132nm,1.1s
TJN Taejon 62.27 324*ce* P P **13 41 15.1 -0.4**
SSE Sheshan 62.63 316 P P 13 41 18.6 +0.5
SSE S S **13 49 29.8 +0.4**
SSE pmax pmax
comp=Z,24nm,0.7s
SSE LR LR
comp=Z,190nm,21.7s
KSRS Korea Array 62.72 325 P P 13 41 18.9 +0.4
comp=Z,11nm,0.9s,baz=140,slow=7.1,SNR=28
KSRS PcP **PcP 13 41 56.4 +1.2**
comp=Z,8.9nm,0.9s,baz=145,slow=5.0,SNR=7.0
comp=Z,11nm,0.9s
LWLI Liwa 62.80 271 P P 13 41 19.0 -0.7
comp=Z,3µmcomp=Z,51nm,0.6s
DSRI Dabo 63.36 276 P P 13 41 23.9 +0.7
TPRI Tanjung Pinang 63.77 278 P P 13 41 26.8 +0.9
comp=Z,71nm,1.1s
JMBI JAMBI 63.98 275 P P 13 41 29.3 +2.0
YSS Yuzh-Sakhalins 64.06 342 P P 13 41 28.4 +1.3
YSS Yuzh-Sakhalins 64.06 342*ce* P P **13 41 28.3 +1.2**
YSS pmax pmax
comp=Z,204nm,1.2s
YSS Yuzh-Sakhalins 64.06 342 P P 13 41 28.6 +1.5
YSS x PcP **13 42 02.0 +1.6**
VNDA Vanda 64.08 181 P P 13 41 28.1 +1.3
comp=Z,12nm,0.7s,baz=355,slow=7.1,SNR=100
comp=Z,12nm,0.7s
VNDA Vanda 64.08 181 P P 13 41 27.9 +1.0
VNDA IAmb IAmb 13 41 29.7
comp=Z,40nm,1.1s
VNDA Vanda 64.08 181 P P 13 41 28.2 +1.3
VNDA x PcP **13 42 01.9 +1.7**
VNDA pP **pwP 13 42 20.9 +3.8**
VNDA pwP **sP 13 42 31.0 -6.5**
SBA Scott Base 64.36 180 P P 13 41 30.7 +2.0
SBA Scott Base 64.36 180 P P 13 41 30.7 +2.0
SBA pmax pmax
comp=Z,112nm,1.0s
SBA Scott Base 64.36 180 P P 13 41 31.1 +2.4
SBA x PcP **13 42 03.6 +2.3**
TEY Ternei 64.55 336⇓*eP* P **13 41 30.0 -0.3**
TEY *e* 13 49 52.5
TEY pmax pmax
comp=N,10.0nm,1.1s
TEY pmax pmax
comp=Z,30nm,1.1s
TEY pmax pmax
comp=E,10.0nm,1.1s
TEY pmax pmax
comp=N,100nm,2.6s
TEY pmax pmax
comp=Z,100nm,2.3s
SKR Severo-Kuril's 64.65 352⇓*i* P P **13 41 30.8 0.0**
SKR *e**PP PcP 13 42 10.6 +7.9
SKR *e*S S **13 49 49.1 -4.4**
SKR pmax pmax
comp=Z,400nm,3.4s
SKR pmax pmax
comp=Z,114nm,1.1s
SKR MLR MLR
comp=Z,100nm,20.0s
MYKOM Kota Tinggi 64.65 279 P P 13 41 31.4 -0.2
MYKOM IAmb IAmb 13 41 33.5
comp=Z,34nm,0.9s
CASY Casey 64.65 202 P P 13 41 31.1 +0.3
CASY IAmb IAmb 13 41 32.6
comp=Z,52nm,0.8s
CASY Casey 64.65 202 P P 13 41 31.3 +0.5
CASY pP **pP 13 42 19.5 +0.6**

CASY pwP sP 13 42 32.4 -9.2
NJ2 Nanjing 64.79 315⇑P P **13 41 32.8 +0.6**
NJ2 pmax pmax
comp=Z,49nm,0.8s
VLA Vladivostok 64.99 332 *i* P P **13 41 32.5 -0.7**
VLA pmax pmax
comp=Z,157nm,1.9s
QIZ Qiongzhong 65.14 299 P P **13 41 33.8 -0.9**
QIZ pP **pP 13 42 22.5 +0.7**
QIZ S S **13 50 00.4 -0.3**
QIZ pmax pmax
comp=Z,25nm,1.8s
QIZ LR LR
comp=Z,310nm,16.7s
QIZ LR LR
comp=Z,290nm,16.7s
QIZ LR LR
comp=Z,290nm,19.9s
QIZ Qiongzhong 65.14 299 P P **13 41 35.6 +0.9**
QIZ x x 13 41 46.4
AMKA Amchitka 65.45 8 P P **13 41 36.2 +0.3**
USRK Ussuriysk Ar. 65.79 333 P P **13 41 39.3 +1.0**
comp=Z,55nm,1.0s,baz=140,slow=5.2,SNR=86
comp=Z,55nm,1.0s
USRK Ussuriysk Ar. 65.79 333 P P **13 41 39.5 +1.2**
USRK Ussuriysk Ar. 65.79 333 P P **13 41 39.5 +1.2**
KRJI Kerinci 65.98 274 P P **13 41 41.9 +1.6**
comp=Z,9µmcomp=Z,177nm,0.4s
CCD Concordia, Ant 66.10 191 P P **13 41 41.7 +1.3**
UGL Uglegorsk 66.17 342*c i* P P **13 41 41.4 +0.8**
UGL *e*S S **13 50 08.9 -3.2**
UGL pmax pmax
comp=Z,970nm,3.0s
UGL pmax pmax
comp=Z,230nm,0.9s
UGL smax smax
comp=E,170nm,3.0s
UGL smax smax
comp=N,590nm,6.5s
SHEM Shemya Is, Ala 66.22 5 P P **13 41 41.7 +0.9**
comp=N,60nm,0.6s,baz=52,slow=3.2,SNR=15
comp=N,60nm,0.6s
SMY Shemya 66.22 5 P P **13 41 41.7 +0.9**
SMY Shemya 66.22 5 P P **13 41 41.7 +0.9**
SMY pmax pmax
comp=Z,122nm,0.9s
ADK Adak 66.59 11 P P **13 41 43.4 +0.2**
ADK Adak 66.59 11 P P **13 41 43.4 +0.2**
ADK pmax pmax
comp=Z,225nm,1.2s
ADK Adak 66.59 11 P P **13 41 43.7 +0.5**
PET Petropavlovsk 66.66 354 P P **13 41 43.5 -0.1**
PET IAmb IAmb 13 41 45.5
comp=Z,122nm,1.1s
PET Petropavlovsk 66.66 354*a i* P P **13 41 44.0 +0.4**
PET *i* S S **13 50 19.7 +1.8**
PET pmax pmax
comp=Z,150nm,1.0s
PET pmax pmax
comp=Z,300nm,15.7s
PET Petropavlovsk 66.66 354 P P **13 41 44.1 +0.5**
PEA0B Petropavlovsk- 66.84 354 P P **13 41 45.4 +0.6**
PEA0B Petropavlovsk- 66.84 354 P P **13 41 45.4 +0.6**
PEA0B pmax pmax
comp=Z,328nm,1.4s
PETK Petropavlovsk- 66.84 354 P P **13 41 44.8 0.0**
comp=Z,93nm,0.9s,baz=168,slow=9.7,SNR=170
comp=Z,93nm,0.9s
PETK Petropavlovsk- 66.84 354 P P **13 41 45.3 +0.5**
PETK Petropavlovsk- 66.84 354 P P **13 41 45.3 +0.5**
GSTR Great Sitkin T 66.90 11 P P **13 41 45.5 +0.2**
BKNI Bangkinang 66.98 276 P P **13 41 47.1 +0.5**
comp=Z,9µmcomp=Z,249nm,0.9s
WHN Wuhan 67.11 312⇑P P **13 41 47.1 +0.1**
WHN S S **13 50 22.4 -1.8**
WHN pmax pmax
comp=Z,220nm,1.5s
MDJ Mudanjiang 67.19 332 P P **13 41 48.3 +1.1**
MDJ pP pP 13 42 36.6 +0.9
MDJ S S **13 50 26.4 +1.8**
MDJ SS SS **13 54 46.4 -2.3**
MDJ pmax pmax
comp=Z,89nm,1.1s
MDJ pmax pmax
comp=Z,540nm,3.6s
MDJ Mudanjiang 67.19 332 P P **13 41 48.3 +1.1**
GULI GuiLin 67.51 305⇑*i* P P **13 41 46.6 -3.0**
GULI S S **13 50 26.8 -2.3**
GULI pmax pmax
comp=Z,100nm,0.9s
TYV Tymovskoe 67.60 343 *eP* P **13 41 51.0 +1.4**
TYV *e*S S **13 50 29.8 +0.7**
TYV pmax pmax
comp=Z,82nm,1.6s
TYV pmax pmax
comp=Z,500nm,2.4s
TYV smax smax
comp=N,600nm,8.8s
TYV smax smax
comp=E,400nm,8.8s
IPM Ipoh 68.10 280 P P **13 41 54.1 +0.5**
SNY Shenyang 68.18 326⇑P P **13 41 53.8 +0.4**
SNY sP **sP 13 43 02.3 -2.2**
SNY S S **13 50 38.4 +2.0**
SNY sS **sS 13 51 58.4 -2.5**
SNY SS SS **13 55 01.0 -3.0**
SNY pmax pmax
comp=E,43nm,1.0s
SNY LR LR
comp=E,200nm,14.9s
SNY LR LR
comp=E,130nm,16.3s
SNY LR LR
comp=E,200nm,17.3s
TIA Tai'an 68.42 318 P P **13 41 54.8 -0.2**
TIA pmax pmax
comp=E,36nm,0.8s
MNSI Mandailing Nat 68.51 276 P P **13 41 55.8 -0.3**
comp=E,118nm,0.9s
CN2 Changchun 68.59 329⇑P P **13 41 56.6 +0.7**
CN2 PcP PcP **13 42 18.5 -0.9**
CN2 *e*S S **13 50 39.6 -1.6**
CN2 pmax pmax
comp=E,70nm,1.0s
CN2 pmax pmax
comp=E,400nm,3.0s
BNX BinXian 69.06 331⇑P P **13 41 59.0 +0.2**
BNX pP **pP 13 42 47.8 +0.3**
BNX sP **sP 13 43 09.4 -0.5**
BNX PP PP **13 44 36.9 +2.4**
BNX S S **13 50 50.3 +3.7**
BNX sS **sS 13 52 07.6 -3.7**
BNX pmax pmax
comp=E,120nm,0.9s
BNX pmax pmax
comp=E,780nm,7.3s
NIKH Nikolski High 69.32 15 P P **13 42 00.1 -0.1**
baz=205,SNR=11
GRNR Gornyy 69.44 340⇑*i* P P **13 42 02.9 +1.9**
GRNR *e*S S **13 50 51.9 +1.0**
GRNR pmax pmax
comp=N,40nm,1.1s
GRNR pmax pmax
comp=Z,120nm,1.1s
GRNR pmax pmax
comp=E,30nm,1.2s
GRNR smax smax
comp=N,3.0nm,1.0s
GRNR MLR MLR
comp=E,70nm,13.0s
GRNR MLR MLR
comp=N,70nm,12.0s
GRNR MLR MLR
comp=Z,90nm,14.0s
KLR Kul'dur 69.88 336 P P **13 42 04.9 +1.2**
comp=Z,22nm,0.7s,baz=132,slow=3.9,SNR=72
comp=Z,22nm,0.7s
KLR Kul'dur 69.88 336*ce* P P **13 42 04.6 +0.9**
KLR pmax pmax
comp=Z,137nm,1.8s
TSI Tuntungan 70.19 279 P P **13 42 06.1 -0.3**
comp=Z,193nm,0.5s
ENH Enshi 70.58 309 P P **13 42 08.4 0.0**
ENH x x 13 42 17.5
ENH pP **pP 13 43 02.9 +5.4**

GSI Gunungsitoli 70.58 276 P P **13 42 08.3 -0.5**
GSI Gunungsitoli 70.58 276 P P **13 42 09.6 +0.8**
comp=Z,176nm,0.9s
LYN LuoYang 70.61 314⇑*i* P P **13 42 08.8 +0.3**
LYN pP pP 13 42 59.4 +1.8
LYN S S **13 51 05.5 +0.4**
LYN SKS SKSac **13 51 49.4 -0.9**
LYN SS SS **13 55 40.0 -1.6**
LYN pmax pmax
comp=Z,80nm,1.3s
LYN pmax pmax
comp=Z,510nm,3.7s
HNS HongShan 70.68 318⇑P P **13 42 09.8 +1.0**
HNS S S **13 51 06.4 +0.6**
HNS SKS SKSac **13 51 49.3 -1.4**
HNS pmax pmax
comp=Z,72nm,1.5s
UNV Unalaska Valle 70.72 16 P P **13 42 08.0 -0.7**
baz=207,SNR=8.3
KCSI Kotacane, Aceh 70.96 279 P P **13 42 10.3 -0.8**
comp=Z,66nm,1.0s
GYA Guiyang 71.01 304⇓P P **13 42 12.1 +0.9**
GYA pP pwP 13 43 03.3 +0.8
GYA S S **13 51 03.8 -6.5**
GYA SS SS **13 55 38.3 -10**
GYA pmax pmax
comp=Z,83nm,1.0s
GYA LR LR
comp=Z,76nm,3.8s
GYA LR LR
comp=Z,160nm,3.8s
GYA LR LR
comp=Z,110nm,4.8s
BJT Baijiatuau 71.30 321 P P **13 42 13.3 +0.9**
BJI Beijing 71.31 321 P P **13 42 13.1 +0.6**
BJI pP pP **13 43 06.0 +4.4**
BJI sP sP **13 43 28.6 +4.6**
BJI S S **13 51 14.3 +1.4**
BJI pmax pmax
comp=Z,40nm,1.4s
BJI pmax pmax
comp=Z,360nm,4.1s
BJI LR LR
comp=Z,55nm,18.1s
BJI LR LR
comp=Z,210nm,20.0s
BJI LR LR
comp=Z,250nm,18.6s
TIY Taiyuan 72.35 317⇑P P **13 42 20.0 +1.1**
TIY S S **13 51 25.8 +0.7**
TIY sS sS **13 52 50.3 +1.7**
TIY pmax pmax
comp=Z,63nm,0.8s
SPIA Saint Paul Isl 72.85 13 P P **13 42 21.3 0.0**
baz=203
XAN Xi'an 72.85 312⇑P P **13 42 22.5 +0.6**
XAN PcP PcP **13 42 38.3 +0.4**
XAN S S **13 51 28.5 -2.4**
XAN sS sS 13 52 57.3 +2.1
XAN pmax pmax
comp=Z,93nm,0.9s
XAN pmax pmax
comp=Z,400nm,3.7s
XAN LR LR
comp=Z,200nm,15.6s
XAN LR LR
comp=Z,170nm,15.6s
XAN LR LR
comp=Z,230nm,18.9s
CHNA Chernabura Isl 73.62 19 P P **13 42 24.7 -1.1**
baz=214
KMI Kunming 73.65 301⇑P P **13 42 28.4 +1.4**
KMI pP pP 13 43 15.3 -0.9
KMI sP sP 13 43 35.3 -3.1
KMI S S **13 51 39.0 -1.6**
KMI SS SS **13 56 18.9 -10**
KMI pmax pmax
comp=Z,140nm,0.9s
KMI pmax pmax
comp=Z,340nm,3.5s
KMI LR LR
comp=Z,120nm,17.0s
KMI LR LR
comp=Z,200nm,17.9s
KMI LR LR
comp=Z,200nm,20.9s
XLT XiLinHaoTe 73.70 324⇑*i* P P **13 42 27.4 +0.7**
XLT pP pP 13 43 20.5 +4.3
XLT sP sP 13 43 43.0 +4.5
XLT S S **13 51 40.8 +0.6**
XLT pmax pmax
comp=Z,120nm,1.3s
SDPT Sand Point 73.78 19 P P **13 42 25.7 -1.0**
baz=213
MA2 Magadan 74.04 351 P P **13 42 28.1 -0.1**
comp=Z,42nm,0.9s,baz=158,slow=5.2,SNR=30
comp=Z,42nm,0.9s
MA2 Magadan 74.04 351 P P **13 42 27.7 -0.5**
MA2 IAmb IAmb 13 42 29.5
comp=Z,76nm,1.0s
MA2 Magadan 74.04 351*ce* P P **13 42 28.0 -0.2**
MA2 pmax pmax
comp=Z,100nm,1.1s
CMAR Chiang Mai Arr 74.44 294 P P **13 42 32.6 +1.2**
comp=Z,55nm,0.8s,baz=128,slow=4.6,SNR=269
CMAR pP **pP 13 43 18.0 -2.1**
comp=Z,10nm,0.8s,baz=121,slow=4.3,SNR=3.0
CMAR PKiKP **PKiKP 13 48 23.2 +0.6**
comp=Z,0.8nm,0.7s,baz=213,slow=1.0,SNR=4.9
comp=Z,55nm,0.8s
CMAR Chiang Mai Arr 74.44 294 P P **13 42 32.4 +1.0**
CHTO Chiang Mai 74.56 294 P P **13 42 32.3 +0.2**
CHTO IAmb IAmb 13 42 34.2
comp=Z,68nm,0.9s
CHTO Chiang Mai 74.56 294 P P **13 42 32.3 +0.2**
CHTO pmax pmax
comp=Z,68nm,1.0s
HHC Hu-ho-hao-te 74.64 319 *eP* P **13 42 33.4 +1.1**
HHC pmax pmax
comp=Z,140nm,0.9s
HHC pmax pmax
comp=Z,320nm,4.7s
S14K Fog Glacier 74.85 18 P P **13 42 32.6 -0.5**
baz=214
PZH PanZhiHua 75.03 302⇑P P **13 42 35.1 +0.3**
PZH sP **sP 13 43 50.3 +4.3**
PZH S S **13 51 55.6 0.0**
PZH pmax pmax
comp=Z,70nm,0.9s
PZH pmax pmax
comp=Z,130nm,5.2s
ZEA Zeya 75.16 337*ce* P P **13 42 36.2 +1.4**
ZEA *e*S S **13 51 57.4 +1.7**
ZEA pmax pmax
comp=E,10.0nm,0.7s
ZEA pmax pmax
comp=N,50nm,0.9s
ZEA pmax pmax
comp=Z,80nm,0.8s
ZEA smax smax
comp=Z,100nm,5.5s
ZEA smax smax
comp=N,400nm,5.1s
CD2 Chengdu 75.25 307 P P **13 42 36.0 +0.1**
BTO Baotou 75.50 319 *eP* P **13 42 38.5 +1.4**
CHIR Chirikof Islan 75.75 21 P P **13 42 37.7 -0.3**
baz=217
QSPA South Pole Qui 76.52 180 P P **13 42 43.6 +1.0**
R16K Pilot Point 76.52 19 P P **13 42 42.2 -0.1**
baz=215
SII Sitkinak Islan 76.82 21 P P **13 42 44.2 +0.1**
SII Sitkinak Islan 76.82 21 P P **13 42 44.0 -0.1**
baz=218
R17K Ugashik Creek 76.95 19 P P **13 42 44.6 -0.2**
baz=216
SEY Seymchan 77.07 353 P P **13 42 45.8 +0.5**
comp=N,87nm,1.0s,baz=154,slow=5.9,SNR=168
comp=N,87nm,1.0s
SEY Seymchan 77.07 353*ce* P P **13 42 45.7 +0.5**
SEY pmax pmax
comp=Z,173nm,1.1s
LZH Lanzhou 77.49 312⇑P P **13 42 50.1 +1.6**
LZH pP pP 13 43 41.5 +2.9
LZH sP sP 13 44 06.8 +5.9
LZH S S **13 52 24.0 +1.9**

LZH pmax pmax
comp=Z,100nm,1.6s
LZH pmax pmax
comp=Z,170nm,4.9s
LZH LR LR
comp=Z,200nm,16.3s
LZH LR LR
comp=Z,230nm,17.3s
LZH LR LR
comp=Z,180nm,17.9s
P16K Nushagak River 77.60 18 P P 13 42 47.9 -0.5
baz=215,SNR=14
OHAK Old Harbor 77.65 21 P P 13 42 48.8 +0.2
baz=219
Q16K King Salmon 77.71 18 P P 13 42 48.8 -0.1
baz=216
O16K Kolwok River B 78.04 17 P P 13 42 49.8 -0.9
baz=214,SNR=28
P17K Kvichak River 78.20 18 P P 13 42 51.1 -0.5
baz=216
Q18K Katmai Hardscr 78.20 19 P P 13 42 51.7 -0.1
baz=218
KDAK Kodiak Island 78.33 21 P P 13 42 52.6 +0.2
comp=Z,46nm,1.0s,baz=241,slow=4.7,SNR=24
comp=Z,46nm,1.0s
KDAK Kodiak Island 78.33 21 P P 13 42 52.2 -0.1
KDAK IAmb IAmb 13 42 53.8
comp=Z,85nm,1.1s
KDAK Kodiak Island 78.33 21 *i* P P 13 42 52.4 +0.1
KDAK pmax pmax
comp=Z,124nm,1.1s
KDAK Kodiak Island 78.33 21 P P 13 42 52.2 -0.1
baz=220
O17K Koliganek Bris 78.47 18 P P 13 42 52.6 -0.5
baz=215,SNR=21
N16K Nishlik Lake 78.58 16 P P 13 42 54.9 +1.2
baz=214,SNR=41
GAMB Gambell 78.72 9 P P 13 42 54.9 +0.5
baz=201
P18K Big Mountain, 78.73 19 P P 13 42 54.1 -0.4
P18K IAmb IAmb 13 42 55.4
comp=Z,164nm,1.3s
P18K Big Mountain, 78.73 19 P P 13 42 53.9 -0.7
baz=217
Q19K Cape Douglas, 78.86 19 P P 13 42 55.5 +0.1
Q19K Cape Douglas, 78.86 19 P P 13 42 55.1 -0.2
baz=219,SNR=14
Q20K Shuyak Island 79.03 20 P P 13 42 56.4 +0.2
baz=220
O18K Koktuh Hills 79.10 18 P P 13 42 56.2 -0.4
baz=217,SNR=6.9
N18K Kilae Creek 79.56 17 P P 13 42 59.8 +0.7
N18K Kilae Creek 79.56 17 P P 13 42 59.0 0.0
baz=216,SNR=6.4
O19K Port Alsworth 79.65 18 P P 13 42 58.9 -0.5
baz=218,SNR=6.2
SVW2 Sparrevohn 79.99 17 P P 13 43 02.5 +1.2
CIT Chita 80.01 330 *e* P P 13 43 02.5 +0.8
CIT *e* 13 43 09.8
CIT pmax pmax
comp=Z,351nm,1.4s
HOM Homer 80.08 20 P P 13 43 02.2 +0.4
HOM Homer 80.08 20 P P 13 43 02.2 +0.4
baz=220
N19K Bonanza Creek 80.09 18 P P 13 43 01.3 -0.7
baz=218,SNR=7.7
O20K Slope Mountain 80.09 19 P P 13 43 01.6 -0.4
baz=220,SNR=5.1
CNPM China Poot 80.11 20 P P 13 43 02.5 +0.4
CNPM IAmb IAmb 13 43 03.8
comp=Z,68nm,1.0s
BRSE Bradley Lake S 80.44 20 P P 13 43 04.1 +0.3
baz=221,SNR=16
ANM Nome 80.57 12 P P 13 43 05.3 +0.9
baz=207
YAK Yakutsk 80.86 343 P P 13 43 06.3 +0.5
comp=Z,90nm,0.7s,baz=123,slow=1.5,SNR=102
comp=Z,90nm,0.7s
YAK Yakutsk 80.86 343 P P 13 43 05.9 +0.1
YAK Yakutsk 80.86 343 *ce* P P 13 43 06.1 +0.2
YAK pmax pmax
comp=Z,452nm,1.2s
M19K Big River Lodg 80.98 17 P P 13 43 07.2 +0.6
baz=218
TNA Tin City 81.00 10 P P 13 43 07.3 +0.7
baz=204
L19K White Mountain 81.07 17 P P 13 43 07.8 +0.8
L19K IAmb IAmb 13 43 11.0
comp=Z,32nm,0.9s
L19K White Mountain 81.07 17 P P 13 43 07.9 +0.8
baz=217,SNR=29
N20K Mount Spurr 81.08 19 P P 13 43 06.5 -0.7
baz=220
CAPN Captain Cook N 81.08 19 P P 13 43 08.5 +1.4
baz=221
ULN Ulaanbaatar 81.14 324 P P 13 43 08.5 +0.5
ULN IAmb IAmb 13 43 10.0
comp=Z,114nm,1.1s
ULN Ulaanbaatar 81.14 324 *ce* P P 13 43 08.7 +0.8
ULN pmax pmax
comp=Z,125nm,1.1s
SEW Seward 81.15 20 P P 13 43 07.4 0.0
baz=222,SNR=18
BILL Bilibino 81.32 360 P P 13 43 08.4 +0.2
BILL Bilibino 81.32 360 *d i* P P 13 43 08.2 0.0
BILL pmax pmax
comp=Z,126nm,1.1s
M20K Styx River 81.33 18 P P 13 43 08.3 -0.2
baz=219,SNR=12
O22K Cooper Landing 81.34 20 P P 13 43 08.5 +0.1
baz=222,SNR=21
TTA Tatalina 81.35 16 P P 13 43 09.0 +0.4
TTA Tatalina 81.35 16 P P 13 43 09.0 +0.4
TTA pmax pmax
comp=Z,26nm,1.0s
TTA Tatalina 81.35 16 P P 13 43 09.2 +0.6
baz=216,SNR=34
SONM Songino Array 81.50 323 P P 13 43 10.4 +0.5
comp=Z,23nm,0.8s,baz=143,slow=6.4,SNR=115
SONM PKKPbc **PKKPbc** 14 01 42.8 -1.5
comp=Z,1.2nm,0.8s,baz=264,slow=1.3,SNR=6.6
comp=Z,23nm,0.8s
SONM Songino Array 81.50 323 P P 13 43 10.3 +0.5
SONM IAmb IAmb 13 43 12.8
comp=Z,67nm,1.1s
L20K Farewell, AK 81.58 17 P P 13 43 10.7 +1.0
baz=218,SNR=123
SUA Susitna One 81.74 19 P P 13 43 10.6 -0.1
baz=221
Q23K Middleton Isla 81.75 22 P P 13 43 11.1 +0.5
baz=225
RC01 Rabbit Creek A 81.78 20 P P 13 43 11.0 +0.2
RC01 IAmb IAmb 13 43 12.3
comp=Z,65nm,0.9s
RC01 Rabbit Creek A 81.78 20 P P 13 43 10.9 +0.2
baz=222,SNR=18
GTA Gaotai 81.81 314 ⇑P P 13 43 12.8 +1.2
GTA pP pP 13 43 59.9 -2.4
GTA PP **PP** 13 46 20.4 -1.7
GTA S **S** 13 53 06.0 -1.2
GTA sS sS 13 54 33.8 +1.5
GTA pmax pmax
comp=Z,85nm,1.1s
GTA pmax pmax
comp=Z,390nm,6.9s
GTA LR LR
comp=Z,140nm,20.7s
GTA LR LR
comp=Z,120nm,18.9s
GTA LR LR
comp=Z,170nm,19.6s
SKT Skwentna 81.89 18 P P 13 43 10.1 -1.2
baz=220
M22K Willow 82.16 19 P P 13 43 12.6 -0.1
baz=222,SNR=20
K20K Telida 82.22 17 P P 13 43 14.0 +0.9
K20K IAmb IAmb 13 43 14.6
comp=Z,43nm,1.2s
K20K Telida 82.22 17 P P 13 43 13.7 +0.6
baz=218,SNR=28
PMR Palmer 82.35 19 P P 13 43 13.9 +0.2
baz=223,SNR=40
PPLA Purkeypile 82.40 17 P P 13 43 12.9 -1.2
baz=220,SNR=7.8
KNK Knik Glacier 82.44 20 P P 13 43 14.6 +0.4
baz=223,SNR=35
GLI Glacier Island 82.51 21 P P 13 43 14.6 0.0
GLI Glacier Island 82.51 21 P P 13 43 14.6 0.0
baz=225,SNR=13
CUT Chulitna 82.60 18 P P 13 43 14.6 -0.4
baz=222,SNR=11
GCSA Galena City Sc 82.61 15 P P 13 43 15.6 +0.6
baz=215,SNR=18
EYAK Cordova Ski Ar 82.75 21 P P 13 43 15.9 +0.2
EYAK IAmb IAmb 13 43 17.3
comp=Z,63nm,1.1s
EYAK Cordova Ski Ar 82.75 21 P P 13 43 16.0 +0.2
baz=226,SNR=18
SML Sawmill 82.77 20 P P 13 43 16.3 +0.3
baz=223,SNR=34
CAST Castle Rocks 82.83 17 P P 13 43 15.7 -0.5
baz=220,SNR=45
J20K Nowinta River 82.85 16 P P 13 43 17.2 +1.0
J20K Nowinta River 82.85 16 P P 13 43 17.0 +0.8
baz=218,SNR=34
M23K Glacier View 82.96 20 P P 13 43 17.0 +0.1
baz=224,SNR=17
MAW Mawson 83.01 202 P P 13 43 18.3 +1.2
comp=Z,70nm,0.9s,baz=111,slow=5.9,SNR=122
comp=Z,70nm,0.9s
MAW Mawson 83.01 202 P P 13 43 18.4 +1.2
baz=83,SNR=72
MAW Mawson 83.01 202 P P 13 43 18.4 +1.2
MAW Mawson 83.01 202 P P 13 43 18.4 +1.2
MAW pmax pmax
comp=Z,27nm,1.2s
SCM Sheep Creek Mo 83.12 20 P P 13 43 18.2 +0.4
baz=224,SNR=37
CHUM Lake Minchumin 83.12 17 P P 13 43 17.6 -0.1
baz=220,SNR=18
KLU Klutina 83.35 21 P P 13 43 19.1 +0.1
baz=226,SNR=29
BGLC Bering Glacier 83.35 23 P P 13 43 19.2 +0.4
baz=228
BOD Bodaibo 83.37 334 *e* P P 13 43 19.2 +0.2
BOD pmax pmax
comp=Z,141nm,1.7s
TRF Thorofare Moun 83.38 18 P P 13 43 18.5 -0.7
baz=221,SNR=32
BMRM Bremner River 83.45 21 P P 13 43 19.5 +0.1
baz=227,SNR=16
WAT1 Susitna Watana 83.45 19 P P 13 43 19.5 +0.1
baz=223
WAT6 Susitna Watana 83.53 19 P P 13 43 20.0 0.0
baz=224,SNR=86
SNH Sunshine Point 83.56 23 P P 13 43 21.5 +1.5
SNH IAmb IAmb 13 43 22.1
comp=Z,129nm,1.2s
BPAW Bear Paw Mtn. 83.67 17 P P 13 43 19.6 -0.9
baz=221,SNR=30
M24K Tolsona, Glenn 83.70 20 P P 13 43 21.4 +0.7
baz=225,SNR=29
N25K Chitina, Valde 83.89 21 P P 13 43 21.8 +0.1
baz=227,SNR=40
MESA MESA 83.89 23 P P 13 43 22.5 +0.5
baz=229,SNR=14
SCZ2 Santa Cruz Isl 83.93 53 P P 13 43 22.7 +0.2
baz=249
MCK McKinley 84.00 18 P P 13 43 21.8 -0.3
baz=223,SNR=54
DHY Denali Highway 84.00 19 P P 13 43 22.3 -0.1
baz=224,SNR=45
SBC Santa Barbara 84.03 53 P P 13 43 23.8 +0.9
baz=249
VRDI Verde Repeater 84.04 22 P P 13 43 22.9 +0.3
YAH Yahtse 84.09 23 P P 13 43 23.4 +0.5
YAH IAmb IAmb 13 43 24.7
comp=Z,61nm,1.1s
PKM Mcpherson Peak 84.11 52 P P 13 43 24.5 +0.9
baz=249
SMMC Simmler 84.12 52 P P 13 43 24.4 +0.9
baz=249
L02F Cave Junction 84.13 44 P P 13 43 24.0 +0.7
baz=246
RDOG Red Dog Mine 84.13 11 P P 13 43 18.6 -4.1
baz=209
GOMU GeErMu 84.20 309 P P 13 43 24.8 +0.5
GOMU S **S** 13 53 25.5 -6.5
GOMU pmax pmax
comp=Z,10.0nm,0.9s
GOMU pmax pmax
comp=Z,100nm,4.8s
GOMU LR LR
comp=Z,57nm,11.2s
GOMU LR LR
comp=Z,62nm,11.6s
GOMU LR LR
comp=Z,49nm,11.4s
I21K Tanana 84.22 16 P P 13 43 23.9 +0.7
I21K Tanana 84.22 16 P P 13 43 24.1 +0.9
baz=220,SNR=121
HARP HAARP 84.24 20 P P 13 43 23.7 +0.3
baz=226,SNR=7.4
MCARA McCarthy VSAT 84.29 22 P P 13 43 23.7 0.0
baz=228,SNR=14
K02D Willamette Mer 84.30 44 P P 13 43 25.1 +0.8
baz=246,SNR=6.0
J01E Myrtle Point 84.31 43 P P 13 43 24.7 +0.6
baz=246
TABL Table Mountain 84.37 23 P P 13 43 24.7 +0.4
TABL IAmb IAmb 13 43 25.8
comp=Z,150nm,1.4s
H21K Melozitna Rive 84.37 16 P P 13 43 24.9 +0.9
baz=219,SNR=88
PAF Port-aux-Franc 84.40 221 P P 13 43 25.5 +1.0
PAF Port-aux-Franc 84.40 221 P P 13 43 25.5 +1.0
PAF pmax pmax
comp=Z,202nm,0.9s
SCI2 San Clemente I 84.44 54 P P 13 43 25.2 +0.2
baz=250
MLY Manley 84.45 17 P P 13 43 24.3 -0.1
baz=221,SNR=68
PINM Pinnacle 84.49 24 P P 13 43 24.7 -0.1
baz=231,SNR=13
PAX Paxson 84.54 20 P P 13 43 24.6 -0.4
baz=226,SNR=11
ZAK Zakamensk 84.54 325 *e* P P 13 43 24.9 -0.4
ZAK pmax pmax
comp=Z,124nm,1.3s
PNL Peninsula 84.56 24 P P 13 43 24.8 -0.3
baz=232
NEA2 Nenana 84.59 17 P P 13 43 24.4 -0.7
baz=222,SNR=25
CTG Chitna Glacier 84.63 23 P P 13 43 25.1 -0.4
baz=230,SNR=28
CIS Catalina Islan 84.68 54 P P 13 43 26.5 +0.2
baz=250
SIT Sitka 84.73 28 P P 13 43 26.3 +0.5
baz=235
I02E Swisshome, OR 84.76 42 P P 13 43 26.7 +0.4
baz=246
WRH Wood River Hil 84.79 18 P P 13 43 25.7 -0.4
WRH IAmb IAmb 13 43 27.0
comp=Z,120nm,1.2s
CRAG Craig 84.87 30 P P 13 43 26.3 -0.3
baz=237
FMP Fort Macarthur 84.89 54 P P 13 43 27.3 0.0
baz=250
LSA Lhasa 84.90 302 P P 13 43 28.9 +0.9
I03D Drain, OR 84.92 43 P P 13 43 27.6 +0.4
baz=246
I23K Minto, Yukon-K 84.92 17 P P 13 43 26.7 +0.1
I23K Minto, Yukon-K 84.92 17 P P 13 43 26.3 -0.4
baz=222,SNR=25
VOG Valley Oaks Go 84.95 51 P P 13 43 27.0 -0.5
baz=249
ARVC Arvin 84.95 52 P P 13 43 27.5 0.0
baz=250
M26K Nabesna, AK 84.98 21 P P 13 43 26.7 -0.4
baz=228,SNR=52
VES Vestal, Richgr 85.00 52 P P 13 43 27.6 -0.2
baz=250
K24K Donnelly Dome 85.02 19 P P 13 43 27.3 0.0
baz=226,SNR=29
L04D Klamath Falls 85.03 45 P P 13 43 28.3 +0.3
baz=247,SNR=14
HDA Harding Lake 85.09 18 P P 13 43 27.4 -0.2
baz=224,SNR=103
TCOL CIGO, UAF Yank 85.15 18 P P 13 43 27.3 -0.5
baz=224,SNR=28
COLA College 85.16 18 P P 13 43 27.9 +0.1
COLA IAmb IAmb 13 43 28.7
comp=Z,101nm,1.0s
COLA College 85.16 18 *c i* P P 13 43 27.1 -0.7
COLA pmax pmax
comp=Z,118nm,1.1s
COLA College 85.16 18 P P 13 43 27.3 -0.6
baz=224
RIDG Independent Ri 85.28 19 P P 13 43 28.2 -0.4
baz=226,SNR=47
L26K Log Cabin Wild 85.28 20 P P 13 43 28.3 -0.3
baz=228,SNR=22
M27K Edge Creek, AK 85.35 21 P P 13 43 29.0 -0.1
baz=229
ILAR Eielson Array 85.37 18 P P 13 43 28.1 -0.9
comp=Z,23nm,0.6s,baz=240,slow=5.2,SNR=266
ILAR pP **pP** 13 44 15.6 -4.0
comp=Z,20nm,0.9s,baz=240,slow=5.4,SNR=3.4
ILAR PKiKP **PKiKP** 13 48 37.2 -1.0
comp=Z,0.6nm,0.7s,baz=275,slow=2.7,SNR=4.8
ILAR PKPPKP **P'P'df** 14 09 32.5 -5.4
comp=Z,1.1nm,0.9s,baz=332,slow=3.3,SNR=6.3
comp=Z,23nm,0.6s
ILAR Eielson Array 85.37 18 P P 13 43 28.4 -0.5
ILAR Eielson Array 85.37 18 P P 13 43 28.4 -0.5
H23K Yukon River 85.38 16 P P 13 43 29.2 +0.2
baz=222,SNR=69
ISA Isabella, Lake 85.41 52 P P 13 43 30.2 +0.3
baz=250,SNR=8.5
YUK8 Steele Glacier 85.43 23 P P 13 43 29.4 -0.2
baz=231,SNR=37
POKR Poker Flat Res 85.45 18 P P 13 43 28.4 -1.0
baz=224,SNR=11
YUK3 Moose Creek 85.48 22 P P 13 43 29.0 -0.8
baz=230,SNR=36
BEKR Beckworth 85.50 47 P P 13 43 30.6 +0.2
EDW2 Edwards Air Fo 85.51 53 P P 13 43 31.0 +0.5
baz=250,SNR=12
BFSC Mount Baldy Ra 85.56 53 P P 13 43 30.9 +0.1
baz=250,SNR=12
J04D Umpqua Nationa 85.56 44 P P 13 43 30.9 +0.2
baz=247,SNR=9.1
K04D Chiloquin, OR 85.57 44 P P 13 43 30.9 +0.3
baz=247
I04A Tendick Farm, 85.58 43 P P 13 43 30.7 +0.1
baz=247,SNR=6.0
H04D Lebanon 85.65 42 P P 13 43 30.3 -0.5
baz=246
PLBC Pleasant Camp 85.66 25 P P 13 43 29.6 -0.8
baz=230,SNR=6.5
MURC Murrieta 85.71 54 P P 13 43 30.9 -0.5
baz=251
SCRK Sand Creek 85.72 19 P P 13 43 30.8 0.0
SCRK IAmb IAmb 13 43 32.6
comp=Z,37nm,1.0s
SCRK Sand Creek 85.72 19 P P 13 43 30.4 -0.4
baz=227,SNR=49
J25K Salcha River, 85.72 19 P P 13 43 30.6 -0.2
J25K IAmb IAmb 13 43 32.2
comp=Z,62nm,1.2s
J25K Salcha River, 85.72 19 P P 13 43 30.2 -0.5
baz=226,SNR=56
BVCY Beaver Creek 85.75 22 P P 13 43 30.5 -0.4
baz=230,SNR=6.9
WRAK Wrangell Islan 85.75 29 P P 13 43 30.0 -0.9
baz=238
YUK6 Outpost Mounta 85.75 23 P P 13 43 30.4 -0.8
baz=232
P30M Million Dollar 85.81 25 P P 13 43 30.9 -0.4
baz=234
MLAC Mammoth, Mammo 85.81 50 P P 13 43 32.1 +0.1
baz=250
L27K Beaver Creek, 85.83 21 P P 13 43 30.7 -0.6
baz=229,SNR=16
H24K Noodor Dome 85.85 17 P P 13 43 30.0 -1.4
baz=224,SNR=16
YUK4 Talbot Arm 85.89 23 P P 13 43 31.6 -0.2
baz=232,SNR=8.3
LRMC Laurel Mtn Rad 85.95 52 P P 13 43 32.7 0.0
baz=250
CWC Cottonwood Cre 85.97 51 P P 13 43 32.6 -0.2
baz=250
HYT Haines Junctio 86.02 24 P P 13 43 31.6 -0.8
baz=233,SNR=8.3
TIN Tinemaha, Big 86.07 51 P P 13 43 33.5 +0.3
baz=250
MONP2 Monument Peak 86.09 55 P P 13 43 34.2 +0.7
baz=251,SNR=12
SKAG Skagway 86.10 26 P P 13 43 32.1 -0.4
baz=235,SNR=5.7
BBRC Big Bear Solar 86.14 54 P P 13 43 33.4 -0.4
baz=251
J05D Fort Rock, OR 86.17 44 P P 13 43 34.3 +0.7
baz=248,SNR=27
J26L Joseph Creek 86.21 19 P P 13 43 33.8 +0.6
J26L Joseph Creek 86.21 19 P P 13 43 33.3 +0.1
baz=228,SNR=19
COLD Coldfoot 86.25 15 P P 13 43 34.4 +1.1
baz=221
IKP In-Ko-Pah, Jac 86.27 55 P P 13 43 34.9 +0.7
baz=252
RRX Edison Barstow 86.28 53 P P 13 43 34.1 0.0
baz=251
MPMC Manual Prospec 86.30 52 P P 13 43 34.7 +0.3
baz=250,SNR=13
PFO Pinyon Flats O 86.30 54 P P 13 43 34.6 +0.3
baz=251,SNR=6.2
K27K Chicken 86.38 20 P P 13 43 34.1 +0.2
baz=229
RYN Ryan 86.39 49 P P 13 43 36.0 +1.2
YUH Yuha Desert 86.42 55 P P 13 43 35.6 +0.8
MOY Mondy 86.42 325 *eP* P 13 43 34.5 -0.1
MOY pmax pmax
comp=Z,62nm,1.8s
NVAR Mina Array Bea 86.48 49 P P 13 43 36.3 +1.0
comp=Z,9.4nm,0.8s,baz=232,slow=8.4,SNR=57
NVAR pP **pP** 13 44 21.9 -4.0
comp=Z,5.9nm,0.9s,baz=236,slow=6.1,SNR=2.8
NVAR PKKPbc **PKKPbc** 14 01 32.6 +0.4
comp=Z,1.8nm,0.7s,baz=73,slow=3.5,SNR=7.9
NVAR PKPPKP **P'P'df** 14 09 38.0 +0.2
comp=Z,4.0nm,0.9s,baz=101,slow=3.2,SNR=12
comp=Z,9.4nm,0.8s
I05D Terrebonne, OR 86.50 43 P P 13 43 35.3 +0.3
baz=248,SNR=7.9
O30N Mendenhall 86.54 24 P P 13 43 34.8 -0.1
baz=234,SNR=8.2
N30M Aishikik Lake 86.56 23 P P 13 43 34.4 -0.5
baz=234
GSC Goldstone, Bar 86.57 53 P P 13 43 36.1 +0.4
baz=251,SNR=5.9
SWSC Sam W. Stewart 86.61 55 P P 13 43 36.2 +0.5
baz=252,SNR=5.6
D03D Eldon 86.64 40 P P 13 43 36.1 +0.5
baz=246
GRAC Grapevine Rang 86.70 51 P P 13 43 36.5 +0.3
baz=250,SNR=9.6
BELC Belle Mtn. Jos 86.78 54 P P 13 43 37.2 +0.4
baz=252,SNR=19
HEC Hector,Ludlow 86.78 53 P P 13 43 36.9 +0.3
baz=251
KVN Kaiserville 86.85 49 P P 13 43 37.2 +0.2
KVN Kaiserville 86.85 49 P P 13 43 37.2 +0.2
KVN pmax pmax
comp=Z,18nm,1.1s
P32M Atlin 86.85 26 P P 13 43 34.4 -1.9
baz=237
G05D Wamic, OR 86.86 42 P P 13 43 33.7 -3.0
baz=247
I26K Coal Creek Min 86.88 19 P P 13 43 35.9 -0.4
baz=228
FURC Furnace Creek, 86.91 52 P P 13 43 37.5 +0.4
baz=251,SNR=13
WHY Whitehorse 86.97 25 P P 13 43 37.2 +0.3
baz=236
T35M Bob Quinn 87.03 29 P P 13 43 37.0 -0.2
baz=240
N31M Braeburn, Yuko 87.08 24 P P 13 43 36.4 -1.1
baz=235,SNR=8.5
BC3 Big Chuckawall 87.11 55 P P 13 43 38.9 +0.6
baz=252,SNR=9.2
SHOC Shoshone, Teco 87.17 52 P P 13 43 38.2 -0.2
baz=251
ODAN Odare 87.21 298 *eP* P 13 43 38.0 -1.1
comp=Z,25nm,1.0s
GMRC Granite Mounta 87.30 53 P P 13 43 39.5 +0.4
baz=252,SNR=12
TUQ Turquoise Moun 87.30 53 P P 13 43 39.3 +0.1
baz=252
DAWY Dawson 87.31 21 P P 13 43 37.9 -0.6
baz=231,SNR=18
M30M Minto, Yukon 87.33 23 P P 13 43 37.5 -1.1

baz=234,SNR=12
GLA Glamis 87.42 55 P P 13 43 40.6 +0.9
baz=252,SNR=7.6
TOLK Toolik Lake Re 87.48 15 P P 13 43 39.9 +0.7
TOLK IAmb IAmb 13 43 41.0
comp=Z,20nm,0.8s
TOLK Toolik Lake Re 87.48 15 P P 13 43 39.7 +0.5
baz=222
IRM Iron Mountain 87.50 54 P P 13 43 40.8 +0.7
baz=252,SNR=16
TPNV Topopah Spring 87.53 51 P P 13 43 40.7 +0.4
baz=251,SNR=11
P33M Teslin, Yukon 87.57 26 P P 13 43 41.3 +1.5
baz=237
WVOR Wild Horse Val 87.64 45 P P 13 43 41.0 +0.4
DLBC Dease Lake 87.87 28 P P 13 43 40.4 -0.8
baz=240
BMAR Burnt Mountain 87.91 17 P P 13 43 42.4 +1.2
RAMN Ramite 87.91 298 eP P 13 43 42.4 0.0
comp=Z,56nm,0.7s
BELA Belgrano 2 87.94 175 P P 13 43 41.4 +0.1
N32M Quiet Lake 87.97 25 P P 13 43 40.6 -1.0
baz=237
M31M Drury Creek, Y 88.03 24 P P 13 43 39.9 -2.0
baz=236
A21K Barrow 88.08 11 P P 13 43 42.7 +0.9
baz=215
NEE2 Needles Airpor 88.11 54 P P 13 43 43.7 +0.8
baz=252
PDMCI Parker Dam,Lak 88.34 54 P P 13 43 44.5 +0.5
baz=253,SNR=8.9
FARO Faro, Yukon 88.45 24 P P 13 43 43.9 0.0
baz=237
JIRN Jiri 88.46 299 eP P 13 43 45.0 -0.1
R11A Troy Canyon, C 88.47 50 P P 13 43 45.2 +0.4
baz=252,SNR=16
I29M Ogilvie Camp, 88.48 20 P P 13 43 44.5 +0.6
baz=232
214A Organ Pipe Nat 88.72 57 P P 13 43 46.6 +0.8
baz=253
TIXI Tiksi 88.77 349 P P 13 43 45.1 0.0
TIXI IAmb IAmb 13 43 46.1
comp=Z,42nm,0.9s
TIXI Tiksi 88.77 349 ceP P 13 43 44.8 -0.3
TIXI pmax pmax
comp=Z,48nm,0.9s
GUN Gumba 88.79 299 eP P 13 43 46.6 -0.1
PKI Pulchoki 89.10 298 eP P 13 43 47.8 -0.3
comp=Z,141nm,1.1s
PKIN Phulchoki 89.11 298 eP P 13 43 47.7 -0.4
comp=Z,100nm,1.0s
DMN Daman 89.37 298 eP P 13 43 49.4 +0.1
comp=Z,223nm,1.1s
ELK Elko 89.48 48 P P 13 43 50.0 +0.5
MMPY Sheldon Lake, 89.48 24 P P 13 43 47.6 -1.1
baz=239
EPYK Eagle Plains 89.61 20 P P 13 43 48.4 -0.9
baz=234,SNR=8.9
LCMT Little Creek M 89.84 52 P P 13 43 52.0 +0.9
LCMT IAmb IAmb 13 43 53.3
comp=Z,24nm,1.0s
SMAI San Martin Ant 89.84 162 P P 13 43 51.6 +1.3
SMAI IAmb IAmb 13 43 52.4
comp=Z,51nm,0.9s
GKN Gorkha 89.87 299 eP P 13 43 50.8 -0.7
TGTN Hyland Airport 90.16 26 P P 13 43 51.3 -0.5
baz=241
TUC Tucson 90.47 57 P P 13 43 54.2 +0.1
TUC Tucson 90.47 57 P P 13 43 54.2 +0.1
TUC pmax pmax
comp=Z,18nm,1.0s
TUC Tucson 90.47 57 P P 13 43 55.1 +1.0
baz=254
NEW Newport 90.64 40 P P 13 43 54.4 0.0
NEW Newport 90.64 40 P P 13 43 54.5 +0.1
baz=250,SNR=7.5
DANN Dangsing 90.71 299 eP P 13 43 54.6 -0.9
WUAZ Wupatki 90.87 54 P P 13 43 56.7 +0.7
baz=254
HLID Hailey 90.93 45 P P 13 43 56.7 +0.6
baz=252,SNR=18
DUG Dugway, Tooele 91.08 49 P P 13 43 57.8 +1.0
DUG Dugway, Tooele 91.08 49 P P 13 43 57.1 +0.3
baz=253
INK Inuvik 91.73 19 P P 13 43 57.3 -1.6
comp=Z,1.1nm,0.7s,baz=240,slow=7.6,SNR=5.8
INK Inuvik 91.73 19 P P 13 43 57.9 -1.0
baz=237
WMQ Urumqi 91.86 315 ⇑P P 13 44 00.8 +0.6
WMQ pmax pmax
comp=Z,59nm,1.3s
WMQ pmax pmax
comp=Z,370nm,4.7s
W18A Petrified Fore 92.05 55 P P 13 43 60.0 -1.5
baz=255
MSO Missoula 92.23 42 P P 13 44 01.1 -0.8
baz=253
HYBB Hyderabad (bro 92.75 287 esP sP 13 45 16.0 -2.5
121A Cookes Peak, D 92.98 57 P P 13 44 06.5 +0.7
baz=256
121A Cookes Peak, D 92.98 57 P P 13 44 05.7 -0.1
baz=256
BOZ Bozeman (W) 93.42 44 P P 13 44 07.9 +0.4
baz=254,SNR=6.2
H17A Grant Village 93.83 45 P P 13 44 10.5 +1.0
baz=255
PV15 Paradox Valley 93.83 52 P P 13 44 09.6 -0.1
Y22A Socorro 93.98 56 P P 13 44 11.3 +1.0
baz=256
TROLL Troll, Antarti 94.08 185 P P 13 44 10.5 +0.5
BW06 Boulder Array 94.13 47 P P 13 44 10.6 -0.3
baz=256
PDAR Pinedale Array 94.13 47 P P 13 44 10.3 -0.6
comp=Z,0.6nm,0.6s,baz=209,slow=4.3,SNR=7.8
PDAR PKKPbc PKKPdf 14 01 11.7 -0.5
comp=Z,2.7nm,0.7s,baz=97,slow=5.1,SNR=5.6
PDAR PKPPKP P'P'df 14 09 23.4 0.0
comp=Z,0.8nm,0.8s,baz=108,slow=2.9,SNR=4.9
PDAR Pinedale Array 94.13 47 P P 13 44 09.5 -1.4
CRNM Carthage 94.17 56 P P 13 44 11.9 +0.7
NVL N'lazarevskaya 94.26 188 ⇓iP P 13 44 10.0 -0.7
NVL e*PP pP 13 45 02.3 +0.4
NVL eS SKSac 13 54 22.9 -2.3
NVL pmax pmax
comp=Z,52nm,1.0s
BNM Barren Site 94.30 56 P P 13 44 11.9 0.0
O20A White River Ci 94.45 50 P P 13 44 12.2 -0.2
baz=256
ANMO Albuquerque 94.62 55 P P 13 44 12.8 -0.5
ANMO Albuquerque 94.62 55 iP P 13 44 12.6 -0.7
ANMO pmax pmax
comp=Z,6.0nm,1.1s
ANMO Albuquerque 94.62 55 P P 13 44 13.8 +0.5
baz=257
ANMO Albuquerque 94.62 55 P P 13 44 13.0 -0.3
baz=257
ZSN Zaisan 94.75 318 ceP P 13 44 12.0 -1.3
ZSN pmax pmax
comp=Z,16nm,0.8s
ZSN Zaisan 94.75 318 ⇑eP P 13 44 12.1 -1.3
comp=Z,16nm,0.8s,baz=318
SNAA Sanae 94.77 183 P P 13 44 13.1 0.0
SNAA Sanae 94.77 183 P P 13 44 12.5 -0.6
SNAA Sanae 94.77 183 ciP P 13 44 13.1 0.0
SNAA pmax pmax
comp=Z,54nm,1.0s
MNTX Cornudas Mount 94.77 59 P P 13 44 14.6 +0.8
baz=257
MNTX Cornudas Mount 94.77 59 P P 13 44 13.8 -0.1
baz=257
RLMT Red Lodge 94.91 45 P P 13 44 15.0 +0.6
RLMT Red Lodge 94.91 45 P P 13 44 13.7 -0.7
baz=256
S22A 4UR Ranch, Cre 94.96 53 P P 13 44 15.3 +0.4
S22A 4UR Ranch, Cre 94.96 53 P P 13 44 15.3 +0.4
baz=257
SMCO Snowmass 95.18 51 P P 13 44 16.3 +0.3
C36M Paulatuk 95.24 19 P P 13 44 13.8 -1.2
baz=246
EGMT Eagleton 95.29 42 P P 13 44 15.3 -0.6
baz=256
VNA3 Neumayer Olymp 95.44 181 P P 13 44 16.0 -0.1
TX31 Lajitas Ar. Si 95.71 61 P P 13 44 18.7 +0.4
TX31 IAmb IAmb 13 44 25.8
comp=Z,16nm,1.3s
TX31 Lajitas Ar. Si 95.71 61 P P 13 44 18.9 +0.7
baz=258
TX32 Lajitas Array 95.71 61 P P 13 44 18.5 +0.3
TXAR Lajitas Array 95.71 61 P P 13 44 19.0 +0.7
comp=Z,1.3nm,0.7s,baz=223,slow=7.1,SNR=20
TXAR PP PP 13 48 13.4 +0.5
comp=Z,6.6nm,1.1s,baz=233,slow=6.1,SNR=18
comp=Z,1.3nm,0.7s
TXAR Lajitas Array 95.71 61 P P 13 44 19.0 +0.7
SDCO Great Sand Dun 95.99 53 P P 13 44 19.3 -0.3
baz=258
VNA1 Neumayer--Stat 96.00 182 P P 13 44 18.7 +0.1
A36M Sachs Harbour 96.01 17 P P 13 44 18.2 -0.2
baz=245
K22A Casper 96.28 48 P P 13 44 20.3 -0.3
baz=258
MK31 Makanchi Array 96.31 316 P P 13 44 20.2 -0.2
MK31 Makanchi Array 96.31 316 ciP P 13 44 20.3 -0.2
MKAR Makanchi Array 96.31 316 P P 13 44 20.6 +0.2
comp=Z,23nm,0.6s,baz=91,slow=6.3,SNR=198
MKAR pP pP 13 45 08.6 -3.4
comp=Z,4.1nm,0.7s,baz=97,slow=5.2,SNR=2.5
MKAR PKiKP PKiKP 13 48 57.1 -0.2
comp=Z,2.2nm,0.6s,baz=183,slow=0.8,SNR=15
MKAR PKKPbc PKKPbc 14 01 05.0 -2.2
comp=Z,2.4nm,0.7s,baz=273,slow=3.4,SNR=15
comp=Z,23nm,0.6s
MKAR Makanchi Array 96.31 316 P P 13 44 20.3 -0.2
N23A Red Feather La 96.32 50 P P 13 44 21.5 +0.5
baz=258
ISCO Idaho Springs 96.34 51 P P 13 44 20.9 -0.3
ISCO Idaho Springs 96.34 51 P P 13 44 20.9 -0.3
ISCO pmax pmax
comp=Z,4.0nm,1.1s
ISCO Idaho Springs 96.34 51 P P 13 44 22.1 +1.0
baz=258
ISCO Idaho Springs 96.34 51 P P 13 44 21.6 +0.4
baz=258
ZAA0 Zalesovo Array 96.39 324 P P 13 44 19.5 -1.1
ZALV Zalesovo Beam 96.39 324 P P 13 44 19.8 -0.9
comp=Z,30nm,0.8s,baz=108,slow=4.8,SNR=86
ZALV PKiKP PKiKP 13 48 59.1 +2.0
comp=Z,1.9nm,0.6s,baz=116,slow=1.5,SNR=5.0
comp=Z,30nm,0.8s
YKA Yellowknife Ar 96.47 27 P P 13 44 20.0 -0.7
comp=Z,4.4nm,0.9s,baz=253,slow=4.2,SNR=13
YKA pP pP 13 45 08.2 -3.6
comp=Z,4.3nm,0.9s,baz=254,slow=4.8,SNR=3.7
YKA PKiKP PKiKP 13 48 59.1 +2.1
comp=Z,1.1nm,0.7s,baz=229,slow=1.1,SNR=3.9
comp=Z,4.4nm,0.9s
YKA Yellowknife Ar 96.47 27 P P 13 44 20.1 -0.6
MAKZ Makanchi 96.52 316 P P 13 44 21.1 -0.3
MAKZ Makanchi 96.52 316 ⇓P P 13 44 21.8 +0.4
T25A Trinidad 96.71 54 P P 13 44 22.4 -0.4
baz=258
SHLS Shalkode 97.51 312 eP P 13 44 22.6 -3.5
SHLS Shalkode 97.51 312 eP P 13 44 22.6 -3.5
baz=313
UZB Uzynbulak 97.82 312 eP P 13 44 25.5 -2.0
UZB Uzynbulak 97.82 312 eP P 13 44 25.6 -2.0
baz=312
KPKS Kokpek 98.12 313 ceP P 13 44 26.5 -2.3
KPKS pmax pmax
comp=Z,12nm,1.6s
KPKS Kokpek 98.12 313 ⇑eP P 13 44 26.5 -2.3
comp=Z,12nm,1.6s,baz=313
SATY Saty 98.25 312 eP P 13 44 27.0 -2.4
SATY Saty 98.25 312 eP P 13 44 27.1 -2.4
baz=312
RSSD Black Hills 98.35 47 P Pdif 13 44 30.3 +0.3
baz=259
TARG Taragay, Kyrgy 98.44 311 P P 13 44 30.6 -0.1
TARG Taragay, Kyrgy 98.44 311 P P 13 44 30.6 -0.1
TARG pmax pmax
comp=Z,8.0nm,1.2s
AMTX Amarillo 98.45 56 P Pdif 13 44 30.8 +0.4
baz=260
TDK Taldyqorghan 98.60 314 eP P 13 44 28.9 -1.9
TDK Taldyqorghan 98.60 314 eP P 13 44 28.9 -1.9
baz=314
NRIK Noril'sk 98.92 339 P P 13 44 31.1 -0.5
comp=Z,32nm,0.9s,baz=110,slow=4.3,SNR=30
comp=Z,32nm,0.9s
NRIK Noril'sk 98.92 339 P P 13 44 30.7 -0.9
KDJ Kajisay 98.97 311 Pdif 13 44 32.6 -0.2
KDJ Kajisay 98.97 311 P Pdif 13 44 32.6 -0.1
KDJ pmax pmax
comp=Z,6.0nm,0.9s
KUU Kurty 99.87 313 eP Pdif 13 44 34.9 -1.6
KUU pmax pmax
comp=Z,4.0nm,0.9s
KUU Kurty 99.87 313 eP Pdif 13 44 34.9 -1.6
comp=Z,4.5nm,0.9s,baz=313
WMOK Wichita Mounta 100.78 57 P Pdif 13 44 41.9 +1.1
baz=261
IUG luzhnay 104.24 310 ePKiKP PKiKP 13 49 10.1 -1.7
baz=310
ULM Lac du Bonnet 104.63 41 PKiKP PKiKP 13 49 10.7 -1.4
comp=Z,1.3nm,0.4s,baz=248,slow=4.8,SNR=4.2
W41B Gary Mavity, V 106.16 57 P PKiKP 13 49 14.7 -0.6
baz=265
MSEY Mahe Island 109.93 260 P PKiKP 13 49 23.2 +0.1
SVE Sverdlovsk 110.28 326 ePKiKP PKiKP 13 49 23.0 +0.6
ARU Arti 111.47 326 iPKiKP PKiKP 13 49 24.2 -0.5
ARU 13 50 12.2
ARU 13 56 11.9
ARU SS SS 14 05 19.0 -7.6
NOR Nord 111.85 1 iP PKiKP 13 49 24.2 -0.6
WSAR Wadi Sarin 112.13 290 PKKPbc PKKPbc 14 00 19.9 +1.1
comp=Z,3.9nm,0.6s,baz=265,slow=14,SNR=4.4
GEYT Alibeck 113.21 306 PKiKP PKiKP 13 49 29.1 +0.5
comp=Z,11nm,0.8s,baz=218,slow=9.4,SNR=13
SOHO SOHO 114.12 291 iP PKPdf 13 49 30.4 -0.3
SNR=12
BANOM Banah 114.46 292 P PKPdf 13 49 30.5 -0.9
UOSS Minazif 114.48 291 P PKPdf 13 49 30.5 -1.0
HATD Hatta, Dubai 114.54 291 iP PKiKP 13 49 32.0 +0.4
SNR=12
MSFE Esma-Masafi 114.55 292 P PKPdf 13 49 31.2 -0.4
ASHO Ashiyiah 114.60 291 iP PKPdf 13 49 31.2 -0.5
SNR=9.1
SHME Shamm 114.61 293 P PKPdf 13 49 31.1 -0.5
ALNE Al Ain 114.83 290 P PKiKP 13 49 32.3 +0.2
NAZ Nazwa, Dubai 114.98 291 P PKPdf 13 49 32.4 0.0
O53A New Philadelph 115.00 52 P PKiKP 13 49 30.7 -1.2
baz=273
ASUD Al Ashush, Dub 115.25 291 P PKiKP 13 49 33.1 +0.2
M53A WI Miller and 115.33 50 P PKPdf 13 49 31.4 -1.2
baz=274
UPNV Upernavik 115.59 13 iP PKPdf 13 49 31.0 -1.2
UPNV IAMs_20 IAMs_20 14 22 30.9
comp=Z,919nm,22.7s
PRGR Permogore 116.58 333 ePKiKP PKPdf 13 49 33.4 -0.9
PRGR pmax pmax
comp=Z,67nm,1.0s
DAG Danmarks Havn 116.65 2 iP PKPdf 13 49 32.3 -1.8
DAG IAMs_20 IAMs_20 14 31 20.3
comp=Z,1μm,22.7s
MZR Muzera 116.84 289 iP PKiKP 13 49 36.4 +0.4
SNR=9.7
SSPA Standing Stone 117.50 51 P PKPdf 13 49 36.0 -0.8
baz=276
LVZ Lovozero 117.64 342 ⇑PKiKP PKiKP 13 49 36.6 +0.3
LPAZ La Paz 117.78 117 PKP PKiKP 13 49 39.2 +0.4
comp=Z,5.9nm,0.7s,baz=277,slow=1.4,SNR=14
LPAZ PKKPbc PKKPbc 13 59 59.4 -0.8
comp=Z,2.3nm,0.7s,baz=38,slow=3.7,SNR=3.8
APA Apatity 118.22 342 ⇓iPKiKP PKPdf 13 49 34.2 -3.1
APA pmax pmax
comp=Z,22nm,1.1s
BELG Belogornoye 118.55 323 iPKiKP PKiKP 13 49 38.5 +0.1
BELG pmax pmax
comp=Z,31nm,1.0s
HAMF Hammerfest 118.66 347 eP PKPdf 13 49 37.9 -0.2
BINY Binghamton 118.73 49 P PKPdf 13 49 37.9 -1.2
baz=278
SUMG Summit 119.03 9 iP PKPdf 13 49 39.3 0.0
DBG Daneborg 119.06 2 iP PKPdf 13 49 37.3 -1.4
DBG IAMs_20 IAMs_20 14 30 08.5
comp=Z,1μm,21.6s
ARA0 ARCESS Array S 119.06 346 eP PKiKP 13 49 39.0 0.0
ARCES ARCESS Array B 119.06 346 PKP PKiKP 13 49 39.0 0.0
comp=Z,26nm,0.6s,baz=71,slow=2.0,SNR=190
ARCES PKKPbc PKKPab 13 59 53.7 -1.9
comp=Z,9.9nm,0.7s,baz=230,slow=1.9,SNR=10
ARCES ARCESS Array B 119.06 346 PKiKP PKiKP 13 49 39.0 0.0
LONY Lake Ozonia 119.36 46 P PKPdf 13 49 39.2 -1.0
baz=280
KLMR Klimovskoe 119.58 334 ePKiKP PKPdf 13 49 37.5 -2.6
KLMR pmax pmax
comp=Z,49nm,1.0s
KLMR Klimovskoe 119.58 334 ePKPdf PKPdf 13 49 37.6 -2.6
KLMR AMP 13 49 41.8
comp=Z,49nm,1.0s
KLMR ePKKPbc PKKPab 13 59 50.1 -3.4
KTK1 Kautokeino 120.00 346 eP PKPdf 13 49 40.3 -0.5
RODS Rosario do Sul 120.25 138 eP PKPdf 13 49 40.8 -1.7
PAL Palisades 120.45 50 P PKPdf 13 49 41.7 -0.7
baz=279
TRO Tromso 120.47 348 eP PKPdf 13 49 41.2 -0.3
TBTG Tabatinga, AM 120.61 103 eP PKPdf 13 49 42.2 -1.3
MAK Makhachkala 120.78 312 iP Pdif 13 46 07.1 -2.3
MAK i 13 49 39.8
MAK e 13 51 11.9
MAK ePPP PPP 13 53 48.8
MAK e 13 56 13.3
MAK eSS SS 14 07 29.1 +0.6
MAK eSSS SSS 14 11 53.4
MAK pmax pmax
comp=Z,410nm,1.4s
L61B Northampton 121.11 48 P PKPdf 13 49 42.1 -1.6
baz=281
UNIS Unistalda (Bra 121.16 136 eP PKPdf 13 49 42.5 -1.7
SCHQ Schefferville 121.29 33 PKP PKPdf 13 49 42.9 -0.8
comp=Z,6.3nm,0.6s,baz=332,slow=1.2,SNR=7.6
CPUP Villa Florida 121.29 133 PKP PKPdf 13 49 44.5 0.0
comp=Z,9.5nm,0.8s,baz=257,slow=2.1,SNR=17
CPUP Villa Florida 121.29 133 eP PKPdf 13 49 43.0 -1.5
LBNH Lisbon 121.30 46 P PKPdf 13 49 43.7 -0.3
baz=282
CPSB Cacapava Do Su 121.36 139 eP PKPdf 13 49 43.3 -1.3
ICESG Greenland Ices 121.86 11 iP PKPdf 13 49 42.9 -1.8
HRV Adam Dziewonsk 121.92 48 PKiKP PKiKP 13 49 45.3 -0.1
HRV Adam Dziewonsk 121.92 48 P PKPdf 13 49 44.7 -0.5
baz=282
GROC Groznyy 121.97 313 iPKiKP PKPdf 13 49 45.3 0.0
GROC e 13 51 21.5
GROC e 13 56 35.3
GROC pmax pmax
comp=Z,60nm,0.7s
ETMB Extrema 122.10 111 eP PKPdf 13 49 44.5 -1.8
VRH Novokhopyorsk 122.41 323 ePKiKP PKPdf 13 49 45.9 +0.1
VRH pmax pmax
comp=Z,160nm,0.8s
STEI Steigen 122.64 348 eP PKPdf 13 49 45.7 -0.1
NUUK Nuuk 122.66 19 iP PKPdf 13 49 45.2 -0.7
SCO Scoresbysund 122.76 4 iP PKPdf 13 49 45.9 -0.1
SCO IAMs_20 IAMs_20 14 28 40.1
comp=Z,3μm,22.0s
LOF Lofoten 122.81 349 eP PKiKP 13 49 46.3 0.0
MOS Moscow 122.83 329 iPKiKP PKPdf 13 49 45.5 -1.0
MOS e 13 50 43.3
MOS e 13 51 23.6
MOS pmax pmax
comp=Z,84nm,0.8s
PKME Peaks-Kenny Pk 122.88 45 P PKPdf 13 49 47.0 0.0
baz=285
FAUS Fauske 123.09 347 eP PKPdf 13 49 46.4 -0.3
GNI Garni 123.35 309 eP PKiKP 13 49 49.4 +0.9
GNI Garni 123.35 309 ciPKiKP PKiKP 13 49 48.7 +0.2
GNI Garni 123.35 309 P PKiKP 13 49 49.4 +0.9
ZEI Tsey 123.41 313 iPKiKP PKPdf 13 49 48.4 +0.1
ZEI pmax pmax
comp=Z,27nm,0.9s
LPSR Galich'ya Gora 123.49 325 ePKiKP PKiKP 13 49 48.4 +0.3
LPSR pmax pmax
comp=Z,130nm,1.0s
OBN Obninsk 123.65 328 iPKiKP PKPdf 13 49 47.7 -0.4
OBN pmax pmax
comp=Z,71nm,1.2s
VORR Voronezh 123.70 324 ePKiKP PKiKP 13 49 49.1 +0.5
VORR pmax pmax
comp=Z,130nm,0.6s
KBZ Khabaz 123.90 314 PKP PKiKP 13 49 49.4 +0.2
comp=Z,14nm,0.8s,baz=144,slow=2.1,SNR=21
KBZ Khabaz 123.90 314 iPKiKP PKiKP 13 49 49.3 +0.1
KBZ pmax pmax
comp=Z,4.0nm,0.8s
VSR Storozhevoye 123.90 323 ePKiKP PKPdf 13 49 48.8 +0.1
VSR pmax pmax
comp=Z,80nm,0.7s
SIV San Ignacio 123.96 120 PKP PKPdf 13 49 49.9 0.0
comp=Z,12nm,0.7s,baz=245,slow=2.1,SNR=6.5
KIV Kislovodsk 123.99 314 ⇑P PKiKP 13 49 50.5 +0.9
KIV Kislovodsk 123.99 314 eP PKiKP 13 49 49.6 0.0
KIV Kislovodsk 123.99 314 iPKiKP PKiKP 13 49 49.5 0.0
KIV e 13 51 35.2
KIV ePS PS 14 01 36.1 -1.1
KIV eSS SS 14 08 06.6 -2.6
KIV pmax pmax
comp=Z,28nm,1.1s
AKH Akhalkalaki 124.02 311 ⇑P PKiKP 13 49 51.0 +1.2
AKH Akhalkalaki 124.02 311 eP PKiKP 13 49 50.7 +0.9
SHA1 Shidzhatmaz 124.06 314 iPKiKP PKiKP 13 49 49.8 -0.1
CLDR Caldiran 124.16 308 eP PKiKP 13 49 51.1 +0.9
RAYN Ar Rayn 124.19 289 ⇓PKiKP PKiKP 13 49 51.2 +0.7
RAYN Ar Rayn 124.19 289 iP PKiKP 13 49 50.8 +0.3
SNR=30
SUR Sutherland 124.21 214 PKP PKiKP 13 49 51.1 +0.5
comp=Z,48nm,1.0s,baz=71,slow=4.0,SNR=11
BOSA Boshof 124.29 221 PKP PKiKP 13 49 51.1 +0.4
comp=Z,43nm,0.9s,baz=144,slow=2.1,SNR=39
MOR8 Moi Rana 124.30 347 eP PKPdf 13 49 48.4 -0.7
KONS Konsvik 124.30 348 eP PKPdf 13 49 49.5 +0.2
FRBT Francisco Belt 124.51 135 eP PKPdf 13 49 49.2 -1.6
FINES FINESS Array B 124.58 339 PKP PKPdf 13 49 49.8 +0.1
comp=Z,52nm,0.9s,baz=93,slow=4.0,SNR=80
CHVG Ch'k'valeri 124.73 313 ⇑P PKiKP 13 49 51.1 +0.2
CHVG Ch'k'valeri 124.73 313 ⇑PKiKP PKiKP 13 49 51.1 +0.2
CUKT Cukurca 124.74 306 eP PKiKP 13 49 51.2 -0.1
AGRB Hanur-Agry 124.78 309 eP PKiKP 13 49 52.4 +1.0
ANTJ Antonio Joao (124.82 129 eP PKPdf 13 49 50.0 -1.5
AMBA Amambai (Brazi 125.03 131 eP PKPdf 13 49 49.6 -2.2
AKDM Akdamar-Van 125.03 307 eP PKiKP 13 49 52.5 +0.6
ISOG Isortoq, Green 125.04 13 iP PKPdf 13 49 49.0 -1.4
ISOG IAMs_20 IAMs_20 14 22 06.0
comp=Z,2μm,28.0s
TER01 Tubaro-SC 125.37 140 eP PKPdf 13 49 51.2 -1.2
VBST Vila Bela da S 125.55 119 eP PKPdf 13 49 50.9 -2.0
GURO Guroymak-BITLI 125.72 308 eP PKiKP 13 49 54.3 +1.1
PTLB Pontes e Lacer 125.85 121 eP PKPdf 13 49 52.0 -1.4
IVI Ivigtut 125.92 20 iP PKPdf 13 49 50.0 -2.2
IVI IAMs_20 IAMs_20 14 21 02.9
comp=Z,2μm,20.4s
AQDB Aquidauana 125.93 128 eP PKPdf 13 49 51.7 -1.8
PTGB Pitanga 126.01 135 eP PKPdf 13 49 52.2 -1.6
MEF Metsahovi 126.02 338 eP PKiKP 13 49 53.1 +0.2
VILB Vilhena 126.13 117 eP PKPdf 13 49 52.7 -1.4
SOC Sochi 126.16 314 iPKiKP PKPdf 13 49 52.1 -1.2
SOC e 13 51 47.4
SOC ePPP PPP 13 54 34.5
SOC ePS PS 14 01 54.1 -1.9
NSS Namsos 126.24 347 eP PKiKP 13 49 53.2 -0.1
VSU Vasula 126.30 336 iPKiKP PKPdf 13 49 53.2 +0.1
VSU pmax pmax
comp=Z,204nm,0.9s
VSU Vasula 126.30 336 eP PKiKP 13 49 53.5 0.0
RAF Rauma 126.36 340 eP PKPdf 13 49 53.2 +0.1
SVAN Silvan-Diyarba 126.44 308 eP PKiKP 13 49 55.1 +0.5
LBTB Lobatse 126.49 224 PKP PKiKP 13 49 55.1 -0.1
comp=Z,34nm,0.8s,baz=141,slow=4.1,SNR=38
BNGB Bingl 126.66 309 eP PKiKP 13 49 56.1 +1.1
TRCB Terra Rica 126.83 132 eP PKPdf 13 49 53.4 -1.9
NRS Narsarsuaq 126.86 19 iP PKPdf 13 49 53.0 -1.0
NRS IAMs_20 IAMs_20 14 20 37.1
comp=Z,2μm,23.0s
POCN Pocone 127.23 123 eP PKPdf 13 49 54.3 -1.8
MATP Matopo 127.26 231 PKP PKiKP 13 49 56.6 -0.2
comp=Z,51nm,0.9s,baz=128,slow=1.9,SNR=52
MTSE Matsula 127.27 337 eP PKiKP 13 49 55.9 +0.4
ANN Anapa 127.33 317 iPKiKP PKPdf 13 49 54.0 -1.4
ANN e 13 50 52.4
ANN pmax pmax
comp=Z,30nm,0.9s
PTET Porto Estrela 127.53 122 eP PKPdf 13 49 54.6 -2.1
TIJ01 Guaruva-PR 127.68 137 eP PKPdf 13 49 55.5 -1.4
SVRC Sivrice-ELAZID 127.84 308 eP PKiKP 13 49 58.2 +0.7
MNK Minsk 128.24 331 iPKiKP PKiKP 13 49 58.2 +0.7
MNK i 13 50 57.1

MNK *i* 13 52 04.8
MNK *i* PPP PPP 13 54 51.2
MNK *i* SS SS 14 09 02.0 +1.2
MNK *i* SSS SSS 14 13 46.8
MNK pmax pmax
comp=Z,61nm,1.0s
MNK pmax pmax
comp=E,3.0nm,0.9s
MNK pmax pmax
comp=N,21nm,0.9s
MNK MLR MLR
comp=E,178nm,17.0s
MNK MLR MLR
comp=Z,4µm,16.0s
MNK MLR MLR
comp=N,245nm,15.0s
MNK Minsk 128.24 331 *i* PKP **PKiKP 13 49 58.3 +0.7**
comp=E,3.0nm,0.9s
MNK *i* PKP **PKiKP 13 49 58.3 +0.7**
comp=N,21nm,0.9s
MNK *i* PKP **PKiKP 13 49 58.3 +0.7**
comp=Z,61nm,1.1s,baz=54
MNK *j* pPKP **pPKPdf 13 50 57.2 +6.6**
MNK *i* PP **PP 13 52 04.8 +1.5**
MNK *i* PPP PPP 13 54 51.2
MNK *i* SKS SKSdf 13 57 14.9 +26
MNK *i* SS **SS 14 09 02.1 +1.2**
MNK *i* SSS SSS 14 13 46.8
MNK *i* LRM MLR 14 45 10.7
MNK *i* LRM MLR 14 45 11.4
comp=N,245nm,15.5s
IDID Didziasalis 128.28 332 *e*P **PKiKP 13 49 58.4 +0.8**
KMBO Kilima Mbogo 128.36 258 PKP **PKiKP 13 49 60.0 +0.6**
comp=N,12nm,0.8s,baz=32,slow=5.0,SNR=14
KMBO Kilima Mbogo 128.36 258 *i* PKIKP **PKPdf 13 49 58.7 0.0**
KMBO Kilima Mbogo 128.36 258 *i* P **PKiKP 13 50 00.2 +0.9**
SNR=7.4
ISAL Salakas 128.39 333 *e*P **PKiKP 13 49 59.1 +1.3**
ARPR Arapgir-MALATY 128.40 309 *e*P **PKiKP 13 49 59.2 +0.6**
URFA Urfa 128.44 307 *e*P **PKPdf 13 49 55.8 -2.2**
IIGN Ignalina 128.49 333 *e*P **PKiKP 13 49 59.6 +1.6**
NACGM Naroch 128.51 332 ⇓*i*PKP **PKiKP 13 49 58.5 +0.5**
comp=Z,240nm,36.7s,baz=52
SJG San Juan 128.55 78 PKP **PKPdf 13 49 58.2 -0.3**
comp=Z,20nm,0.4s,baz=165,slow=4.3,SNR=5.3
PCMB Pacaembu 128.56 132 *e*P **PKPdf 13 49 56.4 -2.2**
FRTB Fartura 128.63 135 *e*P **PKPdf 13 49 57.0 -1.8**
RSDY Resadiye-TOKAT 128.79 311 *e*P **PKiKP 13 49 59.6 +0.4**
MOL Molde 128.91 348 *e*P **PKiKP 13 49 59.2 +0.5**
DOMB Dombas 129.06 347 *e*P **PKiKP 13 49 59.3 +0.2**
VSVD Vaisvydziai 129.07 334 *e*P **PKiKP 13 49 59.5 +0.3**
C2SB Chapadao do Su 129.12 128 *e*P **PKPdf 13 49 58.1 -1.6**
SVSK Karacayir 129.17 311 *e*P **PKiKP 13 50 00.5 +0.6**
DARE Darende-Malaty 129.18 309 *e*P **PKiKP 13 50 00.5 +0.4**
NBRS Nobres 129.21 121 *e*P **PKPdf 13 49 58.2 -1.8**
PABE Paberze 129.37 334 *e*P **PKiKP 13 50 00.1 +0.4**
AKN Aaknes 129.38 348 *e*P **PKiKP 13 49 59.7 +0.1**
NB2 NORSAR Subarra129.44 345 PKPdf **PKPdf 13 49 58.7 -0.4**
baz=31,slow=1.9
NB2 NORSAR Subarra129.44 345 PKPdf **PKPdf 13 49 58.7 -0.4**
comp=Z,63nm,1.7s,baz=31,slow=1.9
NOA NORSAR Array B129.44 345 PKhKP PKPpre 13 49 44.4
comp=Z,0.8nm,0.6s,baz=51,slow=1.9,SNR=4.3
NOA PKP **PKiKP 13 49 59.5 -0.4**
comp=Z,19nm,1.0s,baz=31,slow=2.0,SNR=41
NOA SKPbc SKPbc 13 53 04.0 +3.3
comp=Z,2.4nm,0.8s,baz=31,slow=3.2,SNR=6.5
SIM Simferopol' 129.47 318 *e*PKIKP **PKPdf 13 49 55.3 -4.3**
SIM pmax pmax
comp=Z,22nm,0.7s
KVT Kavak 129.51 313 *e*P **PKiKP 13 50 00.9 +0.3**
PET01 Itanhaem-SP 129.52 138 *e*P **PKPdf 13 49 58.8 -1.5**
NORES NORESS Array B 129.62 345 PKIKP **PKiKP 13 50 02.7 +2.6**
MACA Manacapuru-AM 129.64 106 *e*P **PKPdf 13 49 58.7 -2.2**
NAO01 NORSAR Array S 129.69 345 *e*P **PKiKP 13 50 00.5 +0.2**
AKASG Malin Array Be 129.71 326 PKP **PKPdf 13 49 59.8 0.0**
comp=Z,9.4nm,0.6s,baz=38,slow=2.3,SNR=66
AKASG SKPbc SKPbc 13 53 05.1 +3.0
comp=Z,6.5nm,0.8s,baz=38,slow=4.9,SNR=11
AKBB Malin Array Si 129.71 326 *i* PKIKP **PKPdf 13 49 59.1 -0.7**
PBUR Paburge 129.87 335 *e*P **PKiKP 13 50 01.3 +0.6**
SARI SarD1z-Kayseri 130.03 309 *e*P **PKiKP 13 50 01.7 -0.2**
BNN Bunyan 130.34 310 *e*P **PKiKP 13 50 02.2 -0.3**
LSZ Lusaka 130.43 236 PKP **PKiKP 13 50 03.0 -0.2**
comp=Z,22nm,0.7s,baz=95,slow=2.4,SNR=26
LSZ SKPbc **SKPab 13 53 09.4 +3.1**
comp=Z,70nm,1.0s,baz=134,slow=3.5,SNR=32
YOZ Yozgat 130.49 311 *e*P **PKPdf 13 50 02.1 +0.2**
RCLB Rio Claro- Sao 130.64 136 *e*P **PKPdf 13 50 00.6 -1.9**
SUW Suwalki 130.70 333 *e*PKP **PKPdf 13 50 01.9 +0.3**
SUW Suwalki 130.70 333 *e*P **PKiKP 13 50 02.2 -0.3**
KOZT Kozan 130.73 308 *e*P **PKiKP 13 50 02.7 -0.4**
CORM Corum 130.82 312 *e*P **PKiKP 13 50 03.4 0.0**
BB19B Bebedouro 130.85 134 *e*P **PKPdf 13 50 00.9 -2.1**
DVLD Doverlandia 130.87 126 *e*P **PKPdf 13 50 01.5 -1.6**
CLDB Colider 130.90 117 *e*P **PKPdf 13 50 01.5 -1.7**
KONO Kongsberg 131.05 345 PKIKP **PKPdf 13 50 02.0 -0.1**
PARB Paraibuna 131.26 138 *e*P **PKPdf 13 50 01.9 -1.9**
CMRD Camardi-Nigde 131.32 309 *e*P **PKiKP 13 50 04.5 0.0**
PURM Purcari 131.45 321 P **PKiKP 13 50 04.0 -0.2**
ODD1 Odda 131.51 347 *e*P **PKiKP 13 50 04.6 +0.6**
BOAV Boa Vista 131.51 99 *e*P **PKPdf 13 50 02.3 -2.0**
SORM Soroca 131.55 324 P **PKiKP 13 50 04.1 -0.3**
SORM Soroca 131.55 324 PKIKP **PKiKP 13 50 04.1 -0.3**
KLNR Kaliningrad 131.57 335 *i* PKIKP **PKPdf 13 50 03.3 +0.1**
KLNR pmax pmax
comp=Z,110nm,1.1s
SLP01 Ubatuba-SP 131.57 139 *e*P **PKPdf 13 50 02.0 -2.4**
BRTR Keskin Array B 131.69 312 PKP **PKPdf 13 50 04.1 -0.1**
comp=Z,10nm,0.8s,baz=127,slow=2.0,SNR=32
BRTR SKPbc **SKPab 13 53 12.7 +1.7**
comp=Z,14nm,0.9s,baz=124,slow=4.7,SNR=22
BRTR Keskin Array B 131.69 312 *e*P **PKPdf 13 50 03.7 -0.5**
KIS Kishinev 131.86 322 *e*PKP **PKPdf 13 50 04.0 0.0**
KIS Kishinev 131.86 322 *e*PKIKP **PKPdf 13 50 04.0 0.0**
MILM Milestii Mici 131.90 322 ⇑*i*PKP **PKPdf 13 50 04.0 -0.1**
comp=Z,130nm,1.1s
MILM Milestii Mici 131.90 322 P **PKiKP 13 50 04.6 -0.5**
MILM Milestii Mici 131.90 322*c i* PKIKP **PKPdf 13 50 04.0 -0.1**
MILM pmax pmax
comp=Z,130nm,1.1s
MERS Mersin 131.90 308 *e*P **PKPdf 13 50 04.9 +0.4**
BLS5 Blasjo 131.99 347 *e*P **PKiKP 13 50 06.0 +1.0**
AFSR Afar-Bala (An 132.20 311 *e*P **PKPdf 13 50 05.4 +0.3**
MMLI Mount Malkishu 132.25 302 *e*P **PKiKP 13 50 06.3 -0.1**
KIZK Mersin 132.31 307 *e*P **PKiKP 13 50 06.7 +0.4**
KMY Karmoy 132.44 348 *e*P **PKiKP 13 50 06.6 +0.7**
DEL Delary 132.50 340 *e*P **PKiKP 13 50 07.0 +0.9**
KEBE Keben-Mersin 132.65 307 *e*P **PKiKP 13 50 07.4 +0.3**
MAN01 Angra dos Reis 132.66 139 *e*P **PKPdf 13 50 04.3 -2.1**
TLCR 132.74 320 P **PKPdf 13 50 06.2 +0.5**
TLCR 132.74 320 PKIKP **PKPdf 13 50 06.2 +0.5**
SNART Snartemo 132.79 346 *e*P **PKiKP 13 50 06.6 0.0**
YUVA Yuva-Kibriscik 132.86 313 *e*P **PKPdf 13 50 06.6 +0.3**
VLDR Vladesti 132.87 321 ⇓P **PKiKP 13 50 07.2 +0.1**
LVV L'vov 132.95 328 *e*PKIKP **PKPdf 13 50 05.8 -0.2**
SCTR Scanteiesti 133.01 321 ⇑P **PKiKP 13 50 07.7 +0.2**
BERE Bereket-Mersin 133.06 307 *e*P **PKPdf 13 50 06.7 -0.1**
TPGR Topolog 133.15 320 ⇑P **PKiKP 13 50 07.2 -0.6**
EIL Elat 133.16 298 SKPbc **SKPab 13 53 18.5 +1.1**
EIL Elat 133.16 298 *e*P **PKiKP 13 50 07.7 -0.5**
CFR Carcaliu 133.17 321 ⇓P **PKiKP 13 50 07.3 -0.5**
CFR Carcaliu 133.17 321 ⇓PKIKP **PKiKP 13 50 07.3 -0.5**
GHRR 133.17 322 ⇑P **PKiKP 13 50 07.9 +0.2**
MDUB Mudurnu 133.18 313 *e*P **PKPdf 13 50 07.1 +0.2**
TEKE Tekeli-Mersin 133.20 307 *e*P **PKPdf 13 50 06.1 -0.8**
BSD Bornholm Skovb 133.22 339 *e*P **PKiKP 13 50 07.3 -0.3**
BSD Bornholm Skovb 133.22 339 *i* P **PKPdf 13 50 06.0 -0.3**
BEL Belsk 133.24 332 *e*PKP **PKiKP 13 50 07.6 -0.1**
BEL *e*L L 14 34 30.3
comp=Z,565nm,30.8s
KIZT Kizilcal 133.26 311 *e*P **PKPdf 13 50 07.2 +0.1**
SVRH Sivrihisar-ESK 133.32 312 *e*P **PKPdf 13 50 07.1 -0.1**
TIRR Tirgusor 133.34 320 ⇓P **PKPdf 13 50 07.4 +0.5**
TIRR Tirgusor 133.34 320 ⇓PKIKP **PKPdf 13 50 07.4 +0.5**
CSS Mathiatis 133.35 306 *e*P **PKiKP 13 50 08.9 +0.4**
TESR Tescani 133.38 323 ⇓P **PKPdf 13 50 07.5 +0.6**
BIZ Bicaz 133.47 324 ⇑P **PKiKP 13 50 08.2 -0.2**
TLBR Topalu 133.53 320 ⇑P **PKiKP 13 50 08.5 0.0**
HARR Harsova 133.53 320 ⇑P **PKiKP 13 50 08.7 +0.2**
HARR Harsova 133.53 320 ⇑PKIKP **PKiKP 13 50 08.7 +0.2**
BURAR Bucovina Array 133.60 325 ⇑P **PKiKP 13 50 08.9 +0.2**
BURAR Bucovina Array 133.60 325 ⇑PKIKP **PKiKP 13 50 08.9 +0.2**
VRI Vrincioaia 133.68 322 ⇑P **PKPdf 13 50 07.4 -0.1**
VRI Vrincioaia 133.68 322 ⇑PKIKP **PKPdf 13 50 07.4 -0.1**
CIFT Cifteler, Eski 133.69 312 *e*P **PKPdf 13 50 08.1 +0.3**
SRCK Saricakaya, Es 133.75 313 *e*P **PKPdf 13 50 07.8 0.0**
GKP Gorka Klasztor 133.75 335 *e*PKP **PKiKP 13 50 08.3 -0.3**
GKP *e*L L 14 35 25.5
comp=Z,605nm,27.7s
GKP Gorka Klasztor 133.75 335 *e*P **PKiKP 13 50 08.8 +0.1**
ITTB Itaituba 133.79 110 *e*P **PKPdf 13 50 06.8 -1.8**
GAZI Gazipasa 133.79 308 *e*P **PKiKP 13 50 08.8 -0.6**
BORA Eskisehir 133.93 313 *e*P **PKPdf 13 50 08.5 +0.2**
SNDB Serra Nova Dou 134.16 122 *e*P **PKPdf 13 50 07.8 -1.5**
AUBOZ BOZOYUK 134.22 313 *e*P **PKiKP 13 50 08.8 0.0**
MLR Muntele Rosu 134.34 322 ⇑P **PKPdf 13 50 09.1 +0.2**
MLR Muntele Rosu 134.34 322 ⇑PKIKP **PKPdf 13 50 09.1 +0.2**
SHUT Suhut-Afyon 134.35 311 *e*P **PKPdf 13 50 09.7 +0.5**
ARCR ARCALIA 134.39 325 ⇑P **PKiKP 13 50 10.4 +0.2**
KOLS Kolonicke sedl 134.40 328 *e*PKIKP **PKiKP 13 50 10.7 +0.5**
KOLS Kolonicke sedl 134.40 328 *e*PKP **PKiKP 13 50 10.7 +0.5**
KOLS *e*SKPDF **SKPdf 13 53 23.4 -0.5**
DOPR Dopca 134.42 323 P **PKiKP 13 50 10.5 +0.2**
ISK Istanbul-Kandi 134.43 315 *e*P **PKPdf 13 50 08.8 -0.2**
SECR 134.50 321 ⇑P **PKiKP 13 50 10.3 -0.2**
UZH Uzhgorod 134.58 328 ⇑*i*PKIKP **PKiKP 13 50 10.0 -0.5**
BDFB Brasilia 134.67 129 PKhKP PKPpre 13 49 58.6
comp=Z,3.4nm,0.7s,baz=154,slow=6.7,SNR=3.5
BDFB PKP **PKPdf 13 50 10.6 +0.2**
comp=Z,12nm,0.8s,baz=210,slow=2.7,SNR=12
BDFB SKPbc **SKPab 13 53 22.7 -1.8**
comp=Z,1.2nm,0.4s,baz=192,slow=6.2,SNR=4.0
BDFB Brasilia 134.67 129 *e*P **PKPdf 13 50 08.1 -2.2**
MBAR Mbarara 134.69 255 PKP **PKPdf 13 50 10.5 -0.1**
comp=Z,17nm,0.7s,baz=33,slow=4.3,SNR=16
MBAR SKPbc **SKPab 13 53 24.6 -0.2**
comp=Z,12nm,0.7s,baz=68,slow=3.7,SNR=11
CTKS Kestanelik-??a 134.74 316 *e*P **PKPdf 13 50 09.7 +0.1**
ARMT Armutlu 134.78 315 *e*P **PKPdf 13 50 09.6 -0.2**
OJC Ojcow 134.79 331 *e*PKP **PKPdf 13 50 09.9 +0.5**
OJC *e*L L 14 33 29.5
comp=Z,330nm,29.1s
TVSB Tavsanli 134.80 313 *e*P **PKPdf 13 50 10.2 +0.2**
CRVS Cervenica-Dubn 134.84 328 *e*PKIKP **PKiKP 13 50 11.1 0.0**
CRVS Cervenica-Dubn 134.84 328 *e*PKP **PKiKP 13 50 11.0 0.0**
CRVS *e*SKPDF 13 53 24.7
MDNY Mudanya-Bursa 134.84 314 *e*P **PKPdf 13 50 09.6 -0.2**
CAM01 Campos-RJ 134.87 141 *e*P **PKPdf 13 50 08.5 -1.9**
VOIR 134.90 322 ⇑P **PKiKP 13 50 10.8 -0.6**
VOIR 134.90 322 ⇑PKIKP **PKiKP 13 50 10.8 -0.6**
CJR Cluj-Napoca 135.03 325 ⇑P **PKiKP 13 50 11.6 0.0**
CJR Cluj-Napoca 135.03 325 ⇑PKIKP **PKiKP 13 50 11.6 0.0**
NIE Niedzica 135.08 330 *e*PKP **PKiKP 13 50 11.4 -0.2**
NIE *e*L L 14 33 51.8
comp=Z,221nm,28.7s
HUMR Humele 135.43 321 ⇑P **PKiKP 13 50 11.7 -0.7**
JMB Yambol 135.46 318 *i* P **PKiKP 13 50 12.2 -0.3**
DRGR 135.47 325 ⇑P **PKPdf 13 50 11.7 +0.7**
DRGR 135.47 325 ⇑PKIKP **PKPdf 13 50 11.7 +0.7**
SZH Strazhica 135.49 319 *i* P **PKPdf 13 50 11.1 +0.1**
EDRB Edirne 135.65 317 *e*P **PKPdf 13 50 11.2 -0.1**
LANS Liptovska Anna 135.67 330 *e*PKIKP **PKiKP 13 50 13.3 +0.5**
LANS Liptovska Anna 135.67 330 *e*PKP **PKiKP 13 50 13.3 +0.5**
LANS *e*SKPDF **SKPdf 13 53 27.7 +1.4**
TSUM Tsumeb 135.86 223 PKhKP PKPpre 13 50 03.4
comp=Z,7.4nm,0.8s,baz=149,slow=1.3,SNR=7.9
TSUM PKP **PKPdf 13 50 13.1 +0.5**
comp=Z,18nm,0.8s,baz=105,slow=3.7,SNR=14
TSUM SKPbc **SKPab 13 53 27.9 -1.7**
comp=Z,11nm,0.8s,baz=150,slow=5.6,SNR=10.0
KSP Ksiaz 135.94 334 *e*PKP **PKiKP 13 50 12.6 -0.7**
KSP *e*L L 14 34 19.5
comp=Z,503nm,25.5s
DIAM Diamantina, MG 136.09 135 *e*P **PKPdf 13 50 11.5 -1.5**
MALB Monte Alegre 136.10 107 *e*P **PKPdf 13 50 10.9 -2.0**
MORC Moravsky Berou 136.15 332 ⇓P **PKPdf 13 50 12.3 +0.2**
MORC Moravsky Berou 136.15 332 PKIKP **PKPdf 13 50 12.3 +0.2**
MORC Moravsky Berou 136.15 332 *e*PKP **PKPdf 13 50 12.7 +0.6**
MORC *e* 13 53 27.5
OSTC Ostas 136.18 334 *e*PKPDF **PKiKP 13 50 13.0 -0.8**
CHVC Chvalec 136.23 334 *e*SKP 13 53 27.7
GZR Gura Zlata 136.25 324 ⇑P **PKPdf 13 50 12.8 +0.4**
GZR Gura Zlata 136.25 324 ⇑PKIKP **PKPdf 13 50 12.8 +0.4**
PSZ Piszkesteto 136.27 328 ⇓P **PKiKP 13 50 13.8 -0.3**
PSZ Piszkesteto 136.27 328 PKIKP **PKiKP 13 50 13.8 -0.3**
DPC Dobruska-Polom 136.28 333 *e*PKIKP **PKiKP 13 50 13.6 -0.4**
DPC Dobruska-Polom 136.28 333 *e*PKPDF **PKiKP 13 50 13.6 -0.4**
DPC *e*SKP 13 53 28.4
MAUC Maruska 136.31 331 *e*PKPDF **PKiKP 13 50 14.0 -0.1**
ERIK Erikli-Kesan 136.34 316 *e*P **PKPdf 13 50 12.6 0.0**
DIM Dimitrovgrad 136.34 318 *i* P **PKiKP 13 50 13.5 -0.8**
SIRR Siria 136.37 325 ⇓P **PKPdf 13 50 13.2 +0.6**
AYDB Zeytinkoy-Aydi 136.52 312 *e*P **PKPdf 13 50 13.6 +0.4**
PEXB Peixe 136.53 124 *e*P **PKPdf 13 50 12.2 -1.5**
KOLL Kolacno 136.57 330 *e*PKP **PKiKP 13 50 14.3 -0.3**
KOLL *e*SKPDF **SKPdf 13 53 29.9 +2.0**
JAVC Velka Javorina 136.73 331 *e*PKP **PKiKP 13 50 14.9 -0.1**
JAVC *e* 13 53 30.8
DKL Dikili 136.77 314 *e*P **PKPdf 13 50 08.3 -5.1**
RDO Rodhopi 136.78 317 *e*P **PKPdf 13 50 13.3 -0.1**
RDO Rodhopi 136.78 317 P **PKPdf 13 50 13.2 -0.1**
BZS Buzias 136.78 325 ⇑P **PKPdf 13 50 14.1 +0.8**
BZS Buzias 136.78 325 ⇑PKIKP **PKPdf 13 50 14.1 +0.8**
MPEP Malo Peshtene 136.81 321 *i* P **PKPdf 13 50 14.3 +0.9**
BRG Berggiesshubel 136.90 335 *e*PKP PKPdf 13 50 05.3 -8.0
BRG Amp 13 50 07.3
comp=Z,7.7nm,1.1s
BRG *ex* x 13 50 14.2
BRG Amp 13 50 16.8
comp=Z,41nm,1.0s
BRG *ex* x 13 50 36.5
BRG Amp 13 50 38.1
comp=Z,13nm,1.4s
BRG SKP 13 53 30.3
BRG Amp 13 53 32.3
comp=Z,14nm,1.3s
BRG Berggiesshubel 136.90 335 *e*PKHKP PKPpre 13 50 05.3
BRG *e* 13 50 14.1
BRG *e*PKP 13 50 08.0
comp=Z,8.0nm,1.1s
BRG pmax pmax
comp=Z,41nm,1.0s
BRG pmax pmax
comp=Z,14nm,1.0s
VRAC Vranov 136.92 332 ⇓P **PKiKP 13 50 14.9 -0.4**
VRAC Vranov 136.92 332 ⇓PKIKP **PKiKP 13 50 14.9 -0.4**
VRAC Vranov 136.92 332 *e*PKP **PKPdf 13 50 14.1 +0.6**
VRAC *e* 13 53 29.7
CLL Collm 136.93 336 *e*PKHKP PKPpre 13 50 04.0
CLL *i* 13 50 13.9
CLL pmax pmax
comp=Z,14nm,1.0s
CLL Collm 136.93 336 *e*PKPpre PKPpre 13 50 04.0
CLL *i* PKPdf **PKPdf 13 50 13.9 +0.5**
comp=Z,14nm,1.0s
CLL *i* PKiKP **PKiKP 13 50 15.8 +0.6**
comp=Z,40nm,1.0s
CLL *es*PKPdf sPKPdf 13 51 30.0 +1.7
CLL *ex* x 13 52 54.0
CLL *e*PP **PP 13 52 59.0 +0.5**
CLL *e*SKPbc **SKPbc 13 53 28.0 +1.6**
CLL *e*(SKPab) 13 53 36.0
CLL *e*PKSbc **PKSbc 13 53 48.0 +0.3**
CLL *e*PKSab **PKSab 13 53 55.0 +0.1**
CLL *es*PP 13 54 03.0
CLL *e*(SKSac) 13 57 06.0
CLL *es*PS 14 04 30.0
CLL *ep*PPS 14 05 54.0
CLL *ex* x 14 07 36.0
CLL *e*SSS SSS 14 15 54.0
CLL *e*SSSS 14 19 54.0
PGB Panagyurishte 136.97 319 *i* P **PKPdf 13 50 13.4 -0.4**
BOZC Bozcaada 137.03 315 *e*P **PKPdf 13 50 13.2 -0.7**
RZN Rozhen 137.05 318 *i* P **PKPdf 13 50 14.0 -0.2**
SMTH Samothraki Isl 137.10 316 P **PKPdf 13 50 13.8 -0.3**
PRK Paraskevi 137.14 314 P **PKPdf 13 50 15.0 +0.9**
KRUC Moravsky 137.18 332 *e*PKP **PKPdf 13 50 14.4 +0.5**
KRUC *e* 13 53 30.9
MDVR Moldovita 137.22 324 ⇓P **PKPdf 13 50 14.6 +0.4**
MODS Modra-Piesok 137.26 331 *e*PKIKP **PKPdf 13 50 14.7 +0.6**
MODS Modra-Piesok 137.26 331 *e*PKP **PKPdf 13 50 14.7 +0.6**
MODS *e*SKPDF **SKPdf 13 53 31.7 +2.6**
BODT Bodrum 137.29 311 *e*P **PKPdf 13 50 13.7 -0.8**
URLA Izmir 137.29 313 *e*P **PKPdf 13 50 14.5 0.0**
SJMB Sao Joao De Ma 137.46 138 *e*P **PKPdf 13 50 12.9 -2.4**
ZST Bratislava 137.47 330 *e*PKIKP **PKiKP 13 50 15.5 -0.9**
ZST Bratislava 137.47 330 *e*PKP **PKiKP 13 50 15.5 -0.9**
RIB01 Linhares ES 137.52 140 *e*P **PKPdf 13 50 13.1 -2.4**
VTS Vitosha 137.52 320 ⇑P **PKPdf 13 50 15.5 +0.5**
VTS Vitosha 137.52 320 ⇑PKIKP **PKPdf 13 50 15.5 +0.5**
VTS Vitosha 137.52 320 *i* P **PKPdf 13 50 14.5 -0.5**
BSFB Barra de Sao F 137.59 139 *e*P **PKPdf 13 50 11.4 -4.2**
CHOS Chios island 137.66 313 *e*P **PKPdf 13 50 15.3 0.0**
NVR Nevrokopi 137.78 318 P **PKPdf 13 50 15.0 -0.3**
JANB Januaria 137.80 131 *e*P **PKPdf 13 50 12.8 -3.4**
BOVS Bovan 137.89 322 ⇓P **PKPdf 13 50 14.9 -0.5**
KOKK Kokkinochori, 137.95 317 P **PKPdf 13 50 15.1 -0.5**
NKC Novy Kostel 137.99 336 *e*PKIKP **PKiKP 13 50 15.8 +0.7**
NKC Novy Kostel 137.99 336 *e*PKPDF **PKiKP 13 50 18.2 +0.7**
MORH Mrgy, Hungar 138.03 327 ⇑P **PKiKP 13 50 16.9 -0.7**
SRS Serrai 138.07 318 P **PKPdf 13 50 15.3 -0.5**
FRGS Fruska Gora 138.07 325 ⇑P **PKPdf 13 50 16.3 +0.6**
RONA Rosalia, Austr 138.20 331 *i* P **PKPdf 13 50 16.5 +0.6**
comp=Z,59nm,0.9s,SNR=15
CONA Conrad Observa 138.24 331 *i* P **PKPdf 13 50 16.8 +0.8**
comp=Z,56nm,1.2s,SNR=17
CKRC Cesky Krumlov 138.30 333 *e*PKPpre PKPpre 13 50 07.8
CKRC *e*SKP 13 53 34.0
PRPB Parauapebas 138.33 116 *e*P **PKPdf 13 50 13.3 -3.8**
KHC Kasperske Hory 138.38 334 *e*PKHKP PKPpre 13 50 09.0
KHC *e* 13 50 17.1
KHC Kasperske Hory 138.38 334 *e*PKPpre PKPpre 13 50 09.0
KHC *e*PKPDF **PKPdf 13 50 17.1 +0.9**
KHC *e*SKP 13 53 34.0
GERES GERESS Array B 138.54 334 PKhKP PKPpre 13 50 07.6
comp=Z,2.7nm,0.8s,baz=42,slow=2.2,SNR=14
GERES PKP **PKPdf 13 50 17.4 +0.8**
comp=Z,20nm,0.9s,baz=135,slow=0.8,SNR=28
GERES SKPbc **SKiKP 13 53 34.8 -0.1**
comp=Z,5.5nm,0.8s,baz=37,slow=3.3,SNR=12
MCPB Macapa, AP 138.69 106 *e*P **PKPdf 13 50 16.6 -1.2**
NAN01 Guarapari, ES 138.77 138 *e*P **PKPdf 13 50 15.1 -2.7**
ARSA Arzberg 138.89 331 *i* P **PKPdf 13 50 18.3 +1.1**
comp=Z,19nm,1.0s
GRG Griva 138.93 318 *e*P **PKPdf 13 50 16.8 -0.6**
GRG Griva 138.93 318 P **PKPdf 13 50 16.9 -0.5**
SANT Santorini 138.93 311 ⇑P **PKPdf 13 50 17.3 -0.3**
SDBA SAO DESIDERIO 139.03 128 *e*P **PKPdf 13 50 17.1 -1.3**
MOA Molln 139.04 332 *e*P **PKPdf 13 50 17.6 +0.2**
comp=Z,25nm,1.1s
XOR Xorichti 139.20 316 P **PKPdf 13 50 17.4 -0.6**
LIT Litokhoron 139.31 317 P **PKPdf 13 50 17.4 -0.8**
BIOA Bad Ischl, Aus 139.44 333 *e*P **PKPdf 13 50 17.8 -0.3**
comp=Z,8.3nm,0.6s
SOKA Soboth 139.53 330 *i* P **PKPdf 13 50 18.9 +0.4**
comp=Z,58nm,1.5s,SNR=8.6
SOKA Soboth 139.53 330 *e*P PKPdf 13 50 09.4 -9.1
comp=Z,5.9nm,1.3s
ABR01 Abrolhos, BA 139.59 140 *e*P **PKPdf 13 50 16.9 -2.4**
ATAL Atalanti 139.65 315 P **PKPdf 13 50 18.2 -0.6**
FNA Florina 139.68 319 *e*P **PKPdf 13 50 18.6 -0.3**
FNA Florina 139.68 319 P **PKPdf 13 50 18.5 -0.3**
LKR Lokris 139.68 315 P **PKPdf 13 50 17.2 -1.6**
GOLS Golise 139.72 329 *i* PKPdf **PKPdf 13 50 19.1 +0.4**
MDP Montagnes des 139.81 98 PKP **PKPdf 13 50 20.4 +0.6**
comp=Z,12nm,0.8s,baz=210,slow=8.4,SNR=7.1
GUA01 Guaratinga, BA 139.90 137 *e*P **PKPdf 13 50 17.6 -2.3**
BTNL Ternell 139.95 341 *d*PKP PKPdf 13 50 11.0 -8.0
BTNL *d*PKPdf **PKiKP 13 50 19.6 -1.9**
BTNL *d*PKiKP **PKiKP 13 50 22.1 +0.6**
MEM Membach 139.97 341 *d*PKP **PKPdf 13 50 11.7 -7.2**
MEM *d*PKPdf **PKiKP 13 50 19.9 -1.5**
MEM *d*PKiKP **PKiKP 13 50 22.0 +0.6**
KBA Koelnbreinsper 140.03 332 *i* P **PKiKP 13 50 21.4 -0.5**
comp=Z,42nm,1.1s,SNR=7.3
KPRO Kipourio 140.12 318 P **PKPdf 13 50 19.8 +0.1**
BHOU Houvegnez 140.19 341 *d*PKP **PKPdf 13 50 12.2 -7.2**
BHOU *d*PKPdf **PKiKP 13 50 20.6 -1.3**
BHOU *d*PKiKP **PKiKP 13 50 23.2 +1.2**
MYKA Terra Mystica 140.23 331 *i* P **PKPdf 13 50 19.7 0.0**
comp=Z,11nm,1.2s,SNR=5.1
MYKA *e*P **PKiKP 13 50 22.0 -0.2**
comp=Z,27nm,0.8s
LJU Ljubljana 140.23 330 *i* PKPdf **PKPdf 13 50 20.1 +0.5**
BCLA Clavier 140.35 342 *d*PKP **PKPdf 13 50 20.5 +0.9**
BCLA *d*PKiKP **PKiKP 13 50 22.8 +0.5**
BMRD Maredsous 140.61 342 *d*PKP **PKPdf 13 50 13.3 -6.8**
BMRD *d*PKPdf **PKiKP 13 50 20.5 -2.2**
BMRD *d*PKiKP **PKiKP 13 50 23.3 +0.6**
WATA Walderalm 140.62 334 *i* P **PKPdf 13 50 20.5 +0.1**
comp=Z,26nm,1.2s,SNR=5.7
WTTA Wattenberg 140.65 334 *i* P **PKPdf 13 50 21.2 +0.6**
comp=Z,45nm,1.3s,SNR=5.8
WTTA Wattenberg 140.65 334 *e*P **PKPdf 13 50 16.9 -3.6**
comp=Z,11nm,0.8s
ABTA Abfaltersbach 140.66 332 *e*P **PKPdf 13 50 21.1 +0.6**
comp=Z,37nm,0.8s
ABTA Abfaltersbach 140.66 332 *e*P **PKPdf 13 50 14.2 -6.3**
comp=Z,7.2nm,0.8s
WLF Walferdange 140.74 341 *d*PKiKP **PKiKP 13 50 24.8 +1.7**
MOTA Moosalm 140.81 334 *e*P **PKPdf 13 50 15.1 -5.8**
comp=Z,13nm,1.1s
RETA Reutte 140.84 335 *e*P **PKiKP 13 50 23.9 +0.4**
comp=Z,25nm,1.2s
RETA Reutte 140.84 335 *e*P **PKPdf 13 50 16.1 -4.7**
comp=Z,3.9nm,0.5s
DOU Dourbes 140.84 342 *d*PKP **PKPdf 13 50 15.2 -5.4**
DOU *d*PKPdf **PKiKP 13 50 21.6 -1.6**
DOU *d*PKiKP **PKiKP 13 50 24.5 +1.2**
SQTA Sankt Quirin 140.86 334 *e*P **PKPdf 13 50 22.1 +1.3**
comp=Z,32nm,0.8s
SQTA Sankt Quirin 140.86 334 *e*P **PKPdf 13 50 15.7 -5.2**
comp=Z,4.3nm,0.5s
CMC01 Camacan, BA 140.97 136 *e*P **PKPdf 13 50 19.8 -2.0**
FETA Feichten 141.22 334 *e*P **PKiKP 13 50 23.0 -1.3**
comp=Z,41nm,0.9s
FETA Feichten 141.22 334 *i* P **PKPdf 13 50 16.6 -4.9**
comp=Z,25nm,1.2s,SNR=13
KEK Kerkira 141.27 318 P **PKPdf 13 50 21.7 0.0**
DAVA Damuels 141.37 335 *e*P **PKPdf 13 50 22.5 +0.7**
comp=Z,32nm,1.1s
DAVA Damuels 141.37 335 *e*P **PKPdf 13 50 16.7 -5.1**
comp=Z,22nm,1.1s
TMAB Tom-Au,PA,Br 141.56 112 *e*P **PKPdf 13 50 21.4 -1.6**
GDU01 Guandu, BA 142.08 134 *e*P **PKPdf 13 50 21.2 -2.6**
TIP Timpagrande 143.51 320 ⇑P PKPbc 13 50 24.4 -0.7
ROSB Rosario 144.86 115 *e*P PKPbc 13 50 26.5 -1.9
NBLA Lagarto - SE 145.22 133 *e*P **PKPdf 13 50 28.1 -1.3**
NBPB Pedra_Branca-C 147.32 124 *e*P **PKPdf 13 50 30.7 -2.2**
VSL Villasalto 147.58 327 **PKPdf 13 50 33.6 +0.9**
NBMO Morrinhos-CE 148.18 120 *e*P **PKPdf 13 50 32.1 -2.2**
RCBR Riachuelo 150.04 128 *e*P **PKPdf 13 50 34.9 -2.5**
KEST Kesra 150.25 322 PKPbc **PKiKP 13 50 43.6 +0.4**
comp=Z,229nm,0.9s,baz=200,slow=0.1,SNR=126
CMAH Djebel Manchou 150.73 325 P 13 50 44.5
**ABSA Djebel Ababsia 150.95

PBEJ	**Beja**	**155.19**	**351**	*e*PKPab	**PKPab**	13 51 11.5	+1.6
PNCL	**Nicolau / Gran**	**155.20**	**352**	*e*PKPab	**PKPab**	13 51 11.1	+1.2
MESJ	**Messejana**	**155.43**	**351**	*e*PKPdf	**PKPdf**	13 50 45.5	+1.0
MESJ	**Messejana**	**155.43**	**351**	*e*PKPab	**PKPab**	13 51 12.7	+1.8
PCVE	**Castro Verde**	**155.60**	**351**	*e*PKPdf	**PKPdf**	13 50 45.9	+1.2
PCVE	**Castro Verde**	**155.60**	**351**	*e*PKPab	**PKPab**	13 51 13.3	+1.6
PVAQ	**Vaqueiros**	**155.77**	**350**	*e*PKPab	**PKPab**	13 51 13.3	+0.9
PTEO	**Sao Teotonio**	**155.78**	**352**	*e*PKPab	**PKPab**	13 51 14.1	+1.7
PBDV	**Barranco-do-Ve**	**155.97**	**351**	*e*PKPdf	**PKPdf**	13 50 46.0	+0.7
PBDV	**Barranco-do-Ve**	**155.97**	**351**	*e*PKPab	**PKPab**	13 51 15.1	+1.8
MORF	**Marmelete**	**156.01**	**352**	*e*PKPab	**PKPab**	13 51 15.1	+1.6
PFVI	**Vila Bisbo**	**156.21**	**352**	*e*PKPab	**PKPab**	13 51 15.9	+1.7
TORD	**Torodi Ar. Bea**	**165.94**	**270**	PKP	**PKPdf**	13 50 56.4	0.0
	comp=Z,39nm,1.0s,baz=32,slow=1.0,SNR=84						
TORD				PKPab	**PKPab**	13 51 57.7	0.0
	comp=Z,11nm,0.8s,baz=83,slow=4.8,SNR=8.8						
KIC	**Kosan Boka**	**169.40**	**229** ⇑ *i*PKP1		**PKPdf**	13 50 58.8	-0.1
	comp=Z,54nm,0.9s						
KIC	**Kosan Boka**	**169.40**	**229** ⇓ *i*PKP2		**PKPab**	13 52 13.3	+0.5
	comp=Z,25nm,0.7s						
LIC	**Lamto**	**169.51**	**227** ⇑ *i*PKP1		**PKPdf**	13 50 58.1	-0.9
	comp=Z,80nm,1.3s						
LIC	**Lamto**	**169.51**	**227** ⇑ *i*PKP2		**PKPab**	13 52 14.1	+0.8
	comp=Z,21nm,0.9s						
DBIC	**Dimbokro**	**169.69**	**230**	PKP	**PKPdf**	13 50 59.0	-0.1
	comp=Z,30nm,0.9s,baz=81,slow=0.2,SNR=16						
DBIC				PKPab	**PKPab**	13 52 13.8	-0.3
	comp=Z,16nm,1.0s,baz=157,slow=6.5,SNR=5.6						
TIC	**Toumodi**	**169.79**	**229** ⇑ *i*PKP1		**PKPdf**	13 50 59.0	-0.2
	comp=Z,8.7nm,0.2s						
TIC	**Toumodi**	**169.79**	**229** ⇑ *i*PKP2		**PKPab**	13 52 14.7	+0.1
	comp=Z,12nm,0.2s						

MOS ***15*** *13:46:53.9±1.0, 14°.21N×91°.43W, h72km, mb5.7/96, MS4.7/13, Error ellipse: s-maj=6.6km s-min=4.1km az=98.2*

GCMT ***15*** *13:46:53.1±0.1, 14°.01N±0°.01×91°.98W±0°.01, h59km, MW5.4/136, Moment Tensor Solution. s136,c225; s123,c228; Duration: 1s2 Moment tensor: Scale 10^{17} Nm; M_{rr}=1.21±.02; $M_{\theta\theta}$=0.81±.02; $M_{\phi\phi}$=0.40±.02; $M_{r\theta}$=0.77±.02; $M_{\theta\phi}$=-0.75±.02; $M_{\phi r}$=-0.76±.02; Best double couple: M_0=1.68600×10^{17} NP1:ϕ_s=121.00000°, δ25.00000°, λ=-100.00000°. NP2:ϕ_s=312.00000°, δ65.00000°, λ=-85.00000°. Principal axes: T 1.7660, Plg20.0000°, Azm39.0000°; N -0.1610, Plg4.0000°, Azm130.0000°; P -1.6060, Plg70.0000°, Azm232.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***15*** *13:46:54.5±0.4, 14°.24N×91°.32W, h60km±3km, mb4.9/36, mbtmp5.2/38, MS4.6/63 Error ellipse: s-maj=14.5km s-min=7.6km az=55.0*

INET ***15*** *13:46:54.0±1.6, 14°.06N×91°.68W, h1km±7km, MW4.3*

SNET ***15*** *13:46:54.2±0.7, 13°.94N×91°.81W, h56km±12km, ML5.5*

MEX ***15*** *13:46:54.6±1.2, 13°.98N×91°.81W, h71km±40km, MD5.3*

NEIC ***15*** *13:46:55.8, 14°.18N×91°.59W, h60km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}=1.09; $M_{\theta\theta}$=0.00; $M_{\phi\phi}$=1.09; $M_{r\theta}$=1.19; $M_{\theta\phi}$=-0.34; $M_{\phi r}$=-0.74; Fault plane solution: M_0=1.81000×10^{17} NP1:ϕ_s=314.83000°, δ71.65000°, λ=-110.14000°. NP2:ϕ_s=184.19000°, δ26.99000°, λ=-43.93000°. Principal axes: T 1.6647, Plg24.0000°, Azm60.0000°; N 0.2586, Plg19.0000°, Azm321.0000°; P -1.9233, Plg59.0000°, Azm197.0000°;*

NEIC ***15*** *13:46:55.1±2.5, 14°.11N±0°.06×91°.65W±0°.07, h61km±1km, mb5.7/280, Mwb5.4/60, Mww5.4, Md5.5(SNET) Error ellipse: s-maj=13.2km s-min=7.5km az=46.0*

UCR ***15*** *13:46:56.6±1.1, 14°.03N×91°.63W, h33km±18km, ML5.1, mb5.4(NEIC)*

GCG ***15*** *13:46:59.0±1.0, 14°.20N×91°.55W, h28km±10km, MD5.3*

NEIC ***15*** *13:47:01, 14°.21N×91°.68W, h70km, Moment Tensor Solution. Duration: 8s0 Moment tensor: Scale 10^{17}Nm; M_{rr}=1.11; $M_{\theta\theta}$=0.82; $M_{\phi\phi}$=0.30; $M_{r\theta}$=0.59; $M_{\theta\phi}$=-0.58; $M_{\phi r}$=-0.70; Fault plane solution: M_0=1.48000×10^{17} NP1: ϕ_s=112.00000°, δ27.00000°, λ=-109.00000°. NP2: ϕ_s=314.00000°, δ64.00000°, λ=-80.00000°. Principal axes: T 1.4949, Plg19.0000°, Azm36.0000°; N -0.0385, Plg9.0000°, Azm129.0000°; P -1.4564, Plg69.0000°, Azm243.0000°;*

ISC 15 13:46:54.1±0.2, 14°.09N±0°.03×91°.64W±0°.03, h65km±1km, h65km: pP-P, n1500, σ1°69/1858, mb5.5/278, 448C-310D, Fault plane solution: NP1:ϕ_s=202.28583°, δ34.57409°, λ=-1.61966°. NP2:ϕ_s=293.61957°, δ89.08097°, λ=-124.56339°. Principal axes: T Plg34.8120°, Azm52.8681°; N Plg34.5583°, Azm294.2527°; P Plg36.4106°, Azm173.7213°; Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	**0.44**	**353**	Pn	**Pn**	**13 47 06.7**	**+0.7**
RTAL				Sn	**Sn**	**13 47 15.5**	**+0.9**
RTAL	**Retalhuleu**	**0.44**	**353**	*e*P	**Pn**	**13 47 06.9**	**+0.9**
RTAL				*e*S	**Sn**	**13 47 17.0**	**+2.4**
RTAL				IAML		13 47 21.9	
	comp=Z,141μm,0.6s						
STG3	**Santiaguito 3,**	**0.62**	**6**	*e*P	**Pn**	**13 47 09.7**	**+1.7**
FUG	**Fuego 3**	**0.85**	**65** ⇑ *i*P		**Pn**	**13 47 13.6**	**+2.8**
THIG		**1.02**	**323**		**Sn**	**13 47 12.2**	**-0.4**
THIG					**Sn**	**13 47 26.5**	**+0.2**
THIG		**1.02**	**323**	*i* P	**Pn**	**13 47 12.2**	**-0.4**
THIG				*e*S	**Sn**	**13 47 25.9**	**-0.4**
PCG	**Pacaya**	**1.04**	**73**	*e*P	**Pn**	**13 47 16.4**	**+3.2**
CHUJ	**Union Juarez**	**1.10**	**336**	*i* P	**Pn**	**13 47 13.8**	**-0.1**
CHUJ				*i* S	**Sn**	**13 47 28.6**	**-0.1**
PATR	**El Naranjo**	**1.18**	**331**	*i* P	**Pn**	**13 47 14.3**	**-0.7**
PATR				*i* S	**Sn**	**13 47 29.6**	**-0.8**
PAVE	**Pavencul**	**1.22**	**335**	*i* P	**Pn**	**13 47 15.4**	**0.0**
PAVE				*i* S	**Sn**	**13 47 31.6**	**+0.2**
HUEH	**Huehuetenango**	**1.23**	**6**	Pn	**Pn**	**13 47 17.9**	**+2.3**
HUEH	**Huehuetenango**	**1.23**	**6**	IAML		13 47 44.6	
	comp=Z,182μm,0.5s						
HUEH	**Huehuetenango**	**1.23**	**6**	IAML		13 47 44.6	
	comp=Z,182μm,0.5s						
HUEH	**Huehuetenango**	**1.23**	**6**	*e*P	**Pn**	**13 47 18.6**	**+2.9**
HUEH				*e*S	**Sn**	**13 47 36.5**	**+4.8**
NBG	**Las Nubes**	**1.35**	**68** ⇑ *e*P		**Pn**	**13 47 21.7**	**+4.5**
SLOZ	**Alcaldia de Sa**	**1.80**	**92**	*e*P	**Pn**	**13 47 25.6**	**+2.5**
NUBE	**Las Nubes**	**1.81**	**96**	*e*P	**Pn**	**13 47 25.1**	**+1.8**
NUBE	**Las Nubes**	**1.81**	**96**	*e*P	**Pn**	**13 47 25.1**	**+1.8**
RTR	**El Retiro**	**1.94**	**95**	*e*P	**Pn**	**13 47 27.7**	**+2.6**
RTR	**El Retiro**	**1.94**	**95**	*e*P	**Pn**	**13 47 27.7**	**+2.6**
SBLS	**San Blas**	**1.97**	**97**	*e*P	**Pn**	**13 47 27.8**	**+2.3**
SBLS	**San Blas**	**1.97**	**97**	*e*P	**Pn**	**13 47 27.8**	**+2.3**
CEVE	**Cerro Verde**	**1.97**	**97**	*e*P	**Pn**	**13 47 27.9**	**+2.3**
CEVE				IAML		13 48 01.1	
	comp=Z,37μm,0.6s						
CEVE	**Cerro Verde**	**1.97**	**97**	*e*P	**Pn**	**13 47 27.9**	**+2.3**
CEVE				IAML		13 48 01.1	
	comp=Z,37μm,0.6s						
SNJE	**San Jose**	**1.98**	**96**	*e*P	**Pn**	**13 47 28.3**	**+2.6**
SNJE	**San Jose**	**1.98**	**96**	*e*P	**Pn**	**13 47 28.3**	**+2.6**
MRL	**Marmol**	**2.13**	**62** ⇓ *e*P		**Pn**	**13 47 31.6**	**+3.9**
JAYA	**Jayaque - finc**	**2.17**	**101**	*e*P	**Pn**	**13 47 29.9**	**+1.8**
JAYA	**Jayaque - finc**	**2.17**	**101**	*e*P	**Pn**	**13 47 29.9**	**+1.8**
CEDA	**San Andres**	**2.20**	**97** ⇑ *e*P		**Pn**	**13 47 31.1**	**+2.7**
CEDA				IAML		13 48 23.9	
	comp=Z,14μm,0.5s						
CEDA	**San Andres**	**2.20**	**97** ⇑ *e*P		**Pn**	**13 47 31.1**	**+2.7**
CEDA				IAML		13 48 23.9	
	comp=Z,14μm,0.5s						
PCIG		**2.22**	**317**		**Pn**	**13 47 28.2**	**-0.5**
PCIG		**2.22**	**317**	*i* P	**Pn**	**13 47 28.2**	**-0.5**
PCIG				*e*S	**Sn**	**13 47 51.6**	**-3.5**
CCIG	**Comitan**	**2.23**	**348**		**Pn**	**13 47 32.1**	**+3.1**
CCIG	**Comitan**	**2.23**	**348**	*i* P	**Pn**	**13 47 32.1**	**+3.1**
CCIG				*e*S	**Sn**	**13 47 59.9**	**+4.2**
ESQI	**Esquipulas**	**2.27**	**78**		**Pn**	**13 47 32.2**	**+2.7**
ESQI	**Esquipulas**	**2.27**	**78**	*i* P	**Pn**	**13 47 32.2**	**+2.7**
BOQS	**Boqueron**	**2.32**	**98** ⇑ *e*P		**Pn**	**13 47 33.0**	**+2.8**
BOQS	**Boqueron**	**2.32**	**98** ⇑ *e*P		**Pn**	**13 47 33.0**	**+2.8**
UEES	**Universidad Ev**	**2.36**	**99**	*e*P	**Pn**	**13 47 33.2**	**+2.6**
UEES				IAML		13 48 09.1	
	comp=Z,9μm,0.5s						
UEES	**Universidad Ev**	**2.36**	**99**	*e*P	**Pn**	**13 47 33.2**	**+2.6**
UEES				IAML		13 48 09.1	
	comp=Z,9μm,0.5s						
SNET	**Serv Nac Est T**	**2.37**	**99**		**Pn**	**13 47 33.2**	**+2.4**
SNET	**Serv Nac Est T**	**2.37**	**99** ⇑ *e*P		**Pn**	**13 47 33.5**	**+2.7**
SNET	**Serv Nac Est T**	**2.37**	**99** ⇑ *e*P		**Pn**	**13 47 33.5**	**+2.7**
LBRS	**Las Brisas**	**2.54**	**98**	*e*P	**Pn**	**13 47 36.1**	**+3.0**
LBRS	**Las Brisas**	**2.54**	**98**	*e*P	**Pn**	**13 47 36.1**	**+3.0**
LFRS	**El Faro**	**2.54**	**100**	*e*P	**Pn**	**13 47 35.7**	**+2.6**
LFRS	**El Faro**	**2.54**	**100**	*e*P	**Pn**	**13 47 35.7**	**+2.6**
SJTE	**Alcalda de S**	**2.60**	**100**	*e*P	**Pn**	**13 47 36.6**	**+2.8**
SJTE	**Alcalda de S**	**2.60**	**100**	*e*P	**Pn**	**13 47 36.6**	**+2.8**
PAVA	**Las Pavas**	**2.65**	**98** ⇑ *i*P		**Pn**	**13 47 37.4**	**+2.7**
PAVA	**Las Pavas**	**2.65**	**98** ⇑ *i*P		**Pn**	**13 47 37.4**	**+2.7**
COEG	**Centro de Oper**	**2.72**	**100**	*e*P	**Pn**	**13 47 38.4**	**+2.9**
COEG				*e*S	**Sn**	**13 48 12.5**	**+5.2**
SNVI	**San Vicente**	**2.76**	**100**	*e*P	**Pn**	**13 47 39.1**	**+2.9**
SNVI	**San Vicente**	**2.76**	**100**	*e*P	**Pn**	**13 47 39.1**	**+2.9**
SCLA	**Alcaldia de Sa**	**2.85**	**97**	*e*P	**Pn**	**13 47 40.0**	**+2.7**
SCLA	**Alcaldia de Sa**	**2.85**	**97**	*e*P	**Pn**	**13 47 40.0**	**+2.7**
TGIG		**3.04**	**332**		**Pn**	**13 47 39.9**	**+0.1**
TGIG		**3.04**	**332**	*e*P	**Pn**	**13 47 39.9**	**+0.1**
TGIG				*e*S	**Sn**	**13 48 19.9**	**+4.8**
COEB	**Comit de Eme**	**3.08**	**101**	*e*P	**Pn**	**13 47 43.1**	**+2.7**
COEB	**Comit de Eme**	**3.08**	**101**	*e*P	**Pn**	**13 47 43.1**	**+2.7**
COEB	**Comit de Eme**	**3.08**	**101**	*e*P	**Pn**	**13 47 43.1**	**+2.7**
COEB				*e*S	**Sn**	**13 48 20.9**	**+4.8**
PACA	**Pacayal**	**3.28**	**100**	*e*P	**Pn**	**13 47 46.2**	**+3.0**
PACA	**Pacayal**	**3.28**	**100**	*e*P	**Pn**	**13 47 46.2**	**+3.0**
PETF	**Flores**	**3.29**	**31** ⇑ *i*P		**Pn**	**13 47 46.7**	**+3.4**
PETF	**Flores**	**3.29**	**31** ⇑ *i*P		**Pn**	**13 47 46.7**	**+3.4**
CAHU	**Cacacuatique**	**3.34**	**95**	*e*P	**Pn**	**13 47 46.9**	**+2.7**
CAHU	**Cacacuatique**	**3.34**	**95**	*e*P	**Pn**	**13 47 46.9**	**+2.7**
LCND	**La Caada**	**3.72**	**102**	*e*P	**Pn**	**13 47 51.5**	**+2.3**
LCND	**La Caada**	**3.72**	**102**	*e*P	**Pn**	**13 47 51.5**	**+2.3**
CNCH	**Conchagua**	**3.78**	**102** ⇑ *i*P		**Pn**	**13 47 52.6**	**+2.5**
CNCH	**Conchagua**	**3.78**	**102** ⇑ *i*P		**Pn**	**13 47 52.6**	**+2.5**
CSGN	**Cosiguina Volc**	**4.12**	**105**	*e*P	**Pn**	**13 47 57.3**	**+2.6**
TGUH	**Tegucigalpa,Un**	**4.24**	**90**		**Pn**	**13 47 58.3**	**+2.0**
CMIG	**Matias Romero**	**4.33**	**314**	P	**Pn**	**13 47 57.7**	**+0.2**
	comp=Z,353nm,0.5s,baz=140,slow=11,SNR=193						
CMIG				S	**Sn**	**13 48 45.0**	**-1.6**
	comp=Z,2μm,0.6s,baz=136,slow=15,SNR=6.1						
CMIG				LR	LR	13 50 04.9	
	comp=Z,9μm,18.6s,baz=173,slow=43						
CMIG	**Matias Romero**	**4.33**	**314**		**Pn**	**13 47 57.3**	**-0.1**
CMIG					**Sn**	**13 48 45.5**	**-1.1**
CMIG	**Matias Romero**	**4.33**	**314**	*i* P	**Pn**	**13 47 57.3**	**-0.1**
CMIG				*e*S	**Sn**	**13 48 45.5**	**-1.1**
HUIG	**Huatulco**	**4.63**	**292**	*e*P	**Pn**	**13 47 58.8**	**-2.8**
HUIG				*e*S	Sn	13 48 40.7	-14
CRIN	**San Cristobal**	**4.67**	**107**		**Pn**	**13 48 04.7**	**+2.4**
CRIN	**San Cristobal**	**4.67**	**107**	*e*P	**Pn**	**13 48 04.9**	**+2.7**
CNGN	**Cerro Negro**	**5.06**	**108**		**Pn**	**13 48 09.3**	**+1.8**
NEUV	**Arroyo Zacate**	**5.39**	**313**	*e*	**Pn**	**13 48 12.1**	**+0.1**
NEUV				*e*		13 49 11.6	
APYN	**Apoyeque**	**5.47**	**109**	*e*P	**Pn**	**13 48 14.8**	**+1.7**
HUEN		**5.60**	**107**	*e*P	**Pn**	**13 48 16.7**	**+1.8**
CRUN	**El Crucero**	**5.61**	**111**	*e*P	**Pn**	**13 48 16.4**	**+1.3**
MATN	**Matagalpa**	**5.67**	**101**		**Pn**	**13 48 16.9**	**+0.9**
BOAB	**BOACO BROADBAN**	**6.04**	**105**		**Pn**	**13 48 21.9**	**+1.0**
ACON	**Acoyapa**	**6.64**	**108**		**Pn**	**13 48 30.1**	**+0.9**
ACON	**Acoyapa**	**6.64**	**108**	*e*P	**Pn**	**13 48 29.7**	**+0.5**
HZTE	**Horizontes, Gu**	**6.79**	**119**		**Pn**	**13 48 34.2**	**+3.1**
HZTE	**Horizontes, Gu**	**6.79**	**119**	*e*P	**Pn**	**13 48 34.5**	**+3.3**
HZTE	**Horizontes, Gu**	**6.79**	**119**	*e*P	**Pn**	**13 48 34.6**	**+3.5**
GBS3	**Finca Santa Img**	**6.87**	**118**	*e*P	**Pn**	**13 48 36.1**	**+3.7**
LAPC	**Finca la Perla**	**6.90**	**118**	*e*P	**Pn**	**13 48 36.0**	**+3.3**
GB1A	**Boringuen Arri**	**6.91**	**117**	*e*P	**Pn**	**13 48 35.8**	**+3.0**
BUEV	**Buena Vista**	**6.91**	**118**	*e*P	**Pn**	**13 48 36.5**	**+3.6**
BUAI	**Buenos Aires**	**6.94**	**117**	*e*P	**Pn**	**13 48 35.9**	**+2.7**
VRLE	**La Escondida,**	**6.95**	**117**	*e*P	**Pn**	**13 48 36.1**	**+2.7**
GPS2	**Hotel Rincn d**	**6.98**	**118**	*e*P	**Pn**	**13 48 37.8**	**+4.0**
SAJU	**San Juanillo,**	**7.04**	**124**	*e*P	**Pn**	**13 48 37.3**	**+2.7**
ORTG	**Ortega, Santa**	**7.08**	**121**	Pn	**Pn**	**13 48 38.1**	**+2.8**
ORTG	**Ortega, Santa**	**7.08**	**121**	*e*P	**Pn**	**13 48 38.4**	**+3.1**
LIM1	**Limonal**	**7.09**	**118**	*e*P	**Pn**	**13 48 38.9**	**+3.5**
GUAI	**GUAI**	**7.09**	**122**	*e*P	**Pn**	**13 48 38.3**	**+3.0**
COLC	**Colonia**	**7.15**	**118**	*e*P	**Pn**	**13 48 39.9**	**+3.8**
HORNC	**Hornillas**	**7.15**	**117**	*e*P	**Pn**	**13 48 39.2**	**+3.1**
VMAR	**Armenia, Volca**	**7.15**	**116**	*e*P	**Pn**	**13 48 37.8**	**+1.6**
PLVR	**Palo Verde**	**7.18**	**120**	*e*P	**Pn**	**13 48 39.7**	**+3.0**
CUI	**Cuipilapa**	**7.18**	**118**	*e*P	**Pn**	**13 48 39.9**	**+3.3**
DUNO	**Dulce Nombre,**	**7.21**	**123**		**Pn**	**13 48 39.5**	**+2.6**
DUNO	**Dulce Nombre,**	**7.21**	**123**	*e*P	**Pn**	**13 48 39.9**	**+2.9**
DUNO	**Dulce Nombre,**	**7.21**	**123**	*e*P	**Pn**	**13 48 39.7**	**+2.8**
JAUV	**Jalcomulco**	**7.21**	**317**	*e*	**Pn**	**13 48 34.3**	**-2.7**
JAUV				*e*		13 49 43.5	
NICO	**Nicoya**	**7.22**	**122**	*e*P	**Pn**	**13 48 40.0**	**+3.0**
PTEN	**Parque Tenorio**	**7.31**	**117**	*e*P	**Pn**	**13 48 41.5**	**+3.1**
INDI	**Punta indio, G**	**7.32**	**124**	*e*P	**Pn**	**13 48 41.4**	**+2.9**
JTS	**Las Juntas de**	**7.55**	**119**	P	**Pn**	**13 48 44.2**	**+2.6**
	comp=Z,40nm,0.3s,baz=25,slow=17,SNR=36						
JTS				S	**Sn**	**13 50 04.7**	**-1.0**
	comp=Z,126nm,0.9s,baz=17,slow=18,SNR=0.7						
JTS	**Las Juntas de**	**7.55**	**119**	Pn	**Pn**	**13 48 44.3**	**+2.8**
JTS	**Las Juntas de**	**7.55**	**119**	*i* P	**Pn**	**13 48 43.2**	**+1.6**
JTS				pmax	pmax		
	comp=Z,210nm,1.4s						
JTS	**Las Juntas de**	**7.55**	**119**	*e*P	**Pn**	**13 48 44.4**	**+2.9**
JTS	**Las Juntas de**	**7.55**	**119**	*e*P	**Pn**	**13 48 44.6**	**+3.1**
CEDE	**Laguna Cedeo**	**7.66**	**117**	*e*P	**Pn**	**13 48 47.3**	**+4.1**
LAFE	**Finca La Fe, P**	**7.84**	**122**	*e*P	**Pn**	**13 48 48.5**	**+3.0**
LAFE	**Finca La Fe, P**	**7.84**	**122**	*e*P	**Pn**	**13 48 48.7**	**+3.2**
JACO	**JACO, Garabito**	**8.12**	**122**		**Pn**	**13 48 52.8**	**+3.3**
JACO	**JACO, Garabito**	**8.12**	**122**	*e*P	**Pn**	**13 48 53.2**	**+3.8**
HDC	**Heredia**	**8.40**	**118**		**Pn**	**13 48 55.7**	**+2.2**
RIFO	**Rio Frio, Sara**	**8.42**	**116**	*e*P	**Pn**	**13 48 56.6**	**+3.1**
AMVM	**AMECAMECA**	**8.49**	**307**	*e*P	**Pn**	**13 48 58.2**	**+3.5**
AMVM				*i* S	Sn	13 50 41.3	+12
OCM	**Ochomogo**	**8.59**	**118**	*e*P	**Pn**	**13 48 59.0**	**+3.0**
VTRT	**Volcan Turrial**	**8.68**	**117**	*e*P	**Pn**	**13 49 00.2**	**+2.8**
CVTR	**Volcan Turrial**	**8.70**	**117**	*e*P	**Pn**	**13 49 02.3**	**+4.6**
RIMA	**Rio Macho**	**8.73**	**119**	Pn	**Pn**	**13 49 00.9**	**+2.9**
RIMA	**Rio Macho**	**8.73**	**119**	*e*P	**Pn**	**13 49 01.1**	**+3.1**
VTCV	**VTCV, Calle Va**	**8.75**	**117**	*e*P	**Pn**	**13 49 01.3**	**+3.2**
VTVM	**Tizayuca**	**8.86**	**311**	*e*P	**Pn**	**13 49 04.3**	**+4.4**
VTVM				*e*S	**Sn**	**13 50 36.6**	**-1.7**
VTVM				*i* S	**Sn**	**13 50 36.6**	**-1.7**
PBVM	**Pinon**	**8.90**	**308**	*e*P	**Pn**	**13 48 55.6**	**-4.4**
PBVM				*e*S	Sn	13 50 48.0	+9.3
UNM	**Universidad Na**	**8.91**	**307**		**Pn**	**13 49 00.7**	**+0.3**
UNM	**Universidad Na**	**8.91**	**307**	P	**Pn**	**13 49 00.7**	**+0.3**
CDM	**Cerro de Muert**	**8.93**	**119**	*e*P	**Pn**	**13 49 03.4**	**+2.6**
CDM	**Cerro de Muert**	**8.93**	**119**	*e*P	**Pn**	**13 49 03.6**	**+2.7**
MCRU	**Las Cruces**	**8.96**	**307**	*e*P	**Pn**	**13 49 03.3**	**+2.1**
MCRU				*e*S	**Sn**	**13 50 43.7**	**+2.8**
PEZE	**Perez Zeledon,**	**9.09**	**120**		**Pn**	**13 49 06.0**	**+3.3**
ZUVM	**ZUMPANGO**	**9.12**	**310**	*e*P	Pn	13 49 08.9	+5.6
ZUVM				*i* S	**Sn**	**13 50 37.6**	**-7.0**
TOVM	**TOLUCA**	**9.27**	**305**	*e*P	**Pn**	**13 49 07.3**	**+1.8**
TOVM				*e*S	Sn	13 50 58.1	+10
SRBA	**San Rafael, Bu**	**9.43**	**120**		**Pn**	**13 49 10.2**	**+2.8**
SRBA	**San Rafael, Bu**	**9.43**	**120**	*e*P	**Pn**	**13 49 11.1**	**+3.6**
EDPN	**Palmar Norte**	**9.50**	**122**	*e*P	Pn	13 49 13.0	+4.8
DRK0	**Durika**	**9.52**	**119**		**Pn**	**13 49 12.1**	**+3.4**
DRK0	**Durika**	**9.52**	**119**	*e*P	**Pn**	**13 49 12.9**	**+4.2**
POTG	**Potrero Grande**	**9.73**	**120**	*e*P	**Pn**	**13 49 13.9**	**+2.4**
PRVC	**Isla de Provid**	**10.01**	**93**	Pn	**Pn**	**13 49 16.2**	**+1.0**
PRVC	**Isla de Provid**	**10.01**	**93**	*e*P	**Pn**	**13 49 16.3**	**+1.0**
CDITO	**Canoas**	**10.19**	**122**	Pn	**Pn**	**13 49 19.9**	**+2.2**
BRU2	**Volcan**	**10.22**	**120**		**Pn**	**13 49 21.0**	**+2.6**
BRU2	**Volcan**	**10.22**	**120**	*e*P	**Pn**	**13 49 21.7**	**+3.4**
SOR	**Soroa**	**11.91**	**42**	P	**Pn**	**13 49 42.6**	**+1.4**
BCIP	**Isla Barro Col**	**12.55**	**112**	Pn	**Pn**	**13 49 50.6**	**+0.7**
BCIP	**Isla Barro Col**	**12.55**	**112**	P	**Pn**	**13 49 50.6**	**+0.7**
BCIP	**Isla Barro Col**	**12.55**	**112**	*e*P	**Pn**	**13 49 50.6**	**+0.7**
AZU	**Azuero**	**12.79**	**118**	*e*P	**Pn**	**13 49 57.1**	**+3.9**
UPA	**Univ. de Panam**	**12.90**	**112**	*e*P	**Pn**	**13 49 54.2**	**-0.4**
MCJ	**Malvern**	**13.94**	**72**	*i* P	**Pn**	**13 50 09.1**	**+0.3**
CVJ	**Coleyville**	**14.16**	**71**	*i* P	**Pn**	**13 50 12.2**	**+0.5**
MTDJ	**Mount Denham**	**14.16**	**71**	Pn	**Pn**	**13 50 11.9**	**+0.3**
PAYG	**Puerto Ayora**	**14.73**	**175**	Pn	**Pn**	**13 50 21.0**	**+2.1**
STH	**Stony Hill**	**14.79**	**72**	*i* P	**Pn**	**13 50 21.6**	**+1.8**
GWJ	**Greenwich**	**14.87**	**73**	*i* P	**P**	**13 50 27.3**	**+2.2**
CAPC	**Capurgana**	**15.01**	**110**	*e*P	**P**	**13 50 26.3**	**-0.4**
061Z	**Ochoppi**	**15.45**	**39**	P	**Pn**	**13 50 28.0**	**-0.2**
	baz=223,SNR=20						
735A	**Kenedy**	**15.77**	**340**	P	**P**	**13 50 33.8**	**-1.1**
	baz=157,SNR=8.0						
833A	**Chaparral WMA,**	**15.90**	**334**	P	**Pn**	**13 50 33.6**	**-0.3**
	baz=151,SNR=33						
833A	**Chaparral WMA,**	**15.90**	**334**	P	**Pn**	**13 50 33.8**	**0.0**
	baz=151,SNR=33						
833A				S	**S**	**13 53 38.1**	**-1.8**
	baz=151						
HKT	**Hockley**	**16.26**	**347**	Pn	**Pn**	**13 50 38.5**	**+0.2**
HKT	**Hockley**	**16.26**	**347**	*c i* P	**Pn**	**13 50 36.2**	**-2.1**
HKT				pmax	pmax		
	comp=Z,85nm,1.6s						
HKT	**Hockley**	**16.26**	**347**	P	**P**	**13 50 39.4**	**-0.9**
	baz=165						
060A	**Indiantown**	**16.64**	**38**	P	**P**	**13 50 44.5**	**-0.1**
	baz=221,SNR=7.2						
441A	**DeRidder**	**16.65**	**355**	P	**Pn**	**13 50 43.6**	**+0.4**
	baz=175,SNR=25						
DBBC	**Dabeiba**	**16.71**	**113**	*e*P	**P**	**13 50 45.6**	**+0.1**
GTBY	**Guantanamo Bay**	**16.83**	**68**	P	**P**	**13 50 47.7**	**+0.9**
DWPF	**Disney Wildern**	**16.88**	**33**	P	**Pn**	**13 50 46.6**	**+0.5**
DWPF				IAmb	IAmb	13 50 54.2	
	comp=Z,568nm,0.9s						
DWPF	**Disney Wildern**	**16.88**	**33**	P	**P**	**13 50 47.3**	**+0.1**
	baz=216						
342A	**Flagon Creek P**	**17.22**	**358**	P	**P**	**13 50 52.0**	**+1.0**
342A				IAmb	IAmb	13 50 55.3	
	comp=Z,850nm,1.2s						
342B	**Flagon Creek P**	**17.22**	**358**	P	**P**	**13 50 51.7**	**+0.8**
	baz=178,SNR=28						
GR1C	**Gorgona, Isla**	**17.27**	**128**	*e*P	**P**	**13 50 58.1**	**+6.4**
MALC	**Bahia Malaga**	**17.30**	**124**	*e*P	**P**	**13 50 57.4**	**+5.5**
344A	**West

LRAL S Sn 13 54 51.1 -1.0
baz=194
PRAC Prado 19.48 120 eP Pn 13 51 19.2 +1.4
152A Waverly Hall 19.55 18 P Pn 13 51 18.9 +0.5
baz=200,SNR=136
BETC Betania 19.60 124 eP Pn 13 51 22.8 +3.6
BARC Barichara 19.61 110 eP Pn 13 51 19.4 -0.2
255A Hazlehurst 19.64 24 P Pn 13 51 18.8 -0.6
255A IAmb IAmb 13 51 41.9
comp=Z,595nm,1.1s
255A Hazlehurst 19.64 24 P Pn 13 51 19.1 -0.3
baz=207,SNR=21
255A S Sn 13 54 58.9 -0.6
baz=207
CCAR Cane Creek 19.74 360 P Pn 13 51 20.0 -0.6
baz=180,SNR=13
SLBS Sierra La Lagu 19.76 302 P Pn 13 51 21.8 +0.8
PAMC Pamplona, Colo 19.77 108 eP P 13 51 20.0 +0.4
Y45A Yeager Farm, C 19.78 5 P Pn 13 51 20.2 -0.9
Y45A Yeager Farm, C 19.78 5 P Pn 13 51 20.8 -0.3
baz=186,SNR=26
Z35A Perchaven, San 19.83 346 P P 13 51 20.1 +0.6
baz=164,SNR=54
ABTX Abilene, Hawle 19.85 340 P P 13 51 20.7 +0.8
baz=156,SNR=72
ABTX Abilene, Hawle 19.85 340 P P 13 51 20.6 +0.8
baz=156,SNR=72
ABTX S S 13 54 57.1 -2.8
baz=156
GARC Garzon, Huila 19.86 125 eP Pn 13 51 22.9 +0.5
RUSC La Rusia 19.99 112 eP P 13 51 22.6 +0.6
CHIC Chingaza 19.99 116 eP Pn 13 51 25.3 +1.1
154A Montrose 20.02 21 P Pn 13 51 23.1 -0.8
154A Montrose 20.02 21 P Pn 13 51 23.5 -0.4
baz=205,SNR=30
Z51A Franklin 20.03 16 P Pn 13 51 23.7 -0.4
baz=198,SNR=52
SDDR Presa de Saban 20.10 73 P P 13 51 23.2 +0.5
FLOC Florencia 20.10 127 eP Pn 13 51 25.9 +0.8
LPIG La Paz 20.24 302 P Pn 13 51 26.1 -0.4
comp=Z,101nm,0.9s,baz=153,slow=21,SNR=9.0
LPIG LR LR 13 58 27.5
comp=Z,1µm,20.2s,baz=115,slow=34
comp=Z,101nm,0.9s
Y49A Blount Mountai 20.25 13 P Pn 13 51 25.9 -0.7
baz=195,SNR=53
Y49A S S 13 55 09.9 +2.1
baz=195
VILC Villavicencio, 20.28 118 eP Pn 13 51 28.2 +0.8
X40A Basin Creek Fa 20.34 357 P P 13 51 25.5 +0.4
baz=177,SNR=56
X40A P P 13 51 25.5 +0.4
baz=177,SNR=56
X40A Basin Creek Fa 20.34 357 P P 13 51 25.0 -0.1
baz=177,SNR=56
X40A S S 13 55 08.5 -1.0
baz=177
OXF Oxford 20.44 5 P P 13 51 26.5 +0.4
OXF Oxford 20.44 5 P P 13 51 26.6 +0.4
baz=186,SNR=25
OXF Oxford 20.44 5 P P 13 51 26.1 0.0
baz=186,SNR=25
MIAR Mount Ida 20.45 355 P P 13 51 26.3 +0.1
MIAR pmax pmax
comp=Z,520nm,1.4s
MIAR Mount Ida 20.45 355 P P 13 51 26.7 +0.5
baz=175,SNR=96
MIAR Mount Ida 20.45 355 P P 13 51 26.0 -0.2
baz=175,SNR=96
MIAR S S 13 55 15.2 +3.6
baz=175
GOGA Godfrey 20.62 20 P P 13 51 29.4 +1.2
GOGA Godfrey 20.62 20 P P 13 51 29.4 +1.2
GOGA pmax pmax
comp=Z,559nm,0.9s
GOGA Godfrey 20.62 20 P P 13 51 29.6 +1.4
baz=203,SNR=255
GOGA Godfrey 20.62 20 P P 13 51 29.2 +1.1
baz=203,SNR=255
GOGA S S 13 55 17.8 +2.7
baz=203
X37A Clayton 20.69 351 P P 13 51 29.5 +0.6
baz=170,SNR=109
X48A Hartselle 20.70 11 P P 13 51 29.9 +1.0
X48A Hartselle 20.70 11 P P 13 51 29.9 +1.0
baz=193,SNR=72
X48A S S 13 55 18.5 +2.0
baz=193
Y52A Lilburn 20.86 18 P Pn 13 51 32.5 -1.2
baz=201,SNR=208
Y52A P Pn 13 51 32.5 -1.2
baz=201,SNR=208
Y52A S Sn 13 55 24.4 -4.3
baz=201
Y52A S Sn 13 55 24.4 -4.3
baz=201
TAMC Tame, Arauca 20.94 109 eP P 13 51 31.4 -0.4
W41B Gary Mavity, V 21.00 359 P P 13 51 32.2 0.0
W41B IAmb IAmb 13 51 55.2
comp=Z,677nm,1.3s
W41B Gary Mavity, V 21.00 359 P P 13 51 32.5 +0.3
baz=178,SNR=66
W41B Gary Mavity, V 21.00 359 P P 13 51 32.1 -0.2
baz=178,SNR=66
W41B S S 13 55 22.8 +0.2
baz=178
FPAL Fort Paine 21.08 14 P P 13 51 33.9 +0.8
W45A Hickory Valley 21.10 6 P P 13 51 33.0 -0.2
baz=187,SNR=17
W45A S S 13 55 27.1 +2.7
baz=187
W39A Magazine 21.11 355 P P 13 51 33.6 +0.3
baz=174,SNR=83
W39A Magazine 21.11 355 P P 13 51 33.3 -0.1
baz=174,SNR=83
W39A S S 13 55 24.8 +0.1
baz=174
X34A Smith Ranch, M 21.18 346 P P 13 51 34.4 +0.2
X34A IAmb IAmb 13 51 57.8
comp=Z,362nm,1.1s
MACC Macarena, Meta 21.21 122 eP P 13 51 37.1 +2.4
SDV Santo Domingo 21.22 102 LR LR 14 00 24.3
comp=Z,744nm,20.6s,baz=283,slow=39
HAW Hawthorne Fire 21.24 24 P P 13 51 35.8 +1.0
baz=208,SNR=47
HAW S S 13 55 32.4 +5.0
baz=208
X51A Calhoun 21.29 16 P P 13 51 36.2 +0.9
baz=198,SNR=43
X51A P P 13 51 36.2 +0.9
baz=198,SNR=43
X51A S S 13 55 30.8 +2.4
baz=198
X51A S S 13 55 30.8 +2.4
baz=198
HBAR Harrisburg 21.39 2 P P 13 51 36.8 +0.4
HBAR Harrisburg 21.39 2 P P 13 51 36.8 +0.4
baz=183,SNR=21
BOSC San Juan Bosco 21.52 142 P P 13 51 41.0 +2.9
WMOK Wichita Mounta 21.55 344 P P 13 51 37.0 -1.2
WMOK IAmb IAmb 13 52 06.2
comp=Z,290nm,1.4s
WMOK Wichita Mounta 21.55 344 P P 13 51 37.0 -1.2
WMOK pmax pmax
comp=Z,290nm,1.5s
WMOK Wichita Mounta 21.55 344 P P 13 51 37.3 -0.9
baz=161,SNR=62
WMOK Wichita Mounta 21.55 344 P P 13 51 37.2 -0.9
baz=161,SNR=62
WMOK S S 13 55 30.9 -2.7
baz=161
MNTX Cornudas Mount 21.59 327 P P 13 51 39.5 +1.0
baz=141,SNR=454
MNTX S S 13 55 36.7 +2.4
baz=141
MNTX Cornudas Mount 21.59 327 P P 13 51 39.2 +0.6
baz=141,SNR=454
MNTX S S 13 55 38.6 +4.3
baz=141
NHSC New Hope 21.62 27 P P 13 51 41.8 +3.0
baz=212,SNR=15
NHSC New Hope 21.62 27 P P 13 51 39.2 +0.4
baz=212,SNR=15
FCAR Ozark Folk Cen 21.71 359 P P 13 51 39.3 -0.6
FCAR IAmb IAmb 13 51 42.0
comp=Z,131nm,0.7s
HODGE Hodges 21.78 21 P P 13 51 41.2 +0.7
HODGE IAmb IAmb 13 51 43.5
comp=Z,400nm,1.1s
HODGE Hodges 21.78 21 P P 13 51 41.3 +0.7
baz=205,SNR=145
W50A Signal Mountai 21.78 14 P P 13 51 41.1 +0.4
baz=197,SNR=34
W50A S S 13 55 40.2 +2.1
baz=197
HALT Halls 21.83 5 P P 13 51 40.8 -0.2
GNAR Gosnell 21.84 4 P P 13 51 41.0 -0.1
OKCSW OKLAHOMA CITY 21.86 347 P P 13 51 41.6 +0.2
OKCFA Oklahoma City 21.87 347 P P 13 51 41.6 +0.1
OKCFA IAmb IAmb 13 51 43.5
comp=Z,311nm,0.9s
OKCFA Oklahoma City 21.87 347 P P 13 51 42.4 +0.8
baz=165,SNR=14
LCAR Lake Charles 21.89 1 P P 13 51 41.1 -0.7
LCAR Lake Charles 21.89 1 P P 13 51 41.1 -0.7
baz=181,SNR=257
W48A Smith Brothers 21.99 11 P P 13 51 43.1 +0.2
V48A IAmb IAmb 13 51 45.0
comp=Z,309nm,0.8s
W48A Smith Brothers 21.99 11 P P 13 51 43.0 +0.2
baz=192,SNR=132
V48A S S 13 55 43.2 +1.3
baz=192
LNXT Lenox 22.01 5 P P 13 51 43.0 0.0
LNXT Lenox 22.01 5 P P 13 51 42.9 -0.1
baz=186,SNR=24
W52A Murphy 22.04 17 P P 13 51 44.2 +0.8
W52A IAmb IAmb 13 51 46.7
comp=Z,170nm,0.8s
W52A Murphy 22.04 17 P P 13 51 44.4 +1.0
baz=200,SNR=69
W52A S S 13 55 45.9 +3.0
baz=200
TUL1 Leonard 22.05 351 P P 13 51 43.4 0.0
baz=169,SNR=14
TUL1 Leonard 22.05 351 P P 13 51 41.9 -1.6
baz=169,SNR=14
TUL1 S S 13 55 42.0 -0.9
baz=169
JSC Jenkinsville 22.19 23 P P 13 51 45.3 +0.3
JSC IAmb IAmb 13 52 07.9
comp=Z,244nm,1.1s
JSC Jenkinsville 22.19 23 P P 13 51 45.3 +0.3
JSC pmax pmax
comp=Z,244nm,1.1s
JSC Jenkinsville 22.19 23 P P 13 51 46.0 +1.0
baz=208,SNR=27
HHAR Hobbs 22.20 355 P P 13 51 44.6 -0.4
baz=174
U40A Yellville 22.20 357 P P 13 51 44.9 -0.3
baz=177,SNR=82
U40A P P 13 51 44.9 -0.3
baz=177,SNR=82
U40A S S 13 55 44.9 -0.8
baz=177
U40A S S 13 55 44.9 -0.8
baz=177
U40A Yellville 22.20 357 P P 13 51 44.2 -0.9
baz=177,SNR=82
U40A S S 13 55 44.9 -0.8
baz=177
WVT Waverly 22.21 8 P P 13 51 44.1 -1.1
WVT IAmb IAmb 13 51 47.3
comp=Z,204nm,0.7s
WVT Waverly 22.21 8 P P 13 51 44.1 -1.1
WVT pmax pmax
comp=Z,204nm,0.7s
WVT Waverly 22.21 8 P P 13 51 44.5 -0.7
baz=190,SNR=156
WVT S S 13 55 45.0 -0.9
baz=190
WVT Waverly 22.21 8 P P 13 51 44.3 -1.0
baz=190
WVT S S 13 55 44.8 -1.0
baz=190
MSTX Muleshoe 22.22 335 P P 13 51 44.8 -0.7
MSTX IAmb IAmb 13 51 46.6
comp=Z,136nm,0.7s
MSTX Muleshoe 22.22 335 P P 13 51 45.2 -0.3
baz=150,SNR=12
MSTX Muleshoe 22.22 335 P P 13 51 45.1 -0.4
baz=150,SNR=12
MSTX S S 13 55 46.2 -0.1
baz=150
CASEE Lake Jocassee 22.25 19 P P 13 51 46.7 +1.1
baz=203
CASEE S S 13 55 48.7 +2.2
baz=203
KIDD KIDD Seismic O 22.26 325 P P 13 51 46.5 +0.7
baz=139,SNR=13
Y57A Sumter 22.31 25 P P 13 51 47.0 +0.7
Y57A IAmb IAmb 13 51 48.8
comp=Z,325nm,0.8s
Y57A Sumter 22.31 25 P P 13 51 47.7 +1.4
baz=210,SNR=12
Y57A P P 13 51 47.7 +1.4
baz=210,SNR=12
U38A Gravette 22.39 354 P P 13 51 46.8 -0.4
baz=173,SNR=54
Y58A Scranton 22.52 27 P P 13 51 49.0 +0.4
baz=212,SNR=7.1
Y58A P P 13 51 49.0 +0.4
baz=212,SNR=7.1
V51A Loudon 22.59 16 P P 13 51 49.3 0.0
V51A Loudon 22.59 16 P P 13 51 50.0 +0.6
baz=199,SNR=41
V51A S S 13 55 53.3 +1.0
baz=199
AMTX Amarillo 22.61 338 P P 13 51 49.4 -0.2
baz=154,SNR=133
AMTX Amarillo 22.61 338 P P 13 51 49.2 -0.4
baz=154
AMTX S S 13 55 53.2 +0.4
baz=154
TKL Tuckaleechee C 22.61 17 P P 13 51 49.6 +0.1
comp=Z,441nm,0.9s,baz=187,slow=9.4,SNR=273
TKL LR LR 14 01 34.4
comp=Z,5µm,21.6s,baz=208,slow=39
comp=Z,441nm,0.9s
TKL Tuckaleechee C 22.61 17 P P 13 51 50.0 +0.4
TKL Tuckaleechee C 22.61 17 P P 13 51 50.0 +0.4
TKL pmax pmax
comp=Z,493nm,0.9s
TKL Tuckaleechee C 22.61 17 P P 13 51 50.5 +1.0
baz=200,SNR=282
PBMO Poplar Bluff 22.62 3 P P 13 51 49.0 -0.6
baz=183,SNR=200
BIRD Birdtown, Kers 22.82 24 P P 13 51 52.6 +0.9
baz=209,SNR=33
V52A Sevierville 22.84 17 P P 13 51 53.0 +1.1
baz=200,SNR=146
V53A Saluda 22.91 19 P P 13 51 53.2 +0.6
baz=202,SNR=146
V53A P P 13 51 53.2 +0.6
baz=202,SNR=146
KMSC Kings Mountain 22.93 22 P P 13 51 53.3 +0.5
baz=206,SNR=85
KMSC Kings Mountain 22.93 22 P P 13 51 52.9 0.0
baz=206,SNR=85
KMSC S S 13 55 59.3 +1.4
baz=206
U49A Red Boiling Sp 22.94 12 P P 13 51 52.6 -0.3
baz=195,SNR=126
Y59A Loris 22.95 28 P P 13 51 54.1 +1.2
baz=213,SNR=19
Y59A P P 13 51 54.1 +1.2
baz=213,SNR=19
MGMO Mountain Grove 22.98 359 P P 13 51 52.4 -0.9
MGMO IAmb IAmb 13 51 55.2
comp=Z,391nm,1.1s
T45B Paducah 22.99 6 P P 13 51 53.1 -0.3
baz=187,SNR=32
T35B Sooner Cattle 23.15 350 P P 13 51 53.6 -1.4
baz=168,SNR=32
T47A Sharon Grove 23.16 9 P P 13 51 54.6 -0.4
baz=191,SNR=197
T47A S S 13 56 01.9 +0.3
baz=191
X58A Rowland 23.21 26 P P 13 51 54.6 -1.0
X58A IAmb IAmb 13 51 57.1
comp=Z,276nm,1.2s
X58A Rowland 23.21 26 P P 13 51 56.4 +0.8
baz=212,SNR=5.8
X58A P P 13 51 56.4 +0.8
baz=212,SNR=5.8
Y60A Bolivia 23.27 29 P P 13 51 56.6 +0.5
baz=215,SNR=13
Y60A P P 13 51 56.6 +0.5
baz=215,SNR=13
W57A Gilead 23.46 25 P P 13 51 57.9 +0.1
baz=209,SNR=22
W57A P P 13 51 57.9 +0.1
baz=209,SNR=22
W57A S S 13 56 08.8 +2.4
baz=209
W57A S S 13 56 08.8 +2.4
baz=209
TZTN Tazewell 23.51 17 P P 13 51 59.2 +0.9
baz=200,SNR=113
TZTN S S 13 56 07.4 +0.2
baz=200
TZTN Tazewell 23.51 17 P P 13 51 58.6 +0.3
baz=200,SNR=113
TZTN S S 13 56 07.0 -0.3
baz=200
121A Cookes Peak, D 23.54 324 P P 13 52 01.5 +2.6
baz=138,SNR=213
121A Cookes Peak, D 23.54 324 P P 13 52 00.7 +1.8
baz=138,SNR=213
121A S S 13 56 13.4 +5.2
baz=138
S39A Bolivar 23.56 357 P P 13 51 58.5 -0.2
baz=176,SNR=280
S39A S S 13 56 07.1 -0.9
baz=176
S44A Carbondale 23.61 5 P P 13 51 59.5 +0.4
baz=186,SNR=310
S44A S S 13 56 11.8 +3.1
baz=186
V55A Taylorsville 23.61 22 P P 13 52 00.2 +0.9
baz=206,SNR=102
V55A P P 13 52 00.2 +0.9
baz=206,SNR=102
V55A S S 13 56 09.4 +0.5
baz=206
V55A S S 13 56 09.4 +0.5
baz=206
T50A Nancy 23.63 14 P P 13 51 59.3 -0.1
baz=197
T50A P P 13 51 59.3 -0.1
baz=197
T50A S S 13 56 10.5 +1.3
baz=197
T50A S S 13 56 10.5 +1.3
baz=197
FVM French Village 23.82 2 P P 13 51 59.6 -1.6
FVM IAmb IAmb 13 52 01.7
comp=Z,174nm,0.7s
FVM French Village 23.82 2 P P 13 51 59.6 -1.6
FVM pmax pmax
comp=Z,175nm,0.7s
FVM French Village 23.82 2 P P 13 52 00.3 -0.8
baz=183,SNR=80
FVM S S 13 56 13.2 +0.8
baz=183
CCM Cathedral Cave 23.88 1 P P 13 52 00.5 -1.1
CCM Cathedral Cave 23.88 1 P P 13 52 00.5 -1.1
CCM pmax pmax
comp=Z,466nm,0.8s
CCM Cathedral Cave 23.88 1 P P 13 52 00.8 -0.8
baz=181,SNR=306
CCM Cathedral Cave 23.88 1 P P 13 52 00.6 -1.0
baz=181
CCM S S 13 56 15.8 +2.6
baz=181
U54A Nelsons Funny 24.01 20 P P 13 52 03.0 +0.1
U54A Nelsons Funny 24.01 20 P P 13 52 03.9 +0.9
baz=204,SNR=117
U54A P P 13 52 03.9 +0.9
baz=204,SNR=117
R40A Maddies Statio 24.11 359 P P 13 52 02.9 -0.8
baz=178,SNR=193
Y22A Socorro 24.16 328 P P 13 52 07.3 +2.9
baz=141,SNR=97
Y22D IRIS PASSCAL I 24.24 328 P P 13 52 08.5 +3.3
baz=142,SNR=8.4
Y22D IRIS PASSCAL I 24.24 328 P P 13 52 07.2 +2.0
baz=142,SNR=8.4
Y22D S S 13 56 27.1 +7.6
baz=142
LENM Lemitar 24.34 328 P P 13 52 08.6 +2.4
U56A King 24.35 22 P P 13 52 06.9 +0.9
baz=207,SNR=54
U56A P P 13 52 06.9 +0.9
baz=207,SNR=54
V58A Windy Hill, Pi 24.37 25 P P 13 52 06.6 +0.5
baz=211,SNR=98
V58A P P 13 52 06.6 +0.5
baz=211,SNR=98
CNNC Cliffs of the 24.43 28 P P 13 52 07.1 +0.4
baz=214,SNR=8.8
CNNC Cliffs of the 24.43 28 P P 13 52 06.7 0.0
baz=214,SNR=8.8
SLM Saint Louis 24.48 3 P P 13 52 07.1 0.0
SLM Saint Louis 24.48 3 P P 13 52 07.1 0.0
SLM pmax pmax
comp=Z,1µm,0.7s
SLM Saint Louis 24.48 3 P P 13 52 07.2 +0.1
baz=183,SNR=58
S51A Beattyville 24.52 16 P P 13 52 08.0 +0.4
baz=199,SNR=64
S51A P P 13 52 08.0 +0.4
baz=199,SNR=64
ANMO Albuquerque 24.70 330 P P 13 52 11.8 +2.4
comp=Z,37nm,0.6s,baz=145,slow=11,SNR=125
comp=Z,37nm,0.6s
ANMO Albuquerque 24.70 330 P P 13 52 10.6 +1.2
ANMO Albuquerque 24.70 330 i P P 13 52 10.2 +0.8
ANMO pmax pmax
comp=Z,59nm,0.8s
ANMO Albuquerque 24.70 330 P P 13 52 11.3 +1.9
baz=144,SNR=91
ANMO Albuquerque 24.70 330 P P 13 52 11.0 +1.6
baz=144
ANMO S S 13 56 27.9 +1.1
baz=144
R49A Shelbyville 24.78 12 P P 13 52 09.3 -0.6
R49A IAmb IAmb 13 52 11.5
comp=Z,170nm,0.6s
R49A Shelbyville 24.78 12 P P 13 52 09.6 -0.3
baz=195,SNR=66
R49A P P 13 52 09.6 -0.3
baz=195,SNR=66
SJG San Juan 24.80 77 P P 13 52 07.9 -2.4
comp=Z,10nm,0.2s,baz=310,slow=20,SNR=2.5
SJG PcP PcP 13 55 46.8 +1.4
comp=Z,9.0nm,0.5s,baz=125,slow=10.0,SNR=1.3
SJG LR LR 14 01 16.8
comp=Z,972nm,20.3s,baz=262,slow=35
comp=Z,10nm,0.2s
Q44A Meyer Farm, Va 24.83 5 P P 13 52 09.7 -0.6
Q44A Meyer Farm, Va 24.83 5 P P 13 52 10.2 -0.1
baz=186,SNR=139
ATAH Atahualpa 24.84 147 P P 13 52 13.1 +2.0
comp=Z,110nm,0.9s,baz=342,slow=7.8,SNR=38
comp=Z,110nm,0.9s
R50A Paris 24.95 14 P P 13 52 11.6 +0.1
baz=197,SNR=62
R50A P P 13 52 11.6 +0.1
baz=197,SNR=62
R32A Long Quarter, 25.04 347 P P 13 52 11.1 -1.2
baz=164,SNR=21
BIRV Birongo 25.04 95 P P 13 52 12.4 -0.1
BLA Blacksburg 25.11 21 P P 13 52 13.7 +0.8
baz=206,SNR=30
BLA Blacksburg 25.11 21 P P 13 52 13.1 +0.2
baz=206,SNR=30
TUC Tucson 25.20 319 P P 13 52 15.1 +1.3
TUC Tucson 25.20 319 P P 13 52 15.1 +1.3
TUC pmax pmax
comp=Z,53nm,0.9s
TUC Tucson 25.20 319 P P 13 52 15.7 +1.8
baz=132
TUC S S 13 56 41.6 +7.0
baz=132
KSU1 Kansas State U 25.30 351 P P 13 52 13.7 -0.9
KSU1 IAmb IAmb 13 52 42.9
comp=Z,194nm,0.9s
KSU1 Kansas State U 25.30 351 P P 13 52 14.3 -0.2
baz=169,SNR=8.2
KSU1 Kansas State U 25.30 351 P P 13 52 14.0 -0.5
baz=169,SNR=8.2

KSU1 S S 13 56 43.9 +8.0
baz=169
S54A Dingess, Beckl 25.34 19 P P 13 52 15.5 +0.5
baz=204,SNR=55
S54A P P 13 52 15.5 +0.5
baz=204,SNR=55
P40A Paris 25.35 359 P P 13 52 14.2 -0.7
baz=179,SNR=118
T57A Hurt 25.36 24 P P 13 52 15.6 +0.5
baz=209,SNR=38
T57A P P 13 52 15.6 +0.5
baz=209,SNR=38
U59A Littleton 25.41 27 P P 13 52 15.0 -0.6
U59A Littleton 25.41 27 P P 13 52 16.2 +0.7
baz=213,SNR=20
U59A P P 13 52 16.2 +0.7
baz=213,SNR=20
P38A Dawn 25.49 357 P P 13 52 16.6 +0.2
baz=176,SNR=21
P43A Skaggs, Pawnee 25.52 4 P P 13 52 16.5 -0.1
baz=185,SNR=48
R53A Hurricane 25.63 18 P P 13 52 18.3 +0.7
baz=202,SNR=45
R53A P P 13 52 18.3 +0.7
baz=202,SNR=45
T25A Trinidad 25.63 336 P P 13 52 18.9 +1.0
baz=150,SNR=46
T25A S S 13 56 46.1 +4.5
baz=150
CUPR Culebra, Puert 25.64 77 P P 13 52 18.1 +0.2
CBKS Cedar Bluff 25.65 345 P P 13 52 17.0 -0.8
baz=162
P46A Rosedale 25.73 8 P P 13 52 18.6 +0.2
baz=190,SNR=102
P48A Milroy 25.86 11 P P 13 52 19.0 -0.6
baz=194,SNR=45
P48A P P 13 52 19.0 -0.6
baz=194,SNR=45
Q51A Peebles 25.90 15 P P 13 52 20.4 +0.4
baz=199,SNR=77
Q51A P P 13 52 20.4 +0.4
baz=199,SNR=77
STVI Saint Thomas 25.96 77 P P 13 52 21.0 +0.3
STVI IAmb IAmb 13 52 46.0
comp=Z,137nm,0.9s
T59A Double "B" Far 26.03 26 P P 13 52 21.7 +0.5
baz=212,SNR=112
T59A P P 13 52 21.7 +0.5
baz=212,SNR=112
P49A Miami Univ. Ec 26.07 12 P P 13 52 20.8 -0.7
baz=195,SNR=13
P49A Miami Univ. Ec 26.07 12 P P 13 52 20.2 -1.3
baz=195,SNR=13
O44A Mansfield 26.11 6 P P 13 52 21.8 -0.1
baz=187,SNR=26
Q52A Bidwell 26.12 17 P P 13 52 22.6 +0.6
baz=201,SNR=52
Q52A P P 13 52 22.6 +0.6
baz=201,SNR=52
S57A Dark Hollow, R 26.14 23 P P 13 52 22.6 +0.4
baz=209,SNR=23
S57A P P 13 52 22.6 +0.4
baz=209,SNR=23
R55A Marlinton 26.17 21 P P 13 52 23.4 +0.9
baz=206,SNR=85
R55A P P 13 52 23.4 +0.9
baz=206,SNR=85
214A Organ Pipe Nat 26.30 316 P P 13 52 24.3 +0.6
baz=128,SNR=7.1
214A S S 13 56 55.5 +3.6
baz=128
P51A Williamsport 26.40 15 P P 13 52 24.4 -0.2
P51A IAmb IAmb 13 52 25.6
comp=Z,153nm,0.8s
P51A Williamsport 26.40 15 P P 13 52 24.7 +0.2
baz=199,SNR=28
P51A P P 13 52 24.7 +0.2
baz=199,SNR=28
HDIL Hopedale 26.45 4 P P 13 52 24.7 -0.2
baz=185,SNR=42
HDIL Hopedale 26.45 4 P P 13 52 23.9 -1.0
baz=185,SNR=42
SFIN Lafayette 26.49 8 P P 13 52 25.3 -0.1
baz=190,SNR=62
SFIN Lafayette 26.49 8 P P 13 52 24.3 -1.0
baz=190,SNR=62
T60A Surry 26.53 27 P P 13 52 26.5 +0.9
baz=214,SNR=18
T60A P P 13 52 26.5 +0.9
baz=214,SNR=18
N41A Harden Midland 26.53 1 P P 13 52 24.8 -0.9
baz=182,SNR=29
W18A Petrified Fore 26.54 325 P P 13 52 27.8 +1.7
baz=138,SNR=9.6
W18A S S 13 56 58.9 +2.9
baz=138
Q54A Coxs Mills 26.57 19 P P 13 52 26.3 +0.3
baz=204,SNR=162
Q54A P P 13 52 26.3 +0.3
baz=204,SNR=162
SDCO Great Sand Dun 26.59 335 P P 13 52 27.8 +1.1
baz=149,SNR=43
SDCO Great Sand Dun 26.59 335 P P 13 52 27.6 +1.0
baz=149,SNR=43
SDCO S S 13 56 58.1 +1.1
baz=149
N38A Joes South For 26.64 357 P P 13 52 26.3 -0.4
baz=176,SNR=21
KSCO Kaye Shedlock' 26.66 341 P P 13 52 27.2 +0.2
baz=156,SNR=10
KSCO Kaye Shedlock' 26.66 341 P P 13 52 26.8 -0.2
baz=156,SNR=10
O48B Farmland 26.68 11 P P 13 52 26.3 -0.8
baz=194,SNR=42
O48B Farmland 26.68 11 P P 13 52 25.8 -1.3
baz=194,SNR=42
R58B Mineral 26.74 25 P P 13 52 28.5 +1.0
baz=211,SNR=31
R58B P P 13 52 28.5 +1.0
baz=211,SNR=31
O49A Covington 26.78 12 P P 13 52 27.3 -0.6
baz=196,SNR=17
O49A P P 13 52 27.3 -0.6
baz=196,SNR=17
P52A Corning 26.79 16 P P 13 52 26.7 -1.3
baz=201
P53A Whipple 26.86 18 P P 13 52 29.5 +0.8
baz=202,SNR=45
P53A P P 13 52 29.5 +0.8
baz=202,SNR=45
N35A Tabor 26.90 353 P P 13 52 31.2 +2.2
baz=171
ACSO Alum Creek Sta 27.13 15 P P 13 52 30.9 -0.2
ACSO IAmb IAmb 13 52 32.0
comp=Z,211nm,1.2s
ACSO Alum Creek Sta 27.13 15 P P 13 52 31.1 +0.1
baz=199,SNR=21
ACSO Alum Creek Sta 27.13 15 P P 13 52 30.7 -0.3
baz=199,SNR=21
CBN Corbin Frederi 27.15 25 P P 13 52 32.9 +1.6
baz=212,SNR=9.3
CBN Corbin Frederi 27.15 25 P P 13 52 31.0 -0.2
baz=212,SNR=9.3
S22A 4UR Ranch, Cre 27.16 333 P P 13 52 32.8 +1.1
baz=146,SNR=22
S22A S S 13 57 05.0 -1.0
baz=146
Q56A Snyder Ridge, 27.18 22 P P 13 52 32.4 +0.8
baz=207
Q56A P P 13 52 32.4 +0.8
baz=207
N47A Urbana 27.19 10 P P 13 52 30.4 -1.2
baz=193,SNR=38
N47A P P 13 52 30.4 -1.2
baz=193,SNR=38
O52A Adamsville 27.32 17 P P 13 52 33.0 +0.2
baz=201,SNR=54
O52A P P 13 52 33.0 +0.2
baz=201,SNR=54
M44A Midewin, Midew 27.38 6 P P 13 52 32.8 -0.5
baz=188,SNR=30
S61A Accomac 27.45 28 P P 13 52 35.4 +1.4
baz=215
S61A P P 13 52 35.4 +1.4
baz=215
MVCO Mesa Verde 27.50 330 P P 13 52 36.3 +1.6
baz=142,SNR=79
MVCO S S 13 57 15.5 +4.3
baz=142
Q24A Divide 27.50 337 P P 13 52 35.1 +0.2
baz=151
MCWV Mont Chateau 27.50 20 P P 13 52 34.9 +0.4
baz=205,SNR=7.7
MCWV Mont Chateau 27.50 20 P P 13 52 34.4 -0.1
baz=205,SNR=7.7
N49A Columbus Grove 27.52 12 P P 13 52 33.8 -0.8
baz=196,SNR=9.9
N49A P P 13 52 33.8 -0.8
baz=196,SNR=9.9
O53A New Philadelph 27.62 17 P P 13 52 35.3 -0.2
baz=202,SNR=47
Y14A Wickenburg 27.67 319 P P 13 52 37.4 +1.4
Y14A PcP 13 55 54.0 +2.1
SCIA State Center 27.75 357 P P 13 52 37.5 +0.9
baz=177
SCIA State Center 27.75 357 P P 13 52 35.3 -1.3
baz=177
WUAZ Wupatki 27.75 324 P P 13 52 39.5 +2.6
baz=135,SNR=50
WUAZ S S 13 57 20.1 +5.0
baz=135
BGNE Belgrade 27.80 349 P P 13 52 37.5 +0.4
baz=166
O54A Avella 27.81 19 P P 13 52 37.3 +0.2
baz=204,SNR=43
O54A P P 13 52 37.3 +0.2
baz=204,SNR=43
L42A Oliver, Polo 27.87 3 P P 13 52 37.1 -0.6
baz=184,SNR=65
L40A Anamosa 27.88 1 P P 13 52 37.6 -0.1
baz=181,SNR=43
N51A Ashland 27.93 15 P P 13 52 38.0 -0.2
baz=199,SNR=11
N51A P P 13 52 38.0 -0.2
baz=199,SNR=11
P57A Homestead Farm 28.00 23 P P 13 52 39.4 +0.5
P57A IAmb IAmb 13 52 40.9
comp=Z,194nm,0.9s
P57A Homestead Farm 28.00 23 P P 13 52 40.0 +1.1
baz=209,SNR=51
P57A P P 13 52 40.0 +1.1
baz=209,SNR=51
L34A Svendsen Farm, 28.08 352 P P 13 52 39.0 -0.6
L34A IAmb IAmb 13 52 41.8
comp=Z,74nm,0.6s
R61A Willards 28.14 28 P P 13 52 41.3 +1.2
R61A Willards 28.14 28 P P 13 52 41.5 +1.4
baz=215
R61A P P 13 52 41.5 +1.4
baz=215
L44A Lake County Fo 28.18 6 P P 13 52 39.8 -0.6
baz=188,SNR=9.0
L44A Lake County Fo 28.18 6 P P 13 52 39.1 -1.3
baz=188,SNR=9.0
L46A Eue Claire 28.21 8 P P 13 52 39.2 -1.4
L46A IAmb IAmb 13 52 40.9
comp=Z,82nm,0.7s
M50A Fremont 28.23 14 P P 13 52 40.1 -0.8
baz=198,SNR=10
M50A P P 13 52 40.1 -0.8
baz=198,SNR=10
N53A Lisbon 28.24 17 P P 13 52 41.0 0.0
N53A IAmb IAmb 13 52 42.1
comp=Z,216nm,0.8s
N53A Lisbon 28.24 17 P P 13 52 41.2 +0.2
baz=202,SNR=66
N53A P P 13 52 41.2 +0.2
baz=202,SNR=66
OGNE Ogallala 28.25 343 P P 13 52 41.0 -0.3
baz=158
GLA Glamis 28.31 316 P P 13 52 43.4 +1.6
GLA Glamis 28.31 316 P P 13 52 43.4 +1.6
GLA pmax pmax
comp=Z,54nm,1.0s
GLA Glamis 28.31 316 P P 13 52 43.2 +1.4
baz=126,SNR=17
GLA S S 13 57 28.2 +4.5
baz=126
ISCO Idaho Springs 28.41 337 P P 13 52 43.5 +0.6
ISCO pmax pmax
comp=Z,25nm,1.0s
ISCO Idaho Springs 28.41 337 P P 13 52 43.6 +0.8
baz=150,SNR=26
ISCO Idaho Springs 28.41 337 P P 13 52 43.3 +0.5
baz=150,SNR=26
SMCO Snowmass 28.42 334 P P 13 52 44.0 +1.0
L48A N Adams 28.45 11 P P 13 52 41.9 -0.9
L48A IAmb IAmb 13 52 43.0
comp=Z,180nm,0.7s
L48A N Adams 28.45 11 P P 13 52 42.0 -0.9
baz=195,SNR=40
L48A P P 13 52 42.0 -0.9
baz=195,SNR=40
K38A Parkersburg 28.48 358 P P 13 52 42.6 -0.5
baz=178,SNR=7.9
PDMCI Parker Dam,Lak 28.63 319 P P 13 52 45.8 +1.3
baz=129,SNR=30
PDMCI S S 13 57 32.8 +4.3
baz=129
K43A Burlington 28.66 5 P P 13 52 44.0 -0.6
baz=187,SNR=12
JFWS Jewell Farm 28.75 2 P P 13 52 45.1 -0.4
baz=183,SNR=39
JFWS Jewell Farm 28.75 2 P P 13 52 44.3 -1.2
baz=183,SNR=39
JFWS S S 13 57 29.6 -0.6
baz=183
M52A Chesterland 28.78 16 P P 13 52 45.5 -0.3
M52A IAmb IAmb 13 52 46.6
comp=Z,166nm,0.8s
M52A Chesterland 28.78 16 P P 13 52 45.8 0.0
baz=201,SNR=21
M52A P P 13 52 45.8 0.0
baz=201,SNR=21
YUH Yuha Desert 28.84 314 P P 13 52 48.5 +2.1
M53A WI Miller and 28.87 17 P P 13 52 46.2 -0.4
M53A IAmb IAmb 13 52 47.5
comp=Z,168nm,0.8s
M53A WI Miller and 28.87 17 P P 13 52 46.2 -0.4
baz=202,SNR=40
M53A S S 13 57 31.4 -0.9
baz=202
SWSC Sam W. Stewart 28.92 315 P P 13 52 48.4 +1.3
baz=125,SNR=5.3
SWSC S S 13 57 36.9 +3.8
baz=125
AAM Ann Arbor 28.95 12 P P 13 52 46.9 -0.3
baz=196
AAM Ann Arbor 28.95 12 P P 13 52 46.2 -1.0
baz=196
IKP In-Ko-Pah, Jac 28.97 314 P P 13 52 49.1 +1.4
baz=124,SNR=7.6
IKP S S 13 57 36.9 +2.8
baz=124
SSPA Standing Stone 29.05 22 P P 13 52 47.8 -0.4
SSPA IAmb IAmb 13 52 49.6
comp=Z,155nm,0.8s
SSPA Standing Stone 29.05 22 P P 13 52 48.3 +0.1
baz=208,SNR=74
SSPA Standing Stone 29.05 22 P P 13 52 48.2 +0.1
baz=208
SSPA Standing Stone 29.05 22 P P 13 52 48.6 +0.4
SSPA x P 13 52 51.1 +2.9
SSPA pP pP 13 53 05.4 +1.4
BC3 Big Chuckawall 29.09 316 P P 13 52 50.3 +1.5
baz=126,SNR=39
BC3 S S 13 57 38.2 +2.1
baz=126
IRM Iron Mountain 29.19 317 P P 13 52 51.7 +2.1
baz=128,SNR=22
IRM S S 13 57 40.1 +2.7
baz=128
ALLY Alegheny Colle 29.22 18 P P 13 52 50.0 +0.3
baz=203,SNR=8.7
NEE2 Needles Airpor 29.22 319 P P 13 52 51.8 +2.0
baz=129
GEDE Greenville 29.23 26 P P 13 52 50.0 +0.3
baz=213,SNR=17
MONP2 Monument Peak 29.32 314 P P 13 52 52.9 +1.9
baz=124,SNR=6.3
P61A Hammonton 29.48 27 P P 13 52 53.4 +1.4
baz=215
P61A P P 13 52 53.4 +1.4
baz=215
N23A Red Feather La 29.48 338 P P 13 52 52.8 +0.4
baz=151,SNR=15
M55A Ridgway 29.49 20 P P 13 52 52.1 0.0
baz=206,SNR=50
M55A P P 13 52 52.1 0.0
baz=206,SNR=50
PKCU Pink Cliffs 29.66 325 P P 13 52 56.7 +2.7
PKCU IAmb IAmb 13 52 59.4
comp=Z,159nm,1.1s
BELC Belle Mtn. Jos 29.66 316 P P 13 52 55.9 +2.0
baz=126,SNR=23
BELC S S 13 57 48.3 +3.2
baz=126
PHWY Pilot Hill 29.66 339 P P 13 52 54.2 +0.2
N58A Sunbury 29.67 23 P P 13 52 53.7 0.0
baz=210,SNR=14
N58A P P 13 52 53.7 0.0
baz=210,SNR=14
ERPA Erie 29.70 18 P P 13 52 54.1 +0.2
baz=203,SNR=16
ERPA Erie 29.70 18 P P 13 52 53.5 -0.4
baz=203,SNR=16
TUPA Temple Univers 29.71 26 P P 13 52 54.6 +0.5
baz=214,SNR=22
I40A Norwalk 29.72 1 P P 13 52 53.0 -1.0
PFO Pinyon Flats O 29.75 315 P P 13 52 56.7 +2.1
comp=Z,9.2nm,0.8s,baz=130,slow=6.2,SNR=10
PFO PcP PcP 13 55 58.1 +0.9
comp=Z,15nm,1.0s,baz=89,slow=2.6,SNR=6.5
PFO LR LR 14 05 29.8
comp=Z,719nm,20.6s,baz=129,slow=37
comp=Z,9.2nm,0.8s
PFO Pinyon Flats O 29.75 315 P P 13 52 56.5 +1.9
PFO Pinyon Flats O 29.75 315 *ce* P P 13 52 56.4 +1.8
PFO pmax pmax
comp=Z,32nm,1.0s
PFO Pinyon Flats O 29.75 315 P P 13 52 55.4 +0.8
baz=125,SNR=9.7
PFO Pinyon Flats O 29.75 315 P P 13 52 56.9 +2.3
PFO pP pP 13 53 12.1 +1.6
PFO sP sP 13 53 20.2 +2.0
O20A White River Ci 29.75 334 P P 13 52 55.8 +1.1
O20A White River Ci 29.75 334 P P 13 52 55.7 +1.0
baz=146,SNR=21
O20A S S 13 57 50.1 +3.6
baz=146
NNA Nana 29.77 150 P P 13 52 54.6 -0.3
comp=Z,19nm,0.8s,baz=330,slow=9.0,SNR=5.5
NNA LR LR 14 02 47.7
comp=Z,773nm,21.3s,baz=329,slow=32
comp=Z,19nm,0.8s
NNA Nana 29.77 150 P P 13 52 54.9 +0.1
NNA Nana 29.77 150 *i* P P 13 52 55.4 +0.6
NNA pmax pmax
comp=Z,66nm,1.0s
I42A Draeger Farm, 29.79 4 P P 13 52 54.1 -0.6
baz=185,SNR=22
ECSD EROS Data Cent 29.85 353 P P 13 52 54.5 -0.8
baz=170,SNR=16
ECSD EROS Data Cent 29.85 353 P P 13 52 53.5 -1.8
baz=170,SNR=16
I37B Waseca 29.86 357 P P 13 52 55.6 +0.2
baz=176,SNR=18
GMRC Granite Mounta 29.91 318 P P 13 52 57.9 +1.9
baz=128,SNR=45
GMRC S S 13 57 52.4 +3.5
baz=128
M57A Sunshine Farm, 29.94 22 P P 13 52 56.3 +0.2
M57A Sunshine Farm, 29.94 22 P P 13 52 56.6 +0.5
baz=209,SNR=92
M57A P P 13 52 56.6 +0.5
baz=209,SNR=92
LUPA Lehigh Univers 30.00 25 P P 13 52 57.2 +0.7
LUPA IAmb IAmb 13 52 58.3
comp=Z,159nm,0.9s
PANJ Princeton 30.10 26 P P 13 52 58.2 +0.7
baz=214,SNR=31
I45A Fountain 30.20 8 P P 13 52 57.9 -0.4
baz=190
I45A P P 13 52 57.9 -0.4
baz=190
MURC Murrieta 30.25 314 P P 13 53 00.4 +1.4
baz=124,SNR=5.5
P17A Butcher Ranch, 30.37 330 P P 13 53 01.6 +1.5
HEC Hector,Ludlow 30.38 317 P P 13 52 02.3 +2.1
baz=127,SNR=23
HEC S S 13 57 59.6 +3.4
baz=127
WVNY West Valley, N 30.39 19 P P 13 52 60.0 0.0
baz=206,SNR=21
BRNJ Basking Ridge 30.41 26 P P 13 53 01.0 +0.9
baz=214,SNR=18
BBRC Big Bear Solar 30.44 316 P P 13 53 02.7 +1.9
baz=125
TMUT Trail Mountain 30.46 329 P P 13 53 03.0 +1.9
TUQ Turquoise Moun 30.48 319 P P 13 53 02.4 +1.4
baz=128
TUQ S S 13 58 01.6 +3.8
baz=128
L56A Greenwood 30.49 21 P P 13 53 01.1 +0.1
baz=208,SNR=48
L56A P P 13 53 01.1 +0.1
baz=208,SNR=48
BBSR BB Station 30.59 49 P P 13 53 01.6 -0.3
BBSR IAmb IAmb 13 53 03.5
comp=Z,136nm,1.0s
BBSR BB Station 30.59 49 P P 13 53 02.2 +0.3
baz=240,SNR=7.6
BBSR BB Station 30.59 49 P P 13 53 02.1 +0.2
BBSR sP sP 13 53 23.2 -2.3
KSPA Keystone Colle 30.65 24 P P 13 53 02.1 -0.2
KSPA IAmb IAmb 13 53 03.6
comp=Z,138nm,1.4s
KSPA Keystone Colle 30.65 24 P P 13 53 02.5 +0.1
baz=211,SNR=15
I49A Point Hope 30.69 13 P P 13 53 01.2 -1.5
baz=197,SNR=10
I49A P P 13 53 01.2 -1.5
baz=197,SNR=10
ODNJ Ogdensburg 30.72 26 P P 13 53 03.3 +0.4
baz=214,SNR=25
RRX Edison Barstow 30.84 317 P P 13 53 05.5 +1.3
baz=126
FOR Fordham 30.85 27 P P 13 53 04.7 +0.7
baz=215,SNR=5.8
SCI2 San Clemente I 30.87 312 P P 13 53 05.1 +0.7
baz=121
SUSD Miller 30.89 350 P P 13 53 03.2 -1.3
SUSD Miller 30.89 350 P P 13 53 03.4 -1.0
baz=166,SNR=6.6
SUSD Miller 30.89 350 P P 13 53 03.0 -1.4
baz=166,SNR=6.6
BFSC Mount Baldy Ra 30.93 315 P P 13 53 06.7 +1.6
baz=124,SNR=9.0
PAL Palisades 30.96 27 P P 13 53 04.8 -0.2
PAL IAmb IAmb 13 53 06.2
comp=Z,144nm,0.8s
PAL Palisades 30.96 27 P P 13 53 04.8 -0.2
PAL pmax pmax
comp=Z,144nm,0.9s
PAL Palisades 30.96 27 P P 13 53 05.0 0.0
baz=215,SNR=17
PAL Palisades 30.96 27 P P 13 53 04.5 -0.5
baz=215,SNR=17
PAL S S 13 58 05.4 +0.5
baz=215
GSC Goldstone, Bar 30.97 317 P P 13 53 05.8 +0.4
baz=127,SNR=8.0
SHOC Shoshone, Teco 30.99 319 P P 13 53 07.2 +1.7
baz=128
CIS Catalina Islan 31.00 313 P P 13 53 06.2 +0.6
baz=122
SPMN Marine on St. 31.05 358 P P 13 53 05.1 -0.7
baz=178,SNR=21
SPMN Marine on St. 31.05 358 P P 13 53 04.2 -1.6
baz=178,SNR=21
FMP Fort Macarthur 31.08 314 P P 13 53 06.0 -0.2
baz=122
N62A Caumsett State 31.09 27 P P 13 53 06.9 +0.7
baz=216
N62A P P 13 53 06.9 +0.7
baz=216
G40A Rib Lake 31.10 2 P P 13 53 05.1 -1.2
G40A Rib Lake 31.10 2 P P 13 53 05.3 -1.0
baz=183,SNR=11
BINY Binghamton 31.12 23 P P 13 53 06.9 +0.4
baz=210,SNR=58
BINY Binghamton 31.12 23 P P 13 53 06.4 -0.1

baz=210,SNR=58
MEDO Medina 31.12 19 P **P** 13 53 05.5 -0.9
MEDO IAmb IAmb 13 53 07.8
comp=Z,174nm,0.9s
J54A Appleton 31.16 19 P **P** 13 53 06.3 -0.4
J54A IAmb IAmb 13 53 08.2
comp=Z,164nm,1.0s
J54A Appleton 31.16 19 P **P** 13 53 06.3 -0.4
baz=205,SNR=20
J54A P **P** 13 53 06.3 -0.4
baz=205,SNR=20
MPU Maple Canyon 31.22 330 P **P** 13 53 09.5 +1.8
K22A Casper 31.23 339 P **P** 13 53 08.1 +0.5
K22A Casper 31.23 339 P **P** 13 53 08.6 +1.0
baz=151,SNR=24
K22A Casper 31.23 339 P **P** 13 53 07.8 +0.2
baz=151,SNR=24
BRNY Black Rk. Fore 31.25 26 P **P** 13 53 07.9 +0.3
baz=214,SNR=24
G45A Suttons Bay 31.27 8 P **P** 13 53 06.7 -1.0
baz=191,SNR=7.7
G45A P **P** 13 53 06.7 -1.0
baz=191,SNR=7.7
K57A Scipio Center 31.38 22 P **P** 13 53 08.3 -0.5
K57A Scipio Center 31.38 22 P **P** 13 53 08.3 -0.5
baz=209,SNR=50
DECC Green Verdugo 31.40 314 P **P** 13 53 10.2 +1.1
baz=123
QSM Queen of Sheba 31.41 318 P **P** 13 53 10.8 +1.7
QSM **PcP** 13 56 02.7 +1.3
J55A Hilton 31.41 20 P **P** 13 53 08.8 -0.1
baz=206,SNR=36
J55A P **P** 13 53 08.8 -0.1
baz=206,SNR=36
GWY Greenwater Val 31.41 319 P **P** 13 53 11.3 +2.0
L59A Walton 31.47 24 P **P** 13 53 09.9 +0.3
baz=212,SNR=38
L59A P **P** 13 53 09.9 +0.3
baz=212,SNR=38
NPNY Mohonk Preserv 31.47 26 P **P** 13 53 09.8 +0.2
baz=214,SNR=22
EDW2 Edwards Air Fo 31.52 316 P **P** 13 53 11.0 +0.9
baz=124,SNR=12
TPNV Topopah Spring 31.63 320 P **P** 13 53 14.1 +2.9
baz=130,SNR=36
TPNV S **S** 13 58 17.5 +1.6
baz=130
YLE Yale 31.64 27 P **P** 13 53 11.1 +0.1
YLE IAmb IAmb 13 53 13.0
comp=Z,147nm,0.9s
LRMC Laurel Mtn Rad 31.65 317 P **P** 13 53 12.9 +1.5
baz=126
FURC Furnace Creek, 31.71 319 P **P** 13 53 14.0 +2.3
baz=128,SNR=28
FURC S **S** 13 58 19.6 +2.8
baz=128
F36A Milaca 31.71 357 P **P** 13 53 09.6 -2.0
baz=176,SNR=14
SNCC San Nicolas Is 31.72 312 P **P** 13 53 13.2 +1.3
baz=120
KSCT Kent School, K 31.73 26 P **P** 13 53 11.9 +0.1
J56A Wolcott 31.74 21 P **P** 13 53 11.7 -0.1
baz=208,SNR=202
J56A P **P** 13 53 11.7 -0.1
baz=208,SNR=202
RSSD Black Hills 31.75 343 P **P** 13 53 12.2 -0.1
RSSD Black Hills 31.75 343 P **P** 13 53 12.2 -0.1
RSSD pmax pmax
comp=Z,18nm,0.7s
RSSD Black Hills 31.75 343 P **P** 13 53 12.1 -0.1
baz=157,SNR=21
RSSD Black Hills 31.75 343 P **P** 13 53 12.2 -0.1
baz=157
RSSD Black Hills 31.75 343 P **P** 13 53 12.5 +0.2
RSSD pP **pP** 13 53 28.1 0.0
RSSD sP **sP** 13 53 35.1 -0.8
MPMC Manual Prospec 31.86 318 P **P** 13 53 14.9 +1.5
baz=127,SNR=56
MPMC S **S** 13 58 20.1 +0.4
baz=127
OSI Osito Audit: C 31.87 315 P **P** 13 53 14.5 +1.2
baz=123
F33A 5 Mile Ranch, 31.89 354 P **P** 13 53 11.2 -2.0
baz=171
DUG Dugway, Tooele 31.95 328 P **P** 13 53 16.6 +2.7
DUG pmax pmax
comp=Z,48nm,1.4s
DUG Dugway, Tooele 31.95 328 P **P** 13 53 15.8 +1.9
baz=138,SNR=33
DUG S **S** 13 58 24.8 +4.1
baz=138
COWI Conover 31.98 3 P **P** 13 53 12.9 -1.1
baz=185
M63A Gales Ferry 32.11 28 P **P** 13 53 15.6 +0.5
M63A Gales Ferry 32.11 28 P **P** 13 53 15.6 +0.5
baz=218,SNR=39
M63A P **P** 13 53 15.6 +0.5
baz=218,SNR=39
R11A Troy Canyon, C 32.15 323 P **P** 13 53 18.2 +2.5
R11A Troy Canyon, C 32.15 323 P **P** 13 53 17.9 +2.2
baz=132,SNR=52
R11A S **S** 13 58 24.9 +0.9
baz=132
HCNY Howe Caverns 32.16 24 P **P** 13 53 15.7 +0.2
baz=213,SNR=18
J57A Williamstown 32.16 22 P **P** 13 53 15.1 -0.5
baz=209,SNR=54
J57A P **P** 13 53 15.1 -0.5
baz=209,SNR=54
SCZ2 Santa Cruz Isl 32.18 313 P **P** 13 53 17.9 +2.0
baz=121
ARVC Arvin 32.22 315 P **P** 13 53 18.0 +1.8
baz=124
ARVC S **S** 13 58 27.4 +2.5
baz=124
ISA Isabella, Lake 32.28 317 P **P** 13 53 19.0 +2.1
baz=125,SNR=21
GRAC Grapevine Rang 32.35 320 P **P** 13 53 20.0 +2.6
baz=128,SNR=37
GRAC S **S** 13 58 30.9 +3.9
baz=128
SADO Sadowa 32.38 17 LR LR 14 07 17.0
comp=Z,2µm,21.7s,baz=212,slow=38
J58A Remsen 32.38 23 P **P** 13 53 17.1 -0.4
baz=211,SNR=46
J58A P **P** 13 53 17.1 -0.4
baz=211,SNR=46
E38A The Farm, Brul 32.42 0 P **P** 13 53 16.6 -1.2
baz=180,SNR=25
E43A Lone Tree Farm 32.42 6 P **P** 13 53 16.3 -1.6
baz=188,SNR=15
HWUT Hardware Ranch 32.42 332 P **P** 13 53 19.4 +1.3
HWUT IAmb IAmb 13 53 21.6
comp=Z,66nm,0.9s
SBC Santa Barbara 32.46 314 P **P** 13 53 19.2 +0.9
baz=122
CWC Cottonwood Cre 32.48 318 P **P** 13 53 20.5 +1.9
baz=126
TRY Troy 32.48 25 P **P** 13 53 18.4 +0.1
baz=214,SNR=40
BW06 Boulder Array 32.49 335 P **P** 13 53 18.3 -0.5
baz=146,SNR=27
PDAR Pinedale Array 32.49 335 P **P** 13 53 19.1 +0.3
comp=Z,7.1nm,0.5s,baz=128,slow=9.6,SNR=38
PDAR PcP **PcP** 13 56 04.8 +0.4
comp=Z,5.3nm,0.7s,baz=135,slow=4.8,SNR=4.6
PDAR ScP **ScP** 13 59 46.5 +3.7
comp=Z,10nm,0.9s,baz=139,slow=5.5,SNR=14
PDAR PKiKP **PKiKP** 14 03 30.1 -1.6
comp=Z,0.8nm,0.7s,baz=132,slow=2.7,SNR=3.9
PDAR LR LR 14 10 39.9
comp=Z,447nm,20.0s,baz=154,slow=44
comp=Z,7.1nm,0.5s
L61B Northampton 32.66 26 P **P** 13 53 19.6 -0.4
baz=216,SNR=23
L61B Northampton 32.66 26 P **P** 13 53 19.3 -0.7
baz=216,SNR=23
L61B S **S** 13 58 30.9 -0.6
baz=216
QUA2 Belchertown 32.67 27 P **P** 13 53 19.6 -0.4
baz=216,SNR=45
J59A Piesco 32.76 23 P **P** 13 53 20.5 -0.4
baz=212,SNR=22
J59A P **P** 13 53 20.5 -0.4
baz=212,SNR=22
E46A Sault Ste Mari 32.76 9 P **P** 13 53 19.6 -1.2
baz=193,SNR=14

PKM Mcpherson Peak 32.77 314 P **P** 13 53 22.2 +0.9
baz=122,SNR=6.7
PKM S **S** 13 58 36.2 +2.5
baz=122
WCNY West Carthage 32.78 22 P **P** 13 53 20.5 -0.5
baz=210,SNR=20
VES Vestal, Richgr 32.79 316 P **P** 13 53 23.1 +1.9
baz=124,SNR=16
TIN Tinemaha, Big 32.94 319 P **P** 13 53 24.4 +1.8
baz=127
D41A Chassel 32.97 4 P **P** 13 53 21.5 -1.1
baz=185,SNR=12
ACCN Adirondack Com 33.02 24 P **P** 13 53 23.1 -0.1
baz=213,SNR=29
K62A Royalston 33.03 27 P **P** 13 53 22.9 -0.3
baz=216,SNR=13
K62A P **P** 13 53 22.9 -0.3
baz=216,SNR=13
L64A Middleborough 33.09 29 P **P** 13 53 24.1 +0.4
baz=219,SNR=37
L64A P **P** 13 53 24.1 +0.4
baz=219,SNR=37
SMMC Simmler 33.12 315 P **P** 13 53 26.1 +1.9
baz=122
HRV Adam Dziewonsk 33.20 28 P **P** 13 53 24.3 -0.4
HRV pmax pmax
comp=Z,297nm,1.1s
HRV Adam Dziewonsk 33.20 28 P **P** 13 53 25.2 +0.4
baz=217,SNR=36
HRV Adam Dziewonsk 33.20 28 P **P** 13 53 24.4 -0.3
baz=217
HRV S **S** 13 58 38.5 -1.4
baz=217
HRV Adam Dziewonsk 33.20 28 P **P** 13 53 24.9 +0.2
HRV pP **pP** 13 53 37.7 -3.0
HRV sP **sP** 13 53 50.7 +2.3
WES Weston 33.22 28 P **P** 13 53 23.9 -0.9
baz=218,SNR=28
VOG Valley Oaks Go 33.26 317 P **P** 13 53 26.4 +1.1
baz=125
E28A Huff 33.27 349 P **P** 13 53 25.1 -0.2
baz=164,SNR=5.8
NCB Newcomb 33.30 23 P **P** 13 53 25.5 -0.1
baz=212,SNR=62
J61A Chester 33.45 26 P **P** 13 53 27.3 +0.5
baz=215,SNR=22
J61A P **P** 13 53 27.3 +0.5
baz=215,SNR=22
ELK Elko 33.61 327 LR LR 14 08 46.4
comp=Z,1µm,20.8s,baz=159,slow=39
ELK Elko 33.61 327 P **P** 13 53 31.0 +2.4
ELK IAmb IAmb 13 53 32.5
comp=Z,59nm,0.8s
ELK Elko 33.61 327 P **P** 13 53 31.0 +2.4
ELK pmax pmax
comp=Z,59nm,0.9s
MLAC Mammoth, Mammo 33.67 319 P **P** 13 53 30.0 +0.8
baz=127
LONY Lake Ozonia 33.72 22 P **P** 13 53 28.8 -0.4
baz=211,SNR=117
LONY S **S** 13 58 47.6 -0.3
baz=211
EYMN Ely 33.76 0 P **P** 13 53 27.9 -1.6
baz=180,SNR=14
EYMN Ely 33.76 0 P **P** 13 53 27.5 -2.0
baz=180,SNR=14
EYMN S **S** 13 58 43.6 -4.8
baz=180
MCVT Middlebury Col 33.77 25 P **P** 13 53 29.3 -0.3
baz=214,SNR=10
NVAR Mina Array Bea 33.83 321 P **P** 13 53 33.4 +2.9
comp=Z,146nm,0.7s,baz=132,slow=8.1,SNR=259
NVAR PcP **PcP** 13 56 09.6 +1.3
comp=Z,24nm,0.8s,baz=132,slow=3.6,SNR=9.4
NVAR ScP **ScP** 13 59 51.0 +3.4
comp=Z,4.6nm,0.8s,baz=126,slow=3.9,SNR=9.4
NVAR LR LR 14 09 16.3
comp=Z,1µm,19.0s,baz=134,slow=40
NVAR Mina Array Bea 33.83 321 P **P** 13 53 33.3 +2.9
NVAR pP **pP** 13 53 49.3 +2.8
BMNY Brushton-Moira 33.94 22 P **P** 13 53 30.8 -0.3
baz=211,SNR=34
UNH University of 33.98 28 P **P** 13 53 31.9 +0.5
baz=218,SNR=31
FLWY Flagg Ranch 34.04 335 P **P** 13 53 33.2 +0.9
VT1 Waterbury 34.18 24 P **P** 13 53 32.8 -0.4
VT1 IAmb IAmb 13 53 34.8
comp=Z,86nm,0.8s
B35A Bob, Littlefor 34.22 358 P **P** 13 53 32.1 -1.3
baz=176,SNR=22
H17A Grant Village 34.25 336 P **P** 13 53 35.2 +1.0
H17A Grant Village 34.25 336 P **P** 13 53 35.2 +1.0
baz=146,SNR=7.3
FRNY Flat Rock 34.27 23 P **P** 13 53 33.6 -0.4
FRNY IAmb IAmb 13 53 34.9
comp=Z,133nm,1.0s
FRNY Flat Rock 34.27 23 P **P** 13 53 33.8 -0.1
baz=212,SNR=46
AGMN Agassiz Nation 34.29 355 P **P** 13 53 33.0 -1.1
baz=173,SNR=24
AGMN Agassiz Nation 34.29 355 P **P** 13 53 32.2 -1.9
baz=173,SNR=24
AGMN S **S** 13 58 55.7 -0.8
baz=173
MDND Maddock 34.31 350 P **P** 13 53 33.9 -0.4
baz=166,SNR=8.0
MDND Maddock 34.31 350 P **P** 13 53 32.8 -1.5
baz=166,SNR=8.0
RLMT Red Lodge 34.36 338 P **P** 13 53 34.8 -0.2
RLMT Red Lodge 34.36 338 P **P** 13 53 35.0 0.0
baz=149,SNR=21
I62A Tamworth 34.40 26 P **P** 13 53 35.6 +0.6
baz=216,SNR=45
I62A P **P** 13 53 35.6 +0.6
baz=216,SNR=45
LBNH Lisbon 34.44 25 P **P** 13 53 35.6 +0.1
LBNH IAmb IAmb 13 53 36.7
comp=Z,104nm,1.0s
LBNH Lisbon 34.44 25 P **P** 13 53 35.6 +0.1
LBNH pmax pmax
comp=Z,104nm,1.0s
LBNH Lisbon 34.44 25 P **P** 13 53 35.6 +0.1
baz=215,SNR=30
LBNH Lisbon 34.44 25 P **P** 13 53 34.5 -1.0
baz=215,SNR=30
LBNH S **S** 13 59 01.2 +2.2
baz=215
BMN Battle Mountai 34.48 324 P **P** 13 53 38.3 +2.2
BMN IAmb IAmb 13 53 40.3
comp=Z,105nm,0.8s
BMN Battle Mountai 34.48 324 P **P** 13 53 38.3 +2.2
BMN pmax pmax
comp=Z,105nm,0.8s
YMR Madison River 34.63 335 P **P** 13 53 38.8 +1.4
YMR IAmb IAmb 13 53 41.0
comp=Z,58nm,0.8s
LAO LASA Array 34.73 342 P **P** 13 53 38.4 +0.5
baz=155
LAO LASA Array 34.73 342 P **P** 13 53 37.7 -0.3
baz=155
MNTQ Montreal, Queb 34.83 22 P **P** 13 53 38.4 -0.3
I63A Otisfield 34.86 27 P **P** 13 53 38.8 -0.3
I63A Otisfield 34.86 27 P **P** 13 53 39.5 +0.4
baz=218,SNR=76
I63A P **P** 13 53 39.5 +0.4
baz=218,SNR=76
QLMT Earthquake Lak 34.96 335 P **P** 13 53 41.8 +1.7
H62A Milan 35.03 26 P **P** 13 53 40.3 -0.3
H62A IAmb IAmb 13 53 41.6
comp=Z,65nm,0.9s
H62A Milan 35.03 26 P **P** 13 53 40.6 +0.1
baz=216,SNR=13
H62A P **P** 13 53 40.6 +0.1
baz=216,SNR=13
GCMT Greycliff 35.08 338 P **P** 13 53 41.2 +0.1
TRQ Mont Tremblant 35.11 21 P **P** 13 53 40.9 -0.4
TRQ IAmb IAmb 13 53 42.3
comp=Z,131nm,1.1s
VCNR Virginia City 35.19 321 P **P** 13 53 44.3 +2.1
HLID Hailey 35.27 331 P **P** 13 53 44.1 +1.3
HLID IAmb IAmb 13 53 46.6
comp=Z,160nm,1.5s
HLID Hailey 35.27 331 P **P** 13 53 44.3 +1.5
baz=139,SNR=68
HLID S **S** 13 59 14.9 +2.8
baz=139
EMB Emerald Bay 35.27 320 P **P** 13 53 45.5 +2.5

EMB IAmb IAmb 13 53 48.5
comp=Z,129nm,0.9s
BCYI Bear Canyon 35.38 333 P **P** 13 53 45.2 +1.4
BOZ Bozeman (W) 35.67 336 P **P** 13 53 46.6 +0.5
BOZ Bozeman (W) 35.67 336 P **P** 13 53 46.6 +0.5
BOZ pmax pmax
comp=Z,19nm,0.7s
BOZ Bozeman (W) 35.67 336 P **P** 13 53 47.0 +0.8
baz=145,SNR=37
BOZ S **S** 13 59 19.4 +1.3
baz=145
WVL Waterville 35.68 27 P **P** 13 53 46.1 0.0
WVL Waterville 35.68 27 P **P** 13 53 46.7 +0.7
baz=218,SNR=51
G62A West of Eustis 35.82 26 P **P** 13 53 47.1 -0.1
G62A West of Eustis 35.82 26 P **P** 13 53 47.9 +0.6
baz=217,SNR=87
G62A P **P** 13 53 47.9 +0.6
baz=217,SNR=87
DGMT Dagmar 35.82 346 P **P** 13 53 47.6 +0.3
baz=159,SNR=10
DGMT Dagmar 35.82 346 P **P** 13 53 46.9 -0.4
baz=159,SNR=10
MFID Camas Ranch 35.84 329 P **P** 13 53 49.0 +1.3
MFID IAmb IAmb 13 53 52.6
comp=Z,165nm,1.2s
BEKR Beckworth 35.97 321 P **P** 13 53 50.8 +2.0
BEKR IAmb IAmb 13 54 08.3
comp=Z,106nm,1.2s
LRM Limekiln Ridge 36.18 335 P **P** 13 53 51.6 +0.9
ULM Lac du Bonnet 36.23 355 P **P** 13 53 49.0 -1.8
comp=Z,49nm,0.8s,baz=175,slow=8.9,SNR=52
ULM ScP **ScP** 13 59 56.8 +1.1
comp=Z,23nm,0.9s,baz=174,slow=6.1,SNR=9.3
ULM LR LR 14 11 31.6
comp=Z,972nm,21.9s,baz=174,slow=41
comp=Z,49nm,0.8s
ULM Lac du Bonnet 36.23 355 *i* P **P** 13 53 48.9 -1.8
SAML Samuel 36.34 127 P **P** 13 53 51.8 -0.3
SAML x **P** 13 53 56.2 +4.1
SAML pP **pP** 13 54 08.0 -0.2
SAML pwP **sP** 13 54 11.2 -4.5
PKME Peaks-Kenny Pk 36.39 27 P **P** 13 53 51.9 -0.2
PKME Peaks-Kenny Pk 36.39 27 P **P** 13 53 52.2 +0.1
baz=218,SNR=68
PKME Peaks-Kenny Pk 36.39 27 P **P** 13 53 51.9 -0.2
baz=218,SNR=68
WVOR Wild Horse Val 36.62 326 P **P** 13 53 56.2 +1.9
WVOR Wild Horse Val 36.62 326 P **P** 13 53 56.2 +1.9
WVOR pmax pmax
comp=Z,178nm,1.0s
EMMW East Machias 36.80 29 P **P** 13 53 55.8 +0.2
baz=222,SNR=34
F63A Nahmakanta, Br 36.81 27 P **P** 13 53 55.8 0.0
F63A Nahmakanta, Br 36.81 27 P **P** 13 53 55.5 -0.3
baz=218,SNR=63
F63A P **P** 13 53 55.5 -0.3
baz=218,SNR=63
EGMT Eagleton 37.03 340 P **P** 13 53 57.8 +0.1
baz=150
F64A Sherman 37.27 27 P **P** 13 53 59.5 -0.2
F64A Sherman 37.27 27 P **P** 13 53 59.4 -0.2
baz=219,SNR=52
F64A P **P** 13 53 59.4 -0.2
baz=219,SNR=52
E62A Clayton Lake 37.36 25 P **P** 13 54 00.2 -0.2
baz=217,SNR=50
E62A P **P** 13 54 00.2 -0.2
baz=217,SNR=50
MSO Missoula 37.61 335 P **P** 13 54 02.8 +0.2
baz=143,SNR=31
BMO Blue Mountains 37.62 330 P **P** 13 54 03.7 +1.0
E63A Oxbow 37.67 27 P **P** 13 54 02.8 -0.2
baz=219,SNR=87
E63A P **P** 13 54 02.8 -0.2
baz=219,SNR=87
D62A Allapoint, All 37.92 25 P **P** 13 54 05.4 +0.3
D62A Allapoint, All 37.92 25 P **P** 13 54 05.4 +0.3
baz=217,SNR=117
D62A P **P** 13 54 05.4 +0.3
baz=217,SNR=117
PQI Presque Isle 38.04 27 P **P** 13 54 05.5 -0.6
K05A Summer Lake 38.07 324 P **P** 13 54 08.2 +1.6
LPAZ La Paz 38.08 142 P **P** 13 54 08.1 +0.6
comp=Z,12nm,0.7s,baz=323,slow=7.2,SNR=27
LPAZ PcP **PcP** 13 56 22.5 +0.8
comp=Z,17nm,1.0s,baz=334,slow=2.5,SNR=7.5
LPAZ LR LR 14 09 26.8
comp=Z,539nm,19.4s,baz=313,slow=36
comp=Z,12nm,0.7s
LPAZ La Paz 38.08 142 P **P** 13 54 07.3 -0.2
LPAZ La Paz 38.08 142 P **P** 13 54 08.3 +0.8
LPAZ pP **pP** 13 54 23.1 -0.6
LPAZ sP **sP** 13 54 30.9 -0.3
I07A Izee 38.20 327 P **P** 13 54 08.9 +1.2
I07A IAmb IAmb 13 54 10.9
comp=Z,120nm,1.0s
F10A Beach Ranch, E 38.40 331 P **P** 13 54 10.2 +0.9
JTMT Jette 38.48 335 P **P** 13 54 10.4 +0.4
K04D Chiloquin, OR 38.49 323 P **P** 13 54 11.7 +1.5
baz=129,SNR=8.7
YBH Yreka Blue Hor 38.52 322 P **P** 13 54 11.2 +0.9
YBH Yreka Blue Hor 38.52 322 P **P** 13 54 11.2 +0.9
YBH pmax pmax
comp=Z,17nm,0.8s
L04D Klamath Falls 38.56 323 P **P** 13 54 12.2 +1.4
L04D Klamath Falls 38.56 323 P **P** 13 54 12.4 +1.6
baz=128,SNR=32
J05D Fort Rock, OR 38.62 325 P **P** 13 54 12.4 +1.2
baz=130,SNR=32
KMPM Mount Pierce 38.64 319 P **P** 13 54 13.4 +2.1
KMPM IAmb IAmb 13 54 31.2
comp=Z,69nm,0.9s
KMPM **PcP** 13 56 24.0 +1.5
KHMM Horse Mountain 38.65 320 P **P** 13 54 13.2 +1.7
KHMM IAmb IAmb 13 54 31.3
comp=Z,66nm,0.9s
HAL Halifax 38.67 32 P **P** 13 54 11.3 0.0
HAL IAmb IAmb 13 54 12.6
comp=Z,96nm,0.9s
HAL Halifax 38.67 32 P **P** 13 54 11.4 0.0
HAL pmax pmax
comp=Z,97nm,0.9s
PB12 IPOC Station P 38.69 147 P **P** 13 54 12.7 +0.7
G08A Pilot Rock 38.75 329 P **P** 13 54 13.3 +1.1
JCC Jacoby Creek, 38.80 320 P **P** 13 54 14.5 +1.9
JCC IAmb IAmb 13 54 32.7
comp=Z,146nm,1.1s
LMN Caledonia Moun 38.91 30 P **P** 13 54 13.1 -0.4
KRPM Rodgers 38.99 320 P **P** 13 54 16.3 +2.1
J04D Umpqua Nationa 39.08 324 P **P** 13 54 17.0 +1.9
J04D Umpqua Nationa 39.08 324 P **P** 13 54 17.5 +2.3
baz=129
E09A Wood Farm, Sta 39.23 331 P **P** 13 54 16.6 +0.5
E09A IAmb IAmb 13 54 18.5
comp=Z,89nm,1.1s
L02F Cave Junction 39.26 322 P **P** 13 54 18.4 +2.0
baz=126,SNR=5.8
L02F S **S** 14 00 14.2 +1.8
baz=126
I05D Terrebonne, OR 39.35 326 P **P** 13 54 19.6 +2.4
baz=131,SNR=30
I05D S **S** 14 00 16.7 +2.8
baz=131
BATG Bathurst New B 39.37 28 P **P** 13 54 17.2 0.0
WALA Waterton Lakes 39.39 337 P **P** 13 54 18.3 +0.7
WALA **S** 14 00 13.0 -1.5
MDP Montagnes des 39.42 99 P **P** 13 54 16.1 -2.0
comp=Z,12nm,1.0s,baz=311,slow=12,SNR=2.3
MDP PcP **PcP** 13 56 26.4 +1.1
comp=Z,10nm,0.6s,baz=284,slow=5.5,SNR=9.3
MDP LR LR 14 12 19.0
comp=Z,296nm,20.8s,baz=294,slow=39
comp=Z,12nm,1.0s
I04A Tendick Farm, 39.60 324 P **P** 13 54 20.7 +1.5
baz=129,SNR=33
K02D Willamette Mer 39.66 322 P **P** 13 54 21.5 +1.6
baz=126,SNR=7.5
DBO Dodson Butte 39.66 323 P **P** 13 54 20.6 +0.8
DBO **PcP** 13 56 27.5 +1.9
F07A Phinny Hill Vi 39.66 329 P **P** 13 54 20.9 +1.2
HAWA Hanford 39.81 330 P **P** 13 54 21.8 +0.8
G05D Wamic, OR 39.94 327 P **P** 13 54 24.1 +2.0
baz=132,SNR=39
G05D S **S** 14 00 25.8 +3.2
baz=132

D08A Wollman Farm, 39.99 331 P **P** 13 54 23.5 +1.1
D08A IAmb IAmb 13 54 24.7
comp=Z,78nm,1.1s
H04A Detroit Lake 40.04 326 P **P** 13 54 24.1 +1.2
I03D Drain, OR 40.07 324 P **P** 13 54 24.9 +1.8
baz=128,SNR=33
I03D S **S** 14 00 27.4 +2.9
baz=128
NEW Newport 40.08 333 LR LR 14 13 36.3
comp=Z,913nm,19.9s,baz=138,slow=40
NEW Newport 40.08 333 P **P** 13 54 23.6 +0.4
NEW Newport 40.08 333 P **P** 13 54 23.6 +0.4
NEW pmax pmax
comp=Z,49nm,1.3s
NEW Newport 40.08 333 P **P** 13 54 23.3 +0.2
baz=140,SNR=19
E07A Sunnyside 40.09 330 P **P** 13 54 24.6 +1.3
E07A IAmb IAmb 13 54 26.2
comp=Z,91nm,1.1s
J01E Myrtle Point 40.09 323 P **P** 13 54 24.6 +1.3
baz=126,SNR=26
KEBM Edson Butte 40.16 322 P **P** 13 54 26.2 +2.2
GO01 Chusmiza 40.16 146 P **P** 13 54 26.1 +1.4
GO01 IAmb IAmb 13 54 27.6
comp=Z,90nm,1.1s
HOOD Mount Hood Mea 40.17 327 P **P** 13 54 26.7 +2.6
BUCK Buck Mountain 40.18 325 P **P** 13 54 25.1 +1.0
H04D Lebanon 40.24 325 P **P** 13 54 26.2 +1.7
H04D Lebanon 40.24 325 P **P** 13 54 25.9 +1.4
baz=129,SNR=33
H04D S **S** 14 00 29.6 +2.6
baz=129
GBN Guysborough 40.28 33 P **P** 13 54 24.4 -0.4
GBN IAmb IAmb 13 54 25.6
comp=Z,136nm,0.9s
TA01 Diego Aracena 40.38 148 P **P** 13 54 27.2 +1.3
TA01 IAmb IAmb 13 54 28.3
comp=Z,101nm,1.1s
PB08 IPOC Station P 40.57 146 P **P** 13 54 29.1 +1.2
COR Corvallis 40.59 325 P **P** 13 54 29.6 +2.2
COR IAmb IAmb 13 54 31.4
comp=Z,181nm,0.9s
COR Corvallis 40.59 325 P **P** 13 54 29.6 +2.2
COR pmax pmax
comp=Z,181nm,1.0s
COR Corvallis 40.59 325 P **P** 13 54 30.3 +2.9
COR pP **pP** 13 54 46.3 +2.6
I02E Swisshome, OR 40.61 324 P **P** 13 54 30.1 +2.6
baz=127,SNR=14
F04A Amboy 40.97 327 P **P** 13 54 32.2 +1.7
F04A IAmb IAmb 13 54 35.9
comp=Z,90nm,1.1s
B08A Colville Reser 41.13 332 P **P** 13 54 32.5 +0.6
PB02 IPOC Station P 41.16 148 P **P** 13 54 33.3 +0.9
PB02 IAmb IAmb 13 54 34.8
comp=Z,86nm,0.9s
HEBO Mount Hebo 41.24 325 P **P** 13 54 34.1 +1.3
HEBO IAmb IAmb 13 54 37.3
comp=Z,163nm,0.8s
D05A Enumclaw 41.59 329 P **P** 13 54 37.1 +1.5
D05A IAmb IAmb 13 54 38.9
comp=Z,199nm,0.9s
B06A Marblemount 42.25 331 P **P** 13 54 42.2 +1.3
D03D Eldon 42.37 328 P **P** 13 54 43.0 +1.0
baz=131,SNR=37
WISH Wishkah 42.45 327 P **P** 13 54 45.3 +2.7
SIV San Ignacio 42.49 134 P **P** 13 54 43.9 +0.5
comp=Z,44nm,1.0s,baz=300,slow=7.9,SNR=62
SIV PcP **PcP** 13 56 35.4 +0.2
comp=Z,19nm,0.9s,baz=298,slow=4.6,SNR=3.7
SIV LR LR 14 11 39.0
comp=Z,498nm,19.9s,baz=328,slow=35
comp=Z,44nm,1.0s
NLWA Neilton Lookou 42.68 328 P **P** 13 54 46.7 +2.2
NLWA IAmb IAmb 13 54 48.5
comp=Z,257nm,1.1s
LVC Limon Verde 42.73 148 P **P** 13 54 47.1 +1.6
comp=Z,35nm,0.9s,baz=301,slow=6.3,SNR=21
LVC LR LR 14 11 57.5
comp=Z,393nm,20.3s,baz=314,slow=35
comp=Z,35nm,0.9s
LVC Limon Verde 42.73 148 P **P** 13 54 46.8 +1.2
LVC Limon Verde 42.73 148 P **P** 13 54 47.3 +1.8
LVC x P 13 54 52.0 +6.5
LVC pP **pP** 13 55 01.7 -0.2
B04A Port Angeles 42.93 329 P **P** 13 54 48.3 +1.8
B04A IAmb IAmb 13 54 50.1
comp=Z,146nm,0.8s
PGC Sidney 43.30 329 P **P** 13 54 50.9 +1.6
CLRS Cowichan Lake 43.75 329 P **P** 13 54 54.6 +1.6
CLRS IAmb IAmb 13 55 11.8
comp=Z,188nm,1.5s
LLLB Lillooet 43.90 332 P **P** 13 54 55.4 +1.0
LLLB IAmb IAmb 13 54 57.5
comp=Z,198nm,1.2s
OZB Mount Ozzard 44.52 328 P **P** 13 55 01.2 +1.9
OZB pP **pP** 13 55 17.1 +1.3
OZB IAmb IAmb 13 55 18.2
comp=Z,144nm,0.9s
GO02 Mina Guanaco 44.54 151 P **P** 13 55 01.1 +1.1
GO02 IAmb IAmb 13 55 02.3
comp=Z,76nm,0.9s
SCHQ Schefferville 45.02 20 P **P** 13 55 02.1 -1.0
comp=Z,294nm,0.8s,baz=221,slow=6.5,SNR=228
SCHQ LR LR 14 14 40.6
comp=Z,4µm,21.7s,baz=223,slow=37
comp=Z,294nm,0.8s
SCHQ Schefferville 45.02 20 P **P** 13 55 02.0 -1.1
CBB Campbell River 45.15 330 P **P** 13 55 06.3 +2.1
CBB IAmb IAmb 13 55 07.6
comp=Z,79nm,0.8s
AC02 Maricunga 46.18 152 P **P** 13 55 14.0 +0.8
AC02 IAmb IAmb 13 55 15.9
comp=Z,93nm,1.1s
TLCB Telegraph Cove 46.20 329 P **P** 13 55 14.6 +2.2
TLCB IAmb IAmb 13 55 16.6
comp=Z,187nm,1.4s
LCO Las Campanas 47.38 155 P **P** 13 55 23.0 +0.7
LCO IAmb IAmb 13 55 24.1
comp=Z,102nm,1.0s
LCO Las Campanas 47.38 155 P **P** 13 55 23.0 +0.7
LCO pmax pmax
comp=Z,102nm,1.0s
LCO Las Campanas 47.38 155 P **P** 13 55 23.2 +1.0
LCO pP **sP** 13 55 47.9 +1.6
BBB Bella Bella 47.86 330 LR LR 14 17 41.5
comp=Z,570nm,20.6s,baz=147,slow=39
H03N2 Juan Fernandez 48.79 166 T T 14 48 18.1
baz=347,slow=76,SNR=3.1
H03N1 Juan Fernandez 48.80 166 T T 14 48 16.8
baz=347,slow=76,SNR=3.9
H03N3 Juan Fernandez 48.81 166 T T 14 48 16.4
baz=347,slow=76,SNR=3.0
RUBB Prince Rupert 50.20 332 P **P** 13 55 44.8 +1.7
RUBB IAmb IAmb 13 55 47.0
comp=Z,100nm,1.2s
ZON Zonda 50.44 154 P **P** 13 55 46.3 +0.9
ZON IAmb IAmb 13 55 47.6
comp=Z,122nm,1.1s
ZON Zonda 50.44 154 P **P** 13 55 46.3 +0.9
ZON pmax pmax
comp=Z,122nm,1.1s
VA03 San Esteban 50.76 157 P **P** 13 55 48.7 +0.8
YKA Yellowknife Ar 51.02 347 P **P** 13 55 49.4 +0.1
comp=Z,100nm,0.7s,baz=147,slow=7.8,SNR=335
YKA pP **pP** 13 56 05.2 -0.9
comp=Z,20nm,0.6s,baz=145,slow=7.6,SNR=7.0
YKA PcP **PcP** 13 57 05.5 +1.1
comp=Z,21nm,0.9s,baz=148,slow=4.0,SNR=9.0
YKA ScP **ScP** 14 00 58.1 +2.8
comp=Z,5.3nm,0.9s,baz=143,slow=4.4,SNR=6.0
comp=Z,100nm,0.7s
PEL Peldehue 51.05 157 P **P** 13 55 50.4 +0.5
PEL pmax pmax
comp=Z,59nm,1.0s
PEL Peldehue 51.05 157 P **P** 13 55 50.2 +0.2
PEL x P 13 55 53.8 +3.9
MT05 Renca 51.25 158 P **P** 13 55 51.5 0.0
LMEL Las Melosas 51.86 157 P **P** 13 55 56.9 +0.8
LMEL IAmb IAmb 13 55 58.2
comp=Z,82nm,0.9s
T35M Bob Quinn 51.87 334 P **P** 13 55 57.9 +2.1
baz=130,SNR=19
FRB Frobisher Bay 52.15 13 LR LR 14 19 35.9
comp=Z,2µm,20.1s,baz=206,slow=38
FRB Frobisher Bay 52.15 13 P **P** 13 55 56.3 -1.3
FRB pmax pmax
comp=Z,96nm,1.3s
CRAG Craig 52.21 331 P **P** 13 56 00.7 +2.4
baz=126,SNR=5.6
CPUP Villa Florida 52.22 140 P **P** 13 55 57.9 -0.8
comp=Z,30nm,0.9s,baz=326,slow=8.1,SNR=41
CPUP PcP **PcP** 13 57 10.6 +1.0
comp=Z,8.6nm,0.7s,baz=325,slow=3.7,SNR=3.3
CPUP LR LR 14 19 51.4
comp=Z,369nm,19.0s,baz=330,slow=38
comp=Z,30nm,0.9s
CPUP Villa Florida 52.22 140 P **P** 13 55 57.6 -1.1
CPUP IAmb IAmb 13 55 59.1
comp=Z,52nm,1.1s
CPUP Villa Florida 52.22 140 P **P** 13 55 57.9 -0.8
CPUP x P 13 56 03.0 +4.2
BDFB Brasilia 52.27 123 P **P** 13 55 58.9 -0.5
comp=Z,11nm,0.8s,baz=288,slow=9.5,SNR=11
BDFB PcP **PcP** 13 57 10.9 +0.8
comp=Z,15nm,0.9s,baz=324,slow=8.9,SNR=2.8
BDFB LR LR 14 19 49.1
comp=Z,259nm,21.6s,baz=315,slow=38
comp=Z,11nm,0.8s
BDFB Brasilia 52.27 123 P **P** 13 55 59.7 +0.3
BDFB Brasilia 52.27 123 P **P** 13 55 59.7 +0.3
BDFB pmax pmax
comp=Z,42nm,1.2s
WRAK Wrangell Islan 52.42 333 P **P** 13 56 01.7 +1.9
baz=127
DLBC Dease Lake 52.72 336 LR LR 14 23 16.0
comp=Z,507nm,18.0s,baz=120,slow=41
DLBC Dease Lake 52.72 336 P **P** 13 56 04.5 +2.4
DLBC IAmb IAmb 13 56 22.1
comp=Z,90nm,0.9s
DLBC Dease Lake 52.72 336 P **P** 13 56 04.0 +1.9
baz=131,SNR=23
ML02 Panimavida 53.15 159 P **P** 13 56 05.4 +0.1
TAOE Nuku Hiva Isla 53.25 247 *eT* T 14 52 44.5
comp=Z,97nm,0.2s
WRGLY Wrigley 53.91 343 P **P** 13 56 10.6 -0.1
baz=141
SIT Sitka 54.13 332 P **P** 13 56 13.2 +0.9
baz=124
TGTN Hyland Airport 54.17 339 P **P** 13 56 13.5 +0.9
baz=134,SNR=7.5
P32M Atlin 54.93 335 P **P** 13 56 19.5 +1.3
baz=127,SNR=16
P32M S **S** 14 03 56.7 +1.8
baz=127
P33M Teslin, Yukon 54.96 336 P **P** 13 56 20.1 +1.7
P33M IAmb IAmb 13 56 38.4
comp=Z,83nm,1.2s
P33M Teslin, Yukon 54.96 336 P **P** 13 56 18.4 0.0
baz=129,SNR=19
P33M S **S** 14 03 57.3 +2.0
baz=129
SKAG Skagway 55.51 335 P **P** 13 56 24.0 +1.7
SKAG IAmb IAmb 13 56 41.7
comp=Z,60nm,1.2s
SKAG Skagway 55.51 335 P **P** 13 56 23.4 +1.1
baz=126,SNR=7.7
N32M Quiet Lake 55.65 337 P **P** 13 56 24.5 +1.2
baz=129
PLBC Pleasant Camp 55.94 334 P **P** 13 56 26.8 +1.4
baz=124,SNR=12
PLBC S **S** 14 04 13.8 +5.5
baz=124
MMPY Sheldon Lake, 55.94 339 P **P** 13 56 26.4 +0.9
baz=132,SNR=61
MMPY S **S** 14 04 10.2 +1.8
baz=132
WHY Whitehorse 56.04 336 P **P** 13 56 27.4 +1.2
WHY Whitehorse 56.04 336 P **P** 13 56 27.0 +0.8
baz=127,SNR=7.6
WHY S **S** 14 04 12.0 +2.2
baz=127
FARO Faro, Yukon 56.43 338 P **P** 13 56 29.4 +0.5
baz=129,SNR=23
IVI Ivigtut 56.46 24 *i* P **P** 13 56 27.2 -1.7
IVI IAmb IAmb 13 56 28.4
comp=Z,84nm,0.9s
IVI Ivigtut 56.46 24 P **P** 13 56 27.6 -1.4
IVI pP **pP** 13 56 46.3 +0.3
IVI pwP **sP** 13 56 50.8 -2.7
P30M Million Dollar 56.57 335 P **P** 13 56 31.7 +1.8
baz=124
P30M S **S** 14 04 21.0 +4.3
baz=124
O30N Mendenhall 56.59 336 P **P** 13 56 30.9 +0.8
baz=126,SNR=50
M31M Drury Creek, Y 56.79 338 P **P** 13 56 32.8 +1.4
M31M Drury Creek, Y 56.79 338 P **P** 13 56 32.0 +0.5
baz=128,SNR=26
N31M Braeburn, Yuko 56.88 336 P **P** 13 56 33.5 +1.3
N31M IAmb IAmb 13 56 51.2
comp=Z,85nm,0.8s
N31M Braeburn, Yuko 56.88 336 P **P** 13 56 32.6 +0.5
baz=126,SNR=30
N31M S **S** 14 04 22.2 +1.4
baz=126
NUUK Nuuk 57.09 20 *i* P **P** 13 56 32.4 -1.0
NUUK IAmb IAmb 13 56 33.8
comp=Z,139nm,0.9s
HYT Haines Junctio 57.19 335 P **P** 13 56 36.1 +1.8
baz=124,SNR=18
PNL Peninsula 57.35 333 P **P** 13 56 37.0 +1.6
baz=121,SNR=16
N30M Aishikik Lake 57.38 336 P **P** 13 56 36.9 +1.3
baz=125,SNR=44
N30M S **S** 14 04 30.2 +2.9
baz=125
NRS Narsarsuaq 57.52 25 P **P** 13 56 35.1 -1.4
NRS pmax pmax
comp=Z,126nm,0.9s
NRS Narsarsuaq 57.52 25 *i* P **P** 13 56 34.9 -1.6
NRS IAmb IAmb 13 56 35.6
comp=Z,114nm,1.0s
YUK6 Outpost Mounta 57.60 335 P **P** 13 56 39.4 +2.0
baz=123,SNR=23
M30M Minto, Yukon 57.91 337 P **P** 13 56 40.5 +1.2
M30M IAmb IAmb 13 56 58.2
comp=Z,57nm,1.1s
M30M Minto, Yukon 57.91 337 P **P** 13 56 40.1 +0.7
baz=126,SNR=44
M30M S **S** 14 04 33.5 -0.8
baz=126
YUK4 Talbot Arm 57.94 335 P **P** 13 56 40.8 +1.0
baz=123,SNR=20
PLCA Paso Flores 57.94 161 P **P** 13 56 39.9 +0.1
comp=Z,38nm,1.0s,baz=342,slow=8.2,SNR=48
PLCA LR LR 14 16 10.0
comp=Z,553nm,21.1s,baz=342,slow=30
comp=Z,38nm,1.0s
PLCA Paso Flores 57.94 161 P **P** 13 56 40.0 +0.2
PLCA IAmb IAmb 13 56 41.4
comp=Z,107nm,1.2s
PLCA Paso Flores 57.94 161 P **P** 13 56 40.0 +0.2
PLCA pmax pmax
comp=Z,107nm,1.3s
PLCA Paso Flores 57.94 161 P **P** 13 56 40.0 +0.2
PLCA x P 13 56 45.7 +5.9
PLCA pP **pP** 13 56 57.0 +0.1
PINM Pinnacle 57.95 334 P **P** 13 56 41.5 +1.8
baz=121,SNR=11
PINM S **S** 14 04 40.2 +5.4
baz=121
YUK8 Steele Glacier 58.36 335 P **P** 13 56 44.3 +1.6
baz=122,SNR=54
YUK8 S **S** 14 04 42.8 +2.2
baz=122
PLTB Pedras Altas 58.38 142 P **P** 13 56 41.9 -1.1
PLTB IAmb IAmb 13 56 43.5
comp=Z,43nm,1.0s
TABL Table Mountain 58.50 334 P **P** 13 56 46.0 +2.3
TABL IAmb IAmb 13 57 03.3
comp=Z,94nm,1.0s
LOGN Logan Glacier 58.64 334 P **P** 13 56 46.0 +1.4
LOGN IAmb IAmb 13 57 04.3
comp=Z,105nm,1.2s
MESA MESA 58.72 333 P **P** 13 56 47.1 +1.9
baz=119
RCBR Riachuelo 58.73 106 P **P** 13 56 45.0 -0.8
comp=Z,56nm,0.8s,baz=68,slow=6.2,SNR=18
RCBR LR LR 14 25 28.9
comp=Z,313nm,18.1s,baz=89,slow=40
comp=Z,56nm,0.8s
RCBR Riachuelo 58.73 106 P **P** 13 56 46.1 +0.3
RCBR IAmb IAmb 13 56 47.8
comp=Z,64nm,0.8s
RCBR Riachuelo 58.73 106 P **P** 13 56 46.1 +0.3
RCBR pmax pmax
comp=Z,65nm,0.9s
RCBR Riachuelo 58.73 106 P **P** 13 56 47.1 +1.3
CTG Chitna Glacier 58.85 334 P **P** 13 56 47.6 +1.6
baz=120,SNR=21
C36M Paulatuk 58.89 347 P **P** 13 56 44.8 -1.1
baz=143,SNR=7.0
C36M S **S** 14 04 45.4 -1.2
baz=143
YUK3 Moose Creek 58.90 335 P **P** 13 56 47.3 +0.8
baz=122,SNR=48
GRNC Granite Creek 58.91 334 P **P** 13 56 48.7 +2.1
ISLE Juniper Island 59.10 334 P **P** 13 56 49.1 +1.4
SNH Sunshine Point 59.11 333 P **P** 13 56 50.2 +2.5
BGLC Bering Glacier 59.28 333 P **P** 13 56 50.9 +2.2
baz=118
SFJD Kangerlussuaq 59.33 17 LR LR 14 23 00.0
comp=Z,2µm,21.4s,baz=228,slow=37
SFJD Kangerlussuaq 59.33 17 P **P** 13 56 47.1 -1.9
SFJD pmax pmax
comp=Z,65nm,0.9s
SFJD Kangerlussuaq 59.33 17 *i* P **P** 13 56 47.3 -1.7
SFJD IAmb IAmb 13 56 48.1
comp=Z,71nm,0.9s
SFJD Kangerlussuaq 59.33 17 P **P** 13 56 47.3 -1.7
SFJD pP **pP** 13 57 01.9 -4.3
SFJD sP **sP** 13 57 07.4 -6.2
BVCY Beaver Creek 59.40 336 P **P** 13 56 50.7 +1.0
baz=121,SNR=23
SUCK Suckling Hills 59.48 333 P **P** 13 56 52.9 +2.7
SUCK IAmb IAmb 13 57 11.2
comp=Z,61nm,0.9s
J29M Klondike Camp 59.53 339 P **P** 13 56 50.6 +0.1
baz=125
DAWY Dawson 59.73 338 P **P** 13 56 51.9 0.0
baz=124,SNR=24
MCARA McCarthy VSAT 59.77 334 P **P** 13 56 54.0 +1.9
baz=119,SNR=26
MCARA S **S** 14 05 01.6 +3.4
baz=119
M27K Edge Creek, AK 59.78 335 P **P** 13 56 54.2 +1.8
M27K IAmb IAmb 13 56 55.1
comp=Z,42nm,0.9s
M27K Edge Creek, AK 59.78 335 P **P** 13 56 53.3 +0.9
baz=120
M27K S **S** 14 04 58.9 +0.2
baz=120
I29M Ogilvie Camp, 60.09 339 P **P** 13 56 54.3 0.0
baz=126,SNR=21
BCAR Beaver Creek A 60.10 336 P **P** 13 56 55.7 +1.2
BCAR pP **pP** 13 57 12.7 +1.0
L27K Beaver Creek, 60.12 336 P **P** 13 56 55.4 +0.8
baz=121,SNR=83
L27K S **S** 14 05 06.6 +3.8
baz=121
EPYK Eagle Plains 60.16 341 P **P** 13 56 55.0 +0.2
baz=128,SNR=24
M26K Nabesna, AK 60.25 335 P **P** 13 56 57.0 +1.5
M26K IAmb IAmb 13 57 14.7
comp=Z,68nm,1.1s
M26K Nabesna, AK 60.25 335 P **P** 13 56 56.5 +1.0
baz=119,SNR=52
M26K S **S** 14 05 08.1 +3.6
baz=119
BMRM Bremner River 60.25 333 P **P** 13 56 57.2 +1.7
baz=117,SNR=32
BMRM S **S** 14 05 07.4 +2.8
baz=117
Q23K Middleton Isla 60.37 331 P **P** 13 56 56.2 0.0
baz=114
INK Inuvik 60.46 343 LR LR 14 27 39.4
comp=Z,635nm,19.8s,baz=122,slow=40
INK Inuvik 60.46 343 P **P** 13 56 57.3 +0.6
INK pmax pmax
comp=Z,101nm,1.0s
INK Inuvik 60.46 343 P **P** 13 56 57.0 +0.3
baz=132,SNR=82
INK S **S** 14 05 06.4 -0.4
baz=132
N25K Chitina, Valde 60.54 334 P **P** 13 56 59.6 +2.1
baz=117,SNR=76
N25K S **S** 14 05 10.4 +2.1
baz=117
EYAK Cordova Ski Ar 60.57 333 P **P** 13 56 59.8 +2.1
baz=116,SNR=36
EYAK S **S** 14 05 11.1 +2.6
baz=116
RES Resolute Bay 60.62 359 LR LR 14 26 28.1
comp=Z,859nm,18.6s,baz=174,slow=39
RES Resolute Bay 60.62 359 P **P** 13 56 57.0 -0.7
RES pmax pmax
comp=Z,72nm,0.8s
L26K Log Cabin Wild 60.70 336 P **P** 13 56 59.7 +1.1
baz=119,SNR=34
L26K S **S** 14 05 12.1 +2.0
baz=119
K27K Chicken 60.71 337 P **P** 13 57 00.1 +1.6
K27K IAmb IAmb 13 57 17.7
comp=Z,29nm,0.8s
K27K Chicken 60.71 337 P **P** 13 56 59.6 +1.1
baz=121
ILULI Ilulissat 60.71 15 *i* P **P** 13 56 56.0 -2.4
ILULI IAmb IAmb 13 56 57.6
comp=Z,65nm,1.1s
HIN Hinchinbrook I 60.84 332 P **P** 13 57 01.7 +2.1
FID Port Fidalgo 60.98 333 P **P** 13 57 02.3 +1.9
KLU Klutina 61.06 334 P **P** 13 57 02.7 +1.6
baz=116,SNR=75
KLU S **S** 14 05 19.8 +4.9
baz=116
HARP HAARP 61.14 335 P **P** 13 57 03.0 +1.5
baz=117,SNR=20
HARP S **S** 14 05 18.2 +2.5
baz=117
A36M Sachs Harbour 61.23 349 P **P** 13 57 01.1 -0.8
baz=142
A36M S **S** 14 05 15.7 -0.9
baz=142
DOT Dot Lake 61.28 336 P **P** 13 57 03.6 +1.1
GLI Glacier Island 61.31 333 P **P** 13 57 03.5 +0.8
baz=114,SNR=5.1
SCRK Sand Creek 61.41 337 P **P** 13 57 04.6 +1.1
baz=119,SNR=54
SCRK S **S** 14 05 20.3 +0.9
baz=119
M24K Tolsona, Glenn 61.43 334 P **P** 13 57 05.0 +1.4
baz=116,SNR=51
J26L Joseph Creek 61.51 337 P **P** 13 57 05.1 +1.0
baz=120,SNR=105
J26L S **S** 14 05 23.0 +2.5
baz=120
PAX Paxson 61.52 335 P **P** 13 57 05.0 +0.8
PAX IAmb IAmb 13 57 22.9
comp=Z,81nm,0.8s
PAX Paxson 61.52 335 P **P** 13 57 05.0 +0.8
PAX pmax pmax
comp=Z,81nm,0.8s
PAX Paxson 61.52 335 P **P** 13 57 05.1 +0.9
baz=117,SNR=86
PAX S **S** 14 05 24.1 +3.2
baz=117
RIDG Independent Ri 61.63 336 P **P** 13 57 06.2 +1.3
RIDG pP **pP** 13 57 23.0 +0.9
RIDG Independent Ri 61.63 336 P **P** 13 57 05.5 +0.6
baz=118,SNR=64
RIDG S **S** 14 05 24.5 +2.4
baz=118
I26K Coal Creek Min 61.76 338 P **P** 13 57 06.1 +0.5
baz=120
SCM Sheep Creek Mo 61.81 334 P **P** 13 57 07.0 +0.9
SCM IAmb IAmb 13 57 08.5
comp=Z,78nm,0.8s
SCM Sheep Creek Mo 61.81 334 P **P** 13 57 07.0 +0.9
SCM pmax pmax
comp=Z,78nm,0.8s
SCM Sheep Creek Mo 61.81 334 P **P** 13 57 06.8 +0.7
baz=115,SNR=28
SCM S **S** 14 05 26.9 +2.5
baz=115
NUUG Nuugaatsiaq 61.88 13 *i* P **P** 13 57 04.2 -2.0
NUUG IAmb IAmb 13 57 06.3
comp=Z,149nm,1.7s
COYC Coyhaique 61.96 165 P **P** 13 57 07.8 +0.7
M23K Glacier View 61.96 333 P **P** 13 57 08.0 +0.9

baz=114,SNR=29
K24K Donnelly Dome 62.03 336 P **P** **13 57 08.2 +0.6**
baz=117,SNR=48
K24K S **S** **14 05 30.3 +3.3**
baz=117
SEW Seward 62.08 331 P **P** **13 57 08.9 +1.1**
SEW Seward 62.08 331 P **P** **13 57 08.9 +1.1**
baz=112,SNR=12
SEW S **S** **14 05 30.2 +2.5**
baz=112
KNK Knik Glacier 62.13 333 P **P** **13 57 09.2 +1.0**
baz=113,SNR=29
KNK S **S** **14 05 30.5 +2.1**
baz=113
SML Sawmill 62.23 333 P **P** **13 57 09.8 +0.9**
baz=114,SNR=38
SML S **S** **14 05 32.3 +2.6**
baz=114
J25K Salcha River, 62.25 337 P **P** **13 57 09.5 +0.5**
baz=118,SNR=97
J25K S **S** **14 05 31.5 +1.7**
baz=118
WAT6 Susitna Watana 62.30 334 P **P** **13 57 10.4 +0.9**
baz=114,SNR=110
WAT6 S **S** **14 05 32.4 +1.7**
baz=114
ISOG Isortoq, Green 62.30 22 *i* P **P** **13 57 07.6 -1.6**
ISOG IAmb IAmb 13 57 08.1
comp=Z,114nm,0.9s
O22K Cooper Landing 62.34 332 P **P** **13 57 10.7 +1.1**
baz=112,SNR=6.7
O22K S **S** **14 05 32.8 +1.8**
baz=112
DHY Denali Highway 62.35 335 P **P** **13 57 10.7 +0.8**
DHY Denali Highway 62.35 335 P **P** **13 57 09.9 0.0**
baz=115,SNR=16
DHY S **S** **14 05 33.1 +1.7**
baz=115
PMR Palmer 62.50 333 P **P** **13 57 11.4 +0.9**
baz=113,SNR=36
PMR S **S** **14 05 34.7 +1.8**
baz=113
BRSE Bradley Lake S 62.56 331 P **P** **13 57 12.5 +1.5**
baz=110,SNR=27
BRSE S **S** **14 05 35.2 +1.4**
baz=110
VAH Vaihoa 62.56 244 *e*P **P** **13 57 11.4 -0.4**
comp=Z,193nm,1.2s
RC01 Rabbit Creek A 62.58 332 P **P** **13 57 12.3 +1.2**
baz=112,SNR=29
RC01 S **S** **14 05 35.5 +1.6**
baz=112
BRLK Bradley Lake 62.63 331 P **P** **13 57 12.6 +1.0**
PMOR Pomariorio Ree 62.70 245 *e*P **P** **13 57 12.2 -0.5**
comp=Z,170nm,1.2s
PMOR Pomariorio Ree 62.70 245 *e*T T 15 04 56.9
comp=Z,7.3nm,0.2s
WAT1 Susitna Watana 62.74 334 P **P** **13 57 13.0 +0.8**
baz=114
HDA Harding Lake 62.76 336 P **P** **13 57 13.1 +0.8**
HDA IAmb IAmb 13 57 14.1
comp=Z,88nm,1.0s
HDA Harding Lake 62.76 336 P **P** **13 57 12.7 +0.3**
baz=116,SNR=55
HDA S **S** **14 05 36.7 +0.5**
baz=116
HDA S **S** **14 05 36.7 +0.5**
baz=116
ANGG Ammassalik, Gr 62.82 22 *i* P **P** **13 57 11.1 -1.6**
ANGG IAmb IAmb 13 57 11.5
comp=Z,75nm,0.7s
KDAK Kodiak Island 62.83 328 LR LR 14 24 10.1
comp=Z,392nm,21.9s,baz=138,slow=36
KDAK Kodiak Island 62.83 328 P **P** **13 57 13.7 +0.9**
KDAK IAmb IAmb 13 57 31.9
comp=Z,58nm,0.8s
KDAK Kodiak Island 62.83 328 *i* P **P** **13 57 14.0 +1.1**
KDAK pmax pmax
comp=Z,101nm,0.9s
KDAK Kodiak Island 62.83 328 P **P** **13 57 14.5 +1.6**
baz=108
KDAK S **S** **14 05 39.2 +2.1**
baz=108
KDAK Kodiak Island 62.83 328 P **P** **13 57 14.8 +1.9**
KDAK pP **pP** **13 57 30.9 +0.7**
KDAK sP **sP** **13 57 37.2 -0.3**
IL31 62.90 337 P **P** **13 57 13.9 +0.7**
ILAR Eielson Array 62.90 337 P **P** **13 57 13.4 +0.2**
comp=Z,51nm,0.9s,baz=111,slow=5.4,SNR=279
ILAR pP **pP** **13 57 30.8 +0.2**
comp=Z,91nm,1.0s,baz=128,slow=4.4,SNR=14
ILAR PKPPKP **P'P'df** **14 26 14.6 -1.4**
comp=Z,1.2nm,1.1s,baz=294,slow=2.9,SNR=5.4
ILAR LR LR 14 27 04.5
comp=Z,509nm,20.9s,baz=112,slow=38
comp=Z,51nm,0.9s
ILAR Eielson Array 62.90 337 P **P** **13 57 14.0 +0.8**
ILAR pP **pP** **13 57 30.8 +0.2**
ILAR Eielson Array 62.90 337 P **P** **13 57 14.0 +0.8**
ILAR *PP **pP** **13 57 30.8 +0.2**
HOM Homer 62.96 330 P **P** **13 57 15.5 +1.8**
baz=109
Q20K Shuyak Island 62.99 329 P **P** **13 57 15.3 +1.4**
baz=108
Q20K S **S** **14 05 41.1 +2.0**
baz=108
M22K Willow 63.00 333 P **P** **13 57 15.0 +1.1**
baz=112,SNR=13
OHAK Old Harbor 63.03 328 P **P** **13 57 15.7 +1.5**
baz=107,SNR=8.8
OHAK S **S** **14 05 43.3 +3.6**
baz=107
SUA Susitna One 63.17 332 P **P** **13 57 16.7 +1.5**
baz=111
POKR Poker Plat Res 63.26 337 P **P** **13 57 16.3 +0.7**
baz=116,SNR=9.0
POKR S **S** **14 05 43.5 +1.1**
baz=116
MCK McKinley 63.27 335 P **P** **13 57 16.4 +0.6**
baz=114,SNR=42
MCK S **S** **14 05 44.7 +2.2**
baz=114
CUT Chulitna 63.30 334 P **P** **13 57 17.0 +1.0**
baz=112,SNR=30
COLA College 63.31 337 P **P** **13 57 16.5 +0.6**
COLA IAmb IAmb 13 57 34.7
comp=Z,84nm,0.9s
COLA College 63.31 337*ce*P **P** **13 57 16.7 +0.8**
COLA pmax pmax
comp=Z,114nm,1.3s
COLA College 63.31 337 P **P** **13 57 16.2 +0.3**
baz=116
COLA S **S** **14 05 43.3 +0.3**
baz=116
COLA College 63.31 337 P **P** **13 57 16.7 +0.8**
COLA pP **pP** **13 57 33.4 +0.1**
COLA x **PcP** **13 57 52.8 +0.2**
SII Sitkinak Islan 63.31 327 P **P** **13 57 17.7 +1.6**
baz=106,SNR=8.1
TCOL CIGO, UAF Yank 63.32 337 P **P** **13 57 16.6 +0.6**
TCOL IAmb IAmb 13 57 34.7
comp=Z,84nm,0.9s
TCOL CIGO, UAF Yank 63.32 337 P **P** **13 57 15.9 -0.1**
baz=116,SNR=16
TCOL S **S** **14 05 42.7 -0.3**
baz=116
BMAR Burnt Mountain 63.33 340 P **P** **13 57 17.0 +0.9**
BMAR pP **pP** **13 57 33.9 +0.4**
O20K Slope Mountain 63.56 331 P **P** **13 57 19.2 +1.4**
baz=109,SNR=15
O20K S **S** **14 05 47.8 +1.3**
baz=109
TULEG Thule 63.60 6 *i* P **P** **13 57 16.2 -1.4**
TULEG IAmb IAmb 13 57 17.6
comp=Z,46nm,0.9s
SPU Mount Spurr 63.66 332 P **P** **13 57 19.8 +1.4**
NEA2 Nenana 63.67 336 P **P** **13 57 18.3 0.0**
baz=114,SNR=11
SKT Skwentna 63.70 333 P **P** **13 57 20.0 +1.4**
baz=110
SKT S **S** **14 05 49.3 +1.3**
baz=110
Q19K Cape Douglas, 63.70 329 P **P** **13 57 20.0 +1.3**
baz=107,SNR=10.0
TRF Thorofare Moun 63.71 335 P **P** **13 57 19.5 +0.7**
baz=112,SNR=134
TRF S **S** **14 05 50.0 +1.6**

baz=112
N20K Mount Spurr 63.74 332 P **P** **13 57 19.9 +1.0**
baz=110
N20K S **S** **14 05 50.6 +2.0**
baz=110
H24K Noodor Dome 63.74 338 P **P** **13 57 19.0 +0.1**
baz=116,SNR=82
H24K S **S** **14 05 49.9 +1.4**
baz=116
RSO Redoubt South 63.75 331 P **P** **13 57 20.3 +1.1**
ICESG Greenland Ices 63.88 18 *i* P **P** **13 57 18.8 -1.3**
ICESG IAmb IAmb 13 57 19.5
comp=Z,206nm,0.7s
CHIR Chirikof Islan 63.91 326 P **P** **13 57 21.2 +1.2**
baz=104
CHIR S **S** **14 05 53.2 +2.5**
baz=104
I23K Minto, Yukon-K 64.01 337 P **P** **13 57 21.9 +1.4**
I23K Minto, Yukon-K 64.01 337 P **P** **13 57 21.2 +0.7**
baz=114,SNR=187
I23K S **S** **14 05 52.8 +1.2**
baz=114
MEH Mehetia 64.08 242 *e*P **P** **13 57 21.3 -0.5**
comp=Z,79nm,1.3s
MEH Mehetia 64.08 242 *e*T T 15 06 30.5
comp=Z,17nm,0.3s
BPAW Bear Paw Mtn. 64.24 335 P **P** **13 57 22.7 +0.5**
baz=112,SNR=159
BPAW S **S** **14 05 55.2 +0.6**
baz=112
Q18K Katmai Hardscr 64.31 329 P **P** **13 57 23.8 +1.0**
baz=106
Q18K S **S** **14 05 57.0 +1.3**
baz=106
PPLA Purkeypile 64.31 334 P **P** **13 57 23.5 +0.7**
baz=110,SNR=34
PPLA S **S** **14 05 56.0 +0.2**
baz=110
H23K Yukon River 64.36 337 P **P** **13 57 23.5 +0.6**
baz=114,SNR=53
H23K S **S** **14 05 55.7 -0.4**
baz=114
M20K Styx River 64.38 333 P **P** **13 57 24.1 +0.9**
baz=109,SNR=90
M20K S **S** **14 05 58.5 +2.0**
baz=109
O19K Port Alsworth 64.41 331 P **P** **13 57 24.2 +1.0**
O19K IAmb IAmb 13 57 41.4
comp=Z,105nm,0.8s
O19K Port Alsworth 64.41 331 P **P** **13 57 23.9 +0.7**
baz=107,SNR=13
O19K S **S** **14 05 58.7 +2.0**
baz=107
CAST Castle Rocks 64.45 334 P **P** **13 57 23.9 +0.4**
baz=111,SNR=67
MLY Manley 64.50 336 P **P** **13 57 24.6 +0.7**
MLY Manley 64.50 336 P **P** **13 57 24.6 +0.7**
baz=113,SNR=315
MLY S **S** **14 05 57.8 -0.1**
baz=113
P18K Big Mountain, 64.62 330 P **P** **13 57 25.2 +0.5**
baz=106,SNR=6.7
P18K S **S** **14 06 00.7 +1.2**
baz=106
Q17K Contact Creek 64.65 328 P **P** **13 57 25.7 +0.7**
baz=105
N19K Bonanza Creek 64.67 331 P **P** **13 57 26.0 +1.0**
baz=107,SNR=72
N19K S **S** **14 06 01.3 +1.1**
baz=107
CHUM Lake Minchumin 64.71 335 P **P** **13 57 25.2 +0.1**
baz=111,SNR=35
CHUM S **S** **14 05 59.1 -1.2**
baz=111
O18K Koktuh Hills 64.74 330 P **P** **13 57 26.3 +0.9**
baz=106,SNR=19
O18K S **S** **14 06 02.9 +2.1**
baz=106
R17K Ugashik Creek 64.75 327 P **P** **13 57 27.1 +1.6**
baz=104,SNR=41
R17K S **S** **14 06 03.3 +2.3**
baz=104
L20K Farewell, AK 64.91 333 P **P** **13 57 27.2 +0.7**
baz=108,SNR=174
L20K S **S** **14 06 03.9 +1.1**
baz=108
M19K Big River Lodg 64.95 332 P **P** **13 57 28.1 +1.3**
baz=108
M19K S **S** **14 06 06.4 +3.0**
baz=108
TIAR Tiarei 65.04 243 *e*P **P** **13 57 27.5 -0.5**
comp=Z,24nm,1.0s
I21K Tanana 65.05 336 P **P** **13 57 28.4 +1.1**
I21K IAmb IAmb 13 57 29.1
comp=Z,84nm,0.9s
I21K Tanana 65.05 336 P **P** **13 57 27.8 +0.5**
baz=112,SNR=112
I21K S **S** **14 06 04.5 +0.1**
baz=112
TVO Taravao 65.05 243 *e*P **P** **13 57 27.5 -0.7**
comp=Z,69nm,1.3s
TVO Taravao 65.05 243 *e*T T 15 07 37.7
comp=Z,0.9nm,0.2s
Q16K King Salmon 65.15 329 S **S** **14 06 08.6 +2.8**
baz=104
P17K Kvichak River 65.17 329 P **P** **13 57 29.4 +1.2**
baz=105
P17K S **S** **14 06 08.5 +2.5**
baz=105
COLD Coldfoot 65.18 339 P **P** **13 57 29.3 +1.2**
baz=114,SNR=15
COLD S **S** **14 06 08.0 +2.0**
baz=114
PPT Papeete 65.24 243 P **P** **13 57 31.0 +1.6**
comp=Z,18nm,0.7s,baz=66,slow=20,SNR=1.9
PPT LR LR 14 17 52.3
comp=Z,434nm,20.0s,baz=51,slow=28
comp=Z,18nm,0.7s
PPT Papeete 65.24 243 P **P** **13 57 31.0 +1.6**
L19K White Mountain 65.25 333 P **P** **13 57 29.4 +0.7**
baz=108,SNR=50
L19K S **S** **14 06 05.3 -1.8**
baz=108
PPT2 Papeete2 65.25 243 *e*LR LR 14 17 10.3
comp=Z,721nm,21.2s
K20K Telida 65.27 334 P **P** **13 57 29.4 +0.6**
K20K Telida 65.27 334 P **P** **13 57 29.4 +0.6**
baz=109,SNR=135
K20K S **S** **14 06 05.7 -1.6**
baz=109
PAE Paea 65.28 243 *e*P **P** **13 57 29.0 -0.6**
comp=Z,26nm,1.1s
N18K Kilae Creek 65.29 331 P **P** **13 57 29.7 +0.7**
baz=106,SNR=41
N18K S **S** **14 06 07.1 -0.6**
baz=106
R16K Pilot Point 65.36 327 P **P** **13 57 30.9 +1.4**
baz=103
R16K S **S** **14 06 11.1 +2.7**
baz=103
H21K Melozitna Rive 65.54 336 P **P** **13 57 30.2 -0.3**
baz=111,SNR=80
H21K S **S** **14 06 10.1 -0.4**
baz=111
TOLK Toolik Lake Re 65.56 340 P **P** **13 57 31.4 +0.7**
TOLK IAmb IAmb 13 57 49.8
comp=Z,57nm,0.8s
TOLK Toolik Lake Re 65.56 340 P **P** **13 57 31.3 +0.7**
baz=115,SNR=62
J20K Nowinta River 65.57 335 P **P** **13 57 30.9 +0.2**
J20K IAmb IAmb 13 57 32.3
comp=Z,82nm,0.8s
J20K Nowinta River 65.57 335 P **P** **13 57 31.2 +0.5**
baz=109,SNR=105
J20K S **S** **14 06 10.5 -0.3**
baz=109
O17K Koliganek Bris 65.64 330 P **P** **13 57 32.3 +1.1**
baz=104,SNR=40
O17K S **S** **14 06 14.0 +2.2**
baz=104
P16K Nushagak River 65.90 329 P **P** **13 57 34.1 +1.1**
baz=103,SNR=7.1
CHNA Chernabura Isl 65.92 324 P **P** **13 57 34.4 +1.3**
baz=100
TTA Tatalina 65.98 333 P **P** **13 57 33.5 0.0**
TTA IAmb IAmb 13 57 51.4
comp=Z,103nm,0.9s
TTA Tatalina 65.98 333 P **P** **13 57 33.5 0.0**

TTA pmax pmax
comp=Z,103nm,0.9s
TTA Tatalina 65.98 333 P **P** **13 57 33.8 +0.3**
baz=107,SNR=103
TTA S **S** **14 06 14.7 -1.4**
baz=107
IMAR Indian Mountai 66.02 337 P **P** **13 57 33.2 -0.4**
IMAR pP **pP** **13 57 49.3 -1.8**
SUMG Summit 66.06 15 P **P** **13 57 33.7 -0.5**
SUMG IAmb IAmb 13 57 35.5
comp=Z,72nm,0.9s
SUMG Summit 66.06 15 P **P** **13 57 33.7 -0.5**
SUMG Summit 66.06 15 *i* P **P** **13 57 32.7 -1.6**
SUMG IAmb IAmb 13 57 34.4
comp=Z,216nm,1.5s
O16K Kokwok River B 66.08 329 P **P** **13 57 35.1 +1.0**
baz=103,SNR=30
O16K S **S** **14 06 18.9 +1.7**
baz=103
S14K Fog Glacier 66.16 326 P **P** **13 57 35.9 +1.1**
baz=100
S14K S **S** **14 06 21.3 +2.8**
baz=100
SOEG Soedalen 66.16 21 *i* P **P** **13 57 32.3 -2.1**
SOEG IAmb IAmb 13 57 33.9
comp=Z,53nm,0.8s
SDPT Sand Point 66.51 324 P **P** **13 57 37.8 +0.9**
baz=99,SNR=10
SDPT S **S** **14 06 22.6 +0.1**
baz=99
N16K Nishlik Lake 66.62 330 P **P** **13 57 38.6 +1.0**
baz=103,SNR=67
N16K S **S** **14 06 26.4 +2.6**
baz=103
GCSA Galena City Sc 66.87 335 P **P** **13 57 39.4 +0.4**
baz=107,SNR=21
GCSA S **S** **14 06 27.0 +0.5**
baz=107
TBI Tubuai 67.69 237 *e*LR LR 14 18 21.3
comp=Z,2µm,27.5s
TBI *e*LR LR 14 18 23.6
comp=Z,20µm,23.5s
TBI Tubuai 67.69 237 *e*T T 15 10 58.2
comp=Z,5.8nm,0.2s
FALS False Pass 68.11 324 P **P** **13 57 47.5 +0.5**
baz=97,SNR=6.8
A21K Barrow 68.83 342 P **P** **13 57 51.9 +0.7**
A21K IAmb IAmb 13 57 52.9
comp=Z,71nm,1.0s
A21K Barrow 68.83 342 P **P** **13 57 51.9 +0.7**
baz=109,SNR=9.7
A21K S **S** **14 06 50.9 +1.1**
baz=109
BORG Borgarnes 68.98 26 LR LR 14 27 59.0
comp=Z,513nm,20.6s,baz=276,slow=36
BORG Borgarnes 68.98 26 P **P** **13 57 52.3 +0.1**
BORG sP **sP** **13 58 19.1 +2.1**
ALE Alert 69.46 4 P **P** **13 57 53.6 -1.4**
PMOZ Porto Moniz, M 69.54 60 *e*LR LR 14 19 44.3
comp=Z,293nm,22.0s
UNV Unalaska Valle 69.82 322 P **P** **13 57 58.3 +0.7**
UNV IAmb IAmb 13 58 01.1
comp=Z,145nm,0.9s
UNV Unalaska Valle 69.82 322 P **P** **13 57 58.5 +0.8**
baz=94,SNR=21
UNV S **S** **14 07 03.8 +1.8**
baz=94
MG03 Isla Dawson 70.05 167 P **P** **13 57 59.7 +0.9**
MG03 IAmb IAmb 13 58 01.0
comp=Z,106nm,1.3s
RDOG Red Dog Mine 70.05 338 P **P** **13 57 54.7 -4.2**
baz=102,SNR=5.6
SCO Scoresbysund 70.06 20 P **P** **13 57 58.1 -0.7**
SCO pmax pmax
comp=Z,27nm,0.9s
SCO Scoresbysund 70.06 20 *i* P **P** **13 57 56.3 -2.5**
SCO IAmb IAmb 13 57 58.2
comp=Z,15nm,0.7s
ANM Nome 70.40 334 P **P** **13 58 02.0 +1.0**
ANM IAmb IAmb 13 58 03.4
comp=Z,46nm,0.8s
ANM Nome 70.40 334 P **P** **13 58 02.0 +1.0**
ANM pmax pmax
comp=Z,47nm,0.8s
ANM Nome 70.40 334 P **P** **13 58 02.1 +1.1**
baz=98,SNR=8.4
NIKH Nikolski High 71.19 321 P **P** **13 58 06.7 +0.7**
baz=91
DBG Daneborg 71.53 16 *i* P **P** **13 58 06.9 -0.8**
DBG IAmb IAmb 13 58 07.7
comp=Z,24nm,0.8s
TNA Tin City 71.60 335 P **P** **13 58 10.1 +1.9**
TNA IAmb IAmb 13 58 27.7
comp=Z,77nm,0.9s
TNA Tin City 71.60 335 P **P** **13 58 09.1 +0.9**
baz=96
EFI East Falkland 71.69 159*ce*P **P** **13 58 10.9 +2.0**
EFI pmax pmax
comp=Z,94nm,2.5s
SPIA Saint Paul Isl 72.11 326 P **P** **13 58 12.0 +0.6**
baz=92
DAG Danmarks Havn 72.50 13 P **P** **13 58 11.8 -1.6**
DAG pmax pmax
comp=Z,119nm,1.1s
DAG Danmarks Havn 72.50 13 *i* P **P** **13 58 11.8 -1.6**
DAG IAmb IAmb 13 58 12.9
comp=Z,75nm,0.7s
GAMB Gambell 73.08 333 P **P** **13 58 19.1 +2.0**
GAMB IAmb IAmb 13 58 36.6
comp=Z,76nm,1.1s
GAMB Gambell 73.08 333 P **P** **13 58 18.8 +1.8**
baz=92
NOR Nord 73.96 8 *i* P **P** **13 58 21.0 -1.0**
NOR IAmb IAmb 13 58 22.0
comp=Z,36nm,0.9s
JMIC Jan Mayen 74.54 20 LR LR 14 31 07.3
comp=Z,825nm,21.9s,baz=254,slow=36
RAR Rarotonga 75.51 243 LR LR 14 23 14.5
comp=Z,176nm,19.6s,baz=65,slow=29
PGAV Gavieira, Arco 75.84 50 *e*LR LR 14 22 45.7
comp=Z,361nm,22.0s
IWEX Carrickbyrne, 75.86 39 *e*P **P** **13 58 31.4 -2.1**
PCAS Casmilo, Conde 75.88 52 *e*P **P** **13 58 32.2 -1.6**
comp=Z,141nm,1.6s
ILTH Belurgan, Co L 75.98 37 *e*P **P** **13 58 32.3 -1.7**
ADK Adak 76.01 320 P **P** **13 58 34.5 +0.2**
ADK Adak 76.01 320 P **P** **13 58 34.5 +0.2**
ADK pmax pmax
comp=Z,300nm,0.9s
MORF Marmelete 76.09 55 *e*P **P** **13 58 33.7 -1.5**
MORF IAmb IAmb 13 58 34.5
comp=Z,23nm,1.0s
MORF Marmelete 76.09 55 *e*P **P** **13 58 33.8 -1.3**
MORF Marmelete 76.09 55 *e*P **P** **13 58 33.6 -1.5**
KPL Plockton 76.11 34 *e*P **P** **13 58 33.4 -1.4**
KPL IAmb IAmb 13 58 34.1
comp=Z,110nm,0.9s
GMM Mts of Mourne 76.19 37 *e*P **P** **13 58 33.6 -1.7**
PMTG Montargil 76.20 53 *e*P **P** **13 58 34.3 -1.4**
comp=Z,56nm,1.6s
PVIS Viseu 76.26 51 *e*P **P** **13 58 34.3 -1.7**
comp=Z,61nm,1.7s
KAC Achnashellach 76.29 34 *e*P **P** **13 58 34.1 -1.7**
LINV Loch Inver, As 76.29 33 *e*P **P** **13 58 34.3 -1.5**
LINV IAmb IAmb 13 58 35.0
comp=Z,52nm,0.8s
KIWB Kanaga Island 76.30 320 P **P** **13 58 36.6 +0.6**
MESJ Messejana 76.36 54 *e*P **P** **13 58 35.0 -1.6**
MESJ IAmb IAmb 13 58 35.1
comp=Z,29nm,1.2s
MESJ Messejana 76.36 54 *e*P **P** **13 58 35.1 -1.6**
comp=Z,46nm,1.8s
MESJ Messejana 76.36 54 *e*P **P** **13 58 35.0 -1.6**
MTE Manteigas 76.56 51 *e*P **P** **13 58 36.2 -1.6**
MTE Manteigas 76.56 51 *e*LR LR 14 23 04.3
comp=Z,340nm,24.0s
PBEJ Beja 76.61 54 *e*P **P** **13 58 36.6 -1.4**
comp=Z,32nm,1.8s
PESTR Estremoz 76.72 53 *e*P **P** **13 58 36.7 -1.9**
comp=Z,39nm,1.7s
MDO Dochfour 76.80 34 *e*P **P** **13 58 37.0 -1.7**
PMRV Marv??o 76.80 52 *e*P **P** **13 58 37.6 -1.5**
comp=Z,43nm,1.6s
PMRV Marv??o 76.80 52 *e*LR LR 14 23 06.6
comp=Z,329nm,20.0s
PVAQ Vaqueiros 76.81 54 *e*P **P** **13 58 38.1 -1.1**

comp=Z,41nm,1.5s
PVAQ Vaqueiros 76.81 54 *e*LR LR 14 23 04.7
comp=Z,286nm,22.0s
GAL1 Galloway 76.85 36 *e*P **P 13 58 37.3 -1.7**
GAL1 IAmb IAmb 13 58 38.1
comp=Z,55nm,1.1s
MVO Moncorvo 76.86 51 *e*P **P 13 58 37.5 -1.9**
comp=Z,58nm,1.4s
MVO Moncorvo 76.86 51 *e*LR LR 14 22 53.2
comp=Z,249nm,24.0s
PGBU Glenifferbraes 76.89 35 *e*P **P 13 58 37.1 -2.1**
WIM Isle of Man 76.95 37 *e*P **P 13 58 38.1 -1.5**
INVG Invergeldie, C 77.07 35 *e*P **P 13 58 38.4 -1.9**
INVG IAmb IAmb 13 58 39.5
comp=Z,94nm,0.8s
NEWG New Galloway 77.10 36 *e*P **P 13 58 38.9 -1.5**
NEWG IAmb IAmb 13 58 39.7
comp=Z,64nm,1.0s
WLF1 Llynfaes 77.20 38 *e*P **P 13 58 39.4 -1.6**
MLA1 Latheron 77.24 33 *e*P **P 13 58 39.7 -1.4**
WME Myndd Eilian 77.25 38 *e*P **P 13 58 39.7 -1.6**
MCD Coleburn Disti 77.38 33 *e*P **P 13 58 40.4 -1.5**
EDU Dundee 77.63 35 *e*P **P 13 58 42.3 -1.1**
ESK Eskdalemuir 77.67 36 *e*P **P 13 58 41.9 -1.7**
ESK IAmb IAmb 13 58 42.8
comp=Z,95nm,0.8s
ESK Eskdalemuir 77.67 36 P **P 13 58 41.9 -1.7**
ESK IAmb IAmb 13 58 43.0
comp=Z,93nm,0.8s
ESK Eskdalemuir 77.67 36 P **P 13 58 41.9 -1.7**
ESK pmax pmax
comp=Z,93nm,0.8s
EKA Eskdalemuir Ar 77.69 36 LR LR 14 32 38.0
comp=Z,533nm,20.1s,baz=298,slow=36
EKA Eskdalemuir Ar 77.69 36 P **P 13 58 41.4 -2.3**
KESW Keswick, Cumbr 77.81 37 *e*P **P 13 58 42.0 -2.4**
DRUM Mains of Drumt 77.87 34 *e*P **P 13 58 43.3 -1.3**
DRUM IAmb IAmb 13 58 44.1
comp=Z,107nm,0.7s
ESY Stoneypath 77.92 35 *e*P **P 13 58 43.6 -1.4**
MCH1 Michaelchurch 78.21 39 *e*P **P 13 58 44.4 -2.3**
MCH1 IAmb IAmb 13 58 49.6
comp=Z,24nm,1.0s
HLM1 Long Mynd 78.21 39 *e*P **P 13 58 44.9 -1.8**
HLM1 IAmb IAmb 13 58 45.6
comp=Z,40nm,1.0s
MONM Monmouth 78.35 39 *e*P **P 13 58 45.4 -2.0**
MONM IAmb IAmb 13 58 46.3
comp=Z,92nm,1.2s
EDMD Edmundbyers 78.44 36 *e*P **P 13 58 46.4 -1.5**
EDMD IAmb IAmb 13 58 47.2
comp=Z,80nm,1.0s
AMKA Amchitka 78.55 320 P **P 13 58 49.3 +0.8**
STRD Stroud 78.75 39 *e*P **P 13 58 48.1 -1.6**
STRD IAmb IAmb 13 58 49.1
comp=Z,45nm,0.8s
HPK Haverah Park 78.76 37 *e*P **P 13 58 48.4 -1.3**
HPK IAmb IAmb 13 58 48.9
comp=Z,37nm,0.8s
LBWR Ladybower, Pea 78.78 38 *e*P **P 13 58 48.5 -1.2**
LBWR IAmb IAmb 13 58 49.2
comp=Z,67nm,1.0s
KBS Kingsbay 78.86 11 *i* P **P 13 58 49.6 -0.1**
KBS Kingsbay 78.86 11 *e*P **P 13 58 50.6 +0.9**
PAB San Pablo 79.11 52 P **P 13 58 50.2 -1.8**
PAB San Pablo 79.11 52 P **P 13 58 50.2 -1.8**
PAB pmax pmax
comp=Z,22nm,1.1s
ESDC Sonseca Array 79.39 52 P **P 13 58 52.2 -1.3**
comp=Z,15nm,0.9s,baz=287,slow=5.7,SNR=48
ESDC LR LR 14 29 06.0
comp=Z,369nm,21.8s,baz=294,slow=32
comp=Z,15nm,0.9s
ESDC Sonseca Array 79.39 52 P **P 13 58 51.8 -1.7**
SPA0 Spitsbergen Ar 79.93 11 *e*P **P 13 58 55.2 -0.4**
SPITS Spitsbergen Ar 79.93 11 LR LR 14 35 34.6
comp=Z,1µm,21.6s,baz=228,slow=37
MDT Midelt 80.05 59 P **P 13 58 55.7 -1.5**
comp=Z,10nm,0.9s,baz=303,slow=5.5,SNR=8.6
MDT LR LR 14 31 11.2
comp=Z,136nm,18.8s,baz=338,slow=33
comp=Z,10nm,0.9s
GRR Gorron 80.12 43 *e*P **P 13 58 55.0 -2.2**
GRR pmax pmax
comp=Z,47nm,0.9s
HSPB Hornsund (broa 80.17 13 *e*P **P 13 58 56.3 -0.5**
HSPB Hornsund (broa 80.17 13 *e*P **P 13 58 58.0 +1.1**
FLN La Foliniere 80.31 42 *e*P **P 13 58 56.1 -2.0**
FLN pmax pmax
comp=Z,36nm,0.9s
SUE Sulen 80.87 29 *e*P **P 13 59 00.3 -0.5**
FOO Floro 80.88 29 *e*P **P 13 59 00.7 -0.2**
BER Bergen 81.29 30 *e*P **P 13 59 02.8 -0.4**
PMSA Palmer Station 81.37 168 LR LR 14 26 49.7
comp=Z,314nm,21.1s,baz=306,slow=29
SHEM Shemya Is, Ala 81.48 322 P **P 13 59 05.3 +1.0**
comp=Z,77nm,1.0s,baz=39,slow=4.1,SNR=6.5
SHEM pP **pP 13 59 22.3 0.0**
comp=Z,20nm,0.6s,baz=4.2,slow=4.1,SNR=2.3
SHEM LR LR 14 33 26.9
comp=Z,59nm,20.1s,baz=98,slow=34
comp=Z,77nm,1.0s
BILL Bilibino 81.51 338 P **P 13 59 05.2 +1.1**
BILL Bilibino 81.51 338 *d i*P **P 13 59 04.9 +0.7**
BILL *i* 13 59 22.2
BILL *i* *PP **sP 13 59 34.5 +5.2**
BILL pmax pmax
comp=Z,124nm,1.3s
BILL MLR MLR
comp=Z,261nm,21.0s
KMY Karmoy 81.51 31 *e*P **P 13 59 03.3 -1.1**
AKN Aaknes 81.65 28 *e*P **P 13 59 05.0 0.0**
MOL Molde 81.80 28 *e*P **P 13 59 02.8 -3.0**
ODD1 Odda 82.03 30 *e*P **P 13 59 06.8 -0.3**
BLS5 Blasjo 82.07 31 *e*P **P 13 59 07.4 +0.1**
CLF Chambon-Foret 82.24 43 P **P 13 59 06.6 -1.8**
CLF IAmb IAmb 13 59 08.2
comp=Z,65nm,1.0s
RJF Les Rejaudoux 82.32 45 *e*P **P 13 59 06.6 -2.3**
RJF pmax pmax
comp=Z,47nm,1.4s
LOF Lofoten 82.58 21 *e*P **P 13 59 07.8 -2.0**
DOMB Dombas 82.62 28 *e*P **P 13 59 10.3 +0.1**
SKAR Skarslia 82.64 29 *e*P **P 13 59 10.2 -0.1**
SNART Snartemo 82.72 32 *e*P **P 13 59 09.5 -1.2**
CAF Calviac 82.78 46 *e*P **P 13 59 09.0 -2.3**
CAF pmax pmax
comp=Z,26nm,1.4s
KONS Konsvik 82.97 23 *e*P **P 13 59 12.1 +0.3**
NSS Namsos 83.14 25 *e*P **P 13 59 11.7 -1.1**
AVF Avril sur Loir 83.24 44 *e*P **P 13 59 10.9 -2.7**
AVF pmax pmax
comp=Z,15nm,1.0s
STEI Steigen 83.25 21 *e*P **P 13 59 13.5 +0.3**
DOU Dourbes 83.27 40 *d*P **P 13 59 12.4 -1.3**
comp=Z,14nm,0.9s
DOU *d*pP **pP 13 59 30.6 -1.2**
BMRD Maredsous 83.33 40 *d*P **P 13 59 12.8 -1.2**
ORCD Orcadas 83.39 159 P **P 13 59 13.2 -0.7**
ORCD IAmb IAmb 13 59 14.4
comp=Z,53nm,1.0s
FAUS Fauske 83.47 22 *e*P **P 13 59 13.0 -1.3**
KONO Kongsberg 83.55 30 *ce*P **P 13 59 15.6 +0.7**
KONO pmax pmax
comp=Z,55nm,2.5s
KONO Kongsberg 83.55 30 *e* **P 13 59 18.8 +3.9**
MOR8 Moi Rana 83.58 23 *e*P **P 13 59 15.4 +0.4**
BCLA Clavier 83.63 40 *d*P **P 13 59 14.3 -1.3**
comp=Z,21nm,1.0s
BCLA *d*PcP **PcP 13 59 19.1 -0.6**
BCLA *d*pP **pP 13 59 33.1 -0.5**
RCHB Rochefort 83.65 40 *d*P **P 13 59 14.6 -1.1**
comp=Z,14nm,1.1s
TRO Tromso 83.84 19 *e*P **P 13 59 16.3 +0.1**
NB2 NORSAR Subarra 83.90 29 P **P 13 59 16.2 -0.6**
NB2 pmax pmax
comp=Z,16nm,1.1s
NB2 NORSAR Subarra 83.90 29 P **P 13 59 16.5 -0.3**
baz=288,slow=5.3
NB2 NORSAR Subarra 83.90 29 P **P 13 59 16.5 -0.3**
comp=Z,38nm,1.0s,baz=288,slow=5.3
NOA NORSAR Array B 83.90 29 P **P 13 59 16.6 -0.1**
comp=Z,19nm,1.0s,baz=290,slow=5.1,SNR=33
NOA PP **PP 14 02 27.4 -3.2**
comp=Z,3.3nm,0.9s,baz=290,slow=7.9,SNR=3.7
NOA LR LR 14 35 07.9
comp=Z,328nm,21.5s,baz=275,slow=35
comp=Z,19nm,1.0s
OSL Oslo 84.01 30 *e*P **P 13 59 17.7 +0.4**
MEM Membach 84.02 39 P **P 13 59 16.7 -0.8**
MEM pmax pmax
comp=Z,29nm,1.5s
MEM Membach 84.02 39 *d*P **P 13 59 16.6 -1.0**
AFI Afiamalu 84.05 254 LR LR 14 28 24.1
comp=Z,177nm,19.6s,baz=65,slow=30
BHOU Houvegnez 84.08 40 *d*P **P 13 59 17.3 -0.6**
BHOU *d*PcP **PcP 13 59 21.0 -0.7**
NC602 NORSAR Array S 84.15 29 P **P 13 59 17.7 -0.3**
NC602 IAmb IAmb 13 59 19.4
comp=Z,99nm,1.1s
NC602 NORSAR Array S 84.15 29 *e*P **P 13 59 18.3 +0.3**
NORES NORESS Array B 84.15 29 P **P 13 59 18.4 +0.4**
NORES pmax pmax
comp=Z,10.0nm,1.0s
MUD Monsted U'grnd 84.25 33 P **P 13 59 18.8 +0.2**
MUD pmax pmax
comp=Z,32nm,1.8s
MUD Monsted U'grnd 84.25 33 *i* P **P 13 59 18.1 -0.4**
MUD IAmb IAmb 13 59 19.1
comp=Z,38nm,1.2s
JETT Jettan, Norway 84.35 19 *e*P **P 13 59 19.3 +0.4**
WLF Walferdange 84.35 40 P **P 13 59 18.0 -1.3**
WLF Walferdange 84.35 40 P **P 13 59 18.0 -1.3**
WLF pmax pmax
comp=Z,23nm,0.8s
WLF Walferdange 84.35 40 *d*P **P 13 59 18.5 -0.8**
VIVF Saint-Julien-l 84.60 45 *e*P **P 13 59 20.3 -0.4**
VIVF pmax pmax
comp=Z,45nm,1.3s
HAU Haudompre 84.91 42 *e*P **P 13 59 20.1 -2.1**
HAU pmax pmax
comp=Z,29nm,0.9s
TIC Toumodi 85.14 84 ǁ *i*P **P 13 59 22.3 -1.6**
comp=Z,20nm,0.2s
LIC Lamto 85.23 85 ǁ *i*P **P 13 59 23.8 -0.6**
comp=Z,36nm,0.9s
HINF Hinteralfeld 85.29 42 *e*P **P 13 59 21.9 -2.2**
HINF pmax pmax
comp=Z,19nm,1.1s
DBIC Dimbokro 85.30 84 P **P 13 59 23.7 -1.0**
comp=Z,12nm,1.0s,baz=292,slow=3.9,SNR=8.0
DBIC LR LR 14 34 32.5
comp=Z,234nm,21.1s,baz=284,slow=34
comp=Z,12nm,1.0s
HFS Hagfors 85.36 29 LR LR 14 35 41.5
comp=Z,381nm,21.9s,baz=278,slow=34
ECH Echery 85.38 42 P **P 13 59 23.2 -1.3**
ECH Echery 85.38 42 P **P 13 59 23.2 -1.3**
ECH pmax pmax
comp=Z,29nm,1.1s
KIC Kosan Boka 85.48 85 *e*P **P 13 59 25.0 -0.6**
comp=Z,24nm,0.6s
KTK1 Kautokeino 85.49 19 *e*P **P 13 59 23.8 -0.8**
TNS Taunus Mts 85.63 39 P **P 13 59 25.0 -0.7**
TNS pmax pmax
comp=Z,37nm,1.2s
BSEG Bad Segeberg 85.63 35 P **P 13 59 25.4 -0.1**
BSEG pmax pmax
comp=Z,61nm,1.0s
LPL La Plagne 85.83 44 *e*P **P 13 59 25.8 -1.2**
LPL pmax pmax
comp=Z,32nm,1.3s
LPG La Plagne 85.85 44 *e*P **P 13 59 26.1 -1.1**
LPG pmax pmax
comp=Z,30nm,1.2s
ARA0 ARCESS Array S 85.94 18 *e*P **P 13 59 26.2 -0.7**
ARCES ARCESS Array B 85.94 18 P **P 13 59 26.2 -0.7**
comp=Z,17nm,1.0s,baz=295,slow=4.0,SNR=38
ARCES PP **PP 14 02 44.4 -2.5**
comp=Z,9.7nm,0.9s,baz=288,slow=7.5,SNR=4.7
ARCES LR LR 14 37 23.1
comp=Z,704nm,21.6s,baz=304,slow=35
comp=Z,17nm,1.0s
MBDF Montbardon 86.07 45 *e*P **P 13 59 26.6 -1.6**
MBDF pmax pmax
comp=Z,15nm,1.0s
BFO Black Forest 86.10 41 P **P 13 59 26.6 -1.4**
BFO Black Forest 86.10 41 P **P 13 59 26.6 -1.4**
BFO pmax pmax
comp=Z,34nm,1.3s
SLE Schleitheim 86.37 42 P **P 13 59 28.2 -1.2**
SLE pmax pmax
comp=Z,37nm,1.0s
TUE Stuetta 87.31 43 P **P 13 59 33.5 -0.7**
TUE IAmb IAmb 13 59 34.6
comp=Z,37nm,0.9s
DAVA Damuels 87.41 42 *i* P **P 13 59 34.2 -0.4**
comp=Z,38nm,1.0s,SNR=11
DAVA *e*P **pP 13 59 53.1 +0.3**
comp=Z,60nm,1.2s
MOX Moxa 87.43 38 P **P 13 59 33.9 -0.6**
MOX pmax pmax
comp=Z,21nm,1.2s
DAVOX Davos/Dischmat 87.56 42 LR LR 14 35 22.4
comp=Z,259nm,20.7s,baz=264,slow=33
GRB1 Grafenberg Arr 87.86 40 P **P 13 59 36.2 -0.4**
GRB1 pmax pmax
comp=Z,45nm,1.1s
RETA Reutte 87.91 42 *i* P **P 13 59 36.0 -0.9**
comp=Z,37nm,1.2s,SNR=7.9
RETA *e*P **pP 13 59 54.1 -1.1**
comp=Z,30nm,1.3s
CLL Collm 88.03 37 P **P 13 59 37.0 -0.3**
CLL Collm 88.03 37 ǁ *i*P **P 13 59 36.6 -0.7**
CLL *e**PP **pP 13 59 54.0 -1.5**
CLL *e* 14 09 59.0
CLL *eS* **S 14 10 16.0 +0.2**
CLL pmax pmax
comp=Z,18nm,1.0s
CLL Collm 88.03 37 ǁ *i*P **P 13 59 36.6 -0.7**
comp=Z,18nm,1.0s
CLL *e*pP **pP 13 59 54.0 -1.5**
CLL *e*sP **sP 14 00 01.0 -1.6**
CLL *e*PP **PP 14 03 02.0 -2.2**
CLL *e*SKSac **SKSac 14 09 59.0 -1.2**
CLL *eS* **S 14 10 16.0 +0.2**
CLL *eSS* **SS 14 16 06.0 +1.6**
CLL *e*SSS SSS 14 19 42.0
CLL *e*SSSS 14 22 30.0
FETA Feichten 88.04 42 *i* P **P 13 59 36.9 -0.8**
comp=Z,20nm,0.9s,SNR=5.3
NKC Novy Kostel 88.07 39 *e*P **P 13 59 37.1 -0.4**
NKC MLR MLR
comp=Z,400nm,23.0s
NKC Novy Kostel 88.07 39 *e*P **P 13 59 37.1 -0.4**
NKC AMS AMS 14 37 50.0
comp=Z,400nm,23.0s
MOTA Moosalm 88.18 42 *i* P **P 13 59 37.6 -0.7**
comp=Z,24nm,1.0s,SNR=6.6
MOTA *e*P **pP 13 59 55.2 -1.3**
comp=Z,18nm,0.9s
SQTA Sankt Quirin 88.29 42 *e*P **P 13 59 38.7 -0.1**
comp=Z,18nm,1.1s
WATA Walderalm 88.48 41 *e*P **P 13 59 39.7 0.0**
comp=Z,20nm,1.2s
WATA *e*P **pP 13 59 56.8 -1.2**
comp=Z,16nm,1.3s
WTTA Wattenberg 88.55 42 *e*P **P 13 59 39.2 -0.9**
comp=Z,5.3nm,0.8s
WTTA *e*P **pP 13 59 57.9 -0.4**
comp=Z,16nm,1.4s
WET Wettzell 88.70 39 P **P 13 59 40.5 -0.1**
WET pmax pmax
comp=Z,20nm,1.5s
BRG Berggiesshubel 88.74 38 *e*P **P 13 59 39.9 -0.7**
BRG Amp 13 59 42.0
comp=Z,7.4nm,0.9s
BRG *ex* x 14 03 09.3
BRG Amp 14 03 11.1
comp=Z,16nm,1.4s
BRG Berggiesshubel 88.74 38 *e*P **P 13 59 39.9 -0.7**
BRG *e* 14 03 09.3
BRG SS S 14 10 12.0 -11
BRG pmax pmax
comp=Z,7.0nm,0.9s
BRG pmax pmax
comp=Z,16nm,1.5s
SEY Seymchan 88.82 336 P **P 13 59 42.2 +1.5**
comp=Z,17nm,0.9s,baz=97,slow=4.3,SNR=22
SEY pP **pP 13 59 59.3 +0.3**
comp=Z,33nm,1.0s,baz=79,slow=4.6,SNR=14
SEY LR LR 14 45 10.1
comp=Z,150nm,19.9s,baz=58,slow=39
comp=Z,17nm,0.9s
SEY Seymchan 88.82 336 *i* P **P 13 59 41.7 +1.0**
SEY pmax pmax
comp=Z,20nm,1.1s
SEY MLR MLR
comp=Z,251nm,23.0s
CTI Castel Tesino 88.95 43 P **P 13 59 40.6 -1.3**
CTI Castel Tesino 88.95 43 P **P 13 59 40.6 -1.3**
CTI pmax pmax
comp=Z,19nm,1.2s
MSF Maaselka 89.01 21 P **P 13 59 39.1 -2.5**
MSF pmax pmax
comp=Z,35nm,1.7s
KHC Kasperske Hory 89.14 39 *i* P **P 13 59 41.9 -0.7**
KHC pmax pmax
comp=Z,24nm,1.2s
KHC Kasperske Hory 89.14 39 *e*P **P 13 59 41.9 -0.7**
KHC *ex* x 14 00 16.0
KHC *e*SKS **SKSac 14 10 04.6 -2.4**
KHC AMS AMS 14 35 00.0
comp=Z,400nm,26.0s
ABTA Abfaltersbach 89.28 42 *i* P **P 13 59 42.8 -0.6**
comp=Z,24nm,1.3s,SNR=6.6
ABTA *e*P **pP 14 00 00.8 -0.8**
comp=Z,19nm,1.2s
GEC2 GERESS Array S 89.31 40 P **P 13 59 42.6 -0.9**
GERES GERESS Array B 89.31 40 P **P 13 59 42.8 -0.7**
comp=Z,3.4nm,0.8s,baz=290,slow=3.8,SNR=20
GERES PP **PP 14 03 16.0 +1.4**
comp=Z,1.3nm,0.7s,baz=308,slow=6.6,SNR=4.5
GERES PKKP **PKKPbc 14 17 19.0 -1.7**
comp=Z,0.2nm,0.3s,baz=183,slow=3.8,SNR=5.6
GERES LR LR 14 35 56.6
comp=Z,352nm,21.9s,baz=298,slow=33
comp=Z,3.4nm,0.8s
GERES GERESS Array B 89.31 40 P **P 13 59 42.4 -1.1**
PRU Pruhonice 89.42 38 *e*P **P 13 59 42.8 -1.0**
PRU *e* 14 10 03.5
PRU MLR MLR
comp=Z,400nm,23.2s
PRU Pruhonice 89.42 38 *e*P **P 13 59 42.8 -1.0**
PRU *e*SKS **SKSac 14 10 03.5 -5.0**
PRU AMS AMS 14 32 50.0
comp=Z,400nm,23.2s
APA Apatity 89.45 18 ǁ *i*P **P 13 59 48.1 +4.5**
APA pmax pmax
comp=Z,6.0nm,1.0s
STAL STALIGIAL 89.58 42 P **P 13 59 43.8 -0.9**
BIOA Bad Ischl, Aus 89.68 41 *e*P **P 13 59 44.8 -0.4**
comp=Z,7.4nm,0.8s
CKRC Cesky Krumlov 89.70 39 AMS AMS 14 36 00.0
comp=Z,400nm,23.6s
KBA Koelnbreinsper 89.71 41 *e*P **P 13 59 45.2 -0.3**
comp=Z,14nm,1.2s
KBA *e*P **pP 14 00 03.1 -0.7**
comp=Z,22nm,1.5s
KBA Koelnbreinsper 89.71 41 P **P 13 59 44.9 -0.6**
KBA pmax pmax
comp=Z,9.0nm,0.8s
TOA0 Torodi Ar. Sit 90.02 77 P **P 13 59 45.6 -1.7**
TORD Torodi Ar. Bea 90.02 77 P **P 13 59 46.2 -1.1**
comp=Z,2.4nm,0.5s,baz=294,slow=4.1,SNR=18
TORD PKKP **PKKPbc 14 17 16.9 -0.8**
comp=Z,0.7nm,0.7s,baz=46,slow=1.6,SNR=4.2
TORD LR LR 14 36 56.8
comp=Z,317nm,21.8s,baz=262,slow=34
comp=Z,2.4nm,0.5s
MYKA Terra Mystica 90.06 42 *e*P **P 13 59 46.6 -0.4**
comp=Z,11nm,0.9s
CHVC Chvalec 90.09 37 AMS AMS 14 37 20.0
comp=Z,500nm,20.9s
UPC Upice 90.10 37 *e*P **P 13 59 47.0 0.0**
UPC MLR MLR
comp=Z,500nm,23.1s
UPC Upice 90.10 37 *e*P **P 13 59 47.0 0.0**
UPC AMS AMS 14 41 10.0
comp=Z,500nm,23.1s
OSTC Ostas 90.20 37 *e*P **P 13 59 47.0 -0.5**
OSTC AMS AMS 14 37 10.0
comp=Z,500nm,22.7s
TIXI Tiksi 90.25 348 LR LR 14 43 55.3
comp=Z,415nm,22.0s,baz=0.0,slow=38
TIXI Tiksi 90.25 348 P **P 13 59 46.2 -1.0**
TIXI IAmb IAmb 13 59 47.8
comp=Z,29nm,0.8s
TIXI Tiksi 90.25 348 *c i*P **P 13 59 46.7 -0.5**
TIXI pmax pmax
comp=Z,32nm,0.8s
FINES FINESS Array B 90.27 25 P **P 13 59 46.3 -1.2**
comp=Z,15nm,0.9s,baz=338,slow=4.1,SNR=31
FINES PP **PP 14 03 20.3 -1.4**
comp=Z,9.4nm,0.8s,baz=316,slow=5.3,SNR=8.9
comp=Z,15nm,0.9s
FINES FINESS Array B 90.27 25 P **P 13 59 46.5 -1.0**
FINES FINESS Array B 90.27 25 P **P 13 59 46.5 -1.0**
PET Petropavlovsk 90.28 325 P **P 13 59 48.4 +0.7**
PET IAmb IAmb 14 00 08.2
comp=Z,29nm,1.0s
PET Petropavlovsk 90.28 325 *e*P **P 13 59 48.1 +0.3**
PET *e**PP **pP 14 00 06.6 +0.6**
PET *eS* **S 14 10 30.2 -6.6**
PET pmax pmax
comp=Z,31nm,1.3s
PET MLR MLR
comp=Z,300nm,21.0s
DPC Dobruska-Polom 90.34 38 *e*P **P 13 59 47.8 -0.4**
DPC *e* 14 10 07.3
DPC MLR MLR
comp=Z,500nm,25.6s
DPC Dobruska-Polom 90.34 38 *e*P **P 13 59 47.8 -0.4**
DPC *e*SKS **SKSac 14 10 07.3 -6.7**
DPC AMS AMS 14 37 10.0
comp=Z,500nm,25.6s
KEST Kesra 90.56 53 P **P 13 59 48.4 -1.2**
comp=Z,16nm,1.0s,baz=265,slow=3.5,SNR=9.7
KEST LR LR 14 35 55.3
comp=Z,137nm,20.4s,baz=220,slow=33
comp=Z,16nm,1.0s
KEST Kesra 90.56 53 P **P 13 59 49.3 -0.3**
KRLC Kraliky 90.72 38 *e*P **P 13 59 49.8 -0.2**
KRLC MLR MLR
comp=Z,400nm,24.0s
KRLC Kraliky 90.72 38 *e*P **P 13 59 49.8 -0.2**
KRLC AMS AMS 14 39 40.0
comp=Z,400nm,24.0s
KLNR Kaliningrad 90.77 33 *i* P **P 13 59 49.7 -0.3**
KLNR pmax pmax
comp=Z,43nm,0.9s
KLNR MLR MLR
comp=Z,274nm,20.0s
PEA0B Petropavlovsk- 90.77 326 P **P 13 59 51.3 +1.2**
PEA0B IAmb IAmb 14 00 10.7
comp=Z,65nm,1.1s
PEA0B Petropavlovsk- 90.77 326 *i* P **P 13 59 50.2 +0.1**
PETK Petropavlovsk- 90.77 326 P **P 13 59 49.6 -0.5**
comp=Z,10nm,0.9s,baz=120,slow=5.3,SNR=28
PETK pP **pP 14 00 08.5 +0.2**
comp=Z,28nm,0.9s,baz=87,slow=8.2,SNR=17
comp=Z,10nm,0.9s
PETK Petropavlovsk- 90.77 326 P **P 13 59 50.7 +0.6**
PETK Petropavlovsk- 90.77 326 P **P 13 59 50.7 +0.6**
KRUC Moravsky 90.88 39 P **P 13 59 49.6 -1.1**
KRUC pmax pmax
comp=Z,7.0nm,1.0s
KRUC Moravsky 90.88 39 *e*P **P 13 59 49.6 -1.1**
VRAC Vranov 90.91 38 LR LR 14 36 51.4
comp=Z,265nm,21.7s,baz=302,slow=33
VRAC Vranov 90.91 38 P **P 13 59 50.3 -0.5**
VRAC pmax pmax
comp=Z,10.0nm,1.0s
VRAC Vranov 90.91 38 *e*P **P 13 59 50.0 -0.8**
SOKA Soboth 90.93 41 *e*P **P 13 59 50.8 -0.3**
comp=Z,5.5nm,0.7s
CONA Conrad Observa 90.99 40 *e*P **P 13 59 49.5 -1.9**
comp=Z,3.9nm,1.0s
CONA *e*P **pP 14 00 09.5 0.0**
comp=Z,7.7nm,1.3s
MA2 Magadan 91.18 333 P **P 13 59 51.7 -0.2**
comp=Z,32nm,0.8s,baz=60,slow=5.0,SNR=21
MA2 pP **pP 14 00 10.6 +0.5**
comp=Z,69nm,1.0s,baz=83,slow=3.0,SNR=14
MA2 LR LR 14 44 28.8
comp=Z,125nm,19.9s,baz=50,slow=38
comp=Z,32nm,0.8s

MA2	**Magadan**	**91.18**	**333**	P		**P**	**13 59 52.5**	**+0.6**
MA2	**Magadan**	**91.18**	**333**	*d* P		**P**	**13 59 52.4**	**+0.6**
MA2					pmax	pmax		
	comp=Z,53nm,1.0s							
MA2					MLR	MLR		
	comp=Z,282nm,23.0s							
MORC	**Moravsky Berou**	**91.29**	**38**	P		**P**	**13 59 52.5**	**-0.1**
MORC					pmax	pmax		
	comp=Z,9.0nm,1.5s							
MORC	**Moravsky Berou**	**91.29**	**38**	*e*P		**P**	**13 59 51.9**	**-0.8**
RONA	**Rosalia, Austr**	**91.34**	**40**	*e*P		**P**	**13 59 52.5**	**-0.4**
	comp=Z,8.7nm,1.2s							
OKC	**Ostrava-Krasne**	**91.62**	**38**	AMS		AMS	14 40 10.0	
	comp=Z,400nm,22.2s							
JAVC	**Velka Javorina**	**91.73**	**39**	*e*P		**P**	**13 59 54.8**	**+0.1**
VSU	**Vasula**	**92.10**	**28**	*i* P		**P**	**13 59 54.8**	**-1.3**
VSU					pmax	pmax		
	comp=Z,55nm,1.4s							
PABE	**Paberze**	**92.27**	**31**	*e*P		**P**	**13 59 56.6**	**-0.4**
SUW	**Suwalki**	**92.59**	**32**	P		**P**	**13 59 57.3**	**-1.1**
SUW					pmax	pmax		
	comp=Z,50nm,1.1s							
SUW	**Suwalki**	**92.59**	**32**⇓	*e*P		**P**	**13 59 57.9**	**-0.6**
LANS	**Liptovska Anna**	**92.69**	**38**	*e*P		**P**	**14 00 00.1**	**+1.0**
LANS	**Liptovska Anna**	**92.69**	**38**	*e*P		**P**	**14 00 00.1**	**+1.0**
NIE	**Niedzica**	**93.07**	**37**	P		**P**	**14 00 01.3**	**+0.4**
NIE					pmax	pmax		
	comp=Z,5.0nm,2.1s							
KOVH	**Kovagotottos**	**93.12**	**41**	P		**P**	**14 00 00.1**	**-1.0**
ISAL	**Salakas**	**93.31**	**30**	*e*P		**P**	**14 00 01.6**	**-0.2**
MORH	**Mrgy, Hungar**	**93.41**	**41**	P		**P**	**14 00 01.8**	**-0.6**
IIGN	**Ignalina**	**93.47**	**30**	*e*P		**P**	**14 00 02.3**	**-0.2**
PSZ	**Piszkesteto**	**93.47**	**39**	P		**P**	**14 00 02.3**	**-0.5**
PSZ	**Piszkesteto**	**93.47**	**39**	P		**P**	**14 00 02.3**	**-0.5**
PSZ					pmax	pmax		
	comp=Z,19nm,1.3s							
PSZ	**Piszkesteto**	**93.47**	**39**	P		**P**	**14 00 02.9**	**+0.1**
RAO	**Raoul Island**	**93.59**	**241**	LR		LR	14 34 03.7	
	comp=Z,302nm,20.4s,baz=129,slow=30							
IDID	**Didziasalis**	**93.74**	**30**	*e*P		**P**	**14 00 03.2**	**-0.5**
VAE	**Valguarnera**	**93.83**	**50**	LR		LR	14 37 39.8	
	comp=Z,525nm,21.2s,baz=314,slow=33							
NACGM	**Naroch**	**93.97**	**31**⇓	*e*P		**P**	**14 00 04.1**	**-0.7**
	baz=300							
CRVS	**Cervenica-Dubn**	**93.98**	**37**	*e*P		**P**	**14 00 05.4**	**+0.3**
CRVS	**Cervenica-Dubn**	**93.98**	**37**	*e*P		**P**	**14 00 05.4**	**+0.3**
MSVF	**Nonsavu**	**94.49**	**253**	LR		LR	14 34 42.9	
	comp=Z,306nm,20.2s,baz=56,slow=30							
MSVF	**Nonsavu**	**94.49**	**253**	P		**P**	**14 00 09.8**	**+1.8**
MSVF					IAmb	IAmb	14 00 11.3	
	comp=Z,19nm,1.1s							
MSVF	**Nonsavu**	**94.49**	**253**	*i* P		**P**	**14 00 09.0**	**+1.0**
MSVF					pmax	pmax		
	comp=Z,20nm,1.1s							
UZH	**Uzhgorod**	**94.60**	**37**	*e*P		**P**	**14 00 07.0**	**-0.8**
MNK	**Minsk**	**94.73**	**31**	*i* P		**P**	**14 00 03.9**	**-4.3**
MNK				*i* *PP		**sP**	**14 00 30.3**	**-3.3**
MNK				*i*			14 03 52.7	
MNK				*i* S		**SKSac**	**14 10 30.3**	**-7.7**
MNK				*i* *SS		**ScS**	**14 11 18.2**	**+0.8**
MNK				*i* SS		**SS**	**14 17 34.9**	**-5.5**
MNK				*i* SSS		SSS	14 21 17.5	
MNK					pmax	pmax		
	comp=Z,7.0nm,0.5s							
MNK					pmax	pmax		
	comp=N,29nm,1.1s							
MNK					pmax	pmax		
	comp=E,4.0nm,0.7s							
MNK					MLR	MLR		
	comp=E,140nm,14.0s							
MNK					MLR	MLR		
	comp=N,219nm,14.0s							
MNK	**Minsk**	**94.73**	**31**	*i* P		**P**	**14 00 04.0**	**-4.3**
	comp=Z,7.0nm,0.5s,baz=302							
MNK				*i* P		**PcP**	**14 00 04.9**	**-3.8**
	comp=E,4.0nm,0.7s							
MNK				*i* P		**PcP**	**14 00 04.9**	**-3.8**
	comp=N,29nm,1.1s							
MNK				*i* pP		**sP**	**14 00 30.4**	**-3.3**
MNK				*i* sP		pP	14 00 41.3	+15
MNK				*i* PP		**PP**	**14 03 52.7**	**-4.1**
MNK				*i* PPP		PPP	14 05 54.5	
MNK				*i* SKS			14 10 01.6	
MNK				*i* S		**SKSac**	**14 10 30.4**	**-7.7**
MNK				*i* sS		**ScS**	**14 11 18.3**	**+0.8**
MNK				*i* SS		**SS**	**14 17 34.9**	**-5.5**
MNK				*i* SSS		SSS	14 21 17.6	
MNK				*i* LR		LR	14 38 21.2	
MNK				*i* LRM		MLR	14 44 60.0	
	comp=E,140nm,14.1s							
MNK				*i* LRM		MLR	14 45 03.6	
	comp=Z,5μm,21.6s							
MNK				*i* LRM		MLR	14 45 03.9	
	comp=N,219nm,14.4s							
BZS	**Buzias**	**95.54**	**40**	P		**P**	**14 00 10.7**	**-1.5**
BZS					pmax	pmax		
	comp=Z,9.0nm,0.9s							
DRGR		**95.69**	**39**	P		**P**	**14 00 12.0**	**-1.0**
DRGR					pmax	pmax		
	comp=Z,6.0nm,1.0s							
KLMR	**Klimovskoe**	**95.84**	**22**	*e*P		**P**	**14 00 10.3**	**-2.9**
KLMR				*e*			14 03 59.6	
KLMR					pmax	pmax		
	comp=Z,18nm,0.8s							
KLMR	**Klimovskoe**	**95.84**	**22**	*e*P		**P**	**14 00 10.4**	**-2.8**
KLMR					AMP		14 00 12.8	
	comp=Z,18nm,0.8s							
KLMR				*e*PP		**PP**	**14 03 59.6**	**-5.6**
NRIK	**Noril'sk**	**96.79**	**0**	P		**P**	**14 00 16.0**	**-1.3**
	comp=Z,4.0nm,0.7s,baz=117,slow=1.4,SNR=3.6							
NRIK					LR	LR	14 47 52.5	
	comp=Z,747nm,19.1s,baz=360,slow=38							
	comp=Z,4.0nm,0.7s							
NRIK	**Noril'sk**	**96.79**	**0**	*i* P		**P**	**14 00 16.8**	**-0.6**
NRIK					pmax	pmax		
	comp=Z,7.0nm,0.9s							
NRIK					MLR	MLR		
	comp=Z,758nm,25.0s							
BELA	**Belgrano 2**	**97.16**	**170**	P		**P**	**14 00 17.9**	**-0.8**
BELA					IAmb	IAmb	14 00 19.6	
	comp=Z,15nm,1.1s							
PRGR	**Permogore**	**97.34**	**19**	*e*P		**P**	**14 00 18.3**	**-1.7**
PRGR				*e*			14 00 35.2	
PRGR				*e*S		**SKSac**	**14 10 47.5**	**-4.0**
PRGR					pmax	pmax		
	comp=Z,45nm,0.9s							
AKASG	**Malin Array Be**	**97.46**	**33**	P		**P**	**14 00 19.0**	**-1.8**
	comp=Z,2.0nm,0.6s,baz=303,slow=4.0,SNR=7.1							
AKASG					PP	**PP**	**14 04 15.9**	**-2.1**
	comp=Z,3.6nm,0.7s,baz=308,slow=5.6,SNR=5.5							
AKASG					PKKPbc	**PKKPbc**	**14 16 56.6**	**-2.9**
	comp=Z,0.2nm,0.3s,baz=89,slow=2.0,SNR=4.7							
AKASG					LR	LR	14 45 14.7	
	comp=Z,155nm,19.4s,baz=290,slow=36							
	comp=Z,2.0nm,0.6s							
AKASG	**Malin Array Be**	**97.46**	**33**	P		**P**	**14 00 19.0**	**-1.8**
YAK	**Yakutsk**	**97.48**	**342**	LR		LR	14 49 25.6	
	comp=Z,217nm,21.4s,baz=74,slow=38							
YAK	**Yakutsk**	**97.48**	**342**	P		Pdif	14 00 20.8	+0.1
YAK					IAmb	IAmb	14 00 22.3	
	comp=Z,23nm,1.0s							
YAK	**Yakutsk**	**97.48**	**342**	*e*P		Pdif	14 00 21.5	+0.8
YAK				*e**PP		pP	14 00 38.7	-0.2
YAK				*e*			14 04 15.7	
YAK				*e*S		**SKSac**	**14 10 52.5**	**+0.3**
YAK				*e*			14 11 44.8	
YAK					pmax	pmax		
	comp=Z,19nm,0.9s							
YAK					pmax	pmax		
	comp=N,3.0nm,1.0s							
YAK					pmax	pmax		
	comp=E,3.0nm,1.1s							
YAK					pmax	pmax		
	comp=Z,36nm,1.6s							
YAK					pmax	pmax		
	comp=N,30nm,2.0s							
YAK					pmax	pmax		
	comp=E,26nm,1.8s							
YAK					smax	smax		
	comp=E,77nm,2.5s							
YAK					smax	smax		
	comp=N,103nm,1.9s							
MLR	**Muntele Rosu**	**98.29**	**39**	LR		LR	14 42 16.7	
	comp=N,253nm,21.5s,baz=311,slow=34							
OBN	**Obninsk**	**98.44**	**27**	LR		LR	14 46 22.9	
	comp=N,81nm,19.5s,baz=335,slow=36							
OBN	**Obninsk**	**98.44**	**27**	*c* *i* P		**P**	**14 00 22.9**	**-2.2**
OBN					*i* *PP	**pP**	**14 00 41.0**	**-2.4**
OBN					*i*		14 04 20.5	
OBN					pmax	pmax		
	comp=Z,18nm,1.1s							
OBN					MLR	MLR		
	comp=Z,322nm,20.0s							
MOS	**Moscow**	**98.50**	**26**	*e*P		**P**	**14 00 24.2**	**-1.1**
URZ	**Urewera**	**99.55**	**233**	LR		LR	14 35 03.6	
	comp=Z,243nm,21.4s,baz=31,slow=29							
VNA3	**Neumayer Olymp**	**100.66**	**161**	Pdiff		**Pdif**	**14 00 34.5**	**-0.1**
VNA1	**Neumayer--Stat**	**101.00**	**160**	Pdiff		**Pdif**	**14 00 36.0**	**0.0**
SNAA	**Sanae**	**102.89**	**161**	Pdiff		**Pdif**	**14 00 44.5**	**0.0**
SNAA	**Sanae**	**102.89**	**161**	P		**Pdif**	**14 00 44.2**	**-0.3**
	comp=Z,3.2nm,1.0s,baz=255,slow=2.1,SNR=7.4							
SNAA					PP	**PP**	**14 04 56.8**	**-2.5**
	comp=Z,3.4nm,1.0s,baz=263,slow=6.4,SNR=4.7							
QSPA	**South Pole Qui**	**104.04**	**180**	Pdiff		**Pdif**	**14 00 50.4**	**+0.6**
	comp=Z,1.8nm,0.8s,baz=176,slow=1.8,SNR=7.2							
TROLL	**Troll, Antarti**	**104.58**	**161**	Pdiff		**Pdif**	**14 00 52.5**	**+0.3**
BRTR	**Keskin Array B**	**106.15**	**41**	PKiKP		**PKiKP**	**14 05 11.6**	**+0.1**
	comp=Z,1.5nm,0.6s,baz=289,slow=1.9,SNR=6.0							
BRTR					PKKPbc	**PKKPbc**	**14 16 33.4**	**-0.7**
	comp=Z,1.6nm,0.8s,baz=139,slow=4.3,SNR=5.7							
KBZ	**Khabaz**	**109.07**	**33**	PKKPbc	PKKPbc		14 16 23.9	-1.0
	comp=Z,3.4nm,0.9s,baz=148,slow=2.0,SNR=4.9							
ZALV	**Zalesovo Beam**	**112.17**	**2**	PKiKP		**PKiKP**	**14 05 22.1**	**-0.1**
	comp=Z,1.3nm,0.5s,baz=281,slow=2.9,SNR=6.3							
ZALV					PKKPbc	**PKKPab**	**14 16 20.4**	**-4.3**
	comp=Z,1.3nm,0.8s,baz=248,slow=1.6,SNR=4.0							
CN2	**Changchun**	**113.18**	**332**	Pdif		**Pdif**	**14 01 31.8**	**+0.8**
CN2					PP	**PP**	**14 06 18.3**	**+4.2**
CN2					LR	LR		
	comp=Z,300nm,19.0s							
CN2					LR	LR		
	comp=Z,200nm,19.0s							
CN2					LR	LR		
	comp=Z,300nm,20.0s							
ZAK	**Zakamensk**	**114.49**	**350**	*e*PKiKP		**PKiKP**	**14 05 26.3**	**-0.6**
ZAK					pmax	pmax		
	comp=Z,6.0nm,1.4s							
ULN	**Ulaanbaatar**	**116.11**	**346**	*c* *i* PKiKP		**PKPdf**	**14 05 32.1**	**+1.9**
ULN					pmax	pmax		
	comp=Z,5.0nm,1.3s							
SONM	**Songino Array**	**116.29**	**347**	PKP		**PKPdf**	**14 05 31.0**	**+0.4**
	comp=Z,3.5nm,0.7s,baz=334,slow=1.3,SNR=16							
SONM					pPKP	pPKPdf	14 05 49.0	-0.4
	comp=Z,4.3nm,0.9s,baz=306,slow=1.7,SNR=7.6							
SONM					PP	**PP**	**14 06 34.9**	**-0.9**
	comp=Z,1.8nm,0.9s,baz=357,slow=3.0,SNR=5.3							
SONM					PKKPbc	**PKKPbc**	**14 15 59.3**	**-2.0**
	comp=Z,3.3nm,0.8s,baz=202,slow=4.0,SNR=15							
KSRS	**Korea Array**	**116.67**	**325**	PKP		**PKiKP**	**14 05 31.6**	**+0.3**
	comp=Z,5.1nm,0.7s,baz=5.1,slow=1.3,SNR=16							
KSRS					pPKP	pPKPdf	14 05 49.8	-0.5
	comp=Z,6.2nm,0.8s,baz=23,slow=1.1,SNR=8.7							
XLT	**XiLinHaoTe**	**116.99**	**338**	*e*P		PKPdf	14 05 23.8	-8.1
XLT					AMB	AMB		
	comp=Z,110nm,4.4s							
XLT					LR	LR		
	comp=N,24nm,19.0s							
XLT					LR	LR		
	comp=E,180nm,17.8s							
XLT					LR	LR		
	comp=Z,350nm,20.0s							
MKAR	**Makanchi Array**	**119.16**	**5**	PKP		**PKPdf**	**14 05 35.8**	**-0.1**
	comp=Z,5.3nm,0.8s,baz=345,slow=2.3,SNR=26							
MKAR					pPKP	**pPKPdf**	**14 05 53.9**	**-1.0**
	comp=Z,9.0nm,0.8s,baz=358,slow=2.6,SNR=15							
MKAR					PKKPbc	**PKKPbc**	**14 15 48.8**	**-2.1**
	comp=Z,1.0nm,0.9s,baz=142,slow=4.9,SNR=5.9							
BOSA	**Boshof**	**120.07**	**115**	PKP		**PKiKP**	**14 05 38.8**	**+0.5**
	comp=Z,18nm,0.8s,baz=295,slow=1.1,SNR=9.1							
BOSA					pPKP	**pPKPdf**	**14 05 55.7**	**-1.5**
	comp=Z,19nm,0.9s,baz=304,slow=2.8,SNR=5.7							
GEYT	**Alibeck**	**120.98**	**28**	PKP		**PKiKP**	**14 05 40.4**	**+0.6**
	comp=Z,15nm,0.7s,baz=233,slow=8.9,SNR=11							
HHC	**Hu-ho-hao-te**	**121.26**	**340**	*e*PKP		**PKPdf**	**14 05 37.6**	**-2.7**
MBAR	**Mbarara**	**121.47**	**82**	PKP		**PKiKP**	**14 05 43.0**	**+1.5**
	comp=Z,2.6nm,0.2s,baz=3.1,slow=21,SNR=1.0							
AAK	**Ala-Archa**	**122.13**	**12**	*c* *i* PKiKP		**PKiKP**	**14 05 43.7**	**+1.6**
AAK					pmax	pmax		
	comp=Z,59nm,1.3s							
WMQ	**Urumqi**	**122.37**	**1**	*e*PKP		**PKiKP**	**14 05 43.8**	**+1.4**
WMQ					LR	LR		
	comp=Z,660nm,17.9s							
WMQ					LR	LR		
	comp=Z,500nm,22.7s							
HNS	**HongShan**	**123.11**	**335**	⇑PKP		**PKiKP**	**14 05 44.8**	**+0.9**
RAYN	**Ar Rayn**	**123.84**	**49**	P		**PKiKP**	**14 05 45.9**	**+0.1**
MAW	**Mawson**	**123.99**	**169**	PKP		**PKPdf**	**14 05 44.4**	**0.0**
	comp=Z,6.2nm,0.9s,baz=243,slow=4.7,SNR=4.8							
LODK	**Lodwar**	**124.65**	**76**	P		**PKiKP**	**14 05 47.8**	**+0.1**
KSH	**Kashi**	**125.44**	**12**	PKP		**PKiKP**	**14 05 49.9**	**+1.2**
KSH					LR	LR		
	comp=Z,400nm,23.4s							
KSH					LR	LR		
	comp=Z,370nm,23.4s							
KSH					LR	LR		
	comp=Z,700nm,21.3s							
NJ2	**Nanjing**	**125.61**	**328**	*e*P		PKPdf	14 05 40.0	-8.7
NJ2					pmax	pmax		
	comp=Z,6.0nm,0.5s							
NJ2	**Nanjing**	**125.61**	**328**	*e*PKP		**PKPdf**	**14 05 48.8**	**+0.1**
GTA	**Gaotai**	**125.72**	**349**	*e*PKP		**PKiKP**	**14 05 49.6**	**+0.3**
GTA					LR	LR		
	comp=Z,290nm,22.5s							
GTA					LR	LR		
	comp=Z,170nm,23.6s							
GTA					LR	LR		
	comp=Z,430nm,23.3s							
LYN	**LuoYang**	**126.48**	**335**	*e*PKP		**PKiKP**	**14 05 51.8**	**+1.1**
LYN					AMB	AMB		
	comp=Z,170nm,4.7s							
LYN					LR	LR		
	comp=Z,390nm,21.8s							
LYN					LR	LR		
	comp=Z,230nm,25.6s							
LYN					LR	LR		
	comp=Z,400nm,24.1s							
LZH	**Lanzhou**	**128.00**	**344**	⇑PKP		**PKiKP**	**14 05 55.0**	**+1.0**
LZH					LR	LR		
	comp=Z,450nm,21.7s							
LZH					LR	LR		
	comp=Z,290nm,21.1s							
LZH					LR	LR		
	comp=Z,480nm,20.6s							
XAN	**Xi'an**	**128.29**	**338**	PKP		**PKPdf**	**14 05 53.8**	**0.0**
XAN					sPKP		14 06 17.8	
XAN					AMB	AMB		
	comp=Z,180nm,14.6s							
XAN					LR	LR		
	comp=Z,260nm,22.5s							
XAN					LR	LR		
	comp=Z,310nm,21.6s							
XAN					LR	LR		
	comp=Z,520nm,22.5s							
STKA	**Stephens Creek**	**128.41**	**240**	PKP		**PKPdf**	**14 05 54.2**	**+0.2**
	comp=Z,21nm,0.8s,baz=53,slow=2.2,SNR=39							
GHWR	**Ruwais**	**128.69**	**43**	P		**PKiKP**	**14 05 55.9**	**+0.4**
WHN	**Wuhan**	**129.06**	**331**	⇑PKP		**PKiKP**	**14 05 55.8**	**-0.2**
WHN					sPKP		14 06 14.8	
SHME	**Shamm**	**129.26**	**38**	P		**PKiKP**	**14 05 56.5**	**-0.1**
BANOM	**Banah**	**129.45**	**38**	P		**PKPdf**	**14 05 56.1**	**-0.1**
MZWR	**Madinat Zayed**	**129.49**	**42**	P		**PKPdf**	**14 05 56.5**	**+0.2**
GOMU	**GeErMu**	**129.62**	**353**	PKP		**PKiKP**	**14 05 58.3**	**+0.8**
GOMU				SKS		**SKSdf**	**14 13 02.3**	**-1.0**
GOMU					AMB	AMB		
	comp=Z,100nm,4.2s							
GOMU					LR	LR		
	comp=Z,130nm,18.6s							
GOMU					LR	LR		
	comp=Z,170nm,18.2s							
GOMU					LR	LR		
	comp=Z,85nm,18.4s							
NAZ	**Nazwa, Dubai**	**129.75**	**40**	P		**PKiKP**	**14 05 57.5**	**0.0**
MZR	**Muzera**	**129.75**	**43**	P		**PKiKP**	**14 05 57.5**	**-0.1**
MASF	**Masafi**	**129.77**	**39**	P		**PKiKP**	**14 05 57.4**	**-0.3**
ASUD	**Al Ashush, Dub**	**129.80**	**40**	P		**PKiKP**	**14 05 57.5**	**-0.2**
FAQ	**Al Faqa, Dubai**	**129.88**	**40**	P		**PKPdf**	**14 05 57.0**	**0.0**
UOSS	**Minazif**	**130.11**	**39**	P		**PKPdf**	**14 05 57.5**	**0.0**
HATD	**Hatta, Dubai**	**130.15**	**39**	P		**PKPdf**	**14 05 57.6**	**0.0**
ASHO	**Ashiyiah**	**130.21**	**40**	P		**PKPdf**	**14 05 57.1**	**-0.6**
ALNE	**Al Ain**	**130.48**	**40**	P		**PKiKP**	**14 05 59.3**	**+0.2**
SOHO	**SOHO**	**130.91**	**40**	P		**PKiKP**	**14 06 00.0**	**+0.1**
UMZA	**Um Al Zommool**	**131.06**	**42**	P		**PKPdf**	**14 05 59.8**	**+0.5**
HOQ	**Hoqain**	**131.79**	**39**	P		**PKPdf**	**14 06 00.7**	**0.0**
BIDO	**Bidbid**	**132.34**	**39**	P		**PKPdf**	**14 06 01.3**	**-0.4**
SMDO	**Samad**	**132.63**	**39**	P		**PKiKP**	**14 06 03.8**	**+0.3**
WSAR	**Wadi Sarin**	**132.85**	**38**	P		**PKPdf**	**14 06 03.1**	**+0.4**
CD2	**Chengdu**	**132.88**	**342**	PKP		**PKPdf**	**14 06 02.1**	**-0.5**
CD2				PP		**PP**	**14 08 26.8**	**-0.1**
CD2				AMB		AMB		
	comp=Z,300nm,5.8s							
CD2				LR		LR		
	comp=Z,200nm,19.6s							
CD2				LR		LR		
	comp=Z,450nm,21.4s							
DOK	**Doka**	**133.16**	**47**	P		**PKPdf**	**14 06 03.0**	**-0.3**
JMDO	**Jabal Madar**	**133.18**	**40**	P		**PKPdf**	**14 06 02.4**	**-1.0**
WHFO	**Wadi Hawf**	**133.36**	**48**	P		**PKPdf**	**14 06 03.8**	**0.0**
ABTO	**Aybut**	**133.38**	**49**	P		**PKPdf**	**14 06 04.3**	**+0.4**
MHTO	**MHTO**	**134.11**	**41**	P		**PKPdf**	**14 06 04.8**	**-0.2**
JLN	**Jalan Bani Buh**	**134.14**	**39**	P		**PKPdf**	**14 06 04.9**	**-0.3**
WRAB	**Tennant Creek**	**135.75**	**256**	*c* *i* PKiKP		**PKiKP**	**14 06 09.2**	**-0.6**
WRAB					pmax	pmax		
	comp=Z,22nm,1.0s							
WRA	**Warramunga Arr**	**135.76**	**256**	PKhKP		PKPpre	14 05 55.0	
	comp=Z,2.9nm,1.0s,baz=92,slow=3.0,SNR=8.2							
WRA					PKP	**PKPdf**	**14 06 08.2**	**0.0**
	comp=Z,8.2nm,0.9s,baz=88,slow=2.7,SNR=20							
WRA					PP	**PP**	**14 08 43.7**	**-3.5**
	comp=Z,1.4nm,1.2s,baz=86,slow=5.1,SNR=5.3							
WRA					SKPbc	**SKPab**	**14 09 37.5**	**-1.6**
	comp=Z,1.1nm,0.9s,baz=110,slow=3.9,SNR=2.0							
GYA	**Guiyang**	**135.94**	**336**	⇑PKP		**PKPdf**	**14 06 09.1**	**+0.5**
GYA					sPKP		14 06 36.5	
GYA					PP	**PP**	**14 08 47.4**	**+0.8**
GYA					SKKS		14 15 37.6	
GYA					SS	**SS**	**14 26 42.8**	**+2.5**
GYA					AMB	AMB		
	comp=Z,97nm,5.4s							
GYA					LR	LR		
	comp=Z,200nm,20.2s							
GYA					LR	LR		
	comp=Z,210nm,19.8s							
GYA					LR	LR		
	comp=Z,270nm,23.1s							
ASAR	**Alice Springs**	**136.03**	**250**	PKhKP		PKPpre	14 05 52.7	
	comp=Z,0.2nm,0.3s,baz=321,slow=39,SNR=3.1							
ASAR					PKP	**PKPdf**	**14 06 09.1**	**+0.4**
	comp=Z,5.9nm,0.8s,baz=106,slow=2.1,SNR=21							
ASAR					SKPbc	**SKPab**	**14 09 39.2**	**-1.1**
	comp=Z,1.7nm,0.9s,baz=76,slow=3.4,SNR=3.4							
ASAR					PKKP	**PKKPdf**	**14 15 49.0**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=283,slow=1.7,SNR=5.2							
DANN	**Dangsing**	**137.58**	**6**	*e*P		**PKiKP**	**14 06 13.1**	**-0.6**
	comp=Z,89nm,0.6s							
PZH	**PanZhiHua**	**137.61**	**342**	PKP		**PKiKP**	**14 06 13.4**	**-0.2**
PZH					sPKP		14 06 32.1	
PZH					PKS	**PKSdf**	**14 09 45.4**	**-2.7**
PZH					AMB	AMB		
	comp=Z,70nm,6.2s							
PZH					LR	LR		
	comp=Z,610nm,24.9s							
PZH					LR	LR		
	comp=Z,570nm,24.1s							
PZH					LR	LR		
	comp=Z,2μm,24.7s							
GKN	**Gorkha**	**138.00**	**5**	*e*P		**PKPdf**	**14 06 13.1**	**+0.7**
GUN	**Gumba**	**138.18**	**3**	*e*P		**PKPdf**	**14 06 13.5**	**+0.5**
	comp=Z,50nm,0.8s							
PKIN	**Phulchoki**	**138.48**	**4**	*e*P		**PKPdf**	**14 06 13.8**	**+0.4**
	comp=Z,30nm,0.6s							
PKI	**Pulchoki**	**138.49**	**4**	*e*P		**PKPdf**	**14 06 13.8**	**+0.3**
	comp=Z,34nm,0.6s							
KMI	**Kunming**	**138.58**	**340**	⇓PKP		**PKiKP**	**14 06 16.0**	**+0.2**
KMI					LR	LR		
	comp=Z,270nm,20.1s							
KMI					LR	LR		
	comp=Z,260nm,20.9s							
KMI					LR	LR		
	comp=Z,490nm,27.5s							
RAMN	**Ramite**	**139.17**	**2**	*e*P		**PKPdf**	**14 06 14.9**	**+0.2**
	comp=Z,60nm,0.9s							
FOMA	**Nahampoana Res**	**139.67**	**112**	P		**PKiKP**	**14 06 18.6**	**+1.0**
VOI	**Vohitsoka**	**139.81**	**107**	PKP		**PKiKP**	**14 06 22.1**	**+4.0**
OPO	**Ambohidratompo**	**140.30**	**102**	PKP		**PKPdf**	**14 06 16.4**	**-0.4**
	comp=Z,5.7nm,0.8s,baz=215,slow=12,SNR=2.5							
QIZ	**Qiongzhong**	**140.88**	**327**	PKP		**PKPdf**	**14 06 17.5**	**-0.1**
QIZ				PP		**PP**	**14 09 18.5**	**+1.2**
QIZ				SS		SS	14 27 41.9	+3.0
QIZ				LR		LR		
	comp=Z,220nm,15.9s							
QIZ				LR		LR		
	comp=Z,210nm,20.7s							
QIZ				LR		LR		
	comp=Z,280nm,23.1s							
TOLI2	**Tolitoli**	**144.52**	**293**			**PKPab**	**14 06 22.0**	**-0.7**
CHTO	**Chiang Mai**	**145.69**	**342**			**PKPdf**	**14 06 25.8**	**-0.3**
CHTO	**Chiang Mai**	**145.69**	**342**	PKP2		**PKPdf**	**14 06 25.8**	**-0.3**
CM31	**Chiang Mai Arr**	**146.02**	**342**			**PKPab**	**14 06 28.0**	**0.0**
CMAR	**Chiang Mai Arr**	**146.02**

BOSA			Rg	Rg	14 17 09.8
	160nm,0.9s,baz=261,slow=2.3,SNR=36				
I35NA	**TSUMEB INFRASO**	**10.47**	**329**	*i*	15 20 40.0
	baz=151,slow=320,SNR=12				

*IDC **15** 14:26:35.1±1.6, 11°.14S×164°.36E, h0km, mb4.0/6, mbtmp4.3/9, ML4.6/3, MS3.7/5, Error ellipse: s-maj=37.2km s-min=24.9km az=129.0*
*NEIC **15** 14:26:42.2±1.8, 10°.9S±0°.1×164°.3E±0°.1, h44km±9km, mb4.3/14, Error ellipse: s-maj=18.6km s-min=13.1km az=47.0*
ISC 15 14:26:40.6±0.9, 11°.0S±0°.1×164°.3E±0°.1, h29km, n31, σ1s58/24, mb4.3/12, MS3.5/3, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.50**	**290**	Pn	**Pn**	**14 27 46.4**	**-0.6**
	57nm,0.3s,baz=140,slow=7.7,SNR=13						
HNR				Sn	**Sn**	**14 28 40.9**	**+2.5**
	23nm,0.3s,baz=142,slow=22,SNR=1.9						
HNR				LR	LR	14 29 37.3	
	comp=Z,1μm,18.4s,baz=124,slow=39						
	194nm,0.4s						
HNR	**Honiara**	**4.50**	**290**		**Pn**	**14 27 45.6**	**-1.3**
KOUNC	**Koumac, New Ca**	**9.52**	**180**		**Pn**	**14 28 57.0**	**+1.3**
PINNC	**Pines Island,**	**11.97**	**166**	Pn	**Pn**	**14 29 30.3**	**+1.0**
KRVT	**Keravat (AS076**	**13.80**	**298**	Pn	**Pn**	**14 29 55.1**	**+0.6**
	1.3nm,0.3s,baz=9.4,slow=20,SNR=2.4						
KRVT				LR	LR	14 34 58.9	
	comp=Z,273nm,21.3s,baz=258,slow=36						
	13nm,0.6s						
EIDS	**Eidsvold**	**18.98**	**219**	P	**P**	**14 31 01.5**	**+1.6**
EIDS				IAmb	IAmb	14 31 05.1	
	comp=Z,17nm,1.1s						
CTA	**Charters Tower**	**19.54**	**240**	P	**P**	**14 31 06.6**	**+0.5**
	comp=Z,1.0nm,0.3s,baz=73,slow=11,SNR=22						
	comp=Z,27nm,0.8s						
CTAO	**Charters Tower**	**19.54**	**240**	P	**P**	**14 31 06.5**	**+0.4**
COEN	**Coen**	**20.79**	**260**	P	**P**	**14 31 18.8**	**-0.9**
COEN				IAmb	IAmb	14 31 20.1	
	comp=Z,13nm,0.8s						
ARMA	**Armidale**	**22.62**	**209**	P	**P**	**14 31 40.3**	**+0.9**
ARMA				IAmb	IAmb	14 32 06.8	
	comp=Z,20nm,1.4s						
AFI	**Afiamalu**	**23.59**	**100**	LR	LR	14 39 23.8	
	comp=Z,207nm,18.5s,baz=230,slow=33						
STKA	**Stephens Creek**	**29.50**	**222**	P	**P**	**14 32 41.5**	**-0.9**
	comp=Z,3.1nm,0.8s,baz=24,slow=14,SNR=7.4						
	comp=Z,3.1nm,0.8s						
WB0	**Warramunga Arr**	**30.04**	**249**	P	**P**	**14 32 44.9**	**-2.5**
WB0				IAmb	IAmb	14 32 46.1	
	comp=Z,6.7nm,1.1s						
WRAB	**Tennant Creek**	**30.12**	**249**	P	**P**	**14 32 45.8**	**-2.2**
WRAB				IAmb	IAmb	14 32 47.2	
	comp=Z,9.3nm,1.1s						
WRA	**Warramunga Arr**	**30.13**	**249**	P	**P**	**14 32 46.0**	**-2.1**
	comp=Z,6.5nm,1.1s,baz=79,slow=9.2,SNR=12						
	comp=Z,6.5nm,1.1s						
WRA	**Warramunga Arr**	**30.13**	**249**	IAmb	IAmb	14 32 47.3	
	comp=Z,0.3nm,1.2s						
H11N1	**WAKE ISLAND Hy**	**30.61**	**5**	T	T	15 04 40.9	
	baz=184,slow=76,SNR=4.1						
H11N3	**WAKE ISLAND Hy**	**30.62**	**5**	T	T	15 04 36.7	
	baz=184,slow=76,SNR=7.5						
H11N2	**WAKE ISLAND Hy**	**30.63**	**5**	T	T	15 04 37.0	
	baz=184,slow=76,SNR=5.5						
GUMO	**Guam**	**31.07**	**321**	LR	LR	14 45 13.0	
	comp=Z,116nm,21.9s,baz=116,slow=36						
ASAR	**Alice Springs**	**31.52**	**242**	P	**P**	**14 32 57.7**	**-2.7**
	comp=Z,1.0nm,0.7s,baz=62,slow=10.0,SNR=4.0						
	comp=Z,1.0nm,0.7s						
BBOO	**Buckleboo**	**33.81**	**226**	P	**P**	**14 33 19.9**	**-0.5**
KNRA	**Kununurra**	**34.82**	**258**	P	**P**	**14 33 26.9**	**-2.3**
RAR	**Rarotonga**	**35.95**	**111**	LR	LR	14 46 43.8	
	comp=Z,75nm,19.1s,baz=124,slow=34						
SONM	**Songino Array**	**77.75**	**324**	P	**P**	**14 38 36.4**	**+1.4**
	comp=Z,0.6nm,0.8s,baz=137,slow=4.8,SNR=4.2						
	comp=Z,0.6nm,0.8s						
SONM	**Songino Array**	**77.75**	**324**	IAmb	IAmb	14 38 37.9	
	comp=Z,2.5nm,1.3s						
QSPA	**South Pole Qui**	**79.02**	**180**	P	**P**	**14 38 41.8**	**-0.1**
QSPA				IAmb	IAmb	14 38 55.8	
	comp=Z,5.2nm,1.4s						
ILAR	**Eielson Array**	**83.92**	**19**	P	**P**	**14 39 05.8**	**-1.6**
	comp=Z,0.7nm,0.9s,baz=213,slow=6.5,SNR=5.5						
	comp=Z,0.7nm,0.9s						
J25K	**Salcha River,**	**84.31**	**19**	P	**P**	**14 39 08.9**	**-0.6**
J25K				IAmb	IAmb	14 39 22.8	
	comp=Z,2.2nm,0.8s						
SCRK	**Sand Creek**	**84.36**	**20**	P	**P**	**14 39 09.5**	**-0.4**
SCRK				IAmb	IAmb	14 39 29.5	
	comp=Z,1.6nm,0.9s						
MKAR	**Makanchi Array**	**92.47**	**317**	P	**P**	**14 39 50.4**	**+1.5**
	comp=Z,0.5nm,0.8s,baz=91,slow=7.2,SNR=4.0						
	comp=Z,0.5nm,0.8s						

*IDC **15** 14:27:58.8±2.2, 2°.81S×134°.14E, h0km, mb3.8/2, mbtmp3.8/4, ML3.3/2, Error ellipse: s-maj=60.3km s-min=20.2km az=55.0*
*DJA **15** 14:28:02.9±1.4, 3°.5S±5°.3×13°.4E±°, h27km±12km, M3.7/7, mb3.7/1, MLv3.6/7*
ISC 15 14:28:03.1±1.0, 2°.80S±0°.10×134°.13E±0°.05, h35km, n8, σ1s11/11, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**1.88**	**266**	P	**Pn**	**14 28 33.0**	**+0.3**
FAKI				S	**Sn**	**14 28 56.0**	**+0.7**
SRPI	**Serui, Papua**	**2.30**	**66**	P	**Pn**	**14 28 37.9**	**-0.6**
SRPI				S	**Sn**	**14 29 05.5**	**-0.2**
BAKI	**Biak**	**2.54**	**51**	P	**Pn**	**14 28 42.4**	**+0.6**
SIJI	**Sorong**	**3.44**	**304**	Pn	**Pn**	**14 28 53.8**	**-0.5**
	4.6nm,0.3s,baz=234,slow=22,SNR=53						
SIJI				Sn	**Sn**	**14 29 33.3**	**-0.6**
	5.5nm,0.3s,baz=166,slow=21,SNR=6.2						
SIJI				Lg	Lg	14 29 48.5	
	5.5nm,0.3s,baz=106,slow=23,SNR=1.9						
	29nm,0.2s						
SWI	**Sorong**	**3.45**	**304**	P	**Pn**	**14 28 53.2**	**-1.2**
WRA	**Warramunga Arr**	**17.04**	**179**	P	**Pn**	**14 31 56.7**	**-2.0**
	0.1nm,0.3s,baz=357,slow=13,SNR=6.4						
	1.0nm,0.8s						
ASAR	**Alice Springs**	**20.75**	**181**	P	**P**	**14 32 42.0**	**+1.0**
	6.3nm,0.8s,baz=4.9,slow=12,SNR=30						
	6.3nm,0.8s						
MKAR	**Makanchi Array**	**67.12**	**324**	P	**P**	**14 38 54.4**	**+1.1**
	0.2nm,0.3s,baz=108,slow=8.4,SNR=4.7						
	0.2nm,0.3s						

*TUL **15** 14:30:57.5±0.4, 36°.72N±0°.01×98°.73W±0°.01, h7km±2km, ML3.0, mb_Lg2.8/57(NEIC), Error ellipse: s-maj=2.0km s-min=1.4km az=154.0*
NEIC 15 14:30:58.1±0.3, 36°.71N±0°.02×98°.73W±0°.03, h5km±4km, Error ellipse: s-maj=4.1km s-min=1.8km az=134.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	**Winter Ranch,**	**0.40**	**214**	Pg	Pg	14 31 05.7	-0.2
R32A	**Long Quarter,**	**1.71**	**0**		Pn	14 31 28.2	-0.4
R32A				IAmb_Lg		14 31 55.1	
	comp=Z,64nm,0.7s						
T35A	**Sooner Cattle**	**1.79**	**83**		Pn	14 31 29.3	-0.4
WMOK	**Wichita Mounta**	**1.97**	**181**		Pn	14 31 31.9	-0.3
X34A	**Smith Ranch, M**	**2.23**	**161**	IAmb_Lg		14 32 09.1	
	comp=Z,51nm,0.7s						
TUL1	**Leonard**	**2.50**	**108**	IAmb_Lg		14 32 17.1	
	comp=Z,31nm,0.8s						
KSU1	**Kansas State U**	**2.91**	**34**	IAmb_Lg		14 32 32.9	
	comp=Z,36nm,0.9s						
AMTX	**Amarillo**	**3.02**	**234**	IAmb_Lg		14 32 37.4	
	comp=Z,28nm,0.7s						
KSCO	**Kaye Shedlock'**	**3.85**	**308**	IAmb_Lg		14 33 08.9	
	comp=Z,21nm,0.7s						
W39A	**Magazine**	**4.28**	**109**	IAmb_Lg		14 33 17.0	
	comp=Z,19nm,0.8s						
S39A	**Bolivar**	**4.42**	**76**	IAmb_Lg		14 33 16.8	
	comp=Z,21nm,0.8s						
T25A	**Trinidad**	**4.58**	**277**	IAmb_Lg		14 33 29.3	
	comp=Z,32nm,1.1s						
Z38A	**Mt. Pleasant**	**4.61**	**137**	IAmb_Lg		14 33 33.6	
	comp=Z,26nm,0.8s						
MIAR	**Mount Ida**	**4.72**	**116**	IAmb_Lg		14 33 34.3	
	comp=Z,14nm,0.8s						
U40A	**Yellville**	**4.74**	**93**	IAmb_Lg		14 33 34.9	
	comp=Z,20nm,0.7s						
P38A	**Dawn**	**5.02**	**53**	IAmb_Lg		14 33 38.6	
	comp=Z,13nm,0.7s						
X40A	**Basin Creek Fa**	**5.29**	**113**	IAmb_Lg		14 33 53.0	
	comp=Z,14nm,0.8s						
WHAR	**Wooly Hollow**	**5.41**	**103**	IAmb_Lg		14 34 02.1	
	comp=Z,12nm,0.9s						
W41B	**Gary Mavity, V**	**5.47**	**104**	IAmb_Lg		14 34 07.4	
	comp=Z,12nm,0.8s						
WLAR	**White Oak Lake**	**5.50**	**122**	IAmb_Lg		14 34 01.0	
	comp=Z,22nm,0.7s						
UALR	**University of**	**5.54**	**109**	IAmb_Lg		14 34 07.6	
	comp=Z,14nm,1.0s						
Q24A	**Divide**	**5.56**	**296**	IAmb_Lg		14 34 03.5	
	comp=Z,15nm,1.0s						
K31A	**O'Neill**	**5.90**	**360**	IAmb_Lg		14 34 12.3	
	comp=Z,20nm,0.7s						
CCM	**Cathedral Cave**	**6.11**	**75**	IAmb_Lg		14 34 11.4	
	comp=Z,17nm,0.8s						
JCT	**Junction City**	**6.28**	**189**	IAmb_Lg		14 34 28.9	
	comp=Z,12nm,0.8s						
PBMO	**Poplar Bluff**	**6.66**	**87**	IAmb_Lg		14 34 30.4	
	comp=Z,12nm,0.8s						
FVM	**French Village**	**6.73**	**77**	IAmb_Lg		14 34 32.6	
	comp=Z,21nm,1.1s						
PHWY	**Pilot Hill**	**6.96**	**313**	IAmb_Lg		14 34 54.9	
	comp=Z,11nm,1.0s						
K38A	**Parkersburg**	**7.50**	**36**	IAmb_Lg		14 35 11.0	
	comp=Z,17nm,0.8s						
S44A	**Carbondale**	**7.62**	**80**	IAmb_Lg		14 35 10.3	
	comp=Z,12nm,0.7s						
SUSD	**Miller**	**7.72**	**359**	IAmb_Lg		14 35 01.4	
	comp=Z,11nm,0.8s						
JFWS	**Jewell Farm**	**8.99**	**44**	IAmb_Lg		14 35 46.1	
	comp=Z,9.0nm,0.8s						

*TUL **15** 14:36:28.4±0.4, 36°.72N±0°.01×98°.730W±0°.006, h6km±2km, ML3.3, mb_Lg3.0/81(NEIC), Error ellipse: s-maj=1.9km s-min=0.7km az=181.0*
*NEIC **15** 14:36:29.1±0.4, 36°.71N±0°.01×98°.73W±0°.02, h6km±2km, Error ellipse: s-maj=2.5km s-min=1.7km az=125.0*
NEIC 15 14:35:37.5±0.6, 36.71N±0°.02×98.74W±0.03, h3km±4km, mb_Lg2.5/31, Error ellipse: s-maj=4.6km s-min=1.5km az=135.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	**Winter Ranch,**	**0.39**	**213**	Pg	Pg	14 35 45.0	0.0
R32A	**Long Quarter,**	**1.71**	**1**	Pn	Pn	14 36 07.8	-0.4
R32A	**Long Quarter,**	**1.71**	**1**	IAmb_Lg		14 37 22.4	
	comp=Z,74nm,0.8s						
T35A	**Sooner Cattle**	**1.80**	**83**	Pn	Pn	14 36 09.0	-0.4
WMOK	**Wichita Mounta**	**1.97**	**181**	Pn	Pn	14 36 11.4	-0.4
TUL1	**Leonard**	**2.51**	**108**	IAmb_Lg		14 37 48.0	
	comp=Z,58nm,0.9s						
KSU1	**Kansas State U**	**2.92**	**35**	IAmb_Lg		14 38 07.6	
	comp=Z,70nm,1.1s						
AMTX	**Amarillo**	**3.01**	**234**	IAmb_Lg		14 38 08.4	
	comp=Z,60nm,0.7s						
X37A	**Clayton**	**3.46**	**127**	IAmb_Lg		14 37 36.3	
	comp=Z,17nm,1.0s						
U38A	**Gravette**	**3.51**	**93**	IAmb_Lg		14 38 25.6	
	comp=Z,41nm,0.8s						
KSCO	**Kaye Shedlock'**	**3.84**	**308**	IAmb_Lg		14 38 39.9	
	comp=Z,49nm,0.7s						
ABTX	**Abilene, Hawle**	**4.14**	**191**	IAmb_Lg		14 37 59.6	
	comp=Z,12nm,0.7s						
N33A	**J Bar K, Exete**	**4.15**	**14**	IAmb_Lg		14 38 49.5	
	comp=Z,25nm,0.8s						
MSTX	**Muleshoe**	**4.28**	**232**	IAmb_Lg		14 37 56.0	
	comp=Z,8.2nm,0.7s						
MSTX	**Muleshoe**	**4.28**	**232**	IAmb_Lg		14 38 49.3	
	comp=Z,31nm,0.7s						
W39A	**Magazine**	**4.29**	**109**	IAmb_Lg		14 37 53.5	
	comp=Z,14nm,0.8s						
W39A	**Magazine**	**4.29**	**109**	IAmb_Lg		14 38 47.6	
	comp=Z,34nm,0.8s						
S39A	**Bolivar**	**4.43**	**76**	IAmb_Lg		14 38 00.9	
	comp=Z,7.5nm,0.7s						
T25A	**Trinidad**	**4.57**	**277**	IAmb_Lg		14 37 59.9	
	comp=Z,14nm,0.8s						
Z38A	**Mt. Pleasant**	**4.62**	**137**	IAmb_Lg		14 39 00.9	
	comp=Z,40nm,0.7s						
MIAR	**Mount Ida**	**4.72**	**116**	IAmb_Lg		14 39 09.8	
	comp=Z,21nm,0.7s						
U40A	**Yellville**	**4.75**	**92**	IAmb_Lg		14 38 58.2	
	comp=Z,45nm,0.7s						
OGNE	**Ogallala**	**4.95**	**330**	IAmb_Lg		14 38 21.2	
	comp=Z,14nm,0.8s						
P38A	**Dawn**	**5.03**	**53**	IAmb_Lg		14 38 29.3	
	comp=Z,8.4nm,1.1s						
P38A	**Dawn**	**5.03**	**53**	IAmb_Lg		14 39 20.2	
	comp=Z,25nm,0.7s						
MGMO	**Mountain Grove**	**5.20**	**83**	IAmb_Lg		14 39 13.9	
	comp=Z,23nm,0.8s						
237A	**Washetta, Mont**	**5.28**	**152**	IAmb_Lg		14 39 25.1	
	comp=Z,20nm,0.8s						
X40A	**Basin Creek Fa**	**5.29**	**113**	IAmb_Lg		14 38 38.6	
	comp=Z,5.3nm,0.8s						
X40A	**Basin Creek Fa**	**5.29**	**113**	IAmb_Lg		14 39 27.3	
	comp=Z,30nm,0.8s						
WHAR	**Wooly Hollow**	**5.42**	**103**	IAmb_Lg		14 38 32.4	
	comp=Z,8.3nm,0.9s						
W41B	**Gary Mavity, V**	**5.48**	**104**	IAmb_Lg		14 39 30.0	
	comp=Z,23nm,0.8s						
WLAR	**White Oak Lake**	**5.50**	**122**	IAmb_Lg		14 39 28.0	
	comp=Z,27nm,0.8s						
UALR	**University of**	**5.55**	**108**	IAmb_Lg		14 39 38.1	
	comp=Z,19nm,0.8s						
Q24A	**Divide**	**5.55**	**296**	IAmb_Lg		14 38 46.2	
	comp=Z,7.2nm,0.7s						
Q24A	**Divide**	**5.55**	**296**	IAmb_Lg		14 39 34.4	
	comp=Z,30nm,1.1s						
K31A	**O'Neill**	**5.91**	**360**	IAmb_Lg		14 39 44.2	
	comp=Z,35nm,0.8s						
P40A	**Paris**	**5.98**	**60**	IAmb_Lg		14 38 47.1	
	comp=Z,8.6nm,0.8s						
435B	**Jarrell**	**5.99**	**170**	IAmb_Lg		14 39 50.5	
	comp=Z,26nm,0.7s						
CCM	**Cathedral Cave**	**6.12**	**75**	IAmb_Lg		14 39 42.4	
	comp=Z,30nm,0.8s						
ISCO	**Idaho Springs**	**6.23**	**302**	IAmb_Lg		14 39 10.8	
	comp=Z,3.9nm,0.8s						
ISCO	**Idaho Springs**	**6.23**	**302**	IAmb_Lg		14 39 50.9	
	comp=Z,15nm,0.7s						
JCT	**Junction City**	**6.28**	**188**	IAmb_Lg		14 39 11.1	
	comp=Z,7.7nm,1.0s						
JCT	**Junction City**	**6.28**	**188**	IAmb_Lg		14 39 53.2	
	comp=Z,26nm,0.8s						
PBMO	**Poplar Bluff**	**6.67**	**87**	IAmb_Lg		14 40 18.0	
	comp=Z,20nm,0.8s						
SCIA	**State Center**	**6.73**	**38**	IAmb_Lg		14 40 05.8	
	comp=Z,26nm,0.8s						
FVM	**French Village**	**6.74**	**77**	IAmb_Lg		14 40 04.1	
	comp=Z,26nm,0.9s						
PHWY	**Pilot Hill**	**6.96**	**313**	IAmb_Lg		14 39 24.9	
	comp=Z,4.9nm,1.1s						
PHWY	**Pilot Hill**	**6.96**	**313**	IAmb_Lg		14 40 13.2	
	comp=Z,15nm,0.8s						
143A	**Socs Landing,**	**7.24**	**121**	IAmb_Lg		14 40 30.4	
	comp=Z,14nm,0.9s						
MNTX	**Cornudas Mount**	**7.43**	**230**	IAmb_Lg		14 40 32.9	
	comp=Z,13nm,0.8s						
S44A	**Carbondale**	**7.63**	**80**	IAmb_Lg		14 40 28.4	
	comp=Z,23nm,0.8s						
RWWY	**Rawlins**	**8.24**	**310**	IAmb_Lg		14 41 05.1	
	comp=Z,13nm,0.9s						
I37A	**Lemond, Waseca**	**8.36**	**28**	IAmb_Lg		14 41 04.6	
	comp=Z,16nm,0.9s						
RSSD	**Black Hills**	**8.43**	**333**	IAmb_Lg		14 40 07.9	
	comp=Z,4.0nm,1.1s						
K22A	**Casper**	**8.44**	**317**	IAmb_Lg		14 40 26.4	
	comp=Z,5.9nm,0.8s						
K22A	**Casper**	**8.44**	**317**	IAmb_Lg		14 41 16.9	
	comp=Z,20nm,1.0s						
L42A	**Oliver, Polo**	**8.79**	**50**	IAmb_Lg		14 41 16.9	
	comp=Z,19nm,0.9s						
146A	**Union**	**8.95**	**114**	IAmb_Lg		14 41 36.2	
	comp=Z,18nm,0.8s						
JFWS	**Jewell Farm**	**9.00**	**44**	IAmb_Lg		14 41 17.8	
	comp=Z,16nm,0.8s						
E28A	**Huff**	**9.97**	**352**	IAmb_Lg		14 41 51.3	
	comp=Z,13nm,1.0s						

*TUL **15** 14:50:59.1±0.2, 36°.73N±0°.03×98°.73W±0°.03, h6km±6km, ML2.8, mb_Lg2.5/29(NEIC), Error ellipse: s-maj=4.7km s-min=1.9km az=139.0*
NEIC 15 14:50:59.8±0.2, 36.72N±0°.02×98.73W±0°.03, h1km±5km, Error ellipse: s-maj=3.9km s-min=1.5km az=122.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	**Winter Ranch,**	**0.41**	**213**	Pg	Pg	14 51 07.4	-0.1
X34A	**Smith Ranch, M**	**2.24**	**161**	IAmb_Lg		14 52 14.1	
	comp=Z,19nm,0.8s						
TUL1	**Leonard**	**2.50**	**108**	IAmb_Lg		14 52 18.7	
	comp=Z,17nm,0.9s						
AMTX	**Amarillo**	**3.02**	**233**	IAmb_Lg		14 52 35.6	
	comp=Z,17nm,0.7s						
U38A	**Gravette**	**3.51**	**93**	IAmb_Lg		14 52 53.2	
	comp=Z,12nm,0.7s						
MSTX	**Muleshoe**	**4.30**	**231**	IAmb_Lg		14 53 25.8	
	comp=Z,8.0nm,0.7s						
T25A	**Trinidad**	**4.57**	**277**	IAmb_Lg		14 53 31.0	
	comp=Z,12nm,0.9s						
U40A	**Yellville**	**4.74**	**93**	IAmb_Lg		14 53 28.8	
	comp=Z,15nm,0.9s						
X40A	**Basin Creek Fa**	**5.29**	**113**	IAmb_Lg		14 53 50.5	
	comp=Z,8.3nm,0.8s						
FCAR	**Ozark Folk Cen**	**5.40**	**97**	IAmb_Lg		14 53 49.9	
	comp=Z,6.9nm,1.1s						
W41B	**Gary Mavity, V**	**5.48**	**104**	IAmb_Lg		14 54 01.0	
	comp=Z,11nm,1.1s						
CCM	**Cathedral Cave**	**6.11**	**75**	IAmb_Lg		14 54 13.1	
	comp=Z,6.5nm,0.8s						
PBMO	**Poplar Bluff**	**6.66**	**87**	IAmb_Lg		14 54 32.0	
	comp=Z,5.9nm,0.8s						
PHWY	**Pilot Hill**	**6.95**	**313**	IAmb_Lg		14 54 43.9	
	comp=Z,4.3nm,0.7s						
N23A	**Red Feather La**	**7.01**	**309**	IAmb_Lg		14 54 48.2	
	comp=Z,8.6nm,0.8s						
K22A	**Casper**	**8.43**	**317**	IAmb_Lg		14 55 37.5	
	comp=Z,4.8nm,0.9s						

TAP 15 14:52:23.6, 23°.19N×121°.00E, h5km, ML3.5, 26C-18D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ELDTW	**Lidau**	**0.02**	**78**	↑*iP*	Pg	14 52 25.0	+0.1
	baz=86						
ELDTW				*i* S	Sg	14 52 26.2	+0.5
	baz=86						
STYH	**Taoyuan**	**0.20**	**266**	↓*iP*	Pg	14 52 28.2	+0.6
	baz=268						
STYH				*i* S	Sg	14 52 31.1	+0.7
	baz=268						
ECS	**Chishang**	**0.22**	**113**	↓*iP*	Pg	14 52 28.8	+0.8
	baz=114						
ECS				S	Sg	14 52 32.5	+1.5
	baz=114						
FULB	**Fuli**	**0.27**	**87**	↓*iP*	Pb	14 52 30.1	-0.9
	baz=87						
FULB				*i* S	Sb	14 52 34.6	-1.4
	baz=87						
LONT	**Longtian**	**0.30**	**156**	↓*iP*	Pg	14 52 30.0	+0.4
	baz=156						
LONT				*i* S	Sg	14 52 33.9	+0.3
	baz=156						
YUS	**Yu-Shan**	**0.31**	**352**	↑*iP*	Pg	14 52 30.1	+0.3
	baz=354						
YUS				*i* S	Sg	14 52 34.4	+0.4
	baz=354						
TWF1	**Yuli**	**0.32**	**59**	↑*iP*	Pg	14 52 30.4	+0.4
	baz=60						
TWF1				S	Sg	14 52 34.3	+0.1
	baz=60						
EYUL	**Yuli**	**0.34**	**61**	↑*iP*	Pg	14 52 30.6	+0.4
	baz=62						
EYUL				*i* S	Sg	14 52 34.7	0.0
	baz=62						
YULB	**Yu-li**	**0.35**	**53**	↑*iP*	Pg	14 52 30.5	+0.1
	baz=53						
YULB				*e*S	Sg	14 52 34.7	-0.3
	baz=53						
CHKT	**Chengkung**	**0.35**	**104**	↓*ePi*	Pb	14 52 31.7	-0.6
	baz=104						
CHKT				*e*S	Sb	14 52 37.9	-0.2
	baz=104						
EDH	**Donghe**	**0.35**	**127**	↓*iP*	Pg	14 52 31.4	+0.9
	baz=127						
EDH				*e*S	Sb	14 52 38.0	-0.3
	baz=127						
TPUB	**Ta-pu**	**0.36**	**289**	↓*iP*	Pb	14 52 31.8	-0.7
	baz=289						
TPUB				*e*S	Sb	14 52 37.2	-1.2
	baz=289						
WTP	**Ta-pu**	**0.36**	**280**	↓*iP*	Pb	14 52 31.7	-0.8
	baz=280						
WTP				*e*S	Sb	14 52 37.2	-1.2
	baz=280						
ALS	**Alishan**	**0.37**	**332**	↓*iP*	Pg	14 52 31.7	+0.8
	baz=332						
ALS				S	Sg	14 52 37.0	+1.2
	baz=332						
TWG	**Pinlang**	**0.37**	**169**	↓*iP*	Pg	14 52 31.2	+0.4
	baz=168						
TWG				S	Sg	14 52 36.0	+0.3
	baz=168						
SLGT	**Liugui**	**0.37**	**239**	↑*iP*	Pb	14 52 31.9	-0.9
	baz=239						
SLGT				*e*S	Sg	14 52 36.8	+1.0
	baz=239						
TWGBT	**Beinan**	**0.37**	**168**	↓*iP*	Pg	14 52 31.2	+0.3
	baz=168						
TWGBT				S	Sg	14 52 36.0	+0.2
	baz=168						
SGST	**Jiashian**	**0.39**	**255**	↑*eP*	Pg	14 52 31.4	+0.1
	baz=254						
SGST				*e*S	Sg	14 52 37.3	+0.8
	baz=254						
CHN4	**Tsaushan**	**0.41**	**294**	↓*iP*	Pg	14 52 32.9	-0.4
	baz=294						
CHN4				*e*S	Sb	14 52 39.1	-0.7
	baz=294						
CHN1	**Nanshi**	**0.43**	**270**	↓*ePi*	Pb	14 52 33.4	-0.3
	baz=270						
CHN1				*e*S	Sb	14 52 40.2	-0.3
	baz=270						
EHY	**Hungye**	**0.44**	**43**	↑*iP*	Pg	14 52 32.2	+0.1
	baz=44						
EHY				*e*S	Sg	14 52 37.8	-0.1
	baz

VWDT				eS	Sb	14 52 45.6	+0.8		
	baz=13								
ECL	**Taimali**	**0.59**	**184**⇑	*i*P	Pg	14 52 34.8	-0.1		
	baz=183								
ECL				eS	Sg	14 52 42.1	-0.5		
	baz=183								
CHN2	**Minshiung**	**0.59**	**306**	eP	Pb	14 52 37.1	+0.6		
	baz=306								
CHN2				eS	Sn	14 52 46.9	-1.8		
	baz=306								
CHN3	**Shinhua**	**0.59**	**260**	eP	Pn	14 52 38.0	-0.7		
	baz=259								
CHN3				eS	Sn	14 52 48.4	-0.3		
	baz=259								
SSLB	**Suanglung**	**0.60**	**356**⇑	eP	Pg	14 52 35.1	-0.2		
	baz=356								
SSLB				eS	Sg	14 52 42.7	-0.4		
	baz=356								
CHY	**Chiayi**	**0.61**	**301**⇓	eP	Pb	14 52 37.0	+0.2		
	baz=301								
CHY				eS	Sb	14 52 47.0	+1.3		
	baz=301								
SHHT	**Tainan City**	**0.62**	**255**	eP	Pn	14 52 38.6	-0.4		
	baz=255								
SHHT				eS	Sn	14 52 49.1	-0.2		
	baz=255								
EGFH	**Guangfu**	**0.62**	**39**	⇑P	Pg	14 52 35.5	-0.2		
	baz=39								
EGFH				eS	Sg	14 52 43.4	-0.4		
	baz=39								
WGK	**Gukeng**	**0.64**	**321**⇓	eP	Pb	14 52 37.8	+0.5		
	baz=322								
WGK				eS	Sb	14 52 48.1	+1.6		
	baz=322								
TWM1	**Shoushan**	**0.64**	**236**	eP	Pb	14 52 38.1	+0.8		
	baz=235								
SGLT	**Jiouru**	**0.65**	**226**	eP	Pb	14 52 37.6	+0.1		
	baz=225								
WDLH	**Douliu**	**0.65**	**320**	eP	Pb	14 52 38.1	+0.6		
	baz=320								
WDLH				eS	Sb	14 52 48.1	+1.1		
	baz=320								
MASBT	**Mashibuluo**	**0.66**	**210**	⇑P	Pg	14 52 36.1	-0.3		
	baz=210								
MASBT				eS	Sg	14 52 45.9	+0.9		
	baz=210								
LDUT	**Ludao**	**0.67**	**139**	eP	Pg	14 52 36.8	+0.2		
	baz=139								
LDUT				eS	Sb	14 52 47.4	0.0		
	baz=139								
WJS	**Zhushan**	**0.68**	**339**	eP	Pb	14 52 38.4	+0.4		
	baz=339								
WJS				eS	Sb	14 52 48.6	+0.9		
	baz=339								
ICHU	**Yijhu**	**0.68**	**285**	eP	Pb	14 52 38.4	+0.4		
	baz=285								
ICHU				eS	Sn	14 52 49.5	-1.4		
	baz=285								
TSPT	**Pingtung City**	**0.68**	**222**	eP	Pb	14 52 38.1	+0.1		
	baz=223								
SMLT	**Sun Moon Lake**	**0.70**	**353**	eP	Pg	14 52 37.5	+0.3		
	baz=353								
SMLT				eS	Sb	14 52 49.4	+1.0		
	baz=353								
TAI1	**Yung-k'ang**	**0.72**	**259**	eP	Pb	14 52 39.2	+0.5		
	baz=258								
TEGC	**Jichi Village**	**0.72**	**44**	eP	Pb	14 52 38.9	+0.2		
	baz=44								
TEGC				eS	Sb	14 52 49.8	+1.0		
	baz=44								
TYC	**Yuchr**	**0.73**	**350**	eP	Pg	14 52 38.2	+0.5		
	baz=351								
TYC				eS	Sn	14 52 51.1	-0.9		
	baz=351								
SCLT	**Jiali**	**0.74**	**269**	eP	Pn	14 52 40.3	-0.3		
	baz=269								
SCLT				eS	Sn	14 52 52.4	+0.2		
	baz=269								
CHN8	**Yiju**	**0.74**	**283**	eP	Pb	14 52 39.7	+0.7		
	baz=283								
CHN8				eS	Sn	14 52 51.9	-0.4		
	baz=283								
ESL	**Shilin**	**0.74**	**33**⇑	eP	Pg	14 52 37.6	-0.3		
	baz=33								
ESL				eS	Sg	14 52 48.5	+0.9		
	baz=33								
WNT	**Mingjian**	**0.75**	**338**	eP	Pn	14 52 40.0	-0.8		
	baz=338								
WNT				eS	Sn	14 52 51.4	-1.2		
	baz=338								
WTK	**Tuku**	**0.75**	**312**	eP	Pb	14 52 39.7	+0.5		
	baz=312								
WTK				eS	Sb	14 52 51.0	+1.3		
	baz=312								
TAI	**Tainan**	**0.76**	**256**	eP	Pn	14 52 40.7	-0.3		
	baz=256								
WNT1	**Nantou City**	**0.78**	**338**	eP	Pn	14 52 40.6	-0.6		
	baz=338								
WNT1				eS	Sn	14 52 52.5	-0.7		
	baz=338								
WSL	**Shuilin Townsh**	**0.78**	**296**⇓	eP	Pb	14 52 40.2	+0.5		
	baz=295								
WSL				eS	Sn	14 52 52.4	-1.0		
	baz=295								
OWD	**Renai**	**0.78**	**12**⇑	eP	Pg	14 52 37.8	-0.9		
	baz=12								
OWD				eS	Sg	14 52 48.9	-0.1		
	baz=12								
SSPT	**Xinbi**	**0.80**	**210**⇑	eP	Pg	14 52 39.3	+0.2		
	baz=209								
SSPT				eS	Sb	14 52 52.4	+1.2		
	baz=209								
EAST	**Anshuo**	**0.81**	**190**⇑	eP	Pg	14 52 39.2	-0.1		
	baz=189								
EAST				eS	Sb	14 52 51.7	+0.3		
	baz=189								
WUSB	**Renai**	**0.81**	**8**⇑	eP	Pg	14 52 38.5	-0.7		
	baz=8.0								
WUSB				eS	Sg	14 52 48.2	-1.6		
	baz=8.0								
WPL	**Puli Township**	**0.82**	**358**	eP	Pg	14 52 39.6	+0.1		
	baz=357								
WPL				eS	Sb	14 52 52.9	+1.1		
	baz=357								
TAW	**Tawu**	**0.83**	**186**⇑	eP	Pg	14 52 39.5	-0.1		
	baz=186								
TAW				eS	Sb	14 52 52.1	+0.2		
	baz=186								
WSF	**Szhu**	**0.84**	**303**	eP	Pb	14 52 41.0	+0.3		
	baz=303								
WSF				eS	Sn	14 52 54.4	-0.5		
	baz=303								
DPDB	**Guoxing**	**0.85**	**356**	eP	Pb	14 52 40.1	+0.2		
	baz=356								
TAWH	**Dawu Township**	**0.85**	**187**⇑	eP	Pg	14 52 39.8	-0.2		
	baz=187								
TAWH				eS	Sg	14 52 50.2	-0.7		
	baz=187								
WYL	**Yuanlin Townsh**	**0.86**	**334**	eP	Pn	14 52 41.9	-0.5		
	baz=334								
WSSB	**Gushan**	**0.87**	**232**	eP	Pn	14 52 43.4	+0.9		
	baz=231								
WCS	**Beigang Elemen**	**0.87**	**355**	eP	Pg	14 52 40.4	0.0		
	baz=355								
WCS				eS	Sn	14 52 54.9	-0.7		
	baz=355								
TEYL	**Yanliau Villag**	**0.88**	**39**	eP	Pb	14 52 41.3	0.0		
	baz=38								
TEYL				eS	Sn	14 52 55.2	-0.4		
	baz=38								
SCZT	**Fangliau**	**0.88**	**203**⇑	eP	Pg	14 52 40.2	-0.3		
	baz=203								
SCZT				eS	Sn	14 52 57.9	+2.1		
	baz=203								
CHGB	**Renai**	**0.89**	**11**⇑	eP	Pg	14 52 39.9	-0.8		
	baz=11								
CHGB				eS	Sb	14 52 55.0	+1.1		
	baz=11								
WWF	**Wufeng**	**0.90**	**342**	eP	Pn	14 52 42.7	-0.2		
	baz=342								
WWF				eS	Sn	14 52 56.3	+0.1		
	baz=342								
ETM	**Tongmen**	**0.90**	**30**	eP	Pg	14 52 40.5	-0.4		
	baz=30								
ETM				eS	Sg	14 52 53.0	+0.3		
	baz=30								
WRL	**Guolierlin Hig**	**0.91**	**322**	eP	Pb	14 52 42.1	+0.2		
	baz=322								
WRL				eS	Sb	14 52 55.3	+1.0		
	baz=322								
HWA	**Hwalien**	**0.97**	**35**	eP	Pg	14 52 42.4	+0.2		
	baz=36								
WCHH	**Zhanghua**	**0.98**	**336**	eP	Pn	14 52 44.0	0.0		
	baz=336								
WCHH				eS	Sn	14 52 58.1	0.0		
	baz=336								
SLIU	**Shizi**	**0.98**	**191**⇑	eP	Pg	14 52 42.2	-0.3		
	baz=191								
SLIU				eS	Sn	14 52 58.7	+0.4		
	baz=191								
WHF	**Hehuan Shan**	**0.99**	**14**	eP	Pg	14 52 41.7	-1.0		
	baz=15								
WHF				eS	Sb	14 52 57.7	+0.8		
	baz=15								
TCU	**Taichung**	**1.00**	**343**	eP	Pn	14 52 44.4	+0.1		
	baz=343								
WLCH	**Liuqiu**	**1.01**	**215**	eP	Pn	14 52 46.9	+2.5		
	baz=214								
TWP	**Hsiaoliuchiu**	**1.02**	**215**	eP	Pn	14 52 46.7	+2.2		
	baz=215								
TWD	**Chiawan**	**1.05**	**32**	eP	Pg	14 52 43.2	-0.5		
	baz=32								
TWD				eS	Sg	14 52 57.4	+0.1		
	baz=32								
TDCB	**Techi**	**1.07**	**8**	eP	Pg	14 52 43.5	-0.8		
	baz=8.0								
TWT	**Tachien**	**1.08**	**9**	eP	Pg	14 52 44.4	0.0		
	baz=8.0								
FUSS	**Fushou**	**1.08**	**12**	eP	Pg	14 52 43.3	-1.1		
	baz=12								
FUSS				eS	Sn	14 53 01.2	0.0		
	baz=12								
WHP	**Taichung City**	**1.09**	**358**	eP	Pn	14 52 46.1	+0.5		
	baz=358								
ETLH	**Xiulin Townshi**	**1.11**	**24**	eP	Pg	14 52 43.9	-1.1		
	baz=24								
ETLH				eS	Sn	14 53 01.6	0.0		
	baz=24								
ETL	**Fush Village**	**1.13**	**31**	eP	Pg	14 52 45.3	0.0		
	baz=31								
ETL				eS	Sb	14 53 00.4	-0.2		
	baz=31								
NACB	**Ninganchiao**	**1.13**	**29**	eP	Pg	14 52 44.3	-1.0		
	baz=29								
TWQ1	**Liyutan**	**1.18**	**350**	eP	Pn	14 52 47.3	+0.6		
	baz=350								
TWQ1				eS	Sn	14 53 04.0	+0.8		
	baz=350								
HEN	**Hengchun**	**1.20**	**192**	eP	Pn	14 52 47.5	+0.5		
	baz=191								
WDGT	**Dungji**	**1.23**	**274**	eP	Pg	14 52 46.9	-0.4		
	baz=273								
WDGT				eS	Sb	14 53 03.7	+0.1		
	baz=273								
NSY	**Sanyi**	**1.24**	**350**	eP	Pn	14 52 49.0	+1.3		
	baz=350								
NSY				eS	Sn	14 53 05.9	+1.0		
	baz=350								
TWK1	**Hengchun**	**1.25**	**188**	eP	Pn	14 52 48.7	+0.9		
	baz=188								
TWKBT	**Hengchun**	**1.25**	**188**	eP	Pn	14 52 48.3	+0.6		
	baz=188								
TSEB	**Hengchuen, Pin**	**1.28**	**184**	eP	Pn	14 52 47.4	-0.8		
	baz=186								
TSEB				eS	Sn	14 53 10.2	+4.5		
	baz=186								
NNSB	**Datong**	**1.29**	**16**	eP	Pg	14 52 47.1	-1.2		
	baz=16								
NNSH	**Datong**	**1.29**	**16**	eP	Pg	14 52 47.3	-1.1		
	baz=16								
NNS	**Nan Shan**	**1.30**	**15**	eP	Pn	14 52 47.7	-0.8		
	baz=16								
PHUB	**P'eng-hu**	**1.35**	**284**	eP	Pn	14 52 48.6	-0.5		
	baz=284								
PHUB				eS	Sb	14 53 06.9	-0.1		
	baz=284								
NMLH	**Miaoli**	**1.36**	**352**	eP	Pg	14 52 49.8	0.0		
	baz=352								
PNG	**Penghu**	**1.38**	**286**	eP	Pn	14 52 49.1	-0.4		
	baz=286								
PNG				eS	Sb	14 53 07.7	-0.1		
	baz=286								
ENA	**Nanau**	**1.41**	**29**	eP	Pn	14 52 49.9	-0.1		
	baz=29								
LATG	**Datong**	**1.43**	**20**	eP	Pn	14 52 50.0	-0.3		
	baz=20								
LATG				eS	Sg	14 53 11.2	+1.5		
	baz=20								
NSTT	**Nanjuang**	**1.44**	**0**	eP	Pg	14 52 51.9	+0.6		
NSTT				eS	Sg	14 53 12.1	+2.2		
VCHM	**Qimei**	**1.44**	**271**	eP	Pn	14 52 49.9	-0.4		
	baz=271								
VCHM				eS	Sb	14 53 09.3	-0.3		
	baz=271								
EWUT	**Wuta**	**1.45**	**30**	eP	Pb	14 52 50.9	-0.1		
	baz=30								
NFF	**Wufeng Townshi**	**1.45**	**4**	eP	Pn	14 52 50.6	+0.1		
	baz=4.0								
NFF				eS	Sg	14 53 12.1	+1.9		
	baz=4.0								
LIOB	**Emei**	**1.45**	**1**	eP	Pg	14 52 51.7	+0.1		
	baz=1.0								
NDT	**Datong Townshi**	**1.49**	**18**	eP	Pn	14 52 51.3	+0.3		
	baz=19								
NDT				eS	Sg	14 53 13.3	+1.8		
	baz=19								
YHNB	**Yeheng**	**1.52**	**13**	eP	Pn	14 52 51.4	-0.1		
	baz=13								
YHNB				eS	Sg	14 53 13.9	+1.4		
	baz=13								
NSK	**Sanguang**	**1.52**	**13**	eP	Pg	14 52 52.7	-0.2		
	baz=13								
ENTT	**Nioudou**	**1.54**	**20**	eP	Pb	14 52 52.5	-0.2		
	baz=20								
NDS	**Dongshan**	**1.58**	**24**	eP	Pb	14 52 53.2	-0.3		
	baz=25								
TWC	**Suao**	**1.62**	**29**	eP	Pb	14 52 54.2	+0.2		
	baz=29								
TWC				eS	Sg	14 53 15.6	-0.1		
	baz=29								
TWE	**Neicheng**	**1.65**	**22**	eP	Pb	14 52 54.8	+0.3		
	baz=22								
NWLT	**Wulai**	**1.65**	**16**	eP	Pb	14 52 54.9	+0.4		
	baz=16								
FUSB	**Fushanzhiwuyua**	**1.66**	**19**	eP	Pb	14 52 54.5	-0.2		
	baz=19								
TIPB	**Shuangxi**	**1.93**	**23**	eP	Pb	14 52 58.8	-0.6		
	baz=23								
SXI1	**Grass Mountain**	**2.06**	**23**	eP	Pb	14 53 01.3	-0.4		
	baz=23								
YOJ	**Yonaguni jima**	**2.24**	**55**	eP	Pn	14 53 01.2	-0.2		
	baz=55								

IDC 15 15:24:40.5±4.6, 15°.18S×173°.46W, h0km, mb3.7/3, mbtmp3.7/4, ML3.7/1, MS3.1/5, Error ellipse: s-maj=353.6km s-min=22.9km az=150.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.06**	**52**	Pn	Pn	15 25 14.3	-2.2
	29nm,0.3s,baz=207,slow=3.2,SNR=48						
AFI				Sn	Sn	15 25 35.8	-7.2
	82nm,0.3s,baz=56,slow=23,SNR=9.1						
AFI				LR	LR	15 26 06.7	
	comp=Z,131nm,18.3s,baz=3.5,slow=42						
	80nm,0.4s						
RAR	**Rarotonga**	**14.32**	**117**	LR	LR	15 31 40.0	
	comp=Z,43nm,20.3s,baz=215,slow=29						
WRA	**Warramunga Arr**	**49.84**	**257**	P	P	15 33 35.3	-0.4
	0.4nm,0.7s,baz=93,slow=7.7,SNR=5.6						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**50.12**	**252**	P	P	15 33 37.7	-0.3
	2.5nm,0.6s,baz=86,slow=8.3,SNR=28						
	2.5nm,0.6s						
JHJ	**Hachijo jima 2**	**65.57**	**318**	LR	LR	15 57 09.2	
	comp=Z,44nm,20.4s,baz=74,slow=30						
ASAJ	**Asahikawa**	**71.32**	**328**	LR	LR	16 02 32.0	
	comp=Z,14nm,21.5s,baz=177,slow=32						
NVAR	**Mina Array Bea**	**74.21**	**42**	P	P	15 36 21.4	+1.9
	0.1nm,0.3s,baz=231,slow=5.7,SNR=2.4						
	0.1nm,0.3s						
TIXI	**Tiksi**	**94.78**	**344**	LR	LR	16 15 07.7	
	comp=Z,28nm,21.3s,baz=181,slow=32						

GCG ***15*** *15:31:36.0±2.7, 13°.78N×90°.92W, h94km±37km, MD4.0*
SNET ***15*** *15:31:37.1±0.9, 13°.74N×90°.89W, h26km±20km, ML4.1*
UCR ***15*** *15:31:37.3±0.9, 13°.78N×90°.88W, h26km±14km, ML4.0, mb4.0(NEIC)*
NEIC ***15*** *15:31:39.1±2.6, 14°.0N±0°.1×90°.75W±0°.05, h67km±9km, mb4.0/12, Md4.2(SNET), Error ellipse: s-maj=17.3km s-min=1.6km az=204.0*
IDC ***15*** *15:31:39.3±1.9, 14°.18N×90°.59W, h77km±18km, mb3.6/4, mbtmp3.9/7, Error ellipse: s-maj=34.7km s-min=13.2km az=36.0*

ISC 15 15:31:38.4±0.9, 13°.84N±0°.07×90°.84W±0°.05, h81km±7km, n97, σ1°.25/109, mb4.0/7, 1C-13D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCG	**Pacaya**	**0.60**	**22**	eP	Pn	15 31 52.8	-0.8
PCG				eS	Sn	15 32 10.2	+5.5
FUG	**Fuego 3**	**0.61**	**0**	eP	Pn	15 31 52.9	-0.6
FUG				eS	Sn	15 32 04.2	-0.5
NBG	**Las Nubes**	**0.89**	**33**⇓	eP	Pn	15 31 57.2	+0.6
NBG				eS	Sn	15 32 12.4	+2.3
NUBE	**Las Nubes**	**1.03**	**86**⇓	*i*P	Pn	15 31 57.1	-1.0
NUBE				eS	Sn	15 32 12.0	-0.9
NUBE	**Las Nubes**	**1.03**	**86**⇓	*i*P	Pn	15 31 57.1	-1.0
NUBE				eS	Sn	15 32 12.0	-0.9
RTAL	**Retalhuleu**	**1.07**	**310**		Pn	15 31 56.8	-1.7
RTAL				Sn	Sn	15 32 11.6	-1.9
RTAL	**Retalhuleu**	**1.07**	**310**⇓	eP	Pn	15 31 56.8	-1.7
STG3	**Santiaguito 3,**	**1.12**	**321**⇓	eP	Pn	15 31 58.6	-0.7
RTR	**El Retiro**	**1.17**	**87**	eP	Pn	15 31 59.1	-0.6
RTR	**El Retiro**	**1.17**	**87**	eP	Pn	15 31 59.1	-0.6
CEVE	**Cerro Verde**	**1.18**	**90**⇓	eP	Pn	15 31 59.4	-0.6
CEVE				eS	Sn	15 32 16.3	0.0
CEVE				IAML		15 32 18.2	
	comp=Z,8μm,0.2s						
CEVE	**Cerro Verde**	**1.18**	**90**⇓	eP	Pn	15 31 59.4	-0.6
CEVE				eS	Sn	15 32 16.3	0.0
CEVE				IAML		15 32 18.2	
	comp=Z,8μm,0.2s						
SBLS	**San Blas**	**1.19**	**90**⇓	*i*P	Pn	15 31 59.4	-0.7
SBLS	**San Blas**	**1.19**	**90**⇓	*i*P	Pn	15 31 59.4	-0.7
SNJE	**San Jose**	**1.20**	**88**	eP	Pn	15 31 59.4	-0.8
SNJE	**San Jose**	**1.20**	**88**	eP	Pn	15 31 59.4	-0.8
JAYA	**Jayaque - finc**	**1.37**	**97**⇓	*i*P	Pn	15 32 01.1	-1.1
JAYA				IAML		15 32 21.3	
	comp=Z,4μm,0.2s						
JAYA	**Jayaque - finc**	**1.37**	**97**⇓	*i*P	Pn	15 32 01.1	-1.1
JAYA				IAML		15 32 21.3	
	comp=Z,4μm,0.2s						
CEDA	**San Andres**	**1.41**	**91**	*i* P	Pn	15 32 01.7	-1.0
CEDA				IAML		15 32 28.6	
	comp=Z,2μm,0.3s						
CEDA	**San Andres**	**1.41**	**91**	*i* P	Pn	15 32 01.7	-1.0
CEDA				IAML		15 32 28.6	
	comp=Z,2μm,0.3s						
BOQS	**Boqueron**	**1.52**	**94**	eP	Pn	15 32 03.7	-0.6
BOQS	**Boqueron**	**1.52**	**94**	eP	Pn	15 32 03.7	-0.6
UEES	**Universidad Ev**	**1.56**	**94**	eP	Pn	15 32 04.0	-0.7
UEES	**Universidad Ev**	**1.56**	**94**	eP	Pn	15 32 04.0	-0.7
SNET	**Serv Nac Est T**	**1.57**	**95**	Pn	Pn	15 32 03.9	-0.9
SNET	**Serv Nac Est T**	**1.57**	**95**	eP	Pn	15 32 04.1	-0.7
SNET				IAML		15 32 05.4	
	comp=Z,1μm,0.3s						
SNET	**Serv Nac Est T**	**1.57**	**95**	eP	Pn	15 32 04.1	-0.7
SNET				IAML		15 32 05.4	
	comp=Z,1μm,0.3s						
HUEH	**Huehuetenango**	**1.61**	**337**	Pn	Pn	15 32 05.2	-0.2
ESQI	**Esquipulas**	**1.62**	**63**		Pn	15 32 04.9	-0.6
ESQI	**Esquipulas**	**1.62**	**63**⇓	*i*P	Pn	15 32 05.0	-0.6
MRL	**Marmol**	**1.67**	**42**⇑	eP	Pn	15 32 06.9	+0.6
MRL				eS	Sn	15 32 28.9	+1.5
SJTE	**Alcalda de S**	**1.80**	**97**	eP	Pn	15 32 07.2	-0.6
SJTE	**Alcalda de S**	**1.80**	**97**	eP	Pn	15 32 07.2	-0.6
PAVA	**Las Pavas**	**1.86**	**94**	eP	Pn	15 32 07.8	-0.8
PAVA	**Las Pavas**	**1.86**	**94**	eP	Pn	15 32 07.8	-0.8
SCLA	**Alcaldia de Sa**	**2.06**	**93**	eP	Pn	15 32 10.3	-0.9
SCLA	**Alcaldia de Sa**	**2.06**	**93**	eP	Pn	15 32 10.3	-0.9
LCND	**La Caada**	**2.92**	**100**	eP	Pn	15 32 22.4	-0.4
LCND	**La Caada**	**2.92**	**100**	eP	Pn	15 32 22.4	-0.4
TGUH	**Tegucigalpa,Un**	**3.47**	**86**	Pn	Pn	15 32 29.6	-0.8
CRIN	**San Cristobal**	**3.86**	**107**	Pn	Pn	15 32 35.7	+0.1
CRIN	**San Cristobal**	**3.86**	**107**	eP	Pn	15 32 35.7	+0.1
CRIN	**San Cristobal**	**3.86**	**107**	eP	Pn	15 32 35.6	0.0
CRIN				eS	Pn	15 32 38.6	+3.0
CNGN	**Cerro Negro**	**4.25**	**108**	Pn	Pn	15 32 40.5	-0.3
MATN	**Matagalpa**	**4.87**	**100**	Pn	Pn	15 32 47.9	-1.4
CMIG	**Matias Romero**	**5.07**	**310**	P	Pn	15 32 51.5	-0.5
	comp=Z,14nm,0.5s,baz=158,slow=13,SNR=32						
CMIG				S	Sn	15 33 49.4	+0.2
	comp=Z,20nm,0.4s,baz=280,slow=22,SNR=2.3						
BOAB	**BOACO BROADBAN**	**6.23**	**105**		Pn	15 32 53.2	-0.9
BOAB	**BOACO BROADBAN**	**6.23**	**105**	eP	Pn	15 32 53.3	-0.8
HZTE	**Horizontes, Gu**	**5.99**	**121**	Pn	Pn	15 33 05.6	+1.0
HZTE	**Horizontes, Gu**	**5.99**	**121**	eP	Pn	15 33 05.7	+1.0
VRLE	**La Escondida,**	**6.15**	**119**	eP	Pn	15 33 06.9	+0.1
SAJU	**San Juanillo,**	**6.26**	**126**	eP	Pn	15 33 08.5	+0.2
ORTG	**Ortega, Santa**	**6.29**	**123**	Pn	Pn	15 33 09.6	+0.8
ORTG	**Ortega, Santa**	**6.29**	**123**	eP	Pn	15 33 09.6	+0.8
GUAI	**GUAI**	**6.30**	**124**⇓	*i*P	Pn	15 33 09.6	+0.7
HORNC	**Hornillas**	**6.35**	**119**	eP	Pn	15 33 09.9	+0.4
VMAR	**Armenia, Volca**	**6.35**	**118**	eP	Pn	15 33 09.6	+0.1
CUI	**Cuipilapa**	**6.39**	**119**	eP	Pn	15 33 10.6	+0.6
PLVR	**Palo Verde**	**6.39**	**122**	eP	Pn	15 33 11.0	+0.8
DUNO	**Dulce Nombre,**	**6.43**	**125**		Pn	15 33 09.7	-0.9
DUNO	**Dulce Nombre,**	**6.43**	**125**	eP	Pn	15 33 09.6	-1.0
INDI	**Punta indio, G**	**6.56**	**126**	eP	Pn	15 33 12.4	+0.3
JTS	**Las Juntas de**	**6.75**	**121**	P	Pn	15 33 15.3	+0.3
	comp=Z,8.0nm,0.4s,baz=162,slow=21,SNR=13						
JTS				S	Sn	15 34 31.8	+1.3
	comp=Z,3.1nm,0.4s,baz=1.4,slow=23,SNR=0.9						
JTS	**Las Juntas de**	**6.75**	**121**	Pn	Pn	15 33 15.2	+0.2
JTS	**Las Juntas de**	**6.75**	**121**	eP	Pn	15 33 15.2	+0.2
LAFE	**Finca La Fe, P**	**7.05**	**124**	eP	Pn	15 33 19.4	+0.4
JACO	**JACO, Garabito**	**7.34**	**124**	Pn	Pn	15 33 24.0	+1.0
JACO	**JACO, Garabito**	**7.34**	**124**	eP	Pn	15 33 24.2	+1.2
RIMA	**Rio Macho**	**7.94**	**120**	Pn	Pn	15 33 31.8	+0.4
CDM	**Cerro de Muert**	**8.13**	**121**	eP	Pn	15 33 35.5	+1.3
SRBA	**San Rafael, Bu**	**8.64**	**121**	Pn	Pn	15 33 41.8	+0.9
SRBA	**San Rafael, Bu**	**8.64**	**121**	eP	Pn	15 33 41.8	+0.9
DRK0	**Durika**	**8.72**	**121**	Pn	Pn	15 33 43.9	+1.9
TXAR	**Lajitas Array**	**19.47**	**324**	P

ILAR	**Eielson Array**	**63.44**	**337**	P	**P**	**15 41 57.9**	**-1.4**
WRA	**Warramunga Arr**	**136.44**	**256**	PKP	**PKiKP**	**15 50 53.7**	**+0.2**
	comp=Z,0.9nm,1.1s,baz=37,slow=1.0,SNR=4.8						
WRA	**Warramunga Arr**	**136.44**	**256**		**PKPdf**	**15 50 51.7**	**-0.1**
ASAR	**Alice Springs**	**136.67**	**250**	PKP	**PKiKP**	**15 50 55.5**	**+1.6**
	comp=Z,0.2nm,0.7s,baz=103,slow=2.9,SNR=1.5						
CMAR	**Chiang Mai Arr**	**146.49**	**343**	PKPbc	**PKPdf**	**15 51 09.9**	**+0.1**
	comp=Z,1.4nm,0.5s,baz=336,slow=2.9,SNR=7.7						
CMAR	**Chiang Mai Arr**	**146.49**	**343**		**PKPdf**	**15 51 09.8**	**0.0**

*NEIC **15** 15:43:53.9±1.0, 36.49N±0.02×99.10W±0.02, h4km±3km, Error ellipse: s-maj=3.4km s-min=2.0km az=132.0*
*TUL **15** 15:43:53.2±0.8, 36.48N±0.02×99.10W±0.03, h6km±4km, ML3.3, mb_Lg2.9/66(NEIC), Error ellipse: s-maj=4.0km s-min=2.0km az=123.0*
*ANF **15** 15:43:54.5±0.4, 36.46N×99.06W, h6km, ML3.7/10, Error ellipse: s-maj=5.3km s-min=4.0km az=67.0*

ISC 15 15:43:54.0±1.4, 36.49N±0.03×99.05W±0.03, h6km±9km, n78, σ0⁹90/73, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
U32A	**Winter Ranch,**	**0.12**	**162**	Pg	**Pg**	**15 43 56.2**	**-0.3**
U32A	**Winter Ranch,**	**0.12**	**162**	P	**Pg**	**15 43 56.2**	**-0.3**
	baz=323,SNR=681						
OKCFA	**Oklahoma City**	**1.68**	**129**		**Pn**	**15 44 23.9**	**0.0**
OKCFA	**Oklahoma City**	**1.68**	**129**	P	**Pn**	**15 44 24.3**	**+0.3**
	baz=309,SNR=7.2						
OKCFA				S	**Sb**	**15 44 47.6**	**+0.8**
	baz=309						
OKCSW	**OKLAHOME CITY**	**1.69**	**129**	Pn	**Pn**	**15 44 23.9**	**-0.2**
WMOK	**Wichita Mounta**	**1.76**	**173**		**Pn**	**15 44 24.2**	**-0.8**
WMOK	**Wichita Mounta**	**1.76**	**173**	P	**Pn**	**15 44 24.2**	**-0.8**
	baz=352,SNR=49						
WMOK				S	**Sn**	**15 44 48.0**	**+0.2**
	baz=352						
WMOK	**Wichita Mounta**	**1.76**	**173**	P	**Pn**	**15 44 24.3**	**-0.8**
	baz=352,SNR=23						
WMOK				S	**Sn**	**15 44 48.0**	**+0.2**
	baz=352						
FNO	**Franklin**	**1.82**	**132**		**Pn**	**15 44 26.1**	**+0.3**
R32A	**Long Quarter,**	**1.95**	**8**		**Pn**	**15 44 27.2**	**-0.5**
R32A	**Long Quarter,**	**1.95**	**8**	P	**Pn**	**15 44 28.3**	**+0.7**
	baz=189,SNR=7.4						
R32A				S	**Sb**	**15 44 54.5**	**0.0**
	baz=189						
T35A	**Sooner Cattle**	**2.08**	**77**		**Pn**	**15 44 29.4**	**0.0**
T35A				lAmb_Lg		15 45 05.2	
	comp=Z,62nm,0.9s						
T35B	**Sooner Cattle**	**2.08**	**77**	P	**Pn**	**15 44 30.3**	**+0.9**
	baz=259,SNR=24						
T35B				S	**Sb**	**15 44 59.5**	**+1.3**
	baz=259						
X34A	**Smith Ranch, M**	**2.13**	**152**	lAmb_Lg		15 45 04.4	
	comp=Z,48nm,0.8s						
CBKS	**Cedar Bluff**	**2.38**	**347**	lAmb_Lg		15 45 13.5	
	comp=Z,41nm,0.8s						
CBKS	**Cedar Bluff**	**2.38**	**347**	P	**Pn**	**15 44 34.4**	**+0.7**
	baz=168,SNR=22						
CBKS				S	**Sb**	**15 45 06.3**	**-0.7**
	baz=168						
CBKS	**Cedar Bluff**	**2.38**	**347**	P	**Pn**	**15 44 34.1**	**+0.4**
	baz=168						
CBKS				Sb	**Sb**	**15 45 06.5**	**-0.6**
	baz=168						
AMTX	**Amarillo**	**2.68**	**234**	lAmb_Lg		15 45 23.5	
	comp=Z,45nm,0.7s						
AMTX	**Amarillo**	**2.68**	**234**	S	**Sb**	**15 45 14.9**	**-0.7**
	baz=52						
AMTX	**Amarillo**	**2.68**	**234**	P	**Pn**	**15 44 37.8**	**+0.1**
	baz=52						
TUL1	**Leonard**	**2.69**	**101**	Pn	**Pn**	**15 44 38.2**	**+0.3**
TUL1				lAmb_Lg		15 45 27.3	
	comp=Z,43nm,0.8s						
TUL1	**Leonard**	**2.69**	**101**	P	**Pn**	**15 44 38.1**	**+0.2**
	baz=283						
TUL1				S	**Sn**	**15 45 12.0**	**+1.2**
	baz=283						
TUL1	**Leonard**	**2.69**	**101**	Sb	**Sb**	**15 45 16.5**	**+0.6**
	baz=283						
X37A	**Clayton**	**3.55**	**121**	Pn	**Pn**	**15 44 49.5**	**0.0**
X37A	**Clayton**	**3.55**	**121**	P	**Pn**	**15 44 49.6**	**0.0**
	baz=303,SNR=7.6						
KSCO	**Kaye Shedlock'**	**3.79**	**313**	Pn	**Pn**	**15 44 52.6**	**-0.5**
KSCO	**Kaye Shedlock'**	**3.79**	**313**	P	**Pn**	**15 44 52.8**	**-0.3**
	baz=131,SNR=9.1						
KSCO				S	**Sn**	**15 45 37.2**	**-0.9**
	baz=131						
ABTX	**Abilene, Hawle**	**3.89**	**187**	P	**Pn**	**15 44 54.0**	**-0.3**
	baz=6.5						
ABTX				S	**Sn**	**15 45 40.5**	**+0.2**
	baz=6.5						
MSTX	**Muleshoe**	**3.95**	**232**	P	**Pn**	**15 44 54.0**	**-1.3**
	baz=49						
MSTX				Sb	**Sb**	**15 45 55.3**	**+3.0**
	baz=49						
HHAR	**Hobbs**	**4.12**	**91**	lAmb_Lg		15 46 12.0	
	comp=Z,34nm,0.9s						
T25A	**Trinidad**	**4.35**	**280**	Pn	**Pn**	**15 45 00.1**	**-0.8**
T25A	**Trinidad**	**4.35**	**280**	P	**Pn**	**15 44 59.9**	**-1.0**
	baz=97						
T25A				Sb	**Sb**	**15 46 06.8**	**+2.9**
	baz=97						
W39A	**Magazine**	**4.46**	**105**	Pn	**Pn**	**15 45 03.7**	**+1.5**
W39A	**Magazine**	**4.46**	**105**	P	**Pn**	**15 45 01.8**	**-0.4**
	baz=288						
W39A				S	**Sn**	**15 45 53.5**	**-1.0**
	baz=288						
Z38A	**Mt. Pleasant**	**4.64**	**133**	lAmb_Lg		15 46 23.7	
	comp=Z,20nm,0.8s						
WHTX	**Lake Whitney,**	**4.68**	**163**	P	**Pn**	**15 45 05.3**	**+0.2**
	baz=344						
WHTX				S	**Sn**	**15 45 59.9**	**+0.2**
	baz=344						
S39A	**Bolivar**	**4.73**	**74**	Pn	**Pn**	**15 45 06.0**	**+0.1**
S39A				lAmb_Lg		15 46 26.2	
	comp=Z,21nm,0.9s						
MIAR	**Mount Ida**	**4.86**	**112**	Pn	**Pn**	**15 45 07.9**	**+0.1**
MIAR	**Mount Ida**	**4.86**	**112**	P	**Pn**	**15 45 07.8**	**+0.1**
	baz=295						
MIAR	**Mount Ida**	**4.86**	**112**	P	**Pn**	**15 45 07.4**	**-0.3**
	baz=295						
MIAR				S	**Sn**	**15 46 02.7**	**-1.7**
	baz=295						
U40A	**Yellville**	**5.00**	**90**	Pn	**Pn**	**15 45 09.5**	**0.0**
U40A				lAmb_Lg		15 46 38.0	
	comp=Z,24nm,0.8s						
U40A	**Yellville**	**5.00**	**90**	P	**Pn**	**15 45 08.9**	**-0.6**
	baz=273						
OGNE	**Ogallala**	**5.02**	**333**	Pn	**Pn**	**15 45 10.9**	**+0.9**
OGNE	**Ogallala**	**5.02**	**333**	P	**Pn**	**15 45 10.5**	**+0.5**
	baz=152,SNR=10						
OGNE	**Ogallala**	**5.02**	**333**	P	**Pn**	**15 45 09.9**	**-0.1**
	baz=152,SNR=8.1						
OGNE				S	**Sn**	**15 46 07.5**	**-0.9**
	baz=152						
SDCO	**Great Sand Dun**	**5.31**	**286**		**Pn**	**15 45 14.6**	**+0.5**
SDCO				lAmb_Lg		15 46 49.4	
	comp=Z,20nm,1.2s						
SDCO	**Great Sand Dun**	**5.31**	**286**	P	**Pn**	**15 45 13.8**	**-0.3**
	baz=102,SNR=5.5						
SDCO				S	**Sn**	**15 46 15.4**	**-0.3**
	baz=102						
P38A	**Dawn**	**5.36**	**53**	lAmb_Lg		15 46 51.0	
	comp=Z,16nm,0.8s						
Q24A	**Divide**	**5.43**	**299**	S	**Sn**	**15 46 17.4**	**-1.4**
	baz=116						
X40A	**Basin Creek Fa**	**5.45**	**110**	Pn	**Pn**	**15 45 15.4**	**-0.3**
X40A				lAmb_Lg		15 46 50.2	
	comp=Z,21nm,0.7s						
X40A	**Basin Creek Fa**	**5.45**	**110**	P	**Pn**	**15 45 15.6**	**-0.2**
	baz=293						
X40A				S	**Sn**	**15 46 17.7**	**-1.0**
	baz=293						
MGMO	**Mountain Grove**	**5.48**	**81**	Pn	**Pn**	**15 45 17.2**	**+1.1**
MGMO				lAmb_Lg		15 46 52.3	
	comp=Z,16nm,0.8s						
WLAR	**White Oak Lake**	**5.61**	**118**	lAmb_Lg		15 47 06.4	
	comp=Z,16nm,0.8s						
WHAR	**Wooly Hollow**	**5.61**	**100**	Pn	**Pn**	**15 45 18.1**	**+0.1**
FCAR	**Ozark Folk Cen**	**5.63**	**94**	Pn	**Pn**	**15 45 19.0**	**+0.8**
FCAR				lAmb_Lg		15 46 53.0	
	comp=Z,18nm,0.8s						
W41B	**Gary Mavity, V**	**5.68**	**101**	Pn	**Pn**	**15 45 19.9**	**+1.1**
W41B				lAmb_Lg		15 47 05.8	
	comp=Z,21nm,0.8s						
W41B	**Gary Mavity, V**	**5.68**	**101**	S	**Sn**	**15 46 22.6**	**-1.8**
	baz=285						
435B	**Jarrell**	**5.82**	**168**	lAmb_Lg		15 47 06.5	
	comp=Z,28nm,0.9s						
435B	**Jarrell**	**5.82**	**168**	S	**Sn**	**15 46 27.9**	**-0.1**
	baz=348						
NATX	**Nacogdoches**	**5.96**	**141**	S	**Sn**	**15 46 31.7**	**+0.4**
	baz=323						
JCT	**Junction City**	**6.03**	**186**	lAmb_Lg		15 47 15.6	
	comp=Z,24nm,0.8s						
Z41A	**Richland Creek**	**6.06**	**120**	lAmb_Lg		15 47 11.7	
	comp=Z,20nm,1.0s						
Z41A	**Richland Creek**	**6.06**	**120**	S	**Sn**	**15 46 32.7**	**-1.1**
	baz=304						
ISCO	**Idaho Springs**	**6.14**	**305**	lAmb_Lg		15 47 12.9	
	comp=Z,17nm,0.8s						
ISCO	**Idaho Springs**	**6.14**	**305**	P	**Pn**	**15 45 25.7**	**+0.2**
	baz=121,SNR=16						
ISCO				S	**Sn**	**15 46 34.1**	**-2.1**
	baz=121						
P40A	**Paris**	**6.30**	**59**	lAmb_Lg		15 47 15.2	
	comp=Z,23nm,0.7s						
LCAR	**Lake Charles**	**6.39**	**91**	lAmb_Lg		15 47 27.2	
	comp=Z,17nm,0.9s						
CCM	**Cathedral Cave**	**6.41**	**74**	lAmb_Lg		15 47 15.9	
	comp=Z,19nm,0.8s						
PHWY	**Pilot Hill**	**6.93**	**316**	lAmb_Lg		15 47 33.0	
	comp=Z,16nm,0.7s						
PBMO	**Poplar Bluff**	**6.93**	**85**	lAmb_Lg		15 47 35.7	
	comp=Z,17nm,0.7s						
N23A	**Red Feather La**	**6.96**	**311**	lAmb_Lg		15 47 39.8	
	comp=Z,20nm,0.8s						
FVM	**French Village**	**7.04**	**75**	lAmb_Lg		15 47 38.1	
	comp=Z,22nm,0.8s						
SCIA	**State Center**	**7.05**	**38**	lAmb_Lg		15 47 51.3	
	comp=Z,13nm,0.8s						
PV11	**David Mesa, Pa**	**8.03**	**286**	lAmb_Lg		15 48 19.1	
	comp=Z,11nm,1.1s						
833A	**Chaparral WMA,**	**8.15**	**182**	lAmb_Lg		15 48 24.7	
	comp=Z,11nm,0.9s						
L40A	**Anamosa**	**8.23**	**45**	lAmb_Lg		15 48 18.2	
	comp=Z,11nm,0.9s						
K22A	**Casper**	**8.44**	**319**	lAmb_Lg		15 48 44.7	
	comp=Z,14nm,1.1s						
RSSD	**Black Hills**	**8.52**	**335**	lAmb_Lg		15 48 26.4	
	comp=Z,10nm,0.8s						

*IDC **15** 15:48:25.6±1.1, 28.86S×71.51W, h0km, mb4.0/3, mbtmp3.8/7, ML3.7/4, Error ellipse: s-maj=37.6km s-min=28.4km az=123.0*
*NEIC **15** 15:48:27.3±1.2, 28.37S±0.05×71.66W±0.07, h10km±1km, mb4.1/5, ML3.9(GUC), Error ellipse: s-maj=10.8km s-min=6.5km az=119.0*
*GUC **15** 15:48:29.7±0.6, 28.49S×71.34W, h37km±3km, ML4.1*

ISC 15 15:48:27.7±1.6, 28.44S±0.04×71.61W±0.06, h11km±9km, n71, σ1⁹25/79, mb4.3/4, 3C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AC04	**Llanos de Chal**	**0.53**	**63**	Pg	**Pg**	**15 48 38.6**	**+0.6**
AC04				Sg	**Sg**	**15 48 44.5**	**-0.4**
AC04	**Llanos de Chal**	**0.53**	**63**	↓*iP*	**Pg**	**15 48 38.6**	**+0.6**
AC04				*i* S	**Sg**	**15 48 44.5**	**-0.4**
AC04				IAML		15 48 44.9	
	comp=E,34μm,0.2s						
LCO	**Las Campanas**	**0.97**	**126**		**Pb**	**15 48 45.8**	**-1.0**
LCO	**Las Campanas**	**0.97**	**126**	↓*eP*	**Pb**	**15 48 45.7**	**-1.0**
LCO				*eS*	**Sb**	**15 48 57.4**	**-2.3**
GO03	**Copiap**	**1.48**	**55**	Pn	**Pn**	**15 48 53.8**	**-0.4**
GO03	**Copiap**	**1.48**	**55**	↓*iP*	**Pn**	**15 48 53.8**	**-0.4**
GO03				*eS*	**Sn**	**15 49 12.2**	**-1.3**
GO03				IAML		15 49 15.8	
	comp=E,5μm,0.2s						
CO05	**La Serena**	**1.50**	**168**	Pn	**Pn**	**15 48 55.4**	**+0.8**
CO05	**La Serena**	**1.50**	**168**	*eP*	**Pn**	**15 48 55.2**	**+0.7**
CO05				*i* S	**Sn**	**15 49 13.3**	**-0.8**
CO05				IAML		15 49 25.5	
	comp=N,3μm,0.4s						
AC06	**Mina Casimiro**	**1.55**	**46**		**Pn**	**15 48 54.8**	**-0.4**
AC06	**Mina Casimiro**	**1.55**	**46**	*eP*	**Pn**	**15 48 54.9**	**-0.3**
AC06				*i* S	**Sn**	**15 49 13.4**	**-1.9**
GO04	**Tololo Observa**	**1.86**	**158**	Pn	**Pn**	**15 49 00.4**	**+0.7**
GO04	**Tololo Observa**	**1.86**	**158**	↑*eP*	**Pn**	**15 49 00.4**	**+0.7**
GO04				*i* S	**Sn**	**15 49 23.9**	**+0.6**
GO04				IAML		15 49 33.0	
	comp=N,9μm,0.5s						
CO01	**Juntas del Tor**	**2.02**	**139**	Pn	**Pn**	**15 49 03.5**	**+1.5**
CO01	**Juntas del Tor**	**2.02**	**139**	↑*iP*	**Pn**	**15 49 03.4**	**+1.5**
CO01				*i* S	**Sn**	**15 49 28.4**	**+1.2**
CO01				IAML		15 49 30.5	
	comp=N,2μm,0.4s						
CO06	**Fray Jorge**	**2.22**	**181**	Pn	**Pn**	**15 49 04.7**	**+0.3**
CO06	**Fray Jorge**	**2.22**	**181**	↓*iP*	**Pn**	**15 49 04.7**	**+0.3**
CO06				*eS*	**Sn**	**15 49 30.7**	**-1.1**
AC01	**Pan de Azucar**	**2.46**	**22**	Pn	**Pn**	**15 49 06.6**	**-1.1**
AC01	**Pan de Azucar**	**2.46**	**22**	↑*iP*	**Pn**	**15 49 06.6**	**-1.1**
CO03	**El Pedregal**	**2.52**	**162**		**Pn**	**15 49 09.6**	**+1.0**
CO03	**El Pedregal**	**2.52**	**162**	*eP*	**Pn**	**15 49 09.6**	**+1.0**
CO03				*eS*	**Sn**	**15 49 39.1**	**-0.2**
CO03				IAML		15 49 52.5	
	comp=E,1μm,0.8s						
AC02	**Maricunga**	**2.72**	**54**		**Pn**	**15 49 12.9**	**+1.1**
AC02	**Maricunga**	**2.72**	**54**	*eP*	**Pn**	**15 49 12.8**	**+1.1**
AC02				*eS*	**Sn**	**15 49 46.3**	**+1.4**
AC02				IAML		15 49 51.6	
	comp=E,1μm,0.5s						
CO02	**Combarbal**	**2.80**	**169**	Pn	**Pn**	**15 49 13.2**	**+0.7**
CO02	**Combarbal**	**2.80**	**169**	*eP*	**Pn**	**15 49 13.1**	**+0.7**
CO02				*i* S	**Sn**	**15 49 47.2**	**+0.9**
GO02	**Mina Guanaco**	**3.73**	**29**	Pn	**Pn**	**15 49 25.1**	**-0.3**
ZON	**Zonda**	**4.00**	**141**	Pn	**Pn**	**15 49 31.3**	**+2.4**
VA06	**Catapilco**	**4.11**	**176**	Pn	**Pn**	**15 49 30.9**	**+0.6**
VA03	**San Esteban**	**4.40**	**168**	Pn	**Pn**	**15 49 36.0**	**+1.5**
ROC1	**El Roble**	**4.55**	**174**	Pn	**Pn**	**15 49 37.0**	**+0.4**
PEL	**Peldehue**	**4.75**	**171**	Pn	**Pn**	**15 49 39.8**	**+0.5**
MT02	**Curacav**	**4.82**	**175**	Pn	**Pn**	**15 49 42.0**	**+1.9**
MT09	**Talagante**	**5.34**	**174**		**Pn**	**15 49 48.0**	**+0.5**
MT01	**Popeta**	**5.41**	**177**	Pn	**Pn**	**15 49 49.0**	**+0.7**
LMEL	**Las Melosas**	**5.52**	**168**	Pn	**Pn**	**15 49 50.9**	**+1.0**
PB15	**IPOC Station P**	**5.56**	**21**	Pn	**Pn**	**15 49 49.5**	**-1.0**
BO04	**La Punta**	**5.59**	**171**	Pn	**Pn**	**15 49 51.8**	**+0.9**
BO01	**Tunca**	**5.95**	**176**	Pn	**Pn**	**15 49 57.1**	**+1.5**
PB06	**IPOC Station P**	**6.00**	**18**	Pn	**Pn**	**15 49 54.5**	**-2.1**
PB04	**IPOC Station P**	**6.22**	**13**	Pn	**Pn**	**15 49 58.7**	**-0.9**
LVC	**Limon Verde**	**6.30**	**23**	Pn	Pn	15 50 06.0	+5.2
	comp=E,2.1nm,0.3s,baz=196,slow=8.0,SNR=3.9						
LVC				Sn	Sb	15 51 23.9	-9.1
	comp=E,3.6nm,0.3s,baz=140,slow=3.5,SNR=4.9						
	comp=E,2.3nm,0.2s						
LVC	**Limon Verde**	**6.30**	**23**	Pn	**Pn**	**15 49 59.9**	**-0.9**
PB09	**IPOC Station P**	**6.96**	**18**	Pn	**Pn**	**15 50 08.0**	**-1.6**
PB02	**IPOC Station P**	**7.26**	**13**	Pn	**Pn**	**15 50 12.2**	**-1.6**
PB01	**IPOC Station P**	**7.62**	**15**	Pn	**Pn**	**15 50 16.2**	**-2.5**
H03N1	**Juan Fernandez**	**8.01**	**230**	Pn	**Pn**	**15 50 23.0**	**-0.7**
	baz=285,slow=74						
H03N1				T	T	15 58 42.8	
	baz=57,slow=72,SNR=3788						
H03N2	**Juan Fernandez**	**8.02**	**230**	Pn	**Pn**	**15 50 22.8**	**-1.0**
H03N2				T	T	15 58 41.6	
	baz=57,slow=72,SNR=2348						
H03N3	**Juan Fernandez**	**8.03**	**230**	Pn	**Pn**	**15 50 23.0**	**-1.0**
	baz=104,slow=74						
H03N3				T	T	15 58 40.3	
	baz=57,slow=72,SNR=3545						
H03S3	**Juan Fernandez**	**8.24**	**228**	Pn	**Pn**	**15 50 25.3**	**-1.5**
H03S3				T	T	15 59 05.3	
	baz=57						
H03S1	**Juan Fernandez**	**8.25**	**227**	Pn	**Pn**	**15 50 24.9**	**-2.1**
H03S1				T	T	15 58 55.6	
	baz=57						
H03S2	**Juan Fernandez**	**8.26**	**228**	Pn	**Pn**	**15 50 25.4**	**-1.8**
H03S2				T	T	15 59 01.7	
	baz=57						
LPAZ	**La Paz**	**12.52**	**16**	Pn	**Pn**	**15 51 30.1**	**+3.7**
	comp=E,0.1nm,0.3s,baz=246,slow=6.6,SNR=2.4						
	comp=E,0.7nm,0.5s						
CPUP	**Villa Florida**	**12.86**	**84**	Pn	**Pn**	**15 51 30.4**	**0.0**
	comp=E,0.2nm,0.3s,baz=230,slow=6.7,SNR=1.9						
CPUP				Lg	Lg	15 54 56.6	
	comp=E,0.1nm,0.3s,baz=346,slow=19,SNR=2.0						
	comp=E,1.0nm,0.5s						
CPUP	**Villa Florida**	**12.86**	**84**		**Pn**	**15 51 32.8**	**+2.4**
ITQB	**Itaqui**	**13.16**	**99**	Pn	**Pn**	**15 51 33.1**	**-1.4**
SIV	**San Ignacio**	**15.76**	**40**	Pn	**P**	**15 52 12.3**	**-1.3**
	baz=212,slow=11,SNR=4.0						
	comp=E,0.8nm,0.5s						
PLTB	**Pedras Altas**	**15.93**	**106**	Pn	**Pn**	**15 52 11.4**	**-0.4**
SAML	**Samuel**	**20.95**	**24**	P	**P**	**15 53 09.7**	**-0.9**
SAML				lAmb	lAmb	15 53 15.3	
	comp=Z,2.6nm,0.8s						
SNAA	**Sanae**	**56.61**	**159**		**P**	**15 58 10.1**	**0.0**
SNAA				lAmb	lAmb	15 58 22.6	
	comp=Z,3.7nm,1.3s						
QSPA	**South Pole Qui**	**61.77**	**180**	P	**P**	**15 58 47.3**	**+1.2**
TXAR	**Lajitas Array**	**65.12**	**329**	P	**P**	**15 59 10.5**	**+1.9**
	comp=Z,0.2nm,0.7s,baz=160,slow=6.7,SNR=1.9						
	comp=Z,0.2nm,0.7s						
DBIC	**Dimbokro**	**73.11**	**73**	P	**P**	**15 59 57.9**	**-0.5**
	comp=Z,3.4nm,0.7s,baz=70,slow=20,SNR=3.2						
	comp=Z,3.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**81.99**	**70**	P	**P**	**16 00 47.7**	**-0.4**
	comp=Z,2.5nm,0.7s,baz=254,slow=4.6,SNR=10						
	comp=Z,2.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**81.99**	**70**		**P**	**16 00 46.9**	**-1.1**
TORD				lAmb	lAmb	16 00 48.2	
	comp=Z,2.7nm,0.8s						
ASAR	**Alice Springs**	**122.66**	**208**	PKP	**PKPdf**	**16 07 23.7**	**-0.4**
	comp=Z,0.4nm,0.8s,baz=129,slow=1.6,SNR=2.2						
WRA	**Warramunga Arr**	**125.75**	**210**	PKP	**PKPdf**	**16 07 29.2**	**-0.8**
	comp=Z,0.5nm,1.0s,baz=155,slow=1.6,SNR=4.7						
H11N3	**WAKE ISLAND Hyl**	**26.31**	**274**	T	T	18 26 52.8	
	baz=110						
H11N1	**WAKE ISLAND Hyl**	**26.33**	**274**	T	T	18 26 53.8	
	baz=110						
H11N2	**WAKE ISLAND Hyl**	**26.33**	**274**	T	T	18 26 48.4	
	baz=110						
ZALV	**Zalesovo Beam**	**149.24**	**28**	PKPbc	**PKPbc**	**16 08 16.4**	**+0.5**
	comp=Z,1.8nm,0.6s,baz=307,slow=3.0,SNR=9.2						
MKAR	**Makanchi Array**	**152.57**	**41**	PKPbc	**PKPbc**	**16 08 24.3**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=334,slow=1.4,SNR=9.6						
MKAR	**Makanchi Array**	**152.57**	**41**		**PKPbc**	**16 08 23.9**	**-0.1**

MAN 15 16:09:03.8, 13.63N×123.90E, h31km, mb4.2, ML3.0, MS2.6, Luzon

*TUL **15** 16:28:24.0±0.6, 36.72N±0.01×98.73W±0.02, h7km±4km, ML3.0, mb_Lg2.6/39(NEIC), Error ellipse: s-maj=2.8km s-min=1.7km az=118.0*

NEIC 15 16:28:24.5±0.6, 36.72N±0.01×98.74W±0.03, h5km±3km, Error ellipse: s-maj=3.4km s-min=1.5km az=117.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
U32A	**Winter Ranch,**	**0.40**	**212**		Pg	16 28 32.2	0.0
U32A				Sg	Sg	16 28 38.1	+0.6
OKCFA	**Oklahoma City**	**1.67**	**141**	Pn	Pn	16 28 53.5	-0.9
R32A	**Long Quarter,**	**1.70**	**1**		Pn	16 28 54.4	-0.5
R32A				lAmb_Lg		16 29 21.0	
	comp=Z,33nm,0.7s						
T35A	**Sooner Cattle**	**1.79**	**83**		Pn	16 28 56.0	-0.2
FNO	**Franklin**	**1.82**	**143**	Pn	Pn	16 28 56.1	-0.3
WMOK	**Wichita Mounta**	**1.98**	**181**		Pn	16 28 58.3	-0.4
CBKS	**Cedar Bluff**	**2.24**	**340**	Pn	Pn	16 29 02.2	-0.1
X34A	**Smith Ranch, M**	**2.24**	**161**	Pn	Pn	16 29 02.1	-0.2
X34A				lAmb_Lg		16 29 35.6	
	comp=Z,23nm,0.7s						
TUL1	**Leonard**	**2.51**	**108**	Pn	Pn	16 29 07.1	+1.1
TUL1				lAmb_Lg		16 29 43.5	
	comp=Z,14nm,0.7s						
AMTX	**Amarillo**	**3.01**	**233**	lAmb_Lg		16 30 08.0	
	comp=Z,18nm,0.8s						
X37A	**Clayton**	**3.47**	**127**	Pn	Pn	16 29 18.3	-0.8
U38A	**Gravette**	**3.51**	**93**	Pn	Pn	16 29 20.0	+0.2
KSCO	**Kaye Shedlock'**	**3.84**	**308**	lAmb_Lg		16 30 29.0	
	comp=Z,16nm,0.7s						
HHAR	**Hobbs**	**3.89**	**95**	Pn	Pn	16 29 24.7	-0.2
ABTX	**Abilene, Hawle**	**4.15**	**191**	Pn	Pn	16 29 28.4	-0.3
W39A	**Magazine**	**4.29**	**109**	lAmb_Lg		16 30 42.6	
	comp=Z,9.6nm,0.8s						
T25A	**Trinidad**	**4.57**	**277**	Pn	Pn	16 29 34.8	+0.3
T25A				lAmb_Lg		16 30 55.8	
	comp=Z,16nm,1.1s						
MIAR	**Mount Ida**	**4.73**	**116**	lAmb_Lg		16 31 00.8	
	comp=Z,7.4nm,0.8s						
U40A	**Yellville**	**4.75**	**93**	Pn	Pn	16 29 35.6	-1.2
U40A				lAmb_Lg		16 31 01.4	
	comp=Z,10nm,0.7s						
P38A	**Dawn**	**5.02**	**53**	lAmb_Lg		16 31 04.7	
	comp=Z,7.5nm,0.7s						
X40A	**Basin Creek Fa**	**5.30**	**113**	Pn	Pn	16 29 45.0	+0.7
X40A				lAmb_Lg		16 31 15.3	
	comp=Z,8.7nm,0.8s						
R40A	**Maddies Statio**	**5.38**	**71**	Pn	Pn	16 29 46.1	+0.7
R40A				lAmb_Lg		16 31 23.7	
	comp=Z,6.3nm,0.9s						
WHAR	**Wooly Hollow**	**5.42**	**103**	lA

ETVZ	East Tongariro	0.58	100	P		Pn	16 30 03.8 +0.3
LREZ	Lake Rotokare	0.61	226	P		Pn	16 30 04.3 +1.0
DREZ	Durham Road	0.62	255	P		Pn	16 30 04.1 +0.7
DREZ				S		S	16 30 28.4 -0.4
RATZ	Rangitukua	0.64	75	P		Pn	16 30 03.7 +0.1
WATZ	Wairara	0.68	61	P		Pn	16 30 04.1 +0.3
WATZ				S		S	16 30 27.5 -1.7
RITZ	Rihia Road	0.69	85	P		Pn	16 30 04.3 +0.6
RITZ				S		S	16 30 28.4 -0.9
PREZ	Palmer Road	0.70	244	P		Pn	16 30 04.7 +0.9
MOVZ	Moawhango	0.71	122	P		Pn	16 30 04.1 +0.3
WAZ	Wanganui	0.72	179	P		Pn	16 30 04.9 +1.1
NEZ	North Egmont	0.72	251	P		Pn	16 30 04.8 +0.9
PKE	Pukeiti	0.79	259	P		Pn	16 30 04.9 +0.8
KHEZ	Kahui Hut	0.79	251	P		Pn	16 30 04.9 +0.7
TLZ	Tolley Road	0.83	32	P		Pn	16 30 04.4 -0.1
WHTZ	Whakaora	0.85	65	P		Pn	16 30 04.9 +0.3
KUTZ	Kaahu Road	0.86	51	P		Pn	16 30 04.8 +0.3
HATZ	Hinemaiaia	0.88	81	P		Pn	16 30 04.6 0.0
NBEZ	Newall Road No	0.89	255	P		Pn	16 30 05.5 +0.9
NMEZ	Namu Road	0.93	246	P		Pn	16 30 05.8 +1.0
BHHZ	Black Hill Sta	0.96	119	P		Pn	16 30 05.4 +0.4
WPRZ	Whakapapatarin	1.06	61	P		Pn	16 30 05.5 -0.1
GRRZ	Galatos Road	1.12	53	P		Pn	16 30 06.1 +0.1
MRHZ	Matea Rd	1.14	80	P		Pn	16 30 05.9 -0.3
ALRZ	Allen Road	1.17	67	P		Pn	16 30 06.2 -0.1
BKZ	Black Stump Fm	1.19	97	P		Pn	16 30 06.7 +0.3
BKZ	Black Stump Fm	1.19	97	P		Pn	16 30 06.7 +0.3
KWHZ	Kaweka Forest	1.19	110	P		Pn	16 30 07.4 +0.9
OHWZ	Ohakea	1.20	167	P		Pn	16 30 07.9 +1.5
HRRZ	Handcock Road	1.21	58	P		Pn	16 30 06.6 0.0
HSRZ	Hossack Road	1.23	54	P		Pn	16 30 06.8 +0.1
PRRZ	Plateau Road	1.23	65	P		Pn	16 30 06.5 -0.1
KRHZ	Kereru	1.24	120	P		Pn	16 30 07.5 +0.8
TSZ	Takapari Road	1.27	144	P		Pn	16 30 08.0 +1.0
PNHZ	Pukenui	1.29	133	P		Pn	16 30 08.0 +0.9
TOZ	Tahuroa Road	1.37	18	P		Pn	16 30 07.6 -0.1
RRRZ	Republican Roa	1.39	61	P		Pn	16 30 07.5 -0.3
MCHZ	McNeill Hill	1.40	108	P		Pn	16 30 09.2 +1.3
KARZ	Kaharoa	1.42	45	P		Pn	16 30 08.1 +0.1
NMHZ	Naumai	1.43	93	P		Pn	16 30 09.3 +1.1
OMRZ	Omania	1.44	50	P		Pn	16 30 08.1 -0.1
MTHZ	Maungataniwha	1.47	83	P		Pn	16 30 08.5 +0.1
POWZ	Post Office Ro	1.49	156	P		Pn	16 30 09.3 +0.8
MUGZ	Murupara	1.51	69	P		Pn	16 30 08.1 -0.6
WPHZ	Waipukurau	1.53	133	P		Pn	16 30 09.8 +1.0
DVHZ	Dannevirke	1.56	144	P		Pn	16 30 09.9 +0.8
ARHZ	Aropaoanui	1.59	99	P		Pn	16 30 10.2 +1.0
RTZ	Ruatahuna	1.62	76	P		Pn	16 30 09.4 -0.2
RAHZ	Arahi	1.65	87	P		Pn	16 30 10.4 +0.6
TGRZ	Tauranga	1.65	38	P		Pn	16 30 09.7 -0.1
KAHZ	Kahuranaki	1.66	118	P		Pn	16 30 11.1 +1.2
MRZ	Mangatainoka R	1.69	164	P		Pn	16 30 10.7 +0.6
PRWZ	Pori Road	1.70	154	P		Pn	16 30 11.1 +1.0
OPRZ	Ohinepanea	1.72	47	P		Pn	16 30 10.1 -0.3
CKHZ	Cape Kidnapper	1.75	112	P		Pn	16 30 11.9 +1.3
PXZ	Pawanui	1.77	125	P		Pn	16 30 11.6 +0.9
PRHZ	Porangahau	1.78	134	P		Pn	16 30 11.8 +1.0
OGWZ	Otaki Gorge	1.79	175	P		Pn	16 30 11.8 +0.9
KIW	Kapiti Island	1.82	182	P		Pn	16 30 11.9 +0.6
ANWZ	Angora Road	1.83	141	P		Pn	16 30 12.4 +1.1
URZ	Urewera	1.84	66	P		Pn	16 30 10.6 -0.8
	21nm,0.3s,baz=232,slow=4.0,SNR=252						
URZ				S		S	16 30 37.5 -5.6
	334nm,0.4s,baz=228,slow=10,SNR=60						
URZ	Urewera	1.84	66	P		Pn	16 30 10.6 -0.8
URZ	Urewera	1.84	66	P		Pn	16 30 10.7 -0.8
SNGZ	Shannon Statio	1.86	83	P		Pn	16 30 11.9 +0.3
TIWZ	Tintock	1.88	158	P		Pn	16 30 12.4 +0.7
HOWZ	Holdsworth Sta	1.91	168	P		Pn	16 30 12.5 +0.5
BFZ	Birch Farm	1.91	150	P		Pn	16 30 12.6 +0.6
BFZ	Birch Farm	1.91	150	P		Pn	16 30 12.6 +0.6
MKAZ	Moumakai	1.93	4	P		Pn	16 30 12.2 -0.1
DUWZ	D'Urville Isla	1.94	204	P		Pn	16 30 13.0 +0.7
RAGZ	Rawiri	1.98	75	P		Pn	16 30 12.8 0.0
AWAZ	Awhitu Peninsu	1.98	352	P		Pn	16 30 12.8 0.0
CAW	Cannon Point	2.07	178	P		Pn	16 30 14.1 +0.7
CPWZ	Castlepoint	2.10	154	P		Pn	16 30 13.9 +0.2
KNZ	Kokohu	2.10	90	P		Pn	16 30 14.3 +0.5
MWZ	Matawai	2.12	71	P		Pn	16 30 13.6 -0.4
MTW	Mount Morrison	2.16	169	P		Pn	16 30 14.7 +0.4
TMWZ	Te Maipa	2.19	162	P		Pn	16 30 15.1 +0.5
RIGZ	Rimuhau	2.20	82	P		Pn	16 30 15.1 +0.3
TCW	Tory Channel	2.24	194	P		Pn	16 30 15.8 +0.8
WEL	Wellington	2.25	184	P		Pn	16 30 15.7 +0.5
MBAZ	Motutapu North	2.26	358	P		Pn	16 30 15.2 -0.2
PRGZ	Paritu Road	2.27	88	P		Pn	16 30 15.8 +0.4
SNZO	South Karori	2.28	185	P		Pn	16 30 16.0 +0.6
MHGZ	Mahia Peninsul	2.28	94	P		Pn	16 30 16.2 +0.6
TKGZ	Te Karaka	2.32	76	P		Pn	16 30 16.2 +0.2
KUZ	Kuaotunu	2.36	15	P		Pn	16 30 16.1 -0.3
PAWZ	Paruwai Farm	2.37	172	P		Pn	16 30 16.8 +0.4
RUGZ	Raukumara Rang	2.37	64	P		Pn	16 30 15.1 -1.5
MSWZ	Moikau Station	2.39	175	P		Pn	16 30 16.9 +0.4
TRWZ	Traveller	2.42	167	P		Pn	16 30 17.5 +0.6
ABAZ	Army Bay	2.43	357	P		Pn	16 30 17.3 +0.2
NNZ	Nelson	2.50	209	P		Pn	16 30 18.2 +0.5
TWGZ	Tauwhareparae	2.50	71	P		Pn	16 30 17.8 -0.1
TUMZ	Tuamarina	2.52	198	P		Pn	16 30 18.5 +0.7
TKNZ	Takaka Hill	2.52	217	P		Pn	16 30 17.8 -0.2
PLWZ	Palliser	2.54	175	P		Pn	16 30 18.4 +0.3
HAZ	Te Kaha	2.55	61	P		Pn	16 30 16.8 -1.4
CNGZ	Carnagh Statio	2.59	79	P		Pn	16 30 19.2 +0.6
QRZ	Quartz Range	2.59	226	P		Pn	16 30 18.3 -0.4
QRZ	Quartz Range	2.59	226	P		Pn	16 30 18.4 -0.3
PKGZ	Pakihiroa	2.69	66	P		Pn	16 30 19.1 -0.7
PUZ	Puketiti	2.75	71	P		Pn	16 30 19.7 -0.7
CMWZ	Cape Campbell	2.77	192	P		Pn	16 30 21.6 +1.1
BSWZ	Blackbirch Sta	2.81	197	P		Pn	16 30 21.6 +0.7
MRNZ	Matariki Terra	2.91	215	P		Pn	16 30 21.9 -0.1
WMGZ	Waiomatatini S	2.96	67	P		Pn	16 30 21.9 -0.7
MXZ	Matakaoa Point	3.00	62	P		Pn	16 30 22.4 -0.7
THZ	Tophouse	3.15	209	P		Pn	16 30 24.9 +0.2
KHZ	Kahutara	3.55	197	P		Pn	16 30 29.5 +0.4
KHZ	Kahutara	3.55	197	P		Pn	16 30 29.6 +0.4
DSZ	Denniston Nort	3.63	241	P		Pn	16 30 29.7 -0.5
OUZ	Omahuta	3.96	343	P		Pn	16 30 34.3 +0.2
OUZ	Omahuta	3.96	343	P		Pn	16 30 34.4 +0.2
GVZ	Greta Valley S	4.19	200	P		Pn	16 30 36.6 -0.1
LTZ	Lake Taylor	4.27	208	P		Pn	16 30 37.6 0.0
AMCZ	Amberley	4.49	202	P		Pn	16 30 40.0 -0.3
INZ	Inchbonnie	4.55	215	P		Pn	16 30 40.6 -0.5
OXZ	Oxford	4.83	206	P		Pn	16 30 43.4 -0.9
OKCZ	Okains Bay	4.90	196	P		Pn	16 30 45.0 -0.3
MQZ	McQueen's Vall	4.98	200	P		Pn	16 30 45.2 -1.1
AKCZ	Akaroa Harbour	5.08	197	P		Pn	16 30 47.0 -0.5
RACZ	Rakaia	5.15	204	P		Pn	16 30 47.8 -0.6
WVZ	Waitaha Valley	5.15	217	P		Pn	16 30 47.7 -0.6
WACZ	Wakanui South	5.44	205	P		Pn	16 30 51.5 -0.5
RPZ	Rata Peaks	5.53	211	P		Pn	16 30 52.7 -0.4
	12nm,0.3s,baz=305,slow=1.1,SNR=24						
RPZ				S		S	16 31 53.1 -5.3
	46nm,0.3s,baz=67,slow=4.8,SNR=25						
RPZ	Rata Peaks	5.53	211	P		Pn	16 30 52.6 -0.4
RPZ	Rata Peaks	5.53	211	P		Pn	16 30 53.0 -0.1
GCSZ	Gaunt Creek Bo	5.53	218	P		Pn	16 30 52.3 -0.8
ARCZ	Arundel	5.68	209	P		Pn	16 30 54.3 -0.6
FOZ	Fox Glacier	5.94	219	P		Pn	16 30 57.0 -1.2
TMZ	Timaru	6.11	208	P		Pn	16 31 00.1 -0.3
LBZ	Lake Benmore	6.43	212	P		Pn	16 31 03.8 -0.6
ODZ	Otahua Downs	6.81	207	P		Pn	16 31 09.2 0.0
ODZ	Otahua Downs	6.81	207	P		Pn	16 31 09.6 +0.4
JCZ	Jackson Bay	6.85	221	P		Pn	16 31 08.0 -1.7
WKZ	Wanaka	7.29	216	P		Pn	16 31 13.1 -2.2
MSVF	Nonsavu	21.39	8	P		P	16 34 00.4 +0.1
	0.8nm,0.4s,baz=198,slow=17,SNR=1.4						
	0.8nm,0.4s						
ASAR	Alice Springs	37.93	282	P		P	16 36 27.4 +1.7
	0.8nm,0.8s,baz=120,slow=6.3,SNR=17						
ASAR				PcP		PcP	16 38 35.9 -0.3
	0.4nm,0.9s,baz=116,slow=4.2,SNR=2.3						
	0.8nm,0.8s						
WRA	Warramunga Arr	39.76	287	P		P	16 36 41.2 +0.4
	0.3nm,0.8s,baz=124,slow=7.3,SNR=2.2						
	0.3nm,0.8s						
ARCES	ARCESS Array B	145.40	342	PKPbc		PKPdf	16 48 39.4 +0.4
	3.1nm,0.9s,baz=43,slow=2.0,SNR=14						
FINES	FINESS Array B	150.52	330	PKPbc		PKPbc	16 48 56.6 +3.4
	0.9nm,0.4s,baz=46,slow=4.0,SNR=12						

*NEIC **15** 16:35:13.2±2.6, 8.72S×0.09×160.7E±0.1, h35km±2km, mb4.2/10, Error ellipse: s-maj=20.5km s-min=10.9km az=124.0*
*IDC **15** 16:35:15.7±2.5, 8.82S×160.66E, h70km±15km, mb3.4/3, mbtmp3.8/4, MS2.9/1, Error ellipse: s-maj=34.0km s-min=27.4km az=101.0*

ISC 15 16:35:15.9±1.0, 8.79S±0.08×160.6E±0.1, h69km, n25, σ1§11/21, mb4.0/7, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	Honiara	0.93	227	P		Pn		16 35 32.4	-1.1
	341nm,0.3s,baz=198,slow=1.7,SNR=196								
HNR				S		Sn		16 35 47.2	+0.6
	2um,0.3s,baz=249,slow=23,SNR=20								
HNR	Honiara	0.93	227			Pn		16 35 32.4	-1.1
HNR					Sn	Sn		16 35 45.1	-1.5
KRVT	Keravat (AS076	9.64	297	P		Pn		16 37 31.7	-0.2
	4.9nm,0.3s,baz=119,slow=19,SNR=6.1								
KRVT				S		Sn		16 39 20.9	+2.1
	16nm,0.8s,baz=157,slow=18,SNR=1.9								
PATS	Pohnpei	15.70	351	Pn		Pn		16 38 50.2	-2.7
PATS				IAmb		IAmb		16 39 12.4	
	comp=Z,35nm,0.9s								
EIDS	Eidsvold	18.83	208			Pn		16 39 32.4	+0.9
EIDS				IAmb		IAmb		16 39 37.0	
	comp=Z,20nm,1.2s								
ARMA	Armidale	23.11	200	P		P		16 40 16.6	+0.4
ARMA				IAmb		IAmb		16 40 23.8	
	comp=Z,7.4nm,1.1s								
WR0	Warramunga Arr	27.57	243	P		P		16 40 56.2	-0.4
WR0				IAmb		IAmb		16 41 15.1	
	comp=Z,11nm,1.4s								
WB0	Warramunga Arr	27.63	244	P		P		16 40 57.2	0.0
WB0				IAmb		IAmb		16 40 58.0	
	comp=Z,4.0nm,1.0s								
WB2	Warramunga Arr	27.73	244	P		P		16 40 57.8	-0.3
WB2				IAmb		IAmb		16 41 18.6	
	comp=Z,4.9nm,1.1s								
WRA	Warramunga Arr	27.74	244	P		P		16 40 58.0	-0.2
	comp=Z,0.9nm,0.6s,baz=71,slow=9.5,SNR=14								
	comp=Z,0.9nm,0.6s								
WRA	Warramunga Arr	27.74	244	P		P		16 40 57.8	-0.5
H11S2	WAKE ISLAND Hy	27.76	12	T		T		17 09 36.5	
	baz=193,slow=76,SNR=169								
H11S3	WAKE ISLAND Hy	27.76	12	T		T		17 09 35.4	
	baz=193,slow=76,SNR=155								
H11S1	WAKE ISLAND Hy	27.78	12	T		T		17 09 33.6	
	baz=193,slow=76,SNR=121								
H11N1	WAKE ISLAND Hy	28.98	12	T		T		17 11 05.8	
	baz=193,slow=76,SNR=201								
H11N3	WAKE ISLAND Hy	28.99	12	T		T		17 11 04.7	
	baz=193,slow=76,SNR=166								
H11N2	WAKE ISLAND Hy	29.00	12	T		T		17 11 09.4	
	baz=193,slow=76,SNR=207								
AS31	Alice Springs	29.54	237	P		P		16 41 13.7	-0.5
ASAR	Alice Springs	29.54	237	P		P		16 41 13.7	-0.6
	comp=Z,0.6nm,0.8s,baz=64,slow=10,SNR=19								
	comp=Z,0.6nm,0.8s								
ASAR	Alice Springs	29.54	237	P		P		16 41 13.9	-0.3
KNRA	Kununurra	31.86	254	P		P		16 41 35.1	+0.4
BKZ	Black Stump Fm	33.42	157	P		P		16 41 48.7	+0.5
KSRS	Korea Array	55.26	328	LR		LR		17 06 32.9	
	comp=Z,10nm,18.8s,baz=330,slow=34								
IMAR	Indian Mountai	81.69	17	P		P		16 47 27.9	+1.5
ILAR	Eielson Array	83.06	20	P		P		16 47 34.2	+0.7
	comp=Z,0.2nm,0.5s,baz=237,slow=5.0,SNR=2.3								
	comp=Z,0.2nm,0.5s								

*KRNET **15** 16:50:07.3±0.1, 41.45N×80.41E, mb3.1*
*SOME **15** 16:50:08.0, 41.68N×80.38E, h15km*
*NNC **15** 16:50:09.7±4.9, 41.75N×80.39E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=36.5km s-min=28.5km az=18.0*

ISC 15 16:50:08.8±2.4, 41.66N±0.07×80.32E±0.07, h6km±12km, n26, σ1§97/52, 19C-3D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SHLS	Shalkode	1.62	337	eP		Pn		16 50 36.4	-1.6
	152nm,0.2s								
SHLS				eS		Sn		16 50 57.0	-2.4
	291nm,0.3s								
PRZ	Przheval'sk	1.65	301	⇑iP		Pg		16 50 41.5	+1.1
	baz=6.0								
PRZ				⇑iS		Sg		16 51 06.3	+4.5
	baz=6.0								
UZB	Uzynbulak	1.77	328	eP		Pb		16 50 40.4	-1.3
	12nm,0.1s								
UZB				eS		Sb		16 51 03.8	-0.5
	129nm,0.3s								
PDGK	Podgornoye	1.78	340	⇑Pn		Pb		16 50 40.3	-1.5
	16nm,0.5s								
PDGK				⇑Sn		Sg		16 51 05.1	-0.8
	111nm,0.6s								
TARG	Taragay, Kyrgy	1.88	273	⇑iP		Pb		16 50 43.6	-0.2
	baz=79								
TARG				⇑iS		Sg		16 51 10.9	+1.6
	baz=79								
SATY	Saty	1.99	315	eP		Pg		16 50 45.9	-1.0
	18nm,0.1s								
SATY				eS		Sg		16 51 13.4	+0.7
	113nm,0.1s								
ZHN	Zhinishke	2.05	318	eP		Pb		16 50 46.5	-0.1
	59nm,0.1s								
ZHN				eS		Sg		16 51 14.1	-0.6
	84nm,0.2s								
KPKS	Kokpek	2.17	327	eP		Pb		16 50 47.4	-1.2
	47nm,0.1s								
KPKS				eS		Sb		16 51 16.1	+0.4
	267nm,0.1s								
ANVS	Anan'yevo	2.27	301	⇓iP		Pb		16 50 50.5	+0.3
	baz=4.0								
ANVS				⇓iS		Sg		16 51 21.7	+0.1
	baz=4.0								
KDJ	Kajisay	2.39	282	⇑iP		Pb		16 50 51.6	-0.7
	baz=87								
KDJ				⇑iS		Sb		16 51 23.1	+1.0
	baz=87								
KURS	Kuram	2.42	320	eP		Pb		16 50 52.1	-0.6
	25nm,0.4s								
KURS				eS		Sb		16 51 23.9	+1.0
	42nm,0.3s								
DJR	Jarkent	2.70	352	eP		Pb		16 50 57.0	-0.6
	12nm,0.2s								
DJR				eS		Sb		16 51 31.4	+0.5
	102nm,0.3s								
KOTS	Kotyrbulak	2.85	305	eP		Pb		16 50 59.7	-0.4
	11nm,0.2s								
KOTS				eS		Sb		16 51 37.0	+1.7
	52nm,0.4s								
TNSS	Tian-Shan	2.85	300	eP		Pb		16 51 00.2	-0.1
	10nm,0.3s								
TNSS				eS		Sb		16 51 37.5	+1.9
	21nm,0.3s								
ULHL	Ulahol	3.10	282	⇑iP		Pb		16 51 00.9	-3.5
	baz=86								
ULHL				⇑iS		Sb		16 51 40.8	-1.7
	baz=86								
ARXS	Arharly	3.14	325	eP		Pb		16 51 05.0	0.0
	8.6nm,0.2s								
ARXS				eS		Sb		16 51 45.6	+2.0
	39nm,0.4s								
MTBS	Maitube	3.23	298	eP		Pb		16 51 06.1	-0.6
	5.7nm,0.1s								
MTBS				eS		Sb		16 51 48.1	+1.8
	30nm,0.2s								
BOOM	Boomskoye usch	3.36	286	⇑iP		Pb		16 51 05.2	-3.7
	baz=89								
BOOM				⇑iS		Sb		16 51 47.5	-2.6
	baz=89								
KTBS	Karatobe	3.38	309	eP		Pb		16 51 09.3	+0.3
	12nm,0.3s								
KTBS				eS		Sb		16 51 53.0	+2.6
	45nm,0.4s								
KST	Kastek	3.51	295	eP		Pb		16 51 11.8	+0.5
	7.4nm,0.4s								
KST				eS		Sb		16 51 57.6	+3.3
	32nm,0.1s								
KUU	Kurty	3.68	309	eP		Pb		16 51 14.8	+0.5
	4.9nm,0.0s								
KUU				eS		Sg		16 52 03.1	-3.9
	20nm,0.2s								
KAPS	Kapalarasan	3.69	349	eP		Pb		16 51 14.0	-0.4
	4.9nm,0.1s								
KAPS				eS		Sb		16 52 01.5	+2.0
	28nm,0.2s								
TKM2	Tokmak 2	3.72	291	⇑iP		Pn		16 51 10.2	+3.2
	baz=94								
TKM2				⇑iS		Sb		16 51 55.9	-4.6
	baz=94								
SGDS	Sogindy	4.57	295	eP		Pb		16 51 31.1	+1.7
	3.9nm,0.2s								
SGDS				eS		Sg		16 52 31.2	-4.2
	5.6nm,0.2s								
MAKZ	Makanchi	5.28	12	⇑Pn		Pn		16 51 29.1	+0.9
	2.2nm,0.5s								
MAKZ				⇑Sn		Sn		16 52 29.5	+0.1
	1.6nm,0.5s								
MAKZ				⇑Lg		Lg		16 52 49.5	
	1.9nm,0.4s								
MK31	Makanchi Array	5.32	15	⇑Pn		Pn		16 51 29.7	+0.9
	0.7nm,0.2s,baz=196,slow=14,SNR=48								
MK31				⇑Sn		Sn		16 52 30.5	0.0
	3.2nm,0.6s,baz=204,slow=24,SNR=5.3								
MK31				⇓Lg		Lg		16 52 53.5	
	3.4nm,0.4s								

*IDC **15** 16:59:36.1±2.0, 47.39S×165.36E, h0km, mb3.6/3, mbtmp3.9/5, ML3.9/2, MS3.3/2, Error ellipse: s-maj=57.6km s-min=29.8km az=173.0*
*NEIC **15** 16:59:40.8±3.0, 47.1S±0.1×165.3E±0.1, h23km±6km, mb4.1/3, Error ellipse: s-maj=19.2km s-min=13.4km az=160.0*

ISC 15 16:59:38.9±0.8, 47.18S±0.09×165.39E±0.06, h15km, n46, σ1§27/50, mb3.9/5, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DCZ	Deep Cove	2.11	36	Pn		Pn		17 00 14.3	+0.7
DCZ	Deep Cove	2.11	36	P		Pn		17 00 14.5	+0.9
WHZ	Wether Hill Ro	2.19	55	Pn		Pn		17 00 14.6	-0.2
WHZ	Wether Hill Ro	2.19	55	P		Pn		17 00 14.5	-0.2
WHZ				S		Sn		17 00 42.0	+0.5
MLZ	Mavora Lakes	2.62	47	Pn		Pn		17 00 22.6	+1.8
MLZ	Mavora Lakes	2.62	47	P		Pn		17 00 22.4	+1.7
MLZ				S		Sb		17 00 57.4	-0.2
SYZ	Scrubby Hill	2.65	77	P		Pn		17 00 20.9	-0.1
SYZ				S		Sn		17 00 52.6	-0.3
MSZ	Milford Sound	3.07	36	P		Pn		17 00 29.2	+2.4
TUZ	Tuapeka	3.17	69	P		Pn		17 00 27.8	-0.5
TUZ				S		Sn		17 01 05.9	+0.2
EAZ	Earnscleugh	3.35	56	P		Pn		17 00 31.5	+0.8
EAZ				S		Sn		17 01 12.6	+2.4
WKZ	Wanaka	3.45	48	P		Pn		17 00 34.9	+2.7
FOZ	Fox Glacier	4.80	42	Pn		Pn		17 00 52.4	+1.8
GCSZ	Gaunt Creek Bo	5.20	44	P		Pn		17 00 56.5	+0.3
GCSZ				S		Sn		17 01 54.0	-1.9
RPZ	Rata Peaks	5.28	51	Pn		Pn		17 00 58.4	+1.2
	3.8nm,0.3s,baz=41,slow=17,SNR=2.2								
RPZ				Sn		Sn		17 01 55.4	-2.4
	4.3nm,0.3s,baz=50,slow=17,SNR=1.5								
RPZ				LR		LR		17 03 07.4	
	comp=Z,176nm,21.9s,baz=182,slow=39								
	22nm,0.5s								
RPZ	Rata Peaks	5.28	51	Pn		Pn		17 00 58.3	+1.1
RPZ	Rata Peaks	5.28	51	P		Pn		17 00 58.9	+1.7
RPZ				S		Sn		17 01 54.8	-3.0
INZ	Inchbonnie	6.19	46	P		Pn		17 01 10.2	+0.5
LTZ	Lake Taylor	6.57	50	Pn		Pn		17 01 14.8	-0.2
LTZ	Lake Taylor	6.57	50	P		Pn		17 01 15.5	+0.6
LTZ				S		Sn		17 02 29.5	-0.1
DSZ	Denniston Nort	7.11	42	P		Pn		17 01 22.2	-0.2
DSZ				S		Sn		17 02 42.3	-0.6
MRNZ	Matariki Terra	7.83	45	P		Pn		17 01 32.1	-0.2
MRNZ				S		Sn		17 02 59.4	-1.1
QRZ	Quartz Range	8.17	42	Pn		Pn		17 01 36.5	-0.4
MSWZ	Moikau Station	9.12	54	Pn		Pn		17 01 50.2	+0.3
HIZ	Hauiti	11.10	42	Pn		Pn		17 02 16.0	-1.0
URZ	Urewera	12.39	48	Pn		Pn		17 02 35.6	+1.0
	0.8nm,0.3s,baz=306,slow=17,SNR=2.1								
	9.4nm,1.0s								
OUZ	Omahuta	13.44	30	Pn		Pn		17 02 50.0	+1.0
TAU	Tasmania Unive	13.47	282	Pn		Pn		17 02 47.4	-2.0
TOO	Toolangi	17.52	296			Pn		17 03 43.4	+0.8
TOO				IAmb		IAmb		17 04 03.4	
	comp=Z,20nm,1.4s								
STKA	Stephens Creek	23.75	302	P		P		17 04 51.7	+1.1
	comp=

ZHN	**Zhinishke**	**1.99**	**317**	*eP*		**Pg**	**17 17 48.0**	**-1.4**
	7.2nm,0.1s							
ZHN				*eS*		**Sg**	**17 18 15.5**	**+0.3**
	24nm,0.0s							
KPKS	**Kokpek**	**2.10**	**326**	*eP*		**Pb**	**17 17 49.4**	**+0.2**
	4.6nm,0.2s							
KPKS				*eS*		**Sg**	**17 18 18.4**	**-0.4**
	19nm,0.1s							
ANVS	**Anan'yevo**	**2.22**	**299**	⇓*iP*		**Pg**	**17 17 52.8**	**-1.0**
	baz=7.0							
ANVS				⇓*iS*		**Sg**	**17 18 24.9**	**+2.4**
	baz=7.0							
KURS	**Kuram**	**2.35**	**319**	*eP*		**Pb**	**17 17 53.7**	**+0.2**
	2.1nm,0.2s							
KURS				*eS*		**Sg**	**17 18 25.4**	**-1.5**
	2.1nm,0.1s							
KDJ	**Kajisay**	**2.36**	**281**	⇓*iP*		**Pb**	**17 17 52.6**	**-1.2**
	baz=90							
KDJ				⇓*iS*		**Sb**	**17 18 24.6**	**+1.7**
	baz=90							
DJR	**Jarkent**	**2.62**	**352**	*eP*		**Pb**	**17 17 58.4**	**+0.3**
	1.2nm,0.1s							
DJR				*eS*		**Sg**	**17 18 33.5**	**-1.9**
	7.3nm,0.2s							
KOTS	**Kotyrbulak**	**2.79**	**303**	*eP*		**Pb**	**17 18 02.0**	**+0.9**
	1.3nm,0.1s							
KOTS				*eS*		**Sg**	**17 18 39.7**	**-1.3**
	5.6nm,0.4s							
ULHL	**Ulahol**	**3.07**	**281**	⇑*eP*		**Pn**	**17 18 01.7**	**+2.1**
	baz=88							
ULHL				⇑*iS*		**Sb**	**17 18 42.1**	**-1.1**
	baz=88							
KTBS	**Karatobe**	**3.32**	**308**	*eP*		**Pb**	**17 18 11.1**	**+1.2**
	1.1nm,0.5s							
KTBS				*eS*		**Sg**	**17 18 55.2**	**-2.6**
	4.0nm,0.4s							
BOOM	**Boomskoye usch**	**3.33**	**284**	⇑*iP*		**Pb**	**17 18 06.3**	**-4.0**
	baz=91							
BOOM				⇑*iS*		**Sb**	**17 18 48.6**	**-2.1**
	baz=91							
MAKZ	**Makanchi**	**5.21**	**13**	⇑Pn		**Pn**	**17 18 28.9**	**+0.1**
	0.8nm,0.6s							
MAKZ				⇓Sn		**Sn**	**17 19 30.4**	**+1.7**
	1.2nm,1.2s							
MAKZ				⇑Lg		Lg	17 19 50.2	
	0.6nm,0.8s							
MK31	**Makanchi Array**	**5.25**	**15**	Pn		**Pn**	**17 18 30.8**	**+1.4**
	baz=196,slow=13,SNR=7.0							
MK31				⇑Sn		**Sn**	**17 19 29.7**	**0.0**
	0.3nm,0.6s,baz=201,slow=23							
MK31				⇑Lg		Lg	17 19 52.6	
	0.3nm,0.5s,baz=15,slow=30							

MAN 15 17:23:56.2,16°.15N×122°.29E,h11km,mb4.0,ML2.8, MS2.4,1D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCPH	**Palayan**	**1.29**	**243**	⇓*eP*	Pb	17 24 20.3	0.0
PCPH				*eS*		17 24 40.0	

*DJA **15** 17:40:00.1±0.4,9°.5±3°×12°.4E±°,h99km±5km,M4.0/13, mb4.2/6,MLv3.9/13*

ISC 15 17:40:00.7±0.9,8°.99S±0°.07×124°.09E±0°.07,h74km,n20, σ1°.66/23,Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**1.28**	**199**	P	**Pn**	**17 40 24.6**	**+1.7**
BATI				S	**Sn**	**17 40 44.6**	**+5.0**
MMRI	**Maumere**	**1.86**	**281**	P	**Pn**	**17 40 31.7**	**+1.1**
MMRI				S	**Sn**	**17 40 54.3**	**+1.0**
MMRI	**Maumere**	**1.86**	**281**	P	**Pn**	**17 40 31.9**	**+1.3**
EDFI	**Ende, Flores**	**2.38**	**276**	P	**Pn**	**17 40 39.2**	**+1.6**
EDFI				S	**Sn**	**17 41 06.3**	**+0.4**
BASI	**Baing, Sumba**	**3.67**	**250**	P	**Pn**	**17 40 53.3**	**-1.7**
BBSI	**Bau Bau**	**3.79**	**337**	P	**Pn**	**17 40 57.6**	**+0.9**
BSSI	**Bau Bau, Buton**	**4.55**	**308**	P	**Pn**	**17 41 06.2**	**-0.9**
WBSI	**Waikabubak, Su**	**4.68**	**262**	P	**Pn**	**17 41 08.1**	**-0.8**
BKSI	**Bulukumba**	**5.36**	**313**	P	**Pn**	**17 41 18.2**	**0.0**
	0.0nm13nm,0.7s						
BNSI	**Bone**	**6.04**	**319**	P	**Pn**	**17 41 27.7**	**+0.3**
	0.1nm15nm,0.9s						
PLAI	**Plampang**	**6.24**	**271**	P	**Pn**	**17 41 28.4**	**-1.7**
	0.2nm53nm,0.7s						
PLAI	**Plampang**	**6.24**	**271**	P	**Pn**	**17 41 30.6**	**+0.5**
MTN	**Manton Dam**	**7.91**	**120**	P	**Pn**	**17 41 52.6**	**-0.4**
KNRA	**Kununurra**	**8.06**	**146**	P	**Pn**	**17 41 54.4**	**-0.7**
KDU	**Kakadu**	**9.02**	**115**	P	**Pn**	**17 42 06.7**	**-1.5**
WRKA	**Warakurna**	**16.45**	**166**	P	**Pn**	**17 43 45.4**	**-1.6**
QIS	**Mount Isa**	**18.88**	**129**	P	**P**	**17 44 15.2**	**-0.1**
COEN	**Coen**	**19.34**	**107**	P	**Pn**	**17 44 23.2**	**+1.1**
OOD	**Oodnadatta**	**21.67**	**151**	P	**P**	**17 44 45.8**	**+0.5**
BLDU	**Ballidu**	**22.59**	**197**	P	**P**	**17 44 52.9**	**-2.3**

*TUL **15** 17:57:40.6±1.0,36°.72N±0°.01×98°.73W±0°.02,h6km±5km, ML2.8,mb_Lg2.4/25(NEIC), Error ellipse: s-maj=3.0km s-min=1.7km az=113.0*

NEIC 15 17:57:41.0±0.9,36°.71N±0°.01×98°.70W±0°.02,h5km±1km, Error ellipse: s-maj=3.3km s-min=2.6km az=306.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
U32A	**Winter Ranch,**	**0.41**	**217**	Pg	Pg	17 57 48.9	-0.1
U32A				Sg	Sg	17 57 54.8	+0.5
R32A	**Long Quarter,**	**1.71**	**360**		Pn	17 58 11.8	+0.3
R32A				IAmb_Lg		17 58 37.5	
	comp=Z,26nm,0.8s						
T35A	**Sooner Cattle**	**1.77**	**83**		Pn	17 58 12.6	+0.3
WMOK	**Wichita Mounta**	**1.97**	**182**		Pn	17 58 14.6	-0.4
X34A	**Smith Ranch, M**	**2.22**	**161**		Pn	17 58 17.8	-0.7
AMTX	**Amarillo**	**3.03**	**234**		Pn	17 58 29.8	0.0
X37A	**Clayton**	**3.44**	**127**		Pn	17 58 35.1	-0.2
U38A	**Gravette**	**3.48**	**93**		Pn	17 58 33.1	-2.8
HHAR	**Hobbs**	**3.86**	**95**		Pb	17 58 49.2	-0.4
KSCO	**Kaye Shedlock'**	**3.87**	**308**		Pb	17 58 50.8	+1.0
KSCO				IAmb_Lg		17 59 45.6	
	comp=Z,13nm,0.7s						
W39A	**Magazine**	**4.26**	**109**		Pb	17 58 57.3	+0.9
W39A				IAmb_Lg		18 00 00.5	
	comp=Z,6.7nm,0.8s						
S39A	**Bolivar**	**4.40**	**76**		Pb	17 58 58.5	-0.3
S39A				IAmb_Lg		17 59 59.9	
	comp=Z,11nm,0.7s						
T25A	**Trinidad**	**4.60**	**277**		Pn	17 58 50.0	-1.4
T25A				IAmb_Lg		18 00 08.3	
	comp=Z,5.9nm,0.8s						
U40A	**Yellville**	**4.72**	**93**		Pb	17 59 02.8	-1.4
U40A				IAmb_Lg		18 00 22.0	
	comp=Z,10nm,1.0s						
P38A	**Dawn**	**5.00**	**53**	IAmb_Lg		18 00 28.5	
	comp=Z,5.9nm,0.7s						
MGMO	**Mountain Grove**	**5.17**	**83**	IAmb_Lg		18 00 26.0	
	comp=Z,5.6nm,0.8s						
X40A	**Basin Creek Fa**	**5.27**	**113**	IAmb_Lg		18 00 39.0	
	comp=Z,6.1nm,0.8s						
R40A	**Maddies Statio**	**5.35**	**71**	IAmb_Lg		18 00 39.3	
	comp=Z,4.9nm,0.7s						
FCAR	**Ozark Folk Cen**	**5.37**	**97**	IAmb_Lg		18 00 35.2	
	comp=Z,5.9nm,1.0s						
JCT	**Junction City**	**6.28**	**189**	IAmb_Lg		18 01 12.4	
	comp=Z,5.6nm,0.7s						
PHWY	**Pilot Hill**	**6.98**	**313**	IAmb_Lg		18 01 30.5	
	comp=Z,4.5nm,1.0s						

*NNC **15** 17:57:43.9±0.2,47°.34N×81°.94E,h0km,mb3.1,mpv2.4, Error ellipse: s-maj=1.9km s-min=1.2km az=72.0*
*SOME **15** 17:57:43.2,47°.22N×81°.40E,h0km*

ISC 15 17:57:42.3±1.4,47°.32N±0°.05×81°.66E±0°.05,h6km±16km, n14,σ0°.43/27,3C-1D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAKZ	**Makanchi**	**0.55**	**157**	⇑P	**Pb**	**17 57 54.4**	**0.0**
	5.4nm,0.3s						
MAKZ				⇑S	**Sb**	**17 58 01.7**	**-0.8**
	2.3nm,0.2s						
MK05	**Makanchi Array**	**0.68**	**140**	P	**Pg**	**17 57 55.6**	**+0.3**
MK05				S	**Sg**	**17 58 04.3**	**+0.3**
MK31	**Makanchi Array**	**0.68**	**140**	P	**Pg**	**17 57 55.5**	**+0.3**
	1.2nm,0.2s,baz=117,slow=14,SNR=1080						
MK31				S	**Sg**	**17 58 04.0**	**0.0**
	6.8nm,0.3s,baz=334,slow=29,SNR=29						
MK09	**Makanchi Array**	**0.69**	**142**	P	**Pg**	**17 57 55.9**	**+0.5**
MK09				S	**Sg**	**17 58 04.0**	**-0.3**
MK04	**Makanchi Array**	**0.69**	**141**	P	**Pg**	**17 57 55.9**	**+0.3**
MK04				S	**Sg**	**17 58 04.4**	**-0.2**
MK01	**Makanchi Array**	**0.70**	**141**	P	**Pg**	**17 57 56.0**	**+0.3**
MK01				S	**Sg**	**17 58 04.4**	**-0.4**
MK06	**Makanchi Array**	**0.70**	**140**	P	**Pg**	**17 57 56.0**	**+0.3**
MK06				S	**Sg**	**17 58 04.4**	**-0.4**
MK02	**Makanchi Array**	**0.70**	**141**	P	**Pg**	**17 57 56.1**	**+0.4**
MK02				S	**Sg**	**17 58 04.5**	**-0.4**
MK03	**Makanchi Array**	**0.70**	**141**	P	**Pg**	**17 57 56.1**	**+0.3**
MK03				S	**Sg**	**17 58 04.5**	**-0.3**
MK08	**Makanchi Array**	**0.70**	**142**	P	**Pg**	**17 57 56.1**	**+0.3**
MK08				S	**Sg**	**17 58 04.7**	**-0.2**
MK07	**Makanchi Array**	**0.72**	**141**	P	**Pg**	**17 57 56.3**	**+0.2**
MK07				S	**Sg**	**17 58 05.0**	**-0.4**
ZSN	**Zaisan**	**2.18**	**85**	*eP*	**Pb**	**17 58 21.7**	**-0.4**
	2.3nm,0.2s						
ZSN				*eS*	**Sb**	**17 58 50.2**	**+0.7**
	7.0nm,0.3s						
KAPS	**Kapalarasan**	**2.58**	**219**	*eP*	**Pb**	**17 58 28.6**	**-0.4**
	0.8nm,0.2s						
KAPS				*eS*	**Sb**	**17 59 01.9**	**+0.8**
	3.1nm,0.4s						
KURBB	**Kurchatov Arra**	**3.90**	**329**	⇓Pg	**Pg**	**17 58 57.0**	**+0.1**
	1.4nm,0.8s						
KURBB				⇑Lg	Lg	17 59 49.6	
	7.7nm,0.6s						

*IDC **15** 18:17:01.7±1.0,8°.43N×82°.72W,h0km,mb3.9/8, mbtmp3.9/9,ML4.5/1,MS3.5/17,Error ellipse: s-maj=46.8km s-min=14.5km az=46.0*
*UPA **15** 18:17:05.8±1.5,8°.32N×82°.78W,h12km±3km,MW4.5, Fault plane solution: NP1:φs70.91000°,δ60.13000°, λ-12.06000°.*
*NEIC **15** 18:17:06.1±1.7,8°.37N±0°.06×82°.83W±0°.06,h20km±6km, mb4.5/74,Error ellipse: s-maj=10.7km s-min=6.7km az=45.0*
*INET **15** 18:17:06.3±2.3,8°.28N×82°.85W,h13km±24km,MW4.1*
*UCR **15** 18:17:06.0±3.0,8°.33N×82°.84W,h12km±9km,MW4.9, mb4.5(NEIC)*

ISC 15 18:17:05.2±0.5,8°.30N±0°.03×82°.83W±0°.03,h21km±1km, n218,σ1°.20/218,mb4.5/42,MS3.6/12,9C-17D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTPM	**Petroterminale**	**0.11**	**206**	⇑*iP*	**Pb**	**18 17 09.6**	**-2.2**
PTPM				*eS*	**Sb**	**18 17 13.3**	**-3.3**
LIMO3	**Limones**	**0.20**	**189**	⇑*iP*	**Pb**	**18 17 10.8**	**-0.3**
LIMO3				*eS*	**Sb**	**18 17 15.3**	**+0.1**
CDITO	**Canoas**	**0.27**	**351**		**Pb**	**18 17 11.4**	**-0.1**
CDITO				Sg	**Sb**	**18 17 13.7**	**-2.3**
CDITO	**Canoas**	**0.27**	**351**	⇑*eP*	**Pb**	**18 17 11.3**	**-0.2**
CDITO				*i S*	**Sb**	**18 17 16.1**	**+0.1**
BAGA3	**Bagala, Chiriq**	**0.34**	**62**	⇓*iP*	**Pb**	**18 17 13.1**	**+0.6**
DVD	**David**	**0.40**	**71**	⇓*eP*	**Pb**	**18 17 13.6**	**+0.2**
DVD				*eS*	**Sb**	**18 17 19.6**	**+0.6**
MLIR3	**Monte Lirio, C**	**0.49**	**1**	⇓*iP*	**Pb**	**18 17 15.3**	**+0.2**
BRU2	**Volcan**	**0.51**	**16**		**Pb**	**18 17 15.4**	**-0.1**
BRU2	**Volcan**	**0.51**	**16**	⇓*iP*	**Pb**	**18 17 15.4**	**-0.1**
BRU2	**Volcan**	**0.51**	**16**	⇓*iP*	**Pb**	**18 17 15.4**	**-0.1**
BRU2				*i S*	**Sb**	**18 17 24.1**	**+1.6**
PTAR3	**Potrerillos Ar**	**0.51**	**40**	⇓*iP*	**Pb**	**18 17 15.4**	**-0.1**
PTAR3				*eS*	**Sb**	**18 17 23.8**	**+1.2**
EDSV	**San Vito**	**0.53**	**345**	*eP*	**Pb**	**18 17 15.8**	**-0.2**
EDSV				*eS*	**Sn**	**18 17 25.1**	**-1.0**
BC3P	**Paso Ancho**	**0.55**	**23**	⇓*iP*	**Pb**	**18 17 15.9**	**-0.5**
LNBQ3	**Los Naranjos,**	**0.62**	**38**	⇓*iP*	**Pb**	**18 17 16.8**	**-0.7**
LNBQ3				*eS*	**Sb**	**18 17 26.2**	**+0.3**
PSOM3	**Paja de Sombre**	**0.63**	**53**	⇓*eP*	**Pb**	**18 17 17.0**	**-0.7**
EDPN	**Palmar Norte**	**0.90**	**317**	*eP*	**Pb**	**18 17 21.2**	**-0.9**
EDPN				*eS*	**Sn**	**18 17 35.2**	**+0.2**
CHGR2	**Aguacate**	**0.93**	**47**	⇓*eP*	**Pb**	**18 17 21.5**	**-1.1**
CHGR2				*i S*	**Sb**	**18 17 34.4**	**-0.1**
EDBA	**Buenos Aires**	**0.96**	**333**	*eP*	**Pb**	**18 17 22.7**	**-0.5**
EDBA				*eS*	**Sn**	**18 17 37.5**	**+1.0**
REME3	**Remedios, Chir**	**0.99**	**94**	⇑*eP*	**Pb**	**18 17 22.9**	**-0.7**
DRK0	**Durika**	**1.04**	**337**		**Pb**	**18 17 24.2**	**-0.4**
DRK0	**Durika**	**1.04**	**337**	⇑*eP*	**Pb**	**18 17 24.5**	**-0.1**
DRK0				*eS*	**Sn**	**18 17 39.9**	**+1.3**
SRBA	**San Rafael, Bu**	**1.06**	**331**		**Pb**	**18 17 23.7**	**-1.2**
SRBA				Sn	**Sb**	**18 17 37.6**	**-0.8**
SRBA	**San Rafael, Bu**	**1.06**	**331**	*eP*	**Pb**	**18 17 23.6**	**-1.4**
NANC3	**Nancito, Chiri**	**1.09**	**93**	⇑*eP*	**Pn**	**18 17 24.1**	**-1.2**
CNI2	**El Empalme, Bo**	**1.17**	**18**	⇓*eP*	**Pn**	**18 17 25.7**	**-0.6**
CNI2				*eS*	**Sn**	**18 17 42.7**	**+1.1**
RGM0	**Gandoca**	**1.30**	**10**		**Pn**	**18 17 28.5**	**+0.4**
RGM0	**Gandoca**	**1.30**	**10**	⇓*eP*	**Pb**	**18 17 29.2**	**+0.3**
RGM0	**Gandoca**	**1.30**	**10**	*eP*	**Pb**	**18 17 29.3**	**+0.3**
PEZE	**Perez Zeledon,**	**1.36**	**322**		**Pn**	**18 17 28.4**	**-0.6**
EDDO	**Dominical**	**1.39**	**313**	*eP*	**Pn**	**18 17 29.1**	**-0.2**
CDM	**Cerro de Muert**	**1.55**	**324**	*eP*	**Pn**	**18 17 31.2**	**-0.7**
GMAL	**Guarumal, Vera**	**1.67**	**109**	*eP*	**Pn**	**18 17 32.0**	**-1.3**
GMAL	**Guarumal, Vera**	**1.67**	**109**	⇓*eP*	**Pn**	**18 17 32.0**	**-1.3**
GMAL				*eS*	**Sb**	**18 17 56.5**	**+0.6**
RIMA	**Rio Macho**	**1.78**	**325**		**Pn**	**18 17 34.4**	**-0.5**
RIMA	**Rio Macho**	**1.78**	**325**	*eP*	**Pn**	**18 17 34.3**	**-0.5**
RIMA	**Rio Macho**	**1.78**	**325**	*eP*	**Pn**	**18 17 34.6**	**-0.2**
RIMA				*eS*	**Sb**	**18 17 58.4**	**-0.7**
BATAN	**Batan**	**1.86**	**343**		**Pn**	**18 17 36.2**	**+0.4**
BATAN	**Batan**	**1.86**	**343**	⇓*eP*	**Pn**	**18 17 36.9**	**+1.1**
BATAN				*eS*	**Sb**	**18 18 01.0**	**-0.4**
MARI3	**Mariato, Verag**	**1.94**	**109**	⇑*eP*	**Pn**	**18 17 37.5**	**+0.7**
CVTR	**Volcan Turrial**	**1.94**	**332**		**Pn**	**18 17 37.7**	**+0.5**
HDC3	**Heredia 3**	**2.11**	**323**	*eP*	**Pn**	**18 17 41.2**	**+1.8**
HDC	**Heredia**	**2.11**	**323**		**Pn**	**18 17 39.9**	**+0.5**
HDC	**Heredia**	**2.11**	**323**	*eP*	**Pn**	**18 17 40.3**	**+0.9**
HDC	**Heredia**	**2.11**	**323**	⇑*eP*	**Pb**	**18 17 41.4**	**-1.4**
HDC				*i S*	**Sb**	**18 18 08.9**	**+0.2**
CACAO	**El Cacao, Vera**	**2.17**	**116**	*eP*	**Pn**	**18 17 40.8**	**+0.8**
CACAO	**El Cacao, Vera**	**2.17**	**116**	⇓*eP*	**Pn**	**18 17 40.9**	**+0.8**
CACAO				*eS*	**Sb**	**18 18 09.5**	**-0.8**
JACO	**JACO, Garabito**	**2.26**	**307**		**Pn**	**18 17 40.9**	**-0.4**
JACO	**JACO, Garabito**	**2.26**	**307**	*eP*	**Pn**	**18 17 40.7**	**-0.6**
PNME	**Penonome**	**2.48**	**86**	⇓*eP*	**Pn**	**18 17 45.5**	**+1.1**
LAFE	**Finca La Fe, P**	**2.54**	**306**	*eP*	**Pn**	**18 17 44.9**	**-0.2**
LAFE	**Finca La Fe, P**	**2.54**	**306**	*eP*	**Pn**	**18 17 45.1**	**0.0**
LAFE				*eS*	**Sn**	**18 18 17.1**	**+1.6**
AZU	**Azuero**	**2.58**	**101**	*eP*	**Pn**	**18 17 46.2**	**+0.5**
AZU	**Azuero**	**2.58**	**101**	⇓*eP*	**Pn**	**18 17 46.3**	**+0.5**
AZU				*eS*	**Sn**	**18 18 16.2**	**-0.4**
FORC	**Fortuna**	**2.81**	**320**	*eP*	**Pn**	**18 17 51.9**	**+2.9**
CASO	**Castillo**	**2.83**	**319**	*eP*	**Pn**	**18 17 51.4**	**+2.2**
CEDE	**Laguna Cedeo**	**2.85**	**320**	*eP*	**Pn**	**18 17 52.3**	**+2.8**
JTS	**Las Juntas de**	**2.88**	**313**	Pn	**Pn**	**18 17 50.3**	**+0.4**
	75nm,0.3s,baz=181,slow=9.1,SNR=45						
JTS				Sn	**Sn**	**18 18 24.9**	**+1.0**
	81nm,0.3s,baz=64,slow=21,SNR=15						
JTS				Lg	Lg	18 18 31.9	
	90nm,0.3s,baz=355,slow=21,SNR=4.6						
JTS				LR	LR	18 19 02.5	
	comp=Z,714nm,19.3s,baz=194,slow=42						
	186nm,0.4s						
JTS	**Las Juntas de**	**2.88**	**313**	Pn	**Pn**	**18 17 49.8**	**-0.1**
JTS	**Las Juntas de**	**2.88**	**313**	*eP*	**Pn**	**18 17 50.5**	**+0.6**
JTS	**Las Juntas de**	**2.88**	**313**	*eP*	**Pn**	**18 17 50.2**	**+0.4**
JTS	**Las Juntas de**	**2.88**	**313**	*eS*	**Sn**	**18 18 24.8**	**+0.9**
JTS	**Las Juntas de**	**2.88**	**313**	*eP*	**Pn**	**18 17 50.5**	**+0.6**
INDI	**Punta indio, G**	**3.06**	**301**	*eP*	**Pn**	**18 17 52.0**	**-0.3**
BCIP	**Isla Barro Col**	**3.08**	**74**	Pn	**Pn**	**18 17 53.2**	**+0.6**
BCIP	**Isla Barro Col**	**3.08**	**74**	*eP*	**Pn**	**18 17 53.3**	**+0.7**
BCIP	**Isla Barro Col**	**3.08**	**74**	⇓*iP*	**Pn**	**18 17 53.5**	**+0.9**
BCIP				*eP*	Pb	18 17 53.6	-5.7
BCIP	**Isla Barro Col**	**3.08**	**74**	*eP*	**Pn**	**18 17 53.2**	**+0.6**
DUNO	**Dulce Nombre,**	**3.17**	**304**		**Pn**	**18 17 54.0**	**+0.2**
DUNO	**Dulce Nombre,**	**3.17**	**304**	*eP*	**Pn**	**18 17 54.3**	**+0.4**
GUAI	**GUAI**	**3.29**	**307**	*eP*	**Pn**	**18 17 56.3**	**+0.8**
ORTG	**Ortega, Santa**	**3.30**	**308**	Pn	**Pn**	**18 17 56.7**	**+0.9**
ORTG	**Ortega, Santa**	**3.30**	**308**	*eP*	**Pn**	**18 17 57.2**	**+1.4**
ORTG				*eS*	**Sn**	**18 18 35.3**	**+0.8**
COLC	**Colonia**	**3.31**	**315**	*eP*	**Pn**	**18 17 58.9**	**+3.0**
UPA	**Univ. de Panam**	**3.33**	**78**	*eP*	**Pb**	**18 18 01.3**	**-2.2**
HORNC	**Hornillas**	**3.33**	**316**	*eP*	**Pn**	**18 17 58.4**	**+2.3**
GUAB	**Guayabo de Bag**	**3.36**	**315**	*eP*	**Pn**	**18 17 59.6**	**+3.0**
GPS2	**Hotel Rincn d**	**3.48**	**315**	*eP*	**Pn**	**18 17 59.7**	**+1.5**
LAPC	**Finca la Perla**	**3.55**	**314**	*eP*	**Pn**	**18 18 01.4**	**+2.3**
BUEV	**Buena Vista**	**3.55**	**315**	*eP*	**Pn**	**18 18 02.0**	**+2.8**
BUAI	**Buenos Aires**	**3.55**	**316**	*eP*	**Pn**	**18 18 01.5**	**+2.4**
HZTE	**Horizontes, Gu**	**3.63**	**312**		**Pn**	**18 18 01.1**	**+0.9**
ESPN	**Las Esperanzas**	**4.13**	**340**	Pn	**Pn**	**18 18 05.4**	**-1.7**
CONN	**Concepcion**	**4.25**	**320**	*eP*	**Pn**	**18 18 10.9**	**+2.2**
ACON	**Acoyapa**	**4.31**	**328**		**Pn**	**18 18 10.6**	**+1.1**
BOAB	**BOACO BROADBAN**	**4.97**	**326**		**Pn**	**18 18 19.9**	**+1.2**
CAPC	**Capurgana**	**5.43**	**86**	*eP*	Pn	18 18 30.2	+5.3
MATN	**Matagalpa**	**5.51**	**327**		**Pn**	**18 18 26.6**	**+0.4**
CNGN	**Cerro Negro**	**5.64**	**318**		**Pn**	**18 18 28.0**	**0.0**
CRIN	**San Cristobal**	**6.03**	**317**		**Pn**	**18 18 34.3**	**+1.1**
LCBC	**Los crdobas,**	**6.42**	**85**	*eP*	**Pb**	**18 18 54.4**	**-1.8**
DBBC	**Dabeiba**	**6.69**	**101**	*eP*	**Pn**	**18 18 43.2**	**+0.9**
CBOC	**Ciudad Bolivar**	**7.19**	**109**	*eP*	Pn	18 18 42.1	-7.2
TGUH	**Tegucigalpa,Un**	**7.19**	**323**	Pn	**Pn**	**18 18 48.5**	**-0.7**
SJCC	**San Jacinto, C**	**7.72**	**78**		**Pn**	**18 18 58.9**	**+2.4**
SJCC	**San Jacinto, C**	**7.72**	**78**	*eP*	**Pn**	**18 18 56.6**	**+0.1**
YOTC	**Yotoco, Valle**	**7.75**	**123**	*eP*	**Pn**	**18 18 58.6**	**+1.7**
ZARC	**Zaragoza, Cauc**	**7.94**	**95**		**Pn**	**18 19 01.2**	**+1.7**
GUY2C	**Guyana, Caldas**	**8.02**	**112**	*eP*	**Pn**	**18 19 02.7**	**+1.7**
PTBC	**PUERTO BERRIO,**	**8.49**	**101**	*eP*	**Pn**	**18 19 09.4**	**+2.4**
ORTC	**Ortega, Tolima**	**8.71**	**120**	*eP*	**Pn**	**18 19 09.9**	**-0.2**
ESQI	**Esquipulas**	**8.91**	**315**	Pn	**Pn**	**18 19 12.8**	**0.0**
ROSC	**El Rosal**	**9.13**	**112**	LR	LR	18 22 28.6	
	comp=Z,322nm,20.5s,baz=270,slow=36						
CHIC	**Chingaza**	**9.75**	**111**	*eP*	**Pn**	**18 19 29.1**	**+4.5**
RUSC	**La Rusia**	**9.96**	**103**	*eP*	**Pn**	**18 19 30.5**	**+2.8**
VILC	**Villavicencio,**	**9.99**	**114**	*eP*	**Pn**	**18 19 32.1**	**+4.4**
PORT	**Chimborazo Vol**	**10.51**	**157**	Pn	**Pn**	**18 19 36.2**	**+0.9**
PETF	**Flores**	**10.97**	**322**	Pn	**Pn**	**18 19 38.0**	**-3.0**
SDV	**Santo Domingo**	**12.08**	**86**	LR	LR	18 25 12.3	
	comp=Z,349nm,18.7s,baz=256,slow=41						
CMIG	**Matias Romero**	**14.64**	**308**	Pn	**Pn**	**18 20 32.9**	**+1.7**
	0.5nm,0.3s,baz=121,slow=17,SNR=2.5						
SDDR	**Presa de Saban**	**15.43**	**45**	Pn	**Pn**	**18 20 39.9**	**-1.9**
SDDR				IAmb	IAmb	18 21 05.8	
	comp=Z,43nm,1.5s						
ATAH	**Atahualpa**	**15.96**	**164**	LR	LR	18 26 15.8	
	comp=Z,231nm,20.1s,baz=340,slow=34						
SJG	**San Juan**	**18.92**	**57**	LR	LR	18 27 31.0	
	comp=Z,43nm,20.0s,baz=270,slow=34						
250A	**Grady**	**23.77**	**353**	P	**P**	**18 22 15.6**	**-0.8**
250A				IAmb	IAmb	18 22 18.8	
	comp=Z,14nm,0.7s						
146A	**Union**	**24.89**	**347**	P	**P**	**18 22 27.1**	**+0.4**
LRAL	**Lakeview Retre**	**24.91**	**352**	P	**P**	**18 22 27.7**	**+0.9**
Z47A	**Carrollton**	**25.25**	**350**	P	**P**	**18 22 30.3**	**+0.5**
Z47A				IAmb	IAmb	18 22 31.7	
	comp=Z,14nm,0.9s						
SAML	**Samuel**	**26.02**	**131**	P	**P**	**18 22 36.8**	**-0.2**
W50A	**Signal Mountai**	**26.87**	**356**	P	**P**	**18 22 44.8**	**+0.3**
SWET	**Sewanee**	**26.94**	**354**	P	**P**	**18 22 44.8**	**-0.4**
WLAR	**White Oak Lake**	**26.99**	**341**	P	**P**	**18 22 45.2**	**-0.4**
TKL	**Tuckaleechee C**	**27.24**	**358**	LR	LR	18 33 23.9	
	comp=Z,126nm,19.6s,baz=170,slow=36						
V51A	**Loudon**	**27.41**	**357**	P	**P**	**18 22 48.6**	**-0.8**
UALR	**University of**	**27.76**	**343**	P	**P**	**18 22 52.1**	**-0.4**
UALR				IA

YHL				IAmb	IAmb	18 25 13.4	
	comp=Z,10nm,1.3s						
QLMT	**Earthquake Lak**	**44.02**	**331**	P	**P**	**18 25 12.1**	**+0.6**
BMN	**Battle Mountai**	**44.27**	**322**	P	**P**	**18 25 14.3**	**+0.8**
BMN				IAmb	IAmb	18 25 15.6	
	comp=Z,7.2nm,0.9s						
BCYI	**Bear Canyon**	**44.64**	**329**	P	**P**	**18 25 16.4**	**-0.1**
HLID	**Hailey**	**44.65**	**327**	P	**P**	**18 25 16.5**	**-0.1**
BOZ	**Bozeman (W)**	**44.68**	**331**	P	**P**	**18 25 16.6**	**-0.2**
BOZ				IAmb	IAmb	18 25 18.0	
	comp=Z,6.0nm,1.1s						
LRM	**Limekiln Ridge**	**45.24**	**331**	P	**P**	**18 25 21.4**	**+0.1**
MFID	**Camas Ranch**	**45.33**	**326**	P	**P**	**18 25 22.0**	**+0.1**
MFID				IAmb	IAmb	18 25 23.4	
	comp=Z,5.9nm,1.3s						
WVOR	**Wild Horse Val**	**46.32**	**323**	P	**P**	**18 25 29.8**	**0.0**
WVOR				IAmb	IAmb	18 25 32.5	
	comp=Z,6.6nm,0.9s						
ORV	**Oroville**	**46.50**	**318**	P	**P**	**18 25 31.9**	**+0.8**
ORV				IAmb	IAmb	18 25 34.5	
	comp=Z,9.1nm,1.2s						
PLID	**Pearl Lake**	**46.52**	**328**	P	**P**	**18 25 30.3**	**-1.1**
PLID				IAmb	IAmb	18 25 32.4	
	comp=Z,4.1nm,1.1s						
MSO	**Missoula**	**46.68**	**331**	P	**P**	**18 25 32.0**	**-0.5**
MSO				IAmb	IAmb	18 25 33.3	
	comp=Z,8.7nm,1.4s						
F10A	**Beach Ranch, E**	**47.75**	**328**	P	**P**	**18 25 42.2**	**+1.3**
PLCA	**Paso Flores**	**50.09**	**168**	P	**P**	**18 25 58.8**	**0.0**
	comp=Z,2.2nm,1.1s,baz=356,slow=7.4,SNR=3.7						
	comp=Z,2.2nm,1.1s						
PLCA	**Paso Flores**	**50.09**	**168**	IAmb	IAmb	18 26 04.7	
	comp=Z,4.2nm,1.1s						
SFJD	**Kangerlussuaq**	**62.55**	**14**	LR	LR	18 55 08.8	
	comp=Z,50nm,19.6s,baz=222,slow=37						
INK	**Inuvik**	**68.52**	**342**	P	**P**	**18 28 05.6**	**-0.1**
I29M	**Ogilvie Camp,**	**68.57**	**338**	P	**P**	**18 28 06.0**	**-0.2**
I29M				IAmb	IAmb	18 28 07.6	
	comp=Z,5.4nm,1.2s						
BCAR	**Beaver Creek A**	**68.89**	**335**	P	**P**	**18 28 08.7**	**+0.4**
L27K	**Beaver Creek,**	**68.91**	**335**	P	**P**	**18 28 09.2**	**+0.9**
L27K				IAmb	IAmb	18 28 20.7	
	comp=Z,5.7nm,1.2s						
J26L	**Joseph Creek**	**70.20**	**336**	P	**P**	**18 28 17.2**	**+0.9**
J26L				IAmb	IAmb	18 28 18.5	
	comp=Z,5.3nm,1.2s						
J25K	**Salcha River,**	**70.96**	**336**	P	**P**	**18 28 21.4**	**+0.5**
J25K				IAmb	IAmb	18 28 22.1	
	comp=Z,2.6nm,0.9s						
HDA	**Harding Lake**	**71.53**	**336**	P	**P**	**18 28 24.4**	**+0.1**
HDA				IAmb	IAmb	18 28 25.5	
	comp=Z,6.9nm,1.2s						
IL31		**71.63**	**336**	P	**P**	**18 28 24.8**	**-0.1**
IL31				IAmb	IAmb	18 28 38.7	
	comp=Z,4.6nm,1.2s						
ILAR	**Eielson Array**	**71.63**	**336**	P	**P**	**18 28 24.3**	**-0.6**
	comp=Z,1.3nm,0.9s,baz=110,slow=5.2,SNR=9.4						
	comp=Z,1.3nm,0.9s						
ILAR	**Eielson Array**	**71.63**	**336**	P	**P**	**18 28 24.5**	**-0.4**
BMAR	**Burnt Mountain**	**71.75**	**339**	P	**P**	**18 28 25.5**	**-0.2**
RND	**Reindeer**	**71.99**	**334**	P	**P**	**18 28 27.4**	**+0.2**
MDM	**Murphy Dome**	**72.23**	**336**	P	**P**	**18 28 28.8**	**+0.3**
I23K	**Minto, Yukon-K**	**72.75**	**336**	P	**P**	**18 28 31.9**	**+0.3**
MLY	**Manley**	**73.27**	**336**	P	**P**	**18 28 34.3**	**-0.4**
COLD	**Coldfoot**	**73.72**	**338**	P	**P**	**18 28 38.3**	**+1.1**
COLD				IAmb	IAmb	18 28 39.5	
	comp=Z,4.6nm,1.2s						
I21K	**Tanana**	**73.82**	**336**	P	**P**	**18 28 37.2**	**-0.6**
I21K				IAmb	IAmb	18 28 39.0	
	comp=Z,8.7nm,1.4s						
IMAR	**Indian Mountai**	**74.73**	**336**	P	**P**	**18 28 42.9**	**-0.3**
JMIC	**Jan Mayen**	**77.11**	**19**	LR	LR	19 03 45.6	
	comp=Z,16nm,19.2s,baz=254,slow=36						
TORD	**Torodi Ar. Bea**	**82.85**	**78**	P	**P**	**18 29 28.8**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=262,slow=5.2,SNR=4.7						
	comp=Z,0.9nm,0.7s						
TORD	**Torodi Ar. Bea**	**82.85**	**78**	IAmb	IAmb	18 29 29.3	
	comp=Z,3.7nm,1.2s						
SPITS	**Spitsbergen Ar**	**83.81**	**12**	LR	LR	19 08 05.8	
	comp=Z,33nm,20.8s,baz=249,slow=37						
VRAC	**Vranov**	**89.86**	**40**	LR	LR	19 05 35.8	
	comp=Z,57nm,20.9s,baz=278,slow=32						
AKASG	**Malin Array Be**	**97.22**	**36**	LR	LR	19 11 51.0	
	comp=Z,31nm,19.5s,baz=256,slow=34						
ASAR	**Alice Springs**	**141.67**	**242**	PKhKP	PKPpre	18 36 29.7	
	comp=Z,0.4nm,0.6s,baz=122,slow=3.6,SNR=9.8						
WRA	**Warramunga Arr**	**142.24**	**248**	PKhKP	PKPpre	18 36 32.3	
	comp=Z,1.1nm,1.0s,baz=96,slow=2.3,SNR=4.7						
WRA	**Warramunga Arr**	**142.24**	**248**		PKPpre	18 36 30.6	
PZH	**PanZhiHua**	**145.12**	**353**	PKPbc	**PKPbc**	**18 36 40.6**	**-0.9**
CMAR	**Chiang Mai Arr**	**153.35**	**356**	PKPbc	**PKPbc**	**18 37 01.7**	**-1.1**
	comp=Z,0.7nm,0.6s,baz=320,slow=2.7,SNR=3.3						

*VAO **15** 18:22:38.7±2.0,8.60S×76.18W,h10km,mb4.6*
*ARE **15** 18:23:09±4.5,8.56S±0.07×74.22W±0.09,h195km±6km, Error ellipse: s-maj=0.0km s-min=0.0km az=199.0*
*IDC **15** 18:23:11.1±2.2,8.36S×73.97W,h160km±24km,mb3.5/7, mbtmp4.0/12,Error ellipse: s-maj=29.1km s-min=13.5km az=45.0*
*NEIC **15** 18:23:12.6±2.4,8.51S±0.05×74.19W±0.07,h168km±7km, mb4.1/12,ML4.7(ARE),Error ellipse: s-maj=11.5km s-min=4.2km az=56.0*

ISC 15 18:23:10.8±0.5,8.44S±0.05×74.07W±0.06,h158km,n51, σ1$34/53,mb3.7/9,Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**4.46**	**217**	P	**Pn**	**18 24 18.7**	**+1.4**
	17nm,0.3s,baz=23,slow=6.7,SNR=7.0						
NNA				S	**Sn**	**18 25 06.5**	**-2.7**
	107nm,0.3s,baz=6.8,slow=5.5,SNR=5.1						
NNA	**Nana**	**4.46**	**217**	Pn	**Pn**	**18 24 16.9**	**-0.4**
NNA				Sn	**Sn**	**18 25 06.8**	**-2.4**
ATAH	**Atahualpa**	**4.47**	**287**	P	**Pn**	**18 24 18.4**	**+0.5**
	77nm,0.5s,baz=51,slow=2.3,SNR=18						
ATAH				S	**Sn**	**18 25 09.2**	**-0.9**
	98nm,0.4s,baz=5.0,slow=15,SNR=9.9						
BOSC	**San Juan Bosco**	**6.85**	**320**	Pn	**Pn**	**18 24 46.2**	**-2.9**
ARNL	**Arenillas**	**7.69**	**309**	Pn	**Pn**	**18 24 57.8**	**-2.3**
COHC	**Cochancay**	**7.86**	**319**	Pn	**Pn**	**18 25 03.4**	**+1.0**
ETMB	**Extrema**	**7.88**	**101**	*eP*	**Pn**	**18 25 02.0**	**-0.7**
PORT	**Chimborazo Vol**	**8.36**	**326**	Pn	**Pn**	**18 25 09.9**	**+0.3**
LPAZ	**La Paz**	**9.72**	**144**	P	**Pn**	**18 25 27.4**	**-0.3**
	1.2nm,0.4s,baz=325,slow=4.4,SNR=5.1						
LPAZ	**La Paz**	**9.72**	**144**	Pn	**Pn**	**18 25 26.8**	**-0.8**
SAML	**Samuel**	**10.78**	**94**	Pn	**Pn**	**18 25 40.1**	**-0.9**
PB16	**IPOC Station P**	**10.79**	**156**		**Pn**	**18 25 42.7**	**+1.0**
PB11	**IPOC Station P**	**12.04**	**160**		**Pn**	**18 25 56.6**	**-1.0**
GO01	**Chusmiza**	**12.12**	**158**		**Pn**	**18 25 59.0**	**0.0**
PB08	**IPOC Station P**	**12.57**	**158**	P	**P**	**18 26 10.0**	**+0.1**
PB01	**IPOC Station P**	**13.29**	**161**	P	**P**	**18 26 18.9**	**+1.2**
PB02	**IPOC Station P**	**13.43**	**163**	P	**P**	**18 26 20.4**	**+1.2**
PB07	**IPOC Station P**	**13.81**	**163**	P	**P**	**18 26 25.0**	**+1.4**
PB09	**IPOC Station P**	**14.07**	**161**	P	**P**	**18 26 28.1**	**+1.7**
MACA	**Manacapuru-AM**	**14.31**	**69**	*eP*	**P**	**18 26 29.0**	**0.0**
SIV	**San Ignacio**	**14.75**	**122**	P	**P**	**18 26 33.2**	**-0.7**
	1.3nm,0.4s,baz=298,slow=13,SNR=6.9						
SIV				S	**Sn**	**18 29 12.5**	**-3.6**
	1.6nm,0.5s,baz=110,slow=4.2,SNR=3.0						
LVC	**Limon Verde**	**14.94**	**161**	P	**P**	**18 26 37.0**	**+0.8**
	3.9nm,0.6s,baz=329,slow=6.4,SNR=5.6						
LVC	**Limon Verde**	**14.94**	**161**		**P**	**18 26 37.5**	**+1.2**
ZARC	**Zaragoza, Cauc**	**15.85**	**357**	P	**P**	**18 26 45.9**	**-0.1**
PTLB	**Pontes e Lacer**	**16.18**	**117**	*eP*	**P**	**18 26 49.5**	**-0.1**
OCAC	**Ocana**	**16.59**	**3**	P	**Pn**	**18 26 54.6**	**0.0**
OCAC				IAmb	IAmb	18 27 00.2	
	comp=Z,4.0nm,0.4s						
GO02	**Mina Guanaco**	**17.17**	**166**	P	**Pn**	**18 27 02.5**	**+0.8**
GO02				IAmb	IAmb	18 27 07.1	
	comp=Z,12nm,1.1s						
PDRB	**Porto dos Gac**	**17.37**	**102**	*eP*	**Pn**	**18 27 04.0**	**+0.2**
CLDB	**Colider**	**18.18**	**99**	*eP*	**Pn**	**18 27 13.1**	**-0.3**
SJCC	**San Jacinto, C**	**18.25**	**357**		**Pn**	**18 27 13.4**	**-0.9**
ITTB	**Itaituba**	**18.66**	**79**	*eP*	**P**	**18 27 18.4**	**+1.5**
AC02	**Maricunga**	**18.89**	**166**	P	**Pn**	**18 27 21.3**	**-0.8**
AC02				IAmb	IAmb	18 27 25.7	
	comp=Z,10.0nm,0.7s						
MALB	**Monte Alegre**	**20.77**	**73**	*eP*	**P**	**18 27 42.6**	**+3.0**
SNDB	**Serra Nova Dou**	**22.69**	**101**	*eP*	**P**	**18 28 00.6**	**+1.4**
MCPB	**Macapa, AP**	**23.36**	**71**	*eP*	**P**	**18 28 06.4**	**+1.1**
CPUP	**Villa Florida**	**23.86**	**140**	P	**P**	**18 28 11.6**	**+1.8**
	comp=Z,1.1nm,0.5s,baz=330,slow=8.1,SNR=2.9						
	comp=Z,1.1nm,0.5s						

PLCA	**Paso Flores**	**32.31**	**175**	P	**P**	**18 29 25.1**	**+0.1**
	comp=Z,0.9nm,0.4s,baz=352,slow=11,SNR=9.8						
PLCA				pP	**pP**	**18 30 00.8**	**+2.3**
	comp=Z,0.9nm,0.7s,baz=1.9,slow=8.1,SNR=4.6						
	comp=Z,0.9nm,0.4s						
PLCA	**Paso Flores**	**32.31**	**175**	IAmb	IAmb	18 29 44.6	
	comp=Z,2.6nm,1.1s						
GDU01	**Guandu, BA**	**34.23**	**102**	*eP*	**P**	**18 29 43.3**	**+1.4**
NBAN	**Anadia, AL**	**37.34**	**95**	*eP*	**P**	**18 30 09.0**	**+0.7**
TX31	**Lajitas Ar. Si**	**47.15**	**324**	P	**P**	**18 31 28.1**	**+0.6**
TX31				IAmb	IAmb	18 31 29.1	
	comp=Z,6.9nm,1.1s						
TX32	**Lajitas Array**	**47.15**	**324**	P	**P**	**18 31 27.7**	**+0.1**
TXAR	**Lajitas Array**	**47.15**	**324**	P	**P**	**18 31 28.4**	**+0.8**
	comp=Z,0.8nm,0.5s,baz=151,slow=8.6,SNR=14						
	comp=Z,0.8nm,0.5s						
X37A	**Clayton**	**47.31**	**336**	P	**P**	**18 31 29.0**	**+0.4**
X37A				IAmb	IAmb	18 31 29.6	
	comp=Z,2.9nm,0.7s						
PDAR	**Pinedale Array**	**60.36**	**331**	P	**P**	**18 33 03.1**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=134,slow=8.5,SNR=4.3						
	comp=Z,0.5nm,0.5s						
NVAR	**Mina Array Bea**	**62.19**	**322**	P	**P**	**18 33 16.3**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=131,slow=9.7,SNR=2.8						
	comp=Z,0.4nm,0.6s						
DBIC	**Dimbokro**	**70.62**	**80**	P	**P**	**18 34 09.0**	**-0.7**
	comp=Z,2.2nm,0.3s,baz=275,slow=4.3,SNR=11						
	comp=Z,2.2nm,0.3s						
TORD	**Torodi Ar. Bea**	**78.23**	**75**	P	**P**	**18 34 52.3**	**-1.3**
	comp=Z,0.7nm,0.4s,baz=265,slow=5.2,SNR=15						
	comp=Z,0.7nm,0.4s						
TORD	**Torodi Ar. Bea**	**78.23**	**75**	IAmb	IAmb	18 34 55.7	
	comp=Z,0.9nm,0.8s						
KSRS	**Korea Array**	**144.91**	**329**	PKP	PKPbc	18 42 27.4	-1.7
	comp=Z,0.8nm,0.8s,baz=50,slow=3.8,SNR=3.3						
PZH	**PanZhiHua**	**161.60**	**12**	PKP	**PKPdf**	**18 42 53.9**	**+0.1**

*IDC **15** 18:30:10.9±0.8,12.13N×143.67E,h0km,mb4.2/11, mbtmp4.2/11,MS3.0/5,Error ellipse: s-maj=28.3km s-min=17.6km az=115.0*
*NEIC **15** 18:30:15.7±1.3,12.13N±0.06×143.7E±0.2,h30km±4km, mb4.4/27,Error ellipse: s-maj=24.2km s-min=7.6km az=101.0*

ISC 15 18:30:14.5±0.6,12.09N±0.09×143.9E±0.1,h26km,n56, σ1$31/46,mb4.4/25,MS3.0/5,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.78**	**33**	Pn	**Pb**	**18 30 45.3**	**-1.1**
	79nm,0.3s,baz=178,slow=2.7,SNR=63						
GUMO				Sn	**Sb**	**18 31 09.0**	**+0.7**
	168nm,0.3s,baz=22,slow=23,SNR=15						
GUMO				LR	LR	18 31 39.9	
	comp=Z,223nm,20.2s,baz=214,slow=48						
GUMO	**Guam**	**1.78**	**33**		**Pb**	**18 30 45.1**	**-1.3**
PATS	**Pohnpei**	**15.16**	**109**	Pn	**Pn**	**18 33 44.3**	**-2.7**
H11S3	**WAKE ISLAND Hy**	**22.89**	**71**	T	T	18 59 21.8	
	baz=253,slow=74,SNR=4.8						
H11S1	**WAKE ISLAND Hy**	**22.91**	**71**	T	T	18 59 21.2	
	baz=253						
H11S2	**WAKE ISLAND Hy**	**22.91**	**71**	T	T	18 59 19.1	
	baz=253,slow=74,SNR=6.4						
H11N1	**WAKE ISLAND Hy**	**23.38**	**68**	T	T	18 59 59.4	
	baz=255,slow=75,SNR=6.7						
H11N2	**WAKE ISLAND Hy**	**23.39**	**68**	T	T	18 59 54.8	
	baz=255,slow=75,SNR=2.5						
H11N3	**WAKE ISLAND Hy**	**23.40**	**68**	T	T	18 59 51.6	
	baz=255,slow=75,SNR=6.4						
MJAR	**Matsushiro Arr**	**24.88**	**349**	LR	LR	18 44 33.8	
	comp=Z,41nm,18.1s,baz=184,slow=35						
KSRS	**Kona Array**	**29.03**	**333**	LR	LR	18 46 45.2	
	comp=Z,12nm,19.0s,baz=145,slow=34						
ASAJ	**Asahikawa**	**31.93**	**358**	LR	LR	18 50 13.1	
	comp=Z,14nm,19.6s,baz=192,slow=38						
WRA	**Warramunga Arr**	**33.18**	**197**	P	**P**	**18 36 49.0**	**-0.2**
	0.8nm,0.7s,baz=18,slow=9.6,SNR=6.9						
	0.8nm,0.7s						
ASAR	**Alice Springs**	**36.85**	**195**	P	**P**	**18 37 21.4**	**+0.6**
	0.3nm,0.7s,baz=18,slow=9.7,SNR=5.5						
KLR	**Kul'dur**	**38.37**	**347**	LR	LR	18 51 12.0	
	comp=Z,32nm,19.4s,baz=202,slow=33						
BBOO	**Buckleboo**	**45.26**	**189**	P	**P**	**18 38 30.2**	**+0.3**
SONM	**Songino Array**	**47.41**	**326**	P	**P**	**18 38 47.1**	**+0.3**
	0.7nm,0.5s,baz=144,slow=8.7,SNR=7.2						
SONM				PcP	**PcP**	**18 40 17.6**	**+0.4**
	0.3nm,0.6s,baz=163,slow=1.5,SNR=2.6						
	0.7nm,0.5s						
SONM	**Songino Array**	**47.41**	**326**	IAmb	IAmb	18 38 48.4	
	comp=Z,1.0nm,0.7s						
MK31	**Makanchi Array**	**61.91**	**317**	P	**P**	**18 40 30.2**	**-1.7**
MKAR	**Makanchi Array**	**61.91**	**317**	P	**P**	**18 40 32.1**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=89,slow=8.0,SNR=6.2						
	comp=Z,0.4nm,0.5s						
ZALV	**Zalesovo Beam**	**62.28**	**325**	P	**P**	**18 40 33.8**	**-0.4**
	comp=Z,1.3nm,0.5s,baz=106,slow=8.1,SNR=8.1						
ZALV				PcP	**PcP**	**18 41 13.2**	**-0.7**
	comp=Z,1.0nm,0.6s,baz=94,slow=5.9,SNR=4.5						
	comp=Z,1.3nm,0.5s						
ZALV	**Zalesovo Beam**	**62.28**	**325**	P	**P**	**18 40 31.5**	**-2.7**
KURK	**Kurchatov**	**65.11**	**320**	P	**P**	**18 40 52.7**	**-0.2**
KURK				IAmb	IAmb	18 40 54.0	
	comp=Z,4.1nm,0.8s						
CNPM	**China Poot**	**67.01**	**30**	P	**P**	**18 41 05.0**	**0.0**
PPLA	**Purkeypile**	**67.56**	**26**	P	**P**	**18 41 09.5**	**+0.9**
PPLA				IAmb	IAmb	18 41 16.9	
	comp=Z,7.5nm,1.3s						
CAST	**Castle Rocks**	**67.76**	**26**	P	**P**	**18 41 09.5**	**-0.2**
CAST				IAmb	IAmb	18 41 11.4	
	comp=Z,2.6nm,0.9s						
H21K	**Melozitna Rive**	**68.20**	**24**	P	**P**	**18 41 12.9**	**+0.4**
H21K				IAmb	IAmb	18 41 15.3	
	comp=Z,4.4nm,1.5s						
MLY	**Manley**	**68.82**	**24**	P	**P**	**18 41 17.1**	**+0.7**
MLY				IAmb	IAmb	18 41 18.1	
	comp=Z,3.2nm,1.2s						
SML	**Sawmill**	**68.98**	**28**	P	**P**	**18 41 17.5**	**+0.1**
SML				IAmb	IAmb	18 41 18.7	
	comp=Z,3.5nm,0.7s						
FID	**Port Fidalgo**	**69.61**	**29**	P	**P**	**18 41 22.6**	**+1.3**
KKAR	**Karatay Array**	**69.71**	**312**	P	**P**	**18 41 21.1**	**-1.2**
WRH	**Wood River Hil**	**69.75**	**25**	P	**P**	**18 41 21.8**	**-0.3**
WRH				IAmb	IAmb	18 41 22.7	
	comp=Z,2.2nm,0.8s						
ILAR	**Eielson Array**	**70.33**	**25**	P	**P**	**18 41 25.1**	**-0.5**
	comp=Z,1.5nm,0.7s,baz=251,slow=5.3,SNR=12						
	comp=Z,1.5nm,0.7s						
TOLK	**Toolik Lake Re**	**70.36**	**21**	P	**P**	**18 41 27.4**	**+1.7**
TOLK				IAmb	IAmb	18 41 28.0	
	comp=Z,3.5nm,0.8s						
BRVK	**Borovoye**	**70.57**	**322**	P	**P**	**18 41 27.5**	**+0.2**
BRVK				IAmb	IAmb	18 41 28.0	
	comp=Z,2.6nm,0.6s						
J25K	**Salcha River,**	**70.93**	**26**	P	**P**	**18 41 30.1**	**+0.7**
J25K				IAmb	IAmb	18 41 48.8	
	comp=Z,3.1nm,1.2s						
J26L	**Joseph Creek**	**71.67**	**26**	P	**P**	**18 41 34.5**	**+0.7**
J26L				IAmb	IAmb	18 41 35.2	
	comp=Z,2.3nm,0.7s						
BMAR	**Burnt Mountain**	**71.85**	**23**	P	**P**	**18 41 36.6**	**+1.7**
L27K	**Beaver Creek,**	**72.19**	**27**	P	**P**	**18 41 37.8**	**+0.9**
BCAR	**Beaver Creek A**	**72.21**	**27**	P	**P**	**18 41 37.9**	**+0.8**
I29M	**Ogilvie Camp,**	**74.01**	**25**	P	**P**	**18 41 48.8**	**+1.2**
INK	**Inuvik**	**76.11**	**22**	P	**P**	**18 42 00.6**	**+0.9**
	comp=Z,5.1nm,0.8s,baz=300,slow=4.3,SNR=6.2						
	comp=Z,5.1nm,0.8s						
INK	**Inuvik**	**76.11**	**22**	P	**P**	**18 42 00.8**	**+1.1**
INK				IAmb	IAmb	18 42 01.3	
	comp=Z,6.3nm,0.9s						
ABKAR	**Akbulak array**	**77.00**	**318**	P	**P**	**18 42 04.6**	**-0.4**
ARU	**Arti**	**77.45**	**325**	P	**P**	**18 42 06.7**	**-0.7**
AKTO	**Aktyubinsk**	**78.17**	**319**	LR	LR	19 17 02.9	
	comp=Z,32nm,21.4s,baz=337,slow=36						
YKA	**Yellowknife Ar**	**84.63**	**27**	P	**P**	**18 42 47.0**	**+1.5**
	comp=Z,0.9nm,0.5s,baz=304,slow=2.4,SNR=4.7						
	comp=Z,0.9nm,0.5s						
B08A	**Colville Reser**	**85.53**	**42**	P	**P**	**18 42 52.8**	**+2.3**
NEW	**Newport**	**86.99**	**41**	P	**P**	**18 42 57.9**	**+0.2**
BMO	**Blue Mountains**	**87.73**	**45**	P	**P**	**18 43 04.4**	**+3.0**
BMO				IAmb	IAmb	18 43 05.2	
	comp=Z,2.4nm,0.8s						
ARCES	**ARCESS Array B**	**88.21**	**342**	P	**P**	**18 43 02.7**	**-0.3**
	comp=Z,1.1nm,0.5s,baz=75,slow=1.4,SNR=16						
	comp=Z,1.1nm,0.5s						
NVAR	**Mina Array Bea**	**88.61**	**51**	P	**P**	**18 43 08.4**	**+2.6**
	comp=Z,1.8nm,0.7s,baz=273,slow=5.2,SNR=10						
	comp=Z,1.8nm,0.7s						
MFID	**Camas Ranch**	**89.14**	**46**	P	**P**	**18 43 10.9**	**+2.9**
MFID				IAmb	IAmb	18 43 12.9	
	comp=Z,2.5nm,0.8s						
ELK	**Elko**	**90.29**	**48**	P	**P**	**18 43 13.4**	**-0.2**
ELK				IAmb	IAmb	18 43 18.2	
	comp=Z,1.3nm,0.8s						
FINES	**FINESS Array B**	**92.11**	**335**	P	**P**	**18 43 20.1**	**-1.2**
	comp=Z,1.3nm,0.3s,baz=68,slow=4.9,SNR=26						
	comp=Z,1.3nm,0.3s						
NOA	**NORSAR Array B**	**98.10**	**339**	P	Pdif	18 43 47.8	-0.9
	comp=Z,0.4nm,0.6s,baz=30,slow=6.3,SNR=3.6						
	comp=Z,0.4nm,0.6s						

MAN 15 18:40:48.6,16.34N×121.50E,h29km,mb3.8,ML2.6, MS2.1,1C,Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCPH	**Palayan**	**0.86**	**207**	⇑*eP*	Pn	18 41 05.1	+1.1
PCPH				*eS*		18 41 17.1	

*SOME **15** 18:45:28.7,45.15N×79.05E,h20km*
*NNC **15** 18:45:29.1±0.3,45.07N×79.02E,h0km,mb3.8,mpv3.6, Error ellipse: s-maj=3.0km s-min=2.2km az=140.0*

ISC 15 18:45:29.5±1.0,45.14N±0.03×79.13E±0.03,h22km±9km, n55,σ1$29/86,10C-7D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAPS	**Kapalarasan**	**0.22**	**46**	*eP*	**Pb**	**18 45 35.3**	**0.0**
	166nm,0.1s						
KAPS				*eS*	**Sb**	**18 45 39.4**	**+0.1**
	2µm,0.1s						
KAPS	**Kapalarasan**	**0.22**	**46**	P	**Pb**	**18 45 35.3**	**0.0**
	166nm,0.1s						
KAPS				S	**Sb**	**18 45 39.4**	**+0.1**
	2µm,0.1s						
TDK	**Taldyqorghan**	**0.53**	**256**	*eP*	**Pb**	**18 45 38.0**	**-2.2**
	257nm,0.1s						
TDK				*eS*	**Sb**	**18 45 43.8**	**-3.7**
	684nm,0.2s						
TDK	**Taldyqorghan**	**0.53**	**256**	P	**Pb**	**18 45 38.0**	**-2.2**
	257nm,0.1s						
TDK				S	**Sb**	**18 45 43.8**	**-3.7**
	684nm,0.2s						
DJR	**Jarkent**	**0.93**	**150**	*eP*	**Pb**	**18 45 46.4**	**-0.6**
	25nm,0.2s						
DJR				*eS*	**Sb**	**18 45 58.1**	**-0.8**
	111nm,0.2s						
DJR	**Jarkent**	**0.93**	**150**	P	**Pb**	**18 45 46.4**	**-0.6**
	25nm,0.2s						
DJR				S	**Sb**	**18 45 58.1**	**-0.8**
	111nm,0.2s						
ARXS	**Arharly**	**1.31**	**226**	*eP*	**Pn**	**18 45 51.9**	**-0.7**
	24nm,0.1s						
ARXS				*eS*	**Sn**	**18 46 07.8**	**-1.6**
	102nm,0.2s						
ARXS	**Arharly**	**1.31**	**226**	P	**Pn**	**18 45 51.9**	**-0.7**
	32nm,0.2s						
ARXS				S	**Sn**	**18 46 07.8**	**-1.6**
	102nm,0.5s						
KPKS	**Kokpek**	**1.70**	**191**	*eP*	**Pb**	**18 46 00.2**	**+0.1**
	162nm,0.2s						
KPKS				*eS*	**Sb**	**18 46 22.0**	**+0.9**
	95nm,0.1s						
KPKS	**Kokpek**	**1.70**	**191**	P	**Pb**	**18 45 59.5**	**-0.6**
	162nm,0.2s						
KPKS				S	**Sb**	**18 46 20.4**	**-0.7**
	95nm,0.2s						
KURS	**Kuram**	**1.79**	**203**	*eP*	**Pb**	**18 46 01.1**	**-0.5**
	108nm,0.3s						
KURS				*eS*	**Sb**	**18 46 23.3**	**-0.2**
	41nm,0.1s						
KURS	**Kuram**	**1.79**	**203**	P	**Pb**	**18 46 01.1**	**-0.5**
	108nm,0.3s						
KURS				S	**Sb**	**18 46 23.3**	**-0.2**
	41nm,0.3s						
PDGK	**Podgornoye**	**1.82**	**172**	⇑P	**Pb**	**18 46 01.5**	**-0.7**
	14nm,0.4s						
PDGK				⇑S	**Sb**	**18 46 25.3**	**+0.7**
	90nm,0.7s						

TNSS	**Tian-Shan**	**2.62**	**218**	Pg	**Pb**	**18 46 15.9**	**-0.1**
	34nm,0.4s						
TNSS				Lg	Lg	18 46 48.6	
	40nm,0.4s						
MK31	**Makanchi Array**	**2.76**	**52**	Pn	**Pb**	**18 46 16.8**	**-1.3**
	0.8nm,0.2s,baz=227,slow=14,SNR=199						
MK31				⇑Pg	Pn	18 46 21.7	+9.3
	2.1nm,0.2s,baz=228,slow=15,SNR=10						
MK31				Lg	Lg	18 46 56.6	
	4.7nm,0.3s,baz=233,slow=32,SNR=12						
MTBS	**Maitube**	**2.79**	**225**	*e*P	**Pb**	**18 46 18.6**	**-0.1**
	7.9nm,0.1s						
MTBS				*e*S	**Sb**	**18 46 53.7**	**+1.1**
	105nm,0.1s						
MTBS	**Maitube**	**2.79**	**225**	Pg	**Pb**	**18 46 18.2**	**-0.5**
	10nm,0.2s						
MTBS				Lg	Lg	18 46 52.7	
	187nm,0.4s						
KRBS	**Karabastau**	**2.87**	**241**	*e*P	**Pb**	**18 46 19.7**	**-0.3**
	0.5nm,0.1s						
KRBS				*e*S	**Sb**	**18 46 55.4**	**+0.8**
	29nm,0.2s						
KRBS	**Karabastau**	**2.87**	**241**	Pg	**Pb**	**18 46 19.3**	**-0.6**
	0.6nm,0.3s						
KRBS				Lg	Lg	18 46 54.5	
	29nm,0.2s						
DGS	**Degeres**	**3.07**	**233**	*e*P	**Pb**	**18 46 23.3**	**-0.1**
	12nm,0.3s						
DGS				*e*S	**Sb**	**18 47 01.7**	**+1.2**
	44nm,0.5s						
DGS	**Degeres**	**3.07**	**233**	Pg	**Pb**	**18 46 22.6**	**-0.9**
	12nm,0.3s						
DGS				Lg	Lg	18 47 00.2	
	44nm,0.5s						
KST	**Kastek**	**3.10**	**229**	*e*P	**Pb**	**18 46 24.5**	**+0.6**
	7.2nm,0.3s						
KST				*e*S	**Sb**	**18 47 03.7**	**+2.4**
	31nm,0.1s						
KST	**Kastek**	**3.10**	**229**	Pg	**Pb**	**18 46 23.3**	**-0.7**
	7.2nm,0.3s						
KST				Lg	Lg	18 47 01.3	
	34nm,0.5s						
TKM2	**Tokmak 2**	**3.38**	**230**	⇑Pn	**Pn**	**18 46 23.3**	**+2.3**
	0.9nm,0.6s						
TKM2				⇓Pg	**Pb**	**18 46 29.6**	**+0.8**
	3.4nm,0.5s						
TKM2				⇑Lg	Lg	18 47 10.2	
	5.0nm,0.3s						
BTLS	**Baital**	**3.60**	**270**	*e*P	**Pb**	**18 46 34.2**	**+1.7**
	2.5nm,0.3s						
BTLS				*e*S	**Sb**	**18 47 20.3**	**+4.5**
	5.5nm,0.4s						
BTLS	**Baital**	**3.60**	**270**	Pg	**Pb**	**18 46 34.7**	**+2.2**
	2.5nm,0.3s						
BTLS				Lg	Lg	18 47 21.2	
	5.5nm,0.4s						
SGDS	**Sogindy**	**3.64**	**244**	*e*P	**Pb**	**18 46 33.5**	**+0.3**
	1.4nm,0.0s						
SGDS				*e*S	**Sb**	**18 47 19.1**	**+2.1**
	12nm,0.3s						
SGDS	**Sogindy**	**3.64**	**244**	Pg	**Pb**	**18 46 32.7**	**-0.5**
	3.9nm,0.4s						
SGDS				Lg	Lg	18 47 17.4	
	12nm,0.3s						
CHMS	**Chumysh**	**3.81**	**237**	⇓Pg	**Pb**	**18 46 37.1**	**+1.0**
	6.1nm,0.5s						
CHMS				⇓Lg	Lg	18 47 23.2	
	14nm,0.6s						
ZSN	**Zaisan**	**4.60**	**58**	*e*P	**Pb**	**18 46 48.5**	**-0.9**
	0.7nm,0.1s						
ZSN				*e*S	**Sb**	**18 47 43.3**	**-1.1**
	2.6nm,0.3s						
ZSN	**Zaisan**	**4.60**	**58**	Pg	**Pb**	**18 46 49.4**	**-0.1**
	1.9nm,0.7s						
ZSN				Lg	Lg	18 47 45.8	
	3.7nm,0.5s						
KURBB	**Kurchatov Arra**	**5.51**	**356**	⇓Pg	Pb	18 47 11.0	+6.2
	0.4nm,0.3s						
KURBB				⇓Lg	Lg	18 48 22.1	
	19nm,0.7s						
OTUK	**Ortayu**	**5.62**	**306**	⇑Pg	Pb	18 47 11.8	+5.1
	0.4nm,0.4s						
OTUK				⇓Lg	Lg	18 48 25.8	
	4.0nm,0.5s						
KK31	**Karatay Array**	**6.53**	**255**	Pn	**Pn**	**18 47 05.9**	**+1.7**
	0.7nm,0.7s,baz=99,slow=14,SNR=7.3						
KK31				⇓Lg	Lg	18 48 51.6	
	2.0nm,0.5s,baz=72,slow=28,SNR=9.9						

*IDC **15** 18:47:34.2±2.1,45°.55N×150°.53E, h0km, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=90.8km s-min=27.3km az=81.0*
*JMA **15** 18:47:47.9±0.7,45°.7N±3°.3×15°.0E±°, h30km, MV4.0/13, KURILE ISLANDS REGION*
*SKHL **15** 18:47:48.8±0.3,44°.80N×150°.20E, h49km±5km, mb4.5/3*
ISC 15 18:47:45.4±2.0, 44°.7N±0°.1×150°.4E±0°.1, h35km, n28, σ1s98/32, mb3.5/5, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.87**	**287**	*e*P	**Pn**	**18 48 14.9**	**+0.1**
KUR				AMB	AMB	18 48 18.8	
	120nm,0.3s						
KUR				*e*S	**Sn**	**18 48 34.5**	**-2.7**
KUR				A	A	18 48 35.8	
	370nm,0.2s						
KUR				A	A	18 48 35.8	
	260nm,0.2s						
SHO	**Shikotan**	**2.69**	**253**	*e*P	**Pn**	**18 48 27.6**	**+1.5**
SHO				AMB	AMB	18 48 31.8	
	20nm,0.4s						
SHO				*e*S	**Sn**	**18 48 56.4**	**-1.0**
SHO				A	A	18 49 02.4	
	50nm,0.2s						
SHO				A	A	18 49 02.4	
	80nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**3.31**	**260**	*i* P	**Pn**	**18 48 36.8**	**+2.1**
YUK				AMB	AMB	18 48 39.2	
	30nm,0.2s						
YUK				*e*S	**Sn**	**18 49 13.0**	**+0.2**
YUK				A	A	18 49 17.0	
	80nm,0.3s						
YUK				A	A	18 49 17.0	
	140nm,0.3s						
NEM2	**Nemuro 2**	**3.60**	**250**	*e*P	**Pn**	**18 48 40.9**	**+2.2**
NEM2				*e*S	**Sn**	**18 49 19.8**	**-0.3**
NMR	**Nemuro--Hokkai**	**3.61**	**250**	*i* P	**Pn**	**18 48 41.0**	**+2.1**
NMR				*e*S	**Sn**	**18 49 20.2**	**-0.1**
GLVR	**Golovnino**	**3.63**	**256**	*i* P	**Pn**	**18 48 41.5**	**+2.4**
GLVR				AMB	AMB	18 48 42.2	
	60nm,0.4s						
GLVR				*e*S	**Sn**	**18 49 20.8**	**+0.2**
GLVR				A	A	18 49 31.1	
	170nm,0.4s						
GLVR				A	A	18 49 31.1	
	110nm,0.4s						
JRA	**Rausu**	**3.85**	**260**	*e*P	**Pn**	**18 48 45.1**	**+2.9**
JNK	**Nakash**	**4.23**	**257**	*e*P	**Pn**	**18 48 49.5**	**+2.2**
JNK				*e*S	**Sn**	**18 49 34.9**	**-0.5**
AKK	**Akkeshi**	**4.35**	**249**	*e*P	**Pn**	**18 48 50.8**	**+1.8**
AKK				*e*S	**Sn**	**18 49 37.3**	**-1.1**
JAK	**Akkeshi**	**4.45**	**249**	*e*P	**Pn**	**18 48 52.2**	**+1.8**
JAK				*e*S	**Sn**	**18 49 40.0**	**-1.0**
JTKR	**Abashiri--Toko**	**4.70**	**263**	*e*P	**Pn**	**18 48 56.1**	**+2.2**
JAR	**Ashorobuto**	**4.98**	**256**	*e*P	**Pn**	**18 49 00.0**	**+2.4**
JAR				*e*S	**Sn**	**18 49 53.5**	**-0.3**
JOB	**Onbets**	**5.07**	**252**	*e*P	**Pn**	**18 49 01.2**	**+2.3**
JOB				*e*S	**Sn**	**18 49 55.1**	**-1.1**
JCH	**Churui**	**5.51**	**250**	*e*P	**Pn**	**18 49 06.6**	**+1.7**
JCH				*e*S	**Sn**	**18 50 04.8**	**-2.1**
JKK2	**Kamakawa 2**	**5.55**	**264**	*e*P	**Pn**	**18 49 07.6**	**+2.2**
JNBK	**Urakawa-nobuka**	**6.06**	**249**	*e*P	**Pn**	**18 49 13.9**	**+1.4**
JANG	**Nango**	**7.85**	**240**	*e*P	**Pn**	**18 49 37.7**	**+0.7**
JANG				*e*S	**Sn**	**18 50 59.3**	**-5.3**
H11N2	**WAKE ISLAND Hy 28.44**	**146**		T	T	19 24 35.7	
	baz=336,slow=76,SNR=60						
H11N1	**WAKE ISLAND Hy 28.45**	**146**		T	T	19 24 39.3	
	baz=336,slow=76,SNR=68						
H11N3	**WAKE ISLAND Hy 28.45**	**146**		T	T	19 24 39.4	
	baz=336,slow=76,SNR=73						
H11S1	**WAKE ISLAND Hy 29.46**	**147**		T	T	19 25 58.1	
	baz=336,slow=76,SNR=83						
H11S3	**WAKE ISLAND Hy 29.47**	**147**		T	T	19 26 00.8	
	baz=336,slow=76,SNR=52						
H11S2	**WAKE ISLAND Hy 29.48**	**147**		T	T	19 25 54.6	
	baz=336,slow=76,SNR=58						
MKAR	**Makanchi Array**	**46.20**	**298**	P	P	18 55 58.5	-8.3
	0.4nm,0.7s,baz=78,slow=7.9,SNR=4.1						
	0.4nm,0.7s						
FINES	**FINESS Array B**	**65.06**	**334**	P	P	18 58 10.9	-11
	1.3nm,0.8s,baz=1.4,slow=5.7,SNR=7.1						
	1.3nm,0.8s						
WRA	**Warramunga Arr**	**65.98**	**197**	P	**P**	**18 58 27.1**	**-1.0**
	0.3nm,0.6s,baz=14,slow=6.9,SNR=1.5						
	0.3nm,0.6s						
NOA	**NORSAR Array B**	**69.53**	**340**	P	P	18 58 39.7	-10
	0.4nm,0.4s,baz=29,slow=6.6,SNR=2.1						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**69.68**	**196**	P	**P**	**18 58 51.2**	**-0.2**
	0.4nm,0.8s,baz=12,slow=6.2,SNR=4.8						
	0.4nm,0.8s						

MAN 15 19:05:26.9, 7°.93N×124°.51E, h1km, mb4.1, ML2.9, MS2.5, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAGZ	**Pagadian**	**1.12**	**266**	⇑*i*P	Pn	19 05 49.0	+0.3
PAGZ				*i* S		19 06 05.3	

*IDC **15** 19:05:35.5±1.6, 16°.79S×179°.54W, h553km±17km, mb3.1/8, mbtmp4.0/9, Error ellipse: s-maj=38.9km s-min=17.9km az=149.0*
ISC 15 19:05:35.1±1.1, 16°.8S±0°.3×179°.5W±0°.2, h550km, n17, σ0s62/18, mb3.6/8, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**2.51**	**247**	P	**P**	**19 06 48.1**	**+0.8**
	24nm,0.5s,baz=300,slow=23,SNR=14						
MSVF				S	S	19 07 34.4	-12
	5.2nm,0.2s,baz=31,slow=23,SNR=6.4						
WRA	**Warramunga Arr**	**43.80**	**259**	P	**P**	**19 12 52.4**	**-0.4**
	0.1nm,0.2s,baz=96,slow=7.6,SNR=11						
WRA				PcP	**PcP**	**19 14 27.6**	**+0.4**
	0.2nm,0.7s,baz=89,slow=3.7,SNR=4.9						
	0.2nm,0.2s						
ASAR	**Alice Springs**	**44.08**	**253**	P	**P**	**19 12 55.1**	**+0.1**
	1.2nm,0.5s,baz=86,slow=8.4,SNR=13						
	1.2nm,0.5s						
MJAR	**Matsushiro Arr**	**66.35**	**324**	P	**P**	**19 15 30.3**	**+0.6**
	1.0nm,0.5s,baz=99,slow=11,SNR=4.8						
	1.0nm,0.5s						
PETK	**Petropavlovsk-**	**72.31**	**346**	P	**P**	**19 16 04.9**	**-0.1**
	1.8nm,0.7s,baz=112,slow=11,SNR=6.0						
	1.8nm,0.7s						
NVAR	**Mina Array Bea**	**79.35**	**44**	P	**P**	**19 16 44.8**	**+0.2**
	0.8nm,0.6s,baz=226,slow=7.4,SNR=5.6						
	0.8nm,0.6s						
SEY	**Seymchan**	**82.43**	**347**	P	**P**	**19 16 59.8**	**+0.3**
	2.7nm,0.6s,baz=149,slow=7.0,SNR=16						
	2.7nm,0.6s						
TXAR	**Lajitas Array**	**86.30**	**58**	P	**P**	**19 17 20.4**	**+1.0**
	0.2nm,0.6s,baz=228,slow=3.2,SNR=4.9						
	0.2nm,0.6s						
PDAR	**Pinedale Array**	**87.27**	**44**	P	**P**	**19 17 23.2**	**-0.6**
	0.9nm,0.6s,baz=216,slow=2.5,SNR=8.1						
	0.9nm,0.6s						
ARCES	**ARCESS Array B**	**125.00**	**350**	PKP	**PKiKP**	**19 23 32.0**	**-0.8**
	0.7nm,0.6s,baz=45,slow=0.2,SNR=5.1						
FINES	**FINESS Array B**	**131.80**	**344**	PKP	**PKPdf**	**19 23 45.2**	**-0.3**
	1.2nm,0.9s,baz=31,slow=9.3,SNR=4.1						
BRTR	**Keskin Array B**	**143.22**	**315**	PKP	**PKPdf**	**19 24 06.2**	**-1.1**
	1.3nm,0.7s,baz=12,slow=6.3,SNR=9.2						
CLL	**Collm**	**144.11**	**347**	⇓*i*PKPbc	**PKPab**	**19 24 07.8**	**-0.2**
	comp=Z,10.0nm,1.0s						
GERES	**GERESS Array B**	**146.23**	**344**	PKPbc	**PKPbc**	**19 24 14.1**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=20,slow=4.3,SNR=7.1						
CONA	**Conrad Observa**	**146.44**	**341**	*e*P	**PKPab**	**19 24 17.4**	**0.0**
WTTA	**Wattenberg**	**148.21**	**345**	*e*P	**PKiKP**	**19 24 19.9**	**-1.0**
	comp=Z,2.3nm,0.3s						
ABTA	**Abfaltersbach**	**148.47**	**344**	*e*P	**PKPbc**	**19 24 19.9**	**-0.3**
	comp=Z,1.7nm,0.6s						

*IDC **15** 19:08:56.0±3.0, 40°.15N×144°.09E, h0km, mb3.7/5, mbtmp3.7/6, ML2.5/1, MS2.7/2, Error ellipse: s-maj=71.9km s-min=30.6km az=74.0*
*NIED **15** 19:08:57.6, 40°.19N×143°.69E, h2km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^14 Nm; Mrr=2.09; Mθθ=2.27; Mφφ=-0.17; Mrθ=2.00; Mθφ 1.93; Mφr=2.25; Fault plane solution: Mo=4.12000×10^14 NP1:φs=88.00000°, δ=27.00000°, λ=-47.00000°. NP2:φs=222.00000°, δ=71.00000°, λ=-109.00000°.*
*JMA **15** 19:08:57.6±0.4, 40°.2N±0°.6×144°.4E±°, h2km±3km, MV3.7/33, FAR E OFF SANRIKU*
ISC 15 19:08:58.6±1.2, 40°.17N±0°.06×143°.77E±0°.10, h10km, n28, σ0s79/25, mb3.6/5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**1.48**	**262**	P	**Pn**	**19 09 24.2**	**-1.1**
JKEN	**Kujiedanarisaw**	**1.58**	**272**	P	**Pn**	**19 09 25.8**	**-0.9**
MIYJ	**Miyakonagasawa**	**1.62**	**249**	P	**Pn**	**19 09 26.6**	**-0.5**
JANG	**Nango**	**1.74**	**277**	P	**Pn**	**19 09 28.1**	**-0.8**
JEM	**Erimo**	**1.90**	**346**	P	**Pn**	**19 09 31.1**	**+0.1**
JEM				S	**Sn**	**19 09 54.6**	**-0.4**
JOM	**Ohasama**	**2.04**	**251**	P	**Pn**	**19 09 32.9**	**0.0**
JTM	**Tenmabayashi**	**2.15**	**287**	P	**Pn**	**19 09 34.8**	**+0.2**
JNBK	**Urakawa-nobuka**	**2.24**	**340**	P	**Pn**	**19 09 36.5**	**+0.8**
JMK	**Ichinoseki**	**2.32**	**239**	P	**Pn**	**19 09 37.0**	**+0.2**
JOT	**Ohata**	**2.40**	**301**	P	**Pn**	**19 09 38.4**	**+0.6**
JCH	**Churui**	**2.46**	**353**	P	**Pn**	**19 09 39.0**	**+0.3**
JCH				S	**Sn**	**19 10 08.4**	**-0.4**
JAK	**Akkeshi**	**2.90**	**13**	P	**Pn**	**19 09 45.1**	**+0.3**
JAK				S	**Sn**	**19 10 19.2**	**-0.6**
JYK	**Kaneyama**	**2.92**	**246**	P	**Pn**	**19 09 45.8**	**+0.7**
JAR	**Ashorobuto**	**3.12**	**360**	P	**Pn**	**19 09 47.6**	**-0.2**
JAR				S	**Sn**	**19 10 23.0**	**-2.2**
JEW	**Eniwo**	**3.19**	**328**	S	**Sn**	**19 10 27.0**	**+0.2**
MJAR	**Matsushiro Arr**	**5.68**	**232**	Pn	**Pn**	**19 10 24.1**	**+1.0**
	0.1nm,0.3s,baz=34,slow=12,SNR=9.0						
MJAR				LR	LR	19 12 15.5	
	comp=Z,8.0nm,21.1s,baz=354,slow=34						
	3.5nm,0.9s						
SONM	**Songino Array**	**27.74**	**299**	P	**P**	**19 14 48.3**	**+1.0**
	0.6nm,0.5s,baz=84,slow=9.2,SNR=3.9						
	0.6nm,0.5s						
H11N2	**WAKE ISLAND Hy 28.42**	**129**		T	T	19 44 35.2	
	baz=321,slow=75,SNR=32						
H11N1	**WAKE ISLAND Hy 28.43**	**129**		T	T	19 44 45.2	
	baz=321,slow=75,SNR=31						
H11N3	**WAKE ISLAND Hy 28.44**	**129**		T	T	19 44 40.2	
	baz=321,slow=75,SNR=32						
H11S1	**WAKE ISLAND Hy 29.26**	**131**		T	T	19 45 47.5	
	baz=322,slow=76,SNR=19						
H11S3	**WAKE ISLAND Hy 29.26**	**131**		T	T	19 45 43.7	
	baz=322,slow=76,SNR=19						
H11S2	**WAKE ISLAND Hy 29.28**	**131**		T	T	19 45 41.8	
	baz=322,slow=76,SNR=19						
ZALV	**Zalesovo Beam**	**41.25**	**310**	P	**P**	**19 16 44.3**	**+0.7**
	1.2nm,0.6s,baz=84,slow=8.5,SNR=6.0						
	1.2nm,0.6s						
MKAR	**Makanchi Array**	**44.09**	**300**	P	**P**	**19 17 06.9**	**+0.1**
	0.3nm,0.6s,baz=89,slow=7.5,SNR=2.6						
	0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**45.59**	**306**	P	**P**	**19 17 19.2**	**+0.6**
	2.1nm,0.6s,baz=79,slow=8.5,SNR=23						
	2.1nm,0.6s						
WRA	**Warramunga Arr**	**60.45**	**190**	P	**P**	**19 19 07.5**	**-0.9**
	0.2nm,0.5s,baz=7.2,slow=6.9,SNR=1.2						
	0.2nm,0.5s						
FINES	**FINESS Array B**	**66.89**	**332**	LR	LR	19 50 16.8	
	comp=Z,37nm,18.0s,baz=50,slow=37						

*PRU **15** 19:20:07.7±0.0, 56°.81N×13°.67E, h0km*
*DNK **15** 19:20:34.6±1.8, 54°.95N×14°.71E, h0km, ML2.1, Suspected explosion*
UPP 15 19:20:35.4±1.3, 55°.02N×14°.63E, h2km, ML2.3, Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSD	**Bornholm Skovb**	**0.19**	**59**	*i* P	Pg	19 20 39.0	-0.1
BSD				*i* P		19 20 40.0	
BSD				IAML		19 20 56.6	
	comp=Z,150nm,0.7s						
BJUU	**Bjuv**	**1.40**	**320**	P	Pn	19 21 01.2	-0.7
BJUU				*i* P	Pg	19 21 01.5	-0.7
BJUU				S	Sn	19 21 20.9	-0.1
BJUU				*i* S	Sb	19 21 22.1	+1.6
BJUU	**Bjuv**	**1.40**	**320**	P	Pn	19 21 01.2	-0.7
BJUU				S	Sn	19 21 20.9	-0.1
LLD	**Lille Linde**	**1.42**	**284**	*i* P	Pn	19 21 01.2	-0.9
LLD				*i* S	Sn	19 21 22.6	+1.2
LLD				IAML		19 21 24.8	
	comp=Z,15nm,0.2s						
COP	**Copenhagen**	**1.42**	**299**	*i* P	Pn	19 21 02.2	0.0
COP				*i* S	Sn	19 21 22.3	+0.9
COP				IAML		19 21 27.9	
	comp=Z,38nm,0.2s						
BLEU	**Blekinge**	**1.46**	**27**	P	Pn	19 21 02.2	-0.5
BLEU				*i* P	Pb	19 21 02.2	-0.9
BLEU				S	Sb	19 21 22.1	-0.1
BLEU				*i* S	Sg	19 21 22.2	0.0
BLEU				IAML		19 21 25.6	
	comp=Z,3.8nm,0.2s						
BLEU	**Blekinge**	**1.46**	**27**	P	Pn	19 21 02.2	-0.5
BLEU				S	Sb	19 21 22.1	-0.1
DEL	**Delary**	**1.52**	**344**	P	Pn	19 21 03.0	-0.6
DEL				*i* P	Pb	19 21 03.0	-1.2
DEL				*i* S	Sn	19 21 23.6	-0.3
DEL				IAML		19 21 26.0	
	comp=Z,13nm,0.2s						
DEL	**Delary**	**1.52**	**344**	P	Pn	19 21 03.0	-0.6
VXJU	**Vaexsjoe**	**1.92**	**5**	P	Pn	19 21 09.4	+0.4
VXJU	**Vaexsjoe**	**1.92**	**5**	P	Pn	19 21 09.4	+0.4
GNOU	**Gnosjoe**	**2.33**	**348**	S	Sn	19 21 44.4	+0.4
GNOU	**Gnosjoe**	**2.33**	**348**	S	Sn	19 21 44.4	+0.4
OSKU	**Oskarshamn**	**2.34**	**20**	P	Pn	19 21 14.8	0.0
OSKU	**Oskarshamn**	**2.34**	**20**	P	Pn	19 21 14.8	0.0
EKSU	**Eksjoe**	**2.59**	**8**	P	Pn	19 21 18.3	0.0
EKSU	**Eksjoe**	**2.59**	**8**	P	Pn	19 21 18.3	0.0
ONAU	**Onsala**	**2.83**	**329**	*i* P	Pn	19 21 21.4	-0.1
ONAU				*i* S	Sn	19 21 55.9	-0.2
MUD	**Monsted U'grnd**	**3.40**	**297**	*i* P	Pn	19 21 29.0	-0.4
TJOU	**Tjoern**	**3.45**	**332**	*i* P	Pn	19 21 30.7	+0.6
CLL	**Collm**	**3.84**	**195**	*e*Pn	Pn	19 21 34.0	-1.5
CLL				*e*Sn	Sn	19 22 16.0	-5.1
STRU	**Stroemstad**	**4.45**	**336**	*i* P	Pn	19 21 43.4	-0.3
STRU				*i* S	Sn	19 22 34.4	-1.6
PVCC	**Panska Ves**	**4.50**	**180**	*e*PN	Pn	19 21 43.6	-0.9
CHVC	**Chvalec**	**4.52**	**168**	*e*PN	Pn	19 21 43.9	-0.9
OSTC	**Ostas**	**4.57**	**167**	*e*PN	Pn	19 21 44.9	-0.6
DPC	**Dobruska-Polom**	**4.79**	**167**	*e*PN	Pn	19 21 47.5	-1.0
KRLC	**Kraliky**	**5.12**	**164**	*e*PN	Pn	19 21 51.8	-1.3
KHC	**Kasperske Hory**	**5.93**	**187**	*e*PN	Pn	19 22 00.0	-4.2

*KRNET **15** 19:21:08.8±0.1, 41°.78N×80°.46E, mb3.4*
*SOME **15** 19:21:09.6, 41°.70N×80°.30E, h15km*
*NNC **15** 19:21:10.6±3.9, 41°.67N×80°.29E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=27.3km s-min=21.6km az=141.0*
ISC 15 19:21:11.4±2.4, 41°.77N±0°.07×80°.18E±0°.07, h1km±12km, n35, σ1s67/65, 19C-7D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	**1.49**	**339**	*e*P	**Pn**	**19 21 38.1**	**-1.3**
	225nm,0.2s						
SHLS				*e*S	**Sn**	**19 21 58.7**	**-0.9**
	607nm,0.1s						
PRZ	**Przheval'sk**	**1.50**	**299**	⇓*i*P	**Pg**	**19 21 40.4**	**+0.1**
	baz=96						
PRZ				⇓*i*S	**Sg**	**19 22 03.4**	**+3.6**
	baz=96						
UZB	**Uzynbulak**	**1.62**	**329**	*e*P	**Pb**	**19 21 42.0**	**-0.3**
	20nm,0.0s						
UZB				*e*S	**Sg**	**19 22 05.7**	**+2.1**
	192nm,0.1s						
PDGK	**Podgornoye**	**1.64**	**342**	⇓P	**Pb**	**19 21 41.7**	**-0.9**
	13nm,0.3s						
PDGK				⇑S	**Sg**	**19 22 07.0**	**+2.8**
	176nm,0.7s						
TARG	**Taragay, Kyrgy**	**1.78**	**270**	⇑*e*P	**Pg**	**19 21 45.3**	**-0.2**
	baz=69						
TARG				⇑*i*S	**Sg**	**19 22 12.7**	**+4.2**
	baz=69						
SATY	**Saty**	**1.84**	**315**	*e*P	**Pb**	**19 21 46.1**	**+0.1**
	22nm,0.2s						
SATY				*e*S	**Sg**	**19 22 12.4**	**+1.8**
	213nm,0.1s						
ZHN	**Zhinishke**	**1.90**	**318**	*e*P	**Pg**	**19 21 47.7**	**-0.2**
	78nm,0.1s						
ZHN				*e*S	**Sg**	**19 22 15.1**	**+2.4**
	168nm,0.3s						
KPKS	**Kokpek**	**2.02**	**327**	*e*P	**Pb**	**19 21 49.0**	**-0.2**
	85nm,0.2s						
KPKS				*e*S	**Sg**	**19 22 17.0**	**+0.5**
	404nm,0.3s						
ANVS	**Anan'yevo**	**2.12**	**299**	⇓*i*P	**Pb**	**19 21 50.1**	**-0.7**
	baz=97						
ANVS				⇓*i*S	**Sg**	**19 22 19.7**	**+0.1**
	baz=97						
KDJ	**Kajisay**	**2.27**	**280**	⇑*e*P	**Pb**	**19 21 52.1**	**-1.2**
	baz=79						
KDJ				⇑*i*S	**Sb**	**19 22 23.5**	**+1.6**
	baz=79						
KURS	**Kuram**	**2.27**	**320**	*e*P	**Pb**	**19 21 53.8**	**+0.5**
	36nm,0.5s						
KURS				*e*S	**Sg**	**19 22 25.8**	**+1.4**
	40nm,0.5s						
DJR	**Jarkent**	**2.58**	**354**	*e*P	**Pb**	**19 21 58.1**	**-0.5**
	30nm,0.4s						
DJR				*e*S	**Sg**	**19 22 33.1**	**-1.2**
	148nm,0.4s						
KOTS	**Kotyrbulak**	**2.70**	**304**	*e*P	**Pb**	**19 22 01.3**	**+0.7**
	13nm,0.1s						
KOTS				*e*S	**Sg**	**19 22 38.3**	**+0.1**
	89nm,0.5s						
TNSS	**Tian-Shan**	**2.71**	**299**	*e*P	**Pb**	**19 22 01.9**	**+1.0**
	20nm,0.3s						
TNSS				*e*S	**Sg**	**19 22 39.5**	**+1.0**
	37nm,0.4s						
KNDC	**Almaty**	**2.78**	**302**	⇓Pg	**Pb**	**19 22 01.6**	**-0.5**

DGS				*e*S	**Sg**	**19 23 05.4**	**-0.9**
	33nm,0.6s							
TKM2	**Tokmak 2**	**3.59**	**290**	⇑*i*P	**Pn**	**19 22 10.7**	**+2.3**
	baz=89							
TKM2				⇑*i*S	**Sb**	**19 22 55.5**	**-4.4**
	baz=89							
TKM2	**Tokmak 2**	**3.59**	**290**	⇑Pn	**Pn**	**19 22 10.7**	**+2.3**
	3.0nm,0.2s							
TKM2				⇑Lg	Lg	19 23 07.4		
	27nm,0.6s							
KRBS	**Karabastau**	**3.84**	**302**	*e*P	**Pb**	**19 22 21.9**	**+1.9**
	1.3nm,0.5s							
KRBS				*e*S	**Sg**	**19 23 13.5**	**-1.2**
	28nm,0.4s							
CHMS	**Chumysh**	**4.20**	**289**	⇑Pg	**Pg**	**19 22 31.2**	**-0.8**
	8.0nm,1.0s							
CHMS				⇑Lg	Lg	19 23 24.9		
	7.4nm,0.5s							
SGDS	**Sogindy**	**4.43**	**294**	*e*P	**Pg**	**19 22 33.2**	**-3.0**
	4.2nm,0.1s							
SGDS				*e*S	**Sg**	**19 23 33.8**	**+0.2**
	7.8nm,0.2s							
MAKZ	**Makanchi**	**5.20**	**14**	⇑Pn	**Pn**	**19 22 31.2**	**+0.7**
	2.8nm,0.4s							
MAKZ				⇓Sn	**Sn**	**19 23 31.6**	**+0.5**
	1.8nm,0.5s							
MK31	**Makanchi Array**	**5.25**	**16**	Pn	**Pn**	**19 22 31.2**	**+0.2**
	0.9nm,0.2s,baz=207,slow=15,SNR=97							
MK31				⇑Sn	**Sn**	**19 23 32.2**	**0.0**
	0.6nm,0.2s,baz=206,slow=24,SNR=4.7							
KURBB	**Kurchatov Arra**	**8.93**	**353**	⇑Lg	Lg	19 25 54.0		
	5.8nm,0.6s							

*FUNV **15** 19:26:03.2,8.40N×71.82W,h5km,MW3.8*
ISC 15 19:26:02.3±1.2,8.40N±0.03×71.76W±0.03,h14km±10km, n34,σ1§72/50,Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAPV	**Capacho**	**0.76**	**226**	*e*P	**Pg**	**19 26 16.5**	**-0.7**
CAPV				*e*S	**Sg**	**19 26 27.1**	**-0.1**
SOCV	**Socops**	**0.90**	**97**	*e*P	**Pg**	**19 26 20.0**	**+0.2**
SOCV	**Socops**	**0.90**	**97**	*e*P	**Pg**	**19 26 19.9**	**0.0**
SOCV				*e*S	**Sg**	**19 26 32.1**	**+0.4**
SDV	**Santo Domingo**	**1.22**	**66**	*e*P	**Pb**	**19 26 25.8**	**+0.5**
PAMC	**Pamplona, Colo**	**1.40**	**222**	*e*P	**Pn**	**19 26 28.7**	**+0.9**
OCAC	**Ocana**	**1.55**	**264**	*e*P	**Pn**	**19 26 29.4**	**-0.2**
MCQV	**Machiques**	**1.81**	**335**	*e*P	**Pn**	**19 26 33.1**	**+0.1**
MCQV				*e*S	**Sb**	**19 26 57.6**	**-0.2**
TAMC	**Tame, Arauca**	**1.95**	**181**	*e*P	**Pn**	**19 26 37.1**	**+2.1**
LL1C	**La Loma 1 Cana**	**2.10**	**303**	*e*P	**Pn**	**19 26 38.4**	**+1.3**
BARC	**Barichara**	**2.28**	**218**	*e*P	**Pb**	**19 26 43.6**	**+0.2**
BRRC	**Barranca, Sant**	**2.32**	**237**	*e*P	**Pb**	**19 26 43.7**	**-0.2**
CURV	**Curarigua**	**2.40**	**48**	*e*P	**Pb**	**19 26 44.9**	**-0.4**
CURV				*e*S	**Sn**	**19 27 12.5**	**+2.1**
ELOV	**Elorza**	**2.65**	**121**	*e*P	**Pb**	**19 26 48.3**	**-1.3**
ELOV	**Elorza**	**2.65**	**121**	*e*P	**Pn**	**19 26 47.1**	**+2.5**
ELOV				*e*S	**Sn**	**19 27 18.9**	**+2.3**
DABV	**Dabajuro**	**2.75**	**24**	*e*P	**Pn**	**19 26 46.7**	**+0.8**
DABV	**Dabajuro**	**2.75**	**24**	*e*P	**Pn**	**19 26 46.6**	**+0.8**
DABV				*e*S	**Sn**	**19 27 19.8**	**+0.9**
RUSC	**La Rusia**	**2.81**	**208**	*e*P	**Pn**	**19 26 50.2**	**+3.0**
SIQV	**Siquisique**	**2.95**	**41**	*e*P	**Pn**	**19 26 50.1**	**+1.3**
SIQV				*e*S	**Sn**	**19 27 25.5**	**+1.4**
ZARC	**Zaragoza, Cauc**	**3.19**	**254**	*e*P	**Pn**	**19 26 53.3**	**+1.2**
PTBC	**PUERTO BERRIO,**	**3.25**	**236**	*e*P	**Pn**	**19 26 52.9**	**+0.1**
MAPV	**Macapo**	**3.56**	**66**	*e*P	**Pn**	**19 26 60.0**	**+2.8**
MAPV				*e*S	**Sn**	**19 27 40.2**	**+1.1**
SPBC	**San Pablo de B**	**3.56**	**220**	*e*P	**Pn**	**19 26 59.3**	**+2.1**
BAUV	**El Baul**	**3.72**	**81**	*e*P	**Pn**	**19 27 01.1**	**+1.8**
BAUV				*e*S	**Sn**	**19 27 44.1**	**+1.2**
CHIC	**Chingaza**	**4.22**	**208**	*e*P	**Pn**	**19 27 09.0**	**+2.4**
TURV	**Turiamo**	**4.38**	**62**	*e*P	**Pn**	**19 27 09.8**	**+1.4**
TURV				*e*S	**Sn**	**19 27 58.9**	**-0.3**
BENV	**Beln**	**4.40**	**69**	*e*P	**Pn**	**19 27 10.7**	**+2.0**
BENV				*e*S	**Sn**	**19 27 59.9**	**+0.2**
VILC	**Villavicencio,**	**4.67**	**204**	*e*P	**Pn**	**19 27 13.9**	**+1.4**
CBOC	**Ciudad Bolivar**	**4.91**	**239**	*e*P	**Pn**	**19 27 18.4**	**+2.5**
PAYV	**Puerto Ayacuch**	**5.04**	**126**	*e*P	**Pn**	**19 27 18.9**	**+1.4**
PAYV				*e*S	**Sn**	**19 28 14.9**	**-0.6**
CACV	**CAICARA DEL OR**	**5.24**	**99**	*e*P	Pb	19 27 28.9	-4.7
CACV				*e*S	**Sb**	**19 28 31.9**	**-4.5**
MERV	**Las Mercedes**	**5.47**	**81**	*e*P	**Pn**	**19 27 24.5**	**+1.1**
MERV				*e*S	**Sn**	**19 28 24.0**	**-2.1**
BIRV	**Birongo**	**5.80**	**69**	*e*P	**Pn**	**19 27 29.6**	**+1.7**
BIRV				*e*S	**Sn**	**19 28 32.3**	**-2.0**
PRGV	**PARIAGUAN**	**7.05**	**87**	*e*P	**Pn**	**19 27 45.0**	**-0.1**
PRGV				*e*S	**Sn**	**19 29 01.7**	**-3.4**
PCRV	**Puerto La Cruz**	**7.25**	**75**	*e*P	**Pn**	**19 27 48.9**	**+1.0**
PCRV				*e*S	**Sn**	**19 29 07.4**	**-2.8**

*YARS **15** 19:50:00.5±0.0,57.78N×121.47E,h10km*
*IDC **15** 19:50:01.2±1.4,57.80N×121.54E,h0km,mb3.4/6, mbtmp3.5/6,MS3.5/1,Error ellipse: s-maj=34.8km s-min=30.6km az=180.0*
ISC 15 19:50:01.1±0.7,57.73N±0.03×121.46E±0.04,h10km,n17, σ2§37/28,mb3.6/5,Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YKLR	**Yuktali**	**1.15**	**175**	*e*Pg	**Pn**	**19 50 22.9**	**-0.3**
	366nm,0.2s						
YKLR				*e*Sg	**Sn**	**19 50 38.5**	**-0.5**
	2μm,0.5s						
KHN	**Khani**	**1.22**	**229**	*e*Pg	**Pb**	**19 50 22.4**	**-1.8**
	1μm,0.2s						
KHN				*e*Sg	**Sb**	**19 50 38.1**	**-1.9**
	281nm,0.2s						
CLNS	**Chul'man**	**2.07**	**114**	*e*Pg	**Pb**	**19 50 38.6**	**-0.1**
	66nm,0.2s						
CLNS				*e*Sg	**Sb**	**19 51 05.4**	**+0.9**
	738nm,0.3s						
ALDR	**Aldan**	**2.27**	**66**	*e*Pg	**Pb**	**19 50 41.4**	**-0.8**
	13nm,0.2s						
ALDR				*e*Sg	**Sb**	**19 51 10.6**	**+0.3**
	136nm,0.2s						
OLMR	**Olekminsk**	**2.70**	**349**	*e*Pn	**Pn**	**19 50 44.1**	**-0.4**
OLMR				*e*Pg	**Pb**	**19 50 48.1**	**-1.3**
	89nm,0.5s						
OLMR				*e*Sn	**Sn**	**19 51 17.0**	**-0.2**
OLMR				*e*Sg	**Sb**	**19 51 23.3**	**+0.7**
	264nm,0.1s						
TUP	**Tupik**	**3.42**	**195**	*e*Pn	**Pn**	**19 50 55.1**	**+0.6**
TUP				*e*Pg	**Pb**	**19 51 02.3**	**+0.6**
	26nm,0.3s						
TUP				*e*Sn	**Sn**	**19 51 34.3**	**-0.8**
	202nm,0.6s						
CGD	**Chagda**	**4.95**	**74**	*e*Pn	**Pn**	**19 51 15.1**	**-0.2**
CGD				*e*Pg	**Pb**	**19 51 29.3**	**+1.6**
	68nm,0.2s						
CGD				*e*Sg	**Sg**	**19 52 34.4**	**-5.3**
	839nm,0.5s						
ZEA	**Zeya**	**5.17**	**138**	*e*Sg	**Sg**	**19 52 43.3**	**-3.6**
	90nm,0.7s						
YAK	**Yakutsk**	**5.97**	**40**	*e*Pn	**Pn**	**19 51 29.7**	**+0.2**
YAK				*i* Pg	**Pb**	**19 51 48.5**	**+3.3**
	5.7nm,0.4s						
YAK				*e*Sn	**Sn**	**19 52 36.1**	**-1.7**
YAK				*e*Sg	**Sg**	**19 53 05.5**	**-7.2**
	60nm,0.6s						
SONM	**Songino Array**	**13.43**	**229**	Lg	Lg	19 57 00.3	
	0.3nm,0.3s,baz=36,slow=25,SNR=6.6						
ZALV	**Zalesovo Beam**	**20.75**	**275**	P	Pn	19 54 43.7	-0.3
	0.2nm,0.2s,baz=72,slow=9.3,SNR=1.9						
	0.2nm,0.2s						
MKAR	**Makanchi Array**	**25.98**	**262**	P	**P**	**19 55 37.1**	**+3.4**
	0.3nm,0.8s,baz=45,slow=10,SNR=2.2						
	0.3nm,0.8s						
ILAR	**Eielson Array**	**40.90**	**41**	P	**P**	**19 57 44.7**	**+1.8**
	0.2nm,0.5s,baz=303,slow=8.3,SNR=2.1						
	0.2nm,0.5s						
FINES	**FINESS Array B**	**44.28**	**317**	P	**P**	**19 58 11.1**	**+0.8**
	0.6nm,0.4s,baz=52,slow=9.2,SNR=11						
	0.6nm,0.4s						
NOA	**NORSAR Array B**	**49.69**	**323**	P	**P**	**19 58 53.3**	**+0.7**
	0.5nm,0.7s,baz=48,slow=7.2,SNR=1.5						
	0.5nm,0.7s						
EKA	**Eskdalemuir Ar**	**58.77**	**327**	LR	LR	20 29 40.3	
	comp=Z,34nm,18.6s,baz=164,slow=40						
WRA	**Warramunga Arr**	**78.12**	**168**	P	**P**	**20 02 01.5**	**+1.5**
	0.6nm,1.0s,baz=357,slow=6.9,SNR=2.3						
	0.6nm,1.0s						

*BER **15** 20:01:04.2±3.5,54.56N×14.65E,h15km±14km,ML2.1, ML2.6(UPP)*
*DNK **15** 20:01:06.8±2.9,54.97N×14.67E,h0km,ML2.4,Suspected explosion*
*UPP **15** 20:01:07.6±1.3,55.02N×14.67E,h0km,ML2.6,Suspected explosion*
*NAO **15** 20:01:07.6±2.9,54.94N×14.34E,ML2.0*
ISC 15 20:01:07.0±1.2,55.06N±0.05×14.52E±0.03,h0km,n37, σ1§58/85,Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSD	**Bornholm Skovb**	**0.23**	**77**	*i* P	**Pg**	**20 01 11.0**	**-0.5**
BSD				*i* P	**Pg**	**20 01 12.0**	**+0.6**
BSD				IAML		20 01 28.3	
	comp=Z,112nm,0.6s						
BJUU	**Bjuv**	**1.32**	**321**	*i* P	**Pn**	**20 01 33.8**	**+1.0**
BJUU				P	**Pn**	**20 01 33.9**	**+1.2**
BJUU				P	**Pn**	**20 01 33.9**	**+1.2**
BJUU				*i* S	**Sn**	**20 01 52.9**	**+1.9**
BJUU				S	**Sn**	**20 01 53.4**	**+2.4**
BJUU				S	**Sn**	**20 01 53.4**	**+2.4**
BJUU	**Bjuv**	**1.32**	**321**	P	**Pn**	**20 01 33.9**	**+1.2**
BJUU				S	**Sn**	**20 01 53.4**	**+2.4**
BJUU	**Bjuv**	**1.32**	**321**	P	**Pn**	**20 01 33.9**	**+1.2**
BJUU				S	**Sn**	**20 01 53.4**	**+2.4**
COP	**Copenhagen**	**1.35**	**299**	*i* P	**Pb**	**20 01 34.4**	**+1.3**
COP				*i* S	**Sn**	**20 01 54.2**	**+2.6**
COP				IAML		20 01 58.6	
	comp=Z,53nm,0.4s						
LLD	**Lille Linde**	**1.35**	**283**	*i* P	**Pn**	**20 01 34.0**	**+0.9**
LLD				*i* S	**Sn**	**20 01 53.5**	**+1.8**
LLD				IAML		20 01 59.8	
	comp=Z,37nm,0.1s						
BLEU	**Blekinge**	**1.45**	**30**	*i* P	**Pn**	**20 01 34.3**	**0.0**
BLEU				P	**Pn**	**20 01 34.4**	**0.0**
BLEU				P	**Pn**	**20 01 34.4**	**0.0**
BLEU				S	**Sb**	**20 01 54.4**	**+0.7**
BLEU				S	**Sb**	**20 01 54.4**	**+0.7**
BLEU				*i* S	**Sn**	**20 01 54.8**	**+0.8**
BLEU	**Blekinge**	**1.45**	**30**	P	**Pn**	**20 01 34.4**	**0.0**
BLEU				S	**Sb**	**20 01 54.4**	**+0.7**
BLEU	**Blekinge**	**1.45**	**30**	P	**Pn**	**20 01 34.4**	**0.0**
BLEU				S	**Sb**	**20 01 54.4**	**+0.7**
DEL	**Delary**	**1.46**	**346**	*i* P	**Pg**	**20 01 35.0**	**+0.0**
DEL				P	**Pb**	**20 01 35.4**	**+0.3**
DEL				S	**Sn**	**20 01 56.0**	**+1.6**
DEL				*i* S	**Sb**	**20 01 56.5**	**+2.4**
DEL				IAML		20 01 58.0	
	comp=Z,11nm,0.2s						
DEL	**Delary**	**1.46**	**346**	P	**Pb**	**20 01 35.4**	**+0.3**
DEL				S	**Sn**	**20 01 56.0**	**+1.6**
VXJU	**Vaexsjoe**	**1.88**	**7**	P	**Pb**	**20 01 41.5**	**-0.7**
VXJU				P	**Pb**	**20 01 41.5**	**-0.7**
VXJU				S	**Sg**	**20 02 07.9**	**+0.5**
VXJU				S	**Sg**	**20 02 07.9**	**+0.5**
VXJU	**Vaexsjoe**	**1.88**	**7**	P	**Pb**	**20 01 41.5**	**-0.7**
VXJU				S	**Sg**	**20 02 07.9**	**+0.5**
VXJU	**Vaexsjoe**	**1.88**	**7**	P	**Pb**	**20 01 41.5**	**-0.7**
VXJU				S	**Sg**	**20 02 07.9**	**+0.5**
ONAU	**Onsala**	**2.76**	**329**	*i* P	**Pn**	**20 01 53.5**	**+1.2**
MUD	**Monsted U'grnd**	**3.33**	**297**	*i* P	**Pn**	**20 02 01.2**	**+1.0**
TJOU	**Tjoern**	**3.38**	**333**	*i* P	**Pn**	**20 02 02.9**	**+1.9**
CLL	**Collm**	**3.87**	**194**	*e*Pn	**Pn**	**20 02 06.0**	**-1.7**
CLL				*e*Sn	**Sn**	**20 02 49.0**	**-4.8**
STRU	**Stroemstad**	**4.38**	**337**	*e*P	**Pn**	**20 02 15.2**	**+0.5**
STRU				*i* P	**Pn**	**20 02 15.4**	**+0.7**
STRU				*i* S	**Sn**	**20 03 05.3**	**-1.0**
STRU	**Stroemstad**	**4.38**	**337**	*e*P	**Pn**	**20 02 15.2**	**+0.5**
HFS	**Hagfors**	**5.11**	**355**	Pn	**Pn**	**20 02 25.5**	**+0.8**
	baz=179,slow=14						
HFS				Sn	**Sn**	**20 03 24.9**	**+0.7**
	baz=187,slow=28						
HFS				Lg	Lg	20 03 50.9	
	baz=176,slow=37						
HFS	**Hagfors**	**5.11**	**355**	Pn	**Pn**	**20 02 25.5**	**+0.8**
	baz=179,slow=14						
HFS				Sn	**Sn**	**20 03 24.9**	**+0.7**
	baz=187,slow=28						
HFS				Sg	**Sg**	**20 03 50.9**	**0.0**
	baz=176,slow=37						
HFS	**Hagfors**	**5.11**	**355**	Pn	**Pn**	**20 02 25.5**	**+0.8**
	baz=179,slow=14						
HFS				Sn	**Sn**	**20 03 24.9**	**+0.7**
	baz=187,slow=28						
HFS				Sg	**Sg**	**20 03 50.9**	**0.0**
	baz=176,slow=37						
SNART	**Snartemo**	**5.20**	**312**	*e*P	**Pn**	**20 02 25.7**	**-0.2**
SNART				*e*S	**Sn**	**20 03 22.6**	**-3.9**
SNART				*e*Sg	**Sg**	**20 03 50.1**	**-3.8**
SNART				IAML		20 03 53.1	
	comp=Z,5.0nm,0.2s						
SNART	**Snartemo**	**5.20**	**312**	*e*P	**Pn**	**20 02 25.7**	**-0.2**
SNART				*e*S	**Sn**	**20 03 22.6**	**-3.9**
SNART				*e*Sg	**Sg**	**20 03 50.1**	**-3.8**
SNART				IAML		20 03 53.1	
	comp=Z,5.0nm,0.2s						
KON	**Kongsberg**	**5.32**	**332**	Pn	**Pn**	**20 02 27.9**	**+0.3**
KONO	**Kongsberg**	**5.32**	**332**	*e*P	**Pn**	**20 02 27.8**	**+0.3**
KONO				*e*S	**Sn**	**20 03 28.3**	**-1.1**
KONO				*e*Sg	**Sg**	**20 03 56.8**	**-0.8**
KONO	**Kongsberg**	**5.32**	**332**	*e*P	**Pn**	**20 02 27.8**	**+0.3**
KONO				*e*S	**Sn**	**20 03 28.3**	**-1.1**
KONO				*e*Sg	**Sg**	**20 03 56.8**	**-0.8**
NRA0	**NORESS Array S**	**5.91**	**346**	Pn	**Pn**	**20 02 35.3**	**-0.4**
	baz=157,slow=12						
NRA0				Sn	**Sn**	**20 03 42.9**	**-1.1**
	baz=178,slow=22						
NRA0				Lg	Lg	20 04 17.1	
	baz=168,slow=37						
NRA0	**NORESS Array S**	**5.91**	**346**	Pn	**Pn**	**20 02 35.3**	**-0.4**
	baz=157,slow=12						
NRA0				Sn	**Sn**	**20 03 42.9**	**-1.1**
	baz=178,slow=22						
NRA0	**NORESS Array S**	**5.91**	**346**	Pn	**Pn**	**20 02 35.3**	**-0.4**
	baz=157,slow=12						
NRA0				Sn	**Sn**	**20 03 42.9**	**-1.1**
	baz=178,slow=22						
NB2	**NORSAR Subarra**	**6.25**	**345**	Pn	**Pn**	**20 02 40.8**	**+0.4**
	baz=167,slow=14						
NB2				Sn	**Sn**	**20 03 48.0**	**-4.4**
NB2				Lg	Lg	20 04 24.5	
NB2	**NORSAR Subarra**	**6.25**	**345**	Pn	**Pn**	**20 02 40.8**	**+0.4**
	baz=167,slow=14						
NB2				Sg	**Sg**	**20 04 24.5**	**-2.9**
NB2	**NORSAR Subarra**	**6.25**	**345**	Pn	**Pn**	**20 02 40.8**	**+0.4**
	baz=167,slow=14						
NB2				Sg	**Sg**	**20 04 24.5**	**-2.9**
FIA0	**FINESS Array S**	**8.83**	**39**	Pn	**Pn**	**20 03 15.9**	**+0.2**
	baz=217,slow=12						
FIA0	**FINESS Array S**	**8.83**	**39**	Pn	**Pn**	**20 03 15.9**	**+0.2**
	baz=217,slow=12						
FIA0	**FINESS Array S**	**8.83**	**39**	Pn	**Pn**	**20 03 15.9**	**+0.2**
	baz=217,slow=12						

*SOF **15** 20:23:41.3,45.63N×26.48E,h140km,MD3.0*
*BUC **15** 20:23:41.2±0.3,45.65N×26.52E,h147km±2km,ml3.6/31, Error ellipse: s-maj=2.2km s-min=1.8km az=145.0*
ISC 15 20:23:39.2±1.4,45.68N±0.03×26.48E±0.03,h163km±7km, n102,σ1§00/167,95C-66D,Romania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLOR	**Plostina**	**0.21**	**35**	P	**Pn**	**20 24 01.2**	**+0.1**
PLOR				S	**Sn**	**20 24 16.7**	**-1.2**
PLOR	**Plostina**	**0.21**	**35**	P	**Pn**	**20 24 01.2**	**+0.1**
PLOR				S	**Sn**	**20 24 16.7**	**-1.2**
BISRR	**Bisoca**	**0.21**	**130**	P	**Pn**	**20 24 01.9**	**+0.7**
BISRR				S	**Sn**	**20 24 17.7**	**-0.2**
BISRR	**Bisoca**	**0.21**	**130**	P	**Pn**	**20 24 01.9**	**+0.7**
BISRR				S	**Sn**	**20 24 17.7**	**-0.2**
VRI	**Vrincioaia**	**0.25**	**43**	P	**Pn**	**20 24 01.4**	**+0.3**
VRI				S	**Sn**	**20 24 16.3**	**-1.7**
VRI	**Vrincioaia**	**0.25**	**43**	P	**Pn**	**20 24 01.4**	**+0.3**
VRI				S	**Sn**	**20 24 16.3**	**-1.7**
COVR	**Voineasa-Covas**	**0.26**	**310**	P	**Pn**	**20 24 01.2**	**0.0**
COVR				S	**Sn**	**20 24 16.6**	**-1.5**
COVR	**Voineasa-Covas**	**0.26**	**310**	P	**Pn**	**20 24 01.2**	**0.0**
COVR				S	**Sn**	**20 24 16.6**	**-1.5**
NEHR	**Nehoiu**	**0.29**	**207**	P	**Pn**	**20 24 02.0**	**+0.6**
NEHR				S	**Sn**	**20 24 15.1**	**-3.0**
NEHR	**Nehoiu**	**0.29**	**207**	P	**Pn**	**20 24 02.0**	**+0.6**
ODBI	**Odobesti**	**0.41**	**78**	P	**Pn**	**20 24 02.8**	**+1.2**
ODBI				S	**Sn**	**20 24 19.2**	**+0.5**
ODBI	**Odobesti**	**0.41**	**78**	P	**Pn**	**20 24 02.8**	**+1.2**
ODBI				S	**Sn**	**20 24 19.2**	**+0.5**
MLR	**Muntele Rosu**	**0.42**	**243**	P	**Pn**	**20 24 02.1**	**+0.2**
MLR				S	**Sn**	**20 24 18.3**	**-0.8**
MLR	**Muntele Rosu**	**0.42**	**243**	P	**Pn**	**20 24 02.1**	**+0.2**
MLR				S	**Sn**	**20 24 18.3**	**-0.8**
GRER		**0.46**	**131**	P	**Pn**	**20 24 03.3**	**+1.4**
GRER				S	**Sn**	**20 24 20.9**	**+1.8**
PANC	**Panciu**	**0.50**	**67**	P	**Pn**	**20 24 02.7**	**+0.7**
PANC	**Panciu**	**0.50**	**67**	P	**Pn**	**20 24 02.7**	**+0.7**
ISR	**Istrita**	**0.56**	**176**	P	**Pn**	**20 24 03.4**	**+0.9**
ISR	**Istrita**	**0.56**	**176**	P	**Pn**	**20 24 03.4**	**+0.9**
SECR		**0.71**	**205**	P	**Pn**	**20 24 04.0**	**+0.8**
SECR				S	**Sn**	**20 24 21.7**	**+0.2**
SECR		**0.71**	**205**	P	**Pn**	**20 24 04.0**	**+0.8**
SECR				S	**Sn**	**20 24 21.7**	**+0.2**
GHRR		**0.75**	**59**	P	**Pn**	**20 24 04.2**	**+0.8**
GHRR				S	**Sn**	**20 24 21.6**	**-0.3**
GHRR		**0.75**	**59**	P	**Pn**	**20 24 04.2**	**+0.8**
GHRR				S	**Sn**	**20 24 21.6**	**-0.3**
DOPR	**Dopca**	**0.82**	**291**	P	**Pn**	**20 24 04.1**	**+0.3**
DOPR				S	**Sn**	**20 24 22.2**	**-0.6**
DOPR	**Dopca**	**0.82**	**291**	P	**Pn**	**20 24 04.1**	**+0.3**
DOPR				S	**Sn**	**20 24 22.2**	**-0.6**
PLAR	**PLOIESTI**	**0.83**	**203**	P	**Pn**	**20 24 23.2**	**+0.3**
PLAR	**PLOIESTI**	**0.83**	**203**	P	**Pn**	**20 24 23.2**	**+0.3**
TUDR		**0.84**	**96**	P	**Pn**	**20 24 04.4**	**+0.5**
TUDR				S	**Sn**	**20 24 22.6**	**-0.3**
TUDR		**0.84**	**96**	P	**Pn**	**20 24 04.4**	**+0.5**
TUDR				S	**Sn**	**20 24 22.6**	**-0.3**
TESR	**Tescani**	**0.84**	**8**	P	**Pn**	**20 24 04.2**	**+0.2**
TESR				S	**Sn**	**20 24 21.0**	**-2.1**
TESR	**Tescani**	**0.84**	**8**	P	**Pn**	**20 24 04.2**	**+0.2**
PGOR	**Pogoanele**	**0.85**	**155**	S	**Sn**	**20 24 23.7**	**+0.6**
SLCR	**Slobozia Conac**	**0.91**	**95**	S	**Sn**	**20 24 22.9**	**-0.9**
SLCR	**Slobozia Conac**	**0.91**	**95**	S	**Sn**	**20 24 22.9**	**-0.9**
IZVR	**Izvoarele**	**0.91**	**98**	P	**Pn**	**20 24 05.0**	**+0.5**
IZVR				S	**Sn**	**20 24 22.6**	**-1.3**
IZVR	**Izvoarele**	**0.91**	**98**	P	**Pn**	**20 24 05.0**	**+0.5**
IZVR				S	**Sn**	**20 24 22.6**	**-1.3**
SCHL	**Schela**	**0.96**	**100**	S	**Sn**	**20 24 23.7**	**-0.8**
SCHL	**Schela**	**0.96**	**100**	S	**Sn**	**20 24 23.7**	**-0.8**
VARL	**Varlezi**	**0.98**	**77**	P	**Pn**	**20 24 05.9**	**+0.9**
VARL				S	**Sn**	**20 24 23.9**	**-0.9**
VARL	**Varlezi**	**0.98**	**77**	P	**Pn**	**20 24 05.9**	**+0.9**
VARL				S	**Sn**	**20 24 23.9**	**-0.9**
BIR	**Birlad**	**0.99**	**53**	P	**Pn**	**20 24 05.9**	**+0.8**
BIR				S	**Sn**	**20 24 24.1**	**-0.9**
BIR	**Birlad**	**0.99**	**53**	P	**Pn**	**20 24 05.9**	**+0.8**
BIR				S	**Sn**	**20 24 24.1**	**-0.9**
SULR		**1.02**	**189**	P	**Pn**	**20 24 06.1**	**+0.8**
SULR				S	**Sn**	**20 24 25.6**	**+0.3**
SULR		**1.02**	**189**	P	**Pn**	**20 24 06.1**	**+0.8**
SULR				S	**Sn**	**20 24 25.6**	**+0.3**
SCTR	**Scanteiesti**	**1.06**	**90**	S	**Sn**	**20 24 25.6**	**-0.4**
SCTR	**Scanteiesti**	**1.06**	**90**	S	**Sn**	**20 24 25.6**	**-0.4**
TATR	**Tatarca**	**1.10**	**94**	S	**Sn**	**20 24 25.9**	**-0.6**
TATR	**Tatarca**	**1.10**	**94**	S	**Sn**	**20 24 25.9**	**-0.6**
VLDR	**Vladesti**	**1.13**	**81**	P	**Pn**	**20 24 07.1**	**+0.8**
VLDR				S	**Sn**	**20 24 26.2**	**-0.8**
VLDR	**Vladesti**	**1.13**	**81**	P	**Pn**	**20 24 07.1**	**+0.8**
VLDR				S	**Sn**	**20 24 26.2**	**-0.8**
AMRR	**Amara**	**1.23**	**150**	P	**Pn**	**20 24 08.0**	**+0.8**
AMRR				S	**Sn**	**20 24 28.3**	**-0.3**
AMRR	**Amara**	**1.23**	**150**	P	**Pn**	**20 24 08.0**	**+0.8**
AMRR				S	**Sn**	**20 24 28.3**	**-0.3**
LEHL	**Lehliu**	**1.23**	**169**	P	**Pn**	**20 24 08.0**	**+0.8**
LEHL				S	**Sn**	**20 24 28.6**	**0.0**
LEHL	**Lehliu**	**1.23**	**169**	P	**Pn**	**20 24 08.0**	**+0.8**
LEHL				S	**Sn**	**20 24 28.6**	**0.0**
CFR	**Carcaliu**	**1.27**	**113**	P	**Pn**	**20 24 07.9**	**+0.4**
CFR				S	**Sn**	**20 24 27.8**	**-1.4**
CFR	**Carcaliu**	**1.27**	**113**	P	**Pn**	**20 24 07.9**	**+0.4**
CFR				S	**Sn**	**20 24 27.8**	**-1.4**
BIZ	**Bicaz**	**1.28**	**348**	P	**Pn**	**20 24 09.2**	**+1.5**
BIZ				S	**Sn**	**20 24 30.2**	**+0.5**
BIZ	**Bicaz**	**1.28**	**348**	P	**Pn**	**20 24 09.2**	**+1.5**
BIZ				S	**Sn**	**20 24 30.2**	**+0.5**
VASR	**Vaslui**	**1.32**	**43**	P	**Pn**	**20 24 08.5**	**+0.5**
VASR		

ISC 15 20:35:43.0±0.6, 17°9S±0.2×176.6W±0.1, h35km, n48, σ1§13/37, mb4.4/14, MS3.9/11, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.08**	**271**	P	**Pn**	**20 36 59.8**	**+3.0**
	1.2nm,0.3s,baz=101,slow=15,SNR=17						
MSVF				LR	LR	20 38 52.0	
	comp=Z,3μm,18.2s,baz=77,slow=38 30nm,1.0s						
MSVF	**Nonsavu**	**5.08**	**271**		**Pn**	**20 36 56.1**	**-0.6**
AFI	**Afiamalu**	**6.13**	**50**	LR	LR	20 38 44.6	
	comp=Z,259nm,18.8s,baz=158,slow=28						
RAR	**Rarotonga**	**16.22**	**104**	LR	LR	20 44 03.7	
	comp=Z,164nm,20.4s,baz=284,slow=30						
URZ	**Urewera**	**21.00**	**194**	LR	LR	20 47 55.6	
	comp=Z,747nm,18.6s,baz=31,slow=35						
HNR	**Honiara**	**24.25**	**287**	LR	LR	20 49 49.8	
	comp=Z,199nm,18.1s,baz=88,slow=35						
PPT2	**Papeete2**	**25.76**	**93**	*e*LR	LR	20 46 48.5	
	comp=Z,773nm,27.2s						
PPT	**Papeete**	**25.76**	**93**	LR	LR	20 48 28.1	
	comp=Z,167nm,20.4s,baz=242,slow=29						
TBI	**Tubuai**	**25.97**	**107**	*e*LR	LR	20 47 05.5	
	comp=Z,520nm,28.5s						
CTA	**Charters Tower**	**35.12**	**260**	P	**P**	**20 42 34.0**	**+0.6**
	12nm,1.0s,baz=91,slow=6.1,SNR=3.7						
CTA				LR	LR	20 54 50.6	
	comp=Z,230nm,21.0s,baz=104,slow=33 12nm,1.0s						
TAOE	**Nuku Hiva Isla**	**36.55**	**81**	*e*LR	LR	20 51 44.3	
	comp=Z,280nm,28.0s						
STKA	**Stephens Creek**	**40.12**	**242**	LR	LR	20 56 33.5	
	comp=Z,168nm,21.3s,baz=193,slow=31						
WRA	**Warramunga Arr**	**46.30**	**259**	P	**P**	**20 44 04.5**	**-1.2**
	1.6nm,0.8s,baz=97,slow=6.5,SNR=21 1.6nm,0.8s						
WRA	**Warramunga Arr**	**46.30**	**259**	P	**P**	**20 44 04.4**	**-1.4**
AS31	**Alice Springs**	**46.42**	**254**	P	**P**	**20 44 05.8**	**-0.9**
ASAR	**Alice Springs**	**46.42**	**254**	P	**P**	**20 44 06.1**	**-0.6**
	3.9nm,0.6s,baz=89,slow=8.3,SNR=82 3.9nm,0.6s						
ASAR	**Alice Springs**	**46.42**	**254**	P	**P**	**20 44 05.9**	**-0.8**
SIJI	**Sorong**	**53.89**	**282**	P	**P**	**20 45 02.5**	**-0.9**
	4.0nm,0.7s,baz=72,slow=5.6,SNR=5.2 4.0nm,0.7s						
SBA	**Scott Base**	**60.53**	**184**	P	**P**	**20 45 50.5**	**+1.3**
VNDA	**Vanda**	**60.59**	**185**	LR	LR	21 09 01.9	
	comp=Z,33nm,20.8s,baz=358,slow=33						
SEY	**Seymchan**	**84.17**	**346**	P	**P**	**20 48 09.7**	**-0.4**
	1.3nm,0.8s,baz=165,slow=10,SNR=4.1 1.3nm,0.8s						
TXAR	**Lajitas Array**	**84.57**	**57**	P	**P**	**20 48 14.1**	**+0.9**
	0.5nm,0.9s,baz=231,slow=4.0,SNR=6.8 0.5nm,0.9s						
ANMO	**Albuquerque**	**84.77**	**51**	P	**P**	**20 48 14.0**	**-0.2**
ANMO				IAmb	IAmb	20 48 31.0	
	comp=Z,2.4nm,1.4s						
WRH	**Wood River Hil**	**85.01**	**12**	P	**P**	**20 48 13.6**	**-0.8**
MLY	**Manley**	**85.02**	**11**	P	**P**	**20 48 13.4**	**-1.1**
MLY				IAmb	IAmb	20 48 40.6	
	comp=Z,4.0nm,1.4s						
CCB	**Clear Creek Bu**	**85.22**	**12**	P	**P**	**20 48 15.9**	**+0.4**
CCB				IAmb	IAmb	20 48 33.4	
	comp=Z,3.4nm,1.2s						
ILAR	**Eielson Array**	**85.51**	**12**	P	**P**	**20 48 17.1**	**+0.2**
	comp=Z,0.7nm,0.9s,baz=214,slow=6.3,SNR=5.9 comp=Z,0.7nm,0.9s						
J25K	**Salcha River,**	**85.69**	**13**	P	**P**	**20 48 18.8**	**+0.9**
J25K				IAmb	IAmb	20 48 41.7	
	comp=Z,5.0nm,1.5s						
J26L	**Joseph Creek**	**85.99**	**14**	P	**P**	**20 48 20.1**	**+0.6**
J26L				IAmb	IAmb	20 48 49.1	
	comp=Z,2.5nm,1.1s						
YHL	**Hebgen Lake**	**86.18**	**40**	P	**P**	**20 48 21.1**	**0.0**
YHL				IAmb	IAmb	20 48 25.3	
	comp=Z,4.9nm,1.2s						
BOZ	**Bozeman (W)**	**86.28**	**40**	P	**P**	**20 48 22.4**	**+1.1**
BOZ				IAmb	IAmb	20 48 25.1	
	comp=Z,3.8nm,1.4s						
TROLL	**Troll, Antarti**	**90.31**	**180**	P	**P**	**20 48 37.6**	**-2.6**
SNAA	**Sanae**	**90.55**	**178**	P	**P**	**20 48 41.4**	**+0.2**
VNA3	**Neumayer Olymp**	**90.62**	**176**	P	**P**	**20 48 40.0**	**-1.5**
VNA1	**Neumayer--Stat**	**91.30**	**176**	P	**P**	**20 48 45.6**	**+1.0**
JTS	**Las Juntas de**	**94.68**	**81**	LR	LR	21 22 50.5	
	comp=Z,72nm,19.8s,baz=16,slow=30						
ATAH	**Atahualpa**	**95.60**	**99**	LR	LR	21 21 23.9	
	comp=Z,94nm,21.8s,baz=293,slow=29						
CLL	**Collm**	**145.81**	**349**	*i* PKPbc	**PKPab**	**20 55 19.6**	**+0.8**
	comp=Z,7.0nm,1.0s						
CLL				*i* PKiKP	**PKiKP**	**20 55 23.8**	**+1.8**
BRTR	**Keskin Array B**	**145.97**	**316**	PKPbc	**PKPab**	**20 55 20.3**	**+0.2**
	comp=Z,2.2nm,1.0s,baz=108,slow=4.0,SNR=6.2						
BRTR	**Keskin Array B**	**145.97**	**316**		**PKPdf**	**20 55 17.2**	**-1.5**
DPC	**Dobruska-Polom**	**146.01**	**345**	*e*PKP	**PKPab**	**20 55 20.7**	**+1.0**
KRLC	**Kraliky**	**146.15**	**344**	*e*PKP	**PKPab**	**20 55 20.2**	**0.0**
KHC	**Kasperske Hory**	**147.78**	**347**	*e*PKP	**PKiKP**	**20 55 26.3**	**+0.1**
CKRC	**Cesky Krumlov**	**147.91**	**346**	*e*PKP	**PKiKP**	**20 55 26.6**	**+0.2**
GERES	**GERESS Array B**	**148.02**	**347**	PKPbc	**PKPbc**	**20 55 25.1**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=20,slow=1.6,SNR=5.4						
GERES	**GERESS Array B**	**148.02**	**347**		**PKPdf**	**20 55 20.1**	**-1.7**
DAVOX	**Davos/Dischmat**	**150.71**	**351**	PKPbc	**PKiKP**	**20 55 32.3**	**-0.1**
	comp=Z,3.3nm,0.7s,baz=1.7,slow=14,SNR=5.8						
TORD	**Torodi Ar. Bea**	**175.00**	**161**	PKPbc	**PKPab**	**20 57 25.3**	**+0.3**
	comp=Z,0.5nm,0.9s,baz=191,slow=4.4,SNR=2.1						

*JMA **15** 20:41:05.7±0.1, 37.5°N±0.3×141.9°E±0.6, h46km±2km, MV3.9/39, E OFF FUKUSHIMA PREF*
JMA Felt I J1 at E OFF FUKUSHIMA PREF .
*NIED **15** 20:41:05.7, 37.53°N×141.91°E, h46km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.16; $M_{\theta\theta}$0.20; $M_{\phi\phi}$-0.37; $M_{r\theta}$-0.01; $M_{\theta\phi}$-0.44; $M_{\phi r}$-2.45; Fault plane solution: $M_0$2.50000×10^{14} NP1:ϕ_s73.00000°, δ11.00000°, λ164.00000°. NP2:ϕ_s180.00000°, δ87.00000°, λ80.00000°.*
*IDC **15** 20:41:07.3±4.1, 37.46°N×141.85°E, h62km±39km, mb3.2/5, mbtmp3.6/7, ML3.0/2, MS2.5/2 Error ellipse: s-maj=39.7km s-min=27.5km az=64.0*

ISC 15 20:41:04.5±1.4, 37.47°N±0.04×142.04°E±0.09, h37km±2km, n31, σ1§16/36, mb3.5/5, 16D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**0.94**	**264**	⇓*i*P	**Pn**	**20 41 21.3**	**+0.1**
JFK				⇓S	**Sn**	**20 41 32.3**	**-1.0**
JMST	**Minamisoumatoc**	**0.95**	**286**	⇓*i*P	**Pn**	**20 41 21.1**	**-0.1**
JMST				⇓S	**Sn**	**20 41 32.2**	**-1.4**
JIKH	**Ishinomakibobu**	**0.95**	**332**	⇓*i*P	**Pn**	**20 41 21.5**	**+0.2**
JIKH				⇓S	**Sn**	**20 41 32.7**	**-0.9**
ONAJ	**Iwakimizuishiy**	**1.06**	**250**	⇓*i*P	**Pn**	**20 41 23.2**	**+0.3**
ONAJ				⇓S	**Sn**	**20 41 35.5**	**-0.9**
JMM	**Marumori**	**1.07**	**292**	*i* P	**Pn**	**20 41 22.9**	**0.0**
JMM				S	**Sn**	**20 41 35.4**	**-1.0**
JIO	**Ouri**	**1.12**	**331**	⇓*i*P	**Pn**	**20 41 23.9**	**+0.3**
JIO				⇓S	**Sn**	**20 41 36.6**	**-1.2**
JFT	**Otama**	**1.36**	**272**	⇓*i*P	**Pn**	**20 41 27.7**	**+0.8**
JFT				⇓S	**Sn**	**20 41 43.8**	**+0.1**
JOU	**Okura**	**1.41**	**310**	⇓*i*P	**Pn**	**20 41 27.8**	**+0.2**
JOU				⇓*e*S	**Sn**	**20 41 44.2**	**-0.7**
JMK	**Ichinoseki**	**1.61**	**337**	*i* P	**Pn**	**20 41 31.2**	**+0.8**
JMK				S	**Sn**	**20 41 50.1**	**+0.2**
JYS	**Shirataka**	**1.73**	**296**	*i* P	**Pn**	**20 41 32.7**	**+0.6**
JYS				S	**Sn**	**20 41 53.3**	**+0.4**
JFY	**Yanaizu**	**1.86**	**269**	P	**Pn**	**20 41 34.6**	**+0.7**
JFY				*e*S	**Sn**	**20 41 56.8**	**+0.6**
JYK	**Kaneyama**	**1.96**	**318**	⇓*i*P	**Pn**	**20 41 35.8**	**+0.6**
JYK				⇓*e*S	**Sn**	**20 41 58.8**	**+0.3**
JOM	**Ohasama**	**2.08**	**344**	P	**Pn**	**20 41 38.2**	**+1.4**
JOM				*e*S	**Sn**	**20 42 02.0**	**+0.5**
JYA	**Atsumi**	**2.15**	**302**	P	**Pn**	**20 41 38.6**	**+0.8**
MJAR	**Matsushiro Arr**	**3.21**	**254**	P	**Pn**	**20 41 53.9**	**+1.6**
	0.7nm,0.3s,baz=82,slow=15,SNR=23						
MJAR				S	**Sn**	**20 42 33.5**	**+4.2**
	4.7nm,0.3s,baz=77,slow=27,SNR=5.6						
MJAR				LR	LR	20 43 14.4	
	comp=Z,53nm,19.8s,baz=63,slow=42 3.8nm,0.3s						
JHJ	**Hachijo jima 2**	**4.72**	**204**	P	**Pn**	**20 42 13.8**	**+0.7**
	6.2nm,0.3s,baz=321,slow=23,SNR=6.7						
JHJ				S	**Sn**	**20 43 04.5**	**-2.1**
	47nm,0.3s,baz=65,slow=22,SNR=8.0 42nm,0.5s						
KSRS	**Korea Array**	**11.22**	**274**	LR	LR	20 47 32.8	
	comp=Z,28nm,18.9s,baz=220,slow=35						
H11N2	**WAKE ISLAND Hy**	**27.95**	**122**	T	T	21 16 30.4	
	baz=315,slow=75,SNR=83						
H11N1	**WAKE ISLAND Hy**	**27.96**	**122**	T	T	21 16 27.2	
	baz=315,slow=75,SNR=81						
SONM	**Songino Array**	**27.96**	**303**	P	**P**	**20 46 50.0**	**-1.5**
	0.6nm,0.7s,baz=101,slow=7.6,SNR=4.3 0.6nm,0.7s						
H11N3	**WAKE ISLAND Hy**	**27.97**	**122**	T	T	21 16 28.8	
	baz=315,slow=75,SNR=79						
H11S1	**WAKE ISLAND Hy**	**28.68**	**124**	T	T	21 17 21.4	
	baz=316,slow=76,SNR=56						
H11S3	**WAKE ISLAND Hy**	**28.69**	**124**	T	T	21 17 24.7	
	baz=316,slow=76,SNR=70						
H11S2	**WAKE ISLAND Hy**	**28.70**	**124**	T	T	21 17 25.9	
	baz=316,slow=76,SNR=61						
ZALV	**Zalesovo Beam**	**41.99**	**312**	P	**P**	**20 48 51.5**	**-0.3**
	0.5nm,0.4s,baz=75,slow=6.1,SNR=2.2 0.5nm,0.4s						
MKAR	**Makanchi Array**	**44.31**	**302**	P	**P**	**20 49 10.0**	**-0.7**
	0.4nm,0.5s,baz=86,slow=9.2,SNR=5.3 0.4nm,0.5s						
ILAR	**Eielson Array**	**48.85**	**33**	P	**P**	**20 49 47.0**	**+1.0**
	0.3nm,0.6s,baz=262,slow=6.3,SNR=2.2 0.3nm,0.6s						
WRA	**Warramunga Arr**	**57.57**	**189**	P	**P**	**20 50 50.6**	**+0.1**
	0.5nm,1.0s,baz=3.6,slow=7.0,SNR=2.0 0.5nm,1.0s						
H03N2	**Juan Fernandez**	**146.57**	**96**	T	T	23 44 46.6	
	baz=291,slow=76,SNR=4.6						
H03N3	**Juan Fernandez**	**146.58**	**96**	T	T	23 44 51.3	
	baz=291,slow=76,SNR=4.8						
H03N1	**Juan Fernandez**	**146.59**	**96**	T	T	23 44 52.2	
	baz=291,slow=76,SNR=3.9						

IDC 15 20:47:37.0±9.8, 3.12S×142.46E, h0km, mb3.2/2, mbtmp3.3/3, ML3.2/1, MS3.6/1, Error ellipse: s-maj=359.7km s-min=34.4km az=92.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.50**	**205**	P	Pn	20 51 55.2	+0.2
	0.1nm,0.3s,baz=25,slow=12,SNR=1.6 0.6nm,0.8s						
ASAR	**Alice Springs**	**22.04**	**201**	P	P	20 52 33.1	-0.2
	0.4nm,0.8s,baz=31,slow=11,SNR=4.6						
ASAR				LR	LR	21 01 58.5	
	comp=Z,155nm,18.9s,baz=156,slow=39 0.4nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**32.10**	**47**	T	T	21 28 04.6	
	baz=230,slow=76,SNR=11						
H11S2	**WAKE ISLAND Hy**	**32.11**	**47**	T	T	21 28 04.5	
	baz=230,slow=76,SNR=6.2						
H11S1	**WAKE ISLAND Hy**	**32.12**	**47**	T	T	21 28 06.0	
	baz=230,slow=76,SNR=6.8						
H11N1	**WAKE ISLAND Hy**	**33.03**	**46**	T	T	21 29 12.9	
	baz=230,slow=76,SNR=15						
H11N2	**WAKE ISLAND Hy**	**33.05**	**46**	T	T	21 29 14.4	
	baz=230,slow=76,SNR=20						
H11N3	**WAKE ISLAND Hy**	**33.05**	**46**	T	T	21 29 14.7	
	baz=230,slow=76,SNR=12						
MKAR	**Makanchi Array**	**72.43**	**321**	P	P	20 59 05.3	0.0
	0.5nm,0.9s,baz=125,slow=4.0,SNR=3.3 0.5nm,0.9s						

*BJI **15** 21:06:14.8±0.0, 3.48S×147.95E, h10km, mb4.6/50, mB4.9/34, Ms5.0/44, Ms7 4.7/42*
*IDC **15** 21:06:18.7±0.7, 3.12S×147.66E, h0km, mb4.3/14, mbtmp4.3/16, ML4.3/1, MS4.5/55, Error ellipse: s-maj=24.1km s-min=16.7km az=94.0*
*NEIC **15** 21:06:19.7±1.1, 3.08S±0.06×147.60E±0.08, h10km±1km, mb4.9/65, Error ellipse: s-maj=14.5km s-min=9.5km az=78.0*
*DJA **15** 21:06:22.1±0.3, 3°S×4°×14°8E±°, h10km, M4.7/29, mB5.2/11, mb4.7/29, MLv5.0/4, Mw(mB)4.6/11*
*GCMT **15** 21:06:24.7±0.1, 2.97S±0.01×147.59E±0.01, h12km, MW5.2/141, Moment Tensor Solution. s85, c120; s141, c248; Duration: 1§0 Moment tensor: Scale 10^{16} Nm; M_{rr}-0.80±.13; $M_{\theta\theta}$1.92±.13; $M_{\phi\phi}$-1.12±.14; $M_{r\theta}$-0.15±.32; $M_{\theta\phi}$8.15±.10; $M_{\phi r}$-1.95±.33; Best double couple: $M_0$8.52300×10^{16} NP1:ϕ_s275.00000°, δ76.00000°, λ-2.00000°. NP2:ϕ_s6.00000°, δ88.00000°, λ-166.00000°. Principal axes: T 8.8840, Plg8.0000°, Azm140.0000°; N -0.7170, Plg76.0000°, Azm14.0000°; P -8.1620, Plg11.0000°, Azm231.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 21:06:19.4±0.4, 3.24S±0.06×147.73E±0.07, h10km, n193, σ1§90/157, mb4.8/69, MS4.6/71, 4C-3D, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MANU	**Manus Island**	**1.24**	**343**		Pb	21 06 36.7	-6.2
KRVT	**Keravat (AS076**	**4.42**	**104**	Pn	**Pn**	**21 07 30.1**	**+3.5**
	15nm,0.3s,baz=141,slow=2.2,SNR=12 120nm,0.6s						
RABL	**Rabaul**	**4.52**	**102**		**Pn**	**21 07 30.4**	**+2.4**
PMG	**Port Moresby**	**6.16**	**185**	Pn	Pn	21 07 57.2	+6.7
	1.8nm,0.3s,baz=193,slow=16,SNR=3.3						
PMG	**Port Moresby**	**6.16**	**185**	Pn	**Pn**	**21 07 50.1**	**-0.4**
GENI	**Genyem**	**7.58**	**275**	P	**Pn**	**21 08 10.1**	**+0.1**
	1.2nm4μm378nm,1.3s						
SMPI	**Sarmi**	**9.10**	**278**	P	**Pn**	**21 08 34.4**	**+3.5**
	1μm78nm,1.4s						
COEN	**Coen**	**11.56**	**203**	Pn	**Pn**	**21 09 05.3**	**+0.6**
HNR	**Honiara**	**13.61**	**117**	LR	LR	21 14 58.5	
	comp=Z,3μm,18.6s,baz=294,slow=38						
FAKI	**Fak Fak**	**15.46**	**271**	Pn	**Pn**	**21 09 56.6**	**-1.2**
FAKI				IAmb	IAmb	21 10 13.2	
	comp=Z,58nm,1.3s						
FAKI	**Fak Fak**	**15.46**	**271**	P	**P**	**21 10 01.8**	**-0.5**
	comp=Z,35nm,1.2s						
SIJI	**Sorong**	**16.62**	**278**	Pn	**Pn**	**21 10 12.7**	**0.0**
	comp=Z,5.6nm,0.9s,baz=105,slow=14,SNR=2.0						
SIJI				LR	LR	21 15 33.7	
	comp=Z,3μm,20.9s,baz=118,slow=34						
SWI	**Sorong**	**16.63**	**278**	P	**P**	**21 10 14.3**	**-0.9**
	comp=Z,813nmcomp=Z,24nm,1.0s						
CTA	**Charters Tower**	**16.81**	**185**	LR	LR	21 16 58.9	
	comp=Z,2μm,18.9s,baz=5.0,slow=38						
GUMO	**Guam**	**16.96**	**350**	LR	LR	21 15 17.3	
	comp=Z,1μm,18.6s,baz=168,slow=32						
MTN	**Manton Dam**	**18.99**	**239**	P	**P**	**21 10 39.7**	**-1.6**
AAI	**Ambon**	**19.51**	**268**	P	**P**	**21 10 46.6**	**-0.4**
	comp=Z,43nm,0.8s						
LBMI	**Labuha**	**20.38**	**277**	P	Pn	21 10 58.2	-0.4
	comp=Z,811nmcomp=Z,35nm,2.0s						
TNTI	**Ternate**	**20.74**	**281**	P	**P**	**21 10 57.4**	**-3.1**
TNTI				IAmb	IAmb	21 11 31.2	
	comp=Z,100nm,1.8s						
TNTI	**Ternate**	**20.74**	**281**	P	Pn	21 11 02.7	-0.1
	comp=Z,850nmcomp=Z,30nm,1.2s						
WB0	**Warramunga Arr**	**20.96**	**217**	P	**P**	**21 11 02.3**	**-0.5**
WR0	**Warramunga Arr**	**21.02**	**217**	P	**P**	**21 11 02.4**	**-1.0**
WR0				IAmb	IAmb	21 11 24.4	
	comp=Z,60nm,1.2s						
WRAB	**Tennant Creek**	**21.12**	**217**	P	**P**	**21 11 04.5**	**0.0**
WRA	**Warramunga Arr**	**21.13**	**217**	P	**P**	**21 11 05.5**	**+0.8**
	comp=Z,6.0nm,0.8s,baz=42,slow=11,SNR=39						
WRA				LR	LR	21 20 12.5	
	comp=Z,2μm,18.2s,baz=25,slow=39 comp=Z,6.0nm,0.8s						
WRA	**Warramunga Arr**	**21.13**	**217**	P	**P**	**21 11 05.8**	**+1.1**
SANI	**Sanana**	**21.75**	**273**	P	**P**	**21 11 12.4**	**+1.0**
	comp=Z,599nmcomp=Z,30nm,1.2s						
EIDS	**Eidsvold**	**22.24**	**172**	P	**P**	**21 11 17.2**	**+0.7**
EIDS				IAmb	IAmb	21 11 25.3	
	comp=Z,67nm,1.6s						
KNRA	**Kununurra**	**22.39**	**235**	P	**P**	**21 11 17.7**	**-0.5**
KNRA				IAmb	IAmb	21 11 26.9	
	comp=Z,55nm,1.1s						
KMSI	**Cibinong**	**24.04**	**279**	P	**P**	**21 11 36.2**	**+1.3**
	comp=Z,3μmcomp=Z,87nm,1.1s						
AS31	**Alice Springs**	**24.31**	**212**	P	**P**	**21 11 37.4**	**0.0**
ASAR	**Alice Springs**	**24.32**	**212**	P	**P**	**21 11 39.2**	**+1.8**
	comp=Z,9.4nm,0.8s,baz=42,slow=7.7,SNR=44						
ASAR				LR	LR	21 21 54.9	
	comp=Z,1μm,19.1s,baz=42,slow=38 comp=Z,9.4nm,0.8s						
ASAR	**Alice Springs**	**24.32**	**212**	P	**P**	**21 11 37.2**	**-0.2**
DAV	**Davao City (W)**	**24.37**	**295**	LR	LR	21 20 53.6	
	comp=Z,2μm,18.1s,baz=108,slow=36						
LUWI	**Luwuk**	**25.04**	**274**	P	**P**	**21 11 42.4**	**-1.7**
LUWI	**Luwuk**	**25.04**	**274**	P	**P**	**21 11 44.5**	**+0.5**
	comp=Z,110nm,1.2s						
MRSI	**Marisa**	**26.04**	**278**	P	**P**	**21 11 54.9**	**+1.7**
	comp=Z,16nm,1.0s						
APSI	**Ampana**	**26.17**	**274**	P	**P**	**21 11 54.6**	**+0.3**
	comp=Z,352nmcomp=Z,29nm,1.3s						
EDFI	**Ende, Flores**	**26.46**	**257**	P	P	21 12 04.2	+7.1
TOLI2	**Tolitoli**	**27.28**	**279**	P	**P**	**21 12 01.9**	**-2.4**
ARMA	**Armidale**	**27.29**	**173**	P	**P**	**21 12 04.5**	**+0.2**
ARMA				IAmb	IAmb	21 12 15.4	
	comp=Z,25nm,1.1s						
BNSI	**Bone**	**27.59**	**267**	P	**P**	**21 12 08.4**	**+1.3**
	comp=Z,24nm,1.0s						
BKSI	**Bulukumba**	**27.61**	**265**	P	**P**	**21 12 09.9**	**+2.6**
	comp=Z,11nm,1.3s						
TTSI	**Tana Toraja**	**27.87**	**270**	P	**P**	**21 12 14.0**	**+4.4**
	comp=Z,16nm,1.1s						
MPSI	**Mapaga**	**28.05**	**277**	P	**P**	**21 12 10.9**	**-0.3**
	comp=Z,8.7nm,1.6s						
H11S3	**WAKE ISLAND Hy**	**28.55**	**40**	T	T	21 42 01.0	
	baz=223,slow=76,SNR=1334						
H11S2	**WAKE ISLAND Hy**	**28.55**	**40**	T	T	21 42 03.4	
	baz=223,slow=76,SNR=1114						
H11S1	**WAKE ISLAND Hy**	**28.57**	**40**	T	T	21 42 04.5	
	baz=223,slow=76,SNR=939						
STKA	**Stephens Creek**	**29.07**	**191**	LR	LR	21 24 44.1	
	comp=Z,1μm,19.1s,baz=3.2,slow=38						
H11N1	**WAKE ISLAND Hy**	**29.57**	**39**	T	T	21 43 15.9	
	baz=222,slow=76,SNR=346						
H11N3	**WAKE ISLAND Hy**	**29.59**	**39**	T	T	21 43 16.2	
	baz=222,slow=76,SNR=887						
H11N2	**WAKE ISLAND Hy**	**29.59**	**39**	T	T	21 43 17.0	
	baz=222,slow=76,SNR=513						
MYLDM	**Lahad Datu**	**30.38**	**286**	P	**P**	**21 12 29.8**	**-2.1**
MYLDM				IAmb	IAmb	21 12 41.5	
	comp=Z,28nm,1.4s						
JCJ	**Chichijima**	**30.63**	**350**	LR	LR	21 23 10.4	
	comp=Z,577nm,21.9s,baz=160,slow=33						
CAN	**Canberra**	**31.95**	**178**	P	**P**	**21 12 47.1**	**+1.6**
MSVF	**Nonsavu**	**33.03**	**118**	LR	LR	21 26 00.4	
	comp=Z,541nm,18.4s,baz=303,slow=36						
FORT	**Forrest**	**33.10**	**212**	P	**P**	**21 12 56.8**	**+1.1**
JOW	**Kunigami**	**35.31**	**329**	LR	LR	21 24 25.6	
	comp=Z,2μm,21.9s,baz=142,slow=31						
SBUM	**Sibu**	**35.94**	**279**	P	**P**	**21 13 18.3**	**-2.2**
JHJ	**Hachijo jima 2**	**36.93**	**349**	LR	LR	21 27 35.8	
	comp=Z,277nm,19.4s,baz=247,slow=35						
NACB	**Ninganchiao**	**37.27**	**318**	P	**P**	**21 13 27.7**	**-3.9**
NACB				IAmb	IAmb	21 13 41.2	
	comp=Z,30nm,1.0s						
KSM	**Kuching**	**37.70**	**277**	P	**P**	**21 13 33.5**	**-2.0**
INU	**Inuyama**	**39.68**	**346**	P	**P**	**21 13 50.1**	**-1.7**
INU				IAmb	IAmb	21 14 04.6	
	comp=Z,54nm,1.5s						
JGF	**Kuroka**	**39.84**	**347**	P	**P**	**21 13 49.7**	**-3.5**
JGF				IAmb	IAmb	21 14 15.5	
	comp=Z,54nm,1.6s						
LEM	**Lembang**	**40.11**	**263**	LR	LR	21 33 38.8	
	comp=Z,186nm,19.4s,baz=104,slow=41						
MJAR	**Matsushiro Arr**	**40.56**	**348**	P	**P**	**21 13 59.7**	**+0.6**
	comp=Z,2.2nm,1.0s,baz=176,slow=5.7,SNR=3.2						
MJAR				LR	LR	21 29 23.7	
	comp=Z,498nm,18.1s,baz=152,slow=34 comp=Z,2.2nm,1.0s						
AFI	**Afiamalu**	**41.35**	**107**	LR	LR	21 29 46.1	
	comp=Z,534nm,18.5s,baz=280,slow=34						
SSE	**Sheshan**	**42.49**	**325**	P	**P**	**21 14 15.1**	**+0.1**
SSE				S	**S**	**21 20 37.1**	**-0.1**
SSE				pmax	pmax		
	comp=Z,12nm,0.7s						
SSE				pmax	pmax		
	comp=Z,60nm,4.3s						
SSE				LR	LR		
	comp=Z,270nm,23.2s						
SSE				LR	LR		
	comp=Z,530nm,20.1s						
QIZ	**Qiongzhong**	**43.34**	**302**	P	**P**	**21 14 20.3**	**-1.8**
QIZ				S	**S**	**21 20 52.8**	**+2.6**
QIZ				LR	LR		
	comp=Z,530nm,25.5s						
QIZ				LR	LR		
	comp=Z,530nm,17.5s						
QIZ				LR	LR		
	comp=Z,1μm,22.3s						
URZ	**Urewera**	**43.99**	**146**	LR	LR	21 30 26.2	
	comp=Z,2μm,21.1s,baz=30,slow=33						
KSRS	**Korea Array**	**44.47**	**337**	P	**P**	**21 14 31.1**	**+0.2**
	comp=Z,3.5nm,0.8s,baz=155,slow=9.6,SNR=11						
KSRS				LR	LR	21 31 14.2	
	comp=Z,676nm,19.1s,baz=150,slow=34 comp=Z,3.5nm,0.8s						
KSAR	**Wonju Array Be**	**44.48**	**337**	P	**P**	**21 14 28.8**	**-2.1**
NJ2	**Nanjing**	**44.54**	**324**	*e*P	**P**	**21 14 31.8**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
NJ2				LR	L

comp=Z,210nm,18.2s
KMI LR LR
comp=Z,410nm,18.4s
KMI LR LR
comp=Z,550nm,20.5s
XAN Xi'an 52.06 319 ⇑P **P 21 15 28.4 -1.3**
XAN pP pP 21 15 31.6 -0.9
XAN S **S 21 22 52.1 -1.6**
XAN sS sS 21 23 00.3 +1.8
XAN SS **SS 21 26 29.3 -1.9**
XAN pmax pmax
comp=Z,10.0nm,0.9s
XAN pmax pmax
comp=Z,120nm,3.8s
XAN LR LR
comp=Z,800nm,16.7s
XAN LR LR
comp=Z,520nm,15.8s
XAN LR LR
comp=Z,1μm,18.2s
CMAR Chiang Mai Arr 52.65 296 P **P 21 15 35.0 +0.7**
comp=Z,2.0nm,0.9s,baz=110,slow=5.2,SNR=12
CMAR LR LR 21 35 47.6
comp=Z,171nm,21.0s,baz=110,slow=34
comp=Z,2.0nm,0.9s
CMAR Chiang Mai Arr 52.65 296 P **P 21 15 32.4 -1.8**
PZH PanZhiHua 53.36 307 P **P 21 15 42.8 +3.2**
PZH PP **PP 21 17 43.8 +3.8**
PZH S **S 21 23 13.3 +1.4**
PZH pmax pmax
comp=Z,10.0nm,1.2s
PZH pmax pmax
comp=Z,110nm,4.9s
PZH LR LR
comp=Z,1μm,20.4s
PZH LR LR
comp=Z,1μm,17.7s
PZH LR LR
comp=Z,3μm,24.7s
RAR Rarotonga 54.03 114 LR LR 21 36 00.5
comp=Z,175nm,21.9s,baz=285,slow=33
KLR Kul'dur 54.07 347 LR LR 21 36 23.3
comp=Z,283nm,21.3s,baz=164,slow=34
XLT XiLinHaoTe 54.86 332 *e*P **P 21 15 53.8 +3.7**
XLT pP sP 21 15 58.6 +4.6
XLT sP pP 21 16 00.3 +7.4
XLT S **S 21 23 34.8 +3.4**
XLT pmax pmax
comp=Z,9.0nm,0.8s
XLT pmax pmax
comp=Z,100nm,3.5s
XLT LR LR
comp=Z,610nm,17.0s
XLT LR LR
comp=Z,730nm,19.0s
HHC Hu-ho-hao-te 54.91 327 *e*P **P 21 15 50.4 -0.1**
HHC sP sP 21 15 58.1 +3.6
HHC S **S 21 23 34.5 +2.2**
HHC pmax pmax
comp=Z,22nm,0.9s
HHC pmax pmax
comp=Z,140nm,6.1s
HHC LR LR
comp=Z,1μm,19.8s
HHC LR LR
comp=Z,1μm,18.6s
HHC LR LR
comp=Z,2μm,18.8s
LZH Lanzhou 56.64 318 ⇑P **P 21 16 04.4 +1.3**
LZH pP sP 21 16 09.1 +2.0
LZH S **S 21 23 57.6 +2.0**
LZH SS **SS 21 27 42.6 -0.9**
LZH pmax pmax
comp=Z,16nm,1.4s
LZH pmax pmax
comp=Z,120nm,6.0s
LZH LR LR
comp=Z,310nm,20.6s
LZH LR LR
comp=Z,430nm,20.6s
LZH LR LR
comp=Z,540nm,20.1s
PEA0B Petropavlovsk- 56.76 7 P **P 21 16 02.3 -1.1**
PEA0B IAmb IAmb 21 16 08.8
comp=Z,14nm,1.0s
PETK Petropavlovsk- 56.76 7 P **P 21 16 03.8 +0.3**
comp=Z,7.5nm,0.8s,baz=183,slow=7.4,SNR=13
PETK LR LR 21 36 32.7
comp=Z,367nm,21.9s,baz=189,slow=32
comp=Z,7.5nm,0.8s
PETK Petropavlovsk- 56.76 7 P **P 21 16 02.7 -0.8**
HIA Hailar 57.65 339 P **P 21 16 09.1 -0.8**
SHEM Shemya Is, Ala 60.03 18 LR LR 21 40 17.9
comp=Z,150nm,18.8s,baz=234,slow=34
GTA Gaotai 61.12 319 ⇓P **P 21 16 34.4 +0.2**
GTA pP sP 21 16 37.6 -0.6
GTA sP pP 21 16 40.9 +3.8
GTA S **S 21 24 52.1 -1.7**
GTA pmax pmax
comp=Z,3.0nm,0.9s
GTA pmax pmax
comp=Z,85nm,5.8s
GTA LR LR
comp=Z,260nm,19.3s
GTA LR LR
comp=Z,320nm,21.1s
GTA LR LR
comp=Z,450nm,19.6s
SHL Shillong 61.17 301 P **P 21 16 33.5 -1.4**
SHL IAmb IAmb 21 16 41.9
comp=Z,15nm,1.3s
ULN Ulaanbaatar 62.07 330 P **P 21 16 39.1 -1.4**
ULN IAmb IAmb 21 16 45.7
comp=Z,12nm,1.4s
SONM Songino Array 62.38 330 P **P 21 16 42.8 +0.3**
comp=Z,0.7nm,0.6s,baz=129,slow=3.9,SNR=3.1
SONM LR LR 21 41 45.3
comp=Z,598nm,21.6s,baz=134,slow=34
comp=Z,0.7nm,0.6s
SONM Songino Array 62.38 330 P **P 21 16 41.5 -1.0**
SONM IAmb IAmb 21 17 03.1
comp=Z,9.0nm,1.5s
MA2 Magadan 62.67 2 LR LR 21 38 53.7
comp=Z,163nm,22.0s,baz=188,slow=31
GOMU GeErMu 63.00 314 P **P 21 16 48.4 +1.2**
GOMU pP sP 21 16 51.0 -0.2
GOMU PcP **PcP 21 17 22.9 -2.2**
GOMU S **S 21 25 20.4 +2.3**
GOMU pmax pmax
comp=Z,4.0nm,0.8s
GOMU pmax pmax
comp=Z,22nm,4.9s
GOMU LR LR
comp=Z,270nm,17.2s
GOMU LR LR
comp=Z,140nm,17.3s
GOMU LR LR
comp=Z,170nm,17.2s
PPT Papeete 63.01 108 LR LR 21 37 51.5
comp=Z,104nm,21.4s,baz=310,slow=30
PPT2 Papeete2 63.02 108 *e*LR LR 21 35 33.5
comp=Z,434nm,24.8s
LSA Lhasa 63.21 306 P **P 21 16 46.7 -2.1**
LSA IAmb IAmb 21 17 09.3
comp=Z,6.8nm,1.1s
TBI Tubuai 63.80 114 *e*LR LR 21 35 53.2
comp=Z,1μm,31.5s
SEY Seymchan 66.09 2 LR LR 21 48 03.5
comp=Z,142nm,18.2s,baz=180,slow=38
RAMN Ramite 66.11 301 *e*P **P 21 17 10.8 +3.2**
YAK Yakutsk 66.54 351 LR LR 21 46 46.4
comp=Z,160nm,18.6s,baz=102,slow=37
YAK Yakutsk 66.54 351 P **P 21 17 08.2 -1.0**
GUN Gumba 67.00 302 *e*P **P 21 17 13.8 +0.4**
PKI Pulchoki 67.30 302 *e*P **P 21 17 15.1 -0.2**
PKIN Phulchoki 67.31 302 *e*P **P 21 17 16.1 +0.8**
DMN Daman 67.57 302 *e*P **P 21 17 15.9 -1.0**
comp=Z,45nm,1.0s
PALK Pallekele 67.70 279 LR LR 21 48 51.5
comp=Z,97nm,19.0s,baz=208,slow=38
GKN Gorkha 68.08 302 *e*P **P 21 17 19.9 -0.1**
comp=Z,49nm,1.1s
WMQ Urumqi 71.20 319 *e*P **P 21 17 39.3 +0.5**
WMQ LR LR
comp=Z,410nm,16.5s
WMQ LR LR
comp=Z,260nm,18.3s
WMQ LR LR
comp=Z,350nm,16.1s
TAOE Nuku Hiva Isla 71.85 98 *e*LR LR 21 39 37.5
comp=Z,369nm,26.7s
CNBA Chernabura Isl 72.27 29 P **P 21 17 44.4 -0.5**
BILL Bilibino 72.30 7 P **P 21 17 43.8 -1.0**
BILL IAmb IAmb 21 17 47.8
comp=Z,14nm,1.3s
VNDA Vanda 74.61 177 P **P 21 18 00.4 +2.1**
comp=Z,2.4nm,0.8s,baz=323,slow=5.4,SNR=8.3
VNDA LR LR 21 49 02.1
comp=Z,254nm,18.7s,baz=350,slow=34
comp=Z,2.4nm,0.8s
VNDA Vanda 74.61 177 P **P 21 17 59.7 +1.4**
TIXI Tiksi 75.75 354 P **P 21 18 04.1 -0.9**
MK31 Makanchi Array 75.86 320 P **P 21 18 04.4 -1.7**
MKAR Makanchi Array 75.86 320 P **P 21 18 05.7 -0.4**
comp=Z,2.6nm,1.0s,baz=110,slow=6.8,SNR=12
MKAR LR LR 21 51 46.1
comp=Z,494nm,18.9s,baz=88,slow=36
comp=Z,2.6nm,1.0s
MKAR Makanchi Array 75.86 320 P **P 21 18 04.0 -2.1**
MAKZ Makanchi 76.06 320 P **P 21 18 05.2 -2.1**
ZAA0 Zalesovo Array 77.09 327 P **P 21 18 11.0 -1.8**
ZALV Zalesovo Beam 77.09 327 P **P 21 18 11.7 -1.2**
comp=Z,3.2nm,1.0s,baz=106,slow=6.7,SNR=7.8
ZALV LR LR 21 51 51.5
comp=Z,540nm,19.5s,baz=117,slow=36
comp=Z,3.2nm,1.0s
ZALV Zalesovo Beam 77.09 327 P **P 21 18 10.4 -2.4**
PRZ Przheval'sk 77.12 315 P **P 21 18 12.1 -1.5**
KDAK Kodiak Island 77.14 28 LR LR 21 46 09.5
comp=Z,305nm,22.0s,baz=257,slow=31
TARG Taragay, Kyrgy 77.33 314 P **P 21 18 13.8 -1.3**
KDJ Kajisay 77.89 314 P **P 21 18 16.4 -1.4**
KSH Kashi 78.10 311 P **P 21 18 20.9 +1.9**
KSH pP sP 21 18 24.4 +1.3
KSH S **S 21 28 17.5 +3.9**
KSH SS **SS 21 33 24.0 +8.6**
KSH pmax pmax
comp=Z,3.0nm,0.9s
KSH LR LR
comp=Z,340nm,22.0s
KSH LR LR
comp=Z,300nm,23.4s
KSH LR LR
comp=Z,320nm,22.0s
TTA Tatalina 78.24 23 P **P 21 18 19.1 -0.1**
TTA IAmb IAmb 21 18 41.7
comp=Z,13nm,1.5s
L19K White Mountain 78.30 24 P **P 21 18 18.8 -0.7**
L19K IAmb IAmb 21 18 34.8
comp=Z,11nm,1.1s
CNPM China Poot 78.57 27 P **P 21 18 20.9 -0.1**
M20K Styx River 78.86 24 P **P 21 18 22.7 +0.1**
M20K IAmb IAmb 21 18 41.2
comp=Z,9.0nm,1.1s
BOOM Boomskoye usch 78.87 314 P **P 21 18 21.7 -1.6**
KURK Kurchatov 79.45 323 P **P 21 18 24.9 -1.1**
KURK IAmb IAmb 21 18 30.3
comp=Z,10nm,1.2s
KURBB Kurchatov Arra 79.48 323 LR LR 21 52 59.8
comp=Z,429nm,20.0s,baz=84,slow=35
J20K Nowinta River 79.60 22 P **P 21 18 26.3 -0.2**
J20K IAmb IAmb 21 18 33.4
comp=Z,10.0nm,1.1s
AAK Ala-Archa 79.94 314 LR LR 21 53 22.2
comp=Z,706nm,21.4s,baz=100,slow=35
IMAR Indian Mountai 80.66 21 P **P 21 18 32.2 -0.1**
SML Sawmill 80.85 26 P **P 21 18 32.5 -0.9**
SML IAmb IAmb 21 18 36.3
comp=Z,12nm,1.1s
DRK Karamyk 81.24 311 P **P 21 18 34.2 -2.1**
RND Reindeer 81.31 24 P **P 21 18 35.0 -0.9**
RND IAmb IAmb 21 18 40.2
comp=Z,23nm,1.6s
MCK McKinley 81.42 24 P **P 21 18 36.8 +0.4**
MCK IAmb IAmb 21 18 40.8
comp=Z,16nm,1.3s
KLU Klutina 81.78 26 P **P 21 18 37.2 -1.2**
KLU IAmb IAmb 21 18 44.0
comp=Z,8.8nm,1.0s
DHY Denali Highway 81.78 25 P **P 21 18 38.2 -0.3**
WRH Wood River Hil 82.07 23 P **P 21 18 39.5 -0.3**
WRH IAmb IAmb 21 18 44.0
comp=Z,8.9nm,1.1s
CCB Clear Creek Bu 82.26 23 P **P 21 18 40.5 -0.2**
IL31 82.67 23 P **P 21 18 41.9 -0.9**
ILAR Eielson Array 82.67 23 P **P 21 18 42.2 -0.7**
comp=Z,2.8nm,0.8s,baz=257,slow=5.3,SNR=16
ILAR LR LR 21 50 39.5
comp=Z,119nm,22.0s,baz=242,slow=32
comp=Z,2.8nm,0.8s
ILAR Eielson Array 82.67 23 P **P 21 18 41.8 -1.1**
NRIK Noril'sk 82.89 342 P **P 21 18 44.9 +1.0**
comp=Z,5.9nm,0.9s,baz=122,slow=5.3,SNR=3.4
NRIK LR LR 21 55 55.8
comp=Z,263nm,18.8s,baz=126,slow=36
comp=Z,5.9nm,0.9s
NRIK Noril'sk 82.89 342 P **P 21 18 44.0 0.0**
NRIK IAmb IAmb 21 18 48.9
comp=Z,11nm,1.1s
KKAR Karatay Array 82.90 314 P **P 21 18 43.2 -1.4**
J25K Salcha River, 83.21 24 P **P 21 18 45.4 -0.4**
J25K IAmb IAmb 21 18 50.3
comp=Z,7.1nm,0.8s
M27K Edge Creek, AK 83.88 26 P **P 21 18 49.8 +0.4**
M27K IAmb IAmb 21 18 55.0
comp=Z,6.7nm,0.8s
BCAR Beaver Creek A 84.15 26 P **P 21 18 50.6 0.0**
BMAR Burnt Mountain 84.57 21 P **P 21 18 52.8 +0.1**
BVAR Borovoye Array 84.98 324 LR LR 21 58 39.9
comp=Z,124nm,18.5s,baz=330,slow=37
BRVK Borovoye 85.05 324 P **P 21 18 54.8 -0.5**
BRVK IAmb IAmb 21 18 59.8
comp=Z,11nm,1.5s
MAW Mawson 85.06 203 LR LR 21 56 51.9
comp=Z,217nm,18.4s,baz=84,slow=36
HYT Haines Junctio 85.43 28 P **P 21 18 56.7 -0.5**
HYT IAmb IAmb 21 19 03.2
comp=Z,13nm,1.5s
H02S1 DAWSON INLET T 86.47 36 T T 22 54 39.1
SNR=6.2
HRA Herat 88.08 304 P **P 21 19 09.0 -1.9**
HRA IAmb IAmb 21 19 19.4
comp=Z,6.1nm,1.1s
DLBC Dease Lake 88.67 31 LR LR 21 52 35.6
comp=Z,464nm,19.8s,baz=281,slow=31
INK Inuvik 88.83 21 LR LR 21 56 10.3
comp=Z,351nm,20.1s,baz=239,slow=34
BBB Bella Bella 88.94 38 LR LR 21 52 19.3
comp=Z,516nm,20.1s,baz=278,slow=31
WSAR Wadi Sarin 90.44 293 LR LR 22 04 30.1
comp=Z,65nm,18.3s,baz=104,slow=39
GEYT Alibeck 91.66 308 LR LR 22 02 31.6
comp=Z,248nm,19.7s,baz=95,slow=37
ARU Arti 92.21 326 LR LR 22 00 18.7
comp=Z,638nm,21.9s,baz=91,slow=35
AKTO Aktyubinsk 92.29 320 LR LR 22 00 45.2
comp=Z,605nm,20.7s,baz=85,slow=35
NVAR Mina Array Bea 95.10 52 LR LR 21 55 07.5
comp=Z,337nm,20.9s,baz=277,slow=31
NEW Newport 95.83 42 LR LR 22 01 12.1
comp=Z,136nm,18.0s,baz=270,slow=34
YKA Yellowknife Ar 96.40 28 P **P 21 19 49.1 +0.7**
comp=Z,2.0nm,0.7s,baz=277,slow=4.9,SNR=3.1
YKA LR LR 22 00 21.2
comp=Z,154nm,20.5s,baz=295,slow=34
comp=Z,2.0nm,0.7s
PFO Pinyon Flats O 96.62 57 LR LR 21 57 22.7
comp=Z,284nm,18.9s,baz=234,slow=32
KIRV Kirov 97.09 329 LR LR 22 05 23.0
comp=Z,713nm,18.9s,baz=89,slow=36
ELK Elko 97.43 50 LR LR 22 00 09.9
comp=Z,199nm,18.5s,baz=257,slow=33
BELG Belogornoye 98.72 322 LR LR 22 07 39.1
comp=Z,153nm,18.0s,baz=104,slow=37
CLL Collm 118.99 329 *e*PS PS 21 36 14.0 -1.5
CLL *e*(PPS) 21 37 48.0
CLL *e*SS SS 21 42 48.0 +0.9
CLL *e*SSS SSS 21 46 54.0
CLL *e*x x 21 49 18.0
CLL *e*SSSS 21 50 36.0
CLL Lm MLR 22 17 00.0
comp=Z,500nm,21.6s
LPAZ La Paz 139.59 120 PKP **PKPdf 21 25 49.8 +0.5**
comp=Z,0.9nm,0.8s,baz=181,slow=3.1,SNR=2.4
CPUP Villa Florida 141.90 142 PKP **PKiKP 21 25 53.8 -1.5**
comp=Z,1.7nm,0.8s,baz=77,slow=8.9,SNR=3.0
TORD Torodi Ar. Bea 145.02 288 PKP **PKPbc 21 25 56.5 -0.9**
comp=Z,4.0nm,1.1s,baz=53,slow=2.8,SNR=10
TORD Torodi Ar. Bea 145.02 288 **PKPbc 21 25 56.7 -0.8**

TUL ***15*** *21:08:01.6±0.8, 36°.219N±0°.008×97°.29W±0°.02, h6km±6km, ML3.1, mb_Lg3.0/68(NEIC), Error ellipse: s-maj=1.7km s-min=1.1km az=76.0*
ANF ***15*** *21:08:01.5±0.3, 36°.24N×97°.27W, h6km, ML3.4/8, Error ellipse: s-maj=3.9km s-min=3.0km az=156.0*
NEIC ***15*** *21:08:02.3±0.4, 36°.22N±0°.01×97°.29W±0°.02, h1km±7km, Error ellipse: s-maj=1.9km s-min=1.5km az=73.0*
ISC 15 21:08:02.1±0.9, 36°.22N±0°.03×97°.29W±0°.03, h10km, n58, σ0s95/39, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKCFA	**Oklahoma City**	**0.82**	**189**		**Pg**	**21 08 17.1**	**-0.8**
OKCFA	**Oklahoma City**	**0.82**	**189**	P	**Pg**	**21 08 17.1**	**-0.8**
baz=9.5							
OKCSW	**OKLAHOMA CITY**	**0.82**	**188**		**Pg**	**21 08 17.3**	**-0.7**
T35A	**Sooner Cattle**	**0.93**	**42**		**Pg**	**21 08 19.4**	**-0.7**
T35B	**Sooner Cattle**	**0.93**	**42**	P	**Pg**	**21 08 19.3**	**-0.8**
baz=222							
T35B				S	**Sg**	**21 08 31.6**	**-0.7**
baz=222							
FNO	**Franklin**	**0.97**	**185**		**Pg**	**21 08 19.8**	**-0.9**
TUL1	**Leonard**	**1.26**	**104**	Pg	**Pn**	**21 08 24.4**	**-1.4**
TUL1	**Leonard**	**1.26**	**104**	P	**Pn**	**21 08 24.3**	**-1.4**
baz=285							
TUL1				S	**Sb**	**21 08 41.3**	**-0.8**
baz=285							
U32A	**Winter Ranch,**	**1.39**	**277**		**Pn**	**21 08 27.2**	**-0.4**
U32A	**Winter Ranch,**	**1.39**	**277**	P	**Pn**	**21 08 27.1**	**-0.5**
baz=96							
U32A				S	**Sn**	**21 08 46.3**	**+0.3**
baz=96							
X34A	**Smith Ranch, M**	**1.68**	**195**		**Pn**	**21 08 32.4**	**+0.9**
WMOK	**Wichita Mounta**	**1.92**	**220**		**Pn**	**21 08 35.7**	**+0.9**
WMOK				lAmb_Lg		21 09 02.5	
comp=Z,92nm,0.8s							
WMOK	**Wichita Mounta**	**1.92**	**220**	P	**Pn**	**21 08 35.5**	**+0.7**
baz=39							
WMOK				S	**Sb**	**21 09 01.3**	**+0.2**
baz=39							
X37A	**Clayton**	**2.26**	**136**		**Pn**	**21 08 40.4**	**+0.8**
X37A				lAmb_Lg		21 09 13.9	
comp=Z,46nm,0.7s							
X37A	**Clayton**	**2.26**	**136**	P	**Pn**	**21 08 40.2**	**+0.6**
baz=317							
U38A	**Gravette**	**2.36**	**84**		**Pn**	**21 08 42.1**	**+1.3**
R32A	**Long Quarter,**	**2.47**	**333**	Pn	**Pn**	**21 08 43.0**	**+0.5**
R32A	**Long Quarter,**	**2.47**	**333**	S	**Sn**	**21 09 14.0**	**+1.3**
baz=152							
HHAR	**Hobbs**	**2.71**	**88**		**Pn**	**21 08 47.4**	**+1.6**
W39A	**Magazine**	**3.03**	**109**		**Pn**	**21 08 50.7**	**+0.5**
W39A				lAmb_Lg		21 09 42.4	
comp=Z,51nm,0.7s							
CBKS	**Cedar Bluff**	**3.23**	**324**	Pn	**Pn**	**21 08 53.0**	**0.0**
MIAR	**Mount Ida**	**3.47**	**118**		**Pn**	**21 08 56.6**	**+0.5**
MIAR	**Mount Ida**	**3.47**	**118**	P	**Pn**	**21 08 57.0**	**+0.9**
baz=300							
S39A	**Bolivar**	**3.50**	**64**		**Pn**	**21 08 57.4**	**+0.8**
S39A	**Bolivar**	**3.50**	**64**	P	**Pn**	**21 08 57.2**	**+0.6**
baz=246							
Z38A	**Mt. Pleasant**	**3.52**	**147**	lAmb_Lg		21 10 00.2	
comp=Z,38nm,0.7s							
U40A	**Yellville**	**3.59**	**87**		**Pn**	**21 08 59.5**	**+1.7**
AMTX	**Amarillo**	**3.82**	**251**		**Pn**	**21 09 01.9**	**+0.8**
AMTX				lAmb_Lg		21 10 08.0	
comp=Z,31nm,0.8s							
X40A	**Basin Creek Fa**	**4.04**	**114**		**Pn**	**21 09 05.5**	**+1.5**
X40A				lAmb_Lg		21 10 17.3	
comp=Z,24nm,0.8s							
MGMO	**Mountain Grove**	**4.14**	**76**		**Pn**	**21 09 06.7**	**+1.2**
WHAR	**Wooly Hollow**	**4.17**	**101**		**Pn**	**21 09 06.5**	**+0.7**
WHAR				lAmb_Lg		21 10 20.3	
comp=Z,38nm,0.8s							
FCAR	**Ozark Folk Cen**	**4.20**	**93**		**Pn**	**21 09 07.5**	**+1.2**
FCAR				lAmb_Lg		21 10 12.3	
comp=Z,37nm,0.9s							
W41B	**Gary Mavity, V**	**4.24**	**103**		**Pn**	**21 09 07.4**	**+0.7**
WLAR	**White Oak Lake**	**4.26**	**125**	lAmb_Lg		21 10 23.0	
comp=Z,25nm,0.9s							
UALR	**University of**	**4.29**	**108**	lAmb_Lg		21 10 20.1	
comp=Z,27nm,0.9s							
R40A	**Maddies Statio**	**4.51**	**61**		**Pn**	**21 09 11.1**	**+0.7**
R40A				lAmb_Lg		21 10 22.8	
comp=Z,26nm,0.8s							
P38A	**Dawn**	**4.51**	**40**		**Pn**	**21 09 11.5**	**+1.0**
P38A				lAmb_Lg		21 10 30.4	
comp=Z,22nm,0.8s							
N35A	**Tabor**	**4.81**	**15**	lAmb_Lg		21 10 46.2	
comp=Z,29nm,0.8s							
LCAR	**Lake Charles**	**4.97**	**90**	lAmb_Lg		21 10 37.6	
comp=Z,22nm,1.0s							
KSCO	**Kaye Shedlock'**	**5.07**	**305**	lAmb_Lg		21 10 47.9	
comp=Z,25nm,1.0s							
CCM	**Cathedral Cave**	**5.17**	**67**		**Pn**	**21 09 20.1**	**+0.6**
CCM				lAmb_Lg		21 10 52.2	
comp=Z,23nm,0.7s							
P40A	**Paris**	**5.30**	**50**	lAmb_Lg		21 10 53.9	
comp=Z,22nm,0.8s							
N38A	**Joes South For**	**5.56**	**34**	lAmb_Lg		21 10 57.7	
comp=Z,26nm,1.0s							
FVM	**French Village**	**5.76**	**70**	lAmb_Lg		21 11 07.8	
comp=Z,22nm,0.9s							
T25A	**Trinidad**	**5.79**	**281**	lAmb_Lg		21 11 08.8	
comp=Z,17nm,0.9s							
143A	**Socs Landing,**	**6.00**	**124**	lAmb_Lg		21 11 16.9	
comp=Z,23nm,0.8s							
OGNE	**Ogallala**	**6.00**	**323**	lAmb_Lg		21 11 18.6	
comp=Z,20nm,0.8s							
JCT	**Junction City**	**6.10**	**201**	lAmb_Lg		21 11 19.4	
comp=Z,19nm,1.1s							
SCIA	**State Center**	**6.50**	**28**	lAmb_Lg		21 11 40.6	
comp=Z,21nm,0.8s							
Q24A	**Divide**	**6.81**	**296**	lAmb_Lg		21 11 47.5	
comp=Z,16nm,0.9s							
K38A	**Parkersburg**	**7.31**	**27**	lAmb_Lg		21 12 10.2	
comp=Z,16nm,0.9s							
L40A	**Anamosa**	**7.50**	**37**	lAmb_Lg		21 12 05.3	
comp=Z,11nm,0.8s							
PHWY	**Pilot Hill**	**8.14**	**311**	lAmb_Lg		21 12 36.9	
comp=Z,9.4nm,1.1s							
N23A	**Red Feather La**	**8.22**	**307**	lAmb_Lg		21 12 36.5	
comp=Z,12nm,0.8s							
L42A	**Oliver, Polo**	**8.27**	**43**	lAmb_Lg		21 12 29.3	
comp=Z,11nm,0.9s							
JFWS	**Jewell Farm**	**8.61**	**37**	lAmb_Lg		21 12 35.0	
comp=Z,11nm,0.7s							
M44A	**Midewin, Midew**	**8.87**	**52**	lAmb_Lg		21 12 38.6	
comp=Z,16nm,0.9s							
K22A	**Casper**	**9.60**	**315**	lAmb_Lg		21 13 19.4	
comp=Z,12nm,1.2s							

IDC 15 21:13:27.5±1.7, 3°.14S×147°.38E, h0km, mb3.6/3, mbtmp3.8/4, ML3.6/1, Error ellipse: s-maj=37.8km s-min=30.7km az=109.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**4.78**	**104**	Pn	Pn	21 14 41.2	+0.5
2.5nm,0.3s,baz=106,slow=2.3,SNR=4.9							
33nm,0.6s							
WRA	**Warramunga Arr**	**21.00**	**216**	P	P	21 18 12.8	+0.1
2.1nm,0.9s,baz=44,slow=10,SNR=14							
2.1nm,0.9s							
ASAR	**Alice Springs**	**24.21**	**211**	P	P	21 18 46.0	-0.1
2.7nm,1.0s,baz=37,slow=7.4,SNR=9.8							
2.7nm,1.0s							
H11S3	**WAKE ISLAND Hy**	**28.70**	**41**	T	T	21 49 08.9	
baz=223,slow=76,SNR=64							
H11S2	**WAKE ISLAND Hy**	**28.71**	**41**	T	T	21 49 09.1	
baz=223,slow=76,SNR=238							
H11S1	**WAKE ISLAND Hy**	**28.72**	**41**	T	T	21 49 12.1	
baz=223,slow=76,SNR=62							
H11N1	**WAKE ISLAND Hy**	**29.72**	**39**	T	T	21 50 24.2	
baz=221,slow=76,SNR=110							
H11N3	**WAKE ISLAND Hy**	**29.74**	**39**	T	T	21 50 25.1	
baz=221,slow=76,SNR=182							

H11N2	**WAKE ISLAND Hy**	**29.74**	**39**	T	T	21 50 25.2		
	baz=221,slow=76,SNR=163							
SONM	**Songino Array**	**62.12**	**330**	P	P	21 23 50.4	-0.1	
	0.5nm,0.7s,baz=140,slow=7.6,SNR=4.2							
	0.5nm,0.7s							

IDC ***15*** *21:26:49.4±1.5, 53.78N×163.38W, h0km, mb3.9/13, mbtmp3.8/15, ML3.1/2, Error ellipse: s-maj=37.6km s-min=19.0km az=167.0*

NEIC ***15*** *21:26:52.6±1.9, 53.63N±0.04×163.30W±0.06, h24km±2km, mb4.6/18, ML3.7/10, ML3.6/55(AEIC), Error ellipse: s-maj=5.5km s-min=5.0km az=184.0*

AEIC ***15*** *21:26:54±1.8, 53.61N±0.06×163.25W±0.08, h27km±3km, Error ellipse: s-maj=9.7km s-min=5.2km az=148.0*

ISC 15 21:26:50.5±2.0, 53.56N±0.06×163.23W±0.04, h16km±11km, n167, σ1$06/170, mb4.3/26, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BRPK	**Brown Peak**	**1.13**	**345**		**Pg**	**21 27 12.1**	**-0.2**
ISLZ	**Isanotski Laza**	**1.20**	**346**		**Pb**	**21 27 13.0**	**+0.1**
ISLZ					**Sb**	**21 27 26.6**	**-1.7**
WESE	**West Dahl East**	**1.22**	**319**		**Pb**	**21 27 13.5**	**+0.3**
WESP	**Westdahl Peak**	**1.29**	**317**		**Pb**	**21 27 14.6**	**+0.2**
FALS	**False Pass**	**1.30**	**355**		**Pb**	**21 27 14.8**	**+0.2**
FALS				Sn	**Sb**	**21 27 29.2**	**-2.0**
FALS	**False Pass**	**1.30**	**355**		**Sn**	**21 27 30.8**	**-0.3**
FALS	**False Pass**	**1.30**	**355**	P	**Pb**	**21 27 14.9**	**+0.2**
	baz=175						
FALS				S	**Sn**	**21 27 30.8**	**-0.3**
	baz=175						
SSLW	**Shishaldin Wes**	**1.32**	**337**		**Pb**	**21 27 15.2**	**+0.2**
SSLN	**Shishaldin Nor**	**1.33**	**340**		**Pb**	**21 27 15.6**	**+0.4**
WECS	**Westdahl Cape**	**1.34**	**317**		**Pb**	**21 27 15.2**	**-0.1**
WEBT	**Westdahl Beart**	**1.37**	**320**		**Pb**	**21 27 15.9**	**+0.1**
AKSA	**Akutan Strait**	**1.57**	**293**		**Pn**	**21 27 18.4**	**+0.6**
AKSA					**Sb**	**21 27 38.5**	**-0.4**
AKUT	**Akutan**	**1.61**	**292**	Pn	**Pn**	**21 27 18.8**	**+0.5**
AKUT				Sn	**Sn**	**21 27 37.9**	**-0.9**
AKUT				IAML		21 27 50.5	
	comp=N,496nm,0.7s						
AKUT				IAML		21 27 51.3	
	comp=E,506nm,0.5s						
AKBBA	**Akutan Broad B**	**1.69**	**290**		**Pn**	**21 27 20.1**	**+0.7**
AKV	**Akutan Volcano**	**1.72**	**290**		**Pn**	**21 27 20.6**	**+0.7**
AKGG	**Akutan Green G**	**1.76**	**292**		**Pn**	**21 27 21.4**	**+1.0**
HAG	**Hague Volcano**	**1.92**	**23**		**Pb**	**21 27 24.2**	**-1.0**
UNV	**Unalaska Valle**	**1.97**	**280**	Pn	**Pn**	**21 27 23.2**	**0.0**
UNV	**Unalaska Valle**	**1.97**	**280**	P	**Pn**	**21 27 23.3**	**0.0**
	baz=96						
MTBL	**Makushin Table**	**2.09**	**283**		**Pn**	**21 27 25.8**	**+0.8**
MSW	**Makushin Switc**	**2.14**	**281**		**Pn**	**21 27 26.1**	**+0.4**
MGOD	**Makushin Gods**	**2.18**	**278**		**Pn**	**21 27 26.9**	**+0.7**
BLHA	**Black Hill**	**2.25**	**17**		**Pn**	**21 27 28.6**	**+1.5**
BLHA	**Black Hill**	**2.25**	**17**	P	**Pn**	**21 27 28.6**	**+1.5**
	baz=199						
SDPT	**Sand Point**	**2.41**	**41**	Pn	**Pn**	**21 27 30.1**	**+0.9**
SDPT				IAML		21 28 11.8	
	comp=E,595nm,0.7s						
SDPT				IAML		21 28 20.5	
	comp=N,476nm,1.0s						
SDPT	**Sand Point**	**2.41**	**41**		**Sn**	**21 27 59.1**	**+0.7**
SDPT	**Sand Point**	**2.41**	**41**	P	**Pn**	**21 27 30.4**	**+1.2**
	baz=224						
SDPT				S	**Sn**	**21 27 59.1**	**+0.7**
	baz=224						
CNBA	**Chernabura Isl**	**2.48**	**58**	Pn	**Pn**	**21 27 30.6**	**+0.4**
CNBA	**Chernabura Isl**	**2.48**	**58**		**Sn**	**21 28 00.4**	**+0.2**
CHNA	**Chernabura Isl**	**2.49**	**58**	P	**Pn**	**21 27 30.8**	**+0.5**
	baz=242						
CHNA				S	**Sn**	**21 28 00.4**	**+0.1**
	baz=242						
OKFG	**Magazine Ridge**	**2.80**	**269**		**Pn**	**21 27 35.6**	**+0.9**
OKRE	**Okmok R'deer P**	**2.95**	**271**		**Pn**	**21 27 37.6**	**+1.0**
NIKH	**Nikolski High**	**3.43**	**262**	Pn	**Pn**	**21 27 43.6**	**+0.3**
NIKH	**Nikolski High**	**3.43**	**262**		**Sn**	**21 28 23.0**	**-0.6**
NIKH	**Nikolski High**	**3.43**	**262**	P	**Pn**	**21 27 43.8**	**+0.5**
	baz=77						
NIKH				S	**Sn**	**21 28 23.0**	**-0.6**
	baz=77						
VNSG	**Veniaminof 6**	**3.51**	**41**		**Pn**	**21 27 46.0**	**+1.5**
VNHG	**Veniaminof 1**	**3.55**	**40**		**Pn**	**21 27 46.5**	**+1.5**
ANPB	**Aniakchak Plen**	**4.31**	**39**		**Pn**	**21 27 57.1**	**+1.7**
CHIR	**Chirikof Islan**	**4.96**	**60**	Pn	**Pn**	**21 28 04.5**	**+0.2**
CHIR				IAML		21 30 05.3	
	comp=E,70nm,2.0s						
CHIR				IAML		21 31 12.8	
	comp=N,79nm,2.2s						
SPIA	**Saint Paul Isl**	**5.40**	**315**		**Pn**	**21 28 11.6**	**+1.3**
SPIA	**Saint Paul Isl**	**5.40**	**315**	P	**Pn**	**21 28 11.7**	**+1.3**
	baz=129						
SII	**Sitkinak Islan**	**6.00**	**56**	Pn	**Pn**	**21 28 18.1**	**-0.5**
P16K	**Nushagak River**	**6.21**	**26**		**Pn**	**21 28 22.7**	**+1.3**
P16K	**Nushagak River**	**6.21**	**26**	P	**Pn**	**21 28 22.7**	**+1.3**
	baz=210						
O16K	**Kokwok River B**	**6.68**	**23**		**Pn**	**21 28 29.1**	**+1.3**
O16K	**Kokwok River B**	**6.68**	**23**	P	**Pn**	**21 28 29.1**	**+1.3**
	baz=208						
ATKA	**Atka Island**	**6.78**	**263**		**Pn**	**21 28 30.1**	**+0.9**
P17K	**Kvichak River**	**6.79**	**31**		**Pn**	**21 28 30.1**	**+0.7**
P17K	**Kvichak River**	**6.79**	**31**	P	**Pn**	**21 28 30.1**	**+0.7**
	baz=217						
O17K	**Koliganek Bris**	**7.08**	**26**		**Pn**	**21 28 34.6**	**+1.2**
O17K	**Koliganek Bris**	**7.08**	**26**	P	**Pn**	**21 28 34.6**	**+1.2**
	baz=211						
P18K	**Big Mountain,**	**7.33**	**34**		**Pn**	**21 28 37.7**	**+0.9**
P18K	**Big Mountain,**	**7.33**	**34**	P	**Pn**	**21 28 37.7**	**+0.9**
	baz=221						
N16K	**Nishlik Lake**	**7.35**	**18**		**Pn**	**21 28 38.3**	**+1.2**
N16K	**Nishlik Lake**	**7.35**	**18**	P	**Pn**	**21 28 38.3**	**+1.2**
	baz=201						
KDAK	**Kodiak Island**	**7.35**	**51**	Pn	**Pn**	**21 28 36.0**	**-1.2**
	comp=N,0.5nm,0.3s,baz=216,slow=5.8,SNR=12						
KDAK				Sn	**Sn**	**21 29 55.1**	**-5.0**
	comp=N,0.3nm,0.3s,baz=282,slow=17,SNR=0.9						
	comp=N,2.3nm,0.3s						
KDAK	**Kodiak Island**	**7.35**	**51**	Pn	**Pn**	**21 28 36.1**	**-1.0**
Q19K	**Cape Douglas,**	**7.58**	**41**		**Pn**	**21 28 41.3**	**+1.1**
Q19K	**Cape Douglas,**	**7.58**	**41**	P	**Pn**	**21 28 41.7**	**+1.5**
	baz=229						
O18K	**Koktuh Hills**	**7.70**	**32**		**Pn**	**21 28 43.6**	**+1.8**
O18K	**Koktuh Hills**	**7.70**	**32**	P	**Pn**	**21 28 43.4**	**+1.6**
	baz=219						
Q20K	**Shuyak Island**	**7.89**	**46**	P	**Pn**	**21 28 45.3**	**+0.8**
	baz=235						
SYI	**Shuyak Island**	**7.89**	**46**		**Pn**	**21 28 45.3**	**+0.8**
GSTR	**Great Sitkin T**	**7.91**	**264**	Pn	**Pn**	**21 28 46.9**	**+2.1**
GSCK	**Great Sitkin C**	**8.00**	**264**		**Pn**	**21 28 46.7**	**+0.7**
N18K	**Kilae Creek**	**8.17**	**26**		**Pn**	**21 28 48.7**	**+0.3**
N18K	**Kilae Creek**	**8.17**	**26**	P	**Pn**	**21 28 49.2**	**+0.8**
	baz=213						
ADK	**Adak**	**8.34**	**264**		**Pn**	**21 28 51.4**	**+0.7**
KIWB	**Kanaga Island**	**8.63**	**264**	Pn	**Pn**	**21 28 55.6**	**+1.0**
N19K	**Bonanza Creek**	**8.68**	**30**		**Pn**	**21 28 57.8**	**+2.5**
N19K	**Bonanza Creek**	**8.68**	**30**	P	**Pn**	**21 28 56.5**	**+1.1**
	baz=217						
CNPM	**China Poot**	**8.91**	**43**	Pn	**Pn**	**21 28 59.3**	**+0.8**
M19K	**Big River Lodg**	**9.60**	**26**		**Pn**	**21 29 09.6**	**+1.7**
L19K	**White Mountain**	**9.72**	**24**	Pn	**Pn**	**21 29 10.3**	**+0.8**
SLKM	**Skilak Lake**	**9.92**	**40**		**Pn**	**21 29 13.4**	**+1.0**
M20K	**Styx River**	**9.93**	**29**		**Pn**	**21 29 14.6**	**+2.1**
TTA	**Tatalina**	**10.13**	**19**	Pn	**Pn**	**21 29 15.9**	**+0.7**
SUA	**Susitna One**	**10.37**	**35**		**Pn**	**21 29 18.7**	**+0.2**
SUA	**Susitna One**	**10.37**	**35**	P	**Pn**	**21 29 18.3**	**-0.2**
	baz=226						
SKT	**Skwentna**	**10.48**	**32**	Pn	**Pn**	**21 29 21.9**	**+1.9**
AMKA	**Amchitka**	**10.88**	**265**	Pn	**Pn**	**21 29 24.8**	**-0.7**
K20K	**Telida**	**10.92**	**22**	Pn	**Pn**	**21 29 26.9**	**+0.9**
K20K	**Telida**	**10.92**	**22**	P	**Pn**	**21 29 26.0**	**+0.1**
	baz=210						
PPLA	**Purkeypile**	**11.00**	**27**	Pn	**Pn**	**21 29 29.4**	**+2.2**
HIN	**Hinchinbrook I**	**11.39**	**46**	Pn	**Pn**	**21 29 32.0**	**-0.4**
J20K	**Nowinta River**	**11.62**	**20**	Pn	**Pn**	**21 29 36.5**	**+1.0**
SCM	**Sheep Creek Mo**	**11.85**	**39**	Pn	**Pn**	**21 29 37.7**	**-1.0**
TRF	**Thorofare Moun**	**11.97**	**29**	Pn	**Pn**	**21 29 40.4**	**-0.1**
KLU	**Klutina**	**12.20**	**42**		**Pn**	**21 29 42.2**	**-1.3**
M24K	**Tolsona, Glenn**	**12.45**	**40**	Pn	**Pn**	**21 29 46.4**	**-0.5**
BMRM	**Bremner River**	**12.48**	**46**	Pn	**Pn**	**21 29 46.6**	**-0.7**
DHY	**Denali Highway**	**12.62**	**35**		**Pn**	**21 29 46.7**	**-2.7**
SNH	**Sunshine Point**	**12.94**	**51**	Pn	**Pn**	**21 29 53.5**	**0.0**
MLY	**Manley**	**13.12**	**24**		**Pn**	**21 29 56.5**	**+0.5**
H21K	**Melozitna Rive**	**13.20**	**19**	Pn	**Pn**	**21 29 58.5**	**+1.4**
PAX	**Paxson**	**13.22**	**38**		**Pn**	**21 29 56.3**	**-1.2**
IMAR	**Indian Mountai**	**13.32**	**17**	Pn	**Pn**	**21 29 59.4**	**+0.7**
ISLE	**Juniper Island**	**13.33**	**50**	Pn	**Pn**	**21 29 58.8**	**-0.1**
MDM	**Murphy Dome**	**13.71**	**28**	Pn	**Pn**	**21 30 03.9**	**-0.2**
M26K	**Nabesna, AK**	**13.85**	**42**	Pn	**Pn**	**21 30 05.1**	**-0.9**
MENT	**Mentasta**	**13.86**	**40**		**Pn**	**21 30 05.8**	**-0.3**
RIDG	**Independent Ri**	**13.92**	**36**	Pn	**Pn**	**21 30 06.0**	**-1.0**
ILAR	**Eielson Array**	**13.96**	**30**	Pn	**Pn**	**21 30 04.5**	**-3.0**
	comp=N,0.1nm,0.3s,baz=218,slow=14,SNR=3.0						
	comp=N,0.2nm,0.3s						
L26K	**Log Cabin Wild**	**14.05**	**40**		**Pn**	**21 30 08.1**	**-0.6**
H23K	**Yukon River**	**14.06**	**24**		**Pn**	**21 30 08.4**	**-0.4**
M27K	**Edge Creek, AK**	**14.29**	**43**		**Pn**	**21 30 12.2**	**+0.2**
J25K	**Salcha River,**	**14.32**	**32**		**Pn**	**21 30 11.2**	**-1.2**
BCPM	**Bancas Point**	**14.38**	**54**	Pn	**Pn**	**21 30 13.2**	**-0.1**
BCAR	**Beaver Creek A**	**14.67**	**41**	Pn	**Pn**	**21 30 15.8**	**-1.4**
J26L	**Joseph Creek**	**14.84**	**35**	Pn	**Pn**	**21 30 18.8**	**-0.7**
BMAR	**Burnt Mountain**	**16.55**	**26**	Pn	**Pn**	**21 30 42.1**	**+0.3**
I29M	**Ogilvie Camp,**	**17.17**	**37**		**Pn**	**21 30 50.0**	**+0.5**
PEA0B	**Petropavlovsk-**	**23.14**	**285**	P	**P**	**21 31 54.6**	**-1.3**
PETK	**Petropavlovsk-**	**23.14**	**285**	P	**P**	**21 31 55.1**	**-0.8**
	comp=N,2.5nm,0.6s,baz=81,slow=13,SNR=14						
	comp=N,2.5nm,0.6s						
PETK	**Petropavlovsk-**	**23.14**	**285**	P	**P**	**21 31 54.8**	**-1.1**
C36M	**Paulatuk**	**23.87**	**34**	P	**P**	**21 32 03.5**	**+0.7**
C36M				IAmb	IAmb	21 32 09.3	
	comp=Z,14nm,1.4s						
SEY	**Seymchan**	**24.68**	**310**	P	**P**	**21 32 08.7**	**-1.6**
	comp=Z,0.8nm,0.5s,baz=39,slow=23,SNR=2.1						
	comp=Z,0.8nm,0.5s						
TIXI	**Tiksi**	**33.66**	**328**	P	**P**	**21 33 29.4**	**-0.7**
H11N2	**WAKE ISLAND Hy**	**40.83**	**226**	T	T	22 18 23.1	
	baz=26						
H11N3	**WAKE ISLAND Hy**	**40.84**	**226**	T	T	22 18 21.9	
	baz=26						
H11N1	**WAKE ISLAND Hy**	**40.85**	**226**	T	T	22 18 23.6	
	baz=26						
H11S1	**WAKE ISLAND Hy**	**42.00**	**225**	T	T	22 19 51.2	
	baz=26,slow=76,SNR=20						
H11S2	**WAKE ISLAND Hy**	**42.02**	**225**	T	T	22 19 36.5	
	baz=26,slow=76,SNR=29						
H11S3	**WAKE ISLAND Hy**	**42.02**	**225**	T	T	22 19 38.9	
	baz=26,slow=76,SNR=25						
DAG	**Danmarks Havn**	**48.01**	**10**	*i* P	**P**	**21 35 28.0**	**0.0**
SUMG	**Summit**	**48.49**	**19**	P	**P**	**21 35 33.2**	**+0.9**
SUMG				IAmb	IAmb	21 35 43.9	
	comp=Z,4.1nm,1.1s						
SPITS	**Spitsbergen Ar**	**48.52**	**0**	P	**P**	**21 35 31.2**	**-0.8**
	comp=Z,0.7nm,0.4s,baz=45,slow=8.3,SNR=6.1						
	comp=Z,0.7nm,0.4s						
TXAR	**Lajitas Array**	**49.07**	**95**	P	**P**	**21 35 39.0**	**+2.0**
	comp=Z,0.1nm,0.4s,baz=298,slow=6.0,SNR=3.9						
	comp=Z,0.1nm,0.4s						
TXAR	**Lajitas Array**	**49.07**	**95**	P	**P**	**21 35 38.1**	**+1.1**
DBG	**Daneborg**	**50.02**	**12**	*i* P	**P**	**21 35 42.4**	**-1.1**
SONM	**Songino Array**	**53.81**	**303**	P	**P**	**21 36 12.6**	**+0.3**
	comp=Z,1.2nm,0.8s,baz=57,slow=5.5,SNR=6.4						
	comp=Z,1.2nm,0.8s						
HHC	**Hu-ho-hao-te**	**55.90**	**294**	*e*P	**P**	**21 36 26.8**	**-0.6**
HHC				pmax	pmax		
	comp=Z,24nm,1.0s						
KEV	**Kevo**	**56.77**	**356**	P	**P**	**21 36 32.3**	**-0.8**
ARCES	**ARCESS Array B**	**57.05**	**356**	P	**P**	**21 36 34.6**	**-0.5**
	comp=Z,3.3nm,1.0s,baz=13,slow=8.2,SNR=6.6						
	comp=Z,3.3nm,1.0s						
ARCES	**ARCESS Array B**	**57.05**	**356**	P	**P**	**21 36 34.4**	**-0.7**
ZALV	**Zalesovo Beam**	**58.97**	**320**	P	**P**	**21 36 48.9**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=30,slow=12,SNR=4.0						
	comp=Z,0.5nm,0.4s						
ZALV	**Zalesovo Beam**	**58.97**	**320**	P	**P**	**21 36 48.1**	**-0.6**
BRVK	**Borovoye**	**64.80**	**328**	P	**P**	**21 37 28.5**	**+0.5**
BRVK				IAmb	IAmb	21 37 29.5	
	comp=Z,3.5nm,0.8s						
FINES	**FINESS Array B**	**65.11**	**355**	P	**P**	**21 37 29.6**	**-0.1**
	comp=Z,1.6nm,0.8s,baz=46,slow=5.5,SNR=7.0						
	comp=Z,1.6nm,0.8s						
FINES	**FINESS Array B**	**65.11**	**355**	P	**P**	**21 37 29.5**	**-0.3**
ARU	**Arti**	**65.15**	**336**	P	**P**	**21 37 29.9**	**-0.3**
ARU				IAmb	IAmb	21 37 31.0	
	comp=Z,8.0nm,1.3s						
MK31	**Makanchi Array**	**65.59**	**317**	P	**P**	**21 37 32.3**	**-0.9**
MK31				IAmb	IAmb	21 37 54.2	
	comp=Z,3.3nm,1.3s						
MKAR	**Makanchi Array**	**65.59**	**317**	P	**P**	**21 37 33.2**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=43,slow=6.2,SNR=11						
	comp=Z,0.3nm,0.3s						
MKAR	**Makanchi Array**	**65.59**	**317**	P	**P**	**21 37 32.6**	**-0.7**
NC405	**NORSAR Array S**	**65.60**	**3**	P	**P**	**21 37 32.6**	**-0.5**
WMQ	**Urumqi**	**65.63**	**311**	*e*P	**P**	**21 37 35.6**	**+2.0**
PABE	**Paberze**	**71.14**	**356**	P	**P**	**21 38 07.8**	**+0.1**
PABE				IAmb	IAmb	21 38 08.8	
	comp=Z,5.8nm,0.6s						
ABKAR	**Akbulak array**	**71.26**	**332**	P	**P**	**21 38 09.4**	**+0.8**
ABKAR				IAmb	IAmb	21 38 10.4	
	comp=Z,5.6nm,0.6s						
TARG	**Taragay, Kyrgy**	**71.58**	**316**	P	**P**	**21 38 12.0**	**+0.8**
TARG				IAmb	IAmb	21 38 14.1	
	comp=Z,2.2nm,0.5s						
BOOM	**Boomskoye usch**	**71.70**	**318**	P	**P**	**21 38 12.8**	**+1.1**
BOOM				IAmb	IAmb	21 38 13.8	
	comp=Z,2.3nm,0.6s						
PZH	**PanZhiHua**	**71.98**	**290**	P	**P**	**21 38 14.4**	**+0.9**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KKAR	**Karatay Array**	**73.26**	**322**	P	**P**	**21 38 20.9**	**+0.1**
AKASG	**Malin Array Be**	**75.58**	**352**	P	**P**	**21 38 33.9**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=14,slow=5.5,SNR=7.2						
	comp=Z,1.1nm,0.5s						
CHGR	**Chuyangaron**	**77.63**	**321**	P	**P**	**21 38 46.1**	**+0.1**
CHGR				IAmb	IAmb	21 38 51.3	
	comp=Z,9.0nm,0.7s						
GERES	**GERESS Array B**	**77.94**	**2**	P	**P**	**21 38 48.2**	**+0.7**
	comp=Z,0.6nm,0.6s,baz=20,slow=4.7,SNR=5.8						
	comp=Z,0.6nm,0.6s						
GERES	**GERESS Array B**	**77.94**	**2**	P	**P**	**21 38 47.8**	**+0.3**
CLF	**Chambon-Foret**	**78.04**	**10**	P	**P**	**21 38 48.9**	**+0.9**
BURAR	**Bucovina Array**	**78.95**	**354**	P	**P**	**21 38 53.4**	**+0.2**
JIRN	**Jiri**	**79.36**	**302**	*e*P	**P**	**21 38 56.8**	**+0.8**
	comp=Z,11nm,0.4s						
PKI	**Pulchoki**	**79.83**	**303**	*e*P	**P**	**21 38 58.4**	**-0.1**
GKN	**Gorkha**	**79.86**	**304**	*e*P	**P**	**21 38 58.6**	**+0.1**
CMAR	**Chiang Mai Arr**	**79.90**	**287**	P	**P**	**21 38 59.1**	**+0.6**
	comp=Z,1.2nm,0.6s,baz=11,slow=5.9,SNR=6.7						
	comp=Z,1.2nm,0.6s						
CMAR	**Chiang Mai Arr**	**79.90**	**287**	P	**P**	**21 38 58.6**	**+0.1**
DMN	**Daman**	**79.95**	**303**	*e*P	**P**	**21 38 58.9**	**-0.2**
DANN	**Dangsing**	**80.01**	**305**	*e*P	**P**	**21 39 00.2**	**+0.8**
BRTR	**Keskin Array B**	**85.95**	**347**	P	**P**	**21 39 31.2**	**+1.3**
	comp=Z,1.1nm,0.8s,baz=6.6,slow=5.3,SNR=5.6						
	comp=Z,1.1nm,0.8s						
BRTR	**Keskin Array B**	**85.95**	**347**	P	**P**	**21 39 30.2**	**+0.3**

NOU ***15*** *21:30:05.9, 20.39S×168.83E, h0km, MLv4.6/6, Loyalty Islands*

NEIC ***15*** *21:30:07.9±2.9, 20.62S±0.07×168.72E±0.05, h10km±1km, mb4.3/10, Error ellipse: s-maj=14.1km s-min=5.8km az=331.0*

IDC ***15*** *21:30:11.6±4.6, 20.43S×168.80E, h50km±52km, mb3.7/6, mbtmp4.0/7, ML4.6/1, MS3.6/1, Error ellipse: s-maj=91.0km s-min=22.5km az=153.0*

ISC 15 21:30:08.9±0.6, 20.48S±0.06×168.82E±0.09, h31km, n38, σ0$97/37, mb4.0/9, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**1.24**	**216**	Pn	**Pn**	**21 30 29.1**	**-1.0**
MARNC				Sn	**Sn**	**21 30 45.2**	**-0.4**
PINNC	**Pines Island,**	**2.48**	**211**		**Pn**	**21 30 46.6**	**-0.5**
PINNC	**Pines Island,**	**2.48**	**211**	P	**Pn**	**21 30 49.1**	**+2.0**
DVP	**Devils Point**	**2.81**	**348**	P	**Pn**	**21 30 50.9**	**-0.7**
NOUC	**Port Laguerre**	**2.84**	**235**	P	**Pn**	**21 30 52.2**	**+0.1**
KOUNC	**Koumac, New Ca**	**4.25**	**268**		**Pn**	**21 31 12.6**	**+1.2**
KOUNC	**Koumac, New Ca**	**4.25**	**268**	P	**Pn**	**21 31 12.8**	**+1.4**
MSVF	**Nonsavu**	**9.15**	**74**	P	**Pn**	**21 32 21.5**	**+2.6**
	0.2nm,0.3s,baz=253,slow=13,SNR=7.1						
	6.7nm,0.8s						
MSVF	**Nonsavu**	**9.15**	**74**		Pn	21 32 21.8	+2.9
OUZ	**Omahuta**	**15.28**	**165**	Pn	**Pn**	**21 33 42.7**	**+0.4**
OUZ				IAmb	IAmb	21 33 57.8	
	comp=Z,20nm,1.4s						
BKZ	**Black Stump Fm**	**19.76**	**162**	P	**Pn**	**21 34 37.7**	**-0.3**
BKZ				IAmb	IAmb	21 34 44.2	
	comp=Z,9.9nm,0.9s						
CTA	**Charters Tower**	**21.17**	**267**	LR	LR	21 42 35.4	
	comp=Z,151nm,20.2s,baz=95,slow=35						
STKA	**Stephens Creek**	**26.86**	**239**	P	**P**	**21 35 48.1**	**+1.3**
	comp=Z,1.2nm,0.7s,baz=90,slow=6.1,SNR=4.2						
	comp=Z,1.2nm,0.7s						
STKA	**Stephens Creek**	**26.86**	**239**	P	**P**	**21 35 47.7**	**+0.8**
WR0	**Warramunga Arr**	**32.13**	**265**	P	**P**	**21 36 33.9**	**+0.1**
WR0				IAmb	IAmb	21 36 47.4	
	comp=Z,6.1nm,1.1s						
WRA	**Warramunga Arr**	**32.32**	**265**	P	**P**	**21 36 35.1**	**-0.4**
	comp=Z,1.0nm,0.8s,baz=92,slow=8.4,SNR=9.0						
	comp=Z,1.0nm,0.8s						
WRA	**Warramunga Arr**	**32.32**	**265**	P	**P**	**21 36 35.0**	**-0.4**
AS31	**Alice Springs**	**32.46**	**258**	P	**P**	**21 36 36.6**	**-0.1**
AS31				IAmb	IAmb	21 36 49.6	
	comp=Z,1.8nm,0.9s						
ASAR	**Alice Springs**	**32.46**	**258**	P	**P**	**21 36 37.4**	**+0.7**
	comp=Z,3.9nm,0.9s,baz=82,slow=9.1,SNR=24						
	comp=Z,3.9nm,0.9s						
ASAR	**Alice Springs**	**32.46**	**258**	P	**P**	**21 36 36.2**	**-0.4**
QSPA	**South Pole Qui**	**69.58**	**180**	P	**P**	**21 41 14.2**	**-0.6**
CMAR	**Chiang Mai Arr**	**78.65**	**295**	P	**P**	**21 42 09.9**	**+1.6**
	comp=Z,1.2nm,0.7s,baz=128,slow=4.6,SNR=7.3						
	comp=Z,1.2nm,0.7s						
CMAR	**Chiang Mai Arr**	**78.65**	**295**	P	**P**	**21 42 09.2**	**+0.9**
BELA	**Belgrano 2**	**80.90**	**175**	P	**P**	**21 42 18.8**	**-0.8**
TROLL	**Troll, Antarti**	**87.27**	**184**	P	**P**	**21 42 51.4**	**-0.9**
SNAA	**Sanae**	**87.91**	**183**	P	**P**	**21 42 55.5**	**+0.2**
SNAA	**Sanae**	**87.91**	**183**	P	**P**	**21 42 54.2**	**-1.0**
SNAA				IAmb	IAmb	21 43 21.4	
	comp=Z,2.7nm,1.2s						
SONM	**Songino Array**	**87.97**	**323**	P	**P**	**21 42 55.7**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=134,slow=4.3,SNR=4.7						
	comp=Z,0.4nm,0.5s						
SONM	**Songino Array**	**87.97**	**323**	P	**P**	**21 42 55.5**	**-0.3**
SONM				IAmb	IAmb	21 43 02.8	
	comp=Z,3.1nm,1.4s						
VNA3	**Neumayer Olymp**	**88.51**	**180**	P	**P**	**21 42 57.0**	**-1.0**
ILAR	**Eielson Array**	**91.53**	**17**	P	**P**	**21 43 11.1**	**-0.8**
	comp=Z,0.3nm,0.7s,baz=240,slow=6.0,SNR=4.1						
	comp=Z,0.3nm,0.7s						
ARCES	**ARCESS Array B**	**126.16**	**345**	PKP	**PKPdf**	**21 49 07.2**	**-0.3**
	comp=Z,2.5nm,0.9s,baz=77,slow=2.5,SNR=5.1						
GERES	**GERESS Array B**	**145.38**	**331**	PKPbc	**PKPbc**	**21 49 43.1**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=35,slow=4.9,SNR=7.9						
ABTA	**Abfaltersbach**	**147.45**	**329**	*e*P	**PKPbc**	**21 49 48.3**	**-1.5**
	comp=Z,0.7nm,0.3s						
WATA	**Walderalm**	**147.46**	**331**	*e*P	**PKiKP**	**21 49 51.7**	**-0.4**
	comp=Z,2.0nm,0.6s						
MOTA	**Moosalm**	**147.67**	**331**	*e*P	**PKPbc**	**21 49 49.6**	**-0.9**
	comp=Z,2.0nm,0.6s						
SQTA	**Sankt Quirin**	**147.71**	**331**	*e*P	**PKPbc**	**21 49 49.8**	**-0.7**
	comp=Z,2.3nm,0.4s						
FETA	**Feichten**	**148.08**	**331**	*e*P	**PKPbc**	**21 49 50.9**	**-0.7**
	comp=Z,1.9nm,0.5s						

**IDC 15 21:34:32.0±4.3, 47.21S×165.09E, h0km, mb3.6/2, mbtmp3.6/3

DUNU				S	Sg	22 06 30.3	+0.3
MASU	**Masugnsbyn**	**0.60**	**61**	P	Pg	22 06 39.3	-0.1
MASU				S	Sg	22 06 47.3	+0.2
RATU	**Laukkuluspa**	**0.77**	**329**	P	Pg	22 06 42.2	-0.4
RATU				S	Sg	22 06 52.4	-0.1
ERTU	**Ertsjaerv**	**0.88**	**135**	P	Pg	22 06 43.8	-0.9

KRSC 15 22:19:48.8±1.3, 51°54'N×158°60'E, h42km±13km, ML3.8, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDTR	**Khodutka, Kamc**	**0.42**	**310**	*e*P	Pn	22 20 00.0	+1.4
KDTR				*e*S	Sn	22 20 06.7	+1.2
RUS	**Russkaya**	**0.90**	**357**	*e*P	Pn	22 20 06.3	+1.3
RUS				*e*S	Sn	22 20 17.1	+0.3
ASAK	**Asacha**	**0.95**	**333**	*e*P	Pn	22 20 07.5	+1.7
ASAK				*e*S	Sn	22 20 19.4	+1.2
MTVR	**Mutnovka**	**0.98**	**345**	*e*P	Pn	22 20 07.8	+1.6
MTVR				*e*S	Sn	22 20 20.1	+1.1
GRL	**Gorelyy**	**1.07**	**343**	*e*P	Pn	22 20 09.3	+1.9
GRL				*e*S	Sn	22 20 22.9	+1.8
PAU	**Pauzhetka**	**1.12**	**267**	*e*P	Pn	22 20 08.0	+0.1
PAU				*e*S	Sn	22 20 22.1	0.0
KRMR	**Karymshinskiy**	**1.33**	**348**	*e*P	Pn	22 20 12.6	+1.8
KRMR				*e*S	Sn	22 20 29.6	+2.3
MIPR	**Malaya Ipel'ka**	**1.36**	**304**	*e*P	Pn	22 20 13.0	+1.7
MIPR				*e*S	Sn	22 20 30.1	+2.0
DALK	**Dalny**	**1.50**	**4**	*e*P	Pn	22 20 14.9	+1.7
DALK				*e*S	Sn	22 20 33.5	+2.0
APC	**Apacha**	**1.65**	**328**	*e*P	Pn	22 20 17.3	+2.1
APC				*e*S	Sn	22 20 38.1	+2.9
UGLR	**Uglovaya**	**1.68**	**5**	*e*P	Pn	22 20 18.0	+2.2
NLC	**Nalytchevo**	**1.70**	**15**	*e*P	Pn	22 20 16.7	+0.8
NLC				*e*S	Sn	22 20 35.3	-1.1
AVH	**Avacha**	**1.73**	**3**	*e*P	Pn	22 20 19.0	+2.5
AVH				*e*S	Sn	22 20 40.2	+2.8
SMAR	**Somma**	**1.73**	**4**	*e*P	Pn	22 20 18.6	+2.0
SDLR	**Sedlovina**	**1.75**	**6**	*e*P	Pn	22 20 18.5	+1.7
KOK	**Koryaka**	**1.76**	**1**	*e*P	Pn	22 20 19.7	+2.9
KOK				*e*S	Sn	22 20 41.5	+3.5
KRER	**Koryakskii**	**1.77**	**3**	*e*P	Pn	22 20 19.7	+2.6
KRER				*e*S	Sn	22 20 40.2	+1.7
SKR	**Severo-Kuril's**	**1.78**	**242**	*e*P	Pn	22 20 18.7	+1.7
SPN	**Mys Shipunski**	**1.79**	**29**	*e*P	Pn	22 20 19.7	+2.5
SPN				*e*S	Sn	22 20 41.3	+2.6
KRX	**Arik**	**1.83**	**1**	*e*P	Pn	22 20 20.4	+2.6
GNL	**Ganaly**	**2.20**	**350**	*e*P	Pn	22 20 25.3	+2.4
KII	**Karymskiy**	**2.56**	**11**	*e*P	Pn	22 20 31.2	+3.4
MKZ	**Mys Kozlova**	**3.57**	**31**	*e*P	Pn	22 20 44.0	+2.5
TUMR	**Tumrok**	**3.87**	**13**	*e*P	Pn	22 20 50.8	+5.0

*SKHL **15** 22:21:14.8±0.1, 47°.90N×154°.70E, h57km±3km, mb4.7/8*
*MOS **15** 22:21:14.7±0.9, 48°.08N×154°.55E, h54km, mb4.1/4, Error ellipse: s-maj=12.7km s-min=3.8km az=72.1*
*KRSC **15** 22:21:15.5±2.1, 48°.02N×156°.24E, h16km±52km, ML4.9*
*NEIC **15** 22:21:17.7±1.5, 48°.22N±0°.09×154°.3E±0°.1, h55km±7km, mb4.4/32, Error ellipse: s-maj=16.5km s-min=9.6km az=136.0*
*IDC **15** 22:21:20.5±3.2, 48°.32N×154°.17E, h89km±27km, mb3.5/13, mbtmp4.0/17, MS3.2/14, Error ellipse: s-maj=22.5km s-min=15.0km az=151.0*

ISC 15 22:21:15.3±0.5, 48°.05N±0°.06×154°.56E±0°.06, h42km, n267, σ1.9 40/279, mb4.3/34, MS3.3/8, 4C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.82**	**21**	*e*PN	**Pn**	**22 21 58.5**	**+0.6**
SKR				*e*S	**Sn**	**22 22 31.2**	**+0.6**
SKR				pmax	pmax		
	comp=Z,114nm,0.6s						
SKR				smax	smax		
	comp=E,475nm,0.4s						
SKR				smax	smax		
	comp=N,567nm,0.6s						
SKR				MLR	MLR		
	comp=Z,300nm,13.0s						
SKR	**Severo-Kuril's**	**2.82**	**21**	*e*P	**Pn**	**22 21 58.4**	**+0.6**
SKR				*e*S	**Sn**	**22 22 29.0**	**-1.6**
SKR	**Severo-Kuril's**	**2.82**	**21**	*e*P	**Pn**	**22 21 58.5**	**+0.6**
SKR				AMB	AMB	22 22 00.6	
	comp=Z,190nm,0.4s						
SKR				*e*S	**Sn**	**22 22 31.2**	**+0.6**
SKR				A	A	22 22 38.2	
	comp=Z,570nm,0.5s						
SKR				A	A	22 22 38.2	
	comp=Z,470nm,0.5s						
SKR				AMS	AMS	22 23 05.1	
	comp=Z,300nm,13.0s						
PAU	**Pauzhetka**	**3.72**	**22**	PN	**Pn**	**22 22 11.3**	**+1.2**
PAU				S	**Sn**	**22 22 53.7**	**+1.1**
PAU	**Pauzhetka**	**3.72**	**22**	*e*P	**Pn**	**22 22 11.3**	**+1.2**
PAU				*e*S	**Sn**	**22 22 53.7**	**+1.1**
PAU	**Pauzhetka**	**3.72**	**22**	*e*P	**Pn**	**22 22 11.3**	**+1.2**
PAU				AMB	AMB	22 22 14.4	
	comp=Z,160nm,0.2s						
PAU				*e*S	**Sn**	**22 22 53.8**	**+1.1**
PAU				A	A	22 22 57.0	
	comp=Z,680nm,0.5s						
PAU				A	A	22 22 57.0	
	comp=Z,630nm,0.5s						
KDTR	**Khodutka, Kamc**	**4.39**	**30**	PN	**Pn**	**22 22 19.2**	**-0.2**
KDTR	**Khodutka, Kamc**	**4.39**	**30**	*e*P	**Pn**	**22 22 19.2**	**-0.2**
KDTR				*e*S	**Sn**	**22 23 07.0**	**-2.3**
MIPR	**Malaya Ipel'ka**	**4.46**	**18**	PN	**Pn**	**22 22 20.9**	**+0.6**
MIPR	**Malaya Ipel'ka**	**4.46**	**18**	*e*P	**Pn**	**22 22 20.9**	**+0.6**
ASAK	**Asacha**	**4.84**	**25**	PN	**Pn**	**22 22 27.6**	**+2.0**
ASAK	**Asacha**	**4.84**	**25**	*e*P	**Pn**	**22 22 27.6**	**+2.0**
MTVR	**Mutnovka**	**5.01**	**26**	PN	**Pn**	**22 22 29.1**	**+1.1**
MTVR				S	**Sn**	**22 23 24.4**	**-0.2**
MTVR	**Mutnovka**	**5.01**	**26**	*e*P	**Pn**	**22 22 29.1**	**+1.1**
MTVR				*e*S	**Sn**	**22 23 24.4**	**-0.2**
GRL	**Gorelyy**	**5.04**	**25**	PN	**Pn**	**22 22 30.0**	**+1.6**
GRL				S	**Sn**	**22 23 25.5**	**+0.2**
GRL	**Gorelyy**	**5.04**	**25**	*e*P	**Pn**	**22 22 30.0**	**+1.6**
GRL				*e*S	**Sn**	**22 23 25.5**	**+0.2**
RUS	**Russkaya**	**5.07**	**29**	PN	**Pn**	**22 22 28.7**	**+0.1**
RUS	**Russkaya**	**5.07**	**29**	*e*P	**Pn**	**22 22 28.7**	**+0.1**
RUS				*e*S	**Sn**	**22 23 23.3**	**-2.5**
APC	**Apacha**	**5.15**	**18**	PN	**Pn**	**22 22 32.3**	**+2.5**
APC	**Apacha**	**5.15**	**18**	*e*P	**Pn**	**22 22 32.3**	**+2.5**
KRMR	**Karymshinskiy**	**5.30**	**24**	PN	**Pn**	**22 22 33.9**	**+2.1**
KRMR	**Karymshinskiy**	**5.30**	**24**	*e*P	**Pn**	**22 22 33.9**	**+2.1**
KUR	**Kuril'sk**	**5.40**	**241**	*i* PN	**Pn**	**22 22 36.6**	**+3.3**
KUR	**Kuril'sk**	**5.40**	**241**	*e*P	**Pn**	**22 22 35.1**	**+1.8**
KUR				AMB	AMB	22 22 39.5	
	comp=Z,30nm,0.4s						
KUR				*e*S	**Sn**	**22 23 34.9**	**+0.8**
KUR				A	A	22 23 52.8	
	comp=Z,110nm,0.7s						
KUR				A	A	22 23 52.8	
	comp=Z,150nm,0.7s						
PEA0B	**Petropavlovsk-**	**5.44**	**20**	Pn	**Pn**	**22 22 34.9**	**+1.1**
PEA0B	**Petropavlovsk-**	**5.44**	**20**	*i* PN	**Pn**	**22 22 35.6**	**+1.8**
PETK	**Petropavlovsk-**	**5.44**	**20**	P	**Pn**	**22 22 35.7**	**+1.9**
	comp=Z,21nm,0.4s,baz=173,slow=13,SNR=19						
PETK				LR	LR	22 24 50.4	
	comp=Z,165nm,21.0s,baz=208,slow=40						
PETK	**Petropavlovsk-**	**5.44**	**20**	Pn	**Pn**	**22 22 34.1**	**+0.3**
PETK	**Petropavlovsk-**	**5.44**	**20**	PN	**Pn**	**22 22 34.1**	**+0.3**
PET	**Petropavlovsk**	**5.62**	**26**		**Pn**	**22 22 35.7**	**-0.5**
PET				Sn	**Sn**	**22 23 39.9**	**+0.5**
PET	**Petropavlovsk**	**5.62**	**26**	*e*PN	**Pn**	**22 22 37.8**	**+1.6**
PET				*e*S	**Sn**	**22 23 40.1**	**+0.7**
PET				pmax	pmax		
	comp=Z,94nm,1.0s						
PET				smax	smax		
	comp=N,125nm,0.4s						
PET				MLR	MLR		
	comp=Z,200nm,11.0s						
PET	**Petropavlovsk**	**5.62**	**26**	*e*P	**Pn**	**22 22 37.6**	**+1.4**
PET				AMB	AMB	22 22 40.2	
	comp=Z,30nm,0.5s						
PET				*e*S	**Sn**	**22 23 39.6**	**+0.2**
PET				A	A	22 23 40.6	
	comp=Z,130nm,0.6s						
PET				AMS	AMS	22 24 30.6	
	comp=Z,200nm,11.0s						
DALK	**Dalny**	**5.66**	**27**	PN	**Pn**	**22 22 37.6**	**+0.9**
DALK	**Dalny**	**5.66**	**27**	*e*P	**Pn**	**22 22 37.6**	**+0.9**
DALK				*e*S	**Sn**	**22 23 39.7**	**-0.6**
UGLR	**Uglovaya**	**5.83**	**26**	PN	**Pn**	**22 22 41.0**	**+1.7**
UGLR	**Uglovaya**	**5.83**	**26**	*e*P	**Pn**	**22 22 41.0**	**+1.7**
KOK	**Koryaka**	**5.85**	**25**	PN	**Pn**	**22 22 41.8**	**+2.3**
KOK	**Koryaka**	**5.85**	**25**	*e*P	**Pn**	**22 22 41.8**	**+2.3**
KOK	**Koryaka**	**5.85**	**25**	*e*P	**Pn**	**22 22 41.8**	**+2.3**
AVH	**Avacha**	**5.86**	**25**	PN	**Pn**	**22 22 41.6**	**+2.0**
AVH				S	**Sn**	**22 23 45.8**	**+0.4**
AVH	**Avacha**	**5.86**	**25**	*e*P	**Pn**	**22 22 41.6**	**+2.0**
AVH				*e*S	**Sn**	**22 23 45.8**	**+0.4**
SMAR	**Somma**	**5.87**	**26**	PN	**Pn**	**22 22 41.8**	**+1.9**
SMAR	**Somma**	**5.87**	**26**	*e*P	**Pn**	**22 22 41.8**	**+1.9**
KRER	**Koryakskii**	**5.89**	**25**	PN	**Pn**	**22 22 42.4**	**+2.2**
KRER	**Koryakskii**	**5.89**	**25**	*e*P	**Pn**	**22 22 42.4**	**+2.2**
SDLR	**Sedlovina**	**5.91**	**26**	PN	**Pn**	**22 22 41.5**	**+1.2**
SDLR	**Sedlovina**	**5.91**	**26**	*e*P	**Pn**	**22 22 41.5**	**+1.2**
SDLR				*e*S	**Sn**	**22 23 45.3**	**-1.5**
KRX	**Arik**	**5.91**	**25**	PN	**Pn**	**22 22 42.4**	**+2.0**
KRX	**Arik**	**5.91**	**25**	*e*P	**Pn**	**22 22 42.4**	**+2.0**
NLC	**Nalytchevo**	**5.96**	**29**	PN	**Pn**	**22 22 39.7**	**-1.2**
NLC	**Nalytchevo**	**5.96**	**29**	*e*P	**Pn**	**22 22 39.7**	**-1.2**
NLC				*e*S	**Sn**	**22 23 42.9**	**-4.9**
GNL	**Ganaly**	**6.04**	**19**	PN	**Pn**	**22 22 44.5**	**+2.4**
GNL	**Ganaly**	**6.04**	**19**	*e*P	**Pn**	**22 22 44.5**	**+2.4**
SPN	**Mys Shipunski**	**6.13**	**33**	PN	**Pn**	**22 22 42.8**	**-0.5**
SPN	**Mys Shipunski**	**6.13**	**33**	*e*P	**Pn**	**22 22 42.8**	**-0.5**
SPN				*e*S	**Sn**	**22 23 48.2**	**-3.9**
KII	**Karymskiy**	**6.74**	**25**	PN	**Pn**	**22 22 54.1**	**+2.5**
KII	**Karymskiy**	**6.74**	**25**	*e*P	**Pn**	**22 22 54.1**	**+2.5**
SHO	**Shikotan**	**6.82**	**235**	*e*PN	**Pn**	**22 22 53.2**	**+0.5**
SHO	**Shikotan**	**6.82**	**235**	*e*P	**Pn**	**22 22 53.5**	**+0.8**
SHO				AMB	AMB	22 22 56.6	
	comp=Z,10.0nm,0.2s						
SHO				*e*S	**Sn**	**22 24 06.6**	**-2.4**
SHO				A	A	22 24 20.9	
	comp=Z,60nm,0.5s						
SHO				A	A	22 24 20.9	
	comp=Z,50nm,0.5s						
NMR	**Nemuro--Hokkai**	**7.75**	**236**	*e*P	**Pn**	**22 23 06.5**	**+1.0**
NMR				*e*S	**Sn**	**22 24 29.1**	**-2.8**
MKZ	**Mys Kozlova**	**7.91**	**32**	PN	**Pn**	**22 23 06.8**	**-0.8**
MKZ	**Mys Kozlova**	**7.91**	**32**	*e*P	**Pn**	**22 23 06.8**	**-0.8**
MKZ				*e*S	**Sn**	**22 24 29.6**	**-6.1**
YSS	**Yuzh-Sakhalins**	**8.07**	**267**	Pn	**Pn**	**22 23 09.3**	**-0.6**
YSS	**Yuzh-Sakhalins**	**8.07**	**267**	*ce*PN	**Pn**	**22 23 11.3**	**+1.4**
YSS				pmax	pmax		
	comp=Z,17nm,1.0s						
YSS	**Yuzh-Sakhalins**	**8.07**	**267**	*e*P	**Pn**	**22 23 11.2**	**+1.4**
YSS				AMB	AMB	22 23 12.8	
	comp=Z,20nm,0.5s						
TYV	**Tymovskoe**	**8.25**	**294**	*e*P	**Pn**	**22 23 13.9**	**+1.6**
TYV				AMB	AMB	22 23 18.1	
	comp=Z,20nm,0.8s						
AKK	**Akkeshi**	**8.47**	**237**	*e*P	**Pn**	**22 23 16.9**	**+1.5**
AKK				*e*S	**Sn**	**22 24 47.2**	**-2.5**
OKH	**Okha**	**9.19**	**311**	*e*P	**Pn**	**22 23 28.7**	**+3.6**
OKH				AMB	AMB	22 23 30.1	
	comp=Z,40nm,0.6s						
JKA	**Kamikawa-asahi**	**9.19**	**249**	Pn	**Pn**	**22 23 26.8**	**+1.5**
ASAJ	**Asahikawa**	**9.20**	**249**	LR	LR	22 26 41.0	
	comp=Z,82nm,19.0s,baz=28,slow=35						
ASAJ	**Asahikawa**	**9.20**	**249**	PN	**Pn**	**22 23 26.8**	**+1.5**
KBTR	**Krutoberegovo**	**9.61**	**29**	PN	**Pn**	**22 23 30.9**	**0.0**
KBTR	**Krutoberegovo**	**9.61**	**29**	*e*P	**Pn**	**22 23 30.9**	**0.0**
ERM	**Erimo**	**10.07**	**237**	Pn	**Pn**	**22 23 38.5**	**+1.3**
ERM	**Erimo**	**10.07**	**237**	*i* PN	**Pn**	**22 23 38.8**	**+1.5**
MA2	**Magadan**	**11.76**	**350**	P	**Pn**	**22 23 59.9**	**-0.3**
	comp=Z,6.8nm,0.3s,baz=148,slow=8.5,SNR=7.0						
MA2				LR	LR	22 28 47.4	
	comp=Z,49nm,19.0s,baz=132,slow=39						
MA2	**Magadan**	**11.76**	**350**		**Pn**	**22 23 59.0**	**-1.2**
MA2	**Magadan**	**11.76**	**350**	*ce*PN	**Pn**	**22 24 00.3**	**+0.1**
MA2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
JTM	**Tenmabayashi**	**12.06**	**238**	Pn	**Pn**	**22 24 03.5**	**-1.0**
SHEM	**Shemya Is, Ala**	**13.30**	**62**	P	**Pn**	**22 24 22.4**	**+1.0**
	comp=Z,95nm,0.5s,baz=265,slow=1.2,SNR=24						
SHEM				LR	LR	22 28 53.8	
	comp=Z,35nm,21.5s,baz=92,slow=34						
SMY	**Shemya**	**13.30**	**62**	Pn	**Pn**	**22 24 22.3**	**+0.9**
SMY	**Shemya**	**13.30**	**62**	PN	**Pn**	**22 24 22.3**	**+0.9**
SEY	**Seymchan**	**14.96**	**356**	P	**Pn**	**22 24 45.0**	**+1.3**
	comp=Z,3.2nm,0.8s,baz=156,slow=11,SNR=10						
SEY				LR	LR	22 30 22.2	
	comp=Z,36nm,18.8s,baz=144,slow=37						
SEY	**Seymchan**	**14.96**	**356**	*ce*P	**Pn**	**22 24 44.9**	**+1.3**
SEY				pmax	pmax		
	comp=Z,4.0nm,1.3s						
KLR	**Kul'dur**	**15.12**	**283**	P	**P**	**22 24 48.9**	**-1.5**
	comp=Z,1.1nm,0.5s,baz=162,slow=20,SNR=3.2						
KLR				LR	LR	22 30 10.2	
	comp=Z,67nm,20.2s,baz=46,slow=36						
MJAR	**Matsushiro Arr**	**16.65**	**232**	LR	LR	22 32 37.5	
	comp=Z,45nm,18.1s,baz=67,slow=41						
YAK	**Yakutsk**	**19.80**	**324**	P	**P**	**22 25 41.4**	**-0.3**
	comp=Z,10nm,0.6s,baz=157,slow=0.9,SNR=6.1						
YAK	**Yakutsk**	**19.80**	**324**	P	**P**	**22 25 41.2**	**-0.6**
YAK	**Yakutsk**	**19.80**	**324**	*e*P	**Pn**	**22 25 43.2**	**-0.4**
YAK				*e*S	**S**	**22 29 22.1**	**-0.1**
YAK				pmax	pmax		
	comp=Z,25nm,1.0s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.1s						
YAK				smax	smax		
	comp=E,47nm,3.0s						
BILL	**Bilibino**	**20.91**	**12**	*i* P	**P**	**22 25 53.7**	**0.0**
BILL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,95nm,17.0s						
BILL	**Bilibino**	**20.91**	**12**	*e*P	Pn	22 25 55.6	-1.0
KSRS	**Korea Array**	**22.14**	**251**	P	**P**	**22 26 08.7**	**+1.6**
	comp=Z,0.6nm,0.3s,baz=46,slow=11,SNR=2.2						
KSRS				LR	LR	22 34 20.9	
	comp=Z,49nm,19.2s,baz=75,slow=36						
	comp=Z,0.6nm,0.3s						
TIXI	**Tiksi**	**26.51**	**342**	LR	LR	22 38 06.6	
	comp=Z,37nm,19.6s,baz=192,slow=38						
N16K	**Nishlik Lake**	**29.29**	**47**	P	**P**	**22 27 14.9**	**+1.6**
	baz=267						
O16K	**Kokwok River B**	**29.58**	**49**	P	**P**	**22 27 17.0**	**+1.1**
	baz=269						
H11N2	**WAKE ISLAND Hy**	**29.97**	**156**	T	T	22 58 58.4	
	baz=343,slow=74						
H11N1	**WAKE ISLAND Hy**	**29.99**	**156**	T	T	22 59 02.7	
	baz=343,SNR=1408						
H11N3	**WAKE ISLAND Hy**	**29.99**	**156**	T	T	22 59 02.6	
	baz=343,slow=74						
O17K	**Koliganek Bris**	**30.09**	**49**	P	**P**	**22 27 20.8**	**+0.4**
	baz=269						
N18K	**Kilae Creek**	**30.71**	**47**	P	**P**	**22 27 27.2**	**+1.3**
N18K					IAmb	IAmb	22 27 28.8
	comp=Z,5.7nm,0.9s						
N18K	**Kilae Creek**	**30.71**	**47**	P	**P**	**22 27 26.5**	**+0.5**
	baz=269						
TTA	**Tatalina**	**30.80**	**43**	P	**P**	**22 27 26.8**	**+0.1**
	baz=265						
O18K	**Koktuh Hills**	**31.05**	**49**	P	**P**	**22 27 29.9**	**+1.0**
	baz=277						
CHIR	**Chirikof Islan**	**31.08**	**57**	P	**P**	**22 27 30.3**	**+1.2**
	baz=277						
H11S1	**WAKE ISLAND Hy**	**31.09**	**157**	T	T	23 00 26.8	
	baz=344,slow=76,SNR=3261						
H11S3	**WAKE ISLAND Hy**	**31.10**	**157**	T	T	23 00 27.3	
	baz=344,slow=76,SNR=2001						
H11S2	**WAKE ISLAND Hy**	**31.11**	**157**	T	T	23 00 23.5	
	baz=344,slow=76,SNR=2238						
HHC	**Hu-ho-hao-te**	**31.19**	**273**	*e*P	**P**	**22 27 31.8**	**+1.3**
HHC				pmax	pmax		
	comp=Z,18nm,0.9s						
HHC				pmax	pmax		
	comp=Z,160nm,7.1s						
L19K	**White Mountain**	**31.27**	**44**	P	**P**	**22 27 31.7**	**+0.9**
	baz=267						
N19K	**Bonanza Creek**	**31.41**	**47**	P	**P**	**22 27 32.8**	**+0.6**
	baz=270						
M19K	**Big River Lodg**	**31.48**	**45**	P	**P**	**22 27 33.2**	**+0.6**
	baz=268						
K20K	**Telida**	**31.71**	**42**	P	**P**	**22 27 35.6**	**+0.9**
	baz=266						
L20K	**Farewell, AK**	**31.74**	**44**	P	**P**	**22 27 35.5**	**+0.5**
	baz=268						
J20K	**Nowinta River**	**31.75**	**41**	P	**P**	**22 27 35.7**	**+0.8**
J20K	**Nowinta River**	**31.75**	**41**	P	**P**	**22 27 35.8**	**+0.8**
	baz=265						
SONM	**Songino Array**	**31.85**	**288**	LR	LR	22 41 07.7	
	comp=Z,64nm,19.1s,baz=68,slow=38						
Q19K	**Cape Douglas,**	**31.88**	**51**	P	**P**	**22 27 37.1**	**+0.9**
	baz=274						
M20K	**Styx River**	**32.08**	**45**	P	**P**	**22 27 38.5**	**+0.6**
	baz=269						
IMAR	**Indian Mountai**	**32.14**	**37**	P	**P**	**22 27 39.0**	**+0.6**
O20K	**Slope Mountain**	**32.34**	**48**	P	**P**	**22 27 40.5**	**+0.2**
	baz=273						
H21K	**Melozitna Rive**	**32.48**	**38**	P	**P**	**22 27 42.0**	**+0.6**
H21K	**Melozitna Rive**	**32.48**	**38**	P	**P**	**22 27 41.6**	**+0.2**
	baz=264						
KDAK	**Kodiak Island**	**32.52**	**53**	LR	LR	22 42 38.5	
	comp=Z,45nm,19.1s,baz=242,slow=39						
PPLA	**Purkeypile**	**32.54**	**43**	P	**P**	**22 27 42.7**	**+0.6**
PPLA	**Purkeypile**	**32.54**	**43**	P	**P**	**22 27 43.0**	**+0.9**
	baz=269						
Q20K	**Shuyak Island**	**32.55**	**51**	P	**P**	**22 27 43.5**	**+1.5**
	baz=275						
SKT	**Skwentna**	**32.83**	**45**	P	**P**	**22 27 45.4**	**+0.9**
	baz=271						
H22K	**Ishtalitna Cre**	**33.09**	**38**	P	**P**	**22 27 47.2**	**+0.5**
	baz=265						
BPAW	**Bear Paw Mtn.**	**33.12**	**41**	P	**P**	**22 27 48.4**	**+1.3**
BPAW					IAmb	IAmb	22 27 49.1
	comp=Z,3.5nm,0.9s						
BPAW	**Bear Paw Mtn.**	**33.12**	**41**	P	**P**	**22 27 47.5**	**+0.5**
	baz=268						
SUA	**Susitna One**	**33.21**	**46**	P	**P**	**22 27 48.3**	**+0.4**
	baz=272						
MLY	**Manley**	**33.28**	**39**	P	**P**	**22 27 49.6**	**+1.2**
MLY	**Manley**	**33.28**	**39**	P	**P**	**22 27 48.7**	**+0.3**
	baz=267						
BRSE	**Bradley Lake S**	**33.31**	**49**	P	**P**	**22 27 49.7**	**+1.0**
	baz=275						
TRF	**Thorofare Moun**	**33.41**	**42**	P	**P**	**22 27 50.0**	**+0.2**
	baz=269						
COLD	**Coldfoot**	**33.70**	**35**	P	**P**	**22 27 52.2**	**+0.2**
	baz=264						
BWN	**Browne**	**33.80**	**41**	P	**P**	**22 27 54.4**	**+1.6**
H23K	**Yukon River**	**33.84**	**38**	P	**P**	**22 27 54.3**	**+1.1**
H23K	**Yukon River**	**33.84**	**38**	P	**P**	**22 27 53.4**	**+0.2**
	baz=267						
I23K	**Minto, Yukon-K**	**33.87**	**39**	P	**P**	**22 27 54.2**	**+0.7**
	baz=268						
SEW	**Seward**	**33.92**	**48**	P	**P**	**22 27 54.9**	**+0.9**
	baz=275						
NEA2	**Nenana**	**33.98**	**40**	P	**P**	**22 27 55.2**	**+0.8**
NEA2					IAmb	IAmb	22 27 56.7
	comp=Z,4.1nm,0.8s						
NEA2	**Nenana**	**33.98**	**40**	P	**P**	**22 27 54.7**	**+0.3**
	baz=269,SNR=6.0						
MCK	**McKinley**	**34.02**	**42**	P	**P**	**22 27 55.9**	**+1.0**
	baz=270						
RND	**Reindeer**	**34.06**	**42**	P	**P**	**22 27 55.5**	**+0.3**
RND	**Reindeer**	**34.06**	**42**	P	**P**	**22 27 55.5**	**+0.3**
RND				pmax	pmax		
	comp=Z,7.0nm,1.0s						
TOLK	**Toolik Lake Re**	**34.12**	**33**	P	**P**	**22 27 56.1**	**+0.5**
	baz=262						
KNK	**Knik Glacier**	**34.31**	**46**	P	**P**	**22 27 58.0**	**+0.6**
KNK	**Knik Glacier**	**34.31**	**46**	P	**P**	**22 27 58.1**	**+0.6**
	baz=274						
SML	**Sawmill**	**34.35**	**45**	P	**P**	**22 27 58.3**	**+0.6**
	baz=274,SNR=6.8						
WRH	**Wood River Hil**	**34.40**	**40**	P	**P**	**22 27 58.9**	**+0.8**
WRH					IAmb	IAmb	22 27 60.0
	comp=Z,6.9nm,1.4s						
TCOL	**CIGO, UAF Yank**	**34.50**	**40**	P	**P**	**22 27 59.5**	**+0.6**
	baz=270						
COLA	**College**	**34.51**	**40**	P	**P**	**22 27 59.8**	**+0.9**
	baz=270						
H24K	**Noodor Dome**	**34.52**	**38**	P	**P**	**22 27 59.7**	**+0.5**
	baz=268						
WAT6	**Susitna Watana**	**34.59**	**44**	P	**P**	**22 27 59.6**	**-0.4**
	baz=273						
M23K	**Glacier View**	**34.64**	**45**	P	**P**	**22 28 00.2**	**0.0**
	baz=274						
POKR	**Poker Flat Res**	**34.69**	**39**	P	**P**	**22 28 01.1**	**+0.5**
	baz=270						
DHY	**Denali Highway**	**34.74**	**43**	P	**P**	**22 28 01.5**	**+0.3**
DHY					IAmb	IAmb	22 28 02.5
	comp=Z,6.6nm,1.2s						
DHY	**Denali Highway**	**34.74**	**43**	P	**P**	**22 28 01.4**	**+0.3**
	baz=273,SNR=5.7						
SCM	**Sheep Creek Mo**	**34.83**	**45**	P	**P**	**22 28 02.2**	**+0.3**
	baz=274						
HDA	**Harding Lake**	**34.89**	**40**	P	**P**	**22 28 02.5**	**+0.2**
	baz=271						
IL31		**34.92**	**40**	P	**P**	**22 28 02.5**	**+0.1**
IL31					IAmb	IAmb

INK	**Inuvik**	**40.02**	**33**	P	**P**	**22 28 46.2**	**+0.6**
INK				IAmb	IAmb	22 28 47.8		
	comp=Z,12nm,1.4s							
INK	**Inuvik**	**40.02**	**33**	P	**P**	**22 28 46.1**	**+0.5**
	baz=278							
N31M	**Braeburn, Yuko**	**40.32**	**44**	P	**P**	**22 28 49.0**	**+0.7**
	baz=284							
O30N	**Mendenhall**	**40.34**	**45**	P	**P**	**22 28 48.9**	**+0.4**
	baz=284,SNR=5.3							
PLBC	**Pleasant Camp**	**40.55**	**47**	P	**P**	**22 28 50.8**	**+0.8**
	baz=286							
M31M	**Drury Creek, Y**	**40.79**	**43**	P	**P**	**22 28 53.5**	**+1.4**
M31M				IAmb	IAmb	22 28 55.0		
	comp=Z,5.2nm,0.8s							
M31M	**Drury Creek, Y**	**40.79**	**43**	P	**P**	**22 28 53.1**	**+1.1**
	baz=284							
FARO	**Faro, Yukon**	**41.26**	**43**	P	**P**	**22 28 57.2**	**+1.3**
	baz=285							
P33M	**Teslin, Yukon**	**42.05**	**45**	P	**P**	**22 29 03.2**	**+0.7**
	baz=287							
MMPY	**Sheldon Lake,**	**42.09**	**42**	P	**P**	**22 29 03.2**	**+0.4**
	baz=286							
ZALV	**Zalesovo Beam**	**42.66**	**305**	P	**P**	**22 29 05.1**	**-2.3**
	comp=Z,0.5nm,0.4s,baz=64,slow=13,SNR=1.9							
ZALV				PcP	**PcP**	**22 30 57.9**	**-0.7**	
	comp=Z,0.3nm,0.3s,baz=45,slow=2.2,SNR=4.4							
	comp=Z,0.5nm,0.4s							
C36M	**Paulatuk**	**43.20**	**31**	P	**P**	**22 29 11.7**	**+0.1**
	baz=285							
WMQ	**Urumqi**	**45.38**	**291**	*e*P	**P**	**22 29 31.4**	**+2.0**
PZH	**PanZhiHua**	**46.17**	**262**	P	**P**	**22 29 35.5**	**-0.5**
PZH				pmax	pmax			
	comp=Z,10.0nm,0.7s							
PZH				pmax	pmax			
	comp=Z,50nm,4.2s							
MK31	**Makanchi Array**	**47.22**	**297**	P	**P**	**22 29 41.8**	**-2.0**
MK31	**Makanchi Array**	**47.22**	**297**	P	**P**	**22 29 41.8**	**-2.0**
MK31				pmax	pmax			
	comp=Z,2.0nm,1.2s							
MKAR	**Makanchi Array**	**47.22**	**297**	P	**P**	**22 29 41.3**	**-2.5**
	comp=Z,0.3nm,0.6s,baz=60,slow=8.5,SNR=2.5							
	comp=Z,0.3nm,0.6s							
MKAR	**Makanchi Array**	**47.22**	**297**	P	**P**	**22 29 41.8**	**-2.0**
MKAR	**Makanchi Array**	**47.22**	**297**	P	**P**	**22 29 41.8**	**-2.0**
BRVK	**Borovoye**	**50.83**	**309**	P	**P**	**22 30 10.4**	**-0.9**
BRVK				IAmb	IAmb	22 30 25.7		
	comp=Z,4.1nm,1.5s							
BRVK	**Borovoye**	**50.83**	**309**	*i* P	**P**	**22 30 11.5**	**+0.2**
BRVK				pmax	pmax			
	comp=Z,5.0nm,2.5s							
BRVK	**Borovoye**	**50.83**	**309**	*e*P	**P**	**22 30 11.5**	**+0.2**
CMAR	**Chiang Mai Arr**	**53.63**	**257**	LR	LR	22 54 40.3		
	comp=Z,27nm,18.5s,baz=195,slow=37							
CMAR	**Chiang Mai Arr**	**53.63**	**257**	P	**P**	**22 30 32.8**	**+0.3**
CMAR	**Chiang Mai Arr**	**53.63**	**257**	P	**P**	**22 30 32.8**	**+0.3**
J01E	**Myrtle Point**	**54.70**	**62**	P	**P**	**22 30 40.9**	**+1.0**
	baz=306							
ARU	**Arti**	**54.72**	**317**	*c i* P	**P**	**22 30 41.3**	**+1.3**
ARU						22 32 45.1		
ARU				S	**S**	**22 38 20.7**	**+3.8**
ARU				SS	**SS**	**22 41 53.0**	**-6.5**
ARU				pmax	pmax			
	comp=Z,6.0nm,2.4s							
ARU	**Arti**	**54.72**	**317**	*e*P	**P**	**22 30 41.2**	**+1.3**
I04A	**Tendick Farm,**	**55.23**	**61**	P	**P**	**22 30 45.0**	**+1.2**
	baz=306							
J05D	**Fort Rock, OR**	**56.22**	**61**	P	**P**	**22 30 52.4**	**+1.2**
	baz=307							
L04D	**Klamath Falls**	**56.22**	**63**	P	**P**	**22 30 52.2**	**+1.1**
	baz=307							
PLID	**Pearl Lake**	**58.13**	**57**	P	**P**	**22 31 06.2**	**+1.5**
HLID	**Hailey**	**59.97**	**57**	P	**P**	**22 31 18.3**	**+0.9**
	baz=310							
BOZ	**Bozeman (W)**	**60.22**	**54**	P	**P**	**22 31 20.6**	**+1.6**
BOZ				IAmb	IAmb	22 31 21.2		
	comp=Z,2.1nm,0.7s							
BOZ	**Bozeman (W)**	**60.22**	**54**	P	**P**	**22 31 20.6**	**+1.6**
BOZ				pmax	pmax			
	comp=Z,2.0nm,0.7s							
BOZ	**Bozeman (W)**	**60.22**	**54**	P	**P**	**22 31 20.0**	**+1.0**
	baz=310							
NVAR	**Mina Array Bea**	**60.97**	**64**	P	**P**	**22 31 25.9**	**+1.5**
	comp=Z,1.1nm,0.4s,baz=286,slow=6.5,SNR=3.5							
	comp=Z,1.1nm,0.4s							
PDAR	**Pinedale Array**	**63.19**	**55**	P	**P**	**22 31 40.0**	**+0.9**
	comp=Z,1.2nm,0.8s,baz=323,slow=2.2,SNR=9.0							
	comp=Z,1.2nm,0.8s							
MMRI	**Maumere**	**63.25**	**216**	P	**P**	**22 31 40.6**	**+1.1**
FINES	**FINESS Array B**	**63.27**	**335**	P	**P**	**22 31 35.9**	**-3.2**
	comp=Z,0.9nm,0.7s,baz=35,slow=7.0,SNR=6.7							
	comp=Z,0.9nm,0.7s							
FINES	**FINESS Array B**	**63.27**	**335**	P	**P**	**22 31 38.2**	**-0.9**
FINES	**FINESS Array B**	**63.27**	**335**	P	**P**	**22 31 38.2**	**-0.9**
ULM	**Lac du Bonnet**	**64.89**	**42**	P	**P**	**22 31 48.5**	**-1.5**
	comp=Z,2.2nm,0.7s,baz=336,slow=7.4,SNR=3.7							
	comp=Z,2.2nm,0.7s							
RSSD	**Black Hills**	**65.24**	**51**	P	**P**	**22 31 53.4**	**+0.9**
	baz=314							
NOA	**NORSAR Array B**	**67.31**	**342**	P	**P**	**22 32 02.5**	**-2.8**
	comp=Z,0.3nm,0.6s,baz=27,slow=6.6,SNR=1.7							
	comp=Z,0.3nm,0.6s							
WB0	**Warramunga Arr**	**69.89**	**200**	P	**P**	**22 32 22.1**	**+0.3**
WB0				IAmb	IAmb	22 32 43.0		
	comp=Z,5.2nm,1.1s							
WRA	**Warramunga Arr**	**70.07**	**200**	P	**P**	**22 32 23.1**	**+0.2**
	comp=Z,1.0nm,0.8s,baz=14,slow=6.4,SNR=5.7							
	comp=Z,1.0nm,0.8s							
WRA	**Warramunga Arr**	**70.07**	**200**	P	**P**	**22 32 23.1**	**+0.2**
SCHQ	**Schefferville**	**71.72**	**24**	P	**P**	**22 32 32.8**	**+0.2**
SCHQ				IAmb	IAmb	22 32 47.3		
	comp=Z,6.5nm,1.2s							
MNTX	**Cornudas Mount**	**73.27**	**61**	P	**P**	**22 32 42.9**	**+0.7**
	baz=317							
ASAR	**Alice Springs**	**73.76**	**200**	P	**P**	**22 32 45.9**	**+0.9**
	comp=Z,0.4nm,0.6s,baz=13,slow=5.7,SNR=4.6							
	comp=Z,0.4nm,0.6s							
BURAR	**Bucovina Array**	**75.03**	**327**	P	**P**	**22 32 52.5**	**+0.2**
TX31	**Lajitas Ar. Si**	**76.00**	**62**	P	**P**	**22 32 59.5**	**+1.3**
TX31				IAmb	IAmb	22 32 59.7		
	comp=Z,5.4nm,0.8s							
TXAR	**Lajitas Array**	**76.00**	**62**	P	**P**	**22 32 59.5**	**+1.3**
	comp=Z,1.4nm,0.7s,baz=301,slow=4.5,SNR=20							
	comp=Z,1.4nm,0.7s							
TXAR	**Lajitas Array**	**76.00**	**62**	P	**P**	**22 32 59.4**	**+1.2**
TXAR	**Lajitas Array**	**76.00**	**62**	P	**P**	**22 32 59.4**	**+1.2**
SADO	**Sadowa**	**76.26**	**36**	LR	LR	23 10 54.8		
	comp=Z,66nm,18.5s,baz=92,slow=39							
U40A	**Yellville**	**76.72**	**50**	P	**P**	**22 33 02.5**	**+0.4**
	baz=321							
BRTR	**Keskin Array B**	**78.10**	**317**	P	**P**	**22 33 09.3**	**-0.6**
BRTR	**Keskin Array B**	**78.10**	**317**	P	**P**	**22 33 09.3**	**-0.6**
PKME	**Peaks-Kenny Pk**	**79.44**	**30**	P	**P**	**22 33 16.7**	**-0.2**
	baz=332							
DAVOX	**Davos/Dischmat**	**80.65**	**336**	LR	LR	23 13 14.9		
	comp=Z,61nm,19.2s,baz=258,slow=39							
TORD	**Torodi Ar. Bea**	**114.46**	**331**	PKP	**PKiKP**	**22 39 47.5**	**-3.4**
	comp=Z,0.3nm,0.5s,baz=32,slow=3.4,SNR=4.2							
H03N2	**Juan Fernandez**	**137.77**	**90**	T	T	01 13 59.1		
	baz=309,slow=77,SNR=129							
H03N1	**Juan Fernandez**	**137.79**	**90**	T	T	01 14 00.5		
	baz=309,slow=77,SNR=92							
H03N3	**Juan Fernandez**	**137.79**	**90**	T	T	01 13 59.0		
	baz=309,slow=77,SNR=91							
CPUP	**Villa Florida**	**146.97**	**60**	PKPbc	**PKPbc**	**22 40 52.9**	**-0.3**
	comp=Z,1.5nm,0.7s,baz=284,slow=5.2,SNR=3.4							
PLCA	**Paso Flores**	**147.34**	**94**	PKPbc	**PKPbc**	**22 40 53.4**	**-0.5**
	comp=Z,1.8nm,1.0s,baz=285,slow=3.3,SNR=2.3							

*IDC **15** 22:33:04.5±1.2,34.˚63N×23.˚74E, h0km, mb3.8/9, mbtmp3.7/14, ML4.0/4, Error ellipse: s-maj=22.3km s-min=12.3km az=161.0*
*NEIC **15** 22:33:12.8±2.0, 34.˚74N±0.˚08×24.˚09E±0.˚05, h55km±5km, mb4.0/9, ML3.8(ATH), ML3.7(THE), Error ellipse: s-maj=11.3km s-min=5.5km az=189.0*
*ISK **15** 22:33:12.1, 34.˚91N×23.˚97E, h8km, ML3.7/23*
*ATH **15** 22:33:13.8, 34.˚84N×24.˚08E, h46km±2km, ML3.8/6, Error ellipse: s-maj=2.8km s-min=1.2km az=203.0*
*THE **15** 22:33:15.5, 34.˚84N×24.˚10E, h39km±1km, ML3.7/9, Error ellipse: s-maj=2.5km s-min=0.9km az=198.0*
*GII **15** 22:33:19.4±0.0, 34.˚53N×24.˚82E, h30km, Mm3.8/3*
ISC 15 22:33:11.7±0.7,**34.˚66N**±0.˚06×**24.˚11E**±0.˚04,**h55**km±5km, **n148**,σ1§**82**/182,**mb3.8**/13,**Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GVD	**Gavdhos**	**0.18**	**355**	P	**Pn**	**22 33 21.2**	**+0.6**
GVD				S	**Sn**	**22 33 26.3**	**-0.5**
GVD				AML	AML	22 33 27.6	
	comp=N,52538μm,0.4s						
GVD				AML	AML	22 33 29.1	
	comp=E,52106μm,0.4s						
GVD	**Gavdhos**	**0.18**	**355**	P	**Pn**	**22 33 21.0**	**+0.5**
GVD				S	**Sn**	**22 33 26.6**	**-0.2**
	comp=E,26μm,0.4s						
GVD	**Gavdhos**	**0.18**	**355**		**Pn**	**22 33 21.1**	**+0.6**
GVD					**Sn**	**22 33 26.7**	**-0.1**
GVDS	**Gavdos**	**0.19**	**356**	P	**Pn**	**22 33 21.0**	**+0.5**
GVDS				S	**Sn**	**22 33 26.2**	**-0.7**
	comp=E,28μm,0.3s						
GVDS	**Gavdos**	**0.19**	**356**		**Pn**	**22 33 21.2**	**+0.7**
GVDS					**Sn**	**22 33 25.7**	**-1.2**
KNDR	**Palaiochora Ch**	**0.67**	**329**	P	**Pn**	**22 33 26.0**	**+0.7**
KNDR				S	**Sn**	**22 33 35.1**	**-0.2**
KNDR				AML	AML	22 33 39.0	
	comp=E,21620μm,0.3s						
KNDR				AML	AML	22 33 41.4	
	comp=N,22156μm,0.4s						
KNDR	**Palaiochora Ch**	**0.67**	**329**	P	**Pn**	**22 33 25.8**	**+0.5**
KNDR				S	**Sn**	**22 33 35.7**	**+0.5**
	comp=N,4μm,0.3s						
KNDR	**Palaiochora Ch**	**0.67**	**329**	PG	**Pn**	**22 33 26.1**	**+0.8**
KNDR				SG	**Sn**	**22 33 36.3**	**+1.0**
KNDR	**Palaiochora Ch**	**0.67**	**329**		**Pn**	**22 33 26.0**	**+0.7**
KNDR					**Sn**	**22 33 36.2**	**+1.0**
SIVA	**Sivas**	**0.68**	**58**	P	**Pn**	**22 33 26.7**	**+1.2**
SIVA				S	**Sn**	**22 33 37.5**	**+2.0**
SIVA				AML	AML	22 33 38.8	
	comp=N,16489μm,0.4s						
SIVA				AML	AML	22 33 39.2	
	comp=E,33881μm,0.4s						
SIVA	**Sivas**	**0.68**	**58**	P	**Pn**	**22 33 26.8**	**+1.4**
SIVA				S	**Sn**	**22 33 36.6**	**+1.2**
	comp=E,13μm,0.4s						
TMBK	**Timbaki Herakl**	**0.68**	**52**	P	**Pn**	**22 33 26.4**	**+0.9**
TMBK				S	**Sn**	**22 33 36.2**	**+0.8**
TMBK	**Timbaki Herakl**	**0.68**	**52**	P	**Pn**	**22 33 26.3**	**+0.9**
TMBK				S	**Sn**	**22 33 36.1**	**+0.7**
	comp=E,6μm,0.7s						
TMBK	**Timbaki Herakl**	**0.68**	**52**		**Pn**	**22 33 26.4**	**+0.9**
TMBK					**Sn**	**22 33 35.5**	**+0.1**
IMMV	**Iera Moni Meta**	**0.81**	**353**	P	**Pn**	**22 33 26.9**	**-0.2**
IMMV				S	**Sn**	**22 33 36.1**	**-2.2**
IMMV	**Iera Moni Meta**	**0.81**	**353**	P	**Pn**	**22 33 27.0**	**0.0**
IMMV				S	**Sn**	**22 33 36.4**	**-1.9**
	comp=E,25μm,0.4s						
IMMV	**Iera Moni Meta**	**0.81**	**353**	PG	**Pn**	**22 33 27.1**	**0.0**
IMMV				SG	**Sn**	**22 33 37.8**	**-0.5**
IMMV	**Iera Moni Meta**	**0.81**	**353**		**Pn**	**22 33 27.0**	**0.0**
IMMV					**Sn**	**22 33 37.4**	**-0.9**
CHAN	**Chania**	**0.86**	**357**	P	**Pn**	**22 33 28.1**	**+0.4**
CHAN				S	**Sn**	**22 33 38.3**	**-1.2**
CHAN				AML	AML	22 33 42.8	
	comp=E,18816μm,0.6s						
CHAN				AML	AML	22 33 44.0	
	comp=N,13935μm,0.4s						
IDI	**Anoyia**	**0.90**	**45**	Pg	**Pn**	**22 33 28.6**	**+0.3**
	comp=N,53nm,0.3s,baz=256,slow=9.9,SNR=271						
IDI				Lg	Lg	22 33 41.2	
	comp=N,338nm,0.3s,baz=310,slow=20,SNR=29						
IDI	**Anoyia**	**0.90**	**45**	P	**Pn**	**22 33 29.6**	**+1.3**
IDI				S	**Sn**	**22 33 40.7**	**+0.2**
IDI				AML	AML	22 33 43.6	
	comp=N,7548μm,0.6s						
IDI				AML	AML	22 33 43.9	
	comp=E,9481μm,0.5s						
IDI	**Anoyia**	**0.90**	**45**	P	**Pn**	**22 33 28.9**	**+0.6**
IDI				S	**Sn**	**22 33 41.1**	**+0.6**
	comp=E,4μm,0.5s						
IDI	**Anoyia**	**0.90**	**45**	PG	**Pn**	**22 33 29.5**	**+1.2**
IDI	**Anoyia**	**0.90**	**45**		**Pn**	**22 33 29.4**	**+1.0**
IDI				Sn	**Sn**	**22 33 41.0**	**+0.4**
RODP	**Rodopos**	**0.95**	**343**	P	**Pn**	**22 33 29.6**	**+0.7**
RODP				S	**Sn**	**22 33 40.4**	**-1.1**
	comp=E,2μm,0.4s						
RODP	**Rodopos**	**0.95**	**343**	PG	**Pn**	**22 33 28.9**	**0.0**
RODP				SG	**Sn**	**22 33 40.3**	**-1.2**
KSTL	**Kastelli Herak**	**1.02**	**50**	P	**Pn**	22 33 34.8	+5.0
KSTL	**Kastelli Herak**	**1.02**	**50**	P	**Pn**	**22 33 34.4**	**+4.6**
IACM	**Heraklion**	**1.02**	**50**	P	**Pn**	**22 33 32.5**	**+2.6**
IACM	**Heraklion**	**1.02**	**50**	P	**Pn**	**22 33 31.9**	**+2.1**
HRKL	**Herakleio**	**1.05**	**51**	P	**Pn**	**22 33 32.4**	**+2.2**
HRKL				S	**Sn**	**22 33 44.9**	**+1.1**
HRKL	**Herakleio**	**1.05**	**51**	P	**Pn**	**22 33 32.2**	**+2.0**
HRKL				S	**Sn**	**22 33 44.5**	**+0.7**
	comp=E,6μm,0.7s						
HRKL	**Herakleio**	**1.05**	**51**	PG	**Pn**	**22 33 32.4**	**+2.2**
ANKY	**Antikythira Is**	**1.38**	**332**	P	**Pn**	**22 33 36.6**	**+2.0**
ANKY	**Antikythira Is**	**1.38**	**332**	P	**Pn**	**22 33 36.3**	**+1.7**
NPS	**Neapolis**	**1.38**	**63**	P	**Pn**	**22 33 37.5**	**+2.9**
NPS	**Neapolis**	**1.38**	**63**	P	**Pn**	**22 33 37.5**	**+2.9**
FRMA	**Ierapetra Chan**	**1.39**	**75**	P	Pn	22 33 40.7	+6.0
ZKR	**Zakros**	**1.79**	**75**	P	Pn	22 33 45.5	+5.2
ZKR				AML	AML	22 34 25.2	
	comp=E,1386μm,0.7s						
ZKR				AML	AML	22 34 33.6	
	comp=N,439μm,1.3s						
ZKR	**Zakros**	**1.79**	**75**	P	**Pn**	**22 33 43.8**	**+3.5**
ZKR	**Zakros**	**1.79**	**75**	PN	**Pn**	**22 33 43.5**	**+3.2**
KTHA	**Kythira Island**	**1.81**	**332**	P	**Pn**	**22 33 42.7**	**+2.2**
KTHA	**Kythira Island**	**1.81**	**332**	P	**Pn**	**22 33 42.0**	**+1.5**
KTHR	**Kythira**	**1.84**	**331**	P	**Pn**	**22 33 42.6**	**+1.8**
KTHR	**Kythira**	**1.84**	**331**	P	**Pn**	**22 33 42.8**	**+1.9**
SANT	**Santorini**	**2.04**	**32**	P	**Pn**	**22 33 43.9**	**+0.3**
SANT	**Santorini**	**2.04**	**32**	PN	**Pn**	**22 33 44.6**	**+1.0**
SANT	**Santorini**	**2.04**	**32**	Pn	**Pn**	**22 33 43.9**	**+0.3**
MHLO	**Agia Marina, M**	**2.04**	**7**	P	**Pn**	**22 33 43.4**	**-0.3**
THR3	**Thira Island,**	**2.04**	**31**	P	**Pn**	**22 33 44.0**	**+0.4**
THR8	**Santorini-Mono**	**2.08**	**32**	P	**Pn**	**22 33 44.3**	**+0.2**
CMBO	**Columbo, Santo**	**2.10**	**30**	P	**Pn**	**22 33 45.3**	**+0.9**
VLI	**Veliai**	**2.27**	**336**	P	**Pn**	**22 33 48.4**	**+1.7**
KARP	**Karpathos**	**2.66**	**70**	PN	**Pn**	**22 33 54.9**	**+2.8**
KARP	**Karpathos**	**2.66**	**70**		**Pn**	**22 33 55.0**	**+2.9**
APE	**Apeiranthos**	**2.67**	**25**	P	**Pn**	**22 33 51.6**	**-0.7**
APE	**Apeiranthos**	**2.67**	**25**	PN	**Pn**	**22 33 51.8**	**-0.5**
KRND	**KRANIDI**	**2.83**	**344**	P	**Pn**	**22 33 54.9**	**+0.5**
EPID	**Epidavros**	**3.06**	**345**	P	**Pn**	**22 33 57.7**	**+0.1**
ITM	**Ithomi**	**3.08**	**326**	PN	**Pn**	**22 33 56.2**	**-1.6**
ITM	**Ithomi**	**3.08**	**326**	Pn	**Pn**	**22 33 58.1**	**+0.3**
NIS1	**Nisyros Isl.**	**3.17**	**51**	PN	**Pn**	**22 34 00.8**	**+1.7**
VLY	**Voula,Athens**	**3.20**	**356**	P	**Pn**	**22 33 59.0**	**-0.5**
PTL	**Penteli**	**3.39**	**357**	P	**Pn**	**22 34 01.8**	**-0.3**
DION	**Dionisos Attik**	**3.42**	**358**	P	**Pn**	**22 34 02.1**	**-0.4**
DAT	**Datca**	**3.50**	**53**	PN	**Pn**	**22 34 05.2**	**+1.5**
BODT	**Bodrum**	**3.54**	**46**	PN	**Pn**	**22 34 05.4**	**+1.2**
VILL	**Villia**	**3.56**	**350**	P	**Pn**	**22 34 04.0**	**-0.5**
GUR	**Goura**	**3.57**	**337**	P	**Pn**	**22 34 05.1**	**+0.4**
ARG	**Arkhangelos**	**3.63**	**63**	P	**Pn**	**22 34 06.6**	**+1.2**
ARG	**Arkhangelos**	**3.63**	**63**	PN	**Pn**	**22 34 07.6**	**+2.2**
ARG	**Arkhangelos**	**3.63**	**63**	Pn	**Pn**	**22 34 07.0**	**+1.6**
GCAM	**G?zelcaml?**	**3.95**	**39**	PN	**Pn**	**22 34 10.7**	**+0.9**
MLSB	**Milas**	**3.98**	**47**	PN	**Pn**	**22 34 11.6**	**+1.5**
TURN	**Turunc**	**3.98**	**57**	PN	**Pn**	**22 34 11.6**	**+1.5**
CHOS	**Chios island**	**4.04**	**22**	PN	**Pn**	**22 34 11.0**	**-0.1**
YER	**Yerkesik**	**4.20**	**53**	PN	**Pn**	**22 34 14.8**	**+1.6**
URLA	**Izmir**	**4.21**	**28**	PN	**Pn**	**22 34 13.3**	**0.0**
DALY	**Dalyan (Mula)**	**4.28**	**58**	PN	**Pn**	**22 34 15.9**	**+1.6**
AYDB	**Zeytinkoy-Aydi**	**4.49**	**42**	PN	**Pn**	**22 34 18.4**	**+1.2**
FETY	**Fethiye**	**4.51**	**63**	PN	**Pn**	**22 34 18.7**	**+1.3**
KEF3	**Kipouria, Keph**	**4.66**	**321**	P	**Pn**	**22 34 20.3**	**+0.8**
AKAS	**Kas**	**4.76**	**69**	Pn	**Pn**	**22 34 22.0**	**+1.1**
EVGI	**Ofkada island**	**4.83**	**326**	P	**Pn**	**22 34 24.4**	**+2.6**
ELL	**Elmali**	**5.16**	**64**	Pn	**Pn**	**22 34 27.7**	**+1.2**
LIT	**Litokhoron**	**5.59**	**347**		**Pn**	**22 34 31.6**	**-0.6**
KEK	**Kerkira**	**6.11**	**327**	Pn	**Pn**	**22 34 38.0**	**-1.3**
ALN	**Alexandroupoli**	**6.42**	**13**	Pn	**Pn**	**22 34 42.5**	**-1.0**
FNA	**Florina**	**6.49**	**341**		**Pn**	**22 34 43.2**	**-1.4**
KBN	**Korca**	**6.51**	**337**	Pn	**Pn**	**22 34 44.0**	**-0.9**
RDO	**Rodhopi**	**6.58**	**9**	Pn	**Pn**	**22 34 45.1**	**-0.6**
TIP	**Timpagrande**	**7.42**	**310**	Pn	**Pn**	**22 34 56.6**	**-0.7**
CSS	**Mathiatis**	**7.59**	**85**	Pn	**Pn**	**22 34 59.2**	**-0.5**
VTS	**Vitosha**	**7.98**	**355**	Pn	**Pn**	**22 35 03.8**	**-1.3**
RAFF	**Raffo Rosso**	**8.31**	**291**	Pn	**Pn**	**22 35 09.7**	**+0.2**
VAE	**Valguarnera**	**8.34**	**293**	Pn	**Pn**	**22 35 10.8**	**+0.8**
	comp=N,0.3nm,0.3s,baz=137,slow=23,SNR=2.1						
VAE				Sn	Sn	22 36 32.3	-10
	comp=N,0.5nm,0.3s,baz=101,slow=22,SNR=2.1						
CUC	**Castrocucco**	**8.48**	**311**	Pn	**Pn**	**22 35 12.9**	**+1.0**
PDG	**Podgorica**	**8.64**	**335**	Pn	**Pn**	**22 35 11.1**	**-2.9**
BRTR	**Keskin Array B**	**9.13**	**54**	Pn	**Pn**	**22 35 24.6**	**+3.7**
	comp=N,0.3nm,0.5s,baz=219,slow=13,SNR=2.1						
BRTR				Sn	**Sn**	**22 36 57.1**	**-5.2**
	comp=N,0.1nm,0.3s,baz=217,slow=23,SNR=3.1						
KZIT	**Kziot**	**9.44**	**110**	Pn	**Pn**	**22 35 25.1**	**+0.2**
KZIT				Sn	Sn	22 37 03.6	-5.9
MMC7	**Mount Meron ar**	**9.53**	**97**	Pn	**Pn**	**22 35 26.7**	**+0.4**
MMAI	**Mount Meron Ar**	**9.54**	**97**	Pn	**Pn**	**22 35 25.8**	**-0.6**
	comp=N,2.2nm,0.3s,baz=315,slow=12,SNR=17						
MMAI				Sn	**Sn**	**22 37 07.3**	**-4.8**
	comp=N,2.3nm,0.3s,baz=272,slow=20,SNR=5.8						
	comp=N,1.3nm,0.3s						
AMAZ	**Amatzia**	**9.59**	**106**	Pn	**Pn**	**22 35 27.5**	**+0.5**
AMAZ				Sn	**Sn**	**22 37 07.6**	**-5.7**
SGRT	**San Giovanni R**	**9.67**	**320**	Pn	**Pn**	**22 35 27.1**	**-1.0**
NATI	**Neve Ativ**	**9.76**	**95**	Pn	**Pn**	**22 35 29.2**	**-0.1**
NATI				Sn	**Sn**	**22 37 12.9**	**-4.5**
YTIR	**Yattir**	**9.81**	**106**	Pn	**Pn**	**22 35 30.8**	**+0.7**
YTIR				Sn	Sn	22 37 12.9	-5.9
HMDT	**Nahal Hemdat**	**9.84**	**101**	Pn	**Pn**	**22 35 30.3**	**-0.1**
DSI	**Dead Sea**	**9.94**	**105**	Pn	**Pn**	**22 35 32.4**	**+0.5**
DSI				Sn	**Sn**	**22 37 17.1**	**-4.8**
KRMI	**Paran Flat**	**10.05**	**114**	Pn	**Pn**	**22 35 33.9**	**+0.5**
KRMI				Sn	Sn	22 37 19.4	-5.3
PRNI	**Paran**	**10.15**	**112**	Pn	**Pn**	**22 35 35.5**	**+0.8**
PRNI				Sn	**Sn**	**22 37 22.4**	**-4.7**
GHAJ	**Ghor Haditha**	**10.19**	**106**		**Pn**	**22 35 36.6**	**+1.3**
GHAJ	**Ghor Haditha**	**10.19**	**106**	Pn	**Pn**	**22 35 36.5**	**+1.3**
ZFRI	**Zfri**	**10.19**	**111**	Pn	**Pn**	**22 35 35.4**	**+0.2**
ZFRI				Sn	**Sn**	**22 37 23.4**	**-4.6**
HRFI	**Mount Harif**	**10.33**	**113**	Pn	**Pn**	**22 35 38.0**	**+0.9**
HRFI				Sn	Sn	22 37 25.7	-5.7
MBRI	**Mt Berech**	**10.36**	**115**	Pn	**Pn**	**22 35 38.6**	**+1.0**
MBRI				Sn	**Sn**	**22 37 27.9**	**-4.3**
EIL	**Elat**	**10.45**	**115**	Pn	**Pn**	**22 35 39.0**	**+0.3**
	comp=N,1.0nm,0.3s,baz=314,slow=5.0,SNR=24						
EIL				Sn	**Sn**	**22 37 29.2**	**-5.0**
	comp=N,1.5nm,0.3s,baz=340,slow=24,SNR=6.0						
	comp=N,2.1nm,0.3s						
EIL	**Elat**	**10.45**	**115**	Pn	**Pn**	**22 35 39.7**	**+1.0**
EIL				Sn	**Sn**	**22 37 29.4**	**-4.9**
ASF	**Jabal al Asfar**	**10.97**	**99**	Pn	**Pn**	**22 35 43.7**	**-2.3**
	comp=N,0.3nm,0.3s,baz=346,slow=7.3,SNR=1.4						
ASF				Sn	Sn	22 37 40.7	-6.6
	comp=N,0.3nm,0.3s,baz=239,slow=19,SNR=1.8						
NRCA	**Norcia**	**11.84**	**317**	Pn	**Pn**	**22 35 58.9**	**+1.1**
BURAR	**Bucovina Array**	**12.97**	**3**	Pn	**Pn**	**22 36 15.0**	**+1.8**
CKRC	**Cesky Krumlov**	**15.91**	**336**	*e*P	**P**	**22 36 56.1**	**+1.5**
TREC	**Trest**	**15.95**	**339**	*e*P	**P**	**22 36 56.0**	**+0.9**
GERES	**GERESS Array B**	**16.14**	**335**	Pn	**Pn**	**22 36 53.8**	**-1.1**
	comp=N,0.1nm,0.3s,baz=156,slow=11,SNR=1.6						
	comp=N,0.7nm,0.8s						
GERES	**GERESS Array B**	**16.14**	**335**	P	**P**	**22

GRL	**Gorelyy**	**5.04**	**22**	PN	**Pn**	**22 35 32.9**	**+1.9**
GRL				S	**Sn**	**22 36 27.9**	**-0.2**
GRL	**Gorelyy**	**5.04**	**22**	P	**Pn**	**22 35 32.9**	**+1.9**
GRL				*e*S	**Sn**	**22 36 27.9**	**-0.2**
RUS	**Russkaya**	**5.05**	**26**	PN	**Pn**	**22 35 31.5**	**+0.5**
RUS				S	**Sn**	**22 36 25.2**	**-3.0**
RUS	**Russkaya**	**5.05**	**26**	*e*P	**Pn**	**22 35 31.5**	**+0.5**
RUS				S	**Sn**	**22 36 25.2**	**-3.0**
APC	**Apacha**	**5.19**	**15**	PN	**Pn**	**22 35 35.6**	**+2.7**
APC	**Apacha**	**5.19**	**15**	*e*P	**Pn**	**22 35 35.6**	**+2.7**
KRMR	**Karymshinskiy**	**5.31**	**21**	PN	**Pn**	**22 35 36.4**	**+1.9**
KRMR	**Karymshinskiy**	**5.31**	**21**	*e*P	**Pn**	**22 35 36.4**	**+1.9**
PETK	**Petropavlovsk-** 2.6nm,0.3s,baz=179,slow=12,SNR=17	**5.47**	**18**	Pn	**Pn**	**22 35 39.0**	**+2.2**
PETK				LR	LR	22 37 49.0	
	comp=Z,55nm,20.2s,baz=192,slow=38 11nm,0.5s						
PET	**Petropavlovsk**	**5.62**	**24**	*e*PN	**Pn**	**22 35 41.5**	**+2.7**
PET				*e*S	**Sn**	**22 36 43.1**	**+1.0**
PET				pmax	pmax		
	comp=Z,35nm,0.5s						
PET				smax	smax		
	comp=N,43nm,0.5s						
PET	**Petropavlovsk**	**5.62**	**24**	*e*P	**Pn**	**22 35 40.5**	**+1.7**
PET				AMB	AMB	22 35 47.0	
	comp=N,40nm,0.5s						
PET				*e*S	**Sn**	**22 36 40.9**	**-1.2**
DALK	**Dalny**	**5.65**	**24**	PN	**Pn**	**22 35 40.2**	**+1.0**
DALK				S	**Sn**	**22 36 42.2**	**-0.7**
DALK	**Dalny**	**5.65**	**24**	*e*P	**Pn**	**22 35 40.2**	**+1.0**
DALK				*e*S	**Sn**	**22 36 42.2**	**-0.7**
UGLR	**Uglovaya**	**5.83**	**24**	PN	**Pn**	**22 35 44.0**	**+2.2**
UGLR	**Uglovaya**	**5.83**	**24**	*e*P	**Pn**	**22 35 44.0**	**+2.2**
KOK	**Koryaka**	**5.85**	**22**	PN	**Pn**	**22 35 44.9**	**+2.7**
KOK	**Koryaka**	**5.85**	**22**	*e*P	**Pn**	**22 35 44.9**	**+2.7**
AVH	**Avacha**	**5.86**	**23**	PN	**Pn**	**22 35 44.8**	**+2.6**
AVH				S	**Sn**	**22 36 46.2**	**-1.9**
AVH	**Avacha**	**5.86**	**23**	*e*P	**Pn**	**22 35 44.8**	**+2.6**
AVH				S	**Sn**	**22 36 46.2**	**-1.9**
SMAR	**Somma**	**5.87**	**23**	PN	**Pn**	**22 35 45.5**	**+3.0**
SMAR	**Somma**	**5.87**	**23**	*e*P	**Pn**	**22 35 45.5**	**+3.0**
KRER	**Koryakskii**	**5.89**	**23**	PN	**Pn**	**22 35 44.7**	**+1.9**
KRER	**Koryakskii**	**5.89**	**23**	*e*P	**Pn**	**22 35 44.7**	**+1.9**
SDLR	**Sedlovina**	**5.91**	**24**	PN	**Pn**	**22 35 44.3**	**+1.4**
SDLR	**Sedlovina**	**5.91**	**24**	*e*P	**Pn**	**22 35 44.3**	**+1.4**
KRX	**Arik**	**5.92**	**22**	PN	**Pn**	**22 35 45.6**	**+2.5**
KRX	**Arik**	**5.92**	**22**	*e*P	**Pn**	**22 35 45.6**	**+2.5**
GNL	**Ganaly**	**6.07**	**17**	PN	**Pn**	**22 35 47.8**	**+2.7**
GNL	**Ganaly**	**6.07**	**17**	*e*P	**Pn**	**22 35 47.8**	**+2.7**
SPN	**Mys Shipunski**	**6.10**	**30**	PN	**Pn**	**22 35 46.6**	**+1.2**
SPN	**Mys Shipunski**	**6.10**	**30**	*e*P	**Pn**	**22 35 46.6**	**+1.2**
SPN				*e*S	**Sn**	**22 36 51.1**	**-2.9**
SPN	**Mys Shipunski**	**6.10**	**30**	*e*P	**Pn**	**22 35 46.6**	**+1.2**
SHO	**Shikotan**	**6.97**	**237**	*e*PN	Pn	22 35 55.3	-2.0
SHO	**Shikotan**	**6.97**	**237**	*e*P	Pn	22 35 55.5	-1.8
SHO				AMB	AMB	22 35 58.0	
	comp=N,10.0nm,0.4s						
SHO				*e*S	Sn	22 37 08.7	-6.7
SHO				A	A	22 37 24.0	
	comp=N,20nm,0.5s						
SHO				A	A	22 37 24.0	
	comp=N,20nm,0.5s						
MKZ	**Mys Kozlova**	**7.88**	**30**	PN	**Pn**	**22 36 09.5**	**-0.2**
MKZ	**Mys Kozlova**	**7.88**	**30**	*e*P	**Pn**	**22 36 09.5**	**-0.2**
MKZ				S	**Sn**	**22 37 32.5**	**-5.1**
KBTR	**Krutoberegovo**	**9.59**	**27**	PN	**Pn**	**22 36 33.7**	**+0.4**
KBTR	**Krutoberegovo**	**9.59**	**27**	*e*P	**Pn**	**22 36 33.7**	**+0.4**
SHEM	**Shemya Is, Ala**	**13.13**	**61**	Pn	**Pn**	**22 37 23.8**	**+2.2**
	comp=N,7.3nm,0.3s,baz=261,slow=2.6,SNR=10.0						
KLR	**Kul'dur**	**15.39**	**283**	Pn	**Pn**	**22 37 53.5**	**+1.3**
	comp=N,0.2nm,0.3s,baz=59,slow=5.3,SNR=5.9						
KLR				LR	LR	22 43 55.3	
	comp=N,40nm,18.1s,baz=24,slow=38 comp=N,1.4nm,0.6s						
USRK	**Ussuriysk Ar.**	**16.34**	**265**	Pn	**Pn**	**22 38 02.4**	**-2.1**
	comp=N,0.2nm,0.3s,baz=80,slow=13,SNR=5.9 comp=N,1.9nm,0.6s						
KSRS	**Korea Array**	**22.34**	**252**	P	**P**	**22 39 11.2**	**-1.4**
	comp=N,0.6nm,0.3s,baz=57,slow=11,SNR=4.6						
KSRS				LR	LR	22 47 13.6	
	comp=N,19nm,18.5s,baz=280,slow=35 comp=N,0.6nm,0.3s						
H11N2	**WAKE ISLAND Hy**	**29.76**	**157**	T	T	23 12 02.2	
	baz=344,slow=76,SNR=93						
H11N1	**WAKE ISLAND Hy**	**29.78**	**157**	T	T	23 12 04.6	
	baz=344,slow=76,SNR=176						
H11N3	**WAKE ISLAND Hy**	**29.78**	**157**	T	T	23 12 03.2	
	baz=344,slow=76,SNR=67						
H11S1	**WAKE ISLAND Hy**	**30.88**	**158**	T	T	23 13 29.7	
	baz=344,slow=76,SNR=856						
H11S3	**WAKE ISLAND Hy**	**30.89**	**158**	T	T	23 13 27.5	
	baz=344,slow=76,SNR=809						
H11S2	**WAKE ISLAND Hy**	**30.90**	**158**	T	T	23 13 27.1	
	baz=344,slow=76,SNR=565						
SONM	**Songino Array**	**32.12**	**288**	LR	LR	22 55 08.8	
	comp=N,27nm,18.8s,baz=305,slow=39						
ILAR	**Eielson Array**	**34.84**	**40**	P	**P**	**22 41 06.0**	**+0.8**
	comp=N,0.3nm,0.6s,baz=249,slow=9.0,SNR=4.6 comp=N,0.3nm,0.6s						
ILAR	**Eielson Array**	**34.84**	**40**	P	**P**	**22 41 06.0**	**+0.8**
JMIC	**Jan Mayen**	**60.79**	**354**	LR	LR	23 09 27.9	
	comp=N,27nm,18.9s,baz=194,slow=35						
PDAR	**Pinedale Array**	**63.05**	**55**	P	**P**	**22 44 41.6**	**0.0**
	comp=N,0.4nm,0.7s,baz=283,slow=4.5,SNR=2.4 comp=N,0.4nm,0.7s						
SFJD	**Kangerlussuaq**	**63.76**	**11**	LR	LR	23 15 07.1	
	comp=N,63nm,20.0s,baz=174,slow=38						
ULM	**Lac du Bonnet**	**64.81**	**42**	LR	LR	23 13 39.1	
	comp=N,40nm,21.9s,baz=106,slow=36						
WRA	**Warramunga Arr**	**70.05**	**201**	P	**P**	**22 45 25.9**	**-0.3**
	comp=N,0.7nm,0.7s,baz=14,slow=6.2,SNR=6.1 comp=N,0.7nm,0.7s						
ASAR	**Alice Springs**	**73.74**	**200**	P	**P**	**22 45 47.6**	**-0.7**
	comp=N,0.3nm,0.6s,baz=33,slow=5.8,SNR=2.9 comp=N,0.3nm,0.6s						
TXAR	**Lajitas Array**	**75.83**	**62**	P	**P**	**22 46 02.1**	**+1.5**
	comp=N,0.8nm,0.9s,baz=296,slow=5.2,SNR=8.5 comp=N,0.8nm,0.9s						

IDC 15 22:48:42.8±4.5, 2°.00S×139°.54E, h0km, mb3.1/2, mbtmp3.2/3, ML3.4/1, Error ellipse: s-maj=175.2km s-min=31.7km az=87.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=16,slow=12,SNR=1.4 0.2nm,0.4s	**18.55**	**196**	P	P	22 52 59.8	-1.4
ASAR	**Alice Springs** 0.3nm,0.4s,baz=25,slow=10,SNR=6.7 0.3nm,0.4s	**22.22**	**194**	P	P	22 53 42.0	+0.8
MKAR	**Makanchi Array** 0.1nm,0.4s,baz=128,slow=6.5,SNR=1.6 0.1nm,0.4s	**69.74**	**322**	P	P	22 59 54.7	-0.1

*IDC **15** 23:44:01.4±2.9, 37°.59N×73°.08E, h0km, mb3.5/1, mbtmp3.5/6, ML2.9/5, MS2.7/1, Error ellipse: s-maj=55.7km s-min=23.5km az=131.0*

ISC 15 23:44:05.5±2.6, 37°.7N±0°.2×72°.1E±0°.1, h35km, n8, σ2s69/15, 4C-2D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa** 0.8nm,0.3s,baz=198,slow=9.6,SNR=1.9	**5.26**	**20**	Pn	**Pn**	**23 45 23.2**	**+1.5**
AAK				Sn	**Sn**	**23 46 23.4**	**+2.2**
	0.1nm,0.3s,baz=207,slow=11,SNR=3.8 1.9nm,0.3s						
KK31	**Karatay Array** 2.6nm,0.5s,baz=173,slow=10,SNR=32	**5.53**	**348**	Pn	**Pn**	**23 45 28.1**	**+2.7**
KK31				Pn	**Pn**	**23 45 28.1**	**+2.7**
	2.6nm,0.5s,baz=173,slow=10,SNR=32						
KK31				⇑Sn	**Sn**	**23 46 29.6**	**+1.9**
	13nm,0.8s						
KK31				⇑Sn	**Sn**	**23 46 29.6**	**+1.9**
	13nm,0.8s						
MKAR	**Makanchi Array** baz=217,slow=12,SNR=2.1 0.2nm,0.7s	**11.80**	**36**	Pn	**Pn**	**23 46 48.5**	**-2.8**
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=205,slow=13,SNR=4.0 0.4nm,0.2s	**13.71**	**17**	Pn	**Pn**	**23 47 14.4**	**-2.8**
AB31	**Akbulak array** 0.7nm,0.5s,baz=138,slow=12,SNR=15	**14.52**	**327**	⇑Pn	**Pn**	**23 47 28.2**	**0.0**
AB31				⇑Pn	**Pn**	**23 47 28.2**	**0.0**
	0.7nm,0.5s,baz=138,slow=12,SNR=15						
AB31				⇓Sn	**Sn**	**23 50 04.0**	**-3.8**
	1.5nm,0.7s,baz=137,slow=25,SNR=2.6						
AB31				⇓Sn	**Sn**	**23 50 04.0**	**-3.8**
	1.5nm,0.7s,baz=137,slow=25,SNR=2.6						
AKTO	**Aktyubinsk** 0.1nm,0.3s,baz=122,slow=6.5,SNR=6.3	**16.23**	**326**	Pn	**P**	**23 47 55.8**	**+2.3**
AKTO				Sn	**Sn**	**23 50 47.3**	**-2.2**
	0.1nm,0.3s,baz=129,slow=21,SNR=1.5						
AKTO				LR	LR	23 54 22.9	
	comp=Z,26nm,18.2s,baz=116,slow=37 2.2nm,0.8s						
ZALV	**Zalesovo Beam** 0.1nm,0.3s,baz=220,slow=11,SNR=4.5 1.1nm,0.6s	**18.46**	**24**	P	**P**	**23 48 16.6**	**-1.4**
TORD	**Torodi Ar. Bea** 0.6nm,1.1s,baz=55,slow=6.4,SNR=4.1 0.6nm,1.1s	**66.63**	**269**	P	P	23 54 58.5	+5.7

IDC 15 23:45:22.2±3.4, 23°.48S×174°.91W, h0km, mb3.6/2, mbtmp3.6/3, ML4.6/1, Error ellipse: s-maj=70.2km s-min=63.8km az=128.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu** 0.2nm,0.3s,baz=128,slow=16,SNR=6.2 4.3nm,0.7s	**8.72**	**310**	Pn	Pn	23 47 29.7	-0.1
ASAR	**Alice Springs** 0.2nm,0.4s,baz=101,slow=7.2,SNR=4.6 0.2nm,0.4s	**46.70**	**259**	P	P	23 53 53.3	+0.1
WRA	**Warramunga Arr** 0.8nm,0.7s,baz=103,slow=8.1,SNR=6.4 0.8nm,0.7s	**47.09**	**264**	P	P	23 53 55.9	-0.4
AKASG	**Malin Array Be** 0.3nm,0.3s,baz=42,slow=3.4,SNR=1.8	**146.99**	**331**	PKPbc	PKPbc	00 05 05.9	-0.7

*NOU **15** 23:47:35.1, 39°.39S×174°.14E, h243km, MLv3.5/7, North Island, New Zealand*
*WEL **15** 23:47:39.7±0.7, 40°.5S±5°×17°.4E±°, h199km±5km, M3.0/34, ML2.6/8, MLv3.0/34, Error ellipse: s-maj=0.0km s-min=0.0km az=141.2*

ISC 15 23:47:35.3±1.8, 39°.46S±0°.06×174°.20E±0°.06, h231km±9km, n117, σ1s37/126, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LREZ	**Lake Rotokare**	**0.15**	**90**	P	**Pn**	**23 48 06.8**	**+1.7**
LREZ				S	**S**	**23 48 28.1**	**-0.5**
NEZ	**North Egmont**	**0.21**	**336**	P	**Pn**	**23 48 07.0**	**+1.5**
NEZ				S	**S**	**23 48 28.4**	**-0.6**
KHEZ	**Kahui Hut**	**0.22**	**318**	P	**Pn**	**23 48 06.9**	**+1.5**
KHEZ				S	**S**	**23 48 28.4**	**-0.6**
NMEZ	**Namu Road**	**0.26**	**280**	P	**Pn**	**23 48 06.9**	**+1.6**
NMEZ				S	**S**	**23 48 27.9**	**-0.8**
DREZ	**Durham Road**	**0.27**	**359**	S	**S**	**23 48 28.7**	**-0.3**
NBEZ	**Newall Road No**	**0.32**	**306**	P	**Pn**	**23 48 06.7**	**+1.2**
VRZ	**Vera Road**	**0.55**	**52**	P	**Pn**	**23 48 06.8**	**+0.7**
VRZ				S	**S**	**23 48 29.0**	**-2.2**
WAZ	**Wanganui**	**0.67**	**116**	P	**Pn**	**23 48 08.6**	**+2.0**
WAZ				S	**S**	**23 48 29.8**	**-1.2**
PKVZ	**Pokaka**	**0.90**	**79**	P	**Pn**	**23 48 08.8**	**+1.0**
PKVZ				S	**S**	**23 48 30.9**	**-2.2**
MTVZ	**Mangateitei**	**0.98**	**86**	P	**Pn**	**23 48 09.6**	**+1.3**
MTVZ				S	**S**	**23 48 31.4**	**-2.5**
TWVZ	**Taurewa**	**1.03**	**68**	P	**Pn**	**23 48 09.5**	**+0.9**
TRVZ	**Turoa**	**1.05**	**82**	P	**Pn**	**23 48 10.3**	**+1.4**
TRVZ				S	**S**	**23 48 32.5**	**-2.5**
DRZ	**Dome Shelter**	**1.07**	**80**	S	**S**	**23 48 33.5**	**-1.9**
HIZ	**Hauiti**	**1.07**	**28**	P	**Pn**	**23 48 09.7**	**+1.0**
HIZ	**Hauiti**	**1.07**	**28**	P	**Pn**	**23 48 09.9**	**+1.1**
WHVZ	**Whangaehu Hut**	**1.09**	**81**	P	**Pn**	**23 48 10.5**	**+1.4**
WNVZ	**Wahianoa**	**1.09**	**83**	P	**Pn**	**23 48 10.4**	**+1.4**
NGZ	**Ngauruhoe**	**1.12**	**76**	P	**Pn**	**23 48 10.5**	**+1.3**
WTVZ	**West Tongariro**	**1.13**	**73**	P	**Pn**	**23 48 10.4**	**+1.2**
OHWZ	**Ohakea**	**1.13**	**131**	S	**S**	**23 48 34.0**	**-1.4**
TUVZ	**Tukino**	**1.14**	**81**	P	**Pn**	**23 48 10.5**	**+1.2**
NNVZ	**North Ngauruho**	**1.14**	**74**	P	**Pn**	**23 48 10.6**	**+1.3**
SNVZ	**South Ngauruho**	**1.15**	**77**	P	**Pn**	**23 48 10.9**	**+1.5**
OTVZ	**Oturere**	**1.17**	**76**	P	**Pn**	**23 48 10.8**	**+1.2**
KRVZ	**Karewarewa**	**1.17**	**72**	P	**Pn**	**23 48 10.9**	**+1.4**
NTVZ	**North Tongarir**	**1.20**	**73**	P	**Pn**	**23 48 11.0**	**+1.3**
MOVZ	**Moawhango**	**1.20**	**88**	P	**Pn**	**23 48 10.6**	**+1.0**
ETVZ	**East Tongariro**	**1.21**	**75**	P	**Pn**	**23 48 11.4**	**+1.6**
TMVZ	**Te Maari**	**1.21**	**74**	P	**Pn**	**23 48 11.5**	**+1.7**
RATZ	**Rangitukua**	**1.35**	**65**	P	**Pn**	**23 48 12.1**	**+1.4**
DUWZ	**D'Urville Isla**	**1.36**	**189**	P	**Pn**	**23 48 12.0**	**+1.3**
RITZ	**Rihia Road**	**1.37**	**70**	P	**Pn**	**23 48 12.4**	**+1.6**
WATZ	**Wairara**	**1.41**	**58**	P	**Pn**	**23 48 12.4**	**+1.3**
BHHZ	**Black Hill Sta**	**1.44**	**92**	P	**Pn**	**23 48 12.2**	**+0.9**
TSZ	**Takapari Road**	**1.48**	**114**	P	**Pn**	**23 48 13.1**	**+1.5**
KIW	**Kapiti Island**	**1.50**	**159**	P	**Pn**	**23 48 12.9**	**+1.2**
POWZ	**Post Office Ro**	**1.52**	**128**	P	**Pn**	**23 48 13.2**	**+1.3**
TLZ	**Tolley Road**	**1.54**	**43**	P	**Pn**	**23 48 13.1**	**+1.0**
OGWZ	**Otaki Gorge**	**1.54**	**152**	P	**Pn**	**23 48 13.4**	**+1.4**
HATZ	**Hinemaiaia**	**1.57**	**69**	P	**Pn**	**23 48 13.4**	**+1.0**
MRZ	**Mangatainoka R**	**1.60**	**139**	P	**Pn**	**23 48 13.6**	**+1.2**
PNHZ	**Pukenui**	**1.60**	**107**	P	**Pn**	**23 48 14.0**	**+1.4**
KRHZ	**Kereru**	**1.68**	**97**	P	**Pn**	**23 48 14.8**	**+1.5**
KWHZ	**Kaweka Forest**	**1.72**	**89**	P	**Pn**	**23 48 15.4**	**+1.7**
DVHZ	**Dannevirke**	**1.73**	**120**	P	**Pn**	**23 48 15.0**	**+1.4**
PRWZ	**Pori Road**	**1.74**	**129**	P	**Pn**	**23 48 15.4**	**+1.7**
TCW	**Tory Channel**	**1.75**	**178**	P	**Pn**	**23 48 15.3**	**+1.6**
HOWZ	**Holdsworth Sta**	**1.75**	**145**	P	**Pn**	**23 48 14.9**	**+1.0**
CAW	**Cannon Point**	**1.77**	**158**	P	**Pn**	**23 48 15.2**	**+1.2**
BKZ	**Black Stump Fm**	**1.80**	**81**	P	**Pn**	**23 48 15.5**	**+1.1**
BKZ	**Black Stump Fm**	**1.80**	**81**	P	**Pn**	**23 48 15.5**	**+1.1**
WPHZ	**Waipukurau**	**1.83**	**110**	P	**Pn**	**23 48 16.2**	**+1.7**
MRHZ	**Matea Rd**	**1.83**	**71**	P	**Pn**	**23 48 15.4**	**+0.7**
TKNZ	**Takaka Hill**	**1.84**	**211**	P	**Pn**	**23 48 15.6**	**+1.0**
NNZ	**Nelson**	**1.86**	**199**	P	**Pn**	**23 48 16.1**	**+1.3**
QRZ	**Quartz Range**	**1.87**	**223**	P	**Pn**	**23 48 15.8**	**+0.8**
QRZ	**Quartz Range**	**1.87**	**223**	P	**Pn**	**23 48 15.7**	**+0.8**
SNZO	**South Karori**	**1.89**	**168**	P	**Pn**	**23 48 16.3**	**+1.3**
MCHZ	**McNeill Hill**	**1.93**	**90**	P	**Pn**	**23 48 17.7**	**+2.2**
MTW	**Mount Morrison**	**1.96**	**150**	P	**Pn**	**23 48 16.7**	**+1.0**
TUWZ	**Tuamarina**	**1.98**	**186**	P	**Pn**	**23 48 17.2**	**+1.4**
BFZ	**Birch Farm**	**1.99**	**129**	P	**Pn**	**23 48 17.3**	**+1.4**
BFZ	**Birch Farm**	**1.99**	**129**	P	**Pn**	**23 48 17.7**	**+1.7**
TOZ	**Tahuroa Road**	**2.00**	**31**	P	**Pn**	**23 48 17.8**	**+1.6**
BHW	**Baring Head**	**2.01**	**166**	P	**Pn**	**23 48 17.1**	**+0.9**
PRHZ	**Porangahau**	**2.04**	**114**	P	**Pn**	**23 48 18.3**	**+1.8**
NMHZ	**Naumai**	**2.05**	**81**	P	**Pn**	**23 48 18.9**	**+2.2**
KAHZ	**Kahuranaki**	**2.09**	**100**	P	**Pn**	**23 48 19.0**	**+1.9**
TMWZ	**Te Maipa**	**2.09**	**142**	P	**Pn**	**23 48 18.1**	**+1.2**
CPWZ	**Castlepoint**	**2.11**	**134**	P	**Pn**	**23 48 18.9**	**+1.8**
MSWZ	**Moikau Station**	**2.11**	**158**	P	**Pn**	**23 48 18.0**	**+0.9**
PXZ	**Pawanui**	**2.13**	**106**	P	**Pn**	**23 48 19.0**	**+1.7**
PAWZ	**Paruwai Farm**	**2.13**	**154**	P	**Pn**	**23 48 18.3**	**+0.9**
OMRZ	**Omania**	**2.17**	**52**	P	**Pn**	**23 48 17.4**	**-0.5**
ARHZ	**Aropaoanui**	**2.17**	**86**	P	**Pn**	**23 48 19.7**	**+1.9**
MUGZ	**Murupara**	**2.23**	**65**	P	**Pn**	**23 48 19.1**	**+0.7**
MRNZ	**Matariki Terra**	**2.23**	**209**	P	**Pn**	**23 48 19.4**	**+1.0**
CKHZ	**Cape Kidnapper**	**2.23**	**96**	P	**Pn**	**23 48 20.5**	**+2.1**
TRWZ	**Traveller**	**2.24**	**150**	P	**Pn**	**23 48 19.5**	**+1.1**
PLWZ	**Palliser**	**2.25**	**160**	P	**Pn**	**23 48 19.4**	**+0.8**
BSWZ	**Blackbirch Sta**	**2.27**	**186**	P	**Pn**	**23 48 20.5**	**+1.8**
CMWZ	**Cape Campbell**	**2.29**	**180**	P	**Pn**	**23 48 20.7**	**+1.8**
RAHZ	**Arahi**	**2.30**	**77**	P	**Pn**	**23 48 20.7**	**+1.6**
RTZ	**Ruatahuna**	**2.32**	**70**	P	**Pn**	**23 48 20.4**	**+1.0**
MKAZ	**Moumakai**	**2.47**	**18**	P	**Pn**	**23 48 23.3**	**+2.4**
THZ	**Tophouse**	**2.50**	**203**	P	**Pn**	**23 48 22.4**	**+1.2**
SNGZ	**Shannon Statio**	**2.53**	**75**	P	**Pn**	**23 48 22.9**	**+1.4**
URZ	**Urewera**	**2.57**	**63**	P	**Pn**	**23 48 22.3**	**+0.4**
URZ	**Urewera**	**2.57**	**63**	P	**Pn**	**23 48 22.4**	**+0.6**
RAGZ	**Rawiri**	**2.68**	**70**	P	**Pn**	**23 48 24.3**	**+1.1**
KNZ	**Kokohu**	**2.73**	**62**	P	**Pn**	**23 48 24.9**	**+1.3**
MWZ	**Matawai**	**2.83**	**68**	P	**Pn**	**23 48 25.5**	**+0.8**
RIGZ	**Rimuhau**	**2.87**	**76**	P	**Pn**	**23 48 26.6**	**+1.5**
MHGZ	**Mahia Peninsul**	**2.89**	**85**	P	**Pn**	**23 48 27.3**	**+2.0**
PRGZ	**Paritu Road**	**2.91**	**81**	P	**Pn**	**23 48 27.1**	**+1.5**
DSZ	**Dennistone Nort**	**2.92**	**218**	P	**Pn**	**23 48 26.8**	**+1.1**
KHZ	**Kahutara**	**3.00**	**189**	P	**Pn**	**23 48 27.6**	**+1.2**
KHZ	**Kahutara**	**3.00**	**189**	P	**Pn**	**23 48 28.2**	**+1.8**
TKGZ	**Te Karaka**	**3.02**	**71**	P	**Pn**	**23 48 28.2**	**+1.5**
RUGZ	**Raukumara Rang**	**3.10**	**62**	P	**Pn**	**23 48 27.9**	**0.0**
TWGZ	**Tauwhareparae**	**3.22**	**68**	P	**Pn**	**23 48 30.5**	**+1.4**
CNGZ	**Carnagh Statio**	**3.27**	**74**	P	**Pn**	**23 48 31.4**	**+1.8**
HAZ	**Te Kaha**	**3.28**	**60**	P	**Pn**	**23 48 29.9**	**+0.2**
PKGZ	**Pakihiroa**	**3.41**	**64**	P	**Pn**	**23 48 32.2**	**+0.9**
PUZ	**Puketiti**	**3.46**	**68**	P	**Pn**	**23 48 32.7**	**+0.8**
GVZ	**Greta Valley S**	**3.61**	**194**	P	**Pn**	**23 48 34.2**	**+0.7**
LTZ	**Lake Taylor**	**3.62**	**203**	P	**Pn**	**23 48 34.9**	**+1.1**
WMGZ	**Waiomatatini S**	**3.68**	**65**	P	**Pn**	**23 48 35.1**	**+0.7**
MXZ	**Matakaoa Point**	**3.73**	**61**	P	**Pn**	**23 48 35.9**	**+0.8**
INZ	**Inchbonnie**	**3.87**	**212**	P	**Pn**	**23 48 36.2**	**-0.3**
AMCZ	**Amberley**	**3.89**	**197**	P	**Pn**	**23 48 38.0**	**+1.2**
OXZ	**Oxford**	**4.19**	**202**	P	**Pn**	**23 48 40.9**	**+0.5**
OKCZ	**Okains Bay**	**4.34**	**191**	P	**Pn**	**23 48 42.8**	**+0.4**
MQZ	**McQueen's Vall**	**4.40**	**195**	P	**Pn**	**23 48 42.9**	**0.0**
RACZ	**Rakaia**	**4.54**	**199**	P	**Pn**	**23 48 45.2**	**+0.6**
ARCZ	**Arundel**	**5.02**	**206**	P	**Pn**	**23 48 51.4**	**+0.7**
TMZ	**Timaru**	**5.47**	**205**	P	**Pn**	**23 48 57.3**	**+1.1**

*JMA **15** 23:50:52.3±0.2, 24°.N±1°.×126°.6E±0°.8, h106km, MV3.5/18, NEAR MIYAKOJIMA ISLAND*
*IDC **15** 23:50:53.4±1.4, 24°.49N×126°.49E, h0km, mb3.5/3, mbtmp3.5/4, ML3.1/1, Error ellipse: s-maj=41.6km s-min=24.3km az=94.0*

ISC 15 23:50:53.5±2.1, 24°.25N±0°.08×126°.53E±0°.05, h9km±12km, n19, σ1s78/31, mb3.4/3, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOGS	**Gusukube**	**1.15**	**297**	P	**Pn**	**23 51 16.5**	**+0.9**
JOGS				S	**Sn**	**23 51 34.3**	**+2.8**
JMJ2	**Miyako jima3**	**1.20**	**294**	*e*P	**Pn**	**23 51 16.9**	**+0.4**
JMJ2				S	**Sn**	**23 51 35.4**	**+2.6**
JIKM	**Ikemajima**	**1.35**	**300**	*e*P	**Pg**	**23 51 19.3**	**0.0**
JIKM				*e*S	**Sg**	**23 51 39.4**	**+2.5**
JIRB	**Irabujima**	**1.37**	**295**	*e*P	**Pg**	**23 51 19.2**	**-0.5**
JIRB				S	**Sg**	**23 51 39.1**	**+1.7**
JTJ	**Tarama**	**1.71**	**284**	P	**Pn**	**23 51 22.9**	**-0.5**
JTJ				S	**Sb**	**23 51 45.5**	**-1.2**
JISG	**Ishigakijimahi**	**2.05**	**280**	*e*P	**Pn**	**23 51 27.2**	**-0.9**
JISG				S	**Sn**	**23 51 53.2**	**-0.7**
JKE	**Kume jima 2**	**2.08**	**6**	P	**Pb**	**23 51 29.2**	**-2.2**
JKE				S	**Sb**	**23 51 56.2**	**-1.2**
JIJ	**Ishigaki jima**	**2.18**	**273**	P	**Pn**	**23 51 28.5**	**-1.5**
JIJ				S	**Sn**	**23 51 56.1**	**-1.0**
JJT3	**Tamagusuku3**	**2.20**	**31**	P	**Pn**	**23 51 29.4**	**-0.7**
JKRS	**Kuro-shima**	**2.30**	**270**	S	**Sn**	**23 51 58.3**	**-1.8**
JAGN	**Aguni-jima**	**2.42**	**15**	P	**Pn**	**23 51 33.7**	**+0.5**
HATJ	**Hateruma jima**	**2.50**	**266**	P	**Pn**	**23 51 32.2**	**-2.0**
HATJ				S	**Sn**	**23 52 01.3**	**-3.5**
IRIF	**Iriomote-Funau**	**2.56**	**272**	P	**Pn**	**23 51 33.8**	**-1.3**
IRIF				S	**Sn**	**23 52 05.0**	**-1.4**
JNTH	**Nagotoyohara**	**2.63**	**30**	P	**Pn**	**23 51 35.2**	**-0.9**
JNTH				S	**Sn**	**23 52 08.1**	**0.0**
JOW	**Kunigami** 5.6nm,0.3s,baz=167,slow=17,SNR=1.8	**3.02**	**31**	Pn	**Pn**	**23 51 40.1**	**-1.2**
JOW				Sn	**Sn**	**23 52 16.8**	**-0.8**
	11nm,0.3s,baz=122,slow=25,SNR=9.8 16nm,0.3s						
JOW	**Kunigami**	**3.02**	**31**	S	**Sn**	**23

O18K	**Koktuh Hills**	**85.10**	**15**	P	**P**	**00 17 46.4**	**+0.1**
O18K				IAmb	IAmb	00 17 48.1	
	comp=Z,3.4nm,0.7s						
TROLL	**Troll, Antarti**	**86.22**	**182**	P	**P**	**00 17 49.4**	**-2.7**
SNAA	**Sanae**	**86.70**	**181**	P	**P**	**00 17 55.3**	**+0.9**
	comp=Z,1.0nm,0.9s,baz=184,slow=5.7,SNR=2.5						
	comp=Z,1.0nm,0.9s						
SNAA	**Sanae**	**86.70**	**181**	P	**P**	**00 17 55.2**	**+0.8**
SNAA				IAmb	IAmb	00 17 56.7	
	comp=Z,6.8nm,1.5s						
NVAR	**Mina Array Bea**	**86.91**	**46**	P	**P**	**00 17 56.7**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=214,slow=7.7,SNR=1.9						
	comp=Z,0.4nm,0.5s						
MDM	**Murphy Dome**	**91.16**	**15**	P	**P**	**00 18 15.0**	**-0.3**
MDM				IAmb	IAmb	00 18 23.2	
	comp=Z,4.1nm,1.2s						
IL31		**91.33**	**16**	P	**P**	**00 18 15.5**	**-0.4**
IL31				IAmb	IAmb	00 18 16.6	
	comp=Z,2.0nm,0.8s						
ILAR	**Eielson Array**	**91.33**	**16**	P	**P**	**00 18 15.7**	**-0.3**
	comp=Z,1.9nm,0.8s,baz=234,slow=5.5,SNR=20						
ILAR				LR	LR	00 57 11.1	
	comp=Z,32nm,18.1s,baz=253,slow=34						
	comp=Z,1.9nm,0.8s						
ILAR	**Eielson Array**	**91.33**	**16**	P	**P**	**00 18 15.3**	**-0.7**
J25K	**Salcha River,**	**91.59**	**16**	P	**P**	**00 18 17.3**	**0.0**
J25K				IAmb	IAmb	00 18 18.4	
	comp=Z,1.9nm,0.7s						
J26L	**Joseph Creek**	**91.97**	**17**	P	**P**	**00 18 20.0**	**+0.9**
TXAR	**Lajitas Array**	**93.72**	**60**	P	**P**	**00 18 28.9**	**+0.9**
	comp=Z,0.4nm,0.9s,baz=266,slow=3.8,SNR=3.7						
	comp=Z,0.4nm,0.9s						
ARCES	**ARCESS Array B**	**128.80**	**347**	PKP	**PKPdf**	**00 24 17.1**	**-0.4**
	comp=Z,1.3nm,0.8s,baz=347,slow=2.6,SNR=5.8						
ARCES	**ARCESS Array B**	**128.80**	**347**		**PKPdf**	**00 24 16.9**	**-0.6**
DPC	**Dobruska-Polom**	**146.81**	**334**	*e*PKP	**PKPab**	**00 24 54.2**	**+0.1**
DPC				*ex*	x	00 25 04.6	
KRLC	**Kraliky**	**146.83**	**334**	*e*PKP	**PKPdf**	**00 24 50.3**	**-0.7**
CLL	**Collm**	**147.27**	**338**	*e*PKPbc	**PKPbc**	**00 24 54.0**	**0.0**
	comp=Z,6.0nm,1.3s						
PRU	**Pruhonice**	**147.79**	**336**	*e*PKP	**PKiKP**	**00 24 56.5**	**-0.9**
CKRC	**Cesky Krumlov**	**148.82**	**334**	*e*PKP	**PKPbc**	**00 24 58.6**	**+0.4**
KHC	**Kasperske Hory**	**148.86**	**336**	*e*PKP	**PKPbc**	**00 24 57.5**	**-0.8**
KHC				*ex*	x	00 25 02.8	
GERES	**GERESS Array B**	**149.04**	**335**	PKPbc	**PKPbc**	**00 24 59.4**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=280,slow=3.7,SNR=5.8						
GERES	**GERESS Array B**	**149.04**	**335**		**PKPbc**	**00 24 59.0**	**+0.2**
TORD	**Torodi Ar. Bea**	**168.97**	**219**	PKPab	**PKPab**	**00 26 29.9**	**+0.2**
	comp=Z,0.4nm,0.9s,baz=140,slow=3.7,SNR=1.8						

IDC ***16*** *00:24:36.7±1.4, 1.°18N×126.°87E, h0km, mb3.6/5, mbtmp3.6/5, MS4.1/1, Error ellipse: s-maj=147.0km s-min=21.5km az=69.0*

NEIC ***16*** *00:24:45.0±0.8, 1.°17N±0.°10×126.°92E±0.°09, h58km±8km, mb4.1/8, Error ellipse: s-maj=16.8km s-min=8.0km az=219.0*

DJA ***16*** *00:24:44.7±0.3, 1°N±2°×12°7E±°, h52km±9km, M3.9/10, mb3.9/1, MLv3.9/10*

ISC 16 00:24:45.5±0.7, 1.°15N±0.°05×126.°94E±0.°06, h72km, n27, σ1s52/31, mb3.6/9, Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.57**	**131**		**Pn**	**00 24 58.0**	**-1.2**
TNTI				Sn	**Sn**	**00 25 07.3**	**-1.9**
TNTI	**Ternate**	**0.57**	**131**	P	**Pn**	**00 24 58.4**	**-0.8**
TNTI				S	**Sn**	**00 25 08.3**	**-0.9**
LBMI	**Labuha**	**1.86**	**162**	P	**Pn**	**00 25 16.4**	**+1.0**
LBMI				S	**Sn**	**00 25 35.3**	**-2.7**
SGSI	**Sangihe**	**2.89**	**331**	P	**Pn**	**00 25 27.9**	**-1.4**
SGSI				S	**Sn**	**00 26 00.3**	**-2.7**
KMSI	**Cibinong**	**3.01**	**259**	P	**Pn**	**00 25 32.3**	**+1.3**
KMSI				S	**Sn**	**00 26 03.0**	**-3.0**
SANI	**Sanana**	**3.32**	**197**	P	**Pn**	**00 25 34.3**	**-0.8**
SANI				S	**Sn**	**00 26 09.4**	**-4.0**
LUWI	**Luwuk**	**4.70**	**242**	Pn	**Pn**	**00 25 53.2**	**-0.8**
LUWI	**Luwuk**	**4.70**	**242**	P	**Pn**	**00 25 53.7**	**-0.3**
MRSI	**Marisa**	**5.04**	**262**	P	Pn	00 26 11.6	+13
APSI	**Ampana**	**5.67**	**249**	P	**Pn**	**00 26 08.2**	**+0.9**
FAKI	**Fak Fak**	**6.67**	**127**	Pn	**Pn**	**00 26 20.9**	**-0.1**
WB0	**Warramunga Arr**	**22.03**	**161**	P	**P**	**00 29 33.4**	**-0.9**
WB0				IAmb	IAmb	00 30 01.7	
	comp=Z,8.3nm,1.2s						
WRA	**Warramunga Arr**	**22.18**	**161**	P	**P**	**00 29 35.8**	**-0.1**
	comp=Z,0.8nm,0.4s,baz=340,slow=11,SNR=19						
	comp=Z,0.8nm,0.4s						
WRA	**Warramunga Arr**	**22.18**	**161**	P	**P**	**00 29 34.6**	**-1.3**
ASAR	**Alice Springs**	**25.58**	**165**	P	**P**	**00 30 08.5**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=341,slow=11,SNR=9.3						
	comp=Z,0.5nm,0.4s						
ASAR	**Alice Springs**	**25.58**	**165**	P	**P**	**00 30 07.8**	**-0.2**
ARMA	**Armidale**	**39.22**	**145**	P	**P**	**00 32 08.1**	**+1.0**
SONM	**Songino Array**	**49.80**	**342**	P	**P**	**00 33 30.9**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=134,slow=6.2,SNR=2.5						
	comp=Z,0.4nm,0.6s						
RPZ	**Rata Peaks**	**59.55**	**144**	LR	LR	01 01 09.6	
	comp=Z,138nm,18.4s,baz=200,slow=37						
MK31	**Makanchi Array**	**59.79**	**326**	P	**P**	**00 34 43.3**	**0.0**
MK31				IAmb	IAmb	00 34 54.1	
	comp=Z,1.3nm,1.1s						
MKAR	**Makanchi Array**	**59.79**	**326**	P	**P**	**00 34 43.7**	**+0.4**
	comp=Z,0.2nm,0.4s,baz=116,slow=7.1,SNR=4.6						
	comp=Z,0.2nm,0.4s						
MKAR	**Makanchi Array**	**59.79**	**326**	P	**P**	**00 34 43.5**	**+0.2**
KURK	**Kurchatov**	**64.02**	**328**	P	**P**	**00 35 11.8**	**+0.3**
KURK				IAmb	IAmb	00 35 12.9	
	comp=Z,1.7nm,0.8s						
CASY	**Casey**	**68.30**	**187**	P	**P**	**00 35 41.1**	**+2.5**
VNDA	**Vanda**	**80.86**	**173**	P	**P**	**00 36 51.2**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=317,slow=6.3,SNR=5.0						
	comp=Z,0.5nm,0.6s						
VNDA	**Vanda**	**80.86**	**173**	P	**P**	**00 36 50.9**	**-0.2**
SBA	**Scott Base**	**81.77**	**172**	P	**P**	**00 36 57.2**	**+1.2**
SBA				IAmb	IAmb	00 37 26.6	
	comp=Z,5.4nm,1.4s						

BJI ***16*** *00:48:02.1±0.0, 20.°64S×178.°02W, h578km, mb5.2/50, mB5.0/27*

NEIC ***16*** *00:48:03.7±1.9, 20.°78S±0.°09×178.°61W±0.°10, h561km±5km, mb5.1/179, Error ellipse: s-maj=13.5km s-min=12.1km az=121.0*

NOU ***16*** *00:48:03.6, 20.°88S×178.°45W, h576km, ML5.1/107, Fiji Islands Region*

GCMT ***16*** *00:48:04.7±0.5, 20.°81S±0.°06×178.°58W±0.°06, h569km±4km, MW5.3/42, Moment Tensor Solution. s42,c50; Duration: 1s1 Moment tensor: Scale 10¹⁷Nm; Mrr-0.63±.05; Mθθ0.24±.08; Mϕϕ0.38±.09; Mrθ-0.36±.10; Mθϕ-0.57±.09; Mϕr-0.89±.10; Best double couple: M₀1.21500×10¹⁷ NP1:ϕs113.00000°, δ37.00000°, λ-149.00000°. NP2:ϕs357.00000°, δ72.00000°, λ-57.00000°. Principal axes: T 1.0530, Plg20.0000°, Azm63.0000°; N 0.3240, Plg31.0000°, Azm166.0000°; P -1.3770, Plg52.0000°, Azm305.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

IDC ***16*** *00:48:05.3±0.6, 20.°81S×178.°74W, h582km±5km, mb4.5/34, mbtmp5.4/34 Error ellipse: s-maj=9.0km s-min=7.7km az=148.0*

MOS ***16*** *00:48:05.6±0.8, 20.°76S×178.°84W, h594km, mb5.1/27, Error ellipse: s-maj=9.1km s-min=7.7km az=115.7*

ISC 16 00:48:04.3±0.3, 20.°82S±0.°04×178.°57W±0.°04, h579km±3km, h581km; pP-P, n1193, σ1s15/1285, mb5.1/192, 127C-59D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LKBA	**Tubou, Lakemba**	**2.58**	**355**	P	**P**	**00 49 20.8**	**+1.2**
TAVE	**Taveuni**	**4.28**	**343**	P	**P**	**00 49 32.0**	**+1.6**
MSVF	**Nonsavu**	**4.43**	**313**	P	**P**	**00 49 31.9**	**+0.3**
	22nm,0.4s,baz=149,slow=3.9,SNR=64						
MSVF	**Nonsavu**	**4.43**	**313**	P	**P**	**00 49 32.6**	**+1.0**
MSVF	**Nonsavu**	**4.43**	**313**	*c iP*	**P**	**00 49 32.5**	**+0.9**
MSVF	**Nonsavu**	**4.43**	**313**	P	**P**	**00 49 32.9**	**+1.3**
DGTI	**Dogotuki**	**4.77**	**340**	P	**P**	**00 49 35.2**	**+1.0**
NIUE	**Niue**	**8.32**	**79**	P	**P**	**00 50 06.3**	**+0.2**
	baz=8.3,SNR=8.1						
NIUE				S	**S**	**00 51 46.6**	**+0.8**
	baz=8.3						
NIUE	**Niue**	**8.32**	**79**	P	**P**	**00 50 05.8**	**-0.3**
RAO	**Raoul Island**	**8.42**	**176**	P	**P**	**00 50 05.6**	**-1.3**
	244nm,0.3s,baz=90,slow=22,SNR=2.7						
RAO				S	S	00 51 34.4	-13
	442nm,0.4s,baz=78,slow=23,SNR=4.5						
RAO	**Raoul Island**	**8.42**	**176**	P	**P**	**00 50 05.1**	**-1.7**
RAO	**Raoul Island**	**8.42**	**176**	P	**P**	**00 50 05.1**	**-1.7**
GLKZ	**Green Lake**	**8.43**	**176**	P	**P**	**00 50 03.0**	**-4.0**
GLKZ				S	**S**	**00 51 46.6**	**-0.9**
AFI	**Afiamalu**	**9.45**	**44**	P	**P**	**00 50 15.2**	**-2.2**
	572nm,0.6s,baz=42,slow=1.5,SNR=64						
AFI				S	**S**	**00 51 58.9**	**-7.6**
	331nm,0.6s,baz=227,slow=24,SNR=7.4						
AFI	**Afiamalu**	**9.45**	**44**	P	**P**	**00 50 15.3**	**-2.1**
AFI	**Afiamalu**	**9.45**	**44**	P	**P**	**00 50 15.3**	**-2.1**
AFI	**Afiamalu**	**9.45**	**44**	P	**P**	**00 50 15.0**	**-2.4**
FUNA	**Funafuti**	**12.41**	**350**	P	**P**	**00 50 46.1**	**-1.2**
FUNA	**Funafuti**	**12.41**	**350**	P	**P**	**00 50 46.1**	**-1.2**
MARNC	**Mare, Loyalty**	**12.52**	**265**	P	**P**	**00 50 47.7**	**-0.6**
MARNC	**Mare, Loyalty**	**12.52**	**265**	P	**P**	**00 50 47.9**	**-0.4**
DVP	**Devils Point**	**12.88**	**282**	P	**P**	**00 50 52.2**	**+0.2**
PINNC	**Pines Island,**	**13.12**	**260**	P	**P**	**00 50 53.9**	**-0.5**
NOUC	**Port Laguerre**	**14.14**	**262**	P	**P**	**00 51 04.3**	**-0.5**
NFK	**Norfolk Island**	**14.71**	**234**	P	**P**	**00 51 10.1**	**-0.2**
OUZ	**Omahuta**	**15.91**	**204**	P	**P**	**00 51 23.0**	**+1.3**
OUZ	**Omahuta**	**15.91**	**204**	P	**P**	**00 51 22.8**	**+1.2**
KOUNC	**Koumac, New Ca**	**16.04**	**268**	P	**P**	**00 51 24.6**	**+1.5**
KOUNC	**Koumac, New Ca**	**16.04**	**268**	P	**P**	**00 51 25.0**	**+1.9**
GRZ	**Great Barrier**	**16.24**	**197**	P	**P**	**00 51 24.4**	**-0.2**
WCZ	**Waipu Caves**	**16.29**	**201**	P	**P**	**00 51 26.8**	**+1.7**
KUZ	**Kuaotunu**	**16.63**	**196**	P	**P**	**00 51 29.1**	**+0.9**
WIAZ	**Waiheke Island**	**16.84**	**198**	P	**P**	**00 51 31.1**	**+1.1**
MBAZ	**Motutapu North**	**16.88**	**198**	P	**P**	**00 51 32.3**	**+1.8**
MXZ	**Matakaoa Point**	**16.90**	**189**	P	**P**	**00 51 28.7**	**-1.9**
MXZ	**Matakaoa Point**	**16.90**	**189**	P	**P**	**00 51 28.7**	**-1.9**
EPAZ	**Eden Park BICE**	**17.03**	**199**	P	**P**	**00 51 32.6**	**+0.8**
MKAZ	**Moumakai**	**17.12**	**197**	P	**P**	**00 51 33.9**	**+1.3**
WMGZ	**Waiomatatini S**	**17.14**	**188**	P	**P**	**00 51 31.2**	**-1.6**
HAZ	**Te Kaha**	**17.17**	**190**	P	**P**	**00 51 30.6**	**-2.4**
PKGZ	**Pakihiroa**	**17.26**	**189**	P	**P**	**00 51 32.6**	**-1.3**
RUGZ	**Raukumara Rang**	**17.39**	**190**	P	**P**	**00 51 33.6**	**-1.6**
PUZ	**Puketiti**	**17.41**	**188**	P	**P**	**00 51 34.5**	**-0.8**
WHRZ	**Whale Island**	**17.41**	**192**	P	**P**	**00 51 35.8**	**+0.6**
TGRZ	**Tauranga**	**17.44**	**194**	P	**P**	**00 51 35.0**	**-0.5**
OPRZ	**Ohinepanea**	**17.48**	**193**	P	**P**	**00 51 34.7**	**-1.2**
TWGZ	**Tauwhareparae**	**17.55**	**189**	P	**P**	**00 51 36.3**	**-0.4**
MARZ	**Manawahe**	**17.59**	**193**	P	**P**	**00 51 37.5**	**+0.6**
TOZ	**Tahuroa Road**	**17.62**	**196**	P	**P**	**00 51 38.0**	**+0.9**
KMRZ	**Kaimai**	**17.62**	**194**	P	**P**	**00 51 38.7**	**+1.5**
LIRZ	**Lichensteins R**	**17.67**	**193**	P	**P**	**00 51 40.5**	**+2.8**
EDRZ	**Edgecumbe**	**17.70**	**192**	P	**P**	**00 51 38.5**	**+0.5**
OMRZ	**Omania**	**17.77**	**193**	P	**P**	**00 51 37.2**	**-1.4**
URZ	**Urewera**	**17.78**	**191**	P	**P**	**00 51 35.7**	**-2.9**
	272nm,0.8s,baz=25,slow=3.3,SNR=81						
URZ				S	**S**	**00 54 27.0**	**-5.8**
	28nm,0.7s,baz=209,slow=23,SNR=3.2						
URZ				ScP	**ScP**	**00 58 24.6**	**0.0**
	10nm,0.6s,baz=291,slow=2.1,SNR=3.7						
URZ	**Urewera**	**17.78**	**191**	P	**P**	**00 51 35.5**	**-3.1**
URZ	**Urewera**	**17.78**	**191**	P	**P**	**00 51 35.5**	**-3.1**
URZ	**Urewera**	**17.78**	**191**	P	**P**	**00 51 35.7**	**-2.9**
MWZ	**Matawai**	**17.78**	**190**	P	**P**	**00 51 36.4**	**-2.2**
NGRZ	**Ngongotaha**	**17.81**	**194**	P	**P**	**00 51 41.1**	**+2.1**
CNGZ	**Carnagh Statio**	**17.82**	**188**	P	**P**	**00 51 37.5**	**-1.5**
TKGZ	**Te Karaka**	**17.83**	**189**	P	**P**	**00 51 38.6**	**-0.5**
TARZ	**Mount Tarawera**	**17.87**	**193**	P	**P**	**00 51 39.4**	**-0.2**
UTU	**Utuhina**	**17.88**	**194**	P	**P**	**00 51 42.0**	**+2.5**
HLRZ	**Highlands Stat**	**17.92**	**193**	P	**P**	**00 51 40.2**	**+0.2**
RAGZ	**Rawiri**	**17.95**	**190**	P	**P**	**00 51 39.1**	**-1.3**
RRRZ	**Republican Roa**	**17.97**	**193**	P	**P**	**00 51 40.1**	**-0.3**
HSRZ	**Hossack Road**	**18.00**	**193**	P	**P**	**00 51 41.5**	**+0.8**
MUGZ	**Murupara**	**18.05**	**192**	P	**P**	**00 51 39.4**	**-1.8**
GRRZ	**Galatos Road**	**18.07**	**194**	P	**P**	**00 51 42.3**	**+1.1**
HRRZ	**Handcock Road**	**18.07**	**193**	P	**P**	**00 51 41.4**	**+0.1**
RIGZ	**Rimuhau**	**18.10**	**189**	P	**P**	**00 51 40.8**	**-0.9**
RTZ	**Ruatahuna**	**18.15**	**191**	P	**P**	**00 51 40.1**	**-1.9**
PRRZ	**Plateau Road**	**18.15**	**193**	P	**P**	**00 51 41.1**	**-0.9**
TLZ	**Tolley Road**	**18.18**	**195**	P	**P**	**00 51 44.0**	**+1.7**
WPRZ	**Whakapapatarin**	**18.22**	**193**	P	**P**	**00 51 43.6**	**+0.9**
ALRZ	**Allen Road**	**18.22**	**193**	P	**P**	**00 51 43.1**	**+0.5**
SNGZ	**Shannon Statio**	**18.25**	**190**	P	**P**	**00 51 41.0**	**-1.9**
KUTZ	**Kaahu Road**	**18.26**	**194**	P	**P**	**00 51 43.5**	**+0.4**
PRGZ	**Paritu Road**	**18.30**	**189**	P	**P**	**00 51 43.4**	**0.0**
RAHZ	**Arahi**	**18.42**	**191**	P	**P**	**00 51 42.8**	**-1.7**
KNZ	**Kokohu**	**18.43**	**189**	P	**P**	**00 51 43.5**	**-1.0**
MRHZ	**Matea Rd**	**18.46**	**192**	P	**P**	**00 51 43.2**	**-1.8**
WATZ	**Wairara**	**18.49**	**194**	P	**P**	**00 51 44.7**	**-0.5**
MHGZ	**Mahia Peninsul**	**18.52**	**189**	P	**P**	**00 51 45.0**	**-0.4**
HIZ	**Hauiti**	**18.52**	**196**	P	**P**	**00 51 46.6**	**+1.1**
HIZ	**Hauiti**	**18.52**	**196**	P	**P**	**00 51 46.7**	**+1.3**
HIZ	**Hauiti**	**18.52**	**196**	P	**P**	**00 51 47.1**	**+1.6**
HATZ	**Hinemaiaia**	**18.59**	**193**	P	**P**	**00 51 44.7**	**-1.3**
RATZ	**Rangitukua**	**18.64**	**194**	P	**P**	**00 51 45.4**	**-1.1**
NMHZ	**Naumai**	**18.64**	**191**	P	**P**	**00 51 44.9**	**-1.7**
RITZ	**Rihia Road**	**18.72**	**194**	P	**P**	**00 51 46.6**	**-0.6**
KATZ	**Kakaramea**	**18.76**	**194**	P	**P**	**00 51 48.9**	**+1.2**
BKZ	**Black Stump Fm**	**18.77**	**192**	P	**P**	**00 51 45.0**	**-2.7**
BKZ	**Black Stump Fm**	**18.77**	**192**	P	**P**	**00 51 44.9**	**-2.8**
BKZ	**Black Stump Fm**	**18.77**	**192**	P	**P**	**00 51 45.3**	**-2.4**
ARHZ	**Aropaoanui**	**18.77**	**191**	P	**P**	**00 51 46.2**	**-1.5**
NTVZ	**North Tongarir**	**18.88**	**194**	P	**P**	**00 51 48.1**	**-0.7**
KRVZ	**Karewarewa**	**18.88**	**194**	P	**P**	**00 51 48.2**	**-0.6**
TMVZ	**Te Maari**	**18.89**	**194**	P	**P**	**00 51 47.4**	**-1.5**
ETVZ	**East Tongariro**	**18.91**	**194**	P	**P**	**00 51 47.9**	**-1.1**
TWVZ	**Taurewa**	**18.91**	**195**	P	**P**	**00 51 48.1**	**-0.9**
WTVZ	**West Tongariro**	**18.91**	**194**	P	**P**	**00 51 47.9**	**-1.2**
NNVZ	**North Ngauruho**	**18.92**	**194**	P	**P**	**00 51 48.1**	**-1.2**
OTVZ	**Oturere**	**18.94**	**194**	P	**P**	**00 51 47.6**	**-1.8**
NGZ	**Ngauruhoe**	**18.97**	**194**	P	**P**	**00 51 48.7**	**-1.0**
SNVZ	**South Ngauruho**	**18.97**	**194**	P	**P**	**00 51 48.3**	**-1.4**
MCHZ	**McNeill Hill**	**19.00**	**191**	P	**P**	**00 51 48.2**	**-1.6**
KWHZ	**Kaweka Forest**	**19.03**	**192**	P	**P**	**00 51 47.9**	**-2.2**
TUVZ	**Tukino**	**19.05**	**194**	P	**P**	**00 51 49.8**	**-0.5**
WHVZ	**Whangaehu Hut**	**19.07**	**194**	P	**P**	**00 51 49.9**	**-0.8**
TRVZ	**Turoa**	**19.10**	**194**	P	**P**	**00 51 50.7**	**-0.2**
WNVZ	**Wahianoa**	**19.11**	**194**	P	**P**	**00 51 49.4**	**-1.6**
KNTN	**Kanton**	**19.14**	**21**	P	**P**	**00 51 50.9**	**-0.5**
CKHZ	**Cape Kidnapper**	**19.14**	**190**	P	**P**	**00 51 50.4**	**-0.6**
MOVZ	**Moawhango**	**19.16**	**193**	P	**P**	**00 51 50.0**	**-1.2**
BHHZ	**Black Hill Sta**	**19.17**	**193**	P	**P**	**00 51 48.7**	**-2.6**
MTVZ	**Mangateitei**	**19.20**	**194**	P	**P**	**00 51 51.2**	**-0.5**
KRHZ	**Kereru**	**19.26**	**192**	P	**P**	**00 51 49.7**	**-2.4**
KAHZ	**Kahuranaki**	**19.31**	**191**	P	**P**	**00 51 51.9**	**-0.7**
PXZ	**Pawanui**	**19.54**	**191**	P	**P**	**00 51 53.0**	**-1.6**
PNHZ	**Pukenui**	**19.55**	**192**	P	**P**	**00 51 52.7**	**-2.1**
BFZ	**Birch Farm**	**20.29**	**191**	P	**P**	**00 51 59.4**	**-2.0**
BFZ	**Birch Farm**	**20.29**	**191**	P	**P**	**00 51 59.3**	**-2.1**
SNZO	**South Karori**	**21.21**	**194**	P	**P**	**00 52 08.2**	**-1.4**
QRZ	**Quartz Range**	**21.33**	**199**	P	**P**	**00 52 10.3**	**-0.5**
KHZ	**Kahutara**	**22.53**	**195**	P	**P**	**00 52 19.4**	**-2.1**
LHI	**Lord Howe Isla**	**22.68**	**237**	P	**P**	**00 52 23.9**	**+1.0**
	baz=23						
LHI	**Lord Howe Isla**	**22.68**	**237**	P	**P**	**00 52 23.3**	**+0.3**
LHI				IAmb	IAmb	00 52 24.9	
	comp=Z,94nm,0.8s						
TARA	**Tarawa**	**23.56**	**338**	P	**P**	**00 52 31.0**	**0.0**
TARA	**Tarawa**	**23.56**	**338**	P	**P**	**00 52 31.1**	**+0.1**
HNR	**Honiara**	**23.59**	**295**	P	**P**	**00 52 29.1**	**-2.2**
	comp=Z,104nm,0.5s,baz=259,slow=6.3,SNR=4.8						
	comp=Z,104nm,0.5s						
HNR	**Honiara**	**23.59**	**295**	P	**P**	**00 52 30.3**	**-1.0**
HNR	**Honiara**	**23.59**	**295**	P	**P**	**00 52 30.3**	**-1.0**
HNR				pmax	pmax		
	comp=Z,116nm,0.7s						
RPZ	**Rata Peaks**	**24.41**	**198**	P	**P**	**00 52 36.8**	**-1.4**
	comp=Z,64nm,0.5s,baz=76,slow=0.8,SNR=36						
	comp=Z,64nm,0.5s						
RPZ	**Rata Peaks**	**24.41**	**198**	P	**P**	**00 52 36.8**	**-1.4**
ODZ	**Otahua Downs**	**25.75**	**198**	P	**P**	**00 52 48.9**	**-1.0**
PAE	**Paea**	**27.54**	**88**	*e*P	**P**	**00 53 06.6**	**+0.6**
	comp=Z,15nm,0.9s						
PPT2	**Papeete2**	**27.55**	**88**	*e*P	**P**	**00 53 06.9**	**+0.7**
	comp=Z,89nm,1.1s						
PPT	**Papeete**	**27.56**	**88**	P	**P**	**00 53 07.6**	**+1.4**
	comp=Z,84nm,0.8s,baz=95,slow=20,SNR=6.2						
	comp=Z,84nm,0.8s						
TIAR	**Tiarei**	**27.78**	**88**	*e*P	**P**	**00 53 08.7**	**+0.6**
	comp=Z,20nm,1.1s						
EIDS	**Eidsvold**	**28.25**	**255**	P	**P**	**00 53 11.8**	**-0.3**
	baz=28,SNR=4.3						
EIDS	**Eidsvold**	**28.25**	**255**	P	**P**	**00 53 11.4**	**-0.6**
ARMA	**Armidale**	**28.45**	**244**	P	**P**	**00 53 14.3**	**+0.4**
	baz=28,SNR=7.8						
ARMA	**Armidale**	**28.45**	**244**	P	**P**	**00 53 14.3**	**+0.4**
ARMA	**Armidale**	**28.45**	**244**	P	**P**	**00 53 14.0**	**+0.4**
MGCD	**Mangrove Creek**	**29.58**	**239**	P	**P**	**00 53 24.1**	**+0.6**
	baz=30,SNR=4.3						
VAH	**Vaihoa**	**29.92**	**84**	*e*P	**P**	**00 53 27.0**	**+0.4**
	comp=Z,81nm,0.9s						
SYDH	**Sydney Hard Ro**	**30.04**	**238**	P	**P**	**00 53 28.1**	**+0.7**
RMQ	**Roma**	**30.40**	**253**	P	**P**	**00 53 31.4**	**+0.8**
	baz=30,SNR=7.7						
RMQ	**Roma**	**30.40**	**253**	P	**P**	**00 53 31.3**	**+0.6**
XMAS	**Kiritimati**	**30.74**	**45**	P	**P**	**00 53 34.3**	**+0.7**
XMAS	**Kiritimati**	**30.74**	**45**	P	**P**	**00 53 33.7**	**+0.1**
XMAS	**Kiritimati**	**30.74**	**45**	P	**P**	**00 53 34.6**	**+0.9**
CNB	**Canberra Magne**	**31.60**	**236**	P	**P**	**00 53 41.1**	**+0.2**
	baz=32,SNR=16						
CNB	**Canberra Magne**	**31.60**	**236**	P	**P**	**00 53 41.3**	**+0.4**
CAN	**Canberra**	**31.89**	**236**	P	**P**	**00 53 43.1**	**-0.1**
CAN	**Canberra**	**31.89**	**236**	P	**P**	**00 53 43.2**	**-0.1**
CAN				pmax	pmax		
	comp=Z,17nm,0.8s						
CAN	**Canberra**	**31.89**	**236**	P	**P**	**00 53 43.6**	**+0.3**
CAN	**Canberra**	**31.89**	**236**	P	**P**	**00 53 43.6**	**+0.3**
CAN				pP	**pwP**	**00 55 19.9**	**-2.6**
CAN				PP	**PP**	**00 55 25.8**	**+1.5**
CAN				sP	**sP**	**00 56 26.4**	**+3.3**
CAN				ScP	**ScP**	**00 59 08.1**	**+3.1**
KWAJ	**Kwajalein Atol**	**32.42**	**334**	P	**P**	**00 53 48.0**	**+0.2**
KWAJ	**Kwajalein Atol**	**32.42**	**334**	P	**P**	**00 53 48.1**	**+0.2**
KWAJ				pmax	pmax		
	comp=Z,580nm,1.2s						
KWAJ	**Kwajalein Atol**	**32.42**	**334**	P	**P**	**00 53 48.1**	**+0.2**
KWAJ	**Kwajalein Atol**	**32.42**	**334**	P	**P**	**00 53 48.2**	**+0.3**
CTA	**Charters Tower**	**32.92**	**265**	P	**P**	**00 53 52.4**	**+0.2**
CTA				pmax	pmax		
	comp=Z,212nm,0.8s						
CTA	**Charters Tower**	**32.92**	**265**	P	**P**	**00 53 52.1**	**-0.1**
CTAO	**Charters Tower**	**32.92**	**265**	P	**P**	**00 53 52.3**	**+0.1**
CTAO	**Charters Tower**	**32.92**	**265**	P	**P**	**00 53 52.3**	**+0.1**
CTAO				pmax	pmax		
	comp=Z,118nm,0.6s						
CTAO	**Charters Tower**	**32.92**	**265**	P	**P**	**00 53 52.2**	**+0.1**
CTAO	**Charters Tower**	**32.92**	**265**	||P	**P**	**00 53 52.4**	**+0.1**
KRVT	**Keravat (AS076**	**32.95**	**296**	P	**P**	**00 53 51.8**	**-0.7**
	comp=Z,184nm,0.6s,baz=189,slow=1.3,SNR=7.7						
	comp=Z,184nm,0.6s						
CMSA	**Cobar Meteorol**	**33.66**	**244**	P	**P**	**00 53 58.3**	**0.0**
	baz=34,SNR=13						
CMSA	**Cobar Meteorol**	**33.66**	**244**

HMH Humu'ula Sheep 46.10 31 P P 00 55 38.5 +0.6
HPAH Hawaii Prepara 46.36 30 P P 00 55 39.8 +0.1
KDU Kakadu 47.42 272 P P 00 55 47.0 -0.6
baz=47,SNR=19
KDU Kakadu 47.42 272 P P 00 55 47.1 -0.6
SRPI Serui, Papua 47.90 287 P P 00 55 53.0 +1.8
comp=Z,363nm,0.4s
BAKI Biak 48.32 288 P P 00 55 55.1 +0.7
comp=Z,3µmcomp=Z,345nm,1.0s
MTN Manton Dam 48.63 271 P P 00 55 55.9 -0.7
MTN Manton Dam 48.63 271 P P 00 55 56.0 -0.7
FORT Forrest 48.67 247 P P 00 55 56.2 -0.5
baz=49,SNR=13
FORT Forrest 48.67 247 P P 00 55 56.0 -0.8
FORT IAmb IAmb 00 55 56.8
comp=Z,73nm,0.7s
FORT Forrest 48.67 247 P P 00 55 56.3 -0.5
WRKA Warakurna 48.86 254 P P 00 55 57.7 -0.5
baz=49,SNR=203
WRKA Warakurna 48.86 254 P P 00 55 57.8 -0.5
GUMO Guam 49.60 310 P P 00 56 04.0 +0.3
comp=Z,219nm,0.5s,baz=177,slow=8.4,SNR=16
comp=Z,219nm,0.5s
GUMO Guam 49.60 310 P P 00 56 03.8 +0.1
GUMO Guam 49.60 310 P P 00 56 03.8 +0.1
GUMO pmax pmax
comp=Z,423nm,1.0s
GUMO Guam 49.60 310 P P 00 56 04.4 +0.7
GUMO Guam 49.60 310 P P 00 56 04.0 +0.3
GUMO sP sP 00 58 45.7 -8.0
KNRA Kununurra 50.10 267 P P 00 56 06.8 -0.7
baz=50,SNR=24
KNRA Kununurra 50.10 267 P P 00 56 06.9 -0.5
KNRA IAmb IAmb 00 56 07.5
comp=Z,70nm,0.7s
KNRA Kununurra 50.10 267 P P 00 56 07.0 -0.5
FAKI Fak Fak 51.05 284 P P 00 56 13.6 -0.8
FAKI IAmb IAmb 00 56 14.9
comp=Z,164nm,1.2s
FAKI Fak Fak 51.05 284 P P 00 56 13.0 -1.4
comp=Z,1µmcomp=Z,121nm,1.1s
FAKI Fak Fak 51.05 284 P P 00 56 13.9 -0.5
SIJI Sorong 52.80 285 P P 00 56 26.9 0.0
comp=Z,457nm,0.8s,baz=91,slow=4.9,SNR=215
SWI Sorong 52.81 285 P P 00 56 26.3 -0.7
comp=Z,6µmcomp=Z,808nm,0.8s
DRV Dumont d'Urvil 52.88 199 P P 00 56 27.1 +0.6
MSAI Masohi 53.91 281 P P 00 56 34.8 0.0
comp=Z,24nm,0.6s
AAI Ambon 54.45 281 P P 00 56 39.2 +0.6
comp=Z,136nm,1.3s
SOEI Soe 55.97 272 P P 00 56 50.1 +0.8
SOEI Soe 55.97 272 P P 00 56 50.4 +1.1
LBMI Labuha 56.31 284 P P 00 56 51.8 +0.3
comp=Z,1µmcomp=Z,117nm,1.0s
BATI Baumata 56.40 271 P P 00 56 53.6 +1.5
comp=Z,72nm,0.5s,baz=170,slow=3.1,SNR=7.7
comp=Z,72nm,0.5s
TNTI Ternate 57.02 285 P P 00 56 55.6 -0.7
TNTI IAmb IAmb 00 56 57.2
comp=Z,145nm,0.9s
TNTI Ternate 57.02 285 P P 00 56 56.2 -0.1
comp=Z,2µmcomp=Z,181nm,1.0s
TNTI Ternate 57.02 285 P P 00 56 56.2 -0.1
PSA00 Pilbara Seismi 57.07 257 P P 00 56 55.7 -0.9
PSA00 IAmb IAmb 00 56 56.7
comp=Z,104nm,0.8s
PSA00 Pilbara Seismi 57.07 257 P P 00 56 55.0 -1.6
PSA00 IAmb IAmb 00 56 56.8
comp=Z,49nm,0.9s
PSA00 Pilbara Seismi 57.07 257 P P 00 56 55.7 -0.9
SANI Sanana 57.12 281 P P 00 56 56.1 -0.9
comp=Z,1µmcomp=Z,121nm,1.1s
SANI Sanana 57.12 281 P P 00 56 56.1 -0.9
MBWA Marble Bar 57.26 258 P P 00 56 57.0 -0.9
MBWA IAmb IAmb 00 56 58.0
comp=Z,89nm,0.8s
MBWA Marble Bar 57.26 258 P P 00 56 57.3 -0.6
MBWA Marble Bar 57.26 258 P P 00 56 57.2 -0.6
KLBR Kellerberrin 57.43 245 P P 00 56 58.4 -0.4
baz=57,SNR=19
KLBR Kellerberrin 57.43 245 P P 00 56 58.5 -0.4
SBA Scott Base 57.52 184 P P 00 57 00.8 +2.2
SBA Scott Base 57.52 184 P P 00 57 00.9 +2.2
SBA pmax pmax
comp=Z,20nm,1.0s
SBA Scott Base 57.52 184 P P 00 57 01.6 +3.0
SBA ScP ScP 01 00 51.1 +2.5
VNDA Vanda 57.55 185 P P 00 57 00.7 +1.8
comp=Z,3.7nm,0.5s,baz=359,slow=7.9,SNR=71
comp=Z,3.7nm,0.5s
VNDA Vanda 57.55 185 P P 00 57 00.4 +1.6
VNDA Vanda 57.55 185 P P 00 57 00.4 +1.6
VNDA pmax pmax
comp=Z,6.0nm,0.8s
VNDA Vanda 57.55 185 P P 00 57 00.7 +1.8
VNDA ScP ScP 01 00 50.6 +1.8
NWAO Narrogin (SRO) 57.74 244 P P 00 57 00.4 -0.6
NWAO Narrogin (SRO) 57.74 244 P P 00 57 00.4 -0.6
NWAO pmax pmax
comp=Z,29nm,0.9s
NWAO Narrogin (SRO) 57.74 244 P P 00 57 00.8 -0.2
NWAO Narrogin (SRO) 57.74 244 P P 00 57 00.7 -0.2
RKGY Rocky Gully 57.82 242 P P 00 57 01.1 -0.3
baz=58,SNR=5.2
MMRI Maumere 58.23 273 P P 00 57 03.9 -0.6
MMRI IAmb IAmb 00 57 04.8
comp=Z,152nm,1.1s
MMRI Maumere 58.23 273 P P 00 57 04.5 0.0
comp=Z,126nm,0.9s
MMRI Maumere 58.23 273 P P 00 57 03.7 -0.8
BLDU Ballidu 58.43 246 P P 00 57 05.1 -0.6
baz=58,SNR=45
BLDU Ballidu 58.43 246 P P 00 57 05.0 -0.6
MUN Mundaring 58.70 245 P P 00 57 07.2 -0.2
baz=59,SNR=13
MUN Mundaring 58.70 245 P P 00 57 07.4 -0.1
MUN Mundaring 58.70 245 P P 00 57 07.3 -0.2
EDFI Ende, Flores 58.70 272 P P 00 57 07.1 -0.7
comp=Z,562nmcomp=Z,72nm,1.0s
MORW Morawa 59.21 248 P P 00 57 10.4 -0.5
baz=59,SNR=20
MORW Morawa 59.21 248 P P 00 57 10.3 -0.5
MORW Morawa 59.21 248 P P 00 57 10.1 -0.8
SGSI Sangihe 59.94 287 P P 00 57 16.2 +0.2
comp=Z,98nm,0.9s
LUWI Luwuk 60.47 281 P P 00 57 19.2 -0.2
LUWI IAmb IAmb 00 57 20.7
comp=Z,218nm,1.1s
LUWI Luwuk 60.47 281 P P 00 57 19.8 +0.3
comp=Z,3µmcomp=Z,10µmcomp=Z,171nm,0.8s
LUWI Luwuk 60.47 281 P P 00 57 19.7 +0.3
WBSI Waikabubak, Su 60.57 271 P P 00 57 20.5 +0.3
comp=Z,67nm,0.6s
BKSI Bulukumba 61.33 275 P P 00 57 24.3 -0.7
DAV Davao City (W) 61.44 291 P P 00 57 26.3 +0.5
comp=Z,94nm,0.3s,baz=68,slow=1.6,SNR=5.3
comp=Z,94nm,0.3s
DAV Davao City (W) 61.44 291 P P 00 57 25.9 +0.1
APSI Ampana 61.55 281 P P 00 57 27.2 +0.7
comp=Z,964nmcomp=Z,88nm,1.1s
BNSI Bone 61.67 276 P P 00 57 27.3 0.0
comp=Z,640nmcomp=Z,68nm,0.8s
KAPI Kappang 61.78 276 P P 00 57 27.4 -0.6
comp=Z,9.4nm,0.6s,baz=217,slow=22,SNR=7.2
comp=Z,9.4nm,0.6s
KAPI Kappang 61.78 276 P P 00 57 27.4 -0.6
KAPI IAmb IAmb 00 57 28.9
comp=Z,100nm,1.8s
KAPI Kappang 61.78 276 P P 00 57 27.9 -0.1
KAPI Kappang 61.78 276 P P 00 57 27.6 -0.4
MRSI Marisa 61.83 282 P P 00 57 28.1 -0.2
comp=Z,62nm,0.9s
GIRL Giralia 61.95 255 P P 00 57 29.7 +0.7
baz=62,SNR=24
GIRL Giralia 61.95 255 P P 00 57 29.5 +0.5
GIRL IAmb IAmb 00 57 30.5
comp=Z,145nm,0.8s
CCD Concordia, Ant 62.02 194 P P 00 57 29.9 +0.9
CCD x PcP 00 58 03.0 +0.2
CCD pP pwP 00 59 26.0 +0.9
SPSI Sidrap Palu 62.14 277 P P 00 57 29.1 -1.2
comp=Z,50nm,1.0s
PLAI Plampang 62.34 271 P P 00 57 31.1 -0.5
comp=Z,2µmcomp=Z,188nm,1.0s
PLAI Plampang 62.34 271 P P 00 57 30.9 -0.7
TTSI Tana Toraja 62.43 278 P P 00 57 33.3 +1.1
comp=Z,2µmcomp=Z,24nm,0.8s
TOLI2 Tolitoli 63.15 282 P P 00 57 36.0 -0.8
TOLI2 IAmb IAmb 00 57 37.3
comp=Z,61nm,1.0s
TOLI2 Tolitoli 63.15 282 P P 00 57 36.1 -0.8
CASY Casey 63.45 205 P P 00 57 38.2 +0.4
MPSI Mapaga 63.65 281 P P 00 57 39.3 -0.7
comp=Z,1µmcomp=Z,100nm,1.0s
SRBI Singaraja 64.98 271 P P 00 57 48.3 -0.1
comp=Z,64nm,0.9s
GMJI Gumukmas 66.57 270 P P 00 58 03.8 +5.5
BLJI Banyuglugur 66.60 270 P P 00 57 58.4 -0.1
comp=Z,2µmcomp=Z,57nm,0.7s
JHJ2 Mitsune 66.74 323 P P 00 57 58.8 -0.1
JHJ Hachijo jima 2 66.76 323 P P 00 57 59.4 +0.4
comp=Z,160nm,0.4s,baz=65,slow=21,SNR=16
MYLDM Lahad Datu 66.90 285 P P 00 58 01.6 +1.3
MYLDM IAmb IAmb 00 58 20.3
comp=Z,34nm,0.8s
BBKI Banjar Baru 66.90 275 P P 00 58 01.0 +0.6
MTKI Muara Teweh, K 67.77 278 P P 00 58 06.8 +1.1
PWJI Pagerwojo 68.19 270 P P 00 58 11.9 +3.7
PCJI Pacitan 68.72 269 P P 00 58 11.4 0.0
comp=Z,3µmcomp=Z,353nm,0.8s
JYT Yasato 68.84 325 P P 00 58 11.3 -0.3
JYT IAmb IAmb 00 58 12.5
comp=Z,61nm,0.5s
WOJI Wonogiri, Jawa 69.07 269 P P 00 58 13.6 +0.1
comp=Z,81nm,1.4s
QSPA South Pole Qui 69.25 180 P P 00 58 15.0 +1.2
QSPA x PcP 00 58 33.0 +0.2
UGM Wanagama 69.42 269 P P 00 58 15.0 -0.7
JMM Marumori 69.76 327 P P 00 58 17.0 -0.1
JMM IAmb IAmb 00 58 18.3
comp=Z,58nm,1.0s
SMRI Semarang 69.78 270 P P 00 58 17.5 -0.3
SMRI IAmb IAmb 00 58 18.4
comp=Z,59nm,0.7s
JGF Kuroka 69.94 323 P P 00 58 18.4 +0.1
JGF IAmb IAmb 00 58 19.1
comp=Z,27nm,0.7s
INU Inuyama 69.95 322 P P 00 58 18.2 -0.1
INU Inuyama 69.95 322 P P 00 58 18.0 -0.3
JOW Kunigami 69.96 310 P P 00 58 19.2 +0.7
comp=Z,25nm,0.4s,baz=163,slow=7.9,SNR=5.2
comp=Z,25nm,0.4s
JOW Kunigami 69.96 310 P P 00 58 18.8 +0.3
JOW IAmb IAmb 00 58 19.8
comp=Z,53nm,0.9s
MJAR Matsushiro Arr 70.15 324 P P 00 58 17.9 -1.5
comp=Z,23nm,0.6s,baz=106,slow=11,SNR=51
comp=Z,23nm,0.6s
MJAR Matsushiro Arr 70.15 324 P P 00 58 18.4 -1.1
MJAR Matsushiro Arr 70.15 324 P P 00 58 18.4 -1.1
MJAR pmax pmax
comp=Z,14nm,0.6s
MAJO Matsushiro 70.15 324 P P 00 58 19.3 -0.1
MAJO IAmb IAmb 00 58 20.3
comp=Z,34nm,0.7s
MAJO Matsushiro 70.15 324 P P 00 58 19.3 -0.1
MAJO pmax pmax
comp=Z,35nm,0.7s
MAJO Matsushiro 70.15 324 P P 00 58 19.4 -0.1
MAJO Matsushiro 70.15 324 P P 00 58 19.5 0.0
MJB9 Matsu-Tunnel 70.16 324 P P 00 58 19.5 0.0
MJB9 IAmb IAmb 00 58 20.3
comp=Z,34nm,0.6s
STKI Sintang 71.32 277 P P 00 58 27.6 +0.8
comp=Z,8µmcomp=Z,44nm,0.5s
JSU Suzuyama 71.37 316 P P 00 58 26.9 +0.1
JSU IAmb IAmb 00 58 27.6
comp=Z,51nm,0.7s
SBUM Sibu 71.53 280 P P 00 58 28.3 +0.3
ERM Erimo 71.84 331 P P 00 58 29.9 +0.8
ERM IAmb IAmb 01 01 03.3
comp=Z,122nm,1.5s
ERM Erimo 71.84 331 P P 00 58 29.9 +0.8
ERM pmax pmax
comp=Z,122nm,1.5s
JHS Saijyo 72.00 320 P P 00 58 30.9 +0.6
JHS IAmb IAmb 00 58 32.0
comp=Z,67nm,0.7s
KIWB Kanaga Island 72.37 1 P P 00 58 32.3 +0.3
ADK Adak 72.41 1 P P 00 58 32.1 -0.1
ADK Adak 72.41 1 P P 00 58 32.1 -0.1
ADK pmax pmax
comp=Z,105nm,0.6s
ADK Adak 72.41 1 P P 00 58 32.3 +0.1
YOJ Yonaguni jima 72.48 306 P P 00 58 32.8 -0.5
YOJ IAmb IAmb 00 58 34.0
comp=Z,74nm,0.8s
YOJ Yonaguni jima 72.48 306 P P 00 58 32.8 -0.5
YOJ pmax pmax
comp=Z,74nm,0.8s
LEM Lembang 72.50 269 P P 00 58 34.4 +0.5
comp=Z,152nm,1.0s,baz=80,slow=6.0,SNR=18
comp=Z,152nm,1.0s
ATKA Atka Island 72.81 3 P P 00 58 34.5 0.0
KSM Kuching 72.92 278 P P 00 58 35.9 -0.2
KSM IAmb IAmb 00 58 37.4
comp=Z,87nm,0.7s
KSM Kuching 72.92 278 P P 00 58 36.6 +0.5
TWG Pinlang 73.10 303 P P 00 58 35.0 -1.9
YULB Yu-li 73.23 304 P P 00 58 36.0 -1.6
YULB IAmb IAmb 00 58 37.3
comp=Z,39nm,0.5s
DBJI Dramaga 73.40 269 P P 00 58 38.6 -0.2
NACB Ninganchiao 73.41 305 P P 00 58 37.6 -1.0
SHEM Shemya Is, Ala 73.51 355 P P 00 58 38.3 -0.2
comp=Z,70nm,0.7s,baz=77,slow=5.2,SNR=6.5
comp=Z,70nm,0.7s
TPUB Ta-pu 73.70 303 P P 00 58 39.3 -1.0
TPUB Ta-pu 73.70 303 P P 00 58 39.3 -1.0
SSLB Suanglung 73.70 304 P P 00 58 39.3 -1.0
SSLB IAmb IAmb 00 58 40.0
comp=Z,72nm,0.6s
SSLB Suanglung 73.70 304 P P 00 58 39.3 -1.0
YHNB Yeheng 73.84 305 P P 00 58 40.6 -0.5
YHNB IAmb IAmb 00 58 42.2
comp=Z,45nm,0.9s
YHNB Yeheng 73.84 305 P P 00 58 41.5 +0.3
NIKH Nikolski High 73.96 6 P P 00 58 41.1 0.0
NIKH Nikolski High 73.96 6 P P 00 58 40.8 -0.3
baz=190,SNR=6.2
SKR Severo-Kuril's 74.61 344 ceP P 00 58 44.7 0.0
UNV Unalaska Valle 75.08 7 P P 00 58 46.9 -0.4
UNV IAmb IAmb 00 58 47.6
comp=Z,44nm,0.6s
UNV Unalaska Valle 75.08 7 P P 00 58 46.7 -0.6
baz=192,SNR=5.5
AKUT Akutan 75.46 8 P P 00 58 48.9 -0.5
AKUT IAmb IAmb 01 01 36.2
comp=Z,134nm,1.5s
KASI Kota Agung 75.86 269 P P 00 58 51.5 -1.1
comp=Z,108nm,1.0s
YSS Yuzh-Sakhalins 75.94 334 P P 00 58 52.8 +0.6
YSS IAmb IAmb 00 58 54.0
comp=Z,46nm,0.6s
YSS Yuzh-Sakhalins 75.94 334 ⇓iP P 00 58 53.5 +1.2
YSS e 00 58 56.1
YSS eS S 01 07 54.2 +5.6
YSS pmax pmax
comp=N,100nm,4.9s
YSS pmax pmax
comp=Z,200nm,4.9s
YSS smax smax
comp=E,100nm,3.2s
YSS Yuzh-Sakhalins 75.94 334 P P 00 58 53.4 +1.2
PET Petropavlovsk 76.15 346 P P 00 58 53.0 -0.2
PET IAmb IAmb 00 59 43.0
comp=Z,75nm,1.2s
KSCHJ Chungju 76.37 318 P P 00 58 55.1 +0.2
KSCHJ IAmb IAmb 01 01 09.2
comp=Z,98nm,1.9s
LWLI Liwa 76.44 270 P P 00 58 56.4 +0.5
comp=Z,124nm,0.8s
PEA0B Petropavlovsk- 76.44 346 P P 00 58 54.9 0.0
PEA0B IAmb IAmb 00 58 56.1
comp=Z,59nm,0.7s
PEA0B Petropavlovsk- 76.44 346 deP P 00 58 55.0 +0.1
PETK Petropavlovsk- 76.44 346 P P 00 58 54.9 0.0
comp=Z,43nm,0.7s,baz=138,slow=7.2,SNR=132
comp=Z,43nm,0.7s
PETK Petropavlovsk- 76.44 346 P P 00 58 54.4 -0.5
PETK Petropavlovsk- 76.44 346 P P 00 58 54.4 -0.5
FALS False Pass 76.48 9 P P 00 58 55.2 +0.2
KSRS Korea Array 76.77 319 P P 00 58 58.0 +1.0
comp=Z,12nm,0.7s,baz=127,slow=6.0,SNR=46
comp=Z,12nm,0.7s
KSAR Wonju Array Be 76.79 319 P P 00 58 57.8 +0.7
KSAR Wonju Array Be 76.79 319 P P 00 58 57.8 +0.7
CNBA Chernabura Isl 77.07 11 P P 00 58 57.9 -0.3
CHNA Chernabura Isl 77.08 11 P P 00 58 58.1 -0.1
baz=198
SEHB SEOHWA 77.09 320 P P 00 58 59.8 +1.0
SEHB IAmb IAmb 00 59 01.0
comp=Z,34nm,0.7s
SDPT Sand Point 77.42 10 P P 00 59 00.1 +0.1
SDPT IAmb IAmb 00 59 00.7
comp=Z,88nm,0.6s
SDPT Sand Point 77.42 10 P P 00 58 59.9 -0.2
baz=197
DSRI Dabo 77.54 274 P P 00 59 02.9 +1.1
comp=Z,35nm,0.9s
MNAI Manna 77.69 270 P P 00 59 02.5 -0.1
UGL Uglegorsk 77.91 335 eP P 00 59 03.9 +1.0
UGL pmax pmax
comp=Z,95nm,0.6s
JMBI JAMBI 78.00 273 P P 00 59 06.4 +2.1
comp=Z,83nm,0.4s
CHIR Chirikof Islan 78.79 13 P P 00 59 08.0 +0.6
baz=202
USA0B Ussuriysk Arra 78.93 326 P P 00 59 09.8 +1.3
USA0B IAmb IAmb 00 59 10.7
comp=Z,43nm,0.8s
USA0B Ussuriysk Arra 78.93 326 P P 00 59 09.8 +1.3
USA0B pmax pmax
comp=Z,43nm,0.8s
USRK Ussuriysk Ar. 78.93 326 P P 00 59 10.0 +1.5
comp=Z,33nm,0.6s,baz=112,slow=3.2,SNR=53
comp=Z,33nm,0.6s
USRK Ussuriysk Ar. 78.93 326 P P 00 59 09.5 +1.1
USRK Ussuriysk Ar. 78.93 326 P P 00 59 09.5 +1.1
MYKOM Kota Tinggi 79.03 276 P P 00 59 10.0 +0.3
MYKOM IAmb IAmb 00 59 11.2
comp=Z,74nm,0.8s
TYV Tymovskoe 79.11 336 eP P 00 59 10.0 +0.8
TYV pmax pmax
comp=Z,200nm,3.7s
TYV pmax pmax
comp=Z,57nm,0.9s
BELA Belgrano 2 79.31 173 P P 00 59 10.3 +0.2
NJ2 Nanjing 79.67 310 ⇓P P 00 59 13.6 +1.0
NJ2 pmax pmax
comp=Z,40nm,0.9s
SII Sitkinak Islan 79.78 13 P P 00 59 13.6 +0.9
SII IAmb IAmb 00 59 14.3
comp=Z,61nm,0.8s
SII Sitkinak Islan 79.78 13 P P 00 59 13.4 +0.7
baz=203
SII Sitkinak Islan 79.78 13 P P 00 59 13.3 +0.7
R17K Ugashik Creek 80.33 12 P P 00 59 16.1 +0.6
baz=201
MDJ Mudanjiang 80.47 325 P P 00 59 17.5 +1.0
MDJ IAmb IAmb 00 59 18.7
comp=Z,37nm,0.8s
MDJ Mudanjiang 80.47 325 P P 00 59 17.9 +1.4
MDJ pmax pmax
comp=Z,55nm,1.1s
MDJ pmax pmax
comp=Z,310nm,4.2s
MDJ Mudanjiang 80.47 325 P P 00 59 17.6 +1.0
OHAK Old Harbor 80.58 14 P P 00 59 17.3 +0.6
OHAK Old Harbor 80.58 14 P P 00 59 17.5 +0.7
baz=204
K02D Willamette Mer 80.92 38 P P 00 59 21.5 +2.4
baz=231
Q17K Contact Creek 81.01 12 P P 00 59 19.3 +0.2
baz=201
MAW Mawson 81.08 200 P P 00 59 20.1 +0.7
comp=Z,4.8nm,0.6s,baz=158,slow=5.9,SNR=29
comp=Z,4.8nm,0.6s
MAW Mawson 81.08 200 P P 00 59 20.0 +0.7
baz=81,SNR=14
MAW Mawson 81.08 200 P P 00 59 20.1 +0.7
BKNI Bangkinang 81.13 274 P P 00 59 22.8 +2.1
comp=Z,2µmcomp=Z,44nm,0.5s
BKNI Bangkinang 81.13 274 P P 00 59 21.3 +0.6
KDAK Kodiak Island 81.25 14 P P 00 59 20.9 +0.7
comp=Z,9.8nm,0.6s,baz=283,slow=1.6,SNR=19
comp=Z,9.8nm,0.6s
KDAK Kodiak Island 81.25 14 P P 00 59 20.9 +0.7
KDAK IAmb IAmb 00 59 21.9
comp=Z,85nm,1.8s
KDAK Kodiak Island 81.25 14 P P 00 59 20.9 +0.7
baz=204
P16K Nushagak River 81.35 11 P P 00 59 21.0 +0.3
baz=199,SNR=10.0
L04D Klamath Falls 81.41 39 P P 00 59 23.6 +2.0
baz=232
GRNR Gornyy 81.54 333 ⇓iP P 00 59 23.1 +1.2
GRNR pmax pmax
comp=Z,20nm,0.8s
GRNR MLR MLR
comp=E,110nm,11.0s
GRNR MLR MLR
comp=N,90nm,16.0s
GRNR MLR MLR
comp=Z,60nm,14.0s
NVAR Mina Array Bea 81.62 44 P P 00 59 24.6 +1.7
comp=Z,1.6nm,0.8s,baz=221,slow=8.2,SNR=7.0
NVAR pP pwP 01 01 27.7 -0.8
comp=Z,2.3nm,0.9s,baz=228,slow=8.0,SNR=3.8
NVAR PKKPbc PKKPbc 01 17 52.1 +0.4
comp=Z,0.8nm,0.7s,baz=96,slow=3.0,SNR=3.7
NVAR Mina Array Bea 81.62 44 P P 00 59 24.0 +1.1
P17K Kvichak River 81.78 11 P P 00 59 23.1 +0.3
baz=201,SNR=36
O16K Kokwok River B 81.86 10 P P 00 59 23.0 -0.3
baz=199,SNR=34
Q20K Shuyak Island 82.05 13 P P 00 59 24.9 +0.7
baz=205
Q19K Cape Douglas, 82.08 13 P P 00 59 24.8 +0.3
Q19K IAmb IAmb 00 59 25.6
comp=Z,66nm,1.1s
Q19K Cape Douglas, 82.08 13 P P 00 59 24.7 +0.2
baz=204,SNR=8.9
P18K Big Mountain, 82.19 12 P P 00 59 25.0 0.0
P18K IAmb IAmb 00 59 25.9
comp=Z,35nm,0.7s
P18K Big Mountain, 82.19 12 P P 00 59 24.9 0.0
baz=202,SNR=39
O17K Koliganek Bris 82.20 11 P P 00 59 24.9 -0.1
baz=200,SNR=22
CN2 Changchun 82.23 323 eP P 00 59 25.6 +0.1
CN2 ePP PP 01 02 48.3 +3.1
CN2 SKS S 01 08 47.8 -5.8
CN2 pmax pmax
comp=Z,40nm,1.1s
I04A Tendick Farm, 82.33 37 P P 00 59 27.7 +1.6
baz=232
KLR Kul'dur 82.53 330 deP P 00 59 27.9 +1.0
comp=Z,16nm,0.9s,baz=106,slow=4.3,SNR=35
comp=Z,16nm,0.9s
KLR Kul'dur 82.53 330 deP P 00 59 27.8 +0.9
KLR pmax pmax
comp=Z,18nm,0.8s
K05A Summer Lake 82.55 39 P P 00 59 29.3 +1.8
N16K Nishlik Lake 82.59 10 P P 00 59 28.2 +1.2
baz=199,SNR=66
H04D Lebanon 82.60 37 P P 00 59 29.4 +2.0
baz=231
O18K Koktuh Hills 82.62 12 P P 00 59 27.5 +0.3
baz=202
IPM Ipoh 82.64 278 P P 00 59 28.6 +0.2
IPM IAmb IAmb 00 59 29.8
comp=Z,82nm,0.7s
IPM Ipoh 82.64 278 P P 00 59 28.9 +0.5
MNSI Mandailing Nat 82.66 274 P P 00 59 27.4 -1.0
comp=Z,103nm,0.8s
J05D Fort Rock, OR 82.69 38 P P 00 59 30.2 +2.1
baz=232,SNR=17
H04A Detroit Lake 83.00 37 P P 00 59 30.4 +0.9
O19K Port Alsworth 83.11 12 P P 00 59 29.7 +0.2
baz=203,SNR=7.1
CNPM China Poot 83.13 14 P P 00 59 30.3 +0.5
CNPM IAmb IAmb 00 59 31.1
comp=Z,37nm,0.7s
HOM Homer 83.17 13 P P 00 59 31.3 +1.4

baz=205
PINE Pine Mountain 83.17 38 P P 00 59 31.9 +1.4
N18K Kilae Creek 83.27 11 P P 00 59 30.5 +0.1
baz=201,SNR=14
KULM Kulim 83.28 278 P P 00 59 32.0 +0.5
KULM IAmb IAmb 00 59 32.8
comp=Z,40nm,0.6s
O20K Slope Mountain 83.34 13 P P 00 59 30.8 0.0
baz=204,SNR=13
BRSE Bradley Lake S 83.44 14 P P 00 59 31.8 +0.5
baz=206,SNR=19
N19K Bonanza Creek 83.65 12 P P 00 59 31.9 -0.4
baz=203,SNR=21
HG4B Hotspring 83.67 27 P P 00 59 34.0 +1.5
HG4B IAmb IAmb 01 02 09.4
comp=Z,61nm,1.4s
SVW2 Sparrevohn 83.71 11 P P 00 59 32.7 +0.1
HOLB Holberg 83.86 30 P P 00 59 34.2 +0.7
MA2 Magadan 83.95 345 P P 00 59 33.5 -0.3
comp=Z,22nm,0.8s,baz=147,slow=4.9,SNR=12
comp=Z,22nm,0.8s
MA2 Magadan 83.95 345 P P 00 59 33.6 -0.1
MA2 IAmb IAmb 00 59 34.5
comp=Z,27nm,0.9s
MA2 Magadan 83.95 345 *ce*P **P 00 59 33.7 0.0**
MA2 pmax pmax
comp=Z,51nm,1.7s
MA2 Magadan 83.95 345 P P 00 59 33.4 -0.3
PSI Prapat 83.99 275 P P 00 59 34.3 -0.9
comp=Z,45nm,0.9s,baz=154,slow=5.2,SNR=24
comp=Z,45nm,0.9s
SEW Seward 84.06 14 P P 00 59 34.4 +0.2
SEW IAmb IAmb 00 59 35.2
comp=Z,24nm,0.8s
SEW Seward 84.06 14 P P 00 59 34.3 +0.1
baz=207,SNR=7.5
Q23K Middleton Isla 84.21 16 P P 00 59 35.4 +0.4
baz=210
N20K Mount Spurr 84.45 12 P P 00 59 35.6 -0.6
baz=205
SPU Mount Spurr 84.46 13 P P 00 59 35.8 -0.5
M19K Big River Lodg 84.68 11 P P 00 59 37.3 0.0
baz=203
GSI Gunungsitoli 84.71 273 P P 00 59 39.2 +0.6
GSI Gunungsitoli 84.71 273 P P 00 59 39.7 +1.1
comp=Z,242nm,0.8s
GSI Gunungsitoli 84.71 273 P P 00 59 39.6 +1.0
L19K White Mountain 84.85 11 P P 00 59 38.9 +0.7
L19K White Mountain 84.85 11 P P 00 59 38.7 +0.6
baz=202,SNR=25
RC01 Rabbit Creek A 84.87 14 P P 00 59 38.9 +0.7
RC01 IAmb IAmb 00 59 39.5
comp=Z,26nm,0.8s
RC01 Rabbit Creek A 84.87 14 P P 00 59 38.4 +0.2
baz=207,SNR=14
M20K Styx River 84.89 12 P P 00 59 38.4 0.0
M20K Styx River 84.89 12 P P 00 59 37.7 -0.7
baz=204,SNR=9.0
SUA Susitna One 84.99 13 P P 00 59 38.8 -0.2
baz=206,SNR=44
G08A Pilot Rock 85.20 38 P P 00 59 41.8 +1.4
GLI Glacier Island 85.29 15 P P 00 59 40.4 +0.1
GLI IAmb IAmb 00 59 41.3
comp=Z,64nm,0.8s
GLI Glacier Island 85.29 15 P P 00 59 40.2 0.0
baz=209,SNR=8.3
SKT Skwentna 85.30 12 P P 00 59 39.0 -1.3
baz=205,SNR=13
L20K Farewell, AK 85.30 11 P P 00 59 40.4 0.0
baz=203,SNR=21
EYAK Cordova Ski Ar 85.34 16 P P 00 59 40.9 +0.4
EYAK IAmb IAmb 00 59 41.8
comp=Z,30nm,1.1s
EYAK Cordova Ski Ar 85.34 16 P P 00 59 40.7 +0.3
baz=211,SNR=5.6
TTA Tatalina 85.35 10 P P 00 59 40.9 +0.3
TTA Tatalina 85.35 10 P P 00 59 40.9 +0.3
TTA pmax pmax
comp=Z,19nm,1.1s
TTA Tatalina 85.35 10 P P 00 59 41.0 +0.4
baz=201
HNS HongShan 85.37 313 ⇓P **P 00 59 42.1 +0.9**
HNS pmax pmax
comp=Z,38nm,1.0s
KNK Knik Glacier 85.44 14 P P 00 59 41.4 +0.4
baz=208,SNR=12
PMR Palmer 85.45 14 P P 00 59 41.1 +0.2
PMR IAmb IAmb 00 59 42.1
comp=Z,74nm,1.6s
PMR Palmer 85.45 14 P P 00 59 41.1 +0.2
PMR pmax pmax
comp=Z,74nm,1.6s
PMR Palmer 85.45 14 P P 00 59 41.1 +0.2
baz=208
SRIT Nakonsritamara 85.46 281 P P 00 59 43.5 +1.3
HMT Hamilton 85.54 16 P P 00 59 41.4 -0.1
HMT IAmb IAmb 00 59 43.1
comp=Z,29nm,1.1s
LYN LuoYang 85.54 309 ⇓P **P 00 59 43.0 +0.9**
LYN S **S 01 09 32.4 +6.2**
LYN pmax pmax
comp=Z,60nm,0.7s
LYN pmax pmax
comp=Z,270nm,3.6s
BJT Baijiatuau 85.73 316 P P 00 59 43.2 +0.4
BJT IAmb IAmb 00 59 44.0
comp=Z,18nm,0.8s
BJT Baijiatuau 85.73 316 P P 00 59 43.3 +0.4
BJT pmax pmax
comp=Z,18nm,0.8s
BJI Beijing 85.74 316 P P 00 59 43.6 +0.7
BJI pmax pmax
comp=Z,26nm,0.7s
BJI pmax pmax
comp=Z,190nm,4.2s
ENH Enshi 85.78 304 P P 00 59 43.7 +0.4
SNH Sunshine Point 85.79 17 P P 00 59 43.7 +1.1
SNH IAmb IAmb 00 59 44.9
comp=Z,44nm,0.9s
SML Sawmill 85.82 14 P P 00 59 42.9 0.0
baz=208
DIV Divide 85.83 15 P P 00 59 43.2 +0.3
DIV IAmb IAmb 00 59 44.8
comp=Z,36nm,1.0s
BMO Blue Mountains 85.90 39 P P 00 59 44.9 +1.2
BMO Blue Mountains 85.90 39 P P 00 59 44.9 +1.2
BMO pmax pmax
comp=Z,4.0nm,0.9s
CUT Chulitna 85.94 13 P P 00 59 43.2 -0.1
baz=206
M23K Glacier View 85.95 14 P P 00 59 43.3 -0.1
baz=209,SNR=6.3
MFID Camas Ranch 85.97 40 P P 00 59 44.6 +0.5
BMRM Bremner River 85.99 16 P P 00 59 44.0 +0.3
BMRM IAmb IAmb 00 59 45.1
comp=Z,36nm,1.0s
BMRM Bremner River 85.99 16 P P 00 59 44.1 +0.5
baz=212,SNR=15
MESA MESA 86.03 17 P P 00 59 44.9 +0.9
MESA IAmb IAmb 00 59 46.1
comp=Z,48nm,0.8s
MESA MESA 86.03 17 P P 00 59 45.1 +1.1
baz=214,SNR=8.1
SCM Sheep Creek Mo 86.07 14 P P 00 59 44.3 +0.3
baz=209,SNR=27
K20K Telida 86.08 11 P P 00 59 44.2 +0.2
baz=203
KLU Klutina 86.11 15 P P 00 59 44.6 +0.4
KLU Klutina 86.11 15 P P 00 59 44.5 +0.2
baz=210,SNR=11
WRAK Wrangell Islan 86.22 24 P P 00 59 46.1 +1.3
baz=223
YAH Yahtse 86.24 17 P P 00 59 45.8 +0.7
YAH IAmb IAmb 00 59 47.1
comp=Z,31nm,0.8s
D08A Wollman Farm, 86.26 36 P P 00 59 46.6 +1.4
ISLE Juniper Island 86.28 17 P P 00 59 45.2 0.0
ISLE IAmb IAmb 00 59 46.7
comp=Z,27nm,0.9s
GYA Guiyang 86.34 300 ⇓*i*P **P 00 59 47.0 +0.8**
GYA pmax pmax
comp=Z,24nm,0.6s
PNL Peninsula 86.35 19 P P 00 59 46.2 +0.9
baz=216
PINM Pinnacle 86.45 18 P P 00 59 46.3 +0.4
baz=216,SNR=5.1

TNA Tin City 86.49 4 P P 00 59 46.6 +0.8
TNA IAmb IAmb 01 00 51.0
comp=Z,80nm,1.6s
CAST Castle Rocks 86.50 12 P P 00 59 44.9 -1.1
baz=205
VRDI Verde Repeater 86.50 16 P P 00 59 46.7 +0.4
VRDI IAmb IAmb 00 59 47.8
comp=Z,55nm,1.5s
N25K Chitina, Valde 86.53 16 P P 00 59 46.8 +0.6
baz=212,SNR=34
SEY Seymchan 86.56 347 P P 00 59 46.6 +0.4
comp=Z,34nm,0.5s,baz=143,slow=5.4,SNR=117
comp=Z,34nm,0.5s
SEY Seymchan 86.56 347 *ce*P **P 00 59 46.3 +0.1**
SEY pmax pmax
comp=Z,75nm,1.3s
M24K Tolsona, Glenn 86.58 15 P P 00 59 47.5 +1.0
M24K IAmb IAmb 00 59 48.4
comp=Z,27nm,0.8s
M24K Tolsona, Glenn 86.58 15 P P 00 59 47.1 +0.7
baz=210,SNR=9.8
WAT6 Susitna Watana 86.64 14 P P 00 59 46.8 0.0
baz=209,SNR=50
WAT1 Susitna Watana 86.68 13 P P 00 59 46.9 0.0
baz=208
MCARA McCarthy VSAT 86.75 16 P P 00 59 47.8 +0.7
baz=213,SNR=6.7
J20K Nowinta River 86.83 10 P P 00 59 47.7 +0.3
baz=203
BARN Barnard Glacie 86.84 17 P P 00 59 48.4 +0.5
BARN IAmb IAmb 00 59 49.7
comp=Z,31nm,0.8s
CTG Chitna Glacier 86.85 17 P P 00 59 48.7 +0.8
baz=214,SNR=10
CTGM Chitina Glacie 86.86 17 P P 00 59 48.5 +0.6
CTGM IAmb IAmb 00 59 49.6
comp=Z,30nm,0.8s
TRF Thorofare Moun 86.87 12 P P 00 59 47.5 -0.4
baz=206,SNR=43
CHUM Lake Minchumin 86.88 11 P P 00 59 47.2 -0.5
baz=204
HLID Hailey 86.92 41 P P 00 59 50.0 +1.4
HLID Hailey 86.92 41 P P 00 59 50.4 +1.7
baz=237
GCSA Galena City Sc 86.92 9 P P 00 59 48.4 +0.6
baz=200
HARP HAARP 87.08 15 P P 00 59 49.3 +0.6
baz=211,SNR=7.7
TIY Taiyuan 87.09 312 *e*P **P 00 59 50.6 +1.2**
PLBC Pleasant Camp 87.13 20 P P 00 59 49.9 +1.0
baz=219,SNR=6.4
DHY Denali Highway 87.15 14 P P 00 59 49.4 +0.1
DHY IAmb IAmb 00 59 50.3
comp=Z,60nm,1.8s
DHY Denali Highway 87.15 14 P P 00 59 49.1 -0.1
baz=209,SNR=15
BPAW Bear Paw Mtn. 87.32 12 P P 00 59 48.6 -1.2
baz=206
PAF Port-aux-Franc 87.37 218 P P 00 59 51.0 +0.5
PAF Port-aux-Franc 87.37 218 P P 00 59 51.0 +0.5
PAF pmax pmax
comp=Z,378nm,1.9s
MNTX Cornudas Mount 87.37 55 P P 00 59 52.3 +1.4
baz=244
MCK McKinley 87.40 13 P P 00 59 50.1 -0.1
MCK IAmb IAmb 00 59 52.0
comp=Z,33nm,0.8s
MCK McKinley 87.40 13 P P 00 59 50.1 -0.1
MCK pmax pmax
comp=Z,33nm,0.8s
MCK McKinley 87.40 13 P P 00 59 49.9 -0.2
baz=208,SNR=21
TROLL Troll, Antarti 87.41 180 P P 00 59 50.2 -0.3
TROLL S **S 01 09 42.0 -0.9**
TROLL Troll, Antarti 87.41 180 pP pP 01 01 56.9 +1.5
T35M Bob Quinn 87.43 24 P P 00 59 52.1 +1.6
baz=224
SKAG Skagway 87.47 20 P P 00 59 52.1 +1.6
SKAG Skagway 87.47 20 P P 00 59 52.0 +1.6
baz=220
PAX Paxson 87.49 14 P P 00 59 50.5 -0.3
baz=211,SNR=16
YUK8 Steele Glacier 87.56 18 P P 00 59 52.2 +0.9
baz=216,SNR=46
M26K Nabesna, AK 87.61 16 P P 00 59 51.9 +0.6
M26K IAmb IAmb 00 59 53.0
comp=Z,24nm,1.0s
M26K Nabesna, AK 87.61 16 P P 00 59 51.9 +0.6
baz=213,SNR=26
ZEA Zeya 87.65 331 *e*P **P 00 59 51.8 +0.3**
ZEA pmax pmax
comp=Z,20nm,1.0s
TXAR Lajitas Array 87.68 58 P P 00 59 54.4 +2.0
comp=Z,1.9nm,1.0s,baz=216,slow=5.5,SNR=8.6
TXAR pP **pwP 01 01 59.6 -0.4**
comp=Z,3.4nm,1.1s,baz=223,slow=6.2,SNR=6.6
TXAR PKKPbc **PKKPbc 01 17 37.8 +0.9**
comp=Z,1.1nm,0.7s,baz=29,slow=2.9,SNR=4.0
TXAR Lajitas Array 87.68 58 P **P 00 59 54.0 +1.6**
TXAR Lajitas Array 87.68 58 P **P 00 59 54.0 +1.6**
YUK6 Outpost Mounta 87.69 18 P P 00 59 52.7 +0.9
baz=217,SNR=9.0
SNAA Sanae 87.70 179 P P 00 59 51.1 -0.7
SNAA Sanae 87.70 179 pP pP 01 01 57.0 +0.5
SNAA Sanae 87.70 179 P **P 00 59 51.5 -0.2**
comp=Z,1.9nm,0.6s,baz=204,slow=10,SNR=15
SNAA pP **pwP 01 01 59.9 +3.4**
comp=Z,6.3nm,1.0s,baz=187,slow=4.9,SNR=9.3
comp=Z,1.9nm,0.6s
SNAA Sanae 87.70 179 P P 00 59 51.7 -0.1
YUK3 Moose Creek 87.76 17 P P 00 59 53.2 +1.0
baz=215,SNR=78
XLT XiLinHaoTe 87.83 319 ⇑*i*P **P 00 59 53.3 +0.6**
XLT pmax pmax
comp=Z,26nm,0.7s
XLT pmax pmax
comp=Z,160nm,5.0s
VNA3 Neumayer Olymp 87.86 176 P P 00 59 52.2 -0.2
VNA3 S **S 01 09 43.9 -2.9**
VNA3 Neumayer Olymp 87.86 176 pP pP 01 01 58.6 +1.6
VNA3 Neumayer Olymp 87.86 176 sP sP 01 02 49.2 -5.8
M27K Edge Creek, AK 87.86 16 P P 00 59 53.7 +1.1
M27K IAmb IAmb 00 59 54.7
comp=Z,48nm,1.1s
M27K Edge Creek, AK 87.86 16 P P 00 59 53.4 +0.9
baz=214,SNR=38
XAN Xi'an 87.90 308 ⇓*i*P **P 00 59 54.3 +1.0**
XAN pP pP 01 01 58.9 +1.2
XAN pmax pmax
comp=Z,67nm,0.9s
YUK4 Talbot Arm 87.92 18 P P 00 59 54.0 +1.0
baz=217,SNR=13
NEW Newport 87.95 36 P P 00 59 54.1 +0.9
baz=235
ANMO Albuquerque 88.02 51 *i*P **P 00 59 55.2 +1.2**
ANMO pmax pmax
comp=Z,3.0nm,1.2s
ANMO Albuquerque 88.02 51 P P 00 59 55.4 +1.4
baz=243
L26K Log Cabin Wild 88.05 15 P P 00 59 54.0 +0.7
L26K Log Cabin Wild 88.05 15 P P 00 59 53.7 +0.5
baz=213,SNR=9.1
P32M Atlin 88.10 21 P P 00 59 54.8 +1.3
baz=221,SNR=6.0
I21K Tanana 88.12 11 P P 00 59 53.9 +0.4
I21K IAmb IAmb 00 59 54.5
comp=Z,38nm,0.8s
I21K Tanana 88.12 11 P P 00 59 53.6 +0.1
baz=205
NEA2 Nenana 88.14 12 P P 00 59 52.8 -0.8
baz=208
K24K Donnelly Dome 88.14 14 P P 00 59 54.1 +0.4
baz=210,SNR=24
BVCY Beaver Creek 88.18 17 P P 00 59 54.6 +0.7
baz=215,SNR=43
MLY Manley 88.21 11 P P 00 59 53.6 -0.4
MLY IAmb IAmb 00 59 54.3
comp=Z,20nm,0.6s
MLY Manley 88.21 11 P P 00 59 53.4 -0.6
baz=206
WRH Wood River Hil 88.23 13 P P 00 59 54.0 0.0
WRH IAmb IAmb 00 59 54.8
comp=Z,50nm,0.8s
O30N Mendenhall 88.24 19 P P 00 59 55.1 +0.9
baz=219,SNR=16
RIDG Independent Ri 88.30 14 P P 00 59 54.6 +0.1

baz=211,SNR=18
NVL N'lazarevskaya 88.37 183 *e*P **P 00 59 53.0 -1.7**
NVL pmax pmax
comp=Z,16nm,0.7s
HDA Harding Lake 88.41 13 P P 00 59 54.9 0.0
HDA IAmb IAmb 00 59 55.7
comp=Z,36nm,0.7s
HDA Harding Lake 88.41 13 P P 00 59 54.7 -0.2
baz=209
H21K Melozitna Rive 88.42 10 P P 00 59 55.3 +0.4
H21K IAmb IAmb 00 59 56.2
comp=Z,18nm,0.8s
H21K Melozitna Rive 88.42 10 P P 00 59 55.3 +0.4
baz=204
L27K Beaver Creek, 88.46 16 P P 00 59 55.8 +0.6
baz=214,SNR=17
N30M Aishikik Lake 88.47 19 P P 00 59 56.1 +0.8
baz=218,SNR=9.3
BCAR Beaver Creek A 88.48 16 P P 00 59 55.6 +0.3
VNA1 Neumayer--Stat 88.52 177 P P 00 59 55.6 +0.1
VNA1 Neumayer--Stat 88.52 177 pP pP 01 02 01.3 +0.9
WHY Whitehorse 88.53 20 P P 00 59 56.3 +0.6
WHY IAmb IAmb 00 59 57.8
comp=Z,14nm,0.8s
WHY Whitehorse 88.53 20 P P 00 59 56.6 +1.0
baz=220,SNR=10
DLBC Dease Lake 88.55 23 P P 00 59 56.8 +1.0
comp=Z,7.8nm,0.8s
comp=Z,7.8nm,0.8s
DLBC Dease Lake 88.55 23 P P 00 59 57.0 +1.2
baz=224
IMAR Indian Mountai 88.56 10 P P 00 59 56.0 +0.5
I23K Minto, Yukon-K 88.58 12 P P 00 59 54.8 -0.7
baz=207
TCOL CIGO, UAF Yank 88.63 13 P P 00 59 55.5 -0.3
baz=209
COLA College 88.63 13 P P 00 59 55.6 -0.2
COLA College 88.63 13 *i*P **P 00 59 55.7 -0.2**
COLA pmax pmax
comp=Z,43nm,0.7s
COLA College 88.63 13 P P 00 59 55.5 -0.2
baz=209
HIA Hailar 88.64 325 P P 00 59 56.4 +0.1
HIA IAmb IAmb 00 59 57.4
comp=Z,21nm,1.0s
HIA Hailar 88.64 325 P P 00 59 56.4 +0.1
HIA pmax pmax
comp=Z,21nm,1.0s
SCRK Sand Creek 88.70 15 P P 00 59 56.8 +0.4
baz=212,SNR=27
IL31 88.74 13 P P 00 59 56.0 -0.3
IL31 IAmb IAmb 00 59 57.0
comp=Z,21nm,0.9s
ILAR Eielson Array 88.74 13 P P 00 59 56.0 -0.4
comp=Z,16nm,0.8s,baz=226,slow=5.6,SNR=123
ILAR PKKP **PKKPdf 01 17 30.7 0.0**
comp=Z,0.3nm,0.6s,baz=10,slow=1.9,SNR=5.6
comp=Z,16nm,0.8s
P33M Teslin, Yukon 88.87 21 P P 00 59 57.9 +0.7
baz=222
N31M Braeburn, Yuko 88.89 19 P P 00 59 58.0 +0.8
baz=220,SNR=5.2
J25K Salcha River, 88.93 14 P P 00 59 57.5 +0.1
J25K IAmb IAmb 00 59 58.5
comp=Z,18nm,0.7s
J25K Salcha River, 88.93 14 P P 00 59 57.5 +0.1
baz=211
POKR Poker Plat Res 88.93 13 P P 00 59 56.7 -0.6
baz=209
KMI Kunming 89.02 297 ⇓P **P 01 00 00.4 +1.5**
KMI pmax pmax
comp=Z,42nm,0.9s
S22A 4UR Ranch, Cre 89.03 49 P P 01 00 00.8 +2.0
baz=243
H23K Yukon River 89.15 12 P P 00 59 57.9 -0.4
H23K Yukon River 89.15 12 P P 00 59 57.7 -0.6
baz=207
O20A White River Ci 89.17 46 P P 01 00 00.8 +1.6
baz=242
HHC Hu-ho-hao-te 89.19 315 *e*P **P 01 00 00.4 +1.2**
HHC pmax pmax
comp=Z,60nm,1.0s
HHC pmax pmax
comp=Z,140nm,5.0s
K27K Chicken 89.21 15 P P 00 59 59.4 +0.8
K27K IAmb IAmb 01 00 00.7
comp=Z,21nm,0.8s
K27K Chicken 89.21 15 P P 00 59 59.4 +0.8
baz=214,SNR=32
BILL Bilibino 89.30 354 P P 00 59 59.1 +0.3
BILL IAmb IAmb 01 00 00.2
comp=Z,17nm,1.0s
BILL Bilibino 89.30 354 *ci*P **P 00 59 59.0 +0.1**
BILL pmax pmax
comp=Z,15nm,0.9s
M30M Minto, Yukon 89.44 18 P P 01 00 00.2 +0.5
M30M IAmb IAmb 01 00 02.0
comp=Z,26nm,0.8s
M30M Minto, Yukon 89.44 18 P P 01 00 00.4 +0.6
baz=219,SNR=28
PLCA Paso Flores 89.44 134 P P 01 00 01.5 +1.0
comp=Z,1.3nm,0.7s,baz=216,slow=2.4,SNR=3.6
comp=Z,1.3nm,0.7s
H24K Noodor Dome 89.48 12 P P 00 59 58.9 -0.9
H24K Noodor Dome 89.48 12 P P 00 59 58.6 -1.2
baz=208
BW06 Boulder Array 89.56 43 P P 01 00 01.8 +0.7
baz=241
PD31 Pinedale Array 89.56 43 P P 01 00 01.8 +0.7
PDAR Pinedale Array 89.56 43 P P 01 00 02.5 +1.4
comp=Z,16nm,0.3s,baz=93,slow=30,SNR=7.6
PDAR PKKPbc **PKKPdf 01 17 28.8 +0.2**
comp=Z,0.6nm,0.7s,baz=93,slow=6.2,SNR=4.4
comp=Z,16nm,0.3s
BOZ Bozeman (W) 89.68 40 P P 01 00 03.0 +1.6
BOZ Bozeman (W) 89.68 40 P P 01 00 03.0 +1.6
BOZ pmax pmax
comp=Z,4.0nm,0.9s
BOZ Bozeman (W) 89.68 40 P P 01 00 02.6 +1.2
baz=239
CM31 Chiang Mai Arr 89.72 290 P P 01 00 03.0 +1.0
CM31 IAmb IAmb 01 00 04.6
comp=Z,40nm,0.8s
CMAR Chiang Mai Arr 89.72 290 P P 01 00 03.5 +1.5
comp=Z,31nm,0.9s,baz=128,slow=3.0,SNR=116
CMAR PP **PP 01 03 44.1 -1.1**
comp=Z,4.5nm,0.9s,baz=127,slow=6.2,SNR=9.6
comp=Z,31nm,0.9s
CMAR Chiang Mai Arr 89.72 290 P P 01 00 03.0 +1.0
CMAR Chiang Mai Arr 89.72 290 *ce*P **P 01 00 03.5 +1.5**
CMAR pmax pmax
comp=Z,34nm,0.9s
H17A Grant Village 89.72 42 P P 01 00 04.3 +2.6
baz=240
CHTO Chiang Mai 89.85 290 P P 01 00 03.7 +1.1
CHTO Chiang Mai 89.85 290 P P 01 00 03.7 +1.1
CHTO pmax pmax
comp=Z,43nm,0.7s
CHTO Chiang Mai 89.85 290 P P 01 00 03.9 +1.3
M31M Drury Creek, Y 89.86 19 P P 01 00 02.7 +1.0
baz=221
DAWY Dawson 89.91 16 P P 01 00 02.7 +0.8
DAWY IAmb IAmb 01 00 03.6
comp=Z,24nm,0.9s
DAWY Dawson 89.91 16 P P 01 00 02.4 +0.5
baz=216,SNR=5.1
SDCO Great Sand Dun 89.97 49 P P 01 00 04.5 +1.3
baz=244
HRY Holter Researc 90.13 39 P P 01 00 04.5 +1.1
FARO Faro, Yukon 90.20 19 P P 01 00 04.2 +0.9
baz=222
COLD Coldfoot 90.29 11 P P 01 00 04.3 +0.8
COLD IAmb IAmb 01 00 05.3
comp=Z,18nm,0.9s
COLD Coldfoot 90.29 11 P P 01 00 04.3 +0.8
baz=206
PZH PanZhiHua 90.38 298 ⇓P **P 01 00 05.8 +0.7**
PZH pmax pmax
comp=Z,30nm,0.8s
PZH pmax pmax
comp=Z,70nm,5.9s
CD2 Chengdu 90.51 303 P P 01 00 06.0 +0.5
RLMT Red Lodge 90.89 41 P P 01 00 08.4 +1.4
baz=241
N23A Red Feather La 91.07 46 P P 01 00 09.4 +1.3
baz=243
MMPY Sheldon Lake, 91.15 20 P P 01 00 08.6 +1.0

baz=224,SNR=9.7
I29M Ogilvie Camp, 91.23 16 P **P** **01 00 08.2 +0.2**
baz=217
TGTN Hyland Airport 91.36 22 P **P** **01 00 10.4 +1.7**
baz=226
BMAR Burnt Mountain 91.52 12 P **P** **01 00 10.3 +1.0**
TOLK Toolik Lake Re 91.66 10 P **P** **01 00 10.3 +0.4**
baz=207
YAK Yakutsk 92.21 338 P **P** **01 00 12.2 -0.2**
comp=Z,21nm,0.6s,baz=209,slow=0.5,SNR=7.8
comp=Z,21nm,0.6s
YAK Yakutsk 92.21 338 P **P** **01 00 11.9 -0.5**
YAK Yakutsk 92.21 338*d* iP **P** **01 00 11.6 -0.8**
YAK *e**PP **pwP** 01 02 19.6 -0.9
YAK *eS **SKSac** 01 09 49.2 -0.7
YAK *e* 01 10 30.1
YAK pmax pmax
comp=Z,51nm,0.9s
YAK pmax pmax
comp=E,6.0nm,1.0s
YAK smax smax
comp=E,92nm,5.2s
YAK smax smax
comp=N,35nm,4.1s
EPYK Eagle Plains 92.44 16 P **P** **01 00 13.7 +0.2**
baz=219
LZH Lanzhou 92.54 308 *e*P **P** **01 00 15.4 +0.6**
LZH pP pwP 01 02 26.0 +1.7
LZH pmax pmax
comp=N,41nm,1.5s
A21K Barrow 93.15 7 P **P** **01 00 16.7 +0.2**
baz=200
RSSD Black Hills 93.76 44 P **P** **01 00 21.3 +1.0**
baz=245
INK Inuvik 94.72 15 P **P** **01 00 23.6 -0.1**
comp=N,6.1nm,0.9s,baz=212,slow=6.1
comp=N,6.1nm,0.9s
INK Inuvik 94.72 15 P **P** **01 00 23.5 -0.3**
INK Inuvik 94.72 15 P **P** **01 00 23.5 -0.3**
INK pmax pmax
comp=Z,7.0nm,1.0s
INK Inuvik 94.72 15 P **P** **01 00 23.6 -0.1**
baz=222
ULN Ulaanbaatar 95.25 319 P **P** **01 00 26.1 -0.7**
ULN Ulaanbaatar 95.25 319*ce*P **P** **01 00 26.7 -0.2**
ULN pmax pmax
comp=E,4.0nm,0.8s
SONM Songino Array 95.64 319 P **P** **01 00 28.1 -0.5**
comp=Z,0.9nm,0.5s,baz=112,slow=1.6,SNR=6.0
SONM PP **PP** **01 04 26.4 -4.0**
comp=Z,2.4nm,0.9s,baz=114,slow=6.8,SNR=7.6
comp=Z,0.9nm,0.5s
SONM Songino Array 95.64 319 P **P** **01 00 28.6 0.0**
GTA Gaotai 96.76 309 *e*P **P** **01 00 34.5 +0.7**
GTA pmax pmax
comp=Z,4.0nm,0.7s
GOMU GeErMu 99.38 305 P **Pdif** **01 00 46.8 +0.9**
GOMU pmax pmax
comp=Z,2.0nm,0.7s
GOMU pmax pmax
comp=Z,34nm,4.1s
LPAZ La Paz 102.43 113 PKKPbc PKKPbc 01 16 58.1 -0.3
comp=Z,1.6nm,0.7s,baz=314,slow=2.4,SNR=7.6
RES Resolute Bay 108.25 16 PKiKP **PKiKP** **01 05 25.2 -1.2**
comp=Z,1.5nm,0.6s,baz=189,slow=5.4,SNR=7.5
SIV San Ignacio 108.59 116 PKKPbc PKKPbc 01 16 39.0 -0.3
comp=Z,2.1nm,0.6s,baz=80,slow=6.0,SNR=12
ZALV Zalesovo Beam 110.40 321 PKiKP **PKiKP** **01 05 29.8 -1.2**
comp=Z,7.8nm,0.6s,baz=143,slow=0.7,SNR=47
ZALV Zalesovo Beam 110.40 321 Pdif **Pdif** **01 01 32.5 -1.4**
NRIK Noril'sk 110.66 338 PKiKP **PKiKP** **01 05 30.1 -1.0**
comp=Z,2.4nm,0.5s,baz=99,slow=8.3,SNR=4.7
NRIK Noril'sk 110.66 338 *i* PKIKP **PKiKP** **01 05 30.8 -0.3**
NRIK pmax pmax
comp=Z,2.0nm,0.9s
MK31 Makanchi Array 111.03 313 *i* PKIKP **PKiKP** **01 05 31.3 -1.2**
MK31 pmax pmax
comp=Z,3.0nm,0.5s
MKAR Makanchi Array 111.03 313 Pdiff **Pdif** **01 01 38.1 +1.1**
comp=Z,1.2nm,0.7s,baz=87,slow=7.4,SNR=11
MKAR PKiKP **PKiKP** **01 05 31.4 -1.1**
comp=Z,4.1nm,0.4s,baz=140,slow=0.6,SNR=57
MKAR PP **PP** **01 06 22.4 -0.7**
comp=Z,1.9nm,0.9s,baz=82,slow=8.8,SNR=4.3
MKAR PKKPbc **PKKPbc** **01 16 31.8 -0.3**
comp=Z,1.1nm,0.8s,baz=251,slow=5.5,SNR=7.4
MKAR Makanchi Array 111.03 313 **Pdif** **01 01 37.8 +0.8**
MAKZ Makanchi 111.24 313 ⇑PKiKP **PKiKP** **01 05 32.0 -0.9**
KURK Kurchatov 113.86 317 *i* PKiKP **PKiKP** **01 05 36.8 -0.9**
KURBB Kurchatov Arra 113.92 317 PKiKP **PKiKP** **01 05 36.8 -1.1**
comp=Z,7.0nm,0.6s,baz=94,slow=1.8,SNR=55
KURBB PP **PP** **01 06 38.7 -4.3**
comp=Z,1.8nm,0.8s,baz=99,slow=5.7,SNR=5.2
KURBB SKP **SKPdf** **01 08 18.8 0.0**
comp=Z,0.5nm,0.4s,baz=97,slow=1.9,SNR=4.3
KURBB PKKPbc **PKKPbc** **01 16 21.5 -1.1**
comp=Z,0.3nm,0.7s,baz=279,slow=3.7,SNR=5.5
KSH Kashi 114.63 305 PKP **PKiKP** **01 05 39.8 +0.1**
TKM2 Tokmak 2 115.29 309 PKiKP **PKPdf** **01 05 39.5 -1.5**
TKM2 pmax pmax
comp=Z,7.0nm,0.8s
OTUK Ortayu 117.86 314 PKIKP **PKPdf** **01 05 44.6 -1.0**
OTUK pmax pmax
comp=Z,15nm,0.5s
BTK Batken 118.64 305 PKPdf **PKPdf** **01 05 46.8 -0.6**
BTK Batken 118.64 305 PKIKP **PKPdf** **01 05 46.8 -0.6**
NOR Nord 118.70 3 *i* P **PKPdf** **01 05 44.9 -1.3**
GAR Garm 118.95 304 **PKPdf** **01 05 47.8 -0.3**
KK31 Karatay Array 119.02 309 PKPdf **PKPdf** **01 05 47.1 -0.9**
KK31 Karatay Array 119.02 309 *i* PKIKP **PKPdf** **01 05 47.1 -0.9**
KK31 pmax pmax
comp=Z,5.0nm,0.6s
KKAR Karatay Array 119.02 309 **PKPdf** **01 05 46.9 -1.1**
KKAR Karatay Array 119.02 309 PKIKP **PKPdf** **01 05 46.9 -1.1**
BRVK Borovoye 119.04 320 PKPdf **PKPdf** **01 05 46.9 -0.7**
BRVK Borovoye 119.04 320 PKIKP **PKPdf** **01 05 46.9 -0.7**
BDFB Brasilia 119.43 123 PKKPbc PKKPbc 01 16 03.7 +0.2
comp=Z,4.1nm,0.7s,baz=109,slow=9.4,SNR=5.9
KBL Kabul 119.57 299 PKPdf **PKPdf** **01 05 49.3 -0.2**
KBL Kabul 119.57 299 PKIKP **PKPdf** **01 05 49.3 -0.2**
CHGR Chuyangaron 119.83 303 PKPdf **PKPdf** **01 05 49.1 -0.6**
CHGR Chuyangaron 119.83 303 PKIKP **PKPdf** **01 05 49.1 -0.6**
SPA0 Spitsbergen Ar 122.15 356 *e*PKPdf **PKPdf** **01 05 52.5 -0.5**
SPITS Spitsbergen Ar 122.15 356 PKIKP **PKPdf** **01 05 52.8 -0.2**
ILULI Ilulissat 122.22 20 *i* P **PKPdf** **01 05 52.0 -1.3**
DAG Danmarks Havn 123.11 5 *i* P **PKPdf** **01 05 52.8 -2.0**
SUMG Summit 123.59 13 PKPdf **PKPdf** **01 05 56.4 0.0**
SUMG Summit 123.59 13 PKIKP **PKPdf** **01 05 56.4 0.0**
SUMG Summit 123.59 13 *i* P **PKPdf** **01 05 55.3 -1.1**
SVE Sverdlovsk 123.95 325 *e*PKIKP **PKPdf** **01 05 56.5 -0.4**
SVE pmax pmax
comp=Z,34nm,0.8s
ARU Arti 125.16 325 PKP **PKPdf** **01 05 59.0 -0.3**
comp=Z,38nm,0.4s,baz=78,slow=0.6,SNR=94
ARU Arti 125.16 325 PKPdf **PKPdf** **01 05 58.7 -0.5**
ARU Arti 125.16 325 *e*PKIKP **PKPdf** **01 05 59.0 -0.3**
ARU WSKS **SKSac** 01 12 14.6 +5.4
HRA Herat 125.16 298 PKPdf **PKPdf** **01 05 59.6 -0.7**
DY2G Dye2 125.20 21 *i* P **PKPdf** **01 05 57.8 -1.6**
DBG Daneborg 125.22 7 *i* P **PKPdf** **01 05 57.5 -1.4**
ICESG Greenland Ices 125.66 17 *i* P **PKPdf** **01 05 58.7 -1.6**
BOSA Boshof 125.73 206 PKP **PKPdf** **01 06 01.7 +0.2**
comp=Z,6.7nm,0.9s,baz=217,slow=0.6,SNR=8.8
BOSA Boshof 125.73 206 **PKiKP** **01 06 01.8 -0.2**
AB31 Akbulak array 125.95 316 *i* PKIKP **PKPdf** **01 06 00.4 -0.6**
AB31 pmax pmax
comp=Z,4.0nm,0.7s
ABKAR Akbulak array 125.95 316 **PKPdf** **01 06 00.6 -0.4**
ABKAR Akbulak array 125.95 316 PKPdf **PKPdf** **01 06 00.9 -0.1**
AKTO Aktyubinsk 126.95 318 PKP **PKPdf** **01 06 02.7 -0.7**
comp=Z,16nm,0.7s,baz=84,slow=2.6,SNR=47
AKTO Aktyubinsk 126.95 318 PKIKP **PKPdf** **01 06 02.2 -0.7**
AKTO pmax pmax
comp=Z,18nm,0.8s
IVI Ivigtut 127.07 28 *i* P **PKPdf** **01 06 01.2 -1.6**
SCO Scoresbysund 128.42 10 PKPdf **PKPdf** **01 06 05.1 0.0**
SCO Scoresbysund 128.42 10 PKIKP **PKPdf** **01 06 05.1 0.0**
SCO Scoresbysund 128.42 10 *i* P **PKPdf** **01 06 04.5 -0.6**
GEYT Alibeck 128.50 302 PKP **PKPdf** **01 06 06.5 +0.2**
comp=Z,12nm,0.7s,baz=225,slow=19,SNR=9.3
GEYT Alibeck 128.50 302 **PKPdf** **01 06 06.0 -0.3**
LVZ Lovozero 128.55 345 **PKPdf** **01 06 04.6 -0.9**
LVZ Lovozero 128.55 345 ⇑PKIKP **PKPdf** **01 06 05.5 0.0**
KIRV Kirov 128.97 330 PKP **PKPdf** **01 06 06.2 -0.2**
comp=Z,33nm,0.5s,baz=155,slow=1.2,SNR=15

PRGR Permogore 129.10 335 *e*PKIKP **PKPdf** **01 06 06.0 -0.6**
PRGR *e* 01 08 22.3
ARA0 ARCESS Array S 129.13 349 *e*PKPdf **PKPdf** **01 06 06.3 -0.2**
ARCES ARCESS Array B 129.13 349 PKhKP PKPpre 01 05 53.7
comp=Z,0.6nm,0.4s,baz=52,slow=2.2,SNR=10.0
ARCES PKP **PKPdf** **01 06 06.0 -0.5**
comp=Z,14nm,0.5s,baz=21,slow=1.0,SNR=60
ARCES ARCESS Array B 129.13 349 PKPdf **PKPdf** **01 06 06.1 -0.4**
ARCES ARCESS Array B 129.13 349 PKiKP **PKPdf** **01 06 06.0 -0.5**
JMIC Jan Mayen 129.48 4 PKP **PKiKP** **01 06 08.0 0.0**
comp=Z,12nm,0.6s,baz=331,slow=5.1,SNR=5.5
JMIC Jan Mayen 129.48 4 *e*PKPdf **PKiKP** **01 06 07.9 0.0**
JETT Jettan, Norway 129.91 351 *e*PKPdf **PKPdf** **01 06 08.2 +0.2**
KTK1 Kautokeino 129.98 350 *e*PKPdf **PKPdf** **01 06 07.1 -1.0**
TRO Tromso 130.04 352 *e*PKPdf **PKPdf** **01 06 07.4 -0.8**
KLMR Klimovskoe 131.95 336 *e*PKIKP **PKPdf** **01 06 11.2 -0.8**
KLMR *e* 01 08 43.3
KLMR pmax pmax
comp=Z,16nm,0.7s
KLMR Klimovskoe 131.95 336 *e*PKPdf **PKPdf** **01 06 11.3 -0.8**
KLMR AMP 01 06 12.9
comp=Z,16nm,0.7s
KLMR *e*PP **PP** **01 08 43.4 +1.4**
STEI Steigen 132.10 353 *e*PKPdf **PKPdf** **01 06 11.7 -0.4**
BELG Belogornoye 132.53 323 PKP **PKiKP** **01 06 14.2 -0.3**
comp=Z,96nm,0.8s,baz=343,slow=1.3,SNR=21
BELG SKPbc **SKPbc** **01 08 45.9 -0.9**
comp=Z,39nm,0.9s,baz=192,slow=1.6,SNR=8.1
BELG Belogornoye 132.53 323 *i* PKIKP **PKPdf** **01 06 13.5 +0.2**
BELG pmax pmax
comp=Z,15nm,0.8s
FAUS Fauske 132.62 353 *e*PKPdf **PKPdf** **01 06 12.5 -0.6**
VALR Valaam 134.59 341 *i* PKIKP **PKiKP** **01 06 17.7 -0.8**
VALR pmax pmax
comp=Z,43nm,0.9s
MOS Moscow 135.92 331 *i* PKIKP **PKPdf** **01 06 18.6 -1.0**
FIA1 FINESS Array S 135.92 343 **PKPdf** **01 06 19.7 +0.3**
FINES FINESS Array B 135.92 343 PKhKP PKPpre 01 06 05.1
comp=Z,1.6nm,0.5s,baz=42,slow=3.8,SNR=12
FINES PKP **PKPdf** **01 06 19.6 +0.2**
comp=Z,9.1nm,0.5s,baz=53,slow=3.8,SNR=19
FINES SKPbc **SKPbc** **01 08 55.5 -1.9**
comp=Z,6.6nm,0.9s,baz=90,slow=1.9,SNR=7.5
FINES FINESS Array B 135.92 343 PKPdf **PKPdf** **01 06 20.3 +0.8**
VRH Novokhopyorsk 136.35 324 *e*PKIKP **PKPdf** **01 06 19.9 -0.6**
VRH pmax pmax
comp=Z,40nm,0.6s
OBN Obninsk 136.78 331 PKhKP PKPpre 01 06 10.7
comp=Z,2.1nm,0.3s,baz=6.1,slow=10,SNR=3.3
OBN PKP **PKPdf** **01 06 20.0 -1.2**
comp=Z,5.7nm,0.5s,baz=2.3,slow=6.4,SNR=7.5
OBN SKPbc **SKPbc** **01 09 00.9 +0.8**
comp=Z,1.5nm,0.4s,baz=58,slow=3.0,SNR=4.7
OBN Obninsk 136.78 331 **PKPdf** **01 06 20.0 -1.2**
OBN Obninsk 136.78 331 *i* PKIKP **PKPdf** **01 06 18.9 -2.3**
OBN pmax pmax
comp=Z,18nm,0.8s
LPSR Galich'ya Gora 137.11 327 *e*PKIKP **PKPdf** **01 06 20.7 -1.2**
LPSR pmax pmax
comp=Z,10.0nm,1.0s
VORR Voronezh 137.47 326 *e*PKIKP **PKPdf** **01 06 22.1 -0.5**
VORR pmax pmax
comp=Z,50nm,0.7s
VSR Storozhevoye 137.73 325 *e*PKIKP **PKPdf** **01 06 21.7 -1.4**
VSR pmax pmax
comp=Z,20nm,1.0s
ZEI Tsey 138.34 312 *i* PKIKP **PKiKP** **01 06 26.5 -0.5**
ZEI pmax pmax
comp=Z,7.0nm,0.9s
DOMB Dombas 138.47 355 *e* PKPpre 01 06 16.6
GNI Garni 138.47 308*c i*PKIKP **PKiKP** **01 06 26.6 -0.7**
GNI pmax pmax
comp=Z,26nm,1.3s
AKN Aaknes 138.49 356 *e* **PKPdf** **01 06 17.6 -6.7**
KMBO Kilima Mbogo 138.72 242 PKhKP PKPpre 01 06 17.7
comp=Z,1.7nm,0.7s,baz=314,slow=1.6,SNR=6.4
KMBO PKP **PKPdf** **01 06 25.3 -1.1**
comp=Z,5.7nm,0.9s,baz=236,slow=9.4,SNR=4.2
KMBO SKPbc **SKPbc** **01 09 07.9 +0.6**
comp=Z,2.2nm,0.8s,baz=61,slow=2.1,SNR=4.1
KBZ Khabaz 138.72 313 PKhKP PKPpre 01 06 17.2
comp=Z,2.6nm,0.8s,baz=97,slow=4.0,SNR=4.0
KIV Kislovodsk 138.79 314 *e*PKIKP **PKPdf** **01 06 25.3 -0.1**
KIV pmax pmax
comp=Z,8.0nm,1.0s
RAYN Ar Rayn 139.21 282 PKPdf **PKPdf** **01 06 26.7 0.0**
RAYN Ar Rayn 139.21 282 PKIKP **PKPdf** **01 06 26.7 0.0**
NB2 NORSAR Subarra 139.23 353 *e* PKPpre 01 06 17.0
baz=10,slow=3.2
NB2 NORSAR Subarra 139.23 353 PKP PKPpre 01 06 17.0
comp=Z,1.9nm,0.5s,baz=10,slow=3.2
NOA NORSAR Array B 139.23 353 PKhKP PKPpre 01 06 17.1
comp=Z,5.6nm,0.7s,baz=11,slow=2.3,SNR=28
NOA PKP **PKPdf** **01 06 26.4 +0.8**
comp=Z,2.7nm,0.6s,baz=31,slow=1.7,SNR=8.2
NOA SKPbc **SKiKP** **01 09 08.6 -1.1**
comp=Z,2.6nm,0.8s,baz=16,slow=4.3,SNR=5.4
ASK Askoy 140.28 357 *e*PKPdf **PKPdf** **01 06 21.5 -5.9**
BER Bergen 140.38 357 *e*PKPdf **PKPdf** **01 06 22.4 -5.2**
IDID Didziasalis 140.66 337 *e*P **PKPdf** **01 06 22.6 -5.7**
ISAL Salakas 140.67 338 *e*P **PKPdf** **01 06 23.1 -5.2**
KONO Kongsberg 140.77 353 ⇑PKHKP PKPpre 01 06 22.3
KONO Kongsberg 140.77 353 *e*PKPdf **PKPdf** **01 06 22.5 -5.9**
IIGN Ignalina 140.81 338 *e*P **PKPdf** **01 06 23.0 -5.5**
NACGM Naroch 140.96 337*fe*PKP **PKPdf** **01 06 23.9 -4.9**
baz=39
VSVD Vaisvydziai 141.08 340 *e*P **PKPdf** **01 06 23.9 -5.0**
BLS5 Blasjo 141.27 356 *e*PKPdf **PKPdf** **01 06 24.6 -4.7**
PABE Paberze 141.46 340 *e*P **PKPdf** **01 06 25.5 -4.2**
KMY Karmoy 141.55 357 *e*PKPdf **PKPdf** **01 06 25.4 -4.3**
PBUR Paburge 141.66 342 *e*P **PKPdf** **01 06 26.2 -3.8**
ANN Anapa 141.90 317 *i* PKHKP PKPpre 01 06 23.1
ANN pmax pmax
comp=Z,27nm,0.8s
MARD Mardin 142.19 304 **PKPdf** **01 06 28.6 -3.2**
HOMB Homborsund 142.24 354 *e*PKPdf **PKPdf** **01 06 27.9 -3.1**
SNART Snartemo 142.29 355 *e*PKPdf **PKPdf** **01 06 27.7 -3.3**
LODK Lodwar 142.72 247 PKPdf **PKPdf** **01 06 31.4 -2.0**
SHEL Horse Pasture 142.78 169 **PKPdf** **01 06 32.5 -0.8**
SHEL Horse Pasture 142.78 169 PKIKP **PKPdf** **01 06 32.5 -0.8**
SUW Suwalki 142.94 339 *e*PKP **PKPdf** **01 06 30.1 -2.2**
SUW Suwalki 142.94 339 PKPdf **PKPdf** **01 06 30.1 -2.2**
SUW Suwalki 142.94 339 PKIKP **PKPdf** **01 06 30.2 -2.2**
SUW Suwalki 142.94 339 *e*P **PKPdf** **01 06 30.3 -2.0**
OVD Ostervraa, Den 142.98 352 *i* P **PKPdf** **01 06 29.1 -3.2**
AKASG Malin Array Be 143.03 330 PKP PKPab 01 06 30.2 -0.2
comp=Z,66nm,0.4s,baz=34,slow=4.3,SNR=769
AKASG SKPbc **SKiKP** **01 09 17.9 +0.1**
comp=Z,5.6nm,1.0s,baz=36,slow=3.7,SNR=7.2
AKASG Malin Array Be 143.03 330*c i*PKIKP PKPpre 01 06 29.7
AKASG pmax pmax
comp=Z,66nm,0.4s
AKBB Malin Array Si 143.03 330*c i*PKHKP PKPpre 01 06 29.6
KAC Achnashellach 143.03 6 *e*P PKPab 01 06 30.3 +0.1
MCD Coleburn Disti 143.12 4 *e*P PKPab 01 06 30.4 -0.1
KPL Plockton 143.16 6 *e*P PKPab 01 06 28.6 -2.0
MDO Dochfour 143.18 5 *e*P PKPab 01 06 30.6 -0.2
DEL Delary 143.22 348 *e*P PKPab 01 06 30.5 -0.3
GOET G??ttrup 143.38 353 *i* P PKPab 01 06 31.1 -0.4
DRUM Mains of Drumt 143.84 4 *e*P PKPbc 01 06 31.9 -1.2
MUD Monsted U'grnd 143.95 353 *i* P PKPbc 01 06 31.5 -2.0
EDU Dundee 144.17 4 *e*P PKPbc 01 06 34.1 -0.1
INVG Invergeldie, C 144.21 5 *e*P PKPbc 01 06 33.8 -0.5
COP Copenhagen 144.22 349 *i* P PKPbc 01 06 33.5 -0.8
BSD Bornholm Skovb 144.28 347 *e*P PKPbc 01 06 34.2 -0.4
BSD Bornholm Skovb 144.28 347 *i* P PKPbc 01 06 32.9 -1.6
MBAR Mbarara 144.29 237*c i*PKIKP **PKPab** **01 06 36.8 +0.3**
MBAR pmax pmax
comp=Z,108nm,1.7s
TOKA Tokat 144.42 311 **PKPdf** **01 06 35.3 -0.1**
LLD Lille Linde 144.59 349 *i* P **PKPdf** **01 06 34.5 -0.7**
PGBU Glenifferbraes 144.78 6 *e*P **PKPdf** **01 06 35.3 -0.2**
EBL Broad Law 144.94 4 *e*P **PKPdf** **01 06 35.6 -0.2**
RGN Rugen 145.13 348 **PKPbc** **01 06 37.6 +0.5**
SORM Soroca 145.19 328 ⇓P **PKPdf** **01 06 36.3 -0.2**
SORM Soroca 145.19 328 ⇓PKIKP **PKPdf** **01 06 36.3 -0.2**
ESK Eskdalemuir 145.38 5 **PKPbc** **01 06 37.7 -0.1**
ESK Eskdalemuir 145.38 5 PKIKP **PKPbc** **01 06 37.7 -0.1**
GKP Gorka Klasztor 145.40 343 *i* PKPdf **PKPbc** **01 06 38.2 +0.3**
GKP Gorka Klasztor 145.40 343 *e*P **PKPbc** **01 06 38.3 +0.3**
BNN Bunyan 145.42 309 **PKPbc** **01 06 38.8 +0.1**
BZK Bozkurt 145.42 315 ⇑P **PKPbc** **01 06 38.6 +0.2**
BZK Bozkurt 145.42 315 **PKPbc** **01 06 38.1 -0.3**

PURM Purcari 145.44 325 ⇑P **PKPbc** **01 06 38.8 +0.5**
BEL Belsk 145.56 339 *e*PKP **PKPbc** **01 06 39.0 +0.6**
GAL1 Galloway 145.69 6 *e*P **PKPdf** **01 06 37.4 +0.3**
KIS Kishinev 145.70 326 ⇓*i*PKP **PKPbc** **01 06 38.6 -0.4**
comp=Z,120nm,0.9s
KIS Kishinev 145.70 326 ⇑P **PKPbc** **01 06 39.1 0.0**
KIS Kishinev 145.70 326*d i*PKIKP **PKPbc** **01 06 38.6 -0.4**
KIS *i* 01 06 40.5
KIS pmax pmax
comp=Z,120nm,0.9s
MILM Milestii Mici 145.76 326 *e*PKHKP PKPpre 01 06 36.0
MILM Milestii Mici 145.76 326 *i* PKiKP **PKPbc** **01 06 38.4 -0.8**
MILM Milestii Mici 145.76 326 ⇑P **PKPbc** **01 06 39.1 -0.1**
MILM Milestii Mici 145.76 326 ⇑PKP2 **PKPbc** **01 06 39.1 -0.1**
EDMD Edmundbyers 145.94 4 *e*P **PKPbc** **01 06 39.0 -0.5**
LVV L'vov 145.96 334 *e*PKIKP **PKPdf** **01 06 38.6 +0.9**
DRBR Darabani 145.99 329 ⇑P **PKPbc** **01 06 39.5 -0.3**
KESW Keswick, Cumbr 146.11 5 *e*P **PKPdf** **01 06 38.3 +0.4**
GMM Mts of Mourne 146.16 8 *e*P **PKPbc** **01 06 40.2 +0.1**
IOMK Kirk Michael 146.30 6 *e*P **PKPbc** **01 06 39.9 -0.6**
ILTH Belurgan, Co L 146.32 8 *e*P **PKPdf** **01 06 38.7 +0.5**
LEOM Leova 146.34 326 ⇑P **PKPbc** **01 06 41.2 +0.4**
LEOM Leova 146.34 326 ⇑PKP2 **PKPbc** **01 06 41.2 +0.4**
WIM Isle of Man 146.40 6 *e*P **PKPbc** **01 06 40.2 -0.6**
GDLE Glaisdale, N Y 146.41 2 *e*P **PKPbc** **01 06 39.8 -0.9**
VASR Vaslui 146.47 326 ⇑P **PKPbc** **01 06 41.9 +0.7**
BR131 Keskin Array S 146.65 312 **PKPdf** **01 06 40.1 +0.8**
BR131 Keskin Array S 146.65 312 PKIKP **PKPdf** **01 06 40.2 +0.8**
BRTR Keskin Array B 146.65 312 PKPbc **PKPbc** **01 06 42.0 -0.1**
comp=Z,36nm,0.7s,baz=146,slow=2.7,SNR=125
BRTR Keskin Array B 146.65 312 PKPdf **PKPdf** **01 06 38.6 -0.8**
HWQ Hawqa 146.76 301 *e*P **PKPbc** **01 06 41.7 -0.9**
BIR Birlad 146.80 326 ⇑P **PKiKP** **01 06 43.1 -0.9**
BIR Birlad 146.80 326 ⇑PKP2 **PKiKP** **01 06 43.1 -0.9**
HPK Haverah Park 146.84 3 *e*P **PKPbc** **01 06 41.6 -0.4**
VLDR Vladesti 146.84 325 ⇓P **PKPbc** **01 06 42.6 +0.4**
TLCR 146.85 323 ⇑P **PKPbc** **01 06 42.7 +0.5**
TLCR 146.85 323 ⇑PKP2 **PKPbc** **01 06 42.7 +0.5**
GIRR Girov 146.91 328 ⇑P **PKPbc** **01 06 42.9 +0.5**
VARL Varlezi 146.93 325 ⇑P **PKPbc** **01 06 43.2 +0.8**
SCTR Scanteiesti 146.99 325 ⇑P **PKiKP** **01 06 43.6 -0.8**
GIUM Giurgiulesti 147.00 324 ⇑P **PKPbc** **01 06 43.2 +0.6**
GHRR 147.05 326 ⇑P **PKiKP** **01 06 44.2 -0.3**
BURAR Bucovina Array 147.07 330 ⇑P **PKiKP** **01 06 44.0 -0.7**
BURAR Bucovina Array 147.07 330 PKPdf **PKPdf** **01 06 39.6 -0.2**
BURAR Bucovina Array 147.07 330 ⇑PKP2 **PKiKP** **01 06 44.0 -0.7**
JURR Jurilovca 147.07 323 ⇑P **PKPbc** **01 06 43.3 +0.5**
DSB Dublin 147.08 9 **PKPbc** **01 06 42.4 -0.2**
BHL Bhannes 147.09 301 *e*P **PKPbc** **01 06 42.5 -0.9**
BIZ Bicaz 147.12 328 ⇑P **PKiKP** **01 06 44.2 -0.5**
TESR Tescani 147.14 327 ⇓P **PKPbc** **01 06 43.2 +0.2**
SHBL Chebaa 147.15 300 *e*P **PKPbc** **01 06 43.6 0.0**
WPS Cemaes, Angles 147.16 7 *e*P **PKPbc** **01 06 41.5 -1.3**
SLCR Slobozia Conac 147.17 325 ⇑P **PKiKP** **01 06 44.0 -0.8**
ANTO Ankara 147.18 312 PKPdf **PKPdf** **01 06 39.9 -0.3**
ANTO PKPbc **PKPbc** **01 06 43.6 +0.2**
ANTO Ankara 147.18 312 PKIKP **PKPdf** **01 06 39.9 -0.3**
WME Myndd Eilian 147.18 6 *e*P **PKPdf** **01 06 39.2 -0.4**
IZVR Izvoarele 147.20 325 ⇑P **PKPbc** **01 06 43.9 +0.8**
TUDR 147.22 325 ⇑P **PKPbc** **01 06 42.8 -0.4**
CFR Carcaliu 147.23 324 ⇑P **PKPbc** **01 06 43.7 +0.5**
CFR Carcaliu 147.23 324 ⇑PKP2 **PKPbc** **01 06 43.7 +0.5**
OJC Ojcow 147.26 338 *i* PKPdf **PKPbc** **01 06 43.1 -0.1**
OJC Ojcow 147.26 338 PKPdf **PKPdf** **01 06 39.6 -0.3**
OJC PKPbc **PKPbc** **01 06 43.1 -0.1**
OJC Ojcow 147.26 338 PKIKP **PKPdf** **01 06 39.6 -0.3**
TPGR Topolog 147.27 323 ⇑P **PKPbc** **01 06 44.1 +0.7**
WLF1 Llynfaes 147.28 6 *e*P **PKPdf** **01 06 39.4 -0.4**
YRC Rhoscolyn 147.30 7 *e*P **PKPbc** **01 06 41.9 -1.3**
PANC Panciu 147.31 326 ⇑P **PKPbc** **01 06 44.1 +0.6**
KOLS Kolonicke sedl 147.37 334 *e*PKIKP **PKPdf** **01 06 41.3 +1.2**
KOLS *e* 01 06 48.3
KOLS Kolonicke sedl 147.37 334 *e*PKP **PKPdf** **01 06 41.3 +1.2**
KOLS *e* 01 06 44.3
KOLS *e* 01 06 48.3
LBWR Ladybower, Pea 147.38 4 *e*P **PKPdf** **01 06 40.9 +0.9**
ODBI Odobesti 147.43 326 ⇑P **PKiKP** **01 06 45.1 -0.3**
TIRR Tirgusor 147.52 323 ⇑P **PKPbc** **01 06 44.4 +0.4**
TIRR Tirgusor 147.52 323 **PKPbc** **01 06 43.8 -0.2**
TIRR Tirgusor 147.52 323 ⇑PKP2 **PKPbc** **01 06 44.4 +0.4**
VRI Vrincioaia 147.54 326 ⇑P **PKPbc** **01 06 44.3 +0.2**
VRI Vrincioaia 147.54 326 ⇑PKP2 **PKPbc** **01 06 44.3 +0.2**
JOSR Joseni 147.57 328 ⇓P **PKiKP** **01 06 45.2 -0.5**
PLOR Plostina 147.59 326 ⇑P **PKPbc** **01 06 44.3 +0.1**
PLOR Plostina 147.59 326 ⇑PKP2 **PKPbc** **01 06 44.3 +0.1**
UZH Uzhgorod 147.60 334 *i* PKP2 **PKPbc** **01 06 44.0 -0.1**
HARR Harsova 147.65 323 ⇑P **PKPbc** **01 06 44.9 +0.5**
HARR Harsova 147.65 323 ⇑PKP2 **PKPbc** **01 06 44.9 +0.5**
STNC Stoke 147.66 4 *e*P **PKPbc** **01 06 43.6 -0.5**
TLBR Topalu 147.68 323 ⇑P **PKiKP** **01 06 45.1 -0.7**
MFTR Murfatlar 147.69 322 ⇑P **PKiKP** **01 06 45.2 -0.7**
CRVS Cervenica-Dubn 147.72 335 *e*PKP2 **PKPbc** **01 06 45.0 +0.6**
CRVS Cervenica-Dubn 147.72 335 *e*PKP **PKPbc** **01 06 45.0 +0.6**
CRVS *e* 01 06 49.7
GRER 147.73 325 ⇓P **PKiKP** **01 06 45.9 0.0**
NIE Niedzica 147.74 337 *i* PKPdf **PKiKP** **01 06 45.5 -0.5**
BISRR Bisoca 147.76 326 ⇑P **PKiKP** **01 06 45.8 -0.7**
FOEL Foel Wylfa 147.79 5 *e*P **PKPdf** **01 06 41.2 +0.5**
MANR Mangalia 147.81 322 ⇑P **PKiKP** **01 06 45.8 -0.4**
CVDA Cernavoda 147.81 323 ⇑P **PKiKP** **01 06 45.5 -0.6**
BMR Baia Mare 147.82 332 ⇑P **PKPbc** **01 06 45.3 +0.6**
BMR Baia Mare 147.82 332 ⇑PKP2 **PKPbc** **01 06 45.3 +0.6**
COVR Voineasa-Covas 147.82 327 ⇑P **PKPbc** **01 06 45.0 +0.2**
KSP Ksiaz 147.83 342 *i* PKPdf **PKPbc** **01 06 45.2 +0.6**
ARCR ARCALIA 147.86 330 ⇑P **PKiKP** **01 06 45.7 -0.5**
MDUB Mudurnu 147.99 314 **PKPbc** **01 06 45.2 -0.3**
AMRR Amara 148.03 324 ⇑P **PKiKP** **01 06 46.3 -0.3**
AMRR Amara 148.03 324 ⇑PKP2 **PKiKP** **01 06 46.3 -0.3**
NEHR Nehoiu 148.06 326 ⇑P **PKPbc** **01 06 45.7 +0.2**
ICOR Ion Corvin 148.08 323 ⇑P **PKiKP** **01 06 46.3 -0.4**
OSTC Ostas 148.11 342 *e*PKPDF **PKPdf** **01 06 41.3 0.0**
OSTC ⇑*e*PKP **PKiKP** **01 06 46.0 -0.6**
PSN Preselentsi 148.12 322 *i* P **PKiKP** **01 06 46.4 -0.4**
CHVC Chvalec 148.13 342 *e*PKPDF **PKPdf** **01 06 41.6 +0.3**
CHVC ⇑*e*PKP **PKiKP** **01 06 45.9 +0.5**
ISR Istrita 148.13 325 ⇑P **PKiKP** **01 06 46.3 -0.6**
ISR Istrita 148.13 325 ⇑PKP2 **PKiKP** **01 06 46.3 -0.6**
OKC Ostrava-Krasne 148.15 339 *e*PKP2 **PKPbc** **01 06 45.7 +0.3**
OKC Ostrava-Krasne 148.15 339⇑*e*PKP **PKPbc** **01 06 45.7 +0.3**
OKC *e*PKPAB **PKPab** **01 06 51.0 +0.4**
DOPR Dopca 148.15 328 ⇑P **PKiKP** **01

LANS e 01 06 52.6
KRLC Kraliky 148.37 341 *e*PKHKP PKPpre 01 06 41.9
KRLC *e* 01 06 52.1
KRLC Kraliky 148.37 341 *e*PKPDF **PKPdf 01 06 41.9 +0.1**
KRLC ⇑*e*PKP **PKiKP 01 06 46.7 -0.5**
KRLC *e*PKPAB **PKPab 01 06 52.1 +0.5**
RASA Rasa 148.38 323 ⇑P **PKiKP 01 06 46.9 -0.5**
MORC Moravsky Berou 148.39 340 ⇑P **PKiKP 01 06 47.0 -0.3**
MORC Moravsky Berou 148.39 340 PKPdf **PKPdf 01 06 41.5 -0.3**
MORC PKPbc **PKPbc 01 06 46.5 +0.4**
MORC Moravsky Berou 148.39 340 PKHKP PKPpre 01 06 41.5
MORC Moravsky Berou 148.39 340 *e*PKP **PKPdf 01 06 41.8 0.0**
MORC *e* 01 06 46.5
BRG Berggiesshubel 148.43 345 *e*PKP **PKPdf 01 06 42.2 +0.4**
BRG Amp 01 06 43.1
comp=Z,9.7nm,1.1s
BRG *i* x x 01 06 46.6
BRG Amp 01 06 47.2
comp=Z,49nm,1.1s
BRG *ex* x 01 06 52.1
BRG Amp 01 06 52.7
comp=Z,32nm,0.7s
BRG Berggiesshubel 148.43 345 *e*PKHKP PKPpre 01 06 42.1
BRG *e* 01 06 52.1
BRG pmax pmax
comp=Z,10.0nm,1.2s
BRG pmax pmax
comp=Z,32nm,0.7s
SECR 148.44 326 ⇑P **PKiKP 01 06 46.9 -0.5**
KECS Kecovo 148.44 335 *e*PKP2 **PKiKP 01 06 47.2 -0.1**
KECS Kecovo 148.44 335 *e*PKP **PKiKP 01 06 47.2 -0.1**
KECS *e* 01 06 52.7
MESR Meseseni 148.46 331 ⇑P **PKiKP 01 06 47.1 -0.3**
CJR Cluj-Napoca 148.49 330 ⇑P **PKiKP 01 06 47.2 -0.4**
CJR Cluj-Napoca 148.49 330 ⇑PKP2 **PKiKP 01 06 47.2 -0.4**
MDB Medias 148.53 329 ⇓P **PKiKP 01 06 47.5 -0.1**
MDB Medias 148.53 329 ⇓PKP2 **PKiKP 01 06 47.5 -0.1**
PLAR PLOIESTI 148.54 325 ⇑P **PKiKP 01 06 47.5 -0.2**
RSBS Rosebush, Pemb 148.56 7 *e*P **PKPbc 01 06 46.1 -0.3**
SUR 148.57 325 ⇑P **PKiKP 01 06 48.0 +0.3**
PVCC Panska Ves 148.59 344 *e*PKHKP PKPpre 01 06 42.4
PVCC *e* 01 06 52.2
PVCC Panska Ves 148.59 344 *e*PKPDF **PKPdf 01 06 42.4 +0.4**
PVCC ⇑*e*PKP **PKiKP 01 06 47.2 -0.4**
PVCC *e*PKPAB **PKPab 01 06 52.2 -0.2**
CSS Mathiatis 148.63 303 **PKPbc 01 06 46.4 -0.8**
MAUC Maruska 148.66 339 *e*PKPDF **PKPdf 01 06 40.6 -1.6**
MAUC ⇑*e*PKP **PKiKP 01 06 47.4 -0.4**
MCH1 Michaelchurch 148.69 5 *e*P **PKPdf 01 06 41.4 -0.7**
VOIR 148.69 327 ⇑P **PKPbc 01 06 47.2 +0.2**
VOIR 148.69 327 ⇑PKHKP PKPpre 01 06 47.2
LTVH Ltavrtes, Hu 148.73 333 ⇑P **PKiKP 01 06 48.1 +0.2**
BORA Eskisehir 148.77 314 **PKPbc 01 06 47.1 -0.3**
DRGR 148.83 331 ⇓P **PKPbc 01 06 47.6 +0.3**
DRGR 148.83 331 ⇓PKHKP PKPpre 01 06 47.6
MONM Monmouth 148.86 5 *e*P **PKPbc 01 06 46.4 -0.7**
SGRR Singureni 149.03 325 ⇑P **PKPbc 01 06 47.5 -0.3**
PRU Pruhonice 149.09 343 *e*PKHKP PKPpre 01 06 47.5
PRU *e* 01 06 54.1
PRU Pruhonice 149.09 343 ⇑*e*PKP **PKPbc 01 06 47.5 -0.2**
PRU *e*PKPAB **PKPab 01 06 54.5 +0.1**
VRAC Vranov 149.10 341 ⇑P **PKiKP 01 06 48.6 -0.1**
VRAC Vranov 149.10 341 ⇑PKHKP PKPpre 01 06 48.6
VRAC Vranov 149.10 341 *e*PKP **PKPdf 01 06 42.1 -0.8**
VRAC *e* 01 06 48.1
PSZ Piszkesteto 149.13 335 ⇑P **PKiKP 01 06 48.5 -0.4**
PSZ Piszkesteto 149.13 335 **PKPbc 01 06 47.8 -0.2**
PSZ Piszkesteto 149.13 335 ⇑PKHKP PKPpre 01 06 48.5
PSZ Piszkesteto 149.13 335 PKP **PKPbc 01 06 46.6 -1.5**
KOLL Kolacno 149.13 338 *e*PKP **PKiKP 01 06 48.5 -0.3**
KOLL *e* 01 06 55.6
JAVC Velka Javorina 149.15 339 *e*PKP **PKPdf 01 06 44.1 +1.0**
JAVC *e* 01 06 49.5
RAZG Razgrad 149.15 323 ⇑P **PKPbc 01 06 48.5 +0.3**
LOT Lotru 149.32 328 ⇓P **PKPbc 01 06 48.3 -0.3**
HUMR Humele 149.35 326 ⇓P **PKPbc 01 06 48.1 -0.4**
NKC Novy Kostel 149.38 346 *e*PKIKP **PKPdf 01 06 43.3 0.0**
NKC *e* 01 06 55.5
NKC Novy Kostel 149.38 346 *e*PKPDF **PKPdf 01 06 43.3 0.0**
NKC ⇑*e*PKP **PKPbc 01 06 48.6 +0.1**
NKC *e*PKPAB **PKPab 01 06 55.5 -0.2**
KRUC Moravsky 149.38 341 *e*PKP **PKPdf 01 06 43.2 -0.1**
KRUC *e* 01 06 48.7
DEV Deva 149.42 330 ⇑P **PKiKP 01 06 49.2 -0.2**
DEV Deva 149.42 330 ⇑PKHKP PKPpre 01 06 49.2
TREC Trest 149.45 342 *e*PKHKP PKPpre 01 06 45.6
TREC *e* 01 06 56.5
TREC Trest 149.45 342 *e*PKPDF **PKPdf 01 06 45.6 +2.1**
TREC ⇑*e*PKP **PKPbc 01 06 48.7 0.0**
TREC *e*PKPAB **PKPab 01 06 56.5 +0.5**
BSZH Besenyszg 149.48 334 ⇑P **PKiKP 01 06 49.6 +0.1**
WOL Wolverton 149.50 3 *e*P **PKPbc 01 06 48.0 -0.7**
SMOL Smolenice 149.53 339 *e*PKHKP PKPpre 01 06 49.8
SMOL *e* 01 06 57.6
SMOL Smolenice 149.53 339 *e*PKP **PKiKP 01 06 49.8 +0.2**
SMOL *e* 01 06 57.6
SZH Strazhica 149.67 323 *i* P **PKPbc 01 06 49.4 0.0**
MODS Modra-Piesok 149.70 339 *e*PKHKP PKPpre 01 06 44.4
MODS *e* 01 06 58.3
MODS Modra-Piesok 149.70 339 *e*PKP **PKPdf 01 06 44.4 +0.5**
MODS *e* 01 06 50.1
MODS *e* 01 06 58.2
SIRR Siria 149.70 332 ⇑P **PKiKP 01 06 50.2 +0.1**
ZIMR 149.73 324 ⇑P **PKiKP 01 06 49.8 -0.3**
ZIMR 149.73 324 ⇑PKHKP PKPpre 01 06 49.8
JMB Yambol 149.79 321 *i* P **PKPbc 01 06 49.8 +0.1**
SRO Srobarova 149.81 337 *e*PKHKP PKPpre 01 06 50.0
SRO *e* 01 06 58.5
SRO Srobarova 149.81 337 *e*PKP **PKiKP 01 06 50.0 -0.2**
SRO *e* 01 06 58.5
BUD Budapest 149.82 336 PKP **PKPbc 01 06 49.8 +0.3**
SRO2 Moca 149.82 337 *e*PKHKP PKPpre 01 06 48.8
SRO2 *e* 01 06 56.9
SRO2 Moca 149.82 337 *e*PKP **PKPbc 01 06 48.8 -0.7**
SRO2 *e* 01 06 56.9
GZR Gura Zlata 149.84 329 ⇑P **PKPbc 01 06 50.1 +0.3**
GZR Gura Zlata 149.84 329 ⇑PKIKP **PKPbc 01 06 50.1 +0.3**
BEBN Eben Emael 149.90 355 *d*PKPab **PKPab 01 06 58.0 +0.2**
VLAD Vladila 150.01 326 ⇑P **PKiKP 01 06 50.9 +0.2**
MEM Membach 150.05 354 *d*PKPdf **PKPdf 01 06 44.3 0.0**
MEM *d*PKiKP **PKPbc 01 06 50.2 +0.2**
MEM *d*PKPab **PKPab 01 06 58.2 -0.2**
BTNL Ternell 150.06 354 *d*PKPdf **PKPdf 01 06 44.7 +0.3**
BTNL *d*PKiKP **PKPbc 01 06 50.3 +0.2**
BSTI Sart Tilman 150.12 355 *d*PKiKP **PKPbc 01 06 50.3 +0.2**
BSTI *d*PKPab **PKPab 01 06 58.7 0.0**
KHC Kasperske Hory 150.13 344 **PKPdf 01 06 44.3 -0.3**
KHC PKPbc **PKiKP 01 06 50.6 -0.3**
KHC PKPab **PKPab 01 06 59.5 +0.6**
KHC Kasperske Hory 150.13 344 *e*PKIKP **PKPdf 01 06 44.4 -0.2**
KHC *e* 01 06 59.4
KHC Kasperske Hory 150.13 344 *e*PKPDF **PKPdf 01 06 44.4 -0.2**
KHC ⇑*e*PKP **PKPbc 01 06 50.2 -0.1**
KHC *e*PKPAB **PKPab 01 06 59.4 +0.6**
GRA1 Grafenberg Arr 150.15 347 **PKPbc 01 06 50.1 -0.2**
GRA1 PKPab **PKPab 01 06 59.6 +0.7**
GRF Grafenberg Arr 150.15 347 PKIKP **PKPbc 01 06 50.1 -0.2**
GRF 01 06 59.6
GRFO Grafenberg 150.16 347 **PKPbc 01 06 50.1 -0.2**
GRFO Grafenberg 150.16 347 PKIKP **PKPbc 01 06 50.1 -0.2**
SRE Strehaia 150.16 328 ⇑P **PKiKP 01 06 51.4 +0.4**
SRE Strehaia 150.16 328 ⇑PKHKP PKPpre 01 06 51.4
CSKK Cskako 150.21 337 PKP **PKPbc 01 06 50.1 -0.4**
CKRC Cesky Krumlov 150.22 343 *e*PKPDF **PKPdf 01 06 44.6 -0.1**
CKRC ⇑*e*PKP **PKPbc 01 06 50.3 -0.2**
BZS Buzias 150.22 331 ⇑P **PKiKP 01 06 51.0 0.0**
BZS Buzias 150.22 331 ⇑PKIKP **PKiKP 01 06 51.1 0.0**
SNF Seneffe 150.29 356 *d*PKiKP **PKPbc 01 06 50.7 +0.2**
SNF *d*PKPab **PKPab 01 06 59.5 +0.2**
BCLA Clavier 150.30 355 *d*PKP **PKPbc 01 06 50.4 -0.2**
BCLA *d*PKPab **PKPab 01 06 59.3 -0.2**
BHOU Houvegnez 150.31 354 *d*PKiKP **PKiKP 01 06 51.0 -0.1**
BHOU *d*PKPab **PKPab 01 06 59.7 +0.2**
GEC2 GERESS Array S 150.36 344 PKPdf **PKPdf 01 06 44.6 -0.4**
GEC2 PKPbc **PKPbc 01 06 51.0 +0.1**
GEC2 PKPab **PKPab 01 06 60.0 +0.1**
GERES GERESS Array B 150.36 344 PKP **PKPdf 01 06 44.9 -0.1**
comp=Z,1.0nm,0.7s,baz=48,slow=2.0,SNR=13
GERES PKPbc **PKPbc 01 06 51.1 +0.1**
comp=Z,17nm,0.6s,baz=36,slow=2.7,SNR=96
GERES pPKPab **pPKPab 01 09 08.1 +0.1**
comp=Z,1.6nm,0.7s,baz=60,slow=3.2,SNR=4.3
GERES GERESS Array B 150.36 344 **PKPdf 01 06 44.6 -0.4**
GERES PKPbc **PKPbc 01 06 51.1 +0.1**
GERES PKPab **PKPab 01 06 59.7 -0.2**
GERES GERESS Array B 150.36 344 PKIKP **PKPdf 01 06 44.6 -0.4**
GERES 01 06 59.7
HERR Herculane 150.39 329 ⇓P **PKPbc 01 06 51.0 +0.1**
BMRD Maredsous 150.46 356 *d*PKPdf **PKPdf 01 06 45.2 +0.2**
BMRD *d*PKiKP **PKPbc 01 06 51.0 +0.1**
BMRD *d*PKPab **PKPab 01 06 59.8 -0.4**
DJES Djerdap 150.50 329 ⇑P **PKPbc 01 06 51.0 -0.2**
SOP Sopron 150.54 339 PKP **PKPbc 01 06 51.3 +0.1**
CONA Conrad Observa 150.55 340 *i* P **PKiKP 01 06 51.8 -0.1**
comp=Z,48nm,0.7s,SNR=22
CONA *e*P **PKPab 01 07 01.4 +0.6**
comp=Z,32nm,0.8s
BAIL Bailesti 150.55 327 ⇑P **PKiKP 01 06 51.9 +0.1**
ELL Elmali 150.57 309 **PKPbc 01 06 51.3 -0.5**
ELL Elmali 150.57 309 PKIKP **PKPbc 01 06 51.3 -0.5**
RCHB Rochefort 150.57 355 *d*PKiKP **PKPbc 01 06 51.0 -0.2**
RCHB *d*PKPab **PKPab 01 07 00.3 -0.3**
PUNG Punghina 150.58 328 ⇑P **PKPbc 01 06 51.4 0.0**
BALB Balikesir 150.60 316 **PKPbc 01 06 51.0 -0.6**
BALB PKPab **PKPab 01 07 01.4 +0.3**
RONA Rosalia, Austr 150.61 339 *i* P **PKPdf 01 06 45.1 -0.3**
comp=Z,3.7nm,1.0s
RONA *i* P **PKiKP 01 06 51.7 -0.2**
comp=Z,63nm,0.5s,SNR=35
RONA *e*P **PKPab 01 07 02.2 +1.2**
comp=Z,48nm,1.1s
BANR Banloc 150.62 331 ⇑P **PKiKP 01 06 52.5 +0.6**
MPLH Magyarpolny 150.64 337 PKP **PKPbc 01 06 51.4 -0.1**
DIM Dimitrovgrad 150.66 322 *i* P **PKiKP 01 06 52.0 -0.1**
DOU Dourbes 150.68 356 *d*PKiKP **PKPbc 01 06 51.6 +0.2**
DOU *d*PKPab **PKPab 01 07 01.0 -0.1**
TIH Tihany 150.73 337 PKP **PKPbc 01 06 51.8 +0.1**
MDVR Moldovita 150.80 330 ⇓P **PKPbc 01 06 52.0 0.0**
MPEP Malo Peshtene 150.81 325 *i* P **PKPbc 01 06 52.0 0.0**
WLF Walferdange 150.97 354 **PKiKP 01 06 52.4 -0.1**
WLF Walferdange 150.97 354 PKIKP **PKiKP 01 06 52.4 -0.1**
WLF Walferdange 150.97 354 *d*PKiKP **PKiKP 01 06 52.7 +0.2**
WLF *d*PKPab **PKPab 01 07 01.0 -1.3**
AKAS Kas 151.00 308 **PKPbc 01 06 52.2 -0.6**
MORH Mrgy, Hungar 151.01 335 ⇑P **PKiKP 01 06 52.5 -0.1**
MORH Mrgy, Hungar 151.01 335 *e*P **PKPbc 01 06 51.9 -0.4**
MOA Molln 151.11 342 *i* P **PKPbc 01 06 52.4 -0.1**
comp=Z,17nm,0.6s,SNR=7.8
BLKB Belogradchik 151.18 327 ⇑P **PKiKP 01 06 53.2 0.0**
ARSA Arzberg 151.26 340 *e*P **PKPbc 01 06 52.5 -0.4**
comp=Z,15nm,1.0s
KOVH Kovagotottos 151.33 335 PKP **PKPdf 01 06 46.8 +0.4**
RZN Rozhen 151.37 322 *i* P **PKiKP 01 06 53.7 -0.1**
FRGS Fruska Gora 151.38 332 ⇓P **PKiKP 01 06 53.2 0.0**
FRGS Fruska Gora 151.38 332 *e*P **PKPbc 01 06 52.6 -0.7**
STU Stuttgart 151.42 349 **PKPbc 01 06 53.0 -0.2**
STU PKPab **PKPab 01 07 04.2 -0.1**
BIOA Bad Ischl, Aus 151.43 343 *i* P **PKPbc 01 06 52.9 -0.4**
comp=Z,7.9nm,0.4s,SNR=8.5
BIOA *e*P **PKPab 01 07 05.4 +1.1**
comp=Z,19nm,0.7s
BEHE Becsehely 151.51 337 *e*P **PKPbc 01 06 53.3 -0.2**
BEHE Becsehely 151.51 337 PKP **PKiKP 01 06 53.8 +0.1**
JSA Saint Aubin 151.55 5 *e*P **PKPbc 01 06 53.0 -0.4**
VTS Vitosha 151.58 325 ⇑P **PKPbc 01 06 53.4 -0.6**
VTS Vitosha 151.58 325 PKPdf **PKPdf 01 06 46.5 -0.6**
VTS PKPbc **PKPbc 01 06 53.8 -0.2**
VTS PKPab **PKPab 01 07 06.2 +0.8**
VTS Vitosha 151.58 325 PKP2 **PKPab 01 07 06.2 +0.8**
VTS 02 06 46.5
VTS Vitosha 151.58 325 *i* P **PKPbc 01 06 53.7 -0.2**
BOVS Bovan 151.65 328 ⇓P **PKPbc 01 06 53.4 -0.5**
SOKA Soboth 151.92 340 *i* P **PKPbc 01 06 54.0 -0.5**
comp=Z,36nm,1.1s,SNR=10
TEKS Tekeris 151.98 332 *e*P **PKPbc 01 06 52.4 -2.2**
BFO Black Forest 152.00 350 **PKPbc 01 06 54.2 -0.3**
BFO PKPab **PKPab 01 07 06.4 -0.3**
BFO Black Forest 152.00 350 PKIKP **PKPbc 01 06 54.2 -0.3**
BFO 01 07 06.4
MMB Musomiste 152.00 323 *i* P **PKPbc 01 06 54.2 -0.6**
KBA Koelnbreinsper 152.07 342 *i* P **PKPbc 01 06 54.1 -0.8**
comp=Z,17nm,0.7s,SNR=10
KBA *e*P **PKPab 01 07 08.3 +1.0**
comp=Z,16nm,0.6s
DIVS Divibare 152.12 331 **PKPdf 01 06 47.4 -0.4**
DIVS PKPbc **PKPbc 01 06 54.9 -0.1**
DIVS Divibare 152.12 331 *e*P **PKPbc 01 06 54.8 -0.2**
KKB Krupnik 152.17 324 *i* P **PKPbc 01 06 54.6 -0.5**
OBKA Obir 152.22 340 *e*P **PKPbc 01 06 54.5 -0.7**
comp=Z,16nm,0.9s
OBKA *e*P **PKPab 01 07 07.8 -0.1**
comp=Z,23nm,0.9s
ECH Echery 152.28 352 **PKPbc 01 06 54.7 -0.5**
ECH PKPab **PKPab 01 07 07.3 -0.6**
ECH Echery 152.28 352 PKP2 **PKPab 01 07 07.3 -0.6**
ECH 02 06 54.7
ROSF Rostrenen 152.29 7 *e*P **PKPbc 01 06 54.4 -0.7**
WATA Walderalm 152.29 345 *i* P **PKPbc 01 06 55.0 -0.3**
comp=Z,14nm,0.4s,SNR=9.6
WATA *i* P **PKPab 01 07 08.3 +0.1**
comp=Z,39nm,0.9s
RETA Reutte 152.34 346 *i* P **PKPbc 01 06 55.2 -0.2**
comp=Z,16nm,0.8s,SNR=5.4
RETA *e*P **PKPab 01 07 08.5 +0.2**
comp=Z,36nm,0.7s
WTTA Wattenberg 152.35 345 *e*P **PKPdf 01 06 47.7 -0.4**
comp=Z,6.6nm,0.9s
WTTA *i* P **PKPbc 01 06 55.5 -0.1**
comp=Z,32nm,0.4s,SNR=12
WTTA *i* P **PKPab 01 07 08.9 +0.5**
comp=Z,43nm,0.6s
MYKA Terra Mystica 152.39 342 *i* P **PKPbc 01 06 54.7 -0.8**
comp=Z,20nm,0.5s,SNR=6.1
MYKA *e*P **PKPab 01 07 08.4 -0.2**
comp=Z,10nm,0.5s
MOTA Moosalm 152.40 346 *e*P **PKPdf 01 06 47.8 -0.4**
comp=Z,9.5nm,1.0s
MOTA *e*P **PKPbc 01 06 55.0 -0.6**
comp=Z,23nm,1.1s
MOTA *e*P **PKPab 01 07 08.6 -0.1**
comp=Z,57nm,1.1s
SQTA Sankt Quirin 152.49 345 *e*P **PKPdf 01 06 48.1 -0.2**
comp=Z,10nm,1.0s
SQTA *i* P **PKPbc 01 06 55.5 -0.3**
comp=Z,34nm,0.8s,SNR=7.4
SQTA *e*P **PKPab 01 07 09.6 +0.7**
comp=Z,28nm,0.9s
CRES Cresnjev 152.53 338 *e*P **PKPbc 01 06 54.6 -1.2**
BBLS Lazići 152.57 331 *e*P **PKPbc 01 06 56.0 0.0**
ABTA Abfaltersbach 152.60 343 *e*P **PKPdf 01 06 47.8 -0.6**
comp=Z,8.2nm,0.8s
ABTA *i* P **PKPbc 01 06 55.0 -1.0**
comp=Z,46nm,0.6s,SNR=9.4
ABTA *e*P **PKPab 01 07 09.4 0.0**
comp=Z,23nm,0.6s
LJU Ljubljana 152.64 340 ⇑*i*P **PKPbc 01 06 54.6 -1.4**
SJES Sjenica 152.77 329 *e*P **PKPbc 01 06 56.3 -0.2**
RUDO Rudo 152.78 331 *e*P **PKPbc 01 06 55.5 -0.9**
FETA Feichten 152.79 346 *e*P **PKPdf 01 06 48.7 -0.1**
comp=Z,13nm,0.9s
FETA *e*P **PKPbc 01 06 55.7 -0.8**
comp=Z,40nm,0.9s
FETA *e*P **PKPab 01 07 10.9 +0.6**
comp=Z,17nm,1.2s
BLY Banja Luka 152.81 335 *e*P **PKPbc 01 06 55.9 -0.5**
CLF Chambon-Foret 152.85 359 PKPdf **PKPdf 01 06 48.9 +0.3**
CLF PKPbc **PKiKP 01 06 56.7 +0.3**
CLF PKPab **PKPab 01 07 10.7 +0.4**
CEY Cerknica 152.95 340 *e*P **PKPbc 01 06 56.2 -0.5**
STAL STALIGIAL 153.00 343 **PKPdf 01 06 48.0 -0.9**
STAL PKPbc **PKPbc 01 06 55.9 -0.9**
STAL PKPab **PKPab 01 07 10.1 -0.9**
MGRS Mrkonjic Grad 153.12 335 ⇑*i*P **PKPab 01 07 12.4 +0.7**
SKDS Skadanscina 153.25 340 *e*P **PKPbc 01 06 56.0 -1.3**
UPM Unac-Piva 153.32 331 *e*P **PKPbc 01 06 56.0 -1.8**
CTI Castel Tesino 153.48 344 **PKPbc 01 06 56.7 -1.2**
CTI PKPab **PKPab 01 07 12.9 -0.3**
CTI Castel Tesino 153.48 344 PKP2 **PKPab 01 07 12.9 -0.3**
CTI 02 06 56.7
TUE Stuetta 153.61 348 PKPdf **PKPdf 01 06 49.1 -0.9**
TUE PKPbc **PKiKP 01 06 58.4 0.0**
TUE PKPab **PKPab 01 07 13.8 -0.1**
LIT Litokhoron 153.68 322 **PKPbc 01 06 57.1 -1.4**
LIT PKPab **PKPab 01 07 13.8 -0.3**
LIT Litokhoron 153.68 322 PKP2 **PKPab 01 07 13.9 -0.3**
LIT 02 06 57.1
BRY Bratogost 153.72 331 *e*P **PKPbc 01 06 57.5 -1.1**
PDG Podgorica 153.75 329 *e*P **PKPbc 01 06 56.6 -1.8**
TREB Trebinje 153.95 331 *e*P **PKPbc 01 06 57.4 -1.5**
DRME Dracevica, Mon 153.97 329 *e*P **PKPbc 01 06 57.0 -1.9**
SENIN Lac Senin/Sane 154.07 351 **PKPbc 01 06 59.3 0.0**
SENIN PKPab **PKPab 01 07 16.0 +0.1**
TEOL Teolo 154.11 343 **PKPbc 01 06 58.6 -0.5**
TEOL **PKPab 01 07 15.9 +0.1**
SALO Salr 154.16 345 PKPab **PKPab 01 07 15.3 -0.7**
KBN Korca 154.28 324 **PKiKP 01 06 59.0 -0.8**
KBN PKPab **PKPab 01 07 17.1 +0.2**
BNI Bardonecchia 155.45 351 PKPdf **PKPdf 01 06 52.2 -0.2**
BNI PKPab **PKPab 01 07 22.4 +0.7**
BNI Bardonecchia 155.45 351 PKP2 **PKPab 01 07 22.4 +0.7**
BNI 02 06 52.3
ITM Ithomi 155.85 317 PKPab **PKPab 01 07 23.1 -0.5**
ESDC Sonseca Array 160.65 13 PKP **PKPdf 01 06 59.3 +0.5**
comp=Z,1.4nm,1.0s,baz=2.9,slow=3.9,SNR=4.5
ESDC PKPab **PKPab 01 07 44.6 +0.2**
comp=Z,9.0nm,1.0s,baz=341,slow=4.0,SNR=18
ESDC Sonseca Array 160.65 13 PKPdf **PKPdf 01 06 58.9 +0.2**
ESDC PKPab **PKPab 01 07 44.6 +0.2**
KEST Kesra 163.60 337 PKPab **PKPab 01 07 58.0 +0.4**
comp=Z,14nm,0.8s,baz=326,slow=4.6,SNR=11
LIC Lamto 164.20 156 ⇑*i*PKIKP **PKPdf 01 07 03.1 +0.2**
comp=Z,27nm,1.0s
KIC Kosan Boka 164.43 157 ⇑*i*PKIKP **PKPdf 01 07 02.7 -0.4**
comp=Z,30nm,0.8s
TIC Toumodi 164.59 155 *e*PKIKP **PKPdf 01 07 02.9 -0.3**
comp=Z,2.0nm,0.2s
DBIC Dimbokro 164.67 156 PKP **PKPdf 01 07 02.6 -0.7**
comp=Z,9.4nm,0.8s,baz=223,slow=2.2,SNR=8.0
DBIC Dimbokro 164.67 156 ⇑PKIKP **PKPdf 01 07 02.8 -0.5**
TOA0 Torodi Ar. Sit 172.37 182 **PKPdf 01 07 07.4 -0.8**
TORD Torodi Ar. Bea 172.37 182 PKP **PKPdf 01 07 07.2 -1.0**
comp=Z,7.2nm,0.8s,baz=331,slow=0.5,SNR=37
TORD PKPab **PKPab 01 08 36.5 -0.1**
comp=Z,2.8nm,0.8s,baz=174,slow=3.6,SNR=7.5
TORD pPKP **pPKPdf 01 09 25.3 +1.4**
comp=Z,1.3nm,0.8s,baz=32,slow=2.2,SNR=3.2
TORD pPKPab **pPKPab 01 10 45.7 +2.7**
comp=Z,2.6nm,1.0s,baz=197,slow=3.1,SNR=7.1

RSNC ***16*** *00:49:10.5±1.1, 7.99N×72.01W, h0km±4km, ML3.5, Mw3.6*
FUNV ***16*** *00:49:10.1, 7.99N×72.04W, h5km, MW3.9*
ISC 16 00:49:08.6±1.2, 7.98N±0.02×71.99W±0.02, h4km±9km, n55, σ2s00/95, 1C-1D, Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**0.34**	**251**	*e*P		**Pg**		**00 49 15.5**	**+0.2**
CAPV				*e*S		**Sg**		**00 49 19.4**	**-0.5**
PAMC	**Pamplona, Colo**	**0.95**	**228**	⇓*i*P		**Pg**		**00 49 26.8**	**-0.1**
PAMC				*e*S		**Sg**		**00 49 39.3**	**+0.1**
PAMC				*i*				00 49 46.1	
comp=Z,854nm,0.4s									
SOCV	**Socops**	**1.16**	**75**	*e*P		**Pg**		**00 49 31.4**	**+0.6**
SOCV				*e*S		**Sb**		**00 49 48.4**	**+1.7**
SOCV	**Socops**	**1.16**	**75**	*e*P		**Pg**		**00 49 31.1**	**+0.3**
SOCV				*e*S		**Sb**		**00 49 47.9**	**+1.3**
OCAC	**Ocana**	**1.34**	**281**	*e*P		**Pn**		**00 49 33.6**	**-0.7**
OCAC				*e*S		**Sb**		**00 49 51.8**	**-0.3**
OCAC				*i*				00 49 55.2	
comp=Z,2μm,0.5s									
TAMC	**Tame, Arauca**	**1.54**	**173**	⇑*e*P		**Pn**		**00 49 37.8**	**+0.9**
TAMC				*e*S		**Sg**		**00 50 00.3**	**+2.1**
TAMC				*i*				00 50 03.5	
comp=Z,825nm,0.2s									
SDV	**Santo Domingo**	**1.61**	**56**	*e*P		**Pn**		**00 49 39.1**	**+1.0**
SDV				*e*S		**Sg**		**00 50 01.8**	**+1.3**
SDV				*i*				00 50 04.1	
comp=Z,468nm,0.3s									
BARC	**Barichara**	**1.82**	**221**	*e*P		**Pb**		**00 49 42.8**	**+0.2**
BARC				*e*S		**Sb**		**00 50 06.7**	**+0.9**
BARC				*i*				00 50 11.2	
comp=Z,470nm,0.5s									
BRRC	**Barranca, Sant**	**1.92**	**243**	*e*P		**Pb**		**00 49 43.9**	**-0.3**
BRRC				*e*S		**Sg**		**00 50 10.1**	**-0.2**
BRRC				*i*				00 50 16.1	
comp=Z,368nm,0.8s									
MCQV	**Machiques**	**2.13**	**345**	*e*P		**Pn**		**00 49 45.8**	**+0.8**
MCQV				*e*S		**Sn**		**00 50 12.1**	**+0.2**
LL6C	**La Loma 6 Bece**	**2.16**	**324**	*e*S		**Sb**		**00 50 15.9**	**+0.5**
LL6C				*i*				00 50 17.6	
comp=Z,206nm,0.4s									
LL1C	**La Loma 1 Cana**	**2.19**	**315**	*e*P		**Pg**		**00 49 49.8**	**-0.9**
LL1C				*e*S		**Sg**		**00 50 19.2**	**+0.1**
LL1C				*i*				00 50 27.0	
comp=Z,796nm,0.3s									
RUSC	**La Rusia**	**2.34**	**208**	*e*P		**Pn**		**00 49 49.6**	**+1.3**
RUSC				*e*S		**Sb**		**00 50 22.3**	**+1.2**
RUSC				*i*				00 50 28.0	
comp=Z,212nm,0.7s									
ELOV	**Elorza**	**2.67**	**111**	*e*P		**Pn**		**00 49 53.3**	**+1.0**
ELOV				*e*S		**Sn**		**00 50 27.8**	**+2.6**
ELOV	**Elorza**	**2.67**	**111**	*e*P		**Pn**		**00 49 53.0**	**+0.7**
ELOV				*e*S		**Sn**		**00 50 25.8**	**+0.7**
PTBC	**PUERTO BERRIO,**	**2.84**	**240**	*e*P		**Pn**		**00 49 54.9**	**+0.2**
PTBC				*e*S		**Sb**		**00 50 34.8**	**-0.2**
PTBC				*i*				00 50 37.9	
comp=Z,251nm,0.3s									
SANV	**Sanarito**	**2.86**	**58**	*e*P		**Pn**		**00 49 56.6**	**+1.6**
SANV				*e*S		**Sn**		**00 50 30.5**	**+0.5**
ZARC	**Zaragoza, Cauc**	**2.89**	**261**	*e*P		**Pn**		**00 49 57.3**	**+1.9**
ZARC				*e*S		**Sb**		**00 50 34.0**	**-2.4**
ZARC				*i*				00 50 39.5	
comp=Z,290nm,0.3s									
SPBC	**San Pablo de B**	**3.10**	**222**	*e*P		**Pn**		**00 50 00.1**	**+1.6**
SPBC				*i*				00 50 49.8	
comp=Z,127nm,0.3s									
CRJC	**Cerrejon, Guaj**	**3.15**	**344**	*e*P		**Pn**		**00 49 59.7**	**+0.6**
CRJC				*i*				00 51 00.6	
comp=Z,116nm,0.3s									
DABV	**Dabajuro**	**3.21**	**24**	*e*P		**Pn**		**00 50 00.5**	**+0.6**
DABV	**Dabajuro**	**3.21**	**24**	*e*P		**Pn**		**00 50 00.9**	**+1.0**
DABV				*e*S		**Sn**		**00 50 38.4**	**-0.3**
UREC	**San Jos de Ur**	**3.52**	**267**	*e*P		**Pn**		**00 50 07.2**	**+3.0**
UREC				*e*S		**Sn**		**00 50 49.6**	**+3.4**
UREC				*i*				00 50 59.5	
comp=Z,68nm,0.2s									
SJCC	**San Jacinto, C**	**3.69**	**301**	*e*P		**Pn**		**00 50 08.8**	**+2.4**
SJCC				*e*S		**Sn**		**00 50 53.0**	**+2.6**
SJCC				*i*				00 50 56.8	
comp=Z,61nm,0.8s									
NORC	**Norcasia**	**3.73**	**230**	*e*P		**Pn**		**00 50 07.6**	**+0.5**
NORC				*e*S		**Sb**		**00 50 58.0**	**-2.9**
NORC				*i*				00 51 05.2	
comp=Z,84nm,0.4s									
CHIC	**Chingaza**	**3.75**	**208**	*e*P		**Pn**		**00 50 08.7**	**+1.0**
CHIC				*i*				00 51 14.9	
comp=Z,36nm,0.6s									
PTGC	**Puerto Gaitan,**	**3.76**	**182**	*e*P		**Pn**		**00 50 07.1**	**-0.2**
PTGC				*i*				00 51 13.4	
comp=Z,173nm,0.4

CBOC				*i*			00 51 32.0	
	comp=Z,27nm,0.5s							
BENV	**Beln**	**4.76**	**65**	*eP*		**Pn**	**00 50 21.8**	**+0.6**
BENV				*eS*		**Sn**	**00 51 14.7**	**-2.3**
TURV	**Turiamo**	**4.77**	**59**	*eP*		**Pn**	**00 50 22.2**	**+0.9**
TURV				*eS*		**Sn**	**00 51 15.3**	**-1.9**
ANIL	**Santa Ana**	**4.85**	**225**	*eP*		**Pn**	**00 50 26.8**	**+4.1**
ANIL				*eS*		**Sn**	**00 51 24.2**	**+4.7**
ANIL				*i*			00 51 26.7	
	comp=Z,56nm,0.4s							
PAYV	**Puerto Ayacuch**	**5.00**	**120**	*eP*		**Pn**	**00 50 24.4**	**0.0**
PAYV				*eS*		**Sn**	**00 51 20.1**	**-2.5**
PRAC	**Prado**	**5.12**	**214**	*eP*		**Pn**	**00 50 28.0**	**+1.8**
PRAC				*eS*		**Sn**	**00 51 27.9**	**+2.0**
PRAC				*i*			00 51 59.8	
	comp=Z,25nm,0.6s							
ORTC	**Ortega, Tolima**	**5.18**	**219**	*eP*		**Pn**	**00 50 28.1**	**+1.1**
ORTC				*eS*		**Sn**	**00 51 29.6**	**+2.3**
ORTC				*i*			00 52 04.3	
	comp=Z,22nm,0.5s							
PLMC	**San Jos del P**	**5.25**	**235**	*eP*		**Pn**	**00 50 30.8**	**+2.8**
PLMC				*i*			00 51 58.1	
	comp=Z,13nm,0.4s							
CAPC	**Capurgana**	**5.35**	**277**	*eP*		**Pn**	**00 50 28.8**	**-0.4**
CAPC				*i*			00 51 37.6	
	comp=Z,11nm,0.4s							
CACV	**CAICARA DEL OR**	**5.41**	**94**	*eP*		Pn	00 50 37.7	+7.5
CACV				*eS*		Sn	00 51 42.5	+10
GUVC	**San Jose del G**	**5.43**	**187**	*eP*		**Pn**	**00 50 30.1**	**-0.4**
MERV	**Las Mercedes**	**5.77**	**77**	*eP*		**Pn**	**00 50 35.2**	**+0.2**
MERV				*eS*		**Sn**	**00 51 38.1**	**-3.5**
YOTC	**Yotoco, Valle**	**5.88**	**228**	*eP*		**Pn**	**00 50 38.1**	**+1.5**
MACC	**Macarena, Meta**	**6.08**	**198**	*eP*		**Pn**	**00 50 38.1**	**-1.3**
MACC				*eS*		**Sn**	**00 51 45.5**	**-4.0**
MACC				*i*			00 52 41.8	
	comp=Z,26nm,0.6s							
BIRV	**Birongo**	**6.17**	**66**	*eP*		**Pn**	**00 50 41.0**	**+0.5**
BIRV				*eS*		**Sn**	**00 51 47.4**	**-4.1**
GARC	**Garzon, Huila**	**6.73**	**211**	*eP*		**Pn**	**00 50 49.0**	**+0.5**
GARC				*eS*		**Sn**	**00 52 07.6**	**+1.8**
GARC				*i*			00 52 55.2	
	comp=Z,18nm,0.1s							
POPC	**Popayan, Colom**	**7.14**	**221**	*eP*		**Pn**	**00 50 55.9**	**+1.8**
PRGV	**PARIAGUAN**	**7.30**	**83**	*eP*		**Pn**	**00 50 55.6**	**-0.5**
PRGV				*eS*		**Sn**	**00 52 15.2**	**-4.4**
PCRV	**Puerto La Cruz**	**7.58**	**73**	*eP*		**Pn**	**00 51 00.9**	**+0.9**
PCRV				*eS*		**Sn**	**00 52 22.3**	**-4.2**
COAV	**Cumanacoa**	**8.34**	**74**	*eP*		**Pn**	**00 51 10.9**	**+0.3**

IDC 16 01:02:43.9±2.2, 6°49S×129°08E, h0km, mb3.6/1, mbtmp3.4/3, ML3.6/2, Error ellipse: s-maj=119.5km s-min=32.8km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.31**	**160**	Pn		Pn	01 06 07.8	-0.3
	0.3nm,0.3s,baz=338,slow=12,SNR=20							
WRA				Sn		Sn	01 08 35.0	-13
	0.5nm,0.3s,baz=331,slow=23,SNR=11							
	0.3nm,0.3s							
ASAR	**Alice Springs**	**17.70**	**165**	P		Pn	01 06 52.0	0.0
	0.2nm,0.3s,baz=344,slow=11,SNR=4.6							
ASAR				S		Sn	01 10 01.9	-8.1
	0.3nm,0.5s,baz=341,slow=23,SNR=2.1							
	0.3nm,0.5s							
MKAR	**Makanchi Array**	**67.30**	**327**	P		P	01 13 40.7	+0.1
	0.3nm,0.5s,baz=118,slow=7.4,SNR=3.6							
	0.3nm,0.5s							

VAO ***16*** *01:14:38.5±0.4, 30°.73S×71°.39W, h10km, mb4.6*
SJA ***16*** *01:14:44.5±0.7, 30°.64S×71°.36W, h46km±16km, ML4.6, MW4.5*
IDC ***16*** *01:14:45.3±0.5, 30°.65S×71°.14W, h52km±4km, mb4.2/11, mbtmp4.4/15, MS3.5/11, Error ellipse: s-maj=18.1km s-min=15.0km az=129.0*
NEIC ***16*** *01:14:45.4±1.5, 30°.67S±0°.05×71°.32W±0°.08, h58km±4km, mb4.7/96, Mwr4.4/38, Mwr4.7(GUC), Error ellipse: s-maj=10.2km s-min=6.8km az=94.0*
NEIC ***16*** *01:14:45.8, 30°.66S×71°.30W, h58km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}5.47; $M_{\theta\theta}$0.56; $M_{\phi\phi}$-6.03; $M_{r\theta}$0.87; $M_{\theta\phi}$0.41; $M_{\phi r}$-0.47; Fault plane solution: M_o5.87000×10^{15} NP1:ϕ_s167.20000°, δ48.35000°, λ77.38000°. NP2:ϕ_s5.81000°, δ43.18000°, λ103.80000°. Principal axes: T 5.6307, Plg80.0000°, Azm12.0000°; N 0.4499, Plg9.0000°, Azm176.0000°; P -6.0806, Plg3.0000°, Azm266.0000°;*
GUC ***16*** *01:14:46.4±0.7, 30°.65S×71°.22W, h59km±2km, ML4.9*
ISC 16 01:14:44.8±0.5, 30°.65S±0°.02×71°.29W±0°.03, h55km±4km, n301, σ1°65/326, mb4.7/51, MS3.6/7, 12C-9D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CO06	**Fray Jorge**	**0.30**	**265**			**Pn**	**01 14 56.3**	**+1.9**
CO06						**Sn**	**01 15 04.2**	**+2.9**
CO06	**Fray Jorge**	**0.30**	**265**	⇑*iP*		**Pn**	**01 14 56.3**	**+1.9**
CO06				*i* S		**Sn**	**01 15 04.8**	**+3.5**
CO06				IAML			01 15 07.3	
	comp=N,74μm,0.2s							
CO03	**El Pedregal**	**0.55**	**110**			**Pn**	**01 14 57.9**	**+0.8**
CO03				Sn		**Sn**	**01 15 06.8**	**+0.9**
CO03	**El Pedregal**	**0.55**	**110**	⇓*iP*		**Pn**	**01 14 58.1**	**+1.1**
CO03				*i* S		**Sn**	**01 15 06.9**	**+1.0**
CO03				IAML			01 15 07.8	
	comp=E,104μm,0.2s							
CO03	**El Pedregal**	**0.55**	**110**	*eP*		**Pn**	**01 14 57.8**	**+0.8**
CO03				*eS*		**Sn**	**01 15 07.4**	**+1.5**
CO03				IAML			01 15 08.3	
	comp=Z,35μm,0.8s							
CO02	**Combarbal**	**0.61**	**156**			**Pn**	**01 14 59.1**	**+1.3**
CO02				Sn		**Sn**	**01 15 08.4**	**+1.3**
CO02	**Combarbal**	**0.61**	**156**	⇑*iP*		**Pn**	**01 14 59.0**	**+1.3**
CO02				*i* S		**Sn**	**01 15 08.4**	**+1.3**
CO02	**Combarbal**	**0.61**	**156**	*eP*		**Pn**	**01 14 58.7**	**+0.9**
CO02				IAML			01 15 09.2	
	comp=Z,44μm,0.5s							
GO04	**Tololo Observa**	**0.63**	**42**			**Pn**	**01 14 59.4**	**+1.2**
GO04	**Tololo Observa**	**0.63**	**42**	⇓*iP*		**Pn**	**01 14 59.5**	**+1.3**
GO04				*i* S		**Sn**	**01 15 09.7**	**+1.7**
GO04				IAML			01 15 10.9	
	comp=E,167μm,0.5s							
GO04	**Tololo Observa**	**0.63**	**42**	*eP*		**Pn**	**01 14 59.0**	**+0.8**
GO04				*eS*		**Sn**	**01 15 10.0**	**+2.1**
CO05	**La Serena**	**0.73**	**3**			**Pn**	**01 15 00.5**	**+1.4**
CO05	**La Serena**	**0.73**	**3**	⇑*iP*		**Pn**	**01 15 00.7**	**+1.6**
CO05				*i* S		**Sn**	**01 15 11.4**	**+1.9**
CO05				IAML			01 15 12.2	
	comp=E,72μm,0.3s							
CO01	**Juntas del Tor**	**1.23**	**57**			**Pn**	**01 15 07.5**	**+1.6**
CO01	**Juntas del Tor**	**1.23**	**57**	⇓*iP*		**Pn**	**01 15 07.8**	**+1.8**
CO01				*i* S		**Sn**	**01 15 23.2**	**+1.5**
CO01	**Juntas del Tor**	**1.23**	**57**	*eP*		**Pn**	**01 15 07.0**	**+1.0**
CO01				*eS*		**Sn**	**01 15 24.3**	**+2.6**
AROD	**Rodeo**	**1.64**	**73**	*eP*		**Pn**	**01 15 14.0**	**+2.4**
LCO	**Las Campanas**	**1.71**	**17**	⇓*iP*		**Pn**	**01 15 14.2**	**+1.7**
LCO				*i* S		**Sn**	**01 15 35.1**	**+1.7**
LCO	**Las Campanas**	**1.71**	**17**	*eP*		**Pn**	**01 15 14.0**	**+1.5**
VA06	**Catapilco**	**1.91**	**180**			**Pn**	**01 15 16.6**	**+1.7**
VA06	**Catapilco**	**1.91**	**180**	⇓*iP*		**Pn**	**01 15 17.0**	**+2.1**
VA06				*i* S		**Sn**	**01 15 40.2**	**+2.4**
VA06				IAML			01 15 45.9	
	comp=E,12μm,0.5s							
ACCO	**Cerro Coronel**	**1.92**	**89**	*eP*		**Pn**	**01 15 17.0**	**+1.6**
ACDV	**Cuesta del Vie**	**1.93**	**76**	*eP*		**Pn**	**01 15 19.0**	**+3.6**
RTLS	**Leoncito**	**2.06**	**124**	*eP*		**Pn**	**01 15 20.0**	**+2.8**
VA03	**San Esteban**	**2.20**	**164**			**Pn**	**01 15 20.4**	**+1.4**
VA03	**San Esteban**	**2.20**	**164**	⇓*iP*		**Pn**	**01 15 21.1**	**+2.0**
VA03				*i* S		**Sn**	**01 15 47.4**	**+2.2**
VA03				IAML			01 15 53.1	
	comp=E,6μm,0.2s							
VA03	**San Esteban**	**2.20**	**164**	*eP*		**Pn**	**01 15 20.8**	**+1.8**
VA03				*eS*		**Sn**	**01 15 52.6**	**+7.4**
VA03				IAML			01 15 59.0	
	comp=Z,4μm,0.8s							
AUSP	**Uspallata**	**2.26**	**135**	*eP*		**Pn**	**01 15 23.0**	**+3.0**
ROCH	**El Roble**	**2.33**	**174**	⇓*iP*		**Pn**	**01 15 23.0**	**+2.1**
ROCH				*eP*			01 15 23.2	
ROCH				*i* S		**Sn**	**01 15 51.2**	**+2.7**
ROCH				*i* S			01 15 51.4	
ROCH				IAML			01 16 10.8	
	comp=N,6μm,0.4s							
ROCH				IAML			01 16 10.9	
	comp=N,9μm,0.2s							
ROC1	**El Roble**	**2.33**	**174**			**Pn**	**01 15 22.6**	**+1.6**
ROC1	**El Roble**	**2.33**	**174**	*eP*		**Pn**	**01 15 22.8**	**+1.8**
ROC1				*eP*			01 15 23.0	
ROC1				*eS*		**Sn**	**01 15 53.8**	**+5.2**
VA01	**Torpederas**	**2.39**	**187**			**Pn**	**01 15 22.6**	**+1.2**
VA01	**Torpederas**	**2.39**	**187**	*eP*		**Pn**	**01 15 22.7**	**+1.2**
VA01				*i* S		**Sn**	**01 15 52.0**	**+2.4**
VA01				IAML			01 15 59.9	
	comp=E,6μm,0.6s							
VA01	**Torpederas**	**2.39**	**187**	*eP*		**Pn**	**01 15 22.7**	**+1.2**
VA01				*eP*			01 15 23.0	
VA01				IAML			01 15 60.0	
	comp=Z,3μm,0.5s							
ZON	**Zonda**	**2.41**	**112**	*eP*		**Pn**	**01 15 25.0**	**+3.1**
ZON				*eS*		**Sn**	**01 15 46.7**	**-3.6**
ZON				IAML			01 16 18.3	
	comp=Z,1μm,0.6s							
AC04	**Llanos de Chal**	**2.44**	**4**	Pn		**Pn**	**01 15 24.2**	**+1.9**
AC04	**Llanos de Chal**	**2.44**	**4**	*eP*		**Pn**	**01 15 24.8**	**+2.5**
AC04				IAML			01 16 04.8	
	comp=E,3μm,0.5s							
AC04	**Llanos de Chal**	**2.44**	**4**	*eP*		**Pn**	**01 15 24.0**	**+1.7**
AC04				*eS*		**Sn**	**01 15 57.1**	**+6.1**
AC04				IAML			01 16 02.7	
	comp=Z,3μm,0.7s							
RTLL	**Cerro Villicun**	**2.51**	**106**	*eP*		**Pn**	**01 15 25.9**	**+2.7**
RTLL				*eP*			01 15 26.0	
PEL	**Peldehue**	**2.54**	**169**			**Pn**	**01 15 24.9**	**+1.2**
PEL	**Peldehue**	**2.54**	**169**	⇑*iP*		**Pn**	**01 15 25.9**	**+2.2**
PEL				*i* S		**Sn**	**01 15 55.6**	**+2.2**
PEL				IAML			01 16 11.4	
	comp=N,4μm,0.4s							
PEL	**Peldehue**	**2.54**	**169**	*eP*		**Pn**	**01 15 25.9**	**+2.2**
PEL				*eP*			01 15 26.0	
PEL				*eS*		**Sn**	**01 16 01.1**	**+7.6**
MT02	**Curacav**	**2.61**	**177**			**Pn**	**01 15 25.8**	**+1.3**
MT02	**Curacav**	**2.61**	**177**	⇑*iP*		**Pn**	**01 15 26.2**	**+1.7**
MT02				*i* S		**Sn**	**01 15 56.8**	**+1.9**
MT02	**Curacav**	**2.61**	**177**	*eP*		**Pn**	**01 15 26.0**	**+1.5**
MT02				*eS*		Sn	01 15 43.1	-12
MT02				IAML			01 16 02.8	
	comp=Z,2μm,0.6s							
MT05	**Renca**	**2.77**	**170**			**Pn**	**01 15 28.7**	**+1.9**
MT05	**Renca**	**2.77**	**170**	*eP*		**Pn**	**01 15 29.6**	**+2.7**
MT05				*eS*		**Sn**	**01 16 01.4**	**+2.1**
MT05				IAML			01 16 18.0	
	comp=E,8μm,0.4s							
MT05	**Renca**	**2.77**	**170**	*eP*		**Pn**	**01 15 29.6**	**+2.7**
MT05				*eS*		**Sn**	**01 16 03.1**	**+3.9**
MT05				IAML			01 16 16.3	
	comp=Z,2μm,0.8s							
FCH	**Farellones**	**2.80**	**163**	⇑*iP*		**Pn**	**01 15 30.3**	**+2.8**
FCH				*i* S		**Sn**	**01 16 00.5**	**+0.2**
ASAL	**Salagasta**	**2.85**	**133**	*eP*		**Pn**	**01 15 32.0**	**+4.1**
ASAL				*eS*		Sn	01 16 23.6	+22
MT03	**Universidad Ad**	**2.91**	**167**			**Pn**	**01 15 30.6**	**+1.8**
MT03	**Universidad Ad**	**2.91**	**167**	*eP*		**Pn**	**01 15 31.0**	**+2.2**
MT03				*eS*		**Sn**	**01 16 06.6**	**+3.9**
MT03				IAML			01 16 28.4	
	comp=Z,2μm,0.4s							
ARCO	**CERRO ARCO**	**2.97**	**138**	*eP*		**Pn**	**01 15 34.0**	**+4.4**
ARCO				*eS*		Sn	01 15 52.6	-12
ARCO				IAML			01 15 53.8	
	comp=Z,2μm,0.6s							
ARCO				*eS*			01 15 54.6	
MT09	**Talagante**	**3.13**	**175**			**Pn**	**01 15 33.0**	**+1.2**
MT09	**Talagante**	**3.13**	**175**	⇑*iP*		**Pn**	**01 15 34.2**	**+2.4**
MT09				IAML			01 16 27.7	
	comp=N,3μm,0.4s							
GO03	**Copiap**	**3.18**	**17**			**Pn**	**01 15 33.8**	**+1.3**
GO03	**Copiap**	**3.18**	**17**	*eP*		**Pn**	**01 15 29.6**	**-2.9**
GO03				*eP*			01 15 34.7	
GO03				*eS*		**Sn**	**01 16 10.6**	**+1.4**
AAGR	**Agrelo**	**3.21**	**140**	*eP*		**Pn**	**01 15 37.0**	**+4.2**
AAGR				*eS*		Sn	01 15 57.7	-12
MT01	**Popeta**	**3.21**	**179**			**Pn**	**01 15 33.9**	**+1.2**
MT01	**Popeta**	**3.21**	**179**	⇑*iP*		**Pn**	**01 15 34.4**	**+1.7**
MT01				*i* S		**Sn**	**01 16 11.2**	**+1.5**
MT01				IAML			01 16 29.5	
	comp=E,2μm,0.5s							
MT01	**Popeta**	**3.21**	**179**	*eP*		**Pn**	**01 15 34.0**	**+1.2**
MT01				*eP*			01 15 34.4	
MT01				*eS*		**Sn**	**01 16 12.6**	**+2.8**
MT01				IAML			01 16 28.9	
	comp=Z,2μm,0.8s							
AVFE	**Valle Fertil**	**3.30**	**91**	*eP*		**Pn**	**01 15 36.0**	**+1.9**
AVFE				IAML			01 16 44.7	
	comp=Z,842nm,0.5s							
LMEL	**Las Melosas**	**3.32**	**164**	Pn		**Pn**	**01 15 35.4**	**+1.0**
AC06	**Mina Casimiro**	**3.38**	**14**			**Pn**	**01 15 36.8**	**+1.6**
AC06	**Mina Casimiro**	**3.38**	**14**	⇑*iP*		**Pn**	**01 15 37.5**	**+2.4**
AC06				*eS*		**Sn**	**01 16 15.4**	**+1.4**
AC06				IAML			01 16 39.7	
	comp=E,1μm,0.4s							
BO04	**La Punta**	**3.38**	**170**			**Pn**	**01 15 36.7**	**+1.6**
BO04	**La Punta**	**3.38**	**170**	⇑*iP*		**Pn**	**01 15 37.4**	**+2.2**
BO04				*eS*		**Sn**	**01 16 15.7**	**+1.7**
BO04				IAML			01 16 33.0	
	comp=N,2μm,0.3s							
BO01	**Tunca**	**3.74**	**177**			**Pn**	**01 15 41.5**	**+1.5**
BO01	**Tunca**	**3.74**	**177**	⇑*iP*		**Pn**	**01 15 41.5**	**+1.5**
BO01				*eS*		**Sn**	**01 16 24.3**	**+1.5**
BO01				IAML			01 16 39.9	
	comp=E,677nm,0.4s							
BO01	**Tunca**	**3.74**	**177**	*eP*		**Pn**	**01 15 41.6**	**+1.6**
BO01				*eS*		**Sn**	**01 16 25.1**	**+2.3**
BO01				*eS*			01 16 25.9	
BO01				IAML			01 16 45.2	
	comp=Z,661nm,0.5s							
BO03	**Pichilemu**	**3.88**	**188**	⇓*iP*		**Pn**	**01 15 42.2**	**+0.3**
BO03				*eS*		**Sn**	**01 16 24.8**	**-1.4**
BO03				IAML			01 16 52.5	
	comp=E,759nm,0.3s							
ACLC	**CERRO LA CRUZ**	**3.95**	**73**	*eP*		**Pn**	**01 15 45.0**	**+1.9**
ACLC				*eS*		**Sn**	**01 16 34.6**	**+6.3**
ACLC				IAML			01 16 40.0	
	comp=Z,1μm,1.1s							
ACHE	**Chepes**	**4.01**	**99**	*eP*		**Pn**	**01 15 45.0**	**+1.2**
AC02	**Maricunga**	**4.25**	**27**			**Pn**	**01 15 48.8**	**+1.4**
AC02	**Maricunga**	**4.25**	**27**	⇑*iP*		**Pn**	**01 15 49.8**	**+2.3**
AC02				*eS*		**Sn**	**01 16 36.4**	**+0.4**
AC02				IAML			01 17 17.9	
	comp=E,994nm,0.5s							
AC02	**Maricunga**	**4.25**	**27**	*eS*		Sn	01 16 52.6	+17
AC02				IAML			01 16 57.9	
	comp=Z,685nm,0.9s							
GO05	**Huala**	**4.38**	**187**	Pn		**Pn**	**01 15 49.1**	**+0.3**
GO05	**Huala**	**4.38**	**187**	⇓*iP*		**Pn**	**01 15 49.0**	**+0.2**
GO05				*eS*		**Sn**	**01 16 36.9**	**-1.8**
GO05				IAML			01 17 02.1	
	comp=N,686nm,0.6s							
GO05	**Huala**	**4.38**	**187**	*eP*		**Pn**	**01 15 49.3**	**+0.4**
AC01	**Pan de Azucar**	**4.52**	**8**			**Pn**	**01 15 51.3**	**+0.5**
RFA	**San Rafael**	**4.75**	**151**	*eP*		**Pn**	**01 15 55.8**	**+1.8**
RFA				IAML			01 17 22.7	
	comp=Z,234nm,0.6s							
ML02	**Panimavida**	**5.10**	**181**			**Pn**	**01 15 59.5**	**+0.8**
GO02	**Mina Guanaco**	**5.67**	**16**	Pn		**Pn**	**01 16 07.2**	**+0.4**
BI05	**Punta Hualpn**	**6.29**	**194**			**Pn**	**01 16 14.4**	**-0.5**
H03N1	**Juan Fernandez**	**7.05**	**245**	P		**Pn**	**01 16 26.0**	**+1.0**
	baz=117,slow=19,SNR=214							
H03N1				T		T	01 23 23.5	
	baz=71,slow=72,SNR=2608							
VA04	**Juan Fernndez**	**7.06**	**243**	Pn		**Pn**	**01 16 25.5**	**0.0**
H03N3	**Juan Fernandez**	**7.06**	**245**	P		**Pn**	**01 16 25.9**	**+0.5**
	baz=117,slow=19,SNR=146							
H03N3				T		T	01 23 22.8	
	baz=71,slow=72,SNR=1876							
H03N2	**Juan Fernandez**	**7.06**	**245**	P		**Pn**	**01 16 26.1**	**+0.8**
	baz=117,slow=19,SNR=223							
H03N2				T		T	01 23 24.1	
	baz=71,slow=72,SNR=2327							
H03S3	**Juan Fernandez**	**7.19**	**242**	P		**Pn**	**01 16 27.0**	**-0.1**
	SNR=116							
H03S3				T		T	01 23 32.1	
	baz=82							
H03S1	**Juan Fernandez**	**7.20**	**242**	P		**Pn**	**01 16 26.8**	**-0.4**
	SNR=97							
H03S1				T		T	01 23 27.0	
	baz=82							
H03S2	**Juan Fernandez**	**7.21**	**242**	P		**Pn**	**01 16 27.0**	**-0.3**
	SNR=119							
H03S2				T		T	01 23 34.4	
	baz=82							
PB15	**IPOC Station P**	**7.58**	**13**			**Pn**	**01 16 33.6**	**+0.6**
LVC	**Limon Verde**	**8.28**	**15**	P		**Pn**	**01 16 39.9**	**-2.8**
	comp=Z,4.4nm,0.7s,baz=272,slow=8.7,SNR=2.2							
LVC				S		Sn	01 18 07.1	-8.0
	comp=Z,36nm,0.6s,baz=222,slow=9.0,SNR=1.7							
LVC				LR		LR	01 20 02.1	
	comp=Z,275nm,22.0s,baz=212,slow=38							
LVC	**Limon Verde**	**8.28**	**15**	Pn		**Pn**	**01 16 40.8**	**-1.9**
LVC	**Limon Verde**	**8.28**	**15**	*eP*		Pn	01 16 38.5	-4.2
LR03	**Panguipulli**	**9.01**	**185**			**Pn**	**01 16 51.1**	**-1.0**
LR04	**Corral**	**9.38**	**190**			**Pn**	**01 16 56.8**	**-0.4**
PLCA	**Paso Flores**	**10.08**	**177**	P		**Pn**	**01 17 08.7**	**+1.8**
	comp=Z,2.1nm,0.8s,baz=346,slow=10,SNR=4.9							
PLCA				LR		LR	01 21 22.0	
	comp=Z,160nm,18.8s,baz=338,slow=39							
ITQB	**Itaqui**	**12.73**	**89**	Pn		**Pn**	**01 17 40.4**	**-2.7**
ITQB	**Itaqui**	**12.73**	**89**	*eP*		**Pn**	**01 17 40.5**	**-2.5**
CPUP	**Villa Florida**	**13.01**	**74**	P		**Pn**	**01 17 44.9**	**-1.9**
	comp=Z,1.7nm,0.7s,baz=242,slow=11,SNR=3.5							
CPUP				S		Sn	01 19 59.9	-10
	comp=Z,7.6nm,0.8s,baz=223,slow=17,SNR=1.2							
CPUP				LR		LR	01 23 19.3	
	comp=Z,188nm,19.4s,baz=252,slow=40							
CPUP	**Villa Florida**	**13.01**	**74**			**Pn**	**01 17 46.4**	**-0.5**
CPUP	**Villa Florida**	**13.01**	**74**	*eP*		**Pn**	**01 17 44.8**	**-2.1**
RODS	**Rosario do Sul**	**13.88**	**93**	*eP*		**Pn**	**01 17 54.7**	**-4.0**
UNIS	**Unistalda (Bra**	**14.16**	**88**	*eP*		**Pn**	**01 18 00.5**	**-2.0**
LPAZ	**La Paz**	**14.58**	**12**	P		**Pn**	**01 18 09.9**	**+1.2**
	comp=Z,8.3nm,0.9s,baz=176,slow=9.1,SNR=19							
LPAZ	**La Paz**	**14.58**	**12**	Pn		**Pn**	**01 18 08.9**	**+0.2**
LPAZ	**La Paz**	**14.58**	**12**	*eP*		**Pn**	**01 18 07.1**	**-1.6**
PLTB	**Pedras Altas**	**15.18**	**99**	Pn		**Pn**	**01 18 13.7**	**-2.0**
CRSM	**Crissiumal (Br**	**15.40**	**83**	*eP*		**Pn**	**01 18 17.4**	**-1.3**
ALGR	**Alto Alegre (B**	**15.97**	**88**	*eP*		**Pn**	**01 18 25.8**	**-0.3**
ANTJ	**Antonio Joao (**	**16.17**	**61**	*eP*		**Pn**	**01 18 27.2**	**-1.3**
AMBA	**Amambai (Brazi**	**16.45**	**66**	*eP*		**Pn**	**01 18 29.3**	**-2.7**
MCR1	**Marechal Candi**	**16.49**	**72**	*eP*		**Pn**	**01 18 30.5**	**-2.0**
FRBT	**Francisco Belt**	**16.71**	**78**	*eP*		**Pn**	**01 18 34.3**	**-1.0**
ITAB	**Concordia**	**17.11**	**83**	Pn		**Pn**	**01 18 38.1**	**-2.1**
ITAB	**Concordia**	**17.11**	**83**	*eP*		**Pn**	**01 18 39.5**	**-0.7**
AQDB	**Aquidauana**	**17.31**	**58**	*eP*		**Pn**	**01 18 41.1**	**-1.7**
SIV	**San Ignacio**	**17.33**	**35**	P		**Pn**	**01 18 41.6**	**-1.4**
	comp=Z,18nm,1.0s,baz=208,slow=9.5,SNR=50							
CNLB	**Canela**	**17.75**	**91**	*eP*		**Pn**	**01 18 47.0**	**-1.2**
PTGB	**Pitanga**	**18.01**	**76**	*eP*		**P**	**01 18 50.5**	**-0.9**
TRCB	**Terra Rica**	**18.39**	**69**	*eP*		**P**	**01 18 55.0**	**-0.4**
PTLB	**Pontes e Lacer**	**18.79**	**39**	*eP*		**P**	**01 18 58.1**	**-1.6**
VBST	**Vila Bela da S**	**19.10**	**35**	*eP*		**P**	**01 19 03.1**	**-0.1**
NNA	**Nana**	**19.27**	**343**	LR		LR	01 24 55.3	
	comp=Z,69nm,21.4s,baz=180,slow=32							
POCN	**Pocone**	**19.28**	**47**	*eP*		**P**	**01 19 06.2**	**+1.1**
TER01	**Tubaro-SC**	**19.38**	**89**	*eP*		**P**	**01 19 07.0**	**+0.7**
PP1B	**Ponte de Pedra**	**19.79**	**53**	*eP*		**P**	**01 19 11.1**	**+0.4**
PTET	**Porto Estrela**	**19.97**	**44**	*eP*		**P**	**01 19 13.1**	**+0.4**
PCMB	**Pacaembu**	**20.08**	**68**	*eP*		**P**	**01 19 14.4**	**+0.4**
VILB	**Vilhena**	**20.37**	**33**	*eP*		**P**	**01 19 17.5**	**+0.4**
SALV	**Santo Antonio**	**20.47**	**48**	*eP*		**P**	**01 19 17.8**	**-0.3**
C2SB	**Chapadao do Su**	**20.48**	**59**	*eP*		**P**	**01 19 17.9**	**-0.2**
FRTB	**Fartura**	**20.66**	**75**	*eP*		**P**	**01 19 18.4**	**-1.7**
ETMB	**Extrema**	**21.26**	**14**	*eP*		**P**	**01 19 26.4**	**-0.1**
NBRS	**Nobres**	**21.62**	**45**	*eP*		**P**	**01 19 29.9**	**-0.7**
ITRB	**Iturama**	**21.81**	**65**	*eP*		**P

SWET Sewanee 66.95 347 P **P** **01 25 31.6 0.0**
SWET IAmb IAmb 01 25 33.6
comp=Z,8.5nm,0.9s
TKL Tuckaleechee C 66.99 349 P **P** **01 25 31.9 +0.1**
TKL IAmb IAmb 01 25 33.5
comp=Z,7.4nm,1.1s
V52A Sevierville 67.14 349 P **P** **01 25 32.6 -0.1**
V52A IAmb IAmb 01 25 35.6
comp=Z,8.5nm,1.0s
TXAR Lajitas Array 67.15 330 P **P** **01 25 35.1 +2.1**
comp=Z,1.0nm,0.6s,baz=154,slow=6.9,SNR=5.2
TXAR pP **pP** **01 25 49.4 +1.0**
comp=Z,1.0nm,0.7s,baz=148,slow=7.4,SNR=4.0
comp=Z,1.0nm,0.6s
TX31 Lajitas Ar. Si 67.15 330 P **P** **01 25 33.3 +0.3**
PLAL Pickwick Lake 67.17 345 P **P** **01 25 32.6 -0.3**
V51A Loudon 67.23 349 P **P** **01 25 34.2 +1.0**
V51A IAmb IAmb 01 25 37.1
comp=Z,8.6nm,1.0s
VNDA Vanda 67.50 191 P **P** **01 25 37.0 +2.5**
comp=Z,1.1nm,1.0s,baz=168,slow=4.8,SNR=3.6
comp=Z,1.1nm,1.0s
U54A Nelsons Funny 67.54 351 P **P** **01 25 34.7 -0.6**
U54A IAmb IAmb 01 25 37.1
comp=Z,9.2nm,0.9s
V48A Smith Brothers 67.63 346 P **P** **01 25 36.1 +0.2**
CLTN Cedars of Leba 67.88 347 P **P** **01 25 37.6 +0.3**
CLTN IAmb IAmb 01 25 39.4
comp=Z,6.8nm,0.7s
MIAR Mount Ida 68.17 340 P **P** **01 25 39.3 +0.1**
MIAR IAmb IAmb 01 25 42.4
comp=Z,9.9nm,1.4s
U49A Red Boiling Sp 68.18 347 P **P** **01 25 39.9 +0.7**
U49A IAmb IAmb 01 25 42.4
comp=Z,9.0nm,1.1s
WVT Waverly 68.22 346 P **P** **01 25 38.5 -0.9**
WVT IAmb IAmb 01 25 41.5
comp=Z,12nm,1.0s
S57A Dark Hollow, R 68.43 353 P **P** **01 25 41.5 +0.7**
S57A IAmb IAmb 01 25 42.7
comp=Z,5.9nm,0.8s
T47A Sharon Grove 68.90 346 P **P** **01 25 44.2 +0.5**
T47A IAmb IAmb 01 25 46.3
comp=Z,11nm,0.9s
LCAR Lake Charles 68.94 343 P **P** **01 25 44.2 +0.2**
LCAR IAmb IAmb 01 25 47.2
comp=Z,6.7nm,0.8s
FCAR Ozark Folk Cen 69.02 342 P **P** **01 25 45.1 +0.5**
PBMO Poplar Bluff 69.43 344 P **P** **01 25 47.0 -0.1**
PBMO IAmb IAmb 01 25 50.3
comp=Z,9.2nm,1.1s
U40A Yellville 69.66 342 P **P** **01 25 49.0 +0.6**
HHAR Hobbs 69.89 341 P **P** **01 25 50.6 +0.7**
HHAR IAmb IAmb 01 25 52.1
comp=Z,7.1nm,0.8s
MNTX Cornudas Mount 69.93 329 P **P** **01 25 50.5 +0.2**
P57A Homestead Farm 70.05 354 P **P** **01 25 51.8 +1.0**
P57A IAmb IAmb 01 25 54.0
comp=Z,9.4nm,1.1s
TUL1 Leonard 70.10 339 P **P** **01 25 51.6 +0.4**
TUL1 IAmb IAmb 01 25 55.0
comp=Z,11nm,0.9s
U38A Gravette 70.17 340 P **P** **01 25 50.7 -0.9**
FVM French Village 70.58 344 P **P** **01 25 54.0 0.0**
P52A Corning 70.65 351 P **P** **01 25 55.0 +0.6**
P52A IAmb IAmb 01 25 57.3
comp=Z,12nm,1.1s
MSTX Muleshoe 70.81 333 P **P** **01 25 56.0 +0.3**
MSTX IAmb IAmb 01 26 25.1
comp=Z,9.1nm,0.9s
CCM Cathedral Cave 70.85 343 P **P** **01 25 55.4 -0.2**
CCM IAmb IAmb 01 25 58.0
comp=Z,17nm,1.3s
S39A Bolivar 71.04 342 P **P** **01 25 56.2 -0.6**
S39A IAmb IAmb 01 25 59.2
comp=Z,7.6nm,1.0s
T35A Sooner Cattle 71.25 339 P **P** **01 25 57.6 -0.6**
T35A IAmb IAmb 01 26 01.3
comp=Z,7.1nm,0.9s
R40A Maddies Statio 71.33 343 P **P** **01 25 59.2 +0.6**
O49A Covington 71.51 349 P **P** **01 26 00.2 +0.5**
O49A IAmb IAmb 01 26 02.5
comp=Z,11nm,0.9s
121A Cookes Peak, D 71.72 328 P **P** **01 26 00.3 -1.0**
N49A Columbus Grove 72.20 350 P **P** **01 26 03.6 -0.2**
P40A Paris 72.44 343 P **P** **01 26 06.2 +1.0**
L56A Greenwood 72.66 355 P **P** **01 26 05.7 -0.8**
P38A Dawn 72.91 342 P **P** **01 26 07.3 -0.7**
P38A IAmb IAmb 01 26 11.2
comp=Z,6.1nm,0.9s
ANMO Albuquerque 73.17 330 P **P** **01 26 08.6 -1.3**
DBIC Dimbokro 73.52 72 P **P** **01 26 12.8 +0.7**
comp=Z,12nm,0.9s,baz=246,slow=7.5,SNR=7.7
DBIC LR LR 01 55 58.7
comp=Z,46nm,18.8s,baz=192,slow=34
comp=Z,12nm,0.9s
DBIC Dimbokro 73.52 72 P **P** **01 26 11.6 -0.6**
214A Organ Pipe Nat 73.66 324 P **P** **01 26 13.0 +0.3**
T25A Trinidad 74.23 333 P **P** **01 26 15.8 -0.3**
T25A IAmb IAmb 01 26 19.8
comp=Z,7.0nm,0.9s
L40A Anamosa 74.65 345 P **P** **01 26 18.2 +0.1**
X16A Lo Mia Camp, P 74.98 326 P **P** **01 26 20.6 +0.2**
SDCO Great Sand Dun 75.18 333 P **P** **01 26 21.6 -0.1**
MVCO Mesa Verde 75.96 330 P **P** **01 26 26.0 -0.1**
MVCO IAmb IAmb 01 26 30.3
comp=Z,13nm,1.5s
Q24A Divide 76.10 333 P **P** **01 26 25.1 -1.9**
Q24A IAmb IAmb 01 26 53.4
comp=Z,5.4nm,0.8s
MAW Mawson 76.20 164 P **P** **01 26 27.5 +0.7**
comp=Z,3.2nm,0.7s,baz=232,slow=6.3,SNR=13
comp=Z,3.2nm,0.7s
MAW Mawson 76.20 164 P **P** **01 26 26.5 -0.3**
W13A Hualapai Mount 76.71 325 P **P** **01 26 30.9 +0.5**
SMCO Snowmass 77.00 332 P **P** **01 26 30.1 -2.1**
SMCO IAmb IAmb 01 26 37.2
comp=Z,7.1nm,0.8s
ISCO Idaho Springs 77.00 334 P **P** **01 26 30.9 -1.1**
I37A Lemond, Waseca 77.01 344 P **P** **01 26 31.9 +0.3**
I37A IAmb IAmb 01 26 33.1
comp=Z,8.1nm,0.7s
PV23 Carpenter Ridg 77.23 330 P **P** **01 26 33.0 -0.3**
E46A Sault Ste Mari 77.56 351 P **P** **01 26 34.5 0.0**
ECSD EROS Data Cent 77.57 341 P **P** **01 26 35.3 +0.6**
ECSD IAmb IAmb 01 26 37.0
comp=Z,9.8nm,0.8s
P18A Preston Nutter 78.74 330 P **P** **01 26 41.3 -0.3**
P18A IAmb IAmb 01 26 46.3
comp=Z,8.6nm,1.0s
PRN Pahroc Range 79.12 326 P **P** **01 26 43.4 -0.2**
PRN IAmb IAmb 01 26 48.2
comp=Z,9.5nm,1.3s
TSUM Tsumeb 79.52 106 LR LR 01 57 20.7
comp=Z,67nm,18.3s,baz=196,slow=32
R11A Troy Canyon, C 80.12 326 P **P** **01 26 48.7 -0.4**
HWUT Hardware Ranch 80.94 331 P **P** **01 26 53.0 -0.4**
BOSA Boshof 81.06 118 P **P** **01 26 54.8 +0.3**
comp=Z,13nm,1.4s,baz=280,slow=6.1,SNR=1.9
comp=Z,13nm,1.4s
BOSA Boshof 81.06 118 P **P** **01 26 53.2 -1.3**
BOSA IAmb IAmb 01 27 31.0
comp=Z,11nm,1.2s
PDAR Pinedale Array 81.08 333 P **P** **01 26 55.8 +1.6**
comp=Z,0.8nm,0.6s,baz=126,slow=7.5,SNR=7.8
comp=Z,0.8nm,0.6s
PDAR Pinedale Array 81.08 333 P **P** **01 26 53.7 -0.5**
B35A Bob, Littlefor 81.18 345 P **P** **01 26 54.7 +0.4**
B35A IAmb IAmb 01 26 56.8
comp=Z,12nm,1.1s
NVAR Mina Array Bea 81.52 324 P **P** **01 26 58.8 +2.2**
comp=Z,1.0nm,0.7s,baz=136,slow=7.6,SNR=4.8
comp=Z,1.0nm,0.7s
HVU Hansel Valley 81.59 330 P **P** **01 26 57.0 +0.1**
ELK Elko 81.86 328 P **P** **01 26 57.7 -0.7**
TOA0 Torodi Ar. Sit 82.47 70 P **P** **01 27 00.7 -1.2**
TORD Torodi Ar. Bea 82.47 70 P **P** **01 27 02.4 +0.6**
comp=Z,12nm,0.9s,baz=277,slow=6.7,SNR=76
TORD pP **pP** **01 27 17.2 -0.3**
comp=Z,2.3nm,0.8s,baz=270,slow=6.0,SNR=4.1
TORD sP **sP** **01 27 23.8 +0.2**
comp=Z,3.5nm,0.6s,baz=274,slow=5.1,SNR=4.9
comp=Z,12nm,0.9s
TORD Torodi Ar. Bea 82.47 70 P **P** **01 27 00.8 -1.0**
ULM Lac du Bonnet 83.44 344 P **P** **01 27 06.5 +0.5**
comp=Z,4.3nm,0.8s,baz=144,slow=4.6,SNR=4.1
comp=Z,4.3nm,0.8s
ULM Lac du Bonnet 83.44 344 P **P** **01 27 04.9 -1.1**
HLID Hailey 83.75 330 P **P** **01 27 07.1 -0.9**
BCYI Bear Canyon 83.92 331 P P 01 27 03.4 -5.6
J08A Circle Bar Ran 85.40 328 P **P** **01 27 16.1 -0.2**
J08A IAmb IAmb 01 27 20.1
comp=Z,8.1nm,1.2s
PLID Pearl Lake 85.65 330 P **P** **01 27 17.7 +0.1**
PINE Pine Mountain 86.89 326 P **P** **01 27 23.2 -0.5**
WALA Waterton Lakes 87.99 334 P **P** **01 27 28.0 -0.7**
WALA IAmb IAmb 01 27 31.1
comp=Z,6.3nm,1.1s
AKASG Malin Array Be 119.44 46 PKP **PKPdf** **01 33 26.6 -1.2**
comp=Z,0.2nm,0.3s,baz=357,slow=0.8,SNR=1.4
WRA Warramunga Arr 123.99 209 PKP **PKPdf** **01 33 36.5 -1.1**
comp=Z,0.6nm,0.8s,baz=145,slow=1.5,SNR=2.1
WRA pPKP **pPKPdf** **01 33 53.5 -0.4**
comp=Z,0.9nm,0.5s,baz=149,slow=1.8,SNR=3.4
H11S2 WAKE ISLAND Hy 126.40 271 T T 03 52 34.1
baz=116,slow=75,SNR=774
H11S1 WAKE ISLAND Hy 126.41 271 T T 03 52 34.9
baz=116,slow=75,SNR=513
H11S3 WAKE ISLAND Hy 126.42 271 T T 03 52 32.8
baz=116,slow=75,SNR=695
H11N3 WAKE ISLAND Hy 126.73 273 T T 03 52 57.4
baz=116,slow=75,SNR=87
H11N1 WAKE ISLAND Hy 126.74 273 T T 03 53 02.7
baz=116,slow=75,SNR=39
H11N2 WAKE ISLAND Hy 126.74 273 T T 03 53 02.0
baz=116,slow=75,SNR=138
ZALV Zalesovo Beam 151.03 30 PKPbc **PKPbc** **01 34 31.8 +0.7**
comp=Z,9.2nm,0.7s,baz=296,slow=3.1,SNR=35
ZALV pPKPbc **pPKPbc** **01 34 48.1 +0.5**
comp=Z,9.8nm,0.7s,baz=299,slow=3.3,SNR=11
ZALV Zalesovo Beam 151.03 30 PKPdf **PKPdf** **01 34 25.6 +0.3**
MKAR Makanchi Array 154.00 44 PKPbc **PKPbc** **01 34 38.2 +0.1**
comp=Z,0.6nm,0.9s,baz=28,slow=2.9,SNR=3.8
MKAR pPKPbc **PKPab** **01 34 52.7 +1.0**
comp=Z,1.6nm,0.8s,baz=291,slow=3.8,SNR=9.9
SONM Songino Array 162.74 5 PKP **PKPdf** **01 34 40.0 -0.6**
comp=Z,0.2nm,0.3s,baz=303,slow=2.9,SNR=2.0
PZH PanZhiHua 172.61 122 PKP **PKPdf** **01 34 49.8 +1.6**

*IDC **16** 01:26:04.9±0.7,3.°04S×147.°53E,h0km,mb4.3/16, mbtmp4.3/19,ML4.2/2,MS3.8/30,Error ellipse: s-maj=22.3km s-min=13.6km az=93.0*
*DJA **16** 01:26:06.4±1.7,3.°S±6.°×14.°8E±.°,h17km±16km,M4.7/12, mB5.1/2,mb4.5/12,MLv4.7/3,Mw(mB)4.4/2*
*NEIC **16** 01:26:07.5±1.3,2.°92S±0.°04×147.°5E±0.°1,h12km±2km, mb4.6/31,Error ellipse: s-maj=15.3km s-min=5.1km az=80.0*
*GCMT **16** 01:26:12.5±0.5,2.°96S±0.°03×147.°56E±0.°03,h37km±1km, MW5.1/73,Moment Tensor Solution. s14,c14; s73,c86; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr1.52±.40; Mθθ-0.86±.29; Mφφ-0.65±.29; Mrθ0.17±.24; Mθφ6.21±.26; Mφr-0.71±.23; Best double couple: M◎6.25300×10^16 NP1:φ270.00000°,δ83.00000°,λ1.00000°. NP2: φ179.00000°,δ89.00000°,λ173.00000°. Principal axes: T 5.4900, Plg6.0000°, Azm134.0000°; N 1.5270, Plg83.0000°, Azm351.0000°; P -7.0150, Plg4.0000°, Azm225.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 16 01:26:09.8±0.5,2.°94S±0.°05×147.°51E±0.°08,h32km,n106, σ1.°04/82,mb4.4/33,MS3.8/28,1D,Admiralty Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MANU	**Manus Island**	**0.90**	**351**		**Pn**	**01 26 23.9**	**-2.5**
MANU				Sg	**Sn**	**01 26 36.2**	**-2.0**
KRVT	**Keravat (AS076**	**4.71**	**107**	Pn	**Pn**	**01 27 17.3**	**-1.4**
	12nm,0.3s,baz=256,slow=14,SNR=14						
	108nm,0.6s						
PMG	**Port Moresby**	**6.43**	**183**	Pn	**Pn**	**01 27 39.9**	**-2.5**
	7.4nm,0.3s,baz=168,slow=15,SNR=1.8						
PMG				Sn	**Sn**	**01 28 56.0**	**+1.2**
	1.4nm,0.3s,baz=272,slow=21,SNR=0.8						
PMG	**Port Moresby**	**6.43**	**183**	Pn	**Pn**	**01 27 42.3**	**-0.1**
GENI	**Genyem**	**7.34**	**273**	P	**Pn**	**01 27 53.6**	**-1.3**
	1.0nm247nm,0.6s						
SMPI	**Sarmi**	**8.84**	**276**	P	**Pn**	**01 28 15.9**	**+0.4**
	2μm38nm,1.2s						
COEN	**Coen**	**11.75**	**201**		**Pn**	**01 28 55.0**	**-0.4**
COEN	**Coen**	**11.75**	**201**	P	**Pn**	**01 28 55.0**	**-0.4**
HNR	**Honiara**	**13.94**	**118**	LR	LR	01 34 37.3	
	comp=Z,431nm,19.0s,baz=320,slow=37						
SIJI	**Sorong**	**16.36**	**277**	Pn	**Pn**	**01 29 57.5**	**+0.2**
	0.9nm,0.3s,baz=6.7,slow=6.3,SNR=5.9						
	3.2nm,0.2s						
SWI	**Sorong**	**16.37**	**277**	P	**P**	**01 30 00.7**	**+0.7**
	20nm,0.4s						
GUMO	**Guam**	**16.63**	**351**	LR	LR	01 36 20.9	
	comp=Z,274nm,18.4s,baz=132,slow=37						
CTA	**Charters Tower**	**17.09**	**184**	Pn	**P**	**01 30 08.5**	**+0.6**
	0.2nm,0.3s,baz=342,slow=8.8,SNR=2.7						
CTA				LR	LR	01 36 43.6	
	comp=Z,341nm,18.4s,baz=358,slow=38						
KDU	**Kakadu**	**17.75**	**236**	P	**Pn**	**01 30 13.4**	**-1.3**
MTN	**Manton Dam**	**18.95**	**238**	P	**P**	**01 30 27.8**	**-0.7**
MTN	**Manton Dam**	**18.95**	**238**	P	**P**	**01 30 28.0**	**-0.5**
QIS	**Mount Isa**	**19.13**	**203**	P	**Pn**	**01 30 30.5**	**-1.0**
LBMI	**Labuha**	**20.13**	**276**	P	**P**	**01 30 39.6**	**-1.8**
	26nm,1.5s						
WB0	**Warramunga Arr**	**21.07**	**216**	P	**P**	**01 30 51.1**	**-0.4**
WB0				IAmb	IAmb	01 30 56.7	
	comp=Z,32nm,1.1s						
WR0	**Warramunga Arr**	**21.13**	**216**	P	**P**	**01 30 51.5**	**-0.6**
WR0				IAmb	IAmb	01 31 17.3	
	comp=Z,25nm,0.9s						
WRAB	**Tennant Creek**	**21.22**	**216**	P	**P**	**01 30 52.3**	**-0.8**
WRAB	**Tennant Creek**	**21.22**	**216**	P	**P**	**01 30 52.3**	**-0.8**
WB2	**Warramunga Arr**	**21.23**	**216**	P	**P**	**01 30 52.8**	**-0.5**
WRA	**Warramunga Arr**	**21.23**	**216**	P	**P**	**01 30 52.2**	**-1.1**
	comp=Z,32nm,1.1s,baz=41,slow=10,SNR=44						
WRA				LR	LR	01 39 39.6	
	comp=Z,482nm,19.2s,baz=16,slow=38						
	comp=Z,32nm,1.1s						
WRA	**Warramunga Arr**	**21.23**	**216**	P	**P**	**01 30 52.3**	**-1.0**
SANI	**Sanana**	**21.52**	**272**	P	**P**	**01 30 56.5**	**+0.1**
	comp=Z,13nm,1.1s						
SANI	**Sanana**	**21.52**	**272**	P	**P**	**01 30 59.5**	**+3.1**
KNRA	**Kununurra**	**22.38**	**234**	P	**P**	**01 31 05.4**	**-0.2**
KNRA				IAmb	IAmb	01 31 23.0	
	comp=Z,22nm,0.8s						
KNRA	**Kununurra**	**22.38**	**234**	P	**P**	**01 31 06.0**	**+0.4**
RMQ	**Roma**	**23.44**	**177**	P	**P**	**01 31 16.8**	**+0.3**
DAV	**Davao City (W)**	**24.04**	**295**	LR	LR	01 39 07.3	
	comp=Z,95nm,19.9s,baz=76,slow=32						
AS31	**Alice Springs**	**24.45**	**211**	P	**P**	**01 31 25.8**	**-0.2**
AS31				IAmb	IAmb	01 31 27.0	
	comp=Z,4.7nm,0.5s						
ASAR	**Alice Springs**	**24.45**	**211**	P	**P**	**01 31 25.8**	**-0.2**
	comp=Z,10.0nm,0.7s,baz=36,slow=7.3,SNR=95						
ASAR				LR	LR	01 42 30.1	
	comp=Z,222nm,18.3s,baz=356,slow=40						
	comp=Z,10.0nm,0.7s						
ASAR	**Alice Springs**	**24.45**	**211**	P	**P**	**01 31 26.0**	**0.0**
LUWI	**Luwuk**	**24.79**	**274**	P	**P**	**01 31 29.7**	**+0.5**
INKA	**Innaminka**	**25.49**	**194**	P	**P**	**01 31 35.8**	**+0.5**
OOD	**Oodnadatta**	**27.17**	**203**	P	**P**	**01 31 49.7**	**-0.8**
ARMA	**Armidale**	**27.61**	**172**	P	**P**	**01 31 54.8**	**+0.2**
ARMA				IAmb	IAmb	01 32 01.6	
	comp=Z,13nm,1.1s						
ARMA	**Armidale**	**27.61**	**172**	P	**P**	**01 31 54.6**	**+0.1**
KAPI	**Kappang**	**27.76**	**265**	P	**P**	**01 31 54.6**	**-1.4**
	comp=Z,6.2nm,0.8s,baz=9.4,slow=19,SNR=3.7						
KAPI				LR	LR	01 44 06.6	
	comp=Z,65nm,18.9s,baz=80,slow=39						
	comp=Z,6.2nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**28.47**	**41**	T	T	02 01 49.8	
	baz=223,slow=76,SNR=487						
H11S2	**WAKE ISLAND Hy**	**28.48**	**41**	T	T	02 01 50.8	
	baz=223,slow=76,SNR=225						
H11S1	**WAKE ISLAND Hy**	**28.49**	**41**	T	T	02 01 50.1	
	baz=223,slow=76,SNR=411						
CMSA	**Cobar Meteorol**	**28.50**	**183**	P	**P**	**01 32 03.3**	**+1.0**
STKA	**Stephens Creek**	**29.32**	**190**	P	**P**	**01 32 07.3**	**-2.3**
	comp=Z,1.2nm,0.5s,baz=21,slow=13,SNR=4.0						
STKA				LR	LR	01 43 42.9	
	comp=Z,344nm,18.5s,baz=13,slow=36						
H11N1	**WAKE ISLAND Hy**	**29.49**	**39**	T	T	02 03 05.7	
	baz=222,slow=76,SNR=177						
H11N3	**WAKE ISLAND Hy**	**29.50**	**39**	T	T	02 03 06.9	
	baz=222,slow=76,SNR=335						
H11N2	**WAKE ISLAND Hy**	**29.50**	**39**	T	T	02 03 09.9	
	baz=222,slow=76,SNR=317						
JCJ	**Chichijima**	**30.30**	**351**	LR	LR	01 42 44.3	
	comp=Z,126nm,21.1s,baz=131,slow=33						
MSVF	**Nonsavu**	**33.36**	**118**	LR	LR	01 44 47.5	
	comp=Z,187nm,20.9s,baz=10,slow=34						
JHJ	**Hachijo jima 2**	**36.60**	**349**	LR	LR	01 48 20.4	
	comp=Z,41nm,18.3s,baz=140,slow=36						
JGF	**Kuroka**	**39.50**	**347**	P	**P**	**01 33 38.4**	**+0.8**
JGF				IAmb	IAmb	01 33 41.1	
	comp=Z,18nm,1.0s						
MJAR	**Matsushiro Arr**	**40.23**	**348**	P	**P**	**01 33 43.9**	**+0.3**
	comp=Z,1.0nm,0.3s,baz=355,slow=14,SNR=2.3						
MJAR				LR	LR	01 49 08.7	
	comp=Z,117nm,18.0s,baz=158,slow=34						
	comp=Z,1.0nm,0.3s						
AFI	**Afiamalu**	**41.65**	**108**	LR	LR	01 50 17.8	
	comp=Z,107nm,18.8s,baz=68,slow=35						
KSRS	**Korea Array**	**44.12**	**337**	P	**P**	**01 34 16.3**	**+1.0**
	comp=Z,1.8nm,0.6s,baz=148,slow=9.6,SNR=7.6						
KSRS				LR	LR	01 50 50.2	
	comp=Z,132nm,19.9s,baz=160,slow=34						
	comp=Z,1.8nm,0.6s						
NJ2	**Nanjing**	**44.17**	**324**	*e*P	**P**	**01 34 16.4**	**+0.6**
URZ	**Urewera**	**44.36**	**146**	LR	LR	01 50 13.3	
	comp=Z,360nm,20.2s,baz=211,slow=33						
RPZ	**Rata Peaks**	**45.66**	**156**	LR	LR	01 52 18.4	
	comp=Z,163nm,19.1s,baz=284,slow=34						
ASAJ	**Asahikawa**	**47.05**	**355**	LR	LR	01 53 37.2	
	comp=Z,45nm,20.4s,baz=151,slow=35						
PSI	**Prapat**	**48.90**	**276**	LR	LR	01 57 25.2	
	comp=Z,214nm,18.5s,baz=147,slow=38						
USRK	**Ussuriysk Ar.**	**48.95**	**345**	P	**P**	**01 34 54.9**	**+1.8**
	comp=Z,6.1nm,1.1s,baz=152,slow=9.4,SNR=3.1						
USRK				LR	LR	01 53 57.8	
	comp=Z,67nm,18.1s,baz=171,slow=34						
	comp=Z,6.1nm,1.1s						
HNS	**HongShan**	**50.38**	**326**	⇓P	**P**	**01 35 05.5**	**+1.4**
HNS				*e*S	S	01 41 51.4	-24
HNS				LR	LR		
	comp=N,140nm,17.5s						
HNS				LR	LR		
	comp=E,190nm,19.1s						
HNS				LR	LR		
	comp=Z,190nm,17.5s						
CMAR	**Chiang Mai Arr**	**52.32**	**296**	P	**P**	**01 35 20.4**	**+1.5**
	comp=Z,2.5nm,0.3s,baz=99,slow=5.6,SNR=4.2						
CMAR				LR	LR	01 55 31.5	
	comp=Z,42nm,21.9s,baz=200,slow=34						
	comp=Z,2.5nm,0.3s						
CMAR	**Chiang Mai Arr**	**52.32**	**296**	P	**P**	**01 35 18.7**	**-0.3**
KLR	**Kul'dur**	**53.73**	**347**	LR	LR	01 56 07.5	
	comp=Z,53nm,21.1s,baz=206,slow=34						
PETK	**Petropavlovsk-**	**56.50**	**7**	P	**P**	**01 35 49.8**	**+1.1**
	comp=Z,8.7nm,0.9s,baz=184,slow=10,SNR=13						
	comp=Z,8.7nm,0.9s						
PETK	**Petropavlovsk-**	**56.50**	**7**	P	**P**	**01 35 48.3**	**-0.5**
SONM	**Songino Array**	**62.01**	**330**	P	**P**	**01 36 28.6**	**+1.5**
	comp=Z,2.2nm,0.3s,baz=142,slow=4.9,SNR=4.1						
	comp=Z,0.2nm,0.3s						
SONM	**Songino Array**	**62.01**	**330**	P	**P**	**01 36 25.7**	**-1.5**
MA2	**Magadan**	**62.38**	**2**	LR	LR	02 05 50.9	
	comp=Z,41nm,18.0s,baz=166,slow=38						
YAK	**Yakutsk**	**66.22**	**351**	LR	LR	02 04 31.5	
	comp=Z,50nm,19.8s,baz=81,slow=35						
PALK	**Pallekele**	**67.43**	**279**	LR	LR	02 08 47.5	
	comp=Z,119nm,18.3s,baz=235,slow=38						
VNDA	**Vanda**	**74.92**	**177**	P	**P**	**01 37 47.0**	**-0.2**
	comp=Z,1.7nm,0.6s,baz=330,slow=6.9,SNR=24						
VNDA				LR	LR	02 08 36.3	
	comp=Z,88nm,18.3s,baz=346,slow=34						
	comp=Z,1.7nm,0.6s						
VNDA	**Vanda**	**74.92**	**177**	P	**P**	**01 37 47.0**	**-0.2**
VNDA				IAmb	IAmb	01 37 47.2	
	comp=Z,2.7nm,0.8s						
MKAR	**Makanchi Array**	**75.49**	**320**	P	**P**	**01 37 51.3**	**+0.2**
	comp=Z,1.0nm,0.8s,baz=81,slow=7.5,SNR=3.7						
	comp=Z,1.0nm,0.9s						
ZALV	**Zalesovo Beam**	**76.72**	**327**	P	**P**	**01 37 57.3**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=111,slow=6.3,SNR=2.4						
	comp=Z,0.8nm,0.7s						
SVW2	**Sparrevohn**	**77.27**	**25**	P	**P**	**01 37 60.0**	**-0.8**
SVW2				IAmb	IAmb	01 38 07.2	
	comp=Z,8.0nm,1.2s						
L19K	**White Mountain**	**78.12**	**24**	P	**P**	**01 38 06.2**	**+0.6**
L19K				IAmb	IAmb	01 38 08.2	
	comp=Z,4.6nm,0.9s						
K20K	**Telida**	**79.03**	**23**	P	**P**	**01 38 11.8**	**+1.3**
J20K	**Nowinta River**	**79.41**	**22**	P	**P**	**01 38 14.1**	**+1.6**
J20K				IAmb	IAmb	01 38 19.0	
	comp=Z,7.8nm,1.3s						
IMAR	**Indian Mountai**	**80.47**	**21**	P	**P**	**01 38 18.7**	**+0.4**
MLY	**Manley**	**81.11**	**22**	P	**P**	**01 38 22.1**	**+0.3**
RND	**Reindeer**	**81.14**	**24**	P	**P**	**01 38 22.5**	**+0.5**
RND				IAmb	IAmb	01 38 34.2	
	comp=Z,3.8nm,0.8s						
DHY	**Denali Highway**	**81.61**	**25**	P	**P**	**01 38 25.5**	**+0.9**
DHY				IAmb	IAmb	01 38 29.0	
	comp=Z,3.3nm,0.9s						
WRH	**Wood River Hil**	**81.89**	**23**	P	**P**	**01 38 26.4**	**+0.5**
WRH				IAmb	IAmb	01 38 32.3	
	comp=Z,3.5nm,1.0s						
HMT	**Hamilton**	**81.95**	**28**	P	**P**	**01 38 26.9**	**+0.6**
CCB	**Clear Creek Bu**	**82.08**	**23**	P	**P**	**01 38 26.3**	**-0.5**
IL31		**82.49**	**23**	P	**P**	**01 38 29.2**	**+0.3**
ILAR	**Eielson Array**	**82.49**	**23**	P	**P**	**01 38 28.4**	**-0.6**
	comp=Z,1.6nm,0.7s,baz=253,slow=5.2,SNR=19						
	comp=Z,1.6nm,0.7s						
NRIK	**Noril'sk**	**82.54**	**342**	P	**P**	**01 38 29.0**	**-0.2**
	comp=Z,1.6nm,0.6s,baz=145,slow=4.8,SNR=3.8						
NRIK				LR	LR	02 15 32.7	
	comp=Z,48nm,18.9s,baz=151,slow=36						
	comp=Z,1.6nm,0.6s						
J25K	**Salcha River,**	**83.03**	**24**	P	**P**	**01 38 31.8**	**-0.1**
J25K				IAmb	IAmb	01 38 33.5	
	comp=Z,3.8nm,0.8s						
L26K	**Log Cabin Wild**	**83.29**	**25**	P	**P**	**01 38 34.5**	**+1.3**
L26K				IAmb	IAmb	01 38 38.0	
	comp=Z,8.3nm,1.5s						
M27K	**Edge Creek, AK**	**83.71**	**26**	P	**P**	**01 38 36.7**	**+1.2**
J26L	**Joseph Creek**	**83.72**	**24**	P	**P**	**01 38 35.6**	**+0.2**
K27K	**Chicken**	**84.17**	**25**	P	**P**	**01 38 39.9**	**+1.3**
K27K				IAmb	IAmb	01 38 45.7	
	comp=Z,3.3nm,1.1s						
BVAR	**Borovoye Array**	**84.61**	**324**	LR	LR	02 18 52.4	
	comp=Z,33nm,18.1s,baz=318,slow=37						
DAWY	**Dawson**	**85.30**	**25**	P	**P**	**01 38 43.8**	**+0.4**
DAWY				IAmb	IAmb	01 38 51.9	
	comp=Z,6.8nm,1.4s						
EPYK	**Eagle Plains**	**87.00**	**23**	P	**P**	**01 38 52.3**	**+0.5**
INK	**Inuvik**	**88.64**	**21**	P	**P**	**01 38 59.2**	**-0.3**
GEYT	**Alibeck**	**91.31**	**308**	LR	LR	02 20 43.1	
	comp=Z,65nm,22.0s,baz=102,slow=36						
NVAR	**Mina Array Bea**	**95.10**	**52**	P	**P**	**01 39 31.6**	**+1.2**
	comp=Z,1.5nm,0.9s,baz=271,slow=6.0,SNR=3.9						
	comp=Z,1.5nm,0.9s						
NEW	**Newport**	**95.76**	**42**	LR	L

PESE3				*i* S		**Sb**	**01 33 16.2**	**+0.3**
GMAL	**Guarumal, Vera**	**0.49**	**301**	*e*P		**Pg**	**01 33 08.7**	**-0.3**
GMAL				*e*S		**Sb**	**01 33 16.1**	**-1.2**
GMAL				*i*			01 33 18.4	
	comp=Z,905nm,0.2s							
GMAL	**Guarumal, Vera**	**0.49**	**301**	⇓*i*P		**Pg**	**01 33 08.7**	**-0.3**
GMAL				*i* S		**Sb**	**01 33 16.9**	**-0.3**
RSUS3	**Rio de Jesus,**	**0.59**	**324**	⇑*i*P		**Pg**	**01 33 10.3**	**-0.5**
RSUS3				*i* S		**Sg**	**01 33 18.5**	**-0.1**
CHIT3	**Chitre**	**0.59**	**41**	*e*P		**Pb**	**01 33 11.7**	**-0.1**
CHIT3				*e*S		**Sb**	**01 33 19.8**	**-0.5**
CHIT3				*i* S		**Sg**	**01 33 20.4**	**+1.7**
AZU	**Azuero**	**0.60**	**62**	*e*P		**Pb**	**01 33 11.8**	**-0.2**
AZU				*e*S		**Sb**	**01 33 20.9**	**+0.3**
AZU				*i*			01 33 27.2	
	comp=Z,157nm,0.6s							
AZU	**Azuero**	**0.60**	**62**	⇓*e*P		**Pb**	**01 33 11.7**	**-0.2**
AZU				*i* S		**Sb**	**01 33 20.6**	**0.0**
AZU				*i* S		**Sg**	**01 33 21.3**	**+2.2**
STIA3	**Santiago, Vera**	**0.61**	**345**	⇑*i*P		**Pg**	**01 33 11.1**	**-0.1**
STIA3				*i* S		**Sb**	**01 33 20.1**	**-0.7**
PEDA3	**Pedasi**	**0.78**	**88**	⇑*e*P		**Pg**	**01 33 14.0**	**-0.4**
CALO3	**Calobre, Verag**	**0.81**	**358**	⇑*e*P		**Pg**	**01 33 14.6**	**-0.4**
SAFE3	**Santa Fe, Vera**	**1.04**	**345**	⇓*e*P		**Pg**	**01 33 18.4**	**-1.0**
PNME	**Penonome**	**1.09**	**26**	*e*P		**Pg**	**01 33 18.6**	**-1.7**
REME3	**Remedios, Chir**	**1.24**	**305**	⇓*e*P		**Pb**	**01 33 20.9**	**-2.3**
VTON	**El Valle, Cocl**	**1.30**	**32**	⇓*e*P		**Pb**	**01 33 24.0**	**+0.1**
ZANG	**Zanguenga, Cho**	**1.72**	**33**	⇓*e*P		**Pb**	**01 33 30.9**	**-0.1**
ZANG				*i* S		**Sn**	**01 33 52.2**	**+0.9**
CHIR3	**Chiriqui UPA,**	**1.74**	**301**	⇑*e*P		**Pn**	**01 33 29.0**	**-0.6**
BCIP	**Isla Barro Col**	**1.91**	**30**	*e*P		**Pb**	**01 33 33.5**	**-0.8**
BCIP				*e*S		**Sb**	**01 33 59.4**	**+1.2**
BCIP				*i*			01 34 07.2	
	comp=Z,24nm,0.4s							
BCIP	**Isla Barro Col**	**1.91**	**30**	⇓*e*P		**Pb**	**01 33 33.7**	**-0.6**
BCIP				*i* S		**Sn**	**01 33 56.3**	**+0.2**
BCIP				*e*S		**Sb**	**01 33 57.6**	**-0.6**
UPA	**Univ. de Panam**	**1.94**	**41**	⇓*e*P		**Pn**	**01 33 29.7**	**-2.6**
FRIJ	**El Hiral**	**2.02**	**32**	⇓*e*P		**Pb**	**01 33 35.5**	**-0.5**
FRIJ				*i* S		**Sn**	**01 34 00.1**	**+1.5**
LNBQ3	**Los Naranjos,**	**2.06**	**308**	⇓*e*P		**Pn**	**01 33 34.4**	**+0.3**
PTPM	**Petroterminale**	**2.16**	**289**	⇓*e*P		**Pn**	**01 33 35.0**	**-0.4**
BRU2	**Volcan**	**2.26**	**305**	⇓*i*P		**Pn**	**01 33 37.5**	**+0.6**
BRU2				*i* S		**Sn**	**01 34 06.8**	**+1.9**
DRK0	**Durika**	**2.97**	**306**	⇓*e*P		**Pn**	**01 33 49.0**	**+2.3**

IDC **16** *01:32:58.7±0.7, 3˚.26N×126˚.36E, h0km, mb4.2/12, mbtmp4.2/13, ML4.5/1, Error ellipse: s-maj=58.4km s-min=11.9km az=69.0*
DJA **16** *01:33:02.6±0.4, 4˚N±9˚×12˚7E±˚, h30km±12km, M4.3/10, mb4.5/7, mB4.6/3, MLv4.2/10, Mw(mB)3.8/3*
NEIC **16** *01:33:03.4±1.6, 3˚.5N±0˚.1×126˚.68E±0˚.09, h33km±5km, mb4.4/17, Error ellipse: s-maj=17.8km s-min=8.2km az=218.0*

ISC 16 01:33:05.4±0.5,**3˚41N**±0˚.07×**126˚.73E**±0˚.08,**h53km**,**n45,** σ1⇟**37**/50,**mb4.2**/17,**Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.23**	**283**	P	**Pn**	**01 33 26.8**	**+0.6**
SGSI				S	**Sn**	**01 33 43.5**	**+1.7**
TNTI	**Ternate**	**2.70**	**166**		**Pn**	**01 33 46.8**	**+0.5**
TNTI				Sn	**Sn**	**01 34 17.8**	**+0.1**
TNTI	**Ternate**	**2.70**	**166**	P	**Pn**	**01 33 47.2**	**+0.9**
LBMI	**Labuha**	**4.09**	**169**	P	**Pn**	**01 34 04.8**	**-0.7**
SANI	**Sanana**	**5.47**	**188**	P	**Pn**	**01 34 23.0**	**-1.4**
	0.1nm8.5nm,0.4s						
SWI	**Sorong**	**6.21**	**133**	P	**Pn**	**01 34 32.1**	**-2.4**
	0.3nm70nm,0.8s						
SIJI	**Sorong**	**6.22**	**133**	Pn	**Pn**	**01 34 33.7**	**-0.9**
	9.5nm,0.3s,baz=339,slow=9.1,SNR=17						
SIJI				Sn	**Sn**	**01 35 42.7**	**-1.7**
	baz=233,slow=22 34nm,0.5s						
TOLI2	**Tolitoli**	**6.36**	**249**	Pn	**Pn**	**01 34 34.8**	**-1.9**
APSI	**Ampana**	**6.65**	**230**	P	Pn	01 34 45.8	+5.3
	0.2nm498nm55nm,0.7s						
FAKI	**Fak Fak**	**8.37**	**139**	P	**Pn**	**01 35 03.2**	**-0.9**
MYLDM	**Lahad Datu**	**8.39**	**282**	Pn	**Pn**	**01 35 00.8**	**-3.6**
KNRA	**Kununurra**	**19.07**	**174**		**P**	**01 37 23.4**	**-0.2**
KNRA				IAmb	IAmb	01 37 26.6	
	comp=Z,46nm,1.5s						
WB0	**Warramunga Arr**	**24.23**	**162**	P	**P**	**01 38 16.8**	**-0.6**
WRAB	**Tennant Creek**	**24.38**	**162**	P	**P**	**01 38 18.2**	**-0.6**
WRA	**Warramunga Arr**	**24.38**	**162**	P	**P**	**01 38 18.2**	**-0.6**
	comp=Z,16nm,0.9s,baz=337,slow=11,SNR=69						
WRA				S	**S**	**01 42 39.0**	**+4.1**
	comp=Z,1.1nm,0.8s,baz=336,slow=20,SNR=4.7 comp=Z,16nm,0.9s						
WRA	**Warramunga Arr**	**24.38**	**162**	P	**P**	**01 38 17.3**	**-1.5**
WB2	**Warramunga Arr**	**24.39**	**162**	P	**P**	**01 38 18.0**	**-0.8**
WR0	**Warramunga Arr**	**24.46**	**162**	P	**P**	**01 38 19.0**	**-0.5**
WR0				IAmb	IAmb	01 38 20.6	
	comp=Z,18nm,1.0s						
AS31	**Alice Springs**	**27.80**	**166**	P	**P**	**01 38 49.4**	**-0.3**
ASAR	**Alice Springs**	**27.81**	**166**	P	**P**	**01 38 49.5**	**-0.3**
	comp=Z,1.7nm,0.6s,baz=345,slow=6.8,SNR=22						
ASAR				PcP	**PcP**	**01 42 06.4**	**+1.3**
	comp=Z,0.4nm,0.5s,baz=335,slow=1.3,SNR=3.4 comp=Z,1.7nm,0.6s						
ASAR	**Alice Springs**	**27.81**	**166**	P	**P**	**01 38 48.8**	**-0.9**
ASAR					**PcP**	**01 42 04.7**	**-0.4**
KSRS	**Korea Array**	**33.90**	**2**	P	**P**	**01 39 46.1**	**+2.9**
	comp=Z,1.0nm,0.6s,baz=189,slow=9.9,SNR=2.3 comp=Z,1.0nm,0.6s						
STKA	**Stephens Creek**	**37.83**	**159**	P	**P**	**01 40 17.3**	**+0.3**
	comp=Z,24nm,0.8s,baz=334,slow=8.3,SNR=39 comp=Z,24nm,0.8s						
STKA	**Stephens Creek**	**37.83**	**159**	P	**P**	**01 40 17.1**	**+0.2**
STKA				IAmb	IAmb	01 40 18.3	
	comp=Z,4.6nm,0.8s						
SHL	**Shillong**	**40.06**	**307**	P	**P**	**01 40 35.9**	**-0.1**
SHL				IAmb	IAmb	01 40 39.9	
	comp=Z,8.2nm,0.6s						
ARMA	**Armidale**	**41.20**	**146**	P	**P**	**01 40 45.6**	**+0.4**
SONM	**Songino Array**	**47.60**	**342**	P	**P**	**01 41 37.1**	**+1.0**
	comp=Z,1.0nm,0.6s,baz=155,slow=9.6,SNR=5.6 comp=Z,1.0nm,0.6s						
SONM	**Songino Array**	**47.60**	**342**	P	**P**	**01 41 34.3**	**-1.8**
MK31	**Makanchi Array**	**57.81**	**325**	P	**P**	**01 42 49.9**	**-1.5**
MK31				IAmb	IAmb	01 42 54.8	
	comp=Z,1.3nm,0.5s						
MKAR	**Makanchi Array**	**57.81**	**325**	P	**P**	**01 42 51.9**	**+0.5**
	comp=Z,2.2nm,0.5s,baz=122,slow=7.8,SNR=24 comp=Z,2.2nm,0.5s						
MKAR	**Makanchi Array**	**57.81**	**325**	P	**P**	**01 42 50.8**	**-0.6**
ZALV	**Zalesovo Beam**	**60.87**	**333**	P	**P**	**01 43 11.4**	**-0.9**
	comp=Z,0.5nm,0.4s,baz=129,slow=8.4,SNR=1.4 comp=Z,0.5nm,0.4s						
KURK	**Kurchatov**	**62.01**	**328**	P	**P**	**01 43 19.9**	**-0.1**
KURK				IAmb	IAmb	01 43 24.7	
	comp=Z,3.4nm,0.8s						
BRVK	**Borovoye**	**67.66**	**327**	P	**P**	**01 43 55.9**	**-0.9**
BRVK				IAmb	IAmb	01 43 59.2	
	comp=Z,2.1nm,0.8s						
NRIK	**Noril'sk**	**70.74**	**346**	P	**P**	**01 44 15.3**	**-0.3**
	comp=Z,1.6nm,0.6s,baz=135,slow=6.3,SNR=2.5 comp=Z,1.6nm,0.6s						
ABKAR	**Akbulak array**	**72.39**	**321**	P	**P**	**01 44 25.7**	**-0.2**
VNDA	**Vanda**	**83.11**	**173**	P	**P**	**01 45 27.2**	**+2.3**
	comp=Z,0.6nm,0.6s,baz=306,slow=6.2,SNR=7.4 comp=Z,0.6nm,0.6s						
VNDA	**Vanda**	**83.11**	**173**	P	**P**	**01 45 27.0**	**+2.0**
VNDA				IAmb	IAmb	01 45 39.7	
	comp=Z,2.0nm,1.1s						
BRTR	**Keskin Array B**	**90.22**	**310**	P	**P**	**01 46 01.2**	**+0.4**
	comp=Z,0.6nm,1.0s,baz=40,slow=5.6,SNR=2.1 comp=Z,0.6nm,1.0s						
BRTR	**Keskin Array B**	**90.22**	**310**	P	**P**	**01 46 00.8**	**+0.1**
ARCES	**ARCESS Array B**	**90.75**	**340**	P	**P**	**01 46 02.7**	**+0.4**
	comp=Z,2.6nm,0.9s,baz=83,slow=7.4,SNR=5.8 comp=Z,2.6nm,0.9s						
ARCES	**ARCESS Array B**	**90.75**	**340**	P	**P**	**01 46 02.7**	**+0.4**
ARCES				IAmb	IAmb	01 46 35.4	
	comp=Z,3.9nm,1.1s						
AKASG	**Malin Array Be**	**92.14**	**321**	P	**P**	**01 46 07.7**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=55,slow=4.7,SNR=1.8 comp=Z,0.1nm,0.3s						
TORD	**Torodi Ar. Bea**	**123.01**	**288**	PKP	**PKiKP**	**01 51 58.0**	**+0.9**
	comp=Z,0.4nm,0.7s,baz=55,slow=1.4,SNR=2.2						
TORD	**Torodi Ar. Bea**	**123.01**	**288**		**PKiKP**	**01 51 57.1**	**-0.1**

CNRM **16** *01:33:22.9, 36˚.29N×1˚.66W, h61km, ml2.9*
MDD **16** *01:33:22.5±0.7, 36˚.27N×1˚.50W, h7km±3km, mb_Lg2.8/19, Error ellipse: s-maj=5.3km s-min=3.2km az=156.0*
SFS **16** *01:33:22.0, 36˚.27N×1˚.49W, h7km, ML2.8, MEDITERRANEO ARGELIA*
INMG **16** *01:33:22.2±1.2, 36˚.17N×1˚.52W, h14km±5km, ML2.5, Error ellipse: s-maj=4.9km s-min=3.8km az=151.0*
IGIL **16** *01:33:26.1, 35˚.49N×2˚.31W, h0km*

ISC 16 01:33:22.3±1.4,**36˚26N**±0˚.03×**1˚54W**±0˚.04,**h25**km±14km, **n47,** σ1⇟**43**/84,**Western Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENIJ	**Nijar**	**0.89**	**323**	Pg	**Pn**	**01 33 39.5**	**+0.3**
ENIJ				Sg	**Sb**	**01 33 50.5**	**-0.1**
ENIJ				*i* Vmb_Lg		01 33 52.6	
EBER	**Berja**	**1.26**	**301**	Pn	**Pb**	**01 33 44.9**	**-0.5**
EBER				Pg	**Pn**	**01 33 47.2**	**+2.8**
EBER				Sg	**Sb**	**01 34 03.4**	**+2.1**
EBER				*i* Vmb_Lg		01 34 07.6	
CART	**Cartagena**	**1.39**	**18**	P	**Pn**	**01 33 45.7**	**-0.4**
CART				S	**Sn**	**01 34 01.3**	**-2.3**
CART	**Cartagena**	**1.39**	**18**	P	**Pn**	**01 33 46.0**	**-0.1**
CART				S	**Sn**	**01 34 01.7**	**-2.0**
TLOR	**Lorca, Murcia**	**1.40**	**355**	Pn	**Pb**	**01 33 47.1**	**-0.5**
TLOR				Sn	**Sn**	**01 34 03.9**	**+0.1**
GOG	**Mont Gurugu**	**1.57**	**229**	P	**Pn**	**01 33 48.7**	**0.0**
GOG				S	**Sn**	**01 34 08.9**	**+0.6**
EMUR	**La Murta**	**1.60**	**9**	Pn	**Pn**	**01 33 49.4**	**+0.4**
EMUR				Sn	**Sn**	**01 34 08.5**	**-0.3**
EMUR				*i* Vmb_Lg		01 34 12.3	
TAF	**Taforalt**	**1.61**	**206**	P	**Pn**	**01 33 50.0**	**+0.8**
TAF				S	**Sn**	**01 34 10.2**	**+1.0**
EZAR	**Zarzadilla de**	**1.61**	**356**	Pn	**Pb**	**01 33 50.4**	**-1.0**
EZAR				Sn	**Sn**	**01 34 09.2**	**-0.1**
ELGU	**Los Guajares,**	**1.78**	**290**	Pn	**Pn**	**01 33 51.2**	**-0.3**
ELGU				Sn	**Sn**	**01 34 13.2**	**-0.2**
ELGU				*i* Vmb_Lg		01 34 17.2	
EQUE	**Quentar**	**1.79**	**302**	Pn	**Pb**	**01 33 53.8**	**-0.7**
EQUE				Sn	**Sb**	**01 34 18.3**	**+1.8**
EQUE				*i* Vmb_Lg		01 34 19.0	
ETRV	**Los Montesinos**	**1.86**	**19**	Pn	**Pn**	**01 33 53.0**	**+0.5**
ETRV				Sn	**Sn**	**01 34 14.5**	**-0.8**
ETRV				*i* Vmb_Lg		01 34 18.9	
EQES	**Quesada**	**1.97**	**322**	Pn	**Pb**	**01 33 57.3**	**-0.1**
EQES				Sn	**Sb**	**01 34 21.6**	**+0.1**
EQES				*i* Vmb_Lg		01 34 24.5	
JBK	**JBK**	**2.10**	**204**	P	**Pn**	**01 33 57.3**	**+1.3**
JBK				S	**Sn**	**01 34 21.9**	**+0.5**
EGOR	**Sierra Gorda,**	**2.23**	**293**	Pn	**Pb**	**01 34 00.1**	**-1.9**
EGOR				*i* Vmb_Lg		01 34 36.0	
ETOB	**Tobarra**	**2.38**	**360**	Pn	**Pn**	**01 34 01.4**	**+1.6**
ETOB				Sn	**Sn**	**01 34 30.2**	**+2.1**
ETOB				*i* Vmb_Lg		01 34 30.9	
EMIJ	**Mijas**	**2.62**	**278**	Pn	**Pn**	**01 34 02.1**	**-0.9**
EMIJ				Sn	**Sn**	**01 34 32.0**	**-2.1**
EMIJ				*i* Vmb_Lg		01 34 34.7	
EADA	**Adamuz**	**3.08**	**309**	Pn	**Pn**	**01 34 11.5**	**+2.1**
EADA				Sn	**Sb**	**01 34 52.0**	**-1.6**
EADA				*i* Vmb_Lg		01 34 55.3	
SMIR	**Smir Dam**	**3.17**	**261**	P	**Pn**	**01 34 09.9**	**-0.6**
SMIR				S	**Sn**	**01 34 45.7**	**-1.8**
TDRA	**Tendrara**	**3.24**	**187**	P	**Pn**	**01 34 12.3**	**+0.7**
TDRA				S	**Sn**	**01 34 51.5**	**+2.0**
CHEFC	**Chefchaouen**	**3.30**	**251**	P	**Pn**	**01 34 14.4**	**+2.0**
CHEFC				S	**Sn**	**01 34 48.7**	**-2.2**
ECAB	**El Cabril**	**3.59**	**301**	Pn	**Pn**	**01 34 17.1**	**+0.7**
ECAB				Sn	**Sn**	**01 34 57.6**	**-0.3**
ECAB				*i* Vmb_Lg		01 35 10.2	
EIBI	**Ibiza**	**3.59**	**39**	Pn	**Pn**	**01 34 17.1**	**+0.8**
EIBI				Sn	**Sn**	**01 34 56.3**	**-1.6**
EIBI				*i* Vmb_Lg		01 34 57.8	
LCRM	**LCR**	**3.74**	**228**	P	**Pn**	**01 34 20.6**	**+2.0**
LCRM				S	**Sn**	**01 35 01.8**	**-0.2**
PAB	**San Pablo**	**3.96**	**327**	Pn	**Pn**	**01 34 23.4**	**+1.9**
PAB				Sn	**Sn**	**01 35 05.6**	**-1.5**
PAB				*i* Vmb_Lg		01 35 31.7	
EMOS	**Mosqueruela**	**4.18**	**11**	Pn	**Pn**	**01 34 26.9**	**+2.3**
EMOS				Sn	**Sn**	**01 35 12.5**	**-0.2**
EMOS				*i* Vmb_Lg		01 35 15.1	
MDT	**Midelt**	**4.27**	**217**	P	**Pn**	**01 34 24.4**	**-1.3**
MDT				S	**Sn**	**01 35 14.0**	**-0.8**
MD31	**MD31**	**4.30**	**219**	P	**Pn**	**01 34 25.4**	**-0.8**
MD31				S	**Sn**	**01 35 15.3**	**-0.3**
EMIN	**Mina Concepcio**	**4.37**	**292**	Pn	**Pn**	**01 34 27.4**	**+0.4**
PBAR	**Barrancos**	**4.79**	**295**	*e*Sn	**Sn**	**01 35 27.5**	**+0.1**
EBAD	**Badajoz**	**5.01**	**301**	Pn	**Pn**	**01 34 36.5**	**+0.4**
EBAD				Sn	**Sn**	**01 35 31.4**	**-1.5**
EBAD				*i* Vmb_Lg		01 35 33.1	
ZHG	**ZHG**	**5.05**	**238**	P	**Pn**	**01 34 36.9**	**+0.5**
ZHG				S	**Sn**	**01 35 29.0**	**-5.0**
PVAQ	**Vaqueiros**	**5.08**	**285**	*e*Pn	**Pn**	**01 34 37.5**	**+0.7**
PVAQ				*e*Sn	**Sn**	**01 35 33.8**	**-0.9**
PVAQ				A	A	01 35 40.9	
	3.2nm,0.5s						
EPLA	**Plasencia**	**5.21**	**318**	Pn	**Pn**	**01 34 40.3**	**+1.6**
EPLA				Sn	**Sn**	**01 35 38.3**	**+0.2**
PBDV	**Barranco-do-Ve**	**5.22**	**283**	*e*Pn	**Pn**	**01 34 40.3**	**+1.5**
PBDV				*e*Sn	**Sn**	**01 35 38.1**	**-0.1**
PCVE	**Castro Verde**	**5.38**	**287**	*e*Pn	**Pn**	**01 34 40.9**	**0.0**
PESTR	**Estremoz**	**5.46**	**300**	*e*Pn	**Pn**	**01 34 43.8**	**+1.7**
PESTR				*e*Sn	**Sn**	**01 35 44.3**	**+0.2**
PESTR	**Estremoz**	**5.46**	**300**	P	**Pn**	**01 34 42.1**	**+0.4**
MESJ	**Messejana**	**5.57**	**288**	*e*P	**Pn**	**01 34 44.2**	**+0.7**
MESJ	**Messejana**	**5.57**	**288**	*e*Pn	**Pn**	**01 34 44.5**	**+1.0**
MESJ				*e*Sn	**Sn**	**01 35 46.1**	**-0.6**
MESJ				A	A	01 35 49.7	
	2.7nm,0.1s						
EVO	**Evora**	**5.63**	**296**	*e*Pn	**Pn**	**01 34 45.8**	**+1.5**
EVO				*e*Sn	**Sn**	**01 35 47.7**	**-0.5**
PNCL	**Nicolau / Gran**	**5.88**	**290**	*e*Pn	**Pn**	**01 34 48.6**	**+0.9**
PCBR	**Castelo Branco**	**5.89**	**309**	*e*Pn	**Pn**	**01 34 50.3**	**+2.4**
PCBR				*e*Sn	**Sn**	**01 35 53.1**	**-1.5**
PTEO	**Sao Teotonio**	**5.90**	**285**	*e*Pn	**Pn**	**01 34 49.5**	**+1.5**
PMTG	**Montargil**	**6.00**	**300**	*e*Pn	**Pn**	**01 34 51.3**	**+1.9**
PSBE	**So Bento**	**6.59**	**302**	*e*Pn	**Pn**	**01 34 59.2**	**+1.6**
OUZM	**OUZ**	**6.89**	**221**	P	**Pn**	**01 35 05.2**	**+3.4**

IDC **16** *01:46:14.9±0.7, 3˚.09S×147˚.62E, h0km, mb4.0/9, mbtmp4.1/11, ML4.1/2, MS3.8/32, Error ellipse: s-maj=26.7km s-min=19.5km az=104.0*
NEIC **16** *01:46:17.0±1.5, 2˚.96S±0˚.05×147˚.6E±0˚.1, h10km±1km, mb4.5/12, Error ellipse: s-maj=22.6km s-min=7.3km az=256.0*

ISC 16 01:46:16.3±0.6,**2˚99S**±0˚.07×**147˚.5E**±0˚.1,**h10**km,**n65,** σ0⇟**73**/33,**mb4.2**/15,**MS3.9**/29,**Admiralty Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**0.95**	**350**	Pg	**Pg**	**01 46 33.5**	**-1.1**
MANU				Sg	**Sg**	**01 46 47.0**	**-0.1**
KRVT	**Keravat (AS076**	**4.67**	**106**	Pn	**Pn**	**01 47 27.1**	**+0.1**
	8.8nm,0.3s,baz=281,slow=6.0,SNR=8.8						
KRVT				LR	LR	01 49 11.1	
	comp=Z,1μm,19.4s,baz=43,slow=39 18nm,0.5s						
HNR	**Honiara**	**13.90**	**118**	LR	LR	01 54 55.9	
	comp=Z,395nm,18.4s,baz=302,slow=38						
SIJI	**Sorong**	**16.39**	**277**	Pn	**P**	**01 50 09.3**	**-0.3**
	0.9nm,0.3s,baz=49,slow=8.5,SNR=4.5 3.5nm,0.3s						
GUMO	**Guam**	**16.68**	**351**	LR	LR	01 55 03.4	
	comp=Z,163nm,21.0s,baz=114,slow=32						
WB0	**Warramunga Arr**	**21.05**	**217**	P	**P**	**01 51 00.6**	**-0.1**
WB0				IAmb	IAmb	01 51 20.4	
	comp=Z,20nm,1.2s						
WR0	**Warramunga Arr**	**21.11**	**216**	P	**P**	**01 51 01.7**	**+0.3**
WR0				IAmb	IAmb	01 51 26.7	
	comp=Z,16nm,1.1s						
WRAB	**Tennant Creek**	**21.20**	**216**	P	**P**	**01 51 02.3**	**0.0**
WRAB				IAmb	IAmb	01 51 27.2	
	comp=Z,26nm,1.1s						
WB2	**Warramunga Arr**	**21.20**	**216**	P	**P**	**01 51 02.2**	**-0.2**
WB2				IAmb	IAmb	01 51 27.9	
	comp=Z,20nm,0.9s						
WRA	**Warramunga Arr**	**21.21**	**216**	P	**P**	**01 51 02.4**	**0.0**
	comp=Z,4.6nm,0.8s,baz=39,slow=10,SNR=21						
WRA				LR	LR	01 59 49.9	
	comp=Z,441nm,20.8s,baz=40,slow=38 comp=Z,4.6nm,0.8s						

WRA	**Warramunga Arr**	**21.21**	**216**	P		**P**	**01 51 02.7**	**+0.2**
KNRA	**Kununurra**	**22.38**	**235**	P		**P**	**01 51 14.1**	**-0.9**
KNRA				IAmb		IAmb	01 51 35.9	
	comp=Z,30nm,1.2s							
DAV	**Davao City (W)**	**24.08**	**295**	LR		LR	02 00 47.3	
	comp=Z,247nm,18.2s,baz=142,slow=36							
AS31	**Alice Springs**	**24.42**	**212**	P		**P**	**01 51 35.9**	**+0.5**
ASAR	**Alice Springs**	**24.42**	**212**	P		**P**	**01 51 35.5**	**+0.1**
	comp=Z,2.2nm,0.4s,baz=37,slow=7.5,SNR=46							
ASAR				LR		LR	02 01 30.6	
	comp=Z,361nm,18.2s,baz=358,slow=38 comp=Z,2.2nm,0.4s							
ASAR	**Alice Springs**	**24.42**	**212**	P		**P**	**01 51 36.3**	**+0.9**
LUWI	**Luwuk**	**24.82**	**274**	P		**P**	**01 51 39.5**	**+0.5**
ARMA	**Armidale**	**27.56**	**172**	P		**P**	**01 52 02.7**	**-1.0**
KAPI	**Kappang**	**27.79**	**265**	LR		LR	02 04 49.9	
	comp=Z,94nm,18.6s,baz=110,slow=40							
H11S3	**WAKE ISLAND Hy**	**28.48**	**41**	T		T	02 22 00.5	
	baz=223,slow=76,SNR=494							
H11S2	**WAKE ISLAND Hy**	**28.49**	**41**	T		T	02 21 59.5	
	baz=223,slow=76,SNR=492							
H11S1	**WAKE ISLAND Hy**	**28.50**	**41**	T		T	02 22 01.1	
	baz=223,slow=76,SNR=533							
STKA	**Stephens Creek**	**29.28**	**190**	LR		LR	02 04 18.2	
	comp=Z,307nm,19.8s,baz=35,slow=37							
H11N1	**WAKE ISLAND Hy**	**29.50**	**39**	T		T	02 23 16.1	
	baz=221,slow=76,SNR=157							
H11N3	**WAKE ISLAND Hy**	**29.52**	**39**	T		T	02 23 17.2	
	baz=221,slow=76,SNR=316							
H11N2	**WAKE ISLAND Hy**	**29.52**	**39**	T		T	02 23 17.3	
	baz=221,slow=76,SNR=279							
JCJ	**Chichijima**	**30.35**	**351**	LR		LR	02 03 57.2	
	comp=Z,58nm,18.5s,baz=128,slow=35							
JOW	**Kunigami**	**35.00**	**329**	LR		LR	02 04 31.1	
	comp=Z,214nm,21.4s,baz=203,slow=31							
MJAR	**Matsushiro Arr**	**40.27**	**348**	LR		LR	02 09 10.9	
	comp=Z,58nm,18.4s,baz=167,slow=34							
AFI	**Afiamalu**	**41.61**	**108**	LR		LR	02 09 33.9	
	comp=Z,76nm,19.1s,baz=74,slow=34							
KSRS	**Korea Array**	**44.17**	**337**	LR		LR	02 11 09.4	
	comp=Z,91nm,19.0s,baz=155,slow=34							
URZ	**Urewera**	**44.30**	**146**	LR		LR	02 12 45.3	
	comp=Z,222nm,18.1s,baz=210,slow=36							
RPZ	**Rata Peaks**	**45.60**	**156**	LR		LR	02 13 57.2	
	comp=Z,93nm,18.4s,baz=233,slow=37							
KLR	**Kul'dur**	**53.78**	**347**	LR		LR	02 16 07.5	
	comp=Z,53nm,19.9s,baz=212,slow=35							
RAR	**Rarotonga**	**54.31**	**114**	LR		LR	02 17 39.2	
	comp=Z,46nm,18.1s,baz=270,slow=35							
PETK	**Petropavlovsk-**	**56.54**	**7**	P		**P**	**01 56 00.3**	**+1.4**
	comp=Z,1.6nm,0.6s,baz=165,slow=6.2,SNR=5.2							
PETK				LR		LR	02 16 15.8	
	comp=Z,90nm,21.8s,baz=187,slow=32 comp=Z,1.6nm,0.6s							
PETK	**Petropavlovsk-**	**56.54**	**7**	P		**P**	**01 55 58.1**	**-0.7**
SONM	**Songino Array**	**62.06**	**330**	LR		LR	02 21 40.2	
	comp=Z,69nm,21.9s,baz=118,slow=34							
VNDA	**Vanda**	**74.87**	**177**	P		**P**	**01 57 55.6**	**-1.2**
	comp=Z,1.5nm,1.0s,baz=328,slow=6.5,SNR=8.8 comp=Z,1.5nm,1.0s							
VNDA	**Vanda**	**74.87**	**177**	P		**P**	**01 57 56.8**	**0.0**
MKAR	**Makanchi Array**	**75.54**	**320**	P		**P**	**01 58 02.5**	**+1.2**
	comp=Z,1.0nm,0.9s,baz=133,slow=7.1,SNR=5.3 comp=Z,1.0nm,0.9s							
MKAR	**Makanchi Array**	**75.54**	**320**	P		**P**	**01 58 02.3**	**+1.1**
ZALV	**Zalesovo Beam**	**76.77**	**327**	P		**P**	**01 58 09.4**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=130

ASAR	**Alice Springs**	**24.57**	**211**	P		P	02 25 56.8	+0.1
	0.5nm,0.5s,baz=39,slow=7.6,SNR=6.1							
	0.5nm,0.5s							
ILAR	**Eielson Array**	**82.36**	**23**	P		P	02 32 58.3	0.0
	0.2nm,0.7s,baz=243,slow=4.0,SNR=2.5							
	0.2nm,0.7s							

IDC ***16*** *02:27:07.9±4.5,37°.67N×73°.84E,h0km,mb3.6/2, mbtmp3.5/3,ML2.9/1,MS3.3/1,Error ellipse: s-maj=116.5km s-min=32.3km az=136.0*
NNC ***16*** *02:27:14.3±2.4,38°.16N×73°.82E,h0km,mb3.8,mpv3.4, Error ellipse: s-maj=17.5km s-min=10.3km az=169.0*

ISC 16 02:27:10.7±1.0,37°.80N±0°.06×73°.6E±0°.1,h10km,n14, σ1§44/14,4C-1D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**4.20**	**200**	P	**Pg**	**02 28 29.9**	**-1.3**
MRKS	**Merke**	**4.95**	**357**	Pg	**Pg**	**02 28 42.9**	**-2.6**
MRKS				Lg	Lg	02 29 48.6	
TKM2	**Tokmak 2**	**5.34**	**16**	⇓Pg	**Pb**	**02 28 46.1**	**+2.0**
	2.0nm,0.6s						
TKM2				⇑Lg	Lg	02 29 51.3	
	17nm,1.1s						
KST	**Kastek**	**5.54**	**18**	Pg	**Pb**	**02 28 49.1**	**+1.6**
	2.4nm,0.7s						
KST				Lg	Lg	02 29 59.0	
	9.2nm,0.7s						
DGS	**Degeres**	**5.68**	**16**	Pg	**Pb**	**02 28 51.4**	**+1.4**
	4.1nm,0.7s						
DGS				Lg	Lg	02 30 02.8	
	9.4nm,0.8s						
KK31	**Karatay Array**	**5.81**	**337**	⇑Pn	**Pn**	**02 28 37.6**	**+0.7**
	1.6nm,0.6s,baz=156,slow=13,SNR=11						
KK31				⇑Sn	**Sn**	**02 29 43.4**	**-0.2**
	1.9nm,0.5s,baz=151,slow=26						
KK31				⇑Lg	Lg	02 30 09.1	
	3.9nm,0.7s						
TNSS	**Tian-Shan**	**5.82**	**25**	Pg	**Pb**	**02 28 53.0**	**+0.6**
TNSS				Lg	Lg	02 30 05.6	
KOTS	**Kotyrbulak**	**6.05**	**25**	Pg	**Pb**	**02 28 57.2**	**+1.0**
	3.4nm,0.4s						
KOTS				Lg	Lg	02 30 13.2	
	20nm,1.0s						
KTBS	**Karatobe**	**6.35**	**20**	Pg	**Pb**	**02 29 03.2**	**+1.9**
	2.1nm,0.6s						
KTBS				Lg	Lg	02 30 23.6	
	5.2nm,0.4s						
UZB	**Uzynbulak**	**6.74**	**36**	Pg	**Pb**	**02 29 07.9**	**-0.1**
	1.5nm,0.5s						
UZB				Lg	Lg	02 30 31.3	
	4.1nm,0.7s						
MKAR	**Makanchi Array**	**11.04**	**33**	Pn	**Pn**	**02 29 48.9**	**+0.3**
	0.1nm,0.3s,baz=212,slow=14,SNR=4.5						
	0.7nm,0.8s						
AKASG	**Malin Array Be**	**33.81**	**307**	LR	LR	02 50 24.6	
	comp=Z,54nm,19.7s,baz=15,slow=41						
ARCES	**ARCESS Array B**	**40.77**	**336**	P	**P**	**02 34 51.6**	**0.0**
	0.9nm,0.8s,baz=106,slow=8.9,SNR=5.5						
	0.9nm,0.8s						
TORD	**Torodi Ar. Bea**	**67.83**	**270**	P	**P**	**02 38 09.3**	**0.0**
	0.3nm,0.5s,baz=50,slow=5.6,SNR=8.0						
	0.3nm,0.5s						

TAP 16 02:36:12.6,23°.28N×121°.63E,h39km,ML1.7,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HGSD	**Ruisui**	**0.28**	**319**	P	Pn	02 36 20.4	-0.4
	baz=319						
HGSD				S	Sn	02 36 27.1	+0.3
	baz=319						
TWF1	**Yuli**	**0.31**	**283**	P	Pn	02 36 20.1	-0.9
	baz=283						
TWF1				*i* S	Sn	02 36 27.5	+0.4
	baz=283						
FULB	**Fuli**	**0.32**	**255**	P	Pn	02 36 20.8	-0.3
	baz=254						
FULB				S	Sn	02 36 27.5	+0.2
	baz=254						
YULB	**Yu-li**	**0.32**	**290**	P	Pn	02 36 20.8	-0.3
	baz=290						
YULB				S	Sn	02 36 27.5	+0.2
	baz=290						
EDH	**Donghe**	**0.43**	**224**	P	Pn	02 36 21.3	-1.1
	baz=217						
EDH				S	Sn	02 36 29.1	-0.1
	baz=217						
EGFH	**Guangfu**	**0.43**	**335**	*e*P	Pn	02 36 22.8	+0.4
	baz=324						
VWDT	**VWDT**	**0.65**	**317**	P	Pn	02 36 25.4	0.0
	baz=317						
VWDT				S	Sn	02 36 35.8	+1.4
	baz=317						
YUS	**Yu-Shan**	**0.65**	**289**	P	Pn	02 36 26.1	+0.2
	baz=288						
YUS				S	Sn	02 36 35.6	+0.3
	baz=288						
OWD	**Renai**	**0.79**	**328**	S	Sn	02 36 38.1	0.0
	baz=336						
WUSB	**Renai**	**0.85**	**327**	*e*P	Pn	02 36 28.3	+0.1
	baz=334						
SMLT	**Sun Moon Lake**	**0.90**	**312**	*e*P	Pn	02 36 29.2	+0.3
	baz=319						
WHF	**Hehuan Shan**	**0.92**	**339**	*e*P	Pn	02 36 29.0	-0.5
	baz=339						
ETLH	**Xiulin Townshi**	**0.93**	**352**	*e*P	Pn	02 36 30.4	+1.1
	baz=352						

JMA 16 02:36:42.8±0.1,24°N±2°×123°.2E±0°.5,h53km±1km, MV1.5/10,NW OFF ISHIGAKIJIMA IS,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.18**	**293**	*i* P	Pn	02 36 51.4	+0.1
YOJ				*e*S	Sn	02 36 57.3	-0.1
JYNG	**Yonagunijimaku**	**0.23**	**285**	P	Pn	02 36 51.6	0.0
JYNG				*e*S	Sn	02 36 57.9	-0.2
IRIF	**Iriomote-Funau**	**0.49**	**96**	*e*P	Pn	02 36 54.1	0.0
IRIF				*e*S	Sn	02 37 02.7	+0.3
HATJ	**Hateruma jima**	**0.65**	**121**	*e*S	Sn	02 37 05.3	-0.4
JKRS	**Kuro-shima**	**0.76**	**101**	*e*P	Pn	02 36 57.7	+0.2
JKRS				*e*S	Sn	02 37 08.8	+0.7
JIJ	**Ishigaki jima**	**0.87**	**92**	P	Pn	02 36 58.7	-0.1
JIJ				*e*S	Sn	02 37 10.5	-0.1
JISG	**Ishigakijimahi**	**1.04**	**79**	*e*P	Pn	02 37 01.3	+0.2
JISG				*e*S	Sn	02 37 15.0	+0.4
JTJ	**Tarama**	**1.40**	**79**	*e*S	Sn	02 37 24.2	+0.9

IDC ***16*** *02:49:32.0±2.0,1°.58N×126°.91E,h0km,mb3.8/3, mbtmp3.8/3,MS3.3/1,Error ellipse: s-maj=168.2km s-min=23.9km az=66.0*
DJA ***16*** *02:49:45.7±0.3,2°.N±2°×12°.7E±°,h10km,M4.0/12,mb4.3/4, mB4.7/3,MLv3.9/12,Mw(mB)4.0/3*

ISC 16 02:49:44.3±1.2,1°.88N±0°.08×127°.1E±0°.1,h100km,n11, σ2§56/12,mb3.7/3,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.15**	**164**	P	**Pn**	**02 50 06.4**	**0.0**
TNTI				S	**Sn**	**02 50 24.1**	**+1.1**
SGSI	**Sangihe**	**2.35**	**320**	P	**Pn**	**02 50 23.1**	**+1.6**
LBMI	**Labuha**	**2.54**	**170**	P	**Pn**	**02 50 27.4**	**+3.4**
KMSI	**Cibinong**	**3.34**	**247**	P	**Pn**	**02 50 35.1**	**+0.6**
SANI	**Sanana**	**4.05**	**195**	P	**Pn**	**02 50 46.6**	**+2.4**
LUWI	**Luwuk**	**5.17**	**236**	P	**Pn**	**02 51 00.3**	**+0.9**
MRSI	**Marisa**	**5.30**	**255**	P	**Pn**	**02 51 02.0**	**+0.9**
	0.2nm972nm40nm,0.9s						
APSI	**Ampana**	**6.08**	**243**	P	**Pn**	**02 51 12.7**	**+1.1**
WRA	**Warramunga Arr**	**22.84**	**162**	P	**P**	**02 54 34.8**	**-4.4**
	1.5nm,0.4s,baz=340,slow=11,SNR=31						
	1.5nm,0.4s						
ASAR	**Alice Springs**	**26.26**	**166**	P	**P**	**02 55 06.6**	**-3.7**
	0.4nm,0.5s,baz=348,slow=7.8,SNR=7.1						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**59.25**	**326**	P	**P**	**02 59 36.5**	**+1.1**
	1.0nm,0.5s,baz=118,slow=8.7,SNR=11						
MKAR				LR	LR	03 28 25.7	
	comp=Z,24nm,18.6s,baz=160,slow=39						
	1.0nm,0.5s						

NNC 16 02:53:31.2±1.5,38°.02N×73°.88E,h0km,mb3.8,mpv3.3, 5C,Error ellipse: s-maj=10.6km s-min=6.4km az=170.0, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TKM2	**Tokmak 2**	**5.07**	**14**	⇑Pg	Pg	02 55 05.0	-3.4
	5.6nm,1.4s						
TKM2				⇑Lg	Lg	02 56 12.6	
	22nm,1.4s						
KST	**Kastek**	**5.26**	**17**	Pg	Pb	02 55 07.6	+3.3
	4.5nm,1.4s						
KST				Lg	Lg	02 56 19.5	
	8.9nm,0.8s						
DGS	**Degeres**	**5.41**	**15**	Pg	Pb	02 55 10.6	+3.8
	1.4nm,0.3s						
DGS				Lg	Lg	02 56 24.7	
	8.1nm,0.8s						
TNSS	**Tian-Shan**	**5.53**	**24**	Pg	Pb	02 55 11.4	+2.5
	4.1nm,0.4s						
TNSS				Lg	Lg	02 56 26.5	
	4.6nm,1.1s						
KK31	**Karatay Array**	**5.69**	**334**	⇑Pn	Pn	02 54 56.8	-0.2
	0.6nm,0.2s,baz=154,slow=13,SNR=11						
KK31				⇑Sn	Sn	02 56 04.3	+1.2
	1.2nm,0.4s,baz=151,slow=23						
KK31				⇑Lg	Lg	02 56 31.0	
	1.8nm,0.5s						
KOTS	**Kotyrbulak**	**5.76**	**24**	Pg	Pb	02 55 16.0	+3.3
	2.4nm,0.5s						
KOTS				Lg	Lg	02 56 34.3	
	18nm,1.1s						
KUU	**Kurty**	**6.16**	**17**	Pg	Pb	02 55 22.4	+3.1
	1.3nm,0.4s						
KUU				Lg	Lg	02 56 45.3	
	6.6nm,0.7s						
UZB	**Uzynbulak**	**6.45**	**36**	Pg	Pb	02 55 28.7	+4.4
	1.2nm,0.6s						
UZB				Lg	Lg	02 56 56.5	
	3.6nm,0.5s						
KPKS	**Kokpek**	**6.55**	**32**	Pg	Pb	02 55 30.6	+4.5
	3.2nm,0.8s						
KPKS				Lg	Lg	02 56 59.1	
	6.2nm,1.0s						

NEIC ***16*** *03:08:49.1±0.8,31°.14N±0°.04×103°.24W±0°.07,h2km±7km, mb_Lg3.3/85,Error ellipse: s-maj=8.7km s-min=5.8km az=97.0*
ANF ***16*** *03:08:49.3±0.4,31°.17N×103°.24W,h3km,ML4.1/6,Error ellipse: s-maj=5.6km s-min=4.7km az=169.0*

ISC 16 03:08:49.8±1.1,31°.20N±0°.05×103°.17W±0°.05,h10km,n52, σ0§98/49,Western Texas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TX31	**Lajitas Ar. Si**	**1.91**	**193**		**Pn**	**03 09 22.0**	**-0.6**
TX31				Sg	**Sn**	**03 09 46.7**	**-0.1**
TX31	**Lajitas Ar. Si**	**1.91**	**193**	P	**Pn**	**03 09 22.3**	**-0.3**
	baz=9.9,SNR=798						
TX31				S	**Sn**	**03 09 47.1**	**+0.4**
	baz=9.9						
TX32	**Lajitas Array**	**1.91**	**193**		**Pn**	**03 09 21.9**	**-0.7**
TX32				Sn	**Sn**	**03 09 46.4**	**-0.3**
TXAR	**Lajitas Array**	**1.91**	**193**		**Pn**	**03 09 21.9**	**-0.6**
MNTX	**Cornudas Mount**	**1.95**	**285**		**Pn**	**03 09 22.6**	**-0.5**
MNTX	**Cornudas Mount**	**1.95**	**285**	P	**Pn**	**03 09 22.8**	**-0.3**
	baz=107,SNR=291						
MNTX				Sb	**Sb**	**03 09 49.9**	**-0.1**
	baz=107						
MSTX	**Muleshoe**	**2.78**	**7**		**Pn**	**03 09 36.1**	**+1.6**
MSTX				IAmb_Lg		03 10 17.1	
	comp=Z,120nm,0.9s						
MSTX	**Muleshoe**	**2.78**	**7**	P	**Pn**	**03 09 36.1**	**+1.6**
	baz=189,SNR=67						
MSTX				S	**Sb**	**03 10 12.2**	**-1.7**
	baz=189						
JCT	**Junction City**	**2.98**	**103**		**Pn**	**03 09 38.5**	**+1.3**
JCT	**Junction City**	**2.98**	**103**	P	**Pn**	**03 09 39.5**	**+2.2**
	baz=283,SNR=64						
JCT				S	**Sb**	**03 10 18.2**	**-1.6**
	baz=283						
ABTX	**Abilene, Hawle**	**3.32**	**64**	Pn	**Pn**	**03 09 43.4**	**+1.5**
ABTX				IAmb_Lg		03 10 35.6	
	comp=Z,91nm,0.8s						
ABTX	**Abilene, Hawle**	**3.32**	**64**	P	**Pn**	**03 09 44.0**	**+2.2**
	baz=245,SNR=75						
AMTX	**Amarillo**	**3.88**	**18**		**Pn**	**03 09 51.0**	**+1.4**
AMTX				IAmb_Lg		03 11 04.9	
	comp=Z,107nm,0.8s						
CRNM	**Carthage**	**4.07**	**313**		**Pn**	**03 09 52.8**	**+0.4**
BNM	**Barren Site**	**4.14**	**316**		**Pn**	**03 09 54.1**	**+0.8**
121A	**Cookes Peak, D**	**4.14**	**290**		**Pn**	**03 09 53.0**	**-0.3**
121A				IAmb_Lg		03 11 08.3	
	comp=Z,51nm,0.8s						
Y22A	**Socorro**	**4.21**	**311**	P	**Pn**	**03 09 55.6**	**+1.4**
	baz=131,SNR=6.0						
Y22D	**IRIS PASSCAL I**	**4.27**	**313**	Pn	**Pn**	**03 09 55.0**	**0.0**
833A	**Chaparral WMA,**	**4.36**	**130**	Pn	**Pn**	**03 09 56.6**	**+0.4**
833A				IAmb_Lg		03 11 16.5	
	comp=Z,44nm,0.8s						
LENM	**Lemitar**	**4.36**	**314**		**Pn**	**03 09 56.8**	**+0.5**
ANMO	**Albuquerque**	**4.64**	**324**		**Pn**	**03 09 59.9**	**-0.3**
ANMO				IAmb_Lg		03 11 18.4	
	comp=Z,47nm,0.9s						
HPIG		**4.78**	**208**		**Pn**	**03 10 00.9**	**-1.2**
435B	**Jarrell**	**4.81**	**94**		**Pn**	**03 10 03.5**	**+1.1**
WHTX	**Lake Whitney,**	**4.94**	**79**	Pn	**Pn**	**03 10 05.0**	**+0.9**
WHTX				IAmb_Lg		03 11 34.0	
	comp=Z,77nm,1.1s						
WMOK	**Wichita Mounta**	**5.10**	**45**		**Pn**	**03 10 07.5**	**+1.1**
WMOK	**Wichita Mounta**	**5.10**	**45**	P	**Pn**	**03 10 07.5**	**+1.1**
	baz=228,SNR=19						
735A	**Kenedy**	**5.21**	**115**	Pn	**Pn**	**03 10 08.3**	**+0.6**
735A				IAmb_Lg		03 11 48.3	
	comp=Z,74nm,0.9s						
Z35A	**Perchaven, San**	**5.44**	**65**	Pn	**Pn**	**03 10 11.6**	**+0.6**
X34A	**Smith Ranch, M**	**5.62**	**52**	Pn	**Pn**	**03 10 15.0**	**+1.5**
T25A	**Trinidad**	**6.01**	**350**	Pn	**Pn**	**03 10 19.5**	**+0.5**
U32A	**Winter Ranch,**	**6.22**	**33**	Pn	**Pn**	**03 10 22.1**	**+0.4**
U32A				IAmb_Lg		03 12 21.8	
	comp=Z,40nm,0.9s						
237A	**Washetta, Mont**	**6.33**	**81**	Pn	**Pn**	**03 10 24.0**	**+0.7**
OKCFA	**Oklahoma City**	**6.37**	**47**	Pn	**Pn**	**03 10 24.9**	**+1.1**
OKCFA				IAmb_Lg		03 12 22.5	
	comp=Z,57nm,0.7s						
HKT	**Hockley**	**6.45**	**99**	Pn	**Pn**	**03 10 25.0**	**+0.2**
X18A	**Snowflake**	**6.60**	**302**		**Pn**	**03 10 26.9**	**-0.2**
SDCO	**Great Sand Dun**	**6.80**	**344**	Pn	**Pn**	**03 10 29.0**	**-1.0**
Z38A	**Mt. Pleasant**	**7.23**	**71**	IAmb_Lg		03 12 53.8	
	comp=Z,46nm,0.7s						
NATX	**Nacogdoches**	**7.29**	**83**	Pn	**Pn**	**03 10 37.2**	**+0.8**
NATX				IAmb_Lg		03 12 55.3	
	comp=Z,44nm,0.9s						
X37A	**Clayton**	**7.38**	**61**	P	**Pn**	**03 10 37.9**	**+0.3**
	baz=245,SNR=8.0						
KSCO	**Kaye Shedlock'**	**7.80**	**3**	IAmb_Lg		03 13 12.9	
	comp=Z,32nm,0.7s						
T35A	**Sooner Cattle**	**7.94**	**42**	Pn	**Pn**	**03 10 45.4**	**+0.2**
T35A				IAmb_Lg		03 13 12.9	
	comp=Z,25nm,0.9s						
T35B	**Sooner Cattle**	**7.94**	**42**	P	**Pn**	**03 10 45.4**	**+0.1**
	baz=226,SNR=11						
R32A	**Long Quarter,**	**8.08**	**26**	IAmb_Lg		03 13 17.8	
	comp=Z,29nm,0.8s						
CBKS	**Cedar Bluff**	**8.10**	**19**	IAmb_Lg		03 13 19.1	
	comp=Z,25nm,0.7s						
PV13	**Radium Mtn., P**	**8.35**	**328**	IAmb_Lg		03 13 31.1	
	comp=Z,22nm,1.1s						
PV11	**David Mesa, Pa**	**8.49**	**328**	IAmb_Lg		03 13 33.8	
	comp=Z,19nm,0.9s						
PV10	**Paradox Valley**	**8.63**	**328**	IAmb_Lg		03 13 26.3	
	comp=Z,21nm,0.8s						
MIAR	**Mount Ida**	**8.73**	**65**	IAmb_Lg		03 13 34.0	
	comp=Z,21nm,0.7s						
U38A	**Gravette**	**8.98**	**52**	IAmb_Lg		03 13 36.7	
	comp=Z,22nm,0.8s						
Z41A	**Richland Creek**	**9.02**	**74**	P	**Pn**	**03 11 00.2**	**+0.1**
	baz=259,SNR=6.2						
Z41A				P	**Pn**	**03 11 00.2**	**+0.1**
	baz=259,SNR=6.2						
HHAR	**Hobbs**	**9.20**	**54**	IAmb_Lg		03 13 55.9	
	comp=Z,26nm,1.1s						
W41B	**Gary Mavity, V**	**9.97**	**64**	P	**Pn**	**03 11 12.6**	**-0.6**
	baz=250,SNR=9.1						

IDC 16 03:10:05.6±22.0,18°.95S×177°.61W,h518km±194km, mbb2.8/3,mbtmp3.7/3,Error ellipse: s-maj=289.5km s-min=69.0km az=138.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.20**	**260**	P	P	03 17 36.1	-0.2
	0.7nm,0.3s,baz=98,slow=7.6,SNR=39						
	0.7nm,0.3s						
ASAR	**Alice Springs**	**45.25**	**255**	P	P	03 17 36.6	-0.1
	0.8nm,0.4s,baz=84,slow=8.4,SNR=16						
	0.8nm,0.4s						
ILAR	**Eielson Array**	**86.72**	**13**	P	P	03 21 53.8	-0.1
	0.2nm,0.7s,baz=210,slow=5.2,SNR=2.0						
	0.2nm,0.7s						
ARCES	**ARCESS Array B**	**127.46**	**350**	PKP	PKPdf	03 28 10.2	-0.5
	3.6nm,1.1s,baz=50,slow=1.5,SNR=4.5						
BRTR	**Keskin Array B**	**146.05**	**314**	PKPbc	PKPbc	03 28 47.0	-0.8
	0.4nm,0.5s,baz=159,slow=4.9,SNR=2.5						
GERES	**GERESS Array B**	**148.80**	**346**	PKPbc	PKPbc	03 28 54.2	-0.3
	0.2nm,0.3s,baz=53,slow=5.2,SNR=2.7						

IDC ***16*** *03:25:31.6±2.3,5°.52S×152°.47E,h48km±18km,mb3.9/9, mbtmp4.2/10,ML2.1/1,MS3.5/17,Error ellipse: s-maj=25.7km s-min=9.7km az=110.0*
NEIC ***16*** *03:25:33.8±2.1,5°.25S±0°.09×152°.3E±0°.2,h58km±9km, mb4.5/42,Error ellipse: s-maj=27.3km s-min=10.9km az=106.0*

ISC 16 03:25:30.6±0.9,5°.48S±0°.07×152°.6E±0°.1,h40km,n76, σ1§01/67,mb4.5/30,MS3.5/15,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.28**	**335**	P	**Pn**	**03 25 51.5**	**-0.5**
	9µm,0.5s,baz=257,slow=0.8,SNR=552						
KRVT				S	**Sn**	**03 26 09.2**	**+1.3**
	3µm,0.6s,baz=314,slow=21,SNR=19						
RABL	**Rabaul**	**1.34**	**343**		**Pn**	**03 25 52.2**	**-0.6**
PMG	**Port Moresby**	**6.63**	**234**	P	**Pn**	**03 27 05.3**	**-0.2**
	2.5nm,0.3s,baz=17,slow=7.7,SNR=4.4						
PMG				S	**Sn**	**03 28 19.2**	**-0.6**
	178nm,0.8s,baz=237,slow=12,SNR=10						
PMG				LR	LR	03 29 12.7	
	comp=Z,133nm,21.8s,baz=38,slow=34						
	17nm,0.6s						
PMG	**Port Moresby**	**6.63**	**234**	Pn	**Pn**	**03 27 07.3**	**+1.9**
CTA	**Charters Tower**	**15.77**	**202**	LR	LR	03 34 28.7	
	comp=Z,183nm,18.9s,baz=6.0,slow=34						
GUMO	**Guam**	**20.42**	**338**	LR	LR	03 36 10.1	
	comp=Z,47nm,20.9s,baz=112,slow=31						
WB0	**Warramunga Arr**	**22.68**	**230**	P	**P**	**03 30 28.0**	**-0.8**
WR0	**Warramunga Arr**	**22.68**	**229**	P	**P**	**03 30 30.8**	**+1.9**
WRAB	**Tennant Creek**	**22.81**	**229**	P	**P**	**03 30 30.4**	**+0.3**
WB2	**Warramunga Arr**	**22.81**	**229**	P	**P**	**03 30 30.4**	**+0.2**
WRA	**Warramunga Arr**	**22.82**	**229**	P	**P**	**03 30 30.3**	**0.0**
	3.5nm,0.8s,baz=54,slow=9.9,SNR=19						
WRA				S	**S**	**03 34 35.9**	**-1.1**
	0.8nm,0.9s,baz=52,slow=17,SNR=4.5						
	3.5nm,0.8s						
WRA	**Warramunga Arr**	**22.82**	**229**	P	**P**	**03 30 29.1**	**-1.2**
KNRA	**Kununurra**	**25.46**	**245**	P	**P**	**03 30 55.6**	**+0.5**
AS31	**Alice Springs**	**25.49**	**223**	P	**P**	**03 30 56.7**	**+1.4**
ASAR	**Alice Springs**	**25.49**	**223**	P	**P**	**03 30 55.2**	**-0.1**
	2.4nm,0.7s,baz=56,slow=9.0,SNR=23						
	2.4nm,0.7s						
ASAR	**Alice Springs**	**25.49**	**223**	P	**P**	**03 30 54.9**	**-0.4**
STKA	**Stephens Creek**	**28.20**	**200**	P	**P**	**03 31 18.4**	**-1.2**
	1.9nm,0.7s,baz=13,slow=15,SNR=2.5						
STKA				LR	LR	03 43 07.6	
	comp=Z,131nm,19.4s,baz=204,slow=38						
	1.9nm,0.7s						
JCJ	**Chichijima**	**33.90**	**343**	LR	LR	03 44 13.3	
	comp=Z,61nm,21.8s,baz=152,slow=33						
MJAR	**Matsushiro Arr**	**43.91**	**343**	LR	LR	03 49 28.7	
	comp=Z,44nm,21.2s,baz=170,slow=33						
KSRS	**Korea Array**	**48.49**	**334**	LR	LR	03 53 26.2	
	comp=Z,24nm,20.3s,baz=155,slow=34						
ASAJ	**Asahikawa**	**50.18**	**351**	LR	LR	03 52 45.1	
	comp=Z,28nm,20.8s,baz=154,slow=32						
PETK	**Petropavlovsk-**	**58.53**	**4**	LR	LR	03 57 41.8	
	comp=Z,38nm,18.9s,baz=156,slow=33						
SHEM	**Shemya Is, Ala**	**60.80**	**15**	LR	LR	03 57 56.3	
	comp=Z,69nm,20.4s,baz=276,slow=32						
MA2	**Magadan**	**64.86**	**359**	LR	LR	04 03 39.2	
	comp=Z,27nm,19.5s,baz=302,slow=35						
SONM	**Songino Array**	**66.77**	**328**	P	**P**	**03 36 18.5**	**+0.4**
	1.2nm,0.7s,baz=151,slow=6.5,SNR=4.9						
	1.2nm,0.7s						
N18K	**Kilae Creek**	**77.17**	**23**		**P**	**03 37 18.7**	**-1.3**
N18K				IAmb	IAmb	03 37 22.9	
	comp=Z,6.6nm,1.1s						
L19K	**White Mountain**	**78.46**	**22**		**P**	**03 37 28.9**	**+1.7**
L19K				IAmb	IAmb	03 37 29.9	
	comp=Z,7.3nm,0.9s						
M19K	**Big River Lodg**	**78.48**	**23**	P	**P**	**03 37 28.8**	**+1.5**
M19K				IAmb	IAmb	03 37 30.3	
	comp=Z,6.0nm,1.1s						
TTA	**Tatalina**	**78.48**	**21**		**P**	**03 37 28.6**	**+1.3**
TTA				IAmb	IAmb	03 37 29.8	
	comp=Z,3.8nm,1.0s						
K20K	**Telida**	**79.45**	**22**		**P**	**03 37 33.7**	**+1.2**
K20K				IAmb	IAmb	03 37 35.4	
	comp=Z,12nm,1.4s						
J20K	**Nowinta River**	**79.90**	**21**		**P**	**03 37 36.3**	**+1.4**
CAST	**Castle Rocks**	**80.22**	**22**	P	**P**	**03 37 36.8**	**+0.1**
MKAR	**Makanchi Array**	**80.67**	**319**	P	**P**	**03 37 39.0**	**-0.6**
	comp=Z,1.1nm,0.8s,baz=120,slow=4.9,SNR=7.1						
	comp=Z,1.1nm,0.8s						
MKAR	**Makanchi Array**	**80.67**	**319**	P	**P**	**03 37 38.5**	**-1.1**
IMAR	**Indian Mountai**	**81.10**	**20**	P	**P**	**03 37 42.4**	**+1.1**
H21K	**Melozitna Rive**	**81.23**	**20**	P	**P**	**03 37 42.1**	**+0.1**
I21K	**Tanana**	**81.24**	**21**	P	**P**	**03 37 43.5**	**+1.4**
I21K				IAmb	IAmb	03 37 56.5	
	comp=Z,7.1nm,1.0s						
RND	**Reindeer**	**81.44**	**23**	P	**P**	**03 37 42.9**	**-0.4**
RND				IAmb	IAmb	03 37 45.2	
	comp=Z,7.5nm,1.0s						
MCK	**McKinley**	**81.58**	**23**	P	**P**	**03 37 43.6**	**-0.3**
ZALV	**Zalesovo Beam**	**81.58**	**326**	P	**P**	**03 37 43.2**	**-1.0**
	comp=Z,0.9nm,0.6s,baz=100,slow=4.4,SNR=1.9						
ZALV		

L26K					IAmb	IAmb	03 37 58.2	
	comp=Z,3.0nm,0.7s							
SCRK	**Sand Creek**	**83.62**	**23**	P	**P**		**03 37 55.5**	**+0.8**
M27K	**Edge Creek, AK**	**83.79**	**25**	P	**P**		**03 37 56.8**	**+1.2**
L27K	**Beaver Creek,**	**84.10**	**25**	P	**P**		**03 37 58.9**	**+1.8**
L27K					IAmb	IAmb	03 38 00.6	
	comp=Z,4.2nm,1.1s							
BCAR	**Beaver Creek A**	**84.12**	**25**	P	**P**		**03 37 58.6**	**+1.4**
KURK	**Kurchatov**	**84.15**	**322**	P	**P**		**03 37 56.1**	**-1.4**
KURK					IAmb	IAmb	03 37 58.7	
	comp=Z,3.5nm,0.9s							
K27K	**Chicken**	**84.40**	**24**	P	**P**		**03 37 59.8**	**+1.3**
K27K					IAmb	IAmb	03 38 02.5	
	comp=Z,3.5nm,1.0s							
BMAR	**Burnt Mountain**	**84.96**	**20**	P	**P**		**03 38 02.2**	**+0.8**
DAWY	**Dawson**	**85.50**	**24**	P	**P**		**03 38 03.6**	**-0.5**
I29M	**Ogilvie Camp,**	**86.41**	**23**	P	**P**		**03 38 09.6**	**+1.1**
EPYK	**Eagle Plains**	**87.38**	**22**	P	**P**		**03 38 13.7**	**+0.4**
DLBC	**Dease Lake**	**88.08**	**31**	P	**P**		**03 38 18.6**	**+1.7**
	comp=Z,3.4nm,1.0s,baz=269,slow=9.8,SNR=4.0							
	comp=Z,3.4nm,1.0s							
INK	**Inuvik**	**89.17**	**21**	P	**P**		**03 38 22.8**	**+1.2**
	comp=Z,1.8nm,0.9s,baz=239,slow=10,SNR=3.5							
INK				LR	LR		04 20 28.6	
	comp=Z,38nm,18.1s,baz=220,slow=37							
	comp=Z,1.8nm,0.9s							
INK	**Inuvik**	**89.17**	**21**	P	**P**		**03 38 21.9**	**+0.3**
INK					IAmb	IAmb	03 38 35.5	
	comp=Z,3.5nm,1.1s							
ELK	**Elko**	**95.20**	**50**	LR	LR		04 17 33.4	
	comp=Z,53nm,19.0s,baz=255,slow=33							
ARU	**Arti**	**96.74**	**326**	LR	LR		04 23 24.0	
	comp=Z,36nm,19.8s,baz=112,slow=36							
PDAR	**Pinedale Array**	**99.48**	**48**	LR	LR		04 20 41.4	
	comp=Z,42nm,18.4s,baz=222,slow=33							
CLL	**Collm**	**123.32**	**331**	*e*PKPdf	**PKiKP**		**03 44 25.0**	**+1.4**
TORD	**Torodi Ar. Bea**	**150.28**	**287**	PKPbc	**PKPbc**		**03 45 18.1**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=72,slow=2.5,SNR=6.8							
BDFB	**Brasilia**	**150.75**	**136**	PKPbc	**PKPbc**		**03 45 20.2**	**+0.4**
	comp=Z,2.0nm,0.8s,baz=180,slow=4.0,SNR=3.4							

*IDC **16** 04:00:56.9±3.7,21˚.02S×68˚.45W,h98km±45km,mb3.3/1, mbtmp3.5/3,Error ellipse: s-maj=110.7km s-min=30.3km az=103.0*
*GUC **16** 04:00:56.7±0.6,20˚.89S×69˚.03W,h104km±3km,ML3.8*
ISC 16 04:00:55.7±0.9,**20˚.89S**±0˚.03×**69˚.12W**±0˚.07,**h109**km±7km, **n20,**σ0°**83**/33,**1C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.38**	**246**	*i* P	**Pn**	**04 01 12.1**	**+0.2**
PB01				*e*S	**Sn**	**04 01 23.9**	**-0.1**
PB01				IAML		04 01 25.4	
	comp=N,4µm,0.2s						
PB08	**IPOC Station P**	**0.75**	**358**	*e*P	**Pn**	**04 01 15.2**	**+0.3**
PB08				*i* S	**Sn**	**04 01 29.4**	**+0.2**
PB08				IAML		04 01 30.2	
	comp=E,3µm,0.3s						
PB02	**IPOC Station P**	**0.84**	**239⇑**	*i* P	**Pn**	**04 01 16.2**	**+0.7**
PB02				*e*S	**Sn**	**04 01 31.0**	**+0.7**
PB02				IAML		04 01 32.9	
	comp=E,5µm,0.1s						
PB09	**IPOC Station P**	**0.91**	**187⇓**	*i* P	**Pn**	**04 01 16.9**	**+0.7**
PB09				*e*S	**Sn**	**04 01 32.5**	**+0.9**
PB09				IAML		04 01 34.6	
	comp=E,2µm,0.2s						
PATCX	**Punta Patache**	**0.97**	**274**	*i* P	**Pn**	**04 01 17.5**	**+0.8**
PATCX				*e*S	**Sn**	**04 01 33.6**	**+1.2**
PATCX				IAML		04 01 35.2	
	comp=N,3µm,0.3s						
TA01	**Diego Aracena**	**1.04**	**288**	*i* P	**Pn**	**04 01 17.8**	**+0.5**
TA01				*e*S	**Sn**	**04 01 34.2**	**+0.6**
PB07	**IPOC Station P**	**1.10**	**221**	*i* P	**Pn**	**04 01 18.9**	**+0.8**
PB07				*e*S	**Sn**	**04 01 35.4**	**+0.4**
PB07				IAML		04 01 37.5	
	comp=E,2µm,0.4s						
TA02	**Huaiquique**	**1.13**	**303**	*e*P	**Pn**	**04 01 18.4**	**+0.2**
TA02				*e*S	**Sn**	**04 01 35.8**	**+0.5**
GO01	**Chusmiza**	**1.22**	**357**	*e*P	**Pn**	**04 01 20.1**	**+0.3**
GO01				*e*S	**Sn**	**04 01 38.3**	**+0.4**
GO01				IAML		04 01 40.3	
	comp=N,7µm,0.1s						
PB11	**IPOC Station P**	**1.23**	**336**	*i* P	**Pn**	**04 01 19.9**	**+0.3**
PB11				*e*S	**Sn**	**04 01 38.0**	**+0.4**
PB11				IAML		04 01 39.4	
	comp=E,4µm,0.2s						
LVC	**Limon Verde**	**1.72**	**174**	*i* P	**Pn**	**04 01 26.6**	**+1.0**
LVC				*e*S	**Sn**	**04 01 48.8**	**+0.5**
PB04	**IPOC Station P**	**1.73**	**214**	*e*P	**Pn**	**04 01 26.1**	**+0.7**
PB04				*e*S	**Sn**	**04 01 48.0**	**0.0**
PB04				IAML		04 01 51.5	
	comp=N,539nm,0.1s						
PB06	**IPOC Station P**	**1.85**	**193**	*e*P	**Pn**	**04 01 27.6**	**+0.5**
PB06				IAML		04 01 60.0	
	comp=E,468nm,0.2s						
PB15	**IPOC Station P**	**2.33**	**188**	*e*P	**Pn**	**04 01 33.8**	**+0.7**
PB12	**IPOC Station P**	**2.54**	**333**	*i* P	**Pn**	**04 01 35.2**	**-0.5**
PB12				IAML		04 02 07.8	
	comp=E,294nm,0.3s						
PB16	**IPOC Station P**	**2.57**	**352**	*i* P	**Pn**	**04 01 38.0**	**+1.3**
LPAZ	**La Paz**	**4.67**	**12**	P	**Pn**	**04 02 06.7**	**+1.9**
	comp=E,4.6nm,0.3s,baz=187,slow=3.0,SNR=46							
LPAZ				S	Sn	04 02 47.5	-11	
	comp=E,4.5nm,0.6s,baz=215,slow=6.9,SNR=6.6							
PLCA	**Paso Flores**	**19.82**	**183**	P	**Pn**	**04 05 19.0**	**-1.3**	
	comp=E,0.6nm,0.8s,baz=355,slow=11,SNR=1.7							
TORD	**Torodi Ar. Bea**	**77.34**	**71**	P	**P**	**04 12 38.2**	**-0.7**	
	comp=E,0.3nm,0.4s,baz=246,slow=5.4,SNR=9.0							
TORD				pP	**pP**	**04 13 06.7**	**-1.5**	
	comp=E,1.0nm,0.9s,baz=250,slow=5.3,SNR=4.8							
	comp=E,0.3nm,0.4s							
MKAR	**Makanchi Array**	**145.25**	**35**	PKPbc	**PKPab**	**04 20 21.5**	**+0.8**	
	comp=E,0.5nm,0.6s,baz=336,slow=2.8,SNR=5.3							

*IDC **16** 04:09:42.8±1.4,6˚.91S×126˚.94E,h438km±17km,mb3.0/3, mbtmp4.1/7,Error ellipse: s-maj=26.4km s-min=14.4km az=73.0*
ISC 16 04:09:40.5±0.9,**6˚.77S**±0˚.09×**127˚.3E**±0˚.1,**h400**km,**n17,** σ1°**63**/19,**mb3.6**/4,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**4.23**	**225**	P	**Pn**	**04 10 56.0**	**+1.0**
BATI	**Baumata**	**4.97**	**226**	P	**Pn**	**04 11 03.4**	**+1.1**
	45nm,0.3s,baz=87,slow=0.5,SNR=5.2						
BATI				S	**S**	**04 12 07.8**	**-0.9**
	47nm,0.3s,baz=312,slow=17,SNR=8.5						
FAKI	**Fak Fak**	**6.23**	**52**	P	**Pn**	**04 11 16.3**	**+0.6**
SIJI	**Sorong**	**7.07**	**34**	P	P	04 11 31.5	+5.9
	7.1nm,0.5s,baz=294,slow=22,SNR=4.5						
MTN	**Manton Dam**	**7.11**	**148**	P	**P**	**04 11 27.7**	**+1.7**
KDU	**Kakadu**	**7.77**	**140**	P	**P**	**04 11 34.5**	**+1.2**
KNRA	**Kununurra**	**8.96**	**171**	P	**P**	**04 11 48.0**	**+1.4**
WRAB	**Tennant Creek**	**14.76**	**153**	P	**P**	**04 12 51.3**	**+0.9**
WRA	**Warramunga Arr**	**14.76**	**153**	P	**P**	**04 12 50.9**	**+0.4**
	5.7nm,0.6s,baz=327,slow=12,SNR=63						
WRA				S	**S**	**04 15 23.5**	**-4.2**
	0.7nm,0.6s,baz=325,slow=24,SNR=3.2						
ASAR	**Alice Springs**	**17.95**	**160**	P	**P**	**04 13 25.7**	**+1.1**
	4.6nm,0.7s,baz=350,slow=13,SNR=46						
ASAR				S	**S**	**04 16 28.7**	**-1.3**
	0.7nm,0.7s,baz=346,slow=23,SNR=2.8						
QIS	**Mount Isa**	**18.16**	**140**	P	**P**	**04 13 27.8**	**+1.0**
WRKA	**Warakurna**	**18.18**	**177**	P	**P**	**04 13 28.0**	**+0.9**
OOD	**Oodnadatta**	**22.36**	**160**	P	**P**	**04 14 08.1**	**+1.6**
	8.1nm,1.6s						
MULG	**Mulgathing**	**24.23**	**166**	P	**P**	**04 14 24.4**	**+1.1**
STKA	**Stephens Creek**	**28.31**	**154**	P	**P**	**04 15 00.1**	**+0.6**
	1.7nm,0.5s,baz=328,slow=9.5,SNR=5.2						
	1.7nm,0.5s						
MKAR	**Makanchi Array**	**66.60**	**328**	P	**P**	**04 19 48.1**	**-1.3**
	0.2nm,0.4s,baz=123,slow=5.3,SNR=2.8						
	0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**70.23**	**335**	P	**P**	**04 20 09.4**	**-2.0**
	0.6nm,0.5s,baz=138,slow=8.2,SNR=2.1						
	0.6nm,0.5s						

*VIE **16** 04:19:39.8,51˚.61N×16˚.36E,h0km,ML2.6/2 74 km NW of Wroclaw Suspected Mining induced.*
*IDC **16** 04:19:42.4±1.0,51˚.45N×16˚.02E,h0km,mbtmp3.4/5, ML2.6/5,Error ellipse: s-maj=19.5km s-min=8.5km az=105.0*
*PRU **16** 04:19:42.2±0.0,51˚.44N×16˚.07E,h0km*
ISC 16 04:19:40.5±0.8,**51˚.52N**±0˚.04×**16˚.12E**±0˚.03,**h0**km,**n31,** σ0°**80**/60,**Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.69**	**171**	*e*Pg	**Pg**	**04 19 53.9**	**+0.4**
KSP				*e*Sg	**Sg**	**04 20 02.5**	**+0.1**
CHVC	**Chvalec**	**0.93**	**182**	*e*PG	**Pg**	**04 19 58.6**	**+0.3**
CHVC				*e*SG	**Sg**	**04 20 09.4**	**-0.9**
	comp=Z,24nm,0.6s						
OSTC	**Ostas**	**0.96**	**176**	*e*PG	**Pg**	**04 19 59.3**	**+0.4**
OSTC				*e*SG	**Sg**	**04 20 11.5**	**+0.1**
	comp=Z,22nm,0.3s						
UPC	**Upice**	**1.01**	**184**	*e*PG	**Pg**	**04 19 59.9**	**+0.1**
UPC				*e*SG	**Sg**	**04 20 12.7**	**-0.3**
	comp=Z,77nm,0.4s						
DPC	**Dobruska-Polom**	**1.18**	**174**	*e*PG	**Pg**	**04 20 02.8**	**-0.2**
DPC				*e*SG	**Sg**	**04 20 17.4**	**-0.8**
	comp=Z,16nm,0.4s						
PVCC	**Panska Ves**	**1.39**	**225**	*e*PG	**Pg**	**04 20 07.2**	**+0.1**
PVCC				*e*SG	**Sg**	**04 20 24.5**	**-0.6**
	comp=Z,86nm,0.3s						
KRLC	**Kraliky**	**1.50**	**163**	*e*PG	**Pn**	**04 20 08.4**	**-0.3**
KRLC				*e*SG	**Sg**	**04 20 28.7**	**0.0**
	comp=Z,48nm,0.9s						
BRG	**Berggiesshubel**	**1.51**	**246**	Pg	**Pg**	**04 20 09.7**	**+0.3**
BRG				Sg	**Sn**	**04 20 29.8**	**+0.6**
BRG				Amp		04 20 31.1	
	comp=Z,25nm,0.4s						
PRU	**Pruhonice**	**1.83**	**214**	*e*PG	**Pn**	**04 20 13.9**	**+0.8**
PRU				*e*SG	**Sb**	**04 20 38.4**	**+0.2**
	comp=Z,16nm,0.5s						
CLL	**Collm**	**1.96**	**265**	*e*Pg	**Pb**	**04 20 17.0**	**0.0**
CLL				*ex*	x	04 20 33.0	
CLL				*e*Sg	**Sb**	**04 20 43.0**	**+1.0**
	comp=Z,12nm,0.4s						
MORC	**Moravsky Berou**	**1.96**	**152**	*e*PN	**Pn**	**04 20 14.8**	**-0.2**
MORC				*e*SG	**Sb**	**04 20 41.6**	**-0.6**
OKC	**Ostrava-Krasne**	**2.12**	**142**	*e*PG	**Pb**	**04 20 19.4**	**-0.3**
OKC				*e*SG	**Sg**	**04 20 47.7**	**-0.8**
	comp=Z,23nm,0.7s						
VRAC	**Vranov**	**2.23**	**172**	Pn	**Pn**	**04 20 19.9**	**+1.2**
	comp=Z,1.1nm,0.3s,baz=348,slow=11,SNR=5.8						
VRAC				Lg	Lg	04 20 51.1	
	comp=Z,2.3nm,0.3s,baz=76,slow=22,SNR=7.5						
	comp=Z,3.6nm,0.4s						
VRAC	**Vranov**	**2.23**	**172**	*e*PN	**Pn**	**04 20 18.8**	**+0.1**
VRAC				*e*SG	**Sb**	**04 20 50.3**	**+0.5**
TREC	**Trest**	**2.26**	**190**	*e*PN	**Pn**	**04 20 20.2**	**+1.1**
TREC				*e*SG	**Sb**	**04 20 51.8**	**+1.1**
	comp=Z,11nm,0.2s						
MAUC	**Maruska**	**2.42**	**152**	*e*PN	**Pn**	**04 20 22.1**	**+0.9**
MAUC				*e*PG	**Pb**	**04 20 24.9**	**+0.1**
MAUC				*e*SG	**Sg**	**04 20 57.0**	**-1.0**
	comp=Z,23nm,0.4s						
KRUC	**Moravsky**	**2.46**	**176**	*e*SG	**Sb**	**04 20 57.6**	**+1.1**
NKC	**Novy Kostel**	**2.66**	**242**	*e*PN	**Pn**	**04 20 25.0**	**+0.5**
NKC				*e*PG	**Pb**	**04 20 29.7**	**+0.8**
NKC				*e*SG	**Sg**	**04 21 05.4**	**-0.3**
	comp=Z,18nm,0.3s						
OJC	**Ojcow**	**2.67**	**118**	*e*Pg	**Pg**	**04 20 33.2**	**+1.6**
OJC				*e*Sg	**Sg**	**04 21 07.6**	**+1.4**
JAVC	**Velka Javorina**	**2.84**	**159**	*e*PN	**Pn**	**04 20 27.5**	**+0.4**
KHC	**Kasperske Hory**	**2.89**	**215**	*e*PN	**Pn**	**04 20 27.9**	**+0.1**
KHC				*e*PG	**Pb**	**04 20 33.3**	**+0.4**
KHC				*e*SN	**Sn**	**04 21 02.7**	**-0.5**
KHC				*e*SG	**Sg**	**04 21 11.5**	**-1.7**
	comp=Z,6.5nm,0.4s						
CKRC	**Cesky Krumlov**	**2.94**	**204**	*e*PN	**Pn**	**04 20 29.0**	**+0.6**
CKRC				*e*PG	**Pb**	**04 20 34.5**	**+0.8**
CKRC				*e*SG	**Sg**	**04 21 13.3**	**-1.5**
GERES	**GERESS Array B**	**3.09**	**211**	Pn	**Pn**	**04 20 31.6**	**+1.0**
	comp=Z,0.5nm,0.3s,baz=31,slow=12,SNR=11						
GERES				Pg	**Pb**	**04 20 37.2**	**+0.8**
	comp=Z,1.7nm,0.3s,baz=31,slow=16,SNR=28						
GERES				Sn	**Sn**	**04 21 07.2**	**-1.1**
	comp=Z,0.9nm,0.3s,baz=28,slow=23,SNR=1.3						
GERES				Lg	Lg	04 21 17.7	
	comp=Z,1.8nm,0.3s,baz=31,slow=26,SNR=7.4						
	comp=Z,0.9nm,0.4s						
LANS	**Liptovska Anna**	**3.20**	**137**	*e*PG	**Pg**	**04 20 41.6**	**-0.1**
LANS				*e*SG	**Sg**	**04 21 22.6**	**-0.5**
CONA	**Conrad Observa**	**3.60**	**183**	*i* Pn	**Pn**	**04 20 38.5**	**+1.0**
	comp=Z,0.3nm,0.2s						
CONA				*e*Sg	**Sg**	**04 21 35.3**	**-0.6**
	comp=Z,5.3nm,0.5s						
RONA	**Rosalia, Austr**	**3.82**	**178**	*e*Sg	**Sg**	**04 21 41.6**	**-1.6**
	comp=Z,4.1nm,0.3s						
MOA	**Molln**	**3.86**	**199**	*i* Pn	**Pn**	**04 20 41.9**	**+0.8**
	comp=Z,0.9nm,0.2s						
MOA				*e*Sg	**Sg**	**04 21 44.2**	**-0.3**
	comp=Z,1.8nm,0.2s						
ARSA	**Arzberg**	**4.29**	**185**	*e*Pn	**Pg**	**04 21 03.1**	**+0.6**
	comp=Z,1.8nm,0.3s						
HFS	**Hagfors**	**8.74**	**352**	Pn	**Pn**	**04 21 47.1**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=156,slow=22,SNR=1.7						
	comp=Z,1.5nm,0.9s						
FINES	**FINESS Array B**	**11.36**	**25**	Pn	**Pn**	**04 22 22.3**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=203,slow=13,SNR=1.5						
	comp=Z,4.2nm,1.2s						
ARCES	**ARCESS Array B**	**18.61**	**10**	Pn	**P**	**04 23 58.8**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=188,slow=12,SNR=4.8						
	comp=Z,5.1nm,1.2s						

*IDC **16** 04:22:30.2±1.1,33˚.12N×105˚.98E,h0km,mb3.5/5, mbtmp3.6/6,ML4.7/1,Error ellipse: s-maj=39.0km s-min=22.4km az=59.0*
ISC 16 04:22:31.5±1.2,**33.0N**±0˚.2×**105˚.9E**±0˚.2,**h10**km,**n6,** σ0°**68**/6,**mb3.6**/5,**Gansu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.77**	**205**	Pn	**P**	**04 26 17.3**	**-0.4**
	1.2nm,0.3s,baz=17,slow=9.3,SNR=7.5						
	1.4nm,0.3s						
MKAR	**Makanchi Array**	**22.60**	**314**	P	**P**	**04 27 32.7**	**+0.5**
	1.1nm,0.9s,baz=109,slow=11,SNR=7.3						
	1.1nm,0.9s						
KLR	**Kul'dur**	**25.18**	**42**	P	**P**	**04 27 56.6**	**-0.3**
	0.4nm,0.3s,baz=240,slow=14,SNR=1.5						
	0.4nm,0.3s						
KURBB	**Kurchatov Arra**	**26.67**	**319**	P	**P**	**04 28 10.1**	**-0.3**
	0.2nm,0.3s,baz=132,slow=8.4,SNR=4.1						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**59.29**	**149**	P	**P**	**04 32 33.3**	**-0.2**
	0.4nm,0.6s,baz=342,slow=7.4,SNR=6.2						
	0.4nm,0.6s						
ASAR	**Alice Springs**	**62.40**	**151**	P	**P**	**04 32 55.5**	**+0.9**
	0.3nm,0.6s,baz=332,slow=7.4,SNR=1.8						
	0.3nm,0.6s						

*NOU **16** 04:23:35.8,34˚.09S×179˚.12W,h346km,ML4.8/7,South of Kermadec Islands*
*WEL **16** 04:24:04.7±0.9,36˚.S±14˚×17˚.9E±1˚.4,h232km±17km, M4.0/18,ML4.3/23,MLv4.0/18,Error ellipse: s-maj=0.0km s-min=0.0km az=135.7*
*IDC **16** 04:24:09.7±1.5,35˚.75S×178˚.12E,h244km±16km,mb3.1/2, mbtmp3.8/4,Error ellipse: s-maj=37.6km s-min=19.6km az=117.0*
ISC 16 04:24:08.6±1.2,**35˚.94S**±0˚.09×**178˚.7E**±0˚.1,**h262**km±8km, **n90,**σ1°**39**/104,**Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.66**	**192**	P	**Pn**	**04 24 46.6**	**-2.4**
MXZ				S	**S**	**04 25 18.4**	**-2.8**
WMGZ	**Waiomatatini S**	**1.89**	**188**	P	**Pn**	**04 24 50.4**	**-0.6**
HAZ	**Te Kaha**	**1.97**	**203**	P	**Pn**	**04 24 49.2**	**-2.4**
HAZ				S	**S**	**04 25 25.1**	**-0.7**
PKGZ	**Pakihiroa**	**2.01**	**195**	P	**Pn**	**04 24 51.0**	**-1.1**
PUZ	**Puketiti**	**2.16**	**190**	P	**Pn**	**04 24 52.5**	**-0.8**
PUZ				S	**S**	**04 25 28.6**	**-0.4**
RUGZ	**Raukumara Rang**	**2.19**	**203**	P	**Pn**	**04 24 51.7**	**-2.1**
TWGZ	**Tauwhareparae**	**2.31**	**195**	P	**Pn**	**04 24 54.6**	**-0.2**
TWGZ				S	**S**	**04 25 33.9**	**+2.3**
CNGZ	**Carnagh Statio**	**2.57**	**189**	P	**Pn**	**04 24 56.6**	**-0.6**
MWZ	**Matawai**	**2.58**	**202**	P	**Pn**	**04 24 55.9**	**-1.4**
MWZ				S	**S**	**04 25 38.0**	**+1.8**
OPRZ	**Ohinepanea**	**2.58**	**222**	P	**Pn**	**04 24 55.8**	**-1.6**
TKGZ	**Te Karaka**	**2.59**	**196**	P	**Pn**	**04 24 56.1**	**-1.4**
TKGZ				S	**S**	**04 25 38.4**	**+2.0**
URZ	**Urewera**	**2.66**	**209**	P	**Pn**	**04 24 56.2**	**-1.9**
	11nm,0.3s,baz=256,slow=3.6,SNR=34						
URZ				S	**S**	**04 25 36.8**	**-0.7**
	71nm,0.5s,baz=248,slow=5.9,SNR=13						
URZ	**Urewera**	**2.66**	**209**	P	**Pn**	**04 24 56.1**	**-2.0**
URZ				S	**S**	**04 25 37.7**	**+0.2**
URZ	**Urewera**	**2.66**	**209**	P	**Pn**	**04 24 56.1**	**-2.0**
RAGZ	**Rawiri**	**2.76**	**202**	P	**Pn**	**04 24 58.3**	**-1.0**
RAGZ				S	**S**	**04 25 42.3**	**+2.7**
RIGZ	**Rimuhau**	**2.87**	**196**	P	**Pn**	**04 24 59.1**	**-1.2**
RIGZ				S	**S**	**04 25 44.1**	**+2.6**
MUGZ	**Murupara**	**2.98**	**211**	P	**Pn**	**04 24 59.9**	**-1.6**
MUGZ				S	**S**	**04 25 44.6**	**+1.1**
RTZ	**Ruatahuna**	**3.02**	**207**	P	**Pn**	**04 25 00.3**	**-1.7**
SNGZ	**Shannon Statio**	**3.05**	**201**	P	**Pn**	**04 25 01.4**	**-0.8**
SNGZ				S	**S**	**04 25 47.4**	**+2.5**
PRGZ	**Paritu Road**	**3.05**	**193**	P	**Pn**	**04 25 01.2**	**-1.0**
TOZ	**Tahuroa Road**	**3.15**	**235**	P	**Pn**	**04 25 02.4**	**-0.9**
PRRZ	**Plateau Road**	**3.17**	**216**	P	**Pn**	**04 25 03.1**	**-0.4**
ALRZ	**Allen Road**	**3.24**	**215**	P	**Pn**	**04 25 03.7**	**-0.6**
RAHZ	**Arahi**	**3.25**	**203**	P	**Pn**	**04 25 03.6**	**-0.8**
RAHZ				S	**S**	**04 25 50.5**	**+1.7**
MHGZ	**Mahia Peninsul**	**3.27**	**191**	P	**Pn**	**04 25 03.9**	**-0.7**
MTHZ	**Maungataniwha**	**3.28**	**207**	P	**Pn**	**04 25 03.7**	**-1.0**
MTHZ				S	**S**	**04 25 51.8**	**+2.4**
TLZ	**Tolley Road**	**3.50**	**226**	P	**Pn**	**04 25 07.4**	**+0.3**
NMHZ	**Naumai**	**3.50**	**205**	P	**Pn**	**04 25 06.8**	**-0.4**
ARHZ	**Aropaoanui**	**3.59**	**202**	P	**Pn**	**04 25 07.0**	**-0.9**
BKZ	**Black Stump Fm**	**3.68**	**208**	P	**Pn**	**04 25 08.7**	**-0.5**
BKZ	**Black Stump Fm**	**3.68**	**208**	P	**Pn**	**04 25 08.5**	**-0.7**
RATZ	**Rangitukua**	**3.76**	**218**	P	**Pn**	**04 25 10.5**	**+0.4**
MCHZ	**McNeill Hill**	**3.85**	**204**	P	**Pn**	**04 25 11.6**	**+0.5**
KATZ	**Kakaramea**	**3.88**	**218**	P	**Pn**	**04 25 12.6**	**+1.0**
KWHZ	**Kaweka Forest**	**3.93**	**207**	P	**Pn**	**04 25 11.5**	**-0.6**
CKHZ	**Cape Kidnapper**	**3.94**	**199**	P	**Pn**	**04 25 11.8**	**-0.3**
NTVZ	**North Tongarir**	**3.98**	**217**	P	**Pn**	**04 25 12.4**	**-0.3**
TMVZ	**Te Maari**	**3.98**	**216**	P	**Pn**	**04 25 12.2**	**-0.5**
ETVZ	**East Tongariro**	**4.00**	**216**	P	**Pn**	**04 25 11.8**	**-1.1**
HIZ	**Hauiti**	**4.03**	**229**	P	**Pn**	**04 25 14.0**	**+0.9**
HIZ	**Hauiti**	**4.03**	**229**	P	**Pn**	**04 25 13.8**	**+0.7**
NNVZ	**North Ngauruho**	**4.04**	**217**	P	**Pn**	**04 25 13.4**	**0.0**
OTVZ	**Oturere**	**4.04**	**216**	P	**Pn**	**04 25 12.4**	**-1.0**
WTVZ	**West Tongariro**	**4.04**	**217**	P	**Pn**	**04 25 13.2**	**-0.1**
SNVZ	**South Ngauruho**	**4.07**	**216**	P	**Pn**	**04 25 12.9**	**-0.9**
NGZ	**Ngauruhoe**	**4.08**	**217**	P	**Pn**	**04 25 14.0**	**+0.1**
KAHZ	**Kahuranaki**	**4.12**	**200**	P	**Pn**	**04 25 13.5**	**-0.7**
TUVZ	**Tukino**	**4.13**	**216**	P	**Pn**	**04 25 13.7**	**-0.7**
BHHZ	**Black Hill Sta**	**4.13**	**210**	P	**Pn**	**04 25 13.2**	**-1.2**
KRHZ	**Kereru**	**4.14**	**206**	P	**Pn**	**04 25 13.3**	**-1.2**
MOVZ	**Moawhango**	**4.19**	**214**	P	**Pn**	**04 25 14.2**	**-1.0**
WNVZ	**Wahianoa**	**4.20**	**216**	P	**Pn**	**04 25 14.9**	**-0.4**
OUZ	**Omahuta**	**4.25**	**278**	P	Pn	04 25 07.8	-8.0
MTVZ	**Mangateitei**	**4.31**	**216**	P	**Pn**	**04 25 16.5**	**0.0**
PXZ	**Pawanui**	**4.34**	**199**	P	**Pn**	**04 25 15.8**	**-0.9**
PNHZ	**Pukenui**	**4.45**	**206**	P	**Pn**	**04 25 16.7**	**-1.3**
PRHZ	**Porangahau**	**4.63**	**200**	P	**Pn**	**04 25 19.4**	**-0.7**
TSZ	**Takapari Road**	**4.66**	**207**	P	**Pn**	**04 25 19.4**	**-1.2**
DVHZ	**Dannevirke**	**4.80**	**204**	P	**Pn**	**04 25 20.9**	**-1.3**
WAZ	**Wanganui**	**4.83**	**217**	P	**Pn**	**04 25 22.6**	**0.0**
ANWZ	**Angora Road**	**4.85**	**201**	P	**Pn**	**04 25 22.8**	**0.0**
NEZ	**North Egmont**	**4.96**	**227**	P	**Pn**	**04 25 25.8**	**+1.5**
PKE	**Pukeiti**	**4.98**	**228**	P	**Pn**	**04 25 25.9**	**+1.5**
POWZ	**Post Office Ro**	**5.02**	**207**	P	**Pn**	**04 25 24.5**	**-0.4**
PRWZ	**Pori Road**	**5.09**	**204**	P	**Pn**	**04 25 25.9**	**+0.1**
BFZ	**Birch Farm**	**5.12**	**202**	P	**Pn**	**04 25 24.9**	**-1.2**
BFZ	**Birch Farm**	**5.12**	**202**	P	**Pn**	**04 25 24.9

	comp=Z,2.0nm,0.8s							
ILAR	**Eielson Array**	**83.84**	**22**	P		**P**	**04 55 23.6**	**-0.9**
	comp=Z,1.5nm,0.6s,baz=250,slow=5.3,SNR=15							
	comp=Z,1.5nm,0.6s							
ILAR	**Eielson Array**	**83.84**	**22**	P		**P**	**04 55 23.8**	**-0.6**
J25K	**Salcha River,**	**84.35**	**23**	P		**P**	**04 55 26.9**	**-0.1**
J25K				IAmb		IAmb	04 55 28.8	
	comp=Z,3.8nm,0.6s							
M27K	**Edge Creek, AK**	**84.80**	**25**	P		**P**	**04 55 30.3**	**+0.7**
M27K				IAmb		IAmb	04 55 32.8	
	comp=Z,3.3nm,0.8s							
NVAR	**Mina Array Bea**	**93.95**	**52**	P		**P**	**04 56 13.2**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=243,slow=5.8,SNR=2.5							
	comp=Z,0.4nm,0.7s							
TORD	**Torodi Ar. Bea**	**149.34**	**286**	PKPbc		**PKPbc**	**05 02 44.7**	**-0.3**
	comp=Z,2.0nm,0.6s,baz=59,slow=2.3,SNR=17							

MDD ***16*** *04:47:47.3±0.9, 36°.67N×11°.20W, h0km, mb_Lg3.1/10, Error ellipse: s-maj=7.4km s-min=6.1km az=34.0*
INMG ***16*** *04:47:48.5±1.0, 36°.50N×11°.38W, h31km, ML2.4, Error ellipse: s-maj=4.2km s-min=3.4km az=76.0*
IGIL ***16*** *04:47:49.3, 36°.51N×11°.36W, h31km, ML2.3*
CNRM ***16*** *04:47:50.3, 36°.23N×10°.79W, h30km, ml3.2*

ISC 16 04:47:45.4±2.0, 36°.40N±0°.05×11°.3W±0°.1, h35km, n53, σ2s 24/98, 4C-1D, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PFVI	**Vila Bisbo**	**2.10**	**69**	*i*Pn		**Pn**	**04 48 20.5**	**+2.4**
PFVI				*e*Sn		**Sn**	**04 48 43.7**	**+0.7**
PFVI				A		A	04 48 45.3	
	17nm,0.3s							
PFVI	**Vila Bisbo**	**2.10**	**69**	P		**Pn**	**04 48 20.3**	**+2.3**
PFVI				S		**Sn**	**04 48 43.7**	**+0.7**
MORF	**Marmelete**	**2.30**	**66**	*e*P		**Pn**	**04 48 23.1**	**+2.4**
MORF				*e*S		**Sn**	**04 48 48.2**	**+0.4**
MORF				IAML			04 48 52.1	
	comp=N,20nm,0.2s							
MORF	**Marmelete**	**2.30**	**66**	*e*Pn		**Pn**	**04 48 23.1**	**+2.4**
MORF				*e*Sn		**Sn**	**04 48 49.9**	**+2.1**
MORF				A		A	04 48 54.7	
	comp=N,19nm,0.2s							
PTEO	**Sao Teotonio**	**2.35**	**60**	*e*Pn		**Pn**	**04 48 23.8**	**+2.4**
PTEO				*e*Sn		**Sn**	**04 48 49.7**	**+0.7**
PTEO				A		A	04 48 54.3	
	comp=N,14nm,0.3s							
PNCL	**Nicolau / Gran**	**2.78**	**51**	*e*Pn		**Pn**	**04 48 29.4**	**+2.0**
PNCL				*e*Sn		**Sn**	**04 48 59.9**	**+0.2**
PNCL				A		A	04 49 03.6	
	comp=N,8.1nm,0.3s							
PBDV	**Barranco-do-Ve**	**2.82**	**72**	*e*Pn		**Pn**	**04 48 30.8**	**+2.9**
PBDV				*e*Sn		**Sn**	**04 49 01.6**	**+0.9**
PBDV				A		A	04 49 09.5	
	comp=N,8.1nm,0.4s							
MESJ	**Messejana**	**2.84**	**59**	*e*P		**Pn**	**04 48 30.4**	**+2.2**
MESJ				*e*S		**Sn**	**04 49 00.6**	**-0.5**
MESJ				IAML			04 49 04.1	
	comp=N,8.2nm,0.1s							
MESJ	**Messejana**	**2.84**	**59**	*e*Pn		**Pn**	**04 48 30.5**	**+2.3**
MESJ				*e*Sn		**Sn**	**04 49 02.0**	**+0.9**
MESJ				A		A	04 49 07.7	
	comp=N,6.6nm,0.2s							
PMST	**Lisbon--Monsan**	**2.87**	**35**	*e*Sn		**Sn**	**04 49 01.3**	**-0.5**
PCVE	**Castro Verde**	**2.87**	**64**	*e*Pn		**Pn**	**04 48 31.1**	**+2.5**
PCVE				*e*Sn		**Sn**	**04 49 02.6**	**+0.6**
PCVE				A		A	04 49 05.9	
	comp=N,6.2nm,0.6s							
PMAFR	**Mafra**	**3.00**	**31**	*e*Pn		**Pn**	**04 48 31.4**	**+0.9**
PMAFR				*e*Sn		**Sn**	**04 49 04.9**	**-0.3**
PMAFR				A		A	04 49 08.9	
	comp=N,18nm,0.2s							
PVAQ	**Vaqueiros**	**3.03**	**70**	*e*Pn		**Pn**	**04 48 33.5**	**+2.7**
PVAQ				*e*Sn		**Sn**	**04 49 06.3**	**+0.5**
PVAQ				A		A	04 49 08.9	
	comp=N,12nm,0.1s							
PACT	**Alcochete**	**3.06**	**39**	*e*Pn		**Pn**	**04 48 33.2**	**+2.0**
PACT				*e*Sn		**Sn**	**04 49 07.8**	**+1.2**
PBEJ	**Beja**	**3.17**	**58**	*e*Pn		**Pn**	**04 48 34.7**	**+1.9**
PBEJ				*e*Sn		**Sn**	**04 49 09.4**	**0.0**
PBEJ				A		A	04 49 12.0	
	comp=N,6.4nm,0.2s							
EGRO	**El Granado**	**3.25**	**68**	Pn		**Pn**	**04 48 36.6**	**+2.9**
EGRO				Sn		**Sn**	**04 49 11.6**	**+0.5**
EGRO				*i* Vmb_Lg			04 49 16.1	
EVO	**Evora**	**3.36**	**50**	P		**Pn**	**04 48 38.0**	**+2.7**
EVO				S		**Sn**	**04 49 12.9**	**-1.1**
EVO	**Evora**	**3.36**	**50**	*e*Pn		**Pn**	**04 48 37.2**	**+1.9**
EVO				*e*Sn		**Sn**	**04 49 13.6**	**-0.4**
EVO				A		A	04 49 16.1	
	comp=N,16nm,0.1s							
PMTG	**Montargil**	**3.60**	**41**	*e*Pn		**Pn**	**04 48 39.9**	**+1.2**
PMTG				*e*Sn		**Sn**	**04 49 19.1**	**-0.8**
PMTG				A		A	04 49 20.9	
	comp=N,3.8nm,0.3s							
PSBE	**So Bento**	**3.68**	**32**	*e*Pn		**Pn**	**04 48 40.9**	**+1.2**
PSBE				*e*Sn		**Sn**	**04 49 21.7**	**-0.2**
PSBE				A		A	04 49 26.3	
	comp=N,8.3nm,0.6s							
PBAR	**Barrancos**	**3.82**	**61**	*e*Sn		**Sn**	**04 49 25.1**	**-0.2**
PESTR	**Estremoz**	**3.83**	**49**	*e*Pn		**Pn**	**04 48 43.9**	**+2.1**
PESTR				*e*Sn		**Sn**	**04 49 25.4**	**-0.2**
PESTR	**Estremoz**	**3.83**	**49**	P		**Pn**	**04 48 43.1**	**+1.3**
PESTR				S		**Sn**	**04 49 23.9**	**-1.7**
EMIN	**Mina Concepcio**	**3.93**	**68**	Pn		**Pn**	**04 48 45.1**	**+1.9**
EMIN				Sn		**Sn**	**04 49 27.9**	**-0.2**
EMIN				*i* Vmb_Lg			04 49 29.6	
EBAD	**Badajoz**	**4.13**	**54**	Pn		**Pn**	**04 48 47.4**	**+1.5**
EBAD				Sn		**Sn**	**04 49 31.8**	**-1.1**
EBAD				*i* Vmb_Lg			04 49 33.5	
PCAS	**Casmilo, Conde**	**4.25**	**30**	*e*Pn		**Pn**	**04 48 48.6**	**+0.9**
PCAS				*e*Sn		**Sn**	**04 49 35.2**	**-0.9**
PCAS				A		A	04 49 36.0	
	comp=N,4.5nm,0.5s							
PMRV	**Marv??o**	**4.31**	**44**	*e*Pn		**Pn**	**04 48 49.6**	**+1.1**
PMRV				*e*Sn		**Sn**	**04 49 35.4**	**-2.1**
PMRV				A		A	04 49 37.5	
	comp=N,5.4nm,0.5s							
ESPR	**Espera**	**4.39**	**82**	Pn		**Pn**	**04 48 52.0**	**+2.6**
ESPR				Sn		**Sn**	**04 49 40.5**	**+1.1**
ESPR				*i* Vmb_Lg			04 49 42.2	
PCBR	**Castelo Branco**	**4.56**	**40**	*e*Pn		**Pn**	**04 48 53.8**	**+2.0**
PCBR				*e*Sn		**Sn**	**04 49 42.0**	**-1.6**
PCBR				A		A	04 49 43.5	
	comp=N,3.1nm,0.5s							
SRHM	**Skhour des Reh**	**4.81**	**144**	P		**Pn**	**04 48 57.6**	**+2.2**
SRHM				S		**Sn**	**04 49 47.5**	**-2.4**
SMIR	**Smir Dam**	**4.83**	**97**	P		**Pn**	**04 48 55.9**	**+0.3**
SMIR				S		**Sn**	**04 49 44.1**	**-6.3**
EAH	**EAH**	**4.94**	**163**	P		**Pn**	**04 48 58.7**	**+1.6**
EAH				S		**Sn**	**04 49 53.0**	**-0.1**
MTE	**Manteigas**	**4.96**	**35**	*e*Pn		**Pn**	**04 48 59.5**	**+2.2**
ECAB	**El Cabril**	**4.97**	**69**	Pn		**Pn**	**04 48 59.5**	**+2.0**
ECAB				Sn		**Sn**	**04 49 52.5**	**-1.2**
ECAB				*i* Vmb_Lg			04 49 53.0	
CHEFC	**Chefchaouen**	**5.00**	**103**	P		**Pn**	**04 48 59.4**	**+1.4**
CHEFC				S		**Sn**	**04 49 51.0**	**-3.6**
PVIS	**Viseu**	**5.06**	**31**	*e*Pn		**Pn**	**04 48 59.6**	**+0.8**
PVIS				*e*Sn		**Sn**	**04 49 53.6**	**-2.4**
PVIS				A		A	04 49 58.0	
	comp=N,4.0nm,0.1s							
EPLA	**Plasencia**	**5.49**	**47**	Pn		**Pn**	**04 49 05.7**	**+1.1**
EPLA				Sn		**Sn**	**04 50 05.1**	**-1.5**
EPLA				*i* Vmb_Lg			04 50 08.6	
EADA	**Adamuz**	**5.63**	**70**	Pn		**Pn**	**04 49 08.8**	**+2.2**
EADA				Sn		**Sn**	**04 50 09.2**	**-0.9**
EADA				*i* Vmb_Lg			04 50 14.5	
POLO	**Lamas de Olo**	**5.66**	**28**	*e*Sn		**Sn**	**04 50 06.8**	**-4.1**
POLO				A		A	04 50 09.7	
	comp=N,1.5nm,0.7s							
MVO	**Moncorvo**	**5.80**	**34**	*e*Pn		**Pn**	**04 49 09.8**	**+0.8**
MVO				*e*Sn		**Sn**	**04 50 11.5**	**-2.8**
MVO				A		A	04 50 13.6	
	comp=N,3.7nm,0.6s							
OUK	**Oukaimeden**	**5.91**	**150**	P		**Pn**	**04 49 13.3**	**+2.6**
OUK				S		**Sn**	**04 50 14.2**	**-3.1**
ELOB	**Lobios**	**6.01**	**24**	Pn		**Pn**	**04 49 11.9**	**+0.1**
ELOB				Sn		**Sn**	**04 50 14.3**	**-5.0**
ELOB				*i* Vmb_Lg			04 50 16.1	
PGAV	**Gavieira, Arco**	**6.03**	**22**	*e*Pn		**Pn**	**04 49 12.6**	**+0.5**
PGAV				*e*Sn		**Sn**	**04 50 15.8**	**-4.1**
PGAV				A		A	04 50 19.3	
	comp=N,2.9nm,0.2s							
TTIG	**Tnine Tigouga,**	**6.30**	**157**	P		**Pn**	**04 49 14.6**	**-1.3**
PAB	**San Pablo**	**6.31**	**58**	Pn		**Pn**	**04 49 17.3**	**+1.3**
PAB				Sn		**Sn**	**04 50 24.5**	**-2.4**
PAB				*i* Vmb_Lg			04 50 26.9	
MD31	**MD31**	**6.43**	**121**	P		**Pn**	**04 49 19.8**	**+2.2**
MD31				S		**Sn**	**04 50 27.0**	**-2.7**
PBRG	**Braganca**	**6.45**	**32**	*e*Sn		**Sn**	**04 50 26.3**	**-3.9**
PBRG				A		A	04 50 30.5	
	comp=N,1.4nm,0.3s							
MDT	**Midelt**	**6.56**	**121**	P		**Pn**	**04 49 21.9**	**+2.5**
MDT				S		**Sn**	**04 50 28.6**	**-4.6**
OUZM	**OUZ**	**6.65**	**144**	P		**Pn**	**04 49 22.7**	**+2.1**
OUZM				S		**Sn**	**04 50 31.9**	**-3.4**
EAGO	**Agolada(Pontev**	**6.85**	**20**	Pn		**Pn**	**04 49 23.0**	**-0.3**
EAGO				Sn		**Sn**	**04 50 33.3**	**-6.8**
EAGO				*i* Vmb_Lg			04 50 35.5	
TZRR	**Tazzarine**	**7.35**	**138**	P		**Pn**	**04 49 31.2**	**+0.9**
ZGR	**Zagora**	**7.85**	**141**	P		**Pn**	**04 49 38.2**	**+1.0**
ETOR	**Torete**	**8.46**	**56**	Pn		**Pn**	**04 49 47.2**	**+1.7**
ETOR				Sn		**Sn**	**04 51 14.9**	**-4.9**

TUL ***16*** *05:12:05.4±0.7, 36°.86N±0°.02×98°.13W±0°.02, h5km±1km, ML2.8, mb_Lg2.6/44(NEIC), Error ellipse: s-maj=3.9km s-min=1.6km az=323.0*

NEIC 16 05:12:05.9±1.1, 36°.84N±0°.02×98°.12W±0°.02, h8km±6km, Error ellipse: s-maj=3.2km s-min=1.4km az=143.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
U32A	**Winter Ranch,**	**0.84**	**238**	Pg		Pg	05 12 21.6	-0.5
T35A	**Sooner Cattle**	**1.29**	**86**			Pn	05 12 29.6	-0.6
R32A	**Long Quarter,**	**1.65**	**344**			Pn	05 12 35.9	+0.7
FNO	**Franklin**	**1.68**	**160**			Pb	05 12 36.3	-0.7
TUL1	**Leonard**	**2.09**	**115**			Pn	05 12 41.6	+0.4
TUL1				IAmb_Lg			05 13 16.8	
	comp=Z,31nm,0.8s							
WMOK	**Wichita Mounta**	**2.16**	**195**			Pn	05 12 43.0	+0.8
WMOK				IAmb_Lg			05 13 14.9	
	comp=Z,20nm,0.8s							
X34A	**Smith Ranch, M**	**2.24**	**174**			Pn	05 12 43.5	+0.3
X34A				IAmb_Lg			05 13 20.9	
	comp=Z,30nm,0.7s							
CBKS	**Cedar Bluff**	**2.36**	**327**	Pn		Pn	05 12 44.2	-0.7
KSU1	**Kansas State U**	**2.56**	**27**	Pn		Pn	05 12 48.4	+0.8
KSU1				IAmb_Lg			05 13 28.3	
	comp=Z,28nm,0.8s							
U38A	**Gravette**	**3.03**	**96**			Pn	05 12 54.4	+0.3
X37A	**Clayton**	**3.16**	**134**	Pn		Pn	05 12 56.7	+0.7
HHAR	**Hobbs**	**3.41**	**98**			Pn	05 12 59.8	+0.4
AMTX	**Amarillo**	**3.49**	**237**			Pn	05 13 00.5	0.0
AMTX				IAmb_Lg			05 14 02.2	
	comp=Z,13nm,0.8s							
S39A	**Bolivar**	**3.92**	**76**	Pn		Pn	05 13 06.9	+0.5
N33A	**J Bar K, Exete**	**3.93**	**7**	Pn		Pn	05 13 06.5	-0.1
KSCO	**Kaye Shedlock'**	**4.18**	**303**			Pn	05 13 11.3	+1.3
U40A	**Yellville**	**4.26**	**95**			Pn	05 13 11.7	+0.6
U40A				IAmb_Lg			05 14 22.6	
	comp=Z,11nm,0.8s							
MIAR	**Mount Ida**	**4.34**	**120**	Pn		Pn	05 13 13.4	+1.2
ABTX	**Abilene, Hawle**	**4.38**	**197**	Pn		Pn	05 13 13.4	+0.6
Z38A	**Mt. Pleasant**	**4.39**	**143**	IAmb_Lg			05 14 29.9	
	comp=Z,14nm,1.0s							
N35A	**Tabor**	**4.46**	**25**			Pn	05 13 13.0	-0.8
P38A	**Dawn**	**4.56**	**51**			Pn	05 13 15.4	+0.2
P38A				IAmb_Lg			05 14 38.4	
	comp=Z,10nm,0.9s							
BGNE	**Belgrade**	**4.57**	**360**	IAmb_Lg			05 14 38.4	
	comp=Z,17nm,0.7s							
MGMO	**Mountain Grove**	**4.69**	**84**	Pn		Pn	05 13 17.8	+0.8
MGMO				IAmb_Lg			05 14 36.1	
	comp=Z,14nm,0.8s							
MSTX	**Muleshoe**	**4.76**	**234**	Pn		Pn	05 13 17.4	-0.6
WHTX	**Lake Whitney,**	**4.86**	**173**	Pn		Pn	05 13 19.4	+0.1
R40A	**Maddies Statio**	**4.87**	**71**			Pn	05 13 19.8	+0.3
R40A				IAmb_Lg			05 14 42.2	
	comp=Z,10nm,0.8s							
FCAR	**Ozark Folk Cen**	**4.93**	**99**	IAmb_Lg			05 14 49.6	
	comp=Z,11nm,0.9s							
W41B	**Gary Mavity, V**	**5.04**	**107**	IAmb_Lg			05 14 47.4	
	comp=Z,9.1nm,0.8s							
L34A	**Svendsen Farm,**	**5.30**	**14**	IAmb_Lg			05 15 04.1	
	comp=Z,15nm,0.8s							
P40A	**Paris**	**5.49**	**59**	IAmb_Lg			05 14 59.2	
	comp=Z,11nm,0.8s							
CCM	**Cathedral Cave**	**5.60**	**75**	IAmb_Lg			05 15 07.1	
	comp=Z,14nm,0.9s							
435B	**Jarrell**	**6.05**	**176**	IAmb_Lg			05 15 30.9	
	comp=Z,8.5nm,0.9s							
FVM	**French Village**	**6.23**	**77**	IAmb_Lg			05 15 22.4	
	comp=Z,8.9nm,0.9s							
JCT	**Junction City**	**6.49**	**193**	IAmb_Lg			05 15 46.2	
	comp=Z,8.0nm,0.9s							
S44A	**Carbondale**	**7.12**	**80**	IAmb_Lg			05 15 52.8	
	comp=Z,9.4nm,0.7s							
I37A	**Lemond, Waseca**	**8.02**	**25**	IAmb_Lg			05 16 42.1	
	comp=Z,7.8nm,1.1s							

IDC ***16*** *05:21:26.8±0.5, 42°.02N×140°.86E, h0km, mb4.7/27, mbtmp4.7/31, ML3.2/3, MS4.5/81, Error ellipse: s-maj=13.3km s-min=12.1km az=107.0*
BJI ***16*** *05:21:27.0±0.0, 42°.14N×141°.44E, h39km, mb4.8/65, mB5.1/58, Ms5.2/77, Ms7 4.8/73*
NIED ***16*** *05:21:28.2, 41°.95N×140°.99E, h11km, MW5.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^16 Nm; Mrr4.38; Mθθ0.39; Mϕϕ-4.77; Mrθ1.50; Mθϕ3.20; Mϕr3.63; Fault plane solution: M0 6.83000×10^16 NP1: ϕs126.00000°, δ40.00000°, λ41.00000°. NP2:ϕs2.00000°, δ65.00000°, λ122.00000°.*
JMA ***16*** *05:21:28.2±0.0, 42°.0N±0°.1×141°.0E±0°.2, h11km, MD5.3/40, MW5.2/40, UCHIURA BAY REGION*
JMA Felt VI J1 at UCHIURA BAY REGION .
IASPEI ***16*** *05:21:28.0±0.9, 41°.94N±0°.02×140°.97E±0°.03, h12km±8km, mb5.2/370, MS4.8/124, Error ellipse: s-maj=4.4km s-min=3.4km az=80.1, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
NEIC ***16*** *05:21:29.3±1.2, 41°.98N±0°.04×140°.94E±0°.04, h14km±3km, mb5.2/491, Mww5.2, Error ellipse: s-maj=6.8km s-min=3.3km az=153.0*
MOS ***16*** *05:21:30.1±1.0, 41°.96N×140°.82E, h31km, mb5.3/97, MS4.9/35, Error ellipse: s-maj=5.1km s-min=3.7km az=110.0*
GCMT ***16*** *05:21:31.3±0.1, 42°.01N±0°.01×140°.89E±0°.01, h13km, MW5.1/120, Moment Tensor Solution. s65,c89; s120,c194; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr4.58±.18; Mθθ0.16±.14; Mϕϕ-4.74±.14; Mrθ0.84±.35; Mθϕ5.04±.11; Mϕr-0.54±.30; Best double couple: M0 6.36500×10^16 NP1:ϕs345.00000°, δ43.00000°, λ114.00000°. NP2:ϕs133.00000°, δ51.00000°, λ69.00000°. Principal axes: T 4.7720, Plg73.0000°, Azm342.0000°; N 3.1890, Plg16.0000°, Azm147.0000°; P -7.9580, Plg4.0000°, Azm238.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***16*** *05:21:33, 42°.05N×140°.94E, h16km, Moment Tensor Solution. Duration: 8s0 Moment tensor: Scale 10^16 Nm; Mrr8.41; Mθθ-0.75; Mϕϕ-7.66; Mrθ2.31; Mθϕ3.01; Mϕr-2.15; Fault plane solution: M0 9.17000×10^16 NP1: ϕs349.00000°, δ37.00000°, λ105.00000°. NP2: ϕs150.00000°, δ55.00000°, λ79.00000°. Principal axes: T 9.0852, Plg77.0000°, Azm24.0000°; N 0.1615, Plg9.0000°, Azm157.0000°; P -9.2467, Plg9.0000°, Azm248.0000°:*

ISC 16 05:21:28.9±0.6, 41°.96N±0°.02×141°.00E±0°.02, h14km±3km, n1225, σ1s 49/997, mb5.2/370, MS4.8/124, 134C-154D, Fault plane solution: NP1:ϕs340.13806°, δ67.27298°, λ125.08029°. NP2:ϕs98.95369°, δ40.99143°, λ36.08487°. Principal axes: T Plg53.7955°, Azm293.6115°; N Plg32.0122°, Azm144.9577°; P Plg15.1024°, Azm45.2448°; **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JKB	**Kayabe**	**0.08**	**162**	P		**Pg**	**05 21 30.3**	**-1.4**
JKB	**Kayabe**	**0.08**	**162**	A		A	05 21 30.3	
	comp=E,9μm,1.0s,comp=E,5μm,4.1s							
JYM2	**Yakumo 2**	**0.49**	**288**	*e*P		**Pg**	**05 21 37.7**	**-0.9**
JYM2				*e*S		**Sg**	**05 21 44.2**	**-1.0**
JYM2	**Yakumo 2**	**0.49**	**288**	A		A	05 21 37.7	
	comp=E,389nm,4.7s,comp=E,293nm,7.2s							
JNB	**Noboribetsu**	**0.51**	**3**	⇓P		**Pg**	**05 21 38.3**	**-0.6**
JNB				⇓*e*S		**Sg**	**05 21 45.2**	**-0.5**
JNB	**Noboribetsu**	**0.51**	**3**	A		A	05 21 38.3	
	comp=E,182nm,0.8s,comp=E,153nm,3.9s							
JOT	**Ohata**	**0.58**	**176**	⇓P		**Pg**	**05 21 39.0**	**-1.3**
JOT				⇓*e*S		**Sg**	**05 21 46.5**	**-1.5**
JOT	**Ohata**	**0.58**	**176**	A		A	05 21 39.0	
	comp=E,326nm,4.2s,comp=E,344nm,3.3s							
JSR	**Shiriuchi**	**0.61**	**225**	*e*P		**Pg**	**05 21 39.8**	**-1.1**
JSR				*e*S		**Sg**	**05 21 48.1**	**-0.9**
JSR	**Shiriuchi**	**0.61**	**225**	A		A	05 21 39.8	
	comp=E,224nm,6.2s,comp=E,259nm,4.2s							
JAHD	**Aomorihigashid**	**0.74**	**160**	P		**Pg**	**05 21 42.1**	**-1.2**
JAHD				*e*S		**Sg**	**05 21 52.1**	**-1.0**
JAHD	**Aomorihigashid**	**0.74**	**160**	A		A	05 21 42.1	
	comp=E,210nm,0.4s,comp=E,211nm,1.8s							
JOMM	**Oshimamatsumae**	**0.86**	**240**	⇓*e*P		**Pg**	**05 21 43.7**	**-1.8**
JOMM				⇓*e*S		**Sg**	**05 21 55.6**	**-1.3**
JOMM	**Oshimamatsumae**	**0.86**	**240**	A		A	05 21 43.7	
	comp=E,146nm,4.0s,comp=E,133nm,3.5s							
JEW	**Eniwo**	**0.94**	**21**			**Pg**	**05 21 47.1**	**0.0**
JEW	**Eniwo**	**0.94**	**21**	⇓*e*P		**Pb**	**05 21 46.2**	**-0.8**
JEW	**Eniwo**	**0.94**	**21**	A		A	05 21 46.2	
	comp=E,88nm,4.3s,comp=E,95nm,7.1s							
JIAM	**Iburiatsuma**	**0.95**	**46**	⇓P		**Pb**	**05 21 47.1**	**-0.1**
JIAM	**Iburiatsuma**	**0.95**	**46**	A		A	05 21 47.1	
	comp=E,180nm,5.5s,comp=E,171nm,4.6s							
JHST	**Hiyamasetana**	**0.95**	**299**	P		**Pb**	**05 21 46.0**	**-1.1**
JHST				*e*S		**Sb**	**05 21 59.1**	**-0.5**
JHST	**Hiyamasetana**	**0.95**	**299**	A		A	05 21 46.0	
	comp=E,225nm,3.4s,comp=E,131nm,2.7s							
JSH	**Shimam**	**0.98**	**314**	P		**Pb**	**05 21 46.2**	**-1.5**
JSH				*e*S		**Sb**	**05 21 59.5**	**-0.9**
JSH	**Shimam**	**0.98**	**314**	A		A	05 21 46.2	
	comp=E,71nm,6.6s,comp=E,60nm,4.4s							
JARK	**Aomorirokkasho**	**0.99**	**164**	*e*P		**Pb**	**05 21 46.6**	**-1.2**
JARK				*e*S		**Sb**	**05 21 59.6**	**-1.2**
JARK	**Aomorirokkasho**	**0.99**	**164**	A		A	05 21 46.6	
	comp=E,124nm,6.1s,comp=E,106nm,5.1s							
JSI2	**Shiura 2**	**1.01**	**206**	A		A	05 21 46.8	
	comp=E,174nm,0.7s,comp=E,128nm,6.4s							
JOSM	**Okushiri--Mats**	**1.14**	**277**	A		A	05 21 49.4	
	comp=E,130nm,4.3s,comp=E,189nm,3.7s							
JOSM	**Okushiri--Mats**	**1.14**	**277**	P		**Pb**	**05 21 49.1**	**-1.3**
JTM	**Tenmabayashi**	**1.18**	**177**	Pn		**Pn**	**05 21 49.8**	**-1.1**
JTM				Sg		**Sb**	**05 22 04.7**	**-1.4**
JTM	**Tenmabayashi**	**1.18**	**177**	A		A	05 21 49.7	
	comp=E,130nm,2.1s,comp=E,83nm,9.3s							
JTM	**Tenmabayashi**	**1.18**	**177**	⇓P		**Pn**	**05 21 49.5**	**-1.4**
JSHD	**Hidakashinhida**	**1.18**	**67**	A		A	05 21 50.3	
	comp=E,238nm,3.7s,comp=E,243nm,3.2s							
JBT2	**Biratori 2**	**1.30**	**51**	A		A	05 21 52.3	
	comp=E,76nm,3.1s,comp=E,113nm,4.7s							
JNBK	**Urakawa-nobuka**	**1.34**	**76**	A		A	05 21 52.9	
	comp=E,102nm,0.6s,comp=E,97nm,2.7s							
JNBK	**Urakawa-nobuka**	**1.34**	**76**	⇓P		**Pn**	**05 21 53.4**	**+0.2**
JISS	**Ishikarishitsu**	**1.35**	**13**	A		A	05 21 53.1	
	comp=E,170nm,7.8s,comp=E,179nm,3.0s							
JISS	**Ishikarishitsu**	**1.35**	**13**	P		**Pb**	**05 21 53.7**	**-0.2**
JHHS	**Hirosakihyakuz**	**1.40**	**200**	A		A	05 21 53.3	
	comp=E,252nm,0.9s,comp=E,362nm,4.4s							
JSK	**Shakotan**	**1.44**	**345**	A		A	05 21 54.5	
	comp=E,89nm,2.1s,comp=E,42nm,1.7s							
JSK	**Shakotan**	**1.44**	**345**	P		**Pn**	**05 21 54.5**	**-0.1**
JIW	**Iwasaki**	**1.56**	**209**	A		A	05 21 55.8	
	comp=E,138nm,2.4s,comp=E,128nm,1.5s							
JIW	**Iwasaki**	**1.56**	**209**	⇓P		**Pn**	**05 21 55.5**	**-0.7**
ERM	**Erimo**	**1.61**	**87**	Pn		**Pn**	**05 21 57.4**	**+0.5**
ERM	**Erimo**	**1.61**	**87**	*de*P		**Pn**	**05 21 56.9**	**0.0**
JEM	**Erimo**	**1.61**	**87**	A		A	05 21 57.0	
	comp=E,39nm,3.2s,comp=E,45nm,3.3s							
JEM	**Erimo**	**1.61**	**87**	P		**Pn**	**05 21 56.9**	**0.0**
JANG	**Nango**	**1.63**	**166**	A		A	05 21 57.0	
	comp=E,56nm,4.6s,comp=E,43nm,5.9s							
JANG	**Nango**	**1.63**	**166**	⇓P		**Pn**	**05 21 56.7**	**-0.6**
JFR	**Fur

comp=E,10.0nm,5.0s,comp=E,13nm,10.8s
JNK Nakash 3.18 58 P **Pn 05 22 20.5 +2.0**
JSE Soyaes 3.21 21 A A 05 22 20.3
comp=E,12nm,7.5s,comp=E,16nm,2.7s
JSE Soyaes 3.21 21 P **Pn 05 22 21.2 +2.3**
JKHN Kushirohamanak 3.27 69 A A 05 22 21.1
comp=E,28nm,2.2s,comp=E,15nm,4.7s
JOFO Osakifurukawao 3.36 181 A A 05 22 21.9
comp=E,116nm,2.6s,comp=E,120nm,3.6s
JWK2 Keihoku 3.42 11 A A 05 22 23.2
comp=E,23nm,8.1s,comp=E,23nm,12.9s
JNSB Nemuroshibetsu 3.46 57 A A 05 22 23.8
comp=E,31nm,2.9s,comp=E,35nm,3.3s
JRBN Rebuntou 3.46 1 A A 05 22 23.8
comp=E,9.0nm,8.3s,comp=E,6.0nm,3.6s
JYA Atsumi 3.51 197 A A 05 22 24.0
comp=E,26nm,4.4s,comp=E,20nm,1.2s
JYA Atsumi 3.51 197 P **Pn 05 22 23.4 +0.4**
JIO Ouri 3.51 176 A A 05 22 24.1
comp=E,21nm,6.1s,comp=E,17nm,8.0s
JIO Ouri 3.51 176 P **Pn 05 22 24.7 +1.7**
JOU Okura 3.60 184 A A 05 22 25.4
comp=E,45nm,2.3s,comp=E,26nm,8.1s
JRA Rausu 3.61 55 A A 05 22 26.0
comp=E,19nm,3.6s,comp=E,16nm,2.3s
JAW Awa shima 3.75 202 A A 05 22 27.4
comp=E,22nm,5.5s,comp=E,16nm,4.6s
NMR Nemuro--Hokkai 3.76 66 *e*P **Pn 05 22 26.8 +0.4**
NMR *e*S **Sn 05 23 10.8 +0.4**
GLVR Golovnino 3.77 60 *e*P **Pb 05 22 33.5 -1.6**
GLVR *e*S **Sn 05 23 07.9 -2.7**
GLVR pmax pmax
comp=Z,815nm,0.4s
GLVR pmax pmax
comp=N,306nm,0.3s
GLVR pmax pmax
comp=E,298nm,0.3s
GLVR smax smax
comp=N,2μm,0.3s
GLVR smax smax
comp=E,4μm,0.6s
NEM2 Nemuro 2 3.77 67 A A 05 22 28.1
comp=E,7.0nm,4.7s,comp=E,7.0nm,3.0s
NEM2 Nemuro 2 3.77 67 P **Pn 05 22 27.0 +0.4**
RUSJ Misakicho 3.78 54*c i*P **Pb 05 22 31.8 -3.5**
RUSJ *e*S **Sb 05 23 18.4 -2.6**
JYS Shirataka 3.81 191 A A 05 22 28.2
comp=E,19nm,2.1s,comp=E,26nm,3.0s
JYS Shirataka 3.81 191 P **Pn 05 22 29.0 +1.9**
JMM Marumori 4.09 182 Pn Pn 05 22 33.8 +2.8
JMM Marumori 4.09 182 A A 05 22 32.3
comp=E,23nm,9.5s,comp=E,15nm,7.3s
JMM Marumori 4.09 182 P **Pn 05 22 33.7 +2.7**
JYAR Yonezawaarcadi 4.10 190 A A 05 22 32.4
comp=E,22nm,4.2s,comp=E,21nm,2.4s
YUK Yuzh-Kuril'sk 4.12 58*c i*P **Pn 05 22 34.3 +2.9**
YUK *i* S **Sn 05 23 23.2 +3.8**
YUK pmax pmax
comp=N,510nm,0.6s
YUK pmax pmax
comp=Z,961nm,0.6s
YUK pmax pmax
comp=E,630nm,0.7s
YUK smax smax
comp=N,3μm,0.6s
YUK smax smax
comp=E,2μm,0.6s
YUK MLR MLR
comp=E,7μm,10.0s
YUK MLR MLR
comp=Z,7μm,10.0s
JMST Minamisoumatoc 4.23 181 A A 05 22 34.3
comp=Z,22nm,6.4s,comp=Z,15nm,3.5s
JNS Sasagawa 4.34 198 A A 05 22 35.7
comp=Z,8.0nm,6.5s,comp=Z,6.0nm,9.7s
TEY Ternei 4.43 315⇑*e*P **Pn 05 22 35.0 -0.7**
TEY pmax pmax
comp=N,80nm,0.6s
TEY pmax pmax
comp=E,60nm,0.6s
TEY pmax pmax
comp=Z,80nm,0.6s
JSD Sado 4.45 209 Pn **Pn 05 22 36.9 +1.0**
JSD Sado 4.45 209 A A 05 22 37.3
comp=Z,9.0nm,11.8s,comp=Z,4.0nm,11.1s
JSD Sado 4.45 209 P **Pn 05 22 36.5 +0.6**
JFT Otama 4.47 187 A A 05 22 37.6
comp=Z,29nm,5.7s,comp=Z,19nm,2.5s
JFT Otama 4.47 187 P **Pn 05 22 40.2 +4.0**
JFK Kawauchi 4.59 181 A A 05 22 39.3
comp=Z,15nm,17.2s,comp=Z,8.0nm,7.5s
JFY Yanaizu 4.66 193 A A 05 22 40.2
comp=Z,11nm,5.6s,comp=Z,8.0nm,9.3s
SHO Shikotan 4.69 64*d i*P **Pn 05 22 40.5 +1.3**
SHO *i* S **Sn 05 23 33.3 0.0**
SHO pmax pmax
comp=E,179nm,0.6s
SHO pmax pmax
comp=Z,382nm,0.6s
SHO pmax pmax
comp=N,97nm,0.3s
SHO smax smax
comp=N,746nm,0.6s
SHO smax smax
comp=E,2μm,0.5s
SHO MLR MLR
comp=Z,3μm,9.0s
JIZZ Izumozaki 4.76 202 A A 05 22 41.7
comp=Z,25nm,4.1s,comp=Z,18nm,3.3s
ONAJ Iwakimizuishiy 4.86 182 A A 05 22 43.1
comp=Z,17nm,8.7s,comp=Z,14nm,2.7s
JFFD Fukushimafurud 4.88 184 A A 05 22 43.4
comp=Z,15nm,6.6s,comp=Z,9.0nm,8.8s
JSB Shiboa 5.06 190 A A 05 22 45.8
comp=Z,25nm,6.8s,comp=Z,23nm,5.7s
YSS Yuzh-Sakhalins 5.15 14 Pn **Pn 05 22 48.0 +2.6**
YSS Yuzh-Sakhalins 5.15 14*d i*P Pn 05 22 50.6 +5.1
YSS *e*S **Sn 05 23 47.9 +3.3**
YSS pmax pmax
comp=E,1μm,7.3s
YSS pmax pmax
comp=Z,190nm,0.8s
YSS smax smax
comp=N,90nm,0.7s
YSS MLR MLR
comp=N,9μm,13.0s
YSS MLR MLR
comp=Z,9μm,13.0s
JJN Nakama 5.33 205 A A 05 22 49.6
comp=Z,8.0nm,3.9s,comp=Z,6.0nm,5.5s
JHO Hitachi 5.36 184 A A 05 22 50.0
comp=Z,14nm,8.2s,comp=Z,8.0nm,6.7s
JKT Katashina 5.36 195 A A 05 22 50.1
comp=Z,5.0nm,12.4s,comp=Z,5.0nm,4.2s
JKT Katashina 5.36 195 P **Pn 05 22 53.0 +4.4**
JHYU Hitachinakayam 5.62 183 A A 05 22 53.8
comp=Z,12nm,6.0s,comp=Z,7.0nm,4.9s
JAG Ashikaga 5.66 193 A A 05 22 54.3
comp=Z,6.0nm,11.4s,comp=Z,6.0nm,4.4s
JAG Ashikaga 5.66 193 P **Pn 05 22 56.0 +3.5**
JGK Kuni 5.70 200 A A 05 22 54.8
comp=Z,7.0nm,11.8s,comp=Z,6.0nm,5.0s
JYT Yasato 5.76 186 Pn 05 22 55.8 +1.8
MJB9 Matsu-Tunnel 5.83 203 Pn **Pn 05 22 57.3 +2.4**
MAJO Matsushiro 5.83 203 Pn 05 22 55.7 +0.8
MAJO Matsushiro 5.83 203 *i* P **Pn 05 22 57.3 +2.4**
MJAR Matsushiro Arr 5.83 203 Pn **Pn 05 22 56.6 +1.6**
comp=Z,0.7nm,0.3s,baz=37,slow=24,SNR=33
MJAR LR LR 05 24 35.1
comp=Z,1μm,21.5s,baz=4.0,slow=32
comp=Z,44nm,0.8s
MJAR Matsushiro Arr 5.83 203 Pn **Pn 05 22 55.9 +1.0**
KUR Kuril'sk 5.96 54 *e*P **Pn 05 23 01.2 +4.5**
KUR *e*S **Sn 05 24 11.5 +6.8**
KUR pmax pmax
comp=Z,3μm,3.1s
KUR pmax pmax
comp=Z,442nm,0.7s
KUR pmax pmax
comp=N,162nm,0.8s
KUR pmax pmax
comp=E,148nm,0.8s
KUR smax smax
comp=E,13μm,4.6s
KUR smax smax
comp=N,11μm,4.0s
KUR smax smax
comp=N,483nm,0.7s
KUR smax smax
comp=E,427nm,0.7s
KUR MLR MLR
comp=N,12μm,14.0s
KUR MLR MLR
comp=Z,9μm,14.0s
KUR MLR MLR
comp=E,6μm,10.0s
JIHU Itakohorinouch 6.00 184 A A 05 22 59.1
comp=E,66nm,4.9s,comp=E,39nm,4.6s
JRY Ryogami san 6.16 196 A A 05 23 01.3
comp=E,4.0nm,12.5s,comp=E,5.0nm,9.9s
JRY Ryogami san 6.16 196 P Pn 05 23 04.7 +5.3
JHU Hanno 6.25 193 A A 05 23 02.5
comp=E,7.0nm,9.4s,comp=E,7.0nm,3.7s
TOK Tokyo 6.34 189 A A 05 23 03.8
comp=E,51nm,4.8s,comp=E,43nm,4.1s
VLA Vladivostok 6.83 283 *i* P **Pn 05 23 09.7 +1.1**
VLA pmax pmax
comp=Z,401nm,1.4s
JGF Kuroka 6.96 205 Pn 05 23 08.5 -2.0
USA0B Ussuriysk Arra 6.97 292 Pn **Pn 05 23 09.0 -1.5**
USA0B Ussuriysk Arra 6.97 292 P **Pn 05 23 09.0 -1.5**
USRK Ussuriysk Ar. 6.97 292 Pn **Pn 05 23 10.6 +0.2**
comp=Z,3.6nm,0.3s,baz=101,slow=14,SNR=42
USRK Sn **Sn 05 24 29.6 +0.1**
comp=Z,0.3nm,0.3s,baz=98,slow=25,SNR=1.6
USRK LR LR 05 25 30.8
comp=Z,3μm,22.0s,baz=100,slow=36
comp=Z,27nm,0.6s
USRK Ussuriysk Ar. 6.97 292 Pn 05 23 09.2 -1.3
UGL Uglegorsk 7.16 6 *e*P **Pn 05 23 16.4 +3.4**
UGL *e*S **Sn 05 24 40.1 +6.0**
UGL pmax pmax
comp=Z,700nm,4.3s
UGL pmax pmax
comp=Z,126nm,0.8s
UGL smax smax
comp=E,2μm,4.0s
UGL smax smax
comp=N,1μm,7.5s
UGL MLR MLR
comp=Z,5μm,12.0s
UGL MLR MLR
comp=N,4μm,13.0s
UGL MLR MLR
comp=E,3μm,10.0s
INU Inuyama 7.30 207 Pn 05 23 14.7 -0.4
JKY Yasaka 7.82 218 P **Pn 05 23 25.4 +3.2**
JWT Wachi 7.98 215 Pn **Pn 05 23 23.6 -0.8**
JKSM Kasumi 8.06 220 P **Pn 05 23 28.6 +3.1**
JOI OKI 8.27 229⇓P **Pn 05 23 30.9 +2.6**
MDJ Mudanjiang 8.73 292 Pn **Pn 05 23 33.1 -1.6**
JAD Aida 8.82 220 P **Pn 05 23 40.1 +4.2**
TYV Tymovskoe 8.98 7 *e*P Pn 05 23 45.2 +7.2
TYV *e*S **Sn 05 25 27.4 +8.6**
TYV pmax pmax
comp=Z,41nm,0.9s
TYV pmax pmax
comp=Z,900nm,2.9s
TYV smax smax
comp=N,400nm,3.3s
TYV smax smax
comp=E,200nm,3.3s
TYV smax smax
comp=N,27nm,1.4s
TYV smax smax
comp=E,14nm,1.4s
TYV MLR MLR
comp=N,8μm,16.0s
TYV MLR MLR
comp=E,4μm,16.0s
TYV MLR MLR
comp=Z,8μm,16.0s
JHS Saijyo 9.30 224 Pn 05 23 41.0 -1.5
GRNR Gornyy 9.36 342⇑*i*P **Pn 05 23 45.1 +1.8**
GRNR *e*S **Sn 05 25 32.5 +4.3**
GRNR pmax pmax
comp=N,20nm,0.7s
GRNR pmax pmax
comp=Z,20nm,0.6s
GRNR smax smax
comp=N,7.0nm,0.6s
GRNR MLR MLR
comp=N,4μm,12.0s
GRNR MLR MLR
comp=E,3μm,12.0s
GRNR MLR MLR
comp=Z,6μm,12.0s
JGT2 ShimaneMisato 9.57 227 P **Pn 05 23 49.8 +3.5**
KLR Kul'dur 9.73 321 Pn **Pn 05 23 49.5 +1.1**
comp=Z,1.0nm,0.3s,baz=124,slow=15,SNR=17
KLR LR LR 05 27 36.8
comp=Z,3μm,19.2s,baz=138,slow=38
KLR Kul'dur 9.73 321 *i* P **Pn 05 23 49.5 +1.1**
KLR pmax pmax
comp=Z,64nm,1.3s
JHM Kurahashi 10.27 223 P Pn 05 24 00.8 +5.0
SEHB SEOHWA 10.44 254 Pn 05 23 57.5 -0.6
KSRS Korea Array 11.03 250 Pn **Pn 05 24 10.0 +3.8**
comp=Z,5.6nm,0.3s,baz=66,slow=14,SNR=78
KSRS Sn **Sn 05 26 12.0 +2.7**
comp=Z,3.8nm,0.3s,baz=63,slow=23,SNR=23
KSRS LR LR 05 27 52.4
comp=Z,4μm,20.5s,baz=60,slow=35
KS19 Wonju Array Si 11.05 251 Pn 05 24 06.1 -0.3
KSAR Wonju Array Be 11.06 250 Pn **Pn 05 24 07.2 +0.5**
KSAR Wonju Array Be 11.06 250 P **Pn 05 24 07.2 +0.5**
NKL Nikolayevsk 11.20 359 *e*P **Pn 05 24 07.0 -1.4**
NKL *e*S **Sn 05 26 10.9 -2.3**
NKL pmax pmax
comp=E,8.0nm,1.1s
NKL pmax pmax
comp=N,319nm,0.6s
NKL pmax pmax
comp=Z,94nm,1.3s
NKL smax smax
comp=E,9.0nm,1.4s
NKL smax smax
comp=N,163nm,1.1s
NKL MLR MLR
comp=N,3μm,14.0s
NKL MLR MLR
comp=Z,3μm,13.0s
KSCHJ Chungju 11.28 248 Pn 05 24 10.3 +0.7
CN2 Changchun 11.56 284 *e*P **Pn 05 24 11.3 -2.1**
CN2 *e*PP **PnPn 05 24 20.8 -0.2**
CN2 *e*S **Sn 05 26 18.5 -3.7**
CN2 *e*sS 05 26 31.9
CN2 LR LR
comp=N,12μm,12.0s
CN2 LR LR
comp=E,3μm,12.0s
CN2 LR LR
comp=Z,5μm,12.0s
OKH Okha 11.67 6*de*P Pn 05 24 19.7 +4.9
OKH *e*S **Sn 05 26 27.7 +3.0**
OKH pmax pmax
comp=Z,700nm,13.4s
OKH smax smax
comp=E,2μm,13.1s
OKH smax smax
comp=N,600nm,11.5s
OKH MLR MLR
comp=Z,3μm,12.0s
OKH MLR MLR
comp=E,7μm,13.0s
OKH MLR MLR
comp=N,4μm,14.0s
INCN Inchon 11.93 253 Pn Pn 05 24 17.9 -0.6
INCN Inchon 11.93 253 P **Pn 05 24 18.0 -0.6**
TJN Taejon 11.96 247 Pn 05 24 23.5 +4.6
TJN Taejon 11.96 247*c e*P Pn 05 24 24.2 +5.3
SNY Shenyang 12.98 275⇓P **Pn 05 24 37.1 +4.2**
SNY pmax pmax
comp=N,48nm,2.3s
SNY LR LR
comp=N,3μm,11.2s
SKR Severo-Kuril's 13.59 45 *e*P **Pn 05 24 41.1 +0.1**
SKR pmax pmax
comp=Z,300nm,9.0s
SKR MLR MLR
comp=Z,2μm,15.0s
JCJ Chichijima 14.86 176 LR LR 05 30 22.9
comp=Z,2μm,21.8s,baz=334,slow=36
ZEA Zeya 14.93 327 *e*P **Pn 05 25 00.5 +1.1**
ZEA *e*S **Sn 05 27 38.8 -5.7**
ZEA pmax pmax
comp=E,500nm,3.2s
ZEA pmax pmax
comp=N,700nm,6.0s
ZEA pmax pmax
comp=Z,800nm,2.9s
ZEA MLR MLR
comp=E,2μm,12.0s
ZEA MLR MLR
comp=N,2μm,14.0s
ZEA MLR MLR
comp=Z,3μm,14.0s
DL2 Dalian 15.06 265 P **P 05 25 05.4 -1.1**
DL2 S **Sn 05 27 50.9 +3.1**
DL2 pmax pmax
comp=Z,83nm,1.0s
DL2 pmax pmax
comp=Z,1μm,4.5s
DL2 LR LR
comp=Z,2μm,10.8s
DL2 LR LR
comp=Z,2μm,10.5s
DL2 LR LR
comp=Z,2μm,14.6s
PEA0B Petropavlovsk- 15.81 39 Pn **Pn 05 25 10.8 -0.2**
PEA0B Petropavlovsk- 15.81 39*ce*P **Pn 05 25 11.0 0.0**
PETK Petropavlovsk- 15.81 39 Pn **Pn 05 25 10.7 -0.3**
comp=Z,0.7nm,0.3s,baz=219,slow=12,SNR=22
PETK LR LR 05 31 26.8
comp=Z,4μm,18.7s,baz=224,slow=38
comp=Z,16nm,0.9s
PET Petropavlovsk 16.22 41 *e*P **Pn 05 25 13.4 -2.8**
PET pmax pmax
comp=Z,1μm,9.2s
PET pmax pmax
comp=Z,900nm,11.4s
PET MLR MLR
comp=Z,2μm,14.0s
PET MLR MLR
comp=Z,2μm,15.0s
HIA Hailar 16.54 303 Pn **Pn 05 25 20.4 +0.1**
HIA Hailar 16.54 303 P **Pn 05 25 20.4 +0.1**
HIA pmax pmax
comp=Z,34nm,1.2s
XLT XiLinHaoTe 18.33 284⇓*i*P **P 05 25 43.5 +0.7**
XLT pP pP 05 25 46.9 0.0
XLT PP **PnPn 05 25 57.8 +3.7**
XLT S **S 05 29 10.8 -1.2**
XLT sS sS 05 29 18.0 -0.3
XLT pmax pmax
comp=Z,36nm,1.1s
XLT pmax pmax
comp=Z,2μm,5.7s
XLT LR LR
comp=Z,500nm,11.5s
XLT LR LR
comp=Z,2μm,11.2s
XLT LR LR
comp=Z,2μm,11.1s
JOW Kunigami 18.35 219 LR LR 05 32 38.3
comp=Z,3μm,21.9s,baz=3.5,slow=37
MA2 Magadan 18.65 16 P **P 05 25 45.3 -0.8**
comp=Z,30nm,0.7s,baz=220,slow=10,SNR=12
MA2 LR LR 05 34 00.3
comp=Z,1μm,18.6s,baz=202,slow=40
MA2 Magadan 18.65 16 P **P 05 25 45.5 -0.5**
MA2 IAmb IAmb 05 25 53.2
comp=Z,168nm,1.4s
MA2 Magadan 18.65 16 *i* P **P 05 25 45.6 -0.5**
MA2 pmax pmax
comp=Z,161nm,1.5s
MA2 MLR MLR
comp=Z,1μm,20.0s
BJI Beijing 18.82 272 P **Pn 05 25 48.8 +0.2**
BJI pmax pmax
comp=Z,63nm,1.3s
BJI pmax pmax
comp=Z,1μm,5.1s
BJI LR LR
comp=Z,840nm,11.4s
BJI LR LR
comp=Z,3μm,12.0s
BJI LR LR
comp=Z,3μm,13.3s
BJT Baijiatuao 18.83 272 P 05 25 48.0 -0.2
BJT Baijiatuao 18.83 272 P **P 05 25 48.0 -0.2**
BJT pmax pmax
comp=Z,142nm,1.3s
SSE Sheshan 19.22 242 P **Pn 05 25 56.9 +3.5**
SSE S **Sn 05 29 27.4 -1.2**
SSE pmax pmax
comp=Z,10.0nm,0.7s
SSE pmax pmax
comp=Z,500nm,4.5s
SSE LR LR
comp=Z,2μm,15.3s
SSE LR LR
comp=Z,2μm,14.5s
TIA Tai'an 19.38 261⇓P **P 05 25 54.6 +0.4**
TIA S **S 05 29 35.8 +2.8**
TIA pmax pmax
comp=Z,59nm,1.2s
TIA pmax pmax
comp=Z,580nm,5.5s
TIA LR LR
comp=Z,2μm,11.3s
TIA LR LR
comp=Z,2μm,10.7s
TIA LR LR
comp=Z,2μm,14.2s
NJ2 Nanjing 20.21 248⇓P **P 05 26 03.5 +0.2**
NJ2 PP **PnPn 05 26 26.1 +6.3**
NJ2 S **S 05 29 45.9 -3.8**
NJ2 pmax pmax
comp=Z,11nm,0.5s
NJ2 pmax pmax
comp=Z,740nm,3.8s
NJ2 LR LR
comp=Z,5μm,14.9s
NJ2 LR LR
comp=Z,5μm,16.1s
NJ2 LR LR
comp=Z,4μm,17.3s
HNS HongShan 20.71 266⇓P **P 05 26 08.1 -0.6**
HNS S **S 05 29 57.8 -1.7**
HNS PcS **PcS 05 33 50.5 -5.4**
HNS pmax pmax
comp=N,130nm,1.4s
HNS LR LR
comp=Z,1μm,14.7s
HNS LR LR
comp=Z,4μm,12.7s
HNS LR LR
comp=Z,3μm,14.3s
CIT Chita 21.13 308 *e*P **P 05 26 11.8 -1.4**
CIT *e* 05 26 26.3
CIT *e* 05 26 36.4
CIT *e* 05 26 44.1
CIT pmax pmax
comp=Z,219nm,2.6s
YAK Yakutsk 21.21 345 P **P 05 26 12.3 -1.5**
comp=Z,18nm,0.5s,baz=167,slow=1.3,SNR=7.7
YAK LR LR 05 35 32.4
comp=Z,750nm,21.1s,baz=144,slow=40
comp=Z,18nm,0.5s
YAK Yakutsk 21.21 345 P **P 05 26 11.7 -2.2**
YAK Yakutsk 21.21 345*c i*P **P 05 26 12.0 -1.9**
YAK *e* 05 26 27.8
YAK *e*S **S 05 30 04.3 -4.8**
YAK *e* 05 30 18.4
YAK *e**SS **pS 05 30 19.5 +2.4**
YAK pmax pmax
comp=Z,54nm,1.0s
YAK pmax pmax
comp=N,18nm,1.3s
YAK smax smax
comp=N,563nm,3.9s
YAK smax smax
comp=E,319nm,5.3s
YAK MLR MLR
comp=Z,6μm,16.0s
YAK MLR MLR
comp=N,3μm,13.0s
YAK MLR MLR

comp=E,2µm,14.0s
SEY Seymchan 22.05 14 P P 05 26 21.3 -1.6
comp=E,13nm,0.5s,baz=198,slow=8.4,SNR=44
SEY LR LR 05 36 08.5
comp=E,1µm,18.5s,baz=196,slow=40
comp=E,13nm,0.5s
SEY Seymchan 22.05 14 *ce* P **P 05 26 20.9 -2.0**
SEY pmax pmax
comp=Z,56nm,1.7s
HHC Hu-ho-hao-te 22.06 277 *e* P **P 05 26 21.3 -2.1**
HHC S **S 05 30 21.8 -4.5**
HHC pmax pmax
comp=Z,38nm,1.0s
HHC pmax pmax
comp=Z,870nm,7.6s
HHC LR LR
comp=Z,4µm,10.5s
HHC LR LR
comp=Z,3µm,10.2s
HHC LR LR
comp=Z,3µm,10.8s
TIY Taiyuan 22.29 269 ⇓ P **P 05 26 26.0 +0.2**
TIY S **S 05 30 27.3 -3.3**
TIY sS **sS 05 30 38.3 +0.9**
TIY pmax pmax
comp=Z,390nm,4.6s
TIY LR LR
comp=Z,2µm,13.0s
TIY LR LR
comp=Z,1µm,10.4s
TIY LR LR
comp=Z,1µm,15.9s
BTO Baotou 23.26 277 *e* P **P 05 26 34.3 -1.7**
BOD Bodaibo 23.31 322 *e* P **P 05 26 34.3 -1.9**
BOD pmax pmax
comp=Z,25nm,1.3s
LYN LuoYang 23.52 261 ⇓ P **P 05 26 35.8 -2.7**
LYN SS **SnSn 05 31 35.1 +7.1**
LYN pmax pmax
comp=Z,10.0nm,0.8s
LYN pmax pmax
comp=Z,310nm,5.8s
LYN LR LR
comp=Z,2µm,12.9s
LYN LR LR
comp=Z,3µm,16.9s
LYN LR LR
comp=Z,2µm,12.8s
WHN Wuhan 24.23 251 ⇑ P **P 05 26 48.8 +3.6**
WHN S **S 05 31 00.1 -3.1**
WHN LR LR
comp=Z,9µm,15.1s
WHN LR LR
comp=Z,4µm,15.5s
WHN LR LR
comp=Z,6µm,14.3s
ULN Ulaanbaatar 24.62 295 P **P 05 26 45.3 -3.5**
ULN Ulaanbaatar 24.62 295 *ce* P **P 05 26 46.7 -2.1**
ULN pmax pmax
comp=Z,61nm,2.5s
ULN Ulaanbaatar 24.62 295 P **P 05 26 47.9 -1.0**
SHEM Shemya Is, Ala 24.66 53 LR LR 05 35 39.9
comp=Z,951nm,21.6s,baz=266,slow=34
SONM Songino Array 25.06 295 P **P 05 26 50.9 -1.9**
comp=Z,13nm,1.0s,baz=95,slow=6.7,SNR=41
SONM ScP **ScP 05 34 06.0 +0.4**
comp=Z,1.3nm,0.9s,baz=81,slow=9.2,SNR=4.1
SONM LR LR 05 37 17.3
comp=Z,2µm,18.1s,baz=92,slow=38
comp=Z,13nm,1.0s
SONM Songino Array 25.06 295 P **P 05 26 51.7 -1.1**
SONM IAmb IAmb 05 26 54.0
comp=Z,63nm,1.4s
SONM Songino Array 25.06 295 P **P 05 26 51.7 -1.1**
SONM pmax pmax
comp=Z,63nm,1.4s
QZH Quanzhou 25.13 235 ⇓ *i* P **P 05 26 54.8 +1.4**
QZH S **S 05 31 17.9 0.0**
QZH pmax pmax
comp=Z,440nm,5.0s
QZH LR LR
comp=Z,1µm,13.3s
QZH LR LR
comp=Z,1µm,12.8s
QZH LR LR
comp=Z,1µm,13.7s
XAN Xi'an 26.37 263 P **P 05 27 04.3 -0.4**
XAN PcP **PcP 05 30 31.0 +0.8**
XAN S **S 05 31 41.6 +4.1**
XAN SS **SnSn 05 32 46.9 +9.0**
XAN pmax pmax
comp=Z,27nm,1.6s
XAN pmax pmax
comp=Z,300nm,6.5s
XAN LR LR
comp=Z,2µm,13.3s
XAN LR LR
comp=Z,2µm,14.5s
XAN LR LR
comp=Z,1µm,17.7s
IRK Irkutsk 26.76 305 *e* P **P 05 27 07.1 -0.9**
IRK pmax pmax
comp=Z,54nm,3.4s
ENH Enshi 27.85 255 P **P 05 27 15.2 -2.8**
GUMO Guam 28.47 172 LR LR 05 41 06.6
comp=Z,243nm,20.4s,baz=343,slow=41
LZH Lanzhou 29.29 271 ⇑ P **P 05 27 30.8 -0.2**
LZH S **S 05 32 22.8 -0.9**
LZH pmax pmax
comp=Z,24nm,1.5s
LZH pmax pmax
comp=Z,160nm,4.9s
LZH LR LR
comp=Z,2µm,11.9s
LZH LR LR
comp=Z,2µm,11.9s
LZH LR LR
comp=Z,2µm,12.5s
BILL Bilibino 29.43 19 P **P 05 27 32.5 +0.8**
BILL Bilibino 29.43 19 *i* P **P 05 27 32.7 +1.0**
BILL *i* 05 28 26.3
BILL *i* 05 30 35.1
BILL pmax pmax
comp=Z,5.0nm,1.7s
BILL MLR MLR
comp=Z,1µm,14.0s
TIXI Tiksi 30.37 352 P **P 05 27 37.3 -2.6**
comp=Z,7.9nm,0.7s,baz=270,slow=23,SNR=20
TIXI LR LR 05 39 20.8
comp=Z,663nm,19.9s,baz=181,slow=36
comp=Z,7.9nm,0.7s
TIXI Tiksi 30.37 352 P **P 05 27 37.2 -2.6**
TIXI Tiksi 30.37 352 *ce* P **P 05 27 36.7 -3.1**
TIXI pmax pmax
comp=Z,22nm,1.7s
TIXI MLR MLR
comp=Z,2µm,15.0s
GTA Gaotai 31.12 279 *e* P **P 05 27 46.9 -0.2**
GTA pP sP 05 27 52.4 -0.7
GTA PP **PnPn 05 28 46.0 -2.5**
GTA PcP **PcP 05 30 43.4 +1.3**
GTA S **S 05 32 56.6 +4.3**
GTA PcS **PcS 05 34 27.3 +1.0**
GTA pmax pmax
comp=Z,9.0nm,1.3s
GTA pmax pmax
comp=Z,150nm,5.1s
GTA LR LR
comp=Z,2µm,12.4s
GTA LR LR
comp=Z,1µm,13.8s
GTA LR LR
comp=Z,1µm,13.8s
CD2 Chengdu 31.70 262 P **P 05 27 51.0 -1.1**
CD2 S **S 05 33 00.0 -1.3**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 LR LR
comp=Z,1µm,12.7s
CD2 LR LR
comp=Z,1µm,10.8s
H11S1 WAKE ISLAND Hy 32.02 129 T T 06 01 09.9
baz=323,slow=76,SNR=1810
H11S3 WAKE ISLAND Hy 32.02 129 T T 06 01 10.9
baz=323,slow=76,SNR=1072
H11S2 WAKE ISLAND Hy 32.03 129 T T 06 01 10.6
baz=323,slow=76,SNR=1294
GYA Guiyang 32.08 252 ⇓ *i* P **P 05 27 54.4 -1.2**
GYA PP **PP 05 29 06.9 -1.1**
GYA S **S 05 33 03.8 -3.6**
GYA SS **SnSn 05 35 00.8 +3.5**
GYA pmax pmax
comp=Z,210nm,5.4s
GYA LR LR
comp=Z,2µm,13.2s
GYA LR LR
comp=Z,1µm,18.8s
GYA LR LR
comp=Z,3µm,16.0s
QIZ Qiongzhong 34.95 239 P **P 05 28 17.8 -2.7**
QIZ S **S 05 33 57.3 +5.6**
QIZ LR LR
comp=Z,2µm,15.7s
QIZ LR LR
comp=Z,2µm,13.5s
QIZ LR LR
comp=Z,2µm,9.6s
PZH PanZhiHua 35.59 257 P **P 05 28 26.1 0.0**
PZH S **S 05 34 01.8 0.0**
PZH SS **SnSn 05 36 26.6 +4.1**
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,150nm,5.9s
PZH LR LR
comp=Z,890nm,15.5s
PZH LR LR
comp=Z,1µm,15.1s
PZH LR LR
comp=Z,960nm,14.9s
KMI Kunming 35.70 254 ⇑ P **P 05 28 28.1 +1.0**
KMI pP sP 05 28 33.6 +0.4
KMI PP **PP 05 29 51.9 +3.7**
KMI S **S 05 34 02.1 -1.5**
KMI SS **SnSn 05 36 22.8 -2.3**
KMI pmax pmax
comp=Z,13nm,1.2s
KMI pmax pmax
comp=Z,180nm,4.4s
KMI LR LR
comp=Z,2µm,14.3s
KMI LR LR
comp=Z,2µm,14.8s
KMI LR LR
comp=Z,2µm,14.0s
GOMU GeErMu 35.97 276 P **P 05 28 27.3 -2.2**
GOMU PP **PnPn 05 29 48.6 -1.5**
GOMU PcP **PcP 05 30 54.9 -1.2**
GOMU S **S 05 34 11.9 +4.0**
GOMU SS **SnSn 05 36 33.4 +1.8**
GOMU pmax pmax
comp=Z,11nm,0.8s
GOMU pmax pmax
comp=Z,62nm,5.2s
GOMU LR LR
comp=Z,820nm,11.2s
GOMU LR LR
comp=Z,1µm,15.0s
GOMU LR LR
comp=Z,1µm,15.0s
TNA Tin City 36.80 33 P **P 05 28 37.3 +1.4**
TNA IAmb IAmb 05 29 17.0
comp=Z,46nm,1.2s
DAV Davao City (W) 37.34 206 LR LR 05 45 19.1
comp=Z,712nm,18.2s,baz=19,slow=38
ANM Nome 37.64 35 P **P 05 28 43.0 +0.1**
ANM Nome 37.64 35 P **P 05 28 43.1 +0.1**
ANM pmax pmax
comp=Z,43nm,1.6s
ZAA0 Zalesovo Array 38.49 308 P **P 05 28 49.9 -0.4**
ZALV Zalesovo Beam 38.49 308 P **P 05 28 49.1 -1.2**
comp=Z,15nm,0.7s,baz=87,slow=8.2,SNR=61
ZALV PcP **PcP 05 31 03.0 +0.1**
comp=Z,10nm,0.7s,baz=98,slow=2.7,SNR=11
ZALV ScP **ScP 05 34 51.8 +1.3**
comp=Z,0.6nm,0.6s,baz=56,slow=3.6,SNR=3.2
ZALV LR LR 05 44 33.1
comp=Z,467nm,20.2s,baz=81,slow=36
comp=Z,15nm,0.7s
ZALV Zalesovo Beam 38.49 308 P **P 05 28 49.6 -0.7**
WMQ Urumqi 38.53 291 *e* P **P 05 28 52.5 +1.6**
WMQ pP sP 05 28 56.9 -0.1
WMQ pmax pmax
comp=Z,28nm,0.9s
WMQ pmax pmax
comp=Z,300nm,4.1s
WMQ LR LR
comp=Z,4µm,16.1s
WMQ LR LR
comp=Z,1µm,14.5s
WMQ LR LR
comp=Z,770nm,13.9s
NRIK Noril'sk 38.70 333 P **P 05 28 50.6 -1.2**
comp=Z,3.2nm,0.6s,baz=130,slow=7.0,SNR=5.3
NRIK LR LR 05 45 36.4
comp=Z,2µm,20.2s,baz=93,slow=38
comp=Z,3.2nm,0.6s
NRIK Noril'sk 38.70 333 P **P 05 28 50.1 -1.8**
NRIK Noril'sk 38.70 333 *ce* P **P 05 28 50.3 -1.6**
NRIK pmax pmax
comp=Z,17nm,1.6s
NRIK MLR MLR
comp=Z,2µm,17.0s
ZSN Zaisan 39.53 298 *e* P **P 05 28 58.1 -1.0**
ZSN Zaisan 39.53 298 *e* P **P 05 28 58.1 -1.0**
baz=298
CHNA Chernabura Isl 40.28 50 P **P 05 29 05.7 +0.5**
baz=277
CNBA Chernabura Isl 40.28 50 P **P 05 29 04.3 -0.9**
N16K Nishlik Lake 40.35 42 P **P 05 29 06.8 +1.0**
baz=271
SGSI Sangihe 40.55 204 P **P 05 29 07.9 +0.1**
comp=Z,5µmcomp=Z,68nm,0.7s
O16K Kokwok River B 40.71 43 P **P 05 29 09.2 +0.5**
baz=272
O17K Koliganek Bris 41.21 43 P **P 05 29 14.2 +1.4**
baz=273
GCSA Galena City Sc 41.29 35 P **P 05 29 15.7 +2.3**
baz=268
MK31 Makanchi Array 41.40 297 P **P 05 29 14.0 -0.6**
MK31 IAmb IAmb 05 29 15.7
comp=Z,32nm,0.9s
MK31 Makanchi Array 41.40 297 *c i* P **P 05 29 13.6 -1.0**
MK31 pmax pmax
comp=Z,38nm,0.8s
MKAR Makanchi Array 41.40 297 P **P 05 29 14.0 -0.6**
comp=Z,19nm,0.8s,baz=82,slow=9.3,SNR=124
MKAR ScP **ScP 05 35 03.3 +1.3**
comp=Z,1.0nm,0.9s,baz=74,slow=5.2,SNR=3.3
MKAR LR LR 05 47 04.7
comp=Z,604nm,18.5s,baz=84,slow=37
comp=Z,19nm,0.8s
MKAR Makanchi Array 41.40 297 P **P 05 29 14.0 -0.6**
Q16K King Salmon 41.51 44 P **P 05 29 16.7 +1.4**
baz=275
P17K Kvichak River 41.58 43 P **P 05 29 18.3 +2.5**
baz=274
MAKZ Makanchi 41.60 297 P **P 05 29 15.9 -0.3**
MAKZ IAmb IAmb 05 29 17.5
comp=Z,45nm,0.9s
MAKZ Makanchi 41.60 297 P **P 05 29 14.4 -1.8**
MAKZ pmax pmax
comp=Z,111nm,1.7s
TTA Tatalina 41.64 38 P **P 05 29 16.4 -0.1**
TTA Tatalina 41.64 38 P **P 05 29 16.4 -0.1**
TTA pmax pmax
comp=Z,15nm,1.1s
TTA Tatalina 41.64 38 P **P 05 29 16.8 +0.4**
baz=270
LSA Lhasa 41.69 269 P **P 05 29 17.0 -0.7**
LSA Lhasa 41.69 269 P **P 05 29 17.0 -0.7**
LSA pmax pmax
comp=Z,10.0nm,0.9s
LSA Lhasa 41.69 269 P **P 05 29 19.3 +1.6**
LSA Lhasa 41.69 269 P **P 05 29 17.2 -0.5**
R17K Ugashik Creek 41.74 46 P **P 05 29 17.4 +0.2**
baz=276
MYLDM Lahad Datu 41.75 215 P **P 05 29 18.2 +0.5**
MYLDM IAmb IAmb 05 30 10.5
comp=Z,61nm,1.5s
N18K Kilae Creek 41.76 41 P **P 05 29 18.2 +0.8**
N18K Kilae Creek 41.76 41 P **P 05 29 18.2 +0.8**
baz=273
SEM Semipalatinsk 41.83 303 *e* P **P 05 29 15.7 -2.6**
SEM pmax pmax
comp=Z,20nm,1.2s
SEM Semipalatinsk 41.83 303 *e* P **P 05 29 15.8 -2.6**
comp=Z,20nm,1.2s,baz=303
SVW2 Sparrevohn 41.89 41 P **P 05 29 18.4 -0.1**
KKM Kota Kinabalu 42.01 219 P **P 05 29 20.2 +0.3**
A21K Barrow 42.10 25 IAmb IAmb 05 29 24.8
comp=Z,52nm,1.1s
A21K Barrow 42.10 25 P **P 05 29 18.8 -1.1**
baz=260
O18K Koktuh Hills 42.16 42 P **P 05 29 21.7 +1.1**
baz=274
P18K Big Mountain, 42.18 43 P **P 05 29 21.8 +1.0**
baz=275
L19K White Mountain 42.19 39 P **P 05 29 21.2 +0.3**
baz=272
M19K Big River Lodg 42.42 39 P **P 05 29 23.6 +0.9**
baz=273
CHTO Chiang Mai 42.43 250 P **P 05 29 23.3 0.0**
CHTO Chiang Mai 42.43 250 P **P 05 29 23.3 0.0**
CHTO pmax pmax
comp=Z,17nm,1.2s
CHTO Chiang Mai 42.43 250 P **P 05 29 23.9 +0.6**
CHTO P **P 05 29 23.9 +0.6**
N19K Bonanza Creek 42.45 41 P **P 05 29 23.2 +0.1**
N19K Bonanza Creek 42.45 41 P **P 05 29 23.8 +0.8**
baz=274
J20K Nowinta River 42.47 36 P **P 05 29 23.2 +0.2**
J20K Nowinta River 42.47 36 P **P 05 29 23.7 +0.7**
baz=271
K20K Telida 42.52 37 P **P 05 29 23.5 0.0**
K20K Telida 42.52 37 P **P 05 29 24.0 +0.5**
baz=272
O19K Port Alsworth 42.57 42 P **P 05 29 24.5 +0.6**
L20K Farewell, AK 42.64 38 P **P 05 29 24.9 +0.4**
baz=273
IMAR Indian Mountai 42.64 33 P **P 05 29 24.4 -0.1**
CMAR Chiang Mai Arr 42.67 250 P **P 05 29 25.2 0.0**
comp=Z,1.3nm,0.4s,baz=38,slow=6.5,SNR=9.3
CMAR LR LR 05 48 29.3
comp=Z,1µm,18.0s,baz=50,slow=38
comp=Z,1.3nm,0.4s
CMAR Chiang Mai Arr 42.67 250 P **P 05 29 25.0 -0.2**
CMAR Chiang Mai Arr 42.67 250 *i* P **P 05 29 28.5 +3.3**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
KURK Kurchatov 42.77 304 P **P 05 29 25.2 -0.5**
KURK IAmb IAmb 05 29 27.0
comp=Z,71nm,0.9s
KURK Kurchatov 42.77 304 P **P 05 29 25.2 -0.5**
KURK pmax pmax
comp=Z,71nm,1.0s
KURK Kurchatov 42.77 304 P **P 05 29 25.5 -0.3**
KURBB Kurchatov Arra 42.85 304 LR LR 05 47 04.7
comp=Z,296nm,20.5s,baz=53,slow=36
KURBB Kurchatov Arra 42.85 304 P **P 05 29 25.1 -1.2**
KURBB pmax pmax
comp=Z,116nm,1.3s
M20K Styx River 43.02 39 P **P 05 29 28.4 +0.7**
M20K Styx River 43.02 39 P **P 05 29 29.3 +1.6**
baz=274
H21K Melozitna Rive 43.03 34 P **P 05 29 28.2 +0.6**
H21K Melozitna Rive 43.03 34 P **P 05 29 27.8 +0.2**
baz=270
Q19K Cape Douglas, 43.04 44 P **P 05 29 27.8 0.0**
baz=277
BAKI Biak 43.18 187 P **P 05 29 31.0 +1.7**
comp=Z,41nm,0.8s
CHUM Lake Minchumin 43.28 36 P **P 05 29 30.3 +0.7**
baz=273
SHL Shillong 43.38 264 P **P 05 29 30.8 -0.3**
SHL Shillong 43.38 264 P **P 05 29 30.8 -0.3**
SHL pmax pmax
comp=Z,10.0nm,0.6s
I21K Tanana 43.38 34 P **P 05 29 31.2 +0.8**
I21K Tanana 43.38 34 P **P 05 29 30.7 +0.3**
baz=272
PPLA Purkeypile 43.39 38 P **P 05 29 31.4 +0.7**
PPLA IAmb IAmb 05 29 38.1
comp=Z,72nm,1.5s
PPLA Purkeypile 43.39 38 P **P 05 29 31.4 +0.7**
baz=274
CAST Castle Rocks 43.41 37 P **P 05 29 31.2 +0.5**
baz=273
O20K Slope Mountain 43.43 42 P **P 05 29 31.8 +0.8**
baz=276
OHAK Old Harbor 43.46 46 P **P 05 29 32.2 +1.0**
baz=279
N20K Mount Spurr 43.52 40 P **P 05 29 33.9 +2.2**
baz=276
SWI Sorong 43.53 194 P **P 05 29 33.0 +0.9**
SWI pmax pmax
comp=Z,31nm,0.9s
SWI Sorong 43.53 194 P **P 05 29 33.2 +1.1**
comp=Z,31nm,0.8s
SIJI Sorong 43.53 194 LR LR 05 48 07.5
comp=Z,354nm,18.6s,baz=56,slow=37
H22K Ishtalitna Cre 43.62 33 P **P 05 29 32.7 +0.4**
baz=271
Q20K Shuyak Island 43.73 44 P **P 05 29 33.2 -0.1**
baz=278
KDAK Kodiak Island 43.75 45 LR LR 05 49 15.2
comp=Z,615nm,21.2s,baz=264,slow=38
KDAK Kodiak Island 43.75 45 P **P 05 29 34.3 +0.8**
KDAK IAmb IAmb 05 29 42.0
comp=Z,20nm,0.7s
KDAK Kodiak Island 43.75 45 P **P 05 29 34.3 +0.8**
KDAK pmax pmax
comp=Z,20nm,0.7s
SKT Skwentna 43.77 39 P **P 05 29 35.3 +1.6**
baz=275
SMPI Sarmi 43.80 183 P **P 05 29 36.0 +1.7**
comp=Z,627nmcomp=Z,39nm,1.1s
BPAW Bear Paw Mtn. 43.85 36 P **P 05 29 35.3 +0.9**
baz=274
MLY Manley 43.91 35 P **P 05 29 35.5 +0.7**
baz=273
KMSI Cibinong 43.97 205 P **P 05 29 37.9 +2.3**
comp=Z,9µmcomp=Z,73nm,0.4s
COLD Coldfoot 44.06 31 P **P 05 29 36.5 +0.6**
baz=271
SUA Susitna One 44.19 40 P **P 05 29 37.9 +0.7**
baz=276
TRF Thorofare Moun 44.21 37 P **P 05 29 37.6 +0.3**
baz=275
TOLK Toolik Lake Re 44.29 29 IAmb IAmb 05 29 41.2
comp=Z,53nm,1.8s
TOLK Toolik Lake Re 44.29 29 P **P 05 29 37.5 -0.2**
baz=270
CUT Chulitna 44.32 38 IAmb IAmb 05 29 41.7
comp=Z,46nm,1.2s
CUT Chulitna 44.32 38 P **P 05 29 37.8 -0.2**
baz=276
PDGK Podgornoye 44.35 293 *i* P **P 05 29 37.6 -1.1**
PDGK pmax pmax
comp=Z,67nm,1.6s
GENI Genyem 44.35 181 P **P 05 29 40.4 +1.7**
comp=Z,5µmcomp=Z,80nm,0.6s
H23K Yukon River 44.37 33 P **P 05 29 39.0 +0.6**
baz=273
BRSE Bradley Lake S 44.41 42 P **P 05 29 39.0 +0.2**
baz=278
SHLS Shalkode 44.43 293 *e* P **P 05 29 36.5 -2.8**
SHLS pmax pmax
comp=Z,41nm,1.8s
SHLS Shalkode 44.43 293 *e* P **P 05 29 36.5 -2.8**
comp=Z,41nm,1.8s,baz=293
M22K Willow 44.46 39 IAmb IAmb 05 29 48.8
comp=Z,41nm,1.4s
M22K Willow 44.46 39 P **P 05 29 38.6 -0.5**
baz=277
I23K Minto, Yukon-K 44.49 34 P **P 05 29 39.1 -0.2**
baz=274
TDK Taldyqorghan 44.52 296 *e* P **P 05 29 39.6 -0.2**
TDK MLR MLR
comp=Z,816nm,13.0s
TDK Taldyqorghan 44.52 296 *e* P **P 05 29 39.7 -0.2**
baz=296
TDK *e* LR LR 05 48 24.3
comp=Z,816nm,12.9s,baz=296
NEA2 Nenana 44.65 35 IAmb IAmb 05 29 46.2
comp=Z,26nm,0.8s
NEA2 Nenana 44.65 35 P **P 05 29 41.3 +0.6**
baz=275
RC01 Rabbit Creek A 44.72 40 P **P 05 29 41.1 -0.1**

baz=278
MRSI Marisa 44.73 208 P P 05 29 42.5 +0.7
comp=Z,43nm,1.1s
UZB Uzynbulak 44.73 293 eP P 05 29 41.4 -0.4
UZB pmax pmax
comp=Z,28nm,1.8s
UZB Uzynbulak 44.73 293 eP P 05 29 41.4 -0.4
comp=Z,28nm,1.8s,baz=293
MCK McKinley 44.79 36 IAmb IAmb 05 29 47.2
comp=Z,24nm,1.0s
MCK McKinley 44.79 36 P P 05 29 42.5 +0.7
baz=276
KPKS Kokpek 44.85 294 eP P 05 29 42.1 -0.6
KPKS pmax pmax
comp=Z,55nm,1.7s
KPKS Kokpek 44.85 294 eP P 05 29 42.1 -0.6
comp=Z,55nm,1.7s,baz=294
PMR Palmer 44.95 39 P P 05 29 43.0 0.0
baz=278
SEW Seward 45.00 42 IAmb IAmb 05 29 51.7
comp=Z,33nm,1.1s
SEW Seward 45.00 42 P P 05 29 44.2 +0.7
baz=279
GHO Glory Hole Cre 45.02 39 IAmb IAmb 05 29 50.9
comp=Z,48nm,1.1s
H24K Noodor Dome 45.05 33 P P 05 29 44.4 +0.5
baz=274
WRH Wood River Hil 45.09 35 IAmb IAmb 05 29 49.6
comp=Z,42nm,1.5s
ZHN Zhinishke 45.13 294 eP P 05 29 44.7 -0.2
ZHN *e*S **S 05 36 18.7 -5.1**
ZHN Zhinishke 45.13 294 eP P 05 29 44.7 -0.2
baz=294
ZHN *e*S **S 05 36 18.7 -5.1**
baz=294
TCOL CIGO, UAF Yank 45.14 35 P P 05 29 45.5 +0.9
TCOL IAmb IAmb 05 29 50.2
comp=Z,49nm,1.1s
TCOL CIGO, UAF Yank 45.14 35 P P 05 29 45.3 +0.7
baz=275
COLA College 45.15 35 P P 05 29 45.5 +0.9
COLA IAmb IAmb 05 29 50.2
comp=Z,45nm,1.0s
COLA College 45.15 35 *c i*P **P 05 29 43.8 -0.8**
COLA pmax pmax
comp=Z,41nm,1.0s
ARXS Arharly 45.17 295 eP P 05 29 44.7 -0.5
SATY Saty 45.19 293 eP P 05 29 44.8 -0.6
SATY pmax pmax
comp=Z,53nm,2.0s
SATY Saty 45.19 293 eP P 05 29 44.8 -0.6
comp=Z,52nm,2.0s,baz=293
KNK Knik Glacier 45.29 40 IAmb IAmb 05 29 53.8
comp=Z,22nm,0.8s
KNK Knik Glacier 45.29 40 P P 05 29 46.3 +0.5
baz=278
POKR Poker Plat Res 45.30 34 P P 05 29 46.4 +0.6
baz=276
FAKI Fak Fak 45.37 192 P P 05 29 46.9 +0.1
FAKI Fak Fak 45.37 192 P P 05 29 47.7 +0.8
comp=Z,830nmcomp=Z,73nm,1.1s
PRZ Przheval'sk 45.40 293 P P 05 29 47.0 -0.1
PRZ IAmb IAmb 05 29 49.4
comp=Z,48nm,1.1s
PRZ Przheval'sk 45.40 293 P P 05 29 47.0 -0.1
PRZ pmax pmax
comp=Z,48nm,1.1s
WAT6 Susitna Watana 45.46 38 P P 05 29 47.6 +0.3
baz=278
DHY Denali Highway 45.56 37 P P 05 29 48.2 +0.1
DHY IAmb IAmb 05 29 54.9
comp=Z,22nm,0.9s
DHY Denali Highway 45.56 37 P P 05 29 47.9 -0.2
baz=278
IL31 45.57 35 IAmb IAmb 05 29 53.5
comp=Z,18nm,0.9s
ILAR Eielson Array 45.57 35 P P 05 29 48.5 +0.6
comp=Z,17nm,0.9s,baz=277,slow=6.7,SNR=52
ILAR LR LR 05 50 34.5
comp=Z,708nm,18.6s,baz=272,slow=38
comp=Z,17nm,0.9s
M23K Glacier View 45.58 39 P P 05 29 48.5 +0.4
baz=279
HDA Harding Lake 45.58 35 P P 05 29 47.6 -0.5
baz=277
MPSI Mapaga 45.60 210 P P 05 29 49.1 +0.4
comp=Z,991nmcomp=Z,7.5nm,1.0s
SCM Sheep Creek Mo 45.76 39 IAmb IAmb 05 29 57.1
comp=Z,44nm,1.3s
SCM Sheep Creek Mo 45.76 39 P P 05 29 50.0 +0.5
baz=279
CHKK Chushkaly 45.87 295 eP P 05 29 50.2 -0.4
CHKK Chushkaly 45.87 295 eP P 05 29 50.2 -0.4
baz=295
LUWI Luwuk 45.87 206 P P 05 29 53.1 +2.3
comp=Z,47nm,0.6s
SANI Sanana 45.87 201 P P 05 29 50.3 -0.5
comp=Z,687nmcomp=Z,33nm,0.9s
GLI Glacier Island 46.03 40 P P 05 29 52.1 +0.5
baz=280
TARG Taragay, Kyrgy 46.09 292 IAmb IAmb 05 29 54.8
comp=Z,36nm,0.9s
APSI Ampana 46.13 207 P P 05 29 50.9 -1.9
comp=Z,27nm,1.2s
AAA Alma-Ata 46.15 294 eP P 05 29 51.5 -1.4
AAA Alma-Ata 46.15 294 eP P 05 29 51.6 -1.4
baz=294
K24K Donnelly Dome 46.17 36 P P 05 29 53.4 +0.6
baz=278
TNSS Tian-Shan 46.19 294 eP P 05 29 53.4 -0.2
TNSS Tian-Shan 46.19 294 eP P 05 29 53.5 -0.2
baz=294
BMAR Burnt Mountain 46.22 31 P P 05 29 52.4 -0.7
J25K Salcha River, 46.24 35 P P 05 29 53.1 -0.2
J25K Salcha River, 46.24 35 P P 05 29 53.1 -0.2
baz=278
M24K Tolsona, Glenn 46.25 38 IAmb IAmb 05 30 01.5
comp=Z,20nm,0.8s
M24K Tolsona, Glenn 46.25 38 P P 05 29 54.4 +0.9
baz=280
KUU Kurty 46.29 295 eP P 05 29 52.9 -1.0
KUU Kurty 46.29 295 eP P 05 29 53.0 -1.0
baz=295
KDJ Kajisay 46.37 293 P P 05 29 54.8 0.0
KDJ IAmb IAmb 05 29 56.5
comp=Z,49nm,1.1s
KDJ Kajisay 46.37 293 P P 05 29 54.8 0.0
KDJ pmax pmax
comp=Z,49nm,1.2s
PAX Paxson 46.44 37 P P 05 29 55.8 +0.9
baz=279
JIRN Jiri 46.46 270 eP P 05 29 55.1 -0.8
KLU Klutina 46.48 39 IAmb IAmb 05 30 02.8
comp=Z,26nm,1.0s
KLU Klutina 46.48 39 P P 05 29 56.4 +1.1
baz=280
RAMN Ramite 46.54 269 eP P 05 29 56.2 -0.2
comp=Z,85nm,1.1s
GUN Gumba 46.56 271 eP P 05 29 56.1 -0.5
comp=Z,56nm,0.6s
RIDG Independent Ri 46.59 36 P P 05 29 56.0 -0.1
baz=279
DIV Divide 46.62 40 IAmb IAmb 05 30 03.9
comp=Z,30nm,1.0s
BRZS Berezniki 46.64 304 eP P 05 29 55.5 -1.0
BRZS pmax pmax
comp=Z,17nm,0.9s
BRZS Berezniki 46.64 304 eP P 05 29 55.6 -1.0
comp=Z,17nm,0.9s,baz=304
HARP HAARP 46.67 38 P P 05 29 57.7 +1.0
baz=280
EYAK Cordova Ski Ar 46.74 41 IAmb IAmb 05 30 05.8
comp=Z,21nm,1.0s
EYAK Cordova Ski Ar 46.74 41 P P 05 29 56.4 -0.7
baz=281
ULHL Ulahol 46.97 293 P P 05 30 00.5 +0.9
SNR=6.8
J26L Joseph Creek 47.02 35 P P 05 29 59.0 -0.5
baz=279
I26K Coal Creek Min 47.07 34 P P 05 29 59.4 -0.3
baz=279
N25K Chitina, Valde 47.08 39 P P 05 30 00.3 +0.3
baz=281
PKI Pulchoki 47.09 271 eP P 05 30 00.8 0.0
PKIN Phulchoki 47.10 271 eP P 05 30 00.8 +0.1
TKM2 Tokmak 2 47.15 294 P P 05 30 01.2 +0.3
SNR=54

TKM2 Tokmak 2 47.15 294 P P 05 30 00.3 -0.6
TKM2 pmax pmax
comp=Z,170nm,1.6s
BRVK Borovoye 47.17 309 P P 05 30 00.4 -0.3
BRVK Borovoye 47.17 309 *ce*P **P 05 30 00.5 -0.2**
BRVK pmax pmax
comp=Z,35nm,1.0s
BRVK MLR MLR
comp=Z,1µm,14.0s
BRVK Borovoye 47.17 309 P P 05 30 00.7 0.0
BMRM Bremner River 47.20 40 P P 05 30 01.3 +0.4
BMRM IAmb IAmb 05 30 15.3
comp=Z,24nm,1.2s
BMRM Bremner River 47.20 40 P P 05 30 00.5 -0.4
baz=282
DMN Daman 47.30 271 *e*P **P 05 30 02.6 +0.3**
L26K Log Cabin Wild 47.38 37 IAmb IAmb 05 30 09.0
comp=Z,20nm,0.9s
L26K Log Cabin Wild 47.38 37 P P 05 30 02.6 +0.4
baz=281
OTUK Ortayu 47.40 302 P P 05 30 01.3 -1.3
OTUK pmax pmax
comp=Z,47nm,0.9s
BTLS Baital 47.41 298 *e*P **P 05 30 01.1 -1.5**
BTLS pmax pmax
comp=Z,34nm,1.6s
BTLS Baital 47.41 298 *e*P **P 05 30 01.1 -1.5**
comp=Z,34nm,1.6s,baz=298
GKN Gorkha 47.43 272 *e*P **P 05 30 02.6 -0.6**
GLB Gilahina Butte 47.48 39 IAmb IAmb 05 30 07.9
comp=Z,55nm,1.8s
HMT Hamilton 47.50 41 IAmb IAmb 05 30 09.4
comp=Z,20nm,1.1s
SGDS Sogindy 47.60 295 *e*P **P 05 30 03.6 -0.7**
SGDS pmax pmax
comp=Z,18nm,1.3s
SGDS Sogindy 47.60 295 *e*P **P 05 30 03.6 -0.7**
comp=Z,18nm,1.3s,baz=295
M26K Nabesna, AK 47.66 38 IAmb IAmb 05 30 11.2
comp=Z,24nm,1.0s
M26K Nabesna, AK 47.66 38 P P 05 30 04.8 +0.3
baz=282
KBK Karagaybulak 47.70 294 P P 05 30 05.5 +0.3
SNR=29
CHMS Chumysh 47.70 295 *i* P **P 05 30 04.4 -0.6**
CHMS pmax pmax
comp=Z,46nm,1.7s
K27K Chicken 47.75 35 IAmb IAmb 05 30 10.9
comp=Z,33nm,1.1s
K27K Chicken 47.75 35 P P 05 30 05.3 +0.3
baz=281
USP Ospenovka 47.76 295 P P 05 30 06.3 +0.8
SNR=26
MCARA McCarthy VSAT 47.87 39 IAmb IAmb 05 30 13.6
comp=Z,32nm,1.2s
MCARA McCarthy VSAT 47.87 39 P P 05 30 06.8 +0.8
baz=283
DANN Dangsing 47.90 273 *e*P **P 05 30 07.0 0.0**
comp=Z,190nm,0.8s
AAK Ala-Archa 48.01 294 P P 05 30 08.3 +0.8
SNR=6.6
AAK Ala-Archa 48.01 294 P P 05 30 07.4 -0.1
AAK Ala-Archa 48.01 294 *ce*P **P 05 30 07.8 +0.2**
AAK pmax pmax
comp=Z,61nm,1.7s
AAK MLR MLR
comp=Z,1µm,14.0s
AAK Ala-Archa 48.01 294 P P 05 30 09.2 +1.6
AAK Ala-Archa 48.01 294 *i* P **P 05 30 07.1 -0.4**
SNR=9
L27K Beaver Creek, 48.05 37 IAmb IAmb 05 30 13.9
comp=Z,30nm,0.9s
L27K Beaver Creek, 48.05 37 P P 05 30 08.2 +0.8
baz=282
BCAR Beaver Creek A 48.07 37 P P 05 30 08.2 +0.7
TGL Tana Glacier 48.10 40 IAmb IAmb 05 30 29.5
comp=Z,23nm,1.1s
UCH Uchtor 48.16 294 P P 05 30 10.0 +0.9
SNR=11
M27K Edge Creek, AK 48.18 38 IAmb IAmb 05 30 16.6
comp=Z,34nm,0.9s
M27K Edge Creek, AK 48.18 38 P P 05 30 09.6 +1.0
baz=283
KSH Kashi 48.26 290 P P 05 30 13.6 +4.1
KSH sP sP 05 30 24.0 +8.3
KSH PcP **PcP 05 31 38.8 +2.4**
KSH S **S 05 37 16.9 +8.2**
KSH pmax pmax
comp=Z,27nm,1.0s
KSH pmax pmax
comp=Z,420nm,4.3s
KSH LR LR
comp=Z,2µm,16.5s
KSH LR LR
comp=Z,2µm,16.8s
KSH LR LR
comp=Z,3µm,13.7s
ISLE Juniper Island 48.37 40 IAmb IAmb 05 30 34.3
comp=Z,43nm,1.6s
EKS2 Erkin-Say 48.49 295 P P 05 30 11.2 0.0
SNR=13
GRNC Granite Creek 48.62 40 IAmb IAmb 05 30 19.7
comp=Z,19nm,1.0s
MESA MESA 48.66 40 P P 05 30 13.6 +1.3
baz=285
AML Almayashu 48.76 294 P P 05 30 14.9 +1.3
SNR=15
AML Almayashu 48.76 294 P P 05 30 13.8 +0.2
AML Almayashu 48.76 294 *i* P **P 05 30 13.7 +0.2**
SNR=15
CTG Chitna Glacier 48.76 39 P P 05 30 14.3 +1.2
baz=284
CTGM Chitina Glacie 48.76 39 IAmb IAmb 05 30 22.3
comp=Z,12nm,0.7s
KSM Kuching 48.84 223 P P 05 30 14.7 +0.7
KSM IAmb IAmb 05 30 16.2
comp=Z,26nm,0.9s
DAWY Dawson 48.90 35 P P 05 30 16.0 +2.1
baz=283
TABL Table Mountain 48.98 40 IAmb IAmb 05 30 19.4
comp=Z,57nm,1.9s
I29M Ogilvie Camp, 49.05 33 IAmb IAmb 05 30 21.0
comp=Z,26nm,1.2s
I29M Ogilvie Camp, 49.05 33 P P 05 30 16.0 +0.9
baz=283
SRIT Nakonsritamara 49.29 240 IAmb IAmb 05 30 20.2
comp=Z,39nm,0.9s
EPYK Eagle Plains 49.46 32 P P 05 30 18.4 +0.2
baz=284
DZA Taraz 50.04 296 eP P 05 30 21.7 -1.2
DZA *e*S **S 05 37 30.5 -3.0**
DZA Taraz 50.04 296 eP P 05 30 21.8 -1.2
baz=296
DZA *e*S **S 05 37 30.5 -3.0**
baz=296
INK Inuvik 50.19 29 LR LR 05 55 10.5
comp=Z,497nm,18.9s,baz=266,slow=40
INK Inuvik 50.19 29 P P 05 30 23.5 -0.1
INK Inuvik 50.19 29 P P 05 30 23.5 -0.1
INK pmax pmax
comp=Z,14nm,0.8s
INK Inuvik 50.19 29 P P 05 30 23.8 +0.2
baz=285
M30M Minto, Yukon 50.41 37 P P 05 30 27.4 +1.9
baz=287
KK31 Karatay Array 50.51 297 P P 05 30 26.1 -0.4
KK31 IAmb IAmb 05 30 27.7
comp=Z,35nm,0.9s
KK31 Karatay Array 50.51 297 *i* P **P 05 30 25.7 -0.7**
KK31 pmax pmax
comp=Z,27nm,0.8s
KKAR Karatay Array 50.51 297 P P 05 30 26.1 -0.4
KKAR IAmb IAmb 05 30 27.7
comp=Z,35nm,0.9s
KKAR Karatay Array 50.51 297 P P 05 30 25.8 -0.6
KKAR Karatay Array 50.51 297 P P 05 30 25.8 -0.6
HYT Haines Junctio 50.60 39 IAmb IAmb 05 30 34.8
comp=Z,42nm,1.0s
N30M Aishikik Lake 50.60 38 P P 05 30 28.1 +1.2
baz=287
KAPI Kappang 50.61 208 LR LR 05 52 20.7
comp=Z,146nm,20.1s,baz=24,slow=37
KAPI Kappang 50.61 208 P P 05 30 26.8 -0.5
KAPI Kappang 50.61 208 P P 05 30 26.8 -0.5
KAPI pmax pmax
comp=Z,68nm,1.3s
KAPI Kappang 50.61 208 P P 05 30 28.3 +1.0

KAPI P P **05 30 28.3 +1.0**
P30M Million Dollar 51.07 40 P P 05 30 31.1 +0.6
baz=288
KULM Kulim 51.17 236 P P 05 30 33.2 +1.5
KULM IAmb IAmb 05 30 40.3
comp=Z,24nm,0.9s
N31M Braeburn, Yuko 51.19 38 IAmb IAmb 05 30 40.0
comp=Z,25nm,0.9s
N31M Braeburn, Yuko 51.19 38 P P 05 30 32.7 +1.3
baz=288
IUG Iuzhnay 51.23 296 *e*P **P 05 30 31.2 -0.8**
IUG Iuzhnay 51.23 296 *e*P **P 05 30 31.2 -0.8**
baz=296
O30N Mendenhall 51.27 39 P P 05 30 35.1 +3.0
baz=288
SVE Sverdlovsk 51.31 316 *de*P **P 05 30 32.6 +0.3**
SVE *e*S **S 05 37 52.5 +1.9**
SVE pmax pmax
comp=Z,93nm,0.9s
SVE MLR MLR
comp=Z,3µm,14.0s
PMG Port Moresby 51.43 172 LR LR 05 51 56.5
comp=Z,77nm,21.4s,baz=324,slow=36
M31M Drury Creek, Y 51.59 37 IAmb IAmb 05 30 39.4
comp=Z,46nm,1.8s
M31M Drury Creek, Y 51.59 37 P P 05 30 34.6 +0.3
baz=289
A36M Sachs Harbour 51.84 23 IAmb IAmb 05 30 41.7
comp=Z,49nm,1.0s
A36M Sachs Harbour 51.84 23 P P 05 30 36.9 +1.0
baz=289
WHY Whitehorse 51.87 39 pP 05 30 41.0 0.0
WHY Whitehorse 51.87 39 P P 05 30 37.5 +1.0
baz=290
SKAG Skagway 52.07 40 P P 05 30 40.3 +2.4
baz=290
GAR Garm 52.43 292 P P 05 30 40.2 -0.8
ARU Arti 52.52 316 LR LR 05 54 54.7
comp=Z,612nm,19.2s,baz=66,slow=38
ARU Arti 52.52 316 P P 05 30 40.7 -0.6
ARU Arti 52.52 316 *ce*P **P 05 30 41.0 -0.3**
ARU pmax pmax
comp=Z,128nm,1.7s
ARU MLR MLR
comp=Z,2µm,16.0s
P33M Teslin, Yukon 52.99 39 IAmb IAmb 05 30 50.0
comp=Z,45nm,1.7s
P33M Teslin, Yukon 52.99 39 P P 05 30 44.6 -0.2
baz=291
C36M Paulatuk 53.12 26 IAmb IAmb 05 30 49.5
comp=Z,23nm,0.6s
C36M Paulatuk 53.12 26 P P 05 30 45.3 -0.2
baz=292
CHGR Chuyangaron 53.39 292 P P 05 30 47.8 -0.3
CHGR Chuyangaron 53.39 292 P P 05 30 47.8 -0.3
CHGR pmax pmax
comp=Z,173nm,0.9s
SOEI Soe 53.71 201 P P 05 30 50.2 -0.4
HNR Honiara 54.02 157 LR LR 05 52 14.2
comp=Z,266nm,21.8s,baz=322,slow=34
BATI Baumata 54.30 201 LR LR 05 53 06.6
comp=Z,280nm,21.2s,baz=100,slow=35
AB31 Akbulak array 54.60 307 *i* P **P 05 30 56.5 -0.2**
AB31 pmax pmax
comp=Z,17nm,0.6s
ABKAR Akbulak array 54.60 307 P P 05 30 56.4 -0.3
ABKAR Akbulak array 54.60 307 IAmb IAmb 05 30 57.6
comp=Z,28nm,0.7s
DLBC Dease Lake 55.00 40 LR LR 05 56 29.8
comp=Z,277nm,18.4s,baz=309,slow=38
DLBC Dease Lake 55.00 40 IAmb IAmb 05 31 05.2
comp=Z,40nm,1.8s
DLBC Dease Lake 55.00 40 P P 05 31 00.1 +0.6
baz=294
AKTO Aktyubinsk 55.22 309 P P 05 31 00.3 -0.8
AKTO pmax pmax
comp=Z,22nm,0.8s
MTN Manton Dam 55.28 192 P P 05 31 01.4 -0.4
KBL Kabul 55.48 288 P P 05 31 02.6 -0.9
KBL IAmb IAmb 05 31 04.0
comp=Z,28nm,1.0s
KBL Kabul 55.48 288 P P 05 31 02.6 -0.9
KBL pmax pmax
comp=Z,28nm,1.0s
KBL Kabul 55.48 288 P P 05 31 03.6 +0.1
SNR=14
T35M Bob Quinn 55.50 42 P P 05 31 04.8 +1.7
baz=295
SPA0 Spitsbergen Ar 55.64 348 *e*P **P 05 31 03.8 +0.1**
SPITS Spitsbergen Ar 55.64 348 LR LR 05 57 44.1
comp=Z,692nm,18.6s,baz=360,slow=39
COEN Coen 55.67 177 P P 05 31 05.0 +0.4
KBS Kingsbay 55.76 350 P P 05 31 05.2 +0.7
KBS Kingsbay 55.76 350 *ce*P **P 05 31 05.7 +1.1**
KBS pmax pmax
comp=Z,66nm,1.3s
KBS Kingsbay 55.76 350 *i* P **P 05 31 04.3 -0.2**
KBS Kingsbay 55.76 350 *e*P **P 05 31 05.6 +1.0**
NOR Nord 56.12 356 *i* P **P 05 31 05.6 -1.6**
NOR IAmb IAmb 05 31 07.7
comp=Z,24nm,1.2s
KIRV Kirov 56.17 321 LR LR 05 57 22.7
comp=Z,644nm,18.4s,baz=43,slow=38
KIRV Kirov 56.17 321 *ce*P **P 05 31 07.1 -0.7**
PRGR Permogore 56.50 325 *e*P **P 05 31 10.3 +0.2**
PRGR *e**SP sP 05 31 26.5 +10
HSPB Hornsund (broa 56.57 347 eP P 05 31 10.9 +0.5
GRNB Grenville Isla 57.04 45 IAmb IAmb 05 31 22.9
comp=Z,19nm,1.0s
KPJI Karang Pucung 57.15 219 P P 05 31 15.2 0.0
comp=Z,59nm,0.8s
LEM Lembang 57.33 220 LR LR 05 56 32.2
comp=Z,265nm,20.5s,baz=118,slow=37
LVZ Lovozero 57.51 334 P P 05 31 16.9 -0.3
LVZ IAmb IAmb 05 31 21.2
comp=Z,38nm,1.3s
LVZ Lovozero 57.51 334 P P 05 31 16.9 -0.3
LVZ pmax pmax
comp=Z,38nm,1.3s
RES Resolute Bay 57.92 15 LR LR 05 58 37.4
comp=Z,533nm,20.3s,baz=308,slow=38
APA Apatity 58.09 334 ǁ *i*P **P 05 31 24.8 +3.6**
APA pmax pmax
comp=Z,10.0nm,0.8s
HYBB Hyderabad (bro 58.16 265 eP P 05 31 21.7 -0.8
HYBB ǁ *e*PcP **PcP 05 32 13.0 -1.0**
KNRA Kununurra 58.45 194 P P 05 31 24.5 +0.2
BBB Bella Bella 58.81 46 LR LR 05 53 49.7
comp=Z,188nm,21.7s,baz=289,slow=33
HAMF Hammerfest 59.08 340 eP P 05 31 27.8 -0.2
ARA0 ARCESS Array S 59.29 338 eP P 05 31 29.4 -0.2
ARCES ARCESS Array B 59.29 338 P P 05 31 29.9 +0.3
comp=Z,3.1nm,0.5s,baz=49,slow=8.1,SNR=18
ARCES LR LR 06 00 15.7
comp=Z,639nm,19.6s,baz=50,slow=39
comp=Z,3.1nm,0.5s
ARCES ARCESS Array B 59.29 338 P P 05 31 29.1 -0.5
ARCES IAmb IAmb 05 31 50.3
comp=Z,35nm,1.6s
ARCES ARCESS Array B 59.29 338 P P 05 31 29.1 -0.5
ARCES pmax pmax
comp=Z,35nm,1.6s
KLMR Klimovskoe 59.45 326 *eP* **P 05 31 28.0 -2.8**
KLMR *e* 05 33 39.6
KLMR pmax pmax
comp=Z,66nm,1.4s
KLMR MLR MLR
comp=Z,693nm,14.0s
KLMR Klimovskoe 59.45 326 eP P 05 31 28.1 -2.8
KLMR AMP 05 31 34.3
comp=Z,66nm,1.4s
KLMR *e*PP **PP 05 33 39.6 -2.1**
KLMR LQ LQ 05 51 59.4
KLMR LQ LQ 05 51 59.4
KLMR LR LR 05 57 44.7
KLMR AMP 06 02 12.7
comp=Z,693nm,14.0s
YKA Yellowknife Ar 59.74 31 P P 05 31 33.2 +0.4
comp=Z,7.1nm,0.8s,baz=301,slow=6.6,SNR=11
YKA LR LR 06 01 06.7
comp=Z,355nm,19.2s,baz=303,slow=40
comp=Z,7.1nm,0.8s
KTK1 Kautokeino 60.25 338 *eP* **P 05 31 36.0 -0.2**
TULEG Thule 60.26 8 *i* P **P 05 31 34.0 -2.2**
TULEG IAmb IAmb 05 31 36.6
comp=Z,233nm,2.0s

HRA Herat 60.34 291 P **P** **05 31 37.5 -0.1**
JETT Jettan, Norway 60.64 340 *e*P **P** **05 31 38.6 -0.3**
DAG Danmarks Havn 60.84 355 P **P** **05 31 40.4 +0.3**
DAG Danmarks Havn 60.84 355 *i* P **P** **05 31 39.0 -1.1**
DAG IAmb IAmb 05 31 40.9
comp=Z,155nm,2.1s
TRO Tromso 60.96 340 *e*P **P** **05 31 40.4 -0.6**
GEYT Alibeck 61.26 297 P **P** **05 31 43.2 -0.4**
comp=Z,13nm,0.7s,baz=8.5,slow=3.0,SNR=9.3
GEYT LR LR 05 57 53.0
comp=Z,480nm,19.2s,baz=70,slow=36
comp=Z,13nm,0.7s
GEYT Alibeck 61.26 297 P **P** **05 31 42.9 -0.7**
GEYT IAmb IAmb 05 31 44.3
comp=Z,12nm,0.8s
GYA0 ALIBECK ARRAY 61.26 297 P **P** **05 31 42.2 -1.4**
GYA0B ALIBECK ARRAY 61.26 297 P **P** **05 31 43.3 -0.3**
GYA0B IAmb IAmb 05 31 44.3
comp=Z,17nm,0.7s
WRAB Tennant Creek 61.89 187 P **P** **05 31 47.3 -0.5**
WRAB Tennant Creek 61.89 187 *i* P **P** **05 31 47.0 -0.8**
WRAB pmax pmax
comp=Z,28nm,0.7s
WR0 Warramunga Arr 61.90 187 P **P** **05 31 47.2 -0.6**
WRA Warramunga Arr 61.90 187 P **P** **05 31 46.9 -1.0**
comp=Z,24nm,0.6s,baz=2.8,slow=6.9,SNR=286
WRA LR LR 05 56 53.0
comp=Z,256nm,21.7s,baz=56,slow=34
comp=Z,24nm,0.6s
WRA Warramunga Arr 61.90 187 P **P** **05 31 46.7 -1.2**
CTA Charters Tower 61.93 174 LR LR 05 57 42.2
comp=Z,189nm,21.4s,baz=333,slow=35
CLRS Cowichan Lake 62.74 48 IAmb IAmb 05 32 07.8
comp=Z,46nm,1.8s
LLLB Lillooet 62.97 45 IAmb IAmb 05 32 01.6
comp=Z,16nm,1.1s
STEI Steigen 63.12 340 *e*P **P** **05 31 55.3 -0.3**
MOS Moscow 63.14 322 *e*P **P** **05 31 54.9 -0.9**
MOS *e* 05 32 30.9
MOS *e*PPP PPP 05 35 47.9
MOS *e*S **S** **05 40 27.5 +1.3**
MOS *e* 05 41 45.1
MOS *e*SS **SS** **05 44 34.5 +3.1**
MOS pmax pmax
comp=Z,36nm,0.9s
MOS MLR MLR
comp=Z,1µm,14.0s
MOS MLR MLR
comp=E,900nm,15.0s
PGC Sidney 63.21 48 IAmb IAmb 05 32 02.5
comp=Z,17nm,1.1s
PALK Pallekele 63.23 255 LR LR 06 00 50.9
comp=Z,336nm,20.6s,baz=152,slow=37
DBG Daneborg 63.33 354 *i* P **P** **05 31 56.6 -0.3**
DBG IAmb IAmb 05 31 58.5
comp=Z,8.2nm,1.1s
FAUS Fauske 63.52 339 *e*P **P** **05 31 57.8 -0.4**
NLWA Neilton Lookou 63.68 49 IAmb IAmb 05 32 07.0
comp=Z,22nm,1.0s
VRH Novokhopyorsk 63.76 316 *e*P **P** **05 31 58.0 -2.0**
VRH pmax pmax
comp=Z,50nm,1.8s
OBN Obninsk 63.99 322 LR LR 06 00 43.8
comp=Z,49nm,19.5s,baz=61,slow=37
OBN Obninsk 63.99 322 *c i* P **P** **05 32 00.7 -0.8**
OBN *i* 05 32 34.9
OBN pmax pmax
comp=Z,68nm,1.9s
OBN MLR MLR
comp=Z,1µm,15.0s
PCHI Peechi 64.22 261 *e*P **P** **05 32 01.0 -2.5**
FIA1 FINESS Array S 64.33 331 P **P** **05 32 02.7 -0.8**
FIA0 FINESS Array S 64.33 331 P **P** **05 32 03.0 -0.6**
FIA0 FINESS Array S 64.33 331 P **P** **05 32 03.0 -0.6**
FINES FINESS Array B 64.33 331 P **P** **05 32 03.0 -0.6**
comp=Z,20nm,0.7s,baz=46,slow=8.2,SNR=59
FINES LR LR 06 02 04.8
comp=Z,1µm,20.1s,baz=30,slow=38
comp=Z,20nm,0.7s
FINES FINESS Array B 64.33 331 P **P** **05 32 02.8 -0.7**
LPSR Galich'ya Gora 64.36 319 *e*P **P** **05 32 03.2 -0.7**
LPSR pmax pmax
comp=Z,50nm,1.8s
MOR8 Moi Rana 64.65 339 *e*P **P** **05 32 03.9 -1.8**
VSR Storozhevoye 65.06 317 *e*P **P** **05 32 07.9 -0.6**
VSR pmax pmax
comp=Z,60nm,1.9s
JMIC Jan Mayen 65.25 349 LR LR 06 00 34.3
comp=Z,139nm,20.9s,baz=28,slow=36
F04A Amboy 65.33 50 IAmb IAmb 05 32 17.3
comp=Z,16nm,0.7s
LTY Liberty 65.54 48 IAmb IAmb 05 32 20.1
comp=Z,26nm,1.6s
B08A Colville Reser 65.62 46 IAmb IAmb 05 32 16.7
comp=Z,21nm,1.4s
AS31 Alice Springs 65.62 187 P **P** **05 32 12.2 -0.2**
ASAR Alice Springs 65.63 187 P **P** **05 32 12.4 0.0**
comp=Z,8.4nm,0.8s,baz=7.3,slow=5.5,SNR=57
ASAR LR LR 06 01 26.9
comp=Z,129nm,19.3s,baz=346,slow=36
comp=Z,8.4nm,0.8s
SUMG Summit 65.76 360 P **P** **05 32 12.4 -0.8**
SUMG Summit 65.76 360 P **P** **05 32 12.4 -0.8**
SUMG pmax pmax
comp=Z,36nm,0.9s
SUMG Summit 65.76 360 *i* P **P** **05 32 13.0 -0.2**
SUMG IAmb IAmb 05 32 18.9
comp=Z,52nm,1.1s
MBWA Marble Bar 65.82 202 P **P** **05 32 12.9 -0.7**
MBWA IAmb IAmb 05 32 14.5
comp=Z,24nm,1.1s
MBWA Marble Bar 65.82 202 P **P** **05 32 13.4 -0.2**
VSU Vasula 66.07 328 *i* P **P** **05 32 14.8 -0.1**
VSU pmax pmax
comp=Z,158nm,1.6s
VSU MLR MLR
comp=Z,2µm,17.0s
VSU Vasula 66.07 328 *e*P **P** **05 32 15.1 +0.1**
HOOD Mount Hood Mea 66.12 50 IAmb IAmb 05 32 28.9
comp=Z,26nm,0.9s
RAF Rauma 66.14 332 *e*P **P** **05 32 14.9 -0.4**
PSA00 Pilbara Seismi 66.18 202 P **P** **05 32 15.5 -0.4**
PSA00 IAmb IAmb 05 32 20.2
comp=Z,33nm,1.2s
PSA00 Pilbara Seismi 66.18 202 IAmb IAmb 05 32 20.2
comp=Z,16nm,1.2s
H04A Detroit Lake 66.19 51 P **P** **05 32 16.5 +0.5**
H04A IAmb IAmb 05 32 23.9
comp=Z,12nm,0.9s
C09A Chrisman Ranch 66.52 46 IAmb IAmb 05 32 24.1
comp=Z,15nm,0.9s
I04A Tendick Farm, 66.58 52 P **P** **05 32 18.6 0.0**
baz=306
F07A Phinny Hill Vi 66.76 49 IAmb IAmb 05 32 28.1
comp=Z,14nm,0.8s
NEW Newport 66.86 45 LR LR 06 04 12.2
comp=Z,242nm,18.1s,baz=320,slow=38
NEW Newport 66.86 45 P **P** **05 32 20.8 +0.6**
MTSE Matsula 67.02 330 *e*P **P** **05 32 21.1 +0.1**
SCO Scoresbysund 67.18 354 IAmb IAmb 05 32 26.0
comp=Z,39nm,1.7s
SCO Scoresbysund 67.18 354 *i* P **P** **05 32 22.3 +0.5**
SCO IAmb IAmb 05 32 25.4
comp=Z,397nm,3.8s
AAL Aland 67.36 332 *e*P **P** **05 32 22.8 -0.3**
E09A Wood Farm, Sta 67.37 47 IAmb IAmb 05 32 28.2
comp=Z,17nm,1.0s
ZEI Tsey 67.48 308 *e*P **P** **05 32 23.6 -0.9**
ZEI pmax pmax
comp=Z,9.0nm,0.6s
KIV Kislovodsk 67.49 309 ⇑P **P** **05 32 24.3 -0.1**
KIV Kislovodsk 67.49 309 P **P** **05 32 24.9 +0.5**
KIV Kislovodsk 67.49 309 *e*P **P** **05 32 24.6 +0.2**
KIV *e*S **S** **05 41 18.6 -1.6**
KIV *e*SS **SS** **05 45 40.2 +0.5**
KIV pmax pmax
comp=Z,55nm,1.1s
KIV pmax pmax
comp=Z,37nm,2.8s
KIV MLR MLR
comp=Z,850nm,17.0s
KIV Kislovodsk 67.49 309 *i* P **P** **05 32 24.4 +0.1**
SNR=14
KBZ Khabaz 67.50 309 P **P** **05 32 24.7 +0.4**
comp=Z,12nm,0.7s,baz=50,slow=5.1,SNR=25
KBZ LR LR 06 04 52.0
comp=Z,460nm,18.9s,baz=29,slow=39
comp=Z,12nm,0.7s
KBZ Khabaz 67.50 309 *ce*P **P** **05 32 25.3 +1.0**
KBZ pmax pmax
comp=Z,4.0nm,0.6s
KBZ MLR MLR
comp=Z,463nm,16.0s
J05D Fort Rock, OR 67.57 52 P **P** **05 32 26.6 +1.6**
baz=307
YBH Yreka Blue Hor 67.63 54 LR LR 05 56 39.6
comp=Z,146nm,21.1s,slow=31
YBH Yreka Blue Hor 67.63 54 P **P** **05 32 28.0 +2.7**
YBH Yreka Blue Hor 67.63 54 P **P** **05 32 28.0 +2.7**
YBH pmax pmax
comp=Z,17nm,1.5s
SHA1 Shidzhatmaz 67.64 309 *i* P **P** **05 32 24.8 -0.7**
WALA Waterton Lakes 68.03 43 P **P** **05 32 27.8 0.0**
WALA IAmb IAmb 05 32 32.2
comp=Z,16nm,0.9s
I07A Izee 68.09 50 P **P** **05 32 28.5 +0.3**
K05A Summer Lake 68.11 52 P **P** **05 32 28.8 +0.4**
K05A IAmb IAmb 05 32 33.7
comp=Z,22nm,1.2s
IDID Didziasalis 68.20 326 *e*P **P** **05 32 28.7 +0.2**
F10A Beach Ranch, E 68.20 47 IAmb IAmb 05 32 33.5
comp=Z,44nm,2.0s
ISAL Salakas 68.28 326 *e*P **P** **05 32 29.1 +0.1**
IIGN Ignalina 68.39 326 *e*P **P** **05 32 29.7 0.0**
NACGM Naroch 68.46 326 ⇓*e*P P 05 32 23.7 -6.5
baz=47
MSVF Nonsavu 68.55 142 LR LR 06 03 08.4
comp=Z,188nm,18.1s,baz=331,slow=36
GNI Garni 68.56 305 LR LR 06 03 59.9
comp=Z,357nm,18.3s,baz=88,slow=37
GNI Garni 68.56 305 *ce*P **P** **05 32 32.0 +0.7**
GNI pmax pmax
comp=Z,37nm,1.7s
GNI MLR MLR
comp=Z,326nm,17.0s
GNI Garni 68.56 305 P **P** **05 32 31.9 +0.6**
JTMT Jetta 68.67 44 IAmb IAmb 05 32 39.6
comp=Z,17nm,1.0s
BMO Blue Mountains 68.86 48 IAmb IAmb 05 32 37.7
comp=Z,25nm,1.4s
BMO Blue Mountains 68.86 48 P **P** **05 32 34.2 +1.2**
J08A Circle Bar Ran 69.12 50 IAmb IAmb 05 32 39.8
comp=Z,17nm,1.2s
PABE Paberze 69.21 327 *e*P **P** **05 32 35.0 +0.3**
ICESG Greenland Ices 69.27 0 *i* P **P** **05 32 34.8 -0.6**
ICESG IAmb IAmb 05 32 39.1
comp=Z,76nm,1.4s
KARS Kars 69.28 306 P **P** **05 32 37.2 +1.5**
NC303 NORSAR Array S 69.34 337 IAmb IAmb 05 32 38.9
comp=Z,28nm,0.9s
DOMB Dombas 69.35 338 *e*P **P** **05 32 35.3 -0.3**
WSAR Wadi Sarin 69.36 283 LR LR 06 06 00.4
comp=Z,107nm,18.1s,baz=89,slow=39
WSAR Wadi Sarin 69.36 283 P **P** **05 32 37.2 +0.9**
BANOM Banah 69.41 287 P **P** **05 32 36.3 -0.3**
BANOM P **P** **05 32 36.3 -0.3**
BANOM Banah 69.41 287 P **P** **05 32 36.3 -0.3**
SOC Sochi 69.42 310 *e*P **P** **05 32 33.1 -3.2**
SOC *e* 05 35 07.2
SOC *e*PPP PPP 05 36 52.6
SOC *e*S **S** **05 41 37.3 -5.6**
SOC pmax pmax
comp=Z,24nm,1.1s
SOC MLR MLR
comp=Z,311nm,16.0s
MSO Missoula 69.44 45 IAmb IAmb 05 32 40.8
comp=Z,23nm,1.4s
SHME Shamm 69.45 287 P **P** **05 32 36.8 0.0**
SHME P **P** **05 32 36.8 0.0**
SHME Shamm 69.45 287 P **P** **05 32 36.1 -0.6**
JLN Jalan Bani Buh 69.46 282 P **P** **05 32 38.4 +1.5**
JLN P **P** **05 32 38.4 +1.5**
NC204 NORSAR Array S 69.48 337 P **P** **05 32 36.2 -0.3**
HFS Hagfors 69.48 335 LR LR 06 05 48.1
comp=Z,899nm,18.1s,baz=25,slow=38
NB2 NORSAR Subarra 69.53 336 P **P** **05 32 32.7 -4.1**
NB2 pmax pmax
comp=Z,109nm,2.0s
NB2 NORSAR Subarra 69.53 336 P **P** **05 32 36.0 -0.8**
baz=38,slow=6.5
NB2 NORSAR Subarra 69.53 336 P **P** **05 32 36.0 -0.8**
comp=Z,28nm,0.9s,baz=38,slow=6.5
NOA NORSAR Array B 69.53 336 P **P** **05 32 36.0 -0.8**
comp=Z,10nm,0.7s,baz=38,slow=6.2,SNR=58
NOA LR LR 06 08 12.1
comp=Z,530nm,18.6s,baz=20,slow=40
comp=Z,10nm,0.7s
WVOR Wild Horse Val 69.60 51 P **P** **05 32 39.1 +1.4**
NC602 NORSAR Array S 69.68 336 IAmb IAmb 05 32 37.6
comp=Z,34nm,1.2s
NORES NORESS Array B 69.68 336 P **P** **05 32 40.6 +3.0**
MASF Masafi 69.84 286 P **P** **05 32 39.7 +0.5**
MASF P **P** **05 32 39.7 +0.5**
MSFE Esma-Masafi 69.85 286 P **P** **05 32 38.6 -0.7**
SMDO Samad 69.89 283 P **P** **05 32 38.7 -1.0**
SMDO P **P** **05 32 38.7 -1.0**
ANN Anapa 69.92 313 *e*P **P** **05 32 39.2 -0.2**
ANN pmax pmax
comp=Z,84nm,1.6s
ANN MLR MLR
comp=Z,499nm,12.0s
UOSS Minazif 70.07 286 P **P** **05 32 40.0 -0.6**
UOSS IAmb IAmb 05 32 41.8
comp=Z,25nm,0.9s
UOSS Minazif 70.07 286 P **P** **05 32 41.1 +0.4**
UOSS P **P** **05 32 41.1 +0.4**
UOSS Minazif 70.07 286 *i* P **P** **05 32 39.8 -0.9**
SNR=6.2
HOQ Hoqain 70.11 284 P **P** **05 32 41.3 +0.4**
HOQ P **P** **05 32 41.3 +0.4**
BEKR Beckworth 70.18 54 P **P** **05 32 41.5 +0.2**
HATD Hatta, Dubai 70.20 286 P **P** **05 32 41.8 +0.4**
SNR=6.4
HATD P **P** **05 32 41.8 +0.4**
SNR=6.4
HATD Hatta, Dubai 70.20 286 *i* P **P** **05 32 41.1 -0.4**
SNR=10
AKASG Malin Array Be 70.23 321 P **P** **05 32 40.5 -0.6**
comp=Z,3.5nm,0.6s,baz=40,slow=6.5,SNR=6.3
AKASG LR LR 06 06 01.6
comp=Z,728nm,19.0s,baz=43,slow=38
comp=Z,3.5nm,0.6s
JMDO Jabal Madar 70.28 283 P **P** **05 32 42.7 +0.7**
SOHO SOHO 70.33 285 P **P** **05 32 43.0 +0.8**
SOHO P **P** **05 32 43.0 +0.8**
SOHO SOHO 70.33 285 P **P** **05 32 41.3 -0.9**
ASHO Ashiyiah 70.34 286 P **P** **05 32 43.3 +1.0**
SNR=5.8
ASHO P **P** **05 32 43.3 +1.0**
SNR=5.8
ASHO Ashiyiah 70.34 286 *i* P **P** **05 32 42.1 -0.2**
SNR=6.9
NAZ Nazwa, Dubai 70.44 286 P **P** **05 32 43.5 +0.7**
NAZ Nazwa, Dubai 70.44 286 P **P** **05 32 42.2 -0.7**
AFI Afiamalu 70.57 131 LR LR 06 00 33.2
comp=Z,90nm,19.1s,baz=312,slow=33
MFID Camas Ranch 70.59 49 IAmb IAmb 05 32 48.4
comp=Z,24nm,1.4s
FAQ Al Faqa, Dubai 70.63 286 P **P** **05 32 43.9 -0.2**
FAQ P **P** **05 32 43.9 -0.2**
FAQ Al Faqa, Dubai 70.63 286 P **P** **05 32 43.5 -0.5**
SKAR Skarsla 70.67 337 *e*P **P** **05 32 42.8 -1.0**
ASUD Al Ashush, Dub 70.90 286 P **P** **05 32 46.2 +0.6**
ASUD P **P** **05 32 46.2 +0.6**
ASUD Al Ashush, Dub 70.90 286 P **P** **05 32 45.7 0.0**
ALNE Al Ain 70.94 285 P **P** **05 32 45.8 -0.1**
SNR=6.5
SFJD Kangerlussuaq 71.01 5 LR LR 06 06 17.3
comp=Z,408nm,18.6s,baz=349,slow=38
SFJD Kangerlussuaq 71.01 5 P **P** **05 32 45.6 0.0**
SFJD IAmb IAmb 05 32 47.1
comp=Z,44nm,1.4s
SFJD Kangerlussuaq 71.01 5 P **P** **05 32 45.6 0.0**
SFJD pmax pmax
comp=Z,44nm,1.4s
MHTO MHTO 71.23 282 P **P** **05 32 48.2 +0.5**
SNR=6.1
MHTO P **P** **05 32 48.2 +0.5**
SNR=6.1
CMB Columbia Colle 71.31 56 IAmb IAmb 05 32 57.1
comp=Z,34nm,1.6s
YERR Yerington 71.41 54 IAmb IAmb 05 32 57.3
comp=Z,18nm,1.1s
BOZ Bozeman (W) 71.46 45 IAmb IAmb 05 32 53.5
comp=Z,14nm,0.9s
BOZ Bozeman (W) 71.46 45 P **P** **05 32 49.7 +0.8**
SIM Simferopol' 71.62 314 *e*P P 05 32 44.8 -5.0
SIM pmax pmax
comp=Z,12nm,0.8s
SIM MLR MLR
comp=Z,500nm,17.0s
ASK Askoy 71.70 339 *e*P **P** **05 32 50.1 +0.2**
BER Bergen 71.75 339 *e*P **P** **05 32 49.9 -0.2**
DY2G Dye2 71.75 3 *i* P **P** **05 32 50.0 -0.4**
DY2G IAmb IAmb 05 32 56.1
comp=Z,144nm,1.5s
FRB Frobisher Bay 72.06 13 LR LR 06 08 11.0
comp=Z,423nm,18.0s,baz=346,slow=39
UMZA Um Al Zommool 72.20 285 P **P** **05 32 53.4 -0.2**
UMZA P **P** **05 32 53.4 -0.2**
BLS5 Blasjo 72.24 338 *e*P **P** **05 32 55.5 +2.3**
DEL Delary 72.28 332 *e*P **P** **05 32 53.3 -0.2**
NVAR Mina Array Bea 72.33 54 P **P** **05 32 55.6 +1.2**
comp=Z,4.2nm,0.8s,baz=301,slow=5.7,SNR=20
NVAR LR LR 06 02 42.3
comp=Z,69nm,20.4s,baz=270,slow=34
comp=Z,4.2nm,0.8s
MDPB Devils Postpil 72.36 55 IAmb IAmb 05 35 15.8
comp=Z,17nm,1.0s
SORM Soroca 72.41 320 ⇑P **P** **05 32 53.5 -0.9**
YMR Madison River 72.42 45 IAmb IAmb 05 32 59.8
comp=Z,41nm,1.6s
JRN Qarnain Island 72.47 288 P **P** **05 32 53.8 -1.3**
JRN P **P** **05 32 53.8 -1.3**
ELK Elko 72.64 51 LR LR 06 00 51.2
comp=Z,127nm,21.2s,baz=316,slow=32
ELK Elko 72.64 51 P **P** **05 32 57.6 +1.3**
ARMA Armidale 72.69 170 P **P** **05 32 56.6 +0.4**
ARMA IAmb IAmb 05 33 00.8
comp=Z,32nm,1.2s
BORG Borgarnes 72.73 352 LR LR 06 05 19.5
comp=Z,167nm,20.2s,baz=359,slow=36
MARD Mardin 72.75 305 P **P** **05 32 56.7 -0.1**
H17A Grant Village 72.81 45 IAmb IAmb 05 33 03.6
comp=Z,22nm,1.1s
H17A Grant Village 72.81 45 P **P** **05 32 58.6 +1.4**
baz=312
KIS Kishinev 72.97 318 ⇑*e*P **P** **05 32 56.0 -1.7**
comp=Z,100nm,5.4s
KIS Kishinev 72.97 318 *e*PP PP 05 35 40.0 +0.4
KIS Kishinev 72.97 318 *ce*P **P** **05 32 56.0 -1.7**
KIS *e* 05 35 40.0
KIS pmax pmax
comp=Z,100nm,5.4s
KIS MLR MLR
comp=Z,400nm,14.0s
BSD Bornholm Skovb 72.97 331 *e*P **P** **05 32 57.6 +0.1**
RLMT Red Lodge 73.01 44 IAmb IAmb 05 33 03.1
comp=Z,54nm,1.6s
MILM Milestii Mici 73.02 318 ⇑*i* P **P** **05 32 57.0 -1.1**
comp=Z,240nm,5.4s
MILM Milestii Mici 73.02 318 *e*PP PP 05 35 40.0 -0.1
MILM Milestii Mici 73.02 318 *c i* P **P** **05 32 57.0 -1.1**
MILM *e* 05 33 06.0
MILM *e* 05 35 40.0
MILM *e*PS **PnS** **05 43 03.0 +7.1**
MILM pmax pmax
comp=Z,240nm,5.4s
MILM MLR MLR
comp=Z,1µm,15.0s
MOOW Moose Ponds 73.16 46 IAmb IAmb 05 33 04.6
comp=Z,34nm,1.5s
DIKM Dikmen 73.18 311 ⇑P **P** **05 32 58.6 -0.5**
TPAW Teton Pass 73.22 46 IAmb IAmb 05 33 05.1
comp=Z,57nm,1.7s
MZR Muzera 73.23 286 P **P** **05 33 00.6 +0.9**
SNR=5.5
MZR Muzera 73.23 286 *i* P **P** **05 32 59.1 -0.6**
SNR=12
SHMA Al-Shehemyia 73.23 290 P **P** **05 32 57.3 -2.3**
LVV L'vov 73.23 323 *e*P **P** **05 33 00.0 +0.7**
LOHW Long Hollow 73.33 46 IAmb IAmb 05 33 05.6
comp=Z,45nm,1.9s
REDW Red Top Meadow 73.36 46 IAmb IAmb 05 33 05.6
comp=Z,42nm,1.6s
LAO LASA Array 73.48 41 IAmb IAmb 05 33 05.5
comp=Z,29nm,1.1s
STKA Stephens Creek 73.48 179 P **P** **05 33 01.0 +0.3**
comp=Z,4.3nm,0.8s,baz=332,slow=7.4,SNR=7.2
STKA LR LR 06 06 11.1
comp=Z,227nm,19.7s,baz=6.7,slow=36
comp=Z,4.3nm,0.8s
CWC Cottonwood Cre 73.74 56 P **P** **05 33 02.4 -0.3**
baz=310
ISA Isabella, Lake 74.00 56 P **P** **05 33 05.2 +1.1**
baz=310
R11A Troy Canyon, C 74.00 53 P **P** **05 33 04.3 +0.1**
baz=311
HWUT Hardware Ranch 74.15 48 IAmb IAmb 05 33 10.0
comp=Z,36nm,1.4s
BUR08 Bucovina Ar. S 74.26 321 P **P** **05 33 05.3 -0.2**
BUR08 IAmb IAmb 05 33 07.2
comp=Z,38nm,1.8s
BURAR Bucovina Array 74.27 321 ⇓P **P** **05 33 05.7 +0.1**
BURAR Bucovina Array 74.27 321 P **P** **05 33 05.3 -0.2**
BIZ Bicaz 74.33 320 ⇑P **P** **05 33 06.3 +0.5**
MORW Morawa 74.34 203 P **P** **05 33 05.1 -0.7**
MORW IAmb IAmb 05 33 07.1
comp=Z,24nm,0.8s
MPMC Manual Prospec 74.35 56 P **P** **05 33 05.9 -0.4**
baz=311
S11A Rachel 74.37 53 IAmb IAmb 05 33 15.0
comp=Z,28nm,1.1s
TESR Tescani 74.37 319 ⇑P **P** **05 33 05.4 -0.6**
DUG Dugway, Tooele 74.40 50 IAmb IAmb 05 33 11.4
comp=Z,25nm,1.2s
DUG Dugway, Tooele 74.40 50 P **P** **05 33 08.2 +1.7**
BW06 Boulder Array 74.46 46 IAmb IAmb 05 33 11.2
comp=Z,31nm,1.4s
PD31 Pinedale Array 74.46 46 IAmb IAmb 05 33 11.2
comp=Z,27nm,1.4s
PDAR Pinedale Array 74.46 46 P **P** **05 33 07.5 +0.5**
comp=Z,12nm,0.9s,baz=253,slow=2.6,SNR=29
PDAR LR LR 06 06 40.6
comp=Z,184nm,21.4s,baz=341,slow=36
comp=Z,12nm,0.9s
FURC Furnace Creek, 74.47 55 P **P** **05 33 07.1 +0.4**
baz=311
TPGR Topolog 74.66 317 ⇑P **P** **05 33 07.8 +0.1**
GWY Greenwater Val 74.77 55 IAmb IAmb 05 33 13.3
comp=Z,28nm,1.4s
OJC Ojcow 74.79 325 *e*P **P** **05 33 08.8 +0.4**
OJC *e*L L 06 08 48.1
comp=Z,1µm,18.3s
OJC Ojcow 74.79 325 IAmb IAmb 05 33 09.9
comp=Z,29nm,1.1s
VRI Vrincioaia 74.79 319 ⇑P **P** **05 33 08.8 +0.3**
VRI Vrincioaia 74.79 319 P **P** **05 33 09.1 +0.6**
EDW2 Edwards Air Fo 74.80 57 P **P** **05 33 08.7 -0.1**
baz=311
SHAO Shalim 74.81 281 P **P** **05 33 08.8 -0.2**
PRN Pahroc Range 74.94 53 IAmb IAmb 05 33 14.8
comp=Z,42nm,1.8s
CRVS Cervenica-Dubn 75.05 324 *e*P **P** **05 33 10.5 +0.6**
CRVS pmax pmax
comp=Z,66nm,2.0s
CRVS Cervenica-Dubn 75.05 324 *e*P **P** **05 33 10.5 +0.6**
NIE Niedzica 75.18 324 *e*P **P** **05 33 11.7 +1.0**
NIE *e*L L 06 09 03.9
comp=Z,428nm,18.2s
MPU Maple Canyon 75.19 49 IAmb IAmb 05 33 15.9
comp=Z,14nm,0.9s
DOPR Dopca 75.37 319 ⇑P **P** **05 33 12.3 +0.5**
BR131 Keskin Array S 75.38 310 P **P** **05 33 12.1 0.0**
BR131 IAmb IAmb 05 33 13.8
comp=Z,32nm,1.6s
BR131 Keskin Array S 75.38 310 P **P** **05 33 12.1 0.0**
BR131 pmax pmax
comp=Z,32nm,1.6s
BR131 Keskin Array S 75.38 310 P **P** **05 33 12.3 +0.2**
SNR=5.6
BRTR Keskin Array B 75.38 310 P **P** **05 33 11.8 -0.3**
comp=Z,1.7nm,0.6s,baz=73,slow=3.6,SNR=12
BRTR LR LR 06 11 04.7
comp=Z,292nm,18.2s,baz=30,slow=40
comp=Z,1.7nm,0.6s
BRTR Keskin Array B 75.38 310 *i* P **P** **05 33 12.3 +0.2**

BRTR pmax pmax
comp=Z,2.0nm,0.6s
MLR Muntele Rosu 75.44 319 ⇑P **P 05 33 11.5 -0.9**
MLR Muntele Rosu 75.44 319 IAmb IAmb 05 33 14.2
comp=Z,60nm,1.9s
MLR Muntele Rosu 75.44 319 P **P 05 33 12.2 -0.2**
DOK Doka 75.52 282 P **P 05 33 12.7 -0.4**
ULM Lac du Bonnet 75.58 34 P **P 05 33 13.4 +0.5**
comp=Z,11nm,0.8s,baz=310,slow=7.1,SNR=12
ULM LR LR 06 08 58.4
comp=Z,413nm,18.2s,baz=330,slow=38
comp=Z,11nm,0.8s
ULM Lac du Bonnet 75.58 34 P **P 05 33 13.1 +0.2**
ULM IAmb IAmb 05 33 16.4
comp=Z,23nm,1.1s
ULM Lac du Bonnet 75.58 34 P **P 05 33 13.1 +0.2**
ULM pmax pmax
comp=Z,23nm,1.2s
PSN Preselentsi 75.60 316 *i* P **P 05 33 13.9 +0.8**
TUQ Turquoise Moun 75.72 55 P **P 05 33 15.1 +1.0**
baz=312
LANS Liptovska Anna 75.74 325 *e*P **P 05 33 15.9 +2.0**
LANS Liptovska Anna 75.74 325 *e*P **P 05 33 15.9 +2.0**
KSP Ksiaz 75.76 327 *e*P **P 05 33 14.7 +0.7**
KSP *e*L L 06 09 43.5
comp=Z,936nm,17.0s
MDND Maddock 75.77 37 P **P 05 33 15.8 +1.7**
baz=318
MDND Maddock 75.77 37 P **P 05 33 15.5 +1.4**
baz=318
OKC Ostrava-Krasne 75.78 326 AMS AMS 06 11 00.0
comp=Z,800nm,14.5s
VOIR 75.92 319 ⇓P **P 05 33 15.3 +0.2**
OSTC Ostas 76.02 327 *e*P **P 05 33 19.9 +4.5**
OSTC AMS AMS 06 09 30.0
comp=Z,700nm,15.0s
CHVC Chvalec 76.06 327 *e*P **P 05 33 16.3 +0.6**
CHVC AMS AMS 06 09 30.0
comp=Z,800nm,15.4s
P17A Butcher Ranch, 76.06 49 IAmb IAmb 05 33 21.0
comp=Z,27nm,1.0s
MORC Moravsky Berou 76.08 326 ⇑P P 05 33 10.1 -5.7
MORC Moravsky Berou 76.08 326 IAmb IAmb 05 33 17.7
comp=Z,16nm,1.0s
MORC Moravsky Berou 76.08 326 P **P 05 33 17.0 +1.2**
MORC Moravsky Berou 76.08 326 *e*P **P 05 33 16.5 +0.7**
DPC Dobruska-Polom 76.13 327 *e*P **P 05 33 17.1 +1.0**
DPC MLR MLR
comp=Z,700nm,12.4s
DPC Dobruska-Polom 76.13 327 *e*P **P 05 33 17.1 +1.0**
DPC AMS AMS 06 10 50.0
comp=Z,700nm,12.4s
UPC Upice 76.14 327 *e*P **P 05 33 17.0 +0.9**
UPC MLR MLR
comp=Z,900nm,16.4s
UPC Upice 76.14 327 *e*P **P 05 33 17.0 +0.9**
UPC AMS AMS 06 09 30.0
comp=Z,900nm,16.4s
K22A Casper 76.15 45 IAmb IAmb 05 33 20.8
comp=Z,38nm,1.4s
K22A Casper 76.15 45 P **P 05 33 17.6 +1.0**
baz=315
K22A Casper 76.15 45 P **P 05 33 17.0 +0.5**
baz=315
KRLC Kraliky 76.16 327 *e*P **P 05 33 16.9 +0.6**
KRLC MLR MLR
comp=Z,800nm,15.2s
KRLC Kraliky 76.16 327 *e*P **P 05 33 16.9 +0.6**
KRLC AMS AMS 06 09 50.0
comp=Z,800nm,15.2s
Q16A Castle Valley 76.19 50 IAmb IAmb 05 33 21.9
comp=Z,31nm,1.5s
E28A Huff 76.21 39 IAmb IAmb 05 33 21.4
comp=Z,40nm,1.4s
E28A Huff 76.21 39 P **P 05 33 17.6 +1.0**
baz=318
WHFO Wadi Hawf 76.23 282 P **P 05 33 16.5 -0.7**
P18A Preston Nutter 76.23 49 IAmb IAmb 05 33 28.3
comp=Z,18nm,1.0s
MAUC Maruska 76.27 326 *e*P **P 05 33 18.3 +1.4**
MAUC AMS AMS 06 09 10.0
comp=Z,1μm,17.7s
GMRC Granite Mounta 76.31 56 P **P 05 33 17.6 +0.1**
baz=312
PRD Provadia 76.35 316 *i* P **P 05 33 18.6 +1.2**
RSSD Black Hills 76.38 42 P **P 05 33 18.1 +0.2**
RSSD IAmb IAmb 05 33 21.9
comp=Z,18nm,1.1s
RSSD Black Hills 76.38 42 P **P 05 33 18.1 +0.2**
RSSD pmax pmax
comp=Z,18nm,1.1s
SRU San Rafael Swe 76.43 49 P **P 05 33 18.6 +0.4**
SRU IAmb IAmb 05 33 27.8
comp=Z,17nm,0.9s
SRU San Rafael Swe 76.43 49 P **P 05 33 18.6 +0.4**
SRU pmax pmax
comp=Z,17nm,0.9s
PSZ Piszkesteto 76.48 324 P **P 05 33 18.1 -0.1**
PSZ IAmb IAmb 05 33 20.3
comp=Z,21nm,1.2s
PSZ Piszkesteto 76.48 324 P **P 05 33 18.1 -0.1**
PSZ pmax pmax
comp=Z,21nm,1.2s
PSZ Piszkesteto 76.48 324 P **P 05 33 19.2 +1.0**
PFO Pinyon Flats O 76.59 57 LR LR 06 03 36.2
comp=Z,219nm,18.6s,baz=300,slow=33
BRG Berggiesshubel 76.67 329 *e*P **P 05 33 19.4 +0.3**
BRG Amp 05 33 20.6
comp=Z,12nm,1.2s
BRG *ex* x 05 33 31.4
BRG Amp 05 33 32.5
comp=Z,8.5nm,1.0s
BRG Berggiesshubel 76.67 329 *e*P **P 05 33 19.4 +0.3**
BRG *e* 05 33 31.3
BRG pmax pmax
comp=Z,12nm,1.2s
BRG MLR MLR
comp=N,960nm,14.8s
BRG MLR MLR
comp=Z,720nm,13.4s
CLL Collm 76.68 329 IAmb IAmb 05 33 20.3
comp=Z,22nm,1.2s
CLL Collm 76.68 329 *i* P **P 05 33 19.3 +0.2**
CLL *e*S **S 05 43 03.0 -2.2**
CLL pmax pmax
comp=Z,16nm,1.0s
CLL MLR MLR
comp=Z,700nm,18.2s
CLL Collm 76.68 329 *i* P **P 05 33 19.3 +0.2**
comp=Z,16nm,1.0s
CLL *e*PP **PP 05 36 11.0 +0.1**
CLL *e*S **S 05 43 03.0 -2.2**
CLL *e*PS **PnS 05 43 41.0 -2.1**
CLL *ex* x 05 52 12.0
CLL LmV 06 10 00.0
comp=Z,700nm,18.2s
PVCC Panska Ves 76.69 328 AMS AMS 06 10 00.0
comp=Z,900nm,16.2s
JAVC Velka Javorina 76.73 325 *e*P **P 05 33 21.4 +1.9**
VRAC Vranov 76.83 326 ⇑P **P 05 33 20.0 -0.1**
VRAC Vranov 76.83 326 LR LR 06 10 28.2
comp=Z,530nm,19.5s,baz=30,slow=38
VRAC Vranov 76.83 326 *e*P **P 05 33 21.1 +1.0**
ABTO Aybut 76.94 282 P **P 05 33 20.6 -0.6**
ABTO P **P 05 33 20.6 -0.6**
O20A White River Ci 76.99 47 IAmb IAmb 05 33 25.8
comp=Z,28nm,1.3s
O20A White River Ci 76.99 47 P **P 05 33 21.5 +0.1**
baz=314
IRM Iron Mountain 77.04 56 P **P 05 33 21.5 0.0**
baz=312
GZR Gura Zlata 77.05 320 ⇑P **P 05 33 20.8 -0.6**
BORA Eskisehir 77.06 312 IAmb IAmb 05 33 23.1
comp=Z,29nm,1.4s
AGMN Agassiz Nation 77.08 35 P **P 05 33 21.1 -0.3**
baz=320
SMOL Smolenice 77.09 325 *e*P **P 05 33 22.6 +1.0**
SMOL Smolenice 77.09 325 *e*P **P 05 33 22.6 +1.0**
KRUC Moravsky 77.10 326 *e*P **P 05 33 22.4 +0.8**
PRU Pruhonice 77.13 328 *e*P **P 05 33 22.1 +0.4**
PRU MLR MLR
comp=Z,1μm,14.5s
PRU Pruhonice 77.13 328 *e*P **P 05 33 22.1 +0.4**
PRU AMS AMS 06 10 10.0
comp=Z,1μm,14.5s

BUD Budapest 77.20 324 P **P 05 33 22.7 +0.6**
U15A North Rim 77.24 52 IAmb IAmb 05 33 28.2
comp=Z,24nm,1.2s
MODS Modra-Piesok 77.27 325 *e*P **P 05 33 24.2 +1.7**
MODS pmax pmax
comp=Z,48nm,1.4s
MODS Modra-Piesok 77.27 325 *e*P **P 05 33 24.1 +1.6**
TREC Trest 77.30 327 AMS AMS 06 10 20.0
comp=Z,1μm,15.8s
BZS Buzias 77.43 321 P **P 05 33 19.1 -4.3**
IKP In-Ko-Pah, Jac 77.45 57 P **P 05 33 24.6 +0.6**
baz=312
ZST Bratislava 77.48 325 *e*P **P 05 33 25.4 +1.7**
ZST Bratislava 77.48 325 *e*P **P 05 33 25.4 +1.7**
PDMCI Parker Dam,Lak 77.56 55 P **P 05 33 24.7 +0.3**
baz=313
NWAO Narrogin (SRO) 77.66 200 P **P 05 33 25.0 +0.3**
BLYC Blythe 77.70 56 IAmb IAmb 05 33 29.9
comp=Z,41nm,1.6s
N23A Red Feather La 77.70 46 IAmb IAmb 05 33 30.3
comp=Z,22nm,1.2s
N23A Red Feather La 77.70 46 P **P 05 33 26.4 +0.9**
baz=316
PV23 Carpenter Ridg 77.74 49 IAmb IAmb 05 33 30.4
comp=Z,28nm,1.0s
NKC Novy Kostel 77.75 329 AMS AMS 06 15 10.0
comp=Z,800nm,14.5s
PV11 David Mesa, Pa 77.92 49 IAmb IAmb 05 33 31.4
comp=Z,24nm,1.0s
B35A Bob, Littlefor 77.93 34 IAmb IAmb 05 33 29.7
comp=Z,27nm,0.9s
B35A Bob, Littlefor 77.93 34 P **P 05 33 25.1 -1.2**
baz=322
GLA Glamis 77.98 56 P **P 05 33 28.1 +1.2**
baz=312
MDVR Moldovita 78.00 321 ⇑P **P 05 33 26.0 -0.8**
PV13 Radium Mtn., P 78.05 49 IAmb IAmb 05 33 32.2
comp=Z,53nm,1.5s
MPEP Malo Peshtene 78.08 318 *i* P **P 05 33 27.2 +0.1**
SOP Sopron 78.11 325 P **P 05 33 29.0 +1.8**
PV15 Paradox Valley 78.11 49 IAmb IAmb 05 33 32.4
comp=Z,17nm,1.0s
CKRC Cesky Krumlov 78.15 327 *e*P **P 05 33 27.8 +0.4**
KHC Kasperske Hory 78.19 328 *e*P **P 05 33 27.6 -0.1**
KHC *e* 05 33 38.0
KHC MLR MLR
comp=Z,800nm,15.6s
KHC Kasperske Hory 78.19 328 *e*P **P 05 33 27.6 -0.1**
KHC *e*PCP **PcP 05 33 38.0 +0.8**
KHC AMS AMS 06 10 50.0
comp=Z,800nm,15.6s
RONA Rosalia, Austr 78.21 325 *i* P **P 05 33 29.2 +1.4**
comp=Z,15nm,1.2s,SNR=6.7
CONA Conrad Observa 78.21 326 *i* P **P 05 33 28.2 +0.3**
comp=Z,19nm,1.6s,SNR=7.2
MORH Mrgy, Hungar 78.33 323 P **P 05 33 27.4 -1.1**
SMCO Snowmass 78.36 47 P **P 05 33 29.4 +0.1**
SMCO IAmb IAmb 05 33 37.6
comp=Z,20nm,1.1s
GERES GERESS Array B 78.37 328 P **P 05 33 28.5 -0.3**
comp=Z,1.2nm,0.6s,baz=46,slow=5.8,SNR=14
GERES LR LR 06 11 34.4
comp=Z,686nm,18.3s,baz=36,slow=38
comp=Z,1.2nm,0.6s
EKA Eskdalemuir Ar 78.39 340 P **P 05 33 27.8 -0.8**
KDZ Kurdzhali 78.48 316 *i* P **P 05 33 29.8 +0.4**
RAYN Ar Rayn 78.53 291 P **P 05 33 29.1 -0.9**
RAYN IAmb IAmb 05 33 31.1
comp=Z,56nm,1.5s
RAYN Ar Rayn 78.53 291 P **P 05 33 29.1 -0.9**
RAYN pmax pmax
comp=Z,56nm,1.5s
RAYN Ar Rayn 78.53 291 P **P 05 33 29.7 -0.3**
RAYN Ar Rayn 78.53 291 *i* P **P 05 33 29.6 -0.4**
SNR=16
SUSD Miller 78.62 39 P **P 05 33 32.1 +2.0**
baz=319
ISCO Idaho Springs 78.66 46 IAmb IAmb 05 33 35.7
comp=Z,28nm,1.4s
ISCO Idaho Springs 78.66 46 P **P 05 33 32.5 +1.7**
ISCO Idaho Springs 78.66 46 P **P 05 33 32.0 +1.2**
baz=316,SNR=15
KOVH Kovagottos 78.67 323 P **P 05 33 29.8 -0.5**
ALN Alexandroupoli 78.70 316 IAmb IAmb 05 33 32.3
comp=Z,32nm,1.4s
F33A 5 Mile Ranch, 78.78 37 IAmb IAmb 05 33 34.7
comp=Z,19nm,0.9s
RDO Rodhopi 78.78 316 IAmb IAmb 05 33 33.1
comp=Z,39nm,1.2s
VTS Vitosha 78.87 318 ⇑P **P 05 33 32.3 +0.5**
VTS Vitosha 78.87 318 IAmb IAmb 05 33 34.0
comp=Z,14nm,0.8s
VTS Vitosha 78.87 318 P **P 05 33 32.9 +1.2**
VTS Vitosha 78.87 318 *i* P **P 05 33 31.6 -0.1**
ARSA Arzberg 78.89 326 *e*P **P 05 33 32.1 +0.6**
comp=Z,6.0nm,0.9s
MMAI Mount Meron Ar 78.89 304 LR LR 06 12 09.3
comp=Z,286nm,18.9s,baz=210,slow=39
MVCO Mesa Verde 78.90 50 IAmb IAmb 05 33 38.4
comp=Z,25nm,1.4s
MOA Molln 78.93 327 *e*P **P 05 33 34.0 +2.2**
comp=Z,3.3nm,0.9s
EYMN Ely 79.17 33 IAmb IAmb 05 33 36.7
comp=Z,26nm,0.9s
EYMN Ely 79.17 33 P **P 05 33 32.9 -0.2**
baz=323
BIOA Bad Ischl, Aus 79.32 327 *e*P **P 05 33 34.6 +0.7**
comp=Z,10nm,1.0s
EZN Ezine 79.33 315 P **P 05 33 34.2 +0.2**
S22A 4UR Ranch, Cre 79.46 48 P **P 05 33 35.5 +0.3**
baz=316
KKB Krupnik 79.51 318 *i* P **P 05 33 35.8 +0.8**
Q24A Divide 79.51 46 P **P 05 33 36.0 +0.5**
baz=316
SOKA Soboth 79.54 325 *i* P **P 05 33 36.1 +0.9**
comp=Z,27nm,1.6s,SNR=5.7
W18A Petrified Fore 79.64 52 P **P 05 33 37.9 +1.8**
baz=314
OGNE Ogallala 79.71 43 P **P 05 33 37.3 +1.1**
baz=318
BTNL Ternell 79.75 333 *d*P **P 05 33 36.0 -0.3**
MEM Membach 79.78 333 *d*P **P 05 33 36.0 -0.3**
KBA Koelnbreinsper 79.93 327 *e*P **P 05 33 37.7 +0.3**
comp=Z,29nm,1.3s
214A Organ Pipe Nat 79.97 56 P **P 05 33 38.1 +0.3**
baz=314
BHOU Houvegnez 80.00 333 *d*P **P 05 33 38.0 +0.5**
MYKA Terra Mystica 80.16 326 *e*P **P 05 33 39.1 +0.5**
comp=Z,14nm,0.9s
BCLA Clavier 80.18 333 *d*P **P 05 33 38.6 +0.2**
SDCO Great Sand Dun 80.19 48 P **P 05 33 40.0 +0.8**
baz=316,SNR=16
E38A The Farm, Brul 80.22 34 IAmb IAmb 05 33 42.2
comp=Z,31nm,1.1s
ECSD EROS Data Cent 80.25 38 P **P 05 33 38.9 -0.2**
ECSD IAmb IAmb 05 33 42.8
comp=Z,27nm,0.9s
ECSD EROS Data Cent 80.25 38 P **P 05 33 38.6 -0.4**
baz=320
RCHB Rochefort 80.43 333 *d*P **P 05 33 40.0 +0.1**
WATA Walderalm 80.43 328 *e*P **P 05 33 41.4 +1.2**
comp=Z,30nm,1.9s
BMRD Maredsous 80.46 333 *d*P **P 05 33 39.7 -0.3**
WTTA Wattenberg 80.47 328 *i* P **P 05 33 41.4 +1.0**
comp=Z,13nm,0.8s,SNR=5.2
ABTA Abfaltersbach 80.53 327 *e*P **P 05 33 40.6 +0.1**
comp=Z,10.0nm,1.4s
MOTA Moosalm 80.61 328 *i* P **P 05 33 42.0 +0.9**
comp=Z,30nm,1.2s,SNR=7.1
RETA Reutte 80.63 328 *i* P **P 05 33 42.1 +1.0**
comp=Z,22nm,1.3s,SNR=7.2
SQTA Sankt Quirin 80.67 328 *e*P **P 05 33 42.3 +1.0**
comp=Z,15nm,1.2s
SCHQ Schefferville 80.69 16 P **P 05 33 41.4 +0.2**
comp=Z,15nm,0.9s,baz=324,slow=5.8,SNR=11
SCHQ LR LR 06 13 39.3
comp=Z,278nm,18.5s,baz=350,slow=39
comp=Z,15nm,0.9s
SCHQ Schefferville 80.69 16 IAmb IAmb 05 33 45.2
comp=Z,28nm,1.2s
SPMN Marine on St. 80.79 35 P **P 05 33 41.2 -0.7**
baz=323
KSCO Kaye Shedlock' 80.82 45 IAmb IAmb 05 33 46.5
comp=Z,40nm,1.3s
KSCO Kaye Shedlock' 80.82 45 P **P 05 33 42.4 0.0**
baz=318

STAL STALIGIAL 80.84 327 IAmb IAmb 05 33 44.6
comp=Z,68nm,1.6s
BFO Black Forest 80.86 330 P **P 05 33 42.2 0.0**
BFO Black Forest 80.86 330 P **P 05 33 42.2 0.0**
BFO pmax pmax
comp=Z,20nm,1.3s
PDG Podgorica 80.95 320 ⇑P **P 05 33 42.9 +0.1**
PDG Podgorica 80.95 320 IAmb IAmb 05 33 44.1
comp=Z,22nm,0.9s
TUC Tucson 80.97 55 P **P 05 33 43.7 +0.5**
TUC Tucson 80.97 55 P **P 05 33 43.7 +0.5**
TUC pmax pmax
comp=Z,11nm,1.2s
FETA Feichten 81.03 328 *i* P **P 05 33 43.6 +0.3**
comp=Z,9.0nm,0.8s,SNR=5.6
DAVA Damuels 81.14 329 *i* P **P 05 33 44.6 +0.7**
comp=Z,20nm,1.1s,SNR=6.2
CDF Champ du Feu 81.18 331 *e*P **P 05 33 44.4 +0.4**
CDF pmax pmax
comp=Z,9.0nm,1.0s
T25A Trinidad 81.23 47 IAmb IAmb 05 33 49.1
comp=Z,20nm,1.0s
T25A Trinidad 81.23 47 P **P 05 33 45.2 +0.5**
baz=317
I37B Waseca 81.49 36 P **P 05 33 45.9 +0.2**
baz=322
DAVOX Davos/Dischmat 81.56 328 LR LR 06 12 06.8
comp=Z,369nm,20.1s,baz=84,slow=37
KBN Korca 81.58 318 IAmb IAmb 05 33 47.4
comp=Z,32nm,1.1s
ANMO Albuquerque 81.67 50 P **P 05 33 47.4 +0.4**
ANMO Albuquerque 81.67 50 P **P 05 33 47.4 +0.4**
ANMO pmax pmax
comp=Z,18nm,1.3s
ANMO Albuquerque 81.67 50 P **P 05 33 48.3 +1.3**
baz=316
HINF Hinteralfeld 81.83 331 *e*P **P 05 33 49.9 +2.5**
HINF pmax pmax
comp=Z,6.0nm,1.0s
HAU Haudompre 81.86 331 *e*P **P 05 33 47.5 0.0**
HAU pmax pmax
comp=Z,7.0nm,0.8s
E43A Lone Tree Farm 82.23 31 IAmb IAmb 05 33 53.0
comp=Z,24nm,1.2s
121A Cookes Peak, D 82.61 53 P **P 05 33 52.0 +0.1**
baz=316
I40A Norwalk 82.79 35 IAmb IAmb 05 33 56.0
comp=Z,34nm,1.2s
E46A Sault Ste Mari 83.26 30 IAmb IAmb 05 33 58.1
comp=Z,28nm,1.4s
LOR Lormes 83.37 332 *e*P **P 05 33 55.4 0.0**
LOR pmax pmax
comp=Z,15nm,1.0s
I42A Draeger Farm, 83.51 34 IAmb IAmb 05 34 01.4
comp=Z,24nm,1.0s
LDF La Druitiere 83.53 335 *e*P **P 05 33 59.3 +3.1**
LDF pmax pmax
comp=Z,36nm,1.6s
SSF Saint Saulge 83.67 332 *e*P **P 05 33 57.0 +0.1**
SSF pmax pmax
comp=Z,6.0nm,0.7s
JFWS Jewell Farm 83.74 35 IAmb IAmb 05 34 00.6
comp=Z,20nm,1.1s
LPL La Plagne 83.82 330 *e*P **P 05 33 58.7 +0.7**
LPL pmax pmax
comp=Z,22nm,1.2s
LPG La Plagne 83.83 330 *e*P **P 05 33 58.8 +0.7**
LPG pmax pmax
comp=Z,12nm,0.8s
GRR Gorron 83.94 336 *e*P **P 05 33 57.7 -0.6**
GRR pmax pmax
comp=Z,24nm,1.2s
AVF Avril sur Loir 83.96 332 *e*P **P 05 33 57.8 -0.6**
AVF pmax pmax
comp=Z,16nm,0.7s
BNI Bardonecchia 84.23 329 IAmb IAmb 05 34 05.5
comp=Z,13nm,1.0s
BGF Bois d'Agland 84.33 332 *e*P **P 05 33 59.7 -0.6**
BGF pmax pmax
comp=Z,45nm,1.8s
AMTX Amarillo 84.38 47 P **P 05 34 00.8 -0.1**
AMTX IAmb IAmb 05 34 05.4
comp=Z,25nm,1.2s
MSTX Muleshoe 84.46 49 P **P 05 34 00.8 -0.6**
MSTX IAmb IAmb 05 34 06.4
comp=Z,11nm,1.0s
MSTX Muleshoe 84.46 49 P **P 05 34 00.3 -1.1**
baz=318
MBDF Montbardon 84.47 329 *e*P **P 05 34 01.0 -0.2**
MBDF pmax pmax
comp=Z,10.0nm,0.7s
SGMF Saint Gilles 84.57 336 *e*P **P 05 34 01.1 -0.4**
SGMF pmax pmax
comp=Z,52nm,1.7s
MNTX Cornudas Mount 84.63 52 IAmb IAmb 05 34 06.7
comp=Z,16nm,1.2s
MNTX Cornudas Mount 84.63 52 P **P 05 34 01.5 -0.6**
baz=317
ORIF Oris-en-Rattie 84.64 330 *e*P **P 05 34 02.4 +0.3**
ORIF pmax pmax
comp=Z,14nm,0.8s
TIP Timpagrande 84.67 320 ⇑P **P 05 34 00.1 -2.1**
ROSF Rostrenen 84.71 337 *e*P **P 05 34 01.9 -0.3**
ROSF pmax pmax
comp=Z,92nm,1.7s
L42A Oliver, Polo 84.73 35 IAmb IAmb 05 34 05.5
comp=Z,22nm,0.9s
P38A Dawn 84.90 39 P **P 05 34 03.6 +0.3**
baz=323,SNR=16
VIVF Saint-Julien-l 85.15 330 *e*P **P 05 34 04.1 -0.4**
VIVF pmax pmax
comp=Z,17nm,0.9s
T35B Sooner Cattle 85.56 43 P **P 05 34 07.9 +1.2**
baz=321,SNR=5.4
P40A Paris 85.67 38 IAmb IAmb 05 34 11.2
comp=Z,25nm,0.9s
J47A Sunmer 85.71 32 P **P 05 34 07.5 +0.3**
baz=328
J47A P **P 05 34 07.5 +0.3**
baz=328
RJF Les Rejaudoux 85.88 333 *e*P **P 05 34 07.9 -0.2**
RJF pmax pmax
comp=Z,39nm,1.5s
CAF Calviac 86.02 332 *e*P **P 05 34 09.1 +0.2**
CAF pmax pmax
comp=Z,21nm,0.9s
WMOK Wichita Mounta 86.06 46 IAmb IAmb 05 34 13.3
comp=Z,18nm,1.2s
WMOK Wichita Mounta 86.06 46 P **P 05 34 09.3 +0.1**
WMOK Wichita Mounta 86.06 46 P **P 05 34 09.1 -0.2**
baz=320
LATQ La Tuque 86.13 22 IAmb IAmb 05 34 12.9
comp=Z,13nm,0.9s
URZ Urewera 86.36 152 LR LR 06 10 22.6
comp=Z,208nm,19.0s,baz=211,slow=34
PMOR Pomariorio Ree 86.44 114 *e*T T 07 09 10.5
comp=Z,38nm,0.2s
SADO Sadowa 86.48 27 LR LR 06 18 16.3
comp=Z,208nm,18.0s,baz=360,slow=39
S39A Bolivar 86.53 40 IAmb IAmb 05 34 15.2
comp=Z,17nm,0.9s
S39A Bolivar 86.53 40 P **P 05 34 10.8 -0.6**
baz=323,SNR=16
R40A Maddies Statio 86.56 39 IAmb IAmb 05 34 15.2
comp=Z,28nm,1.1s
R40A Maddies Statio 86.56 39 P **P 05 34 11.4 -0.1**
baz=323,SNR=14
TUL1 Leonard 86.71 43 IAmb IAmb 05 34 16.5
comp=Z,23nm,1.2s
TUL1 Leonard 86.71 43 P **P 05 34 12.2 -0.2**
baz=322
P43A Skaggs, Pawnee 86.72 37 IAmb IAmb 05 34 17.8
comp=Z,15nm,1.1s
O44A Mansfield 86.77 36 IAmb IAmb 05 34 16.2
comp=Z,15nm,1.1s
L48A N Adams 86.95 32 P **P 05 34 13.8 +0.3**
baz=328
L48A P **P 05 34 13.8 +0.3**
baz=328
U38A Gravette 87.00 42 IAmb IAmb 05 34 17.6
comp=Z,15nm,1.0s
U38A Gravette 87.00 42 P **P 05 34 13.2 -0.6**
baz=322,SNR=8.1
LPIG La Paz 87.02 60 LR LR 06 05 21.6
comp=Z,117nm,21.1s,baz=324,slow=30
PPT Papeete 87.12 117 LR LR 06 06 39.7
comp=Z,180nm,20.4s,baz=306,slow=31

VAE	Valguarnera	87.14	320	LR	LR	06 18 03.4		
	comp=Z,373nm,18.6s,baz=204,slow=39							
PPT2	Papeete2	87.14	117	eLR	LR	06 02 31.0		
	comp=Z,336nm,23.0s							
PPT2	Papeete2	87.14	117	eT	T	07 09 58.0		
	comp=Z,11nm,0.3s							
PAE	Paea	87.19	117	eT	T	07 10 01.3		
	comp=Z,1.3nm,0.3s							
ABTX	Abilene, Hawle	87.20	47	P	P	05 34 15.2	+0.4	
	baz=320							
DELO	Deloro Mine	87.22	27	IAmb	IAmb	05 34 18.2		
	comp=Z,20nm,1.0s							
CCM	Cathedral Cave	87.22	39	P	P	05 34 14.9	+0.1	
CCM	Cathedral Cave	87.22	39	P	P	05 34 14.9	+0.1	
CCM				pmax	pmax			
	comp=Z,27nm,1.0s							
CCM	Cathedral Cave	87.22	39	P	P	05 34 15.0	+0.2	
	baz=324,SNR=20							
TIAR	Tiarei	87.27	116	eT	T	07 10 07.5		
	comp=Z,2.4nm,0.3s							
N47A	Urbana	87.34	34	IAmb	IAmb	05 34 19.1		
	comp=Z,19nm,0.8s							
N47A	Urbana	87.34	34	P	P	05 34 14.6	-0.8	
	baz=327							
N47A				P	P	05 34 14.6	-0.8	
	baz=327							
HHAR	Hobbs	87.35	41	IAmb	IAmb	05 34 20.4		
	comp=Z,16nm,1.2s							
HHAR	Hobbs	87.35	41	P	P	05 34 14.8	-0.7	
	baz=322							
MTLF	Montolieu	87.35	331	eP	P	05 34 15.3	0.0	
MTLF				pmax	pmax			
	comp=Z,87nm,1.9s							
TX31	Lajitas Ar. Si	87.36	52	P	P	05 34 16.2	+0.4	
	baz=318							
TX32	Lajitas Array	87.36	52	IAmb	IAmb	05 34 20.2		
	comp=Z,15nm,1.3s							
TXAR	Lajitas Array	87.36	52	P	P	05 34 16.4	+0.6	
	comp=Z,4.5nm,1.0s,baz=305,slow=4.4,SNR=15							
	comp=Z,4.5nm,1.0s							
D62A	Allapoint, All	87.41	20	IAmb	IAmb	05 34 19.4		
	comp=Z,18nm,1.1s							
D62A	Allapoint, All	87.41	20	P	P	05 34 15.7	+0.1	
	baz=338,SNR=8.2							
D62A				P	P	05 34 15.7	+0.1	
	baz=338,SNR=8.2							
MGMO	Mountain Grove	87.47	40	IAmb	IAmb	05 34 20.1		
	comp=Z,15nm,0.9s							
Q44A	Meyer Farm, Va	87.55	37	IAmb	IAmb	05 34 20.3		
	comp=Z,21nm,0.9s							
MNTQ	Montreal, Queb	87.60	24	IAmb	IAmb	05 34 20.8		
	comp=Z,25nm,1.1s							
FVM	French Village	87.66	38	IAmb	IAmb	05 34 20.9		
	comp=Z,17nm,1.1s							
FVM	French Village	87.66	38	P	P	05 34 16.7	-0.2	
	baz=324							
TAOE	Nuku Hiva Isla	87.67	104	eLR	LR	06 02 59.4		
	comp=Z,233nm,24.4s							
TAOE	Nuku Hiva Isla	87.67	104	eT	T	07 10 42.3		
	comp=Z,23nm,0.2s							
E62A	Clayton Lake	87.72	21	P	P	05 34 17.1	+0.1	
	baz=338							
E62A				P	P	05 34 17.1	+0.1	
	baz=338							
U40A	Yellville	87.82	41	P	P	05 34 17.7	-0.1	
	baz=323,SNR=26							
U40A				P	P	05 34 17.7	-0.1	
	baz=323,SNR=26							
U40A	Yellville	87.82	41	P	P	05 34 17.2	-0.6	
	baz=323							
HPIG		87.91	55	IAmb	IAmb	05 34 23.0		
	comp=Z,16nm,1.3s							
N49A	Columbus Grove	87.92	33	P	P	05 34 19.3	+1.1	
	baz=328							
N49A				P	P	05 34 19.3	+1.1	
	baz=328							
BMNY	Brushton-Moira	87.93	24	P	P	05 34 17.9	-0.2	
	baz=334							
PECO	Prince Edward	87.94	26	IAmb	IAmb	05 34 21.7		
	comp=Z,14nm,0.9s							
O48B	Farmland	88.08	34	P	P	05 34 19.4	+0.5	
	baz=328							
O48B	Farmland	88.08	34	P	P	05 34 18.6	-0.3	
	baz=328							
J55A	Hilton	88.25	27	P	P	05 34 19.6	-0.1	
	baz=332							
J55A				P	P	05 34 19.6	-0.1	
	baz=332							
W39A	Magazine	88.28	42	IAmb	IAmb	05 34 37.8		
	comp=Z,37nm,1.8s							
W39A	Magazine	88.28	42	P	P	05 34 19.8	-0.1	
	baz=323							
WCNY	West Carthage	88.34	26	P	P	05 34 19.9	-0.1	
	baz=334							
MEH	Mehetia	88.35	116	eT	T	07 11 28.6		
	comp=Z,66nm,0.3s							
ATD	Arta Tunnel	88.36	284	LR	LR	06 18 43.8		
	comp=Z,103nm,18.9s,baz=280,slow=39							
S44A	Carbondale	88.43	38	P	P	05 34 20.3	-0.3	
	baz=325,SNR=6.1							
FCAR	Ozark Folk Cen	88.55	41	IAmb	IAmb	05 34 24.7		
	comp=Z,18nm,1.1s							
J56A	Wolcott	88.57	27	IAmb	IAmb	05 34 24.8		
	comp=Z,17nm,1.0s							
J56A	Wolcott	88.57	27	P	P	05 34 20.7	-0.4	
	baz=333,SNR=7.7							
J56A				P	P	05 34 20.7	-0.4	
	baz=333,SNR=7.7							
PBMO	Poplar Bluff	88.64	39	P	P	05 34 22.0	+0.4	
	baz=324,SNR=15							
P48A	Milroy	88.64	34	IAmb	IAmb	05 34 25.4		
	comp=Z,12nm,0.8s							
MMNY	Mt. Morris Dam	88.69	28	IAmb	IAmb	05 34 25.5		
	comp=Z,23nm,1.0s							
ETSF	Etsaut	88.71	333	eP	P	05 34 22.1	+0.2	
ETSF				pmax	pmax			
	comp=Z,20nm,1.2s							
F64A	Sherman	88.72	20	IAmb	IAmb	05 34 26.4		
	comp=Z,21nm,1.2s							
WVNY	West Valley, N	88.74	28	IAmb	IAmb	05 34 26.1		
	comp=Z,20nm,1.0s							
NCB	Newcomb	88.80	25	IAmb	IAmb	05 34 26.2		
	comp=Z,16nm,1.0s							
M53A	WI Miller and	88.83	30	P	P	05 34 22.8	+0.4	
	baz=330							
LCAR	Lake Charles	88.87	40	IAmb	IAmb	05 34 26.6		
	comp=Z,34nm,1.8s							
WHTX	Lake Whitney,	88.87	46	P	P	05 34 22.6	-0.2	
	baz=321							
P49A	Miami Univ. Ec	88.88	34	P	P	05 34 23.1	+0.4	
	baz=328							
MIAR	Mount Ida	88.90	42	IAmb	IAmb	05 34 27.1		
	comp=Z,21nm,1.1s							
MIAR	Mount Ida	88.90	42	P	P	05 34 24.0	+1.1	
MIAR	Mount Ida	88.90	42	P	P	05 34 23.4	+0.6	
	baz=323							
WHAR	Wooly Hollow	88.95	41	IAmb	IAmb	05 34 26.9		
	comp=Z,20nm,1.0s							
ACSO	Alum Creek Sta	88.98	32	P	P	05 34 22.9	-0.3	
	baz=329,SNR=12							
J58A	Remsen	89.01	26	IAmb	IAmb	05 34 27.6		
	comp=Z,16nm,0.9s							
J58A	Remsen	89.01	26	P	P	05 34 23.6	+0.3	
	baz=334,SNR=8.7							
J58A				P	P	05 34 23.6	+0.3	
	baz=334,SNR=8.7							
PKME	Peaks-Kenny Pk	89.03	21	IAmb	IAmb	05 34 27.6		
	comp=Z,14nm,0.9s							
W41B	Gary Mavity, V	89.06	41	IAmb	IAmb	05 34 27.5		
	comp=Z,12nm,1.1s							
W41B	Gary Mavity, V	89.06	41	P	P	05 34 23.6	0.0	
	baz=323							
H62A	Milan	89.16	22	P	P	05 34 24.4	+0.5	
	baz=337,SNR=18							
H62A				P	P	05 34 24.4	+0.5	
	baz=337,SNR=18							
J59A	Piesco	89.17	25	IAmb	IAmb	05 34 27.9		
	comp=Z,19nm,1.0s							
J59A	Piesco	89.17	25	P	P	05 34 23.4	-0.6	
	baz=334							
J59A				P	P	05 34 23.4	-0.6	
	baz=334							
X40A	Basin Creek Fa	89.32	42	IAmb	IAmb	05 34 29.9		
	comp=Z,18nm,1.2s							
X40A	Basin Creek Fa	89.32	42	P	P	05 34 25.0	+0.1	
	baz=323							
N53A	Lisbon	89.32	30	P	P	05 34 24.9	+0.2	
	baz=330,SNR=12							
N53A				P	P	05 34 24.9	+0.2	
	baz=330,SNR=12							
L56A	Greenwood	89.34	28	IAmb	IAmb	05 34 28.9		
	comp=Z,12nm,0.8s							
L56A	Greenwood	89.34	28	P	P	05 34 24.8	0.0	
	baz=332							
L56A				P	P	05 34 24.8	0.0	
	baz=332							
RPZ	Rata Peaks	89.47	159	LR	LR	06 12 28.6		
	comp=Z,278nm,18.5s,baz=204,slow=34							
ACCN	Adirondack Com	89.50	25	P	P	05 34 26.5	+1.0	
	baz=335,SNR=7.5							
M55A	Ridgway	89.51	29	P	P	05 34 26.4	+0.8	
	baz=332,SNR=12							
M55A				P	P	05 34 26.4	+0.8	
	baz=332,SNR=12							
O52A	Adamsville	89.53	31	P	P	05 34 26.2	+0.4	
	baz=330,SNR=5.3							
Q52A				P	P	05 34 26.2	+0.4	
	baz=330,SNR=5.3							
WVL	Waterville	89.58	21	IAmb	IAmb	05 34 30.2		
	comp=Z,20nm,1.1s							
LMN	Caledonia Moun	89.59	18	IAmb	IAmb	05 34 30.1		
	comp=Z,22nm,1.1s							
O53A	New Philadelph	89.66	31	P	P	05 34 25.9	-0.5	
	baz=330							
GGN	Saint George	89.80	19	IAmb	IAmb	05 34 31.5		
	comp=Z,20nm,1.1s							
I63A	Otisfield	89.80	22	P	P	05 34 28.2	+1.3	
	baz=337,SNR=6.0							
I63A				P	P	05 34 28.2	+1.3	
	baz=337,SNR=6.0							
BINY	Binghamton	89.82	27	IAmb	IAmb	05 34 31.1		
	comp=Z,17nm,1.0s							
BINY	Binghamton	89.82	27	P	P	05 34 26.8	-0.3	
	baz=334							
P52A	Corning	89.83	32	IAmb	IAmb	05 34 31.5		
	comp=Z,22nm,1.0s							
P52A	Corning	89.83	32	P	P	05 34 27.4	+0.2	
	baz=330							
Q51A	Peebles	89.87	33	P	P	05 34 25.9	-1.4	
	baz=329,SNR=6.2							
Q51A				P	P	05 34 25.9	-1.4	
	baz=329,SNR=6.2							
J61A	Chester	89.87	24	IAmb	IAmb	05 34 31.9		
	comp=Z,14nm,0.9s							
T47A	Sharon Grove	89.98	37	IAmb	IAmb	05 34 32.1		
	comp=Z,20nm,0.9s							
T47A	Sharon Grove	89.98	37	P	P	05 34 28.5	+0.6	
	baz=326							
FFD	Franklin Falls	90.03	23	IAmb	IAmb	05 34 32.7		
	comp=Z,24nm,1.1s							
O54A	Avella	90.04	30	P	P	05 34 27.5	-0.6	
	baz=331,SNR=14							
O54A				P	P	05 34 27.5	-0.6	
	baz=331,SNR=14							
R50A	Paris	90.10	34	IAmb	IAmb	05 34 33.3		
	comp=Z,12nm,0.9s							
L59A	Walton	90.14	26	P	P	05 34 28.7	+0.1	
	baz=334,SNR=11							
L59A				P	P	05 34 28.7	+0.1	
	baz=334,SNR=11							
M57A	Sunshine Farm,	90.20	28	P	P	05 34 29.6	+0.7	
	baz=333,SNR=18							
M57A				P	P	05 34 29.6	+0.7	
	baz=333,SNR=18							
P53A	Whipple	90.25	31	IAmb	IAmb	05 34 34.0		
	comp=Z,23nm,1.0s							
WVT	Waverly	90.37	38	P	P	05 34 29.4	-0.3	
WVT				IAmb	IAmb	05 34 33.8		
	comp=Z,11nm,1.0s							
WVT	Waverly	90.37	38	P	P	05 34 29.4	-0.3	
WVT				pmax	pmax			
	comp=Z,11nm,1.0s							
WVT	Waverly	90.37	38	P	P	05 34 30.1	+0.4	
	baz=326,SNR=5.1							
KSPA	Keystone Colle	90.47	27	IAmb	IAmb	05 34 34.2		
	comp=Z,17nm,0.9s							
KSPA	Keystone Colle	90.47	27	P	P	05 34 30.2	+0.2	
	baz=334							
SSPA	Standing Stone	90.55	29	P	P	05 34 30.8	+0.3	
SSPA	Standing Stone	90.55	29	P	P	05 34 31.3	+0.8	
	baz=332,SNR=13							
K62A	Royalston	90.59	24	IAmb	IAmb	05 34 35.3		
	comp=Z,21nm,1.1s							
UNH	University of	90.60	23	P	P	05 34 32.2	+1.6	
	baz=337							
MCWV	Mont Chateau	90.69	30	IAmb	IAmb	05 34 35.9		
	comp=Z,22nm,1.0s							
N58A	Sunbury	90.78	28	P	P	05 34 32.2	+0.6	
	baz=333,SNR=12							
N58A				P	P	05 34 32.2	+0.6	
	baz=333,SNR=12							
Q54A	Coxs Mills	90.90	31	IAmb	IAmb	05 34 37.2		
	comp=Z,12nm,0.8s							
Q54A	Coxs Mills	90.90	31	P	P	05 34 31.7	-0.4	
	baz=330							
Q54A				P	P	05 34 31.7	-0.4	
	baz=330							
KEST	Kesra	90.92	323	LR	LR	06 20 36.7		
	comp=Z,568nm,18.5s,baz=348,slow=39							
HRV	Adam Dziewonsk	90.94	23	P	P	05 34 32.5	+0.3	
HRV				IAmb	IAmb	05 34 37.6		
	comp=Z,22nm,1.1s							
HRV	Adam Dziewonsk	90.94	23	P	P	05 34 32.5	+0.3	
HRV				pmax	pmax			
	comp=Z,23nm,1.1s							
T50A	Nancy	90.94	35	IAmb	IAmb	05 34 36.4		
	comp=Z,15nm,1.1s							
T50A	Nancy	90.94	35	P	P	05 34 32.1	-0.3	
	baz=328							
T50A				P	P	05 34 32.1	-0.3	
	baz=328							
U49A	Red Boiling Sp	90.96	36	IAmb	IAmb	05 34 36.6		
	comp=Z,19nm,1.1s							
U49A	Red Boiling Sp	90.96	36	P	P	05 34 32.9	+0.4	
	baz=327,SNR=10							
KSCT	Kent School, K	91.06	25	IAmb	IAmb	05 34 37.0		
	comp=Z,19nm,1.2s							
CLTN	Cedars of Leba	91.07	37	IAmb	IAmb	05 34 37.2		
	comp=Z,10nm,1.0s							
V48A	Smith Brothers	91.15	37	IAmb	IAmb	05 34 38.9		
	comp=Z,8.6nm,1.0s							
V48A	Smith Brothers	91.15	37	P	P	05 34 33.7	+0.3	
	baz=327							
ODNJ	Ogdensburg	91.28	26	IAmb	IAmb	05 34 37.8		
	comp=Z,8.9nm,0.8s							
ODNJ	Ogdensburg	91.28	26	P	P	05 34 34.1	+0.3	
	baz=334							
TBI	Tubuai	91.31	121	eT	T	07 15 09.0		
	comp=Z,38nm,0.3s							
R55A	Marlinton	91.79	31	IAmb	IAmb	05 34 47.5		
	comp=Z,10nm,0.9s							
TZTN	Tazewell	91.90	34	IAmb	IAmb	05 34 40.9		
	comp=Z,15nm,1.1s							
SWET	Sewanee	91.98	37	IAmb	IAmb	05 34 40.8		
	comp=Z,15nm,1.1s							
X48A	Hartselle	92.11	38	IAmb	IAmb	05 34 41.3		
	comp=Z,9.5nm,1.1s							
CPCT	Cooper Cave	92.41	36	IAmb	IAmb	05 34 43.8		
	comp=Z,12nm,1.0s							
TKL	Tuckaleechee C	92.55	35	LR	LR	06 19 28.0		
	comp=Z,339nm,18.5s,baz=340,slow=38							
ESDC	Sonseca Array	92.73	334	P	P	05 34 40.2	-0.4	
	comp=Z,2.6nm,0.8s,baz=18,slow=4.4,SNR=11							
ESDC				LR	LR	06 21 37.0		
	comp=Z,499nm,18.9s,baz=18,slow=39							
	comp=Z,2.6nm,0.8s							
ESDC	Sonseca Array	92.73	334	IAmb	IAmb	05 34 41.8		
	comp=Z,10nm,1.3s							
KMSC	Kings Mountain	94.02	34	P	P	05 34 47.2	+0.6	
	baz=330							
MDT	Midelt	99.15	331	LR	LR	06 23 14.3		
	comp=Z,148nm,18.4s,baz=18,slow=37							
TORD	Torodi Ar. Bea	113.59	316	PKiKP	PKiKP	05 40 06.7	-0.5	
	comp=Z,1.4nm,1.1s,baz=46,slow=2.9,SNR=4.8							
TORD				PP	PP	05 40 56.5	-1.8	
	comp=Z,4.5nm,1.0s,baz=24,slow=6.2,SNR=14							
NPGB	Novo Progresso	142.32	27	eP	PKPdf	05 41 00.7	-0.7	
TROLL	Troll, Antarti	143.77	200	P	PKPbc	05 40 60.0	-0.1	
TROLL	Troll, Antarti	143.77	200	PP	PP	05 44 13.6	-2.4	
LPAZ	La Paz	144.23	53	PKP	PKPdf	05 41 05.0	-0.5	
	comp=Z,1.7nm,0.8s,baz=12,slow=4.9,SNR=8.1							
LPAZ	La Paz	144.23	53	PKPdf	PKPbc	05 41 03.7	+0.1	
LPAZ	La Paz	144.23	53	PKiKP	PKPbc	05 41 03.7	+0.1	
LPAZ	La Paz	144.23	53	eP	PKPdf	05 41 06.2	+0.7	
SNAA	Sanae	145.33	199	P	PKPbc	05 41 04.6	-0.3	
SNAA	Sanae	145.33	199	PP	PP	05 44 24.9	-0.2	
SNAA	Sanae	145.33	199		PKPbc	05 41 04.6	-0.3	
SNAA	Sanae	145.33	199	PKIKP	PKPbc	05 41 04.6	-0.3	
CLDB	Colider	145.71	30	eP	PKPab	05 41 09.3	+1.3	
VILB	Vilhena	145.72	39	eP	PKPab	05 41 08.9	+0.8	
NBCA	Caruaru-PE	146.30	355	eP	PKPab	05 41 10.2	0.0	
NBRF	Rio Formoso -	146.68	353	eP	PKPbc	05 41 10.8	+0.3	
VBST	Vila Bela da S	147.18	40	eP	PKPbc	05 41 11.1	-0.8	
VNA3	Neumayer Olymp	147.21	197	P	PKPbc	05 41 09.5	-1.0	
VNA3	Neumayer Olymp	147.21	197	PP	PP	05 44 36.2	0.0	
VNA1	Neumayer--Stat	147.32	198	P	PKPbc	05 41 10.1	-0.6	
VNA1	Neumayer--Stat	147.32	198	PP	PP	05 44 36.4	-0.4	
SNDB	Serra Nova Dou	148.25	23	eP	PKPdf	05 41 12.9	+1.3	
BDFB	Brasilia	152.64	19		PKiKP	05 41 26.4	+0.6	
BDFB	Brasilia	152.64	19	PKIKP	PKiKP	05 41 26.4	+0.6	
PLCA	Paso Flores	156.35	98	PKPab	PKPab	05 41 53.0	+1.7	
	comp=Z,7.0nm,1.1s,baz=241,slow=5.2,SNR=6.7							
PLCA	Paso Flores	156.35	98	PKPab	PKPab	05 41 53.6	+2.3	
ALF01	Guarapari-ES	158.67	4	eP	PKPdf	05 41 27.8	+1.5	
MAN01	Angra dos Reis	160.51	14	eP	PKPdf	05 41 28.5	+0.1	

MOS ***16*** *05:30:24.4±0.8,49.°11N×156.°84E,h66km,mb4.1/2 Error ellipse: s-maj=22.4km s-min=4.2km az=82.1*
IDC ***16*** *05:30:29.8±7.7,49.°39N×156.°41E,h70km±55km,mb3.3/6, mbtmp3.7/7,ML2.9/1,Error ellipse: s-maj=55.7km s-min=30.9km az=1.0*
KRSC ***16*** *05:30:29.0±2.4,49.°54N×157.°50E,h41km±49km,ML4.3*
ISC 16 05:30:27.2±0.9,49.°30N±0.°09×156.°84E±0.°07,h53km,n70,
σ1s83/102,mb3.8/6,1C,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
SKR	Severo-Kuril's	1.47	342	eP	Pn	05 30 51.5	+0.3
SKR				eS	Sn	05 31 07.7	-1.6
SKR				pmax	pmax		
	comp=Z,77nm,0.2s						
SKR				smax	smax		
	comp=N,1μm,0.3s						
SKR	Severo-Kuril's	1.47	342	eP	Pn	05 30 51.5	+0.3
SKR				eS	Sn	05 31 07.6	-1.7
PAU	Pauzhetka	2.17	360	PN	Pn	05 31 01.8	+0.9
PAU				S	Sn	05 31 25.6	-1.0
PAU	Pauzhetka	2.17	360	eP	Pn	05 31 01.8	+0.9
PAU				eS	Sn	05 31 25.6	-1.0
KDTR	Khodutka, Kamc	2.64	17	PN	Pn	05 31 07.9	+0.7
KDTR				S	Sn	05 31 36.2	-1.7
KDTR	Khodutka, Kamc	2.64	17	eP	Pn	05 31 07.9	+0.7
KDTR				eS	Sn	05 31 36.2	-1.7
MIPR	Malaya Ipel'ka	2.99	359	PN	Pn	05 31 13.2	+1.2
MIPR	Malaya Ipel'ka	2.99	359	eP	Pn	05 31 13.2	+1.2
ASAK	Asacha	3.16	12	PN	Pn	05 31 15.7	+1.2
ASAK				S	Sn	05 31 50.1	-0.9
ASAK	Asacha	3.16	12	eP	Pn	05 31 15.7	+1.2
ASAK				eS	Sn	05 31 50.1	-0.9
MTVR	Mutnovka	3.30	14	PN	Pn	05 31 17.7	+1.2
MTVR				S	Sn	05 31 52.7	-1.8
MTVR	Mutnovka	3.30	14	eP	Pn	05 31 17.7	+1.2
MTVR				eS	Sn	05 31 52.7	-1.8
RUS	Russkaya	3.32	18	PN	Pn	05 31 17.0	+0.5
RUS				S	Sn	05 31 51.9	-2.7
RUS	Russkaya	3.32	18	eP	Pn	05 31 17.0	+0.5
RUS				eS	Sn	05 31 51.9	-2.7
GRL	Gorelyy	3.35	13	PN	Pn	05 31 18.7	+1.6
GRL				S	Sn	05 31 54.4	-1.3
GRL	Gorelyy	3.35	13	eP	Pn	05 31 18.7	+1.6
GRL				eS	Sn	05 31 54.4	-1.3
APC	Apacha	3.64	3	PN	Pn	05 31 23.1	+2.2
APC	Apacha	3.64	3	eP	Pn	05 31 23.1	+2.2
PEA0B	Petropavlovsk-	3.86	8	*c* iPN	Pn	05 31 25.6	+1.7
PEA0B				*i* S	Sn	05 32 11.7	+3.8
PETK	Petropavlovsk-	3.86	8	P	Pn	05 31 25.1	+1.2
	comp=N,4.3nm,0.3s,baz=176,slow=12,SNR=32						
PETK				S	Sn	05 32 10.8	+2.9
	comp=N,4.0nm,0.5s,baz=100,slow=41,SNR=1.7						
	comp=N,19nm,0.5s						
PET	Petropavlovsk	3.91	16	ePN	Pn	05 31 25.7	+1.2
PET				eS	Sn	05 32 08.2	-0.8
PET				pmax	pmax		
	comp=Z,92nm,0.9s						
PET				smax	smax		
	comp=N,153nm,0.6s						
PET	Petropavlovsk	3.91	16	eP	Pn	05 31 25.8	+1.2
PET				eS	Sn	05 32 06.8	-2.2
DALK	Dalny	3.93	17	PN	Pn	05 31 26.0	+1.1
DALK				S	Sn	05 32 08.4	-1.3
DALK	Dalny	3.93	17	eP	Pn	05 31 26.0	+1.1
DALK				eS	Sn	05 32 08.4	-1.3
UGLR	Uglovaya	4.11	17	PN	Pn	05 31 29.2	+1.7
UGLR				S	Sn	05 32 13.8	-0.5
UGLR	Uglovaya	4.11	17	eP	Pn	05 31 29.2	+1.7
UGLR				eS	Sn	05 32 13.8	-0.5
AVH	Avacha	4.15	16	PN	Pn	05 31 30.1	+2.1
AVH				S	Sn	05 32 14.5	-0.7
AVH	Avacha	4.15	16	eP	Pn	05 31 30.1	+2.1
AVH				eS	Sn	05 32 14.5	-0.7
KOK	Koryaka	4.16	15	PN	Pn	05 31 30.5	+2.4
KOK				S	Sn	05 32 16.0	+0.6
KOK	Koryaka	4.16	15	eP	Pn	05 31 30.5	+2.4
KOK				eS	Sn	05 32 16.0	+0.6
SMAR	Somma	4.16	16	PN	Pn	05 31 29.8	+1.6
SMAR				S	Sn	05 32 16.2	+0.6
SMAR	Somma	4.16	16	eP	Pn	05 31 29.8	+1.6
SMAR				eS	Sn	05 32 16.2	+0.6
NLC	Nalytchevo	4.19	21	PN	Pn	05 31 28.2	-0.2
NLC	Nalytchevo	4.19	21	eP	Pn	05 31 28.2	-0.2
NLC				eS	Sn	05 32 11.0	-5.0
KRER	Koryakskii	4.19	16	PN	Pn	05 31 30.6	+2.0
KRER				S	Sn	05 32 14.9	-1.5
KRER	Koryakskii	4.19	16	eP	Pn	05 31 30.6	+2.0
KRER				eS	Sn	05 32 14.9	-1.5
SDLR	Sedlovina	4.19	17	PN	Pn	05 31 29.7	+1.1
SDLR				S	Sn	05 32 15.4	-0.8
SDLR	Sedlovina	4.19	17	eP	Pn	05 31 29.7	+1.1
SDLR				eS	Sn	05 32 15.4	-0.8
KRX	Arik	4.22	15	PN	Pn	05 31 31.2	+2.1
KRX	Arik	4.22	15	eP	Pn	05 31 31.2	+2.1
SPN	Mys Shipunski	4.30	27	PN	Pn	05 31 31.5	+1.5
SPN	Mys Shipunski	4.30	27	eP	Pn	05 31 31.5	+1.5
SPN				eS	Sn	05 32 16.6	-2.2
GNL	Ganaly	4.46	8	PN	Pn	05 31 34.3	+2.0
GNL				S	Sn	05 32 23.7	+0.8
GNL	Ganaly	4.46	8	eP	Pn	05 31 34.3	+2.0
GNL

TXAR	**Lajitas Array**	**74.09**	**64**	*e*P		**P**		**05 42 00.6**	**+2.9**
TXAR				pmax		pmax			
	comp=Z,1.0nm,0.8s								
CLL	**Collm**	**75.13**	**337**	*e*P		**P**		**05 41 59.0**	**-4.2**
CLL	**Collm**	**75.13**	**337**	*e*P		**P**		**05 41 59.0**	**-4.2**
GERES	**GERESS Array B**	**77.20**	**336**	P		**P**		**05 42 14.6**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=34,slow=9.7,SNR=5.7								
	comp=Z,0.5nm,0.4s								
BRTR	**Keskin Array B**	**78.19**	**319**	P		**P**		**05 42 20.8**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=160,slow=3.9,SNR=4.5								
	comp=Z,0.6nm,0.5s								

WEL 16 06:04:18.9±1.0, 31.5°S±18"×17.9°E±4", h321km±33km, M4.1/7, mB4.3/5, ML4.5/9, MLv4.5/7, Mw(mB)3.5/5, Error ellipse: s-maj=0.1km s-min=0.0km az=110.4, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.26**	**49**	P	Pn	06 05 15.6	-3.1
GLKZ				S	S	06 06 08.6	+2.0
MXZ	**Matakaoa Point**	**6.18**	**187**	P	Pn	06 05 51.2	+0.4
WMGZ	**Waiomatatini S**	**6.42**	**186**	P	Pn	06 05 53.3	-0.4
WMGZ				S	S	06 07 13.3	+3.0
HAZ	**Te Kaha**	**6.43**	**190**	P	Pn	06 05 54.9	+1.1
HAZ				S	S	06 07 12.4	+1.8
RUGZ	**Raukumara Rang**	**6.66**	**191**	P	Pn	06 05 57.4	+0.8
RUGZ				S	S	06 07 14.2	-1.4
PUZ	**Puketiti**	**6.69**	**187**	P	Pn	06 05 57.3	+0.5
PUZ				S	S	06 07 16.3	+0.2
TWGZ	**Tauwhareparae**	**6.82**	**188**	P	Pn	06 06 00.6	+2.1
TWGZ				S	S	06 07 18.4	-0.7
MWZ	**Matawai**	**7.04**	**191**	P	Pn	06 06 02.0	+1.0
MWZ				S	S	06 07 24.4	+0.5
URZ	**Urewera**	**7.04**	**194**	P	Pn	06 06 00.8	-0.2
URZ				S	S	06 07 24.0	+0.1
TKGZ	**Te Karaka**	**7.10**	**189**	P	Pn	06 06 01.4	-0.3
TKGZ				S	S	06 07 24.6	-0.4
RAGZ	**Rawiri**	**7.22**	**192**	P	Pn	06 06 02.0	-1.2
RAGZ				S	S	06 07 28.8	+1.0
MUGZ	**Murupara**	**7.33**	**195**	P	Pn	06 06 05.0	+0.6
MUGZ				S	S	06 07 32.1	+1.9
RIGZ	**Rimuhau**	**7.37**	**189**	P	Pn	06 06 05.2	+0.2
RIGZ				S	S	06 07 30.2	-0.9
RTZ	**Ruatahuna**	**7.42**	**194**	P	Pn	06 06 05.4	-0.2
RTZ				S	S	06 07 30.8	-1.3

*NEIC **16** 06:15:04.3±0.8, 36.37N±0.01×97.72W±0.01, h5km±2km, Error ellipse: s-maj=3.0km s-min=2.6km az=9.0*
*TUL **16** 06:15:04.1±0.9, 36.38N±0.01×97.72W±0.01, h5km±7km, ML3.0, mb_Lg3.0/90(NEIC), Error ellipse: s-maj=1.7km s-min=1.1km az=159.0*
*ANF **16** 06:15:04.3±0.3, 36.38N×97.73W, h5km, ML3.5/11, Error ellipse: s-maj=3.0km s-min=2.7km az=4.0*
ISC 16 06:15:04.7±0.9, 36.38N±0.03×97.72W±0.03, h10km, n72, σ0°91/46, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKCFA	**Oklahoma City**	**0.98**	**167**	Pg	**Pg**	**06 15 22.7**	**-0.9**
OKCFA	**Oklahoma City**	**0.98**	**167**	P	**Pg**	**06 15 22.7**	**-0.9**
OKCFA	baz=347,SNR=16			S	**Sg**	**06 15 36.4**	**0.0**
	baz=347						
OKCSW	**OKLAHOMA CITY**	**0.99**	**167**		**Pg**	**06 15 23.1**	**-0.8**
U32A	**Winter Ranch,**	**1.04**	**271**	Pg	**Pg**	**06 15 23.6**	**-1.1**
U32A	**Winter Ranch,**	**1.04**	**271**	P	**Pg**	**06 15 23.6**	**-1.1**
U32A	baz=90,SNR=62			S	**Sg**	**06 15 38.0**	**-0.1**
	baz=90						
T35A	**Sooner Cattle**	**1.11**	**61**	Pg	**Pb**	**06 15 25.1**	**-0.9**
T35B	**Sooner Cattle**	**1.11**	**61**	P	**Pb**	**06 15 25.1**	**-0.9**
	baz=241,SNR=229						
FNO	**Franklin**	**1.15**	**167**	Pg	**Pb**	**06 15 25.6**	**-1.1**
TUL1	**Leonard**	**1.63**	**106**		**Pn**	**06 15 33.5**	**+0.1**
TUL1				IAmb_Lg		06 15 56.8	
	comp=Z,120nm,0.8s						
TUL1	**Leonard**	**1.63**	**106**	P	**Pn**	**06 15 33.6**	**+0.1**
	baz=287,SNR=75						
TUL1				S	**Sb**	**06 15 55.6**	**+0.2**
	baz=287						
X34A	**Smith Ranch, M**	**1.77**	**183**	Pn	**Pb**	**06 15 37.0**	**-0.3**
WMOK	**Wichita Mounta**	**1.85**	**208**		**Pn**	**06 15 37.1**	**+0.5**
WMOK	**Wichita Mounta**	**1.85**	**208**	P	**Pn**	**06 15 36.5**	**0.0**
WMOK	baz=27,SNR=75			S	**Sb**	**06 16 01.9**	**+0.1**
	baz=27						
R32A	**Long Quarter,**	**2.19**	**339**	Pn	**Pn**	**06 15 42.9**	**+1.6**
R32A	**Long Quarter,**	**2.19**	**339**	P	**Pn**	**06 15 42.8**	**+1.6**
	baz=159						
X37A	**Clayton**	**2.62**	**132**	Pn	**Pn**	**06 15 47.6**	**+0.6**
X37A				IAmb_Lg		06 16 28.5	
	comp=Z,56nm,0.8s						
X37A	**Clayton**	**2.62**	**132**	P	**Pn**	**06 15 48.0**	**+1.0**
	baz=314,SNR=37						
U38A	**Gravette**	**2.69**	**88**		**Pn**	**06 15 49.5**	**+1.5**
KSU1	**Kansas State U**	**2.86**	**18**	Pn	**Pn**	**06 15 51.2**	**+0.9**
KSU1				IAmb_Lg		06 16 41.4	
	comp=Z,36nm,0.8s						
CBKS	**Cedar Bluff**	**2.91**	**327**		**Pn**	**06 15 52.2**	**+1.1**
CBKS				IAmb_Lg		06 16 43.4	
	comp=Z,43nm,0.9s						
HHAR	**Hobbs**	**3.05**	**91**		**Pn**	**06 15 54.3**	**+1.3**
Z35A	**Perchaven, San**	**3.06**	**173**		**Pn**	**06 15 54.0**	**+0.8**
Z35A	**Perchaven, San**	**3.06**	**173**	P	**Pn**	**06 15 54.2**	**+1.1**
Z35A	baz=353			S	**Sn**	**06 16 32.3**	**+2.4**
	baz=353						
AMTX	**Amarillo**	**3.56**	**246**	Pn	**Pn**	**06 16 00.1**	**+0.1**
AMTX				IAmb_Lg		06 17 05.3	
	comp=Z,31nm,0.7s						
S39A	**Bolivar**	**3.75**	**68**		**Pn**	**06 16 03.3**	**+0.6**
S39A				IAmb_Lg		06 17 02.4	
	comp=Z,25nm,0.9s						
S39A	**Bolivar**	**3.75**	**68**	P	**Pn**	**06 16 03.1**	**+0.4**
	baz=251,SNR=14						
Z38A	**Mt. Pleasant**	**3.84**	**143**		**Pn**	**06 16 03.6**	**-0.2**
Z38A				IAmb_Lg		06 17 14.4	
	comp=Z,63nm,0.8s						
Z38A	**Mt. Pleasant**	**3.84**	**143**	S	**Sn**	**06 16 50.2**	**+1.2**
	baz=325						
MIAR	**Mount Ida**	**3.84**	**117**		**Pn**	**06 16 04.4**	**+0.5**
MIAR				IAmb_Lg		06 17 09.5	
	comp=Z,40nm,0.7s						
MIAR	**Mount Ida**	**3.84**	**117**	P	**Pn**	**06 16 05.0**	**+1.2**
	baz=300,SNR=17						
U40A	**Yellville**	**3.93**	**89**		**Pn**	**06 16 06.0**	**+0.9**
ABTX	**Abilene, Hawle**	**4.07**	**204**	Pn	**Pn**	**06 16 06.8**	**-0.2**
MGMO	**Mountain Grove**	**4.44**	**78**	Pn	**Pn**	**06 16 12.1**	**-0.1**
WHAR	**Wooly Hollow**	**4.54**	**102**		**Pn**	**06 16 13.7**	**+0.2**
WHAR				IAmb_Lg		06 17 34.0	
	comp=Z,41nm,0.7s						
W41B	**Gary Mavity, V**	**4.61**	**103**		**Pn**	**06 16 14.5**	**+0.1**
W41B				IAmb_Lg		06 17 37.8	
	comp=Z,28nm,0.8s						
P38A	**Dawn**	**4.63**	**44**		**Pn**	**06 16 15.1**	**+0.4**
P38A				IAmb_Lg		06 17 37.7	
	comp=Z,35nm,0.7s						
WLAR	**White Oak Lake**	**4.63**	**124**	IAmb_Lg		06 17 43.0	
	comp=Z,38nm,1.0s						
237A	**Washetta, Mont**	**4.64**	**160**	Pn	**Pn**	**06 16 14.8**	**-0.1**
KSCO	**Kaye Shedlock'**	**4.70**	**306**	IAmb_Lg		06 17 35.8	
	comp=Z,25nm,0.8s						
R40A	**Maddies Statio**	**4.75**	**65**		**Pn**	**06 16 16.8**	**+0.5**
R40A				IAmb_Lg		06 17 42.2	
	comp=Z,20nm,0.8s						
R40A	**Maddies Statio**	**4.75**	**65**	P	**Pn**	**06 16 16.8**	**+0.5**
	baz=248,SNR=14						
Z41A	**Richland Creek**	**5.10**	**126**	IAmb_Lg		06 17 57.4	
	comp=Z,27nm,0.8s						
LCAR	**Lake Charles**	**5.32**	**91**	IAmb_Lg		06 17 54.6	
	comp=Z,19nm,0.8s						
T25A	**Trinidad**	**5.43**	**280**	IAmb_Lg		06 18 05.5	
	comp=Z,27nm,0.9s						
CCAR	**Cane Creek**	**5.45**	**115**	IAmb_Lg		06 18 03.9	
	comp=Z,45nm,1.0s						
P40A	**Paris**	**5.47**	**53**	IAmb_Lg		06 17 57.9	
	comp=Z,34nm,0.7s						
435B	**Jarrell**	**5.58**	**179**	IAmb_Lg		06 18 11.1	
	comp=Z,17nm,0.8s						
OGNE	**Ogallala**	**5.67**	**325**	Pn	**Pn**	**06 16 30.3**	**+1.2**
PBMO	**Poplar Bluff**	**5.88**	**84**	IAmb_Lg		06 18 12.2	
	comp=Z,27nm,0.8s						
FVM	**French Village**	**6.04**	**72**	IAmb_Lg		06 18 22.4	
	comp=Z,16nm,0.9s						
JCT	**Junction City**	**6.13**	**197**	IAmb_Lg		06 18 23.7	
	comp=Z,32nm,0.9s						
SLM	**Saint Louis**	**6.36**	**67**	IAmb_Lg		06 18 23.9	
	comp=Z,20nm,0.8s						
143A	**Socs Landing,**	**6.37**	**123**	IAmb_Lg		06 18 23.3	
	comp=Z,20nm,0.9s						
PARMO	**Parma**	**6.42**	**85**	IAmb_Lg		06 18 26.2	
	comp=Z,37nm,0.8s						
Q24A	**Divide**	**6.43**	**296**	IAmb_Lg		06 18 39.0	
	comp=Z,17nm,0.7s						
S44A	**Carbondale**	**6.90**	**76**	IAmb_Lg		06 18 44.1	
	comp=Z,19nm,0.7s						
N41A	**Harden Midland**	**6.90**	**49**	IAmb_Lg		06 18 54.3	
	comp=Z,33nm,0.8s						
SIUC	**Southern Illin**	**6.93**	**76**	IAmb_Lg		06 19 00.6	
	comp=Z,20nm,0.8s						
W45A	**Hickory Valley**	**7.04**	**97**	IAmb_Lg		06 19 01.3	
	comp=Z,23nm,0.7s						
Y45A	**Yeager Farm, C**	**7.15**	**108**	IAmb_Lg		06 19 00.7	
	comp=Z,19nm,0.8s						
P43A	**Skaggs, Pawnee**	**7.25**	**61**	IAmb_Lg		06 19 04.7	
	comp=Z,24nm,0.8s						
ECSD	**EROS Data Cent**	**7.40**	**6**	P	**Pn**	**06 16 51.6**	**-1.1**
	baz=187,SNR=6.9						
L40A	**Anamosa**	**7.59**	**40**	IAmb_Lg		06 19 10.8	
	comp=Z,21nm,0.8s						
N23A	**Red Feather La**	**7.86**	**308**	IAmb_Lg		06 19 16.5	
	comp=Z,11nm,0.8s						
PLAL	**Pickwick Lake**	**7.97**	**97**	IAmb_Lg		06 19 20.9	
	comp=Z,11nm,0.9s						
833A	**Chaparral WMA,**	**8.15**	**190**	IAmb_Lg		06 19 33.5	
	comp=Z,10.0nm,0.9s						
L42A	**Oliver, Polo**	**8.40**	**46**	IAmb_Lg		06 19 34.5	
	comp=Z,20nm,0.8s						
JFWS	**Jewell Farm**	**8.71**	**39**	IAmb_Lg		06 19 57.8	
	comp=Z,15nm,0.7s						
RWWY	**Rawlins**	**9.09**	**309**	IAmb_Lg		06 20 12.7	
	comp=Z,13nm,1.0s						
K22A	**Casper**	**9.25**	**315**	IAmb_Lg		06 20 12.9	
	comp=Z,16nm,1.1s						
I40A	**Norwalk**	**9.27**	**34**	IAmb_Lg		06 20 08.3	
	comp=Z,8.2nm,0.8s						
SPMN	**Marine on St.**	**9.59**	**21**	IAmb_Lg		06 20 17.1	
	comp=Z,9.5nm,0.9s						

IDC 16 06:17:06.8±2.5, 54.11N×86.40E, h0km, mbtmp3.0/2, ML2.8/2, Error ellipse: s-maj=19.6km s-min=11.6km az=62.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.94**	**261**	*i*		06 23 30.0	
	baz=80,slow=316,SNR=1.0						
ZALV	**Zalesovo Beam**	**0.94**	**261**	Pg	Pg	06 17 24.1	-0.9
	1.0nm,0.3s,baz=78,slow=17,SNR=10						
ZALV				Lg	Lg	06 17 38.4	
	1.2nm,0.3s,baz=81,slow=28,SNR=14						
KURBB	**Kurchatov Arra**	**5.95**	**237**	Pn	Pn	06 18 36.7	+0.6
	0.1nm,0.3s,baz=54,slow=14,SNR=10						
KURBB				Lg	Lg	06 20 16.4	
	0.1nm,0.3s,baz=53,slow=32,SNR=5.1						
	0.9nm,0.4s						
MKAR	**Makanchi Array**	**7.78**	**201**	Pn	Pn	06 19 02.4	+1.1
	0.2nm,0.3s,baz=20,slow=14,SNR=6.5						
MKAR				Sn	Sn	06 20 29.9	-0.1
	baz=27,slow=26,SNR=3.6						
MKAR				Lg	Lg	06 21 14.0	
	0.1nm,0.3s,baz=31,slow=32,SNR=3.4						
	0.3nm,0.3s						

MAN 16 06:33:17.2, 12.85N×121.07E, h1km, mb3.5, ML2.1, MS1.5, Mindoro

*IDC **16** 06:38:11.0±5.7, 8.20S×116.22E, h199km±44km, mb3.2/5, mbtmp3.8/6, Error ellipse: s-maj=70.5km s-min=17.3km az=69.0*
*DJA **16** 06:38:16.2±0.4, 8.3°S±8.1°×11.6E±.1°, h138km±7km, M4.0/16, mb4.0/3, MLv3.9/16*
ISC 16 06:38:11.0±0.9, 8.30S±0.09×116.34E±0.06, h200km, n24, σ2°56/24, mb3.6/4, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRBI	**Singaraja**	**1.14**	**281**	P	**Pn**	**06 38 40.3**	**-1.4**
DNP	**Denpasar**	**1.18**	**251**	P	**Pn**	**06 38 41.1**	**-0.9**
DNP				S	**Sn**	**06 39 04.0**	**-2.0**
IGBI	**Denpasar**	**1.29**	**246**	P	**Pn**	**06 38 41.2**	**-1.7**
IGBI				S	**Sn**	**06 39 03.9**	**-3.7**
PLAI	**Plampang**	**1.51**	**110**	P	**Pn**	**06 38 44.2**	**-0.6**
PLAI				S	**Sn**	**06 39 09.5**	**-1.5**
ABJI	**Asem Bagus**	**2.15**	**283**	P	**Pn**	**06 38 51.1**	**+0.1**
KMMI	**Kalianget**	**2.66**	**298**	P	**Pn**	**06 38 58.6**	**+1.9**
BLJI	**Banyuglugur**	**2.77**	**281**	P	**Pn**	**06 39 01.2**	**+3.2**
GMJI	**Gumukmas**	**2.87**	**270**	P	**Pn**	**06 38 57.5**	**-1.6**
WBSI	**Waikabubak, Su**	**3.29**	**114**	P	Pn	06 39 14.3	+10
GRJI	**Gresik**	**4.07**	**289**	P	Pn	06 39 19.5	+5.9
WSI	**Waingapu**	**4.14**	**110**	P	**Pn**	**06 39 17.1**	**+2.6**
BWJI	**Bawean**	**4.39**	**303**	P	Pn	06 39 22.8	+5.1
PWJI	**Pagerwojo**	**4.50**	**273**	P	**Pn**	**06 39 23.2**	**+4.2**
BASI	**Baing, Sumba**	**4.60**	**115**	P	**Pn**	**06 39 23.2**	**+2.9**
BSSI	**Bau Bau, Buton**	**4.64**	**63**	P	**Pn**	**06 39 22.7**	**+1.9**
KAPI	**Kappang**	**4.70**	**46**	P	**Pn**	**06 39 22.3**	**+0.7**
	22nm,0.4s,baz=230,slow=11,SNR=17						
PCJI	**Pacitan**	**5.11**	**271**	P	**Pn**	**06 39 30.9**	**+4.1**
	0.4nm52nm,1.4s						
EDFI	**Ende, Flores**	**5.31**	**95**	P	**Pn**	**06 39 33.1**	**+3.6**
	0.1nm9.9nm,2.4s						
UGM	**Wanagama**	**5.77**	**273**	P	**Pn**	**06 39 39.7**	**+4.3**
WRA	**Warramunga Arr**	**20.92**	**125**	P	**P**	**06 42 39.6**	**+1.3**
	0.3nm,0.5s,baz=310,slow=8.8,SNR=18						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**22.73**	**134**	P	**P**	**06 42 57.9**	**+1.9**
	0.6nm,0.3s,baz=309,slow=8.8,SNR=18						
	0.6nm,0.3s						
KSRS	**Korea Array**	**46.78**	**13**	P	**P**	**06 46 21.0**	**+0.5**
	1.8nm,0.7s,baz=198,slow=7.6,SNR=7.0						
	1.8nm,0.7s						
MJAR	**Matsushiro Arr**	**49.10**	**23**	P	**P**	**06 46 36.7**	**-1.6**
	1.4nm,0.4s,baz=201,slow=8.9,SNR=5.0						
	1.4nm,0.4s						
MKAR	**Makanchi Array**	**62.66**	**334**	P	**P**	**06 48 13.1**	**-1.2**
	0.3nm,0.4s,baz=147,slow=7.0,SNR=3.0						
	0.3nm,0.4s						

*INET **16** 06:40:00.6±1.0, 12.89N×87.07W, h4km±5km, MW3.1*
*SNET **16** 06:40:01.6±1.1, 12.87N×87.10W, h13km±7km, ML2.8*
ISC 16 06:40:00.9±1.2, 12.91N±0.07×87.06W±0.06, h11km±11km, n12, σ0°53/17, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.21**	**177**	*e*P	**Pg**	**06 40 05.5**	**+0.1**
TEL3	**Telica 3**	**0.40**	**148**	*e*P	**Pg**	**06 40 08.1**	**-0.8**
CSGN	**Cosiguina Volc**	**0.49**	**277**	*e*P	**Pg**	**06 40 10.7**	**+0.2**
CNGN	**Cerro Negro**	**0.54**	**139**	*e*P	**Pg**	**06 40 12.0**	**+0.4**
MOMN	**Momotombo**	**0.72**	**135**	*e*P	**Pg**	**06 40 14.9**	**+0.1**
CNCH	**Conchagua**	**0.83**	**296**	*e*P	**Pg**	**06 40 16.7**	**-0.4**
CNCH				*e*S	**Sb**	**06 40 29.3**	**+0.5**
CNCH				IAML		06 40 35.5	
	comp=Z,771nm,0.4s						
LCND	**La Caada**	**0.90**	**296**	*e*P	**Pg**	**06 40 17.9**	**-0.3**
LCND				*e*S	**Sb**	**06 40 30.7**	**+0.2**
LCND				IAML		06 40 35.9	
	comp=Z,169nm,0.3s						
TGUH	**Tegucigalpa,Un**	**1.15**	**350**	*e*P	**Pb**	**06 40 22.7**	**-0.3**
TGUH				*e*S	**Sg**	**06 40 38.7**	**+0.5**
PACA	**Pacayal**	**1.35**	**294**	*e*P	**Pn**	**06 40 25.0**	**-0.8**
PACA				*e*S	**Sb**	**06 40 43.0**	**-0.6**
COEB	**Comit de Eme**	**1.54**	**292**	*e*P	**Pn**	**06 40 28.1**	**-0.4**
COEB				IAML		06 40 54.2	
	comp=Z,75nm,0.6s						
SCLA	**Alcaldia de Sa**	**1.80**	**296**	*e*P	**Pn**	**06 40 32.8**	**+0.8**
COEG	**Centro de Oper**	**1.90**	**292**	*e*P	**Pn**	**06 40 33.5**	**+0.1**
COEG				*e*S	**Sn**	**06 40 58.0**	**+0.5**

*NNC **16** 06:49:33.0±2.9, 38.22N×70.49E, h0km, mb4.8, mpv4.8, Error ellipse: s-maj=23.0km s-min=16.7km az=0.0*

*NEIC **16** 06:49:39.8±1.1, 38.91N±0.04×70.55E±0.03, h10km±1km, mb4.3/25, Error ellipse: s-maj=6.6km s-min=4.5km az=359.0*
*MOS **16** 06:49:42.0±1.3, 38.87N×70.54E, h43km, mb4.3/15, Error ellipse: s-maj=7.1km s-min=3.8km az=69.3*
*IDC **16** 06:49:50.3±2.7, 39.12N×70.74E, h94km±23km, mb3.6/14, mbtmp4.1/19, MS3.3/11, Error ellipse: s-maj=23.4km s-min=13.5km az=5.0*
*SOME **16** 06:49:53.4, 39.90N×71.10E, h0km*
ISC 16 06:49:39.3±0.4, 38.74N±0.03×70.54E±0.03, h10km, n195, σ2°44/207, mb4.1/30, MS3.4/8, 21C-6D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**0.32**	**327**		**Pg**	**06 49 43.5**	**-2.2**
CHGR	**Chuyangaron**	**1.08**	**266**		**Pg**	**06 50 00.0**	**-0.1**
CHGR				Sg	**Sg**	**06 50 14.4**	**+0.2**
CHGR	**Chuyangaron**	**1.08**	**266**	P	**Pg**	**06 50 00.0**	**-0.1**
CHGR						06 50 14.4	
DRK	**Karamyk**	**1.23**	**53**		**Pb**	**06 50 01.2**	**-1.7**
BTK	**Batken**	**1.34**	**9**		**Pn**	**06 50 02.4**	**-1.7**
BTK	**Batken**	**1.34**	**9**	P	**Pn**	**06 50 02.4**	**-1.7**
TAS	**Tashkent**	**2.76**	**340**		**Pn**	**06 50 21.4**	**-2.2**
TAS	**Tashkent**	**2.76**	**340**	PN	**Pn**	**06 50 21.4**	**-2.2**
IUG	**Iuzhnay**	**3.43**	**354**	*e*PN	**Pn**	**06 50 35.1**	**+2.2**
IUG	**Iuzhnay**	**3.43**	**354**	*e*P	**Pn**	**06 50 35.2**	**+2.2**
	baz=349						
CHM	**Chimkent**	**3.65**	**349**	*e*P	**Pb**	**06 50 43.5**	**-0.4**
	179nm,0.2s						
CHM				*e*S	**Sb**	**06 51 23.8**	**-4.4**
	1um,0.3s						
AML	**Almayashu**	**4.16**	**34**	P	**Pn**	**06 50 45.8**	**+2.6**
	SNR=137						
DZA	**Taraz**	**4.20**	**8**	*e*PN	**Pn**	**06 50 45.3**	**+2.0**
DZA	**Taraz**	**4.20**	**8**	*e*P	**Pb**	**06 50 50.9**	**-2.3**
	104nm,0.5s						
DZA				*e*S	**Sn**	**06 51 37.3**	**+4.8**
	770nm,0.3s						
DZA	**Taraz**	**4.20**	**8**	*e*P	**Pn**	**06 50 45.4**	**+2.0**
	baz=6.0						
KSH	**Kashi**	**4.30**	**78**	Pn	**Pn**	**06 50 43.3**	**-1.6**
KSH				Sn	**Sb**	**06 51 47.0**	**0.0**
KSH				pmax	pmax		
	comp=Z,29nm,0.4s						
KSH				smax	smax		
	comp=N,540nm,0.8s						
KSH				smax	smax		
	comp=E,410nm,0.9s						
BRLS	**Borolday**	**4.32**	**353**	*e*PN	**Pn**	**06 50 45.6**	**+0.5**
BRLS	**Borolday**	**4.32**	**353**	*e*P	**Pn**	**06 50 45.6**	**+0.5**
	baz=347						
BRLS				*e*S	**Sn**	**06 51 28.0**	**-7.6**
	baz=347						
KBL	**Kabul**	**4.36**	**196**	Pn	**Pn**	**06 50 49.2**	**+3.5**
KBL	**Kabul**	**4.36**	**196**	PN	**Pn**	**06 50 49.2**	**+3.5**
KK31	**Karatay Array**	**4.36**	**360**	Pn	**Pn**	**06 50 43.9**	**-1.7**
KK31	**Karatay Array**	**4.36**	**360**	PN	**Pn**	**06 50 48.1**	**+2.4**
KK31				S	**Sn**	**06 51 40.6**	**+4.0**
KK31				pmax	pmax		
	comp=Z,30nm,0.6s						
KK31				smax	smax		
	comp=N,32nm,0.4s						
KK31	**Karatay Array**	**4.36**	**360**	⇑P	**Pn**	**06 50 47.5**	**+1.9**
	comp=N,19nm,0.3s,baz=180,slow=12,SNR=260						
KK31				⇑S	**Sb**	**06 51 47.5**	**-1.3**
	comp=N,183nm,0.6s,baz=183,slow=28,SNR=6.4						
KKAR	**Karatay Array**	**4.36**	**360**		**Pn**	**06 50 45.0**	**-0.7**
KKAR	**Karatay Array**	**4.36**	**360**		**Pn**	**06 50 48.1**	**+2.4**
KKAR	**Karatay Array**	**4.36**	**360**	PN	**Pn**	**06 50 45.0**	**-0.7**
MRKS	**Merke**	**4.50**	**26**	*e*P	**Pb**	**06 50 56.2**	**-2.2**
	comp=N,43nm,0.5s						
MRKS				*e*S	**Sn**	**06 51 46.0**	**+6.1**
	comp=N,210nm,0.5s						
UCH	**Uchtor**	**4.62**	**40**	P	**Pn**	**06 50 52.6**	**+3.0**
	SNR=310						
EKS2	**Erkin-Say**	**4.63**	**31**	P	Pn	06 50 54.5	+5.1
	SNR=59						
AAK	**Ala-Archa**	**4.92**	**36**	P	**Pn**	**06 50 57.1**	**+3.5**
	SNR=60						
AAK	**Ala-Archa**	**4.92**	**36**	P	**Pn**	**06 50 57.0**	**+3.5**
	comp=N,109nm,0.5s,baz=223,slow=9.6,SNR=68						
AAK				S	**Sn**	**06 51 57.3**	**+6.8**
	comp=N,64nm,0.5s,baz=34,slow=12,SNR=6.6						
AAK	**Ala-Archa**	**4.92**	**36**	Pn	**Pn**	**06 50 53.5**	**0.0**
AAK	**Ala-Archa**	**4.92**	**36**	*d* PN	**Pn**	**06 50 56.9**	**+3.4**
AAK				pmax	pmax		
	comp=Z,128nm,0.8s						
CEP	**Cherat**	**5.03**	**167**	P	Pb	06 51 01.2	-6.2
CEP				S	**Sg**	**06 52 18.0**	**-2.7**
FRU1	**Bishkek**	**5.12**	**36**	Pn	**Pn**	**06 50 54.8**	**-1.3**
FRU1	**Bishkek**	**5.12**	**36**	PN	**Pn**	**06 50 54.8**	**-1.3**
KBK	**Karagaybulak**	**5.16**	**39**	P	Pn	06 51 02.4	+5.7
	SNR=69						
CHMS	**Chumysh**	**5.32**	**36**	P	**Pn**	**06 51 01.6**	**+2.7**
	SNR=56						
CHMS	**Chumysh**	**5.32**	**36**	*i* PN	**Pn**	**06 51 01.4**	**+2.6**
CHMS				pmax	pmax		
	comp=Z,119nm,0.8s						
CHMS	**Chumysh**	**5.32**	**36**	⇑P	**Pn**	**06 51 01.4**	**+2.6**
	comp=Z,119nm,0.8s						
CHMS				⇑S	**Sn**	**06 52 05.9**	**+5.7**
	comp=Z,175nm,1.2s						
USP	**Ospenovka**	**5.43**	**32**	P	**Pn**	**06 51 02.7**	**+2.4**
	SNR=83						
BOOM	**Boomskoye usch**	**5.56**	**46**		**Pn**	**06 51 01.2**	**-1.1**
BOOM	**Boomskoye usch**	**5.56**	**46**	PN	**Pn**	**06 51 01.2**	**-1.1**
ULHL	**Ulahol**	**5.59**	**49**	P	**Pn**

baz=52
UZB Uzynbulak 7.79 53 *e*P **Pn 06 51 34.2 +1.4**
UZB Uzynbulak 7.79 53 *e*P **Pn 06 51 34.2 +1.4**
baz=55
HRA Herat 7.96 239 Pn **Pn 06 51 35.3 +0.1**
SHLS Shalkode 8.07 54 *e*P Pn 06 51 42.4 +5.8
SHLS Shalkode 8.07 54 *e*P Pn 06 51 42.5 +5.8
baz=58
PDGK Podgornoye 8.17 53 *i*P **Pn 06 51 40.7 +2.6**
PDGK pmax pmax
comp=Z,9.0nm,0.7s
OTUK Ortayu 9.60 7 P **Pn 06 51 57.9 +0.5**
OTUK pmax pmax
comp=Z,5.0nm,0.8s
OTUK Ortayu 9.60 7 ⇑P **Pn 06 51 58.0 +0.5**
comp=Z,8.5nm,0.8s
OTUK ⇑S **Sn 06 53 54.0 +8.8**
comp=Z,51nm,1.2s
GEYT Alibeck 9.79 269 P Pn 06 52 12.0 +12
comp=Z,8.0nm,0.7s,baz=97,slow=19,SNR=3.9
GEYT S **Sn 06 53 45.9 -4.4**
comp=Z,16nm,0.6s,baz=148,slow=31,SNR=5.1
GEYT LR LR 06 56 43.4
comp=Z,199nm,18.3s,baz=116,slow=42
GEYT Alibeck 9.79 269 Pn **Pn 06 52 00.0 -0.2**
GYA0B ALIBECK ARRAY 9.79 269 Pn **Pn 06 51 59.6 -0.6**
BRZS Berezniki 11.35 7 *e*P **Pn 06 52 21.2 -0.2**
BRZS Berezniki 11.35 7 *e*P **Pn 06 52 21.2 -0.2**
baz=6.4
MAKZ Makanchi 11.64 42 **Pn 06 52 23.6 -1.8**
MAKZ Makanchi 11.64 42 P **Pn 06 52 23.7 -1.8**
MK31 Makanchi Array 11.80 43 **Pn 06 52 26.1 -1.5**
MK31 Makanchi Array 11.80 43 P **Pn 06 52 28.4 +0.8**
MK31 pmax pmax
comp=Z,9.0nm,0.9s
MK31 Makanchi Array 11.80 43 ⇑P **Pn 06 52 29.3 +1.7**
comp=Z,9.2nm,0.8s,baz=232,slow=9.9,SNR=48
MKAR Makanchi Array 11.80 43 P **Pn 06 52 29.4 +1.7**
comp=Z,6.8nm,0.7s,baz=227,slow=13,SNR=60
MKAR LR LR 06 56 53.4
comp=Z,53nm,20.7s,baz=198,slow=37
MKAR Makanchi Array 11.80 43 **Pn 06 52 25.7 -1.9**
MKAR Makanchi Array 11.80 43 *i*P **Pn 06 52 29.7 +2.1**
MKAR pmax pmax
comp=Z,7.0nm,0.7s
AB31 Akbulak array 12.98 328 *i*P **Pn 06 52 41.8 -1.8**
AB31 *e*S Sn 06 54 58.0 -10
AB31 pmax pmax
comp=Z,18nm,0.6s
AB31 smax smax
comp=N,18nm,0.6s
AB31 Akbulak array 12.98 328 P **Pn 06 52 41.8 -1.8**
comp=N,18nm,0.6s,baz=142,slow=11,SNR=170
AB31 ⇓S **Sn 06 55 13.7 +5.7**
comp=N,18nm,0.6s,baz=153,slow=23,SNR=11
ABKAR Akbulak array 12.98 328 **Pn 06 52 41.6 -2.0**
KURBB Kurchatov Arra 13.16 23 P **Pn 06 52 44.0 -2.2**
comp=N,1.8nm,0.7s,baz=214,slow=12,SNR=13
KURBB Kurchatov Arra 13.16 23 P **Pn 06 52 43.8 -2.4**
KURBB pmax pmax
comp=Z,4.0nm,0.9s
KURBB Kurchatov Arra 13.16 23 ⇓P **Pn 06 52 46.4 +0.2**
comp=Z,2.9nm,0.6s
KURK Kurchatov 13.27 23 Pn **Pn 06 52 45.8 -1.9**
KURK Kurchatov 13.27 23 P **Pn 06 52 45.8 -1.9**
SEM Semipalatinsk 13.55 27 *e*P **Pn 06 52 50.1 -1.6**
SEM Semipalatinsk 13.55 27 *e*P **Pn 06 52 50.1 -1.6**
baz=28
BRVK Borovoye 14.33 359 **Pn 06 53 00.6 -1.5**
BRVK Borovoye 14.33 359⇑ *e*P **Pn 06 53 02.4 +0.4**
BRVK pmax pmax
comp=Z,8.0nm,1.2s
BRVK Borovoye 14.33 359 ⇓P **Pn 06 53 02.4 +0.4**
comp=Z,2.7nm,0.5s
AKTO Aktyubinsk 14.68 327 P **Pn 06 53 05.6 -1.3**
comp=Z,7.3nm,0.5s,baz=143,slow=15,SNR=12
AKTO S **Sn 06 55 41.3 -8.4**
comp=Z,9.0nm,0.9s,baz=175,slow=20,SNR=6.3
AKTO LR LR 06 59 34.0
comp=Z,36nm,21.9s,baz=138,slow=40
AKTO Aktyubinsk 14.68 327 ⇑P **Pn 06 53 05.2 -1.7**
comp=Z,31nm,0.8s
AKTO ⇑S **Sn 06 55 58.3 +8.6**
comp=Z,17nm,0.7s
DANN Dangsing 15.11 129 *e*P **Pn 06 53 11.9 -1.2**
comp=Z,30nm,0.4s
GKN Gorkha 15.89 128 *e*P **Pn 06 53 21.7 -1.6**
comp=Z,24nm,0.4s
DMN Daman 16.47 128 *e*P **Pn 06 53 29.4 -1.3**
comp=Z,13nm,0.4s
PKIN Phulchoki 16.67 127 *e*P **Pn 06 53 32.6 -0.7**
PKI Pulchoki 16.68 127 *e*P **Pn 06 53 32.8 -0.7**
comp=Z,6.8nm,0.3s
GUN Gumba 16.74 126 *e*P **Pn 06 53 32.5 -1.7**
comp=Z,13nm,0.4s
JIRN Jiri 17.11 126 *e*P **Pn 06 53 37.0 -1.9**
comp=Z,26nm,0.4s
RAMN Ramite 17.87 126 *e*P **Pn 06 53 46.1 -2.1**
comp=Z,21nm,0.5s
ZAA0 Zalesovo Array 18.07 28 P **Pn 06 53 48.0 -2.3**
ZALV Zalesovo Beam 18.07 28 P **Pn 06 53 48.9 -1.4**
comp=Z,4.2nm,0.5s,baz=231,slow=12,SNR=20
ZALV LR LR 07 01 08.1
comp=Z,61nm,18.3s,baz=156,slow=38
ZALV Zalesovo Beam 18.07 28 P **Pn 06 53 47.8 -2.6**
TAPN Taplejung 18.30 123 *e*P **Pn 06 53 51.9 -1.7**
LSA Lhasa 19.25 112 P **P 06 54 03.9 -0.4**
LSA IAmb IAmb 06 54 09.5
comp=Z,10nm,0.9s
LSA Lhasa 19.25 112 P **P 06 54 03.9 -0.4**
LSA pmax pmax
comp=Z,10.0nm,0.9s
ARU Arti 19.41 340 P **P 06 54 05.3 -0.1**
comp=Z,2.7nm,0.3s,baz=162,slow=6.1,SNR=9.1
ARU LR LR 07 02 18.5
comp=Z,124nm,18.6s,baz=146,slow=39
ARU Arti 19.41 340 P **P 06 54 03.8 -1.5**
ARU IAmb IAmb 06 54 09.6
comp=Z,9.2nm,0.8s
ARU Arti 19.41 340⇑ *i*P **P 06 54 05.8 +0.5**
ARU pmax pmax
comp=Z,11nm,0.8s
GOMU GeErMu 19.43 90 P **Pn 06 54 07.4 +0.1**
GOMU pP sP 06 54 11.8 +0.5
GOMU sP pP 06 54 13.9 +4.2
GOMU S **Sn 06 57 38.9 -6.4**
GOMU pmax pmax
comp=Z,7.0nm,0.6s
GOMU pmax pmax
comp=Z,61nm,3.7s
GOMU LR LR
comp=N,68nm,12.5s
GOMU LR LR
comp=E,100nm,10.8s
GOMU LR LR
comp=Z,100nm,13.1s
ONI Oni 20.87 289 P **P 06 54 20.8 -0.6**
ONI IAmb IAmb 06 54 31.1
comp=Z,16nm,0.7s
ONI Oni 20.87 289 P **P 06 54 20.8 -0.6**
ONI pmax pmax
comp=Z,16nm,0.7s
BELG Belogornoye 20.95 318 P **P 06 54 23.3 +1.2**
comp=Z,23nm,0.6s,baz=338,slow=1.4,SNR=9.6
BELG LR LR 07 04 49.1
comp=Z,44nm,18.9s,baz=128,slow=43
comp=Z,23nm,0.6s
BELG Belogornoye 20.95 318*d i*P **P 06 54 23.0 +0.9**
BELG pmax pmax
comp=Z,8.0nm,1.3s
KBZ Khabaz 21.33 292 LR LR 07 04 43.0
comp=Z,100nm,18.6s,baz=45,slow=42
KBZ Khabaz 21.33 292*c i*P **P 06 54 31.4 +5.1**
KBZ pmax pmax
comp=Z,4.0nm,0.8s
GOF Gofitskoye 21.36 296⇑ *e*P **P 06 54 25.0 -1.6**
SHL Shillong 22.27 120 P **P 06 54 39.2 +2.4**
SHL IAmb IAmb 06 54 41.1
comp=Z,10nm,1.0s
SHL Shillong 22.27 120 P **P 06 54 39.2 +2.4**
SHL pmax pmax
comp=Z,10.0nm,1.0s
GTA Gaotai 22.70 79 *e*P **P 06 54 44.0 +2.8**
GTA pP sP 06 54 51.3 +4.8
GTA sP pP 06 54 55.4 +11
GTA pmax pmax
comp=Z,7.0nm,1.0s
GTA pmax pmax
comp=Z,34nm,4.0s
GTA LR LR
comp=N,84nm,14.2s
GTA LR LR
comp=E,120nm,14.9s
GTA LR LR
comp=Z,120nm,16.7s
VRH Novokhopyorsk 23.72 311 *e*P **P 06 54 51.1 -0.2**
VRH pmax pmax
comp=Z,10.0nm,0.5s
KIRV Kirov 24.08 332*ce*P **P 06 54 57.9 +3.3**
LPSR Galich'ya Gora 25.83 313 *e*P **P 06 55 11.5 +0.9**
LPSR pmax pmax
comp=Z,10.0nm,1.6s
RAYN Ar Rayn 26.14 242 P **P 06 55 14.3 +0.6**
RAYN Ar Rayn 26.14 242 P **P 06 55 14.3 +0.6**
RAYN pmax pmax
comp=Z,4.0nm,1.1s
LZH Lanzhou 26.51 85 *e*P **P 06 55 22.8 +5.7**
LZH sP sP 06 55 30.8 +8.3
LZH pmax pmax
comp=Z,16nm,1.4s
SONM Songino Array 27.43 59 P **P 06 55 24.6 -0.7**
comp=Z,1.5nm,0.8s,baz=263,slow=12,SNR=4.4
comp=Z,1.5nm,0.8s
SONM Songino Array 27.43 59 P **P 06 55 24.1 -1.2**
ULN Ulaanbaatar 27.88 59 P **P 06 55 27.5 -1.8**
ULN Ulaanbaatar 27.88 59*ce*P **P 06 55 29.2 -0.1**
ULN pmax pmax
comp=Z,3.0nm,1.0s
BRTR Keskin Array B 28.47 284 P **P 06 55 37.1 +2.4**
comp=Z,1.5nm,0.9s,baz=69,slow=6.8,SNR=4.9
comp=Z,1.5nm,0.9s
BRTR Keskin Array B 28.47 284*ce*P P 06 55 41.0 +6.3
BRTR pmax pmax
comp=Z,1.0nm,0.5s
XAN Xi'an 31.10 87 P **P 06 55 57.6 -0.2**
XAN pP sP 06 56 04.4 +1.1
XAN pmax pmax
comp=Z,5.0nm,1.1s
XAN LR LR
comp=N,190nm,13.1s
XAN LR LR
comp=Z,180nm,16.5s
AKASG Malin Array Be 31.30 306 P **P 06 55 59.9 +0.5**
comp=Z,0.3nm,0.3s,baz=76,slow=7.5,SNR=8.5
AKASG LR LR 07 11 05.1
comp=Z,63nm,18.5s,baz=60,slow=41
comp=Z,0.3nm,0.3s
AKASG Malin Array Be 31.30 306*ce*P **P 06 56 02.2 +2.9**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
MLR Muntele Rosu 33.41 296 LR LR 07 12 37.3
comp=Z,64nm,20.6s,baz=104,slow=41
FINES FINESS Array B 35.44 325 P **P 06 56 35.2 -0.1**
comp=Z,1.2nm,0.5s,baz=108,slow=6.2,SNR=6.6
FINES LR LR 07 11 48.4
comp=Z,82nm,18.5s,baz=139,slow=37
comp=Z,1.2nm,0.5s
FINES FINESS Array B 35.44 325 P **P 06 56 34.5 -0.8**
FINES FINESS Array B 35.44 325*ce*P **P 06 56 37.7 +2.4**
FINES pmax pmax
comp=Z,2.0nm,0.6s
SANT Santorini 35.54 281 P **P 06 56 36.4 -0.1**
ARCES ARCESS Array B 38.95 337 P **P 06 57 03.1 -1.9**
comp=Z,1.5nm,0.8s,baz=110,slow=7.8,SNR=2.0
ARCES LR LR 07 14 14.1
comp=Z,108nm,18.2s,baz=112,slow=38
comp=Z,1.5nm,0.8s
ARCES ARCESS Array B 38.95 337 P **P 06 57 04.1 -0.9**
ARCES IAmb IAmb 06 57 24.5
comp=Z,16nm,1.4s
ARCES ARCESS Array B 38.95 337 P **P 06 57 04.1 -0.9**
ARCES pmax pmax
comp=Z,16nm,1.5s
CLL Collm 41.53 307 *e*P **P 06 57 27.0 +0.4**
CLL *e*'PP sP 06 57 48.0 +16
NB2 NORSAR Subarra 42.39 322 P **P 06 57 32.9 -0.7**
comp=Z,1.4nm,0.6s,baz=93,slow=8.6
NOA NORSAR Array B 42.39 322 P **P 06 57 33.0 -0.5**
comp=Z,1.5nm,0.7s,baz=94,slow=8.2,SNR=6.9
comp=Z,1.5nm,0.7s
TIXI Tiksi 43.85 23 P **P 06 57 44.2 -1.0**
TIXI IAmb IAmb 06 57 49.5
comp=Z,7.4nm,1.0s
TIXI Tiksi 43.85 23*ce*P **P 06 57 44.9 -0.3**
TIXI pmax pmax
comp=Z,8.0nm,1.0s
KBS Kingsbay 46.35 347 *i*P **P 06 58 08.7 +3.7**
JHS Saijyo 49.35 74 P **P 06 58 28.6 -0.2**
KMBO Kilima Mbogo 50.10 226 P **P 06 58 34.7 -0.2**
KMBO IAmb IAmb 06 58 51.0
comp=Z,3.8nm,1.2s
KMBO Kilima Mbogo 50.10 226 P **P 06 58 34.7 -0.2**
KMBO pmax pmax
comp=Z,4.0nm,1.3s
SBUM Sibu 52.41 123 P **P 06 58 50.5 -1.5**
SBUM IAmb IAmb 06 58 55.3
comp=Z,7.1nm,1.0s
DAG Danmarks Havn 52.49 343 *i*P **P 06 58 52.4 +0.6**
DAG IAmb IAmb 06 58 55.2
comp=Z,1.9nm,0.9s
MJAR Matsushiro Arr 52.50 70 P **P 06 58 52.8 +0.2**
comp=Z,1.7nm,0.7s,baz=302,slow=9.8,SNR=5.0
comp=Z,1.7nm,0.7s
MJAR Matsushiro Arr 52.50 70 P **P 06 58 51.8 -0.7**
MJAR IAmb IAmb 06 59 22.9
comp=Z,3.7nm,1.4s
ESDC Sonseca Array 56.11 296 P **P 06 59 19.9 +1.1**
comp=Z,1.0nm,0.7s,baz=54,slow=7.6,SNR=5.4
comp=Z,1.0nm,0.7s
SUMG Summit 58.83 341 *i*P **P 06 59 38.5 +0.6**
SUMG AMP 06 59 43.0
comp=Z,4.2nm,0.8s
TORD Torodi Ar. Bea 65.43 267 P **P 07 00 24.7 +2.2**
comp=Z,0.7nm,0.6s,baz=49,slow=5.3,SNR=4.9
comp=Z,0.7nm,0.6s
TORD Torodi Ar. Bea 65.43 267 P **P 07 00 23.3 +0.8**
TORD IAmb IAmb 07 00 39.1
comp=Z,2.1nm,1.3s
TOLK Toolik Lake Re 68.86 15 P **P 07 00 41.8 -1.7**
TOLK IAmb IAmb 07 01 09.1
comp=Z,6.6nm,1.4s
IMAR Indian Mountai 70.16 18 P **P 07 00 51.1 -0.4**
C36M Paulatuk 71.69 5 P **P 07 01 00.0 -0.8**
INK Inuvik 71.76 9 P **P 07 01 01.0 -0.2**
INK IAmb IAmb 07 01 30.9
comp=Z,2.2nm,1.0s
INK Inuvik 71.76 9 P **P 07 01 01.0 -0.2**
INK pmax pmax
comp=Z,2.0nm,1.0s
ILAR Eielson Array 72.73 16 P **P 07 01 05.3 -1.8**
comp=Z,0.4nm,0.9s,baz=317,slow=3.5,SNR=5.0
comp=Z,0.4nm,0.9s
SKT Skwentna 74.03 19 P **P 07 01 14.4 -0.5**
SKT IAmb IAmb 07 01 19.6
comp=Z,4.5nm,1.2s
YKA Yellowknife Ar 79.03 2 P **P 07 01 42.9 -0.2**
comp=Z,1.2nm,0.8s,baz=354,slow=5.4,SNR=5.1
comp=Z,1.2nm,0.8s
YKA Yellowknife Ar 79.03 2 *i*P **P 07 01 46.5 +3.4**
YKA pmax pmax
comp=Z,1.0nm,0.8s
WRA Warramunga Arr 83.48 122 P **P 07 02 07.5 +0.1**
comp=Z,1.3nm,0.6s,baz=324,slow=4.9,SNR=16
comp=Z,1.3nm,0.6s
WRA Warramunga Arr 83.48 122 P **P 07 02 07.3 0.0**
WRA Warramunga Arr 83.48 122*ce*P **P 07 02 08.1 +0.7**
WRA pmax pmax
comp=Z,1.0nm,0.7s
WRAB Tennant Creek 83.48 122 P **P 07 02 07.9 +0.6**
WRAB Tennant Creek 83.48 122 P **P 07 02 07.9 +0.6**
WRAB pmax pmax
comp=Z,10.0nm,1.5s
WB2 Warramunga Arr 83.49 122 P **P 07 02 07.5 +0.1**
WR0 Warramunga Arr 83.63 122 P **P 07 02 08.0 -0.1**
ASAR Alice Springs 85.83 125 P **P 07 02 19.6 +0.4**
comp=Z,0.6nm,0.8s,baz=304,slow=5.0,SNR=3.0
comp=Z,0.6nm,0.8s

*IDC **16** 06:57:29.7±5.5,24°.31N×109°.02W,h0km,mb3.2/1, mbtmp3.2/3,ML4.1/2,MS3.2/1,Error ellipse: s-maj=102.1km s-min=12.5km az=152.0*

*MEX **16** 06:57:35.0±0.7,25°.10N×109°.66W,h16km±8km,MD4.0*
ISC 16 06:57:33.3±0.9,**24°.89N**±0°.07×**109°.47W**±0°.07,**h17**km,**n11, σ2s76/12, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TSIG	**Topolobambo**	**0.81**	**29**	*i* P			**Pb**	**06 57 46.7**	**-2.1**
TSIG				*i* S			**Sb**	**06 57 56.0**	**-3.4**
LPIG	**La Paz**	**1.09**	**224**	Pg			**Pn**	**06 57 52.9**	**-0.9**
	14nm,0.3s,baz=5.2,slow=5.4,SNR=22								
LPIG				Lg			Lg	06 58 07.0	
	97nm,0.3s,baz=233,slow=23,SNR=12								
LPIG	**La Paz**	**1.09**	**224**	*i* P			**Pn**	**06 57 52.9**	**-0.9**
LPIG				*i* S			**Sb**	**06 58 06.4**	**-1.3**
SLBS	**Sierra La Lagu**	**1.28**	**200**	*e*P			**Pg**	**06 57 58.4**	**+0.5**
SLBS				*e*				06 58 21.9	
SSIG	**Sanalona**	**2.12**	**91**	*i* P			**Pb**	**06 58 08.9**	**-2.3**
SSIG				*e*				06 58 34.1	
PDIG	**Papasquiaro**	**3.70**	**87**	*i* P			**Pn**	**06 58 31.6**	**+1.7**
PDIG				*e*				06 59 17.4	
HPIG		**3.99**	**58**	*i* P			**Pn**	**06 58 33.7**	**-0.1**
HPIG				*i* S			**Sn**	**06 59 20.6**	**+0.3**
TXAR	**Lajitas Array**	**6.81**	**48**	Pn			**Pn**	**06 59 12.0**	**-0.5**
	0.5nm,0.3s,baz=228,slow=13,SNR=13								
TXAR				Lg			Lg	07 01 03.2	
	0.5nm,0.3s,baz=230,slow=32,SNR=3.4								
	0.7nm,0.3s								
PDAR	**Pinedale Array**	**17.83**	**360**	P			**P**	**07 01 47.8**	**+6.3**
	0.1nm,0.3s,baz=164,slow=10,SNR=3.7								
	0.5nm,0.7s								
SJG	**San Juan**	**40.74**	**91**	LR			LR	07 22 52.3	
	comp=Z,28nm,18.2s,baz=94,slow=38								
ILAR	**Eielson Array**	**46.58**	**339**	P			P	07 06 06.1	+6.1
	0.2nm,0.6s,baz=148,slow=7.2,SNR=4.1								
	0.2nm,0.6s								

IDC 16 06:58:27.4±6.6,**28°.24S**×**23°.49E,h0**km,**Error ellipse: s-maj=39.2km s-min=32.2km az=105.0, South Africa**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
I47ZA	**BOSHOF INFRASO**	**1.58**	**104**	*i*				07 06 40.0	
	baz=283,slow=330,SNR=1.3								
BOSA	**Boshof**	**1.60**	**104**	Pn			Pn	06 58 56.8	-0.3
	0.3nm,0.3s,baz=286,slow=17,SNR=1.8								
BOSA				Lg			Lg	06 59 18.5	
	0.8nm,0.3s,baz=207,slow=21,SNR=13								
BOSA				Rg			Rg	06 59 26.7	
	5.0nm,0.7s,baz=346,slow=7.4,SNR=6.5								
I35NA	**TSUMEB INFRASO**	**10.51**	**328**	*i*				08 07 00.0	
	baz=149,slow=320,SNR=1.7								

*ISK **16** 07:09:28.3,38°.73N×26°.02E,h9km,ML2.1/6*
*THE **16** 07:09:29.2,38°.67N×25°.90E,h10km±3km,ML2.2/2,Error ellipse: s-maj=3.5km s-min=0.6km az=233.0*
*DDA **16** 07:09:30.6±0.0,38°.82N×25°.92E,h8km±3km,ML1.8*
ISC 16 07:09:29.2±1.0,**38°.73N**±0°.02×**26°.10E**±0°.05,**h10**km±10km, **n19,σ0s77/34, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CHOS	**Chios island**	**0.35**	**185**	P			**Pg**	**07 09 35.9**	**-0.2**
CHOS				S			**Sg**	**07 09 39.8**	**-0.9**
	710nm,0.3s								
CHOS	**Chios island**	**0.35**	**185**	PG			**Pg**	**07 09 35.6**	**-0.5**
CHOS				SG			**Sg**	**07 09 40.2**	**-0.5**
SIGR	**SIGRI**	**0.51**	**339**	P			**Pg**	**07 09 39.8**	**+0.6**
SIGR				S			**Sb**	**07 09 47.2**	**-0.7**
	282nm,0.2s								
URLA	**Izmir**	**0.54**	**133**	PG			**Pg**	**07 09 39.8**	**+0.1**
URLA				SG			**Sb**	**07 09 48.9**	**+0.2**
URLA	**Izmir**	**0.54**	**133**	P			**Pg**	**07 09 40.5**	**+0.7**
URLA				S			**Sg**	**07 09 48.0**	**+1.2**
URLA				*i* AML			AML	07 09 52.0	
	comp=N,28nm,0.4s								
URLA				*i* AML			AML	07 09 53.0	
	comp=E,35nm,0.4s								
ZEYE	**Izmir, Urla-Ze**	**0.59**	**147**	P			**Pg**	**07 09 40.5**	**-0.1**
ZEYE				S			**Sg**	**07 09 48.7**	**+0.4**
ZEYE				*i* AML			AML	07 09 53.0	
	comp=E,44nm,0.5s								
ZEYE				*i* AML			AML	07 09 53.0	
	comp=N,46nm,0.3s								
GPNR	**Gulpinar-Canak**	**0.72**	**2**	PG			**Pg**	**07 09 43.1**	**-0.1**
GPNR				SG			**Sg**	**07 09 53.5**	**+0.8**
AYVA	**Ayvalik**	**0.74**	**39**	P			**Pg**	**07 09 42.7**	**-0.8**
AYVA				S			**Sn**	**07 09 57.0**	**-0.1**
AYVA				*i* AML			AML	07 09 58.0	
	comp=E,25nm,0.6s								
AYVA				*i* AML			AML	07 09 59.0	
	comp=N,66nm,0.3s								
KOCA	**Canakkale, Ayv**	**0.77**	**2**	P			**Pg**	**07 09 44.6**	**+0.5**
KOCA				S			**Sn**	**07 09 57.3**	**-0.6**
KOCA				*i* AML			AML	07 09 58.0	
	comp=N,120nm,0.3s								
KOCA				*i* AML			AML	07 09 59.0	
	comp=E,110nm,0.6s								
KOCA	**Canakkale, Ayv**	**0.77**	**2**	P			**Pg**	**07 09 44.6**	**+0.5**
KOCA				S			**Sn**	**07 09 57.3**	**-0.6**
KOCA				*i* AML			AML	07 09 58.0	
	comp=N,120nm,0.3s								
KOCA				*i* AML			AML	07 09 59.0	
	comp=E,110nm,0.6s								
DGB	**zmir**	**0.92**	**137**	P			**Pg**	**07 09 46.4**	**-0.5**
DGB				S			**Sg**	**07 09 59.0**	**+0.2**
BAYC	**CANAKKALE_Bayr**	**1.07**	**19**	P			**Pb**	**07 09 50.4**	**+0.6**
BAYC				S			**Sb**	**07 10 04.4**	**+0.6**
BAYC				*i* AML			AML	07 10 10.0	
	comp=N,14nm,0.2s								
BAYC				*i* AML			AML	07 10 10.0	
	comp=E,16nm,0.2s								
BUHA	**Balikesir, Bur**	**1.08**	**44**	S			**Sg**	**07 10 01.2**	**-2.9**
EZN	**Ezine**	**1.11**	**9**	PN			**Pg**	**07 09 50.4**	**-0.1**
EZN				SN			**Sb**	**07 10 05.8**	**+0.8**
BOZC	**Bozcaada**	**1.11**	**358**	PN			**Pg**	**07 09 50.2**	**-0.3**
BOZC	**Bozcaada**	**1.11**	**358**	P			**Pg**	**07 09 50.0**	**-0.5**
BOZC				S			**Sg**	**07 10 05.1**	**+0.2**
BOZC				*i* AML			AML	07 10 08.0	
	comp=N,32nm,0.4s								
BOZC				*i* AML			AML	07 10 10.0	
	comp=E,27nm,0.2s								
ECEA	**Canakkale, Ece**	**1.31**	**3**	P			**Pn**	**07 09 53.8**	**+0.1**
ECEA				S			**Sb**	**07 10 11.4**	**+0.5**
ECEA				*i* AML			AML	07 10 15.0	
	comp=E,43nm,0.9s								
ECEA				*i* AML			AML	07 10 17.0	
	comp=N,30nm,0.4s								
GADA	**Gvkgeada**	**1.47**	**354**	PN			**Pn**	**07 09 55.5**	**-0.3**
GELI	**Tayfur-Gelibol**	**1.69**	**10**	PN			**Pn**	**07 09 58.8**	**0.0**

*IDC **16** 07:14:44.4±2.2,24°.24N×125°.16E,h0km,mb3.8/5, mbtmp3.8/5,MS3.0/4,Error ellipse: s-maj=166.2km s-min=22.4km az=65.0*
*JMA **16** 07:14:49.4±0.2,24°.N±1°×125°.2E±0°.6,h44km±3km, MV3.5/11,NEAR MIYAKOJIMA ISLAND*
ISC 16 07:14:48.5±1.9,**24°.26N**±0°.08×**125°.21E**±0°.08,**h29**km±12km, **n19,σ0s41/23,mb3.8/5,MS3.1/3, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JMJ2	**Miyako jima3**	**0.50**	**13**	*i* P			**Pn**	**07 14 59.3**	**-0.3**
JMJ2				S			**Sn**	**07 15 06.9**	**-0.4**
JOGS	**Gusukube**	**0.53**	**20**	P			**Pn**	**07 14 60.0**	**-0.2**
JOGS				S			**Sn**	**07 15 08.2**	**0.0**
JIRB	**Irabujima**	**0.57**	**357**	*i* P			**Pb**	**07 15 00.1**	**0.0**
JIRB				S			**Sb**	**07 15 07.9**	**0.0**
JTJ	**Tarama**	**0.60**	**310**	P			**Pn**	**07 15 00.8**	**-0.3**
JTJ				S			**Sb**	**07 15 09.2**	**+0.6**
JIKM	**Ikemajima**	**0.67**	**3**	P			**Pn**	**07 15 01.7**	**-0.3**
JIKM				S			**Sb**	**07 15 10.6**	**0.0**
JISG	**Ishigakijimahi**	**0.88**	**292**	*e*P			**Pn**	**07 15 04.8**	**-0.1**
JISG				S			**Sb**	**07 15 16.3**	**-0.3**
JIJ	**Ishigaki jima**	**0.98**	**277**	P			**Pb**	**07 15 06.7**	**-0.1**
JKRS	**Kuro-shima**	**1.09**	**269**	P			**Pb**	**07 15 09.2**	**+0.5**
JKRS				S			**Sb**	**07 15 23.6**	**+1.0**
HATJ	**Hateruma jima**	**1.29**	**261**	P			**Pb**	**07 15 11.4**	**-0.7**
HATJ				*e*S			**Sb**	**07 15 28.1**	**-0.4**
IRIF	**Iriomote-Funau**	**1.35**	**274**	P			**Pb**	**07 15 12.6**	**-0.5**
KSRS	**Korea Array**	**13.36**	**9**	LR			LR	07 23 31.8	
	comp=Z,29nm,18.4s,baz=280,slow=40								

CMAR	**Chiang Mai Arr**	**25.11 262**	LR	LR	07 30 34.5	
	comp=Z,23nm,18.2s,baz=280,slow=38					
KLR	**Kul'dur**	**25.45 10**	LR	LR	07 31 30.1	
	comp=Z,52nm,18.2s,baz=242,slow=40					
MKAR	**Makanchi Array**	**40.88 314**	P	**P**	**07 22 28.0**	**+0.1**
	0.9nm,0.4s,baz=102,slow=9.9,SNR=18					
	0.9nm,0.4s					
ZALV	**Zalesovo Beam**	**42.23 325**	P	**P**	**07 22 38.7**	**-0.2**
	0.9nm,0.5s,baz=115,slow=8.5,SNR=2.5					
	0.9nm,0.5s					
WRA	**Warramunga Arr**	**44.82 168**	P	**P**	**07 23 00.2**	**+0.1**
	0.5nm,0.7s,baz=348,slow=8.7,SNR=4.9					
	0.5nm,0.7s					
ASAR	**Alice Springs**	**48.38 169**	P	**P**	**07 23 28.1**	**+0.2**
	0.4nm,0.8s,baz=350,slow=9.3,SNR=2.3					
	0.4nm,0.8s					
FINES	**FINESS Array B**	**73.22 330**	P	**P**	**07 26 16.9**	**+0.4**
	1.7nm,0.7s,baz=59,slow=7.4,SNR=6.3					
	1.7nm,0.7s					
BORG	**Borgarnes**	**87.57 346**	LR	LR	08 10 33.0	
	comp=Z,14nm,18.1s,baz=201,slow=38					

MAN 16 07:16:24.1, 12.85N×121.09E, 1 km, mb 3.5, ML 2.2, MS 1.6, Mindoro

*DJA **16** 07:26:17.7±0.2, 6.7°S±2.7°×13.0°E±0.7°, h189 km±3 km, M4.8/29, mB5.3/12, mb4.7/29, MLv5.1/14, Mw(mB)4.8/12*
*NEIC **16** 07:26:18.4±2.2, 5.77°S±0.07°×130.01°E±0.09, h190 km±7 km, mb4.5/20, Error ellipse: s-maj=12.5km s-min=9.5km az=82.0*
*IDC **16** 07:26:19.0±1.6, 5.76°S×130.10°E, h205 km±15 km, mb3.7/7, mbtmp4.5/10, MS3.7/1, Error ellipse: s-maj=22.3km s-min=11.9km az=65.0*

ISC 16 07:26:18.4±0.4, 5.87°S±0.04°×130.08°E±0.05, h200 km, n99, σ18.76/109, mb 4.4/15, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**1.34**	**353**	P	**Pn**	**07 26 52.4**	**+1.5**
SAUI	**Saumlaki**	**2.43**	**150**		**Pn**	**07 27 03.5**	**+1.9**
SAUI	**Saumlaki**	**2.43**	**150**	P	**Pn**	**07 27 01.2**	**-0.4**
MSAI	**Masohi**	**2.75**	**335**	P	**Pn**	**07 27 05.5**	**+0.3**
MSAI				S	**Sn**	**07 27 39.4**	**-2.4**
AAI	**Ambon**	**2.86**	**319**	P	**Pn**	**07 27 07.9**	**+1.4**
FAKI	**Fak Fak**	**3.64**	**37**	Pn	**Pn**	**07 27 15.8**	**0.0**
FAKI	**Fak Fak**	**3.64**	**37**	P	**Pn**	**07 27 15.8**	**0.0**
FAKI				S	**Sn**	**07 27 58.0**	**-2.9**
FAKI	**Fak Fak**	**3.64**	**37**	P	**Pn**	**07 27 16.1**	**+0.2**
SIJI	**Sorong**	**5.10**	**14**	P	**Pn**	**07 27 33.5**	**-0.8**
	154nm,0.3s,baz=270,slow=23,SNR=88						
SIJI				S	**Sn**	**07 28 27.3**	**-6.8**
	356nm,0.2s,baz=202,slow=3.5,SNR=5.8						
SWI	**Sorong**	**5.11**	**13**	P	**Pn**	**07 27 33.5**	**-0.8**
	4.2nm13μm421nm,0.7s						
SWI				S	**Sn**	**07 28 30.3**	**-3.9**
	4.2nm13μm421nm,0.7s						
SANI	**Sanana**	**5.57**	**313**	P	**Pn**	**07 27 40.6**	**+0.4**
	2.0nm7μm626nm,0.9s						
SANI				S	**Sn**	**07 28 39.0**	**-5.7**
	2.0nm7μm626nm,0.9s						
SANI	**Sanana**	**5.57**	**313**	P	**Pn**	**07 27 40.9**	**+0.7**
LBMI	**Labuha**	**5.79**	**334**	P	**Pn**	**07 27 43.3**	**+0.2**
	1.7nm4μm180nm,0.6s						
LBMI				S	**Sn**	**07 28 45.6**	**-4.5**
	1.7nm4μm180nm,0.6s						
SOEI	**Soe**	**6.93**	**236**		**Pn**	**07 27 57.7**	**-0.3**
SOEI	**Soe**	**6.93**	**236**	P	**Pn**	**07 27 58.4**	**+0.4**
	1.1nm91nm,0.6s						
SOEI				S	**Sn**	**07 29 14.1**	**-2.8**
	1.1nm91nm,0.6s						
SOEI	**Soe**	**6.93**	**236**	P	**Pn**	**07 27 59.3**	**+1.3**
MTN	**Manton Dam**	**7.01**	**172**	Pn	**Pn**	**07 27 58.9**	**0.0**
MTN	**Manton Dam**	**7.01**	**172**	P	**Pn**	**07 27 59.1**	**+0.2**
KDU	**Kakadu**	**7.18**	**161**	P	**Pn**	**07 28 01.2**	**+0.2**
BAKI	**Biak**	**7.60**	**53**	P	**Pn**	**07 28 07.5**	**+0.9**
	1.3nm4μm431nm,0.8s						
BATI	**Baumata**	**7.67**	**235**	P	**Pn**	**07 28 08.2**	**+0.7**
	169nm,0.6s,baz=31,slow=1.7,SNR=17						
BATI				S	**Sn**	**07 29 32.2**	**-2.1**
	160nm,0.4s,baz=219,slow=23,SNR=8.1						
BATI	**Baumata**	**7.67**	**235**	P	**Pn**	**07 28 05.9**	**-1.6**
	0.6nm2μm132nm,0.7s						
EDFI	**Ende, Flores**	**8.80**	**250**	P	**Pn**	**07 28 23.4**	**+1.2**
	19nm,0.9s						
SMPI	**Sarmi**	**9.43**	**66**	P	**Pn**	**07 28 29.3**	**-1.1**
	18nm,1.0s						
APSI	**Ampana**	**9.74**	**300**	P	**Pn**	**07 28 34.2**	**-0.3**
	20nm,0.9s						
KNRA	**Kununurra**	**9.84**	**187**	Pn	**Pn**	**07 28 35.1**	**-0.6**
KNRA	**Kununurra**	**9.84**	**187**	P	**Pn**	**07 28 35.0**	**-0.6**
MRSI	**Marisa**	**10.28**	**308**	P	**Pn**	**07 28 43.2**	**+1.8**
	30nm,0.6s						
WBSI	**Waikabubak, Su**	**11.23**	**250**	P	**Pn**	**07 28 53.8**	**+0.1**
	73nm,0.8s						
TOLI2	**Tolitoli**	**11.58**	**306**	P	**Pn**	**07 28 59.8**	**+1.7**
MPSI	**Mapaga**	**11.88**	**301**	P	**Pn**	**07 29 03.4**	**+1.4**
	8.7nm,0.9s						
PLAI	**Plampang**	**12.55**	**256**	P	**Pn**	**07 29 09.5**	**-0.9**
	45nm,0.7s						
PLAI	**Plampang**	**12.55**	**256**	P	**Pn**	**07 29 09.8**	**-0.6**
WRAB	**Tennant Creek**	**14.59**	**164**		**Pn**	**07 29 34.8**	**-0.9**
WRAB	**Tennant Creek**	**14.59**	**164**	P	**Pn**	**07 29 35.2**	**-0.5**
WRA	**Warramunga Arr**	**14.59**	**164**	P	**Pn**	**07 29 34.9**	**-0.9**
	5.1nm,0.5s,baz=352,slow=11,SNR=35						
WRA				S	**S**	**07 32 09.8**	**-8.3**
	12nm,0.5s,baz=340,slow=22,SNR=8.3						
WRA	**Warramunga Arr**	**14.59**	**164**		**Pn**	**07 29 36.0**	**+0.2**
SRBI	**Singaraja**	**14.92**	**261**	P	**P**	**07 29 40.5**	**0.0**
	39nm,1.1s						
IGBI	**Denpasar**	**15.09**	**258**	P	**Pn**	**07 29 41.6**	**-0.3**
	51nm,0.9s						
COEN	**Coen**	**15.20**	**123**		**P**	**07 29 43.8**	**+0.2**
COEN	**Coen**	**15.20**	**123**	P	**P**	**07 29 44.1**	**+0.5**
BBKI	**Banjar Baru**	**15.37**	**278**	P	**Pn**	**07 29 45.6**	**+0.3**
KMMI	**Kalianget**	**16.05**	**265**	P	**P**	**07 29 53.2**	**+0.1**
	132nm,0.8s						
BLJI	**Banyuglugur**	**16.47**	**263**	P	**P**	**07 29 56.9**	**-0.8**
	60nm,0.8s						
GMJI	**Gumukmas**	**16.68**	**261**	P	**P**	**07 29 59.7**	**-0.3**
	32nm,0.9s						
QIS	**Mount Isa**	**17.29**	**149**	P	**Pn**	**07 30 08.1**	**-0.1**
AS31	**Alice Springs**	**18.08**	**169**	P	**Pn**	**07 30 16.7**	**-0.8**
AS31				IAmb	IAmb	07 30 20.4	
	comp=Z,9.8nm,0.8s						
ASAR	**Alice Springs**	**18.08**	**169**	P	**Pn**	**07 30 16.8**	**-0.8**
	comp=Z,19nm,0.5s,baz=350,slow=11,SNR=167						
ASAR				S	**S**	**07 33 29.7**	**-2.4**
	comp=Z,10nm,0.8s,baz=351,slow=21,SNR=19						
ASAR				ScP	**ScP**	**07 37 54.5**	**-2.2**
	comp=Z,1.8nm,0.7s,baz=323,slow=1.9,SNR=4.5						
KKM	**Kota Kinabalu**	**18.20**	**310**		**P**	**07 30 17.2**	**+0.5**
KKM				IAmb	IAmb	07 30 24.9	
	comp=Z,22nm,1.1s						
KKM	**Kota Kinabalu**	**18.20**	**310**	P	**Pn**	**07 30 18.5**	**-0.6**
	comp=Z,19nm,0.7s						
MBWA	**Marble Bar**	**18.21**	**212**	P	**P**	**07 30 16.9**	**+0.2**
MBWA				IAmb	IAmb	07 30 17.9	
	comp=Z,25nm,0.8s						
MBWA	**Marble Bar**	**18.21**	**212**	P	**P**	**07 30 17.1**	**+0.4**
PWJI	**Pagerwojo**	**18.26**	**262**	P	**P**	**07 30 16.7**	**-0.6**
	comp=Z,26nm,2.4s						
PSA00	**Pilbara Seismi**	**18.49**	**211**	P	**P**	**07 30 19.1**	**-0.6**
PSA00	**Pilbara Seismi**	**18.49**	**211**	P	**P**	**07 30 20.4**	**+0.7**
MTSU	**Mount Surprise**	**18.49**	**132**	P	**Pn**	**07 30 21.7**	**-0.7**
WRKA	**Warakurna**	**19.14**	**185**	P	**P**	**07 30 27.7**	**+1.0**
SBUM	**Sibu**	**19.65**	**294**	P	**P**	**07 30 32.0**	**-0.3**
SBUM				IAmb	IAmb	07 30 35.7	
	comp=Z,8.3nm,0.9s						
YOGI	**Yogyakarta**	**19.73**	**263**	P	**P**	**07 30 33.3**	**+0.1**
	comp=Z,111nm,1.9s						
KPJI	**Karang Pucung**	**21.05**	**265**	P	**P**	**07 30 46.8**	**-0.4**
CTA	**Charters Tower**	**21.14**	**133**	P	**P**	**07 30 49.1**	**+1.0**
	comp=Z,8.4nm,0.7s,baz=330,slow=12,SNR=7.3						
	comp=Z,8.4nm,0.7s						
CTAO	**Charters Tower**	**21.14**	**133**	P	**P**	**07 30 49.5**	**+1.4**
CTAO				IAmb	IAmb	07 30 54.5	
	comp=Z,40nm,1.4s						
LEM	**Lembang**	**22.34**	**266**	LR	LR	07 41 59.9	
	comp=Z,179nm,18.1s,baz=244,slow=42						
OOD	**Oodnadatta**	**22.45**	**167**	P	**P**	**07 31 01.6**	**+0.7**
GIRL	**Giralia**	**22.63**	**221**	P	**P**	**07 31 03.1**	**+0.5**
GIRL	**Giralia**	**22.63**	**221**	P	**P**	**07 31 03.6**	**+1.0**
MULG	**Mulgathing**	**24.58**	**172**	P	**P**	**07 31 21.7**	**+1.6**
FORT	**Forrest**	**24.86**	**184**	P	**P**	**07 31 23.1**	**+0.5**
FORT				IAmb	IAmb	07 31 33.2	
	comp=Z,27nm,1.1s						
FORT	**Forrest**	**24.86**	**184**	P	**P**	**07 31 23.0**	**+0.3**
MORW	**Morawa**	**26.62**	**208**	P	**P**	**07 31 38.4**	**-0.2**
MORW				IAmb	IAmb	07 31 42.7	
	comp=Z,6.9nm,0.8s						
MORW	**Morawa**	**26.62**	**208**	P	**P**	**07 31 38.4**	**-0.2**
BBOO	**Buckleboo**	**27.38**	**169**	P	**P**	**07 31 46.2**	**+0.9**
BBOO				IAmb	IAmb	07 32 09.1	
	comp=Z,23nm,1.4s						
BLDU	**Ballidu**	**27.64**	**205**	P	**P**	**07 31 47.5**	**-0.1**
STKA	**Stephens Creek**	**28.03**	**159**	P	**P**	**07 31 51.5**	**+0.3**
	comp=Z,1.6nm,0.4s,baz=344,slow=7.2,SNR=6.4						
	comp=Z,1.6nm,0.4s						
STKA	**Stephens Creek**	**28.03**	**159**	P	**P**	**07 31 52.0**	**+0.9**
KLBR	**Kellerberrin**	**28.07**	**203**	P	**P**	**07 31 51.9**	**+0.4**
MUN	**Mundaring**	**29.04**	**205**	P	**P**	**07 32 00.6**	**+0.6**
CMSA	**Cobar Meteorol**	**29.43**	**152**	P	**P**	**07 32 04.9**	**+1.4**
ARMA	**Armidale**	**31.74**	**143**	P	**P**	**07 32 26.8**	**+2.8**
ARMA				IAmb	IAmb	07 32 41.6	
	comp=Z,9.9nm,1.1s						
CAN	**Canberra**	**34.11**	**152**	P	**P**	**07 32 45.3**	**+0.9**
CAN				IAmb	IAmb	07 32 52.6	
	comp=Z,10nm,1.1s						
CMAR	**Chiang Mai Arr**	**39.07**	**309**	P	**P**	**07 33 26.1**	**-0.3**
	comp=Z,3.4nm,0.7s,baz=139,slow=7.1,SNR=9.8						
	comp=Z,3.4nm,0.7s						
NJ2	**Nanjing**	**39.19**	**345**	*e*P	**P**	**07 33 28.5**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
PZH	**PanZhiHua**	**42.30**	**321**	P	**P**	**07 33 56.3**	**+3.4**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,60nm,4.8s						
HHC	**Hu-ho-hao-te**	**49.50**	**342**	*e*P	**P**	**07 34 51.8**	**+3.0**
HHC				pmax	pmax		
	comp=Z,21nm,0.9s						
HHC				pmax	pmax		
	comp=Z,170nm,5.8s						
KHZ	**Kahutara**	**52.92**	**140**	P	**P**	**07 35 14.7**	**+0.6**
WMQ	**Urumqi**	**62.49**	**327**	*e*P	**P**	**07 36 23.8**	**+3.0**
MK31	**Makanchi Array**	**67.33**	**327**	P	**P**	**07 36 52.4**	**+0.5**
MKAR	**Makanchi Array**	**67.33**	**327**	P	**P**	**07 36 52.1**	**+0.2**
	comp=Z,3.9nm,0.6s,baz=121,slow=8.2,SNR=44						
	comp=Z,3.9nm,0.6s						
MKAR	**Makanchi Array**	**67.33**	**327**	P	**P**	**07 36 52.3**	**+0.4**
MAKZ	**Makanchi**	**67.51**	**326**	P	**P**	**07 36 53.3**	**+0.3**
ZALV	**Zalesovo Beam**	**70.61**	**334**	P	**P**	**07 37 10.7**	**-1.1**
	comp=Z,0.7nm,0.3s,baz=157,slow=4.5,SNR=4.6						
	comp=Z,0.7nm,0.3s						
VNDA	**Vanda**	**73.56**	**173**	P	**P**	**07 37 32.5**	**+3.4**
MAW	**Mawson**	**76.03**	**201**	P	**P**	**07 37 43.8**	**+0.5**
	comp=Z,2.1nm,0.8s,baz=72,slow=4.8,SNR=6.6						
	comp=Z,2.1nm,0.8s						
MAW	**Mawson**	**76.03**	**201**	P	**P**	**07 37 44.0**	**+0.7**
HPAH	**Hawaii Prepara**	**77.31**	**68**	P	**P**	**07 37 50.9**	**-0.6**
ABKAR	**Akbulak array**	**81.67**	**321**	P	**P**	**07 38 13.8**	**-0.6**
ILAR	**Eielson Array**	**92.30**	**25**	P	**P**	**07 39 03.3**	**-2.3**
	comp=Z,0.3nm,0.7s,baz=284,slow=5.5,SNR=4.6						
	comp=Z,0.3nm,0.7s						
CPUP	**Villa Florida**	**147.20**	**168**	PKPbc	**PKPbc**	**07 45 38.8**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=300,slow=1.1,SNR=4.0						
LPAZ	**La Paz**	**151.56**	**141**	PKPbc	**PKPbc**	**07 45 51.0**	**+0.4**
	comp=Z,0.7nm,0.4s,baz=46,slow=5.0,SNR=11						

WEL 16 07:27:00.1±1.1, 34.°S±14.°×17.°9W±2.°4, h33 km, M3.8/9, mB4.5/6, ML4.2/13, MLv3.9/9, Mw(mB)3.7/6, Error ellipse: s-maj=0.0km s-min=0.0km az=117.9, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**4.46**	**210**	P	**Pn**	07 28 04.8	-0.5
MXZ				S	**Sn**	07 28 59.2	+3.2
WMGZ	**Waiomatatini S**	**4.64**	**207**	P	**Pn**	07 28 08.7	+0.9
WMGZ				S	**Sn**	07 29 02.5	+2.0
PKGZ	**Pakihiroa**	**4.83**	**210**	P	**Pn**	07 28 10.2	-0.3
HAZ	**Te Kaha**	**4.85**	**213**	P	**Pn**	07 28 10.8	+0.1
HAZ				S	**Sn**	07 29 07.4	+1.7
PUZ	**Puketiti**	**4.92**	**207**	P	**Pn**	07 28 13.1	+1.5
PUZ				S	**Sn**	07 29 07.9	+0.5
RUGZ	**Raukumara Rang**	**5.07**	**212**	P	**Pn**	07 28 13.9	+0.1
RUGZ				S	**Sn**	07 29 13.9	+2.7
TWGZ	**Tauwhareparae**	**5.12**	**209**	P	**Pn**	07 28 16.2	+1.1
TWGZ				S	**Sn**	07 29 13.6	+1.3
CNGZ	**Carnagh Statio**	**5.30**	**206**	P	**Pn**	07 28 14.7	-2.1
KUZ	**Kuaotunu**	**5.34**	**234**	P	**Pn**	07 28 18.2	+0.7
TKGZ	**Te Karaka**	**5.39**	**208**	P	**Pn**	07 28 18.4	+0.2
TKGZ				S	**Sn**	07 29 19.3	+0.2
MWZ	**Matawai**	**5.44**	**211**	P	**Pn**	07 28 18.7	-0.2
MWZ				S	**Sn**	07 29 20.4	+0.1
URZ	**Urewera**	**5.57**	**215**	P	**Pn**	07 28 20.4	-0.2
URZ				S	**Sn**	07 29 21.7	-1.6
RAGZ	**Rawiri**	**5.62**	**211**	P	**Pn**	07 28 22.1	+0.7
RAGZ				S	**Sn**	07 29 23.4	-1.4
RIGZ	**Rimuhau**	**5.66**	**208**	P	**Pn**	07 28 22.0	+0.2
RIGZ				S	**Sn**	07 29 25.5	-0.2
PRGZ	**Paritu Road**	**5.80**	**206**	P	**Pn**	07 28 24.0	+0.2
MUGZ	**Murupara**	**5.90**	**215**	P	**Pn**	07 28 24.2	-0.9

MAN 16 07:41:55.8, 12.70N×120.94E, h17 km, mb 4.4, ML 3.2, MS 3.0, 8C-2D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SJMP	**San Jose**	**0.29**	**143**	*e*P	**Pn**	07 42 02.9	+1.4
PGP	**Puerto Galera**	**0.80**	**1**	*e*P	Pg	07 42 08.1	+2.6
PGP				*i* S		07 42 17.9	
LUBP	**Lubang**	**1.23**	**327**	*e*P	**Pn**	07 42 18.2	+0.1
LUBP				*e*S		07 42 34.5	
TGY	**Tagaytay City**	**1.40**	**360**	*e*P	**Pn**	07 42 20.2	+0.1
TGY				*e*S		07 42 42.9	
MACP	**Maragondon, Ca**	**1.57**	**352**	*e*P	**Pn**	07 42 22.6	+0.1
CUYO	**Cuyo Island**	**1.83**	**178**	*e*P	**Pn**	07 42 26.6	+0.7
CUYO				*e*S		07 42 57.9	
GQP	**Guinayangan**	**1.90**	**50**	*e*P	**Pn**	07 42 26.9	+0.6
GQP				*e*S		07 42 52.0	
ENPP	**El Nido**	**2.09**	**225**	*e*P	Pb	07 42 32.4	+0.9
ENPP				*e*S		07 42 53.3	
RCP	**Roxas**	**2.10**	**122**	*e*P	Pb	07 42 31.0	+1.0
JCNP	**Jose Panganiba**	**2.33**	**47**	*e*P	**Pn**	07 42 32.4	0.0
JCNP				*e*S		07 42 36.6	

WEL 16 07:43:20.0±0.8, 34.°S±14.°×17.°8W±2.°3, h415 km±10 km, M3.7/18, mB4.2/10, ML4.5/21, MLv4.3/18, Mw(mB)3.3/10, Error ellipse: s-maj=0.0km s-min=0.0km az=119.6, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**4.11**	**219**	P	P	07 44 31.3	-2.4
MXZ				S	S	07 45 32.2	-1.7
WMGZ	**Waiomatatini S**	**4.25**	**216**	P	P	07 44 32.0	-3.1
WMGZ				S	S	07 45 39.3	+2.9
PKGZ	**Pakihiroa**	**4.47**	**218**	P	P	07 44 35.6	-1.6
PKGZ				S	S	07 45 41.5	+1.0
PUZ	**Puketiti**	**4.53**	**215**	P	P	07 44 36.1	-1.7
PUZ				S	S	07 45 43.4	+2.1
HAZ	**Te Kaha**	**4.53**	**222**	P	P	07 44 35.2	-2.5
HAZ				S	S	07 45 38.7	-2.6
RUGZ	**Raukumara Rang**	**4.74**	**221**	P	P	07 44 37.5	-2.5
RUGZ				S	S	07 45 43.7	-1.6
GLKZ	**Green Lake**	**5.16**	**5**	P	P	07 44 50.2	+6.0
BKZ	**Black Stump Fm**	**6.25**	**219**	P	P	07 44 55.3	-0.2
BKZ				S	S	07 46 18.4	+4.5
CKHZ	**Cape Kidnapper**	**6.35**	**213**	P	P	07 44 58.9	+2.4
MCHZ	**McNeill Hill**	**6.36**	**216**	P	P	07 44 57.7	+1.1
KWHZ	**Kaweka Forest**	**6.48**	**218**	P	P	07 44 58.6	+0.6
KWHZ				S	S	07 46 22.7	+4.2
KAHZ	**Kahuranaki**	**6.55**	**214**	P	P	07 45 00.5	+1.2
ETVZ	**East Tongariro**	**6.66**	**223**	P	P	07 44 58.9	-1.7
KRHZ	**Kereru**	**6.67**	**217**	P	P	07 44 58.8	-1.8
KRHZ				S	S	07 46 23.5	+1.2
OTVZ	**Oturere**	**6.70**	**223**	P	P	07 44 59.3	-1.8
NNVZ	**North Ngauruho**	**6.71**	**224**	P	P	07 44 59.6	-1.6
WTVZ	**West Tongariro**	**6.71**	**224**	P	P	07 44 59.6	-1.6
BHHZ	**Black Hill Sta**	**6.71**	**219**	P	P	07 44 59.7	-1.4
BHHZ				S	S	07 46 25.5	+2.3
SNVZ	**South Ngauruho**	**6.73**	**223**	P	P	07 44 58.6	-2.9
NGZ	**Ngauruhoe**	**6.75**	**224**	P	P	07 45 00.1	-1.5
TUVZ	**Tukino**	**6.78**	**223**	P	P	07 45 00.2	-1.8
HIZ	**Hauiti**	**6.78**	**231**	P	P	07 44 59.9	-1.9
MOVZ	**Moawhango**	**6.82**	**221**	P	P	07 45 00.3	-2.1
MOVZ				S	S	07 46 23.2	-2.1
WNVZ	**Wahianoa**	**6.85**	**223**	P	P	07 45 00.9	-1.9
MTVZ	**Mangateitei**	**6.96**	**223**	P	P	07 45 02.3	-1.5
PNHZ	**Pukenui**	**6.96**	**216**	P	P	07 45 03.0	-0.9
PNHZ				S	S	07 46 31.5	+3.3
TSZ	**Takapari Road**	**7.19**	**217**	P	P	07 45 05.7	-0.7
VRZ	**Vera Road**	**7.21**	**227**	P	P	07 45 05.0	-1.5
ANWZ	**Angora Road**	**7.27**	**212**	P	P	07 45 09.0	+1.9
DVHZ	**Dannevirke**	**7.28**	**215**	P	P	07 45 07.8	+0.5
POWZ	**Post Office Ro**	**7.54**	**216**	P	P	07 45 10.4	+0.3
BFZ	**Birch Farm**	**7.55**	**213**	P	P	07 45 12.1	+1.9
PRWZ	**Pori Road**	**7.57**	**214**	P	P	07 45 11.6	+1.1
PKE	**Pukeiti**	**7.73**	**230**	P	P	07 45 11.4	-0.9
CPWZ	**Castlepoint**	**7.75**	**212**	P	P	07 45 15.8	+3.4
TIWZ	**Tintock**	**7.79**	**214**	P	P	07 45 14.0	+1.1
MRZ	**Mangatainoka R**	**7.84**	**216**	P	P	07 45 13.1	-0.3
TMWZ	**Te Maipa**	**8.05**	**212**	P	P	07 45 17.8	+2.1
HOWZ	**Holdsworth Sta**	**8.06**	**215**	P	P	07 45 16.2	+0.5
OGWZ	**Otaki Gorge**	**8.16**	**217**	P	P	07 45 16.4	-0.4
MTW	**Mount Morrison**	**8.27**	**214**	P	P	07 45 19.0	+1.0
KIW	**Kapiti Island**	**8.32**	**217**	P	P	07 45 18.1	-0.5
TRWZ	**Traveller**	**8.38**	**212**	P	P	07 45 21.7	+2.4
CAW	**Cannon Point**	**8.43**	**216**	P	P	07 45 20.1	+0.2
PAWZ	**Paruwai Farm**	**8.48**	**213**	P	P	07 45 21.9	+1.5
MSWZ	**Moikau Station**	**8.59**	**214**	P	P	07 45 23.0	+1.5
PLWZ	**Palliser**	**8.71**	**213**	P	P	07 45 24.0	+1.7
DUWZ	**D'Urville Isla**	**8.80**	**221**	P	P	07 45 22.7	-1.2
TCW	**Tory Channel**	**8.90**	**218**	P	P	07 45 24.6	-0.4
TUWZ	**Tuamarina**	**9.23**	**218**	P	P	07 45 27.9	-0.7
TKNZ	**Takaka Hill**	**9.49**	**223**	P	P	07 45 29.6	-2.0
MRNZ	**Matariki Terra**	**9.85**	**222**	P	P	07 45 35.1	-0.4
THZ	**Tophouse**	**10.02**	**220**	P	P	07 45 37.4	-0.1
KHZ	**Kahutara**	**10.17**	**216**	P	P	07 45 40.7	+1.7

MAN 16 07:54:32.4, 8.57N×122.49E, h51 km, mb 3.9, ML 2.7, MS 2.2, Mindanao

*TUL **16** 07:58:28.0±0.9, 36.05°N±0.02°×96.77°W±0.02°, h5 km±2 km, ML2.7, mb_Lg2.3/28(NEIC), Error ellipse: s-maj=2.5km s-min=1.8km az=169.0*

NEIC 16 07:58:28.2±0.7, 36.03°N±0.02°×96.79°W±0.01°, h5 km±1 km, Error ellipse: s-maj=3.6km s-min=2.3km az=164.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TUL1	**Leonard**	**0.82**	**98**	P	Pg	07 58 43.1	-0.7
T35A	**Sooner Cattle**	**0.91**	**14**		Pg	07 58 44.8	-0.9
T35A				IAmb_Lg		07 58 56.4	
	comp=Z,19nm,0.8s						
X34A	**Smith Ranch, M**	**1.66**	**211**	Pn	Pn	07 58 58.3	+0.3
X37A	**Clayton**	**1.85**	**141**		Pn	07 59 01.2	+0.7
FCAR	**Ozark Folk Cen**	**3.79**	**91**	IAmb_Lg		08 00 36.6	
	comp=Z,5.1nm,0.8s						
W41B	**Gary Mavity, V**	**3.80**	**102**	IAmb_Lg		08 00 38.5	
	comp=Z,4.6nm,0.8s						
AMTX	**Amarillo**	**4.16**	**255**	IAmb_Lg		08 00 37.7	
	comp=Z,3.8nm,1.0s						
R40A	**Maddies Statio**	**4.26**	**57**	IAmb_Lg		08 00 49.9	
	comp=Z,4.7nm,0.9s						
CCM	**Cathedral Cave**	**4.87**	**64**	IAmb_Lg		08 01 14.3	
	comp=Z,5.8nm,0.8s						
L34A	**Svendsen Farm,**	**5.94**	**3**	IAmb_Lg		08 01 34.2	
	comp=Z,5.4nm,0.8s						

*EAF **16** 08:08:06.8±7.6, 25.29°S×22.30°E, h10 km, MD4.2*
*PRE **16** 08:08:25.9±1.1, 26.29°S×27.65°E, h2 km, ML2.5*

ISC 16 08:08:27.2±1.1, 26.37°S±0.04°×27.68°E±0.05, h5 km, n11, σ2.920/20, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNKL	**Senekal, Frees**	**1.90**	**178**	*e*P	**Pn**	**08 09 01.5**	**+1.1**
SNKL				*e*S	**Sn**	**08

KYMI				S		**Sn**	**08 13 35.8**	**+0.5**
	comp=E,105nm,0.4s							
PRK	**Paraskevi**	**0.96**	**55**	P		**Pb**	**08 13 23.2**	**+0.3**
PRK				AML		AML	08 13 40.5	
	comp=N,653μm,0.4s							
PRK				AML		AML	08 13 42.7	
	comp=E,378μm,0.4s							
GPNR	**Gulpinar-Canak**	**1.02**	**42**	PG		**Pb**	**08 13 23.2**	**-0.6**
GPNR				SG		**Sb**	**08 13 37.5**	**+0.6**
KOCA	**Canakkale, Ayv**	**1.05**	**40**	P		**Pb**	**08 13 24.5**	**0.0**
KOCA				S		**Sb**	**08 13 38.6**	**+0.7**
KOCA				*i* AML		AML	08 13 42.0	
	comp=E,108nm,0.5s							
KOCA				*i* AML		AML	08 13 43.0	
	comp=E,109nm,0.5s							
URLA	**Izmir**	**1.10**	**107**	PN		**Pn**	**08 13 24.6**	**-0.6**
URLA				SN		**Sb**	**08 13 39.9**	**+0.6**
URLA	**Izmir**	**1.10**	**107**	P		**Pn**	**08 13 24.7**	**-0.6**
URLA				S		**Sg**	**08 13 41.2**	**+0.7**
FOCM	**Foa**	**1.15**	**89**	PN		**Pn**	**08 13 25.3**	**-0.6**
LIA	**Limnos Island**	**1.20**	**357**	P		**Pn**	**08 13 26.4**	**-0.2**
LIA				AML		AML	08 13 45.3	
	comp=E,106μm,0.3s							
LIA				AML		AML	08 13 46.5	
	comp=N,138μm,0.2s							
DION	**Dionisos Attik**	**1.21**	**240**	P		**Pn**	**08 13 26.2**	**-0.6**
DION				AML		AML	08 13 45.0	
	comp=E,430μm,0.4s							
DION				AML		AML	08 13 46.6	
	comp=N,312μm,0.5s							
DION	**Dionisos Attik**	**1.21**	**240**	P		**Pn**	**08 13 26.2**	**-0.6**
DION				S		**Sn**	**08 13 42.8**	**0.0**
	comp=N,288nm,0.4s							
CAND	**Candarli**	**1.23**	**78**	PN		**Pn**	**08 13 26.4**	**-0.7**
AYVA	**Ayvalik**	**1.27**	**61**	P		**Pg**	**08 13 29.4**	**+0.1**
AYVA				*i* AML		AML	08 13 49.0	
	comp=N,106nm,0.6s							
AYVA				*i* AML		AML	08 13 49.0	
	comp=N,75nm,0.5s							
BOZC	**Bozcaada**	**1.30**	**28**	PN		**Pn**	**08 13 27.4**	**-0.6**
BOZC				SN		**Sn**	**08 13 44.2**	**-0.7**
BOZC	**Bozcaada**	**1.30**	**28**	P		**Pn**	**08 13 27.8**	**-0.1**
BOZC				S		**Sb**	**08 13 45.6**	**+0.7**
DKL	**Dikili**	**1.34**	**73**	PN		**Pn**	**08 13 27.5**	**-1.0**
EZN	**Ezine**	**1.40**	**36**	PN		**Pn**	**08 13 28.8**	**-0.5**
VLY	**Voula,Athens**	**1.43**	**234**	P		**Pn**	**08 13 29.8**	**+0.1**
VLY				AML		AML	08 13 50.0	
	comp=N,187μm,0.5s							
VLY				AML		AML	08 13 53.0	
	comp=E,266μm,0.4s							
BLCB	**Balcova**	**1.43**	**102**	PN		**Pn**	**08 13 29.1**	**-0.7**
BAYC	**CANAKKALE_Bayr**	**1.45**	**43**	P		**Pb**	**08 13 31.2**	**+0.1**
BAYC				S		**Sn**	**08 13 47.8**	**-0.7**
ECEA	**Canakkale, Ece**	**1.52**	**28**	P		**Pb**	**08 13 32.4**	**0.0**
ECEA				S		**Sg**	**08 13 55.0**	**+1.1**
ECEA				*i* AML		AML	08 13 58.0	
	comp=E,76nm,0.4s							
ECEA				*i* AML		AML	08 13 58.0	
	comp=E,80nm,0.5s							
GADA	**Gvkgeada**	**1.57**	**18**	PN		**Pn**	**08 13 31.0**	**-0.7**
BUHA	**Balikesir, Bur**	**1.63**	**60**	P		**Pb**	**08 13 35.6**	**+1.4**
BUHA				S		**Sg**	**08 13 57.0**	**-0.2**
APE	**Apeiranthos**	**1.64**	**172**	PN		**Pn**	**08 13 32.5**	**-0.2**
GELI	**Tayfur-Gelibol**	**1.94**	**29**	PN		**Pn**	**08 13 36.3**	**-0.5**
BALY	**Balya**	**2.11**	**60**	P		**Pg**	**08 13 44.7**	**-0.5**
BALY				S		**Sg**	**08 14 12.5**	**-0.1**

IDC ***16*** *08:21:46.0±3.4,* **54°28N×87°45E,h0km,mbtmp3.2/2, ML2.8/2,Error ellipse: s-maj=30.0km s-min=19.0km az=45.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.59**	**259**	*i*		08 30 43.8	
	baz=77,slow=312,SNR=1.4						
ZALV	**Zalesovo Beam**	**1.59**	**259**	Pg	Pn	08 22 13.7	-1.6
	1.0nm,0.3s,baz=78,slow=17,SNR=9.1						
ZALV				Lg	Lg	08 22 36.5	
	1.6nm,0.3s,baz=78,slow=28,SNR=6.8						
KURBB	**Kurchatov Arra**	**6.57**	**240**	Pn	Pn	08 23 24.4	+0.6
	0.2nm,0.3s,baz=55,slow=14,SNR=4.7						
	1.2nm,0.2s						
MKAR	**Makanchi Array**	**8.19**	**206**	Pn	Pn	08 23 47.2	+1.3
	0.2nm,0.3s,baz=29,slow=14,SNR=6.4						
MKAR				Lg	Lg	08 26 07.3	
	baz=29,slow=33,SNR=1.8						
	0.4nm,0.4s						

IDC ***16*** *08:48:05.3±0.5,29°16S×179°09W,h318km±6km,mb3.4/7, mbtmp4.2/8,Error ellipse: s-maj=23.2km s-min=18.7km az=7.0*

ISC 16 08:48:04.8±0.7,**29°48S**±0°07×**179°3W**±0°1,**h300km,n55,** σ1§**41/78,mb3.6/7,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RIZ	**Raoul Island**	**1.19**	**79**	P	**Pn**	**08 48 48.1**	**+1.9**
GLKZ	**Green Lake**	**1.20**	**80**	P	**Pn**	**08 48 47.8**	**+1.6**
RAO	**Raoul Island**	**1.20**	**80**	P	**Pn**	**08 48 48.4**	**+2.1**
	584nm,0.4s,baz=99,slow=10,SNR=9.9						
RAO				S	**S**	**08 49 21.8**	**+2.6**
	714nm,0.4s,baz=88,slow=22,SNR=11						
MXZ	**Matakaoa Point**	**8.31**	**193**	P	**Pn**	**08 50 01.6**	**-0.6**
MXZ				S	**S**	**08 51 37.2**	**-0.2**
WCZ	**Waipu Caves**	**8.39**	**218**	P	Pn	08 50 11.1	+8.0
WMGZ	**Waiomatatini S**	**8.54**	**192**	P	**P**	**08 50 08.1**	**-2.1**
WMGZ				S	**S**	**08 51 43.0**	**+0.5**
HAZ	**Te Kaha**	**8.62**	**196**	P	**Pn**	**08 50 05.5**	**-0.3**
HAZ				S	**S**	**08 51 43.6**	**-0.6**
PKGZ	**Pakihiroa**	**8.68**	**194**	P	**Pn**	**08 50 09.1**	**+2.4**
PKGZ				S	**S**	**08 51 44.3**	**-1.4**
PUZ	**Puketiti**	**8.82**	**193**	P	**Pn**	**08 50 10.9**	**+2.6**
PUZ				S	**S**	**08 51 47.1**	**-1.7**
RUGZ	**Raukumara Rang**	**8.84**	**196**	P	**Pn**	**08 50 10.2**	**+1.5**
RUGZ				S	**S**	**08 51 48.9**	**-0.5**
TWGZ	**Tauwhareparae**	**8.97**	**194**	P	**Pn**	**08 50 11.6**	**+1.3**
TWGZ				S	**S**	**08 51 52.3**	**-0.1**
OPRZ	**Ohinepanea**	**9.04**	**202**	P	**P**	**08 50 16.6**	**+0.8**
CNGZ	**Carnagh Statio**	**9.23**	**192**	P	**Pn**	**08 50 15.2**	**+1.9**
CNGZ				S	**S**	**08 51 59.1**	**+1.1**
MWZ	**Matawai**	**9.23**	**196**	P	**Pn**	**08 50 12.2**	**-1.2**
MWZ				S	**S**	**08 51 56.7**	**-1.4**
URZ	**Urewera**	**9.26**	**198**	P	**P**	**08 50 17.9**	**-0.3**
	9.1nm,0.3s,baz=255,slow=2.7,SNR=33						
URZ				S	**S**	**08 51 59.2**	**+0.4**
	31nm,0.6s,baz=201,slow=12,SNR=12						
URZ	**Urewera**	**9.26**	**198**	S	**S**	**08 51 59.2**	**+0.4**
RAGZ	**Rawiri**	**9.41**	**196**	P	**Pn**	**08 50 18.0**	**+2.4**
RAGZ				S	**S**	**08 52 01.7**	**-0.6**
RIGZ	**Rimuhau**	**9.53**	**194**	P	**P**	**08 50 20.3**	**-0.9**
RIGZ				S	**S**	**08 52 04.3**	**-0.6**
MUGZ	**Murupara**	**9.56**	**199**	P	**Pn**	**08 50 19.5**	**+2.1**
MUGZ				S	**S**	**08 52 04.4**	**-1.1**
RTZ	**Ruatahuna**	**9.63**	**198**	P	**Pn**	**08 50 20.6**	**+2.2**
SNGZ	**Shannon Statio**	**9.70**	**196**	P	**Pn**	**08 50 19.6**	**+0.4**
SNGZ				S	**S**	**08 52 07.7**	**-1.0**
PRGZ	**Paritu Road**	**9.71**	**193**	P	**P**	**08 50 23.7**	**+0.4**
PRGZ				S	**S**	**08 52 08.4**	**-0.7**
TLZ	**Tolley Road**	**9.83**	**205**	P	**P**	**08 50 26.8**	**+2.2**
RAHZ	**Arahi**	**9.89**	**197**	P	**Pn**	**08 50 23.0**	**+1.5**
RAHZ				S	**S**	**08 52 11.5**	**-1.5**
MTHZ	**Maungataniwha**	**9.89**	**198**	P	**P**	**08 50 24.5**	**-0.7**
MTHZ				S	**S**	**08 52 10.0**	**-3.1**
MHGZ	**Mahia Peninsul**	**9.93**	**193**	P	**P**	**08 50 25.5**	**-0.2**
MHGZ				S	**S**	**08 52 10.6**	**-3.3**
MRHZ	**Matea Rd**	**9.99**	**200**	P	**P**	**08 50 25.0**	**-1.4**
MRHZ				S	**S**	**08 52 13.9**	**-1.5**
NMHZ	**Naumai**	**10.13**	**198**	P	**P**	**08 50 27.1**	**-0.9**
NMHZ				S	**S**	**08 52 19.8**	**+1.3**
ARHZ	**Aropaoanui**	**10.24**	**197**	P	**Pn**	**08 50 26.8**	**+1.1**
ARHZ				S	**S**	**08 52 19.8**	**-1.1**
BKZ	**Black Stump Fm**	**10.28**	**199**	P	**P**	**08 50 28.3**	**-1.3**
MCHZ	**McNeill Hill**	**10.48**	**197**	P	**P**	**08 50 30.8**	**-1.0**
OTVZ	**Oturere**	**10.53**	**202**	P	**P**	**08 50 32.3**	**-0.1**
KWHZ	**Kaweka Forest**	**10.54**	**199**	P	**P**	**08 50 31.4**	**-1.1**
WNVZ	**Wahianoa**	**10.70**	**202**	P	**P**	**08 50 33.7**	**-0.7**
BHHZ	**Black Hill Sta**	**10.70**	**200**	P	**Pn**	**08 50 32.5**	**+0.9**
KRHZ	**Kereru**	**10.76**	**198**	P	**Pn**	**08 50 33.3**	**+1.2**
KAHZ	**Kahuranaki**	**10.77**	**196**	P	**P**	**08 50 34.0**	**-1.0**
PXZ	**Pawanui**	**11.00**	**196**	P	**Pn**	**08 50 35.4**	**+0.4**
WPHZ	**Waipukurau**	**11.13**	**197**	P	**P**	**08 50 38.7**	**-0.3**
ANWZ	**Angora Road**	**11.50**	**196**	P	**Pn**	**08 50 42.1**	**+1.0**
CTA	**Charters Tower**	**32.56**	**279**	P	**P**	**08 54 09.5**	**+0.7**
	1.9nm,0.5s,baz=87,slow=10,SNR=1.6						
	1.9nm,0.5s						
STKA	**Stephens Creek**	**33.62**	**256**	P	**P**	**08 54 19.5**	**+1.8**
	4.0nm,0.5s,baz=99,slow=12,SNR=11						
	4.0nm,0.5s						
ASAR	**Alice Springs**	**42.06**	**266**	P	**P**	**08 55 27.9**	**-0.1**
	1.8nm,0.5s,baz=101,slow=7.2,SNR=38						
ASAR				PcP	**PcP**	**08 57 16.1**	**-0.7**
	0.5nm,0.5s,baz=117,slow=4.2,SNR=6.5						
ASAR				ScP	**ScP**	**09 00 35.1**	**-3.0**
	0.2nm,0.6s,baz=116,slow=4.3,SNR=2.1						
	1.8nm,0.5s						
WRA	**Warramunga Arr**	**42.96**	**272**	P	**P**	**08 55 34.5**	**-0.7**
	2.1nm,0.5s,baz=111,slow=7.2,SNR=27						
WRA				PcP	**PcP**	**08 57 18.4**	**-1.4**
	0.8nm,0.8s,baz=106,slow=3.4,SNR=3.5						
	2.1nm,0.5s						
VNDA	**Vanda**	**48.91**	**185**	P	**P**	**08 56 22.1**	**+1.6**
	0.5nm,0.7s,baz=6.3,slow=4.2,SNR=4.4						
	0.5nm,0.7s						
MAW	**Mawson**	**72.78**	**201**	P	**P**	**08 59 00.7**	**+0.3**
	2.2nm,0.5s,baz=132,slow=6.6,SNR=3.3						
	2.2nm,0.5s						
TROLL	**Troll, Antarti**	**78.79**	**181**	P	**P**	**08 59 34.3**	**0.0**
SNAA	**Sanae**	**79.10**	**179**	P	**P**	**08 59 35.6**	**-0.4**
VNA3	**Neumayer Olymp**	**79.29**	**177**	P	**P**	**08 59 36.4**	**-0.5**
VNA2	**Neumayer--Watz**	**79.72**	**177**	P	**P**	**08 59 39.1**	**-0.1**
	baz=190,slow=3.1						
VNA1	**Neumayer--Stat**	**79.95**	**177**	P	**P**	**08 59 39.9**	**-0.5**
NVAR	**Mina Array Bea**	**88.32**	**43**	P	**P**	**09 00 21.0**	**-2.0**
	0.4nm,0.8s,baz=219,slow=5.6,SNR=3.3						
	0.4nm,0.8s						
FINES	**FINESS Array B**	**143.90**	**340**	PKP	PKPab	09 06 59.4	-2.4
	1.8nm,0.4s,baz=49,slow=2.8,SNR=29						
MMAI	**Mount Meron Ar**	**150.22**	**286**	PKPbc	**PKPbc**	**09 07 19.2**	**-1.6**
	1.8nm,0.4s,baz=95,slow=7.2,SNR=4.0						
TORD	**Torodi Ar. Bea**	**163.73**	**183**	PKPab	**PKPab**	**09 08 25.4**	**-0.9**
	0.7nm,0.5s,baz=177,slow=3.2,SNR=8.7						

IDC ***16*** *08:50:16.0±2.0,24°.89N×109°.28W,h0km,mbtmp3.2/3, ML3.7/3,Error ellipse: s-maj=43.4km s-min=14.7km az=136.0*

MEX ***16*** *08:50:19.1±0.4,25°.09N×109°.62W,h10km,MD3.8*

ISC 16 08:50:17.4±1.0,**24°.95N**±0°.08×**109°.47W**±0°.07,**h17km,n7,** σ1§**26/11,Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TSIG	**Topolobambo**	**0.76**	**31**	*i* P	**Pb**	**08 50 31.6**	**-0.6**
TSIG				*i* S	**Sb**	**08 50 40.9**	**-1.3**
LPIG	**La Paz**	**1.13**	**222**	Pg	**Pn**	**08 50 39.5**	**+1.0**
	14nm,0.3s,baz=0.0,slow=4.0,SNR=20						
LPIG	**La Paz**	**1.13**	**222**	*e*P	**Pn**	**08 50 38.0**	**-0.5**
LPIG				*e*S	**Sb**	**08 50 51.9**	**-1.1**
SSIG	**Sanalona**	**2.12**	**93**	*e*P	**Pn**	**08 50 53.6**	**+1.5**
SSIG				*e*S	**Sb**	**08 51 19.9**	**-1.5**
TXAR	**Lajitas Array**	**6.77**	**49**	Pn	**Pn**	**08 51 56.5**	**+0.4**
	0.6nm,0.3s,baz=226,slow=12,SNR=54						
TXAR				Sn	**Sn**	**08 53 12.2**	**-0.6**
	0.2nm,0.3s,baz=224,slow=17,SNR=3.5						
TXAR				Lg	Lg	08 53 45.7	
	0.5nm,0.3s,baz=229,slow=29,SNR=4.0						
	0.8nm,0.3s						
NVAR	**Mina Array Bea**	**15.39**	**333**	Pn	**P**	**08 53 59.9**	**+1.3**
	0.1nm,0.3s,baz=160,slow=14,SNR=4.2						
	0.4nm,0.6s						
PDAR	**Pinedale Array**	**17.78**	**360**	P	**P**	**08 54 26.1**	**+1.1**
	baz=175,slow=11,SNR=2.7						
	0.2nm,0.6s						

IDC 16 08:57:12.8±2.0,**8°.64S×124°.50E,h0km,mb3.5/1, mbtmp3.5/3,ML3.4/2,Error ellipse: s-maj=49.5km s-min=28.5km az=80.0,Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**1.77**	**208**	Pn	Pn	08 57 44.4	-0.4
	88nm,0.3s,baz=27,slow=2.3,SNR=22						
BATI				Sn	Sn	08 57 59.7	-8.2
	71nm,0.3s,baz=297,slow=23,SNR=22						
WRA	**Warramunga Arr**	**14.73**	**141**	Pn	Pn	09 00 43.1	+0.5
	0.2nm,0.3s,baz=318,slow=13,SNR=15						
WRA				Sn	Sn	09 03 17.9	-8.9
	0.8nm,0.3s,baz=314,slow=24,SNR=4.7						
	0.2nm,0.2s						
ASAR	**Alice Springs**	**17.45**	**150**	P	Pn	09 01 18.1	+0.3
	0.2nm,0.3s,baz=322,slow=12,SNR=16						
ASAR				S	Sn	09 04 18.8	-14
	0.6nm,0.6s,baz=316,slow=21,SNR=6.2						
	1.3nm,0.5s						
MKAR	**Makanchi Array**	**66.75**	**330**	P	P	09 08 06.0	+0.1
	0.4nm,0.7s,baz=132,slow=7.2,SNR=3.5						
	0.4nm,0.7s						

IDC 16 09:15:40.7±6.4,**35°.34N×69°.85E,h0km,mb3.7/3, mbtmp3.7/5,ML3.2/2,Error ellipse: s-maj=220.3km s-min=28.8km az=137.0,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**14.78**	**35**	Pn	Pn	09 19 10.7	-0.2
	0.1nm,0.3s,baz=234,slow=14,SNR=5.9						
	0.8nm,0.6s						
KURBB	**Kurchatov Arra**	**16.52**	**20**	Pn	Pn	09 19 30.4	-3.3
	0.1nm,0.3s,baz=214,slow=10.0,SNR=4.5						
	0.4nm,0.3s						
ZALV	**Zalesovo Beam**	**21.36**	**25**	P	P	09 20 28.9	-0.5
	2.1nm,0.7s,baz=212,slow=10,SNR=3.5						
	2.1nm,0.7s						
TORD	**Torodi Ar. Bea**	**64.76**	**268**	P	P	09 26 21.2	0.0
	0.6nm,0.9s,baz=41,slow=5.7,SNR=3.2						
	0.6nm,0.9s						
YKA	**Yellowknife Ar**	**82.44**	**2**	P	P	09 28 04.7	+0.1
	0.6nm,0.6s,baz=354,slow=5.3,SNR=8.7						
	0.6nm,0.6s						

IDC 16 09:15:58.3±3.5,**53°.62N×87°.98E,h0km,mbtmp2.7/2, ML2.4/1,Error ellipse: s-maj=34.4km s-min=19.5km az=52.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.91**	**281**	*i*		09 28 00.0	
	0.3nm,0.9s,baz=98,slow=319,SNR=1.9						
ZALV	**Zalesovo Beam**	**1.91**	**281**	Pn	Pn	09 16 32.2	+0.2
	0.7nm,0.3s,baz=96,slow=15,SNR=7.3						
ZALV				Lg	Lg	09 16 58.6	
	1.2nm,0.3s,baz=99,slow=24,SNR=10						
KURBB	**Kurchatov Arra**	**6.55**	**246**	Pn	Pn	09 17 36.1	+0.4
	0.4nm,0.4s,baz=64,slow=15,SNR=1.5						
MKAR	**Makanchi Array**	**7.75**	**210**	Pn	Pn	09 17 53.4	+1.2
	0.1nm,0.3s,baz=28,slow=11,SNR=3.1						
	0.1nm,0.4s						

IDC ***16*** *09:23:52.8±0.8,31°.77S×178°.64W,h0km,mb4.6/5, mbtmp4.6/7,ML4.3/2,MS3.6/6,Error ellipse: s-maj=27.2km s-min=19.7km az=101.0*

NEIC ***16*** *09:23:54.2±1.8,31°.86S±0°.07×178°.5W±0°.1,h10km±1km, mb4.5/14,Error ellipse: s-maj=20.6km s-min=11.2km az=107.0*

WEL ***16*** *09:23:57.3±0.6,32°S±6°×17°8W±1°7,h33km,M4.5/30, mB5.0/24,ML5.2/35,MLv4.9/30,Mw(mB)4.4/24,Error ellipse: s-maj=0.0km s-min=0.0km az=108.8*

ISC 16 09:23:53.2±0.6,**32°01S**±0°05×**178°2W**±0°1,**h10km,n102,** σ2§**03/116,mb4.6/13,MS3.6/5,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**2.76**	**6**	P	**Pn**	**09 24 39.4**	**+2.0**
GLKZ				S	**Sn**	**09 25 09.5**	**-1.3**
RAO	**Raoul Island**	**2.77**	**6**	Pn	**Pn**	**09 24 36.3**	**-1.3**
	50nm,0.3s,baz=93,slow=22,SNR=1.6						
RAO				Sn	**Sn**	**09 25 09.5**	**-1.6**
	89nm,0.3s,baz=70,slow=23,SNR=1.9						
	166nm,0.3s						
RAO	**Raoul Island**	**2.77**	**6**	Pn	**Pn**	**09 24 36.1**	**-1.5**
RIZ	**Raoul Island**	**2.77**	**6**	P	**Pb**	**09 24 42.0**	**-0.9**
RIZ				S	**Sn**	**09 25 11.6**	**+0.4**
MXZ	**Matakaoa Point**	**6.22**	**206**	Pn	**Pn**	**09 25 26.2**	**+1.1**
MXZ	**Matakaoa Point**	**6.22**	**206**	P	**Pn**	**09 25 26.1**	**+1.1**
MXZ				S	**Sn**	**09 26 35.0**	**-1.3**
WMGZ	**Waiomatatini S**	**6.41**	**204**	P	**Pn**	**09 25 29.4**	**+1.7**
WMGZ				S	**Sn**	**09 26 42.2**	**+1.3**
PKGZ	**Pakihiroa**	**6.59**	**206**	P	**Pn**	**09 25 32.0**	**+1.8**
PKGZ				S	**Sn**	**09 26 43.2**	**-2.4**
HAZ	**Te Kaha**	**6.60**	**209**	P	**Pn**	**09 25 31.5**	**+1.3**
HAZ				S	**Sn**	**09 26 45.2**	**-0.2**
PUZ	**Puketiti**	**6.69**	**204**	P	**Pn**	**09 25 32.9**	**+1.3**
PUZ				S	**Sn**	**09 26 46.2**	**-1.7**
RUGZ	**Raukumara Rang**	**6.82**	**208**	P	**Pn**	**09 25 34.1**	**+0.7**
RUGZ				S	**Sn**	**09 26 51.0**	**-0.1**
TWGZ	**Tauwhareparae**	**6.88**	**206**	P	**Pn**	**09 25 36.6**	**+2.4**
TWGZ				S	**Sn**	**09 26 51.6**	**-1.1**
WHRZ	**Whale Island**	**7.03**	**213**	P	Pn	09 25 41.6	+5.4
WHRZ				S	**Sn**	**09 26 58.9**	**+2.8**
CNGZ	**Carnagh Statio**	**7.08**	**203**	P	**Pn**	**09 25 38.3**	**+1.4**
TKGZ	**Te Karaka**	**7.17**	**205**	P	**Pn**	**09 25 41.2**	**+3.2**
TKGZ				S	**Sn**	**09 26 56.5**	**-3.0**
MWZ	**Matawai**	**7.20**	**208**	P	**Pn**	**09 25 38.1**	**-0.4**
MWZ				S	**Sn**	**09 26 58.6**	**-1.7**
OPRZ	**Ohinepanea**	**7.22**	**215**	P	**Pn**	**09 25 41.8**	**+3.1**
URZ	**Urewera**	**7.30**	**210**	Pn	**Pn**	**09 25 41.2**	**+1.3**
	6.7nm,0.3s,baz=106,slow=0.8,SNR=31						
URZ				Sn	**Sn**	**09 27 01.2**	**-1.6**
	7.3nm,0.3s,baz=217,slow=20,SNR=2.7						
	16nm,0.3s						
URZ	**Urewera**	**7.30**	**210**		**Pn**	**09 25 40.2**	**+0.3**
URZ	**Urewera**	**7.30**	**210**	P	**Pn**	**09 25 39.9**	**-0.1**
URZ				S	**Sn**	**09 27 03.0**	**+0.1**
EDRZ	**Edgecumbe**	**7.34**	**213**	P	**Pn**	**09 25 43.9**	**+3.4**
RIGZ	**Rimuhau**	**7.43**	**205**	P	**Pn**	**09 25 41.7**	**0.0**
RIGZ				S	**Sn**	**09 27 03.8**	**-2.4**
OUZ	**Omahuta**	**7.52**	**243**		**Pn**	**09 25 47.2**	**+4.2**
PRGZ	**Paritu Road**	**7.58**	**204**	P	**Pn**	**09 25 44.9**	**+1.1**
PRGZ				S	**Sn**	**09 27 06.8**	**-3.1**
MUGZ	**Murupara**	**7.63**	**211**	P	**Pn**	**09 25 44.5**	**0.0**
MUGZ				S	**Sn**	**09 27 09.3**	**-1.7**
SNGZ	**Shannon Statio**	**7.66**	**207**	P	**Pn**	**09 25 45.5**	**+0.7**
SNGZ				S	**Sn**	**09 27 07.1**	**-4.5**
MHGZ	**Mahia Peninsul**	**7.78**	**203**	P	**Pn**	**09 25 46.0**	**-0.5**
MHGZ				S	**Sn**	**09 27 10.0**	**-4.8**
RAHZ	**Arahi**	**7.87**	**208**	P	**Pn**	**09 25 49.5**	**+1.7**
RAHZ				S	**Sn**	**09 27 15.2**	**-1.8**
ALRZ	**Allen Road**	**7.89**	**213**	P	**Pn**	**09 25 52.0**	**+4.0**
MTHZ	**Maungataniwha**	**7.92**	**209**	P	**Pn**	**09 25 48.4**	**0.0**
MTHZ				S	**Sn**	**09 27 14.3**	**-3.8**
KUTZ	**Kaahu Road**	**8.08**	**215**	P	**Pn**	**09 25 54.9**	**+4.2**
MRHZ	**Matea Rd**	**8.08**	**211**	P	**Pn**	**09 25 51.1**	**+0.5**
MRHZ				S	**Sn**	**09 27 18.3**	**-3.9**
NMHZ	**Naumai**	**8.14**	**208**	P	**Pn**	**09 25 53.2**	**+1.7**
NMHZ				S	**Sn**	**09 27 22.3**	**-1.3**
ARHZ	**Aropaoanui**	**8.21**	**207**	P	**Pn**	**09 25 53.4**	**+1.1**
ARHZ				S	**Sn**	**09 27 22.9**	**-2.2**
BKZ	**Black Stump Fm**	**8.33**	**210**		**Pn**	**09 25 54.7**	**+0.7**
BKZ	**Black Stump Fm**	**8.33**	**210**	P	**Pn**	**09 25 53.4**	**-0.6**
BKZ				S	**Sn**	**09 27 24.6**	**-3.6**
MCHZ	**McNeill Hill**	**8.48**	**208**	P	**Pn**	**09 25 54.8**	**-1.3**
MCHZ				S	**Sn**	**09 27 28.3**	**-3.5**
CKHZ	**Cape Kidnapper**	**8.52**	**205**	P	**Pn**	**09 25 58.9**	**+2.3**
KWHZ	**Kaweka Forest**	**8.57**	**209**	P	**Pn**	**09 25 57.2**	**-0.2**
HIZ	**Hauiti**	**8.60**	**219**	P	**Pn**	**09 25 58.2**	**+4.6**
NTVZ	**North Tongarir**	**8.63**	**213**	P	**Pn**	**09 26 00.1**	**+1.8**
TMVZ	**Te Maari**	**8.63**	**213**	P	**Pn**	**09 25 60.0**	**+1.7**
ETVZ	**East Tongariro**	**8.65**	**213**	P	**Pn**	**09 26 00.1**	**+1.6**
NNVZ	**North Ngauruho**	**8.69**	**213**	P	**Pn**	**09 26 01.9**	**+2.8**
OTVZ	**Oturere**	**8.69**	**213**	P	**Pn**	**09 26 00.8**	**+1.7**
KAHZ	**Kahuranaki**	**8.71**	**206**	P	**Pn**	**09 25 58.5**	**-0.9**
SNVZ	**South Ngauruho**	**8.72**	**213**	P	**Pn**	**09 26 01.0**	**+1.5**
NGZ	**Ngauruhoe**	**8.73**	**213**	P	**Pn**	**09 26 02.8**	**+3.2**
BHHZ	**Black Hill Sta**	**8.78**	**210**	P	**Pn**	**09 26 00.6**	**+0.4**
KRHZ	**Kereru**	**8.78**	**208**	P	**Pn**	**09 26 00.1**	**-0.1**
WNVZ	**Wahianoa**	**8.85**	**213**	P	**Pn**	**09 26 03.6**	**+2.3**
PXZ	**Pawanui**	**8.93**	**205**	P	**Pn**	**09 26 01.2**	**-1.0**
MTVZ	**Mangateitei**	**8.96**	**213**	P	**Pn**	**09 26 03.7**	**+1.0**
PNHZ	**Pukenui**	**9.08**	**208**	P	**Pn**	**09 26 03.4**	**-1.0**
**WPH

FINES	**FINESS Array B**	**146.58**	**339**	PKPbc	**PKPdf**	**09 43 33.0**	**+0.4**
	comp=Z,2.7nm,0.4s,baz=62,slow=4.4,SNR=26						
NB2	**NORSAR Subarra**	**150.31**	**351**	PKP	**PKPbc**	**09 43 43.3**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=16,slow=2.5						
NOA	**NORSAR Array B**	**150.31**	**351**	PKPbc	**PKPbc**	**09 43 43.6**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=14,slow=4.1,SNR=5.3						
AKASG	**Malin Array Be**	**152.44**	**321**	PKPbc	**PKPbc**	**09 43 49.7**	**+0.5**
	comp=Z,0.9nm,0.5s,baz=40,slow=2.3,SNR=5.9						
BRTR	**Keskin Array B**	**153.15**	**296**	PKPbc	**PKPbc**	**09 43 51.5**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=144,slow=2.7,SNR=3.9						
TORD	**Torodi Ar. Bea**	**161.22**	**180**	PKPab	**PKPab**	**09 44 38.9**	**+0.9**
	comp=Z,1.4nm,0.6s,baz=179,slow=2.6,SNR=8.0						

ISK 16 09:26:45.9, 40.58N×31.72E, h0km, ML2.1/7, Suspected Mining explosion., Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YUVA	**Yuva-Kibriscik**	**0.19**	**187**	PG	Pg	09 26 50.5	+1.0
YUVA				SG	Sg	09 26 53.7	+1.7
MDUB	**Mudurnu**	**0.41**	**255**	PG	Pg	09 26 54.5	+0.7
MDUB				SG	Sg	09 27 00.8	+1.7
AUMIH	**MIHALICIK**	**0.73**	**194**	PG	Pg	09 27 00.3	+0.3
AUMIH	**MIHALICIK**	**0.73**	**194**	P	Pg	09 27 00.1	+0.2
GULT	**Gulveren**	**0.93**	**261**	PG	Pb	09 27 04.5	-0.5
SRCK	**Saricakaya, Es**	**0.99**	**238**	PG	Pg	09 27 05.2	+0.3
SVRH	**Sivrihisar-ESK**	**1.14**	**188**	PN	Pg	09 27 08.0	+0.2
BORA	**Eskisehir**	**1.20**	**235**	PN	Pg	09 27 08.6	-0.2
KIZT	**Kizilcal**	**1.70**	**176**	PN	Pn	09 27 16.6	-0.4

DDA 16 09:27:15.6±0.0, 39.66N×29.46E, h7km±4km, ML1.4, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANDZ	**Kutahya, Merke**	**0.37**	**114**	P	Pg	09 27 22.7	-0.1
ANDZ				S	Sg	09 27 28.7	+0.9
ANDZ				*i* AML	AML	09 27 29.0	
	comp=N,58nm,0.2s						
ANDZ				*i* AML	AML	09 27 30.0	
	comp=E,38nm,0.2s						
AUBOZ	**BOZOYUK**	**0.51**	**60**	P	Pg	09 27 24.6	-0.8
AUBOZ				S	Sb	09 27 33.4	-1.1
AUBOZ				*i* AML	AML	09 27 34.0	
	comp=N,30nm,0.8s						
AUBOZ				*i* AML	AML	09 27 34.0	
	comp=E,45nm,0.8s						
STBT	**Saitabat**	**0.51**	**340**	P	Pg	09 27 25.5	-0.1
STBT				*i* AML	AML	09 27 33.0	
	comp=N,85nm,0.1s						
STBT				*i* AML	AML	09 27 33.0	
	comp=E,69nm,0.1s						
STBT				S	Sg	09 27 33.3	+1.0
ULDT	**Uludag**	**0.54**	**333**	P	Pg	09 27 26.0	-0.1
ULDT				S	Sb	09 27 34.5	-1.2
ULDT				*i* AML	AML	09 27 35.0	
	comp=E,26nm,0.5s						
ULDT				*i* AML	AML	09 27 35.0	
	comp=N,19nm,0.1s						
GDZ	**Gediz**	**0.57**	**179**	P	Pg	09 27 26.5	-0.1
GDZ				S	Sb	09 27 36.3	-0.1
GDZ				*i* AML	AML	09 27 37.0	
	comp=E,19nm,0.3s						
GDZ				*i* AML	AML	09 27 37.0	
	comp=N,27nm,0.5s						
BILE	**Bilecik/Merkez**	**0.59**	**32**	P	Pg	09 27 26.8	-0.3
BILE				*i* AML	AML	09 27 34.0	
	comp=N,18nm,0.7s						
BILE				S	Sb	09 27 36.2	-0.8
BILE				*i* AML	AML	09 27 37.0	
	comp=E,17nm,0.3s						
IGD	**Bursa**	**0.64**	**342**	P	Pg	09 27 27.6	-0.3
IGD				S	Sg	09 27 37.0	+0.8
IGD				*i* AML	AML	09 27 37.0	
	comp=E,7.0nm,0.8s						
IGD				*i* AML	AML	09 27 38.0	
	comp=N,12nm,0.4s						
DURS	**Dursunbey**	**0.77**	**266**	P	Pg	09 27 30.1	-0.2
BORA	**Eskisehir**	**0.80**	**74**	P	Pg	09 27 30.1	-0.8
BORA				*i* AML	AML	09 27 40.0	
	comp=N,8.3nm,0.6s						
BORA				*i* AML	AML	09 27 50.0	
	comp=E,16nm,0.2s						
DEMI	**Demirci**	**0.85**	**223**	P	Pb	09 27 33.1	+0.4
DEMI				S	Sn	09 27 48.0	+1.3
DEMI				*i* AML	AML	09 27 49.0	
	comp=N,26nm,0.4s						
DEMI				*i* AML	AML	09 27 51.0	
	comp=E,18nm,0.4s						
KURT	**Yalova, Merkez**	**0.95**	**348**	P	Pb	09 27 34.6	+0.3
USAK	**Uak-Merkez**	**1.01**	**200**	P	Pb	09 27 35.6	+0.2
USAK				*i* AML	AML	09 27 47.0	
	comp=E,73nm,1.6s						
USAK				*i* AML	AML	09 27 51.0	
	comp=N,12nm,1.3s						
USAK				S	Sn	09 27 52.4	+1.7
GEYV	**SAKARYA_Geyve**	**1.04**	**38**	P	Pb	09 27 36.0	+0.1

MAN 16 09:28:12.3, 8.23N×126.73E, h4km, mb3.9, ML2.7, MS2.3, Mindanao

IDC 16 09:29:24.8±2.1, 0.74N×125.11E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=192.4km s-min=28.2km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.46**	**157**	P	P	09 34 25.3	-0.5
	1.0nm,0.4s,baz=335,slow=11,SNR=7.1						
	1.0nm,0.4s						
ASAR	**Alice Springs**	**25.72**	**161**	P	P	09 34 57.5	+0.4
	0.3nm,0.4s,baz=346,slow=10,SNR=6.8						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**59.12**	**327**	P	P	09 39 27.2	-0.1
	0.3nm,0.5s,baz=113,slow=9.7,SNR=2.8						
	0.3nm,0.5s						

NIED ***16*** *09:35:46.1,36.05N×139.91E,h44km,MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.93; $M_{\theta\theta}$-0.63; $M_{\phi\phi}$-0.30; $M_{r\theta}$1.53; $M_{\theta\phi}$-1.49; $M_{\phi r}$1.74; Fault plane solution: $M_0$2.74000×10^{14} NP1: ϕ_s250.00000°,δ18.00000°,λ121.00000°. NP2: ϕ_s39.00000°,δ75.00000°,λ81.00000°.*

JMA 16 09:35:46.1±0.1, 36.1N±0.2×139.9E±0.3, h44km, MV3.6/36, 5D, SW IBARAKI PREF, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYT	**Yasato**	**0.29**	**53**	P	Pn	09 35 54.5	-0.1
JYT				S	Sn	09 36 00.5	+0.1
JAG	**Ashikaga**	**0.52**	**315**	⇓*i*	Pn	09 35 57.4	+0.1
JAG				⇓S	Sn	09 36 05.3	0.0
JRY	**Ryogami san**	**0.82**	**268**	⇓P	Pn	09 36 01.1	-0.2
JRY				⇓*e*S	Sn	09 36 11.9	-0.4
JKT	**Katashina**	**0.89**	**323**	⇓*i*	Pn	09 36 02.0	-0.3
JOD2	**Odawara 2**	**1.03**	**221**	*e*P	Pn	09 36 04.3	+0.1
JOD2				S	Sn	09 36 17.7	+0.1
JYN	**Shimob**	**1.24**	**244**	*e*P	Pn	09 36 08.2	+1.1
JFNN	**Fujinakano**	**1.32**	**230**	*e*S	Sn	09 36 25.3	+0.9

MOS ***16*** *09:37:04.7±1.4,56.44N×114.96E,h18km,mb4.0/2, Error ellipse: s-maj=12.8km s-min=9.5km az=77.1*
BYKL ***16*** *09:37:06.4±0.1,56.43N×114.84E*
ISC 16 09:37:04.9±1.1, 56.39N±0.03×114.83E±0.02, h3km±9km, n46, σ2.39/86, mb3.7/3, 3C-5D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NLYR	**Nelyaty**	**0.50**	**78**	⇓*i*	**Pg**	**09 37 15.5**	**+1.1**
NLYR				*e*		09 37 21.6	
NLYR				pmax	pmax		
	comp=Z,533nm,0.3s						
NLYR				smax	smax		
	comp=N,5μm,0.9s						
NLYR	**Nelyaty**	**0.50**	**78**	⇓*i*	**Pg**	**09 37 15.5**	**+1.1**
NLYR				*e*Sg	**Sg**	**09 37 22.0**	**+1.2**
NLYR				Pmax			
	comp=N,544nm,0.3s						
NLYR				Smax			
	comp=N,4μm,0.4s						
SVKR	**Severomuysk**	**0.76**	**249**	*e*PG	**Pg**	**09 37 20.5**	**+1.2**
SVKR				*e*		09 37 30.3	
SVKR				pmax	pmax		
	comp=Z,1μm,0.4s						
SVKR				smax	smax		
	comp=E,4μm,0.4s						
SVKR	**Severomuysk**	**0.76**	**249**	⇓*i*Pg	**Pg**	**09 37 20.6**	**+1.2**
SVKR				*e*Sg	**Sg**	**09 37 31.0**	**+1.8**
SVKR				Pmax			
	comp=E,1μm,0.1s						
SVKR				Smax			
	comp=E,5μm,0.6s						
UKT	**Uakit**	**1.13**	**217**	⇓*i*PG	**Pb**	**09 37 27.4**	**+0.4**
UKT				*e*		09 37 42.9	
UKT				pmax	pmax		
	comp=Z,121nm,0.3s						
UKT				smax	smax		
	comp=E,2μm,0.4s						
UKT	**Uakit**	**1.13**	**217**	⇓*i*Pg	**Pb**	**09 37 27.5**	**+0.4**
UKT				*e*Sg	**Sb**	**09 37 43.1**	**+1.0**
UKT				Pmax			
	comp=E,153nm,0.4s						
UKT				Smax			
	comp=E,2μm,0.5s						
BOD	**Bodaibo**	**1.50**	**343**	*e*PN	**Pn**	**09 37 32.6**	**-0.2**
BOD				*e*		09 37 51.7	
BOD				pmax	pmax		
	comp=Z,2μm,0.2s						
BOD				smax	smax		
	comp=E,2μm,0.2s						
BOD	**Bodaibo**	**1.50**	**343**	⇑*i*Pg	**Pn**	**09 37 32.5**	**-0.2**
BOD				*e*Sg	**Sn**	**09 37 51.5**	**-1.3**
BOD				Pmax			
	comp=E,2μm,0.2s						
BOD				Smax			
	comp=E,2μm,0.4s						
CRS	**Chara**	**1.97**	**73**	*e*PN	**Pn**	**09 37 39.2**	**+0.1**
CRS				*e*		09 37 41.8	
CRS				*e*		09 38 06.6	
CRS				pmax	pmax		
	comp=Z,333nm,0.3s						
CRS				smax	smax		
	comp=E,724nm,0.5s						
CRS	**Chara**	**1.97**	**73**	*e*Pn	**Pn**	**09 37 39.4**	**+0.2**
CRS				*e*Pg	**Pb**	**09 37 41.5**	**+0.2**
CRS				*e*Sn	**Sn**	**09 38 05.0**	**+0.6**
CRS				*e*Sg	**Sb**	**09 38 06.9**	**+0.6**
CRS				Pmax			
	comp=E,403nm,0.4s						
CRS				Smax			
	comp=E,708nm,0.4s						
KMO	**Kumora**	**2.09**	**258**	*e*PN	**Pn**	**09 37 41.7**	**+0.9**
KMO				*e*		09 37 43.8	
KMO				*e*		09 38 11.9	
KMO				pmax	pmax		
	comp=Z,224nm,0.3s						
KMO				smax	smax		
	comp=N,2μm,1.2s						
KMO	**Kumora**	**2.09**	**258**	*e*Pn	**Pn**	**09 37 41.5**	**+0.7**
KMO				*e*Pg	**Pb**	**09 37 44.0**	**+0.6**
KMO				*e*Sn	**Sn**	**09 38 07.7**	**+0.3**
KMO				*e*Sg	**Sb**	**09 38 12.2**	**+2.4**
KMO				Pmax			
	comp=N,224nm,0.3s						
KMO				Smax			
	comp=N,2μm,1.2s						
YLYR	**Ulyunkhan**	**2.57**	**235**	*e*Pn	**Pn**	**09 37 48.5**	**+1.1**
YLYR				*e*Pg	**Pb**	**09 37 53.4**	**+1.8**
YLYR				*e*PgPg	**PbPb**	**09 37 56.9**	**+2.1**
YLYR				*e*Sn	**Sn**	**09 38 20.1**	**+0.9**
YLYR				*e*Sg	**Sb**	**09 38 27.5**	**+3.9**
YLYR				Pmax			
	comp=N,66nm,0.4s						
YLYR				Smax			
	comp=N,553nm,0.3s						
KHNR	**Khani**	**2.89**	**77**	*e*Pn	**Pn**	**09 37 52.3**	**+0.4**
KHNR				*e*Pg	**Pb**	**09 37 58.1**	**+1.0**
KHNR				*e*Sn	**Sn**	**09 38 26.4**	**-0.8**
KHNR				*e*Sg	**Sb**	**09 38 35.9**	**+3.0**
NIZ	**Nizh Angarsk**	**3.03**	**260**	*e*PN	**Pn**	**09 37 53.3**	**-0.4**
NIZ				*e*		09 38 01.4	
NIZ				*e*		09 38 42.0	
NIZ				pmax	pmax		
	comp=Z,49nm,0.5s						
NIZ				smax	smax		
	comp=N,346nm,0.6s						
NIZ	**Nizh Angarsk**	**3.03**	**260**	*e*Pn	**Pn**	**09 37 54.8**	**+1.1**
NIZ				*e*Pg	**Pb**	**09 38 01.4**	**+2.1**
NIZ				*e*		09 38 08.7	
NIZ				*e*Sn	**Sn**	**09 38 30.0**	**-0.4**
NIZ				*e*Sg	**Sg**	**09 38 41.2**	**-0.8**
NIZ				max			
	comp=N,36nm,0.3s						
NIZ				Smax			
	comp=N,347nm,0.6s						
VTMR	**Vitim**	**3.29**	**339**	*e*Pn	**Pn**	**09 37 56.9**	**-0.4**
VTMR				*e*		09 38 02.9	
VTMR				*e*Pg	**Pb**	**09 38 05.3**	**+1.5**
VTMR				*e*Sn	**Sn**	**09 38 35.0**	**-1.9**
VTMR				*e*Sg	**Sb**	**09 38 46.6**	**+2.3**
TUP	**Tupik**	**3.52**	**122**	*e*PN	**Pn**	**09 38 00.2**	**-0.3**
TUP				*e*		09 38 08.9	
TUP				*e*S	**Sn**	**09 38 42.5**	**-0.2**
TUP				*e*		09 38 56.5	
TUP				pmax	pmax		
	comp=Z,108nm,0.4s						
TUP				smax	smax		
	comp=E,561nm,0.6s						
TUP	**Tupik**	**3.52**	**122**	*e*Pn	**Pn**	**09 38 00.5**	**0.0**
TUP				*e*Pg	**Pb**	**09 38 09.3**	**+1.5**
TUP				*e*Sn	**Sn**	**09 38 40.6**	**-2.1**
TUP				*e*Sg	**Sb**	**09 38 56.0**	**+5.0**
TUP				Pmax			
	comp=E,111nm,0.6s						
TUP				Smax			
	comp=E,560nm,0.6s						
YKLR	**Yuktali**	**3.79**	**84**	*e*Pn	**Pn**	**09 38 04.5**	**+0.4**
YKLR				*e*Pg	**Pb**	**09 38 14.4**	**+2.0**
YKLR				*e*Sn	**Sn**	**09 38 48.5**	**-0.7**
YKLR				*e*Sg	**Sb**	**09 39 02.8**	**+4.2**
SYVR	**Suvo**	**3.90**	**227**	*e*PN	**Pn**	**09 38 06.3**	**+0.6**
SYVR				*e*		09 38 15.1	
SYVR				*e*		09 39 07.7	
SYVR				pmax	pmax		
	comp=Z,24nm,0.6s						
SYVR				smax	smax		
	comp=N,204nm,0.8s						
SYVR	**Suvo**	**3.90**	**227**	*e*Pn	**Pn**	**09 38 06.2**	**+0.6**
SYVR				*e*Pg	**Pb**	**09 38 16.9**	**+2.7**
SYVR				*e*Sn	**Sn**	**09 38 50.4**	**-1.5**
SYVR				*e*Sg	**Sg**	**09 39 08.1**	**-1.9**
SYVR				Pmax			
	comp=N,23nm,0.6s						
SYVR				Smax			
	comp=N,201nm,0.8s						
CIT	**Chita**	**4.44**	**190**	*e*Sg	**Sg**	**09 39 25.3**	**-2.1**
CIT				Smax			
	comp=N,493nm,0.7s						
MXMB	**Maximikha**	**4.71**	**231**	*e*Pg	**Pb**	**09 38 31.6**	**+3.6**
MXMB				*e*Sn	**Sn**	**09 39 11.5**	**-0.4**
MXMB				*e*Sg	**Sg**	**09 39 33.4**	**-2.6**
OGRR	**Ongureny**	**4.99**	**240**	*e*PN	**Pn**	**09 38 23.2**	**+2.6**
OGRR				*e*		09 38 37.3	
OGRR				*e*		09 39 41.2	
OGRR				pmax	pmax		
	comp=Z,18nm,1.4s						
OGRR				smax	smax		
	comp=E,70nm,1.4s						
OGRR	**Ongureny**	**4.99**	**240**	*e*Pn	**Pn**	**09 38 23.2**	**+2.6**
OGRR				*e*Pg	**Pb**	**09 38 36.6**	**+3.8**
OGRR				*e*Sn	**Sn**	**09 39 18.9**	**+0.1**
OGRR				*e*Sg	**Sg**	**09 39 41.4**	**-3.5**
OGRR				Pmax			
	comp=E,19nm,1.0s						
OGRR				Smax			
	comp=E,85nm,1.0s						
KELR	**Kotokel**	**5.35**	**230**	*e*Sg	**Sg**	**09 39 52.8**	**-3.7**
CLNS	**Chul'man**	**5.58**	**81**	*e*Sg	**Sg**	**09 39 57.8**	**-6.0**
CLNS				*e*		09 40 02.2	
ZRHB	**Zarechye**	**5.90**	**233**	*e*Sg	**Sg**	**09 40 10.4**	**-3.7**
ZRHB				Smax			
	comp=E,317nm,1.3s						
TRG	**Tyrgan**	**6.12**	**237**	*e*Pg	**Pb**	**09 38 56.3**	**+4.2**
TRG				*e*Sn	**Sn**	**09 39 44.2**	**-2.6**
TRG				*e*Sg	**Sg**	**09 40 16.9**	**-4.5**
TRG				Pmax			
	comp=E,9.0nm,0.9s						
TRG				Smax			
	comp=E,36nm,1.1s						
UUDB	**Ulan-Yde**	**6.18**	**226**	*e*Sg	**Sg**	**09 40 18.8**	**-4.5**
UUDB				*e*		09 40 22.1	
UUDB				max			
	comp=E,154nm,1.1s						
KPC	**Khapcheranga**	**6.86**	**193**	*e*	**Pn**	**09 38 45.9**	**-0.4**
KPC				*e*Pg	Pb	09 39 10.3	+5.7
KPC				*e*Sn	**Sn**	**09 40 03.5**	**-1.4**
KPC				*e*		09 40 21.8	
KPC				*e*Sg	**Sg**	**09 40 39.7**	**-5.2**
KPC				Pmax			
	comp=E,5.0nm,0.3s						
KPC				Smax			
	comp=E,149nm,1.0s						
BGT	**Bolshoye Golou**	**7.03**	**236**	*e*Pg	Pb	09 39 13.8	+6.3
BGT				*e*		09 39 18.5	
BGT				*e*Sn	**Sn**	**09 40 07.6**	**-1.4**
BGT				*e*Sg	**Sg**	**09 40 44.2**	**-6.2**
BGT				max			
	comp=E,8.0nm,0.1s						
BGT				Smax			
	comp=E,33nm,1.1s						
ZEA	**Zeya**	**7.61**	**105**	*e*PN	**Pn**	**09 38 56.0**	**-0.6**
IVK	**Ivanovka**	**7.65**	**237**	*e*Sg	**Sg**	**09 41 03.7**	**-6.6**
IVK				Smax			
	comp=E,48nm,0.1s						
HIA	**Hailar**	**7.73**	**155**	*e*PN	**Pn**	**09 39 00.6**	**+2.4**
TLY	**Talaya**	**8.10**	**239**	*e*Pg	Pb	09 39 33.5	+7.9
TLY				*e*Sg	Sg	09 41 17.8	-6.7
TLY				Pmax			
	comp=E,5.0nm,0.6s						
TLY				Smax			
	comp=E,21nm,1.0s						
ARS	**Arshan**	**8.54**	**244**	*e*	Pg	09 39 43.0	-5.3
ARS				*e*		09 39 59.9	
ARS				*e*Sg	Sg	09 41 30.8	-8.0
ARS				max			
	comp=E,11nm,0.4s						
ARS				Smax			
	comp=E,98nm,0.9s						
MOY	**Mondy**	**9.41**	**246**	*e*	Pn	09 39 34.4	+13
MOY				*e*Pg		09 39 56.8	
MOY				*e*		09 41 22.4	
MOY				*e*Sg	Sn	09 41 58.5	+51
MOY				Pmax			
	comp=E,6.0nm,0.8s						
MOY				Smax			
	comp=E,59nm,1.7s						
YAK	**Yakutsk**	**9.47**	**47**	*e*P	**Pn**	**09 39 20.0**	**-2.0**
ULN	**Ulaanbaatar**	**9.78**	**212**	*e*P	**Pn**	**09 39 28.5**	**+2.1**
KLR	**Kul'dur**	**12.47**	**118**	⇑*i*P	**Pn**	**09 40 01.8**	**-1.3**
VLA	**Vladivostok**	**17.19**	**133**	*i*P	**Pn**	**09 41 04.6**	**-1.2**
GOMU	**GeErMu**	**24.31**	**222**	P	**P**	**09 42 23.6**	**-0.3**
GOMU				pP	pP	09 42 28.3	+3.4
GOMU				sP	sP	09 42 30.4	+5.0
GOMU				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,24nm,5.3s						
MAJO	**Matsushiro**	**25.34**	**132**	⇑*e*P	**P**	**09 42 32.6**	**-0.2**
MAJO				pmax	pmax		
	comp=Z,6.0nm,1.3s						
ARU	**Arti**	**30.39**	**294**	*i*P	**P**	**09 43 16.4**	**-1.4**
ARU				pmax	pmax		
	comp=Z,1.0nm,1.0s						

WEL ***16*** *09:37:58.4±0.3,40.22S±2.2×175.17E±1.0,h16km±4km,M3.4/25, ML3.7/25,MLv3.4/25,Error ellipse: s-maj=0.0km s-min=0.0km az=86.1*
NOU ***16*** *09:37:59.3,40.24S×175.17E,h72km,MLv3.6/8,North Island, New Zealand*
ISC 16 09:37:58.9±1.0, 40.22S±0.02×175.17E±0.02, h28km±7km, n115, σ0.84/122, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHWZ	**Ohakea**	**0.11**	**85**	P	**Pb**	**09 38 03.6**	**-0.4**
OHWZ				S	**Sb**	**09 38 07.9**	**+0.4**
WAZ	**Wanganui**	**0.48**	**343**	P	**Pb**	**09 38 08.7**	**-0.3**
WAZ				S	**Sb**	**09 38 16.4**	**+0.7**
POWZ	**Post Office Ro**	**0.49**	**111**	P	**Pb**	**09 38 09.1**	**+0.1**
POWZ				S	**Sn**	**09 38 17.3**	**-0.4**
MRZ	**Mangatainoka R**	**0.54**	**145**	P	**Pb**	**09 38 10.2**	**+0.2**
MRZ				S	**Sb**	**09 38 18.1**	**+0.6**
OGWZ	**Otaki Gorge**	**0.60**	**180**	P	**Pb**	**09 38 10.6**	**-0.3**
OGWZ				S	**Sb**	**09 38 19.0**	**0.0**
TSZ	**Takapari Road**	**0.63**	**76**	P	**Pb**	**09 38 11.0**	**-0.3**
TSZ				S	**Sb**	**09 38 20.0**	**+0.2**
KIW	**Kapiti Island**	**0.67**	**197**	P	**Pb**	**09 38 11.2**	**-1.0**
KIW				S	**Sb**	**09 38 20.3**	**-0.8**
PRWZ	**Pori Road**	**0.70**	**119**	P	**Pn**	**09 38 13.3**	**+0.3**
HOWZ	**Holdsworth Sta**	**0.73**	**159**	P	**Pn**	**09 38 13.4**	**0.0**
DVHZ	**Dannevirke**	**0.77**	**97**	P	**Pn**	**09 38 14.0**	**+0.1**
TIWZ	**Tintock**	**0.78**	**136**	P	**Pn**	**09 38 14.6**	**+0.5**
PNHZ	**Pukenui**	**0.85**	**69**	P	**Pb**	**09 38 14.5**	**-0.5**
MTVZ	**Mangateitei**	**0.86**	**16**	P	**Pb**	**09 38 14.3**	**-1.0**
CAW	**Cannon Point**	**0.89**	**185**	P	**Pb**	**09 38 15.4**	**-0.4**
MOVZ	**Moawhango**	**0.93**	**29**	P	**Pb**	**09 38 14.8**	**-1.6**
BFZ	**Birch Farm**	**0.94**	**120**	P	**Pn**	**09 38 16.9**	**+0.6**
BFZ	**Birch Farm**	**0.94**	**120**	P	**Pn**	**09 38 17.0**	**+0.6**
WNVZ	**Wahianoa**	**0.95**	**21**	P	**Pb**	**09 38 15.5**	**-1.3**
LREZ	**Lake Rotokare**	**0.96**	**322**	P	**Pb**	**09 38 17.0**	**+0.1**
TRVZ	**Turoa**	**0.96**	**18**	P	**Pb**	**09 38 15.8**	**-1.3**
MTW	**Mount Morrison**	**0.97**	**165**	P	**Pn**	**09 38 17.4**	**+0.6**
WPHZ	**Waipukurau**	**0.99**	**82**	P	**Pn**	**09 38 18.1**	**+1.1**
WHVZ	**Whangaehu Hut**	**0.99**	**19**	P	**Pb**	**09 38 16.2**	**-1.3**
BHHZ	**Black Hill Sta**	**1.00**	**44**	P	**Pb**	**09 38 16.3**	**-1.3**
TUVZ	**Tukino**	**1.02**	**22**	P	**Pb**	**09 38 16.8**	**-1.2**
ANWZ	**Angora Road**	**1.03**	**104**	P	**Pn**	**09 38 18.4**	**+0.9**
TMWZ	**Te Maipa**	**1.04**	**149**	P	**Pb**	**09 38 18.4**	**0.0**
CPWZ	**Castlepoint**	**1.05**	**132**	P	**Pb**	**09 38 19.7**	**+1.3**
KRHZ	**Kereru**	**1.09**	**59**	P	**Pn**	**09 38 18.4**	**+0.1**
NGZ	**Ngauruhoe**	**1.09**	**18**	P	**Pn**	**09 38 18.1**	**-0.4**
SNVZ	**South Ngauruho**	**1.09**	**20**	P	**Pn**	**09 38 18.0**	**-0.5**
WEL	**Wellington**	**1.11**	**196**	P	**Pn**	**09 38 18.7**	**+0.1**
DUWZ	**D'Urville Isla**	**1.12**	**238**	P	**Pn**	**09 38 18.4**	**-0.3**
OTVZ	**Oturere**	**1.12**	**20**	P	**Pn**	**09 38 18.5**	**-0.4**
PRHZ	**Porangahau**	**1.12**	**93**	P	**Pb**	**09 38 19.8**	**+0.1**
NNVZ	**North Ngauruho**	**1.14**	**18**	P	**Pn**	**09 38 18.8**	**-0.3**
VRZ	**Vera Road**	**1.14**	**344**	P	**Pn**	**09 38 18.9**	**0.0**
WTVZ	**West Tongariro**	**1.15**	**17**	P	**Pn**	**09 38 18.9**	**-0.3**
SNZO	**South Karori**	**1.15**	**198**	P	**Pn**	**09 38 19.4**	**+0.3**
ETVZ	**East Tongariro**	**1.16**	**21**	P	**Pn**	**09 38 19.0**	**-0.4**
PREZ	**Palmer Road**	**1.17**	**318**	P	**Pb**	**09 38 20.9**	**+0.4**
TMVZ	**Te Maari**	**1.17**	**21**	P	**Pn**	**09 38 19.3**	**-0.3**
PAWZ	**Paruwai Farm**	**1.18**	**171**	P	**Pb**	**09 38 20.7**	**0.0**
NTVZ	**North Tongarir**	**1.18**	**19**	P	**Pn**	**09 38 19.6**	**-0.2**
MSWZ	**Moikau Station**	**1.20**	**177**	P	**Pn**	**09 38 20.4**	**+0.5**
TCW	**Tory Channel**	**1.20**	**214**	P	**Pn**	**09 38 19.4**	**-0.5**
BHW	**Baring Head**	**1.21**	**191**	P	**Pn**	**09 38 20.7**	**+0.7**
TRWZ	**Traveller

CMWZ	**Cape Campbell**	**1.69**	**205**	P	**Pb**	**09 38 29.7**	**+0.3**
ARHZ	**Aropaoanui**	**1.70**	**57**	P	**Pn**	**09 38 27.8**	**+1.1**
HIZ	**Hauiti**	**1.72**	**352**	P	**Pn**	**09 38 26.9**	**0.0**
HIZ	**Hauiti**	**1.72**	**352**	P	**Pn**	**09 38 27.0**	**0.0**
BSWZ	**Blackbirch Sta**	**1.79**	**213**	P	**Pn**	**09 38 28.8**	**+0.9**
TKNZ	**Takaka Hill**	**1.87**	**243**	P	**Pn**	**09 38 29.9**	**+0.8**
MTHZ	**Maungataniwha**	**1.88**	**44**	P	**Pn**	**09 38 30.3**	**+1.1**
ALRZ	**Allen Road**	**1.89**	**29**	P	**Pn**	**09 38 30.7**	**+1.4**
TLZ	**Tolley Road**	**1.91**	**9**	P	**Pn**	**09 38 29.5**	**-0.1**
PRRZ	**Plateau Road**	**1.96**	**29**	P	**Pn**	**09 38 31.8**	**+1.5**
RAHZ	**Arahi**	**1.97**	**49**	P	**Pn**	**09 38 31.3**	**+0.8**
QRZ	**Quartz Range**	**2.10**	**252**	P	**Pn**	**09 38 32.5**	**+0.2**
QRZ	**Quartz Range**	**2.10**	**252**	P	**Pn**	**09 38 32.6**	**+0.3**
RTZ	**Ruatahuna**	**2.13**	**42**	P	**Pn**	**09 38 33.3**	**+0.7**
MUGZ	**Murupara**	**2.13**	**36**	P	**Pn**	**09 38 34.2**	**+1.5**
MRNZ	**Matariki Terra**	**2.18**	**236**	P	**Pn**	**09 38 34.8**	**+1.5**
SNGZ	**Shannon Statio**	**2.21**	**50**	P	**Pn**	**09 38 34.5**	**+0.8**
THZ	**Tophouse**	**2.31**	**227**	P	**Pn**	**09 38 35.9**	**+0.7**
MHGZ	**Mahia Peninsul**	**2.36**	**64**	P	**Pn**	**09 38 35.8**	**-0.1**
RAGZ	**Rawiri**	**2.45**	**46**	P	**Pn**	**09 38 39.7**	**+2.6**
PRGZ	**Paritu Road**	**2.46**	**59**	P	**Pn**	**09 38 36.9**	**-0.3**
URZ	**Urewera**	**2.47**	**38**	P	**Pn**	**09 38 37.3**	**+0.1**
URZ	**Urewera**	**2.47**	**38**	P	**Pn**	**09 38 37.4**	**+0.1**
RIGZ	**Rimuhau**	**2.51**	**54**	P	**Pn**	**09 38 37.8**	**-0.1**
KHZ	**Kahutara**	**2.52**	**209**	P	**Pn**	**09 38 38.1**	**+0.2**
OPRZ	**Ohinepanea**	**2.60**	**25**	P	**Pn**	**09 38 40.3**	**+1.2**
MWZ	**Matawai**	**2.62**	**45**	P	**Pn**	**09 38 39.8**	**+0.3**
DSZ	**Denniston Nort**	**2.97**	**238**	P	**Pn**	**09 38 45.0**	**+0.7**
RUGZ	**Raukumara Rang**	**2.98**	**42**	P	**Pn**	**09 38 44.7**	**+0.3**
AWAZ	**Awhitu Peninsu**	**3.17**	**352**	P	**Pn**	**09 38 47.7**	**+0.8**
GVZ	**Greta Valley S**	**3.18**	**210**	P	**Pn**	**09 38 46.6**	**-0.5**
HAZ	**Te Kaha**	**3.19**	**40**	P	**Pn**	**09 38 47.3**	**+0.1**
ETAZ	**East Tamaki Re**	**3.26**	**357**	P	**Pn**	**09 38 51.0**	**+2.8**
LTZ	**Lake Taylor**	**3.36**	**219**	P	**Pn**	**09 38 49.2**	**-0.4**
WIAZ	**Waiheke Island**	**3.42**	**360**	P	**Pn**	**09 38 50.8**	**+0.4**
MBAZ	**Motutapu North**	**3.45**	**356**	P	**Pn**	**09 38 52.8**	**+2.1**
WMGZ	**Waiomatatini S**	**3.48**	**48**	P	**Pn**	**09 38 50.5**	**-0.7**
MXZ	**Matakaoa Point**	**3.61**	**44**	P	**Pn**	**09 38 53.2**	**+0.3**
INZ	**Inchbonnie**	**3.76**	**227**	P	**Pn**	**09 38 54.6**	**-0.4**
OKCZ	**Okains Bay**	**3.84**	**203**	P	**Pn**	**09 38 55.0**	**-1.2**
TMZ	**Timaru**	**5.18**	**215**	P	**Pn**	**09 39 13.5**	**-1.1**
ODZ	**Otahua Downs**	**5.87**	**213**	P	**Pn**	**09 39 22.8**	**-1.2**
ODZ	**Otahua Downs**	**5.87**	**213**	P	**Pn**	**09 39 22.9**	**-1.1**
JCZ	**Jackson Bay**	**6.11**	**229**	P	**Pn**	**09 39 26.7**	**-0.8**

*IDC **16** 09:44:04.9±1.2,55.41N×163.51E,h0km,mb3.7/5, mbtmp3.7/7,ML3.2/2,MS2.9/1,Error ellipse: s-maj=43.1km s-min=19.5km az=155.0*

*KRSC **16** 09:44:06.5±1.5,54.99N×163.64E,h63km±28km,ML4.2*

ISC 16 09:44:08.7±1.1,54.96N±0.04×163.71E±0.04,h44km±16km, n52,σ1°37/76,mb3.5/6,Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	**1.22**	**251**	*eP*	**Pn**	**09 44 29.1**	**-0.1**
MKZ				*eS*	**Sn**	09 44 43.3	-1.2
BKI	**Bering**	**1.32**	**79**	*eP*	**Pn**	**09 44 31.4**	**+0.8**
BKI				*eS*	**Sn**	**09 44 47.5**	**+0.5**
KBTR	**Krutoberegovo**	**1.35**	**338**	*eP*	**Pn**	**09 44 29.4**	**-1.6**
KBTR				*eS*	**Sn**	**09 44 45.7**	**-2.0**
KBG	**Krutoberegovo**	**1.42**	**337**	*eP*	**Pn**	**09 44 30.5**	**-1.4**
KBG				*eS*	**Sn**	**09 44 47.7**	**-1.6**
ZLN	**Zelenaya**	**1.96**	**304**	*eP*	**Pn**	**09 44 40.4**	**+0.9**
ZLN				*eS*	**Sn**	**09 45 04.6**	**+1.6**
BZGR	**Bezymyannyi-Gr**	**1.98**	**301**	*eP*	**Pn**	**09 44 40.1**	**+0.4**
BZGR				*eS*	**Sn**	**09 45 04.3**	**+1.0**
SMKR	**Semkarok**	**2.06**	**323**	*eP*	**Pn**	**09 44 40.9**	**+0.1**
SMKR				*eS*	**Sn**	**09 45 05.3**	**0.0**
TUMR	**Tumrok**	**2.07**	**280**	*eP*	**Pn**	**09 44 41.8**	**+0.8**
TUMR				*eS*	**Sn**	**09 45 07.2**	**+1.5**
KMNR	**Kamenistaya**	**2.14**	**293**	*eP*	**Pn**	**09 44 42.6**	**+0.7**
KMNR				*eS*	**Sn**	**09 45 07.5**	**+0.3**
BDR	**Baidarnaya**	**2.14**	**320**	*eP*	**Pn**	**09 44 42.3**	**+0.3**
BDR				*eS*	**Sn**	**09 45 06.8**	**-0.5**
KIRR	**Kirishev**	**2.16**	**299**	*eP*	**Pn**	**09 44 43.5**	**+1.2**
KIRR				*eS*	**Sn**	**09 45 09.0**	**+1.1**
KRSR	**Krestovskiy**	**2.18**	**306**	*eP*	**Pn**	**09 44 42.7**	**+0.1**
KRSR				*eS*	**Sn**	**09 45 07.7**	**-0.7**
KLY	**Klyuchi**	**2.20**	**309**	*eP*	**Pn**	**09 44 41.7**	**-1.0**
KLY				*eS*	**Sn**	**09 45 07.1**	**-1.5**
SRKR	**Sorokina**	**2.22**	**321**	*eP*	**Pn**	**09 44 43.0**	**0.0**
KPT	**Kopyto**	**2.23**	**298**	*eP*	**Pn**	**09 44 44.4**	**+1.3**
KPT				*eS*	**Sn**	**09 45 10.8**	**+1.4**
KOZ	**Kozyrevsk**	**2.44**	**298**	*eP*	**Pn**	**09 44 47.2**	**+1.2**
KII	**Karymskiy**	**2.65**	**251**	*eP*	**Pn**	**09 44 49.9**	**+0.9**
KII				*eS*	**Sn**	**09 45 17.6**	**-2.3**
SPN	**Mys Shipunski**	**2.87**	**231**	*eP*	**Pn**	**09 44 51.8**	**0.0**
SPN				*eS*	**Sn**	**09 45 22.5**	**-2.6**
ESO	**Esso**	**3.01**	**291**	*eP*	**Pn**	**09 44 54.2**	**+0.3**
ESO				*eS*	**Sn**	**09 45 26.9**	**-1.8**
NLC	**Nalytchevo**	**3.14**	**237**	*eP*	**Pn**	**09 44 55.2**	**-0.3**
SDLR	**Sedlovina**	**3.30**	**241**	*eP*	**Pn**	**09 44 59.4**	**+1.4**
SDLR				*eS*	**Sn**	**09 45 35.7**	**-0.3**
SMAR	**Somma**	**3.35**	**241**	*eP*	**Pn**	**09 45 00.2**	**+1.5**
SMAR				*eS*	**Sn**	**09 45 35.8**	**-1.6**
KRER	**Koryakskii**	**3.36**	**242**	*eP*	**Pn**	**09 45 00.6**	**+1.8**
KRER				*eS*	**Sn**	**09 45 36.8**	**-0.7**
UGLR	**Uglovaya**	**3.37**	**241**	*eP*	**Pn**	**09 45 00.6**	**+1.7**
UGLR				*eS*	**Sn**	**09 45 36.1**	**-1.6**
KRX	**Arik**	**3.38**	**244**	*eP*	**Pn**	**09 45 00.5**	**+1.5**
KRX				*eS*	**Sn**	**09 45 36.2**	**-1.8**
AVH	**Avacha**	**3.38**	**242**	*eP*	**Pn**	**09 45 01.0**	**+2.0**
AVH				*eS*	**Sn**	**09 45 38.4**	**+0.5**
KOK	**Koryaka**	**3.42**	**243**	*eP*	**Pn**	**09 45 01.2**	**+1.6**
KOK				*eS*	**Sn**	**09 45 39.7**	**+0.8**
DALK	**Dalny**	**3.51**	**239**	*eP*	**Pn**	**09 45 02.1**	**+1.5**
DALK				*eS*	**Sn**	**09 45 40.0**	**-0.8**
PET	**Petropavlovsk**	**3.56**	**239**	*eP*	**Pn**	**09 45 02.8**	**+1.4**
PET				*eS*	**Sn**	**09 45 41.2**	**-0.9**
GNL	**Ganaly**	**3.61**	**252**	*eP*	**Pn**	**09 45 03.7**	**+1.6**
RUS	**Russkaya**	**4.00**	**233**	*eP*	**Pn**	**09 45 08.4**	**+1.1**
RUS				*eS*	**Sn**	**09 45 50.4**	**-2.4**
PETK	**Petropavlovsk-** 1.8nm,0.3s,baz=70,slow=17,SNR=23	**4.00**	**245**	Pn	**Pn**	**09 45 08.6**	**+1.2**
PETK				Sn	**Sn**	**09 45 54.2**	**+1.2**
	7.3nm,0.3s,baz=249,slow=12,SNR=16 2.8nm,0.3s						
MTVR	**Mutnovka**	**4.12**	**235**	*eP*	**Pn**	**09 45 11.0**	**+1.9**
MTVR				*eS*	**Sn**	**09 45 55.8**	**-0.3**
GRL	**Gorelyy**	**4.13**	**236**	*eP*	**Pn**	**09 45 11.4**	**+2.2**
GRL				*eS*	**Sn**	**09 45 54.8**	**-1.5**
OSSR	**Ossora**	**4.31**	**356**	*eP*	**Pn**	**09 45 11.6**	**0.0**
OSSR				*eS*	**Sn**	**09 45 59.1**	**-1.5**
ASAK	**Asacha**	**4.32**	**236**	*eP*	Pn	09 45 14.3	+2.5
ASAK				*eS*	**Sn**	**09 46 00.3**	**-0.5**
KDTR	**Khodutka, Kamc**	**4.62**	**229**	*eP*	**Pn**	**09 45 16.9**	**+1.0**
KDTR				*eS*	**Sn**	**09 46 05.4**	**-2.8**
MIPR	**Malaya Ipel'ka**	**4.94**	**240**	*eP*	**Pn**	**09 45 22.3**	**+2.0**
SHEM	**Shemya Is, Ala** 2.2nm,0.3s,baz=345,slow=5.3,SNR=5.9	**6.54**	**106**	Pn	**Pn**	**09 45 44.7**	**+2.5**
SHEM				Sn	**Sn**	**09 46 54.3**	**-1.1**
	2.9nm,0.3s,baz=165,slow=20,SNR=8.1						
SHEM				LR	LR	09 48 15.2	
	comp=Z,88nm,18.2s,baz=277,slow=37 19nm,0.8s						
KMSK	**Kamenskaya**	**7.64**	**9**	*eP*	**Pn**	**09 45 59.4**	**+2.2**
MJAR	**Matsushiro Arr** 1.0nm,0.5s,baz=308,slow=13,SNR=2.3 1.0nm,0.5s	**25.38**	**234**	P	P	09 49 35.7	+4.1
ILAR	**Eielson Array** 0.7nm,0.7s,baz=274,slow=8.7,SNR=7.4 0.7nm,0.7s	**25.98**	**48**	P	**P**	**09 49 37.2**	**+0.5**
H11N2	**WAKE ISLAND Hy** baz=358,slow=76,SNR=34	**35.26**	**175**	T	T	10 30 21.3	
H11N3	**WAKE ISLAND Hy** baz=358,slow=76,SNR=16	**35.27**	**175**	T	T	10 30 17.4	
H11N1	**WAKE ISLAND Hy** baz=358,slow=76,SNR=22	**35.27**	**175**	T	T	10 30 28.0	
H11S1	**WAKE ISLAND Hy** baz=353	**36.46**	**175**	T	T	10 31 49.3	
H11S3	**WAKE ISLAND Hy** baz=353	**36.47**	**175**	T	T	10 31 49.0	
H11S2	**WAKE ISLAND Hy** baz=353	**36.48**	**175**	T	T	10 31 42.6	
YKA	**Yellowknife Ar** 0.6nm,0.8s,baz=297,slow=7.8,SNR=1.9 0.6nm,0.8s	**40.33**	**45**	P	**P**	**09 51 41.6**	**+0.3**
MKAR	**Makanchi Array** 0.2nm,0.4s,baz=50,slow=7.8,SNR=4.9	**49.25**	**296**	P	**P**	**09 52 51.8**	**-0.7**
	0.2nm,0.4s						
CMAR	**Chiang Mai Arr** 0.9nm,0.3s,baz=12,slow=7.5,SNR=4.3 0.9nm,0.3s	**60.63**	**260**	P	P	09 54 17.6	+2.6
TXAR	**Lajitas Array** 0.2nm,0.7s,baz=303,slow=5.1,SNR=2.7	**67.97**	**70**	P	P	09 55 11.4	+8.4

*RSNC **16** 09:48:07.4±0.9,10.29N×72.81W,h6km±4km,ML2.4*

*FUNV **16** 09:48:08.9,10.23N×72.53W,h13km,MW3.1*

ISC 16 09:48:04.2±1.1,10.23N±0.03×72.65W±0.03,h12km±10km, n14,σ1°50/28,1D,Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LL6C	**La Loma 6 Bece**	**0.79**	**231**	*eP*	**Pb**	**09 48 20.0**	**+0.2**
LL6C				*eS*	**Sg**	**09 48 30.1**	**+0.4**
LL6C				*i*		09 48 31.3	
	comp=Z,101nm,0.3s						
CRJC	**Cerrejon, Guaj**	**0.82**	**344**	*eP*	**Pb**	**09 48 20.5**	**+0.1**
CRJC				*eS*	**Sg**	**09 48 30.8**	**+0.1**
CRJC				*i*		09 48 35.0	
	comp=Z,228nm,0.5s						
LL1C	**La Loma 1 Cana**	**1.12**	**233**	*eP*	**Pg**	**09 48 25.3**	**-0.5**
LL1C				*eS*	**Sg**	**09 48 39.8**	**-0.7**
LL1C				*i*		09 48 42.0	
	comp=Z,207nm,0.4s						
URIC	**Uribia, Colomb**	**1.60**	**24**	*eP*	**Pg**	**09 48 34.6**	**-0.3**
URIC				*eS*	**Sg**	**09 48 56.6**	**+0.9**
URIC				*i*		09 48 58.6	
	comp=N,59nm,0.2s						
ARGC	**Ariguani, Magd**	**1.61**	**257**	*eP*	**Pb**	**09 48 34.8**	**+0.8**
ARGC				*eS*	**Sn**	**09 48 52.7**	**-0.6**
ARGC				*i*		09 48 59.2	
	comp=Z,18nm,0.2s						
SMRC	**Santa Marta, M**	**1.80**	**301**	*eP*	**Pn**	**09 48 34.0**	**-1.1**
SMRC				*eS*	**Sn**	**09 48 55.0**	**-3.0**
SMRC				*i*		09 49 01.6	
	comp=Z,35nm,0.4s						
OCAC	**Ocana**	**2.09**	**198**	*eP*	**Pb**	**09 48 42.5**	**+0.4**
OCAC				*eS*	**Sg**	**09 49 10.8**	**-0.6**
DABV	**Dabajuro**	**2.10**	**71**	*eP*	**Pb**	**09 48 41.5**	**-0.6**
DABV				*eS*	**Sn**	**09 49 05.5**	**+0.3**
CAPV	**Capacho**	**2.38**	**172**	*eP*	**Pb**	**09 48 47.1**	**0.0**
CAPV				*eS*	**Sb**	**09 49 14.8**	**-1.7**
SJCC	**San Jacinto, C**	**2.51**	**263**	*eP*	**Pn**	**09 48 47.3**	**+2.3**
SJCC				*eS*	**Sn**	**09 49 18.3**	**+2.7**
SIQV	**Siquisique**	**2.83**	**81**	*eP*	**Pn**	**09 48 51.5**	**+2.2**
SIQV				*eS*	**Sn**	**09 49 23.2**	**0.0**
SANV	**Sanarito**	**3.15**	**103**	*eP*	**Pn**	**09 48 56.2**	**+2.4**
SANV				*eS*	**Sn**	**09 49 30.6**	**-0.9**
ZARC	**Zaragoza, Cauc**	**3.49**	**219**	*eP*	**Pn**	**09 48 58.2**	**-0.1**
ZARC				*eS*	**Sn**	**09 49 40.3**	**+0.7**
BAUV	**El Baul**	**4.72**	**105**	*eP*	**Pn**	**09 49 16.6**	**+1.3**
BAUV				*eS*	**Sn**	**09 50 06.7**	**-3.3**

IDC 16 10:02:42.4±2.3,2.01N×127.49E,h0km,mb3.2/3, mbtmp3.2/3,Error ellipse: s-maj=159.8km s-min=27.9km az=67.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 0.5nm,0.6s,baz=343,slow=10,SNR=9.3 0.5nm,0.6s	**22.83**	**163**	P	P	10 07 47.4	+0.1
ASAR	**Alice Springs** 0.1nm,0.5s,baz=342,slow=12,SNR=1.4 0.1nm,0.5s	**26.28**	**167**	P	P	10 08 19.1	-0.7
MKAR	**Makanchi Array** 1.0nm,1.2s,baz=126,slow=7.4,SNR=3.6 1.0nm,1.2s	**59.39**	**325**	P	P	10 12 47.1	+0.4

*IDC **16** 10:12:28.3±4.1,14.85S×166.98E,h205km±39km,mb3.5/6, mbtmp4.1/7,Error ellipse: s-maj=30.0km s-min=19.0km az=162.0*

ISC 16 10:12:27.9±0.9,14.99S±0.2×167.0E±0.1,h200km,n11, σ0°91/11,mb3.8/6,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu** 17nm,0.8s,baz=271,slow=10,SNR=15	**11.02**	**106**	P	**Pn**	**10 15 01.0**	**+0.7**
STKA	**Stephens Creek** 4.4nm,0.7s,baz=49,slow=8.8,SNR=15 4.4nm,0.7s	**28.67**	**229**	P	**P**	**10 18 06.8**	**+0.6**
WRA	**Warramunga Arr** 1.1nm,1.1s,baz=84,slow=7.9,SNR=6.5 1.1nm,1.1s	**31.50**	**256**	P	**P**	**10 18 31.0**	**-0.3**
ASAR	**Alice Springs** 1.0nm,0.4s,baz=76,slow=9.4,SNR=27 1.0nm,0.4s	**32.34**	**249**	P	**P**	**10 18 38.7**	**+0.1**
VNDA	**Vanda** 1.7nm,0.9s,baz=354,slow=6.8,SNR=10 1.7nm,0.9s	**62.71**	**181**	P	**P**	**10 22 31.0**	**0.0**
ILAR	**Eielson Array** 0.4nm,0.7s,baz=240,slow=5.5,SNR=5.8 0.4nm,0.7s	**86.76**	**18**	P	**P**	**10 24 47.9**	**-1.1**
TROLL	**Troll, Antarti**	**92.69**	**185**	P	**P**	**10 25 16.4**	**-0.5**
SNAA	**Sanae**	**93.39**	**183**	P	**P**	**10 25 19.0**	**-1.0**
VNA3	**Neumayer Olymp**	**94.06**	**181**	P	**P**	**10 25 21.9**	**-1.2**
MKAR	**Makanchi Array** 0.4nm,0.6s,baz=101,slow=7.5,SNR=1.0 0.4nm,0.6s	**97.11**	**316**	P	**P**	**10 25 38.6**	**+1.3**
ARCES	**ARCESS Array B** 0.4nm,0.4s,baz=66,slow=1.3,SNR=6.6	**120.32**	**345**	PKP	**PKiKP**	**10 30 54.8**	**0.0**

IDC 16 10:22:53.3±1.4,0.28N×121.68E,h0km,mb3.6/3, mbtmp3.6/3,Error ellipse: s-maj=212.3km s-min=24.0km az=60.0,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 0.7nm,0.5s,baz=325,slow=11,SNR=21 0.7nm,0.5s	**23.62**	**149**	P	P	10 28 06.5	+0.2
ASAR	**Alice Springs** 0.3nm,0.5s,baz=341,slow=11,SNR=6.3 0.3nm,0.5s	**26.61**	**154**	P	P	10 28 33.5	-0.1
MKAR	**Makanchi Array** 0.5nm,0.3s,baz=125,slow=8.6,SNR=9.9 0.5nm,0.3s	**57.69**	**329**	P	P	10 32 45.6	-0.1

*BJI **16** 10:31:13.5±0.0,20.05N×169.69E,h13km,mb5.3/59, mB5.6/56,Ms5.2/63,Ms7 4.9/62*

*NOU **16** 10:31:18.6,20.33S×168.80E,h18km,mb5.3/77,Loyalty Islands*

*MOS **16** 10:31:20.6±1.2,20.38S×168.95E,h43km,mb5.5/24, MS5.0/8,Error ellipse: s-maj=8.9km s-min=8.4km az=24.9*

*NEIC **16** 10:31:20.4±3.0,20.55S±0.08×168.89E±0.08,h40km±4km, mb5.3/227,Error ellipse: s-maj=11.8km s-min=9.3km az=144.0*

*GCMT **16** 10:31:22.4±0.1,20.39S±0.01×168.69E±0.01,h28km, MW5.6/137,Moment Tensor Solution. s137,c240; s134,c236; Duration: 1s6 Moment tensor: Scale 10^17 Nm; Mrr2.54±.04; Mθθ-0.26±.03; Mφφ-2.29±.03; Mrθ0.74±.07; Mθφ1.17±.02; Mφr-1.81±.06; Best double couple: Mo3.31900×10^17 NP1:φs334.00000°,δ27.00000°, λ87.00000°. NP2:φs157.00000°,δ63.00000°,λ91.00000°. Principal axes: T 3.1780, Plg72.0000°, Azm70.0000°; N 0.2760, Plg1.0000°, Azm336.0000°; P -3.4600, Plg18.0000°, Azm246.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **16** 10:31:22.8±2.7,20.37S×168.94E,h67km±23km,mb4.7/23, mbtmp5.0/25,MS5.0/52 Error ellipse: s-maj=13.6km s-min=13.1km az=65.0*

ISC 16 10:31:19.1±0.4,20.44S±0.04×169.17E±0.05,h42km±2km, h42km:pP-P,n801,σ1°71/704,mb5.2/180,MS5.0/81, 92C-68D,Fault plane solution: NP1:φs318.10992°, δ34.46830°,λ73.63862°. NP2:φs157.71080°,δ57.10975°, λ100.94444°. Principal axes: T Plg75.2280°, Azm99.4815°; N Plg9.1735°, Azm331.7162°; P Plg11.4776°, Azm239.8372°; **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**1.49**	**225**		Pn	10 31 38.5	-4.8
PINNC	**Pines Island,**	**2.69**	**216**	Pn	**Pn**	**10 31 57.0**	**-3.0**
PINNC	**Pines Island,**	**2.69**	**216**	P	**Pn**	**10 31 57.4**	**-2.5**
RTV	**Rentapao**	**2.72**	**345**	P	**Pn**	**10 31 59.4**	**-0.9**
DVP	**Devils Point**	**2.85**	**341**	P	**Pn**	**10 32 00.1**	**-2.0**
NOUC	**Port Laguerre**	**3.14**	**238**	P	**Pn**	**10 32 02.7**	**-3.4**
KOUNC	**Koumac, New Ca**	**4.58**	**268**	Pn	**Pn**	**10 32 22.0**	**-3.8**
KOUNC	**Koumac, New Ca**	**4.58**	**268**	P	**Pn**	**10 32 22.3**	**-3.5**
MSVF	**Nonsavu** 129nm,0.9s,baz=246,slow=10.0,SNR=54	**8.82**	**74**	P	Pn	10 33 31.8	+7.6
MSVF				LR	LR	10 36 17.0	
	comp=Z,35μm,18.3s,baz=248,slow=33						
MSVF	**Nonsavu**	**8.82**	**74**	Pn	Pn	10 33 31.1	+7.0
MSVF	**Nonsavu**	**8.82**	**74**	*d*	P	10 33 31.5	+7.3
MSVF	**Nonsavu**	**8.82**	**74**	P	Pn	10 33 32.0	+7.8
TAVE	**Taveuni**	**11.01**	**72**	P	Pn	10 34 01.7	+7.7
LKBA	**Tubou, Lakemba**	**11.56**	**81**	P	Pn	10 34 07.7	+6.1
HNR	**Honiara** comp=Z,3μm,18.4s,baz=140,slow=37	**14.10**	**320**	LR	LR	10 39 55.0	
RAO	**Raoul Island** comp=Z,8μm,20.1s,baz=294,slow=32	**14.64**	**129**	LR	LR	10 39 24.2	
OUZ	**Omahuta**	**15.24**	**166**	P	**P**	**10 34 55.3**	**-0.3**
FUNA	**Funafuti**	**15.30**	**41**	Pn	**Pn**	**10 34 54.5**	**+2.1**
FUNA				IAmb	IAmb	10 35 03.1	
	comp=Z,214nm,1.4s						
WCZ	**Waipu Caves**	**16.10**	**165**	P	**P**	**10 35 09.1**	**+3.8**
GRZ	**Great Barrier**	**16.69**	**162**	P	**P**	**10 35 16.0**	**+4.2**
KUZ	**Kuaotunu**	**17.23**	**162**	P	**P**	**10 35 20.4**	**+2.7**
EIDS	**Eidsvold** baz=17,SNR=4.9	**17.37**	**250**	P	**Pn**	**10 35 18.6**	**+0.1**
EIDS	**Eidsvold**	**17.37**	**250**	Pn	**Pn**	**10 35 13.1**	**-5.3**
EIDS	**Eidsvold**	**17.37**	**250**	P	**Pn**	**10 35 18.5**	**+0.1**
MKAZ	**Moumakai**	**17.41**	**164**	P	**P**	**10 35 23.2**	**+3.5**
ARMA	**Armidale** baz=19,SNR=8.8	**18.68**	**234**	P	**Pn**	**10 35 35.0**	**+0.4**
ARMA	**Armidale**	**18.68**	**234**	P	**P**	**10 35 31.9**	**-1.9**
ARMA	**Armidale**	**18.68**	**234**	P	**Pn**	**10 35 35.2**	**+0.6**
HAZ	**Te Kaha**	**18.81**	**158**	P	**Pn**	**10 35 39.7**	**+3.7**
MXZ	**Matakaoa Point**	**18.83**	**157**	P	**Pn**	**10 35 38.1**	**+1.9**
MXZ				IAmb	IAmb	10 35 42.8	
	comp=Z,236nm,1.9s						
MXZ	**Matakaoa Point**	**18.83**	**157**	P	**Pn**	**10 35 40.0**	**+3.8**
RUGZ	**Raukumara Rang**	**18.96**	**159**	P	**Pn**	**10 35 41.2**	**+3.2**
PKGZ	**Pakihiroa**	**19.03**	**158**	P	**Pn**	**10 35 41.7**	**+3.0**
URZ	**Urewera** comp=Z,62nm,1.0s,baz=357,slow=4.7,SNR=14	**19.05**	**161**	P	**Pn**	**10 35 40.8**	**+2.0**
URZ				LR	LR	10 42 22.2	
	comp=Z,9μm,18.1s,baz=30,slow=34						
URZ	**Urewera**	**19.05**	**161**	P	**Pn**	**10 35 40.2**	**+1.4**
URZ	**Urewera**	**19.05**	**161**	P	**Pn**	**10 35 40.5**	**+1.7**
WMGZ	**Waiomatatini S**	**19.09**	**157**	P	**Pn**	**10 35 42.7**	**+3.3**
TWGZ	**Tauwhareparae**	**19.26**	**159**	P	**Pn**	**10 35 44.0**	**+2.6**
PUZ	**Puketiti**	**19.26**	**158**	P	**Pn**	**10 35 42.6**	**+1.2**
AFI	**Afiamalu** comp=Z,49nm,0.8s,baz=0.4,slow=20,SNR=7.8	**19.32**	**73**	P	**Pn**	**10 35 42.5**	**+0.2**
AFI				LR	LR	10 41 41.7	
	comp=Z,6μm,19.4s,baz=256,slow=32						
AFI	**Afiamalu**	**19.32**	**73**	P	**Pn**	**10 35 43.0**	**+0.7**
AFI	**Afiamalu**	**19.32**	**73**	P	**Pn**	**10 35 43.1**	**+0.7**
AFI				pmax	pmax		
	comp=Z,85nm,1.0s						
AFI	**Afiamalu**	**19.32**	**73**	P	**Pn**	**10 35 45.2**	**+2.9**
TMVZ	**Te Maari**	**19.45**	**165**	P	**Pn**	**10 35 48.2**	**+4.5**
SNGZ	**Sharon Statio**	**19.60**	**161**	P	**Pn**	**10 35 48.5**	**+3.1**
RAHZ	**Arahi**	**19.64**	**161**	P	**Pn**	**10 35 48.1**	**+2.2**
RMQ	**Roma** baz=20,SNR=24	**19.66**	**248**	P	**Pn**	**10 35 46.2**	**0.0**
RMQ	**Roma**	**19.66**	**248**	P	**P**	**10 35 44.1**	**-0.5**
RIGZ	**Rimuhau**	**19.66**	**160**	P	**Pn**	**10 35 46.8**	**+0.6**
BKZ	**Black Stump Fm**	**19.70**	**163**	P	**Pn**	**10 35 46.6**	**-0.1**
BKZ	**Black Stump Fm**	**19.70**	**163**	P	**Pn**	**10 35 49.3**	**+2.6**
BHHZ	**Black Hill Sta**	**19.89**	**164**	P	**Pn**	**10 35 51.1**	**+2.1**
KWHZ	**Kaweka Forest**	**19.93**	**163**	P	**Pn**	**10 35 51.8**	**+2.5**
MCHZ	**McNeill Hill**	**20.02**	**163**	P	Pn	10 35 55.0	+4.6
KAHZ	**Kahuranaki**	**20.40**	**163**	P	Pn	10 35 55.6	+0.7
TSZ	**Takapari Road**	**20.41**	**165**	P	Pn	10 35 55.5	+0.5
MGCD	**Mangrove Creek**	**20.49**	**228**	P	Pn	10 35 55.1	-0.9
QRZ	**Quartz Range**	**20.53**	**173**	P	**P**	**10 35 54.1**	**+0.2**
SYDH	**Sydney Hard Ro** comp=Z,60nm,0.9s	**21.05**	**227**	P	**P**	**10 36 01.8**	**+2.2**
BFZ	**Birch Farm**	**21.07**	**165**	P	**P**	**10 36 00.5**	**+0.8**
BFZ				IAmb	IAmb	10 36 03.9	
	comp=Z,152nm,1.4s						
BFZ	**Birch Farm**

comp=Z,18nm,0.7s,baz=82,slow=9.5,SNR=38
STKA PcP **PcP** **10 40 19.2 +0.8**
comp=Z,8.7nm,0.9s,baz=40,slow=3.3,SNR=2.8
STKA LR LR 10 47 42.6
comp=Z,5μm,18.3s,baz=96,slow=36
comp=Z,18nm,0.7s
STKA Stephens Creek 27.17 240 P **P** **10 36 58.9 +0.1**
baz=27,SNR=22
STKA Stephens Creek 27.17 240 P **P** **10 36 58.6 -0.1**
STKA Stephens Creek 27.17 240 P **P** **10 36 59.0 +0.3**
QIS Mount Isa 27.67 265 P **P** **10 37 02.5 -0.9**
baz=28,SNR=5.8
QIS Mount Isa 27.67 265 P **P** **10 37 04.8 +1.4**
BRAT Ballarat 27.76 227 P **P** **10 37 03.4 -0.5**
ARPS Mount Arapiles 28.85 230 P **P** **10 37 12.7 -0.9**
baz=29,SNR=7.8
ARPS Mount Arapiles 28.85 230 P **P** **10 37 14.2 +0.5**
RAR Rarotonga 29.02 97 LR LR 10 46 30.2
comp=Z,2μm,21.9s,baz=265,slow=31
LCRK Leigh Creek 29.59 244 P **P** **10 37 21.6 +1.3**
HTT Hallett 29.79 238 P **P** **10 37 21.9 -0.2**
baz=30,SNR=8.6
HTT Hallett 29.79 238 P **P** **10 37 23.0 +0.9**
NAPP Napperby 30.34 239 P **P** **10 37 28.7 +1.8**
comp=Z,42nm,1.0s
PTPS Port Pirie 30.46 239 P **P** **10 37 29.6 +1.7**
WHYH Whyalla 30.75 239 P **P** **10 37 30.5 0.0**
comp=Z,45nm,0.9s
OOD Oodnadatta 31.35 250 P **P** **10 37 36.5 +0.6**
BBOO Buckleboo 31.93 240 P **P** **10 37 40.6 -0.3**
BBOO IAmb IAmb 10 38 20.8
comp=Z,53nm,1.1s
BBOO Buckleboo 31.93 240 P **P** **10 37 40.9 0.0**
WR0 Warramunga Arr 32.47 265 IAmb IAmb 10 38 05.2
comp=Z,33nm,1.1s
WB0 Warramunga Arr 32.63 265 IAmb IAmb 10 37 46.2
comp=Z,27nm,0.8s
WB2 Warramunga Arr 32.64 265 IAmb IAmb 10 37 59.6
comp=Z,36nm,1.1s
WRAB Tennant Creek 32.65 265 P **P** **10 37 45.1 -2.2**
WRAB IAmb IAmb 10 37 59.6
comp=Z,48nm,1.2s
WRAB Tennant Creek 32.65 265⇑*i*P **P** **10 37 45.0 -2.4**
WRAB pmax pmax
comp=Z,28nm,1.3s
WRAB Tennant Creek 32.65 265 P **P** **10 37 45.1 -2.2**
WRAB Tennant Creek 32.65 265 P **P** **10 37 45.2 -2.2**
WRA Warramunga Arr 32.66 265 P **P** **10 37 45.2 -2.3**
comp=Z,16nm,0.8s,baz=105,slow=7.7,SNR=87
WRA PcP **PcP** **10 40 32.8 -0.1**
comp=Z,5.3nm,0.9s,baz=97,slow=2.9,SNR=4.3
WRA LR LR 10 51 07.6
comp=Z,6μm,18.6s,baz=91,slow=36
comp=Z,16nm,0.8s
WRA Warramunga Arr 32.66 265 P **P** **10 37 45.7 -1.7**
WRA Warramunga Arr 32.66 265 P **P** **10 37 45.7 -1.7**
WRA pmax pmax
comp=Z,3.0nm,1.1s
AS31 Alice Springs 32.79 258 P **P** **10 37 47.2 -1.4**
ASAR Alice Springs 32.79 258 P **P** **10 37 46.9 -1.7**
comp=Z,46nm,0.8s,baz=82,slow=9.0,SNR=268
ASAR PcP **PcP** **10 40 33.1 -0.1**
comp=Z,5.4nm,0.8s,baz=90,slow=2.5,SNR=4.5
ASAR LR LR 10 51 28.2
comp=Z,8μm,18.2s,baz=93,slow=37
comp=Z,46nm,0.8s
ASAR Alice Springs 32.79 258 P **P** **10 37 47.4 -1.2**
MULG Mulgathing 33.09 246 P **P** **10 37 50.1 -1.0**
KDU Kakadu 35.94 277 P **P** **10 38 14.0 -1.9**
baz=36,SNR=5.5
KDU Kakadu 35.94 277 P **P** **10 38 17.1 +1.2**
MTN Manton Dam 37.15 276 P **P** **10 38 24.5 -1.7**
baz=37,SNR=20
MTN Manton Dam 37.15 276 IAmb IAmb 10 38 42.9
comp=Z,42nm,0.8s
MTN Manton Dam 37.15 276 P **P** **10 38 24.8 -1.4**
BAKI Biak 37.53 296 P **P** **10 38 29.5 0.0**
comp=Z,75nm,1.1s
WRKA Warakurna 37.87 255 P **P** **10 38 31.0 -1.3**
baz=38,SNR=17
WRKA Warakurna 37.87 255 P **P** **10 38 31.1 -1.2**
FORT Forrest 38.29 246 P **P** **10 38 34.5 -1.1**
FORT IAmb IAmb 10 39 17.1
comp=Z,50nm,0.8s
FORT Forrest 38.29 246 P **P** **10 38 35.3 -0.4**
TBI Tubuai 38.41 102 *e*LR LR 10 49 00.4
comp=Z,2μm,24.0s
KNRA Kununurra 38.63 270 P **P** **10 38 36.9 -1.8**
baz=38,SNR=16
KNRA Kununurra 38.63 270 P **P** **10 38 37.2 -1.6**
KNRA Kununurra 38.63 270 P **P** **10 38 37.0 -1.8**
PPT Papeete 39.04 93 LR LR 10 51 09.0
comp=Z,2μm,21.7s,baz=259,slow=30
FAKI Fak Fak 39.97 291 P **P** **10 38 45.5 -4.4**
comp=Z,807nmcomp=Z,48nm,1.0s
FAKI Fak Fak 39.97 291 P **P** **10 38 48.8 -1.1**
GUMO Guam 41.40 323 LR LR 10 55 31.2
comp=Z,1μm,19.4s,baz=136,slow=35
SIJI Sorong 41.83 293 P **P** **10 39 03.7 -1.5**
comp=Z,21nm,0.7s,baz=79,slow=6.3,SNR=8.3
SIJI LR LR 10 56 04.6
comp=Z,3μm,20.8s,baz=109,slow=36
comp=Z,21nm,0.7s
SWI Sorong 41.83 293 P **P** **10 39 04.2 -1.1**
SWI pmax pmax
comp=Z,72nm,0.9s
SOEI Soe 44.50 277 P **P** **10 39 28.6 +1.6**
BATI Baumata 44.92 276 LR LR 10 58 17.8
comp=Z,5μm,20.7s,baz=140,slow=36
BATI Baumata 44.92 276 P **P** **10 39 31.8 +1.6**
comp=Z,87nm,1.2s
LBMI Labuha 45.22 291 P **P** **10 39 35.0 +2.4**
comp=Z,1μmcomp=Z,34nm,1.3s
PSA00 Pilbara Seismi 45.90 259 IAmb IAmb 10 39 49.4
comp=Z,31nm,1.1s
PSA00 Pilbara Seismi 45.90 259 P **P** **10 39 36.7 -1.2**
SANI Sanana 45.91 288 P **P** **10 39 36.9 -1.1**
comp=Z,2μmcomp=Z,96nm,1.0s
SANI Sanana 45.91 288 P **P** **10 39 37.9 -0.1**
MBWA Marble Bar 46.07 260 P **P** **10 39 37.4 -1.8**
MBWA Marble Bar 46.07 260 P **P** **10 39 38.5 -0.7**
MBWA Marble Bar 46.07 260 P **P** **10 39 38.4 -0.8**
MBWA pP **pP** **10 39 49.5 -0.2**
MMRI Maumere 46.76 277 P **P** **10 39 43.7 -1.0**
MMRI Maumere 46.76 277 P **P** **10 39 44.0 -0.7**
KLBR Kellerberrin 47.15 245 P **P** **10 39 46.0 -1.5**
baz=47,SNR=11
KLBR Kellerberrin 47.15 245 P **P** **10 39 46.0 -1.5**
NWAO Narrogin (SRO) 47.62 244 P **P** **10 39 50.2 -1.0**
NWAO Narrogin (SRO) 47.62 244 P **P** **10 39 50.2 -1.0**
NWAO pmax pmax
comp=Z,51nm,0.9s
NWAO Narrogin (SRO) 47.62 244 P **P** **10 39 50.2 -1.0**
NWAO Narrogin (SRO) 47.62 244 P **P** **10 39 49.6 -1.5**
NWAO pP **pP** **10 40 01.4 -0.2**
BLDU Ballidu 48.04 247 P **P** **10 39 52.9 -1.6**
baz=48,SNR=8.3
BLDU Ballidu 48.04 247 P **P** **10 39 53.7 -0.8**
MUN Mundaring 48.47 245 P **P** **10 39 56.7 -1.1**
MORW Morawa 48.67 249 P **P** **10 39 58.1 -1.2**
baz=48,SNR=4.7
MORW Morawa 48.67 249 P **P** **10 39 57.3 -2.1**
MORW IAmb IAmb 10 40 10.6
comp=Z,51nm,1.2s
MORW Morawa 48.67 249 P **P** **10 39 58.6 -0.8**
DRV Dumont d'Urvil 49.86 195 P **P** **10 40 07.8 0.0**
DRV x x 10 40 15.2
DRV sP **sP** **10 40 24.3 +0.8**
BKSI Bulukumba 49.90 281 P **P** **10 40 09.9 +1.0**
comp=Z,538nmcomp=Z,23nm,1.1s
TAOE Nuku Hiva Isla 50.19 84 *e*P P 10 40 01.3 -10
comp=Z,401nm,25.2s
TAOE *e*S **S** **10 47 15.0 -5.7**
comp=Z,2μm,25.7s
TAOE *e*LR LR 10 54 29.1
comp=Z,2μm,26.3s
BNSI Bone 50.27 282 P **P** **10 40 11.5 -0.2**
comp=Z,795nmcomp=Z,43nm,1.2s
APSI Ampana 50.30 287 P **P** **10 40 12.1 +0.2**
comp=Z,747nmcomp=Z,37nm,1.1s
KAPI Kappang 50.36 281 P **P** **10 40 12.0 -0.4**
KAPI LR LR 11 04 18.3
comp=Z,833nm,18.6s,baz=134,slow=39
comp=Z,16nm,0.7s
KAPI Kappang 50.36 281 P **P** **10 40 12.7 +0.3**
KAPI Kappang 50.36 281 P **P** **10 40 12.7 +0.3**
KAPI pP **pP** **10 40 23.9 +0.7**
SPSI Sidrap Palu 50.75 282 P **P** **10 40 16.1 +0.8**
comp=Z,640nmcomp=Z,22nm,1.1s
DAV Davao City (W) 50.82 298 LR LR 11 02 04.6
comp=Z,572nm,19.8s,baz=108,slow=36
PLAI Plampang 50.85 275 P **P** **10 40 16.8 +0.7**
comp=Z,1μmcomp=Z,93nm,1.1s
PLAI Plampang 50.85 275 P **P** **10 40 15.5 -0.6**
TOLI2 Tolitoli 51.97 288 P **P** **10 40 22.7 -1.8**
TOLI2 IAmb IAmb 10 40 45.4
comp=Z,30nm,0.8s
TOLI2 Tolitoli 51.97 288 P **P** **10 40 23.4 -1.1**
JCJ Chichijima 54.00 330 P **P** **10 40 37.8 -1.4**
comp=Z,101nm,0.8s,baz=252,slow=20,SNR=4.0
JCJ LR LR 11 04 46.6
comp=Z,296nm,18.4s,baz=146,slow=37
comp=Z,101nm,0.8s
JCJ Chichijima 54.00 330 IAmb IAmb 10 40 39.0
comp=Z,142nm,0.9s
MYLDM **Lahad Datu 55.88 291** P **P** **10 40 53.8 +0.7**
VNDA Vanda 57.24 182 LR LR 11 02 11.6
comp=Z,918nm,20.3s,baz=23,slow=32
VNDA Vanda 57.24 182 P **P** **10 41 01.9 +0.1**
VNDA Vanda 57.24 182 P **P** **10 41 01.9 +0.1**
VNDA pmax pmax
comp=Z,10.0nm,1.1s
VNDA Vanda 57.24 182 P **P** **10 41 02.6 +0.9**
SBA Scott Base 57.47 181 P **P** **10 41 04.9 +1.5**
SBA IAmb IAmb 10 41 06.5
comp=Z,28nm,1.0s
SBA Scott Base 57.47 181 P **P** **10 41 04.9 +1.5**
SBA pmax pmax
comp=Z,29nm,1.0s
SBA Scott Base 57.47 181 P **P** **10 41 05.2 +1.8**
SBA x x 10 41 13.0
KKM Kota Kinabalu 58.29 291 P **P** **10 41 09.1 -1.1**
CASY Casey 59.01 204 P **P** **10 41 13.4 -0.9**
CASY IAmb IAmb 10 41 14.9
comp=Z,56nm,1.6s
CASY Casey 59.01 204 P **P** **10 41 13.6 -0.7**
CASY pP **pP** **10 41 30.2 +4.7**
CCD Concordia, Ant 59.72 192 P **P** **10 41 19.5 -0.1**
CCD pP **pP** **10 41 31.5 +0.6**
CCD sP **sP** **10 41 36.6 +1.2**
JHJ Hachijo jima 2 60.20 332 LR LR 11 07 07.9
comp=Z,537nm,19.5s,baz=92,slow=36
SBUM Sibu 60.24 285 P **P** **10 41 23.4 -0.2**
SBUM IAmb IAmb 10 41 50.9
comp=Z,44nm,1.4s
LEM Lembang 61.01 274 LR LR 11 09 03.3
comp=Z,1μm,19.2s,baz=104,slow=37
JOW Kunigami 61.47 318 LR LR 11 08 49.0
comp=Z,867nm,18.3s,baz=146,slow=37
KSM Kuching 61.58 283 P **P** **10 41 31.4 -1.3**
KSM Kuching 61.58 283 P **P** **10 41 32.7 0.0**
INU Inuyama 63.31 331 P **P** **10 41 44.8 +1.0**
comp=Z,43nm,2.4s
INU Inuyama 63.31 331 P **P** **10 41 43.5 -0.3**
MJAR Matsushiro Arr 63.77 332 P **P** **10 41 46.3 -0.6**
comp=Z,13nm,0.9s,baz=148,slow=7.2,SNR=31
MJAR LR LR 11 07 51.0
comp=Z,526nm,20.7s,baz=136,slow=34
comp=Z,13nm,0.9s
MAJO Matsushiro 63.78 332 P **P** **10 41 45.4 -1.5**
MAJO IAmb IAmb 10 41 48.9
comp=Z,24nm,0.8s
MAJO Matsushiro 63.78 332*c i*P **P** **10 41 46.1 -0.8**
MAJO pmax pmax
comp=Z,28nm,0.9s
MAJO Matsushiro 63.78 332 P **P** **10 41 47.3 +0.4**
MAJO Matsushiro 63.78 332 P **P** **10 41 46.6 -0.3**
MAJO pP **sP** **10 42 01.7 -1.5**
MAJO sP pP 10 42 08.9 +10
MJB9 Matsu-Tunnel 63.78 332 P **P** **10 41 45.9 -1.0**
MJB9 IAmb IAmb 10 41 48.9
comp=Z,23nm,0.8s
YHNB Yeheng 64.58 312 P **P** **10 41 50.8 -1.7**
QZH Quanzhou 66.73 310⇓*i*P **P** **10 42 08.9 +2.7**
QZH S **S** **10 50 58.3 +2.9**
QZH pmax pmax
comp=Z,380nm,7.5s
QZH LR LR
comp=Z,440nm,18.5s
QZH LR LR
comp=Z,400nm,14.7s
KUR Kuril'sk 68.17 344 *e*P **P** **10 42 14.8 -0.1**
KUR *e* 10 42 36.0
KUR *e*S **S** **10 51 16.3 +4.4**
KUR *e*SS **SS** **10 55 34.6 -1.3**
KUR MLR MLR
comp=Z,1μm,16.0s
KUR MLR MLR
comp=N,2μm,22.0s
KUR MLR MLR
comp=E,1μm,15.0s
ASAJ Asahikawa 68.69 340 LR LR 11 09 02.9
comp=E,1μm,20.7s,baz=165,slow=33
SSE Sheshan 68.89 317 P P 10 42 24.5 +4.8
SSE S S 10 51 32.3 +11
SSE pmax pmax
comp=E,8.0nm,0.7s
SSE pmax pmax
comp=E,170nm,6.2s
SSE LR LR
comp=E,260nm,18.8s
SSE LR LR
comp=E,240nm,20.4s
TJN Taejon 68.95 325⇑*i*P **P** **10 42 19.0 -0.9**
TJN Taejon 68.95 325 P **P** **10 42 20.9 +1.0**
KSRS Korea Array 69.45 326 P **P** **10 42 23.3 +0.3**
comp=E,5.1nm,1.0s,baz=143,slow=5.5,SNR=18
KSRS LR LR 11 11 02.9
comp=E,520nm,19.8s,baz=145,slow=34
comp=E,5.1nm,1.0s
QSPA South Pole Qui 69.62 180 LR LR 11 11 31.4
comp=E,2μm,18.0s,baz=82,slow=35
QSPA South Pole Qui 69.62 180 P **P** **10 42 24.2 +0.3**
QSPA IAmb IAmb 10 42 25.8
comp=Z,36nm,1.0s
QIZ Qiongzhong 70.11 300 P P 10 42 32.4 +4.9
QIZ PP **PP** **10 45 08.4 +5.1**
QIZ S **S** **10 51 41.3 +5.4**
QIZ pmax pmax
comp=Z,420nm,14.7s
QIZ LR LR
comp=Z,310nm,20.7s
QIZ LR LR
comp=Z,470nm,20.7s
QIZ LR LR
comp=Z,440nm,19.5s
INCN Inchon 70.16 325 P **P** **10 42 28.6 +1.2**
INCN Inchon 70.16 325 P **P** **10 42 28.6 +1.2**
INCN pmax pmax
comp=Z,87nm,1.1s
INCN Inchon 70.16 325 P **P** **10 42 28.7 +1.3**
comp=Z,73nm,1.5s
INCN Inchon 70.16 325 P **P** **10 42 28.5 +1.0**
NJ2 Nanjing 71.02 316 *e*P **P** **10 42 36.9 +4.1**
NJ2 S **S** **10 51 50.5 +4.5**
NJ2 pmax pmax
comp=Z,7.0nm,0.6s
NJ2 pmax pmax
comp=Z,440nm,5.6s
NJ2 LR LR
comp=Z,690nm,17.2s
NJ2 LR LR
comp=Z,380nm,20.4s
NJ2 LR LR
comp=Z,1μm,18.6s
YSS Yuzh-Sakhalins 71.18 341 P **P** **10 42 35.0 +1.6**
YSS Yuzh-Sakhalins 71.18 341*c i*P **P** **10 42 34.8 +1.4**
YSS *e*S **S** **10 51 52.5 +5.2**
YSS *e*PS **PnS** **10 52 07.1 -13**
YSS pmax pmax
comp=Z,70nm,0.9s
YSS pmax pmax
comp=Z,400nm,5.7s
YSS smax smax
comp=N,300nm,9.4s
YSS Yuzh-Sakhalins 71.18 341 P **P** **10 42 36.6 +3.2**
YSS Yuzh-Sakhalins 71.18 341 P **P** **10 42 35.0 +1.6**
IPM Ipoh 71.26 282 P **P** **10 42 33.9 -0.9**
IPM IAmb IAmb 10 42 35.1
comp=Z,28nm,0.8s
IPM Ipoh 71.26 282 P **P** **10 42 34.5 -0.2**
comp=Z,37nm,0.8s
SKR Severo-Kuril's 71.74 351 *e*P **P** **10 42 32.6 -4.0**
SKR *e*S **S** **10 51 57.9 +4.4**
SKR pmax pmax
comp=Z,100nm,4.5s
PSI Prapat 72.55 280 LR LR 11 16 28.7
comp=Z,990nm,20.3s,baz=132,slow=37
USRK Ussuriysk Ar. 72.76 333 P **P** **10 42 43.5 +0.6**
comp=Z,35nm,0.8s,baz=136,slow=4.3,SNR=51
USRK LR LR 11 12 08.5
comp=Z,584nm,20.3s,baz=141,slow=34
comp=Z,35nm,0.8s
SHEM Shemya Is, Ala 72.98 3 LR LR 11 09 50.9
comp=Z,959nm,20.5s,baz=188,slow=32
WHN Wuhan 73.10 313⇑P **P** **10 42 44.8 -0.5**
WHN S **S** **10 52 09.4 -0.5**
WHN LR LR
comp=Z,720nm,8.5s
WHN LR LR
comp=Z,590nm,14.3s
WHN LR LR
comp=Z,1μm,21.5s
RPN Rapa Nui 73.68 113 LR LR 11 07 11.9
comp=Z,563nm,21.8s,baz=253,slow=29
PET Petropavlovsk 73.72 353 *e*P **P** **10 42 47.6 -0.7**
PET *e*S **S** **10 52 18.6 +2.7**
PET pmax pmax
comp=Z,500nm,9.4s
PET pmax pmax
comp=Z,24nm,1.9s
PET pmax pmax
comp=Z,300nm,15.5s
PET MLR MLR
comp=Z,400nm,20.0s
PET MLR MLR
comp=Z,500nm,14.0s
PETK Petropavlovsk- 73.91 353 P **P** **10 42 49.7 +0.2**
comp=Z,14nm,0.9s,baz=148,slow=8.6,SNR=28
PETK LR LR 11 09 16.1
comp=Z,755nm,21.7s,baz=171,slow=31
comp=Z,14nm,0.9s
DL2 Dalian 73.93 323 P **P** **10 42 50.8 +0.9**
DL2 S **S** **10 52 20.4 +1.5**
DL2 pmax pmax
comp=Z,85nm,0.9s
DL2 pmax pmax
comp=Z,460nm,7.2s
DL2 LR LR
comp=Z,400nm,32.1s
DL2 LR LR
comp=Z,390nm,18.0s
DL2 LR LR
comp=Z,560nm,24.8s
MDJ Mudanjiang 74.14 332 P **P** **10 42 51.8 +0.8**
MDJ S S 10 52 30.5 +9.4
MDJ pmax pmax
comp=Z,62nm,1.3s
MDJ pmax pmax
comp=Z,580nm,3.8s
MDJ LR LR
comp=Z,410nm,17.1s
MDJ LR LR
comp=Z,430nm,8.5s
MDJ LR LR
comp=Z,370nm,8.2s
MDJ Mudanjiang 74.14 332 P **P** **10 42 51.9 +0.9**
comp=Z,68nm,1.1s
TYV Tymovskoe 74.73 343 *e*P **P** **10 42 55.3 +1.0**
TYV pmax pmax
comp=Z,37nm,1.2s
TYV pmax pmax
comp=Z,400nm,6.4s
TIA Tai'an 74.79 319 *e*P **P** **10 42 55.0 -0.1**
TIA S **S** **10 52 28.8 0.0**
TIA pmax pmax
comp=Z,18nm,0.9s
TIA pmax pmax
comp=Z,440nm,7.1s
TIA LR LR
comp=Z,400nm,16.1s
TIA LR LR
comp=Z,310nm,16.7s
TIA LR LR
comp=Z,670nm,18.1s
CN2 Changchun 75.44 329 *e*P **P** **10 42 57.8 -0.8**
CN2 *e*PP **PP** **10 45 49.4 +1.0**
CN2 *e*S **S** **10 52 36.5 +0.8**
CN2 *es*S pS 10 52 46.9 -3.0
CN2 *e*SS **SS** **10 57 30.4 +3.0**
CN2 pmax pmax
comp=Z,50nm,0.8s
CN2 LR LR
comp=Z,420nm,19.0s
CN2 LR LR
comp=Z,390nm,19.0s
CN2 LR LR
comp=Z,440nm,21.0s
NIKH Nikolski High 75.55 14 P **P** **10 42 58.3 -0.7**
NIKH Nikolski High 75.55 14 P **P** **10 42 57.5 -1.5**
baz=202
BNX BinXian 75.99 331⇓P **P** **10 43 01.6 -0.1**
BNX pmax pmax
comp=Z,58nm,0.7s
BNX pmax pmax
comp=Z,740nm,4.4s
GYA Guiyang 76.45 305⇓*i*P **P** **10 43 05.9 +1.0**
GYA S **S** **10 52 51.1 +3.4**
GYA SS **SS** **10 57 52.8 +9.3**
GYA pmax pmax
comp=Z,450nm,7.3s
GYA LR LR
comp=Z,440nm,23.1s
GRNR Gornyy 76.54 339⇑*i*P **P** **10 43 06.2 +1.5**
GRNR pmax pmax
comp=E,10.0nm,0.7s
GRNR pmax pmax
comp=N,10.0nm,1.2s
GRNR pmax pmax
comp=Z,50nm,0.9s
LYN LuoYang 76.76 315⇑P **P** **10 43 06.3 0.0**
LYN S **S** **10 52 52.4 +1.8**
LYN SS **SS** **10 57 49.1 +1.4**
LYN pmax pmax
comp=Z,40nm,0.8s
LYN pmax pmax
comp=Z,530nm,7.3s
LYN LR LR
comp=Z,710nm,19.3s
LYN LR LR
comp=Z,680nm,18.6s
LYN LR LR
comp=Z,970nm,18.6s
UNV Unalaska Valle 76.89 15 P **P** **10 43 04.7 -1.9**
baz=204
KLR Kul'dur 76.93 336*ce*P **P** **10 43 07.6 +0.7**
KLR pmax pmax
comp=Z,75nm,1.9s
HNS HongShan 77.04 318⇑P **P** **10 43 08.4 +0.6**
HNS S **S** **10 52 56.8 +3.3**
HNS pmax pmax
comp=Z,24nm,1.3s
HNS pmax pmax
comp=Z,510nm,9.0s
HNS LR LR
comp=Z,510nm,20.7s
HNS LR LR
comp=Z,380nm,20.7s
HNS LR LR
comp=Z,690nm,21.5s
MAW Mawson 77.31 202 P **P** **10 43 09.9 +1.1**
comp=Z,14nm,0.8s,baz=124,slow=11,SNR=26
MAW LR LR 11 14 17.2
comp=Z,1μm,19.1s,baz=100,slow=33
comp=Z,14nm,0.8s
MAW Mawson 77.31 202 P **P** **10 43 10.0 +1.2**
baz=77,SNR=23
MAW Mawson 77.31 202 P **P** **10 43 09.6 +0.7**
NKL Nikolayevsk 77.33 343 *e*P **P** **10 43 07.3 -1.7**
NKL *e*S **S** **10 52 55.8 -0.1**
NKL pmax pmax
comp=E,5.0nm,0.7s
NKL pmax pmax
comp=Z,58nm,1.5s
NKL smax smax
comp=N,323nm,1.0s
NKL smax smax

comp=E,10.0nm,1.0s
BJT Baijiatuau 77.81 321 IAmb IAmb 10 43 13.8
comp=Z,32nm,1.2s
BJI Beijing 77.82 321 P **P** **10 43 13.0 +0.9**
BJI S **S** **10 53 06.1 +4.3**
BJI pmax pmax
comp=Z,21nm,1.1s
BJI pmax pmax
comp=Z,450nm,7.8s
BJI LR LR
comp=Z,87nm,21.2s
BJI LR LR
comp=Z,430nm,21.4s
BJI LR LR
comp=Z,680nm,19.8s
TIY Taiyuan 78.66 317 *e*P **P** **10 43 17.8 +0.8**
TIY S **S** **10 53 14.1 +2.9**
TIY pmax pmax
comp=Z,350nm,5.2s
TIY LR LR
comp=Z,450nm,19.6s
KMI Kunming 78.85 302 ⇑P **P** **10 43 19.5 +1.1**
KMI pP PcP 10 43 27.3 +0.2
KMI sP pP 10 43 32.0 +1.9
KMI S **S** **10 53 18.1 +4.1**
KMI SS **SS** **10 58 24.8 +4.9**
KMI pmax pmax
comp=Z,20nm,1.3s
KMI pmax pmax
comp=Z,390nm,7.5s
KMI LR LR
comp=Z,310nm,18.4s
KMI LR LR
comp=Z,410nm,16.8s
KMI LR LR
comp=Z,510nm,20.8s
XAN Xi'an 78.87 313 ⇑*i*P **P** **10 43 18.6 +0.5**
XAN pP PcP 10 43 25.3 -1.4
XAN sP pP 10 43 29.3 -0.4
XAN PP **PP** **10 46 20.3 +2.9**
XAN S **S** **10 53 13.8 +0.3**
XAN SKS **SKKSac** **10 53 32.4 +0.6**
XAN ScS **ScS** **10 53 39.3 +2.4**
XAN pmax pmax
comp=Z,22nm,0.8s
XAN pmax pmax
comp=Z,600nm,6.9s
XAN LR LR
comp=Z,250nm,22.0s
XAN LR LR
comp=Z,550nm,21.3s
XAN LR LR
comp=Z,760nm,19.9s
CMAR Chiang Mai Arr 78.93 294 P **P** **10 43 19.9 +1.1**
comp=Z,15nm,0.8s,baz=134,slow=4.1,SNR=67
comp=Z,15nm,0.8s
CHTO Chiang Mai 79.09 295 P **P** **10 43 20.6 +1.0**
CHTO Chiang Mai 79.09 295 P **P** **10 43 20.9 +1.3**
SPIA Saint Paul Isl 79.22 11 P **P** **10 43 16.9 -2.5**
baz=200
CHNA Chernabura Isl 79.58 18 P **P** **10 43 20.2 -1.3**
baz=210
SDPT Sand Point 79.79 17 P **P** **10 43 20.7 -1.8**
baz=209
PZH PanZhiHua 80.30 303 P **P** **10 43 26.3 +0.1**
PZH pP **PcP** **10 43 33.1 -0.1**
PZH sP **pP** **10 43 39.3 +1.5**
PZH S **S** **10 53 29.6 +0.6**
PZH sS **SKKSac** **10 53 42.8 -0.3**
PZH SS **SS** **10 58 41.8 +0.4**
PZH pmax pmax
comp=Z,10.0nm,1.2s
PZH pmax pmax
comp=Z,310nm,8.6s
PZH LR LR
comp=Z,510nm,18.0s
PZH LR LR
comp=Z,1μm,20.2s
PZH LR LR
comp=Z,2μm,21.0s
XLT XiLinHaoTe 80.37 324 ⇓*i*P **P** **10 43 26.9 +0.8**
XLT pP PcP 10 43 32.6 -0.5
XLT sP pP 10 43 38.3 +0.1
XLT S **S** **10 53 32.6 +3.6**
XLT sS SKKSac 10 53 42.1 -0.7
XLT pmax pmax
comp=Z,26nm,1.5s
XLT pmax pmax
comp=Z,460nm,7.0s
XLT LR LR
comp=Z,41nm,19.5s
XLT LR LR
comp=Z,400nm,16.9s
XLT LR LR
comp=Z,490nm,18.7s
CD2 Chengdu 80.91 308 P **P** **10 43 32.0 +2.7**
CD2 S **S** **10 53 40.1 +5.0**
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,430nm,6.8s
CD2 LR LR
comp=Z,490nm,19.1s
CD2 LR LR
comp=Z,480nm,18.6s
BELA Belgrano 2 80.92 175 P **P** **10 43 28.0 -0.6**
HHC Hu-ho-hao-te 81.08 320 *e*P **P** **10 43 31.0 +1.0**
HHC S **S** **10 53 40.9 +4.3**
HHC pmax pmax
comp=Z,50nm,1.3s
HHC pmax pmax
comp=Z,760nm,6.5s
HHC LR LR
comp=Z,480nm,16.5s
HHC LR LR
comp=Z,880nm,15.9s
HHC LR LR
comp=Z,1μm,16.5s
CHIR Chirikof Islan 81.61 19 P **P** **10 43 29.9 -2.4**
baz=213
BTO Baotou 81.88 319 *e*P **P** **10 43 35.1 +0.8**
ZEA Zeya 82.22 336 *e*P **P** **10 43 36.1 +0.5**
ZEA *e*S **S** **10 53 52.7 +5.1**
ZEA pmax pmax
comp=N,20nm,1.0s
ZEA pmax pmax
comp=Z,30nm,1.3s
ZEA pmax pmax
comp=E,100nm,5.1s
ZEA pmax pmax
comp=N,100nm,9.5s
ZEA pmax pmax
comp=Z,300nm,9.2s
ZEA smax smax
comp=N,200nm,13.3s
SII Sitkinak Islan 82.67 19 P **P** **10 43 35.7 -2.2**
baz=215
SMAI San Martin Ant 82.72 162 P **P** **10 43 39.1 +1.0**
R17K Ugashik Creek 82.92 18 P **P** **10 43 36.2 -2.9**
baz=213
LZH Lanzhou 83.48 312 ⇑P **P** **10 43 43.5 +0.8**
LZH pP PcP 10 43 49.4 +2.4
LZH sP pP 10 43 55.1 +0.7
LZH S **S** **10 54 06.4 +4.9**
LZH SS **SS** **10 59 29.3 +0.8**
LZH pmax pmax
comp=N,40nm,1.5s
LZH pmax pmax
comp=N,270nm,5.4s
LZH LR LR
comp=N,250nm,17.9s
LZH LR LR
comp=N,300nm,17.3s
LZH LR LR
comp=N,540nm,16.3s
OHAK Old Harbor 83.50 19 P **P** **10 43 40.1 -2.0**
baz=215
P16K Nushagak River 83.66 16 P **P** **10 43 41.1 -1.8**
baz=211
O16K Kokwok River B 84.12 16 P **P** **10 43 43.1 -2.2**
baz=211,SNR=9.1
SEY Seymchan 84.14 352 *ce*P **P** **10 43 44.7 -0.6**
SEY pmax pmax
comp=Z,16nm,1.5s
KDAK Kodiak Island 84.18 19 P **P** **10 43 45.8 +0.2**
comp=Z,16nm,1.1s,baz=244,slow=5.0,SNR=7.0
KDAK LR LR 11 19 03.5
comp=Z,2μm,18.3s,baz=229,slow=34
comp=Z,16nm,1.1s
KDAK Kodiak Island 84.18 19 P **P** **10 43 45.5 0.0**
KDAK IAmb IAmb 10 43 46.8
comp=Z,46nm,1.3s
KDAK Kodiak Island 84.18 19 *c*P **P** **10 43 44.8 -0.8**
KDAK pmax pmax
comp=Z,59nm,1.4s
KDAK Kodiak Island 84.18 19 P **P** **10 43 44.8 -0.8**
baz=216
O17K Koliganek Bris 84.54 16 P **P** **10 43 45.9 -1.4**
baz=212,SNR=9.7
N16K Nishlik Lake 84.71 15 P **P** **10 43 48.5 +0.2**
baz=210,SNR=18
P18K Big Mountain, 84.72 17 P **P** **10 43 47.1 -1.3**
baz=214,SNR=42
Q19K Cape Douglas, 84.80 18 P **P** **10 43 47.4 -1.4**
baz=215,SNR=9.4
Q20K Shuyak Island 84.91 19 P **P** **10 43 49.2 0.0**
baz=216
O18K Koktuh Hills 85.12 17 IAmb IAmb 10 43 51.0
comp=Z,22nm,0.9s
O18K Koktuh Hills 85.12 17 P **P** **10 43 49.4 -0.9**
baz=214,SNR=16
GAMB Gambell 85.26 8 P **P** **10 43 50.9 +0.1**
baz=198
N18K Kilae Creek 85.63 16 P **P** **10 43 52.0 -0.8**
N18K IAmb IAmb 10 43 54.0
comp=Z,30nm,1.6s
N18K Kilae Creek 85.63 16 P **P** **10 43 52.2 -0.6**
baz=213,SNR=8.7
O19K Port Alsworth 85.65 17 IAmb IAmb 10 43 53.6
comp=Z,22nm,0.8s
O19K Port Alsworth 85.65 17 P **P** **10 43 51.7 -1.2**
baz=214
PMSA Palmer Station 85.82 160 P **P** **10 43 54.8 +0.9**
comp=Z,32nm,0.9s,baz=250,slow=4.0,SNR=3.7
PMSA LR LR 11 20 10.7
comp=Z,824nm,18.6s,baz=225,slow=34
comp=Z,32nm,0.9s
PMSA Palmer Station 85.82 160 P **P** **10 43 55.0 +1.1**
HOM Homer 85.99 19 P **P** **10 43 53.8 -0.8**
baz=217
CNPM China Poot 86.00 19 IAmb IAmb 10 43 56.1
comp=Z,29nm,1.2s
SVW2 Sparrevohn 86.06 16 IAmb IAmb 10 43 56.5
comp=Z,25nm,1.4s
N19K Bonanza Creek 86.12 17 P **P** **10 43 54.1 -1.3**
baz=214
BRLK Bradley Lake 86.30 19 IAmb IAmb 10 44 03.5
comp=Z,8.2nm,0.7s
BRSE Bradley Lake S 86.33 19 P **P** **10 43 55.8 -0.5**
baz=218
SAO San Andreas Ge 86.66 49 IAmb IAmb 10 44 31.6
comp=Z,12nm,1.1s
GDXM Geysers 86.71 47 IAmb IAmb 10 44 01.5
comp=Z,16nm,1.1s
KMRM Mail Ridge 86.80 45 IAmb IAmb 10 44 01.8
comp=Z,29nm,1.0s
PKM Mcpherson Peak 86.96 51 P **P** **10 43 58.7 -1.5**
baz=243
ANM Nome 86.98 11 P **P** **10 43 59.1 -0.3**
baz=204
SEW Seward 87.01 19 P **P** **10 43 59.0 -0.6**
baz=219
M19K Big River Lodg 87.05 16 P **P** **10 43 58.9 -0.9**
baz=214,SNR=6.3
L19K White Mountain 87.16 16 IAmb IAmb 10 44 25.4
comp=Z,13nm,0.9s
L19K White Mountain 87.16 16 P **P** **10 43 59.7 -0.7**
baz=214,SNR=19
BCW Bitter Crk WRg 87.27 51 IAmb IAmb 10 44 27.8
comp=Z,19nm,0.9s
TROLL Troll, Antarti 87.34 184 P **P** **10 44 01.5 0.0**
TROLL Troll, Antarti 87.34 184 pP pP 10 44 07.8 -5.4
TTA Tatalina 87.50 15 P **P** **10 44 01.9 -0.2**
baz=213
FMP Fort Macarthur 87.55 53 P **P** **10 44 03.4 +0.6**
baz=244
L20K Farewell, AK 87.66 16 P **P** **10 44 01.5 -1.3**
baz=215,SNR=17
NVL N'lazarevskaya 87.67 187 *e*P **P** **10 44 01.8 -1.0**
NVL *e*S **SKSac** **10 54 28.7 +1.5**
NVL pmax pmax
comp=Z,21nm,1.0s
NVL MLR MLR
comp=Z,554nm,16.0s
SUA Susitna One 87.70 18 P **P** **10 44 01.1 -2.0**
baz=218
RC01 Rabbit Creek A 87.70 19 P **P** **10 44 02.0 -0.9**
baz=218
ULN Ulaanbaatar 87.78 323 P **P** **10 44 04.6 +0.8**
ULN Ulaanbaatar 87.78 323 *c*P **P** **10 44 03.6 -0.2**
ULN pmax pmax
comp=Z,31nm,1.2s
GTA Gaotai 87.89 313 ⇓P **P** **10 44 05.4 +0.8**
GTA pP pP 10 44 16.8 +0.6
GTA SKS **SKSac** **10 54 29.3 -0.4**
GTA S **ScS** **10 54 52.3 +1.2**
GTA pmax pmax
comp=Z,17nm,0.9s
GTA pmax pmax
comp=Z,350nm,8.0s
GTA LR LR
comp=Z,280nm,16.0s
GTA LR LR
comp=Z,320nm,19.6s
GTA LR LR
comp=Z,400nm,18.5s
VES Vestal, Richgr 87.92 51 P **P** **10 44 05.2 +0.6**
baz=243
VOG Valley Oaks Go 87.92 50 P **P** **10 44 04.5 -0.1**
baz=243
SNAA Sanae 87.97 183 P **P** **10 44 04.2 -0.2**
SNAA Sanae 87.97 183 pP pP 10 44 10.8 -5.4
SNAA Sanae 87.97 183 LR LR 11 23 14.3
comp=Z,801nm,18.2s,baz=219,slow=35
SNAA Sanae 87.97 183 P **P** **10 44 03.7 -0.7**
SNAA IAmb IAmb 10 44 11.1
comp=Z,24nm,1.0s
SNAA Sanae 87.97 183 *ce*P **P** **10 44 04.2 -0.2**
SNAA pmax pmax
comp=Z,38nm,1.4s
YAK Yakutsk 87.99 343 *c*/P **P** **10 44 03.2 -1.0**
YAK *e*'PP **sP** **10 44 24.9 +4.1**
YAK e 10 47 28.8
YAK *e*S **SKSac** **10 54 23.5 -5.4**
YAK *e*SS **SS** **11 00 28.8 -4.5**
YAK pmax pmax
comp=Z,82nm,1.1s
YAK pmax pmax
comp=N,12nm,1.4s
YAK pmax pmax
comp=E,7.0nm,1.3s
YAK pmax pmax
comp=Z,122nm,4.4s
YAK smax smax
comp=N,610nm,12.8s
YAK smax smax
comp=E,558nm,14.8s
YAK MLR MLR
comp=Z,860nm,19.0s
YAK MLR MLR
comp=N,446nm,20.0s
YAK MLR MLR
comp=E,352nm,20.0s
CMB Columbia Colle 88.00 48 IAmb IAmb 10 44 06.9
comp=Z,47nm,1.9s
K02D Willamette Mer 88.06 43 P **P** **10 44 05.2 0.0**
baz=240
M22K Willow 88.12 18 P **P** **10 44 04.3 -0.5**
baz=218
SONM Songino Array 88.13 323 P **P** **10 44 05.3 -0.2**
comp=Z,7.6nm,0.8s,baz=152,slow=4.7,SNR=26
SONM LR LR 11 21 29.0
comp=Z,411nm,21.7s,baz=118,slow=34
comp=Z,7.6nm,0.8s
YBH Yreka Blue Hor 88.20 44 LR LR 11 16 57.5
comp=Z,906nm,19.6s,slow=31
YBH Yreka Blue Hor 88.20 44 P **P** **10 44 05.3 -0.5**
YBH Yreka Blue Hor 88.20 44 P **P** **10 44 05.4 -0.5**
YBH pmax pmax
comp=Z,45nm,1.6s
BILL Bilibino 88.24 359 P **P** **10 44 04.8 -0.5**
BILL IAmb IAmb 10 44 21.5
comp=Z,13nm,0.8s
BILL Bilibino 88.24 359 ⇓*i*P **P** **10 44 05.0 -0.3**
BILL *i* 10 44 31.8
BILL pmax pmax
comp=Z,33nm,1.9s
BILL MLR MLR
comp=Z,353nm,18.0s
BFSC Mount Baldy Ra 88.25 53 P **P** **10 44 06.6 +0.2**
baz=244
PMR Palmer 88.28 19 P **P** **10 44 06.3 +0.7**
baz=219
ISA Isabella, Lake 88.28 51 IAmb IAmb 10 44 34.9
comp=Z,13nm,1.0s
ISA Isabella, Lake 88.28 51 P **P** **10 44 06.2 -0.2**
baz=243,SNR=6.6
EDW2 Edwards Air Fo 88.29 52 P **P** **10 44 07.1 +0.6**
baz=244
MURC Murrieta 88.32 53 P **P** **10 44 06.7 +0.1**
baz=244
K20K Telida 88.34 16 P **P** **10 44 06.4 +0.4**
baz=214
GLI Glacier Island 88.36 20 P **P** **10 44 05.6 -0.4**
baz=221
HUMO Hull Mountain 88.47 43 P **P** **10 44 07.8 +0.7**
HUMO IAmb IAmb 10 44 09.7
comp=Z,24nm,1.2s
EYAK Cordova Ski Ar 88.54 20 P **P** **10 44 07.7 +0.9**
baz=222
VNA3 Neumayer Olymp 88.56 180 P **P** **10 44 07.0 -0.2**
VNA3 S **S** **10 54 50.2 +0.3**
VNA3 Neumayer Olymp 88.56 180 pP pP 10 44 13.3 -5.6
MONP2 Monument Peak 88.60 54 P **P** **10 44 07.8 -0.3**
baz=245
IKP In-Ko-Pah, Jac 88.73 54 P **P** **10 44 08.8 +0.2**
baz=245
MDPB Devils Postpil 88.73 49 IAmb IAmb 10 46 17.5
comp=Z,9.8nm,0.8s
BBRC Big Bear Solar 88.81 53 P **P** **10 44 09.0 -0.2**
baz=244
GCSA Galena City Sc 88.84 14 P **P** **10 44 08.3 +0.1**
baz=212
BEKR Beckworth 88.88 47 IAmb IAmb 10 44 11.4
comp=Z,30nm,1.5s
PFO Pinyon Flats O 88.88 53 LR LR 11 18 53.2
comp=Z,639nm,18.6s,baz=262,slow=32
PFO Pinyon Flats O 88.88 53 P **P** **10 44 08.4 -0.9**
baz=245
TPFO Pinon Flats 88.88 54 P **P** **10 44 08.4 -0.9**
baz=245
CWC Cottonwood Cre 88.92 50 P **P** **10 44 09.5 0.0**
baz=244
J20K Nowinta River 89.01 15 P **P** **10 44 07.5 -1.5**
baz=214
SCM Sheep Creek Mo 89.01 19 P **P** **10 44 07.8 -1.4**
baz=220
PNTR Pine Nut 89.04 47 IAmb IAmb 10 44 12.3
comp=Z,26nm,1.2s
SWSC Sam W. Stewart 89.10 54 P **P** **10 44 10.3 +0.1**
baz=245
VNA1 Neumayer--Stat 89.14 181 P **P** **10 44 10.0 +0.3**
VNA1 Neumayer--Stat 89.14 181 pP pP 10 44 16.6 -5.0
MPMC Manual Prospec 89.17 51 P **P** **10 44 11.5 +0.7**
baz=244,SNR=8.8
CHUM Lake Minchumin 89.23 16 P **P** **10 44 09.8 -0.3**
baz=216
YERR Yerington 89.24 48 IAmb IAmb 10 44 13.1
comp=Z,12nm,1.0s
GSC Goldstone, Bar 89.35 52 IAmb IAmb 10 44 49.2
comp=Z,35nm,1.9s
GSC Goldstone, Bar 89.35 52 P **P** **10 44 11.7 +0.2**
baz=244
BELC Belle Mtn. Jos 89.39 53 P **P** **10 44 12.6 +0.8**
baz=245
I04A Tendick Farm, 89.41 42 P **P** **10 44 12.0 +0.5**
baz=241
TRF Thorofare Moun 89.42 17 P **P** **10 44 11.4 +0.2**
baz=218
WAT1 Susitna Watana 89.42 18 P **P** **10 44 12.5 +1.4**
baz=219
LHV Little Huntoon 89.42 49 IAmb IAmb 10 44 14.1
comp=Z,25nm,1.3s
WAX Waxell Ridge 89.44 22 IAmb IAmb 10 47 27.9
comp=Z,9.0nm,0.8s
WAT6 Susitna Watana 89.46 18 P **P** **10 44 11.5 0.0**
baz=220
PAHR Pah Rah Range 89.47 47 IAmb IAmb 10 44 14.2
comp=Z,25nm,1.3s
H04D Lebanon 89.56 42 P **P** **10 44 12.9 +0.8**
baz=241
M24K Tolsona, Glenn 89.58 19 IAmb IAmb 10 44 25.8
comp=Z,8.9nm,0.8s
RYN Ryan 89.58 48 IAmb IAmb 10 44 14.6
comp=Z,15nm,1.1s
QSM Queen of Sheba 89.59 51 IAmb IAmb 10 44 14.4
comp=Z,23nm,1.4s
NVAR Mina Array Bea 89.64 49 P **P** **10 44 13.9 +0.9**
comp=Z,7.0nm,0.9s,baz=227,slow=7.5,SNR=41
NVAR LR LR 11 16 18.7
comp=Z,1μm,20.8s,baz=256,slow=30
comp=Z,7.0nm,0.9s
BC3 Big Chuckawall 89.66 54 P **P** **10 44 13.8 +0.8**
baz=245
GRAC Grapevine Rang 89.67 50 IAmb IAmb 10 44 29.2
comp=Z,15nm,0.8s
GRAC Grapevine Rang 89.67 50 P **P** **10 44 13.4 +0.5**
baz=244,SNR=12
N25K Chitina, Valde 89.70 20 P **P** **10 44 14.0 +1.6**
baz=223
NV11 Mina Array Sit 89.75 49 IAmb IAmb 10 44 15.4
comp=Z,18nm,1.2s
RND Reindeer 89.78 18 IAmb IAmb 10 44 32.6
comp=Z,11nm,1.1s
FURC Furnace Creek, 89.81 51 P **P** **10 44 14.3 +0.9**
baz=244,SNR=5.4
GWY Greenwater Val 89.83 51 IAmb IAmb 10 44 29.7
comp=Z,12nm,1.0s
K05A Summer Lake 89.86 44 IAmb IAmb 10 44 30.1
comp=Z,15nm,0.9s
MOD Modoc Plateau 89.86 45 IAmb IAmb 10 44 15.8
comp=Z,25nm,1.4s
GLA Glamis 89.88 55 P **P** **10 44 14.8 +0.9**
baz=246
J05D Fort Rock, OR 89.91 43 P **P** **10 44 14.8 +0.9**
baz=242
DHY Denali Highway 89.95 18 IAmb IAmb 10 44 18.9
comp=Z,17nm,1.6s
DHY Denali Highway 89.95 18 P **P** **10 44 14.8 +1.1**
baz=220
GOMU GeErMu 89.97 309 P **P** **10 44 15.0 +0.3**
GOMU pP PcP 10 44 18.6 +2.7
GOMU PP **PP** **10 47 45.5 -2.8**
GOMU S **S** **10 55 00.3 -4.6**
GOMU pmax pmax
comp=Z,7.0nm,0.7s
GOMU pmax pmax
comp=Z,180nm,7.2s
GOMU LR LR
comp=Z,300nm,20.3s
GOMU LR LR
comp=Z,280nm,19.5s
GOMU LR LR
comp=Z,220nm,19.2s
GMRC Granite Mounta 89.98 53 P **P** **10 44 15.5 +1.0**
baz=245
LPIG La Paz 89.99 64 LR LR 11 15 43.9
comp=Z,1μm,20.9s,baz=249,slow=30
KVN Kaiserville 90.06 48 IAmb IAmb 10 44 16.7
comp=Z,22nm,1.3s
IRM Iron Mountain 90.10 53 P **P** **10 44 16.2 +1.3**
baz=245
HARP HAARP 90.11 19 P **P** **10 44 15.2 +0.9**
baz=222
PINM Pinnacle 90.11 23 P **P** **10 44 15.3 +0.9**
baz=227
TLCB Telegraph Cove 90.29 35 IAmb IAmb 10 44 54.7
comp=Z,23nm,1.3s
CTG Chitna Glacier 90.33 22 P **P** **10 44 14.9 -0.6**
baz=226
I21K Tanana 90.37 15 IAmb IAmb 10 44 45.1
comp=Z,7.0nm,0.8s
I21K Tanana 90.37 15 P **P** **10 44 14.9 -0.5**
baz=216
BLYC Blythe 90.40 54 IAmb IAmb 10 44 18.8
comp=Z,13nm,1.0s
TPNV Topopah Spring 90.46 51 IAmb IAmb 10 44 18.8
comp=Z,16nm,1.1s
TPNV Topopah Spring 90.46 51 P **P** **10 44 17.2 +0.5**
baz=245,SNR=5.9
BBB Bella Bella 90.51 33 LR LR 11 18 24.4

comp=Z,765nm,19.6s,baz=270,slow=31
H21K Melozitna Rive 90.55 15 P **P** 10 44 16.1 -0.2
baz=216
MLY Manley 90.56 16 P **P** 10 44 15.8 -0.6
baz=218
113A Mohawk Valley, 90.58 55 IAmb IAmb 10 44 19.6
comp=Z,23nm,1.5s
M26K Nabesna, AK 90.80 20 P **P** 10 44 16.6 -0.9
baz=224
CLRS Cowichan Lake 90.88 37 IAmb IAmb 10 44 47.2
comp=Z,18nm,1.0s
PDMCI Parker Dam,Lak 90.92 54 P **P** 10 44 19.5 +0.8
baz=246
WRAK Wrangell Islan 90.93 28 P **P** 10 44 18.2 +0.1
baz=233
K24K Donnelly Dome 90.97 18 P **P** 10 44 17.6 -0.7
baz=222
214A Organ Pipe Nat 91.00 56 IAmb IAmb 10 44 21.7
comp=Z,22nm,1.4s
214A Organ Pipe Nat 91.00 56 P **P** 10 44 19.6 +0.5
baz=247
I23K Minto, Yukon-K 91.01 16 P **P** 10 44 18.9 +0.6
baz=219
SHPR Sheep Range 91.07 51 IAmb IAmb 10 44 22.0
comp=Z,8.3nm,1.1s
PALK Pallekele 91.07 277 LR LR 11 25 48.9
comp=Z,325nm,19.9s,baz=218,slow=36
HDA Harding Lake 91.09 18 IAmb IAmb 10 44 27.4
comp=Z,6.7nm,0.7s
HDA Harding Lake 91.09 18 P **P** 10 44 18.6 -0.2
baz=221
YUK8 Steele Glacier 91.11 22 P **P** 10 44 18.7 -0.6
baz=227,SNR=11
S11A Rachel 91.12 50 IAmb IAmb 10 44 48.0
comp=Z,18nm,1.0s
M27K Edge Creek, AK 91.14 21 IAmb IAmb 10 44 42.8
comp=Z,14nm,1.6s
M27K Edge Creek, AK 91.14 21 P **P** 10 44 18.9 -0.3
baz=225
L26K Log Cabin Wild 91.14 20 P **P** 10 44 18.2 -0.9
baz=224
PLBC Pleasant Camp 91.15 25 P **P** 10 44 19.0 -0.1
baz=230
BESE Bessie Mountai 91.19 26 IAmb IAmb 10 44 47.6
comp=Z,19nm,1.0s
TCOL CIGO, UAF Yank 91.20 17 P **P** 10 44 19.3 +0.1
baz=220
COLA College 91.20 17⇓*i*P **P** 10 44 17.7 -1.5
COLA pmax pmax
comp=Z,8.0nm,1.2s
COLA College 91.20 17 P **P** 10 44 19.3 +0.1
baz=220
RIDG Independent Ri 91.20 19 IAmb IAmb 10 44 43.6
comp=Z,11nm,1.1s
YUK3 Moose Creek 91.20 21 P **P** 10 44 18.2 -1.4
baz=226,SNR=7.2
WVOR Wild Horse Val 91.21 45 IAmb IAmb 10 44 41.0
comp=Z,16nm,1.0s
BMN Battle Mountai 91.28 47 IAmb IAmb 10 44 38.7
comp=Z,13nm,1.1s
YUK6 Outpost Mounta 91.38 23 P **P** 10 44 19.3 -1.2
baz=228
ILAR Eielson Array 91.39 17 P **P** 10 44 18.4 -1.7
comp=Z,2.7nm,0.8s,baz=238,slow=5.5,SNR=18
ILAR LR LR 11 24 03.2
comp=Z,1μm,18.1s,baz=210,slow=35
I07A Izee 91.39 43 IAmb IAmb 10 44 22.9
comp=Z,18nm,1.1s
W13A Hualapai Mount 91.43 53 IAmb IAmb 10 44 23.6
comp=Z,16nm,1.4s
H23K Yukon River 91.50 16 P **P** 10 44 19.9 -0.7
baz=219
POKR Poker Plat Res 91.50 17 P **P** 10 44 19.8 -0.9
baz=220
BVCY Beaver Creek 91.51 21 P **P** 10 44 20.8 0.0
baz=226
R11A Troy Canyon, C 91.53 50 P **P** 10 44 21.4 -0.2
baz=245,SNR=10
YUK4 Talbot Arm 91.55 22 P **P** 10 44 20.9 -0.3
baz=228
SKAG Skagway 91.56 25 IAmb IAmb 10 44 38.3
comp=Z,17nm,1.0s
SKAG Skagway 91.56 25 P **P** 10 44 20.5 -0.5
baz=231
HYT Haines Junctio 91.61 23 IAmb IAmb 10 44 37.3
comp=Z,8.7nm,1.1s
HYT Haines Junctio 91.61 23 P **P** 10 44 20.4 -1.0
baz=229
SCRK Sand Creek 91.64 19 P **P** 10 44 20.1 -1.4
baz=224
L27K Beaver Creek, 91.65 20 pP 10 44 36.0 +2.3
L27K Beaver Creek, 91.65 20 P **P** 10 44 21.1 -0.4
baz=225
J25K Salcha River, 91.70 18 IAmb IAmb 10 44 44.8
comp=Z,17nm,1.8s
J25K Salcha River, 91.70 18 P **P** 10 44 20.0 -1.7
baz=222
J08A Circle Bar Ran 91.73 44 IAmb IAmb 10 44 25.2
comp=Z,9.7nm,0.8s
TAPN Taplejung 91.99 298 *e*P **P** 10 44 23.9 -0.3
O30N Mendenhall 92.10 24 P **P** 10 44 22.4 -1.2
baz=230,SNR=6.9
LTY Liberty 92.14 40 IAmb IAmb 10 44 25.8
comp=Z,34nm,1.9s
J26L Joseph Creek 92.15 19 P **P** 10 44 22.9 -0.8
baz=224,SNR=6.1
N30M Aishikik Lake 92.18 23 P **P** 10 44 23.6 -0.4
baz=229
T35M Bob Quinn 92.19 29 P **P** 10 44 23.7 -0.4
baz=235
K27K Chicken 92.26 19 IAmb IAmb 10 44 26.1
comp=Z,16nm,1.6s
K27K Chicken 92.26 19 P **P** 10 44 23.3 -0.9
baz=225
P32M Atlin 92.28 25 P **P** 10 44 24.0 -0.4
baz=232,SNR=5.1
G08A Pilot Rock 92.29 42 IAmb IAmb 10 44 26.7
comp=Z,9.0nm,1.0s
HAWA Hanford 92.43 41 IAmb IAmb 10 44 27.5
comp=Z,13nm,1.1s
COLD Coldfoot 92.44 15 IAmb IAmb 10 44 42.1
comp=Z,9.4nm,1.2s
COLD Coldfoot 92.44 15 P **P** 10 44 24.8 -0.2
baz=218
WHY Whitehorse 92.49 24 P **P** 10 44 24.6 -0.9
baz=231
LCMT Little Creek M 92.68 51 IAmb IAmb 10 44 29.1
comp=Z,8.9nm,1.1s
N31M Braeburn, Yuko 92.68 23 IAmb IAmb 10 44 26.8
comp=Z,19nm,1.2s
N31M Braeburn, Yuko 92.68 23 P **P** 10 44 25.4 -0.9
baz=231,SNR=6.1
TUC Tucson 92.72 57 P **P** 10 44 28.6 +1.4
TUC IAmb IAmb 10 44 29.7
comp=Z,10nm,1.1s
TUC Tucson 92.72 57 P **P** 10 44 28.6 +1.4
TUC pmax pmax
comp=Z,10.0nm,1.1s
TUC Tucson 92.72 57 P **P** 10 44 27.0 -0.2
baz=248
RAMN Ramite 92.76 298 *e*P **P** 10 44 27.5 -0.2
comp=Z,15nm,0.8s
ELK Elko 92.78 47 LR LR 11 21 06.9
comp=Z,707nm,18.9s,baz=240,slow=32
CCUT Cedar City 92.81 51 IAmb IAmb 10 44 29.4
comp=Z,29nm,2.0s
PSUT Pine Spring 92.84 50 P **P** 10 44 28.2 +0.4
PSUT **pP** 10 44 40.5 +0.4
X16A Lo Mia Camp, P 93.01 54 IAmb IAmb 10 44 31.1
comp=Z,8.9nm,1.0s
M30M Minto, Yukon 93.02 22 IAmb IAmb 10 44 44.2
comp=Z,12nm,1.1s
M30M Minto, Yukon 93.02 22 P **P** 10 44 26.9 -0.9
baz=230,SNR=11
P33M Teslin, Yukon 93.02 25 P **P** 10 44 27.5 -0.4
P33M pP **pP** 10 44 42.0 +1.8
P33M IAmb IAmb 10 44 55.3
comp=Z,10nm,1.2s
P33M Teslin, Yukon 93.02 25 P **P** 10 44 27.4 -0.5
baz=233
LLLL Lillooet 93.03 37 IAmb IAmb 10 44 39.9
comp=Z,5.8nm,0.8s
MOY Mondy 93.12 325 *e*P **P** 10 44 29.1 +0.5
MOY pmax pmax
comp=Z,24nm,1.8s
DLBC Dease Lake 93.13 27 LR LR 11 22 45.9
comp=Z,2μm,18.4s,baz=256,slow=33
DLBC Dease Lake 93.13 27 P **P** 10 44 28.7 +0.3
DLBC IAmb IAmb 10 44 29.9
comp=Z,17nm,1.2s
DLBC pP **pP** 10 44 39.6 -1.0
DLBC Dease Lake 93.13 27 P **P** 10 44 28.1 -0.3
baz=235
DAWY Dawson 93.14 20 IAmb IAmb 10 44 45.4
comp=Z,12nm,1.5s
DAWY Dawson 93.14 20 P **P** 10 44 27.3 -1.0
baz=228,SNR=5.2
U15A North Rim 93.15 52 IAmb IAmb 10 44 55.6
comp=Z,16nm,1.3s
JIRN Jiri 93.36 298 *e*P **P** 10 44 30.5 -0.1
B08A Colville Reser 93.45 39 IAmb IAmb 10 44 32.7
comp=Z,11nm,1.5s
WUAZ Wupatki 93.49 53 IAmb IAmb 10 44 56.9
comp=Z,8.9nm,1.0s
WUAZ Wupatki 93.49 53 P **P** 10 44 29.7 -1.1
baz=248
PKCU Pink Cliffs 93.53 51 IAmb IAmb 10 44 57.9
comp=Z,14nm,1.1s
M31M Drury Creek, Y 93.64 23 P **P** 10 44 30.3 -0.3
baz=232,SNR=5.2
F10A Beach Ranch, E 93.68 42 IAmb IAmb 10 44 59.4
comp=Z,8.2nm,1.2s
TOLK Toolik Lake Re 93.71 14 P **P** 10 44 30.5 -0.3
baz=219
PKI Pulchoki 93.97 298 *e*P **P** 10 44 33.2 -0.2
comp=Z,38nm,0.9s
PKIN Phulchoki 93.98 298 *e*P **P** 10 44 33.0 -0.4
BMAR Burnt Mountain 94.01 16 P **P** 10 44 31.7 -0.5
FARO Faro, Yukon 94.05 23 P **P** 10 44 32.1 -0.5
baz=233
DMN Daman 94.24 298 *e*P **P** 10 44 34.5 0.0
comp=Z,47nm,0.8s
DUG Dugway, Tooele 94.25 49 P **P** 10 44 33.7 -0.4
baz=247
I29M Ogilvie Camp, 94.36 19 IAmb IAmb 10 44 34.7
comp=Z,15nm,1.4s
I29M Ogilvie Camp, 94.36 19 P **P** 10 44 33.4 -0.5
baz=229
HLID Hailey 94.49 45 P **P** 10 44 35.5 +0.3
baz=246
A21K Barrow 94.52 10 IAmb IAmb 10 44 36.2
comp=Z,20nm,1.4s
A21K Barrow 94.52 10 P **P** 10 44 34.6 +0.2
baz=212
NEW Newport 94.73 40 LR LR 11 23 29.2
comp=Z,668nm,18.4s,baz=258,slow=33
GKN Gorkha 94.76 298 *e*P **P** 10 44 36.2 -0.6
MMPY Sheldon Lake, 95.06 24 P **P** 10 44 36.8 -0.4
baz=234
EPYK Eagle Plains 95.51 19 IAmb IAmb 10 45 11.1
comp=Z,7.5nm,1.0s
EPYK Eagle Plains 95.51 19 P **P** 10 44 38.6 -0.6
baz=230
DANN Dangsing 95.61 298 *e*P **P** 10 44 39.7 -1.1
TIXI Tiksi 95.89 348 *d*/P **P** 10 44 39.7 -1.0
TIXI pmax pmax
comp=Z,4.0nm,1.0s
HYBB Hyderabad (bro 96.48 286 *e*P **P** 10 44 44.2 -0.5
MNTX Cornudas Mount 96.78 59 P **P** 10 44 45.9 +0.2
baz=250
ANMO Albuquerque 97.03 55 LR LR 11 24 00.4
comp=Z,603nm,18.5s,baz=255,slow=32
ANMO Albuquerque 97.03 55 P **P** 10 44 46.4 -0.6
baz=250
BOZ Bozeman (W) 97.11 44 P **P** 10 44 46.9 -0.1
baz=248
TXAR Lajitas Array 97.39 62 P Pdif 10 44 49.7 +1.0
comp=Z,0.6nm,0.8s,baz=213,slow=5.6,SNR=10
TXAR PKKPbc **PKKPbc** 11 01 27.6 +0.8
comp=Z,0.6nm,0.8s,baz=90,slow=3.0,SNR=7.2
TXAR LR LR 11 23 06.4
comp=Z,1μm,18.2s,baz=253,slow=32
comp=Z,0.6nm,0.8s
PDAR Pindale Array 97.47 47 P Pdif 10 44 50.6 +1.6
comp=Z,0.4nm,0.6s,baz=225,slow=8.2,SNR=4.4
PDAR PP **PP** 10 48 45.8 -0.9
comp=Z,0.1nm,0.3s,baz=262,slow=3.0,SNR=4.4
PDAR LR LR 11 21 39.9
comp=Z,338nm,21.2s,baz=264,slow=31
comp=Z,0.4nm,0.6s
O20A White River Ci 97.48 50 P **P** 10 44 47.7 -1.2
baz=250
PLCA Paso Flores 97.69 139 LR LR 11 19 47.7
comp=Z,335nm,21.0s,baz=236,slow=30
INK Inuvik 97.69 18 P **P** 10 44 48.0 -0.9
comp=Z,4.2nm,1.1s,baz=249,slow=7.9,SNR=6.6
INK LR LR 11 26 16.9
comp=Z,666nm,18.9s,baz=220,slow=34
comp=Z,4.2nm,1.1s
INK Inuvik 97.69 18 IAmb IAmb 10 44 49.0
comp=Z,12nm,1.4s
INK Inuvik 97.69 18 P **P** 10 44 48.0 -0.9
INK Inuvik 97.69 18 P **P** 10 44 48.1 -0.8
baz=233
S22A 4UR Ranch, Cre 97.70 53 P **P** 10 44 48.8 -1.3
baz=250
WMQ Urumqi 97.98 314 *e*P Pdif 10 44 54.5 +3.5
WMQ LR LR
comp=Z,520nm,15.9s
WMQ LR LR
comp=Z,480nm,17.9s
WMQ LR LR
comp=Z,330nm,17.7s
YKA Yellowknife Ar 101.76 27 P **Pdif** 10 45 07.8 +0.6
comp=Z,0.4nm,0.6s,baz=258,slow=4.6,SNR=5.3
MK31 Makanchi Array 102.54 315 *e*P **Pdif** 10 45 10.3 -0.8
MKAR Makanchi Array 102.54 315 P **Pdif** 10 45 11.0 -0.1
comp=Z,1.1nm,0.7s,baz=101,slow=6.2,SNR=11
MKAR PP **PP** 10 49 21.4 -3.5
comp=Z,1.4nm,1.0s,baz=103,slow=8.8,SNR=4.0
MKAR Makanchi Array 102.54 315 *i* P **Pdif** 10 45 11.3 +0.2
MKAR pmax pmax
comp=Z,1.0nm,0.7s
ZALV Zalesovo Beam 103.02 323 P **Pdif** 10 45 12.9 -0.2
comp=Z,0.6nm,0.4s,baz=116,slow=3.4,SNR=2.1
KURBB **Kurchatov Arra 105.91 319** PP **PP** 10 49 47.2 -2.5
comp=Z,2.7nm,1.1s,baz=102,slow=7.6,SNR=5.7
ULM Lac du Bonnet 108.55 42 PKiKP **PKiKP** 10 49 41.4 -1.8
comp=Z,2.1nm,0.6s,baz=212,slow=3.6,SNR=4.1
BRVK Borovoye 111.36 320⇑*i*PKiKP **PKiKP** 10 49 48.1 -0.2
BRVK pmax pmax
comp=Z,4.0nm,1.7s
GOGA Godfrey 115.11 62 P **PKPdf** 10 49 55.8 -0.3
baz=261
TZTN Tazewell 115.48 58 P **PKPdf** 10 49 55.8 -1.0
baz=263
KMSC Kings Mountain 117.09 60 P **PKPdf** 10 49 59.2 -0.7
baz=263
ABKAR **Akbulak array 117.68 316** **PKPdf** 10 50 00.1 -0.5
BLA Blacksburg 118.05 58 P **PKPdf** 10 49 60.0 -1.7
baz=265
ARU Arti 118.16 324 PKPdf **PKPdf** 10 50 00.7 -0.6
ARU Arti 118.16 324 *i* PKiKP **PKPdf** 10 50 01.0 -0.3
ARU MLR MLR
comp=Z,504nm,21.0s
SSPA Standing Stone 120.23 54 P **PKPdf** 10 50 04.1 -1.6
baz=268
SAML Samuel 120.82 114 **PKPdf** 10 50 06.0 -1.6
SAML Samuel 120.82 114 PKiKP **PKPdf** 10 50 06.1 -1.6
BINY Binghamton 121.68 52 P **PKPdf** 10 50 07.4 -1.1
baz=270
LONY Lake Ozonia 122.63 50 P **PKPdf** 10 50 08.3 -1.9
baz=273
PRGR Permogore 123.53 331 *e*PKiKP **PKPdf** 10 50 10.2 -1.2
L61B Northampton 124.12 52 P **PKPdf** 10 50 11.7 -1.5
baz=273
LBNH Lisbon 124.55 50 P **PKPdf** 10 50 12.9 -1.1
baz=275
HRV Adam Dziewonsk 124.94 52 P **PKPdf** 10 50 13.6 -1.1
baz=274
G62A West of Eustis 125.45 49 PKPdf **PKPdf** 10 50 14.1 -1.5
BIRV Birdsgo 125.88 92 PKPdf **PKPdf** 10 50 16.6 -0.8
SCHQ Schefferville 125.91 36 PKP **PKPdf** 10 50 15.6 -0.6
comp=Z,5.4nm,0.8s,baz=287,slow=1.3,SNR=8.2
ARCES **ARCESS Array B 126.20 345** PKP **PKPdf** 10 50 16.1 -0.3
comp=Z,4.9nm,0.7s,baz=94,slow=1.5,SNR=16
ARCES **ARCESS Array B 126.20 345** **PKPdf** 10 50 15.3 -1.1
D62A Allapoint, All 126.23 46 PKPdf **PKPdf** 10 50 15.4 -1.7
PKME Peaks-Kenny Pk 126.31 48 P **PKPdf** 10 50 16.6 -0.7
baz=278
KLMR Klimovskoe 126.56 332 *e*PKiKP **PKPdf** 10 50 15.0 -2.2
KLMR pmax pmax
comp=Z,14nm,1.0s
KLMR Klimovskoe 126.56 332 *e*PKPdf **PKPdf** 10 50 15.0 -2.2
KLMR AMP 10 50 19.4
comp=Z,14nm,1.0s
MLPR Magueyes Islan 127.08 83 PKPdf **PKPdf** 10 50 17.4 -2.1
CELP Cerrillos 127.53 83 PKPdf **PKPdf** 10 50 17.5 -2.9
SJG San Juan 127.94 83 **PKPdf** 10 50 20.0 -1.2
SJG San Juan 127.94 83 PKiKP **PKPdf** 10 50 20.0 -1.2
RAYN Ar Rayn 127.94 284 **PKPdf** 10 50 20.4 -0.8
RAYN Ar Rayn 127.94 284⇑PKiKP **PKiKP** 10 50 22.1 +0.4
BDFB Brasilia 128.82 132 PKP **PKPdf** 10 50 23.1 0.0
comp=Z,2.4nm,0.5s,baz=190,slow=3.0,SNR=9.1
LMN Caledonia Moun 129.33 47 PKPdf **PKPdf** 10 50 21.5 -1.5
KBZ Knabaz 129.89 310 PKP **PKPdf** 10 50 24.2 +0.1
comp=Z,2.1nm,0.8s,baz=60,slow=8.9,SNR=4.4
KIV Kislovodsk 130.00 311 *i* PKiKP **PKPdf** 10 50 24.2 -0.3
KIV *e* 10 52 33.2
KIV *e*PS **PS** 11 02 42.8 -6.0
KIV *e*SS SS 11 09 56.5 -3.1
KIV pmax pmax
comp=Z,5.0nm,1.0s
OBN Obninsk 130.45 326 *i* PKiKP **PKPdf** 10 50 24.1 -0.7
OBN pmax pmax
comp=Z,8.0nm,0.9s
OBN MLR MLR
comp=Z,569nm,21.0s
FINES FINESS Array B 131.66 337 PKhKP PKPpre 10 50 20.9
comp=Z,1.6nm,0.6s,baz=90,slow=3.8,SNR=5.2
FINES SKPbc **SKPbc** 10 53 47.6 -1.6
comp=Z,1.1nm,0.6s,baz=99,slow=4.4,SNR=1.6
SOC Sochi 132.18 311 *i* PKiKP **PKPdf** 10 50 27.3 -1.2
SOC *e*PS **PS** 11 03 05.8 -1.6
SOC *e*SS SS 11 10 22.9 -3.1
SOC *e*SSS SSS 11 15 14.9
NACGM **Naroch 135.43 330**⇓*e*PKP **PKPdf** 10 50 33.7 -0.5
baz=55
SIM Simferopol' 135.70 314 *i* PKiKP **PKiKP** 10 50 38.6 +1.9
SIM *e* 10 53 18.0
SIM *e*PPP PPP 10 56 15.0
SIM pmax pmax
comp=Z,11nm,0.7s
AKASG Malin Array Be 136.41 324 PKP **PKPdf** 10 50 36.1 -0.1
comp=Z,2.2nm,0.6s,baz=40,slow=2.4,SNR=8.6
NB2 NORSAR Subarra 136.57 345 PKPdf PKPpre 10 50 24.9
comp=Z,5.5nm,1.4s,baz=31,slow=1.9
NOA NORSAR Array B 136.57 345 PKhKP PKPpre 10 50 24.3
comp=Z,1.1nm,0.7s,baz=261,slow=3.4,SNR=4.8
NOA PKP **PKPdf** 10 50 36.8 +0.5
comp=Z,1.4nm,0.7s,baz=36,slow=2.0,SNR=8.8
BRTR Keskin Array B 137.48 307 PKP **PKiKP** 10 50 39.9 -0.8
comp=Z,1.0nm,0.8s,baz=166,slow=2.5,SNR=5.4
BRTR Keskin Array B 137.48 307 **PKPdf** 10 50 38.8 +0.1
MILM Milestii Mici 138.39 319 *e*PKP **PKiKP** 10 50 42.0 -0.1
comp=Z,170nm,4.3s
MILM Milestii Mici 138.39 319 LRM MLR 11 52 03.0
comp=Z,400nm,22.0s
MILM Milestii Mici 138.39 319 *e*PKiKP **PKiKP** 10 50 42.0 -0.1
MILM *e* 10 53 31.0
MILM pmax pmax
comp=Z,170nm,4.3s
MILM Milestii Mici 138.39 319 *e*PP PP 10 53 31.0 +1.0
MILM Milestii Mici 138.39 319 *e*L L 11 49 58.0
TPGR Topolog 139.51 316⇑P PKPpre 10 50 29.5
CFR Carcaliu 139.56 317⇑P **PKPdf** 10 50 40.9 -1.2
CFR Carcaliu 139.56 317⇑PKiKP **PKPdf** 10 50 40.9 -1.2
BIZ Bicaz 140.03 320⇑P **PKiKP** 10 50 46.0 +0.5
BURAR **Bucovina Array 140.23 322**⇑P **PKPdf** 10 50 44.0 +0.5
BURAR **Bucovina Array 140.23 322**⇑PKiKP **PKPdf** 10 50 44.0 +0.5
MLR Muntele Rosu 140.81 318⇑P **PKPdf** 10 50 44.6 0.0
MLR Muntele Rosu 140.81 318 PKP **PKPdf** 10 50 45.3 +0.7
comp=Z,2.4nm,0.5s,baz=103,slow=7.1,SNR=4.0
UZH Uzhgorod 141.33 325 *e*PKiKP **PKiKP** 10 50 48.6 +0.6
VOIR 141.40 319⇑P **PKPdf** 10 50 46.8 +1.2
VOIR 141.40 319⇑PKiKP **PKPdf** 10 50 46.8 +1.2
CEI Carei 141.77 323⇑P **PKPdf** 10 50 44.4 -1.7
CEI Carei 141.77 323⇑PKiKP **PKPdf** 10 50 44.4 -1.7
DRGR 142.12 322⇑P **PKPdf** 10 50 41.7 -5.2
DRGR 142.12 322⇑PKHKP PKPpre 10 50 41.7
OKC Ostrava-Krasne 142.72 329 *e*PKHKP PKPpre 10 50 37.0
OKC Ostrava-Krasne 142.72 329 *e*PKP PKPpre 10 50 37.0
MORC Moravsky Berou 143.06 329⇑P PKPbc 10 50 45.6 +0.4
MORC Moravsky Berou 143.06 329⇑PKiKP PKPbc 10 50 45.6 +0.3
MORC Moravsky Berou 143.06 329 *e*PKP PKPbc 10 50 46.8 +1.5
OSTC Ostas 143.14 331 *e*PKP PKPbc 10 50 45.7 +0.3
CHVC Chvalec 143.19 331 *e*PKP PKPab 10 50 38.3 -5.9
MAUC Maruska 143.19 328 *e*PKP **PKiKP** 10 50 52.9 +1.0
MPEP Malo Peshtene 143.20 316 P PKPab 10 50 43.0 -1.5
KRLC Kraliky 143.21 330 *e*PKHKP PKPpre 10 50 41.4
KRLC Kraliky 143.21 330 *e*PKP PKPab 10 50 41.4 -3.0
DPC Dobruska-Polom 143.23 331 *e*PKiKP PKPbc 10 50 45.5 -0.2
DPC Dobruska-Polom 143.23 331 *e*PKP PKPbc 10 50 45.5 -0.2
UPC Upice 143.26 331 *e*PKHKP PKPpre 10 50 42.0
UPC Upice 143.26 331 *e*PKP PKPab 10 50 42.0 -2.5
HERR Herculane 143.29 319⇑P PKPbc 10 50 45.6 -0.4
BZS Buzias 143.39 321⇑P **PKPdf** 10 50 47.7 -1.3
BZS Buzias 143.39 321⇑PKiKP **PKPdf** 10 50 47.7 -1.3
JAVC Velka Javorina 143.60 328 *e*PKP PKPbc 10 50 48.0 +1.2
BLKB Belogradchik 143.75 317⇑P PKPab 10 50 46.5 -0.2
MDVR Moldovita 143.77 320⇑P PKPab 10 50 46.1 -0.7
VTS Vitosha 143.86 315⇑P PKPab 10 50 46.4 -0.9
VTS Vitosha 143.86 315⇑PKiKP PKPab 10 50 46.4 -0.9
VTS Vitosha 143.86 315 P PKPab 10 50 44.7 -2.6
PVCC Panska Ves 143.89 332 *e*PKiKP PKPbc 10 50 47.6 0.0
PVCC Panska Ves 143.89 332 *e*PKP PKPbc 10 50 47.6 0.0
BRG Berggiesshubel 143.91 333 *e*PKP PKPbc 10 50 47.9 +0.3
BRG Amp 10 50 49.5
comp=Z,59nm,1.5s
BRG *ex* x 10 51 03.0
BRG Amp 10 51 04.1
comp=Z,32nm,1.4s
BRG *ex* x 10 51 07.7
BRG Amp 10 51 09.4
comp=Z,47nm,1.7s
BRG Berggiesshubel 143.91 333 *e*PKiKP PKPbc 10 50 47.8 +0.2
BRG *e* 10 51 07.6
BRG pmax pmax
comp=Z,59nm,1.5s
CLL Collm 143.97 334⇓*i*PKiKP PKPbc 10 50 47.9 +0.2
CLL pmax pmax
comp=Z,133nm,2.1s
CLL MLR MLR
comp=Z,500nm,19.2s
CLL Collm 143.97 334⇓*i*PKPdf PKPbc 10 50 47.9 +0.2
comp=Z,133nm,2.1s
CLL *e*PP **PP** 10 54 00.0 -3.4
CLL *ex* x 10 56 36.0
CLL *e*PPP PPP 10 57 15.0
CLL *e*SKSac **SKSac** 10 58 00.0 -3.5
CLL *ex* x 11 00 24.0
CLL *e*SKKSac **SKKSac** 11 01 00.0 +7.0
CLL *e*Sdif **Sdif** 11 02 40.0 +2.2
CLL *e*PSKS 11 04 06.0
CLL *e*PPPrev 11 05 24.0
CLL *e*PPS PPS 11 06 30.0
CLL *e*SKKSdf **SKKSdf** 11 07 18.0 +7.2
CLL *ex* x 11 07 42.0
CLL *e*SS **SS** 11 12 36.0 -7.9
CLL *ex* x 11 14 30.0
CLL *ex* x 11 15 34.0
CLL *e*SSS SSS 11 17 48.0
CLL *e*SSSS 11 22 18.0
CLL Lm MLR 12 02 00.0
comp=N,400nm,19.6s
CLL Lm MLR 12 02 00.0
comp=E,100nm,18.5s
CLL Lm MLR 12 02 00.0
comp=Z,500nm,19.2s
MMB Musomiste 143.99 314 P PKPab 10 50 47.3 -0.4
NVR Nevrokopi 144.00 313 P **PKPab** 10 50 46.0 -1.7
KRUC Moravsky 144.09 329 *e*PKP **PKPab** 10 50 47.5 -0.2
MODS Modra-Piesok 144.12 328 *e*PKiKP **PKPdf** 10 50 49.8 -0.5
MODS Modra-Piesok 144.12 328 *e*PKP **PKPdf** 10 50 49.8 -0.5
KOKK Kokkinochori, 144.12 312 P **PKPab** 10 50 46.0 -2.1
EBL Broad Law 144.23 352 *e*P **PKPab** 10 50 48.1 +0.1
CSKK Cskako 144.26 326 PKP **PKPdf** 10 50 50.8 +0.3
PRU Pruhonice 144.30 332 *e*PKiKP PKPbc 10 50 48.9 +0.1
PRU Pruhonice 144.30 332 *e*PKP PKPbc 10 50 48.9 +0.1
KKB Krupnik 144.30 314 P **PKPab** 10 50 48.8 -0.2
PGBU Glenifferbraes 144.36 354 *e*P **PKPab** 10 50 47.7 -0.8
TREC Trest 144.36 330 *e*PKHKP PKPpre 10 50 45.0
TREC Trest 144.36 330 *e*PKP **PKPab** 10 50 45.0 -3.8
BOVS Bovan 144.36 318⇑P **PKPab** 10 50 48.5 -0.5
EKA Eskdalemuir Ar 144.68 352 PKP **PKPab** 10 50 49.7 0.0
comp=Z,13nm,0.7s,baz=19,slow=1.7,SNR=8.6
ESK Eskdalemuir 144.70 352 **PKPab** 10 50 49.1 -0.7

ESK	Eskdalemuir	144.70	352	PKIKP	PKPab	10 50 49.1	-0.7
FRGS	Fruska Gora	144.70	321	⇑P	PKPab	10 50 50.1	-0.1
FRGS	Fruska Gora	144.70	321	⇑*iP*	PKPab	10 50 50.1	-0.1
EGYH	Egyhazaskeszo	144.71	326	PKP	PKiKP	10 50 53.2	-1.9
MORH	Mrgy, Hungar	144.75	324	⇑P	PKPbc	10 50 50.8	+0.4
MORH	Mrgy, Hungar	144.75	324	⇑*iP*	PKPab	10 50 50.2	-0.1
MORH	Mrgy, Hungar	144.75	324	PKP	PKPbc	10 50 50.6	+0.3
MPLH	Magyarpolny	144.76	326	PKP	PKPdf	10 50 50.9	-0.5
EDMD	Edmundbyers	145.01	351	*e*P	PKPbc	10 50 50.2	-0.7
NEWG	New Galloway	145.01	353	*e*P	PKPbc	10 50 50.0	-0.9
NKC	Novy Kostel	145.01	334	*e*PKIKP	PKPdf	10 50 51.6	-0.2
NKC	Novy Kostel	145.01	334	*e*PKP	PKPdf	10 50 51.6	-0.2
RONA	Rosalia, Austr	145.06	327	*i* P	PKPdf	10 50 52.3	+0.4
	comp=Z,53nm,1.0s,SNR=18						
CONA	Conrad Observa	145.12	328	*i* P	PKPdf	10 50 52.8	+0.7
	comp=Z,99nm,1.6s,SNR=26						
GRG	Griva	145.16	313	P	PKPbc	10 50 50.2	-1.7
DIVS	Divibare	145.18	320	⇑*iP*	PKPbc	10 50 51.4	-0.6
TEKS	Tekeris	145.21	321	*e*P	PKPbc	10 50 51.8	-0.2
GDLE	Glaisdale, N Y	145.22	350	*e*P	PKPbc	10 50 51.3	-0.4
CKRC	Cesky Krumlov	145.24	330	*e*PKP	PKPdf	10 50 52.4	+0.2
CKRC				*ex*	x	10 50 58.7	
PTL	Penteli	145.26	308	P	PKPbc	10 50 47.5	-4.9
GAL1	Galloway	145.31	354	*e*P	PKPbc	10 50 51.6	-0.2
IDI	Anoyia	145.33	303	⇑P	PKPab	10 50 53.0	+0.1
IDI	Anoyia	145.33	303		PKPbc	10 50 51.7	-1.0
ATHU	Athens Univers	145.35	308	P	PKPbc	10 50 50.7	-1.9
KHC	Kasperske Hory	145.35	331	*e*PKIKP	PKPbc	10 50 51.9	-0.4
KHC	Kasperske Hory	145.35	331	*e*PKP	PKPbc	10 50 51.9	-0.4
KHC				*ex*	x	10 50 59.3	
KESW	Keswick, Cumbr	145.40	352	*e*P	PKPbc	10 50 51.9	-0.3
GERES	GERESS Array B	145.50	331	PKPbc	PKPab	10 50 53.0	-0.1
	comp=Z,8.4nm,0.7s,baz=44,slow=4.2,SNR=61						
BEHE	Becsehely	145.61	325	⇑*iP*	PKPbc	10 50 53.2	+0.1
SJES	Sjenica	145.64	318	⇑*iP*	PKPbc	10 50 53.4	-0.1
BBLS	Lazići	145.66	320	⇑*iP*	PKPbc	10 50 53.5	0.0
ARSA	Arzberg	145.75	327	*i* P	PKPab	10 50 54.7	+0.7
	comp=Z,41nm,1.2s,SNR=11						
HPK	Haverah Park	145.80	350	*e*P	PKPbc	10 50 53.3	-0.2
RUDO	Rudo	145.82	319	⇑*iP*	PKPbc	10 50 53.8	-0.1
KZN	Kozani	145.88	313	P	PKPdf	10 50 50.5	-3.1
IOMK	Kirk Michael	145.89	353	*e*P	PKPdf	10 50 52.8	-0.3
KOGS	Kog	145.90	326	*e*PKPbc	PKPbc	10 50 54.0	-0.1
FNA	Florina	145.93	314	P	PKPdf	10 50 53.5	-0.2
MOA	Molln	145.95	329	*i* P	PKPab	10 50 55.0	+0.3
	comp=Z,65nm,1.5s,SNR=21						
WIM	Isle of Man	146.02	354	*e*P	PKPbc	10 50 54.0	-0.2
RODP	Rodopos	146.14	304	P	PKPdf	10 50 53.5	-0.6
LBWR	Ladybower, Pea	146.35	350	*e*P	PKPbc	10 50 54.9	-0.3
BIOA	Bad Ischl, Aus	146.36	330	*e*P	PKPbc	10 50 55.1	-0.4
	comp=Z,6.0nm,0.5s						
SOKA	Soboth	146.38	327	*e*P	PKPbc	10 50 55.9	+0.3
	comp=Z,9.5nm,0.8s						
BLY	Banja Luka	146.46	323	⇑*iP*	PKPbc	10 50 55.9	+0.1
ANX	Ano Chora	146.48	310	P	PKPdf	10 50 54.8	+0.1
PDG	Podgorica	146.52	318	⇑P	PKPbc	10 50 55.6	-0.4
PDG	Podgorica	146.52	318		PKPbc	10 50 55.9	-0.2
PDG	Podgorica	146.52	318	*e*P	PKPbc	10 50 55.8	-0.2
TIR	Tirane	146.68	316	⇑P	PKPbc	10 50 57.0	+0.5
TIR	Tirane	146.68	316	⇑PKP2	PKPbc	10 50 57.0	+0.5
DRME	Dracevica, Mon	146.69	317	*e*P	PKPdf	10 50 55.6	+0.8
WME	Myndd Eilian	146.72	353	*e*P	PKPbc	10 50 55.9	-0.3
BRY	Bratogost	146.72	319	*e*P	PKPbc	10 50 56.9	+0.1
CRES	Cresnjev	146.73	326	⇑*iP*	PKPbc	10 50 56.3	-0.2
STNC	Stoke	146.73	351	*e*P	PKPbc	10 50 56.5	+0.2
WPS	Cemaes, Angles	146.73	353	*e*P	PKPbc	10 50 55.5	-0.7
OBKA	Obir	146.74	327	*e*P	PKPbc	10 50 57.2	+0.5
	comp=Z,20nm,1.4s						
WLF1	Llynfaes	146.83	353	*e*P	PKPbc	10 50 56.3	-0.2
YRC	Rhoscolyn	146.89	353	*e*P	PKPbc	10 50 56.2	-0.5
CWF	Charnwood Fore	146.92	349	*e*P	PKPbc	10 50 56.5	-0.3
KBA	Koelnbreinsper	146.94	329	*i* P	PKPbc	10 50 57.0	-0.3
	comp=Z,15nm,1.0s,SNR=6.7						
YLL	Llanberis	146.95	353	*e*P	PKPbc	10 50 56.5	-0.4
HCY	Herceg Novi	146.99	318	*e*P	PKPbc	10 50 57.3	-0.1
ITM	Ithomi	147.01	307	P	PKPdf	10 50 55.0	-0.6
BTNL	Ternell	147.06	340	*d*PKPdf	PKPbc	10 50 57.2	-0.1
LJU	Ljubljana	147.07	327	*e*P	PKPdf	10 50 55.6	+0.2
LJU	Ljubljana	147.07	327	*i* PKPbc	PKPbc	10 50 57.7	+0.3
DSB	Dublin	147.07	355	PKPdf	PKPbc	10 50 56.8	-0.4
FOEL	Foel Wylfa	147.07	351	*e*P	PKPbc	10 50 57.1	-0.1
MEM	Membach	147.08	340	*d*PKPdf	PKPbc	10 50 57.4	+0.1
MYKA	Terra Mystica	147.11	328	*e*P	PKPbc	10 50 57.3	-0.4
	comp=Z,14nm,0.7s						
CRNS	Crni Vrh	147.18	327	*i* PKPbc	PKPbc	10 50 57.6	-0.2
IGT	Igoumenitsa	147.21	312	P	PKPdf	10 50 55.0	-0.8
BSTI	Sart Tilman	147.24	341	*d*PKPdf	PKPbc	10 50 58.4	+0.6
BHOU	Houvegnez	147.30	340	*d*PKPdf	PKPbc	10 50 58.7	+0.7
CEY	Cerknica	147.32	326	*e*P	PKPbc	10 50 57.9	-0.3
HLM1	Long Mynd	147.39	351	*e*P	PKPbc	10 50 57.6	-0.6
BCLA	Clavier	147.47	341	*d*PKPdf	PKPbc	10 50 58.4	0.0
ABTA	Abfaltersbach	147.58	329	*i* P	PKPbc	10 50 57.9	-1.1
	comp=Z,8.6nm,0.7s,SNR=7.8						
WATA	Walderalm	147.58	331	*i* P	PKPbc	10 50 58.9	-0.1
	comp=Z,9.3nm,0.7s,SNR=5.4						
WTTA	Wattenberg	147.61	331	*i* P	PKPbc	10 50 59.4	+0.3
	comp=Z,22nm,0.9s,SNR=9						
SKDS	Skadanscina	147.67	326	*e*P	PKPbc	10 50 58.4	-0.8
SNF	Seneffe	147.69	342	*d*PKPdf	PKPbc	10 50 59.2	+0.2
SNF				*d*PKP	PKPab	10 51 01.4	+0.1
RCHB	Rochefort	147.72	341	*d*PKPdf	PKPbc	10 50 59.1	0.0
BMRD	Maredsous	147.73	341	*d*PKPdf	PKPbc	10 50 59.2	+0.1
MOTA	Moosalm	147.79	332	*i* P	PKPbc	10 50 59.6	0.0
	comp=Z,15nm,0.6s,SNR=9.0						
RETA	Reutte	147.83	332	*i* P	PKPbc	10 50 59.5	-0.2
	comp=Z,33nm,1.4s,SNR=7.0						
SQTA	Sankt Quirin	147.83	331	*i* P	PKPbc	10 50 59.8	+0.1
	comp=Z,37nm,0.7s,SNR=13						
WLF	Walferdange	147.85	339	PKPbc	PKiKP	10 51 00.8	-0.6
WLF	Walferdange	147.85	339	PKP2	PKiKP	10 51 00.8	-0.6
WLF	Walferdange	147.85	339	*d*PKPdf	PKiKP	10 51 00.6	-0.8
MCH1	Michaelchurch	147.91	351	*e*P	PKPbc	10 50 59.1	-0.4
DOU	Dourbes	147.97	341	*d*PKPdf	PKPbc	10 51 00.1	+0.3
MONM	Monmouth	148.03	351	*e*P	PKPbc	10 50 59.7	-0.2
BFO	Black Forest	148.18	335		PKPbc	10 51 00.6	+0.1
BFO	Black Forest	148.18	335	PKP2	PKPbc	10 51 00.6	+0.1
SWN1	Swindon	148.19	349	*e*P	PKPbc	10 51 00.4	+0.1
RSBS	Rosebush, Pemb	148.19	353	*e*P	PKPbc	10 50 59.4	-1.0
FETA	Feichten	148.20	332	*i* P	PKPbc	10 51 01.0	+0.3
	comp=Z,15nm,0.7s,SNR=14						
DAVA	Damuels	148.37	333	*i* P	PKPbc	10 51 01.2	+0.1
	comp=Z,30nm,0.7s,SNR=9.7						
DAVOX	Davos/Dischmat	148.76	332	PKPbc	PKPbc	10 51 02.6	+0.4
	comp=Z,38nm,0.6s,baz=202,slow=4.2,SNR=3.6						
SGRT	San Giovanni R	149.07	319		PKPbc	10 51 02.7	-0.3
MATE	Matera	149.09	317	⇑P	PKPbc	10 51 02.1	-0.9
TIP	Timpagrande	149.82	314	⇑P	PKPbc	10 51 05.0	0.0
PGAV	Gavieira, Arco	158.43	355	*e*LR	LR	11 58 55.4	
	comp=Z,531nm,18.0s						
PVRL	Vila Real	159.06	353	*e*PKPab	PKPab	10 51 50.2	+0.8
MVO	Moncorvo	159.08	352	*e*PKPab	PKPab	10 51 50.1	+0.5
MVO	Moncorvo	159.08	352	*e*LR	LR	12 00 57.3	
	comp=Z,556nm,22.0s						
PVIS	Viseu	159.63	354	*e*PKPab	PKPab	10 51 53.3	+1.4
MTE	Manteigas	159.90	353	*e*LR	LR	12 01 19.2	
	comp=Z,474nm,20.0s						
ESDC	Sonseca Array	159.94	344	PKPab	PKPab	10 51 53.2	-0.1
	comp=Z,6.6nm,0.8s,baz=12,slow=3.6,SNR=19						
PMRV	Marv??o	160.84	352	*e*LR	LR	11 54 32.7	
	comp=Z,436nm,18.0s						
PNCL	Nicolau / Gran	162.27	354	*e*PKPab	PKPab	10 52 04.6	+1.2
PBEJ	Beja	162.28	352	*e*PKPab	PKPab	10 52 04.7	+1.2
MESJ	Messejana	162.51	353	*e*PKPdf	PKPdf	10 51 19.5	+2.8
MESJ				IAMs_20	IAMs_20	12 04 40.9	
	comp=Z,829nm,15.9s						
MESJ	Messejana	162.51	353	*e*PKIKP	PKPdf	10 51 19.4	+2.8
PVAQ	Vaqueiros	162.88	352	*e*LR	LR	11 56 11.1	
	comp=Z,674nm,20.0s						
LIC	Lamto	164.79	203	⇑*iP*	PKPab	10 52 16.7	+1.6
	comp=Z,54nm,1.6s						
KIC	Kosan Boka	164.81	204	⇑*iP*	PKPab	10 52 14.5	-0.7
	comp=Z,16nm,0.9s						
DBIC	Dimbokro	165.14	204	PKPab	PKPab	10 52 16.9	+0.2
	comp=Z,6.5nm,0.9s,baz=195,slow=6.2,SNR=3.4						
TIC	Toumodi	165.18	203	⇑*iP*	PKPab	10 52 16.8	0.0
	comp=Z,2.6nm,0.2s						
TORD	Torodi Ar. Bea	165.99	241	PKP	PKPdf	10 51 20.0	-0.4
	comp=Z,1.2nm,0.7s,baz=263,slow=1.3,SNR=3.8						
TORD				PKPab	PKPab	10 52 20.0	-0.6
	comp=Z,2.8nm,1.0s,baz=97,slow=4.2,SNR=5.1						
TORD	Torodi Ar. Bea	165.99	241		PKPdf	10 51 20.1	-0.3
MDT	Midelt	166.48	337	PKPab	PKPab	10 52 22.3	+0.1
	comp=Z,3.1nm,0.7s,baz=100,slow=4.0,SNR=6.3						

IDC 16 10:41:55.0±2.4, 1°74N×127°48E, h0km, mb3.2/3, mbtmp3.2/3 Error ellipse: s-maj=186.4km s-min=27.2km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.57	163	P	P	10 46 56.4	-0.8
	0.4nm,0.7s,baz=342,slow=11,SNR=5.1						
	0.4nm,0.7s						
ASAR	Alice Springs	26.01	166	P	P	10 47 30.6	+0.7
	0.2nm,0.3s,baz=346,slow=12,SNR=4.6						
	0.2nm,0.3s						
MKAR	Makanchi Array	59.61	326	P	P	10 52 00.8	-0.1
	0.2nm,0.3s,baz=119,slow=7.5,SNR=4.7						
	0.2nm,0.3s						

*NEIC **16** 10:48:38.4±1.2, 5°.37S±0°.08×147°.52E±0°.06, h176km±12km, mb4.3/9, Error ellipse: s-maj=11.6km s-min=9.0km az=194.0*
*IDC **16** 10:48:40.8±5.7, 5°.51S×147°.43E, h194km±61km, mb3.2/2, mbtmp3.8/4, Error ellipse: s-maj=103.8km s-min=28.6km az=131.0*

ISC 16 10:48:37.3±0.9, 5°.36S±0°.07×147°.7E±0°.1, h170km, n17, σ1°92/18, mb3.9/3, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANU	Manus Island	3.31	354	Pn	Pn	10 49 32.5	+3.2
PMG	Port Moresby	4.06	187	P	Pn	10 49 42.5	+3.6
	11nm,0.7s,baz=303,slow=11,SNR=2.3						
PMG				S	Sn	10 50 28.2	+1.2
	58nm,0.7s,baz=200,slow=21,SNR=13						
RABL	Rabaul	4.61	76	Pn	Pn	10 49 46.5	+0.6
COEN	Coen	9.63	207	Pn	Pn	10 50 51.8	-0.4
MTN	Manton Dam	17.95	244	P	P	10 52 32.9	-1.8
MTN				IAmb	IAmb	10 52 33.6	
	comp=Z,12nm,0.8s						
WB0	Warramunga Arr	19.30	221	P	P	10 52 48.2	-1.2
WR0	Warramunga Arr	19.35	220	P	P	10 52 48.6	-1.3
WR0				IAmb	IAmb	10 52 49.3	
	comp=Z,7.9nm,0.5s						
WRAB	Tennant Creek	19.45	221	P	P	10 52 49.3	-1.7
WRAB				IAmb	IAmb	10 52 53.7	
	comp=Z,13nm,1.1s						
WB2	Warramunga Arr	19.46	221	P	P	10 52 49.5	-1.6
WB2				IAmb	IAmb	10 52 55.0	
	comp=Z,8.5nm,0.7s						
WRA	Warramunga Arr	19.46	221	P	P	10 52 49.8	-1.4
	comp=Z,3.4nm,0.4s,baz=46,slow=11,SNR=90						
WRA	Warramunga Arr	19.46	221	P	P	10 52 49.0	-2.1
KNRA	Kununurra	21.22	240	P	P	10 53 07.6	-2.3
AS31	Alice Springs	22.53	215	P	P	10 53 22.5	-0.6
AS31				IAmb	IAmb	10 53 31.9	
	comp=Z,3.4nm,0.3s						
ASAR	Alice Springs	22.53	215	P	P	10 53 22.4	-0.7
	comp=Z,3.1nm,0.8s,baz=46,slow=7.8,SNR=27						
	comp=Z,3.1nm,0.8s						
FORT	Forrest	31.31	214	P	P	10 54 40.1	-1.5
ILAR	Eielson Array	84.62	23	P	P	11 00 53.0	+1.7
	comp=Z,0.3nm,0.7s,baz=256,slow=4.6,SNR=5.3						
	comp=Z,0.3nm,0.7s						
TORD	Torodi Ar. Bea	145.59	285	PKPbc	PKPdf	11 07 56.0	-0.4
	comp=Z,0.6nm,0.5s,baz=69,slow=3.2,SNR=6.1						

*ISU **16** 10:51:11.7, 41°.26N×71°.96E, h9km*
*KRNET **16** 10:51:12.6±0.1, 41°.14N×71°.90E, h24km, mb2.7*
*SOME **16** 10:51:17.7, 41°.32N×71°.87E, h20km*

ISC 16 10:51:12.8±1.1, 41°.15N±0°.02×71°.94E±0°.03, h9km±10km, n18, σ1°68/33, 13C-5D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NAM	Namangan	0.26	234	P	Pg	10 51 17.9	-0.2
NAM				S	Sg	10 51 23.4	+1.8
ANR	Andizhan	0.50	141	P	Pg	10 51 22.4	-0.2
ANR				S	Sb	10 51 31.4	+0.1
ARK	Arkit	0.65	1	⇓*iP*	Pg	10 51 25.2	-0.2
	baz=4.0						
ARK				⇓*iS*	Sb	10 51 34.7	-1.0
	baz=4.0						
TRKS	Terek-Say	0.71	303	⇑*eP*	Pg	10 51 24.9	-1.7
	baz=1.0						
TRKS				⇑*iS*	Sg	10 51 33.4	-2.6
	baz=1.0						
FRG	Fergana	0.78	189	S	Sb	10 51 39.1	-0.2
OHH	Osh	0.89	134	⇑*iP*	Pb	10 51 29.8	-0.7
	baz=32						
OHH				⇑*iS*	Sb	10 51 42.0	-0.5
	baz=32						
CHMI	Chimion	0.93	200	S	Sn	10 51 47.4	+1.7
BTK	Batken	1.38	219	⇑*iP*	Pn	10 51 37.7	-0.7
	baz=18						
BTK				⇑*iS*	Sn	10 51 55.8	-1.1
	baz=18						
CHMG	Chimgan	1.51	286	P	Pg	10 51 43.8	+2.0
CHMG				S	Sg	10 52 04.6	+3.3
DZA	Taraz	1.80	346	*e*P	Pg	10 51 47.3	-0.1
	93nm,0.2s						
DZA				*e*S	Sb	10 52 08.9	+0.2
	110nm,0.3s						
MRKS	Merke	1.86	31	*e*P	Pg	10 51 51.8	+3.3
	4.7nm,0.2s						
MRKS				*e*S	Sg	10 52 16.1	+3.5
	18nm,0.2s						
ARLS	Aral	1.93	67	⇑*eP*	Pb	10 51 47.2	-1.0
	baz=68						
ARLS				⇑*eS*	Sb	10 52 12.0	-0.4
	baz=68						
UCH	Uchtor	2.21	60	⇓*iP*	Pb	10 51 51.3	-1.9
	baz=60						
UCH				⇓*iS*	Sb	10 52 19.1	-1.7
	baz=60						
KK31	Karatay Array	2.23	332	⇓Pn	Pb	10 51 53.1	-0.1
	1.1nm,0.3s,baz=137,slow=14,SNR=18						
KK31				⇑Sn	Sg	10 52 22.4	-1.9
	5.8nm,0.5s,baz=137,slow=25,SNR=8.0						
KKAR	Karatay Array	2.23	332	⇑*eP*	Pn	10 51 50.8	+0.9
	baz=33						
KKAR				⇑*eS*	Sb	10 52 18.6	-2.3
	baz=33						
BRLS	Borolday	2.45	321	*eP*	Pb	10 51 57.8	+0.8
	1.1nm,0.2s						
BRLS				*eS*	Sb	10 52 27.1	-0.3
	9.1nm,0.3s						
SGDS	Sogindy	3.05	40	*eP*	Pg	10 52 09.3	-1.9
	0.8nm,0.1s						
SGDS				*eS*	Sb	10 52 46.3	+1.7
	2.5nm,0.3s						
TKM2	Tokmak 2	3.25	56	⇑Pg	Pg	10 52 14.9	-0.2
	0.7nm,0.5s						
TKM2				⇑Lg	Lg	10 52 52.0	
	3.2nm,0.6s						

*DDA **16** 10:52:11.7±0.0, 41°.17N×28°.36E, h7km±2km, ML1.3*

ISK 16 10:52:07.4, 41°.26N×28°.73E, h0km, ML1.9/13, Suspected Mining explosion., Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BGKT	Bogazkoy	0.09	157	PG	Pg	10 52 09.8	+0.8
CTKS	Kestanelik-??a	0.17	262	PG	Pg	10 52 10.7	+0.1
CTKS				SG	Sg	10 52 15.4	+2.6
KLYT	Kilyos	0.24	92	PG	Pg	10 52 12.5	+0.6
ELBA	Catalca	0.25	243	P	Pb	10 52 13.6	-1.3
ISK	Istanbul-Kandi	0.32	128	PG	Pg	10 52 13.9	+0.4
ISK				SG	Sb	10 52 19.9	-1.7
KAVV	Kandilli-Istan	0.32	128	PG	Pb	10 52 15.2	-0.8
SLVT	Silivri	0.39	266	PG	Pg	10 52 15.9	+1.0
CTYL	Yalikoy Yolu	0.39	303	PG	Pb	10 52 16.6	-0.7
SILT	Sile	0.70	99	PG	Pb	10 52 22.2	-0.2
ARMT	Armutlu	0.70	172	PG	Pg	10 52 21.2	+0.4
VIZE	Kirklareli, Vi	0.74	296	P	Pb	10 52 22.6	-0.6
VIZE				*i* AML	AML	10 52 35.0	
	comp=N,9.1nm,0.3s						
VIZE				*i* AML	AML	10 52 41.0	
	comp=E,20nm,0.9s						
YLV	Yalova	0.85	145	PG	Pb	10 52 24.4	-0.6
ADVT	Abdulvahap	1.13	137	PN	Pb	10 52 29.8	+0.1
ARMN	Kirklareli, Me	1.15	302	P	Pn	10 52 30.9	+0.2
ARMN				S	Sg	10 52 44.8	+0.6
ARMN				*i* AML	AML	10 52 48.0	
	comp=E,9.0nm,1.1s						
ARMN				*i* AML	AML	10 52 50.0	
	comp=N,13nm,0.6s						
GZKV	Gazikoy-Tekird	1.18	245	PN	Pb	10 52 30.3	-0.3
MAR3	Marsite Statio	1.20	245	PN	Pb	10 52 30.9	-0.1
RKY	Sarkoy-Tekirda	1.31	245	PN	Pn	10 52 33.1	+0.2
KIRK	Kırklareli	1.33	294	P	Pn	10 52 33.8	+0.5
KIRK				S	Sg	10 52 49.3	-0.9
KIRK				*i* AML	AML	10 52 54.0	
	comp=E,8.3nm,0.8s						
KIRK				*i* AML	AML	10 53 04.0	
	comp=N,6.9nm,0.6s						

MAN 16 10:57:51.4, 12°.97N×121°.28E, h33km, mb3.9, ML2.7, MS2.3, Mindoro

*JMA **16** 11:01:02.2±0.4, 44°N±2°×14°8E±°, h93km, MV3.8/26, SE OFF EROROFU*
*SKHL **16** 11:01:02.4±0.2, 44°.40N×147°.80E, h91km±8km, mb4.8/4, msha5.7/4*

ISC 16 11:00:59.6±2.8, 44°.3N±0°.1×147°.9E±0°.1, h106km±17km, n18, σ1°11/33, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHO	Shikotan	0.85	244	*i* P	Pn	11 01 20.2	+1.3
SHO				AMB	AMB	11 01 20.7	
	260nm,0.2s						
SHO				*i* S	Sn	11 01 33.3	0.0
SHO				A	A	11 01 34.3	
	2μm,0.3s						
SHO				A	A	11 01 34.3	
	2μm,0.3s						
KUR	Kuril'sk	0.98	360	*i* P	Pn	11 01 20.7	+0.5
KUR				AMB	AMB	11 01 21.2	
	260nm,0.4s						
KUR				*e*S	Sn	11 01 34.6	-1.2
KUR				A	A	11 01 36.0	
	300nm,0.3s						
KUR				A	A	11 01 36.0	
	660nm,0.3s						
YUK	Yuzh-Kuril'sk	1.47	262	*i* P	Pn	11 01 26.4	+0.7
YUK				AMB	AMB	11 01 28.5	
	160nm,0.2s						
YUK				*i* S	Sn	11 01 44.3	-1.2
YUK				A	A	11 01 48.4	
	930nm,0.3s						
YUK				A	A	11 01 48.4	
	850nm,0.3s						
GLVR	Golovnino	1.78	254	*i* P	Pn	11 01 30.5	+1.0
GLVR				AMB	AMB	11 01 30.9	
	120nm,0.1s						
GLVR				*i* S	Sn	11 01 51.5	-0.8
GLVR				A	A	11 01 52.5	
	1μm,0.3s						
GLVR				A	A	11 01 52.5	
	700nm,0.3s						
NEM2	Nemuro 2	1.78	241	P	Pn	11 01 30.4	+0.8
NEM2				*e*S	Sn	11 01 51.1	-1.3
NMR	Nemuro--Hokkai	1.79	241	*i* P	Pn	11 01 30.3	+0.6
NMR				*i* S	Sn	11 01 51.4	-1.2
JRA	Rausu	2.01	262	P	Pn	11 01 33.1	+0.6
JRA				*e*S	Sn	11 01 57.1	-0.5
JNSB	Nemuroshibetsu	2.13	258	*e*P	Pn	11 01 35.1	+1.1
JNSB				*e*S	Sn	11 02 00.5	+0.2
JKHN	Kushirohamanak	2.29	240	*e*P	Pn	11 01 37.0	+0.9
JKHN				*e*S	Sn	11 02 02.7	-1.4
JNK	Nakash	2.38	255	P	Pn	11 01 38.2	+0.9
JNK				*e*S	Sn	11 02 05.9	-0.3
AKK	Akkeshi	2.52	242	*e*P	Pn	11 01 39.8	+0.6
AKK				*e*S	Sn	11 02 07.9	-1.7
JAK	Akkeshi	2.63	243	*e*P	Pn	11 01 41.2	+0.7
JAK				*e*S	Sn	11 02 10.4	-1.6
JTKR	Abashiri--Toko	2.87	266	P	Pn	11 01 44.0	+0.3
JAR	Ashorobuto	3.12	254	*e*P	Pn	11 01 48.7	+1.6
JAR				*e*S	Sn	11 02 24.4	+0.7
JOB	Onbets	3.23	247	*e*P	Pn	11 01 50.1	+1.5
JOB				*e*S	Sn	11 02 25.3	-1.0
JCH	Churui	3.67	245	*e*P	Pn	11 01 55.3	+0.9
JCH				*e*S	Sn	11 02 34.6	-2.2
JKK2	Kamakawa 2	3.72	266	*e*P	Pn	11 01 56.0	+1.0
JNBK	Urakawa-nobuka	4.23	244	*e*P	Pn	11 02 02.1	+0.2

MAN 16 11:02:44.0, 17°.23N×120°.36E, h19km, mb4.6, ML3.4, MS3.3, 3C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAMP	Sagada Mountai	0.53	106	⇑*eP*	Pn	11 02 55.9	+0.4
SAMP				*e*S		11 03 05.6	
SIPP	Brgy, Tapao	0.69

comp=Z,219nm,18.6s,baz=56,slow=34
comp=Z,3.4nm,0.9s

WRA	**Warramunga Arr**	**32.48**	**265**	P	**P**	**11**	**14**	**02.5 -0.2**
AS31	**Alice Springs**	**32.62**	**258**	P	**P**	**11**	**14**	**04.2 +0.3**
AS31				IAmb	IAmb	11	14	16.9

comp=Z,3.0nm,0.8s

ASAR	**Alice Springs**	**32.62**	**258**	P	**P**	**11**	**14**	**04.5 +0.6**

comp=Z,9.5nm,0.8s,baz=80,slow=9.2,SNR=54

ASAR				PcP	**PcP**	**11**	**16**	**50.0 +0.3**

comp=Z,1.0nm,0.8s,baz=100,slow=3.6,SNR=4.3

ASAR				LR	LR	11	28	20.9

comp=Z,438nm,19.1s,baz=17,slow=38
comp=Z,9.5nm,0.8s

KNRA	**Kununurra**	**38.46**	**270**	P	**P**	**11**	**14**	**54.5 +0.5**
SIJI	**Sorong**	**41.67**	**293**	LR	LR	11	31	32.7

comp=Z,161nm,21.3s,baz=56,slow=34

VNDA	**Vanda**	**57.23**	**182**	P	**P**	**11**	**17**	**19.2 +0.7**

comp=Z,0.6nm,0.7s,baz=29,slow=4.8,SNR=3.6

VNDA				LR	LR	11	40	36.9

comp=Z,143nm,18.1s,baz=336,slow=34
comp=Z,0.6nm,0.7s

KSM	**Kuching**	**61.41**	**283**	P	**P**	**11**	**17**	**48.7 +0.3**
MJAR	**Matsushiro Arr**	**63.70**	**333**	P	**P**	**11**	**18**	**03.4 +0.1**

comp=Z,1.2nm,0.5s,baz=153,slow=8.1,SNR=5.3
comp=Z,1.2nm,0.5s

QSPA	**South Pole Qui**	**69.62**	**180**	P	**P**	**11**	**18**	**41.0 +0.2**
QSPA				IAmb	IAmb	11	18	57.5

comp=Z,14nm,1.4s

USRK	**Ussuriysk Ar.**	**72.69**	**333**	P	**P**	**11**	**19**	**00.8 +1.4**

comp=Z,5.9nm,0.9s,baz=144,slow=2.1,SNR=7.0
comp=Z,5.9nm,0.9s

CMAR	**Chiang Mai Arr**	**78.77**	**295**	P	**P**	**11**	**19**	**37.0 +2.1**

comp=Z,1.3nm,0.4s,baz=133,slow=4.2,SNR=11
comp=Z,1.3nm,0.4s

BELA	**Belgrano 2**	**80.93**	**175**	P	**P**	**11**	**19**	**45.7 +0.2**
BELA				IAmb	IAmb	11	19	46.8

comp=Z,7.7nm,1.0s

TROLL	**Troll, Antarti**	**87.33**	**184**	P	**P**	**11**	**20**	**18.8 +0.5**
SNAA	**Sanae**	**87.96**	**183**	P	**P**	**11**	**20**	**20.7 -0.6**
SONM	**Songino Array**	**88.03**	**323**	P	**P**	**11**	**20**	**22.6 +0.7**

comp=Z,1.1nm,0.8s,baz=153,slow=7.6,SNR=5.3
comp=Z,1.1nm,0.8s

VNA3	**Neumayer Olymp**	**88.56**	**180**	P	**P**	**11**	**20**	**24.1 0.0**
VNA1	**Neumayer--Stat**	**89.13**	**181**	P	**P**	**11**	**20**	**27.1 +0.4**
NVAR	**Mina Array Bea**	**89.78**	**49**	P	**P**	**11**	**20**	**31.1 +0.6**

comp=Z,1.3nm,0.9s,baz=226,slow=6.8,SNR=9.1
comp=Z,1.3nm,0.9s

GRAC	**Grapevine Rang**	**89.81**	**50**	P	**P**	**11**	**20**	**31.5 +0.9**
PINE	**Pine Mountain**	**90.46**	**43**	P	**P**	**11**	**20**	**34.8 +1.2**
WVOR	**Wild Horse Val**	**91.33**	**45**	IAmb	IAmb	11	20	39.1

comp=Z,3.8nm,1.1s

ILAR	**Eielson Array**	**91.44**	**17**	P	**P**	**11**	**20**	**36.5 -0.9**

comp=Z,0.6nm,0.9s,baz=232,slow=5.1,SNR=8.8
comp=Z,0.6nm,0.9s

J08A	**Circle Bar Ran**	**91.86**	**44**	IAmb	IAmb	11	20	41.1

comp=Z,3.6nm,1.1s

ARCES	**ARCESS Array B**	**126.16**	**345**	PKP	**PKiKP**	**11**	**26**	**33.1 -0.7**

comp=Z,0.8nm,0.5s,baz=70,slow=1.8,SNR=8.9

FINES	**FINESS Array B**	**131.60**	**337**	PKP	**PKiKP**	**11**	**26**	**43.7 -1.1**

comp=Z,1.0nm,0.6s,baz=117,slow=0.9,SNR=4.2

RONA	**Rosalia, Austr**	**144.97**	**327**	*eP*	**PKiKP**	**11**	**27**	**09.3 -3.3**

comp=Z,4.8nm,0.9s

CONA	**Conrad Observa**	**145.03**	**328**	*eP*	**PKiKP**	**11**	**27**	**09.8 -3.1**

comp=Z,1.9nm,1.5s

GERES	**GERESS Array B**	**145.42**	**331**	PKPbc	**PKPab**	**11**	**27**	**09.9 +0.1**

comp=Z,1.7nm,0.7s,baz=327,slow=2.2,SNR=11

GERES	**GERESS Array B**	**145.42**	**331**		**PKiKP**	**11**	**27**	**10.1 -3.5**
ARSA	**Arzberg**	**145.66**	**327**	*eP*	**PKiKP**	**11**	**27**	**11.8 -2.2**

comp=Z,5.4nm,1.1s

KBA	**Koelnbreinsper**	**146.85**	**329**	*eP*	**PKiKP**	**11**	**27**	**14.5 -2.2**

comp=Z,3.6nm,0.7s

MOTA	**Moosalm**	**147.71**	**331**	*eP*	**PKiKP**	**11**	**27**	**16.8 -1.7**

comp=Z,4.4nm,0.7s

SQTA	**Sankt Quirin**	**147.75**	**331**	*eP*	**PKPab**	**11**	**27**	**17.3 -1.6**

comp=Z,6.8nm,0.5s

FETA	**Feichten**	**148.12**	**331**	*eP*	**PKiKP**	**11**	**27**	**18.1 -1.3**

comp=Z,4.1nm,0.6s

MIRAS 16 11:30:54.0±0.0, 56.94N×61.43E, h0km, ML2.5/3, Ural Mountains region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SVE	**Sverdlovsk**	**0.45**	**256**	*eS*		Sg	11 31 08.9	+0.5

baz=256

SVE				*eS*		Sg	11 31 08.9	+0.5

baz=256

SVE				*eS*		Sg	11 31 08.9	+0.5

baz=256

KAUR	**Kamensk Uralsk**	**0.51**	**175**	*eP*		Pg	11 31 03.8	+0.1

24nm,0.2s,baz=175

KAUR				*eP*		Pg	11 31 03.8	+0.1

baz=175

KAUR				*eP*		Pg	11 31 03.8	+0.1

baz=175

KAUR				*eS*		Sg	11 31 10.8	+0.5

baz=175

KAUR				*eS*		Sg	11 31 10.8	+0.5

baz=175

KAUR				*eS*		Sg	11 31 10.8	+0.5

315nm,0.2s,baz=175

KAUR				*i* AML		AML	11 31 12.6	

281nm,1.1s,baz=175

ARU	**Arti**	**1.66**	**253**	*eP*		Pn	11 31 24.6	+0.2

11nm,0.3s,baz=253

ARU				*eP*		Pn	11 31 24.6	+0.2

baz=253

ARU				*eP*		Pn	11 31 24.6	+0.2

baz=253

ARU				*eS*		Sb	11 31 46.8	-0.1

baz=253

ARU				*eS*		Sb	11 31 46.8	-0.1

17nm,0.3s,baz=253

ARU				*eS*		Sb	11 31 46.8	-0.1

baz=253

ARU				*i* AML		AML	11 31 50.4	

66nm,0.7s,baz=253

PR3R	**Kungur**	**2.46**	**284**	*eP*		Pn	11 31 34.9	-0.5

baz=284

PR3R				*eP*		Pn	11 31 34.9	-0.5

baz=284

PR3R				*eP*		Pn	11 31 34.9	-0.5

16nm,0.3s,baz=284

PR3R				*eS*		Sn	11 32 06.4	+0.4

baz=284

PR3R				*eS*		Sn	11 32 06.4	+0.4

24nm,0.4s,baz=284

PR3R				*eS*		Sn	11 32 06.4	+0.4

baz=284

PR3R				*i* AML		AML	11 32 10.2	

45nm,1.2s,baz=284

MAN 16 11:42:59.0, 13.43N×120.53E, h15km, mb3.6, ML2.3, MS1.8, Mindoro

IDC 16 11:44:38.8±2.3, 7.50S×129.50E, h0km, mb3.3/1, mbtmp3.2/3, ML3.2/2, Error ellipse: s-maj=110.9km s-min=33.7km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.23**	**160**		Pn	Pn	11 47 47.9	-0.2

0.2nm,0.3s,baz=338,slow=13,SNR=11

WRA					Sn	Sn	11 50 06.2	-10

0.3nm,0.3s,baz=344,slow=22,SNR=8.1
0.5nm,0.5s

ASAR	**Alice Springs**	**16.62**	**166**		Pn	Pn	11 48 33.5	+0.2

0.1nm,0.3s,baz=344,slow=9.4,SNR=7.5
0.2nm,0.6s

MKAR	**Makanchi Array**	**68.37**	**327**	P	P	P	11 55 42.2	0.0

0.1nm,0.4s,baz=126,slow=7.2,SNR=2.0
0.1nm,0.4s

KRSZO 16 12:06:41.6±1.3, 47.19N×19.22E, h0km, ML1.6/3, Error ellipse: s-maj=18.2km s-min=5.5km az=119.0, Hungary

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PSZ	**Piszkesteto**	**0.86**	**32**		Pg	Pb	12 07 00.1	+0.6

SNR=2.0

PSZ					Lg	Lg	12 07 13.2	
PSZ	**Piszkesteto**	**0.86**	**32**	P	P	Pb	12 07 00.1	+0.6
PSZ					S	Sn	12 07 13.2	-1.3
MORH	**Mrgy, Hungar**	**1.05**	**202**		Pg	Pb	12 07 02.6	+0.1

SNR=2.0

MORH					Lg	Lg	12 07 17.9	
MORH	**Mrgy, Hungar**	**1.05**	**202**	P	P	Pb	12 07 02.6	+0.1
MORH					S	Sn	12 07 17.9	-1.0
MPLH	**Magyarpolny**	**1.14**	**270**	Pn	Pb		12 07 04.5	+0.3

SNR=2.1

MPLH					Sn	Sn	12 07 20.9	-0.3
MPLH	**Magyarpolny**	**1.14**	**270**	P	P	Pb	12 07 04.5	+0.3
MPLH					S	Sn	12 07 20.9	-0.3

IDC 16 12:07:56.5±1.8, 32.76S×179.66E, h0km, mb4.3/3, mbtmp4.3/6, ML4.5/3, MS3.8/15, Error ellipse: s-maj=45.0km s-min=26.8km az=125.0
NEIC 16 12:07:58.1±1.7, 32.92S±0.09×180.0E±0.1, h19km±6km, mb4.4/9, Error ellipse: s-maj=18.0km s-min=12.9km az=102.0
WEL 16 12:07:59.3±0.6, 33°S±6°×18°0W±1°, h33km, M4.4/10, mB4.9/6, ML4.6/12, MLv4.6/10, Mw(mB)4.2/6, Error ellipse: s-maj=0.0km s-min=0.0km az=114.0
ISC 16 12:07:56.1±0.7, 32.85S±0.06×179.85E±0.09, h10km, n60, σ1§84/46, mb4.4/7, MS3.8/13, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.06**	**29**	P	P	**Pn**	**12 08 57.4**	**-0.9**
GLKZ					S	**Sn**	**12 09 46.1**	**+0.3**
RAO	**Raoul Island**	**4.07**	**29**	Pn	Pn	**Pn**	**12 08 58.2**	**-0.2**

32nm,0.3s,baz=256,slow=23,SNR=6.0

RAO					LR	LR	12 10 30.3	

comp=Z,1µm,18.4s,baz=102,slow=38
439nm,0.6s

MXZ	**Matakaoa Point**	**4.87**	**195**	Pn		**Pn**	**12 09 10.4**	**+1.0**
MXZ	**Matakaoa Point**	**4.87**	**195**	P		**Pn**	**12 09 10.0**	**+0.7**
MXZ				S		**Sn**	**12 10 09.1**	**+3.3**
GRZ	**Great Barrier**	**4.96**	**226**	S		**Sn**	**12 10 07.5**	**-0.6**
WMGZ	**Waiomatatini S**	**5.09**	**193**	P		**Pn**	**12 09 12.9**	**+0.4**
WMGZ				S		**Sn**	**12 10 14.4**	**+3.1**
KUZ	**Kuaotunu**	**5.16**	**220**	P		**Pb**	**12 09 22.9**	**-3.5**
HAZ	**Te Kaha**	**5.18**	**198**	P		**Pn**	**12 09 14.8**	**+1.2**
HAZ				S		**Sn**	**12 10 21.1**	**+7.6**
PUZ	**Puketiti**	**5.37**	**194**	P		**Pn**	**12 09 16.7**	**+0.4**
PUZ				S		**Sn**	**12 10 19.3**	**+1.1**
RUGZ	**Raukumara Rang**	**5.40**	**199**	P		**Pn**	**12 09 17.9**	**+1.1**
TWGZ	**Tauwhareparae**	**5.53**	**195**	P		**Pn**	**12 09 18.2**	**-0.3**
OPRZ	**Ohinepanea**	**5.66**	**207**	P		Pn	12 09 25.4	+5.1
OUZ	**Omahuta**	**5.70**	**244**			**Pn**	**12 09 21.9**	**+1.1**
CNGZ	**Carnagh Statio**	**5.78**	**193**	P		**Pn**	**12 09 21.6**	**-0.3**
MWZ	**Matawai**	**5.79**	**198**	P		**Pn**	**12 09 22.0**	**-0.1**
TKGZ	**Te Karaka**	**5.81**	**196**	P		**Pn**	**12 09 19.9**	**-2.5**
URZ	**Urewera**	**5.84**	**202**	Pn		**Pn**	**12 09 23.9**	**+1.2**

2.9nm,0.3s,baz=39,slow=4.0,SNR=22

URZ					Sn	**Sn**	**12 10 29.0**	**-0.7**

baz=80,slow=11
16nm,0.6s

URZ	**Urewera**	**5.84**	**202**			**Pn**	**12 09 24.2**	**+1.5**
URZ	**Urewera**	**5.84**	**202**	P		**Pn**	**12 09 24.1**	**+1.5**
RIGZ	**Rimuhau**	**6.08**	**196**	P		**Pn**	**12 09 26.3**	**+0.2**
BKZ	**Black Stump Fm**	**6.86**	**202**			**Pn**	**12 09 37.1**	**+0.3**
HIZ	**Hauiti**	**6.96**	**214**	Pn		**Pn**	**12 09 39.8**	**+1.7**
BFZ	**Bush Farm**	**8.33**	**199**	Pn		**Pn**	**12 09 53.8**	**-3.2**
RPZ	**Rata Peaks**	**12.85**	**210**	LR		LR	12 15 46.2	

comp=Z,530nm,19.1s,baz=192,slow=37

MSVF	**Nonsavu**	**15.14**	**353**	Pn		**Pn**	**12 11 30.7**	**+0.5**

0.2nm,0.3s,baz=170,slow=9.9,SNR=4.0
5.4nm,0.9s

MSVF	**Nonsavu**	**15.14**	**353**	Pn		**Pn**	**12 11 31.4**	**+1.3**
MSVF				IAmb		IAmb	12 11 38.5	

comp=Z,16nm,0.7s

RAR	**Rarotonga**	**21.50**	**62**	LR		LR	12 19 52.7	

1.104nm,19.4s,baz=278,slow=33

PPT	**Papeete**	**31.43**	**69**	LR		LR	12 26 46.3	

comp=Z,56nm,18.4s,baz=222,slow=36

STKA	**Stephens Creek**	**32.21**	**261**	LR		LR	12 27 19.8	

comp=Z,271nm,18.1s,baz=100,slow=36

CTA	**Charters Tower**	**32.50**	**285**	LR		LR	12 26 01.9	

comp=Z,149nm,19.1s,baz=130,slow=34

PMG	**Port Moresby**	**38.12**	**300**	LR		LR	12 28 26.2	

comp=Z,152nm,20.0s,baz=122,slow=32

KRVT	**Kerr (AS076**	**38.50**	**312**	P		**P**	**12 15 18.6**	**-0.1**

comp=Z,12nm,0.7s,baz=155,slow=18,SNR=1.8
comp=Z,12nm,0.7s

ASAR	**Alice Springs**	**41.22**	**271**	P		**P**	**12 15 41.8**	**+0.4**

comp=Z,2.3nm,0.9s,baz=110,slow=7.5,SNR=11

ASAR					LR	LR	12 31 26.2	

comp=Z,137nm,18.9s,baz=154,slow=34
comp=Z,2.3nm,0.9s

WR0	**Warramunga Arr**	**42.26**	**276**	P		**P**	**12 15 51.2**	**+1.3**
WR0				IAmb		IAmb	12 16 00.0	

comp=Z,8.7nm,1.4s

WB2	**Warramunga Arr**	**42.43**	**276**	P		**P**	**12 15 51.3**	**0.0**
WB2				IAmb		IAmb	12 16 17.1	

comp=Z,13nm,1.4s

WRAB	**Tennant Creek**	**42.43**	**276**	P		**P**	**12 15 51.5**	**+0.3**
WRA	**Warramunga Arr**	**42.44**	**276**	P		**P**	**12 15 51.7**	**+0.4**

comp=Z,1.8nm,0.9s,baz=117,slow=7.3,SNR=6.6

WRA					LR	LR	12 30 44.5	

comp=Z,151nm,21.9s,baz=36,slow=32
comp=Z,1.8nm,0.9s

WRA	**Warramunga Arr**	**42.44**	**276**	IAmb		IAmb	12 15 59.7	

comp=Z,0.3nm,1.0s

WB0	**Warramunga Arr**	**42.47**	**276**	P		**P**	**12 15 52.4**	**+0.8**
WB0				IAmb		IAmb	12 16 02.2	

comp=Z,7.0nm,0.8s

SBA	**Scott Base**	**45.47**	**184**	P		**P**	**12 16 15.6**	**+0.7**
SBA				IAmb		IAmb	12 16 24.4	

comp=Z,3.7nm,0.8s

SIJI	**Sorong**	**55.60**	**295**	LR		LR	12 38 42.2	

comp=Z,79nm,22.0s,baz=352,slow=33

BATI	**Baumata**	**56.21**	**280**	LR		LR	12 42 51.3	

comp=Z,185nm,18.0s,baz=274,slow=37

QSPA	**South Pole Qui**	**57.27**	**180**	P		**P**	**12 17 43.9**	**+0.2**
RPN	**Rapa Nui**	**60.57**	**105**	LR		LR	12 41 51.1	

comp=Z,35nm,18.2s,baz=180,slow=34

KAPI	**Kappang**	**62.29**	**283**	LR		LR	12 44 08.8	

comp=Z,86nm,19.6s,baz=238,slow=35

LEM	**Lembang**	**71.41**	**27**	LR		LR	12 50 09.5	

comp=Z,126nm,19.3s,baz=168,slow=36

TROLL	**Troll, Antarti**	**75.41**	**181**	P		**P**	**12 19 39.0**	**-0.8**
SNAA	**Sanae**	**75.75**	**179**	P		**P**	**12 19 40.1**	**-1.5**
SNAA	**Sanae**	**75.75**	**179**	P		**P**	**12 19 40.2**	**-1.5**
VNA3	**Neumayer Olymp**	**75.98**	**177**	P		**P**	**12 19 41.2**	**-1.7**
VNA1	**Neumayer--Stat**	**76.63**	**177**	P		**P**	**12 19 44.2**	**-2.3**
H03S2	**Juan Fernandez**	**80.63**	**124**	T		T	13 48 50.6	

baz=235,SNR=40

H03S1	**Juan Fernandez**	**80.64**	**124**	T		T	13 48 51.5	

baz=235,SNR=37

H03S3	**Juan Fernandez**	**80.65**	**124**	T		T	13 48 49.9	

baz=235,SNR=34

H03N3	**Juan Fernandez**	**80.84**	**124**	T		T	13 49 04.4	

baz=240,slow=72,SNR=139

H03N2	**Juan Fernandez**	**80.84**	**124**	T		T	13 49 03.1	

baz=240,slow=72,SNR=101

H03N1	**Juan Fernandez**	**80.86**	**124**	T		T	13 49 03.5	

baz=240,slow=72,SNR=205

LVC	**Limon Verde**	**94.33**	**120**	LR		LR	12 56 36.4	

comp=Z,45nm,16.9s,baz=354,slow=31

FINES	**FINESS Array B**	**146.75**	**337**	PKPbc		**PKiKP**	**12 27 39.9**	**-0.3**

comp=Z,2.3nm,0.8s,baz=79,slow=7.2,SNR=4.8

NOA	**NORSAR Array B**	**150.84**	**349**	PKPbc		**PKiKP**	**12 27 49.9**	**+1.1**

comp=Z,0.3nm,0.7s,baz=17,slow=4.2,SNR=1.7

KRSZO 16 12:08:14.5±1.2, 47.12N×19.38E, h0km, ML1.8/4, Error ellipse: s-maj=13.3km s-min=8.5km az=128.0, Hungary

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
BSZH	**Besenyszg**	**0.63**	**73**		Pg	Pg	12 08 27.3	+0.7

comp=Z,0.2nm,SNR=2.1

BSZH	**Besenyszg**	**0.63**	**73**	P	Pg	Pg	12 08 27.3	+0.7
PSZ	**Piszkesteto**	**0.87**	**24**	Pg	Pn		12 08 33.7	-0.4

comp=Z,0.1nm,SNR=3.1

PSZ	**Piszkesteto**	**0.87**	**24**	P	Pn		12 08 33.7	-0.4
MORH	**Mrgy, Hungar**	**1.04**	**209**	Pn	Pn		12 08 36.5	+0.2

SNR=1.3

MORH					Lg	Lg	12 08 48.9	
MORH	**Mrgy, Hungar**	**1.04**	**209**	P	Pn		12 08 36.5	+0.2
MORH					S	Sb	12 08 48.9	-0.5
MPLH	**Magyarpolny**	**1.25**	**273**	Sn	Sg		12 08 53.9	-0.9
MPLH	**Magyarpolny**	**1.25**	**273**	S	Sg		12 08 53.9	-0.9
KOVH	**Kovagotottos**	**1.36**	**221**	Pn	Pb		12 08 42.0	+1.3

SNR=1.5

KOVH					Sn	Sn	12 09 01.1	+1.7
KOVH	**Kovagotottos**	**1.36**	**221**	P	P	Pb	12 08 42.0	+1.3
KOVH					S	Sn	12 09 01.1	+1.7

IDC 16 12:13:07.5±0.8, 30.86S×177.97W, h0km, mb4.2/7, mbtmp4.2/8, ML3.5/1, Error ellipse: s-maj=26.4km s-min=19.3km az=133.0
NEIC 16 12:13:10.0±1.9, 30.67S±0.05×178.0W±0.1, h10km±1km, mb4.5/14, Error ellipse: s-maj=21.4km s-min=8.0km az=103.0
ISC 16 12:13:14.3±0.6, 30.69S±0.07×178.1W±0.1, h46km, n44, σ1§49/39, mb4.4/14, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.44**	**5**	Pn	P	**Pn**	**12 13 37.1**	**-0.8**

289nm,0.3s,baz=184,slow=22,SNR=6.6

RAO					Sn	**Sn**	**12 13 51.7**	**-3.9**

615nm,0.3s,baz=270,slow=23,SNR=8.9

OUZ	**Omahuta**	**8.33**	**235**		Pn	**Pn**	**12 15 13.1**	**+0.6**
URZ	**Urewera**	**8.53**	**206**		Pn	Pn	12 15 09.9	-5.2

0.6nm,0.3s,baz=346,slow=22,SNR=1.2

URZ					Sn	**Sn**	**12 16 45.3**	**-4.7**

2.2nm,0.3s,baz=186,slow=22,SNR=6.7
1.9nm,0.3s

URZ	**Urewera**	**8.53**	**206**		Pn	**Pn**	**12 15 16.3**	**+1.2**
BKZ	**Black Stump Fm**	**9.56**	**206**		Pn	**Pn**	**12 15 28.8**	**-0.5**
CTAO	**Charters Tower**	**33.78**	**280**		P	**P**	**12 19 53.0**	**+1.1**
CTAO					IAmb	IAmb	12 19 54.8	

comp=Z,8.6nm,0.8s

STKA	**Stephens Creek**	**34.35**	**257**	P		**P**	**12 19 58.2**	**+1.5**

comp=Z,15nm,0.8s,baz=92,slow=9.7,SNR=25
comp=Z,15nm,0.8s

STKA	**Stephens Creek**	**34.35**	**257**	P		**P**	**12 19 57.8**	**+1.1**
STKA				IAmb		IAmb	12 19 59.5	

comp=Z,3.2nm,0.8s

BBOO	**Buckleboo**	**38.83**	**255**	P		**P**	**12 20 34.9**	**0.0**
AS31	**Alice Springs**	**43.03**	**267**	P		**P**	**12 21 09.8**	**+0.2**
ASAR	**Alice Springs**	**43.03**	**267**	P		**P**	**12 21 09.4**	**-0.2**

comp=Z,3.9nm,0.8s,baz=108,slow=7.5,SNR=29

ASAR				PcP		**PcP**	**12 23 00.6**	**+1.4**

comp=Z,0.4nm,0.6s,baz=122,slow=4.2,SNR=1.9
comp=Z,3.9nm,0.8s

WR0	**Warramunga Arr**	**43.87**	**273**	P		**P**	**12 21 16.6**	**+0.2**
WR0				IAmb		IAmb	12 21 18.2	

comp=Z,4.7nm,0.8s

WB2	**Warramunga Arr**	**44.04**	**272**	P		**

LZH				pP	sP	12 23 45.5	+7.7
LZH				pmax	pmax		
	comp=Z,18nm,1.4s						
WRA	**Warramunga Arr**	**35.02**	**158**	P	**P**	**12 24 35.5**	**-1.6**
	comp=Z,1.5nm,0.7s,baz=333,slow=9.9,SNR=11						
	comp=Z,1.5nm,0.7s						
SONM	**Songino Array**	**37.06**	**343**	P	**P**	**12 24 55.3**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=152,slow=6.5,SNR=2.9						
	comp=Z,0.6nm,0.5s						
ASAR	**Alice Springs**	**38.31**	**161**	P	**P**	**12 25 04.6**	**-0.7**
	comp=Z,1.1nm,0.6s,baz=340,slow=6.9,SNR=20						
	comp=Z,1.1nm,0.6s						
MKAR	**Makanchi Array**	**47.02**	**324**	P	**P**	**12 26 15.1**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=134,slow=8.2,SNR=3.8						
MKAR				LR	LR	12 48 37.7	
	comp=Z,100nm,19.0s,baz=299,slow=39						
	comp=Z,0.2nm,0.5s						
ZALV	**Zalesovo Beam**	**50.06**	**333**	LR	LR	12 49 01.6	
	comp=Z,104nm,19.1s,baz=287,slow=38						

IDC 16 12:27:36.7±1.8, 26°14S×70°79E, h0km, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=59.3km s-min=29.4km az=87.0, Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Garcia H**	**18.46**	**5**	T	T	12 50 53.0	
	baz=186,slow=76,SNR=7.9						
H08S2	**Diego Garcia H**	**18.46**	**5**	T	T	12 50 54.6	
	baz=186,slow=76,SNR=11						
H08S3	**Diego Garcia H**	**18.46**	**5**	T	T	12 50 52.8	
	baz=186,slow=76,SNR=13						
H01W2	**Cape Leeuwin H**	**39.10**	**114**	T	T	13 15 19.2	
	baz=270,slow=75,SNR=7.9						
H01W3	**Cape Leeuwin H**	**38.11**	**114**	T	T	13 15 17.4	
	baz=270,slow=75,SNR=8.7						
H01W1	**Cape Leeuwin H**	**38.12**	**114**	T	T	13 15 17.3	
	baz=270,slow=75,SNR=9.2						
CMAR	**Chiang Mai Arr**	**52.09**	**35**	P	P	12 36 49.5	+0.7
	0.6nm,0.2s,baz=238,slow=8.4,SNR=5.5						
	0.6nm,0.2s						
ASAR	**Alice Springs**	**56.80**	**102**	P	P	12 37 22.6	-0.5
	0.4nm,0.8s,baz=256,slow=6.4,SNR=3.1						
	0.4nm,0.8s						
WRA	**Warramunga Arr**	**58.32**	**98**	P	P	12 37 33.6	-0.2
	0.6nm,1.0s,baz=254,slow=8.1,SNR=1.7						
	0.6nm,1.0s						
VNDA	**Vanda**	**64.91**	**166**	P	P	12 38 17.6	+0.2
	2.0nm,1.0s,baz=277,slow=8.8,SNR=8.5						
	2.0nm,1.0s						
MKAR	**Makanchi Array**	**73.33**	**8**	P	P	12 39 09.5	-0.5
	1.3nm,1.0s,baz=197,slow=4.5,SNR=6.1						
	1.3nm,1.0s						

*NNC **16** 12:32:09.7±2.7, 40°.77N×74°.86E, h0km, mb3.2, mpv2.8, Error ellipse: s-maj=20.4km s-min=11.4km az=157.0*
*SOME **16** 12:32:12.0, 40°.80N×74°.80E, h20km*
*KRNET **16** 12:32:13.8±0.1, 41°.00N×74°.72E, h19km, mb2.4*

ISC 16 12:32:11.0±2.1, 40°79N±0°08×74°73E±0°04, h11km±13km, n25, σ1s39/42, 15C-11D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARLS	**Aral**	**1.12**	**344**	⇓*i*P	**Pn**	**12 32 30.8**	**-2.0**
	baz=41						
ARLS				⇓*e*S	**Sb**	**12 32 43.2**	**-3.9**
	baz=41						
UCH	**Uchtor**	**1.45**	**354**	⇓*i*P	**Pn**	**12 32 37.0**	**-0.6**
	baz=53						
UCH				⇓*e*S	**Sn**	**12 32 53.6**	**-3.2**
	baz=53						
ULHL	**Ulahol**	**1.85**	**37**	⇑*e*P	**Pb**	**12 32 44.9**	**-0.1**
	baz=42						
ULHL				⇑*i*S	**Sb**	**12 33 07.4**	**-0.8**
	baz=42						
BOOM	**Boomskoye usch**	**1.93**	**28**	⇓*e*P	**Pb**	**12 32 45.7**	**-0.6**
	baz=31						
BOOM				⇓*i*S	**Sb**	**12 33 09.1**	**-1.4**
	baz=31						
EKS2	**Erkin-Say**	**2.00**	**340**	⇓*i*P	**Pb**	**12 32 46.9**	**-0.7**
	baz=37						
EKS2				⇓*i*S	**Sn**	**12 33 11.0**	**+0.9**
	baz=37						
CHMS	**Chumysh**	**2.21**	**0**	⇑*e*P	**Pb**	**12 32 49.8**	**-1.2**
	baz=1.0						
CHMS				⇑*e*S	**Sn**	**12 33 15.8**	**+0.8**
	baz=1.0						
TKM2	**Tokmak 2**	**2.23**	**17**	⇑*e*P	**Pb**	**12 32 50.1**	**-1.4**
	baz=19						
TKM2				⇑*e*S	**Sn**	**12 33 16.8**	**+1.1**
	baz=19						
TKM2	**Tokmak 2**	**2.23**	**17**	⇑Pg	**Pb**	**12 32 51.3**	**-0.2**
	1.9nm,0.8s						
TKM2				⇑Lg	Lg	12 33 19.2	
	2.1nm,0.3s						
MRKS	**Merke**	**2.26**	**331**	*e*P	**Pg**	**12 32 54.1**	**-0.2**
	4.3nm,0.1s						
MRKS				*e*S	**Sg**	**12 33 24.2**	**+0.6**
	17nm,0.4s						
MRKS	**Merke**	**2.26**	**331**	Pg	**Pb**	**12 32 52.7**	**+0.9**
	8.6nm,0.5s						
MRKS				Lg	Lg	12 33 24.1	
	16nm,0.3s						
KDJ	**Kajisay**	**2.28**	**53**	⇑*e*P	**Pb**	**12 32 52.3**	**0.0**
	baz=58						
KDJ				⇑*i*S	**Sb**	**12 33 20.3**	**-0.3**
	baz=58						
ARK	**Arkit**	**2.32**	**297**	⇑*i*P	**Pb**	**12 32 52.4**	**-0.5**
	baz=92						
ARK				⇑*i*S	**Sb**	**12 33 21.2**	**-0.3**
	baz=92						
KST	**Kastek**	**2.44**	**22**	*e*P	**Pb**	**12 32 55.1**	**+0.2**
	2.3nm,0.2s						
KST				*e*S	**Sb**	**12 33 25.9**	**+0.9**
	5.7nm,0.2s						
KST	**Kastek**	**2.44**	**22**	Pg	**Pb**	**12 32 53.5**	**-1.4**
	2.2nm,0.2s						
KST				Lg	Lg	12 33 25.6	
	5.6nm,0.4s						
USP	**Ospenovka**	**2.48**	**356**	⇓*e*P	**Pn**	**12 32 53.5**	**+2.0**
	baz=56						
USP				⇓*i*S	**Sn**	**12 33 22.6**	**+0.8**
	baz=56						
TARG	**Taragay, Kyrgy**	**2.50**	**67**	⇑*e*P	**Pb**	**12 32 56.1**	**-0.1**
	baz=72						
TARG				⇑*e*S	**Sb**	**12 33 26.8**	**-0.4**
	baz=72						
DGS	**Degeres**	**2.58**	**17**	*e*P	**Pb**	**12 32 58.1**	**+0.8**
	3.3nm,0.2s						
DGS				*e*S	**Sb**	**12 33 31.6**	**+2.6**
	5.3nm,0.5s						
DGS	**Degeres**	**2.58**	**17**	Pg	**Pb**	**12 32 57.7**	**+0.4**
	2.9nm,0.2s						
DGS				Lg	Lg	12 33 32.8	
	8.0nm,0.6s						
TNSS	**Tian-Shan**	**2.79**	**36**	*e*P	**Pb**	**12 33 01.0**	**-0.1**
	1.5nm,0.2s						
TNSS				*e*S	**Sb**	**12 33 36.0**	**+0.4**
	2.3nm,0.3s						
TNSS	**Tian-Shan**	**2.79**	**36**	Pg	**Pb**	**12 32 59.5**	**-1.6**
	2.3nm,0.6s						
TNSS				Lg	Lg	12 33 36.0	
	1.9nm,0.3s						
KTBS	**Karatobe**	**3.26**	**26**	*e*P	**Pb**	**12 33 09.3**	**+0.3**
	0.7nm,0.3s						
KTBS				*e*S	**Sb**	**12 33 50.4**	**+1.7**
	7.3nm,0.4s						
KTBS	**Karatobe**	**3.26**	**26**	Pg	**Pb**	**12 33 08.2**	**-0.8**
	1.2nm,0.3s						
KTBS				Lg	Lg	12 33 50.4	
	6.5nm,0.4s						
KUU	**Kurty**	**3.33**	**21**	*e*P	**Pb**	**12 33 10.8**	**+0.7**
	0.9nm,0.1s						
KUU				*e*S	**Sb**	**12 33 52.9**	**+2.4**
	3.9nm,0.2s						
KUU	**Kurty**	**3.33**	**21**	Pg	**Pb**	**12 33 08.9**	**-1.2**
	1.4nm,0.4s						
KUU				Lg	Lg	12 33 52.0	
	4.9nm,0.3s						
KK31	**Karatay Array**	**3.91**	**308**	⇓Pg	**Pb**	**12 33 21.7**	**+1.9**
	0.2nm,0.3s,baz=121,slow=17						
KK31				⇑Lg	Lg	12 34 13.2	
	0.5nm,0.3s,baz=128,slow=29						

*IDC **16** 12:36:09.7±4.7, 4°.83S×102°.07E, h0km, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=206.5km s-min=21.3km az=54.0*

ISC 16 12:36:15.6±4.3, 4°7S±0°7×10°2E±°, h35km, n9, σ0s42/6, mb3.4/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**23.23**	**352**	P	**P**	**12 41 20.2**	**+0.3**
	0.5nm,0.4s,baz=185,slow=8.9,SNR=4.1						
	0.5nm,0.4s						
H01W3	**Cape Leeuwin H**	**31.99**	**161**	T	T	13 16 26.2	
	baz=337						
H01W2	**Cape Leeuwin H**	**32.00**	**161**	T	T	13 16 34.7	
	baz=337						
H01W1	**Cape Leeuwin H**	**32.01**	**161**	T	T	13 16 26.7	
	baz=337						
WRA	**Warramunga Arr**	**34.68**	**119**	P	**P**	**12 43 02.3**	**0.0**
	0.2nm,0.4s,baz=305,slow=8.8,SNR=9.7						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**35.84**	**125**	P	**P**	**12 43 12.5**	**+0.2**
	0.2nm,0.4s,baz=301,slow=8.2,SNR=8.7						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**54.23**	**343**	P	**P**	**12 45 38.1**	**+0.2**
	0.4nm,0.5s,baz=140,slow=6.3,SNR=4.8						
	0.4nm,0.5s						
ZALV	**Zalesovo Beam**	**60.23**	**348**	P	**P**	**12 46 19.6**	**-0.5**
	1.3nm,0.4s,baz=175,slow=5.7,SNR=4.2						
	1.3nm,0.4s						
TXAR	**Lajitas Array**	**145.28**	**42**	PKPbc	**PKPbc**	**12 55 50.0**	**-0.3**
	0.3nm,0.5s,baz=318,slow=1.2,SNR=4.3						

*IDC **16** 12:36:49.8±0.8, 12°.70N×120°.99E, h0km, mb3.8/10, mbtmp3.8/10, MS3.6/5, Error ellipse: s-maj=30.7km s-min=11.9km az=79.0*
*MAN **16** 12:36:52.5, 12°.75N×121°.00E, h9km, mb5.1, ML4.1, MS4.2*

ISC 16 12:36:51.2±1.4, 12°77N±0°03×121°04E±0°05, h7km±9km, n30, σ1s56/33, mb3.8/12, MS3.7/5, 4C-5D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.74**	**354**	⇑*e*P	**Pg**	**12 37 04.2**	**-1.2**
PGP				*i* S	**Sg**	**12 37 14.7**	**-0.3**
LUBP	**Lubang**	**1.23**	**321**	⇑*e*P	**Pn**	**12 37 14.7**	**-0.2**
LUBP				*e*S	**Sb**	**12 37 31.9**	**+0.9**
TGY	**Tagaytay City**	**1.33**	**356**	Pg	**Pb**	**12 37 17.1**	**+0.5**
TGY				Lg	Lg	12 37 37.1	
TGY	**Tagaytay City**	**1.33**	**356**	⇓*e*P	**Pn**	**12 37 16.7**	**+0.4**
TGY				*i* S	**Sg**	**12 37 37.2**	**+3.1**
GQP	**Guinayangan**	**1.78**	**50**	⇓*e*P	**Pb**	**12 37 23.7**	**-0.5**
GQP				*e*S	**Sg**	**12 37 49.6**	**+1.1**
RCP	**Roxas**	**2.06**	**125**	⇓*e*P	**Pb**	**12 37 27.6**	**-1.3**
RCP				*e*S	**Sg**	**12 37 57.0**	**-0.4**
JAP	**San Jose, Anti**	**2.20**	**156**	⇓*e*P	**Pn**	**12 37 29.5**	**+1.4**
JCNP	**Jose Panganiba**	**2.21**	**47**	⇑*e*P	**Pn**	**12 37 29.5**	**+1.1**
JCNP				*e*S	**Sn**	**12 37 56.9**	**+0.8**
PCPH	**Palayan**	**2.78**	**1**	⇑*e*P	**Pn**	**12 37 37.6**	**+1.4**
PPR	**Puerto Princes**	**3.73**	**218**	⇓*i*P	**Pn**	**12 37 51.8**	**+2.4**
PPR				*i* S	**Sn**	**12 38 33.1**	**-0.5**
LLP	**Lapu-Lapu**	**3.77**	**130**	*e*P	**Pn**	**12 37 49.3**	**-0.5**
LLP				*e*S	**Sn**	**12 38 38.0**	**+3.6**
TBP	**Tagbilaran**	**4.13**	**137**	*e*P	**Pn**	**12 37 57.5**	**+2.7**
TBP				*i* S	Sg	12 39 17.7	+14
DAV	**Davao City (W)**	**7.21**	**141**	LR	LR	12 42 07.0	
	comp=Z,553nm,18.2s,baz=330,slow=44						
CMAR	**Chiang Mai Arr**	**22.01**	**288**	P	**P**	**12 41 46.5**	**+0.2**
	1.8nm,0.6s,baz=96,slow=11,SNR=12						
	1.8nm,0.6s						
XAN	**Xi'an**	**23.88**	**334**	P	**P**	**12 42 09.0**	**+3.4**
XAN				pP	sP	12 42 16.1	+7.3
XAN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
XAN				LR	LR		
	comp=N,200nm,19.9s						
XAN				LR	LR		
	comp=E,160nm,19.9s						
XAN				LR	LR		
	comp=Z,260nm,19.9s						
KSRS	**Korea Array**	**25.35**	**13**	P	**P**	**12 42 17.4**	**-1.5**
	comp=Z,1.9nm,1.0s,baz=186,slow=10,SNR=6.0						
	comp=Z,1.9nm,1.0s						
GTA	**Gaotai**	**32.50**	**329**	*e*P	**P**	**12 43 23.3**	**+0.5**
GTA				pP	pP	12 43 26.8	+1.6
GTA				sP	sP	12 43 30.3	+4.2
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
USRK	**Ussuriysk Ar.**	**32.71**	**15**	LR	LR	12 56 24.4	
	comp=Z,69nm,21.2s,baz=312,slow=36						
WRA	**Warramunga Arr**	**35.04**	**158**	P	**P**	**12 43 44.0**	**-0.9**
	comp=Z,0.9nm,0.6s,baz=339,slow=9.3,SNR=14						
	comp=Z,0.9nm,0.6s						
SONM	**Songino Array**	**37.04**	**344**	P	**P**	**12 44 00.7**	**-1.2**
	comp=Z,1.2nm,0.9s,baz=139,slow=7.7,SNR=3.6						
	comp=Z,1.2nm,0.9s						
ASAR	**Alice Springs**	**38.33**	**161**	P	**P**	**12 44 13.6**	**+0.6**
	comp=Z,1.2nm,0.4s,baz=339,slow=6.8,SNR=28						
	comp=Z,1.2nm,0.4s						
MKAR	**Makanchi Array**	**46.97**	**324**	P	**P**	**12 45 22.5**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=123,slow=8.8,SNR=5.1						
	comp=Z,0.3nm,0.5s						
STKA	**Stephens Creek**	**48.57**	**157**	P	**P**	**12 45 35.9**	**+0.5**
	comp=Z,1.1nm,0.4s,baz=341,slow=11,SNR=1.7						
	comp=Z,1.1nm,0.4s						
ILAR	**Eielson Array**	**79.44**	**26**	P	**P**	**12 48 57.0**	**-1.1**
	comp=Z,0.3nm,0.7s,baz=243,slow=6.0,SNR=3.9						
	comp=Z,0.3nm,0.7s						
BRTR	**Keskin Array B**	**79.98**	**309**	P	**P**	**12 49 01.4**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=85,slow=3.6,SNR=3.0						
	comp=Z,0.6nm,0.6s						
FINES	**FINESS Array B**	**81.25**	**331**	P	**P**	**12 49 06.4**	**-1.5**
	comp=Z,1.2nm,0.7s,baz=59,slow=3.7,SNR=4.4						
	comp=Z,1.2nm,0.7s						
IDI	**Anoyia**	**87.66**	**306**	LR	LR	13 33 52.8	
	comp=Z,38nm,18.6s,baz=292,slow=39						
NOA	**NORSAR Array B**	**88.23**	**333**	LR	LR	13 30 17.2	
	comp=Z,18nm,20.9s,baz=25,slow=36						
MAW	**Mawson**	**90.32**	**199**	LR	LR	13 31 23.6	
	comp=Z,58nm,18.7s,baz=101,slow=36						
TXAR	**Lajitas Array**	**119.90**	**45**	PKP	**PKPdf**	**12 55 42.4**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=222,slow=1.2,SNR=4.2						

MAN 16 12:41:35.1, 12°69N×121°02E, h15km, mb4.3, ML3.1, MS2.8, Mindoro

IDC 16 12:43:56.9±2.2, 26°17S×70°85E, h0km, mb3.4/4, mbtmp3.4/4, Error ellipse: s-maj=65.6km s-min=41.4km az=77.0, Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Garcia H**	**18.49**	**5**	T	T	13 07 10.5	
	baz=186,slow=76,SNR=3.1						
H08S2	**Diego Garcia H**	**18.49**	**5**	T	T	13 07 10.9	
	baz=186,slow=76,SNR=3.1						
H08S3	**Diego Garcia H**	**18.51**	**5**	T	T	13 07 15.6	
	baz=186,slow=76,SNR=4.2						
H01W2	**Cape Leeuwin H**	**38.05**	**114**	T	T	13 31 34.7	
	baz=263						
H01W3	**Cape Leeuwin H**	**38.05**	**114**	T	T	13 31 36.4	
	baz=263						
H01W1	**Cape Leeuwin H**	**38.06**	**114**	T	T	13 31 32.5	
	baz=263						
ASAR	**Alice Springs**	**56.74**	**102**	P	P	12 53 42.5	-0.5
	0.2nm,0.8s,baz=254,slow=6.3,SNR=4.7						
	0.2nm,0.8s						
WRA	**Warramunga Arr**	**58.26**	**98**	P	P	12 53 54.2	+0.5
	0.4nm,0.8s,baz=254,slow=7.7,SNR=2.3						
	0.4nm,0.8s						
VNDA	**Vanda**	**64.87**	**166**	P	P	12 54 37.4	-0.1
	0.5nm,0.9s,baz=285,slow=4.2,SNR=2.7						
	0.5nm,0.9s						
MKAR	**Makanchi Array**	**73.36**	**8**	P	P	12 55 30.4	0.0
	0.3nm,0.6s,baz=193,slow=5.9,SNR=2.7						
	0.3nm,0.6s						

*IDC **16** 12:49:09.2±0.8, 43°.25S×41°.25E, h0km, mb3.8/8, mbtmp3.9/10, ML3.9/2, MS3.5/6, Error ellipse: s-maj=33.2km s-min=16.9km az=59.0*

ISC 16 12:49:10.6±0.9, 43°25S±0°1×41°3E±0°2, h10km, n20, σ1s27/14, mb3.9/8, MS3.4/4, Prince Edward Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	**Sutherland**	**19.41**	**297**	P	**P**	**12 53 37.2**	**+0.1**
	0.3nm,0.3s,baz=96,slow=16,SNR=2.9						
SUR				S	Sn	12 57 05.0	-11
	10nm,1.1s,baz=279,slow=21,SNR=1.8						
SUR				LR	LR	12 58 52.5	
	comp=Z,109nm,18.0s,baz=114,slow=30						
	11nm,0.9s						
BOSA	**Boshof**	**19.45**	**313**	P	**Pn**	**12 53 38.8**	**0.0**
	0.3nm,0.3s,baz=147,slow=13,SNR=7.1						
BOSA				S	Sn	12 57 03.7	-13
	2.8nm,0.9s,baz=106,slow=15,SNR=1.7						
BOSA				LR	LR	12 59 25.2	
	comp=Z,181nm,19.1s,baz=89,slow=32						
	2.7nm,0.5s						
LBTB	**Lobatse**	**22.24**	**320**	P	**P**	**12 54 08.8**	**+1.1**
	3.8nm,0.9s,baz=180,slow=9.9,SNR=2.5						
LBTB				LR	LR	13 01 01.0	
	comp=Z,86nm,21.9s,baz=177,slow=32						
	3.8nm,0.9s						
MATP	**Matopo**	**25.11**	**331**	P	**P**	**12 54 35.3**	**-0.4**
	3.0nm,0.8s,baz=185,slow=9.7,SNR=5.5						
	3.0nm,0.8s						
LSZ	**Lusaka**	**30.00**	**334**	LR	LR	13 07 38.7	
	comp=Z,54nm,18.0s,baz=161,slow=37						
TSUM	**Tsumeb**	**31.15**	**313**	LR	LR	13 06 46.3	
	comp=Z,130nm,18.7s,baz=146,slow=34						
TROLL	**Troll, Antarti**	**34.36**	**200**	P	**P**	**12 55 58.8**	**+1.4**
SNAA	**Sanae**	**35.60**	**202**	P	**P**	**12 56 09.8**	**+1.8**
SNAA	**Sanae**	**35.60**	**202**	P	**P**	**12 56 09.2**	**+1.2**
	3.3nm,0.8s,baz=72,slow=9.2,SNR=15						
	3.3nm,0.8s						
VNA3	**Neumayer Olymp**	**37.40**	**204**	P	**P**	**12 56 24.7**	**+1.4**
MBAR	**Mbarara**	**43.45**	**345**	LR	LR	13 13 45.8	
	comp=Z,57nm,19.2s,baz=158,slow=34						
QSPA	**South Pole Qui**	**47.01**	**180**	P	**P**	**12 57 40.6**	**-1.2**
	1.4nm,0.9s,baz=276,slow=4.2,SNR=6.5						
	1.4nm,0.9s						
VNDA	**Vanda**	**54.21**	**167**	P	**P**	**12 58 34.3**	**-1.5**
	0.6nm,0.6s,baz=268,slow=7.8,SNR=8.9						
	0.6nm,0.6s						
H01W2	**Cape Leeuwin H**	**55.54**	**108**	T	T	13 58 19.7	
	baz=238,slow=75,SNR=594						
H01W3	**Cape Leeuwin H**	**55.55**	**108**	T	T	13 58 24.1	
	baz=238,slow=75,SNR=768						
H01W1	**Cape Leeuwin H**	**55.56**	**108**	T	T	13 58 20.9	
	baz=238,slow=75,SNR=647						
TORD	**Torodi Ar. Bea**	**66.75**	**317**	P	**P**	**13 00 01.6**	**-0.5**
	0.8nm,0.8s,baz=151,slow=4.3,SNR=3.6						
	0.8nm,0.8s						
ASAR	**Alice Springs**	**76.01**	**109**	P	**P**	**13 00 59.2**	**+0.9**
	0.4nm,0.9s,baz=232,slow=4.6,SNR=2.5						
	0.4nm,0.9s						
WRA	**Warramunga Arr**	**78.77**	**107**	P	**P**	**13 01 15.1**	**+1.4**
	0.8nm,1.0s,baz=222,slow=4.8,SNR=5.6						
	0.8nm,1.0s						
TXAR	**Lajitas Array**	**148.79**	**255**	PKPbc	**PKPbc**	**13 08 57.2**	**-1.2**
	0.3nm,0.7s,baz=128,slow=6.9,SNR=4.7						

*TIF **16** 13:00:09.6, 41°.16N×43°.09E, h13km±1km*
*DDA **16** 13:00:09.6±0.0, 41°.16N×43°.06E, h7km±3km, MW3.4*
*ISK **16** 13:00:10.0, 41°.23N×43°.05E, h6km, ML3.1/6*

ISC 16 13:00:09.9±1.1, 41°17N±0°02×43°06E±0°02, h8km±10km, n33, σ0s98/58, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKH	**Akhalkalaki**	**0.40**	**53**	P	**Pg**	**13 00 17.8**	**0.0**
AKH				S	**Sg**	**13 00 24.5**	**+1.3**
AKH	**Akhalkalaki**	**0.40**	**53**	PG	**Pg**	**13 00 17.7**	**-0.2**
AKH				SG	**Sg**	**13 00 23.7**	**+0.5**
EPOS	**Posof**	**0.42**	**323**	P	**Pg**	**13 00 17.7**	**-0.5**
EPOS				S	**Sb**	**13 00 26.3**	**0.0**
KARS	**Kars**	**0.54**	**179**	PG	**Pb**	**13 00 21.6**	**-0.1**
KARS				SG	**Sn**	**13 00 31.8**	**-1.6**
ABS	**Abastumani**	**0.62**	**342**	P	**Pg**	**13 00 22.0**	**+0.1**
EAK	**Akyaka**	**0.63**	**139**	P	**Pg**	**13 00 21.3**	**-0.9**
EAK				S	**Sb**	**13 00 31.8**	**-0.6**
BKRG	**Bakuriani**	**0.69**	**30**	P	**Pg**	**13 00 23.1**	**0.0**
BKRG				S	**Sg**	**13 00 32.3**	**+0.1**
BRNG	**Burnasheti**	**0.73**	**51**	P	**Pg**	**13 00 24.2**	**+0.1**
DIGO	**Kars**	**0.79**	**162**	P	**Pg**	**13 00 24.6**	**-0.4**
DIGO				*i* AML	AML	13 00 46.0	
	comp=E,511nm,0.5s						
DIGO				*i* AML	AML	13 00 47.0	
	comp=N,334nm,0.7s						
DMNI	**Dmanisi**	**0.86**	**79**	P	**Pg**	**13 00 26.2**	**-0.3**
DMNI				S	**Sg**	**13 00 38.2**	**+0.4**
TRLG	**Trialeti**	**0.87**	**64**	P	**Pg**	**13 00 26.0**	**-0.6**
TRLG				S	**Sb**	**13 00 39.5**	**+0.3**
DAGI	**Agillar**	**0.87**	**265**	P	**Pg**	**13 00 26.6**	**-0.1**
DAGI				S	**Sb**	**13 00 40.0**	**+0.7**
DAGI				*i* AML	AML	13 00 41.0	
	comp=E,259nm,0.5s						
DAGI				*i* AML	AML	13 00 46.0	
	comp=N,281nm,0.6s						
DDEM	**Demirkent**	**1.03**	**255**	P	**Pb**	**13 00 29.9**	**-0.2**
DDEM				S	**Sn**	**13 00 44.7**	**-0.8**
DDEM				*i* AML	AML	13 00 46.0	
	comp=E,1μm,0.4s						
DDEM				*i* AML	AML	13 00 48.0	
	comp=N,1μm,0.5s						
DBAD	**Bademkaya**	**1.04**	**262**	P	**Pg**	**13 00 29.8**	**-0.2**
DBAD				S	**Sn**	**13 00 45.1**	**-0.8**
DBAD				*i* AML	AML	13 00 52.0	
	comp=N,310nm,0.7s						
DBOC	**Borcka**	**1.07**	**280**	P	**Pg**	**13 00 30.1**	**-0.3**
DBOC				S	**Sb**	**13 00 44.7**	**-0.1**
DBOC				*i* AML	AML	13 00 47.0	
	comp=E,122nm,0.4s						
BATM	**Batumi**	**1.12**	**293**	P	**Pg**	**13 00 31.0**	**-0.4**
BATM				S	**Sn**	**13 00 47.7**	**+0.2**
BATM	**Batumi**	**1.12**	**293**	PN	**Pb**	**13 00 31.3**	**-0.2**
BATM				SN	**Sb**	**13 00 46.7**	**+0.4**
TKB	**Tkibuli**	**1.18**	**358**	P	**Pg**	**13 00 32.2**	**-0.4**
TKB				S	**Sn**	**13 00 49.5**	**+0.3**
HOPA	**Hopa-Artvin**	**1.24**	**281**	PN	**Pg**	**13 00 33.8**	**+0.1**
HOPA				SN	**Sn**	**13 00 51.0**	**+0.6**
KOTA	**Agri, Merkez-K**	**1.37**	**175**	P	**Pb**	**13 00 35.4**	**-0.5**
KOTA				S	**Sn**	**13 00 58.8**	**+4.9**
EATA	**Eleskirt**	**1.38**	**199**	P	**Pb**	**13 00 35.6**	**-0.5**
EATA				S	**Sn**	**13 00 56.7**	**+2.4**
ONI	**Oni**	**1.45**

0.7nm,0.9s,baz=194,slow=9.5,SNR=3.7
WRA LR LR 13 19 53.1
comp=Z,161nm,21.2s,baz=222,slow=34
0.7nm,0.9s
VNDA Vanda 31.65 167 P P 13 09 35.4 -0.1
1.3nm,1.0s,baz=323,slow=10,SNR=5.0
VNDA LR LR 13 21 30.6
comp=Z,256nm,18.9s,baz=334,slow=35
1.3nm,1.0s
CTA Charters Tower 32.15 34 LR LR 13 21 41.3
comp=Z,210nm,21.4s,baz=192,slow=34
BATI Baumata 38.59 353 LR LR 13 27 12.3
comp=Z,378nm,19.3s,baz=220,slow=37
QSPA South Pole Qui 41.37 180 LR LR 13 27 17.6
comp=Z,126nm,19.1s,baz=322,slow=35
PMG Port Moresby 42.40 29 LR LR 13 28 55.5
comp=Z,192nm,18.3s,baz=210,slow=36
LEM Lembang 45.20 331 LR LR 13 27 20.8
comp=Z,80nm,21.1s,baz=316,slow=32
SIJI Sorong 47.78 4 LR LR 13 30 18.8
comp=Z,35nm,21.9s,baz=124,slow=34
SNAA Sanae 54.95 197 LR LR 13 34 42.5
comp=Z,95nm,21.7s,baz=80,slow=34
PMSA Palmer Station 66.43 174 LR LR 13 41 16.2
comp=Z,87nm,20.1s,baz=236,slow=34
CMAR Chiang Mai Arr 71.74 331 P P 13 14 35.5 +0.5
0.3nm,0.3s,baz=168,slow=6.3,SNR=1.8
0.3nm,0.3s

HEL 16 13:05:28.1±0.3, 60.12N×24.47E, h0km, ML1.5, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MEF	**Metsahovi**	**0.11**	**340**	*e*P	Pg	13 05 31.2	+1.1
MEF	**Metsahovi**	**0.11**	**340**	PG	Pg	13 05 30.7	+0.6
MEF				SG	Sg	13 05 31.4	-0.1
NUR	**Nurmijrvi**	**0.40**	**13**	PG	Pg	13 05 35.1	-0.7
NUR				SG	Sg	13 05 39.0	-2.0
PVF	**Pernaja**	**0.81**	**58**	PG	Pg	13 05 43.1	-0.6
	baz=235						
PVF				SB	Sg	13 05 54.2	0.0
MTSE	**Matsula**	**1.45**	**194**	*e*P	Pb	13 05 56.0	+0.8
MTSE	**Matsula**	**1.45**	**194**	PN	Pb	13 05 55.0	-0.5
FIA0	**FINESS Array S**	**1.55**	**30**	PG	Pn	13 05 55.8	-1.1
	baz=213						
FIA0				SG	Sn	13 06 14.5	-3.1
VJF	**Virojoki**	**1.59**	**73**	PN	Pn	13 05 57.5	0.0
VJF				MSG		13 06 15.8	
	comp=Z,3.6nm,0.2s						
VJF				SN	Sg	13 06 20.1	+0.9
RAF	**Rauma**	**1.61**	**305**	*e*P	Pn	13 05 52.8	-5.0
RAF	**Rauma**	**1.61**	**305**	MSG		13 06 16.3	
	comp=Z,1.6nm,0.2s						
RAF				SN	Sg	13 06 21.2	+1.3
KEF	**Keuruu**	**2.07**	**5**	MSG		13 06 29.3	
	comp=Z,2.3nm,0.2s						
KEF				SG	Sn	13 06 30.7	+0.3
KAF	**Kangasniemi**	**2.19**	**23**	MSG		13 06 32.9	
	comp=Z,2.4nm,0.2s						
KAF				SB	Sn	13 06 34.5	+1.0
SUF	**Sumiainen**	**2.73**	**16**	MSG		13 06 48.7	
	comp=Z,0.9nm,0.2s						
SUF				SB	Sb	13 06 49.8	-2.0
OBF0	**Syolatti, Pyha**	**4.40**	**359**	PN	Pn	13 06 35.6	-0.3

HEL 16 13:06:17.6±0.1, 65.41N×21.37E, h0km, ML1.1 (UPP), Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SJUU	**Sjulsmark**	**0.14**	**44**	*i* P	Pg	13 06 19.6	-0.7
SJUU				*i* S	Sg	13 06 22.0	-0.2
LILU	**Lilltraesk**	**0.65**	**260**	*i* P	Pg	13 06 29.0	-1.0
LILU				*i* S	Sg	13 06 38.2	-0.2
HARU	**Harads**	**0.78**	**348**	*i* P	Pg	13 06 31.4	-1.1
HARU				*i* S	Sg	13 06 42.5	-0.1
KALU	**Kalix**	**0.94**	**60**	*e*PB	Pg	13 06 34.9	-0.8
KALU				*e*S	Sg	13 06 46.4	-1.4
ODEU	**Stanfors**	**1.04**	**196**	*e*P	Pg	13 06 36.1	-1.3
ODEU				*e*S	Sg	13 06 50.2	-0.7
SVAU	**Svanoeiden**	**1.19**	**221**	*e*P	Pg	13 06 39.0	-1.4
ERTU	**Ertsjaerv**	**1.20**	**16**	*e*P	Pg	13 06 39.1	-1.5
ERTU				*e*SB	Sg	13 06 55.3	-0.8
TOF	**Tornio**	**1.40**	**60**	*e*PG	Pn	13 06 43.2	-1.1
TOF				*e*SB	Sg	13 07 00.8	-1.6
OBF8	**Ulkokalla**	**1.40**	**140**	PG	Pn	13 06 42.4	-1.9
OBF8	**Ulkokalla**	**1.40**	**140**	*e*P	Pn	13 06 42.4	-1.9
OBF0	**Syolatti, Pyha**	**1.52**	**125**	*e*P	Pn	13 06 44.5	-1.5
OBF0				*e*SN	Sn	13 07 06.8	+0.3
OBF4	**Vikkela, Lumij**	**1.69**	**109**	PB	Pn	13 06 47.6	-0.7
OBF4	**Vikkela, Lumij**	**1.69**	**109**	*e*P	Pn	13 06 47.6	-0.7
OBF4				*e*SN	Sg	13 07 11.7	-0.1
PAJU	**Pajala**	**1.77**	**23**	*e*P	Pn	13 06 48.8	-0.7
PAJU				*e*SN	Sn	13 07 12.3	-0.4
OUF	**Merijarvi**	**1.77**	**124**	*e*P	Pn	13 06 49.0	-0.5
OUF				*e*SG	Sn	13 07 12.2	-0.5
OUL	**Oulu**	**1.93**	**98**	*e*P	Pn	13 06 51.3	-0.4
OUL				*e*SG	Sn	13 07 17.3	+0.7
KLF	**Kolari**	**2.12**	**29**	*e*P	Pn	13 06 54.2	0.0
KLF				*e*SG	Sb	13 07 22.8	-0.7
RNF	**Rovaniemi**	**2.25**	**55**	*e*PB	Pn	13 06 57.0	+1.0
RNF				*e*SG	Sb	13 07 26.4	-0.9
SGF	**Sodankyl**	**2.91**	**43**	*e*SB	Sb	13 07 45.3	-1.1
HEF	**Hetta**	**3.15**	**16**	*e*S	Sn	13 07 44.4	-2.2
OLKF	**Oulanka, Finla**	**3.42**	**71**	*e*PG	Pb	13 07 19.4	+0.3
KU6	**Riekki**	**3.58**	**76**	*e*S	Sn	13 07 57.2	0.0
VRF	**Varrio**	**4.04**	**51**	*e*SG	Sg	13 08 24.7	-2.6
FIA0	**FINESS Array S**	**4.50**	**150**	*e*SG	Sb	13 08 35.7	+3.5

*NSSP **16** 13:10:22.3, 41.18N×43.02E, h10km, Ms2.9*
*TIF **16** 13:10:23.6, 41.16N×43.08E, h12km±1km*
*ISK **16** 13:10:24.2, 41.23N×43.06E, h14km, ML3.2/8*
*DDA **16** 13:10:24.0±0.0, 41.17N×43.08E, h7km±3km, MW3.4*
ISC 16 13:10:24.4±1.0, 41.18N±0.02×43.07E±0.02, h13km±9km, n43, σ0970/70, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKH	**Akhalkalaki**	**0.39**	**54**	P	**Pg**	**13 10 32.0**	**-0.4**
AKH	**Akhalkalaki**	**0.39**	**54**	PG	**Pg**	**13 10 31.8**	**-0.5**
AKH				SG	**Sb**	**13 10 38.3**	**-1.0**
EPOS	**Posof**	**0.42**	**322**	P	**Pg**	**13 10 32.6**	**-0.1**
EPOS				S	**Sb**	**13 10 39.7**	**-0.2**
EPOS				*i* AML	AML	13 10 50.0	
	comp=E,765nm,0.9s						
EPOS				*i* AML	AML	13 10 52.0	
	comp=N,1μm,0.8s						
KARS	**Kars**	**0.55**	**179**	PG	**Pb**	**13 10 35.7**	**-0.3**
KARS				SG	**Sn**	**13 10 46.3**	**-0.8**
ABS	**Abastumani**	**0.61**	**341**	P	**Pg**	**13 10 36.1**	**-0.2**
ABS				S	**Sb**	**13 10 45.6**	**+0.1**
EAK	**Akyaka**	**0.64**	**140**	P	**Pg**	**13 10 36.2**	**-0.6**
EAK				*i* AML	AML	13 10 57.0	
	comp=E,871nm,0.6s						
EAK				*i* AML	AML	13 10 59.0	
	comp=N,843nm,0.7s						
BKRG	**Bakuriani**	**0.67**	**30**	P	**Pg**	**13 10 37.3**	**-0.2**
BKRG				S	**Sb**	**13 10 47.6**	**+0.2**
BRNG	**Burnasheti**	**0.72**	**52**	P	**Pb**	**13 10 38.4**	**-0.5**
DIGO	**Kars**	**0.80**	**163**	P	**Pg**	**13 10 39.0**	**-0.8**
DIGO				*i* AML	AML	13 10 58.0	
	comp=N,453nm,0.6s						
DIGO				*i* AML	AML	13 11 02.0	
	comp=E,713nm,0.9s						
TRLG	**Trialeti**	**0.85**	**65**	P	**Pg**	**13 10 40.1**	**-0.9**
TRLG				S	**Sb**	**13 10 52.4**	**-0.2**
DMNI	**Dmanisi**	**0.86**	**79**	P	**Pb**	**13 10 40.9**	**-0.2**
DMNI				S	**Sb**	**13 10 53.1**	**+0.5**
DAGI	**Agillar**	**0.88**	**264**	P	**Pb**	**13 10 41.5**	**-0.1**
DAGI				S	**Sb**	**13 10 53.5**	**+0.2**
DAGI				*i* AML	AML	13 10 55.0	
	comp=E,347nm,0.5s						
DAGI				*i* AML	AML	13 11 00.0	
	comp=N,394nm,0.6s						
STE	**Stepanavan**	**1.00**	**100**	*e*P	**Pn**	**13 10 43.8**	**-0.4**
STE				*e*S	**Sn**	**13 10 58.8**	**+0.6**
DDEM	**Demirkent**	**1.04**	**254**	P	**Pb**	**13 10 43.8**	**-0.5**
DDEM				S	**Sn**	**13 10 59.3**	**+0.1**
DDEM				*i* AML	AML	13 11 01.0	
	comp=E,2μm,0.4s						
DDEM				*i* AML	AML	13 11 02.0	
	comp=N,2μm,0.5s						
DBAD	**Bademkaya**	**1.05**	**262**	P	**Pb**	**13 10 44.0**	**-0.6**
DBAD				*i* AML	AML	13 11 02.0	
	comp=E,267nm,0.6s						
DBAD				*i* AML	AML	13 11 07.0	
	comp=N,432nm,0.6s						
DBOC	**Borcka**	**1.07**	**279**	P	**Pb**	**13 10 44.0**	**-0.8**
DBOC				*i* AML	AML	13 11 01.0	
	comp=E,176nm,0.9s						
BATM	**Batumi**	**1.12**	**293**	P	**Pb**	**13 10 45.4**	**-0.2**
BATM				S	**Sn**	**13 11 01.8**	**+0.7**
BATM	**Batumi**	**1.12**	**293**	PN	**Pg**	**13 10 45.7**	**-0.3**
BATM				SN	**Sn**	**13 11 01.4**	**+0.4**
TKB	**Tkibuli**	**1.17**	**357**	P	**Pg**	**13 10 46.4**	**-0.6**
TKB				S	**Sn**	**13 11 03.6**	**+1.2**
AMBZ	**Amberd**	**1.20**	**131**	*e*P	**Pn**	**13 10 47.0**	**-0.1**
AMBZ				*e*S	**Sn**	**13 11 04.3**	**+1.1**
VNNZ	**Vanand**	**1.22**	**152**	*e*P	**Pn**	**13 10 46.7**	**-0.4**
VNNZ				*e*S	**Sn**	**13 11 04.2**	**+0.7**
HOPA	**Hopa-Artvin**	**1.24**	**280**	PN	**Pb**	**13 10 47.5**	**-0.2**
METS	**Metsamor**	**1.28**	**143**	*e*P	**Pg**	**13 10 48.5**	**-0.6**
METS				*e*S	**Sg**	**13 11 07.7**	**+2.0**
KOTA	**Agri, Merkez-K**	**1.38**	**176**	P	**Pg**	**13 10 50.6**	**-0.3**
KOTA				*i* AML	AML	13 11 19.0	
	comp=E,31nm,1.0s						
KOTA				*i* AML	AML	13 11 24.0	
	comp=N,42nm,1.1s						
EATA	**Eleskirt**	**1.39**	**199**	P	**Pn**	**13 10 49.0**	**-0.8**
EATA				S	**Sg**	**13 11 11.2**	**+2.1**
EATA				*i* AML	AML	13 11 16.0	
	comp=E,77nm,1.4s						
EATA				*i* AML	AML	13 11 20.0	
	comp=N,78nm,1.4s						
SEAG	**Tbilisi Sea**	**1.43**	**65**	P	**Pg**	**13 10 51.8**	**0.0**
SEAG				S	**Sg**	**13 11 11.4**	**+1.1**
ONI	**Oni**	**1.44**	**11**	P	**Pb**	**13 10 51.0**	**0.0**
ONI				S	**Sg**	**13 11 11.7**	**+0.9**
TASB	**TASBURUN-IGDIR**	**1.49**	**143**	PN	**Pb**	**13 10 51.6**	**-0.3**
KAPZ	**Kaputan**	**1.50**	**124**	*e*P	**Pb**	**13 10 51.6**	**-0.7**
KAPZ				*e*S	**Sb**	**13 11 11.3**	**+0.1**
KOPR	**Koprukoy-ERZUR**	**1.50**	**218**	PN	**Pb**	**13 10 52.0**	**-0.3**
AGRB	**Hanur-Agry**	**1.60**	**182**	PN	**Pb**	**13 10 53.4**	**-0.5**
GNI	**Garni**	**1.63**	**128**	*e*P	**Pb**	**13 10 54.3**	**-0.2**
GNI				*e*S	**Sg**	**13 11 17.3**	**+0.3**
GNI	**Garni**	**1.63**	**128**	PN	**Pb**	**13 10 53.8**	**-0.6**
NRKZ	**NAREK**	**1.69**	**134**	*e*P	**Pb**	**13 10 55.2**	**-0.1**
NRKZ				*e*S	**Sg**	**13 11 19.9**	**+1.2**
CHVG	**Ch'k'valeri**	**1.71**	**335**	P	**Pg**	**13 10 56.2**	**-0.9**
CHOM	**Cayeli-Rize**	**1.75**	**268**	PN	**Pn**	**13 10 54.8**	**+0.4**
DGRG	**David-gareji**	**1.75**	**80**	P	**Pg**	**13 10 57.7**	**-0.4**
DGRG				S	**Sg**	**13 11 21.7**	**+0.9**
ERZM	**Erzurum**	**1.82**	**226**	PN	**Pn**	**13 10 56.4**	**+0.8**
KRIK	**Erzurum-spir**	**1.83**	**243**	P	**Pb**	**13 10 57.8**	**0.0**
KRIK				S	**Sg**	**13 11 23.0**	**-0.3**
KRIK				*i* AML	AML	13 11 27.0	
	comp=N,24nm,0.9s						
KRIK				*i* AML	AML	13 11 32.0	
	comp=E,32nm,0.6s						
MTEO	**Meteo**	**1.85**	**36**	P	**Pg**	**13 10 58.8**	**-1.3**
PNSH	**Pansheti**	**1.86**	**38**	P	**Pb**	**13 10 58.3**	**+0.1**
PNSH				S	**Sg**	**13 11 24.2**	**+0.1**
LGD	**Lagodekhi**	**2.47**	**74**	P	**Pb**	**13 11 08.7**	**+0.1**
LGD				S	**Sg**	**13 11 42.7**	**-1.1**
KELT	**Kelkit**	**3.08**	**252**	P	**Pb**	**13 11 19.2**	**+0.1**
KELT				S	**Sg**	**13 12 02.2**	**-1.1**

*IDC **16** 13:11:18.5±1.1, 26.78N×130.26E, h0km, mb4.0/12, mbtmp3.9/13, MS3.3/5, Error ellipse: s-maj=24.8km s-min=24.3km az=104.0*
*JMA **16** 13:11:21.1±0.1, 26.8N±0.5×130.3E±0.5, h55km, MV3.9/23, NEAR MINAMI-DAITOJIMA IS*
*NIED **16** 13:11:21.1, 26.82N×130.26E, h55km, MW4.0, Moment Tensor Solution. s2 Moment tensor: Scale 10^15Nm; Mrr=0.56; Mθθ0.22; Mφφ0.34; Mrθ-0.42; Mθφ0.41; Mφr-0.88; Fault plane solution: M0 1.17000×10^15 NP1: φs238.00000°, δ18.00000°, λ-61.00000°. NP2:φs27.00000°, δ74.00000°, λ-99.00000°.*
ISC 16 13:11:23.4±0.6, 26.84N±0.04×130.26E±0.04, h35km, n36, σ1973/50, mb3.9/12, MS3.4/4, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKDJ	**Kitadaitoujima**	**1.29**	**133**	*e*P	**Pn**	**13 11 42.9**	**-2.0**
JKDJ				*e*S	**Sn**	**13 11 59.1**	**-1.8**
JMZ	**Minamidaito 2**	**1.33**	**139**	P	**Pn**	**13 11 43.7**	**-1.9**
JMZ				S	**Sn**	**13 12 00.3**	**-1.8**
JZK	**Kikaishima**	**1.49**	**350**	P	**Pn**	**13 11 47.0**	**-0.8**
JZK				*e*S	**Sn**	**13 12 05.4**	**-0.6**
JTK	**Tokunoshima**	**1.50**	**309**	P	**Pn**	**13 11 46.5**	**-1.3**
JTK				S	**Sn**	**13 12 04.5**	**-1.7**
JOKE	**Okinoerabujima**	**1.59**	**289**	P	**Pn**	**13 11 47.9**	**-1.2**
JOKE				*e*S	**Sn**	**13 12 07.8**	**-0.6**
JYRO	**Yoronjima**	**1.62**	**277**	P	**Pn**	**13 11 48.0**	**-1.5**
JYRO				*e*S	**Sn**	**13 12 07.3**	**-1.9**
JAM	**Amami Oshima**	**1.67**	**340**	P	**Pn**	**13 11 48.7**	**-1.5**
JAM				S	**Sn**	**13 12 08.7**	**-1.7**
JAMN	**Amaminishikomi**	**1.70**	**326**	P	**Pn**	**13 11 48.9**	**-1.6**
JAMN				*e*S	**Sn**	**13 12 08.5**	**-2.5**
JOW	**Kunigami**	**1.77**	**270**	Pn	**Pn**	**13 11 50.1**	**-1.5**
	236nm,0.3s,baz=107,slow=15,SNR=458						
JOW				Sn	**Sn**	**13 12 10.9**	**-2.1**
	145nm,0.3s,baz=120,slow=28,SNR=11						
JOW	**Kunigami**	**1.77**	**270**	P	**Pn**	**13 11 50.3**	**-1.3**
JOW				*e*S	**Sn**	**13 12 10.8**	**-2.1**
JNTH	**Nagotoyohara**	**2.02**	**261**	*e*P	**Pn**	**13 11 53.3**	**-1.8**
JNTH				*e*S	**Sn**	**13 12 16.7**	**-2.5**
JIH	**Iheya**	**2.05**	**276**	P	**Pn**	**13 11 54.2**	**-1.2**
JIH				S	**Sn**	**13 12 18.7**	**-1.1**
JJT3	**Tamagusuku3**	**2.32**	**253**	P	**Pn**	**13 11 58.1**	**-1.1**
JJT3				*e*S	**Sn**	**13 12 25.1**	**-1.4**
JTAJ	**Takarajima**	**2.49**	**338**	*e*P	**Pn**	**13 11 59.8**	**-1.7**
JTAJ				*e*S	**Sn**	**13 12 26.8**	**-3.7**
JAGN	**Aguni-jima**	**2.71**	**265**	P	**Pn**	**13 12 03.0**	**-1.4**
JAGN				S	**Sn**	**13 12 33.7**	**-2.3**
JKE	**Kume jima 2**	**3.15**	**261**	P	**Pn**	**13 12 08.2**	**-2.3**
JKE				S	**Sn**	**13 12 45.3**	**-1.6**
JYAK	**Yakushimahirau**	**3.39**	**4**	*e*S	**Sn**	**13 12 49.5**	**-3.4**
JMTN	**Minamitane**	**3.59**	**9**	*e*P	**Pn**	**13 12 15.5**	**-1.1**
JMTN				S	**Sn**	**13 12 54.5**	**-3.3**
JTN	**Tanegashima 3**	**3.85**	**9**	*e*P	**Pn**	**13 12 18.3**	**-1.9**
KSRS	**Korea Array**	**10.77**	**350**	Pn	**Pn**	**13 13 56.7**	**+1.7**
	1.3nm,0.7s,baz=170,slow=14,SNR=6.4						
KSRS				LR	LR	13 18 46.3	
	comp=Z,45nm,18.2s,baz=320,slow=41						
KLR	**Kul'dur**	**22.39**	**3**	P	**P**	**13 16 18.5**	**-0.1**
	1.2nm,0.5s,baz=184,slow=7.9,SNR=3.8						
	1.2nm,0.5s						
SONM	**Songino Array**	**28.07**	**325**	LR	LR	13 30 08.9	
	comp=Z,71nm,18.1s,baz=284,slow=40						
MKAR	**Makanchi Array**	**42.50**	**311**	P	**P**	**13 19 16.4**	**+1.1**
	1.3nm,0.7s,baz=96,slow=9.7,SNR=12						
	1.3nm,0.7s						
ZALV	**Zalesovo Beam**	**42.88**	**322**	P	**P**	**13 19 19.1**	**+0.8**
	1.4nm,0.6s,baz=116,slow=8.1,SNR=7.6						
ZALV				LR	LR	13 39 06.0	
	comp=Z,36nm,18.5s,baz=186,slow=39						
	1.4nm,0.6s						
WRA	**Warramunga Arr**	**46.67**	**175**	P	**P**	**13 19 48.6**	**-0.1**
	0.6nm,0.6s,baz=354,slow=8.6,SNR=5.6						
	0.6nm,0.6s						
BVAR	**Borovoye Array**	**51.04**	**318**	LR	LR	13 44 03.5	
	comp=Z,40nm,19.0s,baz=360,slow=38						
ARU	**Arti**	**58.04**	**322**	LR	LR	13 50 38.4	
	comp=Z,41nm,18.4s,baz=172,slow=41						
ILAR	**Eielson Array**	**63.04**	**28**	P	**P**	**13 21 46.7**	**0.0**
	0.3nm,0.7s,baz=278,slow=6.3,SNR=3.1						
	0.3nm,0.7s						
INK	**Inuvik**	**67.61**	**24**	P	**P**	**13 22 17.4**	**+1.2**
	0.7nm,0.5s,baz=356,slow=1.9,SNR=3.6						
	0.7nm,0.5s						
KBZ	**Khabaz**	**70.17**	**310**	P	**P**	**13 22 34.1**	**+1.5**
	3.7nm,0.8s,baz=83,slow=5.1,SNR=7.6						
	3.7nm,0.8s						
FINES	**FINESS Array B**	**73.22**	**331**	P	**P**	**13 22 50.8**	**+0.3**
	2.0nm,0.6s,baz=49,slow=8.8,SNR=7.5						
	2.0nm,0.6s						
AKASG	**Malin Array Be**	**76.24**	**320**	P	**P**	**13 23 08.3**	**+0.1**
	1.0nm,0.5s,baz=55,slow=6.9,SNR=8.1						
	1.0nm,0.5s						
BRTR	**Keskin Array B**	**78.09**	**308**	P	**P**	**13 23 20.1**	**+1.1**
	1.9nm,0.8s,baz=94,slow=5.2,SNR=8.5						
	1.9nm,0.8s						
NB2	**NORSAR Subarra**	**79.56**	**334**	P	**P**	**13 23 26.4**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=51,slow=5.9						
NOA	**NORSAR Array B**	**79.56**	**334**	P	**P**	**13 23 26.5**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=50,slow=5.4,SNR=5.2						
	comp=Z,1.3nm,0.7s						
PDAR	**Pinedale Array**	**91.55**	**40**	P	**P**	**13 24 28.8**	**+1.8**
	comp=Z,0.2nm,0.4s,baz=336,slow=2.0,SNR=3.8						
	comp=Z,0.2nm,0.4s						

*NEIC **16** 13:13:05.9±1.1, 65.50N±0.02×144.45W±0.10, h7km±9km, Error ellipse: s-maj=6.2km s-min=2.2km az=70.0*
*AEIC **16** 13:13:06±1.2, 65.49N±0.03×144.47W±0.10, h12km±6km, ML3.1, ML3.2/82(NEIC), Error ellipse: s-maj=5.8km s-min=4.8km az=89.0*
*ANF **16** 13:13:06.2±0.3, 65.46N×144.53W, h6km±2km, ML3.5/49, ML3.4/48, Error ellipse: s-maj=1.8km s-min=1.4km az=12.0*
ISC 16 13:13:06.0±1.3, 65.50N±0.03×144.48W±0.02, h5km±11km, n138, σ0993/150, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I26K	**Coal Creek Min**	**0.59**	**109**	P	**Pg**	**13 13 17.8**	**+0.6**
	baz=289						
I26K				S	**Sb**	**13 13 25.9**	**-1.4**
	baz=289						
J25K	**Salcha River,**	**0.97**	**203**		**Pb**	**13 13 24.7**	**-0.6**
J25K	**Salcha River,**	**0.97**	**203**	P	**Pb**	**13 13 25.0**	**-0.3**
	baz=23,SNR=129						
J25K				S	**Sg**	**13 13 36.3**	**-0.7**
	baz=23						
J26L	**Joseph Creek**	**1.07**	**158**		**Pb**	**13 13 26.9**	**-0.2**
J26L					**Sg**	**13 13 40.3**	**-0.1**
J26L	**Joseph Creek**	**1.07**	**158**	IAML		13 13 42.3	
	comp=E,463nm,0.3s						
J26L	**Joseph Creek**	**1.07**	**158**	P	**Pb**	**13 13 26.9**	**-0.2**
	baz=339,SNR=806						
J26L				S	**Sg**	**13 13 40.1**	**-0.3**
	baz=339						
IL31		**1.25**	**235**		**Pn**	**13 13 29.7**	**-0.4**
ILAR	**Eielson Array**	**1.25**	**235**	Pn	**Pn**	**13 13 29.3**	**-0.9**
POKR	**Poker Plat Res**	**1.30**	**254**		**Pn**	**13 13 30.5**	**-0.3**
POKR	**Poker Plat Res**	**1.30**	**254**	IAML		13 13 50.6	
	comp=E,421nm,0.3s						
POKR				IAML		13 13 54.0	
	comp=N,354nm,0.2s						
POKR	**Poker Plat Res**	**1.30**	**254**	P	**Pn**	**13 13 30.5**	**-0.3**
	baz=72,SNR=33						
POKR				S	**Sg**	**13 13 47.8**	**+0.1**
	baz=72						
PS08	**TAPS Pump Stn8**	**1.38**	**227**		**Pn**	**13 13 31.4**	**-0.6**
H24K	**Noodor Dome**	**1.45**	**285**		**Pn**	**13 13 32.7**	**-0.2**
H24K					**Sg**	**13 13 52.9**	**+0.4**
H24K	**Noodor Dome**	**1.45**	**285**	P	**Pn**	**13 13 32.5**	**-0.5**
	baz=102,SNR=98						
H24K				S	**Sg**	**13 13 52.4**	**-0.1**
	baz=102						
HDA	**Harding Lake**	**1.52**	**225**		**Pn**	**13 13 33.3**	**-0.5**
HDA	**Harding Lake**	**1.52**	**225**	P	**Pn**	**13 13 33.3**	**-0.5**
	baz=43,SNR=83						
HDA				S	**Sn**	**13 13 53.4**	**-0.5**
	baz=43						
HDA				S	**Sn**	**13 13 53.4**	**-0.5**
	baz=43						
SCRK	**Sand Creek**	**1.54**	**172**		**Pn**	**13 13 34.1**	**-0.2**
SCRK	**Sand Creek**	**1.54**	**172**	IAML		13 13 54.8	
	comp=E,352nm,0.4s						
SCRK	**Sand Creek**	**1.54**	**172**	P	**Pn**	**13 13 34.1**	**-0.2**
	baz=352,SNR=175						
SCRK				S	**Sn**	**13 13 54.2**	**-0.5**
	baz=352						
COLA	**College**	**1.56**	**248**		**Pn**	**13 13 33.9**	**-0.4**
COLA					**Sg**	**13 13 55.4**	**-0.5**
COLA	**College**	**1.56**	**248**	P	**Pn**	**13 13 33.9**	**-0.4**
	baz=65						
COLA				Sg	**Sg**	**13 13 56.2**	**+0.3**
	baz=65						
TCOL	**CIGO, UAF Yank**	**1.56**	**248**		**Pn**	**13 13 34.0**	**-0.4**
TCOL	**CIGO, UAF Yank**	**1.56**	**248**	P	**Pn**	**13 13 33.9**	**-0.4**
	baz=65,SNR=75						
TCOL				Sg	**Sg**	**13 13 56.2**	**+0.2**
	baz=65						
PS07	**TAPS Pump Stn7**	**1.60**	**265**		**Pn**	**13 13 34.9**	**0.0**
CCB	**Clear Creek Bu**	**1.65**	**240**		**Pn**	**13 13 34.7**	**-0.8**
CCB					**Sg**	**13 13 58.3**	**-0.6**
CCB	**Clear Creek Bu**	**1.65**	**240**	IAML		13 13 59.1	
	comp=N,227nm,0.3s						
MDM	**Murphy Dome**	**1.67**	**253**		**Pn**	**13 13 35.2**	**-0.7**
MDM	**Murphy Dome**	**1.67**	**253**	IAML		13 14 01.0	
	comp=N,211nm,0.3s						
MDM				IAML		13 14 01.8	
	comp=E,216nm,0.3s						
RIDG	**Independent Ri**	**1.77**	**185**	P	**Pn**	**13 13 37.1**	**-0.3**
	baz=5.0						
RIDG				S	**Sb**	**13 14 00.4**	**-1.1**
	baz=5.0						
K24K	**Donnelly Dome**	**1.79**	**199**		**Pn**	**13 13 37.7**	**+0.1**
K24K	**Donnelly Dome**	**1.79**	**199**	P	**Pn**	**13 13 37.4**	**-0.2**
	baz=18,SNR=84						
K24K				Sb	**Sg**	**13 14 02.5**	**-1.0**
	baz=18						
K27K	**Chicken**	**1.80**	**144**		**Pn**	**13 13 37.4**	**-0.3**
K27K				IAML		13 14 04.4	
	comp=N,338nm,0.4s						
K27K	**Chicken**	**1.80**	**144**	P	**Pn**	**13 13 37.5**	**-0.2**
	baz=326						
K27K				S	**Sb**	**13 14 02.0**	**-0

MCK	**McKinley** baz=45	**2.61**	**229**	Sb	**Sb**	**13 14 26.7**	**+1.0**
MLY	**Manley** comp=N,91nm,0.4s	**2.67**	**263**		**Pn**	**13 13 48.6**	**-1.1**
MLY				IAML		13 14 38.8	
MLY	comp=E,98nm,0.3s			IAML		13 14 41.0	
MLY	**Manley** baz=77,SNR=10	**2.67**	**263**	P	**Pn**	**13 13 48.6**	**-1.1**
L27K	**Beaver Creek,**	**2.71**	**154**		**Pn**	**13 13 49.7**	**-0.5**
L27K	**Beaver Creek,** comp=E,100nm,0.5s	**2.71**	**154**	IAML		13 14 35.0	
L27K	**Beaver Creek,** baz=336,SNR=14	**2.71**	**154**	P	**Pn**	**13 13 49.7**	**-0.5**
BC03		**2.71**	**153**		**Pn**	**13 13 49.8**	**-0.3**
BCAR	**Beaver Creek A**	**2.71**	**153**	Pn	**Pn**	**13 13 49.5**	**-0.7**
DHY	**Denali Highway**	**2.74**	**209**		**Pn**	**13 13 51.5**	**+0.7**
DHY	**Denali Highway** comp=N,105nm,0.6s	**2.74**	**209**	IAML		13 14 32.0	
DHY	comp=E,87nm,1.0s			IAML		13 14 35.5	
DHY	**Denali Highway** baz=26,SNR=9.6	**2.74**	**209**	P	**Pn**	**13 13 51.3**	**+0.6**
DHY	baz=26			S	**Sn**	**13 14 24.0**	**-0.3**
RND	**Reindeer**	**2.83**	**224**		**Pn**	**13 13 52.1**	**+0.2**
RND	**Reindeer** comp=N,68nm,0.5s	**2.83**	**224**	IAML		13 14 34.4	
RND	comp=E,64nm,0.4s			IAML		13 14 35.6	
J29M	**Klondike Camp** baz=294	**2.86**	**109**	Sb	**Sb**	**13 14 34.7**	**+1.9**
COLD	**Coldfoot**	**2.89**	**310**		**Pn**	**13 13 53.4**	**+0.8**
COLD	**Coldfoot** baz=124	**2.89**	**310**	P	**Pn**	**13 13 53.4**	**+0.8**
BPAW	**Bear Paw Mtn.**	**3.12**	**246**		**Pn**	**13 13 54.6**	**-1.3**
BPAW	**Bear Paw Mtn.** comp=N,80nm,0.3s	**3.12**	**246**	IAML		13 14 48.6	
BPAW	**Bear Paw Mtn.** baz=60,SNR=6.7	**3.12**	**246**	P	**Pn**	**13 13 54.5**	**-1.3**
HARP	**HAARP** baz=5.2	**3.13**	**186**	P	**Pn**	**13 13 56.3**	**+0.4**
HARP	baz=5.2			Sb	**Sb**	**13 14 42.3**	**+1.9**
I21K	**Tanana**	**3.16**	**268**		**Pn**	**13 13 55.3**	**-1.1**
I21K	**Tanana** comp=N,73nm,0.7s	**3.16**	**268**	IAML		13 14 51.7	
I21K	comp=E,75nm,0.6s			IAML		13 14 54.2	
I21K	**Tanana** baz=81	**3.16**	**268**	P	**Pn**	**13 13 55.2**	**-1.1**
M26K	**Nabesna, AK**	**3.18**	**167**		**Pn**	**13 13 56.8**	**+0.1**
M26K	**Nabesna, AK** comp=N,50nm,0.5s	**3.18**	**167**	IAML		13 14 51.4	
M26K	**Nabesna, AK** baz=349,SNR=8.8	**3.18**	**167**	P	**Pn**	**13 13 56.6**	**-0.1**
WAT1	**Susitna Watana** baz=32	**3.22**	**216**	Sb	**Sb**	**13 14 45.1**	**+2.0**
TRF	**Thorofare Moun**	**3.25**	**233**		**Pn**	**13 13 57.7**	**-0.1**
TRF	**Thorofare Moun** comp=E,58nm,0.6s	**3.25**	**233**	IAML		13 14 52.2	
TRF	**Thorofare Moun** baz=48,SNR=9.4	**3.25**	**233**	P	**Pn**	**13 13 57.4**	**-0.4**
WAT6	**Susitna Watana**	**3.26**	**208**		**Pn**	**13 13 58.6**	**+0.7**
WAT6	**Susitna Watana** baz=25	**3.26**	**208**	P	**Pn**	**13 13 58.2**	**+0.3**
WAT6	baz=25			Sb	**Sb**	**13 14 45.8**	**+1.3**
EPYK	**Eagle Plains**	**3.30**	**71**		**Pn**	**13 13 57.5**	**-0.7**
EPYK	**Eagle Plains** comp=E,41nm,0.3s	**3.30**	**71**	IAML		13 14 56.9	
EPYK	**Eagle Plains** baz=258	**3.30**	**71**	P	**Pn**	**13 13 57.6**	**-0.7**
M27K	**Edge Creek, AK**	**3.36**	**159**		**Pn**	**13 13 59.0**	**-0.2**
M27K	**Edge Creek, AK** comp=E,59nm,0.8s	**3.36**	**159**	IAML		13 14 53.8	
M27K	comp=N,72nm,0.7s			IAML		13 14 59.1	
M27K	**Edge Creek, AK** baz=341,SNR=13	**3.36**	**159**	P	**Pn**	**13 13 58.8**	**-0.4**
KTH	**Kantishna Hill**	**3.40**	**238**		**Pn**	**13 13 59.4**	**-0.3**
KTH	comp=N,39nm,0.5s			IAML		13 14 54.6	
H21K	**Melozitna Rive**	**3.46**	**276**	Pn	**Pn**	**13 13 57.0**	**-3.6**
H21K	comp=N,36nm,1.0s			IAML		13 14 57.0	
H21K	comp=E,56nm,0.6s			IAML		13 14 58.7	
BVCY	**Beaver Creek**	**3.48**	**151**		**Pn**	**13 14 01.1**	**+0.3**
BVCY	**Beaver Creek** baz=334,SNR=7.4	**3.48**	**151**	P	**Pn**	**13 14 00.8**	**-0.1**
TOLK	**Toolik Lake Re**	**3.73**	**330**	Pn	**Pn**	**13 14 05.5**	**+1.2**
TOLK	**Toolik Lake Re** baz=145	**3.73**	**330**	P	**Pn**	**13 14 05.9**	**+1.7**
TOLK	baz=145			S	**Sn**	**13 14 49.8**	**+1.3**
CHUM	**Lake Minchumin**	**3.74**	**248**		**Pn**	**13 14 03.0**	**-1.2**
CHUM	**Lake Minchumin** baz=61	**3.74**	**248**	P	**Pn**	**13 14 03.3**	**-0.9**
IMAR	**Indian Mountai**	**3.86**	**281**	Pn	**Pn**	**13 14 02.8**	**-3.1**
SCM	**Sheep Creek Mo**	**3.89**	**200**		**Pn**	**13 14 08.1**	**+1.6**
SCM	comp=E,47nm,1.4s			IAML		13 15 11.4	
SCM	**Sheep Creek Mo** baz=18	**3.89**	**200**	P	**Pn**	**13 14 08.1**	**+1.6**
SCM	baz=18			Sb	**Sb**	**13 15 04.3**	**+1.8**
CAST	**Castle Rocks** baz=54	**3.90**	**241**	P	**Pn**	**13 14 05.4**	**-1.1**
N25K	**Chitina, Valde** baz=0.8	**3.91**	**181**	P	**Pn**	**13 14 06.6**	**-0.1**
N25K	baz=0.8			Sb	**Sb**	**13 15 04.7**	**+1.7**
M23K	**Glacier View** baz=20	**3.99**	**203**	P	**Pn**	**13 14 08.6**	**+0.8**
M23K	baz=20			Sb	**Sb**	**13 15 06.6**	**+1.3**
YUK2	**White River**	**4.06**	**155**		**Pn**	**13 14 09.1**	**+0.2**
KLU	**Klutina** baz=8.5	**4.07**	**190**	Sb	**Sb**	**13 15 09.2**	**+1.5**
SML	**Sawmill** baz=23	**4.08**	**207**	Sb	**Sb**	**13 15 10.0**	**+2.0**
YUK3	**Moose Creek**	**4.14**	**153**		**Pn**	**13 14 10.1**	**+0.1**
YUK3	**Moose Creek** baz=336,SNR=8.4	**4.14**	**153**	P	**Pn**	**13 14 09.9**	**-0.2**
PPLA	**Purkeypile** baz=49	**4.26**	**236**	P	**Pn**	**13 14 10.9**	**-0.8**
J20K	**Nowinta River**	**4.34**	**257**		**Pn**	**13 14 11.4**	**-1.0**
J20K	**Nowinta River** comp=E,33nm,0.5s	**4.34**	**257**	IAML		13 15 25.4	
J20K	comp=N,31nm,0.5s			IAML		13 15 37.7	
J20K	**Nowinta River** baz=68	**4.34**	**257**	P	**Pn**	**13 14 11.5**	**-1.0**
M30M	**Minto, Yukon**	**4.47**	**127**		**Pn**	**13 14 12.6**	**-1.8**
M30M	comp=E,30nm,0.8s			IAML		13 15 33.2	
M30M	**Minto, Yukon** baz=314	**4.47**	**127**	P	**Pn**	**13 14 13.0**	**-1.4**
SKT	**Skwentna**	**4.72**	**225**		**Pn**	**13 14 18.0**	**+0.2**
SKT	comp=E,16nm,0.6s			IAML		13 15 32.5	
SKT	comp=N,18nm,0.8s			IAML		13 15 39.7	
SKT	**Skwentna** baz=38	**4.72**	**225**	P	**Pn**	**13 14 17.8**	**0.0**
YUK8	**Steele Glacier** baz=335,SNR=5.6	**4.73**	**151**	P	**Pn**	**13 14 18.4**	**+0.3**
CTG	**Chitna Glacier** baz=344	**4.77**	**161**	P	**Pn**	**13 14 18.9**	**+0.4**
CTGM	**Chitina Glacie**	**4.77**	**161**		**Pn**	**13 14 19.4**	**+0.8**
YUK4	**Talbot Arm** baz=330	**4.92**	**145**	P	**Pn**	**13 14 20.1**	**-0.6**
L20K	**Farewell, AK** baz=50	**5.13**	**238**	P	**Pn**	**13 14 22.2**	**-1.2**
INK	**Inuvik**	**5.15**	**52**		**Pn**	**13 14 23.4**	**-0.1**
INK	**Inuvik** baz=242	**5.15**	**52**	P	**Pn**	**13 14 23.3**	**-0.3**
HMT	**Hamilton** comp=N,13nm,0.9s	**5.18**	**179**	Pn	**Pn**	**13 14 25.9**	**+1.8**
HMT				IAML		13 16 08.7	
N30M	**Aishikik Lake** baz=324	**5.23**	**137**	P	**Pn**	**13 14 24.8**	**-0.1**
M20K	**Styx River**	**5.29**	**231**	Pn	**Pn**	**13 14 26.9**	**+1.2**
M20K	**Styx River** baz=43	**5.29**	**231**	P	**Pn**	**13 14 26.0**	**+0.3**
YUK6	**Outpost Mounta**	**5.34**	**146**	P	**Pn**	**13 14 26.8**	**+0.2**
HYT	**Haines Junctio** baz=332	**5.65**	**143**	Pn	**Pn**	**13 14 31.4**	**+0.7**
HYT	**Haines Junctio** baz=329	**5.65**	**143**	P	**Pn**	**13 14 30.8**	**+0.1**
O30N	**Mendenhall** baz=325	**6.08**	**137**	P	**Pn**	**13 14 36.1**	**-0.3**
C36M	**Paulatuk** baz=254	**8.72**	**55**	P	**Pn**	**13 15 10.4**	**-2.2**

IDC 16 13:19:55.9±1.5, 48°.71S×127°.40E, h0km, mb3.8/4, mbtmp3.8/4, MS3.5/1, Error ellipse: s-maj=81.5km s-min=26.1km az=87.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W1	**Cape Leeuwin H**	**16.94**	**320**	T	T	13 41 19.1	
	baz=145,slow=73,SNR=6.9						
H01W2	**Cape Leeuwin H**	**16.95**	**320**	T	T	13 41 07.5	
	baz=145,slow=73,SNR=8.0						
H01W3	**Cape Leeuwin H**	**16.96**	**320**	T	T	13 41 13.1	
	baz=145,slow=73,SNR=9.5						
ASAR	**Alice Springs**	**25.52**	**14**	P	P	13 25 26.0	0.0
	2.1nm,0.8s,baz=192,slow=9.0,SNR=26 2.1nm,0.8s						
WRA	**Warramunga Arr**	**29.24**	**13**	P	P	13 25 58.8	-0.7
	0.5nm,0.9s,baz=198,slow=8.3,SNR=2.5 0.5nm,0.9s						
VNDA	**Vanda**	**31.78**	**166**	P	P	13 26 21.0	-0.3
	0.8nm,0.8s,baz=312,slow=7.6,SNR=6.0 0.8nm,0.8s						
MAW	**Mawson**	**36.76**	**215**	LR	LR	13 40 19.9	
	comp=Z,65nm,18.8s,baz=111,slow=33						
CMAR	**Chiang Mai Arr**	**71.52**	**332**	P	P	13 31 19.3	+0.9
	0.8nm,0.8s,baz=168,slow=6.3,SNR=2.5 0.8nm,0.3s						

*IDC **16** 13:23:48.8±2.2, 33°.99N×137°.55E, h324km±108km, mb2.8/2, mbtmp3.3/3, Error ellipse: s-maj=159.5km s-min=95.0km az=12.0*
*JMA **16** 13:23:49.1±0.2, 34°N±2°×13°7E±°, h337km, MV3.0/30, ENSYUNADA*

ISC 16 13:23:49.0±1.1, 34°.2N±0°.1×137°.4E±0°.1, h347km, n13, σ0s.74/16, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEG	**Eigenji**	**1.22**	**319**	P	**Pn**	**13 24 35.9**	**+0.5**
JYTA	**Yamagatatanaiei**	**1.47**	**339**	P	**Pn**	**13 24 37.0**	**+0.5**
JWY	**Kouya**	**1.48**	**270**	P	**Pn**	**13 24 36.6**	**-0.2**
JTNC	**Tanabenakahech**	**1.52**	**255**	P	**Pn**	**13 24 36.5**	**-0.5**
JOD2	**Odawara 2**	**1.75**	**53**	P	**Pn**	**13 24 38.6**	**+0.3**
JWT	**Wachi**	**1.94**	**304**	P	**Pn**	**13 24 39.9**	**+0.4**
JRY	**Ryogami san**	**2.19**	**34**	P	**Pn**	**13 24 42.5**	**+1.2**
JRY				*e*S	**S**	**13 25 23.2**	**-0.2**
JKG	**Kaga**	**2.22**	**338**	P	**Pn**	**13 24 42.1**	**+0.6**
JHU	**Hanno**	**2.26**	**43**	P	**Pn**	**13 24 42.0**	**+0.2**
JHU				S	**S**	**13 25 22.8**	**-1.5**
MJAR	**Matsushiro Arr**	**2.42**	**16**	P	**Pn**	**13 24 43.3**	**+0.2**
	1.8nm,0.4s,baz=184,slow=9.2,SNR=8.4						
MJAR				S	**S**	**13 25 25.4**	**-1.1**
	1.8nm,0.8s,baz=198,slow=15,SNR=2.3						
JAG	**Ashikaga**	**2.78**	**37**	P	**Pn**	**13 24 46.0**	**-0.1**
WRA	**Warramunga Arr**	**53.94**	**184**	P	**P**	**13 32 38.1**	**+0.1**
	0.4nm,0.3s,baz=360,slow=7.5,SNR=23 0.4nm,0.3s						
ASAR	**Alice Springs**	**57.66**	**184**	P	**P**	**13 33 04.8**	**+0.7**
	0.1nm,0.3s,baz=21,slow=11,SNR=6.0 0.1nm,0.3s						

MAN 16 13:39:57.0, 12°.86N×121°.08E, h1km, mb3.8, ML2.5, MS2.0, Mindoro

*INET **16** 13:40:18.6±0.3, 12°.84N×87°.09W, h5km±2km, MW2.1*

SNET 16 13:40:24.5±1.1, 13°.57N×88°.66W, h10km±3km, ML2.5, 2D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PQSS	**Presa 15 de Se**	**0.11**	**59**	*i*P	Pg	13 40 28.0	+0.8
PQSS				IAML		13 40 28.3	
	comp=Z,3μm,0.1s						
PQSS				*e*S	Sg	13 40 30.4	+1.3
COEB	**Comit de Eme**	**0.14**	**119**	*e*P	Pg	13 40 27.9	+0.1
COEB				*e*S	Sg	13 40 31.1	+1.1
COEB				IAML		13 40 32.7	
	comp=Z,1μm,0.2s						
SCLA	**Alcaldia de Sa**	**0.15**	**332**	*i*P	Pg	13 40 28.9	+1.0
SNVI	**San Vicente**	**0.18**	**284**	*e*P	Pg	13 40 29.6	+1.1
SNVI				*e*S	Sg	13 40 32.7	+1.4
COEG	**Centro de Oper**	**0.22**	**284**	*i* P	Pg	13 40 30.0	+0.8
COEG				*e*S	Sg	13 40 33.7	+1.3
COEG				IAML		13 40 36.9	
	comp=Z,1μm,0.3s						
PAVA	**Las Pavas**	**0.31**	**298**	*i* P	Pb	13 40 31.6	-0.6
SJTE	**Alcalda de S**	**0.34**	**278**	*i* P	Pg	13 40 32.0	+0.7
SJTE				IAML		13 40 39.2	
	comp=Z,245nm,0.2s						
LFRS	**El Faro**	**0.40**	**278**	*e*P	Pg	13 40 33.1	+0.7
LLGN	**La Laguna**	**0.66**	**335**	*e*P	Pg	13 40 37.2	0.0
LLGN				*e*S	Sg	13 40 46.5	+0.7
JAYA	**Jayaque - finc**	**0.78**	**277**	*e*P	Pg	13 40 39.6	+0.1
JAYA				*i* P	Pb	13 40 39.7	-0.5
JAYA				*e*S	Sb	13 40 50.5	-0.3

MAN 16 13:46:22.7, 12°.72N×121°.05E, h22km, mb3.9, ML2.7, MS2.3, Mindoro

*IDC **16** 13:46:21.4±0.5, 20°.34S×168°.94E, h0km, mb4.5/20, mbtmp4.5/22, ML4.4/2, MS4.9/53, Error ellipse: s-maj=17.9km s-min=15.0km az=156.0*
*BJI **16** 13:46:22.8±0.0, 20°.86S×169°.27E, h15km, mb4.9/53, mB5.5/55, Ms5.0/55, Ms7 4.8/54*
*NEIC **16** 13:46:24.3±2.9, 20°.58S±0°.04×168°.9E±0°.1, h10km±1km, mb5.2/54, Ms_20 5.2/284, Mww5.7, Error ellipse: s-maj=16.6km s-min=6.4km az=77.0*
*MOS **16** 13:46:27.3±1.7, 20°.46S×168°.70E, h42km, mb5.4/25, MS5.1/16, Error ellipse: s-maj=11.3km s-min=10.0km az=81.7*
*GCMT **16** 13:46:33.3±0.1, 20°.37S±0°.01×168°.70E±0°.01, h24km, MW5.6/134, Moment Tensor Solution. s133,c237; s134,c249; Duration: 1ᵗ6 Moment tensor: Scale 10¹⁷ Nm; Mrr2.73±.04; Mθθ-0.37±.03; Mϕϕ-2.36±.03; Mrθ0.88±.05; Mθϕ1.35±.03; Mϕr-1.76±.05; Best double couple: Ms3.49200×10¹⁷ NP1:ϕs333.00000°, δ28.00000°, λ90.00000°. NP2:ϕs153.00000°, δ62.00000°, λ90.00000°. Principal axes: T 3.3360, Plg73.0000°, Azm64.0000°; N 0.3120, Plg0.0000°, Azm333.0000°; P -3.6480, Plg17.0000°, Azm243.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **16** 13:46:36, 20°.48S×168°.81E, h20km, Moment Tensor Solution. Duration: 24ᵗ0 Moment tensor: Scale 10¹⁷Nm; Mrr2.69; Mθθ-0.04; Mϕϕ-2.65; Mrθ0.53; Mθϕ1.55; Mϕr-2.42; Fault plane solution: Mo3.96000×10¹⁷ NP1: ϕs323.00000°, δ27.00000°, λ71.00000°. NP2: ϕs164.00000°, δ65.00000°, λ99.00000°. Principal axes: T 3.6195, Plg69.0000°, Azm93.0000°; N 0.6052, Plg9.0000°, Azm340.0000°; P -4.2247, Plg19.0000°, Azm247.00000°;*

ISC 16 13:46:24.8±0.5, 20°.51S±0°.05×169°.02E±0°.05, h14km±2km, h14km:pP-P, n663, σ2s.04/536, mb5.1/91, MS5.2/218, 10C-28D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**1.33**	**224**	Pn	**Pn**	**13 46 45.8**	**-3.2**
PINNC	**Pines Island,**	**2.55**	**215**	Pn	**Pn**	**13 47 04.1**	**-1.6**
KOUNC	**Koumac, New Ca**	**4.43**	**269**		**Pn**	**13 47 29.0**	**-2.6**
MSVF	**Nonsavu**	**8.97**	**74**	Pn	Pn	13 48 39.4	+5.3
MSVF	1.3nm,0.3s,baz=251,slow=12,SNR=26			LR	LR	13 51 29.5	
	comp=Z,33μm,18.8s,baz=247,slow=34						
MSVF	**Nonsavu**	**8.97**	**74**	Pn	Pn	13 48 40.4	+6.3
MSVF	**Nonsavu**	**8.97**	**74**	*c i*P	Pn	13 48 40.2	+6.1
HNR	**Honiara** comp=Z,2μm,18.2s,baz=140,slow=34	**14.07**	**320**	LR	LR	13 54 12.8	
OUZ	**Omahuta**	**15.20**	**166**	P	**P**	**13 50 02.8**	**-1.2**
EIDS	**Eidsvold** baz=17,SNR=4.6	**17.21**	**250**	P	**Pn**	**13 50 25.6**	**+0.8**
EIDS	**Eidsvold**	**17.21**	**250**		**Pn**	**13 50 22.6**	**-2.2**
ARMA	**Armidale** baz=18,SNR=6.1	**18.52**	**234**	P	**Pn**	**13 50 42.3**	**+1.2**
ARMA	**Armidale**	**18.52**	**234**	P	**P**	**13 50 39.4**	**-1.6**
HLRZ	**Highlands Stat**	**18.79**	**162**	P	Pn	13 50 52.9	+8.8
HAZ	**Te Kaha**	**18.80**	**158**	P	**Pn**	**13 50 47.9**	**+3.7**
HAZ				S	S	13 54 44.0	+27
RUGZ	**Raukumara Rang**	**18.95**	**158**	P	**Pn**	**13 50 48.3**	**+2.0**
PKGZ	**Pakihiroa**	**19.02**	**158**	P	**Pn**	**13 50 51.8**	**+4.8**
URZ	**Urewera** 1.1nm,0.3s,baz=297,slow=23,SNR=10	**19.02**	**160**	Pn	**Pn**	**13 50 49.5**	**+2.5**
URZ	comp=Z,7μm,18.4s,baz=26,slow=35 11nm,0.7s			LR	LR	13 57 34.4	
URZ	**Urewera**	**19.02**	**160**	P	**Pn**	**13 50 49.5**	**+2.5**
URZ	**Urewera**	**19.02**	**160**	P	**Pn**	**13 50 48.3**	**+1.3**
WMGZ	**Waiomatatini S**	**19.08**	**157**	P	**Pn**	**13 50 51.1**	**+3.4**
WMGZ				S	S	13 54 43.9	+21
MWZ	**Matawai**	**19.23**	**159**	P	**Pn**	**13 50 51.5**	**+2.0**
MWZ				S	S	13 54 44.3	+18
TWGZ	**Tauwhareparae**	**19.24**	**158**	P	**Pn**	**13 50 52.7**	**+3.0**
TWGZ				S	S	13 54 51.2	+25
PUZ	**Puketiti**	**19.25**	**157**	P	**Pn**	**13 50 50.7**	**+0.9**
PUZ				S	S	13 54 50.0	+24
HATZ	**Hinemaiaia**	**19.31**	**163**	P	Pn	13 50 57.9	+7.4
AFI	**Afiamalu** 1.3nm,0.3s,baz=270,slow=16,SNR=2.1	**19.48**	**73**	P	**P**	**13 50 51.7**	**+0.2**
AFI	comp=Z,6μm,19.7s,baz=254,slow=32 40nm,0.7s			LR	LR	13 56 54.3	
RMQ	**Roma** baz=19,SNR=20	**19.50**	**248**	P	**Pn**	**13 50 53.1**	**+0.3**
SNGZ	**Shannon Statio**	**19.57**	**160**	P	**Pn**	**13 50 56.3**	**+2.7**
SNGZ				S	Sn	13 54 58.2	+25
RAHZ	**Arahi**	**19.62**	**161**	P	**Pn**	**13 50 58.1**	**+3.9**
RAHZ				S	Sn	13 54 58.3	+24
RIGZ	**Rimuhau**	**19.64**	**159**	P	**Pn**	**13 50 56.0**	**+1.5**
RIGZ				S	Sn	13 55 05.2	+30
BKZ	**Black Stump Fm**	**19.68**	**163**	P	**Pn**	**13 50 56.2**	**+1.3**
BKZ	comp=Z,78nm,0.8s			IAmb	IAmb	13 51 08.1	
MGCD	**Mangrove Creek** baz=20,SNR=4.3	**20.34**	**228**	P	Pn	13 51 04.4	+1.7
BFZ	**Birch Farm**	**21.03**	**165**	P	**P**	**13 51 08.5**	**+0.4**
BFZ	comp=Z,81nm,0.9s			IAmb	IAmb	13 51 20.5	
CTA	**Charters Tower** comp=Z,10nm,1.0s,baz=67,slow=13,SNR=3.7	**21.35**	**267**	P	**P**	**13 51 11.5**	**-0.3**
CTA	comp=Z,4μm,21.3s,baz=87,slow=35 comp=Z,10nm,1.0s			LR	LR	13 58 47.8	
CTAO	**Charters Tower**	**21.35**	**267**	P	**P**	**13 51 11.7**	**-0.1**
CTAO	comp=Z,155nm,1.4s			IAmb	IAmb	13 51 25.1	
CTAO	**Charters Tower**	**21.35**	**267**	P	**P**	**13 51 11.7**	**-0.1**
CTAO	comp=Z,155nm,1.5s			pmax	pmax		
THZ	**Tophouse**	**21.44**	**172**	P	**P**	**13 51 15.8**	**+3.2**
THZ	comp=Z,70nm,0.8s			IAmb	IAmb	13 51 36.6	
LTZ	**Lake Taylor**	**22.37**	**174**	P	**P**	**13 51 23.8**	**+1.2**
LTZ	comp=Z,189nm,1.3s			IAmb	IAmb	13 51 50.9	
CNB	**Canberra Magne** baz=23,SNR=13	**22.72**	**225**	P	**P**	**13 51 30.0**	**+3.6**
CAN	**Canberra**	**22.97**	**226**	P	**P**	**13 51 29.1**	**+0.2**
CAN	comp=Z,117nm,1.1s			IAmb	IAmb	13 51 43.3	
CAN	**Canberra**	**22.97**	**226**	P	**P**	**13 51 29.1**	**+0.2**
CAN	comp=Z,117nm,1.1s			pmax	pmax		
KRVT	**Keravat (AS076** comp=Z,16nm,0.7s,baz=131,slow=19,SNR=4.0	**23.08**	**312**	P	**P**	**13 51 29.5**	**-0.7**
RPZ	**Rata Peaks**	**23.20**	**176**	P	**P**	**13 51 36.6**	**+5.4**
RPZ	comp=Z,27nm,1.0s,baz=61,slow=1.3,SNR=6.7			LR	LR	14 00 30.1	
	comp=Z,6μm,18.0s,baz=350,slow=36						
RPZ	**Rata Peaks** comp=Z,8μm,20.0s	**23.20**	**176**	IAMs_20	IAMs_20	14 00 28.9	
MTSU	**Mount Surprise** baz=23,SNR=12	**23.42**	**272**	P	**P**	**13 51 34.1**	**+0.4**
QLP	**Quilpie** baz=23,SNR=4.7	**23.49**	**250**	P	**P**	**13 51 33.6**	**-0.7**
CMSA	**Cobar Meteorol** baz=24,SNR=17	**23.61**	**238**	P	**P**	**13 51 35.2**	**-0.2**
PMG	**Port Moresby** comp=Z,17nm,0.8s,baz=111,slow=9.8,SNR=1.1	**23.80**	**294**	P	**P**	**13 51 35.9**	**-1.4**
PMG	comp=Z,3μm,18.3s,baz=134,slow=35 comp=Z,17nm,0.8s			LR	LR	14 00 08.0	
COEN	**Coen** baz=25,SNR=9.2	**25.51**	**281**	P	**P**	**13 51 54.5**	**+1.6**
COEN	**Coen**	**25.51**	**281**	P	**P**	**13 51 53.3**	**+0.4**
COEN	comp=Z,89nm,1.2s			IAmb	IAmb	13 52 08.7	
TOO	**Toolangi** baz=27,SNR=6.5	**26.57**	**225**	P	**P**	**13 52 05.7**	**+3.2**
TOO	**Toolangi**	**26.57**	**225**	P	**P**	**13 52 01.1**	**-1.4**
TOO	comp=Z,91nm,1.3s			IAmb	IAmb	13 52 16.2	
TOO	**Toolangi**	**26.57**	**225**	P	**P**	**13 52 01.1**	**-1.4**
TOO	comp=Z,91nm,1.3s			pmax	pmax		
STKA	**Stephens Creek** comp=Z,4.1nm,0.6s,baz=82,slow=11,SNR=12	**27.01**	**240**	P	**P**	**13 52 05.4**	**-1.0**
STKA	comp=Z,3μm,19.0s,baz=101,slow=36 comp=Z,4.1nm,0.6s			LR	LR	14 02 44.1	
STKA	**Stephens Creek** baz=27,SNR=8.2	**27.01**	**240**	P	**P**	**13 52 06.1**	**-0.3**
STKA	**Stephens Creek**	**27.01**	**240**	P	**P**	**13 52 06.8**	**+0.4**
STKA	**Stephens Creek**	**27.01**	**240**	P	**P**	**13 52 06.8**	**+0.4**
STKA	comp=Z,21nm,1.5s			pmax	pmax		
QIS	**Mount Isa** baz=27,SNR=4.5	**27.53**	**265**	P	**P**	**13 52 11.7**	**+0.5**
RAR	**Rarotonga** comp=Z,1μm,20.3s,baz=269,slow=32	**29.15**	**97**	LR	LR	14 01 53.3	
HTT	**Hallett** baz=30,SNR=3.5	**29.63**	**238**	P	**P**	**13 52 29.3**	**-0.6**
BBOO	**Buckleboo** comp=Z,27nm,0.9s	**31.77**	**240**	P	**P**	**13 52 49.4**	**+0.7**
BBOO				IAmb	IAmb	13 53 08.1	
WR0	**Warramunga Arr**	**32.32**	**265**	P	**P**	**13 52 51.1**	**-2.5**
WR0	comp=Z,22nm,0.9s			IAmb	IAmb	13 53 07.3	
WB0	**Warramunga Arr**	**32.48**	**265**	P	**P**	**13 52 52.9**	**-2.2**
WB0	comp=Z,29nm,0.9s			IAmb	IAmb	13 52 60.0	
WB2	**Warramunga Arr**	**32.50**	**265**	P	**P**	**13 52 53.0**	**-2.3**
WB2	comp=Z,27nm,1.1s			IAmb	IAmb	13 53 09.5	
WRAB	**Tennant Creek**	**32.50**	**265**	P	**P**	**13 52 52.7**	**-2.6**
WRAB	comp=Z,23nm,1.0s			IAmb	IAmb	13 53 00.1	
WRAB	**Tennant Creek** comp=Z,4μm,18.0s	**32.50**	**265**	IAMs_20	IAMs_20	14 06 15.6	
WRAB	**Tennant Creek**	**32.50**	**265**	*e*P	**P**	**13 52 52.9**	**-2.4**
WRAB	comp=Z,20nm,1.1s			pmax	pmax		
WRA	**Warramunga Arr** comp=Z,2.9nm,0.6s,baz=93,slow=8.4,SNR=34	**32.51**	**265**	P	**P**	**13 52 52.4**	**-2.9**
WRA	comp=Z,1.9nm,0.9s,baz=99,slow=2.9,SNR=2.0			PcP	**PcP**	**13 55 41.0**	**-1.2**
WRA	comp=Z,4μm,18.2s,baz=87,slow=37			LR	LR	14 06 26.6	
WRA	comp=Z,1.1nm,1.1s,baz=293,slow=2.7,SNR=6.2 comp=Z,2.9nm,0.6s			P3KPbc		14 24 21.9	
WRA	**Warramunga Arr**	**32.51**	**265**	P	**P**	**13 52 52.9**	**-2.5**
WRA	**Warramunga Arr**	**32.51**	**265**	P	**P**	**13 52 52.9**	**-2.5**
AS31	**Alice Springs**	**32.64**	**258**	P	**P**	**13 52 54.7**	**-1.8**
ASAR	**Alice Springs** comp=Z,10.0nm,0.6s,baz=87,slow=9.1,SNR=103	**32.64**	**258**	P	**P**	**13 52 54.2**	**

ASAR Alice Springs 32.64 258 P P 13 52 54.8 -1.7
ASAR Alice Springs 32.64 258 P P 13 52 54.8 -1.7
GENI Genyem 33.30 299 P P 13 53 01.6 -0.6
comp=Z,73nm,1.1s
MTN Manton Dam 37.01 276 P P 13 53 32.9 -1.4
baz=37,SNR=4.6
MTN Manton Dam 37.01 276 P P 13 53 33.0 -1.4
MTN IAmb IAmb 13 53 51.3
comp=Z,44nm,1.0s
WRKA Warakurna 37.72 255 P P 13 53 38.8 -1.5
baz=38,SNR=7.8
FORT Forrest 38.13 246 P P 13 53 44.0 +0.4
FORT IAmb IAmb 13 53 57.9
comp=Z,44nm,0.8s
KNRA Kununurra 38.50 270 P P 13 53 44.7 -2.1
baz=38,SNR=12
KNRA Kununurra 38.50 270 P P 13 53 45.0 -1.8
KNRA IAmb IAmb 13 54 03.8
comp=Z,44nm,0.8s
TBI Tubuai 38.53 102 *e*P **P 13 53 48.5 +1.5**
comp=Z,352nm,28.5s
TBI *e*S **S 13 59 46.0 +3.5**
comp=Z,1μm,31.5s
TBI *e*LQ LQ 14 02 43.4
comp=Z,7μm,31.0s
TBI *e*LR LR 14 04 23.0
comp=Z,2μm,26.5s
PPT2 Papeete2 39.17 93 *e*P **P 13 53 53.9 +1.3**
comp=Z,282nm,26.2s
PPT2 *e*S **S 13 59 57.0 +4.5**
comp=Z,2μm,26.8s
PPT2 *e*LQ LQ 14 03 01.4
comp=Z,8μm,31.0s
PPT2 *e*LR LR 14 04 42.5
comp=Z,5μm,25.5s
PPT Papeete 39.18 93 P **P 13 53 52.6 0.0**
comp=Z,36nm,1.1s,baz=202,slow=19,SNR=1.8
PPT LR LR 14 08 55.8
comp=Z,1μm,18.6s,baz=258,slow=34
comp=Z,36nm,1.1s
FAKI Fak Fak 39.87 291 P **P 13 53 56.3 -2.0**
FAKI IAmb IAmb 13 54 11.1
comp=Z,59nm,1.2s
GUMO Guam 41.38 323 LR LR 14 11 00.5
comp=Z,967nm,18.7s,baz=141,slow=36
SIJI Sorong 41.73 293 LR LR 14 11 14.7
comp=Z,2μm,21.2s,baz=132,slow=36
BATI Baunata 44.79 276 LR LR 14 13 27.6
comp=Z,3μm,20.9s,baz=139,slow=36
PSA00 Pilbara Seismi 45.75 259 P **P 13 54 45.5 -0.6**
SANI Sanana 45.80 288 P **P 13 54 44.4 -2.1**
comp=Z,989nmcomp=Z,48nm,0.8s
MBWA Marble Bar 45.92 260 P **P 13 54 47.1 -0.2**
KLBR Kellerberrin 46.99 246 P **P 13 54 54.6 -1.0**
baz=47,SNR=7.5
NWAO Narrogin (SRO) 47.46 244 IAMs_20 IAMs_20 14 14 54.1
comp=Z,3μm,19.0s
MORW Morawa 48.51 249 P **P 13 55 08.3 +0.8**
baz=48,SNR=4.3
LUWI Luwuk 49.12 287 P **P 13 55 14.4 +2.1**
comp=Z,1μmcomp=Z,48nm,0.9s
BNSI Bone 50.15 282 P **P 13 55 23.1 +3.0**
comp=Z,31nm,1.1s
APSI Ampana 50.19 287 P **P 13 55 23.8 +3.4**
comp=Z,569nmcomp=Z,36nm,1.0s
KAPI Kappang 50.24 281 LR LR 14 18 48.7
comp=Z,572nm,20.1s,baz=126,slow=39
TAOE Nuku Hiva Isla 50.33 84 *e*P **P 13 55 23.2 +1.5**
comp=Z,301nm,25.6s
TAOE *e*S **S 14 02 36.0 +1.4**
comp=Z,2μm,26.6s
TAOE *e*LR LR 14 09 52.9
comp=Z,3μm,26.9s
SPSI Sidrap Palu 50.63 282 P **P 13 55 25.3 +1.5**
comp=Z,15nm,1.2s
DAV Davao City (W) 50.73 298 LR LR 14 16 54.1
comp=Z,331nm,20.7s,baz=109,slow=36
TTSI Tana Toraja 50.95 283 P **P 13 55 28.1 +1.9**
comp=Z,24nm,1.2s
TOLI2 Tolitoli 51.86 289 P **P 13 55 32.4 -0.7**
TOLI2 IAmb IAmb 13 55 42.5
comp=Z,26nm,1.0s
MPSI Mapaga 52.31 287 P **P 13 55 33.0 -3.4**
comp=Z,656nmcomp=Z,44nm,1.0s
JCJ Chichijima 53.99 330 LR LR 14 19 38.9
comp=Z,248nm,18.6s,baz=120,slow=37
BBKI Banjar Baru 55.35 280 P **P 13 56 01.6 +2.9**
comp=Z,20nm,1.1s
VNDA Vanda 57.16 182 P **P 13 56 10.3 -0.3**
comp=Z,0.9nm,0.6s,baz=345,slow=6.7,SNR=8.3
VNDA LR LR 14 16 42.0
comp=Z,619nm,20.4s,baz=20,slow=32
comp=Z,0.9nm,0.6s
VNDA Vanda 57.16 182 P **P 13 56 11.5 +0.9**
VNDA Vanda 57.16 182 P **P 13 56 11.5 +0.9**
VNDA pmax pmax
comp=Z,13nm,1.1s
SBA Scott Base 57.40 181 P **P 13 56 13.5 +1.2**
SBA IAmb IAmb 13 56 27.0
comp=Z,64nm,1.4s
SBA Scott Base 57.40 181 P **P 13 56 13.5 +1.2**
SBA pmax pmax
comp=Z,64nm,1.5s
WOJI Wonogiri, Jawa 57.45 274 P P 13 56 23.7 +10
STKI Sintang 59.82 283 P **P 13 56 34.0 +3.8**
comp=Z,23nm,0.5s
LEM Lembang 60.88 274 P **P 13 56 37.5 -0.1**
comp=Z,18nm,0.6s,baz=142,slow=20,SNR=3.9
LEM LR LR 14 24 13.1
comp=Z,765nm,19.5s,baz=116,slow=37
comp=Z,18nm,0.6s
JOW Kunigami 61.43 318 LR LR 14 24 08.2
comp=Z,572nm,18.1s,baz=158,slow=37
CBJI Citeko 61.73 274 P **P 13 56 45.5 +2.3**
TNG Tangerang 62.00 274 P P 13 56 51.7 +6.7
JGF Kuroka 63.36 331 P **P 13 56 55.1 +1.4**
JGF IAmb IAmb 13 56 58.2
comp=Z,12nm,0.8s
MJAR Matsushiro Arr 63.78 333 P **P 13 56 52.7 -3.6**
comp=Z,2.1nm,0.8s,baz=167,slow=9.0,SNR=7.4
MJAR LR LR 14 23 01.5
comp=Z,374nm,20.7s,baz=134,slow=35
comp=Z,2.1nm,0.8s
MJAR Matsushiro Arr 63.78 333 P **P 13 56 57.1 +0.7**
MJAR Matsushiro Arr 63.78 333 P **P 13 56 57.1 +0.7**
MJAR pmax pmax
comp=Z,11nm,1.4s
MAJO Matsushiro 63.78 333⇑ *i*P **P 13 56 54.5 -1.9**
MAJO pmax pmax
comp=Z,5.0nm,0.7s
KASI Kota Agung 64.23 274 P P 13 57 08.0 +8.1
ERM Erimo 66.65 339 IAMs_20 IAMs_20 14 23 09.0
comp=Z,1μm,20.0s
QZH Quanzhou 66.67 310⇓ *i*P **P 13 57 16.6 +1.3**
QZH S **S 14 06 07.0 +0.3**
QZH pmax pmax
comp=Z,330nm,7.8s
QZH LR LR
comp=Z,520nm,15.6s
QZH LR LR
comp=Z,390nm,17.5s
KUR Kuril'sk 68.21 344 P **P 13 57 23.2 -1.4**
KUR *e* 13 57 48.6
KUR S **S 14 06 24.6 +0.2**
KUR *e*SS **SS 14 10 42.4 -5.5**
KUR MLR MLR
comp=N,1μm,15.0s
KUR MLR MLR
comp=Z,1μm,15.0s
ASAJ Asahikawa 68.72 340 LR LR 14 24 13.8
comp=Z,1μm,20.6s,baz=166,slow=33
KSRS Korea Array 69.44 326 P **P 13 57 31.3 -1.1**
comp=Z,2.1nm,1.0s,baz=137,slow=5.6,SNR=5.3
KSRS LR LR 14 26 22.8
comp=Z,362nm,19.6s,baz=155,slow=35
comp=Z,2.1nm,1.0s
QSPA South Pole Qui 69.55 180 LR LR 14 26 43.4
comp=Z,1μm,18.1s,baz=36,slow=35
QSPA South Pole Qui 69.55 180 IAMs_20 IAMs_20 14 26 49.9
comp=Z,1μm,18.0s
QIZ Qiongzhong 70.03 300 P **P 13 57 39.9 +3.4**
QIZ S **S 14 06 51.4 +4.3**
QIZ pmax pmax
comp=Z,240nm,4.9s
QIZ LR LR
comp=Z,280nm,18.6s
QIZ LR LR
comp=Z,370nm,20.2s
QIZ LR LR
comp=Z,320nm,19.1s
NJ2 Nanjing 70.98 316 *e*P **P 13 57 42.3 +0.3**
NJ2 pmax pmax
comp=Z,14nm,0.6s
NJ2 pmax pmax
comp=Z,280nm,4.2s
NJ2 LR LR
comp=Z,530nm,18.5s
NJ2 LR LR
comp=Z,410nm,16.8s
NJ2 LR LR
comp=Z,760nm,18.6s
YSS Yuzh-Sakhalins 71.21 341 IAMs_20 IAMs_20 14 26 01.8
comp=Z,2μm,20.0s
YSS Yuzh-Sakhalins 71.21 341 *e*P **P 13 57 42.0 -1.1**
YSS *e**SP **pwP 13 57 52.6 +2.3**
YSS *e*S **S 14 06 55.0 -4.7**
YSS *e*SS **SS 14 11 36.3 +2.1**
YSS pmax pmax
comp=Z,300nm,5.3s
YSS pmax pmax
comp=Z,50nm,1.0s
SKR Severo-Kuril's 71.79 351 *e*P P 13 57 41.5 -5.0
SKR *e*SS SS 14 11 42.5 -0.4
SKR pmax pmax
comp=Z,100nm,4.1s
SKR MLR MLR
comp=Z,300nm,19.0s
PSI Prapat 72.43 280 P **P 13 57 52.9 +1.5**
comp=Z,6.8nm,0.4s,baz=90,slow=9.5,SNR=4.5
PSI LR LR 14 31 47.8
comp=Z,715nm,19.6s,baz=126,slow=38
USA0B Ussuriysk Arra 72.77 333⇓ *i*P **P 13 57 51.4 -1.1**
USRK Ussuriysk Ar. 72.77 333 P **P 13 57 50.5 -2.0**
comp=Z,6.2nm,0.8s,baz=143,slow=5.4,SNR=7.3
USRK LR LR 14 27 18.8
comp=Z,518nm,20.3s,baz=139,slow=34
comp=Z,6.2nm,0.8s
WHN Wuhan 73.05 313⇑ P **P 13 57 55.3 +0.8**
WHN S **S 14 07 19.9 -1.6**
WHN LR LR
comp=Z,1μm,27.7s
SHEM Shemya Is, Ala 73.06 3 LR LR 14 25 12.5
comp=Z,775nm,20.3s,baz=173,slow=32
ADK Adak 73.16 9 IAMs_20 IAMs_20 14 23 30.4
comp=Z,1μm,19.0s
PET Petropavlovsk 73.78 354 IAMs_20 IAMs_20 14 23 45.0
comp=Z,1μm,22.0s
PET Petropavlovsk 73.78 354 *e*P **P 13 58 02.6 +4.4**
PET *e*S **S 14 07 28.2 -0.5**
PET pmax pmax
comp=Z,37nm,1.6s
PET pmax pmax
comp=Z,300nm,13.0s
PET pmax pmax
comp=Z,300nm,17.0s
PET MLR MLR
comp=Z,500nm,21.0s
RPN Rapa Nui 73.78 113 LR LR 14 23 20.5
comp=Z,447nm,19.3s,baz=250,slow=30
PEA0B Petropavlovsk- 73.96 353 *e*P **P 13 57 57.5 -1.9**
PETK Petropavlovsk- 73.96 353 P **P 13 57 57.4 -2.0**
comp=Z,4.3nm,0.9s,baz=112,slow=6.6,SNR=10
PETK LR LR 14 24 27.3
comp=Z,823nm,21.8s,baz=164,slow=31
comp=Z,4.3nm,0.9s
PETK Petropavlovsk- 73.96 353 P **P 13 57 57.8 -1.6**
PETK Petropavlovsk- 73.96 353 P **P 13 57 57.8 -1.6**
MDJ Mudanjiang 74.14 332 P P 13 58 05.4 +4.8
MDJ S **S 14 07 34.9 +1.6**
MDJ pmax pmax
comp=Z,43nm,2.0s
MDJ pmax pmax
comp=Z,350nm,4.1s
TIA Tai'an 74.75 319⇑ P **P 13 58 08.8 +4.4**
TIA S **S 14 07 45.6 +5.1**
TIA SS **SS 14 12 36.9 +8.0**
TIA pmax pmax
comp=Z,14nm,1.5s
TIA pmax pmax
comp=Z,270nm,7.7s
TIA LR LR
comp=Z,200nm,18.4s
TIA LR LR
comp=Z,330nm,17.5s
TIA LR LR
comp=Z,370nm,22.0s
TYV Tymovskoe 74.76 343 *e*P **P 13 58 08.5 +4.4**
TYV pmax pmax
comp=Z,300nm,6.0s
TYV pmax pmax
comp=Z,33nm,1.3s
SNY Shenyang 74.92 327⇓ P **P 13 58 09.0 +3.8**
SNY S **S 14 07 43.3 +1.2**
SNY pmax pmax
comp=Z,27nm,2.0s
SNY pmax pmax
comp=Z,390nm,7.2s
SNY LR LR
comp=Z,410nm,19.3s
SNY LR LR
comp=Z,330nm,24.4s
SNY LR LR
comp=Z,520nm,19.9s
CN2 Changchun 75.43 329 *e*P **P 13 58 05.6 -2.5**
CN2 *e*PP **PP 14 00 57.1 -0.4**
CN2 *e*S **S 14 07 44.3 -3.4**
CN2 *e*SS SS 14 07 54.8 +1.5
CN2 Changchun 75.43 329 *e*SS SS 14 12 38.1 -0.8
CN2 pmax pmax
comp=Z,30nm,1.0s
CN2 LR LR
comp=N,430nm,24.0s
CN2 LR LR
comp=E,250nm,24.0s
CN2 LR LR
comp=Z,350nm,26.0s
NIKH Nikolski High 75.66 14 P **P 13 58 08.9 -0.2**
baz=201
BNX BinXian 75.99 331⇓ P **P 13 58 15.5 +4.3**
BNX pmax pmax
comp=Z,56nm,0.9s
BNX pmax pmax
comp=Z,500nm,4.8s
GYA Guiyang 76.38 305⇓ *i*P **P 13 58 15.6 +1.5**
GYA S **S 14 07 58.8 -0.3**
GYA pmax pmax
comp=Z,440nm,7.3s
GYA LR LR
comp=Z,380nm,21.9s
GRNR Gornyy 76.56 339⇓ *i*P **P 13 58 14.0 -0.4**
GRNR *e*S **S 14 08 03.8 +3.9**
GRNR pmax pmax
comp=N,1.0nm,1.0s
GRNR pmax pmax
comp=Z,7.0nm,0.6s
GRNR smax smax
comp=N,8.0nm,0.9s
LYN LuoYang 76.71 315⇑ P **P 13 58 16.3 +0.7**
LYN pP sP 13 58 20.6 +0.5
LYN S **S 14 08 00.6 -1.6**
LYN pmax pmax
comp=N,20nm,0.5s
LYN pmax pmax
comp=N,420nm,6.7s
LYN LR LR
comp=N,500nm,17.5s
LYN LR LR
comp=N,540nm,16.4s
LYN LR LR
comp=N,670nm,19.2s
KLR Kul'dur 76.94 336 P **P 13 58 15.3 -1.3**
comp=N,2.7nm,0.8s,baz=145,slow=2.6,SNR=7.7
KLR LR LR 14 29 32.0
comp=N,813nm,20.3s,baz=142,slow=34
comp=N,2.7nm,0.8s
KLR Kul'dur 76.94 336⇓ *i*P **P 13 58 15.7 -0.9**
KLR pmax pmax
comp=Z,4.0nm,1.0s
UNV Unalaska Valle 77.00 15 P **P 13 58 16.3 -0.5**
baz=204
HNS HongShan 77.01 318⇑ P **P 13 58 16.3 -0.9**
HNS S **S 14 08 04.0 -1.3**
HNS pmax pmax
comp=Z,22nm,1.4s
HNS pmax pmax
comp=Z,380nm,8.3s
HNS LR LR
comp=Z,390nm,21.5s
HNS LR LR
comp=Z,260nm,21.6s
HNS LR LR
comp=Z,560nm,20.7s
MAW Mawson 77.18 202 P **P 13 58 17.9 +0.1**
comp=Z,4.3nm,0.8s,baz=134,slow=9.9,SNR=6.4
MAW LR LR 14 29 28.4
comp=Z,713nm,19.3s,baz=104,slow=34
comp=Z,4.3nm,0.8s
MAW Mawson 77.18 202 P **P 13 58 17.7 -0.1**
baz=77,SNR=7.9
MAW Mawson 77.18 202 P **P 13 58 18.1 +0.3**
MAW Mawson 77.18 202 P **P 13 58 18.1 +0.3**
MAW pmax pmax
comp=Z,4.0nm,1.0s
BJI Beijing 77.79 321 P P 13 58 27.1 +5.6
BJI S **S 14 08 14.4 +0.7**
BJI pmax pmax
comp=Z,12nm,1.2s
BJI pmax pmax
comp=Z,300nm,7.8s
BJI LR LR
comp=Z,71nm,19.0s
BJI LR LR
comp=Z,310nm,19.0s
BJI LR LR
comp=Z,540nm,20.0s
TIY Taiyuan 78.62 318 *e*P P 13 58 31.5 +5.2
TIY S **S 14 08 22.5 -0.5**
TIY pmax pmax
comp=Z,320nm,6.1s
KMI Kunming 78.77 302⇑ P **P 13 58 28.3 +0.7**
KMI pP sP 13 58 33.4 +1.3
KMI S **S 14 08 24.9 -0.4**
KMI SS **SS 14 13 31.3 +0.9**
KMI pmax pmax
comp=Z,8.0nm,1.0s
KMI pmax pmax
comp=Z,130nm,3.5s
KMI LR LR
comp=Z,290nm,18.4s
KMI LR LR
comp=Z,300nm,22.6s
KMI LR LR
comp=Z,380nm,21.4s
XAN Xi'an 78.81 313⇑ P P 13 58 32.3 +4.9
XAN pP PcP 13 58 37.1 +0.9
XAN sP pwP 13 58 39.6 +3.0
XAN PP **PP 14 01 32.3 +6.1**
XAN S **S 14 08 29.6 +4.5**
XAN SKS **SKSac 14 08 40.6 -2.0**
XAN ScS **ScS 14 08 48.9 0.0**
XAN SS **SS 14 13 35.3 +4.9**
XAN pmax pmax
comp=Z,16nm,1.2s
XAN pmax pmax
comp=Z,450nm,6.8s
XAN LR LR
comp=Z,390nm,20.6s
XAN LR LR
comp=Z,200nm,17.2s
XAN LR LR
comp=Z,630nm,20.6s
CMAR Chiang Mai Arr 78.84 295 P **P 13 58 26.9 -1.0**
comp=Z,3.5nm,0.8s,baz=133,slow=4.4,SNR=14
comp=Z,3.5nm,0.8s
CMAR Chiang Mai Arr 78.84 295 P **P 13 58 26.7 -1.2**
CMAR Chiang Mai Arr 78.84 295 P **P 13 58 26.7 -1.2**
SPIA Saint Paul Isl 79.32 11 P **P 13 58 29.8 +0.3**
baz=200
CHNA Chernabura Isl 79.70 18 P **P 13 58 31.3 -0.3**
baz=210
PZH PanZhiHua 80.22 303 P P 13 58 40.0 +4.6
PZH pP pwP 13 58 43.8 -0.7
PZH PcP **PcP 13 58 48.1 +5.5**
PZH S **S 14 08 38.8 -1.7**
PZH pmax pmax
comp=Z,10.0nm,1.3s
PZH pmax pmax
comp=Z,230nm,7.1s
PZH LR LR
comp=Z,530nm,19.8s
PZH LR LR
comp=Z,900nm,21.0s
PZH LR LR
comp=Z,1μm,23.9s
XLT XiLinHaoTe 80.35 324 *e*P **P 13 58 38.6 +3.0**
XLT pP PcP 13 58 42.5 -0.2
XLT sP pwP 13 58 45.9 +1.0
XLT S **S 14 08 42.6 +1.6**
XLT pmax pmax
comp=Z,21nm,1.3s
XLT pmax pmax
comp=Z,330nm,6.5s
XLT LR LR
comp=Z,32nm,18.4s
XLT LR LR
comp=Z,290nm,18.0s
XLT LR LR
comp=Z,450nm,20.5s
CD2 Chengdu 80.84 308 *e*P **P 13 58 41.0 +2.5**
BELA Belgrano 2 80.86 175 P **P 13 58 36.4 -1.4**
S14K Fog Glacier 80.97 17 P **P 13 58 37.1 -1.6**
baz=210
HHC Hu-ho-hao-te 81.05 320 *e*P P 13 58 44.8 +5.3
HHC sP pwP 13 58 50.8 +2.1
HHC S **S 14 08 49.8 +1.3**
HHC pmax pmax
comp=Z,44nm,1.0s
HHC pmax pmax
comp=Z,600nm,7.9s
HHC LR LR
comp=Z,480nm,16.5s
HHC LR LR
comp=Z,700nm,15.9s
HHC LR LR
comp=Z,920nm,16.5s
MA2 Magadan 81.19 351 LR LR 14 29 15.5
comp=Z,1μm,22.0s,baz=168,slow=32
MA2 Magadan 81.19 351 IAMs_20 IAMs_20 14 28 52.9
comp=Z,1μm,22.0s
CHIR Chirikof Islan 81.73 19 IAMs_20 IAMs_20 14 27 29.5
comp=Z,1μm,22.0s
ZEA Zeya 82.23 336 *e*P **P 13 58 44.3 -0.9**
ZEA *e*S **S 14 09 01.0 +1.0**
ZEA *e* 14 14 14.1
ZEA pmax pmax
comp=N,10.0nm,0.9s
ZEA pmax pmax
comp=Z,20nm,1.0s
ZEA pmax pmax
comp=E,100nm,4.5s
ZEA pmax pmax
comp=N,100nm,9.1s
ZEA pmax pmax
comp=Z,200nm,9.2s
ZEA smax smax
comp=E,200nm,7.9s
ZEA smax smax
comp=N,200nm,12.9s
SII Sitkinak Islan 82.79 20 P **P 13 58 48.0 -0.2**
baz=214
R17K Ugashik Creek 83.03 18 P **P 13 58 48.7 -0.6**
baz=212
LZH Lanzhou 83.42 312⇑ P **P 13 58 56.6 +4.5**
LZH sP pwP 13 59 02.8 +1.5
LZH S **S 14 09 14.8 +1.6**
LZH sS ScS 14 09 27.3 +0.5
LZH SS **SS 14 14 45.8 +6.4**
LZH pmax pmax
comp=N,20nm,1.5s
LZH pmax pmax
comp=N,290nm,4.3s
LZH LR LR
comp=N,250nm,17.9s
LZH LR LR
comp=N,250nm,18.4s
LZH LR LR
comp=N,360nm,17.4s
OHAK Old Harbor 83.62 20 P **P 13 58 51.8 -0.5**
baz=215

P16K	**Nushagak River**	**83.78**	**16**	P	**P**	**13 58 51.9**	**-1.2**
	baz=211							
Q16K	**King Salmon**	**83.83**	**17**	P	**P**	**13 58 50.7**	**-2.7**
	baz=212							
SEY	**Seymchan**	**84.20**	**352**	LR	LR	14 33 24.5		
	comp=N,552nm,20.0s,baz=162,slow=34							
SEY	**Seymchan**	**84.20**	**352**	*e*P	**P**	**13 58 52.9**	**-2.3**
SEY				pmax	pmax			
	comp=Z,4.0nm,1.0s							
O16K	**Kokwok River B**	**84.23**	**16**	P	**P**	**13 58 52.4**	**-3.1**
	baz=211,SNR=6.2							
KDAK	**Kodiak Island**	**84.30**	**20**	P	**P**	**13 58 54.6**	**-1.1**
	comp=Z,7.8nm,0.8s,baz=238,slow=8.6,SNR=3.1							
KDAK				LR	LR	14 34 51.0		
	comp=Z,1µm,18.1s,baz=232,slow=35 comp=Z,7.8nm,0.8s							
KDAK	**Kodiak Island**	**84.30**	**20**	P	**P**	**13 58 59.0**	**+3.2**
KDAK	**Kodiak Island**	**84.30**	**20**	P	**P**	**13 58 59.0**	**+3.2**
KDAK				pmax	pmax			
	comp=Z,25nm,0.9s							
KDAK	**Kodiak Island**	**84.30**	**20**	P	**P**	**13 58 55.5**	**-0.3**
	baz=216							
P17K	**Kvichak River**	**84.33**	**17**	P	**P**	**13 58 53.3**	**-2.6**
	baz=212							
O17K	**Koliganek Bris**	**84.65**	**16**	P	**P**	**13 58 55.2**	**-2.3**
	baz=212,SNR=7.7							
N16K	**Nishlik Lake**	**84.82**	**15**	P	**P**	**13 58 56.2**	**-2.2**
	baz=210							
P18K	**Big Mountain,**	**84.84**	**17**	P	**P**	**13 58 55.7**	**-2.9**
	baz=213,SNR=17							
Q19K	**Cape Douglas,**	**84.91**	**18**	P	**P**	**13 58 56.7**	**-2.2**
	baz=215,SNR=7.3							
Q20K	**Shuyak Island**	**85.03**	**19**	P	**P**	**13 58 57.3**	**-2.2**
	baz=216,SNR=7.4							
O18K	**Koktuh Hills**	**85.23**	**17**	P	**P**	**13 58 58.9**	**-1.6**
	baz=213,SNR=9.8							
GAMB	**Gambell**	**85.35**	**8**	P	**P**	**13 58 59.0**	**-2.0**
	baz=198							
N18K	**Kilae Creek**	**85.74**	**16**	P	**P**	**13 59 01.3**	**-1.7**
N18K				IAmb	IAmb	13 59 13.3		
	comp=Z,13nm,0.9s							
N18K	**Kilae Creek**	**85.74**	**16**	P	**P**	**13 59 01.5**	**-1.5**
	baz=213,SNR=8.8							
O19K	**Port Alsworth**	**85.76**	**17**	P	**P**	**13 59 02.7**	**-0.4**
	baz=214,SNR=5.5							
PMSA	**Palmer Station**	**85.79**	**160**	LR	LR	14 35 16.2		
	comp=Z,569nm,18.0s,baz=230,slow=34							
HOM	**Homer**	**86.10**	**19**	P	**P**	**13 59 04.1**	**-0.7**
	baz=217							
O20K	**Slope Mountain**	**86.15**	**18**	P	**P**	**13 59 04.8**	**-0.3**
	baz=216,SNR=5.9							
N19K	**Bonanza Creek**	**86.23**	**17**	P	**P**	**13 59 04.1**	**-1.5**
	baz=214							
BRSE	**Bradley Lake S**	**86.44**	**19**	P	**P**	**13 59 05.7**	**-0.8**
	baz=217,SNR=6.4							
HOPS	**Hopland Field**	**86.77**	**46**	IAMs_20	IAMs_20	14 28 03.1		
	comp=Z,999nm,18.0s							
ANM	**Nome**	**87.08**	**11**	IAMs_20	IAMs_20	14 34 40.6		
	comp=Z,772nm,20.0s							
ANM	**Nome**	**87.08**	**11**	P	**P**	**13 59 09.6**	**+0.1**
	baz=204							
PKM	**Mcpherson Peak**	**87.11**	**51**	P	**P**	**13 59 10.8**	**+0.2**
	baz=243							
SEW	**Seward**	**87.13**	**19**	P	**P**	**13 59 10.0**	**+0.2**
	baz=218							
M19K	**Big River Lodg**	**87.16**	**16**	P	**P**	**13 59 10.3**	**+0.3**
	baz=214							
TROLL	**Troll, Antarti**	**87.26**	**184**	P	**P**	**13 59 09.4**	**-1.3**
L19K	**White Mountain**	**87.27**	**16**	IAmb	IAmb	13 59 17.8		
	comp=Z,24nm,1.1s							
L19K				IAMs_20	IAMs_20	14 33 44.9		
	comp=Z,745nm,20.0s							
L19K	**White Mountain**	**87.27**	**16**	P	**P**	**13 59 11.1**	**+0.5**
	baz=214							
O22K	**Cooper Landing**	**87.34**	**19**	IAMs_20	IAMs_20	14 36 23.9		
	comp=Z,1µm,19.0s							
CIS	**Catalina Islan**	**87.47**	**53**	P	**P**	**13 59 11.8**	**-0.4**
	baz=243							
M20K	**Styx River**	**87.48**	**17**	P	**P**	**13 59 11.2**	**-0.5**
	baz=215							
NVL	**N'lazarevskaya**	**87.58**	**187**	*e*P	P	13 59 06.8	-5.2
NVL				*e*PPP	PPP	14 04 41.3		
NVL				*e*S	**SKSac**	**14 09 30.1**	**-9.1**
NVL				pmax	pmax			
	comp=Z,13nm,1.0s							
NVL				MLR	MLR			
	comp=Z,401nm,19.0s							
TTA	**Tatalina**	**87.61**	**15**	P	**P**	**13 59 12.9**	**+0.7**
	baz=213							
Q23K	**Middleton Isla**	**87.62**	**21**	IAMs_20	IAMs_20	14 38 00.4		
	comp=Z,1µm,21.0s							
ULN	**Ulaanbaatar**	**87.76**	**324**	*e*P	**P**	**13 59 11.0**	**-2.4**
ULN				pmax	pmax			
	comp=Z,15nm,1.6s							
L20K	**Farewell, AK**	**87.78**	**16**	P	**P**	**13 59 13.6**	**+0.7**
	baz=214							
OSI	**Osito Audit: C**	**87.79**	**52**	P	**P**	**13 59 13.5**	**-0.2**
	baz=243							
SUA	**Susitna One**	**87.82**	**18**	P	**P**	**13 59 13.7**	**+0.4**
	baz=217							
RC01	**Rabbit Creek A**	**87.82**	**19**	P	**P**	**13 59 12.8**	**-0.3**
	baz=218							
GTA	**Gaotai**	**87.85**	**314**	⇓P	**P**	**13 59 12.8**	**-1.2**
GTA				pP	sP	13 59 19.0	+0.5
GTA				sP	pwP	13 59 22.3	-1.0
GTA				S	**S**	**14 09 49.0**	**-7.6**
GTA				pmax	pmax			
	comp=Z,4.0nm,1.0s							
GTA				pmax	pmax			
	comp=Z,140nm,6.5s							
GTA				LR	LR			
	comp=Z,200nm,17.4s							
GTA				LR	LR			
	comp=Z,210nm,18.5s							
GTA				LR	LR			
	comp=Z,280nm,19.6s							
SNAA	**Sanae**	**87.89**	**183**	P	**P**	**13 59 11.9**	**-1.7**
SNAA	**Sanae**	**87.89**	**183**	LR	LR	14 38 25.6		
	comp=Z,444nm,18.5s,baz=228,slow=36							
SNAA	**Sanae**	**87.89**	**183**	P	**P**	**13 59 12.4**	**-1.2**
SNAA				IAmb	IAmb	13 59 37.4		
	comp=Z,16nm,0.9s							
SNAA				IAMs_20	IAMs_20	14 39 06.3		
	comp=Z,742nm,18.0s							
SNAA	**Sanae**	**87.89**	**183**	*i* P	**P**	**13 59 12.2**	**-1.4**
SNAA				pmax	pmax			
	comp=Z,10.0nm,1.6s							
PASC	**Pasadena Art C**	**87.99**	**52**	IAMs_20	IAMs_20	14 30 03.6		
	comp=Z,1µm,18.0s							
SKT	**Skwentna**	**88.01**	**17**	P	**P**	**13 59 14.3**	**+0.3**
	baz=217							
YAK	**Yakutsk**	**88.02**	**343**	IAMs_20	IAMs_20	14 41 01.2		
	comp=Z,736nm,19.0s							
YAK	**Yakutsk**	**88.02**	**343**	*e*P	**P**	**13 59 11.8**	**-2.2**
YAK				*e**PP	**sP**	**13 59 17.9**	**-1.5**
YAK				*e*S	**SKSac**	**14 09 39.1**	**-2.5**
YAK				*e**SS	**SKKSac**	**14 09 46.9**	**-4.8**
YAK				*e*SS	**SS**	**14 15 43.8**	**-1.7**
YAK				pmax	pmax			
	comp=Z,16nm,1.0s							
YAK				pmax	pmax			
	comp=E,2.0nm,1.0s							
YAK				pmax	pmax			
	comp=N,4.0nm,1.1s							
YAK				smax	smax			
	comp=E,68nm,3.0s							
YAK				smax	smax			
	comp=N,60nm,2.5s							
YAK				MLR	MLR			
	comp=Z,823nm,20.0s							
YAK				MLR	MLR			
	comp=E,284nm,19.0s							
YAK				MLR	MLR			
	comp=N,377nm,16.0s							
ORV	**Oroville**	**88.10**	**46**	IAMs_20	IAMs_20	14 33 51.5		
	comp=Z,663nm,18.0s							
SONM	**Songino Array**	**88.11**	**323**	P	**P**	**13 59 12.1**	**-2.9**
	comp=Z,7.6nm,1.3s,baz=188,slow=4.5,SNR=9.8							
SONM				LR	LR	14 36 39.3		
	comp=Z,336nm,21.6s,baz=121,slow=34 comp=Z,7.6nm,1.3s							
CMB	**Columbia Colle**	**88.16**	**48**	IAMs_20	IAMs_20	14 30 43.9		
	comp=Z,1µm,19.0s							
K02D	**Willamette Mer**	**88.22**	**43**	P	**P**	**13 59 15.3**	**-0.3**
	baz=240							
HIN	**Hinchinbrook I**	**88.30**	**20**	IAMs_20	IAMs_20	14 35 19.2		
	comp=Z,890nm,19.0s							
BILL	**Bilibino**	**88.31**	**359**	*i* P	**P**	**13 59 12.1**	**-3.2**
BILL				*i*		13 59 17.7		
BILL				*i*		14 02 40.6		
BILL				pmax	pmax			
	comp=Z,3.0nm,0.9s							
BILL				MLR	MLR			
	comp=Z,275nm,19.0s							
YBH	**Yreka Blue Hor**	**88.35**	**44**	LR	LR	14 31 59.6		
	comp=Z,878nm,19.8s,baz=238,slow=31							
YBH	**Yreka Blue Hor**	**88.35**	**44**	IAMs_20	IAMs_20	14 29 58.0		
	comp=Z,1µm,20.0s							
PMR	**Palmer**	**88.40**	**19**	P	**P**	**13 59 15.9**	**+0.1**
	baz=219							
BFSC	**Mount Baldy Ra**	**88.41**	**53**	P	**P**	**13 59 17.1**	**+0.3**
	baz=244							
ISA	**Isabella, Lake**	**88.44**	**51**	P	**P**	**13 59 17.3**	**+0.5**
	baz=243							
EDW2	**Edwards Air Fo**	**88.44**	**52**	P	**P**	**13 59 18.2**	**+1.3**
	baz=244							
K20K	**Telida**	**88.45**	**16**	P	**P**	**13 59 16.7**	**+0.6**
K20K				IAMs_20	IAMs_20	14 34 23.1		
	comp=Z,740nm,20.0s							
K20K	**Telida**	**88.45**	**16**	P	**P**	**13 59 15.7**	**-0.4**
	baz=214							
KNK	**Knik Glacier**	**88.46**	**19**	IAMs_20	IAMs_20	14 39 19.4		
	comp=Z,685nm,19.0s							
GLI	**Glacier Island**	**88.47**	**20**	P	**P**	**13 59 17.7**	**+1.4**
	baz=221							
VNA3	**Neumayer Olymp**	**88.48**	**180**	P	**P**	**13 59 14.8**	**-1.6**
PPLA	**Purkeypile**	**88.57**	**17**	P	**P**	**13 59 17.1**	**+0.3**
	baz=216							
FID	**Port Fidalgo**	**88.57**	**20**	IAMs_20	IAMs_20	14 35 48.0		
	comp=Z,693nm,19.0s							
HUMO	**Hull Mountain**	**88.62**	**43**	IAmb	IAmb	13 59 29.1		
	comp=Z,24nm,1.0s							
HUMO				IAMs_20	IAMs_20	14 30 25.1		
	comp=Z,1µm,20.0s							
EYAK	**Cordova Ski Ar**	**88.66**	**21**	P	**P**	**13 59 15.2**	**-1.9**
	baz=222							
CUT	**Chulitna**	**88.70**	**18**	IAMs_20	IAMs_20	14 31 56.9		
	comp=Z,899nm,22.0s							
CUT	**Chulitna**	**88.70**	**18**	P	**P**	**13 59 16.3**	**-1.0**
	baz=218							
MONP2	**Monument Peak**	**88.76**	**54**	P	**P**	**13 59 17.2**	**-1.4**
	baz=244							
SML	**Sawmill**	**88.80**	**19**	IAMs_20	IAMs_20	14 37 03.5		
	comp=Z,848nm,19.0s							
SML	**Sawmill**	**88.80**	**19**	P	**P**	**13 59 18.7**	**+0.8**
	baz=219							
L04D	**Klamath Falls**	**88.85**	**44**	IAMs_20	IAMs_20	14 32 53.2		
	comp=Z,1µm,20.0s							
IKP	**In-Ko-Pah, Jac**	**88.89**	**55**	P	**P**	**13 59 18.2**	**-0.8**
	baz=245							
LRMC	**Laurel Mtn Rad**	**88.94**	**51**	P	**P**	**13 59 17.5**	**-1.8**
	baz=244							
GCSA	**Galena City Sc**	**88.95**	**14**	P	**P**	**13 59 18.6**	**+0.2**
	baz=212							
M23K	**Glacier View**	**88.98**	**19**	P	**P**	**13 59 17.3**	**-1.3**
	baz=220							
CAST	**Castle Rocks**	**89.02**	**16**	P	**P**	**13 59 16.6**	**-2.2**
	baz=216							
PFO	**Pinyon Flats O**	**89.04**	**54**	LR	LR	14 34 13.8		
	comp=Z,552nm,18.4s,baz=260,slow=32							
PFO	**Pinyon Flats O**	**89.04**	**54**	IAMs_20	IAMs_20	14 33 42.5		
	comp=Z,815nm,19.0s							
VNA1	**Neumayer–Stat**	**89.07**	**181**	P	**P**	**13 59 17.9**	**-1.2**
CWC	**Cottonwood Cre**	**89.07**	**50**	P	**P**	**13 59 19.6**	**-0.3**
	baz=244							
J20K	**Nowinta River**	**89.11**	**15**	IAMs_20	IAMs_20	14 35 51.6		
	comp=Z,1µm,20.0s							
J20K	**Nowinta River**	**89.11**	**15**	P	**P**	**13 59 18.9**	**-0.3**
	baz=214							
SCM	**Sheep Creek Mo**	**89.13**	**19**	P	**P**	**13 59 18.7**	**-0.7**
	baz=220							
TIN	**Tinemaha, Big**	**89.23**	**50**	P	**P**	**13 59 20.2**	**-0.3**
	baz=243							
SWSC	**Sam W. Stewart**	**89.25**	**54**	P	**P**	**13 59 20.4**	**-0.2**
	baz=245							
KLU	**Klutina**	**89.31**	**20**	IAMs_20	IAMs_20	14 36 54.0		
	comp=Z,708nm,19.0s							
KLU	**Klutina**	**89.31**	**20**	P	**P**	**13 59 21.1**	**+0.8**
	baz=222							
MPMC	**Manual Prospec**	**89.33**	**51**	P	**P**	**13 59 20.5**	**-0.6**
	baz=244,SNR=8.6							
CHUM	**Lake Minchumin**	**89.34**	**16**	P	**P**	**13 59 21.2**	**+0.9**
	baz=216							
BMRM	**Bremner River**	**89.35**	**21**	P	**P**	**13 59 20.9**	**+0.5**
	baz=223							
COR	**Corvallis**	**89.39**	**41**	IAMs_20	IAMs_20	14 32 24.2		
	comp=Z,1µm,20.0s							
KTH	**Kantishna Hill**	**89.44**	**17**	IAMs_20	IAMs_20	14 34 22.2		
	comp=Z,837nm,20.0s							
J04D	**Umpqua Nationa**	**89.48**	**43**	IAMs_20	IAMs_20	14 30 21.7		
	comp=Z,1µm,20.0s							
GSC	**Goldstone, Bar**	**89.50**	**52**	P	**P**	**13 59 21.1**	**-0.7**
	baz=244							
TRF	**Thorofare Moun**	**89.53**	**17**	P	**P**	**13 59 21.4**	**+0.1**
	baz=218							
WAT1	**Susitna Watana**	**89.53**	**18**	P	**P**	**13 59 21.8**	**+0.6**
	baz=219							
BELC	**Belle Mtn. Jos**	**89.55**	**53**	P	**P**	**13 59 21.3**	**-0.8**
	baz=245,SNR=6.8							
I04A	**Tendick Farm,**	**89.55**	**42**	P	**P**	**13 59 20.9**	**-0.9**
	baz=241							
WAX	**Waxell Ridge**	**89.56**	**22**	IAMs_20	IAMs_20	14 36 08.7		
	comp=Z,1µm,18.0s							
WAT6	**Susitna Watana**	**89.58**	**18**	P	**P**	**13 59 21.4**	**-0.2**
	baz=220							
HEC	**Hector,Ludlow**	**89.65**	**52**	P	**P**	**13 59 20.9**	**-1.6**
	baz=245							
MESA	**MESA**	**89.69**	**22**	IAMs_20	IAMs_20	14 39 26.0		
	comp=Z,1µm,18.0s							
MESA	**MESA**	**89.69**	**22**	P	**P**	**13 59 21.6**	**-0.6**
	baz=225							
M24K	**Tolsona, Glenn**	**89.69**	**19**	P	**P**	**13 59 21.9**	**-0.1**
	baz=221							
H04D	**Lebanon**	**89.71**	**42**	IAMs_20	IAMs_20	14 31 47.7		
	comp=Z,1µm,20.0s							
H04D	**Lebanon**	**89.71**	**42**	P	**P**	**13 59 22.3**	**-0.1**
	baz=240							
G03D	**McMinnville, O**	**89.72**	**41**	IAMs_20	IAMs_20	14 32 33.0		
	comp=Z,1µm,21.0s							
G03D	**McMinnville, O**	**89.72**	**41**	P	**P**	**13 59 20.3**	**-2.1**
	baz=240							
TGL	**Tana Glacier**	**89.79**	**21**	IAMs_20	IAMs_20	14 38 15.8		
	comp=Z,888nm,18.0s							
NVAR	**Mina Array Bea**	**89.80**	**49**	P	**P**	**13 59 20.4**	**-2.9**
	comp=Z,2.0nm,0.9s,baz=227,slow=7.3,SNR=13							
NVAR				LR	LR	14 31 30.8		
	comp=Z,1µm,20.9s,baz=256,slow=30 comp=Z,2.0nm,0.9s							
NVAR	**Mina Array Bea**	**89.80**	**49**	P	**P**	**13 59 22.9**	**-0.4**
BC3	**Big Chuckawall**	**89.81**	**54**	P	**P**	**13 59 22.1**	**-1.3**
	baz=245,SNR=7.0							
N25K	**Chitina, Valde**	**89.82**	**20**	P	**P**	**13 59 22.6**	**-0.1**
	baz=223							
GRAC	**Grapevine Rang**	**89.83**	**50**	P	**P**	**13 59 22.0**	**-1.3**
	baz=244,SNR=5.9							
ISLE	**Uniper Island**	**89.85**	**22**	IAMs_20	IAMs_20	14 36 39.4		
	comp=Z,715nm,19.0s							
BPAW	**Bear Paw Mtn.**	**89.86**	**16**	P	**P**	**13 59 23.2**	**+0.5**
BPAW				IAMs_20	IAMs_20	14 40 38.3		
	comp=Z,938nm,19.0s							
BPAW	**Bear Paw Mtn.**	**89.86**	**16**	P	**P**	**13 59 22.6**	**-0.1**
	baz=217							
GOMU	**GeErMu**	**89.91**	**309**	P	**P**	**13 59 25.8**	**+1.7**
GOMU				pP	pwP	13 59 30.4	-3.0
GOMU				sP	sP	13 59 33.5	+4.9
GOMU				PP	**PP**	**14 02 59.1**	**+2.0**
GOMU				pmax	pmax			
	comp=Z,3.0nm,0.5s							
GOMU				pmax	pmax			
	comp=Z,190nm,7.4s							
GOMU				LR	LR			
	comp=Z,200nm,19.6s							
GOMU				LR	LR			
	comp=Z,200nm,18.8s							
GOMU				LR	LR			
	comp=Z,170nm,17.6s							
FURC	**Furnace Creek,**	**89.96**	**51**	P	**P**	**13 59 23.7**	**-0.1**
	baz=244,SNR=7.0							
MOD	**Modoc Plateau**	**90.01**	**45**	IAMs_20	IAMs_20	14 32 04.0		
	comp=Z,866nm,20.0s							
GLA	**Glamis**	**90.04**	**55**	P	**P**	**13 59 23.9**	**-0.4**
	baz=245,SNR=5.6							
J05D	**Fort Rock, OR**	**90.06**	**43**	P	**P**	**13 59 22.8**	**-1.5**
	baz=242							
DHY	**Denali Highway**	**90.06**	**18**	P	**P**	**13 59 23.4**	**-0.5**
	baz=220							
MCK	**McKinley**	**90.13**	**17**	IAMs_20	IAMs_20	14 38 58.4		
	comp=Z,1µm,19.0s							
MCK	**McKinley**	**90.13**	**17**	P	**P**	**13 59 23.2**	**-0.8**
	baz=219							
H04A	**Detroit Lake**	**90.13**	**42**	P	**P**	**13 59 23.8**	**-0.7**
GMRC	**Granite Mounta**	**90.13**	**53**	P	**P**	**13 59 25.2**	**+0.3**
	baz=245,SNR=5.6							
GRNC	**Granite Creek**	**90.15**	**22**	IAMs_20	IAMs_20	14 39 49.2		
	comp=Z,792nm,19.0s							
LPIG	**La Paz**	**90.15**	**64**	LR	LR	14 30 45.7		
	comp=Z,1µm,21.3s,baz=248,slow=30							
TABL	**Table Mountain**	**90.16**	**22**	IAMs_20	IAMs_20	14 38 47.5		
	comp=Z,903nm,18.0s							
MCARA	**McCarthy VSAT**	**90.18**	**21**	IAMs_20	IAMs_20	14 39 12.0		
	comp=Z,715nm,19.0s							
KVN	**Kaiserville**	**90.21**	**48**	P	**P**	**13 59 24.2**	**-1.0**
KVN				IAmb	IAmb	13 59 31.1		
	comp=Z,24nm,1.2s							
KVN	**Kaiserville**	**90.21**	**48**	P	**P**	**13 59 24.2**	**-1.0**
KVN				pmax	pmax			
	comp=Z,24nm,1.2s							
IRM	**Iron Mountain**	**90.26**	**54**	P	**P**	**13 59 25.1**	**-0.3**
	baz=245,SNR=7.6							
BOD	**Bodaibo**	**90.38**	**334**	*e*P	**P**	**13 59 29.2**	**+4.0**
BOD				pmax	pmax			
	comp=Z,41nm,1.7s							
NLWA	**Neilton Lookou**	**90.45**	**39**	IAMs_20	IAMs_20	14 34 30.2		
	comp=Z,803nm,19.0s							
CTG	**Chitna Glacier**	**90.45**	**22**	P	**P**	**13 59 24.0**	**-1.7**
	baz=226							
I21K	**Tanana**	**90.47**	**15**	IAMs_20	IAMs_20	14 37 01.5		
	comp=Z,984nm,20.0s							
I21K	**Tanana**	**90.47**	**15**	P	**P**	**13 59 24.2**	**-1.3**
	baz=216							
LOGN	**Logan Glacier**	**90.47**	**22**	IAMs_20	IAMs_20	14 39 49.9		
	comp=Z,795nm,19.0s							
PAX	**Paxson**	**90.56**	**19**	P	**P**	**13 59 24.0**	**-2.1**
	baz=222							
TPNV	**Topopah Spring**	**90.61**	**51**	P	**P**	**13 59 25.6**	**-1.5**
	baz=245,SNR=8.6							
BBB	**Bella Bella**	**90.65**	**33**	LR	LR	14 34 14.6		
	comp=Z,603nm,19.0s,baz=264,slow=32							
H21K	**Melozitna Rive**	**90.66**	**15**	P	**P**	**13 59 27.4**	**+0.9**
H21K				IAMs_20	IAMs_20	14 37 09.4		
	comp=Z,997nm,19.0s							
H21K	**Melozitna Rive**	**90.66**	**15**	P	**P**	**13 59 24.1**	**-2.3**
	baz=215							
MLY	**Manley**	**90.67**	**16**	P	**P**	**13 59 24.9**	**-1.7**
	baz=217							
NEA2	**Nenana**	**90.76**	**17**	P	**P**	**13 59 26.4**	**-0.5**
	baz=219							
NEE2	**Needles Airpor**	**90.91**	**53**	P	**P**	**13 59 27.8**	**-0.4**
	baz=246							
M26K	**Nabesna, AK**	**90.92**	**20**	P	**P**	**13 59 27.4**	**-0.3**
	baz=224							
WRH	**Wood River Hil**	**90.94**	**17**	IAMs_20	IAMs_20	14 35 09.8		
	comp=Z,1µm,20.0s							
PALK	**Pallekele**	**90.94**	**277**	LR	LR	14 40 48.6		
	comp=Z,238nm,19.4s,baz=216,slow=36							
WRAK	**Wrangell Islan**	**91.06**	**28**	IAMs_20	IAMs_20	14 30 50.7		
	comp=Z,1µm,20.0s							
WRAK	**Wrangell Islan**	**91.06**	**28**	P	**P**	**13 59 27.3**	**-1.1**
	baz=233							
PDMCI	**Parker Dam,Lak**	**91.07**	**54**	P	**P**	**13 59 27.0**	**-2.0**
	baz=246,SNR=6.0							
K24K	**Donnelly Dome**	**91.09**	**18**	P	**P**	**13 59 28.9**	**+0.4**
	baz=222							
I23K	**Minto, Yukon-K**	**91.12**	**16**	IAMs_20	IAMs_20	14 41 05.6		
	comp=Z,853nm,19.0s							
I23K	**Minto, Yukon-K**	**91.12**	**16**	P	**P**	**13 59 27.2**	**-1.3**
	baz=218							
214A	**Organ Pipe Nat**	**91.15**	**56**	P	**P**	**13 59 28.3**	**-1.3**
	baz=246							
H22K	**Ishtalitna Cre**	**91.20**	**15**	P	**P**	**13 59 27.7**	**-1.2**
	baz=217							
ZAK	**Zakamensk**	**91.20**	**324**	*e*P	**P**	**13 59 31.5**	**+2.1**
ZAK				pmax	pmax			
	comp=Z,21nm,1.6s							
HDA	**Harding Lake**	**91.21**	**18**	P	**P**	**13 59 27.8**	**-1.1**
	baz=221							
YUK8	**Steele Glacier**	**91.23**	**22**	P	**P**	**13 59 28.4**	**-1.1**
	baz=227,SNR=12							
M27K	**Edge Creek, AK**	**91.25**	**21**	P	**P**	**13 59 27.9**	**-1.5**
	baz=225							
L26K	**Log Cabin Wild**	**91.26**	**20**	P	**P**	**13 59 28.5**	**-0.7**
	baz=224							
MDM	**Murphy Dome**	**91.28**	**17**	IAMs_20	IAMs_20	14 37 54.7		
	comp=Z,731nm,20.0s							
PLBC	**Pleasant Camp**	**91.28**	**25**	P	**P**	**13 59 28.0**	**-1.3**
	baz=230,SNR=8.5							
TCOL	**CIGO, UAF Yank**	**91.31**	**17**	IAMs_20	IAMs_20	14 37 55.6		
	comp=Z,849nm,20.0s							
TCOL	**CIGO, UAF Yank**	**91.31**	**17**	P	**P**	**13 59 28.7**	**-0.7**
	baz=220							
COLA	**College**	**91.31**	**17**	IAMs_20	IAMs_20	14 37 55.7		
	comp=Z,805nm,20.0s							
COLA	**College**	**91.31**	**17**	P	**P**	**13 59 28.1**	**-1.3**
	baz=220							
RIDG	**Independent Ri**	**91.32**	**19**	P	**P**	**13 59 28.1**	**-1.4**
	baz=223							
YUK3	**Moose Creek**	**91.33**	**22**	P	**P**	**13 59 28.0**	**-1.9**
	baz=226,SNR=6.0							
WVOR	**Wild Horse Val**	**91.36**	**45**	IAMs_20	IAMs_20	14 33 49.5		
	comp=Z,973nm,19.0s							
P30M	**Million Dollar**	**91.48**	**24**	P	**P**	**13 59 28.6**	**-1.8**
	baz=229							
ILAR	**Eielson Array**	**91.50**	**17**	P	**P**	**13 59 26.1**	**-4.3**
	comp=Z,2.4nm,0.7s,baz=231,slow=5.2,SNR=8.7							
ILAR				LR	LR	14 39 14.3		
	comp=Z,1µm,18.1s,baz=218,slow=35							
YUK6	**Outpost Mounta**	**91.50**	**23**	P	**P**	**13 59 29.3**	**-1.4**
	baz=228							
H23K	**Yukon River**	**91.61**	**16**	IAMs_20	IAMs_20	14 36 31.4		
	comp=Z,1µm,20.0s							
H23K	**Yukon River**	**91.61**	**16**	P	**P**	**13 59 29.6**	**-1.2**
	baz=218							
POKR	**Po

TUC	**Tucson**	**92.87**	**57**	IAMs_20	IAMs_20	14 37 13.2		
	comp=Z,786nm,18.0s							
TUC	**Tucson**	**92.87**	**57**	P	**P**	**13 59 33.9**	**-3.6**	
	baz=248							
ELK	**Elko**	**92.93**	**48**	LR	LR	14 36 09.3		
	comp=Z,629nm,18.9s,baz=239,slow=32							
ELK	**Elko**	**92.93**	**48**	IAMs_20	IAMs_20	14 32 32.2		
	comp=Z,677nm,20.0s							
I26K	**Coal Creek Min**	**92.97**	**18**	P	**P**	**13 59 34.4**	**-2.7**	
	baz=224							
MOY	**Mondy**	**93.10**	**325**	*e*P	P	13 59 42.9	+4.7	
MOY				pmax	pmax			
	comp=Z,34nm,2.4s							
M30M	**Minto, Yukon**	**93.14**	**22**	IAMs_20	IAMs_20	14 38 06.4		
	comp=Z,738nm,20.0s							
M30M	**Minto, Yukon**	**93.14**	**22**	P	**P**	**13 59 35.1**	**-2.9**	
	baz=230,SNR=10							
P33M	**Teslin, Yukon**	**93.15**	**25**	IAMs_20	IAMs_20	14 38 26.7		
	comp=Z,906nm,19.0s							
P33M	**Teslin, Yukon**	**93.15**	**25**	P	P	13 59 33.3	-4.9	
	baz=233							
DAWY	**Dawson**	**93.25**	**20**	P	P	13 59 33.7	-4.8	
	baz=227							
DLBC	**Dease Lake**	**93.26**	**27**	LR	LR	14 37 48.1		
	comp=Z,1µm,18.3s,baz=249,slow=33							
DLBC	**Dease Lake**	**93.26**	**27**	P	P	13 59 33.8	-4.9	
	baz=235							
WUAZ	**Wupatki**	**93.64**	**54**	P	P	13 59 35.0	-6.1	
	baz=247							
M31M	**Drury Creek, Y**	**93.77**	**23**	IAMs_20	IAMs_20	14 40 18.0		
	comp=Z,1µm,19.0s							
M31M	**Drury Creek, Y**	**93.77**	**23**	P	**P**	**13 59 36.8**	**-4.1**	
	baz=232							
TOLK	**Toolik Lake Re**	**93.82**	**14**	P	**P**	**13 59 43.1**	**+2.2**	
TOLK				IAmb	IAmb	14 00 04.3		
	comp=Z,9.0nm,1.2s							
TOLK				IAMs_20	IAMs_20	14 40 27.7		
	comp=Z,1µm,19.0s							
TOLK	**Toolik Lake Re**	**93.82**	**14**	P	**P**	**13 59 36.6**	**-4.4**	
	baz=218							
J29M	**Klondike Camp**	**93.90**	**20**	IAMs_20	IAMs_20	14 40 59.2		
	comp=Z,701nm,19.0s							
BMAR	**Burnt Mountain**	**94.12**	**16**	P	**P**	**13 59 44.2**	**+1.8**	
FARO	**Faro, Yukon**	**94.17**	**23**	P	**P**	**13 59 40.3**	**-2.4**	
	baz=233							
A21K	**Barrow**	**94.61**	**11**	IAMs_20	IAMs_20	14 39 25.6		
	comp=Z,769nm,20.0s							
A21K	**Barrow**	**94.61**	**11**	P	**P**	**13 59 43.2**	**-1.3**	
	baz=212							
HLID	**Hailey**	**94.64**	**45**	IAMs_20	IAMs_20	14 36 12.4		
	comp=Z,1µm,20.0s							
HLID	**Hailey**	**94.64**	**45**	P	**P**	**13 59 43.2**	**-2.4**	
	baz=246,SNR=6.0							
NEW	**Newport**	**94.88**	**40**	LR	LR	14 38 31.5		
	comp=Z,676nm,18.6s,baz=256,slow=33							
NEW	**Newport**	**94.88**	**40**	IAMs_20	IAMs_20	14 38 11.4		
	comp=Z,834nm,19.0s							
MMPY	**Sheldon Lake,**	**95.18**	**24**	P	**P**	**13 59 46.4**	**-1.0**	
	baz=234							
121A	**Cookes Peak, D**	**95.31**	**57**	P	**P**	**13 59 46.5**	**-2.4**	
	baz=249							
EPYK	**Eagle Plains**	**95.63**	**19**	IAMs_20	IAMs_20	14 38 51.0		
	comp=Z,740nm,19.0s							
EPYK	**Eagle Plains**	**95.63**	**19**	P	**P**	**13 59 47.3**	**-2.0**	
	baz=230							
HWUT	**Hardware Ranch**	**95.81**	**48**	IAMs_20	IAMs_20	14 39 23.6		
	comp=Z,674nm,18.0s							
MSO	**Missoula**	**96.25**	**42**	IAMs_20	IAMs_20	14 38 08.9		
	comp=Z,791nm,19.0s							
Y22D	**IRIS PASSCAL I**	**96.53**	**56**	IAMs_20	IAMs_20	14 37 21.0		
	comp=Z,745nm,18.0s							
AHID	**Auburn Hatcher**	**96.57**	**47**	IAMs_20	IAMs_20	14 47 38.5		
	comp=Z,604nm,18.0s							
TPAW	**Teton Pass**	**96.94**	**46**	IAMs_20	IAMs_20	14 38 45.3		
	comp=Z,614nm,18.0s							
MNTX	**Cornudas Mount**	**96.94**	**59**	IAMs_20	IAMs_20	14 35 18.9		
	comp=Z,706nm,19.0s							
MNTX	**Cornudas Mount**	**96.94**	**59**	P	**P**	**13 59 54.4**	**-1.8**	
	baz=250							
SNOW	**Snow King Moun**	**97.06**	**46**	IAMs_20	IAMs_20	14 32 15.5		
	comp=Z,833nm,20.0s							
MOOW	**Moose Ponds**	**97.17**	**46**	IAMs_20	IAMs_20	14 33 30.4		
	comp=Z,767nm,21.0s							
ANMO	**Albuquerque**	**97.19**	**56**	LR	LR	14 39 21.2		
	comp=Z,495nm,18.3s,baz=244,slow=33							
ANMO	**Albuquerque**	**97.19**	**56**	P	**P**	**13 59 54.6**	**-2.8**	
	baz=250							
BOZ	**Bozeman (W)**	**97.26**	**44**	P	**P**	**13 59 55.6**	**-1.8**	
	baz=248							
FLWY	**Flagg Ranch**	**97.32**	**46**	IAMs_20	IAMs_20	14 34 39.4		
	comp=Z,868nm,21.0s							
TXAR	**Lajitas Array**	**97.55**	**62**	P	**P**	**13 59 58.5**	**-0.6**	
	comp=Z,0.2nm,0.6s,baz=191,slow=4.2,SNR=2.1							
TXAR				PKKP	**PKKPdf**	**14 16 39.0**	**0.0**	
	comp=Z,0.3nm,0.8s,baz=104,slow=3.8,SNR=4.0							
TXAR				LR	LR	14 38 09.3		
	comp=Z,1µm,18.2s,baz=252,slow=32							
	comp=Z,0.2nm,0.6s							
BW06	**Boulder Array**	**97.63**	**47**	IAMs_20	IAMs_20	14 48 17.6		
	comp=Z,574nm,18.0s							
PDAR	**Pinedale Array**	**97.63**	**47**	P	Pdif	13 59 59.5	+0.2	
	comp=Z,0.3nm,0.5s,baz=197,slow=4.6,SNR=4.9							
PDAR				PP	**PP**	**14 03 59.3**	**+2.0**	
	comp=Z,0.3nm,0.5s,baz=224,slow=5.8,SNR=1.8							
PDAR				LR	LR	14 36 51.6		
	comp=Z,280nm,20.6s,baz=254,slow=31							
	comp=Z,0.3nm,0.5s							
O20A	**White River Ci**	**97.63**	**50**	P	**P**	**13 59 56.4**	**-2.9**	
	baz=250							
PLCA	**Paso Flores**	**97.72**	**139**	P	Pdif	14 00 03.0	+3.3	
	comp=Z,1.0nm,1.0s,baz=188,slow=3.1,SNR=3.4							
PLCA				LR	LR	14 34 48.8		
	comp=Z,269nm,22.0s,baz=234,slow=30							
INK	**Inuvik**	**97.81**	**18**	P	Pdif	14 00 00.1	+1.0	
	comp=Z,5.1nm,1.1s,baz=224,slow=4.6,SNR=7.6							
INK				LR	LR	14 43 00.1		
	comp=Z,558nm,18.1s,baz=221,slow=35							
INK	**Inuvik**	**97.81**	**18**	P	Pdif	13 59 59.7	+0.5	
INK	**Inuvik**	**97.81**	**18**	P	Pdif	13 59 59.7	+0.6	
INK				pmax	pmax			
	comp=Z,17nm,1.5s							
INK	**Inuvik**	**97.81**	**18**	P	**P**	**13 59 56.6**	**-2.5**	
	baz=233							
S22A	**4UR Ranch, Cre**	**97.85**	**53**	P	**P**	**13 59 57.3**	**-3.1**	
	baz=250							
WMQ	**Urumqi**	**97.93**	**314**	*e*P	Pdif	14 00 03.3	+2.9	
WMQ				LR	LR			
	comp=Z,370nm,19.3s							
WMQ				LR	LR			
	comp=Z,370nm,16.1s							
WMQ				LR	LR			
	comp=Z,290nm,17.3s							
SMCO	**Snowmass**	**98.23**	**51**	IAMs_20	IAMs_20	14 36 44.7		
	comp=Z,664nm,18.0s							
EGMT	**Eagleton**	**99.33**	**42**	IAMs_20	IAMs_20	14 40 59.5		
	comp=Z,644nm,19.0s							
C36M	**Paulatuk**	**101.26**	**19**	P	**Pdif**	**14 00 13.0**	**-1.4**	
	baz=242							
RSSD	**Black Hills**	**101.87**	**47**	IAMs_20	IAMs_20	14 39 10.8		
	comp=Z,583nm,20.0s							
YKA	**Yellowknife Ar**	**101.89**	**27**	P	**Pdif**	**14 00 15.8**	**-1.7**	
	comp=Z,0.4nm,0.7s,baz=263,slow=4.7,SNR=2.2							
MKAR	**Makanchi Array**	**102.49**	**315**	P	**Pdif**	**14 00 19.4**	**-1.1**	
	comp=Z,0.4nm,0.6s,baz=108,slow=6.6,SNR=2.9							
MKAR				PP	**PP**	**14 04 32.6**	**-1.3**	
	comp=Z,0.7nm,0.7s,baz=82,slow=10,SNR=3.5							
ZALV	**Zalesovo Beam**	**103.00**	**323**	P	**Pdif**	**14 00 23.6**	**+1.1**	
	comp=Z,0.9nm,0.6s,baz=96,slow=6.0,SNR=4.5							
DGMT	**Dagmar**	**103.00**	**43**	IAMs_20	IAMs_20	14 41 35.6		
	comp=Z,538nm,19.0s							
WMOK	**Wichita Mounta**	**103.13**	**58**	IAMs_20	IAMs_20	14 51 57.9		
	comp=Z,622nm,18.0s							
CBKS	**Cedar Bluff**	**103.49**	**53**	IAMs_20	IAMs_20	14 40 44.2		
	comp=Z,570nm,19.0s							
TUL1	**Leonard**	**105.80**	**57**	IAMs_20	IAMs_20	14 43 39.3		
	comp=Z,674nm,19.0s							
KURBB	**Kurchatov Arra**	**105.88**	**319**	PP	**PP**	**14 04 54.6**	**-4.3**	
	comp=Z,0.4nm,0.8s,baz=96,slow=5.7,SNR=4.2							
W39A	**Magazine**	**107.22**	**58**	IAMs_20	IAMs_20	14 42 47.1		
	comp=Z,820nm,19.0s							
MIAR	**Mount Ida**	**107.24**	**59**	IAMs_20	IAMs_20	14 42 29.6		
	comp=Z,605nm,20.0s							
U40A	**Yellville**	**108.22**	**57**	IAMs_20	IAMs_20	14 43 00.3		
	comp=Z,586nm,19.0s							
SCIA	**State Center**	**109.05**	**51**	IAMs_20	IAMs_20	14 46 35.1		
	comp=Z,898nm,21.0s							
RES	**Resolute Bay**	**111.23**	**16**	PKiKP	**PKiKP**	**14 04 55.4**	**-1.9**	
	comp=Z,1.1nm,0.6s,baz=282,slow=3.5,SNR=2.0							
JFWS	**Jewell Farm**	**111.38**	**51**	IAMs_20	IAMs_20	14 46 45.8		
	comp=Z,749nm,20.0s							
HDIL	**Hopedale**	**111.73**	**53**	IAMs_20	IAMs_20	14 47 23.3		
	comp=Z,754nm,20.0s							
BRAL	**Brewton**	**111.89**	**64**	IAMs_20	IAMs_20	14 46 36.0		
	comp=Z,789nm,20.0s							
WVT	**Waverly**	**112.16**	**58**	IAMs_20	IAMs_20	14 43 06.8		
	comp=Z,519nm,20.0s							
LRAL	**Lakeview Retre**	**112.29**	**62**	IAMs_20	IAMs_20	14 46 12.4		
	comp=Z,642nm,19.0s							
BCIP	**Isla Barro Col**	**112.89**	**88**	IAMs_20	IAMs_20	14 39 24.4		
	comp=Z,584nm,19.0s							
P49A	**Miami Univ. Ec**	**115.08**	**55**	IAMs_20	IAMs_20	14 53 46.9		
	comp=Z,663nm,18.0s							
TZTN	**Tazewell**	**115.64**	**58**	IAMs_20	IAMs_20	14 50 34.9		
	comp=Z,612nm,18.0s							
AAM	**Ann Arbor**	**116.15**	**52**	IAMs_20	IAMs_20	14 50 22.9		
	comp=Z,718nm,19.0s							
ACSO	**Alum Creek Sta**	**116.48**	**54**	IAMs_20	IAMs_20	14 51 29.9		
	comp=Z,503nm,20.0s							
O53A	**New Philadelph**	**117.83**	**55**	IAMs_20	IAMs_20	14 54 39.7		
	comp=Z,651nm,19.0s							
NHSC	**New Hope**	**117.96**	**63**	IAMs_20	IAMs_20	14 49 19.5		
	comp=Z,685nm,19.0s							
ARU	**Arti**	**118.14**	**324**	PKP	**PKPdf**	**14 05 07.9**	**-3.1**	
	comp=Z,1.0nm,0.3s,baz=79,slow=1.9,SNR=1.2							
ARU	**Arti**	**118.14**	**324**	IAMs_20	IAMs_20	14 56 07.5		
	comp=Z,443nm,20.0s							
ARU	**Arti**	**118.14**	**324**	*i* PKiKP	**PKPdf**	**14 05 08.7**	**-2.3**	
ARU						14 12 11.2		
ARU				MLR	MLR			
	comp=Z,416nm,21.0s							
M53A	**WI Miller and**	**118.31**	**53**	IAMs_20	IAMs_20	14 55 02.3		
	comp=Z,554nm,18.0s							
MCWV	**Mont Chateau**	**118.84**	**55**	IAMs_20	IAMs_20	14 54 37.5		
	comp=Z,670nm,19.0s							
ERPA	**Erie**	**118.86**	**52**	IAMs_20	IAMs_20	14 53 18.7		
	comp=Z,632nm,19.0s							
AKTO	**Aktyubinsk**	**118.86**	**317**	PKP	**PKPdf**	**14 05 10.3**	**-2.3**	
	comp=Z,0.7nm,0.3s,baz=37,slow=5.1,SNR=2.4							
SSPA	**Standing Stone**	**120.38**	**54**	IAMs_20	IAMs_20	14 52 20.3		
	comp=Z,641nm,20.0s							
CBN	**Corbin Frederi**	**120.68**	**57**	IAMs_20	IAMs_20	14 51 26.4		
	comp=Z,455nm,20.0s							
SPITS	**Spitsbergen Ar**	**120.83**	**354**	PKP	**PKPdf**	**14 05 12.0**	**-3.7**	
	comp=Z,4.5nm,0.9s,baz=91,slow=7.9,SNR=1.4							
BINY	**Binghamton**	**121.83**	**52**	IAMs_20	IAMs_20	14 51 16.4		
	comp=Z,562nm,20.0s							
PRGR	**Permogore**	**123.53**	**331**	*e*PKIKP	**PKPdf**	**14 05 19.3**	**-1.9**	
DAG	**Danmarks Havn**	**123.57**	**2**	*i* P	**PKiKP**	**14 05 23.5**	**+2.3**	
DAG				IAMs_20	IAMs_20	14 57 23.8		
	comp=Z,373nm,20.8s							
YLE	**Yale**	**124.13**	**53**	IAMs_20	IAMs_20	14 58 18.7		
	comp=Z,576nm,20.0s							
GRTK	**Grand Turk**	**124.16**	**77**	IAMs_20	IAMs_20	14 51 50.1		
	comp=Z,638nm,19.0s							
ILULI	**Iluilissat**	**125.54**	**16**	IAMs_20	IAMs_20	15 00 02.1		
	comp=Z,604nm,19.0s							
SUMG	**Summit**	**125.64**	**10**	IAMs_20	IAMs_20	15 00 39.3		
	comp=Z,424nm,20.0s							
KEV	**Kevo**	**125.71**	**345**	IAMs_20	IAMs_20	15 03 31.3		
	comp=Z,523nm,20.0s							
DBG	**Daneborg**	**125.94**	**3**	*i* P	**PKiKP**	**14 05 27.8**	**+1.8**	
DBG				IAMs_20	IAMs_20	14 53 56.5		
	comp=Z,427nm,25.8s							
ARCES	**ARCESS Array B**	**126.24**	**345**	PKP	**PKPdf**	**14 05 23.8**	**-2.4**	
	comp=Z,1.3nm,0.5s,baz=55,slow=2.1,SNR=16							
D62A	**Allapoint, All**	**126.38**	**46**	PKPdf	**PKiKP**	**14 05 30.4**	**+2.8**	
PKME	**Peaks-Kenny Pk**	**126.47**	**48**	P	**PKPdf**	**14 05 22.0**	**-5.3**	
	baz=277							
KLMR	**Klimovskoe**	**126.56**	**332**	*e*PKIKP	**PKiKP**	**14 05 29.3**	**+1.8**	
KLMR				pmax	pmax			
	comp=Z,13nm,1.0s							
KLMR	**Klimovskoe**	**126.56**	**332**	*e*PKPdf	**PKiKP**	**14 05 29.3**	**+1.8**	
KLMR				AMP		14 05 32.4		
	comp=Z,13nm,1.0s							
KIBK	**Kibwezi**	**126.87**	**251**	IAMs_20	IAMs_20	15 00 39.3		
	comp=Z,557nm,19.0s							
ATD	**Arta Tunnel**	**127.69**	**269**	IAMs_20	IAMs_20	14 59 19.7		
	comp=Z,536nm,20.0s							
RAYN	**Ar Rayn**	**127.83**	**284**	IAMs_20	IAMs_20	15 04 07.8		
	comp=Z,512nm,19.0s							
DY2G	**Dye2**	**128.77**	**17**	*i* P	**PKiKP**	**14 05 33.6**	**+1.5**	
DY2G				IAMs_20	IAMs_20	14 53 47.1		
	comp=Z,715nm,26.1s							
SCO	**Scoresbysund**	**129.59**	**5**	IAMs_20	IAMs_20	15 07 59.5		
	comp=Z,396nm,19.0s							
SCO	**Scoresbysund**	**129.59**	**5**	*i* P	**PKiKP**	**14 05 36.3**	**+3.0**	
SCO				IAMs_20	IAMs_20	15 07 49.1		
	comp=Z,383nm,17.0s							
KIV	**Kislovodsk**	**129.94**	**311**	*i* PKIKP	**PKiKP**	**14 05 37.7**	**+2.7**	
KIV				*e*		14 07 47.2		
KIV				*e*PS	**PS**	**14 17 56.6**	**-0.9**	
KIV				pmax	pmax			
	comp=Z,5.0nm,1.0s							
OBN	**Obninsk**	**130.44**	**326**	IAMs_20	IAMs_20	15 03 32.6		
	comp=Z,538nm,21.0s							
OBN	**Obninsk**	**130.44**	**326**	*i* PKIKP	**PKPdf**	**14 05 33.6**	**-1.0**	
OBN				pmax	pmax			
	comp=Z,7.0nm,1.1s							
OBN				MLR	MLR			
	comp=Z,497nm,21.0s							
ANGG	**Ammassalik, Gr**	**131.66**	**14**	IAMs_20	IAMs_20	15 00 50.7		
	comp=Z,595nm,19.0s							
FINES	**FINESS Array B**	**131.68**	**337**	PKhKP	PKPpre	14 05 30.7		
	comp=Z,1.1nm,0.5s,baz=116,slow=3.2,SNR=8.3							
FINES				SKPbc	**SKPbc**	**14 09 02.1**	**+0.2**	
	comp=Z,7.6nm,0.9s,baz=72,slow=4.8,SNR=5.0							
LODK	**Lodwar**	**131.81**	**256**	IAMs_20	IAMs_20	14 54 59.8		
	comp=Z,557nm,22.0s							
NACGM	**Naroch**	**135.42**	**330**	*e*PKP	**PKiKP**	**14 05 47.1**	**+1.6**	
	baz=55							
AKASG	**Malin Array Be**	**136.39**	**323**	PKP	**PKPdf**	**14 05 42.4**	**-3.5**	
	comp=Z,0.2nm,0.3s,baz=72,slow=2.0,SNR=2.0							
AKASG				SKPbc	**SKPbc**	**14 09 18.2**	**+0.4**	
	comp=Z,1.0nm,0.7s,baz=44,slow=3.8,SNR=1.9							
AKBB	**Malin Array Si**	**136.39**	**323**	*c* PKIKP	**PKiKP**	**14 05 46.8**	**-0.8**	
NB2	**NORSAR Subarra**	**136.61**	**344**	PKPdf	**PKPdf**	**14 05 40.1**	**-6.0**	
	comp=Z,4.0nm,1.1s,baz=29,slow=2.0							
NOA	**NORSAR Array B**	**136.61**	**344**	PKhKP	PKPpre	14 05 37.2		
	comp=Z,0.5nm,0.6s,baz=33,slow=1.9,SNR=2.6							
NOA				PKP	**PKPdf**	**14 05 45.2**	**-0.9**	
	comp=Z,0.7nm,0.6s,baz=35,slow=2.0,SNR=4.4							
NOA				SKPab	**SKPab**	**14 09 26.0**	**+1.8**	
	comp=Z,2.0nm,0.9s,baz=27,slow=4.0,SNR=3.9							
BRTR	**Keskin Array B**	**137.42**	**307**	PKP	**PKPdf**	**14 05 45.5**	**-2.9**	
	comp=Z,0.5nm,0.7s,baz=171,slow=2.2,SNR=1.8							
KONO	**Kongsberg**	**138.22**	**344**	IAMs_20	IAMs_20	15 08 24.0		
	comp=Z,551nm,21.0s							
MILM	**Milestii Mici**	**138.36**	**319**	*e*PKP	**PKPdf**	**14 05 42.0**	**-7.7**	
MILM	**Milestii Mici**	**138.36**	**319**	*e*PP	PP	14 08 42.0	+2.7	
MILM				*e*L	L	15 05 25.0		
MILM				LRM	MLR	15 07 14.0		
	comp=Z,350nm,21.5s							
MILM	**Milestii Mici**	**138.36**	**319**	*e*PKHKP	PKPpre	14 05 42.0		
MILM				*e*		14 08 42.0		
CSS		**138.56**	**300**	IAMs_20	IAMs_20	15 16 33.6		
	Mathiatis							
	comp=Z,358nm,19.0s							
MLR	**Muntele Rosu**	**140.78**	**318**	IAMs_20	IAMs_20	15 09 41.5		
	comp=Z,401nm,21.0s							
RGN	**Rugen**	**141.34**	**337**	IAMs_20	IAMs_20	15 10 57.5		
	comp=Z,443nm,20.0s							
CRVS	**Cervenica-Dubn**	**141.60**	**325**	*e*PKIKP	**PKiKP**	**14 05 59.0**	**+0.6**	
CRVS	**Cervenica-Dubn**	**141.60**	**325**	*e*PKP	**PKiKP**	**14 05 59.0**	**+0.6**	
OKC	**Ostrava-Krasne**	**142.71**	**329**	AMS	AMS	15 07 20.0		
	comp=Z,500nm,25.1s							
KDZ	**Kurdzhali**	**142.75**	**313**	P	**PKiKP**	**14 06 03.3**	**+2.3**	
KSP	**Ksiaz**	**142.90**	**331**	*e*PKP	**PKPdf**	**14 05 59.1**	**+1.3**	
KSP				*e*L	L	15 10 11.3		
	comp=Z,826nm,22.1s							
PSZ	**Piszkesteto**	**143.03**	**325**	PKP	**PKiKP**	**14 06 06.2**	**+4.8**	
OSTC	**Ostas**	**143.14**	**331**	*e*PKP	**PKiKP**	**14 06 01.9**	**+0.4**	
OSTC				*ex*	x	14 06 06.8		
OSTC				AMS	AMS	15 10 00.0		
	comp=Z,700nm,20.8s							
MAUC	**Maruska**	**143.18**	**328**	AMS	AMS	15 11 40.0		
	comp=Z,1µm,24.5s							
CHVC	**Chvalec**	**143.19**	**331**	AMS	AMS	15 10 10.0		
	comp=Z,700nm,21.1s							
KRLC	**Kraliky**	**143.21**	**330**	*e*PKIKP	**PKiKP**	**14 06 01.2**	**-0.5**	
KRLC				MLR	MLR			
	comp=Z,600nm,23.8s							
KRLC	**Kraliky**	**143.21**	**330**	*e*PKP	**PKiKP**	**14 06 01.2**	**-0.5**	
KRLC				*ep*PKP	**sPKPdf**	**14 06 05.1**	**+1.3**	
KRLC				AMS	AMS	15 08 30.0		
	comp=Z,600nm,23.8s							
RZN	**Rozhen**	**143.22**	**313**	P	**PKPdf**	**14 05 59.4**	**+0.5**	
DPC	**Dobruska-Polom**	**143.23**	**331**	*e*PKIKP	**PKiKP**	**14 06 00.4**	**-1.3**	
DPC				*e*		14 06 06.4		
DPC				MLR	MLR			
	comp=Z,700nm,24.2s							
DPC	**Dobruska-Polom**	**143.23**	**331**	*e*PKP	**PKiKP**	**14 06 00.4**	**-1.3**	
DPC				*ex*	x	14 06 06.4		
DPC				AMS	AMS	15 08 30.0		
	comp=Z,700nm,24.2s							
UPC	**Upice**	**143.26**	**331**	*e*PKIKP	**PKiKP**	**14 06 00.5**	**-1.2**	
UPC				*e*		14 06 06.5		
UPC				MLR	MLR			
	comp=Z,800nm,20.6s							
UPC	**Upice**	**143.26**	**331**	*e*PKP	**PKiKP**	**14 06 00.5**	**-1.2**	
UPC				*ep*PKP	**sPKPdf**	**14 06 06.5**	**+2.7**	
UPC				AMS	AMS	15 10 00.0		
	comp=Z,800nm,20.6s							
JAVC	**Velka Javorina**	**143.59**	**328**	*e*PKP	PKPbc	14 05 56.9	+0.4	
THAS	**Thassos island**	**143.65**	**311**	P	**PKPdf**	**14 06 00.5**	**+1.1**	
PVCC	**Panska Ves**	**143.89**	**332**	AMS	AMS	15 08 00.0		
	comp=Z,500nm,23.6s							
BRG	**Berggiesshubel**	**143.91**	**333**	*e*PKP	PKPab	14 05 56.3	-0.4	
BRG				Amp		14 05 58.6		
	comp=Z,5.5nm,0.8s							
BRG				*ex*	x	14 06 02.4		
BRG				Amp		14 06 04.8		
	comp=Z,54nm,1.5s							
BRG				*ex*	x	14 06 08.4		
BRG				Amp		14 06 10.7		
	comp=Z,18nm,0.8s							
BRG				*ex*	x	14 06 15.1		
BRG				Amp		14 06 16.9		
	comp=Z,42nm,1.3s							
BRG	**Berggiesshubel**	**143.91**	**333**	*e*PKIKP	PKPab	14 05 56.2	-0.5	
BRG				*e*		14 06 02.4		
BRG				*e*		14 06 08.4		
BRG				*e*		14 27 49.0		
BRG				pmax	pmax			
	comp=Z,6.0nm,0.8s							
MMB	**Musomiste**	**143.94**	**313**	P	PKPbc	14 05 58.6	+0.8	
CLL	**Collm**	**143.97**	**334**	IAMs_20	IAMs_20	15 17 25.3		
	comp=Z,380nm,20.0s							
CLL	**Collm**	**143.97**	**334**	*e*PKHKP	PKPpre	14 05 55.0		
CLL				*i*		14 06 00.4		
CLL				*e*		14 09 15.0		
CLL				pmax	pmax			
	comp=Z,144nm,2.1s							
CLL				MLR	MLR			
	comp=Z,400nm,19.1s							
CLL	**Collm**	**143.97**	**334**	*e*PKPpre	PKPpre	14 05 55.0		
CLL				*i* PKPdf	**PKPdf**	**14 06 00.4**	**+0.8**	
	comp=Z,144nm,2.1s							
CLL				*e*PKPlp		14 06 02.0		
	comp=Z,200nm,19.6s							
CLL				*i* pPKiKP	pPKiKP	14 06 07.4	+0.3	
	comp=Z,22nm,0.9s							
CLL				*e*PP	**PP**	**14 09 15.0**	**+2.0**	
CLL				*e*SKPdf	**SKPdf**	**14 09 35.0**	**+1.3**	
CLL				*e*PPP	PPP	14 12 24.0		
CLL				*e*Sdif	**Sdif**	**14 17 54.0**	**+3.7**	
CLL				*ex*	x	14 18 54.0		
CLL				*e*PSKS		14 19 24.0		
CLL				*e*PPPrev		14 20 30.0		
CLL				*e*PPS	PPS	14 21 48.0		
CLL				*e*SKKSdf	**SKKSdf**	**14 22 30.0**	**+6.5**	
CLL				*ex*	x	14 23 06.0		
CLL				*e*SS	**SS**	**14 27 58.0**	**+1.9**	
CLL				*ex*	x	14 29 42.0		
CLL				*ex*	x	14 30 56.0		
CLL				*e*SSS	SSS	14 33 06.0		
CLL				*e*SSSS		14 37 36.0		
CLL				*ex*	x	14 42 24.0		
CLL				Lm	MLR	15 17 00.0		
	comp=N,300nm,20.0s							
CLL				Lm	MLR	15 17 00.0		
	comp=E,100nm,20.3s							
CLL				Lm	ML

	comp=Z,20nm,1.4s						
EVR	**Evrytania**	**146.37**	**310**	P	**PKiKP**	**14 06 09.5**	**+0.9**
KTHA	**Kythira Island**	**146.40**	**305**	P	**PKPbc**	**14 06 05.1**	**-0.5**
LBWR	**Ladybower, Pea**	**146.40**	**350**	*e*P	**PKPdf**	**14 06 03.1**	**-0.7**
ANX	**Ano Chora**	**146.42**	**310**	P	**PKPdf**	**14 06 04.2**	**-0.2**
KTHR	**Kythira**	**146.44**	**305**	P	**PKiKP**	**14 06 09.9**	**+1.2**
KLV	**Kalavryta, Ach**	**146.46**	**309**	P	**PKPdf**	**14 06 03.1**	**-1.4**
EFP	**Efpalio**	**146.50**	**309**	P	**PKiKP**	**14 06 10.0**	**+1.2**
LAKA	**Lakka**	**146.51**	**309**	P	**PKPbc**	**14 06 05.6**	**-0.3**
PVO	**Paravola**	**146.69**	**310**	P	**PKiKP**	**14 06 09.9**	**+0.7**
OBKA	**Obir**	**146.73**	**327**	*e*P	**PKiKP**	**14 06 09.4**	**+0.2**
	comp=Z,7.3nm,0.8s						
WME	**Myndd Eilian**	**146.77**	**353**	*e*P	**PKPdf**	**14 06 03.3**	**-1.1**
WLF1	**Llynfaes**	**146.89**	**353**	*e*P	**PKPdf**	**14 06 04.1**	**-0.5**
KBA	**Koelnbreinsper**	**146.93**	**329**	*e*P	**PKPab**	**14 06 08.5**	**0.0**
	comp=Z,19nm,0.8s						
ITM	**Ithomi**	**146.94**	**307**	P	**PKiKP**	**14 06 11.3**	**+1.5**
YRC	**Rhoscolyn**	**146.95**	**353**	*e*P	**PKPdf**	**14 06 04.6**	**0.0**
CWF	**Charnwood Fore**	**146.97**	**349**	*e*P	**PKPdf**	**14 06 04.5**	**-0.3**
YLL	**Llanberis**	**147.01**	**352**	*e*P	**PKPdf**	**14 06 04.8**	**0.0**
LJU	**Ljubljana**	**147.05**	**327**	*e*PKPbc	**PKiKP**	**14 06 11.6**	**+1.9**
BTNL	**Ternell**	**147.08**	**340**	*d*PKPdf	**PKPdf**	**14 06 05.5**	**+0.4**
BTNL				*d*PKPab	**pPKPab**	**14 06 12.0**	**-0.7**
MYKA	**Terra Mystica**	**147.10**	**328**	*e*P	**PKiKP**	**14 06 10.6**	**+0.8**
	comp=Z,14nm,0.6s						
MEM	**Membach**	**147.10**	**340**	*d*PKPdf	**PKPbc**	**14 06 06.2**	**-1.0**
MEM				*d*PKPab	**pPKPab**	**14 06 12.1**	**-0.6**
FOEL	**Foel Wylfa**	**147.12**	**351**	*e*P	**PKPdf**	**14 06 05.5**	**+0.5**
ELMS	**Elmsett, Ipswi**	**147.12**	**346**	*e*P	**PKPbc**	**14 06 06.2**	**-0.9**
PYL	**PYLOS**	**147.18**	**307**	P	**PKiKP**	**14 06 10.8**	**+0.6**
BSTI	**Sart Tilman**	**147.26**	**340**	*d*PKPdf	**PKPbc**	**14 06 07.1**	**-0.5**
BSTI				*d*PKPab	**pPKPab**	**14 06 12.8**	**-0.6**
BHOU	**Houvegnez**	**147.32**	**340**	*d*PKPdf	**PKPdf**	**14 06 06.4**	**+0.9**
BHOU				*d*PKPab	**pPKPab**	**14 06 13.2**	**-0.5**
HLM1	**Long Mynd**	**147.44**	**351**	*e*P	**PKPdf**	**14 06 06.1**	**+0.5**
KEK	**Kerkira**	**147.44**	**313**	P	**PKiKP**	**14 06 12.2**	**+1.5**
BCLA	**Clavier**	**147.49**	**341**	*d*PKPdf	**PKPbc**	**14 06 08.4**	**+0.2**
BCLA				*d*PKPab	**pPKPab**	**14 06 13.2**	**-1.1**
ABTA	**Abfaltersbach**	**147.57**	**329**	*e*P	**PKPab**	**14 06 10.3**	**-0.5**
	comp=Z,9.0nm,0.6s						
WATA	**Walderalm**	**147.58**	**331**	*e*P	**PKiKP**	**14 06 12.6**	**+1.7**
	comp=Z,30nm,0.8s						
WTTA	**Wattenberg**	**147.60**	**331**	*i* P	**PKPab**	**14 06 10.4**	**-0.6**
	comp=Z,21nm,0.9s,SNR=5.8						
RCHB	**Rochefort**	**147.75**	**340**	*d*PKPdf	**PKPbc**	**14 06 07.8**	**-1.2**
RCHB				*d*PKPab	**sPKPbc**	**14 06 13.8**	**-0.7**
BMRD	**Maredsous**	**147.76**	**341**	*d*PKPdf	**PKPdf**	**14 06 06.4**	**+0.3**
BMRD				*d*PKPab	**pPKPab**	**14 06 13.9**	**-1.4**
MOTA	**Moosalm**	**147.78**	**331**	*e*P	**PKiKP**	**14 06 11.0**	**-0.3**
	comp=Z,9.2nm,0.7s						
RETA	**Reutte**	**147.83**	**332**	*e*P	**PKPbc**	**14 06 09.2**	**-0.2**
	comp=Z,19nm,0.7s						
SQTA	**Sankt Quirin**	**147.83**	**331**	*e*P	**PKPab**	**14 06 11.9**	**0.0**
	comp=Z,17nm,0.6s						
WLF	**Walferdange**	**147.87**	**339**	IAMs_20	IAMs_20	15 19 12.2	
	comp=Z,506nm,19.0s						
WLF	**Walferdange**	**147.87**	**339**	*d*PKPdf	**PKPbc**	**14 06 08.5**	**-0.8**
WLF				*d*PKPab	**pPKPab**	**14 06 15.1**	**-0.7**
MCH1	**Michaelchurch**	**147.96**	**351**	*e*P	**PKPdf**	**14 06 07.4**	**+1.0**
DOU	**Dourbes**	**147.99**	**341**	*d*PKPdf	**PKPdf**	**14 06 07.9**	**+1.3**
DOU				*d*PKPab	**sPKPbc**	**14 06 14.3**	**-0.6**
IWEX	**Carrickbyrne,**	**148.03**	**355**	*e*P	**PKPdf**	**14 06 07.4**	**+0.9**
FETA	**Feichten**	**148.20**	**331**	*e*P	**PKPdf**	**14 06 08.5**	**+1.2**
	comp=Z,20nm,0.7s						
SWN1	**Swindon**	**148.23**	**349**	*e*P	**PKPbc**	**14 06 08.9**	**-1.3**
RSBS	**Rosebush, Pemb**	**148.24**	**353**	*e*P	**PKPbc**	**14 06 08.7**	**-1.5**
DAVA	**Damuels**	**148.37**	**332**	*e*P	**PKPbc**	**14 06 10.6**	**-0.3**
	comp=Z,15nm,1.0s						
ESDC	**Sonseca Array**	**159.97**	**344**	PKPab	**PKPab**	**14 07 01.5**	**-1.7**
	comp=Z,2.4nm,0.8s,baz=7.4,slow=4.0,SNR=7.1						
TORD	**Torodi Ar. Bea**	**165.83**	**241**	PKP	**PKPdf**	**14 06 30.6**	**+0.5**
	comp=Z,1.1nm,1.1s,baz=233,slow=0.7,SNR=3.7						

*SKHL **16** 13:50:19.5±0.3, 44.50N×148.50E, h39km±4km, mb4.6/3*
*JMA **16** 13:50:20.1±0.5, 44.4N×142.8E, h0km, MV4.1/23, SE OFF ETOROFU*

ISC 16 13:50:17.3±3.7, 44.44N±0.08×148.7E±0.2, h55km, n18, σ1s58/27, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.97**	**325**	*i* P		Pn	13 50 34.1	-0.6
KUR				AMB		AMB	13 50 34.9	
	270nm,0.3s							
KUR				*e*S		**Sn**	**13 50 45.0**	**-2.6**
KUR				A		A	13 50 46.2	
	2μm,0.4s							
KUR				A		A	13 50 46.2	
	1μm,0.4s							
SHO	**Shikotan**	**1.44**	**247**	*i* P		**Pn**	**13 50 41.2**	**+0.2**
SHO				AMB		AMB	13 50 42.7	
	90nm,0.3s							
SHO				*i* S		**Sn**	**13 50 57.2**	**-1.6**
SHO				A		A	13 50 59.7	
	260nm,0.4s							
SHO				A		A	13 50 59.7	
	660nm,0.4s							
YUK	**Yuzh-Kuril'sk**	**2.05**	**259**	*i* P		**Pn**	**13 50 50.4**	**+1.1**
YUK				AMB		AMB	13 50 51.3	
	180nm,0.2s							
YUK				*i* S		**Sn**	**13 51 13.3**	**-0.5**
YUK				A		A	13 51 15.8	
	660nm,0.5s							
YUK				A		A	13 51 15.8	
	950nm,0.5s							
NEM2	**Nemuro 2**	**2.37**	**244**	*e*P		**Pn**	**13 50 53.7**	**0.0**
NEM2				*e*S		**Sn**	**13 51 18.6**	**-2.8**
GLVR	**Golovnino**	**2.37**	**254**	*e*P		**Pn**	**13 50 55.1**	**+1.4**
GLVR				AMB		AMB	13 50 56.7	
	100nm,0.3s							
GLVR				*e*S		**Sn**	**13 51 21.8**	**+0.3**
GLVR				A		A	13 51 26.7	
	560nm,0.4s							
GLVR				A		A	13 51 26.7	
	410nm,0.4s							
NMR	**Nemuro--Hokkai**	**2.38**	**244**	*e*P		**Pn**	**13 50 53.8**	**0.0**
NMR				*e*S		**Sn**	**13 51 19.7**	**-2.0**
JRA	**Rausu**	**2.59**	**260**	*e*P		**Pn**	**13 50 58.0**	**+1.2**
JNSB	**Nemuroshibetsu**	**2.71**	**257**	*e*P		**Pn**	**13 51 00.1**	**+1.6**
JNK	**Nakash**	**2.97**	**255**	*e*P		**Pn**	**13 51 03.1**	**+1.2**
JNK				*e*S		**Sn**	**13 51 35.3**	**-1.0**
AKK	**Akkeshi**	**3.11**	**244**	*e*P		**Pn**	**13 51 04.7**	**+0.8**
AKK				*e*S		**Sn**	**13 51 38.6**	**-1.2**
JAK	**Akkeshi**	**3.22**	**245**	*e*P		**Pn**	**13 51 06.1**	**+0.8**
JAK				*e*S		**Sn**	**13 51 40.5**	**-1.8**
JAR	**Ashorobuto**	**3.72**	**254**	*e*P		**Pn**	**13 51 14.4**	**+2.3**
JAR				*e*S		**Sn**	**13 51 54.1**	**-0.6**
JMP	**Maruseppu**	**3.83**	**265**	*e*P		**Pn**	**13 51 15.5**	**+1.7**
JCH	**Churui**	**4.26**	**246**	*e*P		**Pn**	**13 51 21.6**	**+2.0**
JKK2	**Kamakawa 2**	**4.29**	**264**	*e*P		**Pn**	**13 51 22.2**	**+2.2**
JNBK	**Urakawa-nobuka**	**4.82**	**245**	*e*P		**Pn**	**13 51 28.9**	**+1.6**
YSS	**Yuzh-Sakhalins**	**4.84**	**303**	*e*S		**Sn**	**13 52 20.6**	**-1.5**
YSS				A		A	13 52 22.0	
	30nm,0.4s							
YSS				A		A	13 52 22.0	
	10.0nm,0.4s							
JOT	**Ohata**	**6.37**	**244**	*e*P		**Pn**	**13 51 49.4**	**+0.9**

*IDC **16** 13:52:52.5±2.0, 20.14S×168.82E, h0km, mb4.0/8, mbtmp4.0/8, Error ellipse: s-maj=76.4km s-min=25.2km az=145.0*

ISC 16 13:52:57.2±0.9, 20.3S±0.2×168.9E±0.2, h35km, n12, σ1s14/12, mb3.9/8, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**27.03**	**239**	P		**P**	**13 58 36.9**	**+0.8**
	1.9nm,0.6s,baz=81,slow=8.9,SNR=3.5							
	1.9nm,0.6s							
WRA	**Warramunga Arr**	**32.41**	**264**	P		**P**	**13 59 22.9**	**-1.1**
	6.4nm,1.3s,baz=102,slow=8.7,SNR=2.2							
	6.4nm,1.3s							
ASAR	**Alice Springs**	**32.57**	**258**	P		**P**	**13 59 24.6**	**-0.7**
	1.6nm,0.7s,baz=83,slow=8.8,SNR=13							
	1.6nm,0.7s							
PETK	**Petropavlovsk-**	**73.70**	**353**	P		**P**	**14 04 27.2**	**+0.1**
	1.0nm,0.8s,baz=102,slow=6.5,SNR=4.0							
	1.0nm,0.8s							
CMAR	**Chiang Mai Arr**	**78.62**	**295**	P		**P**	**14 04 58.1**	**+2.2**
	1.1nm,1.0s,baz=142,slow=4.9,SNR=4.3							
	1.1nm,1.0s							
TROLL	**Troll, Antarti**	**87.50**	**184**	P		**P**	**14 05 41.0**	**-0.1**
SONM	**Songino Array**	**87.83**	**323**	P		**P**	**14 05 41.6**	**-1.3**
	0.4nm,0.6s,baz=142,slow=5.4,SNR=2.0							
	0.4nm,0.6s							
SNAA	**Sanae**	**88.13**	**183**	P		**P**	**14 05 43.5**	**-0.4**
VNA3	**Neumayer Olymp**	**88.73**	**180**	P		**P**	**14 05 46.4**	**-0.4**
NVAR	**Mina Array Bea**	**89.73**	**49**	P		**P**	**14 05 53.0**	**+0.8**
	0.9nm,0.9s,baz=232,slow=7.3,SNR=4.5							
	0.9nm,0.9s							
ILAR	**Eielson Array**	**91.30**	**17**	P		**P**	**14 05 57.5**	**-1.1**
	0.3nm,0.8s,baz=237,slow=26,SNR=1.8							
	0.3nm,0.8s							
GERES	**GERESS Array B**	**145.22**	**331**	PKPbc		**PKPdf**	**14 12 31.9**	**+0.7**
	1.0nm,0.7s,baz=62,slow=3.2,SNR=6.6							

MAN 16 13:55:42.9, 12.71N×120.98E, h17km, mb4.5, ML3.3, MS3.2, Mindoro

*JMA **16** 14:24:57.8±0.6, 23.2N×121.2E, h3km±3km, MV3.5/12, TAIWAN REGION*
*TAP **16** 14:24:58.7, 23.06N×121.31E, h35km, ML3.3, B*

ISC 16 14:24:58.8±0.9, 23.04N±0.02×121.37E±0.02, h31km±5km, n134, σ0s84/165, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
EDH	**Donghe**	**0.09**	**221**	P		**Pb**	**14 25 04.7**	**+0.3**
	baz=180							
EDH				*i* S		**Sb**	**14 25 08.8**	**+0.8**
	baz=180							
ECS	**Chishang**	**0.15**	**291**	P		**Pb**	**14 25 05.0**	**+0.3**
	baz=283							
ECS				S		**Sb**	**14 25 09.8**	**+1.0**
	baz=283							
FULB	**Fuli**	**0.17**	**336**	P		**Pb**	**14 25 05.0**	**+0.1**
	baz=348							
FULB				*i* S		**Sn**	**14 25 10.0**	**+0.7**
	baz=348							
LONT	**Longtian**	**0.26**	**238**	*e*P		**Pb**	**14 25 05.7**	**-0.3**
	baz=232							
LONT				*i* S		**Sb**	**14 25 10.6**	**-0.2**
	baz=232							
ECBN	**Changbin**	**0.28**	**15**	*e*P		**Pb**	**14 25 06.9**	**+0.7**
	baz=36							
EYUL	**Yuli**	**0.31**	**351**	*i* P		**Pb**	**14 25 06.2**	**-0.4**
	baz=359							
TWF1	**Yuli**	**0.32**	**348**	*e*P		**Pb**	**14 25 05.9**	**-0.8**
	baz=353							
TWF1				*e*S		**Sb**	**14 25 10.9**	**-1.1**
	baz=353							
TWGBT	**Beinan**	**0.35**	**230**	*e*P		**Pb**	**14 25 06.6**	**-0.5**
	baz=219							
TWGBT				*e*S		**Sb**	**14 25 11.9**	**-0.8**
	baz=219							
TWG	**Pinlang**	**0.35**	**231**	*i* P		**Pb**	**14 25 06.6**	**-0.6**
	baz=219							
TWG				*e*S		**Sb**	**14 25 11.9**	**-0.9**
	baz=219							
TTN	**Taitung**	**0.35**	**216**	*e*P		**Pb**	**14 25 07.8**	**+0.6**
	baz=203							
TTN				*e*S		**Sn**	**14 25 14.8**	**+1.1**
	baz=203							
YULB	**Yu-li**	**0.35**	**349**	P		**Pb**	**14 25 06.2**	**-1.0**
	baz=353							
YULB				*e*S		**Sb**	**14 25 11.3**	**-1.6**
	baz=353							
ELDTW	**Lidau**	**0.36**	**294**	*i* P		**Pb**	**14 25 06.5**	**-0.8**
	baz=297							
ELDTW				*e*S		**Sb**	**14 25 11.5**	**-1.6**
	baz=297							
LDUT	**Ludao**	**0.38**	**166**	P		**Pb**	**14 25 07.7**	**+0.2**
	baz=158							
LDUT				*e*S		**Sn**	**14 25 14.8**	**+0.4**
	baz=158							
HGSD	**Ruisui**	**0.45**	**6**	*i* P		**Pb**	**14 25 08.4**	**-0.1**
	baz=26							
EHY	**Hungye**	**0.46**	**355**	*e*P		**Pb**	**14 25 07.6**	**-1.2**
	baz=358							
EHY				*e*S		**Sb**	**14 25 13.8**	**-1.8**
	baz=358							
STYH	**Taoyuan**	**0.56**	**283**	*e*P		**Pb**	**14 25 09.8**	**-0.5**
	baz=282							
STYH				*e*S		**Sb**	**14 25 17.6**	**-0.6**
	baz=282							
STYT	**Tauyuan**	**0.58**	**282**	*e*P		**Pb**	**14 25 10.1**	**-0.5**
	baz=275							
STYT				*e*S		**Sb**	**14 25 18.0**	**-0.7**
	baz=275							
ECL	**Taimali**	**0.59**	**221**	P		**Pb**	**14 25 09.3**	**-1.4**
	baz=208							
ECL				*e*S		**Sb**	**14 25 16.9**	**-1.9**
	baz=208							
YUS	**Yu-Shan**	**0.59**	**319**	*e*P		**Pb**	**14 25 10.5**	**-0.6**
	baz=327							
YUS				*e*S		**Sb**	**14 25 18.1**	**-1.4**
	baz=327							
EGFH	**Guangfu**	**0.62**	**5**	*e*P		**Pb**	**14 25 09.7**	**-1.7**
	baz=4.0							
TEGC	**Jichi Village**	**0.68**	**13**	*e*P		**Pn**	**14 25 11.9**	**-0.4**
	baz=26							
ALS	**Alishan**	**0.70**	**312**	*e*P		**Pb**	**14 25 12.6**	**-0.2**
	baz=321							
ALS				*e*S		**Sb**	**14 25 22.0**	**-0.2**
	baz=321							
WTP	**Ta-pu**	**0.72**	**286**	*e*P		**Pn**	**14 25 12.9**	**-0.1**
	baz=286							
WTP				*e*S		**Sn**	**14 25 23.7**	**+0.6**
	baz=286							
SGST	**Jiashian**	**0.73**	**273**	*e*P		**Pn**	**14 25 12.1**	**-0.8**
	baz=276							
SGST				*e*S		**Sb**	**14 25 22.9**	**+0.2**
	baz=276							
TPUB	**Ta-pu**	**0.73**	**291**	*e*P		**Pn**	**14 25 13.0**	**0.0**
	baz=296							
TPUB				*e*S		**Sn**	**14 25 23.6**	**+0.5**
	baz=296							
VWDT	**VWDT**	**0.74**	**344**	*e*P		**Pn**	**14 25 12.3**	**-0.8**
	baz=350							
SSD	**Sandimen**	**0.74**	**247**	*e*P		**Pn**	**14 25 12.4**	**-0.8**
	baz=238							
TSMG	**Majia**	**0.75**	**243**	*e*P		**Pn**	**14 25 12.5**	**-0.8**
	baz=233							
ESL	**Shilin**	**0.77**	**4**	*e*P		**Pn**	**14 25 11.6**	**-2.0**
	baz=12							
CHN1	**Nanshi**	**0.79**	**280**	*e*P		**Pb**	**14 25 14.3**	**+0.2**
	baz=279							
MASBT	**Mashibuluo**	**0.80**	**238**	*e*P		**Pn**	**14 25 13.5**	**-0.6**
	baz=231							
MASBT				*e*S		**Sb**	**14 25 23.8**	**-1.2**
	baz=231							
TAW	**Tawu**	**0.81**	**213**	*e*P		**Pn**	**14 25 13.1**	**-1.0**
	baz=199							
EAST	**Anshuo**	**0.81**	**216**	*e*P		**Pn**	**14 25 12.9**	**-1.3**
	baz=205							
SNST	**Tainan City**	**0.82**	**283**	*e*P		**Pn**	**14 25 14.7**	**+0.4**
	baz=282							
SNST				*e*S		**Sb**	**14 25 26.5**	**+1.0**
	baz=282							
SCST	**Cishan**	**0.82**	**259**	*e*P		**Pb**	**14 25 14.9**	**+0.3**
	baz=255							
TAWH	**Dawu Township**	**0.83**	**213**	*e*P		**Pn**	**14 25 13.2**	**-1.2**
	baz=197							
TAWH				*e*S		**Sn**	**14 25 23.4**	**-2.1**
	baz=197							
SSLB	**Suanglung**	**0.83**	**333**	*e*P		**Pn**	**14 25 13.9**	**-0.5**
	baz=330							
TWK	**Hsinying**	**0.84**	**286**	*e*P		**Pn**	**14 25 14.9**	**+0.3**
	baz=285							
TEYL	**Yanliau Villag**	**0.85**	**14**	*e*P		**Pn**	**14 25 14.6**	**0.0**
	baz=22							
SGLT	**Jiouru**	**0.87**	**249**	*e*P		**Pn**	**14 25 14.9**	**-0.1**
	baz=243							
TWM1	**Shoushan**	**0.90**	**256**	*e*P		**Pb**	**14 25 17.3**	**+1.3**
	baz=251							
ETM	**Tongmen**	**0.93**	**7**	*e*P		**Pn**	**14 25 14.1**	**-1.7**
	baz=25							
OWD	**Renai**	**0.93**	**349**	*e*P		**Pn**	**14 25 14.8**	**-1.0**
	baz=1.0							
CHN3	**Shinhua**	**0.93**	**272**	*e*P		**Pb**	**14 25 17.6**	**+1.2**
	baz=268							
SSPT	**Xinbi**	**0.93**	**233**	*e*P		**Pn**	**14 25 16.1**	**+0.4**
	baz=220							
SMLT	**Sun Moon Lake**	**0.94**	**333**	*e*P		**Pn**	**14 25 16.0**	**0.0**
	baz=332							
SHHT	**Tainan City**	**0.94**	**269**	*e*P		**Pb**	**14 25 18.1**	**+1.4**
	baz=266							
HWA	**Hwalien**	**0.95**	**13**	*e*P		**Pn**	**14 25 15.5**	**-0.6**
	baz=21							
SCZT	**Fangliau**	**0.96**	**226**	*e*P		**Pn**	**14 25 16.1**	**-0.1**
	baz=211							
WUSB	**Renai**	**0.97**	**346**	*e*P		**Pn**	**14 25 15.9**	**-0.6**
	baz=4.0							
WJS	**Zhushan**	**0.97**	**323**	*e*P		**Pn**	**14 25 17.1**	**+0.7**
	baz=327							
SLIU	**Shizi**	**0.98**	**213**	*e*P		**Pn**	**14 25 16.0**	**-0.4**
	baz=198							
TYC	**Yuchr**	**0.98**	**331**	*e*P		**Pn**	**14 25 17.0**	**+0.6**
	baz=338							
WGK	**Gukeng**	**0.98**	**311**	*e*P		**Pb**	**14 25 17.5**	**+0.2**
	baz=316							
CHY	**Chiayi**	**0.98**	**298**	*e*P		**Pb**	**14 25 17.5**	**+0.2**
	baz=300							
WDLH	**Douliu**	**1.00**	**310**	*e*P		**Pb**	**14 25 17.8**	**+0.2**
	baz=314							
LAY	**Lan-yu**	**1.01**	**170**	*e*P		**Pn**	**14 25 16.4**	**-0.5**
	baz=155							
CHGB	**Renai**	**1.03**	**350**	*e*P		**Pn**	**14 25 16.7**	**-0.7**
	baz=7.0							
WPL	**Puli Township**	**1.04**	**339**	*e*P		**Pn**	**14 25 17.5**	**+0.2**
	baz=355							
WNT	**Mingjian**	**1.04**	**323**	*e*P		**Pn**	**14 25 18.2**	**+0.9**
	baz=329							
ICHU	**Yijhu**	**1.05**	**288**	*e*P		**Pn**	**14 25 18.2**	**+0.8**
	baz=287							
TWD	**Chiawan**	**1.05**	**11**	*e*P		**Pn**	**14 25 16.3**	**-1.1**
	baz=19							
LYUB	**Lan-yu**	**1.05**	**169**	*e*P		**Pn**	**14 25 15.8**	**-1.6**
	baz=163							
DPDB	**Guoxing**	**1.07**	**338**	*e*P		**Pn**	**14 25 18.2**	**+0.5**
	baz=345							
WNT1	**Nantou City**	**1.07**	**324**	*e*P		**Pn**	**14 25 18.6**	**+0.9**
	baz=330							
WCS	**Beigang Elemen**	**1.09**	**337**	*e*P		**Pn**	**14 25 18.5**	**+0.5**
	baz=345							
WHF	**Hehuan Shan**	**1.10**	**355**	*e*P		**Pn**	**14 25 17.6**	**-0.9**
	baz=11							
WTK	**Tuku**	**1.11**	**306**	*e*P		**Pn**	**14 25 18.6**	**+0.5**
	baz=309							
NACB	**Ninganchiao**	**1.14**	**10**	*e*P		**Pn**	**14 25 16.9**	**-1.8**
	baz=18							
WLCH	**Liugiu**	**1.15**	**233**	*e*P		**Pb**	**14 25 21.1**	**+1.0**
	baz=209							
WSL	**Shuilin Townsh**	**1.15**	**295**	*e*P		**Pn**	**14 25 19.1**	**+0.3**
	baz=297							
ETLH	**Xiulin Townshi**	**1.16**	**5**	*e*P		**Pn**	**14 25 17.4**	**-1.7**
	baz=22							
WWF	**Wufeng**	**1.17**	**328**	*e*P		**Pb**	**14 25 20.3**	**-0.2**
	baz=335							
FUSS	**Fushou**	**1.21**	**355**	*e*P		**Pn**	**14 25 19.3**	**-0.4**
	baz=9.0							
WSF	**Szhu**	**1.21**	**300**	*e*P		**Pn**	**14 25 19.6**	**0.0**
	baz=302							
TWKBT	**Hengchun**	**1.21**	**205**	*e*P		**Pn**	**14 25 19.6**	**-0.1**
	baz=186							
TWK1	**Hengchun**	**1.21**	**206**	*e*P		**Pn**	**14 25 19.5**	**-0.2**
	baz=186							
TWT	**Tachien**	**1.22**	**352**	*e*P		**Pn**	**14 25 19.9**	**0.0**
	baz=359							
WRL	**Guolierlin Hig**	**1.25**	**313**	*e*P		**Pn**	**14 25 20.6**	**+0.5**
	baz=318							
TCU	**Taichung**	**1.27**	**330**	*e*P		**Pb**	**14 25 22.0**	**-0.2**
	baz=338							
WCHH	**Zhanghua**	**1.27**	**324**	*e*P		**Pb**	**14 25 21.9**	**-0.3**
	baz=331							
WHP	**Taichung City**	**1.29**	**343**	*e*P		**Pn**	**14 25 21.9**	**+1.1**
	baz=357							
NNSB	**Datong**	**1.38**	**0**	*e*P		**Pn**	**14 25 21.4**	**-0.7**
	baz=21							
NNSH	**Datong**	**1.38**	**0**	*e*P		**Pn**	**14 25 21.4**	**-0.7**
	baz=20							
NNS	**Nan Shan**	**1.39**	**0**	*e*P		**Pn**	**14 25 22.1**	**-0.2**
	baz=20							
TWQ1	**Liyutan**	**1.41**	**337**	*e*P		**Pn**	**14 25 23.9**	**+1.5**
	baz=345							
ENA	**Nanau**	**1.42**	**14**	*e*P		**Pn**	**14 25 21.2**	**-1.3**
	baz=23							
EWUT	**Wuta**	**1.45**	**15**	*e*P		**Pn**	**14 25 22.2**	**-0.6**
	baz=32							
LATG	**Datong**	**1.49**	**5**	*e*P		**Pn**	**14 25 22.9**	**-0.8**
	baz=25							
NMLH	**Miaoli**	**1.58**	**340**	*e*P		**Pn**	**14 25 25.9**	**+1.1**
	baz=349							
WDGT	**Dungji**	**1.59**	**278**	*e*P		**Pn**	**14 25 24.8**	**0.0**
	baz=274							
NFF	**Wufeng Townshi**	**1.60**	**352**	*e*P		**Pn**	**14 25 26.3**	**+1.3**
NDS	**Dongshan**	**1.61**	**11**	*e*P		**Pn**	**14 25 24.5**	**-0.7**
	baz=20							
NSTT	**Nanjuang**	**1.62**	**348**	*e*P		**Pn**	**14 25 26.2**	**+1.0**
	baz=358							
YHNB	**Yeheng**	**1.62**	**0**	*e*P		**Pn**	**14 25 25.4**	**+0.1**
	baz=22							
TWC	**Suao**	**1.62**	**16**	*e*P		**Pn**	**14 25 25.2**	**0.0**
	baz=25							
NSK	**Sanguang**	**1.63**	**360**	*e*P		**Pn**	**14 25 25.7**	**+0.3**
	baz=21							
LIOB	**Emei**	**1.63**	**349**	*e*P		**Pn**	**14 25 26.4**	**+1.1**
	baz=358							
TWE	**Neicheng**	**1.69**	**9**	*e*P		**Pn**	**14 25 26.1**	**-0.2**
	baz=28							
PHUB	**P'eng-hu**	**1.72**	**286**	*e*P		**Pn**	**14 25 26.6**	**0.0**

JMJ	**Miyako jima 2**	**4.00**	**63**	*e*P	**Pn**	**14 25 59.4**	**+1.4**
	baz=66							
XPSS	**Dashiqiu**	**4.01**	**345**	*e*P	**Pn**	**14 25 57.9**	**-0.3**
	baz=356							
SXFK	**Yanhouchang**	**4.76**	**315**	*e*P	**Pn**	**14 26 08.3**	**-0.1**
	baz=324							

*IDC **16** 14:34:02.5±2.4, 26°.87N×130°.19E, h0km, mb3.4/3, mbtmp3.4/3, Error ellipse: s-maj=63.3km s-min=30.2km az=42.0*
*JMA **16** 14:34:04.8±0.1, 26°.8N±0°.5×130°.3E±0°.5, h54km, MV3.5/21, NEAR MINAMI-DAITOJIMA IS*

ISC 16 14:34:02.5±1.9, 26°.87N±0°.04×130°.27E±0°.04, h9km±13km, n20, σ1§21/35, mb3.3/3, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKDJ	**Kitadaitoujima**	**1.30**	**135**	P	**Pn**	**14 34 26.8**	**-0.1**
JKDJ				*e*S	**Sn**	**14 34 43.0**	**-1.3**
JMZ	**Minamidaito 2**	**1.35**	**141**	P	**Pn**	**14 34 27.3**	**-0.3**
JMZ				S	**Sn**	**14 34 43.6**	**-2.0**
JZK	**Kikaishima**	**1.46**	**350**	P	**Pg**	**14 34 30.6**	**0.0**
JZK				S	**Sb**	**14 34 48.7**	**+0.1**
JTK	**Tokunoshima**	**1.49**	**308**	P	**Pb**	**14 34 30.1**	**-0.2**
JTK				S	**Sn**	**14 34 48.1**	**-0.8**
JOKE	**Okinoerabujima**	**1.59**	**288**	P	**Pb**	**14 34 31.5**	**-0.6**
JOKE				*e*S	**Sn**	**14 34 50.7**	**-0.9**
JYRO	**Yoronjima**	**1.63**	**276**	P	**Pn**	**14 34 31.6**	**+0.2**
JYRO				*e*S	**Sn**	**14 34 51.2**	**-1.3**
JAM	**Amami Oshima**	**1.64**	**339**	P	**Pb**	**14 34 32.4**	**-0.6**
JAM				*e*S	**Sn**	**14 34 51.9**	**-0.9**
JAMN	**Amaminishikomi**	**1.68**	**325**	P	**Pb**	**14 34 32.5**	**-1.0**
JAMN				*e*S	**Sn**	**14 34 52.3**	**-1.3**
JOW	**Kunigami**	**1.78**	**269**	Pn	**Pn**	**14 34 33.7**	**+0.2**
	76nm,0.3s,baz=153,slow=11,SNR=317						
JOW				Sn	**Sn**	**14 34 54.2**	**-2.1**
	31nm,0.3s,baz=103,slow=9.7,SNR=4.6						
JOW	**Kunigami**	**1.78**	**269**	P	**Pn**	**14 34 33.9**	**+0.4**
JOW				*e*S	**Sn**	**14 34 54.5**	**-1.8**
JNTH	**Nagotoyohara**	**2.04**	**261**	*e*P	**Pn**	**14 34 36.9**	**-0.1**
JNTH				*e*S	**Sn**	**14 35 00.5**	**-2.2**
JIH	**Iheya**	**2.06**	**275**	P	**Pn**	**14 34 37.9**	**+0.5**
JIH				S	**Sn**	**14 35 02.4**	**-0.8**
JJT3	**Tamagusuku3**	**2.34**	**253**	P	**Pn**	**14 34 41.7**	**+0.5**
JJT3				*e*S	**Sn**	**14 35 08.7**	**-1.4**
JTAJ	**Takarajima**	**2.46**	**338**	*e*P	**Pn**	**14 34 43.3**	**+0.5**
JTAJ				*e*S	**Sn**	**14 35 10.7**	**-2.3**
JAGN	**Aguni-jima**	**2.72**	**265**	P	**Pn**	**14 34 46.7**	**+0.2**
JAGN				*e*S	**Sn**	**14 35 17.8**	**-1.7**
JKE	**Kume jima 2**	**3.17**	**261**	P	**Pn**	**14 34 52.8**	**+0.2**
JYAK	**Yakushimahirau**	**3.36**	**4**	*e*S	**Sn**	**14 35 33.6**	**-1.6**
WRA	**Warramunga Arr**	**46.70**	**175**	P	**P**	**14 42 32.9**	**+1.0**
	0.2nm,0.7s,baz=354,slow=8.7,SNR=1.5						
	0.2nm,0.7s						
ASAR	**Alice Springs**	**50.37**	**176**	P	**P**	**14 43 01.8**	**+1.7**
	0.3nm,0.9s,baz=7.5,slow=15,SNR=2.1						
	0.3nm,0.9s						
BRTR	**Keskin Array B**	**78.08**	**308**	P	**P**	**14 46 03.2**	**+1.2**
	0.7nm,0.8s,baz=55,slow=5.5,SNR=2.7						
	0.7nm,0.8s						

*SOME **16** 14:35:27.5, 44°.13N×81°.72E, h5km*
*NNC **16** 14:35:29.2±1.7, 44°.19N×81°.72E, h0km, mb2.8, mpv2.7, Error ellipse: s-maj=15.5km s-min=7.1km az=125.0*

ISC 16 14:35:26.5±2.1, 44°.12N±0°.06×81°.79E±0°.09, h7km±12km, n9, σ1§39/15, 1C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DJR	**Jarkent**	**1.45**	**279**	*e*P	**Pg**	**14 35 54.4**	**0.0**
	3.3nm,0.2s						
DJR				*e*S	**Sn**	**14 36 14.6**	**+1.9**
	4.2nm,0.4s						
DJR	**Jarkent**	**1.45**	**279**	P	**Pg**	**14 35 54.3**	**0.0**
	4.1nm,0.2s						
DJR				S	**Sn**	**14 36 14.5**	**+1.9**
	4.3nm,0.3s						
SHLS	**Shalkode**	**1.94**	**241**	*e*P	**Pn**	**14 35 59.5**	**-0.5**
	1.1nm,0.3s						
SHLS				*e*S	**Sn**	**14 36 23.2**	**-1.6**
	6.4nm,0.2s						
SHLS	**Shalkode**	**1.94**	**241**	P	**Pn**	**14 35 59.4**	**-0.7**
	3.5nm,0.2s						
SHLS				S	**Sn**	**14 36 22.9**	**-1.9**
	6.3nm,0.5s						
KAPS	**Kapalarasan**	**2.09**	**305**	*e*P	**Pb**	**14 36 04.7**	**-0.1**
	0.8nm,0.1s						
KAPS				*e*S	**Sg**	**14 36 32.0**	**-1.6**
	6.9nm,0.2s						
UZB	**Uzynbulak**	**2.23**	**245**	*e*P	**Pg**	**14 36 09.2**	**-0.1**
	2.6nm,0.3s						
UZB				*e*S	**Sg**	**14 36 39.7**	**+1.4**
	4.3nm,0.3s						
SATY	**Saty**	**2.68**	**248**	*e*P	**Pb**	**14 36 16.2**	**+1.4**
	2.2nm,0.3s						
SATY				*e*S	**Sg**	**14 36 51.9**	**-0.6**
	5.9nm,0.3s						
MAKZ	**Makanchi**	**2.69**	**3**	⇓Lg	Lg	14 36 50.3	
	1.1nm,0.5s						
MK31	**Makanchi Array**	**2.70**	**7**	⇑Pg	**Pg**	**14 36 18.5**	**+0.3**
	0.2nm,0.3s,baz=184,slow=16,SNR=13						
MK31				⇓Lg	Lg	14 36 52.0	
	0.3nm,0.2s,baz=188,slow=29,SNR=10						

*IDC **16** 14:50:09.8±4.3, 13°.14S×167°.08E, h188km±32km, mb3.5/7, mbtmp4.0/7, Error ellipse: s-maj=66.1km s-min=18.5km az=131.0*

ISC 16 14:50:08.6±1.7, 13°.2S±0°.3×167°.2E±0°.4, h180km, n10, σ0§75/11, mb3.9/7, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**21.19**	**248**	P	**P**	**14 54 40.6**	**+0.5**
	3.5nm,0.8s,baz=72,slow=13,SNR=1.5						
	3.5nm,0.8s						
STKA	**Stephens Creek**	**29.94**	**227**	P	**P**	**14 56 00.8**	**+0.8**
	2.0nm,0.5s,baz=53,slow=9.5,SNR=8.7						
	2.0nm,0.5s						
WRA	**Warramunga Arr**	**32.16**	**254**	P	**P**	**14 56 18.7**	**-0.8**
	0.6nm,0.6s,baz=85,slow=9.3,SNR=12						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**33.17**	**247**	P	**P**	**14 56 27.6**	**-0.8**
	1.0nm,0.3s,baz=76,slow=9.9,SNR=55						
ASAR				ScP	**ScP**	**15 02 33.2**	**-1.3**
	0.7nm,0.8s,baz=71,slow=2.8,SNR=6.7						
	1.0nm,0.3s						
PETK	**Petropavlovsk-**	**66.55**	**354**	P	**P**	**15 00 39.5**	**+0.5**
	1.0nm,0.8s,baz=163,slow=5.4,SNR=4.4						
	1.0nm,0.8s						
ILAR	**Eielson Array**	**85.11**	**18**	P	**P**	**15 02 23.4**	**-0.4**
	1.3nm,0.6s,baz=242,slow=5.1,SNR=45						
	1.3nm,0.6s						
MKAR	**Makanchi Array**	**96.06**	**317**	P	**P**	**15 03 15.9**	**+0.3**
	0.3nm,0.6s,baz=108,slow=4.7,SNR=2.5						
	0.3nm,0.6s						
ARCES	**ARCESS Array B**	**118.77**	**346**	PKP	**PKPdf**	**15 08 34.5**	**-0.3**
	0.7nm,0.3s,baz=76,slow=2.5,SNR=19						
FINES	**FINESS Array B**	**124.29**	**339**	PKP	**PKPdf**	**15 08 45.5**	**0.0**
	1.2nm,0.8s,baz=88,slow=4.3,SNR=6.1						
ESDC	**Sonseca Array**	**152.51**	**345**	PKPbc	**PKiKP**	**15 09 44.3**	**+0.2**
	0.5nm,0.5s,baz=29,slow=3.8,SNR=2.7						

NOU 16 14:57:46.3, 16°.11S×167°.55E, h14km, MLv3.9/8, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**1.72**	**159**	P	Pn	14 58 15.6	-0.2
KOUNC	**Koumac, New Ca**	**5.40**	**215**	P	Pn	14 59 05.5	-0.9
NOUC	**Port Laguerre**	**6.08**	**191**	P	Pn	14 59 15.8	+0.1

*TUL **16** 15:06:26.7±1.9, 36°.76N±0°.01×98°.08W±0°.02, h7km±6km, ML2.8, mb_Lg2.5/29(NEIC), Error ellipse: s-maj=2.2km s-min=1.3km az=136.0*
*NEIC **16** 15:07:10.6±1.0, 36°.74N±0°.01×98°.07W±0°.02, h11km±5km, Error ellipse: s-maj=2.7km s-min=1.2km az=122.0*

NEIC 16 15:06:26.6±1.0, 36°.76N±0°.01×98°.08W±0°.02, h12km±5km, Error ellipse: s-maj=2.4km s-min=0.8km az=134.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
U32A	**Winter Ranch,**	**0.83**	**243**	Pg	Pg	15 06 42.4	-0.3
U32A				Sg	Sg	15 06 53.6	-0.1
T35A	**Sooner Cattle**	**1.27**	**82**		Pn	15 06 50.0	-0.1
T35A					Sb	15 07 06.5	-0.2
OKCFA	**Oklahoma City**	**1.43**	**159**	Pn	Pn	15 06 52.6	+0.2
FNO	**Franklin**	**1.60**	**160**	Pn	Pn	15 06 54.9	+0.2
R32A	**Long Quarter,**	**1.73**	**343**		Pb	15 06 57.9	-0.5
TUL1	**Leonard**	**2.03**	**114**	Pn	Pn	15 07 01.4	+0.8
WMOK	**Wichita Mounta**	**2.10**	**196**		Pn	15 07 02.4	+0.9
X34A	**Smith Ranch, M**	**2.16**	**175**	Pn	Pb	15 07 04.1	-1.6
X34A				lAmb_Lg		15 07 40.6	
	comp=Z,18nm,0.8s						
CBKS	**Cedar Bluff**	**2.44**	**328**	Pn	Pn	15 07 07.6	+1.3
KSU1	**Kansas State U**	**2.61**	**26**	Pn	Pn	15 07 08.1	-0.5
U38A	**Gravette**	**2.99**	**95**		Pn	15 07 13.4	-0.4
X37A	**Clayton**	**3.09**	**134**		Pn	15 07 14.9	-0.3
X37A				lAmb_Lg		15 08 06.3	
	comp=Z,13nm,1.0s						
HHAR	**Hobbs**	**3.37**	**97**	Pn	Pn	15 07 18.9	-0.2
HHAR	**Hobbs**	**3.37**	**97**	lAmb_Lg		15 09 02.4	
	comp=Z,16nm,1.1s						
AMTX	**Amarillo**	**3.48**	**238**		Pn	15 07 20.3	-0.3
AMTX				lAmb_Lg		15 08 17.4	
	comp=Z,12nm,0.8s						
AMTX	**Amarillo**	**3.48**	**238**	lAmb_Lg		15 09 09.8	
	comp=Z,15nm,0.9s						
Z35A	**Perchaven, San**	**3.49**	**169**	Pn	Pn	15 07 20.1	-0.6
W39A	**Magazine**	**3.81**	**113**	Pn	Pn	15 07 24.6	-0.6
S39A	**Bolivar**	**3.91**	**75**		Pn	15 07 24.8	-1.6
U40A	**Yellville**	**4.22**	**94**		Pn	15 07 29.6	-1.2
U40A	**Yellville**	**4.22**	**94**	lAmb_Lg		15 09 34.2	
	comp=Z,13nm,0.7s						
KSCO	**Kaye Shedlock'**	**4.24**	**303**	Pn	Pn	15 07 30.8	-0.4
KSCO				lAmb_Lg		15 08 46.8	
	comp=Z,11nm,0.8s						
KSCO	**Kaye Shedlock'**	**4.24**	**303**	lAmb_Lg		15 09 22.8	
	comp=Z,13nm,0.8s						
MIAR	**Mount Ida**	**4.28**	**120**	lAmb_Lg		15 08 41.8	
	comp=Z,11nm,0.9s						
ABTX	**Abilene, Hawle**	**4.32**	**198**	lAmb_Lg		15 08 42.3	
	comp=Z,9.5nm,0.7s						
ABTX	**Abilene, Hawle**	**4.32**	**198**	lAmb_Lg		15 09 27.4	
	comp=Z,11nm,0.8s						
P38A	**Dawn**	**4.58**	**50**	lAmb_Lg		15 09 00.6	
	comp=Z,12nm,0.7s						
MGMO	**Mountain Grove**	**4.67**	**83**	Pn	Pn	15 07 36.6	-0.3
X40A	**Basin Creek Fa**	**4.83**	**116**	Pn	Pn	15 07 38.0	-1.2
X40A	**Basin Creek Fa**	**4.83**	**116**	lAmb_Lg		15 09 46.9	
	comp=Z,12nm,0.8s						
R40A	**Maddies Statio**	**4.86**	**70**		Pn	15 07 38.5	-1.1
R40A	**Maddies Statio**	**4.86**	**70**	lAmb_Lg		15 09 56.6	
	comp=Z,14nm,1.3s						
FCAR	**Ozark Folk Cen**	**4.88**	**98**	Pn	Pn	15 07 40.0	+0.1
FCAR	**Ozark Folk Cen**	**4.88**	**98**	lAmb_Lg		15 09 48.2	
	comp=Z,11nm,1.1s						
WHAR	**Wooly Hollow**	**4.92**	**106**	Pn	Pn	15 07 40.1	-0.1
WHAR				lAmb_Lg		15 09 03.2	
	comp=Z,9.2nm,1.0s						
WHAR	**Wooly Hollow**	**4.92**	**106**	lAmb_Lg		15 09 43.8	
	comp=Z,9.6nm,1.0s						
W41B	**Gary Mavity, V**	**4.99**	**107**	Pn	Pn	15 07 39.2	-2.0
UALR	**University of**	**5.07**	**111**	lAmb_Lg		15 09 56.9	
	comp=Z,12nm,0.8s						
T25A	**Trinidad**	**5.09**	**276**	lAmb_Lg		15 09 11.1	
	comp=Z,9.7nm,0.8s						
P40A	**Paris**	**5.50**	**58**	Pn	Pn	15 07 47.2	-1.1
P40A				lAmb_Lg		15 09 26.9	
	comp=Z,6.8nm,0.8s						
CCM	**Cathedral Cave**	**5.59**	**75**	Pn	Pn	15 07 47.8	-1.8
CCM				lAmb_Lg		15 09 32.4	
	comp=Z,6.9nm,0.7s						
LCAR	**Lake Charles**	**5.62**	**95**	Pn	Pn	15 07 48.4	-1.6
LCAR	**Lake Charles**	**5.62**	**95**	lAmb_Lg		15 10 12.1	
	comp=Z,10.0nm,1.0s						
SDCO	**Great Sand Dun**	**6.00**	**282**		Pn	15 07 54.8	-0.7
Q24A	**Divide**	**6.01**	**294**	lAmb_Lg		15 09 38.7	
	comp=Z,6.5nm,0.8s						
Q24A	**Divide**	**6.01**	**294**	lAmb_Lg		15 10 23.3	
	comp=Z,7.2nm,0.8s						
PBMO	**Poplar Bluff**	**6.14**	**88**	lAmb_Lg		15 09 43.0	
	comp=Z,6.5nm,0.8s						
PBMO	**Poplar Bluff**	**6.14**	**88**	lAmb_Lg		15 10 24.5	
	comp=Z,7.1nm,0.8s						
FVM	**French Village**	**6.21**	**76**	Pn	Pn	15 07 58.7	+0.5
FVM				lAmb_Lg		15 09 42.8	
	comp=Z,6.5nm,0.7s						
X43A	**Marvell**	**6.27**	**109**	Pn	Pn	15 07 58.2	-0.7
JCT	**Junction City**	**6.43**	**193**	lAmb_Lg		15 10 52.7	
	comp=Z,8.7nm,0.8s						
N23A	**Red Feather La**	**7.40**	**306**	lAmb_Lg		15 11 20.6	
	comp=Z,8.3nm,0.8s						

*MOS **16** 15:12:22.6±0.9, 28°.07N×103°.54E, h16km, mb4.3/12, Error ellipse: s-maj=12.4km s-min=6.9km az=104.7*
*IDC **16** 15:12:22.1±0.6, 28°.09N×103°.56E, h0km, mb4.0/21, mbtmp3.9/23, ML2.7/2, MS3.7/6, Error ellipse: s-maj=19.2km s-min=13.0km az=61.0*
*BJI **16** 15:12:24.3±0.0, 28°.10N×103°.47E, h10km, mb4.1/15, mB4.4/3, ML4.0/17, Ms3.9/14, Ms7 3.8/11*
*NEIC **16** 15:12:26.7±1.6, 28°.2N±0°.1×103°.6E±0°.1, h30km±5km, mb4.2/37, Error ellipse: s-maj=17.1km s-min=15.3km az=50.0*

ISC 16 15:12:23.4±0.3, 28°.09N±0°.03×103°.58E±0°.04, h10km, n112, σ1§59/119, mb4.2/50, MS3.8/6, 7C-1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PZH	**PanZhiHua**	**2.28**	**226**	Pg	**Pb**	**15 13 04.3**	**-0.4**
PZH				Sg	**Sb**	**15 13 32.5**	**-0.5**
PZH				smax	smax		
	comp=N,620nm,1.0s						
PZH				smax	smax		
	comp=E,730nm,0.9s						
CD2	**Chengdu**	**2.81**	**3**	Pn	**Pn**	**15 13 10.5**	**+2.0**
CD2				Pg	**Pg**	**15 13 16.5**	**-0.9**
CD2				Sn	**Sn**	**15 13 42.1**	**-0.4**
CD2				Sg	**Sg**	**15 13 53.3**	**-0.5**
CD2				smax	smax		
	comp=E,2μm,0.8s						
KMI	**Kunming**	**3.05**	**195**	⇑Pg	**Pg**	**15 13 20.5**	**-1.5**
KMI				Sg	**Sg**	**15 13 58.6**	**-2.9**
KMI				LR	LR		
	comp=E,980nm,4.1s						
KMI				LR	LR		
	comp=Z,610nm,3.6s						
GYA	**Guiyang**	**3.19**	**120**	⇑Pg	**Pb**	**15 13 18.3**	**-1.9**
GYA				Sg	**Sb**	**15 13 57.8**	**-1.4**
GYA				smax	smax		
	comp=N,920nm,0.8s						
GYA				smax	smax		
	comp=E,870nm,0.7s						
GYA				LR	LR		
	comp=N,1μm,3.8s						
GYA				LR	LR		
	comp=E,1μm,3.8s						
GYA				LR	LR		
	comp=Z,1μm,3.1s						
ENH	**Enshi**	**5.60**	**66**		**Pn**	**15 13 48.2**	**+1.4**
XAN	**Xi'an**	**7.49**	**36**	Pn	**Pn**	**15 14 13.4**	**+0.6**
XAN				Sn	**Sn**	**15 15 37.8**	**0.0**
XAN				Sg	**Sg**	**15 16 23.3**	**-0.5**
XAN				smax	smax		
	comp=N,170nm,1.1s						
XAN				smax	smax		
	comp=E,220nm,1.2s						
XAN				LR	LR		
	comp=E,600nm,4.0s						
XAN				LR	LR		
	comp=Z,480nm,5.6s						
LZH	**Lanzhou**	**7.97**	**2**	Pg	**Pg**	**15 14 57.4**	**+1.3**
LZH				Sg	**Sg**	**15 16 40.8**	**+1.4**
LZH				smax	smax		
	comp=N,45nm,1.5s						
LZH				smax	smax		
	comp=E,55nm,1.5s						
LZH				LR	LR		
	comp=N,230nm,6.5s						
LZH				LR	LR		
	comp=E,510nm,6.5s						
LZH				LR	LR		
	comp=Z,120nm,6.0s						

CNSH	**ChangSha**	**8.25**	**87**	⇓P	**Pn**	**15 14 25.9**	**+2.7**
CNSH				S	**Sn**	**15 15 57.0**	**+0.4**
CNSH				smax	smax		
	comp=Z,86nm,1.1s						
CNSH				smax	smax		
	comp=Z,52nm,1.0s						
WHN	**Wuhan**	**9.71**	**73**	⇑P	**Pn**	**15 14 44.1**	**+0.9**
WHN				LR	LR		
	comp=Z,1μm,7.8s						
WHN				LR	LR		
	comp=Z,560nm,4.4s						
WHN				LR	LR		
	comp=Z,1μm,7.8s						
LYN	**LuoYang**	**9.96**	**48**	*e*P	**Pn**	**15 14 47.4**	**+0.8**
LYN				S	**Sn**	**15 16 40.8**	**+2.4**
LYN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LYN				LR	LR		
	comp=Z,430nm,5.6s						
LYN				LR	LR		
	comp=Z,320nm,8.4s						
CMAR	**Chiang Mai Arr**	**10.49**	**205**	Pn	**Pn**	**15 14 54.6**	**+0.6**
	baz=18,slow=11,SNR=2.1						
	comp=Z,0.8nm,0.8s						
QIZ	**Qiongzhong**	**10.69**	**146**	P	**Pn**	**15 14 55.3**	**-1.4**
QIZ				S	**Sn**	**15 17 03.1**	**+6.6**
QIZ				LR	LR		
	comp=N,310nm,13.5s						
QIZ				LR	LR		
	comp=E,450nm,11.9s						
QIZ				LR	LR		
	comp=Z,190nm,11.2s						
SONM	**Songino Array**	**19.83**	**6**	P	**Pn**	**15 16 56.0**	**0.0**
	baz=183,slow=11,SNR=4.6						
	comp=Z,0.6nm,0.6s						
SONM	**Songino Array**	**19.83**	**6**	P	**P**	**15 16 52.7**	**-1.7**
ULN	**Ulaanbaatar**	**19.93**	**7**	*e*P	**Pn**	**15 16 56.9**	**-0.2**
WMQ	**Urumqi**	**20.24**	**325**	*e*P	**P**	**15 16 59.8**	**+1.0**
ZAK	**Zakamensk**	**22.26**	**359**	*e*P	**P**	**15 17 20.7**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KSAR	**Wonju Array Be**	**22.41**	**59**	P	**P**	**15 17 19.0**	**-3.2**
KSAR	**Wonju Array Be**	**22.41**	**59**	P	**P**	**15 17 19.0**	**-3.2**
KS19	**Wonju Array Si**	**22.41**	**59**	P	**P**	**15 17 22.3**	**0.0**
KS19				lAmb	lAmb	15 17 44.6	
	comp=Z,5.3nm,0.8s						
KSRS	**Korea Array**	**22.44**	**59**	P	**P**	**15 17 22.9**	**+0.3**
	comp=Z,4.2nm,0.7s,baz=247,slow=9.6,SNR=22						
	comp=Z,4.2nm,0.7s						
SEHB	**SEOHWA**	**22.94**	**57**	P	**P**	**15 17 27.9**	**0.0**
CN2	**Changchun**	**23.54**	**42**	*e*P	**P**	**15 17 28.6**	**-5.2**
CN2				*e*PP	**PnPn**	**15 18 01.1**	**+0.6**
CN2				*e*S	**S**	**15 21 38.9**	**-8.9**
IPM	**Ipoh**	**23.61**	**186**	P	**P**	**15 17 35.4**	**+0.7**
IPM				lAmb	lAmb	15 17 36.4	
	comp=Z,10nm,0.9s						
TARG	**Taragay, Kyrgy**	**25.02**	**310**	P	**P**	**15 17 48.9**	**+0.8**
TARG				lAmb	lAmb	15 17 50.2	
	comp=Z,4.2nm,0.7s						
TARG	**Taragay, Kyrgy**	**25.02**	**310**	P	**P**	**15 17 48.9**	**+0.8**
TARG				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MK31	**Makanchi Array**	**25.05**	**324**	P	**P**	**15 17 47.7**	**-0.1**
MK31	**Makanchi Array**	**25.05**	**324**	⇑*i*P	**P**	**15 17 48.8**	**+1.0**
MKAR	**Makanchi Array**	**25.05**	**324**	P	**P**	**15 17 48.6**	**+0.8**
	comp=Z,2.0nm,0.7s,baz=128,slow=9.9,SNR=21						
MKAR				PcP	**PcP**	**15 21 21.8**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=126,slow=2.5,SNR=4.2						
	comp=Z,2.0nm,0.7s						
MKAR	**Makanchi Array**	**25.05**	**324**	P	**P**	**15 17 48.0**	**+0.2**
MAKZ	**Makanchi**	**25.22**	**324**	P	**P**	**15 17 47.9**	**-1.5**
MAKZ				lAmb	lAmb	15 17 57.1	
	comp=Z,5.5nm,0.8s						
MAKZ	**Makanchi**	**25.22**	**324**	P	**P**	**15 17 47.9**	**-1.5**
MAKZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KSH	**Kashi**	**25.52**	**304**	P	**P**	**15 17 54.3**	**+2.0**
KSH				pmax	pmax		
	comp=Z,3.0nm,0.7s						
PSI	**Prapat**	**25.54**	**191**	P	**P**	**15 17 54.0**	**+1.4**
	comp=Z,3.8nm,0.4s,baz=333,slow=9.0,SNR=2.1						
	comp=Z,3.8nm,0.4s						
SBUM	**Sibu**	**26.80**	**161**	P	**P**	**15 18 04.9**	**+1.0**
AAK	**Ala-Archa**	**27.64**	**309**	*i* P	**P**	**15 18 10.3**	**-1.2**
USRK	**Ussuriysk Ar.**	**27.82**	**47**	P	**P**	**15 18 12.2**	**-0.6**
	comp=Z,5.4nm,0.8s,baz=243,slow=6.3,SNR=6.0						
	comp=Z,5.4nm,0.8s						
ZALV	**Zalesovo Beam**	**29.27**	**337**	P	**P**	**15 18 25.2**	**-0.4**
	comp=Z,0.6nm,0.7s,baz=149,slow=11,SNR=2.4						
	comp=Z,0.6nm,0.7s						
ZALV	**Zalesovo Beam**	**29.27**	**337**	P	**P**	**15 18 24.8**	**-0.8**
KURBB	**Kurchatov Arra**	**29.43**	**327**	P	**P**	**15 18 26.0**	**-1.1**
	comp=Z,0.5nm,0.6s,baz=133,slow=9.7,SNR=6.9						
	comp=Z,0.5nm,0.6s						
KURK	**Kurchatov**	**29.45**	**327**	P	**P**	**15 18 26.0**	**-1.2**
KURK	**Kurchatov**	**29.45**	**327**	lAmb	lAmb	15 18 35.1	
	comp=Z,2.4nm,0.8s						
KURK	**Kurchatov**	**29.45**	**327**	P	**P**	**15 18 26.0**	**-1.2**
DAV	**Davao City (W)**	**29.50**	**131**	LR	LR	15 32 02.7	
	comp=Z,66nm,19.1s,baz=314,slow=40						
KLR	**Kul'dur**	**30.19**	**38**	*i* P	**P**	**15 18 34.3**	**+0.4**
KLR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MJAR	**Matsushiro Arr**	**30.32**	**65**	LR	LR	15 31 45.5	
	comp=Z,58nm,21.8s,baz=204,slow=38						
KKAR	**Karatay Array**	**30.55**	**308**	P	**P**	**15 18 36.5**	**-0.6**
KKAR	**Karatay Array**	**30.55**	**308**	P	**P**	**15 18 36.5**	**-0.6**
ZEA	**Zeya**	**30.96**	**28**	*e*P	**P**	**15 18 41.6**	**+1.0**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GEYT	**Alibeck**	**39.04**	**296**	P	**P**	**15 19 52.3**	**+1.8**
	comp=Z,4.4nm,0.7s,baz=104,slow=11,SNR=3.9						
GEYT				LR	LR	15 37 20.0	
	comp=Z,117nm,18.3s,baz=2.5,slow=38						
	comp=Z,4.4nm,0.7s						
GEYT	**Alibeck**	**39.04**	**296**	P	**P**	**15 19 51.8**	**+1.3**
ABKAR	**Akbulak array**	**39.40**	**315**	P	**P**	**15 19 52.3**	**-0.9**
ABKAR	**Akbulak array**	**39.40**	**315**	P	**P**	**15 19 52

comp=Z,2.0nm,0.7s
ASAR Alice Springs 59.18 147 P P 15 22 24.9 +0.1
ARCES ARCESS Array B 59.82 337 P P 15 22 29.3 +0.7
comp=Z,1.7nm,0.9s,baz=97,slow=7.4,SNR=1.5
comp=Z,1.7nm,0.9s
FIA1 FINESS Array S 59.82 327 P P 15 22 26.9 -1.8
FINES FINESS Array B 59.83 327 P P 15 22 28.1 -0.6
comp=Z,1.8nm,0.7s,baz=76,slow=8.0,SNR=5.3
comp=Z,1.8nm,0.7s
CTAO Charters Tower 63.22 134 P P 15 22 52.0 -0.2
CTAO Charters Tower 63.22 134 P P **15 22 52.0 -0.2**
CTAO pmax pmax
comp=Z,31nm,1.4s
NB2 NORSAR Subarra 66.96 328 P P 15 23 14.8 -1.2
comp=Z,1.4nm,0.9s,baz=74,slow=6.5
NOA NORSAR Array B 66.96 328 P P 15 23 14.8 -1.2
comp=Z,0.7nm,0.7s,baz=78,slow=4.6,SNR=4.7
comp=Z,0.7nm,0.7s
NC204 NORSAR Array S 67.10 328 P P 15 23 15.6 -1.4
CLL Collm 68.96 318 *e*P **P 15 23 28.0 -0.7**
CLL Collm 68.96 318 *e*P **P 15 23 28.0 -0.7**
GERES GERESS Array B 69.34 315 P P 15 23 31.6 +0.3
comp=Z,0.2nm,0.3s,baz=95,slow=3.3,SNR=3.7
comp=Z,0.2nm,0.3s
IMAR Indian Mountai 69.63 25 P P 15 23 32.3 -0.3
STKA Stephens Creek 69.75 146 P P 15 23 34.0 +0.2
comp=Z,1.4nm,0.7s,baz=322,slow=7.4,SNR=4.5
comp=Z,1.4nm,0.7s
STKA Stephens Creek 69.75 146 IAmb IAmb 15 23 38.1
comp=Z,1.6nm,1.2s
STKA Stephens Creek 69.75 146 *e*P **P 15 23 36.0 +2.2**
STKA pmax pmax
comp=Z,1.0nm,0.7s
TOLK Toolik Lake Re 70.00 22 P P 15 23 34.2 -0.8
TOLK IAmb IAmb 15 23 36.6
comp=Z,3.1nm,1.1s
H21K Melozitna Rive 70.12 25 P P 15 23 35.7 0.0
H21K IAmb IAmb 15 23 48.0
comp=Z,2.7nm,1.2s
J20K Nowinta River 70.19 27 P P 15 23 35.5 -0.6
J20K IAmb IAmb 15 23 39.7
comp=Z,1.3nm,0.8s
I21K Tanana 70.63 26 P P 15 23 39.3 +0.6
I21K IAmb IAmb 15 23 59.1
comp=Z,6.6nm,1.4s
L19K White Mountain 70.69 29 P P 15 23 39.8 +0.6
L19K IAmb IAmb 15 23 53.1
comp=Z,2.4nm,1.1s
MLY Manley 71.17 26 P P 15 23 42.1 0.0
MLY IAmb IAmb 15 23 43.0
comp=Z,1.4nm,0.8s
N19K Bonanza Creek 71.41 30 P P 15 23 43.9 +0.1
N19K IAmb IAmb 15 23 53.0
comp=Z,5.0nm,1.5s
BPAW Bear Paw Mtn. 71.48 27 P P 15 23 44.4 +0.4
BPAW IAmb IAmb 15 23 57.8
comp=Z,3.2nm,1.0s
PPLA Purkeypile 71.52 28 P P 15 23 45.1 +0.7
I23K Minto, Yukon-K 71.64 25 P P 15 23 46.5 +1.7
I23K IAmb IAmb 15 24 05.8
comp=Z,3.2nm,1.4s
MDM Murphy Dome 72.15 25 P P 15 23 47.4 -0.6
MDM IAmb IAmb 15 24 14.6
comp=Z,4.3nm,1.2s
SKT Skwentna 72.20 29 P P 15 23 46.9 -1.4
SKT IAmb IAmb 15 24 16.0
comp=Z,4.7nm,1.3s
BMAR Burnt Mountain 72.23 22 P 15 23 48.4 0.0
ILAR Eielson Array 72.74 25 P **P 15 23 52.3 +0.8**
comp=Z,0.4nm,0.9s,baz=308,slow=4.4,SNR=2.6
comp=Z,0.4nm,0.9s
RIDG Independent Ri 74.03 25 P P 15 23 57.8 -1.4
RIDG IAmb IAmb 15 24 09.3
comp=Z,1.9nm,0.9s
J26L Joseph Creek 74.11 25 P P 15 23 58.9 -0.8
J26L IAmb IAmb 15 24 08.1
comp=Z,1.8nm,0.9s
GLI Glacier Island 74.60 29 P P 15 24 02.8 +0.3
INK Inuvik 75.14 19 LR LR 16 01 41.7
comp=Z,63nm,19.1s,baz=80,slow=39
TULEG Thule 75.51 358 P P 15 24 06.7 -0.7
BCAR Beaver Creek A 75.56 25 P P 15 24 07.2 -0.9
DLBC Dease Lake 82.95 25 LR LR 16 07 37.9
comp=Z,74nm,19.2s,baz=98,slow=40
YKA Yellowknife Ar 84.69 17 P P 15 24 57.1 -0.1
comp=Z,0.5nm,0.7s,baz=333,slow=5.1,SNR=2.6
comp=Z,0.5nm,0.7s
BBB Bella Bella 88.17 29 LR LR 16 08 19.6
comp=Z,73nm,21.7s,baz=95,slow=38
TORD Torodi Ar. Bea 94.10 287 P P 15 25 42.6 -0.2
comp=Z,0.6nm,0.9s,baz=58,slow=5.4,SNR=2.9
comp=Z,0.6nm,0.9s

TUL ***16*** *15:29:08.5±0.3,36°.759N×0°.009×98°.07W±0°.01,h7km±2km, ML2.6,mb_Lg2.2/10(NEIC),Error ellipse: s-maj=1.2km s-min=1.1km az=146.0*

NEIC 16 15:29:08.3±0.3,36°.752N±0°.008×98°.07W±0°.01,h5km±1km, Error ellipse: s-maj=2.2km s-min=1.4km az=165.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
U32A	**Winter Ranch,**	**0.84**	**244**	Pg	Pg	15 29 24.4	+0.1
T35A	**Sooner Cattle**	**1.26**	**82**		Pg	15 29 32.0	-0.4
R32A	**Long Quarter,**	**1.74**	**343**	Pn	Pn	15 29 39.0	-0.2
TUL1	**Leonard**	**2.02**	**114**	Pn	Pn	15 29 44.1	+1.1
TUL1				IAmb_Lg		15 30 12.4	
comp=Z,8.5nm,0.8s							
WMOK	**Wichita Mounta**	**2.09**	**196**		Pn	15 29 45.1	+1.1
X34A	**Smith Ranch, M**	**2.15**	**175**	Pn	Pb	15 29 47.1	-0.7
X34A				IAmb_Lg		15 30 16.7	
comp=Z,7.7nm,0.8s							
X37A	**Clayton**	**3.08**	**134**	Pn	Pn	15 29 58.5	+0.9
HHAR	**Hobbs**	**3.36**	**97**	Pn	Pn	15 30 02.4	+0.9
HHAR				IAmb_Lg		15 31 01.1	
comp=Z,5.2nm,0.7s							
AMTX	**Amarillo**	**3.48**	**239**	Pn	Pn	15 30 04.5	+1.4
W39A	**Magazine**	**3.81**	**113**	Pn	Pn	15 30 08.2	+0.6
S39A	**Bolivar**	**3.91**	**75**	Pn	Pn	15 30 10.0	+1.1
U40A	**Yellville**	**4.22**	**94**	IAmb_Lg		15 31 22.3	
comp=Z,6.3nm,0.7s							
FCAR	**Ozark Folk Cen**	**4.88**	**98**	Pn	Pn	15 30 20.3	-2.0
T25A	**Trinidad**	**5.09**	**276**	Pn	Pn	15 30 24.3	-1.2
T25A				IAmb_Lg		15 31 52.9	
comp=Z,5.8nm,0.8s							
N38A	**Joes South For**	**5.53**	**42**	IAmb_Lg		15 32 09.9	
comp=Z,5.2nm,0.8s							

ANF ***16*** *15:29:57.8±0.1, 60°.59N×151°.01W,h64km±2km, ML3.6/83, ML3.5/82, Error ellipse: s-maj=1.5km s-min=1.2km az=151.0*

NEIC ***16*** *15:29:57.5±1.4, 60°.60N±0°.03×151°.02W±0°.05, h68km±6km, Error ellipse: s-maj=3.9km s-min=3.8km az=206.0*

AEIC ***16*** *15:29:58±1.4, 60°.61N±0°.03×151°.04W±0°.03, h62km±5km, ML3.1, ML3.3/177(NEIC), Error ellipse: s-maj=3.9km s-min=2.3km az=169.0*

ISC 16 15:29:57.5±1.1, 60°.59N±0°.02×151°.00W±0°.02, h71km±6km, n267, ₙ0ᵍ72/328, Kenai Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAPN	**Captain Cook N**	**0.19**	**336**		**Pn**	**15 30 08.5**	**+0.3**
CAPN				Sn	**Sn**	**15 30 17.2**	**+1.3**
CAPN	**Captain Cook N**	**0.19**	**336**	P	**Pn**	**15 30 08.5**	**+0.3**
baz=160,SNR=15							
CAPN				S	**Sn**	**15 30 17.3**	**+1.3**
baz=160							
SLKM	**Skilak Lake**	**0.39**	**102**		**Pn**	**15 30 09.1**	**-0.4**
SLKM					**Sn**	**15 30 17.5**	**-0.8**
O22K	**Cooper Landing**	**0.64**	**99**		**Pn**	**15 30 11.7**	**0.0**
O22K				Sn	**Sn**	**15 30 21.4**	**-0.9**
O22K	**Cooper Landing**	**0.64**	**99**	P	**Pn**	**15 30 11.9**	**+0.2**
baz=282,SNR=121							
O22K				S	**Sn**	**15 30 21.7**	**-0.5**
baz=282							
FIS	**Fire Island**	**0.67**	**34**		**Pn**	**15 30 12.5**	**+0.4**
FIS				IAML		15 30 25.0	
comp=N,2μm,0.7s							
SPU	**Mount Spurr**	**0.79**	**319**		**Pn**	**15 30 12.4**	**-1.0**
RC01	**Rabbit Creek A**	**0.79**	**50**		**Pn**	**15 30 13.3**	**-0.2**
RC01				Sn	**Sn**	**15 30 24.8**	**-0.6**
RC01				IAML		15 30 26.2	
comp=E,2μm,0.5s							
RC01				IAML		15 30 27.4	
comp=N,1μm,0.2s							
RC01	**Rabbit Creek A**	**0.79**	**50**	P	**Pn**	**15 30 13.4**	**-0.2**
baz=234,SNR=91							
RC01				S	**Sn**	**15 30 25.1**	**-0.3**
baz=234							
BRLK	**Bradley Lake**	**0.83**	**176**		**Pn**	**15 30 14.1**	**+0.1**
BRLK				IAML		15 30 28.3	
comp=E,1μm,0.1s							
BRLK	**Bradley Lake**	**0.83**	**176**		**Sn**	**15 30 27.3**	**+1.1**
DFR	**Drift River**	**0.83**	**271**		**Pn**	**15 30 13.3**	**-0.8**
DFR					**Sn**	**15 30 25.4**	**-1.0**
N20K	**Mount Spurr**	**0.85**	**316**	P	**Pn**	**15 30 13.4**	**-0.9**
baz=136							
N20K				S	**Sn**	**15 30 25.5**	**-1.2**
baz=136							
CKN	**Chakachatna No**	**0.86**	**318**		**Pn**	**15 30 14.0**	**-0.4**
SPCG	**Spurr Capps Gl**	**0.86**	**325**		**Pn**	**15 30 14.0**	**-0.5**
SPCG					**Sn**	**15 30 26.4**	**-0.6**
BRSE	**Bradley Lake S**	**0.86**	**171**		**Pn**	**15 30 14.6**	**+0.3**
BRSE	**Bradley Lake S**	**0.86**	**171**	P	**Pn**	**15 30 14.6**	**+0.3**
baz=350,SNR=138							
BRSE				S	**Sn**	**15 30 27.3**	**+0.5**
baz=350							
RSO	**Redoubt South**	**0.88**	**262**		**Pn**	**15 30 14.1**	**-0.6**
SPCP	**Crater Peak Br**	**0.88**	**321**		**Pn**	**15 30 14.3**	**-0.4**
SPCP					**Sn**	**15 30 27.2**	**-0.3**
CRP	**Crater Peak**	**0.88**	**321**		**Pn**	**15 30 14.4**	**-0.4**
SUA	**Susitna One**	**0.88**	**8**	Pn	**Pn**	**15 30 14.2**	**-0.5**
SUA				Sn	**Sn**	**15 30 26.6**	**-0.8**
SUA				IAML		15 30 27.3	
comp=N,813nm,0.7s							
SUA				IAML		15 30 28.8	
comp=E,573nm,0.7s							
SUA	**Susitna One**	**0.88**	**8**	P	**Pn**	**15 30 14.3**	**-0.4**
baz=190,SNR=104							
SUA				S	**Sn**	**15 30 26.7**	**-0.7**
baz=190							
RDJH	**Redoubt Jeurge**	**0.89**	**271**		**Pn**	**15 30 14.2**	**-0.6**
RED	**Redoubt Volcan**	**0.90**	**260**		**Pn**	**15 30 14.1**	**-0.7**
SEW	**Seward**	**0.91**	**122**		**Pn**	**15 30 14.6**	**-0.2**
SEW	**Seward**	**0.91**	**122**	P	**Pn**	**15 30 14.7**	**-0.2**
baz=304,SNR=116							
SEW				S	**Sn**	**15 30 29.1**	**+1.3**
baz=304							
RDWB	**Redoubt West**	**0.92**	**264**		**Pn**	**15 30 14.5**	**-0.7**
NCT	**North Crescent**	**0.95**	**269**		**Pn**	**15 30 15.0**	**-0.5**
O20K	**Slope Mountain**	**0.96**	**238**		**Pn**	**15 30 15.6**	**0.0**
O20K	**Slope Mountain**	**0.96**	**238**	P	**Pn**	**15 30 15.6**	**0.0**
baz=55,SNR=110							
O20K				S	**Sn**	**15 30 28.5**	**-0.5**
baz=55							
HOM	**Homer**	**0.99**	**199**		**Pn**	**15 30 16.1**	**+0.2**
HOM				Sn	**Sn**	**15 30 30.6**	**+1.1**
HOM	**Homer**	**0.99**	**199**	P	**Pn**	**15 30 16.6**	**+0.8**
baz=18,SNR=19							
HOM				S	**Sn**	**15 30 31.0**	**+1.4**
baz=18							
STLK	**Strandline Lak**	**1.00**	**336**		**Pn**	**15 30 16.0**	**0.0**
SPWE	**Spurr West**	**1.02**	**313**		**Pn**	**15 30 16.2**	**-0.2**
CNPM	**China Poot**	**1.08**	**187**	Pn	**Pn**	**15 30 17.3**	**+0.3**
CNPM				Sn	**Sn**	**15 30 31.3**	**-0.2**
CNPM				IAML		15 30 34.3	
comp=E,913nm,0.4s							
CNPM				IAML		15 30 35.3	
comp=N,813nm,0.3s							
IVE	**Iliamna Volcan**	**1.16**	**241**		**Pn**	**15 30 17.9**	**-0.3**
IVE					**Sn**	**15 30 33.3**	**-0.2**
M22K	**Willow**	**1.24**	**20**		**Pn**	**15 30 18.5**	**-0.5**
M22K				Sn	**Sn**	**15 30 35.0**	**-0.2**
M22K	**Willow**	**1.24**	**20**	P	**Pn**	**15 30 19.5**	**+0.4**
baz=202,SNR=71							
M22K				S	**Sn**	**15 30 35.2**	**0.0**
baz=202							
PMR	**Palmer**	**1.35**	**41**		**Pn**	**15 30 20.4**	**0.0**
PMR				Sn	**Sn**	**15 30 37.3**	**-0.4**
PMR				IAML		15 30 42.0	
comp=N,504nm,0.3s							
PMR				IAML		15 30 42.2	
comp=E,424nm,0.3s							
PMR	**Palmer**	**1.35**	**41**	P	**Pn**	**15 30 20.6**	**+0.2**
baz=224,SNR=44							
PMR				S	**Sn**	**15 30 37.6**	**-0.2**
baz=224							
SKT	**Skwentna**	**1.42**	**350**		**Pn**	**15 30 21.5**	**+0.1**
SKT				Sn	**Sn**	**15 30 39.3**	**0.0**
SKT				IAML		15 30 40.9	
comp=E,641nm,0.4s							
SKT	**Skwentna**	**1.42**	**350**	P	**Pn**	**15 30 21.6**	**+0.3**
baz=170,SNR=183							
SKT				S	**Sn**	**15 30 39.6**	**+0.2**
baz=170							
OPT	**Oil Point**	**1.46**	**231**		**Pn**	**15 30 22.6**	**+0.6**
KNK	**Knik Glacier**	**1.49**	**55**		**Pn**	**15 30 22.7**	**+0.4**
KNK					**Sn**	**15 30 41.4**	**+0.4**
KNK	**Knik Glacier**	**1.49**	**55**	P	**Pn**	**15 30 22.7**	**+0.4**
baz=238							
KNK				S	**Sn**	**15 30 41.1**	**+0.1**
baz=238							
GHO	**Glory Hole Cre**	**1.55**	**39**		**Pn**	**15 30 23.4**	**+0.2**
M20K	**Styx River**	**1.66**	**322**		**Pn**	**15 30 24.9**	**+0.3**
M20K	**Styx River**	**1.66**	**322**	P	**Pn**	**15 30 24.9**	**+0.3**
baz=141,SNR=66							
M20K				S	**Sn**	**15 30 45.8**	**+0.7**
baz=141							
O19K	**Port Alsworth**	**1.70**	**258**		**Pn**	**15 30 24.5**	**-0.5**
O19K				Sn	**Sn**	**15 30 45.3**	**-0.6**
O19K	**Port Alsworth**	**1.70**	**258**	P	**Pn**	**15 30 24.6**	**-0.4**
baz=74,SNR=36							
O19K				S	**Sn**	**15 30 45.6**	**-0.3**
baz=74							
AU22	**Augustine Moun**	**1.71**	**225**		**Pn**	**15 30 25.8**	**+0.7**
AU22					**Sn**	**15 30 47.2**	**+1.1**
AU2	**Augustine Isla**	**1.71**	**225**		**Pn**	**15 30 25.9**	**+0.7**
AUL	**Augustine Lava**	**1.73**	**226**		**Pn**	**15 30 26.2**	**+0.8**
N19K	**Bonanza Creek**	**1.73**	**279**		**Pn**	**15 30 25.0**	**-0.6**
N19K				Sn	**Sn**	**15 30 45.9**	**-0.9**
N19K	**Bonanza Creek**	**1.73**	**279**	P	**Pn**	**15 30 25.1**	**-0.6**
baz=95,SNR=86							
N19K				S	**Sn**	**15 30 46.1**	**-0.8**
baz=95							
AUQ	**Augustine Qik'**	**1.74**	**225**		**Pn**	**15 30 26.3**	**+0.7**
AUH	**Augustine H**	**1.74**	**226**		**Pn**	**15 30 26.7**	**+1.0**
AUCH	**Augustine Cone**	**1.74**	**226**		**Pn**	**15 30 26.5**	**+0.8**
SML	**Sawmill**	**1.77**	**45**	Pn	**Pn**	**15 30 26.3**	**+0.2**
SML				Sn	**Sn**	**15 30 47.6**	**-0.3**
SML	**Sawmill**	**1.77**	**45**	P	**Pn**	**15 30 26.3**	**+0.2**
baz=229,SNR=69							
SML				S	**Sn**	**15 30 47.9**	**0.0**
baz=229							
CUT	**Chulitna**	**1.85**	**11**		**Pn**	**15 30 27.4**	**+0.3**
CUT				Sn	**Sn**	**15 30 51.2**	**+1.6**
CUT				IAML		15 30 54.2	
comp=N,340nm,0.5s							
CUT				IAML		15 30 57.8	
comp=E,416nm,0.6s							
CUT	**Chulitna**	**1.85**	**11**	P	**Pn**	**15 30 27.7**	**+0.6**
baz=192,SNR=23							
CUT				S	**Sn**	**15 30 49.2**	**-0.4**
baz=192							
GLI	**Glacier Island**	**1.94**	**80**		**Pn**	**15 30 27.4**	**-0.9**
GLI				Sn	**Sn**	**15 30 49.8**	**-1.9**
GLI				IAML		15 30 53.2	
comp=E,320nm,0.2s							
GLI	**Glacier Island**	**1.94**	**80**	P	**Pn**	**15 30 28.2**	**0.0**
baz=264,SNR=22							
GLI				S	**Sn**	**15 30 50.5**	**-1.2**
baz=264							
M23K	**Glacier View**	**1.99**	**51**		**Pn**	**15 30 29.3**	**+0.3**
M23K					**Sn**	**15 30 52.6**	**-0.4**
M23K	**Glacier View**	**1.99**	**51**	P	**Pn**	**15 30 29.3**	**+0.3**
baz=235,SNR=75							
M23K				S	**Sn**	**15 30 53.0**	**0.0**
baz=235							
M19K	**Big River Lodg**	**2.10**	**310**		**Pn**	**15 30 30.7**	**+0.1**
M19K	**Big River Lodg**	**2.10**	**310**	IAML		15 30 58.5	
comp=E,147nm,0.3s							
M19K				IAML		15 30 58.5	
comp=N,163nm,0.3s							
M19K	**Big River Lodg**	**2.10**	**310**	S	**Sn**	**15 30 56.2**	**+0.5**
baz=127							
SYI	**Shuyak Island**	**2.11**	**200**		**Pn**	**15 30 31.7**	**+1.1**
Q20K	**Shuyak Island**	**2.11**	**200**	P	**Pn**	**15 30 31.8**	**+1.2**
baz=18,SNR=14							
Q20K				S	**Sn**	**15 30 55.0**	**-0.9**
baz=18							
Q19K	**Cape Douglas,**	**2.14**	**220**		**Pn**	**15 30 32.0**	**+0.9**
Q19K				Sn	**Sn**	**15 30 58.2**	**+1.6**
Q19K	**Cape Douglas,**	**2.14**	**220**	P	**Pn**	**15 30 32.3**	**+1.3**
baz=37,SNR=54							
Q19K				S	**Sn**	**15 30 56.2**	**-0.4**
baz=37							
SCM	**Sheep Creek Mo**	**2.17**	**53**		**Pn**	**15 30 31.4**	**-0.1**
SCM				IAML		15 31 07.4	
comp=N,299nm,0.7s							
SCM	**Sheep Creek Mo**	**2.17**	**53**	P	**Pn**	**15 30 31.7**	**+0.3**
baz=237,SNR=30							
SCM				S	**Sn**	**15 30 57.5**	**+0.1**
baz=237							
JPK	**Jack Peak**	**2.20**	**76**		**Pn**	**15 30 31.7**	**-0.2**
O18K	**Koktuh Hills**	**2.23**	**252**		**Pn**	**15 30 31.6**	**-0.6**
O18K				Sn	**Sn**	**15 30 57.4**	**-1.4**
O18K				IAML		15 31 05.0	
comp=N,272nm,0.6s							
O18K				IAML		15 31 05.4	
comp=E,147nm,0.5s							
O18K	**Koktuh Hills**	**2.23**	**252**	P	**Pn**	**15 30 31.5**	**-0.7**
baz=68,SNR=60							
O18K				S	**Sn**	**15 30 58.3**	**-0.5**
baz=68							
FID	**Port Fidalgo**	**2.23**	**84**		**Pn**	**15 30 31.2**	**-1.0**
FID				IAML		15 30 59.9	
comp=N,205nm,0.2s							
FID				IAML		15 31 00.7	
comp=E,300nm,0.3s							
FID	**Port Fidalgo**	**2.23**	**84**		**Sn**	**15 30 56.9**	**-1.8**
HIN	**Hinchinbrook I**	**2.23**	**93**		**Pn**	**15 30 31.4**	**-0.8**
HIN				IAML		15 31 00.2	
comp=N,196nm,0.6s							
HIN				IAML		15 31 19.7	
comp=E,172nm,0.7s							
HIN	**Hinchinbrook I**	**2.23**	**93**		**Sn**	**15 30 59.3**	**+0.5**
SVW2	**Sparrevohn**	**2.30**	**285**		**Pn**	**15 30 32.0**	**-1.2**
SVW2				IAML		15 31 15.3	
comp=E,104nm,0.6s							
L20K	**Farewell, AK**	**2.34**	**325**		**Pn**	**15 30 34.0**	**+0.3**
L20K	**Farewell, AK**	**2.34**	**325**	P	**Pn**	**15 30 34.0**	**+0.3**
baz=143,SNR=49							
PPLA	**Purkeypile**	**2.38**	**347**	Pn	**Pn**	**15 30 34.8**	**+0.4**
PPLA	**Purkeypile**	**2.38**	**347**	P	**Pn**	**15 30 34.5**	**+0.1**
baz=166,SNR=21							
PPLA				S	**Sn**	**15 31 03.3**	**+0.7**
baz=166							
N18K	**Kilae Creek**	**2.41**	**274**		**Pn**	**15 30 33.8**	**-0.9**
N18K	**Kilae Creek**	**2.41**	**274**	P	**Pn**	**15 30 34.0**	**-0.7**
baz=90,SNR=48							
N18K				S	**Sn**	**15 31 01.7**	**-1.5**
baz=90							
P18K	**Big Mountain,**	**2.44**	**242**		**Pn**	**15 30 34.7**	**-0.4**
P18K	**Big Mountain,**	**2.44**	**242**	P	**Pn**	**15 30 34.9**	**-0.3**
baz=58,SNR=11							
P18K				S	**Sn**	**15 31 03.7**	**-0.3**
baz=58							
L19K	**White Mountain**	**2.45**	**312**	Pn	**Pn**	**15 30 35.4**	**+0.3**
L19K				IAML		15 31 06.6	
comp=N,116nm,0.8s							
L19K	**White Mountain**	**2.45**	**312**	P	**Pn**	**15 30 35.6**	**+0.4**
baz=129,SNR=64							
L19K				S	**Sn**	**15 31 04.0**	**0.0**
baz=129							
WAT1	**Susitna Watana**	**2.53**	**26**		**Pn**	**15 30 36.6**	**+0.4**
WAT1	**Susitna Watana**	**2.53**	**26**	P	**Pn**	**15 30 36.7**	**+0.4**
baz=209							
WAT1				S	**Sn**	**15 31 05.8**	**-0.2**
baz=209							
WAT6	**Susitna Watana**	**2.53**	**37**		**Pn**	**15 30 37.0**	**+0.6**
WAT6	**Susitna Watana**	**2.53**	**37**	P	**Pn**	**15 30 36.5**	**0.0**
baz=220,SNR=36							
WAT6				S	**Sn**	**15 31 05.3**	**-1.0**
baz=220							
EYAK	**Cordova Ski Ar**	**2.59**	**89**	Pn	**Pn**	**15 30 36.4**	**-0.7**
EYAK	**Cordova Ski Ar**	**2.59**	**89**	P	**Pn**	**15 30 36.4**	**-0.7**
baz=274							
EYAK				S	**Sn**	**15 31 07.7**	**+0.3**
baz=274							
Q23K	**Middleton Isla**	**2.61**	**115**	Pn	**Pn**	**15 30 37.2**	**0.0**
Q23K				IAML		15 31 39.2	
comp=N,76nm,1.2s							
Q23K				IAML		15 31 43.0	
comp=E,85nm,0.9s							
Q23K	**Middleton Isla**	**2.61**	**115**	P	**Pn**	**15 30 37.3**	**0.0**
baz=299							
Q23K				S	**Sn**	**15 31 07.7**	**-0.2**
baz=299							
DIV	**Divide**	**2.61**	**76**		**Pn**	**15 30 37.6**	**+0.1**
MID	**Middleton Isla**	**2.61**	**115**	Pn	**Pn**	**15 30 37.3**	**-0.1**
MID				IAML		15 31 39.1	
comp=N,74nm,1.2s							
MID				IAML		15 31 43.0	
comp=E,83nm,0.9s							
KLU	**Klutina**	**2.63**	**68**		**Pn**	**15 30 37.8**	**+0.1**
KLU	**Klutina**	**2.63**	**68**	P	**Pn**	**15 30 37.9**	**+0.3**
baz=253,SNR=19							
KLU				S	**Sn**	**15 31 08.0**	**-0.5**
baz=253							
M24K	**Tolsona, Glenn**	**2.78**	**55**		**Pn**	**15 30 40.5**	**+0.9**
M24K	**Tolsona, Glenn**	**2.78**	**55**	P	**Pn**	**15 30 40.6**	**+1.0**
baz=240,SNR=41							
M24K				S	**Sn**	**15 31 13.5**	**+1.4**
baz=240							
KAHC	**Katmai Hardscr**	**2.82**	**228**		**Pn**	**15 30 41.2**	**+0.9**
CAST	**Castle Rocks**	**2.88**	**350**		**Pn**	**15 30 41.2**	**+0.2**
CAST	**Castle Rocks**	**2.88**	**350**	P	**Pn**	**15 30 41.6**	**+0.5**
baz=170,SNR=26							
TRF	**Thorofare Moun**	**2.89**	**6**	Pn	**Pn**	**15 30 42.0**	**+0.7**
TRF				IAML		15 31 30.9	
comp=E,66nm,0.8s							
TRF				IAML		15 31 34.4	
comp=N,103nm,0.9s							
TRF	**Thorofare Moun**	**2.89**	**6**	P	**Pn**	**15 30 42.0**	**+0.7**
baz=187,SNR=59							
KDAK	**Kodiak Island**	**2.93**	**197**		**Pn**	**15 30 41.0**	**-0.7**
KDAK				IAML		15 31 28.0	
comp=N,78nm,0.6s							
KDAK				IAML		15 31 30.0	
comp=N,65nm,0.9s							
KDAK	**Kodiak Island**	**2.93**	**197**	P	**Pn**	**15 30 41.1**	**-0.6**
baz=15							
KDAK				S	**Sn**	**15 31 15.2**	**-0.6**
baz=15							
KTH	**Kantishna Hill**	**2.97**	**1**	Pn	**Pn**	**15 30 42.2**	**-0.1**
KTH				IAML		15 31 26.6	
comp=N,77nm,0.9s							
KTH				IAML		15 31 45.5	
comp=E,93nm,0.9s							
RND	**Reindeer**	**3.00**	**19**		**Pn**	**15 30 43.2**	**+0.5**
RND				IAML		15 31 40.2	
comp=N,54nm,0.6s							
DHY	**Denali Highway**	**3.03**	**33**		**Pn**	**15 30 43.2**	**+0.1**
DHY				IAML		15 31 19.2	
comp=E,111nm,0.4s							
DHY				IAML		15 31 31.5	
comp=N,82nm,0.5s							
DHY	**Denali Highway**	**3.03**	**33**	P	**Pn**	**15 30 43.8**	**+0.7**
baz=217,SNR=29							
DHY				S	**Sn**	**15 31 18.5**	**+0.2**
baz=217							
P17K	**Kvichak River**	**3.08**	**245**	P	**Pn**	**15 30 43.9**	**+0.2**
baz=60							
K20K	**Telida**	**3.13**	**334**	Pn	**Pn**	**15 30 44.1**	**-0.4**
K20K	**Telida**	**3.13**	**334**	P	**Pn**	**15 30 44.6**	**+0.2**
baz=151,SNR=54							
O17K	**Koliganek Bris**	**3.15**	**258**		**Pn**	**15 30 44.1**	**-0.6**
O17K	**Koliganek Bris**	**3.15**	**258**	P	**Pn**	**15 30 44.2**	**-0.6**
baz=72,SNR=5.7					

	baz=255,SNR=12							
N25K				S	Sn	15 31 23.7	-0.4	
	baz=255							
MCK	**McKinley**	**3.30**	**16**	Pn	Pn	**15 30 47.4**	**+0.7**	
MCK				IAML		15 31 41.3		
	comp=N,47nm,0.7s							
MCK	**McKinley**	**3.30**	**16**	P	Pn	**15 30 48.1**	**+1.4**	
	baz=198,SNR=9.5							
TT01	**Tatalina**	**3.33**	**316**		Pn	**15 30 47.4**	**+0.3**	
HARP	**HAARP**	**3.33**	**55**		Pn	**15 30 47.7**	**+0.5**	
HARP	**HAARP**	**3.33**	**55**	P	Pn	**15 30 48.0**	**+0.8**	
	baz=240,SNR=20							
HARP				S	Sn	**15 31 26.0**	**+0.4**	
	baz=240							
HMT	**Hamilton**	**3.34**	**91**		Pn	**15 30 46.2**	**-1.1**	
HMT				IAML		15 31 53.3		
	comp=N,89nm,0.6s							
TTA	**Tatalina**	**3.34**	**317**	Pn	Pn	**15 30 47.3**	**0.0**	
TTA	**Tatalina**	**3.34**	**317**	P	Pn	**15 30 47.5**	**+0.1**	
	baz=132,SNR=35							
CHUM	**Lake Minchumin**	**3.36**	**350**		Pn	**15 30 47.7**	**+0.1**	
CHUM	**Lake Minchumin**	**3.36**	**350**	P	Pn	**15 30 47.6**	**+0.1**	
	baz=169,SNR=34							
Q16K	**King Salmon**	**3.46**	**239**	P	Pn	**15 30 49.0**	**+0.2**	
	baz=53							
NICHA	**Nichawak Mount**	**3.50**	**93**		Pn	**15 30 48.5**	**-1.0**	
BPAW	**Bear Paw Mtn.**	**3.52**	**0**	Pn	Pn	**15 30 48.7**	**-1.1**	
BPAW	**Bear Paw Mtn.**	**3.52**	**0**	P	Pn	**15 30 50.2**	**+0.5**	
	baz=180,SNR=26							
PAX	**Paxson**	**3.55**	**45**		Pn	**15 30 51.2**	**+1.1**	
PAX	**Paxson**	**3.55**	**45**	P	Pn	**15 30 51.1**	**+0.9**	
	baz=231,SNR=35							
OHAK	**Old Harbor**	**3.58**	**200**		Pn	**15 30 49.8**	**-0.7**	
OHAK				IAML		15 31 48.2		
	comp=N,37nm,0.7s							
OHAK				IAML		15 31 53.8		
	comp=E,36nm,1.1s							
OHAK	**Old Harbor**	**3.58**	**200**	P	Pn	**15 30 50.0**	**-0.6**	
	baz=18							
GLB	**Gilahina Butte**	**3.60**	**73**	Pn	Pn	**15 30 50.7**	**-0.2**	
GLB				IAML		15 31 35.9		
	comp=E,42nm,0.4s							
GLB				IAML		15 31 58.0		
	comp=N,65nm,1.1s							
SUCK	**Suckling Hills**	**3.63**	**95**	Pn	Pn	**15 30 51.8**	**+0.6**	
SUCK				IAML		15 31 32.0		
	comp=N,80nm,0.4s							
SUCK				IAML		15 31 34.2		
	comp=E,34nm,0.3s							
BWN	**Browne**	**3.66**	**11**	Pn	Pn	**15 30 52.7**	**+1.0**	
BWN				IAML		15 32 01.9		
	comp=E,76nm,1.1s							
O16K	**Kokwok River B**	**3.69**	**257**		Pn	**15 30 51.6**	**-0.4**	
O16K	**Kokwok River B**	**3.69**	**257**	P	Pn	**15 30 51.6**	**-0.4**	
	baz=71,SNR=7.5							
VRDI	**Verde Repeater**	**3.74**	**77**	Pn	Pn	**15 30 52.6**	**-0.3**	
VRDI				IAML		15 31 36.6		
	comp=N,54nm,0.3s							
VRDI				IAML		15 31 37.0		
	comp=E,30nm,0.2s							
N16K	**Nishlik Lake**	**3.84**	**272**		Pn	**15 30 54.0**	**-0.1**	
N16K	**Nishlik Lake**	**3.84**	**272**	P	Pn	**15 30 54.0**	**-0.1**	
	baz=85,SNR=31							
P16K	**Nushagak River**	**3.86**	**249**		Pn	**15 30 54.9**	**+0.5**	
P16K	**Nushagak River**	**3.86**	**249**	P	Pn	**15 30 54.6**	**+0.2**	
	baz=63							
J20K	**Nowinta River**	**3.88**	**339**	Pn	Pn	**15 30 54.4**	**-0.3**	
J20K	**Nowinta River**	**3.88**	**339**	P	Pn	**15 30 54.7**	**+0.1**	
	baz=157,SNR=26							
MCARA	**McCarthy VSAT**	**3.96**	**75**	Pn	Pn	**15 30 55.8**	**+0.1**	
MCARA	**McCarthy VSAT**	**3.96**	**75**	P	Pn	**15 30 55.9**	**+0.2**	
	baz=262							
TGL	**Tana Glacier**	**4.02**	**84**	Pn	Pn	**15 30 55.8**	**-0.8**	
TGL				IAML		15 31 45.4		
	comp=E,43nm,0.6s							
TGL				IAML		15 32 07.9		
	comp=N,35nm,0.7s							
WAX	**Waxell Ridge**	**4.03**	**88**		Pn	**15 30 55.6**	**-1.1**	
K24K	**Donnelly Dome**	**4.04**	**35**	P	Pn	**15 30 59.3**	**+2.5**	
	baz=220,SNR=17							
R17K	**Ugashik Creek**	**4.06**	**226**	P	Pn	**15 30 58.3**	**+1.2**	
	baz=40							
SNH	**Sunshine Point**	**4.07**	**92**		Pn	**15 30 55.3**	**-1.9**	
SNH				IAML		15 31 43.9		
	comp=N,43nm,0.7s							
SNH				IAML		15 31 44.7		
	comp=E,43nm,0.5s							
NEA2	**Nenana**	**4.11**	**12**		Pn	**15 30 57.0**	**-0.8**	
NEA2	**Nenana**	**4.11**	**12**	P	Pn	**15 30 58.6**	**+0.8**	
	baz=194,SNR=13							
WRH	**Wood River Hil**	**4.12**	**18**		Pn	**15 30 58.2**	**+0.4**	
MENT	**Mentasta**	**4.18**	**53**		Pn	**15 30 59.0**	**+0.3**	
PTPK	**Patty Peak**	**4.21**	**78**		Pn	**15 30 59.4**	**+0.1**	
M26K	**Nabesna, AK**	**4.24**	**61**		Pn	**15 31 00.1**	**+0.5**	
M26K				IAML		15 31 49.1		
	comp=E,28nm,0.5s							
M26K				IAML		15 32 21.2		
	comp=N,36nm,0.7s							
M26K	**Nabesna, AK**	**4.24**	**61**	P	Pn	**15 31 00.4**	**+0.8**	
	baz=249,SNR=20							
KIAG	**Kiagna River**	**4.25**	**82**		Pn	**15 30 59.5**	**-0.3**	
BALM	**Baldy**	**4.26**	**80**		Pn	**15 30 59.6**	**-0.3**	
HDA	**Harding Lake**	**4.27**	**24**		Pn	**15 31 00.6**	**+0.7**	
HDA				IAML		15 32 13.8		
	comp=N,43nm,0.9s							
HDA				IAML		15 32 16.3		
	comp=E,37nm,0.7s							
HDA	**Harding Lake**	**4.27**	**24**	P	Pn	**15 31 01.1**	**+1.2**	
	baz=208,SNR=32							
ISLE	**Juniper Island**	**4.27**	**86**		Pn	**15 30 59.1**	**-1.0**	
ISLE				IAML		15 31 50.5		
	comp=E,34nm,0.6s							
ISLE				IAML		15 32 13.7		
	comp=N,34nm,0.8s							
RIDG	**Independent Ri**	**4.28**	**40**		Pn	**15 31 01.3**	**+1.3**	
RIDG	**Independent Ri**	**4.28**	**40**	P	Pn	**15 31 01.4**	**+1.3**	
	baz=226							
CCB	**Clear Creek Bu**	**4.33**	**19**		Pn	**15 31 01.3**	**+0.6**	
L26K	**Log Cabin Wild**	**4.37**	**53**		Pn	**15 31 02.4**	**+1.0**	
L26K				IAML		15 32 13.1		
	comp=E,37nm,0.5s							
L26K				IAML		15 32 33.2		
	comp=N,41nm,0.5s							
L26K	**Log Cabin Wild**	**4.37**	**53**	P	Pn	**15 31 02.3**	**+1.0**	
	baz=240							
SII	**Sitkinak Islan**	**4.38**	**204**	Pn	Pn	**15 31 01.6**	**+0.2**	
SII				IAML		15 32 29.4		
	comp=E,42nm,0.9s							
BAGL	**Bagley Icefiel**	**4.40**	**87**		Pn	**15 31 01.2**	**-0.5**	
MLY	**Manley**	**4.46**	**1**		Pn	**15 31 03.0**	**+0.5**	
MLY	**Manley**	**4.46**	**1**	P	Pn	**15 31 02.7**	**+0.2**	
	baz=182,SNR=22							
DOT	**Dot Lake**	**4.47**	**44**	Pn	Pn	**15 31 03.8**	**+1.1**	
MESA	**MESA**	**4.51**	**91**	Pn	Pn	**15 31 03.8**	**+0.4**	
MESA	**MESA**	**4.51**	**91**	P	Pn	**15 31 03.3**	**-0.1**	
	baz=279							
TCOL	**CIGO, UAF Yank**	**4.53**	**17**		Pn	**15 31 04.7**	**+1.2**	
TCOL	**CIGO, UAF Yank**	**4.53**	**17**	P	Pn	**15 31 04.7**	**+1.2**	
	baz=200,SNR=8.7							
COLA	**College**	**4.54**	**17**		Pn	**15 31 04.6**	**+1.1**	
COLA	**College**	**4.54**	**17**	P	Pn	**15 31 04.5**	**+1.0**	
	baz=200							
GRNC	**Granite Creek**	**4.55**	**84**		Pn	**15 31 04.0**	**0.0**	
GRNC				IAML		15 31 53.8		
	comp=E,23nm,0.5s							
GRNC				IAML		15 32 01.0		
	comp=N,40nm,0.6s							
MDM	**Murphy Dome**	**4.56**	**15**		Pn	**15 31 03.9**	**-0.1**	
MDM				IAML		15 32 30.1		
	comp=E,16nm,0.9s							
YAH	**Yahtse**	**4.58**	**89**		Pn	**15 31 04.4**	**-0.1**	
YAH				IAML		15 31 57.3		
	comp=N,34nm,0.5s							
YAH				IAML		15 31 58.1		
	comp=E,25nm,0.6s							
BARN	**Barnard Glacie**	**4.59**	**80**		Pn	**15 31 04.4**	**-0.2**	
BARN				IAML		15 31 57.2		
	comp=N,24nm,0.5s							
BARN				IAML		15 31 59.6		
	comp=E,22nm,0.4s							
IL31		**4.60**	**23**		Pn	**15 31 05.5**	**+1.1**	
ILAR	**Eielson Array**	**4.60**	**23**	Pn	Pn	**15 31 05.2**	**+0.8**	
I21K	**Tanana**	**4.63**	**355**		Pn	**15 31 05.1**	**+0.3**	
I21K	**Tanana**	**4.63**	**355**	P	Pn	**15 31 05.9**	**+1.2**	
	baz=174,SNR=15							
I23K	**Minto, Yukon-K**	**4.63**	**9**		Pn	**15 31 05.1**	**+0.3**	
I23K				IAML		15 32 32.2		
	comp=N,19nm,0.9s							
I23K	**Minto, Yukon-K**	**4.63**	**9**	P	Pn	**15 31 05.8**	**+1.0**	
	baz=190,SNR=29							
SCRK	**Sand Creek**	**4.72**	**41**	Pn	Pn	**15 31 06.3**	**+0.2**	
SCRK				IAML		15 32 23.1		
	comp=E,33nm,0.8s							
SCRK				IAML		15 32 24.3		
	comp=N,24nm,0.8s							
SCRK	**Sand Creek**	**4.72**	**41**	P	Pn	**15 31 06.4**	**+0.2**	
	baz=227,SNR=13							
M27K	**Edge Creek, AK**	**4.72**	**64**		Pn	**15 31 06.6**	**+0.4**	
M27K	**Edge Creek, AK**	**4.72**	**64**	P	Pn	**15 31 06.9**	**+0.8**	
	baz=252							
CTG	**Chitna Glacier**	**4.75**	**81**	P	Pn	**15 31 07.0**	**+0.4**	
	baz=270							
CTGM	**Chitina Glacie**	**4.75**	**81**		Pn	**15 31 07.4**	**+0.8**	
CTGM				IAML		15 32 01.9		
	comp=E,20nm,0.7s							
CTGM				IAML		15 32 02.1		
	comp=N,18nm,0.4s							
J25K	**Salcha River,**	**4.80**	**30**		Pn	**15 31 08.3**	**+1.1**	
J25K				IAML		15 32 16.8		
	comp=N,16nm,0.7s							
J25K				IAML		15 32 25.4		
	comp=E,23nm,0.8s							
J25K	**Salcha River,**	**4.80**	**30**	P	Pn	**15 31 08.4**	**+1.2**	
	baz=216,SNR=63							
POKR	**Poker Plat Res**	**4.83**	**18**	IAML		15 32 33.0		
	comp=N,13nm,0.9s							
POKR				IAML		15 32 35.5		
	comp=E,19nm,0.9s							
POKR	**Poker Plat Res**	**4.83**	**18**		Pn	**15 31 08.7**	**+1.2**	
POKR	**Poker Plat Res**	**4.83**	**18**	P	Pn	**15 31 08.4**	**+0.9**	
	baz=202,SNR=7.7							
TABL	**Table Mountain**	**4.87**	**88**		Pn	**15 31 08.3**	**-0.1**	
TABL				IAML		15 32 02.0		
	comp=E,33nm,0.4s							
TABL				IAML		15 32 04.5		
	comp=N,24nm,0.5s							
LOGN	**Logan Glacier**	**4.92**	**83**		Pn	**15 31 08.8**	**-0.1**	
LOGN				IAML		15 32 07.5		
	comp=N,25nm,0.5s							
LOGN				IAML		15 32 07.8		
	comp=E,18nm,0.5s							
GCSA	**Galena City Sc**	**4.97**	**330**	P	Pn	**15 31 10.0**	**+0.5**	
	baz=144							
L27K	**Beaver Creek,**	**5.00**	**56**		Pn	**15 31 10.4**	**+0.5**	
L27K	**Beaver Creek,**	**5.00**	**56**	P	Pn	**15 31 10.5**	**+0.5**	
	baz=245,SNR=5.9							
BC03		**5.02**	**56**		Pn	**15 31 10.9**	**+0.8**	
BCAR	**Beaver Creek A**	**5.02**	**56**	Pn	Pn	**15 31 10.6**	**+0.4**	
YUK2	**White River**	**5.06**	**72**		Pn	**15 31 11.3**	**+0.5**	
H21K	**Melozitna Rive**	**5.15**	**352**	Pn	Pn	**15 31 12.7**	**+0.8**	
H21K	**Melozitna Rive**	**5.15**	**352**	P	Pn	**15 31 12.9**	**+0.9**	
	baz=170,SNR=26							
BVCY	**Beaver Creek**	**5.19**	**65**	P	Pn	**15 31 13.2**	**+0.8**	
	baz=254							
J26L	**Joseph Creek**	**5.21**	**38**	Pn	Pn	**15 31 13.4**	**+0.6**	
J26L				IAML		15 32 24.3		
	comp=N,20nm,0.7s							
J26L	**Joseph Creek**	**5.21**	**38**	P	Pn	**15 31 13.5**	**+0.6**	
	baz=225,SNR=18							
YUK3	**Moose Creek**	**5.24**	**72**		Pn	**15 31 13.8**	**+0.5**	
YUK3	**Moose Creek**	**5.24**	**72**	P	Pn	**15 31 13.7**	**+0.3**	
	baz=262,SNR=6.5							
H23K	**Yukon River**	**5.29**	**6**		Pn	**15 31 14.4**	**+0.5**	
H23K	**Yukon River**	**5.29**	**6**	P	Pn	**15 31 14.7**	**+0.8**	
	baz=188							
H22K	**Ishtalitna Cre**	**5.33**	**358**	P	Pn	**15 31 14.9**	**+0.6**	
	baz=178							
PCA	**Pinnacle**	**5.36**	**91**	Pn	Pn	**15 31 16.1**	**+1.3**	
PINM	**Pinnacle**	**5.36**	**91**	P	Pn	**15 31 15.9**	**+1.1**	
	baz=280							
CHIR	**Chirikof Islan**	**5.37**	**209**	Pn	Pn	**15 31 14.7**	**-0.3**	
K27K	**Chicken**	**5.40**	**46**	P	Pn	**15 31 16.0**	**+0.7**	
	baz=235							
H24K	**Noodor Dome**	**5.45**	**14**	Pn	Pn	**15 31 16.9**	**+0.8**	
H24K	**Noodor Dome**	**5.45**	**14**	P	Pn	**15 31 17.0**	**+0.9**	
	baz=197,SNR=11							
YUK8	**Steele Glacier**	**5.52**	**78**	P	Pn	**15 31 17.6**	**+0.4**	
	baz=268							
IM03		**5.55**	**348**		Pn	**15 31 17.8**	**+0.4**	
IMAR	**Indian Mountai**	**5.55**	**348**	Pn	Pn	**15 31 17.5**	**+0.1**	
BCPM	**Bancas Point**	**5.69**	**92**	Pn	Pn	**15 31 18.0**	**-1.3**	
PNL	**Peninsula**	**5.87**	**94**		Pn	**15 31 21.4**	**-0.5**	
PNL	**Peninsula**	**5.87**	**94**	P	Pn	**15 31 22.0**	**+0.2**	
	baz=284							
I26K	**Coal Creek Min**	**5.93**	**34**	P	Pn	**15 31 23.4**	**+0.9**	
	baz=221							
YUK4	**Talbot Arm**	**6.06**	**77**	P	Pn	**15 31 25.8**	**+1.2**	
	baz=262							
YUK6	**Outpost Mounta**	**6.20**	**81**	P	Pn	**15 31 27.0**	**+0.5**	
	baz=272							
DAWY	**Dawson**	**6.43**	**52**	Pn	Pn	**15 31 29.9**	**+0.5**	
DAWY	**Dawson**	**6.43**	**52**	P	Pn	**15 31 30.4**	**+0.9**	
	baz=243							
HYT	**Haines Junctio**	**6.63**	**82**	Pn	Pn	**15 31 33.0**	**+0.8**	
COLD	**Coldfoot**	**6.67**	**3**	P	Pn	**15 31 33.5**	**+0.8**	
	baz=184							
N30M	**Aishikik Lake**	**6.81**	**77**	P	Pn	**15 31 34.4**	**-0.4**	
	baz=269							
M30M	**Minto, Yukon**	**7.06**	**67**	Pn	Pn	**15 31 37.1**	**-1.0**	
SDPT	**Sand Point**	**7.28**	**228**	Pn	Pn	**15 31 40.0**	**-1.0**	
SDPT	**Sand Point**	**7.28**	**228**	P	Pn	**15 31 41.3**	**+0.3**	
	baz=40							
CHNA	**Chernabura Isl**	**7.38**	**222**	P	Pn	**15 31 41.9**	**-0.5**	
	baz=35							
CNBA	**Chernabura Isl**	**7.39**	**222**	Pn	Pn	**15 31 41.4**	**-1.2**	
BMAR	**Burnt Mountain**	**7.42**	**20**	Pn	Pn	**15 31 43.2**	**+0.3**	
I29M	**Ogilvie Camp,**	**7.50**	**45**		Pn	**15 31 44.2**	**+0.3**	
I29M	**Ogilvie Camp,**	**7.50**	**45**	P	Pn	**15 31 44.4**	**+0.5**	
	baz=236							
ANM	**Nome**	**7.73**	**307**	Pn	Pn	**15 31 46.5**	**-0.7**	
ANM	**Nome**	**7.73**	**307**	P	Pn	**15 31 47.3**	**+0.1**	
	baz=114							
WHY	**Whitehorse**	**7.93**	**82**	Pn	Pn	**15 31 50.1**	**+0.2**	
TOLK	**Toolik Lake Re**	**8.11**	**4**	Pn	Pn	**15 31 52.9**	**+0.6**	
TOLK	**Toolik Lake Re**	**8.11**	**4**	P	Pn	**15 31 54.1**	**+1.8**	
	baz=185							
M31M	**Drury Creek, Y**	**8.13**	**71**	Pn	Pn	**15 31 51.3**	**-1.4**	
EPYK	**Eagle Plains**	**8.61**	**42**	Pn	Pn	**15 31 57.5**	**-1.6**	
TNA	**Tin City**	**9.13**	**310**	Pn	Pn	**15 32 08.0**	**+1.7**	

IDC 16 15:35:06.2±5.0, 11°22S×167°03E, h0km, mb3.7/3, mbtmp3.7/3, MS3.7/8, Error ellipse: s-maj=250.4km s-min=35.6km az=139.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.20**	**284**	LR	LR	15 39 40.0	
	comp=Z,397nm,21.1s,baz=60,slow=38						
PMG	**Port Moresby**	**19.64**	**273**	LR	LR	15 46 47.1	
	comp=Z,298nm,18.2s,baz=118,slow=36						
AFI	**Afiamalu**	**20.85**	**100**	LR	LR	15 46 08.6	
	comp=Z,136nm,20.4s,baz=281,slow=32						
CTA	**Charters Tower**	**21.85**	**244**	LR	LR	15 47 14.6	
	comp=Z,202nm,18.1s,baz=70,slow=33						
WRA	**Warramunga Arr**	**32.62**	**251**	P	P	15 41 40.0	0.0
	1.5nm,0.7s,baz=83,slow=8.8,SNR=19						
WRA				LR	LR	15 54 56.1	
	comp=Z,184nm,18.1s,baz=246,slow=36 1.5nm,0.7s						
ASAR	**Alice Springs**	**33.85**	**244**	P	P	15 41 50.6	-0.1
	0.5nm,0.6s,baz=67,slow=9.9,SNR=13						
ASAR				LR	LR	15 54 20.5	
	comp=Z,146nm,18.1s,baz=120,slow=34 0.5nm,0.6s						
SIJI	**Sorong**	**36.97**	**284**	LR	LR	15 59 38.2	
	comp=Z,53nm,18.2s,baz=42,slow=40						
PPT	**Papeete**	**42.43**	**104**	LR	LR	15 57 26.9	
	comp=Z,63nm,19.3s,baz=286,slow=32						
ILAR	**Eielson Array**	**83.28**	**18**	P	P	15 47 34.4	0.0
	0.3nm,0.6s,baz=215,slow=6.1,SNR=3.0 0.3nm,0.6s						

MAN 16 15:38:54.3, 20°26N×121°30E, h15km, mb4.2, ML3.0, MS2.7, Philippine Islands region

MAN 16 15:39:15.2, 10°10N×125°09E, h30km, mb4.2, ML3.0, MS2.7, 1C, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**0.23**	**279**	eP	Pg	15 39 22.0	+0.8
MSLP				eS		15 39 28.1	

*KRSC **16** 15:44:48.6±0.9, 55°.06N×162°.41E, h48km±19km, ML4.1*
*IDC **16** 15:44:54.2±2.9, 55°.34N×161°.85E, h64km±28km, mb3.4/11, mbtmp3.6/12, ML2.5/1, MS2.8/5, Error ellipse: s-maj=25.6km s-min=17.7km az=132.0*

ISC 16 15:44:52.0±1.2, 55°.14N±0°.03×162°.29E±0°.06, h48km±12km, n61, σ1°17/79, mb3.6/11, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.67**	**209**	eP	Pn	15 45 02.1	-3.1
MKZ				eS	Sn	15 45 10.9	-3.8
KBTR	**Krutoberegovo**	**1.11**	**15**	eP	Pn	**15 45 09.7**	**-1.5**
KBTR				eS	Sn	**15 45 25.7**	**+0.3**
KBG	**Krutoberegovo**	**1.14**	**12**	eP	Pn	**15 45 10.1**	**-1.5**
KBG				eS	Sn	**15 45 27.5**	**+1.4**
BZGR	**Bezymyannyi-Gr**	**1.21**	**312**	eP	Pn	**15 45 12.2**	**-0.4**
BZGR				eS	Sn	**15 45 28.5**	**+0.6**
ZLN	**Zelenaya**	**1.22**	**317**	eP	Pn	**15 45 12.7**	**0.0**
TUMR	**Tumrok**	**1.24**	**278**	eP	Pn	**15 45 12.5**	**-0.5**
TUMR				eS	Sn	**15 45 28.9**	**+0.3**
LGNR	**Loginova**	**1.31**	**317**	eP	Pn	**15 45 14.5**	**+0.4**
BZWR	**Bezymyannyi-We**	**1.31**	**310**	eP	Pn	**15 45 13.5**	**-0.5**
BZWR				eS	Sn	**15 45 31.8**	**+1.3**
CIRR	**Tsirk**	**1.31**	**319**	eP	Pn	**15 45 14.2**	**+0.2**
KMNR	**Kamenistaya**	**1.32**	**299**	eP	Pn	**15 45 13.7**	**-0.4**
KIRR	**Kirishev**	**1.38**	**307**	eP	Pn	**15 45 14.5**	**-0.4**
KPT	**Kopyto**	**1.44**	**306**	eP	Pn	**15 45 15.4**	**-0.3**
KRSR	**Krestovskiy**	**1.46**	**319**	eP	Pn	**15 45 15.4**	**-0.5**
KLY	**Klyuchi**	**1.50**	**323**	eP	Pn	**15 45 14.9**	**-1.5**
KLY				eS	Sn	**15 45 35.4**	**+0.7**
SMKR	**Semkarok**	**1.52**	**343**	eP	Pn	**15 45 16.7**	**-0.1**
SMKR				eS	Sn	**15 45 37.0**	**+1.6**
BDR	**Baidarnaya**	**1.56**	**337**	eP	Pn	**15 45 17.4**	**+0.1**
SRKR	**Sorokina**	**1.65**	**338**	eP	Pn	**15 45 18.7**	**+0.2**
KOZ	**Kozyrevsk**	**1.65**	**305**	eP	Pn	**15 45 18.7**	**+0.2**
KOZ				eS	Sn	**15 45 37.6**	**-1.0**
KII	**Karymskiy**	**1.99**	**237**	eP	Pn	**15 45 23.0**	**-0.2**
BKI	**Bering**	**2.12**	**87**	eP	Pn	15 45 22.6	-2.2
BKI				eS	Sn	15 45 45.9	-3.9
ESO	**Esso**	**2.19**	**293**	eP	Pn	**15 45 25.4**	**-0.5**
ESO				eS	Sn	**15 45 51.2**	**-0.5**
SPN	**Mys Shipunski**	**2.44**	**214**	eP	Pn	15 45 26.6	-2.7
SPN				eS	Sn	**15 45 54.1**	**-3.8**
NLC	**Nalytchevo**	**2.62**	**222**	eP	Pn	**15 45 32.1**	**+0.3**
NLC				eS	Sn	**15 46 01.1**	**-1.2**
SDLR	**Sedlovina**	**2.73**	**228**	eP	Pn	**15 45 33.3**	**-0.1**
SDLR				eS	Sn	**15 46 07.3**	**+2.0**
KRER	**Koryakskii**	**2.77**	**230**	eP	Pn	**15 45 34.7**	**+0.6**
KRER				eS	Sn	**15 46 08.1**	**+1.7**
SMAR	**Somma**	**2.78**	**229**	eP	Pn	**15 45 33.7**	**-0.5**
SMAR				eS	Sn	**15 46 07.2**	**+0.7**
KRX	**Arik**	**2.78**	**232**	eP	Pn	**15 45 34.5**	**+0.4**
KRX				eS	Sn	**15 46 07.7**	**+1.2**
AVH	**Avacha**	**2.81**	**229**	eP	Pn	**15 45 35.5**	**+1.1**
AVH				eS	Sn	**15 46 06.8**	**-0.2**
UGLR	**Uglovaya**	**2.81**	**228**	eP	Pn	**15 45 34.7**	**+0.3**
UGLR				eS	Sn	**15 46 07.7**	**+0.6**
KOK	**Koryaka**	**2.83**	**231**	eP	Pn	**15 45 34.9**	**+0.1**
KOK				eS	Sn	**15 46 08.8**	**+1.1**
GNL	**Ganaly**	**2.92**	**242**	eP	Pn	**15 45 36.3**	**+0.3**
DALK	**Dalny**	**2.96**	**226**	eP	Pn	**15 45 36.2**	**-0.3**
DALK				eS	Sn	**15 46 10.4**	**-0.4**
PET	**Petropavlovsk**	**3.01**	**227**	eP	Pn	**15 45 36.7**	**-0.4**
PET				eS	Sn	**15 46 12.3**	**+0.4**
KRMR	**Karymshinskiy**	**3.37**	**228**	eP	Pn	**15 45 43.4**	**+1.3**
KRMR				S	Sn	**15 46 22.2**	**+1.4**
PETK	**Petropavlovsk-**	**3.38**	**235**	P	Pn	**15 45 42.6**	**+0.4**
	2.5nm,0.3s,baz=68,slow=16,SNR=40						
PETK				S	Sn	**15 46 22.5**	**+1.5**
	8.4nm,0.5s,baz=72,slow=23,SNR=4.3						
PETK				LR	LR	15 47 10.9	
	comp=Z,75nm,19.2s,baz=69,slow=41 4.3nm,0.4s						
RUS	**Russkaya**	**3.52**	**221**	eP	Pn	**15 45 44.0**	**0.0**
RUS				eS	Sn	**15 46 23.5**	**-0.8**
GRL	**Gorelyy**	**3.60**	**226**	eP	Pn	**15 45 46.4**	**+1.1**
GRL				eS	Sn	**15 46 26.8**	**+0.3**
MTVR	**Mutnovka**	**3.60**	**224**	eP	Pn	**15 45 45.0**	**-0.4**
MTVR				eS	Sn	**15 46 26.3**	**-0.4**
APC	**Apacha**	**3.75**	**236**	eP	Pn	**15 45 49.4**	**+2.2**
APC				S	Sn	**15 46 32.4**	**+2.3**
ASAK	**Asacha**	**3.79**	**225**	eP	Pn	**15 45 48.8**	**+0.8**
ASAK				eS	Sn	**15 46 32.4**	**+1.1**
OSSR	**Ossora**	**4.14**	**6**	eP	Pn	**15 45 52.2**	**-0.4**
PALN	**Palana**	**4.16**	**343**	eP	Pn	**15 45 55.8**	**+3.0**
KDTR	**Khodutka, Kamc**	**4.18**	**219**	eP	Pn	**15 45 53.4**	**+0.3**
KDTR				eS	Sn	**15 46 39.3**	**-1.3**
SHEM	**Shemya Is, Ala**	**7.38**	**104**	LR	LR	15 49 21.5	
	comp=Z,64nm,21.1s,baz=290,slow=35						
MA2	**Magadan**	**7.65**	**310**	LR	LR	15 50 03.9	
	comp=Z,66nm,19.1s,baz=116,slow=42						
SEY	**Seymchan**	**9.32**	**331**	LR	LR	15 50 43.3	
	comp=Z,57nm,20.0s,baz=214,slow=39						
H11N2	**WAKE ISLAND Hy**	**35.52**	**173**	T	T	16 29 05.5	
	baz=355,slow=76,SNR=

*IDC **16** 16:03:50.7±4.3,23°.95N×96°.03E,h35km±39km, mb3.3/6, mbtmp3.5/7, ML3.5/1, Error ellipse: s-maj=111.9km s-min=17.1km az=59.0*

ISC 16 16:03:47.1±1.0,23°.9N±0°.3×96°.0E±0°.6,h10km,n7,σ1§38/8, mb3.5/6,Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**6.09**	**153**	Pn	**Pn**	**16 05 19.7**	**+2.4**
	0.3nm,0.3s,baz=325,slow=13,SNR=12						
CMAR				Pg	**Pg**	**16 05 42.1**	**-1.7**
	0.3nm,0.3s,baz=332,slow=15,SNR=4.1						
CMAR				Lg	Lg	16 07 04.8	
	0.5nm,0.3s,baz=325,slow=30,SNR=6.8						
	0.8nm,0.5s						
MKAR	**Makanchi Array**	**25.34**	**338**	P	**P**	**16 09 13.8**	**-0.3**
	1.4nm,0.8s,baz=137,slow=11,SNR=0.1						
	1.4nm,0.8s						
KURBB	**Kurchatov Arra**	**29.91**	**337**	P	**P**	**16 09 55.5**	**+0.5**
	0.3nm,0.7s,baz=141,slow=11,SNR=2.5						
	0.3nm,0.7s						
ZALV	**Zalesovo Beam**	**31.14**	**347**	P	**P**	**16 10 05.8**	**0.0**
	0.9nm,0.8s,baz=146,slow=10,SNR=2.0						
	0.9nm,0.8s						
AKASG	**Malin Array Be**	**57.28**	**316**	P	**P**	**16 13 34.4**	**-0.5**
	0.3nm,0.5s,baz=79,slow=6.7,SNR=0.9						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**57.41**	**136**	P	**P**	**16 13 35.8**	**-0.4**
	0.3nm,0.6s,baz=322,slow=7.6,SNR=9.3						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**59.92**	**139**	P	**P**	**16 13 53.5**	**-0.2**
	0.2nm,0.5s,baz=319,slow=6.8,SNR=6.9						
	0.2nm,0.5s						

*NEIC **16** 16:13:30.5±1.7,52°.5N±0°.2×179°.43W±0°.09,h213km±10km, mb3.8/34, ML3.0/12(AEIC), Error ellipse: s-maj=26.5km s-min=8.4km az=181.0*

*IDC **16** 16:13:30.9±5.7,52°.48N×179°.31W,h211km±103km, mb2.9/5, mbtmp3.5/6, Error ellipse: s-maj=113.0km s-min=36.8km az=118.0*

*AEIC **16** 16:13:31±4.3,52°.2N±0°.2×179°.37W±0°.09,h200km±7km, Error ellipse: s-maj=22.2km s-min=8.0km az=180.0*

ISC 16 16:13:30.2±0.8,52°.6N±0°.1×179°.42W±0°.05,h200km,n54, σ1§00/58,mb3.7/10,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEAP	**Semis' Anvil P**	**0.86**	**226**		**Pn**	**16 14 00.4**	**+1.4**
CERAA	**Semis' Rag'd T**	**0.89**	**219**		**Pn**	**16 14 00.5**	**+1.3**
GAEA	**Gareloi East**	**0.92**	**153**		**Pn**	**16 14 00.7**	**+1.3**
TANO	**Tanaga North**	**1.05**	**130**		**Pn**	**16 14 01.7**	**+1.4**
TAFP	**Tanaga Falls P**	**1.13**	**128**		**Pn**	**16 14 01.9**	**+1.0**
TAFP					**Sn**	**16 14 26.4**	**+1.8**
TASE	**Tanaga Southea**	**1.15**	**132**		**Pn**	**16 14 02.0**	**+1.0**
AMKA	**Amchitka**	**1.46**	**213**		**Pn**	**16 14 03.5**	**0.0**
AMKA					**Sn**	**16 14 28.4**	**-0.8**
KIWB	**Kanaga Island**	**1.58**	**117**		**Pn**	**16 14 06.0**	**+1.4**
KIMD	**Kanaga Island**	**1.59**	**121**		**Pn**	**16 14 05.6**	**+1.0**
ADK	**Adak**	**1.83**	**112**		**Pn**	**16 14 08.0**	**+1.1**
ADK					**Sn**	**16 14 35.8**	**+0.4**
GSTR	**Great Sitkin T**	**2.12**	**103**	Pn	**Pn**	**16 14 09.8**	**-0.2**
SHEM	**Shemya Is, Ala**	**3.95**	**274**	P	**Pn**	**16 14 33.4**	**+2.2**
	12nm,0.3s,baz=80,slow=6.1,SNR=1.9						
SHEM				S	**Sn**	**16 15 18.2**	**-0.9**
	18nm,0.3s,baz=358,slow=21,SNR=7.5						
SMY	**Shemya**	**3.95**	**274**	Pn	**Pn**	**16 14 31.7**	**+0.5**
N18K	**Kilae Creek**	**15.19**	**49**	P	**Pn**	**16 16 54.1**	**-0.2**
O18K	**Koktuh Hills**	**15.23**	**52**	P	**Pn**	**16 16 54.3**	**-0.6**
O18K				IAmb	IAmb	16 16 60.0	
	comp=Z,2.7nm,0.7s						
SVW2	**Sparrevohn**	**15.49**	**47**	P	**Pn**	**16 16 57.9**	**-0.1**
OHAK	**Old Harbor**	**15.67**	**62**	P	**P**	**16 16 57.9**	**-2.2**
N19K	**Bonanza Creek**	**15.88**	**49**	P	**P**	**16 17 01.1**	**-1.4**
N19K				IAmb	IAmb	16 17 10.2	
	comp=Z,3.2nm,0.8s						
KDAK	**Kodiak Island**	**16.11**	**61**	P	**P**	**16 17 02.7**	**-2.3**
L19K	**White Mountain**	**16.24**	**44**	P	**P**	**16 17 07.7**	**+1.2**
K20K	**Telida**	**17.09**	**41**	P	**Pn**	**16 17 17.6**	**+0.5**
CNPM	**China Poot**	**17.09**	**55**	P	**P**	**16 17 16.5**	**+0.7**
CNPM				IAmb	IAmb	16 17 49.6	
	comp=Z,6.0nm,1.0s						
J20K	**Nowinta River**	**17.45**	**39**	P	**P**	**16 17 21.1**	**+1.5**
SKT	**Skwentna**	**17.61**	**47**	P	**Pn**	**16 17 23.7**	**+0.4**
SKT				IAmb	IAmb	16 17 29.3	
	comp=Z,2.8nm,0.7s						
PPLA	**Purkeypile**	**17.66**	**44**		**Pn**	**16 17 24.9**	**+0.9**
PPLA				IAmb	IAmb	16 17 52.5	
	comp=Z,6.9nm,1.4s						
SUA	**Susitna One**	**17.81**	**49**	P	**P**	**16 17 24.8**	**+1.1**
IMAR	**Indian Mountai**	**18.55**	**34**	P	**P**	**16 17 31.0**	**-0.6**
BPAW	**Bear Paw Mtn.**	**18.65**	**41**	P	**P**	**16 17 31.9**	**-0.8**
BPAW				IAmb	IAmb	16 17 38.5	
	comp=Z,2.0nm,0.8s						
TRF	**Thorofare Moun**	**18.67**	**43**	P	**P**	**16 17 33.4**	**+0.4**
TRF				IAmb	IAmb	16 17 38.0	
	comp=Z,2.1nm,0.8s						
I21K	**Tanana**	**18.76**	**37**	P	**P**	**16 17 33.8**	**0.0**
I21K				IAmb	IAmb	16 17 40.4	
	comp=Z,2.7nm,1.0s						
GLI	**Glacier Island**	**19.39**	**52**	P	**P**	**16 17 40.3**	**-0.3**
SCM	**Sheep Creek Mo**	**19.48**	**49**	P	**P**	**16 17 42.4**	**+0.7**
FID	**Port Fidalgo**	**19.66**	**53**	P	**P**	**16 17 43.7**	**+0.2**
I23K	**Minto, Yukon-K**	**19.73**	**39**	P	**P**	**16 17 44.4**	**+0.2**
I23K				IAmb	IAmb	16 17 49.0	
	comp=Z,3.9nm,1.4s						
DHY	**Denali Highway**	**19.79**	**46**	P	**P**	**16 17 44.5**	**-0.5**
DHY				IAmb	IAmb	16 17 49.0	
	comp=Z,3.3nm,0.6s						
MDM	**Murphy Dome**	**20.09**	**40**	P	**P**	**16 17 48.4**	**+0.3**
MDM				IAmb	IAmb	16 17 51.5	
	comp=Z,2.4nm,0.6s						
IL31		**20.55**	**41**	P	**P**	**16 17 52.9**	**0.0**
ILAR	**Eielson Array**	**20.55**	**41**	P	**P**	**16 17 53.4**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=240,slow=8.3,SNR=10.0						
	comp=Z,0.4nm,0.6s						
H24K	**Noodor Dome**	**20.58**	**38**	P	**P**	**16 17 54.4**	**+1.0**
H24K				IAmb	IAmb	16 17 57.0	
	comp=Z,1.9nm,0.8s						
SUCK	**Suckling Hills**	**20.90**	**55**	P	**P**	**16 17 57.5**	**+0.7**
RIDG	**Independent Ri**	**21.07**	**45**	P	**P**	**16 17 56.8**	**-1.7**
VRDI	**Verde Repeater**	**21.19**	**52**	P	**P**	**16 18 00.2**	**+0.2**
VRDI				IAmb	IAmb	16 18 02.7	
	comp=Z,2.2nm,0.6s						
TOLK	**Toolik Lake Re**	**21.38**	**30**	P	**P**	**16 18 02.1**	**+0.4**
TOLK				IAmb	IAmb	16 18 21.3	
	comp=Z,4.0nm,1.3s						
SCRK	**Sand Creek**	**21.50**	**44**	P	**P**	**16 18 02.2**	**-0.9**
SCRK				IAmb	IAmb	16 18 05.8	
	comp=Z,2.7nm,1.1s						
BARN	**Barnard Glacie**	**22.04**	**53**	P	**P**	**16 18 07.6**	**-0.9**
L27K	**Beaver Creek,**	**22.24**	**47**	P	**P**	**16 18 10.6**	**+0.4**
L27K				IAmb	IAmb	16 18 12.9	
	comp=Z,2.7nm,0.8s						
TABL	**Table Mountain**	**22.24**	**54**	P	**P**	**16 18 10.5**	**0.0**
K27K	**Chicken**	**22.33**	**45**	P	**P**	**16 18 10.1**	**-0.9**
K27K				IAmb	IAmb	16 18 13.8	
	comp=Z,2.0nm,0.8s						
BMAR	**Burnt Mountain**	**22.44**	**35**	P	**P**	**16 18 11.6**	**-0.4**
HYT	**Haines Junctio**	**24.05**	**53**	P	**P**	**16 18 26.8**	**+0.1**
HYT				IAmb	IAmb	16 18 46.5	
	comp=Z,4.2nm,1.5s						
YKA	**Yellowknife Ar**	**34.68**	**48**	P	**P**	**16 20 00.4**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=281,slow=7.0,SNR=3.5						
	comp=Z,0.7nm,0.6s						
NVAR	**Mina Array Bea**	**43.79**	**84**	P	**P**	**16 21 15.9**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=301,slow=7.3,SNR=6.3						
	comp=Z,0.6nm,0.6s						
PDAR	**Pinedale Array**	**46.31**	**73**	P	**P**	**16 21 34.6**	**-1.3**
	comp=Z,0.4nm,0.4s,baz=284,slow=3.6,SNR=2.0						
	comp=Z,0.4nm,0.4s						
TXAR	**Lajitas Array**	**58.85**	**81**	P	**P**	**16 23 06.8**	**-1.0**
	comp=Z,0.3nm,0.5s,baz=309,slow=5.7,SNR=5.2						
	comp=Z,0.3nm,0.5s						

*IDC **16** 16:16:25.3±10.0,39°.37N×72°.28E,h0km,mb3.8/2, mbtmp3.5/5, ML2.8/2, MS3.7/1, Error ellipse: s-maj=172.4km s-min=29.7km az=163.0*

*NNC **16** 16:16:34.7±4.4,39°.48N×72°.69E,h0km,mb3.8,mpv3.4, Error ellipse: s-maj=33.5km s-min=19.9km az=175.0*

*SOME **16** 16:16:34.8,39°.47N×72°.37E,h10km*

ISC 16 16:16:17.7±1.9,38°.5N±0°.1×72°.06E±0°.07,h10km,n23, σ2§59/27,4C-2D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRKS	**Merke**	**4.35**	**11**	*eP*	**Pb**	**16 17 35.0**	**+0.8**
	13nm,0.4s						
MRKS				*eS*	**Sn**	**16 18 18.3**	**+3.5**
	14nm,0.7s						
MRKS	**Merke**	**4.35**	**11**	Pg	**Pb**	**16 17 32.7**	**-1.6**
	17nm,0.4s						
MRKS				Lg	Lg	16 18 17.6	
	14nm,0.7s						
AAK	**Ala-Archa**	**4.55**	**23**	Pn	**Pn**	**16 17 27.3**	**+0.6**
	1.4nm,0.3s,baz=201,slow=7.3,SNR=2.1						
AAK				Lg	Lg	16 18 18.1	
	0.8nm,0.3s,baz=202,slow=24,SNR=8.2						
	3.0nm,0.3s						
KK31	**Karatay Array**	**4.76**	**346**	⇑Pn	Pn	16 17 35.9	+6.4
	1.2nm,0.3s,baz=149,slow=12,SNR=21						
KK31				⇑Sn	**Sn**	**16 18 25.5**	**+0.7**
	3.1nm,0.5s,baz=144,slow=22						
BRLS	**Borolday**	**4.85**	**340**	*eP*	**Pg**	**16 17 47.5**	**-3.0**
	7.3nm,0.8s						
BRLS				*eS*	**Sb**	**16 18 39.8**	**-1.2**
	7.9nm,0.9s						
CHMS	**Chumysh**	**4.95**	**24**	⇑Pn	**Pn**	**16 17 33.3**	**+1.1**
	5.4nm,0.6s						
CHMS				⇑Lg	Lg	16 18 34.7	
	16nm,1.1s						
TKM2	**Tokmak 2**	**5.19**	**30**	⇓Pg	**Pb**	**16 17 48.5**	**-0.1**
	3.1nm,0.5s						
TKM2				⇓Lg	Lg	16 18 41.7	
	5.1nm,0.6s						
KST	**Kastek**	**5.44**	**32**	*eP*	**Pg**	**16 17 58.8**	**-3.0**
	2.5nm,0.2s						
KST				*eS*	**Sb**	**16 18 59.2**	**+1.1**
	7.7nm,0.6s						
KST	**Kastek**	**5.44**	**32**	Pg	**Pb**	**16 17 55.6**	**+2.8**
	1.7nm,0.2s						
KST				Lg	Lg	16 18 57.2	
	11nm,0.6s						
DGS	**Degeres**	**5.53**	**29**	*eP*	**Pg**	**16 17 59.3**	**-4.2**
	5.3nm,0.7s						
DGS				*eS*	**Sb**	**16 19 00.3**	**-0.3**
	9.5nm,1.0s						
DGS	**Degeres**	**5.53**	**29**	Pg	**Pb**	**16 17 56.2**	**+1.9**
	5.3nm,0.5s						
DGS				Lg	Lg	16 18 58.8	
	9.5nm,1.0s						
TNSS	**Tian-Shan**	**5.87**	**38**	*eP*	**Pg**	**16 18 06.0**	**-4.2**
	1.2nm,0.3s						
TNSS				*eS*	**Sb**	**16 19 11.5**	**+0.6**
	3.8nm,0.0s						
TNSS	**Tian-Shan**	**5.87**	**38**	Pg	**Pb**	**16 18 03.2**	**+2.9**
	2.5nm,0.3s						
TNSS				Lg	Lg	16 19 10.1	
	2.5nm,0.8s						
KRBS	**Karabastau**	**5.88**	**27**	Pg	**Pb**	**16 18 02.9**	**+2.6**
	0.8nm,0.3s						
KRBS				Lg	Lg	16 19 10.0	
	4.8nm,0.7s						
KTBS	**Karatobe**	**6.28**	**32**	*eP*	Pg	16 18 13.2	-4.8
	2.3nm,0.6s						
KTBS				*eS*	**Sb**	**16 19 24.4**	**+2.0**
	7.2nm,0.5s						
KTBS	**Karatobe**	**6.28**	**32**	Pg	**Pb**	**16 18 11.1**	**+4.0**
	2.3nm,0.6s						
KTBS				Lg	Lg	16 19 24.0	
	7.2nm,0.5s						
KUU	**Kurty**	**6.30**	**29**	*eP*	Pg	16 18 13.2	-5.0
	2.4nm,0.1s						
KUU				*eS*	**Sb**	**16 19 24.0**	**+1.3**
	9.2nm,0.1s						
KUU	**Kurty**	**6.30**	**29**	Pg	**Pb**	**16 18 11.1**	**+3.7**
KUU				Lg	Lg	16 19 23.5	
MKAR	**Makanchi Array**	**11.21**	**39**	Pn	**Pn**	**16 18 56.8**	**-1.2**
	0.4nm,0.7s,baz=226,slow=16,SNR=3.7						
ZALV	**Zalesovo Beam**	**17.77**	**25**	Pn	**Pn**	**16 20 23.2**	**-1.7**
	0.1nm,0.3s,baz=218,slow=11,SNR=2.1						
	0.3nm,0.3s						
FINES	**FINESS Array B**	**36.34**	**324**	P	**P**	**16 23 24.9**	**+3.5**
	1.6nm,1.0s,baz=123,slow=12,SNR=3.5						
	1.6nm,1.0s						
ARCES	**ARCESS Array B**	**39.65**	**336**	P	**P**	**16 23 52.4**	**+3.1**
	1.1nm,0.8s,baz=114,slow=10.0,SNR=1.6						
	1.1nm,0.8s						
VAE	**Valguarnera**	**44.80**	**287**	LR	LR	16 46 44.3	
	comp=Z,86nm,18.8s,baz=150,slow=41						

*ATH **16** 16:35:55.7,38°.18N×20°.28E,h15km±1km,ML2.2/8, Error ellipse: s-maj=1.9km s-min=1.1km az=249.0*

*THE **16** 16:35:57.1,38°.20N×20°.36E,h10km±1km,ML2.6/5, Error ellipse: s-maj=1.6km s-min=0.8km az=240.0*

ISC 16 16:35:56.2±1.4,38°.18N±0°.04×20°.32E±0°.07,h13km±5km, n29,σ0§47/51,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	**Kipouria, Keph**	**0.04**	**44**	P	**Pg**	**16 35 59.1**	**+0.5**
KEF3				S	**Sg**	**16 36 00.2**	**0.0**
DMLN	**Damoulianata-K**	**0.07**	**36**	P	**Pg**	**16 35 59.3**	**+0.3**
DMLN				S	**Sg**	**16 36 00.8**	**-0.1**
DMLN	**Damoulianata-K**	**0.07**	**36**	P	**Pg**	**16 35 59.3**	**+0.3**
DMLN				S	**Sg**	**16 36 00.8**	**-0.1**
	28μm,0.1s						
KEF4	**Livadi, Kephal**	**0.12**	**46**	P	**Pg**	**16 35 59.4**	**0.0**
KEF4				S	**Sg**	**16 36 01.0**	**-0.6**
ARGA	**Argostoli. Kep**	**0.13**	**90**	P	**Pb**	**16 36 00.5**	**0.0**
ARGA				S	**Sg**	**16 36 01.9**	**0.0**
VLS	**Valsamata**	**0.21**	**90**	P	**Pg**	**16 36 00.6**	**-0.4**
VLS				AML	AML	16 36 03.5	
	comp=N,5910μm,0.1s						
VLS				AML	AML	16 36 03.6	
	comp=E,9007μm,0.1s						
VLS	**Valsamata**	**0.21**	**90**	P	**Pg**	**16 36 00.5**	**-0.4**
VLS				S	**Sg**	**16 36 03.1**	**-1.0**
	comp=E,4μm,0.0s						
PSDA	**Pessada-Kefalo**	**0.22**	**107**	P	**Pg**	**16 36 01.1**	**+0.1**
PSDA				S	**Sg**	**16 36 04.0**	**-0.2**
PSDA	**Pessada-Kefalo**	**0.22**	**107**	P	**Pg**	**16 36 01.1**	**+0.1**
PSDA				S	**Sg**	**16 36 04.0**	**-0.2**
FSK	**Fiskardo**	**0.34**	**34**	P	**Pg**	**16 36 03.6**	**+0.4**
FSK				S	**Sg**	**16 36 08.1**	**+0.3**
FSK				AML	AML	16 36 08.6	
	comp=N,1024μm,0.2s						
FSK				AML	AML	16 36 09.7	
	comp=E,2326μm,0.1s						
FSK	**Fiskardo**	**0.34**	**34**	P	**Pg**	**16 36 03.5**	**+0.4**
FSK				S	**Sg**	**16 36 08.1**	**+0.3**
	comp=E,800nm,0.1s						
EVGI	**Lefkada island**	**0.52**	**31**	P	**Pg**	**16 36 06.0**	**-0.3**
EVGI				S	**Sg**	**16 36 13.7**	**+0.5**
EVGI	**Lefkada island**	**0.52**	**31**	P	**Pg**	**16 36 06.1**	**-0.3**
EVGI				S	**Sg**	**16 36 13.6**	**+0.3**
	comp=E,860nm,0.1s						
DRAG	**Dragano-Lefkad**	**0.54**	**22**	P	**Pg**	**16 36 06.7**	**-0.3**
DRAG				S	**Sg**	**16 36 14.5**	**+0.3**
DRAG	**Dragano-Lefkad**	**0.54**	**22**	P	**Pg**	**16 36 06.6**	**-0.3**
NYDR	**Nydri-Lefkada**	**0.61**	**29**	P	**Pg**	**16 36 07.8**	**-0.4**
NYDR				S	**Sg**	**16 36 16.4**	**+0.1**
NYDR	**Nydri-Lefkada**	**0.61**	**29**	P	**Pg**	**16 36 07.8**	**-0.4**
LTHK	**Lithakia**	**0.62**	**139**	P	**Pg**	**16 36 08.3**	**-0.1**
LTHK				S	**Sb**	**16 36 17.9**	**+0.3**
LKD2	**Lefkada island**	**0.67**	**24**	P	**Pg**	**16 36 08.7**	**-0.5**
LKD2				AML	AML	16 36 25.5	
	comp=N,255μm,0.3s						
LKD2				AML	AML	16 36 25.9	
	comp=E,274μm,0.2s						
LKD2	**Lefkada island**	**0.67**	**24**	P	**Pg**	**16 36 08.7**	**-0.5**
TSLK	**Tsoukalades, L**	**0.70**	**22**	P	**Pg**	**16 36 09.6**	**-0.2**
TSLK				AML	AML	16 36 26.1	
	comp=E,330μm,0.4s						
TSLK				AML	AML	16 36 29.5	
	comp=N,342μm,0.4s						
RLS	**Riolos of Patr**	**0.91**	**97**	P	**Pg**	**16 36 13.4**	**-0.4**
RLS				S	**Sn**	**16 36 27.5**	**-0.4**
RLS				AML	AML	16 36 31.8	
	comp=N,173μm,0.3s						
RLS				AML	AML	16 36 33.6	
	comp=E,209μm,0.3s						
RLS	**Riolos of Patr**	**0.91**	**97**	P	**Pg**	**16 36 13.9**	**0.0**
RLS				S	**Sn**	**16 36 27.4**	**-0.4**
	comp=E,185nm,0.5s						
PVO	**Paravola**	**1.05**	**65**	P	**Pb**	**16 36 15.7**	**-0.5**
PVO				S	**Sn**	**16 36 31.1**	**0.0**
EFP	**Efpalio**	**1.27**	**78**	P	**Pn**	**16 36 19.7**	**0.0**
EFP				S	**Sg**	**16 36 38.4**	**+1.1**
EFP				AML	AML	16 36 45.2	
	comp=E,150μm,0.4s						
EFP				AML	AML	16 36 50.5	
	comp=N,170μm,0.7s						
ANX	**Ano Chora**	**1.33**	**71**	P	**Pn**	**16 36 20.8**	**+0.2**
ANX				S	**Sg**	**16 36 40.2**	**+1.2**
ANX				AML	AML	16 36 48.3	
	comp=N,188μm,0.5s						
ANX				AML	AML	16 36 50.6	
	comp=E,202μm,0.7s						
IGT	**Igoumenitsa**	**1.35**	**0**	P	**Pn**	**16 36 21.0**	**+0.1**
KLV	**Kalavryta, Ach**	**1.45**	**95**	P	**Pn**	**16 36 22.5**	**+0.2**
KLV				S	**Sg**	**16 36 44.4**	**+1.4**
GUR	**Goura**	**1.62**	**98**	P	**Pb**	**16 36 25.8**	**-0.2**
GUR				S	**Sg**	**16 36 48.4**	**+0.1**
GUR				AML	AML	16 36 52.1	
	comp=N,212μm,0.3s						
GUR				AML	AML	16 36 52.7	
	comp=E,166μm,0.5s						

*IDC **16** 16:51:10.1±4.1,13°.75S×166°.83E,h0km,mb3.3/2, mbtmp3.3/2, Error ellipse: s-maj=237.0km s-min=54.0km az=148.0*

*NOU **16** 16:51:27.5,15°.21S×167°.30E,h14km,MLv4.4/11, Vanuatu Islands*

ISC 16 16:51:17.4±2.0,14°.3S±0°.2×167°.2E±0°.2,h67km,n9, σ1§79/9,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**3.52**	**165**	P	**Pn**	**16 52 10.5**	**+0.8**
RTV	**Rentapao**	**3.65**	**162**	P	**Pn**	**16 52 13.3**	**+1.8**
KOUNC	**Koumac, New Ca**	**6.82**	**204**	P	**Pn**	**16 52 57.4**	**+2.5**
MARNC	**Mare, Loyalty**	**7.17**	**174**	P	**Pn**	**16 52 58.1**	**-1.6**
NOUC	**Port Laguerre**	**7.80**	**186**	P	**Pn**	**16 53 06.6**	**-1.7**
PINNC	**Pines Island,**	**8.26**	**179**	P	**Pn**	**16 53 15.4**	**+0.8**
WRA	**Warramunga Arr**	**31.90**	**255**	P	**P**	**16 57 35.9**	**-0.9**
	0.3nm,0.9s,baz=84,slow=8.7,SNR=4.6						
	0.3nm,0.9s						
ASAR	**Alice Springs**	**32.80**	**248**	P	**P**	**16 57 43.5**	**-1.1**
	0.8nm,1.1s,baz=76,slow=9.5,SNR=9.2						
	0.8nm,1.1s						
ARCES	**ARCESS Array B**	**119.84**	**345**	PKP	**PKiKP**	**17 10 00.4**	**+0.8**
	0.7nm,0.7s,baz=20,slow=3.2,SNR=1.0						

*KRSC **16** 16:57:08.3±1.8,51°.48N×153°.54E,h454km±32km,ML4.4*

*MOS **16** 16:57:08.7±0.9,51°.62N×153°.06E,h445km,mb4.0/1, Error ellipse: s-maj=16.5km s-min=6.9km az=56.0*

*SKHL **16** 16:57:09.0±0.3,51°.50N×153°.10E,h445km±15km,mb4.8/8, msha5.0/4*

*IDC **16** 16:57:10.0±1.0,51°.82N×152°.72E,h413km±11km, mb3.0/11, mbtmp3.8/15, Error ellipse: s-maj=17.2km s-min=12.0km az=140.0*

ISC 16 16:57:10.4±0.6,51°.44N±0°.08×153°.47E±0°.09,h450km,n99, σ2§33/121,mb3.4/11,Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.83**	**113**	PN	**P**	**16 58 09.2**	**-0.8**
SKR	**Severo-Kuril's**	**1.83**	**113**	*eP*	**P**	**16 58 09.2**	**-0.8**
SKR	**Severo-Kuril's**	**1.83**	**113**	*eP*	**P**	**16 58 09.8**	**-0.2**
SKR				AMB	AMB	16 58 19.3	
	30nm,0.3s						
SKR				*eS*	**S**	**16 58 57.0**	**-1.4**
SKR				A	A	16 59 06.2	
	30nm,0.3s						
SKR				A	A	16 59 06.2	
	40nm,0.3s						
PAU	**Pauzhetka**	**2.09**	**88**	PN	**P**	**16 58 11.0**	**-0.4**
PAU	**Pauzhetka**	**2.09**	**88**	*eP*	**P**	**16 58 11.0**	**-0.4**
PAU	**Pauzhetka**	**2.09**	**88**	*eP*	**P**	**16 58 11.0**	**-0.4**
PAU				AMB	AMB	16 58 11.8	
	80nm,0.6s						
PAU				*eS*	**S**	**16 58 59.6**	**-1.3**
PAU				A	A	16 59 07.3	
	20nm,0.3s						
PAU				A	A	16 59 07.3	
	10.0nm,0.3s						
APC	**Apacha**	**2.71**	**55**	PN	**P**	**16 58 13.5**	**-1.7**
APC	**Apacha**	**2.71**	**55**	*eP*	**P**	**16 58 13.5**	**-1.7**
KDTR	**Khodutka, Kamc**	**2.90**	**81**	PN	**P**	**16 58 16.3**	**-0.3**
KDTR				S	**S**	**16 59 06.2**	**-4.2**
KDTR	**Khodutka, Kamc**	**2.90**	**81**	*eP*	**P**	**16 58 16.3**	**-0.3**
KDTR				*eS*	**S**	**16 59 06.2**	**-4.2**
ASAK	**Asacha**	**2.90**	**69**	PN	**P**	**16 58 16.8**	**+0.1**
ASAK	**Asacha**	**2.90**	**69**	*eP*	**P**	**16 58 16.8**	**+0.1**
GRL	**Gorelyy**	**3.06**	**67**	PN	**P**	**16 58 18.2**	**+0.3**
GRL	**Gorelyy**	**3.06**	**67**	*eP*	**P**	**16 58 18.2**	**+0.3**
PETK	**Petropavlovsk-**	**3.09**	**56**	P	**P**	**16 58 15.7**	**-2.3**
	6.5nm,0.5s,baz=228,slow=5.5,SNR=34						
PETK				S	**S**	**16 59 11.0**	**-2.1**
	0.8nm,0.4s,baz=214,slow=18,SNR=1.0						
MTVR	**Mutnovka**	**3.10**	**68**	PN	**P**	**16 58 18.9**	**+0.7**
MTVR	**Mutnovka**	**3.10**	**68**	*eP*	**P**	**16 58 18.9**	**+0.7**
RUS	**Russkaya**	**3.28**	**70**	PN	**P**	**16 58 19.0**	**-0.4**
RUS				S	**S**	**16 59 12.4**	**-3.2**
RUS	**Russkaya**	**3.28**	**70**	*eP*	**P**	**16 58 19.0**	**-0.4**
RUS				*eS*	**S**	**16 59 12.4**	**-3.2**
RUS	**Russkaya**	**3.28**	**70**	*eP*	**P**	**16 58 19.0**	**-0.4**
RUS				*eS*	**S**	**16 59 12.4**	**-3.2**
GNL	**Ganaly**	**3.54**	**49**	PN	**P**	**16 58 19.9**	**-1.8**
GNL	**Ganaly**	**3.54**	**49**	*eP*	**P**	**16 58 19.9**	**-1.8**
PET	**Petropavlovsk**	**3.56**	**61**	PN	**P**	**16 58 15.8**	**-1.2**
PET				S	**S**	**16 59 18.8**	**-1.0**
PET	**Petropavlovsk**	**3.56**	**61**	*eP*	**P**	**16 58 20.5**	**-1.2**
PET			

KUR					pmax	pmax			
	comp=Z,31nm,0.4s								
KUR					smax	smax			
	comp=N,20nm,0.4s								
KUR					smax	smax			
	comp=E,6.0nm,0.3s								
KUR	**Kuril'sk**	**7.24**	**213**	*e*S		**S**	**17 00 21.9**	**-3.7**	
KUR				*e*P		**P**	**16 58 56.8**	**-1.0**	
KUR					AMB	AMB	16 58 58.9		
	comp=E,30nm,0.4s								
KUR					A	A	17 00 32.9		
	comp=E,30nm,0.4s								
KUR					A	A	17 00 32.9		
	comp=E,20nm,0.4s								
KBG	**Krutoberegovo**	**7.29**	**45**	PN		**P**	**16 58 57.7**	**-0.2**	
KBG				S		**S**	**17 00 19.3**	**-6.8**	
KBG	**Krutoberegovo**	**7.29**	**45**	*e*P		**P**	**16 58 57.7**	**-0.2**	
KBG				*e*S		**S**	**17 00 19.3**	**-6.8**	
KBG	**Krutoberegovo**	**7.29**	**45**	*e*P		**P**	**16 58 57.6**	**-0.3**	
KBG					AMB	AMB	16 58 58.8		
	comp=E,40nm,0.4s								
KBTR	**Krutoberegovo**	**7.31**	**46**	PN		**P**	**16 58 56.6**	**-1.6**	
KBTR				S		**S**	**17 00 20.2**	**-6.4**	
KBTR	**Krutoberegovo**	**7.31**	**46**	*e*P		**P**	**16 58 56.6**	**-1.6**	
KBTR				*e*S		**S**	**17 00 20.2**	**-6.4**	
NKL	**Nikolayevsk**	**8.03**	**287**	*e*P		P	16 59 01.1	-4.8	
NKL					AMB	AMB	16 59 01.9		
	comp=E,10.0nm,0.5s								
MA2	**Magadan**	**8.30**	**350**	P		P	16 59 03.8	-5.0	
	comp=E,3.2nm,0.5s,baz=168,slow=19,SNR=1.8								
YSS	**Yuzh-Sakhalins**	**8.33**	**242**	*e*P		**P**	**16 59 08.2**	**-1.1**	
YSS					AMB	AMB	16 59 12.1		
	comp=E,10.0nm,0.5s								
BKI	**Bering**	**8.38**	**58**	PN		**P**	**16 59 11.1**	**+1.4**	
BKI				S		**S**	**17 00 45.4**	**-2.3**	
BKI	**Bering**	**8.38**	**58**	P		**P**	**16 59 11.1**	**+1.4**	
BKI				*e*S		**S**	**17 00 45.4**	**-2.3**	
BKI	**Bering**	**8.38**	**58**	*e*S		**S**	**17 00 45.4**	**-2.3**	
BKI				*e*P		**P**	**16 59 11.1**	**+1.4**	
SHO	**Shikotan**	**8.80**	**213**	*e*PN		**P**	**16 59 09.9**	**-4.5**	
SHO					pmax	pmax			
	comp=N,38nm,0.3s								
SHO					pmax	pmax			
	comp=E,33nm,0.3s								
SHO					pmax	pmax			
	comp=Z,110nm,0.3s								
SHO	**Shikotan**	**8.80**	**213**	*e*S		**S**	**17 00 48.1**	**-8.2**	
SHO				*e*P		**P**	**16 59 12.2**	**-2.2**	
SHO					AMB	AMB	16 59 13.1		
	comp=Z,70nm,0.2s								
SHO					A	A	17 00 57.7		
	comp=Z,20nm,0.3s								
SHO					A	A	17 00 57.7		
	comp=Z,20nm,0.3s								
YUK	**Yuzh-Kuril'sk**	**9.00**	**218**	*e*PN		**P**	**16 59 16.5**	**-0.2**	
YUK				S		**S**	**17 01 02.0**	**+1.5**	
YUK					pmax	pmax			
	comp=E,33nm,0.2s								
YUK					pmax	pmax			
	comp=Z,104nm,0.2s								
YUK					pmax	pmax			
	comp=N,14nm,0.1s								
YUK	**Yuzh-Kuril'sk**	**9.00**	**218**	*e*S		**S**	**17 00 56.9**	**-3.6**	
YUK				*e*P		**P**	**16 59 16.0**	**-0.7**	
YUK					AMB	AMB	16 59 20.8		
	comp=N,100nm,0.5s								
YUK					A	A	17 01 02.2		
	comp=N,100nm,0.6s								
YUK					A	A	17 01 02.2		
	comp=N,230nm,0.6s								
RUSJ	**Misakicho**	**9.19**	**220**	*e*PN		**P**	**16 59 21.7**	**+3.0**	
GLVR	**Golovnino**	**9.39**	**218**	*e*PN		**P**	**16 59 19.5**	**-1.4**	
GLVR					pmax	pmax			
	comp=Z,57nm,0.1s								
GLVR	**Golovnino**	**9.39**	**218**	*e*P		**P**	**16 59 19.5**	**-1.4**	
GLVR					AMB	AMB	16 59 22.7		
NMR	**Nemuro--Hokkai**	**9.62**	**216**	*e*PN		P	16 59 18.6	-4.8	
NMR	**Nemuro--Hokkai**	**9.62**	**216**	*e*P		**P**	**16 59 20.7**	**-2.7**	
AKK	**Akkeshi**	**10.26**	**218**	*e*P		**P**	**16 59 29.8**	**-0.6**	
SEY	**Seymchan**	**11.54**	**358**	P		P	16 59 41.0	-2.9	
	comp=Z,2.8nm,0.6s,baz=175,slow=11,SNR=12								
KMSK	**Kamenskaya**	**13.02**	**27**	PN		**P**	**17 00 00.5**	**+0.5**	
KMSK	**Kamenskaya**	**13.02**	**27**	*e*P		**P**	**17 00 00.5**	**+0.5**	
KLR	**Kul'dur**	**14.04**	**269**	P		P	17 00 08.3	-2.8	
	comp=Z,0.9nm,0.3s,baz=94,slow=14,SNR=3.5								
KSRS	**Korea Array**	**22.83**	**242**	P		**P**	**17 01 37.2**	**-0.2**	
	comp=Z,0.6nm,0.4s,baz=42,slow=10,SNR=2.9								
	comp=Z,0.6nm,0.4s								
ILAR	**Eielson Array**	**32.84**	**43**	P		**P**	**17 03 07.2**	**+2.4**	
	comp=Z,0.8nm,0.7s,baz=275,slow=10,SNR=12								
	comp=Z,0.8nm,0.7s								
MKAR	**Makanchi Array**	**45.14**	**293**	P		P	17 04 42.5	-2.6	
	comp=Z,0.8nm,0.3s,baz=59,slow=7.0,SNR=20								
	comp=Z,0.8nm,0.3s								
YKA	**Yellowknife Ar**	**47.08**	**39**	P		**P**	**17 05 01.9**	**+2.3**	
	comp=Z,1.5nm,0.6s,baz=304,slow=6.9,SNR=9.8								
	comp=Z,1.5nm,0.6s								
CMAR	**Chiang Mai Arr**	**53.83**	**253**	P		**P**	**17 05 50.4**	**+0.6**	
	comp=Z,0.9nm,0.9s,baz=40,slow=8.6,SNR=4.4								
	comp=Z,0.9nm,0.9s								
PDAR	**Pinedale Array**	**61.85**	**56**	P		**P**	**17 06 48.7**	**+4.1**	
	comp=Z,0.6nm,0.5s,baz=336,slow=2.0,SNR=4.5								
	comp=Z,0.6nm,0.5s								
EKA	**Eskdalemuir Ar**	**71.83**	**346**	P		**P**	**17 07 45.0**	**-1.0**	
	comp=Z,0.3nm,0.4s,baz=23,slow=6.2,SNR=3.7								
	comp=Z,0.3nm,0.4s								
EKA	**Eskdalemuir Ar**	**71.83**	**346**	P		**P**	**17 07 45.0**	**-1.0**	
WRA	**Warramunga Arr**	**73.03**	**199**	P		**P**	**17 07 57.0**	**+3.7**	
	comp=Z,0.5nm,0.5s,baz=15,slow=6.1,SNR=15								
	comp=Z,0.5nm,0.5s								
TXAR	**Lajitas Array**	**75.02**	**62**	P		P	17 08 09.6	+4.7	
	comp=Z,0.4nm,0.4s,baz=302,slow=5.5,SNR=4.4								
	comp=Z,0.4nm,0.4s								
BRTR	**Keskin Array B**	**75.15**	**316**	P		**P**	**17 08 04.7**	**-0.7**	
	comp=Z,0.2nm,0.4s,baz=23,slow=7.8,SNR=2.7								
	comp=Z,0.2nm,0.4s								
ASAR	**Alice Springs**	**76.74**	**198**	P		P	17 08 18.8	+4.6	
	comp=Z,0.9nm,0.5s,baz=8.9,slow=4.9,SNR=37								
	comp=Z,0.9nm,0.5s								

ANF ***16*** *17:02:01.8±0.1,34˚.06N×116˚.38W, h9km±1km, ML3.8/41, Error ellipse: s-maj=1.0km s-min=0.8km az=32.0*
PAS ***16*** *17:02:02.5±1.5,34˚.07N±0˚.04×116˚.38W±0˚.04, h2km±7km, Mwr3.5/4, ML3.4/72(NEIC), Error ellipse: s-maj=5.8km s-min=4.6km az=169.0*
NEIC ***16*** *17:02:02.0±1.7,34˚.05N±0˚.02×116˚.35W±0˚.03, h4km±8km, Error ellipse: s-maj=3.5km s-min=1.3km az=55.0*
ECX ***16*** *17:02:02.9±0.6,34˚.11N×116˚.39W, h16km±4km, MD3.3, ML3.5*
ISC 16 17:02:02.4±1.0,34˚.06N±0˚.01×116˚.38W±0˚.02, h9km±8km, n128, σ0°77/171, 6C-11D, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BELC	**Belle Mtn. Jos**	**0.32**	**100**	P	**Pg**	**17 02 09.0**	**+0.2**
	baz=283,SNR=1000						
BELC				S	**Sg**	**17 02 13.3**	**+0.3**
	baz=283						
PFO	**Pinyon Flats O**	**0.45**	**189**		**Pg**	**17 02 11.1**	**0.0**
PFO				IAML		17 02 18.0	
	3μm,0.3s						
PFO	**Pinyon Flats O**	**0.45**	**189**	P	**Pg**	**17 02 11.3**	**+0.1**
	baz=8.3,SNR=274						
PFO				S	**Sg**	**17 02 17.5**	**+0.5**
	baz=8.3						
GVDA	**Garner Valley**	**0.46**	**213**		**Pg**	**17 02 11.5**	**+0.1**
GVDA					**Sg**	**17 02 18.0**	**+0.6**
BBRC	**Big Bear Solar**	**0.50**	**295**	P	**Pg**	**17 02 12.0**	**0.0**
	baz=113,SNR=53						
BBRC				S	**Sg**	**17 02 18.9**	**+0.2**
	baz=113						
HEC	**Hector,Ludlow**	**0.77**	**2**	P	**Pg**	**17 02 16.7**	**-0.6**
	baz=183,SNR=342						
HEC				S	**Sg**	**17 02 27.2**	**-0.2**
	baz=183						
RSBC	**Riverside Bore**	**0.80**	**264**		**Pg**	**17 02 17.3**	**-0.3**
RSBC					**Sg**	**17 02 28.1**	**+0.1**
MURC	**Murrieta**	**0.82**	**237**	P	**Pg**	**17 02 17.8**	**-0.3**
	baz=55,SNR=94						
MURC				S	**Sg**	**17 02 28.8**	**0.0**
	baz=55						
BC3	**Big Chuckawall**	**0.86**	**117**	P	**Pg**	**17 02 19.4**	**+0.3**
	baz=299,SNR=748						
BC3				S	**Sb**	**17 02 31.0**	**-0.3**
	baz=299						
SLH	**Sleepy Hollow**	**0.87**	**173**	⇓*i*P	**Pg**	**17 02 19.3**	**+0.2**
MATG	**Matauguy Scout**	**0.88**	**195**	⇓*i*P	**Pg**	**17 02 19.5**	**+0.1**
MATG				*e*S	**Sg**	**17 02 31.3**	**+0.4**
GMRC	**Granite Mounta**	**0.94**	**39**	P	**Pg**	**17 02 19.8**	**-0.6**
	baz=220,SNR=640						
GMRC				S	**Sg**	**17 02 32.2**	**-0.5**
	baz=220						
ELS	**Elsinore Mount**	**0.96**	**245**		**Pg**	**17 02 20.2**	**-0.8**
ELS				IAML		17 02 33.6	
	comp=N,1μm,0.4s						
ELS				IAML		17 02 37.2	
	comp=E,1μm,0.5s						
RRX	**Edison Barstow**	**0.96**	**328**	P	**Pg**	**17 02 20.5**	**-0.4**
	baz=147,SNR=35						
RRX				S	**Sg**	**17 02 33.7**	**+0.1**
	baz=147						
IRM	**Iron Mountain**	**1.03**	**84**	P	**Pg**	**17 02 21.7**	**-0.3**
	baz=266,SNR=1000						
IRM				S	**Sg**	**17 02 35.7**	**+0.3**
	baz=266						
BFSC	**Mount Baldy Ra**	**1.08**	**280**	P	**Pg**	**17 02 22.5**	**-0.6**
	baz=99,SNR=211						
BFSC				S	**Sg**	**17 02 36.7**	**-0.5**
	baz=99						
MONP2	**Monument Peak**	**1.16**	**182**	P	**Pg**	**17 02 24.4**	**-0.3**
	baz=1.8,SNR=171						
MONP2				S	**Sg**	**17 02 40.1**	**+0.3**
	baz=1.8						
MONP2	**Monument Peak**	**1.16**	**182**	⇓*i*P	**Pg**	**17 02 24.4**	**-0.3**
MONP2				*e*S	**Sg**	**17 02 39.7**	**-0.1**
SWSC	**Sam W. Stewart**	**1.21**	**156**	P	**Pb**	**17 02 24.0**	**-1.4**
	baz=337,SNR=74						
SWSC	**Sam W. Stewart**	**1.21**	**156**	⇓*i*P	**Pb**	**17 02 24.0**	**-1.4**
SWSC				*e*S	**Sg**	**17 02 41.6**	**+0.4**
CRR	**Carrizo Plain**	**1.21**	**164**	⇓*i*P	**Pn**	**17 02 24.3**	**-1.1**
GSC	**Goldstone, Bar**	**1.29**	**344**		**Pn**	**17 02 26.0**	**-0.7**
GSC				IAML		17 02 48.5	
	comp=E,922nm,0.6s						
GSC	**Goldstone, Bar**	**1.29**	**344**	P	**Pn**	**17 02 26.1**	**-0.5**
	baz=164,SNR=400						
GSC				S	**Sg**	**17 02 44.0**	**0.0**
	baz=164						
109C	**Camp Elliot, M**	**1.31**	**208**	P	**Pn**	**17 02 26.4**	**-0.5**
	baz=27						
109C				S	**Sb**	**17 02 43.6**	**-0.5**
	baz=27						
BAR	**Barrett**	**1.39**	**190**		**Pn**	**17 02 27.4**	**-0.6**
BAR	**Barrett**	**1.39**	**190**	⇓*e*P	**Pn**	**17 02 27.6**	**-0.4**
BAR				*e*S	**Sb**	**17 02 46.1**	**-0.4**
BAR				IAML		17 02 47.1	
	comp=N,990nm,0.1s						
BAR				⇑*e*		17 02 47.1	
BAR				⇑*e*		17 02 47.5	
BAR				IAML		17 02 47.5	
	comp=E,925nm,0.2s						
SDRC	**San Diego Road**	**1.40**	**200**	*e*P	**Pn**	**17 02 27.7**	**-0.3**
SDRC				*e*S	**Sb**	**17 02 46.4**	**-0.1**
SDRC				⇑*e*		17 02 46.8	
SDRC				IAML		17 02 46.8	
	comp=E,1μm,0.3s						
SDRC				⇑*e*		17 02 47.0	
SDRC				IAML		17 02 47.0	
	comp=N,778nm,0.3s						
WESC	**Westside Schoo**	**1.40**	**157**	*e*P	**Pn**	**17 02 27.2**	**-0.7**
WESC				*e*S	**Sb**	**17 02 46.9**	**+0.3**
IKP	**In-Ko-Pah, Jac**	**1.42**	**171**	P	**Pn**	**17 02 27.6**	**-0.8**
	baz=351,SNR=70						
IKP				S	**Sn**	**17 02 46.8**	**-0.4**
	baz=351						
IKP	**In-Ko-Pah, Jac**	**1.42**	**171**	⇓*i*P	**Pn**	**17 02 27.6**	**-0.8**
IKP				*e*S	**Sg**	**17 02 48.0**	**0.0**
TUQ	**Turquoise Moun**	**1.43**	**15**	P	**Pn**	**17 02 27.9**	**-0.6**
	baz=195,SNR=226						
TUQ				S	**Sn**	**17 02 47.6**	**+0.2**
	baz=195						
YUH	**Yuha Desert**	**1.46**	**165**		**Pn**	**17 02 27.6**	**-1.2**
YUH2	**Yuha Desert**	**1.46**	**165**	⇓*i*P	**Pn**	**17 02 27.6**	**-1.1**
YUH2				*e*S	**Sn**	**17 02 48.1**	**+0.1**
RMX	**La Rumorosa**	**1.47**	**170**		**Pn**	**17 02 28.9**	**-0.2**
RMX	**La Rumorosa**	**1.47**	**170**	*e*P	**Pn**	**17 02 29.1**	**0.0**
TKX	**Tecate**	**1.50**	**188**		**Pn**	**17 02 29.3**	**-0.1**
TKX				IAML		17 02 53.2	
	comp=N,708nm,0.2s						
PASC	**Pasadena Art C**	**1.51**	**275**	Pn	**Pn**	**17 02 29.2**	**-0.3**
PASC	**Pasadena Art C**	**1.51**	**275**	IAML		17 02 52.3	
	comp=E,715nm,0.5s						
PASC				IAML		17 02 55.3	
	comp=N,704nm,0.8s						
OLP	**Otay Lakes Par**	**1.52**	**198**	⇓*e*P	**Pn**	**17 02 29.6**	**0.0**
OLP				*e*S	**Sn**	**17 02 49.6**	**+0.2**
BLYC	**Blythe**	**1.57**	**101**		**Pb**	**17 02 31.3**	**-0.2**
EDW2	**Edwards Air Fo**	**1.57**	**302**	P	**Pn**	**17 02 30.0**	**-0.4**
	baz=121,SNR=179						
EDW2				S	**Sb**	**17 02 51.4**	**-0.2**
	baz=121						
NEE2	**Needles Airpor**	**1.62**	**63**	P	**Pn**	**17 02 30.0**	**-1.0**
	baz=245,SNR=139						
NEE2				Sb	**Sg**	**17 02 53.8**	**-0.6**
	baz=245						
FMP	**Fort Macarthur**	**1.63**	**258**	Pb	**Pn**	**17 02 31.6**	**+0.4**
	baz=77,SNR=11						
FMP				S	**Sb**	**17 02 53.0**	**-0.2**
	baz=77						
DECC	**Green Verdugo**	**1.64**	**277**	Pb	**Pb**	**17 02 32.4**	**-0.3**
	baz=96,SNR=15						
DECC				Sb	**Sg**	**17 02 54.3**	**-0.7**
	baz=96						
GLA	**Glamis**	**1.64**	**127**		**Pn**	**17 02 30.6**	**-0.7**
GLA	**Glamis**	**1.64**	**127**	P	**Pn**	**17 02 30.7**	**-0.6**
	baz=309,SNR=191						
GLA				S	**Sb**	**17 02 53.3**	**-0.1**
	baz=309						
GLA	**Glamis**	**1.64**	**127**	*e*P	**Pn**	**17 02 30.4**	**-0.9**
GLA				*e*S	**Sn**	**17 02 52.6**	**+0.2**
TJIG	**Tijuana**	**1.64**	**189**	*e*P	**Pn**	**17 02 31.1**	**-0.2**
TJX	**Tijuana**	**1.64**	**200**		**Pn**	**17 02 31.6**	**+0.2**
CCAC	**Calif City Air**	**1.74**	**309**		**Pn**	**17 02 32.9**	**+0.1**
CBX	**Cerro Bola**	**1.75**	**188**		**Pn**	**17 02 32.9**	**-0.1**
CBX				IAML		17 03 00.0	
	comp=E,557nm,0.5s						
CBX				IAML		17 03 00.2	
	comp=N,478nm,0.5s						
CBX	**Cerro Bola**	**1.75**	**188**	*e*P	**Pn**	**17 02 33.1**	**+0.1**
CBX				IAML		17 03 00.1	
	comp=E,538nm,0.5s						
CBX				⇓*e*		17 03 00.1	
CBX				⇓*e*		17 03 00.2	
CBX				IAML		17 03 00.2	
	comp=N,455nm,0.4s						
LRMC	**Laurel Mtn Rad**	**1.78**	**323**	P	**Pn**	**17 02 33.1**	**-0.3**
	baz=142,SNR=73						
LRMC				S	**Sn**	**17 02 56.7**	**+0.5**
	baz=142						
CIS	**Catalina Islan**	**1.82**	**250**	Pb	**Pb**	**17 02 35.1**	**-0.7**
	baz=68						
CIS				S	**Sn**	**17 02 57.7**	**+0.7**
	baz=68						
SHOC	**Shoshone, Teco**	**1.84**	**3**	P	**Pn**	**17 02 33.8**	**-0.3**
	baz=183,SNR=14						
SHOC				Sb	**Sg**	**17 03 00.6**	**-1.0**
	baz=183						
CPBX	**Cerro Prieto**	**1.86**	**151**		**Pn**	**17 02 35.2**	**+0.8**
CPBX				IAML		17 03 23.7	
	comp=N,425nm,0.6s						
CPBX				IAML		17 03 33.7	
	comp=E,469nm,0.9s						
CPBX	**Cerro Prieto**	**1.86**	**151**	*e*P	**Pn**	**17 02 34.5**	**+0.1**
CPBX				IAML		17 03 23.8	
	comp=N,526nm,0.5s						
CPBX				⇑*e*		17 03 23.8	
CPBX				IAML		17 03 33.8	
	comp=E,575nm,0.6s						
CPBX				⇑*e*		17 03 33.8	
PDMCI	**Parker Dam,Lak**	**1.87**	**82**	P	**Pn**	**17 02 33.7**	**-0.7**
	baz=264,SNR=71						
PDMCI				Sb	**Sb**	**17 03 01.3**	**+1.2**
	baz=264						
QSM	**Queen of Sheba**	**1.95**	**348**		**Pn**	**17 02 35.2**	**-0.4**
QSM				IAML		17 03 07.8	
	comp=N,324nm,0.4s						
QSM				IAML		17 03 08.0	
	comp=E,345nm,0.4s						
OSI	**Osito Audit: C**	**2.02**	**287**	P	**Pn**	**17 02 36.9**	**+0.3**
	baz=105,SNR=41						
OSI				Sb	**Sb**	**17 03 05.9**	**+1.4**
	baz=105						
SCI2	**San Clemente I**	**2.11**	**240**	P	**Pn**	**17 02 38.4**	**+0.7**
	baz=58						
SCI2				S	**Sn**	**17 03 04.8**	**+0.7**
	baz=58						
ALAMX	**Rancho Alamar**	**2.12**	**164**	*e*P	**Pn**	**17 02 37.8**	**-0.2**
GWY	**Greenwater Val**	**2.14**	**354**		**Pn**	**17 02 37.8**	**-0.5**
CCX	**Cicese**	**2.20**	**186**		**Pn**	**17 02 39.8**	**+0.9**
CCX				IAML		17 03 14.7	
	comp=E,229nm,0.8s						
CCX				IAML		17 03 19.4	
	comp=N,210nm,0.5s						
MPMC	**Manual Prospec**	**2.20**	**336**	P	**Pn**	**17 02 38.7**	**-0.4**
	baz=155,SNR=82						
MPMC				Sb	**Sg**	**17 03 11.6**	**-1.4**
	baz=155						
ARVC	**Arvin**	**2.29**	**299**	P	**Pn**	**17 02 40.7**	**+0.5**
	baz=117,SNR=10						
ARVC				Sb	**Sb**	**17 03 13.8**	**+1.6**
	baz=117						
W13A	**Hualapai Mount**	**2.30**	**62**		**Pn**	**17 02 40.2**	**-0.5**
W13A				IAML		17 03 15.7	
	comp=N,194nm,0.5s						
W13A				IAML		17 03 20.8	
	comp=E,184nm,0.4s						
ISA	**Isabella, Lake**	**2.35**	**313**	Pn	**Pn**	**17 02 40.8**	**-0.5**
ISA	**Isabella, Lake**	**2.35**	**313**	P	**Pn**	**17 02 41.2**	**0.0**
	baz=132,SNR=40						
ISA				Sb	**Sb**	**17 03 15.9**	**+1.7**
	baz=132						
FURC	**Furnace Creek,**	**2.44**	**351**	Pg	**Pg**	**17 02 48.9**	**-0.2**
	baz=170						
113A	**Mohawk Valley,**	**2.53**	**120**		**Pn**	**17 02 42.5**	**-1.1**
113A				IAML		17 03 24.9	
	comp=E,133nm,0.7s						
113A				IAML		17 03 30.7	
	comp=N,144nm,0.6s						
SHPR	**Sheep Range**	**2.64**	**22**	Pn	**Pn**	**17 02 45.4**	**+0.1**
SHPR				IAML		17 03 26.8	
	comp=E,167nm,0.5s						
SHPR				IAML		17 03 32.5	
	comp=N,153nm,0.7s						
BCW	**Bitter Crk WRg**	**2.66**	**290**		**Pn**	**17 02 45.7**	**+0.2**
SCZ2	**Santa Cruz Isl**	**2.71**	**270**	Pg	**Pg**	**17 02 53.4**	**-0.9**
	baz=88						
SNCC	**San Nicolas Is**	**2.75**	**254**	Pn	**Pn**	**17 02 47.4**	**+0.9**
SNCC				IAML		17 03 36.5	
	comp=E,116nm,0.8s						
SNCC	**San Nicolas Is**	**2.75**	**254**	P	**Pn**	**17 02 46.2**	**-0.4**
	baz=72						
CWC	**Cottonwood Cre**	**2.76**	**330**	Pg	**Pg**	**17 02 54.2**	**-1.0**
	baz=149						
Y14A	**Wickenburg**	**2.80**	**91**		**Pn**	**17 02 47.6**	**+0.2**
Y14A				IAML		17 03 40.4	
	comp=E,153nm,0.5s						
VES	**Vestal, Richgr**	**2.85**	**309**	Pg	**Pg**	**17 02 56.3**	**-0.7**
	baz=128						
TPNV	**Topopah Spring**	**2.89**	**2**		**Pn**	**17 02 49.0**	**+0.4**
TPNV				IAML		17 03 39.9	
	comp=E,159nm,0.6s						
TPNV				IAML		17 03 41.9	
	comp=E,144nm,0.6s						
TPNV	**Topopah Spring**	**2.89**	**2**	P	**Pn**	**17 02 49.1**	**+0.4**
	baz=182,SNR=16						
PKM	**Mcpherson Peak**	**2.96**	**287**	P	**Pn**	**17 02 50.5**	**+0.8**
	baz=105,SNR=12						
PKM				Sb	**Sg**	**17 03 34.9**	**-2.5**
	baz=105						
GRAC	**Grapevine Rang**	**3.04**	**345**		**Pn**	**17 02 51.5**	**+0.7**
GRAC				IAML		17 03 46.2	
	comp=N,174nm,0.5s						
GRAC				IAML		17 03 47.3	
	comp=E,123nm,0.4s						
GRAC	**Grapevine Rang**	**3.04**	**345**	P	**Pn**	**17 02 51.4**	**+0.7**
	baz=164,SNR=12						
SFX	**San Felipe**	**3.27**	**156**	Pn	**Pn**	**17 02 55.0**	**+1.2**
LCH	**Last Change Ra**	**3.33**	**342**		**Pn**	**17 02 55.2**	**+0.5**
PRN	**Pahroc Range**	**3.51**	**17**		**Pn**	**17 02 58.4**	**+1.2**
PAGB	**Antelope Grade**	**3.60**	**299**		**Pn**	**17 02 58.9**	**+0.6**
214A	**Organ Pipe Nat**	**3.65**	**124**		**Pn**	**17 02 58.4**	**-0.6**
214A				IAML		17 04 05.2	
	comp=E,72nm,0.7s						
214A				IAML		17 04 08.3	
	comp=N,77nm,1.2s						
214A	**Organ Pipe Nat**	**3.65**	**124**	P	**Pn**	**17 02 58.5**	**-0.6**
	baz=306						
LCMT	**Little Creek M**	**3.90**	**40**		**Pn**	**17 03 03.3**	**+0.8**
TPH	**Tonopah**	**4.07**	**351**		**Pn**	**17 03 05.0**	**+0.1**
U15A	**North Rim**	**4.09**	**54**		**Pn**	**17 03 06.2**	**+0.8**
X16A	**Lo Mia Camp, P**	**4.10**	**84**		**Pn**	**17 03 05.5**	**+0.1**
OMMB	**Old Mammoth Mi**	**4.14**	**330**		**Pn**	**17 03 04.0**	**-2.0**
OMMB				Pg	**Pb**	**17 03 16.2**	**+0.6**
MDPB	**Devils Postpil**	**4.19**	**329**		**Pn**	**17 03 05.7**	**-0.9**
PMPB	**Monarch Peak**	**4.22**	**302**		**Pn**	**17 03 08.8**	**+1.9**
CCUT	**Cedar City**	**4.26**	**34**		**Pn**	**17 03 08.6**	**+1.0**
R11A	**Troy Canyon, C**	**4.33**	**8**		**Pn**	**17 03 09.3**	**+0.8**
WUAZ	**Wupatki**	**4.37**	**69**		**Pn**	**17 03 09.6**	**+0.7**
WUAZ				IAML		17 04 24.1	
	comp=N,55nm,0.5s						
WUAZ				IAML		17 04 26.6	
	comp=N,65nm,0.5s						
WUAZ	**Wupatki**	**4.37**	**69**	P	**Pn**	**17 03 09.8**	**+0.9**
	baz=252						
LHV	**Little Huntoon**	**4.53**	**338**		**Pn**	**17 03 12.1**	**+1.1**
BBGB	**Big Mountain B**	**4.57**	**305**		**Pn**	**17 03 11.6**	**-0.1**
NV11	**Mina Array Sit**	**4.60**	**342**		**Pn**	**17 03 12.9**	**+0.7**
NVAR	**Mina Array Bea**	**4.63**	**341**		**Pn**	**17 03 13.0**	**+0.3**
PKCU	**Pink Cliffs**	**4.73**	**43**		**Pn**	**17 03 15.1**	**+1.0**
RYN	**Ryan**	**4.88**	**340**		**Pn**	**17 03 16.4**	**+0.4**
PSUT	**Pine Spring**	**4.91**	**24**		**Pn**	**17 03 17.5**	**+1.0**
TUC	**Tucson**	**5.00**	**109**		**Pn**	**17 03 16.7**	**-0.9**
TUC	**Tucson**	**5.00**	**109**	P	**Pn**	**17 03 16.6**	**-1.0**
	baz=292			

PAJU	**Pajala**	**0.85**	**93**	*e*P		**Pg**	**17 03 41.7**	**-0.7**
PAJU				*e*S		**Sg**	**17 03 53.2**	**-0.2**
RATU	**Laukkuluspa**	**0.91**	**326**	P		**Pg**	**17 03 43.1**	**-0.4**
RATU				S		**Sg**	**17 03 55.8**	**+0.5**
RATU	**Laukkuluspa**	**0.91**	**326**	*e*P		**Pg**	**17 03 43.1**	**-0.4**
RATU				*e*S		**Sg**	**17 03 55.8**	**+0.5**
HARU	**Harads**	**0.92**	**179**	P		**Pg**	**17 03 43.2**	**-0.6**
HARU	**Harads**	**0.92**	**179**	*e*P		**Pg**	**17 03 43.2**	**-0.6**
SALU	**Saltoluokta**	**0.99**	**289**	P		**Pg**	**17 03 44.9**	**-0.3**
SALU	**Saltoluokta**	**0.99**	**289**	*e*P		**Pg**	**17 03 44.9**	**-0.3**
LANU	**Lannavaara**	**1.05**	**22**	P		**Pg**	**17 03 45.7**	**-0.6**
LANU	**Lannavaara**	**1.05**	**22**	*e*P		**Pg**	**17 03 45.5**	**-0.8**
LANU				*e*SB		**Sb**	**17 04 01.6**	**+0.1**
NIKU	**Nikkaluokta**	**1.08**	**318**	P		**Pg**	**17 03 46.2**	**-0.6**
NIKU	**Nikkaluokta**	**1.08**	**318**	*e*P		**Pg**	**17 03 46.2**	**-0.6**
KOVU	**Salmi**	**1.19**	**346**	P		**Pg**	**17 03 48.2**	**-0.6**
KOVU	**Salmi**	**1.19**	**346**	*e*P		**Pg**	**17 03 48.2**	**-0.6**
KLF	**Kolari**	**1.19**	**81**	*e*P		**Pg**	**17 03 48.1**	**-0.8**
	baz=259							
KLF				*e*SB		**Sg**	**17 04 04.6**	**+0.3**
SJUU	**Sjulsmark**	**1.60**	**170**	P		**Pn**	**17 03 55.2**	**-0.4**
SJUU	**Sjulsmark**	**1.60**	**170**	*e*P		**Pn**	**17 03 55.2**	**-0.4**
TOF	**Tornio**	**1.68**	**125**	*e*PG		**Pn**	**17 03 57.0**	**+0.3**
TOF				MSG			17 04 17.4	
	comp=Z,14nm,0.2s							
TOF				*e*SN		**Sb**	**17 04 19.5**	**-0.1**
HEF	**Hetta**	**1.69**	**37**	*e*P		**Pn**	**17 03 55.8**	**-1.1**
HEF	**Hetta**	**1.69**	**37**	*e*P		**Pn**	**17 03 55.5**	**-1.4**
HEF				MSG			17 04 17.4	
	comp=Z,10nm,0.2s							
HEF				*e*SG		**Sn**	**17 04 19.2**	**+0.1**
KIF	**Kilpisjarvi**	**1.93**	**358**	*e*P		**Pb**	**17 04 02.1**	**-0.1**
KIF	**Kilpisjarvi**	**1.93**	**358**	*e*PB		**Pb**	**17 04 01.7**	**-0.5**
KIF				MSG			17 04 24.9	
	comp=Z,29nm,0.2s							
KIF				*e*SG		**Sg**	**17 04 28.3**	**+0.1**
RNF	**Rovaniemi**	**2.06**	**101**	*e*PB		**Pn**	**17 04 02.8**	**+0.9**
RNF				*e*SG		**Sb**	**17 04 30.8**	**+0.4**
KTK1	**Kautokeino**	**2.12**	**23**	*e*PB		**Pb**	**17 04 04.3**	**-1.1**
KTK1				*e*SG		**Sb**	**17 04 32.6**	**+0.3**
I37NO	**I37NO**	**2.19**	**337**	*i*			17 16 24.8	
	baz=158,slow=335,SNR=0.9							
SGF	**Sodankyl**	**2.20**	**78**	*e*P		**Pn**	**17 04 04.8**	**+1.0**
SGF				*e*SG		**Sb**	**17 04 35.2**	**+0.7**
OBF4	**Vikkela, Lumij**	**2.84**	**141**	*e*P		**Pn**	**17 04 13.4**	**+0.7**
	baz=327							
OUL	**Oulu**	**2.84**	**133**	*e*P		**Pn**	**17 04 13.8**	**+1.1**
OBF0	**Syolatti, Pyha**	**2.93**	**151**	*e*P		**Pn**	**17 04 14.9**	**+1.0**
ARA0	**ARCESS Array S**	**2.99**	**32**	*e*P		**Pn**	**17 04 15.2**	**+0.5**
ARA0				*e*SB		**Sb**	**17 04 57.0**	**-0.3**
ARCES	**ARCESS Array B**	**2.99**	**32**	Pn		**Pn**	**17 04 15.2**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=212,slow=14,SNR=55							
ARCES				Sn		**Sn**	**17 04 51.2**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=215,slow=24,SNR=6.3							
ARCES				Lg		Lg	17 04 57.0	
	comp=Z,0.4nm,0.3s,baz=215,slow=26,SNR=5.8							
	comp=Z,0.5nm,0.3s							
ARCES	**ARCESS Array B**	**2.99**	**32**	P		**Pn**	**17 04 15.2**	**+0.4**
ARCES				S		**Sn**	**17 04 52.0**	**+0.7**
OUF	**Merijarvi**	**3.14**	**148**	*e*P		**Pn**	**17 04 17.6**	**+0.8**
	baz=334							
OUF				MSG			17 04 59.1	
	comp=Z,2.1nm,0.2s							
UMAU	**Umeaa**	**3.21**	**182**	*e*P		**Pn**	**17 04 18.3**	**+0.6**
	baz=1.0							
VRF	**Varrio**	**3.41**	**75**	*e*P		**Pn**	**17 04 21.5**	**+1.0**
VRF				*e*SG		**Sb**	**17 05 11.7**	**+2.4**
OLKF	**Oulanka, Finla**	**3.45**	**99**	*e*P		**Pn**	**17 04 21.9**	**+0.9**
OLKF				*e*S		**Sn**	**17 05 03.7**	**+1.2**
MSF	**Maaselka**	**3.45**	**106**	*e*P		**Pn**	**17 04 21.8**	**+0.7**
	baz=296							
MSF				*e*SG		**Sb**	**17 05 13.6**	**+3.2**
KEV	**Kevo**	**3.50**	**37**	*e*P		**Pn**	**17 04 21.8**	**+0.1**
KEV				*e*S		**Sn**	**17 05 04.9**	**+1.2**
KU6	**Riekki**	**3.73**	**102**	*e*P		**Pn**	**17 04 26.0**	**+1.1**
HEMU	**Hemsoen**	**4.59**	**197**	*e*P		**Pn**	**17 04 37.7**	**+1.0**
	baz=16							
APA0	**Apatity Array**	**4.69**	**78**	P		**Pn**	**17 04 36.7**	**-1.3**
APA0				S		**Sn**	**17 05 32.7**	**-0.4**
RMF	**Romuvaara**	**4.70**	**124**	*e*P		**Pn**	**17 04 40.0**	**+1.8**
	baz=309							
PRVG	**Vayda Guba**	**4.94**	**52**	P		**Pn**	**17 04 40.7**	**-0.7**
PRVG				S		**Sn**	**17 05 37.0**	**-2.1**
FINES	**FINESS Array B**	**6.08**	**156**	Pn		**Pn**	**17 04 57.8**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=348,slow=12,SNR=10							
FINES				Sn		**Sn**	**17 06 05.2**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=342,slow=22,SNR=1.1							
FINES				Lg		Lg	17 06 35.0	
	comp=Z,0.1nm,0.3s,baz=338,slow=26,SNR=1.3							
	comp=Z,0.3nm,0.3s							
NOA	**NORSAR Array B**	**7.41**	**220**	Sn		**Sn**	**17 06 39.8**	**-0.2**
	baz=31,slow=9.8							
HFS	**Hagfors**	**7.68**	**208**	Pn		**Pn**	**17 05 18.7**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=28,slow=13,SNR=1.5							
HFS				Sn		**Sn**	**17 06 44.3**	**-2.3**
	comp=Z,0.1nm,0.3s,baz=22,slow=25,SNR=1.8							
	comp=Z,1.8nm,1.0s							

NEIC ***16*** *17:10:42.9±1.6, 6.°00S×0.°07×147.°4E±0.°2, h68km±6km, mb4.0/16, Error ellipse: s-maj=26.3km s-min=9.6km az=92.0*

IDC ***16*** *17:10:44.6±2.3, 6.°06S×147.°29E, h91km±22km, mb3.4/8, mbtmp3.8/11, MS2.9/1, Error ellipse: s-maj=31.0km s-min=12.8km az=111.0*

ISC 16 17:10:45.2±0.6, 6.°16S±0.°07×147.°3E±0.°1, h100km, n36,
σ1s78/34, mb3.7/12, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.23**	**183**	P		P	**Pn**	**17 11 33.9**	**-0.1**
	64nm,0.7s,baz=43,slow=8.6,SNR=20								
PMG				S			**Sn**	**17 12 09.8**	**-1.9**
	52nm,0.3s,baz=182,slow=20,SNR=11								
MANU	**Manus Island**	**4.09**	**1**	Pn		Pn	Pn	17 11 39.9	-5.8
KRVT	**Keravat (AS076**	**5.03**	**69**	P		Pn	**Pn**	**17 11 56.8**	**-1.6**
	93nm,0.4s,baz=328,slow=0.1,SNR=40								
RABL	**Rabaul**	**5.20**	**68**	Pn		Pn	**Pn**	**17 11 59.5**	**-1.3**
COEN	**Coen**	**8.76**	**207**	Pn		Pn	**Pn**	**17 12 48.4**	**-0.6**
COEN				Sn		Sn	**Sn**	**17 14 20.6**	**-5.5**
SIJI	**Sorong**	**16.86**	**288**	LR		LR	LR	17 22 21.6	
	comp=Z,47nm,21.4s,baz=104,slow=42								
WB0	**Warramunga Arr**	**18.46**	**222**	P		P	**P**	**17 14 54.8**	**+1.5**
WR0	**Warramunga Arr**	**18.50**	**221**	P		P	**P**	**17 14 55.3**	**+1.6**
WRAB	**Tennant Creek**	**18.61**	**221**	P		P	**P**	**17 14 56.1**	**+1.2**
WRAB						IAmb	IAmb	17 15 02.4	
	comp=Z,10nm,1.1s								
WB2	**Warramunga Arr**	**18.61**	**221**	P		P	**P**	**17 14 56.4**	**+1.4**
WB2						IAmb	IAmb	17 14 57.6	
	comp=Z,5.2nm,0.8s								
WRA	**Warramunga Arr**	**18.62**	**221**	P		P	**P**	**17 14 56.3**	**+1.3**
	comp=Z,3.3nm,0.6s,baz=41,slow=12,SNR=57								
WRA				S			**S**	**17 18 17.6**	**-4.6**
	comp=Z,0.5nm,0.6s,baz=50,slow=22,SNR=2.4								
WRA	**Warramunga Arr**	**18.62**	**221**	P		P	**P**	**17 14 55.4**	**+0.4**
KNRA	**Kununurra**	**20.51**	**241**	P		P	**P**	**17 15 17.1**	**+1.5**
KNRA						IAmb	IAmb	17 15 26.0	
	comp=Z,33nm,1.4s								
AS31	**Alice Springs**	**21.67**	**215**	P		P	**P**	**17 15 29.9**	**+2.0**
AS31						IAmb	IAmb	17 15 37.7	
	comp=Z,3.3nm,0.3s								
ASAR	**Alice Springs**	**21.67**	**215**	P		P	**P**	**17 15 29.7**	**+1.7**
	comp=Z,2.6nm,0.7s,baz=53,slow=8.9,SNR=76								
ASAR				S			**S**	**17 19 23.5**	**+1.3**
	comp=Z,0.7nm,0.6s,baz=32,slow=21,SNR=4.2								
	comp=Z,2.6nm,0.7s								
ASAR	**Alice Springs**	**21.67**	**215**	P		P	**P**	**17 15 29.6**	**+1.6**
ARMA	**Armidale**	**24.47**	**171**	P		P	**P**	**17 15 56.0**	**+0.9**
ARMA						IAmb	IAmb	17 16 24.8	
	comp=Z,6.8nm,1.1s								
STKA	**Stephens Creek**	**26.14**	**191**	P		P	**P**	**17 16 11.4**	**+1.4**
	comp=Z,0.7nm,0.2s,baz=6.6,slow=8.5,SNR=4.0								
	comp=Z,0.7nm,0.2s								
STKA	**Stephens Creek**	**26.14**	**191**	IAmb		IAmb	IAmb	17 16 18.9	
	comp=Z,1.8nm,1.4s								
MORW	**Morawa**	**37.30**	**229**	P		P	**P**	**17 17 50.0**	**+2.1**
KSRS	**Korea Array**	**47.02**	**339**	P		P	**P**	**17 19 06.0**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=158,slow=8.6,SNR=2.5								
	comp=Z,0.4nm,0.5s								
SONM	**Songino Array**	**64.70**	**331**	P		P	**P**	**17 21 12.6**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=126,slow=7.3,SNR=2.4								
	comp=Z,0.2nm,0.4s								
SONM	**Songino Array**	**64.70**	**331**	IAmb		IAmb	IAmb	17 21 14.4	
	comp=Z,1.4nm,1.2s								

VNDA	**Vanda**	**71.73**	**177**	P		P	**P**	**17 21 57.4**	**+1.3**
	comp=Z,0.9nm,0.8s,baz=335,slow=6.9,SNR=5.5								
	comp=Z,0.9nm,0.8s								
VNDA	**Vanda**	**71.73**	**177**	IAmb		IAmb		17 21 58.2	
	comp=Z,1.0nm,0.8s								
MKAR	**Makanchi Array**	**77.83**	**320**	P		P	**P**	**17 22 31.3**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=98,slow=9.3,SNR=2.1								
	comp=Z,0.2nm,0.5s								
TARG	**Taragay, Kyrgy**	**79.06**	**314**	P		P	**P**	**17 22 38.5**	**-0.7**
TARG						IAmb	IAmb	17 23 00.1	
	comp=Z,2.0nm,0.6s								
OHAK	**Old Harbor**	**79.28**	**28**	P		P	**P**	**17 22 40.8**	**+1.3**
ZALV	**Zalesovo Beam**	**79.32**	**328**	P		P	**P**	**17 22 38.7**	**-1.0**
	comp=Z,0.5nm,0.4s,baz=104,slow=6.1,SNR=2.7								
	comp=Z,0.5nm,0.4s								
QSPA	**South Pole Qui**	**83.81**	**180**	P		P	**P**	**17 23 04.5**	**+1.1**
ILAR	**Eielson Array**	**85.50**	**23**	P		P	**P**	**17 23 10.7**	**-1.0**
	comp=Z,0.2nm,0.5s,baz=248,slow=4.8,SNR=2.4								
	comp=Z,0.2nm,0.5s								
INK	**Inuvik**	**91.69**	**21**	P		P	**P**	**17 23 40.9**	**-0.1**
	comp=Z,3.0nm,0.4s,baz=270,slow=5.1,SNR=3.0								
INK	**Inuvik**	**91.69**	**21**	IAmb		IAmb		17 23 41.5	
	comp=Z,3.2nm,0.5s								
PLCA	**Paso Flores**	**121.81**	**147**	PKP		**PKiKP**		**17 29 29.1**	**+0.8**
	comp=Z,1.4nm,1.0s,baz=218,slow=5.8,SNR=3.2								
TORD	**Torodi Ar. Bea**	**145.44**	**284**	PKPbc		**PKPbc**		**17 30 13.2**	**+0.4**
	comp=Z,1.8nm,0.6s,baz=70,slow=3.9,SNR=12								
HUMP	**Col San Antoni**	**145.53**	**67**	PKPdf		**PKPbc**		**17 30 13.0**	**+0.1**

SKHL ***16*** *17:12:49.8±0.8, 43.°49N×134.°27E, h434km±9km, mb4.3/9, msh4.3/2, msha4.4/4*

JMA ***16*** *17:12:49.6±0.4, 43.°4N±2.°×13.°5E±.°, h491km, MV3.7/29, NEAR VLADIVOSTOK*

MOS ***16*** *17:12:49.2±0.8, 43.°49N×134.°24E, h440km, mb4.0/9, Error ellipse: s-maj=13.1km s-min=8.7km az=105.6*

IDC ***16*** *17:12:50.6±0.8, 43.°51N×134.°06E, h428km±6km, mb3.2/16, mbtmp4.0/20, Error ellipse: s-maj=15.0km s-min=13.8km az=22.0*

ISC 16 17:12:50.7±0.5, 43.°45N±0.°06×134.°39E±0.°05, h450km, n85,
σ2s18/104, mb3.6/26, 8C-5D, Primorye

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GRTR	**Gornotajezhnoj**	**1.64**	**280**	*i*P	⇓	P	**P**	**17 13 47.0**	**-2.3**
GRTR						AMB	AMB	17 13 47.5	
	17nm,0.7s								
GRTR				*e*S		**S**	**17 14 31.1**	**-5.8**
VLA	**Vladivostok**	**1.85**	**261**	*d*P		P	**P**	**17 13 47.7**	**-2.7**
VLA	**Vladivostok**	**1.85**	**261**	P		P	**P**	**17 13 47.7**	**-2.7**
USRK	**Ussuriysk Ar.**	**1.89**	**294**	P		P	**P**	**17 13 48.0**	**-2.5**
	3.5nm,0.4s,baz=107,slow=3.7,SNR=22								
USRK				S		**S**	**17 14 32.8**	**-6.4**
	2.7nm,0.5s,baz=108,slow=17,SNR=2.3								
TEY	**Ternei**	**2.25**	**44**	*e*P		P	**P**	**17 13 51.5**	**-1.0**
TEY				*e*S		**S**	**17 14 39.3**	**-3.5**
TEY				A		A		17 14 40.7	
	130nm,2.0s								
TEY				A		A		17 14 40.7	
	300nm,2.0s								
TEY				A		A		17 14 40.8	
	45nm,0.6s								
TEY				A		A		17 14 40.8	
	51nm,0.6s								
JHST	**Hiyamasetana**	**4.16**	**102**	*e*P		P	**P**	**17 14 06.8**	**-0.4**
JSH	**Shimam**	**4.22**	**99**	*e*P		P	**P**	**17 14 07.0**	**-0.7**
JSK	**Shakotan**	**4.44**	**89**	*e*P		P	**P**	**17 14 09.7**	**0.0**
JYM2	**Yakumo 2**	**4.60**	**105**	*e*P		P	**P**	**17 14 11.2**	**0.0**
JOG3	**Oga3**	**4.98**	**133**	*e*P		P	**P**	**17 14 18.6**	**+3.8**
KHBR	**Khabarovsk**	**5.05**	**5**	*e*P		P	**P**	**17 14 15.0**	**-0.3**
KHBR						AMB	AMB	17 14 15.2	
	32nm,0.7s								
JIW	**Iwasaki**	**5.06**	**122**	*e*P		P	**P**	**17 14 15.0**	**-0.7**
JOT	**Ohata**	**5.34**	**110**	*e*P		P	**P**	**17 14 17.2**	**-1.1**
JOT				*e*S		**S**	**17 15 26.6**	**-3.3**
KLR	**Kul'dur**	**6.07**	**343**	P		P	**P**	**17 14 23.9**	**-1.5**
	26nm,0.3s,baz=169,slow=10,SNR=114								
KLR				S		**S**	**17 15 39.4**	**-3.7**
	2.6nm,0.7s,baz=308,slow=23,SNR=1.1								
KLR	**Kul'dur**	**6.07**	**343**	*c*P		P	**P**	**17 14 23.7**	**-1.7**
KLR	**Kul'dur**	**6.07**	**343**	*i*P	⇑	P	**P**	**17 14 23.8**	**-1.7**
KLR				*e*S		**S**	**17 15 39.8**	**-3.3**
JRG	**Rokugo**	**6.20**	**129**	*e*P		P	**P**	**17 14 26.0**	**-1.0**
JRG				*e*S		**S**	**17 15 42.7**	**-3.0**
ERM	**Erimo**	**6.62**	**99**	*i*P		P	**P**	**17 14 31.0**	**-0.3**
JCH	**Churui**	**6.63**	**94**	*e*P		P	**P**	**17 14 29.8**	**-1.7**
JCH				*e*S		**S**	**17 15 48.4**	**-5.5**
JMK	**Ichinoseki**	**6.83**	**129**	*e*P		P	**P**	**17 14 31.7**	**-2.0**
JMK				*e*S		**S**	**17 15 53.4**	**-4.5**
YSS	**Yuzh-Sakhalins**	**6.87**	**56**	*e*P		P	**P**	**17 14 34.1**	**+0.2**
YSS				*e*			17 15 53.5		
YSS	**Yuzh-Sakhalins**	**6.87**	**56**	*e*P		P	**P**	**17 14 34.1**	**+0.2**
JMM	**Marumori**	**7.40**	**137**	*e*P		P	**P**	**17 14 37.5**	**-2.2**
JMM				*e*S		**S**	**17 16 04.5**	**-4.5**
JFT	**Otama**	**7.46**	**141**	*e*S		**S**	**17 16 05.4**	**-4.7**
GRNR	**Gornyy**	**7.46**	**10**	*i*P	⇑	P	**P**	**17 14 40.0**	**-0.1**
GRNR				pmax		pmax			
	comp=N,20nm,1.0s								
GRNR				pmax		pmax			
	comp=Z,20nm,0.7s								
GRNR	**Gornyy**	**7.46**	**10**	*e*P		P	**P**	**17 14 39.9**	**-0.1**
GRNR				AMB		AMB	AMB	17 14 40.6	
	comp=Z,33nm,0.6s								
MJAR	**Matsushiro Arr**	**7.49**	**156**	P		P	**P**	**17 14 41.7**	**+1.0**
	comp=Z,1.6nm,0.6s,baz=335,slow=10,SNR=3.2								
AKK	**Akkeshi**	**7.65**	**90**	*e*P		P	**P**	**17 14 42.0**	**-0.2**
KSRS	**Korea Array**	**7.75**	**222**	P		P	**P**	**17 14 43.0**	**-0.4**
	comp=Z,11nm,0.5s,baz=40,slow=11,SNR=86								
KSRS	**Korea Array**	**7.75**	**222**	P		P	**P**	**17 14 43.0**	**-0.4**
JWT	**Wachi**	**8.19**	**174**	*e*P		P	**P**	**17 14 48.6**	**+0.4**
NMR	**Nemuro--Hokkai**	**8.26**	**87**	*e*P		P	**P**	**17 14 48.7**	**-0.1**
NMR				*e*S		**S**	**17 16 21.0**	**-4.8**
JHS	**Saijyo**	**8.49**	**187**	*e*P		P	**P**	**17 14 52.3**	**+0.7**
SHO	**Shikotan**	**9.03**	**83**	*e*P		P	**P**	**17 14 56.4**	**-0.8**
SHO				*e*S		**S**	**17 16 36.3**	**-4.9**
SHO				pmax		pmax			
	comp=E,7.0nm,0.3s								
SHO				pmax		pmax			
	comp=Z,7.0nm,0.3s								
SHO	**Shikotan**	**9.03**	**83**	*e*P		P	**P**	**17 14 57.6**	**+0.4**
SHO				AMB		AMB	AMB	17 15 01.0	
	comp=Z,7.0nm,0.3s								
SHO				*e*S		**S**	**17 16 37.9**	**-3.3**
TYV	**Tymovskoe**	**9.31**	**34**	*e*P		P	**P**	**17 15 02.0**	**+1.9**
TYV				*e*S		**S**	**17 16 40.0**	**-6.5**
TYV				pmax		pmax			
	comp=Z,10.0nm,0.9s								
TYV				smax		smax			
	comp=N,6.0nm,1.3s								
TYV				smax		smax			
	comp=E,7.0nm,1.3s								
TYV	**Tymovskoe**	**9.31**	**34**	*e*P		P	**P**	**17 15 01.2**	**+1.1**
TYV				AMB		AMB	AMB	17 15 03.2	
	comp=E,10.0nm,0.9s								
ZEA	**Zeya**	**11.32**	**338**	*e*P		P	**P**	**17 15 21.7**	**-0.2**
ZEA	**Zeya**	**11.32**	**338**	*e*P		P	**P**	**17 15 22.4**	**+0.5**
PEA0B	**Petropavlovsk-**	**18.21**	**50**	*c*P		P	**P**	**17 16 34.1**	**-1.1**
ULN	**Ulaanbaatar**	**19.56**	**293**	*d*P		P	**P**	**17 16 46.5**	**-1.6**
ULN				pmax		pmax			
	comp=Z,3.0nm,0.8s								
ULN	**Ulaanbaatar**	**19.56**	**293**	P		P	**P**	**17 16 46.5**	**-1.6**
SONM	**Songino Array**	**20.00**	**292**	P		P	**P**	**17 16 51.1**	**-1.0**
	comp=Z,2.1nm,0.5s,baz=89,slow=8.7,SNR=18								
GTA	**Gaotai**	**26.12**	**273**	*e*P		P	**P**	**17 17 46.9**	**-0.2**
GTA				pmax		pmax			
	comp=Z,2.0nm,0.8s								
TIXI	**Tiksi**	**28.41**	**356**	*i*P	⇑	P	**P**	**17 18 07.4**	**+0.8**
TIXI				pmax		pmax			
	comp=Z,3.0nm,1.7s								
TIXI	**Tiksi**	**28.41**	**356**	P		P	**P**	**17 18 07.4**	**+0.8**
ZALV	**Zalesovo Beam**	**33.70**	**306**	P		P	**P**	**17 18 51.8**	**-0.8**
	comp=Z,1.8nm,0.5s,baz=90,slow=8.5,SNR=10								
ZALV				PcP		**PcP**		**17 21 20.8**	**+1.2**
	comp=Z,1.4nm,0.5s,baz=87,slow=2.5,SNR=6.8								
ZALV				ScP		**ScP**		**17 24 23.6**	**+2.7**
	comp=Z,0.5nm,0.4s,baz=97,slow=7.4,SNR=2.5								
	comp=Z,1.8nm,0.5s								
ZALV	**Zalesovo Beam**	**33.70**	**306**	*i*P		P	**P**	**17 18 52.0**	**-0.5**
ZALV				pmax		pmax			
	comp=Z,2.0nm,0.5s								
MK31	**Makanchi Array**	**36.36**	**294**	*d*P		P	**P**	**17 19 14.1**	**-0.9**
MKAR	**Makanchi Array**	**36.36**	**294**	P		P	**P**	**17 19 14.2**	**-0.8**
	comp=Z,1.4nm,0.6s,baz=84,slow=11,SNR=22								
MKAR				PcP			**sP**	**17 21 28.5**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=62,slow=5.3,SNR=2.2								
	comp=Z,1.4nm,0.6s								
MKAR	**Makanchi Array**	**36.36**	**294**	*i*P		P	**P**	**17 19 14.1**	**-0.9**
MKAR				pmax		pmax			
	comp=Z,2.0nm,0.6s								
KURK	**Kurchatov**	**37.87**	**301**	*i*P	⇓	P	**P**	**17 19 26.4**	**-0.9**
KURK				pmax		pmax			
	comp=Z,4.0nm,0.6s								
KURK	**Kurchatov**	**37.87**	**301**	P		P	**P**	**17 19 26.4**	**-0.9**
JIRN	**Jiri**	**41.66**	**264**	*e*P		P	**P**	**17 19 58.3**	**-0.5**
GUN	**Gumba**	**41.74**	**265**	*e*P		P	**P**	**17 19 58.9**	**-0.5**
	comp=Z,13nm,0.3s								
PKI	**Pulchoki**	**42.28**	**265**	*e*P		P	**P**	**17 20 02.8**	**-0.8**
	comp=Z,4.8nm,0.4s								
PKIN	**Phulchoki**	**42.29**	**265**	*e*P		P	**P**	**17 20 02.7**	**-0.9**
GKN	**Gorkha**	**42.59**	**266**	*e*P		P	**P**	**17 20 05.3**	**-0.6**
	comp=Z,14nm,0.4s								
DANN	**Dangsing**	**43.03**	**267**	*e*P		P	**P**	**17 20 09.5**	**-0.1**
	comp=Z,43nm,0.3s								
ILAR	**Eielson Array**	**47.15**	**35**	P		P	**P**	**17 20 42.4**	**+2.0**
	comp=Z,0.3nm,0.8s,baz=286,slow=6.5,SNR=4.1								
	comp=Z,0.3nm,0.8s								
ARU	**Arti**	**48.02**	**314**	*i*P	⇑	P	**P**	**17 20 45.9**	**-1.2**
ARU				pmax		pmax			
	comp=Z,5.0nm,0.9s								
ARU	**Arti**	**48.02**	**314**	P		P	**P**	**17 20 45.9**	**-1.2**
AKTO	**Aktyubinsk**	**50.47**	**306**	P		P	**P**	**17 21 04.7**	**-0.7**
	comp=Z,2.4nm,1.0s,baz=76,slow=14,SNR=4.0								
	comp=Z,2.4nm,1.0s								
KIRV	**Kirov**	**51.89**	**318**	*c*P		P	**P**	**17 21 15.9**	**+0.3**
ARCES	**ARCESS Array B**	**56.05**	**336**	P		P	**P**	**17 21 45.5**	**+0.5**
	comp=Z,0.8nm,0.5s,baz=59,slow=8.8,SNR=11								
ARCES				PcP		**PcP**		**17 22 38.0**	**+1.2**
	comp=Z,0.6nm,0.6s,baz=72,slow=5.8,SNR=3.8								
	comp=Z,0.8nm,0.5s								
RES	**Resolute Bay**	**57.70**	**14**	P		P	**P**	**17 21 57.8**	**+1.5**
	comp=Z,1.5nm,1.0s,baz=333,slow=4.5,SNR=6.4								
	comp=Z,1.5nm,1.0s								
OBN	**Obninsk**	**59.74**	**319**	*i*P		P	**P**	**17 22 06.5**	**-3.9**
OBN				*i*				17 22 51.5	
OBN				pmax		pmax			
	comp=Z,5.0nm,0.9s								
FINES	**FINESS Array B**	**60.59**	**328**	P		P	**P**	**17 22 16.4**	**+0.4**
	comp=Z,3.9nm,0.6s,baz=53,slow=8.2,SNR=35								
FINES				PcP		**PcP**		**17 22 55.6**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=93,slow=3.8,SNR=3.4								
	comp=Z,3.9nm,0.6s								
FINES	**FINESS Array B**	**60.59**	**328**	*i*P		P	**P**	**17 22 16.3**	**+0.3**
FINES				pmax		pmax			
	comp=Z,4.0nm,0.6s								
KIV	**Kislovodsk**	**62.72**	**306**	*e*P		P	**P**	**17 22 31.2**	**+0.8**
KIV				pmax		pmax			
	comp=Z,7.0nm,1.0s								
KIV	**Kislovodsk**	**62.72**	**306**	P		P	**P**	**17 22 31.2**	**+0.8**
KBZ	**Khabaz**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.29**	**344**	P	**Pn**	**17 27 12.8**	**+1.0**
	201nm,0.3s,baz=247,slow=1.6,SNR=144						
KRVT				S	**Sn**	**17 27 27.8**	**-0.1**
	250nm,0.4s,baz=288,slow=23,SNR=26						
PMG	**Port Moresby**	**6.44**	**233**	P	**Pn**	**17 28 24.5**	**+1.9**
	0.9nm,0.3s,baz=27,slow=14,SNR=2.3						
PMG				S	**Sn**	**17 29 33.5**	**-1.4**
	3.6nm,0.3s,baz=155,slow=17,SNR=1.2						
	14nm,0.9s						
WRA	**Warramunga Arr**	**22.64**	**229**	P	**P**	**17 31 47.2**	**-1.2**
	1.3nm,0.6s,baz=54,slow=9.9,SNR=22						
	1.3nm,0.6s						
ASAR	**Alice Springs**	**25.32**	**223**	P	**P**	**17 32 13.1**	**-0.8**
	0.4nm,0.4s,baz=57,slow=9.1,SNR=27						
	0.4nm,0.4s						
STKA	**Stephens Creek**	**28.07**	**200**	P	**P**	**17 32 39.3**	**+0.8**
	2.0nm,0.8s,baz=336,slow=18,SNR=3.6						
	2.0nm,0.8s						
ILAR	**Eielson Array**	**83.01**	**22**	P	**P**	**17 39 11.2**	**-0.4**
	0.3nm,0.5s,baz=244,slow=6.1,SNR=4.8						
	0.3nm,0.5s						
TORD	**Torodi Ar. Bea**	**150.14**	**287**	PKPbc	**PKPbc**	**17 46 37.3**	**-1.1**
	0.3nm,0.4s,baz=85,slow=1.6,SNR=3.1						

*TEH **16** 17:32:10.6,36°.42N×51°.81E,h9km,ML3.5*
*AZER **16** 17:32:14.6±0.1,36°.78N×51°.41E,h12km,Error ellipse: s-maj=2.4km s-min=1.2km az=21.0*
ISC 16 17:32:11.4±0.8,36°.44N±0°.03×51°.79E±0°.03,h10km,n71,
σ1s32/94,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPRN	**Peran**	**0.49**	**113**	*e*Pg	**Pg**	**17 32 20.4**	**-0.5**
IPRN				*e*Sg	**Sg**	**17 32 27.4**	**0.0**
IPRN				*e*		17 32 28.8	
	comp=Z,81μm,0.2s						
TEHA	**Amirabad Tehra**	**0.76**	**205**	*e*Pg	**Pg**	**17 32 25.8**	**-0.3**
TEH	**Tehran**	**0.77**	**205**	*e*Pg	**Pg**	**17 32 25.8**	**-0.5**
TEH				*e*		17 32 36.6	
	comp=Z,38μm,0.3s						
DAMV	**Damavand**	**0.82**	**169**	*e*Pg	**Pg**	**17 32 26.7**	**-0.5**
IDMV	**Damavand**	**0.88**	**167**	*e*Pg	**Pg**	**17 32 27.6**	**-0.8**
IDMV				*e*Sg	**Sg**	**17 32 39.7**	**-0.2**
IDMV				*e*		17 32 40.0	
	comp=Z,23μm,0.7s						
QALM	**Alamut, Qazvin**	**0.92**	**270**	*e*Pg	**Pg**	**17 32 28.9**	**-0.3**
QALM				*e*		17 32 44.1	
	comp=Z,39μm,0.1s						
IHSB	**Hasanabad**	**1.08**	**203**	*e*Pg	**Pg**	**17 32 31.6**	**-0.6**
IHSB				*e*		17 32 34.9	
	comp=Z,12μm,0.2s						
IFIR	**Firoozkooh**	**1.11**	**135**	*e*Pg	**Pg**	**17 32 31.7**	**-1.2**
IMHD	**Mahdasht**	**1.18**	**231**	*e*Pg	**Pb**	**17 32 33.8**	**-0.1**
IMHD				*e*		17 32 36.5	
	comp=Z,13μm,0.3s						
IMHD				*e*Sg	**Sn**	**17 32 50.6**	**+0.4**
IGZV	**Ghazvin**	**1.27**	**268**	*e*Pg	**Pg**	**17 32 35.9**	**+0.1**
ISHM	**Shahmirzad**	**1.37**	**117**	*e*Pg	**Pn**	**17 32 36.7**	**-0.2**
ISHM				*e*		17 33 02.3	
	comp=Z,8μm,0.3s						
ILAS	**Lasjerd**	**1.42**	**138**	*e*Pg	**Pn**	**17 32 37.6**	**+0.1**
ILAS				*e*		17 32 58.3	
	comp=Z,5μm,0.3s						
IVRN	**Varamin**	**1.44**	**182**	*e*Pg	**Pn**	**17 32 37.8**	**+0.2**
IVRN				*e*		17 32 59.7	
	comp=Z,13μm,0.4s						
QCNT	**Qazvin**	**1.44**	**265**	*e*Pg	**Pn**	**17 32 37.7**	**0.0**
LHJ2	**Lahijan - Gila**	**1.56**	**298**	*e*Pg	**Pb**	**17 32 40.7**	**+0.2**
JIR1	**Jirandeh**	**1.62**	**280**	*e*Pn	**Pb**	**17 32 41.5**	**0.0**
JIR1				*e*		17 33 09.9	
	comp=Z,20μm,0.3s						
IGLO	**Ghaloghah**	**1.65**	**87**	*e*Pg	**Pn**	**17 32 40.8**	**+0.1**
IGLO				*e*		17 33 16.0	
	comp=Z,9μm,0.7s						
IQOM	**Qom**	**1.69**	**200**	*e*Pg	**Pb**	**17 32 42.4**	**-0.4**
IQOM				*e*		17 33 06.5	
	comp=Z,11μm,0.3s						
IRAZ	**Razeghan**	**1.83**	**236**	*e*Pn	**Pb**	**17 32 44.7**	**-0.4**
IANJ	**Anjilo**	**1.98**	**119**	*e*Pn	**Pn**	**17 32 47.0**	**+1.8**
GHVR	**GHOM**	**1.99**	**192**	*e*Pn	**Pb**	**17 32 46.9**	**-0.9**
ISFB	**Sefidab**	**2.11**	**170**	*e*Pn	**Pn**	**17 32 48.4**	**+1.5**
ISFB				*e*		17 33 18.9	
	comp=Z,3μm,0.3s						
ASAO	**Ashtian**	**2.37**	**218**	*e*Pn	**Pn**	**17 32 52.4**	**+1.8**
KRSH	**Karshahi**	**2.48**	**173**	*e*Pn	**Pn**	**17 32 53.1**	**+1.1**
KRSH				*e*		17 33 28.9	
	comp=Z,19μm,0.4s						
ZNJK	**Zanjan**	**2.51**	**276**	*e*Pn	**Pn**	**17 32 54.5**	**+2.0**
HAGD	**Aghdareh**	**2.69**	**234**	*e*Pn	**Pn**	**17 32 56.0**	**+1.0**
HAGD				*e*		17 33 38.8	
	comp=Z,2μm,0.4s						
QAMS	**Qamsar**	**2.71**	**187**	*e*Pn	**Pn**	**17 32 56.4**	**+1.1**
QAMS				*e*		17 33 38.0	
	comp=Z,4μm,0.5s						
IMND	**Minoodasht**	**3.02**	**73**	*e*Pn	**Pn**	**17 33 00.4**	**+1.1**
KHMZ	**Khomeyn**	**3.08**	**210**	*e*Pn	**Pn**	**17 33 02.3**	**+1.9**
IKLH	**Kolahrood**	**3.12**	**183**	*e*Pn	**Pn**	**17 33 02.6**	**+1.7**
IKLH				*e*		17 33 48.8	
	comp=Z,3μm,0.4s						
ASTR	**Astara**	**3.19**	**313**	P	**Pn**	**17 33 01.6**	**0.0**
ASTR				S	**Sn**	**17 33 37.7**	**-2.0**
LKRN	**Lenkeran, Azer**	**3.29**	**314**	P	**Pn**	**17 33 03.4**	**+0.3**
LKRN				S	**Sn**	**17 33 40.0**	**-2.3**
SHRO	**Shahrood**	**3.44**	**96**	*e*Pn	**Pn**	**17 33 08.1**	**+2.8**
LRK	**Lerik**	**3.52**	**310**	P	**Pn**	**17 33 07.0**	**+0.7**
	SNR=8.6						
LRK				S	**Sn**	**17 33 46.4**	**-1.6**
IZEF	**Zefreh**	**3.56**	**173**	*e*Pn	**Pn**	**17 33 08.2**	**+1.2**
ANAR	**Anarak**	**3.61**	**153**	*e*Pn	**Pn**	**17 33 09.3**	**+1.7**
MRVT	**Maraveh tapeh**	**3.65**	**69**	*e*Pn	**Pn**	**17 33 08.7**	**+0.6**
NASN	**Na'in**	**3.73**	**167**	*e*Pn	**Pn**	**17 33 10.7**	**+1.4**
YRD	**Yardimli**	**3.75**	**312**	P	**Pn**	**17 33 09.5**	**0.0**
	SNR=12						
YRD				S	**Sn**	**17 33 52.2**	**-1.6**
GLBA	**Clilabad**	**3.88**	**317**	P	**Pn**	**17 33 11.8**	**+0.7**
	SNR=2.8						
GLBA				S	**Sn**	**17 33 55.8**	**-0.9**
GRMI	**Germi**	**3.89**	**309**	*e*Pn	**Pn**	**17 33 12.3**	**+0.9**
IBST	**Bostanabad**	**4.11**	**289**	*e*Pn	**Pn**	**17 33 16.6**	**+2.0**
ALIB	**Äli-Bayra**	**4.14**	**329**	P	**Pn**	**17 33 16.1**	**+1.4**
ALIB				S	**Sn**	**17 34 05.8**	**+2.6**
IRAM	**Ramesheh**	**4.64**	**174**	*e*Pn	**Pn**	**17 33 22.7**	**+0.9**
YZKH	**Yazd**	**4.66**	**149**	*e*Pn	**Pn**	**17 33 23.3**	**+1.4**
TNSJ	**Nastanj**	**4.66**	**121**	*e*Pn	**Pn**	**17 33 23.8**	**+1.9**
GBS	**Qobustan**	**4.66**	**332**	S	**Sn**	**17 34 18.2**	**+2.1**
BJRD	**Bojnurd**	**4.67**	**73**	*e*Pn	**Pn**	**17 33 23.2**	**+1.1**
BLQ	**Beylaqan**	**4.68**	**316**	P	**Pn**	**17 33 22.5**	**+0.5**
BLQ				S	**Sn**	**17 34 15.8**	**-0.6**
SBZV	**Sabzevar**	**4.70**	**89**	*e*Pn	**Pn**	**17 33 24.9**	**+2.3**
IDHR	**Dehrash**	**4.73**	**250**	*e*Pn	**Pn**	**17 33 24.2**	**+1.2**
ZRD	**Zardab**	**5.01**	**321**	S	**Sn**	**17 34 24.5**	**-0.1**
PQL	**Pirkuli**	**5.01**	**331**	P	**Pn**	**17 33 28.1**	**+1.3**
	SNR=6.2						
PQL				S	**Sn**	**17 34 25.0**	**+0.1**
SIZA	**Siyzn**	**5.15**	**335**	P	**Pn**	**17 33 30.8**	**+2.1**
	SNR=4.7						
SIZA				S	**Sn**	**17 34 28.8**	**+0.5**
TABS	**Tabas**	**5.18**	**121**	*e*Pn	**Pn**	**17 33 31.2**	**+2.0**
IML	**Ismayilli**	**5.18**	**328**	P	**Pn**	**17 33 29.7**	**+0.6**
IML				S	**Sn**	**17 34 27.5**	**-1.5**
AGDM	**Agdam**	**5.20**	**316**	S	**Sn**	**17 34 29.8**	**+0.6**
ORD	**Ordubad**	**5.22**	**300**	P	**Pn**	**17 33 31.6**	**+1.9**
ORD				S	**Sn**	**17 34 28.5**	**-1.5**
TPRV	**Parvadeh(Tabas**	**5.28**	**129**	*e*Pn	**Pn**	**17 33 32.5**	**+2.1**
QBL	**Gabala**	**5.46**	**327**	P	**Pn**	**17 33 33.4**	**+0.5**
QBL				S	**Sn**	**17 34 34.1**	**-1.7**
XNQ	**Khinaliq**	**5.52**	**330**	P	**Pn**	**17 33 35.0**	**+1.1**
XNQ				S	**Sn**	**17 34 37.3**	**-0.2**
QUBA	**Quba, Azerbaij**	**5.54**	**333**	P	**Pn**	**17 33 35.5**	**+1.5**
	SNR=3.5						
QUBA				S	**Sn**	**17 34 37.9**	**+0.1**
SBZ	**Shahbuz**	**5.75**	**303**	P	**Pn**	**17 33 37.5**	**+0.6**
SBZ				S	**Sn**	**17 34 41.3**	**-1.7**
QSAR	**Qusar**	**5.77**	**333**	P	**Pn**	**17 33 38.3**	**+1.2**
QSAR				S	**Sn**	**17 34 43.1**	**-0.2**
SEKA	**Sheki**	**5.96**	**324**	P	**Pn**	**17 33 40.7**	**+0.9**
	SNR=4.2						
SEKA				S	**Sn**	**17 34 46.2**	**-1.9**
GANJ	**Ganja**	**6.00**	**316**	P	**Pn**	**17 33 41.1**	**+0.8**
	SNR=3.3						
GANJ				S	**Sn**	**17 34 46.7**	**-2.3**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDB	**GEDABAY**	**6.37**	**314**	P	**Pn**	**17 33 46.4**	**+0.8**
	SNR=6.5						
GDB				S	**Sn**	**17 34 56.8**	**-1.7**
ZKTA	**Zakatala**	**6.57**	**324**	P	**Pn**	**17 33 49.4**	**+1.4**
ZKTA				S	**Sn**	**17 35 00.8**	**-2.2**
IKOO	**Kooshah**	**7.18**	**122**	*e*Pn	**Pn**	**17 33 58.5**	**+1.8**
SHRT	**Shahrakht**	**7.51**	**109**	*e*Pn	**Pn**	**17 34 02.5**	**+1.4**
BSRN	**Basiran**	**7.54**	**124**	*e*Pn	**Pn**	**17 34 03.8**	**+2.2**

IDC 16 17:36:22.4±2.0,9°.21S×124°.59E,h0km,mb3.5/1,
mbtmp3.1/3,ML2.7/2,Error ellipse: s-maj=39.0km
s-min=25.2km az=115.0,Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**1.34**	**223**	Pn	Pg	17 36 48.3	+0.1
	1.4nm,0.3s,baz=45,slow=5.7,SNR=1.6						
BATI				Sn	Sn	17 37 08.1	+1.0
	8.5nm,0.3s,baz=293,slow=22,SNR=9.7						
WRA	**Warramunga Arr**	**14.23**	**140**	Pn	Pn	17 39 45.2	-0.2
	baz=315,slow=13,SNR=1.3						
	0.1nm,0.6s						
ASAR	**Alice Springs**	**16.91**	**149**	Pn	Pn	17 40 21.0	+0.4
	baz=324,slow=12,SNR=2.4						
	0.2nm,0.7s						
SONM	**Songino Array**	**59.05**	**346**	P	P	17 46 24.3	0.0
	0.2nm,0.4s,baz=148,slow=8.5,SNR=1.4						
	0.2nm,0.4s						

IDC 16 17:38:00.0±1.4,12°.19N×144°.15E,h0km,mb3.4/4,
mbtmp3.4/4,MS3.4/1,Error ellipse: s-maj=49.3km
s-min=18.9km az=109.0,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.56**	**26**	Pn	Pb	17 38 29.5	-0.3
	35nm,0.3s,baz=18,slow=7.0,SNR=41						
GUMO				Sn	Sn	17 38 49.9	-0.1
	48nm,0.3s,baz=315,slow=6.1,SNR=8.4						
H11S3	**WAKE ISLAND Hy**	**22.61**	**71**	T	T	18 06 32.7	
	baz=254,slow=74,SNR=4.3						
H11S1	**WAKE ISLAND Hy**	**22.62**	**71**	T	T	18 06 30.1	
	baz=254						
H11S2	**WAKE ISLAND Hy**	**22.62**	**71**	T	T	18 06 32.3	
	baz=254,slow=74,SNR=3.2						
WRA	**Warramunga Arr**	**33.35**	**197**	P	P	17 44 39.7	-0.4
	0.5nm,0.9s,baz=20,slow=9.2,SNR=1.8						
	0.5nm,0.9s						
ASAR	**Alice Springs**	**37.01**	**196**	P	P	17 45 11.8	+0.1
	0.3nm,0.6s,baz=19,slow=9.5,SNR=4.1						
	0.3nm,0.6s						
YAK	**Yakutsk**	**50.85**	**351**	LR	LR	18 09 51.0	
	comp=Z,32nm,18.8s,baz=269,slow=38						
MKAR	**Makanchi Array**	**62.02**	**317**	P	P	17 48 22.6	+0.3
	0.2nm,0.4s,baz=91,slow=7.4,SNR=2.1						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**65.25**	**320**	P	P	17 48 43.1	-0.4
	0.4nm,0.7s,baz=104,slow=6.2,SNR=3.6						
	0.4nm,0.7s						

*KRNET **16** 17:38:42.5±0.1,39°.27N×71°.60E,h12km,mb3.8*
*IDC **16** 17:38:42.1±1.0,39°.09N×71°.83E,h0km,mb3.6/7,*
mbtmp3.6/14,ML3.1/7,Error ellipse: s-maj=16.7km
s-min=12.1km az=134.0
*SOME **16** 17:38:43.1,39°.35N×71°.82E,h15km*
*NNC **16** 17:38:47.3±2.6,39°.39N×71°.62E,h0km,mb4.0,mpv3.6,*
Error ellipse: s-maj=19.5km s-min=11.4km az=5.0
ISC 16 17:38:41.8±0.7,39°.29N±0°.03×71°.83E±0°.03,h10km,n69,
σ2s18/98,mb3.7/7,19C-17D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**0.19**	**353**	⇓*e*P	**Pb**	**17 38 47.6**	**+1.5**
	baz=36						
DRK				⇓*i*S	**Sb**	**17 38 51.4**	**+2.4**
	baz=36						
BTK	**Batken**	**1.10**	**315**	⇓*i*P	**Pb**	**17 39 01.5**	**-1.4**
	baz=23						
BTK				⇓*i*S	**Sb**	**17 39 14.9**	**-2.4**
	baz=23						
GAR	**Garm**	**1.21**	**257**	⇓*e*P	**Pb**	**17 39 02.2**	**-2.7**
	baz=56						
GAR				⇓*i*S	**Sb**	**17 39 16.1**	**-4.6**
	baz=56						
OHH	**Osh**	**1.44**	**30**	⇑*i*P	**Pg**	**17 39 11.0**	**+1.6**
	baz=35						
OHH				⇑*e*S	**Sg**	**17 39 32.0**	**+4.0**
	baz=35						
CHGR	**Chuyangaron**	**2.18**	**254**	⇑*i*P	**Pb**	**17 39 18.5**	**-2.8**
	baz=53						
CHGR				⇑*i*S	**Sn**	**17 39 43.7**	**-1.5**
	baz=53						
TRKS	**Terek-Say**	**2.30**	**347**	⇓*i*P	**Pb**	**17 39 21.7**	**-1.8**
	baz=52						
TRKS				⇓*e*S	**Sb**	**17 39 50.5**	**-1.5**
	baz=52						
ARK	**Arkit**	**2.51**	**2**	⇑*i*P	**Pb**	**17 39 26.5**	**-0.5**
	baz=6.0						
ARK				⇑*i*S	**Sb**	**17 39 57.9**	**-0.1**
	baz=6.0						
TAS	**Tashkent**	**2.81**	**317**	⇑*e*P	**Pn**	**17 39 28.2**	**+1.4**
	baz=20						
TAS				⇑*e*S	**Sn**	**17 40 01.6**	**+0.9**
	baz=20						
AML	**Almayashu**	**3.17**	**26**	P	**Pb**	**17 39 39.1**	**+0.6**
	SNR=14						
ARLS	**Aral**	**3.19**	**36**	⇑*e*P	**Pb**	**17 39 37.2**	**-1.5**
	baz=38						
ARLS				⇑*e*S	**Sb**	**17 40 16.0**	**-1.8**
	baz=38						
CHM	**Chimkent**	**3.47**	**332**	*e*P	**Pg**	**17 39 47.0**	**-1.2**
	93nm,0.3s						
CHM				*e*S	**Sg**	**17 40 33.2**	**+0.1**
	301nm,0.5s						
UCH	**Uchtor**	**3.57**	**34**	P	**Pb**	**17 39 45.8**	**+0.5**
	SNR=23						
UCH	**Uchtor**	**3.57**	**34**	⇑*i*P	**Pb**	**17 39 42.3**	**-3.0**
	baz=36						
UCH				⇑*e*S	**Sb**	**17 40 25.4**	**-3.5**
	baz=36						
MRKS	**Merke**	**3.61**	**17**	*e*P	**Pg**	**17 39 48.9**	**-2.1**
	8.2nm,0.4s						
MRKS				*e*S	**Sg**	**17 40 35.7**	**-2.0**
	38nm,0.3s						
MRKS	**Merke**	**3.61**	**17**	Pg	**Pg**	**17 39 49.3**	**-1.6**
	11nm,0.6s						
MRKS				Lg	Lg	17 40 35.0	
	41nm,0.7s						
DZA	**Taraz**	**3.62**	**354**	*e*P	**Pb**	**17 39 47.4**	**+1.5**
	37nm,0.2s						
DZA				*e*S	**Sb**	**17 40 32.8**	**+3.0**
	254nm,0.3s						
EKS2	**Erkin-Say**	**3.68**	**23**	⇑*e*P	**Pb**	**17 39 43.1**	**-3.8**
	baz=25						
EKS2				⇑*e*S	**Sn**	**17 40 26.6**	**+4.3**
	baz=25						
AAK	**Ala-Archa**	**3.91**	**30**	Pn	**Pb**	**17 39 49.0**	**-1.8**
	5.3nm,0.3s,baz=192,slow=7.2,SNR=7.2						
AAK				Sn	**Sb**	**17 40 40.4**	**+2.1**
	2.6nm,0.3s,baz=338,slow=22,SNR=11						
AAK				Lg	Lg	17 40 50.0	
	8.4nm,0.3s,baz=144,slow=9.5,SNR=8.9						
	10nm,0.4s						
AAK	**Ala-Archa**	**3.91**	**30**	⇓*e*P	Pb	17 39 46.6	-4.2
	baz=32						
AAK				⇓*e*S	**Sb**	**17 40 32.9**	**-5.3**
	baz=32						
KK31	**Karatay Array**	**3.94**	**346**	⇓Pn	Pb	17 39 46.8	-4.5
	12nm,0.5s,baz=160,slow=11,SNR=152						
KK31				⇑Sn	**Sb**	**17 40 34.8**	**-4.2**
	6.5nm,0.3s,baz=178,slow=25,SNR=4.4						
KK31				⇓Lg	Lg	17 40 46.2	
	8.0nm,0.3s,baz=161,slow=32,SNR=4.4						
BRLS	**Borolday**	**4.03**	**339**	*e*P	**Pb**	**17 39 53.8**	**+1.0**
	6.3nm,0.6s						
BRLS				*e*S	**Sb**	**17 40 44.0**	**+2.4**
	36nm,0.4s						
KBK	**Karagaybulak**	**4.11**	**34**	P	**Pb**	**17 39 53.4**	**-0.9**
	SNR=11						
CHMS	**Chumysh**	**4.31**	**30**	P	**Pb**	**17 39 54.5**	**-3.1**
	SNR=19						
CHMS	**Chumysh**	**4.31**	**30**	⇓Pn	**Pb**	**17 39 55.1**	**-2.6**
	22nm,0.9s						
CHMS				⇑Sn	**Sb**	**17 40 48.7**	**-1.1**
	35nm,0.6s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USP	**Ospenovka**	**4.45**	**26**	P	**Pb**	**17 39 56.1**	**-4.0**
	SNR=19						
ULHL	**Ulahol**	**4.46**	**47**	P	**Pb**	**17 39 57.5**	**-2.9**
	SNR=7.6						
TKM2	**Tokmak 2**	**4.61**	**37**	P	**Pb**	**17 39 59.5**	**-3.3**
	SNR=9.1						
TKM2	**Tokmak 2**	**4.61**	**37**	⇑Pn	**Pb**	**17 40 00.9**	**-2.0**
	3.6nm,0.5s						
TKM2				⇑Pg	**Pg**	**17 40 12.9**	**+2.8**
	7.0nm,0.5s						
TKM2				⇓Sn	**Sb**	**17 40 57.6**	**-1.0**
	27nm,0.7s						
TKM2				⇓Lg	Lg	17 41 17.7	
	20nm,0.7s						
DGS	**Degeres**	**4.94**	**36**	*e*P	**Pg**	**17 40 15.2**	**-1.3**
	6.8nm,0.5s						
DGS				*e*S	**Sg**	**17 41 21.9**	**+1.5**
	22nm,0.7s						
DGS	**Degeres**	**4.94**	**36**	Pg	**Pg**	**17 40 16.4**	**0.0**
	6.6nm,0.7s						
DGS				Lg	Lg	17 41 21.8	
	27nm,0.7s						
KRBS	**Karabastau**	**5.26**	**32**	*e*P	**Pg**	**17 40 21.1**	**-1.5**
	1.5nm,0.3s						
KRBS				*e*S	**Sg**	**17 41 30.9**	**+0.1**
	13nm,0.6s						
KRBS	**Karabastau**	**5.26**	**32**	Pg	**Pg**	**17 40 22.0**	**-0.6**
	2.8nm,0.6s						
KRBS				Lg	Lg	17 41 30.9	
	15nm,0.8s						
TNSS	**Tian-Shan**	**5.38**	**44**	*e*P	**Pg**	**17 40 24.0**	**-0.8**
	3.8nm,0.4s						
TNSS				*e*S	**Sg**	**17 41 36.6**	**+2.2**
	7.9nm,0.8s						
TNSS	**Tian-Shan**	**5.38**	**44**	Pg	**Pg**	**17 40 25.1**	**+0.3**
	3.8nm,0.4s						
TNSS				Lg	Lg	17 41 36.2	
	7.9nm,0.8s						
KOTS	**Kotyrbulak**	**5.60**	**44**	*e*P	**Pg**	**17 40 27.8**	**-1.3**
	6.3nm,0.7s						
KOTS				*e*S	**Sg**	**17 41 43.4**	**+1.8**
	41nm,0.9s						
KOTS	**Kotyrbulak**	**5.60**	**44**	Pg	**Pg**	**17 40 29.5**	**+0.4**
	6.3nm,0.7s						
KOTS				Lg	Lg	17 41 44.0	
	41nm,0.9s						
KUU	**Kurty**	**5.71**	**35**	*e*P	Pg	17 40 26.9	-4.1
	2.3nm,0.6s						
KUU				*e*S	**Sg**	**17 41 42.6**	**-2.3**
	17nm,0.5s						
KUU	**Kurty**	**5.71**	**35**	Pg	**Pg**	**17 40 28.9**	**-2.1**
	2.3nm,0.5s						
KUU				Lg	Lg	17 41 42.6	
	18nm,1.2s						
KTBS	**Karatobe**	**5.73**	**38**	*e*P	**Pg**	**17 40 28.7**	**-2.7**
	3.3nm,0.7s						
KTBS				*e*S	**Sg**	**17 41 45.2**	**-0.4**
	22nm,0.4s						
KTBS	**Karatobe**	**5.73**	**38**	Pg	**Pg**	**17 40 29.9**	**-1.6**
	2.6nm,0.5s						
KTBS				Lg	Lg	17 41 45.1	
	22nm,0.4s						
BTLS	**Baital**	**5.98**	**15**	*e*P	**Pg**	**17 40 32.5**	**-3.8**
	1.3nm,0.3s						
BTLS				*e*S	**Sg**	**17 41 52.0**	**-1.6**
	7.7nm,0.8s						
BTLS	**Baital**	**5.98**	**15**	Pg	**Pg**	**17 40 34.3**	**-2.0**
	1.8nm,0.3s						
BTLS				Lg	Lg	17 41 52.0	
	7.7nm,0.8s						
CHKK	**Chushkaly**	**5.98**	**39**	*e*P	**Pg**	**17 40 34.0**	**-2.2**
	1.7nm,0.4s						
CHKK				*e*S	**Sg**	**17 41 53.8**	**+0.1**
	14nm,0.5s						
CHKK	**Chushkaly**	**5.98**	**39**	Pg	**Pg**	**17 40 35.7**	**-0.5**
	1.6nm,0.5s						
CHKK				Lg	Lg	17 41 54.9	
	15nm,1.1s						
SATY	**Saty**	**6.23**	**51**	*e*P	**Pg**	**17 40 39.7**	**-1.3**
	1.7nm,0.3s						
SATY				*e*S	**Sg**	**17 42 03.7**	**+2.0**
	12nm,0.5s						
SATY	**Saty**	**6.23**	**51**	Pg	**Pg**	**17 40 40.8**	**-0.2**
	1.4nm,0.3s						
SATY				Lg	Lg	17 42 02.9	
	12nm,1.6s						
KURS	**Kuram**	**6.35**	**47**	*e*P	**Pg**	**17 40 41.2**	**-2.1**
	5.2nm,0.6s						
KURS				*e*S	**Sg**	**17 42 06.9**	**+1.3**
	11nm,0.9s						
KURS	**Kuram**	**6.35**	**47**	Pg	**Pg**	**17 40 42.8**	**-0.5**
	3.6nm,0.5s						
KURS				Lg	Lg	17 42 06.9	
	11nm,0.9s						
KPKS	**Kokpek**	**6.63**	**49**	*e*P	**Pg**	**17 40 46.5**	**-2.2**
	2.9nm,0.8s						
KPKS				*e*S	**Sg**	**17 42 14.6**	**+0.1**
	16nm,0.9s						
KPKS	**Kokpek**	**6.63**	**49**	Pg	**Pg**	**17 40 46.8**	**-1.9**
	5.1nm,0.5s						
KPKS				Lg	Lg	17 42 13.6	
	16nm,0.9s						
UZB	**Uzynbulak**	**6.65**	**52**	*e*P	**Pg**	**17 40 46.5**	**-2.6**
	0.9nm,0.4s						
UZB				*e*S	**Sg**	**17 42 14.4**	**-0.8**
	9.8nm,1.5s						
UZB	**Uzynbulak**	**6.65**	**52**	Pg	**Pg**	**17 40 47.8**	**-1.3**
UZB				Lg	Lg	17 42 15.4	
SHLS	**Shalkode**	**6.93**	**54**	*e*P	**Pg**	**17 40 57.1**	**+2.6**
	1.6nm,0.3s						
SHLS				*e*S	Sg	17 42 33.8	+10
	9.1nm,0.9s		

0.3nm,0.7s,baz=324,slow=4.7,SNR=5.9
0.3nm,0.7s

IDC 16 17:40:27.3±1.7, 25°18.87N×105°36.36E, h0km, mb3.2/3, mbtmp3.2/4, ML3.5/1, Error ellipse: s-maj=45.5km s-min=28.7km az=100.0, Southeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**9.47**	**220**	Pn	Pn	17 42 45.8	+0.8
	0.1nm,0.3s,baz=20,slow=16,SNR=6.0						
CMAR				Sn	Sn	17 44 31.6	-0.7
	baz=20,slow=24,SNR=2.6						
	0.6nm,0.8s						
SONM	**Songino Array**	**21.94**	**2**	P	P	17 45 22.5	-0.1
	0.2nm,0.3s,baz=170,slow=9.5,SNR=2.1						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**53.53**	**145**	P	P	17 49 50.2	+0.2
	0.5nm,0.8s,baz=330,slow=8.2,SNR=6.7						
	0.5nm,0.8s						
ASAR	**Alice Springs**	**56.46**	**148**	P	P	17 50 10.8	-0.4
	0.1nm,0.5s,baz=329,slow=6.7,SNR=4.5						
	0.1nm,0.5s						

*IDC **16** 18:07:42.0±0.9, 59°.22S×25°.17W, h0km, mb4.2/6, mbtmp4.3/7, ML4.8/1, MS3.5/4, Error ellipse: s-maj=35.8km s-min=22.1km az=1.0*
*NEIC **16** 18:07:43.6±1.3, 59°.4S±0°.1×25°.1W±0°.1, h10km±1km, mb4.8/41, Error ellipse: s-maj=20.9km s-min=8.1km az=15.0*

ISC 16 18:07:43.4±0.6, 59°.3S±0°.1×25°.12W±0°.09, h10km, n57, σ0s76/52, mb4.8/24, MS3.5/4, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ORCD	**Orcadas**	**9.93**	**253**	Pn	**Pn**	**18 10 05.8**	**-0.1**
VNA1	**Neumayer--Stat**	**13.39**	**155**	P	**Pn**	**18 10 53.2**	**+0.1**
VNA1				S	Sn	18 13 06.2	-15
VNA3	**Neumayer Olymp**	**13.57**	**158**	P	**Pn**	**18 10 55.2**	**-0.5**
VNA3				S	Sn	18 13 08.1	-18
SNAA	**Sanae**	**15.35**	**153**	P	**Pn**	**18 11 19.0**	**-0.7**
SNAA				S	Sn	18 13 54.3	-15
SNAA	**Sanae**	**15.35**	**153**	Pn	**Pn**	**18 11 19.6**	**-0.1**
	3.6nm,0.3s,baz=316,slow=16,SNR=172						
SNAA				Sn	Sn	18 13 55.2	-14
	0.5nm,0.3s,baz=334,slow=22,SNR=7.5						
	11nm,0.4s						
SNAA	**Sanae**	**15.35**	**153**		**Pn**	**18 11 19.3**	**-0.4**
SNAA					Sn	18 13 55.0	-14
TROLL	**Troll, Antarti**	**16.87**	**150**	P	**Pn**	**18 11 38.9**	**-0.5**
TROLL				S	Sn	18 14 29.3	-17
BELA	**Belgrano 2**	**18.96**	**186**	P	**P**	**18 12 03.8**	**-0.5**
EFI	**East Falkland**	**19.99**	**278**	P	**Pn**	**18 12 18.1**	**+0.7**
EFI				IAmb	IAmb	18 12 19.4	
	comp=Z,72nm,1.1s						
USHA	**Ushuaia**	**23.64**	**262**	P	**P**	**18 12 54.3**	**-0.1**
	comp=Z,10nm,0.4s,baz=152,slow=2.0,SNR=5.9						
	comp=Z,10nm,0.4s						
DSPA	**Despedida**	**23.99**	**264**	P	**P**	**18 12 58.0**	**+0.2**
MG02	**Cerro Sombrero**	**25.09**	**265**	P	**P**	**18 13 07.2**	**-0.6**
MG03	**Isla Dawson**	**25.17**	**262**	P	**P**	**18 13 08.6**	**+0.2**
MG03				IAmb	IAmb	18 13 16.4	
	comp=Z,44nm,1.4s						
GO09	**Cerro Castillo**	**27.54**	**266**	P	**P**	**18 13 28.1**	**-1.8**
GO09				IAmb	IAmb	18 13 39.7	
	comp=Z,37nm,1.4s						
GO08	**Villa O'Higgin**	**29.36**	**270**	P	**P**	**18 13 45.9**	**-0.2**
GO08				IAmb	IAmb	18 13 59.7	
	comp=Z,21nm,1.3s						
QSPA	**South Pole Qui**	**30.97**	**180**	P	**P**	**18 14 00.6**	**+0.2**
PLCA	**Paso Flores**	**33.74**	**283**	P	**P**	**18 14 24.3**	**-0.5**
	comp=Z,3.1nm,1.0s,baz=117,slow=7.3,SNR=7.5						
PLCA				LR	LR	18 26 38.0	
	comp=Z,75nm,18.3s,baz=178,slow=34						
	comp=Z,3.1nm,1.0s						
PLCA	**Paso Flores**	**33.74**	**283**	P	**P**	**18 14 25.1**	**+0.4**
LR04	**Corral**	**35.82**	**281**	P	**P**	**18 14 43.1**	**+0.5**
MAW	**Mawson**	**36.92**	**140**	LR	LR	18 28 37.5	
	comp=Z,40nm,20.9s,baz=83,slow=34						
MAW	**Mawson**	**36.92**	**140**	P	**P**	**18 14 51.5**	**-0.2**
BI05	**Punta Hualpn**	**38.12**	**285**	P	**P**	**18 15 02.6**	**+0.5**
BI05				IAmb	IAmb	18 15 25.5	
	comp=Z,24nm,0.9s						
GO05	**Huala**	**38.87**	**288**	P	**P**	**18 15 08.5**	**-0.1**
GO05				IAmb	IAmb	18 15 16.7	
	comp=Z,30nm,1.4s						
BO04	**La Punta**	**39.05**	**290**	P	**P**	**18 15 10.2**	**0.0**
BO04				IAmb	IAmb	18 15 12.0	
	comp=Z,26nm,1.2s						
MT09	**Talagante**	**39.41**	**290**	P	**P**	**18 15 13.6**	**+0.3**
PEL	**Peldehue**	**39.78**	**291**	P	**P**	**18 15 17.1**	**+0.9**
MT02	**Curacav**	**39.90**	**290**	P	**P**	**18 15 17.4**	**+0.2**
MT02				IAmb	IAmb	18 15 33.9	
	comp=Z,34nm,1.4s						
ROC1	**El Roble**	**40.07**	**290**	P	**P**	**18 15 18.6**	**-0.3**
ROC1				IAmb	IAmb	18 15 23.2	
	comp=Z,10nm,0.6s						
VA06	**Catapilco**	**40.55**	**290**	P	**P**	**18 15 23.2**	**+0.7**
CO02	**Combarbal**	**41.52**	**292**	P	**P**	**18 15 31.5**	**+0.7**
CO02				IAmb	IAmb	18 15 35.8	
	comp=Z,23nm,1.0s						
CO03	**El Pedregal**	**41.68**	**293**	P	**P**	**18 15 33.4**	**+1.4**
CO03				IAmb	IAmb	18 15 54.0	
	comp=Z,30nm,1.4s						
CO01	**Juntas del Tor**	**42.12**	**294**	P	**P**	**18 15 35.9**	**+0.1**
CO06	**Fray Jorge**	**42.27**	**292**	P	**P**	**18 15 37.0**	**+0.4**
GO04	**Tololo Observa**	**42.29**	**293**	P	**P**	**18 15 36.5**	**-0.7**
LCO	**Las Campanas**	**43.22**	**294**	P	**P**	**18 15 44.1**	**-0.6**
LCO				IAmb	IAmb	18 15 46.8	
	comp=Z,19nm,1.4s						
AC02	**Maricunga**	**44.33**	**297**	P	**P**	**18 15 54.4**	**+0.4**
AC02				IAmb	IAmb	18 16 16.1	
	comp=Z,14nm,1.4s						
BOSA	**Boshof**	**45.83**	**71**	P	**P**	**18 16 04.5**	**-0.9**
	comp=Z,3.3nm,0.9s,baz=192,slow=6.0,SNR=4.0						
	comp=Z,3.3nm,0.9s						
BOSA	**Boshof**	**45.83**	**71**	IAmb	IAmb	18 16 12.7	
	comp=Z,20nm,1.5s						
GO02	**Mina Guanaco**	**45.98**	**298**	P	**P**	**18 16 07.7**	**+0.8**
GO02				IAmb	IAmb	18 16 28.8	
	comp=Z,17nm,1.2s						
LVC	**Limon Verde**	**47.89**	**300**	P	**P**	**18 16 21.8**	**-0.1**
LVC				IAmb	IAmb	18 16 23.0	
	comp=Z,18nm,1.5s						
PB04	**IPOC Station P**	**48.69**	**299**	P	**P**	**18 16 26.5**	**-1.3**
LBTB	**Lobatse**	**49.02**	**68**	LR	LR	18 33 31.1	
	comp=Z,64nm,18.8s,baz=150,slow=32						
PB07	**IPOC Station P**	**49.10**	**300**	P	**P**	**18 16 30.9**	**0.0**
PB07				IAmb	IAmb	18 16 42.0	
	comp=Z,20nm,1.3s						
PB02	**IPOC Station P**	**49.46**	**300**	P	**P**	**18 16 33.7**	**+0.1**
PB01	**IPOC Station P**	**49.52**	**301**	P	**P**	**18 16 33.6**	**-0.5**
PB01				IAmb	IAmb	18 16 39.0	
	comp=Z,12nm,1.5s						
GO01	**Chusmiza**	**50.60**	**302**	P	**P**	**18 16 42.4**	**-0.3**
PB11	**IPOC Station P**	**50.72**	**301**	P	**P**	**18 16 42.9**	**-0.4**
PB11				IAmb	IAmb	18 16 43.9	
	comp=Z,21nm,1.5s						
PB16	**IPOC Station P**	**51.91**	**302**	P	**P**	**18 16 50.8**	**-2.0**
LPAZ	**La Paz**	**53.15**	**305**	P	**P**	**18 17 01.7**	**-0.2**
	comp=Z,1.2nm,0.5s,baz=90,slow=10,SNR=6.0						
	comp=Z,1.2nm,0.5s						
LPAZ	**La Paz**	**53.15**	**305**	IAmb	IAmb	18 17 02.3	
	comp=Z,1.5nm,0.7s						
MBAR	**Mbarara**	**72.71**	**60**	LR	LR	18 48 27.5	
	comp=Z,38nm,18.1s,baz=120,slow=34						
TOA0	**Torodi Ar. Sit**	**75.38**	**27**	P	**P**	**18 19 27.8**	**+1.0**
TOA0				IAmb	IAmb	18 19 54.9	
	comp=Z,8.8nm,1.4s						
TORD	**Torodi Ar. Bea**	**75.38**	**27**	P	**P**	**18 19 27.8**	**+0.9**
	comp=Z,1.1nm,0.5s,baz=203,slow=6.4,SNR=15						
	comp=Z,1.1nm,0.5s						
TORD	**Torodi Ar. Bea**	**75.38**	**27**	IAmb	IAmb	18 19 28.6	
	comp=Z,3.8nm,1.1s						
ASAR	**Alice Springs**	**95.57**	**161**	P	**P**	**18 21 11.1**	**+2.4**
	comp=Z,0.3nm,0.9s,baz=185,slow=3.9,SNR=1.5						
	comp=Z,0.3nm,0.9s						
SONM	**Songino Array**	**149.70**	**90**	PKPbc	**PKPbc**	**18 27 31.7**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=198,slow=3.1,SNR=4.6						
ILAR	**Eielson Array**	**153.02**	**307**	PKPbc	**PKPbc**	**18 27 38.2**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=150,slow=2.1,SNR=5.7						
ILAR				PKPab	**PKPab**	**18 27 50.8**	**-0.1**

comp=Z,0.7nm,0.8s,baz=109,slow=1.5,SNR=5.3

*IDC **16** 18:28:01.1±3.8, 31°.63S×70°.59W, h132km±37km, mb3.2/1, mbtmp3.7/4, Error ellipse: s-maj=108.5km s-min=29.9km az=99.0*
*GUC **16** 18:28:01.7±0.7, 31°.63S×70°.30W, h135km±4km, ML3.8*

ISC 16 18:28:01.3±0.9, 31°.62S±0°.03×70°.37W±0°.09, h136km±8km, n32, σ0s81/50, 6C-10D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO02	**Combarbal**	**0.68**	**308**	*i* P	**Pn**	**18 28 22.6**	**+0.3**
CO02				*i* S	**Sn**	**18 28 38.3**	**0.0**
CO02				IAML		18 28 39.8	
	comp=N,8μm,0.2s						
CO03	**El Pedregal**	**0.83**	**341**	*i* P	**Pn**	**18 28 23.3**	**-0.1**
CO03				*i* S	**Sn**	**18 28 39.4**	**-0.7**
CO03				IAML		18 28 40.3	
	comp=N,3μm,0.3s						
VA03	**San Esteban**	**1.15**	**188**	*i* P	**Pn**	**18 28 26.1**	**-0.1**
VA03				*i* S	**Sn**	**18 28 44.3**	**-1.0**
VA03				IAML		18 28 46.0	
	comp=N,3μm,0.4s						
VA06	**Catapilco**	**1.22**	**220**	*i* P	**Pn**	**18 28 26.9**	**+0.1**
VA06				*i* S	**Sn**	**18 28 46.0**	**-0.4**
VA06				IAML		18 28 48.0	
	comp=E,2μm,0.4s						
CO06	**Fray Jorge**	**1.44**	**311**	*i* P	**Pn**	**18 28 29.9**	**+0.8**
CO06				*i* S	**Sn**	**18 28 50.8**	**+0.4**
CO06				IAML		18 28 57.1	
	comp=E,748nm,0.2s						
ROCH	**El Roble**	**1.45**	**202**	*i* P	**Pn**	**18 28 29.4**	**-0.1**
ROCH				*i* S	**Sn**	**18 28 50.7**	**-0.3**
ROCH				IAML		18 28 51.7	
	comp=E,3μm,0.5s						
GO04	**Tololo Observa**	**1.49**	**345**	*i* P	**Pn**	**18 28 30.1**	**+0.1**
GO04				*i* S	**Sn**	**18 28 51.1**	**-0.8**
PEL	**Peldehue**	**1.54**	**190**	*i* P	**Pn**	**18 28 30.1**	**-0.2**
PEL				*i* S	**Sn**	**18 28 51.5**	**-1.0**
PEL				IAML		18 28 54.6	
	comp=N,664nm,0.1s						
CO01	**Juntas del Tor**	**1.66**	**8**	*i* P	**Pn**	**18 28 32.2**	**+0.3**
CO01				*i* S	**Sn**	**18 28 54.2**	**-1.0**
CO01				IAML		18 28 56.3	
	comp=E,415nm,0.7s						
FCH	**Farellones**	**1.70**	**178**	*i* P	**Pn**	**18 28 32.6**	**+0.2**
FCH				*i* S	**Sn**	**18 28 56.3**	**+0.1**
FCH				IAML		18 28 58.6	
	comp=N,486nm,0.4s						
MT02	**Curacav**	**1.76**	**202**	*i* P	**Pn**	**18 28 32.6**	**-0.1**
MT02				*i* S	**Sn**	**18 28 56.0**	**-0.8**
MT02				IAML		18 28 57.6	
	comp=E,482nm,0.1s						
VA01	**Torpederas**	**1.77**	**218**	*e* P	**Pn**	**18 28 32.9**	**+0.2**
VA01				*i* S	**Sn**	**18 28 56.4**	**-0.5**
VA01				IAML		18 29 01.4	
	comp=N,925nm,0.5s						
MT05	**Renca**	**1.79**	**190**	*i* P	**Pn**	**18 28 33.1**	**0.0**
MT05				*i* S	**Sn**	**18 28 57.0**	**-0.6**
MT05				IAML		18 28 59.9	
	comp=N,1μm,0.2s						
CO05	**La Serena**	**1.86**	**336**	*e* P	**Pn**	**18 28 34.0**	**+0.2**
CO05				*i* S	**Sn**	**18 28 58.1**	**-0.7**
CO05				IAML		18 28 59.4	
	comp=E,2μm,0.3s						
MT03	**Universidad Ad**	**1.87**	**184**	*i* P	**Pn**	**18 28 34.3**	**+0.2**
MT03				*i* S	**Sn**	**18 28 59.5**	**+0.2**
MT03				IAML		18 29 05.0	
	comp=E,994nm,0.1s						
MT09	**Talagante**	**2.21**	**194**	*i* P	**Pn**	**18 28 37.7**	**-0.5**
MT09				*i* S	**Sn**	**18 29 05.1**	**-1.6**
MT09				IAML		18 29 09.2	
	comp=N,608nm,0.8s						
VA05	**Santo Domingo**	**2.28**	**207**	*e* P	**Pn**	**18 28 38.8**	**-0.2**
VA05				*i* S	**Sn**	**18 29 07.4**	**-0.6**
VA05				IAML		18 29 14.2	
	comp=E,716nm,0.6s						
BO04	**La Punta**	**2.37**	**185**	*i* P	**Pn**	**18 28 39.9**	**-0.2**
BO04				*i* S	**Sn**	**18 29 08.7**	**-1.3**
BO04				IAML		18 29 11.7	
	comp=N,364nm,0.3s						
LCO	**Las Campanas**	**2.62**	**354**	*e* P	**Pn**	**18 28 43.5**	**0.0**
LCO				*i* S	**Sn**	**18 29 14.2**	**-1.8**
BO01	**Tunca**	**2.83**	**192**	*i* P	**Pn**	**18 28 45.2**	**-0.6**
BO01				IAML		18 29 20.0	
	comp=N,145nm,0.2s						
BO03	**Pichilemu**	**3.16**	**205**	*e* P	**Pn**	**18 28 49.0**	**-1.1**
AC04	**Llanos de Chal**	**3.46**	**350**	*i* P	**Pn**	**18 28 54.3**	**+0.2**
AC04				*i* S	**Sn**	**18 29 32.6**	**-2.4**
GO05	**Huala**	**3.62**	**201**	*e* P	**Pn**	**18 28 55.4**	**-0.8**
GO05				*i* S	**Sn**	**18 29 36.8**	**-1.9**
AC06	**Mina Casimiro**	**4.25**	**0**	*e* P	**Pn**	**18 29 04.0**	**-0.6**
H03N1	**Juan Fernandez**	**7.44**	**254**	T	T	18 36 49.6	
	baz=86,slow=74,SNR=114						
H03N3	**Juan Fernandez**	**7.45**	**254**	T	T	18 36 43.2	
	baz=86,slow=74,SNR=70						
H03N2	**Juan Fernandez**	**7.46**	**254**	T	T	18 36 48.9	
	baz=86,slow=74,SNR=67						
PLCA	**Paso Flores**	**9.09**	**181**	P	**Pn**	**18 30 09.1**	**-0.3**
	comp=N,0.8nm,0.4s,baz=348,slow=12,SNR=15						
LPAZ	**La Paz**	**15.40**	**8**	P	**P**	**18 31 33.6**	**0.0**
	comp=N,3.0nm,0.8s,baz=185,slow=6.4,SNR=10						
SIV	**San Ignacio**	**17.72**	**31**	P	**P**	**18 31 58.9**	**+0.3**
	comp=N,0.9nm,0.4s,baz=204,slow=12,SNR=4.6						
TORD	**Torodi Ar. Bea**	**82.07**	**69**	P	**P**	**18 40 08.3**	**+1.5**
	comp=N,0.4nm,0.7s,baz=245,slow=6.2,SNR=2.5						
	comp=N,0.4nm,0.7s						
ZALV	**Zalesovo Beam**	**151.47**	**31**	PKPbc	**PKPbc**	**18 47 38.9**	**+0.3**
	comp=N,0.4nm,0.3s,baz=316,slow=4.0,SNR=2.7						

*VAO **16** 18:32:22.9±0.6, 15°.58S×70°.55W, h204km±4km, mb4.1*
*ARE **16** 18:32:22±4.9, 15°.67S±0°.07×70°.5W±0°.1, h238km±5km, Error ellipse: s-maj=0.0km s-min=0.0km az=186.0*
*NEIC **16** 18:32:25.8±2.1, 15°.52S±0°.06×70°.22W±0°.07, h209km±5km, mb4.3/38, ML4.6(ARE), Error ellipse: s-maj=12.0km s-min=6.6km az=53.0*
*IDC **16** 18:32:25.2±0.8, 15°.43S×70°.22W, h207km±7km, mb3.6/11, mbtmp4.3/17, MS2.9/2, Error ellipse: s-maj=17.4km s-min=10.6km az=39.0*

ISC 16 18:32:24.3±0.6, 15°.61S±0°.05×70°.40W±0°.05, h207km±6km, n144, σ1s33/162, mb4.2/22, 5C-1D, Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB18	**Visviri**	**2.16**	**156**	Pn	**Pn**	**18 33 09.0**	**+3.6**
LPAZ	**La Paz**	**2.28**	**107**	P	**Pn**	**18 33 08.6**	**+1.7**
	606nm,0.4s,baz=301,slow=7.2,SNR=1866						
LPAZ				S	**S**	**18 33 39.9**	**+0.4**
	271nm,0.4s,baz=322,slow=14,SNR=16						
LPAZ				LR	LR	18 33 57.6	
	comp=Z,153nm,19.0s,baz=226,slow=42						
LPAZ	**La Paz**	**2.28**	**107**	Pn	**Pn**	**18 33 08.9**	**+2.0**
LPAZ				Sn	**S**	**18 33 39.2**	**-0.3**
LPAZ	**La Paz**	**2.28**	**107**	*i* P	**Pn**	**18 33 08.9**	**+2.0**
LPAZ				*e*S	**S**	**18 33 40.3**	**+0.8**
AP01	**Chacalluta**	**2.75**	**179**	P	**Pn**	**18 33 12.6**	**+1.3**
AP01				Sn	**S**	**18 33 47.5**	**-0.3**
AP01	**Chacalluta**	**2.75**	**179**	*e* P	**Pn**	**18 33 12.3**	**+1.0**
AP01				*e*S	**S**	**18 33 47.8**	**+0.1**
PB16	**IPOC Station P**	**2.84**	**163**		**Pn**	**18 33 15.5**	**+2.5**
PB16				Sn	**S**	**18 33 53.3**	**+2.6**
PB16	**IPOC Station P**	**2.84**	**163**	*i* P	**Pn**	**18 33 15.6**	**+2.5**
PB16				*e*S	**S**	**18 33 52.5**	**+1.8**
PB16				IAML		18 33 57.6	
	comp=E,618nm,0.5s						
PB12	**IPOC Station P**	**2.99**	**179**		**Pn**	**18 33 14.7**	**+0.4**
PB12				Sn	**S**	**18 33 51.5**	**-1.4**
PB12	**IPOC Station P**	**2.99**	**179**	*i* P	**Pn**	**18 33 15.1**	**+0.9**
PB12				*i* S	**S**	**18 33 52.2**	**-0.8**
PB12				IAML		18 33 54.5	
	comp=E,2μm,0.2s						
PB11	**IPOC Station P**	**4.19**	**170**		**Pn**	**18 33 29.4**	**+0.6**
PB11	**IPOC Station P**	**4.19**	**170**	*i* P	**Pn**	**18 33 29.5**	**+0.6**
PB11				*e*S	**S**	**18 34 17.7**	**-1.5**
PB11				IAML		18 34 21.6	
	comp=N,2μm,0.4s						
GO01	**Chusmiza**	**4.20**	**164**		**Pn**	**18 33 30.9**	**+1.7**
GO01	**Chusmiza**	**4.20**	**164**	*i* P	**Pn**	**18 33 30.9**	**+1.7**
GO01				*e*S	**S**	**18 34 20.0**	**+0.2**
GO01				IAML		18 34 25.6	
	comp=E,2μm,0.2s						

TA02	**Huaiquique**	**4.64**	**177**		**Pn**	**18 33 34.2**	**0.0**
TA02	**Huaiquique**	**4.64**	**177**	*e*P	**Pn**	**18 33 34.3**	**0.0**
TA02				*e*S	**S**	**18 34 25.9**	**-3.3**
TA02				IAML		18 34 29.1	
	comp=N,3μm,0.2s						
PB08	**IPOC Station P**	**4.66**	**165**		**Pn**	**18 33 35.9**	**+1.0**
PB08	**IPOC Station P**	**4.66**	**165**	*i* P	**Pn**	**18 33 36.3**	**+1.4**
PB08				*e*S	**S**	**18 34 28.7**	**-1.5**
PB08				IAML		18 34 32.2	
	comp=E,865nm,0.2s						
TA01	**Diego Aracena**	**4.93**	**178**	Pn	**Pn**	**18 33 38.0**	**0.0**
TA01	**Diego Aracena**	**4.93**	**178**	*e*P	**Pn**	**18 33 37.9**	**0.0**
TA01				*e*S	**S**	**18 34 32.0**	**-3.9**
TA01				IAML		18 34 35.3	
	comp=N,2μm,0.3s						
PATCX	**Punta Patache**	**5.19**	**177**		**Pn**	**18 33 40.9**	**-0.4**
PATCX	**Punta Patache**	**5.19**	**177**	*e*P	**Pn**	**18 33 41.0**	**-0.3**
PATCX				*e*S	**S**	**18 34 38.0**	**-3.9**
PATCX				IAML		18 34 46.2	
	comp=E,604nm,0.4s						
PB01	**IPOC Station P**	**5.47**	**171**		**Pn**	**18 33 44.7**	**-0.3**
PB02	**IPOC Station P**	**5.70**	**175**		**Pn**	**18 33 48.1**	**+0.2**
PB07	**IPOC Station P**	**6.10**	**176**		**Pn**	**18 33 53.1**	**0.0**
PB09	**IPOC Station P**	**6.25**	**170**		**Pn**	**18 33 55.2**	**+0.2**
ETMB	**Extrema**	**7.06**	**36**	*e*P	**Pn**	**18 34 05.2**	**-0.2**
PB06	**IPOC Station P**	**7.10**	**174**	Pn	**Pn**	**18 34 05.8**	**-0.2**
LVC	**Limon Verde**	**7.10**	**169**	P	**Pn**	**18 34 07.0**	**+0.8**
	comp=E,95nm,0.3s,baz=357,slow=6.9,SNR=3.6						
LVC				S	**S**	**18 35 23.5**	**-3.7**
	comp=E,66nm,0.3s,baz=252,slow=20,SNR=11						
LVC	**Limon Verde**	**7.10**	**169**	Pn	**Pn**	**18 34 06.4**	**+0.2**
LVC	**Limon Verde**	**7.10**	**169**	*e*P	**Pn**	**18 34 05.7**	**-0.5**
NNA	**Nana**	**7.22**	**299**	P	**Pn**	**18 34 08.2**	**+0.6**
	comp=E,18nm,0.3s,baz=130,slow=12,SNR=8.9						
NNA				S	**S**	**18 35 27.7**	**-1.9**
	comp=E,22nm,0.4s,baz=17,slow=22,SNR=5.5						
NNA	**Nana**	**7.22**	**299**	Pn	**Pn**	**18 34 07.7**	**+0.2**
AF01	**San Pedro de A**	**7.60**	**164**	Pn	**Pn**	**18 34 11.3**	**-1.3**
PB15	**IPOC Station P**	**7.61**	**174**		**Pn**	**18 34 13.2**	**+0.6**
PB10	**IPOC Station P**	**7.86**	**181**		**Pn**	**18 34 15.8**	**0.0**
CZSB	**Cruzeiro do Su**	**8.15**	**344**	*e*P	**Pn**	**18 34 16.2**	**-3.4**
PB14	**IPOC Station P**	**8.97**	**180**	Pn	**Pn**	**18 34 29.9**	**-0.5**
SIV	**San Ignacio**	**8.98**	**94**	P	**Pn**	**18 34 28.7**	**-1.7**
	comp=E,7.9nm,0.7s,baz=269,slow=15,SNR=29						
GO02	**Mina Guanaco**	**9.53**	**176**		**Pn**	**18 34 38.4**	**+0.7**
SAML	**Samuel**	**9.67**	**48**	Pn	**Pn**	**18 34 37.8**	**-1.5**
VILB	**Vilhena**	**10.23**	**76**	*e*P	**Pn**	**18 34 47.0**	**+0.4**
AC01	**Pan de Azucar**	**10.49**	**181**		**Pn**	**18 34 50.0**	**+0.4**
AC02	**Maricunga**	**11.23**	**174**	Pn	**Pn**	**18 35 01.3**	**+1.6**
ATAH	**Atahualpa**	**11.50**	**316**	P	**Pn**	**18 35 02.6**	**-0.6**
	comp=E,16nm,0.9s,baz=150,slow=16,SNR=4.7						
AC06	**Mina Casimiro**	**11.69**	**180**	P	**Pn**	**18 35 05.9**	**+0.8**
GO03	**Copiap**	**11.93**	**179**	Pn	**Pn**	**18 35 06.8**	**-1.3**
AC04	**Llanos de Chal**	**12.55**	**183**	Pn	**Pn**	**18 35 15.2**	**-0.7**
POCN	**Pocone**	**13.17**	**96**	*e*P	**Pn**	**18 35 24.4**	**+0.6**
LCO	**Las Campanas**	**13.34**	**181**	Pn	**P**	**18 35 27.3**	**-1.3**
CO01	**Juntas del Tor**	**14.30**	**179**	P	**P**	**18 35 39.4**	**+0.1**
GO04	**Tololo Observa**	**14.50**	**181**	P	**P**	**18 35 42.6**	**+1.1**
BOSC	**San Juan Bosco**	**14.73**	**326**	P	**Pn**	**18 35 41.3**	**-1.8**
AQDB	**Aquidauana**	**14.79**	**111**	*e*P	**P**	**18 35 43.9**	**-0.5**
CLDB	**Colider**	**14.97**	**73**	*e*P	**Pn**	**18 35 45.9**	**-0.2**
PP1B	**Ponte de Pedra**	**15.01**	**100**	*e*P	**P**	**18 35 46.6**	**-0.3**
ANTJ	**Antonio Joao (**	**15.03**	**117**	*e*P	**P**	**18 35 47.2**	**0.0**
CO06	**Fray Jorge**	**15.04**	**184**	Pn	**Pn**	**18 35 44.0**	**-2.6**
CO03	**El Pedregal**	**15.16**	**181**	P	**P**	**18 35 49.8**	**+1.2**
CO03				IAmb	IAmb	18 35 57.7	
	comp=Z,16nm,1.2s						
CO02	**Combarbal**	**15.53**	**182**		**Pn**	**18 35 53.0**	**+0.2**
MACA	**Manacapuru-AM**	**15.64**	**39**	*e*P	**Pn**	**18 35 54.1**	**0.0**
CPUP	**Villa Florida**	**16.19**	**133**	P	**Pn**	**18 36 01.2**	**+0.5**
	comp=Z,6.6nm,0.6s,baz=327,slow=9.0,SNR=11						
CPUP	**Villa Florida**	**16.19**	**133**		**Pn**	**18 36 00.2**	**-0.4**
CPUP				IAmb	IAmb	18 36 04.3	
	comp=Z,7.0nm,0.6s						
CPUP	**Villa Florida**	**16.19**	**133**	*e*P	**Pn**	**18 36 00.2**	**-0.4**
PORT	**Chimborazo Vol**	**16.30**	**329**	P	**Pn**	**18 36 03.7**	**+1.0**
NPGB	**Novo Progresso**	**17.02**	**62**	*e*P	**Pn**	**18 36 10.1**	**-0.4**
VA03	**San Esteban**	**17.08**	**180**	P	**P**	**18 36 09.6**	**-0.1**
VA03				IAmb	IAmb	18 36 14.5	
	comp=Z,13nm,0.6s						
MT02	**Curacav**	**17.58**	**182**	P	**Pn**	**18 36 17.0**	**-0.1**
BO04	**La Punta**	**18.30**	**181**	P	**Pn**	**18 36 25.2**	**-0.2**
BO04				IAmb	IAmb	18 36 51.3	
	comp=Z,16nm,1.2s						
BO01	**Tunca**	**18.71**	**182**	P	**

comp=Z,0.7nm,0.5s,baz=136,slow=4.5,SNR=6.2
comp=Z,1.0nm,0.7s
NVAR Mina Array Bea 70.01 322 P **P** **18 43 15.6 +1.7**
YERR Yerington 70.93 322 P **P** **18 43 21.1 +1.7**
YERR IAmb IAmb 18 43 21.8
comp=Z,4.5nm,0.6s
PAHR Pah Rah Range 71.48 322 P **P** **18 43 24.7 +2.1**
PAHR IAmb IAmb 18 43 25.5
comp=Z,6.1nm,0.9s
MFID Camas Ranch 71.96 327 P **P** **18 43 26.9 +1.5**
MFID IAmb IAmb 18 43 28.0
comp=Z,3.9nm,0.8s
PLID Pearl Lake 73.21 328 P **P** **18 43 32.5 -0.3**
MOD Modoc Plateau 73.42 323 P **P** **18 43 35.1 +1.1**
MOD IAmb IAmb 18 43 36.5
comp=Z,3.5nm,0.8s
G08A Pilot Rock 74.89 327 P **P** **18 43 43.0 +0.6**
PINE Pine Mountain 74.99 325 P **P** **18 43 44.9 +1.8**
PINE IAmb IAmb 18 43 45.6
comp=Z,4.2nm,0.8s
H04A Detroit Lake 76.25 325 P **P** **18 43 51.2 +1.1**
TOA0 Torodi Ar. Sit 76.81 72 P **P** **18 43 51.9 -1.8**
TOA0 IAmb IAmb 18 44 17.5
comp=Z,7.3nm,1.6s
TORD Torodi Ar. Bea 76.81 72 P **P** **18 43 52.0 -1.7**
comp=Z,1.0nm,0.4s,baz=268,slow=5.2,SNR=23
comp=Z,1.0nm,0.4s
TORD Torodi Ar. Bea 76.81 72 P **P** **18 43 52.1 -1.7**
ESDC Sonseca Array 82.69 45 P **P** **18 44 25.0 +0.1**
comp=Z,0.9nm,0.8s,baz=241,slow=4.2,SNR=3.6
comp=Z,0.9nm,0.8s
YKA Yellowknife Ar 85.19 341 P **P** **18 44 37.0 +0.1**
comp=Z,2.5nm,0.5s,baz=134,slow=5.0,SNR=17
comp=Z,2.5nm,0.5s
YKA Yellowknife Ar 85.19 341 P **P** **18 44 38.0 +1.1**
MAW Mawson 90.35 164 P **P** **18 45 03.5 +2.0**
comp=Z,2.3nm,0.9s,baz=226,slow=5.0,SNR=1.5
comp=Z,2.3nm,0.9s
STKA Stephens Creek 123.69 213 PKP **PKiKP** **18 50 58.9 +0.7**
comp=Z,1.3nm,0.5s,baz=158,slow=5.4,SNR=6.9
ASAR Alice Springs 134.30 212 PKhKP PKPpre 18 51 04.4
comp=Z,0.6nm,1.0s,baz=142,slow=2.7,SNR=5.9
ASAR PKP **PKPdf** **18 51 19.0 +0.7**
comp=Z,1.6nm,0.5s,baz=123,slow=1.8,SNR=28
ASAR Alice Springs 134.30 212 **PKPdf** **18 51 18.8 +0.5**
WRA Warramunga Arr 137.11 215 PKhKP PKPpre 18 51 12.2
comp=Z,0.3nm,0.5s,baz=136,slow=2.7,SNR=8.1
WRA PKP **PKPdf** **18 51 24.6 +0.9**
comp=Z,1.7nm,0.3s,baz=136,slow=1.7,SNR=5.4
ZALV Zalesovo Beam 137.12 21 PKP **PKiKP** **18 51 23.7 -0.7**
comp=Z,6.9nm,0.6s,baz=299,slow=2.4,SNR=32
ZALV SKP **SKPbc** **18 54 37.8 +1.7**
comp=Z,1.8nm,0.9s,baz=328,slow=5.1,SNR=6.4
MKAR Makanchi Array 141.50 30 PKhKP PKPpre 18 51 26.0
comp=Z,0.2nm,0.5s,baz=19,slow=4.1,SNR=1.6
MKAR PKP **PKPdf** **18 51 31.2 +0.5**
comp=Z,1.2nm,0.7s,baz=303,slow=1.4,SNR=8.7
MKAR SKPbc **SKPbc** **18 54 48.0 -0.4**
comp=Z,0.2nm,0.5s,baz=265,slow=2.8,SNR=2.4
MTN Manton Dam 144.60 218 PKPdf **PKPdf** **18 51 37.0 -0.1**
HIA Hailar 145.43 348 PKPdf **PKPbc** **18 51 38.0 +0.1**
USRK Ussuriysk Ar. 145.75 331 PKPbc **PKPab** **18 51 39.5 -0.2**
comp=Z,2.9nm,0.4s,baz=28,slow=3.6,SNR=13
MJAR Matsushiro Arr 147.12 315 PKPbc **PKPbc** **18 51 43.8 +0.5**
comp=Z,12nm,0.6s,baz=106,slow=3.3,SNR=25
MJAR Matsushiro Arr 147.12 315 **PKPbc** **18 51 43.6 +0.3**
SONM Songino Array 147.76 4 PKPbc **PKiKP** **18 51 45.8 -0.8**
comp=Z,8.4nm,0.6s,baz=324,slow=1.7,SNR=51
KSRS Korea Array 152.86 327 PKP **PKPdf** **18 51 51.1 +1.4**
KSRS comp=Z,1.2nm,0.8s,baz=117,slow=0.6,SNR=5.4 PKPbc **PKiKP** **18 51 57.9 +0.6**
comp=Z,2.0nm,0.7s,baz=18,slow=2.6,SNR=6.5
PZH PanZhiHua 166.92 33 PKP **PKPdf** **18 52 05.1 -0.9**

*EAF **16** 18:42:19.7±10.0, 25°.29S×22°.60E, h10km, MD3.5*
*BUL **16** 18:42:19.7±10.0, 25°.29S×22°.60E, h10km, MD3.7*
*PRE **16** 18:42:31.5±1.0, 26°.37S×27°.55E, h2km, ML2.3*
ISC 16 18:42:33.1±0.9**, 26°.43S**±0.04×**27°.57E**±0.04**, h10**km**, n13,** σ1§71/22**, South Africa**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SNKL	**Senekal, Frees**	**1.85**	**174**	*e*P		**Pb**	**18 43 06.5**	**-0.7**
SNKL				*e*S		**Sb**	**18 43 31.1**	**+0.6**
SNKL				IAML			18 43 35.4	
	comp=Z,104nm,0.6s							
SWZ	**Schweizer**	**2.14**	**249**	*e*P		**Pb**	**18 43 09.8**	**-2.3**
SWZ				*e*S		**Sb**	**18 43 36.0**	**-2.7**
SWZ				IAML			18 43 43.6	
	comp=Z,46nm,0.2s							
LBTB	**Lobatse**	**2.27**	**308**	*i* Pg		**Pg**	**18 43 17.2**	**+0.6**
LBTB				*i* Sg		**Sg**	**18 43 46.5**	**+0.5**
LBTB	**Lobatse**	**2.27**	**308**	*i* Pg		**Pg**	**18 43 17.2**	**+0.6**
LBTB				*i* Sg		**Sg**	**18 43 46.5**	**+0.5**
BOSA	**Boshof**	**3.00**	**223**	*i* P		**Pb**	**18 43 24.9**	**-1.8**
BOSA				*i* S		**Sn**	**18 43 59.2**	**+2.3**
BOSA	**Boshof**	**3.00**	**223**	*i* P		**Pb**	**18 43 24.9**	**-1.8**
BOSA				*i* S		**Sn**	**18 43 59.2**	**+2.3**
POGA	**Pongola**	**3.81**	**105**	*e*P		**Pn**	**18 43 32.4**	**+0.5**
POGA				*e*S		**Sn**	**18 44 16.8**	**0.0**
POGA				IAML			18 44 36.0	
	comp=Z,13nm,0.8s							
MOPA	**Mopani**	**4.52**	**51**	*e*P		**Pn**	**18 43 42.0**	**+0.2**
MOPA				*e*S		**Sn**	**18 44 32.2**	**-2.2**
MOPA				IAML			18 44 52.7	
	comp=Z,3.0nm,0.4s							
HVD	**Gariep Dam**	**4.55**	**203**	*e*P		**Pn**	**18 43 43.0**	**+0.8**
HVD				*e*S		**Sn**	**18 44 34.4**	**-0.8**
HVD				IAML			18 44 37.5	
	comp=Z,6.5nm,0.7s							
MATP	**Matopo**	**6.03**	**8**	*i* P		Pn	18 44 07.8	+5.2
MATP				*i* S		**Sn**	**18 45 14.8**	**+2.9**
MATP	**Matopo**	**6.03**	**8**	*i* P		Pn	18 44 07.8	+5.2
MATP				*i* S		**Sn**	**18 45 14.8**	**+2.9**
BLWY	**Bulawayo**	**6.33**	**9**	*i* P		Pn	18 44 12.5	+5.8
BLWY				*i* S		**Sn**	**18 45 19.6**	**+0.4**
BLWY	**Bulawayo**	**6.33**	**9**	*i* P		Pn	18 44 12.5	+5.8
BLWY				*i* S		**Sn**	**18 45 19.6**	**+0.4**

*NEIC **16** 18:47:34.4±1.2, 6°.58S±0°.09×150°.14E±0°.09, h26km±6km, mb4.0/11, Error ellipse: s-maj=17.2km s-min=6.9km az=134.0*
*IDC **16** 18:47:36.7±1.4, 6°.65S×150°.10E, h54km±17km, mb3.5/6, mbtmp3.9/8, ML3.1/2, MS3.0/2, Error ellipse: s-maj=39.0km s-min=9.1km az=129.0*
ISC 16 18:47:36.6±0.7**, 6°.56S**±0°.08×**150°.05E**±0°.09**, h43**km**, n38,** σ1§41/36**, mb3.6/8, New Britain region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**2.98**	**41**	P		**Pn**	**18 48 20.4**	**-1.0**
	25nm,0.3s,baz=304,slow=0.2,SNR=59							
KRVT				S		**Sn**	**18 48 58.1**	**+2.2**
	114nm,0.6s,baz=135,slow=20,SNR=1.6							
	107nm,0.4s							
RABL	**Rabaul**	**3.16**	**42**	Pn		**Pn**	**18 48 21.3**	**-2.5**
RABL	**Rabaul**	**3.16**	**42**	P		**Pn**	**18 48 22.0**	**-1.8**
PMG	**Port Moresby**	**4.02**	**225**	P		**Pn**	**18 48 35.8**	**+0.1**
	22nm,0.3s,baz=41,slow=5.0,SNR=56							
PMG				S		**Sn**	**18 49 21.8**	**+0.2**
	100nm,0.4s,baz=2.2,slow=23,SNR=12							
	48nm,0.3s							
PMG	**Port Moresby**	**4.02**	**225**			**Pn**	**18 48 36.1**	**+0.4**
PMG	**Port Moresby**	**4.02**	**225**	P		**Pn**	**18 48 36.1**	**+0.4**
MANU	**Manus Island**	**5.22**	**329**	Pn		**Pn**	**18 48 51.7**	**-0.5**
COEN	**Coen**	**9.99**	**222**	Pn		**Pn**	**18 49 56.5**	**-1.1**
MTSU	**Mount Surprise**	**12.79**	**205**	P		**Pn**	**18 50 37.5**	**+1.5**
QIS	**Mount Isa**	**17.21**	**215**	P		**P**	**18 51 36.0**	**+0.9**
SIJI	**Sorong**	**19.57**	**286**	LR		LR	19 01 49.1	
	comp=Z,67nm,18.4s,baz=221,slow=43							
RMQ	**Roma**	**19.86**	**183**	P		**Pn**	**18 52 06.4**	**+0.4**
WB0	**Warramunga Arr**	**20.09**	**228**	P		**P**	**18 52 05.7**	**-1.0**
WB0				IAmb		IAmb	18 52 06.5	
	comp=Z,6.3nm,0.6s							
WR0	**Warramunga Arr**	**20.10**	**227**	P		**P**	**18 52 06.2**	**-0.7**
WR0				IAmb		IAmb	18 52 22.8	
	comp=Z,17nm,1.5s							
WRAB	**Tennant Creek**	**20.23**	**227**	P		**P**	**18 52 07.1**	**-1.1**
WRAB				IAmb		IAmb	18 52 07.6	
	comp=Z,6.8nm,0.5s							
WRAB	**Tennant Creek**	**20.23**	**227**	P		**P**	**18 52 07.4**	**-0.8**
WB2	**Warramunga Arr**	**20.23**	**227**	P		**P**	**18 52 06.9**	**-1.3**
WRA	**Warramunga Arr**	**20.24**	**227**	P		**P**	**18 52 07.3**	**-1.0**
	comp=Z,5.8nm,0.5s,baz=52,slow=11,SNR=59							
	comp=Z,5.8nm,0.5s							
WRA	**Warramunga Arr**	**20.24**	**227**	P		**P**	**18 52 06.0**	**-2.3**
GUMO	**Guam**	**20.67**	**346**	LR		LR	19 00 13.2	
	comp=Z,28nm,19.4s,baz=100,slow=36							
QLP	**Quilpie**	**20.67**	**195**	P		Pn	18 52 15.1	-0.4
KNRA	**Kununurra**	**22.75**	**245**	P		**P**	**18 52 31.6**	**-3.7**
KNRA				IAmb		IAmb	18 52 41.2	
	comp=Z,9.1nm,0.9s							
KNRA	**Kununurra**	**22.75**	**245**	P		**P**	**18 52 33.5**	**-1.8**
	comp=Z,15nm,1.6s							
AS31	**Alice Springs**	**23.02**	**221**	P		**P**	**18 52 37.1**	**-1.0**
AS31				IAmb		IAmb	18 52 54.7	
	comp=Z,1.3nm,0.9s							
ASAR	**Alice Springs**	**23.03**	**221**	P		**P**	**18 52 36.8**	**-1.4**
	comp=Z,1.7nm,0.7s,baz=57,slow=8.7,SNR=39							
	comp=Z,1.7nm,0.7s							
ASAR	**Alice Springs**	**23.03**	**221**	P		**P**	**18 52 37.4**	**-0.8**
ARMA	**Armidale**	**23.78**	**177**	P		**P**	**18 52 45.0**	**-0.5**
ARMA				IAmb		IAmb	18 52 57.1	
	comp=Z,13nm,1.3s							
ARMA	**Armidale**	**23.78**	**177**	P		**P**	**18 52 47.6**	**+2.1**
OOD	**Oodnadatta**	**25.13**	**211**	P		**P**	**18 52 58.7**	**+1.0**
CMSA	**Cobar Meteorol**	**25.18**	**189**	P		**P**	**18 52 59.1**	**+1.0**
LCRK	**Leigh Creek**	**26.24**	**204**	P		**P**	**18 53 09.5**	**+1.8**
STKA	**Stephens Creek**	**26.40**	**196**	P		**P**	**18 53 08.7**	**-0.5**
	comp=Z,2.6nm,0.7s,baz=5.2,slow=8.6,SNR=5.9							
	comp=Z,2.6nm,0.7s							
STKA	**Stephens Creek**	**26.40**	**196**	IAmb		IAmb	18 53 11.7	
	comp=Z,0.9nm,0.9s							
CMAR	**Chiang Mai Arr**	**56.19**	**297**	P		**P**	**18 57 13.3**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=106,slow=7.4,SNR=1.9							
	comp=Z,0.2nm,0.5s							
SONM	**Songino Array**	**66.39**	**329**	P		**P**	**18 58 21.7**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=156,slow=4.5,SNR=3.9							
	comp=Z,0.4nm,0.5s							
MKAR	**Makanchi Array**	**79.86**	**320**	P		**P**	**18 59 39.6**	**-1.2**
	comp=Z,0.1nm,0.4s,baz=94,slow=9.0,SNR=3.0							
	comp=Z,0.1nm,0.4s							
QSPA	**South Pole Qui**	**83.41**	**180**	P		**P**	**18 59 59.4**	**+0.1**
TORD	**Torodi Ar. Bea**	**148.16**	**284**	PKPbc		**PKPdf**	**19 07 16.1**	**+0.6**
	comp=Z,0.7nm,0.4s,baz=87,slow=2.5,SNR=12							

MAN 16 19:02:18.8, 8°.58N×123°.35E, h34km**, mb3.8, ML2.5, MS2.0, 2C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PAGZ	**Pagadian**	**0.73**	**177**	⇑*e*P		Pb	19 02 33.4	+0.5
PAGZ				*e*S			19 02 43.6	
CNOP	**Candoni, Negro**	**1.42**	**331**	⇑*e*P		Pb	19 02 46.8	+1.1
CNOP				*e*S			19 03 04.1	

*IDC **16** 19:12:04.5±1.5, 2°.74N×127°.52E, h0km, mb3.5/3, mbtmp3.6/4, ML3.8/1, Error ellipse: s-maj=85.2km s-min=23.9km az=61.0*
*DJA **16** 19:12:11.1±1.1, 3°.1N×3°.12E±°, h26km±12km, M4.1/12, mb4.3/5, MLv4.0/12*
*NEIC **16** 19:12:13.2±0.7, 2°.8N±0°.1×128°.0E±0°.1, h73km±13km, mb4.0/7, Error ellipse: s-maj=17.6km s-min=13.1km az=218.0*
ISC 16 19:12:09.7±1.0**, 2°.99N**±0°.08×**128°.16E**±0°.07**, h35**km**, n25,** σ1§68/30**, mb3.9/6, Halmahera**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.34**	**200**			**Pn**	**19 12 45.9**	**+0.1**
TNTI	**Ternate**	**2.34**	**200**	P		**Pn**	**19 12 46.7**	**+0.9**
TNTI				S		**Sn**	**19 13 14.7**	**+1.4**
SGSI	**Sangihe**	**2.71**	**285**	P		**Pn**	**19 12 51.6**	**+0.8**
SGSI				S		**Sn**	**19 13 23.6**	**+1.1**
LBMI	**Labuha**	**3.66**	**190**	P		**Pn**	**19 13 05.1**	**+1.1**
KMSI	**Cibinong**	**4.81**	**240**	P		**Pn**	**19 13 21.2**	**+1.4**
SWI	**Sorong**	**4.93**	**141**	P		**Pn**	**19 13 23.8**	**+2.5**
SIJI	**Sorong**	**4.94**	**141**	Pn		**Pn**	**19 13 23.8**	**+2.3**
	3.3nm,0.3s,baz=310,slow=16,SNR=17							
SIJI				Sn		**Sn**	**19 14 18.1**	**+0.7**
	0.5nm,0.3s,baz=264,slow=23,SNR=1.5							
	10nm,0.4s							
SANI	**Sanana**	**5.46**	**203**	P		**Pn**	**19 13 28.7**	**+0.1**
	0.0nm5.0nm,0.7s							
MRSI	**Marisa**	**6.70**	**248**	P		**Pn**	**19 13 47.1**	**+1.5**
	0.1nm29nm,0.5s							
LUWI	**Luwuk**	**6.71**	**233**	Pn		**Pn**	**19 13 45.3**	**-0.5**
LUWI						**Sn**	**19 15 01.4**	**+0.2**
LUWI	**Luwuk**	**6.71**	**233**	P		**Pn**	**19 13 47.7**	**+1.9**
	0.3nm16nm,0.5s							
FAKI	**Fak Fak**	**7.16**	**145**	Pn		**Pn**	**19 13 54.4**	**+2.5**
FAKI	**Fak Fak**	**7.16**	**145**	P		**Pn**	**19 13 54.8**	**+2.8**
TOLI2	**Tolitoli**	**7.60**	**256**			**Pn**	**19 13 57.8**	**-0.3**
KKM	**Kota Kinabalu**	**12.28**	**285**	Pn		**Pn**	**19 15 02.9**	**+0.6**
SBUM	**Sibu**	**15.93**	**268**	P		**P**	**19 15 54.1**	**-0.5**
SBUM				IAmb		IAmb	19 15 55.7	
	comp=Z,6.0nm,0.8s							
MTN	**Manton Dam**	**16.01**	**169**	Pn		**Pn**	**19 15 51.4**	**-1.0**
MTN				IAmb		IAmb	19 16 46.2	
	comp=Z,22nm,1.4s							
WB0	**Warramunga Arr**	**23.43**	**165**	P		**P**	**19 17 13.6**	**-2.3**
WB0				IAmb		IAmb	19 17 36.8	
	comp=Z,15nm,1.6s							
WRAB	**Tennant Creek**	**23.58**	**165**	P		**P**	**19 17 15.1**	**-2.3**
WRAB				IAmb		IAmb	19 17 18.9	
	comp=Z,11nm,1.4s							
WRA	**Warramunga Arr**	**23.59**	**165**	P		**P**	**19 17 15.9**	**-1.6**
	comp=Z,2.5nm,1.1s,baz=343,slow=10,SNR=20							
	comp=Z,2.5nm,1.1s							
WRA	**Warramunga Arr**	**23.59**	**165**	P		**P**	**19 17 15.0**	**-2.4**
WB2	**Warramunga Arr**	**23.59**	**165**	P		**P**	**19 17 14.3**	**-3.2**
WB2				IAmb		IAmb	19 17 51.9	
	comp=Z,6.8nm,1.1s							
WR0	**Warramunga Arr**	**23.65**	**165**	P		**P**	**19 17 16.1**	**-2.0**
ASAR	**Alice Springs**	**27.08**	**168**	P		**P**	**19 17 48.5**	**-0.8**
	comp=Z,0.4nm,0.9s,baz=353,slow=7.6,SNR=2.4							
ASAR				PcP		**PcP**	**19 21 09.0**	**-1.0**
	comp=Z,0.3nm,0.7s,baz=5.0,slow=2.1,SNR=4.6							
	comp=Z,0.4nm,0.9s							
MKAR	**Makanchi Array**	**58.97**	**325**	P		**P**	**19 22 05.4**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=116,slow=8.0,SNR=6.0							
	comp=Z,0.2nm,0.4s							

*TEH **16** 19:32:04.9, 38°.47N×49°.53E, h15km, ML3.4*
*AZER **16** 19:32:05.8±0.1, 38°.62N×49°.40E, h9km, Error ellipse: s-maj=3.3km s-min=1.0km az=318.0*
*IDC **16** 19:32:06.1±2.6, 38°.90N×49°.41E, h0km, mb3.6/4, mbtmp3.7/8, ML3.1/3, MS2.6/1, Error ellipse: s-maj=45.9km s-min=15.9km az=178.0*
ISC 16 19:32:05.3±1.3**, 38°.49N**±0°.03×**49°.51E**±0°.03**, h11**km±10km**, n77,** σ1§25/107**, mb3.5/4, 3C, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ASTR	**Astara**	**0.57**	**277**	*e*Pg		**Pb**	**19 32 17.8**	**+0.5**
ASTR	**Astara**	**0.57**	**277**	P		**Pb**	**19 32 17.9**	**+0.5**
	SNR=98							
ASTR				S		**Sn**	**19 32 28.0**	**-0.8**
LKRN	**Lenkeran, Azer**	**0.61**	**291**	*e*Pg		**Pb**	**19 32 18.4**	**+0.3**
LKRN	**Lenkeran, Azer**	**0.61**	**291**	P		**Pb**	**19 32 18.5**	**+0.4**
	SNR=44							
LKRN				S		**Sn**	**19 32 29.2**	**-0.7**
LRK	**Lerik**	**0.93**	**280**	*e*Pg		**Pg**	**19 32 23.9**	**+0.6**
LRK	**Lerik**	**0.93**	**280**	P		**Pg**	**19 32 24.0**	**+0.7**
	SNR=208							
LRK				S		**Sn**	**19 32 37.7**	**-0.2**
CSN1	**Caspian**	**0.98**	**200**	*e*Pg		**Pb**	**19 32 23.5**	**-0.8**
YRD	**Yardimli**	**1.08**	**294**	*e*Pg		**Pb**	**19 32 25.9**	**-0.3**
YRD	**Yardimli**	**1.08**	**294**	P		**Pb**	**19 32 25.9**	**-0.3**
	SNR=102							
YRD				S		**Sn**	**19 32 41.5**	**-0.2**
GLBA	**Clilabad**	**1.15**	**311**	*e*Pg		**Pb**	**19 32 27.0**	**-0.2**
GLBA	**Clilabad**	**1.15**	**311**	P		**Pb**	**19 32 27.0**	**-0.2**
	SNR=44							
GLBA				S		**Sn**	**19 32 43.5**	**+0.3**
GRMI	**Germi**	**1.30**	**285**	*e*Pg		**Pn**	**19 32 29.5**	**-0.1**
GRMI				*e*			19 32 49.4	
	comp=Z,99nm,0.6s							
LHJ2	**Lahijan - Gila**	**1.39**	**162**	*e*Pg		**Pn**	**19 32 30.7**	**0.0**
LHJ2				*e*Sg		**Sn**	**19 32 48.5**	**-0.5**
ALIB	**Äli-Bayra**	**1.52**	**345**	*e*Pg		**Pb**	**19 32 34.0**	**+0.5**
ALIB	**Äli-Bayra**	**1.52**	**345**	Pn		**Pn**	**19 32 33.8**	**+1.4**
	SNR=6.2							
ALIB					Sn	**Sn**	**19 32 50.9**	**-1.3**
ISRB	**Sarab**	**1.60**	**246**	*e*Pg		**Pn**	**19 32 34.4**	**+0.7**
ISRB				*e*			19 33 01.1	
	comp=Z,3μm,0.3s							
SAAT	**Saatly**	**1.61**	**329**	Pn		**Pn**	**19 32 35.0**	**+1.3**
SAAT					Sn	**Sg**	**19 32 57.6**	**+0.5**
GOBA	**Gobu**	**1.92**	**5**	Sg		**Sg**	**19 33 06.6**	**-0.4**
IHRS	**Heris**	**1.95**	**266**	*e*Pn		**Pn**	**19 32 39.5**	**+0.9**
IHRS				*e*			19 32 51.7	
	comp=Z,2μm,0.2s							
BLQ	**Beylaqan**	**1.95**	**310**	*e*Pn		**Pn**	**19 32 39.6**	**+1.2**
BLQ	**Beylaqan**	**1.95**	**310**	Pn		**Pn**	**19 32 39.5**	**+1.1**
	SNR=25							
BLQ					Sn	**Sb**	**19 33 04.4**	**-0.9**
QRD	**Qoradiz**	**1.96**	**300**	*e*Pn		**Pn**	**19 32 38.9**	**+0.3**
QRD	**Qoradiz**	**1.96**	**300**	Pn		**Pn**	**19 32 38.9**	**+0.3**
	SNR=4.3							
QRD					Sn	**Sn**	**19 33 04.0**	**+0.8**
GBS	**Qobustan**	**2.09**	**348**	*e*Pn		**Pn**	**19 32 40.7**	**+0.3**
GBS	**Qobustan**	**2.09**	**348**	Pn		**Pn**	**19 32 40.9**	**+0.5**
	SNR=5.3							
GBS					Sn	**Sn**	**19 33 07.6**	**+1.1**
IHSH	**Hashtrud**	**2.13**	**237**	*e*Pn		**Pn**	**19 32 42.2**	**+1.0**
IHSH				*e*			19 33 15.2	
	comp=Z,1μm,0.4s							
KDMR	**Kurdemir**	**2.15**	**332**	*e*Pn		**Pn**	**19 32 41.5**	**+0.5**
KDMR	**Kurdemir**	**2.15**	**332**	Pn		**Pn**	**19 32 41.6**	**+0.5**
	SNR=8.8							
KDMR					Sn	**Sn**	**19 33 08.9**	**+1.3**
IGZV	**Ghazvin**	**2.17**	**165**	*e*Pn		**Pn**	**19 32 42.3**	**+0.6**
IGZV				*e*			19 33 13.6	
	comp=Z,1μm,0.4s							
IBST	**Bostanabad**	**2.21**	**250**	*e*Pn		**Pn**	**19 32 43.2**	**+1.0**
TVRZ	**Varzaqan**	**2.23**	**271**	*e*Pn		**Pn**	**19 32 44.4**	**+2.0**
QALM	**Alamut, Qazvin**	**2.24**	**156**	*e*Pn		**Pn**	**19 32 42.6**	**-0.1**
QALM				*e*			19 33 11.8	
	comp=Z,2μm,0.4s							
ZRD	**Zardab**	**2.28**	**322**	*e*Pn		**Pn**	**19 32 43.4**	**+0.6**
ZRD	**Zardab**	**2.28**	**322**	Pn		**Pn**	**19 32 43.5**	**+0.6**
	SNR=4.4							
ZRD					Sn	**Sb**	**19 33 13.0**	**-1.7**
PQL	**Pirkuli**	**2.40**	**343**	*e*Pn		**Pn**	**19 32 45.8**	**+1.1**
PQL	**Pirkuli**	**2.40**	**343**	Pn		**Pn**	**19 32 45.9**	**+1.1**
	SNR=4.8							
PQL					Sn	**Sn**	**19 33 15.4**	**+1.2**
ATGJ	**Altiaghaj**	**2.41**	**350**	Pn		**Pn**	**19 32 47.0**	**+2.2**
	SNR=3.2							
ATGJ					Sn	**Sn**	**19 33 15.0**	**+0.6**
AGDM	**Agdam**	**2.47**	**312**	Pn		**Pn**	**19 32 46.0**	**+0.4**
	SNR=9.2							
AGDM					Sn	**Sn**	**19 33 16.9**	**+1.3**
IML	**Ismayilli**	**2.52**	**336**	Pn		**Pn**	**19 32 46.2**	**0.0**
	SNR=6.4							
IML					Sn	**Sn**	**19 33 16.5**	**-0.5**
BRDA	**Brd**	**2.53**	**315**	Pn		**Pn**	**19 32 47.2**	**+0.9**
	SNR=21							
BRDA					Sn	**Sb**	**19 33 19.2**	**-2.7**
SIZA	**Siyzn**	**2.63**	**350**	Pg		**Pn**	**19 32 50.8**	**+3.0**
	SNR=5.8							
SIZA					Sn	**Sn**	**19 33 20.6**	**+1.0**
QBL	**Gabala**	**2.77**	**333**	Pn		**Pn**	**19 32 49.9**	**+0.2**
	SNR=4.7							
QBL					Sn	**Sn**	**19 33 23.0**	**-0.3**
ORD	**Ordubad**	**2.79**	**280**	Pn		**Pn**	**19 32 52.0**	**+2.0**
	SNR=16							
ORD					Sn	**Sn**	**19 33 25.3**	**+1.7**
XNQ	**Khinaliq**	**2.88**	**339**	Pn		**Pn**	**19 32 51.4**	**0.0**
	SNR=5.8							
XNQ					Sn	**Sn**	**19 33 25.7**	**-0.4**
IAZR	**Azarshahr**	**2.90**	**255**	*e*Pn		**Pn**	**19 32 52.5**	**+0.8**
IAZR				*e*			19 33 10.6	
	comp=Z,2μm,0.6s							
IMHD	**Mahdasht**	**2.95**	**161**	*e*Pn		**Pn**	**19 32 54.7**	**+2.5**
IMHD				*e*			19 32 55.9	
	comp=Z,1μm,0.3s							
MNGR	**Mingechevir, A**	**2.95**	**321**	Sn		**Sn**	**19 33 28.4**	**+0.9**
QUBA	**Quba, Azerbaij**	**2.97**	**345**	Pn		**Pn**	**19 32 53.4**	**+1.0**
	SNR=5.1							
QUBA					Sn	**Sn**	**19 33 27.4**	**-0.6**
IMRD	**Marand**	**2.99**	**275**	*e*Pn		**Pn**	**19 32 53.6**	**+0.7**
IMRD				*e*			19 33 57.7	
	comp=Z,2μm,0.6s							
ISHB	**Shabestar**	**3.07**	**267**	*e*Pn		**Pn**	**19 32 56.1**	**+2.1**
ISHB				*e*			19 33 10.6	
	comp=Z,760nm,0.5s							
IRAZ	**Razeghan**	**3.10**	**174**	*e*Pn		**Pn**	**19 32 55.8**	**+1.4**
IRAZ				*e*			19 33 38.7	
	comp=Z,489nm,0.5s							
QSAR	**Qusar**	**3.17**	**343**	Pn		**Pn**	**19 32 55.8**	**+0.6**
	SNR=2.9							
QSAR					Sn	**Sn**	**19 33 33.1**	**+0.1**
IPRN	**Peran**	**3.18**	**134**	*e*Pn		**Pn**	**19 32 56.4**	**+1.0**
IPRN				*e*			19 33 36.1	
	comp=

*IDC **16** 19:32:14.6±1.5, 11°.32S×162°.81E, h0km, mb3.7/6, mbtmp3.8/8, ML4.0/2, MS3.4/8, Error ellipse: s-maj=47.9km s-min=23.7km az=144.0*
*NEIC **16** 19:32:24.7±1.2, 11°.03S±0°.08×162°.4E±0°.1, h56km±8km, mb4.2/14, Error ellipse: s-maj=19.8km s-min=2.8km az=56.0*

ISC 16 19:32:23.6±0.7, 11°.1S±0°.1×162°.47E±0°.09, h50km, n38, σ1§73/25, mb4.0/12, MS3.4/5, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**2.96**	**303**	Pn	**Pn**	**19 33 09.0**	**+0.7**
	42nm,0.3s,baz=160,slow=7.4,SNR=12						
HNR				Sn	**Sn**	**19 33 46.6**	**+4.1**
	127nm,0.3s,baz=41,slow=22,SNR=9.7						
HNR				LR	LR	19 34 33.1	
	comp=Z,607nm,19.8s,baz=124,slow=41						
	271nm,0.6s						
HNR	**Honiara**	**2.96**	**303**		**Pn**	**19 33 08.3**	**+0.1**
KOUNC	**Koumac, New Ca**	**9.60**	**170**	Pn	**Pn**	**19 34 40.6**	**+1.4**
PMG	**Port Moresby**	**15.16**	**275**	LR	LR	19 41 15.1	
	comp=Z,196nm,21.3s,baz=132,slow=35						
MSVF	**Nonsavu**	**16.48**	**116**	Pn	**Pn**	**19 36 12.5**	**+0.9**
MANU	**Manus Island**	**17.46**	**300**		**Pn**	**19 36 22.4**	**-1.5**
MANU				IAmb	IAmb	19 36 25.5	
	comp=Z,11nm,0.8s						
CTA	**Charters Tower**	**18.00**	**238**	P	**Pn**	**19 36 29.0**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=71,slow=14,SNR=1.4						
CTA				LR	LR	19 42 08.8	
	comp=Z,104nm,18.9s,baz=108,slow=33						
	comp=Z,2.5nm,0.6s						
CTAO	**Charters Tower**	**18.00**	**238**		**Pn**	**19 36 28.4**	**-2.0**
CTAO				IAmb	IAmb	19 36 35.7	
	comp=Z,26nm,1.0s						
AFI	**Afiamalu**	**25.30**	**99**	LR	LR	19 45 49.3	
	comp=Z,79nm,19.9s,baz=138,slow=33						
WR0	**Warramunga Arr**	**28.29**	**248**	P	**P**	**19 38 10.1**	**-2.6**
WR0				IAmb	IAmb	19 38 34.2	
	comp=Z,5.5nm,0.9s						
STKA	**Stephens Creek**	**28.30**	**220**	LR	LR	19 49 19.6	
	comp=Z,129nm,18.9s,baz=35,slow=36						
WB0	**Warramunga Arr**	**28.38**	**249**	P	**P**	**19 38 12.1**	**-1.4**
WB0				IAmb	IAmb	19 38 31.2	
	comp=Z,7.9nm,0.8s						
WRAB	**Tennant Creek**	**28.46**	**249**	P	**P**	**19 38 13.2**	**-1.0**
WB2	**Warramunga Arr**	**28.46**	**248**	P	**P**	**19 38 13.4**	**-0.8**
WRA	**Warramunga Arr**	**28.47**	**248**	P	**P**	**19 38 13.3**	**-1.0**
	comp=Z,0.6nm,0.5s,baz=79,slow=8.6,SNR=14						
	comp=Z,0.6nm,0.5s						
H11S2	**WAKE ISLAND Hy**	**29.66**	**8**	T	T	20 09 16.7	
	baz=188,slow=76,SNR=273						
H11S3	**WAKE ISLAND Hy**	**29.66**	**8**	T	T	20 09 18.4	
	baz=188,slow=76,SNR=148						
H11S1	**WAKE ISLAND Hy**	**29.68**	**8**	T	T	20 09 18.5	
	baz=188,slow=76,SNR=141						
ASAR	**Alice Springs**	**29.94**	**241**	P	**P**	**19 38 26.6**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=63,slow=10,SNR=8.3						
	comp=Z,0.4nm,0.4s						
H11N1	**WAKE ISLAND Hy**	**30.89**	**8**	T	T	20 10 50.5	
	baz=188,slow=76,SNR=80						
H11N3	**WAKE ISLAND Hy**	**30.89**	**8**	T	T	20 10 48.3	
	baz=188,slow=76,SNR=89						
H11N2	**WAKE ISLAND Hy**	**30.91**	**8**	T	T	20 10 51.8	
	baz=188,slow=76,SNR=68						
SIJI	**Sorong**	**32.60**	**286**	LR	LR	19 52 59.0	
	comp=Z,68nm,19.0s,baz=82,slow=38						
KNRA	**Kununurra**	**33.09**	**258**	P	**P**	**19 38 52.0**	**-3.0**
BATI	**Baumata**	**38.13**	**268**	P	**P**	**19 39 37.6**	**-0.7**
	comp=Z,12nm,0.6s,baz=99,slow=13,SNR=2.2						
ASAJ	**Asahikawa**	**57.81**	**343**	LR	LR	20 05 27.7	
	comp=Z,28nm,19.7s,baz=174,slow=34						
KSRS	**Korea Array**	**58.13**	**328**	LR	LR	20 05 36.5	
	comp=Z,22nm,19.1s,baz=170,slow=34						
VNDA	**Vanda**	**66.45**	**180**	P	**P**	**19 43 09.9**	**+2.6**
SONM	**Songino Array**	**76.80**	**325**	P	**P**	**19 44 10.3**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=138,slow=5.5,SNR=3.7						
	comp=Z,0.3nm,0.5s						
SONM	**Songino Array**	**76.80**	**325**	IAmb	IAmb	19 44 17.9	
	comp=Z,1.5nm,0.8s						
IMAR	**Indian Mountai**	**83.33**	**17**	P	**P**	**19 44 45.3**	**+0.4**
MLY	**Manley**	**83.53**	**18**	P	**P**	**19 44 45.9**	**-0.1**
MLY				IAmb	IAmb	19 44 46.8	
	comp=Z,4.1nm,1.4s						
H02S1	**DAWSON INLET T**	**84.44**	**33**	T	T	21 17 59.7	
	SNR=38						
ILAR	**Eielson Array**	**84.57**	**19**	P	**P**	**19 44 50.5**	**-0.7**
	comp=Z,0.4nm,0.6s,baz=236,slow=4.2,SNR=5.9						
	comp=Z,0.4nm,0.6s						
M27K	**Edge Creek, AK**	**84.85**	**23**	P	**P**	**19 44 53.3**	**+0.4**
M27K				IAmb	IAmb	19 44 54.8	
	comp=Z,2.4nm,0.8s						
J25K	**Salcha River,**	**84.97**	**20**	P	**P**	**19 44 53.5**	**+0.2**
J25K				IAmb	IAmb	19 44 54.3	
	comp=Z,1.7nm,0.7s						
NVAR	**Mina Array Bea**	**88.50**	**51**	P	**P**	**19 45 08.5**	**-2.8**
	comp=Z,0.3nm,0.7s,baz=244,slow=5.9,SNR=3.1						
	comp=Z,0.3nm,0.7s						
MKAR	**Makanchi Array**	**91.34**	**317**	P	**P**	**19 45 25.1**	**+0.9**
	comp=Z,0.2nm,0.6s,baz=99,slow=6.2,SNR=1.6						
	comp=Z,0.2nm,0.6s						

*DJA **16** 19:33:22.5±0.5, 3°.N±3°×12°.8E±°, h15km±3km, M4.4/13, mb4.5/10, mB4.8/2, MLv4.4/13, Mw(mB)4.0/2*
*NEIC **16** 19:33:25.5±1.6, 2°.42N±0°.08×127°.79E±0°.07, h80km±8km, mb4.2/22, Error ellipse: s-maj=12.2km s-min=10.4km az=195.0*
*IDC **16** 19:33:27.8±2.4, 2°.65N×128°.36E, h114km±24km, mb3.5/10, mbtmp3.9/12, MS3.0/2, Error ellipse: s-maj=40.0km s-min=12.4km az=68.0*

ISC 16 19:33:21.5±0.6, 2°.56N±0°.06×127°.98E±0°.08, h51km, n63, σ1§24/53, mb4.2/16, 1C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.88**	**199**		**Pn**	**19 33 52.5**	**+1.2**
TNTI	**Ternate**	**1.88**	**199**	P	**Pn**	**19 33 52.4**	**+1.2**
SGSI	**Sangihe**	**2.69**	**295**	P	**Pn**	**19 34 03.2**	**+0.9**
SGSI				S	**Sn**	**19 34 33.5**	**-0.1**
LBMI	**Labuha**	**3.21**	**189**	P	**Pn**	**19 34 11.3**	**+1.8**
KMSI	**Cibinong**	**4.46**	**244**	P	**Pn**	**19 34 28.2**	**+1.7**
GSPH	**General Santos**	**4.62**	**319⇑**	*eP*	**Pn**	**19 34 28.0**	**-1.0**
SWI	**Sorong**	**4.73**	**136**	P	Pn	19 34 34.4	+4.1
SIJI	**Sorong**	**4.74**	**136**	P	Pn	19 34 34.6	+4.2
	11nm,0.3s,baz=331,slow=18,SNR=26						
SIJI				S	**Sn**	**19 35 27.1**	**+3.0**
	13nm,0.5s,baz=291,slow=5.8,SNR=7.9						
SANI	**Sanana**	**4.99**	**203**	P	**Pn**	**19 34 34.6**	**+0.7**
DAV	**Davao City (W)**	**5.08**	**332**	LR	LR	19 36 15.2	
	comp=Z,55nm,18.5s,baz=118,slow=32						
LUWI	**Luwuk**	**6.32**	**236**	Pn	**Pn**	**19 34 52.3**	**+0.3**
LUWI	**Luwuk**	**6.32**	**236**	P	**Pn**	**19 34 53.7**	**+1.6**
	0.6nm44nm,0.7s						
MRSI	**Marisa**	**6.38**	**251**	P	**Pn**	**19 34 55.0**	**+2.1**
	0.3nm856nm83nm,0.8s						
FAKI	**Fak Fak**	**6.92**	**142**	Pn	Pn	19 35 04.2	+3.8
FAKI	**Fak Fak**	**6.92**	**142**	P	Pn	19 35 04.1	+3.7
	0.2nm26nm,0.7s						
APSI	**Ampana**	**7.21**	**241**	P	**Pn**	**19 35 04.8**	**+0.5**
	0.2nm36nm,1.0s						
TOLI2	**Tolitoli**	**7.33**	**259**		**Pn**	**19 35 06.3**	**+0.3**
MPSI	**Mapaga**	**8.37**	**255**	P	**Pn**	**19 35 20.4**	**+0.1**
	10nm,0.7s						
MYLDM	**Lahad Datu**	**9.80**	**286**		**Pn**	**19 35 41.4**	**+1.5**
TTSI	**Tana Toraja**	**9.88**	**236**	P	**Pn**	**19 35 40.2**	**-0.7**
	18nm,0.6s						
SPSI	**Sidrap Palu**	**10.46**	**232**	P	**Pn**	**19 35 50.2**	**+1.4**
	16nm,0.9s						
MMRI	**Maumere**	**12.51**	**207**	Pn	**Pn**	**19 36 17.7**	**+0.8**
BATI	**Baumata**	**13.39**	**199**	P	**P**	**19 36 36.7**	**-0.3**
	6.8nm,0.5s,baz=82,slow=15,SNR=1.4						
MTN	**Manton Dam**	**15.62**	**168**	Pn	**Pn**	**19 36 58.2**	**-0.3**
MTN				IAmb	IAmb	19 37 19.4	
	comp=Z,20nm,1.5s						
SBUM	**Sibu**	**15.74**	**270**	P	**Pn**	**19 37 01.5**	**+1.5**
SBUM				IAmb	IAmb	19 37 05.2	
	comp=Z,21nm,0.8s						
KSM	**Kuching**	**17.69**	**267**	P	**Pn**	**19 37 24.5**	**+0.1**
KSM				IAmb	IAmb	19 37 27.2	
	comp=Z,12nm,0.8s						
KNRA	**Kununurra**	**18.14**	**178**	P	**Pn**	**19 37 30.4**	**+0.6**
KNRA				IAmb	IAmb	19 37 43.9	
	comp=Z,20nm,1.5s						
YHNB	**Yeheng**	**22.88**	**344**	P	**P**	**19 38 22.4**	**+1.4**
WRAB	**Tennant Creek**	**23.21**	**165**	P	**P**	**19 38 24.4**	**+0.2**
WRAB				IAmb	IAmb	19 38 33.0	
	comp=Z,8.0nm,0.8s						
WRA	**Warramunga Arr**	**23.22**	**165**	P	**P**	**19 38 24.2**	**-0.2**
	comp=Z,2.8nm,0.4s,baz=334,slow=11,SNR=41						
WRA				PcP	**PcP**	**19 42 09.4**	**-1.8**
	comp=Z,0.3nm,0.8s,baz=342,slow=1.3,SNR=1.6						
WRA	**Warramunga Arr**	**23.22**	**165**	P	**P**	**19 38 22.9**	**-1.5**
WRA				IAmb	IAmb	19 38 25.3	
	comp=Z,0.6nm,1.2s						
WB2	**Warramunga Arr**	**23.22**	**165**	P	**P**	**19 38 24.0**	**-0.4**
WB2				IAmb	IAmb	19 38 33.1	
	comp=Z,9.5nm,0.8s						
MBWA	**Marble Bar**	**24.92**	**199**	P	**P**	**19 38 39.0**	**-0.9**
MBWA				IAmb	IAmb	19 38 41.5	
	comp=Z,8.2nm,1.1s						
PSA00	**Pilbara Seismi**	**25.27**	**198**	P	**P**	**19 38 42.2**	**-1.0**
PSA00				IAmb	IAmb	19 38 42.5	
	comp=Z,7.2nm,0.8s						
PSA00	**Pilbara Seismi**	**25.27**	**198**	P	**P**	**19 38 40.3**	**-2.9**
PSA00				IAmb	IAmb	19 39 09.4	
	comp=Z,5.6nm,0.9s						
AS31	**Alice Springs**	**26.70**	**168**	P	**P**	**19 38 56.0**	**-0.1**
ASAR	**Alice Springs**	**26.70**	**168**	P	**P**	**19 38 55.9**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=347,slow=7.2,SNR=12						
ASAR				PcP	**PcP**	**19 42 18.4**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=3.2,slow=1.8,SNR=5.9						
	comp=Z,0.3nm,0.3s						
CMAR	**Chiang Mai Arr**	**32.53**	**301**	P	**P**	**19 39 51.1**	**+3.2**
	comp=Z,0.4nm,0.6s,baz=122,slow=6.6,SNR=3.0						
	comp=Z,0.4nm,0.6s						
MORW	**Morawa**	**33.47**	**199**	P	**P**	**19 39 54.0**	**-1.9**
KSRS	**Korea Array**	**34.72**	**360**	P	**P**	**19 40 06.2**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=175,slow=9.4,SNR=2.4						
	comp=Z,0.5nm,0.5s						
BBOO	**Buckleboo**	**36.00**	**168**	P	**P**	**19 40 17.5**	**-0.2**
STKA	**Stephens Creek**	**36.61**	**160**	P	**P**	**19 40 23.5**	**+0.5**
	comp=Z,4.7nm,0.6s,baz=332,slow=9.4,SNR=12						
	comp=Z,4.7nm,0.6s						
STKA	**Stephens Creek**	**36.61**	**160**	P	**P**	**19 40 23.3**	**+0.3**
NWAO	**Narrogin (SRO)**	**36.73**	**195**	P	**P**	**19 40 22.5**	**-1.4**
H11S3	**WAKE ISLAND Hy**	**41.08**	**65**	T	T	20 24 20.3	
	baz=252						
H11S2	**WAKE ISLAND Hy**	**41.10**	**65**	T	T	20 24 24.5	
	baz=252						
H11S1	**WAKE ISLAND Hy**	**41.10**	**65**	T	T	20 24 23.8	
	baz=252						
H11N1	**WAKE ISLAND Hy**	**41.65**	**63**	T	T	20 25 00.9	
	baz=250,slow=75,SNR=16						
H11N2	**WAKE ISLAND Hy**	**41.66**	**63**	T	T	20 25 01.8	
	baz=250,slow=75,SNR=6.6						
H11N3	**WAKE ISLAND Hy**	**41.67**	**63**	T	T	20 25 02.3	
	baz=250,slow=75,SNR=10						
KLR	**Kul'dur**	**46.61**	**3**	LR	LR	20 03 37.0	
	comp=Z,38nm,18.1s,baz=190,slow=39						
SONM	**Songino Array**	**48.80**	**341**	P	**P**	**19 42 01.1**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=152,slow=8.7,SNR=3.5						
	comp=Z,0.4nm,0.6s						
SONM	**Songino Array**	**48.80**	**341**	IAmb	IAmb	19 42 03.9	
	comp=Z,1.1nm,1.2s						
MK31	**Makanchi Array**	**59.22**	**325**	P	**P**	**19 43 18.4**	**+0.9**
MK31				IAmb	IAmb	19 43 20.2	
	comp=Z,2.3nm,1.2s						
MKAR	**Makanchi Array**	**59.22**	**325**	P	**P**	**19 43 18.5**	**+1.0**
	comp=Z,0.8nm,0.3s,baz=118,slow=8.1,SNR=25						
	comp=Z,0.8nm,0.3s						
MAKZ	**Makanchi**	**59.41**	**325**	P	**P**	**19 43 19.4**	**+0.5**
ZALV	**Zalesovo Beam**	**62.19**	**333**	P	**P**	**19 43 36.3**	**-1.2**
	comp=Z,0.3nm,0.4s,baz=134,slow=6.2,SNR=2.0						
	comp=Z,0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**63.39**	**327**	P	**P**	**19 43 46.0**	**+0.3**
	comp=Z,1.4nm,0.8s,baz=128,slow=5.8,SNR=15						
	comp=Z,1.4nm,0.8s						
KURK	**Kurchatov**	**63.39**	**327**	P	**P**	**19 43 46.3**	**+0.6**
KURK				IAmb	IAmb	19 43 49.7	
	comp=Z,3.1nm,0.8s						
TIXI	**Tiksi**	**68.99**	**0**	P	**P**	**19 44 21.5**	**+0.3**
ABKAR	**Akbulak array**	**73.84**	**321**	P	**P**	**19 44 49.7**	**-1.1**
VNDA	**Vanda**	**82.12**	**173**	P	**P**	**19 45 34.9**	**-1.3**
	comp=Z,1.0nm,0.7s,baz=331,slow=5.9,SNR=6.4						
	comp=Z,1.0nm,0.7s						
VNDA	**Vanda**	**82.12**	**173**	IAmb	IAmb	19 45 42.5	
	comp=Z,5.9nm,1.4s						

*JSN **16** 19:41:04.4±2.4, 17°.85N×79°.46W, h29km±999km, MD4.0*
*SSNC **16** 19:41:04.3±1.8, 18°.53N×79°.87W, h20km±221km, MD3.2, ML3.1*

ISC 16 19:40:57.6±3.6, 18°.0N±0°.2×79°.8W±0°.2, h35km, n7, σ2§05/5, 1D, North of Honduras

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MCJ	**Malvern**	**2.04**	**92**	*i* P	**Pn**	**19 41 29.8**	**+0.3**
MCJ				*i* S	**Sn**	**19 41 51.4**	**-2.4**
CVJ	**Coleyville**	**2.19**	**84**	*i* P	**Pn**	**19 41 33.3**	**+1.7**
STH	**Stony Hill**	**2.87**	**88**	⇓*i* P	Pn	19 41 44.1	+3.2
GWJ	**Greenwich**	**2.95**	**88**	*i* P	Pn	19 41 45.5	+3.4
LMGC	**Las Mercedes**	**3.37**	**52**	*eP*	Pn	19 41 50.4	+2.7
LMGC				*eS*	**Sn**	**19 42 26.6**	**+0.2**
LMGC				IAML		19 42 33.1	
	comp=E,26nm,0.1s						
LMGC				IAML		19 42 33.5	
	comp=N,43nm,0.1s						
CCCC	**Cccc**	**3.73**	**31**	*eP*	Pn	19 42 02.1	+9.5
MGV	**Manicaragua**	**4.09**	**358**	*eP*	**Pn**	**19 41 57.6**	**0.0**

MAN 16 19:46:25.2, 13°.67N×120°.61E, h95km, mb4.4, ML3.2, MS3.0, 5C-1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.36**	**280⇑**	*eP*	Pn	19 46 41.6	+2.3
LUBP				*eS*		19 46 52.7	
PGP	**Puerto Galera**	**0.37**	**117⇓**	*eP*	Pn	19 46 41.0	+1.5
PGP				*i* S		19 46 52.8	
MACP	**Maragondon, Ca**	**0.60**	**10⇑**	*eP*	Pn	19 46 42.7	+1.7
MACP				*eS*		19 46 55.4	
SMPP	**San Manuel, Pa**	**2.46**	**1⇑**	*eP*	Pn	19 47 04.0	+0.6
SMPP				*eS*		19 47 29.8	
ENPP	**El Nido**	**2.71**	**205⇑**	*eP*	Pn	19 47 08.4	+1.5
ENPP				*eS*		19 47 39.0	
BOLP	**Bolinao**	**2.77**	**346⇑**	*eP*	Pn	19 47 08.4	+0.8
BOLP				*eS*		19 47 38.5	

IDC 16 20:09:17.8±3.7, 6°.08S×149°.55E, h0km, mb3.2/2, mbtmp3.5/3, ML1.7/1, Error ellipse: s-maj=128.4km s-min=38.8km az=116.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.07**	**216**	Pn	Pn	20 10 23.3	+2.0
	3.7nm,0.3s,baz=43,slow=6.1,SNR=8.1						
PMG				Sn	Sn	20 11 08.4	-1.3
	12nm,0.3s,baz=96,slow=19,SNR=14						
	10.0nm,0.2s						
WRA	**Warramunga Arr**	**20.21**	**226**	P	P	20 13 54.5	0.0
	2.0nm,0.8s,baz=51,slow=11,SNR=14						
	2.0nm,0.8s						
ASAR	**Alice Springs**	**23.08**	**219**	P	P	20 14 24.6	-0.7
	0.2nm,0.5s,baz=54,slow=9.6,SNR=10						
	0.2nm,0.5s						
TORD	**Torodi Ar. Bea**	**147.57**	**285**	PKPbc	PKPbc	20 29 04.6	-0.6
	0.2nm,0.6s,baz=76,slow=3.0,SNR=1.9						

MAN 16 20:18:54.8, 7°.86N×126°.43E, h6km, mb3.9, ML2.6, MS2.1, Mindanao

IDC 16 20:23:33.9±7.8, 15°.45S×172°.92W, h0km, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=351.6km s-min=23.2km az=139.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**1.89**	**36**	Pn	Pn	20 24 05.8	-1.7
	17nm,0.3s,baz=135,slow=1.6,SNR=18						
AFI				Sn	Sn	20 24 27.3	-4.8
	128nm,0.3s,baz=258,slow=8.6,SNR=13						
H11N3	**WAKE ISLAND Hy**	**40.19**	**330**	T	T	21 14 06.4	
	baz=148,slow=74,SNR=3.3						
H11N1	**WAKE ISLAND Hy**	**40.19**	**330**	T	T	21 14 04.7	
	baz=148						
H11N2	**WAKE ISLAND Hy**	**40.21**	**330**	T	T	21 14 06.8	
	baz=148,slow=74,SNR=4.9						
WRA	**Warramunga Arr**	**50.29**	**257**	P	P	20 32 32.0	-0.6
	0.3nm,0.6s,baz=98,slow=6.2,SNR=14						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**50.54**	**252**	P	P	20 32 34.0	-0.5
	3.3nm,0.6s,baz=87,slow=7.7,SNR=71						
	3.3nm,0.6s						
ILAR	**Eielson Array**	**82.41**	**11**	P	P	20 35 58.0	+0.5
	0.5nm,0.6s,baz=211,slow=4.9,SNR=6.1						
	0.5nm,0.6s						
BRTR	**Keskin Array B**	**146.49**	**321**	PKPbc	PKPab	20 43 18.2	-0.3
	1.5nm,0.8s,baz=72,slow=1.8,SNR=8.2						

MAN 16 20:35:33.9, 10°.84N×122°.62E, h11km, mb4.4, ML3.2, MS3.0, 6C, Panay

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAP	**San Jose, Anti**	**0.67**	**262⇑**	*eP*	Pn	20 35 50.0	+5.0
RCP	**Roxas**	**0.72**	**10⇑**	*eP*	Pn	20 35 47.7	+0.4
RCP				*eS*		20 35 58.9	
CNOP	**Candoni, Negro**	**1.01**	**179⇑**	*iP*	Pb	20 35 52.4	+0.3
CNOP				*i* S		20 36 42.2	
LLP	**Lapu-Lapu**	**1.42**	**111⇑**	*iP*	Pn	20 35 59.6	+0.8
LLP				*i* S		20 36 18.5	
TBP	**Tagbilaran**	**1.67**	**133**	*eP*	Pn	20 36 03.0	+0.9
MSLP	**Maasin**	**2.31**	**107⇑**	*eP*	Pn	20 36 13.0	+2.0
ENPP	**El Nido**	**3.16**	**277⇑**	*eP*	Pb	20 36 24.2	+2.0
ENPP				*eS*		20 36 59.7	

*JMA **16** 20:37:25.8±0.1, 24°.5N±0°.2×121°.9E±0°.3, h26km, MV3.3/11, TAIWAN REGION*
*TAP **16** 20:37:25.5, 24°.57N×121°.88E, h11km, ML3.5, B*

ISC 16 20:37:25.2±0.8, 24°.56N±0°.01×121°.92E±0°.02, h9km±6km, n120, σ0§66/198, 14C-14D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWC	**Suao**	**0.08**	**306⇑**	*iP*	**Pg**	**20 37 27.6**	**+0.1**
	baz=334						
TWC				*e*S	**Sg**	**20 37 28.7**	**-0.4**
	baz=334						
EWUT	**Wuta**	**0.17**	**229⇓**	*iP*	**Pg**	**20 37 29.4**	**+0.5**
	baz=207						
EWUT				*i* S	**Sg**	**20 37 31.9**	**+0.5**
	baz=207						
NDS	**Dongshan**	**0.20**	**291⇑**	*iP*	**Pg**	**20 37 29.6**	**+0.1**
	baz=293						
NDS				*i* S	**Sg**	**20 37 32.0**	**-0.2**
	baz=293						
ENA	**Nanau**	**0.21**	**232⇓**	*iP*	**Pg**	**20 37 29.9**	**+0.4**
	baz=211						
ENA				*i* S	**Sg**	**20 37 32.8**	**+0.3**
	baz=211						
ILA	**Ilan**	**0.26**	**322⇑**	*iP*	**Pg**	**20 37 31.0**	**+0.5**
	baz=325						
ILA				*e*S	**Sg**	**20 37 33.8**	**-0.2**
	baz=325						
TWE	**Neicheng**	**0.28**	**305⇑**	*iP*	**Pg**	**20 37 31.0**	**+0.1**
	baz=309						
TWE				*e*S	**Sg**	**20 37 34.5**	**-0.2**
	baz=309						
EGS		**0.28**	**2**	*eP*	**Pg**	**20 37 31.6**	**+0.6**
	baz=18						
EGS				*e*S	**Sg**	**20 37 35.5**	**+0.7**
	baz=18						
EHP	**Heping Village**	**0.30**	**214**	*eP*	**Pg**	**20 37 31.6**	**+0.4**
	baz=203						
EHP				*e*S	**Sg**	**20 37 35.6**	**+0.4**
	baz=203						
NTC	**Toucheng**	**0.30**	**344**	*eP*	**Pg**	**20 37 31.8**	**+0.5**
	baz=352						
NTC				*e*S	**Sg**	**20 37 35.3**	**-0.1**
	baz=352						
LATG	**Datong**	**0.36**	**266⇑**	*iP*	**Pg**	**20 37 32.5**	**+0.1**
	baz=263						
LATG				*i* S	**Sg**	**20 37 36.7**	**-0.5**
	baz=263						
FUSB	**Fushanzhiwuyua**	**0.36**	**303⇑**	*iP*	**Pg**	**20 37 32.7**	**+0.3**
	baz=305						
FUSB				*i* S	**Sg**	**20 37 37.3**	**0.0**
	baz=305						
TIPB	**Shuangxi**	**0.42**	**348⇑**	*iP*	**Pg**	**20 37 33.8**	**+0.3**
	baz=354						
TIPB				*i* S	**Sg**	**20 37 38.7**	**-0.3**
	baz=354						
NWLT	**Wulai**	**0.44**	**300⇑**	*iP*	**Pg**	**20 37 34.0**	**+0.2**
	baz=301						
NWLT				*e*S	**Sg**	**20 37 39.3**	**-0.3**
	baz=301						
TWB1	**Santiao Chiao**	**0.45**	**8⇓**	*iP*	**Pg**	**20 37 34.3**	**+0.3**
	baz=15						
TWB1				S	**Sg**	**20 37 39.5**	**-0.5**
	baz=15						
ETL	**Fush Village**	**0.48**	**214⇓**	*iP*	**Pg**	**20 37 35.0**	**+0.3**
	baz=207						
ETL				*e*S	**Sg**	**20 37 41.7**	**+0.7**
	baz=207						
NACB	**Ninganchiao**	**0.49**	**218⇓**	*iP*	**Pg**	**20 37 34.8**	**+0.1**
	baz=202						
NACB				S	**Sg**	**20 37 41.0**	**-0.1**
	baz=202						
NNSB	**Datong**	**0.51**	**255⇓**	*iP*	**Pg**	**20 37 35.1**	**0.0**
	baz=251						
NNSB				*i* S	**Sg**	**20 37 41.4**	**-0.5**
	baz=251						
YHNB	**Yeheng**	**0.51**	**283**	P	**Pg**	**20 37 35.5**	**+0.3**
YHNB	**Yeheng**	**0.51**	**283⇑**	*iP*	**Pg**	**20 37 35.4**	**+0.2**
	baz=288						
YHNB				*e*S	**Sg**	**20 37 41.0**	**-0.9**
	baz=288						
NNS	**Nan Shan**	**0.51**	**257⇓**	*iP*	**Pg**	**20 37 35.2**	**-0.1**
	ba

NFF	**Wufeng Townshi** baz=265	**0.74 276**	*e*P	**Pg**	**20 37 39.8**	**+0.3**
NFF	baz=265		*e*S	**Sg**	**20 37 49.0**	**-0.1**
NTST	**Danshui** baz=335	**0.74 325**	*e*P	**Pb**	**20 37 40.7**	**+0.4**
NTST	baz=335		*e*S	**Sb**	**20 37 50.9**	**+0.3**
TWT	**Tachien** baz=234	**0.75 246**	*e*P	**Pg**	**20 37 39.9**	**+0.2**
TWT	baz=234		*e*S	**Sg**	**20 37 49.6**	**+0.2**
TDCB	**Techi** baz=234	**0.76 246**	*e*P	**Pg**	**20 37 39.2**	**-0.8**
TDCB	baz=234		*e*S	**Sg**	**20 37 49.0**	**-0.9**
TWY	**Chenhua** baz=333	**0.77 338**	*i* P	**Pb**	**20 37 41.0**	**+0.1**
TWY	baz=333		*e*S	**Sg**	**20 37 50.0**	**-0.2**
NCU	**National Centr** baz=310	**0.78 302**	*e*P	**Pb**	**20 37 41.5**	**+0.4**
NCU	baz=310		*e*S	**Sn**	**20 37 54.1**	**-0.2**
NCUH	**Zhongli** baz=310	**0.78 301**	P	**Pb**	**20 37 41.9**	**+0.8**
NCUH	baz=310		*e*S	**Sn**	**20 37 53.7**	**-0.7**
LIOB	**Emei** baz=267	**0.83 276**	*i* P	**Pb**	**20 37 42.0**	**+0.1**
LIOB	baz=267		*e*S	**Sg**	**20 37 52.5**	**+0.4**
NSTT	**Nanjuang** baz=261	**0.84 275**⇑	*i*P	**Pg**	**20 37 42.0**	**+0.6**
NSTT	baz=261		*e*S	**Sg**	**20 37 51.4**	**-1.1**
CHGB	**Renai** baz=238	**0.84 234**	*e*P	**Pg**	**20 37 41.3**	**-0.2**
CHGB	baz=238		*e*S	**Sg**	**20 37 52.5**	**-0.1**
ESL	**Shilin** baz=206	**0.87 211**⇓	*i*P	**Pg**	**20 37 41.7**	**-0.2**
ESL	baz=206		*e*S	**Sg**	**20 37 53.4**	**+0.2**
SBCB	**Hsinchu** baz=277	**0.88 285**	*e*P	**Pn**	**20 37 43.8**	**-0.1**
SBCB	baz=277		*e*S	**Sn**	**20 37 56.2**	**-0.6**
HSN	**Hsinchu** baz=286	**0.90 286**	*e*P	**Pb**	**20 37 43.5**	**+0.4**
HSN	baz=286		*e*S	**Sb**	**20 37 55.5**	**+0.4**
OWD	**Renai** baz=224	**0.91 229**⇓	*i*P	**Pg**	**20 37 42.7**	**-0.1**
OWD	baz=224		*e*S	**Sg**	**20 37 53.9**	**-0.7**
NHW	**Xinwu Township** baz=298	**0.91 299**	*e*P	**Pg**	**20 37 42.8**	**0.0**
NHW	baz=298		*e*S	**Sb**	**20 37 56.1**	**+0.6**
WUSB	**Renai** baz=228	**0.93 233**⇓	*i*P	**Pg**	**20 37 43.0**	**-0.1**
WUSB	baz=228		*e*S	**Sg**	**20 37 55.2**	**0.0**
WHP	**Taichung City** baz=249	**0.93 253**	*e*P	**Pg**	**20 37 43.5**	**+0.3**
WHP	baz=249		*e*S	**Sg**	**20 37 54.5**	**-0.9**
JYNG	**Yonagunijimaku**	**0.94 96**	P	**Pg**	**20 37 43.8**	**+0.5**
JYNG			*e*S	**Sb**	**20 37 56.9**	**+0.6**
EGFH	**Guangfu** baz=209	**1.00 207**	*e*P	**Pg**	**20 37 44.2**	**-0.2**
EGFH	baz=209		*e*S	**Sb**	**20 37 58.1**	**+0.3**
YOJ	**Yonaguni jima**	**1.00 95**	P	**Pg**	**20 37 44.9**	**+0.4**
YOJ	**Yonaguni jima** baz=97	**1.00 95**	*i* P	**Pg**	**20 37 44.6**	**+0.2**
YOJ	baz=97		*i* S	**Sg**	**20 37 58.0**	**+0.6**
YOJ	**Yonaguni jima**	**1.00 95**	P	**Pg**	**20 37 44.8**	**+0.4**
YOJ			*e*S	**Sg**	**20 37 58.0**	**+0.6**
NMLH	**Miaoli** baz=259	**1.03 269**	*e*P	**Pn**	**20 37 46.5**	**+0.6**
WCS	**Beigang Elemen** baz=246	**1.05 242**	*e*P	**Pg**	**20 37 45.2**	**-0.2**
WCS	baz=246		*e*S	**Sg**	**20 37 59.0**	**-0.1**
NSY	**Sanyi** baz=260	**1.07 263**	*e*P	**Pn**	**20 37 47.2**	**+0.8**
NSY	baz=260		*e*S	**Sn**	**20 38 01.3**	**-0.1**
TWQ1	**Liyutan** baz=256	**1.07 259**	*e*P	**Pn**	**20 37 46.6**	**+0.2**
TWQ1	baz=256		*e*S	**Sb**	**20 38 00.8**	**+0.8**
PCYT	**Pengchaiyu** baz=11	**1.07 7**	*e*P	**Pg**	**20 37 45.6**	**-0.3**
VWDT	**VWDT** baz=226	**1.07 222**	P	**Pg**	**20 37 45.8**	**-0.1**
VWDT	baz=226		*e*S	**Sg**	**20 38 00.1**	**+0.2**
SMLT	**Sun Moon Lake** baz=222	**1.15 234**	*e*P	**Pb**	**20 37 47.3**	**-0.1**
SMLT	baz=222		*e*S	**Sg**	**20 38 02.6**	**+0.3**
HGSD	**Ruisui** baz=213	**1.16 203**	*e*P	**Pb**	**20 37 47.2**	**-0.2**
HGSD	baz=213		*e*S	**Sn**	**20 38 04.1**	**+0.6**
TYC	**Yuchr** baz=224	**1.17 236**	P	**Pb**	**20 37 47.7**	**0.0**
TYC	baz=224		*e*S	**Sb**	**20 38 02.5**	**-0.4**
SSLB	**Suanglung**	**1.17 229**	P	**Pb**	**20 37 47.7**	**0.0**
SSLB	**Suanglung** baz=225	**1.17 229**	P	**Pb**	**20 37 47.2**	**-0.5**
SSLB	baz=225		*e*S	**Sb**	**20 38 01.7**	**-1.3**
EHY	**Hungye** baz=208	**1.18 208**	P	**Pb**	**20 37 47.5**	**-0.4**
EHY	baz=208		*e*S	**Sb**	**20 38 02.2**	**-1.1**
WDJ	**Dajia District** baz=259	**1.19 260**	*e*P	**Pg**	**20 37 48.8**	**+0.7**
TCU	**Taichung** baz=255	**1.21 250**	*e*P	**Pg**	**20 37 49.8**	**+1.3**
TCU	baz=255		*e*S	**Sn**	**20 38 06.8**	**+2.0**
YULB	**Yu-li** baz=212	**1.29 206**	*e*P	**Pn**	**20 37 49.6**	**+0.1**
YULB	baz=212		*e*S	**Sg**	**20 38 07.8**	**+0.9**
WJS	**Zhushan** baz=224	**1.31 236**	*e*P	**Pg**	**20 37 51.3**	**+0.8**
WNT	**Mingjian** baz=224	**1.32 239**	*e*P	**Pg**	**20 37 51.8**	**+1.2**
WNT	baz=224		*e*S	**Sg**	**20 38 10.7**	**+3.0**
EYUL	**Yuli** baz=210	**1.33 205**	*e*P	**Pn**	**20 37 50.1**	**+0.1**
EYUL	baz=210		*e*S	**Sg**	**20 38 08.4**	**+0.4**
WCHH	**Zhanghua** baz=247	**1.33 249**	*e*P	**Pb**	**20 37 50.5**	**+0.1**
YUS	**Yu-Shan** baz=204	**1.39 220**	*e*P	**Pn**	**20 37 51.4**	**+0.2**
ALS	**Alishan** baz=232	**1.46 225**	*e*P	**Pb**	**20 37 53.2**	**+0.4**
ALS	baz=232		*e*S	**Sb**	**20 38 11.8**	**+0.2**
FULB	**Fuli** baz=213	**1.47 203**	*e*P	**Pg**	**20 37 53.6**	**+0.1**
CHN5	**Tsauling** baz=226	**1.49 230**	*e*P	**Pg**	**20 37 54.4**	**+0.5**
CHN5	baz=226		*e*S	**Sg**	**20 38 15.2**	**+2.0**
WDLH	**Douliu** baz=232	**1.53 236**	*e*P	**Pg**	**20 37 54.6**	**-0.1**
WDLH	baz=232		*e*S	**Sg**	**20 38 15.9**	**+1.4**
WRL	**Guolierlin Hig** baz=242	**1.56 245**	*e*P	**Pb**	**20 37 53.9**	**-0.3**
WRL	baz=242		*e*S	**Sg**	**20 38 15.4**	**+0.1**
ELDTW	**Lidau** baz=209	**1.60 211**	*e*P	**Pn**	**20 37 54.3**	**+0.5**
WTK	**Tuku** baz=235	**1.65 239**	*e*P	**Pb**	**20 37 56.2**	**+0.4**
WTK	baz=235		*e*S	**Sg**	**20 38 18.7**	**+0.4**
IRIF	**Iriomote-Funau**	**1.66 97**	P	**Pn**	**20 37 54.1**	**-0.5**
IRIF			*e*S	**Sn**	**20 38 15.5**	**-0.6**
CHN2	**Minshiung** baz=244	**1.67 233**	*e*P	**Pg**	**20 37 57.3**	**0.0**
EDH	**Donghe** baz=180	**1.68 200**	*e*P	**Pn**	**20 37 53.9**	**-0.9**
EDH	baz=180		*e*S	**Sn**	**20 38 16.7**	**+0.3**
TPUB	**Ta-pu**	**1.72 224**	P	**Pg**	**20 37 58.7**	**+0.4**
TPUB	**Ta-pu** baz=204	**1.72 224**	*e*P	**Pb**	**20 37 57.1**	**0.0**
CHY	**Chiayi** baz=244	**1.73 233**	*e*P	**Pg**	**20 37 58.8**	**+0.3**
STYH	**Taoyuan** baz=201	**1.74 217**	*e*P	**Pb**	**20 37 57.3**	**0.0**
WTP	**Ta-pu** baz=203	**1.77 223**	*e*P	**Pb**	**20 37 58.8**	**+0.8**
WTP	baz=203		*e*S	**Sb**	**20 38 21.5**	**+1.1**
HATJ	**Hateruma jima**	**1.79 106**	*e*S	**Sn**	**20 38 19.8**	**+0.6**
LONT	**Longtian** baz=201	**1.80 204**	*e*P	**Pb**	**20 37 58.5**	**+0.1**
TWK	**Hsinying** baz=206	**1.84 226**	*e*P	**Pb**	**20 37 59.8**	**+0.7**
WSL	**Shuilin Townsh** baz=248	**1.86 237**	*e*P	**Pb**	**20 37 58.8**	**-0.6**
SNST	**Tainan City** baz=205	**1.87 225**	*e*P	**Pb**	**20 38 00.1**	**+0.5**
SNST	baz=205		*e*S	**Sg**	**20 38 24.8**	**-0.5**
CHN1	**Nanshi** baz=205	**1.87 223**	*e*P	**Pb**	**20 38 00.2**	**+0.5**
TWGBT	**Beinan** baz=209	**1.90 204**	*e*P	**Pn**	**20 37 57.4**	**-0.4**
TWG	**Pinlang** baz=209	**1.90 204**	*e*P	**Pb**	**20 37 59.5**	**-0.6**
SGST	**Jiashian** baz=202	**1.92 220**	*e*P	**Pb**	**20 38 00.1**	**-0.3**
ICHU	**Yijhu** baz=228	**1.92 232**	*e*P	**Pb**	**20 37 59.7**	**-0.7**
ICHU	baz=228		*e*S	**Sg**	**20 38 26.8**	**-0.1**
LDUT	**Ludao** baz=190	**1.92 193**	*e*P	**Pn**	**20 37 56.9**	**-1.3**
JKRS	**Kuro-shima**	**1.93 99**	P	**Pn**	**20 37 58.4**	**+0.2**
JKRS			*e*S	**Sn**	**20 38 21.9**	**-0.7**
JIJ	**Ishigaki jima**	**2.03 95**	P	**Pn**	**20 37 59.1**	**-0.6**
JIJ			S	**Sn**	**20 38 22.8**	**-2.4**
SCST	**Cishan** baz=216	**2.12 218**	*e*P	**Pb**	**20 38 04.5**	**+0.6**
SSD	**Sandimen** baz=210	**2.16 213**	*e*P	**Pb**	**20 38 04.1**	**-0.4**
JISG	**Ishigakijimahi**	**2.17 89**	P	**Pn**	**20 38 01.1**	**-0.6**
JISG			*e*S	**Sn**	**20 38 28.3**	**-0.4**
TSMG	**Majia** baz=209	**2.19 213**	*e*P	**Pb**	**20 38 03.9**	**-1.1**
MASBT	**Mashibuluo** baz=208	**2.27 212**	*e*P	**Pn**	**20 38 04.0**	**+1.1**
EAST	**Anshuo** baz=190	**2.38 205**	*e*P	**Pn**	**20 38 06.2**	**+1.7**
TAW	**Tawu** baz=189	**2.39 203**	*e*P	**Pb**	**20 38 09.1**	**+0.7**
MATB	**Ma-tsu** baz=311	**2.39 312**	*e*P	**Pn**	**20 38 03.5**	**-1.1**
SSPT	**Xinbi** baz=208	**2.41 211**	*e*P	**Pb**	**20 38 08.8**	**0.0**
WDGT	**Dungji** baz=237	**2.44 238**	*e*P	**Pb**	**20 38 07.8**	**-1.6**
SCZT	**Fangliau** baz=205	**2.48 209**	*e*P	**Pb**	**20 38 08.3**	**-1.7**
JTJ	**Tarama**	**2.53 88**	S	**Sn**	**20 38 37.8**	**+0.3**
VCHM	**Qimei** baz=239	**2.65 240**	*e*P	**Pb**	**20 38 11.3**	**-1.6**
LYJJ	**Jianjiangzhen** baz=315	**2.78 316**	*e*P	**Pn**	**20 38 08.8**	**-1.2**
XPSS	**Dashiqiu** baz=327	**2.83 327**	*e*P	**Pn**	**20 38 09.9**	**-0.7**
MHZQ	**Yeshan** baz=299	**3.03 301**	*e*P	**Pn**	**20 38 13.6**	**+0.1**
AXDP	**Jialang** baz=274	**3.61 276**	*e*P	**Pn**	**20 38 20.8**	**-0.5**
ZPLA	**Ao Xicun** baz=259	**3.86 262**	*e*P	**Pn**	**20 38 23.8**	**-1.0**

IDC **16** *20:40:21.7±52.0,* **23°.24S×178°.26W, h0km, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=950.7km s-min=157.8km az=87.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek** 0.8nm,0.4s,baz=114,slow=10.0,SNR=3.8 0.8nm,0.4s	**36.45**	**247**	P	P		20 47 27.6	-0.8
ASAR	**Alice Springs** 0.4nm,0.3s,baz=98,slow=7.6,SNR=14 0.4nm,0.3s	**43.72**	**260**	P	P		20 48 28.7	-0.3
WRA	**Warramunga Arr** 1.1nm,0.3s,baz=101,slow=8.3,SNR=86 1.1nm,0.3s	**44.05**	**265**	P	P		20 48 32.1	+0.5

TAP **16** *20:45:11.2,* **24°.13N×121°.64E, h9km, ML1.0, B, Taiwan**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ETL	**Fush Village** baz=334	**0.03**	**335**	P	Pg		20 45 13.4	+0.5
ETL	baz=334			*i* S	Sg		20 45 14.7	+0.6
NACB	**Ninganchiao** baz=318	**0.06**	**318**	P	Pg		20 45 13.5	+0.4
NACB	baz=318			*i* S	Sg		20 45 15.3	+0.8
TWD	**Chiawan** baz=211	**0.06**	**218**	P	Pg		20 45 13.4	+0.3
TWD	baz=211			*i* S	Sg		20 45 15.2	+0.7
ETLH	**Xiulin Townshi** baz=298	**0.16**	**298**	*i* P	Pg		20 45 15.6	+0.9
ETLH	baz=298			S	Sg		20 45 18.8	+1.7
NNSB	**Datong** baz=321	**0.38**	**322**	P	Pb		20 45 19.6	-0.6
NNSH	**Datong** baz=321	**0.38**	**322**	P	Pb		20 45 19.5	-0.7
NNSH	baz=321			S	Sb		20 45 25.4	-0.8
FUSS	**Fushou** baz=288	**0.38**	**288**	P	Pb		20 45 19.5	-0.8
FUSS	baz=288			S	Sb		20 45 25.8	-0.6
NNS	**Nan Shan** baz=322	**0.39**	**322**	P	Pb		20 45 20.2	-0.3
EGFH	**Guangfu** baz=202	**0.50**	**203**	P	Pb		20 45 21.9	-0.3
EGFH	baz=202			S	Sb		20 45 29.7	+0.2
NDS	**Dongshan** baz=8.0	**0.51**	**8**	S	Sb		20 45 29.7	-0.1
YHNB	**Yeheng** baz=336	**0.59**	**336**	*e*P	Pb		20 45 23.9	+0.1
YHNB	baz=336			*e*S	Sb		20 45 32.3	0.0
NSK	**Sanguang** baz=335	**0.60**	**335**	P	Pb		20 45 23.9	0.0
NSK	baz=335			S	Sb		20 45 32.5	-0.1
YOJ	**Yonaguni jima** baz=74	**1.29**	**75**	*e*P	Pn		20 45 35.6	+0.1

TAP **16** *20:45:19.5,* **24°.48N×121°.75E, h8km±1km, ML1.5, C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
EWUT	**Wuta** baz=145	**0.05**	**145**	P	Pg		20 45 21.1	-0.1
EWUT	baz=145			S	Sg		20 45 22.5	+0.1
ENA	**Nanau** baz=180	**0.06**	**187**	*i* P	Pg		20 45 21.2	-0.1
ENA	baz=180			*i* S	Sg		20 45 22.6	0.0
NDS	**Dongshan** baz=348	**0.15**	**349**	P	Pg		20 45 22.8	0.0
NDS	baz=348			*e*S	Sg		20 45 25.3	+0.3
NDS	**Dongshan** baz=8.0	**0.15**	**349**	P	Pg		20 45 22.8	0.0
LATG	**Datong** baz=284	**0.21**	**284**	P	Pg		20 45 23.4	-0.4
LATG	baz=284			*e*S	Sg		20 45 26.3	-0.4
NNSB	**Datong** baz=260	**0.34**	**261**	*e*P	Pg		20 45 25.6	-0.7
NNSB	baz=260			S	Sg		20 45 31.4	+0.6
NNSH	**Datong** baz=260	**0.34**	**261**	*i* P	Pg		20 45 26.6	+0.3
NNSH	baz=260			*e*S	Sg		20 45 30.8	0.0
NNS	**Nan Shan** baz=262	**0.34**	**263**	P	Pg		20 45 26.1	-0.2
NNS	baz=262			*e*S	Sg		20 45 30.1	-0.9

GUC **16** *21:08:26.8±0.6, 19°.48S×69°.34W, h97km±2km, ML3.6*
IDC **16** *21:08:27.8±1.5, 19°.56S×68°.80W, h112km±15km, mb3.1/2, mbtmp3.6/5, Error ellipse: s-maj=51.5km s-min=8.5km az=99.0*
ISC 16 21:08:27.0±1.2, 19°.53S±0°.03×69°.43W±0°.07, h98km±8km, n21, σ1s02/35, 4C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GO01	**Chusmiza**	**0.26**	**122**	*i* P		**Pn**	**21 08 41.2**	**-0.6**
GO01				*e*S		**Sn**	**21 08 52.5**	**-0.3**
PB11	**IPOC Station P**	**0.31**	**223**⇑	*i*P		**Pn**	**21 08 41.4**	**-0.2**
PB11				*e*S		**Sn**	**21 08 53.0**	**+0.4**
PB11	comp=E,6μm,0.3s			IAML			21 08 53.7	
PB08	**IPOC Station P**	**0.66**	**157**⇑	*i*P		**Pn**	**21 08 44.1**	**-0.2**
PB08				*e*S		**Sn**	**21 08 57.4**	**+0.1**
PB08	comp=E,3μm,0.2s			IAML			21 08 58.6	
HMBC	**Humberstone**	**0.86**	**210**⇑	*i*P		**Pn**	**21 08 45.7**	**-0.3**
HMBC				*e*S		**Sn**	**21 09 00.8**	**+0.6**
HMBC	comp=N,1μm,0.3s			IAML			21 09 04.5	
TA02	**Huaiquique**	**0.99**	**222**	*e*P		**Pn**	**21 08 47.2**	**+0.1**
TA02				*i* S		**Sn**	**21 09 03.1**	**+0.7**
TA02	comp=N,3μm,0.1s			IAML			21 09 07.9	
PB16	**IPOC Station P**	**1.19**	**356**⇓	*i*P		**Pn**	**21 08 49.8**	**-0.3**
PB16				*e*S		**Sn**	**21 09 07.3**	**-0.1**
PB12	**IPOC Station P**	**1.25**	**317**⇓	*e*P		**Pn**	**21 08 49.5**	**-0.7**
PB12				*e*S		**Sn**	**21 09 07.3**	**-0.5**
PB12	comp=E,662nm,0.5s			IAML			21 09 08.7	
TA01	**Diego Aracena**	**1.25**	**214**	*e*P		**Pn**	**21 08 49.7**	**-0.4**
TA01				*i* S		**Sn**	**21 09 07.9**	**+0.3**
TA01	comp=E,675nm,0.2s			IAML			21 09 11.6	
PB01	**IPOC Station P**	**1.50**	**182**⇑	*i*P		**Pn**	**21 08 53.4**	**0.0**
PB01				*e*S		**Sn**	**21 09 13.2**	**0.0**
PB01	comp=E,985nm,0.2s			IAML			21 09 16.4	
PB02	**IPOC Station P**	**1.83**	**194**	*e*P		**Pn**	**21 08 57.7**	**+0.2**
PB02				*e*S		**Sn**	**21 09 20.9**	**+0.3**
PB02	comp=E,835nm,0.2s			IAML			21 09 31.5	
PB18	**Visviri**	**1.93**	**359**	*e*P		**Pn**	**21 09 00.7**	**+1.5**
PB07	**IPOC Station P**	**2.23**	**191**	*e*P		**Pn**	**21 09 02.8**	**+0.2**
PB07				*e*S		**Sn**	**21 09 29.9**	**+0.1**
PB07	comp=E,443nm,0.4s			IAML			21 09 36.3	
PB09	**IPOC Station P**	**2.26**	**176**	*e*P		**Pn**	**21 09 03.3**	**+0.2**
PB09				*e*S		**Sn**	**21 09 31.9**	**+1.2**
PB09	comp=E,242nm,0.5s			IAML			21 09 35.8	
PB04	**IPOC Station P**	**2.87**	**193**	*i* P		**Pn**	**21 09 11.6**	**+0.4**
PB04				*e*S		**Sn**	**21 09 41.7**	**-3.3**
PB04	comp=N,145nm,0.1s			IAML			21 09 59.6	
LVC	**Limon Verde** comp=N,20nm,0.4s,baz=2.9,slow=10,SNR=44	**3.10**	**171**	P		**Pn**	**21 09 14.8**	**+0.4**
LVC				S		**Sn**	**21 09 50.9**	**0.0**
PB06	**IPOC Station P** comp=N,31nm,0.2s,baz=78,slow=20,SNR=21	**3.16**	**182**	*e*P		**Pn**	**21 09 14.6**	**-0.4**
PB06				*e*S		**Sn**	**21 09 49.4**	**-2.7**
PB06	comp=E,96nm,0.3s			IAML			21 09 58.9	
LPAZ	**La Paz** comp=E,3.2nm,0.4s,baz=165,slow=4.6,SNR=15	**3.46**	**21**	P		**Pn**	**21 09 20.1**	**+0.7**
LPAZ				S		**Sn**	**21 09 57.5**	**-2.3**
PB10	**IPOC Station P** comp=E,3.4nm,0.6s,baz=184,slow=16,SNR=3.7	**4.10**	**195**	*e*P		**Pn**	**21 09 27.3**	**-0.2**
SIV	**San Ignacio** comp=E,5.0nm,0.5s,baz=259,slow=10.0,SNR=24	**8.71**	**67**	P		Pn	21 10 25.0	-5.2
PLCA	**Paso Flores** comp=E,1.2nm,0.8s,baz=4.7,slow=12,SNR=5.4 comp=E,1.2nm,0.8s	**21.15**	**182**	P		**P**	**21 13 05.1**	**+0.8**
TORD	**Torodi Ar. Bea** comp=E,0.3nm,0.5s,baz=264,slow=5.9,SNR=4.1 comp=E,0.3nm,0.5s	**77.17**	**71**	P		P	21 20 05.9	-4.6

JMA **16** *21:29:26.4±0.5, 23°.N±1°×12°.1E±°, h0km, TAIWAN REGION*
TAP **16** *21:29:27.6, 23°.11N×120°.96E, h2km, ML3.7, C*
ISC 16 21:29:28.2±0.8, 23°.10N±0°.01×120°.97E±0°.01, h9km±6km, n124, σ1s00/227, 10C-4D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ELDTW	**Lidau** baz=35	**0.09**	**25**⇑	*i*P		**Pg**	**21 29 30.3**	**-0.5**
ELDTW	baz=35			*i* S		**Sg**	**21 29 31.7**	**-0.9**
STYH	**Taoyuan** baz=290	**0.19**	**290**	P		**Pg**	**21 29 32.2**	**-0.1**
STYH	baz=290			S		**Sg**	**21 29 34.9**	**-0.2**
ECS	**Chishang** baz=92	**0.23**	**92**	P		**Pg**	**21 29 33.3**	**+0.5**
ECS	baz=92			S		**Sg**	**21 29 37.2**	**+1.2**
LONT	**Longtian** baz=142	**0.24**	**144**	*i* P		**Pg**	**21 29 33.5**	**+0.3**
LONT	baz=142			*i* S		**Sg**	**21 29 37.1**	**+0.6**
TWG	**Pinlang** baz=150	**0.30**	**162**	*i* P		**Pg**	**21 29 34.4**	**+0.2**
TWG	baz=150			*i* S		**Sg**	**21 29 38.5**	**+0.4**
TWGBT	**Beinan** baz=150	**0.30**	**161**	⇓P		**Pg**	**21 29 34.4**	**+0.2**
TWGBT	baz=150			S		**Sg**	**21 29 38.4**	**+0.1**
FULB	**Fuli** baz=59	**0.31**	**72**⇑	*i*P		**Pb**	**21 29 35.1**	**-0.8**
FULB	baz=59			*i* S		**Sb**	**21 29 40.1**	**-1.0**
EDH	**Donghe** baz=121	**0.33**	**113**	*i* P		**Pb**	**21 29 35.6**	**-0.6**
EDH	baz=121			*i* S		**Sb**	**21 29 41.1**	**-0.5**
WTP	**Ta-pu** baz=294	**0.36**	**293**⇓	*i*P		**Pb**	**21 29 35.8**	**-1.0**
WTP	baz=294			*i* S		**Sb**	**21 29 41.1**	**-1.5**
SGST	**Jiashian** baz=266	**0.36**	**267**⇑	*i*P		**Pg**	**21 29 34.8**	**-0.6**
SGST	baz=266			*i* S		**Sg**	**21 29 40.2**	**+0.1**
TPUB	**Ta-pu** baz=302	**0.37**	**302**	⇓P		**Pb**	**21 29 36.0**	**-1.0**
TPUB	baz=302			S		**Sb**	**21 29 41.5**	**-1.4**
TTN	**Taitung** baz=154	**0.38**	**155**⇓	*i*P		**Pb**	**21 29 36.9**	**-0.2**
TTN	baz=154			*i* S		**Sb**	**21 29 43.3**	**+0.1**
EYUL	**Yuli** baz=53	**0.40**	**53**	*i* P		**Pg**	**21 29 36.1**	**0.0**
EYUL	baz=53			*i* S		**Sg**	**21 29 41.0**	**-0.4**
YULB	**Yu-li** baz=47	**0.41**	**46**	⇑P		**Pg**	**21 29 35.9**	**-0.4**
YULB				S		**Sg**	**21 29 41.0**	**-0.8**

	baz=47								
CHN1	**Nanshi**	**0.42**	**281**	*i*	P		**Pb**	21 29 37.4	**-0.4**
	baz=281								
CHN1				*i*	S		**Sb**	21 29 43.4	**-0.8**
	baz=281								
ALS	**Alishan**	**0.43**	**339**	*i*	P		**Pg**	21 29 36.8	**0.0**
	baz=342								
ALS				*i*	S		**Sg**	21 29 42.6	**0.0**
	baz=342								
SNST	**Tainan City**	**0.45**	**285**	*i*	P		**Pb**	21 29 38.2	**-0.2**
	baz=285								
SNST				*i*	S		**Sb**	21 29 45.8	**+0.6**
	baz=285								
SSD	**Sandimen**	**0.48**	**222**⇑	*i*	P		**Pg**	21 29 36.9	**-0.6**
	baz=219								
SSD				*i*	S		**Sg**	21 29 42.9	**-0.9**
	baz=219								
TWK	**Hsinying**	**0.48**	**290**	*i*	P		**Pb**	21 29 38.4	**-0.4**
	baz=290								
TWK				*i*	S		**Sb**	21 29 46.5	**+0.5**
	baz=290								
SCST	**Cishan**	**0.49**	**244**	*i*	P		**Pb**	21 29 38.6	**-0.4**
	baz=241								
TSMG	**Majia**	**0.50**	**217**	*i*	P		**Pg**	21 29 37.4	**-0.6**
	baz=216								
TSMG					S		**Sg**	21 29 43.5	**-1.0**
	baz=216								
EHY	**Hungye**	**0.51**	**39**	*i*	P		**Pg**	21 29 37.7	**-0.5**
	baz=40								
EHY				*i*	S		**Sg**	21 29 44.3	**-0.6**
	baz=40								
CHN3	**Shinhua**	**0.56**	**267**⇑	*i*	P		**Pn**	21 29 41.5	**-0.9**
	baz=267								
CHN3				*i*	S		**Sn**	21 29 51.8	**0.0**
	baz=267								
HGSD	**Ruisui**	**0.57**	**47**	P			**Pb**	21 29 39.5	**-0.8**
	baz=37								
HGSD					S		**Sb**	21 29 47.6	**-0.9**
	baz=37								
TWM1	**Shoushan**	**0.58**	**241**	*i*	P		**Pb**	21 29 41.0	**+0.4**
	baz=239								
TWM1					S		**Sb**	21 29 50.3	**+1.4**
	baz=239								
MASBT	**Mashibuluo**	**0.58**	**213**⇑	P			**Pg**	21 29 38.9	**-0.7**
	baz=212								
MASBT					S		**Sg**	21 29 46.5	**-0.6**
	baz=212								
SHHT	**Tainan City**	**0.58**	**262**	P			**Pn**	21 29 42.1	**-0.5**
	baz=264								
SHHT					S		**Sn**	21 29 52.9	**+0.7**
	baz=264								
SGLT	**Jiouru**	**0.58**	**230**	P			**Pb**	21 29 40.5	**-0.1**
	baz=220								
SGLT				*i*	S		**Sb**	21 29 48.6	**-0.4**
	baz=220								
WHYT	**Xinyi Township**	**0.60**	**349**	*e*P			**Pg**	21 29 39.9	**0.0**
	baz=1.0								
WHYT				*e*S			**Sg**	21 29 47.7	**-0.1**
	baz=1.0								
CHN2	**Minshiung**	**0.63**	**313**	*i*	P		**Pb**	21 29 41.8	**+0.5**
	baz=314								
CHN2				*i*	S		**Sb**	21 29 51.9	**+1.7**
	baz=314								
LDUT	**Ludao**	**0.63**	**133**	*i*	P		**Pb**	21 29 40.7	**-0.6**
	baz=133								
LDUT				*i*	S		**Sb**	21 29 50.9	**+0.8**
	baz=133								
CHY	**Chiayi**	**0.64**	**308**	*e*P			**Pb**	21 29 41.5	**0.0**
	baz=309								
CHY					S		**Sb**	21 29 51.6	**+1.1**
	baz=309								
VWDT	**VWDT**	**0.67**	**13**	P			**Pg**	21 29 40.0	**-1.0**
	baz=21								
VWDT				*e*S			**Sg**	21 29 49.3	**-0.5**
	baz=21								
SSLB	**Suanglung**	**0.68**	**358**⇑	P			**Pg**	21 29 40.6	**-0.8**
	baz=9.0								
ICHU	**Yijhu**	**0.69**	**292**	*i*	P		**Pb**	21 29 42.7	**+0.3**
	baz=292								
ICHU				*i*	S		**Sn**	21 29 54.2	**-0.7**
	baz=292								
EGFH	**Guangfu**	**0.70**	**36**	*i*	P		**Pg**	21 29 41.8	**+0.1**
	baz=37								
EGFH					S		**Sg**	21 29 50.1	**-0.8**
	baz=37								
WDLH	**Douliu**	**0.71**	**326**	P			**Pn**	21 29 43.8	**-0.6**
	baz=327								
WDLH					S		**Sn**	21 29 54.3	**-1.1**
	baz=327								
SCLT	**Jiali**	**0.72**	**276**	P			**Pn**	21 29 43.8	**-0.8**
	baz=275								
SCLT				*i*	S		**Sn**	21 29 56.5	**+0.8**
	baz=275								
SSPT	**Xinbi**	**0.72**	**211**	*e*P			**Pb**	21 29 42.1	**-0.8**
	baz=200								
SSPT				*e*S			**Sb**	21 29 53.0	**+0.1**
	baz=200								
EAST	**Anshuo**	**0.73**	**189**⇑	*i*P			**Pg**	21 29 41.9	**-0.3**
	baz=188								
EAST				*i*	S		**Sg**	21 29 52.0	**+0.2**
	baz=188								
CHN8	**Yiju**	**0.74**	**289**	P			**Pb**	21 29 43.7	**+0.4**
	baz=289								
CHN8				*i*	S		**Sn**	21 29 55.9	**-0.3**
	baz=289								
TAW	**Tawu**	**0.75**	**186**	*i*	P		**Pg**	21 29 42.3	**-0.3**
	baz=195								
TAW					S		**Sg**	21 29 51.8	**-0.5**
	baz=195								
WJS	**Zhushan**	**0.75**	**342**	P			**Pn**	21 29 44.2	**-0.7**
	baz=352								
WJS					S		**Sn**	21 29 55.9	**-0.5**
	baz=352								
TAWH	**Dawu Township**	**0.77**	**186**	P			**Pg**	21 29 42.6	**-0.3**
	baz=186								
TAWH				*e*S			**Sg**	21 29 52.7	**-0.2**
	baz=186								
SMLT	**Sun Moon Lake**	**0.78**	**355**	*i*	P		**Pg**	21 29 43.0	**-0.3**
	baz=5.0								
SMLT				*i*	S		**Sb**	21 29 56.2	**+1.5**
	baz=5.0								
WTK	**Tuku**	**0.79**	**317**	P			**Pb**	21 29 44.3	**+0.2**
	baz=319								
WTK				*i*	S		**Sn**	21 29 57.2	**-0.3**
	baz=319								
SCZT	**Fangliau**	**0.80**	**204**⇑	*i*P			**Pg**	21 29 43.0	**-0.6**
	baz=196								
SCZT				*e*S			**Sg**	21 29 54.0	**0.0**
	baz=196								
TYC	**Yuchr**	**0.80**	**352**	*i*	P		**Pg**	21 29 43.6	**-0.2**
	baz=2.0								
TYC				*i*	S		**Sb**	21 29 56.9	**+1.6**
	baz=2.0								
WSL	**Shuilin Townsh**	**0.80**	**301**	P			**Pb**	21 29 44.0	**-0.3**
	baz=302								
WSL					S		**Sn**	21 29 57.1	**-0.6**
	baz=302								
KAU	**Kaohsiung**	**0.81**	**229**	*e*P			**Pn**	21 29 47.4	**+1.5**
	baz=248								
KAU					S		**Sn**	21 30 00.1	**+2.1**
	baz=248								
WNT	**Mingjian**	**0.81**	**341**	*i*	P		**Pb**	21 29 44.6	**+0.1**
	baz=344								
WNT				*i*	S		**Sb**	21 29 57.0	**+1.4**
	baz=344								
ESL	**Shilin**	**0.82**	**31**	*i*	P		**Pg**	21 29 43.2	**-0.8**
	baz=41								
ESL					S		**Sg**	21 29 54.7	**-0.1**
	baz=41								
OWD	**Renai**	**0.87**	**12**	P			**Pg**	21 29 43.4	**-1.6**
	baz=24								
OWD				*e*S			**Sb**	21 29 56.7	**-0.6**
	baz=24								
WSF	**Szhu**	**0.87**	**308**	P			**Pb**	21 29 45.5	**0.0**
	baz=309								
WSF				*i*	S		**Sn**	21 29 59.0	**-0.5**
	baz=309								
WUSB	**Renai**	**0.89**	**8**	P			**Pg**	21 29 44.1	**-1.4**
	baz=19								
WUSB				*e*S			**Sn**	21 29 59.8	**-0.4**
	baz=19								
SLIU	**Shizi**	**0.90**	**190**	P			**Pg**	21 29 45.1	**-0.4**
	baz=191								
WLCH	**Liuqiu**	**0.93**	**216**	P			**Pn**	21 29 50.5	**+3.1**
	baz=215								
WCS	**Beigang Elemen**	**0.95**	**357**	P			**Pb**	21 29 47.0	**+0.1**
	baz=9.0								
WCS					S		**Sn**	21 30 01.6	**+0.2**
	baz=9.0								
WRL	**Guolierlin Hig**	**0.96**	**325**		P		**Pb**	21 29 47.2	**+0.1**
	baz=327								
WRL					S		**Sn**	21 30 01.7	**0.0**
	baz=327								
CHGB	**Renai**	**0.97**	**11**		P		**Pg**	21 29 45.5	**-1.4**
	baz=21								
CHGB					*e*S		**Sb**	21 30 00.6	**+0.2**
	baz=21								
WCHH	**Zhanghua**	**1.04**	**339**		P		**Pn**	21 29 50.1	**+1.1**
	baz=341								
WCHH					S		**Sn**	21 30 04.1	**+0.4**
	baz=341								
HWA	**Hwalien**	**1.04**	**34**		P		**Pg**	21 29 48.0	**-0.3**
	baz=34								
HWA					S		**Sn**	21 30 04.3	**+0.6**
	baz=34								
WHF	**Hehuan Shan**	**1.07**	**14**		P		**Pg**	21 29 47.8	**-1.1**
	baz=22								
WHF					S		**Sn**	21 30 04.8	**-0.1**
	baz=22								
TCU	**Taichung**	**1.07**	**345**		P		**Pn**	21 29 50.2	**+0.8**
	baz=348								
TCU					S		**Sn**	21 30 05.9	**+1.5**
	baz=348								
SMST	**Manzhou Townsh**	**1.09**	**187**	*e*P			**Pb**	21 29 49.4	**+0.3**
	baz=194								
SMST				*e*S			**Sb**	21 30 04.4	**+1.0**
	baz=194								
HEN	**Hengchun**	**1.11**	**191**	*e*P			**Pn**	21 29 50.2	**+0.3**
	baz=200								
HEN				*e*S			**Sn**	21 30 07.6	**+2.2**
	baz=200								
TWD	**Chiawan**	**1.13**	**30**		P		**Pg**	21 29 48.7	**-1.2**
	baz=21								
TWD					S		**Sg**	21 30 03.9	**-0.6**
	baz=21								
TDCB	**Techi**	**1.16**	**8**		P		**Pg**	21 29 49.0	**-1.5**
	baz=16								
TDCB					S		**Sg**	21 30 04.8	**-0.7**
	baz=16								
TWT	**Tachien**	**1.16**	**9**		P		**Pg**	21 29 49.5	**-1.0**
	baz=16								
TWT					S		**Sb**	21 30 06.1	**+0.4**
	baz=16								
TWK1	**Hengchun**	**1.17**	**188**		P		**Pb**	21 29 50.6	**+0.1**
	baz=187								
TWK1					S		**Sn**	21 30 08.0	**+1.3**
	baz=187								
TWKBT	**Hengchun**	**1.17**	**187**	*e*P			**Pn**	21 29 50.8	**+0.1**
	baz=187								
TWKBT					S		**Sg**	21 30 07.5	**+0.7**
	baz=187								
WHP	**Taichung City**	**1.17**	**359**		P		**Pn**	21 29 51.7	**+0.9**
	baz=10.0								
WHP					*e*S		**Sb**	21 30 06.8	**+0.9**
	baz=10.0								
LAY	**Lan-yu**	**1.19**	**153**	*e*P			**Pg**	21 29 49.3	**-1.8**
	baz=154								
ETLH	**Xiulin Townshi**	**1.19**	**23**	P			**Pg**	21 29 50.5	**-0.7**
	baz=23								
ETLH					S		**Sn**	21 30 08.1	**+0.6**
	baz=23								
TSEB	**Hengchuen, Pin**	**1.20**	**183**	*e*P			**Pn**	21 29 52.0	**+0.9**
	baz=169								
TSEB					S		**Sn**	21 30 09.4	**+1.8**
	baz=169								
ETL	**Fush Village**	**1.21**	**29**	P			**Pg**	21 29 50.6	**-0.8**
	baz=29								
ETL					*e*S		**Sb**	21 30 07.0	**+0.1**
	baz=29								
NACB	**Ninganchiao**	**1.21**	**28**	P			**Pg**	21 29 50.5	**-0.9**
	baz=28								
NACB					*e*S		**Sg**	21 30 06.1	**-1.0**
	baz=28								
WDGT	**Dungji**	**1.22**	**278**	*i*	P		**Pb**	21 29 51.0	**-0.4**
	baz=277								
WDGT					S		**Sn**	21 30 07.9	**-0.1**
	baz=277								
LYUB	**Lan-yu**	**1.23**	**153**	*e*P			**Pg**	21 29 47.6	**-4.3**
	baz=154								
WDJ	**Dajia District**	**1.27**	**346**	P			**Pn**	21 29 53.8	**+1.6**
	baz=337								
WDJ					S		**Sn**	21 30 13.1	**+3.7**
	baz=337								
NSY	**Sanyi**	**1.32**	**352**	P			**Pb**	21 29 54.2	**+1.0**
	baz=355								
NSY					*e*S		**Sn**	21 30 13.3	**+2.8**
	baz=355								
PHUB	**P'eng-hu**	**1.35**	**288**	*e*P			**Pg**	21 29 51.3	**-2.9**
	baz=288								
PHUB					S		**Sg**	21 30 10.9	**-0.9**
	baz=288								
NNSB	**Datong**	**1.37**	**16**	*e*P			**Pn**	21 29 53.1	**-0.5**
	baz=26								
NNSB					*e*S		**Sn**	21 30 13.9	**+1.9**
	baz=26								
NNS	**Nan Shan**	**1.38**	**15**	*e*P			**Pn**	21 29 53.5	**-0.2**
	baz=26								
NNS					*e*S		**Sn**	21 30 13.3	**+1.2**
	baz=26								
PNG	**Penghu**	**1.38**	**290**	*i*	P		**Pn**	21 29 53.2	**-0.4**
	baz=290								
PNG				*i*	S		**Sb**	21 30 11.9	**-0.1**
	baz=290								
VCHM	**Qimei**	**1.43**	**274**	P			**Pn**	21 29 53.6	**-0.6**
	baz=274								
VCHM					S		**Sg**	21 30 12.4	**-1.7**
	baz=274								
NMLH	**Miaoli**	**1.44**	**353**	*e*P			**Pg**	21 29 55.1	**-0.7**
	baz=356								
NMLH					*e*S		**Sn**	21 30 15.4	**+2.0**
	baz=356								
ENA	**Nanau**	**1.49**	**28**	P			**Pn**	21 29 54.0	**-1.1**
	baz=28								
ENA					S		**Sb**	21 30 15.0	**-0.2**
	baz=28								
LATG	**Datong**	**1.51**	**19**	P			**Pn**	21 29 55.8	**+0.3**
	baz=33								
LATG					*e*S		**Sg**	21 30 17.2	**+0.3**
	baz=33								
NSTT	**Nanjuang**	**1.52**	**1**	P			**Pg**	21 29 57.0	**-0.4**
	baz=4.0								
NSTT					S		**Sg**	21 30 18.0	**+0.8**
	baz=4.0								
EWUT	**Wuta**	**1.52**	**29**	*e*P			**Pb**	21 29 56.4	**-0.3**
	baz=29								
EWUT				*e*S			**Sg**	21 30 17.0	**-0.3**
	baz=29								
NFF	**Wufeng Townshi**	**1.53**	**5**	P			**Pg**	21 29 57.3	**-0.2**
	baz=7.0								
NFF					S		**Sg**	21 30 19.1	**+1.7**
	baz=7.0								
LIOB	**Emei**	**1.54**	**1**	*e*P			**Pg**	21 29 57.3	**-0.4**
	baz=4.0								
LIOB					*e*S		**Sg**	21 30 19.2	**+1.6**
	baz=4.0								
YHNB	**Yeheng**	**1.60**	**13**	P			**Pg**	21 29 58.3	**-0.7**
	baz=15								
YHNB					S		**Sg**	21 30 21.1	**+1.4**
	baz=15								
NSK	**Sanguang**	**1.60**	**13**	P			**Pg**	21 29 58.4	**-0.6**
	baz=14								
NSK					*e*S		**Sg**	21 30 20.4	**+0.6**
	baz=14								
NDS	**Dongshan**	**1.67**	**24**	P			**Pb**	21 29 59.0	**-0.1**
	baz=41								
NDS					*e*S		**Sg**	21 30 21.8	**-0.1**
	baz=41								
SBCB	**Hsinchu**	**1.68**	**0**	*e*P			**Pg**	21 30 01.2	**+0.7**
	baz=3.0								
TWC	**Suao**	**1.70**	**28**	P			**Pb**	21 29 59.0	**-0.6**
	baz=28								
TWC					S		**Sg**	21 30 22.2	**-0.7**
	baz=28								
TWE	**Neicheng**	**1.73**	**21**	P			**Pg**	21 30 00.5	**-0.9**
	baz=36								
TWE					*e*S		**Sg**	21 30 24.8	**+0.9**
	baz=36								
NWLT	**Wulai**	**1.73**	**16**	*e*P			**Pb**	21 30 00.3	**+0.1**
	baz=16								
NWLT				*e*S			**Sg**	21 30 24.4	**+0.4**
	baz=16								
FUSB	**Fushanzhiwuyua**	**1.74**	**19**	*e*P			**Pb**	21 29 59.9	**-0.4**
	baz=32								
FUSB				*e*S			**Sg**	21 30 23.3	**-0.9**
	baz=32								
NCUH	**Zhongli**	**1.86**	**6**	*e*P			**Pn**	21 30 01.4	**+1.1**
	baz=9.0								
NCU	**National Centr**	**1.87**	**6**	*e*P			**Pg**	21 30 03.1	**-1.0**
	baz=9.0								
NTC	**Toucheng**	**1.91**	**24**	*e*P			**Pb**	21 30 02.9	**-0.3**
	baz=39								
NTC				*e*S			**Sb**	21 30 27.6	**+0.4**
	baz=39								
NHDH	**Xindian Distri**	**1.92**	**15**	*e*P			**Pg**	21 30 04.7	**-0.3**
	baz=26								
NHDH				*e*S			**Sg**	21 30 30.6	**+0.7**
	baz=26								
EGS		**1.94**	**27**	*e*P			**Pb**	21 30 03.6	**-0.1**
	baz=43								
TIPB	**Shuangxi**	**2.02**	**23**	*e*P			**Pb**	21 30 04.3	**-0.7**
	baz=39								
TWS1	**Kuangyinshan**	**2.03**	**11**	*e*P			**Pg**	21 30 07.3	**+0.2**
	baz=356								
TWS1				*e*S			**Sg**	21 30 35.1	**+1.6**
	baz=356								
NWF	**Wu-fen Shan**	**2.09**	**20**	*e*P			**Pg**	21 30 07.3	**-1.1**
	baz=38								
NTST	**Danshui**	**2.10**	**12**	*e*P			**Pg**	21 30 07.3	**-1.1**
	baz=11								
YM01	**YM01**	**2.10**	**15**	*e*P			**Pb**	21 30 07.0	**+0.5**
	baz=359								
TWB1	**Santiao Chiao**	**2.11**	**26**	*e*P			**Pb**	21 30 05.5	**-1.1**
	baz=40								
SXI1	**Grass Mountain**	**2.15**	**22**	*e*P			**Pb**	21 30 06.6	**-0.7**
	baz=39								
TWY	**Chenhua**	**2.24**	**15**	*e*P			**Pb**	21 30 09.2	**+0.5**
JYNG	**Yonaguni jima**	**2.25**	**53**	*e*P			**Pn**	21 30 05.6	**0.0**
JYNG				*e*S			**Sn**	21 30 34.7	**+1.3**
YOJ	**Yonaguni jima**	**2.30**	**54**	*e*P			**Pn**	21 30 06.5	**+0.2**
	baz=53								
YOJ				*e*S			**Sn**	21 30 35.9	**+1.1**
	baz=53								
YOJ	**Yonaguni jima**	**2.30**	**54**	P			**Pn**	21 30 06.7	**+0.4**
YOJ				*e*S			**Sn**	21 30 37.0	**+2.2**
VWUC	**VWUC**	**2.34**	**324**	*e*P			**Pn**	21 30 06.5	**-0.3**
	baz=326								
PTMZ	**Houxiangcun**	**2.57**	**319**	*e*P			**Pn**	21 30 11.1	**+1.2**
	baz=323								
PCYT	**Pengchaiyu**	**2.71**	**21**	*e*P			**Pn**	21 30 14.0	**+2.1**
	baz=38								
KNMB	**Chin-men Tao**	**2.73**	**300**	*e*P			**Pn**	21 30 13.2	**+1.0**
	baz=301								
IRIF	**Iriomote-Funau**	**2.81**	**64**	*e*P			**Pn**	21 30 13.1	**-0.1**
IRIF				*e*S			**Sn**	21 30 47.6	**+0.4**
JIJ	**Ishigaki jima**	**3.16**	**66**	P			**Pn**	21 30 17.5	**-0.7**
JIJ				S			**Sn**	21 30 54.6	**-1.4**
JISG	**Ishigakijimahi**	**3.39**	**64**	P			**Pn**	21 30 20.6	**-0.7**
JISG				*e*S			**Sn**	21 30 58.7	**-2.9**

IDC 16 21:32:26.7±3.5, 33°.31S×178°.18W, h0km, mb3.3/2, mbtmp3.4/3, ML2.9/1, Error ellipse: s-maj=81.7km s-min=38.7km az=118.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h	m	s	Res ISC
URZ	**Urewera**	**6.25**	**216**	Pn		Pn	Pn	21	34	00.2	+0.1
	0.3nm,0.3s,baz=308,slow=20,SNR=1.9										
URZ				Sn		Sn	Sn	21	35	12.7	+0.4
	0.6nm,0.3s,baz=127,slow=20,SNR=2.3										
	4.0nm,0.6s										
ASAR	**Alice Springs**	**42.88**	**270**	P		P		21	40	27.0	-0.1
	0.3nm,0.6s,baz=110,slow=7.3,SNR=4.1										
	0.3nm,0.6s										
WRA	**Warramunga Arr**	**44.14**	**275**	P		P		21	40	37.1	-0.1
	0.3nm,0.5s,baz=116,slow=7.6,SNR=6.9										
	0.3nm,0.5s										
FINES	**FINESS Array B**	**147.80**	**338**	PKPbc		PKPbc		21	52	12.0	-0.8
	0.8nm,0.8s,baz=45,slow=0.6,SNR=1.1										

IDC ***16*** *21:41:56.7±0.4, 28°.41N×130°.41E, h0km, mb4.7/27, mbtmp4.7/30, ML4.9/2, MS4.3/50, Error ellipse: s-maj=14.1km s-min=10.6km az=81.0*

BJI ***16*** *21:41:58.6±0.0, 28°.19N×130°.53E, h31km, mb4.5/68, mB4.7/47, Ms4.8/77, Ms7 4.8/71*

MOS ***16*** *21:41:58.7±1.0, 28°.34N×130°.38E, h23km, mb5.2/36, MS4.6/10, Error ellipse: s-maj=6.3km s-min=4.1km az=104.0*

JMA ***16*** *21:41:59.2±0.1, 28°.3N±0°.5×130°.6E±0°.7, h53km±1km, MD4.7/27, MW4.8/27, NEAR AMAMI-OSHIMA ISLAND*

JMA Felt II J1 at NEAR AMAMI-OSHIMA ISLAND.

NIED ***16*** *21:41:59.2, 28°.27N×130°.56E, h53km, MW4.8, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁶Nm; Mrr-1.44; Mθθ0.23; Mφφ1.21; Mrθ-0.27; Mθφ0.50; Mφr0.88; Fault plane solution: M₀1.69000×10¹⁶ NP1:φs39.00000°, δ34.00000°, λ-60.00000°. NP2:φs184.00000°, δ61.00000°, λ-109.00000°.*

NEIC ***16*** *21:42:01.4±1.4, 28°.31N±0°.05×130°.43E±0°.07, h28km±3km, mb5.1/315 Error ellipse: s-maj=9.6km s-min=6.0km az=122.0*

GCMT ***16*** *21:42:01.4±0.4, 28°.25N±0°.03×130°.41E±0°.03, h18km±1km, MW4.9/73, Moment Tensor Solution. s18,c22; s73,c107; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-2.09±.17; Mθθ0.57±.10; Mφφ1.52±.11; Mrθ-0.01±.26; Mθφ0.96±.06; Mφr1.63±.25; Best double couple: M₀2.65800×10¹⁶ NP1:φs48.00000°, δ30.00000°, λ-60.00000°. NP2: φs194.00000°, δ64.00000°, λ-106.00000°. Principal axes: T 2.5590, Plg17.0000°, Azm296.0000°; N 0.2030, Plg15.0000°, Azm201.0000°; P -2.7560, Plg67.0000°, Azm74.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 16 21:42:00.6±0.3, 28°.30N±0°.02×130°.49E±0°.03, h25km±2km, h25km: pP-P, n942, σ1‡31/935, mb5.1/259, MS4.6/84, 92C-112D, Fault plane solution: NP1:φs180.89107°, δ50.41248°, λ-106.53294°. NP2:φs25.86754°, δ42.37152°, λ-71.00990°. Principal axes: T Plg4.1171°, Azm282.5298°; N Plg12.6680°, Azm191.6027°; P Plg76.6585°, Azm30.1989°; **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h	m	s	Res ISC
JZK	**Kikaishima**	**0.46**	**272**	P		**Pn**		**21**	**42**	**10.8**	**-0.8**
JZK				*e*S		**Sn**		**21**	**42**	**19.8**	**+0.8**
JZK	**Kikaishima**	**0.46**	**272**	A		A		21	42	10.8	
	comp=E,395nm,3.8s,comp=E,373nm,1.6s										
JAM	**Amami Oshima**	**0.79**	**278**	P		**Pb**		**21**	**42**	**15.3**	**-0.4**
JAM				*e*S		**Sn**		**21**	**42**	**26.8**	**-0.4**
JAM	**Amami Oshima**	**0.79**	**278**	A		A		21	42	15.3	
	comp=E,77nm,2.4s,comp=E,45nm,2.9s										
JAMN	**Amaminishikomi**	**1.16**	**268**	*e*P		**Pn**		**21**	**42**	**20.3**	**-1.0**
JAMN				*e*S		**Sn**		**21**	**42**	**35.2**	**-1.2**
JAMN	**Amaminishikomi**	**1.16**	**268**	A		A		21	42	20.3	
	comp=E,76nm,1.3s,comp=E,36nm,0.3s										
JTAJ	**Takarajima**	**1.42**	**307**	*e*P		**Pn**		**21**	**42**	**23.5**	**-1.3**
JTAJ				*e*S		**Sn**		**21**	**42**	**41.7**	**-0.9**
JTK	**Tokunoshima**	**1.46**	**250**	*e*P		**Pn**		**21**	**42**	**24.9**	**-0.4**
JTK				*e*S		**Sn**		**21**	**42**	**43.2**	**-0.3**
JTK	**Tokunoshima**	**1.46**	**250**	A		A		21	42	24.9	
	comp=E,17nm,2.8s,comp=E,17nm,2.4s										
JNN	**Nakanoshima**	**1.63**	**341**	*e*P		**Pn**		**21**	**42**	**26.8

JTN	**Tanegashima 3**	**2.39**	**10**	A	A	21 42 37.6			
	comp=E,8.0nm,2.0s,comp=E,5.0nm,0.8s								
JKDJ	**Kitadaitoujima**	**2.45**	**163**	*e*P	**Pn**	**21 42 37.1**	**-1.8**		
JKDJ				*e*S	**Sn**	**21 43 04.6**	**-3.4**		
JOW	**Kunigami**	**2.45**	**234**	Pn	**Pn**	**21 42 38.3**	**-0.8**		
	266nm,0.3s,baz=85,slow=12,SNR=89								
JOW				Sn	**Sn**	**21 43 06.0**	**-2.2**		
	325nm,0.3s,baz=55,slow=30,SNR=4.2								
	635nm,0.3s								
JOW	**Kunigami**	**2.45**	**234**	Pn	**Pn**	**21 42 37.8**	**-1.3**		
JOW	**Kunigami**	**2.45**	**234**	*e*P	**Pn**	**21 42 38.2**	**-0.8**		
JOW				*e*S	**Sn**	**21 43 06.9**	**-1.3**		
JOW	**Kunigami**	**2.45**	**234**	A	A	21 42 38.2			
	comp=E,8.0nm,2.6s,comp=E,6.0nm,2.0s								
JMZ	**Minamidaito 2**	**2.55**	**165**	*e*P	**Pn**	**21 42 38.7**	**-1.7**		
JMZ				*e*S	**Sn**	**21 43 07.2**	**-3.5**		
JMZ	**Minamidaito 2**	**2.55**	**165**	A	A	21 42 38.7			
	comp=N,6.0nm,2.8s								
JIH	**Iheya**	**2.57**	**241**	*e*P	**Pn**	**21 42 39.9**	**-0.8**		
JIH				*e*S	**Sn**	**21 43 09.4**	**-1.7**		
JIH	**Iheya**	**2.57**	**241**	A	A	21 42 39.9			
	comp=E,8.0nm,5.0s,comp=E,8.0nm,2.3s								
JNTH	**Nagotoyohara**	**2.82**	**232**	*e*P	**Pn**	**21 42 43.2**	**-0.8**		
JNTH				*e*S	**Sn**	**21 43 15.6**	**-1.7**		
JTSR	**Tashiro 2**	**2.88**	**7**	A	A	21 42 44.3			
	comp=E,6.0nm,3.2s,comp=E,6.0nm,0.4s								
JSU	**Suzuyama**	**3.20**	**359**	Pn	**Pn**	**21 42 48.9**	**-0.4**		
JSU				Sn	**Sn**	**21 43 26.0**	**-0.6**		
JSU	**Suzuyama**	**3.20**	**359**	A	A	21 42 48.8			
	comp=E,4.0nm,1.2s								
JJT3	**Tamagusuku3**	**3.23**	**229**	*e*P	**Pn**	**21 42 49.0**	**-0.7**		
JJT3				*e*S	**Sn**	**21 43 25.8**	**-1.6**		
JJT3	**Tamagusuku3**	**3.23**	**229**	A	A	21 42 49.0			
	comp=E,25nm,2.8s,comp=E,17nm,2.6s								
JNAR	**Kushima--Naru**	**3.29**	**12**	A	A	21 42 49.9			
	comp=E,4.0nm,2.4s,comp=E,5.0nm,1.2s								
JAGN	**Aguni-jima**	**3.35**	**240**	*e*P	**Pn**	**21 42 50.5**	**-0.9**		
JAGN				*e*S	**Sn**	**21 43 27.9**	**-2.5**		
JAGN	**Aguni-jima**	**3.35**	**240**	A	A	21 42 50.5			
	comp=E,6.0nm,5.7s,comp=E,6.0nm,11.4s								
JNKG	**Nichinankitago**	**3.44**	**13**	A	A	21 42 52.0			
	comp=E,5.0nm,3.1s,comp=E,5.0nm,2.7s								
JKE	**Kume jima 2**	**3.84**	**240**	*e*P	**Pn**	**21 42 56.7**	**-1.4**		
JKE				*e*S	**Sn**	**21 43 40.0**	**-2.4**		
JMN	**Monobe**	**6.14**	**27**	Pn	**Pn**	**21 43 29.1**	**-0.7**		
JTU	**Tsushima**	**6.28**	**352**	Pn	**Pn**	**21 43 32.1**	**+0.6**		
JHS	**Saijyo**	**7.04**	**18**	Pn	**Pn**	**21 43 41.4**	**-0.8**		
NAWB	**Namwon**	**7.57**	**340**	Pn	**Pn**	**21 43 49.2**	**-0.1**		
YOJ	**Yonaguni jima**	**7.72**	**242**	Pn	**Pn**	**21 43 48.3**	**-3.1**		
YOJ	**Yonaguni jima**	**7.72**	**242**	P	**Pn**	**21 43 48.3**	**-3.1**		
TJN	**Taejon**	**8.48**	**343**	Pn	**Pn**	**21 44 02.6**	**+0.9**		
TJN	**Taejon**	**8.48**	**343**	*ce*P	**Pn**	**21 44 01.9**	**+0.1**		
TJN	**Taejon**	**8.48**	**343**	P	Pn	21 44 07.0	+5.2		
SSE	**Sheshan**	**8.56**	**291**	P	**Pn**	**21 44 03.6**	**+0.7**		
SSE				S	**Sn**	**21 45 37.1**	**-1.6**		
SSE				pmax	pmax				
	comp=Z,17nm,0.8s								
SSE				pmax	pmax				
	comp=Z,130nm,3.4s								
SSE				LR	LR				
	comp=N,950nm,13.7s								
SSE				LR	LR				
	comp=E,2μm,14.4s								
KSCHJ	**Chungju**	**8.81**	**347**		**Pn**	**21 44 06.8**	**+0.5**		
YHNB	**Yeheng**	**8.93**	**248**		**Pn**	**21 44 07.9**	**-0.2**		
INU	**Inuyama**	**8.95**	**37**	Pn	**Pn**	**21 44 08.2**	**-0.1**		
INU	**Inuyama**	**8.95**	**37**	P	**Pn**	**21 44 09.7**	**+1.4**		
NACB	**Ninganchiao**	**8.98**	**245**	Pn	**Pn**	**21 44 06.1**	**-2.7**		
JGF	**Kuroka**	**9.32**	**37**	Pn	**Pn**	**21 44 13.7**	**+0.2**		
JHJ	**Hachijo jima 2**	**9.33**	**57**	LR	LR	21 47 21.4			
	comp=Z,903nm,19.4s,baz=70,slow=35								
JHJ2	**Mitsune**	**9.35**	**57**	Pn	**Pn**	**21 44 13.8**	**+0.1**		
KSAR	**Wonju Array Be**	**9.38**	**347**		**Pn**	**21 44 14.8**	**+0.7**		
KSAR	**Wonju Array Be**	**9.38**	**347**	P	**Pn**	**21 44 14.8**	**+0.7**		
KSRS	**Korea Array**	**9.38**	**347**	Pn	**Pn**	**21 44 16.9**	**+2.7**		
	1.0nm,0.3s,baz=156,slow=15,SNR=17								
KS19	**Wonju Array Si**	**9.44**	**347**		**Pn**	**21 44 15.2**	**+0.2**		
YULB	**Yu-li**	**9.62**	**242**		**Pn**	**21 44 13.8**	**-3.7**		
SSLB	**Suanglung**	**9.68**	**245**	Pn	**Pn**	**21 44 16.1**	**-2.3**		
INCN	**Inchon**	**9.72**	**341**	P	Pn	21 44 23.6	+4.8		
SEHB	**SEOHWA**	**10.12**	**350**		**Pn**	**21 44 26.4**	**+2.1**		
TPUB	**Ta-pu**	**10.18**	**243**		**Pn**	**21 44 24.1**	**-1.1**		
TPUB	**Ta-pu**	**10.18**	**243**	P	**Pn**	**21 44 28.3**	**+3.0**		
JCJ	**Chichijima**	**10.43**	**94**	Pn	**Pn**	**21 44 29.3**	**+0.7**		
	21nm,0.3s,baz=271,slow=12,SNR=8.3								
JCJ				LR	LR	21 48 01.5			
	comp=Z,1μm,18.2s,baz=298,slow=35								
	57nm,0.4s								
JCJ	**Chichijima**	**10.43**	**94**	Pn	**Pn**	**21 44 29.7**	**+1.1**		
MAJO	**Matsushiro**	**10.49**	**36**		**Pn**	**21 44 30.1**	**+0.7**		
MAJO	**Matsushiro**	**10.49**	**36**	*i* P	**Pn**	**21 44 29.8**	**+0.5**		
MAJO	**Matsushiro**	**10.49**	**36**	P	**Pn**	**21 44 33.0**	**+3.7**		
MJAR	**Matsushiro Arr**	**10.49**	**36**	Pn	**Pn**	**21 44 29.7**	**+0.4**		
	5.1nm,0.6s,baz=225,slow=9.1,SNR=13								
MJAR				LR	LR	21 48 29.2			
	comp=Z,723nm,20.7s,baz=215,slow=38								
MJAR	**Matsushiro Arr**	**10.49**	**36**		**Pn**	**21 44 30.3**	**+1.0**		
MJAR	**Matsushiro Arr**	**10.49**	**36**	P	**Pn**	**21 44 30.3**	**+1.0**		
MJB9	**Matsu-Tunnel**	**10.49**	**36**		**Pn**	**21 44 30.2**	**+0.9**		
NJ2	**Nanjing**	**10.74**	**293**	*e*P	**Pn**	**21 44 33.3**	**+0.5**		
NJ2				S	**Sn**	**21 46 34.8**	**+2.5**		
NJ2				pmax	pmax				
	comp=Z,41nm,1.0s								
NJ2				LR	LR				
	comp=N,2μm,14.2s								
NJ2				LR	LR				
	comp=E,5μm,14.5s								
NJ2				LR	LR				
	comp=Z,6μm,14.1s								
KNMB	**Chin-men Tao**	**11.50**	**253**	Pn	**Pn**	**21 44 43.0**	**-0.2**		
JSD	**Sado**	**11.68**	**32**	Pn	**Pn**	**21 44 47.7**	**+2.0**		
JMM	**Marumori**	**12.86**	**39**	Pn	**Pn**	**21 45 00.8**	**-0.9**		
DL2	**Dalian**	**12.90**	**327**	P	**Pn**	**21 45 04.3**	**+2.1**		
DL2				S	**Sn**	**21 47 30.3**	**+5.4**		
DL2				pmax	pmax				
	comp=Z,28nm,1.3s								
DL2				pmax	pmax				
	comp=Z,320nm,9.7s								
DL2				LR	LR				
	comp=N,2μm,15.4s								
DL2				LR	LR				
	comp=E,2μm,15.1s								
DL2				LR	LR				
	comp=Z,3μm,15.1s								
TIA	**Tai'an**	**13.78**	**308**	*e*P	**Pn**	**21 45 14.8**	**+0.4**		
TIA				pmax	pmax				
	comp=Z,16nm,0.8s								
TIA				pmax	pmax				
	comp=Z,310nm,8.8s								
TIA				LR	LR				
	comp=N,1μm,17.6s								
TIA				LR	LR				
	comp=E,2μm,16.7s								
TIA				LR	LR				
	comp=Z,3μm,15.7s								
WHN	**Wuhan**	**14.25**	**283**	⇑P	**P**	**21 45 27.3**	**-0.5**		
WHN				S	S	21 48 08.3	-10		
WHN				LR	LR				
	comp=N,3μm,17.8s								
WHN				LR	LR				
	comp=E,5μm,15.9s								
WHN				LR	LR				
	comp=Z,9μm,14.4s								
VLA	**Vladivostok**	**14.83**	**4**	*e*P	**Pn**	**21 45 29.1**	**+0.5**		
CNSH	**ChangSha**	**15.48**	**274**	⇓P	**P**	**21 45 40.4**	**-1.1**		
CNSH				S	**Sn**	**21 48 33.6**	**+5.5**		
CNSH				LR	LR				
	comp=Z,2μm,16.6s								
CNSH				LR	LR				
	comp=Z,3μm,14.7s								
CNSH				LR	LR				
	comp=Z,4μm,14.2s								
USA0B	**Ussuriysk Arra**	**15.91**	**4**	P	**P**	**21 45 47.7**	**+1.4**		
USA0B	**Ussuriysk Arra**	**15.91**	**4**	P	**P**	**21 45 47.7**	**+1.4**		
USA0B				pmax	pmax				
	comp=Z,15nm,1.0s								
USRK	**Ussuriysk Ar.**	**15.91**	**4**	Pn	**Pn**	**21 45 44.0**	**+1.2**		
	comp=Z,1.5nm,0.3s,baz=174,slow=8.5,SNR=18								
USRK	**Ussuriysk Ar.**	**15.91**	**4**		**P**	**21 45 47.2**	**+1.0**		
USRK	**Ussuriysk Ar.**	**15.91**	**4**	P	**P**	**21 45 47.2**	**+1.0**		
CN2	**Changchun**	**15.99**	**347**	*e*P	**Pn**	**21 45 40.9**	**-2.9**		
CN2				*e*PP	**pP**	**21 45 54.1**	**+0.7**		
CN2				*e*S	**Sn**	**21 48 37.9**	**-2.5**		
CN2				pmax	pmax				
	comp=Z,20nm,0.8s								
CN2				LR	LR				
	comp=Z,840nm,13.0s								
CN2				LR	LR				
	comp=Z,3μm,14.0s								
HNS	**HongShan**	**16.06**	**308**	⇑P	**Pn**	**21 45 44.5**	**-0.1**		
HNS				S	**S**	**21 48 51.3**	**-3.7**		
HNS				pmax	pmax				
	comp=E,410nm,8.8s								
HNS				LR	LR				
	comp=Z,1μm,16.3s								
HNS				LR	LR				
	comp=Z,2μm,16.3s								
HNS				LR	LR				
	comp=Z,3μm,16.3s								
LYN	**LuoYang**	**16.59**	**297**	⇑P	**Pn**	**21 45 51.0**	**-0.5**		
LYN				pP	pP	21 45 57.0	-3.3		
LYN				sP	sP	21 46 00.3	-3.0		
LYN				PP	**PnPn**	**21 46 03.5**	**+2.6**		
LYN				pmax	pmax				
	comp=Z,30nm,0.5s								
LYN				pmax	pmax				
	comp=Z,290nm,5.5s								
LYN				LR	LR				
	comp=Z,2μm,14.5s								
LYN				LR	LR				
	comp=Z,4μm,13.8s								
LYN				LR	LR				
	comp=Z,5μm,13.5s								
BJT	**Baijiatuau**	**16.62**	**318**	P	**P**	**21 45 53.5**	**-0.7**		
BJT	**Baijiatuau**	**16.62**	**318**	P	**P**	**21 45 53.5**	**-0.7**		
BJT				pmax	pmax				
	comp=Z,44nm,1.1s								
BJI	**Beijing**	**16.64**	**318**	P	**Pn**	**21 45 52.5**	**+0.5**		
BJI				pmax	pmax				
	comp=Z,11nm,1.1s								
BJI				pmax	pmax				
	comp=Z,330nm,7.6s								
BJI				LR	LR				
	comp=Z,510nm,15.4s								
BJI				LR	LR				
	comp=Z,2μm,14.7s								
BJI				LR	LR				
	comp=Z,3μm,14.8s								
ERM	**Erimo**	**17.13**	**34**		**P**	**21 45 59.5**	**-0.3**		
ERM	**Erimo**	**17.13**	**34**	P	**P**	**21 45 59.5**	**-0.3**		
ERM				pmax	pmax				
	comp=Z,88nm,1.2s								
BNX	**BinXian**	**17.58**	**353**	⇓P	**P**	**21 46 06.9**	**+2.2**		
BNX				pP	**pwP**	**21 46 12.8**	**-0.7**		
BNX				sP	**sP**	**21 46 16.3**	**+2.3**		
BNX				PP	**PnPn**	**21 46 21.3**	**+6.9**		
BNX				S	**S**	**21 49 23.6**	**-2.5**		
BNX				sS	**sS**	**21 49 30.9**	**-5.1**		
BNX				pmax	pmax				
	comp=Z,11nm,0.9s								
BNX				pmax	pmax				
	comp=Z,260nm,3.5s								
BNX				LR	LR				
	comp=Z,4μm,14.4s								
BNX				LR	LR				
	comp=Z,1μm,12.0s								
BNX				LR	LR				
	comp=Z,5μm,13.2s								
TIY	**Taiyuan**	**17.80**	**306**	*e*P	**P**	**21 46 09.3**	**+2.1**		
TIY				pmax	pmax				
	comp=Z,47nm,0.6s								
TIY				pmax	pmax				
	comp=Z,370nm,5.9s								
TIY				LR	LR				
	comp=Z,1μm,14.2s								
TIY				LR	LR				
	comp=Z,3μm,14.8s								
TIY				LR	LR				
	comp=Z,3μm,16.1s								
ENH	**Enshi**	**18.43**	**281**		**P**	**21 46 14.1**	**-0.1**		
ASAJ	**Asahikawa**	**18.53**	**28**	LR	LR	21 54 06.9			
	comp=Z,983nm,19.5s,baz=240,slow=40								
XAN	**Xi'an**	**19.31**	**293**	⇑*i*P	**P**	**21 46 23.3**	**-0.6**		
XAN				pP	sP	21 46 32.4	-1.1		
XAN				S	**S**	**21 50 01.3**	**+0.2**		
XAN				SS	**SnSn**	**21 50 22.5**	**+7.4**		
XAN				pmax	pmax				
	comp=Z,110nm,0.8s								
XAN				pmax	pmax				
	comp=Z,390nm,4.1s								
XAN				LR	LR				
	comp=Z,320nm,15.1s								
XAN				LR	LR				
	comp=Z,1μm,16.5s								
XAN				LR	LR				
	comp=Z,2μm,17.3s								
XLT	**XiLinHaoTe**	**19.40**	**327**	⇓*i*P	Pn	21 46 35.3	+9.3		
XLT				pP	sP	21 46 41.1	+7.0		
XLT				sP	pwP	21 46 45.8	+12		
XLT				S	**Sn**	**21 50 10.3**	**+7.4**		
XLT				sS	pS	21 50 20.9	+0.8		
XLT				pmax	pmax				
	comp=Z,23nm,1.3s								
XLT				pmax	pmax				
	comp=Z,180nm,5.7s								
XLT				LR	LR				
	comp=N,140nm,16.1s								
XLT				LR	LR				
	comp=E,2μm,16.1s								
XLT				LR	LR				
	comp=Z,3μm,16.1s								
GUMO	**Guam**	**19.83**	**135**	LR	LR	21 52 52.2			
	comp=Z,317nm,18.3s,baz=347,slow=33								
HHC	**Hu-ho-hao-te**	**19.94**	**314**	*e*P	**Pn**	**21 46 31.9**	**-0.7**		
HHC				S	**S**	**21 50 12.9**	**-1.1**		
HHC				pmax	pmax				
	comp=Z,26nm,1.0s								
HHC				pmax	pmax				
	comp=Z,270nm,4.6s								
HHC				LR	LR				
	comp=Z,3μm,15.9s								
HHC				LR	LR				
	comp=Z,2μm,15.9s								
HHC				LR	LR				
	comp=Z,3μm,15.2s								
BTO	**Baotou**	**20.82**	**311**	*e*P	**P**	**21 46 40.0**	**-0.3**		
BTO				S	**S**	**21 50 31.9**	**+0.5**		
BTO				LR	LR				
	comp=Z,3μm,16.3s								
BTO				LR	LR				
	comp=Z,4μm,15.5s								
KLR	**Kul'dur**	**20.92**	**2**	P	**P**	**21 46 40.0**	**-1.2**		
	comp=Z,8.3nm,0.6s,baz=192,slow=6.6,SNR=42								
	comp=Z,8.3nm,0.6s								
KLR	**Kul'dur**	**20.92**	**2**	*i* P	**P**	**21 46 40.1**	**-1.2**		
KLR				pmax	pmax				
	comp=Z,6.0nm,0.6s								
YSS	**Yuzh-Sakhalins**	**20.96**	**24**	P	**P**	**21 46 41.8**	**+0.2**		
YSS				IAmb	IAmb	21 46 43.8			
	comp=Z,87nm,1.2s								
YSS	**Yuzh-Sakhalins**	**20.96**	**24**	*e*P	**P**	**21 46 42.7**	**+1.1**		
YSS				*e*S	**S**	**21 50 26.5**	**-7.3**		
YSS				pmax	pmax				
	comp=Z,60nm,0.9s								
YSS				pmax	pmax				
	comp=Z,400nm,3.6s								
YSS				MLR	MLR				
	comp=Z,800nm,13.0s								
YSS				MLR	MLR				
	comp=N,500nm,16.0s								
YSS	**Yuzh-Sakhalins**	**20.96**	**24**	P	Pn	21 46 43.5	-0.7		
QIZ	**Qiongzhong**	**21.02**	**248**	P	**P**	**21 46 46.5**	**+4.0**		
QIZ				S	**S**	**21 50 36.0**	**+0.5**		
QIZ				sS	**pS**	**21 50 47.3**	**-1.0**		
QIZ				pmax	pmax				
	comp=N,23nm,1.5s								
QIZ				LR	LR				
	comp=N,690nm,14.3s								
QIZ				LR	LR				
	comp=N,820nm,17.5s								
QIZ				LR	LR				
	comp=N,1μm,13.9s								
GYA	**Guiyang**	**21.24**	**271**	⇓*i*P	**P**	**21 46 44.9**	**0.0**		
GYA				pP	pwP	21 46 53.1	-0.4		
GYA				sP	sP	21 46 56.3	+1.8		
GYA				S	**S**	**21 50 35.3**	**-4.6**		
GYA				SS	**SnSn**	**21 51 02.8**	**+0.3**		
GYA				pmax	pmax				
	comp=N,28nm,1.0s								
GYA				LR	LR				
	comp=N,1μm,12.8s								
GYA				LR	LR				
	comp=N,2μm,16.3s								
GYA				LR	LR				
	comp=N,3μm,15.6s								
DAV	**Davao City (W)**	**21.62**	**193**	LR	LR	21 55 08.9			
	comp=N,414nm,19.7s,baz=34,slow=36								
KUR	**Kuril'sk**	**21.82**	**35**	*e*P	**P**	**21 46 50.3**	**-0.5**		
KUR				S	**S**	**21 50 51.9**	**+1.2**		
KUR				MLR	MLR				
	comp=Z,1μm,22.0s								
UGL	**Uglegorsk**	**22.58**	**20**	*e*P	**P**	**21 47 00.6**	**+1.6**		
UGL				*e*S	**S**	**21 51 08.4**	**+3.5**		
UGL				pmax	pmax				
	comp=Z,280nm,2.0s								
UGL				pmax	pmax				
	comp=Z,90nm,0.9s								
UGL				MLR	MLR				
	comp=N,450nm,12.0s								
UGL				MLR	MLR				
	comp=E,830nm,13.0s								
UGL				MLR	MLR				
	comp=Z,890nm,13.0s								
GRNR	**Gornyy**	**22.89**	**10**	*c i*P	**P**	**21 47 03.2**	**+1.0**		
GRNR				pmax	pmax				
	comp=E,5.0nm,0.6s								
GRNR				pmax	pmax				
	comp=Z,10.0nm,0.7s								
GRNR				MLR	MLR				
	comp=E,320nm,14.0s								
GRNR				MLR	MLR				
	comp=N,650nm,15.0s								
GRNR				MLR	MLR				
	comp=Z,930nm,15.0s								
CD2	**Chengdu**	**23.37**	**283**	P	**P**	**21 47 06.3**	**-1.1**		
CD2				S	**S**	**21 51 17.5**	**-1.5**		
CD2				pmax	pmax				
	comp=Z,20nm,0.7s								
CD2				LR	LR				
	comp=Z,4μm,13.9s								
CD2				LR	LR				
	comp=Z,4μm,15.9s								
LZH	**Lanzhou**	**23.80**	**296**	*e*P	**P**	**21 47 10.0**	**-1.6**		
LZH				sP	pwP	21 47 19.3	-1.3		
LZH				S	**S**	**21 51 26.5**	**+0.5**		
LZH				SS	**SnSn**	**21 52 16.3**	**+11**		
LZH				pmax	pmax				
	comp=Z,19nm,1.5s								
LZH				pmax	pmax				
	comp=Z,160nm,5.4s								
LZH				LR	LR				
	comp=Z,1μm,14.6s								
LZH				LR	LR				
	comp=Z,3μm,13.6s								
LZH				LR	LR				
	comp=Z,3μm,13.0s								
TYV	**Tymovskoe**	**24.34**	**19**	*e*P	**P**	**21 47 17.3**	**+1.0**		
TYV				*e*S	**S**	**21 51 39.9**	**+5.9**		
TYV				pmax	pmax				
	comp=Z,100nm,1.9s								
TYV				pmax	pmax				
	comp=Z,25nm,0.7s								
TYV				smax	smax				
	comp=N,200nm,3.1s								
TYV				smax	smax				
	comp=E,200nm,3.1s								
SGSI	**Sangihe**	**24.93**	**192**	P	**P**	**21 47 21.9**	**0.0**		
	comp=E,1μmcomp=E,77nm,1.1s								
KMI	**Kunming**	**24.97**	**269**	⇓P	**P**	**21 47 22.5**	**0.0**		
KMI				pP	pP	21 47 29.3	-0.1		
KMI				sP	sP	21 47 32.8	+0.5		
KMI				S	**S**	**21 51 43.4**	**-1.7**		
KMI				pmax	pmax				
	comp=E,27nm,1.1s								
KMI				pmax	pmax				
	comp=E,99nm,3.8s								
KMI				LR	LR				
	comp=E,760nm,11.4s								
KMI				LR	LR				
	comp=E,1μm,14.2s								
KMI				LR	LR				
	comp=E,1μm,14.9s								
SLVN	**Son La**	**25.08**	**260**	P	**P**	**21 47 23.7**	**+0.3**		
ZEA	**Zeya**	**25.53**	**356**	*e*P	**P**	**21 47 27.7**	**+0.7**		
ZEA				*e*S	**S**	**21 51 49.1**	**-3.8**		
ZEA				pmax	pmax				
	comp=N,100nm,3.4s								
ZEA				pmax	pmax				
	comp=Z,100nm,6.1s								
ZEA				MLR	MLR				
	comp=N,200nm,15.0s								
ZEA				MLR	MLR				
	comp=E,200nm,15.0s								
PZH	**PanZhiHua**	**25.57**	**273**	P	**P**	**21 47 26.9**	**-0.9**		
PZH				pP	**pP**	**21 47 35.1**	**+0.5**		
PZH				sP	**sP**	**21 47 38.8**	**+1.3**		
PZH				PP	**PnPn**	**21 48 08.0**	**+4.0**		
PZH				S	**S**	**21 51 54.4**	**+0.1**		
PZH				PcS	**PcS**	**21 54 41.0**	**+1.5**		
PZH				pmax	pmax				
	comp=E,10.0nm,0.9s								
PZH				pmax	pmax				
	comp=E,140nm,4.6s								
PZH				LR	LR				
	comp=E,3μm,19.0s								
PZH				LR	LR				
	comp=E,4μm,16.5s								
PZH				LR	LR				
	comp=E,5μm,16.1s								
MYLDM	**Lahad Datu**	**25.66**	**209**	P	**P**	**21 47 28.8**	**+0.3**		
NKL	**Nikolayevsk**	**25.95**	**14**	*e*P	**P**	**21 47 29.0**	**-1.8**		
NKL				*e*S	**S**	**21 51 55.1**	**-4.4**		
NKL				pmax	pmax				
	comp=E,3.0nm,0.5s								
NKL				pmax	pmax				
	comp=N,5.0nm,0.6s								
NKL				pmax	pmax				
	comp=Z,30nm,1.4s								
NKL				smax	smax				
	comp=E,7.0nm,1.0s								
NKL				smax	smax				
	comp=N,344nm,1.9s								
NKL				MLR	MLR				
	comp=Z,433nm,17.0s								
ULN	**Ulaanbaatar**	**26.69**	**323**	P	**P**	**21 47 36.5**	**-1.3**		
ULN	**Ulaanbaatar**	**26.69**	**323**	⇑*i*P	**P**	**21 47 36.9**	**-0.9**		
ULN				pmax	pmax				
	comp=Z,3.0nm,0.6s								
SONM	**Songino Array**	**27.02**	**323**	P	**P**	**21 47 39.2**	**-1.6**		
	comp=Z,2.7nm,0.7s,baz=139,slow=9.4,SNR=18								
SONM				PcP	**PcP**	**21 51 01.4**	**-0.3**		
	comp=Z,0.4nm,0.6s,baz=151,slow=3.3,SNR=1.8								
SONM				LR	LR	22 00 05.9			
	comp=Z,1μm,18.4s,baz=127,slow=40								
	comp=Z,2.7nm,0.7s								
SONM	**Songino Array**	**27.02**	**323**	P	**P**	**21 47 40.1**	**-0.6**		
TNTI	**Ternate**	**27.53**	**187**	P	**P**	**21 47 43.6**	**-1.8**		
TNTI	**Ternate**	**27.53**	**187**	P	**P**	**21 47 45.5**	**+0.1**		
	comp=Z,28nm,0.9s								
TNTI	**Ternate**	**27.53**	**187**	P	**P**	**21 47 45.9**	**+0.5**		
GTA	**Gaotai**	**27.66**	**302**	⇑P	**P**	**21 47 45.3**	**-1.3**		
GTA				pP	pP	21 47 53.1	-0.4		
GTA				sP	sP	21 47 57.1	+0.6		
GTA				PcP	**PcP**	**21 51 04.1**	**+0.7**		
GTA				S	**S**	**21 52

CHTO pmax pmax
comp=Z,19nm,0.8s
CHTO Chiang Mai 30.35 259 P **P** **21 48 11.4 +0.9**
SANI Sanana 30.48 189 P **P** **21 48 10.5 -1.1**
comp=Z,16nm,1.3s
CMAR Chiang Mai Arr 30.49 258 P **P** **21 48 12.1 +0.3**
comp=Z,2.6nm,0.6s,baz=54,slow=7.8,SNR=20
CMAR PcP **PcP** **21 51 11.9 +1.2**
comp=Z,1.9nm,0.6s,baz=56,slow=1.0,SNR=9.8
CMAR LR LR 22 02 15.0
comp=Z,683nm,19.3s,baz=70,slow=40
comp=Z,2.6nm,0.6s
GOMU GeErMu 31.05 294 P **P** **21 48 15.8 -1.2**
GOMU S **S** **21 53 17.5 -3.5**
GOMU sS sS 21 53 33.5 +0.5
GOMU pmax pmax
comp=Z,4.0nm,0.7s
GOMU pmax pmax
comp=Z,83nm,4.7s
GOMU LR LR
comp=Z,230nm,11.0s
GOMU LR LR
comp=Z,280nm,14.5s
GOMU LR LR
comp=Z,270nm,15.5s
SBUM Sibu 31.06 217 P **P** **21 48 17.2 +0.5**
FAKI Fak Fak 31.08 177 P **P** **21 48 16.9 0.0**
FAKI IAmb IAmb 21 48 18.2
comp=Z,41nm,0.9s
FAKI Fak Fak 31.08 177 P **P** **21 48 17.3 +0.4**
comp=Z,53nm,0.9s
FAKI Fak Fak 31.08 177 P **P** **21 48 17.5 +0.6**
AAI Ambon 31.88 184 P **P** **21 48 23.0 -0.9**
comp=Z,52nm,1.2s
PEA0B Petropavlovsk- 31.89 31 P **P** **21 48 23.4 -0.4**
PEA0B IAmb IAmb 21 48 24.7
comp=Z,20nm,0.8s
PEA0B Petropavlovsk- 31.89 31 ⇓ *i*P **P** **21 48 23.5 -0.2**
PETK Petropavlovsk- 31.89 31 P **P** **21 48 23.4 -0.3**
comp=Z,15nm,0.8s,baz=214,slow=10,SNR=40
PETK LR LR 22 02 11.9
comp=Z,424nm,19.8s,baz=222,slow=38
comp=Z,15nm,0.8s
PETK Petropavlovsk- 31.89 31 P **P** **21 48 23.0 -0.7**
MOY Mondy 32.12 325 *e*P P 21 48 33.7 +7.8
PET Petropavlovsk 32.28 32 P **P** **21 48 26.8 -0.3**
PET IAmb IAmb 21 48 28.4
comp=Z,50nm,1.3s
PET Petropavlovsk 32.28 32 ⇑ *i*P **P** **21 48 27.6 +0.5**
PET pmax pmax
comp=Z,19nm,1.0s
PET Petropavlovsk 32.28 32 P **P** **21 48 28.1 +1.0**
comp=Z,113nm,1.8s
KSM Kuching 32.92 219 P **P** **21 48 33.8 +0.7**
KSM **sP** **21 48 42.2 -0.7**
KSM IAmb IAmb 21 48 45.5
comp=Z,22nm,1.0s
KSM Kuching 32.92 219 P **P** **21 48 34.3 +1.2**
YAK Yakutsk 33.74 359 P **P** **21 48 39.5 -0.2**
comp=Z,14nm,0.6s,baz=161,slow=0.9,SNR=16
comp=Z,14nm,0.6s
YAK Yakutsk 33.74 359 P **P** **21 48 39.6 -0.2**
YAK Yakutsk 33.74 359 *e*P **P** **21 48 39.2 -0.5**
YAK *e**PP **sP** **21 48 49.1 -0.5**
YAK *e* 21 49 48.4
YAK *e* 21 51 18.3
YAK *e*S **S** **21 53 59.4 -2.0**
YAK pmax pmax
comp=Z,43nm,0.9s
YAK pmax pmax
comp=N,25nm,1.4s
YAK pmax pmax
comp=E,4.0nm,1.0s
YAK pmax pmax
comp=Z,31nm,2.3s
YAK pmax pmax
comp=N,21nm,2.3s
YAK pmax pmax
comp=E,35nm,3.6s
YAK smax smax
comp=E,132nm,2.3s
YAK smax smax
comp=N,118nm,2.2s
YAK MLR MLR
comp=Z,345nm,13.0s
YAK MLR MLR
comp=N,250nm,16.0s
MA2 Magadan 34.22 18 P **P** **21 48 43.1 -0.8**
MA2 IAmb IAmb 21 48 44.6
comp=Z,20nm,1.0s
MA2 Magadan 34.22 18 ⇑ *i*P **P** **21 48 43.9 0.0**
MA2 pmax pmax
comp=Z,24nm,1.0s
LSA Lhasa 34.33 282 P **P** **21 48 45.0 -0.9**
LSA Lhasa 34.33 282 P **P** **21 48 45.0 -0.9**
LSA pmax pmax
comp=Z,7.0nm,0.7s
LSA Lhasa 34.33 282 P **P** **21 48 45.3 -0.6**
SHL Shillong 34.44 275 P **P** **21 48 45.4 -1.1**
SHL pwP **sP** **21 48 55.8 -0.5**
SHL Shillong 34.44 275 P **P** **21 48 45.4 -1.1**
KAPI Kappang 34.70 199 LR LR 22 02 00.6
comp=Z,183nm,21.9s,baz=20,slow=35
SRIT Nakonsritamara 35.08 242 P **P** **21 48 52.6 +0.7**
SRIT IAmb IAmb 21 49 10.0
comp=Z,14nm,0.7s
MYKOM Kota Tinggi 36.64 229 P **P** **21 49 05.2 0.0**
MYKOM IAmb IAmb 21 49 18.0
comp=Z,29nm,1.2s
IPM Ipoh 36.68 235 P **P** **21 49 05.4 -0.2**
IPM IAmb IAmb 21 49 18.2
comp=Z,26nm,1.2s
WMQ Urumqi 37.47 306 *e*P **P** **21 49 11.8 -0.3**
WMQ sP sP 21 49 24.1 +2.0
WMQ pmax pmax
comp=Z,13nm,0.7s
WMQ LR LR
comp=Z,930nm,14.9s
WMQ LR LR
comp=Z,1μm,15.5s
WMQ LR LR
comp=Z,840nm,15.7s
SEY Seymchan 37.47 16 LR LR 22 05 41.5
comp=Z,357nm,19.8s,baz=202,slow=38
SEY Seymchan 37.47 16 ⇑ *i*P **P** **21 49 12.5 +0.7**
SEY pmax pmax
comp=Z,13nm,1.0s
MMRI Maumere 37.57 193 P **P** **21 49 12.1 -1.0**
EDFI Ende, Flores 37.80 194 P **P** **21 49 13.7 -1.5**
comp=Z,11nm,1.8s
ODAN Odare 38.09 278 *e*P **P** **21 49 16.9 -0.8**
KRVT Keravat (AS076 38.48 144 P **P** **21 49 22.2 +1.4**
comp=Z,58nm,1.0s,baz=302,slow=2.3,SNR=8.3
comp=Z,58nm,1.0s
GUN Gumba 39.19 280 *e*P **P** **21 49 27.1 0.0**
comp=Z,25nm,0.5s
PKI Pulchoki 39.66 280 *e*P **P** **21 49 30.1 -1.0**
PKIN Phulchoki 39.67 280 *e*P **P** **21 49 30.4 -0.7**
DMN Daman 39.92 280 *e*P **P** **21 49 32.6 -0.5**
GKN Gorkha 40.24 281 *e*P **P** **21 49 34.8 -0.9**
comp=Z,13nm,0.5s
SHEM Shemya Is, Ala 40.30 40 LR LR 22 06 49.3
comp=Z,143nm,20.7s,baz=272,slow=37
UGM Wanagama 40.84 211 P **P** **21 49 40.2 -0.3**
MTN Manton Dam 40.90 179 P **P** **21 49 40.0 -0.9**
MTN IAmb IAmb 21 49 41.2
comp=Z,65nm,1.4s
MTN Manton Dam 40.90 179 P **P** **21 49 40.0 -0.9**
DANN Dangsing 40.93 282 *e*P **P** **21 49 40.9 -0.6**
comp=Z,12nm,0.5s
LEM Lembang 41.31 216 P **P** **21 49 46.1 +1.6**
comp=Z,47nm,0.7s,baz=348,slow=15,SNR=11
comp=Z,47nm,0.7s
MK31 Makanchi Array 41.72 310 P **P** **21 49 46.8 -0.6**
MK31 Makanchi Array 41.72 310 ⇑ *i*P **P** **21 49 46.6 -0.8**
MKAR Makanchi Array 41.72 310 P **P** **21 49 45.8 -1.6**
comp=Z,1.0nm,0.6s,baz=98,slow=10,SNR=12
MKAR PcP **PcP** **21 51 43.3 -0.4**
comp=Z,3.7nm,0.9s,baz=96,slow=3.7,SNR=5.8
MKAR ScP **ScP** **21 55 33.4 +1.2**
comp=Z,0.4nm,0.7s,baz=104,slow=5.4,SNR=2.1
MKAR LR LR 22 09 19.3
comp=Z,658nm,18.1s,baz=92,slow=40
comp=Z,1.0nm,0.6s
MKAR Makanchi Array 41.72 310 P **P** **21 49 46.4 -1.0**
MKAR Makanchi Array 41.72 310 P **P** **21 49 46.4 -1.0**
MKAR 21 51 43.3
ZAA0 Zalesovo Array 41.88 321 P **P** **21 49 47.2 -1.3**
ZALV Zalesovo Beam 41.88 321 P **P** **21 49 46.8 -1.7**
comp=Z,2.4nm,0.5s,baz=105,slow=8.7,SNR=13
ZALV PcP **PcP** **21 51 43.6 -0.3**
comp=Z,6.5nm,0.9s,baz=103,slow=4.7,SNR=8.6
ZALV LR LR 22 08 59.7
comp=Z,406nm,19.9s,baz=110,slow=39
comp=Z,2.4nm,0.5s
ZALV Zalesovo Beam 41.88 321 P **P** **21 49 47.1 -1.4**
ZALV Zalesovo Beam 41.88 321 P **P** **21 49 47.1 -1.4**
AMKA Amchitka 42.99 44 P **P** **21 49 58.3 +0.6**
TIXI Tiksi 43.41 359 LR LR 22 09 38.5
comp=Z,553nm,18.4s,baz=180,slow=38
TIXI Tiksi 43.41 359 P **P** **21 50 00.1 -0.6**
TIXI Tiksi 43.41 359 *i* P **P** **21 50 00.1 -0.6**
TIXI pmax pmax
comp=Z,8.0nm,0.8s
UZB Uzynbulak 43.67 304 *e*P **P** **21 50 02.0 -1.4**
UZB Uzynbulak 43.67 304 *e*P **P** **21 50 02.0 -1.4**
baz=304
SEM Semipalatinsk 43.68 315 *e*P **P** **21 50 01.6 -1.9**
SEM Semipalatinsk 43.68 315 *e*P **P** **21 50 01.6 -1.9**
baz=314
KNRA Kununurra 43.75 182 P **P** **21 50 03.7 -0.3**
KNRA IAmb IAmb 21 50 05.2
comp=Z,32nm,0.9s
KNRA Kununurra 43.75 182 P **P** **21 50 04.4 +0.4**
COEN Coen 43.76 162 P **P** **21 50 04.5 +0.3**
KPKS Kokpek 43.93 304 *e*P **P** **21 50 03.2 -2.3**
KPKS Kokpek 43.93 304 *e*P **P** **21 50 03.2 -2.3**
baz=304
PRZ Przheval'sk 44.10 303 P **P** **21 50 07.0 0.0**
PRZ Przheval'sk 44.10 303 P **P** **21 50 07.0 0.0**
PRZ pmax pmax
comp=Z,14nm,1.1s
SATY Saty 44.11 304 *e*P **P** **21 50 04.4 -2.6**
SATY Saty 44.11 304 *e*P **P** **21 50 04.5 -2.6**
baz=304
TDK Taldyqorghan 44.21 307 *e*P **P** **21 50 07.0 -0.6**
TDK Taldyqorghan 44.21 307 *e*P **P** **21 50 07.0 -0.6**
baz=306
TARG Taragay, Kyrgy 44.54 302 P **P** **21 50 09.5 -1.3**
TARG Taragay, Kyrgy 44.54 302 P **P** **21 50 09.5 -1.3**
TARG pmax pmax
comp=Z,8.0nm,0.9s
KURK Kurchatov 44.75 315 P **P** **21 50 10.9 -0.9**
KURK Kurchatov 44.75 315 ⇑ *i*P **P** **21 50 10.6 -1.2**
KURK pmax pmax
comp=Z,5.0nm,0.9s
KURBB Kurchatov Arra 44.79 315 P **P** **21 50 10.3 -1.9**
comp=Z,2.4nm,0.5s,baz=98,slow=9.2,SNR=24
KURBB PcP **PcP** **21 51 53.3 -0.6**
comp=Z,2.9nm,0.8s,baz=99,slow=4.0,SNR=6.3
KURBB LR LR 22 10 50.0
comp=Z,1μm,18.1s,baz=81,slow=39
comp=Z,2.4nm,0.5s
BILL Bilibino 45.09 18 P **P** **21 50 13.9 -0.4**
BILL Bilibino 45.09 18 *c i*P **P** **21 50 14.2 0.0**
BILL *i* 21 50 26.6
BILL *i* 21 51 55.1
BILL *i* 21 52 03.8
BILL pmax pmax
comp=Z,9.0nm,0.8s
CHKK Chushkaly 45.17 305 *e*P **P** **21 50 12.6 -2.7**
CHKK Chushkaly 45.17 305 *e*P **P** **21 50 12.7 -2.6**
baz=305
KUU Kurty 45.64 305 *e*P **P** **21 50 17.2 -1.8**
KUU Kurty 45.64 305 *e*P **P** **21 50 17.2 -1.8**
baz=305
KSH Kashi 45.99 299 P P 21 50 31.8 +10
KSH sP sP 21 50 46.0 +14
KSH pmax pmax
comp=Z,4.0nm,1.2s
KSH LR LR
comp=N,2μm,16.1s
KSH LR LR
comp=E,1μm,16.5s
KSH LR LR
comp=Z,1μm,15.1s
AAK Ala-Archa 46.99 303 LR LR 22 13 17.5
comp=Z,701nm,18.6s,baz=90,slow=40
AAK Ala-Archa 46.99 303 ⇑ *i*P **P** **21 50 29.3 -0.5**
AAK pmax pmax
comp=Z,2.0nm,0.7s
BTLS Baital 47.30 306 *e*P **P** **21 50 29.9 -2.1**
BTLS Baital 47.30 306 *e*P **P** **21 50 29.9 -2.1**
baz=306
WB0 Warramunga Arr 47.93 175 P **P** **21 50 36.8 -0.3**
WB0 IAmb IAmb 21 50 37.8
comp=Z,20nm,0.8s
NRIK Noril'sk 47.93 341 P **P** **21 50 34.9 -1.7**
comp=Z,7.8nm,0.5s,baz=118,slow=7.9,SNR=12
comp=Z,7.8nm,0.5s
NRIK Noril'sk 47.93 341 IAmb IAmb 21 50 49.1
comp=Z,25nm,1.3s
NRIK Noril'sk 47.93 341 *c e*P **P** **21 50 35.6 -0.9**
NRIK pmax pmax
comp=Z,7.0nm,0.6s
MTSU Mount Surprise 48.06 162 P **P** **21 50 39.5 +1.4**
WRAB Tennant Creek 48.09 175 P **P** **21 50 38.0 -0.3**
WRAB IAmb IAmb 21 50 39.6
comp=Z,21nm,0.8s
WRAB Tennant Creek 48.09 175 *d i*P **P** **21 50 38.6 +0.3**
WRAB pmax pmax
comp=Z,22nm,1.0s
WRAB Tennant Creek 48.09 175 P **P** **21 50 38.7 +0.4**
WRA Warramunga Arr 48.10 175 P **P** **21 50 38.5 +0.2**
comp=Z,13nm,0.7s,baz=355,slow=8.3,SNR=86
comp=Z,13nm,0.7s
WB2 Warramunga Arr 48.10 175 P **P** **21 50 37.8 -0.6**
WB2 IAmb IAmb 21 50 39.6
comp=Z,24nm,0.8s
WR0 Warramunga Arr 48.13 175 P **P** **21 50 38.1 -0.6**
BRZS Berezniki 48.44 313 *e*P **P** **21 50 38.4 -2.4**
BRZS Berezniki 48.44 313 *e*P **P** **21 50 38.5 -2.4**
baz=313
HYBB Hyderabad (bro 48.75 269 *e*P **P** **21 50 44.0 +0.3**
QIS Mount Isa 49.36 169 P **P** **21 50 48.4 +0.3**
KK31 Karatay Array 49.90 304 P **P** **21 50 51.8 -0.2**
KK31 Karatay Array 49.90 304 P **P** **21 50 51.8 -0.2**
KK31 pmax pmax
comp=Z,8.0nm,1.2s
KKAR Karatay Array 49.90 304 P **P** **21 50 51.8 -0.2**
KKAR Karatay Array 49.90 304 P **P** **21 50 51.8 -0.2**
KKAR pmax pmax
comp=Z,8.0nm,1.2s
BVAR Borovoye Array 50.11 317 LR LR 22 14 11.0
comp=Z,668nm,18.3s,baz=336,slow=39
SPIA Saint Paul Isl 50.13 38 P **P** **21 50 53.0 -0.6**
baz=261
BRVK Borovoye 50.18 317 P **P** **21 50 53.6 -0.4**
BRVK IAmb IAmb 21 51 05.6
comp=Z,16nm,0.8s
BRVK Borovoye 50.18 317 ⇑ *i*P **P** **21 50 53.0 -1.0**
BRVK pmax pmax
comp=Z,10.0nm,0.9s
MBWA Marble Bar 50.26 193 P **P** **21 50 54.3 -0.5**
MBWA IAmb IAmb 21 50 55.9
comp=Z,25nm,1.1s
MBWA **sP** **21 51 03.5 -1.1**
MBWA Marble Bar 50.26 193 P **P** **21 50 55.1 +0.3**
GAR Garm 50.41 299 P **P** **21 50 54.8 -1.3**
GAR IAmb IAmb 21 51 07.5
comp=Z,36nm,1.2s
NIKH Nikolski High 50.44 43 P **P** **21 50 54.9 -1.0**
baz=266
CTA Charters Tower 50.46 161 P **P** **21 50 57.0 +0.6**
comp=Z,8.5nm,0.9s,baz=332,slow=9.7,SNR=4.6
comp=Z,8.5nm,0.9s
PSA00 Pilbara Seismi 50.63 193 P **P** **21 50 57.2 -0.5**
PSA00 Pilbara Seismi 50.63 193 IAmb IAmb 21 50 58.9
comp=Z,32nm,1.4s
PSA00 Pilbara Seismi 50.63 193 P **P** **21 50 58.2 +0.5**
GAMB Gambell 50.86 29 P **P** **21 50 59.8 +0.9**
baz=254
CHGR Chuyangaron 51.35 298 P **P** **21 51 03.7 +0.5**
CHGR Chuyangaron 51.35 298 P **P** **21 51 03.7 +0.5**
CHGR pmax pmax
comp=Z,37nm,0.9s
PALK Pallekele 51.39 256 LR LR 22 15 42.2
comp=Z,228nm,18.4s,baz=168,slow=39
ASAR Alice Springs 51.77 176 P **P** **21 51 06.8 +0.6**
comp=Z,12nm,0.8s,baz=1.3,slow=7.2,SNR=98
comp=Z,12nm,0.8s
UNV Unalaska Valle 51.90 42 P **P** **21 51 06.9 0.0**
baz=267
KBL Kabul 52.12 293 P **P** **21 51 09.0 -0.1**
KBL IAmb IAmb 21 51 20.8
comp=Z,25nm,1.1s
KBL Kabul 52.12 293 P **P** **21 51 09.0 -0.1**
KBL pmax pmax
comp=Z,25nm,1.1s
TNA Tin City 52.88 27 P **P** **21 51 13.9 -0.1**
TNA IAmb IAmb 21 51 16.1
comp=Z,24nm,1.0s
TNA Tin City 52.88 27 P **P** **21 51 14.6 +0.6**
baz=257
WRKA Warakurna 53.07 182 P **P** **21 51 16.7 +0.8**
ANM Nome 53.74 29 P **P** **21 51 20.7 +0.4**
ANM IAmb IAmb 21 51 22.5
comp=Z,14nm,0.9s
ANM Nome 53.74 29 P **P** **21 51 20.7 +0.4**
ANM pmax pmax
comp=Z,14nm,0.9s
ANM Nome 53.74 29 P **P** **21 51 21.3 +1.0**
baz=260
SDPT Sand Point 55.43 40 P **P** **21 51 33.4 +0.7**
baz=271
SVE Sverdlovsk 55.88 321 *e*P **P** **21 51 36.6 +0.6**
SVE pmax pmax
comp=Z,22nm,1.1s
SVE MLR MLR
comp=Z,1μm,16.0s
CHNA Chernabura Isl 55.95 41 P **P** **21 51 36.4 -0.1**
baz=272
OOD Oodnadatta 56.00 174 P **P** **21 51 37.6 +0.6**
N16K Nishlik Lake 56.37 34 P **P** **21 51 40.3 +0.8**
baz=269,SNR=6.3
O16K Kokwok River B 56.70 35 P **P** **21 51 42.3 +0.6**
baz=270
ARU Arti 57.04 321 P **P** **21 51 43.4 -0.8**
ARU IAmb IAmb 21 51 55.4
comp=Z,22nm,1.0s
ARU Arti 57.04 321 ⇓ *i*P **P** **21 51 44.1 -0.1**
ARU pmax pmax
comp=Z,13nm,0.9s
O17K Koliganek Bris 57.21 35 P **P** **21 51 45.5 +0.2**
baz=271
P17K Kvichak River 57.55 36 P **P** **21 51 47.9 +0.2**
baz=272
HRA Herat 57.63 295 P **P** **21 51 49.0 -0.1**
R17K Ugashik Creek 57.64 38 P **P** **21 51 48.6 +0.2**
baz=273
TTA Tatalina 57.73 31 P **P** **21 51 49.3 +0.3**
baz=270,SNR=5.9
N18K Kilae Creek 57.80 34 P **P** **21 51 50.1 +0.6**
N18K Kilae Creek 57.80 34 P **P** **21 51 50.1 +0.6**
baz=271
AKTO Aktyubinsk 57.84 314 LR LR 22 18 45.8
comp=Z,497nm,19.9s,baz=85,slow=38
SVW2 Sparrevohn 57.94 33 P **P** **21 51 51.0 +0.5**
A21K Barrow 57.99 21 P **P** **21 51 50.7 +0.1**
A21K IAmb IAmb 21 51 52.2
comp=Z,20nm,0.9s
A21K Barrow 57.99 21 P **P** **21 51 50.9 +0.2**
baz=264
O18K Koktuh Hills 58.16 35 P **P** **21 51 52.5 +0.5**
O18K IAmb IAmb 21 51 54.2
comp=Z,20nm,1.1s
O18K Koktuh Hills 58.16 35 P **P** **21 51 52.3 +0.2**
baz=272
CHIR Chirikof Islan 58.17 40 P **P** **21 51 52.0 -0.2**
baz=274
P18K Big Mountain, 58.17 35 P **P** **21 51 51.7 -0.4**
P18K IAmb IAmb 21 51 54.7
comp=Z,16nm,1.2s
P18K Big Mountain, 58.17 35 P **P** **21 51 52.0 -0.2**
baz=272
L19K White Mountain 58.27 32 P **P** **21 51 53.3 +0.5**
L19K White Mountain 58.27 32 P **P** **21 51 53.7 +0.9**
baz=271,SNR=7.4
Q18K Katmai Hardscr 58.32 36 P **P** **21 51 51.9 -1.4**
baz=273
MULG Mulgathing 58.35 176 P **P** **21 51 54.1 +0.5**
N19K Bonanza Creek 58.48 34 P **P** **21 51 54.8 +0.4**
N19K Bonanza Creek 58.48 34 P **P** **21 51 55.0 +0.6**
baz=272
M19K Big River Lodg 58.49 32 P **P** **21 51 54.6 +0.2**
M19K Big River Lodg 58.49 32 P **P** **21 51 55.4 +1.1**
baz=272
J20K Nowinta River 58.56 30 P **P** **21 51 55.5 +0.7**
J20K IAmb IAmb 21 51 57.0
comp=Z,30nm,1.2s
J20K Nowinta River 58.56 30 P **P** **21 51 56.0 +1.2**
baz=270,SNR=22
O19K Port Alsworth 58.59 34 P **P** **21 51 55.3 +0.3**
O19K IAmb IAmb 21 51 56.8
comp=Z,16nm,1.0s
O19K Port Alsworth 58.59 34 P **P** **21 51 55.6 +0.6**
baz=273
K20K Telida 58.61 31 P **P** **21 51 55.8 +0.6**
K20K IAmb IAmb 21 51 57.5
comp=Z,20nm,0.9s
K20K Telida 58.61 31 P **P** **21 51 56.4 +1.3**
baz=271,SNR=24
MORW Morawa 58.70 195 IAmb IAmb 21 51 57.3
comp=Z,25nm,1.2s
MORW Morawa 58.70 195 P **P** **21 51 56.1 0.0**
L20K Farewell, AK 58.71 32 P **P** **21 51 57.0 +1.0**
baz=272,SNR=13
IMAR Indian Mountai 58.73 28 P **P** **21 51 55.9 0.0**
FORT Forrest 58.79 182 P **P** **21 51 57.0 +0.3**
LCRK Leigh Creek 58.88 172 P **P** **21 51 58.1 +0.8**
Q19K Cape Douglas, 59.01 36 P **P** **21 51 57.1 -1.0**
baz=274
M20K Styx River 59.09 32 P **P** **21 51 59.4 +0.8**
M20K Styx River 59.09 32 P **P** **21 51 59.6 +1.0**
baz=273,SNR=11
H21K Melozitna Rive 59.12 28 P **P** **21 51 59.0 +0.4**
H21K IAmb IAmb 21 52 00.8
comp=Z,18nm,0.9s
H21K Melozitna Rive 59.12 28 P **P** **21 51 59.7 +1.0**
baz=271,SNR=24
OHAK Old Harbor 59.34 38 P **P** **21 51 59.9 -0.4**
baz=275
CHUM Lake Minchumin 59.38 30 P **P** **21 52 01.5 +1.1**
baz=272
O20K Slope Mountain 59.44 35 P **P** **21 52 00.8 -0.2**
baz=274
I21K Tanana 59.47 29 P **P** **21 52 01.6 +0.6**
I21K Tanana 59.47 29 P **P** **21 52 02.4 +1.3**
baz=272,SNR=26
PPLA Purkeypile 59.48 31 P **P** **21 52 01.7 +0.3**
PPLA IAmb IAmb 21 52 02.9
comp=Z,18nm,0.8s
PPLA Purkeypile 59.48 31 P **P** **21 52 02.4 +1.0**
baz=273,SNR=15
CAST Castle Rocks 59.50 31 P **P** **21 52 01.8 +0.5**
CAST IAmb IAmb 21 52 03.3
comp=Z,21nm,0.9s
CAST Castle Rocks 59.50 31 P **P** **21 52 02.3 +1.0**
baz=273,SNR=29
SPU Mount Spurr 59.65 33 P **P** **21 52 03.0 +0.6**
KDAK Kodiak Island 59.66 37 P **P** **21 52 02.7 +0.2**
KDAK IAmb IAmb 21 52 04.3
comp=Z,17nm,1.0s
KDAK Kodiak Island 59.66 37 *d i*P **P** **21 52 02.1 -0.4**
KDAK pmax pmax
comp=Z,60nm,1.9s
KDAK Kodiak Island 59.66 37 P **P** **21 52 02.2 -0.3**
baz=276
Q20K Shuyak Island 59.68 36 P **P** **21 52 01.9 -0.7**
baz=275
H22K Ishtalitna Cre 59.70 28 P **P** **21 52 04.1 +1.4**
baz=272
SKT Skwentna 59.84 32 IAmb IAmb 21 52 04.7
comp=Z,12nm,0.9s
SKT Skwentna 59.84 32 P **P** **21 52 03.5 -0.1**
baz=274,SNR=13
BPAW Bear Paw Mtn. 59.95 30 P **P** **21 52 04.9 +0.5**
BPAW IAmb IAmb 21 52 06.4
comp=Z,14nm,1.0s
BPAW Bear Paw Mtn. 59.95 30 P **P** **21 52 05.1 +0.7**
baz=273,SNR=11
HOM Homer 59.97 35 P **P** **21 52 04.5 -0.1**
HOM Homer 59.97 35 P **P** **21 52 04.8 +0.2**
baz=275
MLY Manley 60.01 29 P **P** **21 52 05.7 +0.9**
MLY IAmb IAmb 21 52 06.9
comp=Z,20nm,1.0s

MLY **Manley** 60.01 29 P P 21 52 05.7 +0.9
baz=273,SNR=24
KTH **Kantishna Hill** 60.01 30 P P 21 52 04.7 -0.3
KTH IAmb IAmb 21 52 06.8
comp=Z,33nm,1.5s
GEYT **Alibeck** 60.01 300 LR LR 22 22 01.6
comp=Z,539nm,18.8s,baz=107,slow=40
CAPN **Captain Cook N** 60.12 34 P P 21 52 06.0 +0.5
baz=275
COLD **Coldfoot** 60.13 26 P P 21 52 06.0 +0.4
COLD **Coldfoot** 60.13 26 P P 21 52 06.3 +0.7
baz=272
CNPM **China Poot** 60.19 35 P P 21 52 05.2 -0.9
SUA **Susitna One** 60.25 33 P P 21 52 06.4 -0.2
baz=275,SNR=39
TRF **Thorofare Moun** 60.30 31 P P 21 52 06.8 -0.2
TRF **Thorofare Moun** 60.30 31 P P 21 52 07.2 +0.1
baz=274,SNR=7.4
TOLK **Toolik Lake Re** 60.31 25 P P 21 52 07.0 +0.1
TOLK IAmb IAmb 21 52 08.9
comp=Z,18nm,1.0s
TOLK **Toolik Lake Re** 60.31 25 P P 21 52 07.8 +0.9
baz=272,SNR=19
BRLK **Bradley Lake** 60.34 35 P P 21 52 06.8 -0.4
BRLK IAmb IAmb 21 52 08.5
comp=Z,12nm,0.8s
CUT **Chulitna** 60.40 32 P P 21 52 07.3 -0.1
CUT **Chulitna** 60.40 32 P P 21 52 07.7 +0.2
baz=275
BRSE **Bradley Lake S** 60.42 35 P P 21 52 08.1 +0.4
baz=276
H23K **Yukon River** 60.46 28 P P 21 52 08.8 +0.9
H23K **Yukon River** 60.46 28 P P 21 52 09.3 +1.4
baz=274,SNR=28
M22K **Willow** 60.52 32 P P 21 52 08.3 0.0
M22K **Willow** 60.52 32 P P 21 52 08.2 -0.1
baz=276
FIS **Fire Island** 60.53 33 P P 21 52 08.5 +0.2
I23K **Minto, Yukon-K** 60.58 29 IAmb IAmb 21 52 10.7
comp=Z,13nm,1.1s
I23K **Minto, Yukon-K** 60.58 29 P P 21 52 09.6 +1.0
baz=274,SNR=15
BWN **Browne** 60.61 30 P P 21 52 09.9 +1.0
NEA2 **Nenana** 60.75 29 P P 21 52 10.5 +0.6
NEA2 **Nenana** 60.75 29 P P 21 52 10.4 +0.6
baz=275,SNR=53
STKA **Stephens Creek** 60.77 169 P P 21 52 09.3 -0.9
comp=Z,4.6nm,0.8s,baz=343,slow=1.6,SNR=8.8
comp=Z,4.6nm,0.8s
STKA **Stephens Creek** 60.77 169 ⇓*i*P P 21 52 10.6 +0.3
RC01 **Rabbit Creek A** 60.77 33 P P 21 52 09.7 -0.3
RC01 IAmb IAmb 21 52 11.0
comp=Z,25nm,1.2s
RC01 **Rabbit Creek A** 60.77 33 P P 21 52 09.8 -0.3
baz=276,SNR=6.0
MCK **McKinley** 60.88 30 P P 21 52 10.4 -0.3
MCK **McKinley** 60.88 30 P P 21 52 10.5 -0.3
MCK pmax pmax
comp=Z,28nm,0.9s
MCK **McKinley** 60.88 30 P P 21 52 10.6 -0.2
baz=275,SNR=14
BBOO **Buckleboo** 61.00 175 P P 21 52 11.2 -0.6
PMR **Palmer** 61.01 33 IAmb IAmb 21 52 12.5
comp=Z,16nm,0.9s
PMR **Palmer** 61.01 33 P P 21 52 11.3 -0.3
baz=276
SEW **Seward** 61.02 34 IAmb IAmb 21 52 12.5
comp=Z,20nm,0.8s
SEW **Seward** 61.02 34 P P 21 52 11.4 -0.3
baz=277,SNR=5.6
MDM **Murphy Dome** 61.08 29 P P 21 52 12.7 +0.6
GHO **Glory Hole Cre** 61.09 32 IAmb IAmb 21 52 31.3
comp=Z,17nm,1.0s
H24K **Noodor Dome** 61.14 28 P P 21 52 13.0 +0.5
H24K IAmb IAmb 21 52 14.9
comp=Z,20nm,0.9s
H24K **Noodor Dome** 61.14 28 P P 21 52 13.7 +1.2
baz=275,SNR=37
WAT1 **Susitna Watana** 61.15 31 P P 21 52 12.0 -0.6
baz=276
WRH **Wood River Hil** 61.18 29 IAmb IAmb 21 52 14.6
comp=Z,16nm,1.2s
TCOL **CIGO, UAF Yank** 61.24 29 P P 21 52 14.1 +1.0
TCOL **CIGO, UAF Yank** 61.24 29 P P 21 52 13.5 +0.4
baz=276
CMSA **Cobar Meteorol** 61.24 165 P P 21 52 14.1 +0.6
COLA **College** 61.24 29 P P 21 52 13.4 +0.3
COLA **College** 61.24 29*c i*P P 21 52 14.2 +1.1
COLA pmax pmax
comp=Z,11nm,0.6s
COLA **College** 61.24 29 P P 21 52 13.8 +0.6
baz=276
KNK **Knik Glacier** 61.35 33 P P 21 52 13.7 -0.4
KNK IAmb IAmb 21 52 15.2
comp=Z,20nm,0.9s
KNK **Knik Glacier** 61.35 33 P P 21 52 13.8 -0.2
baz=277,SNR=8.1
SML **Sawmill** 61.36 32 IAmb IAmb 21 52 16.8
comp=Z,12nm,0.7s
SML **Sawmill** 61.36 32 P P 21 52 14.2 0.0
baz=277,SNR=10.0
POKR **Poker Flat Res** 61.40 29 P P 21 52 15.2 +0.9
POKR **Poker Flat Res** 61.40 29 P P 21 52 14.9 +0.7
baz=276,SNR=9.5
WAT6 **Susitna Watana** 61.55 31 P P 21 52 15.4 -0.1
baz=277,SNR=20
DHY **Denali Highway** 61.65 31 P P 21 52 15.8 -0.3
baz=277,SNR=9.5
M23K **Glacier View** 61.65 32 P P 21 52 16.1 0.0
baz=278
ILAR **Eielson Array** 61.66 29 P P 21 52 15.4 -0.7
comp=Z,5.8nm,0.8s,baz=270,slow=5.7,SNR=61
comp=Z,5.8nm,0.8s
HDA **Harding Lake** 61.68 29 P P 21 52 15.7 -0.5
baz=277,SNR=31
KIRV **Kirov** 61.75 324*c i*P P 21 52 16.3 -0.3
SCM **Sheep Creek Mo** 61.83 32 P P 21 52 17.3 0.0
SCM **Sheep Creek Mo** 61.83 32 P P 21 52 17.3 0.0
SCM pmax pmax
comp=Z,54nm,1.4s
SCM **Sheep Creek Mo** 61.83 32 P P 21 52 17.5 +0.2
baz=278,SNR=15
GLI **Glacier Island** 62.08 33 P P 21 52 18.5 -0.3
GLI IAmb IAmb 21 52 19.9
comp=Z,13nm,0.7s
GLI **Glacier Island** 62.08 33 P P 21 52 18.6 -0.3
baz=278,SNR=9.9
K24K **Donnelly Dome** 62.27 30 P P 21 52 20.2 0.0
baz=278
J25K **Salcha River,** 62.33 29 P P 21 52 20.8 +0.2
baz=278,SNR=8.6
M24K **Tolsona, Glenn** 62.33 32 P P 21 52 21.4 +0.8
baz=279,SNR=5.4
FID **Port Fidalgo** 62.40 33 P P 21 52 21.0 0.0
FID IAmb IAmb 21 52 21.6
comp=Z,11nm,0.8s
HIN **Hinchinbrook I** 62.44 34 P P 21 52 20.7 -0.7
HIN IAmb IAmb 21 52 22.3
comp=Z,12nm,0.7s
PAX **Paxson** 62.53 31 P P 21 52 21.7 -0.3
PAX IAmb IAmb 21 52 23.4
comp=Z,12nm,1.0s
PAX **Paxson** 62.53 31 P P 21 52 21.7 -0.3
PAX pmax pmax
comp=Z,12nm,1.0s
PAX **Paxson** 62.53 31 P P 21 52 22.1 +0.1
baz=279,SNR=13
KLU **Klutina** 62.55 32 P P 21 52 21.8 -0.3
KLU IAmb IAmb 21 52 23.6
comp=Z,18nm,1.2s
KLU **Klutina** 62.55 32 P P 21 52 22.4 +0.3
baz=279,SNR=6.4
DIV **Divide** 62.67 33 P P 21 52 22.8 -0.2
DIV IAmb IAmb 21 52 24.5
comp=Z,17nm,0.8s
Q23K **Middleton Isla** 62.67 35 P P 21 52 23.1 +0.3
baz=280
RIDG **Independent Ri** 62.69 30 IAmb IAmb 21 52 24.8
comp=Z,17nm,0.9s
RIDG **Independent Ri** 62.69 30 P P 21 52 22.5 -0.5
baz=279,SNR=18
HARP **HAARP** 62.76 31 P P 21 52 24.3 +0.9
baz=279,SNR=8.1
EYAK **Cordova Ski Ar** 62.78 34 P P 21 52 23.3 -0.3
EYAK **Cordova Ski Ar** 62.78 34 P P 21 52 24.1 +0.5
baz=280

SCRK **Sand Creek** 63.02 30 P P 21 52 25.3 0.0
baz=280,SNR=41
DOT **Dot Lake** 63.05 30 P P 21 52 25.0 -0.4
J26L **Joseph Creek** 63.12 29 P P 21 52 25.6 -0.3
baz=280,SNR=62
PRGR **Permogore** 63.13 328 *e*P P 21 52 24.2 -1.6
N25K **Chitina, Valde** 63.15 32 P P 21 52 26.7 +0.5
N25K **Chitina, Valde** 63.15 32 P P 21 52 26.9 +0.7
baz=280,SNR=5.9
I26K **Coal Creek Min** 63.16 28 P P 21 52 25.6 -0.4
baz=280
BMRM **Bremner River** 63.26 33 P P 21 52 27.3 +0.4
baz=280,SNR=10
L26K **Log Cabin Wild** 63.47 31 IAmb IAmb 21 52 30.1
comp=Z,18nm,0.8s
L26K **Log Cabin Wild** 63.47 31 P P 21 52 28.9 +0.7
baz=281,SNR=19
HMT **Hamilton** 63.55 34 IAmb IAmb 21 52 30.5
comp=Z,18nm,1.0s
GLB **Gilahina Butte** 63.55 32 IAmb IAmb 21 52 30.4
comp=Z,18nm,1.0s
M26K **Nabesna, AK** 63.75 31 P P 21 52 30.7 +0.7
baz=281,SNR=36
VRDI **Verde Repeater** 63.76 33 P P 21 52 30.6 +0.3
VRDI IAmb IAmb 21 52 31.7
comp=Z,15nm,0.9s
SUCK **Suckling Hills** 63.84 34 P P 21 52 31.3 +0.7
SUCK IAmb IAmb 21 52 32.7
comp=Z,28nm,1.2s
K27K **Chicken** 63.84 29 P P 21 52 31.2 +0.7
K27K IAmb IAmb 21 52 32.5
comp=Z,25nm,1.1s
K27K **Chicken** 63.84 29 P P 21 52 31.3 +0.7
baz=281
BELG **Belogornoye** 63.91 317 LR LR 22 22 26.2
comp=Z,335nm,21.2s,baz=117,slow=38
BELG **Belogornoye** 63.91 317*c i*P P 21 52 30.6 -0.6
BELG pmax pmax
comp=Z,2.0nm,0.9s
MCARA **McCarthy VSAT** 63.94 32 P P 21 52 32.3 +1.0
MCARA IAmb IAmb 21 52 43.1
comp=Z,19nm,1.0s
MCARA **McCarthy VSAT** 63.94 32 P P 21 52 31.8 +0.6
baz=282
WSAR **Wadi Sarin** 64.06 284 LR LR 22 24 17.6
comp=Z,125nm,18.4s,baz=100,slow=40
L27K **Beaver Creek,** 64.14 30 P P 21 52 33.1 +0.5
L27K IAmb IAmb 21 52 34.6
comp=Z,11nm,0.8s
L27K **Beaver Creek,** 64.14 30 P P 21 52 33.6 +0.9
baz=282,SNR=20
TGL **Tana Glacier** 64.16 33 P P 21 52 33.0 +0.2
BCAR **Beaver Creek A** 64.16 30 P P 21 52 33.6 +0.8
WAX **Waxell Ridge** 64.21 33 P P 21 52 33.1 0.0
WAX IAmb IAmb 21 52 34.7
comp=Z,14nm,0.7s
M27K **Edge Creek, AK** 64.27 31 IAmb IAmb 21 52 35.2
comp=Z,18nm,0.8s
M27K **Edge Creek, AK** 64.27 31 P P 21 52 34.3 +0.7
baz=282,SNR=16
SNH **Sunshine Point** 64.27 34 P P 21 52 33.2 -0.3
SNH IAmb IAmb 21 52 35.4
comp=Z,21nm,0.9s
ISLE **Juniper Island** 64.42 33 P P 21 52 34.9 +0.3
ISLE IAmb IAmb 21 52 35.7
comp=Z,13nm,0.8s
BARN **Barnard Glacie** 64.65 33 P P 21 52 36.0 -0.2
BARN IAmb IAmb 21 52 37.7
comp=Z,11nm,0.8s
MESA **MESA** 64.71 34 P P 21 52 36.6 +0.1
MESA IAmb IAmb 21 52 38.9
comp=Z,11nm,0.9s
MESA **MESA** 64.71 34 P P 21 52 37.0 +0.5
baz=283
BVCY **Beaver Creek** 64.72 31 P P 21 52 36.9 +0.6
baz=283
YAH **Yahtse** 64.76 33 P P 21 52 37.1 +0.2
YAH IAmb IAmb 21 52 38.1
comp=Z,11nm,0.8s
CTG **Chitna Glacier** 64.82 33 P P 21 52 37.9 +0.7
baz=283
CTGM **Chitina Glacie** 64.83 33 P P 21 52 37.4 +0.1
CTGM IAmb IAmb 21 52 38.9
comp=Z,17nm,1.0s
MSVF **Nonsavu** 64.89 129 P P 21 52 39.0 +0.9
MSVF IAmb IAmb 21 52 42.2
comp=Z,21nm,1.1s
MSVF **Nonsavu** 64.89 129 P P 21 52 39.0 +0.9
MSVF pmax pmax
comp=Z,21nm,1.1s
DAWY **Dawson** 64.99 29 P P 21 52 38.5 +0.3
DAWY IAmb IAmb 21 52 39.7
comp=Z,11nm,1.1s
DAWY **Dawson** 64.99 29 P P 21 52 38.6 +0.5
baz=283,SNR=7.5
LOGN **Logan Glacier** 65.02 33 P P 21 52 38.6 +0.1
LOGN IAmb IAmb 21 52 40.1
comp=Z,20nm,1.4s
TABL **Table Mountain** 65.04 33 P P 21 52 38.2 -0.5
YUK3 **Moose Creek** 65.05 32 P P 21 52 39.1 +0.4
baz=284,SNR=8.8
I29M **Ogilvie Camp,** 65.14 28 IAmb IAmb 21 52 41.0
comp=Z,20nm,1.0s
I29M **Ogilvie Camp,** 65.14 28 P P 21 52 39.9 +0.8
baz=284,SNR=22
J29M **Klondike Camp** 65.40 28 P P 21 52 42.1 +1.3
baz=284
YUK8 **Steele Glacier** 65.49 32 P P 21 52 42.6 +0.9
baz=284,SNR=6.4
EPYK **Eagle Plains** 65.53 26 P P 21 52 42.2 +0.6
baz=285,SNR=9.7
PCA **Pinnacle** 65.55 33 P P 21 52 42.4 +0.5
PINM **Pinnacle** 65.55 33 P P 21 52 42.6 +0.8
baz=284,SNR=7.6
BCPM **Bancas Point** 65.89 33 P P 21 52 44.8 +0.9
YUK4 **Talbot Arm** 66.00 32 P P 21 52 45.9 +1.0
baz=285,SNR=12
PNL **Peninsula** 66.08 34 P P 21 52 46.1 +0.9
baz=285,SNR=6.2
HLK **Haleakala** 66.18 78 P P 21 52 48.0 +1.3
KLMR **Klimovskoe** 66.18 328 *e*P P 21 52 44.2 -1.6
KLMR pmax pmax
comp=Z,24nm,1.3s
KLMR **Klimovskoe** 66.18 328 *e*P P 21 52 44.2 -1.6
KLMR AMP 21 52 56.8
comp=Z,24nm,1.3s
KLMR LQ LQ 22 18 16.4
KLMR LQ LQ 22 18 16.4
KLMR LR LR 22 21 20.6
INK **Inuvik** 66.19 24 P P 21 52 45.0 -0.8
INK IAmb IAmb 21 52 46.7
comp=Z,9.2nm,0.8s
INK **Inuvik** 66.19 24 P P 21 52 45.0 -0.8
INK pmax pmax
comp=Z,9.0nm,0.8s
INK **Inuvik** 66.19 24 P P 21 52 46.1 +0.3
baz=287
YUK6 **Outpost Mounta** 66.23 32 P P 21 52 47.6 +1.1
baz=286,SNR=14
LVZ **Lovozero** 66.26 336 P P 21 52 46.8 +0.5
LVZ **Lovozero** 66.26 336 P P 21 52 46.8 +0.5
LVZ pmax pmax
comp=Z,31nm,1.2s
MAK **Makhachkala** 66.47 307 *e*P P 21 52 42.3 -5.6
MAK *e*S **S** 22 01 28.2 -8.7
MAK *e*SS **SS** 22 05 50.2 -3.3
MAK pmax pmax
comp=Z,128nm,1.6s
M30M **Minto, Yukon** 66.50 30 P P 21 52 48.8 +0.9
M30M IAmb IAmb 21 52 51.3
comp=Z,11nm,1.0s
M30M **Minto, Yukon** 66.50 30 P P 21 52 49.1 +1.1
baz=286,SNR=13
HYT **Haines Junctio** 66.67 32 P P 21 52 49.6 +0.5
HYT IAmb IAmb 21 52 51.4
comp=Z,19nm,0.9s
HYT **Haines Junctio** 66.67 32 P P 21 52 50.1 +1.0
baz=286,SNR=17
N30M **Aishikik Lake** 66.69 32 P P 21 52 50.1 +0.9
baz=286,SNR=8.2
P30M **Million Dollar** 67.13 33 P P 21 52 52.8 +0.8
baz=287
SPB2 **Spitsbergen Ar** 67.22 348 P P 21 52 52.1 -0.1
SPA0 **Spitsbergen Ar** 67.22 348 *e*P P 21 52 51.7 -0.5
SPITS **Spitsbergen Ar** 67.22 348 LR LR 22 25 18.1
comp=Z,206nm,19.4s,baz=7.5,slow=39

N31M **Braeburn, Yuko** 67.28 31 P P 21 52 52.6 -0.3
N31M **Braeburn, Yuko** 67.28 31 P P 21 52 54.1 +1.2
baz=288,SNR=9.8
O30N **Mendenhall** 67.35 32 P P 21 52 54.2 +0.8
baz=288,SNR=7.5
GROC **Groznyy** 67.59 308 *e*P P 21 52 53.6 -1.5
GROC *e* 21 53 22.3
GROC pmax pmax
comp=Z,11nm,0.5s
PLBC **Pleasant Camp** 67.62 33 P P 21 52 55.8 +0.8
baz=288,SNR=8.1
A36M **Sachs Harbour** 67.63 19 P P 21 52 55.4 +0.5
baz=292
M31M **Drury Creek, Y** 67.69 30 P P 21 52 55.6 +0.2
M31M IAmb IAmb 21 52 56.7
comp=Z,10nm,0.8s
M31M **Drury Creek, Y** 67.69 30 P P 21 52 56.1 +0.7
baz=288,SNR=10.0
VRH **Novokhopyorsk** 67.76 317 *e*P P 21 52 55.5 -0.5
VRH pmax pmax
comp=Z,10.0nm,0.6s
VRH MLR MLR
comp=Z,610nm,15.0s
WHY **Whitehorse** 67.95 32 P P 21 52 58.0 +0.8
WHY IAmb IAmb 21 52 58.8
comp=Z,12nm,0.8s
WHY **Whitehorse** 67.95 32 P P 21 52 58.0 +0.8
baz=289,SNR=7.9
SKAG **Skagway** 68.12 33 P P 21 52 59.2 +1.1
SKAG IAmb IAmb 21 53 00.3
comp=Z,12nm,0.8s
SKAG **Skagway** 68.12 33 P P 21 52 58.8 +0.7
baz=289
N32M **Quiet Lake** 68.62 31 P P 21 53 01.9 +0.6
baz=290
BESE **Bessie Mountai** 68.64 34 P P 21 53 00.8 -0.7
MOS **Moscow** 68.66 323 *e*P P 21 53 00.8 -0.7
MOS *e* 21 55 34.6
MOS *e*S **S** 22 02 01.1 -1.6
MOS MLR MLR
comp=Z,600nm,18.0s
ARA0 **ARCESS Array S** 68.82 339 *e*P P 21 53 02.4 0.0
ARCES **ARCESS Array B** 68.82 339 P P 21 53 01.5 -0.9
comp=Z,1.7nm,0.5s,baz=68,slow=7.0,SNR=21
ARCES LR LR 22 27 46.4
comp=Z,158nm,18.2s,baz=47,slow=40
comp=Z,1.7nm,0.5s
P32M **Atlin** 68.85 33 P P 21 53 03.5 +0.7
baz=290
GOF **Gofitskoye** 68.87 311⇑*e*P P 21 53 04.5 +1.4
GOF pmax pmax
comp=Z,14nm,0.6s
SIT **Sitka** 68.91 36 P P 21 53 04.1 +1.1
baz=290
MMPY **Sheldon Lake,** 68.92 29 P P 21 53 04.3 +1.1
baz=291,SNR=5.0
LPSR **Galich'ya Gora** 68.96 319 *e*P P 21 53 02.7 -0.8
LPSR pmax pmax
comp=Z,20nm,0.9s
LPSR MLR MLR
comp=Z,520nm,14.0s
JIS **Juneau Island** 68.97 34 P P 21 53 03.8 +0.4
JIS IAmb IAmb 21 53 05.2
comp=Z,11nm,0.8s
ZEI **Tsey** 69.04 308 *e*P P 21 53 05.3 +0.9
ZEI pmax pmax
comp=Z,21nm,1.0s
C36M **Paulatuk** 69.04 21 P P 21 53 03.9 +0.2
C36M **Paulatuk** 69.04 21 P P 21 53 04.2 +0.5
baz=295,SNR=12
P33M **Teslin, Yukon** 69.06 32 P P 21 53 04.9 +0.8
P33M IAmb IAmb 21 53 06.2
comp=Z,25nm,1.2s
P33M **Teslin, Yukon** 69.06 32 P P 21 53 04.8 +0.6
baz=290,SNR=12
VORR **Voronezh** 69.10 318 *e*P P 21 53 04.9 +0.5
VORR pmax pmax
comp=Z,30nm,0.6s
VSR **Storozhevoye** 69.28 318 *e*P P 21 53 04.8 -0.7
VSR pmax pmax
comp=Z,10.0nm,0.6s
GNI **Garni** 69.33 305 LR LR 22 27 33.7
comp=Z,122nm,18.0s,baz=50,slow=40
KBZ **Khabaz** 69.41 309 P P 21 53 06.0 -0.4
comp=Z,17nm,0.9s,baz=132,slow=1.2,SNR=25
KBZ LR LR 22 29 18.3
comp=Z,321nm,18.4s,baz=66,slow=41
comp=Z,17nm,0.9s
KBZ **Khabaz** 69.41 309*d i*P P 21 53 07.6 +1.2
KBZ pmax pmax
comp=Z,18nm,0.9s
ONI **Oni** 69.42 308 P P 21 53 06.1 -0.5
ONI IAmb IAmb 21 53 22.9
comp=Z,13nm,1.0s
ONI **Oni** 69.42 308 P P 21 53 06.1 -0.5
ONI pmax pmax
comp=Z,13nm,1.0s
OBN **Obninsk** 69.43 322 LR LR 22 26 12.8
comp=Z,66nm,19.3s,baz=41,slow=38
OBN **Obninsk** 69.43 322 *i*P P 21 53 05.9 -0.4
OBN *i* 21 53 30.7
OBN *i* 21 55 39.6
OBN pmax pmax
comp=Z,9.0nm,1.0s
OBN MLR MLR
comp=Z,619nm,16.0s
KVAR **Kislovodsk Arr** 69.47 310 LR LR 22 26 36.7
comp=Z,164nm,18.7s,baz=243,slow=39
KIV **Kislovodsk** 69.48 310 ⇓P P 21 53 09.3 +2.3
KIV **Kislovodsk** 69.48 310 P P 21 53 07.2 +0.1
KIV IAmb IAmb 21 53 32.2
comp=Z,20nm,1.0s
KIV **Kislovodsk** 69.48 310 *e*P P 21 53 08.2 +1.2
KIV *e*S **S** 22 02 15.9 +2.8
KIV pmax pmax
comp=Z,18nm,1.1s
SHA1 **Shidzhatmaz** 69.57 309*d i*P P 21 53 07.8 0.0
KTK1 **Kautokeino** 69.78 338 *e*P P 21 53 08.0 -0.3
AKH **Akhalkalaki** 69.79 307 ⇑P P 21 53 10.9 +1.8
AFI **Afiamalu** 69.85 119 LR LR 22 18 08.9
comp=Z,103nm,19.0s,baz=210,slow=31
EUNU **Eureka** 70.01 6 P P 21 53 10.0 +0.3
KARS **Kars** 70.36 306 P P 21 53 12.5 0.0
KARS **Kars** 70.36 306 P P 21 53 12.5 0.0
KARS pmax pmax
comp=Z,86nm,1.4s
JETT **Jettan, Norway** 70.42 339 *e*P P 21 53 13.1 +0.9
CRAG **Craig** 70.62 37 P P 21 53 14.5 +0.9
baz=292
TGTN **Hyland Airport** 70.64 30 P P 21 53 14.6 +0.9
baz=294
TRO **Tromso** 70.84 340 *e*P P 21 53 15.0 +0.3
DLBC **Dease Lake** 71.05 33 P P 21 53 16.6 +0.2
DLBC **Dease Lake** 71.05 33 P P 21 53 17.4 +1.0
baz=293
GEVA **Gevas** 71.20 304 P P 21 53 18.0 +0.2
T35M **Bob Quinn** 71.52 35 P P 21 53 20.3 +1.2
baz=294
SOC **Sochi** 71.62 310 *e*P P 21 53 18.4 -1.6
SOC *e* 21 56 00.9
SOC *e*PPP PPP 21 57 41.0
SOC *e*S **S** 22 02 37.9 0.0
SOC *e*SS **SS** 22 07 05.5 -7.4
SOC pmax pmax
comp=Z,21nm,0.6s
GURO **Guroymak-BITLI** 71.86 304 P P 21 53 21.3 -0.4
GURO IAmb IAmb 21 53 36.0
comp=Z,11nm,0.7s
FIA1 **FINESS Array S** 72.06 331 IAmb IAmb 21 53 23.3
comp=Z,12nm,0.7s
FINES **FINESS Array B** 72.06 331 P P 21 53 21.8 -0.5
comp=Z,8.4nm,0.5s,baz=71,slow=5.3,SNR=74
FINES LR LR 22 28 41.2
comp=Z,334nm,18.2s,baz=70,slow=39
comp=Z,8.4nm,0.5s
KOPT **Kop Dagi** 72.42 306 P P 21 53 24.8 -0.4
KOPT IAmb IAmb 21 53 46.4
comp=Z,11nm,0.9s
ANN **Anapa** 72.68 312 *e*P P 21 53 26.2 -0.1
ANN *e* 21 53 34.8
ANN *e*S **S** 22 02 50.5 +0.5
ANN pmax pmax
comp=Z,4.0nm,0.5s
STEI **Steigen** 72.88 339 *e*P P 21 53 25.8 -1.2
VSU **Vasula** 73.08 328 *e*P P 21 53 28.6 +0.2
RES **Resolute Bay** 73.14 11 IAmb IAmb 21 53 30.0

comp=Z,16nm,0.9s
FAUS Fauske 73.16 339 *e*P **P** **21 53 28.1 -0.6**
MARD Mardin 73.25 304 P **P** **21 53 30.7 +0.7**
MARD pwP **sP** **21 53 41.3 +1.1**
MEF Metsahovi 73.35 330 *e*P **P** **21 53 30.2 +0.3**
RAF Rauma 74.10 331 *e*P **P** **21 53 35.7 +1.5**
MOR8 Moi Rana 74.12 338 *e*P **P** **21 53 33.9 -0.5**
MTSE Matsula 74.32 329 *e*P **P** **21 53 36.1 +0.5**
IDID Didziasalis 74.51 325 *e*P **P** **21 53 37.8 +1.0**
NACGM Naroch 74.68 324⇓*e*P **P** **21 53 38.3 +0.6**
baz=63
ISAL Salakas 74.70 325 *e*P **P** **21 53 38.8 +0.9**
IIGN Ignalina 74.75 325 *e*P **P** **21 53 39.5 +1.3**
SIM Simferopol' 74.78 313 *e*P **P** **21 53 37.8 -0.8**
SIM pmax pmax
comp=Z,28nm,1.0s
RAYN Ar Rayn 75.06 289 P **P** **21 53 41.0 +0.3**
RAYN pwP **PcP** **21 53 52.9 -1.3**
RAYN IAmb IAmb 21 53 53.9
comp=Z,25nm,0.9s
RAYN Ar Rayn 75.06 289 P **P** **21 53 41.0 +0.3**
TOKA Tokat 75.12 308 P **P** **21 53 40.7 -0.1**
TOKA IAmb IAmb 21 53 43.5
comp=Z,17nm,0.8s
YKA Yellowknife Ar 75.80 26 P **P** **21 53 44.1 0.0**
comp=Z,8.8nm,0.8s,baz=301,slow=5.3,SNR=17
comp=Z,8.8nm,0.8s
PABE Paberze 75.81 326 P **P** **21 53 44.1 -0.2**
PABE Paberze 75.81 326 *e*P **P** **21 53 44.3 0.0**
NSS Namsos 75.93 337 *e*P **P** **21 53 44.1 -0.7**
PBUR Paburge 76.55 327 *e*P **P** **21 53 48.9 +0.4**
ILGA Ilgaz 76.71 309 P **P** **21 53 49.8 -0.3**
JMIC Jan Mayen 76.86 347 LR LR 22 29 23.1
comp=Z,72nm,20.1s,baz=90,slow=37
SORM Soroca 76.94 318 ⇓P **P** **21 53 50.4 -0.5**
SORM Soroca 76.94 318 P **P** **21 53 50.4 -0.5**
SUW Suwalki 76.95 325 *e*P **P** **21 53 50.5 -0.3**
SUW *e*L L 22 31 48.1
comp=Z,654nm,17.9s
SUW Suwalki 76.95 325 *e*P **P** **21 53 51.0 +0.3**
MILM Milestii Mici 77.23 317 LRM MLR 22 30 47.0
comp=Z,400nm,17.0s
MILM Milestii Mici 77.23 317 ⇑P **P** **21 53 51.6 -1.0**
MILM Milestii Mici 77.23 317 *e*P **P** **21 53 50.0 -2.5**
MILM Milestii Mici 77.23 317 *e*P **P** **21 53 50.0 -2.5**
MILM Milestii Mici 77.23 317 *e*L L 22 29 26.0
BRTR Keskin Array B 77.35 308 P **P** **21 53 53.5 0.0**
comp=Z,14nm,0.8s,baz=107,slow=3.0,SNR=59
BRTR LR LR 22 33 16.5
comp=Z,190nm,20.5s,baz=82,slow=40
comp=Z,14nm,0.8s
BRTR Keskin Array B 77.35 308 P **P** **21 53 53.2 -0.3**
ANTO Ankara 77.87 309 P **P** **21 53 56.5 +0.2**
ANTO IAmb IAmb 21 54 09.1
comp=Z,27nm,1.3s
ANTO Ankara 77.87 309 P **P** **21 53 56.5 +0.2**
ANTO pmax pmax
comp=Z,27nm,1.3s
HFS Hagfors 77.92 333 LR LR 22 32 26.5
comp=Z,267nm,18.4s,baz=43,slow=39
VASR Vaslui 77.98 317 ⇑P **P** **21 53 57.3 +0.6**
TLCR 78.04 315 ⇓P **P** **21 53 57.3 +0.3**
NC405 NORSAR Array S 78.11 334 P **P** **21 53 56.1 -1.0**
NC405 IAmb IAmb 21 54 16.2
comp=Z,32nm,1.1s
NC303 NORSAR Array S 78.17 334 P **P** **21 53 55.5 -2.0**
VLDR Vladesti 78.19 316 ⇓P **P** **21 53 58.5 +0.6**
JURR Jurilovca 78.20 315 ⇓P **P** **21 53 57.9 -0.1**
NB201 NORSAR Array S 78.31 334 P **P** **21 53 56.4 -1.9**
SCTR Scanteiesti 78.32 316 ⇑P **P** **21 53 59.3 +0.7**
NB2 NORSAR Subarra 78.34 334 P **P** **21 53 57.7 -0.8**
baz=49,slow=5.6
NB2 NORSAR Subarra 78.34 334 P **P** **21 53 57.7 -0.8**
comp=Z,2.4nm,0.7s,baz=49,slow=5.6
NOA NORSAR Array B 78.34 334 P **P** **21 53 57.5 -1.0**
comp=Z,3.1nm,0.7s,baz=50,slow=5.4,SNR=18
NOA LR LR 22 32 11.4
comp=Z,175nm,18.9s,baz=70,slow=38
comp=Z,3.1nm,0.7s
NC204 NORSAR Array S 78.37 335 IAmb IAmb 21 54 09.4
comp=Z,12nm,0.9s
NC602 NORSAR Array S 78.41 334 *e*P **P** **21 53 59.4 +0.7**
NORES NORESS Array B 78.41 334 P **P** **21 54 01.8 +3.0**
TPGR Topolog 78.44 315 ⇑P **P** **21 53 59.5 +0.2**
CFR Carcaliu 78.47 315 ⇑P **P** **21 53 58.8 -0.6**
CFR Carcaliu 78.47 315 P **P** **21 53 58.8 -0.6**
GHRR 78.50 316 ⇑P **P** **21 54 00.6 +1.0**
CLRS Cowichan Lake 78.50 41 P **P** **21 53 59.6 +0.1**
LVV L'vov 78.61 321 *e*P **P** **21 54 01.0 +0.8**
TIRR Tirgusor 78.64 314 ⇑P **P** **21 53 59.3 -1.0**
TIRR Tirgusor 78.64 314 P **P** **21 53 59.3 -1.0**
C03A Quillayute Air 78.68 41 P **P** **21 54 01.4 +0.8**
MDUB Mudurnu 78.68 310 P **P** **21 54 00.1 -0.8**
TESR Tescani 78.74 317 ⇑P **P** **21 54 00.8 -0.1**
PANC Panciu 78.74 316 ⇑P **P** **21 54 02.1 +1.2**
TLBR Topalu 78.83 315 ⇑P **P** **21 54 01.6 +0.2**
HARR Harsova 78.83 315 ⇑P **P** **21 54 01.5 +0.1**
HARR Harsova 78.83 315 P **P** **21 54 01.5 +0.1**
LLLB Lillooet 78.85 38 P **P** **21 54 01.3 -0.2**
BIZ Bicaz 78.85 317 ⇑P **P** **21 54 01.0 -0.6**
ODBI Odobesti 78.85 316 ⇑P **P** **21 54 01.1 -0.4**
PGC Sidney 78.97 40 **P** **21 54 01.6 -0.6**
PGC IAmb IAmb 21 54 03.5
comp=Z,21nm,1.4s
VRI Vrincioaia 79.00 316 ⇑P **P** **21 54 02.9 +0.5**
VRI Vrincioaia 79.00 316 P **P** **21 54 02.9 +0.5**
BURAR Bucovina Array 79.04 318 ⇑P **P** **21 54 02.7 -0.1**
BURAR Bucovina Array 79.04 318 IAmb IAmb 21 54 05.2
comp=Z,9.6nm,0.7s
BURAR Bucovina Array 79.04 318 P **P** **21 54 02.6 -0.1**
MMAI Mount Meron Ar 79.05 302 LR LR 22 34 39.7
comp=Z,138nm,18.0s,baz=218,slow=40
PLOR Plostina 79.06 316 ⇑P **P** **21 54 03.2 +0.5**
PLOR Plostina 79.06 316 P **P** **21 54 03.2 +0.5**
SUMG Summit 79.11 357 P **P** **21 54 03.0 0.0**
SUMG IAmb IAmb 21 54 04.7
comp=Z,30nm,1.0s
SUMG Summit 79.11 357 P **P** **21 54 03.0 0.0**
SUMG pmax pmax
comp=Z,30nm,1.0s
PSN Preselentsi 79.15 314 *i* P **P** **21 54 03.3 +0.1**
BISRR Bisoca 79.17 316 ⇑P **P** **21 54 04.5 +1.1**
ICOR Ion Corvin 79.19 314 ⇑P **P** **21 54 03.1 -0.3**
COVR Voineasa-Covas 79.33 316 ⇑P **P** **21 54 01.3 -3.0**
NLWA Neilton Lookou 79.37 42 P **P** **21 54 04.4 0.0**
NLWA IAmb IAmb 21 54 06.8
comp=Z,25nm,1.1s
OZUR 79.46 317 ⇑P **P** **21 54 05.7 +0.8**
BORA Eskisehir 79.46 310 P **P** **21 54 04.9 -0.2**
BORA IAmb IAmb 21 54 18.0
comp=Z,28nm,1.0s
NEHR Nehoiu 79.48 316 ⇑P **P** **21 54 05.5 +0.4**
SCO Scoresbysund 79.55 351 P **P** **21 54 04.8 -0.1**
SCO IAmb IAmb 21 54 06.6
comp=Z,18nm,1.1s
SCO Scoresbysund 79.55 351 P **P** **21 54 04.8 -0.1**
SCO pmax pmax
comp=Z,18nm,1.1s
MLR Muntele Rosu 79.67 316 ⇑P **P** **21 54 07.3 +1.1**
MLR Muntele Rosu 79.67 316 LR LR 22 33 28.5
comp=Z,440nm,18.1s,baz=48,slow=39
MLR Muntele Rosu 79.67 316 P **P** **21 54 05.9 -0.3**
MLR Muntele Rosu 79.67 316 P **P** **21 54 05.9 -0.3**
MLR pmax pmax
comp=Z,11nm,0.9s
GHAJ Ghor Haditha 79.69 300 P **P** **21 54 06.0 -0.4**
GHAJ IAmb IAmb 21 54 19.7
comp=Z,27nm,0.9s
CSS Mathiatis 79.71 304 IAmb IAmb 21 54 19.4
comp=Z,17nm,0.8s
DOPR Dopca 79.77 317 ⇑P **P** **21 54 07.4 +0.8**
ARCR ARCALIA 79.82 318 ⇑P **P** **21 54 08.3 +1.5**
SECR 79.82 316 ⇑P **P** **21 54 06.3 -0.5**
PRD Provadia 79.89 314 *i* P **P** **21 54 07.5 +0.3**
E03A Lebam 79.98 42 P **P** **21 54 08.4 +0.8**
E03A IAmb IAmb 21 54 10.3
comp=Z,31nm,1.2s
DEL Delary 80.04 330 *e*P **P** **21 54 08.8 +1.0**
KOLS Kolonicke sedl 80.06 321 *e*P **P** **21 54 09.4 +1.3**
KOLS pmax pmax
comp=Z,7.0nm,0.6s
KOLS Kolonicke sedl 80.06 321 *e*P **P** **21 54 09.4 +1.3**
UZH Uzhgorod 80.20 320 *e*P **P** **21 54 08.2 -0.6**
UZH *i* 21 54 17.1
BSD Bornholm Skovb 80.37 328 *e*P **P** **21 54 09.7 +0.1**
ARR Arges 80.53 317 ⇑P **P** **21 54 11.5 +0.8**
CRVS Cervenica-Dubn 80.53 321 *e*P **P** **21 54 12.8 +2.2**
CRVS pmax pmax
comp=Z,14nm,1.0s
CRVS Cervenica-Dubn 80.53 321 *e*P **P** **21 54 12.8 +2.2**
OJC Ojcow 80.72 322 *e*P **P** **21 54 11.4 -0.2**
OJC *e*L L 22 33 41.2
comp=Z,868nm,16.9s
OJC Ojcow 80.72 322 P **P** **21 54 11.2 -0.4**
OJC IAmb IAmb 21 54 14.1
comp=Z,14nm,0.6s
OJC Ojcow 80.72 322 P **P** **21 54 11.2 -0.4**
OJC pmax pmax
comp=Z,14nm,0.6s
RPZ Rata Peaks 80.73 151 LR LR 22 27 09.7
comp=Z,256nm,19.9s,baz=256,slow=34
HUMR Humele 80.74 316 ⇑P **P** **21 54 11.1 -0.7**
COPA Copaceanca 80.80 315 ⇑P **P** **21 54 11.8 -0.2**
G03D McMinnville, O 80.84 43 P **P** **21 54 13.6 +1.3**
baz=301
NIE Niedzica 80.89 322 *e*P **P** **21 54 15.2 +2.6**
NIE *e*L L 22 33 50.6
comp=Z,277nm,17.8s
EIL Elat 80.90 299 LR LR 22 36 24.2
comp=Z,157nm,18.3s,baz=86,slow=40
DRGR 80.93 319 ⇑P **P** **21 54 13.2 +0.2**
DRGR 80.93 319 P **P** **21 54 13.1 +0.2**
F04A Amboy 80.97 42 P **P** **21 54 13.3 +0.3**
F04A IAmb IAmb 21 54 14.8
comp=Z,21nm,1.0s
LOT Lotru 81.01 317 ⇓P **P** **21 54 14.0 +0.6**
WHZ Wather Hill Ro 81.29 155 P **P** **21 54 15.4 +1.0**
LTY Liberty 81.30 41 P **P** **21 54 14.5 -0.3**
BALB Balikesir 81.32 310 P **P** **21 54 14.6 -0.4**
ELL Elmali 81.33 307 P **P** **21 54 14.9 -0.3**
ELL Elmali 81.33 307 P **P** **21 54 15.0 -0.3**
B08A Colville Reser 81.46 39 IAmb IAmb 21 54 17.2
comp=Z,13nm,0.9s
J01E Myrtle Point 81.48 45 P **P** **21 54 16.0 +0.3**
J01E Myrtle Point 81.48 45 P **P** **21 54 16.9 +1.2**
baz=301
LANS Liptovska Anna 81.49 322 *e*P **P** **21 54 14.3 -1.5**
LANS Liptovska Anna 81.49 322 *e*P **P** **21 54 14.3 -1.5**
BUCK Buck Mountain 81.53 44 P **P** **21 54 17.0 +0.9**
I03D Drain, OR 81.57 45 P **P** **21 54 17.3 +1.1**
baz=301
GZR Gura Zlata 81.63 317 ⇑P **P** **21 54 17.6 +1.0**
HOOD Mount Hood Mea 81.75 43 P **P** **21 54 17.1 -0.3**
HOOD IAmb IAmb 21 54 19.4
comp=Z,25nm,1.1s
H04A Detroit Lake 81.77 43 P **P** **21 54 17.0 -0.3**
AKAS Kas 81.79 307 P **P** **21 54 16.6 -1.1**
AKAS IAmb IAmb 21 54 36.7
comp=Z,26nm,1.0s
OKC Ostrava-Krasne 81.82 323 AMS AMS 22 34 00.0
comp=Z,600nm,15.9s
K02D Willamette Mer 81.89 46 P **P** **21 54 18.5 +0.5**
baz=301
ALN Alexandroupoli 81.91 312 P **P** **21 54 18.2 +0.2**
ALN IAmb IAmb 21 54 31.5
comp=Z,15nm,1.0s
ALN Alexandroupoli 81.91 312 P **P** **21 54 18.3 +0.2**
ALN pmax pmax
comp=Z,15nm,1.0s
DBO Dodson Butte 81.93 45 P **P** **21 54 17.9 -0.4**
DBO IAmb IAmb 21 54 19.9
comp=Z,11nm,0.8s
PSZ Piszkesteto 81.94 321 P **P** **21 54 18.4 +0.3**
PSZ Piszkesteto 81.94 321 P **P** **21 54 18.5 +0.3**
PSZ pmax pmax
comp=Z,9.0nm,1.2s
G05D Wamic, OR 81.99 43 P **P** **21 54 19.2 +0.7**
baz=302
I04A Tendick Farm, 82.10 44 P **P** **21 54 19.3 +0.2**
baz=302
RDO Rodhopi 82.11 313 P **P** **21 54 19.6 +0.5**
RDO IAmb IAmb 21 54 32.6
comp=Z,19nm,1.0s
MPEP Malo Peshtene 82.11 315 *i* P **P** **21 54 20.3 +1.2**
HERR Herculane 82.12 317 ⇑P **P** **21 54 18.7 -0.4**
E07A Sunnyside 82.14 41 P **P** **21 54 20.6 +1.4**
E07A IAmb IAmb 21 54 21.3
comp=Z,27nm,1.2s
MORC Moravsky Berou 82.17 323 ⇑P **P** **21 54 20.0 +0.7**
MORC Moravsky Berou 82.17 323 P **P** **21 54 19.8 +0.4**
MORC Moravsky Berou 82.17 323 P **P** **21 54 19.8 +0.4**
MORC pmax pmax
comp=Z,10.0nm,1.2s
MORC Moravsky Berou 82.17 323 *e*P **P** **21 54 19.4 0.0**
KSXB Camp Six Broad 82.20 47 P **P** **21 54 20.1 +0.4**
KSXB IAmb IAmb 21 54 21.5
comp=Z,17nm,1.0s
VYHS Vyhne 82.20 321 *e*P **P** **21 54 20.3 +0.8**
VYHS Vyhne 82.20 321 *e*P **P** **21 54 20.3 +0.8**
KSP Ksiaz 82.21 324 *e*P **P** **21 54 19.9 +0.4**
KSP *e*L L 22 35 05.8
comp=Z,753nm,16.4s
L02F Cave Junction 82.24 46 P **P** **21 54 20.7 +0.9**
baz=301
MAUC Maruska 82.26 322 AMS AMS 22 34 20.0
comp=Z,1µm,15.4s
C09A Chrisman Ranch 82.36 39 P **P** **21 54 20.9 +0.6**
C09A IAmb IAmb 21 54 22.0
comp=Z,28nm,1.3s
RZN Rozhen 82.36 313 *i* P **P** **21 54 22.6 +1.9**
HUMO Hull Mountain 82.38 46 P **P** **21 54 21.0 +0.5**
KOLL Kolacno 82.39 322 *e*P **P** **21 54 20.3 -0.2**
KRLC Kraliky 82.41 323 AMS AMS 22 34 40.0
comp=Z,500nm,16.0s
D08A Wollman Farm, 82.41 40 P **P** **21 54 20.8 +0.2**
D08A IAmb IAmb 21 54 22.3
comp=Z,18nm,0.9s
OSTC Ostas 82.42 324 *e*P P 21 54 30.3 +10
OSTC AMS AMS 22 34 40.0
comp=Z,700nm,16.0s
HAWA Hanford 82.42 41 IAmb IAmb 21 54 22.6
comp=Z,15nm,0.9s
F07A Phinny Hill Vi 82.46 42 P **P** **21 54 19.8 -1.1**
F07A IAmb IAmb 21 54 23.1
comp=Z,14nm,0.9s
I05D Terrebonne, OR 82.46 43 P **P** **21 54 21.1 +0.1**
baz=302
CHVC Chvalec 82.48 324 *e*P **P** **21 54 22.2 +1.3**
CHVC *ex* x 21 54 27.0
CHVC AMS AMS 22 34 50.0
comp=Z,800nm,17.6s
DPC Dobruska-Polom 82.48 324 *e*P **P** **21 54 21.8 +0.8**
DPC AMS AMS 22 34 40.0
comp=Z,600nm,14.4s
UPC Upice 82.55 324 AMS AMS 22 34 50.0
comp=Z,800nm,14.7s
J04D Umpqua Nationa 82.57 45 P **P** **21 54 21.8 0.0**
J04D Umpqua Nationa 82.57 45 P **P** **21 54 22.8 +1.0**
baz=302
PRK Paraskevi 82.59 311 P **P** **21 54 24.2 +2.5**
JAVC Velka Javorina 82.63 322 *e*P **P** **21 54 22.6 +0.8**
E08A Dider Farm, El 82.64 41 P **P** **21 54 21.3 -0.5**
E08A IAmb IAmb 21 54 23.7
comp=Z,13nm,0.8s
NEW Newport 82.73 39 P **P** **21 54 21.8 -0.5**
NEW IAmb IAmb 21 54 23.9
comp=Z,11nm,0.9s
NEW Newport 82.73 39 P **P** **21 54 21.8 -0.5**
NEW pmax pmax
comp=Z,11nm,1.0s
NEW Newport 82.73 39 P **P** **21 54 23.0 +0.6**
baz=305
KMPM Mount Pierce 82.77 48 P **P** **21 54 22.6 0.0**
KMPM IAmb IAmb 21 54 25.0
comp=Z,20nm,1.1s
VRAC Vranov 82.95 323 ⇓P **P** **21 54 24.3 +0.9**
VRAC Vranov 82.95 323 LR LR 22 35 02.4
comp=Z,376nm,18.2s,baz=66,slow=38
VRAC Vranov 82.95 323 P **P** **21 54 24.2 +0.9**
VRAC Vranov 82.95 323 *e*P **P** **21 54 23.6 +0.2**
SMOL Smolenice 82.96 322 *e*P **P** **21 54 24.8 +1.4**
SMOL pmax pmax
comp=Z,11nm,1.7s
SMOL Smolenice 82.96 322 *e*P **P** **21 54 24.8 +1.4**
YBH Yreka Blue Hor 82.99 46 P **P** **21 54 24.5 +0.7**
YBH IAmb IAmb 21 54 26.0
comp=Z,11nm,1.0s
YBH Yreka Blue Hor 82.99 46 P **P** **21 54 24.5 +0.7**
YBH pmax pmax
comp=Z,11nm,1.0s
L04D Klamath Falls 82.99 46 P **P** **21 54 24.0 +0.1**
L04D IAmb IAmb 21 54 25.8
comp=Z,25nm,1.0s
L04D Klamath Falls 82.99 46 P **P** **21 54 24.7 +0.8**
baz=302
PINE Pine Mountain 83.00 44 P **P** **21 54 24.4 +0.4**
MMB Musomiste 83.05 314 *i* P **P** **21 54 25.7 +1.6**
J05D Fort Rock, OR 83.09 44 P **P** **21 54 25.7 +1.3**
baz=303
MODS Modra-Piesok 83.13 322 *e*P **P** **21 54 26.1 +1.8**
MODS pmax pmax
comp=Z,33nm,1.4s
MODS Modra-Piesok 83.13 322 *e*P **P** **21 54 26.1 +1.8**
E09A Wood Farm, Sta 83.15 40 P **P** **21 54 25.1 +0.7**
E09A IAmb IAmb 21 54 26.4
comp=Z,21nm,1.0s
KRUC Moravsky 83.20 323 *e*P **P** **21 54 24.4 -0.3**
PVCC Panska Ves 83.28 325 AMS AMS 22 35 20.0
comp=Z,700nm,16.7s
G08A Pilot Rock 83.36 42 P **P** **21 54 25.6 -0.2**
BRG Berggiesshubel 83.39 325 *e*P **P** **21 54 26.3 +0.7**
BRG Amp 21 54 29.0
comp=Z,6.4nm,1.2s
BRG Amp 22 36 22.0
comp=E,0.3nm,15.4s
BRG Amp 22 36 24.0
comp=N,0.4nm,14.6s
BRG Amp 22 36 27.0
comp=Z,0.7nm,16.1s
BRG Berggiesshubel 83.39 325 *e*P **P** **21 54 26.2 +0.7**
BRG pmax pmax
comp=Z,6.0nm,1.2s
BRG MLR MLR
comp=E,340nm,15.4s
BRG MLR MLR
comp=N,350nm,14.6s
BRG MLR MLR
comp=Z,710nm,16.1s
KCPM Cahto Peak 83.50 48 P **P** **21 54 26.1 -0.4**
KCPM IAmb IAmb 21 54 28.5
comp=Z,28nm,1.3s
TREC Trest 83.54 323 AMS AMS 22 35 10.0
comp=Z,600nm,15.3s
CLL Collm 83.59 326 P **P** **21 54 26.7 +0.2**
CLL IAmb IAmb 21 54 27.7
comp=Z,11nm,0.9s
CLL Collm 83.59 326⇓*i*P **P** **21 54 26.8 +0.2**
CLL *i* *SP **pP** **21 54 34.4 +0.2**
CLL *eS* **S** **22 04 48.0 +0.9**
CLL pmax pmax
comp=Z,12nm,1.0s
CLL Collm 83.59 326⇓*i*P **P** **21 54 26.8 +0.2**
comp=Z,12nm,1.0s
CLL *i* PcP **PcP** **21 54 32.3 +1.5**
CLL *i* pP **pP** **21 54 34.4 +0.2**
CLL *i* PP **PP** **21 57 38.1 -0.5**
CLL *eS* **S** **22 04 48.0 +0.9**
CLL *ex* x 22 05 27.0
CLL *e*SS SS 22 10 42.0 +29
CLL *ex* x 22 15 00.0
CLL *e*SSSS 22 16 54.0
MORH Mrgy, Hungar 83.60 320 ⇓P **P** **21 54 26.2 -0.6**
K05A Summer Lake 83.60 45 P **P** **21 54 27.4 +0.2**
PRU Pruhonice 83.62 324 *e*P **P** **21 54 27.3 +0.5**
PRU *ep*P **pP** **21 54 34.3 -0.1**
PRU AMS AMS 22 35 20.0
comp=Z,500nm,14.9s
I07A Izee 83.71 43 P **P** **21 54 27.9 +0.4**
F10A Beach Ranch, E 83.98 40 P **P** **21 54 27.9 -1.0**
WALA Waterton Lakes 84.00 37 P **P** **21 54 28.5 -0.4**
WALA IAmb IAmb 21 54 30.9
comp=Z,9.6nm,0.9s
DIVS Divibare 84.00 317 P **P** **21 54 27.9 -1.1**
RONA Rosalia, Austr 84.05 322 *e*P **P** **21 54 29.0 -0.1**
comp=Z,3.1nm,0.9s
CONA Conrad Observa 84.16 322 *e*P **P** **21 54 29.4 -0.3**
comp=Z,12nm,1.4s
MOD Modoc Plateau 84.42 45 P **P** **21 54 30.7 -0.5**
MOD IAmb IAmb 21 54 33.1
comp=Z,14nm,0.9s
CKRC Cesky Krumlov 84.45 323 *e*P **P** **21 54 31.5 +0.4**
CKRC *ex* x 21 54 35.7
GDXM Geysers 84.48 49 P **P** **21 54 30.8 -0.7**
GDXM IAmb IAmb 21 54 33.7
comp=Z,20nm,1.5s
NKC Novy Kostel 84.54 325 *e*P **P** **21 54 32.0 +0.5**
NKC AMS AMS 22 36 50.0
comp=Z,900nm,15.5s
BMO Blue Mountains 84.58 41 P **P** **21 54 31.8 -0.1**
BMO IAmb IAmb 21 54 33.8
comp=Z,13nm,1.1s
BMO Blue Mountains 84.58 41 P **P** **21 54 31.8 -0.1**
BMO pmax pmax
comp=Z,13nm,1.1s
JTMT Jette 84.58 38 P **P** **21 54 31.9 0.0**
JTMT IAmb IAmb 21 54 34.0
comp=Z,19nm,1.5s
LIT Litokhoron 84.63 313 P **P** **21 54 30.7 -1.5**
LIT IAmb IAmb 21 54 47.4
comp=Z,15nm,1.0s
LIT Litokhoron 84.63 313 P **P** **21 54 30.7 -1.5**
LIT pmax pmax
comp=Z,15nm,1.0s
KHC Kasperske Hory 84.64 324 P **P** **21 54 30.4 -1.7**
KHC Kasperske Hory 84.64 324 P **P** **21 54 30.4 -1.7**
KHC pmax pmax
comp=Z,5.0nm,0.9s
KHC Kasperske Hory 84.64 324 *e*P **P** **21 54 29.7 -2.4**
KHC *ep*P **sP** **21 54 42.0 -0.4**
KHC AMS AMS 22 36 00.0
comp=Z,500nm,14.9s
BORG Borgarnes 84.69 348 LR LR 22 32 56.0
comp=Z,42nm,20.5s,baz=17,slow=36
J08A Circle Bar Ran 84.73 43 P **P** **21 54 33.4 +0.6**
GEC2 GERESS Array S 84.75 324 P **P** **21 54 32.5 -0.2**
GERES GERESS Array B 84.75 324 P **P** **21 54 32.2 -0.5**
comp=Z,1.5nm,0.7s,baz=57,slow=4.9,SNR=13
comp=Z,1.5nm,0.7s
GERES GERESS Array B 84.75 324 P **P** **21 54 31.9 -0.8**
ORV Oroville 84.93 48 P **P** **21 54 33.3 -0.4**
ORV IAmb IAmb 21 54 34.8
comp=Z,18nm,1.3s
ORV Oroville 84.93 48 P **P** **21 54 33.3 -0.4**
ORV pmax pmax
comp=Z,18nm,1.3s
SFJD Kangerlussuaq 85.00 0 P **P** **21 54 32.3 -1.1**
SFJD Kangerlussuaq 85.00 0 P **P** **21 54 32.3 -1.1**
SFJD pmax pmax
comp=Z,26nm,1.1s
ATAL Atalanti 85.04 311 P **P** **21 54 34.4 +0.2**
MOA Molln 85.06 323 *e*P **P** **21 54 33.4 -0.8**
comp=Z,9.8nm,1.0s
WVOR Wild Horse Val 85.15 44 P **P** **21 54 34.2 -0.7**
WVOR IAmb IAmb 21 54 37.0
comp=Z,11nm,1.0s
WVOR Wild Horse Val 85.15 44 P **P** **21 54 34.2 -0.7**
WVOR pmax pmax
comp=Z,11nm,1.0s
MSO Missoula 85.32 38 IAmb IAmb 21 54 37.1
comp=Z,11nm,1.4s
MSO Missoula 85.32 38 P **P** **21 54 35.8 +0.2**
baz=307
SOKA Soboth 85.36 321 *e*P **P** **21 54 36.2 +0.5**
comp=Z,12nm,1.4s
KBN Korca 85.44 314 P **P** **21 54 35.5 -0.8**
KBN Korca 85.44 314 P **P** **21 54 35.5 -0.8**
KBN pmax pmax
comp=Z,24nm,1.1s
BIOA Bad Ischl, Aus 85.49 323 *e*P **P** **21 54 37.7 +1.3**
comp=Z,10.0nm,1.2s
BEKR Beckworth 85.50 47 P **P** **21 54 37.1 +0.3**
IDI Anoyia 85.57 308 ⇑P **P** **21 54 36.0 -1.0**
IDI Anoyia 85.57 308 LR LR 22 39 53.6
comp=Z,58nm,18.9s,baz=66,slow=41
IDI Anoyia 85.57 308 P **P** **21 54 38.1 +1.1**
ANX Ano Chora 85.82 312 P **P** **21 54 37.8 -0.5**
KLV Kalavryta, Ach 85.97 311 P **P** **21 54 39.4 +0.4**
LAKA Lakka 85.98 312 P **P** **21 54 39.9 +1.0**
IMMV Iera Moni Meta 86.11 308 P **P** **21 54 41.5 +1.9**
MYKA Terra Mystica 86.14 322 P **P** **21 54 39.8 +0.1**
comp=Z,8.2nm,0.9s
EMB Emerald Bay 86.16 47 P **P** **21 54 40.2 +0.1**

EMB					IAmb	IAmb	21 54 41.8		
	comp=Z,20nm,1.1s								
VLI	**Veliai**	**86.16**	**310**		P	**P**	**21 54 38.6**	**-1.2**	
PAHR	**Pah Rah Range**	**86.21**	**47**		P	**P**	**21 54 40.5**	**+0.2**	
PAHR					IAmb	IAmb	21 54 41.9		
	comp=Z,16nm,1.0s								
RODP	**Rodopos**	**86.22**	**309**		P	**P**	**21 54 42.4**	**+2.3**	
VCNR	**Virginia City**	**86.27**	**47**		P	**P**	**21 54 39.9**	**-0.7**	
VCNR					IAmb	IAmb	21 54 42.5		
	comp=Z,10nm,0.8s								
MFID	**Camas Ranch**	**86.28**	**42**		P	**P**	**21 54 40.2**	**-0.2**	
MFID					IAmb	IAmb	21 54 42.6		
	comp=Z,13nm,1.1s								
IGT	**Igoumenitsa**	**86.33**	**313**		P	**P**	**21 54 41.9**	**+1.2**	
KTHR	**Kythira**	**86.36**	**309**		P	**P**	**21 54 41.9**	**+1.1**	
ANKY	**Antikythira Is**	**86.37**	**309**		P	**P**	**21 54 42.1**	**+1.2**	
CMB	**Columbia Colle**	**86.49**	**48**		P	**P**	**21 54 40.6**	**-0.9**	
CMB					IAmb	IAmb	21 54 43.0		
	comp=Z,9.8nm,0.9s								
CMB	**Columbia Colle**	**86.49**	**48**		P	**P**	**21 54 40.6**	**-0.9**	
CMB					pmax	pmax			
	comp=Z,10.0nm,0.9s								
NYDR	**Nydri-Lefkada**	**86.55**	**312**		P	**P**	**21 54 43.0**	**+1.3**	
ITM	**Ithomi**	**86.59**	**311**		P	**P**	**21 54 42.8**	**+0.8**	
ITM	**Ithomi**	**86.59**	**311**		P	**P**	**21 54 41.5**	**-0.5**	
ABTA	**Abfaltersbach**	**86.68**	**323**	*e*	P	**P**	**21 54 41.8**	**-0.5**	
	comp=Z,11nm,1.3s								
YERR	**Yerington**	**86.71**	**47**		P	**P**	**21 54 42.8**	**0.0**	
YERR					IAmb	IAmb	21 54 44.6		
	comp=Z,24nm,1.3s								
LRM	**Limekiln Ridge**	**86.75**	**39**		P	**P**	**21 54 43.2**	**+0.3**	
EGMT	**Eagleton**	**86.80**	**36**		P	**P**	**21 54 41.2**	**-1.7**	
	baz=310								
WATA	**Walderalm**	**86.81**	**323**		P	**P**	**21 54 43.5**	**+0.5**	
	comp=Z,2.7nm,0.8s								
WTTA	**Wattenberg**	**86.82**	**323**		P	**P**	**21 54 42.2**	**-0.9**	
	comp=Z,12nm,1.5s								
BBGB	**Big Mountain B**	**86.85**	**50**		P	**P**	**21 54 43.6**	**+0.2**	
BBGB					IAmb	IAmb	21 54 45.3		
	comp=Z,19nm,1.1s								
PYL	**PYLOS**	**86.87**	**311**		P	**P**	**21 54 43.5**	**+0.2**	
HLID	**Hailey**	**87.02**	**41**		P	**P**	**21 54 44.8**	**+0.7**	
HLID					IAmb	IAmb	21 54 46.6		
	comp=Z,10nm,1.1s								
HLID	**Hailey**	**87.02**	**41**		P	**P**	**21 54 45.3**	**+1.1**	
	baz=307								
FRB	**Frobisher Bay**	**87.04**	**8**		LR	LR	22 35 00.5		
	comp=Z,182nm,21.9s,baz=353,slow=37								
MOTA	**Moosalm**	**87.05**	**324**		P	**P**	**21 54 44.2**	**0.0**	
	comp=Z,5.5nm,0.9s								
BMN	**Battle Mountai**	**87.17**	**45**		P	**P**	**21 54 45.4**	**+0.5**	
BMN					IAmb	IAmb	21 54 47.3		
	comp=Z,14nm,1.1s								
BMN	**Battle Mountai**	**87.17**	**45**		P	**P**	**21 54 45.4**	**+0.5**	
BMN					pmax	pmax			
	comp=Z,14nm,1.1s								
BOZ	**Bozeman (W)**	**87.34**	**38**		P	**P**	**21 54 46.1**	**+0.4**	
	baz=309								
RYN	**Ryan**	**87.37**	**47**		P	**P**	**21 54 46.4**	**+0.5**	
RYN					IAmb	IAmb	21 54 48.0		
	comp=Z,14nm,1.3s								
KVN	**Kaiserville**	**87.40**	**47**		P	**P**	**21 54 46.7**	**+0.6**	
KVN					IAmb	IAmb	21 54 48.1		
	comp=Z,18nm,1.2s								
KVN	**Kaiserville**	**87.40**	**47**		P	**P**	**21 54 46.7**	**+0.6**	
KVN					pmax	pmax			
	comp=Z,18nm,1.2s								
FETA	**Feichten**	**87.45**	**324**	*e*	P	**P**	**21 54 44.4**	**-1.8**	
	comp=Z,7.5nm,1.6s								
LHV	**Little Huntoon**	**87.60**	**47**		P	**P**	**21 54 47.5**	**+0.7**	
LHV					IAmb	IAmb	21 54 49.5		
	comp=Z,20nm,1.3s								
NVAR	**Mina Array Bea**	**87.63**	**47**		P	**P**	**21 54 47.7**	**+0.5**	
	comp=Z,2.6nm,0.9s,baz=280,slow=5.0,SNR=18								
	comp=Z,2.6nm,0.9s								
OMMB	**Old Mammoth Mi**	**87.63**	**48**		P	**P**	**21 54 47.4**	**0.0**	
NV11	**Mina Array Sit**	**87.72**	**47**		P	**P**	**21 54 47.4**	**-0.2**	
DAVA	**Damuels**	**87.72**	**324**	*i*	P	**P**	**21 54 45.7**	**-1.8**	
	comp=Z,6.4nm,0.6s								
EKA	**Eskdalemuir Ar**	**87.75**	**336**		LR	LR	22 39 47.3		
	comp=Z,256nm,18.9s,baz=12,slow=40								
EKA	**Eskdalemuir Ar**	**87.75**	**336**		P	**P**	**21 54 49.5**	**+2.3**	
DAVOX	**Davos/Dischmat**	**88.05**	**324**		LR	LR	22 39 17.2		
	comp=Z,321nm,19.0s,baz=82,slow=39								
ELK	**Elko**	**88.21**	**44**		P	**P**	**21 54 50.4**	**+0.4**	
ELK	**Elko**	**88.21**	**44**		P	**P**	**21 54 50.4**	**+0.4**	
ELK					pmax	pmax			
	comp=Z,6.0nm,1.1s								
TPH	**Tonopah**	**88.53**	**47**		P	**P**	**21 54 51.8**	**+0.3**	
TPH	**Tonopah**	**88.53**	**47**		P	**P**	**21 54 51.8**	**+0.3**	
TPH					pmax	pmax			
	comp=Z,48nm,1.2s								
RLMT	**Red Lodge**	**88.93**	**38**		P	**P**	**21 54 52.9**	**-0.3**	
RLMT	**Red Lodge**	**88.93**	**38**		P	**P**	**21 54 53.0**	**-0.3**	
	baz=310								
TPAW	**Teton Pass**	**89.05**	**40**		P	**P**	**21 54 54.5**	**+0.5**	
TPAW					IAmb	IAmb	21 54 56.6		
	comp=Z,6.1nm,0.9s								
HVU	**Hansel Valley**	**89.06**	**42**		P	**P**	**21 54 55.0**	**+1.1**	
HVU					IAmb	IAmb	21 54 56.5		
	comp=Z,8.1nm,1.0s								
HVU	**Hansel Valley**	**89.06**	**42**		P	**P**	**21 54 55.0**	**+1.1**	
HVU					pmax	pmax			
	comp=Z,8.0nm,1.0s								
DGMT	**Dagmar**	**89.27**	**33**		P	**P**	**21 54 55.1**	**+0.6**	
	baz=314								
R11A	**Troy Canyon, C**	**89.41**	**46**		P	**P**	**21 54 56.1**	**+0.4**	
R11A	**Troy Canyon, C**	**89.41**	**46**		P	**P**	**21 54 56.4**	**+0.7**	
	baz=306								
BGU	**Big Grassy Mou**	**89.44**	**43**		P	**P**	**21 54 56.0**	**+0.4**	
LAO	**LASA Array**	**89.49**	**35**		IAmb	IAmb	21 54 57.7		
	comp=Z,15nm,1.1s								
PPT	**Papeete**	**89.68**	**110**		LR	LR	22 27 14.5		
	comp=Z,32nm,21.0s,baz=359,slow=30								
TPNV	**Topopah Spring**	**89.81**	**47**		P	**P**	**21 54 57.9**	**+0.4**	
	baz=306								
HWUT	**Hardware Ranch**	**89.88**	**41**		P	**P**	**21 54 58.5**	**+0.7**	
DUG	**Dugway, Tooele**	**90.02**	**43**		P	**P**	**21 54 59.0**	**+0.6**	
DUG					IAmb	IAmb	21 55 00.9		
	comp=Z,16nm,1.4s								
DUG	**Dugway, Tooele**	**90.02**	**43**		P	**P**	**21 54 59.0**	**+0.6**	
DUG					pmax	pmax			
	comp=Z,16nm,1.4s								
DUG	**Dugway, Tooele**	**90.02**	**43**		P	**P**	**21 54 59.2**	**+0.9**	
	baz=308								
BW06	**Boulder Array**	**90.29**	**40**		P	**P**	**21 55 00.0**	**+0.3**	
BW06	**Boulder Array**	**90.29**	**40**		P	**P**	**21 54 59.9**	**+0.1**	
	baz=310								
PD31	**Pinedale Array**	**90.29**	**40**		P	**P**	**21 54 59.6**	**-0.2**	
PDAR	**Pinedale Array**	**90.29**	**40**		P	**P**	**21 54 59.5**	**-0.2**	
	comp=Z,2.4nm,0.9s,baz=318,slow=2.0,SNR=16								
	comp=Z,2.4nm,0.9s								
PSUT	**Pine Spring**	**90.39**	**45**		P	**P**	**21 55 00.9**	**+0.7**	
CIS	**Catalina Islan**	**90.40**	**51**		P	**P**	**21 55 00.1**	**0.0**	
	baz=305								
GSC	**Goldstone, Bar**	**90.40**	**49**		P	**P**	**21 55 00.7**	**+0.5**	
	baz=306								
HEC	**Hector Ludlow**	**90.99**	**49**		P	**P**	**21 55 02.8**	**-0.1**	
	baz=306								
GMRC	**Granite Mounta**	**91.47**	**49**		P	**P**	**21 55 05.6**	**+0.4**	
	baz=306								
PFO	**Pinyon Flats O**	**91.62**	**50**		P	**P**	**21 55 06.4**	**+0.5**	
	baz=306								
TPFO	**Pinon Flats**	**91.63**	**50**		P	**P**	**21 55 06.4**	**+0.5**	
	baz=306								
ULM	**Lac du Bonnet**	**91.66**	**28**		P	**P**	**21 55 05.3**	**-0.3**	
	comp=Z,6.9nm,0.9s,baz=326,slow=4.0,SNR=5.5								
ULM					LR	LR	22 40 42.3		
	comp=Z,106nm,18.7s,baz=52,slow=38								
	comp=Z,6.9nm,0.9s								
ULM	**Lac du Bonnet**	**91.66**	**28**		IAmb	IAmb	21 55 06.8		
	comp=Z,12nm,1.1s								
RDMU	**Red Mountain**	**91.70**	**41**		P	**P**	**21 55 07.3**	**+1.0**	
RDMU					IAmb	IAmb	21 55 08.5		
	comp=Z,11nm,1.0s								
P17A	**Butcher Ranch,**	**91.71**	**43**		P	**P**	**21 55 07.2**	**+0.9**	
P18A	**Preston Nutter**	**91.91**	**42**		P	**P**	**21 55 07.9**	**+0.5**	
MONP2	**Monument Peak**	**92.06**	**51**		P	**P**	**21 55 08.0**	**-0.1**	
	baz=306								
SRU	**San Rafael Swe**	**92.07**	**43**		P	**P**	**21 55 07.7**	**-0.3**	
SRU	**San Rafael Swe**	**92.07**	**43**		P	**P**	**21 55 07.7**	**-0.3**	
SRU					pmax	pmax			
	comp=Z,12nm,0.8s								
IRM	**Iron Mountain**	**92.18**	**49**		P	**P**	**21 55 09.2**	**+0.8**	
	baz=307								
BC3	**Big Chuckawall**	**92.27**	**50**		P	**P**	**21 55 09.9**	**+0.9**	
	baz=306								
O20A	**White River Ci**	**92.76**	**41**		P	**P**	**21 55 10.7**	**-0.4**	
O20A					IAmb	IAmb	21 55 13.0		
	comp=Z,10nm,1.1s								
O20A	**White River Ci**	**92.76**	**41**		P	**P**	**21 55 12.1**	**+0.9**	
	baz=311								
PDMCI	**Parker Dam,Lak**	**92.76**	**48**		P	**P**	**21 55 10.7**	**-0.3**	
	baz=307								
KMBO	**Kilima Mbogo**	**93.39**	**271**		P	**P**	**21 55 14.7**	**+0.1**	
	comp=Z,0.7nm,0.4s,baz=41,slow=12,SNR=4.2								
	comp=Z,0.7nm,0.4s								
PV23	**Carpenter Ridg**	**93.40**	**43**		P	**P**	**21 55 14.3**	**0.0**	
PV10	**Paradox Valley**	**93.43**	**43**		P	**P**	**21 55 15.5**	**+1.1**	
N23A	**Red Feather La**	**93.56**	**39**		P	**P**	**21 55 16.1**	**+1.2**	
	baz=313								
WUAZ	**Wupatki**	**93.81**	**46**		P	**P**	**21 55 17.4**	**+1.3**	
	baz=309								
B35A	**Bob, Littlefor**	**94.02**	**28**		P	**P**	**21 55 16.9**	**+0.4**	
B35A					IAmb	IAmb	21 55 17.8		
	comp=Z,7.5nm,0.9s								
ISCO	**Idaho Springs**	**94.48**	**40**		P	**P**	**21 55 20.2**	**+1.0**	
	baz=313								
MVCO	**Mesa Verde**	**94.51**	**43**		P	**P**	**21 55 20.4**	**+1.0**	
	baz=311								
214A	**Organ Pipe Nat**	**95.07**	**50**		P	**P**	**21 55 22.4**	**+0.7**	
	baz=308								
EYMN	**Ely**	**95.25**	**27**		P	**P**	**21 55 21.9**	**-0.3**	
EYMN					IAmb	IAmb	21 55 23.4		
	comp=Z,7.8nm,0.9s								
EYMN	**Ely**	**95.25**	**27**		P	**P**	**21 55 22.3**	**0.0**	
	baz=324								
KEST	**Kesra**	**95.56**	**316**		LR	LR	22 43 50.9		
	comp=Z,163nm,18.2s,baz=284,slow=39								
SCHQ	**Schefferville**	**95.88**	**10**		LR	LR	22 44 05.5		
	comp=Z,124nm,18.0s,baz=282,slow=39								
TUC	**Tucson**	**96.20**	**48**		P	**P**	**21 55 27.9**	**+1.0**	
	baz=309								
TORD	**Torodi Ar. Bea**	**115.57**	**303**		PKP	**PKiKP**	**22 00 40.3**	**-0.9**	
	comp=Z,1.8nm,1.0s,baz=11,slow=2.6,SNR=8.3								
TORD					PKKPbc	**PKKPbc**	**22 11 15.1**	**+1.7**	
	comp=Z,0.6nm,1.0s,baz=227,slow=3.2,SNR=5.2								
TORD	**Torodi Ar. Bea**	**115.57**	**303**			**PKiKP**	**22 00 40.7**	**-0.5**	
DBIC	**Dimbokro**	**124.66**	**302**		PKP	**PKPdf**	**22 00 58.4**	**-0.3**	
	comp=Z,3.8nm,0.7s,baz=23,slow=3.8,SNR=4.4								
PLCA	**Paso Flores**	**158.74**	**131**		PKPab	**PKPab**	**22 02 32.8**	**+0.9**	
	comp=Z,2.5nm,0.9s,baz=245,slow=9.5,SNR=5.0								
LPAZ	**La Paz**	**159.06**	**59**		PKPab	**PKPab**	**22 02 33.6**	**-0.9**	
	comp=Z,1.6nm,0.9s,baz=242,slow=2.5,SNR=4.2								
CPUP	**Villa Florida**	**172.77**	**76**		PKP	**PKPdf**	**22 02 09.1**	**+1.2**	
	comp=Z,1.5nm,0.9s,baz=65,slow=2.5,SNR=2.9								

*IDC **16** 21:42:48.2±0.7,54.27S×132.18W,h0km,mb4.0/9, mbtmp4.0/9,MS4.2/33 Error ellipse: s-maj=27.6km s-min=20.1km az=159.0*

*NEIC **16** 21:42:49.9±1.3,54.4S±0.1×132.34W±0.09,h10km±1km, mb4.8/17,Error ellipse: s-maj=23.0km s-min=7.4km az=348.0*

*GCMT **16** 21:42:54.9±0.2,54.67S±0.02×131.83W±0.02,h16km±1km, MW5.0/108,Moment Tensor Solution. s33,c35; s108,c139; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.52±.14; Mθθ3.01±.16; Mφφ-2.49±.13; Mrθ0.18±.35; Mθφ2.21±.09; Mφr-0.31±.33; Best double couple: Ms3.55100×10¹⁶ NP1:φs26.00000°,δ84.00000°, λ-176.00000°. NP2:φs295.00000°,δ86.00000°, λ-6.00000°. Principal axes: T 3.7890, Plg1.0000°, Azm341.0000°; N -0.4770, Plg83.0000°, Azm78.0000°; P -3.3120, Plg7.0000°, Azm251.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 16 21:42:49.9±0.6,54.3S±0.1×132.3W±0.1,h10km,n76, σ0s83/31,mb4.5/13,MS4.4/36,Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTCN	**Pitcairn Islan**	**29.28**	**4**	P	**P**	**21 48 51.9**	**-0.3**
SBA	**Scott Base**	**31.52**	**201**	P	**P**	**21 49 10.4**	**-1.1**
SBA				IAmb	IAmb	21 49 27.2	
	comp=Z,15nm,1.4s						
VA02	**Isla de Pascua**	**31.91**	**41**	P	**P**	**21 49 16.1**	**+0.7**
RPN	**Rapa Nui**	**31.98**	**41**	LR	LR	21 59 01.0	
	comp=Z,286nm,20.4s,baz=173,slow=30						
VNDA	**Vanda**	**32.51**	**202**	P	**P**	**21 49 22.1**	**+1.9**
	comp=Z,0.7nm,0.9s,baz=69,slow=11,SNR=5.1						
VNDA				LR	LR	21 58 16.8	
	comp=Z,110nm,20.7s,baz=86,slow=28						
	comp=Z,0.7nm,0.9s						
VNDA	**Vanda**	**32.51**	**202**	P	**P**	**21 49 20.5**	**+0.3**
TBI	**Tubuai**	**33.53**	**331**	*e*LR	LR	21 57 45.3	
	comp=Z,15μm,25.8s						
TBI				*e*LR	LR	21 57 48.5	
	comp=Z,1μm,28.8s						
TBI	**Tubuai**	**33.53**	**331**	*e*T	T	22 25 04.0	
	comp=Z,35nm,0.3s						
PMSA	**Palmer Station**	**34.36**	**135**	LR	LR	21 59 26.4	
	comp=Z,659nm,19.9s,baz=252,slow=29						
QSPA	**South Pole Qui**	**35.83**	**180**	P	**P**	**21 49 51.3**	**+1.9**
	comp=Z,1.7nm,0.8s,baz=142,slow=3.5,SNR=2.5						
QSPA				LR	LR	22 01 56.4	
	comp=Z,497nm,21.8s,baz=78,slow=32						
	comp=Z,1.7nm,0.8s						
QSPA	**South Pole Qui**	**35.83**	**180**	P	**P**	**21 49 50.2**	**+0.9**
QSPA				IAmb	IAmb	21 50 12.4	
	comp=Z,11nm,1.2s						
URZ	**Urewera**	**37.59**	**274**	LR	LR	22 03 47.0	
	comp=Z,324nm,18.4s,baz=211,slow=33						
MEH	**Mehetia**	**38.38**	**335**	*e*T	T	22 31 09.3	
	comp=Z,6.4nm,0.2s						
PPT2	**Papeete2**	**39.04**	**333**	*e*LR	LR	22 00 20.7	
	comp=Z,1μm,25.5s						
PPT2				*e*LR	LR	22 00 23.0	
	comp=Z,894nm,27.8s						
PPT	**Papeete**	**39.06**	**333**	LR	LR	22 01 56.2	
	comp=Z,510nm,19.8s,baz=163,slow=29						
RAR	**Rarotonga**	**39.08**	**317**	LR	LR	22 03 28.4	
	comp=Z,510nm,18.7s,baz=104,slow=32						
BELA	**Belgrano 2**	**39.12**	**161**	P	**P**	**21 50 16.5**	**-0.3**
VAH	**Vaihoa**	**40.82**	**337**	*e*T	T	22 34 08.0	
	comp=Z,16nm,0.2s						
H03S2	**Juan Fernandez**	**42.25**	**83**	T	T	22 35 27.4	
	baz=222,SNR=251						
H03S1	**Juan Fernandez**	**42.26**	**83**	T	T	22 35 28.6	
	baz=222						
H03S3	**Juan Fernandez**	**42.27**	**83**	T	T	22 35 27.8	
	baz=222,SNR=228						
PLCA	**Paso Flores**	**42.46**	**98**	LR	LR	22 03 38.2	
	comp=Z,292nm,20.0s,baz=228,slow=30						
H03N3	**Juan Fernandez**	**42.52**	**83**	T	T	22 35 51.7	
	baz=225,slow=72,SNR=205						
H03N2	**Juan Fernandez**	**42.53**	**83**	T	T	22 35 41.7	
	baz=225,slow=72,SNR=253						
H03N1	**Juan Fernandez**	**42.54**	**83**	T	T	22 35 43.8	
	baz=225,slow=72,SNR=225						
TAOE	**Nuku Hiva Isla**	**45.80**	**349**	*e*LR	LR	22 03 39.1	
	comp=Z,806nm,24.9s						
SNAA	**Sanae**	**49.36**	**161**	P	**P**	**21 51 38.6**	**-0.2**
SNAA	**Sanae**	**49.36**	**161**	P	**P**	**21 51 37.6**	**-1.3**
	comp=Z,1.6nm,1.0s,baz=254,slow=8.0,SNR=7.8						
SNAA				LR	LR	22 10 19.7	
	comp=Z,533nm,21.7s,baz=255,slow=33						
	comp=Z,1.6nm,1.0s						
SNAA	**Sanae**	**49.36**	**161**	P	**P**	**21 51 38.5**	**-0.3**
SNAA				IAmb	IAmb	21 51 50.0	
	comp=Z,12nm,1.4s						
AFI	**Afiamalu**	**50.78**	**307**	LR	LR	22 07 27.3	
	comp=Z,120nm,21.4s,baz=167,slow=29						
MSVF	**Nonsayu**	**52.66**	**294**	LR	LR	22 08 53.9	
	comp=Z,145nm,21.7s,baz=206,slow=30						
GO02	**Mina Guanaco**	**54.11**	**84**	P	**P**	**21 52 14.8**	**-0.4**
LVC	**Limon Verde**	**56.47**	**82**	LR	LR	22 11 59.0	
	comp=Z,66nm,21.9s,baz=218,slow=31						
MAW	**Mawson**	**57.85**	**187**	LR	LR	22 15 41.0	
	comp=Z,110nm,20.0s,baz=164,slow=34						
ITQB	**Itaqui**	**58.30**	**98**	P	**P**	**21 52 44.6**	**-0.1**
ITQB				IAmb	IAmb	21 53 03.4	
	comp=Z,26nm,1.2s						
PLTB	**Pedras Altas**	**58.49**	**102**	P	**P**	**21 52 45.7**	**-0.4**
PLTB				IAmb	IAmb	21 53 04.7	
	comp=Z,14nm,1.2s						
CPUP	**Villa Florida**	**60.39**	**95**	P	**P**	**21 52 58.5**	**-0.7**
	comp=Z,2.1nm,0.8s,baz=218,slow=7.1,SNR=3.9						
CPUP				LR	LR	22 14 54.7	
	comp=Z,305nm,19.5s,baz=222,slow=32						
	comp=Z,2.1nm,0.8s						
CPUP	**Villa Florida**	**60.39**	**95**	IAmb	IAmb	21 53 17.2	
	comp=Z,5.9nm,1.1s						
NNA	**Nana**	**60.51**	**68**	LR	LR	22 12 20.4	
	comp=Z,503nm,21.6s,baz=208,slow=29						
LPAZ	**La Paz**	**61.89**	**78**	P	**P**	**21 53 10.5**	**+0.3**
	comp=Z,2.4nm,0.9s,baz=172,slow=4.5,SNR=5.9						
LPAZ				LR	LR	22 13 41.3	
	comp=Z,142nm,18.1s,baz=189,slow=30						
	comp=Z,2.4nm,0.9s						
LPAZ	**La Paz**	**61.89**	**78**	P	**P**	**21 53 11.0**	**+0.8**
LPAZ				IAmb	IAmb	21 53 19.6	
	comp=Z,10.0nm,1.1s						
ATAH	**Atahualpa**	**63.73**	**63**	LR	LR	22 15 44.2	
	comp=Z,73nm,20.9s,baz=227,slow=31						
SIV	**San Ignacio**	**66.21**	**84**	P	**P**	**21 53 36.6**	**-1.3**
	comp=Z,1.2nm,0.4s,baz=232,slow=5.8,SNR=8.1						
SIV				LR	LR	22 17 00.3	
	comp=Z,46nm,21.3s,baz=227,slow=31						
	comp=Z,1.2nm,0.4s						
BOSC	**San Juan Bosco**	**67.06**	**61**	P	**P**	**21 53 44.0**	**+0.5**
BOSC				IAmb	IAmb	21 53 53.1	
	comp=Z,14nm,0.9s						
SAML	**Samuel**	**70.63**	**78**	P	**P**	**21 54 06.3**	**+0.8**
ASAR	**Alice Springs**	**73.27**	**253**	P	**P**	**21 54 21.6**	**+0.1**
	comp=Z,1.5nm,0.8s,baz=126,slow=4.5,SNR=5.6						
ASAR				LR	LR	22 22 23.6	
	comp=Z,241nm,19.7s,baz=150,slow=32						
	comp=Z,1.5nm,0.8s						
ASAR	**Alice Springs**	**73.27**	**253**	P	**P**	**21 54 21.3**	**-0.1**
BDFB	**Brasilia**	**74.12**	**95**	LR	LR	22 24 00.6	
	comp=Z,77nm,18.9s,baz=259,slow=33						
H01W1	**Cape Leeuwin H**	**74.39**	**231**	T	T	23 17 05.9	
	baz=145,slow=76,SNR=15						
H01W2	**Cape Leeuwin H**	**74.39**	**231**	T	T	23 17 03.6	
	baz=145,slow=76,SNR=14						
H01W3	**Cape Leeuwin H**	**74.40**	**231**	T	T	23 17 02.0	
	baz=145,slow=76,SNR=15						
JTS	**Las Juntas de**	**75.72**	**48**	LR	LR	22 19 50.3	
	comp=Z,309nm,21.5s,baz=248,slow=29						
WRA	**Warramunga Arr**	**75.98**	**255**	P	**P**	**21 54 36.1**	**-1.0**
	comp=Z,0.9nm,0.7s,baz=147,slow=5.2,SNR=5.9						
WRA				LR	LR	22 25 27.2	
	comp=Z,178nm,18.2s,baz=189,slow=34						
	comp=Z,0.9nm,0.7s						
LPIG	**La Paz**	**80.38**	**20**	LR	LR	22 21 07.6	
	comp=Z,106nm,21.6s,baz=250,slow=29						
TXAR	**Lajitas Array**	**86.92**	**25**	P	**P**	**21 55 34.9**	**+0.2**
	comp=Z,0.6nm,0.9s,baz=189,slow=7.5,SNR=4.7						
	comp=Z,0.6nm,0.9s						
RCBR	**Riachuelo**	**89.02**	**99**	LR	LR	22 32 51.6	
	comp=Z,154nm,18.0s,baz=350,slow=34						
H11N3	**WAKE ISLAND Hy**	**90.17**	**305**	T	T	23 36 02.0	
	baz=148,slow=76,SNR=14						
H11N1	**WAKE ISLAND Hy**	**90.17**	**305**	T	T	23 36 03.0	
	baz=148,slow=76,SNR=13						
H11N2	**WAKE ISLAND Hy**	**90.18**	**305**	T	T	23 36 04.3	
	baz=148,slow=76,SNR=14						
SUR	**Sutherland**	**90.56**	**157**	LR	LR	22 29 10.2	
	comp=Z,226nm,21.7s,baz=164,slow=31						
ANMO	**Albuquerque**	**91.68**	**21**	LR	LR	22 29 22.7	
	comp=Z,82nm,18.5s,baz=262,slow=30						
BOSA	**Boshof**	**95.14**	**160**	LR	LR	22 34 16.4	
	comp=Z,186nm,18.9s,baz=185,slow=32						
ELK	**Elko**	**95.84**	**13**	LR	LR	22 30 08.2	
	comp=Z,101nm,20.1s,baz=228,slow=30						
YBH	**Yreka Blue Hor**	**96.05**	**7**	LR	LR	22 29 45.3	
	comp=Z,177nm,20.3s,baz=206,slow=29						
KAPI	**Kappang**	**96.29**	**252**	LR	LR	22 37 47.3	
	comp=Z,193nm,19.1s,baz=122,slow=34						
Y49A	**Blount Mountai**	**96.33**	**37**	P	**P**	**21 56 18.3**	**0.0**
GUMO	**Guam**	**96.80**	**284**	LR	LR	22 39 20.0	
	comp=Z,25nm,18.1s,baz=111,slow=35						
PDAR	**Pinedale Array**	**98.67**	**17**	LR	LR	22 32 37.0	
	comp=Z,131nm,21.2s,baz=240,slow=30						
LBTB	**Lobatse**	**98.70**	**160**	LR	LR	22 35 30.6	
	comp=Z,143nm,18.5s,baz=162,slow=32						
H02S1	**DAWSON INLET T**	**107.18**	**360**	T	T	23 57 02.5	
	SNR=9.2						
ILAR	**Eielson Array**	**119.31**	**353**	PKP	**PKiKP**	**22 01 38.2**	**+0.4**
	comp=Z,0.5nm,0.9s,baz=194,slow=3.3,SNR=3.2						
TORD	**Torodi Ar. Bea**	**125.40**	**121**	PKP	**PKPdf**	**22 01 50.5**	**-0.6**
	comp=Z,1.1nm,0.9s,baz=215,slow=1.8,SNR=4.8						
SONM	**Songino Array**	**143.53**	**284**	PKhKP	PKPpre	22 02 03.5	
	comp=Z,0.4nm,0.4s

ZAA0	**Zalesovo Array**	**58.52**	**350**	P	**P**	**22 08 49.5**	**-0.4**
ZAA0				IAmb	IAmb	22 08 51.1	
	comp=Z,4.4nm,1.0s						
ZALV	**Zalesovo Beam**	**58.52**	**350**	P	**P**	**22 08 50.2**	**+0.3**
	comp=Z,2.6nm,0.6s,baz=174,slow=4.5,SNR=12						
	comp=Z,2.6nm,0.6s						
ABKAR	**Akbulak array**	**62.68**	**332**	P	**P**	**22 09 18.2**	**-0.2**
ABKAR				IAmb	IAmb	22 09 19.0	
	comp=Z,2.2nm,0.8s						
ABKAR	**Akbulak array**	**62.68**	**332**	P	**P**	**22 09 18.0**	**-0.3**
KBZ	**Khabaz**	**69.07**	**320**	P	**P**	**22 10 00.1**	**+0.4**
	comp=Z,1.5nm,0.7s,baz=204,slow=5.1,SNR=3.8						
	comp=Z,1.5nm,0.7s						
LBZ	**Lake Benmore**	**73.84**	**135**	P	**P**	**22 10 28.3**	**-0.3**
BRTR	**Keskin Array B**	**73.92**	**313**	P	**P**	**22 10 28.2**	**-0.9**
	comp=Z,0.7nm,0.7s,baz=138,slow=7.6,SNR=4.8						
	comp=Z,0.7nm,0.7s						
BRTR	**Keskin Array B**	**73.92**	**313**	P	**P**	**22 10 28.6**	**-0.6**
ODZ	**Otahua Downs**	**74.29**	**136**	P	**P**	**22 10 30.9**	**-0.2**
AKAS	**Kas**	**75.96**	**309**	P	**P**	**22 10 40.7**	**-0.4**
AKAS				IAmb	IAmb	22 10 49.9	
	comp=Z,13nm,1.1s						
FINES	**FINESS Array B**	**85.17**	**332**	P	**P**	**22 11 29.3**	**-0.3**
	comp=Z,2.3nm,1.0s,baz=71,slow=6.0,SNR=5.3						
	comp=Z,2.3nm,1.0s						
TXAR	**Lajitas Array**	**146.21**	**38**	PKPbc	**PKPab**	**22 18 36.2**	**+0.7**
	comp=Z,0.9nm,0.7s,baz=279,slow=0.9,SNR=14						

IDC ***16*** *22:50:38.5±1.4, 12°.78N×86°.95W, h0km, mb3.8/7, mbtmp3.8/9, ML3.1/2, MS3.5/4, Error ellipse: s-maj=45.3km s-min=21.7km az=41.0*
INET ***16*** *22:50:39.8±1.1, 12°.88N×87°.02W, h2km±3km, MW4.2*
SNET ***16*** *22:50:40.7±0.9, 12°.89N×87°.09W, h4km±10km, ML4.1*
UCR ***16*** *22:50:40.9±0.9, 12°.88N×87°.07W, h6km±10km, ML4.1, mb4.4(NEIC)*
NEIC ***16*** *22:50:41.8±1.3, 12°.92N±0°.04×86°.85W±0°.04, h10km±1km, mb4.4/79, Error ellipse: s-maj=7.3km s-min=5.4km az=210.0*

ISC 16 22:50:39.9±1.0, 12°.91N±0°.03×86°.97W±0°.02, h8km±7km, n147, σ1°17/152, mb4.3/38, MS3.7/3, Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.22**	**202**	Pg	**Pg**	**Pg**	**22 50 45.0**	**+0.5**
CRIN				Sg	**Sg**	**Sg**	**22 50 49.3**	**+1.8**
CRIN	**San Cristobal**	**0.22**	**202**	*eP*	**Pg**	**Pg**	**22 50 44.8**	**+0.4**
CRIN				*eS*	**Sg**	**Sg**	**22 50 48.2**	**+0.7**
TELN	**Telica**	**0.33**	**157**	*eP*	**Pg**	**Pg**	**22 50 47.5**	**+1.1**
TEL3	**Telica 3**	**0.35**	**161**	*eP*	**Pb**	**Pb**	**22 50 48.0**	**-0.5**
CNGN	**Cerro Negro**	**0.48**	**147**	Pg	**Pb**	**Pb**	**22 50 50.4**	**-0.3**
CNGN				Sg	**Sb**	**Sb**	**22 50 58.5**	**+0.5**
CNGN	**Cerro Negro**	**0.48**	**147**	*eP*	**Pb**	**Pb**	**22 50 50.4**	**-0.3**
CSGN	**Cosiguina Volc**	**0.58**	**277**	*eP*	**Pg**	**Pg**	**22 50 50.8**	**-0.4**
MOMN	**Momotombo**	**0.65**	**140**	*eP*	**Pn**	**Pn**	**22 50 53.4**	**-2.1**
COPN	**Copaltepe**	**0.81**	**153**	*eP*	**Pb**	**Pb**	**22 50 54.4**	**-1.9**
CNCH	**Conchagua**	**0.92**	**293**	*eP*	**Pg**	**Pg**	**22 50 56.7**	**-1.0**
CNCH				*eS*	**Sg**	**Sg**	**22 51 09.8**	**+0.1**
CNCH				IAML			22 51 15.6	
	comp=Z,7μm,0.5s							
CNCH	**Conchagua**	**0.92**	**293**	*eP*		**Pg**	**22 50 56.7**	**-1.0**
CNCH				*eS*		**Sg**	**22 51 09.8**	**+0.1**
CNCH				IAML			22 51 15.6	
	comp=Z,7μm,0.5s							
HUEN		**0.96**	**126**	*eP*		**Pn**	**22 50 58.9**	**-0.8**
HUEN				*eS*		**Sn**	**22 51 12.7**	**-0.9**
LCND	**La Caada**	**0.99**	**294**	*i P*		**Pg**	**22 50 57.9**	**-1.0**
LCND	**La Caada**	**0.99**	**294**	*i P*		**Pg**	**22 50 57.9**	**-1.0**
MATN	**Matagalpa**	**1.01**	**89**	Pg		**Pg**	**22 50 58.8**	**-0.6**
MATN				Sn		**Sb**	**22 51 13.9**	**+0.5**
MATN	**Matagalpa**	**1.01**	**89**	*eP*		**Pg**	**22 50 58.8**	**-0.6**
WILN	**Americas 2**	**1.06**	**134**	*eP*		**Pn**	**22 51 00.5**	**-0.6**
TGUH	**Tegucigalpa,Un**	**1.18**	**345**			**Pn**	**22 51 02.6**	**-0.4**
TGUH	**Tegucigalpa,Un**	**1.18**	**345**	*i P*		**Pn**	**22 51 02.5**	**-0.4**
TGUH	**Tegucigalpa,Un**	**1.18**	**345**	*i P*		**Pn**	**22 51 02.5**	**-0.4**
TGUH	**Tegucigalpa,Un**	**1.18**	**345**	*eP*		**Pn**	**22 51 02.4**	**-0.5**
BOAB	**BOACO BROADBAN**	**.35**	**110**			**Pn**	**22 51 04.8**	**-0.3**
BOAB	**BOACO BROADBAN**	**.35**	**110**	*eP*		**Pn**	**22 51 04.8**	**-0.3**
BOAB				*eS*		**Sg**	**22 51 24.3**	**+1.0**
RANC	**El Ranchito**	**1.39**	**292**	*eS*		**Sb**	**22 51 22.8**	**-1.5**
RANC				IAML			22 51 28.6	
	comp=Z,2μm,0.5s							
RANC	**El Ranchito**	**1.39**	**292**	*eS*		**Sb**	**22 51 22.8**	**-1.5**
RANC				IAML			22 51 28.6	
	comp=Z,2μm,0.5s							
LCY	**Lacayo**	**1.39**	**292**	*eP*		**Pn**	**22 51 04.4**	**-1.4**
LCY	**Lacayo**	**1.39**	**292**	*eP*		**Pn**	**22 51 04.4**	**-1.4**
PACA	**Pacayal**	**1.44**	**293**	IAML			22 51 28.3	
	comp=Z,7μm,0.5s							
PACA	**Pacayal**	**1.44**	**293**	IAML			22 51 28.3	
	comp=Z,7μm,0.5s							
CAHU	**Cacacuatique**	**1.48**	**305**	*eP*		**Pn**	**22 51 06.6**	**-0.6**
CAHU	**Cacacuatique**	**1.48**	**305**	*eP*		**Pn**	**22 51 06.6**	**-0.6**
COEB	**Comit de Eme**	**1.63**	**291**	*eP*		**Pn**	**22 51 08.6**	**-0.5**
COEB				*eS*		**Sn**	**22 51 30.9**	**+0.5**
COEB	**Comit de Eme**	**1.63**	**291**	*eP*		**Pn**	**22 51 08.6**	**-0.5**
COEB				*eS*		**Sn**	**22 51 30.9**	**+0.5**
CONN	**Concepcion**	**1.87**	**135**	*eP*		**Pb**	**22 51 13.1**	**-1.3**
ACON	**Acoyapa**	**1.98**	**118**			**Pn**	**22 51 13.6**	**-0.2**
ACON	**Acoyapa**	**1.98**	**118**	*eP*		**Pb**	**22 51 15.3**	**-1.0**
COEG	**Centro de Oper**	**2.00**	**291**	*eS*		**Sn**	**22 51 39.6**	**+0.3**
COEG	**Centro de Oper**	**2.00**	**291**	*eS*		**Sn**	**22 51 39.6**	**+0.3**
LLGN	**La Laguna**	**2.29**	**303**	*eS*		**Sn**	**22 51 47.0**	**+0.3**
LLGN	**La Laguna**	**2.29**	**303**	*eS*		**Sn**	**22 51 47.0**	**+0.3**
SNET	**Serv Nac Est T**	**2.34**	**290**	Pn		**Pb**	**22 51 21.5**	**-0.9**
SNET						**Sb**	**22 51 52.3**	**+0.8**
HZTE	**Horizontes, Gu**	**2.56**	**148**			**Pb**	**22 51 23.6**	**-2.6**
ESPN	**Las Esperanzas**	**2.70**	**105**			**Pn**	**22 51 23.9**	**+0.3**
ESPN	**Las Esperanzas**	**2.70**	**105**	*eP*		**Pn**	**22 51 23.9**	**+0.3**
ESQI	**Esquipulas**	**2.83**	**306**	Pn		**Pn**	**22 51 27.1**	**+1.5**
ORTG	**Ortega, Santa**	**2.93**	**150**			**Pb**	**22 51 28.8**	**-3.7**
DUNO	**Dulce Nombre,**	**3.16**	**153**			**Pb**	**22 51 31.7**	**-4.6**
JTS	**Las Juntas de**	**3.26**	**143**	Pn		**Pn**	**22 51 31.0**	**-0.5**
	comp=Z,2.3nm,0.3s,baz=0.7,slow=6.3,SNR=8.3							
	comp=Z,7.1nm,0.5s							
JTS	**Las Juntas de**	**3.26**	**143**			**Pn**	**22 51 32.5**	**+1.0**
HDC	**Heredia**	**4.02**	**136**	Pn		**Pn**	**22 51 42.2**	**+0.2**
CVTR	**Volcan Turrial**	**4.26**	**132**			**Pn**	**22 51 46.5**	**+1.1**
RIMA	**Rio Macho**	**4.36**	**135**			**Pn**	**22 51 47.9**	**+1.2**
BATAN	**Batan**	**4.49**	**128**			**Pn**	**22 51 48.8**	**+0.5**
PEZE	**Perez Zeledon,**	**4.76**	**137**	Pn		**Pn**	**22 51 53.1**	**+1.0**
RTAL	**Retalhuleu**	**4.87**	**290**	Pn		**Pn**	**22 51 55.3**	**+1.8**
PETF	**Flores**	**4.87**	**325**	Pn		**Pn**	**22 51 56.2**	**+2.6**
SRBA	**San Rafael, Bu**	**5.08**	**136**	Pn		**Pn**	**22 51 56.4**	**-0.3**
DRK0	**Durika**	**5.14**	**134**	Pn		**Pn**	**22 51 59.8**	**+2.3**
RGM0	**Gandoca**	**5.40**	**127**	Pn		**Pn**	**22 52 01.1**	**+0.3**
PRIC	**Isla de Provid**	**5.48**	**84**	Pn		**Pn**	**22 52 02.9**	**+1.0**
BRU2	**Volcan**	**5.86**	**134**	Pn		**Pn**	**22 52 07.4**	**+0.1**
CDITO	**Canoas**	**5.89**	**137**	Pn		**Pn**	**22 52 07.1**	**-0.5**
CMIG	**Matias Romero**	**8.71**	**299**	Pn		**Pn**	**22 52 48.0**	**+1.7**
	comp=Z,0.2nm,0.3s,baz=147,slow=5.4,SNR=4.0							
	comp=Z,2.9nm,0.7s							
CBCY	**The Bluff, Cay**	**9.69**	**45**	Pn		**Pn**	**22 52 58.8**	**-1.0**
ROSC	**El Rosal**	**14.84**	**122**	Pn		**Pn**	**22 54 09.7**	**-0.9**
JAKH	**Jacmel**	**14.89**	**67**	Pn		**Pn**	**22 54 08.9**	**-2.0**
TULM	**Tulcn-Chalpat**	**15.15**	**142**	Pn		**Pn**	**22 54 14.3**	**-0.5**
TULM				IAmb		IAmb	22 54 34.6	
	comp=Z,7.7nm,0.8s							
PORT	**Chimborazo Vol**	**16.43**	**150**	Pn		**P**	**22 54 32.7**	**-1.8**
SDV	**Santo Domingo**	**16.53**	**102**	LR		LR	23 00 55.2	
	comp=Z,104nm,20.9s,baz=317,slow=37							
346A	**Big Creek Wild**	**18.54**	**353**	P		**P**	**22 54 56.2**	**-0.8**
346A				IAmb		IAmb	22 55 20.3	
	comp=Z,17nm,0.7s							
342A	**Flagon Creek P**	**19.03**	**346**	P		**P**	**22 55 02.8**	**+0.3**
342A				IAmb		IAmb	22 55 47.3	
	comp=Z,17nm,0.8s							
LRAL	**Lakeview Retre**	**20.04**	**360**	P		**P**	**22 55 14.5**	**+1.1**
SJG	**San Juan**	**20.71**	**73**	LR		LR	23 03 39.6	
	comp=Z,119nm,21.2s,baz=268,slow=38							
Y52A	**Lilburn**	**21.03**	**7**	P		**P**	**22 55 25.0**	**+0.8**
Y52A				IAmb		IAmb	22 55 27.8	
	comp=Z,12nm,1.1s							
X48A	**Hartselle**	**21.45**	**360**	P		**P**	**22 55 30.1**	**+1.3**
Z38A	**Mt. Pleasant**	**21.54**	**341**	P		**P**	**22 55 31.6**	**+1.9**
Z38A				IAmb		IAmb	22 55 36.4	
	comp=Z,24nm,1.0s							
CUPR	**Culebra, Puert**	**21.55**	**73**	P		**P**	**22 55 30.3**	**+0.3**
CUPR				IAmb		IAmb	22 55 35.4	
	comp=Z,14nm,0.9s							
MIAR	**Mount Ida**	**22.36**	**346**	P		**P**	**22 55 40.2**	**+1.7**
Z35A	**Perchaven, San**	**22.39**	**337**	P		**P**	**22 55 39.5**	**+0.6**
TXAR	**Lajitas Array**	**22.53**	**319**	P		**P**	**22 55 40.7**	**+0.1**
	comp=Z,1.1nm,0.8s,baz=145,slow=11,SNR=12							
	comp=Z,1.1nm,0.8s							
TX31	**Lajitas Ar. Si**	**22.53**	**319**	P		**P**	**22 55 41.3**	**+0.7**
TX31				IAmb		IAmb	22 56 09.6	
	comp=Z,15nm,1.4s							
TX32	**Lajitas Array**	**22.53**	**319**	P		**P**	**22 55 41.2**	**+0.6**
W41B	**Gary Mavity, V**	**22.68**	**349**	P		**P**	**22 55 42.9**	**+1.0**
V48A	**Smith Brothers**	**22.73**	**0**	P		**P**	**22 55 43.2**	**+0.7**
WHAR	**Wooly Hollow**	**22.80**	**349**	P		**P**	**22 55 44.7**	**+1.5**
WHAR				IAmb		IAmb	22 55 57.7	
	comp=Z,12nm,1.5s							
ABTX	**Abilene, Hawle**	**22.80**	**331**	P		**P**	**22 55 44.8**	**+1.5**
TKL	**Tuckaleechee C**	**22.83**	**7**	P		**P**	**22 55 46.6**	**+3.0**
	comp=Z,5.2nm,0.8s,baz=190,slow=8.9,SNR=4.9							
	comp=Z,5.2nm,0.8s							
TKL	**Tuckaleechee C**	**22.83**	**7**	P		**P**	**22 55 44.7**	**+1.2**
TKL				IAmb		IAmb	22 55 49.3	
	comp=Z,7.6nm,0.9s							
X37A	**Clayton**	**22.89**	**342**	P		**P**	**22 55 46.0**	**+1.8**
X37A				IAmb		IAmb	22 55 47.4	
	comp=Z,7.0nm,0.9s							
V52A	**Sevierville**	**23.04**	**7**	P		**P**	**22 55 46.5**	**+0.9**
V52A				IAmb		IAmb	22 55 51.0	
	comp=Z,12nm,1.2s							
CLTN	**Cedars of Leba**	**23.09**	**1**	P		**P**	**22 55 46.8**	**+0.6**
CLTN				IAmb		IAmb	22 55 50.7	
	comp=Z,9.9nm,1.1s							
GNAR	**Gosnell**	**23.12**	**354**	P		**P**	**22 55 47.0**	**+0.5**
LNXT	**Lenox**	**23.21**	**355**	P		**P**	**22 55 47.5**	**+0.1**
GLAT	**Glass**	**23.36**	**355**	P		**P**	**22 55 49.0**	**+0.1**
LCAR	**Lake Charles**	**23.37**	**351**	P		**P**	**22 55 50.0**	**+1.0**
LCAR				IAmb		IAmb	22 56 31.2	
	comp=Z,9.0nm,0.8s							
U49A	**Red Boiling Sp**	**23.53**	**2**	P		**P**	**22 55 52.1**	**+1.5**
U49A				IAmb		IAmb	22 55 53.8	
	comp=Z,6.3nm,0.9s							
X34A	**Smith Ranch, M**	**23.74**	**337**	P		**P**	**22 55 53.8**	**+1.0**
X34A				IAmb		IAmb	22 55 57.4	
	comp=Z,6.7nm,0.9s							
V58A	**Windy Hill, Pi**	**23.86**	**16**	P		**P**	**22 55 54.6**	**+0.8**
V58A				IAmb		IAmb	22 56 12.5	
	comp=Z,22nm,1.2s							
U40A	**Yellville**	**23.94**	**348**	P		**P**	**22 55 55.1**	**+0.5**
U54A	**Nelsons Funny**	**23.96**	**10**	P		**P**	**22 55 55.6**	**+0.6**
U54A				IAmb		IAmb	22 56 12.0	
	comp=Z,7.0nm,0.8s							
PBMO	**Poplar Bluff**	**23.97**	**353**	P		**P**	**22 55 56.6**	**+1.7**
PBMO				IAmb		IAmb	22 55 59.2	
	comp=Z,18nm,1.5s							
T47A	**Sharon Grove**	**23.98**	**360**	P		**P**	**22 55 55.7**	**+0.8**
T47A				IAmb		IAmb	22 55 57.5	
	comp=Z,11nm,0.8s							
U56A	**King**	**24.08**	**13**	P		**P**	**22 55 56.2**	**+0.3**
U56A				IAmb		IAmb	22 56 10.3	
	comp=Z,20nm,1.4s							
HHAR	**Hobbs**	**24.11**	**346**	P		**P**	**22 55 57.2**	**+1.0**
FNO	**Franklin**	**24.17**	**339**	P		**P**	**22 55 58.2**	**+1.4**
WMOK	**Wichita Mounta**	**24.23**	**336**	P		**P**	**22 55 57.0**	**-0.4**
WMOK				IAmb		IAmb	22 56 01.6	
	comp=Z,8.0nm,0.9s							
TUL1	**Leonard**	**24.25**	**342**	P		**P**	**22 55 58.0**	**+0.6**
MNTX	**Cornudas Mount**	**25.23**	**321**	P		**P**	**22 56 07.0**	**+0.6**
S39A	**Bolivar**	**25.32**	**348**	P		**P**	**22 56 08.1**	**+0.8**
S39A				IAmb		IAmb	22 56 08.6	
	comp=Z,5.5nm,0.8s							
CCM	**Cathedral Cave**	**25.33**	**352**	P		**P**	**22 56 07.6**	**+0.3**
CCM				IAmb		IAmb	22 56 09.5	
	comp=Z,9.1nm,1.1s							
R50A	**Paris**	**25.38**	**5**	P		**P**	**22 56 08.9**	**+1.2**
R50A				IAmb		IAmb	22 56 27.4	
	comp=Z,14nm,1.4s							
T35A	**Sooner Cattle**	**25.39**	**342**	P		**P**	**22 56 08.9**	**+1.0**
T35A				IAmb		IAmb	22 56 11.1	
	comp=Z,5.3nm,0.8s							
MSTX	**Muleshoe**	**25.43**	**328**	P		**P**	**22 56 08.4**	**+0.1**
MSTX				IAmb		IAmb	22 56 10.0	
	comp=Z,13nm,1.2s							
R40A	**Maddies Statio**	**25.72**	**350**	P		**P**	**22 56 11.6**	**+0.8**
P48A	**Milroy**	**26.48**	**3**	P		**P**	**22 56 18.1**	**+0.4**
Q54A	**Coxs Mills**	**26.53**	**11**	P		**P**	**22 56 20.4**	**+2.2**
Q54A				IAmb		IAmb	22 56 26.5	
	comp=Z,17nm,1.4s							
ACSO	**Alum Creek Sta**	**27.44**	**7**	P		**P**	**22 56 27.1**	**+0.8**
ACSO				IAmb		IAmb	22 56 30.0	
	comp=Z,11nm,0.9s							
N47A	**Urbana**	**27.89**	**2**	P		**P**	**22 56 31.1**	**+0.7**
N49A	**Columbus Grove**	**28.01**	**4**	P		**P**	**22 56 32.4**	**+1.0**
LONY	**Lake Ozonia**	**33.33**	**16**	P		**P**	**22 57 19.6**	**+1.2**
LONY				IAmb		IAmb	22 57 22.0	
	comp=Z,9.0nm,1.1s							
RSSD	**Black Hills**	**34.38**	**338**	P		**P**	**22 57 28.7**	**+0.9**
REDW	**Red Top Meadow**	**36.67**	**330**	P		**P**	**22 57 48.8**	**+1.3**
REDW				IAmb		IAmb	22 57 49.7	
	comp=Z,6.9nm,0.8s							
SNOW	**Snow King Moun**	**36.70**	**331**	P		**P**	**22 57 49.1**	**+1.3**
SNOW				IAmb		IAmb	22 57 50.1	
	comp=Z,8.7nm,0.9s							
TPAW	**Teton Pass**	**36.81**	**330**	P		**P**	**22 57 50.2**	**+1.4**
TPAW				IAmb		IAmb	22 57 55.0	
	comp=Z,5.0nm,1.0s							
ELK	**Elko**	**37.18**	**323**	P		**P**	**22 57 52.8**	**+0.9**
NVAR	**Mina Array Bea**	**37.68**	**318**	P		**P**	**22 57 57.7**	**+1.6**
	comp=Z,0.7nm,0.7s,baz=132,slow=7.4,SNR=7.3							
	comp=Z,0.7nm,0.7s							
KVN	**Kaiserville**	**37.90**	**319**	P		**P**	**22 57 59.4**	**+1.5**
BMN	**Battle Mountai**	**38.16**	**322**	P		**P**	**22 58 01.0**	**+0.9**
DGMT	**Dagmar**	**38.24**	**341**	P		**P**	**22 58 01.4**	**+0.9**
YERR	**Yerington**	**38.59**	**318**	P		**P**	**22 58 05.0**	**+1.2**
MCMT	**McKenzie Canyo**	**38.72**	**330**	P		**P**	**22 58 05.7**	**+0.9**
MCCM	**Marconi Confer**	**40.61**	**315**	P		**P**	**22 58 22.0**	**+1.6**
J08A	**Circle Bar Ran**	**40.70**	**324**	P		**P**	**22 58 22.6**	**+1.4**
MSO	**Missoula**	**40.71**	**331**	P		**P**	**22 58 21.3**	**+0.1**
MSO				IAmb		IAmb	22 58 23.0	
	comp=Z,5.2nm,1.1s							
NEW	**Newport**	**43.24**	**331**	P		**P**	**22 58 43.5**	**+1.7**
NEW				IAmb		IAmb	22 59 05.8	
	comp=Z,9.5nm,1.5s							
YKA	**Yellowknife Ar**	**53.30**	**344**	P		**P**	**23 00 00.1**	**+0.9**
	comp=Z,1.9nm,0.7s,baz=136,slow=8.2,SNR=5.8							
	comp=Z,1.9nm,0.7s							
DLBC	**Dease Lake**	**55.70**	**334**	P		**P**	**23 00 18.5**	**+1.6**
DLBC				IAmb		IAmb	23 00 18.9	
	comp=Z,4.2nm,0.8s							
MESA	**MESA**	**61.84**	**332**	P		**P**	**23 00 58.9**	**-0.8**
ILAR	**Eielson Array**	**65.80**	**336**	P		**P**	**23 01 24.9**	**-0.5**
	comp=Z,1.1nm,0.9s,baz=115,slow=3.5,SNR=8.8							
	comp=Z,1.1nm,0.9s							
BMAR	**Burnt Mountain**	**66.02**	**339**	P		**P**	**23 01 27.5**	**+0.6**
ESDC	**Sonseca Array**	**76.54**	**52**	P		**P**	**23 02 30.4**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=289,slow=6.9,SNR=2.5							
	comp=Z,0.5nm,0.7s							
ESDC	**Sonseca Array**	**76.54**	**52**	P		**P**	**23 02 31.2**	**+0.1**
TORD	**Torodi Ar. Bea**	**85.85**	**78**	P		**P**	**23 03 20.7**	**-0.2**
	comp=Z,0.7nm,1.2s,baz=256,slow=5.8,SNR=1.3							
	comp=Z,0.7nm,1.2s							
SEY	**Seymchan**	**91.72**	**337**	LR		LR	23 50 03.1	
	comp=Z,34nm,19.4s,baz=258,slow=39							
MA2	**Magadan**	**94.24**	**334**	LR		LR	23 51 30.2	
	comp=Z,26nm,18.1s,baz=206,slow=39							
WRA	**Warramunga Arr**	**139.85**	**254**	PKP		**PKPdf**	**23 10 09.0**	**-0.7**
	comp=Z,0.9nm,0.8s,baz=94,slow=2.3,SNR=10							
ASAR	**Alice Springs**	**139.88**	**249**	PKP		**PKPdf**	**23 10 08.7**	**-1.0**
	comp=Z,0.4nm,0.7s,baz=127,slow=3.1,SNR=5.1							

MAN 16 22:55:01.1, 7°.50N×125°.29E, h20km, mb4.0, ML2.8, MS2.4, Mindanao

IDC ***16*** *23:17:21.6±4.3, 19°.90S×178°.18W, h541km±32km, mb2.6/4, mbtmp3.5/5, Error ellipse: s-maj=110.3km s-min=25.3km az=150.0*

ISC 16 23:17:22.4±1.6, 19°.8S±0°.4×178°.3W±0°.2, h550km, n6, σ0°55/7, mb3.1/4, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.03**	**299**	P		**P**	**23 18 44.4**	**-0.2**
	4.5nm,0.4s,baz=110,slow=14,SNR=16							
ASAR	**Alice Springs**	**44.45**	**256**	P		**P**	**23 24 45.4**	**+0.3**
	0.4nm,0.6s,baz=92,slow=7.7,SNR=6.0							
ASAR				PcP		**PcP**	**23 26 16.1**	**-0.6**
	0.3nm,0.6s,baz=95,slow=4.0,SNR=4.2							
	0.4nm,0.6s							
WRA	**Warramunga Arr**	**44.46**	**261**	P		**P**	**23 24 45.2**	**0.0**
	0.2nm,0.3s,baz=97,slow=7.7,SNR=11							
	0.2nm,0.3s							
TXAR	**Lajitas Array**	**86.87**	**57**	P		**P**	**23 29 09.2**	**-0.1**
	0.2nm,0.7s,baz=221,slow=6.6,SNR=3.9							
	0.2nm,0.7s							
ILAR	**Eielson Array**	**87.65**	**13**	P		**P**	**23 29 12.1**	**+0.1**
	0.2nm,0.5s,baz=224,slow=3.8,SNR=3.2							
	0.2nm,0.5s							
BRTR	**Keskin Array B**	**146.16**	**313**	PKPbc		**PKPbc**	**23 36 02.5**	**+0.8**
	0.4nm,0.7s,baz=83,slow=3.6,SNR=3.2							

NNC ***16*** *23:18:00.6±0.5, 43°.83N×79°.30E, h0km, mb3.2, mpv3.5, Error ellipse: s-maj=4.4km s-min=3.4km az=126.0*
KRNET ***16*** *23:18:01.4±0.1, 43°.81N×79°.29E, h17km, mb3.3*
SOME ***16*** *23:18:02.0, 43°.80N×79°.25E, h15km*

ISC 16 23:18:01.4±1.0, 43°.80N±0°.02×79°.28E±0°.03, h14km±9km, n55, σ0°79/103, 13C-7D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
KPKS	**Kokpek**	**0.55**	**232**	*eP*		**Pg**	**23 18 12.4**	**+0.2**
	baz=32							
KPKS				*eS*		**Sg**	**23 18 20.1**	**+0.6**
	baz=32							
KPKS	**Kokpek**	**0.55**	**232**	*eP*		**Pg**	**23 18 12.4**	**+0.2**
	54nm,0.1s							
KPKS				*eS*		**Sg**	**23 18 20.1**	**+0.6**
	189nm,0.2s							
KPKS	**Kokpek**	**0.55**	**232**	P		**Pg**	**23 18 12.4**	**+0.2**
	54nm,0.1s							
KPKS				S		**Sg**	**23 18 20.0**	**+0.6**
	189nm,0.2s							
KNOS	**Konyrlen**	**0.56**	**353**	*eP*		**Pg**	**23 18 12.3**	**-0.2**
	80nm,0.1s							
KNOS				*eS*		**Sg**	**23 18 19.9**	**-0.1**
	1.8nm,0.3s							
DJR	**Jarkent**	**0.65**	**35**	*eP*		**Pg**	**23 18 13.6**	**-0.5**
	34nm,0.1s							
DJR				*eS*		**Sg**	**23 18 22.0**	**-0.6**
	156nm,0.2s							
DJR	**Jarkent**	**0.65**	**35**	P		**Pg**	**23 18 13.6**	**-0.5**
	34nm,0.1s							
DJR				S		**Sg**	**23 18 22.0**	**-0.6**
	156nm,0.2s							
SHLS	**Shalkode**	**0.66**	**168**	*eP*		**Pn**	**23 18 16.1**	**-0.3**
	baz=46							
SHLS				*eS*		**Sn**	**23 18 26.6**	**-0.1**
	baz=46							
SHLS	**Shalkode**	**0.66**	**168**	*eP*		**Pn**	**23 18 16.1**	**-0.3**
	21nm,0.1s							
SHLS				*eS*		**Sn**	**23 18 26.6**	**-0.1**
	68nm,0.2s							
SHLS	**Shalkode**	**0.66**	**168**	P		**Pn**	**23 18 16.1**	**-0.3**
	21nm,0.1s							
SHLS				S		**Sn**	**23 18 26.6**	**-0.1**
	68nm,0.2s							
UZB	**Uzynbulak**	**0.68**	**196**	*eP*		**Pg**	**23 18 14.7**	**0.0**
	baz=96							
UZB				*eS*		**Sg**	**23 18 24.0**	**+0.3**
	baz=96							
UZB	**Uzynbulak**	**0.68**	**196**	*eP*		**Pg**	**23 18 14.7**	**0.0**
	26nm,0.1

KTBS				*e*S		**Sg**	**23 19 00.7**	**-1.4**	
	baz=68								
KTBS	**Karatobe**	**1.88**	**268**	*e*P		**Pb**	**23 18 36.1**	**+0.6**	
	2.2nm,0.1s								
KTBS				*e*S		**Sg**	**23 19 00.6**	**-1.4**	
	56nm,0.3s								
KTBS	**Karatobe**	**1.88**	**268**	P		**Pb**	**23 18 36.2**	**+0.6**	
	2.2nm,0.1s								
KTBS				S		**Sg**	**23 19 00.6**	**-1.4**	
	56nm,0.3s								
KUU	**Kurty**	**2.13**	**273**	*e*P		**Pb**	**23 18 39.9**	**+0.1**	
	baz=73								
KUU				*e*S		**Sb**	**23 19 07.2**	**+1.1**	
	baz=73								
KUU	**Kurty**	**2.13**	**273**	*e*P		**Pb**	**23 18 39.9**	**+0.1**	
	3.0nm,0.1s								
KUU				*e*S		**Sb**	**23 19 07.2**	**+1.1**	
	49nm,0.2s								
KUU	**Kurty**	**2.13**	**273**	Pg		**Pb**	**23 18 39.9**	**+0.1**	
	3.0nm,0.1s								
KUU				Lg		Lg	23 19 07.2		
	49nm,0.2s								
MTBS	**Maitube**	**2.18**	**253**	*e*P		**Pb**	**23 18 41.3**	**+0.6**	
	8.0nm,0.1s								
MTBS				*e*S		**Sg**	**23 19 09.8**	**-1.8**	
	35nm,0.2s								
MTBS	**Maitube**	**2.18**	**253**	Pg		**Pb**	**23 18 41.3**	**+0.6**	
	8.0nm,0.1s								
MTBS				Lg		Lg	23 19 09.7		
	35nm,0.2s								
KDJ	**Kajisay**	**2.27**	**223**	⇑*i*P		**Pb**	**23 18 42.3**	**0.0**	
	baz=23								
KDJ				⇑*i*S		**Sb**	**23 19 10.6**	**+0.2**	
	baz=23								
TARG	**Taragay, Kyrgy**	**2.34**	**208**	⇑*i*P		**Pb**	**23 18 43.2**	**-0.4**	
	baz=8.0								
TARG				⇑*i*S		**Sb**	**23 19 12.6**	**+0.1**	
	baz=8.0								
KST	**Kastek**	**2.53**	**254**	*e*P		**Pb**	**23 18 47.1**	**+0.3**	
	1.0nm,0.0s								
KST				*e*S		**Sb**	**23 19 19.3**	**+1.5**	
	13nm,0.4s								
KST	**Kastek**	**2.53**	**254**	Pg		**Pb**	**23 18 47.1**	**+0.3**	
	1.0nm,0.0s								
KST				Lg		Lg	23 19 19.3		
	13nm,0.4s								
ULHL	**Ulahol**	**2.72**	**236**	⇓*e*P		**Pb**	**23 18 48.2**	**-1.7**	
	baz=36								
ULHL				⇓*i*S		**Sb**	**23 19 21.5**	**-1.7**	
	baz=36								
BOOM	**Boomskoye usch**	**2.77**	**243**	⇑*e*P		**Pb**	**23 18 49.1**	**-1.8**	
	baz=43								
BOOM				⇑*e*S		**Sb**	**23 19 22.7**	**-2.1**	
	baz=43								
TKM2	**Tokmak 2**	**2.83**	**253**	⇓*e*P		**Pb**	**23 18 50.0**	**-1.8**	
	baz=53								
TKM2				⇓*e*S		**Sb**	**23 19 24.2**	**-2.1**	
	baz=53								
TKM2	**Tokmak 2**	**2.83**	**253**	⇑Pg		**Pg**	**23 18 55.5**	**-0.1**	
	2.1nm,0.6s								
TKM2				⇑Lg		Lg	23 19 33.7		
	3.9nm,0.4s								
MAKZ	**Makanchi**	**3.56**	**31**	⇓Pg		**Pn**	**23 18 59.4**	**+3.2**	
	2.2nm,0.8s								
MAKZ				⇓Lg		Lg	23 19 49.6		
	3.5nm,0.6s								
MK31	**Makanchi Array**	**3.67**	**34**	⇓Pg		**Pb**	**23 19 04.0**	**-2.0**	
	0.3nm,0.3s,baz=213,slow=14,SNR=8.5								
MK31				⇑Lg		Lg	23 19 53.0		
	0.5nm,0.2s,baz=215,slow=27,SNR=7.7								
ZSN	**Zaisan**	**5.35**	**45**	Pg		**Pb**	**23 19 35.8**	**+1.1**	
	1.5nm,0.3s								
ZSN				Lg		Lg	23 20 42.8		
	4.8nm,0.8s								

NEIC ***16*** *23:32:19.2±1.0, 17.66S±0.04×69.55W±0.07, h165km±5km, mb4.2/10, ML3.9(GUC), Error ellipse: s-maj=9.8km s-min=5.8km az=81.0*
IDC ***16*** *23:32:19.2±1.4, 17.60S×69.52W, h168km±13km, mb3.7/5, mbtmp4.2/7, Error ellipse: s-maj=21.1km s-min=19.0km az=94.0*
GUC ***16*** *23:32:20.7±0.8, 17.70S×69.25W, h137km±5km, ML3.9*

ISC 16 23:32:18.4±0.6, 17.64S±0.05×69.44W±0.06, h163km±6km, n56, σ1s50/75, mb4.1/8, 4C, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PB18	**Visviri**	**0.06**	**322**			**Pn**	**23 32 42.6**	**+1.8**
PB18	**Visviri**	**0.06**	**322**	⇑*i*P		**Pn**	**23 32 42.7**	**+2.0**
PB18				*i* S		**Sn**	**23 32 59.7**	**+1.9**
PB16	**IPOC Station P**	**0.70**	**185**			**Pn**	**23 32 43.9**	**+0.9**
PB16				Sn		**Sn**	**23 33 03.4**	**+1.5**
PB16	**IPOC Station P**	**0.70**	**185**	⇑*i*P		**Pn**	**23 32 44.4**	**+1.4**
PB16				*i* S		**Sn**	**23 33 02.7**	**+0.8**
PB16				IAML			23 33 05.1	
	comp=E,501nm,0.7s							
AP01	**Chacalluta**	**1.12**	**229**	Pn		**Pn**	**23 32 45.8**	**+0.4**
AP01				Sn		**Sn**	**23 33 05.7**	**-0.6**
AP01	**Chacalluta**	**1.12**	**229**	⇑*i*P		**Pn**	**23 32 45.9**	**+0.4**
AP01				*i* S		**Sn**	**23 33 05.6**	**-0.6**
AP01				IAML			23 33 07.2	
	comp=N,4μm,0.4s							
PB12	**IPOC Station P**	**1.29**	**221**			**Pn**	**23 32 46.6**	**-0.4**
PB12				Sn		**Sn**	**23 33 08.1**	**-0.9**
PB12	**IPOC Station P**	**1.29**	**221**	⇑*i*P		**Pn**	**23 32 47.1**	**+0.1**
PB12				*i* S		**Sn**	**23 33 07.8**	**-1.2**
PB12				IAML			23 33 08.7	
	comp=N,2μm,0.2s							
LPAZ	**La Paz**	**1.84**	**43**	P		**Pn**	**23 32 54.7**	**+1.5**
	comp=N,364nm,0.3s,baz=243,slow=5.9,SNR=1618							
LPAZ				S		**Sn**	**23 33 17.6**	**-2.3**
	comp=N,22nm,0.6s,baz=141,slow=23,SNR=0.9							
GO01	**Chusmiza**	**2.03**	**173**			**Pn**	**23 32 56.2**	**+1.0**
GO01	**Chusmiza**	**2.03**	**173**	*e*P		**Pn**	**23 32 57.1**	**+1.9**
GO01				*i* S		**Sn**	**23 33 23.5**	**-0.2**
GO01				IAML			23 33 28.9	
	comp=N,1μm,0.1s							
PB11	**IPOC Station P**	**2.12**	**185**			**Pn**	**23 32 56.6**	**+0.7**
PB08	**IPOC Station P**	**2.50**	**174**			**Pn**	**23 33 01.2**	**+0.5**
PB08	**IPOC Station P**	**2.50**	**174**	*e*P		**Pn**	**23 33 02.5**	**+1.8**
PB08				*i* S		**Sn**	**23 33 33.5**	**+0.2**
PB08				IAML			23 33 35.4	
	comp=N,211nm,0.3s							
HMBC	**Humberstone**	**2.66**	**189**	*e*P		**Pn**	**23 33 02.7**	**+0.5**
HMBC				*i* S		**Sn**	**23 33 33.6**	**-2.6**
HMBC				IAML			23 33 41.3	
	comp=N,326nm,0.2s							
TA02	**Huaiquique**	**2.70**	**194**	Pn		**Pn**	**23 33 02.8**	**+0.2**
TA01	**Diego Aracena**	**3.00**	**193**	Pn		**Pn**	**23 33 06.8**	**+0.6**
TA01	**Diego Aracena**	**3.00**	**193**	*e*P		**Pn**	**23 33 06.1**	**-0.1**
TA01				*i* S		**Sn**	**23 33 39.3**	**-4.1**
TA01				IAML			23 33 45.3	
	comp=N,287nm,0.2s							
PATCX	**Punta Patache**	**3.24**	**192**	Pn		**Pn**	**23 33 09.7**	**+0.4**
PATCX	**Punta Patache**	**3.24**	**192**	*e*P		**Pn**	**23 33 09.7**	**+0.4**
PATCX				*i* S		**Sn**	**23 33 44.3**	**-4.7**
PATCX				IAML			23 33 55.0	
	comp=E,144nm,0.2s							
PB01	**IPOC Station P**	**3.39**	**181**			**Pn**	**23 33 12.0**	**+0.7**
PB01	**IPOC Station P**	**3.39**	**181**	*e*P		**Pn**	**23 33 11.9**	**+0.7**
PB01				*i* S		**Sn**	**23 33 49.9**	**-2.6**
PB01				IAML			23 33 51.1	
	comp=E,379nm,0.5s							
PB02	**IPOC Station P**	**3.69**	**187**			**Pn**	**23 33 15.7**	**+0.6**
PB07	**IPOC Station P**	**4.09**	**186**			**Pn**	**23 33 21.1**	**+0.7**
PB07	**IPOC Station P**	**4.09**	**186**	*e*P		**Pn**	**23 33 21.2**	**+0.9**
PB07				*i* S		**Sn**	**23 34 04.8**	**-3.9**
PB09	**IPOC Station P**	**4.14**	**177**			**Pn**	**23 33 21.9**	**+0.9**
PB04	**IPOC Station P**	**4.72**	**188**			**Pn**	**23 33 28.8**	**+0.2**
LVC	**Limon Verde**	**4.97**	**174**	P		**Pn**	**23 33 33.2**	**+1.2**
	comp=E,7.7nm,0.3s,baz=13,slow=8.1,SNR=161							
LVC				S		**Sn**	**23 34 27.4**	**-2.2**
	comp=E,29nm,0.3s,baz=91,slow=23,SNR=16							
LVC	**Limon Verde**	**4.97**	**174**			**Pn**	**23 33 32.7**	**+0.6**
LVC				Sn		**Sn**	**23 34 30.6**	**+1.0**
PB06	**IPOC Station P**	**5.04**	**181**			**Pn**	**23 33 33.0**	**+0.2**
PB06				Sn		**Sn**	**23 34 30.5**	**-0.4**
PB15	**IPOC Station P**	**5.54**	**180**	Sn		**Sn**	**23 34 43.0**	**+0.2**
PB10	**IPOC Station P**	**5.94**	**190**	Pn		**Pn**	**23 33 43.9**	**-0.5**
PB14	**IPOC Station P**	**7.01**	**187**	Pn		**Pn**	**23 33 57.8**	**-1.2**
GO02	**Mina Guanaco**	**7.49**	**181**	Pn		**Pn**	**23 34 04.8**	**-0.5**
SIV	**San Ignacio**	**8.18**	**80**	P		**Pn**	**23 34 12.7**	**-1.5**
	comp=E,3.5nm,0.4s,baz=275,slow=8.6,SNR=17							
SIV				S		**Sn**	**23 35 40.7**	**-5.0**
	comp=E,3.5nm,0.6s,baz=328,slow=21,SNR=7.7							
AC01	**Pan de Azucar**	**8.54**	**187**	Pn		**Pn**	**23 34 16.8**	**-2.1**
NNA	**Nana**	**9.10**	**307**	P		**Pn**	**23 34 26.1**	**-0.3**
	comp=E,6.8nm,0.3s,baz=144,slow=12,SNR=6.2							
NNA	**Nana**	**9.10**	**307**	Pn		**Pn**	**23 34 26.8**	**+0.4**
AC02	**Maricunga**	**9.16**	**178**	Pn		**Pn**	**23 34 27.4**	**-0.1**
GO03	**Copiap**	**9.94**	**184**	Pn		**Pn**	**23 34 37.5**	**+0.1**
SAML	**Samuel**	**10.57**	**36**			**Pn**	**23 34 44.2**	**-1.5**
ITAB	**Concordia**	**18.62**	**124**			**P**	**23 36 24.7**	**+1.2**
ITAB				IAmb		IAmb	23 36 27.5	
	comp=Z,5.6nm,0.9s							
PLTB	**Pedras Altas**	**20.08**	**137**	P		**P**	**23 36 39.9**	**+0.5**
PLTB				IAmb		IAmb	23 36 40.9	
	comp=Z,11nm,1.1s							
BDFB	**Brasilia**	**20.63**	**88**	P		**P**	**23 36 46.2**	**+0.8**
	comp=Z,2.5nm,0.3s,baz=242,slow=8.0,SNR=6.3							
	comp=Z,2.5nm,0.3s							
BDFB	**Brasilia**	**20.63**	**88**	P		**P**	**23 36 44.7**	**-0.7**
PLCA	**Paso Flores**	**23.04**	**182**	P		**P**	**23 37 10.3**	**+0.9**
	comp=Z,0.8nm,0.7s,baz=358,slow=9.5,SNR=3.0							
	comp=Z,0.8nm,0.7s							
MDP	**Montagnes des**	**28.03**	**38**	P		**P**	**23 37 55.0**	**+0.5**
	comp=Z,3.1nm,0.7s,baz=212,slow=8.4,SNR=4.3							
	comp=Z,3.1nm,0.7s							
RCBR	**Riachuelo**	**34.80**	**74**	P		**P**	**23 38 54.8**	**+0.9**
RCBR				IAmb		IAmb	23 39 10.4	
	comp=Z,10.0nm,1.0s							
TXAR	**Lajitas Array**	**57.20**	**324**	P		**P**	**23 41 48.2**	**-0.6**
	comp=Z,0.1nm,0.5s,baz=145,slow=6.5,SNR=1.8							
DBIC	**Dimbokro**	**68.18**	**75**	P		**P**	**23 43 02.0**	**+0.4**
	comp=Z,4.1nm,0.6s,baz=246,slow=6.1,SNR=6.8							
	comp=Z,4.1nm,0.6s							
DBIC	**Dimbokro**	**68.18**	**75**	P		**P**	**23 43 02.0**	**+0.4**
TORD	**Torodi Ar. Bea**	**76.57**	**71**	P		**P**	**23 43 52.4**	**+1.0**
	comp=Z,2.6nm,0.6s,baz=260,slow=5.1,SNR=42							
	comp=Z,2.6nm,0.6s							
TORD	**Torodi Ar. Bea**	**76.57**	**71**	P		**P**	**23 43 52.3**	**+1.0**
TORD				IAmb		IAmb	23 43 53.6	
	comp=Z,2.2nm,0.8s							
D08A	**Wollman Farm,**	**78.24**	**328**	P		**P**	**23 44 00.2**	**+0.3**
D08A				IAmb		IAmb	23 44 03.5	
	comp=Z,7.9nm,0.9s							
ESBB	**Sonseca Array**	**83.46**	**45**	P		**P**	**23 44 28.2**	**+0.3**
ESBB				IAmb		IAmb	23 44 43.7	
	comp=Z,3.3nm,1.1s							
RAR	**Rarotonga**	**84.08**	**250**	P		**P**	**23 44 31.0**	**-0.4**

IDC 16 23:45:21.2±2.4, 6.72S×129.35E, h0km, mb3.5/1, mbtmp3.2/3, ML3.1/2, Error ellipse: s-maj=151.3km s-min=33.9km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WRA	**Warramunga Arr**	**14.01**	**160**	Pn		Pn	23 48 41.0	-0.2
	0.1nm,0.3s,baz=343,slow=13,SNR=13							
WRA				Sn		Sn	23 51 03.1	-14
	0.8nm,0.3s,baz=330,slow=22,SNR=13							
	0.1nm,0.3s							
ASAR	**Alice Springs**	**17.41**	**166**	P		Pn	23 49 25.9	+0.1
	baz=341,slow=10.0,SNR=2.6							
ASAR				S		Sn	23 52 24.4	-16
	0.4nm,0.6s,baz=324,slow=17,SNR=3.5							
	0.3nm,0.7s							
MKAR	**Makanchi Array**	**67.64**	**327**	P		P	23 56 20.0	0.0
	0.2nm,0.4s,baz=125,slow=8.0,SNR=2.7							
	0.2nm,0.4s							

MAN 17 00:39:35.8, 16.52N×120.93E, h1km, mb4.8, ML3.7, MS3.7, 1C-4D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
SMPP	**San Manuel, Pa**	**0.43**	**213**	⇓*i*P		Pb	00 39 44.8	-0.5
SIPP	**Brgy, Tapao**	**1.47**	**342**	⇓*i*P		Pn	00 40 02.3	-0.3
SIPP				*i* S		Sn	00 40 36.6	+14
PALP	**Palanan**	**1.54**	**69**	⇓*i*P		Pg	00 40 05.5	+1.1
LUBP	**Lubang**	**2.84**	**193**	⇓*i*P		Pb	00 40 25.1	-1.3
GQP	**Guinayangan**	**2.98**	**150**	⇑*e*P		Pb	00 40 26.6	-2.2
GQP				*e*S		Sb	00 41 04.9	-0.7

NAO ***17*** *01:07:48.2±2.3, 78.30N×7.08E, ML3.6*
IDC ***17*** *01:07:50.8±0.6, 78.26N×7.50E, h0km, mb3.8/12, mbtmp3.9/16, ML3.0/2, MS3.6/58, Error ellipse: s-maj=15.4km s-min=10.5km az=17.0*
BER ***17*** *01:07:51.8±2.5, 78.30N×7.30E, h21km±15km, ML3.0, ML3.6(NAO), Confirmed Earthquake*
DNK ***17*** *01:07:52.2±1.8, 78.34N×7.23E, h36km±20km, ML2.8*
NEIC ***17*** *01:07:53.9±1.8, 78.40N±0.03×8.14E±0.2, h10km±1km, mb4.4/74, Error ellipse: s-maj=7.0km s-min=3.0km az=48.0*
IEPN ***17*** *01:07:53.0, 78.22N×8.64E, h10km*
MOS ***17*** *01:07:53.1±1.1, 78.32N×8.51E, h13km, mb4.5/41, Error ellipse: s-maj=31.1km s-min=5.7km az=95.0*
KOLA ***17*** *01:08:01.4, 78.46N×12.62E, h0km, ML2.3*

ISC 17 01:07:53.3±0.6, 78.32N±0.04×8.21E±0.04, h9km±3km, n270, σ2s28/242, mb4.3/72, MS3.7/58, 11C-7D, Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
KBS	**Kingsbay**	**0.96**	**49**	Pg		**Pg**	**01 08 10.3**	**-1.4**
KBS				Lg		Lg	01 08 22.8	
KBS	**Kingsbay**	**0.96**	**49**	Pg		**Pg**	**01 08 10.7**	**-1.0**
KBS				Sg		**Sg**	**01 08 21.7**	**-2.5**
KBS	**Kingsbay**	**0.96**	**49**	*d* iP		**Pg**	**01 08 10.3**	**-1.4**
KBS	**Kingsbay**	**0.96**	**49**	*i* P		**Pg**	**01 08 10.4**	**-1.3**
KBS				*i* S		**Sg**	**01 08 23.2**	**-1.0**
KBS	**Kingsbay**	**0.96**	**49**	⇓*i*P		**Pg**	**01 08 10.3**	**-1.4**
KBS				*e*S		**Sg**	**01 08 23.3**	**-1.0**
KBS				IAML			01 08 26.5	
	comp=Z,934nm,0.3s							
KBS	**Kingsbay**	**0.96**	**49**	⇓*i*P		**Pg**	**01 08 10.3**	**-1.4**
KBS				*i* S		**Sg**	**01 08 23.2**	**-1.0**
BRBB	**Barentsburg B**	**1.25**	**97**	Pn		**Pn**	**01 08 14.8**	**-2.1**
BRBB				Lg		Lg	01 08 31.3	
BRBB	**Barentsburg B**	**1.25**	**97**	Pn		**Pn**	**01 08 14.8**	**-2.1**
BRBB				S		**Sb**	**01 08 31.3**	**-2.0**
BRBA	**Barentsburg A**	**1.27**	**99**	Pn		**Pn**	**01 08 14.8**	**-2.3**
BRBA				Lg		Lg	01 08 31.6	
BRBA	**Barentsburg A**	**1.27**	**99**	Pn		**Pn**	**01 08 14.8**	**-2.3**
BRBA				S		**Sb**	**01 08 31.6**	**-2.0**
SPA0	**Spitsbergen Ar**	**1.68**	**91**	Pn		**Pn**	**01 08 21.8**	**-0.9**
	baz=267,slow=14							
SPA0				Sn		**Sn**	**01 08 44.3**	**-0.1**
	baz=273,slow=22							
SPA0	**Spitsbergen Ar**	**1.68**	**91**	Pn		**Pn**	**01 08 21.8**	**-0.9**
	baz=267,slow=14							
SPA0				Sn		**Sn**	**01 08 44.3**	**-0.1**
	baz=273,slow=22							
SPA0				IAML			01 08 46.9	
	comp=Z,282nm,0.8s							
SPA0	**Spitsbergen Ar**	**1.68**	**91**	⇑*i*P		**Pn**	**01 08 21.8**	**-0.9**
SPA0				*i* S		**Sn**	**01 08 43.5**	**-0.8**
SPITS	**Spitsbergen Ar**	**1.68**	**91**	Pn		**Pn**	**01 08 21.9**	**-0.9**
	baz=266,slow=12							
SPITS				Sn		**Sn**	**01 08 44.7**	**+0.3**
	baz=257,slow=18							
SPB2	**Spitsbergen Ar**	**1.68**	**91**			**Pn**	**01 08 21.8**	**-1.0**
HSPB	**Hornsund (broa**	**2.06**	**126**	Pn		**Pn**	**01 08 24.9**	**-3.0**
HSPB				Sn		**Sn**	**01 08 49.0**	**-4.6**
HSPB	**Hornsund (broa**	**2.06**	**126**	P		**Pn**	**01 08 24.8**	**-3.1**
HSPB	**Hornsund (broa**	**2.06**	**126**	⇑*i*P		**Pn**	**01 08 24.8**	**-3.1**
HSPB				IAML			01 08 51.5	
	comp=Z,77nm,0.3s							
HSPB	**Hornsund (broa**	**2.06**	**126**	⇑*i*P		**Pn**	**01 08 24.8**	**-3.1**
HSPB				*e*S		**Sn**	**01 08 48.3**	**-5.3**
HOPEN	**Hopen**	**4.09**	**108**	Pn		**Pn**	**01 08 53.5**	**-2.4**
HOPEN				Sn		**Sn**	**01 09 39.6**	**-4.2**
HOPEN	**Hopen**	**4.09**	**108**	*e*P		**Pn**	**01 08 53.6**	**-2.2**
HOPEN				*e*S		**Sn**	**01 09 39.5**	**-4.2**
HOPEN				IAML			01 10 00.8	
	comp=Z,56nm,0.7s							
HOPEN	**Hopen**	**4.09**	**108**	*e*P		**Pn**	**01 08 53.0**	**-2.8**
HOPEN				*e*S		**Sn**	**01 09 38.4**	**-5.3**
BJO1	**Bjornoya**	**4.59**	**141**	*e*P		**Pn**	**01 08 59.8**	**-3.0**
BJO1				*e*S		**Sn**	**01 09 51.2**	**-4.9**
BJO1	**Bjornoya**	**4.59**	**141**	*e*P		**Pn**	**01 08 59.6**	**-3.2**
BJO1				*e*S		**Sn**	**01 09 48.8**	**-7.3**
NOR	**Nord**	**5.41**	**319**	Pn		Pn	01 09 07.8	-6.1
NOR	**Nord**	**5.41**	**319**	*i* P		Pn	01 09 07.4	-6.4
NOR	**Nord**	**5.41**	**319**	*e*P		Pn	01 09 07.5	-6.4
NOR				*e*S		Sn	01 10 04.9	-11
DAG	**Danmarks Havn**	**5.97**	**268**	*i* P		Pn	01 09 14.3	-7.4
DAG				*i* S		Sn	01 10 12.7	-17
DAG				IAML			01 10 17.3	
	comp=Z,33nm,0.2s							
DAG	**Danmarks Havn**	**5.97**	**268**	*e*P		Pn	01 09 14.3	-7.4
DAG				*e*S		Sn	01 10 13.7	-16
ZFI2	**Zemlya Franca-**	**7.44**	**52**	*e*P		**Pn**	**01 09 40.1**	**-1.6**
ZFI2				*e*S		**Sn**	**01 10 59.2**	**-7.0**
	comp=Z,57nm,1.4s							
ZFI	**Zemlya Franca-**	**7.44**	**52**	*e*P		**Pn**	**01 09 40.1**	**-1.7**
ZFI				*e*S		**Sn**	**01 10 59.0**	**-7.2**
	comp=Z,47nm,2.5s							
DBG	**Daneborg**	**7.76**	**254**	Pn		Pn	01 09 38.4	-7.8
DBG				Sn		Sn	01 10 56.6	-17
DBG	**Daneborg**	**7.76**	**254**	*i* P		Pn	01 09 37.9	-8.3
DBG	**Daneborg**	**7.76**	**254**	*e*P		Pn	01 09 38.5	-7.7
DBG				*e*S		Sn	01 10 56.2	-18
JNW	**Jan Mayen West**	**8.49**	**219**	*e*P		**Pn**	**01 09 53.2**	**-3.0**
JNE	**Jan Mayen East**	**8.51**	**219**	*e*P		**Pn**	**01 09 53.4**	**-3.0**
JMIC	**Jan Mayen**	**8.54**	**219**	Pn		**Pn**	**01 09 53.3**	**-3.6**
	comp=Z,20nm,0.2s,baz=56,slow=0.7,SNR=12							
JMIC				LR		LR	01 12 10.1	
	comp=Z,164nm,19.7s,baz=19,slow=31							
JMIC	**Jan Mayen**	**8.54**	**219**	*e*P		**Pn**	**01 09 53.1**	**-3.7**
JMI	**Jan Mayen**	**8.62**	**220**	*e*P		Pn	01 09 52.9	-5.1
HAMF	**Hammerfest**	**8.71**	**144**	Pn		**Pn**	**01 09 56.2**	**-3.0**
HAMF				Sn		**Sn**	**01 11 29.3**	**-7.9**
HAMF	**Hammerfest**	**8.71**	**144**	Pn		**Pn**	**01 09 56.2**	**-3.0**
HAMF				Sn		**Sn**	**01 11 29.3**	**-7.9**
KEV	**Kevo**	**9.95**	**140**	P		**Pn**	**01 10 15.7**	**-0.5**
KIF	**Kilpisjarvi**	**9.97**	**153**	Pn		**Pn**	**01 10 13.4**	**-2.9**
KIF	**Kilpisjarvi**	**9.97**	**153**	Pn		**Pn**	**01 10 13.4**	**-2.9**
ARA0	**ARCESS Array S**	**9.97**	**143**	Pn		**Pn**	**01 10 12.8**	**-3.6**
	baz=335,slow=12							
ARA0				Sn		Sn	01 11 58.5	-10
	baz=336,slow=22							
ARA0	**ARCESS Array S**	**9.97**	**143**	Pn		**Pn**	**01 10 12.8**	**-3.6**
	baz=335,slow=12							
ARA0				Sn		Sn	01 11 58.5	-10
	baz=336,slow=22							
ARCES	**ARCESS Array B**	**9.97**	**143**	Pn		**Pn**	**01 10 12.9**	**-3.5**
	comp=Z,0.2nm,0.3s,baz=336,slow=12,SNR=10							
ARCES				Sn		Sn	01 11 57.9	-10
	baz=338,slow=9.3							
ARCES				LR		LR	01 13 59.1	
	comp=Z,215nm,21.2s,baz=306,slow=37							
	comp=Z,0.5nm,0.5s							
ARCES	**ARCESS Array B**	**9.97**	**143**	P		**Pn**	**01 10 13.0**	**-3.5**
ARCES	**ARCESS Array B**	**9.97**	**143**	P		**Pn**	**01 10 17.9**	**+1.4**
ARCES				S		**Sn**	**01 12 00.8**	**-7.4**
LOF	**Lofoten**	**10.35**	**169**	*e*P		**Pn**	**01 10 17.4**	**-4.2**
PRVG	**Vayda Guba**	**10.71**	**130**	P		**Pn**	**01 10 25.3**	**-1.2**
PRVG				S		Sn	01 12 14.0	-12
SCO	**Scoresbysund**	**11.10**	**241**	Pn		**Pn**	**01 10 27.9**	**-4.0**
SCO	**Scoresbysund**	**11.10**	**241**	P		**Pn**	**01 10 27.9**	**-4.0**
SUMG	**Summit**	**12.66**	**268**	Pn		**Pn**	**01 10 49.3**	**-4.3**
SUMG	**Summit**	**12.66**	**268**	P		**Pn**	**01 10 49.3**	**-4.3**
SUMG	**Summit**	**12.66**	**268**	*i* P		Pn	01 10 45.7	-7.9
SUMG				*e*S		Sn	01 12 53.2	-22
LVZ	**Lovozero**	**12.77**	**130**	*d* iP		**Pn**	**01 10 54.2**	**-0.5**
LVZ				pmax		pmax		
	comp=Z,38nm,2.5s							
APA0	**Apatity Array**	**12.79**	**133**	Pn		**Pn**	**01 10 52.2**	**-2.7**
APA0	**Apatity Array**	**12.79**	**133**	Pn		**Pn**	**01 10 52.2**	**-2.7**
MSF	**Maaselka**	**13.85**	**142**	P		**Pn**	**01 11 10.3**	**+0.9**
MSF				pmax		pmax		
	comp=Z,9.0nm,1.5s							
EUNU	**Eureka**	**16.00**	**321**	Pn		**Pn**	**01 11 36.2**	**-1.9**
BORG	**Borgarnes**	**16.17**	**229**	LR		LR	01 16 04.7	
	comp=Z,168nm,18.9s,baz=10,slow=31							
AMDE	**Amderma**	**16.25**	**92**	*e*P		**Pn**	**01 11 35.6**	**-5.7**
	comp=Z,7.2nm,1.2s							
AMDE				*e*S		Sn	01 14 23.2	-18
NOA	**NORSAR Array B**	**17.39**	**175**	LR		LR	01 17 56.5	
	comp=Z,68nm,18.1s,baz=0.0,sl

comp=Z,97nm,17.0s
FRB Frobisher Bay 26.15 281 LR LR 01 24 28.4
comp=Z,200nm,18.7s,baz=23,slow=38
TIXI Tiksi 26.41 38 LR LR 01 25 27.4
comp=Z,37nm,18.9s,baz=356,slow=40
TIXI Tiksi 26.41 38 P **P** **01 13 30.3 +0.8**
TIXI Tiksi 26.41 38 ⇑*i*P **P** **01 13 29.5 +0.1**
TIXI pmax pmax
comp=Z,2.0nm,1.0s
CLL Collm 27.18 173 P **P** **01 13 38.9 +2.3**
CLL Collm 27.18 173 P **P** **01 13 38.9 +2.3**
CLL pmax pmax
comp=Z,4.0nm,1.1s
ARU Arti 27.59 113 P **P** **01 13 40.7 +0.5**
comp=Z,0.7nm,0.3s,baz=349,slow=10,SNR=1.5
ARU LR LR 01 26 17.1
comp=Z,79nm,18.4s,baz=324,slow=40
comp=Z,0.7nm,0.3s
ARU Arti 27.59 113 P **P** **01 13 40.8 +0.5**
ARU IAmb IAmb 01 13 48.0
comp=Z,12nm,1.5s
ARU Arti 27.59 113*d i*P **P** **01 13 40.8 +0.5**
ARU S **S** **01 18 23.9 +2.6**
ARU pmax pmax
comp=Z,6.0nm,1.3s
OJC Ojcow 28.53 164 P **P** **01 13 49.5 +0.8**
OJC IAmb IAmb 01 13 55.6
comp=Z,10.0nm,1.3s
OJC Ojcow 28.53 164 P **P** **01 13 49.5 +0.8**
OJC pmax pmax
comp=Z,10.0nm,1.3s
MORC Moravsky Berou 28.86 167 P **P** **01 13 53.8 +2.1**
MORC IAmb IAmb 01 13 58.7
comp=Z,6.0nm,1.4s
MORC Moravsky Berou 28.86 167 P **P** **01 13 53.8 +2.1**
MORC pmax pmax
comp=Z,6.0nm,1.4s
VRAC Vranov 29.29 169 LR LR 01 25 38.3
comp=Z,44nm,18.1s,baz=303,slow=36
VRAC Vranov 29.29 169 P **P** **01 13 53.6 -1.8**
VRAC pmax pmax
comp=Z,5.0nm,1.4s
BELG Belogornoye 29.53 128 LR LR 01 26 06.9
comp=Z,195nm,19.3s,baz=338,slow=37
BELG Belogornoye 29.53 128 *i*P **P** **01 13 57.5 +0.1**
BELG pmax pmax
comp=Z,2.0nm,0.9s
GERES GERESS Array B 29.66 173 P **P** **01 13 57.3 -1.5**
comp=Z,0.2nm,0.4s,baz=306,slow=8.3,SNR=2.1
comp=Z,0.2nm,0.4s
GERES GERESS Array B 29.66 173 P **P** **01 14 00.1 +1.3**
GERES GERESS Array B 29.66 173 P **P** **01 14 00.1 +1.3**
BUR08 Bucovina Ar. S 31.45 158 P **P** **01 14 14.4 -0.3**
BUR08 IAmb IAmb 01 14 16.1
comp=Z,9.0nm,1.4s
BURAR Bucovina Array 31.48 158 P **P** **01 14 14.9 0.0**
BURAR IAmb IAmb 01 14 16.5
comp=Z,5.1nm,1.2s
BURAR Bucovina Array 31.48 158 P **P** **01 14 15.2 +0.3**
BURAR pmax pmax
comp=Z,5.0nm,1.2s
INK Inuvik 31.86 334 LR LR 01 28 37.8
comp=Z,68nm,18.9s,baz=288,slow=39
INK Inuvik 31.86 334 P **P** **01 14 19.6 +1.7**
INK pmax pmax
comp=Z,4.0nm,1.0s
BRVK Borovoye 33.05 102 P **P** **01 14 27.9 -0.6**
BRVK IAmb IAmb 01 14 36.0
comp=Z,4.0nm,1.1s
BRVK Borovoye 33.05 102 ⇑*i*P **P** **01 14 29.7 +1.2**
BRVK pmax pmax
comp=Z,6.0nm,2.0s
BVAR Borovoye Array 33.10 102 LR LR 01 30 20.2
comp=Z,212nm,20.5s,baz=216,slow=41
AKTO Aktyubinsk 33.20 117 LR LR 01 30 40.0
comp=Z,136nm,18.1s,baz=357,slow=41
BZS Buzias 33.23 163 P **P** **01 14 30.0 -0.1**
BZS pmax pmax
comp=Z,3.0nm,1.7s
BILL Bilibino 33.28 15 P **P** **01 14 31.1 +0.8**
BILL IAmb IAmb 01 15 00.3
comp=Z,6.4nm,1.1s
BILL Bilibino 33.28 15 ⇑*i*P **P** **01 14 30.5 +0.1**
BILL *e**PP **sP** **01 14 33.3 +0.1**
BILL *i* *SP **pwP** **01 14 36.7 +1.7**
BILL SS **SnSn** **01 21 47.0 -2.7**
BILL SSS SSS 01 22 24.0
BILL pmax pmax
comp=Z,3.0nm,0.9s
BILL MLR MLR
comp=Z,34nm,16.0s
BMAR Burnt Mountain 33.58 341 P **P** **01 14 33.3 +0.3**
VOIR 33.64 158 P **P** **01 14 33.9 +0.1**
VOIR pmax pmax
comp=Z,4.0nm,1.3s
MLR Muntele Rosu 33.65 157 LR LR 01 28 48.7
comp=Z,83nm,20.1s,baz=336,slow=37
SCHQ Schefferville 34.01 272 LR LR 01 29 18.5
comp=Z,254nm,18.1s,baz=42,slow=38
COLD Coldfoot 34.11 345 P **P** **01 14 36.3 -1.2**
COLD IAmb IAmb 01 14 43.7
comp=Z,6.9nm,1.4s
ABKAR Akbulak array 34.69 115 P **P** **01 14 43.3 +0.6**
TIRR Tirgusor 34.88 154 P **P** **01 14 44.2 -0.3**
TIRR Tirgusor 34.88 154 P **P** **01 14 44.2 -0.3**
TIRR pmax pmax
comp=Z,17nm,1.1s
ZAA0 Zalesovo Array 35.16 87 P **P** **01 14 46.8 +0.1**
ZAA0 IAmb IAmb 01 14 54.8
comp=Z,4.4nm,1.1s
ZALV Zalesovo Beam 35.16 87 P **P** **01 14 46.6 -0.1**
comp=Z,1.9nm,0.8s,baz=332,slow=8.4,SNR=8.5
ZALV LR LR 01 30 34.3
comp=Z,53nm,21.8s,baz=340,slow=39
comp=Z,1.9nm,0.8s
ZALV Zalesovo Beam 35.16 87 P **P** **01 14 47.1 +0.3**
ZALV Zalesovo Beam 35.16 87 *eP* **P** **01 14 47.7 +0.9**
ZALV pmax pmax
comp=Z,2.0nm,0.8s
YKA Yellowknife Ar 35.33 318 LR LR 01 28 58.0
comp=Z,144nm,18.6s,baz=296,slow=36
H23K Yukon River 35.47 344 P **P** **01 14 50.5 +1.1**
YAK Yakutsk 35.59 44 LR LR 01 31 33.0
comp=Z,27nm,18.8s,baz=90,slow=40
YAK Yakutsk 35.59 44 *eP* **P** **01 14 52.5 +2.1**
YAK pmax pmax
comp=Z,6.0nm,0.9s
H21K Melozitna Rive 35.80 347 P **P** **01 14 51.5 -0.7**
H21K IAmb IAmb 01 15 02.7
comp=Z,5.2nm,1.2s
I23K Minto, Yukon-K 36.13 344 P **P** **01 14 54.6 -0.4**
I23K IAmb IAmb 01 15 02.8
comp=Z,5.4nm,1.1s
MDM Murphy Dome 36.26 343 P **P** **01 14 56.9 +0.8**
MDM IAmb IAmb 01 15 03.9
comp=Z,7.6nm,1.4s
IL31 36.36 342 P **P** **01 14 56.3 -0.6**
IL31 IAmb IAmb 01 15 08.2
comp=Z,6.3nm,1.4s
ILAR Eielson Array 36.36 342 P **P** **01 14 56.5 -0.4**
comp=Z,1.3nm,0.9s,baz=357,slow=6.8,SNR=13
comp=Z,1.3nm,0.9s
ILAR Eielson Array 36.36 342 P **P** **01 14 57.2 +0.2**
CCB Clear Creek Bu 36.54 343 P **P** **01 14 58.1 -0.4**
KURK Kurchatov 36.95 95 P **P** **01 15 03.0 +0.9**
KURK IAmb IAmb 01 15 10.0
comp=Z,13nm,1.4s
KURK Kurchatov 36.95 95 ⇑*i*P **P** **01 15 03.0 +0.9**
KURK pmax pmax
comp=Z,7.0nm,1.3s
SCRK Sand Creek 36.96 340 P **P** **01 15 02.5 +0.3**
KIV Kislovodsk 37.01 137 *eP* **P** **01 15 02.6 -0.2**
KIV pmax pmax
comp=Z,3.0nm,1.0s
KIV MLR MLR
comp=Z,56nm,16.0s
KURBB Kurchatov Arra 37.02 95 LR LR 01 34 53.2
comp=Z,167nm,18.0s,baz=321,slow=44
KBZ Khabaz 37.27 137 LR LR 01 30 51.6
comp=Z,80nm,20.3s,baz=29,slow=37
KBZ Khabaz 37.27 137 ⇑*i*P **P** **01 15 06.2 +1.4**
KBZ pmax pmax
comp=Z,3.0nm,0.9s
TIR Tirane 37.38 165 P **P** **01 15 07.9 +2.0**
TIR Tirane 37.38 165 P **P** **01 15 07.9 +2.0**
TIR pmax pmax
comp=Z,50nm,1.2s
BCAR Beaver Creek A 37.70 338 P **P** **01 15 08.4 -0.1**
L27K Beaver Creek, 37.71 338 P **P** **01 15 08.6 +0.1**
M30M Minto, Yukon 37.77 334 P **P** **01 15 08.9 -0.2**
RDO Rodhopi 37.94 159 P **P** **01 15 10.9 +0.3**
RDO IAmb IAmb 01 15 11.0
comp=Z,8.8nm,1.4s
DHY Denali Highway 38.08 342 P **P** **01 15 11.0 -0.7**
DHY IAmb IAmb 01 15 18.8
comp=Z,5.3nm,1.1s
ALN Alexandroupoli 38.23 158 P **P** **01 15 14.9 +2.0**
ALN IAmb IAmb 01 15 21.4
comp=Z,7.1nm,1.2s
ALN Alexandroupoli 38.23 158 P **P** **01 15 15.0 +2.0**
ALN pmax pmax
comp=Z,7.0nm,1.2s
LIT Litokhoron 38.77 162 P **P** **01 15 19.3 +1.7**
LIT IAmb IAmb 01 15 25.7
comp=Z,7.3nm,1.0s
LIT Litokhoron 38.77 162 P **P** **01 15 19.3 +1.7**
LIT pmax pmax
comp=Z,7.0nm,1.0s
MDUB Mudurnu 39.09 152 P **P** **01 15 21.4 +1.0**
SCM Sheep Creek Mo 39.31 342 P **P** **01 15 21.8 -0.2**
SCM IAmb IAmb 01 15 50.8
comp=Z,13nm,1.4s
SCM Sheep Creek Mo 39.31 342 P **P** **01 15 21.8 -0.2**
SCM pmax pmax
comp=Z,13nm,1.4s
SML Sawmill 39.40 343 P **P** **01 15 23.0 +0.3**
SML Sawmill 39.40 343 P **P** **01 15 24.5 +1.8**
SML pmax pmax
comp=Z,17nm,1.6s
BORA Eskisehir 39.61 153 P **P** **01 15 25.4 +0.7**
SUA Susitna One 39.88 344 P **P** **01 15 26.8 0.0**
SUA IAmb IAmb 01 15 37.9
comp=Z,8.9nm,1.3s
BR131 Keskin Array S 40.08 149 P **P** **01 15 28.7 0.0**
BR131 Keskin Array S 40.08 149 P **P** **01 15 28.7 0.0**
BR131 pmax pmax
comp=Z,6.0nm,1.3s
BRTR Keskin Array B 40.08 149 P **P** **01 15 28.7 0.0**
comp=Z,1.3nm,0.9s,baz=336,slow=5.8,SNR=7.7
BRTR LR LR 01 33 42.0
comp=Z,37nm,21.5s,baz=14,slow=39
comp=Z,1.3nm,0.9s
BRTR Keskin Array B 40.08 149 P **P** **01 15 28.2 -0.4**
BRTR Keskin Array B 40.08 149 *eP* **P** **01 15 29.3 +0.6**
BRTR pmax pmax
comp=Z,1.0nm,0.9s
VAE Valguarnera 41.03 172 LR LR 01 34 37.1
comp=Z,66nm,18.1s,baz=96,slow=39
GNI Garni 41.04 136 LR LR 01 33 22.0
comp=Z,63nm,20.2s,baz=343,slow=37
DLBC Dease Lake 41.18 328 LR LR 01 33 30.1
comp=Z,111nm,19.2s,baz=50,slow=37
MAKZ Makanchi 41.35 93 P **P** **01 15 39.4 +0.4**
MAKZ IAmb IAmb 01 15 47.0
comp=Z,14nm,1.4s
MAKZ Makanchi 41.35 93 P **P** **01 15 39.4 +0.4**
MAKZ pmax pmax
comp=Z,14nm,1.5s
MK31 Makanchi Array 41.43 93 P **P** **01 15 39.9 +0.3**
MK31 Makanchi Array 41.43 93 P **P** **01 15 39.9 +0.3**
MK31 pmax pmax
comp=Z,3.0nm,1.0s
MKAR Makanchi Array 41.43 93 P **P** **01 15 39.6 0.0**
comp=Z,2.1nm,0.8s,baz=350,slow=6.2,SNR=8.8
MKAR LR LR 01 37 55.4
comp=Z,169nm,18.2s,baz=334,slow=43
comp=Z,2.1nm,0.8s
MKAR Makanchi Array 41.43 93 P **P** **01 15 40.2 +0.6**
MKAR Makanchi Array 41.43 93 *eP* **P** **01 15 40.4 +0.8**
MKAR pmax pmax
comp=Z,2.0nm,0.8s
KK31 Karatay Array 42.61 107 P **P** **01 15 51.1 +1.8**
KK31 Karatay Array 42.61 107 P **P** **01 15 51.1 +1.8**
KK31 pmax pmax
comp=Z,5.0nm,1.3s
KKAR Karatay Array 42.61 107 P **P** **01 15 50.3 +1.0**
KKAR Karatay Array 42.61 107 P **P** **01 15 50.3 +1.0**
KKAR pmax pmax
comp=Z,5.0nm,1.3s
IDI Anoyia 43.72 160 LR LR 01 36 05.4
comp=Z,27nm,18.1s,baz=304,slow=39
AAK Ala-Archa 43.85 103 LR LR 01 36 24.4
comp=Z,158nm,21.0s,baz=339,slow=39
AAK Ala-Archa 43.85 103 P **P** **01 16 01.6 +2.1**
AAK IAmb IAmb 01 16 08.6
comp=Z,8.7nm,1.2s
AAK Ala-Archa 43.85 103 P **P** **01 16 01.6 +2.1**
AAK pmax pmax
comp=Z,9.0nm,1.3s
ULM Lac du Bonnet 44.05 296 LR LR 01 34 15.1
comp=Z,100nm,20.2s,baz=14,slow=36
SONM Songino Array 45.26 70 P **P** **01 16 11.0 +0.3**
comp=Z,1.1nm,0.9s,baz=335,slow=6.7,SNR=7.5
SONM LR LR 01 38 19.5
comp=Z,74nm,18.5s,baz=25,slow=40
comp=Z,1.1nm,0.9s
SONM Songino Array 45.26 70 P **P** **01 16 11.0 +0.3**
SONM IAmb IAmb 01 16 18.4
comp=Z,7.4nm,1.5s
GEYT Alibeck 45.33 122 LR LR 01 37 45.8
comp=Z,85nm,18.8s,baz=336,slow=40
GEYT Alibeck 45.33 122 P **P** **01 16 11.4 +0.3**
GEYT IAmb IAmb 01 16 19.4
comp=Z,5.0nm,1.1s
GYA0B ALIBECK ARRAY 45.33 122 P **P** **01 16 12.1 +0.9**
ULN Ulaanbaatar 45.36 69 P **P** **01 16 11.8 +0.3**
ULN IAmb IAmb 01 16 18.8
comp=Z,5.7nm,0.9s
ULN Ulaanbaatar 45.36 69 ⇑*i*P **P** **01 16 12.4 +1.0**
ULN pmax pmax
comp=Z,6.0nm,1.0s
WMQ Urumqi 45.38 89 *eP* **P** **01 16 14.0 +2.4**
WMQ LR LR
comp=N,150nm,20.9s
WMQ LR LR
comp=Z,97nm,18.9s
TARG Taragay, Kyrgy 45.38 100 P **P** **01 16 12.7 +0.7**
TARG IAmb IAmb 01 16 16.8
comp=Z,6.7nm,1.3s
TARG Taragay, Kyrgy 45.38 100 P **P** **01 16 12.7 +0.7**
TARG pmax pmax
comp=Z,7.0nm,1.3s
BTK Batken 45.61 108 P **P** **01 16 13.3 -0.1**
BTK IAmb IAmb 01 16 15.6
comp=Z,6.2nm,1.1s
BTK Batken 45.61 108 P **P** **01 16 13.3 -0.1**
BTK pmax pmax
comp=Z,6.0nm,1.2s
SADO Sadowa 46.06 279 LR LR 01 36 19.4
comp=Z,113nm,18.1s,baz=14,slow=37
GAR Garm 46.54 108 P **P** **01 16 21.7 +0.9**
BBB Bella Bella 47.10 325 LR LR 01 36 31.8
comp=Z,83nm,18.7s,baz=306,slow=37
KLR Kul'dur 48.28 47 LR LR 01 38 07.7
comp=Z,48nm,18.4s,baz=359,slow=38
NEW Newport 49.49 314 LR LR 01 38 28.4
comp=Z,84nm,18.2s,baz=322,slow=37
EIL Elat 50.17 149 LR LR 01 40 54.5
comp=Z,53nm,18.6s,baz=307,slow=40
MSO Missoula 50.41 311 IAmb IAmb 01 16 49.9
comp=Z,5.5nm,1.1s
ECSD EROS Data Cent 50.46 295 P **P** **01 16 51.0 +0.1**
GTA Gaotai 52.08 79 ⇓P P 01 17 10.4 +7.3
GTA pP pwP 01 17 17.3 +9.5
GTA pmax pmax
comp=Z,4.0nm,1.0s
GTA pmax pmax
comp=Z,77nm,5.1s
GTA LR LR
comp=N,150nm,16.4s
GTA LR LR
comp=E,110nm,14.5s
GTA LR LR
comp=Z,160nm,18.2s
BMO Blue Mountains 52.85 313 IAmb IAmb 01 17 19.1
comp=Z,3.5nm,1.1s
HHC Hu-ho-hao-te 52.98 68 *eP* **P** **01 17 09.6 -0.1**
HHC pmax pmax
comp=Z,35nm,1.1s
HHC pmax pmax
comp=Z,260nm,4.5s
HHC LR LR
comp=N,330nm,14.9s
HHC LR LR
comp=Z,370nm,14.5s
PDAR Pinedale Array 53.67 306 P **P** **01 17 12.8 -2.2**
comp=Z,0.4nm,0.8s,baz=354,slow=4.5,SNR=5.1
PDAR LR LR 01 40 00.7
comp=Z,78nm,18.6s,baz=338,slow=36
comp=Z,0.4nm,0.8s
PDAR Pinedale Array 53.67 306 P **P** **01 17 13.6 -1.4**
GOMU GeErMu 54.17 85 P **P** **01 17 20.0 +1.1**
GOMU pP pwP 01 17 25.9 +2.4
GOMU sP sP 01 17 28.1 +6.3
GOMU PcP **PcP** **01 18 24.5 +1.2**
GOMU PP **PP** **01 19 22.8 +2.7**
GOMU S **S** **01 24 58.5 +2.7**
GOMU sS sS 01 25 14.0 +15
GOMU GeErMu 54.17 85 SS **SS** **01 28 42.8 +6.0**
GOMU pmax pmax
comp=Z,2.0nm,0.5s
GOMU pmax pmax
comp=Z,77nm,6.2s
GOMU LR LR
comp=N,140nm,16.7s
GOMU LR LR
comp=E,82nm,16.5s
GOMU LR LR
comp=Z,100nm,13.5s
ASAJ Asahikawa 54.80 39 LR LR 01 41 45.6
comp=Z,25nm,18.7s,baz=45,slow=37
TKL Tuckaleechee C 55.77 280 LR LR 01 41 21.4
comp=Z,111nm,19.7s,baz=0,slow=36
LZH Lanzhou 56.09 76 *eP* **P** **01 17 35.5 +3.0**
LZH sP pwP 01 17 43.6 +6.4
LZH pmax pmax
comp=Z,18nm,1.5s
LZH LR LR
comp=N,160nm,15.7s
LZH LR LR
comp=E,160nm,16.8s
LZH LR LR
comp=Z,220nm,15.7s
ELK Elko 56.55 311 LR LR 01 44 15.1
comp=Z,44nm,19.9s,baz=331,slow=39
YBH Yreka Blue Hor 56.68 317 LR LR 01 41 01.6
comp=Z,71nm,18.3s,baz=326,slow=35
SMCO Snowmass 56.73 303 P **P** **01 17 36.5 -0.8**
SMCO IAmb IAmb 01 17 46.7
comp=Z,7.6nm,1.4s
RAYN Ar Rayn 57.50 139 P **P** **01 17 42.9 +0.5**
RAYN IAmb IAmb 01 17 50.0
comp=Z,7.2nm,1.4s
RAYN Ar Rayn 57.50 139 P **P** **01 17 42.9 +0.5**
RAYN pmax pmax
comp=Z,7.0nm,1.4s
Q16A Castle Valley 57.69 306 IAmb IAmb 01 17 43.2
comp=Z,4.4nm,0.9s
KVN Kaiserville 58.65 313 IAmb IAmb 01 17 49.9
comp=Z,2.2nm,0.9s
R11A Troy Canyon, C 58.95 310 IAmb IAmb 01 17 51.6
comp=Z,1.6nm,0.8s
KSRS Korea Array 59.17 54 LR LR 01 44 21.4
comp=Z,36nm,20.3s,baz=215,slow=37
NVAR Mina Array Bea 59.29 313 P **P** **01 17 53.8 -1.2**
comp=Z,1.3nm,0.9s,baz=19,slow=5.8,SNR=7.3
comp=Z,1.3nm,0.9s
WSAR Wadi Sarin 59.77 125 LR LR 01 50 04.7
comp=Z,77nm,18.3s,baz=74,slow=42
ANMO Albuquerque 60.77 301 LR LR 01 45 56.1
comp=Z,53nm,20.1s,baz=5.0,slow=38
SAO San Andreas Ge 61.38 315 P **P** **01 18 09.6 +0.5**
SAO San Andreas Ge 61.38 315 P **P** **01 18 09.6 +0.5**
SAO pmax pmax
comp=Z,9.0nm,1.2s
PAGB Antelope Grade 62.22 314 P **P** **01 18 14.2 -0.6**
PFO Pinyon Flats O 63.73 310 LR LR 01 47 30.1
comp=Z,61nm,20.6s,baz=298,slow=37
TUC Tucson 64.08 305 P **P** **01 18 26.9 -0.3**
TUC IAmb IAmb 01 18 38.0
comp=Z,3.5nm,1.4s
TUC Tucson 64.08 305 P **P** **01 18 29.1 +1.9**
TUC pmax pmax
comp=Z,7.0nm,1.5s
PZH PanZhiHua 64.96 81 P **P** **01 18 35.8 +2.7**
PZH pmax pmax
comp=Z,10.0nm,0.6s
PZH pmax pmax
comp=Z,90nm,5.1s
TOA0 Torodi Ar. Sit 65.26 187 P **P** **01 18 34.5 -0.5**
TOA0 IAmb IAmb 01 18 34.6
comp=Z,3.1nm,1.1s
TORD Torodi Ar. Bea 65.26 187 P **P** **01 18 33.2 -1.7**
comp=Z,2.3nm,1.1s,baz=28,slow=5.2,SNR=6.6
comp=Z,2.3nm,1.1s
TORD Torodi Ar. Bea 65.26 187 P **P** **01 18 34.5 -0.5**
TX31 Lajitas Ar. Si 65.74 297 P **P** **01 18 36.7 -1.3**
TXAR Lajitas Array 65.74 297 P **P** **01 18 35.6 -2.5**
comp=Z,0.8nm,0.8s,baz=50,slow=5.4,SNR=11
TXAR LR LR 01 47 47.7
comp=Z,93nm,18.4s,baz=2.0,slow=36
comp=Z,0.8nm,0.8s
TXAR Lajitas Array 65.74 297 P **P** **01 18 35.7 -2.4**
TXAR Lajitas Array 65.74 297 P **P** **01 18 35.7 -2.4**
SJG San Juan 69.22 258 LR LR 01 49 12.0
comp=Z,24nm,19.4s,baz=14,slow=36
ZAIG Zacatecas 71.94 295 P **P** **01 19 17.2 +0.2**
LPIG La Paz 72.02 302 LR LR 01 50 42.6
comp=Z,72nm,18.6s,baz=16,slow=36
CMAR Chiang Mai Arr 72.21 85 LR LR 01 55 44.4
comp=Z,47nm,19.1s,baz=295,slow=40
CMIG Matias Romero 76.01 286 LR LR 01 56 52.6
comp=Z,38nm,18.1s,baz=22,slow=39
JTS Las Juntas de 80.64 275 LR LR 01 55 55.1
comp=Z,106nm,19.3s,baz=47,slow=36
ZARC Zaragoza, Cauc 81.30 265 P **P** **01 20 10.2 +0.5**
ATAH Atahualpa 96.25 265 LR LR 02 06 55.1
comp=Z,29nm,18.6s,baz=358,slow=37
ASAR Alice Springs 119.99 59 PKP **PKPdf** **01 26 41.6 -1.8**
comp=Z,1.1nm,1.0s,baz=354,slow=1.9,SNR=5.9
MAW Mawson 149.22 142 PKPbc **PKPbc** **01 27 39.8 -0.2**
comp=Z,6.0nm,1.1s,baz=288,slow=3.5,SNR=4.1
VNA3 Neumayer Olymp 149.72 191 PKPdf **PKPbc** **01 27 39.9 -1.3**
baz=78,slow=8.9
SNAA Sanae 149.93 187 PKPdf **PKPbc** **01 27 39.6 -2.1**
baz=78,slow=8.9
TROLL Troll, Antarti 150.17 184 PKPdf **PKPbc** **01 27 41.8 -0.6**
baz=78,slow=8.9

IDC 17 01:39:29.4±3.5, 8°04S×124°01E, h180km±44km, mb3.8/1, mbtmp4.2/4, Error ellipse: s-maj=112.4km s-min=32.5km az=76.0, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**2.18**	**189**	P	Pn	01 40 08.3	-0.1
	132nm,0.3s,baz=335,slow=4.9,SNR=14						
BATI				S	Sn	01 40 39.2	+0.3
	211nm,0.3s,baz=277,slow=17,SNR=10						
WRA	**Warramunga Arr**	**15.49**	**141**	P	Pn	01 42 58.5	-0.1
	1.3nm,0.4s,baz=318,slow=12,SNR=20						
WRA				S	S	01 45 42.2	-10
	0.9nm,0.6s,baz=317,slow=25,SNR=5.1						
ASAR	**Alice Springs**	**18.20**	**150**	P	P	01 43 29.8	+0.9
	4.3nm,0.6s,baz=331,slow=12,SNR=33						
ASAR				S	S	01 46 48.5	+0.6
	0.8nm,0.7s,baz=316,slow=21,SNR=5.1						
STKA	**Stephens Creek**	**28.81**	**148**	P	P	01 45 10.5	-0.3
	2.5nm,0.7s,baz=312,slow=12,SNR=6.0						
	2.5nm,0.7s						

IDC 17 01:40:49.8±2.0, 59°.78N×152°.62W, h76km±23km, mb3.4/6, mbtmp3.7/10, Error ellipse: s-maj=32.6km s-min=16.1km az=103.0
ANF 17 01:40:51.5±0.1, 59°.70N×152°.09W, h80km±2km, ML3.8/64, ML3.8/62, Error ellipse: s-maj=1.4km s-min=1.1km az=151.0
NEIC 17 01:40:51.5±0.9, 59°.72N±0°.03×152°.04W±0°.06, h87km±3km, Error ellipse: s-maj=4.3km s-min=4.1km az=198.0
AEIC 17 01:40:52±0.9, 59°.71N±0°.03×152°.05W±0°.05, h82km±4km, ML3.5, ML3.6/140(NEIC), Error ellipse: s-maj=4.6km s-min=3.6km az=176.0
ISC 17 01:40:51.2±0.7, 59°.70N±0°.03×152°.05W±0°.03, h89km±5km, n323, g0°62°/329, mb3.8/6, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOM	**Homer**	**0.21**	**101**		**Pn**	**01 41 04.2**	**+0.1**
HOM					**Sn**	**01 41 13.8**	**+0.2**
HOM	**Homer**	**0.21**	**101**	P	**Pn**	**01 41 04.3**	**+0.1**
	baz=285,SNR=130						
HOM				S	**Sn**	**01 41 13.9**	**+0.2**
	baz=285						
CNPM	**China Poot**	**0.45**	**113**		**Pn**	**01 41 05.5**	**0.0**
CNPM					**Sn**	**01 41 15.8**	**-0.3**
O20K	**Slope Mountain**	**0.48**	**323**		**Pn**	**01 41 05.9**	**+0.1**
O20K					**Sn**	**01 41 16.7**	**+0.1**
O20K	**Slope Mountain**	**0.48**	**323**	P	**Pn**	**01 41 05.9**	**+0.1**
	baz=142,SNR=245						
O20K				S	**Sn**	**01 41 16.3**	**-0.3**
	baz=142						
IVE	**Iliamna Volcan**	**0.58**	**303**		**Pn**	**01 41 06.3**	**-0.4**
IVE					**Sn**	**01 41 17.3**	**-0.8**
BRLK	**Bradley Lake**	**0.59**	**83**		**Pn**	**01 41 06.4**	**-0.3**
BRLK					**Sn**	**01 41 17.6**	**-0.6**
OPT	**Oil Point**	**0.60**	**266**		**Pn**	**01 41 06.9**	**+0.1**
BRSE	**Bradley Lake S**	**0.66**	**86**		**Pn**	**01 41 07.0**	**-0.2**
BRSE					**Sn**	**01 41 18.7**	**-0.5**
BRSE	**Bradley Lake S**	**0.66**	**86**	P	**Pn**	**01 41 07.1**	**-0.2**
	baz=268,SNR=108						
BRSE				S	**Sn**	**01 41 18.7**	**-0.5**
	baz=268						
AU22	**Augustine Moun**	**0.74**	**244**		**Pn**	**01 41 08.4**	**+0.3**
AU22					**Sn**	**01 41 21.2**	**+0.7**
AU2	**Augustine Isla**	**0.76**	**245**		**Pn**	**01 41 08.4**	**+0.3**
AUL	**Augustine Lava**	**0.78**	**246**		**Pn**	**01 41 08.7**	**+0.4**
AUL					**Sn**	**01 41 21.8**	**+0.6**
AUQ	**Augustine Qik'**	**0.78**	**244**		**Pn**	**01 41 08.9**	**+0.5**
AUH	**Augustine H**	**0.79**	**245**		**Pn**	**01 41 09.1**	**+0.6**
AUCH	**Augustine Cone**	**0.79**	**245**		**Pn**	**01 41 09.0**	**+0.4**
RED	**Redoubt Volcan**	**0.81**	**334**		**Pn**	**01 41 08.6**	**-0.2**
RED					**Sn**	**01 41 21.2**	**-0.7**
RDO	**Redoubt South**	**0.83**	**336**		**Pn**	**01 41 08.9**	**-0.2**
RDSO					**Sn**	**01 41 22.1**	**-0.5**
RSO	**Redoubt South**	**0.84**	**335**		**Pn**	**01 41 09.2**	**-0.2**
RDWB	**Redoubt West**	**0.89**	**334**		**Pn**	**01 41 09.1**	**-0.6**
DFR	**Drift River**	**0.95**	**341**		**Pn**	**01 41 10.1**	**-0.3**
NCT	**North Crescent**	**0.97**	**333**		**Pn**	**01 41 10.3**	**-0.3**
RDJH	**Redoubt Jeurge**	**0.97**	**337**		**Pn**	**01 41 10.6**	**0.0**
RDJH					**Sn**	**01 41 25.1**	**-0.1**
Q20K	**Shuyak Island**	**1.11**	**189**	P	**Pn**	**01 41 12.5**	**+0.4**
	baz=8.9,SNR=62						
Q20K				S	**Sn**	**01 41 28.2**	**+0.4**
	baz=8.9						
SYI	**Shuyak Island**	**1.11**	**189**		**Pn**	**01 41 12.4**	**+0.4**
SYI					**Sn**	**01 41 28.1**	**+0.4**
Q19K	**Cape Douglas,**	**1.13**	**227**		**Pn**	**01 41 12.4**	**+0.1**
Q19K					**Sn**	**01 41 28.5**	**+0.3**
Q19K	**Cape Douglas,**	**1.13**	**227**	IAML		01 41 37.6	
	comp=E,2μm,1.0s						
Q19K				IAML		01 41 39.8	
	comp=N,2μm,0.8s						
Q19K	**Cape Douglas,**	**1.13**	**227**	P	**Pn**	**01 41 12.5**	**+0.1**
	baz=46,SNR=175						
Q19K				S	**Sn**	**01 41 28.1**	**-0.1**
	baz=46						
CAPN	**Captain Cook N**	**1.16**	**22**		**Pn**	**01 41 14.2**	**+1.6**
CAPN	**Captain Cook N**	**1.16**	**22**	P	**Pn**	**01 41 14.2**	**+1.6**
	baz=203,SNR=9.6						
SLKM	**Skilak Lake**	**1.22**	**48**		**Pn**	**01 41 13.1**	**-0.4**
O19K	**Port Alsworth**	**1.25**	**294**		**Pn**	**01 41 13.3**	**-0.4**
O19K	**Port Alsworth**	**1.25**	**294**	P	**Pn**	**01 41 13.4**	**-0.4**
	baz=112,SNR=41						
O19K				S	**Sn**	**01 41 30.1**	**-0.6**
	baz=112						
SEW	**Seward**	**1.37**	**72**		**Pn**	**01 41 14.8**	**-0.3**
SEW	**Seward**	**1.37**	**72**	P	**Pn**	**01 41 14.9**	**-0.3**
	baz=254,SNR=14						
SEW				S	**Sn**	**01 41 32.3**	**-1.0**
	baz=254						
O22K	**Cooper Landing**	**1.40**	**55**		**Pn**	**01 41 15.9**	**+0.3**
O22K	**Cooper Landing**	**1.40**	**55**	P	**Pn**	**01 41 15.9**	**+0.3**
	baz=237,SNR=15						
O22K				S	**Sn**	**01 41 34.3**	**+0.2**
	baz=237						
SPU	**Mount Spurr**	**1.49**	**360**		**Pn**	**01 41 16.8**	**+0.1**
N20K	**Mount Spurr**	**1.51**	**357**	P	**Pn**	**01 41 17.2**	**+0.1**
	baz=177						
N20K				S	**Sn**	**01 41 36.5**	**-0.1**
	baz=177						
CKN	**Chakachatna No**	**1.53**	**358**		**Pn**	**01 41 17.8**	**+0.5**
SPCP	**Crater Peak Br**	**1.57**	**358**		**Pn**	**01 41 18.3**	**+0.4**
BGL	**Barrier Glacie**	**1.58**	**354**		**Pn**	**01 41 18.3**	**+0.3**
SPCG	**Spurr Capps Gl**	**1.60**	**0**		**Pn**	**01 41 18.6**	**+0.3**
SPWE	**Spurr West**	**1.60**	**351**		**Pn**	**01 41 18.5**	**+0.3**
O18K	**Koktuh Hills**	**1.61**	**277**		**Pn**	**01 41 17.9**	**-0.4**
O18K	**Koktuh Hills**	**1.61**	**277**	IAML		01 41 38.2	
	comp=E,569nm,0.7s						
O18K				IAML		01 41 38.8	
	comp=N,710nm,0.5s						
O18K	**Koktuh Hills**	**1.61**	**277**	P	**Pn**	**01 41 18.0**	**-0.3**
	baz=94						
O18K				S	**Sn**	**01 41 37.6**	**-1.2**
	baz=94						
P18K	**Big Mountain,**	**1.65**	**261**		**Pn**	**01 41 18.3**	**-0.6**
P18K	**Big Mountain,**	**1.65**	**261**	P	**Pn**	**01 41 18.2**	**-0.6**
	baz=78						
P18K				S	**Sn**	**01 41 38.3**	**-1.5**
	baz=78						
N19K	**Bonanza Creek**	**1.65**	**314**		**Pn**	**01 41 18.6**	**-0.3**
N19K	**Bonanza Creek**	**1.65**	**314**	IAML		01 41 39.6	
	comp=N,460nm,0.6s						
N19K	**Bonanza Creek**	**1.65**	**314**	P	**Pn**	**01 41 18.7**	**-0.3**
	baz=131,SNR=355						
N19K				S	**Sn**	**01 41 38.9**	**-1.0**
	baz=131						
FIS	**Fire Island**	**1.71**	**31**		**Pn**	**01 41 20.7**	**+1.2**
FIS	**Fire Island**	**1.71**	**31**	IAML		01 42 07.0	
	comp=N,737nm,0.8s						
FIS				IAML		01 42 22.3	
	comp=E,650nm,0.7s						
RC01	**Rabbit Creek A**	**1.81**	**38**		**Pn**	**01 41 20.9**	**+0.1**
RC01	**Rabbit Creek A**	**1.81**	**38**	IAML		01 41 43.9	
	comp=E,438nm,0.3s						
RC01				IAML		01 41 45.7	
	comp=N,366nm,0.4s						
RC01	**Rabbit Creek A**	**1.81**	**38**	P	**Pn**	**01 41 20.9**	**+0.1**
	baz=221,SNR=33						
RC01				S	**Sn**	**01 41 42.3**	**-1.0**
	baz=221						
STLK	**Strandline Lak**	**1.81**	**3**		**Pn**	**01 41 21.4**	**+0.5**
KAHC	**Katmai Hardscr**	**1.85**	**237**		**Pn**	**01 41 21.6**	**+0.1**
Q18K	**Katmai Hardscr**	**1.85**	**237**	P	**Pn**	**01 41 21.4**	**-0.2**
	baz=54						
Q18K				S	**Sn**	**01 41 43.2**	**-1.4**
	baz=54						
SUA	**Susitna One**	**1.88**	**19**		**Pn**	**01 41 22.2**	**+0.3**
SUA	**Susitna One**	**1.88**	**19**	IAML		01 41 47.3	
	comp=E,543nm,0.7s						
SUA				IAML		01 41 49.5	
	comp=N,337nm,0.8s						
SUA	**Susitna One**	**1.88**	**19**	P	**Pn**	**01 41 22.3**	**+0.3**
	baz=201,SNR=154						
SUA				S	**Sn**	**01 41 45.0**	**-0.3**
	baz=201						
KDAK	**Kodiak Island**	**1.94**	**189**	P	**Pn**	**01 41 22.0**	**-0.6**
	comp=N,62nm,0.2s,baz=12,slow=14,SNR=917						
KDAK				S	**Sn**	**01 41 46.1**	**-0.3**
	comp=N,283nm,0.4s,baz=194,slow=21,SNR=10.0						
KDAK	**Kodiak Island**	**1.94**	**189**	IAML		01 41 46.9	
	comp=N,762nm,0.4s						
KDAK				IAML		01 41 47.2	
	comp=N,624nm,0.4s						
KDAK	**Kodiak Island**	**1.94**	**189**	P	**Pn**	**01 41 22.1**	**-0.6**
	baz=7.9						
KDAK				S	**Sn**	**01 41 45.8**	**-0.7**
	baz=7.9						
KCG	**Knife Ck. Glac**	**2.11**	**230**		**Pn**	**01 41 25.2**	**+0.3**
N18K	**Kilae Creek**	**2.16**	**299**		**Pn**	**01 41 25.0**	**-0.4**
N18K	**Kilae Creek**	**2.16**	**299**	P	**Pn**	**01 41 25.2**	**-0.2**
	baz=115,SNR=102						
N18K				S	**Sn**	**01 41 50.1**	**-1.4**
	baz=115						
KABR	**Katmai Barrier**	**2.19**	**225**		**Pn**	**01 41 25.1**	**-0.7**
SVW2	**Sparrevohn**	**2.25**	**310**		**Pn**	**01 41 26.0**	**-0.6**
M20K	**Styx River**	**2.25**	**347**		**Pn**	**01 41 27.0**	**+0.2**
M20K	**Styx River**	**2.25**	**347**	P	**Pn**	**01 41 27.0**	**+0.2**
	baz=166,SNR=157						
M20K				S	**Sn**	**01 41 54.4**	**+0.4**
	baz=166						
M22K	**Willow**	**2.27**	**24**		**Pn**	**01 41 26.9**	**+0.1**
M22K	**Willow**	**2.27**	**24**	P	**Pn**	**01 41 26.9**	**+0.1**
	baz=206,SNR=8.9						
M22K				S	**Sn**	**01 41 54.3**	**+0.2**
	baz=206						
KELA	**Mount Kelaz**	**2.29**	**238**		**Pn**	**01 41 27.3**	**+0.1**
P17K	**Kvichak River**	**2.30**	**259**		**Pn**	**01 41 27.6**	**+0.4**
P17K	**Kvichak River**	**2.30**	**259**	P	**Pn**	**01 41 27.4**	**+0.1**
	baz=75,SNR=23						
P17K				S	**Sn**	**01 41 54.6**	**-0.3**
	baz=75						
SKT	**Skwentna**	**2.30**	**6**		**Pn**	**01 41 27.5**	**+0.1**
SKT	**Skwentna**	**2.30**	**6**	IAML		01 41 58.2	
	comp=E,286nm,0.5s						
SKT	**Skwentna**	**2.30**	**6**	P	**Pn**	**01 41 27.5**	**+0.1**
	baz=187,SNR=80						
SKT				S	**Sn**	**01 41 54.9**	**-0.1**
	baz=187						
PMR	**Palmer**	**2.38**	**36**		**Pn**	**01 41 29.0**	**+0.6**
PMR	**Palmer**	**2.38**	**36**	S	**Sn**	**01 41 55.3**	**-1.4**
	baz=218						
KNK	**Knik Glacier**	**2.47**	**44**		**Pn**	**01 41 29.4**	**-0.1**
KNK	**Knik Glacier**	**2.47**	**44**	IAML		01 42 06.0	
	comp=N,194nm,0.5s						
KNK				IAML		01 42 08.4	
	comp=E,212nm,0.6s						
KNK	**Knik Glacier**	**2.47**	**44**	P	**Pn**	**01 41 30.1**	**+0.5**
	baz=228,SNR=5.3						
KNK				S	**Sn**	**01 41 58.5**	**-0.4**
	baz=228						
M19K	**Big River Lodg**	**2.49**	**334**		**Pn**	**01 41 30.1**	**+0.2**
M19K	**Big River Lodg**	**2.49**	**334**	IAML		01 41 60.0	
	comp=E,186nm,0.8s						
M19K	**Big River Lodg**	**2.49**	**334**	P	**Pn**	**01 41 29.9**	**+0.1**
	baz=152						
M19K				S	**Sn**	**01 41 58.9**	**-0.6**
	baz=152						
O17K	**Koliganek Bris**	**2.56**	**274**		**Pn**	**01 41 30.8**	**0.0**
O17K	**Koliganek Bris**	**2.56**	**274**	P	**Pn**	**01 41 30.7**	**0.0**
	baz=89						
O17K				S	**Sn**	**01 42 00.3**	**-0.7**
	baz=89						
OHAK	**Old Harbor**	**2.57**	**195**		**Pn**	**01 41 30.1**	**-0.8**
OHAK	**Old Harbor**	**2.57**	**195**	IAML		01 42 00.1	
	comp=N,231nm,0.5s						
OHAK				IAML		01 42 16.6	
	comp=E,249nm,0.5s						
OHAK	**Old Harbor**	**2.57**	**195**	P	**Pn**	**01 41 30.1**	**-0.8**
	baz=14						
OHAK				S	**Sn**	**01 41 59.3**	**-2.0**
	baz=14						
GHO	**Glory Hole Cre**	**2.58**	**35**		**Pn**	**01 41 31.3**	**+0.2**
GHO	**Glory Hole Cre**	**2.58**	**35**	IAML		01 42 05.9	
	comp=N,201nm,0.4s						
GHO				IAML		01 42 06.3	
	comp=E,298nm,0.4s						
GLI	**Glacier Island**	**2.73**	**62**		**Pn**	**01 41 32.5**	**-0.6**
GLI	**Glacier Island**	**2.73**	**62**	IAML		01 42 03.9	
	comp=N,307nm,0.6s						
GLI	**Glacier Island**	**2.73**	**62**	P	**Pn**	**01 41 32.7**	**-0.4**
	baz=247						
GLI				S	**Sn**	**01 42 03.2**	**-2.1**
	baz=247						
SML	**Sawmill**	**2.79**	**39**		**Pn**	**01 41 33.8**	**-0.1**
SML	**Sawmill**	**2.79**	**39**	IAML		01 42 39.3	
	comp=N,163nm,0.8s						
SML	**Sawmill**	**2.79**	**39**	P	**Pn**	**01 41 33.8**	**-0.1**
	baz=222						
SML				S	**Sn**	**01 42 06.3**	**-0.4**
	baz=222						
L19K	**White Mountain**	**2.84**	**332**		**Pn**	**01 41 34.6**	**+0.1**
L19K	**White Mountain**	**2.84**	**332**	IAML		01 42 08.5	
	comp=N,223nm,0.7s						
L19K				IAML		01 42 08.6	
	comp=E,165nm,0.7s						
L19K	**White Mountain**	**2.84**	**332**	P	**Pn**	**01 41 34.7**	**+0.1**
	baz=150,SNR=278						
L19K				S	**Sn**	**01 42 07.4**	**-0.5**
	baz=150						
CUT	**Chulitna**	**2.85**	**17**		**Pn**	**01 41 33.9**	**-0.7**
CUT	**Chulitna**	**2.85**	**17**	IAML		01 42 13.6	
	comp=N,305nm,0.4s						
CUT	**Chulitna**	**2.85**	**17**	P	**Pn**	**01 41 34.9**	**+0.3**
	baz=199						
CUT				S	**Sn**	**01 42 07.7**	**-0.3**
	baz=199						
HIN	**Hinchinbrook I**	**2.87**	**74**		**Pn**	**01 41 34.6**	**-0.3**
HIN	**Hinchinbrook I**	**2.87**	**74**	IAML		01 42 08.2	
	comp=N,219nm,0.8s						
Q23K	**Middleton Isla**	**2.91**	**93**		**Pn**	**01 41 35.3**	**-0.1**
Q23K	**Middleton Isla**	**2.91**	**93**	P	**Pn**	**01 41 35.6**	**+0.2**
	baz=278						
MID	**Middleton Isla**	**2.92**	**93**		**Pn**	**01 41 35.4**	**-0.1**
L20K	**Farewell, AK**	**2.93**	**343**		**Pn**	**01 41 35.8**	**+0.1**
L20K	**Farewell, AK**	**2.93**	**343**	P	**Pn**	**01 41 35.8**	**+0.1**
	baz=162,SNR=44						
FID	**Port Fidalgo**	**2.97**	**67**		**Pn**	**01 41 35.5**	**-0.8**
FID	**Port Fidalgo**	**2.97**	**67**	IAML		01 42 08.9	
	comp=E,296nm,0.3s						
M23K	**Glacier View**	**2.98**	**43**		**Pn**	**01 41 36.8**	**+0.4**
M23K	**Glacier View**	**2.98**	**43**	P	**Pn**	**01 41 36.8**	**+0.4**
	baz=227						
JPK	**Jack Peak**	**3.03**	**61**		**Pn**	**01 41 36.9**	**-0.1**
R17K	**Ugashik Creek**	**3.07**	**230**	P	**Pn**	**01 41 38.3**	**+0.7**
	baz=46						
O16K	**Kokwok River B**	**3.07**	**271**		**Pn**	**01 41 37.8**	**+0.2**
O16K	**Kokwok River B**	**3.07**	**271**	P	**Pn**	**01 41 37.9**	**+0.2**
	baz=85,SNR=31						
P16K	**Nushagak River**	**3.12**	**260**		**Pn**	**01 41 39.1**	**+0.9**
P16K	**Nushagak River**	**3.12**	**260**	P	**Pn**	**01 41 38.7**	**+0.5**
	baz=75						
SCM	**Sheep Creek Mo**	**3.15**	**45**		**Pn**	**01 41 39.1**	**+0.3**
SCM	**Sheep Creek Mo**	**3.15**	**45**	IAML		01 42 17.1	
	comp=E,132nm,0.5s						
SCM	**Sheep Creek Mo**	**3.15**	**45**	P	**Pn**	**01 41 39.0**	**+0.2**
	baz=229						
PPLA	**Purkeypile**	**3.21**	**359**		**Pn**	**01 41 40.0**	**+0.3**
PPLA	**Purkeypile**	**3.21**	**359**	P	**Pn**	**01 41 39.9**	**+0.3**
	baz=179,SNR=32						
EYAK	**Cordova Ski Ar**	**3.26**	**72**		**Pn**	**01 41 39.8**	**-0.4**
SII	**Sitkinak Islan**	**3.35**	**201**	Pn	**Pn**	**01 41 41.7**	**+0.3**
SII				IAML		01 42 37.0	
	comp=N,169nm,0.7s						
SII				IAML		01 42 37.0	
	comp=E,170nm,0.6s						
DIV	**Divide**	**3.43**	**63**		**Pn**	**01 41 42.6**	**+0.1**
N16K	**Nishlik Lake**	**3.46**	**286**		**Pn**	**01 41 43.1**	**+0.3**
N16K	**Nishlik Lake**	**3.46**	**286**	P	**Pn**	**01 41 43.1**	**+0.3**
	baz=100,SNR=79						
KLU	**Klutina**	**3.52**	**57**		**Pn**	**01 41 43.7**	**0.0**
KLU	**Klutina**	**3.52**	**57**	IAML		01 42 24.7	
	comp=N,114nm,0.5s						
KLU				IAML		01 42 25.5	
	comp=E,81nm,0.2s						
KLU	**Klutina**	**3.52**	**57**	P	**Pn**	**01 41 43.7**	**0.0**
	baz=242,SNR=14						
WAT1	**Susitna Watana**	**3.56**	**27**		**Pn**	**01 41 44.7**	**+0.4**
WAT1	**Susitna Watana**	**3.56**	**27**	P	**Pn**	**01 41 44.6**	**+0.3**
	baz=210						
WAT6	**Susitna Watana**	**3.57**	**34**		**Pn**	**01 41 44.5**	**+0.1**
WAT6	**Susitna Watana**	**3.57**	**34**	P	**Pn**	**01 41 44.6**	**+0.1**
	baz=218,SNR=12						
CAST	**Castle Rocks**	**3.73**	**360**		**Pn**	**01 41 47.2**	**+0.7**
CAST	**Castle Rocks**	**3.73**	**360**	P	**Pn**	**01 41 46.7**	**+0.2**
	baz=180,SNR=5.5						
TT01	**Tatalina**	**3.75**	**331**		**Pn**	**01 41 46.5**	**-0.3**
M24K	**Tolsona, Glenn**	**3.75**	**47**		**Pn**	**01 41 47.4**	**+0.6**
M24K	**Tolsona, Glenn**	**3.75**	**47**	IAML		01 42 40.2	
	comp=E,113nm,0.6s						
M24K				IAML		01 43 21.4	
	comp=N,70nm,1.1s						
M24K	**Tolsona, Glenn**	**3.75**	**47**	P	**Pn**	**01 41 47.2**	**+0.4**
	baz=233						
TTA	**Tatalina**	**3.76**	**331**		**Pn**	**01 41 46.7**	**-0.4**
TTA	**Tatalina**	**3.76**	**331**	P	**Pn**	**01 41 46.6**	**-0.4**
	baz=148,SNR=62						
K20K	**Telida**	**3.80**	**346**		**Pn**	**01 41 47.6**	**+0.2**
K20K	**Telida**	**3.80**	**346**	P	**Pn**	**01 41 47.6**	**+0.2**
	baz=164,SNR=136						
TRF	**Thorofare Moun**	**3.86**	**12**		**Pn**	**01 41 47.9**	**-0.5**
TRF	**Thorofare Moun**	**3.86**	**12**	IAML		01 42 37.7	
	comp=E,94nm,0.5s						
TRF	**Thorofare Moun**	**3.86**	**12**	P	**Pn**	**01 41 47.9**	**-0.5**
	baz=193,SNR=35						
KTH	**Kantishna Hill**	**3.90**	**7**		**Pn**	**01 41 49.1**	**+0.2**
KTH	**Kantishna Hill**	**3.90**	**7**	IAML		01 42 56.8	
	comp=E,67nm,0.6s						
KTH				IAML		01 43 02.0	
	comp=N,80nm,0.9s						
BMRM	**Bremner River**	**3.91**	**68**		**Pn**	**01 41 48.8**	**-0.2**
BMRM	**Bremner River**	**3.91**	**68**	IAML		01 42 34.9	
	comp=N,66nm,0.4s						
BMRM				IAML		01 42 37.2	
	comp=E,66nm,0.5s						
BMRM	**Bremner River**	**3.91**	**68**	P	**Pn**	**01 41 48.8**	**-0.2**
	baz=254,SNR=6.2						
HMT	**Hamilton**	**3.96**	**77**		**Pn**	**01 41 49.5**	**-0.1**
RND	**Reindeer**	**4.02**	**21**		**Pn**	**01 41 50.7**	**+0.2**
RND	**Reindeer**	**4.02**	**21**	IAML		01 42 37.4	
	comp=E,78nm,0.4s						
RND				IAML		01 42 39.4	
	comp=N,52nm,0.5s						
DHY	**Denali Highway**	**4.06**	**32**		**Pn**	**01 41 51.5**	**+0.3**
DHY	**Denali Highway**	**4.06**	**32**	IAML		01 42 40.1	
	comp=E,88nm,0.3s						
DHY				IAML		01 42 42.2	
	comp=N,56nm,0.6s						
DHY	**Denali Highway**	**4.06**	**32**	P	**Pn**	**01 41 51.4**	**+0.3**
	baz=216,SNR=20						
NICHA	**Nichawak Mount**	**4.10**	**79**		**Pn**	**01 41 51.6**	**+0.2**
N25K	**Chitina, Valde**	**4.13**	**59**		**Pn**	**01 41 52.2**	**+0.1**
N25K	**Chitina, Valde**	**4.13**	**59**	IAML		01 42 40.7	
	comp=N,52nm,0.5s						
N25K	**Chitina, Valde**	**4.13**	**59**	P	**Pn**	**01 41 52.1**	**0.0**
	baz=246,SNR=7.0						
SUCK	**Suckling Hills**	**4.18**	**81**		**Pn**	**01 41 53.1**	**+0.4**
SUCK	**Suckling Hills**	**4.18**	**81**	IAML		01 42 42.7	
	comp=N,60nm,0.6s						
SUCK				IAML		01 42 48.4	
	comp=E,55nm,0.7s						
CHUM	**Lake Minchumin**	**4.20**	**358**		**Pn**	**01 41 53.2**	**+0.3**
CHUM	**Lake Minchumin**	**4.20**	**358**	P	**Pn**	**01 41 53.1**	**+0.2**
	baz=178,SNR=24						
HARP	**HAARP**	**4.31**	**48**		**Pn**	**01 41 54.6**	**+0.3**
HARP	**HAARP**	**4.31**	**48**	P	**Pn**	**01 41 55.5**	**+1.2**
	baz=234						
MCK	**McKinley**	**4.31**	**19**		**Pn**	**01 41 54.7**	**+0.3**
MCK	**McKinley**	**4.31**	**19**	IAML		01 42 45.0	
	comp=N,79nm,0.3s						
MCK				IAML		01 42 46.8	
	comp=E,64nm,0.5s						
MCK	**McKinley**	**4.31**	**19**	P	**Pn**	**01 41 54.9**	**+0.5**
	baz=202,SNR=13						
GRIN	**Grindle Hills**	**4.42**	**79**		**Pn**	**01 41 56.0**	**+0.1**
GLB	**Gilahina Butte**	**4.42**	**63**		**Pn**	**01 41 56.5**	**+0.5**
GLB	**Gilahina Butte**	**4.42**	**63**	IAML		01 42 48.1	
	comp=N,61nm,0.6s						
BGLC	**Bering Glacier**	**4.43**	**81**		**Pn**	**01 41 56.0**	**0.0**
BGLC	**Bering Glacier**	**4.43**	**81**	P	**Pn**	**01 41 56.9**	**+0.9**
	baz=268						
BPAW	**Bear Paw Mtn.**	**4.45**	**6**		**Pn**	**01 41 55.7**	**-0.5**
BPAW	**Bear Paw Mtn.**	**4.45**	**6**	P	**Pn**	**01 41 56.7**	**+0.5**
	baz=187,SNR=13						
KHIT	**Khitrov Hills**	**4.47**	**77**		**Pn**	**01 41 56.5**	**-0.1**
VRDI	**Verde Repeater**	**4.52**	**66**		**Pn**	**01 41 57.5**	**+0.1**
VRDI	**Verde Repeater**	**4.52**	**66**	IAML		01 42 48.4	
	comp=E,38nm,0.6s						
VRDI				IAML		01 42 48.7	
	comp=N,45nm,0.5s						
PAX	**Paxson**	**4.56**	**41**		**Pn**	**01 41 58.1**	**+0.3**
PAX	**Paxson**	**4.56**	**41**	P	**Pn**	**01 41 58.3**	**+0.5**
	baz=227,SNR=24						
J20K	**Nowinta River**	**4.60**	**348**		**Pn**	**01 41 58.1**	**-0.2**
J20K	**Nowinta River**	**4.60**	**348**	P	**Pn**	**01 41 58.3**	**0.0**
	baz=167,SNR=62						
BWN	**Browne**	**4.65**	**14**	Pn	**Pn**	**01 41 59.8**	**+0.8**
BWN				IAML		01 43 36.4	
	comp=E,71nm,1.1s						
SNH	**Sunshine Point**	**4.66**	**80**		**Pn**	**01 41 59.5**	**+0.3**
SNH	**Sunshine Point**	**4.66**	**80**	IAML		01 42 53.0	
	comp=N,74nm,0.5s						
SNH				IAML		01 42 53.5	
	comp=E,75nm,0.5s						
WAX	**Waxell Ridge**	**4.67**	**77**		**Pn**	**01 41 59.2**	**0.0**
TGL	**Tana Glacier**	**4.72**	**73**		**Pn**	**01 41 59.9**	**0.0**
TGL	**Tana Glacier**	**4.72**	**73**	IAML		01 42 51.6	
	comp=E,63nm,0.5s						
TGL				IAML		01 42 55.5	
	comp=N,49nm,0.5s						
MCARA	**McCarthy VSAT**	**4.76**	**65**		**Pn**	**01 41 59.9**	**-0.6**
MCARA	**McCarthy VSAT**	**4.76**	**65**	IAML		01 42 55.7	
	comp=E,56nm,0.5s						
MCARA				IAML		01 42 57.6	
	comp=N,56nm,0.3s						
MCARA	**McCarthy VSAT**	**4.76**	**65**	P	**Pn**	**01 42 01.1**	**+0.6**
	baz=253						
CYK	**Cape Yakataga**	**4.83**	**81**		**Pn**	**01 42 01.6**	**+0.2**
ISLE	**Juniper Island**	**4.94**	**75**		**Pn**	**01 42 03.5**	**+0.5**
KIAG	**Kiagna River**	**4.97**	**72**		**Pn**	**01 42 03.9**	**+0.4**
PTPK	**Patty Peak**	**4.97**	**68**		**Pn**	**01 42 03.9**	**+0.3**
BALM	**Baldy**	**5.00**	**70**		**Pn**	**01 42 03.8**	**0.0**
BAGL	**Bagley Icefiel**	**5.05**	**77**		**Pn**	**01 42 05.0**	**+0.6**
K24K	**Donnelly Dome**	**5.08**	**33**		**Pn**	**01 42 05.6**	**+0.7**
K24K	**Donnelly Dome**	**5.08**	**33**	P	**Pn**	**01 42 06.6**	**+1.8**
	baz=219,SNR=11						
MESA	**MESA**	**5.10**	**80**		**Pn**	**01 42 05.4**	**+0.1**
MESA	**MESA**	**5.10**	**80**	P	**Pn**	**01 42 05.7**	**

IL31		5.63	23			Pn	01 42 12.2	0.0
ILAR	Eielson Array	5.63	23	P		Pn	01 42 12.2	0.0
	comp=E,4.1nm,0.5s,baz=211,slow=14,SNR=90							
ILAR				S		Sn	01 43 13.1	-2.4
	comp=E,5.5nm,0.5s,baz=191,slow=11,SNR=1.7							
ILAR	Eielson Array	5.63	23	Pn		Pn	01 42 11.6	-0.7
SAMH	Samovar Hills	5.69	81			Pn	01 42 13.8	+0.6
SCRK	Sand Creek	5.74	38			Pn	01 42 13.8	-0.1
SCRK	Sand Creek	5.74	38	P		Pn	01 42 13.9	-0.1
	baz=225							
J25K	Salcha River,	5.84	30			Pn	01 42 15.2	0.0
J25K	Salcha River,	5.84	30	P		Pn	01 42 15.8	+0.7
	baz=216							
POKR	Poker Plat Res	5.84	20			Pn	01 42 15.3	+0.2
POKR	Poker Plat Res	5.84	20	P		Pn	01 42 15.2	0.0
	baz=204,SNR=6.4							
YUK2	White River	5.88	64			Pn	01 42 17.0	+1.2
PCA	Pinnacle	5.95	81			Pn	01 42 17.2	+0.5
PINM	Pinnacle	5.95	81	P		Pn	01 42 17.4	+0.7
	baz=271							
L27K	Beaver Creek,	5.96	51	Pn		Pn	01 42 17.0	+0.3
L27K	Beaver Creek,	5.96	51	P		Pn	01 42 17.7	+1.0
	baz=240							
BC03		5.97	51			Pn	01 42 18.2	+1.3
BCAR	Beaver Creek A	5.97	51			Pn	01 42 17.8	+0.8
H21K	Melozitna Rive	5.99	357			Pn	01 42 16.9	-0.4
H21K	Melozitna Rive	5.99	357	P		Pn	01 42 16.8	-0.4
	baz=176,SNR=21							
YUK3	Moose Creek	6.05	65			Pn	01 42 19.4	+1.2
YUK3	Moose Creek	6.05	65	P		Pn	01 42 19.2	+0.9
	baz=255,SNR=6.6							
J26L	Joseph Creek	6.25	36			Pn	01 42 21.1	+0.4
J26L	Joseph Creek	6.25	36	P		Pn	01 42 21.0	+0.2
	baz=224							
H23K	Yukon River	6.25	10			Pn	01 42 20.8	0.0
H23K	Yukon River	6.25	10	P		Pn	01 42 20.9	+0.1
	baz=192,SNR=25							
BCPM	Bancas Point	6.26	82			Pn	01 42 21.0	0.0
YUK8	Steele Glacier	6.27	70	P		Pn	01 42 23.0	+1.7
	baz=261,SNR=15							
IM03		6.36	354			Pn	01 42 22.2	+0.2
IMAR	Indian Mountai	6.36	354	Pn		Pn	01 42 21.4	-0.8
K27K	Chicken	6.41	43	Pn		Pn	01 42 24.0	+1.1
PNL	Peninsula	6.41	85			Pn	01 42 22.9	-0.1
PNL	Peninsula	6.41	85	P		Pn	01 42 23.0	+0.1
	baz=276,SNR=27							
H24K	Noodor Dome	6.45	15			Pn	01 42 23.2	-0.3
H24K	Noodor Dome	6.45	15	P		Pn	01 42 23.2	-0.3
	baz=199							
YUK4	Talbot Arm	6.82	70	P		Pn	01 42 30.0	+1.4
	baz=261							
YUK6	Outpost Mounta	6.91	74			Pn	01 42 29.6	-0.3
YUK6	Outpost Mounta	6.91	74	P		Pn	01 42 30.2	+0.3
	baz=266							
HYT	Haines Junctio	7.32	75			Pn	01 42 36.1	+0.7
HYT	Haines Junctio	7.32	75	P		Pn	01 42 36.0	+0.5
	baz=268							
N30M	Aishikik Lake	7.58	70			Pn	01 42 38.3	-0.5
N30M	Aishikik Lake	7.58	70	P		Pn	01 42 38.6	-0.2
	baz=263,SNR=6.2							
COLD	Coldfoot	7.60	5			Pn	01 42 39.5	+0.4
COLD	Coldfoot	7.60	5	P		Pn	01 42 39.3	+0.2
	baz=187							
M30M	Minto, Yukon	7.92	62			Pn	01 42 42.8	-0.7
M30M	Minto, Yukon	7.92	62	P		Pn	01 42 44.2	+0.7
	baz=256							
PLBC	Pleasant Camp	7.96	85	P		Pn	01 42 45.1	+1.0
	baz=279,SNR=13							
O30N	Mendenhall	8.01	75			Pn	01 42 44.0	-0.7
O30N	Mendenhall	8.01	75	P		Pn	01 42 44.9	+0.1
	baz=269,SNR=5.3							
BM03	Burnt Mountain	8.42	20			Pn	01 42 49.1	-1.2
BMAR	Burnt Mountain	8.44	20	Pn		Pn	01 42 49.6	-0.8
WHY	Whitehorse	8.61	76	Pn		Pn	01 42 53.0	0.0
WHY	Whitehorse	8.61	76	P		Pn	01 42 53.0	0.0
	baz=271,SNR=7.3							
BESE	Bessie Mountai	8.91	90			Pn	01 42 57.0	+0.1
TOLK	Toolik Lake Re	9.04	6	Pn		Pn	01 42 59.6	+0.9
SIT	Sitka	9.17	100			Pn	01 42 59.3	-1.2
SIT	Sitka	9.17	100	P		Pn	01 42 59.5	-1.0
	baz=294							
JIS	Juneau Island	9.23	91	Pn		Pn	01 43 01.8	+0.5
P32M	Atlin	9.28	83	P		Pn	01 43 02.7	+0.6
	baz=279							
TNA	Tin City	9.36	316			Pn	01 43 03.6	+0.6
TNA	Tin City	9.36	316	P		Pn	01 43 03.7	+0.7
	baz=122							
P33M	Teslin, Yukon	9.65	79	Pn		Pn	01 43 07.3	+0.1
P33M	Teslin, Yukon	9.65	79	P		Pn	01 43 08.0	+0.9
	baz=275							
UNV	Unalaska Valle	9.86	240			Pn	01 43 08.6	-1.3
CRAG	Craig	10.99	104			Pn	01 43 22.6	-2.7
DLBC	Dease Lake	11.39	87	P		Pn	01 43 32.9	+2.1
	comp=E,3.0nm,0.3s,baz=254,slow=9.6,SNR=13							
DLBC				S		Sn	01 45 35.8	-0.1
	comp=E,1.7nm,0.3s,baz=131,slow=24,SNR=9.5							
DLBC	Dease Lake	11.39	87	Pn		Pn	01 43 30.2	-0.6
YKA	Yellowknife Ar	18.14	65	P		Pn	01 44 57.4	+0.5
	comp=E,0.5nm,0.4s,baz=276,slow=9.7,SNR=5.2							
TXAR	Lajitas Array	44.42	111	P		P	01 48 56.0	+2.9
	comp=E,0.2nm,0.7s,baz=304,slow=5.3,SNR=2.9							
	comp=E,0.2nm,0.7s							
ARCES	ARCESS Array B	51.05	1	P		P	01 49 43.0	-0.6
	comp=E,1.8nm,0.9s,baz=352,slow=5.5,SNR=6.8							
	comp=E,1.8nm,0.9s							
NOA	NORSAR Array B	58.90	9	P		P	01 50 39.3	-1.0
	comp=E,0.6nm,0.7s,baz=352,slow=7.1,SNR=2.7							
	comp=E,0.6nm,0.7s							
FINES	FINESS Array B	59.18	1	P		P	01 50 41.5	-0.6
	comp=E,1.0nm,0.7s,baz=355,slow=6.1,SNR=5.2							
	comp=E,1.0nm,0.7s							
ESDC	Sonseca Array	77.53	25	P		P	01 52 37.7	+0.7
	comp=E,1.1nm,1.0s,baz=350,slow=5.2,SNR=3.5							
	comp=E,1.1nm,1.0s							
BRTR	Keskin Array B	80.82	356	P		P	01 52 54.8	-0.2
	comp=E,0.4nm,0.5s,baz=47,slow=1.6,SNR=3.7							
	comp=E,0.4nm,0.5s							

*IDC **17** 01:55:05.2±2.0, 17.82S×178.52W, h610km±20km, mb3.3/9, mbtmp4.3/10, Error ellipse: s-maj=61.1km s-min=16.3km az=153.0*

ISC 17 01:55:04.3±1.2, **17.9S**±0.4×**178.4W**±0.2, **h600**km, **n11**, σ0s**72**/13, **mb4.0**/9, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MSVF	Nonsavu	3.35	272	P		P	01 56 26.9	+1.3
	27nm,0.6s,baz=152,slow=22,SNR=21							
CTA	Charters Tower	33.42	260	P		P	02 00 55.0	-0.2
	4.3nm,0.5s,baz=93,slow=7.9,SNR=7.0							
	4.3nm,0.5s							
STKA	Stephens Creek	38.62	241	P		P	02 01 37.9	+0.1
	3.2nm,0.7s,baz=88,slow=10,SNR=6.7							
	3.2nm,0.7s							
WRA	Warramunga Arr	44.61	259	P		P	02 02 24.3	-0.7
	2.8nm,0.3s,baz=96,slow=7.2,SNR=32							
WRA				PcP		PcP	02 03 54.0	-0.6
	0.3nm,0.4s,baz=92,slow=3.4,SNR=2.7							
	2.8nm,0.3s							
ASAR	Alice Springs	44.77	254	P		P	02 02 25.8	-0.4
	13nm,0.5s,baz=87,slow=8.8,SNR=77							
ASAR				PcP		PcP	02 03 54.4	-0.7
	0.7nm,0.4s,baz=104,slow=4.3,SNR=3.9							
	13nm,0.5s							
SIJI	Sorong	52.20	283	P		P	02 03 21.6	+0.4
	8.4nm,0.2s,baz=66,slow=12,SNR=3.5							
	8.4nm,0.2s							
NVAR	Mina Array Bea	79.42	44	P		P	02 06 10.2	+0.5
	1.0nm,0.8s,baz=216,slow=7.5,SNR=4.1							
	1.0nm,0.8s							
ILAR	Eielson Array	85.85	13	P		P	02 06 40.0	-1.0
	0.2nm,0.4s,baz=226,slow=4.9,SNR=2.3							
	0.2nm,0.4s							
TXAR	Lajitas Array	86.00	58	P		P	02 06 43.4	+0.7
	0.5nm,0.7s,baz=217,slow=6.3,SNR=7.6							
	0.5nm,0.7s							
PDAR	Pinedale Array	87.34	43	P		P	02 06 48.4	-0.5
	0.3nm,0.5s,baz=191,slow=1.5,SNR=3.9							
	0.3nm,0.5s							
BRTR	Keskin Array B	144.73	315	PKP		PKPdf	02 13 34.3	+0.2
	0.6nm,0.9s,baz=72,slow=0.8,SNR=3.3							

*NEIC **17** 02:22:13.0±1.2, 17.9N±0.4×68.84W±0.07, h160km±17km, Error ellipse: s-maj=62.8km s-min=7.5km az=185.0*

*RSPR **17** 02:22:13.2, 18.10N×68.75W, h169km±5km, MD3.7/4*
*OSPL **17** 02:22:14.8±1.8, 17.98N×69.03W, h80km±45km, ML2.3*

ISC 17 02:22:14.0±1.8, **18.0N**±0.3×**68.81W**±0.07, **h150**km, **n38**, σ0s**90**/35, **7C-2D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DR12	Loma Pena Alta	0.95	325	Pn		Pn	02 22 38.2	-0.3
IDE	Isla Desecheo	1.33	73	⇑eP		Pn	02 22 41.1	-0.7
IDE	Isla Desecheo	1.33	73	eS		Sn	02 23 04.0	+0.9
BANI	BANI	1.52	285	Pn		Pn	02 22 43.6	-0.3
BANI	BANI	1.52	285	*i* P		Pn	02 22 36.5	-7.4
BANI				eS		Sn	02 22 52.8	-14
BANI				IAML			02 22 59.5	
	comp=N,27nm,2.6s							
CRPR	Cabo Rojo, PR	1.62	90	⇓eP		Pn	02 22 43.7	-1.1
CRPR	Cabo Rojo, PR	1.62	90	eS		Sn	02 23 08.6	+0.1
CRPR	Cabo Rojo, PR	1.62	90			Pn	02 22 43.7	-1.1
CRPR	Cabo Rojo, PR	1.62	90	IAML			02 23 16.9	
	comp=N,27nm,2.6s							
CRPR	Cabo Rojo, PR	1.62	90			Sn	02 23 08.6	+0.1
CRPR	Cabo Rojo, PR	1.62	90	*i* P		Pn	02 22 43.8	-1.1
CRPR				IAML			02 23 11.2	
	comp=Z,14nm,2.7s							
LSP	Las Mesas	1.65	84	⇑eP		Pn	02 22 46.8	+1.5
LSP	Las Mesas	1.65	84	eS		Sn	02 23 10.3	+1.1
AGPR	Aguadilla, PR	1.68	74	*i* P		Pn	02 22 44.6	-0.9
AGPR				IAML			02 23 12.5	
	comp=Z,38nm,0.9s							
AOPR	Arecibo Observ	1.99	80	⇑eP		Pn	02 22 49.2	+0.1
AOPR	Arecibo Observ	1.99	80	eS		Sn	02 23 16.6	+0.6
AOPR	Arecibo Observ	1.99	80			Pn	02 22 49.2	+0.1
AOPR						Sn	02 23 16.6	+0.6
AOPR	Arecibo Observ	1.99	80	IAML			02 23 19.7	
	comp=E,51nm,0.4s							
AOPR				IAML			02 23 19.7	
	comp=N,37nm,0.5s							
CELP	Cerrillos	2.13	88	⇓eP		Pn	02 22 51.5	+0.8
CELP	Cerrillos	2.13	88	eS		Sn	02 23 20.6	+1.8
CELP	Cerrillos	2.13	88			Pn	02 22 51.5	+0.8
CELP	Cerrillos	2.13	88			Sn	02 23 20.6	+1.8
CELP	Cerrillos	2.13	88	IAML			02 23 05.1	
	comp=N,15nm,2.5s							
LOBA2	Hotel Casa Bon	2.17	272	*i* P		Pn	02 22 45.1	-6.1
LOBA2				eS		Sn	02 23 09.5	-10
LOBA2				IAML			02 23 12.5	
	comp=Z,23nm,1.7s							
HUMP	Col San Antoni	2.82	87	⇑eP		Pn	02 22 58.7	-0.5
HUMP	Col San Antoni	2.82	87	eS		Sn	02 23 34.5	+0.5
HUMP	Col San Antoni	2.82	87			Pn	02 22 58.7	-0.5
HUMP						Sn	02 23 34.5	+0.5
HUMP	Col San Antoni	2.82	87	IAML			02 23 56.1	
	comp=N,9.5nm,1.7s							
CBYP	Canovanas	2.82	84	⇑eP		Pn	02 22 58.4	-0.9
CBYP	Canovanas	2.82	84	eS		Sn	02 23 34.4	+0.2
CBYP	Canovanas	2.82	84			Pn	02 22 58.4	-0.9
CBYP						Sn	02 23 34.4	+0.2
CUPR	Culebra, Puert	3.37	84	⇑eP		Pn	02 23 05.5	-0.6
CUPR	Culebra, Puert	3.37	84	eS		Sn	02 23 45.3	-1.1
CUPR	Culebra, Puert	3.37	84			Pn	02 23 05.5	-0.6
CUPR						Sn	02 23 45.3	-1.1
CUPR	Culebra, Puert	3.37	84	IAML			02 23 57.3	
	comp=N,7.0nm,0.9s							
CUPR				IAML			02 24 06.6	
	comp=E,7.7nm,1.0s							
SJVI	Gifft Hill Sch	3.85	85	⇑eP		Pn	02 23 11.8	-0.7
SJVI	Gifft Hill Sch	3.85	85	eS		Sn	02 23 58.8	+1.0
SJVI	Gifft Hill Sch	3.85	85			Pn	02 23 11.8	-0.7

IDC 17 02:29:51.0±2.4, **20.75S**×**169.12E**, **h0**km, **mb3.7**/3, **mbtmp3.6**/4, **ML2.9**/1, **MS3.4**/1, **Error ellipse: s-maj=117.1km s-min=26.4km az=151.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DZM	Mont Dzumac	2.82	242	Pn		Pn	02 30 38.0	+0.6
	1.8nm,0.3s,baz=59,slow=19,SNR=113							
DZM				Sn		Sn	02 31 11.4	-0.8
	17nm,0.3s,baz=296,slow=22,SNR=7.1							
	11nm,0.6s							
WRA	Warramunga Arr	32.59	265	P		P	02 36 24.1	-0.4
	0.6nm,0.9s,baz=97,slow=8.4,SNR=5.7							
	0.6nm,0.9s							
ASAR	Alice Springs	32.68	258	P		P	02 36 25.4	+0.1
	1.3nm,0.8s,baz=83,slow=9.2,SNR=10							
ASAR				LR		LR	02 49 03.2	
	comp=Z,57nm,19.2s,baz=154,slow=35							
	1.3nm,0.8s							
NVAR	Mina Array Bea	89.88	49	P		P	02 42 51.9	-0.4
	0.2nm,0.4s,baz=242,slow=6.9,SNR=1.7							
	0.2nm,0.4s							
GERES	GERESS Array B	145.75	331	PKPbc		PKPdf	02 49 31.6	-0.1
	0.2nm,0.4s,baz=36,slow=3.9,SNR=3.9							

MAN 17 02:29:57.2, 16.53N×120.96E, h1km, **mb4.1, ML2.9, MS2.5, 1C-4D, Luzon**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SAMP	Sagada Mountai	0.55	354	⇓*i*P		Pg	02 30 08.2	+0.3
BOLP	Bolinao	1.02	262	⇓*i*P		Pb	02 30 16.8	+0.1
SCZP	Santa Cruz	1.26	234	⇓*i*P		Pg	02 30 21.9	+0.9
SIPP	Brgy, Tapao	1.47	341	⇓eP		Pn	02 30 23.7	+0.1
SIPP				eS			02 31 06.0	
LUBP	Lubang	2.85	194	⇑*i*P		Pn	02 30 44.0	+1.3
LUBP				*i* S			02 31 19.6	

*TAP **17** 02:30:14.8, 24.86N×122.98E, h20km±2km, ML3.0, D*
*JMA **17** 02:30:16.2±0.3, 25°N±1°×12°3E±1°, h13km±4km, MV3.0/8, NW OFF ISHIGAKIJIMA IS*

ISC 17 02:30:15.0±1.2, **24.84N**±0.05×**122.92E**±0.03, **h15**km±9km, **n32**, σ0s**67**/53, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
YOJ	Yonaguni jima	0.38	168	*i* P		Pg	02 30 22.8	0.0
	baz=170							
YOJ				*i* S		Sg	02 30 27.6	-0.3
	baz=170							
YOJ	Yonaguni jima	0.38	168	P		Pg	02 30 22.8	0.0
YOJ				eS		Sg	02 30 27.4	-0.6
JYNG	Yonagunijimaku	0.38	177	P		Pg	02 30 22.9	+0.1
JYNG				S		Sg	02 30 27.4	-0.7
TWB1	Santiao Chiao	0.86	282	*i* P		Pb	02 30 30.7	-1.0
	baz=279							
TWB1				eS		Sg	02 30 44.1	+1.0
	baz=279							
IRIF	Iriomote-Funau	0.89	124	P		Pg	02 30 32.5	+0.3
IRIF				eS		Sg	02 30 44.5	+0.6
SXI1	Grass Mountain	0.98	285	*i* P		Pb	02 30 33.4	-0.4
	baz=283							
SXI1				eS		Sg	02 30 47.7	+0.8
	baz=283							
TIPB	Shuangxi	1.00	278	eP		Pb	02 30 33.7	-0.4
	baz=275							
TIPB				eS		Sb	02 30 46.6	-0.6
	baz=275							
NWF	Wu-fen Shan	1.06	283	eP		Pb	02 30 34.5	-0.7
	baz=282							
EWUT	Wuta	1.11	250	eP		Pb	02 30 35.8	-0.1
	baz=248							
EWUT				eS		Sb	02 30 50.6	+0.4
	baz=248							
NDS	Dongshan	1.11	260	eP		Pb	02 30 35.7	-0.3
	baz=258							
NDS				eS		Sb	02 30 50.1	-0.2
	baz=258							
TWE	Neicheng	1.15	265	eP		Pn	02 30 36.5	0.0
	baz=262							
TWE				eS		Sb	02 30 50.9	-0.3
	baz=262							
ENA	Nanau	1.15	250	eP		Pn	02 30 35.8	-0.7
	baz=247							
ENA				eS		Sb	02 30 51.7	+0.3
	baz=247							
JKRS	Kuro-shima	1.16	121	eP		Pg	02 30 37.6	+0.3
JKRS				eS		Sg	02 30 52.8	+0.4
JIJ	Ishigaki jima	1.21	113	P		Pn	02 30 36.7	-0.7
FUSB	Fushanzhiwuyua	1.22	267	eP		Pn	02 30 36.0	-1.5
	baz=264							
FUSB				eS		Sb	02 30 53.1	-0.2
	baz=264							
NWLT	Wulai	1.29	268	eP		Pn	02 30 38.8	+0.2
	baz=265							
NWLT				eS		Sb	02 30 55.3	-0.1
	baz=265							
LATG	Datong	1.30	257	P		Pn	02 30 39.2	+0.4
	baz=255							
LATG				eS		Sb	02 30 55.3	-0.6
	baz=255							
NACB	Ninganchiao	1.38	242	eP		Pb	02 30 40.9	+0.4
	baz=240							
NACB				eS		Sn	02 30 58.1	+0.4
	baz=240							
YHNB	Yeheng	1.42	264	P		Pn	02 30 40.5	+0.1
	baz=261							
YHNB				eS		Sn	02 30 58.6	-0.2
	baz=261							
NSK	Sanguang	1.43	264	eP		Pn	02 30 40.8	+0.3
	baz=261							
NSK				eS		Sn	02 30 58.7	-0.4
	baz=261							
ETLH	Xiulin Townshi	1.45	245	eP		Pb	02 30 42.0	+0.2
	baz=253							
ETLH				eS		Sb	02 31 01.6	+1.4
	baz=253							
NNSB	Datong	1.46	254	eP		Pn	02 30 41.5	+0.5
	baz=252							
NNSB				eS		Sn	02 30 58.8	-1.1
	baz=252							
NNS	Nan Shan	1.46	255	eP		Pb	02 30 42.4	+0.4
	baz=255							
JTJ	Tarama	1.63	96	eP		Pn	02 30 43.9	+0.7
FUSS	Fushou	1.64	249	eP		Pb	02 30 44.7	-0.4
	baz=250							
NFF	Wufeng Townshi	1.65	263	eP		Pn	02 30 43.5	-0.1
	baz=263							
WHF	Hehuan Shan	1.66	246	eP		Pn	02 30 45.1	+1.1
	baz=244							
WHF				eS		Sb	02 31 07.8	+1.3
	baz=244							
NSTT	Nanjuang	1.76	264	eP		Pb	02 30 46.7	-0.3
	baz=264							
CHGB	Renai	1.77	244	eP		Pn	02 30 45.6	+0.3
	baz=245							
WUSB	Renai	1.85	243	eP		Pn	02 30 47.7	+1.4
	baz=229							
HGSD	Ruisui	1.91	226	eP		Pn	02 30 45.8	-1.4
	baz=226							
VWDT	VWDT	1.95	237	eP		Pn	02 30 47.9	+0.3
	baz=238							

TRN 17 02:40:47.3, 18.00N×62.64W, h14km, **MD3.9, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SMRT	St. Maarten	0.42	277	eP		Pn	02 40 57.9	-1.0
SMRT				eS		Sn	02 41 04.8	-1.7
SEUS	St. Eustatius	0.60	213	eP		Pn	02 41 01.6	+0.1
SEUS				eS		Sn	02 41 12.1	+1.1
SKI	Saint Kitts	0.67	188	eP		Pn	02 41 03.8	+1.3
SKI				eS		Sn	02 41 13.8	+1.0
SKOC	St. Kitts, UWI	0.71	187	eP		Pn	02 41 03.8	+0.9
SKOC				eS		Sn	02 41 15.3	+1.6
ANWB	Willy Bob	0.88	112	eP		Pn	02 41 06.8	+1.6
ANWB				eS		Sn	02 41 22.0	+4.2
BPA	Boggy Peak	1.21	142	eP		Pg	02 41 11.3	+0.7
BPA				eS		Sg	02 41 28.4	+2.0
ANBD	Bethesda, Anti	1.26	139	eP		Pg	02 41 12.2	+0.5
ANBD				eS		Sg	02 41 30.1	+1.9
MBFL	Flemmings, Mon	1.31	162	eP		Pg	02 41 12.9	+0.3
MBFL				eS		Sg	02 41 32.0	+2.3
MLYT	Lee's Yard	1.34	161	eP		Pg	02 41 13.7	+0.5
MLYT				eS		Sg	02 41 33.0	+2.3
ABD	La Joyeuse, An	1.88	144	eP		Pb	02 41 20.5	-0.9
ABD				eS		Sb	02 41 45.0	+0.3
CBE	Ff, Capester	2.16	153	eP		Pb	02 41 25.3	-1.0
CBE				eS		Sb	02 41 52.0	-0.9
TBG	Guadaloupe-3	2.34	156	eP		Pn	02 41 27.1	+1.7
TBG				eS		Sb	02 41 56.6	-1.5
TDBA	Terre de Bas,	2.35	156	eP		Pb	02 41 27.6	-1.8
TDBA				eS		Sb	02 41 57.8	-0.5
MAGL	Barre de l'ile	2.42	147	eP		Pn	02 41 27.5	+1.1
MAGL				eS		Sb	02 41 59.0	-1.3
MDCT	Cottage Hill,	2.63	154	eP		Pb	02 41 32.0	-2.2
MDCT				eS		Sb	02 42 04.2	-2.1
DSLB	Salisbury	2.81	155	eP		Pn	02 41 33.8	+2.0
DSLB				eS		Sb	02 42 08.5	-2.9
FDF	Fort de France	3.55	156	eS		Sn	02 42 26.6	+2.7
ILAM	Ilet Lapin Mar	3.63	152	eS		Sn	02 42 27.3	+1.5
BIM	Bigot	3.78	156	eP		Pn	02 41 47.9	+2.7
BIM				eS		Sn	02 42 31.5	+2.0
MPOM	Morne Pois Mar	3.93	154	eP		Pn	02 41 50.5	+3.3
MPOM				eS		Sn	02 42 35.2	+2.0
SLBI	Saint Lucia, B	4.27	158	eP		Pn	02 41 53.7	+1.8
SLBI	Saint Lucia, B	4.27	158	eS		Sn	02 42 42.6	+1.1

VAO 17 02:40:48.2±0.9, **8.06S**×**73.84W**, **h141**km, **mbR4.0, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CZSB	Cruzeiro do Su	1.18	74	eP		Pn	02 41 13.9	+0.1
ETMB	Extrema	7.74	104	eP		Pn	02 42 38.1	-0.1
MACA	Manacapuru-AM	13.97	70	eP		Pn	02 44 00.9	+0.7
CLDB	Colider	18.02	100	eP		P	02 44 48.7	+0.2
NPGB	Novo Progresso	18.35	88	eP		P	02 44 51.8	-0.4
ITTB	Itaituba	18.37	80	eP		P	02 44 51.5	-0.8
SNDB	Serra Nova Dou	22.54	102	eP		P	02 45 36.1	-0.5
PRPB	Parauapebas	23.91	87	eP		P	02 45 49.6	+0.2
ALF01	Guarapari-ES	34.34	115	eP		P	02 47 22.2	+0.5

*SOME **17** 02:47:55.6, 46.20N×67

	32nm,0.3s								
MRKS	**Merke**	**5.58**	**118**	*e*P		**Pb**	**02 49 38.3**	**+3.0**	
	14nm,0.4s								
MRKS				*e*S		**Sg**	**02 50 52.2**	**-4.7**	
	53nm,0.3s								
MRKS	**Merke**	**5.58**	**118**	Pg		**Pb**	**02 49 33.8**	**-1.5**	
	14nm,0.4s								
MRKS				Lg		Lg	02 50 41.3		
	53nm,0.3s								
AB31	**Akbulak array**	**5.79**	**312**	⇑Pn		**Pn**	**02 49 25.6**	**+1.9**	
	4.0nm,0.4s,baz=120,slow=14,SNR=203								
AB31				⇑Sn		**Sn**	**02 50 30.7**	**+0.5**	
	6.0nm,0.3s,baz=122,slow=24,SNR=5.6								
EKS2	**Erkin-Say**	**5.97**	**117**	P		**Pn**	**02 49 28.1**	**+1.8**	
	SNR=13								
BRZS	**Berezniki**	**6.03**	**41**	*e*P		**Pn**	**02 49 31.3**	**+4.2**	
	4.8nm,0.1s								
BRZS				*e*S		**Sn**	**02 50 39.5**	**+3.4**	
	43nm,0.1s								
BRZS	**Berezniki**	**6.03**	**41**	Pg		Pn	02 49 33.3	+6.2	
	6.3nm,0.2s								
BRZS				Lg		Lg	02 50 40.1		
	46nm,0.2s								
USP	**Ospenovka**	**6.15**	**109**	P		**Pn**	**02 49 29.7**	**+1.1**	
	SNR=56								
SGDS	**Sogindy**	**6.16**	**107**	Pg		**Pb**	**02 49 44.6**	**-0.6**	
	8.9nm,0.5s								
SGDS				Lg		Lg	02 50 59.0		
	28nm,0.5s								
CHMS	**Chumysh**	**6.43**	**111**	P		**Pn**	**02 49 34.2**	**+1.6**	
	SNR=6.3								
CHMS	**Chumysh**	**6.43**	**111**	⇓Pg		Pb	02 49 55.2	+5.4	
	4.5nm,0.3s								
CHMS				Lg		Lg	02 49 58.0		
	594nm,0.1s								
CHMS				⇓Sn		**Sn**	**02 50 45.3**	**-0.7**	
	10nm,0.5s								
CHMS				⇑Lg		Lg	02 51 20.0		
	46nm,0.8s								
AAK	**Ala-Archa**	**6.43**	**114**	Pn		**Pn**	**02 49 34.9**	**+2.2**	
	2.6nm,0.3s,baz=274,slow=4.4,SNR=4.5								
AAK				Pg		Pb	02 49 55.9	+6.0	
	2.8nm,0.3s,baz=271,slow=6.1,SNR=5.0								
AAK				Lg		Lg	02 51 21.6		
	4.2nm,0.3s,baz=18,slow=20,SNR=5.8								
	6.0nm,0.3s								
UCH	**Uchtor**	**6.66**	**117**	P		**Pn**	**02 49 38.8**	**+2.7**	
	SNR=12								
KBK	**Karagaybulak**	**6.72**	**113**	P		**Pn**	**02 49 38.4**	**+1.8**	
	SNR=5.2								
KRBS	**Karabastau**	**6.78**	**103**	Pg		**Pb**	**02 49 55.2**	**-0.5**	
	3.9nm,0.3s								
KRBS				Lg		Lg	02 51 17.4		
	11nm,0.5s								
DGS	**Degeres**	**7.01**	**106**	Pg		**Pb**	**02 49 59.2**	**-0.5**	
	6.3nm,0.5s								
DGS				Lg		Lg	02 51 24.3		
	47nm,0.4s								
TKM2	**Tokmak 2**	**7.02**	**109**	P		**Pn**	**02 49 41.8**	**+1.0**	
	SNR=5.8								
TKM2	**Tokmak 2**	**7.02**	**109**	⇑Pn		**Pn**	**02 49 41.3**	**+0.4**	
	1.3nm,0.5s								
TKM2				⇑Pg		Pb	02 50 04.5	+4.6	
	8.2nm,0.8s								
TKM2				⇑Lg		Lg	02 51 37.2		
	52nm,1.1s								
KST	**Kastek**	**7.22**	**107**	Pg		**Pb**	**02 50 03.9**	**+0.7**	
	11nm,0.5s								
KST				Lg		Lg	02 51 32.8		
	44nm,0.7s								
KTBS	**Karatobe**	**7.47**	**101**	Pg		**Pb**	**02 50 06.6**	**-0.8**	
	3.9nm,0.4s								
KTBS				Lg		Lg	02 51 37.2		
	1.0nm,0.4s								
AKTO	**Aktyubinsk**	**7.50**	**313**	Pn		**Pn**	**02 49 50.0**	**+2.9**	
	1.4nm,0.3s,baz=101,slow=14,SNR=13								
AKTO				Sn		**Sn**	**02 51 13.0**	**+0.8**	
	1.2nm,0.3s,baz=145,slow=23,SNR=8.4								
AKTO				Lg		Lg	02 51 59.0		
	1.1nm,0.3s,baz=58,slow=18,SNR=1.8								
	2.7nm,0.4s								
AKTO	**Aktyubinsk**	**7.50**	**313**	⇑Pn		**Pn**	**02 49 50.1**	**+2.9**	
	6.6nm,1.1s								
AKTO				⇓Sn		**Sn**	**02 51 15.1**	**+2.9**	
	7.2nm,0.5s								
ULHL	**Ulahol**	**7.75**	**112**	P		**Pn**	**02 49 52.8**	**+1.9**	
	SNR=5.5								
KNDC	**Almaty**	**7.83**	**104**	⇓Lg		Lg	02 52 05.7		
	58nm,0.6s								
BRVK	**Borovoye**	**7.87**	**17**	⇑Pn		**Pn**	**02 49 54.8**	**+2.6**	
	2.7nm,0.5s								
BRVK				⇑Sn		**Sn**	**02 51 23.7**	**+2.5**	
	6.5nm,0.4s								
TNSS	**Tian-Shan**	**7.88**	**105**	Pg		**Pb**	**02 50 15.7**	**+1.0**	
	3.1nm,0.3s								
TNSS				Lg		Lg	02 51 53.0		
	15nm,0.4s								
KOTS	**Kotyrbulak**	**7.92**	**104**	Pg		**Pb**	**02 50 15.8**	**+0.6**	
	2.7nm,0.3s								
KOTS				Lg		Lg	02 51 53.0		
	28nm,0.4s								
ARXS	**Arharly**	**8.13**	**96**	Pg		**Pb**	**02 50 18.0**	**-0.6**	
	2.7nm,0.3s								
ARXS				Lg		Lg	02 51 56.5		
	22nm,0.6s								
TDK	**Taldyqorghan**	**8.38**	**90**	Pg		**Pb**	**02 50 21.2**	**-1.8**	
	72nm,0.3s								
TDK				Lg		Lg	02 52 02.2		
	72nm,0.3s								
SATY	**Saty**	**8.87**	**102**	Pg		Pg	02 50 32.7	-15	
	2.0nm,0.2s								
SATY				Lg		Lg	02 52 22.0		
	11nm,0.7s								
KPKS	**Kokpek**	**8.93**	**99**	Pg		Pg	02 50 33.1	-16	
	2.8nm,0.2s								
KPKS				Lg		Lg	02 52 22.4		
	16nm,0.4s								
KAPS	**Kapalarasan**	**9.02**	**87**	Pg		Pn	02 50 32.9	+25	
	3.4nm,0.2s								
KAPS				Lg		Lg	02 52 22.2		
	14nm,0.4s								
UZB	**Uzynbulak**	**9.26**	**101**	Pg		Pn	02 50 40.7	+29	
	1.1nm,0.0s								
UZB				Lg		Lg	02 52 35.1		
	11nm,0.4s								
KURBB	**Kurchatov Arra**	**9.47**	**54**	Pn		**Pn**	**02 50 17.0**	**+2.9**	
	0.1nm,0.3s,baz=243,slow=13,SNR=4.2								
KURBB				Sn		**Sn**	**02 51 58.4**	**-2.1**	
	0.2nm,0.3s,baz=336,slow=23,SNR=4.1								
KURBB				Lg		Lg	02 53 01.2		
	0.2nm,0.3s,baz=247,slow=28,SNR=8.6								
	0.2nm,0.3s								
DJR	**Jarkent**	**9.47**	**93**	Pg		Pn	02 50 42.6	+28	
	1.9nm,0.1s								
DJR				Lg		Lg	02 52 38.7		
	8.5nm,0.3s								
KURK	**Kurchatov**	**9.56**	**53**	⇑Pn		**Pn**	**02 50 18.0**	**+2.6**	
	2.3nm,1.1s								
KURK				⇑Lg		Lg	02 53 03.6		
	46nm,1.1s								
SHLS	**Shalkode**	**9.56**	**100**	Pg		Pn	02 50 50.4	+35	
	2.4nm,0.0s								
SHLS				Lg		Lg	02 52 52.4		
	8.3nm,0.7s								
GEYT	**Alibeck**	**9.90**	**222**	Pn		**Pn**	**02 50 17.8**	**-2.4**	
	2.2nm,0.3s,baz=23,slow=7.8,SNR=9.1								
GEYT				Sn		**Sn**	**02 52 07.1**	**-4.3**	
	1.9nm,0.3s,baz=49,slow=46,SNR=2.5								
MAKZ	**Makanchi**	**10.77**	**78**	⇓Pn		**Pn**	**02 50 33.5**	**+1.5**	
	3.8nm,0.9s								
MAKZ				⇓Sn		**Sn**	**02 52 29.1**	**-3.4**	
	7.2nm,0.8s								
MAKZ				⇑Lg		Lg	02 53 41.2		
	15nm,1.1s								
MK31	**Makanchi Array**	**10.98**	**78**	⇑Pn		**Pn**	**02 50 36.6**	**+1.6**	
	1.3nm,0.5s,baz=209,slow=18,SNR=31								
MK31				⇑Sn		**Sn**	**02 52 35.9**	**-1.9**	
	2.3nm,0.6s,baz=279,slow=17,SNR=5.0								
MK31				⇑Lg		Lg	02 53 47.3		
	6.1nm,0.6s,baz=252,slow=25,SNR=6.5								
MKAR	**Makanchi Array**	**10.98**	**78**	Pn		**Pn**	**02 50 36.4**	**+1.4**	
	0.8nm,0.3s,baz=268,slow=12,SNR=23								
MKAR				Sn		**Sn**	**02 52 34.1**	**-3.7**	
	0.5nm,0.3s,baz=281,slow=16,SNR=3.6								
MKAR				Lg		Lg	02 53 47.9		
	0.6nm,0.3s,baz=254,slow=24,SNR=7.0								
	1.1nm,0.4s								
ARU	**Arti**	**11.96**	**338**	Pn		**Pn**	**02 50 49.2**	**+1.1**	
	baz=188,slow=19,SNR=2.3								
ARU				Sn		**Sn**	**02 52 58.3**	**-3.2**	
	baz=87,slow=23,SNR=1.4								
ARU				Lg		Lg	02 54 20.7		
	baz=24,slow=15,SNR=4.1								
	2.2nm,0.3s								
ZALV	**Zalesovo Beam**	**14.44**	**48**	Pn		**Pn**	**02 51 24.6**	**+2.5**	
	0.2nm,0.3s,baz=254,slow=10,SNR=2.2								
ZALV				Sn		**Sn**	**02 53 57.6**	**-4.5**	
	0.2nm,0.3s,baz=246,slow=25,SNR=3.4								
	0.5nm,0.4s								
KBZ	**Khabaz**	**16.92**	**272**	Pn		**Pn**	**02 51 54.6**	**+0.2**	
	0.1nm,0.3s,baz=8.4,slow=4.2,SNR=2.2								
KBZ				Sn		**Sn**	**02 54 58.4**	**-4.0**	
	0.2nm,0.3s,baz=62,slow=16,SNR=1.4								
	1.4nm,0.5s								

MAN ***17*** *03:16:35.9,9.˝19N×126.˝62E,h10km,mb5.0,ML4.0,MS4.0*
NEIC ***17*** *03:16:39.3±0.9,9.˝12N±0.˝08×126.˝36E±0.˝08,h61km±7km, mb4.4/28, Error ellipse: s-maj=14.2km s-min=5.8km az=136.0*
IDC ***17*** *03:16:43.6±2.1,9.˝13N×126.˝57E,h104km±19km,mb3.8/18, mbtmp4.1/19,MS3.4/12,Error ellipse: s-maj=24.1km s-min=11.9km az=76.0*

ISC 17 03:16:37.7±1.3,9.˝20N±0.˝05×126.˝69E±0.˝08,h55km±11km, n75,σ2s26/73,mb4.3/33,MS3.5/11,5C-3D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**1.06**	**198**	⇓*i*P		**Pn**	**Pn**	**03 16 53.5**	**-2.9**
BIPH				*i* S		**Sn**	**Sn**	**03 17 06.9**	**-3.3**
SCPH	**Surigao**	**1.31**	**296**	*e*P		**Pn**	**Pn**	**03 16 58.3**	**-1.5**
SCPH				*i* S		**Sn**	**Sn**	**03 17 16.3**	**0.0**
BUKP	**Musuan**	**2.08**	**231**	⇑*i*P		**Pn**	**Pn**	**03 17 11.0**	**+0.8**
BUKP				*i* S		**Sn**	**Sn**	**03 17 40.2**	**+5.2**
DAV	**Davao City (W)**	**2.38**	**207**	P		**Pn**	**Pn**	**03 17 19.1**	**+4.7**
	330nm,0.4s,baz=198,slow=4.0,SNR=2.0								
DAV				S			**Sn**	**03 17 49.2**	**+6.7**
	394nm,0.4s,baz=265,slow=14,SNR=4.2								
DAV				LR		LR	LR	03 18 28.6	
	comp=Z,1μm,20.6s,baz=20,slow=46								
DAV	**Davao City (W)**	**2.38**	**207**	Pn		**Pn**	**Pn**	**03 17 15.1**	**+0.6**
KCP	**Kidapawan**	**2.69**	**216**	⇓*e*P		**Pn**	**Pn**	**03 17 19.2**	**+0.5**
KCP				*i* S		**Sn**	**Sn**	**03 17 56.7**	**+6.6**
TBP	**Tagbilaran**	**2.83**	**280**	⇑*i*P		**Pn**	**Pn**	**03 17 20.9**	**+0.4**
TBP				*i* S		**Sn**	**Sn**	**03 17 58.2**	**+4.8**
LLP	**Lapu-Lapu**	**2.90**	**293**	⇑*i*P		**Pn**	**Pn**	**03 17 22.3**	**+0.8**
LLP				*i* S		**Sn**	**Sn**	**03 18 00.7**	**+5.5**
CTBH	**Cotabato--PC H**	**3.12**	**231**	⇑*i*P		**Pn**	**Pn**	**03 17 25.4**	**+1.0**
RCP	**Roxas**	**4.53**	**301**	⇓*e*P		**Pn**	**Pn**	**03 17 44.9**	**+1.1**
JAP	**San Jose, Anti**	**4.92**	**289**	⇑*e*P		**Pn**	**Pn**	**03 17 53.2**	**+4.2**
TNTI	**Ternate**	**8.40**	**175**	Pn		**Pn**	**Pn**	**03 18 37.8**	**+0.9**
MYLDM	**Lahad Datu**	**9.05**	**244**	Pn		**Pn**	**Pn**	**03 18 42.5**	**-3.3**
SIJI	**Sorong**	**10.99**	**155**	P		**Pn**	**Pn**	**03 19 13.9**	**+1.5**
	6.1nm,0.4s,baz=12,slow=18,SNR=3.7								
SIJI				LR		LR	LR	03 24 01.1	
	comp=Z,95nm,19.1s,baz=78,slow=40								
SBUM	**Sibu**	**15.87**	**246**	Pn		**Pn**	**Pn**	**03 20 13.9**	**-3.8**
KSM	**Kuching**	**18.01**	**246**			**P**	**P**	**03 20 41.2**	**-3.0**
GUMO	**Guam**	**18.35**	**75**	LR		LR	LR	03 27 57.4	
	comp=Z,53nm,19.4s,baz=170,slow=36								
MTN	**Manton Dam**	**22.34**	**169**	P		**P**	**P**	**03 21 30.2**	**-1.0**
NJ2	**Nanjing**	**23.87**	**343**	*e*P		**P**	**P**	**03 21 43.8**	**-2.4**
NJ2				pmax		pmax			
	comp=Z,9.0nm,0.6s								
KNRA	**Kununurra**	**24.80**	**175**	P		**P**	**P**	**03 21 54.7**	**-0.1**
KNRA				IAmb		IAmb	IAmb	03 21 58.5	
	comp=Z,13nm,0.7s								
KSRS	**Korea Array**	**28.15**	**2**	P		**P**	**P**	**03 22 26.4**	**+1.7**
	comp=Z,0.7nm,0.5s,baz=179,slow=9.7,SNR=4.7								
	comp=Z,0.7nm,0.5s								
PSI	**Prapat**	**28.32**	**259**	P		**P**	**P**	**03 22 24.1**	**-2.6**
	comp=Z,5.5nm,0.6s,baz=222,slow=19,SNR=2.2								
CMAR	**Chiang Mai Arr**	**28.43**	**292**	P		**P**	**P**	**03 22 27.8**	**+0.2**
	comp=Z,1.0nm,0.3s,baz=111,slow=4.9,SNR=3.8								
CMAR				LR		LR	LR	03 34 15.7	
	comp=Z,54nm,18.1s,baz=130,slow=37								
	comp=Z,1.0nm,0.3s								
MJAR	**Matsushiro Arr**	**29.16**	**19**	LR		LR	LR	03 34 12.2	
	comp=Z,32nm,20.0s,baz=195,slow=36								
XAN	**Xi'an**	**29.63**	**329**	P		**P**	**P**	**03 22 37.6**	**-0.4**
XAN				pP		pP		03 22 44.3	-6.1
XAN				pmax		pmax			
	comp=Z,7.0nm,1.0s								
XAN				LR		LR			
	comp=E,180nm,17.2s								
XAN				LR		LR			
	comp=Z,160nm,17.2s								
WRA	**Warramunga Arr**	**29.92**	**165**	P		**P**	**P**	**03 22 39.8**	**-0.9**
	comp=Z,1.0nm,0.5s,baz=348,slow=9.3,SNR=15								
	comp=Z,1.0nm,0.5s								
WB2	**Warramunga Arr**	**29.93**	**165**	P		**P**	**P**	**03 22 41.7**	**+0.9**
WB2				IAmb		IAmb	IAmb	03 22 56.8	
	comp=Z,4.8nm,0.8s								
PSA00	**Pilbara Seismi**	**31.31**	**192**	P		**P**	**P**	**03 22 52.0**	**-0.9**
PSA00				IAmb		IAmb	IAmb	03 22 53.9	
	comp=Z,4.4nm,1.0s								
AS31	**Alice Springs**	**33.42**	**168**	P		**P**	**P**	**03 23 11.2**	**-0.2**
ASAR	**Alice Springs**	**33.42**	**168**	P		**P**	**P**	**03 23 10.8**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=0.5,slow=6.5,SNR=13								
ASAR				PcP		**PcP**	**PcP**	**03 25 52.9**	**+0.9**
	comp=Z,0.7nm,0.5s,baz=339,slow=2.4,SNR=6.5								
	comp=Z,0.4nm,0.3s								
USRK	**Ussuriysk Ar.**	**35.17**	**7**	P		**P**	**P**	**03 23 28.1**	**+1.8**
	comp=Z,2.6nm,0.7s,baz=186,slow=9.2,SNR=5.2								
	comp=Z,2.6nm,0.7s								
MDJ	**Mudanjiang**	**35.37**	**4**	P		**P**	**P**	**03 23 29.2**	**+1.1**
SHL	**Shillong**	**36.83**	**101**	P		**P**	**P**	**03 23 39.2**	**-1.8**
GOMU	**GeErMu**	**39.50**	**318**	P		**P**	**P**	**03 24 01.3**	**-2.3**
GOMU				sS		S	S	03 29 56.5	-5.9
GOMU				pmax		pmax			
	comp=Z,48nm,5.1s								
GOMU				LR		LR			
	comp=N,58nm,10.1s								
GOMU				LR		LR			
	comp=E,62nm,12.8s								
GOMU				LR		LR			
	comp=Z,70nm,11.2s								
H11S3	**WAKE ISLAND Hy**	**39.84**	**72**	T		T		04 07 02.5	
	baz=262,slow=75,SNR=44								
H11S1	**WAKE ISLAND Hy**	**39.85**	**72**	T		T		04 07 04.6	
	baz=262,slow=75,SNR=29								
H11S2	**WAKE ISLAND Hy**	**39.86**	**72**	T		T		04 07 04.0	
	baz=262,slow=75,SNR=26								
H11N1	**WAKE ISLAND Hy**	**40.21**	**70**	T		T		04 07 49.9	
	baz=265,slow=74								
H11N2	**WAKE ISLAND Hy**	**40.22**	**70**	T		T		04 07 49.6	
	baz=265,slow=74								
H11N3	**WAKE ISLAND Hy**	**40.23**	**70**	T		T		04 07 47.2	
	baz=265,slow=74								
SONM	**Songino Array**	**42.16**	**340**	P		**P**	**P**	**03 24 25.1**	**+0.2**
	comp=Z,0.7nm,0.4s,baz=165,slow=8.7,SNR=3.5								
SONM				PcP		**PcP**	**PcP**	**03 26 19.6**	**+1.1**
	comp=Z,0.3nm,0.4s,baz=157,slow=7.8,SNR=2.6								
	comp=Z,0.7nm,0.4s								
STKA	**Stephens Creek**	**43.26**	**161**	P		**P**	**P**	**03 24 34.0**	**0.0**
	comp=Z,1.1nm,0.4s,baz=307,slow=5.0,SNR=4.4								
	comp=Z,1.1nm,0.4s								
PETK	**Petropavlovsk-**	**50.44**	**24**	P		**P**	**P**	**03 25 32.0**	**+2.3**
	comp=Z,1.5nm,0.6s,baz=190,slow=6.0,SNR=3.6								
	comp=Z,1.5nm,0.6s								
MK31	**Makanchi Array**	**53.12**	**323**	P		**P**	**P**	**03 25 49.2**	**-0.7**
MK31				IAmb		IAmb	IAmb	03 25 50.5	
	comp=Z,4.1nm,0.8s								
MKAR	**Makanchi Array**	**53.12**	**323**	P		**P**	**P**	**03 25 49.9**	**0.0**
	comp=Z,4.8nm,0.6s,baz=123,slow=8.0,SNR=36								
MKAR				PcP		**PcP**	**PcP**	**03 26 57.3**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=125,slow=3.2,SNR=1.7								
MKAR				LR		LR	LR	03 48 03.4	
	comp=Z,32nm,21.1s,baz=103,slow=35								
	comp=Z,4.8nm,0.6s								
MKAR	**Makanchi Array**	**53.12**	**323**	P		**P**	**P**	**03 25 48.8**	**-1.1**
AAK	**Ala-Archa**	**56.37**	**316**	LR		LR	LR	03 52 13.4	
	comp=Z,53nm,19.7s,baz=99,slow=38								
KURK	**Kurchatov**	**57.18**	**326**	P		**P**	**P**	**03 26 18.7**	**-0.3**
KURBB	**Kurchatov Arra**	**57.18**	**326**	P		**P**	**P**	**03 26 18.9**	**-0.1**
	comp=Z,4.9nm,0.6s,baz=125,slow=6.7,SNR=30								
	comp=Z,4.9nm,0.6s								
KK31	**Karatay Array**	**59.29**	**315**	P		**P**	**P**	**03 26 32.8**	**-1.1**
KK31				IAmb		IAmb	IAmb	03 26 34.1	
	comp=Z,2.6nm,0.9s								
KKAR	**Karatay Array**	**59.29**	**315**	P		**P**	**P**	**03 26 32.8**	**-1.1**
KKAR				IAmb		IAmb	IAmb	03 26 34.1	
	comp=Z,2.6nm,0.9s								
TIXI	**Tiksi**	**62.41**	**1**	LR		LR	LR	03 54 55.9	
	comp=Z,30nm,20.8s,baz=183,slow=37								
TIXI	**Tiksi**	**62.41**	**1**	P		**P**	**P**	**03 26 55.5**	**+0.9**
BVAR	**Borovoye Array**	**62.77**	**326**	LR		LR	LR	03 56 31.1	
	comp=Z,23nm,18.7s,baz=20,slow=38								
BRVK	**Borovoye**	**62.84**	**326**	P		**P**	**P**	**03 26 57.6**	**-0.2**
NRIK	**Noril'sk**	**65.14**	**346**	P		**P**	**P**	**03 27 13.2**	**+0.6**
	comp=Z,4.2nm,0.7s,baz=117,slow=6.5,SNR=4.8								
	comp=Z,4.2nm,0.7s								
NRIK	**Noril'sk**	**65.14**	**346**	P		**P**	**P**	**03 27 13.2**	**+0.6**
NRIK				IAmb		IAmb	IAmb	03 27 13.8	
	comp=Z,4.7nm,0.8s								
ABKAR	**Akbulak array**	**67.95**	**319**	P		**P**	**P**	**03 27 30.0**	**-0.8**
ABKAR				IAmb		IAmb	IAmb	03 27 31.2	
	comp=Z,2.0nm,0.8s								
RAYN	**Ar Rayn**	**78.35**	**292**	P		**P**	**P**	**03 28 30.5**	**-2.3**
RAYN				IAmb		IAmb	IAmb	03 28 33.2	
	comp=Z,4.6nm,0.8s								
COLD	**Coldfoot**	**78.91**	**23**	P		**P**	**P**	**03 28 37.0**	**+2.1**
COLD				IAmb		IAmb	IAmb	03 28 50.5	
	comp=Z,3.3nm,1.0s								
IL31		**80.22**	**26**	P		**P**	**P**	**03 28 43.7**	**+1.6**
ILAR	**Eielson Array**	**80.22**	**26**	P		**P**	**P**	**03 28 43.6**	**+1.5**
	comp=Z,0.5nm,0.7s,baz=258,slow=5.0,SNR=12								
	comp=Z,0.5nm,0.7s								
KLMR	**Klimovskoe**	**80.65**	**330**	*e*P		**P**	**P**	**03 28 43.4**	**-1.1**
KLMR				AMP				03 28 45.3	
	comp=Z,10.0nm,1.0s								
RIDG	**Independent Ri**	**81.14**	**27**	P		**P**	**P**	**03 28 49.1**	**+1.9**
RIDG				IAmb		IAmb	IAmb	03 29 01.8	
	comp=Z,4.5nm,1.1s								
DAWY	**Dawson**	**83.51**	**26**	P		**P**	**P**	**03 29 02.1**	**+2.5**
DAWY				IAmb		IAmb	IAmb	03 29 15.9	
	comp=Z,3.7nm,0.9s								
HYT	**Haines Junctio**	**84.86**	**29**	P		**P**	**P**	**03 29 07.4**	**+0.8**
HYT				IAmb		IAmb	IAmb	03 29 22.5	
	comp=Z,3.1nm,0.8s								
SPITS	**Spitsbergen Ar**	**85.14**	**349**	LR		LR	LR	04 11 47.3	
	comp=Z,29nm,20.5s,baz=18,slow=39								
ARCES	**ARCESS Array B**	**85.33**	**340**	P		**P**	**P**	**03 29 09.3**	**+0.8**
	comp=Z,2.6nm,0.7s,baz=80,slow=5.9,SNR=13								
	comp=Z,2.6nm,0.7s								
BRTR	**Keskin Array B**	**86.52**	**310**	P		**P**	**P**	**03 29 16.4**	**+1.1**
	comp=Z,0.4nm,0.7s,baz=48,slow=2.8,SNR=3.2								
	comp=Z,0.4nm,0.7s								
FINES	**FINESS Array B**	**87.02**	**332**	P		**P**	**P**	**03 29 16.9**	**-0.1**
	comp=Z,2.0nm,0.8s,baz=66,slow=4.6,SNR=8.4								
FINES				LR		LR	LR	04 12 02.2	
	comp=Z,34nm,18.1s,baz=112,slow=38								
	comp=Z,2.0nm,0.8s								
VNDA	**Vanda**	**88.82**	**173**	P		**P**	**P**	**03 29 26.3**	**+1.1**
	comp=Z,0.4nm,0.4s,baz=334,slow=7.4,SNR=6.4								
	comp=Z,0.4nm,0.4s								
KMBO	**Kilima Mbogo**	**89.62**	**269**	P		**P**	**P**	**03 29 30.1**	**-0.5**
	comp=Z,1.3nm,0.6s,baz=75,slow=8.4,SNR=3.8								
	comp=Z,1.3nm,0.6s								
NOA	**NORSAR Array B**	**93.89**	**334**	P		**P**	**P**	**03 29 49.4**	**+0.2**
	comp=Z,0.4nm,0.8s,baz=100,slow=5.4,SNR=2.0								
NOA				LR		LR	LR	04 17 37.9	
	comp=Z,14nm,18.1s,baz=75,slow=39								
	comp=Z,0.4nm,0.8s								
GERES	**GERESS Array B**	**97.78**	**322**	P		**P**	**P**	**03 30 06.5**	**-0.7**
TXAR	**Lajitas Array**	**118.20**	**50**	PKP		**PKiKP**	**P**	**03 35 21.3**	**+1.7**
	comp=Z,0.3nm,0.9s,baz=217,slow=3.1,SNR=3.9								

GUC ***17*** *03:30:54.6±0.9,23.˝02S×69.˝00W,h93km±5km,ML4.4*
VAO ***17*** *03:30:54.8±0.7,22.˝89S×68.˝95W,h108km±4km,mb4.5*
NEIC ***17*** *03:30:54.4±2.1,22.˝96S±0.˝05×68.˝94W±0.˝04,h101km±4km, mb4.4/14,Mwr4.4(GUC),Error ellipse: s-maj=7.2km s-min=5.6km az=181.0*
IDC ***17*** *03:30:55.1±0.5,22.˝82S×68.˝82W,h96km±5km,mb4.1/6, mbtmp4.4/9,MS2.7/2,Error ellipse: s-maj=19.8km s-min=17.7km az=41.0*

ISC 17 03:30:54.1±0.5,22.˝97S±0.˝03×68.˝99W±0.˝04,h103km±4km, n150,σ1s20/155,mb4.3/10,6C-4D,Northern Chile

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SIV	**San Ignacio**	**10.19**	**48**	P		**Pn**	**03 33 15.5**	**-2.0**
	comp=E,9.1nm,0.4s,baz=253,slow=9.0,SNR=28							
SIV				S		Sn	03 34 59.8	-10
	comp=E,0.9nm,0.3s,baz=144,slow=23,SNR=1.3							
CPUP	**Villa Florida**	**11.12**	**110**	P		**Pn**	**03 33 30.0**	**+0.1**
	comp=E,5.5nm,0.8s,baz=279,slow=12,SNR=11							
CPUP				LR		LR	03 38 25.2	
	comp=E,57nm,20.4s,baz=264,slow=41							
CPUP	**Villa Florida**	**11.12**	**110**	Pn		**Pn**	**03 33 30.0**	**+0.1**
CPUP	**Villa Florida**	**11.12**	**110**	*eP*		**Pn**	**03 33 31.3**	**+1.4**
VBST	**Vila Bela da S**	**11.94**	**47**	*eP*		**Pn**	**03 33 38.1**	**-2.9**
ANTJ	**Antonio Joao (**	**12.04**	**88**	*eP*		**Pn**	**03 33 42.6**	**+0.3**
AQDB	**Aquidauana**	**12.60**	**81**	*eP*		**Pn**	**03 33 49.5**	**-0.2**
AMBA	**Amambai (Brazi**	**12.90**	**93**	*eP*		**Pn**	**03 33 54.7**	**+1.1**
VILB	**Vilhena**	**13.00**	**41**	*eP*		**Pn**	**03 33 55.3**	**+0.3**
NNA	**Nana**	**13.24**	**324**	LR		LR	03 38 48.5	
	comp=E,25nm,19.4s,baz=158,slow=36							
ETMB	**Extrema**	**13.35**	**12**	*eP*		**Pn**	**03 33 57.1**	**-2.4**
CRSM	**Crissiumal (Br**	**14.25**	**111**	*eP*		**Pn**	**03 34 13.8**	**+2.6**
PP1B	**Ponte de Pedra**	**14.27**	**71**	*eP*		**Pn**	**03 34 11.4**	**-0.1**
SALV	**Santo Antonio**	**14.37**	**63**	*eP*		**Pn**	**03 34 12.3**	**-0.4**
FRBT	**Francisco Belt**	**14.80**	**105**	*eP*		**Pn**	**03 34 17.9**	**-0.4**
SAMI	**Samuel**	**15.01**	**23**			**Pn**	**03 34 18.3**	**-2.6**
TRCB	**Terra Rica**	**15.07**	**93**	*eP*		**P**	**03 34 23.6**	**-1.0**
NBRS	**Nobres**	**15.18**	**58**	*eP*		**Pn**	**03 34 21.8**	**-1.3**
CZSB	**Cruzeiro do Su**	**15.57**	**346**	*eP*		**P**	**03 34 29.3**	**-0.7**
PTGB	**Pitanga**	**15.58**	**100**	*eP*		**Pn**	**03 34 29.3**	**+1.2**
C2SB	**Chapadao do Su**	**15.66**	**78**	*eP*		**Pn**	**03 34 29.3**	**+0.3**
CPSB	**Cacapava Do Su**	**15.74**	**121**	*eP*		**Pn**	**03 34 28.6**	**-1.3**
ITAB	**Concordia**	**15.85**	**109**	*eP*		**Pn**	**03 34 31.0**	**-0.3**
PDRB	**Porto dos Gac**	**16.25**	**48**	*eP*		**P**	**03 34 37.0**	**-0.6**
PCMB	**Pacaembu**	**16.46**	**89**	*eP*		**P**	**03 34 40.8**	**+0.9**
DVLD	**Doverlandia**	**17.03**	**71**	*eP*		**P**	**03 34 46.5**	**+0.3**
CLDB	**Colider**	**17.42**	**48**	*eP*		**P**	**03 34 50.1**	**-0.4**
ITRB	**Iturama**	**17.65**	**83**	*eP*		**Pn**	**03 34 53.7**	**+0.1**
ARAG	**Araguaiana, MT**	**17.73**	**69**	*eP*		**P**	**03 34 53.7**	**-0.3**
PLCA	**Paso Flores**	**17.76**	**184**	P		**Pn**	**03 34 56.2**	**+1.5**
	comp=E,2.0nm,0.6s,baz=25,slow=12,SNR=6.6							
PLCA	**Paso Flores**	**17.76**	**184**	IAmb		IAmb	03 35 05.1	
	comp=Z,9.5nm,1.4s							
FRTB	**Fartura**	**17.87**	**95**	*eP*		**P**	**03 34 54.6**	**-0.8**
LL04	**Puerto Octay**	**18.12**	**188**	P		**P**	**03 34 55.6**	**-2.3**
LL04				IAmb		IAmb	03 35 00.8	
	comp=Z,9.5nm,0.6s							
BB19B	**Bebedouro**	**19.06**	**88**	*eP*		**P**	**03 35 08.7**	**+0.2**
RCLB	**Rio Claro- Sao**	**19.80**	**93**	*eP*		**P**	**03 35 16.2**	**-0.4**
PET01	**Itanhaem-SP**	**19.94**	**98**	*eP*		**P**	**03 35 17.4**	**-0.5**
IPMB	**Ipameri, GO**	**20.08**	**80**	*eP*		**P**	**03 35 19.0**	**-0.6**
SNDB	**Serra Nova Dou**	**20.09**	**60**	*eP*		**P**	**03 35 17.9**	**-1.7**
VAO	**Valinhos**	**20.27**	**94**	*eP*		**P**	**03 35 20.9**	**-0.7**
BDFB	**Brasilia**	**21.08**	**74**	P		**P**	**03 35 29.9**	**-0.5**
	comp=Z,7.6nm,0.5s,baz=236,slow=12,SNR=17							
	comp=Z,7.6nm,0.5s							
BDFB	**Brasilia**	**21.08**	**74**	P		**P**	**03 35 29.0**	**-1.4**
BDFB				IAmb		IAmb	03 35 31.0	
	comp=Z,15nm,1.1s							
BDFB	**Brasilia**	**21.08**	**74**	*eP*		**P**	**03 35 29.6**	**-0.8**
MACA	**Manacapuru-AM**	**21.27**	**23**	*eP*		**P**	**03 35 30.9**	**-1.4**
PARB	**Paraibuna**	**21.48**	**96**	*eP*		**P**	**03 35 33.9**	**-0.8**
PMNB	**Patos De Minas**	**21.54**	**82**	*eP*		**P**	**03 35 34.3**	**-0.9**
SLP01	**Ubatuba-SP**	**21.91**	**96**	*eP*		**P**	**03 35 39.2**	**0.0**
PEXB	**Peixe**	**22.46**	**65**	*eP*		**P**	**03 35 42.9**	**-2.0**
ITTB	**Itaituba**	**22.50**	**37**	*eP*		**P**	**03 35 44.2**	**-1.0**
BSCB	**Bom Sucesso**	**22.53**	**90**	*eP*		**P**	**03 35 45.5**	**-0.3**
ESAR	**Angra dos Reis**	**22.59**	**95**	*eP*		**P**	**03 35 46.0**	**-0.1**
VAS01	**Vassouras-RJ**	**23.58**	**93**	*eP*		**P**	**03 35 55.6**	**0.0**
DIAM	**Diamantina, MG**	**24.13**	**84**	*eP*		**P**	**03 36 00.9**	**+0.2**
DUB01	**Friburgo-RJ**	**24.59**	**93**	*eP*		**P**	**03 36 05.5**	**+0.7**
JANB	**Januaria**	**24.59**	**76**	*eP*		**P**	**03 36 04.5**	**-0.4**
SMTB	**Santa Maria do**	**24.85**	**59**	*eP*		**P**	**03 36 07.0**	**-0.2**
PRPB	**Paraiapebas**	**24.91**	**51**	*eP*		**P**	**03 36 07.6**	**-0.1**
SDBA	**SAO DESIDERIO**	**25.20**	**69**	*eP*		**P**	**03 36 09.9**	**-0.4**
MALB	**Monte Alegre**	**25.39**	**36**	*eP*		**P**	**03 36 11.6**	**-0.4**
BSFB	**Barra de Sao F**	**26.59**	**86**	*eP*		**P**	**03 36 23.0**	**+0.2**
RIB01	**Linhares ES**	**26.89**	**88**	*eP*		**P**	**03 36 25.5**	**-0.1**
NAN01	**Guarapari, ES**	**27.50**	**85**	*eP*		**P**	**03 36 31.1**	**0.0**
GUA01	**Guaratinga, BA**	**28.15**	**82**	*eP*		**P**	**03 36 37.4**	**+0.5**
CMC01	**Camacan, BA**	**28.81**	**80**	*eP*		**P**	**03 36 43.0**	**+0.3**
GDU01	**Guandu, BA**	**29.34**	**77**	*eP*		**P**	**03 36 46.6**	**-0.8**
NBAN	**Anadia - AL**	**33.97**	**72**	*eP*		**P**	**03 37 28.7**	**+0.7**
RCBR	**Riachuelo**	**36.16**	**67**	P		**P**	**03 37 43.5**	**-3.3**
JTS	**Las Juntas de**	**36.57**	**333**	P		**P**	**03 37 48.6**	**-1.6**
BELA	**Belgrano 2**	**57.31**	**172**	P		**P**	**03 40 30.8**	**0.0**
BELA				IAmb		IAmb	03 40 33.5	
	comp=Z,2.6nm,1.0s							
VNA3	**Neumayer Olymp**	**58.71**	**161**	P		**P**	**03 40 42.2**	**+1.6**
VNA3	**Neumayer Olymp**	**58.71**	**161**	pP		pP	03 41 10.3	+3.6
VNA1	**Neumayer--Stat**	**58.93**	**160**	P		**P**	**03 40 44.0**	**+1.9**
SNAA	**Sanae**	**60.92**	**161**	P		**P**	**03 40 57.2**	**+1.4**
TXAR	**Lajitas Array**	**61.79**	**326**	P		**P**	**03 41 04.9**	**+2.6**
	comp=Z,0.1nm,0.8s,baz=159,slow=7.7,SNR=2.7							
TXAR				pP		**pP**	**03 41 29.3**	**+1.1**
	comp=Z,0.2nm,0.7s,baz=151,slow=7.9,SNR=2.4							
S51A	**Beattyville**	**61.83**	**347**	P		**P**	**03 40 59.2**	**-3.0**
S51A				IAmb		IAmb	03 41 07.8	
	comp=Z,6.1nm,1.1s							
TROLL	**Troll, Antarti**	**62.64**	**161**	P		**P**	**03 41 09.1**	**+1.7**
QSPA	**South Pole Qui**	**67.23**	**180**	P		**P**	**03 41 37.8**	**+0.6**
QSPA				IAmb		IAmb	03 41 39.9	
	comp=Z,4.7nm,0.5s							
VNDA	**Vanda**	**75.40**	**190**	P		**P**	**03 42 29.3**	**+3.3**
	comp=Z,0.7nm,0.8s,baz=107,slow=5.0,SNR=3.6							
	comp=Z,0.7nm,0.8s							
VNDA	**Vanda**	**75.40**	**190**	IAmb		IAmb	03 42 30.1	
	comp=Z,2.1nm,1.1s							
TORD	**Torodi Ar. Bea**	**77.92**	**70**	P		**P**	**03 42 41.9**	**+0.6**
	comp=Z,3.2nm,0.5s,baz=254,slow=5.3,SNR=72							
TORD				pP		**pP**	**03 43 07.3**	**-1.2**
	comp=Z,3.3nm,0.7s,baz=251,slow=5.2,SNR=6.6							
	comp=Z,3.2nm,0.5s							
TORD	**Torodi Ar. Bea**	**77.92**	**70**	P		**P**	**03 42 41.8**	**+0.5**
TORD				IAmb		IAmb	03 42 42.6	
	comp=Z,2.8nm,0.8s							
BOSA	**Boshof**	**82.82**	**118**	P		**P**	**03 43 08.6**	**+1.0**
	comp=Z,5.3nm,1.1s,baz=279,slow=3.9,SNR=6.4							
	comp=Z,5.3nm,1.1s							
BOSA	**Boshof**	**82.82**	**118**	IAmb		IAmb	03 43 12.2	
	comp=Z,14nm,1.2s							
MAW	**Mawson**	**82.95**	**163**	P		**P**	**03 43 09.2**	**+2.0**
	comp=Z,3.3nm,0.5s,baz=215,slow=6.5,SNR=19							
	comp=Z,3.3nm,0.5s							
LBTB	**Lobatse**	**84.47**	**115**	P		**P**	**03 43 17.6**	**+1.6**
	comp=Z,3.3nm,1.0s,baz=257,slow=6.4,SNR=4.6							
	comp=Z,3.3nm,1.0s							
LBTB	**Lobatse**	**84.47**	**115**	IAmb		IAmb	03 43 21.6	
	comp=Z,8.1nm,1.2s							
H11S2	**WAKE ISLAND Hyl**	**27.97**	**276**	T		T	06 10 04.3	
	baz=105,slow=75,SNR=19							
H11S1	**WAKE ISLAND Hyl**	**27.98**	**276**	T		T	06 10 08.4	
	baz=105,slow=75,SNR=14							
H11S3	**WAKE ISLAND Hyl**	**27.99**	**276**	T		T	06 10 04.7	
	baz=105,slow=75,SNR=14							
H11N3	**WAKE ISLAND Hyl**	**28.09**	**278**	T		T	06 10 15.1	
	baz=105,slow=74,SNR=7.6							
H11N2	**WAKE ISLAND Hyl**	**28.11**	**278**	T		T	06 10 17.4	
	baz=105,slow=74,SNR=4.8							
H11N1	**WAKE ISLAND Hyl**	**28.11**	**278**	T		T	06 10 15.6	
	baz=105,slow=74,SNR=3.2							
ASAR	**Alice Springs**	**128.58**	**207**	PKP		**PKiKP**	**03 49 51.5**	**+1.0**
	comp=Z,0.8nm,0.6s,baz=142,slow=2.0,SNR=9.1							
ASAR				pPKP		**pPKPdf**	**03 50 18.4**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=98,slow=1.7,SNR=1.2							
ASAR	**Alice Springs**	**128.58**	**207**			**PKPdf**	**03 49 47.3**	**-2.5**
WRA	**Warramunga Arr**	**131.65**	**210**	PKP		**PKiKP**	**03 49 57.6**	**+0.9**
	comp=Z,0.7nm,0.5s,baz=145,slow=1.6,SNR=17							
WRA				pPKP		**pPKPdf**	**03 50 24.7**	**-0.1**
	comp=Z,0.6nm,1.0s,baz=157,slow=1.8,SNR=1.9							
WRA	**Warramunga Arr**	**131.65**	**210**			**PKPdf**	**03 49 53.2**	**-2.5**
ZALV	**Zalesovo Beam**	**143.30**	**26**	PKP		**PKPdf**	**03 50 15.9**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=318,slow=1.9,SNR=2.7							
KSH	**Kashi**	**146.06**	**53**	PKPbc		**PKPab**	**03 50 24.0**	**+0.8**
KSH				pPKP		pPKPdf	03 50 50.4	-0.1
MKAR	**Makanchi Array**	**146.85**	**37**	PKPbc		**PKPbc**	**03 50 24.6**	**+0.3**
	comp=Z,1.6nm,0.6s,baz=338,slow=1.9,SNR=12							
MKAR				pPKPbc		**pPKPdf**	**03 50 51.9**	**+0.4**
	comp=Z,2.8nm,0.8s,baz=336,slow=2.7,SNR=7.3							
MKAR	**Makanchi Array**	**146.85**	**37**	PKPbc		**PKPdf**	**03 50 23.8**	**+1.4**
PZH	**PanZhiHua**	**170.87**	**65**	PKP		**PKPdf**	**03 50 46.6**	**-4.3**

*IDC **17** 03:40:12.7±0.8, 6°.56N×72°.78W, h179km±9km, mb2.9/3, mbtmp3.6/5, Error ellipse: s-maj=28.7km s-min=8.2km az=135.0*

*RSNC **17** 03:40:14.0±1.0, 6°.82N×73°.14W, h148km±4km, ML3.4, Mw3.7*

ISC 17 03:40:12.9±1.0, 6°.86N±0°.03×73°.14W±0°.04, h155km±6km, n28, σ1ᵎ32/52, mb3.2/3, 3C-4D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
BARC	**Barichara**	**0.27**	**190**	⇓*eP*		**Pn**	**03 40 34.0**	**-0.3**
BARC				*eS*		**Sn**	**03 40 48.8**	**-1.8**
BARC				*i*			03 40 51.9	
	comp=Z,477nm,0.3s							
BRRC	**Barranca, Sant**	**0.62**	**294**	⇑*iP*		**Pn**	**03 40 35.8**	**+0.4**
BRRC				*eS*		**Sn**	**03 40 52.8**	**+0.1**
BRRC				*i*			03 40 56.2	
	comp=Z,361nm,0.3s							
PAMC	**Pamplona, Colo**	**0.65**	**42**	⇑*iP*		**Pn**	**03 40 36.8**	**+0.6**
PAMC				*eS*		**Sn**	**03 40 53.8**	**-0.2**
PAMC				*i*			03 40 56.3	
	comp=Z,514nm,0.4s							
RUSC	**La Rusia**	**0.96**	**177**	⇓*iP*		**Pn**	**03 40 37.9**	**-0.5**
RUSC				*eS*		**Sn**	**03 40 56.8**	**-1.1**
RUSC				*i*			03 40 58.5	
	comp=Z,253nm,0.5s							
PTBC	**PUERTO BERRIO,**	**1.35**	**257**	*eP*		**Pn**	**03 40 40.6**	**-0.7**
PTBC				*eS*		**Sn**	**03 41 02.0**	**-1.1**
PTBC				*i*			03 41 09.3	
	comp=Z,255nm,0.4s							
OCAC	**Ocana**	**1.39**	**353**	⇑*iP*		**Pn**	**03 40 42.0**	**+0.2**
OCAC				*eS*		**Sn**	**03 41 04.0**	**-0.1**
OCAC				*i*			03 41 07.5	
	comp=Z,506nm,0.2s							
TAMC	**Tame, Arauca**	**1.40**	**107**	⇓*iP*		**Pn**	**03 40 42.4**	**+0.5**
TAMC				*i*			03 41 03.3	
	comp=Z,163nm,0.4s							
TAMC				*eS*		**Sn**	**03 41 04.0**	**-0.1**
SPBC	**San Pablo de B**	**1.51**	**218**	*eP*		**Pn**	**03 40 42.9**	**-0.3**
SPBC				*eS*		**Sn**	**03 41 05.3**	**-0.9**
SPBC				*i*			03 41 09.9	
	comp=Z,626nm,0.2s							
ZARC	**Zaragoza, Cauc**	**1.82**	**290**	*eP*		**Pn**	**03 40 46.5**	**+0.2**
ZARC				*eS*		**Sn**	**03 41 11.7**	**-0.3**
ZARC				*i*			03 41 17.3	
	comp=Z,333nm,0.3s							
NORC	**Norcasia**	**2.15**	**233**	*eP*		**Pn**	**03 40 50.0**	**-0.1**
NORC				*eS*		**Sn**	**03 41 18.4**	**-0.4**
NORC				*i*			03 41 24.0	
	comp=Z,191nm,0.4s							
CHIC	**Chingaza**	**2.29**	**195**	*eP*		**Pn**	**03 40 52.1**	**0.0**
CHIC				*eS*		**Sn**	**03 41 21.4**	**-1.0**
CHIC				*i*			03 41 25.4	
	comp=Z,228nm,0.5s							
ROSC	**El Rosal**	**2.32**	**211**	P		**Pn**	**03 40 54.9**	**+2.3**
	comp=Z,122nm,0.3s,baz=310,slow=4.4,SNR=37							
ROSC				S		**Sn**	**03 41 25.1**	**+2.0**
	comp=Z,464nm,0.4s,baz=75,slow=18,SNR=12							
HELC	**Santa Helena**	**2.47**	**255**	*eP*		**Pn**	**03 40 54.6**	**+0.4**
HELC				*eS*		**Sn**	**03 41 25.7**	**-0.4**
HELC				*i*			03 41 32.2	
	comp=Z,162nm,0.3s							
UREC	**San Jos de Ur**	**2.54**	**291**	*eP*		**Pn**	**03 40 54.0**	**-0.8**
UREC				*eS*		**Sn**	**03 41 24.4**	**-2.7**
UREC				*i*			03 41 32.4	
	comp=Z,82nm,0.3s							
GUY2C	**Guyana, Caldas**	**2.75**	**234**	*eP*		**Pn**	**03 40 58.8**	**+1.0**
GUY2C				*eS*		**Sn**	**03 41 32.4**	**0.0**
GUY2C				*i*			03 41 40.4	
	comp=Z,203nm,0.3s							
VILC	**Villavicencio,**	**2.78**	**192**	*eP*		**Pn**	**03 40 57.9**	**0.0**
VILC				*eS*		**Sn**	**03 41 31.6**	**-1.1**
PTGC	**Puerto Gaitan,**	**2.82**	**159**	⇓*iP*		**Pn**	**03 40 57.1**	**-1.2**
PTGC				*eS*		**Sn**	**03 41 30.4**	**-3.0**
PTGC				*i*			03 41 33.3	
	comp=Z,109nm,0.4s							
CBOC	**Ciudad Bolivar**	**3.02**	**251**	*eP*		**Pn**	**03 41 02.0**	**+1.1**
CBOC				*eS*		**Sn**	**03 41 37.7**	**-0.4**
CBOC				*i*			03 41 46.4	
	comp=Z,50nm,0.4s							
DBBC	**Dabeiba**	**3.05**	**273**	*eP*		**Pn**	**03 41 01.9**	**+0.7**
DBBC				*eS*		**Sn**	**03 41 35.0**	**-3.6**
DBBC				*i*			03 41 39.7	
	comp=Z,388nm,0.4s							
SDV	**Santo Domingo**	**3.20**	**51**	P		**Pn**	**03 41 03.8**	**+0.6**
	comp=Z,83nm,0.4s,baz=228,slow=11,SNR=11							
SDV				S		**Sn**	**03 41 42.6**	**+0.5**
	comp=Z,68nm,0.4s,baz=106,slow=22,SNR=9.9							
SDV	**Santo Domingo**	**3.20**	**51**	*eP*		**Pn**	**03 41 03.6**	**+0.5**
SDV				*eS*		**Sn**	**03 41 41.5**	**-0.6**
SDV				*i*			03 41 44.3	
	comp=Z,47nm,0.4s							
PRAC	**Prado**	**3.57**	**209**	*eP*		**Pn**	**03 41 07.9**	**+0.1**
PRAC				*eS*		**Sn**	**03 41 49.7**	**-0.8**
PRAC				*i*			03 41 56.1	
	comp=Z,207nm,0.7s							
SJCC	**San Jacinto, C**	**3.63**	**326**	*eP*		**Pn**	**03 41 07.7**	**-0.9**
SJCC				*eS*		**Sn**	**03 41 49.2**	**-2.7**
SJCC				*i*			03 41 56.2	
	comp=Z,42nm,0.6s							
CRJC	**Cerrejon, Guaj**	**4.15**	**3**	*eP*		**Pn**	**03 41 14.3**	**-1.0**
CRJC				*eS*		**Sn**	**03 42 01.3**	**-2.6**
CRJC				*i*			03 42 09.2	
	comp=Z,67nm,0.3s							
GUVC	**San Jose del G**	**4.31**	**173**	*eP*		**Pn**	**03 41 15.8**	**-1.7**
GUVC				*eS*		**Sn**	**03 42 05.0**	**-2.6**
GUVC				*i*			03 42 12.9	
	comp=Z,62nm,0.2s							
TXAR	**Lajitas Array**	**36.43**	**312**	P		**P**	**03 47 04.2**	**+1.2**
	comp=Z,0.4nm,0.7s,baz=130,slow=9.4,SNR=6.0							
	comp=Z,0.4nm,0.7s							
PDAR	**Pinedale Array**	**48.04**	**324**	P		**P**	**03 48 37.7**	**+0.9**
	comp=Z,0.2nm,0.6s,baz=125,slow=11,SNR=2.1							
	comp=Z,0.2nm,0.6s							
TORD	**Torodi Ar. Bea**	**73.75**	**78**	P		P	03 51 25.9	-4.8
	comp=Z,0.3nm,0.5s,baz=287,slow=5.1,SNR=5.0							
	comp=Z,0.3nm,0.5s							

*IDC **17** 03:48:33.0±0.8, 30°.17S×71°.45W, h0km, mb4.4/10, mbtmp4.4/14, ML4.6/4, MS3.7/17, Error ellipse: s-maj=24.1km s-min=21.2km az=52.0*

*SJA **17** 03:48:32.7±0.7, 29°.98S×71°.88W, h12km, ML4.7, MW4.3*

*VAO **17** 03:48:35.5±0.9, 29°.96S×71°.32W, h10km, mb4.6*

*NEIC **17** 03:48:38.3, 30°.06S×71°.60W, h40km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}5.97; $M_{\theta\theta}$1.07; $M_{\phi\phi}$-7.04; $M_{r\theta}$-0.16; $M_{r\phi}$-0.31; $M_{\theta\phi}$-3.99; Fault plane solution: $M_0$7.70000×10^{15} NP1:$\phi_1$182.26000°, δ60.77000°, λ90.05000°. NP2:$\phi_2$2.16000°, δ29.23000°, λ89.91000°. Principal axes: T 7.0982, Plg74.0000°, Azm92.0000°; N 1.0856, Plg0.0000°, Azm2.0000°; P -8.1839, Plg16.0000°, Azm272.0000°;*

*NEIC **17** 03:48:38.7±2.1, 30°.06S±0°.04×71°.58W±0°.07, h34km±3km, mb4.6/50, Mwr4.5/63, ML4.8(GUC) Error ellipse: s-maj=8.4km s-min=5.6km az=91.0*

*GUC **17** 03:48:39.0±0.8, 30°.17S×71°.44W, h20km±6km, ML4.8*

ISC 17 03:48:36.0±0.4, 30°.08S±0°.02×71°.60W±0°.04, h22km±3km, n226, σ2ᵎ03/239, mb4.5/25, MS3.8/13, 7C-8D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CO05	**La Serena**	**0.35**	**62**			**Pn**	**03 48 46.2**	**+0.5**
CO05					Sg	**Sn**	**03 48 51.7**	**-0.3**
CO05	**La Serena**	**0.35**	**62**	⇓*iP*		**Pn**	**03 48 46.2**	**+0.5**
CO05				*i*	S	**Sn**	**03 48 51.7**	**-0.3**
CO06	**Fray Jorge**	**0.59**	**183**			**Pn**	**03 48 50.2**	**+1.1**
CO06	**Fray Jorge**	**0.59**	**183**	⇑*iP*		**Pn**	**03 48 50.1**	**+1.1**
CO06				*i*	S	**Sn**	**03 48 58.5**	**+0.5**
GO04	**Tololo Observa**	**0.70**	**98**			**Pn**	**03 48 51.3**	**+0.6**
GO04	**Tololo Observa**	**0.70**	**98**	⇓*eP*		**Pn**	**03 48 50.9**	**+0.2**
GO04				*eS*		**Sn**	**03 49 00.5**	**-0.4**
GO04	**Tololo Observa**	**0.70**	**98**	*eP*		**Pn**	**03 48 50.9**	**+0.2**
GO04				*eS*		**Sn**	**03 49 00.9**	**0.0**
CO03	**El Pedregal**	**1.09**	**134**			**Pb**	**03 48 57.0**	**+0.8**
CO03	**El Pedregal**	**1.09**	**134**	⇓*iP*		**Pb**	**03 48 57.0**	**+0.8**
CO03				*i*	S	**Sn**	**03 49 10.8**	**+0.4**
CO02	**Combarbal**	**1.23**	**156**			**Pb**	**03 48 59.7**	**+1.0**
CO02	**Combarbal**	**1.23**	**156**	⇓*iP*		**Pb**	**03 48 59.6**	**+1.0**
CO02				*eS*		**Sb**	**03 49 16.3**	**+2.2**
CO02				IAML			03 49 21.2	
	comp=E,34μm,0.3s							
CO02	**Combarbal**	**1.23**	**156**	*eP*		**Pb**	**03 48 59.0**	**+0.4**
CO02				*eS*		**Sb**	**03 49 17.5**	**+3.3**
CO02				IAML			03 49 17.9	
	comp=Z,9μm,0.5s							
CO01	**Juntas del Tor**	**1.31**	**86**			**Pb**	**03 49 00.3**	**+0.3**
CO01	**Juntas del Tor**	**1.31**	**86**	⇓*iP*		**Pb**	**03 49 00.2**	**+0.3**
CO01				*i*	S	**Sb**	**03 49 16.3**	**-0.1**
CO01	**Juntas del Tor**	**1.31**	**86**	*eP*		**Pb**	**03 49 00.0**	**0.0**
CO01				*eP*		**Pn**	**03 49 00.4**	**+1.3**
CO01				*eS*		**Sn**	**03 49 09.8**	**-6.2**
LCO	**Las Campanas**	**1.32**	**36**	Pn		**Pn**	**03 49 00.2**	**+0.9**
LCO	**Las Campanas**	**1.32**	**36**	⇓*iP*		**Pn**	**03 49 00.2**	**+0.9**
LCO				*i*	S	**Sn**	**03 49 16.6**	**+0.2**
LCO	**Las Campanas**	**1.32**	**36**	*eP*		**Pn**	**03 49 00.0**	**+0.7**
ARGD	**Rodeo**	**1.84**	**93**	*eP*		**Pb**	**03 49 09.8**	**+0.6**
ARGD				*eS*		**Sn**	**03 49 28.6**	**-0.7**
AC04	**Llanos de Chal**	**1.93**	**14**	Pn		**Pn**	**03 49 08.8**	**+1.3**
AC04	**Llanos de Chal**	**1.93**	**14**	⇑*iP*		**Pn**	**03 49 08.7**	**+1.3**
AC04				*i*	S	**Sn**	**03 49 30.6**	**-0.3**
AC04				IAML			03 49 40.1	
	comp=E,8μm,0.2s							
AC04	**Llanos de Chal**	**1.93**	**14**	*eP*		**Pn**	**03 49 08.0**	**+0.6**
AC04				*eS*		**Sb**	**03 49 36.2**	**+2.2**
AC04				IAML			03 49 41.1	
	comp=Z,6μm,0.7s							
ACDV	**Cuesta del Vie**	**2.15**	**93**	*eP*		**Pn**	**03 49 08.6**	**-2.0**
ACDV				*eP*		**Pb**	**03 49 14.3**	**+0.1**
ACCO	**Cerro Coronel**	**2.25**	**104**	*eP*		**Pb**	**03 49 16.5**	**+0.5**
VA06	**Catapilco**	**2.48**	**174**			**Pn**	**03 49 17.2**	**+2.1**
VA06	**Catapilco**	**2.48**	**174**	⇑*eP*		**Pn**	**03 49 17.4**	**+2.3**
VA06				*eS*		**Sb**	**03 49 50.8**	**+0.7**
VA06				IAML			03 50 02.6	
	comp=N,5μm,0.4s							
RTLS	**Leoncito**	**2.61**	**132**	*eP*		**Pb**	**03 49 21.5**	**-0.8**
RTLS				*eS*		**Sb**	**03 49 59.5**	**+5.4**
RTLS				IAML			03 50 04.9	
	comp=Z,1μm,0.4s							
GO03	**Copiap**	**2.75**	**26**	Pn		**Pn**	**03 49 20.5**	**+1.7**
GO03	**Copiap**	**2.75**	**26**	⇓*eP*		**Pn**	**03 49 20.4**	**+1.6**
GO03				*eS*		**Sb**	**03 49 56.3**	**-1.5**
GO03				IAML			03 50 07.8	
	comp=N,5μm,0.6s							
GO03	**Copiap**	**2.75**	**26**	*eP*		**Pn**	**03 49 20.0**	**+1.2**
GO03				*eS*		**Sn**	**03 49 52.6**	**+1.2**
VA03	**San Esteban**	**2.82**	**162**			**Pn**	**03 49 22.4**	**+2.6**
VA03	**San Esteban**	**2.82**	**162**	*eP*		**Pb**	**03 49 23.1**	**-2.6**
VA03				*i*	S	**Sb**	**03 50 00.3**	**+0.4**
VA03				IAML			03 50 12.0	
	comp=E,6μm,0.4s							
VA03	**San

comp=Z,0.4nm,0.3s,baz=10,slow=17,SNR=1.9
CPUP LR LR 03 57 06.2
comp=Z,294nm,21.5s,baz=253,slow=39
comp=Z,2.2nm,0.4s
CPUP Villa Florida 13.12 77 Pn Pn 03 51 40.7 -0.3
LPAZ La Paz 14.09 14 Pn **Pn 03 51 56.7 +1.8**
comp=Z,1.3nm,0.3s,baz=188,slow=5.8,SNR=39
comp=Z,3.3nm,0.3s
LPAZ La Paz 14.09 14 Pn **Pn 03 51 55.4 +0.5**
LPAZ La Paz 14.09 14 *eP* **Pn 03 51 52.4 -2.5**
PLTB Pedras Altas 15.54 101 Pn 03 52 13.2 -0.5
PLTB Pedras Altas 15.54 101 *eP* **Pn 03 52 11.2 -2.5**
CRSM Crissiumal (Br 15.61 85 *eP* **Pn 03 52 11.2 -3.4**
CPSB Cacapava Do Su 15.70 96 *eP* **Pn 03 52 12.9 -2.8**
ANTJ Antonio Joao (16.15 64 *eP* **Pn 03 52 19.7 -1.9**
ALGR Alto Alegre (B 16.23 90 *eP* **Pn 03 52 21.2 -1.5**
AMBA Amambai (Brazi 16.47 68 *eP* **Pn 03 52 23.5 -2.3**
MCR1 Marechal Candi 16.58 74 *eP* **Pn 03 52 24.4 -2.7**
FRBT Francisco Belt 16.86 80 *eP* **Pn 03 52 29.4 -1.4**
SIV San Ignacio 17.03 37 P **Pn 03 52 32.3 -0.5**
comp=Z,0.4nm,0.3s,baz=214,slow=11,SNR=63
comp=Z,22nm,0.5s
AQDB Aquidauana 17.25 60 *eP* **Pn 03 52 33.3 -2.2**
ITAB Concordia 17.32 85 Pn **Pn 03 52 36.2 -0.1**
ITAB IAmb IAmb 03 52 40.2
comp=Z,46nm,1.1s
ITAB Concordia 17.32 85 *eP* **Pn 03 52 35.4 -1.0**
CNLB Canela 18.04 93 *eP* **Pn 03 52 45.0 -0.3**
PTGB Pitanga 18.14 78 *eP* **Pn 03 52 43.8 -2.8**
TRCB Terra Rica 18.45 71 P **P 03 52 50.3 +0.1**
TRCB IAmb IAmb 03 52 54.7
comp=Z,27nm,0.5s
TRCB Terra Rica 18.45 71 *eP* **P 03 52 48.2 -2.0**
PTLB Pontes e Lacer 18.52 41 *eP* **P 03 52 50.0 -1.0**
NNA Nana 18.65 344 LR LR 03 57 40.8
comp=Z,47nm,20.2s,baz=174,slow=29
POCN Pocone 19.09 49 *eP* **P 03 52 55.0 -2.2**
TER01 Tubaro-SC 19.65 91 *eP* **P 03 53 03.0 -0.3**
PP1B Ponte de Pedra 19.67 55 *eP* **P 03 53 02.1 -1.5**
PTET Porto Estrela 19.75 45 *eP* **P 03 53 02.9 -1.5**
VILB Vilhena 20.05 34 *eP* **P 03 53 06.5 -1.2**
PCMB Pacaembu 20.13 70 *eP* **P 03 53 07.0 -1.6**
SALV Santo Antonio 20.30 49 *eP* **P 03 53 08.9 -1.5**
C2SB Chapadao do Su 20.43 61 *eP* **P 03 53 10.1 -1.6**
TIJ01 Guaruva-PR 20.55 82 *eP* **P 03 53 10.9 -2.3**
FRTB Fartura 20.78 76 *eP* **P 03 53 15.0 -0.6**
ETMB Extrema 20.78 15 *eP* **P 03 53 16.1 +0.5**
NBRS Nobres 21.42 46 *eP* **P 03 53 21.2 -1.3**
ITRB Iturama 21.82 67 *eP* **P 03 53 25.4 -1.4**
DVLD Doverlandia 22.25 57 *eP* **P 03 53 30.0 -1.5**
CZSB Cruzeiro do Su 22.26 357 *eP* **P 03 53 31.5 0.0**
PET01 Itanhaem-SP 22.37 81 *eP* **P 03 53 31.4 -1.3**
SAML Samuel 22.45 22 P **P 03 53 33.7 +0.2**
BB19B Bebedouro 22.63 72 *eP* **P 03 53 34.0 -1.5**
RCLB Rio Claro- Sao 22.86 76 *eP* **P 03 53 36.4 -1.6**
PDRB Porto dos Gac 22.99 40 *eP* **P 03 53 36.9 -2.4**
VAO Valinhos 23.11 78 *eP* **P 03 53 39.0 -1.5**
ARAG Araguaiana, MT 23.12 56 *eP* **P 03 53 38.3 -2.2**
CLDB Colider 24.12 41 *eP* **P 03 53 48.4 -1.9**
IPMB Ipameri, GO 24.46 66 *eP* **P 03 53 50.5 -3.0**
PMNB Patos De Minas 25.59 69 *eP* **P 03 53 60.0 -3.7**
TBTG Tabatinga, AM 25.80 4 *eP* **P 03 54 06.0 +0.5**
BDFB Brasilia 25.98 62 P **P 03 54 06.9 -0.4**
comp=Z,12nm,0.5s,baz=236,slow=7.8,SNR=32
comp=Z,12nm,0.5s
BDFB Brasilia 25.98 62 P **P 03 54 06.5 -0.9**
BDFB IAmb IAmb 03 54 07.4
comp=Z,15nm,0.6s
BDFB Brasilia 25.98 62 *eP* **P 03 54 06.4 -0.9**
SNDB Serra Nova Dou 26.07 51 *eP* **P 03 54 06.8 -1.1**
NPGB Novo Progresso 27.53 37 *eP* **P 03 54 19.7 -1.4**
PEXB Peixe 28.05 55 *eP* **P 03 54 25.3 -0.5**
MACA Manacapuru-AM 28.70 23 *eP* **P 03 54 31.3 -0.2**
JANB Januaria 29.19 65 *eP* **P 03 54 34.8 -1.2**
ITTB Itaituba 29.64 33 *eP* **P 03 54 38.8 -1.2**
SJMB Sao Joao De Ma 29.83 75 *eP* **P 03 54 40.8 -0.8**
BSFB Barra de Sao F 30.06 75 *eP* **P 03 54 42.7 -0.9**
RIB01 Linhares ES 30.21 76 *eP* **P 03 54 44.9 -0.1**
SDBA SAO DESIDERIO 30.34 60 *eP* **P 03 54 46.0 -0.2**
SMTB Santa Maria do 30.82 52 *eP* **P 03 54 50.3 -0.1**
NAN01 Guarapari, ES 31.12 74 *eP* **P 03 54 52.0 -1.1**
GUA01 Guaratinga, BA 32.01 72 *eP* **P 03 55 00.0 -0.9**
MALB Monte Alegre 32.54 34 *eP* **P 03 55 04.3 -1.2**
CMC01 Camacan, BA 32.88 71 *eP* **P 03 55 07.8 -0.7**
GDU01 Guandu, BA 33.72 68 *eP* **P 03 55 13.8 -2.1**
BOAV Boa Vista 33.98 20 *eP* **P 03 55 17.9 -0.1**
MCPB Macapa, AP 34.92 36 *eP* **P 03 55 25.5 -0.7**
PMSA Palmer Station 35.03 174 LR LR 04 07 42.4
comp=Z,101nm,20.9s,baz=328,slow=33
ZARC Zaragoza, Cauc 37.49 355 P **P 03 55 47.7 -0.4**
ZARC IAmb IAmb 03 55 49.7
comp=Z,10nm,1.3s
NBMA Muriti-CE 38.20 60 *eP* **P 03 55 53.9 -0.3**
MDP Montagnes des 39.42 31 LR LR 04 12 32.7
comp=Z,117nm,20.9s,baz=204,slow=36
RCBR Riachuelo 41.35 61 LR LR 04 13 52.8
comp=Z,95nm,20.1s,baz=354,slow=37
JTS Las Juntas de 42.15 340 LR LR 04 10 35.3
comp=Z,64nm,18.2s,baz=244,slow=31
BELA Belgrano 2 50.67 171 P **P 03 57 33.1 0.0**
BELA IAmb IAmb 03 57 35.4
comp=Z,5.9nm,1.1s
VNA3 Neumayer Olymp 52.85 159 P **P 03 57 50.1 +0.6**
VNA1 Neumayer--Stat 53.14 158 P **P 03 57 52.9 +1.3**
VNA1 Neumayer--Stat 53.14 158 PcP **PcP 03 58 59.2 -0.3**
SNAA Sanae 55.08 159 P **P 03 58 06.4 +0.6**
SNAA Sanae 55.08 159 LR LR 04 19 38.4
comp=Z,73nm,21.6s,baz=289,slow=34
SNAA Sanae 55.08 159 P **P 03 58 05.9 +0.1**
TROLL Troll, Antarti 56.79 159 P **P 03 58 18.6 +0.5**
QSPA South Pole Qui 60.14 180 P **P 03 58 42.1 +0.5**
GOGA Godfrey 64.14 349 P **P 03 59 09.0 +0.5**
TX31 Lajitas Ar. Si 66.53 330 IAmb IAmb 03 59 26.4
comp=Z,9.3nm,1.2s
TXAR Lajitas Array 66.53 330 P **P 03 59 26.0 +1.8**
comp=Z,0.7nm,0.5s,baz=155,slow=8.7,SNR=22
comp=Z,0.7nm,0.5s
TXAR Lajitas Array 66.53 330 P **P 03 59 25.1 +0.9**
PBMO Poplar Bluff 68.82 344 P **P 03 59 39.3 +0.9**
PBMO IAmb IAmb 03 59 40.0
comp=Z,6.5nm,1.0s
MNTX Cornudas Mount 69.31 330 P **P 03 59 42.1 +0.5**
MSTX Muleshoe 70.19 333 P **P 03 59 47.5 +0.5**
MSTX IAmb IAmb 03 59 49.1
comp=Z,7.6nm,1.1s
121A Cookes Peak, D 71.09 328 P **P 03 59 52.6 -0.1**
ANMO Albuquerque 72.55 331 LR LR 04 26 49.9
comp=Z,53nm,19.9s,baz=220,slow=32
DBIC Dimbokro 73.59 72 P **P 04 00 07.9 +0.1**
comp=Z,7.5nm,0.7s,baz=225,slow=5.1,SNR=12
comp=Z,7.5nm,0.7s
T25A Trinidad 73.60 333 P **P 04 00 08.8 +1.2**
T25A IAmb IAmb 04 00 10.8
comp=Z,4.8nm,0.9s
X16A Lo Mia Camp, P 74.36 327 IAmb IAmb 04 00 15.3
comp=Z,5.6nm,1.3s
WUAZ Wupatki 75.23 327 P **P 04 00 18.3 +1.2**
WUAZ IAmb IAmb 04 00 20.6
comp=Z,3.8nm,1.0s
Q24A Divide 75.47 334 IAmb IAmb 04 00 31.4
comp=Z,6.9nm,0.8s
MAW Mawson 76.82 164 P **P 04 00 26.1 +0.6**
comp=Z,1.6nm,0.9s,baz=223,slow=7.2,SNR=9.2
MAW LR LR 04 36 07.4
comp=Z,50nm,18.2s,baz=145,slow=37
comp=Z,1.6nm,0.9s
ECSD EROS Data Cent 76.95 342 IAmb IAmb 04 00 38.2
comp=Z,7.1nm,0.8s
CCUT Cedar City 77.81 327 P **P 04 00 33.7 +2.0**
CCUT IAmb IAmb 04 00 45.4
comp=Z,3.7nm,1.0s
P18A Preston Nutter 78.11 330 IAmb IAmb 04 00 46.5
comp=Z,5.3nm,0.9s
PRN Pahroc Range 78.50 326 IAmb IAmb 04 00 39.0
comp=Z,4.4nm,1.1s
TSUM Tsumeb 79.93 106 LR LR 04 32 15.5
comp=Z,35nm,21.2s,baz=200,slow=33
PDAR Pinedale Array 80.45 333 P **P 04 00 47.7 +1.6**
comp=Z,0.3nm,0.4s,baz=119,slow=3.4,SNR=2.5
comp=Z,0.3nm,0.4s
PDAR Pinedale Array 80.45 333 P **P 04 00 45.7 -0.3**
NVAR Mina Array Bea 80.90 325 P **P 04 00 50.5 +1.9**
comp=Z,0.5nm,0.7s,baz=162,slow=6.8,SNR=5.2
comp=Z,0.5nm,0.7s
ELK Elko 81.24 328 LR LR 04 33 16.0
comp=Z,55nm,18.6s,baz=212,slow=33
ELK Elko 81.24 328 P **P 04 00 51.3 +1.0**
BOSA Boshof 81.56 118 P **P 04 00 52.4 0.0**
comp=Z,4.6nm,0.9s,baz=253,slow=5.6,SNR=4.6
comp=Z,4.6nm,0.9s
TOA0 Torodi Ar. Sit 82.53 70 P **P 04 00 57.1 -0.3**
TORD Torodi Ar. Bea 82.53 70 P **P 04 00 57.5 +0.1**
comp=Z,7.3nm,0.8s,baz=277,slow=5.9,SNR=157
comp=Z,7.3nm,0.8s
TORD Torodi Ar. Bea 82.53 70 P **P 04 00 57.2 -0.2**
ULM Lac du Bonnet 82.83 345 P **P 04 00 59.0 +0.9**
comp=Z,2.8nm,0.8s,baz=80,slow=2.5,SNR=3.8
comp=Z,2.8nm,0.8s
BEKR Beckworth 83.03 324 IAmb IAmb 04 01 12.5
comp=Z,2.7nm,0.8s
LBTB Lobatse 83.61 115 LR LR 04 36 52.2
comp=Z,54nm,18.1s,baz=194,slow=35
LBTB Lobatse 83.61 115 P **P 04 01 02.1 -1.0**
CASY Casey 83.93 181 P **P 04 01 05.2 +1.4**
CASY IAmb IAmb 04 01 25.8
comp=Z,5.0nm,1.1s
SCHQ Schefferville 84.67 3 P **P 04 01 07.8 +0.4**
comp=Z,3.1nm,0.9s,baz=227,slow=6.4,SNR=2.5
comp=Z,3.1nm,0.9s
SCHQ Schefferville 84.67 3 IAmb IAmb 04 01 21.9
comp=Z,4.6nm,1.1s
J08A Circle Bar Ran 84.78 328 P **P 04 01 09.7 +1.3**
LSZ Lusaka 90.66 108 LR LR 04 39 26.6
comp=Z,41nm,19.4s,baz=170,slow=34
ESDC Sonseca Array 93.59 46 LR LR 04 44 04.0
comp=Z,44nm,18.1s,baz=211,slow=36
SFJD Kangerlussuaq 98.08 8 LR LR 04 45 50.3
comp=Z,38nm,20.7s,baz=287,slow=35
WRA Warramunga Arr 124.35 210 PKP **PKPdf 04 07 33.2 -0.6**
comp=Z,1.0nm,0.6s,baz=147,slow=1.6,SNR=7.3
H11S2 WAKE ISLAND Hyl 126.12 272 T T 06 26 44.4
baz=114,slow=75
H11S1 WAKE ISLAND Hyl 126.13 272 T T 06 26 53.6
baz=114,slow=75
H11S3 WAKE ISLAND Hyl 126.14 272 T T 06 26 45.3
baz=114,slow=75
H11N3 WAKE ISLAND Hyl 126.43 273 T T 06 27 00.7
baz=119,slow=74
H11N1 WAKE ISLAND Hyl 126.44 273 T T 06 27 13.0
baz=119,slow=74
H11N2 WAKE ISLAND Hyl 126.45 273 T T 06 27 13.4
baz=119,slow=74
KBL Kabul 146.58 72 PKPbc **PKPbc 04 08 16.7 +0.6**
CHGR Chuyangaron 146.70 64 PKPbc **PKPbc 04 08 16.1 -0.1**
KK31 Karatay Array 147.20 56 PKPbc **PKPbc 04 08 17.3 0.0**
KKAR Karatay Array 147.20 56 PKPbc **PKPbc 04 08 17.1 -0.3**
GAR Garm 147.58 64 PKPbc **PKPbc 04 08 18.4 -0.3**
TOLI2 Tolitoli 148.88 204 PKPbc **PKPbc 04 08 22.0 -0.6**
KURK Kurchatov 149.68 39 PKPbc **PKPbc 04 08 23.5 0.0**
ZALV Zalesovo Beam 150.67 29 PKPbc **PKiKP 04 08 26.7 +0.2**
comp=Z,7.4nm,0.5s,baz=311,slow=3.2,SNR=18
KSH Kashi 151.88 62 PKPbc **PKPbc 04 08 29.1 -0.1**
KSH pPKP pPKPbc 04 08 38.0 +1.3
MKAR Makanchi Array 153.78 43 PKPbc **PKPbc 04 08 33.3 +0.2**
comp=Z,1.0nm,0.9s,baz=336,slow=1.0,SNR=4.0
MKAR Makanchi Array 153.78 43 **PKPbc 04 08 31.8 -1.3**
PZH PanZhiHua 173.13 120 PKP **PKPdf 04 08 42.5 -1.5**
CD2 Chengdu 175.91 77 PKP **PKPdf 04 08 44.1 -0.5**

*MAN **17** 03:59:30.8, 9.°26N×126.°69E, h18km, mb4.7, ML3.6, MS3.5*
*IDC **17** 03:59:40.9±3.8, 9.°12N×126.°50E, h129km±36km, mb3.3/6, mbtmp3.8/7, MS3.3/5, Error ellipse: s-maj=61.4km s-min=16.8km az=71.0*
ISC 17 03:59:31.3±0.8, 9.°27N±0.°06×126.°90E±0.°08, h35km, n25, σ2s19/22, mb3.6/6, 4C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BIPH	**Bislig**	**1.20**	**206**	∥ *iP*	**Pn**	**03 59 48.3**	**-3.2**
BIPH				*eS*	**Sn**	**04 00 01.7**	**-4.9**
SCPH	**Surigao**	**1.48**	**290**	*eP*	**Pn**	**03 59 52.9**	**-2.5**
SCPH				*i* S	**Sn**	**04 00 11.3**	**-2.2**
BUKP	**Musuan**	**2.28**	**233**	∥ *iP*	**Pn**	**04 00 05.8**	**-0.6**
BUKP				*eS*	**Sn**	**04 00 34.6**	**+1.2**
DAV	**Davao City (W)**	**2.54**	**211**	P	Pn	04 00 17.0	+7.0
	170nm,0.3s,baz=266,slow=20,SNR=5.9						
DAV				S	Sn	04 00 47.0	+7.3
	260nm,0.4s,baz=293,slow=20,SNR=3.7						
DAV				LR	LR	04 01 15.6	
	comp=Z,616nm,18.3s,baz=7.0,slow=42						
KCP	**Kidapawan**	**2.87**	**219**	∥ *eP*	**Pn**	**04 00 14.5**	**-0.1**
KCP				*i* S	**Sn**	**04 00 51.6**	**+3.7**
TBP	**Tagbilaran**	**3.02**	**278**	∥ *iP*	**Pn**	**04 00 15.6**	**-1.1**
TBP				*i* S	**Sn**	**04 00 52.9**	**+1.2**
LLP	**Lapu-Lapu**	**3.07**	**290**	∥ *iP*	**Pn**	**04 00 16.9**	**-0.4**
LLP				*i* S	**Sn**	**04 00 55.8**	**+2.9**
CTBH	**Cotabato--PC H**	**3.32**	**232**	∥ *iP*	**Pn**	**04 00 20.5**	**-0.2**
RCP	**Roxas**	**4.68**	**300**	∥ *eP*	**Pn**	**04 00 39.4**	**0.0**
SIJI	**Sorong**	**10.97**	**156**	P	**Pn**	**04 02 09.1**	**+3.3**
	3.8nm,0.4s,baz=159,slow=23,SNR=2.5						
SIJI				LR	LR	04 08 12.1	
	comp=Z,75nm,18.1s,baz=247,slow=46						
GUMO	**Guam**	**18.13**	**75**	LR	LR	04 11 12.2	
	comp=Z,58nm,19.6s,baz=122,slow=37						
CMAR	**Chiang Mai Arr**	**28.60**	**292**	LR	LR	04 17 10.2	
	comp=Z,51nm,18.1s,baz=185,slow=37						
WRA	**Warramunga Arr**	**29.93**	**166**	P	**P**	**04 05 35.5**	**-0.7**
	0.5nm,0.5s,baz=348,slow=9.1,SNR=7.4						
	0.5nm,0.5s						
ASAR	**Alice Springs**	**33.44**	**168**	P	**P**	**04 06 06.5**	**-0.5**
	0.3nm,0.3s,baz=352,slow=6.2,SNR=8.8						
ASAR				PcP	**PcP**	**04 08 47.2**	**-0.8**
	0.2nm,0.5s,baz=350,slow=2.1,SNR=1.8						
	0.3nm,0.3s						
H11S3	**WAKE ISLAND Hy**	**39.62**	**72**	T	T	04 50 07.8	
	baz=262,slow=75,SNR=32						
H11S1	**WAKE ISLAND Hy**	**39.64**	**72**	T	T	04 49 56.6	
	baz=262,slow=75,SNR=24						
H11S2	**WAKE ISLAND Hy**	**39.64**	**72**	T	T	04 49 56.8	
	baz=262,slow=75,SNR=39						
H11N1	**WAKE ISLAND Hy**	**39.99**	**70**	T	T	04 50 33.4	
	baz=265,slow=74						
H11N2	**WAKE ISLAND Hy**	**40.00**	**70**	T	T	04 50 35.0	
	baz=265,slow=74						
H11N3	**WAKE ISLAND Hy**	**40.01**	**70**	T	T	04 50 43.7	
	baz=265,slow=74						
SONM	**Songino Array**	**42.17**	**339**	P	**P**	**04 07 19.2**	**-1.5**
	0.5nm,0.5s,baz=169,slow=8.8,SNR=2.2						
	0.5s						
STKA	**Stephens Creek**	**43.26**	**162**	P	**P**	**04 07 29.8**	**+0.3**
	1.0nm,0.6s,baz=333,slow=5.0,SNR=3.2						
	1.0nm,0.6s						
MKAR	**Makanchi Array**	**53.20**	**323**	P	**P**	**04 08 45.0**	**-1.1**
	2.3nm,0.7s,baz=127,slow=6.9,SNR=8.9						
	2.3nm,0.7s						
MSVF	**Nonsavu**	**57.20**	**118**	LR	LR	04 34 08.0	
	comp=Z,22nm,18.4s,baz=175,slow=36						
ILAR	**Eielson Array**	**80.07**	**26**	P	**P**	**04 11 38.8**	**+1.6**
	0.3nm,0.9s,baz=242,slow=4.4,SNR=5.5						
	0.3nm,0.9s						

*ATH **17** 04:15:54.0, 38.°05N×20.°69E, h18km±2km, ML2.3/2, Error ellipse: s-maj=4.7km s-min=1.5km az=252.0*
*THE **17** 04:15:54.2, 38.°05N×20.°64E, h18km, ML2.3/2, Error ellipse: s-maj=1.7km s-min=0.5km az=241.0*
ISC 17 04:15:53.7±1.1, 38.°05N±0.°04×20.°66E±0.°05, h19km±2km, n21, σ1s05/34, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSDA	**Pessada-Kefalo**	**0.09**	**319**	P	**Pg**	**04 15 57.5**	**+0.1**
PSDA				S	**Sg**	**04 16 00.2**	**+0.2**
PSDA	**Pessada-Kefalo**	**0.09**	**319**	P	**Pg**	**04 15 57.6**	**+0.1**
PSDA				S	**Sg**	**04 16 00.1**	**+0.2**
VLS	**Valsamata**	**0.14**	**337**	P	**Pg**	**04 15 58.2**	**+0.2**
VLS				S	**Sg**	**04 16 01.1**	**+0.2**
VLS				AML	AML	04 16 01.3	
	comp=E,5051μm,0.1s						
VLS				AML	AML	04 16 01.4	
	comp=N,4756μm,0.1s						
VLS	**Valsamata**	**0.14**	**337**	P	**Pg**	**04 15 58.2**	**+0.2**
VLS				S	**Sg**	**04 16 01.1**	**+0.2**
	comp=N,3μm,0.1s						
LXRA	**Lixouri, Kepha**	**0.23**	**311**	P	**Pg**	**04 15 59.6**	**+0.4**
LXRA				S	**Sg**	**04 16 04.1**	**+1.1**
KEF4	**Livadi, Kephal**	**0.28**	**319**	P	**Pb**	**04 16 00.2**	**+0.1**
KEF4				S	**Sb**	**04 16 05.2**	**+0.9**
KEF3	**Kipouria, Keph**	**0.29**	**303**	P	**Pb**	**04 16 00.2**	**-0.1**
KEF3				S	**Sb**	**04 16 05.1**	**+0.4**
DMLN	**Damoulianata-K**	**0.30**	**311**	P	**Pb**	**04 16 00.4**	**0.0**
DMLN	**Damoulianata-K**	**0.30**	**311**	P	**Pb**	**04 16 00.3**	**-0.1**
DMLN				S	**Sb**	**04 16 05.4**	**+0.5**
LTHK	**Lithakia**	**0.36**	**157**	P	**Pb**	**04 16 01.5**	**-0.1**
LTHK	**Lithakia**	**0.36**	**157**	P	**Pb**	**04 16 01.5**	**-0.1**
LTHK				S	**Sb**	**04 16 08.1**	**+1.1**
FSK	**Fiskardo**	**0.42**	**350**	P	**Pb**	**04 16 02.9**	**+0.3**
FSK				S	**Sb**	**04 16 09.4**	**+0.8**
FSK				AML	AML	04 16 10.0	
	comp=E,922μm,0.2s						
FSK				AML	AML	04 16 10.4	
	comp=N,261μm,0.2s						
FSK	**Fiskardo**	**0.42**	**350**	P	**Pb**	**04 16 02.9**	**+0.3**
FSK				S	**Sb**	**04 16 09.5**	**+0.8**
	comp=N,290nm,0.2s						
EVGI	**Lefkada island**	**0.57**	**360**	P	**Pb**	**04 16 04.9**	**-0.1**
EVGI	**Lefkada island**	**0.57**	**360**	P	**Pb**	**04 16 04.8**	**-0.3**
EVGI				S	**Sg**	**04 16 14.2**	**+1.2**
NYDR	**Nydri-Lefkada**	**0.67**	**3**	P	**Pb**	**04 16 06.4**	**-0.2**
NYDR	**Nydri-Lefkada**	**0.67**	**3**	P	**Pb**	**04 16 06.5**	**-0.2**
LKD2	**Lefkada island**	**0.74**	**360**	P	**Pb**	**04 16 07.7**	**-0.3**
DBRK	**Dubrovnik**	**5.00**	**338**	*ePn*	Pg	04 17 37.7	+8.2
DBRK				Sn	**Sn**	**04 18 02.3**	**-2.7**
STON	**Ston**	**5.32**	**336**	*ePn*	**Pg**	**04 17 42.1**	**+6.5**
STON				Sn	**Sn**	**04 18 10.5**	**-2.4**
RICI	**Ricice**	**6.07**	**335**	*ePn*	**Pg**	**04 17 51.8**	**+2.0**
RICI				Sn	**Sn**	**04 18 28.2**	**-3.0**

TIR 17 04:16:59.8, 41.°49N×20.°34E, h25km±1km, Md2.6, Ml2.1, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PHP	**Peshkopia**	**0.21**	**21**	P	Pb	04 17 05.3	-0.4
	baz=20						
PHP				S	Sb	04 17 08.4	-1.3
	baz=20						
PHP				AMP			
	comp=N,2.0nm,0.1s,baz=20						
TIR	**Tirane**	**0.38**	**249**	P	Pb	04 17 08.2	+0.1
	baz=250						
TIR				S	Sb	04 17 14.4	+0.7
	baz=250						
TIR				AMP			
	comp=N,0.3nm,0.2s,baz=250						
BCI	**Bajram Curri**	**0.90**	**347**	P	Pn	04 17 17.5	+0.5
	baz=348						
BCI				S	Sn	04 17 30.4	+1.2
	baz=348						
BCI				AMP			
	comp=N,0.2nm,0.4s,baz=348						
FNA	**Florina**	**1.05**	**132**	P	Pb	04 17 19.9	+0.5
	baz=131						
FNA				S	Sn	04 17 35.4	+2.5
	baz=131						

HEL 17 04:17:06.1±0.8, 64.°42N×31.°00E, h0km, ML1.5, Explosion, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KU6	**Riekki**	**1.68**	**344**	PG	Pn	04 17 36.4	-0.3
	baz=166						
KU6				MSG		04 17 56.4	
	comp=Z,3.4nm,0.2s						
KU6				SG	Sn	04 17 57.5	-1.4
OUL	**Oulu**	**2.29**	**289**	SG	Sb	04 18 16.1	-0.9
OBF0	**Syolatti, Pyha**	**2.93**	**275**	PB	Pn	04 17 56.3	+2.5
OBF0				SG	Sb	04 18 36.7	+1.2

HEL 17 04:17:22.1±0.2, 67.°71N×33.°69E, h0km, ML1.5, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVZ	**Lovozero**	**0.41**	**63**	PG	Pg	04 17 29.1	-0.7
VRF	**Varrio**	**1.56**	**273**	PG	Pn	04 17 49.3	-1.7
	baz=85						
VRF				MSG		04 18 08.8	
	comp=Z,2.3nm,0.2s						
VRF				SG	Sn	04 18 09.8	-2.1
OLKF	**Oulanka, Finla**	**2.19**	**232**	PB	Pn	04 17 60.0	+0.3
OLKF				SG	Sb	04 18 30.5	+0.3
KU6	**Riekki**	**2.27**	**223**	PB	Pn	04 18 01.0	+0.2
KU6				MSG		04 18 29.2	
	comp=Z,3.3nm,0.2s						
KU6				SG	Sb	04 18 30.9	-1.4
MSF	**Maaselka**	**2.58**	**228**	SG	Sb	04 18 40.7	-0.7
SGF	**Sodankyl**	**2.76**	**268**	PG	Pb	04 18 10.1	-2.2
SGF				SN	Sb	04 18 45.1	-1.5
SGF	**Sodankyl**	**2.76**	**268**	PB	Pb	04 18 10.1	-2.2
SGF				SB	Sb	04 18 45.1	-1.5
KEV	**Kevo**	**3.18**	**313**	PN	Pn	04 18 13.5	+0.1
KEV				SN	Sn	04 18 51.5	-0.4
KEV				MSG		04 18 55.6	
	comp=Z,1.1nm,0.2s						
HEF	**Hetta**	**3.83**	**285**	SG	Sb	04 19 20.5	+3.2
KTK1	**Kautokeino**	**4.08**	**293**	SG	Sb	04 19 28.4	+3.7
OUL	**Oulu**	**4.10**	**234**	PG	Pb	04 18 34.9	-0.1
ERTU	**Ertsjaerv**	**4.64**	**261**	SB	Sb	04 19 37.8	-2.7

*NEIC **17** 04:20:57.0±1.5, 10.°94S×165.°81E±0.°1, h67km±9km, mb4.3/11, Error ellipse: s-maj=20.8km s-min=18.8km az=133.0*
*IDC **17** 04:20:59.6±6.5, 10.°94S×165.°81E, h91km±61km, mb3.7/6, mbtmp4.0/7, ML3.9/1, MS3.2/6, Error ellipse: s-maj=40.8km s-min=27.9km az=160.0*
ISC 17 04:20:56.0±0.7, 10.°90S±0.°09×165.°8E±0.°1, h61km, n34, σ1s22/22, mb4.2/12, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOUNC	**Koumac, New Ca**	**9.70**	**188**	Pn	**Pn**	**04 23 13.8**	**+0.9**
MARNC	**Mare, Loyalty**	**10.73**	**169**	Pn	**Pn**	**04 23 25.2**	**-1.8**
DZM	**Mont Dzumac**	**11.12**	**177**	P	**Pn**	**04 23 35.0**	**+2.6**
	0.8nm,0.3s,baz=337,slow=15,SNR=17						
DZM				S	**Sn**	**04 25 34.0**	**-1.2**
	2.8nm,0.6s,baz=26,slow=15,SNR=1.2						
	4.2nm,0.5s						
MSVF	**Nonsavu**	**13.67**	**121**	P	**P**	**04 24 16.0**	**+2.1**
	3.8nm,0.7s,baz=306,slow=14,SNR=2.6						
MSVF	**Nonsavu**	**13.67**	**121**	Pn	**Pn**	**04 24 05.6**	**-1.6**
PMG	**Port Moresby**	**18.41**	**273**	LR	LR	04 30 55.0	
	comp=Z,78nm,20.7s,baz=142,slow=32						
CTA	**Charters Tower**	**20.91**	**242**	LR	LR	04 32 25.0	
	comp=Z,80nm,19.1s,baz=81,slow=33						
AFI	**Afiamalu**	**22.10**	**100**	LR	LR	04 32 18.8	
	comp=Z,63nm,20.5s,baz=213,slow=31						
H11S2	**WAKE ISLAND Hy**	**29.22**	**2**	T	T	04 57 16.6	
	baz=181,slow=76,SNR=8.1						
H11S3	**WAKE ISLAND Hy**	**29.22**	**2**	T	T	04 57 17.6	
	baz=181,slow=76,SNR=4.7						
H11S1	**WAKE ISLAND Hy**	**29.24**	**2**	T	T	04 57 18.2	
	baz=181,slow=76,SNR=8.1						
BKZ	**Black Stump Fm**	**29.72**	**163**	P	**P**	**04 26 56.4**	**0.0**
H11N1	**WAKE ISLAND Hy**	**30.44**	**2**	T	T	04 58 48.4	
	baz=182,slow=76,S

PSA00					IAmb	IAmb	04 29 10.0	
	comp=Z,10nm,1.2s							
PETK	**Petropavlovsk-**	**64.13**	**355**	LR	LR	LR	04 55 09.6	
	comp=Z,26nm,19.5s,baz=119,slow=32							
MA2	**Magadan**	**71.28**	**352**	LR	LR	LR	04 59 26.9	
	comp=Z,16nm,19.4s,baz=140,slow=32							
BPAW	**Bear Paw Mtn.**	**81.63**	**18**	P	**P**	**P**	**04 33 06.3**	**-0.8**
BPAW					IAmb	IAmb	04 33 23.2	
	comp=Z,2.5nm,1.2s							
WAX	**Waxell Ridge**	**81.90**	**23**	P	**P**	**P**	**04 33 08.8**	**0.0**
HDA	**Harding Lake**	**83.09**	**19**	P	**P**	**P**	**04 33 14.7**	**0.0**
HDA					IAmb	IAmb	04 33 17.7	
	comp=Z,2.2nm,0.6s							
ILAR	**Eielson Array**	**83.36**	**18**	P	**P**	**P**	**04 33 16.2**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=239,slow=5.3,SNR=10							
	comp=Z,0.9nm,0.6s							
J25K	**Salcha River,**	**83.73**	**19**	P	**P**	**P**	**04 33 18.5**	**+0.4**
J25K					IAmb	IAmb	04 33 20.2	
	comp=Z,2.0nm,0.7s							
NVAR	**Mina Array Bea**	**85.89**	**50**	P	**P**	**P**	**04 33 30.9**	**+1.2**
	comp=Z,0.4nm,0.7s,baz=242,slow=5.8,SNR=2.4							
	comp=Z,0.4nm,0.7s							
MK31	**Makanchi Array**	**93.45**	**317**	P	**P**	**P**	**04 34 03.2**	**-1.7**
MK31					IAmb	IAmb	04 34 16.8	
	comp=Z,3.5nm,1.2s							
MKAR	**Makanchi Array**	**93.45**	**317**	P	**P**	**P**	**04 34 04.6**	**-0.3**
	comp=Z,0.8nm,0.8s,baz=85,slow=5.4,SNR=4.0							
	comp=Z,0.8nm,0.8s							
ARCES	**ARCESS Array B**	**116.21**	**345**	PKP	**PKPdf**		**04 39 31.3**	**-0.6**
	comp=Z,2.4nm,1.0s,baz=66,slow=2.9,SNR=5.5							

IDC ***17*** *04:21:11.5±2.2,2.2°93N×125°.16E,h0km,mb3.7/3, mbtmp3.7/3,MS3.0/1,Error ellipse: s-maj=225.7km s-min=27.2km az=64.0*

DJA ***17*** *04:21:16.4±0.4,1°.1N±4°×12°.2E±°,h10km,M4.1/8,mb4.4/1, MLv3.9/8*

ISC 17 04:21:15.5±1.2,1°.04N±0°.08×121°.76E±0°.07,h10km,n11, σ0s94/12,mb3.6/3,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.59**	**162**	P	**Pb**	**04 21 26.9**	**-1.0**
MRSI				S	**Sb**	**04 21 36.0**	**-0.3**
APSI	**Ampana**	**1.94**	**183**	P	**Pn**	**04 21 47.7**	**-0.9**
MPSI	**Mapaga**	**1.98**	**249**	P	**Pn**	**04 21 48.5**	**-0.7**
MPSI				S	**Sn**	**04 22 14.7**	**+0.6**
KMSI	**Cibinong**	**2.27**	**102**	P	**Pb**	**04 21 56.3**	**-0.4**
LUWI	**Luwuk**	**2.30**	**154**	P	**Pb**	**04 21 56.3**	**-0.9**
LUWI				S	**Sg**	**04 22 30.9**	**+1.3**
TTSI	**Tana Toraja**	**4.50**	**205**	P	**Pn**	**04 22 24.7**	**+1.0**
SPSI	**Sidrap Palu**	**5.35**	**202**	P	Pn	04 22 41.0	+5.5
WRA	**Warramunga Arr**	**24.23**	**150**	P	**P**	**04 26 32.3**	**-0.4**
	1.0nm,0.5s,baz=338,slow=8.7,SNR=17						
	1.0nm,0.5s						
JOW	**Kunigami**	**26.40**	**13**	LR	LR	04 36 15.2	
	comp=Z,37nm,20.6s,baz=348,slow=38						
ASAR	**Alice Springs**	**27.25**	**155**	P	**P**	**04 27 01.4**	**+1.3**
	0.6nm,0.6s,baz=334,slow=9.2,SNR=10.0						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**57.08**	**329**	P	**P**	**04 31 02.1**	**+0.1**
	0.3nm,0.5s,baz=124,slow=7.5,SNR=3.6						
	0.3nm,0.5s						

IDC ***17*** *04:32:58.0±1.6,24°.39S×179°.91E,h500km±14km,mb3.6/8, mbtmp4.4/10,Error ellipse: s-maj=21.5km s-min=15.6km az=143.0*

NEIC ***17*** *04:32:59.5±1.2,24°.4S±0°.1×179°.9E±0°.2,h513km±7km, mb4.3/21,Error ellipse: s-maj=21.0km s-min=17.8km az=106.0*

ISC 17 04:32:59.2±0.6,24°.36S±0°.07×179°.9E±0°.1,h517km,n46, σ0s98/47,mb4.2/20,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.25**	**159**	S	S	04 35 32.5	-10
	140nm,0.3s,baz=37,slow=20,SNR=2.2						
MSVF	**Nonsavu**	**6.81**	**345**	P	**P**	**04 34 43.6**	**-0.7**
	12nm,0.4s,baz=176,slow=3.8,SNR=36						
MSVF				S	**S**	**04 36 09.1**	**-1.2**
	5.9nm,0.8s,baz=151,slow=19,SNR=1.4						
MSVF	**Nonsavu**	**6.81**	**345**	P	**P**	**04 34 43.7**	**-0.6**
DZM	**Mont Dzumac**	**12.57**	**278**	P	**P**	**04 35 46.5**	**+2.7**
	9.3nm,0.7s,baz=86,slow=16,SNR=7.7						
URZ	**Urewera**	**14.06**	**189**	P	**P**	**04 35 58.6**	**-0.5**
	2.7nm,0.5s,baz=320,slow=22,SNR=2.2						
URZ				S	**S**	**04 38 26.0**	**-1.4**
	5.9nm,0.7s,baz=212,slow=20,SNR=4.8						
URZ	**Urewera**	**14.06**	**189**	P	**P**	**04 35 57.6**	**-1.4**
URZ				S	**S**	**04 38 28.9**	**+1.5**
ARMA	**Armidale**	**25.77**	**250**	P	**P**	**04 37 48.2**	**-0.4**
ARMA					IAmb	IAmb	04 37 50.9	
	comp=Z,5.1nm,0.7s							
EIDS	**Eidsvold**	**26.14**	**262**	P	**P**	**04 37 51.1**	**-0.7**
EIDS					IAmb	IAmb	04 37 53.1	
	comp=Z,5.5nm,0.7s							
CTAO	**Charters Tower**	**31.38**	**271**	P	**P**	**04 38 37.7**	**+0.2**
TOO	**Toolangi**	**32.12**	**238**	P	**P**	**04 38 43.6**	**0.0**
TOO					IAmb	IAmb	04 38 53.1	
	comp=Z,18nm,1.4s							
STKA	**Stephens Creek**	**34.46**	**249**	P	**P**	**04 39 03.8**	**+0.3**
	comp=Z,4.1nm,0.5s,baz=98,slow=10,SNR=23							
	comp=Z,4.1nm,0.5s							
STKA	**Stephens Creek**	**34.46**	**249**	IAmb	IAmb		04 39 05.0	
	comp=Z,2.5nm,1.4s							
BBOO	**Buckleboo**	**39.17**	**247**	P	**P**	**04 39 41.4**	**-0.9**
AS31	**Alice Springs**	**41.86**	**261**	P	**P**	**04 40 03.9**	**-0.1**
ASAR	**Alice Springs**	**41.86**	**261**	P	**P**	**04 40 03.7**	**-0.3**
	comp=Z,4.5nm,0.8s,baz=94,slow=7.1,SNR=47							
	comp=Z,4.5nm,0.8s							
ASAR	**Alice Springs**	**41.86**	**261**	P	**P**	**04 40 03.3**	**-0.7**
WR0	**Warramunga Arr**	**42.09**	**267**	P	**P**	**04 40 05.2**	**-0.6**
WR0					IAmb	IAmb	04 40 05.8	
	comp=Z,5.4nm,0.6s							
WB2	**Warramunga Arr**	**42.27**	**267**	P	**P**	**04 40 06.7**	**-0.4**
WRAB	**Tennant Creek**	**42.27**	**267**	P	**P**	**04 40 06.5**	**-0.7**
WRA	**Warramunga Arr**	**42.28**	**267**	P	**P**	**04 40 06.6**	**-0.6**
	comp=Z,9.2nm,0.5s,baz=102,slow=8.0,SNR=189							
WRA				ScP	**ScP**	**04 44 53.7**	**+3.1**
	comp=Z,2.6nm,0.9s,baz=100,slow=3.7,SNR=11							
	comp=Z,9.2nm,0.5s							
FORT	**Forrest**	**46.06**	**250**	P	**P**	**04 40 35.4**	**-1.0**
MTN	**Manton Dam**	**47.39**	**275**	P	**P**	**04 40 45.9**	**-0.8**
MTN					IAmb	IAmb	04 40 54.5	
	comp=Z,7.6nm,1.1s							
KNRA	**Kununurra**	**48.59**	**270**	P	**P**	**04 40 55.4**	**-0.2**
KNRA					IAmb	IAmb	04 40 56.3	
	comp=Z,22nm,1.1s							
PSA00	**Pilbara Seismi**	**54.98**	**260**	P	**P**	**04 41 40.8**	**-0.9**
PSA00					IAmb	IAmb	04 41 55.2	
	comp=Z,19nm,1.5s							
MBWA	**Marble Bar**	**55.19**	**260**	P	**P**	**04 41 42.2**	**-0.9**
MBWA					IAmb	IAmb	04 41 43.3	
	comp=Z,17nm,1.2s							
MORW	**Morawa**	**56.62**	**250**	P	**P**	**04 41 52.7**	**-0.3**
MORW					IAmb	IAmb	04 41 53.2	
	comp=Z,27nm,1.4s							
TOLI2	**Tolitoli**	**62.60**	**285**	P	**P**	**04 42 31.9**	**-1.1**
RPN	**Rapa Nui**	**63.02**	**109**	P	**P**	**04 42 35.1**	**-0.5**
	comp=Z,93nm,0.9s,baz=248,slow=19,SNR=2.7							
QSPA	**South Pole Qui**	**65.72**	**180**	P	**P**		**04 42 53.0**	**+0.7**
QSPA					IAmb	IAmb	04 43 00.9	
	comp=Z,10nm,1.4s							
KSM	**Kuching**	**72.08**	**280**	P	**P**		**04 43 30.8**	**-0.6**
KSM					IAmb	IAmb	04 43 32.1	
	comp=Z,11nm,0.5s							
MJAR	**Matsushiro Arr**	**72.22**	**326**	P	**P**		**04 43 31.1**	**-0.5**
	comp=Z,1.6nm,0.6s,baz=131,slow=5.7,SNR=3.6							
	comp=Z,1.6nm,0.6s							
MJAR	**Matsushiro Arr**	**72.22**	**326**	IAmb	IAmb		04 43 32.3	
	comp=Z,1.5nm,0.8s							
MAW	**Mawson**	**77.28**	**200**	P	**P**		**04 43 59.7**	**+0.2**
KSRS	**Korea Array**	**78.53**	**320**	P	**P**		**04 44 07.8**	**+1.1**
	comp=Z,1.3nm,0.6s,baz=129,slow=6.6,SNR=6.0							
	comp=Z,1.3nm,0.6s							
CMAR	**Chiang Mai Arr**	**89.59**	**290**	P	**P**		**04 45 02.5**	**+0.6**
	comp=Z,1.4nm,0.3s,baz=148,slow=4.7,SNR=4.5							
	comp=Z,1.4nm,0.3s							
SEY	**Seymchan**	**89.70**	**348**	P	**P**		**04 45 01.4**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=53,slow=4.0,SNR=4.2							
	comp=Z,0.9nm,0.3s							
TXAR	**Lajitas Array**	**90.76**	**58**	P	**P**		**04 45 07.8**	**+0.6**
	comp=Z,0.7nm,0.7s,baz=215,slow=7.3,SNR=11							
	comp=Z,0.7nm,0.7s							

FINES	**FINESS Array B**	**138.85**	**341**	PKhKP	PKPpre		04 51 17.2	
	comp=Z,1.3nm,0.8s,baz=96,slow=1.9,SNR=6.0							
FINES				PKP	**PKPdf**		**04 51 26.0**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=18,slow=11,SNR=4.8							
FINES				SKPbc	**SKPbc**		**04 54 12.8**	**+0.9**
	comp=Z,3.0nm,0.8s,baz=48,slow=2.1,SNR=6.4							
HFS	**Hagfors**	**142.97**	**349**	PKhKP	PKPpre		04 51 29.6	
	baz=66,slow=3.6							
PABE	**Paberze**	**144.20**	**337**		PKPbc		04 51 34.8	-0.2
BNN	**Bunyan**	**146.38**	**304**	PKPbc	**PKPdf**		**04 51 41.1**	**+1.1**
BR131	**Keskin Array S**	**147.77**	**307**		**PKPbc**		**04 51 44.7**	**-1.2**
BRTR	**Keskin Array B**	**147.77**	**307**	PKPbc	**PKPbc**		**04 51 45.7**	**-0.2**
	comp=Z,1.2nm,0.7s,baz=145,slow=4.6,SNR=6.7							
BRTR				PKPab	**PKPab**		**04 51 50.7**	**+0.5**
	comp=Z,2.0nm,0.7s,baz=102,slow=3.2,SNR=10							
EKA	**Eskdalemuir Ar**	**148.98**	**3**	PKPbc	**PKPbc**		**04 51 48.7**	**+0.4**
	comp=Z,1.8nm,0.9s,baz=350,slow=3.4,SNR=4.2							
BURAR	**Bucovina Array**	**149.29**	**325**	PKPbc	**PKPbc**		**04 51 49.8**	**+0.4**
TIRR	**Tirgusor**	**149.33**	**318**	PKPbc	**PKPbc**		**04 51 48.6**	**-0.9**

NSSP ***17*** *04:40:05.9,41°.27N×45°.97E,h6km,Ms3.5*

AZER ***17*** *04:40:05.2±0.0,41°.25N×46°.23E,h14km,Error ellipse: s-maj=0.8km s-min=0.4km az=323.0*

DRS ***17*** *04:40:06.6±0.0,41°.26N×46°.04E,h17km*

MOS ***17*** *04:40:06.3±0.0,41°.36N×46°.26E,h12km,MPVA4.1*

TIF ***17*** *04:40:06.5,41°.29N×46°.15E,h28km±1km*

DDA ***17*** *04:40:08.8±0.0,41°.40N×45°.64E,h6km±5km,ML3.3*

ISC 17 04:40:08.0±0.9,41°.29N±0°.02×46°.14E±0°.01,h32km±7km, n76,σ1s45/151,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDFL	**Dedoflistskaro**	**0.16**	**354**	P	**Pn**	**04 40 15.5**	**+1.1**
DDFL				S	**Sb**	**04 40 21.7**	**+3.5**
DDFL	**Dedoflistskaro**	**0.16**	**354**	P	**Pn**	**04 40 15.4**	**+1.1**
DDFL				S	Sb	04 40 22.7	+4.4
DDFL				*i* AML	AML	04 40 23.0	
	comp=Z,3μm,0.2s						
DDFL				*i* AML	AML	04 40 23.0	
	comp=N,2μm,0.5s						
DDFL				*i* AML	AML	04 40 23.0	
	comp=E,6μm,0.4s						
ZKTA	**Zakatala**	**0.50**	**46**	P	**Pb**	**04 40 17.0**	**-1.6**
	SNR=162						
ZKTA				S	**Sb**	**04 40 24.9**	**-0.9**
LGD	**Lagodekhi**	**0.55**	**8**	P	**Pb**	**04 40 18.0**	**-1.4**
LGD				S	**Sb**	**04 40 27.2**	**+0.1**
QZX	**Qazax, Azerbai**	**0.62**	**249**	P	**Pb**	**04 40 19.5**	**-1.1**
	SNR=153						
QZX				S	**Sn**	**04 40 29.1**	**-0.5**
GDB	**GEDABAY**	**0.64**	**207**	P	**Pb**	**04 40 19.3**	**-1.6**
	SNR=922						
GDB				S	**Sb**	**04 40 28.6**	**-1.1**
GANJ	**Ganja**	**0.66**	**168**	P	**Pb**	**04 40 19.4**	**-1.6**
	SNR=70						
GANJ				S	**Sb**	**04 40 28.9**	**-1.1**
SEKA	**Sheki**	**0.80**	**95**	P	**Pb**	**04 40 21.6**	**-1.9**
	SNR=20						
SEKA				S	**Sn**	**04 40 34.7**	**+0.7**
MNGR	**Mingechevir, A**	**0.88**	**126**	P	**Pn**	**04 40 23.9**	**-0.3**
	SNR=11						
MNGR				S	**Sn**	**04 40 37.8**	**+2.0**
BTNK	**Botanikuri**	**1.08**	**292**	P	**Pn**	**04 40 22.6**	**-4.4**
BTNK				S	**Sn**	**04 40 37.4**	**-3.5**
BTNK	**Botanikuri**	**1.08**	**292**	P	**Pn**	**04 40 22.7**	**-4.3**
BTNK				S	**Sn**	**04 40 37.8**	**-3.1**
BTNK				*i* AML	AML	04 40 38.0	
	comp=Z,1μm,0.1s						
BTNK				*i* AML	AML	04 40 38.0	
	comp=E,3μm,0.1s						
KMKR	**Kumukh**	**1.10**	**40**	*e*Pg	**Pn**	**04 40 27.0**	**-0.5**
KMKR				*e*Sg	**Sn**	**04 40 41.6**	**-0.2**
SEAG	**Tbilisi Sea**	**1.11**	**296**	P	**Pb**	**04 40 28.1**	**-0.6**
SEAG				S	**Sb**	**04 40 44.2**	**+1.4**
AKT	**Akhty**	**1.21**	**80**	*e*Pg	**Pn**	**04 40 28.0**	**-0.8**
AKT				*e*Sg	**Sn**	**04 40 44.7**	**+0.5**
GNBR	**Gunib**	**1.26**	**29**	*i* Pg	**Pn**	**04 40 29.6**	**+0.2**
GNBR				*e*Sg	**Sb**	**04 40 46.6**	**-0.5**
BRDA	**Brd**	**1.29**	**142**	P	**Pb**	**04 40 31.1**	**-0.6**
	SNR=7.9						
BRDA				S	**Sb**	**04 40 49.8**	**+1.9**
KZRT	**Kazreti**	**1.32**	**275**	P	**Pn**	**04 40 30.0**	**-0.3**
KZRT				S	**Sn**	**04 40 47.5**	**+0.8**
KZRT	**Kazreti**	**1.32**	**275**	P	**Pn**	**04 40 29.8**	**-0.4**
KZRT				S	**Sn**	**04 40 47.2**	**+0.5**
XNZR	**Khunzakh**	**1.32**	**18**	*e*Pg	**Pn**	**04 40 31.0**	**+0.6**
XNZR				*e*Sg	**Sb**	**04 40 49.2**	**+0.2**
QBL	**Gabala**	**1.33**	**104**	P	**Pn**	**04 40 30.6**	**+0.2**
	SNR=6.3						
QBL				S	**Sb**	**04 40 48.4**	**-0.6**
STE	**Stepanavan**	**1.37**	**258**	*e*P	**Pn**	**04 40 31.0**	**0.0**
STE				*e*S	**Sn**	**04 40 49.0**	**+0.8**
BTLR	**Botlikh**	**1.38**	**2**	*i* Pg	**Pn**	**04 40 31.8**	**+0.8**
BTLR				*e*Sg	**Sb**	**04 40 50.6**	**+0.2**
AGDM	**Agdam**	**1.39**	**148**	Pn	**Pn**	**04 40 31.8**	**+0.6**
	SNR=29						
AGDM				Sn	**Sb**	**04 40 51.1**	**+0.3**
URKR	**Urkarakh**	**1.42**	**51**	*e*Pg	**Pb**	**04 40 32.6**	**-1.3**
URKR				*e*Sg	**Sb**	**04 40 51.8**	**+0.1**
ARKR	**Arakani**	**1.46**	**26**	*i* Pg	**Pn**	**04 40 33.2**	**+1.0**
ARKR				*e*Sg	**Sb**	**04 40 53.0**	**+0.2**
DMNI	**Dmanisi**	**1.47**	**272**	P	**Pn**	**04 40 32.5**	**+0.1**
DMNI				S	**Sb**	**04 40 52.0**	**-1.1**
UNCR	**Uncukul**	**1.50**	**19**	*e*Pg	**Pb**	**04 40 34.0**	**-1.4**
UNCR				*e*Sg	**Sb**	**04 40 54.5**	**+0.4**
XNQ	**Khinaliq**	**1.51**	**94**	Pn	**Pn**	**04 40 33.5**	**+0.4**
	SNR=36						
XNQ				Sn	**Sb**	**04 40 53.3**	**-1.1**
ZRD	**Zardab**	**1.55**	**130**	Pn	**Pb**	**04 40 35.0**	**-1.0**
	SNR=11						
ZRD				Sn	**Sb**	**04 40 56.6**	**+1.4**
TRLG	**Trialeti**	**1.55**	**280**	P	**Pn**	**04 40 33.5**	**-0.1**
TRLG				S	**Sb**	**04 40 54.2**	**-1.4**
GNI	**Garni**	**1.56**	**224**	*i* P	**Pb**	**04 40 35.7**	**-0.6**
GNI				S	**Sb**	**04 40 56.1**	**+0.4**
QSAR	**Qusar**	**1.61**	**81**	Pn	**Pb**	**04 40 36.4**	**-0.7**
	SNR=8.8						
QSAR				Sn	**Sb**	**04 40 57.7**	**+0.6**
IML	**Ismayilli**	**1.62**	**107**	Pn	**Pn**	**04 40 34.8**	**+0.4**
	SNR=2.9						
IML				Sn	**Sb**	**04 40 57.0**	**-0.4**
SGKR	**Sergokala**	**1.63**	**44**	*e*Pg	**Pb**	**04 40 36.8**	**-0.7**
SGKR				*e*Sg	**Sb**	**04 40 57.8**	**+0.3**
KRNR	**Karanay**	**1.64**	**20**	*e*Pg	**Pb**	**04 40 36.3**	**-1.4**
KRNR				*e*Sg	**Sb**	**04 40 58.7**	**+0.7**
DVE	**Vedeno**	**1.67**	**360**	*i* Pg	**Pb**	**04 40 37.0**	**-1.1**
DVE				*e*Sg	**Sb**	**04 41 00.2**	**+1.5**
BUJR	**Buynaksk**	**1.69**	**25**	*e*Pg	**Pb**	**04 40 36.8**	**-1.7**
BUJR				*e*Sg	**Sb**	**04 41 00.7**	**+1.2**
GUDG	**Gudauri**	**1.71**	**314**	P	**Pn**	**04 40 36.8**	**+1.0**
GUDG				S	**Sb**	**04 40 59.0**	**-1.1**
NRKZ	**NAREK**	**1.71**	**222**	*e*P	**Pb**	**04 40 38.4**	**-0.5**
NRKZ				*e*S	**Sb**	**04 41 01.4**	**+1.4**
PNSH	**Pansheti**	**1.76**	**320**	P	**Pn**	**04 40 37.4**	**+0.9**
PNSH				S	**Sb**	**04 41 00.2**	**-1.3**
BRNG	**Burnasheti**	**1.77**	**282**	P	**Pb**	**04 40 38.6**	**-1.3**
BRNG				S	**Sb**	**04 41 01.5**	**-0.3**
QUBA	**Quba, Azerbaij**	**1.77**	**87**	Pn	**Pb**	**04 40 38.3**	**-1.6**
	SNR=6.9						
QUBA				Sn	**Sb**	**04 41 01.1**	**-0.6**
KDMR	**Kurdemir**	**1.80**	**120**	Pn	**Pn**	**04 40 37.5**	**+0.7**
KDMR				Sn	**Sb**	**04 41 01.0**	**-1.3**
DRN	**Derbent**	**1.80**	**65**	*e*Pg	**Pb**	**04 40 39.4**	**-0.8**
DRN				*e*Sg	**Sb**	**04 41 03.5**	**+1.1**
DBC	**Dubki**	**1.80**	**16**	*e*Pg	**Pb**	**04 40 39.3**	**-1.1**
DBC				*e*Sg	**Sb**	**04 41 03.0**	**+0.3**
DLMR	**Dylym**	**1.82**	**11**	*e*Pg	**Pb**	**04 40 39.6**	**-1.0**
DLMR				*e*Sg	**Sb**	**04 41 03.9**	**+1.0**
MTEO	**Meteo**	**1.83**	**320**	P	**Pn**	**04 40 38.7**	**+0.9**
MTEO				S	**Sn**	**04 41 01.9**	**+1.8**
HYR	**Heyderabad**	**1.85**	**212**	Pn	**Pb**	**04 40 40.6**	**-0.6**
	SNR=7.3						
HYR				Sn	**Sb**	**04 41 06.4**	**+2.4**
BLQ	**Beylaqan**	**1.90**	**145**	Pn	**Pn**	**04 40 39.6**	**+1.4**
	SNR=6.9						
BLQ				Sn	**Sb**	**04 41 03.9**	**-1.5**
BGD	**Bogdanovka**	**1.92**	**270**	P	**Pb**	**04 40 40.6**	**-1.8**
BGD				S	**Sb**	**04 41 05.2**	**-0.8**
PQL	**Pirkuli**	**1.92**	**104**	Pn	**Pn**	**04 40 39.8**	**+1.2**
	SNR=5.5						
PQL				Sn	**Sb**	**04 41 05.1**	**-0.9**

GROC	**Groznyy**	**1.93**	**352**	*e*Pg	**Pb**	**04 40 41.8**	**-0.7**
GROC				*e*Sg	**Sb**	**04 41 07.3**	**+1.2**
METS	**Metsamor**	**1.94**	**235**	*e*P	**Pb**	**04 40 41.5**	**-1.2**
METS				*e*S	**Sb**	**04 41 06.7**	**+0.3**
SBZ	**Shahbuz**	**1.94**	**194**	Pn	**Pb**	**04 40 40.9**	**-1.9**
	SNR=54						
SBZ				Sn	**Sb**	**04 41 07.7**	**+1.1**
MAK	**Makhachkala**	**1.96**	**31**	*e*Pg	**Pn**	**04 40 36.0**	**-3.0**
MAK				*e*Sg	**Sn**	**04 41 01.7**	**-0.7**
AKH	**Akhalkalaki**	**2.00**	**274**	P	**Pn**	**04 40 41.5**	**+1.8**
AKH				S	**Sb**	**04 41 06.7**	**-1.6**
KMGR	**Komgaron**	**2.00**	**332**	*e*Pg	**Pb**	**04 40 43.0**	**-0.3**
KMGR				*e*Sg	**Sb**	**04 41 10.9**	**+2.5**
EAK	**Akyaka**	**2.01**	**253**	P	**Pb**	**04 40 43.4**	**-0.6**
EAK				S	**Sb**	**04 41 11.8**	**+3.1**
BKRG	**Bakuriani**	**2.02**	**284**	P	**Pn**	**04 40 41.1**	**+1.0**
BKRG				S	**Sb**	**04 41 07.9**	**-1.1**
QRD	**Qoradiz**	**2.04**	**153**	Pn	**Pb**	**04 40 42.0**	**-2.3**
	SNR=4.5						
QRD				Sn	**Sb**	**04 41 08.0**	**-1.2**
LACR	**Lac**	**2.06**	**319**	*e*Pg	**Pb**	**04 40 44.3**	**-0.5**
LACR				*i* Sg	**Sb**	**04 41 12.9**	**+2.8**
VLKR	**Vladikavkaz**	**2.07**	**329**	*e*Pg	**Pb**	**04 40 44.2**	**-0.7**
VLKR				*i* Sg	**Sb**	**04 41 11.7**	**+1.5**
SIZA	**Siyzn**	**2.09**	**95**	Pn	**Pn**	**04 40 41.5**	**+0.6**
	SNR=6.9						
SIZA				Sn	**Sb**	**04 41 09.5**	**-1.5**
IGDI	**IGDIR**	**2.12**	**229**	P	**Pb**	**04 40 43.8**	**-1.9**
IGDI				S	**Sb**	**04 41 09.4**	**-2.3**
NAX	**Nakhchivan**	**2.17**	**193**	Pn	**Pb**	**04 40 45.6**	**-1.0**
	SNR=17						
NAX				Sn	**Sb**	**04 41 14.4**	**+1.2**
ZEI	**Tsey**	**2.24**	**313**	*e*Pn	**Pb**	**04 40 46.9**	**-1.1**
ZEI				*e*Sn	**Sb**	**04 41 16.5**	**+1.2**
ARNR	**Ardon**	**2.34**	**324**	*e*Pn	**Pb**	**04 40 48.7**	**-0.7**
ARNR				*e*Sn	**Sb**	**04 41 19.1**	**+1.2**
ORD	**Ordubad**	**2.36**	**183**	Pn	**Pb**	**04 40 48.6**	**-1.2**
	SNR=36						
ORD				Sn	**Sb**	**04 41 17.1**	**-1.5**
KORR	**Kora**	**2.37**	**320**	*i* Pn	**Pb**	**04 40 48.4**	**-1.5**
KORR				*e*Sn	**Sb**	**04 41 20.1**	**+1.4**
EPOS	**Posof**	**2.58**	**276**	P	**Pb**	**04 40 52.0**	**-1.6**
EPOS				S	**Sb**	**04 41 28.4**	**+3.5**
LSNR	**Lesken**	**2.63**	**320**	*e*Pn	**Pb**	**04 40 51.6**	**-2.8**
LSNR				*e*Sn	**Sb**	**04 41 26.0**	**-0.2**
GLBA	**Clilabad**	**2.67**	**139**	Pn	**Pn**	**04 40 51.6**	**+2.8**
	SNR=3.3						
GLBA				Sn	**Sn**	**04 41 22.8**	**+2.7**
YRD	**Yardimli**	**2.87**	**145**	Pn	**Pn**	**04 40 53.0**	**+1.3**
	SNR=3.7						
YRD				Sn	**Sn**	**04 41 26.7**	**+1.5**
LRK	**Lerik**	**3.14**	**147**	Pn	**Pn**	**04 40 56.1**	**+0.8**
	SNR=3.9						
LRK				Sn	**Sn**	**04 41 33.5**	**+1.7**
DAGI	**Agillar**	**3.20**	**268**	P	**Pb**	**04 41 04.5**	**+0.4**
DAGI				S	**Sb**	**04 41 43.9**	**+1.2**
DBAD	**Bademkaya**	**3.37**	**267**	P	**Pb**	**04 41 06.9**	**-0.1**
DBAD				S	**Sb**	**04 41 49.6**	**+2.0**

TUL ***17*** *05:09:14.9±0.6,35°.672N±0°.009×97°.41W±0°.01,h6km±3km, ML3.1,mb_Lg2.7/67(NEIC),Error ellipse: s-maj=1.7km s-min=1.2km az=66.0*

ANF ***17*** *05:09:14.5±0.3,35°.70N×97°.42W,h6km,ML2.9/7,Error ellipse: s-maj=3.0km s-min=2.5km az=137.0*

NEIC ***17*** *05:09:15.5±0.7,35°.67N±0°.01×97°.41W±0°.02,h8km±3km, Error ellipse: s-maj=2.1km s-min=1.8km az=203.0*

ISC 17 05:09:15.0±1.1,35°.68N±0°.05×97°.42W±0°.04,h8km±8km, n50,σ0s55/27,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK009	**Oakdale Elemen**	**0.10**	**183**		**Pg**	**05 09 17.2**	**-0.3**
OK009				Sg	**Sg**	**05 09 19.2**	**+0.1**
OK005	**Luther M Schoo**	**0.18**	**99**	Pg	**P

comp=Z,16nm,0.7s
SLM Saint Louis 6.45 61 IAmb_Lg 05 12 40.1
comp=Z,22nm,0.8s
T45A Paducah 7.20 77 IAmb_Lg 05 13 14.5
comp=Z,19nm,0.7s
P43A Skaggs, Pawnee 7.40 55 IAmb_Lg 05 13 09.8
comp=Z,16nm,0.9s
Q44A Meyer Farm, Va 7.42 62 IAmb_Lg 05 13 25.0
comp=Z,15nm,0.8s
PHWY Pilot Hill 8.44 314 IAmb_Lg 05 13 46.1
comp=Z,5.7nm,1.2s
N23A Red Feather La 8.48 310 IAmb_Lg 05 13 55.3
comp=Z,7.4nm,0.8s

IDC 17 05:15:45.0±2.3, 54°23N×86°06E, h0km, mbtmp3.3/2, ML3.0/2, Error ellipse: s-maj=17.4km s-min=10.4km az=57.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.78**	**250**	*i*		05 18 50.0	
	baz=67,slow=313,SNR=9.7						
ZALV	**Zalesovo Beam**	**0.78**	**250**	Pg	Pg	05 15 58.5	-1.6
	1.9nm,0.3s,baz=66,slow=17,SNR=11						
ZALV				Lg	Lg	05 16 11.8	
	7.9nm,0.3s,baz=69,slow=30,SNR=24						
KURBB	**Kurchatov Arra**	**5.85**	**235**	Pn	Pn	05 17 14.5	+1.6
	0.2nm,0.3s,baz=52,slow=14,SNR=13						
KURBB				Lg	Lg	05 18 51.0	
	baz=54,slow=30,SNR=2.4						
	1.8nm,0.5s						
MKAR	**Makanchi Array**	**7.82**	**199**	Pn	Pn	05 17 40.6	+0.6
	0.5nm,0.3s,baz=27,slow=14,SNR=13						
MKAR				Sn	Sn	05 19 07.8	-1.4
	baz=36,slow=25,SNR=2.5						
MKAR				Lg	Lg	05 19 53.0	
	0.1nm,0.3s,baz=31,slow=29,SNR=2.4						
	1.2nm,0.5s						

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*IDC **17** 05:37:26.9±2.3, 59.°45N×22.°59E, h0km, mbtmp3.2/4, ML2.6/4, Error ellipse: s-maj=31.8km s-min=6.9km az=163.0*
*DNK **17** 05:37:27.5±2.0, 59.°60N×22.°89E, h29km±53km, ML2.4*
*NAO **17** 05:37:28.4±1.4, 59.°64N×22.°24E, ML2.4*
*HEL **17** 05:37:28.7±0.1, 59.°63N×22.°39E, h0km, ML2.3, ML2.5(UPP), Explosion*
*UPP **17** 05:37:28.0±1.7, 59.°71N×22.°42E, h0km, ML2.5, Suspected explosion*
*LVSN **17** 05:37:30.3±5.6, 59.°64N×22.°45E, h0km±55km, ML2.5*
*BER **17** 05:37:31.1±2.8, 59.°55N×22.°31E, h0km, ML2.1, ML2.5(UPP), Suspected explosion*

ISC 17 05:37:26.4±0.7, 59.°67N±0.°02×22.°51E±0.°02, h0km, n85, σ1s60/143, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEF	**Metsahovi**	**1.10**	**59**	*eP*	**Pn**	**05 37 49.3**	**+0.4**
MEF				*eS*	**Sn**	**05 38 04.5**	**-0.2**
MEF				AML	AML	05 38 05.7	
	comp=N,58nm,0.2s						
MEF				AML	AML	05 38 13.3	
	comp=Z,55nm,0.4s						
MEF				AML	AML	05 38 15.3	
	comp=E,39nm,0.3s						
MEF	**Metsahovi**	**1.10**	**59**	*eP*	**Pn**	**05 37 49.3**	**+0.4**
MEF				*eS*	**Sn**	**05 38 03.8**	**-1.0**
MEF				MSG		05 38 05.0	
	comp=Z,54nm,0.2s						
MTSE	**Matsula**	**1.17**	**144**	*eP*	**Pg**	**05 37 49.6**	**+0.9**
MTSE				*eS*	**Sg**	**05 38 02.9**	**-1.0**
MTSE	**Matsula**	**1.17**	**144**	*eP*	**Pg**	**05 37 49.5**	**+0.8**
MTSE				*eS*	**Sg**	**05 38 04.4**	**+0.5**
NUR	**Nurmijrvi**	**1.36**	**51**	*eP*	**Pn**	**05 37 54.0**	**+1.4**
NUR				*eS*	**Sn**	**05 38 12.1**	**+0.8**
NUR				MSG		05 38 13.8	
	comp=Z,18nm,0.1s						
RAF	**Rauma**	**1.41**	**345**	*eP*	**Pb**	**05 37 54.4**	**+0.9**
RAF				*eS*	**Sn**	**05 38 13.6**	**+1.2**
RAF				AML	AML	05 38 26.5	
	comp=E,75nm,0.2s						
RAF				AML	AML	05 38 27.1	
	comp=N,65nm,0.2s						
RAF				AML	AML	05 38 27.1	
	comp=Z,43nm,0.2s						
RAF	**Rauma**	**1.41**	**345**	*eP*	**Pb**	**05 37 54.4**	**+0.9**
RAF				*eS*	**Sn**	**05 38 12.7**	**+0.2**
RAF				MSG		05 38 18.1	
	comp=Z,39nm,0.2s						
ARBE	**Arbavere**	**1.78**	**96**	*eP*	**Pg**	**05 38 00.8**	**+0.3**
ARBE				*eS*	**Sg**	**05 38 25.0**	**+1.4**
PVF	**Pernaja**	**1.90**	**61**	*eP*	**Pg**	**05 38 03.2**	**+0.5**
PVF				*eS*	**Sg**	**05 38 27.7**	**+0.5**
NRTU	**Norrtaelje**	**1.97**	**272**	P	**Pn**	**05 38 01.8**	**+0.9**
NRTU				S	**Sn**	**05 38 27.1**	**+0.8**
NRTU	**Norrtaelje**	**1.97**	**272**	P	**Pn**	**05 38 01.8**	**+0.9**
NRTU				S	**Sn**	**05 38 27.1**	**+0.8**
NRTU	**Norrtaelje**	**1.97**	**272**	P	**Pn**	**05 38 01.8**	**+0.9**
NRTU				S	**Sn**	**05 38 27.1**	**+0.8**
NRTU	**Norrtaelje**	**1.97**	**272**	*eP*	**Pn**	**05 38 01.8**	**+0.9**
NRTU				*eS*	**Sn**	**05 38 27.1**	**+0.8**
SLIT	**Slitere, Latvi**	**2.05**	**183**	*eP*	**Pn**	**05 38 03.8**	**+1.8**
SLIT				AML	AML	05 38 04.5	
	comp=Z,179nm,0.3s						
SLIT				*eS*	**Sb**	**05 38 31.4**	**+1.0**
SLIT				AML	AML	05 38 32.3	
	comp=E,213nm,0.3s						
SLIT				AML	AML	05 38 32.9	
	comp=N,289nm,0.3s						
SLIT	**Slitere, Latvi**	**2.05**	**183**	*eP*	**Pn**	**05 38 03.6**	**+1.6**
SLIT				*eS*	**Sn**	**05 38 29.4**	**+1.2**
GRAU	**Graesoe**	**2.10**	**290**	P	**Pn**	**05 38 03.4**	**+0.7**
GRAU				S	**Sn**	**05 38 31.3**	**+1.7**
GRAU	**Graesoe**	**2.10**	**290**	P	**Pn**	**05 38 03.4**	**+0.7**
GRAU				S	**Sn**	**05 38 31.3**	**+1.7**
GRAU	**Graesoe**	**2.10**	**290**	P	**Pn**	**05 38 03.4**	**+0.7**
GRAU				S	**Sn**	**05 38 31.3**	**+1.7**
GRAU	**Graesoe**	**2.10**	**290**	*eP*	**Pn**	**05 38 03.4**	**+0.7**
GRAU				*eS*	**Sn**	**05 38 31.3**	**+1.7**
FORU	**Forsmark**	**2.29**	**290**	P	**Pn**	**05 38 06.8**	**+1.5**
FORU				S	**Sn**	**05 38 35.6**	**+1.4**
FORU	**Forsmark**	**2.29**	**290**	P	**Pn**	**05 38 06.8**	**+1.5**
FORU				S	**Sn**	**05 38 35.6**	**+1.4**
FORU	**Forsmark**	**2.29**	**290**	P	**Pn**	**05 38 06.8**	**+1.5**
FORU				S	**Sn**	**05 38 35.6**	**+1.4**
FORU	**Forsmark**	**2.29**	**290**	*eP*	**Pn**	**05 38 06.8**	**+1.5**
FORU				*eS*	**Sn**	**05 38 35.6**	**+1.4**
FLYU	**Flymyra**	**2.38**	**283**	P	**Pn**	**05 38 07.5**	**+1.0**
FLYU				S	**Sn**	**05 38 37.0**	**+0.6**
FLYU	**Flymyra**	**2.38**	**283**	P	**Pn**	**05 38 07.5**	**+1.0**
FLYU				S	**Sn**	**05 38 37.0**	**+0.6**
FLYU	**Flymyra**	**2.38**	**283**	P	**Pn**	**05 38 07.5**	**+1.0**
FLYU				S	**Sn**	**05 38 37.0**	**+0.6**
FLYU	**Flymyra**	**2.38**	**283**	*eP*	**Pn**	**05 38 07.5**	**+1.0**
FLYU				*eS*	**Sn**	**05 38 37.0**	**+0.6**
NYNU	**Nynaeshamn**	**2.40**	**256**	P	**Pn**	**05 38 08.4**	**+1.5**
NYNU	**Nynaeshamn**	**2.40**	**256**	P	**Pn**	**05 38 08.4**	**+1.5**
NYNU	**Nynaeshamn**	**2.40**	**256**	P	**Pn**	**05 38 08.4**	**+1.5**
NYNU	**Nynaeshamn**	**2.40**	**256**	*eP*	**Pn**	**05 38 08.4**	**+1.5**
VSU	**Vasula**	**2.50**	**117**	Pn	**Pb**	**05 38 11.8**	**-0.1**
VSU				Sn	**Sb**	**05 38 43.9**	**+0.7**
VSU	**Vasula**	**2.50**	**117**	Pn	**Pb**	**05 38 11.8**	**-0.1**
VSU				Sn	**Sb**	**05 38 43.9**	**+0.7**
VSU	**Vasula**	**2.50**	**117**	*eP*	**Pb**	**05 38 11.7**	**-0.3**
VSU				*eS*	**Sb**	**05 38 44.5**	**+1.3**
VSU				AML	AML	05 38 46.6	
	comp=N,146nm,0.2s						
VSU				AML	AML	05 38 48.3	
	comp=E,140nm,0.4s						
VSU				AML	AML	05 38 48.4	
	comp=Z,85nm,0.3s						
VSU	**Vasula**	**2.50**	**117**	*eP*	**Pb**	**05 38 11.5**	**-0.5**
VSU				*eS*	**Sb**	**05 38 42.3**	**-0.9**
FIA0	**FINESS Array S**	**2.50**	**43**	Pn	**Pb**	**05 38 12.0**	**-0.2**
	baz=215,slow=14						
FIA0				Sn	**Sg**	**05 38 45.3**	**-1.5**
	baz=228,slow=28						
FIA0	**FINESS Array S**	**2.50**	**43**	Pn	**Pb**	**05 38 12.0**	**-0.2**
	baz=215,slow=14						
FIA0				Sn	**Sg**	**05 38 45.3**	**-1.5**
	baz=228,slow=28						
FIA0	**FINESS Array S**	**2.50**	**43**	*eP*	**Pb**	**05 38 11.9**	**-0.3**
FIA0				*eS*	**Sb**	**05 38 43.1**	**-0.4**
FINES	**FINESS Array B**	**2.50**	**43**	Pn	**Pb**	**05 38 12.0**	**-0.2**
	comp=Z,3.2nm,0.3s,baz=221,slow=17,SNR=95						
FINES				Pg	**Pg**	**05 38 13.2**	**-1.1**
	comp=Z,3.2nm,0.3s,baz=224,slow=15,SNR=13						
FINES				Sn	**Sg**	**05 38 45.2**	**-1.5**
	comp=Z,11nm,0.3s,baz=230,slow=24,SNR=49						
	comp=Z,4.5nm,0.3s						
FIA1	**FINESS Array S**	**2.51**	**43**	*eP*	**Pb**	**05 38 11.9**	**-0.3**
FIA1				*eS*	**Sb**	**05 38 43.1**	**-0.5**
FIBU	**Brunna**	**2.62**	**277**	P	**Pn**	**05 38 11.4**	**+1.5**
FIBU				S	**Sn**	**05 38 43.4**	**+1.1**
FIBU	**Brunna**	**2.62**	**277**	P	**Pn**	**05 38 11.4**	**+1.5**
FIBU				S	**Sn**	**05 38 43.4**	**+1.1**
FIBU	**Brunna**	**2.62**	**277**	P	**Pn**	**05 38 11.4**	**+1.5**
FIBU				S	**Sn**	**05 38 43.4**	**+1.1**
VJF	**Virojoki**	**2.67**	**69**	*eP*	**Pb**	**05 38 13.0**	**-2.0**
VJF				*eS*	**Sb**	**05 38 46.8**	**-1.5**
BACU	**Backbrunna**	**2.74**	**276**	P	**Pn**	**05 38 12.6**	**+1.0**
BACU	**Backbrunna**	**2.74**	**276**	P	**Pn**	**05 38 12.6**	**+1.0**
BACU	**Backbrunna**	**2.74**	**276**	P	**Pn**	**05 38 12.6**	**+1.0**
BACU	**Backbrunna**	**2.74**	**276**	*eP*	**Pn**	**05 38 12.6**	**+1.0**
KEF	**Keuruu**	**2.76**	**24**	*eP*	**Pb**	**05 38 15.9**	**-0.6**
KEF				*eS*	**Sb**	**05 38 49.3**	**-1.5**
OSTU	**Oestervaala**	**2.76**	**284**	P	**Pn**	**05 38 13.3**	**+1.5**
OSTU	**Oestervaala**	**2.76**	**284**	P	**Pn**	**05 38 13.3**	**+1.5**
OSTU	**Oestervaala**	**2.76**	**284**	P	**Pn**	**05 38 13.3**	**+1.5**
OSTU	**Oestervaala**	**2.76**	**284**	*eP*	**Pn**	**05 38 13.3**	**+1.5**
KAF	**Kangasniemi**	**3.08**	**35**	*eP*	**Pb**	**05 38 20.3**	**-1.6**
KAF				*eS*	**Sb**	**05 38 57.2**	**-2.7**
ESKU	**Eskilstuna**	**3.15**	**265**	P	**Pn**	**05 38 18.6**	**+1.4**
ESKU	**Eskilstuna**	**3.15**	**265**	P	**Pn**	**05 38 18.6**	**+1.4**
ESKU	**Eskilstuna**	**3.15**	**265**	P	**Pn**	**05 38 18.6**	**+1.4**
ESKU	**Eskilstuna**	**3.15**	**265**	*eP*	**Pn**	**05 38 18.6**	**+1.4**
FALU	**Falun**	**3.45**	**287**	P	**Pn**	**05 38 22.6**	**+1.3**
FALU	**Falun**	**3.45**	**287**	P	**Pn**	**05 38 22.6**	**+1.3**
FALU	**Falun**	**3.45**	**287**	P	**Pn**	**05 38 22.6**	**+1.3**
FALU	**Falun**	**3.45**	**287**	*eP*	**Pn**	**05 38 22.6**	**+1.3**
SUF	**Sumiainen**	**3.53**	**28**	*eP*	**Pb**	**05 38 26.3**	**-3.4**
SUF				*eS*	**Sn**	**05 39 08.2**	**+3.4**
HEMU	**Hemsoen**	**3.71**	**326**	*eP*	**Pn**	**05 38 27.7**	**+2.8**
HEMU				*eS*	**Sn**	**05 39 11.8**	**+2.5**
HFS	**Hagfors**	**4.46**	**280**	Pn	**Pn**	**05 38 36.1**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=96,slow=14,SNR=16						
HFS				Pg	**Pb**	**05 38 46.6**	**+1.0**
	comp=Z,1.1nm,0.3s,baz=97,slow=15,SNR=13						
HFS				Sn	**Sn**	**05 39 28.4**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=101,slow=30,SNR=2.5						
HFS				Lg	Lg	05 39 48.1	
	comp=Z,2.2nm,0.3s,baz=93,slow=29,SNR=7.9						
	comp=Z,1.3nm,0.2s						
HFS	**Hagfors**	**4.46**	**280**	Pn	**Pn**	**05 38 35.2**	**0.0**
	baz=93,slow=11						
HFS				Lg	Lg	05 39 42.9	
	baz=94,slow=37						
HFS	**Hagfors**	**4.46**	**280**	Pn	**Pn**	**05 38 35.2**	**0.0**
	baz=93,slow=11						
BLEU	**Blekinge**	**4.91**	**229**	*i* P	**Pn**	**05 38 41.8**	**+0.5**
NRA0	**NORESS Array S**	**5.58**	**286**	Pn	**Pn**	**05 38 50.8**	**+0.4**
	baz=104,slow=14						
NRA0				Sn	**Sn**	**05 39 53.8**	**-1.3**
	baz=102,slow=28						
NRA0				Lg	Lg	05 40 18.5	
	baz=90,slow=37						
NRA0	**NORESS Array S**	**5.58**	**286**	Pn	**Pn**	**05 38 50.8**	**+0.4**
	baz=104,slow=14						
NRA0				Sn	**Sn**	**05 39 53.8**	**-1.3**
	baz=102,slow=28						
DEL	**Delary**	**5.59**	**239**	*i* P	**Pn**	**05 38 50.4**	**-0.3**
DEL				*i* S	**Sn**	**05 39 49.0**	**-6.6**
DEL				IAML		05 40 26.4	
	comp=Z,1.9nm,0.3s						
NB2	**NORSAR Subarra**	**5.77**	**289**	Pn	**Pn**	**05 38 53.9**	**+0.6**
	baz=96,slow=12						
NB2				Sn	**Sn**	**05 39 58.6**	**-1.5**
	baz=96,slow=22						
NB2	**NORSAR Subarra**	**5.77**	**289**	Pn	**Pn**	**05 38 53.9**	**+0.6**
	baz=96,slow=12						
NB2				Sn	**Sn**	**05 39 58.6**	**-1.5**
	baz=96,slow=22						
NOA	**NORSAR Array B**	**5.77**	**289**	Pn	**Pn**	**05 38 52.8**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=94,slow=3.1,SNR=17						
NOA				Sn	**Sn**	**05 39 58.4**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=238,slow=16,SNR=1.9						
NOA				Lg	Lg	05 40 22.5	
	comp=Z,0.1nm,0.3s,baz=124,slow=3.8,SNR=4.0						
	comp=Z,0.2nm,0.3s						
STRU	**Stroemstad**	**5.83**	**269**	*i* P	**Pn**	**05 38 54.0**	**0.0**
STRU				*i* S	**Sn**	**05 39 57.4**	**-4.0**
TJOU	**Tjoern**	**5.88**	**259**	*i* P	**Pn**	**05 38 55.8**	**+1.2**
TJOU				*i* S	**Sn**	**05 39 58.2**	**-4.6**
ONAU	**Onsala**	**6.00**	**252**	*i* P	**Pn**	**05 38 57.0**	**+0.8**
ONAU				*i* S	**Sn**	**05 40 04.9**	**-0.6**
BSD	**Bornholm Skovb**	**6.14**	**225**	*i* P	**Pn**	**05 38 56.7**	**-1.5**
BSD				*i* S	**Sn**	**05 40 03.6**	**-5.4**
BSD				IAML		05 40 46.1	
	comp=Z,1.9nm,0.2s						
DOMB	**Dombas**	**6.98**	**296**	*eP*	**Pn**	**05 39 09.9**	**0.0**
DOMB				IAML		05 40 39.1	
	comp=Z,3.5nm,0.2s						
SKAR	**Skarslia**	**7.16**	**284**	*eP*	**Pn**	**05 39 13.5**	**+1.3**
SKAR				IAML		05 40 43.2	
	comp=Z,2.5nm,0.2s						
HOMB	**Hombersund**	**7.38**	**265**	*eP*	**Pn**	**05 39 14.0**	**-1.1**
SNART	**Snartemo**	**8.01**	**267**	*i* P	**Pn**	**05 39 23.9**	**+0.1**
SNART				*i* S	**Sn**	**05 40 48.2**	**-6.8**
APA0	**Apatity Array**	**9.21**	**26**	Pn	**Pn**	**05 39 42.5**	**+2.1**
	baz=209,slow=10						
ARA0	**ARCESS Array S**	**9.99**	**6**	Pn	**Pn**	**05 39 51.7**	**+0.8**
	baz=188,slow=14						
ARCES	**ARCESS Array B**	**9.99**	**6**	Pn	**Pn**	**05 39 51.2**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=182,slow=14,SNR=25						
	comp=Z,0.5nm,0.2s						

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*DNK **17** 05:38:56.8±1.0, 59.°66N×22.°36E, h0km, ML2.9(UPP), Suspected explosion*
*UPP **17** 05:38:57.5±1.6, 59.°66N×22.°22E, h0km, ML2.9, Suspected explosion*
*HEL **17** 05:38:57.7±0.1, 59.°58N×22.°25E, h0km, ML2.4, ML2.9(UPP), Explosion*
*LVSN **17** 05:38:59.1±2.4, 59.°64N×22.°48E, h0km±41km, ML2.4*

ISC 17 05:38:56.1±0.8, 59.°66N±0.°03×22.°40E±0.°03, h0km, n35, σ0s93/64, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEF	**Metsahovi**	**1.15**	**60**	*eP*	**Pn**	**05 39 19.3**	**-0.1**
MEF				*eS*	**Sg**	**05 39 32.6**	**-0.4**
MEF				*eS*	**Sb**	**05 39 32.9**	**-1.3**
MEF				AML	AML	05 39 35.5	
	comp=Z,43nm,0.2s						
MEF				AML	AML	05 39 52.9	
	comp=N,50nm,0.1s						
MEF				AML	AML	05 39 55.4	
	comp=E,60nm,0.2s						
MEF	**Metsahovi**	**1.15**	**60**	*eP*	**Pn**	**05 39 19.6**	**+0.2**
MEF				MSG		05 39 35.5	
	comp=Z,35nm,0.1s						
MTSE	**Matsula**	**1.20**	**142**	*eP*	**Pg**	**05 39 19.6**	**+0.6**
MTSE	**Matsula**	**1.20**	**142**	*eP*	**Pg**	**05 39 18.7**	**-0.3**
MTSE				*eS*	**Sg**	**05 39 33.3**	**-1.2**
RAF	**Rauma**	**1.40**	**347**	*eP*	**Pb**	**05 39 23.3**	**+0.2**
RAF				*eS*	**Sn**	**05 39 42.3**	**+0.2**
RAF				AML	AML	05 39 48.1	
	comp=E,59nm,0.1s						
RAF				AML	AML	05 40 00.1	
	comp=N,58nm,0.1s						
RAF				AML	AML	05 40 01.5	
	comp=Z,42nm,0.1s						
RAF	**Rauma**	**1.40**	**347**	*eP*	**Pb**	**05 39 23.3**	**+0.2**
RAF				*eS*	**Sn**	**05 39 42.3**	**+0.2**
RAF				MSG		05 39 46.8	
	comp=Z,30nm,0.2s						
NUR	**Nurmijrvi**	**1.41**	**52**	*eP*	**Pb**	**05 39 24.0**	**+0.7**
NUR				*eS*	**Sn**	**05 39 44.7**	**+2.4**
ARBE	**Arbavere**	**1.84**	**95**	*eP*	**Pg**	**05 39 31.4**	**+0.1**
ARBE				*eS*	**Sg**	**05 39 56.0**	**+0.8**
NRTU	**Norrtaelje**	**1.91**	**272**	P	**Pn**	**05 39 29.7**	**-0.1**
NRTU				S	**Sn**	**05 39 54.6**	**0.0**
NRTU	**Norrtaelje**	**1.91**	**272**	P	**Pn**	**05 39 29.7**	**-0.1**
NRTU				S	**Sn**	**05 39 54.6**	**0.0**
NRTU	**Norrtaelje**	**1.91**	**272**	*eP*	**Pn**	**05 39 29.7**	**-0.1**
NRTU				*eS*	**Sn**	**05 39 54.6**	**0.0**
PVF	**Pernaja**	**1.95**	**61**	*eP*	**Pg**	**05 39 33.2**	**-0.2**
PVF				*eS*	**Sg**	**05 39 59.6**	**+1.0**
PVF				MSG		05 40 02.8	
	comp=Z,58nm,0.2s						
SLIT	**Slitere, Latvi**	**2.04**	**182**	*eP*	**Pn**	**05 39 32.5**	**+0.9**
SLIT				*eS*	**Sn**	**05 39 59.3**	**+1.6**
SLIT				AML	AML	05 40 01.1	
	comp=Z,217nm,0.2s						
SLIT				AML	AML	05 40 01.5	
	comp=E,379nm,0.2s						
SLIT				AML	AML	05 40 14.3	
	comp=N,192nm,0.3s						
GRAU	**Graesoe**	**2.05**	**291**	P	**Pn**	**05 39 32.0**	**+0.2**
GRAU				S	**Sn**	**05 39 58.1**	**0.0**
GRAU	**Graesoe**	**2.05**	**291**	P	**Pn**	**05 39 32.0**	**+0.2**
GRAU				S	**Sn**	**05 39 58.1**	**0.0**
GRAU	**Graesoe**	**2.05**	**291**	*eP*	**Pn**	**05 39 32.0**	**+0.2**
GRAU				*eS*	**Sn**	**05 39 58.1**	**0.0**
FORU	**Forsmark**	**2.24**	**291**	P	**Pn**	**05 39 34.9**	**+0.6**
FORU				S	**Sn**	**05 40 02.9**	**+0.2**
FORU	**Forsmark**	**2.24**	**291**	P	**Pn**	**05 39 34.9**	**+0.6**
FORU				S	**Sn**	**05 40 02.9**	**+0.2**
FORU	**Forsmark**	**2.24**	**291**	*eP*	**Pn**	**05 39 34.9**	**+0.6**
FORU				*eS*	**Sn**	**05 40 02.9**	**+0.2**
FLYU	**Flymyra**	**2.32**	**284**	P	**Pn**	**05 39 36.8**	**+1.2**
FLYU				S	**Sn**	**05 40 05.5**	**+0.8**
FLYU	**Flymyra**	**2.32**	**284**	P	**Pn**	**05 39 36.8**	**+1.2**
FLYU				S	**Sn**	**05 40 05.5**	**+0.8**
FLYU	**Flymyra**	**2.32**	**284**	*eP*	**Pn**	**05 39 36.8**	**+1.2**
FLYU				*eS*	**Sn**	**05 40 05.5**	**+0.8**
NYNU	**Nynaeshamn**	**2.35**	**256**	P	**Pn**	**05 39 36.6**	**+0.8**
NYNU				S	**Sn**	**05 40 05.4**	**+0.2**
NYNU	**Nynaeshamn**	**2.35**	**256**	P	**Pn**	**05 39 36.6**	**+0.8**
NYNU				S	**Sn**	**05 40 05.4**	**+0.2**
NYNU	**Nynaeshamn**	**2.35**	**256**	*eP*	**Pn**	**05 39 36.6**	**+0.8**
NYNU				*eS*	**Sn**	**05 40 05.4**	**+0.2**
VSU	**Vasula**	**2.54**	**116**	*eP*	**Pb**	**05 39 41.1**	**-1.4**
VSU				*eS*	**Sn**	**05 40 12.1**	**+2.0**
FIA0	**FINESS Array S**	**2.55**	**44**	*eP*	**Pb**	**05 39 41.7**	**-0.9**
FIA0				*eS*	**Sb**	**05 40 14.1**	**-0.4**
FIA1	**FINESS Array S**	**2.55**	**44**	*eP*	**Pb**	**05 39 41.7**	**-1.0**
FIA1				*eS*	**Sb**	**05 40 14.1**	**-0.4**
OSTU	**Oestervaala**	**2.71**	**284**	P	**Pn**	**05 39 42.1**	**+1.3**
OSTU	**Oestervaala**	**2.71**	**284**	P	**Pn**	**05 39 42.1**	**+1.3**
OSTU	**Oestervaala**	**2.71**	**284**	*eP*	**Pn**	**05 39 42.1**	**+1.3**
VJF	**Virojoki**	**2.73**	**69**	*eS*	**Sb**	**05 40 18.5**	**-1.2**
VJF				MSG		05 40 26.1	
	comp=Z,13nm,0.1s						
KEF	**Keuruu**	**2.79**	**25**	*eP*	**Pb**	**05 39 45.7**	**-1.1**
KEF				*eS*	**Sb**	**05 40 19.8**	**-1.7**
KAF	**Kangasniemi**	**3.12**	**36**	*eS*	**Sb**	**05 40 28.3**	**-2.5**
HEMU	**Hemsoen**	**3.69**	**327**	*eP*	**Pn**	**05 39 56.0**	**+1.7**
HEMU				*eS*	**Sn**	**05 40 39.3**	**+0.9**

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*DNK **17** 05:46:47.7±1.7, 59.°56N×22.°61E, h0km, ML2.0, Suspected explosion*
*UPP **17** 05:46:49.4±2.8, 59.°69N×22.°64E, h12km±44km, ML2.1, Suspected explosion*
*HEL **17** 05:46:49.6±0.1, 59.°63N×22.°46E, h0km, ML2.1, ML2.1(UPP), Explosion*
*IDC **17** 05:46:50.1±2.3, 59.°61N×22.°52E, h0km, mbtmp2.8/4, ML2.1/4, Error ellipse: s-maj=32.4km s-min=8.3km az=164.0*
*LVSN **17** 05:46:51.5±2.8, 59.°64N×22.°58E, h0km±44km, ML1.8*

ISC 17 05:46:47.9±0.7, 59.°62N±0.°02×22.°50E±0.°02, h0km, n56, σ1s39/90, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEF	**Metsahovi**	**1.13**	**57**	*eP*	**Pb**	**05 47 10.2**	**-0.1**
MEF	**Metsahovi**	**1.13**	**57**	*eP*	**Pb**	**05 47 10.0**	**-0.2**
MEF				AML	AML	05 47 10.9	
	comp=Z,28nm,0.2s						
MEF				*eS*	**Sb**	**05 47 24.6**	**-0.9**
MEF				AML	AML	05 47 31.1	
	comp=N,31nm,0.1s						
MEF				AML	AML	05 47 33.0	
	comp=E,31nm,0.1s						
MEF	**Metsahovi**	**1.13**	**57**	*eP*	**Pb**	**05 47 09.9**	**-0.4**
MEF				*eS*	**Sg**	**05 47 23.9**	**-0.2**
MEF				MSG		05 47 28.3	
	comp=Z,15nm,0.1s						
MTSE	**Matsula**	**1.13**	**143**	*eP*	**Pg**	**05 47 10.0**	**+0.4**
MTSE	**Matsula**	**1.13**	**143**	*eP*	**Pg**	**05 47 10.0**	**+0.4**
MTSE				*eS*	**Sb**	**05 47 26.4**	**+0.8**
MTSE	**Matsula**	**1.13**	**143**	*eP*	**Pg**	**05 47 10.0**	**+0.4**
MTSE				*eS*	**Sb**	**05 47 25.4**	**-0.2**
NUR	**Nurmijrvi**	**1.40**	**49**	*eP*	**Pn**	**05 47 14.6**	**0.0**
NUR				*eS*	**Sb**	**05 47 32.8**	**-0.5**
RAF	**Rauma**	**1.46**	**346**	*eP*	**Pg**	**05 47 16.0**	**+0.2**
RAF	**Rauma**	**1.46**	**346**	*eP*	**Pb**	**05 47 17.1**	**+1.3**
RAF				*eS*	**Sg**	**05 47 34.9**	**+0.3**
RAF	**Rauma**	**1.46**	**346**	*eP*	**Pn**	**05 47 15.6**	**+0.2**
RAF				*eS*	**Sg**	**05 47 34.0**	**-0.6**
RAF				MSG		05 47 36.8	
	comp=Z,17nm,0.2s						
ARBE	**Arbavere**	**1.79**	**94**	*eP*	**Pb**	**05 47 21.5**	**0.0**
ARBE				*eS*	**Sg**	**05 47 45.0**	**-0.2**
PVF	**P

HFS				Pg		**Pb**	**05 48 07.7 +0.5**
	comp=Z,0.5nm,0.3s,baz=94,slow=16,SNR=8.4						
HFS				Lg		Lg	05 49 08.6
	comp=Z,1.3nm,0.3s,baz=87,slow=29,SNR=10.0						
	comp=Z,0.6nm,0.3s						
BLEU	**Blekinge**	**4.87**	**230**	*i* P		**Pn**	**05 48 01.6 -0.7**
BLEU				*i* S		**Sn**	**05 48 58.4 -0.9**
DEL	**Delary**	**5.56**	**239**	*e*P		**Pn**	**05 48 11.5 -0.3**
DEL				*i* S		**Sn**	**05 49 14.2 -2.2**
DEL				IAML			05 49 55.1
	comp=Z,0.5nm,0.2s						
NOA	**NORSAR Array B**	**5.78**	**289**	Pn		**Pn**	**05 48 15.2 +0.3**
	baz=92,slow=12,SNR=6.1						
NOA				Sn		**Sn**	**05 49 20.2 -1.7**
	baz=134,slow=26,SNR=1.5						
	comp=Z,0.1nm,0.3s						
STRU	**Stroemstad**	**5.82**	**269**	*i* P		**Pn**	**05 48 15.6 +0.2**
STRU				*i* S		**Sn**	**05 49 18.7 -4.1**
TJOU	**Tjoern**	**5.87**	**259**	*i* P		**Pn**	**05 48 16.7 +0.7**
TJOU				*i* S		**Sn**	**05 49 21.3 -2.6**
ONAU	**Onsala**	**5.98**	**253**	*i* P		**Pn**	**05 48 18.1 +0.6**
ONAU				*e*S		**Sn**	**05 49 24.7 -1.8**
BSD	**Bornholm Skovb**	**6.10**	**226**	*i* P		**Pn**	**05 48 18.4 -0.8**
BSD				*i* S		**Sn**	**05 49 23.9 -5.7**
BSD				IAML			05 50 42.2
	comp=Z,1.2nm,0.2s						
BJUU	**Bjuv**	**6.18**	**239**	*i* P		Pn	05 48 10.8 -10
SNART	**Snartemo**	**8.00**	**267**	*i* P		**Pn**	**05 48 44.6 -0.7**
ARCES	**ARCESS Array B**	**10.04**	**6**	Pn		**Pn**	**05 49 13.3 +0.2**
	comp=Z,0.1nm,0.3s,baz=187,slow=14,SNR=12						
	comp=Z,0.3nm,0.2s						

LVSN ***17*** *05:48:02.8±2.2, 59.59N×22.31E, h0km±5km, ML2.4*
DNK ***17*** *05:48:03.2±1.0, 59.66N×22.30E, h0km, ML2.4(UPP), Suspected explosion*
HEL ***17*** *05:48:03.6±0.1, 59.58N×22.29E, h0km, ML2.3, ML2.4(UPP), Explosion*
UPP ***17*** *05:48:03.9±1.8, 59.63N×22.15E, h0km, ML2.4, Suspected explosion*
IDC ***17*** *05:48:08.8±2.2, 59.68N×23.52E, h0km, mbtmp3.1/4, ML2.6/4, Error ellipse: s-maj=28.0km s-min=8.9km az=155.0*

ISC 17 05:48:01.3±0.7, 59.60N±0.03×22.24E±0.02, h0km, n35, σ1s27/65, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTSE	**Matsula**	**1.21**	**137**	*e*P	**Pb**	**05 48 24.9**	**0.0**
MTSE				*e*S	**Sb**	**05 48 41.1**	**+0.1**
MTSE	**Matsula**	**1.21**	**137**	*e*P	**Pb**	**05 48 24.7**	**-0.3**
MTSE				*e*S	**Sg**	**05 48 38.6**	**-1.4**
MEF	**Metsahovi**	**1.25**	**60**	*e*P	**Pn**	**05 48 25.7**	**-0.2**
MEF				*e*S	**Sn**	**05 48 42.9**	**-0.5**
MEF				AML	AML	05 48 53.1	
	comp=Z,42nm,0.6s						
MEF				AML	AML	05 48 54.0	
	comp=E,53nm,0.2s						
MEF				AML	AML	05 48 54.3	
	comp=N,51nm,0.2s						
MEF	**Metsahovi**	**1.25**	**60**	*e*P	**Pb**	**05 48 25.4**	**-0.2**
MEF				*e*S	**Sb**	**05 48 41.8**	**-0.4**
MEF				MSG		05 48 44.8	
	comp=Z,30nm,0.2s						
RAF	**Rauma**	**1.44**	**351**	*e*P	**Pb**	**05 48 30.7**	**+1.7**
RAF				*e*S	**Sn**	**05 48 49.9**	**+1.7**
RAF				AML	AML	05 48 56.7	
	comp=N,39nm,0.2s						
RAF				AML	AML	05 48 56.8	
	comp=Z,28nm,0.2s						
RAF				AML	AML	05 48 56.8	
	comp=E,53nm,0.2s						
RAF	**Rauma**	**1.44**	**351**	*e*P	**Pb**	**05 48 30.2**	**+1.2**
RAF				*e*S	**Sn**	**05 48 49.1**	**+0.8**
RAF				MSG		05 48 56.5	
	comp=Z,19nm,0.1s						
NUR	**Nurmijrvi**	**1.51**	**52**	*e*P	**Pg**	**05 48 30.6**	**+0.4**
NUR				*e*S	**Sn**	**05 48 49.9**	**0.0**
NRTU	**Norrtaelje**	**1.83**	**274**	P	**Pg**	**05 48 35.9**	**-0.6**
NRTU				S	**Sg**	**05 49 00.4**	**+0.2**
NRTU	**Norrtaelje**	**1.83**	**274**	P	**Pg**	**05 48 35.9**	**-0.6**
NRTU				S	**Sg**	**05 49 00.4**	**+0.2**
NRTU	**Norrtaelje**	**1.83**	**274**	*e*P	**Pg**	**05 48 35.9**	**-0.6**
NRTU				*e*S	**Sg**	**05 49 00.4**	**+0.2**
ARBE	**Arbavere**	**1.92**	**93**	*e*P	**Pb**	**05 48 36.4**	**-0.6**
ARBE				*e*S	**Sb**	**05 49 01.4**	**-0.1**
SLIT	**Slitere, Latvi**	**1.98**	**179**	*e*P	**Pb**	**05 48 37.9**	**-0.2**
SLIT				*e*S	**Sg**	**05 49 06.6**	**+1.7**
SLIT				AML	AML	05 49 06.9	
	comp=Z,204nm,0.2s						
SLIT				AML	AML	05 49 07.2	
	comp=N,284nm,0.3s						
SLIT				AML	AML	05 49 07.5	
	comp=E,266nm,0.2s						
SLIT	**Slitere, Latvi**	**1.98**	**179**	*e*P	**Pb**	**05 48 37.6**	**-0.6**
SLIT				*e*S	**Sb**	**05 49 02.7**	**-0.6**
GRAU	**Graesoe**	**2.00**	**293**	P	**Pb**	**05 48 38.0**	**-0.5**
GRAU				S	**Sg**	**05 49 04.8**	**-0.7**
GRAU	**Graesoe**	**2.00**	**293**	P	**Pb**	**05 48 38.0**	**-0.5**
GRAU				S	**Sg**	**05 49 04.8**	**-0.7**
GRAU	**Graesoe**	**2.00**	**293**	*e*P	**Pb**	**05 48 38.0**	**-0.5**
GRAU				*e*S	**Sg**	**05 49 04.8**	**-0.7**
PVF	**Pernaja**	**2.04**	**61**	*e*P	**Pg**	**05 48 39.7**	**-0.8**
PVF				*e*S	**Sb**	**05 49 05.1**	**-0.1**
PVF				MSG		05 49 09.8	
	comp=Z,37nm,0.2s						
FORU	**Forsmark**	**2.19**	**293**	P	**Pb**	**05 48 41.8**	**+0.1**
FORU				S	**Sb**	**05 49 08.0**	**-1.2**
FORU	**Forsmark**	**2.19**	**293**	P	**Pb**	**05 48 41.8**	**+0.1**
FORU				S	**Sb**	**05 49 08.0**	**-1.2**
FORU	**Forsmark**	**2.19**	**293**	*e*P	**Pb**	**05 48 41.8**	**+0.1**
FORU				*e*S	**Sb**	**05 49 08.0**	**-1.2**
NYNU	**Nynaeshamn**	**2.25**	**256**	P	**Pb**	**05 48 42.4**	**-0.4**
NYNU				S	**Sb**	**05 49 11.5**	**+0.3**
NYNU	**Nynaeshamn**	**2.25**	**256**	P	**Pb**	**05 48 42.4**	**-0.4**
NYNU				S	**Sb**	**05 49 11.5**	**+0.3**
NYNU	**Nynaeshamn**	**2.25**	**256**	*e*P	**Pb**	**05 48 42.4**	**-0.4**
NYNU				*e*S	**Sb**	**05 49 11.5**	**+0.3**
FLYU	**Flymyra**	**2.26**	**285**	P	**Pb**	**05 48 42.0**	**-0.9**
FLYU	**Flymyra**	**2.26**	**285**	P	**Pb**	**05 48 42.0**	**-0.9**
FLYU	**Flymyra**	**2.26**	**285**	*e*P	**Pb**	**05 48 42.0**	**-0.9**
VSU	**Vasula**	**2.59**	**114**	*e*S	**Sn**	**05 49 17.1**	**+0.6**
FIA0	**FINESS Array S**	**2.65**	**44**	*e*P	**Pb**	**05 48 48.3**	**-1.2**
FIA0				*e*S	**Sn**	**05 49 19.2**	**+1.3**
FINES	**FINESS Array B**	**2.65**	**44**	Pn	**Pb**	**05 48 48.4**	**-1.1**
	comp=Z,2.3nm,0.3s,baz=224,slow=14,SNR=9.6						
FINES				Sn	**Sn**	**05 49 16.9**	**-1.0**
	comp=Z,1.6nm,0.3s,baz=219,slow=18,SNR=4.0						
FINES				Lg	Lg	05 49 25.5	
	comp=Z,4.3nm,0.3s,baz=239,slow=24,SNR=16						
	comp=Z,3.3nm,0.3s						
FIA1	**FINESS Array S**	**2.65**	**44**	*e*P	**Pb**	**05 48 48.3**	**-1.2**
FIA1				*e*S	**Sn**	**05 49 19.7**	**+1.8**
VJF	**Virojoki**	**2.82**	**68**	*e*S	**Sn**	**05 49 21.9**	**+0.6**
KEF	**Keuruu**	**2.88**	**25**	*e*P	**Pb**	**05 48 51.3**	**-2.1**
KEF				*e*S	**Sn**	**05 49 25.0**	**+1.5**
HFS	**Hagfors**	**4.34**	**281**	Pn	**Pg**	**05 49 22.3**	**-2.1**
	comp=Z,2.0nm,0.3s,baz=90,slow=17,SNR=11						
HFS				Sn	**Sg**	**05 50 20.3**	**-0.3**
	comp=Z,2.7nm,0.3s,baz=92,slow=31,SNR=6.2						
HFS				Lg	Lg	05 50 46.5	
	comp=Z,1.8nm,0.3s,baz=91,slow=30,SNR=2.1						
	comp=Z,3.5nm,0.3s						
NOA	**NORSAR Array B**	**5.67**	**289**	Pn	**Pb**	**05 49 40.3**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=65,slow=14,SNR=4.6						
NOA				Pg	Pg	05 49 56.2	+6.4
	comp=Z,0.1nm,0.3s,baz=119,slow=19,SNR=6.3						
NOA				Sn	**Sb**	**05 50 54.6**	**+5.2**
	comp=Z,0.1nm,0.3s,baz=306,slow=24,SNR=1.1						
	comp=Z,0.2nm,0.3s						
ARCES	**ARCESS Array B**	**10.07**	**7**	Pn	**Pn**	**05 50 28.8**	**+1.9**
	comp=Z,0.2nm,0.3s,baz=183,slow=14,SNR=24						
ARCES				Sn	**Sn**	**05 52 15.8**	**-4.6**
	comp=Z,0.1nm,0.3s,baz=182,slow=21,SNR=1.3						
	comp=Z,0.4nm,0.3s						

SOME ***17*** *05:54:51.6, 40.77N×74.83E, h15km*
KRNET ***17*** *05:54:51.9±0.1, 40.79N×74.83E, h10km, mb3.4*
NNC ***17*** *05:54:54.7±1.0, 40.94N×74.87E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=8.6km s-min=4.5km az=164.0*
KNET ***17*** *05:54:56.0±0.7, 41.03N×74.85E, h9km±10km, ml3.0, Error ellipse: s-maj=7.2km s-min=3.5km az=176.0*

ISC 17 05:54:51.7±1.3, 40.76N±0.03×74.66E±0.02, h5km±11km, n73, σ1s42/116, 37C-24D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARLS	**Aral**	**1.13**	**347**	⇑*i*P	**Pb**	**05 55 13.5**	**-0.3**
	baz=41						
ARLS				⇑*i*S	**Sb**	**05 55 28.1**	**-0.8**
	baz=41						
OHH	**Osh**	**1.45**	**261**	⇑*i*P	**Pg**	**05 55 21.1**	**+1.7**
	baz=61						
OHH				⇑*i*S	**Sg**	**05 55 42.6**	**+4.4**
	baz=61						
UCH	**Uchtor**	**1.47**	**356**	P	**Pb**	**05 55 19.4**	**-0.4**
	28nm,0.2s,SNR=123						
UCH				⇑S	**Sg**	**05 55 38.8**	**-0.2**
	72nm,0.2s						
UCH	**Uchtor**	**1.47**	**356**	⇑*i*P	**Pg**	**05 55 19.6**	**-0.3**
	baz=51						
UCH				⇑*i*S	**Sg**	**05 55 39.8**	**+0.8**
	baz=51						
AML	**Almayashu**	**1.55**	**332**	⇓P	**Pg**	**05 55 22.4**	**+1.0**
	42nm,0.2s,SNR=18						
AML				⇑S	**Sg**	**05 55 43.1**	**+1.5**
	169nm,0.4s						
AAK	**Ala-Archa**	**1.88**	**356**	⇓P	**Pb**	**05 55 26.8**	**+0.2**
	53nm,0.3s,SNR=17						
AAK				⇓S	**Sb**	**05 55 49.6**	**-0.9**
	91nm,0.4s						
AAK	**Ala-Archa**	**1.88**	**356**	⇑*i*P	**Pb**	**05 55 26.7**	**+0.1**
	baz=52						
AAK				⇑*i*S	**Sg**	**05 55 52.0**	**-0.1**
	baz=52						
ULHL	**Ulahol**	**1.90**	**38**	⇑P	**Pn**	**05 55 24.6**	**-0.4**
	21nm,0.2s,SNR=66						
ULHL	**Ulahol**	**1.90**	**38**	⇓*e*P	**Pn**	**05 55 24.7**	**-0.3**
	baz=35						
ULHL				⇓*i*S	**Sn**	**05 55 49.9**	**+0.4**
	baz=35						
KBK	**Karagaybulak**	**1.91**	**6**	⇓P	**Pb**	**05 55 26.9**	**-0.2**
	44nm,0.1s,SNR=16						
KBK				⇓S	**Sn**	**05 55 49.9**	**+0.3**
	191nm,0.2s						
KBK	**Karagaybulak**	**1.91**	**6**	⇑*i*P	**Pb**	**05 55 26.8**	**-0.3**
	baz=3.0						
KBK				⇑*i*S	**Sg**	**05 55 52.1**	**-0.9**
	baz=3.0						
BOOM	**Boomskoye usch**	**1.98**	**29**	⇑*i*P	**Pb**	**05 55 27.1**	**-1.2**
	baz=26						
BOOM				⇑*i*S	**Sb**	**05 55 52.9**	**-0.4**
	baz=26						
EKS2	**Erkin-Say**	**2.01**	**341**	⇓P	**Pg**	**05 55 30.1**	**-0.1**
	13nm,0.2s,SNR=12						
EKS2				⇓S	**Sg**	**05 55 56.0**	**-0.3**
	43nm,0.4s						
EKS2	**Erkin-Say**	**2.01**	**341**	⇓*i*P	**Pb**	**05 55 29.0**	**+0.1**
	baz=37						
EKS2				⇓*i*S	**Sg**	**05 55 56.1**	**-0.3**
	baz=37						
CHMS	**Chumysh**	**2.24**	**2**	⇑P	**Pb**	**05 55 32.7**	**0.0**
	24nm,0.2s,SNR=14						
CHMS				⇓S	**Sb**	**05 56 00.7**	**0.0**
	108nm,0.4s						
CHMS	**Chumysh**	**2.24**	**2**	⇑*i*P	**Pb**	**05 55 31.4**	**-1.3**
	baz=58						
CHMS				⇑*i*S	**Sb**	**05 56 00.3**	**-0.4**
	baz=58						
CHMS	**Chumysh**	**2.24**	**2**	⇓Pn	**Pb**	**05 55 31.8**	**-0.8**
	30nm,0.9s						
CHMS				⇑Lg	Lg	05 56 00.8	
	111nm,0.7s						
MRKS	**Merke**	**2.25**	**332**	*e*P	**Pg**	**05 55 34.1**	**-0.8**
	52nm,0.3s						
MRKS				*e*S	**Sg**	**05 56 04.5**	**+0.4**
	185nm,0.3s						
MRKS	**Merke**	**2.25**	**332**	Pg	**Pg**	**05 55 34.9**	**0.0**
	52nm,0.3s						
MRKS				Lg	Lg	05 56 04.5	
	185nm,0.3s						
TKM2	**Tokmak 2**	**2.27**	**18**	⇑P	**Pb**	**05 55 32.9**	**-0.4**
	22nm,0.2s,SNR=24						
TKM2				⇑S	**Sb**	**05 56 00.6**	**-1.2**
	81nm,0.2s						
TKM2	**Tokmak 2**	**2.27**	**18**	⇑*i*P	**Pb**	**05 55 31.4**	**-1.9**
	baz=15						
TKM2				⇑*i*S	**Sb**	**05 56 00.3**	**-1.5**
	baz=15						
TKM2	**Tokmak 2**	**2.27**	**18**	⇓Pn	**Pb**	**05 55 31.4**	**-1.9**
	9.5nm,0.3s						
TKM2				⇑Lg	Lg	05 56 00.2	
	103nm,0.6s						
ARK	**Arkit**	**2.28**	**298**	⇑*i*P	**Pg**	**05 55 33.9**	**-1.5**
	baz=96						
ARK				⇑*i*S	**Sg**	**05 56 04.5**	**-0.5**
	baz=96						
KDJ	**Kajisay**	**2.34**	**53**	⇑*i*P	**Pn**	**05 55 31.5**	**+0.5**
	baz=52						
KDJ				⇑*i*S	**Sn**	**05 56 00.6**	**+0.4**
	baz=52						
KST	**Kastek**	**2.48**	**23**	*e*P	**Pb**	**05 55 35.5**	**-1.4**
	19nm,0.3s						
KST				*e*S	**Sb**	**05 56 06.5**	**-1.2**
	182nm,0.4s						
KST	**Kastek**	**2.48**	**23**	Pg	**Pb**	**05 55 36.1**	**-0.8**
	19nm,0.3s						
KST				Lg	Lg	05 56 06.5	
	182nm,0.4s						
USP	**Ospenovka**	**2.51**	**357**	⇑P	**Pb**	**05 55 37.1**	**-0.1**
	78nm,0.2s,SNR=66						
USP	**Ospenovka**	**2.51**	**357**	⇑*i*P	**Pb**	**05 55 35.4**	**-1.9**
	baz=54						
USP				⇑*i*S	**Sb**	**05 56 07.0**	**-1.5**
	baz=54						
DRK	**Karamyk**	**2.54**	**241**	⇓*i*P	**Pg**	**05 55 38.4**	**-1.9**
	baz=42						
DRK				⇓*i*S	**Sg**	**05 56 12.2**	**-1.0**
	baz=42						
TARG	**Taragay, Kyrgy**	**2.56**	**67**	⇓*e*P	**Pn**	**05 55 34.5**	**+0.2**
	baz=66						
TARG				⇓*i*S	**Sn**	**05 56 05.8**	**-0.2**
	baz=66						
DGS	**Degeres**	**2.62**	**18**	*e*P	**Pb**	**05 55 38.1**	**-1.0**
	41nm,0.5s						
DGS				*e*S	**Sb**	**05 56 11.0**	**-0.6**
	96nm,0.3s						
DGS	**Degeres**	**2.62**	**18**	Pg	**Pb**	**05 55 38.6**	**-0.5**
	41nm,0.5s						
DGS				Lg	Lg	05 56 11.0	
	96nm,0.3s						
SGDS	**Sogindy**	**2.69**	**360**	*e*P	**Pb**	**05 55 40.7**	**+0.3**
	43nm,0.4s						
SGDS				*e*S	**Sg**	**05 56 15.6**	**-2.5**
	177nm,0.6s						
SGDS	**Sogindy**	**2.69**	**360**	Pg	**Pb**	**05 55 40.7**	**+0.3**
	43nm,0.4s						
SGDS				Lg	Lg	05 56 14.5	
	177nm,0.6s						
MTBS	**Maitube**	**2.71**	**29**	*e*P	**Pb**	**05 55 39.6**	**-1.1**
	10nm,0.3s						
MTBS				*e*S	**Sb**	**05 56 13.6**	**-0.8**
	132nm,0.4s						
MTBS	**Maitube**	**2.71**	**29**	Pg	**Pb**	**05 55 39.6**	**-1.1**
	20nm,0.2s						
MTBS				Lg	Lg	05 56 12.6	
	132nm,0.4s						
TRKS	**Terek-Say**	**2.77**	**287**	⇑*e*P	**Pb**	**05 55 40.3**	**-1.4**
	baz=85						
TRKS				⇑*i*S	**Sb**	**05 56 15.7**	**-0.3**
	baz=85						
TNSS	**Tian-Shan**	**2.84**	**36**	*e*P	**Pb**	**05 55 41.9**	**-1.3**
	26nm,0.5s						
TNSS				*e*S	**Sb**	**05 56 18.4**	**-0.1**
	68nm,0.6s						
TNSS	**Tian-Shan**	**2.84**	**36**	Pg	**Pb**	**05 55 42.1**	**-1.1**
	26nm,0.5s						
TNSS				Lg	Lg	05 56 17.1	
	68nm,0.6s						
AAA	**Alma-Ata**	**2.97**	**34**	*e*P	**Pb**	**05 55 44.5**	**-0.7**
	40nm,0.1s						
AAA				*e*S	**Sb**	**05 56 22.2**	**+0.5**
	198nm,0.3s						
AAA	**Alma-Ata**	**2.97**	**34**	Pg	**Pb**	**05 55 45.5**	**+0.4**
	40nm,0.1s						
AAA				Lg	Lg	05 56 22.6	
	198nm,0.3s						
BTK	**Batken**	**3.02**	**258**	⇓*i*P	**Pb**	**05 55 44.3**	**-1.6**
	baz=58						
BTK				⇓*i*S	**Sb**	**05 56 22.5**	**-0.6**
	baz=58						
ANVS	**Anan'yevo**	**3.02**	**47**	⇑*i*P	**Pn**	**05 55 41.0**	**+0.6**
	baz=46						
ANVS				⇑*i*S	**Sn**	**05 56 17.0**	**-0.1**
	baz=46						
KRBS	**Karabastau**	**3.03**	**14**	*e*P	**Pb**	**05 55 45.2**	**-1.0**
	1.1nm,0.6s						
KRBS				*e*S	**Sb**	**05 56 23.6**	**+0.2**
	177nm,0.4s						
KRBS	**Karabastau**	**3.03**	**14**	Pg	**Pb**	**05 55 46.0**	**-0.1**
	4.6nm,0.4s						
KRBS				Lg	Lg	05 56 23.6	
	177nm,0.4s						
DZA	**Taraz**	**3.27**	**312**	*e*P	**Pg**	**05 55 54.2**	**-0.2**
	47nm,0.1s						
DZA				*e*S	**Sg**	**05 56 39.1**	**+2.2**
	232nm,0.3s						
DZA	**Taraz**	**3.27**	**312**	Pg	**Pg**	**05 55 54.9**	**+0.5**
	47nm,0.1s						
DZA				Lg	Lg	05 56 39.1	
	232nm,0.3s						
KTBS	**Karatobe**	**3.31**	**26**	*e*P	**Pb**	**05 55 50.0**	**-0.9**
	10nm,0.4s						
KTBS				*e*S	**Sb**	**05 56 31.9**	**+0.3**
	156nm,0.3s						
KTBS	**Karatobe**	**3.31**	**26**	Pg	**Pb**	**05 55 50.7**	**-0.2**
	10nm,0.4s						
KTBS				Lg	Lg	05 56 31.8	
	156nm,0.3s						
CHKK	**Chushkaly**	**3.54**	**28**	*e*P	**Pb**	**05 55 53.0**	**-1.9**
	3.3nm,0.2s						
CHKK				*e*S	**Sb**	**05 56 37.8**	**-0.4**
	61nm,0.2s						
CHKK	**Chushkaly**	**3.54**	**28**	Pg	**Pb**	**05 55 54.2**	**-0.6**
	5.1nm,0.2s						
CHKK				Lg	Lg	05 56 37.8	
	61nm,0.2s						
SATY	**Saty**	**3.62**	**49**	*e*P	**Pb**	**05 55 54.8**	**-1.4**
	13nm,0.3s						
SATY				*e*S	**Sb**	**05 56 41.0**	**+0.5**
	49nm,0.3s						
SATY	**Saty**	**3.62**	**49**	Pg	**Pb**	**05 55 56.0**	**-0.2**
	13nm,0.3s						
SATY				Lg	Lg	05 56 41.0	
	49nm,0.3s						
IUG	**Iuzhnay**	**3.74**	**293**	*e*P	**Pg**	**05 56 04.4**	**+1.0**
	200nm,0.2s						
IUG				*e*S	**Sg**	**05 56 56.6**	**+4.6**
	85nm,0.4s						
IUG	**Iuzhnay**	**3.74**	**293**	Pg	**Pg**	**05 56 05.1**	**+1.7**
	200nm,0.2s						
IUG				Lg	Lg	05 56 56.6	
	85nm,0.4s						
KK31	**Karatay Array**	**3.88**	**308**	⇑Pn	**Pb**	**05 55 56.7**	**-3.9**
	0.4nm,0.4s,baz=127,slow=12,SNR=4.8						
KK31				⇓Pg	**Pg**	**05 56 05.8**	**-0.2**
	1.3nm,0.3s,baz=123,slow=17,SNR=22						
KK31				⇑Lg	Lg	05 56 58.6	
	12nm,0.4s,baz=127,slow=29,SNR=9.2						
KPKS	**Kokpek**	**4.03**	**47**	*e*P	**Pb**	**05 56 01.8**	**-1.5**
	7.1nm,0.5s						
KPKS				*e*S	**Sb**	**05 56 52.0**	**-0.4**
	31nm,0.5s						
KPKS	**Kokpek**	**4.03**	**47**	Pg	**Pb**	**05 56 02.5**	**-0.8**
	9.6nm,0.3s						
KPKS				Lg	Lg	05 56 52.1	
	31nm,0.5s						
UZB	**Uzynbulak**	**4.03**	**52**	*e*P	**Pb**	**05 56 01.6**	**-1.7**
	3.2nm,0.4s						
UZB				*e*S	**Sb**	**05 56 52.6**	**+0.1**
	40nm,0.5s						
UZB	**Uzynbulak**	**4.03**	**52**	Pg	**Pb**	**05 56 02.8**	**-0.5**
	8.2nm,0.4s						
UZB				Lg	Lg	05 56 52.6	
	40nm,0.5s						
ARXS	**Arharly**	**4.17**	**33**	*e*P	**Pb**	**05 56 04.7**	**-0.9**
	5.6nm,0.3s						
ARXS				*e*S	**Sb**	**05 56 57.4**	**+1.0**
	38nm,0.5s						
ARXS	**Arharly**	**4.17**	**33**	Pg	**Pb**	**05 56 05.6**	**0.0**
	11nm,0.7s						
ARXS				Lg	Lg	05 56 57.4	
	38nm,0.5s						
BRLS	**Borolday**	**4.25**	**304**	*e*P	**Pg**	**05 56 11.3**	**-1.9**
	1.3nm,0.2s						
BRLS				*e*S	**Sg**	**05 57 09.1**	**+0.7**
	19nm,0.4s						
BRLS	**Borolday**	**4.25**	**304**	Pg	**Pg**	**05 56 13.7**	**+0.5**
	1.3nm,0.2s						
BRLS				Lg	Lg	05 57 11.2	
	19nm,0.4s						
SHLS	**Shalkode**	**4.31**	**55**	*e*P	**Pg**	**05 56 12.3**	**-1.9**
	2.7nm,0.2s						
SHLS				*e*S	**Sg**	**05 57 10.8**	**+0.8**
	38nm,0.4s						
SHLS	**Shalkode**	**4.31**	**55**	Pg	**Pg**	**05 56 13.5**	**-0.7**
	9.4nm,0.3s						
SHLS				Lg	Lg	05 57 10.8	
	38nm,0.4s						
TDK	**Taldyqorghan**	**5.05**	**32**	*e*P	**Pb**	**05 56 22.1**	**+1.5**
	83nm,0.3s						
TDK				*e*S	**Sb**	**05 57 27.3**	**+5.6**
	89nm,0.5s						
TDK	**Taldyqorghan**	**5.05**	**32**	Pg	**Pb**	**05 56 22.1**	**+1.5**
	83nm,0.3s						
TDK				Lg	Lg	05 57 25.6	
	89nm,0.5s						
DJR	**Jarkent**	**5.21**	**45**	*e*P	**Pb**	**05 56 24.8**	**+1.5**
	5.4nm,0.3s						
DJR				*e*S	**Sb**	**05 57 31.6**	**+5.5**
	13nm,0.4s						
DJR	**Jarkent**	**5.21**	**45**	Pg	**Pb**	**05 56 24.8**	**+1.5**
	5.4nm,0.3s						
DJR				Lg	Lg	05 57 30.3	
	13nm,0.4s						
OTUK	**Ortayu**	**7.67**	**348**	⇓Lg	Lg	05 58 53.5	
	14nm,0.8s						
MK31	**Makanchi Array**	**8.17**	**40**	⇓Lg	Lg	05 59 04.0	
	4.8nm,0.9s						
KURK	**Kurchatov**	**10.33**	**14**	⇓Lg	Lg	06 00 16.0	
	11nm,1.1s						

DNK ***17*** *06:12:04.5±1.8, 59.60N×22.40E, h0km, ML2.9, Suspected explosion*
IDC ***17*** *06:12:04.6±1.4, 59.57N×22.62E, h0km, mb3.4/1, mbtmp3.2/5, ML2.7/4, Error ellipse: s-maj=18.6km s-min=7.3km az=151.0*
BER ***17*** *06:12:05.1±1.9, 59.50N×22.58E, h0km, ML2.1, ML2.8(UPP), Suspected explosion*
HEL ***17*** *06:12:05.6±0.1, 59.65N×22.36E, h0km, ML2.4, ML2.8(UPP), Explosion*
UPP ***17*** *06:12:06.4±1.8, 59.68N×22.19E, h0km, ML2.8, Suspected explosion*
LVSN ***17*** *

RAF					AML	AML	06 13 01.2		
	comp=Z,48nm,0.9s								
RAF					AML	AML	06 13 01.7		
	comp=N,49nm,0.5s								
RAF	**Rauma**	**1.44**	**345**	*eP*	**Pb**		**06 12 31.4**	**+0.5**	
RAF				*eS*	**Sg**		**06 12 49.6**	**+0.1**	
RAF				MSG			06 13 02.4		
	comp=Z,45nm,0.2s								
PVF	**Pernaja**	**1.91**	**60**	*eP*	**Pg**		**06 12 40.5**	**+0.6**	
PVF				*eS*	**Sg**		**06 13 05.0**	**+0.3**	
PVF				MSG			06 13 14.9		
	comp=Z,39nm,0.2s								
NRTU	**Norrtaelje**	**1.97**	**273**	P	**Pn**		**06 12 38.6**	**+0.8**	
NRTU				S	**Sn**		**06 13 03.3**	**+0.1**	
NRTU	**Norrtaelje**	**1.97**	**273**	P	**Pn**		**06 12 38.6**	**+0.8**	
NRTU				S	**Sn**		**06 13 03.3**	**+0.1**	
NRTU	**Norrtaelje**	**1.97**	**273**	P	**Pn**		**06 12 38.6**	**+0.8**	
NRTU				S	**Sn**		**06 13 03.3**	**+0.1**	
NRTU	**Norrtaelje**	**1.97**	**273**	*eP*	**Pn**		**06 12 38.6**	**+0.8**	
NRTU				*eS*	**Sn**		**06 13 03.3**	**+0.1**	
SLIT	**Slitere, Latvi**	**2.02**	**183**	*eP*	**Pb**		**06 12 40.8**	**+0.1**	
SLIT				IAML			06 13 10.5		
	comp=Z,364nm,0.2s								
SLIT	**Slitere, Latvi**	**2.02**	**183**	*eP*	**Pb**		**06 12 40.8**	**+0.1**	
SLIT				*eS*	**Sb**		**06 13 07.7**	**+1.4**	
SLIT				AML	AML		06 13 09.7		
	comp=N,378nm,0.2s								
SLIT				AML	AML		06 13 11.3		
	comp=E,449nm,0.4s								
SLIT				AML	AML		06 13 16.8		
	comp=Z,265nm,0.2s								
SLIT	**Slitere, Latvi**	**2.02**	**183**	*eP*	**Pb**		**06 12 40.5**	**-0.2**	
SLIT				*eS*	**Sb**		**06 13 07.2**	**+0.9**	
GRAU	**Graesoe**	**2.11**	**291**	P	**Pn**		**06 12 40.3**	**+0.4**	
GRAU				S	**Sn**		**06 13 07.0**	**+0.3**	
GRAU	**Graesoe**	**2.11**	**291**	P	**Pn**		**06 12 40.3**	**+0.4**	
GRAU				S	**Sn**		**06 13 07.0**	**+0.3**	
GRAU	**Graesoe**	**2.11**	**291**	P	**Pn**		**06 12 40.3**	**+0.4**	
GRAU				S	**Sn**		**06 13 07.0**	**+0.3**	
GRAU	**Graesoe**	**2.11**	**291**	*eP*	**Pn**		**06 12 40.3**	**+0.4**	
GRAU				*eS*	**Sn**		**06 13 07.0**	**+0.3**	
FORU	**Forsmark**	**2.30**	**291**	P	**Pn**		**06 12 44.1**	**+1.7**	
FORU				S	**Sn**		**06 13 11.1**	**-0.3**	
FORU	**Forsmark**	**2.30**	**291**	P	**Pn**		**06 12 44.1**	**+1.7**	
FORU				S	**Sn**		**06 13 11.1**	**-0.3**	
FORU	**Forsmark**	**2.30**	**291**	P	**Pn**		**06 12 44.1**	**+1.7**	
FORU				S	**Sn**		**06 13 11.1**	**-0.3**	
FORU	**Forsmark**	**2.30**	**291**	*eP*	**Pn**		**06 12 44.1**	**+1.7**	
FORU				*eS*	**Sn**		**06 13 11.1**	**-0.3**	
FLYU	**Flymyra**	**2.38**	**284**	P	**Pn**		**06 12 44.5**	**+1.0**	
FLYU				S	**Sn**		**06 13 12.5**	**-0.9**	
FLYU	**Flymyra**	**2.38**	**284**	P	**Pn**		**06 12 44.5**	**+1.0**	
FLYU				S	**Sn**		**06 13 12.5**	**-0.9**	
FLYU	**Flymyra**	**2.38**	**284**	P	**Pn**		**06 12 44.5**	**+1.0**	
FLYU				S	**Sn**		**06 13 12.5**	**-0.9**	
FLYU	**Flymyra**	**2.38**	**284**	*eP*	**Pn**		**06 12 44.5**	**+1.0**	
FLYU				*eS*	**Sn**		**06 13 12.5**	**-0.9**	
VSU	**Vasula**	**2.48**	**116**	*eP*	**Pb**		**06 12 48.1**	**-0.5**	
VSU	**Vasula**	**2.48**	**116**	AML	AML		06 13 23.4		
	comp=N,188nm,0.4s								
VSU				AML	AML		06 13 27.2		
	comp=Z,115nm,0.3s								
VSU				AML	AML		06 13 32.0		
	comp=E,224nm,0.4s								
VSU	**Vasula**	**2.48**	**116**	*eP*	**Pb**		**06 12 49.1**	**+0.4**	
VSU				*eS*	**Sb**		**06 13 19.5**	**-0.2**	
FIA0	**FINESS Array S**	**2.53**	**43**	*eP*	**Pb**		**06 12 49.1**	**-0.3**	
FIA0				*eS*	**Sn**		**06 13 19.0**	**+1.9**	
FINES	**FINESS Array B**	**2.53**	**43**	Pn	**Pb**		**06 12 49.2**	**-0.3**	
	comp=E,3.0nm,0.3s,baz=226,slow=14,SNR=62								
FINES				Lg	Lg		06 13 22.6		
	comp=E,13nm,0.3s,baz=223,slow=26,SNR=31								
	comp=E,4.4nm,0.3s								
FIA1	**FINESS Array S**	**2.53**	**43**	*eP*	**Pb**		**06 12 49.1**	**-0.4**	
FIA1				*eS*	**Sn**		**06 13 19.0**	**+1.9**	
FIBU	**Brunna**	**2.62**	**278**	P	**Pn**		**06 12 48.8**	**+2.0**	
FIBU	**Brunna**	**2.62**	**278**	P	**Pn**		**06 12 48.8**	**+2.0**	
FIBU	**Brunna**	**2.62**	**278**	P	**Pn**		**06 12 48.8**	**+2.0**	
BACU	**Backbrunna**	**2.74**	**277**	P	**Pn**		**06 12 49.7**	**+1.2**	
BACU	**Backbrunna**	**2.74**	**277**	P	**Pn**		**06 12 49.7**	**+1.2**	
BACU	**Backbrunna**	**2.74**	**277**	P	**Pn**		**06 12 49.7**	**+1.2**	
BACU	**Backbrunna**	**2.74**	**277**	*eP*	**Pn**		**06 12 49.7**	**+1.2**	
OSTU	**Oestervaala**	**2.77**	**285**	P	**Pn**		**06 12 50.2**	**+1.4**	
OSTU	**Oestervaala**	**2.77**	**285**	P	**Pn**		**06 12 50.2**	**+1.4**	
OSTU	**Oestervaala**	**2.77**	**285**	P	**Pn**		**06 12 50.2**	**+1.4**	
OSTU	**Oestervaala**	**2.77**	**285**	*eP*	**Pn**		**06 12 50.2**	**+1.4**	
KEF	**Keuruu**	**2.79**	**23**	*e*PB	**Pb**		**06 12 53.9**	**-0.1**	
KEF				*e*SB	**Sb**		**06 13 29.0**	**+0.3**	
HFS	**Hagfors**	**4.47**	**280**	Pn	**Pn**		**06 13 12.8**	**+0.7**	
	comp=E,0.4nm,0.3s,baz=100,slow=14,SNR=7.4								
HFS				Pg	**Pb**		**06 13 23.3**	**+0.8**	
	comp=E,2.2nm,0.3s,baz=95,slow=17,SNR=25								
HFS				Lg	Lg		06 14 19.8		
	comp=E,0.9nm,0.3s,baz=89,slow=33,SNR=2.3								
	comp=E,0.9nm,0.3s								
BLEU	**Blekinge**	**4.88**	**230**	*i* P	**Pn**		**06 13 17.9**	**+0.1**	
BLEU				*eS*	**Sn**		**06 14 13.6**	**-1.4**	
DEL	**Delary**	**5.58**	**239**	*eP*	**Pn**		**06 13 27.4**	**+0.1**	
DEL	**Delary**	**5.58**	**239**	*i* P	**Pn**		**06 13 27.0**	**-0.4**	
DEL				*i* S	**Sn**		**06 14 27.7**	**-4.3**	
DEL				IAML			06 15 03.1		
	comp=Z,4.3nm,0.3s								
NC602	**NORSAR Array S**	**5.58**	**286**	*eP*	**Pn**		**06 13 27.7**	**+0.2**	
NC303	**NORSAR Array S**	**5.74**	**291**	*eP*	**Pn**		**06 13 29.1**	**-0.5**	
NC303				*eS*	**Sn**		**06 14 34.8**	**-1.4**	
NC303				IAML			06 15 12.0		
	comp=Z,5.5nm,0.2s								
NB201	**NORSAR Array S**	**5.75**	**289**	*eP*	**Pn**		**06 13 29.1**	**-0.6**	
NB201				IAML			06 15 02.9		
	comp=Z,5.2nm,0.2s								
NOA	**NORSAR Array B**	**5.78**	**289**	Pn	**Pn**		**06 13 30.0**	**-0.3**	
	comp=Z,0.1nm,0.3s,baz=96,slow=16,SNR=24								
NOA				Sn	**Sn**		**06 14 35.9**	**-1.4**	
	comp=Z,0.1nm,0.3s,baz=110,slow=16,SNR=2.3								
NOA				Lg	Lg		06 15 00.0		
	comp=Z,0.2nm,0.3s,baz=331,slow=9.2,SNR=5.8								
	comp=Z,0.4nm,0.3s								
STRU	**Stroemstad**	**5.83**	**269**	*i* P	**Pn**		**06 13 31.4**	**+0.6**	
STRU				*i* S	**Sn**		**06 14 35.7**	**-2.5**	
STRU	**Stroemstad**	**5.83**	**269**	*eP*	**Pn**		**06 13 31.4**	**+0.6**	
STRU				*eS*	**Sn**		**06 14 34.5**	**-3.7**	
TJOU	**Tjoern**	**5.88**	**259**	*i* P	**Pn**		**06 13 31.8**	**+0.3**	
TJOU				*i* S	**Sn**		**06 14 40.4**	**+0.9**	
ONAU	**Onsala**	**5.99**	**253**	*i* P	**Pn**		**06 13 31.6**	**-1.3**	
ONAU				*eS*	**Sn**		**06 14 37.9**	**-4.2**	
NBO00	**NORSAR Array S**	**5.99**	**289**	*eP*	**Pn**		**06 13 32.9**	**-0.2**	
BSD	**Bornholm Skovb**	**6.11**	**225**	*eP*	**Pn**		**06 13 35.6**	**+0.9**	
BSD				IAML			06 15 19.7		
	comp=Z,8.4nm,0.8s								
BJUU	**Bjuv**	**6.19**	**239**	*i* S	**Sn**		**06 14 43.7**	**-3.6**	
SKAR	**Skarslia**	**7.17**	**285**	*eP*	**Pn**		**06 13 48.6**	**-0.6**	
SKAR				*eS*	**Sn**		**06 15 05.7**	**-5.5**	
SKAR				IAML			06 15 30.0		
	comp=Z,2.1nm,0.2s								
HOMB	**Homborsund**	**7.37**	**265**	*i* P	**Pn**		**06 13 51.8**	**-0.2**	
SALU	**Saltoluokta**	**7.98**	**349**	*eP*	**Pn**		**06 14 00.8**	**+0.5**	
SALU				*eS*	**Sn**		**06 15 26.9**	**-4.3**	
HEF	**Hetta**	**8.82**	**3**	*eP*	**Pn**		**06 14 11.5**	**-0.4**	
KIF	**Kilpisjarvi**	**9.44**	**356**	*eP*	**Pn**		**06 14 18.1**	**-2.1**	
ARA0	**ARCESS Array S**	**10.02**	**6**	*eP*	**Pn**		**06 14 27.9**	**-0.4**	
ARA0				IAML			06 16 10.2		
	comp=Z,1.0nm,0.2s								
ARCES	**ARCESS Array B**	**10.02**	**6**	Pn	**Pn**		**06 14 28.0**	**-0.3**	
	comp=Z,0.5nm,0.3s,baz=183,slow=14,SNR=37								
ARCES				Sn	**Sn**		**06 16 17.4**	**-3.9**	
	comp=Z,0.2nm,0.3s,baz=183,slow=22,SNR=5.6								
	comp=Z,1.1nm,0.3s								
TORD	**Torodi Ar. Bea**	**48.91**	**207**	P	**P**		**06 20 51.6**	**+0.8**	
	comp=Z,0.2nm,0.4s,baz=13,slow=7.3,SNR=1.8								
	comp=Z,0.2nm,0.4s								

IDC ***17*** *06:28:09.5±2.9,54.°18N×87.°35E, h0km, mbtmp3.2/2, ML2.9/2, Error ellipse: s-maj=23.6km s-min=16.9km az=53.0*

NNC ***17*** *06:28:10.5±2.7,54.°15N×87.°20E, h4km±24km, mb3.1, mpv2.8, Error ellipse: s-maj=32.7km s-min=19.4km az=26.0, Suspected Mining explosion.*

ISC 17 06:28:10.4±4.3,54.°2N±0.°2×87.°1E±0.°2, h0km, n7, σ0s 74/11, 6C-1D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.38**	**259**	*i*		06 37 25.5	
	baz=80,slow=312,SNR=0.9						
ZAA0	**Zalesovo Array**	**1.38**	**259**	⇑P	**Pn**	**06 28 36.3**	**-0.6**
	1.0nm,0.3s						
ZAA0				⇑S	**Sn**	**06 28 56.9**	**+1.0**
	3.2nm,0.4s						
ZALV	**Zalesovo Beam**	**1.38**	**259**	Pg	**Pn**	**06 28 36.3**	**-0.6**
	8.8nm,0.3s,baz=81,slow=9.3,SNR=3.6						
ZALV				Lg	Lg	06 28 57.8	
	7.4nm,0.3s,baz=77,slow=26,SNR=7.7						
KURBB	**Kurchatov Arra**	**6.37**	**239**	Pn	**Pn**	**06 29 46.7**	**+1.3**
	0.3nm,0.3s,baz=54,slow=13,SNR=5.9						
KURBB				Sn	**Sn**	**06 30 58.3**	**-0.4**
	0.1nm,0.3s,baz=54,slow=23,SNR=2.3						
KURBB				Lg	Lg	06 31 33.8	
	0.1nm,0.3s,baz=60,slow=31,SNR=4.3						
	1.3nm,0.4s						
KURBB	**Kurchatov Arra**	**6.37**	**239**	⇑Pn	**Pn**	**06 29 45.4**	**-0.1**
	1.2nm,0.3s						
KURBB				⇓Sn	**Sn**	**06 30 58.4**	**-0.4**
	4.9nm,0.7s						
KURBB				⇑Lg	Lg	06 31 31.5	
	6.4nm,0.6s						
MK31	**Makanchi Array**	**8.05**	**204**	Pn	**Pn**	**06 30 08.6**	**+0.1**
	0.2nm,0.4s,baz=29,slow=15,SNR=10						
MK31				⇑Sn	**Sn**	**06 31 39.6**	**-0.6**
	0.6nm,0.5s						
MK31				⇑Lg	Lg	06 32 24.5	
	1.6nm,0.8s						
MKAR	**Makanchi Array**	**8.05**	**204**	Pn	**Pn**	**06 30 08.9**	**+0.4**
	0.2nm,0.3s,baz=25,slow=14,SNR=7.8						
MKAR				Sn	**Sn**	**06 31 40.0**	**-0.2**
	0.2nm,0.3s,baz=29,slow=28,SNR=5.0						
MKAR				Lg	Lg	06 32 24.9	
	0.1nm,0.3s,baz=24,slow=27,SNR=1.8						
	0.2nm,0.3s						

VAO ***17*** *06:38:18.8±0.3,30.°85S×72.°04W, h10km, mb4.9*

SJA ***17*** *06:38:18.2±0.7,30.°57S×72.°15W, h7km, ML4.8, MW4.5*

IDC ***17*** *06:38:20.6±0.5,30.°68S×71.°65W, h0km, mb4.5/14, mbtmp4.5/20, ML4.3/6, MS4.1/31, Error ellipse: s-maj=18.8km s-min=13.3km az=80.0*

GUC ***17*** *06:38:24.8±1.1,30.°66S×71.°63W, h28km±3km, ML4.9*

NEIC ***17*** *06:38:24, 30.°65S×71.°88W, h32km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.89; $M_{\theta\theta}$0.17; $M_{\phi\phi}$-1.06; $M_{r\theta}$0.24; $M_{\theta\phi}$0.05; $M_{\phi r}$-0.19; Fault plane solution: M_o1.04000×10^{16} NP1:ϕ_s162.46000°, δ52.80000°, λ69.85000°. NP2:ϕ_s13.72000°, δ41.60000°, λ114.41000°. Principal axes: T 0.9796, Plg73.0000°, Azm16.0000°; N 0.1073, Plg16.0000°, Azm175.0000°; P -1.0869, Plg6.0000°, Azm267.0000°;*

NEIC ***17*** *06:38:25.7±1.7,30.°66S±0.°03×71.°76W±0.°06, h30km±1km, mb4.9/42, Mwr4.6/80, Mwr4.8(GUC) Error ellipse: s-maj=9.1km s-min=5.1km az=268.0*

ISC 17 06:38:24.6±0.5, 30.°65S±0.°02×71.°79W±0.°04, h28km±3km, n317, σ1s63/325, mb4.9/34, MS4.2/29, 17C-33D, Fault plane solution: NP1:ϕ_s22.35539°, δ46.77576°, λ129.13855°. NP2:ϕ_s152.43791°, δ55.58526°, λ56.11518°.
Principal axes: T Plg62.1175°, Azm4.9815°; N Plg27.3833°, Azm173.2230°; P Plg4.8544°, Azm265.7444°; **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.14**	**100**		**Pb**	**06 38 29.7**	**-0.2**
CO06					**Sb**	**06 38 33.5**	**0.0**
CO06	**Fray Jorge**	**0.14**	**100**	⇓*i*P	**Pb**	**06 38 29.9**	**0.0**
CO06				*i* S	**Sb**	**06 38 33.5**	**0.0**
CO06				IAML		06 38 34.2	
	comp=N,352μm,0.4s						
CO05	**La Serena**	**0.87**	**33**		**Pn**	**06 38 40.5**	**-0.5**
CO05					**Sn**	**06 38 53.3**	**+0.5**
CO05	**La Serena**	**0.87**	**33**	⇓*i*P	**Pn**	**06 38 40.5**	**-0.5**
CO05				*i* S	**Sn**	**06 38 52.5**	**-0.3**
CO05				IAML		06 38 54.8	
	comp=N,63μm,0.5s						
CO02	**Combarbal**	**0.88**	**129**		**Pn**	**06 38 40.3**	**-0.9**
CO02					**Sn**	**06 38 52.4**	**-0.7**
CO02	**Combarbal**	**0.88**	**129**	⇓*i*P	**Pn**	**06 38 40.2**	**-0.9**
CO02				*i* S	**Sn**	**06 38 51.7**	**-1.4**
CO02				IAML		06 38 53.0	
	comp=E,47μm,0.5s						
CO03	**El Pedregal**	**0.97**	**101**		**Pn**	**06 38 41.6**	**-0.8**
CO03	**El Pedregal**	**0.97**	**101**	⇓*i*P	**Pn**	**06 38 41.5**	**-0.8**
CO03				*e*S	**Sn**	**06 38 53.8**	**-1.6**
CO03	**El Pedregal**	**0.97**	**101**	*eP*	**Pn**	**06 38 41.6**	**-0.8**
CO03				IAML		06 39 04.4	
	comp=Z,10μm,0.8s						
GO04	**Tololo Observa**	**0.98**	**61**		**Pb**	**06 38 42.3**	**-0.8**
GO04	**Tololo Observa**	**0.98**	**61**	⇓*i*P	**Pb**	**06 38 42.3**	**-0.8**
CO01	**Juntas del Tor**	**1.61**	**66**		**Pb**	**06 38 52.3**	**-1.5**
CO01	**Juntas del Tor**	**1.61**	**66**	*eP*	**Pb**	**06 38 52.5**	**-1.4**
CO01				*i* S	**Sb**	**06 39 12.7**	**-1.3**
CO01	**Juntas del Tor**	**1.61**	**66**	*eP*	**Pb**	**06 38 52.7**	**-1.2**
CO01				*e*S	**Sb**	**06 39 14.9**	**+0.9**
CO01				IAML		06 39 23.8	
	comp=Z,5μm,0.8s						
LCO	**Las Campanas**	**1.89**	**30**	Pn	**Pn**	**06 38 55.6**	**+0.4**
LCO	**Las Campanas**	**1.89**	**30**	*eP*	**Pn**	**06 38 55.5**	**+0.2**
LCO				*i* S	**Sb**	**06 39 20.7**	**-1.2**
LCO	**Las Campanas**	**1.89**	**30**	*eP*	**Pn**	**06 38 55.0**	**-0.3**
VA06	**Catapilco**	**1.95**	**168**		**Pn**	**06 38 56.0**	**+0.1**
VA06	**Catapilco**	**1.95**	**168**	*eP*	**Pn**	**06 38 55.9**	**+0.1**
VA06				*e*S	**Sb**	**06 39 21.7**	**-1.7**
VA06				IAML		06 39 28.5	
	comp=N,12μm,0.5s						
AROD	**Rodeo**	**2.06**	**77**	*eP*	**Pb**	**06 39 00.0**	**-1.5**
AROD				*eP*	Pn	06 39 00.8	+3.2
ACCO	**Cerro Coronel**	**2.35**	**89**	*eP*	**Pb**	**06 39 05.0**	**-1.5**
ACCO				IAML		06 39 58.4	
	comp=Z,1μm,2.7s						
ACDV	**Cuesta del Vie**	**2.36**	**79**	*eP*	**Pb**	**06 39 05.0**	**-1.5**
ACDV				*e*S	**Sb**	**06 39 38.3**	**+3.1**
ACDV				IAML		06 39 46.4	
	comp=Z,4μm,0.5s						
VA03	**San Esteban**	**2.36**	**154**		**Pn**	**06 39 02.7**	**+1.2**
VA03	**San Esteban**	**2.36**	**154**	*eP*	**Pn**	**06 39 02.7**	**+1.2**
VA03				*e*S	**Sb**	**06 39 31.8**	**-3.3**
VA03				IAML		06 39 40.4	
	comp=E,9μm,0.5s						
VA03	**San Esteban**	**2.36**	**154**	*eP*	**Pn**	**06 39 03.0**	**+1.4**
VA03				IAML		06 39 45.0	
	comp=Z,6μm,0.5s						
VA01	**Torpederas**	**2.37**	**177**	Pn	**Pn**	**06 39 01.8**	**+0.2**
VA01	**Torpederas**	**2.37**	**177**	*eP*	**Pn**	**06 39 01.6**	**0.0**
ROCH	**El Roble**	**2.41**	**164**	*i* P	**Pn**	**06 39 02.7**	**+0.3**
ROCH				*eP*	**Pn**	**06 39 02.7**	**+0.3**
ROCH				*e*S	**Sb**	**06 39 36.0**	**-0.7**
ROCH				*i* S	**Sn**	**06 39 36.6**	**+5.5**
ROCH				IAML		06 39 44.5	
	comp=N,10μm,0.7s						
ROC1	**El Roble**	**2.41**	**164**		**Pn**	**06 39 03.0**	**+0.6**
ROC1	**El Roble**	**2.41**	**164**	*eP*	**Pn**	**06 39 03.0**	**+0.6**
ROC1				*e*S	**Sb**	**06 39 36.6**	**-0.3**
RTLS	**Leoncito**	**2.42**	**119**	*eP*	**Pb**	**06 39 06.0**	**-1.7**
RTLS				*e*S	**Sb**	**06 39 39.8**	**+2.6**
RTLS				IAML		06 39 47.4	
	comp=Z,4μm,0.8s						
AC04	**Llanos de Chal**	**2.52**	**15**	Pn	**Pn**	**06 39 03.6**	**-0.1**
AC04	**Llanos de Chal**	**2.52**	**15**	*i* P	**Pn**	**06 39 03.4**	**-0.3**
AC04				IAML		06 39 49.2	
	comp=E,5μm,0.5s						
AC04	**Llanos de Chal**	**2.52**	**15**	*eP*	**Pn**	**06 39 03.0**	**-0.7**
AC04				*e*S	**Sb**	**06 39 37.8**	**-1.8**
AC04				IAML		06 39 46.6	
	comp=Z,3μm,0.7s						
AUSP	**Uspallata**	**2.58**	**128**	*eP*	**Pb**	**06 39 08.0**	**-2.4**
AUSP				*e*S	**Sb**	**06 39 45.4**	**+3.6**
PEL	**Peldehue**	**2.66**	**160**		**Pn**	**06 39 06.9**	**+1.2**
PEL	**Peldehue**	**2.66**	**160**	*i* P	**Pn**	**06 39 06.6**	**+1.0**
PEL				*e*S	**Sb**	**06 39 41.2**	**-2.5**
PEL				IAML		06 39 54.0	
	comp=E,5μm,0.4s						
PEL	**Peldehue**	**2.66**	**160**	*eP*	**Pn**	**06 39 06.6**	**+1.0**
PEL				*e*S	**Sn**	**06 39 38.8**	**+1.9**
MT02	**Curacav**	**2.66**	**168**		**Pn**	**06 39 05.8**	**+0.2**
MT02	**Curacav**	**2.66**	**168**	*eP*	**Pn**	**06 39 05.8**	**+0.2**
MT02				*e*S	**Sb**	**06 39 41.1**	**-2.7**
MT02	**Curacav**	**2.66**	**168**	*eP*	**Pn**	**06 39 05.0**	**-0.6**
MT02				*eP*	Pb	06 39 05.6	-5.9
MT02				IAML		06 39 52.9	
	comp=Z,2μm,0.7s						
ZON	**Zonda**	**2.81**	**109**	*eP*	**Pb**	**06 39 11.0**	**-3.2**
ZON				IAML		06 39 58.6	
	comp=Z,2μm,1.2s						
MT05	**Renca**	**2.88**	**162**	Pn	**Pn**	**06 39 09.8**	**+1.1**
MT05	**Renca**	**2.88**	**162**	*eP*	**Pn**	**06 39 09.7**	**+1.1**
MT05				*i* S	**Sb**	**06 39 47.5**	**-2.5**
MT05				IAML		06 39 54.0	
	comp=E,7μm,0.2s						
MT05	**Renca**	**2.88**	**162**	*eP*	**Pn**	**06 39 10.0**	**+1.3**
MT05				IAML		06 40 00.0	
	comp=Z,4μm,1.1s						
RTLL	**Cerro Villicun**	**2.93**	**104**	*eP*	**Pb**	**06 39 12.0**	**-4.1**
FCH	**Farellones**	**2.96**	**155**	*eP*	**Pn**	**06 39 11.4**	**+1.4**
FCH				IAML		06 40 02.7	
	comp=N,3μm,0.9s						
MT03	**Universidad Ad**	**3.04**	**159**	Pn	**Pn**	**06 39 12.4**	**+1.5**
MT03	**Universidad Ad**	**3.04**	**159**	*eP*	**Pn**	**06 39 12.2**	**+1.3**
MT03				*e*S	**Sb**	**06 39 54.3**	**-0.4**
MT03				IAML		06 39 59.8	
	comp=N,5μm,0.5s						
MT03	**Universidad Ad**	**3.04**	**159**	*eP*	**Pn**	**06 39 12.0**	**+1.1**
MT03				*e*S	**Sb**	**06 39 53.3**	**-1.3**
MT03				IAML		06 40 10.1	
	comp=Z,4μm,1.4s						
ASAL	**Salagasta**	**3.18**	**128**	*eP*	**Pb**	**06 39 17.0**	**-3.4**
ASAL				*e*S	Sb	06 40 10.2	+11
ASAL				IAML		06 40 14.6	
	comp=Z,2μm,1.5s						
MT09	**Talagante**	**3.19**	**168**		**Pn**	**06 39 14.0**	**+0.9**
MT09	**Talagante**	**3.19**	**168**	*eP*	**Pn**	**06 39 13.9**	**+0.9**
MT09				*e*S	**Sb**	**06 39 56.2**	**-2.9**
MT09				IAML		06 40 05.5	
	comp=N,2μm,0.3s						
ARCO	**CERRO ARCO**	**3.27**	**133**	*eP*	**Pb**	**06 39 19.0**	**-3.1**
ARCO				IAML		06 40 18.5	
	comp=Z,2μm,0.8s						
GO03	**Copiap**	**3.34**	**24**	Pn	**Pn**	**06 39 15.1**	**+0.1**
GO03	**Copiap**	**3.34**	**24**	*eP*	**Pn**	**06 39 15.1**	**+0.1**
GO03				IAML		06 40 17.3	
	comp=E,4μm,0.6s						
GO03	**Copiap**	**3.34**	**24**	*eP*	**Pn**	**06 39 15.1**	**+0.1**
GO03				*e*S	**Sb**	**06 40 00.8**	**-2.5**
LMEL	**Las Melosas**	**3.46**	**158**		**Pn**	**06 39 18.3**	**+1.5**
BO04	**La Punta**	**3.48**	**164**		**Pn**	**06 39 17.5**	**+0.6**
BO04	**La Punta**	**3.48**	**164**	*eP*	**Pn**	**06 39 17.7**	**+0.8**
BO04				IAML		06 40 18.8	
	comp=E,2μm,0.6s						
AAGR	**Agrelo**	**3.50**	**135**	*eP*	**Pb**	**06 39 21.9**	**-4.0**
AAGR				*e*S	Sb	06 40 18.9	+11
AAGR				IAML		06 40 35.9	
	comp=Z,1μm,0.9s						
AC06	**Mina Casimiro**	**3.51**	**21**		**Pn**	**06 39 17.1**	**-0.3**
AC06	**Mina Casimiro**	**3.51**	**21**	*i* P	**Pn**	**06 39 17.3**	**-0.1**
AC06				IAML		06 40 20.1	
	comp=N,2μm,0.4s						
AVFE	**Valle Fertil**	**3.74**	**91**	*eP*	**Pn**	**06 39 23.2**	**+2.7**
AVFE				*e*S	**Sb**	**06 40 19.8**	**+5.0**
AVFE				IAML		06 40 28.0	
	comp=Z,2μm,0.7s						
BO01	**Tunca**	**3.78**	**171**		**Pn**	**06 39 21.6**	**+0.6**
BO01	**Tunca**	**3.78**	**171**	*eP*	**Pn**	**06 39 21.4**	**+0.3**
BO01	**Tunca**	**3.78**	**171**	*eP*	**Pn**	**06 39 21.8**	**+0.8**
BO01				IAML		06 40 27.8	
	comp=Z,884nm,0.8s						
BO03	**Pichilemu**	**3.84**	**182**	*eP*	**Pn**	**06 39 20.7**	**-1.1**
GO05	**Huala**	**4.35**	**181**	Pn	**Pn**	**06 39 27.6**	**-1.2**
GO05	**Huala**	**4.35**	**181**	*eP*	**Pn**	**06 39 27.6**	**-1.2**
GO05	**Huala**	**4.35**	**181**	*eP*	**Pn**	**06 39 27.8**	**-1.0**
AC02	**Maricunga**	**4.46**	**32**	Pn	**Pn**	**06 39 31.7**	**+0.9**
AC02	**Maricunga**	**4.46**	**32**	*i* P	**Pn**	**06 39 31.8**	**+0.9**
AC02				*e*S	**Sb**	**06 40 28.7**	**-7.4**
AC02	**Maricunga**	**4.46**	**32**	*eP*	**Pn**	**06 39 31.6**

ETMB	Extrema	21.37	15	*e*P		P	06 43 10.2	+0.3
NBRS	Nobres	21.93	46	*e*P		P	06 43 16.1	+0.1
ITRB	Iturama	22.21	66	*e*P		P	06 43 20.3	+1.3
PET01	Itanhaem-SP	22.63	80	*e*P		P	06 43 22.4	-1.1
DVLD	Doverlandia	22.70	57	*e*P		P	06 43 23.0	-1.3
CZSB	Cruzeiro do Su	22.82	358	*e*P		P	06 43 25.3	-0.2
BB19B	Bebedouro	22.97	71	*e*P		P	06 43 27.4	+0.3
SAML	Samuel	23.04	22	P		P	06 43 27.1	-0.6
RCLB	Rio Claro- Sao	23.17	75	*e*P		P	06 43 27.8	-1.3
VAO	Valinhos	23.39	77	*e*P		P	06 43 29.9	-1.5
PDRB	Porto dos Gac	23.53	40	*e*P		P	06 43 32.2	-0.5
ARAG	Araguaiana, MT	23.58	55	*e*P		P	06 43 33.1	+0.1
ATAH	Atahualpa	24.20	344	P		P	06 43 40.4	+1.0
	comp=Z,5.0nm,0.8s,baz=131,slow=9.3,SNR=3.7							
ATAH				LR		LR	06 51 04.3	
	comp=Z,210nm,21.9s,baz=179,slow=32							
	comp=Z,5.0nm,0.8s							
CLDB	Colider	24.66	40	*e*P		P	06 43 41.8	-1.4
SLP01	Ubatuba-SP	24.79	79	*e*P		P	06 43 45.2	+0.8
IPMB	Ipameri, GO	24.85	65	*e*P		P	06 43 43.7	-1.3
PMNB	Patos De Minas	25.95	68	*e*P		P	06 43 54.4	-0.5
BSCB	Bom Sucesso	26.09	75	*e*P		P	06 43 56.1	-0.1
TBTG	Tabatinga, AM	26.38	4	*e*P		P	06 43 58.0	-0.7
BDFB	Brasilia	26.40	61	P		P	06 43 58.4	-0.6
	comp=Z,17nm,0.8s,baz=228,slow=9.3,SNR=32							
	comp=Z,17nm,0.8s							
BDFB	Brasilia	26.40	61	P		P	06 43 58.2	-0.8
BDFB				IAmb		IAmb	06 44 10.2	
	comp=Z,57nm,1.0s							
BDFB	Brasilia	26.40	61	*e*P		P	06 43 57.9	-1.2
SNDB	Serra Nova Dou	26.56	50	*e*P		P	06 43 58.8	-1.5
VAS01	Vassouras-RJ	26.66	79	*e*P		P	06 44 00.3	-0.9
NPGB	Novo Progresso	28.09	37	*e*P		P	06 44 12.4	-1.6
DIAM	Diamantina, MG	28.31	71	*e*P		P	06 44 16.3	+0.1
CAM01	Campos-RJ	28.35	79	*e*P		P	06 44 16.1	-0.3
PEXB	Peixe	28.51	55	*e*P		P	06 44 16.4	-1.4
MACA	Manacapuru-AM	29.29	23	*e*P		P	06 44 23.4	-1.4
JANB	Januaria	29.59	65	*e*P		P	06 44 27.2	-0.3
SJMB	Sao Joao De Ma	30.15	74	*e*P		P	06 44 29.7	-2.7
ITTB	Itaituba	30.21	33	*e*P		P	06 44 31.4	-1.5
BSFB	Barra de Sao F	30.37	74	*e*P		P	06 44 33.3	-1.0
SDBA	SAO DESIDERIO	30.77	60	*e*P		P	06 44 37.3	-0.6
PTLC	Puerto Leguiza	30.79	354	*e*P		P	06 44 35.1	-2.9
SMTB	Santa Maria do	31.30	51	*e*P		P	06 44 42.7	+0.1
OTAV	Otavalo	31.36	347	*e*P		P	06 44 45.3	+1.7
OTAV	Otavalo	31.36	347	*e*P		P	06 44 41.0	-2.6
OTAV	Otavalo	31.36	347	P		P	06 44 46.1	+2.6
OTAV				x		pP	06 44 49.5	-2.2
NAN01	Guarapari, ES	31.45	73	*e*P		P	06 44 42.9	-0.9
FLOC	Florencia	32.27	353	*e*P		P	06 44 51.3	+0.3
GUA01	Guaratinga, BA	32.35	72	*e*P		P	06 44 51.5	-0.2
RPN	Rapa Nui	32.96	267	LR		LR	06 54 38.9	
	comp=Z,295nm,18.5s,baz=108,slow=30							
MALB	Monte Alegre	33.11	33	*e*P		P	06 44 56.8	-1.5
CMC01	Camacan, BA	33.23	70	*e*P		P	06 44 59.0	-0.4
POPC	Popayan, Colom	33.33	351	*e*P		P	06 45 02.4	+1.9
GDU01	Guandu, BA	34.09	68	*e*P		P	06 45 06.1	-0.9
PRAC	Prado	34.30	355	*e*P		P	06 45 11.4	+2.6
PMSA	Palmer Station	34.49	174	LR		LR	06 59 15.9	
	comp=Z,344nm,18.4s,baz=1.5,slow=36							
PMSA	Palmer Station	34.49	174	*e*P		P	06 45 03.1	-6.7
ORTC	Ortega, Tolima	34.52	354	*e*P		P	06 45 13.2	+2.5
BOAV	Boa Vista	34.58	20	*e*P		P	06 45 10.6	-0.5
PTGC	Puerto Gaitan,	34.66	359	*e*P		P	06 45 12.1	+0.3
YOTC	Yotoco, Valle	34.71	352	*e*P		P	06 45 13.1	+0.7
CHIC	Chingaza	35.13	357	*e*P		P	06 45 17.7	+1.4
ROSC	El Rosal	35.37	356	P		P	06 45 22.2	+3.8
	comp=Z,6.0nm,0.7s,baz=107,slow=8.0,SNR=6.8							
MCPB	Macapa, AP	35.48	36	*e*P		P	06 45 17.4	-1.5
PLMC	San Jos del P	35.62	352	*e*P		P	06 45 21.8	+1.7
GUY2C	Guyana, Caldas	35.84	354	*e*P		P	06 45 24.8	+2.3
TMAB	Tom-Au,PA,Br	35.97	43	*e*P		P	06 45 23.2	0.0
NORC	Norcasia	36.13	355	*e*P		P	06 45 26.6	+2.1
SPBC	San Pablo de B	36.16	356	*e*P		P	06 45 25.3	+0.4
RUSC	La Rusia	36.36	358	*e*P		P	06 45 27.1	+0.2
CBOC	Ciudad Bolivar	36.53	353	*e*P		P	06 45 29.4	+1.3
HELC	Santa Helena	36.81	354	*e*P		P	06 45 31.6	+1.0
BARC	Barichara	37.05	358	*e*P		P	06 45 30.4	-2.2
PTBC	PUERTO BERRIO,	37.07	356	*e*P		P	06 45 31.8	-0.7
NBLA	Lagarto - SE	37.10	66	*e*P		P	06 45 32.8	0.0
DBBC	Dabeiba	37.69	353	*e*P		P	06 45 40.2	+2.4
ROSB	Rosrio	38.02	49	*e*P		P	06 45 40.3	-0.3
ZARC	Zaragoza, Cauc	38.04	355	P		P	06 45 41.3	+0.6
ZARC				IAmb		IAmb	06 45 43.4	
	comp=Z,14nm,0.8s							
ZARC	Zaragoza, Cauc	38.04	355	*e*P		P	06 45 41.4	+0.8
UREC	San Jos de Ur	38.35	354	*e*P		P	06 45 43.3	0.0
NBMA	Muriti-CE	38.62	60	*e*P		P	06 45 45.4	-0.3
SOCV	Socops	38.72	1	*e*P		P	06 45 45.9	-0.6
NBAN	Anadia - AL	39.08	65	*e*P		P	06 45 49.2	-0.3
NBPB	Pedra_Branca-C	39.24	57	*e*P		P	06 45 50.0	-0.9
SDV	Santo Domingo	39.33	2	LR		LR	07 03 32.1	
	comp=Z,208nm,18.5s,baz=113,slow=38							
BAUV	El Baul	39.53	6	P		P	06 45 53.3	+0.1
MDP	Montagnes des	39.99	31	LR		LR	07 04 19.0	
	comp=Z,308nm,19.1s,baz=200,slow=39							
NBCA	Caruaru-PE	40.17	64	*e*P		P	06 45 57.9	-0.8
BCIP	Isla Barro Col	40.34	348	*e*P		P	06 46 00.4	+0.5
RCBR	Riachuelo	41.77	61	LR		LR	07 04 29.7	
	comp=Z,401nm,18.3s,baz=8.0,slow=38							
MLPR	Magueyes Islan	48.55	6	P		P	06 47 05.1	-0.3
PDPR	Patillas Dam,	48.70	7	P		P	06 47 06.6	0.0
CBYP	Canovanas	48.97	7	P		P	06 47 08.7	-0.1
VNA3	Neumayer Olymp	52.38	159	P		P	06 47 34.0	+0.1
CMIG	Matias Romero	52.41	332	LR		LR	07 04 55.8	
	comp=Z,59nm,19.8s,baz=159,slow=30							
VNA1	Neumayer--Stat	52.68	158	P		P	06 47 37.3	+1.3
SNAA	Sanae	54.61	159	P		P	06 47 50.2	-0.1
SNAA	Sanae	54.61	159	P		P	06 47 50.4	+0.1
	comp=Z,7.1nm,0.9s,baz=282,slow=7.5,SNR=61							
SNAA				LR		LR	07 09 08.9	
	comp=Z,155nm,21.3s,baz=300,slow=34							
	comp=Z,7.1nm,0.9s							
SNAA	Sanae	54.61	159	P		P	06 47 50.6	+0.3
SNAA				IAmb		IAmb	06 47 59.3	
	comp=Z,13nm,1.0s							
TROLL	Troll, Antarti	56.32	159	P		P	06 48 02.6	0.0
DWPF	Disney Wildern	59.15	350	P		P	06 48 24.2	+1.4
QSPA	South Pole Qui	59.58	180	P		P	06 48 26.4	+0.8
QSPA				IAmb		IAmb	06 49 03.6	
	comp=Z,10nm,1.0s							
QSPA	South Pole Qui	59.58	180	P		P	06 48 26.6	+1.1
QSPA				pP		sP	06 48 38.7	+1.6
QSPA				sP		pP	06 48 43.4	+10
TXAR	Lajitas Array	66.94	330	P		P	06 49 16.0	+1.4
	comp=Z,1.8nm,0.7s,baz=153,slow=8.2,SNR=29							
TXAR				LR		LR	07 14 06.0	
	comp=Z,106nm,19.1s,baz=162,slow=32							
	comp=Z,1.8nm,0.7s							
TXAR	Lajitas Array	66.94	330	P		P	06 49 15.5	+0.9
TX31	Lajitas Ar. Si	66.94	330	P		P	06 49 15.4	+0.7
TX31				IAmb		IAmb	06 49 58.1	
	comp=Z,19nm,1.4s							
VNDA	Vanda	67.42	191	P		P	06 49 18.8	+1.7
	comp=Z,0.9nm,0.8s,baz=123,slow=5.5,SNR=4.5							
	comp=Z,0.9nm,0.8s							
VNDA	Vanda	67.42	191	P		P	06 49 18.7	+1.6
VNDA	Vanda	67.42	191	P		P	06 49 19.0	+2.0
WVT	Waverly	68.12	346	P		P	06 49 22.1	+0.2
WVT	Waverly	68.12	346	P		P	06 49 22.1	+0.2
TBI	Tubuai	68.34	255	*e*T		T	08 03 58.1	
	comp=Z,18nm,0.3s							
PBMO	Poplar Bluff	69.32	344	P		P	06 49 29.5	+0.2
PBMO				IAmb		IAmb	06 49 30.7	
	comp=Z,13nm,1.2s							
MEH	Mehetia	69.54	261	*e*T		T	08 05 31.5	
	comp=Z,82nm,0.3s							
MNTX	Cornudas Mount	69.72	330			P	06 49 32.0	+0.1
HHAR	Hobbs	69.75	341	P		P	06 49 32.8	+0.7
TUL1	Leonard	69.95	339	P		P	06 49 33.4	+0.1
TUL1				IAmb		IAmb	06 50 01.7	
	comp=Z,15nm,1.2s							
MSTX	Muleshoe	70.62	333			P	06 49 38.0	+0.4
MSTX				IAmb		IAmb	06 49 39.1	
	comp=Z,7.3nm,0.8s							
CCM	Cathedral Cave	70.73	344	P		P	06 49 38.5	+0.5
CCM				IAmb		IAmb	06 49 39.9	
	comp=Z,8.4nm,0.8s							
CCM	Cathedral Cave	70.73	344	P		P	06 49 38.8	+0.8
TIAR	Tiarei	70.78	261	*e*T		T	08 06 59.2	
	comp=Z,7.0nm,0.2s							
PPT2	Papeete2	70.96	260	*e*LR		LR	07 11 33.2	
	comp=Z,178nm,22.5s							
PPT	Papeete	70.97	260	LR		LR	07 12 40.5	
	comp=Z,119nm,19.3s,baz=122,slow=29							
R40A	Maddies Statio	71.20	343	P		P	06 49 41.1	+0.3
R40A				IAmb		IAmb	06 49 42.7	
	comp=Z,12nm,0.8s							
ANMO	Albuquerque	72.96	331	LR		LR	07 17 13.1	
	comp=Z,104nm,20.0s,baz=168,slow=32							
LIC	Lamto	73.54	72	⇑*i*PKP2		P	06 49 55.9	+0.6
	comp=Z,13nm,0.8s							
TIC	Toumodi	73.78	72	⇑*i*PKP2		P	06 49 56.8	0.0
	comp=Z,1.9nm,0.2s							
KIC	Kosan Boka	73.85	72	⇑*e*PKP2		P	06 49 57.1	-0.1
	comp=Z,16nm,0.7s							
DBIC	Dimbokro	73.93	72	P		P	06 49 57.9	+0.2
	comp=Z,8.1nm,0.5s,baz=235,slow=6.3,SNR=16							
DBIC				LR		LR	07 20 03.1	
	comp=Z,222nm,19.4s,baz=242,slow=34							
	comp=Z,8.1nm,0.5s							
DBIC	Dimbokro	73.93	72	P		P	06 49 58.0	+0.4
EMMW	East Machias	75.10	3	P		P	06 50 05.0	+1.3
EMMW				IAmb		IAmb	06 52 17.6	
	comp=Z,26nm,1.6s							
G62A	West of Eustis	75.52	1	P		P	06 50 07.5	+1.3
SUR	Sutherland	76.28	120	LR		LR	07 21 10.1	
	comp=Z,110nm,18.4s,baz=222,slow=34							
SUR	Sutherland	76.28	120	P		P	06 50 12.3	+1.1
MAW	Mawson	76.33	164	P		P	06 50 11.4	+0.9
	comp=Z,12nm,0.7s,baz=216,slow=7.3,SNR=52							
MAW				LR		LR	07 23 30.0	
	comp=Z,114nm,19.9s,baz=226,slow=36							
	comp=Z,12nm,0.7s							
MAW	Mawson	76.33	164	P		P	06 50 11.6	+1.0
LMN	Caledonia Moun	76.41	5	P		P	06 50 12.2	+1.0
LMN				IAmb		IAmb	06 50 13.3	
	comp=Z,18nm,0.9s							
D62A	Allapoint, All	77.41	2	P		P	06 50 17.8	+1.0
D62A				IAmb		IAmb	06 50 19.1	
	comp=Z,13nm,1.1s							
ECSD	EROS Data Cent	77.44	342	P		P	06 50 17.7	+0.7
ECSD				IAmb		IAmb	06 50 18.5	
	comp=Z,11nm,0.7s							
TSUM	Tsumeb	79.94	106	LR		LR	07 21 46.6	
	comp=Z,142nm,18.1s,baz=143,slow=33							
PDAR	Pinedale Array	80.88	333	P		P	06 50 37.1	+0.9
	comp=Z,0.8nm,0.7s,baz=145,slow=5.4,SNR=8.1							
PDAR				LR		LR	07 23 15.9	
	comp=Z,64nm,19.2s,baz=138,slow=33							
	comp=Z,0.8nm,0.7s							
PDAR	Pinedale Array	80.88	333	P		P	06 50 36.8	+0.6
B35A	Bob, Littlefor	81.07	345	P		P	06 50 37.6	+0.8
B35A				IAmb		IAmb	06 50 37.8	
	comp=Z,11nm,0.7s							
NVAR	Mina Array Bea	81.27	325	P		P	06 50 40.1	+1.8
	comp=Z,1.5nm,0.8s,baz=159,slow=6.1,SNR=13							
	comp=Z,1.5nm,0.8s							
BOSA	Boshof	81.45	118	P		P	06 50 39.6	0.0
	comp=Z,6.7nm,0.8s,baz=260,slow=5.4,SNR=9.8							
BOSA				LR		LR	07 23 06.4	
	comp=Z,88nm,18.0s,baz=196,slow=33							
	comp=Z,6.7nm,0.8s							
BOSA	Boshof	81.45	118	P		P	06 50 40.0	+0.4
AGMN	Agassiz Nation	81.50	344	P		P	06 50 40.0	+1.0
AGMN				IAmb		IAmb	06 50 40.2	
	comp=Z,8.7nm,0.7s							
ELK	Elko	81.63	328	LR		LR	07 24 43.7	
	comp=Z,57nm,18.3s,baz=166,slow=34							
TOA0	Torodi Ar. Sit	82.88	70	P		P	06 50 47.0	0.0
TORD	Torodi Ar. Bea	82.88	70	P		P	06 50 47.1	+0.1
	comp=Z,3.4nm,0.5s,baz=279,slow=6.1,SNR=60							
TORD				LR		LR	07 25 47.4	
	comp=Z,219nm,19.3s,baz=214,slow=34							
	comp=Z,3.4nm,0.5s							
TORD	Torodi Ar. Bea	82.88	70	P		P	06 50 47.2	+0.2
ULM	Lac du Bonnet	83.33	345	P		P	06 50 48.7	+0.2
	comp=Z,6.4nm,0.7s,baz=154,slow=4.6,SNR=16							
	comp=Z,6.4nm,0.7s							
CASY	Casey	83.36	181	P		P	06 50 49.6	+0.9
CASY				IAmb		IAmb	06 50 50.6	
	comp=Z,7.2nm,0.8s							
LBTB	Lobatse	83.53	115	LR		LR	07 23 17.6	
	comp=Z,200nm,18.1s,baz=214,slow=32							
LBTB	Lobatse	83.53	115	P		P	06 50 50.3	-0.2
LBTB				IAmb		IAmb	06 51 03.3	
	comp=Z,14nm,1.1s							
SCHQ	Schefferville	85.24	3	P		P	06 50 57.9	-0.3
	comp=Z,5.8nm,0.9s,baz=240,slow=4.4,SNR=4.1							
	comp=Z,5.8nm,0.9s							
PLID	Pearl Lake	85.44	330	P		P	06 51 00.7	+1.1
H04A	Detroit Lake	87.91	327	P		P	06 51 12.2	+0.7
NEW	Newport	88.43	332	LR		LR	07 28 10.4	
	comp=Z,100nm,18.3s,baz=229,slow=34							
MDT	Midelt	89.55	51	LR		LR	07 28 45.8	
	comp=Z,72nm,21.9s,baz=182,slow=34							
LSZ	Lusaka	90.65	108	LR		LR	07 28 43.7	
	comp=Z,79nm,18.3s,baz=166,slow=33							
AFI	Afiamalu	91.37	253	LR		LR	07 23 47.5	
	comp=Z,88nm,18.6s,baz=142,slow=30							
ESDC	Sonseca Array	94.10	46	P		P	06 51 39.4	-1.1
	comp=Z,1.1nm,1.0s,baz=242,slow=3.2,SNR=4.3							
ESDC				LR		LR	07 34 24.0	
	comp=Z,110nm,18.3s,baz=206,slow=36							
	comp=Z,1.1nm,1.0s							
FRB	Frobisher Bay	94.11	1	LR		LR	07 39 01.5	
	comp=Z,39nm,18.1s,baz=204,slow=39							
SFJD	Kangerlussuaq	98.86	8	LR		LR	07 36 36.9	
	comp=Z,40nm,20.5s,baz=242,slow=35							
DZM	Mont Dzumac	103.37	234	*e*LR		LR	07 26 38.8	
	comp=Z,172nm,22.2s							
TULEG	Thule	106.95	1	*i* P		Pdif	06 52 48.0	+11
AKASG	Malin Array Be	119.75	46	PKP		PKPdf	06 57 10.7	-0.9
	comp=Z,0.2nm,0.4s,baz=289,slow=1.3,SNR=4.5							
ASAR	Alice Springs	120.63	208	PKP		PKPdf	06 57 13.2	-1.2
	comp=Z,0.6nm,0.6s,baz=130,slow=1.5,SNR=5.9							
WRA	Warramunga Arr	123.77	210	PKP		PKPdf	06 57 19.9	-0.5
	comp=Z,1.8nm,0.6s,baz=169,slow=1.6,SNR=26							
H11S2	WAKE ISLAND Hyl	25.96	271	T		T	09 16 10.6	
	baz=115,slow=75,SNR=380							
H11S1	WAKE ISLAND Hyl	25.98	271	T		T	09 16 04.3	
	baz=115,slow=75,SNR=233							
H11S3	WAKE ISLAND Hyl	25.98	271	T		T	09 16 06.0	
	baz=115,slow=75,SNR=257							
TIXI	Tiksi	137.44	350	PKP		PKPdf	06 57 43.8	-0.8
	comp=Z,0.7nm,0.3s,baz=341,slow=4.3,SNR=1.5							
YAK	Yakutsk	145.63	342	PKPbc		PKPab	06 58 00.4	+0.3
	comp=Z,14nm,0.5s,baz=19,slow=0.4,SNR=6.3							
KURBB	Kurchatov Arra	150.22	39	PKPbc		PKiKP	06 58 13.1	-0.3
	comp=Z,6.5nm,0.8s,baz=300,slow=3.2,SNR=30							
KURBB				PKPab		sPKPdf	06 58 19.4	0.0
	comp=Z,3.9nm,0.8s,baz=301,slow=3.6,SNR=8.8							
RPSI	Rantau Prapat	150.84	161			PKPbc	06 58 14.4	-0.8
RPSI						PKPab	06 58 22.8	+0.5
PSI	Prapat	150.94	161	PKPbc		PKPbc	06 58 14.4	-1.2
	comp=Z,3.1nm,0.2s,baz=320,slow=15,SNR=5.2							
PSI				PKPab		PKPab	06 58 22.8	-0.1
	comp=Z,3.8nm,0.3s,baz=169,slow=16,SNR=3.0							
ZALV	Zalesovo Beam	151.25	29	PKPbc		PKiKP	06 58 15.5	+0.1
	comp=Z,30nm,0.9s,baz=306,slow=5.0,SNR=5.9							
KSH	Kashi	152.29	63	PKPbc		PKPbc	06 58 17.8	-0.2
KSH				pPKP		pPKPbc	06 58 26.8	+0.1
KSH				PP		PP	07 02 06.9	+6.3
KLR	Kul'dur	154.29	323	PKPbc		PKPbc	06 58 21.8	0.0
	comp=Z,0.6nm,0.5s,baz=80,slow=6.0,SNR=3.7							
MKAR	Makanchi Array	154.31	44	PKPbc		PKPbc	06 58 21.6	-0.4
	comp=Z,1.7nm,0.8s,baz=291,slow=3.4,SNR=8.3							
MKAR				PKPab		sPKPbc	06 58 34.8	+0.9
	comp=Z,2.3nm,0.9s,baz=297,slow=3.5,SNR=5.8							
MJAR	Matsushiro Arr	154.39	291	PKPab		PKPab	06 58 37.8	+1.0
	comp=Z,1.3nm,0.4s,baz=212,slow=12,SNR=4.2							
WMQ	Urumqi	159.10	45	*e*P		PKPdf	06 58 21.3	+1.2
SONM	Songino Array	162.78	4	PKPab		PKPab	06 59 13.4	+0.6
	comp=Z,2.6nm,0.9s,baz=324,slow=3.0,SNR=9.8							
CMAR	Chiang Mai Arr	165.23	143	PKPab		PKPab	06 59 22.6	-1.5
	comp=Z,1.3nm,0.3s,baz=229,slow=6.7,SNR=5.7							
XLT	XiLinHaoTe	165.38	337	*e*PKP		PKPdf	06 58 25.4	-1.0
GTA	Gaotai	168.88	36	*e*PKPbc		PKPdf	06 58 28.9	-0.3
GTA				PKPab		PKPab	06 59 40.5	+0.5
GTA				LR		LR		
	comp=N,56nm,17.8s							
GTA				LR		LR		
	comp=E,180nm,21.1s							
GTA				LR		LR		
	comp=Z,89nm,17.1s							
HHC	Hu-ho-hao-te	169.47	346	*e*P		PKPdf	06 58 25.8	-3.6
PZH	PanZhiHua	172.97	124	PKP		PKPdf	06 58 29.8	-1.9
LZH	Lanzhou	173.47	33	*e*PKP		PKPdf	06 59 23.8	-7.8
LZH				pPKP		pPKPdf	06 58 34.8	-5.8
CD2	Chengdu	176.16	85	PKP		PKPdf	06 58 32.0	-0.5

MOS ***17*** *06:42:00.7±0.0,43.19N×41.73E,h10km,MPVA3.5*
ISC 17 06:42:00.8±0.9,43.19N±0.03×41.73E±0.02,h11km±7km, n14,σ0.941/28,Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DOMR	Dombai	0.13	321	*i* Pg	Pg	06 42 04.0	0.0
DOMR				*i* Sg	Sg	06 42 06.1	-0.2
ARXR	Arkhyz	0.50	318	*i* Pg	Pg	06 42 10.5	-0.1
ARXR				*i* Sg	Sg	06 42 17.4	+0.2
CHVG	Ch'k'valeri	0.54	151	P	Pg	06 42 11.4	+0.1
CHVG				S	Sg	06 42 18.6	+0.2
SHA1	Shidzhatmaz	0.86	51	*i* Pg	Pb	06 42 17.8	-0.2
SHA1				*i* Sg	Sb	06 42 29.8	+0.2
KBZ	Khabaz	1.00	57	*e*Pg	Pg	06 42 19.9	-0.1
KBZ				*e*Sg	Sb	06 42 33.4	+0.1
KIV	Kislovodsk	1.03	42	*e*Pg	Pb	06 42 20.7	+0.1
KIV				*e*Sg	Sn	06 42 35.2	-0.5
AHMR	Akhmetovskaya	1.09	333	*e*Pg	Pg	06 42 21.6	0.0
AHMR				*e*Sg	Sn	06 42 36.9	-0.1
BEYR	Belyy Ugol+	1.14	44	*i* Pg	Pn	06 42 22.8	+0.2
BEYR				*e*Sg	Sg	06 42 37.4	0.0
RPOR	Krasnaya Polya	1.18	296	*e*Pg	Pg	06 42 23.4	-0.1
RPOR				*e*Sg	Sn	06 42 39.3	-0.1
VSLR	Vesyoloye	1.27	283	*i* Pg	Pb	06 42 24.7	0.0
VSLR				*i* Sg	Sg	06 42 42.8	+1.1
PYA1	Pyatigorsk	1.32	48	*e*Pg	Pn	06 42 25.3	+0.2
PYA1				*e*Sg	Sg	06 42 43.8	+0.6
SOC	Sochi	1.52	286	*e*Pg	Pn	06 42 28.2	+0.3
SOC				*e*Sg	Sb	06 42 48.7	+0.4
ABS	Abastumani	1.64	151	P	Pb	06 42 30.8	-0.4
ABS				S	Sg	06 42 53.5	-0.2
GOYR	Goytkh	2.01	302	*e*Pg	Pg	06 42 38.7	-0.5
GOYR				*e*Sg	Sg	06 43 04.2	-1.1

BEO ***17*** *06:46:09.3±0.3,41.53N×20.31E,h0km,ML1.9/7*
TIR 17 06:46:07.4,41.52N×20.32E,h6km±12km,Ml1.9,Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PHP	Peshkopia	0.19	29	S	Sg	06 46 14.9	+1.0
	baz=29						
TIR	Tirane	0.38	244	*e*Pg	Pb	06 46 16.9	+0.4
TIR				*e*Sg	Sg	06 46 20.8	+1.1
TIR	Tirane	0.38	244	P	Pg	06 46 15.3	+0.6
	baz=244						
TIR	Tirane	0.38	244	S	Sg	06 46 21.1	+1.4
	baz=244						
OHR	Ohrid	0.55	138	*e*Pg	Pg	06 46 18.6	+0.7
OHR				*e*Sg	Sb	06 46 27.8	+0.4
BCI	Bajram Curri	0.87	348	P	Pg	06 46 24.1	0.0
	baz=348						
FNA	Florina	1.09	132	S	Sn	06 46 45.0	+0.4
	baz=131						
PDG	Podgorica	1.21	319	*e*Pg	Pn	06 46 30.7	-0.1
PDG				*e*Sg	Sn	06 46 48.1	+0.7
PRVS	Prvonek	1.64	52	*e*Pg	Pg	06 46 39.4	+0.5
PRVS				*e*Sg	Sg	06 47 01.0	+0.8
BARS	Barje	1.71	40	*e*Pg	Pg	06 46 39.8	-0.4
BARS				*e*Sg	Sg	06 47 03.6	+1.2
SJES

RODP	**Rodopos**	**0.75**	**44**	P	**Pb**	**07 06 13.1**	**+0.6**
RODP				S	**Sn**	**07 06 25.2**	**+0.2**
	comp=N,318nm,0.4s						
GVD	**Gavdhos**	**0.82**	**103**	P	**Pb**	**07 06 14.4**	**+0.8**
GVD				AML	AML	07 06 32.2	
	comp=N,2866µm,0.5s						
GVD				AML	AML	07 06 32.6	
	comp=E,2682µm,0.3s						
GVD	**Gavdhos**	**0.82**	**103**	P	**Pb**	**07 06 14.4**	**+0.8**
GVD				S	**Sn**	**07 06 27.9**	**+1.3**
	comp=E,1µm,0.3s						
GVD	**Gavdhos**	**0.82**	**103**	PG	**Pb**	**07 06 14.5**	**+0.9**
GVDS	**Gavdos**	**0.82**	**102**	P	**Pg**	**07 06 14.0**	**+0.4**
GVDS				S	**Sn**	**07 06 27.0**	**+0.3**
	comp=E,810nm,0.3s						
IMMV	**Iera Moni Meta**	**0.84**	**58**	P	**Pb**	**07 06 14.4**	**+0.5**
IMMV	**Iera Moni Meta**	**0.84**	**58**	P	**Pb**	**07 06 14.3**	**+0.5**
IMMV				S	**Sn**	**07 06 28.4**	**+1.4**
	comp=E,812nm,0.6s						
IMMV	**Iera Moni Meta**	**0.84**	**58**	PG	**Pg**	**07 06 13.6**	**-0.2**
IMMV				SG	**Sg**	**07 06 24.2**	**-0.6**
ANKY	**Antikythira Is**	**0.86**	**10**	P	**Pg**	**07 06 14.3**	**+0.1**
ANKY	**Antikythira Is**	**0.86**	**10**	P	**Pg**	**07 06 14.2**	**0.0**
ANKY				S	**Sn**	**07 06 27.4**	**-0.1**
	comp=E,920nm,0.4s						
KTHA	**Kythira Island**	**1.23**	**358**	P	**Pn**	**07 06 19.7**	**-0.7**
KTHA	**Kythira Island**	**1.23**	**358**	P	**Pn**	**07 06 19.9**	**-0.5**
KTHA				S	**Sb**	**07 06 36.9**	**+0.5**
	comp=E,295nm,0.6s						
KTHR	**Kythira**	**1.24**	**356**	P	**Pn**	**07 06 19.3**	**-1.2**
KTHR				S	**Sg**	**07 06 38.3**	**+0.7**
	comp=E,310nm,0.5s						
IDI	**Anoyia**	**1.48**	**79**	P	**Pn**	**07 06 23.9**	**+0.1**
IDI	**Anoyia**	**1.48**	**79**	P	**Pn**	**07 06 23.8**	**0.0**
IDI	**Anoyia**	**1.48**	**79**	PN	**Pn**	**07 06 23.3**	**-0.5**
IDI				SN	**Sn**	**07 06 40.9**	**-2.1**
VLI	**Veliai**	**1.70**	**355**	P	**Pn**	**07 06 26.6**	**-0.2**
VLI				S	**Sn**	**07 06 49.4**	**+1.1**
	comp=E,172nm,0.7s						
SANT	**Santorini**	**2.34**	**54**	PN	**Pn**	**07 06 34.8**	**-0.8**
ITM	**Ithomi**	**2.36**	**336**	PN	**Pn**	**07 06 35.4**	**-0.4**
ZKR	**Zakros**	**2.55**	**87**	PN	**Pn**	**07 06 38.7**	**+0.2**
APE	**Apeiranthos**	**2.83**	**43**	PN	**Pn**	**07 06 40.8**	**-1.6**
KARP	**Karpathos**	**3.35**	**80**	PN	**Pn**	**07 06 49.9**	**+0.3**
DSI	**Dead Sea**	**10.83**	**105**	Pn	**Pn**	**07 08 31.8**	**-0.3**
DSI				Sn	Sn	07 10 23.1	-10
KRMI	**Paran Flat**	**10.95**	**113**	Pn	**Pn**	**07 08 31.8**	**-2.0**
KRMI				Sn	Sn	07 10 24.4	-12
PRNI	**Paran**	**11.05**	**112**	Pn	**Pn**	**07 08 33.4**	**-1.8**
PRNI				Sn	Sn	07 10 27.1	-11
MBRI	**Mt Berech**	**11.25**	**114**	Pn	**Pn**	**07 08 36.5**	**-1.5**
MBRI				Sn	Sn	07 10 33.4	-10

*SOF **17** 07:20:33.1,39.27N×25.62E,h5km,MD4.0*
*ISK **17** 07:20:39.1,39.57N×25.26E,h5km,ML3.8/40*
*THE **17** 07:20:40.5,39.57N×25.27E,h8km±1km,ML3.5/14, Error ellipse: s-maj=1.2km s-min=0.6km az=90.0*
*ATH **17** 07:20:40.8,39.59N×25.27E,h17km±2km,ML3.6/9, Error ellipse: s-maj=2.9km s-min=1.0km az=277.0*
*DDA **17** 07:20:41.0±0.0,39.58N×25.36E,h17km±1km,MW3.5*

ISC 17 07:20:40.8±0.8,**39.57N**±0.02×**25.28E**±0.02,**h13**km±7km, **n128,σ0.82/159,20C-2D,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EFSA	**Agios Efstrati**	**0.23**	**262**	P	**Pg**	**07 20 46.0**	**+0.4**
EFSA				S	**Sg**	**07 20 49.5**	**+0.5**
EFSA				AML	AML	07 20 50.3	
	comp=E,24045µm,0.3s						
EFSA				AML	AML	07 20 50.4	
	comp=N,28465µm,0.3s						
LIA	**Limnos Island**	**0.33**	**347**	P	**Pg**	**07 20 47.6**	**0.0**
LIA				S	**Sg**	**07 20 52.1**	**0.0**
LIA				AML	AML	07 20 52.5	
	comp=E,30203µm,0.3s						
LIA				AML	AML	07 20 53.1	
	comp=N,21229µm,0.3s						
LIA	**Limnos Island**	**0.33**	**347**	P	**Pg**	**07 20 47.6**	**0.0**
LIA				S	**Sg**	**07 20 52.1**	**0.0**
	comp=N,13µm,0.3s						
SIGR	**SIGRI**	**0.58**	**129**	P	**Pg**	**07 20 51.7**	**-0.4**
SIGR				AML	AML	07 20 59.9	
	comp=E,18278µm,0.4s						
SIGR				S	**S**	**07 20 59.9**	**+0.2**
SIGR				AML	AML	07 21 00.3	
	comp=N,29145µm,0.3s						
SIGR	**SIGRI**	**0.58**	**129**	P	**Pg**	**07 20 51.6**	**-0.4**
SIGR				S	**Sg**	**07 20 59.5**	**-0.1**
	comp=N,12µm,0.3s						
BOZC	**Bozcaada**	**0.66**	**66**	PG	**Pg**	**07 20 52.5**	**-1.0**
BOZC				SG	**Sg**	**07 21 01.7**	**-0.5**
BOZC	**Bozcaada**	**0.66**	**66**	P	**Pg**	**07 20 52.6**	**-0.9**
BOZC				*i* AML	AML	07 21 01.0	
	comp=N,5µm,0.3s						
BOZC				S	**Sg**	**07 21 01.4**	**-0.7**
BOZC				*i* AML	AML	07 21 05.0	
	comp=N,3µm,0.3s						
KOCA	**Canakkale, Ayv**	**0.67**	**96**	P	**Pg**	**07 20 53.2**	**-0.6**
KOCA				S	**Sb**	**07 21 03.8**	**+0.3**
KOCA				*i* AML	AML	07 21 05.0	
	comp=N,2µm,0.5s						
KOCA				*i* AML	AML	07 21 05.0	
	comp=N,2µm,0.5s						
GPNR	**Gulpinar-Canak**	**0.67**	**100**	PG	**Pg**	**07 20 52.5**	**-1.3**
GADA	**Gvkgeada**	**0.78**	**38**	PG	**Pg**	**07 20 54.9**	**-1.0**
GADA				SG	**Sg**	**07 21 06.0**	**-0.1**
GOKA	**anakkale-Gk**	**0.78**	**38**	P	**Pg**	**07 20 55.8**	**-0.2**
GOKA				S	**Sg**	**07 21 06.2**	**-0.1**
GOKA				*i* AML	AML	07 21 09.0	
	comp=N,6µm,0.5s						
ECEA	**Canakkale, Ece**	**0.83**	**55**	P	**Pg**	**07 20 56.2**	**-0.7**
ECEA				S	**Sg**	**07 21 07.8**	**-0.1**
ECEA				*i* AML	AML	07 21 09.0	
	comp=N,3µm,0.4s						
ECEA				*i* AML	AML	07 21 09.0	
	comp=N,2µm,0.3s						
PRK	**Paraskevi**	**0.84**	**113**	P	**Pb**	**07 20 57.2**	**+0.1**
PRK				S	**Sb**	**07 21 08.4**	**+0.1**
PRK				AML	AML	07 21 11.2	
	comp=E,40840µm,0.5s						
PRK				AML	AML	07 21 11.4	
	comp=N,26758µm,0.4s						
PRK	**Paraskevi**	**0.84**	**113**	P	**Pb**	**07 20 57.4**	**+0.3**
PRK				S	**Sb**	**07 21 09.1**	**+0.9**
	comp=N,17µm,0.4s						
EZN	**Ezine**	**0.85**	**72**	P	**Pg**	**07 20 56.0**	**-1.1**
EZN				S	**Sg**	**07 21 07.1**	**-1.1**
	comp=N,3µm,0.3s						
EZN	**Ezine**	**0.85**	**72**	PG	**Pg**	**07 20 56.1**	**-1.1**
SKY	**Skiros Island**	**0.90**	**219**	P	**Pg**	**07 20 57.6**	**-0.5**
SKY				AML	AML	07 21 11.8	
	comp=E,16704µm,0.2s						
SKY				AML	AML	07 21 12.1	
	comp=N,17872µm,0.2s						
SKY	**Skiros Island**	**0.90**	**219**	P	**Pg**	**07 20 57.6**	**-0.5**
SKY				S	**Sb**	**07 21 10.0**	**0.0**
	comp=N,8µm,0.2s						
SMTH	**Samothraki Isl**	**0.92**	**12**	P	**Pg**	**07 20 58.0**	**-0.6**
SMTH				AML	AML	07 21 13.6	
	comp=E,2796µm,0.4s						
SMTH				AML	AML	07 21 14.3	
	comp=N,3049µm,0.4s						
SMTH	**Samothraki Isl**	**0.92**	**12**	P	**Pg**	**07 20 57.9**	**-0.6**
SMTH				S	**Sb**	**07 21 10.8**	**+0.2**
	comp=N,1µm,0.4s						
BAYC	**CANAKKALE_Bayr**	**0.99**	**80**	P	**Pg**	**07 20 58.8**	**-1.1**
BAYC				S	**Sg**	**07 21 11.8**	**-1.1**
BAYC				*i* AML	AML	07 21 13.0	
	comp=N,1µm,0.4s						
BAYC				*i* AML	AML	07 21 13.0	
	comp=N,1µm,0.5s						
PSRA	**Psara**	**1.05**	**168**	P	**Pb**	**07 21 01.0**	**+0.2**
PSRA				AML	AML	07 21 18.0	
	comp=E,8164µm,0.5s						
PSRA				AML	AML	07 21 19.6	
	comp=N,6336µm,0.2s						
THAS	**Thassos island**	**1.12**	**338**	P	**Pg**	**07 21 00.8**	**-1.5**
THAS	**Thassos island**	**1.12**	**338**	P	**Pg**	**07 21 00.9**	**-1.4**
THAS				S	**Sg**	**07 21 15.1**	**-1.7**
	comp=N,1µm,0.3s						
AYVA	**Ayvalik**	**1.13**	**103**	P	**Pg**	**07 21 01.4**	**-1.0**
AYVA				S	**Sg**	**07 21 16.6**	**-0.5**
AYVA				*i* AML	AML	07 21 22.0	
	comp=N,2µm,0.5s						
AYVA				*i* AML	AML	07 21 23.0	
	comp=N,860nm,0.4s						
ALNA	**Alonissos**	**1.17**	**249**	P	**Pn**	**07 21 03.1**	**+0.2**
GELI	**Tayfur-Gelibol**	**1.23**	**48**	PN	**Pn**	**07 21 03.4**	**-0.3**
PAIG	**Paliouri**	**1.28**	**286**	P	**Pn**	**07 21 03.3**	**-1.0**
PAIG				AML	AML	07 21 23.6	
	comp=N,1204µm,0.4s						
PAIG				AML	AML	07 21 26.1	
	comp=E,1032µm,0.5s						
PAIG	**Paliouri**	**1.28**	**286**	P	**Pn**	**07 21 03.5**	**-0.8**
CAVK	**Edirne/Enez-Ca**	**1.31**	**31**	P	**Pn**	**07 21 05.0**	**+0.3**
CAVK				S	**Sn**	**07 21 22.7**	**+0.7**
CAVK				*i* AML	AML	07 21 23.0	
	comp=E,1µm,0.6s						
CAVK				*i* AML	AML	07 21 24.0	
	comp=E,997nm,0.6s						
KYMI	**Kymi, Euboea I**	**1.31**	**225**	P	**Pn**	**07 21 03.3**	**-1.4**
KYMI				S	**Sn**	**07 21 22.9**	**+0.8**
	comp=E,2µm,0.4s						
CHOS	**Chios island**	**1.33**	**153**	P	**Pn**	**07 21 04.2**	**-0.8**
CHOS				AML	AML	07 21 26.3	
	comp=N,5954µm,0.7s						
CHOS				AML	AML	07 21 26.3	
	comp=E,7850µm,0.3s						
CHOS	**Chios island**	**1.33**	**153**	P	**Pn**	**07 21 04.1**	**-1.0**
CHOS				S	**Sb**	**07 21 22.8**	**+0.2**
	comp=E,3µm,0.5s						
CHOS	**Chios island**	**1.33**	**153**	PN	**Pn**	**07 21 04.7**	**-0.4**
ENEZ	**Enez**	**1.34**	**30**	P	**Pn**	**07 21 04.2**	**-0.9**
ENEZ				S	**Sb**	**07 21 23.4**	**+0.6**
	comp=E,5µm,0.5s						
ENEZ	**Enez**	**1.34**	**30**	PN	**Pn**	**07 21 04.9**	**-0.2**
DKL	**Dikili**	**1.36**	**111**	PN	**Pn**	**07 21 05.3**	**-0.1**
BUHA	**Balikesir, Bur**	**1.39**	**92**	P	**Pn**	**07 21 05.5**	**-0.3**
BUHA				S	**Sg**	**07 21 25.2**	**-0.4**
BUHA				*i* AML	AML	07 21 32.0	
	comp=E,770nm,0.5s						
BUHA				*i* AML	AML	07 21 32.0	
	comp=E,1µm,0.5s						
FOCM	**Foa**	**1.42**	**127**	PN	**Pn**	**07 21 06.1**	**-0.1**
ALN	**Alexandroupoli**	**1.45**	**24**	P	**Pn**	**07 21 06.6**	**+0.1**
ALN	**Alexandroupoli**	**1.45**	**24**	P	**Pn**	**07 21 05.4**	**-1.2**
ALN				S	**Sb**	**07 21 26.5**	**+0.7**
	comp=E,1µm,0.4s						
ALN	**Alexandroupoli**	**1.45**	**24**	PN	**Pn**	**07 21 06.5**	**-0.1**
ERIK	**Erikli-Kesan**	**1.45**	**40**	PN	**Pn**	**07 21 05.9**	**-0.7**
KVLA	**Kavala**	**1.52**	**334**	P	**Pn**	**07 21 07.0**	**-0.6**
ZEDA	**zmir-Bergama**	**1.52**	**113**	P	**Pb**	**07 21 09.0**	**+0.2**
ZEDA				*i* AML	AML	07 21 29.0	
	comp=E,801nm,0.6s						
ZEDA				*i* AML	AML	07 21 32.0	
	comp=E,670nm,0.3s						
KAVA	**Kavala**	**1.54**	**338**	P	**Pn**	**07 21 07.0**	**-0.8**
KAVA				S	**Sn**	**07 21 28.5**	**+0.8**
	comp=E,702nm,0.4s						
KOKK	**Kokkinochori,**	**1.58**	**322**	P	**Pn**	**07 21 07.8**	**-0.7**
KOKK				S	**Sn**	**07 21 29.2**	**+0.4**
	comp=E,838nm,0.8s						
RDO	**Rodhopi**	**1.58**	**7**	PN	**Pn**	**07 21 07.5**	**-1.0**
RDO	**Rodhopi**	**1.58**	**7**	PN	**Pn**	**07 21 07.8**	**-0.7**
URLA	**Izmir**	**1.59**	**139**	PN	**Pn**	**07 21 07.9**	**-0.7**
URLA	**Izmir**	**1.59**	**139**	P	**Pn**	**07 21 07.8**	**-0.7**
NEO	**Neokhori**	**1.61**	**261**	P	**Pn**	**07 21 07.8**	**-1.1**
NEO				S	**Sb**	**07 21 30.8**	**+0.2**
	comp=E,825nm,0.4s						
PLG	**Polygyros**	**1.62**	**300**	P	**Pn**	**07 21 08.9**	**-0.1**
XOR	**Xorichti**	**1.63**	**263**	P	**Pn**	**07 21 07.8**	**-1.3**
ZEYE	**Izmir, Urla-Ze**	**1.64**	**144**	P	**Pn**	**07 21 10.1**	**+0.9**
ZEYE				*i* AML	AML	07 21 34.0	
	comp=E,524nm,0.8s						
ZEYE				*i* AML	AML	07 21 34.0	
	comp=E,949nm,0.6s						
KESN	**Edirne-Kesan**	**1.65**	**40**	P	**Pn**	**07 21 08.7**	**-1.0**
KESN				S	**Sn**	**07 21 30.5**	**-0.4**
KESN				*i* AML	AML	07 21 33.0	
	comp=E,1µm,0.5s						
KESN				*i* AML	AML	07 21 34.0	
	comp=E,1µm,0.4s						
KRBG	**Karabiga-Canak**	**1.75**	**62**	PN	**Pn**	**07 21 10.8**	**0.0**
BALY	**Balya**	**1.81**	**84**	P	**Pn**	**07 21 11.6**	**-0.1**
BALY				*i* AML	AML	07 21 39.0	
	comp=E,807nm,0.5s						
BALY				*i* AML	AML	07 21 43.0	
	comp=E,459nm,0.4s						
BLCB	**Balcova**	**1.82**	**130**	PN	**Pn**	**07 21 12.1**	**+0.4**
RKY	**Sarkoy-Tekirda**	**1.83**	**52**	PN	**Pn**	**07 21 12.1**	**+0.1**
SART	**Tekirdag**	**1.83**	**52**	P	**Pb**	**07 21 13.7**	**-0.5**
SART				S	**Sn**	**07 21 35.9**	**+0.8**
SART				*i* AML	AML	07 21 39.0	
	comp=E,478nm,0.4s						
SART				*i* AML	AML	07 21 45.0	
	comp=E,914nm,0.7s						
UKOP	**Uzunkopru-Edir**	**1.87**	**33**	PN	**Pn**	**07 21 12.5**	**+0.1**
MAR6	**Marsite Statio**	**1.90**	**53**	PN	**Pn**	**07 21 13.4**	**+0.6**
STEP	**BALIKESIR_Sava**	**1.90**	**95**	P	**Pn**	**07 21 13.1**	**+0.3**
STEP				S	**Sb**	**07 21 39.6**	**+0.8**
STEP				*i* AML	AML	07 21 48.0	
	comp=E,268nm,0.4s						
STEP				*i* AML	AML	07 21 49.0	
	comp=E,463nm,1.0s						
GONE	**Gonen-Balikesi**	**1.91**	**75**	PN	**Pn**	**07 21 13.3**	**+0.3**
MAR3	**Marsite Statio**	**1.94**	**52**	PN	**Pn**	**07 21 13.9**	**+0.6**
HORT	**Hortiatis**	**1.96**	**302**	PN	**Pn**	**07 21 13.4**	**-0.3**
GZKV	**Gazikoy-Tekird**	**1.96**	**53**	PN	**Pn**	**07 21 14.2**	**+0.6**
BALB	**Balikesir**	**2.01**	**87**	PN	**Pn**	**07 21 14.0**	**-0.3**
KDZ	**Kurdzhali**	**2.08**	**3**	*i* P	**Pn**	**07 21 14.5**	**-0.8**
NVR	**Nevrokopi**	**2.08**	**329**	P	**Pn**	**07 21 15.0**	**-0.3**
AKHS	**Akhisar**	**2.09**	**109**	P	**Pn**	**07 21 15.3**	**-0.1**
AKHS				*i* AML	AML	07 21 49.0	
	comp=E,243nm,0.4s						
AKS	**Akhisar**	**2.09**	**109**	PN	**Pn**	**07 21 16.2**	**+0.8**
EDC	**Edincik**	**2.13**	**68**	PN	**Pn**	**07 21 16.7**	**+0.7**
RZN	**Rozhen**	**2.15**	**349**	*i* P	**Pn**	**07 21 16.3**	**-0.2**
SMG	**Samos**	**2.23**	**146**	P	**Pn**	**07 21 16.5**	**-0.8**
TKR	**Tekirdag**	**2.23**	**53**	PN	**Pn**	**07 21 18.1**	**+0.7**
MMT	**Musomiste**	**2.33**	**330**	*i* P	**Pn**	**07 21 18.1**	**-0.7**
KNT	**Kendrikon**	**2.41**	**312**	PN	**Pn**	**07 21 19.8**	**-0.1**
DURS	**Dursunbey**	**2.47**	**88**	P	**Pb**	**07 21 24.0**	**-1.0**
DURS				*i* AML	AML	07 22 00.0	
	comp=E,203nm,0.6s						
DURS				*i* AML	AML	07 22 09.0	
	comp=E,202nm,0.5s						
APE	**Apeiranthos**	**2.51**	**175**	⇑P	**Pn**	**07 21 21.4**	**+0.1**
EDRB	**Edirne**	**2.53**	**26**	PN	**Pn**	**07 21 22.2**	**+0.7**
PLD	**Plovdiv**	**2.57**	**350**	PN	**Pn**	**07 21 22.3**	**+0.3**
PLD	**Plovdiv**	**2.57**	**350**	*i* P	**Pn**	**07 21 22.6**	**+0.6**
DST	**Dursunbey**	**2.58**	**88**	PN	**Pn**	**07 21 23.2**	**+0.9**
GRG	**Griva**	**2.60**	**303**	PN	**Pn**	**07 21 22.5**	**0.0**
AYDB	**Zeytinkoy-Aydi**	**2.61**	**128**	PN	**Pn**	**07 21 23.4**	**+0.7**
PHNR	**Pinarhisar**	**2.67**	**39**	PN	**Pn**	**07 21 24.3**	**+0.8**
SLVT	**Silivri**	**2.78**	**53**	PN	**Pn**	**07 21 25.8**	**+0.8**
ORLT	**Orhaneli**	**2.83**	**79**	PN	**Pn**	**07 21 26.3**	**+0.7**
KKB	**Krupnik**	**2.83**	**325**	*i* P	**Pn**	**07 21 26.4**	**+0.7**
KULA	**Kula-Manisa**	**2.84**	**111**	PN	**Pn**	**07 21 26.4**	**+0.6**
MDNY	**Mudanya-Bursa**	**2.88**	**73**	PN	**Pn**	**07 21 27.1**	**+0.8**
SIMA	**Simav-Kutahya**	**2.92**	**99**	PN	**Pn**	**07 21 27.6**	**+0.7**
ARMT	**Armutlu**	**2.92**	**69**	PN	**Pn**	**07 21 27.6**	**+0.7**
CTKS	**Kestanelik-??a**	**2.97**	**55**	PN	**Pn**	**07 21 28.6**	**+1.0**
CTYL	**Yalikoy Yolu**	**2.98**	**49**	PN	**Pn**	**07 21 28.7**	**+1.1**
ULDT	**Uludag**	**3.02**	**78**	P	**Pn**	**07 21 28.7**	**+0.3**
ULDT				*i* AML	AML	07 22 18.0	
	comp=E,246nm,0.7s						
ULDT				*i* AML	AML	07 22 19.0	
	comp=E,306nm,0.6s						
PGB	**Panagyurishte**	**3.09**	**345**	*i* P	**Pn**	**07 21 28.8**	**-0.5**
BGKT	**Bogazkoy**	**3.12**	**58**	PN	**Pn**	**07 21 30.3**	**+0.8**
GEMT	**Gemlik**	**3.12**	**73**	PN	**Pn**	**07 21 30.6**	**+0.9**
TRML	**Termal-Yalova**	**3.16**	**70**	PN	**Pn**	**07 21 31.1**	**+0.9**
ISK	**Istanbul-Kandi**	**3.25**	**62**	PN	**Pn**	**07 21 32.3**	**+0.9**
KAVV	**Kandilli-Istan**	**3.25**	**62**	PN	**Pn**	**07 21 32.3**	**+0.9**
YLV	**Yalova**	**3.29**	**71**	PN	**Pn**	**07 21 33.2**	**+1.1**
KLYT	**Kilyos**	**3.33**	**59**	PN	**Pn**	**07 21 33.4**	**+1.0**
VTS	**Vitosha**	**3.41**	**334**	*i* P	**Pn**	**07 21 35.6**	**+1.9**
RAZG	**Razgrad**	**4.09**	**13**	⇓P	**Pn**	**07 21 44.7**	**+1.7**
BOVS	**Bovan**	**4.86**	**328**	⇑P	**Pn**	**07 21 53.8**	**+0.3**
HERR	**Herculane**	**5.71**	**339**	⇑P	**Pn**	**07 22 05.1**	**-0.1**
TPGR	**Topolog**	**5.77**	**23**	⇑P	**Pn**	**07 22 07.8**	**+1.7**
ARR	**Arges**	**5.81**	**356**	⇑P	**Pn**	**07 22 07.2**	**+0.5**
MDVR	**Moldovita**	**5.84**	**334**	⇑P	**Pn**	**07 22 07.7**	**+0.7**
VOIR		**5.86**	**358**	⇑P	**Pn**	**07 22 08.1**	**+0.7**
NEHR	**Nehoiu**	**5.90**	**7**	⇑P	**Pn**	**07 22 09.4**	**+1.6**
MLR	**Muntele Rosu**	**5.93**	**5**	⇑P	**Pn**	**07 22 10.0**	**+1.6**
CFR	**Carcaliu**	**5.99**	**20**	⇑P	**Pn**	**07 22 09.9**	**+1.0**
BISRR	**Bisoca**	**6.06**	**10**	⇑P	**Pn**	**07 22 11.8**	**+1.7**
GZR	**Gura Zlata**	**6.10**	**343**	⇑P	**Pn**	**07 22 10.3**	**-0.3**
PLOR	**Plostina**	**6.36**	**9**	⇑P	**Pn**	**07 22 15.7**	**+1.6**
VRI	**Vrincioaia**	**6.38**	**9**	⇑P	**Pn**	**07 22 16.1**	**+1.7**
DOPR	**Dopca**	**6.39**	**1**	⇓P	**Pn**	**07 22 15.7**	**+1.2**
OZUR		**6.53**	**3**	⇑P	**Pn**	**07 22 17.4**	**+1.0**
TIP	**Timpagrande**	**6.61**	**269**	⇑P	**Pn**	**07 22 16.6**	**-1.0**
BZS	**Buzias**	**6.62**	**337**	⇑P	**Pn**	**07 22 17.8**	**+0.2**
TESR	**Tescani**	**7.01**	**8**	⇑P	**Pn**	**07 22 24.1**	**+1.2**
BIZ	**Bicaz**	**7.39**	**4**	⇑P	**Pn**	**07 22 30.0**	**+1.8**
BURAR	**Bucovina Array**	**8.04**	**360**	⇑P	**Pn**	**07 22 39.2**	**+2.0**

*JMA **17** 07:30:19.2±0.1,24.6N±0.9×122.3E±0.3,h85km±1km, MV3.0/15,TAIWAN REGION*
*TAP **17** 07:30:19.7,24.62N×122.32E,h85km,ML3.9,C*

ISC 17 07:30:21.1±1.3,**24.55N**±0.05×**122.36E**±0.02,**h72**km±9km, **n68,σ0.86/84,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWC	**Suao**	**0.47**	**278**	P	**Pn**	**07 30 33.3**	**-0.5**
TWC				S	**Sn**	**07 30 43.0**	**-0.2**
	baz=268						
EWUT	**Wuta**	**0.54**	**259**	*e*P	**Pn**	**07 30 34.5**	**0.0**
	baz=251						
JYNG	**Yonagunijimaku**	**0.54**	**100**	P	**Pn**	**07 30 34.2**	**-0.3**
JYNG				S	**Sn**	**07 30 45.7**	**+1.4**
ENA	**Nanau**	**0.58**	**258**	*e*P	**Pn**	**07 30 34.8**	**-0.1**
	baz=245						
NDS	**Dongshan**	**0.59**	**278**	*e*P	**Pn**	**07 30 34.8**	**-0.2**
	baz=271						
YOJ	**Yonaguni jima**	**0.60**	**98**	P	**Pn**	**07 30 35.0**	**0.0**
YOJ				S	**Sn**	**07 30 46.7**	**+1.3**
EHP	**Heping Village**	**0.61**	**247**	*e*P	**Pn**	**07 30 35.0**	**-0.3**
	baz=234						
TWE	**Neicheng**	**0.66**	**285**	P	**Pn**	**07 30 35.3**	**-0.3**
	baz=279						
TWE				*e*S	**Sn**	**07 30 46.2**	**-0.2**
	baz=279						
FUSB	**Fushanzhiwuyua**	**0.73**	**287**	*e*P	**Pn**	**07 30 36.3**	**-0.4**
	baz=290						
NWF	**Wu-ten Shan**	**0.74**	**315**	*e*S	**Sn**	**07 30 47.4**	**-0.8**
	baz=306						
LATG	**Datong**	**0.76**	**269**	*e*P	**Pn**	**07 30 36.7**	**-0.2**
	baz=256						
ETL	**Fush Village**	**0.78**	**240**	*e*P	**Pn**	**07 30 36.3**	**-0.7**
	baz=227						
NACB	**Ninganchiao**	**0.79**	**242**	*e*P	**Pn**	**07 30 36.5**	**-0.7**
	baz=231						
NWLT	**Wulai**	**0.81**	**287**	*e*P	**Pn**	**07 30 37.4**	**-0.1**
	baz=287						
TWD	**Chiawan**	**0.84**	**236**	*e*P	**Pn**	**07 30 37.0**	**-0.8**
	baz=225						
TWD				S	**Sn**	**07 30 50.7**	**+0.7**
	baz=225						
ETLH	**Xiulin Townshi**	**0.87**	**247**	*e*P	**Pn**	**07 30 37.6**	**-0.6**
	baz=242						
HWA	**Hwalien**	**0.89**	**231**	*e*P	**Pn**	**07 30 38.1**	**-0.3**
	baz=225						
NNSB	**Datong**	**0.90**	**263**	*e*P	**Pn**	**07 30 37.9**	**-0.7**
	baz=251						
YHNB	**Yeheng**	**0.91**	**278**	*e*P	**Pn**	**07 30 38.4**	**-0.3**
	baz=267						
YHNB				*e*S	**Sn**	**07 30 51.5**	**-0.1**
	baz=267						
NNS	**Nan Shan**	**0.91**	**263**	*e*P	**Pn**	**07 30 38.2**	**-0.5**
	baz=253						
NSK	**Sanguang**	**0.92**	**278**	*e*P	**Pn**	**07 30 38.5**	**-0.3**
	baz=273						
NSK				S	**Sn**	**07 30 51.7**	**-0.3**
	baz=273						
FUSS	**Fushou**	**1.06**	**254**	*e*P	**Pn**	**07 30 40.5**	**-0.3**
	baz=245						
WHF	**Hehuan Shan**	**1.08**	**248**	P	**Pn**	**07 30 40.6**	**-0.5**
	baz=238						
WHF				*e*S	**Sn**	**07 30 55.4**	**-0.6**
	baz=238						
ESL	**Shilin**	**1.12**	**229**	P	**Pn**	**07 30 40.1**	**-1.1**
	baz=233						
TWT	**Tachien**	**1.12**	**255**	*e*P	**Pn**	**07 30 41.5**	**+0.1**
	baz=247						
NFF	**Wufeng Townshi**	**1.14**	**275**	*e*P	**Pn**	**07 30 41.1**	**-0.4**
	baz=271						
TDCB	**Techi**	**1.14**	**255**	*e*P	**Pn**	**07 30 41.6**	**+0.1**
	baz=247						
CHGB	**Renai**	**1.19**	**246**	*e*P	**P

JIKM	**Ikemajima**	**2.65**	**81**	S	**Sn**	07 31 33.1	**+0.4**	
JMJ2	**Miyako jima3**	**2.71**	**85**	P	**Pn**	07 31 02.1	**-0.3**	
JMJ2				S	**Sn**	07 31 34.5	**+0.5**	
JOGS	**Gusukube**	**2.78**	**85**	S	**Sn**	07 31 36.4	**+0.6**	

IDC 17 07:31:56.1±2.9, 54.60N×87.19E, h0km, mbtmp3.4/2, ML3.1/2, 3C-3D, Error ellipse: s-maj=25.2km s-min=18.3km az=45.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.54**	**246**	*i*		07 40 30.0	
	baz=65,slow=316,SNR=3.4						
ZALV	**Zalesovo Beam**	**1.54**	**246**	Pg	Pn	07 32 22.1	-2.6
	2.0nm,0.3s,baz=62,slow=17,SNR=16						
ZALV				Lg	Lg	07 32 45.8	
	2.0nm,0.3s,baz=61,slow=28,SNR=13						
KURBB	**Kurchatov Arra**	**6.61**	**236**	Pn	Pn	07 33 35.0	+0.6
	0.2nm,0.3s,baz=53,slow=14,SNR=24						
KURBB				Lg	Lg	07 35 26.6	
	0.1nm,0.3s,baz=48,slow=30,SNR=7.0						
	2.3nm,0.5s						
KURBB	**Kurchatov Arra**	**6.61**	**236**	⇓Pn	Pn	07 33 35.7	+1.3
	2.6nm,0.5s						
KURBB				⇓Sn	Sn	07 34 46.9	-3.4
	4.1nm,0.6s						
KURBB				⇑Lg	Lg	07 35 18.5	
	13nm,0.9s						
MK31	**Makanchi Array**	**8.41**	**204**	⇑Pn	Pn	07 34 00.9	+1.7
	0.7nm,0.5s,baz=27,slow=13,SNR=18						
MK31				⇑Sn	Sn	07 35 32.5	-2.2
	3.1nm,0.8s						
MK31				⇓Lg	Lg	07 36 16.9	
	7.5nm,0.9s						
MKAR	**Makanchi Array**	**8.41**	**204**	Pn	Pn	07 34 00.5	+1.3
	0.5nm,0.3s,baz=25,slow=13,SNR=19						
MKAR				Sn	Sn	07 35 33.0	-1.8
	0.1nm,0.3s,baz=27,slow=26,SNR=5.5						
MKAR				Lg	Lg	07 36 17.6	
	0.1nm,0.3s,baz=29,slow=30,SNR=2.9						
	0.7nm,0.4s						

IDC 17 07:37:05.8±2.6, 53.93N×86.58E, h0km, mbtmp2.8/2, ML2.6/2, Error ellipse: s-maj=22.1km s-min=13.0km az=63.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.04**	**272**	*i*		07 44 22.4	
	baz=88,slow=314,SNR=7.8						
ZALV	**Zalesovo Beam**	**1.04**	**272**	Pg	Pg	07 37 23.9	-1.7
	0.7nm,0.3s,baz=89,slow=17,SNR=6.5						
ZALV				Lg	Lg	07 37 40.8	
	1.8nm,0.3s,baz=95,slow=30,SNR=16						
KURBB	**Kurchatov Arra**	**5.94**	**239**	Pn	Pn	07 38 35.9	+1.0
	0.1nm,0.3s,baz=56,slow=13,SNR=3.6						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**7.65**	**203**	Pn	Pn	07 38 59.7	+1.3
	0.2nm,0.3s,baz=26,slow=13,SNR=6.8						
	0.3nm,0.4s						

*NEIC **17** 07:38:30.5±1.4, 18.67S±0.08×172.57W±0.10, h10km±2km, mb4.6/14, Error ellipse: s-maj=16.5km s-min=11.8km az=65.0*

*IDC **17** 07:38:31.0±1.3, 19.17S×172.87W, h0km, mb4.0/8, mbtmp4.0/9, ML4.4/1, MS3.4/3, Error ellipse: s-maj=60.3km s-min=21.4km az=154.0*

ISC 17 07:38:33.1±0.6, 18.57S±0.08×173.1W±0.1, h10km, n36, σ1§56/32, mb4.5/17, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**3.02**	**100**		Pn	07 39 11.0	-10
AFI	**Afiamalu**	**4.79**	**15**	Pn	**Pn**	**07 39 44.2**	**-1.4**
	4.4nm,0.3s,baz=48,slow=6.5,SNR=4.4						
AFI				Sn	**Sn**	**07 40 37.3**	**-3.9**
	14nm,0.3s,baz=154,slow=18,SNR=6.2						
MSVF	**Nonsavu**	**8.48**	**274**	LR	LR	07 43 25.1	
	comp=Z,193nm,19.8s,baz=132,slow=34						
FUNA	**Funafuti**	**12.49**	**322**	Pn	**Pn**	**07 41 31.1**	**+0.1**
RAR	**Rarotonga**	**12.79**	**104**	Pn	Pn	07 41 25.2	-10
	2.1nm,0.3s,baz=258,slow=3.8,SNR=3.9						
PINNC	**Pines Island,**	**18.68**	**254**	P	**Pn**	**07 42 53.0**	**+1.2**
DZM	**Mont Dzumac**	**19.52**	**256**	P	**Pn**	**07 43 02.7**	**+0.5**
	1.1nm,0.3s,baz=70,slow=19,SNR=12						
	13nm,0.7s						
OUZ	**Omahuta**	**20.37**	**213**	P	**P**	**07 43 09.3**	**-0.6**
URZ	**Urewera**	**21.41**	**202**	P	**P**	**07 43 19.7**	**-1.5**
	12nm,0.6s,baz=302,slow=23,SNR=12						
URZ	**Urewera**	**21.41**	**202**	P	**P**	**07 43 18.7**	**-2.5**
URZ				IAmb	IAmb	07 43 24.6	
	comp=Z,13nm,0.7s						
RPZ	**Rata Peaks**	**28.41**	**205**	P	**P**	**07 44 29.5**	**+1.6**
	comp=Z,11nm,0.5s,baz=3.4,slow=17,SNR=2.5						
EIDS	**Eidsvold**	**33.85**	**252**	P	**P**	**07 45 15.2**	**-0.9**
EIDS				IAmb	IAmb	07 45 30.2	
	comp=Z,17nm,1.4s						
CTAO	**Charters Tower**	**38.35**	**261**	P	**P**	**07 45 54.5**	**-0.1**
CTAO				IAmb	IAmb	07 45 56.6	
	comp=Z,10.0nm,0.8s						
PMG	**Port Moresby**	**39.57**	**278**	LR	LR	07 59 03.3	
	comp=Z,73nm,20.4s,baz=144,slow=31						
TOO	**Toolangi**	**40.78**	**234**	P	**P**	**07 46 13.9**	**-0.8**
TOO				IAmb	IAmb	07 46 29.9	
	comp=Z,20nm,1.4s						
TAU	**Tasmania Unive**	**41.27**	**225**	P	**P**	**07 46 19.2**	**+0.6**
STKA	**Stephens Creek**	**42.81**	**243**	P	**P**	**07 46 29.4**	**-1.9**
	comp=Z,2.5nm,0.8s,baz=110,slow=15,SNR=2.0						
	comp=Z,2.5nm,0.8s						
WR0	**Warramunga Arr**	**49.31**	**259**	P	**P**	**07 47 22.2**	**-0.6**
WR0				IAmb	IAmb	07 47 34.5	
	comp=Z,9.9nm,1.2s						
AS31	**Alice Springs**	**49.50**	**254**	P	**P**	**07 47 23.7**	**-0.5**
AS31				IAmb	IAmb	07 47 24.8	
	comp=Z,5.2nm,0.9s						
ASAR	**Alice Springs**	**49.50**	**254**	P	**P**	**07 47 24.1**	**-0.1**
WRA	**Warramunga Arr**	**49.50**	**259**	P	**P**	**07 47 23.3**	**-0.9**
	comp=Z,3.7nm,0.8s,baz=97,slow=7.3,SNR=41						
	comp=Z,3.7nm,0.8s						
WRA	**Warramunga Arr**	**49.50**	**259**	P	**P**	**07 47 23.5**	**-0.7**
PSA00	**Pilbara Seismi**	**62.64**	**255**	P	**P**	**07 48 58.1**	**-0.3**
JCJ	**Chichijima**	**62.79**	**315**	LR	LR	08 11 59.8	
	comp=Z,34nm,18.9s,baz=216,slow=32						
CASY	**Casey**	**67.69**	**205**	P	**P**	**07 49 28.5**	**-1.7**
CASY				IAmb	IAmb	07 49 42.0	
	comp=Z,6.8nm,1.2s						
QSPA	**South Pole Qui**	**71.50**	**180**	P	**P**	**07 49 52.1**	**-1.9**
QSPA				IAmb	IAmb	07 49 57.4	
	comp=Z,4.2nm,1.4s						
MJAR	**Matsushiro Arr**	**71.56**	**320**	P	**P**	**07 49 56.8**	**+2.3**
	comp=Z,1.1nm,0.4s,baz=157,slow=7.6,SNR=3.0						
	comp=Z,1.1nm,0.4s						
NVAR	**Mina Array Bea**	**76.47**	**41**	P	**P**	**07 50 24.7**	**+1.1**
	comp=Z,0.4nm,0.8s,baz=226,slow=10.0,SNR=4.5						
	comp=Z,0.4nm,0.8s						
KSRS	**Korea Array**	**78.63**	**316**	P	**P**	**07 50 38.5**	**+3.1**
	comp=Z,1.9nm,0.8s,baz=133,slow=6.8,SNR=7.1						
	comp=Z,1.9nm,0.8s						
TXAR	**Lajitas Array**	**82.12**	**56**	P	**P**	**07 50 55.6**	**+1.2**
	comp=Z,0.6nm,1.0s,baz=208,slow=7.2,SNR=5.4						
	comp=Z,0.6nm,1.0s						
PDAR	**Pinedale Array**	**84.41**	**41**	P	**P**	**07 51 06.5**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=126,slow=2.0,SNR=4.4						
	comp=Z,0.5nm,0.8s						
ILAR	**Eielson Array**	**85.47**	**11**	P	**P**	**07 51 13.4**	**+2.7**
	comp=Z,0.7nm,0.9s,baz=214,slow=6.7,SNR=5.5						
	comp=Z,0.7nm,0.9s						
TROLL	**Troll, Antarti**	**89.61**	**179**	P	**P**	**07 51 32.1**	**+1.2**
KURBB	**Kurchatov Arra**	**115.76**	**318**	PKP	**PKPdf**	**07 57 15.5**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=97,slow=2.2,SNR=4.9						
KMBO	**Kilima Mbogo**	**144.34**	**240**	PKP	**PKPdf**	**07 58 10.5**	**-0.4**
	comp=Z,0.6nm,0.3s,baz=63,slow=6.0,SNR=5.6						
BRTR	**Keskin Array B**	**148.76**	**318**	PKPbc	**PKiKP**	**07 58 23.0**	**+0.3**
	comp=Z,2.0nm,0.8s,baz=101,slow=3.9,SNR=11						

*IDC **17** 07:42:10.5±2.3, 31.28S×68.75W, h88km±20km, mb3.6/8, mbtmp3.9/13, MS2.5/1, Error ellipse: s-maj=27.0km s-min=17.6km az=86.0*

ISC 17 07:42:11.4±0.6, 31.12S±0.07×68.38W±0.1, h100km, n19, σ1§50/20, mb3.8/8, San Juan Province

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

LVC	**Limon Verde**	**8.48**	**359**	P	**Pn**	07 44 11.6	**-0.2**	
	3.7nm,0.5s,baz=167,slow=8.3,SNR=57							
LVC				S	**Sn**	07 45 41.8	**-4.2**	
	4.1nm,0.7s,baz=191,slow=19,SNR=1.2							
PLCA	**Paso Flores**	**9.70**	**188**	P	**Pn**	07 44 25.6	**-2.4**	
	1.2nm,0.7s,baz=354,slow=10,SNR=16							
CPUP	**Villa Florida**	**11.10**	**67**	P	**Pn**	07 44 46.6	**-0.5**	
	2.0nm,0.7s,baz=235,slow=13,SNR=9.5							
CPUP				LR	LR	07 49 39.8		
	comp=Z,24nm,20.0s,baz=182,slow=40							
LPAZ	**La Paz**	**14.78**	**2**	P	**P**	**07 45 39.3**	**-0.1**	
	8.9nm,0.8s,baz=182,slow=7.9,SNR=36							
SIV	**San Ignacio**	**16.62**	**27**	P	**P**	**07 46 00.2**	**+1.0**	
	2.9nm,0.6s,baz=205,slow=11,SNR=16							
VNA3	**Neumayer Olymp**	**51.01**	**159**	P	**P**	**07 51 03.2**	**+0.5**	
SNAA	**Sanae**	**53.23**	**159**	P	**P**	**07 51 19.5**	**+0.3**	
VNDA	**Vanda**	**67.44**	**190**	P	**P**	**07 52 55.9**	**+0.1**	
	0.7nm,0.7s,baz=120,slow=6.2,SNR=3.6							
	0.7nm,0.7s							
TXAR	**Lajitas Array**	**68.69**	**328**	P	**P**	**07 53 05.8**	**+1.4**	
	0.3nm,0.6s,baz=156,slow=8.3,SNR=4.6							
	0.3nm,0.6s							
MAW	**Mawson**	**75.12**	**163**	P	**P**	**07 53 40.9**	**-1.2**	
	2.2nm,0.8s,baz=244,slow=9.8,SNR=2.6							
	2.2nm,0.8s							
BOSA	**Boshof**	**78.91**	**117**	P	**P**	**07 54 04.8**	**+0.5**	
	2.3nm,0.8s,baz=247,slow=2.2,SNR=3.6							
	2.3nm,0.8s							
TORD	**Torodi Ar. Bea**	**80.60**	**69**	P	**P**	**07 54 14.3**	**+0.9**	
	1.4nm,0.6s,baz=278,slow=6.6,SNR=9.9							
	1.4nm,0.6s							
PDAR	**Pinedale Array**	**82.53**	**331**	P	**P**	**07 54 24.7**	**+1.6**	
	0.4nm,0.8s,baz=107,slow=5.0,SNR=4.0							
	0.4nm,0.8s							
NVAR	**Mina Array Bea**	**83.19**	**323**	P	**P**	**07 54 28.5**	**+1.9**	
	0.2nm,0.6s,baz=150,slow=7.3,SNR=2.1							
	0.2nm,0.6s							
ULM	**Lac du Bonnet**	**84.51**	**343**	P	**P**	**07 54 33.1**	**+0.3**	
	0.7nm,0.3s,baz=162,slow=6.4,SNR=1.7							
	0.7nm,0.3s							
WRA	**Warramunga Arr**	**124.59**	**207**	PKP	**PKPdf**	**08 00 58.6**	**-1.2**	
	0.8nm,0.4s,baz=157,slow=1.8,SNR=26							
KURBB	**Kurchatov Arra**	**148.88**	**42**	PKPbc	**PKPbc**	**08 01 47.8**	**+0.8**	
	0.5nm,0.3s,baz=303,slow=3.5,SNR=7.6							
ZALV	**Zalesovo Beam**	**150.32**	**32**	PKPbc	**PKPbc**	**08 01 51.1**	**+0.6**	
	3.9nm,0.6s,baz=316,slow=3.7,SNR=4.8							
MKAR	**Makanchi Array**	**152.78**	**47**	PKPbc	**PKPbc**	**08 01 56.6**	**+0.2**	
	1.0nm,0.7s,baz=269,slow=2.0,SNR=6.1							

MAN 17 07:51:13.8, 13.24N×120.90E, h48km, mb3.8, ML2.6, MS2.1, 2C-2D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.27**	**111**	*ie*P	Pn	07 51 23.8	+1.7
PGP				*i* S		07 51 31.1	
LUBP	**Lubang**	**0.80**	**308**	⇑*i*P	Pn	07 51 29.7	+1.7
TGY	**Tagaytay City**	**0.86**	**2**	⇓*ie*P	Pn	07 51 23.5	+5.4
TGY				*e*S		07 51 43.5	
MACP	**Maragondon, Ca**	**1.03**	**350**	⇓*i*P	Pn	07 51 33.0	+1.8

*ATH **17** 07:58:29.9, 33.97N×25.40E, h20km±4km, ML2.6/2, Error ellipse: s-maj=11.4km s-min=2.0km az=3.0*

*GII **17** 07:58:38.6±0.0, 33.54N×26.38E, h1km*

ISC 17 07:58:28.7±1.3, 33.8N±0.1×25.63E±0.09, h17km, n13, σ2§59/19, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FRMA	**Ierapetra Chan**	**1.20**	**4**	P	**Pb**	**07 58 51.4**	**+0.4**
ZKR	**Zakros**	**1.39**	**20**	P	**Pb**	**07 58 55.0**	**+0.8**
ZKR				AML	AML	07 59 21.7	
	comp=N,265μm,0.8s						
ZKR				AML	AML	07 59 22.7	
	comp=E,452μm,0.8s						
IDI	**Anoyia**	**1.59**	**338**	P	**Pn**	**07 58 56.3**	**+0.1**
GVD	**Gavdhos**	**1.64**	**309**	P	**Pn**	**07 58 56.0**	**-0.6**
GVD				S	**Sn**	**07 59 15.0**	**-2.4**
GVD				AML	AML	07 59 27.2	
	comp=E,525μm,0.4s						
GVD				AML	AML	07 59 30.0	
	comp=N,509μm,0.6s						
IMMV	**Iera Moni Meta**	**2.13**	**321**	P	**Pn**	**07 59 03.8**	**+0.3**
KARP	**Karpathos**	**2.15**	**36**	P	**Pb**	**07 59 06.3**	**-0.8**
YTIR	**Yattir**	**8.37**	**104**	Sn	**Sn**	**08 02 00.1**	**-3.4**
HMDT	**Nahal Hemdat**	**8.46**	**98**	Pn	**Pn**	**08 00 33.3**	**+2.9**
HMDT				Sn	**Sn**	**08 02 03.6**	**-1.8**
DSI	**Dead Sea**	**8.52**	**103**	Pn	**Pn**	**08 00 35.0**	**+3.7**
DSI				Sn	**Sn**	**08 02 04.4**	**-2.6**
KRMI	**Paran Flat**	**8.56**	**113**	Pn	**Pn**	**08 00 34.2**	**+2.3**
KRMI				Sn	**Sn**	**08 02 04.6**	**-3.5**
PRNI	**Paran**	**8.67**	**111**	Pn	**Pn**	**08 00 36.0**	**+2.6**
PRNI				Sn	**Sn**	**08 02 07.9**	**-2.9**
MBRI	**Mt Berech**	**8.86**	**114**	Pn	**Pn**	**08 00 38.6**	**+2.6**
EIL	**Elat**	**8.95**	**115**	Pn	**Pn**	**08 00 40.5**	**+3.4**
EIL				Sn	**Sn**	**08 02 15.4**	**-2.2**

MAN 17 08:02:38.3, 13.32N×120.58E, h18km, mb3.8, ML2.5, MS2.0, Mindoro

IDC 17 08:19:05.2±6.0, 54.27N×87.23E, h0km, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=69.4km s-min=24.0km az=67.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.46**	**258**	*i*		08 28 10.0	
	baz=77,slow=318,SNR=2.8						
ZALV	**Zalesovo Beam**	**1.46**	**258**	Pg	Pn	08 19 30.9	-1.8
	1.7nm,0.3s,baz=76,slow=15,SNR=13						
KURBB	**Kurchatov Arra**	**6.45**	**239**	Pn	Pn	08 20 42.1	+0.8
	0.1nm,0.3s,baz=54,slow=14,SNR=5.5						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**8.12**	**205**	Pn	Pn	08 21 05.5	+1.2
	0.1nm,0.3s,baz=27,slow=14,SNR=5.8						
	0.2nm,0.2s						

*BJI **17** 08:39:36.8±0.0, 7.91S×128.63E, h150km, mb5.0/66, mB4.9/35*

*DJA **17** 08:39:40.8±0.2, 8.2S±2.2×12.8E±°, h133km±4km, M4.8/34, mb5.0/34, mB5.3/26, MLv5.3/15, Mw(mB)4.7/26, MwMwp4.7/7, Mwp5.0/7*

*NEIC **17** 08:39:41.4±1.8, 7.49S±0.06×128.33E±0.05, h136km±6km, mb5.1/54, Error ellipse: s-maj=10.9km s-min=1.5km az=139.0*

*GCMT **17** 08:39:41.4±0.3, 7.58S±0.02×128.25E±0.02, h136km±3km, MW5.1/99, Moment Tension Solution. s29,c31; s99,c133; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr2.38±.18; Mθθ-3.15±.22; Mφφ0.77±.26; Mrθ1.78±.12; Mθφ2.56±.23; Mφr2.72±.15; Best double couple: M=4.94500×10^16 NP1:φs330.00000°, δ55.00000°, λ146.00000°. NP2: φs81.00000°, δ63.00000°, λ40.00000°. Principal axes: T 5.4480, Plg47.0000°, Azm299.0000°; N -1.0020, Plg43.0000°, Azm110.0000°; P -4.4430, Plg4.0000°, Azm204.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **17** 08:39:42.8±1.6, 7.44S×128.30E, h150km±14km, mb4.5/25, mbtmp4.9/26, MS3.6/20 Error ellipse: s-maj=13.8km s-min=8.8km az=73.0*

*MOS **17** 08:39:42.8±0.9, 7.38S×128.29E, h164km, mb5.0/27, Error ellipse: s-maj=12.4km s-min=6.4km az=100.1*

ISC 17 08:39:41.1±0.5, 7.56S±0.03×128.35E±0.04, h141km±4km, n330, σ1§50/341, mb5.0/90, 19C-2D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.96**	**98**		**Pn**	**08 40 28.3**	**+0.8**
SAUI	**Saumlaki**	**2.96**	**98**	P	**Pn**	**08 40 28.5**	**+1.0**
BNDI	**Bandanaira**	**3.39**	**27**	P	**Pn**	**08 40 34.0**	**+0.9**
AAI	**Ambon**	**3.85**	**358**	P	**Pn**	**08 40 40.6**	**+1.5**
AAI	**Ambon**	**3.85**	**358**	P	**Pn**	**08 40 40.3**	**+1.2**
MSAI	**Masohi**	**4.22**	**8**	P	**Pn**	**08 40 45.3**	**+1.2**
SOEI	**Soe**	**4.59**	**241**		**Pn**	**08 40 49.1**	**+0.1**
SOEI	**Soe**	**4.59**	**241**	P	**Pn**	**08 40 49.4**	**+0.4**
SOEI	**Soe**	**4.59**	**241**	P	**Pn**	**08 40 49.7**	**+0.7**
MTN	**Manton Dam**	**5.92**	**153**	P	**Pn**	**08 41 06.1**	**-0.6**

	baz=6.0,SNR=108							
MTN				S	**Sn**	08 42 09.9	**-3.7**	
	baz=6.0							
MTN	**Manton Dam**	**5.92**	**153**	Pn	**Pn**	**08 41 05.9**	**-0.8**	
MTN	**Manton Dam**	**5.92**	**153**	P	**Pn**	**08 41 06.3**	**-0.4**	
SANI	**Sanana**	**5.96**	**337**	P	**Pn**	**08 41 09.2**	**+2.1**	
	0.5nm2μm69nm,1.1s							
FAKI	**Fak Fak**	**6.03**	**40**	Pn	**Pn**	**08 41 07.2**	**-0.9**	
FAKI	**Fak Fak**	**6.03**	**40**	P	**Pn**	**08 41 07.0**	**-1.1**	
	1.9nm3μm3μm240nm,0.6s							
FAKI				S	**Sn**	**08 42 15.1**	**-1.0**	
	1.9nm3μm3μm240nm,0.6s							
FAKI	**Fak Fak**	**6.03**	**40**	P	**Pn**	**08 41 07.4**	**-0.7**	
BBSI	**Bau Bau**	**6.10**	**289**	P	**Pn**	**08 41 10.7**	**+1.7**	
	0.1nm32nm,1.1s							
MMRI	**Maumere**	**6.14**	**260**	Pn	**Pn**	**08 41 09.9**	**+0.3**	
MMRI	**Maumere**	**6.14**	**260**	P	**Pn**	**08 41 09.8**	**+0.1**	
	2.2nm3μm4μm309nm,1.0s							
MMRI				S	**Sn**	**08 42 16.3**	**-2.6**	
	2.2nm3μm4μm309nm,1.0s							
MMRI	**Maumere**	**6.14**	**260**	P	**Pn**	**08 41 10.5**	**+0.8**	
KDU	**Kakadu**	**6.52**	**142**	P	**Pn**	**08 41 13.6**	**-1.0**	
	baz=6.5,SNR=1000							
KDU				S	**Sn**	**08 42 23.3**	**-4.5**	
	baz=6.5							
KDU	**Kakadu**	**6.52**	**142**	P	**Pn**	**08 41 13.9**	**-0.7**	
EDFI	**Ende, Flores**	**6.70**	**259**	P	**Pn**	**08 41 18.2**	**+1.0**	
	0.7nm1μm46nm,0.8s							
LBMI	**Labuha**	**6.92**	**353**	P	**Pn**	**08 41 23.3**	**+3.2**	
	0.5nm2μm118nm,1.3s							
SWI	**Sorong**	**7.25**	**24**	P	**Pn**	**08 41 25.2**	**+0.6**	
SWI				pmax	pmax			
	comp=Z,196nm,0.7s							
SWI	**Sorong**	**7.25**	**24**	P	**Pn**	**08 41 24.2**	**-0.4**	
	comp=Z,1.2nmcomp=Z,3μmcomp=Z,3μmcomp=Z,196nm,0.7s							
BSSI	**Bau Bau, Buton**	**7.93**	**280**	P	**Pn**	**08 41 33.8**	**+0.2**	
	comp=Z,0.4nmcomp=Z,96nm,1.2s							
KNRA	**Kununurra**	**8.08**	**177**	P	**Pn**	**08 41 33.3**	**-2.2**	
	baz=8.2,SNR=1000							
KNRA				S	**Sn**	**08 42 59.6**	**-6.0**	
	baz=8.2							
KNRA	**Kununurra**	**8.08**	**177**	Pn	**Pn**	**08 41 34.8**	**-0.8**	
KNRA	**Kununurra**	**8.08**	**177**	P	**Pn**	**08 41 34.2**	**-1.4**	
BASI	**Baing, Sumba**	**8.12**	**250**	P	**Pn**	**08 41 34.6**	**-1.6**	
	comp=Z,4μmcomp=Z,200nm,0.6s							
BKSI	**Bulukumba**	**8.47**	**285**	P	**Pn**	**08 41 41.8**	**+1.0**	
	comp=Z,1μmcomp=Z,43nm,1.0s							
BNSI	**Bone**	**8.78**	**290**	P	**Pn**	**08 41 45.9**	**+1.0**	
	comp=Z,1μmcomp=Z,99nm,1.2s							
KAPI	**Kappang**	**8.91**	**286**	P	**Pn**	**08 41 47.4**	**+0.7**	
	comp=Z,76nm,1.1s,baz=145,slow=8.3,SNR=10							
KAPI	**Kappang**	**8.91**	**286**	Pn	**Pn**	**08 41 46.4**	**-0.3**	
WBSI	**Waikabubak, Su**	**9.10**	**256**	P	**Pn**	**08 41 49.4**	**+0.1**	
	comp=Z,3μmcomp=Z,258nm,0.6s							
SPSI	**Sidrap Palu**	**9.25**	**292**	P	**Pn**	**08 41 52.2**	**+0.9**	
	comp=Z,2μmcomp=Z,43nm,0.9s							
APSI	**Ampana**	**9.39**	**314**	P	**Pn**	**08 41 55.8**	**+2.6**	
	comp=Z,982nmcomp=Z,77nm,1.4s							
TTSI	**Tana Toraja**	**9.60**	**297**	P	**Pn**	**08 41 58.3**	**+2.3**	
	comp=Z,54nm,1.3s							
MRSI	**Marisa**	**10.22**	**321**	P	**Pn**	**08 42 06.8**	**+2.5**	
	comp=Z,978nmcomp=Z,46nm,1.2s							
PLAI	**Plampang**	**10.54**	**262**	P	**Pn**	**08 42 06.6**	**-1.9**	
	comp=Z,2μmcomp=Z,114nm,0.5s							
PLAI	**Plampang**	**10.54**	**262**	P	**Pn**	**08 42 06.7**	**-1.8**	
TOLI2	**Tolitoli**	**11.45**	**318**	P	**Pn**	**08 42 20.7**	**+0.2**	
MPSI	**Mapaga**	**11.51**	**313**	P	**Pn**	**08 42 23.6**	**+2.3**	
	comp=Z,1μmcomp=Z,27nm,1.6s							
SGSI	**Sangihe**	**11.52**	**346**	P	**Pn**	**08 42 23.5**	**+2.1**	
	comp=Z,6μmcomp=Z,490nm,0.5s							
BKB	**Balikpapan**	**13.02**	**298**	P	**P**	**08 42 44.5**	**-1.5**	
BKB	**Balikpapan**	**13.02**	**298**	P	**Pn**	**08 42 39.1**	**-1.8**	
WRAB	**Tennant Creek**	**13.61**	**155**		**Pn**	**08 42 46.5**	**-1.9**	
WRAB	**Tennant Creek**	**13.61**	**155**	*i* P	**Pn**	**08 42 45.8**	**-2.7**	
WRAB	**Tennant Creek**	**13.61**	**155**	P	**Pn**	**08 42 46.0**	**-2.5**	
WRA	**Warramunga Arr**	**13.61**	**155**	P	**Pn**	**08 42 45.6**	**-2.9**	
	comp=Z,32nm,0.5s,baz=341,slow=13,SNR=238							
WRA				S	Sn	08 45 07.4	-12	
	comp=Z,127nm,0.6s,baz=327,slow=24,SNR=7.3							
WRA				LR	LR	08 49 05.6		
	comp=Z,317nm,18.8s,baz=31,slow=41							
WRA	**Warramunga Arr**	**13.61**	**155**	Pn	**Pn**	**08 42 47.0**	**-1.5**	
WRA	**Warramunga Arr**	**13.61**	**155**	P	**Pn**	**08 42 47.0**	**-1.5**	
BBKI	**Banjar Baru**	**14.04**	**286**	P	**Pn**	**08 42 55.4**	**+1.4**	
	comp=Z,199nm,0.9s							
MTKI	**Muara Teweh, K**	**14.93**	**295**	P	**Pn**	**08 43 04.2**	**-1.0**	
MBWA	**Marble Bar**	**15.88**	**211**		**Pn**	**08 43 15.5**	**-1.4**	
MBWA				IAmb	IAmb	08 43 22.0		
	comp=Z,61nm,0.6s							
MBWA	**Marble Bar**	**15.88**	**211**	P	**Pn**	**08 43 15.3**	**-1.6**	
COEN	**Coen**	**15.89**	**115**	P	**Pn**	**08 43 15.6**	**-1.4**	
	baz=16,SNR=38							
**CO

BBOO IAmb IAmb 08 45 07.6
comp=Z,37nm,0.7s
BBOO Buckleboo 26.13 165 P **P** **08 45 03.5 +1.4**
RK1H Rockhampton Ha 26.45 129 P **P** **08 45 07.2 +2.1**
WHYH Whyalla 26.76 163 P **P** **08 45 09.0 +1.3**
comp=Z,35nm,0.6s
MUN Mundaring 26.80 203 P **P** **08 45 09.6 +1.5**
baz=27,SNR=5.2
MUN Mundaring 26.80 203 P **P** **08 45 09.3 +1.2**
NAPP Napperby 27.07 162 P **P** **08 45 11.6 +1.1**
comp=Z,94nm,0.6s
STKA Stephens Creek 27.16 155 P **P** **08 45 13.1 +1.7**
comp=Z,9.2nm,0.3s,baz=336,slow=8.3,SNR=73
comp=Z,9.2nm,0.3s
STKA Stephens Creek 27.16 155 P **P** **08 45 12.9 +1.5**
baz=27,SNR=65
STKA Stephens Creek 27.16 155 P **P** **08 45 12.8 +1.4**
STKA Stephens Creek 27.16 155*d iP* **P** **08 45 12.8 +1.4**
STKA Stephens Creek 27.16 155 P **P** **08 45 12.9 +1.5**
NWAO Narrogin (SRO) 27.27 201 P **P** **08 45 13.0 +0.7**
NWAO IAmb IAmb 08 45 56.8
comp=Z,27nm,0.8s
NWAO Narrogin (SRO) 27.27 201 P **P** **08 45 13.0 +0.7**
NWAO pmax pmax
comp=Z,27nm,0.8s
NWAO Narrogin (SRO) 27.27 201 P **P** **08 45 14.0 +1.7**
HTT Hallett 27.55 161 P **P** **08 45 16.4 +1.6**
baz=28,SNR=35
HTT Hallett 27.55 161 P **P** **08 45 16.8 +2.0**
CMSA Cobar Meteorol 28.83 148 P **P** **08 45 28.2 +2.0**
baz=29,SNR=44
CMSA Cobar Meteorol 28.83 148 P **P** **08 45 28.1 +2.0**
TWOA Tennyson Woods 28.92 162 P **P** **08 45 29.0 +2.1**
comp=Z,16nm,0.7s
IPM Ipoh 29.77 293 P **P** **08 45 34.8 +0.1**
IPM IAmb IAmb 08 45 36.7
comp=Z,65nm,1.2s
KULM Kulim 30.44 294 P **P** **08 45 40.7 +0.1**
RPSI Rantau Prapat 31.07 288 P **P** **08 45 46.0 -0.1**
PSI Prapat 31.11 288 P **P** **08 45 46.0 -0.6**
baz=80,slow=13
HNR Honiara 31.30 96 LR LR 08 59 43.8
comp=Z,108nm,18.5s,baz=240,slow=38
ARPS Mount Arapiles 31.57 159 P **P** **08 45 52.6 +2.4**
baz=32,SNR=44
ARPS Mount Arapiles 31.57 159 P **P** **08 45 52.7 +2.4**
TPUB Ta-pu 31.58 346 P **P** **08 45 49.2 -1.2**
TPUB Ta-pu 31.58 346 P **P** **08 45 49.3 -1.2**
comp=Z,28nm,0.6s
QIZ Qiongzhong 32.10 326 P **P** **08 45 55.1 0.0**
QIZ sP **sP** **08 46 40.8 +1.2**
QIZ S **S** **08 51 02.8 +5.5**
QIZ sS **sS** **08 51 50.6 +1.9**
QIZ pmax pmax
comp=Z,25nm,1.6s
QIZ LR LR
comp=Z,180nm,17.5s
QIZ LR LR
comp=Z,140nm,15.1s
QIZ LR LR
comp=Z,150nm,11.9s
YOJ Yonaguni jima 32.25 351 P **P** **08 45 55.1 -1.2**
YOJ Yonaguni jima 32.25 351 P **P** **08 45 55.1 -1.2**
YOJ pmax pmax
comp=Z,535nm,2.0s
YOJ Yonaguni jima 32.25 351 P **P** **08 45 55.5 -0.8**
comp=Z,115nm,0.7s
CAN Canberra 33.50 149 P **P** **08 46 10.5 +3.3**
CAN Canberra 33.50 149 P **P** **08 46 10.7 +3.4**
TOO Toolangi 33.69 155 P **P** **08 46 10.9 +2.2**
baz=34,SNR=7.1
TOO Toolangi 33.69 155 P **P** **08 46 11.7 +2.9**
LHMI Lhok Sumawe 33.81 291 P **P** **08 46 10.1 +0.1**
comp=Z,157nm,0.5s
JOW Kunigami 34.19 360 P **P** **08 46 13.1 0.0**
comp=Z,21nm,0.6s,baz=185,slow=7.8,SNR=5.7
JOW LR LR 08 59 23.5
comp=Z,69nm,20.2s,baz=262,slow=35
comp=Z,21nm,0.6s
JOW Kunigami 34.19 360 IAmb IAmb 08 46 16.9
comp=Z,74nm,1.1s
JCJ Chichijima 36.97 21 P **P** **08 46 36.2 -0.6**
comp=Z,35nm,0.3s,baz=90,slow=17,SNR=8.5
JCJ LR LR 08 59 56.4
comp=Z,35nm,18.8s,baz=207,slow=33
comp=Z,35nm,0.3s
JCJ Chichijima 36.97 21 P **P** **08 46 35.3 -1.6**
JCJ Chichijima 36.97 21 P **P** **08 46 36.2 -0.6**
comp=Z,67nm,0.8s
CMAR Chiang Mai Arr 38.86 312 P **P** **08 46 54.3 +1.4**
comp=Z,8.9nm,0.6s,baz=140,slow=6.8,SNR=48
CMAR PcP **PcP** **08 49 01.9 +0.7**
comp=Z,1.6nm,0.4s,baz=149,slow=2.2,SNR=4.4
CMAR LR LR 09 06 52.4
comp=Z,54nm,18.1s,baz=120,slow=42
comp=Z,8.9nm,0.6s
CMAR Chiang Mai Arr 38.86 312 P **P** **08 46 53.0 +0.1**
CHTO Chiang Mai 39.08 312 P **P** **08 46 55.1 +0.4**
CHTO Chiang Mai 39.08 312 P **P** **08 46 55.2 +0.4**
CHTO pmax pmax
comp=Z,95nm,1.9s
CHTO Chiang Mai 39.08 312 P **P** **08 46 55.7 +1.0**
DZM Mont Dzumac 39.42 116 LR LR 09 03 19.8
comp=Z,95nm,18.7s,baz=316,slow=36
WHN Wuhan 40.19 341⇑*iP* **P** **08 47 04.4 +0.7**
WHN pmax pmax
comp=Z,100nm,0.9s
NJ2 Nanjing 40.42 348 *eP* **P** **08 47 09.6 +4.1**
NJ2 pmax pmax
comp=Z,12nm,0.5s
KMI Kunming 40.95 323⇑P **P** **08 47 11.4 +1.1**
ENH Enshi 41.75 335 P **P** **08 47 16.3 -0.2**
PZH PanZhiHua 42.58 324 P **P** **08 47 23.8 +0.4**
PZH pmax pmax
comp=Z,30nm,0.7s
PZH pmax pmax
comp=Z,110nm,3.5s
NAWB Namwon 42.76 359 P **P** **08 47 25.0 +0.5**
TJN Taejon 43.71 359⇑*iP* **P** **08 47 31.6 -0.6**
LYN LuoYang 44.49 341⇓P **P** **08 47 38.3 -0.2**
LYN pmax pmax
comp=Z,30nm,0.9s
LYN pmax pmax
comp=Z,150nm,4.5s
KSAR Wonju Array Be 44.77 359 P **P** **08 47 40.9 +0.3**
KSAR Wonju Array Be 44.77 359 P **P** **08 47 40.9 +0.3**
KSRS Korea Array 44.78 360 P **P** **08 47 41.5 +0.8**
comp=Z,12nm,0.6s,baz=178,slow=9.2,SNR=51
KSRS PcP **PcP** **08 49 21.1 +0.7**
comp=Z,1.5nm,0.7s,baz=187,slow=3.1,SNR=4.7
comp=Z,12nm,0.6s
TIA Tai'an 44.80 347⇑P **P** **08 47 39.8 -1.1**
TIA pmax pmax
comp=Z,10.0nm,1.4s
KS19 Wonju Array Si 44.83 359 P **P** **08 47 41.9 +0.8**
KS19 IAmb IAmb 08 47 45.4
comp=Z,65nm,1.8s
MAJO Matsushiro 44.83 11 P **P** **08 47 40.4 -0.8**
MAJO Matsushiro 44.83 11 P **P** **08 47 40.4 -0.8**
MAJO pmax pmax
comp=Z,13nm,0.7s
MAJO Matsushiro 44.83 11 P **P** **08 47 40.0 -1.2**
MJAR Matsushiro Arr 44.83 11 P **P** **08 47 39.5 -1.7**
comp=Z,6.2nm,0.6s,baz=167,slow=9.2,SNR=27
comp=Z,6.2nm,0.6s
MJAR Matsushiro Arr 44.83 11 P **P** **08 47 39.7 -1.5**
MJAR Matsushiro Arr 44.83 11 P **P** **08 47 39.7 -1.5**
MJAR pmax pmax
comp=Z,13nm,1.6s
MJB9 Matsu-Tunnel 44.84 11 P **P** **08 47 40.4 -0.8**
CD2 Chengdu 44.92 330 P **P** **08 47 42.6 +0.6**
CD2 pP pP 08 48 13.1 +0.6
CD2 PP **PP** **08 49 28.8 -1.1**
CD2 S **S** **08 54 12.4 +2.8**
CD2 sS sS 08 55 07.6 +4.5
CD2 pmax pmax
comp=Z,10.0nm,0.7s
CD2 pmax pmax
comp=Z,90nm,7.6s
CD2 LR LR
comp=Z,260nm,19.9s
CD2 LR LR
comp=Z,150nm,15.2s
XAN Xi'an 45.28 337⇑*iP* **P** **08 47 43.8 -1.0**
XAN pP pwP 08 48 21.5 +1.3
XAN sP sP 08 48 39.5 +8.7
XAN pmax pmax
comp=Z,68nm,0.7s
XAN LR LR
comp=Z,150nm,16.5s
XAN LR LR
comp=Z,130nm,15.8s
XAN LR LR
comp=Z,150nm,16.5s
XAN Xi'an 45.28 337 P **P** **08 47 44.0 -0.8**
SEHB SEOHWA 45.59 360 P **P** **08 47 48.6 +1.5**
HNS HongShan 46.51 345⇑P **P** **08 47 53.6 -0.6**
HNS pmax pmax
comp=Z,59nm,1.1s
JMM Marumori 46.66 14 P **P** **08 47 55.1 -0.3**
JMM IAmb IAmb 08 47 58.1
comp=Z,25nm,0.7s
SHL Shillong 48.39 314 P **P** **08 48 08.9 -0.4**
SHL IAmb IAmb 08 48 12.0
comp=Z,33nm,0.7s
SHL Shillong 48.39 314 P **P** **08 48 08.9 -0.4**
SHL pmax pmax
comp=Z,33nm,0.7s
BJT Baijiatuau 48.66 348 P **P** **08 48 10.8 0.0**
BJI Beijing 48.68 348 P **P** **08 48 10.6 -0.3**
BJI pmax pmax
comp=Z,32nm,1.1s
BJI pmax pmax
comp=Z,87nm,3.5s
LZH Lanzhou 49.15 334 *eP* **P** **08 48 15.4 +0.5**
LZH pP pP 08 48 48.3 +2.7
LZH PcP **PcP** **08 49 39.5 +3.3**
LZH pmax pmax
comp=Z,63nm,1.4s
LZH pmax pmax
comp=Z,150nm,4.2s
LZH LR LR
comp=Z,230nm,14.3s
LZH LR LR
comp=Z,270nm,16.8s
LZH LR LR
comp=Z,160nm,16.9s
HHC Hu-ho-hao-te 50.59 344 *eP* **P** **08 48 25.5 -0.1**
HHC pmax pmax
comp=Z,35nm,1.0s
HHC pmax pmax
comp=Z,150nm,4.2s
CN2 Changchun 51.18 357 *eP* **P** **08 48 29.3 -0.5**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
LSA Lhasa 51.49 318 P **P** **08 48 34.0 +1.1**
LSA pmax pmax
comp=Z,41nm,0.8s
LSA Lhasa 51.49 318 P **P** **08 48 33.1 +0.2**
LSA Lhasa 51.49 318 P **P** **08 48 33.2 +0.2**
USA0B Ussuriysk Arra 51.62 3 P **P** **08 48 33.7 +0.6**
USA0B IAmb IAmb 08 48 34.7
comp=Z,18nm,0.6s
USA0B Ussuriysk Arra 51.62 3 P **P** **08 48 33.7 +0.6**
USA0B pmax pmax
comp=Z,18nm,0.6s
USRK Ussuriysk Ar. 51.62 3 P **P** **08 48 33.2 +0.2**
comp=Z,17nm,0.5s,baz=184,slow=7.3,SNR=39
USRK LR LR 09 11 18.7
comp=Z,28nm,19.5s,baz=153,slow=37
comp=Z,17nm,0.5s
RPZ Rata Peaks 51.81 141 P **P** **08 48 37.1 +2.4**
comp=Z,6.7nm,0.6s,baz=235,slow=3.3,SNR=6.4
RPZ LR LR 09 09 53.5
comp=Z,243nm,20.3s,baz=315,slow=35
comp=Z,6.7nm,0.6s
XLT XiLinHaoTe 52.41 349 *eP* **P** **08 48 38.8 -0.2**
XLT pP pP 08 49 11.6 +1.1
XLT sP sP 08 49 26.6 +1.0
XLT S **S** **08 55 53.9 -0.3**
XLT pmax pmax
comp=Z,46nm,1.2s
XLT pmax pmax
comp=Z,68nm,4.8s
TAPN Taplejung 52.45 313 *eP* **P** **08 48 39.4 -0.5**
ASAJ Asahikawa 53.02 13 LR LR 09 13 44.0
comp=Z,23nm,18.6s,baz=180,slow=39
RAMN Ramite 53.03 312 *eP* **P** **08 48 44.1 0.0**
comp=Z,120nm,0.7s
GTA Gaotai 53.69 333⇑P **P** **08 48 48.6 0.0**
GTA pP pP 08 49 20.4 +0.6
GTA PcP **PcP** **08 49 54.3 +1.3**
GTA pmax pmax
comp=Z,28nm,1.4s
GTA pmax pmax
comp=Z,80nm,4.7s
GTA LR LR
comp=Z,130nm,20.4s
GTA LR LR
comp=Z,150nm,17.8s
GTA LR LR
comp=Z,65nm,18.9s
GOMU GeErMu 53.73 326 P **P** **08 48 50.1 +0.9**
GOMU pmax pmax
comp=Z,6.0nm,1.7s
GOMU pmax pmax
comp=Z,69nm,4.7s
JIRN Jiri 53.73 312 *eP* **P** **08 48 49.0 -0.4**
GUN Gumba 54.10 312 *eP* **P** **08 48 51.7 -0.3**
comp=Z,69nm,0.5s
PKI Pulchoki 54.26 312 *eP* **P** **08 48 52.7 -0.5**
PKIN Phulchoki 54.27 312 *eP* **P** **08 48 52.3 -0.9**
comp=Z,42nm,0.5s
HYBB Hyderabad (bro 55.10 297 *eP* **P** **08 48 55.5 -3.6**
HYBB *es*P **sP** **08 49 45.8 +0.4**
HYBB *eP*cP **PcP** **08 49 58.4 -0.4**
KLR Kul'dur 56.62 3 P **P** **08 49 09.5 +0.3**
comp=Z,3.6nm,0.5s,baz=161,slow=9.5,SNR=14
comp=Z,3.6nm,0.5s
KLR Kul'dur 56.62 3*ce*P **P** **08 49 07.2 -2.1**
KLR pmax pmax
comp=Z,17nm,1.6s
ULN Ulaanbaatar 58.30 343 P **P** **08 49 21.8 +0.5**
ULN IAmb IAmb 08 49 24.1
comp=Z,20nm,0.7s
ULN Ulaanbaatar 58.30 343*ce*P **P** **08 49 21.6 +0.3**
ULN pmax pmax
comp=Z,55nm,1.7s
ULN Ulaanbaatar 58.30 343 P **P** **08 49 22.3 +1.1**
SONM Songino Array 58.47 343 P **P** **08 49 22.7 +0.3**
comp=Z,12nm,0.6s,baz=170,slow=7.2,SNR=64
comp=Z,12nm,0.6s
SONM Songino Array 58.47 343 P **P** **08 49 23.4 +1.0**
SONM Songino Array 58.47 343 P **P** **08 49 23.4 +1.0**
SONM pmax pmax
comp=Z,52nm,1.4s
CASY Casey 59.91 188 P **P** **08 49 33.0 +1.1**
ZEA Zeya 61.07 359 *eP* **P** **08 49 40.4 +0.6**
ZEA pmax pmax
comp=Z,20nm,0.5s
WMQ Urumqi 62.98 328 *eP* **P** **08 49 54.1 +1.2**
WMQ pmax pmax
comp=Z,17nm,0.7s
IRK Irkutsk 63.03 344 *eP* **P** **08 49 52.5 -0.5**
IRK pmax pmax
comp=Z,61nm,2.2s
MOY Mondy 63.50 341 *eP* **P** **08 49 57.0 +0.8**
MOY pmax pmax
comp=Z,44nm,2.0s
KNGR Kungurtug, Tuv 63.78 339 *i* P **P** **08 49 58.8 +0.7**
KNGR pmax pmax
comp=Z,14nm,1.3s
PEA0B Petropavlovsk- 65.37 19 P **P** **08 50 09.0 +0.8**
PEA0B IAmb IAmb 08 50 10.1
comp=Z,16nm,0.7s
PEA0B Petropavlovsk- 65.37 19 P **P** **08 50 09.0 +0.8**
PEA0B pmax pmax
comp=Z,16nm,0.7s
PETK Petropavlovsk- 65.37 19 P **P** **08 50 08.4 +0.2**
comp=Z,12nm,0.6s,baz=151,slow=3.4,SNR=27
PETK LR LR 09 15 06.9
comp=Z,40nm,21.7s,baz=209,slow=32
comp=Z,12nm,0.6s
PETK Petropavlovsk- 65.37 19 P **P** **08 50 08.1 -0.1**
BOD Bodaibo 66.19 352 *eP* **P** **08 50 13.9 +0.5**
BOD pmax pmax
comp=Z,21nm,1.7s
CCD Concordia, Ant 67.56 181 P **P** **08 50 24.8 +2.4**
MK31 Makanchi Array 67.81 328 P **P** **08 50 23.9 +0.1**
MK31 IAmb IAmb 08 50 25.3
comp=Z,31nm,1.6s
MK31 Makanchi Array 67.81 328*c iP* **P** **08 50 23.5 -0.4**
MKAR Makanchi Array 67.81 328 P **P** **08 50 24.1 +0.3**
comp=Z,8.5nm,0.5s,baz=119,slow=8.1,SNR=56
MKAR PcP **PcP** **08 50 50.5 +1.0**
comp=Z,4.4nm,0.5s,baz=126,slow=6.4,SNR=5.2
MKAR LR LR 09 22 24.4
comp=Z,27nm,18.4s,baz=113,slow=38
comp=Z,8.5nm,0.5s
MKAR Makanchi Array 67.81 328 P **P** **08 50 23.9 0.0**
MKAR Makanchi Array 67.81 328 *i* P **P** **08 50 23.7 -0.2**
MKAR pmax pmax
comp=Z,9.0nm,0.5s
MAKZ Makanchi 67.98 328 P **P** **08 50 25.2 +0.3**
MAKZ IAmb IAmb 08 50 27.1
comp=Z,44nm,1.6s
MAKZ Makanchi 67.98 328 P **P** **08 50 25.2 +0.3**
MAKZ pmax pmax
comp=Z,44nm,1.7s
MAKZ Makanchi 67.98 328 P **P** **08 50 25.6 +0.6**
YAK Yakutsk 69.39 1 P **P** **08 50 33.0 -0.3**
comp=Z,26nm,0.4s,baz=217,slow=0.9,SNR=10
comp=Z,26nm,0.4s
YAK Yakutsk 69.39 1 P **P** **08 50 33.1 -0.2**
YAK Yakutsk 69.39 1 *eP* **P** **08 50 31.5 -1.8**
YAK pmax pmax
comp=Z,28nm,0.6s
YAK pmax pmax
comp=N,3.0nm,0.8s
YAK pmax pmax
comp=E,4.0nm,0.8s
YAK Yakutsk 69.39 1 P **P** **08 50 32.9 -0.4**
AAK Ala-Archa 69.92 321 P **P** **08 50 37.7 +0.5**
AML Almayashu 70.17 320 P **P** **08 50 40.1 +1.1**
ZALV Zalesovo Beam 71.37 335 P **P** **08 50 45.0 -0.5**
comp=E,7.4nm,0.3s,baz=125,slow=5.0,SNR=18
comp=E,7.4nm,0.3s
ZALV Zalesovo Beam 71.37 335 P **P** **08 50 44.6 -0.9**
ZALV Zalesovo Beam 71.37 335 *i* P **P** **08 50 45.0 -0.5**
ZALV pmax pmax
comp=Z,7.0nm,0.3s
SHEM Shemya Is, Ala 71.52 27 LR LR 09 16 19.7
comp=Z,20nm,21.2s,baz=318,slow=31
VNDA Vanda 72.10 173 P **P** **08 50 51.0 +1.5**
comp=Z,1.9nm,0.5s,baz=321,slow=6.4,SNR=22
comp=Z,1.9nm,0.5s
VNDA Vanda 72.10 173 P **P** **08 50 51.1 +1.5**
VNDA Vanda 72.10 173 P **P** **08 50 51.1 +1.5**
VNDA pmax pmax
comp=Z,12nm,1.6s
KURBB Kurchatov Arra 72.14 329 P **P** **08 50 50.7 +0.5**
comp=Z,34nm,0.6s,baz=132,slow=5.0,SNR=235
comp=Z,34nm,0.6s
KURK Kurchatov 72.15 329 P **P** **08 50 50.1 -0.1**
KURK IAmb IAmb 08 50 51.7
comp=Z,36nm,0.8s
KURK Kurchatov 72.15 329*ce*P **P** **08 50 50.2 0.0**
KURK pmax pmax
comp=Z,69nm,1.3s
SEY Seymchan 72.66 11 LR LR 09 23 12.7
comp=Z,27nm,19.4s,baz=138,slow=36
SEY Seymchan 72.66 11*ce*P **P** **08 50 53.1 +0.1**
SEY pmax pmax
comp=Z,13nm,0.6s
KKAR Karatay Array 72.69 320 P **P** **08 50 54.0 +0.3**
KKAR Karatay Array 72.69 320 P **P** **08 50 54.0 +0.3**
SBA Scott Base 73.01 172 P **P** **08 50 57.4 +2.5**
SBA Scott Base 73.01 172 P **P** **08 50 57.4 +2.5**
SBA pmax pmax
comp=Z,20nm,1.7s
MAW Mawson 73.84 201 P **P** **08 51 01.7 +1.8**
comp=Z,1.6nm,0.5s,baz=62,slow=5.9,SNR=6.5
comp=Z,1.6nm,0.5s
MAW Mawson 73.84 201 IAmb IAmb 08 51 03.4
comp=Z,5.1nm,1.8s
WSAR Wadi Sarin 74.64 297 P **P** **08 51 04.6 -0.9**
comp=Z,4.6nm,0.5s,baz=201,slow=5.1,SNR=11
comp=Z,4.6nm,0.5s
ADK Adak 75.51 32 P **P** **08 51 10.7 +0.9**
ADK IAmb IAmb 08 52 49.1
comp=Z,30nm,1.2s
ADK Adak 75.51 32 P **P** **08 51 10.7 +0.9**
ADK pmax pmax
comp=Z,30nm,1.2s
GSTR Great Sitkin T 75.95 32 P **P** **08 51 13.0 +0.7**
SOHO SOHO 76.73 297 P **P** **08 51 16.7 -0.6**
UOSS Minazif 77.22 298 P **P** **08 51 19.7 -0.4**
UOSS IAmb IAmb 08 52 39.1
comp=Z,64nm,1.8s
UOSS Minazif 77.22 298 P **P** **08 51 19.5 -0.6**
HATD Hatta, Dubai 77.26 297 P **P** **08 51 20.5 +0.2**
MSFE Esma-Masafi 77.37 298 P **P** **08 51 20.7 -0.2**
BANOM Banah 77.39 299 P **P** **08 51 20.4 -0.6**
SHME Shamm 77.56 299 P **P** **08 51 22.2 +0.3**
NAZ Nazwa, Dubai 77.71 298 P **P** **08 51 22.6 -0.2**
BRVK Borovoye 77.74 328 P **P** **08 51 21.8 -0.5**
BRVK IAmb IAmb 08 51 23.6
comp=Z,18nm,0.9s
BRVK Borovoye 77.74 328*ce*P **P** **08 51 22.3 0.0**
BRVK pmax pmax
comp=Z,18nm,0.8s
ASUD Al Ashush, Dub 77.91 297 P **P** **08 51 24.2 +0.3**
TIXI Tiksi 79.04 0 LR LR 09 28 33.6
comp=Z,20nm,18.1s,baz=182,slow=37
TIXI Tiksi 79.04 0*ce*P **P** **08 51 28.5 -0.6**
TIXI pmax pmax
comp=Z,10.0nm,0.6s
OPO Ambohidratompo 79.29 253 P **P** **08 51 32.0 +0.2**
comp=Z,5.7nm,0.6s,baz=55,slow=5.6,SNR=8.2
comp=Z,5.7nm,0.6s
VOI Vohitsoka 79.42 249 P **P** **08 51 32.8 +0.4**
NRIK Noril'sk 81.71 346 P **P** **08 51 43.1 -0.2**
comp=Z,6.4nm,0.3s,baz=115,slow=5.7,SNR=15
NRIK LR LR 09 32 40.7
comp=Z,38nm,18.5s,baz=54,slow=39
comp=Z,6.4nm,0.3s
NRIK Noril'sk 81.71 346 P **P** **08 51 43.4 +0.1**
NRIK Noril'sk 81.71 346*ce*P **P** **08 51 43.2 -0.2**
NRIK pmax pmax
comp=Z,12nm,0.9s
ABKAR Akbulak array 81.93 322 P **P** **08 51 44.3 -0.7**
ABKAR Akbulak array 81.93 322 P **P** **08 51 43.7 -1.3**
ABKAR IAmb IAmb 08 51 49.5
comp=Z,10nm,0.9s
AKTO Aktyubinsk 83.52 323 P **P** **08 51 52.6 -0.6**
comp=Z,5.5nm,0.5s,baz=88,slow=7.7,SNR=6.7
comp=Z,5.5nm,0.5s
GAMB Gambell 84.06 23 P **P** **08 51 55.4 -0.2**
GAMB IAmb IAmb 08 51 57.9
comp=Z,10nm,0.6s
SVE Sverdlovsk 84.40 329 *eP* **P** **08 51 57.6 +0.1**
SVE pmax pmax
comp=Z,36nm,0.6s
ARU Arti 85.32 328 P **P** **08 52 01.2 -0.8**
comp=Z,16nm,0.5s,baz=154,slow=2.1,SNR=15
comp=Z,16nm,0.5s
ARU Arti 85.32 328 P **P** **08 52 02.0 0.0**
ARU IAmb IAmb 08 52 02.8
comp=Z,16nm,0.7s
ARU Arti 85.32 328*c iP* **P** **08 52 01.4 -0.7**
ARU S **S** **09 02 14.8 -6.0**
ARU SS **SS** **09 07 52.1 -6.7**
ARU pmax pmax
comp=Z,16nm,0.6s
RAYN Ar Rayn 86.47 294 P **P** **08 52 07.9 -0.7**
TTA Tatalina 90.21 26 P **P** **08 52 25.3 -0.1**
TTA IAmb IAmb 08 52 26.5
comp=Z,26nm,1.9s
TTA Tatalina 90.21 26 P **P** **08 52 25.3 -0.1**
TTA pmax pmax
comp=Z,26nm,1.9s
L19K White Mountain 90.52 27 P **P** **08 52 27.1 +0.3**
L19K IAmb IAmb 08 53 32.5
comp=Z,37nm,1.9s
KDAK Kodiak Island 90.55 32 P **P** **08 52 26.4 -0.5**
comp=Z,6.3nm,0.7s,baz=252,slow=8.4,SNR=4.1
KDAK LR LR 09 29 30.0
comp=Z,46nm,19.6s,baz=189,slow=33
comp=Z,6.3nm,0.7s
K20K Telida 91.17 26 P **P** **08 52 30.6 +0.8**
TROLL Troll, Antarti 93.22 195 P **P** **08 52 41.5 +2.1**
RND Reindeer 93.48 27 P **P** **08 52 39.6 -0.9**
RND IAmb IAmb 08 52 40.8
comp=Z,9.9nm,0.7s
RND Reindeer 93.48 27 P **P** **08 52 39.6 -0.9**
RND pmax pmax
comp=Z,10.0nm,0.7s
I23K Minto, Yukon-K 93.57 25 P **P** **08 52 40.7 -0.1**

I23K					IAmb	IAmb	08 52 41.5		
	comp=Z,27nm,1.8s								
BELA	**Belgrano 2**	**94.17**	**184**		P	**P**	**08 52 43.8**	**+0.3**
BELA					IAmb	IAmb	08 53 58.5		
	comp=Z,15nm,1.7s								
ILAR	**Eielson Array**	**94.55**	**25**		P	**P**	**08 52 44.8**	**-0.5**
	comp=Z,0.6nm,0.5s,baz=248,slow=5.3,SNR=10								
ILAR					PKKP	**PKKPdf**	**09 09 43.8**	**-1.6**	
	comp=Z,0.3nm,0.6s,baz=48,slow=0.3,SNR=6.5								
	comp=Z,0.6nm,0.5s								
SNAA	**Sanae**	**94.74**	**194**		P	**P**	**08 52 48.1**	**+1.8**	
SNAA	**Sanae**	**94.74**	**194**			**P**	**08 52 47.5**	**+1.2**	
SNAA					IAmb	IAmb	08 55 19.9		
	comp=Z,20nm,1.8s								
SNAA	**Sanae**	**94.74**	**194**		P	**P**	**08 52 47.5**	**+1.2**	
SNAA					pmax	pmax			
	comp=Z,20nm,1.8s								
BMAR	**Burnt Mountain**	**95.80**	**23**		P	**P**	**08 52 51.3**	**+0.3**	
J26L	**Joseph Creek**	**95.94**	**26**		P	**P**	**08 52 51.4**	**-0.4**	
J26L					IAmb	IAmb	08 52 52.5		
	comp=Z,2.6nm,0.7s								
KLMR	**Klimovskoe**	**95.97**	**331**	*e*	P	**P**	**08 52 48.2**	**-3.6**	
KLMR					pmax	pmax			
	comp=Z,5.0nm,0.6s								
KLMR	**Klimovskoe**	**95.97**	**331**	*e*	P	**P**	**08 52 48.3**	**-3.6**	
KLMR					AMP		08 52 50.6		
	comp=Z,5.0nm,0.6s								
EIL	**Elat**	**96.63**	**299**		LR	LR	09 46 27.1		
	comp=Z,34nm,18.1s,baz=89,slow=42								
BOSA	**Boshof**	**97.77**	**240**		LR	LR	09 33 06.7		
	comp=Z,38nm,18.0s,baz=184,slow=33								
LBTB	**Lobatse**	**98.26**	**243**		LR	LR	09 30 24.1		
	comp=Z,24nm,20.8s,baz=113,slow=31								
ARCES	**ARCESS Array B**	**101.53**	**340**		P	**Pdif**	**08 53 15.3**	**-1.3**	
	comp=Z,1.9nm,0.5s,baz=78,slow=6.4,SNR=15								
ARCES					PKiKP	**PKiKP**	**08 57 39.1**	**-0.6**	
	comp=Z,0.9nm,0.7s,baz=104,slow=2.9,SNR=6.2								
ARCES	**ARCESS Array B**	**101.53**	**340**		IAmb	IAmb	08 53 31.0		
	comp=Z,5.0nm,1.1s								
ARCES	**ARCESS Array B**	**101.53**	**340**		P	**Pdif**	**08 53 14.9**	**-1.7**	
FINES	**FINESS Array B**	**102.46**	**331**		P	**Pdif**	**08 53 19.6**	**-1.3**	
	comp=Z,2.0nm,0.7s,baz=64,slow=4.4,SNR=3.7								
FINES					PKiKP	**PKiKP**	**08 57 41.6**	**+0.1**	
	comp=Z,1.4nm,0.7s,baz=116,slow=3.2,SNR=6.1								
GERES	**GERESS Array B**	**111.79**	**320**		PKiKP	**PKiKP**	**08 57 58.8**	**-0.7**	
	comp=Z,1.9nm,0.6s,baz=51,slow=4.3,SNR=11								
NVAR	**Mina Array Bea**	**112.92**	**52**		PKiKP	**PKiKP**	**08 58 03.1**	**+1.0**	
	comp=Z,0.4nm,0.6s,baz=253,slow=2.1,SNR=5.6								
PDAR	**Pinedale Array**	**118.44**	**45**		PKP	**PKiKP**	**08 58 13.0**	**+0.4**	
	comp=Z,1.3nm,0.7s,baz=263,slow=1.3,SNR=13								
PDAR					PKKPab	**PKKPbc**	**09 08 31.1**	**-0.5**	
	comp=Z,0.8nm,0.6s,baz=118,slow=5.7,SNR=8.4								
ULM	**Lac du Bonnet**	**123.80**	**33**		PKP	**PKPdf**	**08 58 21.8**	**-0.6**	
	comp=Z,3.2nm,0.6s,baz=325,slow=2.6,SNR=7.0								
TORD	**Torodi Ar. Bea**	**127.31**	**281**		PKP	**PKPdf**	**08 58 29.9**	**-0.1**	
	comp=Z,4.0nm,0.6s,baz=74,slow=1.8,SNR=26								
PLCA	**Paso Flores**	**128.89**	**162**		PKP	**PKiKP**	**08 58 33.9**	**+0.6**	
	comp=Z,1.7nm,0.7s,baz=298,slow=2.8,SNR=10.0								
SCHQ	**Schefferville**	**131.31**	**12**		PKP	**PKiKP**	**08 58 37.4**	**-0.1**	
	comp=Z,2.2nm,0.5s,baz=340,slow=2.3,SNR=7.1								
SCHQ					SKPbc	**SKPbc**	**09 01 47.5**	**-1.2**	
	comp=Z,6.9nm,0.9s,baz=38,slow=7.2,SNR=5.5								
KIC	**Kosan Boka**	**133.44**	**272**	⇑*e*	PKP1	**PKPdf**	**08 58 41.9**	**+0.2**	
	comp=Z,10nm,0.6s								
DBIC	**Dimbokro**	**133.57**	**272**		PKP	**PKPdf**	**08 58 42.1**	**+0.2**	
	comp=Z,4.7nm,0.5s,baz=113,slow=2.1,SNR=8.2								
DBIC					SKPbc	**SKPbc**	**09 01 56.5**	**-1.3**	
	comp=Z,2.9nm,0.6s,baz=118,slow=4.2,SNR=4.2								
LIC	**Lamto**	**133.71**	**271**	⇑*e*	PKP1	**PKPdf**	**08 58 42.8**	**+0.6**	
	comp=Z,1.1nm,0.2s								
TIC	**Toumodi**	**133.73**	**272**	⇑*e*	PKP1	**PKPdf**	**08 58 42.8**	**+0.5**	
	comp=Z,3.3nm,0.3s								
SADO	**Sadowa**	**135.90**	**28**		SKPbc	**SKPbc**	**09 02 03.2**	**-1.1**	
	comp=Z,2.6nm,0.4s,baz=333,slow=4.3,SNR=6.1								
TKL	**Tuckaleechee C**	**139.43**	**42**		PKP	**PKPdf**	**08 58 52.3**	**+0.1**	
	comp=Z,2.7nm,0.4s,baz=182,slow=6.5,SNR=8.3								
CPUP	**Villa Florida**	**145.87**	**171**		PKPbc	**PKPbc**	**08 59 04.7**	**0.0**	
	comp=Z,7.3nm,1.0s,baz=157,slow=3.1,SNR=10								
JTS	**Las Juntas de**	**147.00**	**83**		PKPbc	**PKPab**	**08 59 10.0**	**-0.1**	
	comp=Z,7.9nm,0.7s,baz=290,slow=1.3,SNR=8.3								
JTS	**Las Juntas de**	**147.00**	**83**		PKP2	**PKPab**	**08 59 10.0**	**-0.1**	
LPAZ	**La Paz**	**151.24**	**146**		PKPbc	**PKiKP**	**08 59 20.9**	**+0.8**	
	comp=Z,4.4nm,0.4s,baz=159,slow=6.1,SNR=35								
LPAZ	**La Paz**	**151.24**	**146**		PKiKP	**PKiKP**	**08 59 21.0**	**+0.8**	

*IDC **17** 08:45:37.1±3.6, 36°.29N×71°.34E, h73km±32km, mb3.8/8, mbtmp4.2/13, Error ellipse: s-maj=28.9km s-min=20.3km az=3.0*
*NEIC **17** 08:45:41.3±2.3, 36°.57N±0°.09×71°.2E±0°.1, h104km±5km, mb4.2/11, Error ellipse: s-maj=15.7km s-min=9.8km az=136.0*
*NNC **17** 08:45:42.8±2.6, 36°.82N×70°.88E, h94km±54km, mb4.1, mpv4.6, Error ellipse: s-maj=25.5km s-min=12.9km az=148.0*

ISC 17 08:45:39.6±0.5, 36°.39N±0°.05×71°.26E±0°.05, h114km, n68, σ2s64/76, mb4.1/12, 5C-6D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.59**	**225**	Pn	**Pn**	**08 46 24.9**	**+4.4**
GAR	**Garm**	**2.71**	**344**		**Pn**	**08 46 21.4**	**-0.6**
CHGR	**Chuyangaron**	**2.81**	**324**	Pn	**Pn**	**08 46 22.6**	**-0.7**
DRK	**Karamyk**	**3.11**	**8**		**Pn**	**08 46 28.1**	**+0.6**
BTK	**Batken**	**3.68**	**355**	Pn	**Pn**	**08 46 35.3**	**+0.5**
JMU	**Jammu**	**4.74**	**140**	*e*S	**Sn**	**08 47 40.0**	**-2.7**
THN	**Thein Dam**	**5.40**	**136**	*e*P	**Pn**	**08 47 00.5**	**+2.8**
THN				*e*S	**Sn**	**08 47 58.9**	**+0.2**
AML	**Almayashu**	**6.04**	**17**	P	**Pn**	**08 47 06.3**	**-0.5**
	SNR=62						
UCH	**Uchtor**	**6.35**	**22**	P	**Pn**	**08 47 10.7**	**-0.3**
	SNR=20						
BHK	**Bhakra**	**6.55**	**138**	*e*P	**Pn**	**08 47 16.2**	**+2.8**
BHK				*e*S	**Sn**	**08 48 24.7**	**-2.1**
EKS2	**Erkin-Say**	**6.56**	**16**	P	**Pn**	**08 47 13.1**	**-0.4**
	SNR=23						
AAK	**Ala-Archa**	**6.72**	**21**	P	**Pn**	**08 47 15.7**	**0.0**
	SNR=16						
AAK	**Ala-Archa**	**6.72**	**21**	P	**Pn**	**08 47 15.8**	**0.0**
	21nm,0.3s,baz=200,slow=7.2,SNR=20						
AAK				S	**Sn**	**08 48 26.5**	**-4.4**
	12nm,0.5s,baz=324,slow=19,SNR=6.3						
AAK	**Ala-Archa**	**6.72**	**21**		**Pn**	**08 47 15.2**	**-0.5**
KK31	**Karatay Array**	**6.73**	**355**	Pn	**Pn**	**08 47 14.7**	**-1.1**
KK31	**Karatay Array**	**6.73**	**355**	⇓P	**Pn**	**08 47 14.7**	**-1.1**
	34nm,0.4s,baz=180,slow=11,SNR=383						
KK31				⇓S	**Sn**	**08 48 24.8**	**-6.1**
	12nm,0.4s,baz=182,slow=23,SNR=4.8						
KKAR	**Karatay Array**	**6.73**	**355**		**Pn**	**08 47 14.7**	**-1.1**
KKAR	**Karatay Array**	**6.73**	**355**		**Pn**	**08 47 14.6**	**-1.1**
KBK	**Karagaybulak**	**6.88**	**23**	P	**Pn**	**08 47 18.0**	**+0.1**
	SNR=7.3						
BOOM	**Boomskoye usch**	**7.08**	**29**	Pn	**Pn**	**08 47 20.3**	**-0.4**
CHMS	**Chumysh**	**7.13**	**21**	P	**Pn**	**08 47 20.8**	**-0.4**
	SNR=14						
CHMS	**Chumysh**	**7.13**	**21**	⇑P	**Pn**	**08 47 20.2**	**-0.9**
	16nm,0.5s						
CHMS				⇑S	**Sn**	**08 48 36.8**	**-3.8**
	23nm,0.5s						
SMLA	**Simla**	**7.19**	**135**	*e*P	**Pn**	**08 47 22.9**	**+0.8**
SMLA				*e*S	**Sn**	**08 48 39.5**	**-2.6**
SMLA				IAML		08 48 45.3	
	comp=N,248nm,0.7s						
SMLA				IAML		08 48 45.7	
	comp=E,225nm,0.6s						
USP	**Ospenovka**	**7.30**	**19**	P	**Pn**	**08 47 23.2**	**-0.3**
	SNR=16						
TKM2	**Tokmak 2**	**7.33**	**26**	P	**Pn**	**08 47 23.8**	**-0.3**
	SNR=22						
TKM2	**Tokmak 2**	**7.33**	**26**	⇓P	**Pn**	**08 47 23.3**	**-0.8**
	comp=E,16nm,0.5s						
TKM2				⇓S	**Sn**	**08 48 43.7**	**-2.0**
	comp=E,18nm,1.1s						
KDJ	**Kajisay**	**7.34**	**37**	Pn	**Pn**	**08 47 24.8**	**+0.6**
TARG	**Taragay, Kyrgy**	**7.37**	**42**	Pn	**Pn**	**08 47 24.6**	**-0.1**
DDI	**Dehra Dun**	**8.30**	**135**	*e*P	**Pn**	**08 47 38.9**	**+1.8**
DDI				*e*S	**Sn**	**08 49 06.1**	**-3.1**
SONA	**Sohna**	**9.49**	**147**	*e*S	**Sn**	**08 49 34.2**	**-3.9**
PTH	**Pithoragarh**	**10.15**	**130**	*e*P	**Pn**	**08 48 02.3**	**0.0**
PTH				*e*S	**Sn**	**08 49 48.9**	**-5.4**
LGTI	**Lohaghat**	**10.24**	**130**	*e*P	**Pn**	**08 48 02.1**	**-1.2**
LGTI				*e*S	Sn	08 49 47.7	-8.4
AJM	**Ajmer**	**10.29**	**163**	*e*S	Sn	08 49 49.4	-8.2
GEYT	**Alibeck**	**10.61**	**282**	P	**Pn**	**08 48 06.8**	**-1.5**
	comp=E,10nm,0.4s,baz=119,slow=11,SNR=21						
GEYT				S	**Sn**	**08 49 58.9**	**-6.2**
	comp=E,5.7nm,0.4s,baz=72,slow=41,SNR=5.1						
GYA0B	**ALIBECK ARRAY**	**10.61**	**282**	Pn	**Pn**	**08 48 06.7**	**-1.6**
GYA0B	**ALIBECK ARRAY**	**10.61**	**282**	⇑P	**Pn**	**08 48 06.5**	**-1.8**
GYA0B				⇑S	**Sn**	**08 49 58.8**	**-6.3**
JHNI	**Jhansi**	**12.55**	**148**	*e*S	**Sn**	**08 50 45.5**	**-6.7**
MK31	**Makanchi Array**	**13.26**	**35**		**Pn**	**08 48 42.3**	**-0.9**
MKAR	**Makanchi Array**	**13.26**	**35**	P	**Pn**	**08 48 41.8**	**-1.4**
	comp=E,1.0nm,0.7s,baz=221,slow=13,SNR=6.3						
BHPL	**Bhopal**	**14.15**	**156**	*e*S	**Sn**	**08 51 23.6**	**-7.4**
KURBB	**Kurchatov Arra**	**15.16**	**18**	P	**Pn**	**08 49 04.4**	**-3.1**
	comp=E,0.3nm,0.4s,baz=211,slow=11,SNR=2.7						
AB31	**Akbulak array**	**15.28**	**331**	⇓P	**Pn**	**08 49 06.7**	**-2.3**
	comp=E,3.9nm,0.3s,baz=138,slow=13,SNR=220						
AB31				S	Sn	08 51 45.4	-13
	comp=E,6.7nm,0.7s,baz=154,slow=23,SNR=14						
ABKAR	**Akbulak array**	**15.28**	**331**		**Pn**	**08 49 06.8**	**-2.2**
ABKAR				IAmb	IAmb	08 49 08.4	
	comp=Z,12nm,0.3s						
ABKAR	**Akbulak array**	**15.28**	**331**		**Pn**	**08 49 06.8**	**-2.2**
BRVK	**Borovoye**	**16.68**	**358**		**Pn**	**08 49 24.8**	**-1.5**
BRVK	**Borovoye**	**16.68**	**358**	⇑P	**Pn**	**08 49 26.1**	**-0.2**
	comp=Z,4.9nm,0.9s						
AKTO	**Aktyubinsk**	**16.98**	**330**	P	**P**	**08 49 30.1**	**+0.1**
	comp=Z,5.7nm,0.3s,baz=132,slow=8.5,SNR=32						
AKTO	**Aktyubinsk**	**16.98**	**330**	⇓P	**Pn**	**08 49 29.6**	**-0.4**
	comp=Z,14nm,0.8s						
ZALV	**Zalesovo Beam**	**19.93**	**24**	P	**P**	**08 50 02.1**	**0.0**
	comp=Z,5.6nm,0.3s,baz=211,slow=10,SNR=20						
ZALV	**Zalesovo Beam**	**19.93**	**24**	P	**P**	**08 50 02.4**	**+0.3**
ARU	**Arti**	**21.81**	**341**	P	**P**	**08 50 23.9**	**+1.7**
	comp=Z,5.3nm,0.2s,baz=162,slow=3.9,SNR=4.6						
	comp=Z,5.3nm,0.2s						
ARU	**Arti**	**21.81**	**341**	IAmb	IAmb	08 50 26.6	
	comp=Z,14nm,1.4s						
KBZ	**Khabaz**	**22.84**	**297**	P	**P**	**08 50 36.3**	**+3.4**
	comp=Z,1.9nm,0.6s,baz=76,slow=8.4,SNR=4.1						
	comp=Z,1.9nm,0.6s						
BRTR	**Keskin Array B**	**29.67**	**288**	P	P	08 51 40.1	+5.5
	comp=Z,0.7nm,0.6s,baz=107,slow=10,SNR=5.0						
AKASG	**Malin Array Be**	**33.18**	**309**	P	**P**	**08 52 08.3**	**+3.3**
	comp=Z,1.7nm,0.5s,baz=80,slow=7.4,SNR=14						
	comp=Z,1.7nm,0.5s						
AKAS	**Kas**	**33.38**	**282**	P	**P**	**08 52 06.4**	**-0.8**
FIA1	**FINESS Array S**	**37.69**	**326**	P	**P**	**08 52 45.9**	**+2.4**
FINES	**FINESS Array B**	**37.69**	**326**	P	**P**	**08 52 46.7**	**+3.2**
	comp=Z,2.6nm,0.3s,baz=120,slow=9.8,SNR=21						
	comp=Z,2.6nm,0.3s						
FINES	**FINESS Array B**	**37.69**	**326**	P	**P**	**08 52 46.5**	**+3.0**
NC405	**NORSAR Array S**	**44.36**	**323**	P	**P**	**08 53 40.8**	**+2.7**
NC405				IAmb	IAmb	08 53 49.6	
	comp=Z,9.5nm,1.1s						
NB2	**NORSAR Subarra**	**44.60**	**323**	P	**P**	**08 53 42.6**	**+2.5**
	comp=Z,3.8nm,0.4s,baz=96,slow=7.9						
NOA	**NORSAR Array B**	**44.60**	**323**	P	**P**	**08 53 42.8**	**+2.7**
	comp=Z,3.8nm,0.4s,baz=96,slow=7.7,SNR=29						
	comp=Z,3.8nm,0.4s						
ESDC	**Sonseca Array**	**57.70**	**298**	P	**P**	**08 55 19.2**	**+0.9**
	comp=Z,0.4nm,0.4s,baz=51,slow=8.4,SNR=2.1						
	comp=Z,0.4nm,0.4s						
TOA0	**Torodi Ar. Sit**	**65.93**	**269**	P	**P**	**08 56 15.9**	**+2.2**
TOA0				IAmb	IAmb	08 56 26.5	
	comp=Z,5.3nm,1.4s						
TORD	**Torodi Ar. Bea**	**65.93**	**269**	P	**P**	**08 56 15.8**	**+2.1**
	comp=Z,1.6nm,0.6s,baz=52,slow=5.8,SNR=20						
	comp=Z,1.6nm,0.6s						
TORD	**Torodi Ar. Bea**	**65.93**	**269**	P	**P**	**08 56 15.5**	**+1.8**
TORD				IAmb	IAmb	08 56 16.2	
	comp=Z,1.2nm,0.7s						
TOLK	**Toolik Lake Re**	**70.97**	**15**	P	**P**	**08 56 47.0**	**+2.7**
TOLK				IAmb	IAmb	08 56 57.6	
	comp=Z,2.3nm,0.9s						
WRA	**Warramunga Arr**	**81.75**	**122**	P	**P**	**08 57 48.0**	**+2.2**
	comp=Z,0.2nm,0.4s,baz=325,slow=4.8,SNR=7.5						
	comp=Z,0.2nm,0.4s						

*NEIC **17** 08:56:28.6±1.2, 5°.71S±0°.08×151°.03E±0°.06, h88km±9km, mb4.3/14, Error ellipse: s-maj=11.9km s-min=7.9km az=174.0*
*IDC **17** 08:56:28.5±1.2, 5°.74S×151°.17E, h103km±11km, mb3.8/8, mbtmp4.1/9, MS3.3/2, Error ellipse: s-maj=27.1km s-min=12.1km az=115.0*

ISC 17 08:56:28.7±0.6, 5°.71S±0°.07×151°.02E±0°.08, h100km, n29, σ1s26/29, mb4.1/16, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.72**	**36**	P	**Pn**	**08 56 57.0**	**-0.7**
	354nm,0.4s,baz=227,slow=1.6,SNR=96						
KRVT				S	**Sn**	**08 57 18.7**	**-1.1**
	351nm,0.5s,baz=297,slow=21,SNR=13						
RABL	**Rabaul**	**1.89**	**37**		**Pn**	**08 56 59.2**	**-0.7**
MANU	**Manus Island**	**5.15**	**315**	Pn	**Pn**	**08 57 43.5**	**0.0**
PMG	**Port Moresby**	**5.30**	**226**	P	**Pn**	**08 57 45.4**	**-0.2**
	42nm,0.5s,baz=40,slow=8.5,SNR=19						
PMG				S	**Sn**	**08 58 41.7**	**-3.7**
	200nm,0.5s,baz=38,slow=22,SNR=16						
CTA	**Charters Tower**	**15.02**	**198**	LR	LR	09 04 47.4	
	comp=Z,91nm,19.1s,baz=98,slow=33						
WR0	**Warramunga Arr**	**21.38**	**227**	P	**P**	**09 01 08.1**	**-0.4**
WR0				IAmb	IAmb	09 01 23.4	
	comp=Z,8.1nm,0.8s						
WRAB	**Tennant Creek**	**21.51**	**227**	P	**P**	**09 01 09.0**	**-0.7**
WRAB				IAmb	IAmb	09 01 24.1	
	comp=Z,7.6nm,0.7s						
WRA	**Warramunga Arr**	**21.52**	**227**	P	**P**	**09 01 09.4**	**-0.4**
	comp=Z,3.3nm,0.5s,baz=55,slow=11,SNR=48						
	comp=Z,3.3nm,0.5s						
WRA	**Warramunga Arr**	**21.52**	**227**	P	**P**	**09 01 08.1**	**-1.8**
DZM	**Mont Dzumac**	**22.07**	**139**	P	**P**	**09 01 14.2**	**-1.6**
	comp=Z,7.8nm,0.7s,baz=332,slow=16,SNR=2.6						
	comp=Z,7.8nm,0.7s						
KNRA	**Kununurra**	**23.98**	**244**	P	**P**	**09 01 34.0**	**-0.2**
KNRA				IAmb	IAmb	09 01 56.8	
	comp=Z,6.2nm,0.8s						
AS31	**Alice Springs**	**24.29**	**221**	P	**P**	**09 01 37.3**	**+0.3**
AS31				IAmb	IAmb	09 01 38.5	
	comp=Z,5.3nm,0.5s						
ASAR	**Alice Springs**	**24.29**	**221**	P	**P**	**09 01 37.3**	**+0.3**
STKA	**Stephens Creek**	**27.49**	**198**	P	**P**	**09 02 06.6**	**+1.0**
	comp=Z,4.0nm,0.7s,baz=9.6,slow=8.4,SNR=8.7						
STKA				LR	LR	09 12 23.6	
	comp=Z,78nm,18.4s,baz=32,slow=35						
	comp=Z,4.0nm,0.7s						
STKA	**Stephens Creek**	**27.49**	**198**	P	**P**	**09 02 06.7**	**+1.0**
BBOO	**Buckleboo**	**30.36**	**205**	P	**P**	**09 02 31.9**	**+0.7**
FORT	**Forrest**	**32.97**	**218**	P	**P**	**09 02 54.5**	**+0.4**
BFZ	**Birch Farm**	**41.52**	**151**	P	**P**	**09 04 07.2**	**+1.0**
KSRS	**Korea Array**	**48.04**	**335**	P	**P**	**09 04 58.9**	**+1.0**
	comp=Z,1.5nm,0.6s,baz=153,slow=7.7,SNR=6.6						
	comp=Z,1.5nm,0.6s						
PEA0B	**Petropavlovsk-**	**58.87**	**5**	P	**P**	**09 06 17.5**	**+0.6**
PEA0B				IAmb	IAmb	09 06 38.9	
	comp=Z,6.7nm,1.1s						
PETK	**Petropavlovsk-**	**58.87**	**5**	P	**P**	**09 06 15.9**	**-1.0**
	comp=Z,2.3nm,0.7s,baz=188,slow=9.7,SNR=5.2						
	comp=Z,2.3nm,0.7s						
SONM	**Songino Array**	**66.16**	**329**	P	**P**	**09 07 06.2**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=121,slow=5.6,SNR=2.3						
	comp=Z,0.4nm,0.3s						
SONM	**Songino Array**	**66.16**	**329**	IAmb	IAmb	09 07 08.4	
	comp=Z,2.6nm,1.3s						
VNDA	**Vanda**	**72.00**	**178**	P	**P**	**09 07 42.4**	**+1.3**
VNDA				IAmb	IAmb	09 07 52.3	
	comp=Z,5.9nm,0.6s						
ILAR	**Eielson Array**	**83.67**	**22**	P	**P**	**09 08 44.5**	**-1.5**
	comp=Z,0.5nm,0.6s,baz=237,slow=5.2,SNR=8.1						
	comp=Z,0.5nm,0.6s						
QSPA	**South Pole Qui**	**84.26**	**180**	P	**P**	**09 08 51.1**	**+2.0**
QSPA				IAmb	IAmb	09 08 54.5	
	comp=Z,4.2nm,1.4s						
M27K	**Edge Creek, AK**	**84.66**	**26**	P	**P**	**09 08 52.2**	**+1.0**
M27K				IAmb	IAmb	09 08 54.9	
	comp=Z,1.9nm,0.7s						
NVAR	**Mina Array Bea**	**94.04**	**52**	P	**P**	**09 09 34.3**	**-2.0**
	comp=Z,0.5nm,0.9s,baz=224,slow=5.0,SNR=2.6						
	comp=Z,0.5nm,0.9s						
TORD	**Torodi Ar. Bea**	**148.87**	**286**	PKPbc	**PKPbc**	**09 16 05.8**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=89,slow=2.6,SNR=9.7						

IDC 17 09:00:09.6±3.6, 52°.31N×35°.04E, h0km, mbtmp3.5/2, ML3.2/2, Error ellipse: s-maj=39.3km s-min=14.5km az=117.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OBN	**Obninsk**	**2.96**	**17**	Sn	Sn	09 01 34.6	+0.7
	0.7nm,0.3s,baz=20,slow=22,SNR=7.5						
AKASG	**Malin Array Be**	**3.97**	**248**	Pn	Pn	09 01 10.1	-1.6
	1.1nm,0.3s,baz=54,slow=13,SNR=4.1						
AKASG				Sn	Sn	09 01 57.9	-0.9
	1.3nm,0.3s,baz=61,slow=23,SNR=2.8						
AKASG				Lg		09 02 15.3	
	1.9nm,0.3s,baz=64,slow=29,SNR=5.9						
I43RU	**DUBNA INFRASON**	**4.60**	**15**	*i*		09 28 18.8	
	baz=198,slow=261,SNR=0.2						
FINES	**FINESS Array B**	**10.38**	**335**	Pn	Pn	09 02 34.3	-5.2
	1.4nm,0.8s,baz=139,slow=16,SNR=1.3						
FINES				Sn	Sn	09 04 26.5	-10
	0.2nm,0.3s,baz=159,slow=20,SNR=1.4						
ARCES	**ARCESS Array B**	**17.85**	**349**	P	P	09 04 20.6	+0.9
	0.1nm,0.3s,baz=168,slow=14,SNR=9.7						
	0.5nm,0.4s						

IDC 17 09:05:38.3±4.1, 53°.41N×87°.28E, h0km, mbtmp2.6/2, ML2.4/2, Error ellipse: s-maj=47.3km s-min=23.1km az=77.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.56**	**291**	*i*		09 15 51.1	
	baz=108,slow=305,SNR=3.7						
ZALV	**Zalesovo Beam**	**1.56**	**291**	Pg	Pn	09 06 07.5	+0.2
	0.8nm,0.3s,baz=113,slow=10,SNR=5.6						
KURBB	**Kurchatov Arra**	**6.08**	**246**	Pn	Pn	09 07 08.9	-0.5
	0.1nm,0.3s,baz=46,slow=11,SNR=4.0						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**7.36**	**208**	Pn	Pn	09 07 28.8	+1.8
	0.1nm,0.3s,baz=29,slow=13,SNR=4.4						
	0.1nm,0.3s						

*NNC **17** 09:05:48.7±6.9, 54°.64N×87°.35E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=73.0km s-min=51.3km az=163.0, Suspected Mining explosion.*
*IDC **17** 09:05:54.5±3.0, 54°.29N×87°.35E, h0km, mbtmp3.4/2, ML3.0/2, Error ellipse: s-maj=26.3km s-min=17.7km az=49.0*

ISC 17 09:05:52.2±4.9, 54°.5N±0°.2×87°.2E±0°.2, h0km, n7, σ2s45/9, 5C-2D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.50**	**249**	*i*		09 14 44.6	
	0.1nm,0.9s,baz=78,slow=319,SNR=2.3						
ZALV	**Zalesovo Beam**	**1.50**	**249**	Pg	**Pg**	**09 06 20.7**	**-0.2**
	1.9nm,0.3s,baz=77,slow=13,SNR=17						
ZALV				Lg	Lg	09 06 43.8	
	2.6nm,0.3s,baz=76,slow=26,SNR=5.9						
KURK	**Kurchatov**	**6.45**	**237**	⇑Pn	**Pn**	**09 07 26.5**	**-1.8**
	3.5nm,0.9s						
KURK				⇑Sn	**Sn**	**09 08 45.3**	**+2.8**
	3.7nm,1.1s						
KURK				⇑Lg	Lg	09 09 17.8	
	9.8nm,0.8s						
KURBB	**Kurchatov Arra**	**6.55**	**237**	Pn	**Pn**	**09 07 32.4**	**+2.6**
	0.1nm,0.3s,baz=55,slow=14,SNR=8.1						
KURBB				Lg	Lg	09 09 21.6	
	0.1nm,0.3s,baz=64,slow=31,SNR=5.8						
	1.9nm,0.5s						
KURBB	**Kurchatov Arra**	**6.55**	**237**	⇓Pn

ISC 17 09:25:24.6±0.5, 6°36S±0.06×155°59E±0.07, h150km, n74, σ1§22/72, mb4.4/24, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**4.04**	**302**		**Pn**	**09 26 25.2**	**-0.2**
KRVT	**Keravat (AS076**	**4.09**	**300**	P	**Pn**	**09 26 25.5**	**-0.6**
	48nm,0.5s,baz=335,slow=3.4,SNR=12						
HNR	**Honiara**	**5.29**	**126**	P	**Pn**	**09 26 41.0**	**-0.8**
	214nm,0.8s,baz=79,slow=3.7,SNR=6.7						
HNR	**Honiara**	**5.29**	**126**	Pn	**Pn**	**09 26 41.5**	**-0.4**
PMG	**Port Moresby**	**8.88**	**250**	P	**Pn**	**09 27 33.8**	**+3.9**
	28nm,0.5s,baz=58,slow=10.0,SNR=11						
PMG				S	**Sn**	**09 29 10.9**	**+2.3**
	49nm,1.1s,baz=177,slow=19,SNR=2.3						
PMG	**Port Moresby**	**8.88**	**250**		**Pn**	**09 27 26.9**	**-2.9**
PMG	**Port Moresby**	**8.88**	**250**	P	Pn	09 27 34.5	+4.6
PMG	**Port Moresby**	**8.88**	**250**	P	Pn	09 27 34.7	+4.8
MTSU	**Mount Surprise**	**16.06**	**222**	P	**P**	**09 29 03.6**	**+0.9**
CTA	**Charters Tower**	**16.39**	**213**	P	**P**	**09 29 07.4**	**+1.2**
	5.7nm,0.8s,baz=90,slow=9.8,SNR=4.4						
CTA	**Charters Tower**	**16.39**	**213**	P	**P**	**09 29 09.0**	**+2.8**
CTAO	**Charters Tower**	**16.39**	**213**		**P**	**09 29 05.9**	**-0.3**
DZM	**Mont Dzumac**	**18.81**	**147**	P	**Pn**	**09 29 34.1**	**-1.1**
	11nm,0.5s,baz=264,slow=7.1,SNR=20						
EIDS	**Eidsvold**	**19.39**	**192**	P	**Pn**	**09 29 40.4**	**-1.4**
QIS	**Mount Isa**	**20.97**	**226**	P	**P**	**09 29 57.8**	**+1.7**
FAKI	**Fak Fak**	**23.51**	**277**	P	**P**	**09 30 20.5**	**-0.8**
FAKI				IAmb	IAmb	09 31 03.1	
	comp=Z,20nm,1.0s						
FAKI	**Fak Fak**	**23.51**	**277**	P	**P**	**09 30 21.3**	**0.0**
KDU	**Kakadu**	**23.64**	**253**	P	**P**	**09 30 21.1**	**-1.3**
ARMA	**Armidale**	**24.22**	**188**	P	**P**	**09 30 28.7**	**+1.1**
ARMA				IAmb	IAmb	09 30 29.1	
	comp=Z,10.0nm,0.8s						
ARMA	**Armidale**	**24.22**	**188**	P	**P**	**09 30 28.3**	**+0.6**
WR0	**Warramunga Arr**	**24.51**	**235**	P	**P**	**09 30 29.9**	**-0.4**
WR0				IAmb	IAmb	09 30 31.8	
	comp=Z,18nm,1.2s						
WB0	**Warramunga Arr**	**24.53**	**235**	P	**P**	**09 30 30.0**	**-0.5**
WB0				IAmb	IAmb	09 30 31.7	
	comp=Z,24nm,1.4s						
WRAB	**Tennant Creek**	**24.65**	**235**	P	**P**	**09 30 30.7**	**-0.8**
WRAB	**Tennant Creek**	**24.65**	**235**	P	**P**	**09 30 31.0**	**-0.6**
WB2	**Warramunga Arr**	**24.66**	**235**	P	**P**	**09 30 31.4**	**-0.2**
WB2				IAmb	IAmb	09 30 37.0	
	comp=Z,7.1nm,0.6s						
WRA	**Warramunga Arr**	**24.66**	**235**	P	**P**	**09 30 31.3**	**-0.4**
	comp=Z,4.6nm,0.6s,baz=58,slow=10.0,SNR=86						
	comp=Z,4.6nm,0.6s						
WRA	**Warramunga Arr**	**24.66**	**235**	P	**P**	**09 30 31.5**	**-0.2**
MTN	**Manton Dam**	**24.95**	**253**	P	**P**	**09 30 35.0**	**+0.7**
MTN				IAmb	IAmb	09 30 37.5	
	comp=Z,18nm,1.2s						
CMSA	**Cobar Meteorol**	**26.71**	**199**	P	**P**	**09 30 50.2**	**+0.2**
H11S3	**WAKE ISLAND Hy**	**27.01**	**24**	T	T	09 59 56.5	
	baz=202,slow=75,SNR=168						
H11S2	**WAKE ISLAND Hy**	**27.02**	**24**	T	T	09 59 55.3	
	baz=202,slow=75,SNR=142						
H11S1	**WAKE ISLAND Hy**	**27.03**	**24**	T	T	09 59 56.5	
	baz=202,slow=75,SNR=113						
KNRA	**Kununurra**	**27.88**	**248**	P	**P**	**09 30 59.5**	**-1.1**
OOD	**Oodnadatta**	**28.48**	**219**	P	**P**	**09 31 05.1**	**-0.7**
STKA	**Stephens Creek**	**28.56**	**205**	P	**P**	**09 31 05.8**	**-0.7**
	comp=Z,1.6nm,0.8s,baz=14,slow=8.0,SNR=5.5						
	comp=Z,1.6nm,0.8s						
STKA	**Stephens Creek**	**28.56**	**205**	P	**P**	**09 31 06.2**	**-0.3**
LCRK	**Leigh Creek**	**29.00**	**212**	P	**P**	**09 31 09.8**	**-0.5**
MULG	**Mulgathing**	**31.25**	**218**	P	**P**	**09 31 28.8**	**-1.4**
BBOO	**Buckleboo**	**31.99**	**212**	P	**P**	**09 31 35.8**	**-0.8**
BBOO	**Buckleboo**	**31.99**	**212**	P	**P**	**09 31 35.9**	**-0.8**
FORT	**Forrest**	**35.46**	**223**	P	**P**	**09 32 06.1**	**-0.6**
FORT	**Forrest**	**35.46**	**223**	P	**P**	**09 32 06.3**	**-0.4**
TOLI2	**Tolitoli**	**35.53**	**281**	P	**P**	**09 32 06.9**	**-0.7**
TOLI2				IAmb	IAmb	09 32 10.0	
	comp=Z,5.3nm,0.7s						
TOLI2	**Tolitoli**	**35.53**	**281**	P	**P**	**09 32 07.7**	**+0.2**
KAPI	**Kappang**	**35.68**	**270**	P	**P**	**09 32 09.0**	**+0.2**
MBWA	**Marble Bar**	**37.69**	**243**	P	**P**	**09 32 24.7**	**-1.1**
MBWA				IAmb	IAmb	09 32 57.5	
	comp=Z,9.6nm,1.2s						
PSA00	**Pilbara Seismi**	**37.71**	**243**	P	**P**	**09 32 25.3**	**-0.7**
PSA00				IAmb	IAmb	09 32 59.9	
	comp=Z,20nm,1.5s						
BKZ	**Black Stump Fm**	**37.72**	**153**	P	**P**	**09 32 25.7**	**-0.1**
THZ	**Tophouse**	**38.47**	**159**		**P**	**09 32 32.1**	**0.0**
TUWZ	**Tuamarina**	**38.56**	**158**	P	**P**	**09 32 33.2**	**+0.4**
MSWZ	**Moikau Station**	**39.06**	**156**	P	**P**	**09 32 36.6**	**-0.4**
KHZ	**Kahutara**	**39.27**	**159**	P	**P**	**09 32 38.8**	**+0.2**
MORW	**Morawa**	**43.61**	**234**	P	**P**	**09 33 13.5**	**-0.7**
MORW				IAmb	IAmb	09 33 14.2	
	comp=Z,28nm,1.5s						
NWAO	**Narrogin (SRO)**	**44.36**	**228**	P	**P**	**09 33 20.0**	**-0.1**
NWAO				IAmb	IAmb	09 33 51.9	
	comp=Z,28nm,1.4s						
MJAR	**Matsushiro Arr**	**45.68**	**340**	P	**P**	**09 33 29.8**	**-0.6**
	comp=Z,1.8nm,0.7s,baz=163,slow=8.5,SNR=6.1						
	comp=Z,1.8nm,0.7s						
MJAR	**Matsushiro Arr**	**45.68**	**340**	P	**P**	**09 33 30.2**	**-0.2**
MAJO	**Matsushiro**	**45.68**	**340**	P	**P**	**09 33 31.4**	**+0.9**
MAJO				IAmb	IAmb	09 34 10.2	
	comp=Z,18nm,1.4s						
MJB9	**Matsu-Tunnel**	**45.68**	**340**	P	**P**	**09 33 31.5**	**+1.0**
MJB9				IAmb	IAmb	09 34 10.2	
	comp=Z,20nm,1.4s						
KLR	**Kul'dur**	**59.14**	**342**	P	**P**	**09 35 08.4**	**-1.0**
	comp=Z,1.4nm,0.6s,baz=58,slow=5.5,SNR=4.7						
KLR				pP	**pP**	**09 35 42.9**	**-1.0**
	comp=Z,4.0nm,1.1s,baz=138,slow=5.9,SNR=4.1						
	comp=Z,1.4nm,0.6s						
CM31	**Chiang Mai Arr**	**61.05**	**295**	P	**P**	**09 35 23.6**	**+0.6**
CMAR	**Chiang Mai Arr**	**61.05**	**295**	pP	pP	09 35 56.8	-2.0
	comp=Z,1.0nm,0.3s,baz=117,slow=4.7,SNR=3.1						
CMAR	**Chiang Mai Arr**	**61.05**	**295**	P	**P**	**09 35 21.7**	**-1.3**
ADK	**Adak**	**62.68**	**19**	P	**P**	**09 35 35.1**	**+1.9**
SONM	**Songino Array**	**69.13**	**327**	P	**P**	**09 36 16.0**	**+1.3**
	comp=Z,1.6nm,0.5s,baz=137,slow=6.6,SNR=11						
	comp=Z,1.6nm,0.5s						
SONM	**Songino Array**	**69.13**	**327**	P	**P**	**09 36 16.8**	**+2.1**
VNDA	**Vanda**	**71.20**	**179**	P	**P**	**09 36 28.0**	**+1.3**
	comp=Z,1.7nm,0.8s,baz=339,slow=6.1,SNR=8.7						
	comp=Z,1.7nm,0.8s						
VNDA	**Vanda**	**71.20**	**179**	IAmb	IAmb	09 36 28.1	
	comp=Z,6.2nm,1.2s						
ILAR	**Eielson Array**	**82.57**	**21**	P	**P**	**09 37 30.4**	**0.0**
	comp=Z,0.8nm,0.5s,baz=247,slow=5.0,SNR=16						
ILAR				pP	**pP**	**09 38 05.8**	**-1.4**
	comp=Z,0.8nm,0.9s,baz=277,slow=4.3,SNR=4.2						
	comp=Z,0.8nm,0.5s						
MKAR	**Makanchi Array**	**83.32**	**319**	P	**P**	**09 37 34.2**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=100,slow=7.9,SNR=4.0						
MKAR				pP	**pP**	**09 38 09.2**	**-3.2**
	comp=Z,0.8nm,0.8s,baz=104,slow=5.1,SNR=3.3						
	comp=Z,0.6nm,0.6s						
NVAR	**Mina Array Bea**	**90.86**	**52**	P	**P**	**09 38 14.3**	**+2.6**
	comp=Z,0.6nm,0.7s,baz=249,slow=3.7,SNR=7.9						
	comp=Z,0.6nm,0.7s						
YKA	**Yellowknife Ar**	**95.50**	**28**	P	**P**	**09 38 33.4**	**+1.3**
	comp=Z,1.2nm,0.6s,baz=269,slow=3.8,SNR=4.8						
	comp=Z,1.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**153.42**	**287**	PKP	**PKPdf**	**09 44 58.7**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=46,slow=4.7,SNR=1.9						
TORD				PKPbc	**PKPbc**	**09 45 05.4**	**-0.9**
	comp=Z,0.7nm,0.5s,baz=25,slow=3.0,SNR=10						
TORD	**Torodi Ar. Bea**	**153.42**	**287**	PKPab	**PKPab**	**09 45 17.9**	**-1.1**
TORD	**Torodi Ar. Bea**	**153.42**	**287**	PKPdf	**PKPdf**	**09 44 58.2**	**-0.3**

IDC 17 09:30:12.0±2.9, 54°25N×86°54E, h0km, mbtmp3.0/2, ML2.9/2, Error ellipse: s-maj=24.6km s-min=14.5km az=53.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.05**	**254**	*i*		09 37 00.0	
	baz=69,slow=318,SNR=3.5						
ZALV	**Zalesovo Beam**	**1.05**	**254**	Pg	Pg	09 30 31.4	-0.8
	1.4nm,0.3s,baz=77,slow=16,SNR=8.3						
ZALV				Lg	Lg	09 30 46.8	
	1.8nm,0.3s,baz=75,slow=29,SNR=7.7						
KURBB	**Kurchatov Arra**	**6.09**	**237**	Pn	Pn	09 31 44.5	+1.2
	0.1nm,0.3s,baz=54,slow=13,SNR=9.3						
	0.7nm,0.4s						
MKAR	**Makanchi Array**	**7.94**	**202**	Pn	Pn	09 32 09.2	+0.6
	0.3nm,0.3s,baz=24,slow=13,SNR=7.6						
MKAR				Lg	Lg	09 34 17.0	
	0.1nm,0.3s,baz=24,slow=26,SNR=3.1						
	0.3nm,0.3s						

IDC 17 09:30:47.2±3.6, 54°27N×87°32E, h0km, mbtmp3.0/2, ML2.3/2, Error ellipse: s-maj=33.2km s-min=20.7km az=51.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.51**	**259**	*i*		09 39 30.0	
	0.1nm,0.8s,baz=78,slow=322,SNR=13						
ZALV	**Zalesovo Beam**	**1.51**	**259**	Pg	Pn	09 31 13.6	-1.8
	0.6nm,0.3s,baz=73,slow=14,SNR=5.9						
ZALV				Lg	Lg	09 31 35.6	
	1.2nm,0.3s,baz=79,slow=25,SNR=2.8						
KURBB	**Kurchatov Arra**	**6.49**	**239**	Pn	Pn	09 32 24.4	+0.5
	baz=55,slow=14,SNR=6.6						
	1.4nm,0.8s						
MKAR	**Makanchi Array**	**8.14**	**205**	Pn	Pn	09 32 48.0	+1.5
	0.1nm,0.3s,baz=24,slow=14,SNR=2.1						
	0.3nm,0.4s						

TAP 17 09:31:44.3, 24°14N×121°64E, h10km, ML1.3, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.03**	**316**	*i* P	Pg	09 31 46.6	+0.4
	baz=314						
ETL				*i* S	Sg	09 31 48.1	+0.6
	baz=314						
NACB	**Ninganchiao**	**0.05**	**307**	*i* P	Pg	09 31 46.8	+0.4
	baz=307						
NACB				*i* S	Sg	09 31 48.7	+0.8
	baz=307						
TWD	**Chiawan**	**0.07**	**215**	*i* P	Pg	09 31 46.9	+0.4
	baz=209						
TWD				*i* S	Sg	09 31 49.1	+0.9
	baz=209						
ETLH	**Xiulin Townshi**	**0.16**	**294**	*eP*	Pb	09 31 48.7	-0.7
	baz=294						

IDC 17 09:32:48.1±9.1, 36°28N×70°99E, h168km±85km, mb3.4/6, mbtmp3.9/8, Error ellipse: s-maj=43.1km s-min=22.2km az=26.0
NEIC 17 09:32:54.5±1.7, 36°61N±0°04×71°0E±0°1, h224km±7km, mb4.2/9, Error ellipse: s-maj=14.6km s-min=3.2km az=110.0
NNC 17 09:32:59.6±3.9, 37°10N×70°99E, h209km±51km, mb2.5, mpv3.5, Error ellipse: s-maj=37.4km s-min=21.2km az=7.0

ISC 17 09:32:53.3±0.7, 36°68N±0°07×71°00E±0°09, h200km, n50, σ1§68/53, mb4.1/10, 2C-5D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**2.38**	**347**		**Pn**	**09 33 39.1**	**+3.2**
CHGR	**Chuyangaron**	**2.46**	**324**		**Pn**	**09 33 39.6**	**+2.8**
KBL	**Kabul**	**2.66**	**217**		**Pn**	**09 33 41.8**	**+2.6**
DRK	**Karamyk**	**2.87**	**13**		**Pn**	**09 33 44.9**	**+3.3**
BTK	**Batken**	**3.38**	**358**		**Pn**	**09 33 51.1**	**+3.6**
CHCP	**Chirah Chowk**	**3.54**	**148**	P	**Pn**	**09 33 51.7**	**+2.3**
THW	**Thamme Wali**	**3.92**	**171**	P	**Pn**	**09 33 56.1**	**+1.9**
SARP	**Sargodha**	**4.94**	**163**	P	**Pn**	**09 34 08.0**	**+1.0**
AML	**Almayashu**	**5.83**	**20**	P	**Pn**	**09 34 20.4**	**+1.7**
	SNR=72						
UCH	**Uchtor**	**6.18**	**25**	P	**Pn**	**09 34 25.0**	**+1.8**
	SNR=24						
EKS2	**Erkin-Say**	**6.35**	**19**	P	**Pn**	**09 34 27.1**	**+2.0**
	SNR=7.0						
KK31	**Karatay Array**	**6.43**	**357**		**Pn**	**09 34 27.4**	**+1.4**
KK31	**Karatay Array**	**6.43**	**357**	⇓P	**Pn**	**09 34 27.2**	**+1.2**
	5.6nm,0.3s,baz=182,slow=12,SNR=114						
KK31				⇑S	**Sn**	**09 35 37.7**	**-1.9**
	4.6nm,0.3s,baz=181,slow=21,SNR=7.8						
KKAR	**Karatay Array**	**6.43**	**357**		**Pn**	**09 34 27.5**	**+1.5**
AAK	**Ala-Archa**	**6.54**	**23**	P	**Pn**	**09 34 29.6**	**+2.1**
	SNR=8.3						
AAK	**Ala-Archa**	**6.54**	**23**		**Pn**	**09 34 29.1**	**+1.5**
CHMS	**Chumysh**	**6.94**	**23**	⇑P	**Pn**	**09 34 34.2**	**+1.5**
	3.3nm,0.3s						
CHMS				⇓S	**Sn**	**09 35 48.4**	**-3.3**
	3.6nm,0.5s						
BOOM	**Boomskoye usch**	**6.95**	**32**	Pn	**Pn**	**09 34 35.0**	**+2.1**
USP	**Ospenovka**	**7.11**	**21**	P	**Pn**	**09 34 36.5**	**+1.7**
	SNR=11						
TKM2	**Tokmak 2**	**7.17**	**28**	P	**Pn**	**09 34 37.4**	**+1.6**
	SNR=9.9						
TKM2	**Tokmak 2**	**7.17**	**28**	⇓P	**Pn**	**09 34 36.9**	**+1.1**
	0.1nm,0.3s						
TKM2				⇓S	**Sn**	**09 35 56.2**	**-1.1**
	10nm,0.9s						
KDJ	**Kajisay**	**7.25**	**39**	Pn	**Pn**	**09 34 38.5**	**+1.7**
TARG	**Taragay, Kyrgy**	**7.31**	**44**	Pn	**Pn**	**09 34 39.5**	**+1.7**
MAKZ	**Makanchi**	**13.01**	**36**	Pn	**Pn**	**09 35 51.4**	**+0.6**
MK31	**Makanchi Array**	**13.15**	**36**	Pn	**Pn**	**09 35 53.0**	**+0.5**
MK31	**Makanchi Array**	**13.15**	**36**	P	**P**	**09 35 56.5**	**+1.0**
	1.1nm,0.8s,baz=212,slow=9.8,SNR=5.0						
MKAR	**Makanchi Array**	**13.15**	**36**	P	**Pn**	**09 35 52.6**	**+0.1**
	0.3nm,0.3s,baz=221,slow=16,SNR=5.4						
AB31	**Akbulak array**	**14.93**	**331**	P	**Pn**	**09 36 14.3**	**-0.1**
	0.6nm,0.3s,baz=142,slow=12,SNR=32						
ABKAR	**Akbulak array**	**14.93**	**331**		**Pn**	**09 36 14.5**	**+0.1**
AKTO	**Aktyubinsk**	**16.63**	**330**	P	**Pn**	**09 36 35.5**	**+0.6**
	6.3nm,0.5s,baz=143,slow=11,SNR=20						
AKTO	**Aktyubinsk**	**16.63**	**330**	⇓P	**Pn**	**09 36 35.2**	**+0.3**
	0.4nm,0.2s						
ZALV	**Zalesovo Beam**	**19.76**	**25**	P	**P**	**09 37 07.9**	**+0.1**
	1.1nm,0.3s,baz=218,slow=9.1,SNR=3.6						
	1.1nm,0.3s						
ZALV	**Zalesovo Beam**	**19.76**	**25**	P	**P**	**09 37 07.2**	**-0.6**
FIA1	**FINESS Array S**	**37.34**	**326**	P	**P**	**09 39 46.8**	**+0.8**
FINES	**FINESS Array B**	**37.34**	**326**	P	**P**	**09 39 46.8**	**+0.7**
	1.4nm,0.4s,baz=118,slow=10.0,SNR=13						
	1.4nm,0.4s						
FINES	**FINESS Array B**	**37.34**	**326**	P	**P**	**09 39 47.0**	**+0.9**
ARCES	**ARCESS Array B**	**40.98**	**338**	P	**P**	**09 40 17.0**	**+0.9**
	1.4nm,0.5s,baz=110,slow=7.2,SNR=17						
	1.4nm,0.5s						
ARCES	**ARCESS Array B**	**40.98**	**338**	P	**P**	**09 40 17.1**	**+1.0**
NC405	**NORSAR Array S**	**44.00**	**323**	P	**P**	**09 40 41.0**	**+0.4**
NC405				IAmb	IAmb	09 40 52.0	
	comp=Z,7.7nm,1.1s						
NC303	**NORSAR Array S**	**44.18**	**323**	P	**P**	**09 40 42.5**	**+0.5**
NC303				IAmb	IAmb	09 40 56.9	
	comp=Z,8.7nm,1.1s						
NB201	**NORSAR Array S**	**44.20**	**323**	P	**P**	**09 40 42.4**	**+0.3**
NB201				IAmb	IAmb	09 40 55.9	
	comp=Z,11nm,1.1s						
NB2	**NORSAR Subarra**	**44.24**	**323**	P	**P**	**09 40 42.1**	**-0.3**
	comp=Z,1.1nm,0.7s,baz=94,slow=7.9						
NOA	**NORSAR Array B**	**44.24**	**323**	P	**P**	**09 40 42.1**	**-0.3**
	comp=Z,1.3nm,0.7s,baz=97,slow=7.7,SNR=5.8						
	comp=Z,1.3nm,0.7s						
NC204	**NORSAR Array S**	**44.48**	**323**	P	**P**	**09 40 44.6**	**+0.2**
TOA0	**Torodi Ar. Sit**	**65.72**	**269**	P	**P**	**09 43 14.9**	**-1.9**
TOA0				IAmb	IAmb	09 43 26.4	
	comp=Z,8.0nm,1.5s						
TORD	**Torodi Ar. Bea**	**65.72**	**269**	P	**P**	**09 43 14.7**	**-2.1**
	comp=Z,1.2nm,0.5s,baz=48,slow=6.0,SNR=14						
	comp=Z,1.2nm,0.5s						
TORD	**Torodi Ar. Bea**	**65.72**	**269**	P	**P**	**09 43 14.8**	**-2.0**
TOLK	**Toolik Lake Re**	**70.75**	**15**	P	**P**	**09 43 48.2**	**+0.9**
C36M	**Paulatuk**	**73.70**	**6**	P	**P**	**09 44 04.5**	**-0.1**
C36M				IAmb	IAmb	09 44 17.5	
	comp=Z,8.7nm,1.3s						
WRA	**Warramunga Arr**	**82.09**	**122**	P	**P**	**09 44 49.0**	**-2.5**
	comp=Z,0.2nm,0.5s,baz=325,slow=5.3,SNR=7.3						
	comp=Z,0.2nm,0.5s						

WEL 17 09:36:10.7±0.7, 41°S±3°×17°5E±°, h20km±5km, M3.3/12, ML3.6/12, MLv3.3/12, Error ellipse: s-maj=0.0km s-min=0.0km az=171.1, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOWZ	**Holdsworth Sta**	**0.06**	**100**	P	Pb	09 36 16.0	+1.4
HOWZ				S	Sb	09 36 19.3	+2.3
OGWZ	**Otaki Gorge**	**0.21**	**289**	P	Pb	09 36 17.8	+1.3
OGWZ				S	Sb	09 36 22.5	+2.1
MRZ	**Mangatainoka R**	**0.25**	**25**	P	Pb	09 36 17.9	+1.1
MRZ				S	Sb	09 36 22.8	+1.8
MTW	**Mount Morrison**	**0.28**	**170**	P	Pb	09 36 18.2	+1.1
MTW				S	Sn	09 36 23.7	-1.6
CAW	**Cannon Point**	**0.36**	**232**	P	Pn	09 36 19.7	-1.1
CAW				S	Sn	09 36 25.4	-1.9
TIWZ	**Tintock**	**0.36**	**72**	P	Pb	09 36 19.3	+1.0
TIWZ				S	Sb	09 36 25.2	+1.7
KIW	**Kapiti Island**	**0.40**	**273**	P	Pn	09 36 20.7	-0.7
KIW				S	Sn	09 36 27.4	-0.9
TMWZ	**Te Maipa**	**0.41**	**123**	P	Pb	09 36 20.3	+1.1
TMWZ				S	Sn	09 36 27.2	-1.3
PAWZ	**Paruwai Farm**	**0.49**	**181**	P	Pb	09 36 21.7	+0.9
PRWZ	**Pori Road**	**0.52**	**51**	P	Pn	09 36 22.3	-0.7
TRWZ	**Traveller**	**0.55**	**160**	P	Pb	09 36 22.4	+0.7
MSWZ	**Moikau Station**	**0.55**	**195**	P	Pn	09 36 22.6	-0.8
POWZ	**Post Office Ro**	**0.56**	**27**	P	Pb	09 36 22.6	+0.8
CPWZ	**Castlepoint**	**0.58**	**93**	P	Pn	09 36 23.4	-0.4
WEL	**Wellington**	**0.64**	**232**	P	Pn	09 36 24.3	-0.3
BFZ	**Birch Farm**	**0.65**	**72**	P	Pb	09 36 23.7	+0.3
BHW	**Baring Head**	**0.67**	**219**	P	Pn	09 36 24.6	-0.5
OHWZ	**Ohakea**	**0.69**	**352**	P	Pn	09 36 25.7	+0.4
PLWZ	**Palliser**	**0.70**	**191**	P	Pb	09 36 24.6	+0.3
DVHZ	**Dannevirke**	**0.81**	**44**	P	Pb	09 36 26.4	+0.3
ANWZ	**Angora Road**	**0.90**	**62**	P	Pb	09 36 27.3	-0.3
TSZ	**Takapari Road**	**0.92**	**26**	P	Pn	09 36 28.4	-0.1
TCW	**Tory Channel**	**0.94**	**249**	P	Pn	09 36 28.8	+0.2
PRHZ	**Porangahau**	**1.10**	**56**	P	Pn	09 36 30.1	-0.9
WPHZ	**Waipukurau**	**1.12**	**43**	P	Pn	09 36 31.0	-0.3
PNHZ	**Pukenui**	**1.13**	**31**	P	Pn	09 36 31.3	-0.1
DUWZ	**D'Urville Isla**	**1.15**	**274**	P	Pb	09 36 32.5	+0.5
WAZ	**Wanganui**	**1.18**	**343**	P	Pb	09 36 33.9	+1.4
TUWZ	**Tuamarina**	**1.25**	**244**	P	Pn	09 36 32.7	-0.4
CMWZ	**Cape Campbell**	**1.26**	**227**	P	Pn	09 36 33.3	+0.1
PXZ	**Pawanui**	**1.38**	**52**	P	Pn	09 36 33.7	-1.1
KRHZ	**Kereru**	**1.43**	**30**	P	Pn	09 36 35.2	-0.3
BSWZ	**Blackbirch Sta**	**1.44**	**234**	P	Pn	09 36 35.3	-0.4
BHHZ	**Black Hill Sta**	**1.48**	**19**	P	Pn	09 36 36.7	+0.5
MOVZ	**Moawhango**	**1.50**	**9**	P	Pn	09 36 37.0	+0.5
MTVZ	**Mangateitei**	**1.50**	**1**	P	Pb	09 36 38.0	+0.1
KAHZ	**Kahuranaki**	**1.55**	**46**	P	Pn	09 36 36.2	-1.0
WNVZ	**Wahianoa**	**1.56**	**5**	P	Pb	09 36 38.5	-0.6
TRVZ	**Turoa**	**1.59**	**3**	P	Pb	09 36 39.1	-0.4
NNZ	**Nelson**	**1.59**	**257**	P	Pn	09 36 38.3	+0.6
PKVZ	**Pokaka**	**1.60**	**357**	P	Pb	09 36 39.2	-0.4
WHVZ	**Whangaehu Hut**	**1.61**	**4**	P	Pb	09 36 39.2	-0.6
DRZ	**Dome Shelter**	**1.61**	**3**	P	Pb	09 36 39.6	-0.4
TUVZ	**Tukino**	**1.62**	**6**	P	Pb	09 36 39.5	-0.6
LREZ	**Lake Rotokare**	**1.63**	**331**	P	Pb	09 36 40.8	+0.7
FWVZ	**Far West T-bar**	**1.63**	**3**	P	Pb	09 36 39.6	-0.6
KWHZ	**Kaweka Forest**	**1.64**	**28**	P	Pn	09 36 38.6	+0.1
SNVZ	**South Ngauruho**	**1.71**	**5**	P	Pb	09 36 40.6	-0.8
NGZ	**Ngauruhoe**	**1.71**	**4**	P	Pb	09 36 40.8	-0.8
OTVZ	**Oturere**	**1.73**	**6**	P	Pb	09 36 40.9	-1.0
MCHZ	**McNeill Hill**	**1.73**	**34**	P	Pb	09 36 42.4	+0.6
NNVZ	**North Ngauruho**	**1.76**	**5**	P	Pb	09 36 41.4	-0.9
ETVZ	**East Tongariro**	**1.76**	**7**	P	Pb	09 36 41.3	-1.1
WTVZ	**West Tongariro**	**1.77**	**4**	P	Pb	09 36 41.8	-0.8
TMVZ	**Te Maari**	**1.78**	**7**	P	Pb	09 36 41.6	-1.1
NTVZ	**North Tongarir**	**1.79**	**6**	P	Pb	09 36 41.8	-1.2
KRVZ	**Karewarewa**	**1.80**	**5**	P	Pb	09 36 42.2	-0.8
TWVZ	**Taurewa**	**1.81**	**0**	P	Pn	09 36 41.9	+1.0
PREZ	**Palmer Road**	**1.83**	**327**	P	Pb	09 36 43.8	+0.3
VRZ	**Vera Road**	**1.84**	**343**	P	Pb	09 36 43.1	-0.5
TKNZ	**Takaka Hill**	**1.88**	**265**	P	Pn	09 36 42.7	+0.9
BKZ	**Black Stump Fm**	**1.90**	**26**	P	Pn	09 36 42.0	0.0
NEZ	**North Egmont**	**1.91**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RMF	**Romuvaara**	**0.70**	**211**	PG	**Pg**	**10 00 40.5**	**-1.2**
KU6	**Riekki** baz=169	**1.26**	**344**	PG	**Pg**	**10 00 51.6**	**-0.7**
KU6				MSG		10 01 07.3	
	comp=Z,15nm,0.2s						
KU6				SB	**Sg**	**10 01 08.2**	**-0.4**
MSF	**Maaselka**	**1.31**	**327**	PG	**Pg**	**10 00 52.1**	**-1.1**
MSF				SB	**Sg**	**10 01 09.7**	**-0.4**
OLKF	**Oulanka, Finla**	**1.60**	**340**	PG	**Pn**	**10 00 57.7**	**-0.1**
OLKF				SN	**Sg**	**10 01 19.5**	**-0.2**
JOF	**Joensuu** baz=348	**1.93**	**172**	PG	**Pn**	**10 01 01.3**	**-0.9**
OUL	**Oulu** baz=97	**2.08**	**279**	PG	**Pn**	**10 01 05.0**	**+0.7**
OUL				SG	**Sn**	**10 01 31.4**	**+0.5**
OBF4	**Vikkela, Lumij**	**2.42**	**272**	PG	**Pn**	**10 01 09.7**	**+0.8**
OBF4				SG	**Sb**	**10 01 42.5**	**-0.3**
OUF	**Merijarvi** baz=81	**2.64**	**263**	PB	**Pn**	**10 01 12.5**	**+0.6**
OUF				MSG		10 01 44.9	
	comp=Z,14nm,0.2s						
OUF				SG	**Sb**	**10 01 47.7**	**-1.4**
RNF	**Rovaniemi** baz=131	**2.66**	**315**	PN	**Pn**	**10 01 12.7**	**+0.5**
RNF				SG	**Sb**	**10 01 49.4**	**-0.2**
OBF0	**Syolatti, Pyha** baz=77	**2.82**	**266**	PB	**Pn**	**10 01 15.7**	**+1.3**
SUF	**Sumiainen**	**2.94**	**226**	PB	**Pn**	**10 01 17.2**	**+1.1**
SUF				MSG		10 01 52.9	
	comp=Z,8.7nm,0.2s						
SUF				SG	**Sb**	**10 01 56.5**	**-1.3**
TOF	**Tornio**	**2.96**	**298**	PB	**Pn**	**10 01 18.4**	**+2.0**
TOF				MSG		10 01 55.2	
	comp=Z,9.0nm,0.2s						
TOF				SG	**Sb**	**10 01 57.2**	**-1.4**
VRF	**Varrio**	**2.97**	**352**	PN	**Pn**	**10 01 16.2**	**-0.3**
VRF				MSG		10 01 56.5	
	comp=Z,6.0nm,0.2s						
VRF				SG	**Sb**	**10 02 00.8**	**+1.9**
VRF	**Varrio**	**2.97**	**352**	SN	**Pn**	**10 01 16.2**	**-0.3**
SGF	**Sodankyl**	**3.14**	**329**	SG	**Sb**	**10 02 04.6**	**+1.0**
KALU	**Kalix**	**3.27**	**292**	PB	**Pn**	**10 01 22.9**	**+2.3**
KAF	**Kangasniemi** baz=35	**3.37**	**218**	PB	**Pn**	**10 01 23.5**	**+1.4**
LVZ	**Lovozero**	**3.46**	**25**	SG	**Sg**	**10 02 18.8**	**-0.6**
RUFX	**Ruokolahti** baz=15	**3.50**	**194**	PB	**Pn**	**10 01 25.0**	**+1.2**
KLF	**Kolari**	**3.68**	**314**	PN	**Pn**	**10 01 26.7**	**+0.4**
KLF	**Kolari**	**3.68**	**314**	PN	**Pn**	**10 01 26.7**	**+0.4**
KEF	**Keuruu**	**3.75**	**227**	PN	**Pn**	**10 01 28.5**	**+1.3**
PAJU	**Pajala**	**3.83**	**309**	PN	**Pn**	**10 01 28.6**	**+0.3**
PAJU				SG	**Sb**	**10 02 25.5**	**+2.0**
PAJU	**Pajala**	**3.83**	**309**	SB	**Sb**	**10 02 25.5**	**+2.0**
PAJU	**Pajala**	**3.83**	**309**	PN	**Pn**	**10 01 29.0**	**+0.6**
ERTU	**Ertsjaerv**	**3.94**	**300**	PN	**Pn**	**10 01 31.3**	**+1.4**
FIA0	**FINESS Array S**	**4.00**	**214**	PN	**Pn**	**10 01 30.3**	**-0.4**
FINES	**FINESS Array B** comp=Z,0.7nm,0.2s,baz=30,slow=15,SNR=5.4	**4.00**	**214**	Pn	**Pn**	**10 01 30.6**	**0.0**
FINES				Pg	**Pb**	**10 01 39.5**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=33,slow=14,SNR=9.3						
FINES				Lg	Lg	10 02 29.6	
	comp=Z,1.6nm,0.3s,baz=26,slow=27,SNR=10						
UMAU	**Umeaa**	**4.48**	**262**	PN	**Pn**	**10 01 35.9**	**-1.3**
UMAU				SG	**Sb**	**10 02 46.1**	**+4.1**
VJF	**Virojoki**	**4.55**	**200**	SG	**Sb**	**10 02 47.7**	**+3.8**
HEF	**Hetta**	**4.58**	**325**	SG	**Sb**	**10 02 49.6**	**+4.8**
ARCES	**ARCESS Array B** comp=Z,0.4nm,0.3s,baz=155,slow=12,SNR=33	**5.15**	**339**	Pn	**Pn**	**10 01 46.4**	**-0.1**
ARCES				Sn	**Sn**	**10 02 43.2**	**-3.3**
	comp=Z,0.2nm,0.3s,baz=147,slow=15,SNR=1.3						
ARCES				Lg	Lg	10 03 06.1	
	comp=Z,0.6nm,0.3s,baz=152,slow=32,SNR=8.1						
	comp=Z,0.9nm,0.3s						
HFS	**Hagfors**	**9.17**	**247**	Pn	**Pn**	**10 02 41.3**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=57,slow=12,SNR=5.2						
	comp=Z,0.4nm,0.3s						
NOA	**NORSAR Array B** baz=55,slow=14,SNR=1.4	**9.66**	**256**	Pn	**Pn**	**10 02 47.7**	**-0.6**
	comp=Z,0.2nm,0.5s						

KOLA ***17*** *10:00:29.3,68°.15N×33°.36E,h0km,ML2.1*
HEL 17 10:00:28.2±0.5,68°.21N×33°.25E,h0km,ML1.8,
Explosion,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVZ	**Lovozero**	**0.61**	**120**	P	Pg	10 00 39.6	-0.3
LVZ				S	Sg	10 00 45.8	-2.1
LVZ	**Lovozero**	**0.61**	**120**	PG	Pg	10 00 39.5	-0.5
LVZ				SG	Sg	10 00 46.7	-1.1
APA	**Apatity**	**0.65**	**175**	P	Pg	10 00 39.2	-1.3
APA				S	Sg	10 00 48.0	-0.8
TERR	**Teriberka**	**1.21**	**33**	P	Pg	10 00 51.2	-0.1
TERR				S	Sb	10 01 08.2	+0.2
VRF	**Varrio**	**1.45**	**253**	PG	Pn	10 00 53.9	-1.7
PRVG	**Vayda Guba**	**1.59**	**347**	P	Pb	10 00 58.0	-0.4
PRVG				S	Sg	10 01 19.7	+0.4
SGF	**Sodankyl**	**2.66**	**256**	PB	Pn	10 01 14.2	+1.9
KEV	**Kevo**	**2.73**	**308**	PG	Pn	10 01 13.9	+0.7
KEV				MSG		10 01 48.8	
	comp=Z,5.2nm,0.2s						
KEV				SG	Sb	10 01 49.8	-2.1
ARA0	**ARCESS Array S**	**3.10**	**299**	PN	Pn	10 01 15.4	-3.0
ARA0				SG	Sb	10 02 02.6	0.0
ARCES	**ARCESS Array B**	**3.10**	**299**	P	Pn	10 01 20.2	+1.8
ARCES				S	Sn	10 01 57.5	+1.4
HEF	**Hetta**	**3.57**	**278**	PN	Pn	10 01 24.4	-0.3
KTK1	**Kautokeino**	**3.75**	**287**	PN	Pn	10 01 27.5	+0.3
LANU	**Lannavaara**	**4.21**	**273**	PG	Pb	10 01 44.4	+1.3
ERTU	**Ertsjaerv**	**4.58**	**254**	PN	Pn	10 01 39.7	+1.0
ERTU				SN	Sn	10 02 31.8	-0.6

MOS ***17*** *10:03:45.5±1.6,30°.01N×57°.62E,h15km,mb4.6/28,Error ellipse: s-maj=6.6km s-min=5.1km az=104.8*
IDC ***17*** *10:03:46.2±0.8,30°.03N×57°.53E,h0km,mb4.3/21, mbtmp4.3/26,ML4.1/5,MS3.3/15,Error ellipse: s-maj=19.3km s-min=12.8km az=162.0*
THR ***17*** *10:03:47.8±0.8,30°.15N×57°.57E,h14km±6km,ML4.5*
TEH ***17*** *10:03:47.1,30°.16N×57°.56E,h8km,ML4.7*
NEIC ***17*** *10:03:47.1±2.6,30°.19N±0°.03×57°.56E±0°.05,h10km±1km, mb4.4/50,mb_Lg4.7(TEH),Error ellipse: s-maj=7.2km s-min=5.8km az=273.0*
DSN ***17*** *10:03:49.2±1.2,30°.36N×57°.02E,h10km,ML4.3/12,Error ellipse: s-maj=20.6km s-min=9.6km az=84.0*
OMAN ***17*** *10:03:49.5±0.8,30°.27N×57°.44E,h10km,mb5.1/23, ml4.5/4,ms3.1/1,Error ellipse: s-maj=8.7km s-min=6.4km az=89.0*
ISC 17 10:03:48.6±0.3,30°.22N±0°.03×57°.53E±0°.03,h15km,n336,
σ2≥18/356,mb4.4/73,MS3.3/14,6C-3D,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHMN	**Cheshme madani**	**0.36**	**179**	Pg	**Pg**	**10 03 53.7**	**-2.3**
CHMN				Sg	**Sg**	**10 03 58.1**	**-3.0**
CHMN	**Cheshme madani**	**0.36**	**179**	*e*Pg	**Pg**	**10 03 53.4**	**-2.6**
CHMN				*e*Sg	**Sg**	**10 03 58.3**	**-2.8**
CHMN				*e*		10 03 58.6	
	comp=Z,67μm,0.3s						
TVBK	**TV Kerman**	**0.71**	**251**	Pg	**Pg**	**10 04 01.4**	**-1.1**
TVBK	**TV Kerman**	**0.71**	**251**	*e*		10 04 02.2	
	comp=Z,88μm,0.2s						
TVBK				*e*Pg	**Pg**	**10 04 01.4**	**-1.1**
KRBR	**Kerman**	**0.71**	**251**	*e*Pg	**Pg**	**10 04 01.4**	**-1.1**
KRBR				IAML		10 04 17.8	
	comp=E,10μm,0.4s						
NGRK	**Negar Kerman**	**0.90**	**231**	Pg	**Pb**	**10 04 04.7**	**-1.4**
NGRK	**Negar Kerman**	**0.90**	**231**	*e*		10 04 05.0	
	comp=Z,26μm,0.3s						
NGRK				*e*Pg	**Pb**	**10 04 04.8**	**-1.4**
NGRK				*e*Sg	**Sg**	**10 04 16.9**	**-1.2**
KHGB	**Koh Gabri**	**0.93**	**280**	*e*		10 04 19.9	
	comp=Z,70μm,0.4s						
KHGB				*e*Pg	**Pb**	**10 04 05.0**	**-1.5**
KBAM	**BAM**	**1.34**	**143**	*e*Pg	**Pn**	**10 04 12.1**	**-0.8**
KBAM				*e*Sg	**Sn**	**10 04 29.9**	**-0.6**
KBAM				*e*		10 04 32.5	
	comp=Z,3μm,0.2s						

IBAF	**Bafgh**	**2.17**	**309**	Pn	**Pn**	**10 04 26.7**	**+2.3**
IBAF	**Bafgh**	**2.17**	**309**	*e*Pn	**Pn**	**10 04 26.5**	**+2.1**
IBAF				*e*		10 04 29.8	
	comp=Z,38μm,0.4s						
BSRN	**Basiran**	**2.21**	**38**	*e*Pn	**Pn**	**10 04 27.1**	**+2.1**
BSRN	**Basiran**	**2.21**	**38**	*e*Pn	**Pn**	**10 04 27.1**	**+2.1**
BSRN				*e*Sg	**Sb**	**10 04 58.2**	**+2.5**
BSRN				IAML		10 05 00.4	
	comp=N,4μm,0.3s						
BSRN				IAML		10 05 05.2	
	comp=E,4μm,0.6s						
KHNJ	**Kahnooj**	**2.27**	**176**	Pn	**Pn**	**10 04 26.8**	**+1.2**
KHNJ	**Kahnooj**	**2.27**	**176**	*e*Pn	**Pn**	**10 04 26.2**	**+0.6**
NHDN	**Nehbandan**	**2.46**	**61**	Pn	**Pn**	**10 04 29.5**	**+1.2**
NHDN	**Nehbandan**	**2.46**	**61**	*e*Pn	**Pn**	**10 04 29.5**	**+1.2**
NHDN				*e*		10 05 11.7	
	comp=Z,21μm,0.7s						
IKOO	**Kooshah**	**2.53**	**29**	Pn	**Pn**	**10 04 30.5**	**+1.1**
IKOO	**Kooshah**	**2.53**	**29**	*e*Pn	**Pn**	**10 04 30.9**	**+1.4**
IKOO				*e*		10 05 09.7	
	comp=Z,91μm,0.2s						
IMEH	**Mehriz**	**2.77**	**296**	*e*Pn	**Pn**	**10 04 34.8**	**+2.1**
IMEH				*e*		10 05 17.5	
	comp=Z,13μm,0.6s						
ITEG	**Tejag**	**2.87**	**21**	Pn	**Pn**	**10 04 34.8**	**+0.9**
ITEG	**Tejag**	**2.87**	**21**	*e*Pn	**Pn**	**10 04 34.9**	**+1.0**
ITEG				*e*		10 05 25.3	
	comp=Z,53μm,0.4s						
ZHSF	**Zahedan**	**2.88**	**101**	*e*Pn	**Pn**	**10 04 35.2**	**+1.1**
ZHSF	**Zahedan**	**2.88**	**101**	*e*Pn	**Pn**	**10 04 35.2**	**+1.1**
IBND	**Bandar-abas** comp=Z,40μm,0.9s	**2.89**	**198**	*e*		10 05 47.4	
TPRV	**Parvadeh(Tabas**	**2.89**	**346**	Pn	**Pn**	**10 04 35.9**	**+1.7**
TPRV	**Parvadeh(Tabas**	**2.89**	**346**	*e*Pn	**Pn**	**10 04 35.9**	**+1.7**
TPRV				*e*		10 05 22.3	
	comp=Z,62μm,0.5s						
GENO	**Geno**	**3.05**	**203**	*e*Pn	**Pn**	**10 04 38.9**	**+2.4**
GENO				*e*		10 05 34.3	
	comp=Z,11μm,0.5s						
IDAH	**Dahanechah**	**3.21**	**38**	Pn	**Pn**	**10 04 40.8**	**+2.1**
IDAH	**Dahanechah**	**3.21**	**38**	*e*Pn	**Pn**	**10 04 40.8**	**+2.1**
IDAH				*e*		10 05 46.0	
	comp=Z,47μm,1.4s						
YZKH	**Yazd**	**3.32**	**311**	*e*Pn	**Pn**	**10 04 42.3**	**+2.2**
YZKH	**Yazd**	**3.32**	**311**	*e*Pn	**Pn**	**10 04 42.3**	**+2.2**
YZKH				IAML		10 05 43.0	
	comp=E,1μm,0.6s						
YZKH				IAML		10 05 43.0	
	comp=N,1μm,0.6s						
ICHK	**Chekchek**	**3.35**	**308**	*e*Pn	**Pn**	**10 04 43.2**	**+2.5**
ICHK				*e*		10 05 44.4	
	comp=Z,22μm,0.8s						
TKDS	**Koohdasht(Taba**	**3.40**	**354**	Pn	**Pn**	**10 04 43.6**	**+2.3**
TKDS	**Koohdasht(Taba**	**3.40**	**354**	*e*Pn	**Pn**	**10 04 43.6**	**+2.3**
TKDS				*e*		10 05 48.8	
	comp=Z,34μm,0.7s						
AFRZ	**Afriz**	**3.44**	**21**	Pn	**Pn**	**10 04 43.1**	**+1.3**
AFRZ	**Afriz**	**3.44**	**21**	*e*Pn	**Pn**	**10 04 43.3**	**+1.5**
AFRZ				*e*		10 05 51.2	
	comp=Z,19μm,0.8s						
TABS	**Tabas**	**3.44**	**354**	*e*Pn	**Pn**	**10 04 44.3**	**+2.5**
TABS	**Tabas**	**3.44**	**354**	*e*Pn	**Pn**	**10 04 44.3**	**+2.5**
TABS				IAML		10 05 43.0	
	comp=N,1μm,0.5s						
TABS				IAML		10 05 44.5	
	comp=E,733nm,0.5s						
IMON	**Monand**	**3.48**	**31**	Pn	**Pn**	**10 04 44.5**	**+2.1**
IMON	**Monand**	**3.48**	**31**	*e*Pn	**Pn**	**10 04 44.5**	**+2.1**
IMON				*e*		10 05 45.1	
	comp=Z,18μm,0.6s						
LAR1	**LAR**	**3.76**	**228**	*e*Pn	**Pn**	**10 04 47.8**	**+1.7**
LAR1				*e*		10 05 53.1	
	comp=Z,14μm,0.9s						
TNSJ	**Nastanj**	**3.82**	**348**	Pn	**Pn**	**10 04 48.7**	**+1.8**
TNSJ	**Nastanj**	**3.82**	**348**	*e*Pn	**Pn**	**10 04 48.8**	**+1.8**
JHRM	**Jahrom**	**3.85**	**245**	*e*Pn	**Pn**	**10 04 49.4**	**+2.0**
SHRT	**Shahrakht**	**4.14**	**34**	*e*Pn	**Pn**	**10 04 53.5**	**+2.1**
SHRT	**Shahrakht**	**4.14**	**34**	*e*Pn	**Pn**	**10 04 53.5**	**+2.1**
SHRT				IAML		10 06 04.5	
	comp=E,289nm,0.5s						
SHRT				IAML		10 06 11.4	
	comp=N,294nm,0.4s						
QIR1	**Qir**	**4.29**	**247**	*e*Pn	**Pn**	**10 04 54.1**	**+0.7**
SHME	**Shamm**	**4.33**	**197**	P	**Pn**	**10 04 56.7**	**+2.8**
SHME				S	**Sn**	**10 05 49.0**	**+4.8**
SHME	**Shamm** SNR=18	**4.33**	**197**	*i* P	**Pn**	**10 04 55.6**	**+1.7**
SHME				S	**Sn**	**10 05 47.7**	**+3.5**
JASK	**Jask - Hormozg**	**4.34**	**176**	Pn	**Pn**	**10 04 55.2**	**+1.1**
JASK	**Jask - Hormozg**	**4.34**	**176**	*e*Pn	**Pn**	**10 04 56.2**	**+2.1**
JASK				*e*		10 05 01.1	
	comp=Z,5μm,0.4s						
JASK	**Jask - Hormozg**	**4.34**	**176**	P	**Pn**	**10 04 57.1**	**+3.0**
ANAR	**Anarak**	**4.39**	**313**	*e*Pn	**Pn**	**10 04 57.3**	**+2.4**
BANOM	**Banah** SNR=20	**4.42**	**195**	P	**Pn**	**10 04 57.9**	**+2.8**
BANOM	**Banah** SNR=20	**4.42**	**195**	*i* P	**Pn**	**10 04 57.3**	**+2.2**
BANOM				S	**Sn**	**10 05 50.7**	**+4.4**
IRAM	**Ramesheh**	**4.70**	**291**	*e*Pn	**Pn**	**10 05 02.1**	**+2.9**
NASN	**Na'in**	**4.79**	**304**	*e*Pn	**Pn**	**10 05 02.7**	**+2.2**
NASN	**Na'in**	**4.79**	**304**	*e*Pn	**Pn**	**10 05 02.7**	**+2.2**
NASN				IAML		10 06 26.3	
	comp=N,204nm,0.6s						
NASN				IAML		10 06 29.3	
	comp=E,114nm,0.6s						
LMD1	**Lamerd**	**4.79**	**234**	*e*Pn	**Pn**	**10 05 02.5**	**+2.3**
LMD1				*e*		10 06 27.7	
	comp=Z,6μm,0.2s						
UMQ	**Umm Al-Quwin**	**4.96**	**200**	P	**Pn**	**10 05 06.2**	**+3.7**
UMQ				S	**Sn**	**10 06 05.6**	**+6.0**
MASF	**Masafi** SNR=9.3	**4.98**	**194**	P	**Pn**	**10 05 06.9**	**+4.1**
MASF				S	**Sn**	**10 06 04.7**	**+4.5**
MSFE	**Esma-Masafi** SNR=8.6	**4.99**	**194**	*i* P	**Pn**	**10 05 05.3**	**+2.2**
SRVN	**Saravan**	**5.11**	**122**	*e*Pn	**Pn**	**10 05 06.8**	**+2.1**
IGAR	**Gharneh**	**5.18**	**296**	*e*Pn	**Pn**	**10 05 08.3**	**+2.5**
IZEF	**Zefreh**	**5.18**	**302**	*e*Pn	**Pn**	**10 05 08.6**	**+2.7**
KLNJ	**Kolanjah**	**5.18**	**280**	*e*Pn	**Pn**	**10 05 08.3**	**+2.4**
CHBR	**Chabahar**	**5.29**	**150**	*e*Pn	**Pn**	**10 05 06.8**	**-0.3**
CHBR	**Chabahar**	**5.29**	**150**	*e*Pn	**Pn**	**10 05 06.9**	**-0.3**
TBHD	**Torbat heydari**	**5.38**	**15**	*e*Pn	**Pn**	**10 05 11.0**	**+2.6**
UOSS	**Minazif**	**5.38**	**193**	Pn	**Pn**	**10 05 07.7**	**-0.7**
UOSS	**Minazif**	**5.38**	**193**	P	**Pn**	**10 05 10.8**	**+2.4**
UOSS				S	**Sn**	**10 06 14.7**	**+4.5**
UOSS	**Minazif**	**5.38**	**193**	P	**Pn**	**10 05 10.9**	**+2.5**
NAZ	**Nazwa, Dubai** SNR=15	**5.47**	**198**	P	**Pn**	**10 05 13.0**	**+3.4**
NAZ				S	**Sn**	**10 06 17.8**	**+5.6**
NAZ	**Nazwa, Dubai** SNR=15	**5.47**	**198**	*i* P	**Pn**	**10 05 11.8**	**+2.2**
HATD	**Hatta, Dubai**	**5.51**	**193**	P	Pn	10 05 15.3	+5.1
HATD				S	**Sn**	**10 06 17.7**	**+4.3**
HATD	**Hatta, Dubai**	**5.51**	**193**	P	**Pn**	**10 05 13.4**	**+3.2**
TBJM	**Torbat-e-JAM**	**5.56**	**24**	*e*Pn	**Pn**	**10 05 12.9**	**+1.9**
AHBU	**AHRAM**	**5.60**	**258**	*e*Pn	**Pn**	**10 05 13.0**	**+1.6**
ASHO	**Ashiyiah** SNR=16	**5.67**	**194**	P	**Pn**	**10 05 15.3**	**+3.0**
ASHO				S	**Sn**	**10 06 22.9**	**+5.8**
ASHO	**Ashiyiah** SNR=18	**5.67**	**194**	*i* P	**Pn**	**10 05 14.8**	**+2.5**
FAQ	**Al Faqa, Dubai** SNR=6.0	**5.72**	**198**	P	**Pn**	**10 05 15.4**	**+2.5**
FAQ				S	**Sn**	**10 06 22.0**	**+3.7**
FAQ	**Al Faqa, Dubai** SNR=37	**5.72**	**198**	*i* P	**Pn**	**10 05 14.9**	**+1.9**
HRA	**Herat**	**5.76**	**43**	Pn	**Pn**	**10 05 13.7**	**0.0**
NGCH	**Negor - Chabah**	**5.80**	**146**	*e*Pn	**Pn**	**10 05 13.7**	**-0.4**
NGCH	**Negor - Chabah**	**5.80**	**146**	P	**Pn**	**10 05 16.0**	**+2.0**
SHRO	**Shahrood**	**5.90**	**348**	*e*Pn	**Pn**	**10 05 18.2**	**+2.7**
SHRO	**Shahrood**	**5.90**	**348**	*e*Pn	**Pn**	**10 05 18.2**	**+2.7**
ASUD	**Al Ashush, Dub** SNR=17	**5.90**	**200**	P	**Pn**	**10 05 18.5**	**+2.9**
ASUD				S	**Sn**	**10 06 27.7**	**+4.7**
ASUD	**Al Ashush, Dub** SNR=17	**5.90**	**200**	*i* P	**Pn**	**10 05 17.4**	**+1.8**
KRSH	**Karshahi**	**5.91**	**311**	*e*Pn	**Pn**	**10 05 18.2**	**+2.4**
IANJ	**Anjilo**	**6.06**	**331**	*e*Pn	**Pn**	**10 05 19.7**	**+1.9**
AJN	**Ajban**	**6.07**	**202**	P	**Pn**	**10 05 20.8**	**+2.9**
AJN				S	**Sn**	**10 06 30.6**	**+3.6**
ISFB	**Sefidab**	**6.09**	**314**	*e*Pn	**Pn**	**10 05 20.6**	**+2.5**
SOHO	**SOHO**	**6.12**	**189**	P	**Pn**	**10 05 18.1**	**-0.5**
SOHO	**SOHO** SNR=19	**6.12**	**189**	*i* P	**Pn**	**10 05 18.8**	**+0.3**
SBZV	**Sabzevar**	**6.16**	**1**	*e*Pn	**Pn**	**10 05 21.7**	**+2.5**
QAMS	**Qamsar**	**6.28**	**306**	*e*Pn	**Pn**	**10 05 23.9**	**+2.9**
ALNE	**Al Ain** SNR=10	**6.34**	**195**	P	**Pn**	**10 05 24.3**	**+2.7**
ALNE				S	**Sn**	**10 06 37.5**	**+3.7**
ALNE	**Al Ain** SNR=9.0	**6.34**	**195**	*i* P	**Pn**	**10 05 23.5**	**+1.9**
IAKL	**Akhelmad**	**6.45**	**9**	*e*Pn	**Pn**	**10 05 25.3**	**+2.0**
IMYA	**Miami**	**6.47**	**19**	*e*Pn	**Pn**	**10 05 25.8**	**+2.3**
HOQ	**Hoqain**	**6.61**	**182**	P	**Pn**	**10 05 26.2**	**+0.9**
HOQ				S	**Sn**	**10 06 44.0**	**+3.5**
BIDO	**Bidbid**	**6.69**	**175**	P	**Pn**	**10 05 27.5**	**+1.1**
JRN	**Qarnain Island**	**6.70**	**219**	P	**Pn**	**10 05 28.0**	**+1.6**
IKRD	**Kardeh**	**6.75**	**14**	*e*Pn	**Pn**	**10 05 29.5**	**+2.2**
GHVR	**GHOM**	**6.78**	**310**	*e*Pn	**Pn**	**10 05 31.2**	**+3.6**
GHVR	**GHOM**	**6.78**	**310**	*e*Pn	**Pn**	**10 05 31.1**	**+3.6**
ISFR	**Sfrayin**	**6.83**	**3**	*e*Pn	**Pn**	**10 05 30.4**	**+1.9**
IVRN	**Varamin**	**6.83**	**316**	*e*Pn	**Pn**	**10 05 31.7**	**+3.4**
IGLO	**Ghaloghah**	**6.99**	**335**	*e*Pn	**Pn**	**10 05 33.5**	**+2.8**
WSAR	**Wadi Sarin** comp=Z,4.5nm,0.3s,baz=4.4,slow=14,SNR=36	**7.02**	**172**	Pn	**Pn**	**10 05 31.4**	**+0.6**
WSAR				Sn	**Sn**	**10 06 51.1**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=90,slow=20,SNR=2.0						
WSAR	**Wadi Sarin**	**7.02**	**172**	P	**Pn**	**10 05 31.5**	**+0.6**
KHOR	**Al-Khor Airpor**	**7.02**	**231**	P	**Pn**	**10 05 32.1**	**+1.2**
KHOR				S	**Sn**	**10 06 51.6**	**+1.1**
IDMV	**Damavand**	**7.07**	**321**	*e*Pn	**Pn**	**10 05 34.5**	**+2.7**
DAMV	**Damavand**	**7.14**	**321**	*e*Pn	**Pn**	**10 05 35.5**	**+2.8**
DAMV	**Damavand**	**7.14**	**321**	*e*Pn	**Pn**	**10 05 35.5**	**+2.8**
IQOM	**Qom**	**7.14**	**312**	*e*Pn	**Pn**	**10 05 34.9**	**+2.1**
SMDO	**Samad**	**7.14**	**176**	P	**Pn**	**10 05 33.9**	**+1.2**
SMDO				S	**Sn**	**10 06 57.3**	**+3.6**
MZWR	**Madinat Zayed**	**7.21**	**208**	P	**Pn**	**10 05 34.0**	**+0.6**
MZWR				S	**Sn**	**10 06 59.0**	**+3.9**
AMIS	**Naft Sefid**	**7.23**	**284**	*e*Pn	**Pn**	**10 05 35.8**	**+2.0**
IMND	**Minoodasht**	**7.24**	**346**	*e*Pn	**Pn**	**10 05 35.9**	**+2.0**
SHMA	**Al-Shehemyia**	**7.25**	**235**	P	**Pn**	**10 05 35.4**	**+1.3**
SHMA				S	**Sn**	**10 06 57.4**	**+1.3**
KHMZ	**Khomeyn**	**7.33**	**301**	*e*Pn	**Pn**	**10 05 38.9**	**+3.6**
KHMZ	**Khomeyn**	**7.33**	**301**	*e*Pn	**Pn**	**10 05 38.9**	**+3.6**
IPRN	**Peran**	**7.42**	**325**	*e*Pn	**Pn**	**10 05 38.9**	**+2.5**
BJRD	**Bojnurd**	**7.46**	**359**	*e*Pn	**Pn**	**10 05 39.5**	**+2.4**
BJRD	**Bojnurd**	**7.46**	**359**	*e*Pn	**Pn**	**10 05 39.5**	**+2.4**
SAKB	**Bahrain**	**7.48**	**237**	P	**Pn**	**10 05 40.3**	**+3.0**
SAKB				S	**Sn**	**10 07 01.7**	**-0.1**
GHWR	**Ruwais**	**7.49**	**215**	P	**Pn**	**10 05 38.4**	**+1.1**
GHWR				S	**Sn**	**10 07 03.3**	**+1.4**
MRVT	**Maraveh tapeh**	**7.52**	**351**	*e*Pn	**Pn**	**10 05 40.3**	**+2.5**
MRVT	**Maraveh tapeh**	**7.52**	**351**	*e*Pn	**Pn**	**10 05 40.6**	**+2.8**
ASAO	**Ashtian**	**7.68**	**306**	*e*Pn	**Pn**	**10 05 42.4**	**+2.3**
ASAO	**Ashtian**	**7.68**	**306**	*e*Pn	**Pn**	**10 05 42.4**	**+2.3**
WBK	**Wadi Bani Khal**	**7.69**	**170**	P	**Pn**	**10 05 40.4**	**+0.3**
GEYT	**Alibeck** comp=Z,1.5nm,0.3s,baz=161,slow=8.6,SNR=5.7	**7.71**	**3**	Pn	**Pn**	**10 05 43.6**	**+3.3**
	comp=Z,3.3nm,0.3s						
GEYT	**Alibeck**	**7.71**	**3**		**Pn**	**10 05 38.6**	**-1.7**
GYA0B	**ALIBECK ARRAY**	**7.71**	**3**	Pn	**Pn**	**10 05 39.6**	**-0.7**
UMZA	**Um Al Zommool**	**7.77**	**196**	P	**Pn**	**10 05 42.6**	**+1.5**
CHTH	**Charan**	**7.82**	**318**	*e*Pn	**Pn**	**10 05 44.7**	**+2.7**
CHTH	**Charan**	**7.82**	**318**	*e*Pn	**Pn**	**10 05 44.6**	**+2.7**
JMDO	**Jabal Madar**	**7.83**	**176**	P	**Pn**	**10 05 45.1**	**+3.1**
MZR	**Muzera**	**8.05**	**208**	P	**Pn**	**10 05 48.0**	**+2.9**
MZR				S	**Sn**	**10 07 16.8**	**+0.9**
MZR	**Muzera**	**8.05**	**208**	P	**Pn**	**10 05 46.4**	**+1.3**
SMRA	**Abu-Samra**	**8.07**	**229**	P	**Pn**	**10 05 46.4**	**+1.0**
SMRA				S	**Sn**	**10 07 16.7**	**+0.3**

SOC *e*S **Sn** **10 11 51.4 -2.6**
SOC MLR MLR
comp=Z,65nm,14.0s
EIL **Elat** **19.58 274** P **P** **10 08 17.1 +1.1**
comp=Z,0.3nm,0.3s,baz=146,slow=5.0,SNR=6.2
EIL LR LR 10 16 06.6
comp=Z,55nm,20.4s,baz=87,slow=38
comp=Z,14nm,0.9s
KDJ **Kajisay** **19.77 48** P **P** **10 08 17.1 -1.2**
KDJ **Kajisay** **19.77 48** P **P** **10 08 17.1 -1.2**
KDJ pmax pmax
comp=Z,12nm,0.9s
BNN **Bunyan** **19.80 302** P **P** **10 08 17.6 -1.0**
TARG **Taragay, Kyrgy** **19.98 49** P **P** **10 08 18.1 -2.7**
TARG IAmb IAmb 10 08 30.1
comp=Z,23nm,1.2s
TARG **Taragay, Kyrgy** **19.98 49** P **P** **10 08 18.1 -2.7**
TARG pmax pmax
comp=Z,23nm,1.2s
AKTO **Aktyubinsk** **20.20 1** P **P** **10 08 24.3 +1.6**
comp=Z,3.6nm,0.4s,baz=177,slow=12,SNR=14
comp=Z,3.6nm,0.4s
CSS **Mathiatis** **20.92 289** P **P** **10 08 27.9 -2.7**
CSS IAmb IAmb 10 08 37.3
comp=Z,31nm,1.2s
BR131 **Keskin Array S** **21.70 302** P **P** **10 08 39.0 -0.1**
BR131 IAmb IAmb 10 08 42.5
comp=Z,23nm,0.9s
BR131 **Keskin Array S** **21.70 302** *c i*P **P** **10 08 40.1 +0.9**
BR131 **Keskin Array S** **21.70 302** P **P** **10 08 40.4 +1.3**
SNR=8.9
BRTR **Keskin Array B** **21.70 302** P **P** **10 08 40.5 +1.3**
comp=Z,7.1nm,0.7s,baz=126,slow=13,SNR=43
BRTR LR LR 10 17 57.3
comp=Z,133nm,18.6s,baz=120,slow=39
comp=Z,7.1nm,0.7s
BRTR **Keskin Array B** **21.70 302** P **P** **10 08 37.8 -1.4**
ILGA **Ilgaz** **22.10 306** P **P** **10 08 39.8 -3.8**
ANTO **Ankara** **22.37 302** P **P** **10 08 44.0 -2.3**
ANTO IAmb IAmb 10 08 49.5
comp=Z,22nm,0.9s
ANTO **Ankara** **22.37 302** P **P** **10 08 44.0 -2.3**
ANTO pmax pmax
comp=Z,22nm,1.0s
ATD **Arta Tunnel** **23.06 219** LR LR 10 19 01.3
comp=Z,57nm,19.0s,baz=45,slow=40
BELG **Belogornoye** **23.33 345** *i* P **P** **10 08 57.0 +1.0**
BELG pmax pmax
comp=Z,3.0nm,0.8s
MDUB **Mudurnu** **23.71 303** P **P** **10 08 57.6 -2.5**
ELL **Elmali** **23.89 293** P **P** **10 09 00.3 -1.6**
ELL **Elmali** **23.89 293** P **P** **10 09 00.3 -1.6**
ELL pmax pmax
comp=Z,113nm,1.2s
BORA **Eskisehir** **24.10 301** P **P** **10 09 00.2 -3.5**
BORA IAmb IAmb 10 09 09.0
comp=Z,13nm,1.3s
BRVK **Borovoye** **24.66 19** P **P** **10 09 05.9 -2.6**
BRVK IAmb IAmb 10 09 18.8
comp=Z,7.8nm,1.1s
BRVK **Borovoye** **24.66 19** *i* P **P** **10 09 08.7 +0.2**
BRVK pmax pmax
comp=Z,8.0nm,1.2s
BVAR **Borovoye Array** **24.66 19** LR LR 10 19 21.7
comp=Z,53nm,21.0s,baz=64,slow=38
MAKZ **Makanchi** **25.15 42** P **P** **10 09 09.6 -3.5**
MAKZ **Makanchi** **25.15 42** P **P** **10 09 09.6 -3.5**
MAKZ pmax pmax
comp=Z,16nm,0.8s
MK31 **Makanchi Array** **25.32 42** P **P** **10 09 12.6 -2.1**
MK31 IAmb IAmb 10 09 20.0
comp=Z,5.5nm,0.8s
MK31 **Makanchi Array** **25.32 42** *c i*P **P** **10 09 15.8 +1.1**
MKAR **Makanchi Array** **25.32 42** P **P** **10 09 16.4 +1.7**
comp=Z,5.7nm,0.7s,baz=229,slow=8.2,SNR=40
comp=Z,5.7nm,0.7s
MKAR **Makanchi Array** **25.32 42** P **P** **10 09 14.1 -0.6**
KURBB **Kurchatov Arra** **25.74 32** P **P** **10 09 20.1 +1.7**
comp=Z,2.4nm,0.9s,baz=229,slow=9.4,SNR=12
KURBB LR LR 10 20 03.9
comp=Z,97nm,20.9s,baz=241,slow=38
comp=Z,4.0nm,0.9s
KURK **Kurchatov** **25.85 32** P **P** **10 09 17.5 -1.8**
KURK **Kurchatov** **25.85 32** *i* P **P** **10 09 19.3 0.0**
KURK pmax pmax
comp=Z,4.0nm,1.0s
ARU **Arti** **26.21 1** P **P** **10 09 20.8 -1.8**
ARU IAmb IAmb 10 09 32.9
comp=Z,7.0nm,1.1s
ARU **Arti** **26.21 1** *d i*P **P** **10 09 23.6 +1.0**
ARU S **S** **10 13 52.3 -1.7**
ARU pmax pmax
comp=Z,6.0nm,1.6s
WMQ **Urumqi** **27.47 52** *e*P **P** **10 09 35.6 +1.4**
ALN **Alexandroupoli** **27.61 301** P **P** **10 09 33.7 -1.7**
ALN IAmb IAmb 10 09 48.1
comp=Z,7.9nm,1.4s
ALN **Alexandroupoli** **27.61 301** P **P** **10 09 33.7 -1.7**
ALN pmax pmax
comp=Z,8.0nm,1.4s
RDO **Rodhopi** **28.04 302** P **P** **10 09 37.1 -2.0**
RDO IAmb IAmb 10 09 41.1
comp=Z,5.0nm,0.9s
KIRV **Kirov** **28.91 351** LR LR 10 23 40.8
comp=Z,78nm,18.6s,baz=212,slow=41
MLR **Muntele Rosu** **29.00 311** P **P** **10 09 50.8 +2.9**
comp=Z,1.9nm,0.5s,baz=136,slow=18,SNR=4.1
comp=Z,1.9nm,0.5s
OBN **Obninsk** **29.04 335**⇓ *e*P **P** **10 09 49.7 +1.8**
OBN pmax pmax
comp=Z,9.0nm,0.4s
OBN MLR MLR
comp=Z,28nm,15.0s
AKASG **Malin Array Be** **29.42 322** P **P** **10 09 52.4 +1.1**
comp=Z,3.4nm,0.7s,baz=123,slow=8.8,SNR=15
comp=Z,3.4nm,0.7s
AKBB **Malin Array Si** **29.42 322** *c e*P **P** **10 09 51.7 +0.4**
BURAR **Bucovina Array** **30.27 314** P **P** **10 09 58.2 -0.8**
BUR08 **Bucovina Ar. S** **30.29 314** P **P** **10 09 57.7 -1.6**
ITM **Ithomi** **30.30 293** P **P** **10 09 58.5 -0.8**
ITM IAmb IAmb 10 10 14.7
comp=Z,5.6nm,1.0s
ZAA0 **Zalesovo Array** **30.84 32** P **P** **10 10 02.1 -1.7**
ZAA0 IAmb IAmb 10 10 05.6
comp=Z,5.7nm,1.1s
ZALV **Zalesovo Beam** **30.84 32** P **P** **10 10 05.0 +1.1**
comp=Z,2.3nm,0.6s,baz=238,slow=8.5,SNR=9.4
ZALV LR LR 10 22 21.3
comp=Z,38nm,18.0s,baz=249,slow=36
comp=Z,2.3nm,0.6s
ZALV **Zalesovo Beam** **30.84 32** P **P** **10 10 01.2 -2.7**
GOMU **GeErMu** **31.62 69** P **P** **10 10 13.9 +2.5**
GOMU pP sP 10 10 21.1 +2.6
GOMU sP pP 10 10 22.6 +6.1
GOMU pmax pmax
comp=Z,4.0nm,1.2s
GOMU pmax pmax
comp=Z,95nm,5.0s
KLMR **Klimovskoe** **32.90 344** *e*P **P** **10 10 21.6 -0.3**
KLMR pmax pmax
comp=Z,8.0nm,1.0s
KLMR **Klimovskoe** **32.90 344** *e*P **P** **10 10 21.6 -0.3**
KLMR AMP 10 10 31.7
comp=Z,8.0nm,1.0s
OJC **Ojcow** **34.56 316** P **P** **10 10 34.3 -2.2**
OJC IAmb IAmb 10 10 39.5
comp=Z,12nm,1.2s
OJC **Ojcow** **34.56 316** P **P** **10 10 34.3 -2.2**
OJC pmax pmax
comp=Z,12nm,1.2s
GTA **Gaotai** **35.63 63** ⇓P **P** **10 10 48.0 +2.0**
GTA pP sP 10 10 53.6 +0.5
GTA sP pP 10 10 57.9 +6.8
GTA pmax pmax
comp=Z,7.0nm,0.8s
RONA **Rosalia, Austr** **36.01 311** *e*P **P** **10 10 49.5 +0.4**
comp=Z,5.5nm,0.7s
KNGR **Kungurtug, Tuv** **36.05 44** *i* P **P** **10 10 51.5 +2.1**
KNGR pmax pmax
comp=Z,9.0nm,1.0s
FIA0 **FINESS Array S** **37.44 336** P **P** **10 11 00.6 -0.4**
FIA0 **FINESS Array S** **37.44 336** P **P** **10 11 00.6 -0.4**
FIA1 **FINESS Array S** **37.44 336** P **P** **10 10 58.6 -2.4**
FIA1 IAmb IAmb 10 11 02.8
comp=Z,8.1nm,0.9s
FINES **FINESS Array B** **37.44 336** P **P** **10 11 02.5 +1.5**
comp=Z,2.9nm,0.7s,baz=132,slow=11,SNR=7.0
comp=Z,2.9nm,0.7s
FINES **FINESS Array B** **37.44 336** P **P** **10 10 59.3 -1.6**
FINES **FINESS Array B** **37.44 336** *i* P **P** **10 11 03.9 +2.9**
FINES pmax pmax
comp=Z,2.0nm,0.6s
CKRC **Cesky Krumlov** **37.56 312** *e*P **P** **10 11 03.7 +1.4**
BIOA **Bad Ischl, Aus** **37.76 310** *e*P **P** **10 11 03.5 -0.4**
comp=Z,5.3nm,0.8s
KBA **Koelnbreinsper** **37.84 309** *e*P **P** **10 11 05.7 +0.9**
comp=Z,6.0nm,0.8s
GEC2 **GERESS Array S** **37.96 312** P **P** **10 11 04.5 -1.2**
GEC2 IAmb IAmb 10 11 07.2
comp=Z,6.8nm,0.9s
GERES **GERESS Array B** **37.96 312** P **P** **10 11 06.6 +0.9**
comp=Z,2.6nm,0.8s,baz=106,slow=9.8,SNR=11
GERES PcP **PcP** **10 13 21.1 -0.2**
comp=Z,1.1nm,0.7s,baz=204,slow=2.2,SNR=6.1
comp=Z,2.6nm,0.8s
GERES **GERESS Array B** **37.96 312** P **P** **10 11 05.3 -0.4**
KHC **Kasperske Hory** **38.10 312** P **P** **10 11 05.7 -1.2**
KHC IAmb IAmb 10 11 08.4
comp=Z,6.1nm,1.0s
KHC **Kasperske Hory** **38.10 312** *e*P **P** **10 11 07.3 +0.5**
KHC **Kasperske Hory** **38.10 312** *e*P **P** **10 11 07.3 +0.5**
ABTA **Abfaltersbach** **38.34 308** *e*P **P** **10 11 09.4 +0.5**
comp=Z,3.9nm,0.6s
PZH **PanZhiHua** **38.90 84** P **P** **10 11 15.3 +1.4**
PZH pmax pmax
comp=Z,10.0nm,0.6s
PZH pmax pmax
comp=Z,100nm,5.1s
LZH **Lanzhou** **38.92 69** ⇑P **P** **10 11 14.6 +0.5**
LZH pP sP 10 11 21.4 +0.2
LZH pmax pmax
comp=Z,19nm,1.5s
CLL **Collm** **39.00 316** P **P** **10 11 13.1 -1.2**
CLL IAmb IAmb 10 11 17.2
comp=Z,8.5nm,0.9s
CLL **Collm** **39.00 316** *i* P **P** **10 11 15.6 +1.3**
CLL pmax pmax
comp=Z,13nm,1.2s
CLL **Collm** **39.00 316** *i* P **P** **10 11 15.6 +1.3**
comp=Z,13nm,1.2s
WTTA **Wattenberg** **39.02 309** *e*P **P** **10 11 14.5 -0.2**
comp=Z,7.6nm,0.7s
WTTA **Wattenberg** **39.02 309** P **P** **10 11 14.8 +0.1**
WTTA pmax pmax
comp=Z,15nm,0.9s
WATA **Walderalm** **39.07 309** *e*P **P** **10 11 14.5 -0.6**
comp=Z,5.7nm,0.8s
BSD **Bornholm Skovb** **39.12 322** P **P** **10 11 15.0 -0.2**
BSD pmax pmax
comp=Z,47nm,0.9s
SQTA **Sankt Quirin** **39.30 309** *e*P **P** **10 11 16.5 -0.5**
comp=Z,10.0nm,0.6s
MOTA **Moosalm** **39.39 309** *e*P **P** **10 11 16.3 -1.4**
comp=Z,9.5nm,1.0s
SALO **Salr** **39.56 306** P **P** **10 11 16.9 -2.1**
FETA **Feichten** **39.59 309** *e*P **P** **10 11 19.4 -0.1**
comp=Z,10nm,0.8s
RETA **Reutte** **39.64 309** *e*P **P** **10 11 19.2 -0.6**
comp=Z,4.5nm,0.6s
MBAR **Mbarara** **39.88 225** LR LR 10 29 41.8
comp=Z,49nm,18.2s,baz=196,slow=39
DAVOX **Davos/Dischmat** **40.14 308** P **P** **10 11 23.9 -0.1**
comp=Z,6.5nm,0.6s,baz=97,slow=8.1,SNR=12
comp=Z,6.5nm,0.6s
KMI **Kunming** **40.16 86** ⇑P **P** **10 11 25.3 +0.8**
KMI pmax pmax
comp=Z,15nm,0.8s
DAVA **Damuels** **40.20 309** *e*P **P** **10 11 24.2 -0.4**
comp=Z,9.0nm,0.6s
TUE **Stuetta** **40.47 307** P **P** **10 11 24.9 -2.0**
TUE IAmb IAmb 10 11 28.3
comp=Z,5.9nm,0.6s
SONM **Songino Array** **41.09 51** P **P** **10 11 33.6 +1.7**
comp=Z,1.7nm,1.0s,baz=264,slow=8.4,SNR=8.5
SONM LR LR 10 30 30.3
comp=Z,48nm,20.9s,baz=248,slow=39
comp=Z,1.7nm,1.0s
SONM **Songino Array** **41.09 51** P **P** **10 11 31.1 -0.7**
ULN **Ulaanbaatar** **41.53 51** *i* P **P** **10 11 36.2 +0.7**
ULN pmax pmax
comp=Z,2.0nm,0.6s
SENIN **Lac Senin/Sane** **41.87 307** P **P** **10 11 37.2 -1.2**
SENIN IAmb IAmb 10 11 39.0
comp=Z,5.6nm,0.7s
ECH **Echery** **42.14 310** P **P** **10 11 39.4 -0.9**
ECH **Echery** **42.14 310** P **P** **10 11 39.4 -0.9**
ECH pmax pmax
comp=Z,5.0nm,1.0s
BNI **Bardonecchia** **42.22 305** P **P** **10 11 40.1 -1.1**
NRIK **Noril'sk** **42.76 15** LR LR 10 30 33.0
comp=Z,51nm,21.5s,baz=168,slow=37
NRIK **Noril'sk** **42.76 15** P **P** **10 11 43.9 -1.1**
NRIK **Noril'sk** **42.76 15** *i* P **P** **10 11 45.9 +0.9**
NRIK pmax pmax
comp=Z,5.0nm,1.0s
NOA **NORSAR Array B** **43.25 329** P **P** **10 11 49.9 +0.7**
comp=Z,1.5nm,0.9s,baz=116,slow=7.9,SNR=4.5
comp=Z,1.5nm,0.9s
XAN **Xi'an** **43.32 71** P **P** **10 11 52.8 +2.7**
XAN sP sP 10 11 59.8 +2.6
XAN pmax pmax
comp=Z,8.0nm,1.2s
SSB **Saint Sauveur** **43.74 305** P **P** **10 11 52.4 -0.9**
SSB pmax pmax
comp=Z,12nm,1.8s
HHC **Hu-ho-hao-te** **44.61 61** *e*P **P** **10 12 00.1 -0.3**
HHC pmax pmax
comp=Z,40nm,1.1s
HHC pmax pmax
comp=Z,220nm,4.9s
EKA **Eskdalemuir Ar** **49.23 319** P **P** **10 12 36.3 +0.1**
comp=Z,2.0nm,0.6s,baz=111,slow=6.8,SNR=12
comp=Z,2.0nm,0.6s
ESDC **Sonseca Array** **50.41 298** P **P** **10 12 45.3 -0.3**
comp=Z,3.0nm,0.7s,baz=71,slow=7.3,SNR=18
comp=Z,3.0nm,0.7s
ESDC **Sonseca Array** **50.41 298** P **P** **10 12 45.2 -0.3**
PAB **San Pablo** **50.73 298** P **P** **10 12 46.0 -2.0**
PAB IAmb IAmb 10 12 48.4
comp=Z,8.1nm,1.0s
PAB **San Pablo** **50.73 298** P **P** **10 12 46.0 -2.0**
PAB pmax pmax
comp=Z,8.0nm,1.0s
NJ2 **Nanjing** **51.89 71** *e*P **P** **10 12 57.0 +0.4**
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
TOA0 **Torodi Ar. Sit** **54.08 264** P **P** **10 13 13.0 0.0**
TORD **Torodi Ar. Bea** **54.08 264** P **P** **10 13 13.1 +0.1**
comp=Z,15nm,0.8s,baz=58,slow=7.2,SNR=82
comp=Z,15nm,0.8s
TORD **Torodi Ar. Bea** **54.08 264** P **P** **10 13 12.8 -0.2**
TIXI **Tiksi** **55.76 21** P **P** **10 13 24.6 +0.3**
TIXI IAmb IAmb 10 13 32.9
comp=Z,2.3nm,0.8s
TIXI **Tiksi** **55.76 21** *i* P **P** **10 13 24.6 +0.3**
TIXI pmax pmax
comp=Z,2.0nm,0.8s
KSRS **Korea Array** **57.70 62** LR LR 10 41 29.5
comp=Z,22nm,18.5s,baz=220,slow=39
KLR **Kul'dur** **57.83 48** P **P** **10 13 39.6 +0.2**
comp=Z,1.7nm,0.8s,baz=270,slow=9.4,SNR=4.9
comp=Z,1.7nm,0.8s
KLR **Kul'dur** **57.83 48** *i* P **P** **10 13 38.1 -1.3**
KLR pmax pmax
comp=Z,5.0nm,1.3s
TSUM **Tsumeb** **62.40 223** LR LR 10 44 48.6
comp=Z,70nm,19.1s,baz=149,slow=40
DBIC **Dimbokro** **62.85 262** P **P** **10 14 13.0 -1.3**
comp=Z,6.3nm,0.9s,baz=45,slow=2.9,SNR=3.4
comp=Z,6.3nm,0.9s
DBIC **Dimbokro** **62.85 262** P **P** **10 14 13.1 -1.2**
DBIC **Dimbokro** **62.85 262** P **P** **10 14 13.1 -1.2**
DBIC pmax pmax
comp=Z,24nm,1.4s
SEY **Seymchan** **65.68 30** *i* P **P** **10 14 32.5 +0.4**
SEY pmax pmax
comp=Z,4.0nm,0.7s
MJAR **Matsushiro Arr** **65.81 61** LR LR 10 46 11.7
comp=Z,22nm,21.5s,baz=150,slow=39
BOSA **Boshof** **66.12 211** P **P** **10 14 35.1 -0.3**
comp=Z,5.8nm,0.8s,baz=29,slow=5.7,SNR=7.4
comp=Z,5.8nm,0.8s
BOSA **Boshof** **66.12 211** P **P** **10 14 34.9 -0.5**
TOLI2 **Tolitoli** **66.47 103** P **P** **10 14 37.0 -0.9**
TOLI2 IAmb IAmb 10 14 38.4
comp=Z,4.1nm,0.9s
BILL **Bilibino** **68.94 22**⇑ *e*P **P** **10 14 53.0 +0.4**
BILL *e* 10 15 01.9
BILL 10 15 20.0
BILL S **S** **10 24 02.0 +5.8**
BILL *SS **SKiKP** **10 24 38.0 -5.4**
BILL pmax pmax
comp=Z,4.0nm,1.1s
BILL MLR MLR
comp=Z,35nm,15.0s
PEA0B **Petropavlovsk-** **72.10 39** *i* P **P** **10 15 11.9 -0.3**
INK **Inuvik** **81.43 4** P **P** **10 16 05.7 +1.1**
comp=Z,3.0nm,1.1s,baz=346,slow=2.5,SNR=3.2
comp=Z,3.0nm,1.1s
INK **Inuvik** **81.43 4** IAmb IAmb 10 16 06.2
comp=Z,3.6nm,1.0s
COLA **College** **83.17 11** *i* P **P** **10 16 14.0 +0.3**
COLA pmax pmax
comp=Z,3.0nm,0.9s
ILAR **Eielson Array** **83.42 10** P **P** **10 16 15.1 +0.1**
comp=Z,1.0nm,0.6s,baz=320,slow=4.5,SNR=15
comp=Z,1.0nm,0.6s
WRA **Warramunga Arr** **89.08 114** P **P** **10 16 43.0 -0.6**
comp=Z,0.8nm,0.6s,baz=316,slow=4.0,SNR=8.5
comp=Z,0.8nm,0.6s
WRA **Warramunga Arr** **89.08 114** IAmb IAmb 10 16 43.6
comp=Z,0.4nm,1.4s
WRA **Warramunga Arr** **89.08 114** *i* P **P** **10 16 43.0 -0.6**
WRA pmax pmax
comp=Z,1.0nm,0.9s
WRAB **Tennant Creek** **89.08 114** *i* P **P** **10 16 41.7 -1.9**
WRAB pmax pmax
comp=Z,4.0nm,1.1s

IDC ***17*** *10:11:50.2±0.9,20.˚30S×168.˚84E,h0km,mb4.3/9, mbtmp4.3/11,ML3.8/2,MS3.8/31,Error ellipse: s-maj=30.1km s-min=21.5km az=128.0*
BJI ***17*** *10:11:50.4±0.0,19.˚90S×169.˚61E,h18km,mb4.9/14, mB5.0/10*
NEIC ***17*** *10:11:51.2±1.5,20.˚63S±0.˚08×168.˚91E±0.˚04,h10km±1km, mb4.7/56,Error ellipse: s-maj=15.2km s-min=3.7km az=160.0*
NOU ***17*** *10:12:26.9,17.˚99S×168.˚28E,h30km,MLv3.0/4,Vanuatu Islands*

ISC 17 10:11:50.8±0.4,20.˚53S±0.˚06×168.˚86E±0.˚07,h10km,n141, σt1s03/116,mb4.7/40,MS3.9/28,8D,Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**1.22**	**219**		**Pn**	**10 12 13.6**	**-0.3**
PINNC	**Pines Island,**	**2.45**	**212**	Pn	**Pn**	**10 12 30.9**	**0.0**
DZM	**Mont Dzumac**	**2.72**	**235**	Pn	**Pn**	**10 12 34.8**	**+0.1**
	20nm,0.3s,baz=67,slow=16,SNR=32						
DZM				Sn	**Sn**	**10 13 06.3**	**-1.5**
	174nm,0.3s,baz=142,slow=24,SNR=14						
	87nm,0.4s						
RTV	**Rentapao**	**2.75**	**351**	P	**Pn**	**10 12 35.2**	**+0.2**
DVP	**Devils Point**	**2.86**	**347**	P	**Pn**	**10 12 35.6**	**-0.9**
KOUNC	**Koumac, New Ca**	**4.29**	**269**	Pn	**Pn**	**10 12 57.0**	**+0.9**
MSVF	**Nonsavu**	**9.12**	**74**	Pn	Pn	10 14 10.6	+7.9
	0.3nm,0.3s,baz=246,slow=11,SNR=9.9						
MSVF				LR	LR	10 16 47.9	
	comp=Z,800nm,19.6s,baz=215,slow=33						
MSVF	**Nonsavu**	**9.12**	**74**	Pn	**Pn**	**10 14 02.4**	**-0.2**
EIDS	**Eidsvold**	**17.06**	**250**	Pn	**Pn**	**10 15 49.2**	**-0.3**
URZ	**Urewera**	**19.06**	**160**	P	**Pn**	**10 16 18.3**	**+4.3**
	0.2nm,0.3s,baz=105,slow=21,SNR=3.6						
URZ				LR	LR	10 22 38.9	
	comp=Z,279nm,19.0s,baz=31,slow=34						
	7.3nm,0.9s						
URZ	**Urewera**	**19.06**	**160**	P	**P**	**10 16 12.1**	**-1.2**
AFI	**Afiamalu**	**19.62**	**73**	LR	LR	10 22 22.1	
	comp=Z,293nm,18.8s,baz=192,slow=32						
CTA	**Charters Tower**	**21.20**	**267**	P	**P**	**10 16 40.2**	**+3.4**
	7.8nm,0.9s,baz=97,slow=12,SNR=7.1						
CTA				LR	LR	10 24 19.5	
	comp=Z,284nm,19.9s,baz=88,slow=35						
CTAO	**Charters Tower**	**21.20**	**267**	P	**P**	**10 16 37.4**	**+0.6**
CTAO				IAmb	IAmb	10 16 56.6	
	comp=Z,50nm,1.5s						
CAN	**Canberra**	**22.85**	**226**	P	**P**	**10 16 52.8**	**-1.6**
CAN				IAmb	IAmb	10 17 17.0	
	comp=Z,50nm,1.4s						
RPZ	**Rata Peaks**	**23.19**	**176**	LR	LR	10 26 12.1	
	comp=Z,365nm,18.1s,baz=291,slow=37						
COEN	**Coen**	**25.36**	**281**	P	**P**	**10 17 20.0**	**+1.6**
TOO	**Toolangi**	**26.45**	**225**	P	**P**	**10 17 25.6**	**-2.5**
TOO				IAmb	IAmb	10 17 37.2	
	comp=Z,27nm,1.3s						
STKA	**Stephens Creek**	**26.87**	**240**	P	**P**	**10 17 34.4**	**+2.5**
	comp=Z,4.0nm,0.7s,baz=35,slow=7.3,SNR=6.1						
STKA				LR	LR	10 27 53.8	
	comp=Z,150nm,19.2s,baz=40,slow=36						
	comp=Z,4.0nm,0.7s						
STKA	**Stephens Creek**	**26.87**	**240**	P	**P**	**10 17 32.7**	**+0.9**
RAR	**Rarotonga**	**29.30**	**97**	LR	LR	10 26 45.0	
	comp=Z,140nm,21.0s,baz=281,slow=30						
BBOO	**Buckleboo**	**31.63**	**240**	P	**P**	**10 18 11.8**	**-2.3**
WR0	**Warramunga Arr**	**32.17**	**265**	P	**P**	**10 18 18.3**	**-0.7**
WB0	**Warramunga Arr**	**32.33**	**265**	P	**P**	**10 18 20.0**	**-0.5**
WB2	**Warramunga Arr**	**32.35**	**265**	P	**P**	**10 18 20.5**	**-0.1**
WRA	**Warramunga Arr**	**32.36**	**265**	P	**P**	**10 18 20.7**	**0.0**
	comp=Z,1.0nm,0.4s,baz=93,slow=8.3,SNR=20						
WRA				PcP	**PcP**	**10 21 09.2**	**+0.7**
	comp=Z,1.1nm,1.0s,baz=95,slow=3.4,SNR=3.6						
WRA				LR	LR	10 31 39.5	
	comp=Z,254nm,18.4s,baz=82,slow=37						
	comp=Z,1.0nm,0.4s						
WRA	**Warramunga Arr**	**32.36**	**265**	P	**P**	**10 18 21.0**	**+0.3**
AS31	**Alice Springs**	**32.49**	**258**	P	**P**	**10 18 22.4**	**+0.5**
AS31				IAmb	IAmb	10 18 34.3	
	comp=Z,5.4nm,0.7s						
ASAR	**Alice Springs**	**32.49**	**258**	P	**P**	**10 18 22.4**	**+0.6**
MTN	**Manton Dam**	**36.87**	**276**	P	**P**	**10 18 59.8**	**+0.1**
MTN				IAmb	IAmb	10 19 11.8	
	comp=Z,15nm,0.8s						
KNRA	**Kununurra**	**38.35**	**270**	P	**P**	**10 19 12.0**	**-0.2**
PPT	**Papeete**	**39.33**	**93**	LR	LR	10 31 41.1	
	comp=Z,54nm,20.1s,baz=62,slow=30						
GUMO	**Guam**	**41.30**	**323**	LR	LR	10 35 23.9	
	comp=Z,54nm,21.8s,baz=130,slow=34						
PSA00	**Pilbara Seismi**	**45.60**	**260**	P	**P**	**10 20 12.7**	**+1.2**
PSA00				IAmb	IAmb	10 20 24.3	
	comp=Z,10nm,0.8s						
MBWA	**Marble Bar**	**45.77**	**260**	P	**P**	**10 20 13.7**	**+0.8**
KAPI	**Kappang**	**50.09**	**281**	LR	LR	10 42 40.4	
	comp=Z,61nm,18.6s,baz=138,slow=37						
TOLI2	**Tolitoli**	**51.73**	**289**	P	**P**	**10 20 58.1**	**-0.7**
VNDA	**Vanda**	**57.14**	**182**	LR	LR	10 41 17.9	
	comp=Z,63nm,20.2s,baz=10,slow=31						
JOW	**Kunigami**	**61.35**	**319**	LR	LR	10 48 46.6	
	comp=Z,59nm,18.1s,baz=56,slow=36						
MJAR	**Matsushiro Arr**	**63.73**	**333**	P	**P**	**10 22 22.8**	**+0.1**
	comp=Z,4.1nm,1.1s,baz=147,slow=6.5,SNR=4.4						
	comp=Z,4.1nm,1.1s						
MJAR	**Matsushiro Arr**	**63.73**	**333**	IAmb	IAmb	10 22 27.0	
	comp=Z,5.1nm,1.5s						
ASAJ	**Asahikawa**	**68.68**	**340**	LR	LR	10 49 47.8	
	comp=Z,78nm,20.0s,baz=166,slow=33						
KSRS	**Korea Array**	**69.37**	**326**	P	**P**	**10 22 57.5**	**-1.2**
	comp=Z,1.2nm,0.8s,baz=122,slow=5.9,SNR=5.0						
	comp=Z,1.2nm,0.8s						
QSPA	**South Pole Qui**	**69.53**	**180**	LR	LR	10 52 24.6	
	comp=Z,76nm,18.0s,baz=46,slow=35						
QSPA	**South Pole Qui**	**69.53**	**180**	P	**P**	**10 22 57.9**	**-1.7**
USA0B	**Ussuriysk Arra**	**72.72**	**333**	P	**P**	**10 23 18.8**	**-0.2**
USRK	**Ussuriysk Ar.**	**72.72**	**333**	P	**P**	**10 23 19.7**	**+0.8**
	comp=Z,5.3nm,0.8s,baz=134,slow=5.0,SNR=8.9						
	comp=Z,5.3nm,0.8s						
USRK	**Ussuriysk Ar.**	**72.72**	**333**	P	**P**	**10 23 19.2**	**+0.2**
SHEM	**Shemya Is, Ala**	**73.09**	**3**	LR	LR	10 50 57.1	
	comp=Z,64nm,20.4s,baz=25,slow=32						
PEA0B	**Petropavlovsk-**	**73.97**	**353**	P	**P**	**10 23 26.4**	**+0.3**
PETK	**Petropavlovsk-**	**73.97**	**353**	P	**P**	**10 23 25.9**	**-0.2**
CN2	**Changchun**	**75.37**	**329**	*e*P	**P**	**10 23 32.4**	**-2.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HNS	**HongShan**	**76.92**	**318**	*e*P	**P**	**10 23 44.3**	**+0.9**
CMAR	**Chiang Mai Arr**	**78.71**	**295**	P	**P**	**10 23 55.6**	**+1.8**
	comp=Z,1.3nm,0.3s,baz=138,slow=4.0,SNR=7.6						
	comp=Z,1.3nm,0.3s						
CMAR	**Chiang Mai Arr**	**78.71**	**295**	P	**P**	**10 23 54.4**	**+0.5**

PZH	PanZhiHua	80.10	303	P	P	10 24 03.3	+1.8
PZH	comp=Z,10.0nm,0.5s			pmax	pmax		
PZH	comp=Z,80nm,7.1s			pmax	pmax		
XLT	XiLinHaoTe	80.27	324	*e*P	P	10 24 12.1	+10
XLT				pP	pwP	10 24 17.4	+7.7
XLT				sP	PcP	10 24 19.0	+10
XLT	comp=Z,16nm,1.0s			pmax	pmax		
XLT	comp=Z,75nm,4.1s			pmax	pmax		
CD2	Chengdu	80.74	308	P	P	10 24 05.8	+1.1
BELA	Belgrano 2	80.85	175	P	P	10 24 05.1	+0.6
BELA	comp=Z,9.9nm,1.0s			IAmb	IAmb	10 24 17.1	
HHC	Hu-ho-hao-te	80.97	320	*e*P	P	10 24 04.8	-0.9
HHC	comp=Z,36nm,0.9s			pmax	pmax		
HHC	comp=Z,130nm,5.9s			pmax	pmax		
MA2	Magadan	81.18	351	LR	LR	10 55 00.7	
LZH	comp=Z,74nm,21.4s,baz=138,slow=32 Lanzhou	83.33	312	*e*P	P	10 24 15.1	-3.2
LZH	comp=Z,18nm,1.6s			pmax	pmax		
SEY	Seymchan	84.19	353	LR	LR	11 00 58.0	
KDAK	comp=Z,42nm,18.1s,baz=176,slow=35 Kodiak Island	84.36	20	LR	LR	11 01 35.8	
TROLL	comp=Z,89nm,18.1s,baz=218,slow=36 Troll, Antarti	87.23	184	P	P	10 24 38.2	+1.0
KHMM	Horse Mountain	87.38	44	P	P	10 24 39.0	+0.6
ULN	Ulaanbaatar	87.68	324	P	P	10 24 40.1	+0.3
GTA	Gaotai	87.75	314	*e*P	P	10 24 41.4	+1.2
GTA				pP	pwP	10 24 46.8	-1.3
GTA				sP	sP	10 24 51.3	+8.6
GTA	comp=Z,4.0nm,1.0s			pmax	pmax		
GTA	comp=Z,65nm,4.7s			pmax	pmax		
SNAA	Sanae	87.86	183	P	P	10 24 40.8	+0.6
SNAA	Sanae	87.86	183	LR	LR	11 03 47.3	
YAK	comp=Z,50nm,18.4s,baz=206,slow=35 Yakutsk	87.99	343	LR	LR	11 04 19.3	
SONM	comp=Z,38nm,18.5s,baz=89,slow=36 Songino Array	88.03	323	P	P	10 24 42.1	+0.7
SONM	comp=Z,1.6nm,0.8s,baz=132,slow=4.6,SNR=9.4			LR	LR	11 05 11.1	
SONM	comp=Z,48nm,18.2s,baz=110,slow=36 comp=Z,1.6nm,0.8s						
SONM	Songino Array	88.03	323	P	P	10 24 42.3	+0.9
CMB	comp=Z,4.0nm,1.2s Columbia Colle	88.28	48	P	P	10 24 42.1	-0.6
VNA3	CMB comp=Z,6.4nm,1.4s Neumayer Olymp	88.47	180	IAmb P	IAmb P	10 24 43.7 10 24 43.6	+0.6
YBH	Yreka Blue Hor	88.47	44	LR	LR	10 59 16.5	
YBH	comp=Z,60nm,18.3s,baz=252,slow=32 Yreka Blue Hor	88.47	44	P	P	10 24 43.8	+0.2
ISA	YBH comp=Z,5.7nm,1.2s Isabella, Lake	88.57	51	IAmb P	IAmb P	10 24 46.9 10 24 44.3	+0.2
HUMO	ISA comp=Z,6.0nm,1.2s Hull Mountain	88.74	43	IAmb P	IAmb P	10 24 44.9 10 24 45.2	+0.5
VNA1	HUMO comp=Z,5.0nm,1.1s Neumayer--Stat	89.04	181	IAmb P	IAmb P	10 24 46.5 10 24 47.5	+1.8
OMMB	Old Mammoth Mi	89.06	49	P	P	10 24 45.9	-0.9
OMMB	comp=Z,5.2nm,1.4s			IAmb	IAmb	10 24 48.1	
BEKR	Beckworth	89.15	47	P	P	10 24 46.8	-0.1
BEKR	comp=Z,6.7nm,1.4s			IAmb	IAmb	10 24 48.1	
YERR	Yerington	89.51	48	P	P	10 24 47.8	-0.8
LHV	Little Huntoon	89.70	49	P	P	10 24 48.6	-0.7
LHV	comp=Z,6.1nm,1.2s			IAmb	IAmb	10 24 54.9	
PAHR	Pah Rah Range	89.74	47	P	P	10 24 49.0	-0.6
RYN	Ryan	89.85	48	P	P	10 24 50.1	-0.1
RYN	comp=Z,5.0nm,1.0s			IAmb	IAmb	10 24 52.9	
NVAR	Mina Array Bea	89.92	49	P	P	10 24 50.9	+0.3
NVAR	comp=Z,3.9nm,1.1s,baz=230,slow=7.0,SNR=13 comp=Z,56nm,20.6s,baz=236,slow=30			LR	LR	10 57 27.8	
NVAR	Mina Array Bea	89.92	49	P	P	10 24 50.4	-0.2
NV11	Mina Array Sit	90.03	49	P	P	10 24 50.9	-0.1
NV11	comp=Z,4.6nm,1.1s			IAmb	IAmb	10 24 53.3	
GWY	Greenwater Val	90.11	51	P	P	10 24 50.8	-0.7
GWY	comp=Z,4.7nm,1.2s			IAmb	IAmb	10 24 53.4	
K05A	Summer Lake	90.13	44	P	P	10 24 52.0	+0.5
K05A	comp=Z,4.2nm,0.9s			IAmb	IAmb	10 24 54.0	
MOD	Modoc Plateau	90.13	45	P	P	10 24 51.2	-0.3
MOD	comp=Z,4.4nm,1.0s			IAmb	IAmb	10 24 53.7	
LPIG	La Paz	90.29	64	LR	LR	10 56 51.4	
E03A	comp=Z,55nm,19.1s,baz=212,slow=30 Lebam	90.32	40	P	P	10 24 53.0	+1.1
KVN	Kaiserville	90.34	48	P	P	10 24 52.8	+0.3
KVN	comp=Z,4.5nm,1.1s			IAmb	IAmb	10 24 53.5	
TPH	Tonopah	90.53	49	P	P	10 24 53.0	-0.5
PINE	Pine Mountain	90.60	43	P	P	10 24 53.8	+0.1
SHPR	Sheep Range	91.35	51	P	P	10 24 57.1	-0.2
WVOR	Wild Horse Val	91.48	45	P	P	10 24 57.4	-0.2
WVOR	comp=Z,5.8nm,1.3s			IAmb	IAmb	10 24 59.4	
ILAR	Eielson Array	91.56	17	P	P	10 24 55.5	-1.8
ILAR	comp=Z,0.6nm,0.7s,baz=234,slow=6.2,SNR=5.4 comp=Z,63nm,18.2s,baz=164,slow=36 comp=Z,0.6nm,0.7s			LR	LR	11 06 08.6	
D05A	Enumclaw	91.57	40	P	P	10 24 57.5	-0.3
I07A	Izee	91.66	43	P	P	10 24 58.7	+0.3
I07A	comp=Z,3.1nm,1.0s			IAmb	IAmb	10 24 59.1	
PRN	Pahroc Range	91.80	51	P	P	10 24 59.7	+0.4
J08A	Circle Bar Ran	92.00	44	P	P	10 24 60.0	0.0
J08A	comp=Z,3.5nm,1.0s			IAmb	IAmb	10 25 02.5	
G08A	Pilot Rock	92.55	42	P	P	10 25 03.1	+0.6
G08A	comp=Z,2.7nm,1.0s			IAmb	IAmb	10 25 03.9	
LCMT	Little Creek M	92.96	52	P	P	10 25 04.5	-0.2
LCMT	comp=Z,2.8nm,1.1s			IAmb	IAmb	10 25 07.0	
ELK	Elko	93.05	48	LR	LR	11 01 53.5	
X16A	comp=Z,49nm,18.5s,baz=258,slow=32 Lo Mia Camp, P	93.30	55	P	P	10 25 06.6	+0.2
U15A	North Rim	93.44	52	P	P	10 25 07.4	+0.3
NEW	Newport	94.99	40	LR	LR	11 03 02.1	
ANMO	comp=Z,52nm,18.6s,baz=281,slow=32 Albuquerque	97.32	56	LR	LR	11 04 08.7	
TXAR	comp=Z,31nm,18.9s,baz=259,slow=32 Lajitas Array	97.69	62	LR	LR	11 03 51.8	
PDAR	comp=Z,77nm,18.1s,baz=258,slow=32 Pinedale Array	97.75	47	LR	LR	11 04 12.9	
WMQ	comp=Z,20nm,18.4s,baz=260,slow=32 Urumqi	97.84	314	*e*P	Pdif	10 25 28.3	+1.6
MKAR	Makanchi Array	102.40	315	P	Pdif	10 25 47.8	+0.9
MKAR	comp=Z,0.4nm,0.7s,baz=110,slow=6.0,SNR=3.6 Makanchi Array	102.40	315		Pdif	10 25 47.4	+0.5
ARCES	ARCESS Array B	126.22	345	PKP	PKPdf	10 30 51.5	-1.4
CLL	comp=Z,2.6nm,0.8s,baz=325,slow=1.9,SNR=4.0 Collm	143.93	334	*e*PKPdf	PKPdf	10 31 27.0	+0.7
RONA	Rosalia, Austr	144.98	327	*e*P	PKPdf	10 31 28.6	+0.2
CONA	comp=Z,10nm,1.2s Conrad Observa	145.05	328	*e*P	PKPdf	10 31 28.5	0.0
KHC	comp=Z,6.3nm,1.1s Kasperske Hory	145.29	331	*e*PKP	PKPdf	10 31 29.3	+0.5
GERES	GERESS Array B	145.45	331	PKPbc	PKPab	10 31 29.8	+0.5
GERES	comp=Z,2.2nm,0.7s,baz=44,slow=6.3,SNR=10 GERESS Array B	145.45	331		PKPbc	10 31 29.2	+0.1
ARSA	Arzberg	145.67	327	*e*P	PKPdf	10 31 29.7	+0.2
MOA	comp=Z,0.5nm,0.6s Molln	145.89	329	*e*P	PKPab	10 31 31.8	+0.8
BTNL	comp=Z,6.6nm,0.9s Ternell	147.05	340	*d*PKP	PKPab	10 31 35.5	+0.3
MEM	Membach	147.07	340	*d*PKiKP	PKiKP	10 31 36.2	-0.1
BSTI	Sart Tilman	147.23	340	*d*PKP	PKiKP	10 31 36.9	+0.3
BHOU	Houvegnez	147.29	340	*d*PKP	PKPab	10 31 36.7	+0.5
BCLA	Clavier	147.46	340	*d*PKiKP	PKiKP	10 31 37.3	+0.2
ABTA	Abfaltersbach	147.51	329	*e*P	PKPdf	10 31 31.8	-0.9
WATA	comp=Z,6.5nm,1.3s Walderalm	147.52	331	*e*P	PKPbc	10 31 35.4	0.0
WTTA	comp=Z,7.6nm,1.2s Wattenberg	147.55	331	*e*P	PKPbc	10 31 36.3	+0.8
BMRD	comp=Z,4.7nm,0.6s Maredsous	147.73	341	*d*PKP	PKiKP	10 31 37.0	-0.7
MOTA	Moosalm	147.73	331	*e*P	PKPbc	10 31 36.1	+0.2
SQTA	comp=Z,7.4nm,0.8s Sankt Quirin	147.78	331	*e*P	PKPbc	10 31 35.4	-0.7
WLF	comp=Z,6.5nm,0.8s Walferdange	147.83	339	*d*PKP	PKiKP	10 31 37.2	-0.7
DOU	Dourbes	147.96	341	*d*PKP	PKPbc	10 31 36.4	+0.1
FETA	Feichten	148.14	331	*e*P	PKPbc	10 31 36.7	-0.4
DAVA	comp=Z,7.5nm,1.2s Damuels	148.32	332	*e*P	PKPab	10 31 40.3	-0.4
ESDC	comp=Z,7.5nm,0.9s Sonseca Array	159.95	344	PKPab	PKPab	10 32 29.5	-0.3
	comp=Z,0.8nm,0.7s,baz=17,slow=4.1,SNR=4.7						

*SKHL **17** 10:41:51.7±0.5, 45˚.80N×143˚.60E, h336km, mb4.7/4, msha5.0/4*
*JMA **17** 10:41:52.6±0.5, 46˚N±2˚×14˚3E±˚, h335km±4km, MV3.4/37, NE OFF HOKKAIDO*
*IDC **17** 10:41:54.0±1.9, 45˚.93N×143˚.00E, h337km±23km, mb2.9/6, mbtmp3.7/11, Error ellipse: s-maj=26.9km s-min=17.8km az=156.0*

ISC 17 10:41:52.8±0.7, **45˚.67N**±0˚.06×**143˚.19E**±0˚.07, **h350**km, **n33,** σ**2s 27**/41, **mb3.2/6, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSE	Soyaes	0.83	211	*e*P	Pn	10 42 36.4	-1.5
JWK2	Keihoku	0.97	249	*e*P	Pn	10 42 37.1	-1.3
JWK2				*e*S	S	10 43 11.4	-3.6
YSS	Yuzh-Sakhalins	1.32	347	*e*P	Pn	10 42 37.0	-2.8
YSS	40nm,0.3s			AMB	AMB	10 42 38.2	
YSS				*e*S	S	10 43 12.3	-5.4
YSS	40nm,0.5s			A	A	10 43 13.3	
YSS	20nm,0.5s			A	A	10 43 13.3	
JRR	Rishiri	1.43	249	*e*P	Pn	10 42 39.1	-1.3
JRBN	Rebuntou	1.51	262	*e*P	Pn	10 42 38.8	-2.1
JSS	Shosan	1.58	217	*e*P	Pn	10 42 40.9	-0.6
ASAJ	Asahikawa	1.60	195	*e*P	Pn	10 42 41.3	-0.3
JMP	Maruseppu	1.66	176	*e*P	Pn	10 42 41.5	-0.5
JYG	Yagishiri	1.76	226	*e*P	Pn	10 42 41.9	-0.6
JTKR	Abashiri--Toko	1.77	163	*e*P	Pn	10 42 42.4	-0.2
JKK2	Kamakawa 2	1.82	190	*e*P	Pn	10 42 42.8	-0.2
JRA	Rausu	2.21	141	*e*P	Pn	10 42 45.8	+0.2
JAR	Ashorobuto	2.40	170	*e*P	Pn	10 42 47.5	+0.4
JAK	Akkeshi	2.88	157	*e*P	Pn	10 42 50.8	-0.3
JAK				*e*S	S	10 43 35.4	-2.5
AKK	Akkeshi	2.90	155	*e*P	Pn	10 42 49.2	-2.1
AKK				*e*S	S	10 43 34.6	-3.7
AKK	300nm,0.4s			A	A	10 43 35.9	
AKK	200nm,0.4s			A	A	10 43 35.9	
NMR	Nemuro--Hokkai	2.92	141	*e*P	Pn	10 42 49.5	-2.0
NMR	10.0nm,0.2s			AMB	AMB	10 42 51.7	
NMR				*e*S	S	10 43 34.0	-4.7
NMR	50nm,0.2s			A	A	10 43 36.8	
NMR	50nm,0.2s			A	A	10 43 36.8	
NEM2	Nemuro 2	2.94	141	*e*P	Pn	10 42 50.8	-0.8
NEM2				*e*S	S	10 43 34.6	-4.3
JCH	Churui	3.05	178	*e*P	Pn	10 42 51.8	-0.9
JCH				*e*S	S	10 43 37.0	-3.8
JEW	Eniwo	3.09	205	*e*P	Pn	10 42 53.9	+0.9
JNBK	Urakawa-nobuka	3.40	186	*e*P	Pn	10 42 56.0	+0.1
JNBK				*e*S	S	10 43 43.4	-3.3
JOSM	Okushiri--Mats	4.48	218	*e*P	Pn	10 43 07.0	+0.3
JOT	Ohata	4.56	201	*e*S	S	10 44 04.2	-3.9
USRK	Ussuriysk Ar.	8.09	264	P	Pn	10 43 48.1	+0.3
KLR	5.8nm,0.5s,baz=72,slow=13,SNR=22 Kul'dur	8.54	299	P	Pn	10 43 52.0	-1.1
MJAR	2.2nm,0.6s,baz=99,slow=5.7,SNR=8.3 Matsushiro Arr	9.86	204	P	P	10 44 11.7	+1.0
PETK	3.7nm,0.5s,baz=18,slow=9.5,SNR=14 Petropavlovsk-	12.02	46	P	Pn	10 44 35.5	+1.0
SEY	0.7nm,0.6s,baz=236,slow=10,SNR=2.0 Seymchan	18.08	14	P	P	10 45 39.0	-1.2
SONM	5.1nm,0.3s,baz=204,slow=9.3,SNR=19 Songino Array	25.16	288	P	P	10 46 47.3	-0.1
MKAR	0.7nm,0.4s,baz=79,slow=8.2,SNR=2.4 Makanchi Array	41.21	294	P	P	10 49 04.8	+0.5
ILAR	0.4nm,0.5s,baz=72,slow=7.5,SNR=4.1 Eielson Array	41.64	37	P	P	10 49 08.1	+0.6
NVAR	0.1nm,0.3s,baz=306,slow=2.1,SNR=1.2 Mina Array Bea	68.91	56	P	P	10 52 23.6	+2.8
PDAR	0.4nm,0.6s,baz=302,slow=5.7,SNR=5.1 Pinedale Array	70.78	48	P	P	10 52 33.9	+1.8
TXAR	0.5nm,0.6s,baz=323,slow=2.1,SNR=6.1 Lajitas Array	83.87	54	P	P	10 53 46.5	+2.5
	0.2nm,0.5s,baz=293,slow=4.1,SNR=5.7 0.2nm,0.5s						

*DJA **17** 10:57:24.5±0.2, 8˚S±3˚×12˚3E±˚, h287km±5km, M4.1/10, mb4.3/9, mB5.0/3, MLv4.0/10, Mw(mB)4.3/3*
*NEIC **17** 10:57:25.0±1.3, 7˚.70S±0˚.08×123˚.08E±0˚.08, h280km±8km, mb4.4/20, Error ellipse: s-maj=12.9km s-min=10.0km az=51.0*
*IDC **17** 10:57:25.8±2.1, 7˚.71S×123˚.02E, h294km±24km, mb3.5/5, mbtmp4.2/7, Error ellipse: s-maj=42.4km s-min=15.3km az=70.0*

ISC 17 10:57:25.9±0.5, **7˚.82S**±0˚.06×**122˚.96E**±0˚.06, **h300**km, **n88,** σ**1s 73**/89, **mb4.3**/11, **Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	Maumere	1.07	221		Pn	10 58 04.3	-2.3
MMRI	Maumere	1.07	221	P	Pn	10 58 05.0	-1.7
EDFI	Ende, Flores	1.55	234	P	Pn	10 58 07.7	-1.9
SOEI	Soe	2.32	146		Pn	10 58 13.4	-2.1
SOEI	Soe	2.32	146	P	Pn	10 58 13.6	-1.9
SOEI	Soe	2.32	146	P	Pn	10 58 13.6	-1.9
BBSI	Bau Bau	2.35	351	P	Pn	10 58 13.8	-1.9
BASI	Baing, Sumba	3.34	224	P	Pn	10 58 21.3	-3.8
BASI				S	S	10 59 07.4	-5.1
BKSI	Bulukumba	3.75	311	P	Pn	10 58 27.7	-1.8
WBSI	Waikabubak, Su	3.96	243	P	Pn	10 58 29.2	-2.5
KAPI	Kappang	4.23	311	P	Pn	10 58 34.2	-0.6
KAPI	17nm,0.5s,baz=137,slow=7.5,SNR=11 Kappang	4.23	311	Pn	Pn	10 58 33.1	-1.7
PLAI	Plampang	5.22	259	P	Pn	10 58 44.3	-1.7
PLAI	1.3nm3µm61nm,0.4s			S	S	10 59 45.4	-5.1
PLAI	1.3nm3µm61nm,0.4s	5.22	259	P	Pn	10 58 44.4	-1.6
TTSI	Tana Toraja	5.68	327	P	Pn	10 58 52.0	+0.5
SANI	Sanana	6.48	28	P	Pn	10 59 02.5	+1.4
APSI	Ampana	6.99	349	P	Pn	10 59 18.5	+11
MRSI	Marisa	8.31	353	P	Pn	10 59 22.2	-1.1
LBMI	29nm,1.0s Labuha	8.46	33	P	Pn	10 59 25.8	+0.6
MPSI	28nm,0.9s Mapaga	8.66	339	P	Pn	10 59 27.8	+0.1
TOLI2	25nm,0.9s Tolitoli	9.14	346	Pn	Pn	10 59 31.4	-2.2
MTN	Manton Dam	9.46	122	Pn	Pn	10 59 35.7	-1.8
MTN	Manton Dam	9.46	122	P	Pn	10 59 36.6	-0.9
KNRA	Kununurra	9.65	144	Pn	Pn	10 59 38.3	-1.6
KNRA	Kununurra	9.65	144	P	Pn	10 59 38.6	-1.2
FAKI	Fak Fak	10.46	63	Pn	Pn	10 59 46.2	-3.6
FAKI	Fak Fak 844nm72nm,0.7s	10.46	63	P	Pn	10 59 47.2	-2.5
FAKI	Fak Fak	10.46	63	P	Pn	10 59 46.1	-3.6
KDU	Kakadu	10.54	118	P	Pn	10 59 48.4	-2.3
SWI	Sorong 13nm,0.6s	10.79	51	P	Pn	10 59 50.7	-3.0
UGM	Wanagama	12.32	269		Pn	11 00 13.1	+0.6
MBWA	Marble Bar	13.62	193		P	11 00 28.8	+1.0
MBWA	Marble Bar	13.62	193	P	P	11 00 28.8	+1.0
MYLDM	Lahad Datu	13.66	341		P	11 00 26.0	-2.3
PSA00	Pilbara Seismi	13.99	192	P	P	11 00 33.2	+1.3
PSA00	Pilbara Seismi	13.99	192	P	P	11 00 33.1	+1.2
SBUM	Sibu	14.79	313	P	P	11 00 40.9	0.0
KKM	Kota Kinabalu	15.33	334		P	11 00 46.4	-0.4
KKM	comp=Z,24nm,1.1s			IAmb	IAmb	11 00 54.4	
WB0	Warramunga Arr	16.25	138	P	P	11 00 56.7	0.0
WB0	comp=Z,8.1nm,0.7s			IAmb	IAmb	11 01 00.3	
WRA	Warramunga Arr	16.33	139	P	P	11 00 57.8	+0.2
WRA	comp=Z,6.0nm,0.3s,baz=313,slow=13,SNR=218			S	S	11 03 52.9	-0.7
WRA	comp=Z,6.2nm,0.9s,baz=309,slow=20,SNR=7.7 Warramunga Arr	16.33	139	P	P	11 00 57.0	-0.7
WRAB	Tennant Creek	16.34	139	P	P	11 00 57.9	+0.2
WRAB	comp=Z,17nm,1.0s			IAmb	IAmb	11 00 59.2	
WRAB	Tennant Creek	16.34	139	P	P	11 00 57.8	+0.2
WB2	Warramunga Arr	16.34	139	P	P	11 00 57.9	+0.1
WB2	comp=Z,11nm,0.7s			IAmb	IAmb	11 00 58.5	
WR0	Warramunga Arr	16.48	138	P	P	11 00 59.5	+0.3
SMPI	Sarmi	16.73	71	P	P	11 01 01.9	-0.1
GIRL	comp=Z,35nm,1.0s Giralia	16.95	209	P	P	11 01 05.7	+1.4
WRKA	Warakurna	17.86	164	P	P	11 01 15.8	+1.6
AS31	Alice Springs	18.93	148	P	P	11 01 27.2	+1.5
AS31	comp=Z,3.9nm,0.3s			IAmb	IAmb	11 01 35.4	
ASAR	Alice Springs	18.93	148	P	P	11 01 27.0	+1.3
QIS	Mount Isa	20.48	130	P	P	11 01 41.8	-0.1
COEN	Coen	20.76	109	P	P	11 01 42.9	-1.8
COEN	Coen	20.76	109	P	P	11 01 42.9	-1.8
MORW	Morawa	22.11	196	P	P	11 01 59.2	+2.3
MORW	comp=Z,15nm,1.5s			IAmb	IAmb	11 02 11.2	
MORW	Morawa	22.11	196	P	P	11 01 59.3	+2.3
OOD	Oodnadatta	23.23	150	P	P	11 02 08.1	+1.0
FORT	Forrest	23.33	169	P	P	11 02 09.9	+1.9
FORT	Forrest	23.33	169	P	P	11 02 09.2	+1.2
BLDU	Ballidu	23.42	194	P	P	11 02 10.3	+1.5
MULG	Mulgathing	24.65	156	P	P	11 02 20.8	+0.9
LCRK	Leigh Creek	26.66	150	P	P	11 02 39.1	+1.2
QLP	Quilpie	27.51	135	P	P	11 02 46.7	+1.2
BBOO	Buckleboo	27.68	156	P	P	11 02 47.8	+0.8
BBOO	Buckleboo	27.68	156	P	P	11 02 47.7	+0.8
HTT	Hallett	29.45	152	P	P	11 03 04.4	+1.8
STKA	Stephens Creek	29.56	147	P	P	11 03 04.8	+1.2
STKA	comp=Z,3.4nm,0.3s,baz=318,slow=11,SNR=12 comp=Z,3.4nm,0.3s Stephens Creek	29.56	147	P	P	11 03 04.2	+0.6
STKA	Stephens Creek	29.56	147	P	P	11 03 04.9	+1.3
CMSA	Cobar Meteorol	31.72	141	P	P	11 03 24.3	+1.9
ARPS	Mount Arapiles	33.55	152	P	P	11 03 40.3	+2.1
ARMA	Armidale	35.01	134	P	P	11 03 52.3	+1.4
ARMA	comp=Z,14nm,1.3s			IAmb	IAmb	11 04 16.2	
TOO	Toolangi	35.98	149	P	P	11 03 59.4	+0.6
TOO	comp=Z,22nm,1.4s			IAmb	IAmb	11 04 05.1	
CNB	Canberra Magne	36.53	142	P	P	11 04 04.9	+1.3
PZH	PanZhiHua	39.85	330	P	P	11 04 34.8	+3.5
PZH	comp=Z,10.0nm,0.6s			pmax	pmax		
PZH	comp=Z,70nm,4.9s			pmax	pmax		
HHC	Hu-ho-hao-te	49.56	349	*e*P	P	11 05 47.8	+0.7
HHC	comp=Z,37nm,0.9s			pmax	pmax		
HHC	comp=Z,190nm,6.1s			pmax	pmax		
RPZ	Rata Peaks	55.05	139	P	P	11 06 27.9	+0.8
TUWZ	Tuamarina	56.07	135	P	P	11 06 35.1	+0.6
WMQ	Urumqi	60.51	331	*e*P	P	11 07 07.9	+3.0
MK31	Makanchi Array	65.28	330	P	P	11 07 35.9	-0.2
MKAR	Makanchi Array	65.28	330	P	P	11 07 36.0	-0.1
MKAR	comp=Z,0.3nm,0.5s,baz=133,slow=7.2,SNR=2.7 comp=Z,0.3nm,0.5s Makanchi Array	65.28	330	P	P	11 07 35.7	-0.4
PEA0B	Petropavlovsk-	67.48	22	P	P	11 07 50.2	+0.4
PEA0B	comp=Z,1.5nm,1.5s			IAmb	IAmb	11 08 12.4	
PETK	Petropavlovsk-	67.48	22	P	P	11 07 49.1	-0.7
PETK	comp=Z,1.4nm,0.7s,baz=196,slow=4.2,SNR=4.1 comp=Z,1.4nm,0.7s Petropavlovsk-	67.48	22	P	P	11 07 48.5	-1.3
KK31	Karatay Array	69.50	322	P	P	11 08 01.9	-0.6
KKAR	Karatay Array	69.50	322	P	P	11 08 01.5	-0.9
VNDA	Vanda	72.56	172	P	P	11 08 21.6	+1.4
SEY	comp=Z,0.6nm,0.4s,baz=316,slow=8.1,SNR=10 comp=Z,0.6nm,0.4s Seymchan	74.07	14	P	P	11 08 29.2	+0.2
	comp=Z,1.2nm,0.5s,baz=233,slow=0.5,SNR=6.9 comp=Z,1.2nm,0.5s						

MAN 17 11:15:00.5, 13˚.59N×120˚.74E, h111km, mb3.9, ML2.6, MS2.1,3D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	Puerto Galera	0.22	113	↓*e*P	Pn	11 15 17.0	+4.7
PGP				*e*S		11 15 29.5	
SJMP	San Jose	1.18	162	↓*i*P	Pb	11 15 24.6	+0.3
ENPP	El Nido	2.70	209	↓*i*P	Pn	11 15 20.7	+0.6

*TUL **17** 11:19:57.6±1.2, 36˚.037N±0˚.004×96˚.78W±0˚.02, h5km±3km, ML2.6, mb_Lg2.7/57(NEIC), Error ellipse: s-maj=1.9km s-min=0.5km az=97.0*

NEIC 17 11:19:57.9±0.9, **36˚.05N**±0˚.01×**96˚.79W**±0˚.02, **h5**km±3km, **Error ellipse: s-maj=2.1km s-min=1.7km az=134.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUL1	Leonard	0.82	99	Pg	Pg	11 20 13.2	-0.4
TUL1				Sg	Sg	11 20 24.2	-0.1
OKCFA	Oklahoma City	0.83	221	Pg	Pg	11 20 13.2	-0.5
OKCSW	OKLAHOMA CITY	0.83	220	Pg	Pg	11 20 13.2	-0.5
T35A	Sooner Cattle	0.90	14	Pg	Pg	11 20 14.9	-0.2
FNO	Franklin	0.93	212	Pg	Pg	11 20 15.0	-0.7
X34A	Smith Ranch, M	1.68	211		Pn	11 20 28.3	+0.5
X37A	Clayton	1.86	141		Pn	11 20 30.2	-0.1
U38A	Gravette	1.98	78		Pn	11 20 31.7	-0.4
WMOK	Wichita Mounta	2.09	232		Pn	11 20 34.1	+0.7
HHAR	Hobbs	2.32	83		Pn	11 20 36.9	+0.2
W39A	Magazine	2.59	108		Pn	11 20 40.7	+0.3
W39A	comp=Z,26nm,0.9s			IAmb_Lg		11 21 26.3	
R32A	Long Quarter, comp=Z,16nm,0.8s	2.83	328	IAmb_Lg		11 21 32.5	
MIAR	Mount Ida	3.02	119		Pn	11 20 45.8	-0.5
KSU1	Kansas State U comp=Z,30

P40A	**Paris**	**5.12**	**46**	IAmb_Lg		11 22 39.4
	comp=Z,15nm,0.8s					
PBMO	**Poplar Bluff**	**5.18**	**80**	IAmb_Lg		11 22 52.3
	comp=Z,18nm,0.8s					
FVM	**French Village**	**5.45**	**67**	IAmb_Lg		11 22 54.5
	comp=Z,17nm,0.8s					
N38A	**Joes South For**	**5.50**	**29**	IAmb_Lg		11 23 07.7
	comp=Z,14nm,0.8s					
KSCO	**Kaye Shedlock'**	**5.50**	**304**	IAmb_Lg		11 23 05.5
	comp=Z,7.2nm,0.8s					
T25A	**Trinidad**	**6.23**	**282**	IAmb_Lg		11 23 15.7
	comp=Z,9.9nm,1.0s					
P43A	**Skaggs, Pawnee**	**6.78**	**56**	IAmb_Lg		11 23 36.3
	comp=Z,12nm,0.8s					
PLAL	**Pickwick Lake**	**7.18**	**96**	IAmb_Lg		11 23 51.8
	comp=Z,12nm,1.2s					
Q24A	**Divide**	**7.25**	**296**	IAmb_Lg		11 23 46.4
	comp=Z,7.2nm,0.8s					
L42A	**Oliver, Polo**	**8.13**	**41**	IAmb_Lg		11 24 23.1
	comp=Z,12nm,0.8s					
N23A	**Red Feather La**	**8.66**	**307**	IAmb_Lg		11 24 43.0
	comp=Z,4.1nm,1.0s					

MOS ***17*** *11:50:08.5±1.4, 33˚.26N×142˚.04E, h21km, mb4.7/38, Error ellipse: s-maj=9.7km s-min=5.9km az=106.8*

JMA ***17*** *11:50:09.7±0.6, 33˚.3N±1˚.0×14˚.2E±˚, h50km, MV4.1/31, FAR E OFF IZU ISLANDS*

NIED ***17*** *11:50:09.7, 33˚.31N×142˚.02E, h50km, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr-1.01; Mθθ-3.40; Mφφ4.41; Mrθ-1.14; Mθφ-0.82; Mφr3.13; Fault plane solution: Mo4.95000×10¹⁵ NP1:φs43.00000°, δ52.00000°, λ-1.00000°. NP2:φs134.00000°, δ89.00000°, λ-142.00000°.*

NEIC ***17*** *11:50:12.6±1.4, 33˚.24N±0˚.05×142˚.00E±0˚.09, h35km±1km, mb4.6/115 Error ellipse: s-maj=12.4km s-min=8.3km az=109.0*

IDC ***17*** *11:50:14.6±0.5, 33˚.22N×141˚.99E, h51km±3km, mb3.9/20, mbtmp4.1/22, MS3.7/34, Error ellipse: s-maj=13.9km s-min=12.7km az=132.0*

ISC 17 11:50:09.6±0.4, 33˚.19N±0˚.04×142˚.03E±0˚.05, h18km±2km, h19km:pP-P,n297,σ1s28/291,mb4.5/107,MS3.8/40,7C-2D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**1.70**	**329**	*e*P			**Pn**	**11 50 36.2**	**-1.7**
JHJ2	**Mitsune**	**1.86**	**268**				**Pn**	**11 50 40.3**	**-0.3**
JHJ2	**Mitsune**	**1.86**	**268**	P			**Pn**	**11 50 40.2**	**-0.3**
JHCJ	**Hachijojimakas**	**1.88**	**267**	P			**Pn**	**11 50 40.4**	**-0.4**
JHJ	**Hachijo jima 2**	**1.89**	**268**	P			**Pn**	**11 50 40.4**	**-0.6**
	691nm,0.3s,baz=84,slow=21,SNR=90								
JAOM	**Aogashimamukai**	**2.04**	**250**	P			**Pn**	**11 50 43.0**	**-0.1**
BSO3	**Boso 3**	**2.04**	**322**	P			**Pn**	**11 50 41.6**	**-1.3**
JMKN	**Mikurajimanish**	**2.16**	**290**	P			**Pn**	**11 50 44.0**	**-0.6**
BSO4	**Boso 4**	**2.28**	**322**	*e*P			**Pn**	**11 50 45.6**	**-0.7**
JIM2	**Oshima 3**	**2.65**	**306**	P			**Pn**	**11 50 49.6**	**-1.8**
JOD2	**Odawara 2**	**3.20**	**311**	P			**Pn**	**11 50 57.2**	**-1.8**
JYT	**Yasato**	**3.39**	**334**				**Pn**	**11 51 00.7**	**-0.9**
TK02	**Tokai 2**	**3.65**	**283**	P			**Pn**	**11 51 05.1**	**+0.2**
JYN	**Shimob**	**3.69**	**310**	P			**Pn**	**11 51 04.8**	**-1.0**
JYN				*e*S			**Sn**	**11 51 47.4**	**-1.5**
JRY	**Ryogami san**	**3.82**	**318**	P			**Pn**	**11 51 06.4**	**-1.2**
JAG	**Ashikaga**	**3.86**	**327**	P			**Pn**	**11 51 06.8**	**-1.3**
JAG				*e*S			**Sn**	**11 51 50.0**	**-3.0**
JFT	**Otama**	**4.54**	**343**	*e*P			**Pn**	**11 51 15.8**	**-1.6**
JFT				*e*S			**Sn**	**11 52 04.6**	**-5.0**
JGF	**Kuroka**	**4.55**	**303**				**Pn**	**11 51 18.3**	**+0.7**
MJAR	**Matsushiro Arr**	**4.59**	**318**	P			**Pn**	**11 51 17.1**	**-1.0**
	15nm,0.3s,baz=235,slow=30,SNR=80								
MJAR				S			**Sn**	**11 52 09.7**	**-1.2**
	24nm,0.8s,baz=141,slow=16,SNR=2.3								
MJAR	**Matsushiro Arr**	**4.59**	**318**				**Pn**	**11 51 16.1**	**-2.0**
MJAR	**Matsushiro Arr**	**4.59**	**318**	P			**Pn**	**11 51 16.1**	**-2.0**
MAJO	**Matsushiro**	**4.59**	**318**				**Pn**	**11 51 18.5**	**+0.4**
MAJO	**Matsushiro**	**4.59**	**318**	*i* P			**Pn**	**11 51 18.5**	**+0.4**
MAT	**Matsushiro**	**4.59**	**318**	*e*P			**Pn**	**11 51 17.7**	**-0.5**
JIE	**Ise**	**4.59**	**287**	*e*P			**Pn**	**11 51 18.1**	**-0.1**
MJB9	**Matsu-Tunnel**	**4.59**	**318**				**Pn**	**11 51 18.5**	**+0.3**
INU	**Inuyama**	**4.68**	**299**				**Pn**	**11 51 19.9**	**+0.6**
JMM	**Marumori**	**4.77**	**348**				**Pn**	**11 51 18.5**	**-2.1**
JSD	**Sado**	**5.73**	**329**	Pn			**Pn**	**11 51 33.3**	**-0.4**
JCJ	**Chichijima**	**6.08**	**179**	P			**Pn**	**11 51 38.0**	**-0.6**
	45nm,0.3s,baz=298,slow=22,SNR=12								
JCJ				S			**Sn**	**11 52 40.2**	**-7.4**
	72nm,0.4s,baz=90,slow=20,SNR=1.4								
JCJ	**Chichijima**	**6.08**	**179**	Pn			**Pn**	**11 51 38.2**	**-0.3**
JHS	**Saijyo**	**7.61**	**286**	Pn			**Pn**	**11 52 00.8**	**+1.2**
JTM	**Tenmabayashi**	**7.62**	**354**	Pn			**Pn**	**11 51 58.9**	**-0.8**
ERM	**Erimo**	**8.85**	**5**	Pn			**Pn**	**11 52 14.7**	**-1.9**
ERM	**Erimo**	**8.85**	**5**	*i* P			Pn	11 52 12.3	-4.3
JEW	**Eniwo**	**9.64**	**357**	Pn			**Pn**	**11 52 26.2**	**-1.3**
JSU	**Suzuyama**	**9.94**	**263**	Pn			**Pn**	**11 52 30.9**	**-0.7**
JKA	**Kamikawa-asahi**	**10.92**	**2**	Pn			**Pn**	**11 52 43.2**	**-1.7**
ASAJ	**Asahikawa**	**10.92**	**2**	P			**Pn**	**11 52 43.2**	**-1.7**
SHO	**Shikotan**	**11.30**	**18**	*e*P			Pn	11 52 44.1	-6.0
SHO					pmax	pmax			
	comp=N,16nm,0.3s								
SHO					pmax	pmax			
	comp=E,16nm,0.3s								
SHO					pmax	pmax			
	comp=Z,12nm,0.3s								
KSRS	**Korea Array**	**12.28**	**294**	P			**Pn**	**11 53 06.4**	**+2.9**
	comp=Z,1.6nm,0.8s,baz=109,slow=14,SNR=5.3								
KSRS				LR			LR	11 58 06.4	
	comp=Z,160nm,19.0s,baz=100,slow=38								
SEHB	**SEOHWA**	**12.29**	**298**	Pn			**Pn**	**11 53 02.4**	**-1.2**
KUR	**Kuril'sk**	**12.84**	**19**	P			Pn	11 53 03.6	-7.6
JOW	**Kunigami**	**13.49**	**246**	LR			LR	11 58 59.2	
	comp=Z,165nm,18.1s,baz=96,slow=39								
YSS	**Yuzh-Sakhalins**	**13.76**	**2**	Pn			**Pn**	**11 53 21.6**	**-2.1**
YSS	**Yuzh-Sakhalins**	**13.76**	**2**	*e*P			Pn	11 53 19.2	-4.4
YSS					pmax	pmax			
	comp=Z,20nm,1.1s								
CN2	**Changchun**	**16.73**	**314**	*e*P			**Pn**	**11 54 02.8**	**-0.1**
CN2				*e*S			**Sn**	**11 57 06.0**	**-2.2**
CN2					pmax	pmax			
	comp=Z,10.0nm,0.8s								
CN2					pmax	pmax			
	comp=Z,100nm,3.0s								
CN2					LR	LR			
	comp=N,200nm,14.0s								
CN2					LR	LR			
	comp=E,200nm,14.0s								
CN2					LR	LR			
	comp=Z,100nm,13.0s								
BNX	**BinXian**	**16.84**	**322**	⇑P			**Pn**	**11 54 01.3**	**-3.0**
BNX					pmax	pmax			
	comp=Z,5.0nm,1.0s								
BNX					pmax	pmax			
	comp=Z,90nm,3.5s								
SNY	**Shenyang**	**16.97**	**306**	⇑P			**P**	**11 54 07.9**	**+0.1**
SNY				S			S	11 58 08.3	+44
SNY					pmax	pmax			
	comp=Z,16nm,0.6s								
SNY					LR	LR			
	comp=N,210nm,8.8s								
SNY					LR	LR			
	comp=E,180nm,14.4s								
SNY					LR	LR			
	comp=Z,230nm,13.3s								
KLR	**Kul'dur**	**17.77**	**337**	P			**Pn**	**11 54 15.9**	**+0.1**
	comp=Z,1.8nm,0.6s,baz=174,slow=8.8,SNR=6.3								
KLR					LR	LR		12 01 49.2	
	comp=Z,164nm,19.3s,baz=149,slow=39								
KLR	**Kul'dur**	**17.77**	**337**	*i* P			**Pn**	**11 54 12.4**	**-3.4**
GRNR	**Gornyy**	**18.04**	**348**	*e*P			Pn	11 54 10.7	-8.6
GRNR					MLR	MLR			
	comp=Z,170nm,16.0s								
NJ2	**Nanjing**	**19.55**	**273**	*e*P			**P**	**11 54 35.0**	**-1.3**
NJ2					pmax	pmax			
	comp=Z,6.0nm,0.6s								
GUMO	**Guam**	**19.68**	**172**	LR			LR	12 05 28.2	
	comp=Z,68nm,18.2s,baz=16,slow=46								
GUMO	**Guam**	**19.68**	**172**	P			**P**	**11 54 37.4**	**-0.4**
GUMO	**Guam**	**19.68**	**172**	P			**P**	**11 54 37.4**	**-0.4**
GUMO					pmax	pmax			
	comp=Z,63nm,0.8s								
NACB	**Ninganchiao**	**20.03**	**249**	P			**P**	**11 54 41.6**	**0.0**
YULB	**Yu-li**	**20.67**	**247**	P			**P**	**11 54 47.0**	**-1.6**
YULB					IAmb	IAmb		11 54 52.8	
	comp=Z,22nm,1.1s								
SSLB	**Suanglung**	**20.73**	**249**	P			**P**	**11 54 49.1**	**-0.1**
BJI	**Beijing**	**21.81**	**296**	P			**P**	**11 55 04.1**	**+3.5**
BJI					pmax	pmax			
	comp=Z,8.0nm,0.7s								
HNS	**HongShan**	**22.66**	**288**	⇓P			**P**	**11 55 06.9**	**-2.9**
HNS				S			**S**	**11 59 16.6**	**-0.5**
HNS					pmax	pmax			
	comp=Z,14nm,1.2s								
HNS					LR	LR			
	comp=N,160nm,13.5s								
HNS					LR	LR			
	comp=E,200nm,14.3s								
HNS					LR	LR			
	comp=Z,230nm,15.1s								
XLT	**XiLinHaoTe**	**22.85**	**305**	*e*P			**P**	**11 55 14.3**	**+2.4**
XLT					pP	pwP		11 55 23.9	-2.5
XLT					sP	sP		11 55 27.3	+12
XLT					S	**S**		**11 59 19.9**	**-0.7**
XLT					sS	sS		11 59 29.3	+3.3
XLT					pmax	pmax			
	comp=Z,22nm,0.6s								
XLT					pmax	pmax			
	comp=Z,80nm,3.6s								
XLT					LR	LR			
	comp=N,12nm,12.6s								
XLT					LR	LR			
	comp=E,170nm,16.1s								
XLT					LR	LR			
	comp=Z,160nm,17.1s								
PEA0B	**Petropavlovsk-**	**22.86**	**25**	P			**P**	**11 55 11.3**	**-0.5**
PEA0B	**Petropavlovsk-**	**22.86**	**25**	P			**P**	**11 55 11.3**	**-0.5**
PEA0B					pmax	pmax			
	comp=Z,12nm,1.2s								
PETK	**Petropavlovsk-**	**22.86**	**25**	P			**P**	**11 55 12.5**	**+0.7**
	comp=Z,2.2nm,0.8s,baz=188,slow=7.3,SNR=2.7								
PETK					LR	LR		12 05 17.2	
	comp=Z,177nm,19.9s,baz=200,slow=40								
	comp=Z,2.2nm,0.8s								
PETK	**Petropavlovsk-**	**22.86**	**25**	P			**P**	**11 55 10.2**	**-1.6**
ZEA	**Zeya**	**23.08**	**337**	*e*P			**P**	**11 55 14.9**	**+0.8**
ZEA					pmax	pmax			
	comp=E,100nm,2.2s								
ZEA					pmax	pmax			
	comp=N,100nm,2.0s								
ZEA					pmax	pmax			
	comp=Z,200nm,1.9s								
ZEA					pmax	pmax			
	comp=E,20nm,1.0s								
ZEA					pmax	pmax			
	comp=N,40nm,1.1s								
ZEA					pmax	pmax			
	comp=Z,70nm,0.8s								
ZEA					MLR	MLR			
	comp=E,100nm,15.0s								
HIA	**Hailar**	**23.09**	**321**	P			**P**	**11 55 11.2**	**-3.0**
HIA	**Hailar**	**23.09**	**321**	P			**P**	**11 55 11.2**	**-3.0**
HIA					pmax	pmax			
	comp=Z,11nm,1.1s								
WHN	**Wuhan**	**23.63**	**271**	⇑P			**P**	**11 55 19.0**	**-0.8**
HHC	**Hu-ho-hao-te**	**25.41**	**296**	*e*P			**P**	**11 55 36.6**	**+0.5**
HHC					pmax	pmax			
	comp=Z,41nm,1.0s								
HHC					pmax	pmax			
	comp=Z,260nm,5.4s								
HHC					LR	LR			
	comp=N,200nm,14.2s								
HHC					LR	LR			
	comp=E,290nm,13.1s								
HHC					LR	LR			
	comp=Z,410nm,12.6s								
H11N2	**WAKE ISLAND Hy**	**25.90**	**115**	T			T	12 22 44.1	
	baz=307,slow=75,SNR=10								
H11N1	**WAKE ISLAND Hy**	**25.91**	**115**	T			T	12 22 44.4	
	baz=307,slow=75,SNR=8.8								
H11N3	**WAKE ISLAND Hy**	**25.92**	**115**	T			T	12 22 49.1	
	baz=307,slow=75,SNR=8.5								
H11S3	**WAKE ISLAND Hy**	**26.49**	**117**	T			T	12 23 32.2	
	baz=312,SNR=2.9								
H11S1	**WAKE ISLAND Hy**	**26.49**	**117**	T			T	12 23 35.1	
	baz=312								
H11S2	**WAKE ISLAND Hy**	**26.51**	**117**	T			T	12 23 29.5	
	baz=312								
BTO	**Baotou**	**26.55**	**295**	*e*P			**P**	**11 55 46.1**	**-0.3**
BTO				S			**S**	**12 00 20.0**	**0.0**
BTO					LR	LR			
	comp=N,750nm,14.3s								
BTO					LR	LR			
	comp=E,750nm,17.3s								
HKPS	**Hong Kong Po S**	**26.90**	**253**	P			**P**	**11 55 48.4**	**-1.2**
MA2	**Magadan**	**27.02**	**10**	LR			LR	12 08 47.2	
	comp=E,64nm,19.5s,baz=133,slow=41								
XAN	**Xi'an**	**27.52**	**281**	⇑P			**P**	**11 55 52.9**	**-2.3**
XAN					pP	pwP		11 56 06.3	-3.5
XAN					sP	sP		11 56 11.8	+12
XAN					pmax	pmax			
	comp=Z,12nm,1.4s								
XAN					LR	LR			
	comp=E,250nm,15.1s								
XAN					LR	LR			
	comp=Z,310nm,18.6s								
ENH	**Enshi**	**27.77**	**273**	P			**P**	**11 55 55.8**	**-1.7**
ULN	**Ulaanbaatar**	**30.07**	**310**	P			**P**	**11 56 17.3**	**-0.5**
ULN					IAmb	IAmb		11 56 21.6	
	comp=Z,14nm,0.8s								
ULN	**Ulaanbaatar**	**30.07**	**310**	*ce*P			**P**	**11 56 20.0**	**+2.2**
ULN					pmax	pmax			
	comp=Z,19nm,1.0s								
SHEM	**Shemya Is, Ala**	**30.16**	**40**	LR			LR	12 06 46.2	
	comp=Z,163nm,20.6s,baz=279,slow=33								
SEY	**Seymchan**	**30.48**	**9**	P			**P**	**11 56 21.3**	**+0.3**
	comp=Z,3.9nm,0.7s,baz=192,slow=7.9,SNR=10								
SEY					pP		**pwP**	**11 56 35.8**	**-0.1**
	comp=Z,3.3nm,0.5s,baz=194,slow=8.7,SNR=6.9								
SEY					LR	LR		12 10 38.2	
	comp=Z,62nm,19.9s,baz=182,slow=40								
	comp=Z,3.9nm,0.7s								
SEY	**Seymchan**	**30.48**	**9**	*i* P			**P**	**11 56 18.7**	**-2.3**
SEY					pmax	pmax			
	comp=Z,5.0nm,0.8s								
SONM	**Songino Array**	**30.48**	**309**	P			**P**	**11 56 22.6**	**+1.1**
	comp=Z,11nm,0.9s,baz=116,slow=6.8,SNR=42								
SONM					LR	LR		12 07 51.3	
	comp=Z,72nm,21.9s,baz=90,slow=35								
	comp=Z,11nm,0.9s								
SONM	**Songino Array**	**30.48**	**309**	P			**P**	**11 56 21.3**	**-0.2**
SONM					IAmb	IAmb		11 56 25.4	
	comp=Z,13nm,1.0s								
LZH	**Lanzhou**	**31.42**	**286**	*e*P			**P**	**11 56 29.8**	**-0.1**
LZH					pP	pwP		11 56 42.0	-2.5
LZH					PP	**PP**		**11 57 45.0**	**+4.1**
LZH					pmax	pmax			
	comp=Z,24nm,1.5s								
LZH					LR	LR			
	comp=N,150nm,15.2s								
LZH					LR	LR			
	comp=E,290nm,16.3s								
LZH					LR	LR			
	comp=Z,280nm,15.2s								
CD2	**Chengdu**	**32.40**	**277**	P			**P**	**11 56 37.3**	**-1.2**
CD2				S			**S**	**12 01 49.3**	**-2.8**
CD2					pmax	pmax			
	comp=Z,110nm,9.5s								
CD2					LR	LR			
	comp=N,120nm,12.3s								
CD2					LR	LR			
	comp=E,240nm,16.7s								
CD2					LR	LR			
	comp=Z,350nm,14.7s								
GTA	**Gaotai**	**34.35**	**293**	⇓P			**P**	**11 56 54.8**	**-0.7**
GTA					pP	sP		11 57 03.1	+3.6
GTA					sP	pwP		11 57 07.6	-2.3
GTA					pmax	pmax			
	comp=Z,8.0nm,1.2s								
GTA					pmax	pmax			
	comp=Z,88nm,6.2s								
GTA					LR	LR			
	comp=N,130nm,17.1s								
GTA					LR	LR			
	comp=E,130nm,17.8s								
GTA					LR	LR			
	comp=Z,130nm,16.7s								
KIWB	**Kanaga Island**	**34.81**	**45**	P			**P**	**11 56 59.6**	**+0.5**
PZH	**PanZhiHua**	**35.41**	**270**	P			**P**	**11 57 02.8**	**-2.0**
PZH					pmax	pmax			
	comp=Z,10.0nm,0.6s								
PZH					pmax	pmax			
	comp=Z,80nm,5.9s								
GSTR	**Great Sitkin T**	**35.53**	**45**	P			**P**	**11 57 05.4**	**+0.1**
KNGR	**Kungurtug, Tuv**	**36.78**	**312**	*i* P			**P**	**11 57 16.5**	**+0.3**
KNGR					pmax	pmax			
	comp=Z,13nm,1.3s								
FAKI	**Fak Fak**	**37.09**	**196**	P			**P**	**11 57 19.1**	**+0.2**
BILL	**Bilibino**	**37.59**	**15**	*e*P			**P**	**11 57 20.6**	**-2.0**
BILL				*e*				11 57 23.8	
BILL				*e*PP			**sP**	**11 57 30.0**	**+3.3**
BILL				*e*SS			SS	12 05 50.0	-5.7
BILL				*e*SSS			SSS	12 06 13.4	
BILL					pmax	pmax			
	comp=Z,7.0nm,1.1s								
BILL					MLR	MLR			
	comp=Z,59nm,20.0s								
TOLI2	**Tolitoli**	**37.64**	**216**	P			**P**	**11 57 22.2**	**-1.4**
GOMU	**GeErMu**	**38.64**	**288**	P			**P**	**11 57 31.8**	**-0.6**
GOMU					pP	sP		11 57 35.9	-0.7
GOMU					sP	pP		11 57 38.8	+3.4
GOMU					PP	**PP**		**11 59 01.1**	**+0.2**
GOMU					PcP	PcP		11 59 34.0	-10
GOMU					pmax	pmax			
	comp=Z,17nm,1.1s								
GOMU					pmax	pmax			
	comp=Z,100nm,6.2s								
TIXI	**Tiksi**	**39.16**	**353**	P			**P**	**11 57 35.2**	**-0.6**
	comp=Z,1.4nm,0.5s,baz=267,slow=24,SNR=5.3								
TIXI					pP		**pwP**	**11 57 49.3**	**-1.4**
	comp=Z,2.3nm,0.5s,baz=266,slow=21,SNR=3.4								
TIXI					LR	LR		12 15 09.2	
	comp=Z,70nm,20.4s,baz=180,slow=38								
	comp=Z,1.4nm,0.5s								
TIXI	**Tiksi**	**39.16**	**353**	P			**P**	**11 57 35.4**	**-0.4**
TIXI	**Tiksi**	**39.16**	**353**	*i* P			**P**	**11 57 34.3**	**-1.5**
TIXI					pmax	pmax			
	comp=Z,2.0nm,0.8s								
NIKH	**Nikolski High**	**40.02**	**45**	P			**P**	**11 57 42.2**	**-1.0**
CMAR	**Chiang Mai Arr**	**41.17**	**260**	P			**P**	**11 57 53.5**	**+0.2**
	comp=Z,1.2nm,0.7s,baz=41,slow=7.9,SNR=7.6								
CMAR					LR	LR		12 17 24.3	
	comp=Z,108nm,18.0s,baz=65,slow=40								
	comp=Z,1.2nm,0.7s								
CMAR	**Chiang Mai Arr**	**41.17**	**260**	P			**P**	**11 57 52.6**	**-0.6**
CMAR	**Chiang Mai Arr**	**41.17**	**260**	*i* P			**P**	**11 57 56.4**	**+3.2**
CMAR					pmax	pmax			
	comp=Z,1.0nm,0.6s								
WMQ	**Urumqi**	**43.13**	**301**	*e*P			**P**	**11 58 09.3**	**+0.3**
WMQ					pmax	pmax			
	comp=Z,17nm,0.7s								
KSM	**Kuching**	**43.37**	**230**	P			**P**	**11 58 10.2**	**-0.9**
KSM					IAmb	IAmb		11 58 12.4	
	comp=Z,12nm,0.9s								
ZALV	**Zalesovo Beam**	**44.94**	**315**	P			**P**	**11 58 23.7**	**+0.5**
	comp=Z,0.5nm,0.3s,baz=94,slow=6.1,SNR=5.5								
	comp=Z,0.5nm,0.3s								
ZALV	**Zalesovo Beam**	**44.94**	**315**	P			**P**	**11 58 21.1**	**-2.2**
ZALV	**Zalesovo Beam**	**44.94**	**315**	*i* P			**P**	**11 58 24.8**	**+1.6**
ZALV					pmax	pmax			
	comp=Z,1.0nm,0.3s								
MK31	**Makanchi Array**	**46.67**	**305**	P			**P**	**11 58 36.0**	**-1.0**
MK31					IAmb	IAmb		11 58 53.8	
	comp=Z,7.2nm,1.1s								
MK31	**Makanchi Array**	**46.67**	**305**	*i* P			**P**	**11 58 36.9**	**-0.2**
MKAR	**Makanchi Array**	**46.67**	**305**	P			**P**	**11 58 37.3**	**+0.2**
	comp=Z,1.7nm,0.6s,baz=91,slow=9.0,SNR=14								
MKAR					pP		**pwP**	**11 58 52.3**	**+0.9**
	comp=Z,2.9nm,0.7s,baz=91,slow=9.2,SNR=7.7								
MKAR					LR	LR		12 18 32.6	
	comp=Z,50nm,21.0s,baz=76,slow=36								
	comp=Z,1.7nm,0.6s								
MKAR	**Makanchi Array**	**46.67**	**305**	P			**P**	**11 58 35.9**	**-1.1**
MAKZ	**Makanchi**	**46.88**	**305**	P			**P**	**11 58 38.0**	**-0.7**
MAKZ	**Makanchi**	**46.88**	**305**	P			**P**	**11 58 38.0**	**-0.7**
MAKZ					pmax	pmax			
	comp=Z,4.0nm,1.0s								
MTN	**Manton Dam**	**46.94**	**195**	P			**P**	**11 58 38.5**	**-0.8**
NRIK	**Noril'sk**	**46.98**	**337**	P			**P**	**11 58 38.5**	**-0.6**
NRIK					IAmb	IAmb		11 58 54.6	
	comp=Z,5.6nm,1.1s								
NRIK	**Noril'sk**	**46.98**	**337**	P			**P**	**11 58 38.5**	**-0.6**
NRIK					pmax	pmax			
	comp=Z,6.0nm,1.2s								
SVW2	**Sparrevohn**	**48.31**	**35**	P			**P**	**11 58 49.5**	**-0.1**
SVW2					IAmb	IAmb		11 58 51.1	
	comp=Z,9.8nm,1.3s								
O18K	**Koktuh Hills**	**48.39**	**37**	P			**P**	**11 58 50.5**	**+0.3**
KURK	**Kurchatov**	**48.76**	**311**	P			**P**	**11 58 52.8**	**-0.3**
KURK	**Kurchatov**	**48.76**	**311**	*i* P			**P**	**11 58 52.4**	**-0.8**
KURK					pmax	pmax			
	comp=Z,7.0nm,0.8s								
K20K	**Telida**	**49.26**	**32**	P			**P**	**11 58 57.8**	**+1.0**
K20K					IAmb	IAmb		11 59 14.4	
	comp=Z,6.4nm,0.9s								
OHAK	**Old Harbor**	**49.29**	**40**	P			**P**	**11 58 57.5**	**+0.4**
J20K	**Nowinta River**	**49.32**	**31**	P			**P**	**11 58 58.3**	**+1.0**
J20K					IAmb	IAmb		11 59 14.7	
	comp=Z,4.5nm,0.9s								
KDAK	**Kodiak Island**	**49.67**	**40**	LR			LR	12 20 17.9	
	comp=Z,68nm,19.3s,baz=249,slow=36								
KDAK	**Kodiak Island**	**49.67**	**40**	P			**P**	**11 59 00.2**	**+0.2**
KDAK	**Kodiak Island**	**49.67**	**40**	P			**P**	**11 59 00.2**	**+0.2**
KDAK					pmax	pmax			
	comp=Z,32nm,1.4s								
IMAR	**Indian Mountai**	**49.73**	**29**	P			**P**	**11 59 00.6**	**+0.2**
H21K	**Melozitna Rive**	**50.07**	**29**	P			**P**	**11 59 04.0**	**+1.0**
H21K					IAmb	IAmb		11 59 19.1	
	comp=Z,9.5nm,1.4s								
KNRA	**Kununurra**	**50.22**	**197**	P			**P**	**11 59 05.8**	**+1.2**
SUA	**Susitna One**	**50.67**	**35**	P			**P**	**11 59 08.1**	**+0.5**
SUA	

M24K **Tolsona, Glenn** 52.84 34 P P 11 59 23.8 0.0
M24K IAmb IAmb 11 59 47.8
comp=Z,14nm,1.2s
WB0 **Warramunga Arr** 53.16 189 P P 11 59 26.9 +0.4
WRAB **Tennant Creek** 53.33 189 *i* P P 11 59 28.0 +0.2
WRAB pmax pmax
comp=Z,6.0nm,1.1s
WR0 **Warramunga Arr** 53.33 189 P P 11 59 27.4 -0.4
WR0 IAmb IAmb 11 59 44.9
comp=Z,5.8nm,0.9s
WB2 **Warramunga Arr** 53.34 189 P P 11 59 27.8 0.0
WB2 IAmb IAmb 11 59 44.3
comp=Z,5.6nm,0.6s
WRA **Warramunga Arr** 53.34 189 P P 11 59 28.1 +0.3
comp=Z,2.1nm,0.5s,baz=5.3,slow=7.6,SNR=47
WRA pP pwP 11 59 42.7 -0.1
comp=Z,4.9nm,0.5s,baz=5.5,slow=7.7,SNR=12
comp=Z,2.1nm,0.5s
WRA **Warramunga Arr** 53.34 189 P P 11 59 28.2 +0.3
RIDG **Independent Ri** 53.40 32 P P 11 59 27.9 0.0
RIDG IAmb IAmb 11 59 46.4
comp=Z,9.2nm,1.5s
BMAR **Burnt Mountain** 53.48 27 P P 11 59 28.7 +0.3
BRVK **Borovoye** 53.64 315 P P 11 59 28.4 -1.3
BRVK **Borovoye** 53.64 315 *i* P P 11 59 29.7 0.0
BRVK pmax pmax
comp=Z,5.0nm,1.0s
DOT **Dot Lake** 53.75 32 P P 11 59 30.6 +0.2
SCRK **Sand Creek** 53.77 32 P P 11 59 30.9 +0.2
SCRK IAmb IAmb 11 59 47.6
comp=Z,4.6nm,1.1s
J26L **Joseph Creek** 53.93 31 P P 11 59 31.5 -0.3
L26K **Log Cabin Wild** 54.10 33 P P 11 59 32.4 -0.7
L26K IAmb IAmb 11 59 52.6
comp=Z,7.6nm,1.4s
K27K **Chicken** 54.61 32 P P 11 59 36.8 +0.2
K27K IAmb IAmb 11 59 55.4
comp=Z,9.1nm,1.4s
L27K **Beaver Creek,** 54.79 33 P P 11 59 38.1 0.0
BCAR **Beaver Creek A** 54.81 33 P P 11 59 39.1 +0.9
GRNC **Granite Creek** 55.06 36 P P 11 59 40.3 0.0
GRNC IAmb IAmb 11 59 57.6
comp=Z,8.6nm,1.3s
KK31 **Karatay Array** 55.55 303 P P 11 59 44.2 +0.4
KK31 IAmb IAmb 11 59 48.5
comp=Z,4.6nm,0.9s
KK31 **Karatay Array** 55.55 303 P P 11 59 44.2 +0.4
KK31 pmax pmax
comp=Z,5.0nm,0.9s
KKAR **Karatay Array** 55.55 303 P P 11 59 43.9 0.0
KKAR IAmb IAmb 11 59 48.5
comp=Z,4.6nm,0.9s
KKAR **Karatay Array** 55.55 303 P P 11 59 43.4 -0.5
KKAR **Karatay Array** 55.55 303 P P 11 59 43.4 -0.5
KKAR pmax pmax
comp=Z,5.0nm,0.9s
I29M **Ogilvie Camp,** 56.10 30 P P 11 59 47.2 -0.2
EPYK **Eagle Plains** 56.63 28 P P 11 59 52.0 +0.8
EPYK IAmb IAmb 12 00 08.3
comp=Z,8.5nm,1.1s
GAR **Garm** 56.88 298 P P 11 59 53.1 -0.4
AS31 **Alice Springs** 57.07 189 P P 11 59 56.0 +1.2
INK **Inuvik** 57.59 26 P P 11 59 58.0 +0.2
comp=Z,1.7nm,0.6s,baz=311,slow=5.0,SNR=5.4
INK pP pwP 12 00 13.1 +0.4
comp=Z,2.3nm,0.9s,baz=242,slow=7.2,SNR=3.1
comp=Z,1.7nm,0.6s
INK **Inuvik** 57.59 26 P P 11 59 58.2 +0.4
INK IAmb IAmb 11 59 59.1
comp=Z,7.0nm,1.3s
INK **Inuvik** 57.59 26 P P 11 59 58.2 +0.4
INK pmax pmax
comp=Z,7.0nm,1.3s
CHGR **Chuyangaron** 57.84 298 P P 12 00 01.1 +0.8
CHGR **Chuyangaron** 57.84 298 P P 12 00 01.1 +0.8
CHGR pmax pmax
comp=Z,26nm,0.8s
MBWA **Marble Bar** 58.09 205 P P 12 00 02.5 +0.6
PSA00 **Pilbara Seismi** 58.43 204 P P 12 00 05.3 +1.0
ARU **Arti** 59.60 320 P P 12 00 11.7 -0.4
ARU **Arti** 59.60 320 *c i* P P 12 00 09.8 -2.3
ARU S S 12 08 15.5 -5.6
ARU pmax pmax
comp=Z,4.0nm,0.6s
ABKAR **Akbulak array** 60.84 312 P P 12 00 20.4 -0.3
ABKAR IAmb IAmb 12 00 35.7
comp=Z,4.1nm,0.6s
PRGR **Permogore** 64.28 328 *e* P P 12 00 46.5 +3.1
AFI **Afiamalu** 64.31 129 LR LR 12 25 27.2
comp=Z,23nm,19.3s,baz=69,slow=33
BBB **Bella Bella** 64.49 43 LR LR 12 28 08.2
comp=Z,51nm,18.8s,baz=276,slow=35
STKA **Stephens Creek** 64.72 180 P P 12 00 46.1 -0.4
comp=Z,1.1nm,0.5s,baz=209,slow=10,SNR=1.4
comp=Z,1.1nm,0.5s
GEYT **Alibeck** 66.19 301 LR LR 12 32 18.8
comp=Z,35nm,18.0s,baz=146,slow=38
YKA **Yellowknife Ar** 66.88 29 P P 12 01 01.2 +1.0
comp=Z,3.2nm,0.9s,baz=296,slow=6.4,SNR=4.3
YKA pP pwP 12 01 15.8 +0.6
comp=Z,3.6nm,0.9s,baz=306,slow=6.5,SNR=4.0
comp=Z,3.2nm,0.9s
YKA **Yellowknife Ar** 66.88 29 P P 12 01 00.7 +0.5
BELG **Belogornoye** 66.98 318 *i* P P 12 01 01.6 +0.6
BELG pmax pmax
comp=Z,1.0nm,0.8s
KLMR **Klimovskoe** 67.28 329 *e* P P 12 01 04.7 +2.0
KLMR pmax pmax
comp=Z,10.0nm,1.0s
KLMR **Klimovskoe** 67.28 329 *e* P P 12 01 04.8 +2.0
KLMR AMP 12 01 17.8
comp=Z,10.0nm,1.0s
ARCES **ARCESS Array B** 67.77 340 pP pP 12 01 19.9 +11
comp=Z,3.0nm,0.9s,baz=33,slow=5.4,SNR=3.0
ARCES LR LR 12 33 54.2
comp=Z,45nm,21.1s,baz=70,slow=39
YBH **Yreka Blue Hor** 72.31 51 LR LR 12 27 15.4
comp=Z,84nm,21.3s,baz=265,slow=31
YBH **Yreka Blue Hor** 72.31 51 P P 12 01 35.4 +1.2
YBH **Yreka Blue Hor** 72.31 51 P P 12 01 35.4 +1.2
YBH pmax pmax
comp=Z,4.0nm,1.2s
WSAR **Wadi Sarin** 72.40 287 LR LR 12 36 05.7
comp=Z,53nm,19.4s,baz=128,slow=38
FINES **FINESS Array B** 72.45 333 P P 12 01 34.4 -0.1
comp=Z,2.9nm,0.8s,baz=64,slow=8.7,SNR=5.0
FINES pP pwP 12 01 49.1 -0.6
comp=Z,6.0nm,0.8s,baz=72,slow=6.2,SNR=8.0
FINES LR LR 12 36 32.3
comp=Z,54nm,18.6s,baz=54,slow=38
comp=Z,2.9nm,0.8s
FINES **FINESS Array B** 72.45 333 P P 12 01 34.6 +0.1
FINES **FINESS Array B** 72.45 333 *i* P P 12 01 36.0 +1.4
FINES pmax pmax
comp=Z,3.0nm,0.8s
PINE **Pine Mountain** 72.45 49 P P 12 01 36.0 +0.8
PINE IAmb IAmb 12 01 54.9
comp=Z,8.9nm,1.1s
NEW **Newport** 72.55 43 P P 12 01 35.0 -0.5
NEW **Newport** 72.55 43 P P 12 01 35.0 -0.5
NEW pmax pmax
comp=Z,2.0nm,0.8s
K05A **Summer Lake** 73.01 50 P P 12 01 38.5 0.0
K05A IAmb IAmb 12 01 58.0
comp=Z,11nm,1.0s
MOD **Modoc Plateau** 73.80 50 P P 12 01 42.2 -0.9
KBZ **Khabaz** 73.81 312 P P 12 01 44.3 +1.4
comp=Z,4.6nm,0.9s,baz=66,slow=7.6,SNR=7.2
KBZ pP PcP 12 01 58.4 -0.1
comp=Z,3.4nm,0.8s,baz=50,slow=2.6,SNR=4.6
comp=Z,4.6nm,0.9s
KBZ **Khabaz** 73.81 312 *i* P P 12 01 43.5 +0.6
KBZ pmax pmax
comp=Z,9.0nm,1.2s
KIV **Kislovodsk** 73.83 312 P P 12 01 42.3 -0.9
KIV IAmb IAmb 12 02 00.5
comp=Z,9.2nm,0.9s
KIV **Kislovodsk** 73.83 312 *e* P P 12 01 43.1 -0.1
KIV pmax pmax
comp=Z,8.0nm,1.1s
SHA1 **Shidzhatmaz** 73.96 312 *i* P P 12 01 44.0 -0.1
GNI **Garni** 74.43 308 LR LR 12 36 25.0
comp=Z,23nm,19.8s,baz=122,slow=37
GNI **Garni** 74.43 308 *i* P P 12 01 47.7 +0.8
GNI pmax pmax
comp=Z,14nm,1.1s

BEKR **Beckworth** 74.79 52 P P 12 01 48.9 0.0
CMB **Columbia Colle** 75.70 54 P P 12 01 55.0 +0.9
CMB **Columbia Colle** 75.70 54 P P 12 01 55.0 +0.9
CMB pmax pmax
comp=Z,4.0nm,1.0s
YERR **Yerington** 75.98 53 P P 12 01 56.6 +0.8
YERR IAmb IAmb 12 02 13.6
comp=Z,8.0nm,1.2s
LRM **Limekiln Ridge** 76.55 44 P P 12 01 59.2 +0.2
KVN **Kaiserville** 76.70 52 P P 12 02 00.5 +0.5
KVN IAmb IAmb 12 02 17.6
comp=Z,4.3nm,1.0s
KVN **Kaiserville** 76.70 52 P P 12 02 00.5 +0.5
KVN pmax pmax
comp=Z,4.0nm,1.0s
LHV **Little Huntoon** 76.86 53 P P 12 02 02.3 +1.7
LHV IAmb IAmb 12 02 19.0
comp=Z,8.2nm,1.1s
NVAR **Mina Array Bea** 76.90 53 P P 12 02 02.5 +1.4
comp=Z,1.9nm,0.8s,baz=279,slow=5.3,SNR=16
NVAR pP pwP 12 02 17.0 +1.0
comp=Z,1.9nm,0.9s,baz=290,slow=4.6,SNR=6.2
NVAR LR LR 12 30 33.2
comp=Z,94nm,20.6s,baz=300,slow=31
comp=Z,1.9nm,0.8s
NVAR **Mina Array Bea** 76.90 53 P P 12 02 00.7 -0.4
BOZ **Bozeman (W)** 77.15 44 P P 12 02 02.5 +0.2
BOZ **Bozeman (W)** 77.15 44 P P 12 02 02.5 +0.2
BOZ pmax pmax
comp=Z,4.0nm,1.0s
ELK **Elko** 77.65 49 LR LR 12 30 55.3
comp=Z,55nm,21.8s,baz=276,slow=31
AKASG **Malin Array Be** 77.66 323 P P 12 02 06.2 +1.4
comp=Z,0.3nm,0.3s,baz=51,slow=6.3,SNR=6.3
AKASG pP pwP 12 02 18.9 0.0
comp=Z,3.7nm,0.7s,baz=46,slow=6.1,SNR=15
comp=Z,0.3nm,0.3s
HFS **Hagfors** 77.80 336 pP pP 12 02 19.5 +11
comp=Z,5.5nm,0.9s,baz=3.8,slow=4.5,SNR=5.4
TPH **Tonopah** 77.81 52 P P 12 02 06.5 +0.3
TPH **Tonopah** 77.81 52 P P 12 02 06.5 +0.3
TPH pmax pmax
comp=Z,14nm,1.1s
YHL **Hebgen Lake** 77.83 44 P P 12 02 06.6 +0.3
YHL IAmb IAmb 12 02 08.5
comp=Z,4.9nm,1.1s
NB2 **NORSAR Subarra** 77.92 338 P P 12 02 05.6 -0.6
comp=Z,5.6nm,1.0s,baz=42,slow=5.3
NOA **NORSAR Array B** 77.92 338 P P 12 02 06.0 -0.2
comp=Z,1.1nm,0.8s,baz=41,slow=5.5,SNR=3.3
NOA pP pwP 12 02 20.7 -0.6
comp=Z,3.8nm,0.9s,baz=39,slow=5.6,SNR=9.5
NOA LR LR 12 41 59.7
comp=Z,59nm,19.7s,baz=35,slow=40
comp=Z,1.1nm,0.8s
YPP **Pitchstone Pla** 78.39 44 P P 12 02 09.9 +0.5
H17A **Grant Village** 78.45 44 P P 12 02 10.8 +1.1
R11A **Troy Canyon, C** 78.74 52 P P 12 02 12.1 +0.8
R11A IAmb IAmb 12 02 13.1
comp=Z,6.0nm,1.4s
RLMT **Red Lodge** 78.79 43 P P 12 02 12.7 +1.2
RLMT IAmb IAmb 12 02 30.2
comp=Z,4.1nm,0.9s
QSM **Queen of Sheba** 79.19 54 P P 12 02 13.5 -0.1
QSM IAmb IAmb 12 02 16.8
comp=Z,5.1nm,0.8s
GWY **Greenwater Val** 79.20 54 P P 12 02 13.4 -0.4
GWY IAmb IAmb 12 02 30.6
comp=Z,6.4nm,1.0s
HWUT **Hardware Ranch** 79.46 47 P P 12 02 14.2 -1.0
HWUT IAmb IAmb 12 02 32.8
comp=Z,7.9nm,1.2s
DUG **Dugway, Tooele** 79.49 49 P P 12 02 16.4 +1.1
DUG IAmb IAmb 12 02 33.3
comp=Z,5.3nm,1.0s
DUG **Dugway, Tooele** 79.49 49 P P 12 02 16.4 +1.1
DUG pmax pmax
comp=Z,5.0nm,1.0s
PRN **Pahroc Range** 79.61 52 P P 12 02 17.0 +0.9
PRN IAmb IAmb 12 02 35.1
comp=Z,6.6nm,1.2s
SFJD **Kangerlussuaq** 79.66 5 LR LR 12 37 58.1
comp=Z,51nm,21.4s,baz=324,slow=36
PSUT **Pine Spring** 79.77 51 P P 12 02 17.5 +0.6
PDAR **Pinedale Array** 80.00 45 P P 12 02 18.6 +0.4
comp=Z,0.6nm,0.7s,baz=267,slow=2.7,SNR=4.6
PDAR pP pwP 12 02 33.4 +0.2
comp=Z,0.5nm,0.6s,baz=282,slow=1.4,SNR=3.9
comp=Z,0.6nm,0.7s
PDAR **Pinedale Array** 80.00 45 P P 12 02 18.3 +0.2
SHPR **Sheep Range** 80.04 53 P P 12 02 18.9 +0.5
SHPR IAmb IAmb 12 02 20.4
comp=Z,5.1nm,1.1s
CCUT **Cedar City** 80.64 51 P P 12 02 22.7 +1.0
PFO **Pinyon Flats O** 80.76 56 LR LR 12 32 02.2
comp=Z,139nm,20.8s,baz=262,slow=31
PFO **Pinyon Flats O** 80.76 56 *i* P P 12 02 19.9 -2.4
PFO pmax pmax
comp=Z,12nm,1.1s
MSU **Marysvale** 80.86 50 P P 12 02 23.8 +0.9
MSU **Marysvale** 80.86 50 P P 12 02 23.8 +0.9
LCMT **Little Creek M** 81.03 52 P P 12 02 24.3 +0.6
LCMT IAmb IAmb 12 02 41.0
comp=Z,4.2nm,1.0s
RDMU **Red Mountain** 81.29 47 P P 12 02 25.9 +0.8
RDMU IAmb IAmb 12 02 43.1
comp=Z,11nm,1.1s
P18A **Preston Nutter** 81.43 48 P P 12 02 25.7 -0.2
P18A IAmb IAmb 12 02 43.2
comp=Z,7.7nm,1.1s
SRU **San Rafael Swe** 81.56 49 P P 12 02 26.4 -0.1
SRU **San Rafael Swe** 81.56 49 P P 12 02 26.4 -0.1
SRU pmax pmax
comp=Z,10.0nm,0.9s
BRTR **Keskin Array B** 81.79 312 P P 12 02 29.6 +2.0
comp=Z,2.9nm,1.0s,baz=69,slow=4.1,SNR=8.3
BRTR pP pwP 12 02 43.1 +1.1
comp=Z,3.2nm,0.8s,baz=114,slow=3.5,SNR=10
BRTR LR LR 12 41 42.7
comp=Z,37nm,19.5s,baz=91,slow=38
comp=Z,2.9nm,1.0s
BRTR **Keskin Array B** 81.79 312 P P 12 02 27.2 -0.5
U15A **North Rim** 81.99 52 P P 12 02 29.0 0.0
ANTO **Ankara** 82.23 313 P P 12 02 30.5 +0.6
PPT **Papeete** 82.47 117 LR LR 12 35 13.5
comp=Z,93nm,19.1s,baz=107,slow=33
RAYN **Ar Rayn** 82.61 293 P P 12 02 31.5 -0.6
RAYN IAmb IAmb 12 02 36.3
comp=Z,6.0nm,1.1s
RAYN **Ar Rayn** 82.61 293 P P 12 02 31.5 -0.6
RAYN pmax pmax
comp=Z,6.0nm,1.1s
PV10 **Paradox Valley** 82.93 49 P P 12 02 33.5 -0.3
PV11 **David Mesa, Pa** 83.08 49 P P 12 02 34.4 -0.1
WUAZ **Wupatki** 83.12 52 P P 12 02 33.8 -0.9
WUAZ IAmb IAmb 12 02 52.5
comp=Z,5.9nm,1.1s
N23A **Red Feather La** 83.28 45 P P 12 02 36.5 +0.9
N23A IAmb IAmb 12 02 53.1
comp=Z,10nm,1.2s
X16A **Lo Mia Camp, P** 83.72 53 P P 12 02 38.5 +0.7
X16A IAmb IAmb 12 02 55.8
comp=Z,4.8nm,1.2s
MVCO **Mesa Verde** 83.97 49 P P 12 02 38.8 -0.3
MVCO IAmb IAmb 12 03 05.7
comp=Z,9.2nm,1.4s
CLL **Collm** 84.68 331 *i* P P 12 02 41.9 -0.2
CLL pmax pmax
comp=Z,4.0nm,0.6s
CLL **Collm** 84.68 331 *i* P P 12 02 41.9 -0.2
comp=Z,4.0nm,0.6s
GERES **GERESS Array B** 86.25 329 pP pP 12 03 04.6 +11
comp=Z,0.7nm,0.6s,baz=8.5,slow=2.7,SNR=3.0
ANMO **Albuquerque** 86.67 50 LR LR 12 36 48.4
comp=Z,113nm,20.5s,baz=298,slow=32
ANMO **Albuquerque** 86.67 50 P P 12 02 53.2 +0.6
ANMO IAmb IAmb 12 03 11.3
comp=Z,4.5nm,1.2s
ANMO **Albuquerque** 86.67 50 P P 12 02 53.2 +0.6
ANMO pmax pmax
comp=Z,5.0nm,1.3s
LPIG **La Paz** 90.64 61 LR LR 12 42 03.2
comp=Z,36nm,18.4s,baz=243,slow=34
TXAR **Lajitas Array** 92.05 53 P P 12 03 18.4 +0.5
comp=Z,0.6nm,0.8s,baz=320,slow=4.0,SNR=7.6
TXAR LR LR 12 38 25.1
comp=Z,71nm,21.2s,baz=288,slow=31
comp=Z,0.6nm,0.8s
TXAR **Lajitas Array** 92.05 53 P P 12 03 17.5 -0.4
SADO **Sadowa** 93.85 28 LR LR 12 45 41.3
comp=Z,27nm,21.8s,baz=318,slow=36
TKL **Tuckaleechee C** 99.19 36 LR LR 12 49 40.4
comp=Z,25nm,19.7s,baz=270,slow=36
TORD **Torodi Ar. Bea** 120.38 314 PKP PKiKP 12 09 01.6 +1.0
comp=Z,0.2nm,0.4s,baz=69,slow=1.4,SNR=1.9
TORD pPKP pPKPdf 12 09 14.6 +11
comp=Z,0.7nm,0.6s,baz=31,slow=2.2,SNR=4.1
TORD **Torodi Ar. Bea** 120.38 314 PKPdf PKiKP 12 09 01.4 +0.8
LPAZ **La Paz** 148.01 66 PKPbc PKPbc 12 09 56.3 +1.0
comp=Z,1.5nm,0.4s,baz=10.0,slow=5.1,SNR=6.7
LPAZ pPKPbc pPKPbc 12 10 11.0 +13
comp=Z,4.8nm,0.9s,baz=13,slow=7.7,SNR=4.8
LPAZ **La Paz** 148.01 66 PKPbc 12 09 56.1 +0.9

*ROM **17** 11:52:47.9±1.0, 42°.66N±0°.06×15°.35E±0°.05, h10km, ML2.5/4, Error ellipse: s-maj=6.9km s-min=2.4km az=28.0*
ISC 17 11:52:51.8±1.0, **42°.40N**±0°.03×**15°.29E**±0°.02, **h15**km±9km, **n37**, σ1§53/48, **Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TREM	**Isole Tremiti**	0.32	150	P	**Pg**	**11 52 57.4**	**-1.1**
FRES	**Fresagrandinar**	0.63	227	P	**Pb**	**11 53 02.5**	**-2.1**
APRC	**Apricena**	0.67	164	P	**Pb**	**11 53 04.1**	**-1.1**
APRC				S	**Sn**	**11 53 18.7**	**+1.6**
APRC				AML	AML		
	comp=N,294μm,0.9s						
APRC				AML	AML		
	comp=E,269μm,0.3s						
APRC				AML	AML		
	comp=N,292μm,0.9s						
SGRT	**San Giovanni R**	0.73	153	P	**Pb**	**11 53 06.0**	**-0.3**
SGRT				S	**Sn**	**11 53 20.3**	**+1.7**
SGRT				AML	AML		
	comp=E,428μm,0.3s						
SGRT				AML	AML		
	comp=N,290μm,0.7s						
SGRT				AML	AML		
	comp=N,290μm,0.7s						
SGRT				AML	AML		
	comp=E,428μm,0.3s						
CIGN	**Sant'Elia a Pi**	0.80	201	P	**Pb**	**11 53 06.1**	**-1.4**
MSAG	**Monte S. Angel**	0.83	146	P	**Pg**	**11 53 08.1**	**+0.2**
MSAG				S	**Sn**	**11 53 23.0**	**+2.0**
LPEL	**Lama dei Pelig**	0.90	247	P	**Pb**	**11 53 08.1**	**-1.0**
LPEL				S	**Sg**	**11 53 22.1**	**+1.1**
LPEL				AML	AML		
	comp=E,324μm,0.3s						
LPEL				AML	AML		
	comp=N,251μm,0.9s						
LPEL				AML	AML		
	comp=N,252μm,0.9s						
LPEL				AML	AML		
	comp=E,324μm,0.3s						
MOCO	**Biccari - m.te**	1.04	186	P	**Pb**	**11 53 10.7**	**-0.8**
VCEL	**Villa Celiera**	1.08	270	P	**Pb**	**11 53 10.9**	**-1.2**
MIDA	**Miranda**	1.09	226	P	**Pn**	**11 53 11.2**	**-1.4**
INTR	**Introdacqua**	1.10	250	P	**Pn**	**11 53 10.4**	**-2.4**
INTR				AML	AML		
	comp=E,63μm,1.3s						
INTR				AML	AML		
	comp=N,132μm,1.6s						
T0110	**Collepietro**	1.14	262	P	**Pn**	**11 53 12.1**	**-1.2**
HVAR	**Hvar**	1.15	47	*e*Pg	**Pn**	**11 53 13.0**	**-0.3**
HVAR				Sg	**Sg**	**11 53 29.0**	**+0.1**
LSTV	**Lastovo**	1.24	72	*e*Pn	**Pn**	**11 53 14.2**	**-0.3**
LSTV				Sn	**Sg**	**11 53 33.1**	**+1.4**
CERA	**Filignano**	1.25	230	P	**Pn**	**11 53 14.7**	**0.0**
VAGA	**Valle Agricola**	1.27	219	P	**Pn**	**11 53 14.1**	**-0.9**
TERO	**Teramo**	1.27	280	P	**Pn**	**11 53 13.1**	**-1.9**
ZIRJ	**Zirje**	1.28	12	*e*Pn	**Pn**	**11 53 13.9**	**-1.1**
ZIRJ				Sg	**Sn**	**11 53 31.2**	**-0.7**
VVLD	**Villa Vallelon**	1.35	247	P	**Pn**	**11 53 14.9**	**-1.3**
POFI	**Posta Fibreno**	1.36	240	P	**Pn**	**11 53 15.0**	**-1.4**
MORI	**Morici**	1.49	12	*e*Pn	**Pn**	**11 53 16.4**	**-1.7**
MORI				Sn	**Sn**	**11 53 36.3**	**-1.0**
DUGI	**Dugi Otok**	1.60	354	*e*Pn	**Pn**	**11 53 17.3**	**-2.2**
DUGI				Sn	**Sn**	**11 53 39.1**	**-0.8**
KIJV	**Kijevo**	1.79	27	*e*Pn	**Pn**	**11 53 22.2**	**0.0**
KIJV				Sn	**Sb**	**11 53 46.0**	**-0.7**
STON	**Ston**	1.84	74	*e*Pn	**Pb**	**11 53 24.0**	**-1.0**
STON				Sn	**Sb**	**11 53 48.0**	**+0.1**
VIRC	**Vir**	1.90	355	*e*Pn	**Pn**	**11 53 22.2**	**-1.4**
VIRC				Sn	**Sn**	**11 53 46.3**	**-0.9**
MMUR	**Monte Murano**	1.98	302	S	**Sn**	**11 53 50.0**	**+0.6**
LAV9	**Lanuvio**	2.06	250	S	**Sn**	**11 53 55.0**	**+0.6**
ATTE	**AVT- Monte Tez**	2.30	291	S	**Sn**	**11 54 06.0**	**+0.1**
APEC	**Apecchio**	2.40	300	P	Pg	11 53 44.3	+6.4
CDCA	**Citt' di Caste**	2.48	296	S	**Sn**	**11 54 03.0**	**+1.3**
PARC	**Parchiule**	2.56	300	P	Pg	11 53 46.5	+5.6
CPGN	**Carpegna, Ital**	2.59	304	P	**Pg**	**11 53 41.7**	**+0.4**
CPGN				S	**Sn**	**11 54 05.0**	**+0.5**
IMOL	**Imola, Italy**	3.24	308	S	**Sn**	**11 54 19.0**	**-1.4**
CMPO	**Campotto Po**	3.34	312	S	**Sg**	**11 54 43.0**	**+3.9**
MTCR	**Monte La Croce**	3.53	299	P	**Pg**	**11 54 03.3**	**+3.8**
FIU	**Minerbio Fiu**	3.56	310	S	**Sg**	**11 54 46.0**	**+0.1**
KOGS	**Kog**	4.10	9	S	**Sn**	**11 54 45.0**	**+3.4**

*CNRM **17** 12:24:48.5, 36°.32N×5°.03E, h73km*
*CRAAG **17** 12:25:02.6, 36°.37N×3°.50E, Ml3.1, Hypocentre not reviewed by the ISC*
*MDD **17** 12:25:06.2±1.4, 36°.30N×3°.51E, h29km±3.2km, Mb4.2/5, M_mb3.5/5, Error ellipse: s-maj=29.2km s-min=5.9km az=130.0*
ISC 17 12:25:06.2±2.7, **36°.36N**±0°.08×**3°.3E**±0°.2, **h35**km, **n8**, σ2§08/12, **4C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ADJB	**Djebel Djouab**	0.24	149	P		12 25 07.4	
AKET	**Djebel Ketaf**	0.58	123	P		12 25 12.5	
ATAF	**Djebel Tarf**	0.94	121	P		12 25 19.1	
EIBI	**Ibiza**	3.07	331	P	**Pn**	**12 25 53.2**	**+1.0**
EIBI				⇑*i*Vmb_V		12 25 58.2	
	268nm,SNR=1.8						
EIBI				S	**Sn**	**12 26 28.4**	**+0.6**
ETOS	**Mallorca**	3.42	354	P	**Pn**	**12 25 57.1**	**0.0**
ETOS				⇑*i*Vmb_V		12 26 00.8	
	277nm,SNR=0.8						
ETOS				S	**Sn**	**12 26 33.3**	**-3.1**
ETOB	**Tobarra**	4.47	302	P	**Pn**	**12 26 14.3**	**+2.9**
ETOB				⇑*i*Vmb_V		12 26 18.9	
	224nm,SNR=2.0						
ETOB				S	**Sn**	**12 26 58.6**	**-3.6**
TAF	**Taforalt**	4.89	253	P	**Pn**	**12 26 17.8**	**+0.4**
EMOS	**Mosqueruela**	4.97	325	P	**Pn**	**12 26 19.7**	**+1.3**
EMOS				⇑*i*Vmb_V		12 26 21.1	
	129nm,SNR=1.0						
EMOS				S	**Sn**	**12 27 14.8**	**0.0**
JBK	**JBK**	5.19	249	P	**Pn**	**12 26 23.8**	**+2.2**
TDRA	**Tendrara**	5.49	234	P	**Pn**	**12 26 26.0**	**+0.3**
MD31	**MD31**	7.49	245	P	**Pn**	**12 26 52.5**	**-0.5**

*NOU **17** 12:54:08.2, 19°.97S×168°.25E, h0km, MLv4.1/8, Vanuatu Islands*
*IDC **17** 12:54:08.3±1.8, 19°.87S×168°.14E, h0km, mb3.7/3, mbtmp3.7/4, ML3.1/1, MS3.5/3, Error ellipse: s-maj=72.4km s-min=30.4km az=141.0*
ISC 17 12:54:08.9±1.2, **20°.03S**±0°.07×**168°.3E**±0°.1, **h10**km, **n12**, σ1§36/10, **mb3.7/3, MS3.4/3, Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	1.47	191	P	**Pn**	**12 54 34.8**	**-0.7**
DVP	**Devils Point**	2.30	357	P	**Pn**	**12 54 45.9**	**-1.0**
DZM	**Mont Dzumac**	2.69	221	Pn	**Pn**	**12 54 51.6**	**-0.8**
	3.3nm,0.3s,baz=60,slow=14,SNR=85						
DZM				Sn	**Sn**	**12 55 22.6**	**-2.4**
	18nm,0.3s,baz=137,slow=20,SNR=10						
	9.3nm,0.2s						
PINNC	**Pines Island,**	2.70	198	P	**Pn**	**12 54 52.9**	**+0.5**
NOUC	**Port Laguerre**	2.80	222	P	**Pn**	**12 54 54.5**	**+0.7**
KOUNC	**Koumac, New Ca**	3.83	262	P	**Pn**	**12 55 08.8**	**+0.8**
CTA	**Charters Tower**	20.74	266	LR	LR	13 05 27.1	
	comp=Z,96nm,20.8s,baz=98,slow=33						
STKA	**Stephens Creek**	26.70	238	P	**P**	**12 59 49.8**	**+1.4**

1.5nm,0.6s,baz=49,slow=12,SNR=3.1
1.5nm,0.6s

WRA	**Warramunga Arr**	**31.91**	**264**	P		**P**	**13 00 34.3**	**-0.6**
	0.3nm,0.4s,baz=90,slow=8.5,SNR=7.1								
	0.3nm,0.4s								
CMAR	**Chiang Mai Arr**	**78.05**	**295**	LR		LR	13 42 03.5		
	comp=Z,17nm,18.6s,baz=175,slow=37								
KDAK	**Kodiak Island**	**84.06**	**20**	LR		LR	13 39 20.1		
	comp=Z,60nm,19.4s,baz=224,slow=32								
NVAR	**Mina Array Bea**	**89.96**	**49**	P		**P**	**13 07 10.1**	**+1.1**
	0.3nm,0.6s,baz=220,slow=7.6,SNR=5.1								
	0.3nm,0.6s								

AEIC ***17*** *13:04:33±1.4, 53°.23N±0°.06×166°.78W±0°.08, h38km±9km, Error ellipse: s-maj=8.9km s-min=6.2km az=152.0*

NEIC 17 13:04:34.2±1.3, 53°.23N±0°.09×166°.79W±0°.10, h33km±16km, ML3.8/8, ML3.6(AEIC)**, Error ellipse: s-maj=14.7km s-min=3.2km az=147.0, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
MGOD	**Makushin Gods**	**0.57**	**355**		Pb	13 04 45.6		-0.3
UNV	**Unalaska Valle**	**0.64**	**15**		Pn	13 04 46.0		-0.9
MSW	**Makushin Switc**	**0.68**	**0**		Pn	13 04 47.1		-0.5
OKFG	**Magazine Ridge**	**0.70**	**285**		Pn	13 04 47.4		-0.4
MCIR	**Makushin Cirqu**	**0.72**	**355**		Pn	13 04 48.1		0.0
MTBL	**Makushin Table**	**0.74**	**5**		Pn	13 04 48.1		-0.3
OKSO	**Okmok South**	**0.83**	**279**		Pn	13 04 49.1		-0.5
OKSP	**Okmok Steeple**	**0.91**	**272**		Pn	13 04 50.1		-0.5
AKBBA	**Akutan Broad B**	**1.00**	**30**		Pn	13 04 51.2		-0.8
AKGG	**Akutan Green G**	**1.08**	**26**		Pn	13 04 52.7		-0.3
AKUT	**Akutan**	**1.09**	**33**		Pn	13 04 52.2		-0.8
AKUT	**Akutan**	**1.09**	**33**	IAML		13 05 07.6		
	comp=E,3μm,0.3s							
AKUT				IAML		13 05 09.5		
	comp=N,2μm,0.4s							
AKSA	**Akutan Strait**	**1.11**	**35**		Pn	13 04 52.8		-0.6
NIKH	**Nikolski High**	**1.27**	**259**		Pn	13 04 55.2		-0.4
WESP	**Westdahl Peak**	**1.76**	**43**		Pn	13 05 02.1		-0.2
WESE	**West Dahl East**	**1.80**	**45**		Pn	13 05 02.8		-0.1
WEBT	**Westdahl Beart**	**1.82**	**41**		Pn	13 05 03.1		0.0
WTUG	**Tugumak**	**2.15**	**40**		Pn	13 05 07.5		-0.3
SSLN	**Shishaldin Nor**	**2.28**	**45**		Pn	13 05 09.7		+0.2
BRPK	**Brown Peak**	**2.29**	**51**		Pn	13 05 09.8		+0.2
ISLZ	**Isanotski Laza**	**2.35**	**49**		Pn	13 05 10.2		-0.3
ISNN	**Isanotski Nort**	**2.39**	**47**		Pn	13 05 11.3		+0.3
FALS	**False Pass**	**2.57**	**49**		Pn	13 05 13.7		+0.3
SDPT	**Sand Point**	**4.26**	**58**		Pn	13 05 36.4		-0.3
SDPT	**Sand Point**	**4.26**	**58**	IAML		13 06 37.1		
	comp=N,107nm,1.3s							
SDPT				IAML		13 06 42.9		
	comp=E,159nm,1.8s							
SPIA	**Saint Paul Isl**	**4.42**	**335**		Pn	13 05 39.0		+0.2
CNBA	**Chernabura Isl**	**4.53**	**67**	Pn	Pn	13 05 37.6		-2.8
KOFP	**Korovin Flat P**	**4.54**	**261**		Pn	13 05 40.6		0.0
ATKA	**Atka Island**	**4.62**	**260**		Pn	13 05 41.5		-0.1
GSTR	**Great Sitkin T**	**5.76**	**262**		Pn	13 05 59.1		+1.8
GSTD	**Great Sitkin T**	**5.82**	**262**		Pn	13 05 59.5		+1.3
GSCK	**Great Sitkin C**	**5.84**	**262**		Pn	13 05 59.6		+1.2
ADK	**Adak**	**6.19**	**261**		Pn	13 06 04.5		+1.3
O16K	**Kokwok River B**	**7.99**	**34**		Pn	13 06 28.6		+0.8
P17K	**Kvichak River**	**8.30**	**40**		Pn	13 06 32.6		+0.6
OHAK	**Old Harbor**	**8.69**	**57**		Pn	13 06 37.6		+0.3
AMKA	**Amchitka**	**8.73**	**263**		Pn	13 06 38.0		0.0
P18K	**Big Mountain,**	**8.90**	**42**	Pn	Pn	13 06 41.7		+1.4
O18K	**Koktuh Hills**	**9.21**	**39**		Pn	13 06 45.8		+1.3
N18K	**Kilae Creek**	**9.54**	**34**	Pn	Pn	13 06 46.8		-2.2
SVW2	**Sparrevohn**	**9.94**	**33**	Pn	Pn	13 06 53.8		-0.8
N19K	**Bonanza Creek**	**10.12**	**36**	Pn	Pn	13 06 57.3		+0.3
CNPM	**China Poot**	**10.66**	**48**	Pn	Pn	13 07 04.8		+0.3
GAMB	**Gambell**	**10.88**	**348**	Pn	Pn	13 07 08.3		+1.0
M19K	**Big River Lodg**	**10.93**	**32**	Pn	Pn	13 07 09.9		+1.9
BRLK	**Bradley Lake**	**10.94**	**47**	Pn	Pn	13 07 07.5		-0.7
L19K	**White Mountain**	**10.99**	**31**	Pn	Pn	13 07 09.0		+0.1
SUA	**Susitna One**	**11.93**	**40**	Pn	Pn	13 07 23.6		+1.8
K20K	**Telida**	**12.13**	**28**	Pn	Pn	13 07 25.0		+0.6
J20K	**Nowinta River**	**12.76**	**26**	Pn	Pn	13 07 33.0		0.0
HIN	**Hinchinbrook I**	**13.18**	**49**	Pn	Pn	13 07 36.9		-2.0
SCM	**Sheep Creek Mo**	**13.49**	**43**	Pn	Pn	13 07 41.3		-1.8
BPAW	**Bear Paw Mtn.**	**13.59**	**31**	Pn	Pn	13 07 44.0		-0.5
KLU	**Klutina**	**13.91**	**45**	Pn	Pn	13 07 46.2		-2.6

IDC ***17*** *13:13:24.4±2.8, 22°.72N×12°.17W, h0km, mb3.9/6, mbtmp3.9/8, ML3.8/2, MS3.1/2, Error ellipse: s-maj=77.3km s-min=31.6km az=85.0*

ISC 17 13:13:28.4±1.9, 22°.8N±0°.2×11°.6W±0°.3, h10km, n11, σ0s64/10, mb4.0/6, Mauritania

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
TORD	**Torodi Ar. Bea**	**15.87**	**125**	Pn	**Pn**	**13 17 12.9**		**+0.9**
	0.4nm,0.3s,baz=314,slow=11,SNR=13							
TORD				Sn	**Sn**	**13 20 07.6**		**-0.4**
	0.1nm,0.3s,baz=306,slow=22,SNR=3.3							
	1.3nm,0.6s							
DBIC	**Dimbokro**	**17.30**	**157**	Pn	**Pn**	**13 17 29.6**		**-0.5**
	0.3nm,0.3s,baz=353,slow=12,SNR=3.1							
	2.3nm,0.5s							
I42PT	**GRACIOSA ISLAN**	**21.40**	**323**	*i*		15 15 00.0		
	baz=141,slow=317,SNR=2.4							
GERES	**GERESS Array B**	**32.83**	**31**	P	**P**	**13 20 01.7**		**-0.4**
	0.9nm,0.7s,baz=215,slow=12,SNR=5.4							
	0.9nm,0.7s							
VRAC	**Vranov**	**34.56**	**33**	LR	LR	13 36 11.6		
	comp=Z,24nm,20.7s,baz=348,slow=39							
BRTR	**Keskin Array B**	**41.73**	**55**	P	**P**	**13 21 17.2**		**-0.6**
	0.5nm,0.6s,baz=237,slow=11,SNR=2.2							
	0.5nm,0.6s							
FINES	**FINESS Array B**	**46.47**	**24**	P	**P**	**13 21 55.2**		**-0.1**
	1.2nm,0.6s,baz=212,slow=4.9,SNR=8.4							
FINES				LR	LR	13 43 21.8		
	comp=Z,29nm,18.4s,baz=52,slow=38							
	1.2nm,0.6s							
AKTO	**Aktyubinsk**	**59.89**	**44**	P	**P**	**13 23 34.9**		**+0.5**
	1.3nm,0.6s,baz=250,slow=7.3,SNR=4.5							
	1.3nm,0.6s							
KURBB	**Kurchatov Arra**	**72.81**	**42**	P	**P**	**13 24 57.9**		**+0.8**
	0.9nm,0.5s,baz=286,slow=6.6,SNR=5.7							
	0.9nm,0.5s							
MKAR	**Makanchi Array**	**76.30**	**45**	P	**P**	**13 25 17.7**		**+0.1**
	0.7nm,0.5s,baz=267,slow=6.0,SNR=2.9							
	0.7nm,0.5s							
WRA	**Warramunga Arr**	**148.20**	**91**	PKPbc	**PKPbc**	**13 33 15.2**		**-0.2**
	0.9nm,0.7s,baz=290,slow=2.8,SNR=8.4							

ANF ***17*** *13:39:58.4±0.1, 34°.19N×116°.83W, h13km±1km, ML2.9/25, Error ellipse: s-maj=1.0km s-min=0.8km az=67.0*
PAS ***17*** *13:39:59.5±2.3, 34°.202N±0°.010×116°.83W±0°.02, h7km±6km, ML3.1/205, ML2.8/56(NEIC), Error ellipse: s-maj=2.2km s-min=1.4km az=74.0*
NEIC ***17*** *13:39:59.3±1.9, 34°.189N±0°.004×116°.81W±0°.02, h4km±8km, Error ellipse: s-maj=2.0km s-min=0.5km az=101.0*

ISC 17 13:39:59.1±0.9, 34°.19N±0°.02×116°.82W±0°.02, h8km±7km, n64, σ0s86/91, Southern California

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
BBRC	**Big Bear Solar**	**0.11**	**311**	P	**Pg**	**13 40 01.8**		**-0.1**
	baz=129,SNR=92							
BBRC				S	**Sg**	**13 40 03.9**		**0.0**
	baz=129							
CFSC	**Central Fire S**	**0.40**	**258**		**Pg**	**13 40 07.1**		**+0.2**
CFSC					**Sg**	**13 40 12.9**		**+0.9**
RSBC	**Riverside Bore**	**0.47**	**243**		**Pg**	**13 40 08.3**		**-0.1**
RSBC					**Sg**	**13 40 14.9**		**+0.3**
GVDA	**Garner Valley**	**0.53**	**167**		**Pg**	**13 40 09.6**		**+0.1**
GVDA					**Sg**	**13 40 17.1**		**+0.6**
PFO	**Pinyon Flats O**	**0.65**	**153**	Pg	**Pg**	**13 40 11.7**		**0.0**
PFO				Sg	**Sg**	**13 40 20.3**		**+0.1**
PFO				IAML		13 40 21.3		
	423nm,0.1s							
PFO				IAML		13 40 21.5		
	511nm,0.1s							
PFO	**Pinyon Flats O**	**0.65**	**153**	P	**Pg**	**13 40 11.7**		**0.0**
	baz=332,SNR=22							
PFO				S	**Sg**	**13 40 20.2**		**0.0**
	baz=332							
MURC	**Murrieta**	**0.67**	**208**	P	**Pg**	**13 40 11.8**		**-0.2**
	baz=27,SNR=42							
MURC				S	**Sg**	**13 40 20.8**		**+0.1**
	baz=27							
BFSC	**Mount Baldy Ra**	**0.70**	**274**	P	**Pg**	**13 40 12.1**		**-0.5**
	baz=93,SNR=56							
BFSC				S	**Sg**	**13 40 21.7**		**-0.1**
	baz=93							
RRX	**Edison Barstow**	**0.70**	**348**	P	**Pg**	**13 40 12.3**		**-0.3**
	baz=168,SNR=9.7							
RRX				S	**Sg**	**13 40 21.9**		**+0.1**
	baz=168							
BELC	**Belle Mtn. Jos**	**0.71**	**105**	P	**Pg**	**13 40 13.0**		**+0.2**
	baz=286,SNR=122							
BELC				S	**Sg**	**13 40 22.3**		**+0.3**
	baz=286							
ELS	**Elsinore Mount**	**0.74**	**223**	Pg	**Pg**	**13 40 12.7**		**-0.7**
ELS				Sg	**Sg**	**13 40 22.6**		**-0.5**
HEC	**Hector,Ludlow**	**0.75**	**32**	P	**Pg**	**13 40 13.4**		**-0.3**
	baz=213,SNR=75							
HEC				S	**Sg**	**13 40 23.7**		**+0.2**
	baz=213							
GSC	**Goldstone, Bar**	**1.11**	**1**		**Pg**	**13 40 19.7**		**-0.8**
GSC				Sg	**Sg**	**13 40 35.0**		**0.0**
GSC				IAML		13 40 36.3		
	comp=N,160nm,0.5s							
GSC				IAML		13 40 38.9		
	comp=E,207nm,0.5s							
GSC	**Goldstone, Bar**	**1.11**	**1**	P	**Pg**	**13 40 19.7**		**-0.8**
	baz=181,SNR=85							
GSC				S	**Sg**	**13 40 34.4**		**-0.6**
	baz=181							
GMRC	**Granite Mounta**	**1.13**	**58**	P	**Pg**	**13 40 19.9**		**-0.8**
	baz=239,SNR=100							
GMRC				S	**Sg**	**13 40 35.2**		**-0.2**
	baz=239							
PASC	**Pasadena Art C**	**1.13**	**270**		**Pg**	**13 40 19.8**		**-1.1**
PASC				Sg	**Sb**	**13 40 36.7**		**+0.9**
PASC				IAML		13 40 37.7		
	comp=E,262nm,0.5s							
PASC				IAML		13 40 38.1		
	comp=N,209nm,0.7s							
EDW2	**Edwards Air Fo**	**1.19**	**306**	P	**Pg**	**13 40 20.9**		**-1.1**
	baz=125,SNR=39							
EDW2				S	**Sg**	**13 40 36.3**		**-1.2**
	baz=125							
GR2C	**Griffith Obs.**	**1.23**	**267**		**Pg**	**13 40 21.6**		**-1.2**
BC3	**Big Chuckawall**	**1.25**	**115**	P	**Pg**	**13 40 22.1**		**-1.1**
	baz=296							
BC3				S	**Sb**	**13 40 39.7**		**+0.4**
	baz=296							
DECC	**Green Verdugo**	**1.26**	**273**	P	**Pg**	**13 40 22.2**		**-1.1**
	baz=92,SNR=18							
DECC				S	**Sg**	**13 40 39.1**		**-0.5**
	baz=92							
109C	**Camp Elliot, M**	**1.32**	**191**		**Pn**	**13 40 23.1**		**-0.7**
109C	**Camp Elliot, M**	**1.32**	**191**	P	**Pn**	**13 40 22.7**		**-1.0**
	baz=9.8							
109C				S	**Sg**	**13 40 39.7**		**-1.8**
	baz=9.8							
MONP2	**Monument Peak**	**1.33**	**166**	Pg	**Pg**	**13 40 24.1**		**-0.7**
	baz=346,SNR=10							
MONP2				S	**Sg**	**13 40 41.3**		**-0.8**
	baz=346							
CCAC	**Calif City Air**	**1.38**	**315**		**Pn**	**13 40 24.5**		**-0.2**
CCAC				IAML		13 40 44.2		
	comp=N,250nm,0.5s							
IRM	**Iron Mountain**	**1.39**	**91**	P	**Pn**	**13 40 23.7**		**-1.1**
	baz=272							
IRM				Sb	**Sg**	**13 40 43.6**		**-0.2**
	baz=272							
TUQ	**Turquoise Moun**	**1.45**	**30**	P	**Pn**	**13 40 24.5**		**-1.2**
	baz=211							
TUQ				Sb	**Sb**	**13 40 45.1**		**+0.2**
	baz=211							
LRMC	**Laurel Mtn Rad**	**1.47**	**331**	Pg	**Pn**	**13 40 26.7**		**+0.6**
	baz=151							
LRMC				Sb	**Sb**	**13 40 45.8**		**+0.1**
	baz=151							
SWSC	**Sam W. Stewart**	**1.50**	**145**	P	**Pn**	**13 40 25.0**		**-1.3**
	baz=326							
SWSC				Sb	**Sn**	**13 40 46.9**		**+0.8**
	baz=326							
BAR	**Barrett**	**1.51**	**175**	Pn	**Pn**	**13 40 26.3**		**-0.1**
CIS	**Catalina Islan**	**1.54**	**240**	P	**Pn**	**13 40 26.0**		**-1.0**
	baz=58,SNR=11							
CIS				Sb	**Sn**	**13 40 47.3**		**+0.2**
	baz=58							
OSI	**Osito Audit: C**	**1.63**	**286**	Pg	**Pn**	**13 40 29.5**		**+1.3**
	baz=104							
IKP	**In-Ko-Pah, Jac**	**1.65**	**159**	P	**Pn**	**13 40 27.7**		**-0.7**
	baz=339,SNR=8.0							
IKP				Sb	**Sn**	**13 40 50.9**		**+1.2**
	baz=339							
RMX	**La Rumorosa**	**1.70**	**158**		**Pg**	**13 40 31.7**		**0.0**
RMX				IAML		13 40 55.7		
	comp=E,108nm,0.2s							
YUH	**Yuha Desert**	**1.71**	**154**		**Pb**	**13 40 30.6**		**-0.2**
SHOC	**Shoshone, Teco**	**1.76**	**14**	Pg	**Pb**	**13 40 32.0**		**+0.3**
	baz=195							
QSM	**Queen of Sheba**	**1.77**	**359**		**Pn**	**13 40 31.1**		**+1.0**
QSM				IAML		13 40 57.9		
	comp=E,142nm,0.4s							
CBX	**Cerro Bola**	**1.88**	**176**		**Pn**	**13 40 32.2**		**+0.6**
CBX				IAML		13 41 00.5		
	comp=N,97nm,0.5s							
ARVC	**Arvin**	**1.90**	**300**	Sb	**Sb**	**13 40 58.2**		**+0.2**
	baz=119							
MPMC	**Manual Prospec**	**1.94**	**344**	P	**Pn**	**13 40 31.0**		**-1.6**
	baz=164,SNR=35							
BLYC	**Blythe**	**1.96**	**102**		**Pn**	**13 40 31.8**		**-0.8**
BLYC				IAML		13 41 04.4		
	comp=E,110nm,0.5s							
BLYC				IAML		13 41 04.9		
	comp=N,81nm,0.5s							
GWY	**Greenwater Val**	**2.00**	**3**		**Pn**	**13 40 32.4**		**-0.9**
GWY				IAML		13 41 05.8		
	comp=N,119nm,0.3s							
ISA	**Isabella, Lake**	**2.00**	**318**		**Pn**	**13 40 34.6**		**+1.3**
GLA	**Glamis**	**2.01**	**124**		**Pb**	**13 40 35.6**		**-0.3**
GLA				IAML		13 41 09.3		
	comp=E,78nm,0.7s							
BCW	**Bitter Crk WRg**	**2.27**	**290**		**Pn**	**13 40 37.4**		**+0.5**
BCW				IAML		13 41 10.8		
	comp=E,75nm,0.6s							
BCW				IAML		13 41 14.6		
	comp=N,65nm,0.5s							
PKM	**Mcpherson Peak**	**2.57**	**287**	P	**Pn**	**13 40 40.7**		**-0.5**
	baz=105							
W13A	**Hualapai Mount**	**2.58**	**69**		**Pn**	**13 40 40.4**		**-1.0**
W13A				IAML		13 41 23.3		
	comp=N,35nm,0.4s							
SHPR	**Sheep Range**	**2.68**	**30**		**Pn**	**13 40 42.4**		**-0.3**
SHPR				IAML		13 41 26.0		
	comp=E,27nm,0.4s							
SHPR				IAML		13 41 26.3		
	comp=N,27nm,0.8s							
TPNV	**Topopah Spring**	**2.79**	**9**		**Pn**	**13 40 44.5**		**+0.2**
TPNV				IAML		13 41 30.0		
	comp=N,46nm,0.5s							
TPNV				IAML		13 41 33.3		
	comp=N,44nm,0.6s							
GRAC	**Grapevine Rang**	**2.84**	**351**		**Pn**	**13 40 45.4**		**+0.7**
GRAC				IAML		13 41 35.0		
	comp=N,43nm,0.6s							
GRAC				IAML		13 41 39.2		
	comp=E,36nm,0.5s							
113A	**Mohawk Valley,**	**2.92**	**118**		**Pn**	**13 40 47.6**		**+1.8**
LCH	**Last Change Ra**	**3.11**	**348**		**Pn**	**13 40 48.9**		**+0.2**
Y14A	**Wickenburg**	**3.17**	**93**	Pn	**Pn**	**13 40 46.8**		**-2.6**
Y14A				IAML		13 41 43.2		
	comp=N,28nm,0.4s							
Y14A				IAML		13 41 50.2		
	comp=E,17nm,0.6s							
PRN	**Pahroc Range**	**3.52**	**24**		**Pn**	**13 40 54.9**		**+0.7**
PRN				IAML		13 42 00.4		
	comp=N,22nm,0.5s							
PRN				IAML		13 42 03.9		
	comp=E,24nm,0.7s							
LCMT	**Little Creek M**	**4.05**	**45**		**Pn**	**13 41 02.4**		**+0.9**
R11A	**Troy Canyon, C**	**4.27**	**13**		**Pn**	**13 41 03.7**		**-0.8**
LHV	**Little Huntoon**	**4.28**	**342**		**Pn**	**13 41 06.1**		**+1.6**
U15A	**North Rim**	**4.32**	**58**		**Pn**	**13 41 05.9**		**+0.5**
CCUT	**Cedar City**	**4.37**	**39**	Pn	**Pn**	**13 41 06.5**		**+0.5**
NVAR	**Mina Array Bea**	**4.40**	**345**		**Pn**	**13 41 07.6**		**+1.2**
X16A	**Lo Mia Camp, P**	**4.46**	**86**	Pn	**Pn**	**13 41 09.8**		**+2.6**
PSUT	**Pine Spring**	**4.95**	**28**		**Pn**	**13 41 14.2**		**+0.2**
KVN	**Kaiserville**	**4.96**	**348**	Pn	**Pn**	**13 41 14.6**		**+0.5**
MTPU	**Mount Pierson**	**5.37**	**43**	Pn	**Pn**	**13 41 19.2**		**-0.7**
PNTR	**Pine Nut**	**5.38**	**336**	Pn	**Pn**	**13 41 19.5**		**-0.3**

IDC ***17*** *13:41:32.6±2.4, 29°.35S×68°.27W, h85km±20km, mb3.5/4, mbtmp3.9/9, Error ellipse: s-maj=27.5km s-min=19.4km az=72.0*
NEIC ***17*** *13:41:34.9±2.8, 29°.405S±0°.04×68°.22W±0°.09, h105km±6km, mb4.3/14, Md3.9(SJA), Error ellipse: s-maj=11.4km s-min=6.5km az=89.0*

ISC 17 13:41:34.4±0.8, 29°.33S±0°.04×68°.23W±0°.06, h106km±8km, n62, σ1s44/76, mb4.2/11, 8C, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
CO01	**Juntas del Tor**	**1.75**	**248**		**Pn**	**13 42 06.0**		**+1.7**
CO01	**Juntas del Tor**	**1.75**	**248**	⇑*iP*	**Pn**	**13 42 06.5**		**+2.2**
CO01				*i* S	**Sn**	**13 42 29.4**		**+2.3**
LCO	**Las Campanas**	**2.19**	**278**		**Pn**	**13 42 10.9**		**+1.1**
LCO	**Las Campanas**	**2.19**	**278**	⇑*eP*	**Pn**	**13 42 10.8**		**+0.9**
LCO				*i* S	**Sn**	**13 42 37.4**		**+0.4**
ZON	**Zonda**	**2.25**	**190**		**Pn**	**13 42 11.6**		**+1.2**
GO04	**Tololo Observa**	**2.39**	**249**		**Pn**	**13 42 13.5**		**+1.0**
GO04	**Tololo Observa**	**2.39**	**249**	⇑*iP*	**Pn**	**13 42 13.3**		**+0.9**
GO04				*i* S	**Sn**	**13 42 42.4**		**+0.8**
GO03	**Copiap**	**2.47**	**314**	*eP*	**Pn**	**13 42 14.2**		**+0.8**
GO03				*i* S	**Sn**	**13 42 42.8**		**-0.5**
GO03				IAML		13 42 44.7		
	comp=N,658nm,0.8s							
AC02	**Maricunga**	**2.61**	**342**		**Pn**	**13 42 17.9**		**+2.3**
AC02	**Maricunga**	**2.61**	**342**	⇑*iP*	**Pn**	**13 42 18.3**		**+2.7**
AC02				*i* S	**Sn**	**13 42 49.0**		**+1.9**
AC02				IAML		13 42 55.5		
	comp=N,401nm,0.3s							
CO03	**El Pedregal**	**2.61**	**234**	⇑*iP*	**Pn**	**13 42 16.3**		**+1.0**
CO03				*i* S	**Sn**	**13 42 48.0**		**+1.3**
CO03				IAML		13 42 49.4		
	comp=E,437nm,0.5s							
CO05	**La Serena**	**2.69**	**257**	*eP*	**Pn**	**13 42 15.9**		**-0.2**
CO05				*i* S	**Sn**	**13 42 46.5**		**-1.8**
CO05				IAML		13 42 54.2		
	comp=N,443nm,0.5s							
AC06	**Mina Casimiro**	**2.71**	**316**	*eP*	**Pn**	**13 42 17.0**		**+0.5**
AC06				*i* S	**Sn**	**13 42 46.9**		**-2.1**
AC06				IAML		13 42 49.5		
	comp=N,234nm,0.3s							
AC04	**Llanos de Chal**	**2.74**	**293**	⇑*iP*	**Pn**	**13 42 17.0**		**+0.2**
AC04				*i* S	**Sn**	**13 42 48.1**		**-1.4**
AC04				IAML		13 42 53.4		
	comp=E,184nm,0.2s							
CO02	**Combarbal**	**3.04**	**231**	⇑*iP*	**Pn**	**13 42 21.0**		**+0.1**
CO02				*i* S	**Sn**	**13 42 56.2**		**-0.6**
CO06	**Fray Jorge**	**3.25**	**245**	*eP*	**Pn**	**13 42 22.2**		**-1.3**
CO06				IAML		13 43 14.3		
	comp=N,183nm,0.6s							
AC01	**Pan de Azucar**	**3.80**	**326**	*eP*	**Pn**	**13 42 31.1**		**+0.1**
VA03	**San Esteban**	**3.96**	**210**		**Pn**	**13 42 33.2**		**0.0**
VA06	**Catapilco**	**4.17**	**219**		**Pn**	**13 42 34.0**		**-1.8**
ROCH	**El Roble**	**4.35**	**213**	⇑*iP*	**Pn**	**13 42 37.4**		**-1.2**
PEL	**Peldehue**	**4.35**	**208**		**Pn**	**13 42 37.0**		**-1.3**
ROC1	**El Roble**	**4.35**	**213**		**Pn**	**13 42 37.7**		**-1.0**
MT05	**Renca**	**4.59**	**207**		**Pn**	**13 42 41.4**		**-0.2**
MT02	**Curacav**	**4.64**	**212**		**Pn**	**13 42 41.2**		**-1.1**
MT02	**Curacav**	**4.64**	**212**	*eP*	**Pn**	**13 42 40.9**		**-1.4**
PB14	**IPOC Station P**	**5.07**	**337**	Pn	**Pn**	**13 42 49.2**		**+0.8**
BO04	**La Punta**	**5.07**	**203**		**Pn**	**13 42 47.8**		**-0.3**
LVC	**Limon Verde**	**6.72**	**355**	P	**Pn**	**13 43 10.9**		**+0.1**
	comp=N,31nm,0.2s,baz=151,slow=5.8,SNR=53							
LVC				S	**Sn**	**13 44 22.5**		**-3.5**
	comp=N,11nm,0.2s,baz=15,slow=20,SNR=1.8							
LVC	**Limon Verde**	**6.72**	**355**	Pn	**Pn**	**13 43 11.0**		**+0.2**
CPUP	**Villa Florida**	**10.10**	**75**	P	**Pn**	**13 43 56.3**		**0.0**
	comp=N,1.3nm,0.4s,baz=247,slow=12,SNR=5.6							
CPUP	**Villa Florida**	**10.10**	**75**		**Pn**	**13 43 56.0**		**-0.3**
ITQB	**Itaqui**	**10.12**	**95**	Pn	**Pn**	**13 43 56.1**		**-0.4**
PB16	**IPOC Station P**	**11.01**	**354**		**Pn**	**13 44 07.7**		**-1.5**
PLCA	**Paso Flores**	**11.54**	**189**	P	**Pn**	**13 44 13.5**		**-2.2**
	comp=N,1.2nm,0.7s,baz=356,slow=13,SNR=6.7							
PLCA	**Paso Flores**	**11.54**	**189**		**Pn**	**13 44 13.0**		**-2.7**
LL04	**Puerto Octay**	**12.05**	**195**		**Pn**	**13 44 18.1**		**-4.4**
LPAZ	**La Paz**	**12.98**	**0**	P	**Pn**	**13 44 34.7**		**-0.7**
	comp=N,1.7nm,0.4s,baz=200,slow=2.6,SNR=12							
LPAZ	**La Paz**	**12.98**	**0**	Pn	**Pn**	**13 44 34.6**		**-0.8**
SIV	**San Ignacio**	**14.82**	**28**	P	**Pn**	**13 44 57.3**		**-1.3**
	comp=N,1.1nm,0.5s,baz=202,slow=11,SNR=5.0							
SAML	**Samuel**	**20.82**	**14**	P	**P**	**13 46 09.3**		**+1.8**
SNAA	**Sanae**	**54.74**	**159**	P	**P**	**13 50 52.2

JMST				S		**Sn**	**13 47 37.1**	**-2.3**
ONAJ	**Iwakimizuishiy**	**1.00**	**255**	*i* P		**Pn**	**13 47 26.4**	**-0.9**
ONAJ				S		**Sn**	**13 47 38.2**	**-2.3**
JIKH	**Ishinomakikobu**	**1.04**	**335**	⇓*i*P		**Pn**	**13 47 26.9**	**-0.8**
JIKH				⇓S		**Sn**	**13 47 39.2**	**-2.1**
JMM	**Marumori**	**1.09**	**298**	Pn		**Pn**	**13 47 27.8**	**-0.7**
JMM	**Marumori**	**1.09**	**298**	*i* P		**Pn**	**13 47 27.7**	**-0.7**
JMM				S		**Sn**	**13 47 40.8**	**-1.8**
JIO	**Ouri**	**1.21**	**334**	⇓*i*P		**Pn**	**13 47 29.5**	**-0.5**
JIO				⇓S		**Sn**	**13 47 43.4**	**-2.1**
JFT	**Otama**	**1.34**	**277**	*i* P		**Pn**	**13 47 32.1**	**+0.2**
JFT				S		**Sn**	**13 47 48.4**	**-0.4**
JOU	**Okura**	**1.46**	**313**	*i* P		**Pn**	**13 47 33.7**	**+0.1**
JOU				S		**Sn**	**13 47 51.3**	**-0.5**
JMK	**Ichinoseki**	**1.70**	**339**	*i* P		**Pn**	**13 47 37.0**	**+0.2**
JMK				S		**Sn**	**13 47 57.7**	**0.0**
JYS	**Shirataka**	**1.76**	**300**	P		**Pn**	**13 47 38.3**	**+0.6**
JYS				S		**Sn**	**13 48 00.8**	**+1.6**
JFY	**Yanaizu**	**1.84**	**272**	S		**Sn**	**13 48 01.7**	**+0.6**
JYT	**Yasato**	**1.85**	**233**			**Pn**	**13 47 38.4**	**-0.5**
JYK	**Kaneyama**	**2.02**	**320**	*i* P		**Pn**	**13 47 42.0**	**+0.7**
JSD	**Sado**	**3.05**	**284**			**Pn**	**13 47 56.8**	**+1.4**
MJAR	**Matsushiro Arr**	**3.16**	**256**	P		**Pn**	**13 47 58.2**	**+1.4**
	0.6nm,0.3s,baz=87,slow=15,SNR=24							
MJAR				S		**Sn**	**13 48 36.4**	**+2.8**
	30nm,0.8s,baz=88,slow=26,SNR=6.0							
MJAR				LR		LR	13 49 36.0	
	comp=Z,139nm,19.0s,baz=44,slow=45							
	8.4nm,0.5s							
MJAR	**Matsushiro Arr**	**3.16**	**256**			**Pn**	**13 47 58.6**	**+1.8**
MAJO	**Matsushiro**	**3.16**	**256**			**Pn**	**13 47 59.6**	**+2.8**
MJB9	**Matsu-Tunnel**	**3.16**	**256**			**Pn**	**13 47 59.6**	**+2.7**
JTM	**Tenmabayashi**	**3.49**	**348**			**Pn**	**13 48 03.4**	**+1.9**
JGF	**Kuroka**	**4.14**	**246**			**Pn**	**13 48 13.7**	**+3.2**
INU	**Inuyama**	**4.51**	**245**			**Pn**	**13 48 18.7**	**+3.3**
JHJ2	**Mitsune**	**4.61**	**204**	Pn		**Pn**	**13 48 17.3**	**+0.5**
JHJ	**Hachijo jima 2**	**4.61**	**204**	P		**Pn**	**13 48 17.2**	**+0.3**
	34nm,0.3s,baz=144,slow=23,SNR=11							
JHJ				S		**Sn**	**13 49 07.8**	**-1.7**
	56nm,0.3s,baz=229,slow=20,SNR=1.7							
	72nm,0.3s							
ERM	**Erimo**	**4.73**	**10**	Pn		**Pn**	**13 48 20.6**	**+2.2**
JHS	**Saijyo**	**7.57**	**254**	Pn		**Pn**	**13 49 00.1**	**+2.5**
JCJ	**Chichijima**	**10.24**	**179**	P		**Pn**	**13 49 32.1**	**-2.0**
	38nm,0.5s,baz=308,slow=17,SNR=1.9							
JCJ				S		Sn	13 51 18.0	-10
	30nm,0.4s,baz=315,slow=20,SNR=1.4							
JCJ				LR		LR	13 55 19.6	
	comp=Z,15nm,20.1s,baz=282,slow=48							
JCJ	**Chichijima**	**10.24**	**179**	Pn		**Pn**	**13 49 32.9**	**-1.2**
KSRS	**Korea Array**	**11.21**	**275**	P		**Pn**	**13 49 51.5**	**+4.1**
	0.1nm,0.3s,baz=91,slow=13,SNR=8.2							
KSRS				LR		LR	13 53 48.3	
	comp=Z,26nm,18.8s,baz=115,slow=35							
	1.4nm,0.7s							
KLR	**Kul'dur**	**14.00**	**331**	P		**P**	**13 50 33.0**	**0.0**
	1.1nm,0.7s,baz=135,slow=9.7,SNR=4.9							
KLR				LR		LR	13 55 17.5	
	comp=Z,40nm,20.6s,baz=152,slow=34							
H11N2	**WAKE ISLAND Hy**	**27.91**	**122**	T		T	14 22 16.3	
	baz=315,slow=75,SNR=54							
H11N1	**WAKE ISLAND Hy**	**27.92**	**122**	T		T	14 22 19.2	
	baz=315,slow=75,SNR=49							
H11N3	**WAKE ISLAND Hy**	**27.93**	**122**	T		T	14 22 14.1	
	baz=315,slow=75,SNR=52							
SONM	**Songino Array**	**28.00**	**303**	P		**P**	**13 52 58.3**	**+0.8**
	0.5nm,0.4s,baz=98,slow=10,SNR=3.9							
	0.5nm,0.4s							
H11S1	**WAKE ISLAND Hy**	**28.64**	**124**	T		T	14 23 12.8	
	baz=316,slow=76,SNR=48							
H11S3	**WAKE ISLAND Hy**	**28.64**	**124**	T		T	14 23 18.0	
	baz=316,slow=76,SNR=56							
H11S2	**WAKE ISLAND Hy**	**28.66**	**124**	T		T	14 23 19.2	
	baz=316,slow=76,SNR=56							
ZALV	**Zalesovo Beam**	**42.05**	**312**	P		**P**	**13 54 58.5**	**+0.6**
	1.4nm,0.6s,baz=87,slow=7.6,SNR=6.0							
ZALV				ScP		**ScP**	**14 00 39.4**	**-1.4**
	0.6nm,0.2s,baz=206,slow=9.9,SNR=4.7							
	1.4nm,0.6s							
MK31	**Makanchi Array**	**44.35**	**302**	P		**P**	**13 55 16.5**	**-0.2**
MK31				IAmb		IAmb	13 55 21.6	
	comp=Z,2.2nm,0.9s							
MKAR	**Makanchi Array**	**44.35**	**302**	P		**P**	**13 55 17.0**	**+0.4**
	comp=Z,1.6nm,0.8s,baz=82,slow=9.1,SNR=9.2							
	comp=Z,1.6nm,0.8s							
MKAR	**Makanchi Array**	**44.35**	**302**	P		**P**	**13 55 16.9**	**+0.3**
KURK	**Kurchatov**	**46.10**	**308**	P		**P**	**13 55 30.8**	**+0.3**
KURK				IAmb		IAmb	13 55 37.0	
	comp=Z,5.2nm,0.7s							
KURBB	**Kurchatov Arra**	**46.18**	**308**	P		**P**	**13 55 31.2**	**+0.2**
	comp=Z,2.6nm,0.4s,baz=82,slow=8.0,SNR=19							
	comp=Z,2.6nm,0.4s							
ILAR	**Eielson Array**	**48.96**	**33**	P		**P**	**13 55 53.8**	**+1.3**
	comp=Z,0.2nm,0.7s,baz=272,slow=6.2,SNR=2.9							
	comp=Z,0.2nm,0.7s							
BVAR	**Borovoye Array**	**50.70**	**312**	LR		LR	14 20 55.0	
	comp=Z,26nm,19.7s,baz=289,slow=40							
WB0	**Warramunga Arr**	**57.28**	**189**	P		**P**	**13 56 54.1**	**0.0**
WRA	**Warramunga Arr**	**57.46**	**189**	P		**P**	**13 56 55.5**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=6.0,slow=7.5,SNR=8.5							
	comp=Z,0.4nm,0.5s							
ABKAR	**Akbulak array**	**58.09**	**310**	P		**P**	**13 56 58.9**	**-0.7**
ABKAR	**Akbulak array**	**58.09**	**310**	P		**P**	**13 56 59.4**	**-0.3**
ABKAR				IAmb		IAmb	13 57 00.2	
	comp=Z,1.2nm,1.0s							
FINES	**FINESS Array B**	**68.74**	**332**	P		**P**	**13 58 09.3**	**-0.5**
PDAR	**Pinedale Array**	**77.09**	**46**	P		**P**	**13 58 59.1**	**-0.9**
	comp=Z,0.4nm,0.5s,baz=308,slow=4.4,SNR=1.9							
	comp=Z,0.4nm,0.5s							
ATD	**Arta Tunnel**	**90.25**	**285**	LR		LR	14 43 46.9	
	comp=Z,42nm,18.8s,baz=54,slow=38							

MAN 17 13:51:09.4,7.05N×124.35E,h19km,mb3.8,ML2.5,MS2.0, Mindanao

*IDC **17** 14:02:15.2±1.2,4.86S×139.84E,h0km,mb4.0/4, mbtmp3.9/5,ML3.9/1,MS3.4/11,Error ellipse: s-maj=59.8km s-min=34.4km az=71.0*
*DJA **17** 14:02:17.0±0.4,5.3S×14.0E±.1°,h10km,M4.8/10, mb4.7/10,mB5.0/1,ML4.8/7,Mw(mB)4.3/1*
*NEIC **17** 14:02:21.7±2.6,4.81S±0.09×139.76E±0.10,h43km±6km, mb4.4/21,Error ellipse: s-maj=16.7km s-min=8.7km az=48.0*

ISC 17 14:02:20.3±0.6,4.90S±0.06×139.76E±0.07,h35km,n74, σ1§66/66,mb4.4/11,MS3.6/6,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**2.33**	**10**	P	**Pn**	**14 02 53.3**	**-2.9**
GENI	**Genyem**	**2.33**	**10**	P	**Pn**	**14 02 54.5**	**-1.7**
SMPI	**Sarmi**	**3.08**	**340**	P	**Pn**	**14 03 05.5**	**-0.9**
SRPI	**Serui, Papua**	**4.63**	**310**	P	**Pn**	**14 03 29.0**	**+1.2**
BAKI	**Biak**	**5.19**	**315**	P	**Pn**	**14 03 35.1**	**-0.4**
	0.7nm1μm89nm,0.6s						
FAKI	**Fak Fak**	**7.75**	**284**		**Pn**	**14 04 10.5**	**-0.3**
FAKI	**Fak Fak**	**7.75**	**284**	P	**Pn**	**14 04 11.0**	**+0.3**
	0.2nm30nm,0.6s						
FAKI	**Fak Fak**	**7.75**	**284**	P	**Pn**	**14 04 10.4**	**-0.3**
PMG	**Port Moresby**	**8.60**	**122**	Pn	**Pn**	**14 04 23.0**	**+0.7**
	1.4nm,0.3s,baz=290,slow=13,SNR=2.3						
PMG				LR	LR	14 08 41.1	
	comp=Z,326nm,18.1s,baz=104,slow=45						
PMG	**Port Moresby**	**8.60**	**122**	Pn	**Pn**	**14 04 23.3**	**+1.0**
PMG	**Port Moresby**	**8.60**	**122**	P	**Pn**	**14 04 23.0**	**+0.7**
PMG	**Port Moresby**	**8.60**	**122**	P	**Pn**	**14 04 23.1**	**+0.8**
SWI	**Sorong**	**9.39**	**295**	P	**Pn**	**14 04 33.2**	**0.0**
	42nm,0.7s						
COEN	**Coen**	**9.61**	**160**	Pn	**Pn**	**14 04 38.3**	**+2.1**
COEN	**Coen**	**9.61**	**160**	P	**Pn**	**14 04 38.2**	**+2.1**
KDU	**Kakadu**	**10.57**	**222**	P	**Pn**	**14 04 49.0**	**-0.3**
MTN	**Manton Dam**	**11.61**	**227**		**Pn**	**14 05 03.1**	**-0.5**
MTN	**Manton Dam**	**11.61**	**227**	P	**Pn**	**14 05 03.4**	**-0.3**
MTSU	**Mount Surprise**	**13.88**	**162**	P	**Pn**	**14 05 35.9**	**+1.2**
KNRA	**Kununurra**	**15.21**	**224**		**Pn**	**14 05 50.1**	**-2.5**
KNRA	**Kununurra**	**15.21**	**224**	P	**Pn**	**14 05 50.4**	**-2.2**
QIS	**Mount Isa**	**15.56**	**181**	P	**Pn**	**14 05 56.5**	**-0.7**
WB0	**Warramunga Arr**	**15.67**	**199**		**Pn**	**14 05 57.5**	**-1.1**
WR0	**Warramunga Arr**	**15.81**	**198**		**Pn**	**14 05 58.6**	**-1.8**
WRAB	**Tennant Creek**	**15.84**	**199**		**Pn**	**14 05 58.9**	**-1.9**
WRAB				IAmb	IAmb	14 06 11.3	
	comp=Z,23nm,0.8s						
WRAB	**Tennant Creek**	**15.84**	**199**	P	**Pn**	**14 05 59.1**	**-1.7**
WB2	**Warramunga Arr**	**15.85**	**199**		**Pn**	**14 05 59.5**	**-1.5**
WB2				IAmb	IAmb	14 06 09.2	
	comp=Z,20nm,0.7s						
WRA	**Warramunga Arr**	**15.86**	**199**	Pn	**Pn**	**14 05 58.7**	**-2.3**
	comp=Z,0.5nm,0.3s,baz=20,slow=13,SNR=25						
WRA				Sn	**Sn**	**14 08 48.4**	**-7.4**
	comp=Z,0.6nm,0.3s,baz=14,slow=22,SNR=3.0						
	comp=Z,0.9nm,0.4s						
WRA	**Warramunga Arr**	**15.86**	**199**		**Pn**	**14 05 58.4**	**-2.5**
SOEI	**Soe**	**16.10**	**252**		**Pn**	**14 06 02.0**	**-2.3**
SOEI	**Soe**	**16.10**	**252**	P	**P**	**14 06 07.7**	**+0.4**
	comp=Z,137nm,0.8s						
SOEI	**Soe**	**16.10**	**252**	P	**Pn**	**14 06 03.4**	**-0.9**
CTA	**Charters Tower**	**16.36**	**158**	Pn	**P**	**14 06 09.9**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=323,slow=12,SNR=5.7						
CTA				LR	LR	14 13 28.7	
	comp=Z,116nm,19.0s,baz=327,slow=41						
CTAO	**Charters Tower**	**16.36**	**158**	P	**P**	**14 06 11.3**	**+1.3**
CTAO				IAmb	IAmb	14 06 16.8	
	comp=Z,36nm,1.5s						
EDFI	**Ende, Flores**	**18.34**	**257**	P	**Pn**	**14 06 34.8**	**+2.6**
DAV	**Davao City (W)**	**18.49**	**310**	LR	LR	14 14 53.6	
	comp=Z,57nm,18.1s,baz=150,slow=41						
GUMO	**Guam**	**19.06**	**15**	LR	LR	14 13 48.4	
	comp=Z,34nm,18.1s,baz=204,slow=36						
AS31	**Alice Springs**	**19.49**	**196**		**Pn**	**14 06 48.5**	**+2.5**
ASAR	**Alice Springs**	**19.49**	**196**		**Pn**	**14 06 46.8**	**+0.9**
TOLI2	**Tolitoli**	**19.88**	**287**		**P**	**14 06 48.7**	**-0.1**
TOLI2				IAmb	IAmb	14 06 58.0	
	comp=Z,11nm,0.7s						
TOLI2	**Tolitoli**	**19.88**	**287**	P	**P**	**14 06 47.8**	**-1.0**
KAPI	**Kappang**	**19.93**	**269**	LR	LR	14 15 53.7	
	comp=Z,170nm,19.3s,baz=88,slow=41						
WRKA	**Warakurna**	**22.85**	**208**	P	**P**	**14 07 20.8**	**+0.1**
OOD	**Oodnadatta**	**23.09**	**189**	P	**P**	**14 07 25.0**	**+1.9**
MBWA	**Marble Bar**	**25.28**	**228**	P	**P**	**14 07 45.4**	**+1.8**
MBWA				IAmb	IAmb	14 07 54.3	
	comp=Z,17nm,1.1s						
PSA00	**Pilbara Seismi**	**25.45**	**228**	P	**P**	**14 07 44.9**	**-0.2**
STKA	**Stephens Creek**	**26.89**	**177**	LR	LR	14 20 03.1	
	comp=Z,216nm,21.0s,baz=15,slow=40						
BBOO	**Buckleboo**	**27.98**	**187**	P	**P**	**14 08 06.6**	**-1.2**
FORT	**Forrest**	**28.00**	**202**	P	**P**	**14 08 07.6**	**-0.4**
MORW	**Morawa**	**32.90**	**220**	P	**P**	**14 08 52.7**	**+1.4**
MJAR	**Matsushiro Arr**	**41.25**	**358**	LR	LR	14 23 57.4	
	comp=Z,21nm,20.6s,baz=161,slow=32						
KSRS	**Korea Array**	**43.56**	**346**	LR	LR	14 27 48.2	
	comp=Z,21nm,19.8s,baz=215,slow=35						
SONM	**Songino Array**	**60.14**	**335**	P	**P**	**14 12 25.5**	**+1.0**
	comp=Z,0.8nm,0.7s,baz=163,slow=10,SNR=2.7						
SONM				LR	LR	14 38 51.5	
	comp=Z,38nm,19.8s,baz=118,slow=36						
	comp=Z,0.8nm,0.7s						
MK31	**Makanchi Array**	**72.16**	**323**	P	**P**	**14 13 40.4**	**-1.2**
MK31				IAmb	IAmb	14 13 45.8	
	comp=Z,3.6nm,1.2s						
MKAR	**Makanchi Array**	**72.16**	**323**	P	**P**	**14 13 42.1**	**+0.6**
	comp=Z,2.6nm,0.8s,baz=110,slow=7.6,SNR=12						
	comp=Z,2.6nm,0.8s						
MKAR	**Makanchi Array**	**72.16**	**323**	P	**P**	**14 13 41.0**	**-0.5**
MAKZ	**Makanchi**	**72.35**	**322**	P	**P**	**14 13 42.6**	**-0.1**
MAKZ				IAmb	IAmb	14 13 51.7	
	comp=Z,5.1nm,0.9s						
ZALV	**Zalesovo Beam**	**74.35**	**330**	P	**P**	**14 13 55.0**	**+0.8**
	comp=Z,0.9nm,0.5s,baz=122,slow=5.4,SNR=5.0						
	comp=Z,0.9nm,0.5s						
ZALV	**Zalesovo Beam**	**74.35**	**330**	P	**P**	**14 13 53.3**	**-1.0**
KURK	**Kurchatov**	**76.10**	**325**	P	**P**	**14 14 04.7**	**+0.3**
KURK				IAmb	IAmb	14 14 11.4	
	comp=Z,4.4nm,1.0s						
BRVK	**Borovoye**	**81.77**	**325**	P	**P**	**14 14 36.6**	**+1.2**
BRVK				IAmb	IAmb	14 14 40.2	
	comp=Z,4.1nm,0.8s						
WSAR	**Wadi Sarin**	**83.80**	**294**	LR	LR	14 52 18.9	
	comp=Z,30nm,22.0s,baz=240,slow=36						
QSPA	**South Pole Qui**	**85.06**	**180**	P	**P**	**14 14 51.5**	**-0.8**
QSPA				IAmb	IAmb	14 14 57.1	
	comp=Z,5.5nm,1.3s						
IMAR	**Indian Mountai**	**85.11**	**22**	P	**P**	**14 14 50.6**	**-1.7**
GEYT	**Alibeck**	**86.42**	**308**	LR	LR	14 59 05.2	
	comp=Z,52nm,18.2s,baz=218,slow=39						
ABKAR	**Akbulak array**	**87.06**	**320**		**P**	**14 15 03.9**	**+1.6**
ILAR	**Eielson Array**	**87.38**	**24**	P	**P**	**14 15 01.8**	**-1.8**
	comp=Z,0.5nm,0.9s,baz=253,slow=5.9,SNR=4.7						
	comp=Z,0.5nm,0.9s						
ILAR	**Eielson Array**	**87.38**	**24**	P	**P**	**14 15 02.7**	**-0.9**
TOLK	**Toolik Lake Re**	**87.60**	**20**	P	**P**	**14 15 03.3**	**-1.3**
TOLK				IAmb	IAmb	14 15 15.6	
	comp=Z,5.0nm,1.2s						
BMAR	**Burnt Mountain**	**89.03**	**22**	P	**P**	**14 15 11.8**	**+0.4**
DBIC	**Dimbokro**	**144.76**	**275**	PKP	PKPbc	14 21 53.6	0.0
	comp=Z,5.0nm,0.7s,baz=154,slow=2.6,SNR=4.4						
DBIC	**Dimbokro**	**144.76**	**275**		**PKPdf**	**14 21 53.9**	**-0.7**
LPAZ	**La Paz**	**145.29**	**128**	PKPbc	**PKPdf**	**14 21 57.3**	**+1.0**
	comp=Z,4.9nm,0.9s,baz=180,slow=1.6,SNR=12						
LPAZ	**La Paz**	**145.29**	**128**		**PKPbc**	**14 21 54.1**	**-1.8**

*NNC **17** 14:07:11.0±3.0,41.70N×72.38E,h3km±22km,mb3.1, mpv2.8,Error ellipse: s-maj=32.7km s-min=13.0km az=165.0*
*SOME **17** 14:07:11.5,41.87N×72.35E,h5km*
*KRNET **17** 14:07:11.5±0.1,41.86N×72.40E,h17km,mb2.5*

ISC 17 14:07:11.7±1.1,41.73N±0.03×72.35E±0.02,h11km±10km, n29,σ1§31/51,32C-1D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARK	**Arkit**	**0.30**	**284**	⇑*i*P	**Pb**	**14 07 18.6**	**-0.5**
	baz=59						
ARK				⇑*i*S	**Sg**	**14 07 23.1**	**+1.1**
	baz=59						
TRKS	**Terek-Say**	**0.93**	**258**	⇑*i*P	**Pn**	**14 07 30.2**	**-0.6**
	baz=47						
TRKS				⇑*i*S	**Sn**	**14 07 43.6**	**-0.6**
	baz=47						
MRKS	**Merke**	**1.21**	**32**	*e*P	**Pg**	**14 07 34.6**	**-0.3**
	2.2nm,0.3s						
MRKS				*e*S	**Sn**	**14 07 51.5**	**+0.6**
	42nm,0.3s						
MRKS	**Merke**	**1.21**	**32**	P	**Pg**	**14 07 36.8**	**+1.9**
	2.4nm,0.1s						
MRKS				S	**Sn**	**14 07 51.5**	**+0.6**
	42nm,0.3s						
OHH	**Osh**	**1.24**	**165**	⇑*i*P	**Pg**	**14 07 36.7**	**+1.1**
	baz=68						
OHH				⇑*i*S	**Sn**	**14 07 55.1**	**+3.3**
	baz=68						
EKS2	**Erkin-Say**	**1.41**	**48**	⇑*i*P	**Pn**	**14 07 35.5**	**-1.9**
	baz=52						
EKS2				⇑*i*S	**Sn**	**14 07 53.2**	**-2.8**
	baz=52						
ARLS	**Aral**	**1.48**	**84**	⇑*i*P	**Pn**	**14 07 38.0**	**-0.3**
	baz=90						
ARLS				⇑*i*S	**Sb**	**14 07 57.5**	**-0.6**
	baz=90						
UCH	**Uchtor**	**1.69**	**72**	⇑*i*P	**Pn**	**14 07 41.4**	**-0.1**
	baz=76						
UCH				⇑*i*S	**Sb**	**14 08 03.3**	**-1.0**
	baz=76						
AAK	**Ala-Archa**	**1.83**	**59**	⇑*e*P	**Pn**	**14 07 43.2**	**0.0**
	baz=63						
AAK				⇑*i*S	**Sn**	**14 08 06.6**	**+0.1**
	baz=63						
KK31	**Karatay Array**	**1.94**	**316**	⇑Pn	**Pn**	**14 07 45.8**	**+1.2**
	2.3nm,0.2s,baz=135,slow=16,SNR=32						
KK31				⇑Sn	**Sb**	**14 08 11.0**	**-0.1**
	5.2nm,0.3s,baz=134,slow=29,SNR=12						
KKAR	**Karatay Array**	**1.94**	**316**	⇑*i*P	**Pn**	**14 07 45.6**	**+1.1**
	baz=12						
KKAR				⇑*i*S	**Sb**	**14 08 10.5**	**-0.7**
	baz=12						
BTK	**Batken**	**2.03**	**215**	⇑*i*P	**Pg**	**14 07 49.9**	**-0.7**
	baz=14						
BTK				⇑*i*S	**Sg**	**14 08 17.7**	**+0.7**
	baz=14						
KBK	**Karagaybulak**	**2.14**	**63**	⇑*e*P	**Pn**	**14 07 48.4**	**+0.9**
	baz=66						
KBK				⇑*i*S	**Sb**	**14 08 15.4**	**-1.7**
	baz=66						
CHMS	**Chumysh**	**2.19**	**54**	⇑*i*P	**Pn**	**14 07 48.5**	**+0.6**
	baz=56						
CHMS				⇑*i*S	**Sn**	**14 08 15.6**	**+0.6**
	baz=56						
CHMS	**Chumysh**	**2.19**	**54**	⇑Lg	Lg	14 08 18.7	
	17nm,0.6s						
USP	**Ospenovka**	**2.21**	**45**	⇑*i*P	**Pn**	**14 07 48.7**	**+0.4**
	baz=47						
USP				⇑*i*S	**Sn**	**14 08 16.0**	**+0.3**
	baz=47						
BRLS	**Borolday**	**2.28**	**306**	*e*P	**Pb**	**14 07 51.8**	**-1.0**
	4.0nm,0.5s						
BRLS				*e*S	**Sb**	**14 08 20.5**	**-0.4**
	17nm,0.3s						
BRLS	**Borolday**	**2.28**	**306**	Pg	**Pb**	**14 07 53.3**	**+0.6**
	4.0nm,0.5s						
BRLS				Lg	Lg	14 08 20.5	
	17nm,0.3s						
DRK	**Karamyk**	**2.28**	**191**	⇑*i*P	**Pg**	**14 07 53.5**	**-1.9**
	baz=91						
DRK				⇑*i*S	**Sg**	**14 08 24.3**	**-0.7**
	baz=91						
SGDS	**Sogindy**	**2.41**	**43**	*e*P	**Pb**	**14 07 53.7**	**-1.4**
	1.3nm,0.4s						
SGDS				*e*S	**Sb**	**14 08 23.8**	**-0.9**
	14nm,0.4s						
TKM2	**Tokmak 2**	**2.69**	**63**	⇓Pg	**Pb**	**14 07 59.7**	**-0.1**
	3.5nm,0.6s						
TKM2				⇑Lg	Lg	14 08 33.8	
	4.6nm,0.6s						
ULHL	**Ulahol**	**2.94**	**79**	⇑*i*P	**Pn**	**14 08 00.1**	**+1.6**
	baz=81						
ULHL				⇑*i*S	**Sn**	**14 08 35.5**	**+1.5**
	baz=81						
DGS	**Degeres**	**2.95**	**58**	*e*P	**Pb**	**14 08 03.9**	**-0.3**
	0.9nm,0.2s						
DGS				*e*S	**Sb**	**14 08 41.7**	**+1.4**
	6.1nm,0.5s						
DGS	**Degeres**	**2.95**	**58**	Pg	**Pb**	**14 08 03.9**	**-0.3**
	0.9nm,0.2s						
DGS				Lg	Lg	14 08 38.3	
	6.1nm,0.5s						
KST	**Kastek**	**2.98**	**63**	*e*P	**Pb**	**14 08 04.4**	**-0.4**
	1.1nm,0.3s						
KST				*e*S	**Sb**	**14 08 42.6**	**+1.3**
	8.6nm,0.5s						
KST	**Kastek**	**2.98**	**63**	Pg	**Pg**	**14 08 06.7**	**-2.0**
	1.1nm,0.3s						
KST				Lg	Lg	14 08 42.6	
	8.6nm,0.5s						
KUU	**Kurty**	**3.65**	**52**	*e*P	**Pb**	**14 08 16.0**	**0.0**
	0.5nm,0.2s						
KUU				*e*S	**Sb**	**14 09 02.2**	**+1.9**
	4.5nm,0.5s						
KTBS	**Karatobe**	**3.76**	**57**	*e*P	**Pb**	**14 08 17.8**	**-0.2**
	0.8nm,0.6s						
KTBS				*e*S	**Sb**	**14 09 05.8**	**+2.3**
	7.9nm,0.4s						
KTBS	**Karatobe**	**3.76**	**57**	Pg	**Pb**	**14 08 14.9**	**-3.1**
	0.3nm,0.5s						
KTBS				Lg	Lg	14 08 57.3	
	7.9nm,0.4s						

*IDC **17** 14:32:53.4±1.8,20.17S×168.68E,h0km,mb4.0/5, mbtmp4.0/6,ML3.7/1,Error ellipse: s-maj=70.0km s-min=24.7km az=136.0*
*NEIC **17** 14:32:53.2±2.0,20.45S±0.09×169.0E±0.1,h10km±2km, mb4.4/15,Error ellipse: s-maj=19.3km s-min=15.7km az=99.0*
*NOU **17** 14:32:55.2,20.38S×168.82E,h20km,MLv4.5/9,Loyalty Islands*

ISC 17 14:32:53.7±0.7,20.44S±0.06×168.84E±0.09,h10km,n35, σ1§08/36,mb4.3/14,Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**1.28**	**216**		**Pn**	**14 33 17.3**	**-0.4**
MARNC	**Mare, Loyalty**	**1.28**	**216**	P	**Pn**	**14 33 17.4**	**-0.2**
PINNC	**Pines Island,**	**2.52**	**211**		**Pn**	**14 33 35.2**	**+0.5**
PINNC	**Pines Island,**	**2.52**	**211**	P	**Pn**	**14 33 35.8**	**+1.1**
DZM	**Mont Dzumac**	**2.76**	**234**	Pn	**Pn**	**14 33 38.4**	**+0.3**
	12nm,0.3s,baz=59,slow=16,SNR=79						
DZM				Sn	**Sn**	**14 34 09.2**	**-2.3**
	32nm,0.3s,baz=295,slow=23,SNR=8.8						
	68nm,0.6s						
DVP	**Devils Point**	**2.77**	**347**	P	**Pn**	**14 33 37.5**	**-0.6**
NOUC	**Port Laguerre**	**2.88**	**235**	P	**Pn**	**14 33 40.8**	**+1.1**
KOUNC	**Koumac, New Ca**	**4.27**	**268**		**Pn**	**14 33 59.3**	**+0.6**
KOUNC	**Koumac, New Ca**	**4.27**	**268**	P	**Pn**	**14 33 59.1**	**+0.4**
ARMA	**Armidale**	**18.43**	**234**	P	**P**	**14 37 08.1**	**-1.3**
CTAO	**Charters Tower**	**21.19**	**267**		**P**	**14 37 40.8**	**+1.3**
CTAO				IAmb	IAmb	14 37 47.6	
	comp=Z,13nm,1.1s						
FOZ	**Fox Glacier**	**23

s-maj=35.9km s-min=18.8km az=136.0
*BJI **17** 14:39:32.0±0.0,20.50S×168.60E,h10km,mb4.5/23, mB5.1/20,Ms4.8/11,Ms7 4.5/12*
*NOU **17** 14:39:32.7,20.32S×168.72E,h0km,mb4.8/30,Loyalty Islands*
*NEIC **17** 14:39:33.8±2.1,20.56S±0.06×168.69E±0.07,h10km±1km, mb4.9/44,Error ellipse: s-maj=13.4km s-min=7.8km az=127.0*
*GCMT **17** 14:39:37.8±0.2,20.33S±0.02×168.60E±0.01,h23km, MW5.2/104,Moment Tensor Solution. s84,c103; s104,c163; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr0.57±.02; Mθθ0.07±.02; Mφφ-0.63±.02; Mrθ0.14±.03; Mθφ0.29±.01; Mφr-0.47±.03; Best double couple: M0.82000×10^17 NP1:φs338.00000°,δ27.00000°, λ86.00000°. NP2:φs162.00000°,δ63.00000°,λ92.00000°. Principal axes: T 0.7360, Plg71.0000°, Azm77.0000°; N 0.1680, Plg2.0000°, Azm341.0000°; P -0.9040, Plg18.0000°, Azm251.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 14:39:33.1±0.4,20.45S±0.05×168.71E±0.06,h10km,n178, σ1s76/140,mb4.9/41,MS4.5/57,3D,Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**1.21**	**212**	Pn	**Pn**	**14 39 54.0**	**-2.1**
MARNC				Sg	**Sb**	**14 40 09.9**	**-1.9**
MARNC	**Mare, Loyalty**	**1.21**	**212**	P	**Pn**	**14 39 54.6**	**-1.5**
PINNC	**Pines Island,**	**2.46**	**208**		**Pn**	**14 40 12.5**	**-0.8**
PINNC	**Pines Island,**	**2.46**	**208**	P	**Pn**	**14 40 13.9**	**+0.6**
DZM	**Mont Dzumac**	**2.66**	**232**	*e*Pn	**Pn**	**14 40 15.5**	**-0.7**
	4μm,1.3s						
DZM	**Mont Dzumac**	**2.66**	**232**	Pn	**Pn**	**14 40 15.3**	**-0.9**
	46nm,0.3s,baz=62,slow=19,SNR=105						
DZM				Sn	**Sn**	**14 40 46.0**	**-2.6**
	119nm,0.3s,baz=344,slow=20,SNR=7.6 299nm,0.6s						
DVP	**Devils Point**	**2.75**	**350**	P	**Pn**	**14 40 15.2**	**-2.1**
NOUC	**Port Laguerre**	**2.79**	**233**	P	**Pn**	**14 40 18.3**	**+0.5**
KOUNC	**Koumac, New Ca**	**4.15**	**268**	Pn	**Pn**	**14 40 36.2**	**-0.4**
KOUNC	**Koumac, New Ca**	**4.15**	**268**	P	**Pn**	**14 40 36.5**	**-0.1**
MSVF	**Nonsavu**	**9.23**	**75**	Pn	**Pn**	**14 41 49.3**	**+2.8**
	1.7nm,0.3s,baz=263,slow=15,SNR=15						
MSVF				LR	LR	14 44 38.4	
	comp=Z,11μm,18.3s,baz=223,slow=34						
MSVF	**Nonsavu**	**9.23**	**75**	Pn	Pn	14 41 50.0	+3.6
OUZ	**Omahuta**	**15.34**	**165**		**P**	**14 43 15.2**	**+0.8**
EIDS	**Eidsvold**	**16.96**	**250**	Pn	**Pn**	**14 43 28.8**	**-1.9**
ARMA	**Armidale**	**18.33**	**234**	P	**P**	**14 43 48.3**	**+0.6**
ARMA	**Armidale**	**18.33**	**234**	P	**P**	**14 43 50.6**	**+2.9**
URZ	**Urewera**	**19.18**	**160**	P	**Pn**	**14 43 59.1**	**+1.3**
	27nm,1.0s,baz=16,slow=8.4,SNR=8.4						
URZ				LR	LR	14 50 42.6	
	comp=Z,2μm,18.6s,baz=32,slow=35						
URZ	**Urewera**	**19.18**	**160**		**Pn**	**14 43 59.3**	**+1.4**
URZ	**Urewera**	**19.18**	**160**	P	**Pn**	**14 44 00.2**	**+2.4**
RMQ	**Roma**	**19.26**	**248**	P	**Pn**	**14 44 01.2**	**+2.3**
AFI	**Afiamalu**	**19.73**	**74**	LR	LR	14 50 03.1	
	comp=Z,2μm,19.4s,baz=245,slow=32						
BKZ	**Black Stump Fm**	**19.82**	**162**	P	**Pn**	**14 44 06.4**	**+0.9**
BKZ	**Black Stump Fm**	**19.82**	**162**	P	**Pn**	**14 44 06.5**	**+0.9**
CTA	**Charters Tower**	**21.07**	**267**	P	**P**	**14 44 19.5**	**+1.8**
	23nm,1.0s,baz=97,slow=12,SNR=12						
CTA				LR	LR	14 51 59.2	
	comp=Z,1μm,20.2s,baz=86,slow=35 23nm,1.0s						
CTA	**Charters Tower**	**21.07**	**267**	P	**P**	**14 44 22.2**	**+4.5**
CTAO	**Charters Tower**	**21.07**	**267**		**P**	**14 44 19.7**	**+2.0**
CTAO				IAmb	IAmb	14 44 39.3	
	comp=Z,48nm,1.1s						
CTAO	**Charters Tower**	**21.07**	**267**	P	**P**	**14 44 20.9**	**+3.2**
BFZ	**Birch Farm**	**21.17**	**164**	P	**P**	**14 44 18.3**	**-0.3**
CNB	**Canberra Magne**	**22.57**	**225**	P	**P**	**14 44 37.6**	**+3.9**
CAN	**Canberra**	**22.81**	**225**	P	**P**	**14 44 34.9**	**-1.4**
CAN				IAmb	IAmb	14 44 44.9	
	comp=Z,52nm,1.3s						
MTSU	**Mount Surprise**	**23.14**	**272**	P	**P**	**14 44 41.2**	**+1.5**
RPZ	**Rata Peaks**	**23.29**	**176**	LR	LR	14 53 18.8	
	comp=Z,1μm,18.1s,baz=346,slow=35						
CMSA	**Cobar Meteorol**	**23.41**	**237**	P	**P**	**14 44 43.3**	**+1.0**
COEN	**Coen**	**25.21**	**281**	P	**P**	**14 45 00.7**	**+1.4**
COEN				IAmb	IAmb	14 45 05.9	
	comp=Z,36nm,1.3s						
COEN	**Coen**	**25.21**	**281**	P	**P**	**14 44 59.7**	**+0.4**
TOO	**Toolangi**	**26.41**	**225**	P	**P**	**14 45 09.3**	**-0.7**
TOO				IAmb	IAmb	14 45 36.8	
	comp=Z,28nm,1.4s						
TOO	**Toolangi**	**26.41**	**225**	P	**P**	**14 45 14.8**	**+4.8**
STKA	**Stephens Creek**	**26.80**	**239**	P	**P**	**14 45 14.4**	**+1.0**
	comp=Z,8.2nm,0.7s,baz=71,slow=9.4,SNR=10						
STKA				LR	LR	14 55 55.6	
	comp=Z,1μm,18.4s,baz=78,slow=36 comp=Z,8.2nm,0.7s						
STKA	**Stephens Creek**	**26.80**	**239**	P	**P**	**14 45 13.1**	**-0.4**
STKA	**Stephens Creek**	**26.80**	**239**	P	**P**	**14 45 14.2**	**+0.7**
LCRK	**Leigh Creek**	**29.20**	**244**	P	**P**	**14 45 36.0**	**+1.0**
	comp=Z,26nm,1.7s						
HTT	**Hallett**	**29.43**	**238**	P	**P**	**14 45 38.1**	**+1.1**
RAR	**Rarotonga**	**29.44**	**97**	LR	LR	14 55 04.1	
	comp=Z,353nm,21.1s,baz=265,slow=32						
OOD	**Oodnadatta**	**30.95**	**250**	P	**P**	**14 45 51.1**	**+0.6**
BBOO	**Buckleboo**	**31.55**	**240**	P	**P**	**14 45 56.0**	**+0.2**
WR0	**Warramunga Arr**	**32.04**	**265**	P	**P**	**14 45 59.8**	**-0.4**
WB0	**Warramunga Arr**	**32.20**	**265**	P	**P**	**14 46 00.8**	**-0.9**
WB0				IAmb	IAmb	14 46 13.0	
	comp=Z,9.1nm,0.8s						
WB2	**Warramunga Arr**	**32.22**	**265**	P	**P**	**14 46 01.1**	**-0.7**
WB2				IAmb	IAmb	14 46 18.4	
	comp=Z,14nm,1.2s						
WRAB	**Tennant Creek**	**32.22**	**265**	P	**P**	**14 46 00.4**	**-1.4**
WRA	**Warramunga Arr**	**32.23**	**265**	P	**P**	**14 46 00.4**	**-1.5**
	comp=Z,5.0nm,0.9s,baz=94,slow=8.7,SNR=37						
WRA				LR	LR	14 59 28.2	
	comp=Z,2μm,18.2s,baz=51,slow=37 comp=Z,5.0nm,0.9s						
WRA	**Warramunga Arr**	**32.23**	**265**	P	**P**	**14 46 00.0**	**-1.9**
AS31	**Alice Springs**	**32.37**	**258**	P	**P**	**14 46 02.5**	**-0.6**
ASAR	**Alice Springs**	**32.37**	**258**	P	**P**	**14 46 02.8**	**-0.4**
MULG	**Mulgathing**	**32.70**	**246**	P	**P**	**14 46 06.6**	**+0.7**
MTN	**Manton Dam**	**36.72**	**276**	P	**P**	**14 46 40.6**	**-0.2**
MTN				IAmb	IAmb	14 46 53.5	
	comp=Z,17nm,0.6s						
MTN	**Manton Dam**	**36.72**	**276**	P	**P**	**14 46 41.6**	**+0.8**
WRKA	**Warakurna**	**37.46**	**255**	P	**P**	**14 46 46.3**	**-0.7**
FORT	**Forrest**	**37.90**	**246**	P	**P**	**14 46 50.3**	**-0.3**
FORT				IAmb	IAmb	14 47 13.7	
	comp=Z,29nm,0.9s						
KNRA	**Kununurra**	**38.21**	**270**	P	**P**	**14 46 51.7**	**-1.7**
KNRA				IAmb	IAmb	14 47 05.0	
	comp=Z,16nm,0.8s						
KNRA	**Kununurra**	**38.21**	**270**	P	**P**	**14 46 52.5**	**-0.9**
TBI	**Tubuai**	**38.82**	**102**	*e*S	S	14 53 05.7	+9.3
	comp=Z,498nm,18.8s						
TBI				*e*LR	LR	14 57 39.5	
	comp=Z,736nm,25.2s						
PPT2	**Papeete2**	**39.46**	**93**	*e*LR	LR	14 57 59.0	
	comp=Z,1μm,25.0s						
PPT	**Papeete**	**39.47**	**93**	LR	LR	14 59 07.1	
	comp=Z,424nm,21.7s,baz=286,slow=30						
FAKI	**Fak Fak**	**39.58**	**291**	P	**P**	**14 47 05.0**	**+0.2**
FAKI				IAmb	IAmb	14 47 22.8	
	comp=Z,24nm,1.1s						
GUMO	**Guam**	**41.15**	**323**	LR	LR	15 03 43.2	
	comp=Z,358nm,18.9s,baz=137,slow=35						
SWI	**Sorong**	**41.45**	**293**	P	P	14 47 32.2	+12
SOEI	**Soe**	**44.08**	**277**	P	P	14 47 54.9	+13
PSA00	**Pilbara Seismi**	**45.48**	**259**	P	**P**	**14 47 52.2**	**-0.7**
PSA00				IAmb	IAmb	14 48 00.8	
	comp=Z,18nm,0.9s						
SANI	**Sanana**	**45.51**	**288**	P	P	14 48 05.5	+12
	comp=Z,32nm,1.2s						
MBWA	**Marble Bar**	**45.65**	**260**	P	**P**	**14 47 54.2**	**0.0**
NWAO	**Narrogin (SRO)**	**47.23**	**244**	P	**P**	**14 48 05.3**	**-1.2**
APSI	**Ampana**	**49.89**	**287**	P	P	14 48 37.7	+10
	comp=Z,608nmcomp=Z,86nm,0.7s						
KAPI	**Kappang**	**49.94**	**281**	LR	LR	15 12 09.8	
	comp=Z,284nm,18.9s,baz=130,slow=39						
DAV	**Davao City (W)**	**50.45**	**298**	LR	LR	15 09 02.1	
	comp=Z,108nm,21.9s,baz=112,slow=35						
GIRL	**Giralia**	**50.48**	**257**	P	**P**	**14 48 31.5**	**-0.2**
TAOE	**Nuku Hiva Isla**	**50.61**	**85**	*e*S	**S**	**14 55 52.5**	**+4.6**
	comp=Z,468nm,25.6s						
TAOE				*e*LR	LR	15 03 09.7	
	comp=Z,874nm,26.1s						
TOLI2	**Tolitoli**	**51.57**	**289**	P	**P**	**14 48 40.0**	**+0.1**
MPSI	**Mapaga**	**52.01**	**287**	P	P	14 48 50.3	+7.1
	comp=Z,13nm,1.1s						
JCJ	**Chichijima**	**53.80**	**330**	LR	LR	15 12 32.3	
	comp=Z,114nm,18.6s,baz=146,slow=37						
VNDA	**Vanda**	**57.22**	**182**	P	**P**	**14 49 20.4**	**+0.4**
	comp=Z,0.7nm,0.9s,baz=27,slow=10,SNR=1.8						
VNDA				LR	LR	15 12 08.1	
	comp=Z,182nm,18.0s,baz=24,slow=34 comp=Z,0.7nm,0.9s						
VNDA	**Vanda**	**57.22**	**182**	P	**P**	**14 49 20.4**	**+0.4**
SBA	**Scott Base**	**57.46**	**180**	P	**P**	**14 49 22.5**	**+0.7**
SBA				IAmb	IAmb	14 49 39.5	
	comp=Z,14nm,1.2s						
JHJ	**Hachijo jima 2**	**60.00**	**332**	LR	LR	15 15 30.6	
	comp=Z,143nm,18.9s,baz=46,slow=36						
KSM	**Kuching**	**61.16**	**284**	P	**P**	**14 49 48.4**	**0.0**
JOW	**Kunigami**	**61.19**	**319**	LR	LR	15 17 01.3	
	comp=Z,224nm,18.0s,baz=120,slow=37						
MJAR	**Matsushiro Arr**	**63.59**	**333**	LR	LR	15 16 34.2	
	comp=Z,97nm,20.1s,baz=136,slow=35						
JHS	**Saijyo**	**64.68**	**328**	P	**P**	**14 50 12.4**	**+1.1**
RGRI	**Rengat**	**67.80**	**278**	P	P	14 50 41.9	+10
ASAJ	**Asahikawa**	**68.56**	**340**	LR	LR	15 17 37.1	
	comp=Z,412nm,20.1s,baz=160,slow=33						
KSAR	**Wonju Array Be**	**69.23**	**326**	P	**P**	**14 50 40.3**	**0.0**
QSPA	**South Pole Qui**	**69.61**	**180**	LR	LR	15 19 41.6	
	comp=Z,352nm,18.1s,baz=38,slow=35						
QSPA	**South Pole Qui**	**69.61**	**180**	P	**P**	**14 50 42.3**	**-0.2**
QSPA				IAmb	IAmb	14 51 00.4	
	comp=Z,13nm,0.9s						
USRK	**Ussuriysk Ar.**	**72.58**	**333**	LR	LR	15 20 51.6	
	comp=Z,174nm,19.9s,baz=145,slow=34						
SHEM	**Shemya Is, Ala**	**73.02**	**3**	LR	LR	15 18 16.7	
	comp=Z,240nm,20.4s,baz=130,slow=32						
PET	**Petropavlovsk**	**73.68**	**354**	P	**P**	**14 51 07.0**	**+0.3**
PET				IAmb	IAmb	14 51 07.3	
	comp=Z,15nm,1.3s						
PEA0B	**Petropavlovsk-**	**73.86**	**353**	P	**P**	**14 51 07.3**	**-0.6**
PETK	**Petropavlovsk-**	**73.86**	**353**	P	**P**	**14 51 05.4**	**-2.5**
	comp=Z,2.2nm,0.6s,baz=157,slow=8.0,SNR=16						
PETK				LR	LR	15 20 04.0	
	comp=Z,313nm,19.9s,baz=162,slow=33 comp=Z,2.2nm,0.6s						
PETK	**Petropavlovsk-**	**73.86**	**353**	P	**P**	**14 51 07.6**	**-0.3**
RPN	**Rapa Nui**	**74.07**	**113**	LR	LR	15 15 56.2	
	comp=Z,195nm,18.9s,baz=271,slow=30						
CN2	**Changchun**	**75.23**	**329**	*e*P	**P**	**14 51 14.8**	**-1.2**
CN2				*e*S	**S**	**15 00 54.3**	**-0.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,2.1s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,100nm,15.0s						
CN2				LR	LR		
	comp=Z,200nm,15.0s						
CN2				LR	LR		
	comp=Z,100nm,22.0s						
KLR	**Kul'dur**	**76.76**	**336**	LR	LR	15 22 54.9	
	comp=Z,276nm,19.9s,baz=143,slow=34						
HNS	**HongShan**	**76.77**	**319**	*e*P	**P**	**14 51 26.1**	**+1.2**
HNS				S	**S**	**15 01 16.4**	**+4.2**
HNS				LR	LR		
	comp=Z,130nm,15.7s						
HNS				LR	LR		
	comp=Z,220nm,16.7s						
HNS				LR	LR		
	comp=Z,210nm,17.3s						
MAW	**Mawson**	**77.14**	**202**	LR	LR	15 22 32.4	
	comp=Z,237nm,19.2s,baz=106,slow=33						
BJI	**Beijing**	**77.56**	**321**	P	**P**	**14 51 33.3**	**+4.0**
BJI				S	**S**	**15 01 22.8**	**+2.1**
BJI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BJI				LR	LR		
	comp=Z,33nm,20.6s						
BJI				LR	LR		
	comp=Z,86nm,21.4s						
BJI				LR	LR		
	comp=Z,190nm,21.8s						
CMAR	**Chiang Mai Arr**	**78.55**	**295**	P	**P**	**14 51 36.4**	**+1.1**
	comp=Z,1.8nm,0.7s,baz=125,slow=4.0,SNR=8.2						
CMAR	**Chiang Mai Arr**	**78.55**	**295**	P	**P**	**14 51 35.5**	**+0.2**
PZH	**PanZhiHua**	**79.94**	**303**	P	**P**	**14 51 45.9**	**+3.0**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,100nm,7.0s						
XLT	**XiLinHaoTe**	**80.13**	**324**	*e*P	**P**	**14 51 44.6**	**+1.2**
XLT				pP	PcP	14 51 49.4	-1.3
XLT				sP	pwP	14 51 51.3	-1.2
XLT				S	**S**	**15 01 50.3**	**+2.1**
XLT				sS	SKKSac	15 02 02.5	-0.5
XLT				pmax	pmax		
	comp=Z,12nm,0.8s						
XLT				pmax	pmax		
	comp=Z,180nm,6.0s						
XLT				LR	LR		
	comp=Z,20nm,17.7s						
XLT				LR	LR		
	comp=Z,150nm,18.6s						
XLT				LR	LR		
	comp=Z,260nm,17.5s						
CD2	**Chengdu**	**80.58**	**308**	P	**P**	**14 51 48.4**	**+2.3**
CD2				S	**S**	**15 01 54.3**	**+0.9**
CD2				pmax	pmax		
	comp=Z,100nm,6.6s						
HHC	**Hu-ho-hao-te**	**80.81**	**320**	*e*P	**P**	**14 51 49.3**	**+2.1**
HHC				S	**S**	**15 02 01.1**	**+5.5**
HHC				sS	SKKSac	15 02 08.0	-0.3
HHC				pmax	pmax		
	comp=Z,33nm,1.1s						
HHC				pmax	pmax		
	comp=Z,190nm,5.1s						
HHC				LR	LR		
	comp=Z,320nm,14.9s						
HHC				LR	LR		
	comp=Z,240nm,17.9s						
HHC				LR	LR		
	comp=Z,420nm,18.5s						
BELA	**Belgrano 2**	**80.94**	**175**	P	**P**	**14 51 46.8**	**-0.5**
BELA				IAmb	IAmb	14 52 04.5	
	comp=Z,18nm,1.3s						
MA2	**Magadan**	**81.08**	**351**	LR	LR	15 22 28.8	
	comp=Z,366nm,21.6s,baz=164,slow=32						
LZH	**Lanzhou**	**83.17**	**312**	*e*P	**P**	**14 52 00.0**	**+0.2**
LZH				pP	pwP	14 52 08.1	-0.7
LZH				S	**S**	**15 02 25.3**	**+5.1**
LZH				pmax	pmax		
	comp=Z,160nm,4.9s						
LZH				LR	LR		
	comp=Z,150nm,15.7s						
LZH				LR	LR		
	comp=Z,210nm,14.6s						
LZH				LR	LR		
	comp=Z,170nm,16.3s						
SEY	**Seymchan**	**84.09**	**353**	LR	LR	15 26 48.6	
	comp=Z,331nm,19.6s,baz=170,slow=34						
KDAK	**Kodiak Island**	**84.33**	**20**	P	**P**	**14 52 02.4**	**-2.6**
	comp=Z,5.8nm,0.8s,baz=257,slow=0.8,SNR=4.3						
KDAK				LR	LR	15 28 31.3	
	comp=Z,485nm,18.0s,baz=230,slow=35 comp=Z,5.8nm,0.8s						
KDAK	**Kodiak Island**	**84.33**	**20**	P	**P**	**14 52 02.9**	**-2.1**
PMSA	**Palmer Station**	**85.95**	**160**	LR	LR	15 28 32.2	
	comp=Z,250nm,18.2s,baz=226,slow=34						
KCPM	**Cahto Peak**	**86.92**	**46**	P	**P**	**14 52 16.7**	**-1.9**
KCPM				IAmb	IAmb	14 52 19.1	
	comp=Z,8.1nm,0.8s						
M19K	**Big River Lodg**	**87.18**	**17**	P	**P**	**14 52 17.0**	**-2.1**
M19K				IAmb	IAmb	14 52 37.6	
	comp=Z,8.8nm,1.4s						
TROLL	**Troll, Antarti**	**87.30**	**184**	P	**P**	**14 52 18.7**	**-1.2**
ULN	**Ulaanbaatar**	**87.53**	**324**	P	**P**	**14 52 21.5**	**+0.1**
GTA	**Gaotai**	**87.59**	**314**	*e*P	**P**	**14 52 22.3**	**+0.5**
GTA				pP	pwP	14 52 29.9	-0.9
GTA				sP	sP	14 52 32.8	+9.0
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,55nm,7.3s						
GTA				LR	LR		
	comp=Z,110nm,17.4s						
GTA				LR	LR		
	comp=Z,120nm,18.2s						
GTA				LR	LR		
	comp=Z,160nm,17.4s						
YAK	**Yakutsk**	**87.87**	**343**	LR	LR	15 31 57.6	
	comp=Z,247nm,18.4s,baz=89,slow=36						
YAK	**Yakutsk**	**87.87**	**343**	P	**P**	**14 52 20.9**	**-1.5**
SONM	**Songino Array**	**87.89**	**323**	P	**P**	**14 52 22.5**	**-0.5**
	comp=Z,2.4nm,0.8s,baz=148,slow=4.4,SNR=11						
SONM				LR	LR	15 32 51.5	
	comp=Z,131nm,18.6s,baz=121,slow=36 comp=Z,2.4nm,0.8s						
SONM	**Songino Array**	**87.89**	**323**	P	**P**	**14 52 22.2**	**-0.8**
SONM				IAmb	IAmb	14 52 29.3	
	comp=Z,4.8nm,1.0s						
SNAA	**Sanae**	**87.94**	**183**	LR	LR	15 31 24.1	
	comp=Z,152nm,18.6s,baz=248,slow=35						
SNAA	**Sanae**	**87.94**	**183**	P	**P**	**14 52 22.4**	**-0.6**
SNAA				IAmb	IAmb	14 52 39.5	
	comp=Z,6.1nm,0.9s						
YBH	**Yreka Blue Hor**	**88.51**	**44**	LR	LR	15 24 36.6	
	comp=Z,282nm,19.8s,baz=244,slow=31						
YBH	**Yreka Blue Hor**	**88.51**	**44**	P	**P**	**14 52 24.6**	**-1.4**
YBH				IAmb	IAmb	14 52 26.2	
	comp=Z,9.5nm,1.4s						
VNA3	**Neumayer Olymp**	**88.55**	**181**	P	**P**	**14 52 24.0**	**-1.7**
HUMO	**Hull Mountain**	**88.77**	**43**	P	**P**	**14 52 26.1**	**-1.1**
HUMO				IAmb	IAmb	14 52 27.4	
	comp=Z,9.5nm,1.3s						
VNA1	**Neumayer--Stat**	**89.12**	**181**	P	**P**	**14 52 28.0**	**-0.4**
PFO	**Pinyon Flats O**	**89.23**	**54**	LR	LR	15 25 32.2	
	comp=Z,184nm,20.1s,baz=235,slow=31						
GOMU	**GeErMu**	**89.64**	**309**	P	**P**	**14 52 32.3**	**+0.4**
GOMU				pP	pwP	14 52 37.0	-3.9
GOMU				sP	sP	14 52 38.6	+4.8
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.5s						
GOMU				pmax	pmax		
	comp=Z,53nm,4.6s						
GOMU				LR	LR		
	comp=Z,85nm,13.9s						
GOMU				LR	LR		
	comp=Z,120nm,16.1s						
GOMU				LR	LR		
	comp=Z,140nm,19.0s						
NVAR	**Mina Array Bea**	**89.97**	**49**	P	**P**	**14 52 31.1**	**-2.1**
	comp=Z,2.2nm,0.9s,baz=228,slow=7.8,SNR=11						
NVAR				LR	LR	15 24 38.1	
	comp=Z,425nm,21.1s,baz=266,slow=30 comp=Z,2.2nm,0.9s						
K05A	**Summer Lake**	**90.17**	**44**	P	**P**	**14 52 31.5**	**-2.4**
K05A				IAmb	IAmb	14 52 39.4	
	comp=Z,12nm,1.3s						
LPIG	**La Paz**	**90.38**	**64**	LR	LR	15 23 53.0	
	comp=Z,393nm,21.0s,baz=237,slow=30						
PALK	**Pallekele**	**90.65**	**277**	LR	LR	15 34 27.4	
	comp=Z,78nm,19.6s,baz=218,slow=36						
BBB	**Bella Bella**	**90.75**	**33**	LR	LR	15 29 46.6	
	comp=Z,270nm,18.1s,baz=271,slow=33						
ILAR	**Eielson Array**	**91.53**	**17**	P	**P**	**14 52 35.3**	**-4.2**
	comp=Z,0.8nm,0.9s,baz=227,slow=5.5,SNR=3.0						
ILAR				LR	LR	15 33 48.4	
	comp=Z,438nm,18.0s,baz=218,slow=36 comp=Z,0.8nm,0.9s						
ELK	**Elko**	**93.09**	**48**	LR	LR	15 30 10.7	
	comp=Z,200nm,18.2s,baz=240,slow=33						
DLBC	**Dease Lake**	**93.33**	**28**	LR	LR	15 31 20.4	
	comp=Z,379nm,18.0s,baz=274,slow=33						
NEW	**Newport**	**95.01**	**40**	LR	LR	15 31 37.7	
	comp=Z,238nm,18.2s,baz=262,slow=33						
TIXI	**Tiksi**	**95.82**	**348**	LR	LR	15 35 11.8	
	comp=Z,93nm,19.0s,baz=180,slow=35						
ANMO	**Albuquerque**	**97.39**	**56**	LR	LR	15 32 45.3	
	comp=Z,188nm,18.1s,baz=248,slow=33						
WMQ	**Urumqi**	**97.68**	**314**	*e*P	Pdif	14 53 11.3	+3.0
WMQ				LR	LR		
	comp=Z,97nm,19.5s						
TXAR	**Lajitas Array**	**97.77**	**62**	LR	LR	15 31 16.2	
	comp=Z,360nm,18.1s,baz=248,slow=32						
PDAR	**Pinedale Array**	**97.79**	**47**	LR	LR	15 33 53.0	
	comp=Z,64nm,18.1s,baz=266,slow=33						
INK	**Inuvik**	**97.84**	**19**	LR	LR	15 38 27.6	
	comp=Z,197nm,18.1s,baz=222,slow=36						
PLCA	**Paso Flores**	**97.96**	**139**	LR	LR	15 28 29.0	
	comp=Z,69nm,21.0s,baz=220,slow=30						
ARCES	**ARCESS Array B**	**126.10**	**345**	PKP	**PKPdf**	**14 58 32.6**	**-2.4**
	comp=Z,1.2nm,0.6s,baz=46,slow=1.7,SNR=13						
ARCES	**ARCESS Array B**	**126.10**	**345**		**PKPdf**	**14 58 33.6**	**-1.5**
FINES	**FINESS Array B**	**131.50**	**337**	PKhKP	PKPpre	14 58 38.5	
	comp=Z,2.0nm,1.0s,baz=90,slow=5.6,SNR=3.9						
BRG	**Berggiesshubel**	**143.72**	**333**	*e*PKP	**PKiKP**	**14 59 14.1**	**+2.4**
BRG				Amp		14 59 17.0	
	comp=Z,6.6nm,1.2s						
CLL	**Collm**	**143.79**	**334**	*i* PKiKP	**PKiKP**	**14 59 13.0**	**+1.2**
	comp=Z,16nm,1.6s						
NKC	**Novy Kostel**	**144.83**	**333**	*e*PKP	**PKPab**	**14 59 08.4**	**-0.9**
NKC				*ex*	x	14 59 18.9	
RONA	**Rosalia, Austr**	**144.84**	**327**	*e*P	**PKPdf**	**14 59 10.1**	**-0.3**
	comp=Z,12nm,1.6s						
CONA	**Conrad Observa**	**144.90**	**328**	*e*P	**PKPdf**	**14 59 10.0**	**-0.6**
	comp=Z,13nm,1.9s						
IDI	**Anoyia**	**144.98**	**303**	PKPbc	**PKPbc**	**14 59 07.9**	**-2.5**
	comp=Z,6.0nm,0.5s,baz=52,slow=8.1,SNR=8.8						
IDI	**Anoyia**	**144.98**	**303**		**PKPbc**	**14 59 08.2**	**-2.2**
CKRC	**Cesky Krumlov**	**145.04**	**330**	*e*PKP	**PKPab**	**14 59 09.8**	**-0.3**
CKRC				*ex*	x	14 59 19.3	
KHC	**Kasperske Hory**	**145.16**	**331**	*e*PKP	**PKPbc**	**14 59 09.0**	**-1.5**
KHC				*ex*	x	14 59 18.8	
GERES	**GERESS Array B**	**145.31**	**331**	PKPbc	**PKPbc**	**14 59 09.7**	**-1.3**
	comp=Z,0.9nm,0.5s,baz=32,slow=5.4,SNR=10						
MOA	**Molln**	**145.74**	**329**	*e*P	**PKPab**	**14 59 12.7**	**0.0**
	comp=Z,9.2nm,1.3s						
KBA	**Koelnbreinsper**	**146.73**	**329**	*e*P	**PKPbc**	**14 59 14.5**	**-1.0**
	comp=Z,4.0nm,0.7s						
BTNL	**Ternell**	**146.92**	**340**	*d*PKP	**PKPab**	**14 59 17.1**	**0.0**
MEM	**Membach**	**146.94**	**340**	*d*PKP	**PKPab**	**14 59 17.1**	**-0.1**
ABTA	**Abfaltersbach**	**147.37**	**329**	*e*P	**PKPbc**	**14 59 16.0**	**-1.3**
	comp=Z,7.0nm,1.3s						
WATA	**Walderalm**	**147.38**	**331

PSDA				S	Sg	15 00 47.4	-0.8	
	2µm,0.2s							
VLS	**Valsamata**	**0.55**	**64**	P	Pg	**15 00 42.0**	**+0.1**	
VLS				S	Sg	**15 00 47.8**	**-1.3**	
VLS				AML	AML	15 00 49.0		
	comp=E,17855µm,0.1s							
VLS				AML	AML	15 00 50.9		
	comp=N,19203µm,0.2s							
VLS	**Valsamata**	**0.55**	**64**	P	Pg	**15 00 42.0**	**+0.1**	
VLS				S	Sg	**15 00 48.6**	**-0.5**	
	comp=N,9µm,0.2s							
FSK	**Fiskardo**	**0.70**	**42**	P	Pb	**15 00 46.0**	**-0.1**	
FSK				AML	AML	15 00 59.2		
	comp=N,8609µm,0.4s							
FSK				AML	AML	15 01 02.3		
	comp=E,8045µm,0.4s							
FSK	**Fiskardo**	**0.70**	**42**	P	Pb	**15 00 46.0**	**-0.1**	
FSK				S	Sb	**15 00 55.4**	**-0.8**	
	comp=E,4µm,0.4s							
LTHK	**Lithakia**	**0.73**	**108**	P	Pg	**15 00 45.2**	**-0.1**	
ZAK2	**Zakynthos**	**0.76**	**101**	P	Pg	**15 00 45.9**	**+0.1**	
ZAK2				S	Sg	**15 00 56.1**	**+0.4**	
	comp=E,21µm,0.3s							
EVGl	**Lefkada island**	**0.88**	**39**	P	Pb	**15 00 48.3**	**-0.7**	
EVGl	**Lefkada island**	**0.88**	**39**	P	Pb	**15 00 48.4**	**-0.7**	
DRAG	**Dragano-Lefkad**	**0.89**	**33**	P	Pb	**15 00 48.9**	**-0.4**	
DRAG	**Dragano-Lefkad**	**0.89**	**33**	P	Pb	**15 00 49.0**	**-0.2**	
NYDR	**Nydri-Lefkada**	**0.97**	**37**	P	Pg	**15 00 49.9**	**0.0**	
NYDR	**Nydri-Lefkada**	**0.97**	**37**	P	Pg	**15 00 49.8**	**0.0**	
LKD2	**Lefkada island**	**1.01**	**33**	P	Pb	**15 00 50.8**	**-0.5**	
LKD2				AML	AML	15 01 11.8		
	comp=N,5411µm,0.3s							
LKD2				AML	AML	15 01 19.0		
	comp=E,4712µm,0.6s							
LKD2	**Lefkada island**	**1.01**	**33**	P	Pb	**15 00 50.9**	**-0.5**	
LKD2	**Lefkada island**	**1.01**	**33**	P	Pb	**15 00 54.2**	**+2.0**	
	baz=47							
LKD2				S	Sn	**15 01 07.3**	**+0.3**	
	baz=47							
TSLK	**Tsoukalades, L**	**1.04**	**32**	P	Pb	**15 00 51.3**	**-0.6**	
TSLK				AML	AML	15 01 12.3		
	comp=E,8929µm,0.3s							
TSLK				AML	AML	15 01 13.8		
	comp=N,11070µm,0.5s							
TSLK	**Tsoukalades, L**	**1.04**	**32**	P	Pb	**15 00 51.4**	**-0.4**	
RLS	**Riolos of Patr**	**1.20**	**84**	P	Pg	**15 00 53.1**	**-1.1**	
RLS				AML	AML	15 01 18.0		
	comp=N,2344µm,0.6s							
RLS				AML	AML	15 01 18.7		
	comp=E,2818µm,0.3s							
PVO	**Paravola**	**1.41**	**61**	P	Pn	**15 00 57.6**	**0.0**	
PVO	**Paravola**	**1.41**	**61**	P	Pn	**15 00 57.7**	**0.0**	
PVO				S	Sn	**15 01 17.7**	**+1.0**	
	comp=E,3µm,0.5s							
EFP	**Efpalio**	**1.61**	**72**	P	Pn	**15 01 00.4**	**-0.1**	
EFP				AML	AML	15 01 32.3		
	comp=N,1619µm,0.7s							
EFP				AML	AML	15 01 33.5		
	comp=E,1590µm,0.3s							
EFP	**Efpalio**	**1.61**	**72**	P	Pn	**15 01 00.6**	**+0.1**	
EFP				S	Sn	**15 01 21.9**	**+0.2**	
	comp=E,832nm,0.5s							
IGT	**Igoumenitsa**	**1.62**	**10**	P	Pg	**15 01 02.2**	**-0.1**	
IGT				AML	AML	15 01 34.5		
	comp=N,1067µm,0.3s							
IGT				AML	AML	15 01 36.6		
	comp=E,1503µm,0.4s							
IGT	**Igoumenitsa**	**1.62**	**10**	P	Pg	**15 01 02.4**	**+0.2**	
IGT	**Igoumenitsa**	**1.62**	**10**	P	Pg	**15 01 02.5**	**+0.2**	
	baz=17							
IGT				S	Sg	**15 01 23.0**	**-0.2**	
	baz=17							
LAKA	**Lakka**	**1.62**	**79**	P	Pn	**15 01 00.3**	**-0.3**	
LAKA				AML	AML	15 01 28.0		
	comp=N,831µm,0.5s							
LAKA				AML	AML	15 01 37.1		
	comp=E,1223µm,0.8s							
LAKA	**Lakka**	**1.62**	**79**	P	Pn	**15 01 00.7**	**0.0**	
ANX	**Ano Chora**	**1.68**	**66**	P	Pn	**15 01 02.2**	**+0.7**	
ANX				AML	AML	15 01 36.9		
	comp=E,2221µm,0.6s							
ANX				AML	AML	15 01 38.4		
	comp=N,3011µm,0.5s							
ANX	**Ano Chora**	**1.68**	**66**	P	Pb	**15 01 02.4**	**-0.4**	
KLV	**Kalavryta, Ach**	**1.74**	**86**	P	Pn	**15 01 02.4**	**+0.1**	
KLV				AML	AML	15 01 31.7		
	comp=N,970µm,0.4s							
KLV				AML	AML	15 01 38.6		
	comp=E,872µm,0.7s							
KLV	**Kalavryta, Ach**	**1.74**	**86**	P	Pn	**15 01 02.5**	**+0.2**	
ITM	**Ithomi**	**1.74**	**115**	P	Pn	**15 01 02.5**	**+0.3**	
ITM	**Ithomi**	**1.74**	**115**	P	Pn	**15 01 02.6**	**+0.3**	
EVR	**Evrytania**	**1.75**	**56**	P	Pn	**15 01 03.2**	**+0.7**	
EVR				AML	AML	15 01 34.1		
	comp=N,934µm,0.7s							
EVR				AML	AML	15 01 41.6		
	comp=E,860µm,0.8s							
PYL	**PYLOS**	**1.76**	**126**	P	Pn	**15 01 02.6**	**+0.1**	
KEK	**Kerkira**	**1.78**	**356**	P	Pg	**15 01 05.1**	**-0.2**	
KEK				AML	AML	15 01 43.8		
	comp=E,1261µm,0.4s							
KEK				AML	AML	15 01 47.9		
	comp=N,804µm,0.5s							
KEK	**Kerkira**	**1.78**	**356**	P	Pg	**15 01 05.1**	**-0.2**	
JAN	**Janina**	**1.85**	**22**	P	Pb	**15 01 05.2**	**-0.4**	
GUR	**Goura**	**1.89**	**89**	P	Pn	**15 01 05.5**	**+1.1**	
GUR				AML	AML	15 01 37.5		
	comp=E,2858µm,0.3s							
GUR				AML	AML	15 01 39.5		
	comp=N,2726µm,0.5s							
GUR	**Goura**	**1.89**	**89**	P	Pn	**15 01 04.7**	**+0.3**	
SRN	**Sarande**	**1.94**	**1**	P	Pg	**15 01 07.3**	**-1.1**	
	baz=5.0							
SRN				S	Sg	**15 01 32.9**	**-0.7**	
	baz=5.0							
SRN				AMP				
	comp=N,1.0nm,0.6s,baz=5.0							
MAKR	**Makrakomi, Fth**	**2.02**	**57**	P	Pb	**15 01 07.8**	**-0.6**	
MAKR				AML	AML	15 01 37.0		
	comp=E,2132µm,0.3s							
MAKR				AML	AML	15 01 46.3		
	comp=N,1524µm,0.5s							
THAL	**Thalero**	**2.14**	**87**	P	Pn	**15 01 09.1**	**+1.3**	
LSK	**Leskovik**	**2.26**	**13**	P	Pg	**15 01 13.8**	**-0.9**	
	baz=17							
LSK				S	Sg	**15 01 42.9**	**-1.0**	
	baz=17							
LSK				AMP				
	comp=E,2.2nm,0.7s,baz=17							
THL	**Klokotos Trika**	**2.29**	**44**	P	Pb	**15 01 11.5**	**-1.6**	
THL				AML	AML	15 01 56.0		
	comp=E,667µm,0.7s							
THL				AML	AML	15 01 57.3		
	comp=N,492µm,1.3s							
SCTE	**Santa Cesarea**	**2.43**	**332**	P	Pb	**15 01 15.0**	**-0.5**	
	baz=333							
SCTE				S	Sb	**15 01 44.7**	**-1.0**	
	baz=333							
SCTE				AMP				
	comp=N,0.5nm,0.5s,baz=333							
LKR	**Lokris**	**2.50**	**73**	P	Pn	**15 01 12.5**	**-0.1**	
LKR				AML	AML	15 01 43.8		
	comp=N,432µm,0.3s							
LKR				AML	AML	15 01 45.1		
	comp=E,684µm,0.2s							
ATAL	**Atalanti**	**2.52**	**72**	P	Pn	**15 01 14.1**	**+1.1**	
ATAL				AML	AML	15 02 01.0		
	comp=N,415µm,0.5s							
ATAL				AML	AML	15 02 10.7		
	comp=E,306µm,0.8s							
ATAL	**Atalanti**	**2.52**	**72**	P	Pn	**15 01 14.1**	**+1.1**	
ATAL				S	Sn	**15 01 44.8**	**+0.5**	
	comp=E,182nm,0.7s							
VIL2	**Platees**	**2.63**	**83**	P	Pn	**15 01 15.4**	**+0.9**	
KBN	**Korca**	**2.76**	**13**	P	Pb	**15 01 20.6**	**-0.6**	
	baz=17							
TIP	**Timpagrande**	**2.80**	**297**	⇑P	Pb	**15 01 19.7**	**-2.1**	
KTHR	**Kythira**	**2.96**	**124**	P	Pn	**15 01 20.8**	**+1.8**	
KTHA	**Kythira Island**	**3.00**	**123**	P	Pn	**15 01 21.3**	**+1.8**	
KTHA	**Kythira Island**	**3.00**	**123**	P	Pn	**15 01 21.4**	**+1.8**	
VLY	**Voula,Athens**	**3.04**	**90**	P	Pn	**15 01 20.6**	**+0.5**	
FNA	**Florina**	**3.05**	**21**	P	Pn	**15 01 22.6**	**+2.3**	
FNA	**Florina**	**3.05**	**21**	P	Pb	**15 01 23.0**	**-3.1**	
	baz=24							
DION	**Dionisos Attik**	**3.14**	**86**	P	Pn	**15 01 22.4**	**+0.8**	
DION				AML	AML	15 02 04.8		
	comp=N,603µm,0.5s							
DION				AML	AML	15 02 07.0		
	comp=E,628µm,0.3s							
DION	**Dionisos Attik**	**3.14**	**86**	P	Pn	**15 01 22.3**	**+0.8**	
ANKY	**Antikythira Is**	**3.38**	**127**	P	Pn	**15 01 26.1**	**+1.2**	
TIR	**Tirane**	**3.41**	**359**	AMP				
	comp=N,0.3nm,0.2s,baz=244							
PHP	**Peshkopia**	**3.76**	**6**	P	Pn	**15 01 32.6**	**+2.6**	
	baz=8.0							
PHP				AMP				
	comp=N,0.3nm,0.4s,baz=8.0							
IDI	**Anoyia**	**4.77**	**122**	⇑P	Pn	**15 01 45.9**	**+1.9**	
IDI	**Anoyia**	**4.77**	**122**	Pn	Pn	**15 01 46.3**	**+2.3**	
	comp=N,1.2nm,0.3s,baz=264,slow=8.9,SNR=9.8							
IDI				Sn	Sn	**15 02 36.5**	**-3.2**	
	comp=N,4.5nm,0.3s,baz=296,slow=18,SNR=8.8							
	comp=N,2.7nm,0.3s							
BOJS	**Bojanci**	**8.34**	**337**	*i* Pn	Pn	**15 02 36.2**	**+3.3**	
VOIR		**8.40**	**25**	⇑P	Pb	15 03 02.0	+4.7	
PDKS	**Podkum**	**8.91**	**337**	*i* Pn	Pn	**15 02 43.7**	**+2.9**	
VRI	**Vrincioaia**	**9.39**	**30**	⇓P	Pn	15 02 53.6	+6.4	
GERES	**GERESS Array B**	**11.81**	**339**	Pn	Pn	**15 03 24.1**	**+3.7**	
	comp=N,0.2nm,0.3s,baz=154,slow=16,SNR=4.8							
GERES				Sn	Sn	**15 05 29.1**	**-3.6**	
	comp=N,0.6nm,0.3s,baz=151,slow=24,SNR=6.9							
	comp=N,0.5nm,0.4s							
HFS	**Hagfors**	**22.57**	**352**	P	P	**15 05 34.7**	**+2.5**	
	comp=E,2.3nm,0.7s,baz=162,slow=11,SNR=7.8							
	comp=N,2.3nm,0.7s							
FINES	**FINESS Array B**	**23.84**	**7**	P	P	**15 05 45.2**	**0.0**	
	comp=N,0.4nm,0.4s,baz=180,slow=11,SNR=6.5							
	comp=N,0.4nm,0.4s							
KIRV	**Kirov**	**28.10**	**33**	LR	LR	15 18 41.7		
	comp=N,44nm,20.5s,baz=105,slow=40							
MKAR	**Makanchi Array**	**45.80**	**58**	P	P	**15 08 53.5**	**-0.6**	
	comp=N,0.4nm,0.5s,baz=275,slow=7.2,SNR=5.4							
	comp=N,0.4nm,0.5s							
ZALV	**Zalesovo Beam**	**46.18**	**48**	P	P	**15 08 56.6**	**-0.2**	
	comp=N,2.2nm,0.5s,baz=273,slow=9.6,SNR=8.3							
	comp=N,2.2nm,0.5s							
BOSA	**Boshof**	**66.39**	**175**	LR	LR	15 42 35.9		
	comp=N,81nm,19.0s,baz=161,slow=38							
SADO	**Sadowa**	**70.08**	**312**	LR	LR	15 41 50.0		
	comp=N,168nm,20.8s,baz=305,slow=35							

*NOU **17** 15:02:57.9, 39˚.30S×174˚.94E, h29km, MLv3.5/8, North Island, New Zealand*
*WEL **17** 15:02:57.2±0.3, 39˚.S±4˚×17˚.5E±˚, h22km±4km, M3.2/28, ML3.5/30, MLv3.2/28, Error ellipse: s-maj=0.0km s-min=0.0km az=171.0*

ISC 17 15:02:57.9±0.9, 39˚.32S±0˚.02×174˚.97E±0˚.02, h31km±8km, n111, σ0s72/124, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRZ	**Vera Road**	**0.26**	**319**	P	**Pn**	**15 03 05.1**	**-0.4**
VRZ				S	**Sn**	**15 03 11.2**	**+0.8**
PKVZ	**Pokaka**	**0.29**	**84**	P	**Pb**	**15 03 05.2**	**-0.2**
PKVZ				S	**Sn**	**15 03 11.1**	**-0.3**
MTVZ	**Mangateitei**	**0.39**	**100**	P	**Pb**	**15 03 06.5**	**-0.2**
MTVZ				S	**Sb**	**15 03 13.1**	**+0.2**
WAZ	**Wanganui**	**0.44**	**179**	P	**Pb**	**15 03 06.8**	**-0.6**
WAZ				S	**Sb**	**15 03 14.1**	**+0.1**
TWVZ	**Taurewa**	**0.44**	**56**	P	**Pb**	**15 03 07.2**	**-0.3**
TRVZ	**Turoa**	**0.45**	**88**	P	**Pb**	**15 03 07.5**	**-0.3**
TRVZ				S	**Sb**	**15 03 14.3**	**-0.2**
FWVZ	**Far West T-bar**	**0.46**	**82**	P	**Pb**	**15 03 07.6**	**-0.3**
FWVZ				S	**Sb**	**15 03 14.7**	**0.0**
DRZ	**Dome Shelter**	**0.46**	**85**	P	**Pb**	**15 03 07.9**	**-0.2**
DRZ				S	**Sn**	**15 03 15.4**	**-0.5**
LREZ	**Lake Rotokare**	**0.46**	**252**	P	**Pb**	**15 03 07.6**	**-0.3**
LREZ				S	**Sn**	**15 03 15.9**	**+0.3**
WHVZ	**Whangaehu Hut**	**0.48**	**86**	P	**Pb**	**15 03 07.8**	**-0.4**
WNVZ	**Wahianoa**	**0.48**	**91**	P	**Pb**	**15 03 07.9**	**-0.4**
WNVZ				S	**Sb**	**15 03 15.1**	**-0.4**
NGZ	**Ngauruhoe**	**0.51**	**74**	P	**Pb**	**15 03 08.3**	**-0.3**
NGZ				S	**Sn**	**15 03 16.4**	**-0.5**
WTVZ	**West Tongariro**	**0.52**	**67**	P	**Pb**	**15 03 08.5**	**-0.3**
WTVZ				S	**Sn**	**15 03 16.6**	**-0.5**
TUVZ	**Tukino**	**0.53**	**85**	P	**Pb**	**15 03 08.8**	**-0.2**
NNVZ	**North Ngauruho**	**0.53**	**70**	P	**Pb**	**15 03 08.7**	**-0.3**
NNVZ				S	**Sb**	**15 03 16.7**	**+0.1**
SNVZ	**South Ngauruho**	**0.54**	**76**	P	**Pb**	**15 03 08.7**	**-0.4**
SNVZ				S	**Sb**	**15 03 17.0**	**+0.3**
OTVZ	**Oturere**	**0.56**	**74**	P	**Pb**	**15 03 09.1**	**-0.4**
KRVZ	**Karewarewa**	**0.56**	**67**	P	**Pb**	**15 03 09.1**	**-0.4**
NTVZ	**North Tongarir**	**0.59**	**68**	P	**Pb**	**15 03 09.4**	**-0.5**
ETVZ	**East Tongariro**	**0.60**	**73**	P	**Pb**	**15 03 09.7**	**-0.5**
TMVZ	**Te Maari**	**0.60**	**71**	P	**Pb**	**15 03 09.7**	**-0.5**
MOVZ	**Moawhango**	**0.61**	**99**	P	**Pb**	**15 03 09.5**	**-0.8**
DREZ	**Durham Road**	**0.61**	**282**	P	**Pn**	**15 03 10.3**	**-0.1**
PREZ	**Palmer Road**	**0.63**	**268**	P	**Pn**	**15 03 10.7**	**-0.1**
KATZ	**Kakaramea**	**0.66**	**59**	P	**Pb**	**15 03 10.6**	**-0.4**
NEZ	**North Egmont**	**0.68**	**274**	P	**Pn**	**15 03 11.3**	**-0.2**
KHUZ	**Kahui Hut**	**0.74**	**272**	P	**Pn**	**15 03 12.7**	**+0.3**
RATZ	**Rangitukua**	**0.77**	**54**	P	**Pb**	**15 03 12.3**	**-0.6**
RITZ	**Rihia Road**	**0.77**	**64**	P	**Pb**	**15 03 12.4**	**-0.4**
PKE	**Pukeiti**	**0.78**	**279**	P	**Pn**	**15 03 12.8**	**+0.1**
HIZ	**Hauiti**	**0.81**	**353**	P	**Pb**	**15 03 13.2**	**-0.3**
HIZ	**Hauiti**	**0.81**	**353**	P	**Pb**	**15 03 13.2**	**-0.3**
WATZ	**Wairara**	**0.85**	**44**	P	**Pb**	**15 03 13.5**	**-0.7**
NMEZ	**Namu Road**	**0.85**	**263**	P	**Pb**	**15 03 13.8**	**-0.5**
NBEZ	**Newall Road No**	**0.86**	**273**	P	**Pn**	**15 03 14.2**	**+0.3**
BHHZ	**Black Hill Sta**	**0.86**	**102**	P	**Pb**	**15 03 13.0**	**-1.4**
OHWZ	**Ohakea**	**0.93**	**164**	P	**Pn**	**15 03 14.3**	**-0.5**
HATZ	**Hinemaiaia**	**0.97**	**64**	P	**Pn**	**15 03 15.0**	**-0.4**
KUTZ	**Kaahu Road**	**1.06**	**39**	P	**Pn**	**15 03 16.6**	**-0.1**
TSZ	**Takapari Road**	**1.06**	**134**	P	**Pn**	**15 03 16.0**	**-0.7**
TLZ	**Tolley Road**	**1.08**	**24**	P	**Pn**	**15 03 16.5**	**-0.4**
PNHZ	**Pukenui**	**1.12**	**122**	P	**Pn**	**15 03 16.9**	**-0.6**
KRHZ	**Kereru**	**1.13**	**107**	P	**Pn**	**15 03 17.7**	**+0.1**
KWHZ	**Kaweka Forest**	**1.13**	**96**	P	**Pn**	**15 03 17.8**	**+0.2**
BKZ	**Black Stump Fm**	**1.19**	**83**	P	**Pn**	**15 03 18.2**	**-0.2**
BKZ	**Black Stump Fm**	**1.19**	**83**	P	**Pn**	**15 03 18.2**	**-0.2**
WPRZ	**Whakapapatarin**	**1.22**	**50**	P	**Pn**	**15 03 18.6**	**-0.3**
MRHZ	**Matea Rd**	**1.22**	**67**	P	**Pn**	**15 03 18.3**	**-0.6**
POWZ	**Post Office Ro**	**1.23**	**151**	P	**Pn**	**15 03 19.3**	**+0.3**
MCHZ	**McNeill Hill**	**1.34**	**96**	P	**Pb**	**15 03 22.0**	**-0.4**
DVHZ	**Dannevirke**	**1.34**	**137**	P	**Pb**	**15 03 21.5**	**-1.0**
WPHZ	**Waipukurau**	**1.36**	**124**	P	**Pb**	**15 03 22.0**	**-0.7**
MRZ	**Mangatainoka R**	**1.42**	**161**	P	**Pn**	**15 03 21.7**	**+0.1**
NMHZ	**Naumai**	**1.44**	**82**	P	**Pn**	**15 03 22.9**	**+1.0**
PRWZ	**Pori Road**	**1.45**	**148**	P	**Pb**	**15 03 23.2**	**-1.2**
OGWZ	**Otaki Gorge**	**1.50**	**174**	P	**Pn**	**15 03 22.7**	**0.0**
MTHZ	**Maungataniwha**	**1.53**	**73**	P	**Pn**	**15 03 23.1**	**0.0**
KIW	**Kapiti Island**	**1.54**	**182**	P	**Pn**	**15 03 23.0**	**-0.2**
KAHZ	**Kahuranaki**	**1.55**	**109**	P	**Pb**	**15 03 26.1**	**+0.1**
TIWZ	**Tintock**	**1.62**	**155**	P	**Pn**	**15 03 25.2**	**+0.9**
PXZ	**Pawanui**	**1.62**	**117**	P	**Pb**	**15 03 26.8**	**-0.4**
ANWZ	**Angora Road**	**1.62**	**135**	P	**Pb**	**15 03 27.0**	**-0.2**
HOWZ	**Holdsworth Sta**	**1.63**	**165**	P	**Pn**	**15 03 24.9**	**+0.4**
MUGZ	**Murupara**	**1.64**	**60**	P	**Pn**	**15 03 24.7**	**+0.2**
TOZ	**Tahuroa Road**	**1.64**	**15**	P	**Pn**	**15 03 24.2**	**-0.3**
BFZ	**Birch Farm**	**1.68**	**145**	P	**Pn**	**15 03 26.0**	**+0.9**
BFZ	**Birch Farm**	**1.68**	**145**	P	**Pn**	**15 03 26.2**	**+1.1**
DUWZ	**D'Urville Isla**	**1.69**	**208**	P	**Pn**	**15 03 25.1**	**-0.1**
RAHZ	**Arahi**	**1.69**	**77**	P	**Pb**	**15 03 27.4**	**-1.0**
RTZ	**Ruatahuna**	**1.71**	**66**	P	**Pn**	**15 03 26.5**	**+0.8**
CAW	**Cannon Point**	**1.79**	**178**	P	**Pn**	**15 03 27.0**	**+0.3**
MTW	**Mount Morrison**	**1.88**	**168**	P	**Pn**	**15 03 28.6**	**+0.6**
SNGZ	**Shannon Statio**	**1.92**	**75**	P	**Pn**	**15 03 30.2**	**+1.8**
TMWZ	**Te Maipa**	**1.92**	**159**	P	**Pn**	**15 03 30.0**	**+1.6**
TCW	**Tory Channel**	**1.96**	**196**	P	**Pn**	**15 03 29.3**	**+0.2**
WEL	**Wellington**	**1.97**	**184**	P	**Pn**	**15 03 30.1**	**+0.9**
URZ	**Urewera**	**1.98**	**58**	P	**Pn**	**15 03 29.2**	**0.0**
URZ	**Urewera**	**1.98**	**58**	P	**Pn**	**15 03 29.2**	**0.0**
SNZO	**South Karori**	**2.00**	**186**	P	**Pn**	**15 03 30.9**	**+1.4**
BHW	**Baring Head**	**2.09**	**182**	P	**Pb**	**15 03 34.4**	**-0.7**
PAWZ	**Paruwai Farm**	**2.09**	**171**	P	**Pb**	**15 03 35.2**	**0.0**
MSWZ	**Moikau Station**	**2.11**	**174**	P	**Pn**	**15 03 32.2**	**+1.2**
TRWZ	**Traveller**	**2.15**	**165**	P	**Pb**	**15 03 35.8**	**-0.3**
MKAZ	**Moumakai**	**2.21**	**4**	P	**Pn**	**15 03 32.5**	**0.0**
MWZ	**Matawai**	**2.22**	**65**	P	**Pn**	**15 03 33.6**	**+0.9**
TUWZ	**Tuamarina**	**2.25**	**200**	P	**Pn**	**15 03 33.8**	**+0.8**
NNZ	**Nelson**	**2.25**	**212**	P	**Pn**	**15 03 33.9**	**+0.9**
RIGZ	**Rimuhau**	**2.26**	**75**	P	**Pn**	**15 03 34.9**	**+1.8**
PLWZ	**Palliser**	**2.26**	**175**	P	**Pn**	**15 03 33.7**	**+0.5**
AWAZ	**Awhitu Peninsu**	**2.27**	**353**	P	**Pn**	**15 03 34.0**	**+0.8**
TKNZ	**Takaka Hill**	**2.31**	**221**	P	**Pn**	**15 03 33.7**	**-0.1**
ETAZ	**East Tamaki Re**	**2.36**	**359**	P	**Pn**	**15 03 35.1**	**+0.6**
QRZ	**Quartz Range**	**2.41**	**230**	P	**Pn**	**15 03 34.4**	**-0.6**
QRZ	**Quartz Range**	**2.41**	**230**	P	**Pn**	**15 03 34.5**	**-0.6**
TKGZ	**Te Karaka**	**2.41**	**70**	P	**Pn**	**15 03 37.2**	**+2.1**
RUGZ	**Raukumara Rang**	**2.51**	**58**	P	**Pn**	**15 03 37.5**	**+0.8**
WIAZ	**Waiheke Island**	**2.52**	**3**	P	**Pn**	**15 03 37.6**	**+0.8**
BSWZ	**Blackbirch Sta**	**2.54**	**199**	P	**Pn**	**15 03 39.4**	**+2.5**
MBAZ	**Motutapu North**	**2.55**	**359**	P	**Pn**	**15 03 37.4**	**+0.4**
RVAZ	**Riverhead Bore**	**2.56**	**353**	P	**Pn**	**15 03 37.7**	**+0.5**
TWGZ	**Tauwhareparae**	**2.61**	**65**	P	**Pn**	**15 03 40.2**	**+2.2**
MRNZ	**Matariki Terra**	**2.68**	**218**	P	**Pn**	**15 03 39.5**	**+0.6**
HAZ	**Te Kaha**	**2.70**	**56**	P	**Pn**	**15 03 40.1**	**+1.0**
PUZ	**Puketiti**	**2.85**	**65**	P	**Pn**	**15 03 42.4**	**+1.1**
THZ	**Tophouse**	**2.91**	**212**	P	**Pn**	**15 03 43.3**	**+1.2**
WMGZ	**Waiomatatini S**	**3.08**	**62**	P	**Pn**	**15 03 45.7**	**+1.3**
KHZ	**Kahutara**	**3.28**	**199**	P	**Pn**	**15 03 46.8**	**-0.3**
KHZ	**Kahutara**	**3.28**	**199**	P	**Pn**	**15 03 46.9**	**-0.2**
GVZ	**Greta Valley S**	**3.93**	**201**	P	**Pn**	**15 03 55.7**	**-0.3**
OUZ	**Omahuta**	**4.24**	**345**	P	**Pn**	**15 04 00.5**	**+0.3**
OUZ	**Omahuta**	**4.24**	**345**	P	**Pn**	**15 04 00.6**	**+0.3**

*IDC **17** 15:06:27.7±2.3, 13˚.08N×122˚.15E, h0km, mb3.4/3, mbtmp3.4/3, MS3.8/3, Error ellipse: s-maj=88.5km s-min=22.5km az=50.0*
*MAN **17** 15:06:29.3, 13˚.28N×122˚.16E, h4km, mb4.6, ML3.4, MS3.3*

ISC 17 15:06:28.4±1.4, 13˚.19N±0˚.04×122˚.23E±0˚.05, h7km±10km, n16, σ0s78/20, mb3.5/3, MS3.8/3, 2C-7D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GQP	**Guinayangan**	**0.74**	**17**	⇓*i*P	**Pg**	**15 06 42.6**	**-0.1**
GQP				*i* S	**Sn**	**15 06 57.1**	**+0.3**
JCNP	**Jose Panganiba**	**1.18**	**23**	⇓*i*P	**Pg**	**15 06 50.0**	**-1.1**
PGP	**Puerto Galera**	**1.28**	**284**	⇓*e*P	**Pn**	**15 06 51.2**	**-1.5**
PGP				*i* S	**Sg**	**15 07 09.7**	**+0.2**
TGY	**Tagaytay City**	**1.54**	**306**	Pn	**Pn**	**15 06 56.9**	**+0.5**
	232nm,0.3s,baz=144,slow=4.2,SNR=40						
TGY				Sn	**Sn**	**15 07 16.9**	**+0.1**
	117nm,0.3s,baz=227,slow=17,SNR=6.2						
TGY	**Tagaytay City**	**1.54**	**306**	⇓*e*P	**Pb**	**15 06 57.6**	**+0.2**
TGY				*i* S	**Sg**	**15 07 19.9**	**+1.8**
RCP	**Roxas**	**1.70**	**163**	⇑*e*P	**Pb**	**15 06 59.8**	**-0.2**
RCP				*e*S	**Sn**	**15 07 21.1**	**+0.5**
MACP	**Maragondon, Ca**	**1.81**	**306**	⇓*i*P	**Pn**	**15 07 00.1**	**+0.1**
LUBP	**Lubang**	**2.00**	**286**	*i* S	**Pg**	**15 07 06.1**	**-0.7**
LUBP	**Lubang**	**2.00**	**286**	⇓*i*P	**Pn**	**15 07 02.6**	**-0.1**
LUBP				*e*S	**Sn**	**15 07 27.2**	**-0.7**
JAP	**San Jose, Anti**	**2.45**	**186**	⇑*e*P	**Pb**	**15 07 12.8**	**+0.1**
CUYO	**Cuyo Island**	**2.61**	**207**	⇓*i*P	**Pn**	**15 07 11.9**	**+0.8**
CMAR	**Chiang Mai Arr**	**23.00**	**286**	P	**P**	**15 11 34.8**	**+0.7**
	1.2nm,0.8s,baz=95,slow=7.7,SNR=6.0						
	1.2nm,0.8s						
WRA	**Warramunga Arr**	**35.02**	**160**	P	**P**	**15 13 21.3**	**-0.6**
	0.5nm,0.9s,baz=331,slow=10,SNR=2.5						
	0.5nm,0.9s						
MKAR	**Makanchi Array**	**47.32**	**323**	P	**P**	**15 15 02.9**	**0.0**
	0.5nm,0.7s,baz=137,slow=8.8,SNR=3.1						
MKAR				LR	LR	15 37 35.4	
	comp=Z,94nm,19.5s,baz=96,slow=39						
	0.5nm,0.7s						
WSAR	**Wadi Sarin**	**60.83**	**289**	LR	LR

ARHZ	Aropaoanui	1.27	140	P	Pn	15 43 25.4	+0.8
MCHZ	McNeill Hill	1.29	153	P	Pn	15 43 25.8	+1.1
MKAZ	Moumakai	1.34	332	P	Pn	15 43 25.7	+0.5
KRHZ	Kereru	1.39	167	P	Pn	15 43 26.1	+0.5
RUGZ	Raukumara Rang	1.40	77	P	Pn	15 43 24.8	-1.0
RIGZ	Rimuhau	1.48	107	P	Pn	15 43 26.8	+0.5
TKGZ	Te Karaka	1.50	96	P	Pn	15 43 27.2	+0.9
HAZ	Te Kaha	1.54	70	P	Pn	15 43 26.2	-0.6
KUZ	Kuaotunu	1.56	353	P	Pn	15 43 27.3	+0.3
TWGZ	Tauwhareparae	1.60	86	P	Pn	15 43 28.4	+1.0
AWAZ	Awhitu Peninsu	1.61	319	P	Pn	15 43 28.1	+0.7
PNHZ	Pukenui	1.63	173	P	Pn	15 43 27.9	+0.4
WIAZ	Waiheke Island	1.63	336	P	Pn	15 43 28.4	+0.7
WAZ	Wanganui	1.64	207	P	Pn	15 43 28.5	+0.8
KAHZ	Kahuranaki	1.66	155	P	Pn	15 43 28.9	+1.0
NEZ	North Egmont	1.75	236	P	Pn	15 43 30.2	+1.5
TSZ	Takapari Road	1.76	180	P	Pn	15 43 29.2	+0.5
CNGZ	Carnagh Statio	1.78	97	P	Pn	15 43 28.8	-0.1
WPHZ	Waipukurau	1.81	168	P	Pn	15 43 29.8	+0.7
PUZ	Puketiti	1.83	84	P	Pn	15 43 29.7	+0.4
PXZ	Pawanui	1.87	158	P	Pn	15 43 30.5	+0.8
MXZ	Matakaoa Point	2.00	69	P	Pn	15 43 31.6	+0.6
WMGZ	Waiomatatini S	2.00	77	P	Pn	15 43 31.2	+0.2
DVHZ	Dannevirke	2.01	175	P	Pn	15 43 31.4	+0.3
PRHZ	Porangahau	2.04	165	P	Pn	15 43 32.0	+0.7
ANWZ	Angora Road	2.20	170	P	Pn	15 43 33.6	+0.7
PRWZ	Pori Road	2.26	180	P	Pn	15 43 34.1	+0.5
MRZ	Mangatainoka R	2.38	187	P	Pn	15 43 34.9	+0.1
BFZ	Birch Farm	2.40	175	P	Pn	15 43 35.3	+0.3
BFZ	Birch Farm	2.40	175	P	Pn	15 43 35.4	+0.4
OGWZ	Otaki Gorge	2.59	193	P	Pn	15 43 37.4	+0.3
HOWZ	Holdsworth Sta	2.62	187	P	Pn	15 43 37.4	-0.1
KIWI	Kapiti Island	2.69	197	P	Pn	15 43 38.1	0.0
TMWZ	Te Maipa	2.81	181	P	Pn	15 43 39.7	+0.2
MTW	Mount Morrison	2.88	187	P	Pn	15 43 39.9	-0.3
CAW	Cannon Point	2.89	193	P	Pn	15 43 40.4	0.0
DUWZ	D'Urville Isla	2.96	211	P	Pn	15 43 41.0	-0.1
TRWZ	Traveller	3.11	184	P	Pn	15 43 42.9	0.0
WEL	Wellington	3.12	197	P	Pn	15 43 43.2	+0.2
MSWZ	Moikau Station	3.17	190	P	Pn	15 43 43.1	-0.4
TCW	Tory Channel	3.19	203	P	Pn	15 43 43.7	0.0
PLWZ	Palliser	3.32	189	P	Pn	15 43 44.9	-0.4
TUWZ	Tuamarina	3.49	206	P	Pn	15 43 47.0	-0.3
NNZ	Nelson	3.53	213	P	Pn	15 43 47.4	-0.4
TKNZ	Takaka Hill	3.58	219	P	Pn	15 43 47.7	-0.8
QRZ	Quartz Range	3.66	225	P	Pn	15 43 49.1	-0.2
QRZ	Quartz Range	3.66	225	P	Pn	15 43 49.8	+0.5
BSWZ	Blackbirch Sta	3.77	204	P	Pn	15 43 50.9	+0.2
MRNZ	Matariki Terra	3.96	217	P	Pn	15 43 52.7	-0.3
THZ	Tophouse	4.18	213	P	Pn	15 43 55.7	0.0
KHZ	Kahutara	4.51	203	P	Pn	15 43 59.9	+0.2
KHZ	Kahutara	4.51	203	P	Pn	15 43 59.9	+0.2
GVZ	Greta Valley S	5.17	205	P	Pn	15 44 07.7	-0.3
LTZ	Lake Taylor	5.29	211	P	Pn	15 44 09.6	+0.1
INZ	Inchbonnie	5.60	216	P	Pn	15 44 12.9	-0.4
OXZ	Oxford	5.84	209	P	Pn	15 44 15.2	-1.2
OKCZ	Okains Bay	5.85	201	P	Pn	15 44 16.0	-0.6
MQZ	McQueen's Vall	5.96	204	P	Pn	15 44 16.5	-1.3
RACZ	Rakaia	6.15	207	P	Pn	15 44 19.2	-1.1
WACZ	Wakanui South	6.44	208	P	Pn	15 44 23.4	-0.7
RPZ	Rata Peaks	6.56	213	P	Pn	15 44 25.5	-0.1
RPZ	Rata Peaks	6.56	213	P	Pn	15 44 25.9	+0.3
ARCZ	Arundel	6.70	211	P	Pn	15 44 27.2	-0.2
TMZ	Timaru	7.13	210	P	Pn	15 44 32.5	-0.4
ODZ	Otahua Downs	7.83	209	P	Pn	15 44 42.2	+0.3
ODZ	Otahua Downs	7.83	209	P	Pn	15 44 42.0	+0.2

*JMA **17** 15:47:53.9±0.1,23°.8N±0°.7×122°.0E±0°.6,h25km±2km, MV2.6/13,TAIWAN REGION*
*TAP **17** 15:47:55.4,23°.91N×121°.89E,h47km,ML3.2,B*
ISC 17 15:47:54.4±1.0,**23°.84N**±0°.02×**121°.99E**±0°.02,**h32**km±11km, **n64**,σ0°**68**/117,**4C-11D**,**Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TEYL	**Yanliau Villag**	**0.36**	**275**	*i* P	**Pn**	**15 48 04.0**	**+0.5**
	baz=269						
TEYL				*e*S	**Sn**	**15 48 10.9**	**+1.4**
	baz=269						
HWA	**Hwalien**	**0.38**	**292**	*i* P	**Pn**	**15 48 04.0**	**+0.3**
	baz=285						
HWA				*e*S	**Sn**	**15 48 11.8**	**+1.9**
	baz=285						
TEGC	**Jichi Village**	**0.43**	**253**	*i* P	**Pn**	**15 48 05.0**	**+0.7**
	baz=238						
TEGC				*e*S	**Sn**	**15 48 12.6**	**+1.4**
	baz=238						
TWD	**Chiawan**	**0.44**	**304**	⇓*i*P	**Pn**	**15 48 04.4**	**-0.1**
	baz=303						
TWD				*i*S	**Sn**	**15 48 11.2**	**-0.1**
	baz=303						
ETL	**Fush Village**	**0.47**	**314**	*i* P	**Pn**	**15 48 04.8**	**-0.1**
	baz=315						
ETL				S	**Sn**	**15 48 12.1**	**-0.1**
	baz=315						
ETM	**Tongmen**	**0.48**	**286**	⇓*i*P	**Pn**	**15 48 05.0**	**0.0**
	baz=279						
ETM				*e*S	**Sn**	**15 48 12.4**	**+0.1**
	baz=279						
NACB	**Ninganchiao**	**0.50**	**313**	⇓*i*P	**Pn**	**15 48 05.0**	**-0.3**
	baz=314						
NACB				*e*S	**Sn**	**15 48 12.4**	**-0.4**
	baz=314						
ESL	**Shilin**	**0.51**	**268**	⇓*i*P	**Pn**	**15 48 05.5**	**-0.1**
	baz=257						
ESL				*e*S	**Sn**	**15 48 13.0**	**-0.2**
	baz=257						
EGFH	**Guangfu**	**0.55**	**252**	*i* P	**Pn**	**15 48 06.4**	**+0.4**
	baz=241						
EGFH				*e*S	**Sn**	**15 48 14.8**	**+0.8**
	baz=241						
ETLH	**Xiulin Townshi**	**0.60**	**308**	⇓*i*P	**Pn**	**15 48 06.6**	**-0.2**
	baz=308						
ETLH				*e*S	**Sn**	**15 48 15.0**	**-0.4**
	baz=308						
HGSD	**Ruisui**	**0.62**	**237**	P	**Pn**	**15 48 07.3**	**+0.2**
	baz=226						
HGSD				*e*S	**Sn**	**15 48 16.1**	**+0.2**
	baz=226						
ENA	**Nanau**	**0.63**	**339**	P	**Pn**	**15 48 07.2**	**+0.1**
	baz=346						
ENA				*e*S	**Sn**	**15 48 16.4**	**+0.2**
	baz=346						
EWUT	**Wuta**	**0.64**	**342**	P	**Pn**	**15 48 07.3**	**+0.1**
	baz=349						
EWUT				*e*S	**Sn**	**15 48 16.7**	**+0.4**
	baz=349						
EHY	**Hungye**	**0.70**	**242**	P	**Pb**	**15 48 08.4**	**+0.2**
	baz=232						
EHY				*e*S	**Sn**	**15 48 18.0**	**+0.3**
	baz=232						
WHF	**Hehuan Shan**	**0.73**	**295**	⇓P	**Pb**	**15 48 08.9**	**-0.2**
	baz=292						
WHF				*e*S	**Sn**	**15 48 19.2**	**-0.1**
	baz=292						
OWD	**Renai**	**0.76**	**279**	*e*P	**Pb**	**15 48 09.3**	**0.0**
	baz=274						
OWD				*e*S	**Sn**	**15 48 19.4**	**-0.1**
	baz=274						
YULB	**Yu-li**	**0.78**	**236**	⇑*i*P	**Pn**	**15 48 09.6**	**+0.4**
	baz=227						
YULB				*e*S	**Sn**	**15 48 20.0**	**+0.3**
	baz=227						
CHGB	**Renai**	**0.78**	**287**	*e*P	**Pb**	**15 48 09.9**	**+0.1**
	baz=283						
VWDT	**VWDT**	**0.79**	**264**	⇓*e*P	**Pb**	**15 48 10.2**	**+0.5**
	baz=257						
VWDT				*e*S	**Sb**	**15 48 20.9**	**+0.9**
	baz=257						
EYUL	**Yuli**	**0.79**	**232**	P	**Pb**	**15 48 10.0**	**+0.4**
	baz=223						
EYUL				*e*S	**Sb**	**15 48 21.1**	**+1.0**
	baz=223						
FUSS	**Fushou**	**0.80**	**301**	⇓*i*P	**Pb**	**15 48 10.1**	**0.0**
	baz=300						
FUSS				*e*S	**Sn**	**15 48 21.0**	**+0.4**
	baz=300						
TWF1	**Yuli**	**0.80**	**233**	*e*P	**Pn**	**15 48 09.9**	**+0.5**
	baz=224						
TWF1				*e*S	**Sb**	**15 48 21.1**	**+0.6**
	baz=224						
NNSB	**Datong**	**0.81**	**317**	*e*P	**Pb**	**15 48 09.9**	**-0.3**
	baz=318						
NNSB				*e*S	**Sb**	**15 48 21.1**	**+0.2**
	baz=318						
NNSH	**Datong**	**0.81**	**317**	⇓*e*P	**Pb**	**15 48 09.9**	**-0.3**
	baz=318						
NNSH				*e*S	**Sb**	**15 48 20.9**	**0.0**
	baz=318						
WUSB	**Renai**	**0.82**	**281**	⇓*e*P	**Pb**	**15 48 10.4**	**+0.2**
	baz=277						
WUSB				*e*S	**Sb**	**15 48 21.1**	**+0.1**
	baz=277						
LATG	**Datong**	**0.82**	**329**	⇓*e*P	**Pb**	**15 48 10.0**	**-0.3**
	baz=332						
LATG				*e*S	**Sb**	**15 48 20.7**	**-0.4**
	baz=332						
NNS	**Nan Shan**	**0.83**	**317**	*e*P	**Pb**	**15 48 10.1**	**-0.4**
	baz=318						
NNS				*e*S	**Sb**	**15 48 21.5**	**+0.2**
	baz=318						
NDS	**Dongshan**	**0.83**	**342**	*e*P	**Pb**	**15 48 10.3**	**-0.2**
	baz=347						
NDS				*e*S	**Sb**	**15 48 21.2**	**-0.2**
	baz=347						
TDCB	**Techi**	**0.87**	**299**	*e*P	**Pb**	**15 48 11.3**	**+0.1**
	baz=297						
TDCB				*e*S	**Sb**	**15 48 22.9**	**+0.4**
	baz=297						
NDT	**Datong Townshi**	**0.88**	**330**	*e*P	**Pn**	**15 48 10.5**	**-0.1**
	baz=333						
FULB	**Fuli**	**0.90**	**226**	P	**Pn**	**15 48 10.9**	**0.0**
	baz=218						
FULB				*e*S	**Sn**	**15 48 23.2**	**+0.4**
	baz=218						
TWE	**Neicheng**	**0.93**	**341**	*e*P	**Pb**	**15 48 11.9**	**-0.2**
	baz=347						
TWE				*e*S	**Sb**	**15 48 24.0**	**-0.2**
	baz=347						
SSLB	**Suanglung**	**0.95**	**267**	*e*P	**Pb**	**15 48 12.5**	**0.0**
	baz=262						
FUSB	**Fushanzhiwuyua**	**0.99**	**338**	*e*P	**Pb**	**15 48 12.8**	**-0.4**
	baz=342						
FUSB				*e*S	**Sb**	**15 48 25.4**	**-0.5**
	baz=342						
YHNB	**Yeheng**	**1.00**	**326**	*e*P	**Pb**	**15 48 12.9**	**-0.4**
	baz=328						
YHNB				*e*S	**Sb**	**15 48 25.6**	**-0.7**
	baz=328						
YUS	**Yu-Shan**	**1.01**	**250**	*e*P	**Pb**	**15 48 14.0**	**+0.2**
	baz=244						
NSK	**Sanguang**	**1.02**	**325**	*e*P	**Pb**	**15 48 13.3**	**-0.3**
	baz=328						
NSK				*e*S	**Sb**	**15 48 25.9**	**-0.8**
	baz=328						
NWLT	**Wulai**	**1.04**	**335**	*e*P	**Pb**	**15 48 13.5**	**-0.5**
	baz=338						
NWLT				*e*S	**Sb**	**15 48 26.4**	**-0.9**
	baz=338						
JYNG	**Yonagunijimaku**	**1.06**	**55**	P	**Pn**	**15 48 13.4**	**+0.4**
JYNG				*e*S	**Sn**	**15 48 27.4**	**+0.6**
EDH	**Donghe**	**1.07**	**217**	⇑P	**Pn**	**15 48 13.0**	**-0.2**
	baz=210						
EDH				*e*S	**Sn**	**15 48 26.1**	**-0.8**
	baz=210						
ELDTW	**Lidau**	**1.10**	**235**	⇑*e*P	**Pn**	**15 48 13.9**	**+0.2**
	baz=228						
ELDTW				*e*S	**Sn**	**15 48 25.8**	**-2.2**
	baz=228						
YOJ	**Yonaguni jima**	**1.12**	**56**	*i* P	**Pn**	**15 48 14.3**	**+0.5**
	baz=61						
YOJ				S	**Sn**	**15 48 28.4**	**+0.3**
	baz=61						
YOJ	**Yonaguni jima**	**1.12**	**56**	P	**Pn**	**15 48 14.3**	**+0.5**
YOJ				*e*S	**Sn**	**15 48 28.4**	**+0.3**
ALS	**Alishan**	**1.14**	**254**	*e*P	**Pb**	**15 48 16.0**	**+0.2**
	baz=248						
ALS				*e*S	**Sb**	**15 48 30.4**	**+0.1**
	baz=248						
TIPB	**Shuangxi**	**1.14**	**352**	P	**Pb**	**15 48 15.4**	**-0.2**
	baz=357						
TIPB				*e*S	**Sb**	**15 48 30.0**	**-0.2**
	baz=357						
TWB1	**Santiao Chiao**	**1.17**	**360**	P	**Pb**	**15 48 15.4**	**-0.7**
	baz=5.0						
TWB1				*e*S	**Sn**	**15 48 29.5**	**+0.2**
	baz=5.0						
LONT	**Longtian**	**1.22**	**221**	⇑*e*P	**Pn**	**15 48 15.3**	**+0.1**
	baz=215						
LONT				*e*S	**Sn**	**15 48 31.4**	**+0.8**
	baz=215						
NWF	**Wu-fen Shan**	**1.25**	**351**	*e*P	**Pb**	**15 48 16.6**	**-0.8**
	baz=355						
LDUT	**Ludao**	**1.25**	**203**	*e*P	**Pn**	**15 48 15.1**	**-0.6**
	baz=198						
LDUT				*e*S	**Sn**	**15 48 30.2**	**-1.3**
	baz=198						
SXI1	**Grass Mountain**	**1.26**	**355**	*e*P	**Pb**	**15 48 16.9**	**-0.8**
	baz=359						
SXI1				*e*S	**Sb**	**15 48 32.4**	**-1.2**
	baz=359						
STYH	**Taoyuan**	**1.30**	**240**	*e*P	**Pb**	**15 48 17.7**	**-0.5**
	baz=235						
TWG	**Pinlang**	**1.32**	**220**	*e*P	**Pn**	**15 48 16.5**	**-0.1**
	baz=215						
TWG				*e*S	**Sn**	**15 48 32.2**	**-0.9**
	baz=215						
IRIF	**Iriomote-Funau**	**1.66**	**72**	P	**Pn**	**15 48 22.1**	**+0.8**
IRIF				*e*S	**Sn**	**15 48 42.0**	**+0.5**
HATJ	**Hateruma jima**	**1.67**	**82**	P	**Pn**	**15 48 22.1**	**+0.6**
HATJ				*e*S	**Sn**	**15 48 41.9**	**+0.1**
MASBT	**Mashibuluo**	**1.75**	**226**	*e*P	**Pn**	**15 48 23.7**	**+1.3**
	baz=222						
MASBT				*e*S	**Sb**	**15 48 46.2**	**-1.2**
	baz=222						
TAWH	**Dawu Township**	**1.80**	**215**	*e*P	**Pn**	**15 48 23.8**	**+0.6**
	baz=211						
LAY	**Lan-yu**	**1.83**	**193**	*e*P	**Pn**	**15 48 23.5**	**-0.2**
	baz=189						
LAY				*e*S	**Sn**	**15 48 44.2**	**-1.6**
	baz=189						
LYUB	**Lan-yu**	**1.86**	**192**	*e*P	**Pn**	**15 48 23.5**	**-0.6**
	baz=189						
LYUB				*e*S	**Sn**	**15 48 43.7**	**-2.8**
	baz=189						
JKRS	**Kuro-shima**	**1.89**	**77**	P	**Pn**	**15 48 25.4**	**+1.1**
JKRS				S	**Sn**	**15 48 48.5**	**+1.4**
JIJ	**Ishigaki jima**	**2.03**	**75**	P	**Pn**	**15 48 26.8**	**+0.4**
JIJ				S	**Sn**	**15 48 49.8**	**-0.9**
JTJ	**Tarama**	**2.60**	**71**	*e*S	**Sn**	**15 49 05.0**	**+0.4**
JIRB	**Irabujima**	**3.06**	**71**	*e*S	**Sn**	**15 49 16.7**	**+0.5**
JMJ2	**Miyako jima3**	**3.17**	**73**	S	**Sn**	**15 49 19.9**	**+1.0**
JOGS	**Gusukube**	**3.25**	**73**	*e*S	**Sn**	**15 49 21.6**	**+0.9**

*IDC **17** 16:27:37.5±1.9,15°.69S×72°.15W,h0km,mb3.9/2, mbtmp3.9/5,ML3.6/3,MS3.1/3,Error ellipse: s-maj=40.4km s-min=32.8km az=109.0*
*GUC **17** 16:27:42.1±0.6,15°.91S×71°.79W,h5km,ML3.8*
ISC 17 16:27:38.4±1.8,**15°.7S**±0°.1×**72°.2W**±0°.2,**h10**km,**n9**, σ1°**19**/10,**1C-1D**,**Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB12	**IPOC Station P**	**3.41**	**149**	⇓*i*P	**Pn**	**16 28 32.7**	**+0.9**
PB12				IAML		16 29 22.6	
	comp=N,241nm,0.6s						
PB12				IAML		16 29 24.0	
	comp=E,209nm,0.6s						
PB16	**IPOC Station P**	**3.67**	**136**	⇑*i*P	**Pn**	**16 28 37.5**	**+1.6**
PB16				IAML		16 29 34.0	
	comp=N,133nm,0.7s						
LPAZ	**La Paz**	**3.95**	**99**	Pn	**Pn**	**16 28 41.1**	**+1.5**
	comp=N,1.0nm,0.3s,baz=283,slow=10,SNR=21						
LPAZ				LR	LR	16 30 17.4	
	comp=N,265nm,19.3s,baz=254,slow=41						
	comp=N,5.5nm,0.6s						
HMBC	**Humberstone**	**5.06**	**155**	*e*P	**Pn**	**16 28 54.6**	**+0.1**
LVC	**Limon Verde**	**7.55**	**156**	Pn	**Pn**	**16 29 29.6**	**+0.7**
	comp=N,3.3nm,0.3s,baz=327,slow=8.7,SNR=17						
LVC				Sn	**Sn**	**16 30 53.2**	**-1.6**
	comp=N,0.5nm,0.3s,baz=153,slow=20,SNR=2.0						
LVC				LR	LR	16 32 27.8	
	comp=N,155nm,21.2s,baz=341,slow=38						
	comp=N,9.7nm,0.5s						
SIV	**San Ignacio**	**10.71**	**93**	Pn	**Pn**	**16 30 11.2**	**-0.8**
	comp=N,0.1nm,0.3s,baz=274,slow=11,SNR=14						
SIV				LR	LR	16 35 03.0	
	comp=N,78nm,18.6s,baz=294,slow=42						
	comp=N,1.9nm,0.5s						

PLCA	**Paso Flores**	**24.99**	**177**	P	**P**	**16 33 02.7**	**+0.3**
	comp=N,4.0nm,1.0s,baz=343,slow=10,SNR=6.2						
	comp=N,4.0nm,1.0s						
TORD	**Torodi Ar. Bea**	**78.48**	**73**	P	**P**	**16 39 39.9**	**-0.5**
	comp=N,0.8nm,0.8s,baz=250,slow=4.4,SNR=5.0						
	comp=N,0.8nm,0.8s						
SONM	**Songino Array**	**147.93**	**2**	PKPbc	**PKiKP**	**16 47 25.6**	**-0.4**
	comp=N,0.4nm,0.5s,baz=347,slow=1.4,SNR=2.7						

*NOU **17** 16:33:09.7,20°.23S×177°.47W,h547km,mb4.4/8,Fiji Islands Region*
*IDC **17** 16:33:10.9±1.9,20°.15S×177°.87W,h547km±20km, mb3.3/12,mbtmp4.2/15,Error ellipse: s-maj=21.8km s-min=15.9km az=91.0*
ISC 17 16:33:11.1±0.7,**20°.1S**±0°.1×**177°.9W**±0°.1,**h550**km,**n44**, σ1°**16**/41,**mb3.7**/12,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAVE	**Taveuni**	**3.92**	**330**	P	**P**	**16 34 32.9**	**+0.5**
MSVF	**Nonsavu**	**4.55**	**301**	P	**P**	**16 34 38.2**	**+0.9**
	17nm,0.7s,baz=217,slow=22,SNR=13						
MSVF	**Nonsavu**	**4.55**	**301**	P	**P**	**16 34 38.6**	**+1.2**
AFI	**Afiamalu**	**8.49**	**44**	P	P	16 35 07.1	-6.7
	21nm,0.7s,baz=297,slow=21,SNR=1.8						
AFI				S	S	16 36 43.8	-11
	19nm,0.6s,baz=39,slow=20,SNR=1.3						
DZM	**Mont Dzumac**	**14.78**	**260**	P	**P**	**16 36 19.0**	**+0.6**
	6.0nm,0.7s,baz=131,slow=20,SNR=1.9						
HAZ	**Te Kaha**	**17.97**	**191**	P	**P**	**16 36 47.4**	**-1.1**
MKAZ	**Moumakai**	**17.98**	**198**	P	**P**	**16 36 50.0**	**+1.4**
RUGZ	**Raukumara Rang**	**18.19**	**191**	P	**P**	**16 36 50.4**	**-0.3**
PUZ	**Pukehiki**	**18.20**	**190**	P	**P**	**16 36 50.7**	**+0.1**
TWGZ	**Tauwhareparae**	**18.34**	**190**	P	**P**	**16 36 52.9**	**+1.0**
TOZ	**Tahuroa Road**	**18.47**	**197**	P	**P**	**16 36 54.5**	**+1.5**
MWZ	**Matawai**	**18.58**	**191**	P	**P**	**16 36 53.7**	**-0.4**
URZ	**Urewera**	**18.59**	**193**	P	**P**	**16 36 52.2**	**-1.9**
	8.2nm,0.3s,baz=276,slow=3.3,SNR=34						
URZ	**Urewera**	**18.59**	**193**	P	**P**	**16 36 51.8**	**-2.3**
URZ	**Urewera**	**18.59**	**193**	P	**P**	**16 36 52.4**	**-1.7**
NMHZ	**Naumai**	**19.46**	**193**	P	**P**	**16 37 02.0**	**-0.1**
BKZ	**Black Stump Fm**	**19.59**	**193**	P	**P**	**16 37 01.2**	**-2.1**
BKZ	**Black Stump Fm**	**19.59**	**193**	P	**P**	**16 37 02.0**	**-1.3**
OTVZ	**Oturere**	**19.78**	**195**	P	**P**	**16 37 04.2**	**-0.9**
SNVZ	**South Ngauruho**	**19.80**	**195**	P	**P**	**16 37 05.1**	**-0.2**
BHHZ	**Black Hill Sta**	**19.99**	**194**	P	**P**	**16 37 04.8**	**-2.1**
KAHZ	**Kahuranaki**	**20.12**	**192**	P	**P**	**16 37 07.9**	**-0.1**
BFZ	**Birch Farm**	**21.10**	**193**	P	**P**	**16 37 15.6**	**-1.3**
QRZ	**Quartz Range**	**22.20**	**200**	P	**P**	**16 37 26.7**	**-0.1**
KHZ	**Kahutara**	**23.38**	**196**	P	**P**	**16 37 35.7**	**-1.5**
RPZ	**Rata Peaks**	**25.28**	**199**	P	**P**	**16 37 52.9**	**-1.2**
	4.5nm,0.7s,baz=2.4,slow=5.9,SNR=2.4						
	4.5nm,0.7s						
PMG	**Port Moresby**	**35.39**	**282**	P	**P**	**16 39 19.4**	**-2.0**
	17nm,0.9s,baz=135,slow=4.3,SNR=2.4						
	17nm,0.9s						
WRA	**Warramunga Arr**	**44.79**	**262**	P	**P**	**16 40 36.5**	**0.0**
	2.6nm,0.4s,baz=97,slow=7.9,SNR=108						
	2.6nm,0.4s						
VNDA	**Vanda**	**58.29**	**185**	P	**P**	**16 42 14.3**	**+1.5**
	1.1nm,0.9s,baz=3.2,slow=7.0,SNR=5.3						
	1.1nm,0.9s						
MJAR	**Matsushiro Arr**	**69.99**	**324**	P	**P**	**16 43 27.1**	**-0.6**
	1.7nm,0.6s,baz=160,slow=5.2,SNR=6.9						
	1.7nm,0.6s						
PETK	**Petropavlovsk-**	**75.95**	**345**	P	**P**	**16 44 01.0**	**-0.4**
	1.4nm,0.8s,baz=137,slow=6.7,SNR=3.6						
	1.4nm,0.8s						
USRK	**Ussuriysk Ar.**	**78.73**	**326**	P	**P**	**16 44 17.9**	**+1.2**
	1.7nm,0.6s,baz=201,slow=4.0,SNR=5.1						
	1.7nm,0.6s						
YBH	**Yreka Blue Hor**	**79.92**	**39**	P	**P**	**16 44 23.4**	**+0.2**
	1.0nm,0.8s,baz=117,slow=4.5,SNR=3.7						
	1.0nm,0.8s						
SEY	**Seymchan**	**86.05**	**347**	P	**P**	**16 44 52.8**	**-0.4**
	1.7nm,0.7s,baz=195,slow=8.9,SNR=6.0						
	1.7nm,0.7s						
TXAR	**Lajitas Array**	**86.74**	**57**	P	**P**	**16 44 57.7**	**+0.3**
	0.4nm,0.8s,baz=234,slow=4.1,SNR=4.6						
	0.4nm,0.8s						
PDAR	**Pinedale Array**	**88.60**	**43**	P	**P**	**16 45 05.8**	**-0.2**
	0.2nm,0.5s,baz=255,slow=7.1,SNR=1.5						
	0.2nm,0.5s						
CMAR	**Chiang Mai Arr**	**90.12**	**290**	P	**P**	**16 45 14.4**	**+1.2**
	1.3nm,1.0s,baz=103,slow=3.0,SNR=6.2						
	1.3nm,1.0s						
MKAR	**Makanchi Array**	**111.04**	**314**	PKiKP	**PKiKP**	**16 50 40.5**	**-1.7**
	0.5nm,0.7s,baz=66,slow=1.5,SNR=4.4						
HFS	**Hagfors**	**139.20**	**351**	PKhKP	PKPpre	16 51 27.5	
	2.4nm,0.9s,baz=90,slow=1.4,SNR=4.9						
AKASG	**Malin Array Be**	**142.75**	**331**	PKhKP	PKPpre	16 51 38.0	
	1.5nm,0.4s,baz=44,slow=4.9,SNR=11						
BRTR	**Keskin Array B**	**146.69**	**313**	PKPbc	**PKPbc**	**16 51 51.2**	**-0.6**
	0.9nm,0.5s,baz=135,slow=5.3,SNR=6.9						
ASF	**Jabal al Asfar**	**146.72**	**298**	PKPbc	**PKPbc**	**16 51 52.4**	**+0.3**
	3.9nm,1.2s,baz=229,slow=1.5,SNR=3.9						
MMAI	**Mount Meron Ar**	**147.75**	**300**	PKPbc	**PKPbc**	**16 51 54.8**	**+0.1**
	1.5nm,0.5s,baz=74,slow=6.2,SNR=7.1						
GERES	**GERESS Array B**	**149.88**	**345**	PKPbc	**PKPbc**	**16 51 59.1**	**-0.3**
	1.4nm,0.8s,baz=57,slow=4.9,SNR=8.0						

**MAN 17 16:35:13.3,9°.72N×122°.37E,h33km,mb3.7,ML2.4,MS1

	comp=E,31nm,0.3s							
CAVK				*i*	AML	AML	17 57 05.0	
	comp=N,23nm,1.1s							
CTYL	**Yalikoy Yolu**	**1.93**	**121**		PN	**Pn**	**17 56 32.5**	**+0.5**
VTS	**Vitosha**	**2.10**	**275**	⇓	P	**Pg**	**17 56 38.8**	**-0.1**
VTS				⇑	S	**Sn**	**17 57 01.4**	**+0.2**
HUMR	**Humele**	**2.20**	**339**	⇓	S	**Sg**	**17 57 07.6**	**-1.5**
SULR		**2.20**	**3**	⇑	P	**Pg**	**17 56 40.6**	**-0.1**
SULR				⇑	S	**Sb**	**17 57 06.9**	**+0.5**
ELBA	**Catalca**	**2.21**	**126**		P	**Pn**	**17 56 35.2**	**-0.6**
ELBA					S	**Sg**	**17 57 09.0**	**-0.4**
TIRR	**Tirgusor**	**2.61**	**40**	⇓	P	**Pg**	**17 56 48.0**	**-0.6**
TIRR				⇑	S	**Sb**	**17 57 19.8**	**+1.7**
KNT	**Kendrikon**	**2.72**	**242**		PN	**Pn**	**17 56 43.9**	**+1.0**
BLKB	**Belogradchik**	**2.74**	**296**	⇓	S	**Sb**	**17 57 21.7**	**-0.3**
TPGR	**Topolog**	**2.92**	**35**	⇑	P	**Pb**	**17 56 52.0**	**+0.8**
TPGR				⇑	S	**Sb**	**17 57 27.4**	**+0.3**
VOIR		**3.05**	**346**	⇑	P	**Pb**	**17 56 51.6**	**-1.7**
VOIR				⇑	S	**Sb**	**17 57 33.2**	**+2.4**
ARR	**Arges**	**3.07**	**341**	⇓	S	**Sg**	**17 57 34.9**	**-2.2**
CFR	**Carcaliu**	**3.08**	**28**	⇑	P	**Pb**	**17 56 53.4**	**-0.4**
CFR				⇑	S	**Sb**	**17 57 31.2**	**-0.5**
GRG	**Griva**	**3.14**	**242**		PN	**Pn**	**17 56 49.6**	**+0.8**
LOT	**Lotru**	**3.40**	**331**		PN	**Pn**	**17 56 53.1**	**+0.7**

*KRSC **17** 18:16:55.1±1.8,48.˚15N×156.˚94E,h16km±41km,ML4.0*
*IDC **17** 18:16:57.7±4.8,48.˚23N×154.˚90E,h54km±38km,mb3.3/8, mbtmp3.5/9,ML2.5/1,Error ellipse: s-maj=50.5km s-min=25.1km az=158.0*
ISC 17 18:16:53.1±1.2,48.˚0N±0.˚1×155.˚5E±0.˚1,h27km,n38, σ2s03/41,mb3.5/8,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.71**	**9**	*e*P		**Pn**	**18 17 35.8**	**+1.1**
SKR				*e*S		**Sn**	**18 18 07.9**	**+1.3**
PAU	**Pauzhetka**	**3.57**	**14**	*e*P		**Pn**	**18 17 48.9**	**+2.3**
PAU				*e*S		**Sn**	**18 18 29.9**	**+2.1**
KDTR	**Khodutka, Kamc**	**4.16**	**23**	*e*P		**Pn**	**18 17 55.5**	**+0.8**
KDTR				*e*S		**Sn**	**18 18 41.5**	**-0.9**
ASAK	**Asacha**	**4.65**	**19**	*e*P		**Pn**	**18 18 03.2**	**+1.7**
MTVR	**Mutnovka**	**4.81**	**20**	*e*P		**Pn**	**18 18 05.3**	**+1.6**
MTVR				*e*S		**Sn**	**18 18 58.4**	**-0.1**
RUS	**Russkaya**	**4.84**	**23**	*e*P		**Pn**	**18 18 04.5**	**+0.4**
RUS				*e*S		**Sn**	**18 18 57.1**	**-2.1**
GRL	**Gorelyy**	**4.84**	**19**	*e*P		**Pn**	**18 18 06.2**	**+2.0**
PETK	**Petropavlovsk-**	**5.30**	**15**	P		**Pn**	**18 18 12.8**	**+2.4**
	0.9nm,0.3s,baz=180,slow=13,SNR=7.7							
PETK				S		**Sn**	**18 19 09.2**	**-1.3**
	2.7nm,0.4s,baz=292,slow=24,SNR=5.5 2.8nm,0.6s							
DALK	**Dalny**	**5.45**	**22**	*e*P		**Pn**	**18 18 13.6**	**+1.2**
DALK				*e*S		**Sn**	**18 19 12.7**	**-1.4**
UGLR	**Uglovaya**	**5.63**	**21**	*e*P		**Pn**	**18 18 16.9**	**+1.9**
AVH	**Avacha**	**5.66**	**20**	*e*P		**Pn**	**18 18 17.8**	**+2.4**
KOK	**Koryaka**	**5.66**	**20**	*e*P		**Pn**	**18 18 18.2**	**+2.8**
SMAR	**Somma**	**5.67**	**21**	*e*P		**Pn**	**18 18 17.6**	**+1.9**
KRER	**Koryakskii**	**5.70**	**20**	*e*P		**Pn**	**18 18 18.4**	**+2.4**
SDLR	**Sedlovina**	**5.71**	**21**	*e*P		**Pn**	**18 18 17.1**	**+1.1**
KRX	**Arik**	**5.72**	**20**	*e*P		**Pn**	**18 18 18.6**	**+2.3**
SPN	**Mys Shipunski**	**5.87**	**28**	*e*P		**Pn**	**18 18 19.3**	**+1.2**
GNL	**Ganaly**	**5.90**	**15**	*e*P		**Pn**	**18 18 22.5**	**+3.7**
KUR	**Kuril'sk**	**5.91**	**245**	*e*P		**Pn**	**18 18 20.4**	**+1.6**
KUR					AMB	AMB	18 18 20.7	
	20nm,0.5s							
KUR				*e*S		**Pb**	**18 18 37.9**	**+2.6**
KUR				A		A	18 19 48.7	
	30nm,0.5s							
KUR				A		A	18 19 48.7	
	40nm,0.5s							
SHO	**Shikotan**	**7.29**	**239**	*e*P		**Pn**	**18 18 35.0**	**-2.8**
SHO					AMB	AMB	18 18 37.5	
	10.0nm,0.5s							
SHO				*e*S		**Pb**	**18 19 02.7**	**+3.9**
SHO				A		A	18 19 11.4	
	50nm,0.5s							
SHO				A		A	18 19 11.4	
	40nm,0.5s							
MKZ	**Mys Kozlova**	**7.64**	**29**	*e*P		**Pn**	**18 18 42.7**	**+0.3**
YUK	**Yuzh-Kuril'sk**	**7.77**	**243**	*e*P		**Pn**	**18 18 43.2**	**-1.0**
YUK					AMB	AMB	18 18 46.0	
	20nm,0.5s							
YUK				*e*S		Pb	18 19 17.0	+10
YUK				A		A	18 19 23.9	
	20nm,0.5s							
YUK				A		A	18 19 23.9	
	40nm,0.5s							
TUMR	**Tumrok**	**7.84**	**20**	*e*P		**Pn**	**18 18 48.3**	**+3.0**
NMR	**Nemuro--Hokkai**	**8.23**	**239**	*e*P		**Pn**	**18 18 48.6**	**-2.0**
KSRS	**Korea Array**	**22.69**	**252**	P		**P**	**18 21 52.3**	**0.0**
	1.1nm,0.6s,baz=56,slow=9.4,SNR=3.9 1.1nm,0.6s							
H11N2	**WAKE ISLAND Hy**	**29.70**	**158**	T		T	18 54 36.2	
	baz=345,slow=76,SNR=16							
H11N1	**WAKE ISLAND Hy**	**29.72**	**158**	T		T	18 54 45.2	
	baz=345,slow=76,SNR=24							
H11N3	**WAKE ISLAND Hy**	**29.72**	**158**	T		T	18 54 35.8	
	baz=345,slow=76,SNR=12							
H11S1	**WAKE ISLAND Hy**	**30.83**	**159**	T		T	18 56 14.7	
	baz=345,slow=76,SNR=128							
H11S3	**WAKE ISLAND Hy**	**30.84**	**159**	T		T	18 56 12.1	
	baz=345,slow=76,SNR=158							
H11S2	**WAKE ISLAND Hy**	**30.85**	**159**	T		T	18 56 14.3	
	baz=345,slow=76,SNR=124							
SONM	**Songino Array**	**32.42**	**288**	P		**P**	**18 23 18.5**	**-2.1**
	0.2nm,0.5s,baz=66,slow=5.2,SNR=1.8 0.2nm,0.5s							
ZALV	**Zalesovo Beam**	**43.16**	**305**	P		**P**	**18 24 48.3**	**-2.8**
	0.3nm,0.3s,baz=87,slow=8.8,SNR=1.9 0.3nm,0.3s							
MKAR	**Makanchi Array**	**47.77**	**297**	P		**P**	**18 25 26.0**	**-1.6**
	0.7nm,0.7s,baz=62,slow=8.4,SNR=6.0 0.7nm,0.7s							
FINES	**FINESS Array B**	**63.56**	**335**	P		**P**	**18 27 20.5**	**-0.1**
	1.2nm,0.8s,baz=36,slow=7.3,SNR=5.8 1.2nm,0.8s							
AKASG	**Malin Array Be**	**71.36**	**327**	P		**P**	**18 28 09.5**	**-0.6**
	0.2nm,0.3s,baz=33,slow=6.7,SNR=2.3 0.2nm,0.3s							
TXAR	**Lajitas Array**	**75.50**	**62**	P		**P**	**18 28 37.5**	**+2.5**
	0.3nm,0.7s,baz=308,slow=4.9,SNR=3.7 0.3nm,0.7s							
BRTR	**Keskin Array B**	**78.53**	**318**	P		**P**	**18 28 50.5**	**-1.5**
	0.4nm,0.8s,baz=69,slow=4.5,SNR=3.6 0.4nm,0.8s							

*IDC **17** 18:17:20.4±1.1,6.˚59S×129.˚74E,h0km,mb3.9/6, mbtmp4.0/7,ML4.2/1,MS2.8/1,Error ellipse: s-maj=65.6km s-min=20.3km az=63.0*
*NEIC **17** 18:17:25.9±2.6,6.˚44S±0.˚04×129.˚94E±0.˚07,h40km±10km, mb4.2/13,Error ellipse: s-maj=11.2km s-min=3.8km az=116.0*
*DJA **17** 18:17:25.7±2.5,6.˚S±4.˚×13.˚0E±.˚,h18km±22km,M4.2/9, mb4.5/7,mB4.9/1,MLv4.1/9,Mw(mB)4.2/1*
ISC 17 18:17:24.8±0.5,6.˚49S±0.˚06×129.˚92E±0.˚07,h35km,n53, σ1s88/48,mb4.2/8,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.95**	**360**	P		**Pn**	**18 17 55.0**	**-0.4**
SAUI	**Saumlaki**	**2.02**	**137**			**Pn**	**18 17 59.5**	**+3.1**
SAUI	**Saumlaki**	**2.02**	**137**	P		Pn	18 18 00.9	+4.5
SAUI	**Saumlaki**	**2.02**	**137**	P		Pn	18 18 00.1	+3.7
AAI	**Ambon**	**3.27**	**328**	P		**Pn**	**18 18 13.9**	**+0.3**
MSAI	**Masohi**	**3.27**	**342**	P		**Pn**	**18 18 14.5**	**+0.9**
MSAI				S		**Sn**	**18 18 49.8**	**-1.5**
FAKI	**Fak Fak**	**4.24**	**33**	Pn		**Pn**	**18 18 27.6**	**+0.7**
FAKI	**Fak Fak**	**4.24**	**33**	P		**Pn**	**18 18 28.0**	**+1.1**
FAKI	**Fak Fak**	**4.24**	**33**	P		**Pn**	**18 18 27.8**	**+0.9**
NLAI	**Namlea**	**4.28**	**319**	P		Pn	18 18 37.2	+10
SWI	**Sorong**	**5.75**	**14**	P		**Pn**	**18 18 48.4**	**+0.8**
	0.1nm27nm,0.5s							
SANI	**Sanana**	**5.90**	**318**	P		**Pn**	**18 18 53.5**	**+3.8**
	0.1nm27nm,0.7s							
SANI	**Sanana**	**5.90**	**318**	P		**Pn**	**18 18 52.3**	**+2.6**
LBMI	**Labuha**	**6.29**	**337**	P		**Pn**	**18 18 58.5**	**+3.4**
	0.1nm38nm,0.9s							
MTN	**Manton Dam**	**6.43**	**169**			**Pn**	**18 18 58.0**	**+1.0**
MTN	**Manton Dam**	**6.43**	**169**	P		**Pn**	**18 18 59.0**	**+2.0**
SOEI	**Soe**	**6.47**	**239**	Pn		**Pn**	**18 18 58.9**	**+1.2**
KDU	**Kakadu**	**6.66**	**158**	P		**Pn**	**18 19 00.9**	**+0.8**

KNRA	**Kununurra**	**9.20**	**187**			**Pn**	**18 19 35.5**	**+0.5**
KNRA	**Kununurra**	**9.20**	**187**	P		**Pn**	**18 19 35.9**	**+0.8**
KAPI	**Kappang**	**10.22**	**278**	LR		LR	18 24 28.1	
	comp=Z,57nm,19.9s,baz=122,slow=42							
KAPI	**Kappang**	**10.22**	**278**	Pn		**Pn**	**18 19 52.4**	**+3.4**
WB0	**Warramunga Arr**	**13.90**	**162**			**Pn**	**18 20 36.4**	**-3.0**
WRAB	**Tennant Creek**	**14.04**	**163**	Pn		**Pn**	**18 20 38.7**	**-2.7**
WRA	**Warramunga Arr**	**14.05**	**163**	Pn		**Pn**	**18 20 38.6**	**-2.8**
	1.3nm,0.3s,baz=342,slow=13,SNR=86							
WRA					Sn	Sn	18 23 04.0	-12
	0.8nm,0.3s,baz=355,slow=19,SNR=3.8 2.3nm,0.5s							
WRA	**Warramunga Arr**	**14.05**	**163**			Pn	18 20 36.9	-4.5
WB2	**Warramunga Arr**	**14.05**	**163**			**Pn**	**18 20 38.5**	**-3.0**
WR0	**Warramunga Arr**	**14.12**	**162**			**Pn**	**18 20 39.1**	**-3.3**
COEN	**Coen**	**15.00**	**121**	Pn		**Pn**	**18 20 51.9**	**-2.5**
COEN				IAmb		IAmb	18 20 56.2	
	comp=Z,12nm,1.1s							
COEN	**Coen**	**15.00**	**121**	P		**Pn**	**18 20 53.9**	**-0.5**
QIS	**Mount Isa**	**16.85**	**147**	P		**Pn**	**18 21 16.7**	**-1.4**
PMG	**Port Moresby**	**17.32**	**101**	P		**P**	**18 21 25.6**	**+0.5**
PMG				IAmb		IAmb	18 22 02.6	
	comp=Z,34nm,1.2s							
AS31	**Alice Springs**	**17.50**	**168**	P		**Pn**	**18 21 25.1**	**-1.2**
ASAR	**Alice Springs**	**17.51**	**168**			**Pn**	**18 21 25.3**	**-0.9**
PSA00	**Pilbara Seismi**	**17.88**	**212**	P		**Pn**	**18 21 27.2**	**-3.6**
MTSU	**Mount Surprise**	**18.20**	**131**	P		**P**	**18 21 34.9**	**+0.1**
KKM	**Kota Kinabalu**	**18.49**	**312**	P		**P**	**18 21 35.1**	**-3.0**
KKM				IAmb		IAmb	18 22 09.8	
	comp=Z,16nm,1.1s							
WRKA	**Warakurna**	**18.51**	**185**	P		**P**	**18 21 37.8**	**-0.4**
CTA	**Charters Tower**	**20.84**	**132**	P		**P**	**18 22 03.7**	**+0.1**
	comp=Z,1.3nm,0.4s,baz=308,slow=13,SNR=1.3 comp=Z,1.3nm,0.4s							
CTAO	**Charters Tower**	**20.84**	**132**	P		**P**	**18 22 02.9**	**-0.7**
CTAO				IAmb		IAmb	18 22 13.2	
	comp=Z,31nm,1.4s							
STKA	**Stephens Creek**	**27.52**	**158**	P		**P**	**18 23 09.5**	**+1.3**
	comp=Z,1.1nm,0.5s,baz=349,slow=6.7,SNR=5.6 comp=Z,1.1nm,0.5s							
STKA	**Stephens Creek**	**27.52**	**158**	P		**P**	**18 23 08.4**	**+0.2**
PATS	**Pohnpei**	**31.27**	**65**	P		**P**	**18 23 42.5**	**+0.9**
SONM	**Songino Array**	**57.93**	**341**	P		**P**	**18 27 13.4**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=167,slow=6.8,SNR=4.0 comp=Z,0.5nm,0.5s							
PEA0B	**Petropavlovsk-**	**63.87**	**18**	P		**P**	**18 27 54.4**	**+0.7**
PETK	**Petropavlovsk-**	**63.87**	**18**	P		**P**	**18 27 54.5**	**+0.8**
MK31	**Makanchi Array**	**67.75**	**327**	P		**P**	**18 28 19.2**	**+0.2**
MK31				IAmb		IAmb	18 28 21.6	
	comp=Z,2.4nm,1.0s							
MKAR	**Makanchi Array**	**67.75**	**327**	P		**P**	**18 28 20.8**	**+1.8**
	comp=Z,1.7nm,0.7s,baz=126,slow=6.5,SNR=18 comp=Z,1.7nm,0.7s							
MKAR	**Makanchi Array**	**67.75**	**327**	P		**P**	**18 28 20.1**	**+1.1**
ZALV	**Zalesovo Beam**	**71.09**	**334**	P		**P**	**18 28 40.3**	**+1.0**
	comp=Z,0.6nm,0.5s,baz=116,slow=6.6,SNR=4.3 comp=Z,0.6nm,0.5s							
SEY	**Seymchan**	**71.32**	**11**	P		**P**	**18 28 42.7**	**+2.2**
	comp=Z,2.3nm,0.8s,baz=285,slow=8.8,SNR=5.5 comp=Z,2.3nm,0.8s							
ABKAR	**Akbulak array**	**82.06**	**322**	P		**P**	**18 29 41.4**	**-0.1**
ABKAR				IAmb		IAmb	18 29 50.6	
	comp=Z,1.5nm,0.7s							
QSPA	**South Pole Qui**	**83.49**	**180**	P		P	18 29 54.0	+5.2
QSPA				IAmb		IAmb	18 29 58.5	
	comp=Z,3.8nm,1.2s							

MAN 17 18:23:36.2,6.˚69N×126.˚22E,h26km,mb4.4,ML3.2,MS2.9, Mindanao

*IDC **17** 18:37:24.1±2.6,21.˚56S×71.˚70W,h0km,mb4.1/1, mbtmp3.8/4,ML3.5/3,MS3.3/2,Error ellipse: s-maj=53.8km s-min=35.0km az=40.0*
*GUC **17** 18:37:26.9±0.7,21.˚43S×71.˚55W,h38km±3km,ML3.4*
ISC 17 18:37:26.1±1.5,21.˚43S±0.˚04×71.˚83W±0.˚09,h35km,n26, σ1s49/37,1C-7D,Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PATCX	**Punta Patache**	**1.68**	**69**	⇓*i*P		**Pn**	**18 37 52.4**	**-0.7**
PATCX				*i* S		**Sn**	**18 38 10.9**	**-2.6**
TA01	**Diego Aracena**	**1.77**	**61**	*e*P		**Pn**	**18 37 53.4**	**-0.8**
TA01				*i* S		**Sn**	**18 38 13.5**	**-2.0**
TA01				IAML			18 38 15.1	
	comp=E,536nm,0.3s							
PB04	**IPOC Station P**	**1.80**	**120**	*e*P		**Pn**	**18 37 54.3**	**-0.6**
PB04				*i* S		**Sn**	**18 38 14.5**	**-2.0**
PB04				IAML			18 38 16.3	
	comp=N,887nm,0.2s							
PB02	**IPOC Station P**	**1.81**	**87**	⇓*i*P		**Pn**	**18 37 54.3**	**-0.5**
PB02				*i* S		**Sn**	**18 38 14.5**	**-2.1**
PB02				IAML			18 38 17.2	
	comp=E,771nm,0.3s							
PB07	**IPOC Station P**	**1.84**	**99**	⇓*i*P		**Pn**	**18 37 54.6**	**-0.6**
PB07				*i* S		**Sn**	**18 38 15.3**	**-2.1**
PB07				IAML			18 38 16.4	
	comp=N,381nm,0.2s							
HMBC	**Humberstone**	**2.15**	**58**	*e*P		**Pn**	**18 37 59.0**	**-0.6**
HMBC				*i* S		**Sn**	**18 38 23.7**	**-1.5**
HMBC				IAML			18 38 25.0	
	comp=N,521nm,0.5s							
PB01	**IPOC Station P**	**2.22**	**80**	⇓*i*P		**Pn**	**18 38 00.5**	**0.0**
PB01				*i* S		**Sn**	**18 38 25.5**	**-1.3**
PB01				IAML			18 38 26.3	
	comp=N,462nm,0.3s							
PB10	**IPOC Station P**	**2.38**	**150**	⇓*i*P		**Pn**	**18 38 01.5**	**-1.2**
PB10				*i* S		**Sn**	**18 38 26.5**	**-4.2**
PB09	**IPOC Station P**	**2.44**	**99**	⇓*i*P		**Pn**	**18 38 04.5**	**+1.0**
PB09				*i* S		**Sn**	**18 38 32.2**	**0.0**
PB09				IAML			18 38 34.4	
	comp=E,310nm,0.5s							
PB06	**IPOC Station P**	**2.45**	**122**	*e*P		**Pn**	**18 38 03.7**	**0.0**
PB06				*i* S		**Sn**	**18 38 31.2**	**-1.3**
PB06				IAML			18 38 32.9	
	comp=E,267nm,0.1s							
PB11	**IPOC Station P**	**2.63**	**51**	⇓*i*P		**Pn**	**18 38 06.2**	**-0.1**
PB11				*i* S		**Sn**	**18 38 35.7**	**-1.4**
PB11				IAML			18 38 37.5	
	comp=N,348nm,0.3s							
PB15	**IPOC Station P**	**2.81**	**129**	*e*P		**Pn**	**18 38 08.6**	**-0.1**
PB08	**IPOC Station P**	**2.82**	**63**	*e*P		**Pn**	**18 38 09.3**	**+0.4**
PB08				*i* S		**Sn**	**18 38 41.2**	**-0.7**
PB08				IAML			18 38 44.6	
	comp=N,265nm,0.3s							
LVC	**Limon Verde**	**2.96**	**114**	Pn		**Pn**	**18 38 11.9**	**+1.0**
	comp=N,6.0nm,0.3s,baz=291,slow=11,SNR=12							
LVC					Sn	**Sn**	**18 38 45.0**	**-0.3**
	comp=N,20nm,0.3s,baz=4.5,slow=23,SNR=21							
LVC				LR		LR	18 39 17.0	
	comp=N,91nm,21.9s,baz=218,slow=40 comp=N,14nm,0.3s							
LVC	**Limon Verde**	**2.96**	**114**	⇑	P	**Pn**	**18 38 11.8**	**+1.0**
LVC				*i* S		**Sn**	**18 38 44.8**	**-0.5**
GO01	**Chusmiza**	**3.03**	**55**	*e*P		**Pn**	**18 38 12.5**	**+0.5**
GO01				*i* S		**Sn**	**18 38 46.7**	**-0.7**
PB12	**IPOC Station P**	**3.14**	**27**	*e*P		**Pn**	**18 38 12.8**	**-0.4**
PB12				*i* S		**Sn**	**18 38 46.2**	**-3.3**
PB12				IAML			18 38 48.7	
	comp=N,139nm,0.3s							
PB16	**IPOC Station P**	**3.78**	**36**	*e*P		**Pn**	**18 38 22.7**	**+0.3**
LPAZ	**La Paz**	**6.20**	**35**	Pn		Pn	18 38 59.8	+4.0
	comp=N,0.6nm,0.3s,baz=206,slow=10,SNR=9.8 comp=N,1.3nm,0.3s							
SIV	**San Ignacio**	**11.54**	**64**	Pn		**Pn**	**18 40 07.7**	**-0.8**
	baz=239,slow=14,SNR=9.2 comp=N,1.3nm,0.4s							
H03N1	**Juan Fernandez**	**13.50**	**206**	T		T	18 54 25.8	
	baz=30,slow=72,SNR=45							
H03N2	**Juan Fernandez**	**13.51**	**206**	T		T	18 54 28.0	
	baz=30,slow=72,SNR=31							
H03N3	**Juan Fernandez**	**13.52**	**206**	T		T	18 54 24.8	
	baz=30,slow=72,SNR=22							
ELK	**Elko**	**73.86**	**327**	LR		LR	19 18 53.3	
	comp=N,91nm,18.0s,baz=247,slow=34							
TORD	**Torodi Ar. Bea**	**79.91**	**72**	P		**P**	**18 49 34.1**	**+2.2**
	comp=N,1.7nm,0.9s,baz=255,slow=4.9,SNR=6.9 comp=N,1.7nm,0.9s							
MKAR	**Makanchi Array**	**147.13**	**34**	PKPbc		**PKiKP**	**18 57 08.9**	**+1.1**
	comp=N,0.8nm,0.8s,baz=339,slow=3.7,SNR=7.5							

MAN 17 18:41:31.8,9.˚18N×126.˚65E,h8km,mb4.1,ML2.8,MS2.5, Mindanao

MAN 17 18:56:50.5,7.˚68N×124.˚83E,h18km,mb3.8,ML2.5,MS2.0, Mindanao

*MOS **17** 18:58:26.7±1.3,56.˚09N×113.˚74E,h11km,mb4.4/5,Error ellipse: s-maj=9.0km s-min=6.8km az=62.4*
MOS Felt (III-IV) at Severomuisk, Mamakan.
*IDC **17** 18:58:27.2±0.7,56.˚07N×113.˚64E,h0km,mb3.7/14, mbtmp3.8/18,ML3.8/3,MS3.7/4, Error ellipse: s-maj=16.3km s-min=10.4km az=152.0*
*NEIC **17** 18:58:28.8±2.5,56.˚07N±0.˚07×113.˚7E±0.˚2,h17km±5km, mb4.3/15,Error ellipse: s-maj=12.7km s-min=9.9km az=89.0*
*BYKL **17** 18:58:28.0±0.2,56.˚13N×113.˚74E,h7km±3km, Mw4.3/12(IEC),#STATIONS MA2 PET MAJO TATO ENH KMI WMQ AAK KURK KEV SOEG NOR FELT I=III-IV MSK at Severomuisk and III at Mamakan*
ISC 17 18:58:26.3±0.5,56.˚02N±0.˚02×113.˚7E±0.˚02,h6km±3km, n132,σ2s86/188,mb4.1/24,MS3.8/10,12C-9D,East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.16**	**310**	*e*PG		**Pg**	**18 58 30.2**	**+0.7**
SVKR				*e*			18 58 31.4	
SVKR				pmax		pmax		
	comp=Z,21μm,0.2s							
SVKR				smax		smax		
	comp=N,18μm,1.7s							
SVKR	**Severomuysk**	**0.16**	**310**	⇑*i*Pg		**Pg**	**18 58 30.2**	**+0.7**
SVKR				Pmax			18 58 30.6	
	comp=N,21μm,0.2s							
SVKR				*e*Sg		**Sg**	**18 58 32.2**	**+0.6**
SVKR				Smax			18 58 32.5	
	comp=N,722μm,0.3s							
NLYR	**Nelyaty**	**1.18**	**65**	*e*PG		**Pn**	**18 58 49.0**	**-0.3**
NLYR				*e*			18 59 04.2	
NLYR				pmax		pmax		
	comp=Z,5μm,0.4s							
NLYR				smax		smax		
	comp=N,11μm,1.0s							
NLYR	**Nelyaty**	**1.18**	**65**	⇓*i*Pg		**Pn**	**18 58 49.0**	**-0.3**
NLYR				*e*Pb		**Pg**	**18 58 51.2**	**+2.4**
NLYR				max			18 58 51.7	
	comp=N,5μm,0.2s							
NLYR				*e*			18 58 53.8	
NLYR				*e*Sg		**Sn**	**18 59 03.9**	**-1.8**
NLYR				*e*Sb		**Sg**	**18 59 08.1**	**+4.0**
NLYR				max			18 59 08.9	
	comp=N,11μm,0.2s							
KMO	**Kumora**	**1.45**	**266**	⇓*i*PG		**Pg**	**18 58 54.2**	**+0.1**
KMO				*e*			18 59 12.3	
KMO				pmax		pmax		
	comp=Z,3μm,0.4s							
KMO				smax		smax		
	comp=N,4μm,1.0s							
KMO	**Kumora**	**1.45**	**266**	⇓*i*Pg		**Pg**	**18 58 54.1**	**0.0**
KMO				*e*Pb		**Pb**	**18 58 55.6**	**+1.9**
KMO				max			18 58 59.6	
	comp=N,4μm,0.6s							
KMO				*e*Sg		**Sg**	**18 59 13.4**	**+0.5**
KMO				*e*			18 59 15.6	
KMO				max			18 59 17.3	
	comp=N,34μm,0.9s							
BOD	**Bodaibo**	**1.81**	**4**	⇑*i*PN		**Pb**	**18 58 58.7**	**-1.1**
BOD				*e*			18 59 21.0	
BOD				pmax		pmax		
	comp=Z,2μm,0.5s							
BOD				smax		smax		
	comp=E,9μm,0.4s							
BOD	**Bodaibo**	**1.81**	**4**	⇑*i*Pg		**Pb**	**18 58 58.7**	**-1.1**
BOD				Pmax			18 58 59.1	
	comp=E,2μm,0.2s							
BOD				*e*Sg		**Sb**	**18 59 20.8**	**-2.0**
BOD				Smax			18 59 21.9	
	comp=E,10μm,0.2s							
YLYR	**Ulyunkhan**	**1.88**	**234**	*e*Pn		**Pg**	**18 59 02.1**	**-0.1**
YLYR				⇓*i*Pg		**Pb**	**18 59 02.6**	**+1.7**
YLYR				Pmax			18 59 03.3	
	comp=E,2μm,1.0s							
YLYR				*e*			18 59 05.8	
YLYR				*e*Sg		**Sg**	**18 59 28.4**	**+1.9**
YLYR				Smax			18 59 30.7	
	comp=E,14μm,0.4s							
NIZ	**Nizh Angarsk**	**2.40**	**266**	*e*PN		**Pb**	**18 59 08.3**	**-1.5**
NIZ				*e*S		**Sg**	**18 59 41.3**	**-1.9**
NIZ				smax		smax		
	comp=N,6μm,1.0s							
NIZ	**Nizh Angarsk**	**2.40**	**266**	⇓*i*Pn		**Pb**	**18 59 08.3**	**-1.5**
NIZ				*e*Pg		**Pg**	**18 59 11.3**	**-0.8**
NIZ				Pmax			18 59 11.5	
	comp=N,1μm,0.6s							
NIZ				*e*			18 59 40.0	
NIZ				*e*Sg		**Sg**	**18 59 42.1**	**-1.1**
NIZ				Smax			18 59 49.5	
	comp=N,6μm,0.8s							
CRS	**Chara**	**2.65**	**69**	*e*PN		**Pb**	**18 59 11.6**	**-2.5**
CRS				*e*			18 59 15.8	
CRS				*e*			18

comp=Z,544nm,1.1s
CIT smax smax
comp=E,3μm,1.8s
CIT Chita 4.01 182 *e*Pn **Pn** **18 59 31.0 +2.8**
CIT *e*Pg **Pg** **18 59 41.6 -1.4**
CIT Pmax 18 59 43.7
comp=E,655nm,0.6s
CIT *e*Sn **Sn** **19 00 18.8 +3.3**
CIT *e*Sg **Sg** **19 00 35.3 +0.5**
CIT Smax 19 00 41.5
comp=E,3μm,0.9s
MXMB Maximikha 4.02 229 *e*Pg **Pg** **18 59 41.8 -1.4**
MXMB *e*Sg **Sg** **19 00 35.0 -0.2**
OGRR Ongureny 4.29 239 *e*PN Pb 18 59 36.5 -5.6
OGRR *e* 18 59 47.5
OGRR *e* 19 00 41.9
OGRR pmax pmax
comp=Z,620nm,2.0s
OGRR smax smax
comp=N,2μm,1.6s
OGRR Ongureny 4.29 239 *e*Pn Pb 18 59 36.8 -5.3
OGRR *e* 18 59 39.4
OGRR *e*Pg **Pg** **18 59 46.7 -1.7**
OGRR Pmax 18 59 49.0
comp=N,464nm,0.9s
OGRR *e*Sn **Sn** **19 00 25.2 +2.7**
OGRR *e*Sg **Sg** **19 00 42.5 -1.5**
OGRR Smax 19 00 53.5
comp=N,2μm,1.3s
YKLR Yuktali 4.43 79 *e*Pn **Pn** **18 59 35.9 +2.0**
YKLR *e*Pg **Pb** **18 59 46.7 +2.3**
YKLR *e* 19 00 16.8
YKLR *e*Sn **Sn** **19 00 25.9 +0.1**
YKLR *e*Sg **Sg** **19 00 45.7 -2.6**
KELR Kotokel 4.66 228 *e*Pn **Pn** **18 59 40.6 +3.4**
KELR *e*Pg **Pg** **18 59 52.8 -2.7**
KELR *e*Sg **Sg** **19 00 53.3 -2.5**
ZRHB Zarechye 5.20 231 *e*Pg **Pg** **19 00 02.7 -3.2**
ZRHB Pmax 19 00 17.4
comp=N,434nm,0.9s
ZRHB *e*Sg **Sg** **19 01 12.3 -0.9**
ZRHB Smax 19 01 32.8
comp=N,5μm,1.2s
TRG Tyrgan 5.43 236 *e*PN **Pn** **18 59 51.0 +3.3**
TRG Tyrgan 5.43 236 *e*Pn **Pn** **18 59 50.3 +2.6**
TRG *e*Pg Pg 19 00 05.5 -4.7
TRG Pmax 19 00 11.9
comp=N,114nm,1.3s
TRG *e*Sg **Sg** **19 01 16.1 -4.3**
TRG Smax 19 01 29.3
comp=N,733nm,1.0s
UUDB Ulan-Yde 5.50 223 *e*Pn **Pn** **18 59 52.6 +3.8**
UUDB *e*Pg **Pg** **19 00 08.8 -2.8**
UUDB Pmax 19 00 15.4
comp=N,319nm,1.5s
UUDB *e*Sg **Sg** **19 01 20.9 -2.0**
UUDB Smax 19 01 26.7
comp=N,6μm,1.9s
FFNB Fofonovo 5.73 229 *e* **Pb** **19 00 05.8 -0.8**
FFNB *e*Pg **Pg** **19 00 12.1 -3.9**
FFNB *e*Sg **Sg** **19 01 28.4 -1.8**
KAB Kabansk 5.78 229 *e*PG **Pg** **19 00 15.4 -1.4**
KAB *e*S **Sg** **19 01 30.1 -1.5**
KAB smax smax
comp=E,4μm,1.7s
KAB Kabansk 5.78 229 *e*Pg **Pg** **19 00 13.9 -2.9**
KAB Pmax 19 00 28.2
comp=E,307nm,0.5s
KAB *e*Sg **Sg** **19 01 28.7 -2.9**
KAB Smax 19 01 56.0
comp=E,4μm,1.3s
CLNS Chul'man 6.22 78 *e*Pn **Pn** **19 00 00.8 +2.1**
CLNS *e*Pg Pg 19 00 19.4 -6.0
CLNS *e*Sg **Sg** **19 01 40.6 -5.3**
BGT Bolshoye Golou 6.33 235 *e*Pg **Pg** **19 00 23.3 -4.2**
BGT Pmax 19 00 25.3
comp=E,53nm,0.7s
BGT *e*Sg **Sg** **19 01 45.9 -3.5**
BGT Smax 19 01 58.2
comp=E,747nm,0.8s
KPC Khapcheranga 6.38 188 *e*PN **Pn** **19 00 02.8 +1.9**
KPC *e* 19 00 25.5
KPC *e* 19 01 48.1
KPC pmax pmax
comp=Z,52nm,0.7s
KPC smax smax
comp=E,2μm,1.8s
KPC Khapcheranga 6.38 188 *e*Pn **Pn** **19 00 02.7 +1.9**
KPC *e* 19 00 12.6
KPC *e*Pg **Pg** **19 00 24.6 -3.8**
KPC Pmax 19 00 29.0
comp=E,52nm,0.7s
KPC *e*Sn **Sn** **19 01 14.3 +0.3**
KPC *e*Sg **Sg** **19 01 48.3 -2.7**
KPC Smax 19 01 58.4
comp=E,2μm,1.7s
LSTR Listvyanka 6.72 235 *e*Pn **Pn** **19 00 07.9 +2.5**
LSTR *e*Pg Pg 19 00 28.6 -6.2
LSTR Pmax 19 00 33.8
comp=E,50nm,1.3s
LSTR *e*Sg **Sg** **19 01 56.2 -5.5**
LSTR Smax 19 02 04.1
comp=E,1μm,1.6s
IRK Irkutsk 6.74 240 *e*PG Pg 19 00 29.8 -5.5
IRK *e* 19 01 56.8
IRK pmax pmax
comp=Z,68nm,0.1s
IRK smax smax
comp=N,1μm,0.9s
IRK Irkutsk 6.74 240 *e*Pg **Pg** **19 00 31.2 -4.1**
IRK Pmax 19 00 32.5
comp=N,146nm,0.9s
IRK *e*Sg **Sg** **19 01 58.1 -4.4**
IRK Smax 19 02 12.3
comp=N,1μm,1.0s
IVK Ivanovka 6.96 237 *e*Pn **Pn** **19 00 11.9 +3.2**
IVK *e*Pg Pg 19 00 33.1 -6.3
IVK Pmax 19 00 34.0
comp=N,38nm,1.7s
IVK *e*Sg **Sg** **19 02 04.1 -5.3**
IVK Smax 19 02 12.2
comp=N,992nm,1.4s
TLY Talaya 7.40 238 *e*Pn **Pn** **19 00 16.8 +2.1**
TLY *e*Pg Pg 19 00 41.8 -6.0
TLY Pmax 19 00 43.5
comp=N,42nm,1.1s
TLY *e*Sg **Sg** **19 02 16.6 -7.0**
TLY Smax 19 02 26.1
comp=N,543nm,1.5s
HIA Hailar 7.67 149 Pn **Pn** **19 00 18.3 -0.2**
HIA Hailar 7.67 149 *i* PN **Pn** **19 00 18.7 +0.2**
HIA Hailar 7.67 149 *e* **Pn** **19 00 19.6 +1.1**
HIA *e*Sn **Sn** **19 01 45.4 -0.3**
HIA *e*Sg **Sg** **19 02 28.1 -4.2**
ARS Arshan 7.85 243 *e*PG Pg 19 00 51.0 -5.4
ARS pmax pmax
comp=Z,87nm,0.6s
ARS Arshan 7.85 243 *e*Pn Pn 19 00 25.2 +4.2
ARS *e* 19 00 38.5
ARS *e*Pg Pg 19 00 49.7 -6.7
ARS Pmax 19 00 56.8
comp=Z,89nm,0.6s
ARS *e*Sg **Sg** **19 02 31.2 -6.8**
ARS Smax 19 02 54.9
comp=Z,1μm,1.0s
ZEA Zeya 8.10 101 *e*PN **Pn** **19 00 27.8 +3.5**
ZEA *e* 19 00 55.9
ZEA *e* 19 01 51.9
ZEA pmax pmax
comp=Z,10.0nm,0.5s
ZAK Zakamensk 8.45 232 *e*PN Pn 19 00 36.2 +6.9
ZAK pmax pmax
comp=Z,30nm,1.7s
ZAK Zakamensk 8.45 232 *e*Pn Pn 19 00 34.5 +5.2
ZAK *e*Pg Pg 19 01 01.1 -6.9
ZAK Pmax 19 01 07.2
comp=Z,22nm,1.0s
ZAK *e*Sg **Sg** **19 02 50.3 -7.1**
ZAK Smax 19 03 22.7
comp=Z,543nm,1.4s
MOY Mondy 8.72 245 *e*PN **Pn** **19 00 34.9 +2.0**
MOY *e*S **Sg** **19 02 57.8 -8.1**
MOY smax smax
comp=N,797nm,1.6s
MOY Mondy 8.72 245 *e*Pn **Pn** **19 00 35.6 +2.7**
MOY max 19 01 23.8
comp=N,71nm,1.4s
MOY *e* 19 02 31.0
MOY *e*Sg **Sg** **19 02 59.3 -6.6**
MOY Smax 19 03 04.7
comp=N,764nm,1.5s
ORL Orlik 8.88 253 *e*PN **Pn** **19 00 36.5 +1.4**
ORL *e* 19 01 06.5
ORL *e*S **Sn** **19 02 10.2 -5.3**
ORL *e* 19 03 01.0
ORL pmax pmax
comp=Z,82nm,0.9s
ORL smax smax
comp=N,453nm,1.8s
ORL Orlik 8.88 253 *e*Pn **Pn** **19 00 37.0 +1.9**
ORL max 19 01 16.1
comp=N,73nm,1.0s
ORL *e*Sn **Sn** **19 02 14.3 -1.2**
ORL *e*Sg **Sg** **19 03 03.2 -7.8**
ORL Smax 19 03 10.2
comp=N,456nm,1.2s
ULN Ulaanbaatar 9.15 210 Pn **Pn** **19 00 39.3 +0.3**
ULN Ulaanbaatar 9.15 210 *ce*P Pn 19 00 43.2 +4.3
ULN pmax pmax
comp=Z,11nm,2.5s
ULN Ulaanbaatar 9.15 210 *e* Pn 19 00 54.8 +16
ULN *e* 19 01 17.7
ULN *e*Sg Sn 19 03 14.0 +52
SONM Songino Array 9.37 212 Pn **Pn** **19 00 44.9 +3.0**
comp=Z,0.4nm,0.3s,baz=22,slow=14,SNR=11
SONM Pg 19 01 19.7
comp=Z,1.4nm,0.3s,baz=17,slow=16,SNR=7.0
SONM Lg Lg 19 03 25.2
comp=Z,11nm,0.3s,baz=254,slow=24,SNR=7.9
comp=Z,1.3nm,0.6s
SONM Songino Array 9.37 212 **Pn** **19 00 43.2 +1.3**
YAK Yakutsk 10.16 47 Pn **Pn** **19 00 50.9 -1.5**
comp=Z,0.1nm,0.3s,baz=294,slow=1.2,SNR=8.4
YAK Pg 19 01 28.0
comp=Z,0.1nm,0.3s,baz=249,slow=6.9,SNR=7.0
YAK Sn **Sn** **19 02 40.8 -5.7**
comp=Z,0.1nm,0.3s,baz=216,slow=20,SNR=7.7
YAK Lg Lg 19 03 37.0
comp=Z,0.2nm,0.3s,baz=336,slow=23,SNR=13
comp=Z,6.4nm,0.7s
YAK Yakutsk 10.16 47 **Pn** **19 00 50.1 -2.3**
YAK Yakutsk 10.16 47 *e*P **Pn** **19 00 49.4 -3.1**
YAK *e*S **Sn** **19 02 41.8 -4.8**
YAK pmax pmax
comp=Z,20nm,1.1s
YAK smax smax
comp=E,139nm,1.4s
YAK smax smax
comp=N,122nm,0.9s
YAK smax smax
comp=N,1μm,1.5s
KNGR Kungurtug, Tuv 11.12 248 *i* P **Pn** **19 01 09.2 +3.4**
KNGR Kungurtug, Tuv 11.12 248 *e*Pn **Pn** **19 01 09.0 +3.2**
KNGR *e*Sn **Sn** **19 03 08.3 -2.2**
KNGR *e*Sg 19 04 12.9
KZLR Kyzyl 12.18 257 *i* P **Pn** **19 01 21.1 +0.9**
KLR Kul'dur 12.84 114 Pn **Pn** **19 01 30.9 +1.7**
comp=N,0.4nm,0.3s,baz=304,slow=13,SNR=12
KLR Sn **Sn** **19 03 45.2 -7.0**
comp=N,0.8nm,0.3s,baz=318,slow=15,SNR=4.1
KLR Lg Lg 19 05 09.3
comp=N,0.3nm,0.3s,baz=278,slow=7.5,SNR=4.6
comp=N,2.8nm,0.6s
KLR Kul'dur 12.84 114 *ce*P **Pn** **19 01 31.6 +2.4**
KLR pmax pmax
comp=Z,2.0nm,0.7s
ABNR Abakan 13.05 269 *i* P **Pn** **19 01 32.8 +0.7**
GRNR Gornyy 14.47 102 *i* P **P** **19 01 54.1 -4.2**
GRNR *e*S Sn 19 04 40.0 +8.0
GRNR pmax pmax
comp=Z,2.0nm,0.6s
GRNR smax smax
comp=N,1.0nm,0.5s
GRNR MLR MLR
comp=E,70nm,13.0s
GRNR MLR MLR
comp=N,40nm,11.0s
GRNR MLR MLR
comp=Z,100nm,11.0s
USRK Ussuriysk Ar. 16.56 128 Lg Lg 19 07 11.6
comp=Z,0.2nm,0.3s,baz=336,slow=27,SNR=9.9
ZAA0 Zalesovo Array 16.69 275 P **Pn** **19 02 15.0 -5.5**
ZALV Zalesovo Beam 16.69 275 Pn **Pn** **19 02 19.7 -0.8**
comp=Z,0.5nm,0.5s,baz=74,slow=11,SNR=6.4
ZALV Lg Lg 19 07 09.3
comp=Z,0.1nm,0.3s,baz=80,slow=32,SNR=3.3
ZALV Zalesovo Beam 16.69 275 P **Pn** **19 02 17.2 -3.3**
ZALV Zalesovo Beam 16.69 275 *i* P **P** **19 02 23.7 +0.8**
ZALV pmax pmax
comp=Z,2.0nm,0.7s
TIXI Tiksi 16.95 16 Pn **Pn** **19 02 18.9 -4.7**
comp=Z,131nm,0.3s,baz=265,slow=21,SNR=24
TIXI Sn Sn 19 05 15.8 -16
comp=Z,120nm,0.3s,baz=89,slow=24,SNR=11
TIXI Lg Lg 19 07 11.8
comp=Z,46nm,0.3s,baz=270,slow=24,SNR=1.4
TIXI Tiksi 16.95 16 P **Pn** **19 02 18.9 -4.7**
TIXI IAmb IAmb 19 02 27.2
comp=Z,21nm,0.7s
TIXI Tiksi 16.95 16 *ce*P **Pn** **19 02 19.6 -4.0**
TIXI pmax pmax
comp=Z,17nm,0.7s
NRIK Noril'sk 17.75 329 P **Pn** **19 02 28.9 -4.8**
comp=Z,8.9nm,0.6s,baz=118,slow=12,SNR=13
NRIK S Sn 19 05 32.5 -19
comp=Z,19nm,1.0s,baz=6.5,slow=17,SNR=5.3
NRIK Lg Lg 19 07 33.6
comp=Z,0.6nm,0.3s,baz=188,slow=12,SNR=1.4
NRIK Noril'sk 17.75 329 Pn 19 02 26.4 -7.3
NRIK Noril'sk 17.75 329 *ce*P **Pn** **19 02 28.1 -5.6**
GTA Gaotai 19.02 215 *e*P **Pn** **19 02 55.0 +5.5**
GTA pP sP 19 02 59.4 +7.9
GTA sP pP 19 03 02.1 +11
GTA pmax pmax
comp=Z,2.0nm,1.2s
SEY Seymchan 20.52 55 P Pn 19 03 06.2 -0.9
comp=Z,4.5nm,0.8s,baz=307,slow=12,SNR=14
SEY Lg Lg 19 09 09.7
comp=Z,0.2nm,0.3s,baz=337,slow=11,SNR=7.9
comp=Z,4.5nm,0.8s
SEY Seymchan 20.52 55 *i* P Pn 19 03 04.7 -2.4
SEY pmax pmax
comp=Z,5.0nm,0.8s
KSRS Korea Array 20.87 147 P Pn 19 03 12.6 +1.3
comp=Z,0.9nm,0.7s,baz=337,slow=9.5,SNR=2.4
KSRS Lg Lg 19 09 34.8
baz=343,slow=29,SNR=5.4
comp=Z,0.9nm,0.7s
KURK Kurchatov 21.47 271 P **P** **19 03 13.6 -1.6**
KURK IAmb IAmb 19 03 24.7
comp=Z,7.1nm,0.8s
KURK Kurchatov 21.47 271 *ce*P **P** **19 03 14.6 -0.6**
KURK pmax pmax
comp=Z,14nm,1.7s
MK31 Makanchi Array 21.53 258 P **P** **19 03 14.2 -1.7**
MK31 Makanchi Array 21.53 258 *d* iP **P** **19 03 17.4 +1.5**
MKAR Makanchi Array 21.53 258 P **P** **19 03 18.0 +2.1**
comp=Z,5.2nm,0.8s,baz=58,slow=9.9,SNR=16
comp=Z,5.2nm,0.8s
MKAR Makanchi Array 21.53 258 P **P** **19 03 15.3 -0.6**
MKAR Makanchi Array 21.53 258 *i* P **P** **19 03 21.0 +5.1**
MKAR pmax pmax
comp=Z,5.0nm,0.8s
KURBB Kurchatov Arra 21.57 270 P **P** **19 03 18.2 +1.9**
comp=Z,4.7nm,0.6s,baz=64,slow=12,SNR=31
comp=Z,4.7nm,0.6s
MAKZ Makanchi 21.69 258 P **P** **19 03 18.3 +0.6**
MAKZ IAmb IAmb 19 03 23.2
comp=Z,15nm,1.4s
MAKZ Makanchi 21.69 258 P **P** **19 03 18.3 +0.6**
MAKZ pmax pmax
comp=Z,15nm,1.4s
XAN Xi'an 22.23 191 P **P** **19 03 25.5 +1.9**
XAN pP sP 19 03 30.1 +3.7
XAN LR LR
comp=N,310nm,15.1s
XAN LR LR
comp=E,800nm,14.4s
XAN LR LR
comp=Z,270nm,17.9s
GOMU GeErMu 23.64 221 P **P** **19 03 39.1 +0.6**
GOMU pP sP 19 03 43.0 +1.8
GOMU sP pP 19 03 45.4 +5.0
GOMU S **S** **19 07 58.3 +4.7**
GOMU pmax pmax
comp=Z,1.0nm,0.5s
GOMU pmax pmax
comp=Z,48nm,4.5s
GOMU LR LR
comp=N,330nm,11.1s
GOMU LR LR
comp=E,340nm,12.4s
GOMU LR LR
comp=Z,170nm,9.0s
BVAR Borovoye Array 25.05 281 LR LR 19 14 20.7
comp=Z,59nm,18.3s,baz=306,slow=38
BRVK Borovoye 25.09 282 P **P** **19 03 51.5 +0.1**
BRVK IAmb IAmb 19 04 28.6
comp=Z,6.1nm,0.7s
BRVK Borovoye 25.09 282 *ce*P **P** **19 03 52.3 +0.9**
BRVK pmax pmax
comp=Z,7.0nm,1.3s
PETK Petropavlovsk- 25.31 78 P **P** **19 03 55.6 +2.3**
comp=Z,4.0nm,1.0s,baz=331,slow=5.8,SNR=6.1
comp=Z,4.0nm,1.0s
PETK Petropavlovsk- 25.31 78 P **P** **19 03 55.0 +1.6**
BILL Bilibino 26.46 42 *e*P **P** **19 04 02.7 -0.9**
BILL *PP **pP** **19 04 05.0 -0.7**
BILL *SP **sP** **19 04 07.0 +0.4**
BILL *e*PPP PPP 19 04 46.3
BILL S **S** **19 08 40.0 +2.6**
BILL pmax pmax
comp=Z,8.0nm,2.4s
BILL MLR MLR
comp=Z,64nm,19.0s
JHJ2 Mitsune 29.15 131 P **P** **19 04 29.0 +1.0**
PZH PanZhiHua 30.75 201 P **P** **19 04 45.8 +3.5**
PZH sP **sP** **19 04 49.3 +4.0**
PZH S **S** **19 09 50.4 +4.7**
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,80nm,5.3s
PZH LR LR
comp=N,130nm,11.1s
PZH LR LR
comp=E,360nm,12.2s
PZH LR LR
comp=Z,340nm,14.1s
ARCES ARCESS Array B 38.69 326 P **P** **19 05 52.6 +2.3**
comp=Z,2.8nm,0.9s,baz=71,slow=12,SNR=3.5
comp=Z,2.8nm,0.9s
ARCES ARCESS Array B 38.69 326 P **P** **19 05 50.5 +0.2**
ARCES IAmb IAmb 19 06 33.6
comp=Z,12nm,1.4s
OBN Obninsk 41.52 302 *e*P **P** **19 06 13.3 -0.6**
OBN *e* 19 06 16.0
OBN 19 07 49.0
OBN pmax pmax
comp=Z,5.0nm,1.3s
OBN MLR MLR
comp=Z,41nm,14.0s
IMAR Indian Mountai 41.84 38 P **P** **19 06 18.0 +1.6**
FIA1 FINESS Array S 42.56 315 P **P** **19 06 25.2 +2.9**
FIA0 FINESS Array S 42.56 315 P **P** **19 06 23.2 +0.8**
FIA0 FINESS Array S 42.56 315 P **P** **19 06 23.2 +0.8**
FINES FINESS Array B 42.56 315 P **P** **19 06 23.0 +0.7**
comp=Z,1.9nm,0.8s,baz=54,slow=9.7,SNR=7.8
comp=Z,1.9nm,0.8s
FINES FINESS Array B 42.56 315 P **P** **19 06 22.6 +0.2**
BMAR Burnt Mountain 43.98 33 P **P** **19 06 35.8 +2.0**
ILAR Eielson Array 44.88 37 P **P** **19 06 43.1 +2.2**
comp=Z,1.2nm,1.0s,baz=301,slow=11,SNR=8.9
comp=Z,1.2nm,1.0s
ILAR Eielson Array 44.88 37 P **P** **19 06 42.2 +1.3**
KIV Kislovodsk 45.27 286 *e*P **P** **19 06 44.9 +0.5**
KIV pmax pmax
comp=Z,3.0nm,0.7s
KIV MLR MLR
comp=Z,71nm,17.0s
DHY Denali Highway 45.78 39 P **P** **19 06 49.1 +0.8**
DHY IAmb IAmb 19 07 00.0
comp=Z,4.6nm,1.1s
RIDG Independent Ri 46.23 37 P **P** **19 06 51.3 -0.4**
RIDG IAmb IAmb 19 06 51.4
comp=Z,5.9nm,1.5s
L27K Beaver Creek, 47.70 37 P **P** **19 07 05.2 +2.0**
L27K IAmb IAmb 19 07 06.5
comp=Z,1.9nm,0.8s
BCAR Beaver Creek A 47.71 37 P **P** **19 07 05.0 +1.8**
N25K Chitina, Valde 47.72 39 P **P** **19 07 04.7 +1.3**
N25K IAmb IAmb 19 07 36.6
comp=Z,3.1nm,0.8s
AKASG Malin Array Be 47.74 301 P **P** **19 07 03.9 +0.4**
comp=Z,0.2nm,0.4s,baz=42,slow=8.6,SNR=1.9
comp=Z,0.2nm,0.4s
C36M Paulatuk 48.12 24 P **P** **19 07 06.5 +0.3**
WSAR Wadi Sarin 51.70 254 LR LR 19 29 52.3
comp=Z,69nm,18.0s,baz=82,slow=36
BRTR Keskin Array B 53.06 288 P **P** **19 07 46.8 +2.6**
comp=Z,0.3nm,0.4s,baz=74,slow=5.7,SNR=2.5
comp=Z,0.3nm,0.4s
GERES GERESS Array B 56.20 308 P **P** **19 08 07.1 +0.3**
comp=Z,0.4nm,0.6s,baz=51,slow=6.8,SNR=2.1
comp=Z,0.4nm,0.6s
ESDC Sonseca Array 71.07 314 P **P** **19 09 45.2 +0.2**
comp=Z,0.9nm,0.9s,baz=32,slow=5.1,SNR=8.2
comp=Z,0.9nm,0.9s
NVAR Mina Array Bea 76.05 40 P **P** **19 10 16.6 +2.1**
comp=Z,0.2nm,0.4s,baz=308,slow=4.9,SNR=3.6
comp=Z,0.2nm,0.4s
MDT Midelt 77.20 311 LR LR 19 48 19.9
comp=Z,45nm,18.1s,baz=56,slow=39
WRA Warramunga Arr 77.64 160 P **P** **19 10 24.5 +1.3**
comp=Z,0.3nm,0.6s,baz=352,slow=6.7,SNR=6.8
comp=Z,0.3nm,0.6s
LPIG La Paz 91.87 40 LR LR 19 58 40.1
comp=Z,70nm,21.4s,baz=220,slow=39

BYKL ***17*** *19:04:03.6±0.1,56.13°N×113.72°E,h3km±2km, Mw4.4/9(IEC), #STATIONS PET MAJO SSE ENH WMQ AAK KIV SCO NOR*

MOS ***17*** *19:04:03.1±2.0,56.06°N×113.73°E,h12km,mb4.2/2, Error ellipse: s-maj=12.7km s-min=7.7km az=68.2*

IDC ***17*** *19:04:04.1±0.9,56.12°N×113.55°E,h0km,mb3.6/10, mbtmp3.8/13,ML4.7/2,MS3.5/23,Error ellipse: s-maj=24.7km s-min=12.9km az=146.0*

NEIC ***17*** *19:04:04.0±2.6,55.81°N±0.05°×114.1°E±0.2°,h21km±5km, mb4.3/13, Error ellipse: s-maj=15.8km s-min=3.3km az=114.0*

ISC 17 19:04:02.8±0.8,56.11°N±0.02°×113.76°E±0.02°,h8km±5km, n118,σ3.3°12/157,mb3.8/17,MS3.6/19,6D,East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.11**	**273**	↓*i*Pg	**Pg**		**19 04 05.4**	**0.0**
SVKR				pmax	pmax			
	comp=Z,26μm,0.4s							
SVKR	**Severomuysk**	**0.11**	**273**	↓*i*Pg	**Pg**		**19 04 05.4**	**0.0**
SVKR				Pmax			19 04 06.6	
	comp=Z,24μm,0.1s							
SVKR				*e*Sg	**Sg**		**19 04 07.3**	**+0.1**
SVKR				Smax			19 04 08.7	
	comp=Z,258μm,0.3s							
NLYR	**Nelyaty**	**1.15**	**70**	*e*PG	**Pb**		**19 04 24.4**	**-0.5**
NLYR				*e*			19 04 39.5	
NLYR				pmax	pmax			
	comp=Z,3μm,0.8s							
NLYR				smax	smax			
	comp=N,9μm,1.0s							
NLYR	**Nelyaty**	**1.15**	**70**	↓*i*Pg	**Pb**		**19 04 24.4**	**-0.5**
NLYR				*e*Pb	**Pn**		**19 04 26.4**	**+1.2**
NLYR				max			19 04 28.1	
	comp=N,3μm,0.4s							
NLYR				*e*Sg	**Sb**		**19 04 40.0**	**0.0**
NLYR				*e*Sb	**Sn**		**19 04 44.2**	**+3.1**
NLYR				max			19 04 47.6	
	comp=N,9μm,1.0s							
KMO	**Kumora**	**1.45**	**262**	↓*i*PG	**Pn**		**19 04 29.4**	**+0.1**
KMO				*e*			19 04 48.4	
KMO				pmax	pmax			
	comp=Z,397nm,0.2s							

KMO smax smax
comp=N,4μm,0.9s
KMO Kumora 1.45 262 ǁ *i* Pg **Pn 19 04 29.5 +0.1**
KMO *e* Pb **Pg 19 04 31.0 +0.4**
KMO *e* 19 04 34.0
KMO max 19 04 35.0
comp=N,2μm,0.5s
KMO *e* Sg **Sb 19 04 48.7 0.0**
KMO *e* 19 04 52.2
KMO max 19 04 53.0
comp=N,14μm,0.9s
BOD Bodaibo 1.72 4 *e* PN **Pn 19 04 34.1 +1.2**
BOD *e* 19 04 56.9
BOD pmax pmax
comp=Z,2μm,0.8s
BOD smax smax
comp=E,6μm,1.1s
BOD Bodaibo 1.72 4 *e* Pn **Pn 19 04 34.1 +1.2**
BOD *e* Pg **Pb 19 04 34.4 -0.1**
BOD Pmax 19 04 35.8
comp=E,2μm,0.7s
BOD *e* Sg **Sb 19 04 56.7 +0.4**
BOD Smax 19 04 59.6
comp=E,6μm,1.5s
YLYR Ulyunkhan 1.93 231 ǁ *i* Pn **Pb 19 04 37.8 -0.3**
YLYR *e* Pg **Pg 19 04 38.5 -1.2**
YLYR Pmax 19 04 40.7
comp=E,1μm,0.8s
YLYR *e* Sg **Sb 19 05 03.3 +1.0**
YLYR Smax 19 05 08.0
comp=E,6μm,0.9s
NIZ Nizh Angarsk 2.40 264 *e* PN **Pb 19 04 46.7 +0.6**
NIZ *e* 19 05 18.8
NIZ pmax pmax
comp=Z,1μm,2.1s
NIZ smax smax
comp=N,4μm,1.0s
NIZ Nizh Angarsk 2.40 264 *e* Pn **Pn 19 04 43.6 +1.3**
NIZ *e* Pg **Pb 19 04 46.6 +0.5**
NIZ Pmax 19 04 48.6
comp=N,1μm,1.6s
NIZ *e* Sg **Sb 19 05 17.8 +2.0**
NIZ *e* 19 05 18.6
NIZ max 19 05 20.6
comp=N,4μm,0.9s
CRS Chara 2.62 71 *e* PN **Pb 19 04 51.3 +1.3**
CRS *e* 19 05 25.4
CRS pmax pmax
comp=Z,1μm,0.8s
CRS smax smax
comp=E,2μm,0.8s
CRS Chara 2.62 71 *e* Pn **Pn 19 04 47.4 +2.0**
CRS *e* Pg **Pb 19 04 51.3 +1.3**
CRS Pmax 19 04 52.6
comp=E,3μm,1.2s
CRS *e* Sg **Sg 19 05 25.8 -1.2**
CRS Smax 19 05 34.5
comp=E,3μm,1.5s
SYVR Suvo 3.28 223 *e* PN **Pn 19 04 56.4 +2.0**
SYVR *e* 19 05 04.0
SYVR *e* 19 05 45.4
SYVR pmax pmax
comp=Z,274nm,0.6s
SYVR smax smax
comp=N,4μm,1.7s
SYVR Suvo 3.28 223 *e* Pn **Pn 19 04 57.2 +2.8**
SYVR *e* Pg **Pb 19 05 03.0 +1.8**
SYVR *e* PgPg **Pg 19 05 05.7 +0.1**
SYVR max 19 05 08.2
comp=N,269nm,0.6s
SYVR max 19 05 13.0
SYVR *e* Sn **Sn 19 05 33.2 -0.4**
SYVR *e* Sg **Sg 19 05 45.7 -2.3**
SYVR Smax 19 05 57.4
comp=N,4μm,2.0s
VTMR Vitim 3.40 350 *e* Pn **Pn 19 04 56.9 +0.9**
VTMR *e* Pg **Pb 19 05 04.7 +1.5**
VTMR *e* PgPg **Pg 19 05 08.7 +0.9**
VTMR *e* Sg **Sb 19 05 47.8 +3.2**
VTMR *e* 19 06 03.6
KHNR Khani 3.54 74 *e* Pn **Pn 19 05 00.3 +2.3**
KHNR *e* Pg **Pb 19 05 07.3 +1.6**
KHNR *e* 19 05 16.1
KHNR *e* Sg **Sb 19 05 53.6 +4.8**
TUP Tupik 3.93 113 *e* PN **Pn 19 05 04.6 +1.2**
TUP *e* 19 05 14.7
TUP *e* S **Sn 19 05 51.0 +1.4**
TUP *e* 19 06 06.5
TUP pmax pmax
comp=Z,196nm,0.7s
TUP smax smax
comp=E,2μm,1.0s
TUP Tupik 3.93 113 *e* Pn **Pn 19 05 04.5 +1.2**
TUP *e* Pg **Pb 19 05 15.0 +2.8**
TUP Pmax 19 05 18.0
comp=E,197nm,0.7s
TUP *e* Sn **Sn 19 05 50.2 +0.6**
TUP *e* Sg **Sg 19 06 06.2 -2.6**
TUP *e* SgSg **SbSb 19 06 10.4 +5.4**
TUP max 19 06 13.4
comp=E,2μm,1.0s
TUP *e* 19 06 20.9
MXMB Maximikha 4.08 228 *e* Pg **Pb 19 05 16.8 +2.1**
MXMB *e* Sn **Sn 19 05 53.2 0.0**
MXMB *e* Sg **Sg 19 06 09.7 -3.8**
CIT Chita 4.10 182 *e* PN **Pn 19 05 07.2 +1.5**
CIT *e* 19 05 17.6
CIT *e* S **Sn 19 05 55.1 +1.2**
CIT *e* 19 06 10.4
CIT pmax pmax
comp=Z,289nm,1.8s
CIT smax smax
comp=E,1μm,1.8s
CIT Chita 4.10 182 *e* Pn **Pn 19 05 08.4 +2.7**
CIT *e* Pg **Pb 19 05 17.2 +2.0**
CIT Pmax 19 05 18.4
comp=E,322nm,1.3s
CIT *e* 19 05 20.1
CIT *e* Sg **Sb 19 06 10.4 +5.5**
CIT *e* 19 06 16.2
CIT max 19 06 29.5
comp=E,2μm,1.5s
OGRR Ongureny 4.33 238 *e* PN **Pn 19 05 13.4 +4.5**
OGRR *e* 19 05 24.3
OGRR *e* 19 06 18.7
OGRR pmax pmax
comp=Z,356nm,2.0s
OGRR smax smax
comp=N,1μm,2.8s
OGRR Ongureny 4.33 238 *e* Pn 19 05 14.2 +5.3
OGRR *e* Pg **Pb 19 05 21.7 +2.6**
OGRR Pmax 19 05 26.2
comp=N,355nm,2.2s
OGRR *e* 19 05 54.1
OGRR *e* Sn **Sn 19 06 00.2 +0.6**
OGRR *e* Sg **Sg 19 06 18.0 -3.8**
OGRR *e* 19 06 24.7
OGRR max 19 06 25.8
comp=N,1μm,1.7s
YKLR Yuktali 4.42 80 *e* Pg **Pb 19 05 22.8 +2.2**
YKLR *e* 19 05 45.9
YKLR *e* Sn **Sn 19 06 01.6 -0.1**
YKLR *e* Sg **Sg 19 06 20.7 -3.9**
KELR Kotokel 4.72 227 *e* Pg **Pb 19 05 28.4 +2.7**
KELR *e* 19 05 34.7
KELR *e* Sn **Sn 19 06 08.4 -0.6**
KELR *e* Sg **Sg 19 06 29.0 -5.1**
ZRHB Zarechye 5.26 230 *e* Pg **Pb 19 05 38.5 +3.7**
ZRHB Pmax 19 05 44.2
comp=N,293nm,1.1s
ZRHB *e* Sn **Sn 19 06 21.3 -1.0**
ZRHB *e* Sg **Sg 19 06 46.4 -5.0**
ZRHB Smax 19 07 24.9
comp=N,3μm,1.2s
TRG Tyrgan 5.47 235 *e* PN **Pn 19 05 24.0 -0.6**
TRG *e* 19 05 39.8
TRG *e* S **Sn 19 06 27.1 -0.6**
TRG *e* 19 06 49.9
TRG pmax pmax
comp=Z,27nm,0.6s
TRG smax smax
comp=N,217nm,1.0s
TRG Tyrgan 5.47 235 *e* **Pb 19 05 40.3 +1.7**
TRG max 19 05 49.5
comp=N,61nm,1.3s
TRG *e* Sn **Sn 19 06 27.6 -0.1**
TRG *e* Sg **Sb 19 06 51.7 +7.4**
TRG *e* 19 06 54.1
TRG max 19 06 54.9
comp=N,527nm,1.3s
UUDB Ulan-Yde 5.57 223 *e* Pg **Pb 19 05 43.4 +3.3**
UUDB Pmax 19 05 53.1
comp=N,106nm,1.3s
UUDB *e* Sg **Sg 19 06 56.0 -5.4**
UUDB Smax 19 07 02.1
comp=N,4μm,1.6s
FFNB Fofonovo 5.79 228 *e* Pn **Pn 19 05 31.6 +2.7**
FFNB *e* Pg **Pb 19 05 48.4 +4.5**
FFNB *e* 19 06 10.3
FFNB *e* Sn **Sn 19 06 35.2 -0.2**
FFNB *e* Sg **Sg 19 07 03.4 -5.1**
KAB Kabansk 5.83 229 *e* Pg 19 06 09.0 +15
KAB max 19 06 12.7
comp=N,249nm,1.1s
KAB *e* Sg **Sg 19 07 04.8 -5.1**
KAB Smax 19 07 32.2
comp=N,2μm,1.5s
STDB Stepnoy Dvoret 5.87 231 *e* Pg **Pb 19 05 49.7 +4.4**
STDB *e* Sn **Sn 19 06 35.7 -1.7**
STDB *e* Sg **Sg 19 07 06.1 -5.0**
CLNS Chul'man 6.21 79 *e* Pg Pb 19 05 55.9 +4.7
CLNS *e* Sn **Sn 19 06 46.0 +0.1**
CLNS *e* Sg **Sg 19 07 15.9 -6.2**
BGT Bolshoye Golou 6.38 234 *e* Pg **Pb 19 05 58.5 +4.5**
BGT Pmax 19 06 07.5
comp=N,39nm,0.5s
BGT *e* Sn **Sn 19 06 48.9 -1.1**
BGT *e* Sg **Sg 19 07 20.0 -7.4**
BGT Smax 19 07 33.8
comp=N,334nm,1.2s
KPC Khapcheranga 6.47 188 *e* Pn **Pn 19 05 40.0 +1.7**
KPC *e* Pg Pb 19 06 00.8 +5.2
KPC Pmax 19 06 14.1
comp=N,58nm,1.2s
KPC *e* Sn **Sn 19 06 52.1 -0.3**
KPC *e* 19 07 09.3
KPC *e* Sg **Sg 19 07 23.9 -6.5**
KPC *e* 19 07 28.3
KPC max 19 07 34.0
comp=N,829nm,1.8s
LSTR Listvyanka 6.76 235 *e* Pn **Pn 19 05 44.1 +1.9**
LSTR *e* Pg **Pb 19 06 04.9 +4.4**
LSTR Pmax 19 06 12.1
comp=N,39nm,1.0s
LSTR *e* 19 06 16.8
LSTR *e* Sn **Sn 19 06 57.0 -2.4**
LSTR *e* Sg **Sg 19 07 32.8 -6.9**
LSTR *e* 19 07 36.7
LSTR max 19 07 39.5
comp=N,540nm,1.8s
IRK Irkutsk 6.78 239 *e* **Sn 19 07 08.1 +8.2**
IRK *e* Sg **Sg 19 07 33.4 -6.9**
IRK Smax 19 07 48.3
comp=N,685nm,1.3s
IVK Ivanovka 7.00 236 *e* Pg **Pb 19 06 08.9 +4.4**
IVK Pmax 19 06 23.7
comp=N,49nm,1.7s
IVK *e* Sn **Sn 19 07 03.0 -2.2**
IVK *e* 19 07 32.5
IVK *e* Sg **Sg 19 07 39.9 -7.4**
IVK Smax 19 07 47.9
comp=N,419nm,1.7s
TLY Talaya 7.44 238 *e* Pn **Pn 19 05 52.7 +1.2**
TLY *e* Pg Pb 19 06 16.8 +4.8
TLY Pmax 19 06 27.8
comp=N,41nm,1.6s
TLY *e* Sn **Sn 19 07 15.6 -0.5**
TLY *e* Sg Sg 19 07 52.6 -8.8
TLY Smax 19 08 00.1
comp=N,283nm,2.4s
HIA Hailar 7.76 150 Pn Pn 19 05 49.7 -6.2
HIA Hailar 7.76 150 *i* PN Pn 19 05 51.5 -4.4
HIA Hailar 7.76 150 *e* Sg **Sg 19 08 04.8 -6.8**
ARS Arshan 7.88 243 *e* PG Pg 19 06 27.8 -5.8
ARS pmax pmax
comp=Z,79nm,0.8s
ARS Arshan 7.88 243 *e* Pn **Pn 19 06 00.4 +2.7**
ARS *e* Pg Pb 19 06 26.0 +6.4
ARS Pmax 19 06 30.4
comp=Z,80nm,0.7s
ARS *e* 19 07 28.6
ARS *e* Sg Sg 19 08 06.5 -9.1
ARS Smax 19 08 30.4
comp=Z,974nm,1.5s
ZAK Zakamensk 8.50 232 *e* Sg Sg 19 08 26.4 -9.0
ZAK *e* 19 08 54.6
ZAK max 19 08 57.5
comp=Z,267nm,1.6s
MOY Mondy 8.75 245 *e* Pg Pg 19 06 41.6 -8.6
MOY Pmax 19 06 46.7
comp=Z,23nm,1.5s
MOY *e* Sg Sg 19 08 33.6 -10
MOY Smax 19 08 40.4
comp=Z,182nm,1.7s
MOY *e* 19 08 48.9
ORL Orlik 8.90 252 *e* Pn **Pn 19 06 14.4 +2.8**
ORL *e* Pg Pg 19 06 44.0 -9.0
ORL Pmax 19 06 52.6
comp=Z,32nm,0.9s
ORL *e* Sn **Sn 19 07 48.7 -3.3**
ORL *e* 19 08 08.0
ORL *e* Sg Sg 19 08 37.7 -10
ORL Smax 19 08 45.7
comp=Z,260nm,1.3s
ULN Ulaanbaatar 9.23 209 Pn **Pn 19 06 13.2 -3.1**
ULN Ulaanbaatar 9.23 209 *i* P **Pn 19 06 14.6 -1.6**
ULN Ulaanbaatar 9.23 209 *e* Sg Sn 19 08 49.9 +50
SONM Songino Array 9.45 212 Pn **Pn 19 06 21.7 +2.5**
comp=Z,4.8nm,0.8s,baz=21,slow=14,SNR=1.0
SONM Lg Lg 19 08 56.4
comp=Z,4.9nm,0.3s,baz=19,slow=25,SNR=11
SONM LR LR 19 10 07.4
comp=Z,140nm,20.6s,baz=30,slow=39
SONM Songino Array 9.45 212 Pn **Pn 19 06 15.8 -3.3**
YAK Yakutsk 10.10 48 Pn **Pn 19 06 28.0 +0.1**
baz=294,slow=20,SNR=1.5
YAK Sn **Sn 19 08 17.0 -4.2**
comp=Z,0.1nm,0.3s,baz=160,slow=18,SNR=1.7
YAK Lg Lg 19 09 11.3
comp=Z,0.2nm,0.3s,baz=155,slow=23,SNR=6.8
YAK LR LR 19 10 21.6
comp=Z,233nm,18.4s,baz=258,slow=37
comp=Z,9.1nm,0.7s
YAK Yakutsk 10.10 48 Pn **Pn 19 06 27.6 -0.3**
YAK Yakutsk 10.10 48 *i* P **Pn 19 06 28.9 +1.0**
KNGR Kungurtug, Tuv 11.15 247 *e* Sg 19 09 48.0
KNGR *e* 19 10 16.1
KLR Kul'dur 12.89 115 Lg Lg 19 10 45.8
comp=Z,0.4nm,0.3s,baz=26,slow=16,SNR=4.3
KLR LR LR 19 11 40.8
comp=Z,147nm,18.6s,baz=359,slow=35
USRK Ussuriysk Ar. 16.63 128 Lg Lg 19 12 46.7
comp=Z,0.1nm,0.3s,baz=332,slow=24,SNR=6.9
ZALV Zalesovo Beam 16.68 275 Lg Lg 19 12 46.6
comp=Z,0.1nm,0.3s,baz=83,slow=26,SNR=5.3
ZALV LR LR 19 14 35.5
comp=Z,164nm,18.5s,baz=69,slow=38
TIXI Tiksi 16.86 17 Pn **Pn 19 07 54.3 -4.4**
comp=Z,89nm,0.3s,baz=270,slow=20,SNR=1.5
TIXI Sn Sn 19 10 52.1 -14
comp=Z,36nm,0.3s,baz=270,slow=20,SNR=1.3
TIXI Lg Lg 19 12 56.7
comp=Z,15nm,0.3s,baz=269,slow=23,SNR=4.0
TIXI LR LR 19 15 07.0
comp=Z,75nm,20.5s,baz=181,slow=39
comp=Z,14nm,0.8s
TIXI Tiksi 16.86 17 Pn **P 19 08 00.4 -0.4**
TIXI IAmb IAmb 19 08 03.0
comp=Z,24nm,0.9s
TIXI Tiksi 16.86 17 P **P 19 08 00.4 -0.4**
TIXI pmax pmax
comp=Z,24nm,0.9s
NRIK Noril'sk 17.67 329 S **Sn 19 11 15.9 -10**
comp=Z,14nm,1.0s,baz=127,slow=15,SNR=2.7
NRIK Lg Lg 19 13 11.0
comp=Z,0.3nm,0.3s,baz=212,slow=17,SNR=1.4
NRIK LR LR 19 15 17.4
comp=Z,323nm,18.1s,baz=142,slow=38
UGL Uglegorsk 18.49 100 *e* P **P 19 08 18.5 -0.4**
UGL pmax pmax
comp=E,80nm,1.3s
UGL pmax pmax
comp=N,50nm,0.8s
UGL pmax pmax
comp=Z,30nm,0.8s
MA2 Magadan 19.83 65 LR LR 19 16 30.0
comp=Z,94nm,21.4s,baz=279,slow=37
SEY Seymchan 20.48 55 P Pn 19 08 43.7 +1.0
comp=Z,3.0nm,0.9s,baz=274,slow=14,SNR=2.6
SEY Lg Lg 19 14 45.4
baz=178,slow=16
SEY LR LR 19 16 59.4
comp=Z,152nm,20.7s,baz=278,slow=38
comp=Z,3.0nm,0.9s
SEY Seymchan 20.48 55 *i* P **P 19 08 36.3 -4.3**
SEY pmax pmax
comp=Z,10.0nm,1.2s
KS19 Wonju Array Si 20.90 147 P **P 19 08 39.0 -6.3**
KS19 IAmb IAmb 19 08 43.1
comp=Z,17nm,1.1s
KSAR Wonju Array Be 20.96 147 P P 19 08 38.1 -7.9
KSAR Wonju Array Be 20.96 147 P P 19 08 38.1 -7.8
KSRS Korea Array 20.96 147 LR LR 19 17 40.8
comp=Z,144nm,20.0s,baz=350,slow=39
KURK Kurchatov 21.46 270 P **P 19 08 52.5 +1.2**
KURK IAmb IAmb 19 09 10.2
comp=Z,15nm,1.3s
KURK Kurchatov 21.46 270 *i* P **P 19 08 51.8 +0.5**
KURK pmax pmax
comp=Z,9.0nm,1.2s
MK31 Makanchi Array 21.54 258 P **P 19 08 52.3 +0.1**
MK31 Makanchi Array 21.54 258 *i* P **P 19 08 54.5 +2.3**
MKAR Makanchi Array 21.54 258 P **P 19 08 54.7 +2.5**
comp=Z,1.0nm,0.5s,baz=46,slow=9.4,SNR=6.6
MKAR LR LR 19 17 33.2
comp=Z,318nm,21.1s,baz=44,slow=38
comp=Z,1.0nm,0.5s
MKAR Makanchi Array 21.54 258 P **P 19 08 53.6 +1.4**
KURBB Kurchatov Arra 21.56 270 P **P 19 08 55.4 +3.1**
comp=Z,3.5nm,0.6s,baz=65,slow=12,SNR=11
comp=Z,3.5nm,0.6s
XAN Xi'an 22.32 191 P P 19 09 13.3 +13
XAN pmax pmax
comp=Z,4.0nm,1.5s
XAN LR LR
comp=N,340nm,9.6s
XAN LR LR
comp=E,680nm,14.4s
XAN LR LR
comp=Z,360nm,11.0s
GOMU GeErMu 23.70 221 P **P 19 09 18.3 +3.0**
GOMU pP sP 19 09 22.3 +3.2
GOMU sP pP 19 09 24.0 +5.9
GOMU S **S 19 13 21.9 -8.7**
GOMU pmax pmax
comp=Z,1.0nm,0.6s
GOMU LR LR
comp=N,300nm,8.3s
GOMU LR LR
comp=E,340nm,10.8s
GOMU LR LR
comp=Z,220nm,9.6s
PETK Petropavlovsk- 25.30 78 P **P 19 09 32.2 +2.8**
comp=Z,2.1nm,0.9s,baz=318,slow=6.0,SNR=3.9
PETK LR LR 19 19 54.2
comp=Z,153nm,18.5s,baz=312,slow=37
comp=Z,2.1nm,0.9s
PZH PanZhiHua 30.84 201 P **P 19 10 21.4 +2.2**
PZH S **S 19 15 23.1 +0.1**
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,100nm,8.2s
PZH LR LR
comp=N,180nm,13.0s
PZH LR LR
comp=E,340nm,14.2s
JOW Kunigami 31.08 154 LR LR 19 23 47.8
comp=E,122nm,19.9s,baz=163,slow=38
KIRV Kirov 33.62 301 LR LR 19 26 09.4
comp=E,76nm,21.5s,baz=58,slow=40
SPITS Spitsbergen Ar 37.27 340 LR LR 19 27 47.9
comp=E,41nm,19.1s,baz=30,slow=38
ARCES ARCESS Array B 38.60 326 LR LR 19 31 46.4
comp=E,51nm,19.8s,baz=96,slow=43
CMAR Chiang Mai Arr 39.22 203 LR LR 19 27 18.8
comp=E,65nm,19.9s,baz=185,slow=36
IMAR Indian Mountai 41.77 38 P **P 19 11 51.2 -0.8**
FIA1 FINESS Array S 42.49 315 P **P 19 11 58.2 +0.4**
FINES FINESS Array B 42.49 315 P **P 19 11 57.7 -0.2**
comp=E,0.7nm,0.5s,baz=64,slow=6.3,SNR=7.1
comp=E,0.7nm,0.5s
FINES FINESS Array B 42.49 315 P **P 19 11 58.6 +0.7**
FINES FINESS Array B 42.49 315 P **P 19 11 58.6 +0.7**
H24K Noodor Dome 43.83 36 P **P 19 12 09.4 +0.7**
BMAR Burnt Mountain 43.91 33 P **P 19 12 11.3 +1.9**
WRH Wood River Hil 44.59 38 P **P 19 12 15.3 +0.5**
WRH IAmb IAmb 19 12 33.0
comp=Z,4.9nm,1.4s
ILAR Eielson Array 44.81 37 P **P 19 12 19.0 +2.4**
comp=Z,0.4nm,0.7s,baz=313,slow=3.9,SNR=3.5
comp=Z,0.4nm,0.7s
ILAR Eielson Array 44.81 37 P **P 19 12 16.4 -0.1**
ILAR Eielson Array 44.81 37 P **P 19 12 19.0 +2.4**
DHY Denali Highway 45.71 39 P **P 19 12 24.2 +0.3**
DHY IAmb IAmb 19 12 32.1
comp=Z,2.0nm,0.7s
SML Sawmill 46.18 41 P **P 19 12 27.8 +0.3**
INK Inuvik 46.48 28 LR LR 19 36 41.0
comp=Z,60nm,18.0s,baz=265,slow=42
JMIC Jan Mayen 46.79 338 LR LR 19 33 02.7
comp=Z,44nm,18.5s,baz=62,slow=37
L27K Beaver Creek, 47.63 37 P **P 19 12 40.5 +1.8**
L27K IAmb IAmb 19 12 44.6
comp=Z,1.6nm,0.7s
BCAR Beaver Creek A 47.64 37 P **P 19 12 40.0 +1.2**
NOA NORSAR Array B 48.36 321 LR LR 19 34 44.1
comp=Z,63nm,18.9s,baz=25,slow=38
BORG Borgarnes 54.68 338 LR LR 19 37 30.7
comp=Z,48nm,19.0s,baz=359,slow=37
EIL Elat 59.83 279 LR LR 19 44 35.9
comp=Z,41nm,19.0s,baz=270,slow=41
FRB Frobisher Bay 60.46 1 LR LR 19 39 19.1
comp=Z,48nm,18.3s,baz=308,slow=35
ESDC Sonseca Array 70.99 314 P **P 19 15 21.6 +0.8**
comp=Z,0.7nm,0.9s,baz=12,slow=7.6,SNR=4.3
ESDC LR LR 19 48 11.3
comp=Z,39nm,20.6s,baz=1.5,slow=37
comp=Z,0.7nm,0.9s
NVAR Mina Array Bea 75.98 40 P **P 19 15 54.3 +4.0**
comp=Z,0.4nm,0.6s,baz=321,slow=6.1,SNR=4.0
comp=Z,0.4nm,0.6s
NVAR Mina Array Bea 75.98 40 P **P 19 15 52.6 +2.3**
WRAB Tennant Creek 77.73 160 P **P 19 15 58.9 -0.9**
WRAB IAmb IAmb 19 16 16.0
comp=Z,6.6nm,1.4s
WRAB Tennant Creek 77.73 160 P **P 19 15 58.9 -0.9**
WRA Warramunga Arr 77.73 160 P **P 19 16 02.0 +2.1**
comp=Z,0.3nm,0.6s,baz=353,slow=6.3,SNR=5.3
comp=Z,0.3nm,0.6s
WRA Warramunga Arr 77.73 160 P **P 19 15 57.3 -2.6**
WB2 Warramunga Arr 77.74 160 P **P 19 15 59.3 -0.6**
TXAR Lajitas Array 89.12 32 P **P 19 17 02.9 +4.2**
comp=Z,0.1nm,0.3s,baz=322,slow=2.6,SNR=1.9
comp=Z,0.1nm,0.3s

NOU 17 19:04:18.8, 13.85S×171.99W, h93km, MLv2.6/4, Samoa Islands, Samoa Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**0.21**	**106**	P	Pn	19 04 33.3	+1.0
AFI	**Afiamalu**	**0.21**	**106**	P	Pn	19 04 33.3	+1.0

BYKL 17 19:04:27.6±0.2, 56.16N×113.66E, h9km±4km, East of Lake Baikal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.07**	**233**	*e* Pg	Pg	19 04 29.2	-0.6
SVKR				*e* Sg	Sg	19 04 31.0	-0.3
NLYR	**Nelyaty**	**1.19**	**73**	*e* Pg	Pb	19 04 48.5	-1.8

NLYR					Pmax			19 04 50.0	
	3µm,0.6s								
NLYR					*e*Pb		Pn	19 04 50.6	+0.2
NLYR					*e*Sg		Sb	19 05 05.0	-0.7
NLYR					*e*Sb		Sn	19 05 08.4	+1.8
NLYR					max			19 05 08.9	
	4µm,0.9s								
KMO	**Kumora**	**1.41**	**260**		*e*Sg		Sb	19 05 11.3	-0.8
KMO					Smax			19 05 16.8	
	4µm,1.4s								
BOD	**Bodaibo**	**1.67**	**6**		*e*Sg		Sb	19 05 20.1	+0.4
BOD					Smax			19 05 25.1	
	2µm,0.7s								
YLYR	**Ulyunkhan**	**1.92**	**229**		*e*Pg		Pb	19 05 02.2	-0.5
YLYR					Pmax			19 05 02.3	
	282nm,0.2s								
YLYR					*e*Sg		Sb	19 05 26.8	+0.1
YLYR					Smax			19 05 29.6	
	2µm,0.7s								
NIZ	**Nizh Angarsk**	**2.35**	**262**		*e*Pg		Pb	19 05 09.4	-0.6
NIZ					Pmax			19 05 12.0	
	309nm,0.6s								
NIZ					*e*Sg		Sb	19 05 40.8	+1.7
NIZ					Smax			19 05 43.9	
	2µm,1.0s								
CRS	**Chara**	**2.66**	**72**		*e*Sg		Sb	19 05 50.3	+2.2
CRS					Smax			19 05 53.8	
	2µm,2.2s								
SYVR	**Suvo**	**3.28**	**222**		*e*Pg		Pb	19 05 26.5	+0.6
SYVR					Pmax			19 05 31.1	
	239nm,0.8s								
SYVR					*e*Sg		Sg	19 06 09.8	-3.0
SYVR					Smax			19 06 22.4	
	1µm,2.2s								
VTMR	**Vitim**	**3.34**	**350**		*e*Pg		Pb	19 05 27.9	+0.9
VTMR					*e*Sg		Sb	19 06 10.6	+2.9
KHNR	**Khani**	**3.58**	**75**		*e*Pg		Pb	19 05 31.1	0.0
KHNR					*e*Sg		Sb	19 06 18.0	+3.4
TUP	**Tupik**	**4.00**	**113**		*e*Pg		Pb	19 05 40.4	+2.3
TUP					*e*Sg		Sg	19 06 31.8	-4.0
TUP					Smax			19 06 37.7	
	1µm,0.9s								
MXMB	**Maximikha**	**4.07**	**227**		*e*Pg		Pb	19 05 40.3	+0.9
MXMB					*e*Sg		Sb	19 06 32.5	+3.9
CIT	**Chita**	**4.15**	**181**		*e*Pg		Pb	19 05 42.9	+2.2
CIT					Pmax			19 05 47.8	
	149nm,0.6s								
CIT					*e*Sg		Sg	19 06 36.3	-4.4
CIT					Smax			19 06 41.0	
	719nm,1.5s								
OGRR	**Ongureny**	**4.31**	**237**		*e*Pg		Pb	19 05 45.5	+2.0
OGRR					Pmax			19 05 57.4	
	107nm,0.7s								
OGRR					*e*Sg		Sg	19 06 41.1	-4.9
OGRR					Smax			19 06 48.7	
	458nm,1.3s								
YKLR	**Yuktali**	**4.47**	**81**		*e*Sg		Sb	19 06 45.3	+5.3
TRG	**Tyrgan**	**5.46**	**234**		*e*Sg		Sg	19 07 16.8	-5.9
TRG					Smax			19 07 17.7	
	177nm,0.5s								
CLNS	**Chul'man**	**6.26**	**79**		*e*Pg		Pb	19 06 20.4	+3.7
CLNS					*e*Sg		Sg	19 07 41.0	-7.3
KPC	**Khapcheranga**	**6.51**	**187**		*e*Pg		Pb	19 06 24.7	+3.7
KPC					Pmax			19 06 34.4	
	43nm,0.8s								
KPC					*e*Sg		Sg	19 07 48.3	-8.2
KPC					Smax			19 07 52.1	
	345nm,1.5s								

TAP 17 19:04:47.3, 24°.11N×121°.73E, h6km, **ML1.0, C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.11**	**297**	P		Pg	19 04 50.2	+0.5
	baz=296							
TWD	**Chiawan**	**0.13**	**258**	*i* P		Pg	19 04 50.5	+0.5
	baz=267							
NACB	**Ninganchiao**	**0.14**	**298**	*e*P		Pg	19 04 50.6	+0.3
	baz=297							
ENA	**Nanau**	**0.32**	**1**	*e*P		Pg	19 04 54.2	+0.7
	baz=358							
ENA				*e*S		Sg	19 04 58.9	+1.1
	baz=358							
EWUT	**Wuta**	**0.34**	**7**	*e*P		Pg	19 04 54.5	+0.6
	baz=2.0							
EWUT				*e*S		Sb	19 05 00.5	-0.9
	baz=2.0							
ESL	**Shilin**	**0.40**	**223**	*e*P		Pg	19 04 55.3	+0.3
	baz=238							
ESL				*e*S		Sg	19 05 01.6	+1.3
	baz=238							
NNSB	**Datong**	**0.45**	**315**	*e*P		Pg	19 04 56.6	+0.5
	baz=312							

*LJU **17** 19:30:31.7, 45°.24N×15°.40E, h3km, ML2.1*
*VIE **17** 19:30:33.0±0.7, 45°.30N×15°.36E, h4km±3km, mb2.5/8, ml2.6/9, Error ellipse: s-maj=4.7km s-min=2.2km az=149.0*
26 km SW of Karlovac
*RHSSO **17** 19:30:33.3±0.2, 45°.27N×15°.45E, h4km±2km, ML2.5/13*
*PRU **17** 19:30:34.8±0.0, 45°.41N×15°.62E, h11km*
ISC 17 19:30:32.4±1.1, **45°.26N**±0°.01×**15°.42E**±0°.02, **h2**km±9km, **n60**, σ1§**05**/110, **5C-4D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BOJS	**Bojanci**	**0.27**	**334**	⇓*i* Pg		**Pg**	**19 30 36.9**	**-0.7**
BOJS				*i* Sg		**Sg**	**19 30 41.4**	**+0.2**
BOJS				IAML			19 30 42.3	
	comp=Z,556nm,0.2s							
OZLJ	**Ozalj**	**0.36**	**5**	*e*Pg		**Pg**	**19 30 39.3**	**0.0**
OZLJ				Sg		**Sg**	**19 30 44.2**	**+0.3**
A250A	**Rusevo Krmpots**	**0.40**	**244**	*e*Pg		**Pg**	**19 30 39.8**	**-0.3**
A250A				Sg		**Sg**	**19 30 45.0**	**-0.3**
PLIT	**Plitvice**	**0.41**	**159**	*e*Pg		**Pg**	**19 30 39.3**	**-1.0**
PLIT				Sg		**Sg**	**19 30 45.0**	**-0.5**
GBRS	**Gornja Briga**	**0.51**	**303**	⇑*i* Pg		**Pg**	**19 30 41.9**	**-0.3**
GBRS				*e*Sg		**Sg**	**19 30 49.5**	**+0.8**
GBRS				IAML			19 30 50.6	
	comp=Z,141nm,0.3s							
CRES	**Cresnjev**	**0.57**	**3**	*e*Pg		**Pg**	**19 30 42.7**	**-0.6**
CRES				*e*Sg		**Sb**	**19 30 51.6**	**-2.1**
CRES	**Cresnjev**	**0.57**	**3**	*i* Pg		**Pg**	**19 30 43.3**	**0.0**
CRES				*e*Sg		**Sb**	**19 30 51.7**	**-2.0**
CRES				IAML			19 30 53.3	
	comp=Z,123nm,0.3s							
GCIS	**Gornji Cirnik**	**0.62**	**13**	⇑*i* Pg		**Pg**	**19 30 44.5**	**+0.1**
GCIS				*i* Sg		**Sb**	**19 30 53.7**	**-1.7**
GCIS				IAML			19 30 59.5	
	comp=Z,60nm,0.3s							
RIY	**Rijeka**	**0.66**	**276**	*e*Pg		**Pg**	**19 30 44.0**	**-1.1**
RIY				Sg		**Sg**	**19 30 53.5**	**-0.3**
VISS	**Visnje**	**0.68**	**323**	*i* Pg		**Pg**	**19 30 44.8**	**-0.7**
VISS				*e*Sg		**Sg**	**19 30 54.7**	**+0.5**
VISS				IAML			19 30 57.3	
	comp=Z,67nm,0.2s							
RABC	**Rab**	**0.68**	**222**	*e*Pg		**Pg**	**19 30 45.0**	**-0.4**
RABC				Sg		**Sg**	**19 30 54.1**	**-0.2**
ZAG	**Zagreb**	**0.69**	**35**	*e*Pg		**Pg**	**19 30 45.9**	**+0.2**
ZAG				Sg		**Sb**	**19 30 56.5**	**-0.8**
PTJ	**Puntijarka**	**0.75**	**31**	*i* Pg		**Pg**	**19 30 46.8**	**-0.1**
PTJ				Sg		**Sb**	**19 30 57.7**	**-1.4**
GOLS	**Golise**	**0.77**	**11**	*e*Pg		**Pb**	**19 30 48.1**	**-0.4**
GOLS				IAML			19 31 05.7	
	comp=Z,110nm,0.5s							
UDBI	**Udbina**	**0.77**	**161**	*e*Pg		**Pg**	**19 30 46.5**	**-0.7**
UDBI				Sg		**Sg**	**19 30 56.8**	**-0.4**
KNDS	**Knezji Dol**	**0.78**	**290**	*i* Pg		**Pg**	**19 30 46.9**	**-0.5**
KNDS				IAML			19 31 03.4	
	comp=Z,54nm,0.4s							
NVLJ	**Novalja**	**0.80**	**209**	*e*Pg		**Pg**	**19 30 47.0**	**-0.7**
NVLJ				Sg		**Sg**	**19 30 58.6**	**+0.6**
CEY	**Cerknica**	**0.85**	**305**	⇓*i* Pg		**Pg**	**19 30 47.9**	**-0.7**
CEY				*e*Sg		**Sg**	**19 31 00.5**	**+0.9**
CEY	**Cerknica**	**0.85**	**305**	*i* Pg		**Pg**	**19 30 48.4**	**-0.3**
CEY				*e*Sg		**Sg**	**19 31 00.3**	**+0.7**
CEY				IAML			19 31 00.9	
	comp=Z,96nm,0.4s							
PDKS	**Podkum**	**0.85**	**340**	⇓*i* Pg		**Pg**	**19 30 48.6**	**-0.2**
PDKS				IAML			19 31 05.5	
	comp=Z,53nm,0.2s							
SMRN	**Sveta Marina**	**0.92**	**256**	*e*Pg		**Pg**	**19 30 49.1**	**-1.0**
SMRN				Sg		**Sg**	**19 31 01.3**	**-0.7**
PRIJ	**Prijedor**	**0.96**	**107**	*e*Pg		**Pg**	**19 30 50.9**	**+0.1**
PRIJ				*e*Sg		**Sg**	**19 31 03.4**	**+0.1**
VIRC	**Vir**	**1.00**	**195**	*e*Pg		**Pg**	**19 30 51.0**	**-0.6**
VIRC				Sg		**Sg**	**19 31 05.2**	**+0.6**
LJU	**Ljubljana**	**1.00**	**322**	⇓*i* Pg		**Pg**	**19 30 50.8**	**-0.8**
LJU				*e*Sg		**Sb**	**19 31 05.7**	**-0.5**
MOSL	**Moslavina**	**1.00**	**69**	*e*Pg		**Pb**	**19 30 52.3**	**-0.3**
MOSL				Sg		**Sb**	**19 31 05.7**	**-0.6**
SKDS	**Skadanscina**	**1.03**	**287**	*e*Pg		**Pg**	**19 30 51.8**	**-0.4**
SKDS				*e*Sg		**Sg**	**19 31 06.3**	**+0.8**
A051A	**Mrakovica**	**1.08**	**103**	⇑*i* Pg		**Pg**	**19 30 52.2**	**-0.9**
A051A				*e*Sg		**Sg**	**19 31 07.0**	**-0.2**
A050A	**Klekovaca**	**1.11**	**134**	⇑*i* Pg		**Pg**	**19 30 52.6**	**-1.1**
A050A				*e*Sg		**Sg**	**19 31 08.1**	**+0.1**
KALN	**Kalnik**	**1.14**	**39**	*e*Pg		**Pg**	**19 30 54.2**	**+0.1**
KALN				Sg		**Sb**	**19 31 09.8**	**-0.2**
BRJN	**Brijuni**	**1.23**	**254**	*e*Pg		**Pg**	**19 30 55.2**	**-0.8**
BRJN				Sg		**Sg**	**19 31 13.0**	**+1.0**
DUGI	**Dugi Otok**	**1.29**	**192**	*e*Pg		**Pn**	**19 30 56.7**	**-0.9**
DUGI				Sg		**Sg**	**19 31 14.7**	**+0.8**
BLY	**Banja Luka**	**1.35**	**112**	*e*Pg		**Pn**	**19 30 57.2**	**-1.1**
BLY				*e*Sg		**Sg**	**19 31 15.8**	**0.0**
OBKA	**Obir**	**1.39**	**334**	Pg		**Pg**	**19 30 59.2**	**+0.1**
	comp=Z,38nm,0.4s,SNR=18							
OBKA				Sg		**Sn**	**19 31 17.8**	**-0.2**
	comp=Z,156nm,0.5s							
OBKA	**Obir**	**1.39**	**334**	*e*Pg		**Pn**	**19 30 58.7**	**-0.3**
OBKA				*e*Sg		**Sn**	**19 31 17.6**	**-0.4**
MORI	**Morici**	**1.41**	**171**	*e*Pn		**Pn**	**19 30 58.5**	**-0.6**
MORI				Sg		**Sn**	**19 31 18.9**	**+0.6**
KIJV	**Kijevo**	**1.44**	**150**	*e*Pn		**Pn**	**19 30 59.4**	**-0.2**
KIJV				Sg		**Sb**	**19 31 18.9**	**+0.1**
SOKA	**Soboth**	**1.44**	**349**	*e*Pg		**Pn**	**19 30 59.3**	**-0.4**
	comp=Z,5.8nm,0.3s,SNR=9.9							
SOKA				*e*Sg		**Sn**	**19 31 20.1**	**+0.8**
	comp=Z,39nm,0.4s							
MGRS	**Mrkonjic Grad**	**1.45**	**125**	⇑*i* Pg		**Pn**	**19 30 59.6**	**-0.2**
MGRS				*e*Sg		**Sb**	**19 31 19.5**	**+0.3**
BEHE	**Becsehely**	**1.54**	**38**	*e*Pg		**Pn**	**19 31 00.6**	**-0.3**
BEHE				*e*Sg		**Sg**	**19 31 21.7**	**-0.1**
ZIRJ	**Zirje**	**1.61**	**174**	*e*Pg		**Pn**	**19 31 01.8**	**-0.1**
ZIRJ				Sg		**Sb**	**19 31 24.7**	**+0.9**
SRKY	**Kupres RS**	**1.72**	**133**	*e*Pn		**Pn**	**19 31 04.0**	**+0.4**
SRKY				*e*Sn		**Sn**	**19 31 26.3**	**+0.1**
MYKA	**Terra Mystica**	**1.85**	**318**	*e*Pg		**Pb**	**19 31 06.3**	**-0.7**
	comp=Z,11nm,0.4s,SNR=8.6							
MYKA				*e*Sg		**Sb**	**19 31 30.7**	**+0.1**
	comp=Z,19nm,0.4s							
RICI	**Ricice**	**2.15**	**145**	*e*Pn		**Pn**	**19 31 09.9**	**+0.6**
RICI				Sn		**Sb**	**19 31 38.9**	**-0.3**
HVAR	**Hvar**	**2.21**	**160**	*e*Pn		**Pn**	**19 31 10.9**	**+0.8**
HVAR				Sn		**Sn**	**19 31 38.8**	**+0.8**
MAKA	**Makarska**	**2.28**	**149**	*e*Pn		**Pn**	**19 31 11.4**	**+0.3**
MAKA				Sn		**Sn**	**19 31 41.9**	**+2.1**
MORH	**Mrgy, Hungar**	**2.45**	**66**	*e*Pn		**Pn**	**19 31 13.5**	**0.0**
MORH				*e*Sn		**Sn**	**19 31 44.0**	**0.0**
ABTA	**Abfaltersbach**	**2.51**	**307**	*e*Pn		**Pn**	**19 31 15.3**	**+0.9**
	comp=Z,8.5nm,0.5s,SNR=9.9							
ABTA				Sn		**Sn**	**19 31 45.2**	**-0.5**
	comp=Z,11nm,0.6s							
RONA	**Rosalia, Austr**	**2.52**	**14**	*e*Pn		**Pn**	**19 31 15.1**	**+0.7**
	comp=Z,1.2nm,0.2s,SNR=5.3							
RONA				*e*Sg		**Sg**	**19 31 56.7**	**+3.5**
	comp=Z,1.2nm,0.2s							
CONA	**Conrad Observa**	**2.69**	**6**	*i* Pn		**Pn**	**19 31 16.5**	**-0.3**
	comp=Z,1.0nm,0.2s							
CONA				*e*Sn		**Sn**	**19 31 49.1**	**-0.9**
	comp=Z,3.8nm,0.4s							
CONA				*e*Sg		**Sg**	**19 32 03.5**	**+4.8**
	comp=Z,1.7nm,0.3s							
LSTV	**Lastovo**	**2.71**	**156**	*e*Pn		**Pn**	**19 31 18.0**	**+1.1**
LSTV				Sn		**Sn**	**19 31 51.2**	**+0.9**
STON	**Ston**	**2.90**	**145**	*e*Sn		**Sn**	**19 31 55.3**	**+0.3**
STON	**Ston**	**2.90**	**145**	*e*Pn		**Pn**	**19 31 20.3**	**+0.7**
STON				Sn		**Sn**	**19 31 56.7**	**+1.7**
FRGS	**Fruska Gora**	**3.11**	**90**	*e*Sn		**Sn**	**19 31 59.6**	**-0.6**
BBLS	**Lazići**	**3.17**	**115**	*e*Sn		**Sn**	**19 32 01.7**	**-0.2**
WTTA	**Wattenberg**	**3.30**	**309**	*i* Pn		**Pn**	**19 31 25.0**	**-0.3**
	comp=Z,3.1nm,0.4s							
TREB	**Trebinje**	**3.31**	**139**	*e*Sn		**Sn**	**19 32 05.5**	**+0.4**
SQTA	**Sankt Quirin**	**3.52**	**305**	*i* Pn		**Pn**	**19 31 30.2**	**+2.0**
	comp=Z,4.9nm,0.5s							
CKRC	**Cesky Krumlov**	**3.64**	**348**	*e*SN		**Sn**	**19 32 10.3**	**-3.1**
FETA	**Feichten**	**3.71**	**300**	*e*Pg		**Pb**	**19 31 40.6**	**+1.9**
	comp=Z,1.1nm,0.2s							
FETA				*e*Sn		**Sn**	**19 32 16.1**	**+0.9**
	comp=Z,1.2nm,0.3s							
KHC	**Kasperske Hory**	**4.07**	**343**	*e*SN		**Sn**	**19 32 20.7**	**-3.3**

*TAP **17** 19:34:03.8, 23°.80N×122°.55E, h38km±1km, ML3.8, D*
*JMA **17** 19:34:04.0±0.2, 24°.N±1°×122°.5E±0°.5, h29km, MV3.2/11,*
NW OFF ISHIGAKIJIMA IS
*IDC **17** 19:34:11.6±29.0, 24°.73N×121°.38E, h0km, mb3.6/2,*
mbtmp3.6/3, ML3.5/1, MS3.3/4, Error ellipse:
s-maj=494.9km s-min=66.1km az=148.0
ISC 17 19:34:04.3±1.8, **23°.76N**±0°.03×**122°.54E**±0°.02, **h37**km±2km, **n131**, σ1§**23**/194, **MS3.6**/3, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.78**	**28**	P		**Pn**	**19 34 18.0**	**-0.7**
JYNG				*e*S		**Sn**	**19 34 27.1**	**-2.1**
YOJ	**Yonaguni jima**	**0.82**	**32**	*i* P		**Pn**	**19 34 18.7**	**-0.6**
	baz=32							
YOJ				*i* S		**Sn**	**19 34 28.7**	**-1.4**
	baz=32							
YOJ	**Yonaguni jima**	**0.82**	**32**	P		**Pn**	**19 34 18.8**	**-0.5**
YOJ				*e*S		**Sn**	**19 34 28.5**	**-1.6**
HWA	**Hwalien**	**0.88**	**284**	P		**Pn**	**19 34 19.2**	**-0.9**
	baz=271							
HWA				S		**Sn**	**19 34 30.9**	**-0.9**
	baz=271							
TWD	**Chiawan**	**0.92**	**290**	*i* P		**Pn**	**19 34 19.4**	**-1.3**
	baz=277							
TWD				*i* S		**Sn**	**19 34 31.7**	**-1.0**
	baz=277							
ETL	**Fush Village**	**0.93**	**295**	*e*P		**Pn**	**19 34 19.8**	**-1.0**
	baz=292							
ETL				*e*S		**Sn**	**19 34 31.4**	**-1.5**
	baz=292							
NACB	**Ninganchiao**	**0.96**	**295**	*i* P		**Pn**	**19 34 20.1**	**-1.0**
	baz=292							
NACB				*e*S		**Sn**	**19 34 32.9**	**-0.7**
	baz=292							
EWUT	**Wuta**	**0.97**	**314**	P		**Pn**	**19 34 21.0**	**-0.3**
	baz=312							
EWUT				*e*S		**Sn**	**19 34 35.1**	**+1.1**
	baz=312							
ENA	**Nanau**	**0.99**	**312**	P		**Pn**	**19 34 21.4**	**-0.2**
	baz=310							
ENA				*e*S		**Sn**	**19 34 34.2**	**0.0**
	baz=310							
ESL	**Shilin**	**1.02**	**273**	*i* P		**Pn**	**19 34 20.8**	**-1.2**
	baz=261							
ESL				*e*S		**Sn**	**19 34 32.8**	**-2.2**
	baz=261							
EGFH	**Guangfu**	**1.02**	**265**	*i* P		**Pn**	**19 34 21.4**	**-0.7**
	baz=262							
EGFH				*e*S		**Sn**	**19 34 34.7**	**-0.5**
	baz=262							
HGSD	**Ruisui**	**1.06**	**255**	P		**Pn**	**19 34 21.7**	**-0.9**
	baz=253							
HGSD				*e*S		**Sn**	**19 34 34.9**	**-1.2**
	baz=253							
ETLH	**Xiulin Townshi**	**1.06**	**295**	P		**Pn**	**19 34 22.0**	**-0.7**
	baz=292							
ETLH				*e*S		**Sn**	**19 34 35.5**	**-0.9**
	baz=292							
EHY	**Hungye**	**1.15**	**257**	P		**Pn**	**19 34 23.4**	**-0.3**
	baz=254							
EHY				*e*S		**Sn**	**19 34 38.3**	**+0.1**
	baz=254							
NDS	**Dongshan**	**1.15**	**319**	P		**Pn**	**19 34 24.0**	**+0.2**
	baz=325							
HATJ	**Hateruma jima**	**1.19**	**76**	*e*P		**Pn**	**19 34 25.1**	**+0.7**
HATJ				*e*S		**Sn**	**19 34 41.0**	**+1.7**
EYUL	**Yuli**	**1.20**	**250**	P		**Pn**	**19 34 24.2**	**-0.3**
	baz=239							
EYUL				*e*S		**Sn**	**19 34 39.1**	**-0.3**
	baz=239							
YULB	**Yu-li**	**1.20**	**252**	*i* P		**Pn**	**19 34 24.2**	**-0.4**
	baz=250							
YULB				S		**Sn**	**19 34 39.5**	**-0.1**
	baz=250							
LATG	**Datong**	**1.20**	**310**	*i* P		**Pn**	**19 34 24.5**	**-0.2**
	baz=308							
EGS		**1.21**	**333**	*e*P		**Pn**	**19 34 25.1**	**+0.4**
	baz=319							
EGS				*e*S		**Sn**	**19 34 38.9**	**-0.9**
	baz=319							
IRIF	**Iriomote-Funau**	**1.23**	**62**	P		**Pn**	**19 34 25.7**	**+0.8**
IRIF				*e*S		**Sn**	**19 34 42.0**	**+1.8**
WHF	**Hehuan Shan**	**1.23**	**288**	*i* P		**Pn**	**19 34 24.6**	**-0.7**
	baz=276							
WHF				*e*S		**Sn**	**19 34 39.8**	**-1.0**
	baz=276							
TWE	**Neicheng**	**1.24**	**320**	P		**Pn**	**19 34 25.8**	**+0.7**
	baz=318							
TWE				*e*S		**Sn**	**19 34 40.1**	**-0.5**
	baz=318							
NNSB	**Datong**	**1.25**	**302**	*i* P		**Pn**	**19 34 25.1**	**-0.2**
	baz=299							
NNSB				*e*S		**Sn**	**19 34 41.1**	**+0.2**
	baz=299							
NNS	**Nan Shan**	**1.26**	**302**	P		**Pn**	**19 34 25.5**	**0.0**
	baz=300							
NNS				*e*S		**Sn**	**19 34 39.9**	**-1.3**
	baz=300							
OWD	**Renai**	**1.26**	**279**	P		**Pn**	**19 34 25.1**	**-0.5**
	baz=276							
OWD				*e*S		**Sn**	**19 34 41.7**	**+0.4**
	baz=276							
NTC	**Toucheng**	**1.27**	**329**	P		**Pn**	**19 34 26.2**	**+0.8**
	baz=327							
NTC				*e*S		**Sn**	**19 34 40.8**	**-0.3**
	baz=327							
FULB	**Fuli**	**1.28**	**244**	*i* P		**Pn**	**19 34 24.8**	**-0.8**
	baz=233							
FULB				*e*S		**Sn**	**19 34 40.0**	**-1.5**
	baz=233							
FUSS	**Fushou**	**1.28**	**292**	P		**Pn**	**19 34 25.7**	**-0.2**
	baz=289							
FUSS				*e*S		**Sn**	**19 34 41.8**	**-0.1**
	baz=289							
VWDT	**VWDT**	**1.28**	**270**	*i* P		**Pn**	**19 34 25.4**	**-0.2**
	baz=267							
VWDT				S		**Sn**	**19 34 41.0**	**-0.6**
	baz=267							
CHGB	**Renai**	**1.29**	**284**	*i* P		**Pn**	**19 34 25.5**	**-0.4**
	baz=273							
CHGB				*e*S		**Sn**	**19 34 41.7**	**-0.3**
	baz=273							
FUSB	**Fushanzhiwuyua**	**1.32**	**319**	P		**Pn**	**19 34 26.6**	**+0.3**
	baz=306							
FUSB				*e*S		**Sn**	**19 34 43.1**	**+0.5**
	baz=306							
WUSB	**Renai**	**1.32**	**280**	*i* P		**Pn**	**19 34 26.1**	**-0.3**
	baz=277							
WUSB				*e*S		**Sn**	**19 34 43.1**	**+0.3**
	baz=277							
TWB1	**Santiao Chiao**	**1.34**	**338**	*e*P		**Pn**	**19 34 25.9**	**-0.5**
	baz=351							
TWB1				*e*S		**Sn**	**19 34 42.7**	**-0.2**
	baz=351							
TWT	**Tachien**	**1.34**	**292**	P		**Pn**	**19 34 26.9**	**+0.3**
	baz=288							
TWT				*e*S		**Sn**	**19 34 43.7**	**+0.4**
	baz=288							
TDCB	**Techi**	**1.35**	**291**	*e*P		**Pn**	**19 34 26.9**	**+0.1**
	baz=280							
TIPB	**Shuangxi**	**1.37**	**332**	*i* P		**Pn**	**19 34 27.3**	**+0.4**
	baz=330							
TIPB				*e*S		**Sn**	**19 34 42.5**	**-1.3**
	baz=330							
EDH	**Donghe**	**1.38**	**236**	*e*P		**Pn**	**19 34 26.3**	**-0.8**
	baz=227							
EDH				*e*S		**Sn**	**19 34 42.5**	**-1.6**
	baz=227							
NWLT	**Wulai**	**1.38**	**317**	P		**Pn**	**19 34 27.6**	**+0.5**
	baz=315							
YHNB	**Yeheng**	**1.40**	**310**	P		**Pn**	**19 34 27.7**	**+0.5**
	baz=308							
NSK	**Sanguang**	**1.41**	**310**	*e*P		**Pn**	**19 34 27.6**	**+0.1**
	baz=308							
NSK				*e*S		**Sn**	**19 34 45.0**	**+0.1**
	baz=308							
JKRS	**Kuro-shima**	**1.42**	**70**	P		**Pn**	**19 34 28.9**	**+1.3**
SSLB	**Suanglung**	**1.45**	**271**	*e*P		**Pn**	**19 34 27.8**	**-0.2**
	baz=269							
SXI1	**Grass Mountain**	**1.46**	**336**	*e*P		**Pn**	**19 34 28.2**	**0.0**
	baz=334							
LDUT	**Ludao**	**1.47**	**222**	*i* P		**Pn**	**19 34 27.2**	**-1.0**
	baz=221							
LDUT				S		**Sn**	**19 34 44.2**	**-1.9**
	baz=221							
NWF	**Wu-fen Shan**	**1.47**	**332**	*e*P		**Pn**	**19 34 28.6**	**+0.2**
	baz=330							
NWF				*e*S		**Sn**	**19 34 45.7**	**-0.8**
	baz=330							
YUS	**Yu-Shan**	**1.48**	**260**	*e*P		**Pn**	**19 34 29.0**	**+0.1**
	baz=257							
YUS				*e*S		**Sn**	**19 34 47.0**	**-0.2**
	baz=257							
TWA	**Mucha**	**1.49**	**324**	*e*P		**Pn**	**19 34 29.9**	**+1.4**
	baz=338							
SMLT	**Sun Moon Lake**	**1.51**	**275**	P		**Pn**	**19 34 29.2**	**+0.4**
	baz=272							
SMLT				*e*S		**Sn**	**19 34 47.7**	**+0.4**
	baz=272							
NHDH	**Xindian Distri**	**1.51**	**322**	*e*P		**Pn**	**19 34 30.3**	**+1.5**
	baz=335							
ELDTW	**Lidau**	**1.51**	**248**	P		**Pn**	**19 34 28.5**	**-0.4**
	ba

	baz=248								
STYH				S		Sn	19 34 53.5	+1.0	
	baz=248								
TWY	**Chenhua**	**1.73**	**331**	*e*P		Pn	19 34 32.7	+0.9	
	baz=329								
TCU	**Taichung**	**1.75**	**283**	P		Pn	19 34 34.0	+2.0	
	baz=280								
TCU				*e*S		Sn	19 34 56.9	+3.8	
	baz=280								
SBCB	**Hsinchu**	**1.75**	**306**	*e*P		Pn	19 34 33.7	+1.6	
	baz=304								
NSY	**Sanyi**	**1.75**	**292**	P		Pn	19 34 33.9	+1.8	
	baz=290								
NSY				*e*S		Sn	19 34 53.8	+0.6	
	baz=290								
NMLH	**Miaoli**	**1.77**	**296**	*e*P		Pn	19 34 33.6	+1.2	
	baz=294								
JISG	**Ishigakijimahi**	**1.81**	**63**	P		Pn	19 34 33.4	+0.5	
JISG				*e*S		Sn	19 34 56.4	+1.8	
TPUB	**Ta-pu**	**1.81**	**256**	*e*P		Pn	19 34 34.7	+1.7	
	baz=247								
TPUB				*e*S		Sn	19 34 56.4	+1.6	
	baz=247								
WDLH	**Douliu**	**1.84**	**268**	*e*P		Pn	19 34 34.6	+1.3	
	baz=265								
WDLH				*e*S		Sn	19 34 57.6	+2.4	
	baz=265								
WCHH	**Zhanghua**	**1.84**	**280**	*e*P		Pn	19 34 35.2	+1.9	
	baz=277								
WCHH				*e*S		Sn	19 34 58.5	+3.1	
	baz=277								
WTP	**Ta-pu**	**1.84**	**254**	*e*P		Pn	19 34 34.7	+1.3	
	baz=251								
WTP				*e*S		Sn	19 34 57.9	+2.4	
	baz=251								
PCYT	**Pengchaiyu**	**1.91**	**347**	*e*P		Pn	19 34 34.1	-0.1	
	baz=346								
SGST	**Jiashian**	**1.92**	**250**	*e*P		Pn	19 34 35.1	+0.6	
	baz=238								
SGST				*e*S		Sn	19 34 58.6	+1.2	
	baz=238								
CHN1	**Nanshi**	**1.94**	**253**	*e*P		Pn	19 34 36.4	+1.7	
	baz=250								
CHN1				*e*S		Sn	19 35 01.5	+3.7	
	baz=250								
LAY	**Lan-yu**	**1.94**	**208**	*e*P		Pn	19 34 33.2	-1.6	
	baz=207								
LAY				*e*S		Sn	19 34 55.9	-2.1	
	baz=207								
TWK	**Hsinying**	**1.95**	**256**	*e*P		Pn	19 34 36.5	+1.6	
	baz=253								
TWK				*e*S		Sn	19 35 01.7	+3.6	
	baz=253								
SNST	**Tainan City**	**1.95**	**254**	*e*P		Pn	19 34 35.0	+0.1	
	baz=252								
CHY	**Chiayi**	**1.96**	**263**	*e*P		Pn	19 34 36.0	+1.0	
	baz=260								
LYUB	**Lan-yu**	**1.96**	**207**	P		Pn	19 34 33.5	-1.5	
	baz=206								
LYUB				S		Sn	19 34 56.1	-2.3	
	baz=206								
WTK	**Tuku**	**1.97**	**268**	*e*P		Pn	19 34 37.4	+2.3	
	baz=266								
WRL	**Guolierlin Hig**	**1.99**	**274**	*e*P		Pn	19 34 36.5	+1.2	
	baz=262								
SSD	**Sandimen**	**2.03**	**240**	*e*P		Pn	19 34 37.3	+1.4	
	baz=233								
TSMG	**Majia**	**2.04**	**239**	*e*P		Pn	19 34 37.5	+1.5	
	baz=232								
SCST	**Cishan**	**2.08**	**245**	*e*P		Pn	19 34 37.0	+0.5	
	baz=243								
EAST	**Anshuo**	**2.08**	**229**	*e*P		Pn	19 34 36.2	-0.5	
	baz=236								
TAWH	**Dawu Township**	**2.08**	**227**	*e*P		Pn	19 34 36.5	-0.1	
	baz=233								
TAWH				*e*S		Sn	19 35 02.2	+0.9	
	baz=233								
MASBT	**Mashibuluo**	**2.10**	**237**	*e*P		Pn	19 34 37.3	+0.5	
	baz=230								
MASBT				*e*S		Sn	19 35 01.8	+0.1	
	baz=230								
CHN3	**Shinhua**	**2.11**	**252**	*e*P		Pn	19 34 39.0	+1.9	
	baz=262								
ICHU	**Yijhu**	**2.11**	**259**	*e*P		Pn	19 34 38.6	+1.5	
	baz=257								
WSL	**Shuilin Townsh**	**2.13**	**264**	*e*P		Pn	19 34 37.7	+0.3	
	baz=262								
SHHT	**Tainan City**	**2.15**	**250**	*e*P		Pn	19 34 41.2	+3.6	
	baz=248								
JTJ	**Tarama**	**2.16**	**66**	P		Pn	19 34 39.4	+1.7	
CHN8	**Yiju**	**2.18**	**259**	*e*P		Pn	19 34 39.6	+1.6	
	baz=257								
SSPT	**Xinbi**	**2.22**	**235**	*e*P		Pn	19 34 40.3	+1.8	
	baz=229								
SLIU	**Shizi**	**2.23**	**227**	*e*P		Pn	19 34 39.0	+0.4	
	baz=225								
SCZT	**Fangliau**	**2.25**	**232**	*e*P		Pn	19 34 39.4	+0.5	
	baz=225								
SMST	**Manzhou Townsh**	**2.34**	**222**	*e*P		Pn	19 34 41.6	+1.4	
	baz=229								
TSEB	**Hengchuen, Pin**	**2.40**	**220**	*e*P		Pn	19 34 41.8	+0.9	
	baz=226								
HEN	**Hengchun**	**2.42**	**224**	*e*P		Pn	19 34 42.2	+1.0	
	baz=222								
TWKBT	**Hengchun**	**2.42**	**222**	*e*P		Pn	19 34 41.9	+0.7	
	baz=220								
TWK1	**Hengchun**	**2.42**	**222**	*e*P		Pn	19 34 42.2	+1.0	
	baz=220								
WDGT	**Dungji**	**2.69**	**260**	*e*P		Pn	19 34 46.2	+1.1	
	baz=257								
WDGT				*e*S		Sn	19 35 17.0	+0.6	
	baz=257								
PHUB	**P'eng-hu**	**2.73**	**265**	*e*P		Pn	19 34 46.0	+0.3	
	baz=276								
PNG	**Penghu**	**2.75**	**267**	*e*P		Pn	19 34 46.4	+0.6	
	baz=254								
VCHM	**Qimei**	**2.91**	**260**	*e*P		Pn	19 34 48.5	+0.5	
	baz=257								
VWUC	**VWUC**	**3.07**	**294**	*e*P		Pn	19 34 49.9	-0.4	
	baz=292								
MATB	**Ma-tsu**	**3.35**	**316**	*e*P		Pn	19 34 53.3	-0.7	
	baz=314								
PTMZ	**Houxiangcun**	**3.37**	**293**	*e*P		Pn	19 34 53.9	-0.4	
	baz=291								
LYJJ	**Jianjiangzhen**	**3.75**	**318**	*e*P		Pn	19 34 59.4	-0.2	
	baz=317								
XPSS	**Dashiqiu**	**3.80**	**326**	*e*P		Pn	19 34 59.9	-0.4	
	baz=335								
KNM	**Kinmen**	**3.81**	**281**	*e*P		Pn	19 35 02.3	+1.9	
	baz=278								
KNMB	**Chin-men Tao**	**3.86**	**281**	*e*P		Pn	19 35 01.1	0.0	
	baz=279								
MHZQ	**Yeshan**	**3.95**	**307**	*e*P		Pn	19 35 01.5	-0.8	
	baz=306								
AXDP	**Jialang**	**4.32**	**286**	*e*P		Pn	19 35 07.2	-0.2	
	baz=283								
ZPLA	**Ao Xinun**	**4.39**	**273**	*e*P		Pn	19 35 08.5	+0.1	
	baz=280								
KSRS	**Korea Array**	**14.41**	**17**	Pn		**P**	19 37 29.6	-2.2	
	0.2nm,0.3s,baz=198,slow=14,SNR=5.5								
KSRS				LR		LR	19 43 58.4		
	comp=Z,58nm,18.6s,baz=195,slow=42 1.1nm,0.7s								
SONM	**Songino Array**	**27.25**	**336**	P		**P**	19 39 45.3	+0.3	
	0.4nm,0.5s,baz=152,slow=8.8,SNR=4.3								
SONM				LR		LR	19 51 21.4		
	comp=Z,38nm,21.6s,baz=87,slow=40 0.4nm,0.5s								
MKAR	**Makanchi Array**	**39.50**	**316**	P		**P**	**19 41 32.0**	**+0.7**	
	0.6nm,0.5s,baz=95,slow=10.0,SNR=14 0.6nm,0.5s								
EIL	**Elat**	**76.65**	**297**	LR		LR	20 21 57.3		
	comp=Z,49nm,20.0s,baz=80,slow=38								
IDI	**Anoyia**	**82.49**	**305**	LR		LR	20 25 58.2		
	comp=Z,29nm,21.8s,baz=84,slow=38								

*TAP **17** 19:36:24.1,23.˚79N×122.˚55E,h37km±2km, ML2.7, D*
*JMA **17** 19:36:25.7±0.1,24.˚1N±1.˚1×122.˚4E±0.˚4, h57km, MV1.8/8, NW OFF ISHIGAKIJIMA IS*

ISC 17 19:36:22.9±1.1, 23.˚80N±0.˚03×122.˚47E±0.˚02, h11km±9km, n73, σ0.˚71/105, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.78**	**34**	P		**Pg**		**19 36 38.5**	**+0.4**
JYNG				e*S*		**Sg**		**19 36 47.9**	**-0.5**
HWA	**Hwalien**	**0.81**	**283**	*e*P		**Pn**		**19 36 40.3**	**+0.1**
	baz=272								
HWA				*e*S		**Sb**		**19 36 50.2**	**+0.4**
	baz=272								
YOJ	**Yonaguni jima**	**0.83**	**37**	*i* P		**Pg**		**19 36 39.1**	**+0.2**
	baz=32								
YOJ				*i* S		**Sg**		**19 36 49.6**	**-0.2**
	baz=32								
YOJ	**Yonaguni jima**	**0.83**	**37**	P		**Pg**		**19 36 39.3**	**+0.4**
YOJ				S		**Sg**		**19 36 49.0**	**-0.8**
TWD	**Chiawan**	**0.84**	**290**	*i* P		**Pb**		**19 36 40.0**	**+0.4**
	baz=277								
TWD				*e*S		Sn		19 36 52.0	-1.1
	baz=277								
ETL	**Fush Village**	**0.85**	**295**	*e*P		Pn		19 36 40.8	-0.1
	baz=283								
NACB	**Ninganchiao**	**0.88**	**295**	P		Pn		19 36 40.9	-0.3
	baz=283								
NACB				*e*S		Sb		19 36 51.9	-0.1
	baz=283								
EWUT	**Wuta**	**0.90**	**316**	P		Pn		19 36 41.4	-0.1
	baz=312								
EWUT				*e*S		Sn		19 36 53.8	-0.7
	baz=312								
ENA	**Nanau**	**0.91**	**314**	*i* P		Pn		19 36 42.0	+0.4
	baz=310								
ENA				*e*S		Sn		19 36 54.7	-0.1
	baz=310								
ESL	**Shilin**	**0.94**	**271**	P		Pg		19 36 41.2	0.0
	baz=262								
EGFH	**Guangfu**	**0.96**	**262**	*e*P		Pg		19 36 41.4	0.0
	baz=262								
EGFH				*e*S		Sn		19 36 55.7	-0.2
	baz=262								
ETLH	**Xiulin Townshi**	**0.99**	**294**	*i* P		Pb		19 36 42.5	+0.4
	baz=292								
ETLH				*e*S		Sn		19 36 56.3	-0.5
	baz=292								
HGSD	**Ruisui**	**1.00**	**252**	P		Pg		19 36 42.2	-0.1
	baz=253								
HGSD				S		Sg		19 36 55.5	+0.2
	baz=253								
NDS	**Dongshan**	**1.08**	**321**	P		Pn		19 36 44.4	+0.5
	baz=317								
NDS				*e*S		Sn		19 36 59.7	+0.8
	baz=317								
EHY	**Hungye**	**1.09**	**255**	*i* P		Pb		19 36 43.7	-0.1
	baz=255								
EHY				*e*S		Sg		19 36 58.4	+0.3
	baz=255								
LATG	**Datong**	**1.13**	**311**	*e*P		Pn		19 36 45.3	+0.5
	baz=308								
EYUL	**Yuli**	**1.14**	**247**	*e*P		Pb		19 36 44.6	-0.1
	baz=239								
EYUL				*e*S		Sb		19 36 60.0	+0.4
	baz=239								
YULB	**Yu-li**	**1.15**	**250**	*e*P		Pb		19 36 44.8	0.0
	baz=250								
YULB				*e*S		Sb		19 36 59.9	+0.3
	baz=250								
EGS		**1.15**	**335**	*e*P		Pb		19 36 44.6	-0.3
	baz=320								
EGS				*e*S		Sn		19 36 59.6	-1.0
	baz=320								
WHF	**Hehuan Shan**	**1.15**	**288**	P		Pg		19 36 45.1	-0.1
	baz=276								
WHF				*e*S		Sn		19 37 00.7	-0.7
	baz=276								
NNSB	**Datong**	**1.17**	**303**	*i* P		Pn		19 36 45.4	0.0
	baz=300								
NNSB				*e*S		Sn		19 37 00.7	-0.7
	baz=300								
TWE	**Neicheng**	**1.17**	**322**	*e*P		Pn		19 36 46.3	+1.1
	baz=319								
OWD	**Renai**	**1.19**	**278**	*e*P		Pb		19 36 45.8	+0.2
	baz=276								
OWD				*e*S		Sn		19 37 01.4	-0.5
	baz=276								
NTC	**Toucheng**	**1.20**	**331**	*e*P		Pn		19 36 47.8	+2.2
	baz=339								
FUSS	**Fushou**	**1.20**	**292**	*e*P		Pg		19 36 45.9	-0.2
	baz=290								
FUSS				*e*S		Sn		19 37 02.0	-0.3
	baz=290								
CHGB	**Renai**	**1.21**	**283**	*e*P		Pb		19 36 45.7	-0.3
	baz=273								
CHGB				*e*S		Sn		19 37 03.0	+0.5
	baz=273								
VWDT	**VWDT**	**1.21**	**268**	*e*P		Pb		19 36 45.4	-0.5
	baz=267								
VWDT				*e*S		Sg		19 37 01.6	-0.5
	baz=267								
FULB	**Fuli**	**1.23**	**241**	*e*P		Pn		19 36 46.9	+0.8
	baz=233								
FULB				*e*S		Sb		19 37 00.8	-1.2
	baz=233								
FUSB	**Fushanzhiwuyua**	**1.25**	**320**	*e*P		Pn		19 36 47.5	+1.1
	baz=317								
FUSB				*e*S		Sn		19 37 04.0	+0.8
	baz=317								
WUSB	**Renai**	**1.25**	**279**	*e*P		Pb		19 36 46.3	-0.3
	baz=278								
WUSB				*e*S		Sn		19 37 03.5	+0.2
	baz=278								
HATJ	**Hateruma jima**	**1.25**	**78**	*e*S		Sb		19 37 03.1	+0.3
TWT	**Tachien**	**1.26**	**291**	*e*P		Pn		19 36 47.4	+0.7
	baz=281								
IRIF	**Iriomote-Funau**	**1.27**	**65**	P		Pn		19 36 46.8	+0.1
IRIF				*e*S		Sb		19 37 02.8	-0.5
TWB1	**Santiao Chiao**	**1.28**	**340**	*e*P		Pg		19 36 48.2	+0.7
	baz=352								
TWB1				*e*S		Sn		19 37 03.6	-0.3
	baz=352								
TIPB	**Shuangxi**	**1.30**	**334**	*e*P		Pg		19 36 48.2	+0.2
	baz=330								
NWLT	**Wulai**	**1.31**	**318**	*e*P		Pg		19 36 47.9	-0.3
	baz=316								
YHNB	**Yeheng**	**1.32**	**311**	*e*P		Pb		19 36 47.3	-0.5
	baz=309								
YHNB				*e*S		Sn		19 37 04.8	-0.1
	baz=309								
NSK	**Sanguang**	**1.33**	**311**	*e*P		Pb		19 36 47.9	-0.1
	baz=309								
SSLB	**Suanglung**	**1.38**	**270**	*e*P		Pn		19 36 48.0	-0.2
	baz=269								
SXI1	**Grass Mountain**	**1.40**	**337**	*e*P		Pn		19 36 48.7	+0.2
	baz=334								
YUS	**Yu-Shan**	**1.42**	**258**	*e*P		Pn		19 36 49.5	+0.4
	baz=257								
YUS				*e*S		Sb		19 37 07.5	-0.6
	baz=257								
TWA	**Mucha**	**1.42**	**326**	*e*P		Pg		19 36 50.3	0.0
	baz=338								
SMLT	**Sun Moon Lake**	**1.44**	**274**	*e*P		Pn		19 36 49.3	+0.3
	baz=272								
SMLT				*e*S		Sn		19 37 07.8	-0.1
	baz=272								
WCS	**Beigang Elemen**	**1.44**	**281**	*e*P		Pn		19 36 49.4	+0.4
	baz=279								
ELDTW	**Lidau**	**1.46**	**246**	*e*P		Pn		19 36 49.2	-0.2
	baz=246								
ELDTW				*e*S		Sn		19 37 07.2	-1.3
	baz=246								
WHP	**Taichung City**	**1.47**	**289**	*e*P		Pg		19 36 52.0	+0.8
	baz=280								
TYC	**Yuchr**	**1.48**	**274**	*e*P		Pn		19 36 50.1	+0.7
	baz=273								
TYC				*e*S		Sg		19 37 09.5	-0.9
	baz=273								
JKRS	**Kuro-shima**	**1.48**	**73**	*e*S		Sn		19 37 08.5	-0.3
NFF	**Wufeng Townshi**	**1.48**	**304**	*e*P		Pg		19 36 51.2	-0.2
	baz=303								
LONT	**Longtian**	**1.52**	**234**	*e*P		Pn		19 36 50.9	+0.9
	baz=229								
ALS	**Alishan**	**1.55**	**260**	*e*P		Pn		19 36 51.1	+0.4
	baz=259								
LIOB	**Emei**	**1.57**	**303**	*e*P		Pg		19 36 52.7	-0.4
	baz=314								
YM01	**YM01**	**1.57**	**329**	*e*P		Pb		19 36 52.0	0.0
	baz=340								
NSTT	**Nanjuang**	**1.57**	**302**	*e*P		Pg		19 36 52.7	-0.5
	baz=313								
TWGBT	**Beinan**	**1.60**	**233**	*e*P		Pn		19 36 51.0	-0.3
	baz=227								
TWG	**Pinlang**	**1.61**	**233**	*e*P		Pn		19 36 51.6	+0.3
	baz=227								
JIJ	**Ishigaki jima**	**1.63**	**70**	*e*S		Sn		19 37 11.7	-0.9
WNT	**Mingjian**	**1.63**	**273**	*e*P		Pb		19 36 53.3	+0.2
	baz=272								
TWQ1	**Liyutan**	**1.64**	**290**	*e*P		Pb		19 36 53.1	-0.1
	baz=288								
STYH	**Taoyuan**	**1.67**	**248**	*e*P		Pn		19 36 53.8	+1.6
	baz=241								
TCU	**Taichung**	**1.67**	**282**	*e*P		Pg		19 36 54.9	-0.2
	baz=281								
WDJ	**Dajia District**	**1.75**	**289**	*e*P		Pn		19 36 54.0	+0.8
	baz=287								
TPUB	**Ta-pu**	**1.76**	**254**	*e*P		Pn		19 36 54.8	+1.5
	baz=245								
WDLH	**Douliu**	**1.77**	**267**	*e*P		Pb		19 36 55.8	+0.4
	baz=266								
WTP	**Ta-pu**	**1.79**	**252**	*e*P		Pn		19 36 55.3	+1.5
	baz=252								
CHN1	**Nanshi**	**1.88**	**251**	*e*P		Pn		19 36 57.2	+2.1
	baz=251								
TWK	**Hsinying**	**1.89**	**254**	*e*P		Pn		19 36 56.8	+1.6
	baz=254								
SNST	**Tainan City**	**1.90**	**253**	*e*P		Pb		19 36 58.0	+0.4
	baz=252								
WRL	**Guolierlin Hig**	**1.91**	**273**	*e*P		Pb		19 36 57.7	-0.2
	baz=263								
SSD	**Sandimen**	**1.98**	**238**	*e*P		Pn		19 36 58.4	+1.9
	baz=233								
TSMG	**Majia**	**2.00**	**237**	*e*P		Pn		19 36 58.5	+1.9
	baz=232								
EAST	**Anshuo**	**2.05**	**227**	*e*P		Pn		19 36 56.9	-0.5
	baz=236								
MASBT	**Mashibuluo**	**2.06**	**235**	*e*P		Pn		19 36 58.0	+0.6
	baz=230								

*MOS **17** 20:26:55.1±1.4, 56.˚11N×113.˚79E, h13km, mb3.9/2, Error ellipse: s-maj=10.4km s-min=6.3km az=71.5*
*BYKL **17** 20:26:56.4±0.2, 56.˚12N×113.˚70E, h3km±2km*
*IDC **17** 20:26:59.3±1.7, 56.˚03N×113.˚11E, h0km, mb3.2/2, mbtmp3.6/7, ML3.9/3, MS3.0/5, Error ellipse: s-maj=39.1km s-min=16.8km az=139.0*

ISC 17 20:26:56.2±0.8, 56.˚09N±0.˚02×113.˚71E±0.˚02, h7km±6km, n76, σ2.˚74/143, mb3.5/4, 7C-6D, East of Lake Baikal

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.09**	**287**	⇑*i*P	G	**Pg**		**20 26 58.4**	**0.0**
SVKR						pmax	pmax		
	comp=Z,29μm,0.4s								
SVKR	**Severomuysk**	**0.09**	**287**	⇑*i*Pg		**Pg**		**20 26 58.4**	**0.0**
SVKR						Pmax		20 26 58.7	
	comp=Z,29μm,0.2s								
SVKR				*e*Sg		**Sg**		**20 27 00.3**	**+0.4**
SVKR						Smax		20 27 00.7	
	comp=Z,61μm,0.4s								
UKT	**Uakit**	**0.61**	**184**	⇓*i*PG		**Pg**		**20 27 07.3**	**-0.6**
UKT				*e*				20 27 16.4	
UKT						pmax	pmax		
	comp=Z,89nm,0.1s								
UKT						smax	smax		
	comp=E,995nm,0.3s								
UKT	**Uakit**	**0.61**	**184**	⇓*i*Pg		**Pg**		**20 27 07.3**	**-0.6**
UKT						Pmax		20 27 07.9	
	comp=E,226nm,0.4s								
UKT				*e*Sg		**Sg**		**20 27 15.6**	**-0.2**
UKT						Smax		20 27 16.8	
	comp=E,1μm,1.0s								
NLYR	**Nelyaty**	**1.18**	**69**	*e*PG		**Pg**		**20 27 17.7**	**-1.1**
NLYR				*e*				20 27 33.7	
NLYR						pmax	pmax		
	comp=Z,1μm,0.3s								
NLYR						smax	smax		
	comp=N,6μm,0.9s								
NLYR	**Nelyaty**	**1.18**	**69**	⇓*i*Pg		**Pg**		**20 27 17.8**	**-1.1**
NLYR				*e*Pb		**Pb**		**20 27 19.6**	**+0.7**
NLYR						max		20 27 20.2	
	comp=N,1μm,0.3s								
NLYR				*e*Sg		**Sg**		**20 27 33.6**	**-0.6**
NLYR				*e*Sb		**Sn**		**20 27 37.5**	**+2.1**
NLYR						max		20 27 38.0	
	comp=N,6μm,0.8s								
KMO	**Kumora**	**1.43**	**263**	⇑*i*PG		**Pn**		**20 27 22.2**	**-0.2**
KMO				*e*				20 27 41.2	
KMO						pmax	pmax		
	comp=Z,145nm,0.3s								
KMO						smax	smax		
	comp=N,5μm,0.8s								
KMO	**Kumora**	**1.43**	**263**	⇑*i*Pg		**Pn**		**20 27 22.3**	**-0.2**
KMO				*e*Pb		**Pg**		**20 27 23.6**	**+0.1**
KMO						max		20 27 27.3	
	comp=N,479nm,0.3s								
KMO				*e*Sg		**Sg**		**20 27 41.5**	**-0.4**
KMO				*e*				20 27 44.7	
KMO						max		20 27 45.7	
	comp=N,5μm,1.0s								
BOD	**Bodaibo**	**1.74**	**5**	*e*PN		**Pn**		**20 27 27.3**	**+0.6**
BOD				*e*				20 27 49.9	
BOD						pmax	pmax		
	comp=Z,287nm,0.3s								
BOD						smax	smax		
	comp=E,1μm,0.7s								
BOD	**Bodaibo**	**1.74**	**5**	⇓*i*Pn		**Pn**		**20 27 27.3**	**+0.6**
BOD				*e*Pg		**Pb**		**20 27 27.6**	**-0.8**
BOD						Pmax		20 27 29.4	
	comp=E,294nm,0.4s								
BOD				*e*Sg		**Sn**		**20 27 49.9**	**+0.8**
BOD						Smax		20 27 50.8	
	comp=E,1μm,0.8s								
YLYR	**Ulyunkhan**	**1.89**	**231**	*e*PN		**Pn**		**20 27 30.4**	**+1.6**
YLYR				*e*S		**Sb**		**20 27 56.3**	**+1.4**
YLYR	**Ulyunkhan**	**1.89**	**231**	⇓*i*Pn		**Pn**		**20 27 30.5**	**+1.6**
YLYR				*e*Pg		**Pb**		**20 27 31.2**	**+0.2**
YLYR						Pmax		20 27 31.5	
	comp=E,529nm,0.5s								
YLYR				*e*				20 27 33.2	
YLYR				*e*Sg		**Sb**		**20 27 56.2**	**+1.4**
YLYR				*e*				20 27 58.3	
YLYR						max		20 27 58.8	
	comp=E,2μm,0.4s								
NIZ	**Nizh Angarsk**	**2.37**	**264**	*e*PN		**Pn**		**20 27 37.3**	**+1.9**
NIZ				*e*				20 28 11.2	
NIZ						pmax	pmax		
	comp=Z,125nm,0.6s								
NIZ						smax	smax		
	comp=N,2μm,1.0s								
NIZ	**Nizh Angarsk**	**2.37**	**264**	*e*Pn		**Pn**		**20 27 37.2**	**+1.9**
NIZ				*e*Pg		**Pb**		**20 27 39.1**	**0.0**
NIZ						Pmax		20 27 43.0	
	comp=N,125nm,0.6s								
NIZ				*e*Sn		**Sn**		**20 28 04.6**	**0.0**
NIZ				*e*Sg		**Sb**		**20 28 09.3**	**+0.9**
NIZ				*e*				20 28 11.2	
NIZ						max		20 28 12.6	
	comp=N,2μm,0.8s								
CRS	**Chara**	**2.66**	**70**	*e*PN		**Pn**		**20 27 40.1**	**+0.7**
CRS				*e*				20 27 44.5	
CRS				*e*				20 28 18.7	
CRS						pmax	pmax		
	comp=Z,325nm,0.8s								
CRS						smax	smax		
	comp=E,826nm,0.9s								
CRS	**Chara**	**2.66**	**70**	⇑*i*Pn		**Pn**		**20 27 40.3**	**+0.9**
CRS				*e*Pg		**Pb**		**20 27 44.6**	**+0

VTMR				*e*PgPg	**Pg**	**20 28 01.3**	**-0.3**
VTMR				*e*Sg	**Sb**	**20 28 40.7**	**+2.1**
KHNR	**Khani**	**3.57**	**74**	*e*Pn	**Pn**	**20 27 53.2**	**+1.2**
KHNR				*e*Pg	**Pb**	**20 28 00.1**	**+0.5**
KHNR				*e*		20 28 03.8	
KHNR				*e*Sn	**Sn**	**20 28 34.6**	**+0.2**
KHNR				*e*Sg	**Sb**	**20 28 46.1**	**+2.9**
KHNR				*e*SgSg	**Sg**	**20 28 51.1**	**+0.3**
TUP	**Tupik**	**3.94**	**112** ⇑	*i*PN	**Pn**	**20 27 57.5**	**+0.4**
TUP				*e*		20 28 07.3	
TUP				*e*S	**Sn**	**20 28 43.0**	**-0.5**
TUP				*e*		20 28 58.5	
TUP				pmax	pmax		
	comp=Z,69nm,0.5s						
TUP				smax	smax		
	comp=N,388nm,0.9s						
TUP	**Tupik**	**3.94**	**112** ⇑	*i*Pn	**Pn**	**20 27 57.5**	**+0.4**
TUP				*e*Pg	**Pb**	**20 28 07.9**	**+1.9**
TUP				Pmax		20 28 08.6	
	comp=N,88nm,0.6s						
TUP				*e*Sn	**Sn**	**20 28 42.7**	**-0.8**
TUP				*e*Sg	**Sg**	**20 28 59.2**	**-3.5**
TUP				*e*		20 29 03.4	
TUP				*e*		20 29 13.7	
TUP				max		20 29 14.3	
	comp=N,388nm,1.2s						
MXMB	**Maximikha**	**4.04**	**228**	*e*PN	**Pn**	**20 28 00.0**	**+1.6**
MXMB				*e*Pg	**Pb**	**20 28 08.3**	**+0.7**
MXMB				*e*PgPg	**PbPb**	**20 28 10.3**	**-0.5**
MXMB				*e*Sn	**Sn**	**20 28 46.6**	**+0.7**
MXMB				*e*Sg	**Sb**	**20 29 01.6**	**+5.0**
MXMB				*e*		20 29 07.4	
CIT	**Chita**	**4.08**	**181**	*e*PN	**Pn**	**20 27 59.1**	**+0.2**
CIT				*e*		20 28 10.1	
CIT				*e*S	**Sn**	**20 28 48.6**	**+1.7**
CIT				*e*		20 29 06.6	
CIT				pmax	pmax		
	comp=Z,66nm,1.0s						
CIT				smax	smax		
	comp=E,431nm,1.1s						
CIT	**Chita**	**4.08**	**181**	*e*Pg	**Pb**	**20 28 10.3**	**+2.0**
CIT				Pmax		20 28 13.0	
	comp=E,58nm,0.3s						
CIT				*e*		20 28 16.8	
CIT				*e*Sn	**Sn**	**20 28 46.6**	**-0.3**
CIT				*e*Sg	**Sb**	**20 29 03.5**	**+5.7**
CIT				Smax		20 29 09.0	
	comp=E,612nm,0.6s						
OGRR	**Ongureny**	**4.30**	**238**	*e*PN	**Pn**	**20 28 05.2**	**+3.3**
OGRR				*e*		20 28 16.1	
OGRR				*e*		20 29 10.3	
OGRR				pmax	pmax		
	comp=Z,51nm,1.3s						
OGRR				smax	smax		
	comp=N,302nm,1.8s						
OGRR	**Ongureny**	**4.30**	**238**	*e*Pn	**Pn**	**20 28 05.1**	**+3.2**
OGRR				*e*Pg	**Pb**	**20 28 14.6**	**+2.6**
OGRR				Pmax		20 28 20.1	
	comp=N,51nm,0.8s						
OGRR				*e*Sn	**Sn**	**20 28 51.8**	**-0.5**
OGRR				*e*Sg	**Sg**	**20 29 10.3**	**-3.9**
OGRR				*e*		20 29 19.0	
OGRR				max		20 29 22.4	
	comp=N,303nm,1.3s						
YKLR	**Yuktali**	**4.45**	**80**	*e*Pn	**Pn**	**20 28 04.5**	**+0.5**
YKLR				*e*Pg	**Pb**	**20 28 15.7**	**+1.1**
YKLR				*e*Sn	**Sn**	**20 28 54.6**	**-1.3**
YKLR				*e*Sg	**Sb**	**20 29 13.2**	**+4.9**
KELR	**Kotokel**	**4.68**	**227**	*e*Pg	**Pb**	**20 28 21.3**	**+2.7**
KELR				*e*Sn	**Sn**	**20 29 02.1**	**+0.4**
KELR				*e*Sg	**Sg**	**20 29 22.5**	**-4.0**
ZRHB	**Zarechye**	**5.22**	**230**	*e*Pn	**Pn**	**20 28 15.6**	**+1.0**
ZRHB				max		20 28 18.7	
	comp=N,87nm,0.4s						
ZRHB				*e*		20 28 30.0	
ZRHB				*e*		20 29 06.9	
ZRHB				*e*Sn	**Sn**	**20 29 14.1**	**-0.9**
ZRHB				*e*Sg	**Sg**	**20 29 38.5**	**-5.3**
ZRHB				*e*		20 29 56.2	
ZRHB				max		20 30 01.2	
	comp=N,648nm,1.5s						
TRG	**Tyrgan**	**5.44**	**235**	*e*PN	**Pn**	**20 28 18.1**	**+0.5**
TRG				*e*		20 28 33.9	
TRG				*e*S	**Sn**	**20 29 20.6**	**+0.2**
TRG				*e*		20 29 43.2	
TRG				pmax	pmax		
	comp=Z,14nm,0.9s						
TRG				smax	smax		
	comp=E,154nm,0.8s						
TRG	**Tyrgan**	**5.44**	**235**	*e*Pn	**Pn**	**20 28 18.6**	**+1.0**
TRG				*e*		20 28 29.4	
TRG				*e*Pg	**Pb**	**20 28 33.9**	**+2.4**
TRG				*e*		20 28 37.6	
TRG				max		20 29 10.8	
	comp=E,19nm,1.0s						
TRG				*e*Sn	**Sn**	**20 29 19.1**	**-1.3**
TRG				*e*Sg	**Sb**	**20 29 44.0**	**+7.1**
TRG				Smax		20 29 51.4	
	comp=E,155nm,0.8s						
UUDB	**Ulan-Yde**	**5.53**	**223**	*e*Pn	**Pn**	**20 28 19.7**	**+0.8**
UUDB				*e*Pg	**Pb**	**20 28 36.2**	**+3.2**
UUDB				Pmax		20 28 38.5	
	comp=E,119nm,1.4s						
UUDB				*e*Sg	**Sg**	**20 29 48.8**	**-4.9**
UUDB				*e*		20 30 04.0	
UUDB				max		20 30 05.2	
	comp=E,324nm,1.1s						
FFNB	**Fofonovo**	**5.75**	**228**	*e*Pg	**Pb**	**20 28 40.2**	**+3.4**
FFNB				*e*		20 28 51.7	
FFNB				*e*Sn	**Sn**	**20 29 27.5**	**-0.6**
FFNB				*e*Sg	**Sg**	**20 29 54.9**	**-5.9**
CLNS	**Chul'man**	**6.25**	**78**	*e*Pg	**Pb**	**20 28 48.9**	**+3.8**
CLNS				*e*		20 29 45.4	
CLNS				*e*Sg	**Sg**	**20 30 09.8**	**-6.7**
BGT	**Bolshoye Golou**	**6.35**	**234**	*e*Pn	**Pn**	**20 28 30.8**	**+0.8**
BGT				*e*Pg	**Pb**	**20 28 50.0**	**+3.1**
BGT				Pmax		20 28 50.8	
	comp=E,12nm,0.2s						
BGT				*e*Sn	**Sn**	**20 29 42.2**	**-0.5**
BGT				*e*		20 30 08.5	
BGT				*e*Sg	**Sg**	**20 30 13.6**	**-6.2**
BGT				Smax		20 30 20.1	
	comp=E,96nm,1.0s						
KPC	**Khapcheranga**	**6.45**	**188**	*e*PN	**Pn**	**20 28 31.2**	**-0.3**
KPC				*e*		20 28 51.0	
KPC				*e*		20 30 16.5	
KPC				pmax	pmax		
	comp=Z,13nm,0.6s						
KPC				smax	smax		
	comp=E,244nm,1.4s						
KPC	**Khapcheranga**	**6.45**	**188**	*e*Pn	**Pn**	**20 28 32.0**	**+0.5**
KPC				*e*Pg	Pb	20 28 53.6	+4.9
KPC				Pmax		20 29 04.6	
	comp=E,13nm,0.6s						
KPC				*e*Sg	**Sg**	**20 30 17.2**	**-5.9**
KPC				Smax		20 30 32.4	
	comp=E,245nm,1.3s						
LSTR	**Listvyanka**	**6.73**	**235**	*e*Pg	**Pb**	**20 28 57.9**	**+4.5**
LSTR				Pmax		20 29 03.1	
	comp=E,10.0nm,1.2s						
LSTR				*e*Sn	**Sn**	**20 29 50.4**	**-1.7**
LSTR				*e*		20 30 20.8	
LSTR				*e*Sg	**Sg**	**20 30 25.6**	**-6.4**
LSTR				Smax		20 30 35.5	
	comp=E,98nm,1.5s						
LSTR				*e*		20 30 47.4	
IRK	**Irkutsk**	**6.75**	**239**	*e*PG	**Pb**	**20 28 57.0**	**+3.3**
IRK				*e*		20 30 25.1	
IRK				pmax	pmax		
	comp=Z,28nm,0.2s						
IRK				smax	smax		
	comp=E,252nm,1.2s						
IRK	**Irkutsk**	**6.75**	**239**	*e*Sg	**Sg**	**20 30 25.5**	**-7.2**
IRK				Smax		20 30 36.2	
	comp=E,264nm,0.9s						
IVK	**Ivanovka**	**6.97**	**236**	*e*Pn	**Pn**	**20 28 40.9**	**+2.4**
IVK				*e*Pg	**Pb**	**20 29 02.1**	**+4.7**
IVK				Pmax		20 29 09.4	
	comp=E,130nm,0.1s						
IVK				*e*		20 30 27.0	
IVK				*e*Sg	**Sg**	**20 30 31.6**	**-8.1**
IVK				Smax		20 30 41.4	
	comp=E,119nm,1.5s						

TLY	**Talaya**	**7.41**	**238**	*e*Pg	**Pb**	**20 29 09.4**	**+4.5**
TLY				Pmax		20 29 45.8	
	comp=E,9.0nm,0.6s						
TLY				*e*Sg	Sb	20 30 43.8	+10
TLY				Smax		20 30 58.9	
	comp=E,68nm,1.2s						
HIA	**Hailar**	**7.75**	**149**	*i*PN	**Pn**	**20 28 52.1**	**+2.7**
HIA	**Hailar**	**7.75**	**149**	*e*Sg	**Sg**	**20 30 57.0**	**-7.9**
ARS	**Arshan**	**7.85**	**243**	*e*PG	Pb	20 29 18.2	+5.7
ARS				pmax	pmax		
	comp=Z,21nm,0.6s						
ARS	**Arshan**	**7.85**	**243**	*e*Pn	**Pn**	**20 28 52.8**	**+2.1**
ARS				*e*Pg	Pb	20 29 18.2	+5.7
ARS				Pmax		20 29 21.5	
	comp=Z,21nm,0.6s						
ARS				*e*Sn	**Sn**	**20 30 17.5**	**-2.2**
ARS				*e*Sg	Sg	20 30 58.3	-10
ARS				Smax		20 31 01.9	
	comp=Z,369nm,0.9s						
ARS				*e*		20 31 07.3	
ZEA	**Zeya**	**8.15**	**101**	*i*PN	**Pn**	**20 28 54.8**	**+0.1**
ZAK	**Zakamensk**	**8.47**	**232**	*e*PG	Pb	20 29 28.9	+5.9
ZAK				*e*		20 31 18.7	
ZAK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ZAK				smax	smax		
	comp=N,53nm,1.3s						
ZAK	**Zakamensk**	**8.47**	**232**	*e*Pg	Pb	20 29 29.1	+6.1
ZAK				Pmax		20 29 58.8	
	comp=N,8.0nm,1.8s						
ZAK				*e*Sn	**Sn**	**20 30 32.8**	**-2.2**
ZAK				*e*Sg	Sg	20 31 18.2	-10
ZAK				*e*		20 31 26.3	
ZAK				max		20 31 35.5	
	comp=N,53nm,1.3s						
MOY	**Mondy**	**8.72**	**245**	*e*PN	**Pn**	**20 29 03.9**	**+1.3**
MOY				*e*		20 29 33.3	
MOY				*e*		20 31 24.4	
MOY				pmax	pmax		
	comp=Z,14nm,1.4s						
MOY				smax	smax		
	comp=E,131nm,1.5s						
MOY	**Mondy**	**8.72**	**245**	*e*Pn	**Pn**	**20 29 04.9**	**+2.3**
MOY				*e*Pg	Pg	20 29 32.4	-11
MOY				Pmax		20 29 39.2	
	comp=E,14nm,1.4s						
MOY				*e*		20 29 48.1	
MOY				*e*Sn	**Sn**	**20 30 38.2**	**-2.9**
MOY				*e*Sg	Sg	20 31 25.2	-11
MOY				Smax		20 31 29.7	
	comp=E,131nm,1.4s						
ORL	**Orlik**	**8.87**	**252**	*e*Pn	**Pn**	**20 29 07.3**	**+2.6**
ORL				Pg	Pg	20 29 37.0	-8.8
ORL				Pmax		20 29 41.3	
	comp=E,12nm,0.1s						
ORL				*e*Sn	**Sn**	**20 30 42.6**	**-2.2**
ORL				*e*Sg	Sg	20 31 31.4	-9.1
ORL				Smax		20 31 47.9	
	comp=E,97nm,1.5s						
ULN	**Ulaanbaatar**	**9.20**	**209**	*i*P	**Pn**	**20 29 09.9**	**+0.6**
ULN	**Ulaanbaatar**	**9.20**	**209**	*e*Pn	**Pn**	**20 29 11.7**	**+2.4**
ULN				*e*Sg	Sn	20 31 42.8	+50
SONM	**Songino Array**	**9.41**	**212**	Pn	**Pn**	**20 29 13.0**	**+0.8**
	comp=E,0.2nm,0.3s,baz=22,slow=13,SNR=5.4						
SONM				Lg	Lg	20 31 48.9	
	comp=E,0.9nm,0.3s,baz=28,slow=17,SNR=4.0						
SONM				LR	LR	20 33 03.1	
	comp=E,85nm,20.5s,baz=63,slow=40						
	comp=E,0.3nm,0.3s						
YAK	**Yakutsk**	**10.13**	**47**	Pn	**Pn**	**20 29 25.8**	**+3.9**
	comp=E,0.1nm,0.3s,baz=247,slow=2.1,SNR=1.7						
YAK				Sn	**Sn**	**20 31 14.8**	**-0.8**
	comp=E,0.1nm,0.3s,baz=337,slow=4.6,SNR=1.7						
YAK				Lg	Lg	20 32 06.3	
	comp=E,0.2nm,0.3s,baz=183,slow=23,SNR=2.2						
YAK				LR	LR	20 33 32.0	
	comp=E,41nm,19.4s,baz=271,slow=38						
	comp=E,1.8nm,0.4s						
YAK	**Yakutsk**	**10.13**	**47**	*i*P	**Pn**	**20 29 21.2**	**-0.6**
KNGR	**Kungurtug, Tuv**	**11.12**	**247**	*i*P	**Pn**	**20 29 37.3**	**+1.8**
KLR	**Kul'dur**	**12.90**	**115**	Pn	**Pn**	**20 30 01.2**	**+1.5**
	comp=E,0.2nm,0.3s,baz=299,slow=16,SNR=2.6						
KLR				Lg	Lg	20 33 42.1	
	comp=E,0.3nm,0.3s,baz=13,slow=18,SNR=3.9						
KLR	**Kul'dur**	**12.90**	**115**	*i*P	**Pn**	**20 29 58.6**	**-1.2**
USRK	**Ussuriysk Ar.**	**16.64**	**128**	LR	LR	20 37 27.7	
	comp=E,69nm,18.9s,baz=125,slow=37						
ZALV	**Zalesovo Beam**	**16.65**	**275**	Pn	**Pn**	**20 30 49.4**	**-0.3**
	comp=E,0.3nm,0.3s,baz=98,slow=10,SNR=2.2						
ZALV				LR	LR	20 37 34.7	
	comp=E,32nm,18.2s,baz=111,slow=39						
TIXI	**Tiksi**	**16.89**	**17**	Pn	**Pn**	**20 30 49.2**	**-3.4**
	comp=E,2.8nm,0.6s,baz=275,slow=23,SNR=8.7						
TIXI				Sn	Sn	20 33 44.4	-16
	comp=E,16nm,0.3s,baz=270,slow=20,SNR=2.0						
TIXI				Lg	Lg	20 35 54.5	
	comp=E,11nm,0.3s,baz=271,slow=23,SNR=4.6						
TIXI	**Tiksi**	**16.89**	**17**	*i*P	**Pn**	**20 30 49.3**	**-3.2**
NRIK	**Noril'sk**	**17.67**	**329**	P	**P**	**20 31 03.6**	**+0.2**
	comp=E,0.4nm,0.3s,baz=134,slow=8.7,SNR=3.5						
NRIK				S	Sn	20 34 03.6	-15
	comp=E,1.5nm,0.4s,baz=155,slow=14,SNR=4.0						
NRIK				Lg	Lg	20 36 08.7	
	comp=E,0.4nm,0.3s,baz=197,slow=19,SNR=1.5						
	comp=E,1.3nm,0.4s						
NRIK	**Noril'sk**	**17.67**	**329**	*i*P	**Pn**	**20 31 00.9**	**-1.5**
KURK	**Kurchatov**	**21.43**	**270**	*i*P	**P**	**20 31 45.0**	**+0.5**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
MK31	**Makanchi Array**	**21.51**	**258**	*i*P	**P**	**20 31 46.9**	**+1.5**
MKAR	**Makanchi Array**	**21.51**	**258**	P	**P**	**20 31 46.2**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=58,slow=9.9,SNR=6.0						
	comp=Z,0.5nm,0.6s						
MKAR	**Makanchi Array**	**21.51**	**258**	*i*P	**P**	**20 31 49.5**	**+4.1**
KURBB	**Kurchatov Arra**	**21.53**	**270**	P	**P**	**20 31 46.7**	**+1.2**
	comp=Z,0.8nm,0.5s,baz=64,slow=12,SNR=7.4						
	comp=Z,0.8nm,0.5s						
BRVK	**Borovoye**	**25.04**	**281**	*i*P	**P**	**20 32 19.4**	**-1.2**
BILL	**Bilibino**	**26.43**	**42** ⇓	*e*P	**P**	**20 32 34.0**	**+1.0**
BILL				*e*		20 32 36.1	
BILL				*e*		20 33 12.8	
BILL				S	**S**	**20 36 59.0**	**-7.4**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.2s						
BILL				MLR	MLR		
	comp=Z,39nm,17.0s						
AAK	**Ala-Archa**	**28.43**	**258**	LR	LR	20 43 07.9	
	comp=Z,56nm,18.7s,baz=150,slow=34						
ESK	**Eskdalemuir**	**57.69**	**323**	*i*P	**P**	**20 36 47.8**	**+1.1**

*NOU **17** 20:42:43.0,38˚.84S×174˚.83E,h242km,MLv3.7/9,North Island, New Zealand*
*WEL **17** 20:42:47.9±0.7,39˚.8±.8˚×17˚.5E±.˚,h204km±4km,M2.5/23, ML2.5/7,MLv2.5/23,Error ellipse: s-maj=0.0km s-min=0.0km az=8.7*

ISC 17 20:42:41.5±1.8,**38˚.91S**±0˚.06×**174˚.90E**±0˚.06, **h248**km±10km,**n108**,**σ1°81**/125,**North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VRZ	**Vera Road**	**0.23**	**207**	P	**Pn**	**20 43 15.1**	**+1.6**
HIZ	**Hauiti**	**0.40**	**356**	P	**Pn**	**20 43 15.4**	**+1.5**
HIZ				S	**S**	**20 43 38.2**	**-1.2**
HIZ	**Hauiti**	**0.40**	**356**	P	**Pn**	**20 43 15.5**	**+1.5**
PKVZ	**Pokaka**	**0.51**	**137**	P	**Pn**	**20 43 16.0**	**+1.8**
PKVZ				S	**S**	**20 43 38.5**	**-1.5**
WTVZ	**West Tongariro**	**0.58**	**111**	P	**Pn**	**20 43 16.3**	**+1.8**
WTVZ				S	**S**	**20 43 38.8**	**-1.7**
NNVZ	**North Ngauruho**	**0.60**	**111**	P	**Pn**	**20 43 16.5**	**+1.9**
NNVZ				S	**S**	**20 43 39.2**	**-1.4**
KRVZ	**Karewarewa**	**0.61**	**107**	P	**Pn**	**20 43 16.4**	**+1.8**
KRVZ				S	**S**	**20 43 38.7**	**-1.9**
NGZ	**Ngauruhoe**	**0.61**	**116**	P	**Pn**	**20 43 16.5**	**+1.9**
NGZ				S	**S**	**20 43 39.4**	**-1.3**
FWVZ	**Far West T-bar**	**0.61**	**124**	P	**Pn**	**20 43 16.5**	**+1.8**
FWVZ				S	**S**	**20 43 38.6**	**-2.3**
SNVZ	**South Ngauruho**	**0.64**	**115**	P	**Pn**	**20 43 16.7**	**+1.9**
SNVZ				S	**S**	**20 43 39.6**	**-1.3**
MTVZ	**Mangateitei**	**0.65**	**137**	P	**Pn**	**20 43 16.6**	**+1.9**
OTVZ	**Oturere**	**0.65**	**113**	P	**Pn**	**20 43 16.9**	**+2.1**
OTVZ				S	**S**	**20 43 39.9**	**-1.1**
TMVZ	**Te Maari**	**0.66**	**108**	P	**Pn**	**20 43 16.8**	**+2.0**
TMVZ				S	**S**	**20 43 39.4**	**-1.6**

ETVZ	**East Tongariro**	**0.67**	**109**	P	**Pn**	**20 43 16.9**	**+2.0**
WNVZ	**Wahianoa**	**0.69**	**127**	P	**Pn**	**20 43 17.0**	**+2.0**
TUVZ	**Tukino**	**0.69**	**121**	P	**Pn**	**20 43 17.0**	**+2.0**
TUVZ				S	**S**	**20 43 39.4**	**-1.9**
PREZ	**Palmer Road**	**0.71**	**233**	P	**Pn**	**20 43 17.2**	**+2.3**
NEZ	**North Egmont**	**0.72**	**240**	P	**Pn**	**20 43 17.1**	**+2.2**
RITZ	**Rihia Road**	**0.75**	**95**	P	**Pn**	**20 43 17.1**	**+2.0**
RITZ				S	**S**	**20 43 40.7**	**-0.8**
PKE	**Pukeiti**	**0.76**	**248**	P	**Pn**	**20 43 17.0**	**+1.9**
TLZ	**Tolley Road**	**0.77**	**41**	P	**Pn**	**20 43 16.7**	**+1.5**
KHEZ	**Kahui Hut**	**0.78**	**241**	P	**Pn**	**20 43 17.5**	**+2.2**
MOVZ	**Moawhango**	**0.83**	**127**	P	**Pn**	**20 43 17.1**	**+1.6**
MOVZ				S	**S**	**20 43 39.3**	**-2.9**
WAZ	**Wanganui**	**0.84**	**175**	P	**Pn**	**20 43 17.7**	**+2.3**
WAZ				S	**S**	**20 43 41.2**	**-1.1**
BHHZ	**Black Hill Sta**	**1.07**	**123**	P	**Pn**	**20 43 18.3**	**+1.6**
BHHZ				S	**S**	**20 43 41.2**	**-3.3**
ALRZ	**Allen Road**	**1.19**	**73**	P	**Pn**	**20 43 19.1**	**+1.7**
MRHZ	**Matea Rd**	**1.19**	**87**	P	**Pn**	**20 43 18.7**	**+1.2**
MRHZ				S	**S**	**20 43 42.5**	**-3.2**
HSRZ	**Hossack Road**	**1.22**	**61**	P	**Pn**	**20 43 19.2**	**+1.6**
BKZ	**Black Stump Fm**	**1.27**	**102**	P	**Pn**	**20 43 19.6**	**+1.6**
BKZ				S	**S**	**20 43 43.9**	**-2.8**
BKZ	**Black Stump Fm**	**1.27**	**102**	P	**Pn**	**20 43 19.5**	**+1.6**
TOZ	**Tahuroa Road**	**1.27**	**22**	P	**Pn**	**20 43 19.8**	**+1.8**
KWHZ	**Kaweka Forest**	**1.29**	**114**	P	**Pn**	**20 43 20.3**	**+2.2**
KRHZ	**Kereru**	**1.36**	**123**	P	**Pn**	**20 43 20.6**	**+2.1**
TSZ	**Takapari Road**	**1.41**	**145**	P	**Pn**	**20 43 21.1**	**+2.2**
PNHZ	**Pukenui**	**1.42**	**135**	P	**Pn**	**20 43 21.3**	**+2.3**
MCHZ	**McNeill Hill**	**1.50**	**111**	P	**Pn**	**20 43 22.3**	**+2.7**
NMHZ	**Naumai**	**1.50**	**98**	P	**Pn**	**20 43 22.2**	**+2.6**
MTHZ	**Maungataniwha**	**1.52**	**88**	P	**Pn**	**20 43 21.4**	**+1.6**
MUGZ	**Murupara**	**1.53**	**74**	P	**Pn**	**20 43 21.0**	**+1.1**
RTZ	**Ruatahuna**	**1.66**	**80**	P	**Pn**	**20 43 22.3**	**+1.4**
ARHZ	**Aropaoanui**	**1.67**	**103**	P	**Pn**	**20 43 23.3**	**+2.4**
DVHZ	**Dannevirke**	**1.70**	**145**	P	**Pn**	**20 43 23.0**	**+1.9**
RAHZ	**Arahi**	**1.71**	**91**	P	**Pn**	**20 43 23.4**	**+2.1**
KAHZ	**Kahuranaki**	**1.77**	**120**	P	**Pn**	**20 43 24.3**	**+2.6**
MKAZ	**Moumakai**	**1.82**	**7**	P	**Pn**	**20 43 24.4**	**+2.2**
MRZ	**Mangatainoka R**	**1.82**	**163**	P	**Pn**	**20 43 23.9**	**+1.8**
CKHZ	**Cape Kidnapper**	**1.85**	**114**	P	**Pn**	**20 43 24.9**	**+2.5**
URZ	**Urewera**	**1.86**	**70**	P	**Pn**	**20 43 23.5**	**+1.0**
URZ	**Urewera**	**1.86**	**70**	P	**Pn**	**20 43 23.5**	**+1.0**
OGWZ	**Otaki Gorge**	**1.91**	**174**	P	**Pn**	**20 43 25.0**	**+2.1**
SNGZ	**Shannon Statio**	**1.91**	**87**	P	**Pn**	**20 43 24.9**	**+1.9**
KIW	**Kapiti Island**	**1.94**	**180**	P	**Pn**	**20 43 25.0**	**+1.8**
TIWZ	**Tintock**	**2.01**	**158**	P	**Pn**	**20 43 25.8**	**+1.9**
RAGZ	**Rawiri**	**2.02**	**79**	P	**Pn**	**20 43 25.6**	**+1.7**
DUWZ	**D'Urville Isla**	**2.03**	**201**	P	**Pn**	**20 43 25.8**	**+1.8**
HOWZ	**Holdsworth Sta**	**2.04**	**167**	P	**Pn**	**20 43 25.7**	**+1.6**
BFZ	**Birch Farm**	**2.05**	**150**	P	**Pn**	**20 43 25.9**	**+1.8**
BFZ	**Birch Farm**	**2.05**	**150**	P	**Pn**	**20 43 26.1**	**+2.0**
MWZ	**Matawai**	**2.14**	**75**	P	**Pn**	**20 43 26.5**	**+1.4**
KNZ	**Kokohu**	**2.17**	**94**	P	**Pn**	**20 43 27.4**	**+2.1**
CAW	**Cannon Point**	**2.19**	**177**	P	**Pn**	**20 43 27.3**	**+1.8**
RIGZ	**Rimuhau**	**2.25**	**86**	P	**Pn**	**20 43 28.1**	**+1.9**
MTW	**Mount Morrison**	**2.29**	**168**	P	**Pn**	**20 43 27.9**	**+1.5**
TMWZ	**Te Maipa**	**2.32**	**161**	P	**Pn**	**20 43 28.4**	**+1.7**
PRGZ	**Paritu Road**	**2.33**	**91**	P	**Pn**	**20 43 29.1**	**+2.2**
TCW	**Tory Channel**	**2.34**	**191**	P	**Pn**	**20 43 29.0**	**+2.1**
MHGZ	**Mahia Peninsul**	**2.36**	**97**	P	**Pn**	**20 43 29.5**	**+2.3**
TKGZ	**Te Karaka**	**2.36**	**79**	P	**Pn**	**20 43 29.2**	**+2.0**
WEL	**Wellington**	**2.37**	**182**	P	**Pn**	**20 43 28.9**	**+1.8**
RUGZ	**Raukumara Rang**	**2.38**	**67**	P	**Pn**	**20 43 28.1**	**+0.5**
SNZO	**South Karori**	**2.40**	**183**	P	**Pn**	**20 43 29.6**	**+2.2**
BHW	**Baring Head**	**2.49**	**180**	P	**Pn**	**20 43 29.0**	**+0.6**
PANZ	**Paruwai Farm**	**2.50**	**171**	P	**Pn**	**20 43 30.1**	**+1.6**
MSWZ	**Moikau Station**	**2.51**	**174**	P	**Pn**	**20 43 30.2**	**+1.6**
TWGZ	**Tauwhareparae**	**2.53**	**74**	P	**Pn**	**20 43 30.0**	**+1.0**
HAZ	**Te Kaha**	**2.55**	**64**	P	**Pn**	**20 43 29.8**	**+0.7**
TRWZ	**Traveller**	**2.55**	**166**	P	**Pn**	**20 43 30.8**	**+1.7**
NNZ	**Nelson**	**2.58**	**206**	P	**Pn**	**20 43 30.9**	**+1.6**
TKNZ	**Takaka Hill**	**2.59**	**214**	P	**Pn**	**20 43 30.6**	**+1.2**
TUWZ	**Tuamarina**	**2.62**	**196**	P	**Pn**	**20 43 31.8**	**+2.1**
QRZ	**Quartz Range**	**2.64**	**223**	P	**Pn**	**20 43 31.0**	**+1.2**
QRZ	**Quartz Range**	**2.64**	**223**	P	**Pn**	**20 43 31.1**	**+1.2**
PLWZ	**Palliser**	**2.67**	**174**	P	**Pn**	**20 43 31.7**	**+1.4**
PKGZ	**Pakihiroa**	**2.70**	**69**	P	**Pn**	**20 43 32.0**	**+1.3**
PUZ	**Puketiti**	**2.77**	**73**	P	**Pn**	**20 43 32.8**	**+1.5**
BSWZ	**Blackbirch Sta**	**2.90**	**195**	P	**Pn**	**20 43 35.0**	**+2.3**
MRNZ	**Matariki Terra**	**2.97**	**213**	P	**Pn**	**20 43 34.6**	**+1.2**
WMGZ	**Waiomatatini S**	**2.98**	**70**	P	**Pn**	**20 43 34.9**	**+1.3**
MXZ	**Matakaoa Point**	**3.01**	**64**	P	**Pn**	**20 43 35.5**	**+1.6**
THZ	**Tophouse**	**3.23**	**207**	P	**Pn**	**20 43 37.6**	**+1.3**
KHZ	**Kahutara**	**3.65**	**196**	P	**Pn**	**20 43 42.7**	**+1.8**
KHZ	**Kahutara**	**3.65**	**196**	P	**Pn**	**20 43 42

MAKZ	**Makanchi**	**61.48 317**	P	**P**	**20 55 08.0 +0.3**	
ZALV	**Zalesovo Beam**	**61.61 325**	P	**P**	**20 55 08.2 -0.2**	
	comp=Z,1.2nm,0.6s,baz=104,slow=7.5,SNR=4.1					
	comp=Z,1.2nm,0.6s					
P18K	**Big Mountain,**	**64.52 30**	P	**P**	**20 55 28.0 +0.5**	
ILAR	**Eielson Array**	**69.78 25**	P	**P**	**20 56 02.3 +1.7**	
	comp=Z,0.8nm,0.6s,baz=253,slow=5.8,SNR=10					
	comp=Z,0.8nm,0.6s					
ILAR	**Eielson Array**	**69.78 25**	P	**P**	**20 56 01.7 +1.1**	
BRVK	**Borovoye**	**69.91 322**	P	**P**	**20 56 01.9 +0.4**	
BMAR	**Burnt Mountain**	**71.28 23**	P	**P**	**20 56 13.5 +3.9**	
ABKAR	**Akbulak array**	**76.36 318**	P	**P**	**20 56 38.8 -0.7**	
ARCES	**ARCESS Array B**	**87.49 342**	P	**P**	**20 57 38.0 +0.8**	
	comp=Z,1.8nm,0.8s,baz=97,slow=4.7,SNR=1.6					
	comp=Z,1.8nm,0.8s					
NVAR	**Mina Array Bea**	**88.32 51**	P	**P**	**20 57 44.2 +2.1**	
	comp=Z,0.3nm,0.6s,baz=305,slow=5.4,SNR=2.2					
	comp=Z,0.3nm,0.6s					
FINES	**FINESS Array B**	**91.40 335**	P	**P**	**20 57 54.9 -0.7**	
	comp=Z,1.4nm,0.9s,baz=122,slow=7.2,SNR=5.8					
	comp=Z,1.4nm,0.9s					
LPAZ	**La Paz**	**149.03 100**	PKPbc	**PKPab**	**21 04 42.6 -1.0**	
	comp=Z,1.0nm,0.5s,baz=232,slow=3.8,SNR=3.9					
LPAZ	**La Paz**	**149.03 100**	PKPdf	**PKPdf**	**21 04 35.9 +1.2**	
LPAZ				**PKiKP**	**21 04 41.3 +1.1**	

IDC ***17*** *20:59:25.2±0.6,53.°76N×161.°67E,h0km,mb3.8/16, mbtmp3.8/19,ML3.6/3,MS3.0/8,Error ellipse: s-maj=22.3km s-min=11.8km az=160.0*

KRSC ***17*** *20:59:26.0±0.9,53.°52N×162.°10E,h39km±16km,ML4.3*

MOS ***17*** *20:59:28.2±0.8,53.°53N×162.°04E,h38km,mb4.2/4,Error ellipse: s-maj=7.1km s-min=5.6km az=60.2*

NEIC ***17*** *20:59:30.2±2.9,53.°7N±0.°2×161.°8E±0.°1,h40km±10km, mb4.2/23,Error ellipse: s-maj=31.4km s-min=9.9km az=170.0*

ISC 17 20:59:28.5±1.0,53.°53N±0.°04×162.°05E±0.°04,h42km±12km, n137,σ1§47/147,mb4.0/31,Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	**1.05**	**350**	PN	**Pn**	**20 59 45.2**	**-1.5**
MKZ				S	**Sn**	**20 59 58.1**	**-2.0**
MKZ	**Mys Kozlova**	**1.05**	**350**	*eP*	**Pn**	**20 59 45.2**	**-1.5**
MKZ				*eS*	**Sn**	**20 59 58.1**	**-2.0**
SPN	**Mys Shipunski**	**1.29**	**251**	PN	**Pn**	**20 59 49.5**	**-0.5**
SPN				S	**Sn**	**21 00 06.2**	**+0.2**
SPN	**Mys Shipunski**	**1.29**	**251**	*eP*	**Pn**	**20 59 49.5**	**-0.5**
SPN				*eS*	**Sn**	**21 00 06.2**	**+0.2**
KII	**Karymskiy**	**1.62**	**289**	PN	**Pn**	**20 59 52.9**	**-1.8**
KII	**Karymskiy**	**1.62**	**289**	*eP*	**Pn**	**20 59 52.9**	**-1.8**
NLC	**Nalytchevo**	**1.66**	**259**	PN	**Pn**	**20 59 55.0**	**-0.1**
NLC	**Nalytchevo**	**1.66**	**259**	*eP*	**Pn**	**20 59 55.0**	**-0.1**
SDLR	**Sedlovina**	**1.91**	**264**	PN	**Pn**	**20 59 58.5**	**-0.2**
SDLR				S	**Sn**	**21 00 21.9**	**+0.4**
SDLR	**Sedlovina**	**1.91**	**264**	*eP*	**Pn**	**20 59 58.5**	**-0.2**
SDLR				*eS*	**Sn**	**21 00 21.9**	**+0.4**
UGLR	**Uglovaya**	**1.96**	**262**	PN	**Pn**	**20 59 59.1**	**-0.2**
UGLR				S	**Sn**	**21 00 22.8**	**+0.1**
UGLR	**Uglovaya**	**1.96**	**262**	*eP*	**Pn**	**20 59 59.1**	**-0.2**
UGLR				*eS*	**Sn**	**21 00 22.8**	**+0.1**
SMAR	**Somma**	**1.96**	**264**	PN	**Pn**	**20 59 59.1**	**-0.3**
SMAR				S	**Sn**	**21 00 22.6**	**-0.3**
SMAR	**Somma**	**1.96**	**264**	*eP*	**Pn**	**20 59 59.1**	**-0.3**
SMAR				*eS*	**Sn**	**21 00 22.6**	**-0.3**
KRER	**Koryakskii**	**1.99**	**265**	PN	**Pn**	**21 00 00.1**	**+0.3**
KRER				S	**Sn**	**21 00 24.5**	**+1.0**
KRER	**Koryakskii**	**1.99**	**265**	*eP*	**Pn**	**21 00 00.1**	**+0.3**
KRER				*eS*	**Sn**	**21 00 24.5**	**+1.0**
AVH	**Avacha**	**2.00**	**264**	PN	**Pn**	**20 59 59.8**	**0.0**
AVH	**Avacha**	**2.00**	**264**	*eP*	**Pn**	**20 59 59.8**	**0.0**
DALK	**Dalny**	**2.04**	**257**	PN	**Pn**	**21 00 00.4**	**+0.1**
DALK				S	**Sn**	**21 00 24.7**	**+0.2**
DALK	**Dalny**	**2.04**	**257**	*eP*	**Pn**	**21 00 00.4**	**+0.1**
DALK				*eS*	**Sn**	**21 00 24.7**	**+0.2**
KRX	**Arik**	**2.04**	**267**	PN	**Pn**	**21 00 00.5**	**+0.1**
KRX				S	**Sn**	**21 00 24.8**	**0.0**
KRX	**Arik**	**2.04**	**267**	*eP*	**Pn**	**21 00 00.5**	**+0.1**
KRX				*eS*	**Sn**	**21 00 24.8**	**0.0**
KOK	**Koryaka**	**2.06**	**265**	PN	**Pn**	**21 00 00.3**	**-0.3**
KOK				S	**Sn**	**21 00 24.9**	**-0.2**
KOK	**Koryaka**	**2.06**	**265**	*eP*	**Pn**	**21 00 00.3**	**-0.3**
KOK				*eS*	**Sn**	**21 00 24.9**	**-0.2**
TUMR	**Tumrok**	**2.08**	**328**	PN	**Pn**	**21 00 01.0**	**0.0**
TUMR				S	**Sn**	**21 00 25.9**	**+0.2**
TUMR	**Tumrok**	**2.08**	**328**	*eP*	**Pn**	**21 00 01.0**	**0.0**
TUMR				*eS*	**Sn**	**21 00 25.9**	**+0.2**
PET	**Petropavlovsk**	**2.10**	**257**	Pn	**Pn**	**20 59 59.9**	**-1.2**
PET	**Petropavlovsk**	**2.10**	**257**	*ePN*	**Pn**	**21 00 01.2**	**+0.1**
PET				*eS*	**Sn**	**21 00 26.7**	**+0.7**
PET				pmax	pmax		
	comp=Z,148nm,0.5s						
PET				smax	smax		
	comp=N,562nm,0.9s						
PET				MLR	MLR		
	comp=Z,800nm,15.0s						
PET	**Petropavlovsk**	**2.10**	**257**	*eP*	**Pn**	**21 00 02.1**	**+1.0**
PET				*eS*	**Sn**	**21 00 27.5**	**+1.5**
RUS	**Russkaya**	**2.40**	**244**	PN	**Pn**	**21 00 06.2**	**+0.9**
RUS	**Russkaya**	**2.40**	**244**	*eP*	**Pn**	**21 00 06.2**	**+0.9**
GNL	**Ganaly**	**2.45**	**276**	PN	**Pn**	**21 00 07.0**	**+0.9**
GNL	**Ganaly**	**2.45**	**276**	*eP*	**Pn**	**21 00 07.0**	**+0.9**
KRMR	**Karymshinskiy**	**2.46**	**255**	PN	**Pn**	**21 00 07.3**	**+1.3**
KRMR	**Karymshinskiy**	**2.46**	**255**	*eP*	**Pn**	**21 00 07.3**	**+1.3**
KMNR	**Kamenistaya**	**2.47**	**335**	PN	**Pn**	**21 00 07.8**	**+1.5**
KMNR				S	**Sn**	**21 00 37.2**	**+2.0**
KMNR	**Kamenistaya**	**2.47**	**335**	*eP*	**Pn**	**21 00 07.8**	**+1.5**
KMNR				*eS*	**Sn**	**21 00 37.2**	**+2.0**
BZGR	**Bezymyannyi-Gr**	**2.54**	**343**	PN	**Pn**	**21 00 08.5**	**+1.2**
BZGR	**Bezymyannyi-Gr**	**2.54**	**343**	*eP*	**Pn**	**21 00 08.5**	**+1.2**
MTVR	**Mutnovka**	**2.56**	**247**	PN	**Pn**	**21 00 08.5**	**+0.9**
MTVR				S	**Sn**	**21 00 38.4**	**+0.9**
MTVR	**Mutnovka**	**2.56**	**247**	*eP*	**Pn**	**21 00 08.5**	**+0.9**
MTVR				*eS*	**Sn**	**21 00 38.4**	**+0.9**
GRL	**Gorelyy**	**2.59**	**249**	PN	**Pn**	**21 00 09.3**	**+1.3**
GRL	**Gorelyy**	**2.59**	**249**	*eP*	**Pn**	**21 00 09.3**	**+1.3**
KIRR	**Kirishev**	**2.62**	**339**	PN	**Pn**	**21 00 09.9**	**+1.5**
KIRR				S	**Sn**	**21 00 41.2**	**+2.1**
KIRR	**Kirishev**	**2.62**	**339**	*eP*	**Pn**	**21 00 09.9**	**+1.5**
KIRR				*eS*	**Sn**	**21 00 41.2**	**+2.1**
PEA0B	**Petropavlovsk-**	**2.64**	**263**	Pn	**Pn**	**21 00 10.0**	**+1.4**
PEA0B	**Petropavlovsk-**	**2.64**	**263**	PN	**Pn**	**21 00 10.0**	**+1.4**
PETK	**Petropavlovsk-**	**2.64**	**263**	Pn	**Pn**	**21 00 08.4**	**-0.2**
	comp=Z,23nm,0.3s,baz=83,slow=15,SNR=111						
PETK				Sn	**Sn**	**21 00 39.7**	**+0.3**
	comp=Z,21nm,0.3s,baz=68,slow=13,SNR=2.6						
PETK				LR	LR	21 00 55.2	
	comp=Z,75nm,19.1s,baz=105,slow=37						
	comp=Z,25nm,0.4s						
PETK	**Petropavlovsk-**	**2.64**	**263**	Pn	**Pn**	**21 00 09.4**	**+0.8**
PETK	**Petropavlovsk-**	**2.64**	**263**	PN	**Pn**	**21 00 09.4**	**+0.8**
KPT	**Kopyto**	**2.66**	**337**	PN	**Pn**	**21 00 11.1**	**+2.2**
KPT	**Kopyto**	**2.66**	**337**	*eP*	**Pn**	**21 00 11.1**	**+2.2**
KBTR	**Krutoberegovo**	**2.72**	**9**	PN	**Pn**	**21 00 11.0**	**+1.4**
KBTR	**Krutoberegovo**	**2.72**	**9**	*eP*	**Pn**	**21 00 11.0**	**+1.4**
KBG	**Krutoberegovo**	**2.76**	**8**	PN	**Pn**	**21 00 11.1**	**+1.0**
KBG	**Krutoberegovo**	**2.76**	**8**	*eP*	**Pn**	**21 00 11.1**	**+1.0**
ASAK	**Asacha**	**2.76**	**247**	PN	**Pn**	**21 00 12.2**	**+1.9**
ASAK				S	**Sn**	**21 00 45.2**	**+2.8**
ASAK	**Asacha**	**2.76**	**247**	*eP*	**Pn**	**21 00 12.2**	**+1.9**
ASAK				*eS*	**Sn**	**21 00 45.2**	**+2.8**
KOZ	**Kozyrevsk**	**2.83**	**334**	PN	**Pn**	**21 00 13.5**	**+2.3**
KOZ	**Kozyrevsk**	**2.83**	**334**	*eP*	**Pn**	**21 00 13.5**	**+2.3**
BKI	**Bering**	**2.84**	**52**	PN	**Pn**	**21 00 11.4**	**+0.1**
BKI				S	**Sn**	**21 00 43.6**	**-0.6**
BKI	**Bering**	**2.84**	**52**	*eP*	**Pn**	**21 00 11.4**	**+0.1**
BKI				*eS*	**Sn**	**21 00 43.6**	**-0.6**
KDTR	**Khodutka, Kamc**	**2.97**	**236**	PN	**Pn**	**21 00 14.0**	**+1.0**
KDTR	**Khodutka, Kamc**	**2.97**	**236**	*eP*	**Pn**	**21 00 14.0**	**+1.0**
APC	**Apacha**	**3.00**	**260**	PN	**Pn**	**21 00 15.2**	**+1.7**
APC	**Apacha**	**3.00**	**260**	*eP*	**Pn**	**21 00 15.2**	**+1.7**
ESO	**Esso**	**3.09**	**322**	PN	**Pn**	**21 00 15.1**	**+0.4**
ESO	**Esso**	**3.09**	**322**	*eP*	**Pn**	**21 00 15.1**	**+0.4**
PAU	**Pauzhetka**	**3.81**	**239**	PN	**Pn**	**21 00 26.5**	**+1.9**
PAU	**Pauzhetka**	**3.81**	**239**	*eP*	**Pn**	**21 00 26.5**	**+1.9**
SHEM	**Shemya Is, Ala**	**7.30**	**91**	Pn	**Pn**	21 01 15.9	+3.5
	comp=Z,5.1nm,0.3s,baz=323,slow=5.8,SNR=2.7						
SHEM				Sn	**Sn**	**21 02 34.2**	**+0.4**
	comp=Z,1.6nm,0.3s,baz=197,slow=14,SNR=1.8						
SHEM				LR	LR	21 03 08.5	
	comp=Z,42nm,21.1s,baz=280,slow=30						
	comp=Z,18nm,0.5s						
MA2	**Magadan**	**8.68**	**319**	LR	LR	21 05 21.1	
	comp=Z,98nm,20.1s,baz=160,slow=43						
AMKA	**Amchitka**	**10.75**	**95**	Pn	Pn	21 02 03.5	+3.9
KIWB	**Kanaga Island**	**12.72**	**89**	Pn	P	21 02 29.4	-7.4
ADK	**Adak**	**12.99**	**89**	Pn	**Pn**	**21 02 31.1**	**+0.8**
ADK	**Adak**	**12.99**	**89**	PN	**Pn**	**21 02 31.1**	**+0.8**
GSTR	**Great Sitkin T**	**13.31**	**87**	Pn	P	21 02 36.9	-6.6
JKA	**Kamikawa-asahi**	**15.85**	**241**	Pn	**P**	**21 03 08.9**	**-2.8**
ASAJ	**Asahikawa**	**15.85**	**241**	LR	LR	21 09 10.8	
	comp=Z,65nm,19.6s,baz=4.5,slow=37						
ASAJ	**Asahikawa**	**15.85**	**241**	P	**P**	**21 03 08.9**	**-2.8**
ASAJ				pmax	pmax		
	comp=Z,45nm,1.3s						
ERM	**Erimo**	**17.08**	**235**	Pn	**Pn**	**21 03 21.8**	**-2.2**
ERM	**Erimo**	**17.08**	**235**	P	**Pn**	**21 03 21.8**	**-2.2**
ERM				pmax	pmax		
	comp=Z,104nm,1.3s						
JTM	**Tenmabayashi**	**19.04**	**236**	P	**P**	**21 03 43.9**	**-3.0**
YAK	**Yakutsk**	**19.05**	**309**	LR	LR	21 12 05.3	
	comp=Z,81nm,18.8s,baz=88,slow=41						
KLR	**Kul'dur**	**19.31**	**269**	P	**Pn**	**21 03 51.0**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=134,slow=8.2,SNR=2.7						
KLR				LR	LR	21 11 58.4	
	comp=Z,84nm,19.0s,baz=190,slow=39						
	comp=Z,0.9nm,0.6s						
USRK	**Ussuriysk Ar.**	**21.72**	**257**	P	**P**	**21 04 16.8**	**+1.0**
	comp=Z,1.8nm,0.6s,baz=68,slow=13,SNR=3.5						
	comp=Z,1.8nm,0.6s						
TIXI	**Tiksi**	**23.19**	**334**	P	**P**	**21 04 31.0**	**-0.1**
	comp=Z,1.1nm,0.7s,baz=90,slow=20,SNR=2.2						
TIXI				LR	LR	21 14 17.2	
	comp=Z,50nm,18.7s,baz=183,slow=39						
	comp=Z,1.1nm,0.7s						
TIXI	**Tiksi**	**23.19**	**334**	P	**P**	**21 04 31.0**	**-0.1**
N18K	**Kilae Creek**	**23.58**	**56**	P	**P**	**21 04 35.3**	**+0.3**
N18K				IAmb	IAmb	21 04 40.7	
	comp=Z,5.5nm,0.8s						
MJB9	**Matsu-Tunnel**	**23.74**	**234**	P	**P**	**21 04 37.4**	**+0.7**
MJB9				IAmb	IAmb	21 04 50.9	
	comp=Z,12nm,0.9s						
MAJO	**Matsushiro**	**23.75**	**234**	P	**P**	**21 04 37.7**	**+1.0**
MAJO	**Matsushiro**	**23.75**	**234**	P	**P**	**21 04 37.7**	**+1.0**
MAJO				pmax	pmax		
	comp=Z,12nm,1.0s						
MJAR	**Matsushiro Arr**	**23.75**	**234**	P	**P**	**21 04 39.0**	**+2.3**
	comp=Z,2.3nm,0.7s,baz=33,slow=11,SNR=9.0						
	comp=Z,2.3nm,0.7s						
MJAR	**Matsushiro Arr**	**23.75**	**234**	P	**P**	**21 04 38.2**	**+1.5**
MJAR	**Matsushiro Arr**	**23.75**	**234**	P	**P**	**21 04 38.2**	**+1.5**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
L19K	**White Mountain**	**24.08**	**52**	P	**P**	**21 04 42.5**	**+3.0**
L19K				IAmb	IAmb	21 04 47.4	
	comp=Z,4.2nm,0.9s						
K20K	**Telida**	**24.48**	**49**	P	**P**	**21 04 47.2**	**+3.9**
K20K				IAmb	IAmb	21 04 48.4	
	comp=Z,7.4nm,0.8s						
J20K	**Nowinta River**	**24.51**	**47**	P	**P**	**21 04 46.4**	**+3.0**
J20K				IAmb	IAmb	21 04 48.9	
	comp=Z,8.1nm,0.8s						
IMAR	**Indian Mountai**	**24.89**	**43**	P	**P**	**21 04 48.3**	**+1.4**
WRH	**Wood River Hil**	**27.16**	**47**	P	**P**	**21 05 10.7**	**+3.4**
CCB	**Clear Creek Bu**	**27.28**	**46**	P	**P**	**21 05 11.4**	**+2.9**
SCM	**Sheep Creek Mo**	**27.64**	**52**	P	**P**	**21 05 13.3**	**+1.5**
SCM	**Sheep Creek Mo**	**27.64**	**52**	P	**P**	**21 05 13.3**	**+1.5**
SCM				pmax	pmax		
	comp=Z,11nm,1.0s						
ILAR	**Eielson Array**	**27.67**	**46**	P	**P**	**21 05 14.8**	**+2.8**
	comp=Z,1.1nm,0.8s,baz=264,slow=8.3,SNR=14						
	comp=Z,1.1nm,0.8s						
J25K	**Salcha River,**	**28.33**	**46**	P	**P**	**21 05 20.2**	**+2.3**
KSRS	**Korea Array**	**28.47**	**249**	P	**P**	**21 05 20.8**	**+1.5**
	comp=Z,0.9nm,0.5s,baz=46,slow=8.6,SNR=2.2						
	comp=Z,0.9nm,0.5s						
BMAR	**Burnt Mountain**	**28.65**	**40**	P	**P**	**21 05 21.3**	**+0.5**
K27K	**Chicken**	**29.80**	**47**	P	P	21 05 34.4	+3.5
K27K				IAmb	IAmb	21 05 35.0	
	comp=Z,2.7nm,0.8s						
L27K	**Beaver Creek,**	**30.03**	**49**	P	P	21 05 36.6	+3.6
L27K				IAmb	IAmb	21 05 38.4	
	comp=Z,7.1nm,1.1s						
BCAR	**Beaver Creek A**	**30.05**	**49**	P	P	21 05 36.2	+3.1
M27K	**Edge Creek, AK**	**30.11**	**50**	P	P	21 05 37.6	+3.8
M27K				IAmb	IAmb	21 05 39.2	
	comp=Z,4.0nm,1.0s						
INK	**Inuvik**	**32.80**	**38**	P	**P**	**21 05 58.7**	**+1.5**
	comp=Z,1.7nm,0.8s,baz=328,slow=14,SNR=5.6						
	comp=Z,1.7nm,0.8s						
INK	**Inuvik**	**32.80**	**38**	IAmb	IAmb	21 06 14.5	
	comp=Z,1.7nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**33.94**	**172**	T	T	21 43 43.0	
	baz=354,slow=76,SNR=16						
H11N3	**WAKE ISLAND Hy**	**33.96**	**172**	T	T	21 43 43.8	
	baz=354,slow=76,SNR=13						
H11N1	**WAKE ISLAND Hy**	**33.96**	**172**	T	T	21 43 44.1	
	baz=354,slow=76,SNR=11						
SONM	**Songino Array**	**34.94**	**284**	P	**P**	**21 06 14.5**	**-1.7**
	comp=Z,0.2nm,0.4s,baz=72,slow=9.3,SNR=2.0						
SONM				LR	LR	21 21 57.4	
	comp=Z,57nm,18.4s,baz=54,slow=39						
	comp=Z,0.2nm,0.4s						
KURK	**Kurchatov**	**48.49**	**303**	P	**P**	**21 08 06.1**	**-0.6**
KURK	**Kurchatov**	**48.49**	**303**	IAmb	IAmb	21 08 15.3	
	comp=Z,3.3nm,1.2s						
KURK	**Kurchatov**	**48.49**	**303**	P	**P**	**21 08 06.1**	**-0.6**
KURBB	**Kurchatov Arra**	**48.60**	**302**	P	**P**	**21 08 06.1**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=59,slow=7.6,SNR=4.1						
	comp=Z,0.3nm,0.3s						
MK31	**Makanchi Array**	**49.02**	**296**	P	**P**	**21 08 09.3**	**-1.5**
MK31	**Makanchi Array**	**49.02**	**296**	P	**P**	**21 08 09.3**	**-1.5**
MK31				pmax	pmax		
	comp=Z,1.0nm,1.1s						
MKAR	**Makanchi Array**	**49.02**	**296**	P	**P**	**21 08 09.1**	**-1.7**
	comp=Z,0.3nm,0.5s,baz=55,slow=7.6,SNR=6.9						
	comp=Z,0.3nm,0.5s						
MAKZ	**Makanchi**	**49.18**	**297**	P	**P**	**21 08 10.7**	**-1.3**
MAKZ				IAmb	IAmb	21 08 26.3	
	comp=Z,3.5nm,1.4s						
MAKZ	**Makanchi**	**49.18**	**297**	P	**P**	**21 08 10.7**	**-1.3**
MAKZ				pmax	pmax		
	comp=Z,4.0nm,1.4s						
MOD	**Modoc Plateau**	**51.01**	**70**	P	P	21 08 29.6	+3.4
MOD				IAmb	IAmb	21 08 31.8	
	comp=Z,2.3nm,0.8s						
KVN	**Kaiserville**	**54.18**	**71**	P	P	21 08 54.3	+4.7
KVN				IAmb	IAmb	21 08 55.1	
	comp=Z,2.0nm,0.8s						
KVN	**Kaiserville**	**54.18**	**71**	P	P	21 08 54.3	+4.7
KVN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NVAR	**Mina Array Bea**	**54.49**	**72**	P	P	21 08 56.6	+4.6
	comp=Z,1.1nm,0.7s,baz=305,slow=7.0,SNR=7.5						
	comp=Z,1.1nm,0.7s						
PDAR	**Pinedale Array**	**56.28**	**62**	P	P	21 09 09.0	+4.2
	comp=Z,0.5nm,0.6s,baz=302,slow=3.3,SNR=6.1						
	comp=Z,0.5nm,0.6s						
CMAR	**Chiang Mai Arr**	**59.42**	**260**	P	P	21 09 29.6	+2.9
	comp=Z,1.5nm,0.8s,baz=27,slow=6.8,SNR=19						
	comp=Z,1.5nm,0.6s						
FINES	**FINESS Array B**	**60.18**	**337**	P	**P**	**21 09 32.5**	**+1.1**
	comp=Z,1.9nm,0.8s,baz=17,slow=10.0,SNR=4.3						
	comp=Z,1.9nm,0.8s						
NOA	**NORSAR Array B**	**63.44**	**345**	P	**P**	**21 09 54.5**	**+1.1**
	comp=Z,0.7nm,0.8s,baz=24,slow=6.6,SNR=2.5						
	comp=Z,0.7nm,0.8s						
TXAR	**Lajitas Array**	**69.39**	**68**	P	P	21 10 35.6	+3.7
	comp=Z,0.6nm,0.7s,baz=296,slow=3.8,SNR=8.6						
	comp=Z,0.6nm,0.7s						
WRA	**Warramunga Arr**	**76.98**	**207**	P	P	21 11 19.1	+2.6
	comp=Z,1.2nm,0.8s,baz=25,slow=6.3,SNR=12						
	comp=Z,1.2nm,0.8s						
USHA	**Ushuaia**	**150.94**	**113**	PKPbc	**PKPab**	**21 19 18.0**	**-5.0**
	comp=Z,66nm,0.5s,baz=328,slow=0.2,SNR=5.8						

NOU ***17*** *21:19:51.7,38.°57S×174.°55E,h261km,MLv4.1/6,North Island, New Zealand*

WEL ***17*** *21:20:02.1±0.9,39.°3S±9.°4×17.°5E±.°,h196km±6km,M2.4/20, ML2.4/8,MLv2.4/20,Error ellipse: s-maj=0.0km s-min=0.0km az=162.3*

ISC 17 21:19:56.1±2.0,39.°07S±0.°08×174.°59E±0.°07, h238km±10km,n92,σ1§63/99,North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VRZ	**Vera Road**	**0.15**	**113**	P	**Pn**	**21 20 28.0**	**+1.2**
LREZ	**Lake Rotokare**	**0.42**	**200**	P	**Pn**	**21 20 29.2**	**+1.9**
PREZ	**Palmer Road**	**0.43**	**230**	P	**Pn**	**21 20 29.5**	**+2.1**
NEZ	**North Egmont**	**0.43**	**242**	P	**Pn**	**21 20 29.6**	**+2.1**
PKE	**Pukeiti**	**0.48**	**255**	P	**Pn**	**21 20 29.6**	**+2.0**
KHEZ	**Kahui Hut**	**0.50**	**243**	P	**Pn**	**21 20 29.8**	**+2.1**
HIZ	**Hauiti**	**0.59**	**21**	P	**Pn**	**21 20 29.4**	**+1.5**
PKVZ	**Pokaka**	**0.63**	**111**	P	**Pn**	**21 20 29.5**	**+1.4**
PKVZ				S	**S**	**21 20 51.5**	**-1.7**
WAZ	**Wanganui**	**0.75**	**156**	P	**Pn**	**21 20 30.4**	**+1.9**
WAZ				S	**S**	**21 20 52.7**	**-1.4**
MTVZ	**Mangateitei**	**0.76**	**115**	P	**Pn**	**21 20 30.1**	**+1.5**
FWVZ	**Far West T-bar**	**0.78**	**104**	P	**Pn**	**21 20 30.6**	**+1.6**
FWVZ				S	**S**	**21 20 52.4**	**-2.2**
WTVZ	**West Tongariro**	**0.78**	**94**	P	**Pn**	**21 20 30.4**	**+1.5**
WTVZ				S	**S**	**21 20 52.5**	**-1.9**
NGZ	**Ngauruhoe**	**0.80**	**98**	P	**Pn**	**21 20 30.5**	**+1.5**
NGZ				S	**S**	**21 20 52.3**	**-2.3**
NNVZ	**North Ngauruho**	**0.80**	**95**	P	**Pn**	**21 20 30.6**	**+1.6**
KRVZ	**Karewarewa**	**0.82**	**92**	P	**Pn**	**21 20 30.6**	**+1.6**
WNVZ	**Wahianoa**	**0.83**	**109**	P	**Pn**	**21 20 30.8**	**+1.7**
WNVZ				S	**S**	**21 20 52.5**	**-2.4**
SNVZ	**South Ngauruho**	**0.83**	**99**	P	**Pn**	**21 20 30.7**	**+1.6**
SNVZ				S	**S**	**21 20 52.9**	**-2.0**
OTVZ	**Oturere**	**0.84**	**97**	P	**Pn**	**21 20 30.9**	**+1.7**
TUVZ	**Tukino**	**0.85**	**104**	P	**Pn**	**21 20 31.0**	**+1.7**
TMVZ	**Te Maari**	**0.87**	**93**	P	**Pn**	**21 20 31.0**	**+1.8**
ETVZ	**East Tongariro**	**0.88**	**95**	P	**Pn**	**21 20 31.1**	**+1.7**
MOVZ	**Moawhango**	**0.97**	**111**	P	**Pn**	**21 20 30.9**	**+1.2**
BHHZ	**Black Hill Sta**	**1.22**	**111**	P	**Pn**	**21 20 32.5**	**+1.2**
MRHZ	**Matea Rd**	**1.45**	**81**	P	**Pn**	**21 20 34.0**	**+1.1**
TSZ	**Takapari Road**	**1.45**	**133**	P	**Pn**	**21 20 34.7**	**+1.8**
BKZ	**Black Stump Fm**	**1.49**	**94**	P	**Pn**	**21 20 34.8**	**+1.6**
KRHZ	**Kereru**	**1.50**	**113**	P	**Pn**	**21 20 34.9**	**+1.7**
PNHZ	**Pukenui**	**1.51**	**125**	P	**Pn**	**21 20 35.1**	**+1.8**
MCHZ	**McNeill Hill**	**1.68**	**104**	P	**Pn**	**21 20 37.1**	**+2.3**
NMHZ	**Naumai**	**1.73**	**92**	P	**Pn**	**21 20 37.6**	**+2.3**
DVHZ	**Dannevirke**	**1.73**	**136**	P	**Pn**	**21 20 36.8**	**+1.6**
WPHZ	**Waipukurau**	**1.75**	**125**	P	**Pn**	**21 20 37.0**	**+1.8**
MRZ	**Mangatainoka R**	**1.77**	**155**	P	**Pn**	**21 20 36.8**	**+1.4**
MTHZ	**Maungataniwha**	**1.77**	**84**	P	**Pn**	**21 20 37.1**	**+1.5**
OGWZ	**Otaki Gorge**	**1.80**	**166**	P	**Pn**	**21 20 37.4**	**+1.7**
DUWZ	**D'Urville Isla**	**1.81**	**196**	P	**Pn**	**21 20 37.4**	**+1.7**
KIW	**Kapiti Island**	**1.81**	**172**	P	**Pn**	**21 20 37.3**	**+1.5**
PRWZ	**Pori Road**	**1.83**	**145**	P	**Pn**	**21 20 37.6**	**+1.6**
ARHZ	**Aropaoanui**	**1.88**	**97**	P	**Pn**	**21 20 38.7**	**+2.3**
KAHZ	**Kahuranaki**	**1.92**	**113**	P	**Pn**	**21 20 39.0**	**+2.1**
RTZ	**Ruatahuna**	**1.92**	**77**	P	**Pn**	**21 20 38.2**	**+1.2**
RAHZ	**Arahi**	**1.95**	**86**	P	**Pn**	**21 20 39.2**	**

MSVF LR LR 21 33 17.5
comp=Z,12µm,21.6s,baz=304,slow=32
MSVF Nonsavu 12.86 120 Pn **Pn 21 29 19.1 +1.2**
MSVF Nonsavu 12.86 120 P **Pn 21 29 20.0 +2.1**
MSVF Nonsavu 12.86 120 P **P 21 29 22.7 -4.5**
FUNA Funafuti 12.98 78 Pn **Pn 21 29 19.9 +0.4**
FUNA Funafuti 12.98 78 P **Pn 21 29 21.4 +1.9**
DGTI Dogotuki 13.80 112 P **P 21 29 34.9 -2.7**
TAVE Taveuni 14.26 113 P **P 21 29 41.7 -0.9**
TARA Tarawa 14.38 27 **Pn 21 29 40.1 +1.7**
TARA Tarawa 14.38 27 P **P 21 29 41.5 -2.5**
1µm,1.0s
LKBA Tubou, Lakemba 15.78 117 P **P 21 30 00.5 +1.0**
RABL Rabaul 15.85 296 Pn **Pn 21 29 58.7 +1.2**
RABL IAmb IAmb 21 30 20.2
comp=Z,178nm,1.0s
RABL Rabaul 15.85 296 P **P 21 30 01.3 +0.9**
KRVT Keravat (AS076 15.92 296 P **Pn 21 29 58.5 +0.2**
comp=Z,128nm,1.1s,baz=77,slow=6.7,SNR=6.4
KRVT S **Sn 21 32 56.1 +2.1**
comp=Z,72nm,0.9s,baz=26,slow=22,SNR=1.3
KRVT LR LR 21 36 43.6
comp=Z,4µm,18.6s,baz=256,slow=39
PMG Port Moresby 19.01 275 P **Pn 21 30 36.1 -0.3**
comp=Z,22nm,0.9s,baz=87,slow=12,SNR=5.1
PMG LR LR 21 37 17.0
comp=Z,8µm,21.9s,baz=122,slow=35
PMG Port Moresby 19.01 275 P **Pn 21 30 36.7 +0.2**
PMG Port Moresby 19.01 275 *i* P **P 21 30 34.4 -0.9**
PMG pmax pmax
comp=Z,78nm,1.1s
PMG Port Moresby 19.01 275 P **Pn 21 30 39.7 +3.2**
PMG Port Moresby 19.01 275 P **Pn 21 30 39.2 +2.7**
RK1H Rockhampton Ha 19.16 230 P **Pn 21 30 38.9 +0.7**
PATS Pohnpei 19.95 336 P **Pn 21 30 47.0 -0.5**
baz=20,SNR=17
PATS Pohnpei 19.95 336 **Pn 21 30 46.9 -0.7**
PATS Pohnpei 19.95 336 P **Pn 21 30 47.5 0.0**
EIDS Eidsvold 19.95 224 P **Pn 21 30 46.7 -0.9**
baz=20,SNR=7.1
EIDS Eidsvold 19.95 224 **P 21 30 45.0 -0.4**
EIDS Eidsvold 19.95 224 P **Pn 21 30 47.7 +0.1**
KWAJ Kwajalein Atol 20.25 4 P Pn 21 30 50.3 -0.8
KWAJ Kwajalein Atol 20.25 4 P Pn 21 30 50.3 -0.8
KWAJ pmax pmax
comp=Z,278nm,0.9s
LHI Lord Howe Isla 20.99 198 P **P 21 30 57.0 +0.4**
baz=21,SNR=5.0
LHI Lord Howe Isla 20.99 198 P **P 21 30 56.2 -0.4**
LHI Lord Howe Isla 20.99 198 P **P 21 30 59.1 +2.5**
comp=Z,236nm,1.2s
MANU Manus Island 21.09 295 P **P 21 30 58.9 +1.1**
MANU IAmb IAmb 21 31 22.5
comp=Z,182nm,1.3s
CTA Charters Tower 21.12 244 P **P 21 30 59.2 +1.0**
comp=Z,31nm,0.8s,baz=78,slow=9.5,SNR=24
CTA LR LR 21 37 59.7
comp=Z,6µm,21.1s,baz=76,slow=33
comp=Z,31nm,0.8s
CTA Charters Tower 21.12 244 P **P 21 30 58.5 +0.4**
CTAO Charters Tower 21.12 244 **P 21 30 59.2 +1.0**
CTAO Charters Tower 21.12 244 P **P 21 30 59.2 +1.0**
CTAO pmax pmax
comp=Z,55nm,0.8s
CTAO MLR MLR
comp=Z,6µm,20.0s
CTAO Charters Tower 21.12 244 P **P 21 30 58.5 +0.4**
AFI Afiamalu 21.44 99 P **P 21 31 05.5 +3.8**
comp=Z,49nm,0.8s,baz=261,slow=19,SNR=3.9
AFI LR LR 21 37 43.6
comp=Z,3µm,21.3s,baz=258,slow=32
AFI Afiamalu 21.44 99 P **P 21 31 03.8 +2.1**
AFI IAmb IAmb 21 31 30.0
comp=Z,165nm,1.4s
AFI Afiamalu 21.44 99 P **P 21 31 03.8 +2.1**
AFI pmax pmax
comp=Z,165nm,1.4s
AFI MLR MLR
comp=Z,4µm,22.0s
RMQ Roma 22.27 226 P **P 21 31 11.4 +0.9**
baz=22,SNR=17
RMQ Roma 22.27 226 P **P 21 31 11.4 +0.9**
comp=Z,63nm,0.8s
MTSU Mount Surprise 22.29 250 P **P 21 31 11.9 +1.2**
baz=22,SNR=23
MTSU Mount Surprise 22.29 250 P **P 21 31 11.7 +1.0**
COEN Coen 22.75 261 P **P 21 31 16.8 +1.1**
baz=23,SNR=6.0
COEN Coen 22.75 261 P **P 21 31 16.8 +1.1**
COEN IAmb IAmb 21 31 18.3
comp=Z,74nm,1.0s
COEN Coen 22.75 261 P **P 21 31 17.3 +1.7**
RAO Raoul Island 22.91 143 LR LR 21 39 03.3
comp=Z,2µm,21.1s,baz=302,slow=33
ARMA Armidale 23.23 214 P **P 21 31 21.0 +0.5**
baz=23,SNR=42
ARMA Armidale 23.23 214 P **P 21 31 21.0 +0.5**
ARMA IAmb IAmb 21 31 23.2
comp=Z,148nm,1.1s
ARMA Armidale 23.23 214 P **P 21 31 21.0 +0.5**
KNTN Kanton 23.40 70 P **P 21 31 22.8 +0.8**
KNTN IAmb IAmb 21 31 26.7
comp=Z,106nm,1.1s
NIUE Niue 24.03 111 P **P 21 31 29.3 +1.4**
OUZ Omahuta 24.46 166 P **P 21 31 31.5 -0.1**
QLP Quilpie 25.65 231 P **P 21 31 42.9 +0.3**
comp=Z,47nm,0.9s
SYDH Sydney Hard Ro 26.33 210 P **P 21 31 50.4 +1.8**
QIS Mount Isa 27.20 247 P **P 21 31 56.4 -0.3**
baz=27,SNR=8.5
QIS Mount Isa 27.20 247 P **P 21 31 57.7 +1.0**
CMSA Cobar Meteorol 27.57 221 P **P 21 31 60.0 +0.1**
baz=28,SNR=16
CMSA Cobar Meteorol 27.57 221 P **P 21 32 00.1 +0.3**
HIZ Hauiti 27.90 166 IAMs_20 IAMs_20 21 41 45.3
comp=Z,5µm,19.0s
RUGZ Raukumara Rang 28.19 161 P **P 21 32 05.0 -0.3**
PKGZ Pakihiroa 28.25 160 P **P 21 32 05.3 -0.5**
CNB Canberra Magne 28.25 210 P **P 21 32 06.7 +0.7**
baz=28,SNR=7.9
CNB Canberra Magne 28.25 210 P **P 21 32 06.6 +0.7**
URZ Urewera 28.28 162 P **P 21 32 07.7 +1.7**
comp=Z,6.1nm,0.4s,baz=289,slow=3.9,SNR=8.9
URZ LR LR 21 41 51.2
comp=Z,3µm,22.0s,baz=31,slow=33
comp=Z,6.1nm,0.4s
URZ Urewera 28.28 162 P **P 21 32 06.5 +0.5**
CAN Canberra 28.44 211 P **P 21 32 07.3 -0.2**
CAN Canberra 28.44 211 P **P 21 32 07.3 -0.2**
CAN pmax pmax
comp=Z,38nm,1.2s
CAN Canberra 28.44 211 P **P 21 32 09.1 +1.6**
CAN Canberra 28.44 211 P **P 21 32 07.9 +0.4**
PUZ Puketiti 28.47 160 P **P 21 32 08.1 +0.3**
MWZ Matawai 28.48 161 P **P 21 32 07.4 -0.4**
TWGZ Tauwhareparae 28.48 161 P **P 21 32 07.3 -0.5**
MRHZ Matea Rd 28.61 163 P **P 21 32 09.9 +0.9**
TKGZ Te Karaka 28.67 161 P **P 21 32 09.2 -0.3**
NNVZ North Ngauruho 28.68 165 P **P 21 32 11.0 +1.3**
TMVZ Te Maari 28.68 165 P **P 21 32 10.7 +1.0**
OTVZ Oturere 28.72 165 P **P 21 32 11.0 +0.9**
SNGZ Shannon Statio 28.83 162 P **P 21 32 10.6 -0.4**
BKZ Black Stump Fm 28.94 164 P **P 21 32 10.7 -1.3**
BKZ IAMs_20 IAMs_20 21 41 43.9
comp=Z,5µm,22.0s
BKZ Black Stump Fm 28.94 164 P **P 21 32 10.9 -1.0**
BKZ Black Stump Fm 28.94 164 P **P 21 32 11.5 -0.5**
SMPI Sarmi 29.03 287 P **P 21 32 13.9 +0.9**
comp=Z,2µmcomp=Z,1µmcomp=Z,95nm,1.0s
QRZ Quartz Range 29.66 171 P **P 21 32 18.7 +0.4**
QRZ IAmb IAmb 21 32 20.9
comp=Z,42nm,0.9s
QRZ Quartz Range 29.66 171 P **P 21 32 19.2 +0.9**
H11S2 WAKE ISLAND Hy 29.85 1 T T 22 02 58.9
baz=181,slow=76,SNR=243
H11S3 WAKE ISLAND Hy 29.85 1 T T 22 03 09.0
baz=181,slow=76,SNR=176
H11S1 WAKE ISLAND Hy 29.87 1 T T 22 03 08.6
baz=181,slow=76,SNR=168
NNZ Nelson 30.19 169 P **P 21 32 24.3 +1.4**
NNZ IAmb IAmb 21 32 26.8
comp=Z,53nm,1.3s
BFZ Birch Farm 30.30 165 P **P 21 32 22.1 -1.8**
BFZ IAmb IAmb 21 32 24.1
comp=Z,26nm,0.7s
BFZ IAMs_20 IAMs_20 21 43 01.7
comp=Z,7µm,21.0s
TUWZ Tuamarina 30.50 169 P **P 21 32 25.1 -0.5**
STKA Stephens Creek 30.51 225 P **P 21 32 26.3 +0.4**
comp=Z,12nm,0.7s,baz=41,slow=7.9,SNR=24
STKA LR LR 21 43 58.9
comp=Z,5µm,20.4s,baz=50,slow=35
comp=Z,12nm,0.7s
STKA Stephens Creek 30.51 225 P **P 21 32 26.4 +0.4**
baz=30,SNR=18
STKA Stephens Creek 30.51 225 P **P 21 32 26.3 +0.4**
STKA Stephens Creek 30.51 225 *i* P **P 21 32 25.2 -0.7**
STKA Stephens Creek 30.51 225 P **P 21 32 26.7 +0.8**
SNZO South Karori 30.54 168 IAMs_20 IAMs_20 21 43 44.0
comp=Z,4µm,21.0s
THZ Tophouse 30.64 170 P **P 21 32 26.6 -0.4**
THZ IAmb IAmb 21 32 38.4
comp=Z,35nm,0.8s
BHW Baring Head 30.67 167 P **P 21 32 26.0 -1.1**
MSWZ Moikau Station 30.76 167 P **P 21 32 26.4 -1.5**
PLWZ Palliser 30.90 167 P **P 21 32 28.8 -0.4**
H11N1 WAKE ISLAND Hy 31.07 1 T T 22 04 40.5
baz=182,slow=76,SNR=149
H11N3 WAKE ISLAND Hy 31.07 1 T T 22 04 39.9
baz=182,slow=76,SNR=84
H11N2 WAKE ISLAND Hy 31.09 1 T T 22 04 40.9
baz=182,slow=76,SNR=62
KHZ Kahutara 31.38 170 P **P 21 32 33.4 0.0**
KHZ IAmb IAmb 21 32 35.0
comp=Z,28nm,0.9s
KHZ Kahutara 31.38 170 P **P 21 32 31.8 -1.6**
LTZ Lake Taylor 31.54 172 IAmb IAmb 21 32 36.1
comp=Z,53nm,0.9s
WR0 Warramunga Arr 31.71 251 IAmb IAmb 21 32 37.6
comp=Z,32nm,1.1s
WB0 Warramunga Arr 31.81 251 P **P 21 32 36.8 -0.7**
WB2 Warramunga Arr 31.88 251 P **P 21 32 37.3 -0.9**
baz=32
WRAB Tennant Creek 31.88 251 P **P 21 32 37.3 -0.8**
WRAB IAmb IAmb 21 32 39.0
comp=Z,69nm,1.1s
WRAB Tennant Creek 31.88 251 *ce* P **P 21 32 36.7 -1.4**
WRAB pmax pmax
comp=Z,118nm,1.7s
WRAB Tennant Creek 31.88 251 P **P 21 32 37.8 -0.3**
WRAB Tennant Creek 31.88 251 P **P 21 32 37.6 -0.6**
WRA Warramunga Arr 31.89 251 P **P 21 32 37.5 -0.8**
comp=Z,42nm,1.1s,baz=84,slow=8.8,SNR=96
WRA pP **pP 21 32 51.8 +1.0**
comp=Z,23nm,0.8s,baz=82,slow=8.3,SNR=11
WRA LR LR 21 44 12.3
comp=Z,3µm,21.6s,baz=33,slow=34
comp=Z,42nm,1.1s
TOO Toolangi 31.97 212 P **P 21 32 38.7 0.0**
baz=32,SNR=9.5
TOO Toolangi 31.97 212 P **P 21 32 38.5 -0.2**
TOO IAmb IAmb 21 32 56.3
comp=Z,30nm,0.8s
TOO Toolangi 31.97 212 P **P 21 32 38.5 -0.2**
TOO pmax pmax
comp=Z,30nm,0.8s
TOO Toolangi 31.97 212 P **P 21 32 39.7 +1.0**
FOZ Fox Glacier 32.01 175 P **P 21 32 37.9 -1.0**
FOZ IAmb IAmb 21 33 06.6
comp=Z,37nm,1.0s
OXZ Oxford 32.04 172 P **P 21 32 38.8 -0.4**
RPZ Rata Peaks 32.30 174 P **P 21 32 41.8 +0.3**
comp=Z,45nm,0.7s,baz=331,slow=1.8,SNR=37
RPZ LR LR 21 44 23.8
comp=Z,3µm,21.9s,baz=344,slow=34
comp=Z,45nm,0.7s
RPZ Rata Peaks 32.30 174 P **P 21 32 41.2 -0.3**
MQZ McQueen's Vall 32.50 172 P **P 21 32 41.7 -1.5**
BRAT Ballarat 32.79 214 P **P 21 32 48.1 +2.3**
GUMO Guam 32.84 319 LR LR 21 46 54.7
comp=Z,745nm,18.8s,baz=136,slow=38
LBZ Lake Benmore 32.88 175 P **P 21 32 47.0 +0.4**
OOD Oodnadatta 32.98 236 P **P 21 32 48.9 +1.3**
ASAR Alice Springs 33.12 244 P **P 21 32 47.7 -1.3**
ASAR **PcP 21 35 30.6 -0.7**
ASAR Alice Springs 33.12 244 P **P 21 32 47.7 -1.3**
ASAR 21 35 30.6
KDU Kakadu 33.15 264 P **P 21 32 49.1 -0.2**
baz=33,SNR=20
KDU Kakadu 33.15 264 P **P 21 32 49.3 0.0**
HTT Hallett 33.24 225 P **P 21 32 50.4 +0.4**
baz=33,SNR=8.9
HTT Hallett 33.24 225 P **P 21 32 50.8 +0.8**
ARPS Mount Arapiles 33.44 217 P **P 21 32 54.0 +2.4**
MLZ Mavora Lakes 33.73 178 P **P 21 32 52.6 -1.4**
MLZ IAmb IAmb 21 32 53.8
comp=Z,77nm,1.5s
RAR Rarotonga 33.80 111 P **P 21 32 58.5 +3.7**
comp=Z,20nm,0.6s,baz=31,slow=3.5,SNR=3.8
RAR LR LR 21 43 54.8
comp=Z,2µm,21.4s,baz=270,slow=31
DCZ Deep Cove 33.81 179 P **P 21 32 53.9 -0.7**
TWOA Tennyson Woods 34.40 223 P **P 21 33 01.9 +2.0**
MTN Manton Dam 34.45 264 P **P 21 33 00.2 -0.4**
baz=34,SNR=7.9
MTN Manton Dam 34.45 264 P **P 21 33 00.6 0.0**
MTN Manton Dam 34.45 264 P **P 21 33 01.6 +1.0**
FAKI Fak Fak 34.88 282 P **P 21 33 03.1 -1.2**
BBOO Buckleboo 34.94 228 P **P 21 33 04.8 +0.2**
baz=35,SNR=10
BBOO Buckleboo 34.94 228 P **P 21 33 04.2 -0.5**
BBOO IAmb IAmb 21 33 04.6
comp=Z,73nm,1.5s
MULG Mulgathing 35.29 233 P **P 21 33 08.2 +0.6**
TAU Tasmania Unive 35.36 204 P **P 21 33 08.3 +0.3**
TAU IAmb IAmb 21 33 32.5
comp=Z,50nm,1.2s
TAU Tasmania Unive 35.36 204 P **P 21 33 08.3 +0.3**
TAU pmax pmax
comp=Z,50nm,1.2s
SWI Sorong 36.43 284 P **P 21 33 18.1 +0.5**
SWI pmax pmax
comp=Z,78nm,1.1s
SWI Sorong 36.43 284 P **P 21 33 18.4 +0.8**
comp=Z,2µmcomp=Z,1µmcomp=Z,78nm,1.1s
BNDI Bandanaira 36.75 278 P **P 21 33 21.5 +1.2**
comp=Z,630nm,1.4s
KNRA Kununurra 36.75 259 P **P 21 33 19.7 -0.6**
baz=37,SNR=24
KNRA Kununurra 36.75 259 P **P 21 33 21.1 +0.8**
WRKA Warakurna 38.42 244 P **P 21 33 33.7 -0.7**
baz=38,SNR=14
WRKA Warakurna 38.42 244 P **P 21 33 34.9 +0.5**
AAI Ambon 38.60 279 P **P 21 33 42.2 +6.2**
NLAI Namlea 39.77 279 P **P 21 33 47.5 +1.8**
comp=Z,4µmcomp=Z,288nm,1.6s
LBMI Labuha 40.08 283 P **P 21 33 49.8 +1.5**
comp=Z,3µmcomp=Z,173nm,1.3s
FORT Forrest 40.26 236 P **P 21 33 49.0 -0.6**
FORT Forrest 40.26 236 P **P 21 33 50.8 +1.2**
TNTI Ternate 40.64 285 P **P 21 33 52.8 -0.1**
TNTI IAmb IAmb 21 33 55.1
comp=Z,63nm,1.1s
TNTI Ternate 40.64 285 P **P 21 33 54.5 +1.6**
comp=Z,1µmcomp=Z,60nm,1.4s
TNTI Ternate 40.64 285 P **P 21 33 54.5 +1.6**
comp=Z,60nm,1.4s
SANI Sanana 41.14 280 P **P 21 33 57.9 +0.8**
comp=Z,3µmcomp=Z,2µmcomp=Z,96nm,1.4s
SANI Sanana 41.14 280 P **P 21 33 58.1 +1.0**
comp=Z,95nm,1.4s
MIDW Midway 42.55 21 IAMs_20 IAMs_20 21 47 54.5
comp=Z,2µm,21.0s
PPT Papeete 42.98 103 LR LR 21 49 00.8
comp=Z,1µm,18.1s,baz=280,slow=32
PPT2 Papeete2 42.98 103 *e* LR LR 21 46 14.7
comp=Z,8µm,29.5s
SGSI Sangihe 43.35 288 P **P 21 34 16.6 +1.5**
comp=Z,3µmcomp=Z,308nm,0.8s
MMRI Maumere 43.52 270 P **P 21 34 15.6 -0.8**
MMRI Maumere 43.52 270 P **P 21 34 17.3 +0.9**
comp=Z,3µmcomp=Z,2µmcomp=Z,141nm,1.0s
MMRI Maumere 43.52 270 P **P 21 34 17.3 +0.9**
comp=Z,143nm,1.0s
TBI Tubuai 43.57 112 *e* LR LR 21 46 28.9
comp=Z,8µm,29.2s
BBSI Bau Bau 43.70 274 P **P** 21 34 27.2 +9.3
KMSI Cibinong 43.80 283 P **P 21 34 20.3 +1.6**
comp=Z,267nm,0.9s
EDFI Ende, Flores 44.04 269 P **P 21 34 20.7 0.0**
comp=Z,2µmcomp=Z,638nmcomp=Z,26nm,0.9s
LUWI Luwuk 44.51 280 P **P 21 34 24.3 0.0**
LUWI Luwuk 44.51 280 P **P 21 34 25.8 +1.5**
comp=Z,2µmcomp=Z,171nm,1.4s
LUWI Luwuk 44.51 280 P **P 21 34 25.8 +1.5**
comp=Z,172nm,1.4s
DAV Davao City (W) 44.60 293 LR LR 21 53 39.7
comp=Z,473nm,19.5s,baz=100,slow=37
JCJ Chichijima 45.02 329 LR LR 21 50 31.8
comp=Z,760nm,21.0s,baz=152,slow=32
PSA00 Pilbara Seismi 45.55 251 P **P 21 34 32.0 -0.5**
PSA00 Pilbara Seismi 45.55 251 P **P 21 34 33.5 +1.0**
BSSI Bau Bau, Buton 45.61 273 P pP 21 34 47.2 +0.5
MBWA Marble Bar 45.62 252 P **P 21 34 33.5 +0.4**
MBWA Marble Bar 45.62 252 P **P 21 34 33.8 +0.7**
MBWA Marble Bar 45.62 252 P **P 21 34 33.8 +0.7**
MBWA pP **pwP 21 34 48.8 -1.2**
APSI Ampana 45.62 280 P **P 21 34 34.9 +1.7**
comp=Z,1µmcomp=Z,93nm,1.4s
MRSI Marisa 45.72 282 P pP 21 34 47.0 -0.6
BKSI Bulukumba 46.12 274 P pP 21 34 49.6 -1.1
WBSI Waikabubak, Su 46.18 268 P **P 21 34 39.9 +2.2**
comp=Z,1µmcomp=Z,136nm,0.9s
BNSI Bone 46.32 275 P **P 21 34 40.0 +1.3**
comp=Z,1µmcomp=Z,149nm,0.9s
KAPI Kappang 46.54 274 LR LR 21 53 29.8
comp=Z,604nm,21.9s,baz=103,slow=35
KAPI Kappang 46.54 274 P **P 21 34 40.7 +0.3**
KAPI Kappang 46.54 274 *c* P **P 21 34 40.4 0.0**
KAPI Kappang 46.54 274 P **P 21 34 42.3 +1.9**
KAPI Kappang 46.54 274 P **P 21 34 41.9 +1.4**
KAPI pP **pP 21 34 53.3 -0.7**
SPSI Sidrap Palu 46.73 275 P pP 21 34 51.9 -3.6
TTSI Tana Toraja 46.88 277 P pP 21 34 59.6 +2.9
TOLI2 Tolitoli 47.01 282 P **P 21 34 43.5 -0.7**
TOLI2 Tolitoli 47.01 282 P **P 21 34 45.0 +0.9**
TBP Tagbilaran 47.24 295 ⇑ *i* P **P 21 34 46.5 +0.6**
MPSI Mapaga 47.64 281 P **P 21 34 49.1 +0.1**
comp=Z,3µmcomp=Z,1µmcomp=Z,86nm,1.4s
PLAI Plampang 47.86 269 P **P 21 34 51.3 +0.5**
comp=Z,3µmcomp=Z,2µmcomp=Z,84nm,0.9s
PLAI Plampang 47.86 269 P **P 21 34 51.2 +0.5**
HLP Hilina Pali 48.63 51 P **P 21 34 57.1 +0.5**
POHA Pohakuloa 48.73 51 IAMs_20 IAMs_20 21 50 14.4
comp=Z,3µm,22.0s
KLBR Kellerberrin 48.96 238 P **P 21 34 58.6 -0.4**
baz=49,SNR=13
KLBR Kellerberrin 48.96 238 P **P 21 34 58.6 -0.4**
RCP Roxas 49.04 296 ⇑ *eP* **P 21 35 00.2 +0.5**
BLDU Ballidu 49.63 240 P **P 21 35 03.2 -0.9**
baz=50,SNR=8.5
BLDU Ballidu 49.63 240 P **P 21 35 03.7 -0.4**
NWAO Narrogin (SRO) 49.70 237 P **P 21 35 03.4 -1.1**
NWAO Narrogin (SRO) 49.70 237 P **P 21 35 03.4 -1.1**
NWAO pmax pmax
comp=Z,171nm,1.5s
NWAO MLR MLR
comp=Z,4µm,21.0s
NWAO Narrogin (SRO) 49.70 237 P **P 21 35 05.4 +0.8**
NWAO Narrogin (SRO) 49.70 237 P **P 21 35 04.5 -0.1**
NWAO pP **pP 21 35 19.8 +2.1**
MORW Morawa 49.92 242 P **P 21 35 06.2 -0.2**
baz=50,SNR=12
MORW Morawa 49.92 242 P **P 21 35 05.5 -0.9**
MORW Morawa 49.92 242 P **P 21 35 06.7 +0.3**
BKB Balikpapan 50.14 278 P **P 21 35 09.3 +1.2**
MUN Mundaring 50.33 238 P **P 21 35 09.7 +0.4**
baz=50,SNR=8.6
MUN Mundaring 50.33 238 P **P 21 35 11.0 +1.6**
MYLDM Lahad Datu 50.44 287 P **P 21 35 12.2 +1.8**
IGBI Denpasar 50.44 268 P pP 21 35 26.0 +1.8
SRBI Singaraja 50.48 269 P pP 21 35 23.6 -0.9
GIRL Giralia 50.82 250 P **P 21 35 14.1 +1.0**
baz=51,SNR=3.8
GIRL Giralia 50.82 250 P **P 21 35 13.0 -0.2**
ABJI Asem Bagus 51.48 269 P **P 21 35 20.0 +1.8**
comp=Z,110nm,0.9s
BBKI Banjar Baru 51.65 275 P **P 21 35 22.4 +2.9**
comp=Z,49nm,1.9s
PPR Puerto Princes 51.88 292 ⇓ *iP* **P 21 35 23.1 +1.9**
BLJI Banyuglugur 52.11 269 P **P 21 35 23.7 +0.7**
comp=Z,47nm,0.8s
GMJI Gumukmas 52.18 268 P pP 21 35 37.4 +0.1
TAOE Nuku Hiva Isla 52.64 92 *eP* **P 21 35 31.0 +4.0**
comp=Z,477nm,28.4s
TAOE *e*S **S 21 42 52.0 +0.9**
comp=Z,591nm,24.8s
TAOE *e*LR LR 21 50 42.3
comp=Z,3µm,27.0s
KKM Kota Kinabalu 52.87 287 P **P 21 35 28.8 +0.1**
KKM Kota Kinabalu 52.87 287 P **P 21 35 30.2 +1.5**
JOW Kunigami 53.14 316 LR LR 21 57 41.8
comp=Z,916nm,19.4s,baz=128,slow=36
JOW Kunigami 53.14 316 P **P 21 35 30.8 +0.5**
JOW Kunigami 53.14 316 P **P 21 35 32.1 +1.8**
comp=Z,64nm,0.8s
PWJI Pagerwojo 53.83 268 P **P 21 35 36.7 +1.1**
comp=Z,89nm,0.9s
INU Inuyama 54.29 330 P **P 21 35 38.0 -0.5**
INU IAmb IAmb 21 35 39.7
comp=Z,37nm,1.4s
INU Inuyama 54.29 330 P **P 21 35 41.2 +2.7**
INU Inuyama 54.29 330 P **P 21 35 38.3 -0.3**
INU pP **pP 21 35 55.1 +2.5**
JGF Kuroka 54.33 331 P **P 21 35 38.5 -0.4**
PCJI Pacitan 54.42 268 P **P 21 35 41.2 +1.3**
comp=Z,2µmcomp=Z,254nm,1.0s
MJAR Matsushiro Arr 54.70 332 P **P 21 35 40.9 -0.7**
comp=Z,12nm,1.0s,baz=161,slow=8.1,SNR=26
MJAR pP **pP 21 35 54.8 -0.9**
comp=Z,3.4nm,0.4s,baz=283,slow=13,SNR=7.8
MJAR LR LR 21 56 51.9
comp=Z,582nm,21.8s,baz=144,slow=34
comp=Z,12nm,1.0s
MAJO Matsushiro 54.70 332 P **P 21 35 40.7 -0.9**
MAJO IAmb IAmb 21 35 56.4
comp=Z,14nm,0.7s
MAJO Matsushiro 54.70 332 *i* P **P 21 35 39.9 -1.6**
MAJO pmax pmax
comp=Z,24nm,1.1s
MAJO Matsushiro 54.70 332 P **P 21 35 44.1 +2.6**
MAJO Matsushiro 54.70 332 P **P 21 35 41.2 -0.3**
MAJO pP **pP 21 35 56.1 +0.4**
MJB9 Matsu-Tunnel 54.70 332 P **P 21 35 40.4 -1.2**
MJB9 IAmb IAmb 21 35 41.5
comp=Z,25nm,1.1s
WOJI Wonogiri, Jawa 54.72 269 P pP 21 35 55.8 -0.1
JSU Suzuyama 54.94 322 P **P 21 35 42.4 -0.9**
JSU IAmb IAmb 21 35 59.0
comp=Z,32nm,1.0s
JWT Wachi 55.03 329 P **P 21 35 45.3 +1.3**
UGM Wanagama 55.10 268 P **P 21 35 45.6 +0.7**
SMRI Semarang 55.31 269 P **P 21 35 46.5 0.0**
SMRI Semarang 55.31 269 P pP 21 36 00.5 +0.2
SMRI Semarang 55.31 269 P **P 21 35 47.6 +1.2**
SBUM Sibu 55.60 281 P **P 21 35 47.8 -0.6**
SBUM IAmb IAmb 21 36 05.5
comp=Z,35nm,1.0s
STKI Sintang 55.71 278 P **P 21 35 51.0 +1.7**
comp=Z,25nm,1.0s
JHS Saijyo 56.00 327 P **P 21 35 50.9 0.0**
JHS IAmb IAmb 21 36 07.4
comp=Z,22nm,0.9s
YULB Yu-li 56.13 308 IAmb IAmb 21 36 08.2
comp=Z,23nm,0.9s
TPUB Ta-pu 56.59 308 P **P 21 35 55.4 0.0**
comp=Z,52nm,1.0s
SSLB Suanglung 56.61 309 IAmb IAmb 21 36 12.5
comp=Z,21nm,0.9s
SSLB Suanglung 56.61 309 P **P 21 35 57.0 +1.5**
YHNB Yeheng 56.77 310 P **P 21 35 57.3 +0.6**
comp=Z,65nm,0.8s
JTM Tenmabayashi 57.09 337 P **P 21 35 57.4 -1.1**
KSM Kuching 57.19 279 P **P 21 35 59.5 -0.3**
KSM IAmb IAmb 21 36 16.1
comp=Z,30nm,0.9s
KSM Kuching 57.19 279 P **P 21 36 01.7 +1.9**
ERM Erimo 57.42 340 IAMs_20 IAMs_20 21 56 05.5
comp=Z,2µm,21.0s
DRV Dumont d'Urvil 57.84 192 P **P 21 36 02.9 -0.6**
LEM Lembang 58.11 269 LR LR 22 02 54.1
comp=Z,110nm,20.4s,slow=38
CNJI Cibinong 58.51 268 P pP 21 36 22.9 -0.1
CBJI Citeko 58.93 269 P pP 21 36 24.7 -1.2
DBJI Dramaga 59.01 269 P pP 21 36 26.1 -0.4

QZH	**Quanzhou**	**59.04 308**	⇑*i*P	**P**	**21 36 12.5**	**0.0**	
QZH			S	**S**	**21 44 16.8**	**+1.2**	
QZH			pmax	pmax			
	comp=Z,370nm,5.7s						
QZH			LR	LR			
	comp=Z,440nm,19.1s						
QZH			LR	LR			
	comp=Z,460nm,19.1s						
QZH			LR	LR			
	comp=Z,550nm,19.5s						
ASAJ	**Asahikawa**	**59.47 340**	LR	LR	21 57 19.0		
	comp=Z,1μm,21.9s,baz=174,slow=31						
NAWB	**Namwon**	**59.50 323**	P	**P**	**21 36 15.3**	**-0.2**	
NAWB			IAmb	IAmb	21 36 17.0		
	comp=Z,25nm,1.1s						
TJN	**Taejon**	**60.19 324**	P	**P**	**21 36 20.2**	**0.0**	
TJN	**Taejon**	**60.19 324**	P	**P**	**21 36 20.2**	**0.0**	
TJN			pmax	pmax			
	comp=Z,79nm,0.9s						
KSCHJ	**Chungju**	**60.19 325**	P	**P**	**21 36 19.9**	**-0.3**	
KSCHJ			IAmb	IAmb	21 36 21.3		
	comp=Z,20nm,0.9s						
KSRS	**Korea Array**	**60.64 325**	P	**P**	**21 36 23.8**	**+0.6**	
	comp=Z,4.2nm,0.7s,baz=136,slow=7.0,SNR=16						
KSRS			LR	LR	22 00 50.0		
	comp=Z,392nm,20.4s,baz=140,slow=34						
	comp=Z,4.2nm,0.7s						
SSE	**Sheshan**	**60.64 316**	P	**P**	**21 36 23.1**	**-0.2**	
SSE			S	**S**	**21 44 34.9**	**-1.1**	
SSE			SS	**SS**	**21 48 34.8**	**-0.7**	
SSE			pmax	pmax			
	comp=Z,24nm,0.9s						
SSE			pmax	pmax			
	comp=Z,160nm,5.5s						
SSE			LR	LR			
	comp=Z,220nm,18.0s						
KS19	**Wonju Array Si**	**60.70 325**	P	**P**	**21 36 23.2**	**-0.4**	
KS19			IAmb	IAmb	21 36 25.8		
	comp=Z,23nm,1.1s						
SEHB	**SEOHWA**	**61.04 326**	P	**P**	**21 36 26.5**	**+0.5**	
SEHB			IAmb	IAmb	21 36 46.6		
	comp=Z,17nm,1.2s						
INCN	**Inchon**	**61.38 325**	P	**P**	**21 36 28.3**	**0.0**	
INCN	**Inchon**	**61.38 325**	P	**P**	**21 36 28.3**	**0.0**	
INCN			pmax	pmax			
	comp=Z,56nm,1.5s						
YSS	**Yuzh-Sakhalins**	**61.95 342**	P	**P**	**21 36 32.4**	**+0.4**	
YSS	**Yuzh-Sakhalins**	**61.95 342**	*e*P	**P**	**21 36 32.3**	**+0.4**	
YSS			*e*S	**S**	**21 44 51.6**	**-0.4**	
YSS			*e*SS	**SS**	**21 48 56.2**	**+0.7**	
YSS			pmax	pmax			
	comp=Z,300nm,2.6s						
DLV	**T Lat**	**62.03 290**	P	**P**	**21 36 33.5**	**+0.1**	
DLV	**T Lat**	**62.03 290**	P	**P**	**21 36 34.7**	**+1.4**	
	comp=Z,43nm,1.1s						
SKR	**Severo-Kuril's**	**62.61 353**	*e*P	**P**	**21 36 32.1**	**-4.1**	
SKR			*e*S	**S**	**21 44 53.1**	**-7.1**	
SKR			pmax	pmax			
	comp=Z,31nm,1.4s						
NJ2	**Nanjing**	**62.81 315**	⇑*i*P	**P**	**21 36 38.3**	**+0.4**	
NJ2			S	**S**	**21 45 05.3**	**+1.9**	
NJ2			sS	**pS**	**21 45 16.6**	**-3.4**	
NJ2			pmax	pmax			
	comp=Z,53nm,0.9s						
NJ2			pmax	pmax			
	comp=Z,450nm,4.5s						
NJ2			LR	LR			
	comp=Z,670nm,24.5s						
NJ2			LR	LR			
	comp=Z,600nm,21.6s						
NJ2			LR	LR			
	comp=Z,1μm,23.5s						
QIZ	**Qiongzhong**	**63.46 298**	P	**P**	**21 36 42.4**	**-0.1**	
QIZ	**Qiongzhong**	**63.46 298**	IAMs_20	IAMs_20	22 00 27.1		
	comp=Z,1μm,22.0s						
QIZ	**Qiongzhong**	**63.46 298**	⇑*i*P	**P**	**21 36 43.8**	**+1.3**	
QIZ			S	**S**	**21 45 16.3**	**+4.3**	
QIZ			SS	**SS**	**21 49 20.0**	**-0.1**	
QIZ			pmax	pmax			
	comp=Z,38nm,1.0s						
QIZ			pmax	pmax			
	comp=Z,360nm,7.2s						
QIZ			LR	LR			
	comp=Z,510nm,19.9s						
QIZ			LR	LR			
	comp=Z,760nm,23.9s						
QIZ			LR	LR			
	comp=Z,1μm,21.5s						
QIZ	**Qiongzhong**	**63.46 298**	P	**P**	**21 36 45.0**	**+2.5**	
	comp=Z,56nm,1.4s						
QIZ	**Qiongzhong**	**63.46 298**	P	**P**	**21 36 43.9**	**+1.3**	
QIZ			pP	**pP**	**21 36 57.0**	**+0.1**	
QIZ			sP	**sP**	**21 37 03.8**	**+0.9**	
MYKOM	**Kota Tinggi**	**63.53 278**	P	**P**	**21 36 42.5**	**-0.6**	
AMKA	**Amchitka**	**63.66 9**	P	**P**	**21 36 44.2**	**+1.1**	
USA0B	**Ussuriysk Arra**	**63.67 333**	P	**P**	**21 36 44.0**	**+0.6**	
USA0B	**Ussuriysk Arra**	**63.67 333**	P	**P**	**21 36 44.0**	**+0.6**	
USA0B			pmax	pmax			
	comp=Z,57nm,1.3s						
USRK	**Ussuriysk Ar.**	**63.67 333**	P	**P**	**21 36 44.4**	**+1.0**	
	comp=Z,33nm,1.2s,baz=131,slow=5.8,SNR=27						
	comp=Z,33nm,1.2s						
SHEM	**Shemya Is, Ala**	**64.36 5**	LR	LR	21 58 48.5		
	comp=Z,837nm,21.1s,baz=191,slow=30						
PET	**Petropavlovsk**	**64.65 355**	P	**P**	**21 36 49.4**	**-0.2**	
PET	**Petropavlovsk**	**64.65 355**	*c i*P	**P**	**21 36 48.3**	**-1.3**	
PET			*e*S	**S**	**21 45 26.3**	**+0.8**	
KIWB	**Kanaga Island**	**64.73 11**	P	**P**	**21 36 51.0**	**+0.8**	
PEA0B	**Petropavlovsk-**	**64.83 354**	IAmb	IAmb	21 37 17.0		
	comp=Z,27nm,1.2s						
PEA0B	**Petropavlovsk-**	**64.83 354**	*ce*P	**P**	**21 36 50.7**	**-0.1**	
PETK	**Petropavlovsk-**	**64.83 354**	P	**P**	**21 36 50.5**	**-0.3**	
	comp=Z,4.4nm,0.8s,baz=181,slow=12,SNR=9.5						
PETK			LR	LR	21 59 35.1		
	comp=Z,750nm,21.7s,baz=166,slow=31						
	comp=Z,4.4nm,0.8s						
PETK	**Petropavlovsk-**	**64.83 354**	P	**P**	**21 36 50.8**	**0.0**	
PETK	**Petropavlovsk-**	**64.83 354**	P	**P**	**21 36 50.8**	**0.0**	
ADK	**Adak**	**64.85 12**	P	**P**	**21 36 51.6**	**+0.7**	
ADK			IAmb	IAmb	21 37 06.9		
	comp=Z,51nm,1.4s						
ADK	**Adak**	**64.85 12**	IAMs_20	IAMs_20	21 59 21.6		
	comp=Z,1μm,20.0s						
ADK	**Adak**	**64.85 12**	P	**P**	**21 36 51.6**	**+0.7**	
ADK			pmax	pmax			
	comp=Z,51nm,1.4s						
ADK			MLR	MLR			
	comp=Z,1μm,20.0s						
ADK	**Adak**	**64.85 12**	P	**P**	**21 36 51.1**	**+0.1**	
CNSH	**ChangSha**	**65.05 309**	⇑P	**P**	**21 36 53.5**	**+0.8**	
CNSH			pmax	pmax			
	comp=Z,36nm,1.0s						
MDJ	**Mudanjiang**	**65.08 332**	IAmb	IAmb	21 36 53.9		
	comp=Z,49nm,1.3s						
MDJ	**Mudanjiang**	**65.08 332**	P	**P**	**21 36 52.9**	**+0.3**	
MDJ			S	**S**	**21 45 35.4**	**+4.3**	
MDJ			pmax	pmax			
	comp=Z,34nm,1.3s						
MDJ			pmax	pmax			
	comp=Z,450nm,8.0s						
MDJ			LR	LR			
	comp=Z,340nm,23.8s						
MDJ			LR	LR			
	comp=Z,460nm,21.6s						
MDJ			LR	LR			
	comp=Z,670nm,24.5s						
MDJ	**Mudanjiang**	**65.08 332**	P	**P**	**21 36 53.7**	**+1.1**	
	comp=Z,28nm,1.0s						
MDJ	**Mudanjiang**	**65.08 332**	P	**P**	**21 36 53.9**	**+1.2**	
MDJ			pP	**pP**	**21 37 08.4**	**+1.3**	
GSTR	**Great Sitkin T**	**65.17 12**	P	**P**	**21 36 53.1**	**+0.1**	
WHN	**Wuhan**	**65.19 311**	⇑P	**P**	**21 36 53.8**	**+0.2**	
WHN			S	**S**	**21 45 31.8**	**-1.1**	
WHN			pmax	pmax			
	comp=Z,120nm,1.3s						
WHN			pmax	pmax			
	comp=Z,690nm,4.1s						
WHN			LR	LR			
	comp=Z,3μm,26.5s						
WHN			LR	LR			
	comp=Z,3μm,26.8s						
WHN			LR	LR			
	comp=Z,5μm,31.5s						
DL2	**Dalian**	**65.25 323**	⇑*i*P	**P**	**21 36 54.1**	**+0.3**	
DL2			S	**S**	**21 45 34.5**	**+1.1**	
DL2			pmax	pmax			
	comp=Z,51nm,1.4s						
DL2			pmax	pmax			
	comp=Z,370nm,6.7s						
DL2			LR	LR			
	comp=Z,550nm,22.7s						
DL2			LR	LR			
	comp=Z,580nm,23.7s						
DL2			LR	LR			
	comp=Z,780nm,23.5s						
BKNI	**Bangkinang**	**65.93 276**	P	**P**	**21 36 58.6**	**-0.1**	
BKNI	**Bangkinang**	**65.93 276**	P	**P**	**21 37 00.7**	**+1.9**	
	comp=Z,2μmcomp=Z,142nm,1.2s						
BKNI	**Bangkinang**	**65.93 276**	P	**P**	**21 37 00.7**	**+1.9**	
	comp=Z,142nm,1.1s						
VNDA	**Vanda**	**66.00 181**	P	**P**	**21 36 58.3**	**+0.1**	
	comp=Z,8.7nm,1.0s,baz=352,slow=6.7,SNR=25						
VNDA			LR	LR	22 01 52.7		
	comp=Z,667nm,20.9s,baz=3.0,slow=32						
	comp=Z,8.7nm,1.0s						
VNDA	**Vanda**	**66.00 181**	P	**P**	**21 36 57.5**	**-0.7**	
VNDA			IAmb	IAmb	21 37 11.6		
	comp=Z,29nm,1.3s						
VNDA	**Vanda**	**66.00 181**	P	**P**	**21 36 57.6**	**-0.5**	
VNDA			x	**pP**	**21 37 09.7**	**-2.9**	
SNY	**Shenyang**	**66.09 326**	⇑P	**P**	**21 36 59.3**	**+0.1**	
SNY			pmax	pmax			
	comp=Z,490nm,8.1s						
SNY			LR	LR			
	comp=Z,350nm,20.4s						
SNY			LR	LR			
	comp=Z,480nm,22.3s						
SNY			LR	LR			
	comp=Z,770nm,22.7s						
CASY	**Casey**	**66.14 201**	P	**P**	**21 36 58.3**	**-0.9**	
CASY	**Casey**	**66.14 201**	P	**P**	**21 36 58.3**	**-0.9**	
CASY			x	**pP**	**21 37 10.7**	**-2.9**	
SBA	**Scott Base**	**66.30 180**	P	**P**	**21 37 00.2**	**+0.2**	
SBA	**Scott Base**	**66.30 180**	P	**P**	**21 37 00.2**	**+0.2**	
SBA			pmax	pmax			
	comp=Z,15nm,1.0s						
SBA	**Scott Base**	**66.30 180**	P	**P**	**21 37 00.7**	**+0.7**	
TIA	**Tai'an**	**66.40 318**	⇑P	**P**	**21 37 00.8**	**-0.5**	
TIA			S	**S**	**21 45 47.0**	**-0.6**	
TIA			SS	**SS**	**21 50 04.0**	**-1.4**	
TIA			pmax	pmax			
	comp=Z,22nm,1.4s						
TIA			pmax	pmax			
	comp=Z,330nm,8.8s						
TIA			LR	LR			
	comp=Z,410nm,25.0s						
TIA			LR	LR			
	comp=Z,730nm,24.9s						
TIA			LR	LR			
	comp=Z,1μm,24.9s						
CN2	**Changchun**	**66.49 329**	*e*P	**P**	**21 37 01.6**	**-0.1**	
CN2			*e*S	**S**	**21 45 44.9**	**-3.4**	
CN2			SS	**SS**	**21 50 07.8**	**+1.4**	
CN2			pmax	pmax			
	comp=Z,20nm,1.1s						
CN2			pmax	pmax			
	comp=Z,200nm,12.0s						
CN2			LR	LR			
	comp=Z,500nm,22.0s						
CN2			LR	LR			
	comp=Z,500nm,22.0s						
CN2			LR	LR			
	comp=Z,400nm,20.0s						
IPM	**Ipoh**	**66.91 280**	P	**P**	**21 37 04.2**	**-0.8**	
IPM	**Ipoh**	**66.91 280**	P	**P**	**21 37 06.6**	**+1.5**	
BNX	**BinXian**	**66.94 331**	⇑P	**P**	**21 37 04.3**	**-0.3**	
BNX			S	**S**	**21 45 53.8**	**+0.1**	
BNX			pmax	pmax			
	comp=Z,23nm,1.4s						
BNX			pmax	pmax			
	comp=Z,330nm,4.1s						
BNX			LR	LR			
	comp=Z,470nm,20.7s						
BNX			LR	LR			
	comp=Z,350nm,20.0s						
BNX			LR	LR			
	comp=Z,730nm,29.2s						
GRNR	**Gornyy**	**67.32 340**	⇑*i*P	**P**	**21 37 07.5**	**+0.6**	
GRNR			pmax	pmax			
	comp=Z,9.0nm,1.2s						
MNSI	**Mandailing Nat**	**67.46 276**	P	**P**	**21 37 08.6**	**+0.1**	
	comp=Z,43nm,0.8s						
KULM	**Kulim**	**67.48 281**	P	**P**	**21 37 08.1**	**-0.5**	
KULM			IAmb	IAmb	21 37 09.6		
	comp=Z,50nm,1.3s						
KLR	**Kul'dur**	**67.76 336**	LR	LR	22 03 00.5		
	comp=Z,626nm,21.9s,baz=152,slow=32						
KLR	**Kul'dur**	**67.76 336**	*ce*P	**P**	**21 37 09.7**	**0.0**	
KLR			pmax	pmax			
	comp=Z,30nm,1.7s						
CCD	**Concordia, Ant**	**67.83 191**	P	**P**	**21 37 09.7**	**-0.6**	
CCD			x	**pP**	**21 37 22.9**	**-1.6**	
PSI	**Prapat**	**68.55 278**	LR	LR	22 09 32.1		
	comp=Z,322nm,20.9s,baz=126,slow=38						
LYN	**LuoYang**	**68.64 314**	⇑P	**P**	**21 37 15.5**	**0.0**	
LYN			pP	pP	21 37 30.8	+0.9	
LYN			S	**S**	**21 46 09.1**	**-5.4**	
LYN			SS	**SS**	**21 50 37.4**	**-2.7**	
LYN			pmax	pmax			
	comp=Z,50nm,0.8s						
LYN			pmax	pmax			
	comp=Z,480nm,10.8s						
LYN			LR	LR			
	comp=Z,510nm,25.3s						
LYN			LR	LR			
	comp=Z,990nm,22.0s						
LYN			LR	LR			
	comp=Z,2μm,22.7s						
HNS	**HongShan**	**68.67 318**	⇑P	**P**	**21 37 16.3**	**+0.7**	
HNS			pP	**pwP**	**21 37 31.4**	**-0.8**	
HNS			S	**S**	**21 46 15.5**	**+0.9**	
HNS			pmax	pmax			
	comp=Z,48nm,1.3s						
HNS			pmax	pmax			
	comp=Z,480nm,7.4s						
HNS			LR	LR			
	comp=Z,340nm,23.1s						
HNS			LR	LR			
	comp=Z,520nm,23.1s						
HNS			LR	LR			
	comp=Z,1μm,23.0s						
ENH	**Enshi**	**68.69 309**	P	**P**	**21 37 16.0**	**0.0**	
ENH			pP	**pP**	**21 37 31.1**	**+0.6**	
ENH			sP	**PcP**	**21 37 39.3**	**-1.2**	
TSI	**Tuntungan**	**69.06 278**	P	pP	21 37 34.5	+1.5	
GYA	**Guiyang**	**69.21 304**	⇑*i*P	**P**	**21 37 19.8**	**+0.5**	
GYA			pP	pP	21 37 35.1	+1.2	
GYA			PcP	**PcP**	**21 37 43.6**	**+0.7**	
GYA			S	**S**	**21 46 17.8**	**-4.0**	
GYA			pmax	pmax			
	comp=Z,50nm,1.2s						
GYA			pmax	pmax			
	comp=Z,580nm,6.2s						
GYA			LR	LR			
	comp=Z,300nm,18.6s						
GYA			LR	LR			
	comp=Z,310nm,22.0s						
GYA			LR	LR			
	comp=Z,410nm,21.4s						
BJT	**Baijiatuau**	**69.25 321**	IAmb	IAmb	21 37 20.2		
	comp=Z,32nm,1.1s						
BJT	**Baijiatuau**	**69.25 321**	P	**P**	**21 37 19.9**	**+0.7**	
BJT			pP	**pwP**	**21 37 34.8**	**-1.0**	
BJT			sP	**PcP**	**21 37 41.5**	**-1.1**	
BJI	**Beijing**	**69.26 321**	P	**P**	**21 37 19.4**	**+0.2**	
BJI			pP	**pP**	**21 37 34.6**	**+1.0**	
BJI			PcP	**PcP**	**21 37 45.8**	**+3.2**	
BJI			S	**S**	**21 46 26.6**	**+5.1**	
BJI			pmax	pmax			
	comp=Z,29nm,1.1s						
BJI			pmax	pmax			
	comp=Z,400nm,10.6s						
BJI			LR	LR			
	comp=Z,110nm,28.0s						
BJI			LR	LR			
	comp=Z,400nm,29.6s						
BJI			LR	LR			
	comp=Z,1μm,27.5s						
SRIT	**Nakonsritamara**	**69.35 284**	P	**P**	**21 37 21.2**	**+0.9**	
GSI	**Gunungsitoli**	**69.52 276**	P	**P**	**21 37 21.7**	**+0.3**	
GSI			IAmb	IAmb	21 37 27.7		
	comp=Z,37nm,0.9s						
GSI	**Gunungsitoli**	**69.52 276**	P	**P**	**21 37 28.7**	**+7.3**	
GSI	**Gunungsitoli**	**69.52 276**	P	**P**	**21 37 22.6**	**+1.2**	
KCSI	**Kotacane, Aceh**	**69.83 278**	P	**P**	**21 37 23.3**	**0.0**	
	comp=Z,30nm,0.8s						
TIY	**Taiyuan**	**70.35 317**	P	**P**	**21 37 27.1**	**+1.0**	
TIY			S	**S**	**21 46 36.8**	**+2.2**	
TIY			SKS	**SKSac**	**21 47 18.3**	**-5.1**	
TIY			pmax	pmax			
	comp=Z,500nm,6.1s						
TIY			LR	LR			
	comp=Z,550nm,23.4s						
TIY			LR	LR			
	comp=Z,540nm,28.2s						
TIY			LR	LR			
	comp=Z,1μm,24.7s						
XAN	**Xi'an**	**70.91 312**	⇓P	**P**	**21 37 29.4**	**-0.2**	
XAN			pP	pP	21 37 42.3	-1.8	
XAN			sP	PcP	21 37 48.5	-1.3	
XAN			PcP	**sP**	**21 37 50.8**	**+0.9**	
XAN			S	**S**	**21 46 38.8**	**-2.5**	
XAN			SKS	**SKSac**	**21 47 24.1**	**-3.7**	
XAN			SS	**SS**	**21 51 19.0**	**+3.7**	
XAN			pmax	pmax			
	comp=Z,75nm,1.0s						
XAN			pmax	pmax			
	comp=Z,610nm,8.2s						
XAN			LR	LR			
	comp=Z,630nm,24.0s						
XAN			LR	LR			
	comp=Z,1μm,23.4s						
XAN			LR	LR			
	comp=Z,2μm,24.7s						
XAN	**Xi'an**	**70.91 312**	P	**P**	**21 37 30.2**	**+0.7**	
XAN			pP	**pP**	**21 37 45.1**	**+1.1**	
XLT	**XiLinHaoTe**	**71.63 324**	*e*P	**P**	**21 37 34.3**	**+0.6**	
XLT			S	**S**	**21 46 51.5**	**+2.2**	
XLT			pmax	pmax			
	comp=Z,80nm,1.2s						
XLT			pmax	pmax			
	comp=Z,520nm,3.9s						
XLT			LR	LR			
	comp=Z,310nm,19.0s						
XLT			LR	LR			
	comp=Z,400nm,23.9s						
KMI	**Kunming**	**71.91 301**	⇑P	**P**	**21 37 37.4**	**+1.4**	
KMI			pP	pP	21 37 50.8	+0.2	
KMI			S	**S**	**21 46 52.3**	**-1.2**	
KMI			pmax	pmax			
	comp=Z,83nm,1.8s						
KMI			pmax	pmax			
	comp=Z,690nm,4.6s						
KMI			LR	LR			
	comp=Z,330nm,24.1s						
KMI			LR	LR			
	comp=Z,820nm,24.0s						
KMI			LR	LR			
	comp=Z,1μm,24.6s						
MA2	**Magadan**	**71.99 352**	LR	LR	22 03 48.7		
	comp=Z,958nm,22.0s,baz=168,slow=31						
CNBA	**Chernabura Isl**	**72.08 20**	IAMs_20	IAMs_20	22 02 37.1		
	comp=Z,1μm,21.0s						
HHC	**Hu-ho-hao-te**	**72.61 319**	*e*P	**P**	**21 37 40.8**	**+1.1**	
HHC			pP	pP	21 37 54.4	+0.2	
HHC			S	**SKiKP**	**21 47 05.8**	**-3.9**	
HHC			pmax	pmax			
	comp=Z,89nm,1.2s						
HHC			pmax	pmax			
	comp=Z,420nm,6.5s						
HHC			LR	LR			
	comp=Z,1μm,19.3s						
HHC			LR	LR			
	comp=Z,2μm,21.6s						
HHC			LR	LR			
	comp=Z,3μm,21.1s						
CM31	**Chiang Mai Arr**	**72.88 293**	P	**P**	**21 37 42.9**	**+1.3**	
CMAR	**Chiang Mai Arr**	**72.88 293**	P	**P**	**21 37 42.8**	**+1.2**	
	comp=Z,41nm,0.9s,baz=118,slow=4.4,SNR=152						
CMAR			pP	**pP**	**21 37 57.1**	**+0.8**	
	comp=Z,35nm,0.8s,baz=124,slow=4.3,SNR=14						
CMAR			LR	LR	22 07 06.5		
	comp=Z,365nm,21.8s,baz=110,slow=34						
	comp=Z,41nm,0.9s						
CHTO	**Chiang Mai**	**72.99 294**	P	**P**	**21 37 43.1**	**+0.8**	
CHTO	**Chiang Mai**	**72.99 294**	P	**P**	**21 37 43.1**	**+0.8**	
CHTO			pmax	pmax			
	comp=Z,91nm,1.2s						
CHTO	**Chiang Mai**	**72.99 294**	P	**P**	**21 37 44.3**	**+2.0**	
ZEA	**Zeya**	**73.04 337**	*e*P	**P**	**21 37 42.6**	**+0.8**	
ZEA			*e*S	**SKiKP**	**21 47 07.6**	**-2.2**	
ZEA			pmax	pmax			
	comp=E,100nm,7.3s						
ZEA			pmax	pmax			
	comp=N,100nm,5.4s						
ZEA			pmax	pmax			
	comp=Z,200nm,6.9s						
ZEA			pmax	pmax			
	comp=N,20nm,1.1s						
ZEA			pmax	pmax			
	comp=Z,30nm,0.9s						
ZEA			smax	smax			
	comp=N,100nm,12.8s						
ZEA			smax	smax			
	comp=E,100nm,12.6s						
HIA	**Hailar**	**73.11 330**	P	**P**	**21 37 42.9**	**+0.5**	
HIA			IAmb	IAmb	21 37 44.0		
	comp=Z,36nm,1.3s						
HIA	**Hailar**	**73.11 330**	*c i*P	**P**	**21 37 42.7**	**+0.4**	
HIA			pmax	pmax			
	comp=Z,37nm,1.3s						
PZH	**PanZhiHua**	**73.26 302**	⇑P	**P**	**21 37 44.3**	**+0.4**	
PZH			pP	**PcP**	**21 37 59.8**	**-0.3**	
PZH			PP	**PP**	**21 40 28.3**	**+0.5**	
PZH			S	**S**	**21 47 08.9**	**+0.2**	
PZH			SS	**SS**	**21 51 56.3**	**+4.6**	
PZH			pmax	pmax			
	comp=Z,40nm,1.3s						
PZH			pmax	pmax			
	comp=Z,330nm,6.2s						
PZH			LR	LR			
	comp=Z,330nm,20.6s						
PZH			LR	LR			
	comp=Z,610nm,22.0s						
PZH			LR	LR			
	comp=Z,970nm,24.5s						
CD2	**Chengdu**	**73.39 307**	P	**P**	**21 37 45.1**	**+0.6**	
CD2			pP	pP	21 37 58.4	-0.7	
CD2			S	**SKiKP**	**21 47 12.5**	**+1.4**	
CD2			SS	**SS**	**21 51 55.6**	**+2.2**	
CD2			pmax	pmax			
	comp=Z,90nm,1.1s						
CD2			pmax	pmax			
	comp=Z,470nm,4.9s						
CD2			LR	LR			
	comp=Z,500nm,24.1s						
CD2			LR	LR			
	comp=Z,1μm,22.6s						
CD2			LR	LR			
	comp=Z,1μm,23.3s						
BTO	**Baotou**	**73.47 319**	*e*P	**P**	**21 37 45.1**	**+0.3**	
BTO			S	**S**	**21 47 10.4**	**-0.1**	
BTO			LR	LR			
	comp=Z,3μm,23.1s						
BTO			LR	LR			
	comp=Z,3μm,23.7s						
CHIR	**Chirikof Islan**	**74.24 21**	IAMs_20	IAMs_20	22 03 05.2		
	comp=Z,2μm,21.0s						
SEY	**Seymchan**	**75.04 353**	LR	LR	22 06 22.5		
	comp=Z,1μm,21.4s,baz=168,slow=32						
SEY	**Seymchan**	**75.04 353**	*ce*P	**P**	**21 37 52.5**	**-0.7**	
SEY			pmax	pmax			
	comp=Z,13nm,1.2s						
SII	**Sitkinak Islan**	**75.32 21**	IAMs_20	IAMs_20	22 04 20.8		
	comp=Z,2μm,20.0s						
LZH	**Lanzhou**	**75.55 312**	⇑P	**P**	**21 37 58.6**	**+1.6**	
LZH			PcP	**pP**	**21 38 12.1**	**+0.4**	
LZH			S	**S**	**21 47 36.9**	**+2.9**	
LZH			pmax	pmax			
	comp=Z,110nm,1.5s						
LZH			pmax	pmax			
	comp=Z,200nm,6.0s						
LZH			LR	LR			
	comp=Z,410nm,17.3s						
LZH			LR	LR			
	comp=Z,870nm,19.0s						
LZH			LR	LR			

comp=Z,2µm,19.0s
PBA Port Blair 76.66 285 P **P** **21 38 01.4 -2.2**
KDAK Kodiak Island 76.82 21 LR LR 22 05 28.3
comp=Z,2µm,21.8s,baz=234,slow=31
KDAK Kodiak Island 76.82 21 IAMs_20 IAMs_20 22 05 27.4
comp=Z,2µm,21.0s
GAMB Gambell 76.95 10 P **P** **21 38 04.1 0.0**
GAMB IAMs_20 IAMs_20 22 05 25.7
comp=Z,1µm,21.0s
Q19K Cape Douglas, 77.33 20 IAMs_20 IAMs_20 22 05 10.7
comp=Z,1µm,22.0s
O18K Koktuh Hills 77.54 19 IAMs_20 IAMs_20 22 06 03.3
comp=Z,1µm,22.0s
CIT Chita 77.90 330 *e*P **P** **21 38 10.5 +0.7**
CIT *e* 21 38 24.1
CIT pmax pmax
comp=Z,168nm,1.4s
N18K Kilae Creek 77.98 18 **P** **21 38 10.9 +0.9**
N18K IAMs_20 IAMs_20 22 06 06.9
comp=Z,945nm,21.0s
SVW2 Sparrevohn 78.40 18 **P** **21 38 13.2 +0.9**
SVW2 IAmb IAmb 21 38 41.8
comp=Z,27nm,1.3s
QSPA South Pole Qui 78.46 180 LR LR 22 10 37.8
comp=Z,634nm,19.1s,baz=26,slow=34
QSPA South Pole Qui 78.46 180 P **P** **21 38 11.8 -1.0**
N19K Bonanza Creek 78.51 18 IAMs_20 IAMs_20 22 06 22.0
comp=Z,1µm,22.0s
YAK Yakutsk 78.75 343 LR LR 22 08 52.3
comp=Z,616nm,21.8s,baz=100,slow=32
YAK Yakutsk 78.75 343 P **P** **21 38 14.2 +0.1**
YAK IAmb IAmb 21 38 40.0
comp=Z,24nm,0.6s
YAK Yakutsk 78.75 343 *c i*P **P** **21 38 13.0 -1.1**
YAK *e* 21 38 20.2
YAK *e**PP **sP** **21 38 33.2 -1.6**
YAK *e* 21 42 59.6
YAK *e*S **S** **21 48 05.3 -2.0**
YAK *e* 21 48 24.0
YAK *e*SS **SS** **21 53 12.1 -1.0**
YAK *e*SSS SSS 21 56 39.1
YAK pmax pmax
comp=Z,39nm,1.5s
YAK pmax pmax
comp=N,7.0nm,1.1s
YAK pmax pmax
comp=E,3.0nm,1.1s
YAK smax smax
comp=E,65nm,5.3s
YAK smax smax
comp=N,35nm,3.8s
ANM Nome 78.85 12 IAMs_20 IAMs_20 22 08 40.8
comp=Z,847nm,20.0s
BRLK Bradley Lake 78.89 20 P **P** **21 38 16.3 +1.2**
BRLK IAmb IAmb 21 38 29.9
comp=Z,24nm,0.9s
ULN Ulaanbaatar 79.07 324 P **P** **21 38 17.2 +0.8**
ULN IAmb IAmb 21 38 18.4
comp=Z,50nm,1.1s
ULN Ulaanbaatar 79.07 324 *ce*P **P** **21 38 16.9 +0.5**
ULN pmax pmax
comp=Z,89nm,1.7s
TNA Tin City 79.25 11 P **P** **21 38 18.0 +1.2**
TNA IAmb IAmb 21 38 27.2
comp=Z,44nm,1.2s
BILL Bilibino 79.38 360 P **P** **21 38 17.7 +0.2**
BILL IAmb IAmb 21 38 33.1
comp=Z,19nm,0.9s
BILL Bilibino 79.38 360 *d i*P **P** **21 38 17.1 -0.4**
BILL *e* 21 38 24.2
BILL *i**PP **pP** **21 38 30.6 -1.8**
BILL *e**SP **sP** **21 38 38.4 +0.1**
BILL *e* 21 41 15.8
BILL *i*S **S** **21 48 18.2 +4.4**
BILL *e* 21 49 11.3
BILL *e*SS **SS** **21 53 22.2 -0.1**
BILL SSS SSS 21 56 37.0
BILL pmax pmax
comp=Z,15nm,1.0s
BILL MLR MLR
comp=Z,147nm,19.0s
M19K Big River Lodg 79.39 18 P **P** **21 38 19.5 +1.8**
M19K IAmb IAmb 21 38 33.9
comp=Z,34nm,1.4s
M19K IAMs_20 IAMs_20 22 07 02.2
comp=Z,902nm,21.0s
SONM Songino Array 79.43 324 P **P** **21 38 18.8 +0.4**
comp=Z,13nm,1.0s,baz=135,slow=4.9,SNR=74
SONM pP **pP** **21 38 33.1 -0.2**
comp=Z,9.5nm,0.8s,baz=141,slow=5.8,SNR=10.0
SONM LR LR 22 13 20.8
comp=Z,245nm,19.9s,baz=116,slow=36
comp=Z,13nm,1.0s
SONM Songino Array 79.43 324 IAmb IAmb 21 38 20.2
comp=Z,52nm,1.4s
L19K White Mountain 79.47 17 P **P** **21 38 19.0 +0.9**
CAPN Captain Cook N 79.54 20 IAMs_20 IAMs_20 22 06 34.3
comp=Z,2µm,22.0s
M20K Styx River 79.75 18 P **P** **21 38 20.7 +1.0**
M20K IAMs_20 IAMs_20 22 07 22.8
comp=Z,1µm,21.0s
RPN Rapa Nui 79.80 116 LR LR 22 06 56.6
comp=Z,650nm,21.3s,baz=276,slow=30
RPN Rapa Nui 79.80 116 P **P** **21 38 20.2 -0.6**
RPN Rapa Nui 79.80 116 P **P** **21 38 20.2 -0.6**
RPN pmax pmax
comp=Z,129nm,1.0s
GTA Gaotai 79.85 314 ⇑P **P** **21 38 22.0 +1.1**
GTA pP pP 21 38 35.5 -0.1
GTA sP sP 21 38 40.0 -1.4
GTA S **S** **21 48 21.6 +1.3**
GTA pmax pmax
comp=Z,59nm,1.1s
GTA pmax pmax
comp=Z,380nm,7.3s
GTA LR LR
comp=Z,430nm,21.1s
GTA LR LR
comp=Z,700nm,21.1s
GTA LR LR
comp=Z,900nm,22.5s
SUA Susitna One 80.19 19 IAMs_20 IAMs_20 22 07 41.5
comp=Z,982nm,22.0s
SKT Skwentna 80.32 19 IAMs_20 IAMs_20 22 07 19.0
comp=Z,1µm,21.0s
M22K Willow 80.61 19 IAMs_20 IAMs_20 22 07 20.5
comp=Z,2µm,22.0s
KNK Knik Glacier 80.91 20 IAMs_20 IAMs_20 22 08 24.6
comp=Z,1µm,21.0s
GLI Glacier Island 81.01 21 P **P** **21 38 27.3 +0.9**
GLI IAmb IAmb 21 38 52.9
comp=Z,52nm,1.4s
GLI IAMs_20 IAMs_20 22 07 43.1
comp=Z,1µm,21.0s
GHO Glory Hole Cre 81.01 20 P **P** **21 38 26.8 +0.3**
CUT Chulitna 81.04 19 P **P** **21 38 28.2 +1.7**
CUT IAmb IAmb 21 38 55.2
comp=Z,16nm,0.7s
J20K Nowinta River 81.23 16 P **P** **21 38 28.9 +1.4**
J20K IAMs_20 IAMs_20 22 08 24.8
comp=Z,927nm,22.0s
SML Sawmill 81.24 20 P **P** **21 38 27.3 -0.4**
SML IAMs_20 IAMs_20 22 09 59.1
comp=Z,1µm,19.0s
CAST Castle Rocks 81.24 18 IAMs_20 IAMs_20 22 07 59.1
comp=Z,899nm,21.0s
SHL Shillong 81.30 298 P **P** **21 38 29.2 +0.2**
SHL Shillong 81.30 298 P **P** **21 38 29.2 +0.2**
SHL pmax pmax
comp=Z,88nm,1.1s
SCM Sheep Creek Mo 81.59 20 IAmb IAmb 21 38 45.4
comp=Z,29nm,1.0s
SCM IAMs_20 IAMs_20 22 09 15.6
comp=Z,824nm,21.0s
DIV Divide 81.65 21 P **P** **21 38 31.1 +1.2**
DIV IAmb IAmb 21 38 45.6
comp=Z,26nm,1.2s
HMT Hamilton 81.67 22 IAMs_20 IAMs_20 22 08 57.6
comp=Z,1µm,20.0s
KTH Kantishna Hill 81.69 18 P **P** **21 38 31.7 +1.7**
KTH IAMs_20 IAMs_20 22 08 36.9
comp=Z,862nm,21.0s
TRF Thorofare Moun 81.80 18 P **P** **21 38 32.4 +1.6**
TRF IAMs_20 IAMs_20 22 08 60.0
comp=Z,1µm,21.0s
KLU Klutina 81.84 21 IAMs_20 IAMs_20 22 08 08.2
comp=Z,2µm,21.0s
BMRM Bremner River 81.96 22 P **P** **21 38 32.4 +0.8**
SNH Sunshine Point 82.11 23 P **P** **21 38 33.8 +1.5**
SNH IAmb IAmb 21 38 48.9
comp=Z,34nm,1.0s
SNH IAMs_20 IAMs_20 22 07 47.2
comp=Z,2µm,21.0s
M24K Tolsona, Glenn 82.18 20 P **P** **21 38 33.8 +1.1**
RND Reindeer 82.21 19 P **P** **21 38 33.1 +0.3**
RND IAMs_20 IAMs_20 22 08 13.8
comp=Z,919nm,22.0s
RND Reindeer 82.21 19 P **P** **21 38 33.1 +0.3**
RND pmax pmax
comp=Z,13nm,1.0s
RND MLR MLR
comp=Z,900nm,22.0s
WAX Waxell Ridge 82.27 23 P **P** **21 38 34.0 +0.8**
WAX IAmb IAmb 21 38 51.1
comp=Z,40nm,1.4s
WAX IAMs_20 IAMs_20 22 09 05.6
comp=Z,2µm,20.0s
GOMU GeErMu 82.31 309 P **P** **21 38 35.4 +1.1**
GOMU pP PcP 21 38 39.8 +0.3
GOMU sP pP 21 38 43.5 -5.7
GOMU PP **PP** **21 41 45.3 +1.6**
GOMU sS sS 21 49 09.1 -1.7
GOMU pmax pmax
comp=Z,25nm,0.9s
GOMU pmax pmax
comp=Z,250nm,5.9s
GOMU LR LR
comp=Z,280nm,20.3s
GOMU LR LR
comp=Z,470nm,21.8s
GOMU LR LR
comp=Z,470nm,20.2s
KMPM Mount Pierce 82.33 46 P **P** **21 38 34.3 +0.3**
KMPM IAmb IAmb 21 38 51.2
comp=Z,49nm,1.4s
MCCM Marconi Confer 82.39 49 IAMs_20 IAMs_20 22 07 16.7
comp=Z,1µm,20.0s
N25K Chitina, Valde 82.39 21 IAmb IAmb 21 38 49.8
comp=Z,26nm,1.1s
MCK McKinley 82.42 18 P **P** **21 38 34.3 +0.5**
MCK IAMs_20 IAMs_20 22 11 16.4
comp=Z,756nm,20.0s
MCK McKinley 82.42 18 P **P** **21 38 34.3 +0.5**
MCK pmax pmax
comp=Z,19nm,1.1s
MCK MLR MLR
comp=Z,800nm,20.0s
KCPM Cahto Peak 82.44 47 P **P** **21 38 35.8 +1.2**
KCPM IAmb IAmb 21 38 51.5
comp=Z,38nm,1.2s
ZAK Zakamensk 82.47 325 *e*P **P** **21 38 33.5 -1.0**
ZAK *e* 21 38 47.8
ZAK pmax pmax
comp=Z,28nm,1.2s
TGL Tana Glacier 82.48 23 P **P** **21 38 34.9 +0.6**
TGL IAmb IAmb 21 38 55.2
comp=Z,38nm,1.4s
TGL IAMs_20 IAMs_20 22 09 33.1
comp=Z,1µm,20.0s
JCC Jacoby Creek, 82.54 46 P **P** **21 38 37.2 +2.3**
JCC IAmb IAmb 21 38 52.1
comp=Z,32nm,1.2s
KMRM Mail Ridge 82.55 46 P **P** **21 38 35.7 +0.6**
KMRM IAmb IAmb 21 38 52.4
comp=Z,48nm,1.3s
HOPS Hopland Field 82.55 48 P **P** **21 38 35.9 +0.8**
HOPS IAmb IAmb 21 38 52.4
comp=Z,36nm,1.2s
HOPS IAMs_20 IAMs_20 22 06 31.1
comp=Z,970nm,20.0s
VRDI Verde Repeater 82.55 22 P **P** **21 38 36.4 +1.6**
VRDI IAmb IAmb 21 38 52.3
comp=Z,28nm,1.5s
VRDI IAMs_20 IAMs_20 22 07 41.0
comp=Z,1µm,22.0s
GLB Gilahina Butte 82.56 22 IAMs_20 IAMs_20 22 07 55.3
comp=Z,2µm,22.0s
ISLE Juniper Island 82.57 23 P **P** **21 38 35.1 +0.3**
ISLE IAmb IAmb 21 38 50.6
comp=Z,16nm,0.9s
ISLE IAMs_20 IAMs_20 22 09 14.4
comp=Z,2µm,20.0s
BWN Browne 82.58 18 P **P** **21 38 31.4 -3.2**
BWN IAMs_20 IAMs_20 22 09 45.9
comp=Z,1µm,20.0s
I21K Tanana 82.60 16 IAmb IAmb 21 39 03.8
comp=Z,17nm,1.0s
I21K IAMs_20 IAMs_20 22 09 18.1
comp=Z,862nm,22.0s
KRPM Rodgers 82.68 46 P **P** **21 38 36.5 +0.8**
KRPM IAmb IAmb 21 38 53.3
comp=Z,44nm,1.3s
GDXM Geysers 82.69 48 P **P** **21 38 36.7 +0.8**
KHMM Horse Mountain 82.77 46 P **P** **21 38 37.0 +0.7**
KHMM IAmb IAmb 21 38 53.6
comp=Z,24nm,1.2s
DIB Dawson Inlet, 82.79 32 P **P** **21 38 37.4 +1.5**
MCARA McCarthy VSAT 82.81 22 P **P** **21 38 36.8 +0.9**
MCARA IAmb IAmb 21 38 51.8
comp=Z,22nm,1.2s
MCARA IAMs_20 IAMs_20 22 07 49.9
comp=Z,885nm,22.0s
IRK Irkutsk 82.81 327 *e*P **P** **21 38 34.3 -1.8**
GRNC Granite Creek 82.87 23 IAMs_20 IAMs_20 22 09 43.4
comp=Z,1µm,20.0s
TABL Table Mountain 82.92 23 P **P** **21 38 38.5 +1.7**
TABL IAmb IAmb 21 38 52.7
comp=Z,21nm,0.9s
SAO San Andreas Ge 82.97 50 P **P** **21 38 37.8 +0.5**
SAO San Andreas Ge 82.97 50 P **P** **21 38 37.8 +0.5**
SAO pmax pmax
comp=Z,21nm,1.3s
SAO MLR MLR
comp=Z,2µm,20.0s
NEA2 Nenana 83.00 18 IAMs_20 IAMs_20 22 09 24.8
comp=Z,1µm,21.0s
PAX Paxson 83.01 20 P **P** **21 38 38.2 +1.2**
PAX Paxson 83.01 20 P **P** **21 38 38.2 +1.2**
PAX pmax pmax
comp=Z,8.0nm,1.0s
PCA Pinnacle 83.06 24 P **P** **21 38 39.2 +1.9**
BARN Barnard Glacie 83.11 23 IAMs_20 IAMs_20 22 09 50.8
comp=Z,1µm,20.0s
LSA Lhasa 83.14 302 P **P** **21 38 39.3 +0.4**
LSA IAmb IAmb 21 38 54.7
comp=Z,37nm,1.2s
LSA Lhasa 83.14 302 P **P** **21 38 39.3 +0.4**
LSA pmax pmax
comp=Z,37nm,1.2s
LSA Lhasa 83.14 302 P **P** **21 38 40.0 +1.1**
LSA pmax pmax
comp=Z,28nm,1.3s
CTGM Chitina Glacie 83.18 23 P **P** **21 38 39.3 +1.4**
CTGM IAmb IAmb 21 39 07.5
comp=Z,25nm,1.0s
CTGM IAMs_20 IAMs_20 22 09 23.5
comp=Z,1µm,20.0s
WRH Wood River Hil 83.21 18 IAmb IAmb 21 38 52.7
comp=Z,20nm,1.1s
LOGN Logan Glacier 83.22 23 IAMs_20 IAMs_20 22 09 12.6
comp=Z,1µm,20.0s
BBGB Big Mountain B 83.22 51 P **P** **21 38 39.0 +0.3**
I23K Minto, Yukon-K 83.32 17 P **P** **21 38 39.4 +1.0**
I23K IAMs_20 IAMs_20 22 09 18.1
comp=Z,932nm,22.0s
M26K Nabesna, AK 83.48 21 IAmb IAmb 21 38 55.3
comp=Z,24nm,1.1s
J01E Myrtle Point 83.50 44 IAMs_20 IAMs_20 22 07 20.8
comp=Z,1µm,19.0s
MDM Murphy Dome 83.52 18 IAmb IAmb 21 39 07.8
comp=Z,18nm,1.0s
MDM IAMs_20 IAMs_20 22 10 22.4
comp=Z,1µm,20.0s
HDA Harding Lake 83.52 19 IAmb IAmb 21 39 02.9
comp=Z,32nm,1.0s
HDA IAMs_20 IAMs_20 22 09 58.5
comp=Z,1µm,21.0s
PAGB Antelope Grade 83.54 52 P **P** **21 38 40.4 +0.1**
TCOL CIGO, UAF Yank 83.57 18 P **P** **21 38 39.4 -0.3**
TCOL IAmb IAmb 21 39 02.7
comp=Z,19nm,0.7s
TCOL IAMs_20 IAMs_20 22 10 32.7
comp=Z,1µm,20.0s
COLA College 83.57 18 P **P** **21 38 39.3 -0.4**
COLA IAmb IAmb 21 39 02.7
comp=Z,20nm,0.8s
COLA College 83.57 18 IAMs_20 IAMs_20 22 10 21.7
comp=Z,975nm,21.0s
COLA College 83.57 18 *i*P **P** **21 38 38.6 -1.1**
COLA pmax pmax
comp=Z,7.0nm,0.7s
MENT Mentasta 83.58 21 P **P** **21 38 40.7 +0.9**
MENT IAmb IAmb 21 39 06.8
comp=Z,42nm,1.4s
RIDG Independent Ri 83.73 20 IAmb IAmb 21 38 56.6
comp=Z,41nm,1.1s
RIDG IAMs_20 IAMs_20 22 08 40.2
comp=Z,1µm,22.0s
L26K Log Cabin Wild 83.77 21 P **P** **21 38 41.2 +0.5**
L26K IAmb IAmb 21 39 10.5
comp=Z,46nm,1.4s
L26K IAMs_20 IAMs_20 22 08 50.1
comp=Z,2µm,22.0s
ILAR Eielson Array 83.79 18 P **P** **21 38 41.0 +0.2**
comp=Z,2.6nm,0.7s,baz=220,slow=6.4,SNR=22
ILAR LR LR 22 09 24.2
comp=Z,370nm,21.9s,baz=214,slow=31
comp=Z,2.6nm,0.7s
YBH Yreka Blue Hor 83.81 45 LR LR 22 09 11.7
comp=Z,508nm,21.1s,baz=250,slow=31
YBH Yreka Blue Hor 83.81 45 P **P** **21 38 42.0 +0.4**
YBH Yreka Blue Hor 83.81 45 P **P** **21 38 42.0 +0.4**
YBH pmax pmax
comp=Z,18nm,1.2s
M27K Edge Creek, AK 83.86 22 IAmb IAmb 21 38 57.7
comp=Z,25nm,1.1s
M27K IAMs_20 IAMs_20 22 08 47.4
comp=Z,2µm,22.0s
POKR Poker Plat Res 83.87 18 P **P** **21 38 40.4 -0.9**
POKR IAMs_20 IAMs_20 22 10 40.7
comp=Z,1µm,21.0s
ORV Oroville 83.89 48 P **P** **21 38 42.6 +0.6**
ORV IAMs_20 IAMs_20 22 08 37.5
comp=Z,781nm,20.0s
ORV Oroville 83.89 48 P **P** **21 38 42.6 +0.6**
ORV pmax pmax
comp=Z,18nm,1.3s
ORV MLR MLR
comp=Z,800nm,20.0s
DOT Dot Lake 83.94 20 P **P** **21 38 41.4 -0.2**
DOT IAmb IAmb 21 39 11.1
comp=Z,32nm,1.0s
BCW Bitter Crk WRg 83.94 53 P **P** **21 38 43.4 +0.9**
BCW IAmb IAmb 21 38 58.7
comp=Z,24nm,1.2s
DBO Dodson Butte 83.95 44 P **P** **21 38 43.6 +1.3**
HUMO Hull Mountain 83.95 44 P **P** **21 38 43.4 +1.2**
HUMO IAmb IAmb 21 38 59.2
comp=Z,27nm,1.4s
SCRK Sand Creek 84.18 20 IAmb IAmb 21 38 59.0
comp=Z,38nm,1.2s
SCRK IAMs_20 IAMs_20 22 08 52.8
comp=Z,902nm,22.0s
CMB Columbia Colle 84.20 49 P **P** **21 38 44.2 +0.7**
CMB Columbia Colle 84.20 49 P **P** **21 38 44.3 +0.7**
CMB pmax pmax
comp=Z,12nm,1.1s
CMB MLR MLR
comp=Z,2µm,21.0s
H24K Noodor Dome 84.25 17 IAMs_20 IAMs_20 22 09 31.6
comp=Z,1µm,22.0s
L04D Klamath Falls 84.26 45 P **P** **21 38 44.0 +0.1**
L04D IAmb IAmb 21 39 00.5
comp=Z,39nm,1.3s
MOY Mondy 84.34 325 *e*P **P** **21 38 43.9 -0.2**
MOY pmax pmax
comp=Z,46nm,1.5s
COR Corvallis 84.45 43 IAMs_20 IAMs_20 22 07 00.1
comp=Z,1µm,20.0s
MAW Mawson 84.49 202 P **P** **21 38 44.8 +0.4**
comp=Z,9.3nm,1.1s,baz=97,slow=7.9,SNR=6.2
MAW LR LR 22 10 59.1
comp=Z,514nm,21.6s,baz=95,slow=32
comp=Z,9.3nm,1.1s
MAW Mawson 84.49 202 P **P** **21 38 44.2 -0.3**
JIS Juneau Island 84.50 27 IAMs_20 IAMs_20 22 07 50.5
comp=Z,1µm,22.0s
HYT Haines Junctio 84.59 24 P **P** **21 38 45.8 +0.7**
COLD Coldfoot 84.61 16 P **P** **21 38 44.8 -0.2**
BBB Bella Bella 84.64 34 LR LR 22 08 41.7
comp=Z,1µm,21.1s,baz=222,slow=30
PASC Pasadena Art C 84.66 54 IAMs_20 IAMs_20 22 07 32.0
comp=Z,1µm,19.0s
J26L Joseph Creek 84.66 19 IAmb IAmb 21 39 10.4
comp=Z,16nm,1.1s
J26L IAMs_20 IAMs_20 22 09 20.7
comp=Z,990nm,22.0s
G03D McMinnville, O 84.72 42 IAMs_20 IAMs_20 22 07 43.0
comp=Z,976nm,20.0s
SKAG Skagway 84.72 26 P **P** **21 38 47.0 +1.4**
SKAG IAmb IAmb 21 39 09.0
comp=Z,19nm,1.0s
J04D Umpqua Nationa 84.76 44 P **P** **21 38 45.9 -0.7**
H04D Lebanon 84.81 43 P **P** **21 38 46.6 +0.2**
H04D IAmb IAmb 21 39 02.4
comp=Z,21nm,1.1s
H04D IAMs_20 IAMs_20 22 06 50.5
comp=Z,1µm,22.0s
BEKR Beckworth 84.83 48 IAmb IAmb 21 39 17.1
comp=Z,28nm,1.3s
K27K Chicken 84.85 20 IAmb IAmb 21 39 16.0
comp=Z,23nm,1.1s
K27K IAMs_20 IAMs_20 22 10 29.7
comp=Z,895nm,21.0s
ISA Isabella, Lake 84.89 52 P **P** **21 38 47.8 +0.6**
ISA IAmb IAmb 21 39 03.7
comp=Z,18nm,1.2s
ISA Isabella, Lake 84.89 52 P **P** **21 38 47.8 +0.6**
ISA pmax pmax
comp=Z,18nm,1.3s
E03A Lebam 85.03 41 P **P** **21 38 48.7 +1.2**
E03A IAmb IAmb 21 39 17.1
comp=Z,29nm,1.2s
OMMB Old Mammoth Mi 85.10 50 P **P** **21 38 48.8 +0.3**
PNTR Pine Nut 85.13 49 P **P** **21 38 48.6 +0.2**
PNTR IAmb IAmb 21 39 13.7
comp=Z,12nm,0.9s
109C Camp Elliot, M 85.14 55 IAMs_20 IAMs_20 22 07 41.8
comp=Z,1µm,21.0s
NLWA Neilton Lookou 85.16 40 IAMs_20 IAMs_20 22 10 51.6
comp=Z,896nm,20.0s
H04A Detroit Lake 85.23 43 P **P** **21 38 49.7 +1.1**
H04A IAmb IAmb 21 39 17.7
comp=Z,26nm,1.5s
CBB Campbell River 85.29 37 P **P** **21 38 50.3 +1.6**
CBB IAmb IAmb 21 39 19.6
comp=Z,12nm,0.9s
YERR Yerington 85.36 49 P **P** **21 38 49.5 -0.1**
YERR IAmb IAmb 21 39 05.4
comp=Z,17nm,1.3s
K05A Summer Lake 85.42 45 P **P** **21 38 50.7 +0.8**
K05A IAmb IAmb 21 39 06.7
comp=Z,36nm,1.3s
PAHR Pah Rah Range 85.48 48 P **P** **21 38 50.0 -0.1**
PAHR IAmb IAmb 21 39 06.7
comp=Z,22nm,1.2s
MOD Modoc Plateau 85.55 46 P **P** **21 38 50.8 +0.3**
MOD IAmb IAmb 21 39 20.0
comp=Z,24nm,1.5s
LHV Little Huntoon 85.67 50 P **P** **21 38 51.4 +0.5**
LHV IAmb IAmb 21 39 12.6
comp=Z,28nm,1.4s
PINE Pine Mountain 85.75 44 P **P** **21 38 51.6 +0.2**
PINE IAmb IAmb 21 39 08.3
comp=Z,16nm,1.1s
RYN Ryan 85.78 49 P **P** **21 38 52.0 +0.4**
RYN IAmb IAmb 21 39 08.1
comp=Z,12nm,1.0s
DAWY Dawson 85.80 21 P **P** **21 38 52.0 +1.0**
TOLK Toolik Lake Re 85.82 15 P **P** **21 38 51.4 +0.4**
TOLK IAMs_20 IAMs_20 22 10 38.0
comp=Z,1µm,22.0s
PFO Pinyon Flats O 85.87 55 LR LR 22 08 60.0
comp=Z,1µm,21.2s,baz=264,slow=30
PFO Pinyon Flats O 85.87 55 IAMs_20 IAMs_20 22 08 14.1
comp=Z,1µm,20.0s
KNGR Kungurtug, Tuv 85.87 323 *i*P **P** **21 38 51.9 +0.1**
KNGR pmax pmax

M30M Minto, Yukon 85.88 23 IAMs_20 IAMs_20 22 10 39.9
comp=Z,39nm,1.1s
comp=Z,1µm,20.0s

NVAR Mina Array Bea 85.88 50 P **P** **21 38 54.5 +2.2**
NVAR LR LR 22 09 03.6
comp=Z,3.2nm,0.8s,baz=231,slow=8.3,SNR=21
comp=Z,2µm,21.7s,baz=274,slow=30
comp=Z,3.2nm,0.8s

NV11 Mina Array Sit 85.99 50 IAmb IAmb 21 39 09.2
comp=Z,22nm,1.2s

LCH Last Change Ra 86.01 51 P **P** **21 38 53.1 +0.3**
LCH IAmb IAmb 21 39 08.4
comp=Z,16nm,1.4s

GSC Goldstone, Bar 86.08 53 P **P** **21 38 53.4 +0.2**
GSC Goldstone, Bar 86.08 53 P **P** **21 38 53.4 +0.2**
GSC pmax pmax
comp=Z,5.0nm,0.9s

P33M Teslin, Yukon 86.20 26 IAMs_20 IAMs_20 22 08 43.5
comp=Z,881nm,22.0s

KVN Kaiserville 86.22 49 IAmb IAmb 21 39 10.3
comp=Z,12nm,1.1s

A21K Barrow 86.34 11 IAMs_20 IAMs_20 22 12 01.7
comp=Z,944nm,22.0s

GWY Greenwater Val 86.45 52 P **P** **21 38 54.9 -0.1**
GWY IAmb IAmb 21 39 11.3
comp=Z,13nm,1.2s

DLBC Dease Lake 86.56 28 LR LR 22 09 40.6
comp=Z,392nm,21.8s,baz=268,slow=30

TPH Tonopah 86.58 50 P **P** **21 38 55.7 0.0**
TPH Tonopah 86.58 50 P **P** **21 38 55.7 0.0**
TPH pmax pmax
comp=Z,72nm,1.4s

TIXI Tiksi 86.70 349 LR LR 22 13 29.1
comp=Z,426nm,21.6s,baz=180,slow=33

TIXI Tiksi 86.70 349 P **P** **21 38 54.6 -0.6**
TIXI Tiksi 86.70 349 *ce*P **P** **21 38 52.3 -2.9**
TIXI pmax pmax
comp=Z,21nm,2.5s

I07A Izee 86.83 44 P **P** **21 38 57.5 +0.8**
I07A IAmb IAmb 21 39 26.4
comp=Z,25nm,1.3s

WVOR Wild Horse Val 86.89 46 P **P** **21 38 58.1 +1.1**
WVOR IAmb IAmb 21 39 27.4
comp=Z,23nm,1.3s

WVOR Wild Horse Val 86.89 46 P **P** **21 38 58.1 +1.1**
WVOR pmax pmax
comp=Z,23nm,1.3s

WVOR MLR MLR
comp=Z,700nm,20.0s

I29M Ogilvie Camp, 86.95 20 P **P** **21 38 56.9 +0.3**
I29M IAMs_20 IAMs_20 22 10 49.2
comp=Z,1µm,21.0s

GLA Glamis 87.03 56 P **P** **21 38 58.5 +0.8**
GLA Glamis 87.03 56 P **P** **21 38 58.6 +0.8**
GLA pmax pmax
comp=Z,40nm,1.4s

PALK Pallekele 87.23 278 LR LR 22 21 30.2
comp=Z,351nm,19.7s,baz=219,slow=38

PALK Pallekele 87.23 278 *i* P **P** **21 38 58.7 -0.4**
PALK pmax pmax
comp=Z,94nm,1.6s

BMN Battle Mountai 87.29 48 P **P** **21 38 59.4 +0.4**
BMN Battle Mountai 87.29 48 P **P** **21 38 59.4 +0.4**
BMN pmax pmax
comp=Z,8.0nm,1.4s

J08A Circle Bar Ran 87.30 45 P **P** **21 38 59.9 +0.9**
J08A IAmb IAmb 21 39 26.6
comp=Z,12nm,1.1s

BLYC Blythe 87.46 55 P **P** **21 39 00.4 +0.6**
BLYC IAmb IAmb 21 39 16.0
comp=Z,26nm,1.4s

G08A Pilot Rock 87.59 43 IAmb IAmb 21 39 28.4
comp=Z,11nm,1.0s

SHPR Sheep Range 87.70 52 IAmb IAmb 21 39 18.1
comp=Z,26nm,1.3s

PRN Pahroc Range 88.04 51 P **P** **21 39 03.5 +0.9**
PRN IAmb IAmb 21 39 19.6
comp=Z,30nm,1.3s

EPYK Eagle Plains 88.07 20 P **P** **21 39 03.0 +1.0**
EPYK IAMs_20 IAMs_20 22 12 59.8
comp=Z,896nm,20.0s

W13A Hualapai Mount 88.32 54 IAmb IAmb 21 39 20.2
comp=Z,23nm,1.4s

214A Organ Pipe Nat 88.38 57 P **P** **21 39 04.3 +0.1**
214A IAmb IAmb 21 39 31.7
comp=Z,12nm,1.1s

BMO Blue Mountains 88.56 44 P **P** **21 39 03.3 -1.6**
BMO IAMs_20 IAMs_20 22 10 12.0
comp=Z,988nm,22.0s

BMO Blue Mountains 88.56 44 P **P** **21 39 03.3 -1.6**
BMO pmax pmax
comp=Z,10.0nm,1.5s

BMO MLR MLR
comp=Z,1µm,22.0s

LPIG La Paz 88.66 65 LR LR 22 08 40.9
comp=Z,245nm,21.7s,baz=240,slow=29

ELK Elko 88.82 48 LR LR 22 11 34.5
comp=Z,861nm,21.1s,baz=246,slow=31

ELK Elko 88.82 48 IAmb IAmb 21 39 22.2
comp=Z,21nm,1.5s

ELK IAMs_20 IAMs_20 22 11 02.0
comp=Z,870nm,20.0s

F10A Beach Ranch, E 88.96 43 IAmb IAmb 21 39 35.5
comp=Z,14nm,1.3s

MFID Camas Ranch 89.16 45 P **P** **21 39 08.4 +0.7**
MFID IAmb IAmb 21 39 37.5
comp=Z,17nm,1.4s

PSUT Pine Spring 89.25 51 P **P** **21 39 08.7 +0.3**
CCUT Cedar City 89.37 52 P **P** **21 39 09.7 +0.6**
CCUT IAmb IAmb 21 39 26.2
comp=Z,24nm,1.3s

NEW Newport 89.72 41 LR LR 22 11 44.2
comp=Z,735nm,21.8s,baz=258,slow=30

NEW Newport 89.72 41 P **P** **21 39 10.9 +0.7**
NEW Newport 89.72 41 IAMs_20 IAMs_20 22 11 44.5
comp=Z,663nm,20.0s

NEW Newport 89.72 41 P **P** **21 39 10.9 +0.7**
NEW pmax pmax
comp=Z,5.0nm,0.9s

NEW MLR MLR
comp=Z,700nm,20.0s

WMQ Urumqi 89.88 315 *e*P **P** **21 39 11.4 +0.3**
WMQ pP pP 21 39 25.0 -1.2
WMQ S **S** **21 49 58.8 -0.7**
WMQ pmax pmax
comp=Z,44nm,1.3s

WMQ pmax pmax
comp=Z,430nm,5.1s

WMQ LR LR
comp=Z,320nm,21.7s

WMQ LR LR
comp=Z,590nm,24.1s

WMQ LR LR
comp=Z,930nm,23.1s

U15A North Rim 89.92 53 IAmb IAmb 21 39 41.7
comp=Z,22nm,1.2s

BELA Belgrano 2 89.94 176 IAmb IAmb 21 39 25.2
comp=Z,7.4nm,0.8s

X16A Lo Mia Camp, P 90.10 55 P **P** **21 39 12.5 +0.1**
TUC Tucson 90.14 57 P **P** **21 39 13.5 +1.0**
TUC IAmb IAmb 21 39 42.7
comp=Z,12nm,1.2s

TUC Tucson 90.14 57 P **P** **21 39 13.5 +1.0**
TUC pmax pmax
comp=Z,12nm,1.2s

TUC MLR MLR
comp=Z,2µm,20.0s

PKCU Pink Cliffs 90.15 52 P **P** **21 39 12.5 -0.3**
PKCU IAmb IAmb 21 39 30.5
comp=Z,22nm,1.2s

INK Inuvik 90.17 19 LR LR 22 16 42.4
comp=Z,490nm,19.3s,baz=211,slow=34

HLID Hailey 90.19 46 P **P** **21 39 12.9 +0.3**
HLID IAmb IAmb 21 39 42.9
comp=Z,14nm,1.4s

MTPU Mount Pierson 90.40 51 IAmb IAmb 21 39 31.4
comp=Z,11nm,1.0s

WUAZ Wupatki 90.42 54 P **P** **21 39 14.0 +0.1**
WUAZ IAmb IAmb 21 39 30.9
comp=Z,12nm,1.1s

WUAZ IAMs_20 IAMs_20 22 10 41.4
comp=Z,1µm,20.0s

DUG Dugway, Tooele 90.46 49 P **P** **21 39 14.9 +0.9**
DUG Dugway, Tooele 90.46 49 P **P** **21 39 14.9 +0.9**
DUG pmax pmax
comp=Z,8.0nm,1.1s

DUG MLR MLR
comp=Z,2µm,22.0s

BGU Big Grassy Mou 90.49 48 P **P** **21 39 15.4 +1.4**
BGU IAmb IAmb 21 39 30.6
comp=Z,10nm,1.1s

MSU Marysvale 90.52 51 P **P** **21 39 14.8 +0.4**
MSU Marysvale 90.52 51 P **P** **21 39 14.8 +0.4**
NLU North Lily Min 90.95 50 P **P** **21 39 16.3 0.0**
NLU IAmb IAmb 21 39 32.9
comp=Z,15nm,1.2s

MPU Maple Canyon 91.29 50 P **P** **21 39 18.1 +0.2**
MPU IAmb IAmb 21 39 45.0
comp=Z,11nm,1.2s

HYBB Hyderabad (bro 91.35 287 *e*P **P** **21 39 18.2 -0.2**
HYBB *ep*P **pP** **21 39 32.0 -1.4**
Q16A Castle Valley 91.38 51 P **P** **21 39 19.7 +1.4**
Q16A IAmb IAmb 21 39 35.5
comp=Z,24nm,1.5s

MCMT McKenzie Canyo 91.60 45 P **P** **21 39 20.5 +1.2**
HWUT Hardware Ranch 91.72 48 IAMs_20 IAMs_20 22 14 43.8
comp=Z,690nm,19.0s

SRU San Rafael Swe 91.92 51 P **P** **21 39 20.9 +0.2**
SRU San Rafael Swe 91.92 51 P **P** **21 39 21.0 +0.2**
SRU pmax pmax
comp=Z,5.0nm,0.8s

WALA Waterton Lakes 91.99 40 P **P** **21 39 21.9 +1.1**
WALA IAmb IAmb 21 39 51.4
comp=Z,16nm,1.3s

AHID Auburn Hatcher 92.33 47 IAMs_20 IAMs_20 22 12 54.8
comp=Z,856nm,21.0s

BOZ Bozeman (W) 92.63 44 IAMs_20 IAMs_20 22 12 31.5
comp=Z,369nm,22.0s

121A Cookes Peak, D 92.66 58 P **P** **21 39 24.1 -0.3**
MOOW Moose Ponds 92.81 46 IAMs_20 IAMs_20 22 20 12.5
comp=Z,588nm,18.0s

PV23 Carpenter Ridg 92.92 52 P **P** **21 39 25.6 0.0**
PV23 IAmb IAmb 21 39 46.5
comp=Z,9.4nm,0.7s

BW06 Boulder Array 93.44 47 IAMs_20 IAMs_20 22 14 30.1
comp=Z,613nm,19.0s

PDAR Pinedale Array 93.44 47 PKKPbc PKKPbc 21 56 33.3 -2.4
comp=Z,0.4nm,0.7s,baz=86,slow=5.8,SNR=3.7
PDAR LR LR 22 15 24.6
comp=Z,361nm,20.4s,baz=256,slow=32

Y22D IRIS PASSCAL I 93.68 56 IAMs_20 IAMs_20 22 15 19.9
comp=Z,1µm,20.0s

C36M Paulatuk 93.70 19 IAMs_20 IAMs_20 22 16 26.5
comp=Z,826nm,20.0s

RLMT Red Lodge 94.14 45 IAMs_20 IAMs_20 22 13 07.7
comp=Z,785nm,22.0s

ANMO Albuquerque 94.22 55 LR LR 22 13 52.2
comp=Z,361nm,21.5s,baz=270,slow=30

ANMO Albuquerque 94.22 55 IAMs_20 IAMs_20 22 12 13.3
comp=Z,1µm,22.0s

ANMO Albuquerque 94.22 55 *ce*P **P** **21 39 33.0 +1.4**
ANMO pmax pmax
comp=Z,5.0nm,1.9s

MK31 Makanchi Array 94.31 317 *c i*P **P** **21 39 30.8 -0.6**
MKAR Makanchi Array 94.31 317 P **P** **21 39 31.2 -0.2**
comp=Z,20nm,0.9s,baz=100,slow=6.2,SNR=109
MKAR pP **pP** **21 39 45.4 -1.2**
comp=Z,35nm,0.8s,baz=88,slow=5.3,SNR=20
MKAR PKKPbc **PKKPdf** **21 56 29.8 -3.0**
comp=Z,0.3nm,0.6s,baz=254,slow=3.8,SNR=2.8
MKAR LR LR 22 21 46.3
comp=Z,146nm,21.3s,baz=102,slow=35
comp=Z,20nm,0.9s

ZAA0 Zalesovo Array 94.32 324 IAmb IAmb 21 39 44.6
comp=Z,17nm,1.1s

ZALV Zalesovo Beam 94.32 324 P **P** **21 39 30.3 -0.9**
comp=Z,5.8nm,0.9s,baz=103,slow=4.7,SNR=24
ZALV pP **pP** **21 39 44.9 -1.6**
comp=Z,11nm,0.9s,baz=120,slow=3.7,SNR=11
ZALV LR LR 22 19 26.7
comp=Z,270nm,21.8s,baz=90,slow=34
comp=Z,5.8nm,0.9s

ZALV Zalesovo Beam 94.32 324 *i* P **P** **21 39 30.2 -1.0**
ZALV pmax pmax
comp=Z,6.0nm,0.9s

MNTX Comrudas Mount 94.50 59 IAMs_20 IAMs_20 22 13 30.7
comp=Z,1µm,21.0s

MAKZ Makanchi 94.52 317 P **P** **21 39 31.7 -0.7**
MAKZ Makanchi 94.52 317 P **P** **21 39 31.7 -0.7**
MAKZ pmax pmax
comp=Z,38nm,1.0s

RWWY Rawlins 94.93 49 IAMs_20 IAMs_20 22 14 00.6
comp=Z,838nm,22.0s

PMSA Palmer Station 95.04 161 LR LR 22 17 32.7
comp=Z,340nm,18.6s,baz=232,slow=32

SDCO Great Sand Dun 95.50 53 IAMs_20 IAMs_20 22 14 32.9
comp=Z,983nm,21.0s

TXAR Lajitas Array 95.53 61 P **P** **21 39 39.2 +1.7**
comp=Z,0.5nm,0.6s,baz=238,slow=5.0,SNR=7.5
TXAR pP **pP** **21 39 54.2 +1.5**
comp=Z,0.7nm,0.8s,baz=221,slow=5.0,SNR=5.8
TXAR PP **PP** **21 43 26.2 -3.0**
comp=Z,0.6nm,1.1s,baz=258,slow=11,SNR=2.1
TXAR LR LR 22 15 01.5
comp=Z,798nm,20.6s,baz=250,slow=31
comp=Z,0.5nm,0.6s

TROLL Troll, Antarti 95.94 185 P **P** **21 39 38.4 -0.2**
PHWY Pilot Hill 96.15 49 IAMs_20 IAMs_20 22 20 16.1
comp=Z,717nm,19.0s

LAO LASA Array 96.53 44 IAMs_20 IAMs_20 22 14 04.7
comp=Z,720nm,21.0s

SNAA Sanae 96.66 183 LR LR 22 22 20.9
comp=Z,457nm,19.6s,baz=132,slow=35

NRIK Noril'sk 96.81 339 P **P** **21 39 41.0 -1.3**
comp=Z,1.7nm,0.5s,baz=135,slow=5.9,SNR=4.7
NRIK LR LR 22 20 31.3
comp=Z,613nm,21.9s,baz=100,slow=34
comp=Z,1.7nm,0.5s

NRIK Noril'sk 96.81 339 *ce*P **P** **21 39 40.5 -1.7**
NRIK pmax pmax
comp=Z,9.0nm,1.8s

KURK Kurchatov 97.42 320 P **P** **21 39 44.5 -0.9**
KURK IAmb IAmb 21 39 59.9
comp=Z,11nm,1.2s

KURK Kurchatov 97.42 320 *ce*P **P** **21 39 43.5 -1.9**
KURK pmax pmax
comp=Z,14nm,1.7s

KURBB Kurchatov Arra 97.46 320 LR LR 22 23 02.6
comp=Z,357nm,21.9s,baz=81,slow=35

AMTX Amarillo 98.08 56 IAMs_20 IAMs_20 22 16 42.5
comp=Z,1µm,20.0s

JCT Junction City 99.02 61 IAMs_20 IAMs_20 22 16 10.6
comp=Z,1µm,20.0s

AAK Ala-Archa 99.09 312 *i* P **Pdif** **21 39 51.0 -2.4**
AAK pmax pmax
comp=Z,9.0nm,1.8s

CBKS Cedar Bluff 100.14 52 IAMs_20 IAMs_20 22 22 35.8
comp=Z,589nm,20.0s

HKT Hockley 102.36 62 IAMs_20 IAMs_20 22 17 20.1
comp=Z,732nm,22.0s

KSU1 Kansas State U 102.60 52 IAMs_20 IAMs_20 22 19 58.8
comp=Z,813nm,21.0s

ECSD ERDS Data Cent 102.93 48 IAMs_20 IAMs_20 22 24 25.3
comp=Z,524nm,19.0s

NATX Nacogdoches 103.55 60 IAMs_20 IAMs_20 22 18 54.4
comp=Z,863nm,21.0s

X40A Basin Creek Fa 105.29 57 IAMs_20 IAMs_20 22 19 54.4
comp=Z,832nm,21.0s

CCM Cathedral Cave 106.74 54 IAMs_20 IAMs_20 22 21 40.5
comp=Z,886nm,20.0s

VBMS Vicksburg 107.09 60 IAMs_20 IAMs_20 22 20 54.3
comp=Z,980nm,21.0s

JFWS Jewell Farm 107.55 49 IAMs_20 IAMs_20 22 28 20.6
comp=Z,673nm,19.0s

OXF Oxford 108.12 57 IAMs_20 IAMs_20 22 23 17.2
comp=Z,759nm,20.0s

COWI Conover 108.27 45 IAMs_20 IAMs_20 22 22 09.4
comp=Z,996nm,22.0s

P49A Miami Univ. Ec 111.82 52 IAMs_20 IAMs_20 22 27 10.9
comp=Z,785nm,20.0s

GOGA Godfrey 113.05 59 IAMs_20 IAMs_20 22 25 16.9
comp=Z,764nm,21.0s

P52A Corning 113.81 52 IAMs_20 IAMs_20 22 26 55.5
comp=Z,645nm,20.0s

MCWV Mont Chateau 115.56 52 IAMs_20 IAMs_20 22 28 11.9
comp=Z,873nm,20.0s

APA Apatity 116.11 342 *i* PKIKP **PKPdf** **21 44 56.1 +1.8**
APA *i* 21 46 02.0
APA pmax pmax
comp=Z,5.0nm,1.2s

ARCES ARCESS Array B 116.97 346 PKP **PKPdf** **21 44 55.0 -0.9**
comp=Z,0.7nm,0.3s,baz=76,slow=2.1,SNR=11

SUMG Summit 117.23 8 IAMs_20 IAMs_20 22 29 10.9
comp=Z,625nm,20.0s

BINY Binghamton 118.10 48 IAMs_20 IAMs_20 22 29 12.7
comp=Z,882nm,21.0s

LPAZ La Paz 119.41 116 PKP **PKPdf** **21 45 02.5 -0.5**
comp=Z,0.8nm,0.5s,baz=288,slow=4.6,SNR=5.5

LPAZ La Paz 119.41 116 **PKPdf** **21 45 01.3 -1.7**
VT1 Waterbury 119.96 45 IAMs_20 IAMs_20 22 31 03.9
comp=Z,592nm,21.0s

SCO Scoresbysund 120.88 3 IAMs_20 IAMs_20 22 35 45.0
comp=Z,504nm,20.0s

FFD Franklin Falls 120.94 46 IAMs_20 IAMs_20 22 32 50.8
comp=Z,784nm,20.0s

BRYW Bryant College 121.39 48 IAMs_20 IAMs_20 22 35 47.0
comp=Z,805nm,20.0s

KIV Kislovodsk 122.02 315 *i* PKIKP **PKPdf** **21 45 04.2 -2.3**
KIV *e* 21 46 37.8
KIV *e*PS **PS** **21 56 31.8 -4.4**
KIV *e*SS SS 22 03 11.4 -4.4
KIV 22 07 46.9
KIV pmax pmax
comp=Z,3.0nm,1.1s

KIV MLR MLR
comp=Z,208nm,22.0s

FINES FINESS Array B 122.46 339 PKP **PKPdf** **21 45 06.6 -0.1**
comp=Z,2.0nm,1.0s,baz=44,slow=3.2,SNR=12
FINES FINESS Array B 122.46 339 *c i* PKIKP **PKiKP** **21 45 08.3 +1.4**
FINES pmax pmax
comp=Z,2.0nm,1.0s

RAYN Ar Rayn 122.72 291 **PKPdf** **21 45 08.4 0.0**
RAYN Ar Rayn 122.72 291 PKIKP **PKPdf** **21 45 08.4 0.0**
SDDR Presa de Saban 124.08 75 IAMs_20 IAMs_20 22 29 19.9
comp=Z,598nm,21.0s

SOC Sochi 124.18 315 *i* PKIKP **PKPdf** **21 45 06.3 -4.2**
SOC *e*PPP PPP 21 49 32.8
SOC *e*PS PS 21 56 52.1 -3.0
SOC *e*SSS SSS 22 08 15.7
SOC MLR MLR
comp=Z,228nm,21.0s

BOSA Boshof 125.17 222 PKP **PKPdf** **21 45 12.6 -0.5**
comp=Z,1.5nm,0.5s,baz=44,slow=1.7,SNR=7.0

ANN Anapa 125.32 317 *i* PKIKP **PKPdf** **21 45 11.2 -1.5**
ANN pmax pmax
comp=Z,10.0nm,0.8s

ANN MLR MLR
comp=Z,543nm,23.0s

NACGM Naroch 126.39 332 *i e*PKP **PKPdf** **21 45 12.2 -2.3**
baz=52

SAML Samuel 126.68 110 **PKPdf** **21 45 14.6 -1.6**
SAML Samuel 126.68 110 PKIKP **PKPdf** **21 45 14.6 -1.6**
NB2 NORSAR Subarra 127.34 345 PKPdf **PKiKP** **21 45 16.9 +0.2**
comp=Z,3.0nm,1.1s,baz=32,slow=2.0
NOA NORSAR Array B 127.34 345 PKP **PKiKP** **21 45 16.9 +0.2**
comp=Z,0.8nm,0.8s,baz=33,slow=2.0,SNR=3.6

AKASG Malin Array Be 127.62 327 *c i* PKIKP **PKPdf** **21 45 16.2 -0.7**
BRTR Keskin Array B 129.75 313 PKP **PKPdf** **21 45 20.9 -0.6**
comp=Z,0.3nm,0.4s,baz=245,slow=3.0,SNR=5.4
BRTR pPKP **pPKPdf** **21 45 38.1 +1.0**
comp=Z,0.6nm,0.7s,baz=142,slow=3.0,SNR=3.5
BRTR PP **PP** **21 47 29.7 -3.2**
comp=Z,1.4nm,0.9s,baz=101,slow=7.5,SNR=5.6
BRTR SKP 21 48 47.5
comp=Z,3.7nm,1.1s,baz=46,slow=1.3,SNR=6.3

BRTR Keskin Array B 129.75 313 *c i* PKIKP **PKPdf** **21 45 21.0 -0.6**
LODK Lodwar 130.83 265 IAMs_20 IAMs_20 22 37 55.7
comp=Z,558nm,21.0s

RGN Rugen 132.12 339 IAMs_20 IAMs_20 22 40 43.4
comp=Z,634nm,22.0s

FDF Fort de France 133.68 81 IAMs_20 IAMs_20 22 37 19.3
comp=Z,446nm,21.0s

OKC Ostrava-Krasne 133.71 332 AMS AMS 22 39 30.0
comp=Z,800nm,27.3s

MPOM Morne Pois Mar 133.95 81 IAMs_20 IAMs_20 22 34 40.4
comp=Z,400nm,20.0s

OSTC Ostas 134.06 334 AMS AMS 22 43 00.0
comp=Z,800nm,21.3s

KRLC Kraliky 134.16 333 AMS AMS 22 44 40.0
comp=Z,800nm,23.3s

DPC Dobruska-Polom 134.16 334 AMS AMS 22 43 10.0
comp=Z,900nm,24.0s

UPC Upice 134.18 334 *e*PP **PP** **21 47 58.3 -2.0**
BRG Berggiesshubel 134.77 336 *e*(PKP) **PKiKP** **21 45 31.9 -0.1**
BRG Amp 21 45 35.8
comp=Z,2.4nm,0.9s

BRG Berggiesshubel 134.77 336 *e*PKIKP **PKiKP** **21 45 31.8 -0.1**
BRG *e* 21 48 08.0
BRG pmax pmax
comp=Z,2.0nm,0.9s

BRG MLR MLR
comp=Z,510nm,23.1s

BRG MLR MLR
comp=E,230nm,23.2s

BRG MLR MLR
comp=N,340nm,15.8s

PVCC Panska Ves 134.78 335 AMS AMS 22 43 10.0
comp=N,500nm,22.3s

CLL Collm 134.81 337 IAMs_20 IAMs_20 22 49 02.8
comp=Z,532nm,19.0s

CLL Collm 134.81 337 *e*PKPdf **PKPdf** **21 45 30.0 -0.5**
CLL *ep*PKPdf **pPKPdf** **21 45 45.0 -1.3**
CLL *e*PP **PP** **21 48 06.0 +1.8**
CLL *e*SKPdf **SKPdf** **21 49 02.0 +0.8**
CLL *e*PKSbc **PKSbc** **21 49 06.0 +4.1**
CLL *e*PPP PPP 21 51 04.0
CLL *e*PSKS 21 58 12.0
CLL *e*PPS PPS 22 00 10.0
CLL *e*PPPrev 22 01 24.0
CLL *e*(SSS) 22 11 36.0
CLL L L 22 49 00.0
comp=Z,500nm,20.9s

PRU Pruhonice 135.20 334 *e*PP **PP** **21 48 00.3 -6.4**
PRU AMS AMS 22 43 40.0
comp=Z,700nm,21.4s

TREC Trest 135.31 333 AMS AMS 22 44 20.0
comp=Z,1µm,23.1s

NKC Novy Kostel 135.87 336 AMS AMS 22 49 50.0
comp=Z,400nm,19.6s

CKRC Cesky Krumlov 136.18 333 *e*PP PP 21 48 00.6 -12
CKRC AMS AMS 22 42 00.0
comp=Z,600nm,22.8s

KHC Kasperske Hory 136.26 334 *e*PP **PP** **21 48 09.9 -3.6**
KHC AMS AMS 22 44 50.0
comp=Z,900nm,22.5s

GERES GERESS Array B 136.43 334 PKP **PKPdf** **21 45 34.1 +0.4**
comp=Z,0.7nm,0.7s,baz=96,slow=1.3,SNR=5.5
GERES SKP 21 49 07.8
comp=Z,1.2nm,0.8s,baz=46,slow=3.9,SNR=6.0

GRA1 Grafenberg Arr 136.78 337 IAMs_20 IAMs_20 22 49 51.0
comp=Z,440nm,20.0s

GRFO Grafenberg 136.78 337 IAMs_20 IAMs_20 22 49 42.1
comp=Z,427nm,20.0s

PDG Podgorica 137.99 323 IAMs_20 IAMs_20 22 50 51.9
comp=Z,587nm,22.0s

TIR Tirane 138.27 321 IAMs_20 IAMs_20 22 48 34.5
comp=Z,649nm,21.0s

WLF Walferdange 138.63 341 IAMs_20 IAMs_20 22 48 12.6
comp=Z,466nm,21.0s

SENIN Lac Senin/Sane 141.02 337 IAMs_20 IAMs_20 22 55 52.2
comp=Z,442nm,21.0s

AQU L'Aquila 141.32 327 IAMs_20 IAMs_20 22 48 51.6
comp=Z,591nm,22.0s

BNI Bardonecchia 142.35 336 IAMs_20 IAMs_20 22 53 37.4
comp=Z,540nm,20.0s

SSB Saint Sauveur 142.97 339 IAMs_20 IAMs_20 22 48 13.5
comp=Z,488nm,22.0s

KEST Kesra 148.19 323 PKPbc **PKPbc** **21 45 58.4 +0.2**
comp=Z,3.2nm,0.5s,baz=78,slow=1.5,SNR=6.0

PBRG Braganca 149.26 350 *e*PKPdf **PKPdf** **21 45 52.3 -4.1**
PGAV Gavieira, Arco 149.34 352 *e*PKPdf **PKPbc** **21 45 59.1 -1.9**
PGAV Gavieira, Arco 149.34 352 *e*LR LR 22 38 15.7
comp=Z,572nm,20.0s

POLO Lamas de Olo 149.85 351 *e*PKPdf **PKPdf** **21 45 58.8 +1.3**
MVO Moncorvo 149.93 350 *e*PKPdf **PKPdf** **21 45 58.7 +1.1**
MVO Moncorvo 149.93 350 *e*LR LR 22 42 35.5
comp=Z,351nm,22.0s

ESDC Sonseca Array 150.71 345 PKPbc **PKPbc** **21 46 02.9 -1.4**
comp=Z,1.6nm,0.9s,baz=13,slow=1.8,SNR=8.8

ESDC Sonseca Array 150.71 345 **PKPbc** **21 46 03.8 -0.5**
MTE Manteigas 150.76 350 *e*PKPdf **PKPdf** **21 46 00.3 +1.4**
MTE Manteigas 150.76 350 *e*LR LR 22 40 26.6
comp=Z,492nm,22.0s

PAB San Pablo 150.93 345 IAMs_20 IAMs_20 22 52 01.8
comp=Z,482nm,21.0s

COI Coimbra 151.08 352 *e*PKPdf **PKPdf** **21 46 02.0 +2.7**
PCAS Casmilo, Conde 151.25 352 *e*PKPdf **PKPdf** **21 45 56.3 -3.3**
PMRV Marv??o 151.69 350 *e*PKPdf **PKPdf** **21 46 01.4 +1.1**
PMRV Marv??o 151.69 350 *e*LR LR 22 39 13.0

	comp=Z,353nm,22.0s						
PMAFR	**Mafra**	**152.43**	**353**	*e*PKPdf	**PKPbc**	**21 46 07.8**	**-0.4**
PNCL	**Nicolau / Gran**	**153.16**	**351**	*e*PKPdf	**PKPbc**	**21 46 06.2**	**-3.6**
MESJ	**Messejana**	**153.38**	**350**	*e*PKPdf	**PKPdf**	**21 46 02.6**	**-0.1**
MESJ				*e*PP	**PP**	**21 49 57.3**	**+2.3**
MESJ				IAMs_20	IAMs_20	22 55 01.2	
	comp=Z,772nm,16.1s						
MESJ	**Messejana**	**153.38**	**350**	*e*PKIKP	**PKPdf**	**21 46 02.6**	**-0.1**
MESJ				*e*		21 49 57.3	
PCVE	**Castro Verde**	**153.55**	**350**	*e*PKPdf	**PKPbc**	**21 46 07.2**	**-3.5**
PVAQ	**Vaqueiros**	**153.71**	**349**	*e*PKPdf	**PKPdf**	**21 46 06.6**	**+3.3**
PVAQ	**Vaqueiros**	**153.71**	**349**	eLR	LR	22 40 59.5	
	comp=Z,869nm,20.0s						
PBDV	**Barranco-do-Ve**	**153.91**	**350**	*e*PKPdf	**PKPdf**	**21 46 00.4**	**-3.2**
MORF	**Marmelete**	**153.97**	**351**	*e*PKPdf	**PKPdf**	**21 46 03.5**	**-0.3**
MORF				*e*PP	**PP**	**21 50 00.6**	**+2.2**
MORF				IAMs_20	IAMs_20	22 54 44.6	
	comp=Z,2µm,39.8s						
MORF	**Marmelete**	**153.97**	**351**	*e*PKPdf	**PKPdf**	**21 46 01.4**	**-2.3**
MORF	**Marmelete**	**153.97**	**351**	*e*PKIKP	**PKPdf**	**21 46 03.4**	**-0.3**
MORF				*e*		21 50 00.6	
PFVI	**Vila Bisbo**	**154.16**	**351**	*e*PKPdf	**PKPdf**	**21 45 57.7**	**-6.2**
TOA0	**Torodi Ar. Sit**	**164.95**	**278**	PKPdf	**PKPdf**	**21 46 15.8**	**-1.0**
TOA0					**PKPab**	**21 47 13.1**	**-0.4**
TOA0				pPKPab	**pPKPab**	**21 47 27.9**	**-0.6**
TORD	**Torodi Ar. Bea**	**164.95**	**278**	PKP	**PKPdf**	**21 46 15.8**	**-1.0**
	comp=Z,2.5nm,1.2s,baz=326,slow=1.6,SNR=6.3						
TORD				PKPab	**PKPab**	**21 47 13.6**	**+0.1**
	comp=Z,8.3nm,1.1s,baz=77,slow=3.9,SNR=15						
TORD				PP	**PP**	**21 50 58.2**	**-2.2**
	comp=Z,2.0nm,1.1s,baz=131,slow=4.0,SNR=4.4						
TORD	**Torodi Ar. Bea**	**164.95**	**278**	PKPdf	**PKPdf**	**21 46 16.1**	**-0.7**
TORD					**PKPab**	**21 47 13.1**	**-0.4**
TORD				pPKPab	**pPKPab**	**21 47 27.4**	**-1.0**
KIC	**Kosan Boka**	**169.82**	**240**⇑	*i*P	**PKPab**	**21 47 34.5**	**-0.5**
	comp=Z,14nm,0.8s						
LIC	**Lamto**	**169.99**	**239**⇑	*i*P	**PKPab**	**21 47 36.0**	**+0.3**
	comp=Z,27nm,0.8s						
TIC	**Toumodi**	**170.21**	**241**⇓	*i*P	**PKPab**	**21 47 36.6**	**-0.1**
	comp=Z,4.7nm,0.3s						

IDC ***17*** *21:47:10.5±4.6, 7.˚39N×93.˚80E, h114km±43km, mb3.3/5, mbtmp3.8/7, Error ellipse: s-maj=36.0km s-min=28.2km az=57.0*

ISC 17 21:47:09.1±1.2, **7.˚4N**±0.˚2×**93.˚8E**±0.˚1, **h100**km, **n10, σ1§11/7, mb3.4/5, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CMAR	**Chiang Mai Arr**	**12.12**	**24**	P		**Pn**	**21 49 59.8**	**+1.3**
	2.4nm,0.6s,baz=212,slow=15,SNR=23							
PALK	**Pallekele**	**13.00**	**271**	P		**Pn**	**21 50 10.7**	**+0.5**
	2.6nm,0.3s,baz=83,slow=8.1,SNR=1.5							
H08S3	**Diego Garcia H**	**25.95**	**235**	T		T	22 19 11.7	
	baz=55,slow=76,SNR=22							
H08S2	**Diego Garcia H**	**25.95**	**235**	T		T	22 19 12.5	
	baz=55,slow=76,SNR=30							
H08S1	**Diego Garcia H**	**25.97**	**235**	T		T	22 19 14.6	
	baz=55,slow=76,SNR=24							
MKAR	**Makanchi Array**	**40.53**	**348**	P		**P**	**21 54 37.1**	**-1.3**
	0.2nm,0.6s,baz=162,slow=10.0,SNR=4.2 0.2nm,0.6s							
SONM	**Songino Array**	**41.75**	**13**	P		**P**	**21 54 47.4**	**-1.1**
	0.4nm,0.6s,baz=189,slow=8.6,SNR=2.6 0.4nm,0.6s							
ZALV	**Zalesovo Beam**	**47.03**	**353**	P		**P**	**21 55 30.2**	**-0.1**
	1.4nm,0.4s,baz=169,slow=8.8,SNR=5.7 1.4nm,0.4s							
WRA	**Warramunga Arr**	**48.23**	**125**	P		**P**	**21 55 40.2**	**0.0**
	0.3nm,0.7s,baz=307,slow=8.5,SNR=2.9 0.3nm,0.7s							
FINES	**FINESS Array B**	**73.02**	**332**	P		**P**	**21 58 28.2**	**+0.3**
	2.4nm,1.1s,baz=104,slow=10,SNR=1.6 2.4nm,1.1s							

RSNC ***17*** *21:53:43.0±0.9, 4.˚23N×76.˚40W, h123km±3km, ML3.5, Mw3.9*

IDC ***17*** *21:53:45.0±4.7, 4.˚19N×76.˚24W, h161km±51km, mb3.1/4, mbtmp3.7/5, MS3.1/1, Error ellipse: s-maj=73.1km s-min=50.3km az=72.0*

ISC 17 21:53:42.0±0.8, **4.˚24N**±0.˚03×**76.˚44W**±0.˚03, **h129**km±6km, **n38, σ1§10/68, mb3.4/4, 5C-2D, Colombia**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
YOTC	**Yotoco, Valle**	**0.27**	**161**⇓	*e*P		**Pn**	**21 53 59.7**	**-0.4**
YOTC				*e*S		**Sn**	**21 54 13.1**	**-0.6**
YOTC				*i*			21 54 14.3	
	comp=Z,1µm,0.3s							
PLMC	**San Jos del P**	**0.68**	**13**	*e*P		**Pn**	**21 54 01.7**	**-0.5**
PLMC				*e*S		**Sn**	**21 54 17.6**	**+0.1**
PLMC				*i*			21 54 19.9	
	comp=Z,2µm,0.2s							
MALC	**Bahia Malaga**	**0.93**	**256**	*e*P		**Pn**	**21 54 05.5**	**+1.4**
MALC				*e*S		**Sn**	**21 54 22.3**	**+1.5**
MALC				*i*			21 54 27.2	
	comp=Z,2µm,0.3s							
ANIL	**Santa Ana**	**1.06**	**77**⇑	*i*P		**Pn**	**21 54 04.8**	**-0.9**
ANIL				*e*S		**Sn**	**21 54 23.1**	**-0.5**
PIZC	**Pizarro, Choco**	**1.17**	**308**	*i*P		**Pn**	**21 54 07.6**	**+1.2**
PIZC				*e*S		**Sn**	**21 54 25.8**	**+0.8**
PIZC				*i*			21 54 30.6	
	comp=Z,519nm,0.3s							
ORTC	**Ortega, Tolima**	**1.23**	**106**	*e*P		**Pn**	**21 54 06.9**	**-0.3**
ORTC				*e*S		**Sn**	**21 54 24.9**	**-1.3**
ORTC				*i*			21 54 26.3	
	comp=Z,2µm,0.2s							
GUY2C	**Guyana, Caldas**	**1.45**	**48**⇑	*e*P		**Pn**	**21 54 10.0**	**+0.1**
GUY2C				*e*S		**Sn**	**21 54 30.5**	**-0.6**
GUY2C				*i*			21 54 33.2	
	comp=Z,775nm,0.6s							
MARP	**Paez Belalcaza**	**1.47**	**161**	*e*P		**Pn**	**21 54 10.4**	**+0.3**
MARP				*e*S		**Sn**	**21 54 30.9**	**-0.4**
MARP				*i*			21 54 32.5	
	comp=Z,222nm,0.4s							
PRAC	**Prado**	**1.63**	**109**⇑	*i*P		**Pn**	**21 54 11.8**	**+0.2**
PRAC				*e*S		**Sn**	**21 54 33.2**	**-0.9**
PRAC				*i*			21 54 35.4	
	comp=Z,840nm,0.4s							
CBOC	**Ciudad Bolivar**	**1.66**	**15**	*e*P		**Pn**	**21 54 12.3**	**+0.1**
CBOC				*e*S		**Sn**	**21 54 34.7**	**-0.4**
CBOC				*i*			21 54 44.3	
	comp=Z,208nm,0.5s							
POPC	**Popayan, Colom**	**1.71**	**188**	*e*P		**Pn**	**21 54 12.2**	**-0.5**
POPC				*e*S		**Sn**	**21 54 35.0**	**-1.1**
POPC				*i*			21 54 38.0	
	comp=Z,178nm,0.5s							
BETC	**Betania**	**1.84**	**147**	*e*P		**Pn**	**21 54 14.4**	**+0.3**
BETC				*e*S		**Sn**	**21 54 37.5**	**-1.1**
PCON	**Cinco Dias**	**1.90**	**179**⇓	*i*P		**Pn**	**21 54 16.2**	**+0.9**
PCON				*e*S		**Sn**	**21 54 42.0**	**+1.3**
PCON				*i*			21 54 43.4	
	comp=Z,278nm,0.6s							
NORC	**Norcasia**	**2.04**	**50**⇑	*e*P		**Pn**	**21 54 16.6**	**+0.1**
NORC				*e*S		**Sn**	**21 54 42.3**	**-0.5**
NORC				*i*			21 54 46.6	
	comp=Z,101nm,0.4s							
SOTA	**Rioblanco**	**2.10**	**185**	*e*P		**Pn**	**21 54 17.9**	**+0.2**
SOTA				*e*S		**Sn**	**21 54 45.4**	**+0.4**
SOTA				*i*			21 54 57.3	
	comp=Z,215nm,0.6s							
GR1C	**Gorgona, Isla**	**2.12**	**235**	*e*P		**Pn**	**21 54 16.9**	**-0.5**
GR1C				*e*S		**Sn**	**21 54 42.7**	**-1.8**
ROSC	**El Rosal**	**2.19**	**74**	P		**Pn**	**21 54 20.5**	**+1.9**
	comp=Z,598nm,0.4s,baz=339,slow=0.1,SNR=177							
ROSC				S		**Sn**	**21 54 50.0**	**+3.4**
	comp=Z,257nm,0.5s,baz=230,slow=23,SNR=15							
SOLC	**Bahia Solano**	**2.19**	**334**	*e*P		**Pn**	**21 54 19.1**	**+0.8**
SOLC				*e*S		**Sn**	**21 54 45.9**	**-0.3**
SOLC				*i*			21 54 49.4	
	comp=Z,120nm,0.3s							
GARC	**Garzon, Huila**	**2.25**	**155**	*i*P		**Pn**	**21 54 19.1**	**-0.1**
GARC				*e*S		**Sn**	**21 54 47.2**	**-0.6**
GARC				*i*			21 54 48.2	
	comp=Z,500nm,0.2s							
BBAC	**Balboa, Cauca**	**2.35**	**200**	*e*P		**Pn**	**21 54 20.9**	**+0.3**
BBAC				*e*S		**Sn**	**21 54 49.8**	**-0.2**
BBAC				*i*			21 54 53.7	
	comp=Z,138nm,0.4s							
CRUC	**La Cruz**	**2.71**	**191**	*e*P		**Pn**	**21 54 25.6**	**+0.4**
CRUC				*e*S		**Sn**	**21 54 56.0**	**-2.3**
CHIC	**Chingaza**	**2.72**	**82**	*e*P		**Pn**	**21 54 26.5**	**+1.1**
CHIC				*e*S		**Sn**	**21 54 58.9**	**+0.1**
CHIC				*i*			21 55 03.0	
	comp=Z,92nm,0.5s							
VILC	**Villavicencio,**	**2.74**	**93**	*e*P		**Pn**	**21 54 26.7**	**+1.4**
VILC				*e*S		**Sn**	**21 55 01.0**	**+2.3**
FLOC	**Florencia**	**2.76**	**163**	*i*P		**Pn**	**21 54 25.6**	**+0.1**
FLOC				*e*S		**Sn**	**21 54 59.0**	**0.0**
DBBC	**Dabeiba**	**2.77**	**5**	*e*P		**Pn**	**21 54 26.3**	**+0.7**
PTBC	**PUERTO BERRIO,**	**3.02**	**41**	*e*P		**Pn**	**21 54 28.7**	**-0.1**
PTBC				*e*S		**Sn**	**21 55 03.9**	**-1.0**
PTBC				*i*			21 55 06.8	
	comp=Z,76nm,0.4s							
GCUF	**Volcan Galeras**	**3.13**	**197**	*e*P		**Pn**	**21 54 30.6**	**-0.2**
GCUF				*e*S		**Sn**	**21 55 07.8**	**-0.6**
GCUF				*i*			21 55 13.4	
	comp=Z,103nm,0.3s							
PTAC	**Punta Ardita,**	**3.19**	**335**	*e*P		**Pn**	**21 54 31.4**	**+0.3**
PTAC				*e*S		**Sn**	**21 55 07.9**	**-1.1**
TUMC	**Tumaco**	**3.32**	**224**	*e*P		**Pn**	**21 54 33.5**	**+0.7**
TUMC				*e*S		**Sn**	**21 55 12.0**	**0.0**
TUMC				*i*			21 55 18.2	
	comp=Z,104nm,0.4s							
ZARC	**Zaragoza, Cauc**	**3.59**	**26**	*e*P		**Pn**	**21 54 36.3**	**-0.1**
ZARC				*e*S		**Sn**	**21 55 17.3**	**-1.1**
ZARC				*i*			21 55 17.5	
	comp=Z,72nm,0.4s							
RUSC	**La Rusia**	**3.72**	**64**⇑	*i*P		**Pn**	**21 54 39.6**	**+1.1**
RUSC				*e*S		**Sn**	**21 55 23.3**	**+1.1**
RUSC				*i*			21 55 27.2	
	comp=Z,34nm,0.7s							
BRRC	**Barranca, Sant**	**3.93**	**43**	*e*P		**Pn**	**21 54 39.0**	**-1.9**
BRRC				*e*S		**Sn**	**21 55 23.1**	**-3.3**
BRRC				*i*			21 55 31.2	
	comp=Z,39nm,0.3s							
SDV	**Santo Domingo**	**7.38**	**51**	LR		LR	21 59 06.5	
	comp=Z,144nm,21.2s,baz=14,slow=44							
PDAR	**Pinedale Array**	**48.33**	**327**	P		**P**	**22 02 11.4**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=116,slow=8.1,SNR=1.7 comp=Z,0.3nm,0.6s							
NVAR	**Mina Array Bea**	**51.04**	**318**	P		**P**	**22 02 33.0**	**+1.6**
	comp=Z,0.3nm,0.5s,baz=126,slow=4.6,SNR=4.0 comp=Z,0.3nm,0.5s							
YKA	**Yellowknife Ar**	**64.59**	**341**	P		**P**	**22 04 04.7**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=131,slow=6.8,SNR=2.3 comp=Z,0.8nm,0.5s							
ILAR	**Eielson Array**	**77.91**	**336**	P		**P**	**22 05 25.4**	**0.0**
	comp=Z,0.3nm,0.5s,baz=128,slow=5.8,SNR=4.3 comp=Z,0.3nm,0.5s							
WRA	**Warramunga Arr**	**146.20**	**240**	PKPbc		**PKPbc**	**22 13 07.2**	**-1.2**
	comp=Z,0.4nm,1.0s,baz=112,slow=2.4,SNR=2.2							

PRU 17 22:42:41.1±0.0, **51.˚51N**×**16.˚12E, h0**km, **Poland**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CHVC	**Chvalec**	**0.92**	**183**	*e*PG		Pg	22 42 58.6	-0.2
CHVC				*e*SG		Sg	22 43 10.6	-0.1
OSTC	**Ostas**	**0.96**	**176**	*e*PG		Pg	22 42 59.2	-0.2
OSTC				*e*SG		Sg	22 43 11.4	-0.4
UPC	**Upice**	**1.01**	**184**	*e*PG		Pg	22 43 00.0	-0.4
UPC				*e*SG		Sg	22 43 13.0	-0.4
DPC	**Dobruska-Polom**	**1.17**	**174**	*e*PG		Pg	22 43 02.3	-1.2
DPC				*e*SG		Sg	22 43 18.7	+0.1
PVCC	**Panska Ves**	**1.39**	**226**	*e*PG		Pg	22 43 07.3	-0.4
PVCC				*e*SG		Sg	22 43 25.5	-0.1
KRLC	**Kraliky**	**1.50**	**163**	*e*PG		Pn	22 43 08.5	-0.8
KRLC				*e*SG		Sg	22 43 28.2	-0.9
BRG	**Berggiesshubel**	**1.51**	**246**	Sg		Sg	22 43 29.3	-0.3
BRG				Amp			22 43 30.8	
	comp=Z,1.8nm,0.3s							
BRG				Amp			22 49 40.0	
	comp=Z,0.5nm,23.1s							
BRG				Amp			22 49 44.0	
	comp=E,0.2nm,23.2s							
BRG				Amp			22 49 45.0	
	comp=N,0.3nm,15.8s							
KHC	**Kasperske Hory**	**2.89**	**215**	*e*SG		Sg	22 44 13.4	-0.3

ISK ***17*** *22:43:48.1, 34.˚74N×24.˚89E, h10km, ML3.1/6*

IDC ***17*** *22:43:48.0±1.6, 34.˚72N×24.˚33E, h0km, mb3.4/2, mbtmp3.3/4, ML3.2/2, Error ellipse: s-maj=51.8km s-min=25.9km az=140.0*

ATH ***17*** *22:43:49.9, 34.˚85N×24.˚76E, h36km±2km, ML3.0/8, Error ellipse: s-maj=5.4km s-min=1.8km az=352.0*

THE ***17*** *22:43:50.0, 34.˚77N×24.˚86E, h20km±1km, ML3.1/6, Error ellipse: s-maj=2.5km s-min=0.8km az=354.0*

ISC 17 22:43:49.3±1.4, **34.˚73N**±0.˚07×**24.˚84E**±0.˚04, **h24**km±9km, **n39, σ0§93/52, Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SIVA	**Sivas**	**0.29**	**354**	P		**Pb**	**22 43 56.0**	**0.0**
SIVA				S		**Sb**	**22 44 01.1**	**+0.4**
SIVA				AML	AML		22 44 01.5	
	comp=E,24479µm,0.3s							
SIVA				AML	AML		22 44 01.6	
	comp=N,10327µm,0.2s							
SIVA	**Sivas**	**0.29**	**354**	P		**Pb**	**22 43 56.1**	**0.0**
SIVA				S		**Sb**	**22 44 00.8**	**+0.1**
	comp=N,9µm,0.2s							
TMBK	**Timbaki Herakl**	**0.34**	**349**	P		**Pb**	**22 43 56.5**	**-0.5**
TMBK				S		**Sb**	**22 44 02.6**	**+0.4**
TMBK				AML	AML		22 44 03.5	
	comp=E,7828µm,0.2s							
TMBK				AML	AML		22 44 04.7	
	comp=N,7897µm,0.3s							
TMBK	**Timbaki Herakl**	**0.34**	**349**	P		**Pb**	**22 43 56.4**	**-0.5**
TMBK				S		**Sb**	**22 44 02.1**	**-0.1**
	comp=N,1µm,0.2s							
IDI	**Anoyia**	**0.56**	**4**	P		**Pb**	**22 43 59.3**	**-1.2**
IDI				AML	AML		22 44 08.4	
	comp=N,1588µm,0.6s							
IDI				AML	AML		22 44 09.0	
	comp=E,2054µm,0.2s							
IDI	**Anoyia**	**0.56**	**4**	P		**Pb**	**22 43 59.2**	**-1.3**
IDI				S		**Sb**	**22 44 08.2**	**+0.1**
	comp=E,902nm,0.3s							
IDI	**Anoyia**	**0.56**	**4**	PG		**Pb**	**22 43 59.2**	**-1.3**
IDI				SG		**Sb**	**22 44 07.2**	**-0.9**
KSTL	**Kastelli Herak**	**0.60**	**18**	P		**Pb**	**22 44 01.6**	**+0.3**
KSTL				S		**Sn**	**22 44 11.4**	**0.0**
KSTL	**Kastelli Herak**	**0.60**	**18**	P		**Pb**	**22 44 01.5**	**+0.3**
IACM	**Heraklion**	**0.60**	**18**	P		**Pb**	**22 44 01.1**	**-0.2**
IACM				AML	AML		22 44 20.4	
	comp=N,10687µm,0.7s							
IACM				AML	AML		22 44 27.6	
	comp=E,8980µm,0.5s							
IACM	**Heraklion**	**0.60**	**18**	P		**Pb**	**22 44 01.5**	**+0.3**
IACM				S		**Sb**	**22 44 09.2**	**-0.1**
	comp=E,5µm,0.6s							
HRKL	**Herakleio**	**0.62**	**20**	P		**Pb**	**22 44 00.9**	**-0.6**
HRKL	**Herakleio**	**0.62**	**20**	P		**Pb**	**22 44 01.0**	**-0.5**
HRKL	**Herakleio**	**0.62**	**20**	PG		**Pb**	**22 44 00.1**	**-1.4**
HRKL				SG		**Sb**	**22 44 08.7**	**-1.0**
GVDS	**Gavdos**	**0.63**	**280**	P		**Pn**	**22 44 02.3**	**-0.5**
GVDS				S		**Sn**	**22 44 12.9**	**+0.8**
	comp=E,2µm,0.5s							
GVD	**Gavdhos**	**0.63**	**280**	P		**Pb**	**22 44 01.6**	**-0.1**
GVD				AML	AML		22 44 14.7	
	comp=N,5512µm,0.3s							
GVD				AML	AML		22 44 15.2	
	comp=E,6797µm,0.4s							
GVD	**Gavdhos**	**0.63**	**280**	P		**Pb**	**22 44 01.8**	**+0.1**
GVD				S		**Sn**	**22 44 11.5**	**-0.7**
	comp=E,3µm,0.3s							
GVD	**Gavdhos**	**0.63**	**280**	PG		**Pb**	**22 44 01.6**	**-0.1**
GVD				SG		**Sn**	**22 44 11.4**	**-0.7**
NPS	**Neapolis**	**0.82**	**50**	P		**Pn**	**22 44 05.8**	**+0.3**
NPS	**Neapolis**	**0.82**	**50**	P		**Pb**	**22 44 05.3**	**+0.3**
IMMV	**Iera Moni Meta**	**1.01**	**316**	P		**Pn**	**22 44 06.5**	**-1.6**
IMMV				AML	AML		22 44 25.1	
	comp=N,1022µm,0.3s							
IMMV				AML	AML		22 44 27.9	
	comp=E,1104µm,0.5s							
IMMV	**Iera Moni Meta**	**1.01**	**316**	P		**Pn**	**22 44 07.0**	**-1.1**
IMMV	**Iera Moni Meta**	**1.01**	**316**	PG		**Pb**	**22 44 08.1**	**-0.1**
IMMV				SG		**Sn**	**22 44 23.2**	**+1.6**
CHAN	**Chania**	**1.02**	**320**	P		**Pn**	**22 44 07.6**	**-0.6**
KNDR	**Palaiochora Ch**	**1.07**	**298**	P		**Pb**	**22 44 09.1**	**-0.1**
KNDR				AML	AML		22 44 31.1	
	comp=E,853µm,0.6s							
KNDR				AML	AML		22 44 35.9	
	comp=N,427µm,0.9s							
KNDR	**Palaiochora Ch**	**1.07**	**298**	P		**Pb**	**22 44 09.1**	**-0.1**
KNDR				S		**Sn**	**22 44 24.7**	**+1.6**
KNDR	**Palaiochora Ch**	**1.07**	**298**	PN		**Pb**	**22 44 09.2**	**0.0**
KNDR				SN		**Sn**	**22 44 27.1**	**+4.0**
ZKR	**Zakros**	**1.19**	**71**	PN		**Pn**	**22 44 10.7**	**+0.2**
RODP	**Rodopos**	**1.21**	**313**	P		**Pn**	**22 44 10.7**	**-0.2**
ANKY	**Antikythira Is**	**1.69**	**312**	P		**Pn**	**22 44 17.7**	**+0.3**
ANKY				AML	AML		22 44 51.0	
	comp=N,258µm,0.5s							
ANKY				AML	AML		22 44 51.5	
	comp=E,247µm,1.0s							
ANKY	**Antikythira Is**	**1.69**	**312**	P		**Pn**	**22 44 17.7**	**+0.3**
SANT	**Santorini**	**1.71**	**17**	PN		**Pn**	**22 44 18.4**	**+0.7**
KTHA	**Kythira Island**	**2.10**	**317**	P		**Pn**	**22 44 22.2**	**-0.9**
KTHR	**Kythira**	**2.14**	**316**	P		**Pn**	**22 44 24.3**	**+0.7**
KTHR	**Kythira**	**2.14**	**316**	P		**Pn**	**22 44 24.1**	**+0.5**
BRTR	**Keskin Array B**	**8.60**	**52**	Pn		Pn	22 45 58.3	+5.8
	baz=230,slow=11,SNR=4.8 comp=E,0.5nm,0.7s							
GERES	**GERESS Array B**	**16.34**	**333**	Pn		**Pn**	**22 47 37.8**	**+0.6**
	comp=E,0.1nm,0.3s,baz=149,slow=14,SNR=1.9 comp=E,0.2nm,0.3s							
TORD	**Torodi Ar. Bea**	**30.02**	**230**	P		**P**	**22 49 55.4**	**-1.0**
	comp=E,0.3nm,0.3s,baz=38,slow=9.1,SNR=8.1 comp=E,0.3nm,0.3s							
MKAR	**Makanchi Array**	**44.23**	**56**	P		P	22 52 02.9	+6.3
	comp=E,0.2nm,0.7s,baz=273,slow=9.3,SNR=1.7 comp=E,0.2nm,0.7s							

IDC ***17*** *22:48:18.6±1.9, 8.˚63S×110.˚41E, h0km, mb3.7/7, mbtmp3.7/7, Error ellipse: s-maj=64.9km s-min=30.6km az=44.0*

ISC 17 22:48:28.2±1.9, **8.˚7S**±0.˚4×**110.˚5E**±0.˚4, **h77**km, **n7, σ0§27/7, mb3.7/7, Jawa**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WRA	**Warramunga Arr**	**25.67**	**118**	P		**P**	**22 53 51.2**	**0.0**
	0.3nm,0.9s,baz=293,slow=11,SNR=2.2 0.3nm,0.9s							
SONM	**Songino Array**	**56.38**	**357**	P		**P**	**22 58 01.2**	**-0.3**
	0.2nm,0.3s,baz=175,slow=8.9,SNR=2.9 0.2nm,0.3s							
KLR	**Kul'dur**	**60.61**	**16**	P		**P**	**22 58 30.9**	**+0.1**
	1.5nm,0.5s,baz=186,slow=5.3,SNR=7.7 1.5nm,0.5s							
MKAR	**Makanchi Array**	**60.66**	**338**	P		**P**	**22 58 31.6**	**+0.4**
	0.6nm,0.5s,baz=153,slow=7.9,SNR=9.9 0.6nm,0.5s							
KURBB	**Kurchatov Arra**	**65.23**	**338**	P		**P**	**22 59 01.4**	**0.0**
	0.6nm,0.6s,baz=154,slow=5.5,SNR=7.0 0.6nm,0.6s							
ZALV	**Zalesovo Beam**	**66.04**	**344**	P		**P**	**22 59 06.8**	**+0.2**
	0.3nm,0.3s,baz=162,slow=5.6,SNR=3.7 0.3nm,0.3s							
BRTR	**Keskin Array B**	**85.49**	**311**	P		**P**	**23 00 57.9**	**-0.1**
	0.7nm,0.8s,baz=161,slow=7.3,SNR=5.9 0.7nm,0.8s							

IDC 17 22:48:55.1±2.2, **27.˚60N**×**90.˚48E, h0**km, **mb3.2/4, mbtmp3.2/4, Error ellipse: s-maj=81.6km s-min=26.2km az=66.0, Bhutan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MKAR	**Makanchi Array**	**20.22**	**344**	P		P	22 53 31.7	+0.1
	0.5nm,0.5s,baz=166,slow=9.2,SNR=14 0.5nm,0.5s							
SONM	**Songino Array**	**23.72**	**27**	P		P	22 54 08.8	-0.1
	0.1nm,0.3s,baz=198,slow=9.1,SNR=2.1 0.1nm,0.3s							
KURBB	**Kurchatov Arra**	**24.73**	**342**	P		P	22 54 17.9	-0.1
	0.3nm,0.7s,baz=158,slow=9.7,SNR=3.4 0.3nm,0.7s							
WRA	**Warramunga Arr**	**63.53**	**133**	P		P	22 59 27.6	0.0
	0.6nm,0.8s,baz=322,slow=7.3,SNR=8.1 0.6nm,0.8s							

BJI ***17*** *22:55:41.9±0.0, 25.˚41N×122.˚65E, h250km, mb4.3/30, mB4.4/18*

NEIC ***17*** *22:55:42.6±1.3, 25.˚51N±0.˚07×122.˚62E±0.˚03, h232km±6km, mb4.3/94, Error ellipse: s-maj=10.1km s-min=3.9km az=194.0*

IDC ***17*** *22:55:42.8±0.9, 25.˚47N×122.˚55E, h237km±7km, mb3.9/21, mbtmp4.4/24, Error ellipse: s-maj=12.3km s-min=10.5km az=66.0*

TAP ***17*** *22:55:42.8, 25.˚40N×122.˚75E, h236km, ML5.3, D*

NIED ***17*** *22:55:44.5, 25.˚41N×122.˚58E, h219km, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}=4.35; $M_{\theta\theta}$=1.51; $M_{\phi\phi}$=2.84; $M_{r\theta}$=1.18; $M_{\theta\phi}$=2.18; $M_{\phi r}$=2.20; Fault plane solution: $M_0$5.06000×10^{15} NP1: ϕ_s=319.00000°, δ30.00000°, λ=97.00000°. NP2: ϕ_s=148.00000°, δ60.00000°, λ=86.00000°.*

JMA ***17*** *22:55:44.5±0.3, 25.˚5N×122.˚6E±0.˚8, h219km±3km, MD4.5/19, MV4.7/19, NW OFF ISHIGAKIJIMA IS*

ISC 17 22:55:42.7±0.4, **25

	baz=256								
NTST				*e*S	**S**	**22 56 44.3**	**+0.6**		
	baz=256								
NHDH	**Xindian Distri**	**1.08 245**	*e*P	**Pn**	**22 56 17.6**	**+0.7**			
	baz=242								
NHDH				*e*S	**S**	**22 56 43.5**	**-0.3**		
	baz=242								
TWE	**Neicheng**	**1.10 230**	P	**Pn**	**22 56 17.2**	**+0.1**			
	baz=228								
TWE				*e*S	**S**	**22 56 44.0**	**-0.1**		
	baz=228								
TATO	**Taipei**	**1.11 246**		**Pn**	**22 56 17.1**	**0.0**			
TWS1	**Kuangyinshan**	**1.12 253**	P	**Pn**	**22 56 17.2**	**-0.1**			
	baz=253								
TWS1				*e*S	**S**	**22 56 44.1**	**-0.1**		
	baz=253								
NDS	**Dongshan**	**1.13 225**	P	**Pn**	**22 56 17.7**	**+0.3**			
	baz=230								
NDS				*e*S	**S**	**22 56 44.0**	**-0.5**		
	baz=230								
FUSB	**Fushanzhiwuyua**	**1.14 234**	*e*P	**Pn**	**22 56 17.3**	**-0.1**			
	baz=244								
FUSB				*e*S	**S**	**22 56 43.5**	**-1.1**		
	baz=244								
NWLT	**Wulai**	**1.19 237**	*e*P	**Pn**	**22 56 18.2**	**+0.4**			
	baz=245								
NWLT				*e*S	**S**	**22 56 43.5**	**-1.7**		
	baz=245								
EWUT	**Wuta**	**1.23 217**	P	**Pn**	**22 56 18.2**	**+0.2**			
	baz=218								
EWUT				*e*S	**S**	**22 56 44.8**	**-0.9**		
	baz=218								
ENA	**Nanau**	**1.27 218**	P	**Pn**	**22 56 18.3**	**+0.1**			
	baz=218								
ENA				*e*S	**S**	**22 56 44.3**	**-1.8**		
	baz=218								
LATG	**Datong**	**1.32 228**	P	**Pn**	**22 56 19.1**	**+0.4**			
	baz=228								
LATG				*e*S	**S**	**22 56 45.9**	**-1.1**		
	baz=228								
YHNB	**Yeheng**	**1.35 236**		**Pn**	**22 56 18.2**	**-0.7**			
YHNB	**Yeheng**	**1.35 236**	P	**Pn**	**22 56 18.9**	**0.0**			
YHNB	**Yeheng**	**1.35 236**	*i* P	**Pn**	**22 56 18.6**	**-0.3**			
	baz=240								
NSK	**Sanguang**	**1.36 237**	*i* P	**Pn**	**22 56 18.8**	**-0.1**			
	baz=234								
NSK				S	**S**	**22 56 44.9**	**-2.4**		
	baz=234								
NCU	**National Centr**	**1.36 251**	*i* P	**Pn**	**22 56 18.2**	**-0.6**			
	baz=259								
NCU				S	**S**	**22 56 46.5**	**-0.7**		
	baz=259								
EHP	**Heping Village**	**1.36 215**	*e*P	**Pn**	**22 56 18.9**	**-0.1**			
	baz=219								
EHP				*e*S	**S**	**22 56 46.3**	**-1.0**		
	baz=219								
NCUH	**Zhongli**	**1.36 250**	*i* P	**Pn**	**22 56 19.2**	**+0.3**			
	baz=259								
NCUH				*i* S	**S**	**22 56 45.5**	**-1.7**		
	baz=259								
NNS	**Nan Shan**	**1.49 229**	P	**Pn**	**22 56 20.3**	**+0.2**			
	baz=232								
NNS				*e*S	**S**	**22 56 47.5**	**-1.7**		
	baz=232								
NNSB	**Datong**	**1.49 228**	*e*P	**Pn**	**22 56 20.2**	**+0.2**			
	baz=232								
IRIF	**Iriomote-Funau**	**1.50 137**	P	**Pn**	**22 56 19.9**	**0.0**			
IRIF			S	**S**	**22 56 46.9**	**-2.2**			
IRIF	**Iriomote-Funau**	**1.50 137**	A	A	22 56 19.9				
	comp=E,8.0nm,1.1s,comp=E,11nm,1.0s								
ETL	**Fush Village**	**1.55 215**	*i* P	**Pn**	**22 56 20.4**	**0.0**			
	baz=212								
ETL				S	**S**	**22 56 48.2**	**-1.8**		
	baz=212								
NACB	**Ninganchiao**	**1.55 216**		**Pn**	**22 56 19.9**	**-0.5**			
NACB	**Ninganchiao**	**1.55 216**	P	**Pn**	**22 56 20.1**	**-0.3**			
	baz=220								
NFF	**Wufeng Townshi**	**1.56 240**	P	**Pn**	**22 56 20.5**	**0.0**			
	baz=238								
NFF				*e*S	**S**	**22 56 47.5**	**-2.6**		
	baz=238								
ETLH	**Xiulin Townshi**	**1.59 220**	*i* P	**Pn**	**22 56 20.9**	**+0.1**			
	baz=230								
ETLH				S	**S**	**22 56 48.8**	**-1.8**		
	baz=230								
SBCB	**Hsinchu**	**1.60 247**	*e*P	**Pn**	**22 56 20.8**	**+0.1**			
	baz=257								
SBCB				*e*S	**S**	**22 56 49.4**	**-1.1**		
	baz=257								
HSN	**Hsinchu**	**1.61 247**	*e*P	**Pn**	**22 56 20.5**	**-0.3**			
	baz=257								
HSN				*e*S	**S**	**22 56 48.4**	**-2.2**		
	baz=257								
TWD	**Chiawan**	**1.63 214**	*i* P	**Pn**	**22 56 20.9**	**-0.1**			
	baz=213								
TWD				*i* S	**S**	**22 56 49.2**	**-1.8**		
	baz=213								
LIOB	**Emei**	**1.64 242**	P	**Pn**	**22 56 21.5**	**+0.4**			
	baz=245								
LIOB				*e*S	**S**	**22 56 49.8**	**-1.3**		
	baz=245								
NSTT	**Nanjuang**	**1.66 242**	P	**Pn**	**22 56 21.2**	**0.0**			
	baz=244								
NSTT				*e*S	**S**	**22 56 49.9**	**-1.5**		
	baz=244								
FUSS	**Fushou**	**1.71 227**	P	**Pn**	**22 56 22.7**	**+0.7**			
	baz=234								
FUSS				*e*S	**S**	**22 56 51.6**	**-1.0**		
	baz=234								
HWA	**Hwalien**	**1.71 212**	*i* P	**Pn**	**22 56 22.4**	**+0.8**			
	baz=209								
HWA				*i* S	**S**	**22 56 51.3**	**-0.9**		
	baz=209								
JKRS	**Kuro-shima**	**1.75 133**	P	**Pn**	**22 56 22.6**	**+0.6**			
JKRS			S	**S**	**22 56 51.4**	**-1.3**			
JKRS	**Kuro-shima**	**1.75 133**	A	A	22 56 22.6				
	comp=E,13nm,0.6s,comp=E,11nm,0.6s								
TWT	**Tachien**	**1.75 228**	*e*P	**Pn**	**22 56 22.8**	**+0.6**			
	baz=235								
TWT				*e*S	**S**	**22 56 52.8**	**-0.3**		
	baz=235								
HATJ	**Hateruma jima**	**1.75 141**	P	**Pn**	**22 56 22.8**	**+0.7**			
HATJ			S	**S**	**22 56 51.8**	**-1.1**			
HATJ	**Hateruma jima**	**1.75 141**	A	A	22 56 22.8				
	comp=E,8.0nm,2.3s,comp=E,13nm,2.0s								
JIJ	**Ishigaki jima**	**1.76 127**	P	**Pn**	**22 56 22.1**	**0.0**			
JIJ			S	**S**	**22 56 50.5**	**-2.5**			
JIJ	**Ishigaki jima**	**1.76 127**	A	A	22 56 22.1				
	comp=E,5.0nm,0.8s,comp=E,8.0nm,0.6s								
TDCB	**Techi**	**1.76 228**	*e*P	**Pn**	**22 56 22.9**	**+0.7**			
	baz=231								
JISG	**Ishigakijimahi**	**1.76 118**	P	**Pn**	**22 56 22.2**	**+0.2**			
JISG			S	**S**	**22 56 51.2**	**-1.8**			
JISG	**Ishigakijimahi**	**1.76 118**	A	A	22 56 22.2				
	comp=E,19nm,0.5s,comp=E,10.0nm,0.4s								
WHF	**Hehuan Shan**	**1.77 224**	*i* P	**Pn**	**22 56 23.3**	**+0.7**			
	baz=227								
WHF				*i* S	**S**	**22 56 53.0**	**-0.9**		
	baz=227								
NMLH	**Miaoli**	**1.87 242**	P	**Pn**	**22 56 23.2**	**+0.1**			
	baz=244								
NMLH				*e*S	**S**	**22 56 53.0**	**-1.7**		
	baz=244								
CHGB	**Renai**	**1.89 224**	P	**Pn**	**22 56 24.2**	**+0.8**			
	baz=226								
WHP	**Taichung City**	**1.89 233**	*i* P	**Pn**	**22 56 23.6**	**+0.2**			
	baz=236								
WHP				*i* S	**S**	**22 56 53.8**	**-1.4**		
	baz=236								
ESL	**Shilin**	**1.93 214**	*i* P	**Pn**	**22 56 23.2**	**-0.5**			
	baz=216								
ESL				*e*S	**S**	**22 56 53.4**	**-2.4**		
	baz=216								
NSY	**Sanyi**	**1.95 239**	P	**Pn**	**22 56 24.5**	**+0.7**			
	baz=237								
NSY				*e*S	**S**	**22 56 54.7**	**-1.4**		
	baz=237								
OWD	**Renai**	**1.96 222**	*i* P	**Pn**	**22 56 24.8**	**+0.7**			
	baz=229								
OWD				*i* S	**S**	**22 56 55.7**	**-0.7**		
	baz=229								
WUSB	**Renai**	**1.97 224**	*i* P	**Pn**	**22 56 24.8**	**+0.7**			
	baz=226								
WUSB				*e*S	**S**	**22 56 56.3**	**-0.3**		
	baz=226								
TWQ1	**Liyutan**	**1.98 237**	*e*P	**Pn**	**22 56 24.4**	**+0.3**			
	baz=234								
TWQ1				*e*S	**S**	**22 56 55.1**	**-1.4**		
	baz=234								
EGFH	**Guangfu**	**2.06 212**	*e*P	**Pn**	**22 56 23.9**	**-0.9**			
	baz=221								
EGFH				*e*S	**S**	**22 56 53.5**	**-4.3**		
	baz=221								
WCS	**Beigang Elemen**	**2.06 229**	*i* P	**Pn**	**22 56 25.3**	**+0.5**			
	baz=227								
WCS				S	**S**	**22 56 56.9**	**-0.9**		
	baz=227								
JTJ	**Tarama**	**2.06 112**	P	**Pn**	**22 56 25.7**	**+0.9**			
JTJ			S	**S**	**22 56 56.8**	**-1.0**			
JTJ	**Tarama**	**2.06 112**	A	A	22 56 25.7				
	comp=E,8.0nm,2.0s,comp=E,8.0nm,0.5s								
WDJ	**Dajia District**	**2.08 239**	*e*P	**Pn**	**22 56 25.3**	**+0.3**			
	baz=237								
WDJ				*e*S	**S**	**22 56 55.9**	**-2.3**		
	baz=237								
TCU	**Taichung**	**2.17 234**	*i* P	**Pn**	**22 56 25.8**	**0.0**			
	baz=236								
TCU				*e*S	**S**	**22 56 58.8**	**-0.9**		
	baz=236								
SMLT	**Sun Moon Lake**	**2.19 225**	P	**Pn**	**22 56 26.3**	**+0.2**			
	baz=228								
SMLT				*e*S	**S**	**22 56 59.3**	**-0.9**		
	baz=228								
TYC	**Yuchr**	**2.20 227**	P	**Pn**	**22 56 26.5**	**+0.4**			
	baz=229								
TYC				*e*S	**S**	**22 56 58.9**	**-1.3**		
	baz=229								
HGSD	**Ruisui**	**2.21 209**	*i* P	**Pn**	**22 56 26.6**	**+0.3**			
	baz=207								
HGSD				*e*S	**S**	**22 56 58.2**	**-2.3**		
	baz=207								
SSLB	**Suanglung**	**2.22 223**	Pn	**Pn**	**22 56 26.3**	**-0.1**			
SSLB	**Suanglung**	**2.22 223**	P	**Pn**	**22 56 26.9**	**+0.5**			
SSLB	**Suanglung**	**2.22 223**	P	**Pn**	**22 56 26.7**	**+0.3**			
	baz=225								
EHY	**Hungye**	**2.25 212**	*e*P	**Pn**	**22 56 26.3**	**-0.3**			
	baz=214								
WCHH	**Zhanghua**	**2.29 234**	P	**Pn**	**22 56 27.7**	**+0.6**			
	baz=236								
WCHH				*e*S	**S**	**22 57 00.3**	**-1.6**		
	baz=236								
WNT	**Mingjian**	**2.33 229**	P	**Pn**	**22 56 27.9**	**+0.5**			
	baz=224								
WNT				S	**S**	**22 57 01.3**	**-1.3**		
	baz=224								
WJS	**Zhushan**	**2.34 227**	P	**Pn**	**22 56 27.7**	**+0.1**			
	baz=236								
WJS				S	**S**	**22 57 01.3**	**-1.4**		
	baz=236								
YULB	**Yu-li**	**2.35 211**		**Pn**	**22 56 26.8**	**-0.9**			
YULB	**Yu-li**	**2.35 211**	P	**Pn**	**22 56 26.8**	**-0.9**			
	baz=213								
EYUL	**Yuli**	**2.38 210**	*e*P	**Pn**	**22 56 28.3**	**+0.3**			
	baz=216								
EYUL				*e*S	**S**	**22 57 00.4**	**-3.2**		
	baz=216								
JIRB	**Irabujima**	**2.41 104**	P	**Pn**	**22 56 29.1**	**+0.9**			
JIRB			S	**S**	**22 57 02.2**	**-1.6**			
JIRB	**Irabujima**	**2.41 104**	A	A	22 56 29.1				
	comp=E,6.0nm,1.3s,comp=E,7.0nm,2.5s								
JIKM	**Ikemajima**	**2.45 101**	P	**Pn**	**22 56 29.3**	**+0.7**			
JIKM			S	**S**	**22 57 03.6**	**-1.1**			
JIKM	**Ikemajima**	**2.45 101**	A	A	22 56 29.3				
	comp=E,7.0nm,0.8s,comp=E,9.0nm,2.5s								
YUS	**Yu-Shan**	**2.45 218**	P	**Pn**	**22 56 29.9**	**+0.7**			
	baz=217								
YUS				*e*S	**S**	**22 57 04.7**	**-1.0**		
	baz=217								
MATB	**Ma-tsu**	**2.50 287**	*e*P	**Pn**	**22 56 28.7**	**-0.4**			
	baz=286								
JMJ	**Miyako jima 2**	**2.52 104**	P	**Pn**	**22 56 31.4**	**+2.1**			
ALS	**Alishan**	**2.52 221**	*e*P	**Pn**	**22 56 30.1**	**+0.5**			
	baz=229								
ALS				*e*S	**S**	**22 57 06.5**	**-0.1**		
	baz=229								
FULB	**Fuli**	**2.52 208**	*e*P	**Pn**	**22 56 29.7**	**+0.2**			
	baz=210								
FULB				*e*S	**S**	**22 57 04.3**	**-1.9**		
	baz=210								
CHN5	**Tsauling**	**2.53 224**	*e*P	**Pn**	**22 56 30.1**	**+0.5**			
	baz=220								
CHN5				*e*S	**S**	**22 57 04.9**	**-1.5**		
	baz=220								
WRL	**Guolierlin Hig**	**2.53 233**	*i* P	**Pn**	**22 56 29.5**	**0.0**			
	baz=231								
WRL				S	**S**	**22 57 04.4**	**-1.9**		
	baz=231								
WDLH	**Douliu**	**2.56 228**	P	**Pn**	**22 56 30.1**	**+0.4**			
	baz=235								
WDLH				*e*S	**S**	**22 57 06.1**	**-0.7**		
	baz=235								
JMJ2	**Miyako jima3**	**2.57 105**	P	**Pn**	**22 56 30.9**	**+1.1**			
JMJ2			S	**S**	**22 57 05.7**	**-1.1**			
JMJ2	**Miyako jima3**	**2.57 105**	A	A	22 56 30.9				
	comp=E,5.0nm,2.0s,comp=E,6.0nm,6.4s								
JOGS	**Gusukube**	**2.63 104**	P	**Pn**	**22 56 31.6**	**+1.1**			
JOGS			S	**S**	**22 57 07.6**	**-0.4**			
JOGS	**Gusukube**	**2.63 104**	A	A	22 56 31.6				
	comp=E,5.0nm,1.0s,comp=E,6.0nm,0.7s								
XPSS	**Dashiqiu**	**2.63 305**	*e*P	**Pn**	**22 56 29.8**	**-0.6**			
	baz=303								
ELDTW	**Lidau**	**2.66 213**	P	**Pn**	**22 56 31.0**	**0.0**			
	baz=214								
ELDTW				*e*S	**S**	**22 57 05.6**	**-3.4**		
	baz=214								
WTK	**Tuku**	**2.66 230**	*i* P	**Pn**	**22 56 31.0**	**+0.2**			
	baz=231								
WTK				S	**S**	**22 57 07.3**	**-1.4**		
	baz=231								
CHN2	**Minshiung**	**2.71 226**	*e*P	**Pn**	**22 56 31.9**	**+0.6**			
	baz=228								
CHN2				*e*S	**S**	**22 57 07.8**	**-1.8**		
	baz=228								
EDH	**Donghe**	**2.72 206**	P	**Pn**	**22 56 31.4**	**-0.1**			
	baz=211								
CHN4	**Tsaushan**	**2.77 222**	P	**Pn**	**22 56 32.7**	**+0.7**			
	baz=223								
CHN4				*e*S	**S**	**22 57 10.3**	**-0.5**		
	baz=223								
CHY	**Chiayi**	**2.77 226**	*e*P	**Pn**	**22 56 32.1**	**+0.2**			
	baz=228								
CHY				*e*S	**S**	**22 57 09.0**	**-1.7**		
	baz=228								
TPUB	**Ta-pu**	**2.78 221**		**Pn**	**22 56 32.4**	**+0.2**			
TPUB	**Ta-pu**	**2.78 221**	P	**Pn**	**22 56 32.6**	**+0.4**			
TPUB	**Ta-pu**	**2.78 221**	P	**Pn**	**22 56 32.6**	**+0.4**			
	baz=222								
STYH	**Taoyuan**	**2.80 217**	P	**Pn**	**22 56 32.9**	**+0.6**			
	baz=218								
STYH				*e*S	**S**	**22 57 10.3**	**-1.1**		
	baz=218								
WSF	**Szhu**	**2.81 231**	P	**Pn**	**22 56 32.7**	**+0.3**			
	baz=229								
WSF				*e*S	**S**	**22 57 10.2**	**-1.3**		
	baz=229								
WTP	**Ta-pu**	**2.83 220**	P	**Pn**	**22 56 33.5**	**+0.8**			
	baz=222								
WTP				*e*S	**S**	**22 57 10.7**	**-1.4**		
	baz=222								
LONT	**Longtian**	**2.85 208**	*e*P	**Pn**	**22 56 32.1**	**-0.8**			
	baz=208								
WSL	**Shuilin Townsh**	**2.88 229**	*e*P	**Pn**	**22 56 33.6**	**+0.4**			
	baz=235								
WSL				*e*S	**S**	**22 57 11.5**	**-1.4**		
	baz=235								
TWK	**Hsinying**	**2.89 222**	P	**Pn**	**22 56 33.5**	**+0.1**			
	baz=219								
TWK				*e*S	**S**	**22 57 10.7**	**-2.6**		
	baz=219								
SNST	**Tainan City**	**2.92 222**	*e*P	**Pn**	**22 56 34.0**	**+0.4**			
	baz=218								
SNST				*e*S	**S**	**22 57 12.6**	**-1.2**		
	baz=218								
CHN1	**Nanshi**	**2.93 221**	*e*P	**Pn**	**22 56 34.2**	**+0.5**			
	baz=222								
CHN1				*e*S	**S**	**22 57 12.9**	**-1.1**		
	baz=222								
LDUT	**Ludao**	**2.94 201**	P	**Pn**	**22 56 34.0**	**+0.2**			
	baz=203								
LDUT				*e*S	**S**	**22 57 11.3**	**-2.8**		
	baz=203								
TWG	**Pinlang**	**2.95 209**		**Pn**	**22 56 32.6**	**-1.4**			
TWG	**Pinlang**	**2.95 209**	P	**Pn**	**22 56 33.5**	**-0.5**			
	baz=210								
TWG				*e*S	**S**	**22 57 11.9**	**-2.5**		
	baz=210								
TWGBT	**Beinan**	**2.95 208**	*e*P	**Pn**	**22 56 33.0**	**-1.0**			
	baz=209								
ICHU	**Yijhu**	**2.96 226**	*e*P	**Pn**	**22 56 34.1**	**+0.1**			
	baz=223								
ICHU				*e*S	**S**	**22 57 13.1**	**-1.3**		
	baz=223								
SGST	**Jiashian**	**2.98 219**	*e*P	**Pn**	**22 56 33.9**	**-0.5**			
	baz=224								
SGST				*e*S	**S**	**22 57 12.6**	**-2.4**		
	baz=224								
TTN	**Taitung**	**2.98 207**	*e*P	**Pn**	**22 56 34.9**	**+0.6**			
	baz=209								
CHN8	**Yiju**	**3.01 227**	*e*P	**Pn**	**22 56 35.0**	**+0.4**			
	baz=234								
CHN8				*e*S	**S**	**22 57 14.5**	**-1.0**		
	baz=234								
CHN3	**Shinhua**	**3.11 221**	*e*P	**Pn**	**22 56 36.8**	**+1.1**			
	baz=217								
SCLT	**Jiali**	**3.14 225**	*e*P	**Pn**	**22 56 35.7**	**-0.4**			
	baz=226								
SHHT	**Tainan City**	**3.16 221**	*e*P	**Pn**	**22 56 38.2**	**+1.9**			
	baz=222								
SCST	**Cishan**	**3.18 218**	P	**Pn**	**22 56 37.4**	**+0.9**			
	baz=218								
SCST				*e*S	**S**	**22 57 18.2**	**-0.9**		
	baz=218								
TAI1	**Yung-k'ang**	**3.22 223**	*e*P	**Pn**	**22 56 37.2**	**+0.3**			
	baz=224								
SSD	**Sandimen**	**3.22 214**	*e*P	**Pn**	**22 56 38.0**	**+0.9**			
	baz=222								
SSD				*e*S	**S**	**22 57 18.9**	**-0.9**		
	baz=222								
TSMG	**Majia**	**3.25 214**	*e*P	**Pn**	**22 56 38.6**	**+1.3**			
	baz=215								
TWM1	**Shoushan**	**3.27 218**	*e*P	**Pn**	**22 56 39.3**	**+1.7**			
	baz=219								
SGLT	**Jiouru**	**3.31 216**	*e*P	**Pn**	**22 56 40.3**	**+2.2**			
	baz=217								
MASBT	**Mashibuluo**	**3.34 213**	*e*P	**Pn**	**22 56 38.7**	**+0.4**			
	baz=214								
MASBT				*e*S	**S**	**22 57 21.0**	**-1.2**		
	baz=214								
PNG	**Penghu**	**3.34 237**	*e*P	**Pn**	**22 56 38.2**	**-0.1**			
	baz=234								
PHUB	**P'eng-hu**	**3.36 236**	*e*P	**Pn**	**22 56 38.2**	**-0.3**			
	baz=233								
EAST	**Anshuo**	**3.43 208**	*e*P	**Pn**	**22 56 40.0**	**+0.5**			
	baz=214								
TAW	**Tawu**	**3.44 207**	*e*P	**Pn**	**22 56 40.4**	**+1.0**			
	baz=208								
WDGT	**Dungji**	**3.45 232**	P	**Pn**	**22 56 40.2**	**+0.7**			
	baz=227								
TAWH	**Dawu Township**	**3.46 207**	*e*P	**Pn**	**22 56 40.6**	**+0.9**			
	baz=208								
TAWH				*e*S	**S**	**22 57 22.3**	**-2.3**		
	baz=208								
SSPT	**Xinbi**	**3.48 213**	*e*P	**Pn**	**22 56 41.2**	**+1.3**			
	baz=213								
LAY	**Lan-yu**	**3.51 196**	*e*P	**Pn**	**22 56 40.9**	**+0.5**			
	baz=194								
LYUB	**Lan-yu**	**3.54 195**	*e*P	**Pn**	**22 56 40.8**	**+0.2**			
	baz=197								
SCZT	**Fangliau**	**3.55 211**	*e*P	**Pn**	**22 56 40.2**	**-0.4**			
	baz=212								
SLIU	**Shizi**	**3.60 208**	*e*P	**Pn**	**22 56 42.0**	**+0.7**			
	baz=213								
QZH	**Quanzhou**	**3.67 263**	*i* P	**Pn**	**22 56 41.8**	**-0.2**			
QZH			S	**S**	**22 57 26.0**	**-2.9**			
QZH			smax	smax					
	comp=N,210nm,1.0s								
QZH			smax	smax					
	comp=E,71nm,0.9s								
WLCH	**Liuqiu**	**3.68 214**	*e*P	**Pn**	**22 56 44.2**	**+1.9**			
	baz=222								
TWK1	**Hengchun**	**3.84 206**	*e*P	**Pn**	**22 56 45.1**	**+0.9**			
	baz=211								
TWKBT	**Hengchun**	**3.84 206**	*e*P	**Pn**	**22 56 45.1**	**+1.0**			
	baz=212								
TSEB	**Hengchuen, Pin**	**3.85 204**	*e*P	**Pn**	**22 56 44.3**	**+0.1**			
	baz=211								
JKE	**Kume jima 2**	**3.87 76**	P	**Pn**	**22 56 44.4**	**-0.1**			
KNMB	**Chin-men Tao**	**3.94 257**	Pn	**Pn**	**22 56 44.5**	**-0.8**			
KNMB				S	**22 57 32.6**	**-2.3**			
KNMB	**Chin-men Tao**	**3.94 257**	*e*P	**Pn**	**22 56 44.8**	**-0.5**			
	baz=257								
JAGN	**Aguni-jima**	**4.33 74**	P	**Pn**	**22 56 49.5**	**-0.5**			
JAGN				*e*S	**S**	**22 57 40.7**	**-2.5**		
JJT3	**Tamagusuku3**	**4.72 80**	P	**Pn**	**22 56 54.7**	**0.0**			
JJT3				*e*S	**S**	**22 57 49.3**	**-2.6**		
JOW	**Kunigami**	**5.29 73**	P	**Pn**	**22 57 00.7**	**-1.0**			
	155nm,0.2s,baz=160,slow=11,SNR=114								
JOW			S	**S**	**22 57 58.5**	**-6.0**			
	51nm,0.2s,baz=119,slow=23,SNR=9.5								
JOW	**Kunigami**	**5.29 73**	Pn	**Pn**	**22 56 60.0**	**-1.7**			
JOW	**Kunigami**	**5.29 73**	P	**Pn**	**22 57 01.0**	**-0.6**			
KSCHJ	**Chungju**	**12.29 21**	P	**P**	**22 58 32.5**	**-0.5**			
INCN	**Inchon**	**12.49 15**	P	**P**	**22 58 34.6**	**-0.7**			
ENH	**Enshi**	**12.56 296**		**Pn**	**22 58 35.0**	**+1.4**			
LYN	**LuoYang**	**12.63 318**	⇓P	**P**	**22 58 38.6**	**+1.8**			
LYN			pmax	pmax					
	comp=Z,20nm,0.8s								
KSAR	**Wonju Array Be**	**12.79 19**		**Pn**	**22 58 35.2**	**-1.0**			
KSRS	**Korea Array**	**12.81 19**	P	**Pn**	**22 58 37.9**	**+1.5**			
	5.7nm,0.6s,baz=198,slow=11,SNR=23								
KS19	**Wonju Array Si**	**12.84 19**		**Pn**	**22 58 35.4**	**-1.5**			
JHS	**Saijyo**	**13.16 41**		**P**	**22 58 43.5**	**+0.7**			
JHS				S	**23 01 14.0**	**+7.2**			
QIZ	**Qiongzhong**	**13.42 244**	Pn	**Pn**	**22 58 44.1**	**-0.1**			
QIZ	**Qiongzhong**	**13.42 244**	P	**Pn**	**22 58 44.9**	**+0.7**			
QIZ			S	**S**	**23 01 12.1**	**-0.8**			
QIZ			pmax	pmax					
	comp=Z,16nm,1.7s								
QIZ			pmax	pmax					
	comp=Z,240nm,6.0s								
SEHB	**SEOHWA**	**13.66 19**		**Pn**	**22 58 45.9**	**-1.1**			
XAN	**Xi'an**	**14.64 309**	P	**P**	**22 59 01.4**	**+2.1**			
XAN			pmax	pmax					
	comp=Z,5.0nm,1.2s								
BJT	**Baijiatuau**	**15.51 341**	P	**P**	**22 59 08.7**	**0.0**			
BJT			IAmb	IAmb	22 59 13.1				
	comp=Z,8.4nm,0.8s								
MJAR	**Matsushiro Arr**	**17.34 47**	P	**P**	**22 59 29.0**	**+0.1**			
	comp=Z,2.0nm,0.8s,baz=237,slow=9.2

GTA	**Gaotai**	**23.67**	**312**	*eP*	**P**	**23 00 32.5**	**-0.4**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HIA	**Hailar**	**23.90**	**355**	P	**P**	**23 00 33.9**	**-0.8**
HIA				IAmb	IAmb	23 00 37.6	
	comp=Z,7.6nm,0.8s						
KLR	**Kul'dur**	**24.81**	**14**	P	**P**	**23 00 43.9**	**+1.0**
	comp=Z,14nm,0.8s,baz=226,slow=7.9,SNR=35						
KLR				PcP	**PcP**	**23 04 11.7**	**-0.6**
	comp=Z,1.4nm,0.7s,baz=160,slow=3.2,SNR=4.2						
	comp=Z,14nm,0.8s						
SBUM	**Sibu**	**24.94**	**205**	P	**P**	**23 00 45.5**	**+1.0**
SBUM				IAmb	IAmb	23 00 47.4	
	comp=Z,8.8nm,0.9s						
ULN	**Ulaanbaatar**	**25.53**	**335**	P	**P**	**23 00 49.2**	**-0.5**
ULN				IAmb	IAmb	23 00 50.6	
	comp=Z,8.0nm,0.9s						
SONM	**Songino Array**	**25.76**	**334**	P	**P**	**23 00 51.6**	**-0.1**
	comp=Z,11nm,0.9s,baz=145,slow=9.1,SNR=60						
SONM				PcP	**PcP**	**23 04 14.1**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=107,slow=4.8,SNR=3.3						
	comp=Z,11nm,0.9s						
SONM	**Songino Array**	**25.76**	**334**	P	**P**	**23 00 51.5**	**-0.1**
WMQ	**Urumqi**	**33.75**	**312**	*eP*	**P**	**23 02 02.6**	**+0.7**
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MK31	**Makanchi Array**	**38.37**	**314**	P	**P**	**23 02 40.3**	**-0.5**
MK31				IAmb	IAmb	23 02 41.6	
	comp=Z,8.5nm,1.1s						
MKAR	**Makanchi Array**	**38.37**	**314**	P	**P**	**23 02 40.6**	**-0.3**
	comp=Z,5.2nm,0.6s,baz=100,slow=10,SNR=62						
MKAR				pP	**pP**	**23 03 28.7**	**-1.1**
	comp=Z,0.9nm,0.6s,baz=100,slow=8.4,SNR=2.4						
MKAR				PcP	**PcP**	**23 04 49.0**	**-0.2**
	comp=Z,0.9nm,0.7s,baz=94,slow=4.9,SNR=4.9						
MKAR				ScP	**ScP**	**23 08 13.7**	**-0.5**
	comp=Z,1.0nm,0.8s,baz=101,slow=6.5,SNR=7.8						
	comp=Z,5.2nm,0.6s						
MKAR	**Makanchi Array**	**38.37**	**314**	P	**P**	**23 02 40.5**	**-0.4**
MAKZ	**Makanchi**	**38.57**	**314**	P	**P**	**23 02 42.2**	**-0.4**
MAKZ				IAmb	IAmb	23 02 43.4	
	comp=Z,11nm,1.0s						
MTN	**Manton Dam**	**38.94**	**167**	P	**P**	**23 02 45.3**	**-0.6**
ZAA0	**Zalesovo Array**	**39.92**	**326**	P	**P**	**23 02 52.5**	**-1.1**
ZAA0				IAmb	IAmb	23 02 53.4	
	comp=Z,9.5nm,0.7s						
ZALV	**Zalesovo Beam**	**39.92**	**326**	P	**P**	**23 02 52.6**	**-0.9**
	comp=Z,8.4nm,0.5s,baz=115,slow=8.6,SNR=40						
ZALV				pP	**pP**	**23 03 42.8**	**-0.1**
	comp=Z,2.2nm,0.8s,baz=110,slow=8.5,SNR=3.1						
	comp=Z,8.4nm,0.5s						
ZALV	**Zalesovo Beam**	**39.92**	**326**	P	**P**	**23 02 52.4**	**-1.1**
KURK	**Kurchatov**	**41.99**	**319**	P	**P**	**23 03 10.0**	**-0.4**
KURK				IAmb	IAmb	23 03 11.0	
	comp=Z,12nm,1.0s						
KURBB	**Kurchatov Arra**	**42.01**	**319**	P	**P**	**23 03 10.1**	**-0.4**
	comp=Z,7.7nm,0.8s,baz=110,slow=8.7,SNR=48						
	comp=Z,7.7nm,0.8s						
BTK	**Batken**	**45.32**	**302**	P	**P**	**23 03 37.5**	**+0.3**
GAR	**Garm**	**45.68**	**301**	P	**P**	**23 03 40.5**	**+0.4**
GAR				IAmb	IAmb	23 03 41.4	
	comp=Z,17nm,0.9s						
KK31	**Karatay Array**	**45.76**	**306**	P	**P**	**23 03 40.8**	**+0.3**
KKAR	**Karatay Array**	**45.76**	**306**	P	**P**	**23 03 40.5**	**0.0**
KKAR	**Karatay Array**	**45.76**	**306**	P	**P**	**23 03 40.5**	**0.0**
KKAR				IAmb	IAmb	23 03 41.9	
	comp=Z,2.4nm,0.4s						
WB0	**Warramunga Arr**	**46.37**	**165**	P	**P**	**23 03 45.1**	**-0.3**
WB0				IAmb	IAmb	23 03 46.8	
	comp=Z,8.2nm,0.8s						
TIXI	**Tiksi**	**46.38**	**3**	P	**P**	**23 03 44.1**	**-0.7**
TIXI				IAmb	IAmb	23 03 45.2	
	comp=Z,20nm,0.9s						
WRAB	**Tennant Creek**	**46.52**	**165**	P	**P**	**23 03 46.9**	**+0.3**
WRAB				IAmb	IAmb	23 03 48.0	
	comp=Z,8.5nm,0.7s						
WRA	**Warramunga Arr**	**46.52**	**165**	P	**P**	**23 03 47.3**	**+0.7**
	comp=Z,7.3nm,0.6s,baz=348,slow=8.6,SNR=73						
WRA				PcP	**PcP**	**23 05 15.1**	**-1.7**
	comp=Z,0.8nm,0.7s,baz=344,slow=4.0,SNR=3.2						
WRA				S	**S**	**23 10 16.1**	**-0.6**
	comp=Z,1.4nm,0.9s,baz=348,slow=13,SNR=5.6						
	comp=Z,7.3nm,0.6s						
WRA	**Warramunga Arr**	**46.52**	**165**	P	**P**	**23 03 46.8**	**+0.2**
WB2	**Warramunga Arr**	**46.53**	**165**	P	**P**	**23 03 47.2**	**+0.6**
WB2				IAmb	IAmb	23 03 48.1	
	comp=Z,10nm,0.7s						
CHGR	**Chuyangaron**	**46.58**	**300**	P	**P**	**23 03 46.8**	**-0.3**
CHGR				IAmb	IAmb	23 03 48.1	
	comp=Z,13nm,0.7s						
WR0	**Warramunga Arr**	**46.59**	**164**	P	**P**	**23 03 47.8**	**+0.7**
WR0				IAmb	IAmb	23 03 48.6	
	comp=Z,12nm,0.6s						
KBL	**Kabul**	**46.81**	**294**	P	**P**	**23 03 48.9**	**-0.1**
BRVK	**Borovoye**	**47.61**	**320**	P	**P**	**23 03 54.6**	**-0.1**
BRVK				IAmb	IAmb	23 03 55.5	
	comp=Z,14nm,1.1s						
NRIK	**Noril'sk**	**48.55**	**344**	P	**P**	**23 04 00.7**	**-0.8**
	comp=Z,5.2nm,0.6s,baz=112,slow=8.6,SNR=10.0						
NRIK				PcP	**PcP**	**23 05 23.0**	**-0.3**
	comp=Z,2.1nm,0.6s,baz=100,slow=6.1,SNR=2.7						
	comp=Z,5.2nm,0.6s						
NRIK	**Noril'sk**	**48.55**	**344**	P	**P**	**23 04 00.7**	**-0.8**
NRIK				IAmb	IAmb	23 04 01.6	
	comp=Z,8.0nm,0.9s						
AS31	**Alice Springs**	**50.02**	**166**	P	**P**	**23 04 13.7**	**+0.4**
ASAR	**Alice Springs**	**50.02**	**166**	P	**P**	**23 04 13.7**	**+0.4**
BILL	**Bilibino**	**50.08**	**20**	P	**P**	**23 04 12.7**	**-0.4**
KIWB	**Kanaga Island**	**52.17**	**43**	P	**P**	**23 04 28.4**	**-0.4**
GSTR	**Great Sitkin T**	**52.87**	**43**	P	**P**	**23 04 33.6**	**-0.3**
ABKAR	**Akbulak array**	**53.51**	**314**	P	**P**	**23 04 38.6**	**-0.1**
ABKAR				IAmb	IAmb	23 04 39.7	
	comp=Z,10nm,0.8s						
ARU	**Arti**	**54.90**	**322**	P	**P**	**23 04 47.9**	**-0.6**
GEYT	**Alibeck**	**55.29**	**300**	P	**P**	**23 04 52.1**	**+0.4**
GYA0B	**ALIBECK ARRAY**	**55.29**	**300**	P	**P**	**23 04 51.9**	**+0.2**
GYA0B				IAmb	IAmb	23 04 53.9	
	comp=Z,7.5nm,1.1s						
STKA	**Stephens Creek**	**59.81**	**161**	P	**P**	**23 05 23.8**	**+0.8**
	comp=Z,2.6nm,0.6s,baz=346,slow=7.1,SNR=8.3						
	comp=Z,2.6nm,0.6s						
L19K	**White Mountain**	**64.39**	**31**	P	**P**	**23 05 53.5**	**+0.5**
L19K				IAmb	IAmb	23 05 55.1	
	comp=Z,5.9nm,0.9s						
O18K	**Koktuh Hills**	**64.49**	**34**	P	**P**	**23 05 54.2**	**+0.5**
IMAR	**Indian Mountai**	**64.49**	**27**	P	**P**	**23 05 54.1**	**+0.5**
J20K	**Nowinta River**	**64.50**	**29**	P	**P**	**23 05 55.0**	**+1.3**
J20K				IAmb	IAmb	23 05 56.4	
	comp=Z,5.4nm,1.1s						
P18K	**Big Mountain,**	**64.53**	**34**	P	**P**	**23 05 54.8**	**+0.7**
K20K	**Telida**	**64.62**	**30**	P	**P**	**23 05 55.4**	**+0.8**
K20K				IAmb	IAmb	23 05 57.2	
	comp=Z,4.4nm,0.9s						
H21K	**Melozitna Rive**	**64.91**	**27**	P	**P**	**23 05 56.8**	**+0.5**
H21K				IAmb	IAmb	23 05 58.8	
	comp=Z,6.9nm,1.1s						
I21K	**Tanana**	**65.31**	**28**	P	**P**	**23 05 58.7**	**-0.2**
I21K				IAmb	IAmb	23 06 01.7	
	comp=Z,6.6nm,1.1s						
PPLA	**Purkeypile**	**65.53**	**30**	P	**P**	**23 06 02.1**	**+1.6**
ONI	**Oni**	**65.56**	**307**	P	**P**	**23 06 01.5**	**+0.5**
ONI				IAmb	IAmb	23 06 03.2	
	comp=Z,7.6nm,1.2s						
KBZ	**Khabaz**	**65.71**	**309**	P	**P**	**23 06 02.6**	**+0.8**
	comp=Z,4.8nm,0.9s,baz=108,slow=2.2,SNR=6.9						
	comp=Z,4.8nm,0.9s						
TOLK	**Toolik Lake Re**	**65.80**	**24**	P	**P**	**23 06 02.7**	**+0.7**
KIV	**Kislovodsk**	**65.81**	**309**	P	**P**	**23 06 02.5**	**-0.1**
MLY	**Manley**	**65.85**	**28**	P	**P**	**23 06 02.7**	**+0.3**
MLY				IAmb	IAmb	23 06 04.8	
	comp=Z,5.6nm,1.1s						
BPAW	**Bear Paw Mtn.**	**65.89**	**29**	P	**P**	**23 06 02.3**	**-0.4**
H23K	**Yukon River**	**66.22**	**27**	P	**P**	**23 06 05.3**	**+0.6**
H23K				IAmb	IAmb	23 06 08.3	
	comp=Z,5.8nm,0.9s						
SUA	**Susitna One**	**66.42**	**32**	P	**P**	**23 06 06.0**	**-0.1**
NEA2	**Nenana**	**66.63**	**28**	P	**P**	**23 06 07.3**	**0.0**
NEA2				IAmb	IAmb	23 06 10.4	
	comp=Z,4.2nm,0.9s						
MCK	**McKinley**	**66.84**	**29**	P	**P**	**23 06 08.7**	**0.0**
H24K	**Noodor Dome**	**66.90**	**27**	P	**P**	**23 06 09.2**	**+0.2**
MDM	**Murphy Dome**	**66.92**	**28**	P	**P**	**23 06 09.5**	**+0.3**
RND	**Reindeer**	**66.94**	**29**	P	**P**	**23 06 08.9**	**-0.4**
ILAR	**Eielson Array**	**67.52**	**28**	P	**P**	**23 06 12.5**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=269,slow=4.7,SNR=8.0						
	comp=Z,0.5nm,0.5s						
ILAR	**Eielson Array**	**67.52**	**28**	P	**P**	**23 06 11.5**	**-1.3**
HDA	**Harding Lake**	**67.56**	**28**	P	**P**	**23 06 12.5**	**-0.6**
DHY	**Denali Highway**	**67.66**	**29**	P	**P**	**23 06 13.8**	**-0.2**
BMAR	**Burnt Mountain**	**67.86**	**25**	P	**P**	**23 06 15.8**	**+0.8**
SCM	**Sheep Creek Mo**	**67.95**	**31**	P	**P**	**23 06 16.1**	**+0.4**
KOPT	**Kop Dagi**	**68.35**	**305**	P	**P**	**23 06 19.9**	**+1.0**
KOPT				IAmb	IAmb	23 06 22.2	
	comp=Z,9.5nm,1.2s						
RIDG	**Independent Ri**	**68.62**	**29**	P	**P**	**23 06 20.0**	**+0.2**
RIDG				IAmb	IAmb	23 06 21.7	
	comp=Z,5.7nm,1.1s						
KLU	**Klutina**	**68.68**	**31**	P	**P**	**23 06 20.1**	**-0.1**
KLU				IAmb	IAmb	23 06 21.4	
	comp=Z,2.8nm,0.7s						
DIV	**Divide**	**68.84**	**31**	P	**P**	**23 06 21.8**	**+0.6**
DIV				IAmb	IAmb	23 06 40.1	
	comp=Z,3.2nm,0.7s						
ARCES	**ARCESS Array B**	**68.87**	**338**	P	**P**	**23 06 20.9**	**-0.3**
	comp=Z,2.1nm,0.6s,baz=64,slow=8.3,SNR=8.9						
	comp=Z,2.1nm,0.6s						
SCRK	**Sand Creek**	**68.93**	**28**	P	**P**	**23 06 22.1**	**+0.4**
J26L	**Joseph Creek**	**68.97**	**28**	P	**P**	**23 06 21.2**	**-0.8**
J26L				IAmb	IAmb	23 06 22.5	
	comp=Z,2.9nm,0.8s						
GLB	**Gilahina Butte**	**69.67**	**31**	P	**P**	**23 06 26.5**	**+0.2**
GLB				IAmb	IAmb	23 06 29.8	
	comp=Z,2.6nm,0.6s						
K27K	**Chicken**	**69.72**	**28**	P	**P**	**23 06 26.9**	**+0.4**
K27K				IAmb	IAmb	23 06 29.6	
	comp=Z,4.8nm,0.9s						
M26K	**Nabesna, AK**	**69.78**	**30**	P	**P**	**23 06 27.5**	**+0.6**
M26K				IAmb	IAmb	23 06 28.4	
	comp=Z,4.0nm,0.7s						
VRDI	**Verde Repeater**	**69.90**	**31**	P	**P**	**23 06 28.7**	**+0.9**
L27K	**Beaver Creek,**	**70.11**	**29**	P	**P**	**23 06 29.2**	**+0.3**
L27K				IAmb	IAmb	23 06 32.3	
	comp=Z,4.1nm,0.9s						
BCAR	**Beaver Creek A**	**70.12**	**29**	P	**P**	**23 06 29.5**	**+0.5**
DAWY	**Dawson**	**70.84**	**27**	P	**P**	**23 06 32.7**	**-0.6**
DAWY				IAmb	IAmb	23 06 34.9	
	comp=Z,4.2nm,0.7s						
I29M	**Ogilvie Camp,**	**70.86**	**26**	P	**P**	**23 06 34.0**	**+0.7**
FINES	**FINESS Array B**	**71.02**	**330**	P	**P**	**23 06 34.2**	**-0.1**
	comp=Z,4.4nm,0.7s,baz=59,slow=5.8,SNR=36						
	comp=Z,4.4nm,0.7s						
EPYK	**Eagle Plains**	**71.14**	**25**	P	**P**	**23 06 35.0**	**0.0**
INK	**Inuvik**	**71.59**	**22**	P	**P**	**23 06 37.1**	**-0.4**
INK				IAmb	IAmb	23 06 38.8	
	comp=Z,5.1nm,0.8s						
M30M	**Minto, Yukon**	**72.45**	**29**	P	**P**	**23 06 43.9**	**+1.0**
AKASG	**Malin Array Be**	**72.80**	**318**	P	**P**	**23 06 44.5**	**-0.6**
	comp=Z,1.4nm,0.5s,baz=58,slow=6.2,SNR=14						
	comp=Z,1.4nm,0.5s						
BR131	**Keskin Array S**	**73.47**	**306**	P	**P**	**23 06 48.5**	**-0.9**
BR131				IAmb	IAmb	23 06 50.4	
	comp=Z,5.1nm,0.9s						
BRTR	**Keskin Array B**	**73.47**	**306**	P	**P**	**23 06 49.6**	**+0.2**
	comp=Z,2.0nm,0.8s,baz=100,slow=5.0,SNR=16						
BRTR				pP	**pP**	**23 07 45.0**	**-0.2**
	comp=Z,1.7nm,1.0s,baz=112,slow=5.9,SNR=5.0						
	comp=Z,2.0nm,0.8s						
BRTR	**Keskin Array B**	**73.47**	**306**	P	**P**	**23 06 49.2**	**-0.2**
CSS	**Mathiatis**	**75.34**	**302**	P	**P**	**23 06 60.0**	**-0.1**
CSS				IAmb	IAmb	23 07 00.8	
	comp=Z,7.7nm,0.9s						
TIRR	**Tirgusor**	**75.47**	**312**	P	**P**	**23 07 00.3**	**-0.3**
BORA	**Eskisehir**	**75.72**	**307**	P	**P**	**23 07 01.6**	**-0.7**
BORA				IAmb	IAmb	23 07 02.6	
	comp=Z,5.7nm,0.9s						
BUR08	**Bucovina Ar. S**	**76.36**	**316**	P	**P**	**23 07 05.0**	**-0.7**
BUR08				IAmb	IAmb	23 07 06.7	
	comp=Z,4.5nm,1.1s						
BURAR	**Bucovina Array**	**76.36**	**316**	P	**P**	**23 07 05.1**	**-0.6**
MLR	**Muntele Rosu**	**76.71**	**314**	P	**P**	**23 07 08.1**	**+0.3**
MLR				IAmb	IAmb	23 07 08.8	
	comp=Z,4.2nm,0.7s						
NC405	**NORSAR Array S**	**77.48**	**332**	P	**P**	**23 07 11.1**	**-0.5**
AKAS	**Kas**	**77.69**	**304**	P	**P**	**23 07 12.9**	**-0.6**
NB2	**NORSAR Subarra**	**77.72**	**332**	P	**P**	**23 07 12.5**	**-0.5**
	comp=Z,1.1nm,0.5s,baz=58,slow=5.6						
NOA	**NORSAR Array B**	**77.72**	**332**	P	**P**	**23 07 12.5**	**-0.5**
	comp=Z,1.5nm,0.6s,baz=55,slow=5.5,SNR=8.6						
	comp=Z,1.5nm,0.6s						
ALN	**Alexandroupoli**	**78.45**	**310**	P	**P**	**23 07 16.4**	**-0.8**
OJC	**Ojcow**	**78.54**	**320**	P	**P**	**23 07 17.4**	**-0.3**
OJC				IAmb	IAmb	23 07 18.6	
	comp=Z,7.4nm,0.8s						
RDO	**Rodhopi**	**78.70**	**310**	P	**P**	**23 07 18.1**	**-0.6**
KARP	**Karpathos**	**79.79**	**304**	P	**P**	**23 07 24.6**	**-0.1**
YKA	**Yellowknife Ar**	**81.32**	**23**	P	**P**	**23 07 32.5**	**+0.3**
	comp=Z,3.0nm,0.6s,baz=309,slow=5.3,SNR=11						
	comp=Z,3.0nm,0.6s						
THZ	**Tophouse**	**81.45**	**144**	P	**P**	**23 07 32.7**	**-0.5**
CLL	**Collm**	**81.83**	**323**	*i* P	**P**	**23 07 34.5**	**-0.6**
	comp=Z,9.0nm,1.2s						
CONA	**Conrad Observa**	**81.90**	**319**	*i* P	**P**	**23 07 35.8**	**+0.1**
	comp=Z,7.2nm,1.6s						
RPZ	**Rata Peaks**	**81.91**	**147**	P	**P**	**23 07 37.0**	**+1.5**
LBZ	**Lake Benmore**	**81.98**	**148**	P	**P**	**23 07 37.5**	**+1.7**
GERES	**GERESS Array B**	**82.69**	**321**	P	**P**	**23 07 39.6**	**-0.2**
	comp=Z,2.0nm,0.7s,baz=64,slow=3.7,SNR=18						
	comp=Z,2.0nm,0.7s						
GERES	**GERESS Array B**	**82.69**	**321**	P	**P**	**23 07 39.4**	**-0.4**
MOA	**Molln**	**82.87**	**320**	*i* P	**P**	**23 07 41.2**	**+0.6**
	comp=Z,4.0nm,0.8s						
ITM	**Ithomi**	**82.92**	**308**	P	**P**	**23 07 40.0**	**-1.0**
GRA1	**Grafenberg Arr**	**83.64**	**323**	P	**P**	**23 07 44.5**	**0.0**
GRA1				IAmb	IAmb	23 08 00.1	
	comp=Z,4.5nm,0.7s						
ABTA	**Abfaltersbach**	**84.46**	**320**	*eP*	**P**	**23 07 47.7**	**-1.1**
	comp=Z,3.0nm,0.7s						
WTTA	**Wattenberg**	**84.70**	**320**	*eP*	**P**	**23 07 49.9**	**-0.1**
	comp=Z,5.3nm,1.0s						
MOTA	**Moosalm**	**84.96**	**321**	*eP*	**P**	**23 07 51.1**	**-0.3**
	comp=Z,1.7nm,0.5s						
KEST	**Kesra**	**92.42**	**312**	P	**P**	**23 08 26.5**	**-0.2**
	comp=Z,2.6nm,0.8s,baz=123,slow=17,SNR=2.4						
	comp=Z,2.6nm,0.8s						
KEST	**Kesra**	**92.42**	**312**	IAmb	IAmb	23 08 28.2	
	comp=Z,5.1nm,1.0s						
NVAR	**Mina Array Bea**	**94.64**	**44**	P	**P**	**23 08 38.4**	**+1.4**
	comp=Z,1.3nm,0.8s,baz=286,slow=4.2,SNR=9.7						
	comp=Z,1.3nm,0.8s						
TROLL	**Troll, Antarti**	**123.14**	**199**	PKPdf	**PKiKP**	**23 14 11.0**	**+0.6**
SNAA	**Sanae**	**124.82**	**198**	PKPdf	**PKPdf**	**23 14 13.6**	**+0.3**
VNA1	**Neumayer--Stat**	**126.86**	**198**	PKPdf	**PKiKP**	**23 14 17.9**	**+0.3**
VNA3	**Neumayer Olymp**	**126.93**	**197**	PKPdf	**PKPdf**	**23 14 17.8**	**+0.5**

SKHL ***17*** *23:09:17.3±0.3, 42.90N×145.40E, h30km±3km, mb3.9/3*
JMA ***17*** *23:09:17.0±0.1, 43.0N±0.5×145.4E±0.6, h46km, MV3.0/38, OFF NEMURO PENINSULA*

ISC 17 23:09:16.6±1.7, 42.93N±0.08×145.44E±0.05, h45km±11km, n15, σ0^{s}37/28, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKHN	**Kushirohamanak**	**0.26**	**307**	*eP*	**Pn**	**23 09 25.2**	**+0.4**
JKHN				*eS*	**Sn**	**23 09 30.6**	**-0.1**
AKK	**Akkeshi**	**0.45**	**281**	*eP*	**Pn**	**23 09 27.0**	**+0.1**
AKK				*eS*	**Sn**	**23 09 34.1**	**-0.1**
NMR	**Nemuro--Hokkai**	**0.49**	**26**	*eP*	**Pn**	**23 09 27.3**	**-0.1**
NMR				*eS*	**Sn**	**23 09 34.7**	**-0.3**
NEM2	**Nemuro 2**	**0.49**	**27**	*eP*	**Pn**	**23 09 27.4**	**0.0**
NEM2				*eS*	**Sn**	**23 09 34.6**	**-0.4**
JAK	**Akkeshi**	**0.55**	**277**	*eP*	**Pn**	**23 09 28.2**	**+0.1**
JAK				*eS*	**Sn**	**23 09 36.6**	**+0.2**
GLVR	**Golovnino**	**0.81**	**4**	*eP*	**Pn**	**23 09 31.6**	**0.0**
GLVR				AMB	AMB	23 09 32.1	
	40nm,0.2s						
GLVR				*eS*	**Sn**	**23 09 42.4**	**-0.1**
GLVR				A	A	23 09 43.0	
	110nm,0.2s						
GLVR				A	A	23 09 43.0	
	460nm,0.2s						
JNK	**Nakash**	**0.84**	**321**	*eP*	**Pn**	**23 09 31.8**	**-0.3**
JNK				*eS*	**Sn**	**23 09 42.2**	**-1.1**
JNSB	**Nemuroshibetsu**	**0.90**	**340**	*eP*	**Pn**	**23 09 32.9**	**0.0**
JNSB				*eS*	**Sn**	**23 09 44.7**	**0.0**
JRA	**Rausu**	**1.03**	**347**	*eP*	**Pn**	**23 09 34.7**	**+0.1**
JRA				*eS*	**Sn**	**23 09 47.9**	**0.0**
YUK	**Yuzh-Kuril'sk**	**1.15**	**15**	*eP*	**Pn**	**23 09 36.7**	**+0.5**
YUK				AMB	AMB	23 09 37.3	
	110nm,0.4s						
YUK				*eS*	**Sn**	**23 09 51.2**	**+0.5**
YUK				A	A	23 09 51.9	
	310nm,0.2s						
YUK				A	A	23 09 51.9	
	290nm,0.2s						
JOB	**Onbets**	**1.18**	**269**	*eP*	**Pn**	**23 09 36.7**	**+0.1**
JOB				*eS*	**Sn**	**23 09 51.2**	**-0.2**
JAR	**Ashorobuto**	**1.28**	**287**	*eP*	**Pn**	**23 09 38.1**	**+0.2**
SHO	**Shikotan**	**1.38**	**47**	*eP*	**Pn**	**23 09 39.6**	**+0.2**
SHO				AMB	AMB	23 09 40.0	
	20nm,0.2s						
SHO				*eS*	**Sn**	**23 09 56.0**	**-0.5**
SHO				A	A	23 09 56.9	
	90nm,0.2s						
SHO				A	A	23 09 56.9	
	110nm,0.2s						
JTKR	**Abashiri--Toko**	**1.52**	**314**	*eP*	**Pn**	**23 09 42.0**	**+0.7**
JCH	**Churui**	**1.56**	**259**	*eP*	**Pn**	**23 09 41.8**	**0.0**
JCH				*eS*	**Sn**	**23 10 00.6**	**-0.2**

IDC ***17*** *23:15:42.6±0.6, 41.92S×105.06W, h0km, mb4.4/11, mbtmp4.4/11, MS3.8/13, Error ellipse: s-maj=22.0km s-min=17.5km az=150.0*
NEIC ***17*** *23:15:44.4±1.0, 41.98S±0.07×105.3W±0.1, h10km±1km, mb4.9/190, Error ellipse: s-maj=20.1km s-min=4.9km az=305.0*

ISC 17 23:15:43.9±0.4, 41.97S±0.07×105.16W±0.09, h10km, n253, σ0^{s}77/222, mb4.9/95, MS3.9/13, 27C-5D, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VA02	**Isla de Pascua**	**15.18**	**345**	Pn	**Pn**	**23 19 18.7**	**+0.3**
RPN	**Rapa Nui**	**15.20**	**346**	Pn	**Pn**	**23 19 19.0**	**+0.4**
H03S2	**Juan Fernandez**	**22.18**	**77**	T	T	23 43 48.9	
	baz=240						
H03S1	**Juan Fernandez**	**22.19**	**77**	T	T	23 43 44.9	
	baz=240						
H03S3	**Juan Fernandez**	**22.19**	**77**	T	T	23 43 43.7	
	baz=240						
VA04	**Juan Fernndez**	**22.34**	**77**	P	**P**	**23 20 41.3**	**-0.5**
LL07	**Hotel Espejo d**	**23.35**	**103**	P	**P**	**23 20 52.4**	**+0.2**
LL05	**Los Muermos**	**23.61**	**99**	P	**P**	**23 20 55.3**	**+0.5**
AY01	**Puyuhuapi**	**23.75**	**107**	P	**P**	**23 20 57.5**	**+1.4**
AY01				IAmb	IAmb	23 21 45.2	
	comp=Z,47nm,1.7s						
COYC	**Coyhaique**	**24.06**	**110**	P	**P**	**23 20 59.7**	**+0.5**
LL03	**Petrohue**	**24.45**	**99**	P	**P**	**23 21 03.3**	**+0.5**
LL03				IAmb	IAmb	23 21 05.8	
	comp=Z,44nm,0.9s						
LL02	**Futaleuf**	**24.47**	**104**	P	**P**	**23 21 03.8**	**+0.9**
LL04	**Puerto Octay**	**24.50**	**99**	P	**P**	**23 21 04.4**	**+1.1**
BI05	**Punta Hualpn**	**25.18**	**89**	P	**P**	**23 21 10.8**	**+1.6**
GO10	**Punta Arenas**	**25.35**	**128**	P	**P**	**23 21 12.1**	**+1.3**
PLCA	**Paso Flores**	**25.91**	**99**	P	**P**	**23 21 16.3**	**+0.2**
	comp=Z,4.6nm,0.8s,baz=258,slow=10,SNR=7.0						
PLCA				LR	LR	23 29 15.8	
	comp=Z,121nm,20.1s,baz=306,slow=32						
	comp=Z,4.6nm,0.8s						
PLCA	**Paso Flores**	**25.91**	**99**	P	**P**	**23 21 17.3**	**+1.2**
PLCA				IAmb	IAmb	23 21 19.7	
	comp=Z,35nm,1.6s						
PLCA	**Paso Flores**	**25.91**	**99**	*eP*	**P**	**23 21 17.9**	**+1.8**
PMSA	**Palmer Station**	**32.57**	**148**	LR	LR	23 31 54.1	
	comp=Z,146nm,20.9s,baz=80,slow=30						
PB15	**IPOC Station P**	**35.09**	**69**	P	**P**	**23 22 37.9**	**+0.4**
PB15				IAmb	IAmb	23 22 49.3	
	comp=Z,59nm,2.0s						
LVC	**Limon Verde**	**35.87**	**69**	P	**P**	**23 22 43.0**	**-1.4**
	comp=Z,4.0nm,0.8s,baz=120,slow=13,SNR=3.0						
LVC				LR	LR	23 33 52.6	
	comp=Z,183nm,18.4s,baz=333,slow=30						
	comp=Z,4.0nm,0.8s						
TA01	**Diego Aracena**	**36.37**	**65**	P	**P**	**23 22 49.0**	**+0.7**
TA01				IAmb	IAmb	23 23 28.2	
	comp=Z,37nm,1.4s						
PB01	**IPOC Station P**	**36.51**	**66**	P	**P**	**23 22 50.2**	**+0.6**
PB01				I

comp=Z,97nm,22.0s,baz=95,slow=29
NBLA Lagarto - SE 65.92 83 eP P 23 26 29.5 -0.8
MDP Montagnes des 66.85 59 LR LR 23 52 06.9
comp=Z,70nm,20.6s,baz=255,slow=33
TOSP Speyside 66.99 48 P P 23 26 38.2 +1.3
HPIG 68.56 360 P P 23 26 47.4 +0.6
HPIG IAmb IAmb 23 29 12.8
comp=Z,7.7nm,0.6s
KVTX Kingsville 69.49 7 P P 23 26 52.1 -0.2
RCBR Riachuelo 70.74 80 LR LR 23 56 00.4
comp=Z,93nm,18.3s,baz=334,slow=34
TXAR Lajitas Array 70.96 1 P P 23 27 00.7 -0.8
TX31 Lajitas Ar. Si 70.96 1 P P 23 27 00.2 -1.2
TX32 Lajitas Array 70.96 1 P P 23 27 00.2 -1.2
TX32 IAmb IAmb 23 27 04.1
comp=Z,16nm,1.7s
HKT Hockley 72.08 9 P P 23 27 09.4 +1.5
HKT IAmb IAmb 23 27 11.2
comp=Z,20nm,1.5s
JCT Junction City 72.26 5 P P 23 27 09.8 +0.6
JCT IAmb IAmb 23 27 11.0
comp=Z,17nm,1.0s
435B Jarrell 72.73 7 P P 23 27 13.0 +1.0
214A Organ Pipe Nat 73.90 353 P P 23 27 19.8 +1.0
214A IAmb IAmb 23 27 21.1
comp=Z,17nm,1.8s
WHTX Lake Whitney, 73.94 7 P P 23 27 20.1 +1.1
WHTX IAmb IAmb 23 28 50.9
comp=Z,12nm,0.7s
TUC Tucson 74.10 355 P P 23 27 21.1 +1.1
237A Washetta, Mont 74.11 8 P P 23 27 21.1 +1.1
121A Cookes Peak, D 74.18 358 P P 23 27 21.5 +0.8
CBX Cerro Bola 74.67 350 P P 23 27 23.6 +0.2
RMX La Rumorosa 74.88 350 P P 23 27 25.2 +0.5
RMX IAmb IAmb 23 27 26.6
comp=Z,19nm,1.5s
MSTX Muleshoe 75.60 2 P P 23 27 29.3 +0.5
MSTX IAmb IAmb 23 27 31.0
comp=Z,7.8nm,1.1s
BLYC Blythe 75.84 352 P P 23 27 30.8 +0.8
BLYC IAmb IAmb 23 27 32.4
comp=Z,14nm,1.6s
ELS Elsinore Mount 76.09 349 P P 23 27 31.8 +0.3
ELS IAmb IAmb 23 30 15.8
comp=Z,5.9nm,0.8s
WLAR White Oak Lake 76.10 10 P P 23 27 31.7 +0.2
WLAR IAmb IAmb 23 27 34.4
comp=Z,20nm,1.2s
X16A Lo Mia Camp, P 76.24 355 P P 23 27 33.5 +1.0
X18A Snowflake 76.26 356 P P 23 27 33.6 +1.0
X18A IAmb IAmb 23 27 35.0
comp=Z,7.2nm,1.0s
Z47A Carrollton 76.44 15 P P 23 27 33.7 +0.4
ANMO Albuquerque 76.55 359 P P 23 27 33.6 -0.6
W13A Hualapai Mount 77.11 353 P P 23 27 37.6 +0.2
WUAZ Wupatki 77.32 355 P P 23 27 39.0 +0.4
WUAZ IAmb IAmb 23 29 57.3
comp=Z,14nm,1.9s
GSC Goldstone, Bar 77.64 350 P P 23 27 41.2 +1.0
GSC IAmb IAmb 23 27 42.5
comp=Z,24nm,1.9s
BCW Bitter Crk WRg 77.65 348 P P 23 27 41.1 +0.8
BCW IAmb IAmb 23 27 42.8
comp=Z,14nm,0.9s
CCAC Calif City Air 77.65 349 P P 23 27 40.9 +0.6
CCAC IAmb IAmb 23 27 42.5
comp=Z,9.1nm,0.8s
W41B Gary Mavity, V 77.68 11 P P 23 27 41.4 +1.1
W41B IAmb IAmb 23 27 41.9
comp=Z,30nm,1.7s
WHAR Wooly Hollow 77.79 11 IAmb IAmb 23 27 43.9
comp=Z,9.7nm,1.0s
ISA Isabella, Lake 78.22 349 P P 23 27 44.6 +1.2
ISA IAmb IAmb 23 27 45.8
comp=Z,6.0nm,0.8s
U15A North Rim 78.30 354 P P 23 27 44.2 +0.1
QSM Queen of Sheba 78.30 350 P P 23 27 43.9 +0.1
GWY Greenwater Val 78.49 351 P P 23 27 45.9 +0.8
GWY IAmb IAmb 23 28 00.9
comp=Z,20nm,1.9s
HHAR Hobbs 78.55 9 IAmb IAmb 23 27 46.7
comp=Z,12nm,1.4s
SHPR Sheep Range 78.64 352 P P 23 27 46.4 +0.5
SHPR IAmb IAmb 23 27 48.3
comp=Z,26nm,1.9s
U38A Gravette 78.66 9 IAmb IAmb 23 27 48.2
comp=Z,10nm,1.4s
LCAR Lake Charles 78.72 12 IAmb IAmb 23 27 48.6
comp=Z,9.7nm,1.1s
T25A Trinidad 78.74 1 P P 23 27 47.2 +0.8
U40A Yellville 78.76 10 P P 23 27 46.6 +0.2
MVCO Mesa Verde 78.86 357 P P 23 27 48.1 +1.0
MVCO IAmb IAmb 23 27 49.1
comp=Z,8.1nm,0.9s
V48A Smith Brothers 79.14 15 IAmb IAmb 23 27 49.3
comp=Z,6.9nm,0.8s
PKCU Pink Cliffs 79.31 354 P P 23 27 49.8 +0.1
WVT Waverly 79.33 14 P P 23 27 49.7 +0.3
WVT IAmb IAmb 23 28 16.8
comp=Z,26nm,1.8s
S22A 4UR Ranch, Cre 79.35 359 P P 23 27 50.9 +1.0
S22A IAmb IAmb 23 27 52.2
comp=Z,25nm,1.9s
CCUT Cedar City 79.50 353 P P 23 27 51.2 +0.6
PRN Pahroc Range 79.52 352 P P 23 27 52.0 +1.4
SZCU Shurtz Canyon 79.52 354 P P 23 27 51.6 +0.9
SZCU IAmb IAmb 23 28 01.5
comp=Z,15nm,0.8s
CLTN Cedars of Leba 79.58 15 P P 23 27 51.3 +0.5
CLTN IAmb IAmb 23 30 21.7
comp=Z,30nm,1.8s
MGMO Mountain Grove 79.62 10 P P 23 27 52.1 +1.1
MGMO IAmb IAmb 23 27 53.5
comp=Z,39nm,1.9s
PV13 Radium Mtn., P 79.82 357 P P 23 27 52.9 +0.5
PV13 IAmb IAmb 23 27 54.1
comp=Z,21nm,1.8s
PV11 David Mesa, Pa 79.96 357 P P 23 27 53.5 +0.4
PV11 IAmb IAmb 23 27 54.7
comp=Z,41nm,1.8s
PV15 Paradox Valley 79.99 357 P P 23 27 53.5 +0.2
S39A Bolivar 80.02 10 IAmb IAmb 23 27 54.8
comp=Z,29nm,2.0s
U49A Red Boiling Sp 80.09 16 IAmb IAmb 23 27 54.5
comp=Z,15nm,0.7s
PV23 Carpenter Ridg 80.12 357 P P 23 27 54.6 +0.6
PV23 IAmb IAmb 23 27 55.9
comp=Z,8.9nm,1.0s
T47A Sharon Grove 80.30 15 P P 23 27 54.9 +0.3
T47A IAmb IAmb 23 27 55.7
comp=Z,37nm,1.7s
MSU Marysvale 80.36 354 P P 23 27 55.9 +0.6
TPH Tonopah 80.42 350 P P 23 27 56.6 +1.1
R11A Troy Canyon, C 80.50 352 P P 23 27 56.5 +0.5
R11A IAmb IAmb 23 30 27.5
comp=Z,12nm,1.5s
PSUT Pine Spring 80.52 353 P P 23 27 56.9 +0.8
Q24A Divide 80.56 0 P P 23 27 56.3 -0.1
KSCO Kaye Shedlock' 80.64 2 P P 23 27 57.0 +0.4
CCM Cathedral Cave 80.65 11 P P 23 27 57.2 +0.7
CCM IAmb IAmb 23 27 58.1
comp=Z,8.0nm,0.9s
Q16A Castle Valley 80.69 355 P P 23 27 57.7 +0.7
Q16A IAmb IAmb 23 27 58.9
comp=Z,38nm,1.9s
FVM French Village 80.70 12 IAmb IAmb 23 27 58.4
comp=Z,8.1nm,0.8s
LHV Little Huntoon 80.77 349 P P 23 27 57.9 +0.8
SMCO Snowmass 80.78 359 P P 23 27 57.6 -0.1
SMCO IAmb IAmb 23 28 03.8
comp=Z,15nm,1.6s
CMB Columbia Colle 80.83 348 P P 23 27 58.0 +0.4
CMB IAmb IAmb 23 27 59.7
comp=Z,13nm,1.6s
SRU San Rafael Swe 80.85 356 P P 23 27 58.7 +0.8
NV11 Mina Array Sit 80.89 350 P P 23 27 59.0 +1.0
NV11 IAmb IAmb 23 28 00.4
comp=Z,14nm,1.5s
NVAR Mina Array Bea 80.91 350 P P 23 27 59.3 +1.1
comp=Z,2.1nm,0.7s,baz=185,slow=7.1,SNR=14
comp=Z,2.1nm,0.7s
TMUT Trail Mountain 81.07 355 P P 23 27 59.4 +0.2
TMUT IAmb IAmb 23 28 01.0
comp=Z,9.4nm,0.8s
RYN Ryan 81.14 349 P P 23 27 59.7 +0.4
RYN IAmb IAmb 23 28 01.7
comp=Z,11nm,1.5s
P17A Butcher Ranch, 81.22 356 P P 23 27 59.6 -0.2
P18A Preston Nutter 81.35 356 P P 23 28 00.9 +0.3
KVN Kaiserville 81.50 350 P P 23 28 01.5 +0.2
YERR Yerington 81.59 349 P P 23 28 02.3 +0.5
O20A White River Ci 81.77 358 P P 23 28 03.2 +0.5
O20A IAmb IAmb 23 30 21.1
comp=Z,11nm,1.3s
NLU North Lily Min 81.79 355 P P 23 28 03.5 +0.6
NLU IAmb IAmb 23 28 05.0
comp=Z,26nm,1.9s
MPU Maple Canyon 81.82 355 P P 23 28 03.6 +0.7
MPU IAmb IAmb 23 28 04.9
comp=Z,15nm,1.7s
BLA Blacksburg 81.98 20 P P 23 28 04.5 +0.8
DUG Dugway, Tooele 82.08 354 P P 23 28 04.6 +0.3
RDMU Red Mountain 82.26 357 P P 23 28 05.2 -0.1
RDMU IAmb IAmb 23 30 54.3
comp=Z,5.5nm,0.6s
N23A Red Feather La 82.49 359 P P 23 28 06.0 -0.5
ORV Oroville 82.49 347 P P 23 28 06.9 +0.6
ORV IAmb IAmb 23 28 09.6
comp=Z,14nm,1.8s
BEKR Beckworth 82.62 348 P P 23 28 07.8 +0.7
BEKR IAmb IAmb 23 28 10.2
comp=Z,13nm,1.5s
BMN Battle Mountai 82.75 351 P P 23 28 08.2 +0.4
BMN IAmb IAmb 23 28 09.6
comp=Z,23nm,1.8s
ELK Elko 82.84 352 P P 23 28 08.5 +0.2
JSRW J. Sargeant Re 83.10 21 P P 23 28 09.2 -0.2
R58B Mineral 83.36 21 P P 23 28 10.2 -0.5
P51A Williamsport 83.52 17 P P 23 28 11.9 +0.4
KMRM Mail Ridge 83.53 346 P P 23 28 12.1 +0.4
HVU Hansel Valley 83.65 354 IAmb IAmb 23 28 13.5
comp=Z,13nm,1.7s
KHMM Horse Mountain 84.16 346 P P 23 28 16.2 +1.1
KHMM IAmb IAmb 23 28 17.3
comp=Z,11nm,1.0s
K22A Casper 84.25 359 P P 23 28 16.0 +0.5
K22A IAmb IAmb 23 28 17.3
comp=Z,12nm,1.1s
BW06 Boulder Array 84.45 357 P P 23 28 16.2 -0.3
BW06 IAmb IAmb 23 28 17.6
comp=Z,13nm,1.1s
PD31 Pinedale Array 84.45 357 P P 23 28 16.4 -0.2
PD31 IAmb IAmb 23 28 17.6
comp=Z,11nm,1.1s
PDAR Pinedale Array 84.45 357 P P 23 28 16.6 +0.1
comp=Z,4.6nm,0.8s,baz=164,slow=5.9,SNR=32
comp=Z,4.6nm,0.8s
AHID Auburn Hatcher 84.52 356 P P 23 28 17.2 +0.3
AHID IAmb IAmb 23 28 19.2
comp=Z,18nm,1.7s
L40A Anamosa 84.59 10 P P 23 28 17.8 +0.8
L40A IAmb IAmb 23 28 18.3
comp=Z,7.6nm,0.8s
MOD Modoc Plateau 84.60 349 P P 23 28 17.9 +0.6
MOD IAmb IAmb 23 28 19.2
comp=Z,20nm,1.6s
N49A Columbus Grove 84.67 16 P P 23 28 17.7 +0.3
WVOR Wild Horse Val 84.90 350 P P 23 28 19.2 +0.5
WVOR IAmb IAmb 23 28 20.9
comp=Z,8.3nm,0.9s
REDW Red Top Meadow 85.10 356 P P 23 28 20.1 +0.3
REDW IAmb IAmb 23 28 22.0
comp=Z,15nm,1.3s
L04D Klamath Falls 85.22 347 P P 23 28 20.9 +0.5
L04D IAmb IAmb 23 28 23.0
comp=Z,8.3nm,1.1s
K05A Summer Lake 85.50 348 P P 23 28 22.7 +1.0
HLID Hailey 85.56 353 IAmb IAmb 23 28 24.1
comp=Z,9.4nm,1.0s
JFWS Jewell Farm 85.56 11 P P 23 28 22.0 +0.2
JFWS IAmb IAmb 23 28 23.2
comp=Z,9.4nm,0.8s
ECSD EROS Data Cent 85.67 6 P P 23 28 22.4 +0.1
ECSD IAmb IAmb 23 28 23.6
comp=Z,8.4nm,0.9s
RSSD Black Hills 85.71 1 P P 23 28 23.6 +0.8
RSSD IAmb IAmb 23 28 24.1
comp=Z,7.4nm,1.1s
J08A Circle Bar Ran 85.78 350 P P 23 28 23.9 +0.8
J08A IAmb IAmb 23 28 25.2
comp=Z,16nm,1.7s
FLWY Flagg Ranch 85.81 356 P P 23 28 23.9 +0.6
FLWY IAmb IAmb 23 28 25.1
comp=Z,8.6nm,0.9s
I40A Norwalk 86.47 10 P P 23 28 26.2 -0.1
I40A IAmb IAmb 23 28 27.6
comp=Z,9.5nm,0.8s
I07A Izee 86.63 350 P P 23 28 28.6 +1.3
I07A IAmb IAmb 23 28 46.6
comp=Z,7.9nm,1.2s
RLMT Red Lodge 86.79 357 P P 23 28 28.4 +0.3
RLMT IAmb IAmb 23 28 32.2
comp=Z,12nm,1.5s
BMO Blue Mountains 87.12 351 P P 23 28 30.0 +0.5
BMO IAmb IAmb 23 28 32.1
comp=Z,7.9nm,1.6s
BOZ Bozeman (W) 87.38 355 P P 23 28 31.4 +0.6
BOZ IAmb IAmb 23 28 33.7
comp=Z,7.0nm,1.4s
G40A Rib Lake 87.88 11 IAmb IAmb 23 28 34.4
comp=Z,9.3nm,1.1s
E43A Lone Tree Farm 89.44 12 P P 23 28 40.8 +0.4
H01W1 Cape Leeuwin H 95.44 212 T T 01 15 53.9
baz=151,slow=76,SNR=5.5
H01W2 Cape Leeuwin H 95.44 212 T T 01 15 54.7
baz=151,slow=76,SNR=6.2
H01W3 Cape Leeuwin H 95.46 212 T T 01 15 55.1
baz=151,slow=76,SNR=6.4
H11S2 WAKE ISLAND Hyl 00.78 285 T T 01 21 38.2
baz=131,slow=76,SNR=7.9
H11S1 WAKE ISLAND Hyl 00.79 285 T T 01 21 40.0
baz=131,slow=76,SNR=5.2
H11S3 WAKE ISLAND Hyl 00.79 285 T T 01 21 39.7
baz=131,slow=76,SNR=8.3
ESDC Sonseca Array 122.37 64 PKP **PKiKP 23 34 39.3 +0.1**
comp=Z,0.7nm,0.8s,baz=274,slow=2.0,SNR=5.2
PETK Petropavlovsk- 125.97 312 PKP **PKPdf 23 34 44.6 -0.7**
comp=Z,0.9nm,0.5s,baz=157,slow=8.0,SNR=3.9
GERES GERESS Array B 137.56 59 PKP **PKPdf 23 35 08.0 +0.5**
comp=Z,0.9nm,0.7s,baz=236,slow=1.8,SNR=6.4
LTVH Ltavrtes, Hu 142.58 63 ⇑P PKPdf 23 35 16.8 +0.3
LOT Lotru 143.43 67 ⇑P PKPdf 23 35 18.2 0.0
ARR Arges 144.00 67 ⇑P PKPbc 23 35 17.4 +0.3
VOIR 144.30 67 ⇑P PKPbc 23 35 18.4 +0.3
DOPR Dopca 144.65 66 ⇑P PKPbc 23 35 19.1 +0.1
SGRR Singureni 144.66 69 ⇑P PKPab 23 35 18.5 -0.4
BURAR Bucovina Array 144.83 63 ⇑P PKPbc 23 35 20.2 +0.5
OZUR 144.94 66 ⇑P PKPab 23 35 19.9 -0.2
SULR 144.97 69 ⇑P PKPab 23 35 19.3 -0.8
FINES FINESS Array B 145.14 39 PKPbc **PKPbc 23 35 19.5 -0.6**
comp=Z,9.4nm,0.7s,baz=277,slow=2.7,SNR=41
NEHR Nehoiu 145.16 67 ⇑P PKPbc 23 35 20.7 0.0
COVR Voineasa-Covas 145.18 67 ⇑P PKPbc 23 35 20.6 -0.2
ISR Istrita 145.26 68 ⇑P PKPbc 23 35 20.1 -1.0
LEHL Lehliu 145.31 69 ⇑P PKPbc 23 35 20.6 -0.6
BIZ Bicaz 145.31 65 ⇓P PKPdf 23 35 21.5 +0.2
BISRR Bisoca 145.47 67 ⇓P PKPab 23 35 22.1 +0.1
RASA Rasa 145.48 70 ⇑P PKPdf 23 35 21.5 -0.2
PLOR Plostina 145.49 67 ⇑P PKPdf 23 35 19.6 -2.1
PGOR Pogoanele 145.52 69 ⇓P PKPdf 23 35 19.9 -1.8
VRI Vrincioaia 145.54 67 ⇑P PKPdf 23 35 21.5 -0.2
TESR Tescani 145.61 66 ⇑P PKPdf 23 35 21.2 -0.7
GHRR 146.04 67 ⇑P PKPbc 23 35 23.3 -0.1
HARR Harsova 146.13 69 ⇑P PKPdf 23 35 23.0 +0.2
CFR Carcaliu 146.38 68 ⇑P PKPbc 23 35 24.2 -0.2
VASR Vaslui 146.41 66 ⇑P PKPbc 23 35 24.2 -0.3
TIRR Tirgusor 146.42 70 ⇑P PKPbc 23 35 24.2 -0.4
TPGR Topolog 146.51 69 ⇑P PKPdf 23 35 23.7 +0.2
TLCR 146.85 69 ⇑P PKPdf 23 35 24.1 +0.1
SORM Soroca 147.00 63 ⇑P PKPbc 23 35 25.3 -0.8
MILM Milestii Mici 147.14 65 ⇑P PKPbc 23 35 26.2 -0.4
AKASG Malin Array Be 147.77 58 PKPbc **PKPbc 23 35 27.1 -1.0**
comp=Z,5.7nm,0.6s,baz=272,slow=3.1,SNR=36
PURM Purcari 147.81 66 ⇓P PKPdf 23 35 26.1 +0.6
CMAR Chiang Mai Arr 148.85 229 PKPbc **PKPbc 23 35 32.5 +0.5**
comp=Z,2.3nm,0.7s,baz=192,slow=2.3,SNR=15
BRTR Keskin Array B 148.97 80 PKPbc **PKPbc 23 35 31.9 0.0**
comp=Z,2.6nm,0.8s,baz=208,slow=3.7,SNR=17
BRTR Keskin Array B 148.97 80 PKPdf 23 35 27.4 -0.4
LYN LuoYang 149.72 268 *e*PKPbc **PKPbc 23 35 33.5 -0.2**
LYN pmax pmax
comp=Z,20nm,1.0s
DIKM Dikmen 150.68 77 ⇓P PKPdf 23 35 26.1 -4.2
NRIK Noril'sk 151.77 350 PKPbc **PKPbc 23 35 37.4 -0.1**
comp=Z,1.1nm,0.4s,baz=100,slow=3.5,SNR=4.1
OBN Obninsk 151.85 49 ⇑P PKPbc 23 35 37.3 -0.7
XAN Xi'an 152.14 265 PKPbc **PKPbc 23 35 39.1 -0.4**
XAN pPKP PKPab 23 35 47.0 -2.2
PZH PanZhiHua 153.08 244 PKPbc **PKPdf 23 35 33.6 -1.0**
KBZ Khabaz 156.59 75 PKP **PKPdf 23 35 39.0 +0.4**
comp=Z,2.1nm,0.7s,baz=134,slow=0.8,SNR=6.6
SONM Songino Array 157.00 296 PKPab **PKPab 23 36 09.5 -0.1**
comp=Z,3.4nm,0.8s,baz=112,slow=3.1,SNR=15
ZALV Zalesovo Beam 166.29 334 PKP **PKPdf 23 35 46.5 -1.9**
comp=Z,0.6nm,0.5s,baz=159,slow=4.3,SNR=4.5
ZALV Zalesovo Beam 166.29 334 PKPdf 23 35 46.0 -2.5
MKAR Makanchi Array 172.81 315 PKPab **PKPab 23 37 19.5 +0.6**
comp=Z,0.7nm,0.8s,baz=76,slow=1.7,SNR=4.9
KSH Kashi 177.40 200 PKP **PKPdf 23 35 55.1 +0.8**

IDC 17 23:37:58.2±3.5, 3.72S×138.70E, h0km, mb3.7/2, mbtmp3.7/3, ML3.8/1, Error ellipse: s-maj=126.3km s-min=33.9km az=91.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.67**	**194**	Pn	Pn	23 41 54.1	+0.6
	0.3nm,0.3s,baz=18,slow=12,SNR=18						
WRA				Sn	Sn	23 45 00.2	+0.8
	0.1nm,0.3s,baz=16,slow=22,SNR=3.1						
	1.2nm,0.6s						
SONM	**Songino Array**	**58.62**	**335**	P	P	23 47 58.3	+1.0
	0.2nm,0.4s,baz=145,slow=5.3,SNR=2.4						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**70.58**	**323**	P	P	23 49 14.8	-0.6
	0.7nm,0.5s,baz=107,slow=7.4,SNR=11						
	0.7nm,0.5s						

*IDC **17** 23:50:10.4±0.9, 36.34N×140.76E, h0km, mb3.8/10, mbtmp3.8/15, ML2.5/3, MS3.4/5, Error ellipse: s-maj=20.2km s-min=16.3km az=90.0*
*NEIC **17** 23:50:13.3±1.3, 36.38N±0.01×140.84E±0.04, h15km±5km, mb4.3/12, Error ellipse: s-maj=5.0km s-min=1.0km az=105.0*
*NIED **17** 23:50:14.3, 36.39N×140.76E, h25km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr0.08; Mθθ-0.51; Mφφ0.43; Mrθ-0.02; Mθφ-0.89; Mφr0.50; Fault plane solution: M₀1.12000×10¹⁵ NP1: φs282.00000°, δ65.00000°, λ172.00000°. NP2: φs15.00000°, δ83.00000°, λ26.00000°.*
*JMA **17** 23:50:14.3±0.1, 36.4N±0.2×140.8E±0.5, h25km, MD4.2/40, MV4.4/40, E OFF IBARAKI PREF*
JMA Felt III J1 at E OFF IBARAKI PREF .

ISC 17 23:50:13.2±1.4, 36.39N±0.03×140.82E±0.05, h17km±9km, n85, σ0°92/67, mb4.0/16, MS3.7/3, 10D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHYU	**Hitachinakayam**	**0.19**	**255**	⇓P	**Pb**	**23 50 19.2**	**+1.0**
JHYU				⇓S	**Sb**	**23 50 22.3**	**+0.6**
JHYU	**Hitachinakayam**	**0.19**	**255**	A	A	23 50 19.2	
	comp=E,67nm,0.3s,comp=E,365nm,0.2s						
JHO	**Hitachi**	**0.30**	**318**	⇓P	**Pb**	**23 50 20.7**	**+0.6**
JHO				⇓S	**Sb**	**23 50 25.3**	**+0.5**
JHO	**Hitachi**	**0.30**	**318**	A	A	23 50 20.7	
	comp=E,11nm,1.0s,comp=E,15nm,0.4s						
JIHU	**Itakohorinouch**	**0.48**	**209**	P	Pn	**23 50 24.4**	**-1.0**
JIHU	**Itakohorinouch**	**0.48**	**209**	A	A	23 50 24.4	
	comp=E,149nm,1.0s,comp=E,60nm,0.8s						
JYT	**Yasato**	**0.53**	**252**	Pg	**Pb**	**23 50 24.1**	**+0.1**
JYT				Sg	**Sb**	**23 50 30.4**	**-1.0**
JYT	**Yasato**	**0.53**	**252**	P	**Pb**	**23 50 24.1**	**+0.1**
JYT				S	**Sb**	**23 50 30.7**	**-0.7**
JYT	**Yasato**	**0.53**	**252**	A	A	23 50 24.1	
	comp=Z,14nm,0.3s,comp=Z,40nm,0.3s,comp=Z,41nm,0.3s						
CHOJ	**Chosi**	**0.69**	**177**	A	A	23 50 27.3	
	comp=E,20nm,3.3s,comp=E,9.0nm,0.8s						
ONAJ	**Iwakimizuishiy**	**0.71**	**359**	⇓P	**Pg**	**23 50 27.3**	**+0.2**
ONAJ				⇓S	**Sg**	**23 50 36.6**	**0.0**
ONAJ	**Iwakimizuishiy**	**0.71**	**359**	A	A	23 50 27.3	
	comp=E,9.0nm,0.4s,comp=E,5.0nm,0.3s						
JFFD	**Fukushimafurud**	**0.73**	**344**	A	A	23 50 27.9	
	comp=E,8.0nm,1.3s,comp=E,7.0nm,0.5s						
JSMT	**Sammumatsuo**	**0.80**	**202**	P	**Pb**	**23 50 29.1**	**+0.4**
JSMT	**Sammumatsuo**	**0.80**	**202**	A	A	23 50 29.1	
	comp=E,44nm,1.1s,comp=E,29nm,1.5s						
JSB	**Shiboa**	**0.92**	**309**	⇓P	**Pn**	**23 50 31.1**	**-0.3**
JSB				⇓S	**Sn**	**23 50 43.3**	**-1.0**
JSB	**Shiboa**	**0.92**	**309**	A	A	23 50 31.1	
	comp=E,27nm,0.8s,comp=E,38nm,1.0s						
JFK	**Kawauchi**	**0.97**	**3**	⇓P	**Pb**	**23 50 31.0**	**-0.7**
JFK				⇓S	**Sb**	**23 50 43.5**	**-0.8**
JCN	**Nagara**	**1.09**	**207**	A	A	23 50 33.5	
	comp=E,20nm,2.1s,comp=E,13nm,0.8s						
JAG	**Ashikaga**	**1.10**	**272**	P	**Pb**	**23 50 32.5**	**-1.3**
JAG				S	**Sb**	**23 50 46.6**	**-1.3**
JAG	**Ashikaga**	**1.10**	**272**	A	A	23 50 32.5	
	comp=E,6.0nm,0.4s,comp=E,8.0nm,0.3s						
TOK	**Tokyo**	**1.11**	**231**	A	A	23 50 33.6	
	comp=E,10.0nm,2.9s,comp=E,14nm,1.7s						
JFT	**Otama**	**1.19**	**341**	P	**Pb**	**23 50 35.7**	**+0.3**
JFT				S	**Sb**	**23 50 50.9**	**+0.5**
JFT	**Otama**	**1.19**	**341**	A	A	23 50 35.7	
	comp=E,16nm,0.7s,comp=E,11nm,0.8s						
JKT	**Katashina**	**1.32**	**287**	A	A	23 50 36.8	
	comp=E,11nm,0.3s,comp=E,9.0nm,0.6s						
JMST	**Minamisoumatoc**	**1.33**	**2**	A	A	23 50 37.8	
	comp=E,3.0nm,0.4s,comp=E,3.0nm,7.5s						
JFY	**Yanaizu**	**1.35**	**319**	A	A	23 50 37.6	
	comp=N,2.0nm,3.9s						
JHU	**Hanno**	**1.35**	**247**	A	A	23 50 37.3	
	comp=E,2.0nm,1.1s,comp=E,2.0nm,3.6s						
JMM	**Marumori**	**1.47**	**359**		Pn	**23 50 39.0**	**0.0**
JMM	**Marumori**	**1.47**	**359**	A	A	23 50 39.9	
	comp=E,4.0nm,0.5s,comp=E,4.0nm,7.1s						
JYO	**Yokosk**	**1.49**	**219**	A	A	23 50 39.6	
	comp=E,6.0nm,4.1s						
JRY	**Ryogami san**	**1.59**	**257**	A	A	23 50 40.9	
	comp=E,4.0nm,6.0s,comp=E,3.0nm,3.2s						
JYAR	**Yonezawaarcadi**	**1.61**	**341**	A	A	23 50 41.7	
	comp=E,4.0nm,2.2s,comp=E,6.0nm,3.7s						
JGK	**Kuni**	**1.76**	**276**	A	A	23 50 43.4	
	comp=E,7.0nm,1.1s,comp=E,6.0nm,1.2s						
JYS	**Shirataka**	**1.92**	**342**	A	A	23 50 46.3	
	comp=E,7.0nm,5.7s,comp=E,3.0nm,0.6s						
JOU	**Okura**	**1.98**	**356**	A	A	23 50 47.2	
	comp=E,5.0nm,0.9s,comp=E,6.0nm,0.8s						
JIZZ	**Izumozaki**	**2.04**	**305**	A	A	23 50 47.6	
	comp=E,7.0nm,3.0s,comp=E,7.0nm,2.4s						
MJAR	**Matsushiro Arr**	**2.11**	**275**	Pn	**Pn**	**23 50 46.7**	**-1.0**
	3.9nm,0.3s,baz=115,slow=11,SNR=107						
MJAR				Sn	**Sn**	**23 51 14.3**	**+0.7**
	14nm,0.3s,baz=86,slow=6.3,SNR=7.2						
	25nm,0.4s						
MJAR	**Matsushiro Arr**	**2.11**	**275**		**Pn**	**23 50 46.9**	**-0.9**
MAJO	**Matsushiro**	**2.11**	**275**		**Pn**	**23 50 48.2**	**+0.5**
MJB9	**Matsu-Tunnel**	**2.11**	**275**		**Pn**	**23 50 48.0**	**+0.2**
JYA	**Atsumi**	**2.37**	**339**	A	A	23 50 52.7	
	comp=E,6.0nm,1.9s,comp=E,6.0nm,0.8s						
JSD	**Sado**	**2.62**	**310**		**Pn**	**23 50 57.0**	**+2.2**
JGF	**Kuroka**	**2.92**	**255**	Pn	**Pn**	**23 51 00.4**	**+1.6**
INU	**Inuyama**	**3.26**	**253**	Pn	**Pn**	**23 51 04.6**	**+1.1**
JHJ	**Hachijo jima 2**	**3.37**	**195**	Pn	**Pn**	**23 51 05.6**	**+0.5**
	83nm,0.3s,baz=326,slow=23,SNR=14						
JHJ				Sn	**Sn**	**23 51 45.9**	**+1.2**
	49nm,0.3s,baz=247,slow=24,SNR=6.1						
JHJ2	**Mitsune**	**3.37**	**194**	Pn	**Pn**	**23 51 05.4**	**+0.3**
JTM	**Tenmabayashi**	**4.39**	**2**	Pn	**Pn**	**23 51 20.9**	**+1.8**
ERM	**Erimo**	**5.90**	**17**		**Pn**	**23 51 39.0**	**-0.9**
JHS	**Saijyo**	**6.42**	**260**	Pn	**Pn**	**23 51 48.8**	**+1.8**
JCJ	**Chichijima**	**9.34**	**172**	Pn	**Pn**	**23 52 24.8**	**-2.2**
	29nm,0.3s,baz=290,slow=18,SNR=4.6						
JCJ				Sn	Sn	23 54 01.7	-10
	3.7nm,0.3s,baz=96,slow=22,SNR=1.7						
JCJ				LR	LR	23 55 59.2	
	comp=Z,83nm,21.5s,baz=358,slow=38						
JCJ	**Chichijima**	**9.34**	**172**	Pn	**Pn**	**23 52 25.2**	**-1.8**
USRK	**Ussuriysk Ar.**	**10.30**	**322**	Pn	**Pn**	**23 52 40.4**	**+0.2**
	baz=126,slow=13,SNR=1.9						
	1.1nm,0.7s						

KSRS	**Korea Array**	**10.38**	**280**	Pn		**Pn**	**23 52 41.9**	**+0.7**
	0.1nm,0.3s,baz=90,slow=14,SNR=2.0							
KSRS				LR		LR	23 56 39.3	
	comp=Z,76nm,18.6s,baz=110,slow=38							
	0.8nm,0.5s							
SEY	**Seymchan**	**27.51**	**11**	P		**P**	**23 55 59.3**	**+0.8**
	0.4nm,0.3s,baz=11,slow=23,SNR=1.6							
	0.4nm,0.3s							
SONM	**Songino Array**	**27.75**	**305**	P		**P**	**23 55 59.4**	**-1.6**
	0.6nm,0.6s,baz=108,slow=8.6,SNR=4.9							
	0.6nm,0.6s							
SONM	**Songino Array**	**27.75**	**305**	P		**P**	**23 56 00.9**	**-0.1**
KIWB	**Kanaga Island**	**33.38**	**49**	P		**P**	**23 56 50.2**	**-0.2**
ZAA0	**Zalesovo Array**	**42.00**	**313**	P		**P**	**23 58 02.7**	**-0.5**
ZAA0				IAmb		IAmb	23 58 12.9	
	comp=Z,2.2nm,0.8s							
ZALV	**Zalesovo Beam**	**42.00**	**313**	P		**P**	**23 58 02.4**	**-0.9**
	comp=Z,1.8nm,0.6s,baz=103,slow=6.2,SNR=8.8							
	comp=Z,1.8nm,0.6s							
ZALV	**Zalesovo Beam**	**42.00**	**313**	P		**P**	**23 58 02.9**	**-0.4**
MKAR	**Makanchi Array**	**44.06**	**303**	P		**P**	**23 58 19.4**	**-0.7**
	comp=Z,0.8nm,0.8s,baz=86,slow=8.9,SNR=6.6							
	comp=Z,0.8nm,0.8s							
MKAR	**Makanchi Array**	**44.06**	**303**	P		**P**	**23 58 20.1**	**+0.1**
MAKZ	**Makanchi**	**44.27**	**303**	P		**P**	**23 58 21.5**	**-0.3**
MAKZ				IAmb		IAmb	23 58 40.9	
	comp=Z,4.6nm,1.4s							
KURK	**Kurchatov**	**45.95**	**309**	P		**P**	**23 58 34.7**	**-0.3**
KURK				IAmb		IAmb	23 58 45.1	
	comp=Z,3.6nm,0.8s							
IMAR	**Indian Mountai**	**47.45**	**30**	P		**P**	**23 58 47.3**	**+0.7**
ILAR	**Eielson Array**	**50.29**	**32**	P		**P**	**23 59 09.4**	**+1.0**
	comp=Z,0.8nm,0.8s,baz=267,slow=6.3,SNR=8.2							
	comp=Z,0.8nm,0.8s							
PSI	**Prapat**	**51.05**	**239**	LR		LR	00 21 51.6	
	comp=Z,71nm,18.0s,slow=37							
KKAR	**Karatay Array**	**53.03**	**300**	P		**P**	**23 59 31.0**	**+1.8**
INK	**Inuvik**	**55.17**	**27**	P		**P**	**23 59 44.9**	**+0.5**
	comp=Z,1.5nm,0.9s,baz=317,slow=2.0,SNR=3.1							
	comp=Z,1.5nm,0.9s							
WB0	**Warramunga Arr**	**56.18**	**187**	P		**P**	**23 59 52.6**	**+0.4**
WB0				IAmb		IAmb	23 59 58.2	
	comp=Z,5.9nm,1.2s							
WRAB	**Tennant Creek**	**56.35**	**187**	P		**P**	**23 59 54.2**	**+0.9**
WR0	**Warramunga Arr**	**56.36**	**187**	P		**P**	**23 59 53.1**	**-0.4**
WB2	**Warramunga Arr**	**56.36**	**187**	P		**P**	**23 59 53.6**	**+0.2**
WB2				IAmb		IAmb	00 00 16.3	
	comp=Z,8.5nm,1.4s							
WRA	**Warramunga Arr**	**56.36**	**187**	P		**P**	**23 59 52.2**	**-1.2**
	comp=Z,0.5nm,0.4s,baz=360,slow=7.6,SNR=22							
	comp=Z,0.5nm,0.4s							
WRA	**Warramunga Arr**	**56.36**	**187**	P		**P**	**23 59 53.2**	**-0.2**
ABKAR	**Akbulak array**	**57.99**	**310**	P		**P**	**00 00 03.9**	**-0.9**
ABKAR				IAmb		IAmb	00 00 08.9	
	comp=Z,3.2nm,1.4s							
PSA00	**Pilbara Seismi**	**60.96**	**202**	P		**P**	**00 00 25.3**	**-0.1**
FINES	**FINESS Array B**	**69.16**	**332**	P		**P**	**00 01 17.8**	**-0.4**
	comp=Z,1.5nm,0.8s,baz=46,slow=8.0,SNR=1.9							
	comp=Z,1.5nm,0.8s							
NB2	**NORSAR Subarra**	**74.59**	**337**	P		**P**	**00 01 50.9**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=41,slow=5.6							
NOA	**NORSAR Array B**	**74.59**	**337**	P		**P**	**00 01 51.0**	**0.0**
	comp=Z,1.1nm,0.8s,baz=41,slow=5.9,SNR=4.0							
	comp=Z,1.1nm,0.8s							
ELK	**Elko**	**76.33**	**49**	LR		LR	00 33 47.2	
	comp=Z,48nm,20.9s,baz=246,slow=34							
BURAR	**Bucovina Array**	**78.52**	**321**	P		**P**	**00 02 13.8**	**+0.3**
BRTR	**Keskin Array B**	**78.92**	**311**	P		**P**	**00 02 16.2**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=174,slow=19,SNR=2.3							
	comp=Z,0.3nm,0.7s							
MLR	**Muntele Rosu**	**79.56**	**320**	LR		LR	00 42 13.5	
	comp=Z,29nm,19.5s,baz=247,slow=39							

*VAO **18** 00:05:11.1±0.6, 17°.84S×69°.88W, h150km±5km, mb4.3*
*IDC **18** 00:05:11.9±1.4, 17°.86S×69°.74W, h145km±11km, mb3.6/7, mbtmp4.1/12, Error ellipse: s-maj=18.0km s-min=16.1km az=110.0*
*GUC **18** 00:05:13.4±0.7, 17°.98S×69°.32W, h95km±6km, ML3.7*

ISC 18 00:05:11.2±0.6, 17°.91S±0°.04×69°.75W±0°.06, h140km±6km, n68,σ1°.38/83, mb3.7/6, 6C-2D, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PB18	**Visviri**	**0.41**	**39**	↓*iP*		**Pn**	**00 05 33.3**	**+1.7**
PB18				*i* S		**Sn**	**00 05 48.0**	**+1.0**
PB16	**IPOC Station P**	**0.48**	**152**	↓*iP*		**Pn**	**00 05 33.0**	**+0.9**
PB16				*i* S		**Sn**	**00 05 48.4**	**+0.5**
PB16				IAML			00 05 50.8	
	comp=N,3μm,0.5s							
AP01	**Chacalluta**	**0.73**	**231**	↑*iP*		**Pn**	**00 05 33.2**	**+0.4**
AP01				*i* S		**Sn**	**00 05 49.2**	**-0.1**
PB12	**IPOC Station P**	**0.89**	**218**	↑*iP*		**Pn**	**00 05 34.4**	**+0.1**
PB12				*i* S		**Sn**	**00 05 51.1**	**-0.7**
PB12				IAML			00 05 52.2	
	comp=E,4μm,0.3s							
GO01	**Chusmiza**	**1.83**	**163**	↑*iP*		**Pn**	**00 05 45.8**	**+1.6**
GO01				*i* S		**Sn**	**00 06 10.8**	**+1.3**
GO01				IAML			00 06 20.6	
	comp=N,805nm,0.2s							
PB11	**IPOC Station P**	**1.84**	**177**	↑*iP*		**Pn**	**00 05 45.0**	**+0.9**
PB11				*i* S		**Sn**	**00 06 09.6**	**+0.3**
PB11				IAML			00 06 12.1	
	comp=N,581nm,0.3s							
LPAZ	**La Paz**	**2.23**	**44**	P		**Pn**	**00 05 51.0**	**+1.9**
	comp=N,238nm,0.4s,baz=234,slow=8.0,SNR=629							
LPAZ				S		**Sn**	**00 06 19.2**	**+0.9**
	comp=N,64nm,0.6s,baz=74,slow=11,SNR=4.6							
LPAZ	**La Paz**	**2.23**	**44**	*eP*		**Pn**	**00 05 51.3**	**+2.1**
PB08	**IPOC Station P**	**2.29**	**166**	↑*iP*		**Pn**	**00 05 51.2**	**+1.6**
PB08				*i* S		**Sn**	**00 06 19.6**	**+0.4**
PB08				IAML			00 06 21.7	
	comp=E,629nm,0.3s							
HMBC	**Humberstone**	**2.36**	**183**	*eP*		**Pn**	**00 05 50.3**	**0.0**
HMBC				*i* S		**Sn**	**00 06 18.5**	**-1.9**
HMBC				IAML			00 06 25.6	
	comp=N,406nm,0.4s							
TA02	**Huaiquique**	**2.38**	**189**	*eP*		**Pn**	**00 05 49.9**	**-0.4**
TA02				IAML			00 06 21.1	
	comp=N,751nm,0.1s							
TA01	**Diego Aracena**	**2.68**	**189**	*eP*		**Pn**	**00 05 54.0**	**0.0**
TA01				*i* S		**Sn**	**00 06 24.1**	**-3.0**
TA01				IAML			00 06 26.7	
	comp=N,226nm,0.3s							
PATCX	**Punta Patache**	**2.92**	**187**	*eP*		**Pn**	**00 05 57.4**	**+0.1**
PB01	**IPOC Station P**	**3.13**	**176**	↑*iP*		**Pn**	**00 06 00.4**	**+0.4**
PB01				*i* S		**Sn**	**00 06 34.6**	**-3.0**
PB02	**IPOC Station P**	**3.40**	**182**	*eP*		**Pn**	**00 06 03.9**	**+0.4**
PB02				*i* S		**Sn**	**00 06 42.4**	**-1.5**
PB07	**IPOC Station P**	**3.80**	**182**	*eP*		**Pn**	**00 06 09.4**	**+0.6**
PB07				*i* S		**Sn**	**00 06 51.5**	**-1.9**
LVC	**Limon Verde**	**4.74**	**171**	P		**Pn**	**00 06 22.8**	**+1.4**
	comp=N,24nm,0.2s,baz=13,slow=7.0,SNR=47							
LVC				S		**Sn**	**00 07 12.4**	**-3.6**
	comp=N,47nm,0.3s,baz=116,slow=16,SNR=25							
LVC	**Limon Verde**	**4.74**	**171**	*eP*		**Pn**	**00 06 22.6**	**+1.2**
SIV	**San Ignacio**	**8.52**	**78**	P		**Pn**	**00 07 10.4**	**-1.3**
	comp=N,18nm,0.4s,baz=268,slow=10,SNR=32							
SIV				S		**Sn**	**00 08 39.4**	**-6.9**
	comp=N,6.1nm,0.7s,baz=351,slow=23,SNR=11							
ETMB	**Extrema**	**8.74**	**24**	*eP*		**Pn**	**00 07 13.5**	**-1.1**
NNA	**Nana**	**9.04**	**310**	P		**Pn**	**00 07 18.2**	**-0.5**
	comp=N,25nm,0.3s,baz=139,slow=12,SNR=17							
NNA				S		Sn	00 08 49.4	-9.5
	comp=N,3.5nm,0.4s,baz=171,slow=7.1,SNR=1.4							
VBST	**Vila Bela da S**	**9.93**	**72**	*eP*		**Pn**	**00 07 30.8**	**+0.3**
VILB	**Vilhena**	**10.44**	**63**	*eP*		**Pn**	**00 07 37.1**	**-0.2**
PTLB	**Pontes e Lacer**	**10.46**	**78**	*eP*		**Pn**	**00 07 36.7**	**-0.8**
CZSB	**Cruzeiro do Su**	**10.52**	**344**	*eP*		**Pn**	**00 07 35.8**	**-2.6**
PTET	**Porto Estrela**	**12.32**	**80**	*eP*		**Pn**	**00 08 03.1**	**+1.0**
POCN	**Pocone**	**12.50**	**86**	*eP*		**Pn**	**00 08 05.3**	**+1.0**
SALV	**Santo Antonio**	**13.60**	**84**	*eP*		**Pn**	**00 08 20.3**	**+1.8**
NBRS	**Nobres**	**13.89**	**77**	*eP*		**Pn**	**00 08 24.0**	**+1.8**
PDRB	**Porto dos Gac**	**14.05**	**65**	*eP*		**P**	**00 08 26.4**	**-1.3**
CPUP	**Vila Florida**	**14.23**	**128**	P		**Pn**	**00 08 27.5**	**+1.1**
	comp=N,1.0nm,0.6s,baz=243,slow=16,SNR=3.3							
AMBA	**Amambai (Brazi**	**14.70**	**112**	*eP*		**Pn**	**00 08 32.8**	**+0.4**
CLDB	**Colider**	**15.21**	**65**	*eP*		**Pn**	**00 08 38.5**	**-0.3**
TRCB	**Terra Rica**	**16.76**	**110**	*eP*		**Pn**	**00 08 59.1**	**+1.2**
DVLD	**Doverlandia**	**16.84**	**88**	*eP*		**Pn**	**00 08 59.2**	**+0.4**
MACA	**Manacapuru-AM**	**17.14**	**32**	*eP*		**P**	**00 09 01.3**	**-0.5**
ARAG	**Araguaiana, MT**	**17.31**	**85**	*eP*		**Pn**	**00 09 05.1**	**+0.6**
CRSM	**Crissiumal (Br**	**17.33**	**126**	*eP*		**Pn**	**00 09 05.2**	**+0.6**
FRBT	**Francisco Belt**	**17.42**	**120**	*eP*		**P**	**00 09 05.4**	**+0.4**
UNIS	**Unistalda (Bra**	**17.43**	**132**	*eP*		**Pn**	**00 09 06.2**	**+0.3**
NPGB	**Novo Progresso**	**17.70**	**54**	*eP*		**P**	**00 09 07.7**	**-0.4**
PTGB	**Pitanga**	**17.80**	**115**	*eP*		**P**	**00 09 10.4**	**+1.2**
ALGR	**Alto Alegre (B**	**18.77**	**128**	*eP*		**P**	**00 09 20.5**	**+0.8**
SNDB	**Serra Nova Dou**	**18.77**	**74**	*eP*		**P**	**00 09 20.1**	**+0.4**
ITTB	**Itaituba**	**19.21**	**47**	*eP*		**P**	**00 09 24.3**	**-0.2**
CPSB	**Cacapava Do Su**	**19.37**	**133**	*eP*		**P**	**00 09 26.6**	**+0.5**
FRTB	**Fartura**	**19.64**	**109**	*eP*		**P**	**00 09 29.1**	**0.0**
PLTB	**Pedras Altas**	**20.09**	**136**	*eP*		**P**	**00 09 34.1**	**+0.2**
BB19B	**Bebedouro**	**20.25**	**102**	*eP*		**P**	**00 09 35.9**	**+0.2**
IPMB	**Ipameri, GO**	**20.49**	**94**	*eP*		**P**	**00 09 38.0**	**-0.4**
CNLB	**Canela**	**20.67**	**127**	*eP*		**P**	**00 09 41.1**	**+0.9**
BDFB	**Brasilia**	**20.93**	**87**	P		**P**	**00 09 42.6**	**-0.5**
	comp=N,6.6nm,0.4s,baz=265,slow=8.5,SNR=13							
	comp=N,6.6nm,0.4s							
BDFB	**Brasilia**	**20.93**	**87**	*eP*		**P**	**00 09 43.2**	**+0.1**
PEXB	**Peixe**	**21.49**	**77**	*eP*		**P**	**00 09 48.8**	**-0.2**
MALB	**Monte Alegre**	**22.04**	**45**	*eP*		**P**	**00 09 55.0**	**+0.3**
PMNB	**Patos De Minas**	**22.15**	**95**	*eP*		**P**	**00 09 55.1**	**-0.9**
PLCA	**Paso Flores**	**22.76**	**182**	P		**P**	**00 10 02.3**	**+0.7**
	comp=N,1.0nm,1.0s,baz=306,slow=13,SNR=3.1							
	comp=N,1.0nm,1.0s							
SMTB	**Santa Maria do**	**23.33**	**70**	*eP*		**P**	**00 10 07.3**	**+0.1**
JANB	**Januaria**	**24.55**	**87**	*eP*		**P**	**00 10 17.9**	**-0.3**
SDBA	**SAO DESIDERIO**	**24.58**	**81**	*eP*		**P**	**00 10 19.1**	**+0.6**
MCPB	**Macapa, AP**	**24.63**	**47**	*eP*		**P**	**00 10 19.3**	**+0.5**
NAN01	**Guarapari, ES**	**28.18**	**94**	*eP*		**P**	**00 10 50.6**	**-0.2**
TXAR	**Lajitas Array**	**57.25**	**325**	P		**P**	**00 14 44.3**	**0.0**
	comp=N,0.1nm,0.6s,baz=137,slow=8.1,SNR=2.3							
	comp=N,0.1nm,0.6s							
DBIC	**Dimbokro**	**68.53**	**75**	P		**P**	**00 15 59.2**	**+0.2**
	comp=N,6.0nm,0.7s,baz=261,slow=3.1,SNR=7.0							
	comp=N,6.0nm,0.7s							
TORD	**Torodi Ar. Bea**	**76.93**	**71**	P		**P**	**00 16 48.9**	**+0.2**
	comp=N,1.5nm,0.4s,baz=260,slow=5.2,SNR=28							
	comp=N,1.5nm,0.4s							
ESDC	**Sonseca Array**	**83.85**	**45**	P		**P**	**00 17 26.5**	**+1.2**
	comp=N,0.7nm,1.0s,baz=246,slow=9.7,SNR=2.4							
	comp=N,0.7nm,1.0s							
YKA	**Yellowknife Ar**	**87.55**	**341**	P		**P**	**00 17 41.7**	**-1.2**
	comp=N,0.8nm,0.5s,baz=133,slow=4.6,SNR=4.5							
	comp=N,0.8nm,0.5s							
WRA	**Warramunga Arr**	**135.57**	**213**	PKP		**PKPdf**	**00 24 16.4**	**+0.7**
	comp=N,0.2nm,0.9s,baz=144,slow=1.8,SNR=5.2							

*IDC **18** 00:10:59.5±1.5, 27°.06N×130°.38E, h0km, mb3.6/7, mbtmp3.6/7, MS2.5/1, Error ellipse: s-maj=37.0km s-min=25.7km az=83.0*
*JMA **18** 00:11:01.9±0.1, 27°.0N±0°.5×130°.3E±0°.6, h59km, MV3.4/22, NEAR MINAMI-DAITOJIMA IS*

ISC 18 00:10:59.1±1.4, 27°.04N±0°.03×130°.34E±0°.04, h3km±10km, n26,σ1°60/40, mb3.6/7, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JZK	**Kikaishima**	**1.31**	**346**	*eP*		**Pg**	**00 11 25.1**	**+0.9**
JZK				S		**Sg**	**00 11 42.7**	**+1.5**
JKDJ	**Kitadaitoujima**	**1.39**	**141**	P		**Pg**	**00 11 25.2**	**-0.5**
JKDJ				S		**Sg**	**00 11 43.2**	**-0.4**
JTK	**Tokunoshima**	**1.44**	**301**	P		**Pn**	**00 11 26.2**	**+0.1**
JTK				*eS*		**Sg**	**00 11 43.2**	**-2.1**
JMZ	**Minamidaito 2**	**1.45**	**147**	P		**Pn**	**00 11 26.2**	**0.0**
JMZ				S		**Sg**	**00 11 43.9**	**-1.8**
JAM	**Amami Oshima**	**1.51**	**335**	P		**Pn**	**00 11 27.1**	**0.0**
JAM				S		**Sb**	**00 11 45.7**	**-1.7**
JAMN	**Amaminishikomi**	**1.58**	**320**	P		**Pn**	**00 11 27.9**	**-0.1**
JAMN				S		**Sn**	**00 11 45.9**	**-3.1**
JOKE	**Okinoerabujima**	**1.61**	**282**	P		**Pn**	**00 11 28.5**	**+0.1**
JOKE				S		**Sn**	**00 11 48.6**	**-1.1**
JYRO	**Yoronjima**	**1.68**	**270**	P		**Pn**	**00 11 29.7**	**+0.2**
JYRO				S		**Sn**	**00 11 49.0**	**-2.6**
JOW	**Kunigami**	**1.85**	**264**	Pn		**Pn**	**00 11 32.7**	**+0.9**
	174nm,0.3s,baz=113,slow=21,SNR=207							
JOW				LR		LR	00 11 46.8	
	comp=Z,29nm,20.1s,baz=214,slow=25							
JOW				Sn		**Sn**	**00 11 53.3**	**-2.5**
	122nm,0.3s,baz=124,slow=30,SNR=31							
JOW	**Kunigami**	**1.85**	**264**	*eP*		**Pn**	**00 11 32.1**	**+0.3**
JOW				S		**Sn**	**00 11 54.0**	**-1.8**
JIH	**Iheya**	**2.11**	**270**	P		**Pn**	**00 11 35.7**	**+0.3**
JIH				*eS*		**Sn**	**00 12 00.8**	**-1.4**
JNTH	**Nagotoyohara**	**2.13**	**256**	P		**Pn**	**00 11 35.8**	**+0.1**
JNTH				*eS*		**Sn**	**00 12 00.2**	**-2.4**
JTAJ	**Takarajima**	**2.33**	**335**	P		**Pn**	**00 11 38.1**	**-0.3**
JTAJ				S		**Sn**	**00 12 03.7**	**-3.8**
JJT3	**Tamagusuku3**	**2.46**	**249**	P		**Pn**	**00 11 40.6**	**+0.5**
JJT3				eS		**Sn**	**00 12 09.2**	**-1.4**
JAGN	**Aguni-jima**	**2.80**	**261**	P		**Pn**	**00 11 45.2**	**+0.4**
JAGN				S		**Sn**	**00 12 17.3**	**-1.9**
JNN	**Nakanoshima**	**2.82**	**352**	*eS*		**Sn**	**00 12 16.7**	**-3.0**
JKE	**Kume jima 2**	**3.26**	**258**	*eP*		**Pn**	**00 11 51.8**	**+0.7**
JMTN	**Minamitane**	**3.38**	**8**	*eS*		**Sn**	**00 12 31.7**	**-1.8**
JCJ	**Chichijima**	**10.56**	**87**	LR		LR	00 15 55.5	
	comp=Z,28nm,20.2s,baz=348,slow=28							
KLR	**Kul'dur**	**22.18**	**2**	P		**P**	**00 15 56.6**	**+0.3**
	0.6nm,0.4s,baz=209,slow=9.7							
	0.6nm,0.4s							
MKAR	**Makanchi Array**	**42.42**	**311**	P		**P**	**00 18 57.2**	**+2.1**
	0.2nm,0.6s,baz=91,slow=8.9,SNR=3.4							
	0.2nm,0.6s							
ZALV	**Zalesovo Beam**	**42.77**	**322**	P		**P**	**00 18 59.1**	**+1.4**
	1.1nm,0.7s,baz=100,slow=10,SNR=4.3							
	1.1nm,0.7s							
KURBB	**Kurchatov Arra**	**45.58**	**316**	P		**P**	**00 19 20.4**	**+0.1**
	0.3nm,0.4s,baz=100,slow=8.2,SNR=4.2							
	0.3nm,0.4s							
WRA	**Warramunga Arr**	**46.87**	**175**	P		**P**	**00 19 31.6**	**+0.9**
	0.4nm,0.7s,baz=355,slow=8.5,SNR=5.3							
	0.4nm,0.7s							
FINES	**FINESS Array B**	**73.08**	**331**	P		**P**	**00 22 31.4**	**+1.0**
	2.6nm,1.0s,baz=81,slow=8.9,SNR=3.4							
	2.6nm,1.0s							
BRTR	**Keskin Array B**	**78.02**	**308**	P		**P**	**00 23 00.0**	**+0.6**
	0.7nm,0.8s,baz=69,slow=6.3,SNR=5.8							
	0.7nm,0.8s							

IDC 18 00:11:29.6±5.5, 6°.58S×149°.22E, h97km±54km, mb3.0/1, mbtmp3.6/3, MS3.0/1, Error ellipse: s-maj=124.1km s-min=42.5km az=132.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PMG	**Port Moresby**	**3.47**	**216**	P		Pn	00 12 22.6	+1.0
	30nm,0.3s,baz=16,slow=6.8,SNR=11							
PMG				S		Sn	00 13 02.2	+0.3
	79nm,0.6s,baz=20,slow=19,SNR=12							
HNR	**Honiara**	**10.99**	**106**	LR		LR	00 17 05.0	
	comp=Z,90nm,20.9s,baz=336,slow=30							
WRA	**Warramunga Arr**	**19.63**	**226**	P		P	00 15 50.9	+0.2
	0.5nm,0.3s,baz=52,slow=11,SNR=8.2							
ILAR	**Eielson Array**	**85.15**	**23**	P		P	00 23 54.2	-0.6
	0.2nm,0.6s,baz=224,slow=3.8,SNR=1.6							
	0.2nm,0.6s							
TORD	**Torodi Ar. Bea**	**147.37**	**284**	PKPbc		PKPbc	00 31 02.8	-0.4
	0.2nm,0.4s,baz=76,slow=3.5,SNR=5.5							

*IDC **18** 00:47:42.3±1.4, 27°.11N×130°.33E, h0km, mb3.7/8, mbtmp3.7/8, MS2.9/3, Error ellipse: s-maj=37.7km s-min=24.7km az=84.0*
*JMA **18** 00:47:45.2±0.1, 27°.0N±0°.4×130°.3E±0°.5, h64km, MV3.8/22, NEAR MINAMI-DAITOJIMA IS*
*NIED **18** 00:47:45.2, 27°.04N×130°.32E, h64km, MW4.0, Moment Tensor Solution. s2 Moment tensor: Scale 10^15Nm; Mrr-0.98; Mθθ 0.50; Mφφ 0.48; Mrθ-0.15; Mθφ 0.55; Mφr-0.84; Fault plane solution: M0 1.32000×10^15 NP1: φs244.00000°, δ30.00000°, λ-55.00000°. NP2:φs25.00000°, δ66.00000°, λ-109.00000°.*

ISC 18 00:47:45.0±1.0, 27°.06N±0°.04×130°.33E±0°.04, h20km±9km, n28,σ0°.95/40, mb3.6/8, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JZK	**Kikaishima**	**1.29**	**346**	P		**Pn**	**00 48 08.1**	**+0.1**
JZK				*eS*		**Sb**	**00 48 25.7**	**+0.9**
JKDJ	**Kitadaitoujima**	**1.40**	**142**	P		**Pn**	**00 48 09.2**	**-0.2**
JKDJ				*eS*		**Sn**	**00 48 26.5**	**-0.8**
JTK	**Tokunoshima**	**1.43**	**301**	P		**Pn**	**00 48 09.4**	**-0.4**
JTK				S		**Sn**	**00 48 27.6**	**-0.4**
JMZ	**Minamidaito 2**	**1.47**	**147**	P		**Pn**	**00 48 09.6**	**-0.7**
JMZ				S		**Sn**	**00 48 27.4**	**-1.5**
JAM	**Amami Oshima**	**1.50**	**335**	P		**Pn**	**00 48 10.4**	**-0.3**
JAM				*eS*		**Sn**	**00 48 28.5**	**-1.1**
JAMN	**Amaminishikomi**	**1.56**	**319**	P		**Pn**	**00 48 11.2**	**-0.5**
JAMN				*eS*		**Sn**	**00 48 29.7**	**-1.6**
JOKE	**Okinoerabujima**	**1.60**	**281**	P		**Pn**	**00 48 11.8**	**-0.4**
JYRO	**Yoronjima**	**1.68**	**269**	P		**Pn**	**00 48 12.9**	**-0.3**
JYRO				S		**Sn**	**00 48 33.4**	**-0.8**
JOW	**Kunigami**	**1.85**	**263**	Pn		**Pn**	**00 48 15.6**	**0.0**
	333nm,0.3s,baz=122,slow=24,SNR=467							
JOW				Sn		**Sn**	**00 48 37.3**	**-1.1**
	280nm,0.3s,baz=198,slow=30,SNR=20							
JOW				LR		LR	00 49 03.0	
	comp=Z,238nm,19.3s,baz=130,slow=43							
JOW	**Kunigami**	**1.85**	**263**	P		**Pn**	**00 48 15.4**	**-0.2**
JOW				*eS*		**Sn**	**00 48 37.4**	**-1.1**
JIH	**Iheya**	**2.11**	**270**	P		**Pn**	**00 48 19.0**	**-0.2**
JIH				S		**Sn**	**00 48 44.3**	**-0.5**
JNTH	**Nagotoyohara**	**2.13**	**256**	P		**Pn**	**00 48 19.0**	**-0.5**
JNTH				S		**Sn**	**00 48 43.1**	**-2.3**
JTAJ	**Takarajima**	**2.31**	**335**	P		**Pn**	**00 48 21.5**	**-0.4**
JTAJ				*eS*		**Sn**	**00 48 47.5**	**-2.4**
JJT3	**Tamagusuku3**	**2.46**	**249**	P		**Pn**	**00 48 23.8**	**-0.2**
JJT3				*eS*		**Sn**	**00 48 52.4**	**-1.0**
JAGN	**Aguni-jima**	**2.80**	**261**	*eP*		**Pn**	**00 48 28.8**	**+0.1**
JAGN				S		**Sn**	**00 49 00.8**	**-1.1**
JNN	**Nakanoshima**	**2.80**	**352**	S		**Sn**	**00 49 01.4**	**-0.5**
JYAK	**Yakushimahirau**	**3.17**	**3**	*eS*		**Sn**	**00 49 09.1**	**-1.9**
JKE	**Kume jima 2**	**3.26**	**258**	*eS*		**Sn**	**00 49 12.2**	**-1.0**
JCJ	**Chichijima**	**10.56**	**87**	LR		LR	00 53 50.2	
	comp=Z,33nm,20.4s,baz=274,slow=35							
KSRS	**Korea Array**	**10.56**	**349**	LR		LR	00 54 49.1	
	comp=Z,54nm,19.2s,baz=175,slow=41							
KLR	**Kul'dur**	**22.16**	**2**	P		**P**	**00 52 39.8**	**+0.2**
	1.2nm,0.8s,baz=166,slow=12,SNR=2.3							
	1.2nm,0.8s							
SONM	**Songino Array**	**27.93**	**324**	P		**P**	**00 53 34.3**	**+0.3**
	0.2nm,0.3s,baz=128,slow=9.3,SNR=1.9							
SONM				LR		LR	01 05 45.6	
	comp=Z,52nm,19.1s,baz=96,slow=39							
	0.2nm,0.3s							
ZALV	**Zalesovo Beam**	**42.75**	**322**	P		**P**	**00 55 41.0**	**+0.2**
	0.4nm,0.4s,baz=98,slow=6.1,SNR=3.9							
	0.4nm,0.4s							
WRA	**Warramunga Arr**	**46.88**	**175**	P		**P**	**00 56 14.9**	**+0.9**
	0.6nm,0.8s,baz=354,slow=8.3,SNR=7.2							
	0.6nm,0.8s							
FINES	**FINESS Array B**	**73.06**	**331**	P		**P**	**00 59 13.8**	**+0.4**
	2.6nm,1.1s,baz=61,slow=4.8,SNR=5.1							
	2.6nm,1.1s							
AKASG	**Malin Array Be**	**76.12**	**320**	P		**P**	**00 59 31.0**	**-0.3**
	0.1nm,0.2s,baz=60,slow=3.7,SNR=1.4							
	0.1nm,0.2s							
BRTR	**Keskin Array B**	**78.00**	**308**	P		**P**	**00 59 42.8**

KKBE				*i* AML	AML	00 56 38.0	
	comp=N,64nm,0.6s						
KRMN	**Karaman**	**2.11**	**35**	PN	**Pn**	**00 56 02.5**	**+0.3**
KMER	**Konya-Meram**	**2.36**	**12**	P	**Pb**	**00 56 08.3**	**-1.1**
OSC2	**CSNet OBS 4**	**2.42**	**169**	P	**Pn**	**00 56 04.8**	**-1.6**
KONT	**Konya--Tatoy**	**2.53**	**11**	P	**Pb**	**00 56 11.2**	**-1.0**
KONT				S	**Sg**	**00 56 47.5**	**-0.2**
DOGA	**KONYA_Doganhis**	**2.64**	**359**	P	**Pn**	**00 56 11.2**	**+1.6**
DOGA				S	**Sb**	**00 56 44.4**	**-2.4**
DOGA				*i* AML	AML	00 56 54.0	
	comp=E,36nm,0.9s						
MERS	**Mersin**	**2.65**	**57**	PN	**Pn**	**00 56 10.5**	**+0.8**
KERG	**Konya-Eregli**	**2.74**	**44**	P	**Pb**	**00 56 14.3**	**-1.5**
YVAC	**Isparta, Yalva**	**2.83**	**352**	P	**Pn**	**00 56 12.3**	**+0.1**
ALIN	**Konya, Altinte**	**2.98**	**18**	P	**Pn**	**00 56 15.0**	**+0.9**
GULE	**Gulek**	**3.05**	**53**	P	**Pb**	**00 56 19.5**	**-1.7**
GULE				S	**Sb**	**00 56 58.9**	**+0.2**

*IDC **18** 01:12:47.6±0.5,53.˙67N×163.˙55W,h0km,mb4.8/34, mbtmp4.7/37,ML4.0/3,MS4.3/69,Error ellipse: s-maj=14.4km s-min=9.0km az=175.0*

*BJI **18** 01:12:47.0±0.0,53.˙70N×163.˙60W,h10km,mb5.2/70, mB5.1/43,Ms4.9/52,Ms7 4.6/51*

*MOS **18** 01:12:48.1±0.9,53.˙67N×163.˙66W,h10km,mb5.4/118, MS4.5/20,Error ellipse: s-maj=8.0km s-min=3.9km az=97.9*

*NEIC **18** 01:12:49.6±2.0,53.˙57N±0.˙05×163.˙51W±0.˙07,h10km±1km, mb5.0/297,ML4.8/10,ML4.6(AEIC),Error ellipse: s-maj=9.7km s-min=5.9km az=147.0*

*AEIC **18** 01:12:50±2.2,53.˙47N±0.˙03×163.˙40W±0.˙07,h30km±3km, Error ellipse: s-maj=6.3km s-min=4.5km az=90.0*

*GCMT **18** 01:12:53.6±0.3,53.˙48N±0.˙03×163.˙24W±0.˙03,h27km±1km, MW5.0/83,Moment Tensor Solution. s45,c56; s83,c115; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.49±.16; $M_{\theta\theta}$-1.73±.12; $M_{\phi\phi}$-0.76±.11; $M_{r\theta}$2.15±.22; $M_{\theta\phi}$-1.93±.08; $M_{\phi r}$1.42±.19; Best double couple: M_o3.85300×10^{16} NP1:ϕ227.00000°,δ24.00000°,λ82.00000°. NP2: ϕs56.00000°,δ66.00000°,λ94.00000°. Principal axes: T 3.4870, Plg69.0000°, Azm333.0000°; N 0.7320, Plg3.0000°, Azm234.0000°; P -4.2200, Plg21.0000°, Azm143.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 01:12:49.3±0.8,53˙60N±0˙04×163˙46W±0˙03,h12km±4km, n1051,σ132/948,mb5.1/322,MS4.4/107,98C-23D, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
				Op	ISC	h	m	s	ISC
BRPK	**Brown Peak**	**1.06**	**351**		**Pn**	**01**	**13**	**11.0**	**+0.9**
WESE	**West Dahl East**	**1.10**	**323**		**Pn**	**01**	**13**	**11.8**	**+1.1**
ISLZ	**Isanotski Laza**	**1.14**	**353**		**Pn**	**01**	**13**	**12.1**	**+0.9**
ISLZ					**Sn**	**01**	**13**	**29.0**	**+2.2**
FALS	**False Pass**	**1.26**	**1**		**Pg**	**01**	**13**	**14.0**	**+0.5**
FALS	**False Pass**	**1.26**	**1**		**Sg**	**01**	**13**	**32.1**	**+2.2**
FALS	**False Pass**	**1.26**	**1**	P	**Pg**	**01**	**13**	**14.1**	**+0.5**
	baz=180,SNR=844								
AKUT	**Akutan**	**1.47**	**292**		**Pb**	**01**	**13**	**16.7**	**+0.1**
AKUT				Sn	**Sg**	**01**	**13**	**36.2**	**-0.4**
AKUT				IAML		01	13	40.0	
	comp=N,8μm,0.8s								
AKUT				IAML		01	13	43.2	
	comp=E,7μm,0.7s								
AKBBA	**Akutan Broad B**	**1.55**	**290**		**Pb**	**01**	**13**	**17.6**	**-0.3**
AKGG	**Akutan Green G**	**1.61**	**293**		**Pb**	**01**	**13**	**18.9**	**-0.1**
UNV	**Unalaska Valle**	**1.82**	**279**		**Sn**	**01**	**13**	**43.1**	**-0.4**
UNV	**Unalaska Valle**	**1.82**	**279**	Pn	**Pn**	**01**	**13**	**20.7**	**+0.3**
UNV	**Unalaska Valle**	**1.82**	**279**	P	**Pn**	**01**	**13**	**20.8**	**+0.3**
	baz=100,SNR=220								
MTBL	**Makushin Table**	**1.94**	**282**		**Pn**	**01**	**13**	**23.1**	**+0.9**
HAG	**Hague Volcano**	**1.95**	**27**		**Pb**	**01**	**13**	**24.0**	**-0.7**
HAG	**Hague Volcano**	**1.95**	**27**	P	**Pb**	**01**	**13**	**24.0**	**-0.7**
PS4A	**Pavlof South-4**	**1.99**	**28**		**Pb**	**01**	**13**	**24.7**	**-0.7**
MSW	**Makushin Switc**	**2.00**	**280**		**Pn**	**01**	**13**	**23.6**	**+0.7**
MSW					**Sn**	**01**	**13**	**48.8**	**+1.0**
PVV	**Pavlof Volcano**	**2.03**	**28**		**Pb**	**01**	**13**	**25.4**	**-0.8**
MGOD	**Makushin Gods**	**2.04**	**277**		**Pb**	**01**	**13**	**24.7**	**-1.6**
SDPT	**Sand Point**	**2.47**	**44**		**Pn**	**01**	**13**	**30.4**	**+1.1**
SDPT				IAML		01	14	28.6	
	comp=E,5μm,1.2s								
SDPT	**Sand Point**	**2.47**	**44**	P	**Pn**	**01**	**13**	**30.5**	**+1.1**
	baz=224,SNR=89								
CNBA	**Chernabura Isl**	**2.58**	**60**	Pn	**Pn**	**01**	**13**	**31.2**	**+0.3**
CHNA	**Chernabura Isl**	**2.59**	**60**	P	**Pn**	**01**	**13**	**31.5**	**+0.5**
	baz=240,SNR=22								
OKFG	**Magazine Ridge**	**2.66**	**268**		**Pn**	**01**	**13**	**33.0**	**+1.0**
NIKH	**Nikolski High**	**3.30**	**261**	Pn	**Pn**	**01**	**13**	**41.0**	**+0.3**
NIKH	**Nikolski High**	**3.30**	**261**	P	**Pn**	**01**	**13**	**41.1**	**+0.3**
	baz=79,SNR=42								
VNSG	**Veniaminof 6**	**3.58**	**43**		**Pn**	**01**	**13**	**46.4**	**+1.8**
VNHG	**Veniaminof 1**	**3.62**	**42**		**Pn**	**01**	**13**	**46.8**	**+1.6**
ANPB	**Aniakchak Plen**	**4.37**	**41**		**Pn**	**01**	**13**	**57.2**	**+1.6**
CHIR	**Chirikof Islan**	**5.06**	**61**		**Pn**	**01**	**14**	**05.9**	**+0.9**
CHIR				IAML		01	15	47.4	
	comp=N,763nm,1.3s								
CHIR	**Chirikof Islan**	**5.06**	**61**	P	**Pn**	**01**	**14**	**05.8**	**+0.8**
	baz=246								
SPIA	**Saint Paul Isl**	**5.27**	**316**	Pn	**Pn**	**01**	**14**	**10.3**	**+2.5**
SPIA	**Saint Paul Isl**	**5.27**	**316**	P	**Pn**	**01**	**14**	**10.6**	**+2.7**
	baz=131								
R17K	**Ugashik Creek**	**5.70**	**42**	P	**Pn**	**01**	**14**	**15.2**	**+1.5**
	baz=227,SNR=42								
SII	**Sitkinak Islan**	**6.10**	**57**		**Pn**	**01**	**14**	**19.5**	**+0.2**
SII	**Sitkinak Islan**	**6.10**	**57**	P	**Pn**	**01**	**14**	**19.4**	**+0.2**
	baz=244,SNR=7.0								
P16K	**Nushagak River**	**6.24**	**27**	P	**Pn**	**01**	**14**	**25.4**	**+4.3**
	baz=211,SNR=8.1								
Q17K	**Contact Creek**	**6.32**	**39**	P	**Pn**	**01**	**14**	**23.8**	**+1.5**
	baz=225								
KOKL	**Mount Kliuchef**	**6.61**	**263**		**Pn**	**01**	**14**	**28.8**	**+2.5**
ATKA	**Atka Island**	**6.64**	**262**		**Pn**	**01**	**14**	**28.1**	**+1.4**
O16K	**Kokwok River B**	**6.70**	**24**		**Pn**	**01**	**14**	**28.9**	**+1.5**
O16K	**Kokwok River B**	**6.70**	**24**	P	**Pn**	**01**	**14**	**28.9**	**+1.5**
	baz=208,SNR=26								
P17K	**Kvichak River**	**6.83**	**32**		**Pn**	**01**	**14**	**32.0**	**+2.8**
P17K	**Kvichak River**	**6.83**	**32**	P	**Pn**	**01**	**14**	**32.6**	**+3.4**
	baz=217,SNR=19								
OHAK	**Old Harbor**	**6.84**	**54**	Pn	**Pn**	**01**	**14**	**29.2**	**0.0**
OHAK	**Old Harbor**	**6.84**	**54**	P	**Pn**	**01**	**14**	**29.0**	**-0.3**
	baz=241,SNR=7.0								
Q18K	**Katmai Hardscr**	**6.92**	**40**	P	**Pn**	**01**	**14**	**32.1**	**+1.5**
	baz=226								
O17K	**Koliganek Bris**	**7.11**	**27**	P	**Pn**	**01**	**14**	**34.8**	**+1.7**
	baz=212								
N16K	**Nishlik Lake**	**7.35**	**18**		**Pn**	**01**	**14**	**39.0**	**+2.6**
N16K	**Nishlik Lake**	**7.35**	**18**	P	**Pn**	**01**	**14**	**38.8**	**+2.4**
	baz=202,SNR=51								
P18K	**Big Mountain,**	**7.38**	**35**		**Pn**	**01**	**14**	**39.1**	**+2.3**
P18K	**Big Mountain,**	**7.38**	**35**	P	**Pn**	**01**	**14**	**38.8**	**+2.0**
	baz=221								
KDAK	**Kodiak Island**	**7.44**	**51**	Pn	**Pn**	**01**	**14**	**34.5**	**-3.0**
	comp=N,4.9nm,0.3s,baz=261,slow=7.4,SNR=23								
KDAK				Sn	**Sn**	**01**	**15**	**54.7**	**-7.1**
	comp=N,1.8nm,0.3s,baz=51,slow=14,SNR=1.7								
KDAK				Lg	Lg	01	16	29.3	
	comp=N,1.8nm,0.3s,baz=338,slow=19,SNR=1.7								
KDAK	**Kodiak Island**	**7.44**	**51**		**Pn**	**01**	**14**	**37.3**	**-0.3**
KDAK	**Kodiak Island**	**7.44**	**51**	P	**Pn**	**01**	**14**	**38.2**	**+0.6**
KDAK				pmax	pmax				
	comp=Z,136nm,1.1s								
KDAK	**Kodiak Island**	**7.44**	**51**	P	**Pn**	**01**	**14**	**37.1**	**-0.5**
	baz=239								
Q19K	**Cape Douglas,**	**7.64**	**42**		**Pn**	**01**	**14**	**41.6**	**+1.2**
Q19K	**Cape Douglas,**	**7.64**	**42**	P	**Pn**	**01**	**14**	**42.2**	**+1.8**
	baz=229,SNR=8.0								
O18K	**Koktuh Hills**	**7.74**	**33**	P	**Pn**	**01**	**14**	**43.9**	**+2.3**
	baz=219								
GSTR	**Great Sitkin T**	**7.78**	**264**		**Pn**	**01**	**14**	**43.2**	**+1.0**
GSMY	**Great Sitkin M**	**7.79**	**264**		**Pn**	**01**	**14**	**44.5**	**+2.1**
GSTD	**Great Sitkin T**	**7.84**	**264**		**Pn**	**01**	**14**	**45.0**	**+1.9**
GSCK	**Great Sitkin C**	**7.86**	**263**		**Pn**	**01**	**14**	**44.9**	**+1.5**
Q20K	**Shuyak Island**	**7.96**	**46**	P	**Pn**	**01**	**14**	**46.2**	**+1.4**
	baz=235								
N18K	**Kilae Creek**	**8.20**	**27**		**Pn**	**01**	**14**	**49.6**	**+1.5**
N18K	**Kilae Creek**	**8.20**	**27**	P	**Pn**	**01**	**14**	**51.3**	**+3.2**
	baz=213,SNR=12								
ADK	**Adak**	**8.21**	**263**		**Pn**	**01**	**14**	**49.2**	**+1.1**
ADK	**Adak**	**8.21**	**263**	P	**Pn**	**01**	**14**	**49.2**	**+1.1**
KIWB	**Kanaga Island**	**8.49**	**264**		**Pn**	**01**	**14**	**53.4**	**+1.4**
KIKV	**Kanaga Island**	**8.50**	**264**		**Pn**	**01**	**14**	**53.2**	**+1.1**
KICM	**Kanaga Island**	**8.50**	**264**		**Pn**	**01**	**14**	**54.1**	**+2.0**
KIMD	**Kanaga Island**	**8.57**	**263**		**Pn**	**01**	**14**	**54.6**	**+1.5**
SVW2	**Sparrevohn**	**8.64**	**26**		**Pn**	**01**	**14**	**56.2**	**+2.3**
N19K	**Bonanza Creek**	**8.71**	**30**		**Pn**	**01**	**14**	**58.0**	**+2.9**
N19K	**Bonanza Creek**	**8.71**	**30**	P	**Pn**	**01**	**14**	**57.9**	**+2.8**
	baz=217,SNR=19								
O20K	**Slope Mountain**	**8.80**	**38**	P	**Pn**	**01**	**14**	**58.7**	**+2.4**
	baz=226								
TAPA	**Tanaga Point A**	**8.90**	**264**		**Pn**	**01**	**14**	**60.0**	**+2.3**
TAFP	**Tanaga Falls P**	**8.97**	**265**		**Pn**	**01**	**15**	**00.6**	**+2.0**
RED	**Redoubt Volcan**	**8.98**	**36**		**Pn**	**01**	**15**	**02.0**	**+3.2**
CNPM	**China Poot**	**8.98**	**44**		**Pn**	**01**	**15**	**00.2**	**+1.4**
RSO	**Redoubt South**	**9.01**	**36**		**Pn**	**01**	**15**	**01.2**	**+1.9**
TASE	**Tanaga Southea**	**9.02**	**265**		**Pn**	**01**	**15**	**01.5**	**+2.2**
NCT	**North Crescent**	**9.03**	**35**		**Pn**	**01**	**15**	**01.9**	**+2.5**
BRSE	**Bradley Lake S**	**9.31**	**44**	P	**Pn**	**01**	**15**	**03.6**	**+0.3**
	baz=234								
M19K	**Big River Lodg**	**9.63**	**27**	P	**Pn**	**01**	**15**	**09.9**	**+2.3**
	baz=214								
L19K	**White Mountain**	**9.74**	**25**	P	**Pn**	**01**	**15**	**10.6**	**+1.4**
	baz=211,SNR=18								
M20K	**Styx River**	**9.96**	**29**	P	**Pn**	**01**	**15**	**16.1**	**+3.9**
	baz=218,SNR=36								
SEW	**Seward**	**10.05**	**44**		**Pn**	**01**	**15**	**13.6**	**+0.3**
SEW	**Seward**	**10.05**	**44**	P	**Pn**	**01**	**15**	**13.3**	**0.0**
	baz=235								
TTA	**Tatalina**	**10.14**	**20**		**Pn**	**01**	**15**	**16.9**	**+2.3**
TTA	**Tatalina**	**10.14**	**20**	P	**Pn**	**01**	**15**	**16.9**	**+2.3**
TTA	**Tatalina**	**10.14**	**20**	P	**Pn**	**01**	**15**	**17.9**	**+3.3**
	baz=206								
L20K	**Farewell, AK**	**10.24**	**26**	P	**Pn**	**01**	**15**	**19.5**	**+3.6**
	baz=214,SNR=12								
SUA	**Susitna One**	**10.42**	**36**	P	**Pn**	**01**	**15**	**19.6**	**+1.1**
	baz=226,SNR=7.9								
SKT	**Skwentna**	**10.53**	**32**	P	**Pn**	**01**	**15**	**22.0**	**+2.2**
	baz=222,SNR=23								
RC01	**Rabbit Creek A**	**10.54**	**39**	P	**Pn**	**01**	**15**	**20.6**	**+0.7**
	baz=230								
AMKA	**Amchitka**	**10.74**	**265**		**Pn**	**01**	**15**	**22.9**	**+0.1**
K20K	**Telida**	**10.94**	**23**	P	**Pn**	**01**	**15**	**27.4**	**+2.0**
	baz=210,SNR=42								
PPLA	**Purkeypile**	**11.03**	**28**	P	**Pn**	**01**	**15**	**30.4**	**+3.5**
	baz=212,SNR=11								
Q23K	**Middleton Isla**	**11.10**	**51**	P	**Pn**	**01**	**15**	**30.2**	**+2.6**
	baz=245								
CUT	**Chulitna**	**11.24**	**33**	P	**Pn**	**01**	**15**	**31.6**	**+2.0**
	baz=224								
GLI	**Glacier Island**	**11.46**	**44**	P	**Pn**	**01**	**15**	**31.3**	**-1.3**
	baz=237								
HIN	**Hinchinbrook I**	**11.46**	**47**		**Pn**	**01**	**15**	**32.0**	**-0.7**
SML	**Sawmill**	**11.51**	**38**	P	**Pn**	**01**	**15**	**34.2**	**+0.8**
	baz=231								
J20K	**Nowinta River**	**11.63**	**21**	P	**Pn**	**01**	**15**	**36.5**	**+1.5**
	baz=208,SNR=28								
M23K	**Glacier View**	**11.73**	**39**	P	**Pn**	**01**	**15**	**35.5**	**-0.8**
	baz=232,SNR=11								
CHUM	**Lake Minchumin**	**11.80**	**25**	P	**Pn**	**01**	**15**	**40.9**	**+3.6**
	baz=214								
EYAK	**Cordova Ski Ar**	**11.86**	**47**	P	**Pn**	**01**	**15**	**37.5**	**-0.6**
	baz=241,SNR=6.0								
SCM	**Sheep Creek Mo**	**11.91**	**40**	P	**Pn**	**01**	**15**	**37.7**	**-1.1**
	baz=233,SNR=6.3								
TRF	**Thorofare Moun**	**12.01**	**29**		**Pn**	**01**	**15**	**40.8**	**+0.5**
TRF	**Thorofare Moun**	**12.01**	**29**	P	**Pn**	**01**	**15**	**41.8**	**+1.5**
	baz=220,SNR=28								
WAT1	**Susitna Watana**	**12.11**	**34**	P	**Pn**	**01**	**15**	**41.4**	**-0.1**
	baz=226								
WAT6	**Susitna Watana**	**12.22**	**36**	P	**Pn**	**01**	**15**	**41.3**	**-1.8**
	baz=229,SNR=11								
KLU	**Klutina**	**12.27**	**43**	P	**Pn**	**01**	**15**	**42.6**	**-1.1**
	baz=237,SNR=35								
BPAW	**Bear Paw Mtn.**	**12.32**	**26**	P	**Pn**	**01**	**15**	**46.4**	**+2.0**
	baz=217,SNR=22								
M24K	**Tolsona, Glenn**	**12.51**	**40**	P	**Pn**	**01**	**15**	**46.6**	**-0.4**
	baz=234,SNR=9.4								
SUCK	**Suckling Hills**	**12.55**	**51**		**Pn**	**01**	**15**	**48.1**	**+0.6**
BMRM	**Bremner River**	**12.55**	**46**	P	**Pn**	**01**	**15**	**48.5**	**+0.9**
	baz=242								
MCK	**McKinley**	**12.62**	**31**	P	**Pn**	**01**	**15**	**50.2**	**+1.6**
	baz=223								
DHY	**Denali Highway**	**12.67**	**35**	P	**Pn**	**01**	**15**	**47.8**	**-1.5**
	baz=228,SNR=13								
N25K	**Chitina, Valde**	**12.87**	**44**	P	**Pn**	**01**	**15**	**51.3**	**-0.6**
	baz=239,SNR=9.5								
I21K	**Tanana**	**12.97**	**22**	P	**Pn**	**01**	**15**	**54.5**	**+1.2**
	baz=212								
HARP	**HAARP**	**13.07**	**40**	P	**Pn**	**01**	**15**	**55.2**	**+0.6**
	baz=235,SNR=7.2								
GLB	**Gilahina Butte**	**13.12**	**45**		**Pn**	**01**	**15**	**54.0**	**-1.3**
MLY	**Manley**	**13.14**	**24**	P	**Pn**	**01**	**15**	**57.5**	**+1.9**
	baz=215,SNR=52								
H21K	**Melozitna Rive**	**13.21**	**20**		**Pn**	**01**	**15**	**58.2**	**+1.7**
H21K	**Melozitna Rive**	**13.21**	**20**	P	**Pn**	**01**	**15**	**59.0**	**+2.5**
	baz=208,SNR=24								
NEA2	**Nenana**	**13.23**	**28**	P	**Pn**	**01**	**15**	**57.4**	**+0.7**
	baz=220,SNR=6.2								
PAX	**Paxson**	**13.28**	**38**		**Pn**	**01**	**15**	**56.2**	**-1.3**
PAX	**Paxson**	**13.28**	**38**	P	**Pn**	**01**	**15**	**56.2**	**-1.3**
PAX	**Paxson**	**13.28**	**38**	P	**Pn**	**01**	**15**	**56.3**	**-1.3**
	baz=233,SNR=31								
IMAR	**Indian Mountai**	**13.33**	**17**		**Pn**	**01**	**15**	**60.0**	**+1.9**
MCARA	**McCarthy VSAT**	**13.43**	**46**	P	**Pn**	**01**	**16**	**01.7**	**+2.2**
	baz=243								
SHEM	**Shemya Is, Ala**	**13.48**	**275**	Pn	**Pn**	**01**	**16**	**01.3**	**+1.1**
	comp=Z,1.3nm,0.3s,baz=47,slow=5.3,SNR=2.0								
SHEM				LR	LR	01	20	57.0	
	comp=Z,1μm,21.1s,baz=106,slow=36 comp=Z,11nm,0.4s								
SMY	**Shemya**	**13.48**	**275**	Pn	**Pn**	**01**	**16**	**00.5**	**+0.3**
SMY	**Shemya**	**13.48**	**275**	P	**Pn**	**01**	**16**	**00.5**	**+0.3**
I23K	**Into, Yukon-K**	**13.58**	**26**	P	**Pn**	**01**	**16**	**02.1**	**+0.6**
	baz=218,SNR=16								
K24K	**Donnelly Dome**	**13.69**	**35**	P	**Pn**	**01**	**16**	**03.1**	**-0.1**
	baz=230,SNR=10								
HDA	**Harding Lake**	**13.72**	**31**	P	**Pn**	**01**	**16**	**02.5**	**-0.9**
	baz=225								
COLA	**College**	**13.79**	**29**	*i* P	**Pn**	**01**	**16**	**02.7**	**-1.6**
M26K	**Nabesna, AK**	**13.92**	**43**	P	**Pn**	**01**	**16**	**05.4**	**-0.9**
	baz=240,SNR=37								
RIDG	**Independent Ri**	**13.97**	**36**	P	**Pn**	**01**	**16**	**06.8**	**-0.2**
	baz=232,SNR=19								
ILAR	**Eielson Array**	**14.00**	**30**	Pn	**Pn**	**01**	**16**	**04.4**	**-2.8**
	comp=Z,0.4nm,0.3s,baz=227,slow=12,SNR=25								
ILAR				Sn	**Sn**	**01**	**18**	**35.1**	**-7.2**
	comp=Z,0.1nm,0.3s,baz=222,slow=16,SNR=0.8								
ILAR				Lg	Lg	01	20	12.3	
	baz=221,slow=23								
ILAR				LR	LR	01	22	05.8	
	comp=Z,4μm,18.2s,baz=220,slow=40 comp=Z,1.4nm,0.5s								
ILAR	**Eielson Array**	**14.00**	**30**		**Pn**	**01**	**16**	**06.2**	**-1.0**
ILAR	**Eielson Array**	**14.00**	**30**	P	**Pn**	**01**	**16**	**06.2**	**-1.0**
CTG	**Chitna Glacier**	**14.00**	**49**	P	**Pn**	**01**	**16**	**08.2**	**+0.8**
	baz=248								
H23K	**Yukon River**	**14.08**	**24**	P	**Pn**	**01**	**16**	**08.9**	**+0.5**
	baz=216,SNR=36								
L26K	**Log Cabin Wild**	**14.11**	**40**	P	**Pn**	**01**	**16**	**10.0**	**+1.2**
	baz=237								
PINM	**Pinnacle**	**14.22**	**54**	P	**Pn**	**01**	**16**	**10.9**	**+0.5**
	baz=253								
M27K	**Edge Creek, AK**	**14.36**	**44**	P	**Pn**	**01**	**16**	**11.7**	**-0.7**
	baz=242,SNR=16								
J25K	**Salcha River,**	**14.36**	**33**	P	**Pn**	**01**	**16**	**08.9**	**-3.4**
	baz=228,SNR=9.9								
SCRK	**Sand Creek**	**14.42**	**36**	P	**Pn**	**01**	**16**	**10.6**	**-2.6**
	baz=232,SNR=29								
RDOG	**Red Dog Mine**	**14.51**	**1**	P	**Pn**	**01**	**16**	**15.3**	**+1.1**
	baz=181,SNR=6.5								
H24K	**Hoodoo Dome**	**14.51**	**26**	P	**Pn**	**01**	**16**	**12.8**	**-1.5**
	baz=219,SNR=12								
PNL	**Peninsula**	**14.52**	**56**	P	**Pn**	**01**	**16**	**14.8**	**+0.4**
	baz=255								
YUK3	**Moose Creek**	**14.71**	**47**	P	**Pn**	**01**	**16**	**16.5**	**-0.7**
	baz=246,SNR=14								
L27K	**Beaver Creek,**	**14.72**	**41**	P	**Pn**	**01**	**16**	**15.8**	**-1.3**
	baz=239,SNR=14								
BCAR	**Beaver Creek A**	**14.74**	**41**		**Pn**	**01**	**16**	**15.6**	**-1.8**
BVCY	**Beaver Creek**	**14.80**	**44**	P	**Pn**	**01**	**16**	**17.5**	**-0.8**
	baz=243,SNR=12								
YUK8	**Steele Glacier**	**14.83**	**49**	P	**Pn**	**01**	**16**	**18.9**	**0.0**
	baz=249,SNR=16								
J26L	**Joseph Creek**	**14.89**	**35**	P	**Pn**	**01**	**16**	**18.8**	**-0.7**
	baz=232,SNR=71								
COLD	**Coldfoot**	**15.10**	**20**	IAmb	IAmb	01	16	29.1	
	comp=Z,105nm,1.0s								
COLD	**Coldfoot**	**15.10**	**20**	P	**Pn**	**01**	**16**	**23.8**	**+1.5**
	baz=211,SNR=61								
K27K	**Chicken**	**15.14**	**38**	P	**Pn**	**01**	**16**	**21.1**	**-1.6**
	baz=236								
YUK4	**Talbot Arm**	**15.36**	**50**	P	**P**	**01**	**16**	**29.7**	**-0.8**
	baz=250,SNR=9.5								
YUK6	**Outpost Mounta**	**15.36**	**51**	P	**Pn**	**01**	**16**	**28.0**	**+2.1**
	baz=252,SNR=7.4								
HYT	**Haines Junctio**	**15.73**	**52**		**Pn**	**01**	**16**	**31.7**	**+1.0**
HYT				IAmb	IAmb	01	16	54.8	
	comp=Z,61nm,1.0s								
HYT	**Haines Junctio**	**15.73**	**52**	P	**Pn**	**01**	**16**	**32.5**	**+1.8**
	baz=254,SNR=9.9								
PLBC	**Pleasant Camp**	**15.98**	**58**	P	**P**	**01**	**16**	**36.1**	**-1.2**
	baz=260,SNR=22								
N30M	**Aishikik Lake**	**16.11**	**50**	P	**Pn**	**01**	**16**	**36.5**	**+1.1**
	baz=252,SNR=9.1								
DAWY	**Dawson**	**16.17**	**40**		**Pn**	**01**	**16**	**34.5**	**-1.6**
DAWY	**Dawson**	**16.17**	**40**	P	**Pn**	**01**	**16**	**34.7**	**-1.4**
	baz=240,SNR=56								
O30N	**Mendenhall**	**16.39**	**53**	P	**P**	**01**	**16**	**41.4**	**-0.4**
	baz=256,SNR=16								
TOLK	**Toolik Lake Re**	**16.44**	**18**		**Pn**	**01**	**16**	**40.4**	**+0.7**
TOLK				IAmb	IAmb	01	16	46.7	
	comp=Z,222nm,1.4s								
TOLK	**Toolik Lake Re**	**16.44**	**18**	P	**Pn**	**01**	**16**	**40.6**	**+1.0**
	baz=210,SNR=80								
SKAG	**Skagway**	**16.51**	**58**	P	**P**	**01**	**16**	**42.6**	**-0.4**
	baz=261								
BMAR	**Burnt Mountain**	**16.58**	**26**	Pn	**Pn**	**01**	**16**	**41.5**	**+0.1**
M30M	**Minto, Yukon**	**16.60**	**47**	IAmb	IAmb	01	16	55.9	
	comp=Z,82nm,1.1s								
M30M	**Minto, Yukon**	**16.60**	**47**	P	**Pn**	**01**	**16**	**41.0**	**-0.7**
	baz=249,SNR=32								
BESE	**Bessie Mountai**	**16.65**	**61**	IAmb	IAmb	01	17	02.8	
	comp=Z,86nm,1.2s								
N31M	**Braeburn, Yuko**	**16.72**	**51**	IAmb	IAmb	01	16	54.1	
	comp=Z,95nm,0.9s								
N31M	**Braeburn, Yuko**	**16.72**	**51**	P	**P**	**01**	**16**	**45.6**	**+0.2**
	baz=254,SNR=25								
J29M	**Klondike Camp**	**16.80**	**40**	IAmb	IAmb	01	16	51.5	
	comp=Z,105nm,0.5s								
JIS	**Juneau Island**	**16.87**	**62**		**Pn**	**01**	**16**	**45.1**	**+0.1**
WHY	**Whitehorse**	**16.94**	**54**	P	**P**	**01**	**16**	**47.6**	**-0.4**
	baz=258,SNR=23								
I29M	**Ogilvie Camp,**	**17.22**	**37**	P	**Pn**	**01**	**16**	**50.0**	**+0.6**
	baz=238,SNR=51								
P32M	**Atlin**	**17.34**	**58**	P	**Pn**	**01**	**16**	**51.6**	**+0.6**
	baz=262								
M31M	**Drury Creek, Y**	**17.55**	**49**	IAmb	IAmb	01	17	08.7	
	comp=Z,102nm,1.1s								
M31M	**Drury Creek, Y**	**17.55**	**49**	P	**P**	**01**	**16**	**57

comp=Z,27nm,1.0s
E03A Lebam 26.28 89 IAmb IAmb 01 18 41.4
comp=Z,44nm,1.0s
YKA Yellowknife Ar 26.72 51 P **P** **01 18 28.8 +0.7**
comp=Z,5.7nm,0.6s,baz=270,slow=8.9,SNR=25
YKA LR LR 01 30 05.8
comp=Z,1µm,18.5s,baz=274,slow=39
comp=Z,5.7nm,0.6s
YKA Yellowknife Ar 26.72 51 P **P** **01 18 28.5 +0.4**
YKA Yellowknife Ar 26.72 51 *ce*P **P** **01 18 29.5 +1.4**
YKA pmax pmax
comp=Z,6.0nm,0.6s
D05A Enumclaw 26.90 87 IAmb IAmb 01 18 50.7
comp=Z,49nm,1.1s
H04D Lebanon 27.84 92 P **P** **01 18 41.0 +2.5**
baz=304
HOOD Mount Hood Mea 28.06 90 IAmb IAmb 01 19 10.0
comp=Z,26nm,1.1s
H04A Detroit Lake 28.09 92 IAmb IAmb 01 19 01.8
comp=Z,33nm,1.2s
G05D Wamic, OR 28.30 90 P **P** **01 18 43.8 +1.3**
baz=302
I04A Tendick Farm, 28.45 93 P **P** **01 18 46.3 +2.4**
baz=305,SNR=6.3
L02F Cave Junction 28.75 97 P **P** **01 18 49.0 +2.5**
baz=307
HAWA Hanford 28.76 86 IAmb IAmb 01 18 49.5
comp=Z,12nm,0.8s
F07A Phinny Hill Vi 28.78 88 IAmb IAmb 01 19 03.0
comp=Z,19nm,1.0s
J04D Umpqua Nationa 28.95 94 P **P** **01 18 51.2 +2.7**
baz=305
NEW Newport 29.27 81 P **P** **01 18 52.3 +1.2**
comp=Z,0.9nm,0.3s,baz=309,slow=5.6,SNR=3.2
NEW ScP **ScP** **01 25 37.5 -1.3**
comp=Z,0.7nm,0.7s,baz=270,slow=4.5,SNR=3.9
NEW LR LR 01 28 32.8
comp=Z,329nm,20.4s,baz=300,slow=32
comp=Z,0.9nm,0.3s
NEW Newport 29.27 81 P **P** **01 18 52.7 +1.6**
baz=298
L04D Klamath Falls 29.44 96 P **P** **01 18 55.0 +2.3**
baz=307
J05D Fort Rock, OR 29.44 93 P **P** **01 18 55.6 +2.8**
baz=305,SNR=7.2
YBH Yreka Blue Hor 29.49 97 P **P** **01 18 54.8 +1.6**
comp=Z,1.8nm,0.7s,baz=281,slow=6.7,SNR=8.0
comp=Z,1.8nm,0.7s
YBH Yreka Blue Hor 29.49 97 P **P** **01 18 52.5 -0.7**
YBH Yreka Blue Hor 29.49 97 P **P** **01 18 52.5 -0.7**
YBH pmax pmax
comp=Z,6.0nm,1.0s
E09A Wood Farm, Sta 29.52 85 IAmb IAmb 01 19 10.4
comp=Z,25nm,1.3s
K05A Summer Lake 29.97 94 IAmb IAmb 01 19 18.5
comp=Z,26nm,1.0s
I07A Izee 30.02 90 IAmb IAmb 01 19 14.2
comp=Z,19nm,1.1s
MOD Modoc Plateau 30.82 95 IAmb IAmb 01 19 25.6
comp=Z,25nm,1.3s
J08A Circle Bar Ran 31.04 91 IAmb IAmb 01 19 23.2
comp=Z,33nm,1.3s
WVOR Wild Horse Val 31.49 92 IAmb IAmb 01 19 28.1
comp=Z,23nm,1.1s
WVOR Wild Horse Val 31.49 92 P **P** **01 19 13.0 +2.1**
WVOR pmax pmax
comp=Z,23nm,1.1s
TYV Tymovskoe 32.46 287 *e*P **P** **01 19 19.1 0.0**
TYV *e*S **S** **01 24 34.4 +1.1**
TYV pmax pmax
comp=Z,18nm,0.9s
TYV pmax pmax
comp=Z,200nm,4.0s
TYV smax smax
comp=N,200nm,3.9s
TYV smax smax
comp=E,100nm,3.9s
MFID Camas Ranch 32.59 89 IAmb IAmb 01 19 36.2
comp=Z,16nm,0.9s
PAHR Pah Rah Range 32.73 97 IAmb IAmb 01 19 42.2
comp=Z,15nm,0.9s
HLK Haleakala 33.25 168 P **P** **01 19 27.4 +0.8**
HLID Hailey 33.34 87 P **P** **01 19 29.2 +1.9**
baz=305,SNR=7.0
BMN Battle Mountai 33.55 94 P **P** **01 19 30.0 +1.0**
BMN Battle Mountai 33.55 94 P **P** **01 19 30.0 +1.0**
BMN pmax pmax
comp=Z,10.0nm,1.0s
TIXI Tiksi 33.56 328 LR LR 01 35 05.4
comp=Z,1µm,18.0s,baz=1.0,slow=40
TIXI Tiksi 33.56 328 P **P** **01 19 27.5 -1.0**
TIXI IAmb IAmb 01 19 29.0
comp=Z,21nm,1.0s
TIXI Tiksi 33.56 328 *ce*P **P** **01 19 27.3 -1.2**
TIXI pmax pmax
comp=Z,27nm,1.3s
TIXI MLR MLR
comp=Z,1µm,16.0s
UGL Uglegorsk 33.62 285 *e*P **P** **01 19 29.7 +0.4**
UGL pmax pmax
comp=Z,130nm,0.7s
RES Resolute Bay 33.70 26 LR LR 01 34 53.7
comp=Z,993nm,18.2s,baz=269,slow=39
RES Resolute Bay 33.70 26 IAmb IAmb 01 19 38.6
comp=Z,30nm,1.5s
RES Resolute Bay 33.70 26 P **P** **01 19 30.0 +0.3**
RES pmax pmax
comp=Z,15nm,1.5s
EGMT Eagleton 33.70 77 P **P** **01 19 32.8 +2.7**
baz=300
BOZ Bozeman (W) 33.86 82 P **P** **01 19 34.1 +2.4**
BOZ Bozeman (W) 33.86 82 P **P** **01 19 33.3 +1.6**
baz=303
KVN Kaiserville 33.91 97 IAmb IAmb 01 19 51.9
comp=Z,19nm,1.1s
LHV Little Huntoon 34.20 98 IAmb IAmb 01 19 54.9
comp=Z,19nm,1.2s
NVAR Mina Array Bea 34.20 98 P **P** **01 19 35.9 +1.2**
comp=Z,3.0nm,0.8s,baz=297,slow=8.8,SNR=16
NVAR PcP **PcP** **01 22 11.3 0.0**
comp=Z,0.2nm,0.3s,baz=307,slow=3.3,SNR=1.9
NVAR ScP **ScP** **01 25 55.0 -0.8**
comp=Z,0.7nm,0.7s,baz=284,slow=3.6,SNR=2.4
comp=Z,3.0nm,0.8s
NVAR Mina Array Bea 34.20 98 P **P** **01 19 35.7 +1.0**
YSS Yuzh-Sakhalins 34.29 281 *e*P **P** **01 19 35.3 +0.2**
YSS *e*S **S** **01 25 02.7 +0.9**
YSS pmax pmax
comp=Z,30nm,0.8s
ELK Elko 34.54 92 LR LR 01 31 23.1
comp=Z,548nm,20.4s,baz=304,slow=32
ELK Elko 34.54 92 P **P** **01 19 39.4 +1.7**
YAK Yakutsk 35.06 311 *e*P **P** **01 19 40.6 -1.0**
YAK *e* 01 20 58.2
YAK *e* 01 22 13.0
YAK *e*S **S** **01 25 09.8 -3.5**
YAK *e*SS **SnSn** **01 27 27.0 -1.9**
YAK *e* 01 29 59.2
YAK pmax pmax
comp=Z,27nm,0.9s
YAK pmax pmax
comp=N,3.0nm,1.0s
YAK pmax pmax
comp=E,10.0nm,1.4s
YAK pmax pmax
comp=Z,14nm,1.2s
YAK pmax pmax
comp=N,12nm,2.0s
YAK pmax pmax
comp=E,17nm,2.3s
YAK smax smax
comp=N,6.0nm,1.0s
YAK smax smax
comp=E,9.0nm,1.1s
HVU Hansel Valley 35.37 88 IAmb IAmb 01 20 00.7
comp=Z,14nm,1.0s
VES Vestal, Richgr 35.49 102 P **P** **01 19 46.8 +1.2**
baz=314
EUNU Eureka 35.52 17 IAmb IAmb 01 20 02.0
comp=Z,14nm,1.1s
RLMT Red Lodge 35.52 81 IAmb IAmb 01 20 16.2
comp=Z,16nm,1.1s
RLMT Red Lodge 35.52 81 P **P** **01 19 47.5 +1.4**
baz=304
CWC Cottonwood Cre 35.66 100 P **P** **01 19 49.3 +2.0**
baz=313
R11A Troy Canyon, C 35.86 95 IAmb IAmb 01 20 07.0
comp=Z,29nm,1.1s
R11A Troy Canyon, C 35.86 95 P **P** **01 19 50.9 +1.9**
baz=311
ASAJ Asahikawa 35.93 277 LR LR 01 32 56.9
comp=Z,254nm,20.7s,baz=72,slow=34
ISA Isabella, Lake 35.97 101 P **P** **01 19 50.9 +1.1**
baz=314
GRNR Gornyy 36.01 291 ⇑*i*P **P** **01 19 49.1 -0.9**
GRNR pmax pmax
comp=Z,20nm,0.9s
MPMC Manual Prospec 36.27 100 P **P** **01 19 54.1 +1.6**
baz=314,SNR=5.9
DUG Dugway, Tooele 36.33 91 IAmb IAmb 01 20 16.6
comp=Z,22nm,1.1s
DUG Dugway, Tooele 36.33 91 P **P** **01 19 54.6 +1.7**
DUG pmax pmax
comp=Z,18nm,1.1s
DUG Dugway, Tooele 36.33 91 P **P** **01 19 54.8 +1.9**
baz=309,SNR=9.5
FURC Furnace Creek, 36.36 99 P **P** **01 19 54.8 +1.7**
baz=313
TPNV Topopah Spring 36.40 98 IAmb IAmb 01 20 12.2
comp=Z,26nm,1.1s
TPNV Topopah Spring 36.40 98 P **P** **01 19 55.4 +1.8**
baz=312
GWY Greenwater Val 36.67 99 IAmb IAmb 01 20 15.5
comp=Z,22nm,1.2s
BW06 Boulder Array 36.70 85 P **P** **01 19 58.0 +1.8**
baz=306
PDAR Pinedale Array 36.70 85 P **P** **01 19 57.1 +0.9**
comp=Z,1.0nm,0.7s,baz=289,slow=4.5,SNR=7.8
PDAR ScP **ScP** **01 26 04.2 -0.6**
comp=Z,0.8nm,1.0s,baz=35,slow=3.6,SNR=4.0
PDAR LR LR 01 33 10.3
comp=Z,188nm,18.9s,baz=314,slow=33
comp=Z,1.0nm,0.7s
PDAR Pinedale Array 36.70 85 P **P** **01 19 56.4 +0.2**
PRN Pahroc Range 36.80 96 IAmb IAmb 01 20 15.4
comp=Z,37nm,1.2s
ERM Erimo 36.83 274 P **P** **01 19 56.9 -0.1**
ERM Erimo 36.83 274 *ce*P **P** **01 19 57.1 +0.1**
ERM pmax pmax
comp=Z,104nm,1.3s
GSC Goldstone, Bar 37.20 100 P **P** **01 20 02.1 +1.7**
baz=314
HEC Hector Ludlow 37.80 100 P **P** **01 20 07.1 +1.6**
baz=314
RDMU Red Mountain 38.02 88 IAmb IAmb 01 20 23.7
comp=Z,20nm,1.2s
Q16A Castle Valley 38.12 91 IAmb IAmb 01 20 25.0
comp=Z,22nm,1.1s
LCMT Little Creek M 38.13 95 P **P** **01 20 08.4 +0.1**
GMRC Granite Mounta 38.23 100 P **P** **01 20 10.6 +1.5**
baz=314
PKCU Pink Cliffs 38.40 94 IAmb IAmb 01 20 28.0
comp=Z,20nm,1.0s
PFO Pinon Flats O 38.59 102 LR LR 01 32 51.6
comp=Z,554nm,18.9s,baz=301,slow=31
IRM Iron Mountain 38.97 100 P **P** **01 20 16.7 +1.4**
baz=315
O20A White River Ci 39.09 87 IAmb IAmb 01 20 36.4
comp=Z,32nm,1.0s
O20A White River Ci 39.09 87 P **P** **01 20 17.7 +1.3**
baz=309,SNR=9.3
RSSD Black Hills 39.16 79 P **P** **01 20 19.5 +2.6**
RSSD pmax pmax
comp=Z,12nm,1.1s
KLR Kul'dur 39.39 291 P **P** **01 20 16.8 -1.7**
comp=Z,11nm,0.7s,baz=64,slow=8.1,SNR=37
KLR LR LR 01 36 45.5
comp=Z,441nm,19.0s,baz=56,slow=37
comp=Z,11nm,0.7s
KLR Kul'dur 39.39 291 *c i*P **P** **01 20 17.3 -1.2**
KLR pmax pmax
comp=Z,27nm,1.3s
KLR MLR MLR
comp=Z,473nm,16.0s
ZEA Zeya 39.54 299 *e*P **P** **01 20 18.5 -1.2**
ZEA pmax pmax
comp=E,10.0nm,0.7s
ZEA pmax pmax
comp=N,10.0nm,0.9s
ZEA pmax pmax
comp=Z,30nm,1.0s
ZEA MLR MLR
comp=E,400nm,16.0s
ZEA MLR MLR
comp=Z,500nm,16.0s
ZEA MLR MLR
comp=N,200nm,15.0s
MDND Maddock 39.61 72 P **P** **01 20 21.4 +0.9**
MDND IAmb IAmb 01 20 36.2
comp=Z,64nm,0.9s
MDND Maddock 39.61 72 P **P** **01 20 22.1 +1.7**
baz=303
MDND Maddock 39.61 72 P **P** **01 20 22.1 +1.7**
baz=303,SNR=5.6
GLA Glamis 39.95 101 P **P** **01 20 24.6 +1.3**
baz=316
N23A Red Feather La 39.98 84 P **P** **01 20 25.6 +1.8**
baz=308
PV13 Radium Mtn., P 40.01 90 P **P** **01 20 25.1 +1.0**
PV13 IAmb IAmb 01 20 39.2
comp=Z,32nm,1.1s
WUAZ Wupatki 40.26 95 P **P** **01 20 27.4 +1.3**
WUAZ IAmb IAmb 01 20 43.7
comp=Z,23nm,1.0s
WUAZ Wupatki 40.26 95 P **P** **01 20 27.7 +1.6**
baz=313
ULM Lac du Bonnet 40.40 66 P **P** **01 20 26.6 -0.3**
comp=Z,2.9nm,0.6s,baz=297,slow=8.6,SNR=5.0
ULM LR LR 01 37 17.3
comp=Z,354nm,19.8s,baz=307,slow=36
comp=Z,2.9nm,0.6s
ULM Lac du Bonnet 40.40 66 *i*P **P** **01 20 27.5 +0.6**
H11N2 WAKE ISLAND Hy 40.76 226 T T 02 04 05.7
baz=26,slow=76,SNR=287
H11N3 WAKE ISLAND Hy 40.76 226 T T 02 04 05.7
baz=26,slow=76,SNR=159
H11N1 WAKE ISLAND Hy 40.78 226 T T 02 04 07.1
baz=26,slow=76,SNR=173
MVCO Mesa Verde 40.83 91 P **P** **01 20 31.8 +0.9**
baz=312
AGMN Agassiz Nation 41.46 69 IAmb IAmb 01 20 54.8
comp=Z,21nm,1.0s
AGMN Agassiz Nation 41.46 69 P **P** **01 20 36.2 +0.6**
baz=304
AGMN Agassiz Nation 41.46 69 P **P** **01 20 36.3 +0.6**
baz=304,SNR=9.1
S22A 4UR Ranch, Cre 41.47 89 P **P** **01 20 38.3 +2.1**
baz=311
214A Organ Pipe Nat 41.91 100 P **P** **01 20 41.2 +1.6**
baz=316
H11S1 WAKE ISLAND Hy 41.93 225 T T 02 05 41.9
baz=26,slow=76,SNR=240
H11S2 WAKE ISLAND Hy 41.94 225 T T 02 05 45.4
baz=26,slow=76,SNR=187
H11S3 WAKE ISLAND Hy 41.95 225 T T 02 05 38.8
baz=26,slow=76,SNR=248
USRK Ussuriysk Ar. 42.09 284 LR LR 01 38 46.0
comp=Z,254nm,18.6s,baz=49,slow=37
SDCO Great Sand Dun 42.26 88 P **P** **01 20 43.9 +1.3**
baz=311
SDCO Great Sand Dun 42.26 88 P **P** **01 20 44.2 +1.5**
baz=311
B35A Bob, Littlefor 42.61 68 P **P** **01 20 45.1 0.0**
B35A Bob, Littlefor 42.61 68 P **P** **01 20 44.8 -0.2**
baz=304
TUC Tucson 42.85 98 P **P** **01 20 48.6 +1.3**
TUC Tucson 42.85 98 P **P** **01 20 48.6 +1.3**
TUC pmax pmax
comp=Z,12nm,1.1s
TUC Tucson 42.85 98 P **P** **01 20 49.0 +1.7**
baz=316
MDJ Mudanjiang 43.22 286 P **P** **01 20 47.6 -2.4**
MDJ ScP **ScP** **01 26 27.5 -2.4**
MDJ S **S** **01 27 15.3 -1.1**
MDJ pmax pmax
comp=Z,21nm,1.2s
MDJ pmax pmax
comp=Z,120nm,3.5s
MDJ LR LR
comp=Z,440nm,20.3s
MDJ LR LR
comp=Z,530nm,20.6s
MDJ LR LR
comp=Z,730nm,21.8s
MJAR Matsushiro Arr 43.28 271 P **P** **01 20 49.8 -0.8**
comp=Z,18nm,1.1s,baz=44,slow=7.3,SNR=10
MJAR LR LR 01 39 43.2
comp=Z,315nm,19.7s,baz=56,slow=37
comp=Z,18nm,1.1s
MJB9 Matsu-Tunnel 43.28 271 P **P** **01 20 51.0 +0.4**
MAJO Matsushiro 43.28 271 P **P** **01 20 50.8 +0.2**
MAJO Matsushiro 43.28 271 *i*P **P** **01 20 49.9 -0.7**
MAJO pmax pmax
comp=Z,60nm,0.8s
T25A Trinidad 43.31 88 P **P** **01 20 52.4 +1.2**
baz=312
ANMO Albuquerque 43.57 92 P **P** **01 20 53.8 +0.5**
ANMO Albuquerque 43.57 92 *ce*P **P** **01 20 53.7 +0.5**
ANMO pmax pmax
comp=Z,3.0nm,1.3s
ANMO Albuquerque 43.57 92 P **P** **01 20 54.2 +1.0**
baz=314
ANMO Albuquerque 43.57 92 P **P** **01 20 54.3 +1.0**
baz=314
ECSD EROS Data Cent 43.70 75 P **P** **01 20 53.9 0.0**
ECSD EROS Data Cent 43.70 75 P **P** **01 20 54.2 +0.3**
baz=307
BNX BinXian 43.79 289 ⇓P **P** **01 20 53.8 -0.8**
BNX pmax pmax
comp=Z,16nm,0.9s
BNX pmax pmax
comp=Z,160nm,5.0s
LENM Lemitar 43.80 93 P **P** **01 20 57.1 +2.0**
NOR Nord 43.87 7 *i*P **P** **01 20 53.4 -1.4**
NOR IAmb IAmb 01 20 55.5
comp=Z,22nm,0.9s
BOD Bodaibo 43.97 310 *e*P **P** **01 20 54.7 -1.2**
BOD pmax pmax
comp=Z,26nm,1.2s
Y22A Socorro 43.97 93 P **P** **01 20 58.0 +1.6**
baz=314
EYMN Ely 44.07 67 P **P** **01 20 56.9 0.0**
EYMN IAmb IAmb 01 21 11.2
comp=Z,15nm,1.0s
EYMN Ely 44.07 67 P **P** **01 20 56.8 0.0**
baz=306
EYMN Ely 44.07 67 P **P** **01 20 56.8 0.0**
baz=305,SNR=5.6
F36A Milaca 44.17 70 P **P** **01 20 57.6 -0.1**
baz=307
JGF Kuroka 44.42 271 P **P** **01 20 59.9 0.0**
JGF IAmb IAmb 01 21 02.1
comp=Z,36nm,1.0s
121A Cookes Peak, D 44.47 95 P **P** **01 21 01.4 +1.0**
baz=315
121A Cookes Peak, D 44.47 95 P **P** **01 21 02.0 +1.5**
baz=315
INU Inuyama 44.80 271 IAmb IAmb 01 21 03.7
comp=Z,19nm,1.0s
E38A The Farm, Brul 44.83 68 IAmb IAmb 01 21 13.4
comp=Z,52nm,1.4s
E38A The Farm, Brul 44.83 68 P **P** **01 21 03.2 +0.3**
baz=307
FRB Frobisher Bay 45.86 38 LR LR 01 43 20.1
comp=Z,1µm,18.3s,baz=302,slow=40
HIA Hailar 45.90 297 IAmb IAmb 01 21 11.5
comp=Z,30nm,1.0s
HIA Hailar 45.90 297 *c i*P **P** **01 21 10.2 -1.2**
HIA pmax pmax
comp=Z,22nm,0.8s
N35A Tabor 46.06 77 P **P** **01 21 12.4 -0.4**
baz=310
CN2 Changchun 46.08 288 *e*P **P** **01 21 12.3 -0.5**
CN2 pmax pmax
comp=Z,30nm,0.8s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=Z,400nm,19.0s
CN2 LR LR
comp=Z,300nm,19.0s
CN2 LR LR
comp=Z,300nm,20.0s
COWI Conover 46.47 68 P **P** **01 21 15.7 -0.3**
baz=308
MNTX Cornudas Mount 46.49 94 P **P** **01 21 16.8 +0.6**
baz=316
MNTX Cornudas Mount 46.49 94 P **P** **01 21 17.7 +1.5**
baz=316,SNR=7.9
NRIK Noril'sk 47.01 333 P **P** **01 21 19.3 -0.5**
comp=Z,28nm,1.0s,baz=62,slow=7.2,SNR=39
comp=Z,28nm,1.0s
NRIK Noril'sk 47.01 333 P **P** **01 21 19.9 +0.1**
NRIK Noril'sk 47.01 333 *ce*P **P** **01 21 19.2 -0.6**
NRIK pmax pmax
comp=Z,40nm,1.0s
E43A Lone Tree Farm 47.47 66 IAmb IAmb 01 21 46.0
comp=Z,12nm,0.9s
E43A Lone Tree Farm 47.47 66 P **P** **01 21 23.3 -0.5**
baz=308
JCJ Chichijima 47.66 259 P **P** **01 21 25.5 +0.1**
comp=Z,109nm,0.9s,baz=105,slow=11,SNR=3.6
JCJ LR LR 01 39 10.2
comp=Z,278nm,21.7s,baz=43,slow=33
comp=Z,109nm,0.9s
JCJ Chichijima 47.66 259 P **P** **01 21 25.8 +0.4**
KBS Kingsbay 47.70 1 P **P** **01 21 25.7 +0.6**
KBS Kingsbay 47.70 1 *ce*P **P** **01 21 25.1 0.0**
KBS pmax pmax
comp=Z,44nm,1.0s
KBS Kingsbay 47.70 1 *i*P **P** **01 21 24.8 -0.3**
KBS Kingsbay 47.70 1 *e*P **P** **01 21 25.9 +0.8**
JFWS Jewell Farm 47.84 72 P **P** **01 21 25.6 -1.0**
baz=310
I42A Draeger Farm, 47.97 70 IAmb IAmb 01 21 37.5
comp=Z,25nm,1.2s
I42A Draeger Farm, 47.97 70 P **P** **01 21 27.3 -0.3**
baz=309
DAG Danmarks Havn 47.99 10 P **P** **01 21 27.3 -0.1**
DAG pmax pmax
comp=Z,72nm,1.0s
DAG Danmarks Havn 47.99 10 *i*P **P** **01 21 26.9 -0.4**
DAG IAmb IAmb 01 21 27.9
comp=Z,50nm,0.8s
SEHB SEOHWA 48.02 280 P **P** **01 21 28.9 +0.8**
P38A Dawn 48.09 77 IAmb IAmb 01 21 34.4
comp=Z,9.0nm,0.7s
P38A Dawn 48.09 77 P **P** **01 21 28.5 -0.1**
baz=311
H43A Windswept, Lux 48.24 68 IAmb IAmb 01 21 41.6
comp=Z,10nm,0.8s
WMOK Wichita Mounta 48.29 86 IAmb IAmb 01 21 47.3
comp=Z,9.5nm,0.8s
WMOK Wichita Mounta 48.29 86 P **P** **01 21 31.1 +0.8**
WMOK pmax pmax
comp=Z,12nm,0.9s
WMOK Wichita Mounta 48.29 86 P **P** **01 21 31.0 +0.8**
baz=314
WMOK Wichita Mounta 48.29 86 P **P** **01 21 31.0 +0.8**
baz=314
SNY Shenyang 48.39 287 ⇓P **P** **01 21 31.8 +0.9**
SNY pmax pmax
comp=Z,61nm,1.2s
SNY pmax pmax
comp=Z,130nm,3.5s
SNY LR LR
comp=Z,440nm,16.9s
SNY LR LR
comp=Z,320nm,16.5s
SNY LR LR
comp=Z,670nm,20.0s
SPA0 Spitsbergen Ar 48.49 0 *e*P **P** **01 21 30.4 -0.8**
SPITS Spitsbergen Ar 48.49 0 LR LR 01 42 49.2
comp=Z,373nm,18.7s,baz=336,slow=37
SUMG Summit 48.50 19 P **P** **01 21 32.2 +0.4**
SUMG Summit 48.50 19 P **P** **01 21 32.2 +0.4**
SUMG pmax pmax
comp=Z,91nm,1.1s
SUMG Summit 48.50 19 *i*P **P** **01 21 32.3 +0.4**
SUMG IAmb IAmb 01 21 33.9
comp=Z,76nm,1.0s
KSRS Korea Array 48.76 280 P **P** **01 21 33.9 +0.1**
comp=Z,22nm,0.9s,baz=54,slow=7.2,SNR=55
KSRS LR LR 01 41 48.8
comp=Z,172nm,20.8s,baz=55,slow=36
comp=Z,22nm,0.9s
KS19 Wonju Array Si 48.76 280 P **P** **01 21 34.6 +0.8**
KS19 IAmb IAmb 01 21 35.8
comp=Z,21nm,0.8s
KSAR Wonju Array Be 48.79 280 P **P** **01 21 34.0 0.0**
KSAR Wonju Array Be 48.79 280 P **P** **01 21 34.0 0.0**
N41A Harden Midland 48.92 74 IAmb IAmb 01 21 45.1

comp=Z,20nm,1.0s
N41A Harden Midland 48.92 74 P **P** 01 21 35.2 +0.3
baz=311
E46A Sault Ste Mari 48.93 64 IAmb IAmb 01 21 45.2
comp=Z,18nm,1.2s
P40A Paris 49.01 76 IAmb IAmb 01 21 56.4
comp=Z,19nm,0.8s
P40A Paris 49.01 76 P **P** **01 21 35.3 -0.4**
baz=312
TX31 Lajitas Ar. Si 49.22 95 IAmb IAmb 01 21 54.4
comp=Z,33nm,1.1s
TX31 Lajitas Ar. Si 49.22 95 P **P** **01 21 38.5 +1.0**
baz=317
TX32 Lajitas Array 49.22 95 IAmb IAmb 01 21 54.4
comp=Z,11nm,1.1s
TXAR Lajitas Array 49.22 95 P **P** **01 21 38.2 +0.7**
comp=Z,2.9nm,0.7s,baz=300,slow=5.3,SNR=48
TXAR ScP **ScP** **01 26 54.1 -1.2**
comp=Z,1.6nm,0.9s,baz=278,slow=2.3,SNR=8.2
TXAR LR LR 01 41 23.1
comp=Z,234nm,19.1s,baz=312,slow=35
comp=Z,2.9nm,0.7s
ABTX Abilene, Hawle 49.25 88 P **P** **01 21 38.4 +0.7**
baz=315
LPIG La Paz 49.26 105 LR LR 01 40 33.8
comp=Z,104nm,18.0s,baz=293,slow=34
S39A Bolivar 49.50 79 P **P** **01 21 38.0 -1.5**
baz=313
SFJD Kangerlussuaq 49.65 28 LR LR 01 46 41.1
comp=Z,357nm,18.6s,baz=319,slow=41
SFJD Kangerlussuaq 49.65 28 P **P** **01 21 40.6 +0.5**
SFJD Kangerlussuaq 49.65 28 P **P** **01 21 40.7 +0.5**
SFJD pmax pmax
comp=Z,48nm,0.9s
SFJD Kangerlussuaq 49.65 28 *i* P **P** **01 21 40.3 +0.1**
SFJD IAmb IAmb 01 21 41.7
comp=Z,48nm,0.9s
R40A Maddies Statio 49.71 78 IAmb IAmb 01 21 58.8
comp=Z,12nm,0.7s
R40A Maddies Statio 49.71 78 P **P** **01 21 39.6 -1.5**
baz=312
U38A Gravette 49.72 81 IAmb IAmb 01 21 59.1
comp=Z,11nm,0.8s
U38A Gravette 49.72 81 P **P** **01 21 40.5 -0.7**
baz=313
TJN Taejon 49.82 279 *ce* P **P** **01 21 42.3 +0.4**
HDIL Hopedale 49.91 73 P **P** **01 21 42.1 -0.5**
baz=312
HDIL Hopedale 49.91 73 P **P** **01 21 42.1 -0.5**
baz=311
DBG Daneborg 50.01 12 *i* P **P** **01 21 42.5 -0.3**
DBG IAmb IAmb 01 21 44.0
comp=Z,42nm,0.9s
X37A Clayton 50.41 83 IAmb IAmb 01 22 02.9
comp=Z,13nm,0.8s
NAWB Namwon 50.46 278 IAmb IAmb 01 21 48.2
comp=Z,25nm,1.0s
CCM Cathedral Cave 50.46 77 P **P** **01 21 46.5 -0.3**
CCM Cathedral Cave 50.46 77 P **P** **01 21 46.5 -0.3**
CCM pmax pmax
comp=Z,7.0nm,0.9s
CCM Cathedral Cave 50.46 77 P **P** **01 21 46.4 -0.3**
baz=313
MGMO Mountain Grove 50.48 79 IAmb IAmb 01 22 04.3
comp=Z,13nm,0.8s
U40A Yellville 50.68 80 P **P** **01 21 47.4 -1.1**
baz=314
U40A P **P** **01 21 47.4 -1.1**
baz=314
U40A Yellville 50.68 80 P **P** **01 21 47.6 -0.8**
baz=313
JCT Junction City 50.69 90 IAmb IAmb 01 22 04.2
comp=Z,20nm,0.9s
JCT Junction City 50.69 90 P **P** **01 21 48.8 +0.2**
baz=316
JCT Junction City 50.69 90 P **P** **01 21 48.9 +0.3**
baz=316
ICESG Greenland Ices 50.92 23 *i* P **P** **01 21 49.9 -0.4**
ICESG IAmb IAmb 01 21 50.7
comp=Z,42nm,0.6s
W39A Magazine 50.93 82 IAmb IAmb 01 22 04.4
comp=Z,13nm,1.0s
W39A Magazine 50.93 82 P **P** **01 21 50.3 -0.1**
baz=314
W39A Magazine 50.93 82 P **P** **01 21 50.4 +0.1**
baz=314
Q44A Meyer Farm, Va 51.18 75 IAmb IAmb 01 22 11.8
comp=Z,23nm,0.9s
XLT XiLinHaoTe 51.23 294 *e* P **P** **01 21 52.8 +0.3**
XLT pP pwP 01 21 57.8 -0.8
XLT sP sP 01 22 01.4 +4.7
XLT ScP **ScP** **01 27 05.6 +2.0**
XLT S **S** **01 29 14.0 +3.3**
XLT pmax pmax
comp=Z,74nm,0.9s
XLT pmax pmax
comp=Z,140nm,4.7s
XLT LR LR
comp=Z,46nm,16.0s
XLT LR LR
comp=Z,320nm,16.4s
XLT LR LR
comp=Z,570nm,16.0s
DY2G Dye2 51.24 27 *i* P **P** **01 21 51.9 -0.6**
DY2G IAmb IAmb 01 21 53.6
comp=Z,18nm,0.9s
SFIN Lafayette 51.28 72 IAmb IAmb 01 22 08.1
comp=Z,27nm,1.1s
SFIN Lafayette 51.28 72 P **P** **01 21 53.4 +0.6**
baz=312
JSU Suzuyama 51.39 272 P **P** **01 21 52.8 -1.0**
JSU IAmb IAmb 01 21 55.4
comp=Z,24nm,1.0s
FCAR Ozark Folk Cen 51.43 80 IAmb IAmb 01 22 07.0
comp=Z,12nm,0.8s
MIAR Mount Ida 51.51 82 IAmb IAmb 01 22 14.8
comp=Z,26nm,1.4s
MIAR Mount Ida 51.51 82 P **P** **01 21 54.8 +0.1**
MIAR Mount Ida 51.51 82 P **P** **01 21 54.5 -0.1**
baz=314
MIAR Mount Ida 51.51 82 P **P** **01 21 54.7 +0.1**
baz=314
N47A Urbana 51.74 71 IAmb IAmb 01 22 11.9
comp=Z,23nm,1.0s
IRK Irkutsk 51.78 309 *e* P **P** **01 21 55.4 -1.0**
IRK pmax pmax
comp=Z,52nm,2.4s
PBMO Poplar Bluff 51.81 78 IAmb IAmb 01 22 17.9
comp=Z,29nm,1.4s
SCHQ Schefferville 52.04 47 P **P** **01 21 58.2 -0.2**
comp=Z,13nm,0.9s,baz=316,slow=7.3,SNR=12
SCHQ LR LR 01 46 52.3
comp=Z,468nm,18.5s,baz=308,slow=39
comp=Z,13nm,0.9s
SCHQ Schefferville 52.04 47 IAmb IAmb 01 21 59.4
comp=Z,28nm,1.1s
O48B Farmland 52.46 71 P **P** **01 22 00.4 -1.3**
baz=313,SNR=5.1
833A Chaparral WMA, 52.50 92 IAmb IAmb 01 22 18.5
comp=Z,18nm,0.9s
833A Chaparral WMA, 52.50 92 P **P** **01 22 02.8 +0.7**
baz=318
833A Chaparral WMA, 52.50 92 P **P** **01 22 03.3 +1.2**
baz=318
SADO Sadowa 52.73 63 LR LR 01 45 42.2
comp=Z,244nm,18.2s,baz=338,slow=37
P48A Milroy 52.85 72 IAmb IAmb 01 22 18.8
comp=Z,28nm,1.2s
SCO Scoresbysund 53.17 15 IAmb IAmb 01 22 20.9
comp=Z,17nm,1.1s
SCO Scoresbysund 53.17 15 *i* P **P** **01 22 06.5 +0.1**
SCO IAmb IAmb 01 22 08.2
comp=Z,114nm,2.4s
P49A Miami Univ. Ec 53.20 71 IAmb IAmb 01 22 25.3
comp=Z,16nm,0.8s
P49A Miami Univ. Ec 53.20 71 P **P** **01 22 05.8 -1.4**
baz=313
ULN Ulaanbaatar 53.33 303 P **P** **01 22 08.0 -0.2**
ULN Ulaanbaatar 53.33 303 *ce* P **P** **01 22 08.1 -0.1**
ULN pmax pmax
comp=Z,50nm,1.0s
HKT Hockley 53.44 88 P **P** **01 22 11.0 +2.1**
HKT IAmb IAmb 01 22 24.9
comp=Z,14nm,1.1s
HKT Hockley 53.44 88 *i* P **P** **01 22 11.4 +2.5**
HKT pmax pmax
comp=Z,15nm,1.2s

SOEG Soedalen 53.44 20 *i* P **P** **01 22 08.2 -0.3**
SOEG IAmb IAmb 01 22 10.1
comp=Z,69nm,1.4s
ZAK Zakamensk 53.48 307 *ep* **P** **01 22 08.5 -0.7**
ZAK *e* 01 23 16.7
ZAK pmax pmax
comp=Z,10.0nm,1.3s
ZAK pmax pmax
comp=Z,10.0nm,1.3s
T47A Sharon Grove 53.59 75 IAmb IAmb 01 22 29.9
comp=Z,32nm,1.1s
MOY Mondy 53.67 310 *ep* **P** **01 22 11.1 +0.5**
MOY pmax pmax
comp=Z,23nm,1.2s
SONM Songino Array 53.67 303 P **P** **01 22 10.8 +0.1**
comp=Z,22nm,0.9s,baz=47,slow=7.2,SNR=118
SONM PcP **PcP** **01 23 17.3 +0.4**
comp=Z,5.5nm,0.8s,baz=74,slow=2.4,SNR=5.0
SONM LR LR 01 45 35.2
comp=Z,233nm,20.6s,baz=46,slow=37
comp=Z,22nm,0.9s
SONM Songino Array 53.67 303 P **P** **01 22 10.7 0.0**
SONM Songino Array 53.67 303 P **P** **01 22 10.7 0.0**
SONM pmax pmax
comp=Z,39nm,1.0s
WVT Waverly 53.77 76 P **P** **01 22 11.7 +0.3**
WVT IAmb IAmb 01 22 18.0
comp=Z,15nm,0.7s
WVT Waverly 53.77 76 P **P** **01 22 11.7 +0.3**
WVT pmax pmax
comp=Z,15nm,0.7s
WVT Waverly 53.77 76 P **P** **01 22 10.7 -0.7**
baz=314
WVT Waverly 53.77 76 P **P** **01 22 11.4 0.0**
baz=314
BJT Baijiatuan 53.78 290 IAmb IAmb 01 22 12.5
comp=Z,27nm,1.2s
OXF Oxford 53.98 79 P **P** **01 22 13.9 +1.0**
OXF Oxford 53.98 79 P **P** **01 22 12.9 0.0**
baz=315
ERPA Erie 54.06 66 P **P** **01 22 13.8 +0.4**
baz=313
TRQ Mont Tremblant 54.14 59 IAmb IAmb 01 22 27.9
comp=Z,22nm,1.1s
R50A Paris 54.28 72 IAmb IAmb 01 22 32.5
comp=Z,17nm,1.0s
R50A Paris 54.28 72 P **P** **01 22 13.6 -1.5**
baz=314
R50A P **P** **01 22 13.6 -1.5**
baz=314
Q51A Peebles 54.32 71 P **P** **01 22 15.0 -0.4**
baz=314
Q51A P **P** **01 22 15.0 -0.4**
baz=314
PLAL Pickwick Lake 54.43 78 IAmb IAmb 01 22 33.6
comp=Z,12nm,0.9s
IVI Ivigtut 54.60 32 P **P** **01 22 17.4 +0.4**
IVI Ivigtut 54.60 32 *i* P **P** **01 22 16.9 -0.1**
IVI IAmb IAmb 01 22 19.1
comp=Z,54nm,0.9s
CLTN Cedars of Leba 54.66 75 IAmb IAmb 01 22 38.1
comp=Z,14nm,1.0s
T50A Nancy 54.87 74 IAmb IAmb 01 22 37.4
comp=Z,13nm,0.9s
M55A Ridgway 55.17 66 IAmb IAmb 01 22 37.5
comp=Z,20nm,0.9s
M55A Ridgway 55.17 66 P **P** **01 22 20.2 -1.3**
baz=314
M55A P **P** **01 22 20.2 -1.3**
baz=314
L56A Greenwood 55.36 64 IAmb IAmb 01 22 48.8
comp=Z,17nm,1.0s
L56A Greenwood 55.36 64 P **P** **01 22 22.0 -0.9**
baz=314
L56A P **P** **01 22 22.0 -0.9**
baz=314
Z47A Carrollton 55.69 79 IAmb IAmb 01 22 33.3
comp=Z,16nm,0.8s
J58A Remsen 55.73 62 IAmb IAmb 01 22 53.8
comp=Z,11nm,1.1s
HHC Hu-ho-hao-te 55.75 294 *ep* **P** **01 22 26.3 +0.5**
HHC pmax pmax
comp=Z,98nm,1.1s
HHC pmax pmax
comp=Z,330nm,5.0s
HHC LR LR
comp=Z,400nm,13.5s
HHC LR LR
comp=Z,660nm,14.0s
HHC LR LR
comp=Z,1μm,14.6s
TIA Tai'an 55.88 286 ⇑P **P** **01 22 26.8 +0.1**
TIA pmax pmax
comp=Z,20nm,0.9s
TIA pmax pmax
comp=Z,150nm,7.4s
TIA LR LR
comp=Z,280nm,18.5s
TIA LR LR
comp=Z,350nm,10.2s
TIA LR LR
comp=Z,480nm,21.4s
TZTN Tazewell 55.94 73 IAmb IAmb 01 22 29.5
comp=Z,35nm,1.2s
TZTN Tazewell 55.94 73 P **P** **01 22 28.9 +1.8**
baz=315
KNGR Kungurtug, Tuv 55.99 311 ⇓ *i* P **P** **01 22 28.3 +0.9**
KNGR pmax pmax
comp=Z,31nm,0.9s
JOW Kunigami 56.10 270 LR LR 01 48 50.7
comp=Z,57nm,18.4s,baz=114,slow=39
FPAL Fort Paine 56.17 76 IAmb IAmb 01 22 44.9
comp=Z,13nm,0.8s
SSPA Standing Stone 56.23 66 P **P** **01 22 28.6 -0.5**
SSPA IAmb IAmb 01 22 44.9
comp=Z,16nm,0.9s
SSPA Standing Stone 56.23 66 P **P** **01 22 31.2 +2.1**
baz=314
HNS HongShan 56.42 289 ⇑P **P** **01 22 31.4 +0.9**
HNS pmax pmax
comp=Z,81nm,0.8s
HNS LR LR
comp=Z,200nm,18.6s
HNS LR LR
comp=Z,430nm,18.6s
HNS LR LR
comp=Z,530nm,18.3s
ACCN Adirondack Com 56.55 61 P **P** **01 22 31.8 +0.4**
ACCN IAmb IAmb 01 22 46.5
comp=Z,14nm,1.2s
KEV Kevo 56.72 356 P **P** **01 22 31.8 -0.3**
KEV Kevo 56.72 356 P **P** **01 22 31.8 -0.3**
KEV pmax pmax
comp=Z,33nm,0.7s
BTO Baotou 56.76 295 *ep* **P** **01 22 32.8 -0.2**
BTO S **S** **01 30 26.8 +1.2**
BTO LR LR
comp=Z,2μm,13.9s
BTO LR LR
comp=Z,2μm,14.3s
GUMO Guam 56.84 246 LR LR 01 45 33.1
comp=Z,74nm,19.2s,baz=90,slow=35
G62A West of Eustis 56.87 57 IAmb IAmb 01 22 47.1
comp=Z,12nm,0.8s
ARA0 ARCESS Array S 57.00 356 *ep* **P** **01 22 33.9 -0.3**
ARA0 IAmb IAmb 01 22 34.6
comp=Z,22nm,1.0s
ARCES ARCESS Array B 57.00 356 P **P** **01 22 33.8 -0.4**
comp=Z,9.1nm,0.7s,baz=36,slow=7.7,SNR=16
ARCES LR LR 01 49 24.6
comp=Z,478nm,18.1s,baz=346,slow=39
comp=Z,9.1nm,0.7s
ARCES ARCESS Array B 57.00 356 P **P** **01 22 33.8 -0.4**
ARCES IAmb IAmb 01 22 34.4
comp=Z,16nm,0.9s
ARCES ARCESS Array B 57.00 356 P **P** **01 22 33.8 -0.4**
ARCES pmax pmax
comp=Z,16nm,0.9s
TRO Tromso 57.07 359 *ep* **P** **01 22 34.1 -0.5**
TRO IAmb IAmb 01 22 38.4
comp=Z,64nm,1.4s
F64A Sherman 57.50 56 IAmb IAmb 01 22 55.3
comp=Z,13nm,1.0s
BATG Bathurst New B 57.60 53 IAmb IAmb 01 22 52.8
comp=Z,40nm,1.5s
NJ2 Nanjing 57.86 282 ⇓P **P** **01 22 40.4 -0.3**
NJ2 pmax pmax
comp=Z,28nm,0.9s
NJ2 LR LR
comp=Z,250nm,13.1s
NJ2 LR LR
comp=Z,250nm,13.9s
NJ2 LR LR
comp=Z,430nm,16.7s
LVZ Lovozero 58.07 352 *ce* P **P** **01 22 41.5 -0.3**
LVZ pmax pmax
comp=Z,34nm,1.3s
BORG Borgarnes 58.43 18 P **P** **01 22 42.2 -2.1**
comp=Z,5.6nm,0.8s,baz=62,slow=9.2,SNR=2.7
BORG LR LR 01 50 18.7
comp=Z,214nm,18.3s,baz=338,slow=39
comp=Z,5.6nm,0.8s
BORG Borgarnes 58.43 18 P **P** **01 22 48.3 +4.0**
BORG Borgarnes 58.43 18 P **P** **01 22 48.3 +4.0**
ZAA0 Zalesovo Array 58.85 320 IAmb IAmb 01 22 48.1
comp=Z,13nm,0.8s
ZALV Zalesovo Beam 58.85 320 P **P** **01 22 46.7 -0.7**
comp=Z,15nm,0.9s,baz=40,slow=7.3,SNR=44
ZALV PcP **PcP** **01 23 36.4 -0.3**
comp=Z,7.7nm,0.8s,baz=48,slow=4.9,SNR=7.6
ZALV LR LR 01 50 42.9
comp=Z,664nm,18.2s,baz=32,slow=39
comp=Z,15nm,0.9s
ZALV Zalesovo Beam 58.85 320 *i* P **P** **01 22 47.0 -0.3**
ZALV pmax pmax
comp=Z,15nm,0.9s
LYN LuoYang 59.73 288 ⇑ *i* P **P** **01 22 54.3 +0.6**
LYN pmax pmax
comp=Z,40nm,0.7s
LYN LR LR
comp=Z,470nm,19.2s
LYN LR LR
comp=Z,470nm,20.6s
WHN Wuhan 61.58 284 ⇑P **P** **01 23 06.6 +0.2**
WHN pmax pmax
comp=Z,41nm,0.8s
XAN Xi'an 62.10 290 ⇑P **P** **01 23 10.0 +0.1**
XAN pP pwP 01 23 16.1 +0.1
XAN sP sP 01 23 19.3 +5.2
XAN PcP **PcP** **01 23 50.8 +0.7**
XAN pmax pmax
comp=Z,30nm,1.4s
XAN LR LR
comp=Z,280nm,19.9s
XAN LR LR
comp=Z,360nm,20.6s
XAN LR LR
comp=Z,590nm,15.8s
SSLB Suanglung 62.74 274 P **P** **01 23 14.6 +0.3**
PRGR Permogore 62.82 345 *ep* **P** **01 23 13.3 -0.9**
GTA Gaotai 63.02 300 ⇑P **P** **01 23 15.8 -0.3**
GTA pP sP 01 23 19.4 -0.9
GTA sP pwP 01 23 22.9 +0.6
GTA pmax pmax
comp=Z,27nm,1.2s
GTA pmax pmax
comp=Z,110nm,4.4s
GTA LR LR
comp=Z,480nm,16.4s
GTA LR LR
comp=Z,450nm,17.1s
GTA LR LR
comp=Z,730nm,16.4s
LZH Lanzhou 63.37 295 *ep* **P** **01 23 19.3 +0.8**
LZH pP pwP 01 23 24.3 -0.4
LZH sP sP 01 23 29.3 +6.6
LZH pmax pmax
comp=Z,80nm,1.0s
LZH pmax pmax
comp=Z,220nm,4.3s
LZH LR LR
comp=Z,640nm,15.2s
LZH LR LR
comp=Z,310nm,14.1s
LZH LR LR
comp=Z,620nm,15.4s
SEM Semipalatinsk 63.37 320 *ep* **P** **01 23 16.2 -2.1**
SEM Semipalatinsk 63.37 320 *ep* **P** **01 23 16.3 -2.1**
baz=320
TWG Pinlang 63.41 273 P **P** **01 23 20.1 +1.4**
TWG IAmb IAmb 01 23 28.0
comp=Z,20nm,1.1s
KURK Kurchatov 63.74 321 P **P** **01 23 20.6 +0.1**
KURK Kurchatov 63.74 321 *ce* P **P** **01 23 20.7 +0.2**
KURK pmax pmax
comp=Z,64nm,1.3s
KURK MLR MLR
comp=Z,473nm,19.0s
KURBB Kurchatov Arra 63.85 321 P **P** **01 23 20.8 -0.4**
comp=Z,35nm,1.0s,baz=38,slow=6.9,SNR=145
KURBB PP **PP** **01 25 39.2 -1.9**
comp=Z,3.4nm,0.9s,baz=37,slow=9.0,SNR=4.2
KURBB LR LR 01 54 11.4
comp=Z,405nm,18.2s,baz=25,slow=39
comp=Z,35nm,1.0s
ZSN Zaisan 63.88 315 *ep* **P** **01 23 21.0 -0.4**
ZSN pmax pmax
comp=Z,22nm,0.9s
ZSN Zaisan 63.88 315 *ep* **P** **01 23 21.1 -0.4**
comp=Z,22nm,0.9s,baz=315
CNSH ChangSha 64.16 283 ⇓P **P** **01 23 23.5 -0.1**
CNSH pmax pmax
comp=Z,40nm,1.1s
SVE Sverdlovsk 64.19 335 ⇓ *ep* **P** **01 23 23.6 +0.3**
SVE pmax pmax
comp=Z,62nm,0.9s
AKN Aaknes 64.32 5 *ep* **P** **01 23 25.6 +1.4**
AKN IAmb IAmb 01 23 26.1
comp=Z,54nm,1.0s
KLMR Klimovskoe 64.43 348 *ep* **P** **01 23 21.9 -3.0**
KLMR pmax pmax
comp=Z,57nm,1.4s
KLMR Klimovskoe 64.43 348 *ep* **P** **01 23 21.9 -3.0**
KLMR AMP 01 23 26.2
comp=Z,57nm,1.4s
DOMB Dombas 64.55 4 *ep* **P** **01 23 26.1 +0.4**
DOMB IAmb IAmb 01 23 26.5
comp=Z,30nm,0.9s
BVAR Borovoye Array 64.69 327 LR LR 01 55 59.1
comp=Z,219nm,19.2s,baz=290,slow=40
BRVK Borovoye 64.69 327 P **P** **01 23 27.1 +0.4**
BRVK Borovoye 64.69 327 *ce* P **P** **01 23 27.3 +0.6**
BRVK pmax pmax
comp=Z,54nm,1.0s
BRVK MLR MLR
comp=Z,596nm,17.0s
VALR Valaam 64.82 352 *i* P **P** **01 23 26.5 -0.9**
VALR pmax pmax
comp=Z,57nm,1.0s
KIRV Kirov 65.05 342 LR LR 01 57 06.2
comp=Z,489nm,18.4s,baz=28,slow=41
KIRV Kirov 65.05 342 *ce* P **P** **01 23 27.2 -1.7**
FIA1 FINESS Array S 65.05 355 P **P** **01 23 29.1 +0.2**
FINES FINESS Array B 65.05 355 P **P** **01 23 28.4 -0.5**
comp=Z,20nm,0.8s,baz=16,slow=8.3,SNR=45
FINES LR LR 01 54 05.4
comp=Z,277nm,18.5s,baz=38,slow=38
comp=Z,20nm,0.8s
FINES FINESS Array B 65.05 355 *i* P **P** **01 23 28.7 -0.2**
FINES pmax pmax
comp=Z,20nm,0.8s
ARU Arti 65.06 336 P **P** **01 23 28.5 -0.5**
ARU Arti 65.06 336 *c i* P **P** **01 23 28.8 -0.2**
ARU 01 24 00.4
ARU 01 25 48.0
ARU PPP PPP 01 27 24.7
ARU S **S** **01 32 13.1 +2.4**
ARU 01 33 22.1
ARU SS **SS** **01 36 25.8 +4.1**
ARU pmax pmax
comp=Z,57nm,0.9s
ARU MLR MLR
comp=Z,493nm,16.0s
TAOE Nuku Hiva Isla 65.28 154 *e* LR LR 01 42 08.7
comp=Z,354nm,29.1s
NC204 NORSAR Array S 65.38 3 *ep* **P** **01 23 31.6 +0.5**
NC204 IAmb IAmb 01 23 32.6
comp=Z,44nm,1.1s
MK31 Makanchi Array 65.46 316 *i* P **P** **01 23 31.0 -0.9**
MK31 pmax pmax
comp=Z,15nm,0.8s
MKAR Makanchi Array 65.46 316 P **P** **01 23 31.2 -0.6**
comp=Z,11nm,0.8s,baz=48,slow=5.7,SNR=88

MKAR PP **PP** **01 25 53.9 -1.5**
comp=Z,1.9nm,0.8s,baz=43,slow=11,SNR=3.6
MKAR LR LR 01 53 25.7
comp=Z,335nm,19.1s,baz=28,slow=37
comp=Z,11nm,0.8s
MKAR Makanchi Array 65.46 316 P **P** **01 23 31.1 -0.7**
WMQ Urumqi 65.50 311 *eP* **P** **01 23 32.4 +0.2**
WMQ pP pwP 01 23 39.3 +0.9
WMQ PP **PP** **01 26 01.0 +5.2**
WMQ pmax pmax
comp=Z,15nm,0.7s
WMQ LR LR
comp=Z,580nm,19.3s
WMQ LR LR
comp=Z,440nm,23.5s
WMQ LR LR
comp=Z,220nm,18.3s
MAKZ Makanchi 65.58 317 P **P** **01 23 32.0 -0.6**
MAKZ IAmb IAmb 01 23 33.2
comp=Z,22nm,1.1s
MAKZ Makanchi 65.58 317 P **P** **01 23 32.0 -0.6**
MAKZ pmax pmax
comp=Z,22nm,1.1s
NB201 NORSAR Array S 65.62 3 *eP* **P** **01 23 33.4 +0.7**
NB2 NORSAR Subarra 65.63 3 P **P** **01 23 29.0 -3.7**
NB2 pmax pmax
comp=Z,12nm,1.1s
NB2 NORSAR Subarra 65.63 3 P **P** **01 23 32.6 -0.1**
baz=357,slow=6.5
NB2 NORSAR Subarra 65.63 3 P **P** **01 23 32.6 -0.1**
comp=Z,27nm,0.9s,baz=357,slow=6.5
NOA NORSAR Array B 65.63 3 P **P** **01 23 32.9 +0.2**
comp=Z,15nm,0.9s,baz=358,slow=6.5,SNR=33
NOA LR LR 01 54 08.7
comp=Z,123nm,18.4s,baz=350,slow=38
comp=Z,15nm,0.9s
NAO01 NORSAR Array S 65.82 3 P **P** **01 23 34.2 +0.4**
SKAR Skarslia 65.88 4 *eP* **P** **01 23 35.2 +0.8**
SKAR IAmb IAmb 01 23 36.0
comp=Z,17nm,0.8s
ASK Askoy 65.91 6 *eP* **P** **01 23 35.3 +0.9**
ASK IAmb IAmb 01 23 37.5
comp=Z,69nm,1.0s
NORES NORESS Array B 65.94 3 P **P** **01 23 37.2 +2.5**
PUL Pulkovo 66.44 352*ce*P **P** **01 23 37.8 0.0**
PUL pmax pmax
comp=Z,42nm,0.4s
BRZS Berezniki 66.49 324 *eP* **P** **01 23 37.2 -1.2**
BRZS pmax pmax
comp=Z,10.0nm,0.8s
BRZS Berezniki 66.49 324 *eP* **P** **01 23 37.3 -1.2**
comp=Z,9.6nm,0.8s,baz=324
ODD1 Odda 66.56 5 *eP* **P** **01 23 39.7 +1.0**
HFS Hagfors 66.60 2 LR LR 01 54 02.3
comp=Z,132nm,21.8s,baz=1.0,slow=37
KONO Kongsberg 66.97 4 P **P** **01 23 41.9 +0.7**
KONO Kongsberg 66.97 4*ce*P **P** **01 23 40.6 -0.6**
KONO pmax pmax
comp=Z,61nm,1.3s
KONO Kongsberg 66.97 4 *eP* **P** **01 23 42.1 +0.9**
KONO IAmb IAmb 01 23 42.7
comp=Z,60nm,1.1s
BLS5 Blasjo 67.04 6 *eP* **P** **01 23 42.5 +0.7**
BLS5 IAmb IAmb 01 23 43.5
comp=Z,40nm,0.9s
CD2 Chengdu 67.32 291 P **P** **01 23 43.8 -0.2**
CD2 PcP **PcP** **01 24 10.8 -0.9**
CD2 S **S** **01 32 37.8 -1.2**
CD2 pmax pmax
comp=Z,60nm,0.8s
CD2 LR LR
comp=Z,300nm,18.9s
CD2 LR LR
comp=Z,330nm,17.1s
CD2 LR LR
comp=Z,280nm,17.1s
AFI Afiamalu 67.61 189 LR LR 01 48 48.9
comp=Z,142nm,20.8s,baz=9.5,slow=32
VSU Vasula 67.99 354 *iP* **P** **01 23 47.8 +0.1**
VSU pmax pmax
comp=Z,25nm,1.0s
VSU Vasula 67.99 354 *eP* **P** **01 23 48.5 +0.8**
GOMU GeErMu 68.03 301 P **P** **01 23 48.6 -0.2**
GOMU pP sP 01 23 52.8 -0.2
GOMU sP pwP 01 23 56.5 +1.5
GOMU S **S** **01 32 40.8 -7.2**
GOMU pmax pmax
comp=Z,18nm,0.9s
GOMU pmax pmax
comp=Z,57nm,3.7s
GOMU LR LR
comp=Z,95nm,16.5s
GOMU LR LR
comp=Z,250nm,16.9s
GOMU LR LR
comp=Z,150nm,16.5s
TDK Taldyqorghan 68.50 318 *eP* **P** **01 23 50.6 -0.6**
TDK Taldyqorghan 68.50 318 *eP* **P** **01 23 50.7 -0.6**
baz=318
KRVT Keravat (AS076 68.66 229 LR LR 01 51 22.0
comp=Z,126nm,18.3s,baz=234,slow=34
SLIT Slitere, Latvi 69.03 357 *eP* **P** **01 23 54.6 +0.4**
GYA Guiyang 69.08 286⇓ *iP* **P** **01 23 56.3 +1.1**
GYA sP pwP 01 24 07.1 +5.8
GYA S **S** **01 33 02.3 +2.0**
GYA SS **SS** **01 37 22.1 -3.6**
GYA pmax pmax
comp=Z,53nm,1.0s
GYA LR LR
comp=Z,340nm,20.2s
SHLS Shalkode 69.59 316 *eP* **P** **01 23 56.5 -1.6**
SHLS pmax pmax
comp=Z,22nm,1.0s
SHLS Shalkode 69.59 316 *eP* **P** **01 23 56.5 -1.6**
comp=Z,22nm,1.0s,baz=315
PMOR Pomariorio Ree 69.62 164 *eT* T 02 39 49.3
comp=Z,12nm,0.2s
MOS Moscow 69.65 347 *eP* **P** **01 23 55.2 -2.9**
MOS pmax pmax
comp=Z,68nm,1.1s
MOS MLR MLR
comp=Z,400nm,18.0s
KPKS Kokpek 69.66 317 *eP* **P** **01 23 57.5 -1.0**
KPKS pmax pmax
comp=Z,22nm,1.2s
KPKS Kokpek 69.66 317 *eP* **P** **01 23 57.5 -1.0**
comp=Z,22nm,1.2s,baz=316
UZB Uzynbulak 69.78 316 *eP* **P** **01 23 58.8 -0.5**
UZB Uzynbulak 69.78 316 *eP* **P** **01 23 58.8 -0.5**
baz=316
CHKK Chushkaly 70.02 318 *eP* **P** **01 23 59.3 -1.3**
CHKK Chushkaly 70.02 318 *eP* **P** **01 23 59.4 -1.2**
baz=318
SATY Saty 70.11 317 *eP* **P** **01 24 01.0 -0.3**
SATY pmax pmax
comp=Z,14nm,1.3s
SATY Saty 70.11 317 *eP* **P** **01 24 01.1 -0.3**
comp=Z,14nm,1.3s,baz=316
MUD Monsted U'grnd 70.14 4 *iP* **P** **01 23 59.9 -1.2**
MUD IAmb IAmb 01 24 02.6
comp=Z,27nm,0.8s
BTLS Baital 70.17 321 *eP* **P** **01 24 01.1 -0.4**
BTLS pmax pmax
comp=Z,12nm,0.5s
BTLS Baital 70.17 321 *eP* **P** **01 24 01.1 -0.4**
comp=Z,12nm,0.5s,baz=320
EKA Eskdalemuir Ar 70.22 12 P **P** **01 24 02.1 +0.5**
ESK Eskdalemuir 70.23 12 P **P** **01 24 01.8 +0.1**
ESK Eskdalemuir 70.23 12 P **P** **01 24 01.8 +0.1**
ESK pmax pmax
comp=Z,31nm,1.1s
KUU Kurty 70.24 318 *eP* **P** **01 24 00.3 -1.7**
KUU pmax pmax
comp=Z,19nm,1.2s
KUU Kurty 70.24 318 *eP* **P** **01 24 00.3 -1.7**
comp=Z,19nm,1.2s,baz=318
DEL Delary 70.27 2 *eP* **P** **01 24 02.5 +0.6**
OBN Obninsk 70.40 348 P **P** **01 24 02.2 -0.5**
OBN Obninsk 70.40 348*ce*P **P** **01 24 02.5 -0.2**
OBN *e* 01 24 22.0
OBN *e* 01 26 37.4
OBN *e*PPP PPP 01 28 18.6
OBN pmax pmax
comp=Z,79nm,1.7s
OBN MLR MLR
comp=Z,335nm,18.0s

AAA Alma-Ata 70.59 318 *eP* **P** **01 24 02.3 -1.8**
AAA Alma-Ata 70.59 318 *eP* **P** **01 24 02.4 -1.8**
baz=317
AKTO Aktyubinsk 70.62 333 LR LR 01 57 40.3
comp=Z,257nm,21.6s,baz=32,slow=38
ISAL Salakas 70.91 354 *eP* **P** **01 24 06.6 +0.8**
PABE Paberze 71.09 356 *eP* **P** **01 24 07.7 +0.8**
IIGN Ignalina 71.12 354 *eP* **P** **01 24 08.0 +0.9**
IDID Didziasalis 71.13 354 *eP* **P** **01 24 08.0 +0.9**
ABKAR Akbulak array 71.16 332 P **P** **01 24 07.8 +0.3**
BELG Belogornoye 71.23 340*c iP* **P** **01 24 07.5 -0.3**
BELG pmax pmax
comp=Z,16nm,0.9s
SGDS Sogindy 71.28 319 *eP* **P** **01 24 07.6 -0.8**
SGDS pmax pmax
comp=Z,11nm,0.8s
SGDS Sogindy 71.28 319 *eP* **P** **01 24 07.6 -0.8**
comp=Z,11nm,0.8s,baz=319
TKM2 Tokmak 2 71.35 318 P **P** **01 24 10.5 +1.5**
SNR=9.7
TKM2 Tokmak 2 71.35 318 *iP* **P** **01 24 09.6 +0.6**
TKM2 pmax pmax
comp=Z,36nm,1.3s
TARG Taragay, Kyrgy 71.46 316 IAmb IAmb 01 24 22.1
comp=Z,9.7nm,0.8s
USP Ospenovka 71.49 319 P **P** **01 24 10.2 +0.6**
SNR=23
USP Ospenovka 71.49 319 P **P** **01 24 11.0 +1.4**
USP pmax pmax
comp=Z,40nm,1.4s
NACGM Naroch 71.53 354⇑ *eP* **P** **01 24 08.4 -1.2**
baz=6.7
CHMS Chumysh 71.62 319 P **P** **01 24 11.8 +1.4**
SNR=12
CHMS Chumysh 71.62 319 *iP* **P** **01 24 11.0 +0.6**
CHMS pmax pmax
comp=Z,59nm,1.2s
KBK Karagaybulak 71.83 319 P **P** **01 24 12.8 +1.0**
SNR=14
PZH PanZhiHua 71.83 290 P **P** **01 24 12.4 +0.4**
PZH S **S** **01 33 36.8 +4.3**
PZH pmax pmax
comp=Z,50nm,0.9s
PZH pmax pmax
comp=Z,170nm,7.9s
PZH LR LR
comp=Z,270nm,18.0s
PZH LR LR
comp=Z,260nm,19.2s
PZH LR LR
comp=Z,310nm,20.2s
MNK Minsk 71.86 353 *iP* **P** **01 24 10.8 -0.7**
MNK *i* 01 24 29.4
MNK *i* 01 26 48.8
MNK *i*PPP PPP 01 28 31.6
MNK *i*S **S** **01 33 32.3 +0.7**
MNK *i*SS **SS** **01 38 10.9 +4.5**
MNK pmax pmax
comp=E,2.0nm,1.1s
MNK pmax pmax
comp=Z,72nm,0.9s
MNK pmax pmax
comp=N,50nm,1.1s
MNK MLR MLR
comp=E,29nm,16.0s
MNK MLR MLR
comp=Z,2μm,15.0s
MNK Minsk 71.86 353 *iP* **P** **01 24 10.9 -0.7**
comp=E,2.0nm,1.1s
MNK *iP* **P** **01 24 10.9 -0.7**
comp=N,50nm,1.1s
MNK *iP* **P** **01 24 10.9 -0.7**
comp=Z,72nm,0.9s
MNK *i*PcP **PcP** **01 24 29.5 -0.9**
MNK *i*PP **PP** **01 26 48.9 -1.4**
MNK *i*PPP PPP 01 28 31.7
MNK *i*S **S** **01 33 32.4 +0.7**
MNK *i*SS **SS** **01 38 10.9 +4.5**
MNK *i*SSS SSS 01 41 28.7
MNK *i*LQ LQ 01 50 50.6
MNK *i*LR LR 01 55 51.4
MNK *i*LRM MLR 01 57 55.1
comp=E,29nm,16.1s
MNK *i*LRM MLR 01 57 59.6
comp=Z,2μm,14.5s
MNK *i*LRM MLR 01 58 15.9
PPT2 Papeete2 71.90 166 *e*LR LR 01 45 11.5
comp=Z,283nm,22.2s
AAK Ala-Archa 72.03 319 P **P** **01 24 14.1 +1.0**
SNR=8.7
AAK Ala-Archa 72.03 319 LR LR 01 58 56.9
comp=Z,615nm,18.4s,baz=36,slow=38
AAK Ala-Archa 72.03 319 P **P** **01 24 13.1 0.0**
AAK Ala-Archa 72.03 319*ce*P **P** **01 24 13.9 +0.9**
AAK pmax pmax
comp=Z,44nm,1.3s
AAK MLR MLR
comp=Z,713nm,17.0s
EKS2 Erkin-Say 72.29 319 P **P** **01 24 15.9 +1.4**
SNR=17
KMI Kunming 72.35 288⇑ P **P** **01 24 15.4 +0.2**
KMI pmax pmax
comp=Z,16nm,1.0s
KMI LR LR
comp=Z,130nm,23.8s
KMI LR LR
comp=Z,360nm,21.0s
KMI LR LR
comp=Z,260nm,20.8s
UCH Uchtor 72.37 319 P **P** **01 24 16.8 +1.3**
SNR=5.6
LPSR Galich'ya Gora 72.53 346 *eP* **P** **01 24 15.0 -0.6**
LPSR pmax pmax
comp=Z,40nm,1.0s
SUW Suwalki 72.61 356 *eP* **P** **01 24 16.3 +0.2**
AML Almayashu 72.77 319 P **P** **01 24 19.1 +1.3**
SNR=16
MSVF Nonsavu 72.80 198 LR LR 01 48 55.7
comp=Z,176nm,22.0s,baz=158,slow=30
DZA Taraz 73.02 321 *eP* **P** **01 24 18.1 -0.6**
DZA Taraz 73.02 321 *eP* **P** **01 24 18.2 -0.6**
baz=321
DAV Davao City (W) 73.07 259 LR LR 01 52 13.4
comp=Z,306nm,21.4s,baz=99,slow=32
KK31 Karatay Array 73.14 322 P **P** **01 24 19.6 +0.2**
KK31 IAmb IAmb 01 24 21.5
comp=Z,21nm,0.9s
KK31 Karatay Array 73.14 322 P **P** **01 24 19.7 +0.2**
KK31 pmax pmax
comp=Z,21nm,1.0s
KKAR Karatay Array 73.14 322 P **P** **01 24 19.6 +0.2**
KKAR IAmb IAmb 01 24 21.5
comp=Z,21nm,0.9s
KKAR Karatay Array 73.14 322 P **P** **01 24 19.7 +0.2**
KKAR pmax pmax
comp=Z,21nm,1.0s
VORR Voronezh 73.39 345 *eP* **P** **01 24 21.0 +0.3**
VORR pmax pmax
comp=Z,10.0nm,0.4s
VRH Novokhopyorsk 73.45 344 *eP* **P** **01 24 19.9 -1.2**
VRH pmax pmax
comp=Z,20nm,1.0s
GKP Gorka Klasztor 73.50 360 *eP* **P** **01 24 21.9 +0.6**
VSR Storozhevoye 73.84 345 *eP* **P** **01 24 22.7 -0.7**
VSR pmax pmax
comp=Z,60nm,1.1s
KSH Kashi 74.07 316 P **P** **01 24 28.3 +3.2**
KSH pP pwP 01 24 33.0 +1.6
KSH PcP **PcP** **01 24 39.5 -0.8**
KSH pmax pmax
comp=Z,25nm,1.3s
KSH LR LR
comp=Z,620nm,16.1s
KSH LR LR
comp=Z,300nm,14.8s
KSH LR LR
comp=Z,910nm,15.3s
RAR Rarotonga 74.56 176 LR LR 01 55 40.8
comp=Z,148nm,18.6s,baz=316,slow=34
JTS Las Juntas de 74.97 93 LR LR 01 59 31.3
comp=Z,52nm,18.4s,baz=30,slow=37
LSA Lhasa 75.03 300 P **P** **01 24 32.4 +1.1**
LSA pmax pmax
comp=Z,54nm,0.8s
PMG Port Moresby 75.37 231 LR LR 01 51 56.4
comp=Z,142nm,21.4s,baz=89,slow=31

CLL Collm 75.42 2 IAmb IAmb 01 24 34.0
comp=Z,28nm,1.0s
CLL Collm 75.42 2 *iP* **P** **01 24 32.7 +0.1**
CLL pmax pmax
comp=Z,32nm,1.0s
CLL Collm 75.42 2 *iP* **P** **01 24 32.7 +0.1**
comp=Z,32nm,1.0s
CLL L L 02 04 00.0
comp=Z,200nm,19.1s
AKASG Malin Array Be 75.53 352 P **P** **01 24 32.6 -0.5**
comp=Z,12nm,0.5s,baz=12,slow=5.9,SNR=66
AKASG LR LR 02 02 40.7
comp=Z,286nm,18.3s,baz=11,slow=40
comp=Z,12nm,0.5s
AKBB Malin Array Si 75.53 352*ce*P **P** **01 24 32.7 -0.4**
BTK Batken 75.66 320 P **P** **01 24 34.2 0.0**
BTK Batken 75.66 320 P **P** **01 24 34.2 0.0**
BTK pmax pmax
comp=Z,24nm,0.8s
SNF Seneffe 75.75 8 *dP* **P** **01 24 35.1 +0.7**
comp=Z,17nm,0.8s
BSTI Sart Tilman 75.78 7 *dP* **P** **01 24 35.3 +0.7**
comp=Z,6.6nm,0.9s
MEM Membach 75.79 7 *dP* **P** **01 24 35.2 +0.6**
comp=Z,24nm,1.0s
MEM *d*PcP **PcP** **01 24 46.9 -0.4**
BTNL Ternell 75.82 7 *dP* **P** **01 24 35.4 +0.5**
comp=Z,22nm,1.0s
BRG Berggiesshubel 75.88 2 *iP* **P** **01 24 35.7 +0.5**
BRG Amp 01 24 36.9
comp=Z,25nm,1.2s
BRG *e*x x 01 24 46.8
BRG Amp 01 24 47.6
comp=Z,10nm,1.1s
BRG Berggiesshubel 75.88 2 *iP* **P** **01 24 35.7 +0.5**
BRG *e* 01 24 46.8
BRG pmax pmax
comp=Z,25nm,1.2s
BRG pmax pmax
comp=Z,10.0nm,1.1s
KSP Ksiaz 75.93 0 *eP* **P** **01 24 35.9 +0.5**
BMRD Maredsous 76.00 8 *dP* **P** **01 24 36.1 +0.3**
comp=Z,18nm,1.1s
BHOU Houvegnez 76.04 7 *dP* **P** **01 24 36.9 +0.8**
comp=Z,10nm,1.0s
RCHB Rochefort 76.18 7 *dP* **P** **01 24 37.3 +0.4**
comp=Z,21nm,1.1s
CHVC Chvalec 76.19 0 *eP* **P** **01 24 37.4 +0.4**
DOU Dourbes 76.19 8 *bP* **P** **01 24 37.4 +0.4**
comp=Z,12nm,1.1s
BAIF Baives 76.19 8 *eP* **P** **01 24 37.2 +0.2**
BAIF pmax pmax
comp=Z,16nm,0.8s
GIVF Givet 76.20 8 *eP* **P** **01 24 37.2 +0.2**
GIVF pmax pmax
comp=Z,32nm,1.2s
OSTC Ostas 76.22 0 *eP* **P** **01 24 38.0 +0.8**
PVCC Panska Ves 76.23 1 *eP* **P** **01 24 38.2 +1.0**
PVCC MLR MLR
comp=Z,200nm,20.5s
PVCC Panska Ves 76.23 1 *eP* **P** **01 24 38.2 +1.0**
PVCC AMS AMS 02 07 50.0
comp=Z,200nm,20.5s
UPC Upice 76.27 0 *eP* **P** **01 24 38.3 +0.9**
UPC MLR MLR
comp=Z,200nm,17.7s
UPC Upice 76.27 0 *eP* **P** **01 24 38.3 +0.9**
UPC AMS AMS 02 05 50.0
comp=Z,200nm,17.7s
DPC Dobruska-Polom 76.42 0 *eP* **P** **01 24 39.0 +0.6**
DPC MLR MLR
comp=Z,200nm,21.3s
DPC Dobruska-Polom 76.42 0 *eP* **P** **01 24 39.0 +0.6**
DPC AMS AMS 02 07 20.0
comp=Z,200nm,21.3s
NKC Novy Kostel 76.48 3 *eP* **P** **01 24 39.6 +0.9**
NKC Novy Kostel 76.48 3 *eP* **P** **01 24 39.6 +0.9**
OJC Ojcow 76.52 358 *eP* **P** **01 24 39.1 +0.2**
OJC Ojcow 76.52 358 IAmb IAmb 01 24 40.3
comp=Z,13nm,1.0s
KRLC Kraliky 76.70 360 *eP* **P** **01 24 40.8 +0.9**
KRLC MLR MLR
comp=Z,200nm,18.9s
KRLC Kraliky 76.70 360 *eP* **P** **01 24 40.8 +0.9**
KRLC AMS AMS 02 09 30.0
comp=Z,200nm,18.9s
WLF Walferdange 76.74 7 P **P** **01 24 41.3 +1.2**
WLF Walferdange 76.74 7 *dP* **P** **01 24 40.5 +0.5**
comp=Z,14nm,1.2s
LVV L'vov 76.76 355 *eP* **P** **01 24 40.6 +0.4**
PRU Pruhonice 76.77 1 *eP* **P** **01 24 40.9 +0.6**
PRU MLR MLR
comp=Z,200nm,14.6s
PRU Pruhonice 76.77 1 *eP* **P** **01 24 40.9 +0.6**
PRU AMS AMS 02 09 40.0
comp=Z,200nm,14.6s
OKC Ostrava-Krasne 76.93 359 *eP* **P** **01 24 41.8 +0.7**
OKC Ostrava-Krasne 76.93 359 *eP* **P** **01 24 41.8 +0.7**
GRFO Grafenberg 76.99 4 P **P** **01 24 42.2 +0.7**
GRFO Grafenberg 76.99 4 P **P** **01 24 42.2 +0.7**
GRFO pmax pmax
comp=Z,26nm,1.0s
MORC Moravsky Berou 77.00 359⇑ P **P** **01 24 41.9 +0.3**
MORC Moravsky Berou 77.00 359 IAmb IAmb 01 24 43.3
comp=Z,16nm,1.0s
MORC Moravsky Berou 77.00 359 P **P** **01 24 41.9 +0.3**
MORC Moravsky Berou 77.00 359 *eP* **P** **01 24 42.1 +0.5**
FLN La Foliniere 77.00 11 *eP* **P** **01 24 41.4 -0.2**
FLN pmax pmax
comp=Z,17nm,1.0s
KWP Kalwaria Pacla 77.01 356 *eP* **P** **01 24 42.6 +0.9**
LDF La Druitiere 77.21 11 *eP* **P** **01 24 42.5 -0.2**
LDF pmax pmax
comp=Z,20nm,1.0s
NIE Niedzica 77.31 357 *eP* **P** **01 24 44.4 +1.1**
GRR Gorron 77.32 12 *eP* **P** **01 24 43.4 0.0**
GRR pmax pmax
comp=Z,9.0nm,0.7s
MAUC Maruska 77.41 359 *eP* **P** **01 24 45.0 +1.1**
VRAC Vranov 77.47 360⇑ P **P** **01 24 45.0 +0.8**
VRAC Vranov 77.47 360 LR LR 01 58 29.6
comp=Z,132nm,21.9s,baz=2.0,slow=35
VRAC Vranov 77.47 360 P **P** **01 24 45.0 +0.8**
VRAC Vranov 77.47 360 *eP* **P** **01 24 45.0 +0.8**
TREC Trest 77.48 1 *eP* **P** **01 24 44.9 +0.6**
TREC MLR MLR
comp=Z,200nm,16.5s
TREC Trest 77.48 1 *eP* **P** **01 24 44.9 +0.6**
TREC AMS AMS 02 08 00.0
comp=Z,200nm,16.5s
CHGR Chuyangaron 77.51 320 P **P** **01 24 45.0 +0.2**
TBI Tubuai 77.58 167 *e*LR LR 01 47 48.5
comp=Z,271nm,33.0s
LANS Liptovska Anna 77.60 358 *eP* **P** **01 24 46.6 +1.6**
LANS pmax pmax
comp=Z,14nm,0.8s
LANS Liptovska Anna 77.60 358 *eP* **P** **01 24 46.6 +1.6**
KHC Kasperske Hory 77.61 2 P **P** **01 24 46.2 +1.1**
KHC Kasperske Hory 77.61 2*c iP* **P** **01 24 45.8 +0.7**
KHC pmax pmax
comp=Z,72nm,1.2s
KHC Kasperske Hory 77.61 2 *eP* **P** **01 24 46.0 +0.9**
KHC AMS AMS 02 08 30.0
comp=Z,300nm,20.0s
KRUC Moravsky 77.72 0 *eP* **P** **01 24 46.1 +0.5**
KOLS Kolonicke sedl 77.73 356 *eP* **P** **01 24 47.1 +1.4**
KOLS pmax pmax
comp=Z,20nm,0.8s
KOLS Kolonicke sedl 77.73 356 *eP* **P** **01 24 47.1 +1.4**
GEC2 GERESS Array S 77.90 2 IAmb IAmb 01 24 48.4
comp=Z,14nm,0.9s
GERES GERESS Array B 77.90 2 P **P** **01 24 46.6 -0.2**
comp=Z,6.7nm,0.7s,baz=15,slow=5.5,SNR=58
comp=Z,6.7nm,0.7s
JAVC Velka Javorina 77.91 359 *eP* **P** **01 24 48.5 +1.7**
CKRC Cesky Krumlov 77.94 2 *eP* **P** **01 24 47.4 +0.5**
SHL Shillong 77.97 297 P **P** **01 24 47.2 -0.3**
SHL IAmb IAmb 01 24 47.8
comp=Z,15nm,0.7s
SHL Shillong 77.97 297 P **P** **01 24 47.3 -0.3**
SHL pmax pmax
comp=Z,15nm,0.7s
UZH Uzhgorod 78.03 356⇓ *iP* **P** **01 24 47.5 +0.2**
UZH *i* 01 24 58.3
CDF Champ du Feu 78.06 6 *eP* **P** **01 24 47.7 +0.1**

CDF pmax pmax
comp=Z,11nm,0.8s
SORM Soroca 78.15 352 ⇑P **P 01 24 47.6 -0.4**
SORM Soroca 78.15 352 P **P 01 24 47.5 -0.4**
KOLL Kolacno 78.19 359 *e*P **P 01 24 49.7 +1.5**
BFO Black Forest 78.21 6 P **P 01 24 49.1 +0.7**
BFO IAmb IAmb 01 24 50.1
comp=Z,17nm,1.1s
BFO Black Forest 78.21 6 P **P 01 24 49.1 +0.7**
KECS Kecovo 78.24 357 *e*P **P 01 24 49.9 +1.4**
KECS Kecovo 78.24 357 *e*P **P 01 24 49.9 +1.4**
ECH Echery 78.25 6 IAmb IAmb 01 24 50.3
comp=Z,24nm,0.9s
ECH Echery 78.25 6 P **P 01 24 49.2 +0.6**
SMOL Smolenice 78.26 359 *e*P **P 01 24 50.1 +1.5**
SMOL pmax pmax
comp=Z,12nm,1.0s
SMOL Smolenice 78.26 359 *e*P **P 01 24 50.1 +1.5**
VYHS Vyhne 78.26 358 *e*P **P 01 24 49.6 +0.9**
VYHS pmax pmax
comp=Z,13nm,1.0s
VYHS Vyhne 78.26 358 *e*P **P 01 24 49.6 +0.9**
MODS Modra-Piesok 78.40 359 *e*P **P 01 24 50.9 +1.5**
MODS pmax pmax
comp=Z,66nm,1.2s
MODS Modra-Piesok 78.40 359 *e*P **P 01 24 50.9 +1.5**
HAU Haudompre 78.40 7 *e*P **P 01 24 49.5 0.0**
HAU pmax pmax
comp=Z,20nm,0.8s
ZST Bratislava 78.58 360 *e*P **P 01 24 52.0 +1.6**
ZST pmax pmax
comp=Z,72nm,1.1s
ZST Bratislava 78.58 360 *e*P **P 01 24 52.0 +1.6**
HINF Hinteralfeld 78.63 7 *e*P **P 01 24 50.6 -0.1**
HINF pmax pmax
comp=Z,15nm,1.0s
PSZ Piszkesteto 78.82 358 ⇑P **P 01 24 52.9 +1.1**
PSZ Piszkesteto 78.82 358 IAmb IAmb 01 24 54.3
comp=Z,32nm,1.1s
PSZ Piszkesteto 78.82 358 P **P 01 24 53.1 +1.3**
CONA Conrad Observa 78.85 0 *i*P **P 01 24 53.1 +1.1**
comp=Z,32nm,1.3s,SNR=18
BUR08 Bucovina Ar. S 78.86 354 P **P 01 24 51.6 -0.5**
BUR08 IAmb IAmb 01 24 53.7
comp=Z,14nm,0.9s
BURAR Bucovina Array 78.89 354 ⇑P **P 01 24 52.6 +0.4**
BURAR Bucovina Array 78.89 354 IAmb IAmb 01 24 54.1
comp=Z,18nm,0.8s
BURAR Bucovina Array 78.89 354 P **P 01 24 52.6 +0.4**
MOA Molln 78.91 2 *i*P **P 01 24 52.9 +0.6**
comp=Z,12nm,1.3s,SNR=8.6
LOR Lormes 78.93 9 *e*P **P 01 24 52.4 0.0**
LOR pmax pmax
comp=Z,24nm,1.0s
SRO Srobarova 78.95 359 *e*P **P 01 24 54.1 +1.7**
SRO pmax pmax
comp=Z,13nm,1.0s
SRO Srobarova 78.95 359 *e*P **P 01 24 54.1 +1.7**
SRO2 Moca 79.00 359 *e*P **P 01 24 53.2 +0.5**
SRO2 pmax pmax
comp=Z,17nm,0.9s
SRO2 Moca 79.00 359 *e*P **P 01 24 53.2 +0.5**
BIOA Bad Ischl, Aus 79.06 2 *i*P **P 01 24 53.8 +0.8**
comp=Z,18nm,1.2s
RONA Rosalia, Austr 79.08 0 *i*P **P 01 24 54.5 +1.3**
comp=Z,13nm,1.0s,SNR=9.0
SOP Sopron 79.09 360 P **P 01 24 54.0 +0.8**
SSF Saint Saulge 79.11 9 *e*P **P 01 24 53.4 +0.1**
SSF pmax pmax
comp=Z,27nm,1.0s
GOF Gofitskoye 79.14 341⇑*e*P **P 01 24 54.5 +1.0**
GOF pmax pmax
comp=Z,83nm,0.7s
RETA Reutte 79.17 4 *i*P **P 01 24 54.3 +0.5**
comp=Z,12nm,0.9s,SNR=5.8
GUN Gumba 79.17 303 *e*P **P 01 24 55.0 +0.6**
comp=Z,178nm,0.9s
KIS Kishinev 79.24 351 *e*P **P 01 24 54.0 0.0**
KIS *e*L L 01 59 00.0
KIS LRM MLR 02 01 32.0
comp=Z,200nm,22.0s
KIS Kishinev 79.24 351 *e*P **P 01 24 54.0 0.0**
BUD Budapest 79.27 358 P **P 01 24 56.2 +2.0**
LTVH Ltavrtes, Hu 79.29 356 ⇑P **P 01 24 54.4 +0.2**
LTVH Ltavrtes, Hu 79.29 356 P **P 01 24 55.7 +1.4**
MILM Milestii Mici 79.31 351 LRM MLR 02 05 00.0
comp=Z,300nm,19.0s
MILM Milestii Mici 79.31 351 ⇑P **P 01 24 54.0 -0.4**
MILM Milestii Mici 79.31 351*c i*P **P 01 24 53.6 -0.8**
MILM *e* 01 25 06.0
MILM pmax pmax
comp=Z,110nm,3.7s
MILM Milestii Mici 79.31 351⇑*i*P **P 01 24 53.6 -0.8**
comp=Z,40nm,0.9s
MILM Milestii Mici 79.31 351 *e*L L 01 58 10.0
MOTA Moosalm 79.33 4 *i*P **P 01 24 55.5 +0.8**
comp=Z,35nm,0.9s,SNR=16
DAVA Damuels 79.33 5 *i*P **P 01 24 55.3 +0.6**
comp=Z,7.6nm,0.7s
WATA Walderalm 79.35 3 *i*P **P 01 24 55.7 +0.8**
comp=Z,38nm,1.2s,SNR=12
AVF Avril sur Loir 79.36 9 *e*P **P 01 24 54.6 -0.1**
AVF pmax pmax
comp=Z,23nm,1.1s
EGYH Egyhazaskeszo 79.36 359 P **P 01 24 56.3 +1.6**
CSKK Cskako 79.40 359 P **P 01 24 56.2 +1.2**
BSZH Besenyszg 79.43 357 ⇑P **P 01 24 55.6 +0.6**
BSZH Besenyszg 79.43 357 P **P 01 24 56.7 +1.7**
WTTA Wattenberg 79.43 3 *i*P **P 01 24 56.4 +1.1**
comp=Z,31nm,0.8s,SNR=11
SQTA Sankt Quirin 79.45 4 *i*P **P 01 24 56.4 +1.1**
comp=Z,39nm,0.8s,SNR=16
CHTO Chiang Mai 79.47 287 P **P 01 24 55.0 -0.7**
CHTO Chiang Mai 79.47 287 P **P 01 24 55.0 -0.7**
CHTO pmax pmax
comp=Z,8.0nm,0.9s
ARCR ARCALIA 79.47 355 P **P 01 24 56.5 +1.2**
MESR Meseseni 79.48 356 ⇑P **P 01 24 56.5 +1.1**
BIZ Bicaz 79.51 353 ⇑P **P 01 24 56.3 +0.8**
KKN Kakani 79.57 303 *e*P **P 01 24 56.1 -0.3**
MPLH Magyarpolny 79.60 359 P **P 01 24 56.9 +0.9**
FETA Feichten 79.64 4 *i*P **P 01 24 57.5 +1.1**
comp=Z,33nm,0.9s,SNR=15
KBA Koelnbreinsper 79.66 2 *i*P **P 01 24 58.0 +1.5**
comp=Z,50nm,1.1s,SNR=27
VASR Vaslui 79.68 352 ⇑P **P 01 24 56.6 +0.2**
PKI Pulchoki 79.69 303 *e*P **P 01 24 57.4 +0.2**
PKIN Phulchoki 79.69 303 *e*P **P 01 24 57.3 +0.2**
comp=Z,55nm,0.7s
GKN Gorkha 79.72 304 *e*P **P 01 24 57.4 +0.2**
DZM Mont Dzumac 79.72 208 *e*LR LR 01 48 47.4
comp=Z,470nm,21.1s
DZM Mont Dzumac 79.72 208 LR LR 01 54 33.8
comp=Z,400nm,19.4s,baz=20,slow=31
CMAR Chiang Mai Arr 79.75 287 P **P 01 24 57.8 +0.5**
comp=Z,12nm,0.8s,baz=16,slow=5.6,SNR=54
CMAR LR LR 02 02 06.8
comp=Z,142nm,20.7s,baz=35,slow=37
comp=Z,12nm,0.8s
CMAR Chiang Mai Arr 79.75 287 P **P 01 24 57.1 -0.2**
CMAR Chiang Mai Arr 79.75 287*ce*P **P 01 24 57.7 +0.5**
CMAR pmax pmax
comp=Z,13nm,0.9s
DMN Daman 79.81 303 *e*P **P 01 24 58.3 +0.5**
DRGR 79.85 356 ⇑P **P 01 24 57.9 +0.5**
SJG San Juan 79.87 73 LR LR 01 59 44.5
comp=Z,101nm,21.2s,baz=351,slow=35
DANN Dangsing 79.87 304 *e*P **P 01 24 58.8 +0.7**
comp=Z,332nm,0.8s
TIH Tihany 79.87 359 P **P 01 24 58.3 +0.8**
CJR Cluj-Napoca 79.88 355 ⇑P **P 01 24 58.2 +0.5**
TESR Tescani 79.89 353 ⇑P **P 01 24 57.5 -0.1**
ABTA Abfaltersbach 79.97 3 *i*P **P 01 24 58.8 +0.7**
comp=Z,25nm,1.0s,SNR=9.7
SOKA Soboth 80.09 1 *i*P **P 01 24 59.7 +0.9**
comp=Z,47nm,1.2s,SNR=22
MYKA Terra Mystica 80.12 2 *i*P **P 01 24 59.3 +0.4**
comp=Z,12nm,0.9s
PERS Pernice 80.14 1 *i*P **P 01 24 60.0 +1.0**
OBKA Obir 80.25 1 *i*P **P 01 25 00.6 +1.0**
comp=Z,60nm,0.8s,SNR=13
KVAR Kislovodsk Arr 80.27 341 LR LR 02 06 07.2
comp=Z,187nm,18.9s,baz=271,slow=40
KIV Kislovodsk 80.27 341 ⇑P **P 01 25 00.9 +1.1**
KIV Kislovodsk 80.27 341 P **P 01 25 00.0 +0.2**
KIV IAmb IAmb 01 25 01.8
comp=Z,23nm,0.8s
KIV Kislovodsk 80.27 341 *e*P **P 01 25 00.6 +0.8**
KIV pmax pmax
comp=Z,28nm,0.9s
GHRR 80.28 352 ⇑P **P 01 25 00.3 +0.6**
BEHE Becsehely 80.31 360⇑*i*P **P 01 25 01.2 +1.4**
BEHE Becsehely 80.31 360 P **P 01 25 01.3 +1.5**
GROS Grobnik 80.31 1 *e*P **P 01 25 00.7 +0.7**
GROC Groznyy 80.36 339 *e*P **P 01 24 58.0 -2.1**
GROC *e* 01 25 05.4
GROC pmax pmax
comp=Z,15nm,0.6s
ANN Anapa 80.36 345 *e*P **P 01 24 57.6 -2.5**
ANN *e**PP **pP 01 25 00.0 -3.2**
ANN *e* 01 25 02.9
ANN *e*S **S 01 35 02.8 -2.6**
ANN *e*SS **SS 01 40 17.0 +1.7**
ANN pmax pmax
comp=Z,17nm,0.9s
OZUR 80.37 353 ⇑P **P 01 25 00.1 -0.1**
SIRR Siria 80.42 356 ⇑P **P 01 25 00.8 +0.4**
KOLN Koldanda 80.43 304 *e*P **P 01 25 01.4 +0.4**
KBZ Khabaz 80.45 341 P **P 01 25 01.6 +1.0**
comp=Z,12nm,0.8s,baz=338,slow=5.0,SNR=21
comp=Z,12nm,0.8s
KBZ Khabaz 80.45 341*ce*P **P 01 25 01.7 +1.1**
KBZ pmax pmax
comp=Z,20nm,0.9s
SHA1 Shidzhatmaz 80.49 341*c i*P **P 01 25 02.0 +0.9**
CADS Cadrg 80.52 2 *i*P **P 01 25 01.1 +0.1**
DOPR Dopca 80.52 354 ⇑P **P 01 25 01.0 0.0**
VRI Vrincioaia 80.53 353 ⇑P **P 01 25 01.2 +0.2**
VRI Vrincioaia 80.53 353 P **P 01 25 01.2 +0.2**
MORH Mrgy, Hungar 80.55 359 ⇓P **P 01 25 01.0 -0.1**
MORH Mrgy, Hungar 80.55 359⇑*i*P **P 01 25 01.3 +0.2**
MORH Mrgy, Hungar 80.55 359 P **P 01 25 01.3 +0.2**
PLOR Plostina 80.55 353 ⇑P **P 01 25 01.7 +0.4**
PLOR Plostina 80.55 353 P **P 01 25 01.6 +0.4**
COVR Voineasa-Covas 80.59 353 ⇑P **P 01 25 02.2 +0.8**
CTI Castel Tesino 80.64 3 IAmb IAmb 01 25 03.0
comp=Z,14nm,1.0s
KOVH Kovagotottos 80.68 359 P **P 01 25 02.6 +0.8**
SIM Simferopol' 80.68 347 *e*P **P 01 25 01.2 -0.7**
SIM pmax pmax
comp=Z,13nm,0.9s
LJU Ljubljana 80.72 1 *e*P **P 01 25 01.2 -0.9**
LPL La Plagne 80.91 7 *e*P **P 01 25 04.4 +1.0**
LPL pmax pmax
comp=Z,10.0nm,1.0s
LPG La Plagne 80.93 7 *e*P **P 01 25 04.7 +1.2**
LPG pmax pmax
comp=Z,13nm,1.1s
MLR Muntele Rosu 80.96 353 LR LR 02 04 12.3
comp=Z,319nm,18.2s,baz=22,slow=38
MLR Muntele Rosu 80.96 353 IAmb IAmb 01 25 16.3
comp=Z,14nm,1.3s
SSB Saint Sauveur 80.97 9 IAmb IAmb 01 25 05.4
comp=Z,19nm,1.1s
CEY Cerknica 81.02 1 *e*P **P 01 25 04.0 +0.3**
TLCR 81.03 351 ⇑P **P 01 25 04.1 +0.4**
BZS Buzias 81.07 356 ⇑P **P 01 25 04.4 +0.5**
BZS Buzias 81.07 356 P **P 01 25 04.4 +0.5**
VOIR 81.07 354 ⇑P **P 01 25 04.6 +0.6**
VOIR 81.07 354 P **P 01 25 04.6 +0.6**
CAF Calviac 81.07 10 *e*P **P 01 25 04.2 +0.2**
CAF pmax pmax
comp=Z,11nm,1.0s
CFR Carcaliu 81.10 352 ⇑P **P 01 25 04.2 +0.1**
LOT Lotru 81.14 355 ⇑P **P 01 25 04.2 -0.2**
ZEI Tsey 81.15 340 *e*P **P 01 25 04.6 -0.1**
ZEI pmax pmax
comp=Z,17nm,0.8s
ARR Arges 81.17 354 ⇑P **P 01 25 05.2 +0.6**
SOC Sochi 81.17 343 *e*P **P 01 25 02.8 -1.7**
SOC *e* 01 28 08.8
SOC *e*PPP PPP 01 29 59.2
SOC *e*S **S 01 35 13.1 -0.9**
SOC *e*SS **SS 01 40 26.4 -1.1**
SOC *e*SSS SSS 01 43 53.9
SOC pmax pmax
comp=Z,36nm,0.7s
SOC MLR MLR
comp=Z,169nm,21.0s
SKDS Skadanscina 81.21 2 *e*P **P 01 25 05.0 +0.3**
GZR Gura Zlata 81.24 356 ⇑P **P 01 25 05.2 +0.3**
BNI Bardonecchia 81.36 7 P **P 01 25 08.2 +2.5**
TPGR Topolog 81.40 351 ⇑P **P 01 25 05.8 +0.1**
VIVF Saint-Julien-I 81.40 9 *e*P **P 01 25 06.2 +0.5**
VIVF pmax pmax
comp=Z,13nm,1.0s
ONI Oni 81.43 340 IAmb IAmb 01 25 24.8
comp=Z,13nm,1.0s
ORIF Oris-en-Rattie 81.44 8 *e*P **P 01 25 06.6 +0.6**
ORIF pmax pmax
comp=Z,10.0nm,0.9s
LGD Lagodekhi 81.56 338 P **P 01 25 08.0 +1.4**
CHVG Ch'k'valeri 81.58 341 ⇓P **P 01 25 07.7 +1.0**
FRGS Fruska Gora 81.58 358 ⇓P **P 01 25 07.2 +0.5**
FRGS Fruska Gora 81.58 358⇑*i*P **P 01 25 07.0 +0.3**
HARR Harsova 81.60 352 ⇑P **P 01 25 06.9 +0.1**
HARR Harsova 81.60 352 P **P 01 25 06.8 +0.1**
ZKTA Zakatala 81.67 338 P **P 01 25 07.4 +0.2**
MBDF Montbardon 81.69 7 *e*P **P 01 25 08.7 +1.2**
MBDF pmax pmax
comp=Z,21nm,0.9s
TLBR Topalu 81.74 352 ⇑P **P 01 25 07.2 -0.3**
HERR Herculane 81.77 356 ⇑P **P 01 25 07.9 +0.2**
TIRR Tirgusor 81.79 351 ⇑P **P 01 25 07.4 -0.3**
TIRR Tirgusor 81.79 351 P **P 01 25 07.4 -0.3**
MDVR Moldovita 81.90 356 ⇑P **P 01 25 08.8 +0.4**
SEKA Sheki 81.94 337 P **P 01 25 08.6 -0.1**
HUMR Humele 81.98 354 ⇑P **P 01 25 08.2 -0.6**
GEYT Alibeck 82.01 328 P **P 01 25 08.6 -0.5**
comp=Z,18nm,0.8s,baz=265,slow=10,SNR=16
GEYT LR LR 02 07 00.0
comp=Z,272nm,18.4s,baz=27,slow=40
comp=Z,18nm,0.8s
GEYT Alibeck 82.01 328 P **P 01 25 09.8 +0.7**
GEYT IAmb IAmb 01 25 11.8
comp=Z,12nm,0.9s
GYA0B ALIBECK ARRAY 82.01 328 IAmb IAmb 01 25 14.8
comp=Z,19nm,0.9s
BLY Banja Luka 82.03 360⇑*i*P **P 01 25 08.5 -0.5**
TEKS Tekeris 82.20 358 *e*P **P 01 25 08.4 -1.5**
SGRR Singureni 82.22 353 ⇑P **P 01 25 09.6 -0.4**
MGRS Mrkonjic Grad 82.36 360⇑*i*P **P 01 25 09.1 -1.7**
MNGR Mingechevir, A 82.38 337 P **P 01 25 11.5 +0.6**
AKH Akhalkalaki 82.56 340 ⇑P **P 01 25 12.8 +0.6**
AKH Akhalkalaki 82.56 340 P **P 01 25 12.7 +0.6**
SBF Sospel 82.60 7 *e*P **P 01 25 12.3 +0.2**
SBF pmax pmax
comp=Z,21nm,1.0s
DIVS Divibare 82.64 357 IAmb IAmb 01 25 14.0
comp=Z,19nm,1.0s
DIVS Divibare 82.64 357⇑*i*P **P 01 25 12.7 +0.4**
MTLF Montolieu 82.66 10 *e*P **P 01 25 12.8 +0.5**
MTLF pmax pmax
comp=Z,23nm,1.4s
BGD Bogdanovka 82.68 340 P **P 01 25 14.7 +1.9**
GANJ Ganja 82.68 338 P **P 01 25 13.1 +0.6**
SRKY Kupres RS 82.71 360 *e*P **P 01 25 13.8 +1.1**
ETSF Etsaut 82.76 13 *e*P **P 01 25 15.0 +2.0**
ETSF pmax pmax
comp=Z,13nm,1.2s
ZIMR 82.83 354 ⇑P **P 01 25 13.2 +0.1**
BBLS Lazići 82.88 358⇑*i*P **P 01 25 14.6 +1.0**
BOVS Bovan 83.04 356 ⇑P **P 01 25 14.0 -0.3**
RUDO Rudo 83.13 358⇑*i*P **P 01 25 15.1 +0.3**
OSSC Osservatorio P 83.15 4 IAmb IAmb 01 25 32.2
comp=Z,15nm,0.8s
SJES Sjenica 83.47 357⇑*i*P **P 01 25 17.6 +0.9**
GNI Garni 83.51 339 P **P 01 25 17.1 +0.1**
comp=Z,14nm,0.8s,baz=29,slow=2.5,SNR=11
GNI LR LR 02 08 21.6
comp=Z,238nm,19.1s,baz=13,slow=40
comp=Z,14nm,0.8s
GNI Garni 83.51 339 P **P 01 25 18.0 +1.0**
GNI Garni 83.51 339*ce*P **P 01 25 18.5 +1.5**
GNI pmax pmax
comp=Z,31nm,1.3s
KTUT Trabzon 83.69 343 ⇑P **P 01 25 18.5 +0.9**
DIKM Dikmen 83.77 346 ⇑P **P 01 25 19.2 +1.1**
HRA Herat 83.85 323 IAmb IAmb 01 25 20.1
comp=Z,11nm,1.0s
BRY Bratogost 83.86 359⇑*i*P **P 01 25 18.7 0.0**
LKRN Lenkeran, Azer 83.93 335 P **P 01 25 19.7 +0.7**
TREB Trebinje 84.05 359 *e*P **P 01 25 17.7 -1.8**
NAX Nakhchivan 84.27 338 P **P 01 25 21.3 +0.5**
PDG Podgorica 84.32 358 ⇑P **P 01 25 20.7 -0.1**
PDG Podgorica 84.32 358⇑*i*P **P 01 25 20.8 -0.1**
KOPT Kop Dagi 84.49 342 P **P 01 25 24.2 +2.0**
KOPT IAmb IAmb 01 25 33.8
comp=Z,13nm,0.9s
SDV Santo Domingo 84.60 82 P **P 01 25 24.2 +1.3**
SDV IAmb IAmb 01 25 43.1
comp=Z,6.1nm,0.7s
NVR Nevrokopi 85.22 354 P **P 01 25 25.4 -0.1**
RDO Rodhopi 85.31 353 P **P 01 25 26.1 +0.2**
ESDC Sonseca Array 85.43 16 P **P 01 25 26.9 +0.3**
comp=Z,2.8nm,1.0s,baz=340,slow=5.1,SNR=13
ESDC PP **PP 01 28 43.0 -0.8**
comp=Z,1.4nm,1.0s,baz=348,slow=7.4,SNR=4.1
ESDC LR LR 02 06 13.5
comp=Z,160nm,18.7s,baz=344,slow=38
comp=Z,2.8nm,1.0s
ESDC Sonseca Array 85.43 16 IAmb IAmb 01 25 51.6
comp=Z,7.4nm,1.1s
KNT Kendrikon 85.46 355 P **P 01 25 26.9 +0.3**
SRS Serrai 85.46 355 P **P 01 25 26.2 -0.5**
ALN Alexandroupoli 85.52 353 P **P 01 25 26.6 -0.3**
ALN Alexandroupoli 85.52 353 IAmb IAmb 01 25 28.4
comp=Z,21nm,1.1s
GRG Griva 85.68 356 P **P 01 25 28.4 +0.6**
PAOL Paolisi 85.73 1 IAmb IAmb 01 25 29.6
comp=Z,25nm,1.2s
KOKK Kokkinochori, 85.74 354 P **P 01 25 27.5 -0.5**
ANTO Ankara 85.85 348 P **P 01 25 29.7 +1.0**
ANTO Ankara 85.85 348 P **P 01 25 29.7 +1.0**
ANTO pmax pmax
comp=Z,32nm,0.9s
BR131 Keskin Array S 85.88 347*c i*P **P 01 25 29.3 +0.3**
BRTR Keskin Array B 85.88 347 P **P 01 25 29.6 +0.6**
comp=Z,16nm,0.9s,baz=46,slow=2.5,SNR=104
BRTR PP **PP 01 28 46.7 -0.9**
comp=Z,1.4nm,1.0s,baz=35,slow=5.3,SNR=3.9
comp=Z,16nm,0.9s
BRTR Keskin Array B 85.88 347 P **P 01 25 29.8 +0.9**
FNA Florina 85.90 356 P **P 01 25 28.6 -0.3**
FNA Florina 85.90 356 IAmb IAmb 01 25 30.1
comp=Z,15nm,0.7s
THAS Thassos island 85.90 354 P **P 01 25 28.7 -0.1**
MTN Manton Dam 86.30 243 P **P 01 25 31.2 +0.2**
LIT Litokhoron 86.53 355 IAmb IAmb 01 25 33.1
comp=Z,16nm,0.9s
LIA Limnos Island 86.58 353 P **P 01 25 31.5 -0.7**
MARD Mardin 87.06 341 P **P 01 25 35.9 +1.1**
IGT Igoumenitsa 87.18 357 P **P 01 25 35.3 +0.1**
XOR Xorichti 87.23 355 P **P 01 25 34.4 -1.0**
NEO Neokhori 87.29 355 P **P 01 25 34.6 -1.1**
TIP Timpagrande 87.60 360 ⇑P **P 01 25 37.6 +0.3**
MAKR Makrakomi, Fth 87.63 356 P **P 01 25 37.4 0.0**
EVR Evrytania 87.75 356 P **P 01 25 38.2 +0.2**
ANX Ano Chora 88.06 356 P **P 01 25 38.3 -1.2**
KLV Kalavryta, Ach 88.60 356 P **P 01 25 41.5 -0.5**
ITM Ithomi 89.47 356 IAmb IAmb 01 25 47.0
comp=Z,17nm,1.2s
VLI Velíai 89.88 355 P **P 01 25 46.5 -1.5**
WRA Warramunga Arr 90.61 236 P **P 01 25 50.8 -0.6**
comp=Z,0.7nm,1.0s,baz=35,slow=5.7,SNR=2.9
comp=Z,0.7nm,1.0s
KEST Kesra 90.82 6 PP **PP 01 29 26.0 -1.0**
comp=Z,5.2nm,1.0s,baz=349,slow=14,SNR=3.4
IDI Anoyia 91.18 353 LR LR 02 10 56.4
comp=Z,80nm,19.9s,baz=356,slow=38
MDT Midelt 92.01 18 LR LR 02 10 41.6
comp=Z,79nm,18.1s,baz=354,slow=38
MMAI Mount Meron Ar 92.20 344 LR LR 02 14 52.0
comp=Z,90nm,18.0s,baz=189,slow=40
URZ Urewera 93.02 195 LR LR 02 04 43.3
comp=Z,127nm,18.5s,baz=31,slow=34
RPN Rapa Nui 93.03 134 LR LR 02 00 08.2
comp=Z,89nm,18.9s,baz=302,slow=30
ASAR Alice Springs 93.97 235 P **P 01 26 07.7 +0.8**
ASAR Alice Springs 93.97 235 P **P 01 26 07.7 +0.8**
WSAR Wadi Sarin 95.27 322 LR LR 02 16 27.6
comp=Z,145nm,18.2s,baz=46,slow=40
EIL Elat 95.55 344 LR LR 02 13 30.2
comp=Z,142nm,20.5s,baz=73,slow=38
STKA Stephens Creek 97.51 225 LR LR 02 05 56.2
comp=Z,68nm,20.3s,baz=29,slow=33
PALK Pallekele 99.02 295 LR LR 02 17 47.9
comp=Z,87nm,18.6s,baz=128,slow=39
RAYN Ar Rayn 99.21 333 P **Pdif 01 26 30.3 -0.6**
RAYN IAmb IAmb 01 26 32.7
comp=Z,5.0nm,1.0s
RAYN Ar Rayn 99.21 333 P **Pdif 01 26 30.3 -0.6**
RAYN pmax pmax
comp=Z,5.0nm,1.0s
RPZ Rata Peaks 99.37 198 P **Pdif 01 26 31.3 +0.5**
TORD Yerodi Ar Bea 112.32 16 PKiKP **PKiKP 01 31 24.3 -0.8**
comp=Z,0.4nm,0.5s,baz=335,slow=3.1,SNR=13
H03N2 Juan Fernandez 113.14 115 T T 03 35 12.7
baz=322,slow=77,SNR=14
H03N1 Juan Fernandez 113.15 115 T T 03 35 20.4
baz=322,slow=77,SNR=9.5
H03N3 Juan Fernandez 113.15 115 T T 03 35 10.9
baz=322,slow=77,SNR=14
KMBO Kilima Mbogo 124.97 334 PKP **PKPdf 01 31 48.8 -1.0**
comp=Z,2.4nm,0.7s,baz=5.3,slow=3.1,SNR=7.3
KMBO Kilima Mbogo 124.97 334 *i* PKiKP **PKPdf 01 31 49.7 -0.1**
QSPA South Pole Qui 143.37 180 PKPdf **PKPdf 01 32 21.9 -0.2**
BLWY Bulawayo 145.33 340 *i*P **PKiKP 01 32 29.6 -1.5**
BLWY Bulawayo 145.33 340 *i*P **PKiKP 01 32 29.6 -1.5**
BLWY Bulawayo 145.33 340 *i*P **PKiKP 01 32 29.6 -1.5**
MATP Matopo 145.63 340 *i*P **PKPab 01 32 28.9 +0.8**
MATP Matopo 145.63 340 *i*P **PKPab 01 32 28.9 +0.8**
MATP Matopo 145.63 340 *i*P **PKPab 01 32 28.9 +0.8**
TSUM Tsumeb 145.66 358 PKPdf **PKPdf 01 32 26.9 -0.8**
MUSN Musina, Limpop 147.13 337 *i*P **PKPbc 01 32 32.7 +0.6**
MUSN Musina, Limpop 147.13 337 *i*P **PKPbc 01 32 32.7 +0.6**
MUSN Musina, Limpop 147.13 337 *i*P **PKPbc 01 32 32.7 +0.6**
MOPA Mopani 147.93 334 *i*P **PKPbc 01 32 33.5 -0.7**
MOPA Mopani 147.93 334 *i*P **PKPbc 01 32 33.5 -0.7**
MOPA Mopani 147.93 334 *i*P **PKPbc 01 32 33.5 -0.7**
BELA Belgrano 2 149.75 161 PKPbc **PKiKP 01 32 38.5 +0.3**
LBTB Lobatse 150.66 343 *i*P **PKPbc 01 32 40.1 -1.1**
LBTB Lobatse 150.66 343 *i*P **PKPbc 01 32 40.1 -1.1**
LBTB Lobatse 150.66 343 *i*P **PKPbc 01 32 40.1 -1.1**
MAW Mawson 154.07 219 PKPbc **PKiKP 01 32 47.5 +0.1**
comp=Z,3.2nm,0.9s,baz=241,slow=20,SNR=2.8
MAW PKPab **PKPab 01 33 01.7 +0.6**
comp=Z,6.6nm,1.0s,baz=71,slow=5.1,SNR=8.2
BOSA Boshof 154.23 342 PKPbc **PKPbc 01 32 48.9 -0.2**
comp=Z,6.3nm,0.9s,baz=46,slow=5.5,SNR=8.5
BOSA PKPab **PKPab 01 33 02.2 -0.7**
comp=Z,3.9nm,0.9s,baz=68,slow=4.7,SNR=6.3
BOSA Boshof 154.23 342 *i*P **PKPbc 01 32 45.6 -3.4**
BOSA Boshof 154.23 342 *i*P **PKPbc 01 32 45.6 -3.4**
BOSA Boshof 154.23 342 *i*P **PKPbc 01 32 45.6 -3.4**
VNA3 Neumayer Olymp 158.87 157 PKPab **PKPab 01 33 21.0 -0.7**
VNA3 Neumayer Olymp 158.87 157 PKPdf **PKPdf 01 32 45.1 -0.3**
VNA1 Neumayer--Stat 159.62 156 PKPab **PKPab 01 33 24.6 -0.3**
SNAA Sanae 159.99 162 PKPab **PKPab 01 33 25.2 -1.4**
SNAA Sanae 159.99 162 PKPdf **PKPdf 01 32 45.7 -1.1**
TROLL Troll, Antarti 160.55 167 PKPab **PKPab 01 33 29.1 0.0**

PRU 18 01:22:33.2±0.0, 50°27N×19°14E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LANS	**Liptovska Anna**	**1.14**	**169**	*e*PG	Pg	01 22 52.0	-3.0
LANS				*e*SG	Sg	01 23 05.6	-4.2
LANS				*e*LG	Lg	01 23 06.2	
MORC	**Moravsky Berou**	**1.14**	**245**	*e*PG	Pg	01 22 54.2	-0.9
MORC				*e*SG	Sg	01 23 09.7	-0.2
KRLC	**Kraliky**	**1.53**	**264**	*e*SG	Sg	01 23 21.5	-0.8
VYHS	**Vyhne**	**1.79**	**186**	*e*PN	Pn	01 23 02.2	-3.1
VYHS				*e*SN	Sn	01 23 23.7	-5.1
DPC	**Dobruska-Polom**	**1.81**	**274**	*e*SG	Sb	01 23 30.5	+0.1

*IDC **18** 01:33:21.4±4.9, 31°.20S×179°.96E, h384km±46km, mb3.1/1, mbtmp4.3/2, Error ellipse: s-maj=55.7km s-min=33.7km az=31.0*
*WEL **18** 01:33:24.2±0.9, 32°S±6°×17°9W±1°7, h318km±13km,*

M4.5/12,mB4.8/7,MLv4.9/12,Mw(mB)4.1/7,Error ellipse: s-maj=0.0km s-min=0.0km az=108.0
ISC 18 01:33:20.1±0.8,31°32S±0.07×179°7W±0.1,h350km,n31,σ2s31/46,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.58**	**38**	P	**Pn**	**01 34 17.1**	**+1.2**
GLKZ				S	**S**	**01 35 02.4**	**+1.7**
RIZ	**Raoul Island**	**2.59**	**38**	P	**Pn**	**01 34 16.5**	**+0.6**
MXZ	**Matakaoa Point**	**6.44**	**194**	P	**Pn**	**01 34 55.2**	**-0.6**
MXZ				S	**S**	**01 36 14.2**	**+0.6**
WMGZ	**Waiomatatini S**	**6.67**	**193**	P	**Pn**	**01 35 02.3**	**+3.9**
WMGZ				S	**S**	**01 36 19.4**	**+1.0**
HAZ	**Te Kaha**	**6.74**	**197**	P	**Pn**	**01 35 01.4**	**+2.1**
HAZ				S	**S**	**01 36 19.9**	**-0.1**
WCZ	**Waipu Caves**	**6.76**	**225**	P	**Pn**	**01 35 04.0**	**+4.5**
OUZ	**Omahuta**	**6.81**	**233**	P	**Pn**	**01 35 03.5**	**+3.3**
PUZ	**Puketiti**	**6.94**	**193**	P	**Pn**	**01 35 02.7**	**+1.1**
PUZ				S	**S**	**01 36 22.7**	**-1.6**
TWGZ	**Tauwhareparae**	**7.10**	**195**	P	**Pn**	**01 35 05.4**	**+1.8**
TWGZ				S	**S**	**01 36 26.8**	**-0.9**
MKAZ	**Moumakai**	**7.16**	**215**	P	**Pn**	**01 35 08.1**	**+3.9**
MWZ	**Matawai**	**7.35**	**197**	P	**Pn**	**01 35 07.2**	**+0.7**
MWZ				S	**S**	**01 36 33.4**	**+0.2**
TKGZ	**Te Karaka**	**7.38**	**195**	P	**Pn**	**01 35 08.9**	**+2.2**
TKGZ				S	**S**	**01 36 31.8**	**-1.8**
URZ	**Urewera**	**7.40**	**200**	P	**Pn**	**01 35 09.2**	**+2.2**
	28nm,0.3s,baz=248,slow=3.4,SNR=55						
URZ				S	**S**	**01 36 29.0**	**-5.0**
	9.7nm,0.5s,baz=237,slow=1.6,SNR=2.1						
URZ	**Urewera**	**7.40**	**200**	P	**Pn**	**01 35 07.4**	**+0.4**
URZ				S	**S**	**01 36 34.3**	**+0.2**
RAGZ	**Rawiri**	**7.54**	**197**	P	**Pn**	**01 35 12.3**	**+3.5**
RAGZ				S	**S**	**01 36 38.4**	**+1.2**
RIGZ	**Rimuhau**	**7.65**	**195**	P	**Pn**	**01 35 13.1**	**+3.0**
RIGZ				S	**S**	**01 36 38.4**	**-1.2**
RTZ	**Ruatahuna**	**7.76**	**199**	P	**Pn**	**01 35 13.9**	**+2.5**
RTZ				S	**S**	**01 36 43.4**	**+1.2**
SNGZ	**Shannon Statio**	**7.83**	**197**	P	**Pn**	**01 35 15.6**	**+3.5**
SNGZ				S	**S**	**01 36 45.0**	**+1.7**
PRGZ	**Paritu Road**	**7.84**	**194**	P	**Pn**	**01 35 15.6**	**+3.3**
PRGZ				S	**S**	**01 36 43.4**	**-0.2**
MTHZ	**Maungataniwha**	**8.03**	**200**	P	**Pn**	**01 35 13.6**	**-0.9**
MTHZ				S	**S**	**01 36 46.4**	**-1.3**
WRA	**Warramunga Arr**	**42.66**	**274**	P	**P**	**01 40 40.0**	**-3.8**
	0.5nm,0.3s,baz=111,slow=8.1,SNR=38						
WRA				PcP	**PcP**	**01 42 25.6**	**-3.0**
	0.4nm,0.8s,baz=127,slow=2.6,SNR=2.0 0.5nm,0.3s						
TROLL	**Troll, Antarti**	**76.95**	**181**	P	**P**	**01 44 33.9**	**-0.5**
SNAA	**Sanae**	**77.28**	**179**	P	**P**	**01 44 35.6**	**-0.6**
VNA3	**Neumayer Olymp**	**77.48**	**177**	P	**P**	**01 44 36.7**	**-0.6**
MKAR	**Makanchi Array**	**117.22**	**310**	PKP	PKPpre	01 51 19.2	
	0.3nm,0.6s,baz=91,slow=1.9,SNR=2.3						
ARCES	**ARCESS Array B**	**139.15**	**347**	PKhKP	PKPpre	01 51 55.6	
	1.9nm,0.9s,baz=15,slow=3.7,SNR=5.4						
FINES	**FINESS Array B**	**145.47**	**338**	PKPbc	**PKPdf**	**01 52 13.7**	**-2.4**
	3.6nm,0.4s,baz=50,slow=4.3,SNR=56						
NOA	**NORSAR Array B**	**149.41**	**350**	PKPbc	**PKPdf**	**01 52 24.1**	**+1.5**
	0.6nm,0.5s,baz=16,slow=4.2,SNR=3.4						
AKASG	**Malin Array Be**	**151.09**	**320**	PKPbc	**PKPdf**	**01 52 27.8**	**+2.3**
	0.3nm,0.4s,baz=71,slow=1.2,SNR=2.1						
BRTR	**Keskin Array B**	**151.70**	**297**	PKPbc	**PKPdf**	**01 52 30.1**	**+3.0**
	0.9nm,0.6s,baz=143,slow=4.5,SNR=8.1						
TORD	**Torodi Ar. Bea**	**161.87**	**184**	PKPab	**PKPab**	**01 53 26.2**	**-1.8**
	0.3nm,0.5s,baz=175,slow=5.1,SNR=5.9						

*BJI **18** 01:38:04.4±0.0,23°.94N×118°.04E,h16km,ML4.1/4*
ISC 18 01:38:06.0±1.2,24°.02N±0°.09×118°.14E±0°.10,h10km,n8,σ0s49/9,1C,Near coast of southeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QZH	**Quanzhou**	**1.01**	**24**	⇑*i*Pg	**Pg**	**01 38 25.1**	**-0.4**
QZH				Sg	**Sg**	**01 38 39.4**	**+0.8**
QZH				smax	smax		
	comp=N,2μm,0.2s						
QZH				smax	smax		
	comp=E,3μm,0.2s						
TPUB	**Ta-pu**	**2.39**	**107**	P	**Pn**	**01 38 45.3**	**+0.1**
SSLB	**Suanglung**	**2.58**	**94**	P	**Pn**	**01 38 47.6**	**-0.3**
YULB	**Yu-li**	**2.96**	**101**	P	**Pn**	**01 38 53.4**	**+0.3**
YHNB	**Yeheng**	**3.02**	**77**	P	**Pn**	**01 38 53.3**	**-0.6**
NACB	**Ninganchiao**	**3.16**	**86**	P	**Pn**	**01 38 56.0**	**+0.2**
QIZ	**Qiongzhong**	**9.18**	**239**	P	Pn	01 40 15.1	-3.5
QIZ				S	**Sn**	**01 42 02.0**	**0.0**
WMQ	**Urumqi**	**31.80**	**316**	*e*P	**P**	**01 44 30.9**	**+0.1**

TAP 18 01:41:38.7,23°.39N×122°.10E,h33km±1km,ML2.7,D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEGC	**Jichi Village**	**0.60**	**302**	*e*P	Pn	01 41 50.3	-0.5
	baz=302						
TEGC				*e*S	Sb	01 41 59.0	-0.3
	baz=302						
HGSD	**Ruisui**	**0.63**	**279**	P	Pn	01 41 50.0	-1.1
	baz=279						
HGSD				S	Sb	01 41 58.4	-1.6
	baz=279						
TEYL	**Yanliau Villag**	**0.66**	**316**	*e*P	Pn	01 41 51.2	-0.4
	baz=328						
EGFH	**Guangfu**	**0.67**	**294**	*e*P	Pn	01 41 51.0	-0.9
	baz=305						
EYUL	**Yuli**	**0.72**	**267**	P	Pn	01 41 51.8	-0.6
	baz=260						
EYUL				*e*S	Sn	01 42 01.8	-0.5
	baz=260						
YULB	**Yu-li**	**0.73**	**270**	*e*P	Pn	01 41 51.9	-0.9
	baz=264						
YULB				*e*S	Sn	01 42 02.3	-0.5
	baz=264						
TWF1	**Yuli**	**0.74**	**267**	P	Pn	01 41 52.0	-0.8
	baz=261						
TWF1				*e*S	Sn	01 42 02.6	-0.2
	baz=261						
ESL	**Shilin**	**0.74**	**305**	P	Pn	01 41 51.7	-1.1
	baz=305						
ESL				*e*S	Sn	01 42 01.4	-1.5
	baz=305						
FULB	**Fuli**	**0.76**	**256**	*e*P	Pn	01 41 51.8	-1.3
	baz=246						
FULB				*e*S	Sn	01 42 01.6	-1.9
	baz=246						
ETM	**Tongmen**	**0.80**	**316**	*e*P	Pn	01 41 52.6	-0.9
	baz=323						
TWD	**Chiawan**	**0.83**	**326**	P	Pn	01 41 53.1	-0.9
	baz=327						
TWD				*e*S	Sn	01 42 03.5	-1.5
	baz=327						
EDH	**Donghe**	**0.84**	**240**	*e*P	Pn	01 41 53.0	-1.1
	baz=235						
EDH				*e*S	Sn	01 42 03.2	-2.1
	baz=235						
ETL	**Fush Village**	**0.88**	**331**	*e*P	Pn	01 41 54.0	-0.7
	baz=331						
ETL				*e*S	Sn	01 42 05.2	-1.2
	baz=331						
NACB	**Ninganchiao**	**0.91**	**330**	*e*P	Pn	01 41 54.3	-0.8
	baz=330						
NACB				*e*S	Sn	01 42 05.6	-1.4
	baz=330						
LDUT	**Ludao**	**0.92**	**219**	*e*P	Pn	01 41 54.1	-1.2
	baz=219						
LDUT				*e*S	Sn	01 42 04.6	-2.6
	baz=219						
VWDT	**VWDT**	**0.95**	**293**	P	Pn	01 41 55.5	-0.1
	baz=292						
ETLH	**Xiulin Townshi**	**0.99**	**325**	*e*P	Pn	01 41 55.7	-0.7
	baz=326						
ETLH				*e*S	Sn	01 42 07.8	-1.4
	baz=326						
LONT	**Longtian**	**1.01**	**242**	*e*P	Pn	01 41 56.2	-0.4
	baz=237						
LONT				*e*S	Sn	01 42 08.9	-0.7
	baz=237						
ELDTW	**Lidau**	**1.01**	**259**	*e*P	Pn	01 41 55.6	-1.0
	baz=248						
ELDTW				*e*S	Sn	01 42 07.6	-2.2
	baz=248						
OWD	**Renai**	**1.01**	**304**	*e*P	Pn	01 41 56.1	-0.6
	baz=304						
OWD				*e*S	Sn	01 42 08.1	-1.8
	baz=304						
YUS	**Yu-Shan**	**1.06**	**276**	P	Pn	01 41 57.4	-0.1
	baz=275						
WHF	**Hehuan Shan**	**1.07**	**315**	*e*P	Pn	01 41 57.2	-0.5
	baz=315						
WHF				*e*S	Sn	01 42 10.4	-1.3
	baz=315						
CHGB	**Renai**	**1.08**	**308**	P	Pn	01 41 57.4	-0.2
	baz=309						
CHGB				*e*S	Sn	01 42 10.6	-0.9
	baz=309						
WUSB	**Renai**	**1.08**	**304**	*e*P	Pn	01 41 57.3	-0.3
	baz=305						
WUSB				*e*S	Sn	01 42 11.4	0.0
	baz=305						
TWG	**Pinlang**	**1.10**	**239**	*e*P	Pn	01 41 58.2	+0.4
	baz=231						
TWG				S	Sn	01 42 10.8	-1.0
	baz=231						
SSLB	**Suanglung**	**1.12**	**291**	*e*P	Pn	01 41 57.8	-0.2
	baz=291						
FUSS	**Fushou**	**1.16**	**318**	*e*P	Pn	01 41 58.8	0.0
	baz=318						
FUSS				*e*S	Sn	01 42 12.2	-1.4
	baz=318						
ALS	**Alishan**	**1.19**	**276**	*e*P	Pn	01 41 59.6	+0.3
	baz=275						
ALS				*e*S	Sn	01 42 14.9	+0.4
	baz=275						
TWT	**Tachien**	**1.20**	**316**	*e*P	Pn	01 42 00.1	+0.8
	baz=316						
TWT				*e*S	Sn	01 42 14.2	-0.4
	baz=316						
NNSB	**Datong**	**1.22**	**328**	P	Pn	01 41 59.5	-0.1
	baz=328						
NNSB				*e*S	Sn	01 42 14.2	-0.8
	baz=328						
STYH	**Taoyuan**	**1.23**	**260**	*e*P	Pn	01 41 60.0	+0.4
	baz=253						
STYH				*e*S	Sn	01 42 14.5	-0.6
	baz=253						
TYC	**Yuchr**	**1.25**	**294**	*e*P	Pn	01 42 00.3	+0.5
	baz=301						
LATG	**Datong**	**1.25**	**336**	*e*P	Pn	01 42 00.2	+0.2
	baz=344						
LATG				*e*S	Sn	01 42 15.4	-0.4
	baz=344						
WCS	**Beigang Elemen**	**1.27**	**302**	*e*P	Pn	01 42 00.5	+0.4
	baz=302						
TPUB	**Ta-pu**	**1.35**	**267**	*e*P	Pn	01 42 00.8	-0.5
	baz=266						
TPUB				*e*S	Sn	01 42 19.2	+1.2
	baz=266						
WTP	**Ta-pu**	**1.37**	**264**	*e*P	Pn	01 42 02.2	+0.7
	baz=256						
WTP				*e*S	Sb	01 42 20.4	-0.7
	baz=256						
CHN4	**Tsaushan**	**1.38**	**269**	*e*P	Pb	01 42 03.2	-0.8
	baz=268						
CHN4				*e*S	Sb	01 42 21.0	-0.3
	baz=268						
YHNB	**Yeheng**	**1.44**	**333**	*e*P	Pn	01 42 03.0	+0.6
	baz=333						
YHNB				*e*S	Sn	01 42 19.8	-0.4
	baz=333						
FUSB	**Fushanzhiwuyua**	**1.44**	**341**	*e*P	Pn	01 42 03.1	+0.6
	baz=341						
FUSB				*e*S	Sn	01 42 21.0	+0.7
	baz=341						
CHN1	**Nanshi**	**1.46**	**262**	*e*P	Pn	01 42 03.7	+1.1
	baz=255						
CHN1				*e*S	Sb	01 42 22.9	-0.5
	baz=255						
SNST	**Tainan City**	**1.48**	**264**	*i* S	Sb	01 42 24.4	+0.3
	baz=263						
NWLT	**Wulai**	**1.48**	**339**	*e*S	Sn	01 42 21.6	+0.2
	baz=327						
TWK	**Hsinying**	**1.48**	**266**	*e*P	Pb	01 42 04.9	-0.9
	baz=265						
TIPB	**Shuangxi**	**1.59**	**351**	*e*P	Pn	01 42 05.7	+1.2
TIPB				*e*S	Sn	01 42 24.9	+0.8

*TRN **18** 02:19:44.9,10°.30N×62°.33W,h7km,MD3.3*
*FUNV **18** 02:19:46.0,10°.39N×62°.34W,h4km,MW3.1*
ISC 18 02:19:45.9±3.3,10°.43N±0°.08×62°.36W±0°.04,h17km±25km,n11,σ1s20/19,Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRUV	**Carupano**	**0.90**	**286**	*e*P	**Pb**	**02 20 01.7**	**-1.3**
CRUV				*e*S	**Sb**	**02 20 14.7**	**0.0**
TRN	**Trinidad (W)**	**0.97**	**77**	*e*P	**Pb**	**02 20 03.6**	**-0.6**
TRN				*e*S	**Sn**	**02 20 18.2**	**+0.1**
COAV	**Cumanacoa**	**1.47**	**260**	*e*P	**Pb**	**02 20 12.7**	**-0.2**
COAV				*e*S	**Sb**	**02 20 33.5**	**+2.3**
CUMV	**Cumana_UDO**	**1.80**	**270**	*e*P	**Pb**	**02 20 17.7**	**-0.8**
GRGR	**Grenville**	**1.83**	**22**	*e*P	**Pb**	**02 20 19.1**	**+0.1**
GRGR				*e*S	**Sb**	**02 20 43.4**	**+1.8**
TOSP	**Speyside**	**1.99**	**64**	*e*P	**Pn**	**02 20 19.3**	**+0.5**
TOSP				*e*S	**Sb**	**02 20 45.9**	**-0.3**
GCMP	**Grenada, Carri**	**2.24**	**24**	*e*P	**Pb**	**02 20 25.1**	**-0.9**
GCMP				*e*S	**Sb**	**02 20 52.8**	**-0.6**
PCRV	**Puerto La Cruz**	**2.25**	**264**	*e*P	**Pn**	**02 20 23.4**	**+0.9**
PCRV				*e*S	**Sn**	**02 20 50.2**	**+0.4**
BIRV	**Birongo**	**3.84**	**271**	*e*P	**Pn**	**02 20 45.1**	**+0.8**
BIRV				*e*S	**Sn**	**02 21 29.1**	**-0.1**
CACV	**CAICARA DEL OR**	**5.01**	**236**	*e*P	Pn	02 20 54.2	-6.1
CACV				*e*S	Sn	02 21 45.6	-12
BAUV	**El Baul**	**5.79**	**256**	*e*P	**Pn**	**02 21 11.3**	**+0.2**
BAUV				*e*S	**Sn**	**02 22 14.4**	**-2.8**

*IDC **18** 02:30:00.7±1.9,1°.08S×23°.39W,h0km,mb3.6/4,mbtmp3.7/4,MS3.6/31,Error ellipse: s-maj=82.5km s-min=36.4km az=166.0*
ISC 18 02:30:03.1±1.4,0°.9S±0°.2×23°.3W±0°.2,h13km,n43,σ1s21/11,mb3.5/3,MS3.6/29,3C,Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N3	**ASCENSION HYDR1**	**1.10**	**128**	Pn	**Pn**	**02 32 42.0**	**+0.5**
	baz=199,slow=80						
H10N3				T	T	02 44 16.9	
	baz=306,slow=74,SNR=248						
H10N2	**ASCENSION HYDR1**	**1.11**	**128**	Pn	**Pn**	**02 32 41.5**	**0.0**
	baz=199,slow=80						
H10N2				T	T	02 44 23.2	
	baz=306,slow=74,SNR=296						
H10N1	**ASCENSION HYDR1**	**1.12**	**128**	Pn	**Pn**	**02 32 41.9**	**+0.2**
	baz=199,slow=80						
H10N1				T	T	02 44 18.4	
	baz=306,slow=74,SNR=313						
H10S3	**ASCENSION HYDR1**	**1.69**	**133**	T	T	02 44 57.0	
	baz=311,slow=74,SNR=74						
H10S2	**ASCENSION HYDR1**	**1.71**	**133**	T	T	02 45 04.1	
	baz=269,slow=74,SNR=15						
RCBR	**Riachuelo**	**13.53**	**249**	LR	LR	02 36 52.5	
	comp=Z,224nm,18.0s,baz=179,slow=31						
LIC	**Lamto**	**19.53**	**68**	⇑*i*P	**P**	**02 34 29.9**	**-0.7**
	9.2nm,0.8s						
TIC	**Toumodi**	**19.69**	**67**	⇑*i*P	**P**	**02 34 30.6**	**-1.7**
	2.0nm,0.2s						
KIC	**Kosan Boka**	**19.85**	**68**	⇑*i*P	**P**	**02 34 31.8**	**-2.2**
	6.5nm,0.7s						
DBIC	**Dimbokro**	**19.85**	**67**	P	**Pn**	**02 34 35.8**	**+0.2**
	8.6nm,1.2s,baz=252,slow=10,SNR=1.6						
DBIC				LR	LR	02 40 50.4	
	comp=Z,133nm,21.0s,baz=250,slow=32 8.6nm,1.2s						
TORD	**Torodi Ar. Bea**	**28.42**	**60**	P	**P**	**02 35 58.5**	**+0.7**
	1.1nm,1.1s,baz=232,slow=11,SNR=2.2 1.1nm,1.1s						
BDFB	**Brasilia**	**28.47**	**238**	LR	LR	02 45 34.3	
	comp=Z,213nm,21.2s,baz=141,slow=33						
MDT	**Midelt**	**37.90**	**26**	LR	LR	02 51 26.7	
	comp=Z,102nm,21.3s,baz=247,slow=34						
SIV	**San Ignacio**	**40.17**	**246**	LR	LR	02 53 13.6	
	comp=Z,92nm,20.4s,baz=112,slow=35						
CPUP	**Villa Florida**	**41.38**	**230**	LR	LR	02 53 57.1	
	comp=Z,92nm,18.8s,baz=72,slow=35						
TSUM	**Tsumeb**	**43.93**	**117**	LR	LR	02 53 22.7	
	comp=Z,120nm,18.5s,baz=73,slow=32						
ESDC	**Sonseca Array**	**44.10**	**21**	LR	LR	02 55 16.4	
	comp=Z,41nm,20.8s,baz=216,slow=34						
SJG	**San Juan**	**46.24**	**296**	LR	LR	02 54 49.2	
	comp=Z,32nm,18.9s,baz=88,slow=32						
LPAZ	**La Paz**	**46.77**	**248**	LR	LR	02 58 01.2	
	comp=Z,20nm,18.1s,baz=94,slow=36						
KEST	**Kesra**	**47.47**	**37**	LR	LR	03 00 09.9	
	comp=Z,65nm,18.8s,baz=250,slow=38						
LVC	**Limon Verde**	**49.31**	**241**	LR	LR	02 59 49.1	
	comp=Z,40nm,18.9s,baz=112,slow=36						
ROSC	**El Rosal**	**51.33**	**277**	LR	LR	02 58 39.0	
	comp=Z,61nm,21.7s,baz=18,slow=34						
LBTB	**Lobatse**	**52.87**	**121**	LR	LR	02 58 45.5	
	comp=Z,93nm,20.1s,baz=244,slow=33						
BOSA	**Boshof**	**53.84**	**125**	LR	LR	02 57 31.1	
	comp=Z,103nm,20.7s,baz=206,slow=31						
MBAR	**Mbarara**	**53.99**	**90**	LR	LR	03 00 04.3	
	comp=Z,94nm,18.0s,baz=206,slow=33						
NNA	**Nana**	**54.26**	**256**	LR	LR	03 01 32.9	
	comp=Z,114nm,19.6s,baz=70,slow=35						
ATAH	**Atahualpa**	**55.31**	**262**	LR	LR	03 02 42.8	
	comp=Z,83nm,18.7s,baz=88,slow=36						
DAVOX	**Davos/Dischmat**	**55.69**	**27**	LR	LR	03 04 18.5	
	comp=Z,44nm,18.0s,baz=257,slow=37						
PLCA	**Paso Flores**	**58.28**	**221**	LR	LR	03 02 54.6	
	comp=Z,60nm,19.6s,baz=184,slow=34						
KMBO	**Kilima Mbogo**	**60.50**	**91**	LR	LR	03 03 58.8	
	comp=Z,97nm,18.8s,baz=232,slow=34						
EIL	**Elat**	**63.22**	**56**	LR	LR	03 08 27.1	
	comp=Z,48nm,18.6s,baz=263,slow=36						
MLR	**Muntele Rosu**	**63.38**	**37**	LR	LR	03 09 12.6	
	comp=Z,55nm,18.9s,baz=248,slow=37						
BORG	**Borgarnes**	**65.53**	**1**	LR	LR	03 05 33.3	
	comp=Z,34nm,18.1s,baz=214,slow=32						
BRTR	**Keskin Array B**	**65.73**	**45**	P	**P**	**02 40 49.4**	**+1.5**
	0.2nm,0.7s,baz=251,slow=4.7,SNR=2.2 0.2nm,0.7s						
TKL	**Tuckaleechee C**	**66.96**	**310**	LR	LR	03 05 57.4	
	comp=Z,27nm,20.2s,baz=124,slow=32						
NOA	**NORSAR Array B**	**67.22**	**17**	LR	LR	03 10 21.2	
	comp=Z,10nm,18.4s,baz=220,slow=36						
HFS	**Hagfors**	**67.29**	**19**	LR	LR	03 09 33.7	
	comp=Z,25nm,18.4s,baz=324,slow=35						
KBZ	**Khabaz**	**73.62**	**44**	LR	LR	03 16 56.5	
	comp=Z,27nm,18.3s,baz=200,slow=38						
BELG	**Belogornoye**	**79.16**	**36**	LR	LR	03 19 58.5	
	comp=Z,21nm,18.7s,baz=174,slow=38						
TXAR	**Lajitas Array**	**82.09**	**300**	P	**P**	**02 42 23.5**	**-0.4**
	0.4nm,1.0s,baz=116,slow=9.2,SNR=2.9 0.4nm,1.0s						
ANMO	**Albuquerque**	**84.95**	**305**	LR	LR	03 14 13.8	
	comp=Z,35nm,21.1s,baz=136,slow=31						
NEW	**Newport**	**93.27**	**318**	LR	LR	03 22 46.4	
	comp=Z,48nm,18.3s,baz=137,slow=34						
WRA	**Warramunga Arr**	**149.79**	**135**	PKPbc	**PKPbc**	**02 49 53.3**	**-0.6**
	0.3nm,0.7s,baz=222,slow=2.2,SNR=1.8						

*IDC **18** 02:33:42.6±1.7,3°.84S×123°.32E,h0km,mb3.8/4,mbtmp3.7/5,ML3.5/1,MS3.0/2,Error ellipse: s-maj=190.3km s-min=31.5km az=60.0*
*NEIC **18** 02:33:46.0±2.8,3°.725S±0°.07×123°.7E±0°.2,h30km±6km,mb4.2/7, Error ellipse: s-maj=22.4km s-min=9.4km az=105.0*
ISC 18 02:33:46.0±0.8,3°.77S±0°.08×123°.7E±0°.1,h35km,n17,σ1s37/15,mb4.1/8,Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**2.86**	**341**	Pn	**Pn**	**02 34 27.4**	**-1.7**
KAPI	**Kappang**	**4.13**	**252**	LR	LR	02 35 51.1	
	comp=Z,110nm,19.7s,baz=40,slow=34						
KAPI	**Kappang**	**4.13**	**252**		**Pn**	**02 34 45.6**	**-0.9**
TOLI2	**Tolitoli**	**5.65**	**329**		**Pn**	**02 35 07.0**	**-0.6**
BATI	**Baumata**	**6.40**	**180**	LR	LR	02 37 52.8	
	comp=Z,205nm,19.1s,slow=40						
WRA	**Warramunga Arr**	**19.14**	**148**	P	**Pn**	**02 38 09.4**	**+2.0**
	0.2nm,0.3s,baz=323,slow=12,SNR=4.7 0.4nm,0.3s						
WB2	**Warramunga Arr**	**19.14**	**148**	P	**P**	**02 38 06.2**	**-0.3**
WR0	**Warramunga Arr**	**19.26**	**148**	P	**Pn**	**02 38 08.2**	**-0.7**
WR0				IAmb	IAmb	02 38 19.0	
	comp=Z,5.8nm,1.1s						
SONM	**Songino Array**	**53.58**	**346**	P	**P**	**02 43 05.9**	**+2.2**
	comp=Z,0.3nm,0.3s,baz=171,slow=9.3,SNR=2.3 comp=Z,0.3nm,0.3s						
MK31	**Makanchi Array**	**62.17**	**329**	P	**P**	**02 44 04.2**	**+0.3**
MK31				IAmb	IAmb	02 44 29.5	
	comp=Z,0.9nm,0.9s						
MKAR	**Makanchi Array**	**62.17**	**329**	P	**P**	**02 44 04.5**	**+0.6**
	comp=Z,0.3nm,0.4s,baz=138,slow=5.6,SNR=5.1 comp=Z,0.3nm,0.4s						
PEA0B	**Petropavlovsk-**	**63.47**	**22**	P	**P**	**02 44 11.1**	**-1.3**
PEA0B				IAmb	IAmb	02 44 34.4	
	comp=Z,3.7nm,0.9s						
ZAA0	**Zalesovo Array**	**66.01**	**336**	P	**P**	**02 44 29.1**	**+0.2**
ZAA0				IAmb	IAmb	02 44 31.4	
	comp=Z,2.2nm,0.9s						
ZALV	**Zalesovo Beam**	**66.01**	**336**	P	**P**	**02 44 30.2**	**+1.3**
	comp=Z,1.3nm,0.8s,baz=122,slow=5.2,SNR=5.7 comp=Z,1.3nm,0.8s						
KURBB	**Kurchatov Arra**	**66.56**	**331**	P	**P**	**02 44 33.8**	**+1.4**
	comp=Z,1.5nm,0.9s,baz=140,slow=6.0,SNR=12 comp=Z,1.5nm,0.9s						
KURK	**Kurchatov**	**66.57**	**331**	P	**P**	**02 44 34.0**	**+1.5**
QSPA	**South Pole Qui**	**86.19**	**180**	P	**P**	**02 46 22.5**	**-1.2**
QSPA				IAmb	IAmb	02 46 26.6	
	comp=Z,2.7nm,1.1s						

MAN 18 02:48:30.8,16°.53N×120°.65E,h32km,mb4.1,ML2.9,MS2.5,4D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPP	**San Manuel, Pa**	**0.38**	**176**	⇓*e*P	Pb	02 48 37.5	+2.0
SMPP				*e*S		02 48 42.0	
SAMP	**Sagada Mountai**	**0.59**	**24**	⇓*e*P	Pn	02 48 43.5	+0.1
SAMP				*e*S		02 48 52.3	
BOLP	**Bolinao**	**0.72**	**258**	⇓*e*P	Pb	02 48 44.7	0.0
BOLP				*e*S		02 48 55.8	
PCPH	**Palayan**	**1.06**	**156**	⇓*e*P	Pb	02 48 49.7	+4.8
PCPH				*e*S		02 49 02.9	

*JMA **18** 03:11:07.4±0.1,24°.5N±0°.2×121°.9E±0°.4,h28km,MV3.4/11,TAIWAN REGION*
*TAP **18** 03:11:07.2,24°.58N×121°.89E,h0km,ML3.8,B*
ISC 18 03:11:07.0±0.8,24°.56N±0°.01×121°.92E±0°.02,h10km±5km,n111,σ0s65/201,27C-22D,Taiwan

| Code |

LATG	**Datong**	**0.36**	**266**⇑	*i*P	**Pg**	**03 11 14.1**	**0.0**
	baz=263							
LATG				*e*S	**Sg**	**03 11 18.6**	**-0.3**
	baz=263							
FUSB	**Fushanzhiwuyua**	**0.36**	**303**⇑	*i*P	**Pg**	**03 11 14.4**	**+0.2**
	baz=304							
FUSB				*e*S	**Sg**	**03 11 19.8**	**+0.8**
	baz=304							
NDT	**Datong Townshi**	**0.37**	**276**	⇑P	**Pg**	**03 11 14.5**	**+0.1**
	baz=275							
NDT				*e*S	**Sg**	**03 11 19.2**	**-0.1**
	baz=275							
TIPB	**Shuangxi**	**0.42**	**348**⇑	*i*P	**Pg**	**03 11 15.4**	**+0.2**
	baz=352							
TIPB				*i* S	**Sg**	**03 11 20.6**	**-0.2**
	baz=352							
NWLT	**Wulai**	**0.44**	**300**⇑	*i*P	**Pg**	**03 11 15.7**	**+0.1**
	baz=300							
NWLT				*e*S	**Sg**	**03 11 21.9**	**+0.6**
	baz=300							
TWB1	**Santiao Chiao**	**0.45**	**8**⇓	*i*P	**Pg**	**03 11 15.9**	**+0.2**
	baz=13							
TWB1				S	**Sg**	**03 11 21.5**	**-0.2**
	baz=13							
ETL	**Fush Village**	**0.48**	**214**⇓	*i*P	**Pg**	**03 11 16.6**	**+0.2**
	baz=210							
ETL				*e*S	**Sg**	**03 11 23.5**	**+0.7**
	baz=210							
NACB	**Ninganchiao**	**0.49**	**218**	⇓P	**Pg**	**03 11 16.5**	**0.0**
	baz=214							
NACB				*e*S	**Sb**	**03 11 23.5**	**-1.3**
	baz=214							
NNSB	**Datong**	**0.51**	**255**	⇓P	**Pg**	**03 11 16.8**	**-0.1**
	baz=252							
NNSB				*e*S	**Sg**	**03 11 22.9**	**-0.7**
	baz=252							
NNSH	**Datong**	**0.51**	**255**	⇓P	**Pg**	**03 11 16.7**	**-0.1**
	baz=252							
NNSH				*e*S	**Sg**	**03 11 22.7**	**-0.8**
	baz=252							
YHNB	**Yeheng**	**0.51**	**282**	⇑P	**Pg**	**03 11 17.0**	**+0.2**
	baz=281							
YHNB				*e*S	**Sg**	**03 11 22.3**	**-1.3**
	baz=281							
NNS	**Nan Shan**	**0.51**	**256**⇓	*i*P	**Pg**	**03 11 16.9**	**-0.1**
	baz=253							
NNS				*e*S	**Sg**	**03 11 23.3**	**-0.5**
	baz=253							
TWA	**Mucha**	**0.52**	**324**⇑	*i*P	**Pg**	**03 11 17.5**	**+0.5**
	baz=326							
TWA				*e*S	**Sg**	**03 11 23.6**	**-0.3**
	baz=326							
NWF	**Wu-fen Shan**	**0.52**	**346**	⇑P	**Pg**	**03 11 17.8**	**+0.6**
	baz=349							
NWF				*e*S	**Sg**	**03 11 24.2**	**+0.1**
	baz=349							
WFSB	**Wu-fen Shan**	**0.52**	**346**	⇑P	**Pg**	**03 11 17.8**	**+0.6**
	baz=349							
WFSB				*e*S	**Sg**	**03 11 24.2**	**+0.1**
	baz=349							
NSK	**Sanguang**	**0.52**	**283**	⇑P	**Pg**	**03 11 17.2**	**0.0**
	baz=282							
NSK				*e*S	**Sg**	**03 11 23.8**	**-0.4**
	baz=282							
SXI1	**Grass Mountain**	**0.53**	**356**	⇓P	**Pg**	**03 11 17.8**	**+0.5**
	baz=359							
SXI1				*e*S	**Sg**	**03 11 24.4**	**0.0**
	baz=359							
ETLH	**Xiulin Townshi**	**0.53**	**229**	⇓P	**Pg**	**03 11 17.3**	**0.0**
	baz=225							
ETLH				*e*S	**Sg**	**03 11 24.7**	**+0.3**
	baz=225							
NHDH	**Xindian Distri**	**0.54**	**318**	⇑P	**Pg**	**03 11 17.9**	**+0.5**
	baz=320							
NHDH				*e*S	**Sg**	**03 11 24.4**	**-0.1**
	baz=320							
TWD	**Chiawan**	**0.56**	**212**⇓	*i*P	**Pg**	**03 11 18.0**	**+0.1**
	baz=208							
TWD				S	**Sg**	**03 11 25.2**	**-0.1**
	baz=208							
TATO	**Taipei**	**0.57**	**317**	⇑P	**Pg**	**03 11 18.6**	**+0.6**
	baz=318							
TATO				*e*S	**Sg**	**03 11 25.2**	**-0.3**
	baz=318							
NHY	**Taipei**	**0.57**	**326**	*e*P	**Pb**	**03 11 19.0**	**-0.1**
	baz=328							
NHY				*e*S	**Sg**	**03 11 26.4**	**+0.7**
	baz=328							
TAP1	**Taipei**	**0.60**	**323**	*e*P	**Pb**	**03 11 19.5**	**0.0**
	baz=324							
TAP1				*e*S	**Sg**	**03 11 27.0**	**+0.6**
	baz=324							
TNOU	**National Taiwa**	**0.60**	**347**	*e*P	**Pg**	**03 11 19.1**	**+0.5**
	baz=350							
TNOU				*e*S	**Sg**	**03 11 26.2**	**-0.4**
	baz=350							
TAP	**Taipei**	**0.61**	**322**	*e*P	**Pb**	**03 11 19.6**	**-0.1**
	baz=324							
TAP				*e*S	**Sg**	**03 11 27.4**	**+0.6**
	baz=324							
BACT	**New Taipei Cit**	**0.61**	**315**	*e*P	**Pb**	**03 11 19.9**	**0.0**
	baz=316							
HWA	**Hwalien**	**0.65**	**206**	*e*P	**Pb**	**03 11 20.4**	**0.0**
	baz=203							
HWA				*e*S	**Sb**	**03 11 29.3**	**-0.2**
	baz=203							
YM01	**YM01**	**0.66**	**331**⇑	*e*P	**Pb**	**03 11 20.6**	**-0.1**
	baz=333							
YM01				*e*S	**Sg**	**03 11 28.8**	**+0.2**
	baz=333							
NWRT	**Kuosheng**	**0.68**	**340**	*e*P	**Pg**	**03 11 20.6**	**+0.5**
	baz=342							
FUSS	**Fushou**	**0.69**	**243**⇓	*e*P	**Pg**	**03 11 20.1**	**-0.3**
	baz=241							
FUSS				*e*S	**Sg**	**03 11 29.5**	**+0.1**
	baz=241							
YM08	**YM08**	**0.69**	**334**⇑	*e*P	**Pg**	**03 11 20.8**	**+0.5**
	baz=336							
YM08				*e*S	**Sg**	**03 11 29.1**	**-0.3**
	baz=336							
TWS1	**Kuangyinshan**	**0.70**	**320**⇑	*e*P	**Pb**	**03 11 21.8**	**+0.4**
	baz=321							
TWS1				*e*S	**Sb**	**03 11 32.0**	**+0.8**
	baz=321							
ETM	**Tongmen**	**0.71**	**213**	*e*P	**Pg**	**03 11 20.6**	**0.0**
	baz=211							
NTY	**Taoyuan**	**0.71**	**308**	*e*P	**Pb**	**03 11 22.2**	**+0.6**
	baz=308							
ANP	**Anpu**	**0.72**	**330**	*e*P	**Pb**	**03 11 21.6**	**-0.1**
	baz=332							
WHF	**Hehuan Shan**	**0.73**	**235**⇓	*e*P	**Pg**	**03 11 20.9**	**-0.2**
	baz=233							
WHF				*e*S	**Sg**	**03 11 30.4**	**-0.2**
	baz=233							
NFF	**Wufeng Townshi**	**0.73**	**276**⇑	*e*P	**Pb**	**03 11 21.4**	**-0.5**
	baz=275							
NFF				*e*S	**Sg**	**03 11 30.4**	**-0.3**
	baz=275							
NTST	**Danshui**	**0.74**	**325**⇑	*e*P	**Pb**	**03 11 22.4**	**+0.4**
	baz=326							
NTST				*e*S	**Sb**	**03 11 32.9**	**+0.8**
	baz=326							
TWT	**Tachien**	**0.74**	**246**	*e*P	**Pb**	**03 11 22.0**	**-0.1**
	baz=244							
TWT				*e*S	**Sb**	**03 11 32.1**	**-0.3**
	baz=244							
TEYL	**Yanliau Villag**	**0.75**	**203**	*e*P	**Pg**	**03 11 21.8**	**+0.3**
	baz=201							
TEYL				*e*S	**Sn**	**03 11 35.4**	**+0.3**
	baz=201							
TDCB	**Techi**	**0.76**	**246**	*e*P	**Pg**	**03 11 21.6**	**0.0**
	baz=244							
TDCB				*e*S	**Sg**	**03 11 31.6**	**0.0**
	baz=244							
TWY	**Chenhua**	**0.77**	**338**	*e*P	**Pb**	**03 11 22.6**	**+0.1**
	baz=340							
TWY				*e*S	**Sg**	**03 11 31.9**	**+0.1**
	baz=340							
NJD	**Zhudong**	**0.78**	**283**	*e*P	**Pb**	**03 11 23.2**	**+0.6**
	baz=282							
NCU	**National Centr**	**0.78**	**302**	*e*P	**Pb**	**03 11 22.8**	**+0.2**
	baz=302							
NCUH	**Zhongli**	**0.78**	**301**⇑	*e*P	**Pb**	**03 11 23.3**	**+0.6**
	baz=301							
NSM	**Shimen**	**0.78**	**338**	*e*P	**Pn**	**03 11 24.5**	**+0.4**
	baz=339							
NSM				*e*S	**Sn**	**03 11 36.0**	**+0.1**
	baz=339							

LIOB	**Emei**	**0.83**	**276**⇑	*e*P	**Pb**	**03 11 23.6**	**+0.2**
	baz=275							
LIOB				*e*S	**Sb**	**03 11 34.2**	**-0.5**
	baz=275							
NSTT	**Nanjuang**	**0.84**	**275**⇑	*e*P	**Pb**	**03 11 23.7**	**0.0**
	baz=274							
NSTT				*e*S	**Sg**	**03 11 33.9**	**-0.2**
	baz=274							
CHGB	**Renai**	**0.84**	**234**⇓	*e*P	**Pg**	**03 11 23.0**	**-0.2**
	baz=232							
CHGB				*e*S	**Sb**	**03 11 34.3**	**-1.0**
	baz=232							
HSN1	**Hsinchu**	**0.85**	**285**	*e*P	**Pn**	**03 11 24.8**	**-0.2**
	baz=284							
HSN1				*e*S	**Sn**	**03 11 36.8**	**-0.7**
	baz=284							
ESL	**Shilin**	**0.87**	**211**⇓	*e*P	**Pg**	**03 11 23.4**	**-0.3**
	baz=208							
ESL				*e*S	**Sb**	**03 11 35.3**	**-0.5**
	baz=208							
SBCB	**Hsinchu**	**0.88**	**285**	*e*P	**Pb**	**03 11 24.6**	**+0.2**
	baz=285							
SBCB				*e*S	**Sn**	**03 11 37.5**	**-0.8**
	baz=285							
HSN	**Hsinchu**	**0.90**	**286**	*e*P	**Pb**	**03 11 25.4**	**+0.8**
	baz=288							
HSN				*e*S	**Sb**	**03 11 37.3**	**+0.6**
	baz=288							
NHW	**Xinwu Township**	**0.91**	**299**	*e*P	**Pn**	**03 11 25.9**	**0.0**
	baz=299							
NHW				*e*S	**Sn**	**03 11 39.8**	**+0.8**
	baz=299							
OWD	**Renai**	**0.91**	**228**⇓	*e*P	**Pg**	**03 11 24.2**	**-0.3**
	baz=226							
OWD				*e*S	**Sg**	**03 11 35.4**	**-1.0**
	baz=226							
TEGC	**Jichi Village**	**0.92**	**202**	*e*P	**Pb**	**03 11 25.5**	**+0.5**
	baz=200							
WUSB	**Renai**	**0.93**	**232**	*e*P	**Pg**	**03 11 24.7**	**-0.1**
	baz=230							
WUSB				*e*S	**Sb**	**03 11 36.9**	**-0.8**
	baz=230							
WHP	**Taichung City**	**0.93**	**253**	*e*P	**Pb**	**03 11 25.3**	**0.0**
	baz=251							
WHP				*e*S	**Sg**	**03 11 36.3**	**-0.8**
	baz=251							
JYNG	**Yonagunijimaku**	**0.94**	**96**	P	**Pg**	**03 11 25.3**	**+0.2**
JYNG				S	**Sg**	**03 11 37.9**	**+0.5**
NJN	**Zhunan**	**0.96**	**277**	*e*P	**Pn**	**03 11 27.2**	**+0.7**
	baz=277							
EGFH	**Guangfu**	**1.00**	**207**⇓	*e*P	**Pg**	**03 11 26.0**	**-0.2**
	baz=205							
EGFH				*e*S	**Sn**	**03 11 41.0**	**-0.1**
	baz=205							
YOJ	**Yonaguni jima**	**1.00**	**95**⇑	*i*P	**Pg**	**03 11 26.2**	**0.0**
	baz=96							
YOJ				S	**Sg**	**03 11 39.4**	**+0.2**
	baz=96							
YOJ	**Yonaguni jima**	**1.00**	**95**	P	**Pg**	**03 11 26.3**	**0.0**
YOJ				*e*S	**Sg**	**03 11 39.6**	**+0.4**
NMLH	**Miaoli**	**1.03**	**269**	*e*P	**Pn**	**03 11 28.4**	**+0.9**
	baz=268							
NMLH				*e*S	**Sb**	**03 11 41.2**	**+0.7**
	baz=268							
WPL	**Puli Township**	**1.03**	**238**	*e*P	**Pb**	**03 11 27.2**	**+0.2**
	baz=237							
WPL				*e*S	**Sg**	**03 11 39.7**	**-0.6**
	baz=237							
DPDB	**Guoxing**	**1.05**	**240**	*e*P	**Pb**	**03 11 27.1**	**-0.1**
	baz=238							
DPDB				*e*S	**Sg**	**03 11 40.2**	**-0.6**
	baz=238							
WCS	**Beigang Elemen**	**1.05**	**242**	*e*P	**Pb**	**03 11 27.1**	**-0.1**
	baz=240							
WCS				*e*S	**Sb**	**03 11 40.6**	**-0.4**
	baz=240							
NSY	**Sanyi**	**1.06**	**262**	*e*P	**Pn**	**03 11 28.9**	**+0.9**
	baz=261							
NSY				*e*S	**Sn**	**03 11 42.5**	**-0.4**
	baz=261							
TWQ1	**Liyutan**	**1.07**	**259**	*e*P	**Pn**	**03 11 28.6**	**+0.6**
	baz=257							
TWQ1				*e*S	**Sb**	**03 11 41.4**	**-0.2**
	baz=257							
PCYT	**Pengchaiyu**	**1.07**	**7**	*e*P	**Pg**	**03 11 27.4**	**-0.2**
	baz=9.0							
PCYT				*e*S	**Sb**	**03 11 43.2**	**+1.4**
	baz=9.0							
VWDT	**VWDT**	**1.07**	**222**⇓	*e*P	**Pg**	**03 11 27.3**	**-0.3**
	baz=220							
VWDT				*e*S	**Sb**	**03 11 42.2**	**+0.4**
	baz=220							
SMLT	**Sun Moon Lake**	**1.15**	**234**	*e*P	**Pb**	**03 11 29.0**	**0.0**
	baz=232							
SMLT				*e*S	**Sb**	**03 11 44.7**	**+0.7**
	baz=232							
HGSD	**Ruisui**	**1.16**	**203**⇓	*e*P	**Pn**	**03 11 29.7**	**+0.5**
	baz=201							
TYC	**Yuchr**	**1.17**	**236**	*e*P	**Pg**	**03 11 29.2**	**-0.3**
	baz=234							
TYC				*e*S	**Sb**	**03 11 44.2**	**-0.3**
	baz=234							
SSLB	**Suanglung**	**1.17**	**229**⇓	*e*P	**Pg**	**03 11 29.0**	**-0.5**
	baz=227							
SSLB				*e*S	**Sg**	**03 11 44.0**	**-0.7**
	baz=227							
EHY	**Hungye**	**1.18**	**208**	*e*P	**Pg**	**03 11 29.1**	**-0.6**
	baz=206							
WDJ	**Dajia District**	**1.19**	**260**	*e*P	**Pn**	**03 11 30.9**	**+1.3**
	baz=259							
YULB	**Yu-li**	**1.29**	**206**⇓	*e*P	**Pg**	**03 11 31.4**	**-0.5**
	baz=205							
YULB				*e*S	**Sn**	**03 11 49.8**	**+1.2**
	baz=205							
WJS	**Zhushan**	**1.31**	**236**	*e*P	**Pb**	**03 11 33.2**	**+1.4**
	baz=235							
EYUL	**Yuli**	**1.33**	**205**	*e*P	**Pn**	**03 11 32.3**	**+0.7**
	baz=203							
TWF1	**Yuli**	**1.33**	**205**	*e*P	**Pn**	**03 11 31.4**	**-0.3**
	baz=204							
TWF1				*e*S	**Sn**	**03 11 50.1**	**+0.6**
	baz=204							
YUS	**Yu-Shan**	**1.39**	**220**	*e*P	**Pg**	**03 11 33.2**	**-0.4**
	baz=218							
ALS	**Alishan**	**1.46**	**224**⇓	*e*P	**Pg**	**03 11 34.9**	**-0.1**
	baz=223							
ALS				*e*S	**Sn**	**03 11 53.6**	**+0.6**
	baz=223							
FULB	**Fuli**	**1.47**	**203**	*e*P	**Pn**	**03 11 34.5**	**+0.9**
	baz=202							
FULB				*e*S	**Sg**	**03 11 58.2**	**+3.8**
	baz=202							
CHN5	**Tsauling**	**1.49**	**230**	*e*P	**Pg**	**03 11 36.2**	**+0.7**
	baz=229							
CHN5				*e*S	**Sg**	**03 11 55.6**	**+0.8**
	baz=229							
ELDTW	**Lidau**	**1.60**	**211**	*e*P	**Pb**	**03 11 36.7**	**0.0**
	baz=210							
ELDTW				*e*S	**Sg**	**03 11 58.2**	**-0.1**
	baz=210							
IRIF	**Iriomote-Funau**	**1.67**	**97**	P	**Pn**	**03 11 35.5**	**-0.7**
IRIF				*e*S	**Sn**	**03 11 56.2**	**-1.4**
CHN4	**Tsaushan**	**1.71**	**225**	*e*P	**Pg**	**03 11 39.5**	**-0.3**
	baz=224							
CHN4				*e*S	**Sg**	**03 12 02.1**	**+0.2**
	baz=224							
WTP	**Ta-pu**	**1.77**	**223**	*e*P	**Pb**	**03 11 39.8**	**+0.2**
	baz=221							
WTP				*e*S	**Sg**	**03 12 06.3**	**+2.3**
	baz=221							
HATJ	**Hateruma jima**	**1.79**	**106**	S	**Sn**	**03 12 00.7**	**-0.1**
TWK	**Hsinying**	**1.84**	**226**	*e*P	**Pb**	**03 11 41.2**	**+0.5**
	baz=224							
TWK				*e*S	**Sg**	**03 12 06.9**	**+0.8**
	baz=224							
CHN1	**Nanshi**	**1.87**	**223**	*e*P	**Pg**	**03 11 42.3**	**-0.6**
	baz=222							
CHN1				*e*S	**Sg**	**03 12 08.0**	**+0.8**
	baz=222							
SGST	**Jiashian**	**1.92**	**220**	*e*P	**Pb**	**03 11 42.0**	**0.0**
	baz=219							
ICHU	**Yijhu**	**1.92**	**232**	*e*P	**Pb**	**03 11 42.6**	**+0.6**
	baz=231							
LDUT	**Ludao**	**1.92**	**192**	*e*P	**Pn**	**03 11 39.3**	**-0.5**
	baz=191							
LDUT				*e*S	**Sn**	**03 12 02.6**	**-1.5**
	baz=191							
JKRS	**Kuro-shima**	**1.93**	**99**	P	**Pn**	**03 11 39.7**	**-0.2**

JKRS				S	**Sn**	**03 12 03.6**	**-0.7**
JIJ	**Ishigaki jima**	**2.04**	**95**	P	**Pn**	**03 11 40.6**	**-0.8**
JIJ				S	**Sn**	**03 12 04.6**	**-2.2**
JISG	**Ishigakijimahi**	**2.18**	**89**	P	**Pn**	**03 11 42.8**	**-0.5**
VWUC	**VWUC**	**2.29**	**281**⇑	*e*P	**Pn**	**03 11 44.4**	**-0.4**
	baz=281							
VWUC				*e*S	**Sn**	**03 12 10.9**	**-2.1**
	baz=281							
PHUB	**P'eng-hu**	**2.39**	**245**	*e*P	**Pn**	**03 11 46.7**	**+0.6**
	baz=243							
MATB	**Ma-tsu**	**2.39**	**312**	*e*P	**Pn**	**03 11 45.3**	**-0.9**
	baz=311							
MATB				*e*S	**Sn**	**03 12 14.9**	**-0.6**
	baz=311							
JTJ	**Tarama**	**2.53**	**88**	*e*P	**Pn**	**03 11 48.4**	**+0.2**
JTJ				S	**Sn**	**03 12 19.4**	**+0.3**

PRU 18 03:24:47.8±0.0, 51°.41N×16°.27E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHVC	**Chvalec**	**0.83**	**189**	*e*PG	Pg	03 25 03.3	-0.5
OSTC	**Ostas**	**0.85**	**182**	*e*PG	Pg	03 25 04.1	-0.1
OSTC				*e*SG	Sg	03 25 15.5	+0.3
DPC	**Dobruska-Polom**	**1.06**	**178**	*e*PG	Pg	03 25 06.9	-1.2
DPC				*e*SG	Sg	03 25 21.9	0.0
PVCC	**Panska Ves**	**1.39**	**231**	*e*PG	Pg	03 25 14.2	-0.2
PVCC				*e*SG	Sg	03 25 31.8	-0.7
	comp=Z,3.4nm,0.5s						

NIED ***18*** *03:25:53.3,31°.07N×129°.04E,h16km,MW3.6,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; Mrr=0.63; Mθθ1.22; Mφφ-0.59; Mrθ1.14; Mθφ2.50; Mφr1.03; Fault plane solution: M₀2.95000×10^{14} NP1: φs102.00000°,δ70.00000°,λ9.00000°. NP2:φs9.00000°, δ82.00000°,λ160.00000°.*

JMA 18 03:25:53.3±0.3, 31°.1N±0°.5×12°9E±°, h16km±2km, MV3.7/24, SW OFF KYUSHU, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	**0.84**	**43**	*e*P	Pb	03 26 08.5	-1.1
JSJ				*e*S	Sb	03 26 20.0	-0.7
JKC	**Kuchinoerabu**	**1.17**	**121**	S	Sb	03 26 29.9	-0.1
JSU	**Suzuyama**	**1.29**	**70**	*e*P	Pb	03 26 17.3	+0.1
JSU				*e*S	Sn	03 26 34.0	+0.2
JNN	**Nakanoshima**	**1.42**	**149**	*e*P	Pn	03 26 18.5	0.0
JNN				*e*S	Sn	03 26 36.8	-0.1
JYAK	**Yakushimahirau**	**1.51**	**123**	*e*P	Pn	03 26 19.2	-0.6
JYAK				*e*S	Sn	03 26 39.4	+0.2
JFU	**Fukue jima 2**	**1.60**	**351**	P	Pn	03 26 21.5	+0.5
JTN	**Tanegashima 3**	**1.72**	**103**	*e*P	Pn	03 26 22.8	+0.2
JMTN	**Minamitane**	**1.74**	**112**	*e*P	Pn	03 26 22.9	0.0

TEH ***18*** *03:28:51.6,38°.06N×46°.30E,h13km,ML3.7*
AZER ***18*** *03:28:51.8±0.1,38°.11N×46°.28E,h10km±2km,Error ellipse: s-maj=5.6km s-min=2.1km az=227.0*
NSSP ***18*** *03:29:54.1,38°.12N×46°.30E,h13km,Ms3.6*

ISC 18 03:28:52.0±0.8, 38°.09N±0°.02×46°.30E±0°.02, h12km±5km, n52, σ1°62/90, 2C, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAB1	**Tabriz**	**0.05**	**147**	*e*Pg	**Pg**	**03 28 54.5**	**0.0**
TAB1				*e*Sg	**Sg**	**03 28 56.6**	**+0.3**
ITBZ	**Tabriz**	**0.19**	**320**	*e*Pg	**Pg**	**03 28 55.8**	**-0.4**
ITBZ				*e*Sg	**Sg**	**03 28 59.5**	**+0.3**
IAZR	**Azarshahr**	**0.48**	**212**	*e*		03 29 09.7	
	comp=Z,29μm,0.2s						
IAZR				*e*Pg	**Pg**	**03 29 01.2**	**-0.3**
IAZR				*e*Sg	**Sg**	**03 29 08.5**	**+0.6**
TVRZ	**Varzaqan**	**0.51**	**35**	*e*Sg	**Sb**	**03 29 11.1**	**+0.8**
TVRZ				*e*Pg	**Pb**	**03 29 02.8**	**-0.1**
ISHB	**Shabestar**	**0.57**	**290**	*e*		03 29 12.4	
	comp=Z,74μm,0.3s						
ISHB				*e*Pg	**Pg**	**03 29 02.6**	**-0.5**
IBST	**Bostanabad**	**0.61**	**129**	*e*Pg	**Pg**	**03 29 02.5**	**-1.4**
IHRS	**Heris**	**0.63**	**69**	*e*Sg	**Sb**	**03 29 13.5**	**-0.4**
IHRS				*e*Pg	**Pg**	**03 29 04.0**	**-0.3**
IHRS				*e*		03 29 14.1	
	comp=Z,63μm,0.2s						
IMRD	**Marand**	**0.78**	**323**	*e*Sg	**Sb**	**03 29 17.9**	**-0.3**
IMRD				*e*Pg	**Pb**	**03 29 07.4**	**-0.1**
IMRD				*e*		03 29 21.2	
	comp=Z,59μm,0.2s						
ORD	**Ordubad**	**0.87**	**344**	P	**Pn**	**03 29 09.6**	**-0.6**
	SNR=5.3						
ORD				S	**Sn**	**03 29 22.4**	**-0.3**
IHSH	**Hashtrud**	**1.10**	**135**	*e*Pg	**Pg**	**03 29 11.2**	**-1.9**
IHSH				*e*Sg	**Sg**	**03 29 25.6**	**-1.8**
ISRB	**Sarab**	**1.11**	**103**	*e*Pg	**Pb**	**03 29 12.4**	**-0.9**
ISRB				*e*Sg	**Sg**	**03 29 28.1**	**+0.1**
ISRB				*e*		03 29 31.8	
	comp=Z,21μm,0.2s						
NAX	**Nakhchivan**	**1.25**	**330**	P	**Pg**	**03 29 16.3**	**+0.3**
	SNR=72						
NAX				S	**Sn**	**03 29 33.9**	**+1.7**
MAHB	**Mahabad**	**1.40**	**200**	*e*Pg	**Pn**	**03 29 17.3**	**-0.2**
MAHB				*e*Sg	**Sn**	**03 29 36.4**	**+0.4**
MAHB				*e*		03 29 39.7	
	comp=Z,21μm,0.4s						
SBZ	**Shahbuz**	**1.43**	**336**	P	**Pg**	**03 29 19.5**	**+0.1**
	SNR=7.7						
SBZ				S	**Sg**	**03 29 39.6**	**+1.6**
GRMI	**Germi**	**1.44**	**60**	*e*Pg	**Pn**	**03 29 18.3**	**+0.3**
GRMI				*e*		03 29 40.7	
	comp=Z,99nm,0.2s						
QRD	**Qoradiz**	**1.59**	**30**	P	**Pg**	**03 29 21.9**	**-0.5**
	SNR=12						
QRD				S	**Sg**	**03 29 43.8**	**+0.8**
LRK	**Lerik**	**1.70**	**70**	P	**Pb**	**03 29 23.4**	**+0.2**
	SNR=120						
LRK				S	**Sg**	**03 29 47.0**	**+0.4**
YRD	**Yardimli**	**1.73**	**61**	P	**Pb**	**03 29 23.9**	**0.0**
	SNR=88						
YRD				S	**Sg**	**03 29 47.8**	**+0.1**
MAKU	**Maku**	**1.79**	**316**	*e*Pn	**Pg**	**03 29 24.9**	**-1.3**
BLQ	**Beylaqan**	**1.90**	**31**	P	**Pg**	**03 29 27.2**	**-1.2**
	SNR=19						
BLQ				S	**Sg**	**03 29 53.4**	**+0.2**
HYR	**Heyderabad**	**1.98**	**326**	P	**Pg**	**03 29 28.6**	**-1.4**
	SNR=20						
HYR				S	**Sg**	**03 29 55.2**	**-0.4**
GLBA	**Clilabad**	**2.00**	**54**	P	**Pb**	**03 29 28.8**	**+0.5**
	SNR=11						
GLBA				S	**Sg**	**03 29 57.2**	**+0.9**
ASTR	**Astara**	**2.02**	**76**	P	**Pb**	**03 29 28.9**	**+0.4**
	SNR=28						
ASTR				S	**Sg**	**03 29 57.3**	**+0.5**
LKRN	**Lenkeran, Azer**	**2.05**	**72**	P	**Pb**	**03 29 29.4**	**+0.4**
	SNR=10						
LKRN				S	**Sg**	**03 29 57.4**	**-0.3**
AGDM	**Agdam**	**2.11**	**17**	P	**Pb**	**03 29 30.4**	**+0.2**
	SNR=18						
AGDM				S	**Sg**	**03 29 59.4**	**-0.4**
BRDA	**Brd**	**2.28**	**17**	P	**Pb**	**03 29 32.4**	**-0.6**
	SN

ALIB				S		**Sg**	**03 30 19.3**	**-3.2**
QZX	**Qazax, Azerbai**	**3.05**	**347**	P		**Pb**	**03 29 44.6**	**-1.5**
	SNR=4.7							
QZX				S		**Sb**	**03 30 21.1**	**-2.2**
IML	**Ismayilli**	**3.07**	**28**	P		**Pb**	**03 29 43.2**	**-3.3**
	SNR=3.0							
IML				S		**Sb**	**03 30 22.4**	**-1.6**
GBS	**Qobustan**	**3.19**	**39**	P		**Pb**	**03 29 45.3**	**-3.3**
GBS				S		**Sb**	**03 30 25.4**	**-2.0**
SEKA	**Sheki**	**3.19**	**12**	P		**Pn**	**03 29 44.6**	**+2.6**
	SNR=7.8							
SEKA				S		**Sb**	**03 30 26.9**	**-0.5**
PQL	**Pirkuli**	**3.23**	**33**	P		**Pb**	**03 29 46.0**	**-3.3**
	SNR=14							
PQL				S		**Sb**	**03 30 27.3**	**-1.3**
IDHR	**Dehrash**	**3.38**	**179**	*e*Pn		**Pn**	**03 29 47.2**	**+2.4**
XNQ	**Khinaliq**	**3.39**	**24**	P		**Pn**	**03 29 47.0**	**+2.2**
	SNR=10							
XNQ				S		**Sb**	**03 30 30.8**	**-2.6**
ZKTA	**Zakatala**	**3.55**	**4**	P		**Pn**	**03 29 49.8**	**+2.9**
	SNR=3.2							
ZKTA				S		**Sb**	**03 30 33.2**	**-4.6**
IGZV	**Ghazvin**	**3.56**	**117**	*e*Pn		**Pn**	**03 29 50.2**	**+2.9**
SIZA	**Siyzn**	**3.60**	**33**	P		**Pn**	**03 29 51.2**	**+3.6**
	SNR=5.2							
SIZA				S		**Sn**	**03 30 33.2**	**+3.2**
QUBA	**Quba, Azerbaij**	**3.67**	**27**	P		**Pn**	**03 29 50.3**	**+1.7**
	SNR=5.0							
QSAR	**Qusar**	**3.74**	**23**	P		**Pn**	**03 29 52.4**	**+2.8**
	SNR=3.6							
QSAR				S		**Sb**	**03 30 39.5**	**-3.7**
IBZA	**Bozab**	**3.83**	**160**	*e*Pn		**Pn**	**03 29 52.5**	**+1.6**
QALM	**Alamut, Qazvin**	**3.84**	**114**	*e*Pn		**Pn**	**03 29 53.2**	**+2.0**
IRAZ	**Razeghan**	**3.96**	**131**	*e*Pn		**Pn**	**03 29 54.4**	**+1.7**

NEIC ***18*** *03:42:57.5±1.0, 7.2°S±0.1°×156.2°E±0.1°, h59km±11km, mb4.3/12, Error ellipse: s-maj=20.3km s-min=11.7km az=214.0*
IDC ***18*** *03:42:59.3±6.2, 7.37°S×156.06°E, h55km±65km, mb3.8/4, mbtmp4.2/5, ML4.6/1, MS3.4/5, Error ellipse: s-maj=41.5km s-min=29.6km az=136.0*

ISC 18 03:42:57.4±0.7, 7.3°S±0.1°×156.03°E±0.09, h44km, n35, σ1§56/23, mb4.3/10, MS3.9/3, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res ISC
HNR	**Honiara**	**4.40**	**119**	P			**Pn**	**03 44 01.9**	**+0.2**
	33nm,0.3s,baz=113,slow=14,SNR=1.6								
HNR				S			**Sn**	**03 44 53.6**	**+1.8**
	156nm,0.4s,baz=298,slow=19,SNR=2.0								
	215nm,0.8s								
HNR	**Honiara**	**4.40**	**119**				**Pn**	**03 44 00.1**	**-1.6**
RABL	**Rabaul**	**4.95**	**309**	Pn			**Pn**	**03 44 10.2**	**+0.9**
PMG	**Port Moresby**	**9.02**	**256**	LR			LR	03 48 49.3	
	comp=Z,102nm,18.3s,baz=59,slow=39								
CTA	**Charters Tower**	**15.84**	**216**	LR			LR	03 51 38.7	
	comp=Z,111nm,21.6s,baz=80,slow=33								
EIDS	**Eidsvold**	**18.56**	**194**	P			**P**	**03 47 11.6**	**+0.9**
EIDS				IAmb			IAmb	03 47 12.1	
	comp=Z,17nm,1.4s								
WR0	**Warramunga Arr**	**24.33**	**237**	P			**P**	**03 48 11.5**	**+0.3**
WR0				IAmb			IAmb	03 48 26.2	
	comp=Z,19nm,1.4s								
WB0	**Warramunga Arr**	**24.36**	**237**	P			**P**	**03 48 11.1**	**-0.5**
WB0				IAmb			IAmb	03 48 26.5	
	comp=Z,18nm,1.4s								
WRAB	**Tennant Creek**	**24.48**	**237**	P			**P**	**03 48 12.8**	**+0.1**
WRAB				IAmb			IAmb	03 48 14.9	
	comp=Z,7.8nm,0.8s								
WRA	**Warramunga Arr**	**24.49**	**237**	P			**P**	**03 48 13.2**	**+0.4**
	comp=Z,6.2nm,0.8s,baz=63,slow=9.8,SNR=31								
WRA				pP			**pP**	**03 48 25.4**	**+1.3**
	comp=Z,3.9nm,0.8s,baz=62,slow=9.5,SNR=6.8								
WRA				PcP			**PcP**	**03 51 50.7**	**0.0**
	comp=Z,0.2nm,0.6s,baz=66,slow=2.5,SNR=1.6								
	comp=Z,6.2nm,0.8s								
WRA	**Warramunga Arr**	**24.49**	**237**	IAmb			IAmb	03 48 14.7	
	comp=Z,0.3nm,1.1s								
MTN	**Manton Dam**	**25.11**	**255**	P			**P**	**03 48 18.1**	**-0.3**
H11S3	**WAKE ISLAND Hy**	**27.73**	**22**	T			T	04 17 03.2	
	baz=202,slow=75,SNR=140								
H11S2	**WAKE ISLAND Hy**	**27.73**	**22**	T			T	04 17 03.4	
	baz=202,slow=75,SNR=151								
H11S1	**WAKE ISLAND Hy**	**27.74**	**22**	T			T	04 17 04.4	
	baz=202,slow=75,SNR=155								
STKA	**Stephens Creek**	**27.89**	**207**	P			**P**	**03 48 44.5**	**+1.2**
	comp=Z,1.1nm,0.5s,baz=44,slow=14,SNR=3.8								
	comp=Z,1.1nm,0.5s								
STKA	**Stephens Creek**	**27.89**	**207**	P			**P**	**03 48 43.8**	**+0.5**
H11N1	**WAKE ISLAND Hy**	**28.92**	**22**	T			T	04 18 39.1	
	baz=202,slow=76,SNR=28								
H11N3	**WAKE ISLAND Hy**	**28.93**	**22**	T			T	04 18 42.8	
	baz=202,slow=76,SNR=52								
H11N2	**WAKE ISLAND Hy**	**28.93**	**22**	T			T	04 18 40.8	
	baz=202,slow=76,SNR=24								
FORT	**Forrest**	**35.07**	**225**	P			**P**	**03 49 44.6**	**-1.8**
PETK	**Petropavlovsk-**	**60.22**	**1**	LR			LR	04 19 24.2	
	comp=Z,22nm,19.1s,baz=114,slow=36								
SONM	**Songino Array**	**70.17**	**327**	P			**P**	**03 54 08.1**	**+2.4**
	comp=Z,0.4nm,0.4s,baz=134,slow=6.2,SNR=2.3								
	comp=Z,0.4nm,0.4s								
QSPA	**South Pole Qui**	**82.65**	**180**	P			**P**	**03 55 14.8**	**-1.3**
MK31	**Makanchi Array**	**84.33**	**318**	P			**P**	**03 55 23.1**	**-1.8**
MK31				IAmb			IAmb	03 55 39.7	
	comp=Z,1.6nm,0.8s								
MKAR	**Makanchi Array**	**84.33**	**318**	P			**P**	**03 55 24.7**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=102,slow=6.4,SNR=8.9								
MKAR				pP			**pP**	**03 55 38.9**	**+1.1**
	comp=Z,2.1nm,0.6s,baz=102,slow=6.5,SNR=14								
	comp=Z,0.8nm,0.5s								
ZAA0	**Zalesovo Array**	**85.03**	**326**	P			**P**	**03 55 25.7**	**-2.5**
ZAA0				IAmb			IAmb	03 55 41.8	
	comp=Z,1.7nm,0.6s								
ZALV	**Zalesovo Beam**	**85.03**	**326**	pP			pP	03 55 41.4	+0.3
	comp=Z,1.2nm,0.4s,baz=116,slow=5.5,SNR=3.7								
ZALV	**Zalesovo Beam**	**85.03**	**326**	P			**P**	**03 55 25.0**	**-3.2**
BRVK	**Borovoye**	**93.25**	**323**	P			**P**	**03 56 05.0**	**-2.3**
NEW	**Newport**	**93.31**	**42**	LR			LR	04 37 06.5	
	comp=Z,36nm,18.2s,baz=262,slow=35								
PDAR	**Pinedale Array**	**98.15**	**48**	LR			LR	04 37 19.5	
	comp=Z,37nm,18.9s,baz=266,slow=33								
H03N3	**Juan Fernandez**	**114.00**	**131**	T			T	06 05 16.6	
	baz=239,slow=72,SNR=12								
H03N2	**Juan Fernandez**	**114.00**	**131**	T			T	06 05 15.2	
	baz=239,slow=72,SNR=9.0								
H03N1	**Juan Fernandez**	**114.01**	**131**	T			T	06 05 15.7	
	baz=239,slow=72,SNR=15								

KRSC 18 03:51:40.0±2.1, 50.04N×157.61E, h40km±35km, ML3.9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res ISC
SKR	**Severo-Kuril's**	**1.15**	**305**	*e*P			Pn	03 51 59.8	+0.2
SKR				*e*S			Sn	03 52 12.6	-1.6
PAU	**Pauzhetka**	**1.52**	**341**	*e*P			Pn	03 52 06.7	+2.0
PAU				*e*S			Sn	03 52 24.2	+1.0
KDTR	**Khodutka, Kamc**	**1.80**	**9**	*e*P			Pn	03 52 10.9	+2.4
KDTR				*e*S			Sn	03 52 32.0	+1.9
ASAK	**Asacha**	**2.36**	**4**	*e*P			Pn	03 52 19.1	+2.9
ASAK				*e*S			Sn	03 52 46.7	+2.7
RUS	**Russkaya**	**2.47**	**13**	*e*P			Pn	03 52 20.3	+2.7
RUS				*e*S			Sn	03 52 48.7	+2.2
MTVR	**Mutnovka**	**2.48**	**8**	*e*P			Pn	03 52 20.9	+3.0
MTVR				*e*S			Sn	03 52 50.2	+3.2
GRL	**Gorelyy**	**2.54**	**6**	*e*P			Pn	03 52 22.0	+3.3
GRL				*e*S			Sn	03 52 51.3	+2.9
KRMR	**Karymshinskiy**	**2.82**	**6**	*e*P			Pn	03 52 26.1	+3.6
KRMR				S			Sn	03 53 00.3	+5.2
APC	**Apacha**	**2.91**	**355**	*e*P			Pn	03 52 26.8	+3.1
PET	**Petropavlovsk**	**3.06**	**12**	*e*S			Sn	03 53 04.8	+3.6
DALK	**Dalny**	**3.08**	**13**	*e*P			Pn	03 52 30.0	+3.9
DALK				S			Sn	03 53 04.7	+3.0
UGLR	**Uglovaya**	**3.27**	**13**	P			Pn	03 52 33.1	+4.4
AVH	**Avacha**	**3.31**	**12**	*e*P			Pn	03 52 34.3	+5.0
SMAR	**Somma**	**3.32**	**12**	*e*P			Pn	03 52 33.7	+4.2
KOK	**Koryaka**	**3.32**	**11**	*e*P			Pn	03 52 34.3	+4.8
SDLR	**Sedlovina**	**3.34**	**13**	P			Pn	03 52 33.0	+3.2
KRER	**Koryakskii**	**3.35**	**12**	*e*P			Pn	03 52 34.5	+4.5
KRER				*e*S			Sn	03 53 14.9	+6.3
KRX	**Arik**	**3.39**	**11**	*e*P			Pn	03 52 35.5	+5.0
KRX				*e*S			Sn	03 53 16.1	+6.6
SPN	**Mys Shipunski**	**3.42**	**25**	P			Pn	03 52 35.5	+4.8
GNL	**Ganaly**	**3.67**	**3**	P			Pn	03 52 38.3	+4.0
MKZ	**Mys Kozlova**	**5.18**	**28**	P			Pn	03 52 57.8	+2.9
KBTR	**Krutoberegovo**	**6.93**	**25**	P			Pn	03 53 22.4	+3.5

MAN 18 03:51:56.2, 18.31N×121.84E, h32km, mb4.1, ML2.9, MS2.5, 3D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res ISC
SGCP	**Gonzaga**	**0.21**	**109**	⇓*e*P			Pn	03 52 04.2	+1.2
SGCP				*e*S				03 52 09.7	
PALP	**Palanan**	**1.36**	**156**	⇓*e*P			Pn	03 52 19.3	+0.3
PALP				*e*S				03 52 37.2	
SMPP	**San Manuel, Pa**	**2.42**	**207**	⇓*e*P			Pn	03 52 34.0	+0.6
SMPP				*e*S				03 53 02.3	

IDC 18 04:00:11.7±5.2, 22.47N×96.04E, h24km±37km, mb3.6/3, mbtmp3.7/4, ML4.1/1, MS2.7/2, Error ellipse: s-maj=43.7km s-min=22.1km az=67.0, Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res ISC
CMAR	**Chiang Mai Arr**	**4.83**	**145**	Pn			Pn	04 01 23.1	+0.2
	2.0nm,0.3s,baz=320,slow=14,SNR=9.9								
CMAR				Pg			Pb	04 01 40.3	+4.7
	12nm,0.3s,baz=322,slow=19,SNR=5.3								
CMAR				Lg			Lg	04 02 44.4	
	8.6nm,0.3s,baz=314,slow=30,SNR=8.3								
CMAR				LR			LR	04 02 55.0	
	comp=Z,28nm,21.2s,baz=285,slow=34								
	3.4nm,0.3s								
SONM	**Songino Array**	**26.64**	**16**	P			P	04 05 48.8	+0.4
	0.5nm,0.5s,baz=206,slow=9.6,SNR=3.7								
	0.5nm,0.5s								
MKAR	**Makanchi Array**	**26.70**	**339**	P			P	04 05 48.5	-0.3
	1.3nm,0.6s,baz=145,slow=13,SNR=14								
	1.3nm,0.6s								
KBZ	**Khabaz**	**48.40**	**309**	LR			LR	04 31 55.8	
	comp=Z,31nm,21.6s,baz=224,slow=39								
WRA	**Warramunga Arr**	**56.35**	**136**	P			P	04 09 50.9	-0.2
	0.6nm,0.7s,baz=321,slow=7.4,SNR=8.0								
	0.6nm,0.7s								

IDC ***18*** *04:18:10.9±3.2, 7.57N×76.11W, h0km, mb3.6/2, mbtmp3.6/3, ML2.2/1, Error ellipse: s-maj=141.4km s-min=24.1km az=50.0*
RSNC ***18*** *04:18:11.0±0.9, 2.04N×75.88W, h2km±3km, ML3.5, Mw3.6*

ISC 18 04:18:10.6±1.2, 2.04N±0.02×75.88W±0.02, h0km±10km, n46, σ1§10/65, 4C-7D, Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res ISC
GARC	**Garzon, Huila**	**0.42**	**69**	⇑*i*P			**Pg**	**04 18 19.0**	**+0.4**
GARC				*e*S			**Sg**	**04 18 25.4**	**+1.4**
FLOC	**Florencia**	**0.51**	**153**	⇓*i*P			**Pg**	**04 18 20.6**	**+0.4**
FLOC				⇓*e*P			**Pg**	**04 18 20.6**	**+0.4**
FLOC				*e*S			**Sg**	**04 18 28.2**	**+1.4**
FLOC				*i*				04 18 29.1	
	comp=Z,9μm,0.3s								
PCON	**Cinco Dias**	**0.59**	**300**	⇓*i*P			**Pg**	**04 18 22.4**	**+0.5**
PCON				*e*S			**Sg**	**04 18 31.2**	**+1.6**
PCON				*i*				04 18 32.2	
	comp=Z,4μm,0.2s								
SOTA	**Rioblanco**	**0.73**	**278**	⇓*i*P			**Pg**	**04 18 24.9**	**+0.3**
SOTA				*e*S			**Sg**	**04 18 34.8**	**+0.7**
SOTA				*i*				04 18 36.1	
	comp=Z,3μm,0.2s								
BETC	**Betania**	**0.78**	**34**	⇑*i*P			**Pg**	**04 18 25.7**	**+0.1**
BETC				*e*S			**Sb**	**04 18 37.5**	**-0.8**
BETC				*i*				04 18 40.5	
	comp=Z,1μm,0.1s								
MARP	**Paez Belalcaza**	**0.81**	**355**	⇑*i*P			**Pg**	**04 18 25.1**	**-0.9**
MARP				*e*S			**Sg**	**04 18 36.0**	**-0.5**
MARP				*i*				04 18 36.5	
	comp=Z,5μm,0.3s								
POPC	**Popayan, Colom**	**0.94**	**302**	⇓*i*P			**Pg**	**04 18 28.0**	**-0.6**
POPC				*e*S			**Sg**	**04 18 41.0**	**+0.3**
POPC				*i*				04 18 41.6	
	comp=Z,814nm,0.2s								
CRUC	**La Cruz**	**1.16**	**247**	⇓*i*P			**Pg**	**04 18 32.1**	**-0.8**
BBAC	**Balboa, Cauca**	**1.36**	**269**	⇓*e*P			**Pg**	**04 18 35.4**	**-1.3**
BBAC				*e*S			**Sg**	**04 18 54.0**	**-0.5**
BBAC				*i*				04 18 57.0	
	comp=Z,846nm,0.3s								
RAC02	**Cali,SGC**	**1.48**	**334**	*e*S			**Sg**	**04 18 58.2**	**+0.1**
CPAS2	**Pasto**	**1.59**	**239**	*e*P			**Pn**	**04 18 39.6**	**-0.6**
CPAS2	**Pasto**	**1.59**	**239**	*e*S			**Sn**	**04 19 01.3**	**-0.3**
CPAS1	**Pasto**	**1.67**	**240**	*e*P			**Pn**	**04 18 41.0**	**-0.4**
CPAS1	**Pasto**	**1.67**	**240**	*e*S			**Sn**	**04 19 03.6**	**-0.1**
CCUFI	**Cufio, Nario**	**1.67**	**241**	*e*P			**Pn**	**04 18 41.2**	**-0.3**
CCUFI				*e*S			**Sn**	**04 19 03.5**	**-0.3**
GCUF	**Volcan Galeras**	**1.67**	**241**	⇑*i*P			**Pn**	**04 18 41.0**	**-0.5**
GCUF				*e*S			**Sn**	**04 19 03.8**	**0.0**
GCUF				*i*				04 19 07.0	
	comp=Z,642nm,0.3s								
PRAC	**Prado**	**1.94**	**31**	*e*P			**Pn**	**04 18 42.5**	**-2.4**
PRAC				*e*S			**Sn**	**04 19 10.8**	**+0.8**
PRAC				*i*				04 19 14.1	
	comp=Z,407nm,0.2s								
ORTC	**Ortega, Tolima**	**1.97**	**19**	*e*P			**Pn**	**04 18 43.0**	**-2.2**
ORTC				*e*S			**Sn**	**04 19 11.4**	**+0.7**
ORTC				*i*				04 19 13.4	
	comp=Z,1μm,0.5s								
YOTC	**Yotoco, Valle**	**1.99**	**347**	*e*P			**Pn**	**04 18 44.2**	**-1.4**
YOTC				*e*S			**Sn**	**04 19 10.8**	**-0.5**
YOTC				*i*				04 19 14.2	
	comp=Z,220nm,0.3s								
MACC	**Macarena, Meta**	**2.04**	**87**	*e*P			**Pn**	**04 18 44.8**	**-1.3**
MACC				*e*S			**Sn**	**04 19 11.1**	**-1.2**
PTLC	**Puerto Leguiza**	**2.15**	**150**	*e*P			**Pb**	**04 18 50.1**	**-0.2**
PTLC				*e*S			**Sg**	**04 19 19.9**	**+0.3**
CMBC	**Cumbal**	**2.23**	**241**	*e*P			**Pb**	**04 18 51.4**	**-0.6**
TULM	**Tulcn-Chalpat**	**2.31**	**235**	*e*P			**Pb**	**04 18 52.8**	**-0.6**
TULM				*e*S			**Sb**	**04 19 23.4**	**+0.7**
TULM				*i*				04 19 26.0	
	comp=Z,188nm,0.4s								
MALC	**Bahia Malaga**	**2.44**	**324**	*e*P			**Pn**	**04 18 52.5**	**+0.8**
MALC				*i*				04 19 37.7	
	comp=Z,85nm,0.6s								
ANIL	**Santa Ana**	**2.49**	**11**	*e*P			**Pn**	**04 18 49.2**	**-3.4**
ANIL				*e*S			**Sb**	**04 19 26.2**	**-1.4**
ANIL				*i*				04 19 32.3	
	comp=Z,895nm,0.4s								
PLMC	**San Jos del P**	**2.88**	**352**	*e*P			**Pn**	**04 18 57.4**	**-0.4**
PLMC				*e*S			**Sn**	**04 19 35.0**	**+1.8**
PLMC				*i*				04 19 55.1	
	comp=Z,71nm,0.5s								
CUSE	**Cuicocha Este**	**3.05**	**236**	*e*P			**Pn**	**04 19 01.9**	**+1.5**
CUSE				*i*				04 19 50.0	
	comp=Z,116nm,0.3s								
OTAV	**Otavalo**	**3.13**	**235**	*e*P			**Pb**	**04 19 07.2**	**-0.2**
ROSC	**El Rosal**	**3.19**	**29**	Pn			**Pn**	**04 19 02.1**	**-0.3**
	comp=Z,5.1nm,0.3s,baz=330,slow=19,SNR=6.4								
ROSC				Pg			**Pb**	**04 19 09.7**	**+1.2**
	comp=Z,27nm,0.3s,baz=174,slow=8.6,SNR=25								
ROSC				Lg			Lg	04 19 52.5	
	comp=Z,34nm,0.3s,baz=71,slow=22,SNR=6.5								
	comp=Z,13nm,0.4s								
GUY2C	**Guyana, Caldas**	**3.21**	**9**	*e*P			**Pn**	**04 19 02.2**	**-0.5**
GUY2C				*e*S			**Sb**	**04 19 49.5**	**+0.9**
GUY2C				*i*				04 19 53.5	
	comp=Z,52nm,0.5s								
GUVC	**San Jose del G**	**3.29**	**81**	*e*S			**Sb**	**04 19 48.4**	**-2.1**
CHIC	**Chingaza**	**3.35**	**40**	*e*P			**Pn**	**04 19 04.3**	**-0.3**
CHIC				*i*				04 20 07.7	
	comp=Z,54nm,0.4s								
NORC	**Norcasia**	**3.65**	**16**	*e*P			**Pn**	**04 19 08.0**	**-0.3**
NORC				*i*				04 20 07.6	
	comp=Z,44nm,0.5s								
CBOC	**Ciudad Bolivar**	**3.81**	**358**	*e*P			**Pn**	**04 19 10.1**	**-0.5**
CBOC				*e*S			**Sn**	**04 19 58.2**	**+1.9**
SPBC	**San Pablo de B**	**4.02**	**27**	*e*P			**Pn**	**04 19 12.2**	**-1.3**
SPBC				*i*				04 20 26.0	
	comp=Z,48nm,0.4s								
HELC	**Santa Helena**	**4.14**	**5**	*e*P			**Pn**	**04 19 16.6**	**+1.1**
PTGC	**Puerto Gaitan,**	**4.32**	**60**	*i*				04 20 41.7	
	comp=Z,156nm,0.3s								
PTBC	**PUERTO BERRIO,**	**4.70**	**18**	*e*P			**Pn**	**04 19 22.1**	**-0.7**
PTBC				*i*				04 20 40.5	
	comp=Z,21nm,0.3s								
RUSC	**La Rusia**	**4.74**	**36**	*e*P			**Pn**	**04 19 22.5**	**-1.3**
RUSC				*i*				04 20 51.0	
	comp=Z,25nm,0.6s								
ZARC	**Zaragoza, Cauc**	**5.52**	**11**	*e*P			**Pn**	**04 19 33.1**	**-0.9**
ZARC				*i*				04 21 04.8	
	comp=Z,18nm,0.8s								
TAMC	**Tame, Arauca**	**5.98**	**43**	*e*P			**Pn**	**04 19 39.5**	**-1.0**
TAMC				*i*				04 21 46.6	
	comp=Z,25nm,0.5s								
PAMC	**Pamplona, Colo**	**6.15**	**31**	*e*P			**Pn**	**04 19 42.4**	**-0.7**
OCAC	**Ocana**	**6.67**	**22**	*e*P			**Pn**	**04 19 50.6**	**+0.6**
LPAZ	**La Paz**	**19.75**	**157**	P			Pn	04 23 38.2	+54
	comp=Z,0.4nm,0.5s,baz=315,slow=11,SNR=1.7								
	comp=Z,0.4nm,0.5s								
CPUP	**Villa Florida**	**33.42**	**149**	P			P	04 25 35.0	+44
	comp=Z,1.4nm,0.9s,baz=346,slow=8.3,SNR=1.8								
	comp=Z,1.4nm,0.9s								
WRA	**Warramunga Arr**	**145.52**	**237**	PKPbc			**PKiKP**	**04 37 57.3**	**+1.5**
	comp=Z,0.4nm,0.9s,baz=101,slow=3.7,SNR=2.5								

IDC ***18*** *04:35:04.0±0.7, 1.66N×126.23E, h0km, mb4.3/9, mbtmp4.3/9, MS3.0/5, Error ellipse: s-maj=53.5km s-min=18.8km az=74.0*
DJA ***18*** *04:35:10.7±0.3, 2.3°N±3°×12.6E±°, h10km, M4.5/13, mb4.7/7, mB5.1/4, MLv4.4/13, Mw(mB)4.4/4*
NEIC ***18*** *04:35:12.1±2.2, 1.69N±0.10×126.50E±0.08, h57km±10km, mb4.5/16, Error ellipse: s-maj=15.7km s-min=9.8km az=212.0*

ISC 18 04:35:11.0±0.5, 1.64N±0.06×126.51E±0.08, h47km, n65, σ1§58/63, mb4.5/22, MS3.0/4, 1C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res ISC
TNTI	**Ternate**	**1.22**	**135**				**Pn**	**04 35 34.1**	**+2.5**
TNTI	**Ternate**	**1.22**	**135**	P			**Pn**	**04 35 34.3**	**+2.7**
SGSI	**Sangihe**	**2.25**	**334**	P			**Pn**	**04 35 46.0**	**+0.2**
LBMI	**Labuha**	**2.47**	**156**	P			**Pn**	**04 35 51.8**	**+3.0**
KMSI	**Cibinong**	**2.74**	**247**	P			**Pn**	**04 35 53.0**	**+0.6**
SANI	**Sanana**	**3.70**	**188**	P			**Pn**	**04 36 06.0**	**+0.3**
LUWI	**Luwuk**	**4.59**	**235**				**Pn**	**04 36 19.2**	**+1.4**
LUWI	**Luwuk**	**4.59**	**235**	P			**Pn**	**04 36 20.5**	**+2.7**
MRSI	**Marisa**	**4.71**	**256**	P			**Pn**	**04 36 20.4**	**+0.9**
SWI	**Sorong**	**5.37**	**118**	P			Pn	04 36 35.5	+7.0
	1μm33nm,0.4s								
APSI	**Ampana**	**5.48**	**242**	P			**Pn**	**04 36 31.3**	**+1.2**
	0.6nm2μm125nm,1.0s								
KCP	**Kidapawan**	**5.52**	**345**	⇑*e*P			Pn	04 36 35.1	+4.5
KCP				*i* S			**Sn**	**04 37 36.6**	**+3.8**
TOLI2	**Tolitoli**	**5.75**	**265**	Pn			**Pn**	**04 36 32.2**	**-1.6**
MPSI	**Mapaga**	**6.73**	**259**	P			**Pn**	**04 36 49.3**	**+2.0**
	0.1nm27nm,0.7s								
TTSI	**Tana Toraja**	**8.15**	**235**	P			**Pn**	**04 37 09.5**	**+2.8**
	33nm,1.1s								
MYLDM	**Lahad Datu**	**8.73**	**294**	Pn			**Pn**	**04 37 15.8**	**+1.1**
SPSI	**Sidrap Palu**	**8.74**	**230**	P			**Pn**	**04 37 16.8**	**+2.0**
	23nm,0.8s								
KAPI	**Kappang**	**9.45**	**226**	LR			LR	04 41 44.6	
	comp=Z,64nm,18.1s,baz=86,slow=43								
BSSI	**Bau Bau, Buton**	**9.79**	**218**	P			**Pn**	**04 37 32.0**	**+2.8**
KKM	**Kota Kinabalu**	**11.16**	**293**	Pn			**Pn**	**04 37 49.0**	**+0.9**
SBUM	**Sibu**	**14.30**	**273**	Pn			**Pn**	**04 38 31.2**	**+0.4**
KNRA	**Kununurra**	**17.35**	**173**	Pn			**Pn**	**04 39 09.0**	**-0.8**
KNRA				IAmb			IAmb	04 39 23.3	
	comp=Z,19nm,0.7s								
DLV	**T Lat**	**20.59**	**301**	P			**P**	**04 39 47.5**	**+1.1**
DLV				IAmb			IAmb	04 39 49.6	
	comp=Z,10nm,0.4s								
TWG	**Pinlang**	**21.70**	**346**	P			**P**	**04 39 54.5**	**-3.6**
WB0	**Warramunga Arr**	**22.64**	**160**	P			**P**	**04 40 07.5**	**-0.7**
SSLB	**Suanglung**	**22.66**	**347**	P			**P**	**04 40 07.4**	**-1.0**
SSLB				IAmb			IAmb	04 40 09.8	
	comp=Z,9.2nm,0.6s								
WRAB	**Tennant Creek**	**22.78**	**161**

KURK	Kurchatov	63.38	328	P	P	04 45 34.1	-1.4
SEY	Seymchan	64.11	13	LR	LR	05 15 32.2	
	comp=Z,23nm,19.9s,baz=216,slow=38						
NRIK	Noril'sk	72.39	346	P	P	04 46 31.8	0.0
	comp=Z,5.3nm,0.6s,baz=128,slow=6.7,SNR=7.7						
	comp=Z,5.3nm,0.6s						
NRIK	Noril'sk	72.39	346	P	P	04 46 31.8	0.0
ABKAR	Akbulak array	73.62	321	P	P	04 46 37.5	-1.9
RAYN	Ar Rayn	81.10	293	P	P	04 47 21.4	-0.5
VNDA	Vanda	81.40	173	P	P	04 47 22.6	+0.2
	comp=Z,1.6nm,0.6s,baz=321,slow=6.7,SNR=12						
	comp=Z,1.6nm,0.6s						
ILAR	Eielson Array	87.07	25	P	P	04 47 50.1	-1.3
	comp=Z,0.3nm,0.5s,baz=274,slow=6.3,SNR=6.9						
	comp=Z,0.3nm,0.5s						
ARCES	ARCESS Array B	92.32	340	P	P	04 48 14.3	-1.6
	comp=Z,2.4nm,0.9s,baz=64,slow=2.8,SNR=4.7						
	comp=Z,2.4nm,0.9s						
TXAR	Lajitas Array	123.03	53	PKP	PKiKP	04 54 03.9	+0.6
	comp=Z,0.2nm,0.7s,baz=240,slow=1.8,SNR=2.7						
TORD	Torodi Ar. Bea	123.33	287	PKP	PKPdf	04 54 03.0	-0.8
	comp=Z,0.6nm,0.7s,baz=83,slow=2.1,SNR=4.8						
PLCA	Paso Flores	138.13	160	PKP	PKiKP	04 54 32.4	-1.0
	comp=Z,1.0nm,0.9s,baz=240,slow=6.1,SNR=4.2						

*DNK **18** 04:45:30.5±1.7, 70.90N×5.35W, h36km±241km, ML1.2*
*BER **18** 04:45:33.3±0.4, 70.97N×6.93W, h0km±279km, ML2.7, Confirmed Earthquake*

ISC 18 04:45:34.3±3.8, 71.2N±0.1×7.2W±0.3, h10km, n7, σ0s85/11, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNE	**Jan Mayen East**	**0.42**	**237**	*i* P	**Pb**	**04 45 43.1**	**-0.7**
JNE				*e*S	**Sb**	**04 45 50.4**	**+0.3**
JNE				IAML		04 45 53.2	
	comp=Z,543nm,0.3s						
JNW	**Jan Mayen West**	**0.43**	**245**	*i* P	**Pb**	**04 45 43.7**	**-0.4**
JNW				*e*S	**Sb**	**04 45 51.4**	**+0.8**
JNW				IAML		04 45 51.6	
	comp=Z,1μm,0.2s						
JMIC	**Jan Mayen**	**0.48**	**241**	*i* P	**Pg**	**04 45 43.9**	**+0.3**
JMIC				*e*S	**Sb**	**04 45 51.9**	**+0.1**
JMIC				IAML		04 45 52.1	
	comp=Z,228nm,0.3s						
JMI	**Jan Mayen**	**0.57**	**240**	*i* P	**Pb**	**04 45 45.4**	**-1.0**
JMI				*e*S	**Sb**	**04 45 54.4**	**-0.2**
JMI				IAML		04 45 57.8	
	comp=Z,198nm,0.3s						
DBG	**Daneborg**	**4.95**	**315**	*e*P	**Pn**	**04 46 49.5**	**+1.0**
DAG	**Danmarks Havn**	**6.40**	**336**	*i* P	**Pn**	**04 47 09.2**	**+0.8**
DAG				*e*S	**Sn**	**04 48 20.0**	**-1.3**
DAG				IAML		04 48 22.3	
	comp=Z,0.7nm,0.5s						
KBS	**Kingsbay**	**9.11**	**24**	*e*P	Pn	04 47 36.6	-8.9

*TAP **18** 04:45:44.9, 24.57N×121.88E, h10km, ML3.2, C*
*JMA **18** 04:45:45.2±0.1, 24.5N±0.2×121.9E±0.4, h27km, MV2.7/11, TAIWAN REGION*

ISC 18 04:45:43.9±0.9, 24.55N±0.02×121.98E±0.02, h8km±7km, n85, σ0s73/139, 8C-4D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWC	**Suao**	**0.13**	**295**	⇑*i* P	**Pg**	**04 45 47.0**	**+0.2**
	baz=334						
TWC				*i* S	**Sg**	**04 45 48.1**	**-0.7**
	baz=334						
EWUT	**Wuta**	**0.21**	**239**	P	**Pg**	**04 45 48.8**	**+0.5**
	baz=207						
EWUT				S	**Sg**	**04 45 51.3**	**+0.1**
	baz=207						
ENA	**Nanau**	**0.25**	**240**	⇓*i* P	**Pg**	**04 45 49.3**	**+0.3**
	baz=211						
ENA				S	**Sg**	**04 45 52.1**	**-0.2**
	baz=211						
NDS	**Dongshan**	**0.25**	**288**	⇑P	**Pg**	**04 45 49.0**	**0.0**
	baz=286						
NDS				S	**Sg**	**04 45 51.6**	**-0.8**
	baz=286						
EGS		**0.29**	**352**	*e*P	**Pb**	**04 45 50.9**	**-0.6**
EGS				S	**Sg**	**04 45 54.9**	**+1.2**
	baz=18						
ILA	**Ilan**	**0.30**	**315**	⇑*i* P	**Pg**	**04 45 50.4**	**+0.5**
	baz=326						
ILA				S	**Sg**	**04 45 53.5**	**-0.4**
	baz=326						
EHP	**Heping Village**	**0.33**	**222**	P	**Pg**	**04 45 51.2**	**+0.8**
	baz=203						
EHP				S	**Sg**	**04 45 55.0**	**+0.3**
	baz=203						
NTC	**Toucheng**	**0.33**	**336**	P	**Pg**	**04 45 51.1**	**+0.6**
	baz=352						
NTC				*e*S	**Sg**	**04 45 55.2**	**+0.3**
	baz=352						
TWE	**Neicheng**	**0.33**	**300**	⇑*i* P	**Pg**	**04 45 50.4**	**-0.1**
	baz=310						
TWE				S	**Sg**	**04 45 53.8**	**-1.1**
	baz=310						
FUSB	**Fushanzhiwuyua**	**0.41**	**300**	⇑*i* P	**Pg**	**04 45 52.1**	**+0.1**
	baz=306						
FUSB				S	**Sg**	**04 45 56.3**	**-1.1**
	baz=306						
LATG	**Datong**	**0.41**	**268**	P	**Pg**	**04 45 51.9**	**-0.2**
	baz=263						
LATG				S	**Sg**	**04 45 56.3**	**-1.2**
	baz=263						
TIPB	**Shuangxi**	**0.44**	**341**	P	**Pb**	**04 45 53.6**	**-0.4**
	baz=354						
TIPB				S	**Sg**	**04 45 58.3**	**0.0**
	baz=354						
TWB1	**Santiao Chiao**	**0.45**	**1**	*e*P	**Pb**	**04 45 54.0**	**-0.2**
	baz=15						
TWB1				*e*S	**Sg**	**04 45 58.9**	**+0.2**
	baz=15						
NWLT	**Wulai**	**0.49**	**297**	*i* P	**Pg**	**04 45 53.4**	**-0.1**
	baz=301						
NWLT				S	**Sg**	**04 45 59.2**	**-0.6**
	baz=301						
ETL	**Fush Village**	**0.51**	**220**	P	**Pg**	**04 45 54.4**	**+0.5**
	baz=207						
ETL				S	**Sg**	**04 46 01.1**	**+0.6**
	baz=207						
NACB	**Ninganchiao**	**0.52**	**223**	⇓*i* P	**Pg**	**04 45 54.2**	**+0.3**
	baz=199						
NACB				S	**Sg**	**04 46 00.5**	**-0.2**
	baz=199						
NWF	**Wu-fen Shan**	**0.55**	**341**	P	**Pb**	**04 45 55.4**	**-0.4**
	baz=343						
NWF				S	**Sg**	**04 46 01.7**	**0.0**
	baz=343						
SXI1	**Grass Mountain**	**0.55**	**350**	P	**Pb**	**04 45 55.8**	**-0.1**
	baz=7.0						
SXI1				S	**Sg**	**04 46 02.5**	**+0.7**
	baz=7.0						
WFSB	**Wu-fen Shan**	**0.55**	**341**	*e*P	**Pb**	**04 45 55.7**	**-0.1**
	baz=343						
WFSB				S	**Sg**	**04 46 01.8**	**+0.1**
	baz=343						
TWA	**Mucha**	**0.56**	**320**	P	**Pg**	**04 45 55.0**	**+0.3**
	baz=328						
TWA				S	**Sg**	**04 46 02.7**	**+0.6**
	baz=328						
NNSH	**Datong**	**0.56**	**257**	P	**Pg**	**04 45 54.5**	**-0.3**
	baz=243						
NNSH				S	**Sg**	**04 46 00.3**	**-1.8**
	baz=243						
NNSB	**Datong**	**0.56**	**257**	⇓*i* P	**Pg**	**04 45 54.5**	**-0.3**
	baz=251						
NNSB				S	**Sg**	**04 46 00.6**	**-1.5**
	baz=251						
YHNB	**Yeheng**	**0.56**	**282**	⇑*i* P	**Pg**	**04 45 54.8**	**-0.1**
	baz=289						
YHNB				S	**Sg**	**04 46 01.1**	**-1.1**
	baz=289						
NNS	**Nan Shan**	**0.56**	**259**	P	**Pg**	**04 45 54.4**	**-0.5**
	baz=253						
NNS				*i* S	**Sg**	**04 46 00.9**	**-1.4**
	baz=253						
ETLH	**Xiulin Townshi**	**0.57**	**233**	P	**Pg**	**04 45 55.0**	**0.0**
	baz=222						
ETLH				S	**Sg**	**04 46 01.4**	**-1.1**
	baz=222						
NSK	**Sanguang**	**0.58**	**282**	⇑*i* P	**Pg**	**04 45 54.9**	**-0.2**
	baz=289						
NSK				S	**Sg**	**04 46 01.4**	**-1.3**
	baz=289						
NHDH	**Xindian Distri**	**0.58**	**315**	*e*P	**Pg**	**04 45 55.5**	**+0.3**
	baz=321						
NHDH				*e*S	**Sg**	**04 46 02.1**	**-0.6**
	baz=321						
TWD	**Chiawan**	**0.59**	**217**	⇓*i* P	**Pg**	**04 45 55.8**	**+0.5**
	baz=204						
TWD				S	**Sg**	**04 46 03.0**	**0.0**
	baz=204						
TATO	**Taipei**	**0.61**	**313**	*e*P	**Pg**	**04 45 55.9**	**+0.1**
	baz=312						
HWA	**Hwalien**	**0.67**	**211**	*e*P	**Pg**	**04 45 57.1**	**+0.2**
	baz=201						
YM01	**YM01**	**0.70**	**328**	P	**Pb**	**04 45 58.3**	**-0.1**
	baz=335						
YM01				*e*S	**Sg**	**04 46 06.2**	**-0.4**
	baz=335						
ETM	**Tongmen**	**0.73**	**217**	*e*P	**Pg**	**04 45 58.3**	**+0.2**
	baz=205						
FUSS	**Fushou**	**0.74**	**246**	P	**Pg**	**04 45 57.8**	**-0.3**
	baz=239						
FUSS				*e*S	**Sg**	**04 46 07.0**	**-0.8**
	baz=239						
TWS1	**Kuangyinshan**	**0.75**	**317**	*e*P	**Pb**	**04 45 59.5**	**+0.3**
	baz=283						
TEYL	**Yanliau Villag**	**0.77**	**207**	*e*P	**Pg**	**04 45 59.1**	**+0.4**
	baz=209						
WHF	**Hehuan Shan**	**0.77**	**238**	P	**Pg**	**04 45 58.7**	**-0.1**
	baz=231						
WHF				S	**Sg**	**04 46 07.8**	**-1.0**
	baz=231						
NTST	**Danshui**	**0.78**	**322**	P	**Pg**	**04 45 59.2**	**+0.3**
	baz=327						
NTST				*e*S	**Sg**	**04 46 09.6**	**+0.5**
	baz=327						
NFF	**Wufeng Townshi**	**0.79**	**276**	*e*P	**Pg**	**04 45 59.0**	**-0.1**
	baz=266						
NFF				*e*S	**Sg**	**04 46 08.0**	**-1.5**
	baz=266						
TWT	**Tachien**	**0.79**	**248**	*e*P	**Pg**	**04 45 59.4**	**+0.2**
	baz=244						
TWY	**Chenhua**	**0.80**	**334**	*e*P	**Pb**	**04 46 00.1**	**0.0**
	baz=341						
TDCB	**Techi**	**0.81**	**248**	*e*P	**Pg**	**04 45 59.6**	**+0.1**
	baz=244						
LIOB	**Emei**	**0.88**	**276**	*e*P	**Pg**	**04 46 01.3**	**+0.4**
	baz=267						
LIOB				*e*S	**Sg**	**04 46 11.8**	**-0.6**
	baz=267						
CHGB	**Renai**	**0.88**	**236**	*e*P	**Pg**	**04 46 00.6**	**-0.4**
	baz=237						
CHGB				*e*S	**Sg**	**04 46 11.8**	**-0.7**
	baz=237						
JYNG	**Yonagunijimaku**	**0.89**	**96**	*e*P	**Pn**	**04 46 03.5**	**+0.8**
JYNG				*e*S	**Sn**	**04 46 15.7**	**0.0**
ESL	**Shilin**	**0.89**	**214**	P	**Pg**	**04 46 01.2**	**+0.1**
	baz=207						
NSTT	**Nanjuang**	**0.89**	**275**	⇑P	**Pg**	**04 46 01.3**	**+0.2**
	baz=262						
NSTT				S	**Sg**	**04 46 11.8**	**-1.0**
	baz=262						
SBCB	**Hsinchu**	**0.94**	**285**	*e*P	**Pb**	**04 46 02.9**	**+0.5**
	baz=285						
SBCB				*e*S	**Sb**	**04 46 15.3**	**+0.4**
	baz=285						
YOJ	**Yonaguni jima**	**0.94**	**95**	*e*P	**Pn**	**04 46 04.1**	**+0.6**
	baz=97						
YOJ				*e*S	**Sn**	**04 46 17.6**	**+0.4**
	baz=97						
YOJ	**Yonaguni jima**	**0.94**	**95**	P	**Pn**	**04 46 04.4**	**+0.9**
YOJ				*e*S	**Sn**	**04 46 17.8**	**+0.7**
OWD	**Renai**	**0.94**	**231**	P	**Pg**	**04 46 02.0**	**-0.1**
	baz=224						
OWD				*e*S	**Sg**	**04 46 12.6**	**-1.8**
	baz=224						
NHW	**Xinwu Township**	**0.96**	**298**	*e*P	**Pn**	**04 46 04.3**	**+0.6**
	baz=311						
WUSB	**Renai**	**0.96**	**235**	*e*P	**Pg**	**04 46 02.3**	**-0.3**
	baz=235						
WUSB				*e*S	**Sg**	**04 46 14.0**	**-1.1**
	baz=235						
WHP	**Taichung City**	**0.98**	**254**	*e*P	**Pg**	**04 46 03.0**	**+0.1**
	baz=250						
WHP				*e*S	**Sg**	**04 46 13.8**	**-1.8**
	baz=250						
EGFH	**Guangfu**	**1.01**	**210**	*e*P	**Pg**	**04 46 03.5**	**0.0**
	baz=219						
NMLH	**Miaoli**	**1.08**	**269**	*e*P	**Pn**	**04 46 05.9**	**+0.5**
	baz=268						
NMLH				*e*S	**Sg**	**04 46 19.0**	**+0.2**
	baz=268						
WCS	**Beigang Elemen**	**1.09**	**243**	*e*P	**Pg**	**04 46 05.1**	**+0.2**
	baz=248						
VWDT	**VWDT**	**1.10**	**224**	*e*P	**Pg**	**04 46 05.1**	**-0.1**
	baz=226						
VWDT				*e*S	**Sg**	**04 46 19.5**	**0.0**
	baz=226						
TWQ1	**Liyutan**	**1.12**	**260**	*e*P	**Pg**	**04 46 04.8**	**-0.6**
	baz=258						
HGSD	**Ruisui**	**1.17**	**206**	*e*P	**Pn**	**04 46 07.8**	**+1.1**
	baz=214						
SMLT	**Sun Moon Lake**	**1.19**	**236**	P	**Pg**	**04 46 06.8**	**0.0**
	baz=232						
EHY	**Hungye**	**1.20**	**210**	P	**Pg**	**04 46 07.0**	**0.0**
	baz=204						
SSLB	**Suanglung**	**1.21**	**231**	*e*P	**Pg**	**04 46 06.7**	**-0.4**
	baz=225						
SSLB				*e*S	**Sg**	**04 46 20.5**	**-2.4**
	baz=225						
TYC	**Yuchr**	**1.21**	**238**	P	**Pg**	**04 46 07.3**	**+0.1**
	baz=223						
TYC				*e*S	**Sg**	**04 46 21.1**	**-1.9**
	baz=223						
YULB	**Yu-li**	**1.31**	**208**	*e*P	**Pn**	**04 46 08.7**	**+0.2**
	baz=211						
YULB				*e*S	**Sb**	**04 46 26.5**	**+0.7**
	baz=211						
YUS	**Yu-Shan**	**1.42**	**222**	P	**Pn**	**04 46 10.9**	**+0.4**
	baz=203						
FULB	**Fuli**	**1.49**	**205**	*e*P	**Pg**	**04 46 13.3**	**+0.8**
	baz=213						
ALS	**Alishan**	**1.49**	**226**	*e*P	**Pb**	**04 46 12.2**	**+0.1**
	baz=206						
CHN5	**Tsauling**	**1.52**	**232**	*e*P	**Pg**	**04 46 14.1**	**+0.9**
	baz=225						
CHN5				*e*S	**Sg**	**04 46 34.8**	**+1.8**
	baz=225						
WDLH	**Douliu**	**1.57**	**237**	*e*S	**Sg**	**04 46 35.9**	**+1.4**
	baz=231						
WRL	**Guolierlin Hig**	**1.60**	**246**	*e*P	**Pg**	**04 46 14.5**	**-0.2**
	baz=242						
WRL				*e*S	**Sb**	**04 46 35.1**	**+1.0**
	baz=242						
IRIF	**Iriomote-Funau**	**1.61**	**97**	*e*P	**Pb**	**04 46 13.5**	**-0.4**
IRIF				*e*S	**Sg**	**04 46 34.9**	**-0.8**
ELDTW	**Lidau**	**1.62**	**213**	*e*P	**Pb**	**04 46 14.5**	**+0.3**
	baz=208						
HATJ	**Hateruma jima**	**1.74**	**106**	*e*S	**Sg**	**04 46 38.7**	**-1.1**
CHN4	**Tsaushan**	**1.74**	**227**	P	**Pg**	**04 46 17.6**	**+0.2**
	baz=223						
TPUB	**Ta-pu**	**1.75**	**225**	*e*P	**Pg**	**04 46 17.4**	**-0.3**
	baz=203						
TPUB				*e*S	**Sg**	**04 46 41.7**	**+1.3**
	baz=203						
STYH	**Taoyuan**	**1.76**	**219**	*e*P	**Pg**	**04 46 17.5**	**-0.3**
	baz=200						
WTP	**Ta-pu**	**1.80**	**224**	P	**Pg**	**04 46 18.4**	**-0.2**
	baz=203						
TWK	**Hsinying**	**1.87**	**227**	*e*P	**Pg**	**04 46 19.8**	**-0.1**
	baz=205						
JKRS	**Kuro-shima**	**1.88**	**99**	P	**Pb**	**04 46 17.6**	**-0.9**
JKRS				S	**Sb**	**04 46 41.4**	**-0.6**
CHN1	**Nanshi**	**1.90**	**225**	P	**Pg**	**04 46 20.8**	**+0.4**
	baz=204						
SGST	**Jiashian**	**1.94**	**221**	*e*P	**Pb**	**04 46 20.0**	**+0.4**
	baz=201						
JIJ	**Ishigaki jima**	**1.98**	**95**	P	**Pb**	**04 46 19.4**	**-0.9**
JIJ				S	**Sn**	**04 46 42.4**	**-0.4**
JISG	**Ishigakijimahi**	**2.12**	**89**	*e*S	**Sb**	**04 46 48.1**	**-1.0**
VWUC	**VWUC**	**2.34**	**281**	*e*P	**Pn**	**04 46 21.9**	**-0.8**
	baz=281						
JTJ	**Tarama**	**2.48**	**87**	S	**Sb**	**04 46 58.0**	**-1.4**

MAN 18 04:57:17.9, 12.27N×120.80E, h33km, mb3.8, ML2.6, MS2.1, Mindoro

*TIR **18** 04:57:36.0, 40.60N×19.97E, h13km±1km, Md2.6, Ml2.2*
*THE **18** 04:57:35.4, 40.72N×19.96E, h7km±1km, ML2.1/4, Error ellipse: s-maj=1.8km s-min=0.8km az=324.0*

ISC 18 04:57:35.5±1.3, 40.67N±0.03×19.97E±0.03, h13km±10km, n26, σ0s77/35, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLO	**Vlora**	**0.41**	**241**	P	**Pg**	**04 57 43.7**	**-0.1**
VLO				S	**Sb**	**04 57 50.2**	**-0.7**
	1μm,0.1s						
VLO	**Vlora**	**0.41**	**241**	S	**Sb**	**04 57 50.4**	**-0.6**
	baz=250						
VLO	**Vlora**	**0.41**	**241**	AMP			
	comp=E,4.3nm,0.1s,baz=250						
VLO	**Vlora**	**0.41**	**241**	P	**Pg**	**04 57 43.7**	**-0.1**
	baz=250						
KBN	**Korca**	**0.62**	**94**	P	**Pg**	**04 57 47.3**	**-0.4**
LSK	**Leskovik**	**0.70**	**137**	P	**Pb**	**04 57 49.3**	**-0.4**
LSK	**Leskovik**	**0.70**	**137**	AMP			
	comp=N,0.7nm,0.5s,baz=132						
LSK	**Leskovik**	**0.70**	**137**	S	**Sb**	**04 57 59.2**	**-0.2**
	baz=132						
SRN	**Sarande**	**0.79**	**179**	P	**Pb**	**04 57 50.7**	**-0.4**
SRN				S	**Sn**	**04 58 03.1**	**-0.9**
	comp=N,105nm,0.3s						
NEST	**Nestorio**	**0.86**	**107**	P	**Pb**	**04 57 52.6**	**+0.2**
KEK	**Kerkira**	**0.96**	**188**	P	**Pn**	**04 57 54.2**	**-0.6**
KEK				S	**Sn**	**04 58 09.4**	**+1.1**
	comp=N,90nm,0.3s						
FNA	**Florina**	**1.07**	**83**	P	**Pb**	**04 57 55.5**	**-0.5**
IGT	**Igoumenitsa**	**1.17**	**166**	P	**Pg**	**04 57 57.5**	**-0.5**
IGT				S	**Sn**	**04 58 15.9**	**+2.5**
	comp=N,60nm,0.3s						
IGT	**Igoumenitsa**	**1.17**	**166**	S	**Sn**	**04 58 13.9**	**+0.5**
	baz=165						
SCTE	**Santa Cesarea**	**1.30**	**243**	S	**Sg**	**04 58 18.3**	**+1.0**
	baz=246						
SCTE	**Santa Cesarea**	**1.30**	**243**	AMP			
	comp=N,0.2nm,0.4s,baz=246						
SCTE	**Santa Cesarea**	**1.30**	**243**	P	**Pg**	**04 58 00.2**	**-0.3**
	baz=246						
LKD2	**Lefkada island**	**1.95**	**164**	P	**Pb**	**04 58 10.6**	**-0.3**
	baz=163						
DBRK	**Dubrovnik**	**2.42**	**326**	*e*Pn	**Pn**	**04 58 15.1**	**+0.2**
DBRK				Sn	**Sn**	**04 58 44.4**	**0.0**
STON	**Ston**	**2.78**	**323**	*e*Pn	**Pn**	**04 58 20.2**	**+0.5**
STON				Sn	**Sn**	**04 58 53.7**	**+0.6**
LSTV	**Lastovo**	**3.12**	**313**	*e*Pn	**Pn**	**04 58 25.4**	**+1.0**
LSTV				Sn	**Sn**	**04 59 01.4**	**-0.1**
RICI	**Ricice**	**3.53**	**324**	*e*Pn	**Pn**	**04 58 31.0**	**+1.0**
RICI				Sn	**Sn**	**04 59 11.5**	**-0.2**
HVAR	**Hvar**	**3.63**	**315**	*e*Pn	**Pn**	**04 58 31.9**	**+0.4**
HVAR				Sn	**Sn**	**04 59 13.9**	**-0.3**
KIJV	**Kijevo**	**4.26**	**323**	*e*Pn	**Pn**	**04 58 41.0**	**+0.9**
KIJV				Sn	**Sn**	**04 59 29.3**	**-0.3**
ZIRJ	**Zirje**	**4.39**	**314**	*e*Pn	**Pn**	**04 58 41.7**	**-0.1**
ZIRJ				Sn	**Sn**	**04 59 31.3**	**-1.5**
DUGI	**Dugi Otok**	**4.93**	**314**	*e*Pn	**Pn**	**04 58 50.1**	**+0.8**
DUGI				Sn	**Sn**	**04 59 46.1**	**-0.1**

*IDC **18** 05:39:53.8±0.8, 54.29N×35.10W, h0km, mb3.7/10, mbtmp3.8/12, ML3.2/2, MS3.6/55, Error ellipse: s-maj=30.6km s-min=15.7km az=7.0*
*NEIC **18** 05:39:55.3±1.3, 54.3N±0.1×35.1W±0.1, h10km±1km, mb4.4/32, Error ellipse: s-maj=18.6km s-min=13.4km az=159.0*

ISC 18 05:39:55.1±0.6, 54.3N±0.1×35.09W±0.06, h10km, n99, σ0s85/53, mb4.3/22, MS3.7/51, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SFJD	**Kangerlussuaq**	**14.78**	**336**	Pn	**Pn**	**05 43 26.2**	**+2.4**
	0.7nm,0.3s,baz=138,slow=7.3,SNR=3.9						
SFJD				LR	LR	05 48 01.8	
	comp=Z,178nm,21.0s,baz=143,slow=33						
SFJD	**Kangerlussuaq**	**14.78**	**336**		**Pn**	**05 43 21.7**	**-2.1**
ILULI	**Ilulissat**	**16.68**	**340**		**Pn**	**05 43 47.4**	**-1.2**
SCHQ	**Schefferville**	**18.34**	**285**	P	**Pn**	**05 44 07.8**	**-1.5**
	0.4nm,0.3s,baz=77,slow=8.2,SNR=9.2						
SCHQ				LR	LR	05 50 00.9	
	comp=Z,120nm,20.4s,baz=64,slow=33						
	4.0nm,0.7s						
SCHQ	**Schefferville**	**18.34**	**285**	P	**Pn**	**05 44 08.9**	**-0.4**
SCHQ				IAmb	IAmb	05 44 10.2	
	comp=Z,32nm,1.4s						
EKA	**Eskdalemuir Ar**	**18.35**	**74**	P	**P**	**05 44 10.3**	**+0.9**
	baz=280,slow=11						
EKA				LR	LR	05 50 04.8	
	comp=Z,190nm,18.1s,baz=270,slow=33						
	comp=Z,4.8nm,1.0s						
SUMG	**Summit**	**18.41**	**357**	P	**Pn**	**05 44 09.2**	**-1.3**
SUMG	**Summit**	**18.41**	**357**	*i* P	**Pn**	**05 44 10.0**	**-0.5**
FRB	**Frobisher Bay**	**19.42**	**312**	LR	LR	05 50 22.7	
	comp=Z,189nm,18.3s,baz=60,slow=32						
JMIC	**Jan Mayen**	**20.41**	**25**	LR	LR	05 50 22.4	
	comp=Z,132nm,18.2s,baz=243,slow=31						
BATG	**Bathurst New B**	**20.68**	**263**	P	**P**	**05 44 35.1**	**+0.2**
BATG				IAmb	IAmb	05 44 38.3	
	comp=Z,17nm,1.1s						
HAL	**Halifax**	**20.76**	**254**	P	**P**	**05 44 35.3**	**-0.6**
HAL				IAmb	IAmb	05 44 39.2	
	comp=Z,19nm,1.0s						
DBG	**Daneborg**	**20.97**	**11**	*i* P	**P**	**05 44 37.5**	**-0.4**
GGN	**Saint George**	**22.32**	**259**	P	**P**	**05 44 53.3**	**+0.7**
GGN				IAmb	IAmb	05 44 56.7	
	comp=Z,24nm,1.1s						
D62A	**Allapoint, All**	**22.52**	**265**	P	**P**	**05 44 54.1**	**-0.7**
D62A				IAmb	IAmb	05 44 56.2	
	comp=Z,14nm,0.9s						
F64A	**Sherman**	**22.77**	**262**	P	**P**	**05 44 56.1**	**-1.3**
F64A				IAmb	IAmb	05 45 01.1	
	comp=Z,12nm,1.1s						
I63A	**Otisfield**	**25.11**	**261**	P	**P**	**05 45 20.1**	**+0.3**
I63A				IAmb	IAmb	05 45 24.3	
	comp=Z,8.0nm,1.1s						
NOA	**NORSAR Array B**	**25.20**	**56**	LR	LR	05 53 31.4	
	comp=Z,80nm,21.5s,baz=265,slow=32						
NB201	**NORSAR Array S**	**25.24**	**56**	P	**P**	**05 45 20.5**	**-0.4**
ESDC	**Sonseca Array**	**25.52**	**112**	P	**P**	**05 45 24.2**	**+0.5**
	comp=Z,1.3nm,0.7s,baz=316,slow=8.7,SNR=8.7						
ESDC				LR	LR	05 53 26.3	
	comp=Z,103nm,18.9s,baz=328,slow=32						
	comp=Z,1.3nm,0.7s						
ESDC	**Sonseca Array**	**25.52**	**112**	P	**P**	**05 45 23.3**	**-0.3**
I62A	**Tamworth**	**25.65**	**261**	P	**P**	**05 45 25.1**	**+0.4**
I62A				IAmb	IAmb	05 45 36.8	
	comp=Z,16nm,1.4s						
TRQ	**Mont Tremblant**	**26.20**	**268**	P	**P**	**05 45 30.5**	**+0.7**
TRQ				IAmb	IAmb	05 45 31.4	
	comp=Z,8.7nm,1.2s						
HFS	**Hagfors**	**26.53**	**57**	LR	LR	05 54 51.2	
	comp=Z,107nm,18.9s,baz=281,slow=34						
GRA1	**Grafenberg Arr**	**28.48**	**80**	P	**P**	**05 45 49.5**	**-0.6**
GRA1				IAmb	IAmb	05 46 09.2	
	comp=Z,12nm,1.2s						
GRFO	**Grafenberg**	**28.48**	**80**	P	**P**	**05 45 49.4**	**-0.7**
CLL	**Collm**	**28.78**	**76**	*e*P	**P**	**05 45 54.0**	**+1.2**
CLL				LmV		05 57 00.0	
	comp=Z,100nm,18.2s						
DAVOX	**Davos/Dischmat**	**29.13**	**86**	LR	LR	05 56 56.8	
	comp=Z,217nm,18.9s,baz=269,slow=35						
SADO	**Sadowa**	**29.69**	**270**	P	**P**	**05 46 02.2**	**+1.4**
	comp=Z,2.4nm,1.0s,baz=47,slow=7.0

G45A Suttons Bay 33.35 275 P P 05 46 33.9 +0.8
G45A IAmb IAmb 05 46 39.9
comp=Z,5.0nm,0.7s
N51A Ashland 33.91 267 P P 05 46 39.0 +1.0
K43A Burlington 36.29 274 P P 05 46 59.3 +0.8
ULM Lac du Bonnet 36.41 289 LR LR 06 00 32.0
comp=Z,160nm,19.0s,baz=86,slow=34
BLO Bloomington 37.46 268 P P 05 47 09.2 +0.8
BURAR Bucovina Array 37.53 75 P P 05 47 08.6 -0.5
JSC Jenkinsville 37.78 257 P P 05 47 11.5 +0.3
AKASG Malin Array Be 38.11 68 P P 05 47 13.5 -0.3
comp=Z,0.2nm,0.3s,baz=306,slow=8.2,SNR=5.3
AKASG LR LR 06 02 59.6
comp=Z,46nm,18.3s,baz=286,slow=36
comp=Z,0.2nm,0.3s
TKL Tuckaleechee C 38.24 261 LR LR 06 02 00.1
comp=Z,113nm,20.2s,baz=67,slow=35
KLMR Klimovskoe 38.50 49 *e* **P 05 47 16.8 -0.2**
KLMR AMP 05 47 25.2
comp=Z,20nm,1.3s
MLR Muntele Rosu 39.15 77 LR LR 06 02 18.6
comp=Z,73nm,21.6s,baz=313,slow=34
OBN Obninsk 39.73 59 LR LR 06 02 43.1
comp=Z,22nm,20.3s,baz=170,slow=34
YKA Yellowknife Ar 39.91 315 LR LR 06 01 49.9
comp=Z,58nm,19.7s,baz=308,slow=33
S44A Carbondale 40.05 268 P P 05 47 30.9 +0.8
S44A IAmb IAmb 05 47 33.8
comp=Z,12nm,1.2s
SJG San Juan 43.28 226 LR LR 06 08 32.2
comp=Z,13nm,18.0s,baz=90,slow=40
INK Inuvik 43.94 328 LR LR 06 05 36.5
comp=Z,81nm,20.0s,baz=61,slow=35
KIRV Kirov 43.99 49 LR LR 06 04 27.4
comp=Z,53nm,21.3s,baz=322,slow=34
W39A Magazine 44.41 269 P P 05 48 05.5 -0.3
W39A IAmb IAmb 05 48 12.6
comp=Z,5.6nm,0.8s
BELG Belogornoye 46.71 57 LR LR 06 07 03.6
comp=Z,76nm,18.6s,baz=332,slow=35
BRTR Keskin Array B 47.18 78 P P 05 48 29.1 +1.4
comp=Z,1.4nm,0.8s,baz=325,slow=6.0,SNR=8.1
BRTR LR LR 06 08 16.3
comp=Z,51nm,18.9s,baz=320,slow=36
comp=Z,1.4nm,0.8s
BRTR Keskin Array B 47.18 78 P P 05 48 28.3 +0.5
PDAR Pinedale Array 48.42 288 P P 05 48 37.0 -0.5
comp=Z,0.3nm,0.6s,baz=64,slow=6.1,SNR=2.4
PDAR LR LR 06 07 49.2
comp=Z,108nm,18.9s,baz=42,slow=35
comp=Z,0.3nm,0.6s
NEW Newport 48.93 299 LR LR 06 07 52.1
comp=Z,96nm,18.4s,baz=78,slow=34
ARU Arti 49.24 47 LR LR 06 07 53.4
comp=Z,76nm,20.4s,baz=316,slow=34
KBZ Khabaz 49.72 68 LR LR 06 10 06.5
comp=Z,49nm,19.1s,baz=289,slow=36
TORD Torodi Ar. Bea 50.17 131 P P 05 48 50.1 -0.7
comp=Z,2.4nm,0.9s,baz=325,slow=7.4,SNR=11
comp=Z,2.4nm,0.9s
TORD Torodi Ar. Bea 50.17 131 P P 05 48 49.8 -1.0
ILAR Eielson Array 50.31 329 P P 05 48 51.4 +0.1
comp=Z,0.3nm,0.9s,baz=60,slow=5.3,SNR=3.0
ILAR LR LR 06 08 42.1
comp=Z,100nm,18.6s,baz=80,slow=34
comp=Z,0.3nm,0.9s
MDP Montagnes des 51.07 203 LR LR 06 04 36.5
comp=Z,68nm,20.3s,baz=140,slow=29
IMAR Indian Mountai 51.38 333 P P 05 48 59.8 +0.5
BBB Bella Bella 51.73 308 LR LR 06 09 32.8
comp=Z,82nm,18.3s,baz=74,slow=34
ANMO Albuquerque 51.99 279 LR LR 06 10 39.9
comp=Z,174nm,18.0s,baz=60,slow=36
ELK Elko 52.92 290 LR LR 06 10 46.8
comp=Z,109nm,18.8s,baz=76,slow=35
AKTO Aktyubinsk 52.95 53 LR LR 06 10 10.1
comp=Z,66nm,21.9s,baz=302,slow=34
GNI Garni 53.16 71 LR LR 06 12 15.0
comp=Z,42nm,21.0s,baz=2.0,slow=36
DBIC Dimbokro 53.37 141 LR LR 06 09 17.2
comp=Z,96nm,20.0s,baz=356,slow=33
TIXI Tiksi 53.85 6 P P 05 49 18.1 +0.6
TIXI IAmb IAmb 05 49 20.2
comp=Z,4.3nm,1.1s
TXAR Lajitas Array 54.42 272 P P 05 49 23.0 +0.6
comp=Z,0.4nm,0.8s,baz=63,slow=8.7,SNR=4.9
TXAR LR LR 06 12 04.2
comp=Z,100nm,18.9s,baz=29,slow=36
comp=Z,0.4nm,0.8s
EIL Elat 55.03 87 LR LR 06 14 11.7
comp=Z,34nm,20.3s,baz=272,slow=37
SVW2 Sparrevohn 55.70 330 P P 05 49 31.6 +0.6
YBH Yreka Blue Hor 56.26 296 LR LR 06 12 16.4
comp=Z,70nm,19.6s,baz=32,slow=34
KDAK Kodiak Island 57.38 326 LR LR 06 12 40.6
comp=Z,141nm,18.3s,baz=226,slow=34
PFO Pinyon Flats O 58.68 285 LR LR 06 12 53.4
comp=Z,66nm,19.4s,baz=182,slow=34
CMIG Matias Romero 58.75 255 LR LR 06 16 43.9
comp=Z,43nm,18.4s,baz=34,slow=38
JTS Las Juntas de 58.96 241 LR LR 06 14 29.0
comp=Z,35nm,18.8s,baz=132,slow=35
ZALV Zalesovo Beam 61.27 36 LR LR 06 16 14.6
comp=Z,23nm,18.0s,baz=354,slow=36
KURK Kurchatov 61.61 41 P P 05 50 12.1 -0.2
KURK IAmb IAmb 05 50 13.3
comp=Z,3.7nm,1.1s
GEYT Alibeck 61.97 63 LR LR 06 17 06.3
comp=Z,52nm,20.4s,baz=112,slow=36
LPIG La Paz 62.25 273 LR LR 06 16 55.1
comp=Z,139nm,18.2s,baz=14,slow=36
MK31 Makanchi Array 66.21 42 P P 05 50 42.6 -0.2
MKAR Makanchi Array 66.21 42 P P 05 50 42.7 0.0
comp=Z,1.2nm,0.8s,baz=325,slow=5.8,SNR=11
comp=Z,1.2nm,0.8s
MKAR Makanchi Array 66.21 42 P P 05 50 42.6 -0.1
AAK Ala-Archa 66.31 49 LR LR 06 18 25.6
comp=Z,55nm,20.0s,baz=344,slow=35
PETK Petropavlovsk- 72.44 352 LR LR 06 24 45.1
comp=Z,52nm,18.3s,baz=110,slow=37
SONM Songino Array 73.17 26 P P 05 51 26.2 +0.4
comp=Z,0.7nm,0.5s,baz=330,slow=5.3,SNR=5.5
comp=Z,0.7nm,0.5s
SONM Songino Array 73.17 26 IAmb IAmb 05 51 36.9
comp=Z,3.7nm,1.4s
NNA Nana 74.88 222 LR LR 06 27 19.0
comp=Z,14nm,18.3s,baz=162,slow=38
KMBO Kilima Mbogo 80.68 105 LR LR 06 28 03.4
comp=Z,56nm,19.1s,baz=76,slow=36
ASAJ Asahikawa 81.95 2 LR LR 06 28 27.0
comp=Z,39nm,19.4s,baz=160,slow=36
TSUM Tsumeb 85.92 131 LR LR 06 32 27.2
comp=Z,29nm,18.0s,baz=136,slow=37
BOSA Boshof 97.52 130 LR LR 06 35 53.9
comp=Z,58nm,18.3s,baz=186,slow=34

*IDC **18** 05:54:05.1±1.9,40°.48N×51°.77E,h0km,mb3.9/3, mbtmp4.1/10,ML3.9/7,MS2.8/2,Error ellipse: s-maj=31.0km s-min=16.1km az=177.0*
*AZER **18** 05:54:09.1±0.2,40°.34N×51°.92E,h25km±1km,Error ellipse: s-maj=6.6km s-min=3.5km az=238.0*
*TEH **18** 05:54:10.3,40°.45N×51°.96E,h40km,ML3.8*
ISC 18 05:54:08.5±1.5,**40°.49N**±0°.05×**51°.97E**±0°.05,**h25**km±13km, **n83,σ1§85**/101,**mb3.6**/4,**2C-1D,Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NDR	**Nardaran**	**1.51**	**274**	Pg	**Pb**	**05 54 37.9**	**+2.0**
NDR				Sn	**Sb**	**05 54 55.1**	**+0.5**
GOBA	**Gobu**	**1.71**	**268**	Sn	**Sb**	**05 55 01.4**	**+1.0**
ATGJ	**Altiaghaj**	**2.34**	**280**	Sn	**Sb**	**05 55 16.6**	**-1.8**
SIZA	**Siyzn**	**2.41**	**285**	*e*Pn	**Pb**	**05 54 50.1**	**-1.1**
SIZA	**Siyzn**	**2.41**	**285**	Pn	**Pb**	**05 54 50.2**	**-1.1**
SIZA				Sn	**Sb**	**05 55 19.6**	**-0.8**
PQL	**Pirkuli**	**2.59**	**278**	*e*Pn	**Pb**	**05 54 53.0**	**-1.3**
PQL	**Pirkuli**	**2.59**	**278**	Pg	**Pb**	**05 54 55.2**	**+0.9**
PQL				Sn	**Sb**	**05 55 23.8**	**-1.9**
QUBA	**Quba, Azerbaij**	**2.77**	**289**	Pn	**Pn**	**05 54 54.1**	**+2.7**
QUBA				Sn	**Sn**	**05 55 27.1**	**+3.0**
QUB	**Quba**	**2.88**	**289**	*e*Pn	**Pn**	**05 54 55.4**	**+2.5**
IML	**Ismayilli**	**2.90**	**277**	*e*Pn	**Pn**	**05 54 55.5**	**+2.3**
IML	**Ismayilli**	**2.90**	**277**	Pn	**Pn**	**05 54 55.2**	**+2.0**
IML				Sn	**Sn**	**05 55 30.3**	**+3.1**
XNQ	**Khinaliq**	**2.99**	**285**	*e*Pn	**Pn**	**05 54 56.7**	**+2.2**
XNQ	**Khinaliq**	**2.99**	**285**	Pn	**Pn**	**05 54 56.8**	**+2.3**
	SNR=28						
XNQ				Sn	**Sn**	**05 55 31.5**	**+1.9**
QSAR	**Qusar**	**2.99**	**291**	*e*Pn	**Pn**	**05 54 56.9**	**+2.5**
QSAR	**Qusar**	**2.99**	**291**	Pn	**Pn**	**05 54 57.2**	**+2.9**
	SNR=8.0						
QSAR				Sn	**Sn**	**05 55 31.9**	**+2.4**
GLBA	**Cilabad**	**3.02**	**247**	*e*Pn	**Pn**	**05 54 56.3**	**+1.6**
GLBA	**Cilabad**	**3.02**	**247**	Pn	**Pn**	**05 54 56.4**	**+1.6**
	SNR=18						
GLBA				Sn	**Sn**	**05 55 31.7**	**+1.6**
LKRN	**Lenkeran, Azer**	**3.04**	**235**	*e*Pn	**Pn**	**05 54 56.1**	**+1.1**
LKRN	**Lenkeran, Azer**	**3.04**	**235**	Pn	**Pn**	**05 54 56.4**	**+1.4**
LKRN				Sn	**Sn**	**05 55 31.7**	**+1.1**
ASTR	**Astara**	**3.12**	**233**	Pn	**Pn**	**05 54 57.2**	**+1.1**
	SNR=6.2						
ASTR				Sn	**Sn**	**05 55 32.4**	**-0.2**
QBL	**Gabala**	**3.17**	**280**	*e*Pn	**Pn**	**05 54 58.8**	**+1.8**
QBL	**Gabala**	**3.17**	**280**	Pn	**Pn**	**05 54 58.8**	**+1.8**
QBL				Sn	**Sn**	**05 55 36.3**	**+2.3**
YRD	**Yardimli**	**3.27**	**243**	*e*Pn	**Pn**	**05 54 59.3**	**+0.9**
YRD	**Yardimli**	**3.27**	**243**	Pn	**Pn**	**05 54 59.3**	**+0.9**
	SNR=14						
YRD				Sn	**Sn**	**05 55 35.8**	**-0.9**
ZRD	**Zardab**	**3.28**	**268**	Pn	**Pn**	**05 55 00.7**	**+2.4**
ZRD				Sn	**Sn**	**05 55 39.4**	**+2.9**
LRK	**Lerik**	**3.35**	**238**	*e*Pn	**Pn**	**05 55 00.1**	**+0.6**
LRK	**Lerik**	**3.35**	**238**	Pn	**Pn**	**05 55 00.5**	**+1.0**
LRK				Sn	**Sn**	**05 55 38.2**	**-0.4**
BLQ	**Beylaqan**	**3.47**	**259**	Pn	**Pn**	**05 55 01.5**	**+0.6**
BLQ				Sn	**Sn**	**05 55 41.7**	**+0.5**
GRMI	**Germi**	**3.56**	**243**	*e*Pn	**Pn**	**05 55 03.5**	**+1.1**
GRMI				*e*		05 55 45.5	
	comp=Z,99nm,0.2s						
BRDA	**Brd**	**3.67**	**268**	Sn	**Sn**	**05 55 48.9**	**+2.8**
SEKA	**Sheki**	**3.69**	**283**	*e*Pn	**Pn**	**05 55 06.2**	**+2.1**
SEKA	**Sheki**	**3.69**	**283**	Pn	**Pn**	**05 55 06.1**	**+2.1**
	SNR=4.2						
SEKA				Sn	**Sn**	**05 55 48.3**	**+1.5**
QRD	**Qoradiz**	**3.72**	**256**	Pn	**Pn**	**05 55 05.3**	**+0.9**
QRD				Sn	**Sn**	**05 55 47.4**	**0.0**
MNGR	**Mingechevir, A**	**3.73**	**276**	Sn	**Sn**	**05 55 51.2**	**+3.6**
AGDM	**Agdam**	**3.74**	**266**	Pn	**Pn**	**05 55 05.7**	**+1.0**
AGDM				Sn	**Sn**	**05 55 48.7**	**+0.8**
GIDE	**GILAN DEYLAMAN**	**3.90**	**205**	*e*Pn	**Pn**	**05 55 08.2**	**+1.1**
IMND	**Minoodasht**	**4.19**	**139**	*e*Pn	**Pn**	**05 55 12.7**	**+1.8**
ZKTA	**Zakatala**	**4.20**	**288**	Pn	**Pn**	**05 55 13.1**	**+2.0**
	SNR=3.1						
ZKTA				Sn	**Sn**	**05 56 01.5**	**+2.1**
IGLO	**Ghaloghah**	**4.24**	**159**	*e*Pn	**Pn**	**05 55 12.7**	**+1.0**
IPRN	**Peran**	**4.25**	**176**	*e*Pn	**Pn**	**05 55 13.7**	**+1.9**
MRVT	**Maraveh tapeh**	**4.27**	**130**	*e*Pn	**Pn**	**05 55 13.6**	**+1.6**
MRVT				*e*		05 55 14.1	
	comp=Z,99nm,0.2s						
GANJ	**Ganja**	**4.30**	**274**	Sn	**Sn**	**05 56 00.3**	**-1.6**
IGZV	**Ghazvin**	**4.32**	**199**	*e*Pn	**Pn**	**05 55 13.6**	**+0.8**
IGZV				*e*		05 56 03.8	
	comp=Z,848nm,0.1s						
ZNJK	**Zanjan**	**4.60**	**215**	*e*Pn	**Pn**	**05 55 17.2**	**+0.5**
CHTH	**Charan**	**4.62**	**189**	*e*Pn	**Pn**	**05 55 18.6**	**+1.6**
GDB	**GEDABAY**	**4.74**	**275**	Pn	**Pn**	**05 55 19.8**	**+1.2**
	SNR=7.6						
GDB				Sn	**Sn**	**05 56 11.3**	**-1.5**
ISHM	**Shahmirzad**	**4.79**	**167**	*e*Pn	**Pn**	**05 55 21.4**	**+2.1**
DAMV	**Damavand**	**4.85**	**180**	*e*Pn	**Pn**	**05 55 23.4**	**+3.3**
ORD	**Ordubad**	**4.86**	**253**	Pn	**Pn**	**05 55 22.1**	**+1.9**
	SNR=5.0						
ORD				Sn	**Sn**	**05 56 16.3**	**+0.5**
IFIR	**Firoozkooh**	**4.88**	**172**	*e*Pn	**Pn**	**05 55 23.0**	**+2.5**
IFIR				*e*		05 55 24.8	
	comp=Z,1μm,0.2s						
IDMV	**Damavand**	**4.90**	**179**	*e*Pn	**Pn**	**05 55 23.8**	**+2.9**
IMHD	**Mahdasht**	**4.90**	**193**	*e*Pn	**Pn**	**05 55 23.2**	**+2.5**
QZX	**Qazax, Azerbai**	**5.04**	**279**	Pn	**Pn**	**05 55 23.4**	**+0.8**
QZX				Sn	**Sn**	**05 56 19.9**	**-0.2**
SBZ	**Shahbuz**	**5.05**	**260**	Sn	**Sn**	**05 56 21.4**	**+1.0**
BJRD	**Bojnurd**	**5.06**	**122**	*e*Pn	**Pn**	**05 55 24.7**	**+1.7**
ILAS	**Lasjerd**	**5.15**	**171**	*e*Pn	**Pn**	**05 55 26.0**	**+1.7**
NAX	**Nakhchivan**	**5.15**	**257**	Sn	**Sn**	**05 56 25.9**	**+3.0**
IRAZ	**Razeghan**	**5.32**	**198**	*e*Pn	**Pn**	**05 55 27.9**	**+1.3**
GEYT	**Alibeck**	**5.41**	**116**	Pn	**Pn**	**05 55 28.3**	**+0.6**
	comp=Z,2.7nm,0.3s,baz=290,slow=12,SNR=12						
GEYT				Sn	**Sn**	**05 56 27.0**	**-2.3**
	comp=Z,4.8nm,0.3s,baz=183,slow=27,SNR=6.1						
	comp=Z,5.6nm,0.3s						
IVRN	**Varamin**	**5.48**	**182**	*e*Pn	**Pn**	**05 55 31.5**	**+2.8**
SHRO	**Shahrood**	**5.50**	**143**	*e*Pn	**Pn**	**05 55 30.9**	**+1.9**
GNI	**Garni**	**5.54**	**269**	LR	LR	05 58 19.8	
	comp=Z,31nm,21.1s,baz=161,slow=47						
IQOM	**Qom**	**5.68**	**187**	*e*Pn	**Pn**	**05 55 33.0**	**+1.4**
ISFR	**Sfrayin**	**5.83**	**124**	*e*Pn	**Pn**	**05 55 35.5**	**+1.9**
ISFB	**Sefidab**	**6.13**	**178**	*e*Pn	**Pn**	**05 55 39.9**	**+2.3**
IKRD	**Kardeh**	**6.97**	**120**	*e*Pn	**Pn**	**05 55 50.2**	**+0.9**
IKRD				*e*		05 57 08.3	
	comp=Z,215nm,0.2s						
KBZ	**Khabaz**	**7.48**	**299**	Pn	**Pn**	**05 55 56.2**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=129,slow=4.8,SNR=1.9						
KBZ				Sn	Sn	05 57 12.3	-7.8
	comp=Z,1.7nm,0.3s,baz=298,slow=8.7,SNR=7.1						
	comp=Z,0.9nm,0.2s						
KVAR	**Kislovodsk Arr**	**7.71**	**300**	Pn	**Pn**	**05 55 58.5**	**-0.7**
	baz=282,slow=22						
KVAR				Sn	Sn	05 57 17.7	-8.1
	baz=196,slow=5.9						
	comp=Z,1.9nm,0.4s						
TABS	**Tabas**	**7.97**	**147**	*e*Pn	**Pn**	**05 56 05.0**	**+2.2**
TKDS	**Koohdasht(Taba**	**8.00**	**147**	*e*Pn	**Pn**	**05 56 05.2**	**+1.9**
TPRV	**Parvadeh(Tabas**	**8.35**	**152**	*e*Pn	**Pn**	**05 56 10.9**	**+2.8**
IKOO	**Kooshah**	**9.84**	**143**	*e*Pn	**Pn**	**05 56 30.7**	**+2.1**
AB31	**Akbulak array**	**10.43**	**30**	P	Pn	05 56 33.4	-3.0
	comp=Z,0.2nm,0.2s,baz=202,slow=13,SNR=16						
AB31				⇓S	Sn	05 58 19.7	-13
	comp=Z,0.9nm,0.3s,baz=202,slow=22,SNR=11						
AKTO	**Aktyubinsk**	**10.81**	**21**	Pn	Pn	05 56 39.5	-2.2
	comp=Z,1.4nm,0.3s,baz=204,slow=7.7,SNR=27						
AKTO				Sn	Sn	05 58 30.1	-12
	comp=Z,0.8nm,0.3s,baz=206,slow=18,SNR=4.6						
	comp=Z,3.2nm,0.3s						
AKTO	**Aktyubinsk**	**10.81**	**21**	⇑P	Pn	05 56 39.4	-2.2
	comp=Z,1.5nm,0.3s						
AKTO				⇑S	Sn	05 58 29.3	-12
	comp=Z,3.6nm,0.5s						
BELG	**Belogornoye**	**12.28**	**347**	Pn	**Pn**	**05 56 59.5**	**-2.1**
	comp=Z,0.9nm,0.3s,baz=153,slow=6.8,SNR=1.4						
BELG				Sn	Sn	05 59 04.9	-13
	comp=Z,1.9nm,0.3s,baz=41,slow=23,SNR=7.0						
	comp=Z,3.9nm,0.3s						
KIRV	**Kirov**	**18.19**	**356**	P	**P**	**05 58 18.6**	**-0.6**
	comp=Z,1.9nm,0.3s,baz=174,slow=4.9,SNR=3.9						
	comp=Z,12nm,0.5s						
AKASG	**Malin Array Be**	**18.84**	**310**	P	**P**	**05 58 24.2**	**-2.3**
	comp=Z,2.5nm,0.3s,baz=111,slow=11,SNR=17						
	comp=Z,4.7nm,0.7s						
MKAR	**Makanchi Array**	**22.74**	**64**	P	**P**	**05 59 11.3**	**+2.6**
	comp=Z,0.3nm,0.6s,baz=256,slow=13,SNR=3.7						
FINES	**FINESS Array B**	**26.25**	**332**	P	**P**	**05 59 40.0**	**-1.4**
	comp=Z,3.6nm,1.0s,baz=131,slow=11,SNR=11						
	comp=Z,3.6nm,1.0s						
GERES	**GERESS Array B**	**28.22**	**300**	P	**P**	**05 59 58.4**	**-1.0**
	comp=Z,0.2nm,0.4s,baz=102,slow=9.1,SNR=2.4						
	comp=Z,0.2nm,0.4s						
HFS	**Hagfors**	**30.73**	**323**	P	**P**	**06 00 19.9**	**-1.4**
	comp=Z,1.0nm,0.5s,baz=107,slow=9.9,SNR=6.7						
	comp=Z,1.0nm,0.5s						
ESDC	**Sonseca Array**	**42.19**	**288**	LR	LR	06 22 16.5	
	comp=Z,31nm,18.1s,baz=218,slow=40						

NOU 18 06:01:41.9,22°.37S×148°.31E,h0km,MLv3.8/8, Queensland, Australia,Queensland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RK1H	**Rockhampton Ha**	**2.25**	**117**	P	Pn	06 02 20.9	+0.4
CTA	**Charters Tower**	**2.97**	**319**	P	Pn	06 02 30.0	-0.4
CTAO	**Charters Tower**	**2.97**	**319**	P	Pn	06 02 30.2	-0.2
EIDS	**Eidsvold**	**3.92**	**140**	P	Pn	06 02 42.9	-0.5
RMQ	**Roma**	**4.12**	**174**	P	Pn	06 02 46.0	-0.1
QLP	**Quilpie**	**5.60**	**221**	P	Pn	06 03 07.7	+1.2
QIS	**Mount Isa**	**8.30**	**281**	P	Pn	06 03 43.4	-0.3
CMSA	**Cobar Meteorol**	**9.43**	**194**	P	Pn	06 03 57.5	-1.5

*IDC **18** 06:08:14.2±3.8,0°.81S×78°.83W,h0km,mb3.6/3, mbtmp3.6/4,ML3.7/1,Error ellipse: s-maj=91.8km s-min=45.0km az=97.0*
ISC 18 06:08:19.5±1.3,**1°.17S**±0°.08×**78°.8W**±0°.1,**h18**km,**n15, σ1§38**/14,**mb3.5**/3,**Ecuador**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FLOC	**Florencia**	**4.15**	**49**	*e*P	**Pg**	**06 09 40.5**	**+1.4**
PTLC	**Puerto Leguiza**	**4.20**	**72**	*e*P	**Pb**	**06 09 34.5**	**+1.6**
GARC	**Garzon, Huila**	**4.68**	**45**	*e*P	**Pg**	**06 09 48.6**	**-0.6**
MARP	**Paez Belalcaza**	**4.88**	**35**	*e*P	**Pg**	**06 09 54.0**	**+0.9**
MALC	**Bahia Malaga**	**5.35**	**16**	*e*P	**Pg**	**06 10 03.3**	**+1.3**
YOTC	**Yotoco, Valle**	**5.67**	**25**	*e*P	Pg	06 10 03.0	-5.1
MACC	**Macarena, Meta**	**5.93**	**56**	*e*P	**Pb**	**06 10 02.0**	**-0.4**
PRAC	**Prado**	**6.22**	**39**	*e*P	**Pb**	**06 10 07.2**	**-0.2**
PLMC	**San Jos del P**	**6.53**	**22**	*e*P	**Pb**	**06 10 13.8**	**+1.1**
CBOC	**Ciudad Bolivar**	**7.51**	**22**	*e*P	**Pb**	**06 10 29.8**	**+0.3**
CHIC	**Chingaza**	**7.66**	**41**	*e*P	**Pb**	**06 10 30.2**	**-1.8**
LPAZ	**La Paz**	**18.32**	**148**	P	Pn	**06 12 35.1**	**+1.6**
	0.1nm,0.3s,baz=301,slow=10,SNR=4.1						
	0.7nm,0.6s						
SIV	**San Ignacio**	**22.84**	**131**	P	**P**	**06 13 21.5**	**-0.5**
	0.6nm,0.3s,baz=301,slow=18,SNR=3.3						
	0.6nm,0.3s						
PLCA	**Paso Flores**	**40.08**	**170**	P	**P**	**06 15 54.3**	**+0.3**
	0.6nm,0.8s,baz=338,slow=7.7,SNR=3.3						
	0.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**80.99**	**77**	P	**P**	**06 20 31.4**	**-2.4**
	0.2nm,0.4s,baz=277,slow=5.4,SNR=5.3						
	0.2nm,0.4s						

OMAN 18 06:10:51.3±0.3,**25°.44N**×**61°.86E,h56**km±8km,**mb4.2**/1, **ml3.2**/9,**Error ellipse: s-maj=5.3km s-min=3.6km az=256.0,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NGCH	**Negor - Chabah**	**0.66**	**263**	P	Pn	06 11 03.6	-1.2
	SNR=73						
NGCH				S	Sn	06 11 17.8	+3.2
JASK	**Jask - Hormozg**	**3.63**	**278**	P	Pn	06 11 45.0	+0.1
WSAR	**Wadi Sarin**	**3.67**	**234**	P	Pn	06 11 44.4	-1.1
WSAR				S	Sn	06 12 26.5	-1.1
WBK	**Wadi Bani Khal**	**3.86**	**224**	P	Pn	06 11 46.7	-1.5
WBK				S	Sn	06 12 31.6	-0.7
	SNR=7.5						
JLN	**Jalan Bani Buh**	**3.96**	**215**	P	Pn	06 11 48.1	-1.5
JLN				S	Sn	06 12 35.9	+1.0
	SNR=9.1						
SMDO	**Samad**	**4.21**	**237**	P	Pn	06 11 53.5	+0.5
SMDO				S	Sn	06 12 40.1	-0.8
HOQ	**Hoqain**	**4.53**	**247**	P	Pn	06 11 58.4	+1.0
JMDO	**Jabal Madar**	**4.60**	**229**	P	Pn	06 11 58.6	+0.4
	SNR=8.9						
JMDO				S	Sn	06 12 53.0	+2.6
SOHO	**SOHO**	**5.01**	**256**	P	Pn	06 12 02.5	-1.4
BANOM	**Banah**	**5.04**	**277**	P	Pn	06 12 02.2	-2.1
BANOM				S	Sn	06 12 60.0	-1.3
UOSS	**Minazif**	**5.14**	**266**	P	Pn	06 12 03.1	-2.7
UOSS				S	Sn	06 13 01.7	-2.2
MASF	**Masafi**	**5.15**	**270**	P	Pn	06 12 07.2	+1.3
SHME	**Shamm**	**5.19**	**278**	P	Pn	06 12 06.3	-0.1
	SNR=5.4						
SHME				S	Sn	06 13 05.2	+0.3
HATD	**Hatta, Dubai**	**5.22**	**265**	P	Pn	06 12 06.3	-0.6
HATD				S	Sn	06 13 04.0	-1.9
ASHO	**Ashiyiah**	**5.31**	**263**	P	Pn	06 12 09.3	+1.2
	SNR=5.4						
ASHO				S	Sn	06 13 11.2	+3.1
MHTO	**MHTO**	**5.69**	**220**	P	Pn	06 12 13.1	-0.2
MHTO				S	Sn	06 13 17.4	0.0
FAQ	**Al Faqa, Dubai**	**5.72**	**264**	P	Pn	06 12 14.1	+0.4
FAQ				S	Sn	06 13 21.0	+3.0
ASUD	**Al Ashush, Dub**	**5.98**	**264**	P	Pn	06 12 18.1	+0.9

IDC 18 06:13:42.4±10.0,**1°.65N**×**126°.19E,h75**km±96km,**mb3.8**/4, **mbtmp4.1**/4,**MS2.5**/2,**Error ellipse: s-maj=242.0km s-min=23.4km az=66.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**5.42**	**354**	LR	LR	06 16 51.7	
	comp=Z,36nm,20.6s,baz=148,slow=35						
KAPI	**Kappang**	**9.23**	**224**	LR	LR	06 20 14.7	
	comp=Z,41nm,20.8s,baz=320,slow=42						
WRA	**Warramunga Arr**	**22.89**	**160**	P	P	06 18 38.5	-1.6
	2.3nm,0.3s,baz=335,slow=9.9,SNR=72						
WRA				PcP	PcP	06 22 28.7	+0.2
	0.1nm,0.5s,baz=337,slow=1.9,SNR=1.5						
	2.3nm,0.3s						
MKAR	**Makanchi Array**	**58.96**	**326**	P	P	06 23 34.5	+0.3
	0.5nm,0.5s,baz=122,slow=7.5,SNR=2.7						
	0.5nm,0.5s						
KURBB	**Kurchatov Arra**	**63.20**	**328**	P	P	06 24 03.0	+0.3
	2.1nm,0.2s,baz=130,slow=6.1,SNR=3.2						
	2.1nm,0.2s						
VNDA	**Vanda**	**81.44**	**173**	P	P	06 25 51.4	+0.6
	0.4nm,0.6s,baz=299,slow=7.1,SNR=2.2						
	0.4nm,0.6s						

*INET **18** 06:15:38.8±0.4,12°.83N×87°.08W,h2km±1km,ML3.8*
*SNET **18** 06:15:38.6±1.1,12°.76N×87°.04W,h12km±19km,ML3.1*
ISC 18 06:15:39.2±0.9,**12°.85N**±0°.04×**87°.05W**±0°.03,**h14**km±8km, **n21,σ0§53**/25,**Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**0.15**	**181**	*e*P	**Pg**	**06 15 42.7**	**-0.3**
CRIN				*e*S	**S

TUL1	**Leonard**	**0.82**	**98**	P		**Pg**	06 19 01.2	**+0.2**
	baz=279							
TUL1				S		**Sg**	06 19 12.2	**+0.5**
	baz=279							
T35A	**Sooner Cattle**	**0.91**	**14**			**Pg**	06 19 03.0	**+0.1**
T35B	**Sooner Cattle**	**0.91**	**14**	P		**Pg**	06 19 03.0	**+0.2**
	baz=194							
T35B				S		**Sg**	06 19 14.9	**+0.2**
	baz=194							
FNO	**Franklin**	**0.92**	**213**			**Pg**	06 19 03.0	**0.0**
U32A	**Winter Ranch,**	**1.82**	**282**	S		**Sg**	06 19 43.9	**0.0**
	baz=100							
X37A	**Clayton**	**1.85**	**141**	IAmb_Lg			06 19 48.2	
	comp=Z,18nm,0.8s							
X37A	**Clayton**	**1.85**	**141**	P		**Pb**	06 19 19.0	**-1.0**
	baz=322							
X37A				Sb		**Sg**	06 19 45.2	**+0.3**
	baz=322							
U38A	**Gravette**	**1.99**	**78**	P		**Pb**	06 19 21.0	**-1.4**
	baz=259							
U38A				S		**Sb**	06 19 47.9	**+0.2**
	baz=259							
WMOK	**Wichita Mounta**	**2.08**	**232**	P		**Pn**	06 19 22.2	**+0.9**
	baz=51							
WMOK				S		**Sb**	06 19 50.8	**+0.6**
	baz=51							
MIAR	**Mount Ida**	**3.02**	**118**	P		**Pn**	06 19 35.1	**+0.8**
	baz=301							
Z38A	**Mt. Pleasant**	**3.14**	**151**	IAmb_Lg			06 20 28.1	
	comp=Z,9.0nm,0.9s							
MGMO	**Mountain Grove**	**3.81**	**72**	IAmb_Lg			06 20 51.8	
	comp=Z,6.6nm,0.7s							
AMTX	**Amarillo**	**4.15**	**255**	IAmb_Lg			06 21 08.2	
	comp=Z,7.8nm,0.8s							
LCAR	**Lake Charles**	**4.57**	**88**	IAmb_Lg			06 21 13.0	
	comp=Z,4.2nm,0.9s							
CCM	**Cathedral Cave**	**4.88**	**64**	IAmb_Lg			06 21 26.8	
	comp=Z,4.9nm,0.7s							
P40A	**Paris**	**5.13**	**46**	IAmb_Lg			06 22 27.8	
	comp=Z,4.7nm,0.8s							
L40A	**Anamosa**	**7.42**	**34**	IAmb_Lg			06 22 51.8	
	comp=Z,4.9nm,1.0s							

*MDD **18** 06:20:03.4±1.0,36°29'N×12°09'W,h26km±33km,Mb4.1/8, M_mb3.4/8, Error ellipse: s-maj=32.2km s-min=6.4km az=50.0*
*INMG **18** 06:20:04.9±1.1,36°36'N×11°93'W,h10km,ML2.3, Error ellipse: s-maj=5.1km s-min=4.1km az=54.0*
*CNRM **18** 06:20:08.0,35°85'N×11°11'W,h0km,ml2.4*

ISC 18 06:20:01.0±3.0,36°35'N±0°09'×11°9'W±0°1,h10km,n40, σ2s10/62,8C,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**2.60**	**72**	*e*Pn	**Pn**	**06 20 44.8**	**+1.8**
PFVI				*e*Sn	**Sn**	**06 21 13.9**	**-0.7**
PFVI				A	A	06 21 16.2	
	15nm,0.8s						
PFVI	**Vila Bisbo**	**2.60**	**72**	P	**Pn**	**06 20 44.0**	**+1.0**
PFVI				S	**Sn**	**06 21 13.3**	**-1.3**
MORF	**Marmelete**	**2.78**	**69**	*e*Sn	**Sn**	**06 21 19.8**	**+0.5**
MORF				A	A	06 21 20.6	
	14nm,0.3s						
PTEO	**Sao Teotonio**	**2.82**	**64**	*e*Sn	**Sn**	**06 21 20.4**	**+0.3**
PNCL	**Nicolau / Gran**	**3.22**	**56**	*e*Pn	**Pn**	**06 20 54.2**	**+2.6**
PNCL				*e*Sn	**Sn**	**06 21 30.5**	**+0.5**
PNCL				A	A	06 21 33.4	
	4.8nm,0.3s						
MESJ	**Messejana**	**3.30**	**62**	*e*Sn	**Sn**	**06 21 31.7**	**-0.4**
MESJ				A	A	06 21 35.7	
	3.8nm,0.6s						
PBDV	**Barranco-do-Ve**	**3.32**	**73**	*e*Sn	**Sn**	**06 21 32.4**	**0.0**
PBDV				A	A	06 21 43.8	
	4.7nm,0.7s						
PMAFR	**Mafra**	**3.33**	**38**	*e*Pn	**Pn**	**06 20 54.7**	**+1.5**
PMAFR				*e*Sn	**Sn**	**06 21 27.8**	**-5.0**
PMAFR				A	A	06 21 32.9	
	17nm,0.8s						
PCVE	**Castro Verde**	**3.35**	**66**	*e*Pn	**Pn**	**06 20 55.7**	**+2.3**
PCVE				*e*Sn	**Sn**	**06 21 33.4**	**+0.1**
PCVE				A	A	06 21 38.6	
	4.2nm,0.2s						
PACT	**Alcochete**	**3.44**	**44**	*e*Pn	**Pn**	**06 20 56.6**	**+2.1**
PACT				*e*Sn	**Sn**	**06 21 36.3**	**+1.0**
PACT				A	A	06 21 39.9	
	22nm,0.6s						
PVAQ	**Vaqueiros**	**3.52**	**71**	*e*Pn	**Pn**	**06 20 57.7**	**+2.0**
PVAQ				*e*Sn	**Sn**	**06 21 37.0**	**-0.5**
PVAQ				A	A	06 21 41.8	
	5.0nm,0.2s						
PVAQ	**Vaqueiros**	**3.52**	**71**	P	**Pn**	**06 20 60.0**	**+4.2**
PVAQ				S	**Sn**	**06 21 39.0**	**+1.5**
PBEJ	**Beja**	**3.64**	**61**	*e*Sn	**Sn**	**06 21 40.3**	**0.0**
PBEJ				A	A	06 21 43.5	
	3.1nm,0.5s						
EGRO	**El Granado**	**3.74**	**70**	Pn	**Pn**	**06 21 00.7**	**+2.0**
EGRO				Sn	**Sn**	**06 21 42.9**	**+0.1**
EVO	**Evora**	**3.79**	**54**	*e*Sn	**Sn**	**06 21 43.4**	**-0.7**
EVO				A	A	06 21 47.2	
	4.2nm,0.4s						
PMTG	**Montargil**	**3.99**	**46**	*e*Pn	**Pn**	**06 21 03.5**	**+1.4**
PMTG				*e*Sn	**Sn**	**06 21 48.1**	**-0.8**
PMTG				A	A	06 21 48.6	
	2.1nm,0.2s						
PSBE	**So Bento**	**4.01**	**37**	*e*Pn	**Pn**	**06 21 04.2**	**+1.8**
PSBE				*e*Sn	**Sn**	**06 21 49.0**	**-0.4**
PESTR	**Estremoz**	**4.25**	**52**	*e*Sn	**Sn**	**06 21 55.4**	**-0.1**
PBAR	**Barrancos**	**4.29**	**63**	*e*Sn	**Sn**	**06 21 55.7**	**-0.7**
EMIN	**Mina Concepcio**	**4.42**	**70**	Pn	**Pn**	**06 21 10.0**	**+1.9**
EMIN				Sn	**Sn**	**06 21 58.2**	**-1.5**
PCAS	**Casmilo, Conde**	**4.57**	**35**	*e*Pn	**Pn**	**06 21 11.9**	**+1.7**
PCAS				*e*Sn	**Sn**	**06 22 02.2**	**-1.1**
PCAS				A	A	06 22 06.9	
	2.7nm,0.8s						
EBAD	**Badajoz**	**4.57**	**57**	Pn	**Pn**	**06 21 12.0**	**+1.9**
EBAD				⇑*i*Vmb_V		06 21 12.6	
	96nm,SNR=1.1						
EBAD				Sn	**Sn**	**06 22 02.8**	**-0.6**
PMRV	**Marv??o**	**4.71**	**48**	*e*Pn	**Pn**	**06 21 14.0**	**+1.9**
PMRV				*e*Sn	**Sn**	**06 22 05.2**	**-1.7**
PMRV				A	A	06 22 08.0	
	3.2nm,0.7s						
ESPR	**Espera**	**4.90**	**82**	Sn	**Sn**	**06 22 10.1**	**-1.3**
PCBR	**Castelo Branco**	**4.94**	**44**	*e*Pn	**Pn**	**06 21 17.2**	**+2.0**
PVIS	**Viseu**	**5.38**	**35**	*e*Pn	**Pn**	**06 21 23.0**	**+1.7**
ECAB	**El Cabril**	**5.46**	**70**	Pn	**Pn**	**06 21 23.9**	**+1.4**
ECAB				⇑*i*Vmb_V		06 21 24.5	
	63nm,SNR=1.0						
ECAB				Sn	**Sn**	**06 22 22.9**	**-2.4**
EPLA	**Plasencia**	**5.90**	**49**	Sn	**Sn**	**06 22 34.4**	**-1.7**
POLO	**Lamas de Olo**	**5.96**	**31**	*e*Sn	**Sn**	**06 22 35.7**	**-1.9**
EADA	**Adamuz**	**6.12**	**71**	Pn	**Pn**	**06 21 33.4**	**+1.9**
EADA				⇑*i*Vmb_V		06 21 35.9	
	62nm,SNR=1.4						
EADA				Sn	**Sn**	**06 22 40.0**	**-1.7**
OUK	**Oukaimeden**	**6.13**	**146**	P	**Pn**	**06 21 30.4**	**-1.5**
OUK				S	Sn	06 22 30.6	-12
ELOB	**Lobios**	**6.27**	**27**	Pn	**Pn**	**06 21 34.5**	**+0.9**
ELOB				⇑*i*Vmb_V		06 21 34.6	
	159nm,SNR=1.5						
ELOB				Sn	**Sn**	**06 22 41.9**	**-3.4**
PGAV	**Gavieira, Arco**	**6.28**	**26**	*e*Pn	**Pn**	**06 21 36.2**	**+2.5**
PGAV				*e*Sn	**Sn**	**06 22 43.0**	**-2.6**
EZAM	**Zamans**	**6.31**	**22**	Pn	**Pn**	**06 21 35.5**	**+1.5**
EZAM				⇑*i*Vmb_V		06 21 38.5	
	76nm,SNR=0.9						
EZAM				Sn	**Sn**	**06 22 42.9**	**-3.2**
MD31	**MD31**	**6.84**	**118**	P	**Pn**	**06 21 40.1**	**-1.4**
MD31				S	Sn	06 22 48.0	-11
ECAL	**Calabor**	**6.88**	**34**	Pn	**Pn**	**06 21 43.2**	**+1.3**
ECAL				⇑*i*Vmb_V		06 21 45.3	
	56nm,SNR=1.3						
ECAL				Sn	**Sn**	**06 22 56.5**	**-3.8**
MDT	**Midelt**	**6.98**	**118**	P	**Pn**	**06 21 42.3**	**-1.0**
MDT				S	**Sn**	**06 22 55.5**	**-7.3**
EAGO	**Agolada(Pontev**	**7.09**	**23**	Pn	**Pn**	**06 21 46.3**	**+1.6**
EAGO				⇑*i*Vmb_V		06 21 47.0	
	81nm,SNR=1.5						
EQES	**Quesada**	**7.21**	**76**	Sn	**Sn**	**06 23 05.8**	**-2.8**
EPON	**Pontenova**	**7.87**	**26**	Pn	**Pn**	**06 21 56.4**	**+0.9**
EPON				⇑*i*Vmb_V		06 21 57.9	
	90nm,SNR=1.0						

*IDC **18** 06:23:28.4±1.8,20°44S×168°99E,h0km,mb4.0/7, mbtmp4.0/8,ML3.8/1,MS3.6/3,Error ellipse: s-maj=65.3km s-min=22.7km az=139.0*
*NOU **18** 06:23:31.4,20°33S×168°84E,h14km,MLv4.6/8,Loyalty Islands*

ISC 18 06:23:33.6±0.8,20°38S±0°08×168°9E±0°1,h31km,n17, σ1s79/17,mb4.0/8,Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**1.36**	**216**	P	**Pn**	**06 23 54.6**	**-2.0**
PINNC	**Pines Island,**	**2.60**	**211**	P	**Pn**	**06 24 13.8**	**+0.2**
DVP	**Devils Point**	**2.72**	**346**	P	**Pn**	**06 24 13.7**	**-1.5**
DZM	**Mont Dzumac**	**2.84**	**233**	Pn	**Pn**	**06 24 15.4**	**-1.6**
	14nm,0.3s,baz=98,slow=5.5,SNR=149						
DZM				Sn	**Sn**	**06 24 47.8**	**-2.4**
	57nm,0.3s,baz=285,slow=23,SNR=11						
	59nm,0.5s						
NOUC	**Port Laguerre**	**2.96**	**234**	P	**Pn**	**06 24 18.1**	**-0.5**
KOUNC	**Koumac, New Ca**	**4.32**	**267**	P	**Pn**	**06 24 36.6**	**-0.7**
MSVF	**Nonsavu**	**9.05**	**75**	LR	LR	06 28 37.0	
	comp=Z,567nm,18.3s,baz=213,slow=34						
CTA	**Charters Tower**	**21.25**	**267**	P	**P**	**06 28 21.9**	**+4.6**
	6.5nm,1.1s,baz=69,slow=12,SNR=4.2						
CTA				LR	LR	06 35 21.5	
	comp=Z,105nm,18.3s,baz=84,slow=33						
STKA	**Stephens Creek**	**26.98**	**239**	P	**P**	**06 29 13.7**	**+0.9**
	1.5nm,0.7s,baz=46,slow=6.4,SNR=4.2						
STKA				LR	LR	06 40 31.8	
	comp=Z,120nm,18.3s,baz=40,slow=38						
	1.5nm,0.7s						
WRA	**Warramunga Arr**	**32.41**	**265**	P	**P**	**06 29 59.8**	**-1.2**
	0.8nm,0.8s,baz=90,slow=7.5,SNR=14						
	0.8nm,0.8s						
PETK	**Petropavlovsk-**	**73.82**	**353**	P	**P**	**06 35 05.5**	**+0.6**
	3.2nm,0.9s,baz=182,slow=15,SNR=6.7						
	3.2nm,0.9s						
KLR	**Kul'dur**	**76.77**	**336**	P	**P**	**06 35 23.1**	**+1.1**
	1.0nm,0.6s,baz=146,slow=3.6,SNR=4.3						
	1.0nm,0.6s						
SONM	**Songino Array**	**87.93**	**323**	P	**P**	**06 36 20.8**	**+0.3**
	0.6nm,0.6s,baz=140,slow=5.3,SNR=5.2						
	0.6nm,0.6s						
VNA3	**Neumayer Olymp**	**88.62**	**180**	P	**P**	**06 36 24.0**	**+0.7**
NVAR	**Mina Array Bea**	**89.79**	**49**	P	**P**	**06 36 29.2**	**-0.4**
	1.3nm,0.9s,baz=222,slow=6.1,SNR=7.0						
	1.3nm,0.9s						
ILAR	**Eielson Array**	**91.41**	**17**	P	**P**	**06 36 34.2**	**-1.9**
	0.3nm,0.7s,baz=239,slow=4.7,SNR=4.2						
	0.3nm,0.7s						
GERES	**GERESS Array B**	**145.33**	**331**	PKPbc	**PKPbc**	**06 43 08.2**	**-0.1**
	0.5nm,0.6s,baz=59,slow=8.0,SNR=4.4						

*INET **18** 06:30:54.4±0.9,12°78N×87°10W,h15km±3km,ML3.1*
*SNET **18** 06:30:55.2±1.4,12°84N×87°07W,h8km±18km,ML2.4*

ISC 18 06:30:53.5±1.6,12°91N±0°05×86°97W±0°05,h3km±14km, n13,σ0s60/18,Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.22**	**201**	*e*P	**Pg**	**06 30 58.3**	**+0.5**
CRIN				*e*S	**Sg**	**06 31 01.2**	**+0.6**
CRIN				IAML		06 31 07.7	
	comp=N,5μm,0.2s						
TEL3	**Telica 3**	**0.35**	**160**	*e*P	**Pb**	**06 31 01.8**	**-0.6**
CSGN	**Cosiguina Volc**	**0.58**	**277**	*e*P	**Pg**	**06 31 04.5**	**-0.1**
COPN	**Copaltepe**	**0.81**	**153**	*e*P	**Pb**	**06 31 09.3**	**-0.9**
CNCH	**Conchagua**	**0.92**	**294**	*e*P	**Pg**	**06 31 11.4**	**+0.2**
CNCH				*e*S	**Sb**	**06 31 25.6**	**+0.8**
CNCH				IAML		06 31 30.6	
	comp=Z,219nm,0.4s						
RCON	**San Juan de Ri**	**0.98**	**54**	*e*P	**Pn**	**06 31 15.3**	**+1.0**
LCND	**La Caada**	**0.98**	**294**	*e*P	**Pg**	**06 31 11.8**	**-0.6**
LCND				*e*S	**Sg**	**06 31 24.8**	**-0.3**
LCND				IAML		06 31 29.4	
	comp=Z,80nm,0.4s						
MATN	**Matagalpa**	**1.02**	**89**	*e*P	**Pn**	**06 31 14.2**	**-0.6**
TGUH	**Tegucigalpa,Un**	**1.18**	**346**	*e*P	**Pn**	**06 31 17.4**	**+0.3**
TGUH				*e*S	**Sn**	**06 31 33.9**	**+0.2**
TGUH	**Tegucigalpa,Un**	**1.18**	**346**	*e*P	**Pn**	**06 31 17.7**	**+0.6**
BOAB	**BOACO BROADBAN**	**1.35**	**109**	*e*P	**Pn**	**06 31 19.6**	**+0.4**
COEG	**Centro de Oper**	**1.99**	**291**	*e*P	**Pn**	**06 31 23.2**	**0.0**
COEG				*e*S	**Sn**	**06 31 53.5**	**-0.2**
COEG				IAML		06 31 59.2	
	comp=Z,19nm,0.4s						
SJTE	**Alcalda de S**	**2.11**	**290**	*e*P	**Pn**	**06 31 30.0**	**+0.2**

IDC 18 06:40:16.1±2.7,22°22S×147°85E,h0km,mbtmp3.3/3, ML3.0/3,Error ellipse: s-maj=40.2km s-min=20.1km az=68.0,Queensland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**2.59**	**325**	Pn	Pn	06 40 59.6	+0.2
	3.0nm,0.3s,baz=140,slow=17,SNR=50						
CTA				Pg	Pb	06 41 04.4	+0.9
	6.7nm,0.3s,baz=130,slow=18,SNR=13						
CTA				Lg	Lg	06 41 37.7	
	5.5nm,0.3s,baz=44,slow=23,SNR=11						
	7.7nm,0.2s						
STKA	**Stephens Creek**	**11.11**	**209**	Pn	Pn	06 42 57.3	+1.0
	0.1nm,0.3s,baz=32,slow=18,SNR=1.5						
	0.7nm,0.4s						
WRA	**Warramunga Arr**	**12.81**	**278**	Pn	Pn	06 43 19.3	-0.4
	baz=96,slow=12,SNR=2.6						
WRA				Sn	Sn	06 45 43.0	-0.2
	baz=93,slow=21,SNR=1.4						
WRA				Lg	Lg	06 47 03.9	
	baz=108,slow=29,SNR=4.2						
	0.2nm,0.5s						
TORD	**Torodi Ar. Bea**	**146.58**	**260**	PKPbc	PKPdf	06 59 59.2	+0.3
	0.4nm,0.8s,baz=101,slow=4.6,SNR=2.3						

*IDC **18** 06:44:34.1±0.7,5°20S×104°30E,h0km,mb4.2/11, mbtmp4.2/11,MS3.5/16,Error ellipse: s-maj=40.6km s-min=16.7km az=58.0*
*DJA **18** 06:44:38.7±0.2,5°S±3°×10°4E±°,h10km,M4.7/17,mb4.7/6, mB5.9/1,MLv4.7/17,Mw(mB)5.5/1*
*NEIC **18** 06:44:42.1±1.4,5°17S±0°07×104°29E±0°08,h56km±5km, mb4.3/17,Error ellipse: s-maj=14.1km s-min=7.3km az=53.0*

ISC 18 06:44:39.7±0.5,5°26S±0°06×104°37E±0°05,h35km,n74, σ1s87/51,mb4.3/16,MS3.6/15,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**0.30**	**154**	P	Pn	06 44 42.6	-5.0
KASI				S	**Sn**	**06 44 46.5**	**-6.4**
LWLI	**Liwa**	**0.39**	**308**	P	**Pn**	**06 44 45.4**	**-3.5**
KLI	**Kotabumi**	**0.62**	**51**	P	**Pn**	**06 44 50.1**	**-2.0**
BLSI	**Bandar Lampung**	**0.88**	**97**	P	**Pn**	**06 44 53.7**	**-1.9**
MNAI	**Manna**	**1.66**	**302**		**Pn**	**06 45 07.4**	**+1.1**
MNAI	**Manna**	**1.66**	**302**	P	**Pn**	**06 45 07.4**	**+1.1**
MNAI				S	**Sn**	**06 45 30.4**	**+3.9**
SBJI	**Serang**	**1.95**	**116**	P	**Pn**	**06 45 11.2**	**+0.9**
PMBI	**Palembang**	**2.35**	**10**		**Pn**	**06 45 17.4**	**+1.6**
PMBI	**Palembang**	**2.35**	**10**	P	Pn	06 45 19.9	+4.1
TNG	**Tangerang**	**2.44**	**112**	P	**Pn**	**06 45 18.3**	**+1.2**
DBJI	**Dramaga**	**2.70**	**119**	P	**Pn**	**06 45 21.5**	**+0.9**
SKJI	**Sukabumi**	**2.79**	**129**	P	**Pn**	**06 45 23.9**	**+2.1**
MASI	**Maura Aman, Be**	**2.98**	**315**	P	**Pn**	**06 45 28.0**	**+3.4**
CNJI	**Cibinong**	**3.42**	**127**	P	**Pn**	**06 45 31.5**	**+1.0**
PPBI	**Pangkal Pinang**	**3.54**	**30**	P	**Pn**	**06 45 33.1**	**+0.9**
KRJI	**Kerinci**	**4.28**	**317**	P	Pn	06 45 46.4	+4.0
DSRI	**Dabo**	**4.75**	**3**	P	**Pn**	**06 45 50.4**	**+1.6**
BKNI	**Bangkinang**	**6.46**	**329**	P	Pn	06 46 16.6	+4.2
	0.6nm116nm,0.4s						
UGM	**Wanagama**	**6.66**	**114**	Pn	**Pn**	**06 46 18.7**	**+3.5**
WOJI	**Wonogiri, Jawa**	**7.00**	**112**	P	**Pn**	**06 46 24.1**	**+4.3**
	0.2nm54nm,1.0s						
KAPI	**Kappang**	**15.32**	**90**	LR	LR	06 54 41.3	
	comp=Z,239nm,18.1s,baz=271,slow=39						
KAPI	**Kappang**	**15.32**	**90**	Pn	**Pn**	**06 48 15.7**	**+2.2**
KAPI				IAmb	IAmb	06 48 20.0	
	comp=Z,15nm,1.1s						
SPSI	**Sidrap Palu**	**15.41**	**86**	P	**Pn**	**06 48 15.8**	**+1.2**
	comp=Z,23nm,1.1s						
BNSI	**Bone**	**15.71**	**88**	P	**P**	**06 48 23.1**	**+1.0**
	comp=Z,76nm,1.2s						
GIRL	**Giralia**	**19.74**	**152**	P	**Pn**	**06 49 08.6**	**+0.3**

MBWA	**Marble Bar**	**21.73**	**138**	P		**P**	**06 49 29.6**	**+1.5**
MBWA				IAmb		IAmb	06 49 30.8	
	comp=Z,19nm,1.2s							
PSA00	**Pilbara Seismi**	**22.09**	**139**	P		**P**	**06 49 32.6**	**+0.6**
CMAR	**Chiang Mai Arr**	**24.16**	**347**	P		**P**	**06 49 52.2**	**-0.6**
	comp=Z,2.2nm,0.3s,baz=184,slow=8.6,SNR=12							
CMAR				LR		LR	06 59 51.5	
	comp=Z,93nm,18.4s,baz=165,slow=38							
	comp=Z,2.2nm,0.3s							
PALK	**Pallekele**	**26.69**	**298**	LR		LR	06 59 14.6	
	comp=Z,127nm,21.9s,baz=224,slow=33							
MTN	**Manton Dam**	**27.47**	**108**	P		**P**	**06 50 23.2**	**+0.4**
MTN				IAmb		IAmb	06 50 41.1	
	comp=Z,11nm,1.1s							
H01W3	**Cape Leeuwin H**	**30.84**	**164**	T		T	07 22 32.5	
	baz=343,slow=76,SNR=19							
H01W1	**Cape Leeuwin H**	**30.85**	**164**	T		T	07 22 33.4	
	baz=343,slow=76,SNR=9.8							
H01W2	**Cape Leeuwin H**	**30.85**	**164**	T		T	07 22 33.4	
	baz=343,slow=76,SNR=12							
H08S2	**Diego Garcia H**	**31.76**	**264**	T		T	07 24 14.0	
	baz=88,slow=76,SNR=4.0							
H08S3	**Diego Garcia H**	**31.76**	**264**	T		T	07 24 20.1	
	baz=88,slow=76,SNR=3.2							
H08S1	**Diego Carcia H**	**31.77**	**264**	T		T	07 24 20.9	
	baz=88,slow=76,SNR=3.9							
WRA	**Warramunga Arr**	**32.80**	**119**	P		**P**	**06 51 07.5**	**-0.8**
	comp=Z,2.0nm,0.7s,baz=296,slow=9.4,SNR=18							
	comp=Z,2.0nm,0.7s							
WRA	**Warramunga Arr**	**32.60**	**119**	P		**P**	**06 51 07.4**	**-0.9**
WR0	**Warramunga Arr**	**32.78**	**119**	P		**P**	**06 51 09.4**	**-0.5**
WR0				IAmb		IAmb	06 51 16.1	
	comp=Z,9.0nm,1.4s							
ASAR	**Alice Springs**	**33.83**	**126**	P		**P**	**06 51 18.9**	**0.0**
AS31	**Alice Springs**	**33.83**	**126**	P		**P**	**06 51 18.7**	**-0.2**
JOW	**Kunigami**	**39.41**	**35**	LR		LR	07 10 23.4	
	comp=Z,32nm,18.1s,baz=34,slow=39							
CTA	**Charters Tower**	**43.29**	**114**	LR		LR	07 14 31.8	
	comp=Z,69nm,18.5s,baz=86,slow=41							
STKA	**Stephens Creek**	**43.75**	**132**	P		**P**	**06 52 42.4**	**+0.5**
	comp=Z,4.4nm,0.7s,baz=303,slow=8.3,SNR=8.1							
STKA				LR		LR	07 13 42.8	
	comp=Z,87nm,18.3s,baz=27,slow=40							
	comp=Z,4.4nm,0.7s							
STKA	**Stephens Creek**	**43.75**	**132**	IAmb		IAmb	06 52 50.0	
	comp=Z,3.8nm,1.4s							
MJAR	**Matsushiro Arr**	**52.25**	**35**	LR		LR	07 16 12.0	
	comp=Z,29nm,19.4s,baz=174,slow=36							
SONM	**Songino Array**	**52.89**	**2**	P		**P**	**06 53 52.8**	**+0.6**
	comp=Z,2.2nm,0.7s,baz=181,slow=8.4,SNR=15							
	comp=Z,2.2nm,0.7s							
SONM	**Songino Array**	**52.89**	**2**	IAmb		IAmb	06 53 54.4	
	comp=Z,1.8nm,0.7s							
MK31	**Makanchi Array**	**55.39**	**342**	P		**P**	**06 54 08.8**	**-1.6**
MKAR	**Makanchi Array**	**55.39**	**342**	P		**P**	**06 54 09.3**	**-1.1**
	comp=Z,1.8nm,0.9s,baz=143,slow=8.3,SNR=14							
	comp=Z,1.8nm,0.9s							
KLR	**Kul'dur**	**59.27**	**21**	LR		LR	07 21 51.2	
	comp=Z,4.5nm,18.8s,baz=152,slow=38							
ASAJ	**Asahikawa**	**59.98**	**31**	LR		LR	07 22 01.6	
	comp=Z,30nm,18.0s,baz=55,slow=38							
ZAA0	**Zalesovo Array**	**61.23**	**347**	P		**P**	**06 54 50.1**	**-0.9**
ZALV	**Zalesovo Beam**	**61.23**	**347**	P		**P**	**06 54 49.7**	**-1.2**
	comp=Z,2.1nm,0.7s,baz=154,slow=4.4,SNR=9.2							
ZALV				LR		LR	07 22 54.8	
	comp=Z,46nm,20.8s,baz=166,slow=38							
	comp=Z,2.1nm,0.7s							
BVAR	**Borovoye Array**	**64.77**	**338**	LR		LR	07 26 33.7	
	comp=Z,32nm,19.6s,baz=332,slow=39							
ABKAR	**Akbulak array**	**66.59**	**330**	P		**P**	**06 55 24.7**	**-1.7**
ABKAR	**Akbulak array**	**66.59**	**330**	P		**P**	**06 55 24.7**	**-1.7**
ABKAR				IAmb		IAmb	06 55 25.7	
	comp=Z,2.9nm,0.8s							
BKZ	**Black Stump Fm**	**72.85**	**129**	P		**P**	**06 56 05.3**	**0.0**
KBZ	**Khabaz**	**73.61**	**318**	P		**P**	**06 56 08.4**	**-1.1**
	comp=Z,1.9nm,0.6s,baz=141,slow=6.7,SNR=4.4							
	comp=Z,1.9nm,0.6s							
EIL	**Elat**	**74.94**	**302**	LR		LR	07 27 05.4	
	comp=Z,36nm,21.9s,baz=88,slow=34							
LSZ	**Lusaka**	**75.32**	**256**	LR		LR	07 26 37.0	
	comp=Z,32nm,18.0s,baz=164,slow=34							
LBTB	**Lobatse**	**77.63**	**246**	LR		LR	07 23 05.1	
	comp=Z,70nm,20.6s,baz=92,slow=30							
VNDA	**Vanda**	**78.16**	**169**	P		**P**	**06 56 35.7**	**+0.8**
	comp=Z,1.4nm,0.9s,baz=290,slow=5.5,SNR=4.7							
	comp=Z,1.4nm,0.9s							
VNDA	**Vanda**	**78.16**	**169**	P		**P**	**06 56 34.8**	**-0.1**
VNDA				IAmb		IAmb	06 56 42.3	
	comp=Z,2.7nm,0.8s							
BR131	**Keskin Array S**	**78.72**	**312**	P		**P**	**06 56 37.8**	**-1.1**
BR131				IAmb		IAmb	06 56 38.8	
	comp=Z,5.1nm,1.1s							
BRTR	**Keskin Array B**	**78.72**	**312**	P		**P**	**06 56 37.9**	**-1.0**
	com

PRZ	**Przheval'sk**	1.04	67	⇑	*i*	P	**Pb**	07 04 59.3 -1.8
PRZ	baz=63			⇑	*i*	S	**Sb**	07 05 14.2 -0.7
AAA	**Alma-Ata**	1.13	353		*e*	P	**Pn**	07 05 02.6 -0.3
AAA	baz=53				*e*	S	**Sn**	07 05 18.3 -0.3
AAA	**Alma-Ata**	1.13	353		*e*	P	**Pn**	07 05 02.6 -0.3
AAA	202nm,0.1s				*e*	S	**Sn**	07 05 18.3 -0.3
AAA	**Alma-Ata**	1.13	353			P	**Pn**	07 05 02.6 -0.3
AAA	202nm,0.1s					S	**Sn**	07 05 18.3 -0.3
KNDC	**Almaty**	1.13	355	⇓		P	**Pb**	07 05 01.3 -1.4
KNDC	9.4nm,0.2s			⇑		S	**Sn**	07 05 18.3 -0.4
MTBS	**Maitube**	1.15	335		*e*	P	**Pn**	07 05 02.3 -1.0
MTBS	baz=36				*e*	S	**Sb**	07 05 17.9 -0.3
MTBS	**Maitube**	1.15	335		*e*	P	**Pn**	07 05 02.3 -1.0
MTBS	26nm,0.2s				*e*	S	**Sb**	07 05 17.9 -0.3
MTBS	**Maitube**	1.15	335			P	**Pn**	07 05 02.3 -1.0
MTBS	26nm,0.2s					S	**Sb**	07 05 17.9 -0.3
KST	**Kastek**	1.27	319		*e*	P	**Pn**	07 05 04.6 -0.4
KST	baz=20				*e*	S	**Sn**	07 05 21.8 -0.5
KST	**Kastek**	1.27	319		*e*	P	**Pn**	07 05 04.6 -0.4
KST	8.6nm,0.2s				*e*	S	**Sn**	07 05 21.8 -0.5
KST	**Kastek**	1.27	319			P	**Pn**	07 05 04.6 -0.4
KST	8.6nm,0.2s					S	**Sn**	07 05 21.8 -0.5
TKM2	**Tokmak 2**	1.39	307	⇑		P	**Pn**	07 05 06.5 -0.1
TKM2	9.5nm,0.2s,SNR=31			⇓		S	**Sb**	07 05 25.6 +0.4
TKM2	**Tokmak 2**	1.39	307	⇓	*i*	P	**Pn**	07 05 06.1 -0.6
TKM2	71nm,0.1s baz=9.0			⇓	*i*	S	**Sb**	07 05 25.0 -0.1
TKM2	**Tokmak 2**	1.39	307	⇓		P	**Pn**	07 05 06.7 0.0
TKM2	1.5nm,0.2s			⇑		S	**Sb**	07 05 25.3 +0.1
ZHN	**Zhinishke**	1.46	42		*e*	P	**Pb**	07 05 07.7 -0.5
ZHN	17nm,0.3s baz=40				*e*	S	**Sg**	07 05 27.2 -0.4
ZHN	**Zhinishke**	1.46	42		*e*	P	**Pb**	07 05 07.7 -0.5
ZHN	71nm,0.2s				*e*	S	**Sg**	07 05 27.2 -0.4
ZHN	**Zhinishke**	1.46	42			P	**Pb**	07 05 07.7 -0.5
ZHN	71nm,0.2s					S	**Sg**	07 05 27.2 -0.4
DGS	**Degeres**	1.51	320		*e*	P	**Pb**	07 05 09.0 -0.2
DGS	baz=21				*e*	S	**Sg**	07 05 29.8 +0.3
DGS	**Degeres**	1.51	320		*e*	P	**Pb**	07 05 09.0 -0.2
DGS	4.4nm,0.1s				*e*	S	**Sg**	07 05 29.8 +0.3
DGS	**Degeres**	1.51	320			P	**Pb**	07 05 09.0 -0.2
DGS	4.4nm,0.1s					S	**Sg**	07 05 29.8 +0.3
KTBS	**Karatobe**	1.65	349		*e*	P	**Pb**	07 05 11.3 -0.2
KTBS	baz=49				*e*	S	**Sg**	07 05 33.3 -0.6
KTBS	**Karatobe**	1.65	349		*e*	P	**Pb**	07 05 11.3 -0.2
KTBS	15nm,0.2s				*e*	S	**Sg**	07 05 33.2 -0.6
KTBS	**Karatobe**	1.65	349			P	**Pb**	07 05 11.3 -0.2
KTBS	15nm,0.2s					S	**Sg**	07 05 33.3 -0.6
KBK	**Karagaybulak**	1.70	290	⇓		P	**Pb**	07 05 12.2 -0.1
KBK	12nm,0.1s,SNR=11			⇑		S	**Sg**	07 05 35.2 -0.1
KBK	**Karagaybulak**	1.70	290	⇓	*i*	P	**Pn**	07 05 11.2 +0.3
KBK	44nm,0.2s baz=92			⇓	*i*	S	**Sb**	07 05 34.3 +0.4
CHKK	**Chushkaly**	1.76	357		*e*	P	**Pb**	07 05 13.3 -0.1
CHKK	baz=92				*e*	S	**Sg**	07 05 36.8 -0.7
CHKK	**Chushkaly**	1.76	357		*e*	P	**Pb**	07 05 13.3 -0.1
CHKK	30nm,0.2s				*e*	S	**Sg**	07 05 36.8 -0.7
CHKK	**Chushkaly**	1.76	357			P	**Pb**	07 05 13.3 -0.1
CHKK	30nm,0.2s					S	**Sg**	07 05 36.8 -0.7
UZB	**Uzynbulak**	1.76	53		*e*	P	**Pb**	07 05 12.8 -0.7
UZB	baz=51				*e*	S	**Sb**	07 05 36.0 +0.2
UZB	**Uzynbulak**	1.76	53		*e*	P	**Pb**	07 05 12.8 -0.7
UZB	31nm,0.3s				*e*	S	**Sb**	07 05 36.0 +0.2
UZB	**Uzynbulak**	1.76	53			P	**Pb**	07 05 12.8 -0.7
UZB	31nm,0.3s					S	**Sb**	07 05 36.0 +0.2
KPKS	**Kokpek**	1.80	40		*e*	P	**Pb**	07 05 13.6 -0.4
KPKS	baz=38				*e*	S	**Sb**	07 05 37.3 +0.5
KPKS	**Kokpek**	1.80	40		*e*	P	**Pb**	07 05 13.6 -0.4
KPKS	106nm,0.2s				*e*	S	**Sb**	07 05 37.3 +0.5
KPKS	**Kokpek**	1.80	40			P	**Pb**	07 05 13.6 -0.4
KPKS	106nm,0.2s					S	**Sb**	07 05 37.3 +0.5
KRBS	**Karabastau**	1.92	327		*e*	P	**Pb**	07 05 16.0 0.0
KRBS	baz=28				*e*	S	**Sb**	07 05 41.2 +1.1
KRBS	**Karabastau**	1.92	327		*e*	P	**Pb**	07 05 16.0 0.0
KRBS	11nm,0.2s				*e*	S	**Sb**	07 05 41.3 +1.1
KRBS	**Karabastau**	1.92	327			P	**Pb**	07 05 16.0 0.0
KRBS	11nm,0.2s					S	**Sb**	07 05 41.3 +1.1
UCH	**Uchtor**	1.93	275	⇑		P	**Pb**	07 05 15.7 -0.8
UCH	3.3nm,0.2s,SNR=11			⇓		S	**Sb**	07 05 41.5 +0.6
UCH	**Uchtor**	1.93	275	⇑	*i*	P	**Pn**	07 05 14.8 +0.4
UCH	13nm,0.2s baz=77			⇑	*i*	S	**Sb**	07 05 40.2 -0.8
CHMS	**Chumysh**	1.96	298	⇓		P	**Pb**	07 05 16.2 -0.6
CHMS	4.7nm,0.2s			⇑		S	**Sb**	07 05 42.2 +0.9
CHMS	**Chumysh**	1.96	298	⇑	*i*	P	**Pn**	07 05 15.2 +0.8
CHMS	32nm,0.3s baz=0.0			⇑	*i*	S	**Sb**	07 05 40.7 -0.7
CHMS	**Chumysh**	1.96	298	⇑	Pn		**Pb**	07 05 17.0 +0.2
CHMS	baz=0.0 2.8nm,0.3s			⇑	Sn		**Sb**	07 05 42.3 +0.9
	10nm,0.5s							

AAK	**Ala-Archa**	2.01	287	⇓		P	**Pb**	07 05 17.1 -0.6
AAK	11nm,0.3s 48nm,0.4s			⇓		S	**Sb**	07 05 44.1 +1.1
AAK	**Ala-Archa**	2.01	287	⇓	*i*	P	**Pn**	07 05 15.8 +0.6
AAK	baz=88			⇓	*e*	S	**Sb**	07 05 41.9 -1.0
SHLS	**Shalkode**	2.04	58		*e*	P	**Pg**	07 05 22.6 +2.7
SHLS	32nm,0.2s 72nm,0.4s				*e*	S	**Sg**	07 05 53.2 +6.9
SHLS	**Shalkode**	2.04	58			Pg	**Pg**	07 05 22.6 +2.7
SHLS	32nm,0.2s 72nm,0.4s					Lg	Lg	07 05 53.2
ARLS	**Aral**	2.09	265	⇑	*e*	P	**Pn**	07 05 16.3 +0.1
ARLS	baz=66 baz=66			⇑	*i*	S	**Sn**	07 05 43.2 +0.7
ARXS	**Arharly**	2.19	14		*e*	P	**Pb**	07 05 20.2 -0.4
ARXS	29nm,0.2s 57nm,0.2s				*e*	S	**Sg**	07 05 49.7 -1.3
ARXS	**Arharly**	2.19	14			Pg	**Pb**	07 05 20.2 -0.4
ARXS	29nm,0.2s 57nm,0.2s					Lg	Lg	07 05 49.7
USP	**Ospenovka**	2.25	302	⇓		P	**Pb**	07 05 20.9 -0.9
USP	6.2nm,0.2s,SNR=6.3 baz=4.0			⇓	*i*	P	**Pn**	07 05 19.1 +0.7
USP	baz=4.0			⇓	*i*	S	**Sb**	07 05 47.9 -1.9
EKS2	**Erkin-Say**	2.53	284	⇓	*i*	P	**Pn**	07 05 22.6 +0.3
EKS2	baz=85 baz=85			⇓	*i*	S	**Sn**	07 05 54.2 +0.8
MRKS	**Merke**	2.95	284		*e*	P	**Pb**	07 05 35.1 +1.5
MRKS	1.6nm,0.1s 29nm,0.4s				*e*	S	**Sg**	07 06 15.1 -0.4
MRKS	**Merke**	2.95	284			Pg	**Pb**	07 05 35.1 +1.5
MRKS	1.6nm,0.1s 29nm,0.4s					Lg	Lg	07 06 15.1
DJR	**Jarkent**	2.98	40		*e*	P	**Pb**	07 05 34.8 +0.7
DJR	7.8nm,0.3s 17nm,0.3s				*e*	S	**Sg**	07 06 13.7 -2.8
DJR	**Jarkent**	2.98	40			Pg	**Pb**	07 05 34.8 +0.7
DJR	7.8nm,0.3s 17nm,0.3s					Lg	Lg	07 06 13.7
KAPS	**Kapalarasan**	3.59	26		*e*	P	**Pb**	07 05 45.6 +1.2
KAPS	3.9nm,0.5s 10nm,0.2s				*e*	S	**Sg**	07 06 32.2 -3.8
KAPS	**Kapalarasan**	3.59	26			Pg	**Pb**	07 05 45.6 +1.2
KAPS	3.9nm,0.5s 10nm,0.2s					Lg	Lg	07 06 32.2
BTLS	**Baital**	3.69	324		*e*	P	**Pb**	07 05 48.1 +1.8
BTLS	0.7nm,0.1s 3.0nm,0.4s				*e*	S	**Sg**	07 06 35.5 -3.8
BTLS	**Baital**	3.69	324			Pg	**Pb**	07 05 48.1 +1.8
BTLS	0.7nm,0.1s 3.0nm,0.4s					Lg	Lg	07 06 35.5
KK31	**Karatay Array**	4.97	284	⇓		Pg	**Pb**	07 06 12.2 +4.1
KK31	0.3nm,0.3s,baz=0.0,slow=0.1,SNR=4.1 0.9nm,0.3s,baz=109,slow=26,SNR=9.7					Lg	Lg	07 07 16.3
MK31	**Makanchi Array**	5.99	37	⇑		Pn	**Pn**	07 06 09.4 -0.3
MK31	0.1nm,0.3s,baz=215,slow=16,SNR=4.0 0.4nm,0.5s,baz=214,slow=27,SNR=3.5			⇑		Lg	Lg	07 07 46.1

*NEIC **18** 07:16:41.3±0.4, 18.6°N±0.2×67.32°W±0.04, h90km±13km,*
Error ellipse: s-maj=32.1km s-min=5.4km az=179.0
*RSPR **18** 07:16:41.8, 18.57°N×67.31°W, h89km, MD3.3/16*
*OSPL **18** 07:16:42.2±0.5, 18.53°N×67.32°W, h91km±7km, ML2.5*
ISC 18 07:16:40.0±1.3, **18.53N**±0.09×**67.35W**±0.04, **h100**km, **n59, σ0.54/68, 14C-3D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IDE	**Isla Desecheo**	**0.19**	**219**	⇑	*e*	P	**Pn**	**07 16 54.4**	**+0.2**
IDE	**Isla Desecheo**	**0.19**	**219**		*e*	S	**Sn**	**07 17 04.2**	**-0.6**
AGPR	**Aguadilla, PR**	**0.24**	**106**	⇑	*e*	P	**Pn**	**07 16 54.4**	**+0.1**
AGPR	**Aguadilla, PR**	**0.24**	**106**		*e*	S	**Sn**	**07 17 04.0**	**-1.0**
AGPR	**Aguadilla, PR**	**0.24**	**106**			P	**Pn**	**07 16 54.4**	**+0.1**
AGPR							**Sn**	**07 17 04.0**	**-1.0**
AGPR	**Aguadilla, PR**	**0.24**	**106**		*i*	P	**Pn**	**07 16 54.4**	**+0.1**
AGPR					*e*	S	**Sn**	**07 17 03.7**	**-1.3**
AGPR	comp=Z,235nm,0.2s					IAML		07 17 05.1	
PRSN	**Puerto Rico Se**	**0.37**	**148**			Pn	**Pn**	**07 16 55.7**	**+0.7**
LSP	**Las Mesas**	**0.44**	**145**	⇑	*e*	P	**Pn**	**07 16 55.6**	**+0.1**
LSP	**Las Mesas**	**0.44**	**145**		*e*	S	**Sn**	**07 17 06.3**	**-0.6**
CRPR	**Cabo Rojo, PR**	**0.57**	**156**	⇑	*e*	P	**Pn**	**07 16 56.6**	**+0.3**
CRPR	**Cabo Rojo, PR**	**0.57**	**156**		*e*	S	**Sn**	**07 17 08.5**	**-0.1**
CRPR	**Cabo Rojo, PR**	**0.57**	**156**			P	**Pn**	**07 16 56.6**	**+0.3**
CRPR							**Sn**	**07 17 08.5**	**-0.1**
CRPR	**Cabo Rojo, PR**	**0.57**	**156**			IAML		07 17 09.6	
CRPR	comp=E,76nm,0.2s comp=N,95nm,0.3s					IAML		07 17 09.6	
CRPR	**Cabo Rojo, PR**	**0.57**	**156**		*i*	P	**Pn**	**07 16 56.8**	**+0.5**
CRPR					*e*	S	**Sn**	**07 17 07.3**	**-1.3**
CRPR						IAML		07 17 09.7	
AOPR	**Arecibo Observ**	**0.60**	**108**	⇑	*e*	P	**Pn**	**07 16 56.5**	**-0.1**
AOPR	**Arecibo Observ**	**0.60**	**108**		*e*	S	**Sn**	**07 17 08.1**	**-0.9**
AOPR	**Arecibo Observ**	**0.60**	**108**			P	**Pn**	**07 16 56.5**	**-0.1**
AOPR							**Sn**	**07 17 08.1**	**-0.9**
MLPR	**Magueyes Islan**	**0.63**	**152**	⇓	*e*	P	**Pn**	**07 16 57.3**	**+0.5**
MLPR	**Magueyes Islan**	**0.63**	**152**		*e*	S	**Sn**	**07 17 09.2**	**-0.2**
MLPR	**Magueyes Islan**	**0.63**	**152**			P	**Pn**	**07 16 57.3**	**+0.5**
MLPR							**Sn**	**07 17 09.2**	**-0.2**
MLPR	**Magueyes Islan**	**0.63**	**152**			IAML		07 17 10.5	
UUPR	**Utuado, UPR, P**	**0.66**	**115**	⇓	*e*	P	**Pn**	**07 16 57.2**	**+0.1**
UUPR	**Utuado, UPR, P**	**0.66**	**115**		*e*	S	**Sn**	**07 17 09.3**	**-0.6**
UUPR	**Utuado, UPR, P**	**0.66**	**115**			P	**Pn**	**07 16 57.2**	**+0.1**
UUPR							**Sn**	**07 17 09.3**	**-0.6**
GBPR	**Guanica, Bosqu**	**0.71**	**141**	⇑	*e*	P	**Pn**	**07 16 58.0**	**+0.4**
OBIP	**Obispado Ponce**	**0.86**	**124**	⇑	*e*	P	**Pn**	**07 16 59.1**	**+0.2**
OBIP	**Obispado Ponce**	**0.86**	**124**		*e*	S	**Sn**	**07 17 12.7**	**-0.5**
OBIP	**Obispado Ponce**	**0.86**	**124**			P	**Pn**	**07 16 59.1**	**+0.2**
OBIP							**Sn**	**07 17 12.7**	**-0.5**
OBIP	**Obispado Ponce**	**0.86**	**124**			IAML		07 17 13.7	
CELP	**Cerrillos**	**0.86**	**122**	⇑	*e*	P	**Pn**	**07 16 59.2**	**+0.1**
CELP	**Cerrillos**	**0.86**	**122**		*e*	S	**Sn**	**07 17 13.1**	**-0.2**
CELP	**Cerrillos**	**0.86**	**122**			P	**Pn**	**07 16 59.2**	**+0.1**
CELP							**Sn**	**07 17 13.1**	**-0.2**
CELP	**Cerrillos**	**0.86**	**122**			IAML		07 17 15.4	
CELP	comp=N,243nm,0.3s comp=E,104nm,0.2s					IAML		07 17 16.1	
SJG	**San Juan**	**1.22**	**110**				**Pn**	**07 17 02.7**	**-0.1**
SJG						IAML		07 17 20.1	
SJG	comp=E,105nm,0.2s comp=E,112nm,0.3s					IAML		07 17 22.8	
GCPR	**Guaynabo City**	**1.22**	**100**	⇑	*e*	P	**Pn**	**07 17 02.9**	**0.0**
GCPR	**Guaynabo City**	**1.22**	**100**		*e*	S	**Sn**	**07 17 19.8**	**-0.5**
GCPR	**Guaynabo City**	**1.22**	**100**			P	**Pn**	**07 17 02.9**	**0.0**
GCPR							**Sn**	**07 17 19.8**	**-0.5**
GCPR	**Guaynabo City**	**1.22**	**100**			IAML		07 17 22.4	
GCPR	comp=E,45nm,0.2s comp=N,48nm,0.1s					IAML		07 17 22.6	
IGPR	**InterUniversit**	**1.31**	**115**	⇑	*e*	P	**Pn**	**07 17 04.3**	**+0.4**
IGPR	**InterUniversit**	**1.31**	**115**		*e*	S	**Sn**	**07 17 21.7**	**-0.4**
PDPR	**Patillas Dam,**	**1.36**	**112**			P	**Pn**	**07 17 04.8**	**+0.1**
CBYP	**Canovanas**	**1.44**	**100**	⇓	*e*	P	**Pn**	**07 17 05.9**	**+0.3**
CBYP	**Canovanas**	**1.44**	**100**		*e*	S	**Sn**	**07 17 25.2**	**+0.1**
CBYP	**Canovanas**	**1.44**	**100**			P	**Pn**	**07 17 05.9**	**+0.3**
CBYP							**Sn**	**07 17 25.2**	**+0.1**
HUMP	**Col San Antoni**	**1.48**	**105**	⇑	*e*	P	**Pn**	**07 17 06.5**	**+0.5**
HUMP	**Col San Antoni**	**1.48**	**105**		*e*	S	**Sn**	**07 17 25.2**	**-0.5**
HUMP	**Col San Antoni**	**1.48**	**105**				**Pn**	**07 17 06.5**	**+0.5**
HUMP							**Sn**	**07 17 25.2**	**-0.5**
DR12	**Loma Pena Alta**	**1.94**	**278**				**Pn**	**07 17 12.8**	**+0.9**
CUPR	**Culebra, Puert**	**1.98**	**96**	⇑	*e*	P	**Pn**	**07 17 12.4**	**+0.1**
CUPR	**Culebra, Puert**	**1.98**	**96**		*e*	S	**Sn**	**07 17 36.1**	**-0.8**
CUPR	**Culebra, Puert**	**1.98**	**96**			P	**Pn**	**07 17 12.4**	**+0.1**
CUPR							**Sn**	**07 17 36.1**	**-0.8**
CUPR	**Culebra, Puert**	**1.98**	**96**			IAML		07 17 41.7	
CUPR	comp=N,17nm,0.3s comp=E,22nm,0.2s					IAML		07 17 43.5	
STVI	**Saint Thomas**	**2.28**	**94**	⇑	*e*	P	**Pn**	**07 17 17.0**	**+0.8**
STVI	**Saint Thomas**	**2.28**	**94**		*e*	S	**Sn**	**07 17 44.8**	**+0.7**
STVI	**Saint Thomas**	**2.28**	**94**			P	**Pn**	**07 17 17.0**	**+0.8**
STVI							**Sn**	**07 17 44.8**	**+0.7**
SJVI	**Gifft Hill Sch**	**2.46**	**94**	⇑	*e*	P	**Pn**	**07 17 19.4**	**+0.8**
SJVI	**Gifft Hill Sch**	**2.46**	**94**		*e*	S	**Sn**	**07 17 48.0**	**-0.2**
SJVI	**Gifft Hill Sch**	**2.46**	**94**			P	**Pn**	**07 17 19.4**	**+0.8**
SJVI							**Sn**	**07 17 48.0**	**-0.2**
LOBA2	**Hotel Casa Bon**	**3.58**	**263**		*i*	P	**Pn**	**07 17 33.9**	**+0.3**

*RHSSO **18** 07:23:36.7±0.2, 44.65°N×17.78°E, h3km±1km, ML2.7/16*
BEO 18 07:23:36.2±0.3, **44.71N×17.77E, h8**km±3km, **ML2.6**/10,
7C-6D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DOB	**Doboj**	**0.24**	**85**		*e*	Pg		07 23 40.8	-0.1
DOB					*e*	Sg		07 23 45.1	+1.0
BLY	**Banja Luka**	**0.42**	**275**		*e*	Pg		07 23 44.8	+0.4
BLY					*e*	Sg		07 23 51.2	-1.2
BLY	**Banja Luka**	**0.42**	**275**	⇓	*i*	Pg		07 23 44.9	+0.5
BLY					*e*	Sg		07 23 51.2	-1.2
A052A	**Srbac**	**0.43**	**335**		*e*	Pg		07 23 46.1	0.0
A052A					*e*	Sg		07 23 52.3	-0.4
MGRS	**Mrkonjic Grad**	**0.57**	**239**	⇓	*i*	Pg		07 23 46.9	-0.3
MGRS					*e*	Sg		07 23 53.9	-0.8
A051A	**Mrakovica**	**0.68**	**296**	⇓	*i*	Pg		07 23 49.9	+0.5
A051A					*e*	Sg		07 23 59.7	-0.4
A252A	**Venje**	**0.73**	**4**		*i*	Pg		07 23 52.0	-0.8
A252A						Sg		07 24 04.3	+0.1
SRKY	**Kupres RS**	**0.78**	**214**		*e*	Pg		07 23 50.0	-1.1
SRKY					*e*	Sg		07 24 00.1	-1.1
A050A	**Klekovaca**	**0.91**	**256**	⇓	*i*	Pg		07 23 53.0	-0.8
A050A					*e*	Sg		07 24 05.6	0.0
BLJ	**Bijeljina**	**1.07**	**86**		*e*	Pg		07 23 55.2	-1.5
BLJ					*e*	Sg		07 24 09.5	-1.1
MOSL	**Moslavina**	**1.15**	**322**		*e*	Pg		07 23 59.8	+1.2
MOSL						Sg		07 24 15.6	+1.0
KIJV	**Kijevo**	**1.21**	**235**		*i*	Pg		07 23 58.1	-1.2
KIJV						Sg		07 24 14.1	-0.9
TEKS	**Tekeris**	**1.27**	**97**		*e*	Pg		07 23 59.4	-0.8
TEKS					*e*	Sg		07 24 16.0	-0.8
TEKS	**Tekeris**	**1.27**	**97**		*e*	Pg		07 23 59.4	-0.8
TEKS					*e*	Sg		07 24 16.1	-0.7
RICI	**Ricice**	**1.30**	**201**		*e*	Pg		07 23 59.5	-1.1
RICI						Sg		07 24 16.2	-1.5
KOVH	**Kovagotottos**	**1.40**	**9**			P		07 24 02.9	-0.1
KOVH						S		07 24 21.7	+0.6
UDBI	**Udbina**	**1.44**	**263**		*e*	Pn		07 24 03.1	-0.3
UDBI						Sn		07 24 24.3	+1.7
BBLS	**Lazići**	**1.45**	**125**		*e*	Pg		07 24 02.5	-0.2
BBLS					*e*	Sg		07 24 22.3	+0.3
BBLS	**Lazići**	**1.45**	**125**		*e*	Pg		07 24 02.4	-0.3
BBLS					*e*	Sg		07 24 21.2	-0.7
FRGS	**Fruska Gora**	**1.52**	**72**		*e*	Pg		07 24 02.8	-0.9
FRGS					*e*	Sg		07 24 24.2	+0.2
FRGS	**Fruska Gora**	**1.52**	**72**	⇑		P		07 24 06.8	+1.5
FRGS				⇑		S		07 24 24.9	-0.1
FRGS	**Fruska Gora**	**1.52**	**72**		*e*	Pn		07 24 04.9	+0.3
FRGS					*e*	Sn		07 24 25.7	+0.8
MAKA	**Makarska**	**1.52**	**201**		*e*	Pg		07 24 03.4	-0.2
MAKA					*e*	Sg		07 24 23.4	-0.3
PLIT	**Plitvice**	**1.54**	**277**		*e*	Pg		07 24 04.8	-0.2
PLIT					*e*	Sg		07 24 26.5	+0.9
RUDO	**Rudo**	**1.59**	**133**		*e*	Pn		07 24 04.2	-0.4
RUDO					*e*	Sn		07 24 25.4	+0.1
MORH	**Mrgy, Hungar**	**1.62**	**22**		*e*	Pg		07 24 05.5	+0.4
MORH					*e*	Sg		07 24 27.1	0.0
MORH	**Mrgy, Hungar**	**1.62**	**22**	⇑		P		07 24 13.1	+5.8
MORH	**Mrgy, Hungar**	**1.62**	**22**		*e*	Pn		07 24 05.9	-0.5
MORH					*e*	Sn		07 24 28.2	-0.2
MORH	**Mrgy, Hungar**	**1.62**	**22**			P		07 24 05.9	-0.5
MORH						S		07 24 30.2	+1.8
KALN	**Kalnik**	**1.69**	**327**		*e*	Pn		07 24 08.2	+0.5
KALN						Sn		07 24 32.8	+2.1
MORI	**Morici**	**1.71**	**241**		*e*	Pn		07 24 07.2	-0.6
MORI						Sg		07 24 29.9	+0.5
DIVS	**Divibare**	**1.71**	**110**		*e*	Pg		07 24 06.0	-0.3
DIVS					*e*	Sg		07 24 31.0	+0.9
DIVS	**Divibare**	**1.71**	**110**		*e*	Pn		07 24 07.2	-0.4
DIVS					*e*	Sn		07 24 28.7	+0.3
UPM	**Unac-Piva**	**1.72**	**151**		*e*	Pn		07 24 06.3	-0.2
UPM					*e*	Sn		07 24 28.1	-0.6
HVAR	**Hvar**	**1.81**	**212**		*e*	Pn		07 24 08.4	+0.8
HVAR						Sg		07 24 32.1	-0.2
STON	**Ston**	**1.84**	**182**		*e*	Pg		07 24 09.4	-0.6
STON					*e*	Sg		07 24 34.1	+0.9
STON	**Ston**	**1.84**	**182**		*e*	Pn		07 24 07.8	-0.2
STON					*e*	Sn		07 24 31.8	+0.3
STON	**Ston**	**1.84**	**182**		*e*	Pn		07 24 09.1	-0.9
STON						Sg		07 24 33.6	+0.4
ZIRJ	**Zirje**	**1.86**	**236**		*i*	Pn		07 24 09.3	+1.0
ZIRJ						Sn		07 24 34.3	+0.5
OZLJ	**Ozalj**	**1.86**	**300**		*e*	Pn		07 24 09.5	-1.0
OZLJ						Sn		07 24 36.0	-0.1
BEHE	**Becsehely**	**1.89**	**339**		*e*	Pn		07 24 10.7	-0.3
BEHE					*e*	Sn		07 24 36.0	-1.0
BRY	**Bratogost**	**1.89**	**163**		*e*	Pn		07 24 09.0	+0.1
BRY					*e*	Sn		07 24 32.9	-0.1
TRUS	**Trudelj**	**1.95**	**104**		*e*	Pg		07 24 10.7	+1.1
TRUS					*e*	Sg		07 24 38.5	-0.3
CRES	**Cresnjev**	**1.98**	**305**		*e*	Pn		07 24 10.6	+0.6
CRES					*e*	Sn		07 24 37.5	+0.3
VIRC	**Vir**	**1.99**	**259**		*e*	Pn		07 24 11.5	-1.1
VIRC						Sn		07 24 37.5	0.0
TREB	**Trebinje**	**2.04**	**168**		*e*	Pg		07 24 12.6	-0.8
TREB					*e*	Sg		07 24 40.0	+1.1
TREB	**Trebinje**	**2.04**	**168**		*e*	Pn		07 24 11.4	+0.6
TREB					*e*	Sn		07 24 36.6	+0.2
LSTV	**Lastovo**	**2.04**	**198**		*e*	Pn		07 24 11.9	+1.1
LSTV						Sn		07 24 37.3	+0.8
IVAS	**Ivanjica**	**2.06**	**123**		*e*	Pn		07 24 10.4	-0.7
DBRK	**Dubrovnik**	**2.06**	**172**		*e*	Pn		07 24 11.3	+0.3
DBRK					*e*	Sn		07 24 39.0	-0.6
A250A	**Rusevo Krmpots**	**2.07**	**281**		*e*	Pn		07 24 13.1	-0.8
A250A					*e*	Sn		07 24 40.5	+0.7
**DUGI

OBKA	**Obir**	**2.89**	**310**		Pg	Pg	07 24 33.5	+1.9
	2.5nm,0.4s							
RONA	**Rosalia, Austr**	**3.16**	**342**	*i* Pn	Pn	Pn	07 24 28.3	+2.0
	4.6nm,0.5s							
RONA				*i* Sn	Sn	Sn	07 25 05.8	+1.6
	1.4nm,0.2s							
HERR	**Herculane**	**3.31**	**85**	⇑S		Sn	07 25 08.0	+0.2
CONA	**Conrad Observa**	**3.48**	**338**	*i* Pn		Pn	07 24 32.5	+1.8
	2.1nm,0.3s							
CONA				*e*Sn	Sn	Sn	07 25 12.6	+0.5
	2.7nm,0.3s							
BARS	**Barje**	**3.49**	**121**	*e*Pn		Pn	07 24 30.7	-0.1
MODS	**Modra-Piesok**	**3.68**	**355**	*e*PN		Pn	07 24 35.8	+2.4
MODS				*e*SN	Sn	Sn	07 25 16.5	-0.4
BLKB	**Belogradchik**	**3.69**	**105**	⇑S		Sn	07 25 16.0	-1.4
PRVS	**Prvonek**	**3.82**	**124**	*e*Pn		Pn	07 24 35.4	0.0
VYHS	**Vyhne**	**3.85**	**11**	*e*PN		Pn	07 24 38.0	+2.2
VYHS				*e*SN	Sn	Sn	07 25 21.4	+0.1
KOLL	**Kolacno**	**3.89**	**6**	*e*PN		Pn	07 24 38.4	+2.1
KOLL				*e*SN	Sn	Sn	07 25 22.1	-0.1
MOA	**Molln**	**3.97**	**324**	*i* Pn		Pn	07 24 40.0	+2.6
	2.8nm,0.3s							
BOSS	**Bosilegrad**	**4.07**	**121**	*e*Pn		Pn	07 24 38.3	-0.5

INET ***18*** *07:26:53.0±0.5, 12°.93N×87°.23W, h4km±2km, MW2.8*
SNET ***18*** *07:26:56.0±0.9, 13°.07N×87°.35W, h5km±10km, ML2.0*

ISC 18 07:26:52.2±1.3, 12°92N±0°.06×87°28W±0°.04, h16km±12km, n14, σ0♀71/19, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CSGN	**Cosiguina Volc**	**0.28**	**282**	*e*P	**Pb**	**07 27 00.2**	**+1.4**
CRIN	**San Cristobal**	**0.32**	**134**	*e*P	**Pb**	**07 27 00.3**	**+0.8**
CRIN				*e*S	**Sb**	**07 27 05.3**	**+0.8**
TEL3	**Telica 3**	**0.55**	**129**	*e*P	**Pb**	**07 27 03.8**	**+0.3**
CNCH	**Conchagua**	**0.64**	**303**	*e*P	**Pn**	**07 27 06.6**	**-0.2**
CNCH				*e*S	**Sn**	**07 27 16.1**	**-0.7**
CNCH				IAML		07 27 21.0	
	comp=Z,244nm,0.3s						
LCND	**La Caada**	**0.71**	**303**	*e*P	**Pn**	**07 27 07.4**	**-0.2**
LCND				*e*S	**Sb**	**07 27 16.6**	**+0.9**
LCND				IAML		07 27 24.0	
	comp=Z,95nm,0.3s						
MOMN	**Momotombo**	**0.89**	**125**	*e*P	**Pn**	**07 27 09.4**	**-0.7**
COPN	**Copaltepe**	**1.00**	**137**	*e*P	**Pn**	**07 27 11.4**	**-0.2**
TGUH	**Tegucigalpa,Un**	**1.13**	**0**	*e*P	**Pg**	**07 27 14.5**	**+0.5**
TGUH				*e*S	**Sn**	**07 27 28.5**	**-0.3**
RCON	**San Juan de Ri**	**1.23**	**63**	*e*P	**Pg**	**07 27 15.5**	**-0.5**
COEB	**Comit de Eme**	**1.34**	**295**	*e*P	**Pg**	**07 27 18.6**	**+0.5**
SCLA	**Alcaldia de Sa**	**1.61**	**299**	*e*P	**Pg**	**07 27 23.2**	**0.0**
SCLA				*e*S	**Sg**	**07 27 43.6**	**-0.4**
SCLA				IAML		07 27 54.4	
	comp=Z,3.5nm,0.4s						
COEG	**Centro de Oper**	**1.71**	**294**	*e*P	**Pg**	**07 27 24.0**	**-1.0**
COEG				IAML		07 27 55.8	
	comp=Z,20nm,0.4s						
SJTE	**Alcalda de S**	**1.82**	**292**	*e*P	**Pg**	**07 27 26.5**	**-0.6**
SJTE				IAML		07 27 53.4	
	comp=Z,9.5nm,0.3s						
JAYA	**Jayaque - finc**	**2.23**	**289**	*e*P	**Pb**	**07 27 31.9**	**-0.4**
JAYA				IAML		07 28 05.7	
	comp=Z,26nm,0.3s						

SOF ***18*** *07:29:09.1, 45°.23N×23°.25E, h10km, MD3.0*
KRSZO ***18*** *07:29:11.0±0.7, 45°.25N×23°.12E, h16km, ML3.4/12, Error ellipse: s-maj=2.2km s-min=2.0km az=125.0*
BEO ***18*** *07:29:11.1±0.4, 45°.22N×23°.12E, h9km±2km, ML3.1/9*
BUC ***18*** *07:29:12.2±0.2, 45°.24N×23°.07E, h14km±1km, ml3.0/21, Error ellipse: s-maj=1.6km s-min=1.3km az=90.0*

ISC 18 07:29:11.1±0.9, 45°24N±0°.01×23°.13E±0°.01, h15km±8km, n116, σ0♀96/177, 70C-38D, Romania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GZR	**Gura Zlata**	**0.29**	**302**	⇓P	**Pb**	**07 29 17.9**	**-0.2**
GZR				⇑S	**Sb**	**07 29 22.5**	**-0.3**
GZR	**Gura Zlata**	**0.29**	**302**	⇑P	**Pb**	**07 29 17.9**	**-0.2**
GZR				⇑S	**Sb**	**07 29 22.3**	**-0.4**
GZR	**Gura Zlata**	**0.29**	**302**	Pg	**Pg**	**07 29 16.9**	**-0.4**
	comp=Z,20nm,SNR=1000						
LOT	**Lotru**	**0.50**	**65**	⇑P	**Pg**	**07 29 20.4**	**-0.7**
LOT				⇑S	**Sg**	**07 29 27.0**	**-0.8**
LOT	**Lotru**	**0.50**	**65**	Pg	**Pg**	**07 29 20.2**	**-0.9**
	comp=Z,5.9nm,SNR=440						
SRE	**Strehaia**	**0.58**	**174**	⇑P	**Pb**	**07 29 23.4**	**+0.4**
SRE				⇓S	**Sn**	**07 29 33.0**	**-1.0**
SRE	**Strehaia**	**0.58**	**174**	⇑P	**Pb**	**07 29 23.4**	**+0.4**
SRE				⇓S	**Sn**	**07 29 33.0**	**-1.0**
HERR	**Herculane**	**0.62**	**235**	⇓P	**Pb**	**07 29 23.3**	**-0.3**
HERR				⇓S	**Sb**	**07 29 32.4**	**+0.3**
HERR	**Herculane**	**0.62**	**235**	⇓P	**Pb**	**07 29 23.3**	**-0.3**
HERR				⇓S	**Sb**	**07 29 32.4**	**+0.3**
RMGR	**Halanga-Turnu**	**0.65**	**208**	⇑P	**Pb**	**07 29 24.5**	**+0.3**
RMGR				⇓S	**Sn**	**07 29 34.5**	**-1.3**
DEV	**Deva**	**0.66**	**346**	⇑P	**Pb**	**07 29 24.7**	**+0.3**
DEV				⇑S	**Sb**	**07 29 33.9**	**+0.5**
DEV	**Deva**	**0.66**	**346**	⇑P	**Pb**	**07 29 24.7**	**+0.3**
DEV				⇑S	**Sb**	**07 29 33.9**	**+0.5**
DEV	**Deva**	**0.66**	**346**	x	**Pb**	**07 29 24.5**	**+0.1**
	comp=Z,5.7nm,SNR=181						
DJES	**Djerdap**	**0.72**	**217**	*e*Pg	**Pg**	**07 29 24.9**	**-0.2**
DJES				*e*Sg	**Sb**	**07 29 35.1**	**+0.2**
DJES	**Djerdap**	**0.72**	**217**	⇓P	**Pb**	**07 29 25.2**	**-0.1**
DJES				⇓S	**Sb**	**07 29 35.3**	**+0.4**
PUNG	**Punghina**	**0.97**	**188**	⇓P	**Pb**	**07 29 29.7**	**+0.1**
PUNG				⇓S	**Sg**	**07 29 43.0**	**+0.4**
PUNG	**Punghina**	**0.97**	**188**	⇓P	**Pb**	**07 29 29.7**	**+0.1**
PUNG				⇓S	**Sg**	**07 29 43.0**	**+0.4**
ARR	**Arges**	**1.07**	**83**	⇑P	**Pb**	**07 29 30.6**	**-0.8**
ARR				⇑S	**Sb**	**07 29 44.8**	**-0.4**
MDVR	**Moldovita**	**1.10**	**246**	*e*Pg	**Pb**	**07 29 31.6**	**-0.3**
MDVR				*e*Sg	**Sg**	**07 29 46.3**	**-0.5**
MDVR	**Moldovita**	**1.10**	**246**	⇓P	**Pn**	**07 29 31.8**	**-0.2**
MDVR				⇑S	**Sg**	**07 29 46.7**	**-0.1**
MDVR	**Moldovita**	**1.10**	**246**	⇓P	**Pn**	**07 29 31.8**	**-0.2**
MDVR				⇑S	**Sg**	**07 29 46.7**	**-0.1**
BZS	**Buzias**	**1.13**	**290**	*e*Pg	**Pg**	**07 29 32.7**	**-0.2**
BZS				*e*Sg	**Sn**	**07 29 47.1**	**-0.5**
BZS	**Buzias**	**1.13**	**290**	⇑P	**Pg**	**07 29 32.7**	**-0.2**
BZS				⇑S	**Sg**	**07 29 48.1**	**+0.5**
BZS	**Buzias**	**1.13**	**290**	⇑P	**Pg**	**07 29 32.7**	**-0.2**
BZS				⇑S	**Sg**	**07 29 48.1**	**+0.5**
BZS	**Buzias**	**1.13**	**290**	Pg	**Pg**	**07 29 32.5**	**-0.4**
	comp=Z,2.1nm,SNR=146						
BAIL	**Bailesti**	**1.23**	**173**	⇑S	**Sg**	**07 29 50.6**	**-0.2**
MDB	**Medias**	**1.26**	**44**	⇑P	**Pg**	**07 29 35.1**	**-0.3**
MDB				⇑S	**Sg**	**07 29 52.9**	**+1.1**
MDB	**Medias**	**1.26**	**44**	⇑P	**Pg**	**07 29 35.1**	**-0.3**
MDB				⇑S	**Sg**	**07 29 52.9**	**+1.1**
KUBS	**Kucevo**	**1.32**	**232**	*e*Pg	**Pn**	**07 29 35.1**	**+0.1**
KUBS				*e*Sg	**Sn**	**07 29 52.0**	**-0.4**
STFAR	**Stefanesti-Arg**	**1.35**	**105**	⇑P	**Pg**	**07 29 37.9**	**+0.7**
STFAR				⇑S	**Sg**	**07 29 57.0**	**+2.3**
STFAR	**Stefanesti-Arg**	**1.35**	**105**	⇑P	**Pg**	**07 29 37.9**	**+0.7**
STFAR				⇑S	**Sg**	**07 29 57.0**	**+2.3**
MTUR	**Matau**	**1.37**	**90**	⇓P	**Pg**	**07 29 38.1**	**+0.6**
MTUR	**Matau**	**1.37**	**90**	⇓P	**Pg**	**07 29 38.1**	**+0.6**
VOIR		**1.37**	**81**	⇓P	**Pg**	**07 29 36.1**	**-0.4**
VOIR				⇓S	**Sn**	**07 29 53.5**	**-0.2**
BANR	**Banloc**	**1.41**	**277**	⇓P	**Pb**	**07 29 37.3**	**+0.2**
BANR				⇓S	**Sg**	**07 29 56.5**	**-0.2**
BANR	**Banloc**	**1.41**	**277**	⇓P	**Pb**	**07 29 37.3**	**+0.2**
BANR				⇓S	**Sg**	**07 29 56.5**	**-0.2**
BANR	**Banloc**	**1.41**	**277**	Pg	**Pg**	**07 29 40.4**	**+2.1**
	comp=Z,1.2nm,SNR=10						
SIRR	**Siria**	**1.45**	**316**	*e*Pg	**Pb**	**07 29 37.9**	**0.0**
SIRR				*e*Sg	**Sb**	**07 29 55.9**	**-0.3**
SIRR	**Siria**	**1.45**	**316**	⇓P	**Pb**	**07 29 37.8**	**0.0**
SIRR				⇑S	**Sb**	**07 29 56.5**	**+0.4**
SIRR	**Siria**	**1.45**	**316**	⇓P	**Pb**	**07 29 37.8**	**0.0**
SIRR				⇑S	**Sb**	**07 29 56.5**	**+0.4**
SIRR	**Siria**	**1.45**	**316**	Pn	**Pb**	**07 29 37.6**	**-0.3**
	comp=Z,1.4nm,SNR=106						
HUMR	**Humele**	**1.50**	**118**	⇑P	**Pg**	**07 29 39.8**	**-0.1**
HUMR				⇑S	**Sg**	**07 29 60.0**	**+0.6**
CJR	**Cluj-Napoca**	**1.51**	**12**	⇑P	**Pb**	**07 29 38.8**	**-0.1**
CJR				⇓S	**Sg**	**07 29 59.3**	**-0.6**
CJR	**Cluj-Napoca**	**1.51**	**12**	⇑P	**Pb**	**07 29 38.8**	**-0.1**
CJR				⇓S	**Sg**	**07 29 59.3**	**-0.6**
CJR	**Cluj-Napoca**	**1.51**	**12**	Pn	**Pb**	**07 29 38.8**	**-0.1**
	comp=Z,1.1nm,SNR=20						
VLAD	**Vladila**	**1.54**	**143**	⇑P	**Pb**	**07 29 39.9**	**+0.6**
VLAD				⇑S	**Sb**	**07 29 59.7**	**+1.1**
VLAD	**Vladila**	**1.54**	**143**	⇑P	**Pb**	**07 29 39.9**	**+0.6**
VLAD				⇑S	**Sb**	**07 29 59.7**	**+1.1**
ZAGS	**Zajecar**	**1.56**	**204**	*e*Pg	**Pn**	**07 29 37.5**	**-0.8**
ZAGS				*e*Sg	**Sb**	**07 30 00.2**	**+0.9**
DRGR		**1.58**	**350**	*e*Pg	**Pb**	**07 29 39.4**	**-0.7**
DRGR				*e*Sg	**Sg**	**07 30 01.4**	**-0.6**
DRGR		**1.58**	**350**	⇑P	**Pb**	**07 29 39.3**	**-0.8**
DRGR				⇑S	**Sg**	**07 30 01.6**	**-0.4**
DRGR		**1.58**	**350**	⇑P	**Pb**	**07 29 39.3**	**-0.8**
DRGR				⇓S	**Sg**	**07 30 01.6**	**-0.4**
DRGR		**1.58**	**350**	x	**Pb**	**07 29 38.7**	**-1.3**
	comp=Z,0.8nm,SNR=42						
TGMR	**Targu Mures**	**1.62**	**37**	⇓P	**Pb**	**07 29 40.9**	**+0.3**
TGMR				⇑S	**Sg**	**07 30 03.2**	**0.0**
TGMR	**Targu Mures**	**1.62**	**37**	⇓P	**Pb**	**07 29 40.9**	**+0.3**
TGMR				⇑S	**Sg**	**07 30 03.2**	**0.0**
BLKB	**Belogradchik**	**1.65**	**191**	⇓S	**Sn**	**07 29 59.3**	**-1.2**
DOPR	**Dopca**	**1.75**	**65**	⇑P	**Pb**	**07 29 42.3**	**-0.6**
DOPR				⇓S	**Sb**	**07 30 05.3**	**+0.6**
DOPR	**Dopca**	**1.75**	**65**	⇑P	**Pb**	**07 29 42.3**	**-0.6**
DOPR				⇓S	**Sb**	**07 30 05.3**	**+0.6**
BOVS	**Bovan**	**1.90**	**213**	*e*Pn	**Pn**	**07 29 42.5**	**-0.5**
BOVS				*e*Sn	**Sb**	**07 30 08.0**	**-1.0**
BOVS	**Bovan**	**1.90**	**213**	⇑P	**Pn**	**07 29 43.2**	**+0.2**
BOVS				⇑S	**Sb**	**07 30 08.3**	**-0.6**
BOVS	**Bovan**	**1.90**	**213**	⇑P	**Pn**	**07 29 43.2**	**+0.2**
BOVS				⇑S	**Sb**	**07 30 08.3**	**-0.6**
MESR	**Meseseni**	**1.92**	**356**	⇑P	**Pb**	**07 29 44.9**	**-0.8**
MESR	**Meseseni**	**1.92**	**356**	⇑P	**Pb**	**07 29 44.9**	**-0.8**
MLR	**Muntele Rosu**	**2.00**	**82**	*e*Pn	**Pb**	**07 29 46.4**	**-0.9**
ARCR	**ARCALIA**	**2.03**	**24**	⇑P	**Pb**	**07 29 46.2**	**-1.5**
ARCR				⇑S	**Sb**	**07 30 11.8**	**-1.0**
ARCR	**ARCALIA**	**2.03**	**24**	⇑P	**Pb**	**07 29 46.2**	**-1.5**
ARCR				⇑S	**Sb**	**07 30 11.8**	**-1.0**
ARCR	**ARCALIA**	**2.03**	**24**	Pn	**Pn**	**07 29 45.9**	**+1.1**
	comp=Z,0.4nm,SNR=13						
OZUR		**2.05**	**64**	⇓P	**Pb**	**07 29 47.6**	**-0.5**
OZUR				⇑S	**Sb**	**07 30 13.4**	**-0.1**
TRUS	**Trudelj**	**2.19**	**243**	*e*Pn	**Pn**	**07 29 48.2**	**+1.3**
GRUS	**Gruza**	**2.19**	**233**	*e*Pn	**Pn**	**07 29 48.0**	**+1.1**
GRUS				*e*Sn	**Sn**	**07 30 15.1**	**+1.3**
NEHR	**Nehoiu**	**2.24**	**84**	⇑P	**Pg**	**07 29 53.1**	**-1.0**
LTVH	**Ltavrtes, Hu**	**2.31**	**339**	Pg	**Pg**	**07 29 57.2**	**+1.8**
	comp=Z,0.3nm,SNR=2.5						
LTVH	**Ltavrtes, Hu**	**2.31**	**339**	P	**Pg**	**07 29 57.2**	**+1.8**
FRGS	**Fruska Gora**	**2.35**	**269**	*e*Pn	**Pb**	**07 29 51.0**	**-2.1**
FRGS	**Fruska Gora**	**2.35**	**269**	⇑P	**Pn**	**07 29 49.4**	**+0.3**
FRGS	**Fruska Gora**	**2.35**	**269**	⇑P	**Pn**	**07 29 49.4**	**+0.3**
ISR	**Istrita**	**2.42**	**92**	⇑P	**Pb**	**07 29 54.7**	**+0.3**
BMR	**Baia Mare**	**2.45**	**6**	⇓P	**Pg**	**07 29 56.2**	**-1.9**
BMR	**Baia Mare**	**2.45**	**6**	Pg	**Pg**	**07 29 59.7**	**+1.7**
SELS	**Selova**	**2.48**	**216**	*e*Pg	**Pb**	**07 29 56.0**	**+0.6**
DIVS	**Divibare**	**2.51**	**244**	*e*Pn	**Pn**	**07 29 52.1**	**+0.7**
PLOR	**Plostina**	**2.55**	**75**	⇓P	**Pb**	**07 29 55.1**	**-1.5**
BARS	**Barje**	**2.60**	**202**	*e*Pn	**Pn**	**07 29 52.1**	**-0.5**
BARS				*e*Sg	**Sn**	**07 29 53.8**	**+1.2**
VRI	**Vrincioaia**	**2.61**	**75**	⇓P	**Pb**	**07 29 55.9**	**-1.7**
VRI				⇑S	**Sb**	**07 30 26.7**	**-2.7**
VTS	**Vitosha**	**2.62**	**178**	⇓S	**Sn**	**07 30 23.7**	**-0.9**
VTS	**Vitosha**	**2.62**	**178**	*i* P	**Pn**	**07 29 52.3**	**-0.7**
TEKS	**Tekeris**	**2.65**	**256**	*e*Pn	**Pn**	**07 29 53.8**	**+0.5**
BIZ	**Bicaz**	**2.68**	**50**	⇓P	**Pn**	**07 29 55.9**	**+2.2**
IVAS	**Ivanjica**	**2.70**	**233**	*e*Pn	**Pn**	**07 29 53.9**	**-0.2**
BUR01	**Bucovina Ar. S**	**2.78**	**31**	⇑P	**Pn**	**07 29 56.8**	**+1.6**
BURAR	**Bucovina Array**	**2.78**	**31**	⇑P	**Pn**	**07 29 56.8**	**+1.6**
BURAR	**Bucovina Array**	**2.78**	**31**	⇑P	**Pn**	**07 29 56.8**	**+1.6**
BOSS	**Bosilegrad**	**2.78**	**190**	*e*Pn	**Pn**	**07 29 54.4**	**-0.7**
SZH	**Strazhica**	**2.82**	**133**	*i* P	**Pn**	**07 29 54.8**	**-0.8**
PRVS	**Prvonek**	**2.83**	**196**	*e*Pn	**Pn**	**07 29 56.0**	**+0.1**
TRSU	**Trosnyk**	**2.86**	**358**	Pg	**Pg**	**07 30 04.8**	**-1.1**
BBLS	**Laziå#263;i**	**2.99**	**244**	*e*Pn	**Pn**	**07 29 59.5**	**+1.4**
SJES	**Sjenica**	**3.01**	**230**	*e*Pn	**Pn**	**07 29 57.9**	**-0.4**
NSLU	**Nyzhne Selyshc**	**3.10**	**17**	Pg	**Pb**	**07 30 06.4**	**+0.9**
MUKU	**Mukachevo**	**3.23**	**355**	Pg	**Pb**	**07 30 09.1**	**+1.0**
MORH	**Mgy, Hungar**	**3.29**	**289**	*e*Pn	**Pn**	**07 30 02.5**	**+0.5**
HOLU	**Holmets**	**3.33**	**351**	Pg	**Pg**	**07 30 13.8**	**-1.0**
PSZ	**Piszkesteto**	**3.48**	**321**	⇑P	**Pn**	**07 30 05.5**	**+0.7**
PSZ				⇑S	**Sn**	**07 30 44.3**	**-1.6**
PSZ	**Piszkesteto**	**3.48**	**321**	⇑P	**Pn**	**07 30 05.5**	**+0.7**
PSZ	**Piszkesteto**	**3.48**	**321**	Pb	**Pn**	**07 30 05.7**	**+0.8**
	comp=Z,0.1nm,SNR=8.7						
PSZ				Sn	**Sn**	**07 30 44.3**	**-1.6**
PSZ	**Piszkesteto**	**3.48**	**321**	P	**Pn**	**07 30 05.7**	**+0.8**
PSZ				S	**Sn**	**07 30 44.3**	**-1.6**
KOVH	**Kovagotottos**	**3.62**	**285**	Sn	**Sn**	**07 30 48.3**	**-0.9**
KOVH	**Kovagotottos**	**3.62**	**285**	S	**Sn**	**07 30 48.3**	**-0.9**
KECS	**Kecovo**	**3.72**	**332**	*e*PN	**Pn**	**07 30 09.5**	**+1.6**
KECS				*e*SN	**Sn**	**07 30 51.0**	**-0.4**
RZN	**Rozhen**	**3.73**	**161**	*i* P	**Pn**	**07 30 07.8**	**-0.6**
KOLS	**Kolonicke sedl**	**3.74**	**351**	Pn	**Pn**	**07 30 10.2**	**+1.9**
	comp=Z,26nm,SNR=13						
KOLS	**Kolonicke sedl**	**3.74**	**351**	*e*PN	**Pn**	**07 30 10.8**	**+2.5**
KOLS				*e*PG	**Pg**	**07 30 23.7**	**+0.9**
KOLS				*e*SG	**Sg**	**07 31 10.9**	**-0.3**
VYHS	**Vyhne**	**4.39**	**319**	*e*PN	**Pn**	**07 30 18.2**	**+1.0**
VYHS				*e*SN	**Sn**	**07 31 08.3**	**+0.3**
NIE	**Niedzica**	**4.60**	**336**	Pn	**Pn**	**07 30 22.5**	**+2.4**
	SNR=1.8						
LANS	**Liptovska Anna**	**4.64**	**329**	*e*PN	**Pn**	**07 30 23.2**	**+2.5**
ZST	**Bratislava**	**5.09**	**308**	*e*SN	**Sn**	**07 31 23.8**	**-1.4**
MODS	**Modra-Piesok**	**5.09**	**310**	*e*SN	**Sn**	**07 31 23.5**	**-1.9**

IDC ***18*** *07:47:25.3±1.0, 0°.24N×127°.39E, h0km, mb3.9/6, mbtmp3.9/6, ML5.1/1, Error ellipse: s-maj=40.6km s-min=18.1km az=78.0*
DJA ***18*** *07:47:37.7±0.2, 0°N±2°×12°7E±°, h101km±3km, M4.8/21, mb4.9/21, mB5.2/8, MLv5.1/21, Mw(mB)4.5/8*
NEIC ***18*** *07:47:37.2±2.6, 0°.05S±0°.07×126°.92E±0°.06, h97km±7km, mb4.6/18, Error ellipse: s-maj=11.2km s-min=7.0km az=137.0*

ISC 18 07:47:37.0±0.4, 0°.01S±0°.05×126°.94E±0°.06, h100km, n91, σ1♀59/97, mb4.6/23, 2C, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBMI	**Labuha**	**0.84**	**138**	P	**Pn**	**07 47 57.1**	**+1.3**
LBMI				S	**Sn**	**07 48 12.3**	**+2.4**
TNTI	**Ternate**	**0.89**	**29**	Pn	**Pn**	**07 47 56.8**	**+0.5**
TNTI	**Ternate**	**0.89**	**29**	P	**Pn**	**07 47 56.5**	**+0.2**
SANI	**Sanana**	**2.24**	**205**	P	**Pn**	**07 48 12.7**	**0.0**
SANI	**Sanana**	**2.24**	**205**	P	**Pn**	**07 48 13.1**	**+0.4**
KMSI	**Cibinong**	**3.01**	**281**	P	**Pn**	**07 48 24.3**	**+1.3**
NLAI	**Namlea**	**3.21**	**177**	P	**Pn**	**07 48 26.9**	**+1.3**
AAI	**Ambon**	**3.86**	**161**	P	**Pn**	**07 48 36.4**	**+2.0**
MSAI	**Masohi**	**3.86**	**149**	P	**Pn**	**07 48 37.4**	**+3.0**
SGSI	**Sangihe**	**3.93**	**339**	P	**Pn**	**07 48 34.3**	**-1.1**
LUWI	**Luwuk**	**4.29**	**256**		**Pn**	**07 48 39.7**	**-0.5**
LUWI	**Luwuk**	**4.29**	**256**	P	**Pn**	**07 48 40.0**	**-0.2**
LUWI	**Luwuk**	**4.29**	**256**	P	**Pn**	**07 48 40.3**	**+0.1**
SWI	**Sorong**	**4.40**	**101**	P	**Pn**	**07 48 44.1**	**+2.4**
MRSI	**Marisa**	**5.02**	**276**	P	**Pn**	**07 48 50.0**	**-0.1**
	1.0nm2μm168nm,0.6s						
APSI	**Ampana**	**5.36**	**260**	P	**Pn**	**07 48 54.5**	**-0.2**
FAKI	**Fak Fak**	**6.04**	**119**	Pn	**Pn**	**07 49 04.9**	**+1.0**
FAKI	**Fak Fak**	**6.04**	**119**	P	**Pn**	**07 49 05.8**	**+1.8**
	0.3nm78nm,0.9s						
TOLI2	**Tolitoli**	**6.26**	**280**	Pn	**Pn**	**07 49 06.0**	**-0.8**
TOLI2	**Tolitoli**	**6.26**	**280**	P	**Pn**	**07 49 07.0**	**+0.1**
GSPH	**General Santos**	**6.38**	**342**	*e*P	**Pn**	**07 49 06.7**	**-1.9**
MPSI	**Mapaga**	**7.05**	**273**	P	**Pn**	**07 49 18.7**	**+1.1**
	0.3nm803nm75nm,0.8s						
KCP	**Kidapawan**	**7.21**	**345**	*i* P	**Pn**	**07 49 18.3**	**-1.6**
KCP				*i* S	**Sn**	**07 50 38.2**	**-2.2**
TTSI	**Tana Toraja**	**7.73**	**247**	P	**Pn**	**07 49 27.1**	**+0.2**
	0.9nm3μm206nm,0.5s						
BNSI	**Bone**	**8.10**	**237**	P	**Pn**	**07 49 33.7**	**+1.8**
	0.5nm1μm84nm,0.8s						
SPSI	**Sidrap Palu**	**8.17**	**241**	P	**Pn**	**07 49 33.6**	**+0.7**
	1.7nm5μm457nm,0.8s						
BKSI	**Bukukumba**	**8.61**	**232**	P	**Pn**	**07 49 42.5**	**+3.6**
	0.8nm3μm188nm,0.5s						
KAPI	**Kappang**	**8.73**	**235**	Pn	**Pn**	**07 49 41.3**	**+0.8**
	19nm,0.3s,baz=49,slow=4.6,SNR=69						
KAPI				Sn	**Sn**	**07 51 16.3**	**-0.9**
	13nm,0.3s,baz=168,slow=23,SNR=16						
KAPI	**Kappang**	**8.73**	**235**	Pn	**Pn**	**07 49 41.1**	**+0.6**
KAPI	**Kappang**	**8.73**	**235**	P	**Pn**	**07 49 43.4**	**+2.9**
MYLDM	**Lahad Datu**	**9.88**	**302**	Pn	**Pn**	**07 49 57.9**	**+1.8**
EDFI	**Ende, Flores**	**10.13**	**211**	P	**Pn**	**07 50 00.2**	**+0.5**
	8.5nm,0.8s						
BBKI	**Banjar Baru**	**12.57**	**254**	P	**Pn**	**07 50 33.6**	**+1.3**
	36nm,0.4s						
PLAI	**Plampang**	**12.65**	**226**	P	**Pn**	**07 50 35.7**	**+2.3**
MTN	**Manton Dam**	**13.41**	**162**	Pn	**Pn**	**07 50 41.3**	**-2.1**
KDU	**Kakadu**	**13.74**	**157**	P	**Pn**	**07 50 45.6**	**-2.1**
KNRA	**Kununurra**	**15.67**	**173**	P	**Pn**	**07 51 12.0**	**-0.3**
KNRA				IAmb	IAmb	07 51 13.1	
	comp=Z,39nm,0.8s						
KNRA	**Kununurra**	**15.67**	**173**	P	**Pn**	**07 51 12.8**	**+0.5**
GMJI	**Gumukmas**	**15.75**	**238**	P	**P**	**07 51 15.0**	**-0.3**
	comp=Z,40nm,1.2s						
PWJI	**Pagerwojo**	**17.05**	**242**	P	**P**	**07 51 30.9**	**+1.2**
	comp=Z,50nm,0.8s						
WB0	**Warramunga Arr**	**20.95**	**160**	P	**P**	**07 52 10.8**	**-1.2**
WRAB	**Tennant Creek**	**21.09**	**160**	P	**P**	**07 52 13.4**	**-0.2**
WRAB	**Tennant Creek**	**21.09**	**160**	P	**P**	**07 52 13.4**	**-0.2**
WRA	**Warramunga Arr**	**21.09**	**160**	P	**P**	**07 52 13.2**	**-0.4**
	comp=Z,20nm,0.4s,baz=339,slow=11,SNR=423						
WRA				S	**S**	**07 55 59.3**	**-3.6**
	comp=Z,3.7nm,0.9s,baz=343,slow=17,SNR=7.6						
WRA	**Warramunga Arr**	**21.09**	**160**	P	**P**	**07 52 11.7**	**-1.9**
COEN	**Coen**	**21.22**	**131**	P	**P**	**07 52 14.4**	**-0.7**
COEN				IAmb	IAmb	07 52 21.8	
	comp=Z,25nm,0.8s						
PSA00	**Pilbara Seismi**	**22.52**	**197**	P	**P**	**07 52 27.6**	**-1.1**
PSA00				IAmb	IAmb	07 52 52.5	
	comp=Z,22nm,1.4s						
KLI	**Kotabumi**	**22.57**	**257**	P	**P**	**07 52 30.5**	**+1.2**
	comp=Z,163nm,0.8s						
KASI	**Kota Agung**	**23.07**	**256**	P	**P**	**07 52 35.2**	**+1.0**
	comp=Z,147nm,1.0s						
LWLI	**Liwa**	**23.38**	**257**	P	**P**	**07 52 38.2**	**+0.9**
	comp=Z,72nm,0.7s						
QIS	**M

MUGZ	**Murupara**	**7.16**	**204**	P	Pn	07 54 28.8	-1.8
HSRZ	**Hossack Road**	**7.20**	**207**	P	Pn	07 54 33.6	+2.5
PRGZ	**Paritu Road**	**7.25**	**196**	P	Pn	07 54 32.1	+0.5
SNGZ	**Shannon Statio**	**7.25**	**200**	P	Pn	07 54 30.9	-0.9
HRRZ	**Handcock Road**	**7.25**	**207**	P	Pn	07 54 33.8	+2.0
PRRZ	**Plateau Road**	**7.31**	**206**	P	Pn	07 54 32.7	+0.3
ALRZ	**Allen Road**	**7.38**	**206**	P	Pn	07 54 34.0	+0.7
KNZ	**Kokohu**	**7.39**	**197**	P	Pn	07 54 32.8	-0.5
WPRZ	**Whakapapatarin**	**7.42**	**207**	P	Pn	07 54 34.8	+1.1
RAHZ	**Arahi**	**7.45**	**201**	P	Pn	07 54 33.4	-0.8
MHGZ	**Mahia Peninsul**	**7.46**	**195**	P	Pn	07 54 35.1	+1.0
MTHZ	**Maungataniwha**	**7.47**	**202**	P	Pn	07 54 33.8	-0.6
TLZ	**Tolley Road**	**7.51**	**211**	P	Pn	07 54 37.3	+2.5
KUTZ	**Kaahu Road**	**7.52**	**209**	P	Pn	07 54 36.6	+1.6
MRHZ	**Matea Rd**	**7.60**	**205**	P	Pn	07 54 34.4	-1.5
NMHZ	**Naumai**	**7.71**	**202**	P	Pn	07 54 36.8	-0.4
WATZ	**Wairara**	**7.75**	**209**	P	Pn	07 54 38.2	+0.5
ARHZ	**Aropaoanui**	**7.80**	**200**	P	Pn	07 54 37.5	-0.8
BKZ	**Black Stump Fm**	**7.87**	**203**	P	Pn	07 54 39.0	-0.1
NTVZ	**North Tongarir**	**8.11**	**207**	P	Pn	07 54 41.6	-0.5
CKHZ	**Cape Kidnapper**	**8.14**	**199**	P	Pn	07 54 42.7	+0.3
OTVZ	**Oturere**	**8.16**	**207**	P	Pn	07 54 42.6	-0.3
TUVZ	**Tukino**	**8.26**	**207**	P	Pn	07 54 42.3	-1.7
BHHZ	**Black Hill Sta**	**8.30**	**204**	P	Pn	07 54 42.1	-2.4
MOVZ	**Moawhango**	**8.34**	**206**	P	Pn	07 54 42.9	-2.0

*IDC **18** 07:54:26.7±0.6, 4.°87S×150.°10E, h406km±7km, mb3.6/14, mbtmp4.3/17, Error ellipse: s-maj=14.7km s-min=9.5km az=108.0*
*DJA **18** 07:54:27.0±0.4, 6.°S±12.°×14.°9E±.°, h253km±12km, M4.6/7, mb4.5/7, MLv4.7/2*
*NEIC **18** 07:54:27.4±1.8, 4.°80S±0.°09×150.°15E±0.°10, h406km±9km, mb4.3/26, Error ellipse: s-maj=14.5km s-min=13.0km az=71.0*

ISC 18 07:54:26.7±0.5, **4.°83S**±0.°06×**150.°08E**±0.°07, **h400**km, **n70, σ0°99/71, mb4.1/28, New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**2.01**	**75**	P	**Pn**	**07 55 23.1**	**+0.4**
	219nm,0.5s,baz=297,slow=2.3,SNR=17						
KRVT				S	**S**	**07 56 08.6**	**+0.7**
	127nm,0.6s,baz=244,slow=22,SNR=6.0						
RABL	**Rabaul**	**2.17**	**73**		**Pn**	**07 55 24.2**	**+0.4**
RABL	**Rabaul**	**2.17**	**73**	P	**Pn**	**07 55 24.7**	**+0.9**
MANU	**Manus Island**	**3.87**	**316**		**Pn**	**07 55 38.7**	**+1.1**
PMG	**Port Moresby**	**5.39**	**212**	P	**Pn**	**07 55 53.7**	**+0.9**
	10nm,0.4s,baz=0.0,slow=8.1,SNR=4.1						
PMG				S	**S**	**07 57 04.1**	**+1.2**
	28nm,0.5s,baz=352,slow=13,SNR=4.7						
PMG	**Port Moresby**	**5.39**	**212**		**Pn**	**07 55 54.2**	**+1.4**
CTA	**Charters Tower**	**15.62**	**193**	P	**P**	**07 57 46.6**	**+0.7**
	8.0nm,1.1s,baz=9.1,slow=12,SNR=3.6						
CTAO	**Charters Tower**	**15.62**	**193**	P	**P**	**07 57 46.6**	**+0.7**
CTAO				IAmb	IAmb	07 57 48.1	
	comp=Z,13nm,1.2s						
FAKI	**Fak Fak**	**17.89**	**275**	P	**P**	**07 58 10.7**	**+0.5**
FAKI				IAmb	IAmb	07 58 24.4	
	comp=Z,20nm,1.1s						
FAKI	**Fak Fak**	**17.89**	**275**	P	**P**	**07 58 12.2**	**+2.0**
RK1H	**Rockhampton Ha**	**18.46**	**179**	P	**P**	**07 58 15.7**	**-0.4**
	comp=Z,22nm,0.6s						
QIS	**Mount Isa**	**18.66**	**212**	P	**P**	**07 58 19.3**	**+1.0**
KDU	**Kakadu**	**19.06**	**245**	P	**P**	**07 58 21.4**	**-1.0**
MTN	**Manton Dam**	**20.33**	**246**	P	**P**	**07 58 33.8**	**-0.5**
MTN	**Manton Dam**	**20.33**	**246**	P	**P**	**07 58 34.5**	**+0.2**
EIDS	**Eidsvold**	**20.45**	**177**	P	**P**	**07 58 35.3**	**+0.1**
EIDS				IAmb	IAmb	07 58 37.0	
	comp=Z,18nm,1.1s						
EIDS	**Eidsvold**	**20.45**	**177**	P	**P**	**07 58 36.0**	**+0.8**
WRAB	**Tennant Creek**	**21.45**	**224**	P	**P**	**07 58 43.9**	**-0.5**
WRAB	**Tennant Creek**	**21.45**	**224**	P	**P**	**07 58 44.2**	**-0.2**
WRA	**Warramunga Arr**	**21.46**	**224**	P	**P**	**07 58 44.2**	**-0.3**
	comp=Z,17nm,0.5s,baz=47,slow=9.4,SNR=187						
WRA				S	**S**	**08 02 11.6**	**-3.1**
	comp=Z,3.7nm,1.0s,baz=45,slow=17,SNR=6.5						
WRA				ScP	**ScP**	**08 05 28.5**	**-1.7**
	comp=Z,0.4nm,0.8s,baz=51,slow=2.9,SNR=2.3						
	comp=Z,17nm,0.5s						
WRA	**Warramunga Arr**	**21.46**	**224**	P	**P**	**07 58 42.8**	**-1.8**
RMQ	**Roma**	**21.58**	**183**	P	**P**	**07 58 47.6**	**+2.1**
DZM	**Mont Dzumac**	**23.35**	**139**	P	**P**	**07 59 01.6**	**-0.1**
	comp=Z,7.2nm,0.5s,baz=281,slow=10,SNR=9.2						
	comp=Z,7.2nm,0.5s						
KNRA	**Kununurra**	**23.55**	**241**	P	**P**	**07 59 02.4**	**-1.1**
KNRA	**Kununurra**	**23.55**	**241**	P	**P**	**07 59 03.0**	**-0.5**
AS31	**Alice Springs**	**24.37**	**218**	P	**P**	**07 59 10.2**	**-0.7**
ASAR	**Alice Springs**	**24.38**	**218**	P	**P**	**07 59 09.9**	**-1.0**
ARMA	**Armidale**	**25.50**	**177**	P	**P**	**07 59 21.9**	**+1.1**
ARMA				IAmb	IAmb	08 00 03.1	
	comp=Z,8.9nm,1.1s						
ARMA	**Armidale**	**25.50**	**177**	P	**P**	**07 59 22.2**	**+1.3**
OOD	**Oodnadatta**	**26.64**	**209**	P	**P**	**07 59 30.3**	**-0.6**
	comp=Z,12nm,3.0s						
CMSA	**Cobar Meteorol**	**26.89**	**188**	P	**P**	**07 59 33.8**	**+0.7**
MULG	**Mulgathing**	**29.49**	**209**	P	**P**	**07 59 54.9**	**-1.1**
FORT	**Forrest**	**33.11**	**216**	P	**P**	**08 00 26.7**	**-0.6**
MBWA	**Marble Bar**	**33.63**	**238**	P	**P**	**08 00 30.7**	**-1.2**
MBWA				IAmb	IAmb	08 00 31.0	
	comp=Z,12nm,0.6s						
OUZ	**Omahuta**	**37.24**	**147**	P	**P**	**08 01 03.5**	**+1.4**
OUZ				IAmb	IAmb	08 01 46.5	
	comp=Z,20nm,1.3s						
GIRL	**Giralia**	**38.90**	**239**	P	**P**	**08 01 15.4**	**-0.6**
URZ	**Urewera**	**41.38**	**147**	P	**P**	**08 01 35.8**	**0.0**
	comp=Z,6.8nm,0.7s,baz=294,slow=20,SNR=5.6						
	comp=Z,6.8nm,0.7s						
URZ	**Urewera**	**41.38**	**147**	IAmb	IAmb	08 01 40.6	
	comp=Z,8.1nm,0.8s						
NNZ	**Nelson**	**41.82**	**153**	P	**P**	**08 01 39.7**	**+0.5**
NNZ				IAmb	IAmb	08 01 47.0	
	comp=Z,29nm,1.3s						
MJAR	**Matsushiro Arr**	**42.62**	**346**	P	**P**	**08 01 45.5**	**-0.2**
	comp=Z,1.1nm,0.8s,baz=158,slow=11,SNR=5.3						
	comp=Z,1.1nm,0.8s						
BFZ	**Birch Farm**	**42.74**	**150**	P	**P**	**08 01 46.4**	**-0.2**
KSRS	**Korea Array**	**46.85**	**336**	P	**P**	**08 02 19.0**	**+0.4**
	comp=Z,2.2nm,0.6s,baz=155,slow=8.2,SNR=9.6						
	comp=Z,2.2nm,0.6s						
CMAR	**Chiang Mai Arr**	**55.44**	**296**	P	**P**	**08 03 22.6**	**+0.7**
	comp=Z,3.7nm,0.3s,baz=126,slow=5.0,SNR=8.5						
	comp=Z,3.7nm,0.3s						
PETK	**Petropavlovsk-**	**58.08**	**5**	P	**P**	**08 03 39.6**	**0.0**
	comp=Z,3.1nm,0.6s,baz=147,slow=5.2,SNR=6.4						
	comp=Z,3.1nm,0.6s						
SONM	**Songino Array**	**64.93**	**329**	P	**P**	**08 04 26.1**	**+0.9**
	comp=Z,1.3nm,0.5s,baz=116,slow=6.8,SNR=4.5						
	comp=Z,1.3nm,0.5s						
SONM	**Songino Array**	**64.93**	**329**	IAmb	IAmb	08 04 26.9	
	comp=Z,2.0nm,0.8s						
SEY	**Seymchan**	**67.59**	**1**	P	**P**	**08 04 41.2**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=198,slow=6.4,SNR=1.8						
	comp=Z,1.0nm,0.6s						
GUN	**Gumba**	**69.82**	**302**	*eP*	**P**	**08 04 56.2**	**+0.1**
	comp=Z,24nm,0.6s						
PKI	**Pulchoki**	**70.12**	**301**	*eP*	**P**	**08 04 57.2**	**-0.7**
GKN	**Gorkha**	**70.90**	**302**	*eP*	**P**	**08 05 02.4**	**0.0**
	comp=Z,16nm,0.4s						
KOLN	**Koldanda**	**71.72**	**301**	*eP*	**P**	**08 05 06.6**	**-0.7**
	comp=Z,1.6nm,0.5s						
DANN	**Dangsing**	**71.74**	**302**	*eP*	**P**	**08 05 07.0**	**-0.5**
	comp=Z,1.9nm,0.5s						
MK31	**Makanchi Array**	**78.57**	**320**	P	**P**	**08 05 45.3**	**0.0**
MKAR	**Makanchi Array**	**78.57**	**320**	P	**P**	**08 05 45.1**	**-0.2**
	comp=Z,1.9nm,0.6s,baz=108,slow=6.1,SNR=19						
	comp=Z,1.9nm,0.6s						
MKAR	**Makanchi Array**	**78.57**	**320**	P	**P**	**08 05 45.4**	**+0.1**
MAKZ	**Makanchi**	**78.78**	**319**	P	**P**	**08 05 46.6**	**+0.2**
MAKZ				IAmb	IAmb	08 05 47.3	
	comp=Z,4.1nm,0.7s						
L19K	**White Mountain**	**78.82**	**23**	P	**P**	**08 05 46.5**	**+0.2**
L19K				IAmb	IAmb	08 05 53.6	
	comp=Z,4.7nm,1.2s						
ZAA0	**Zalesovo Array**	**79.68**	**327**	P	**P**	**08 05 50.5**	**-0.4**
ZAA0				IAmb	IAmb	08 05 50.7	
	comp=Z,2.7nm,0.7s						
ZALV	**Zalesovo Beam**	**79.68**	**327**	P	**P**	**08 05 49.4**	**-1.6**
	comp=Z,2.6nm,0.6s,baz=105,slow=6.0,SNR=12						
	comp=Z,2.6nm,0.6s						
ZALV	**Zalesovo Beam**	**79.68**	**327**	P	**P**	**08 05 49.7**	**-1.3**
DHY	**Denali Highway**	**82.26**	**24**	P	**P**	**08 06 03.8**	**-0.6**
ILAR	**Eielson Array**	**83.21**	**23**	P	**P**	**08 06 07.4**	**-1.7**
	comp=Z,1.3nm,0.6s,baz=252,slow=4.7,SNR=18						
	comp=Z,1.3nm,0.6s						
J25K	**Salcha River,**	**83.73**	**23**	P	**P**	**08 06 10.6**	**-1.2**
J25K				IAmb	IAmb	08 06 13.0	
	comp=Z,3.4nm,0.6s						
M27K	**Edge Creek, AK**	**84.27**	**26**	P	**P**	**08 06 15.2**	**+0.6**
M27K				IAmb	IAmb	08 06 17.0	
	comp=Z,2.4nm,0.6s						
MAW	**Mawson**	**84.50**	**203**	P	**P**	**08 06 14.6**	**-0.9**
	comp=Z,3.6nm,1.1s,baz=85,slow=10,SNR=2.2						
	comp=Z,3.6nm,1.1s						
KKAR	**Karatay Array**	**85.68**	**314**	P	**P**	**08 06 21.7**	**-0.1**
INK	**Inuvik**	**89.45**	**21**	P	**P**	**08 06 38.0**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=282,slow=4.5,SNR=4.9						
	comp=Z,0.4nm,0.4s						
INK	**Inuvik**	**89.45**	**21**	IAmb	IAmb	08 06 50.7	
	comp=Z,6.7nm,1.5s						
GERES	**GERESS Array B**	**122.63**	**327**	PKP	**PKPdf**	**08 12 35.2**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=29,slow=3.0,SNR=4.1						
TORD	**Torodi Ar. Bea**	**147.73**	**287**	PKPbc	**PKPdf**	**08 13 24.7**	**+2.0**
	comp=Z,3.2nm,0.7s,baz=106,slow=3.0,SNR=26						

*INET **18** 08:05:41.8±0.3, 12.°82N×87.°07W, h3km±2km, ML3.3*
*SNET **18** 08:05:46.2±0.8, 13.°06N×87.°28W, h2km±13km, ML2.3*

ISC 18 08:05:42.4±1.2, **12.°88N**±0.°07×**87.°07W**±0.°07, **h13**km, **n12, σ1°05/10, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**0.17**	**173**	*eP*	Pg	08 05 45.5	-1.0
CRIN				*eS*	**Sg**	**08 05 48.4**	**-1.0**
CRIN				IAML		08 05 51.1	
	comp=E,13μm,0.1s						
TEL3	**Telica 3**	**0.37**	**144**	*eP*	Pg	08 05 49.1	-0.9
CNGN	**Cerro Negro**	**0.52**	**136**	*eP*	Pg	08 05 51.9	-0.8
MOMN	**Momotombo**	**0.70**	**132**	*eP*	Pg	08 05 55.2	-0.8
CNCH	**Conchagua**	**0.84**	**298**	*eP*	**Pg**	**08 05 58.2**	**-0.6**
CNCH				*eS*	**Sg**	**08 06 08.6**	**-1.3**
CNCH				IAML		08 06 16.4	
	comp=Z,334nm,0.3s						
LCND	**La Caada**	**0.91**	**299**	*eP*	**Pg**	**08 05 59.4**	**-0.5**
LCND				IAML		08 06 17.4	
	comp=Z,111nm,0.3s						
RCON	**San Juan de Ri**	**1.08**	**56**	*eP*	**Pb**	**08 06 03.1**	**0.0**
MATN	**Matagalpa**	**1.12**	**87**	*eP*	Pn	08 06 02.0	-1.9
TGUH	**Tegucigalpa,Un**	**1.19**	**351**	*eP*	**Pb**	**08 06 05.4**	**+0.4**
TGUH				*eS*	**Sb**	**08 06 19.6**	**-0.8**
TGUH	**Tegucigalpa,Un**	**1.19**	**351**	*eP*	**Pb**	**08 06 05.4**	**+0.4**
COEG	**Centro de Oper**	**1.91**	**293**	*eP*	**Pn**	**08 06 16.4**	**+1.7**
COEG				IAML		08 06 46.2	
	comp=Z,33nm,0.4s						
JAYA	**Jayaque - finc**	**2.44**	**289**	*eP*	**Pn**	**08 06 23.1**	**+0.9**

*IDC **18** 08:14:53.0±15.0, 35.°03N×71.°56E, h171km±179km, mb3.3/5, mbtmp3.7/6, ML3.6/1, MS3.3/1, Error ellipse: s-maj=107.2km s-min=51.4km az=102.0*

ISC 18 08:14:51.8±3.7, **35.°1N**±0.°5×**71.°4E**±0.°4, **h150**km, **n7, σ0°74/6, mb3.7/5, Pakistan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**14.31**	**32**	P	**Pn**	**08 18 07.9**	**+0.4**
	0.3nm,0.3s,baz=210,slow=13,SNR=11						
	0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**21.10**	**22**	P	**P**	**08 19 23.2**	**-1.0**
	1.9nm,0.3s,baz=220,slow=11,SNR=11						
	1.9nm,0.3s						
FINES	**FINESS Array B**	**38.83**	**327**	P	**P**	**08 22 01.5**	**-0.2**
	1.4nm,0.7s,baz=118,slow=11,SNR=4.3						
	1.4nm,0.7s						
ARCES	**ARCESS Array B**	**42.57**	**338**	P	**P**	**08 22 33.0**	**+0.6**
	1.0nm,0.9s,baz=106,slow=8.6,SNR=3.9						
	1.0nm,0.9s						
NOA	**NORSAR Array B**	**45.69**	**324**	P	**P**	**08 22 57.1**	**-0.2**
	0.3nm,0.4s,baz=99,slow=7.8,SNR=1.9						
	0.3nm,0.4s						
JOW	**Kunigami**	**48.94**	**83**	LR	LR	08 48 10.5	
	comp=Z,34nm,20.1s,baz=156,slow=41						
TORD	**Torodi Ar. Bea**	**65.98**	**269**	P	**P**	**08 25 22.4**	**0.0**
	0.4nm,0.4s,baz=50,slow=6.2,SNR=7.9						
	0.4nm,0.4s						

*INET **18** 08:16:33.5±0.5, 12.°80N×87.°08W, h5km±1km, ML3.5*
*SNET **18** 08:16:36.8±0.5, 12.°93N×87.°24W, h2km±61km, ML2.4*

ISC 18 08:16:32.9±1.0, **12.°80N**±0.°04×**87.°06W**±0.°04, **h18**km±4km, **n16, σ0°46/20, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**0.10**	**174**	*eP*	**Pg**	**08 16 36.5**	**-0.1**
CRIN				*eS*	**Sg**	**08 16 39.7**	**+0.5**
CRIN				IAML		08 16 49.8	
	comp=N,19μm,0.2s						
TEL3	**Telica 3**	**0.31**	**137**	*eP*	**Pb**	**08 16 40.5**	**+0.6**
CNGN	**Cerro Negro**	**0.46**	**130**	*eP*	**Pb**	**08 16 43.2**	**+0.6**
CSGN	**Cosiguina Volc**	**0.52**	**290**	*eP*	**Pb**	**08 16 43.9**	**+0.4**
MOMN	**Momotombo**	**0.64**	**127**	*eP*	**Pn**	**08 16 46.4**	**-0.7**
COPN	**Copaltepe**	**0.77**	**143**	*eP*	**Pn**	**08 16 48.2**	**-0.6**
CNCH	**Conchagua**	**0.89**	**302**	*eP*	**Pn**	**08 16 50.8**	**+0.2**
CNCH				*eS*	**Sg**	**08 17 01.4**	**-0.7**
CNCH				IAML		08 17 08.5	
	comp=Z,392nm,0.5s						
LCND	**La Caada**	**0.95**	**302**	*eP*	**Pn**	**08 16 51.2**	**-0.2**
LCND				*eS*	**Sb**	**08 17 03.0**	**-0.3**
LCND				IAML		08 17 08.3	
	comp=Z,115nm,0.4s						
HUEN		**0.98**	**118**	*eP*	**Pg**	**08 16 52.2**	**+0.2**
MATN	**Matagalpa**	**1.11**	**83**	*eP*	**Pn**	**08 16 53.7**	**-0.1**
RCON	**San Juan de Ri**	**1.11**	**52**	*eP*	**Pg**	**08 16 54.7**	**+0.2**
TGUH	**Tegucigalpa,Un**	**1.27**	**351**	*eP*	**Pg**	**08 16 57.5**	**0.0**
TGUH				*eS*	**Sg**	**08 17 13.9**	**-0.1**
TGUH	**Tegucigalpa,Un**	**1.27**	**351**	*eP*	**Pg**	**08 16 57.5**	**0.0**
BOAB	**BOACO BROADBAN**	**1.40**	**104**	*eP*	**Pb**	**08 16 58.5**	**-0.1**
COEB	**Comit de Eme**	**1.59**	**296**	*eP*	**Pb**	**08 17 02.1**	**+0.3**
COEB				IAML		08 17 27.6	
	comp=Z,49nm,0.5s						
SCLA	**Alcaldia de Sa**	**1.86**	**299**	*eP*	**Pb**	**08 17 07.0**	**+0.7**

*JMA **18** 08:25:12.3±0.2, 37.°7N±0.°8×14.°4E±.°, h46km, MV3.6/28, FAR E OFF NORTH HONSHU*
*IDC **18** 08:25:12.0±1.6, 36.°83N×144.°41E, h0km, mb3.7/2, mbtmp3.6/3, ML2.6/1, MS2.3/2, Error ellipse: s-maj=40.3km s-min=30.5km az=143.0*

ISC 18 08:25:11.1±1.5, **37.°69N**±0.°06×**144.°57E**±0.°09, **h35**km, **n21, σ1°47/30, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakibobu**	**2.53**	**285**	P	**Pn**	**08 25 50.3**	**+0.6**
JIKH				S	**Sn**	**08 26 18.4**	**-0.9**
JIO	**Ouri**	**2.66**	**288**	P	**Pn**	**08 25 52.3**	**+0.9**
JIO				*eS*	**Sn**	**08 26 21.5**	**-0.8**
OFUJ	**Ofunato**	**2.67**	**302**	P	**Pn**	**08 25 52.5**	**+0.9**
OFUJ				*eS*	**Sn**	**08 26 22.7**	**0.0**
JKMT	**Kesennumamotoy**	**2.68**	**296**	*eP*	**Pn**	**08 25 52.6**	**+0.8**
JKMT				*eS*	**Sn**	**08 26 22.6**	**-0.4**
JMK	**Ichinoseki**	**2.92**	**297**	P	**Pn**	**08 25 56.4**	**+1.3**
JMK				*eS*	**Sn**	**08 26 29.0**	**+0.1**
JOM	**Ohasama**	**3.13**	**306**	P	**Pn**	**08 25 59.4**	**+1.5**
JFT	**Otama**	**3.37**	**268**	P	**Pn**	**08 26 02.5**	**+1.3**
JFT				S	**Sn**	**08 26 40.4**	**+0.4**
JYK	**Kaneyama**	**3.53**	**292**	P	**Pn**	**08 26 05.3**	**+1.8**
JYK				S	**Sn**	**08 26 45.1**	**+1.0**
BSO1	**Boso 1**	**4.20**	**225**	P	**Pn**	**08 26 10.9**	**-1.2**
BSO1				*eS*	**Sn**	**08 26 58.6**	**-1.1**
JRY	**Ryogami san**	**4.84**	**252**	P	**Pn**	**08 26 21.4**	**-0.1**
JRY				S	**Sn**	**08 27 12.8**	**-3.6**
JCH	**Churui**	**5.01**	**350**	*eP*	**Pn**	**08 26 24.7**	**+1.0**
JCH				*eS*	**Sn**	**08 27 19.5**	**-0.8**
JOD2	**Odawara 2**	**5.04**	**243**	*eP*	**Pn**	**08 26 24.4**	**+0.2**
JOD2				*eS*	**Sn**	**08 27 18.0**	**-3.2**
MJAR	**Matsushiro Arr**	**5.21**	**259**	Pn	**Pn**	**08 26 28.0**	**+1.4**
	0.2nm,0.3s,baz=90,slow=15,SNR=10						
MJAR				Sn	**Sn**	**08 27 26.1**	**+0.7**
	0.1nm,0.3s,baz=101,slow=24,SNR=4.1						
MJAR				LR	LR	08 28 57.3	
	comp=Z,16nm,21.9s,baz=54,slow=45						
	2.6nm,0.5s						
NEM2	**Nemuro 2**	**5.74**	**9**	*eP*	**Pn**	**08 26 32.8**	**-0.9**
NEM2				*eS*	**Sn**	**08 27 35.1**	**-3.3**
JTKR	**Abashiri--Toko**	**6.29**	**356**	P	**Pn**	**08 26 42.3**	**+0.9**
JTKR				*eS*	**Sn**	**08 27 50.6**	**-1.4**
KSRS	**Korea Array**	**13.21**	**274**	LR	LR	08 33 49.4	
	comp=Z,32nm,18.1s,baz=125,slow=39						
H11N2	**WAKE ISLAND Hy**	**26.41**	**126**	T	T	08 58 09.1	
	baz=317						
H11N1	**WAKE ISLAND Hy**	**26.42**	**126**	T	T	08 58 11.6	
	baz=317						
H11N3	**WAKE ISLAND Hy**	**26.43**	**126**	T	T	08 58 06.3	
	baz=317						
ILAR	**Eielson Array**	**47.59**	**33**	P	P	08 33 55.1	+12
	0.3nm,0.8s,baz=246,slow=5.8,SNR=2.9						
	0.3nm,0.8s						
WRA	**Warramunga Arr**	**58.13**	**191**	P	**P**	**08 35 01.4**	**+0.1**
	1.2nm,0.5s,baz=9.3,slow=7.0,SNR=27						
	1.2nm,0.5s						

MAN 18 08:34:37.5, 8.°95N×122.°87E, h22km, mb4.0, ML2.8, MS2.4, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNOP	**Candoni, Negro**	**0.90**	**346**	↓*eP*	Pn	08 34 53.5	0.0
CNOP				*eS*		08 35 06.2	
PAGZ	**Pagadian**	**1.21**	**155**	↓*eP*	Pn	08 34 58.7	+0.3
PAGZ				*eS*		08 35 15.0	
TBP	**Tagbilaran**	**1.23**	**53**	*eP*	Pb	08 34 59.3	+0.6
TBP				*i* S		08 35 15.7	

MAN 18 08:40:05.0, 9.°48N×121.°45E, h33km, mb4.4, ML3.3, MS3.1, 3C-5D, Sulu Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNOP	**Candoni, Negro**	**1.23**	**74**	↓*eP*	Pn	08 40 25.2	+0.4
CNOP				*eS*		08 40 40.5	
CUYO	**Cuyo Island**	**1.42**	**343**	↓*eP*	Pn	08 40 29.2	+1.0
GUIM	**Jordan**	**1.60**	**45**	↓*eP*	Pn	08 40 31.1	+1.1
GUIM				*eS*		08 40 50.1	
RCP	**Roxas**	**2.43**	**32**	↑*eP*	Pn	08 40 44.2	+2.7
RCP				*eS*		08 41 12.3	
PAGZ	**Pagadian**	**2.51**	**130**	↓*eP*	Pn	08 40 44.6	+1.6
PAGZ				*eS*		08 41 14.1	
ZCP	**Zamboanga City**	**2.61**	**166**	↑*iP*	Pn	08 40 45.3	+0.4
ZCP				*i* S		08 41 13.5	
LLP	**Lapu-Lapu**	**2.62**	**71**	↑*iP*	Pn	08 40 46.3	+2.3
LLP				*i* S		08 41 17.7	
SJMP	**San Jose**	**2.98**	**354**	↓*eP*	Pn	08 40 50.9	+1.5

*NOU **18** 09:01:31.0, 10.°42S×165.°76E, h99km, mb5.1/19, Santa Cruz Islands*
*NEIC **18** 09:01:32.3±1.4, 10.°5S±0.°1×166.°0E±0.°1, h131km±6km, mb4.5/70, Error ellipse: s-maj=16.7km s-min=15.7km az=63.0*
*IDC **18** 09:01:34.8±2.7, 10.°64S×166.°03E, h162km±23km, mb4.1/17, mbtmp4.6/19, MS3.5/3, Error ellipse: s-maj=17.2km s-min=12.6km az=71.0*

ISC 18 09:01:34.4±0.4, **10.°66S**±0.°06×**166.°02E**±0.°07, **h155**km, **n142, σ1°14/132, mb4.5/56, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.11**	**281**	P	**Pn**	**09 03 03.2**	**+0.6**
	152nm,0.6s,baz=111,slow=3.1,SNR=6.1						
HNR	**Honiara**	**6.11**	**281**		**Pn**	**09 02 59.3**	**-3.3**
DVP	**Devils Point**	**7.33**	**164**	P	**Pn**	**09 03 18.6**	**-0.2**
KOUNC	**Koumac, New Ca**	**9.97**	**189**	Pn	**Pn**	**09 03 53.5**	**-0.5**
KOUNC	**Koumac, New Ca**	**9.97**	**189**	P	**Pn**	**09 03 55.8**	**+1.8**
MARNC	**Mare, Loyalty**	**10.93**	**170**		**Pn**	**09 04 05.4**	**-1.1**
MARNC	**Mare, Loyalty**	**10.93**	**170**	P	**Pn**	**09 04 06.8**	**+0.3**
DZM	**Mont Dzumac**	**11.35**	**178**	P	**Pn**	**09 04 14.1**	**+1.9**
	99nm,0.4s,baz=210,slow=20,SNR=197						
DZM				S	**Sn**	**09 06 15.3**	**-2.6**
	17nm,0.6s,baz=149,slow=23,SNR=3.7						
NOUC	**Port Laguerre**	**11.38**	**179**	P	**Pn**	**09 04 15.9**	**+3.5**
PINNC	**Pines Island,**	**11.96**	**174**	Pn	**Pn**	**09 04 20.8**	**+0.8**
PINNC	**Pines Island,**	**11.

PSA00 Pilbara Seismi 45.51 250 IAmb IAmb 09 09 39.9
comp=Z,19nm,1.1s
MBWA Marble Bar 45.58 251 P P 09 09 39.2 0.0
MORW Morawa 50.05 241 P P 09 10 13.6 0.0
MORW IAmb IAmb 09 10 16.6
comp=Z,10nm,1.1s
KSRS Korea Array 59.72 325 LR LR 09 38 11.8
comp=Z,12nm,18.1s,baz=170,slow=37
CASY Casey 66.83 201 P P 09 12 09.6 +0.5
CASY IAmb IAmb 09 12 10.3
comp=Z,12nm,1.1s
VNDA Vanda 66.88 181 P P 09 12 09.6 +0.3
comp=Z,1.9nm,0.7s,baz=338,slow=6.9,SNR=9.5
comp=Z,1.9nm,0.7s
VNDA Vanda 66.88 181 P P 09 12 09.9 +0.6
SBA Scott Base 67.18 180 P P 09 12 12.7 +1.6
SBA IAmb IAmb 09 12 13.4
comp=Z,6.3nm,0.9s
XLT XiLinHaoTe 70.72 324 eP P 09 12 34.1 +0.5
XLT PcP PcP 09 12 54.8 +1.2
XLT pP pP 09 13 06.8 -3.9
XLT sP sP 09 13 31.4 +4.2
XLT S S 09 21 40.0 +4.4
XLT ScS ScS 09 22 22.5 -0.2
XLT XiLinHaoTe 70.72 324 sS sS 09 22 36.0 -2.1
XLT XiLinHaoTe 70.72 324 SS SS 09 26 08.6 -2.5
XLT pmax pmax
comp=Z,14nm,0.9s
XLT pmax pmax
comp=Z,96nm,5.2s
HHC Hu-ho-hao-te 71.72 319 eP P 09 12 41.1 +1.3
HHC pmax pmax
comp=Z,25nm,1.0s
HHC pmax pmax
comp=Z,140nm,5.1s
CMAR Chiang Mai Arr 72.21 293 P P 09 12 43.5 +0.5
comp=Z,0.9nm,0.4s,baz=114,slow=4.3,SNR=6.7
comp=Z,0.9nm,0.4s
PZH PanZhiHua 72.50 302 P P 09 12 44.1 -0.7
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,110nm,7.9s
SONM Songino Array 78.52 324 P P 09 13 18.8 +0.2
comp=Z,0.7nm,0.5s,baz=134,slow=6.2,SNR=3.5
comp=Z,0.7nm,0.5s
GTA Gaotai 78.99 314 eP P 09 13 22.4 +1.0
GTA pP PcP 09 13 27.4 -2.0
GTA pmax pmax
comp=Z,2.0nm,0.7s
QSPA South Pole Qui 79.34 180 P P 09 13 22.4 -0.4
comp=Z,8.4nm,0.6s,baz=359,slow=0.8,SNR=90
comp=Z,8.4nm,0.6s
QSPA South Pole Qui 79.34 180 P P 09 13 23.1 +0.3
QSPA IAmb IAmb 09 13 23.8
comp=Z,8.9nm,0.7s
N25K Chitina, Valde 81.70 22 IAmb IAmb 09 13 36.3
comp=Z,8.8nm,0.7s
VRDI Verde Repeater 81.87 22 IAmb IAmb 09 13 36.7
comp=Z,5.4nm,0.6s
GLB Gilahina Butte 81.88 22 IAmb IAmb 09 13 37.0
comp=Z,7.1nm,0.7s
BARN Barnard Glacie 82.44 23 IAmb IAmb 09 13 40.5
comp=Z,7.3nm,0.8s
CTGM Chitina Glacie 82.50 23 IAmb IAmb 09 13 40.7
comp=Z,10nm,0.9s
TCOL CIGO, UAF Yank 82.84 18 IAmb IAmb 09 13 42.4
comp=Z,7.1nm,0.8s
COLA College 82.84 18 P P 09 13 40.1 -0.8
COLA IAmb IAmb 09 13 42.1
comp=Z,6.7nm,0.6s
RIDG Independent Ri 83.02 20 IAmb IAmb 09 13 43.9
comp=Z,8.0nm,1.1s
L26K Log Cabin Wild 83.07 21 IAmb IAmb 09 13 44.3
comp=Z,9.0nm,1.2s
IL31 83.07 18 IAmb IAmb 09 13 42.8
comp=Z,3.3nm,0.6s
ILAR Eielson Array 83.07 18 P P 09 13 41.5 -0.7
comp=Z,3.2nm,0.6s,baz=234,slow=5.0,SNR=84
comp=Z,3.2nm,0.6s
ILAR Eielson Array 83.07 18 P P 09 13 42.4 +0.2
POKR Poker Plat Res 83.14 18 P P 09 13 41.7 -0.9
M27K Edge Creek, AK 83.17 22 IAmb IAmb 09 13 44.5
comp=Z,8.1nm,0.9s
HOLB Holberg 83.43 36 P P 09 13 44.4 0.0
J25K Salcha River, 83.44 19 P P 09 13 44.4 +0.3
J25K IAmb IAmb 09 13 45.0
comp=Z,6.4nm,0.7s
SCRK Sand Creek 83.47 20 P P 09 13 44.7 +0.3
HUMO Hull Mountain 83.57 45 P P 09 13 45.0 -0.3
HUMO IAmb IAmb 09 13 47.1
comp=Z,5.7nm,0.9s
L27K Beaver Creek, 83.62 21 P P 09 13 45.1 0.0
BCAR Beaver Creek A 83.64 21 P P 09 13 45.1 -0.1
GRNB Grenville Isla 83.86 32 P P 09 13 47.1 +0.6
GRNB IAmb IAmb 09 13 47.8
comp=Z,6.8nm,1.0s
CMB Columbia Colle 83.89 50 P P 09 13 47.0 -0.1
HYT Haines Junctio 83.93 24 P P 09 13 47.1 +0.3
J26L Joseph Creek 83.95 20 P P 09 13 46.6 -0.2
J26L IAmb IAmb 09 13 50.7
comp=Z,7.8nm,1.4s
E03A Lebam 84.58 41 P P 09 13 50.4 +0.2
E03A IAmb IAmb 09 13 51.7
comp=Z,8.4nm,0.9s
CBB Campbell River 84.80 37 P P 09 13 52.0 +0.7
CBB IAmb IAmb 09 13 52.3
comp=Z,9.0nm,1.0s
K05A Summer Lake 85.04 45 P P 09 13 53.5 +0.6
K05A IAmb IAmb 09 13 54.1
comp=Z,5.9nm,0.9s
DAWY Dawson 85.10 21 P P 09 13 52.7 +0.2
DAWY IAmb IAmb 09 13 54.5
comp=Z,10nm,1.4s
MAW Mawson 85.17 202 P P 09 13 52.9 0.0
comp=Z,4.4nm,0.7s,baz=122,slow=5.3,SNR=11
comp=Z,4.4nm,0.7s
PINE Pine Mountain 85.36 44 P P 09 13 55.3 +0.8
PINE IAmb IAmb 09 13 56.6
comp=Z,9.8nm,1.2s
NVAR Mina Array Bea 85.57 50 P P 09 13 55.4 -0.3
comp=Z,2.8nm,0.9s,baz=236,slow=7.5,SNR=17
comp=Z,2.8nm,0.9s
I07A Izee 86.44 44 P P 09 14 00.3 +0.6
I07A IAmb IAmb 09 14 01.0
comp=Z,7.4nm,1.2s
LTY Liberty 86.69 41 P P 09 13 59.9 -0.9
G08A Pilot Rock 87.18 43 P P 09 14 02.5 -0.7
G08A IAmb IAmb 09 14 04.5
comp=Z,4.7nm,1.1s
214A Organ Pipe Nat 88.19 57 P P 09 14 08.0 -0.2
214A IAmb IAmb 09 14 10.5
comp=Z,4.6nm,0.9s
WMQ Urumqi 89.02 315 eP P 09 14 12.5 +0.6
TUC Tucson 89.95 57 P P 09 14 16.4 -0.2
BOZ Bozeman (W) 92.24 44 P P 09 14 26.9 -0.1
BOZ IAmb IAmb 09 14 28.5
comp=Z,3.3nm,1.1s
HRY Holter Researc 92.35 43 P P 09 14 27.0 -0.4
PDAR Pinedale Array 93.09 47 P P 09 14 30.0 -1.1
comp=Z,1.0nm,0.9s,baz=256,slow=3.6,SNR=6.0
comp=Z,1.0nm,0.9s
ZALV Zalesovo Beam 93.41 324 P P 09 14 30.7 -1.2
comp=Z,1.3nm,0.8s,baz=99,slow=4.7,SNR=3.6
comp=Z,1.3nm,0.8s
MK31 Makanchi Array 93.43 317 P P 09 14 31.6 -0.7
MK31 IAmb IAmb 09 14 32.3
comp=Z,1.5nm,0.8s
MKAR Makanchi Array 93.43 317 P P 09 14 31.4 -0.9
comp=Z,1.9nm,0.7s,baz=91,slow=6.4,SNR=15
MKAR PKKPbc PKKPdf 09 31 37.1 -1.4
comp=Z,0.7nm,0.7s,baz=309,slow=0.8,SNR=5.4
comp=Z,1.9nm,0.7s
YKA Yellowknife Ar 94.51 27 LR LR 09 51 52.8
comp=Z,34nm,20.8s,baz=208,slow=32
TXAR Lajitas Array 95.41 61 P P 09 14 42.8 +1.0
comp=Z,0.2nm,0.7s,baz=222,slow=4.1,SNR=4.6
comp=Z,0.2nm,0.7s
TROLL Troll, Antarti 96.78 185 P P 09 14 47.0 -0.3
SNAA Sanae 97.51 184 P P 09 14 49.3 -1.2
SNAA Sanae 97.51 184 P P 09 14 49.6 -0.8
comp=Z,2.3nm,0.7s,baz=195,slow=4.3,SNR=21
comp=Z,2.3nm,0.7s
SNAA Sanae 97.51 184 P P 09 14 49.8 -0.6
VNA3 Neumayer Olymp 98.23 181 P P 09 14 52.3 -1.3
VNA1 Neumayer--Stat 98.78 182 P P 09 14 55.4 -0.7

ARCES ARCESS Array B 116.03 346 PKP PKPdf 09 19 57.5 -0.9
comp=Z,7.0nm,1.1s,baz=82,slow=1.8,SNR=11
FINES FINESS Array B 121.52 339 PKP PKPdf 09 20 07.8 -1.3
comp=Z,2.9nm,0.9s,baz=109,slow=3.4,SNR=5.2
FINES FINESS Array B 121.52 339 PKPdf PKPdf 09 20 08.1 -1.0
CPUP Villa Florida 124.08 132 PKP PKPdf 09 20 14.1 -1.1
comp=Z,0.6nm,0.5s,baz=280,slow=6.1,SNR=3.3
CPUP Villa Florida 124.08 132 PKPdf PKPdf 09 20 14.6 -0.6
BOSA Boshof 125.58 223 PKP PKPdf 09 20 17.9 -0.2
comp=Z,3.4nm,0.7s,baz=150,slow=0.2,SNR=8.8
SIV San Ignacio 126.39 119 PKP PKPdf 09 20 18.8 -1.1
comp=Z,1.1nm,0.6s,baz=264,slow=3.6,SNR=6.1
GERES GERESS Array B 135.48 334 PKP PKPdf 09 20 36.8 +0.6
comp=Z,0.5nm,0.7s,baz=99,slow=5.1,SNR=4.1
KEST Kesra 147.28 323 PKPbc PKPbc 09 20 59.4 -0.8
comp=Z,3.6nm,0.6s,baz=55,slow=2.5,SNR=4.9
ESDC Sonseca Array 149.77 345 PKPbc PKPbc 09 21 05.7 -0.7
comp=Z,1.2nm,1.0s,baz=49,slow=1.7,SNR=7.7
TORD Torodi Ar. Bea 164.47 281 PKP PKPdf 09 21 19.7 -0.8
comp=Z,0.5nm,0.8s,baz=54,slow=3.3,SNR=3.3
TORD PKPab PKPab 09 22 13.7 -2.5
comp=Z,1.4nm,1.1s,baz=94,slow=3.9,SNR=4.7
TORD Torodi Ar. Bea 164.47 281 PKPdf 09 21 19.4 -1.2
TORD PKPab 09 22 15.3 -0.8

*UPA **18** 09:15:46.6±2.6, 6°.29N×82°.43W, h0km±15km, MW4.5*
*NEIC **18** 09:15:46.5±2.0, 6°.17N±0°.06×82°.51W±0°.08, h10km±1km, mb4.6/121, Error ellipse: s-maj=14.2km s-min=8.8km az=240.0*
*UCR **18** 09:15:47.8±1.6, 6°.32N×82°.51W, h5km, MW4.6, mb4.6(NEIC)*
*IDC **18** 09:15:47.2±1.1, 6°.53N×82°.20W, h0km, mb4.0/10, mbtmp4.2/15, ML3.8/5, MS3.6/31, Error ellipse: s-maj=34.0km s-min=15.3km az=32.0*
ISC 18 09:15:47.8±2.7, 6°.09N±0°.05×82°.45W±0°.04, h24km±21km, n363,σ1=81/320, mb4.6/62, MS3.7/25, 26C-7D, South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
CACAO	El Cacao, Vera	2.01	51	eP		Pn	09 16 15.0	-5.3
CACAO	El Cacao, Vera	2.01	51	↓iP		Pn	09 16 17.7	-2.6
CACAO				eS		Sn	09 16 40.8	-3.8
MARI3	Mariato, Verag	2.12	43	eP		Pn	09 16 19.7	-2.1
MARI3				eS		Sn	09 16 45.7	-1.6
PTPM	Petroterminale	2.15	348	↑eP		Pn	09 16 20.0	-2.2
PTPM				eS		Sn	09 16 44.0	-4.0
REME3	Remedios, Chir	2.21	16	↓eP		Pn	09 16 20.8	-2.3
MAPC	Malpelo	2.23	158	eP		Pn	09 16 18.8	-4.5
RSUS3	Rio de Jesus,	2.27	34	eP		Pn	09 16 21.9	-2.1
RSUS3				eS		Sn	09 16 49.3	-1.9
DVD	David	2.33	360	eP		Pn	09 16 22.7	-2.0
DVD				eS		Sn	09 16 48.9	-3.7
CCOL	Caracol de Cor	2.36	347	↑eP		Pn	09 16 22.5	-2.6
CCOL				eS		Sn	09 16 51.5	-1.8
STIA3	Santiago, Vera	2.48	36	↑iP		Pn	09 16 25.0	-1.7
STIA3				iS		Sn	09 16 55.2	-1.4
CDITO	Canoas	2.51	350	eP		Pn	09 16 24.7	-2.4
CDITO					Sn	Sn	09 16 54.1	-2.8
CDITO	Canoas	2.51	350	↑iP		Pn	09 16 24.7	-2.4
CDITO				eS		Sn	09 16 54.7	-2.2
PTJ1	Puerto Jimnez	2.58	341	↑eP		Pn	09 16 25.8	-2.3
PTAR3	Potrerillos Ar	2.59	359	eP		Pn	09 16 26.7	-1.6
PTAR3				eS		Sn	09 16 57.7	-1.4
LNBQ3	Los Naranjos,	2.69	0	eP		Pn	09 16 27.8	-1.9
LNBQ3				eS		Sn	09 16 59.5	-2.1
BRU2	Volcan	2.70	355			Pn	09 16 28.1	-1.8
BRU2					Sn	Sn	09 17 01.4	-0.5
BRU2	Volcan	2.70	355	eP		Pn	09 16 28.5	-1.4
BRU2	Volcan	2.70	355	↑eP		Pn	09 16 27.6	-2.3
BRU2				eS		Sn	09 17 00.6	-1.3
BRU2	Volcan	2.70	355	eP		Pn	09 16 27.8	-2.1
BRU2				iS		Sn	09 16 59.5	-2.4
MLIR3	Monte Lirio, C	2.71	352	eP		Pn	09 16 28.7	-1.3
MLIR3				eS		Sn	09 16 59.9	-2.3
AZU	Azuero	2.74	52	eP		Pn	09 16 27.5	-2.8
AZU	Azuero	2.74	52	eP		Pn	09 16 28.1	-2.2
AZU	Azuero	2.74	52	↓iP		Pn	09 16 28.4	-1.9
AZU				iS		Sn	09 16 59.6	-3.1
EDSV	San Vito	2.77	349	↑iP		Pn	09 16 29.2	-1.5
EDSV				eS		Sn	09 17 02.5	-1.0
CHGR2	Aguacate	2.85	6	eP		Pn	09 16 30.5	-1.3
CHGR2				eS		Sn	09 17 03.3	-2.1
POTG	Potrero Grande	3.02	347	eP		Pn	09 16 32.8	-1.5
EDPN	Palmar Norte	3.03	341	↑eP		Pn	09 16 32.2	-2.0
EDBA	Buenos Aires	3.16	345	eP		Pn	09 16 34.9	-1.3
PNME	Penonome	3.18	41	eP		Pn	09 16 35.2	-1.1
PNME	Penonome	3.18	41	↓eP		Pn	09 16 35.4	-1.0
PNME				eS		Sn	09 17 13.3	-0.2
DRK0	Durika	3.25	346			Pn	09 16 36.8	-0.7
DRK0	Durika	3.25	346	↑eP		Pn	09 16 36.7	-0.7
DRK0	Durika	3.25	346	↑iP		Pn	09 16 36.9	-0.7
DRK0				eS		Sn	09 17 15.5	-0.1
SRBA	San Rafael, Bu	3.25	344			Pn	09 16 35.7	-1.8
SRBA					Sn	Sn	09 17 14.1	-1.4
SRBA	San Rafael, Bu	3.25	344	↑iP		Pn	09 16 35.7	-1.8
CNI2	El Empalme, Bo	3.31	360	eP		Pn	09 16 38.4	+0.2
CNI2				eS		Sn	09 17 18.1	+1.3
EDDO	Dominical	3.44	336	↑eP		Pn	09 16 38.2	-1.8
RGM0	Gandoca	3.48	357			Pn	09 16 41.0	+0.4
PEZE	Perez Zeledon,	3.49	340			Pn	09 16 39.4	-1.4
CDM	Cerro de Muert	3.68	339	eP		Pn	09 16 42.4	-1.3
ZANG	Zanguenga, Cho	3.83	42	eP		Pn	09 16 45.1	-0.2
CHOR3	La Chorrera	3.85	43	eP		Pn	09 16 45.3	-0.3
CHOR3				eS		Sn	09 17 28.9	-1.3
RIMA	Rio Macho	3.92	339	Pn		Pn	09 16 45.4	-1.4
RIMA	Rio Macho	3.92	339	eP		Pn	09 16 45.3	-1.4
BCIP	Isla Barro Col	4.00	40	Pn		Pn	09 16 46.9	-0.8
BCIP	Isla Barro Col	4.00	40	eP		Pn	09 16 45.8	-1.9
BCIP	Isla Barro Col	4.00	40	eP		Pn	09 16 46.7	-1.0
BCIP				eS		Sn	09 17 33.0	-0.9
FLAM	Flamenco Islan	4.03	46	eS		Sn	09 17 33.5	-0.9
PML3	Paraiso	4.04	44	eP		Pn	09 16 47.6	-0.6
PML3				eS		Sn	09 17 33.8	-1.1
GAMB1	Gamboa	4.05	42	eP		Pn	09 16 48.7	+0.3
GAMB1				iS		Sn	09 17 34.6	-0.5
OCM	Ochomogo	4.07	338	↑iP		Pn	09 16 47.6	-1.2
UPA	Univ. de Panam	4.07	45	eP		Pn	09 16 47.7	-0.9
UPA	Univ. de Panam	4.07	45	↓eP		Pn	09 16 47.7	-0.9
UPA				iS		Sn	09 17 33.7	-1.9
RAFA	San Farael, Vo	4.08	341	↑iP		Pn	09 16 48.1	-0.9
BATAN	Batan	4.09	347	Pn		Pn	09 16 48.5	-0.4
BATAN	Batan	4.09	347	eP		Pn	09 16 48.7	-0.2
BATAN				eS		Sn	09 17 32.0	-4.0
CVTR	Volcan Turrial	4.12	342			Pn	09 16 49.0	-0.6
CVTR	Volcan Turrial	4.12	342	eP		Pn	09 16 48.4	-1.2
SJS	Escuela Geolog	4.14	338	↑iP		Pn	09 16 48.9	-0.9
SJS				eS		Sn	09 17 32.1	-0.5
JACO	JACO, Garabito	4.17	328			Pn	09 16 48.0	-2.1
JACO	JACO, Garabito	4.17	328	↑iP		Pn	09 16 47.9	-2.1
HDC	Heredia	4.22	337			Pn	09 16 50.2	-0.6
HDC	Heredia	4.22	337	eP		Pn	09 16 50.2	-0.6
HDC	Heredia	4.22	337	↑iP		Pn	09 16 50.3	-0.6
HDC				eS		Sn	09 17 39.8	+0.3
HDC3	Heredia 3	4.22	337	↑iP		Pn	09 16 50.2	-0.6
LAFE	Finca La Fe, P	4.43	327	eP		Pn	09 16 51.6	-2.0
CRPO	Crater poas	4.45	337	eP		Pn	09 16 53.0	-1.1
RIFO	Rio Frio, Sara	4.45	341	↑iP		Pn	09 16 53.3	-0.5
SRA1	San Ramn	4.45	333	↑eP		Pn	09 16 52.5	-1.5
INDI	Punta indio, G	4.82	321	↑eP		Pn	09 16 56.9	-2.0
JTS	Las Juntas de	4.86	329	Pn		Pn	09 16 57.8	-1.7
	15nm,0.3s,baz=187,slow=7.2,SNR=112							
JTS				LR		LR	09 17 40.5	
	comp=Z,301nm,21.4s,baz=252,slow=24							
JTS				Sn		Sn	09 17 52.9	-2.1
	46nm,0.3s,baz=130,slow=22,SNR=26							
	68nm,0.3s							
JTS	Las Juntas de	4.86	329	eP		Pn	09 16 54.5	-5.0
JTS	Las Juntas de	4.86	329	↑eP		Pn	09 16 57.7	-1.7
JTS	Las Juntas de	4.86	329	↑iP		Pn	09 16 57.9	-1.7
JTS				eS		Sn	09 17 53.7	-1.3
CASO	Castillo	4.88	332	eP		Pn	09 16 59.4	-0.4
FORC	Fortuna	4.88	333	eP		Pn	09 16 59.4	-0.3
ARE1	Arenal 1	4.89	333	eP		Pn	09 16 59.2	-0.8
CEDE	Laguna Cedeo	4.91	333	eP		Pn	09 17 00.0	-0.2
DUNO	Dulce Nombre,	4.98	323			Pn	09 16 59.7	-1.5
DUNO	Dulce Nombre,	4.98	323	eP		Pn	09 16 59.5	-1.7
NICO	Nicoya	5.00	324	eP		Pn	09 17 00.2	-1.2
SOLC	Bahia Solano	5.01	88	eP		Pn	09 16 58.3	-3.2
SOLC	Bahia Solano	5.01	88	eP		Pn	09 17 00.3	-1.3
UPD2	Meteti	5.03	61	eP		Pn	09 17 03.1	+1.3
UPD2	Meteti	5.03	61	eP		Pn	09 17 04.8	+3.0
SAJU	San Juanillo,	5.11	321	↑iP		Pn	09 17 00.6	-2.3
SAJU				eS		Sn	09 17 58.4	-2.7
PLVR	Palo Verde	5.12	326	eP		Pn	09 17 01.7	-1.5
GUAI	GUAI	5.14	324	eP		Pn	09 17 02.2	-1.2
ORTG	Ortega, Santa	5.19	325	Pn		Pn	09 17 02.6	-1.5
ORTG	Ortega, Santa	5.19	325	eP		Pn	09 17 02.2	-1.9
PTEN	Parque Tenorio	5.24	332	↑iP		Pn	09 17 04.1	-0.7
PTEN				↓eP		Pb	09 17 04.5	-14
GR1C	Gorgona, Isla	5.25	126	eP		Pn	09 16 59.3	-5.6
CUI	Cuipilapa	5.28	330	↑eP		Pn	09 17 04.0	-1.3
COLC	Colonia	5.30	329	↓eP		Pn	09 17 05.0	-0.6
HORNC	Hornillas	5.33	330	eP		Pn	09 17 05.2	-0.8
GUAB	Guayabo de Bag	5.35	329	eP		Pn	09 17 05.9	-0.4
LIM1	Limonal	5.36	329	eP		Pn	09 17 06.6	+0.2
VMAR	Armenia, Volca	5.39	331	eP		Pn	09 17 06.2	-0.6
GPS2	Hotel Rincn d	5.45	328	eP		Pn	09 17 07.7	0.0
VRLE	La Escondida,	5.49	328	eP		Pn	09 17 06.7	-1.6
LAPC	Finca la Perla	5.51	328	eP		Pn	09 17 07.6	-0.9
BUEV	Buena Vista	5.52	328	eP		Pn	09 17 08.2	-0.4
GBS3	Finca Las Img	5.53	328	eP		Pn	09 17 08.4	-0.4
GB1A	Borinquen Arri	5.53	328	eP		Pn	09 17 08.8	0.0
BUAI	Buenos Aires	5.55	329	eP		Pn	09 17 07.8	-1.2
HZTE	Horizontes, Gu	5.55	326			Pn	09 17 08.5	-0.5
HZTE	Horizontes, Gu	5.55	326	eP		Pn	09 17 08.7	-0.3
CAPC	Capurgana	5.65	63	eP		Pn	09 17 10.9	+0.5
PLMC	San Jos del P	6.25	101	eP		Pn	09 17 16.6	-2.0
DBBC	Dabeiba	6.26	81	eP		Pn	09 17 22.4	+3.5
ESPN	Las Esperanzas	6.34	343			Pn	09 17 19.0	-0.8
ESPN	Las Esperanzas	6.34	343	eP		Pn	09 17 18.6	-1.2
CBOC	Ciudad Bolivar	6.40	92	eP		Pn	09 17 20.5	-0.4
YOTC	Yotoco, Valle	6.43	109	eP		Pn	09 17 20.5	-0.7
ACON	Acoyapa	6.43	335			Pn	09 17 20.3	-0.9
ACON	Acoyapa	6.43	335	eP		Pn	09 17 19.5	-1.7
BBAC	Balboa, Cauca	6.57	128	eP		Pn	09 17 22.4	-0.8
POPC	Popayan, Colom	6.75	121	eP		Pn	09 17 23.4	-2.3
CCUFI	Cufio, Nario	7.01	133	eP		Pn	09 17 30.1	+0.6
GCUF	Volcan Galeras	7.01	133	eP		Pn	09 17 28.2	-1.4
SOTA	Rioblanco	7.02	124	eP		Pn	09 17 30.1	+0.5
OTAV	Otavalo	7.05	145			Pn	09 17 28.9	-1.0
OTAV	Otavalo	7.05	145	eP		Pn	09 17 30.1	+0.2
OTAV	Otavalo	7.05	145	eP		Pn	09 17 29.1	-0.9
UREC	San Jos de Ur	7.06	76	eP		Pn	09 17 31.1	+1.3
UREC	San Jos de Ur	7.06	76	eP		Pn	09 17 31.9	+2.2
BOAB	BOACO BROADBAN	7.08	334	Pn		Pn	09 17 28.9	-1.0
CRUC	La Cruz	7.08	129	eP		Pn	09 17 32.0	+1.6
PCON	Cinco Dias	7.09	122	eP		Pn	09 17 31.1	+0.4
GUY2C	Guyana, Caldas	7.10	97	eP		Pn	09 17 34.0	+3.3
ANIC	Santa Ana	7.19	102	eP		Pn	09 17 34.0	+2.2
MARP	Paez Belalcaza	7.23	116	eP		Pn	09 17 34.9	+2.6
PRVC	Isla de Provid	7.32	8	Pn		Pn	09 17 31.4	-1.9
ORTC	Ortega, Tolima	7.49	106	eP		Pn	09 17 34.9	-0.8
NORC	Norcasia	7.56	94	eP		Pn	09 17 38.8	+2.2
MATN	Matagalpa	7.62	333			Pn	09 17 36.0	-1.4
ZARC	Zaragoza, Cauc	7.66	79			Pn	09 17 39.2	+1.2
ZARC	Zaragoza, Cauc	7.66	79	eP		Pn	09 17 40.7	+2.7
BETC	Betania	7.76	116	eP		Pn	09 17 41.7	+2.3
SLOR	San Lorenzo -	7.84	150			Pn	09 17 41.9	+1.0
PRAC	Prado	7.89	107	eP		Pn	09 17 43.6	+2.4
GARC	Garzon, Huila	7.94	119	eP		Pn	09 17 41.7	-0.4
PTBC	PUERTO BERRIO,	7.95	86	eP		Pn	09 17 45.5	+3.5
CRIN	San Cristobal	7.99	326			Pn	09 17 43.7	+1.1
FLOC	Florencia	8.12	123	eP		Pn	09 17 45.5	+1.2
SJCC	San Jacinto, C	8.13	62	Pn		Pn	09 17 45.6	+1.1
SJCC	San Jacinto, C	8.13	62	eP		Pn	09 17 46.5	+2.0
ROSC	El Rosal	8.18	98	Pn		Pn	09 17 47.5	+2.0
	7.1nm,0.3s,baz=265,slow=10,SNR=10							
ROSC					Sn	Sn	09 19 19.5	+2.0
	0.7nm,0.3s,baz=110,slow=22,SNR=1.2							
ROSC					LR	LR	09 20 42.8	
	comp=Z,297nm,20.4s,baz=304,slow=37							
	26nm,0.4s							
ROSC	El Rosal	8.18	98	Pn		Pn	09 17 49.3	+3.8
ROSC	El Rosal	8.18	98	eP		Pn	09 17 49.4	+3.9
SPBC	San Pablo de B	8.34	93	eP		Pn	09 17 50.4	+2.9
PORT	Chimborazo Vol	8.35	154			Pn	09 17 49.1	+1.1
CHIC	Chingaza	8.80	99	eP		Pn	09 17 58.1	+4.1
ARGC	Ariguani, Magd	8.94	65	eP		Pn	09 17 59.0	+3.4
BARC	Barichara	9.22	86	eP		Pn	09 17 60.0	+0.4
TGUH	Tegucigalpa,Un	9.23	329	eP		Pn	09 18 01.9	+2.2
OCAC	Ocana	9.30	76			Pn	09 18 02.5	+1.8
OCAC	Ocana	9.30	76	eP		Pn	09 18 02.9	+2.2
RUSC	La Rusia	9.31	91	eP		Pn	09 18 03.9	+2.7
PTLC	Puerto Leguiza	9.63	127	eP		Pn	09 18 08.7	+3.6
ARNL	Arenillas	9.86	166	Pn		Pn	09 18 07.9	-0.3
BOSC	San Juan Bosco	9.99	157	Pn		Pn	09 18 14.7	+4.6
SNET	Serv Nac Est T	10.08	319			Pn	09 18 09.1	-2.3
SDV	Santo Domingo	12.04	76	Pn		Pn	09 18 37.1	-1.1
	0.8nm,0.3s,baz=243,slow=11,SNR=1.2							
SDV					Sn	Sn	09 20 46.8	-5.0
	1.9nm,0.3s,baz=347,slow=16,SNR=1.4							
	6.0nm,0.3s							
SDV	Santo Domingo	12.04	76	Pn		Pn	09 18 38.8	+0.6
SDV	Santo Domingo	12.04	76	eP		P	09 18 47.6	-3.3
ATAH	Atahualpa	13.74	163	Pn		Pn	09 19 03.5	+1.9
	0.3nm,0.3s,baz=12,slow=9.3,SNR=4.9							
ATAH					LR	LR	09 23 48.5	
	comp=Z,726nm,19.5s,baz=345,slow=34							
CCIG	Comitan	13.89	318			Pn	09 19 01.4	-2.0
BAUV	El Baul	14.56	78			Pn	09 19 12.4	-0.1
TBTG	Tabatinga, AM	16.15	129	eP		P	09 19 36.1	-0.4
CMIG	Matias Romero	16.36	313	Pn		Pn	09 19 37.3	+1.3
	1.1nm,0.3s,baz=133,slow=10,SNR=17							
CMIG					LR	LR	09 24 50.9	
	comp=Z,322nm,20.9s,baz=126,slow=34							
	9.7nm,0.8s							
SDDR	Presa de Saban	16.80	39	P		Pn	09 19 42.4	+0.6
SDDR				IAmb	IAmb	09 19 50.2		

NPGB Novo Progresso 30.01 115 eP P 09 21 53.9 -1.1
VBST Vila Bela da S 30.24 133 eP P 09 21 55.5 -1.5
W41B Gary Mavity, V 30.32 344 IAmb IAmb 09 21 58.6
comp=Z,9.1nm,1.2s
W41B Gary Mavity, V 30.32 344 P P 09 21 57.9 +0.4
baz=161
SIV San Ignacio 30.48 136 LR LR 09 35 31.6
comp=Z,204nm,18.0s,baz=290,slow=39
TXAR Lajitas Array 30.59 322 P P 09 22 01.8 +1.6
comp=Z,0.3nm,0.7s,baz=146,slow=8.3,SNR=5.1
comp=Z,0.3nm,0.7s
LCAR Lake Charles 30.89 346 IAmb IAmb 09 22 03.3
comp=Z,11nm,0.9s
FCAR Ozark Folk Cen 30.96 345 IAmb IAmb 09 22 03.9
comp=Z,8.3nm,1.1s
PDRB Porto dos Gac 31.04 124 eP P 09 22 03.0 -1.2
LVC Limon Verde 31.45 156 LR LR 09 36 58.0
comp=Z,71nm,18.3s,baz=338,slow=40
PTLB Pontes e Lacer 31.48 133 eP P 09 22 06.9 -1.0
U40A Yellville 31.60 344 IAmb IAmb 09 22 09.9
comp=Z,12nm,1.3s
U40A Yellville 31.60 344 P P 09 22 09.0 +0.2
baz=160
LPIG La Paz 32.20 307 LR LR 09 32 59.4
comp=Z,103nm,19.1s,baz=194,slow=32
CCM Cathedral Cave 32.81 347 P P 09 22 18.3 -1.1
CCM Cathedral Cave 32.81 347 P P 09 22 19.1 -0.3
baz=164
PTET Porto Estrela 32.90 131 eP P 09 22 19.7 -0.7
S39A Bolivar 32.98 344 IAmb IAmb 09 22 22.2
comp=Z,13nm,1.2s
T35A Sooner Cattle 33.27 339 IAmb IAmb 09 22 24.1
comp=Z,13nm,1.1s
MNTX Cornudas Mount 33.31 323 IAmb IAmb 09 22 26.5
comp=Z,8.7nm,1.5s
MNTX Cornudas Mount 33.31 323 P P 09 22 25.6 +1.7
baz=135,SNR=6.5
NBRS Nobres 33.33 128 eP P 09 22 23.6 -0.6
ACSO Alum Creek Sta 34.00 359 P P 09 22 30.3 +0.6
baz=179
O53A New Philadelph 34.03 2 P P 09 22 30.2 +0.2
baz=182
O48B Farmland 34.11 356 P P 09 22 30.3 -0.3
baz=175,SNR=5.3
SALV Santo Antonio 34.33 130 eP P 09 22 32.1 -0.8
P40A Paris 34.40 347 IAmb IAmb 09 22 34.2
comp=Z,9.5nm,1.1s
HDIL Hopedale 34.87 351 P P 09 22 36.3 -0.9
baz=168
TMAB Tom-Au,PA,Br 35.31 103 eP P 09 22 42.2 +0.8
121A Cookes Peak, D 35.35 321 P P 09 22 45.2 +3.4
baz=133,SNR=5.1
SNDB Serra Nova Dou 35.80 120 eP P 09 22 44.8 -0.8
ANMO Albuquerque 36.26 326 LR LR 09 39 52.6
comp=Z,104nm,18.5s,baz=148,slow=40
ANMO Albuquerque 36.26 326 P P 09 22 49.0 -0.6
ANMO IAmb IAmb 09 22 53.2
comp=Z,8.9nm,1.2s
ANMO Albuquerque 36.26 326 P P 09 22 52.3 +2.7
baz=137
L42A Oliver, Polo 36.34 351 P P 09 22 48.1 -1.7
L42A IAmb IAmb 09 22 49.6
comp=Z,11nm,0.9s
T25A Trinidad 36.84 330 IAmb IAmb 09 22 57.8
comp=Z,11nm,0.9s
T25A Trinidad 36.84 330 P P 09 22 56.8 +2.3
baz=142,SNR=11
AQDB Aquidauana 37.25 136 eP P 09 22 55.7 -2.2
ARAG Araguaiana, MT 37.27 126 eP P 09 22 56.7 -1.4
JFWS Jewell Farm 37.32 351 IAmb IAmb 09 22 58.0
comp=Z,6.6nm,0.7s
JFWS Jewell Farm 37.32 351 P P 09 22 57.3 -0.9
baz=167
DVLD Doverlandia 37.51 127 eP P 09 22 59.1 -1.0
KSCO Kaye Shedlock' 37.51 334 P P 09 23 01.5 +1.4
baz=146
K38A Parkersburg 37.54 347 IAmb IAmb 09 23 00.0
comp=Z,11nm,0.8s
SMTB Santa Maria do 37.79 113 eP P 09 23 01.9 -0.7
SDCO Great Sand Dun 37.86 330 IAmb IAmb 09 23 06.7
comp=Z,19nm,1.2s
SDCO Great Sand Dun 37.86 330 P P 09 23 05.7 +2.5
baz=141,SNR=24
ANTJ Antonio Joao (38.08 138 eP P 09 23 03.0 -2.0
W18A Petrified Fore 38.30 323 P P 09 23 10.2 +3.4
baz=133,SNR=8.5
I40A Norwalk 38.33 350 IAmb IAmb 09 23 06.5
comp=Z,12nm,1.1s
PEXB Peixe 38.46 118 eP P 09 23 07.7 -0.6
S22A 4UR Ranch, Cre 38.54 328 P P 09 23 11.9 +3.0
baz=139,SNR=7.4
SADO Sadowa 38.64 4 LR LR 09 38 53.6
comp=Z,96nm,18.7s,baz=216,slow=36
G45A Suttons Bay 38.90 356 IAmb IAmb 09 23 10.8
comp=Z,7.6nm,0.7s
MVCO Mesa Verde 39.04 326 IAmb IAmb 09 23 16.5
comp=Z,19nm,1.4s
MVCO Mesa Verde 39.04 326 P P 09 23 15.6 +2.5
baz=136,SNR=7.0
AMBA Amambai (Brazi 39.40 138 eP P 09 23 13.6 -2.3
ISCO Idaho Springs 39.51 332 P P 09 23 19.0 +1.9
baz=142
ECSD EROS Data Cent 39.51 344 P P 09 23 15.8 -0.8
baz=158,SNR=6.0
WUAZ Wupatki 39.56 322 P P 09 23 20.2 +2.8
baz=131
PV15 Paradox Valley 39.85 327 IAmb IAmb 09 23 23.6
comp=Z,14nm,1.1s
PV13 Radium Mtn., P 39.90 327 IAmb IAmb 09 23 23.7
comp=Z,10nm,0.8s
SPMN Marine on St. 40.02 349 P P 09 23 19.3 -1.5
SPMN Marine on St. 40.02 349 P P 09 23 19.6 -1.2
baz=164,SNR=6.0
COWI Conover 40.28 353 P P 09 23 22.6 -0.4
E43A Lone Tree Farm 40.33 355 P P 09 23 22.8 -0.6
BDFB Brasilia 40.36 123 LR LR 09 39 47.9
comp=Z,112nm,19.7s,baz=301,slow=36
BDFB Brasilia 40.36 123 eP P 09 23 23.1 -1.0
CPUP Villa Florida 40.40 144 LR LR 09 40 54.3
comp=Z,119nm,20.4s,baz=294,slow=37
O20A White River Ci 41.06 329 IAmb IAmb 09 23 55.5
comp=Z,14nm,1.2s
O20A White River Ci 41.06 329 P P 09 23 32.0 +2.3
baz=139
MCR1 Marechal Candi 41.09 139 eP P 09 23 25.9 -4.0
D41A Chassel 41.16 354 IAmb IAmb 09 23 30.6
comp=Z,16nm,0.9s
F33A 5 Mile Ranch, 41.38 345 IAmb IAmb 09 23 31.7
comp=Z,12nm,0.9s
SRU San Rafael Swe 41.51 326 IAmb IAmb 09 23 36.6
comp=Z,10nm,0.8s
SDBA SAO DESIDERIO 41.60 116 eP P 09 23 32.5 -1.9
RWWY Rawlins 41.74 332 IAmb IAmb 09 23 38.5
comp=Z,16nm,1.1s
PFO Pinyon Flats O 41.76 316 LR LR 09 39 22.4
comp=Z,99nm,21.9s,baz=138,slow=34
RDMU Red Mountain 42.06 329 IAmb IAmb 09 23 40.8
comp=Z,11nm,1.1s
K22A Casper 42.19 333 IAmb IAmb 09 23 41.1
comp=Z,9.4nm,1.1s
K22A Casper 42.19 333 P P 09 23 40.6 +1.7
baz=143
RSSD Black Hills 42.35 337 P P 09 23 42.5 +2.2
baz=147
EYMN Ely 42.42 351 P P 09 23 39.3 -1.2
baz=167
JANB Januaria 43.24 119 eP P 09 23 47.0 -0.7
AGMN Agassiz Nation 43.59 347 P P 09 23 49.3 -0.6
baz=161
BW06 Boulder Array 43.69 331 IAmb IAmb 09 23 53.8
comp=Z,16nm,1.6s
BW06 Boulder Array 43.69 331 P P 09 23 52.4 +1.2
baz=139,SNR=6.4
PD31 Pinedale Array 43.69 331 IAmb IAmb 09 23 53.7
comp=Z,14nm,1.6s
PDAR Pinedale Array 43.69 331 P P 09 23 52.4 +1.2
comp=Z,2.9nm,1.1s,baz=128,slow=9.6,SNR=15
PDAR PcP PcP 09 25 41.4 +3.3
comp=Z,0.5nm,0.9s,baz=116,slow=4.1,SNR=2.4
PDAR LR LR 09 43 58.9
comp=Z,119nm,18.6s,baz=143,slow=39
comp=Z,2.9nm,1.1s
HWUT Hardware Ranch 43.85 328 IAmb IAmb 09 23 55.1
comp=Z,8.3nm,0.9s
MDND Maddock 44.12 343 P P 09 23 54.5 +0.2
baz=155,SNR=5.2
BGU Big Grassy Mou 44.16 326 IAmb IAmb 09 23 58.0
comp=Z,7.6nm,1.2s
REDW Red Top Meadow 44.76 330 IAmb IAmb 09 24 02.6
comp=Z,11nm,1.1s
LOHW Long Hollow 44.83 331 IAmb IAmb 09 24 11.4
comp=Z,14nm,1.6s
TPAW Teton Pass 44.91 331 IAmb IAmb 09 24 11.9
comp=Z,5.8nm,0.9s
ELK Elko 45.28 325 LR LR 09 47 05.3
comp=Z,89nm,18.0s,baz=150,slow=42
LAO LASA Array 45.34 337 IAmb IAmb 09 24 06.9
comp=Z,14nm,1.4s
LAO LASA Array 45.34 337 P P 09 24 05.8 +1.7
baz=146
RLMT Red Lodge 45.36 333 IAmb IAmb 09 24 06.2
comp=Z,4.9nm,0.9s
RLMT Red Lodge 45.36 333 P P 09 24 05.6 +1.2
baz=141,SNR=5.3
ULM Lac du Bonnet 45.44 348 P P 09 24 03.0 -1.6
comp=Z,6.1nm,0.7s,baz=164,slow=7.8,SNR=13
comp=Z,6.1nm,0.7s
ULM Lac du Bonnet 45.44 348 P P 09 24 03.1 -1.6
ULM IAmb IAmb 09 24 04.3
comp=Z,8.7nm,0.8s
NVAR Mina Array Bea 45.72 320 P P 09 24 08.9 +1.5
comp=Z,1.1nm,0.8s,baz=122,slow=7.6,SNR=8.4
NVAR PcP PP 09 25 50.6 -4.1
comp=Z,0.1nm,0.4s,baz=111,slow=4.9,SNR=1.5
comp=Z,1.1nm,0.8s
YMR Madison River 45.79 332 IAmb IAmb 09 24 11.1
comp=Z,8.3nm,0.9s
HLID Hailey 46.72 328 P P 09 24 14.6 -0.6
HLID Hailey 46.72 328 P P 09 24 16.8 +1.7
baz=134
BOZ Bozeman (W) 46.80 332 P P 09 24 17.5 +1.8
baz=138,SNR=13
MCMT McKenzie Canyo 46.82 330 P P 09 24 14.4 -1.6
WVOR Wild Horse Val 48.32 324 IAmb IAmb 09 24 39.4
comp=Z,5.9nm,1.1s
MSO Missoula 48.79 332 IAmb IAmb 09 24 33.5
comp=Z,5.0nm,1.1s
MSO Missoula 48.79 332 P P 09 24 31.9 +0.8
baz=136
YBH Yreka Blue Hor 50.37 321 LR LR 09 46 26.8
comp=Z,69nm,18.2s,baz=150,slow=37
WALA Waterton Lakes 50.41 334 IAmb IAmb 09 24 45.9
comp=Z,5.6nm,1.0s
FRB Frobisher Bay 58.42 7 LR LR 09 50 14.3
comp=Z,66nm,21.4s,baz=194,slow=36
DLBC Dease Lake 63.74 334 P P 09 26 19.4 +1.9
comp=Z,2.5nm,0.9s,baz=170,slow=4.0,SNR=6.2
DLBC LR LR 09 57 34.4
comp=Z,73nm,19.2s,baz=293,slow=40
comp=Z,2.5nm,0.9s
DLBC Dease Lake 63.74 334 P P 09 26 19.9 +2.3
baz=125
SFJD Kangerlussuaq 64.60 13 LR LR 09 55 17.1
comp=Z,42nm,19.4s,baz=222,slow=37
MMPY Sheldon Lake, 66.66 338 P P 09 26 38.3 +1.9
baz=126
M30M Minto, Yukon 68.79 336 P P 09 26 51.6 +1.7
baz=120
RES Resolute Bay 68.92 356 LR LR 09 55 56.7
comp=Z,66nm,19.6s,baz=288,slow=35
DAWY Dawson 70.54 337 P P 09 27 01.6 +1.1
baz=118
EPYK Eagle Plains 70.70 340 P P 09 27 02.8 +1.3
baz=121
INK Inuvik 70.73 342 LR LR 10 00 20.4
comp=Z,55nm,18.4s,baz=116,slow=38
INK Inuvik 70.73 342 P P 09 27 02.8 +1.3
INK Inuvik 70.73 342 P P 09 27 03.2 +1.7
baz=125
I29M Ogilvie Camp, 70.76 338 IAmb IAmb 09 27 11.5
comp=Z,7.1nm,1.1s
I29M Ogilvie Camp, 70.76 338 P P 09 27 03.4 +1.6
baz=119
BCAR Beaver Creek A 71.05 336 P P 09 27 05.3 +1.6
L27K Beaver Creek, 71.07 336 IAmb IAmb 09 27 14.6
comp=Z,6.2nm,1.1s
L27K Beaver Creek, 71.07 336 P P 09 27 05.9 +2.1
baz=115
SUMG Summit 71.58 13 P P 09 27 06.0 -1.1
L26K Log Cabin Wild 71.68 335 IAmb IAmb 09 27 20.6
comp=Z,4.5nm,1.1s
DOT Dot Lake 72.23 336 IAmb IAmb 09 27 21.8
comp=Z,7.2nm,1.1s
SCRK Sand Creek 72.33 336 IAmb IAmb 09 27 23.2
comp=Z,3.3nm,0.8s
SCRK Sand Creek 72.33 336 P P 09 27 13.0 +1.6
baz=114
J26L Joseph Creek 72.37 337 IAmb IAmb 09 27 22.5
comp=Z,6.7nm,1.1s
J26L Joseph Creek 72.37 337 P P 09 27 13.7 +2.0
baz=114
J25K Salcha River, 73.13 336 IAmb IAmb 09 27 26.6
comp=Z,4.4nm,0.9s
J25K Salcha River, 73.13 336 P P 09 27 17.5 +1.3
baz=112
WAT6 Susitna Watana 73.39 334 P P 09 27 19.1 +1.2
baz=110
HDA Harding Lake 73.69 336 IAmb IAmb 09 27 29.9
comp=Z,5.9nm,0.9s
HDA Harding Lake 73.69 336 P P 09 27 21.1 +1.7
baz=111
ILAR Eielson Array 73.80 336 P P 09 27 20.7 +0.7
comp=Z,1.0nm,0.8s,baz=123,slow=4.2,SNR=10
ILAR LR LR 10 03 58.0
comp=Z,48nm,19.3s,baz=126,slow=39
comp=Z,1.0nm,0.8s
BMAR Burnt Mountain 73.94 339 P P 09 27 20.8 -0.1
RND Reindeer 74.14 335 IAmb IAmb 09 27 35.0
comp=Z,6.8nm,0.9s
KDAK Kodiak Island 74.34 328 LR LR 10 04 46.9
comp=Z,42nm,18.2s,baz=129,slow=40
H24K Noodor Dome 74.56 337 IAmb IAmb 09 27 34.9
comp=Z,10.0nm,1.3s
H24K Noodor Dome 74.56 337 P P 09 27 25.8 +1.3
baz=110
MLY Manley 75.43 336 P P 09 27 30.8 +1.3
baz=107
ESDC Sonseca Array 77.28 51 P P 09 27 41.2 +0.7
comp=Z,0.9nm,0.8s,baz=270,slow=6.4,SNR=4.7
ESDC LR LR 09 58 40.7
comp=Z,17nm,20.1s,baz=222,slow=34
comp=Z,0.9nm,0.8s
TORD Torodi Ar. Bea 82.95 78 P P 09 28 11.6 0.0
comp=Z,0.9nm,0.7s,baz=268,slow=6.1,SNR=4.7
comp=Z,0.9nm,0.7s
TORD Torodi Ar. Bea 82.95 78 P P 09 28 11.5 0.0
NB2 NORSAR Subarra 86.50 29 P P 09 28 36.3 +7.7
comp=Z,7.3nm,0.8s,baz=273,slow=5.1
NOA NORSAR Array B 86.50 29 LR LR 10 06 11.7
comp=Z,13nm,18.7s,baz=310,slow=35
HFS Hagfors 87.82 30 LR LR 10 04 27.0
comp=Z,24nm,19.5s,baz=288,slow=33
VRAC Vranov 91.30 40 LR LR 10 04 52.6
comp=Z,29nm,20.4s,baz=284,slow=32
TROLL Troll, Antarti 94.19 162 P P 09 29 05.0 +0.5
AKASG Malin Array Be 98.75 37 LR LR 10 08 08.5
comp=Z,16nm,20.6s,baz=286,slow=32
H11S2 WAKE ISLAND Hyl 107.62 291 T T 11 30 31.0
baz=77,slow=75,SNR=7.9
H11S1 WAKE ISLAND Hyl 107.62 292 T T 11 30 29.8
baz=77,slow=75,SNR=6.3
H11S3 WAKE ISLAND Hyl 107.63 291 T T 11 30 32.0
baz=77,slow=75,SNR=4.3
WRA Warramunga Arr 141.72 245 PKhKP PKPpre 09 35 12.3
comp=Z,0.7nm,0.8s,baz=98,slow=3.4,SNR=8.5
PZH PanZhiHua 147.35 353 PKPbc PKPdf 09 35 27.3 -0.8
H01W1 Cape Leeuwin H 147.50 206 T T 12 20 52.5
baz=150,slow=76,SNR=8.3
H01W2 Cape Leeuwin H 147.50 206 T T 12 21 01.4
baz=150,slow=76,SNR=8.1
H01W3 Cape Leeuwin H 147.51 206 T T 12 20 56.4
baz=150,slow=76,SNR=9.5

IDC ***18*** *09:18:40.7±0.6,3˙.41S×151˚.66E,h396km±6km,mb3.4/8, mbtmp4.1/10,Error ellipse: s-maj=24.7km s-min=14.5km az=98.0*
NEIC ***18*** *09:18:43.0±1.1,3˙.6S±0˙.1×151˚.5E±0˙.1,h391km±9km, mb4.1/15,Error ellipse: s-maj=25.7km s-min=13.7km az=46.0*
ISC 18 09:18:41.2±0.7,3˚47S±0˙.09×151˚7E±0˙.1,h400km,n49, σ0s84/52,mb4.1/16,New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	0.87	146		Pn	09 19 32.6	+0.7
RABL				Sn	S	09 20 13.3	+0.5
KRVT	Keravat (AS076	0.91	157	P	Pn	09 19 32.3	+0.3
	264nm,0.7s,baz=246,slow=2.2,SNR=47						
KRVT				S	S	09 20 12.0	-1.0
	106nm,0.6s,baz=269,slow=22,SNR=5.8						
MANU	Manus Island	4.53	288		Pn	09 19 59.7	+1.2
PMG	Port Moresby	7.41	217	P	Pn	09 20 28.9	-0.5
	29nm,0.8s,baz=30,slow=5.6,SNR=8.1						
PMG	Port Moresby	7.41	217		P	09 20 29.6	-0.4
COEN	Coen	13.38	218	P	Pn	09 21 37.1	-1.3
COEN	Coen	13.38	218	P	Pn	09 21 38.1	-0.3
CTA	Charters Tower	17.34	197	P	P	09 22 20.3	+1.5
	7.0nm,0.7s,baz=12,slow=12,SNR=13						
CTA	Charters Tower	17.34	197	P	P	09 22 20.4	+1.6
CTAO	Charters Tower	17.34	197	P	P	09 22 20.3	+1.5
CTAO				IAmb	IAmb	09 22 21.0	
	comp=Z,6.5nm,0.7s						
CTAO	Charters Tower	17.34	197	P	P	09 22 20.3	+1.5
FAKI	Fak Fak	19.40	271	P	P	09 22 40.4	+0.1
QIS	Mount Isa	20.66	214	P	P	09 22 53.6	+1.9
KDU	Kakadu	21.08	243	P	P	09 22 54.4	-1.2
EIDS	Eidsvold	21.78	181	P	P	09 23 02.5	+0.6
EIDS				IAmb	IAmb	09 23 04.5	
	comp=Z,6.4nm,0.7s						
MTN	Manton Dam	22.34	244	P	P	09 23 08.2	+1.1
MTN				IAmb	IAmb	09 23 31.1	
	comp=Z,12nm,1.4s						
WB0	Warramunga Arr	23.38	225	P	P	09 23 15.9	-0.6
WB0				IAmb	IAmb	09 23 16.9	
	comp=Z,15nm,1.2s						
DZM	Mont Dzumac	23.40	143	P	P	09 23 17.7	+1.0
	comp=Z,9.3nm,1.0s,baz=281,slow=16,SNR=2.2						
	comp=Z,9.3nm,1.0s						
WR0	Warramunga Arr	23.41	224	P	P	09 23 16.6	-0.2
WR0				IAmb	IAmb	09 23 17.1	
	comp=Z,7.7nm,0.9s						
WRAB	Tennant Creek	23.52	225	P	P	09 23 17.4	-0.4
WRAB				IAmb	IAmb	09 23 18.0	
	comp=Z,10nm,1.1s						
WRAB	Tennant Creek	23.52	225	P	P	09 23 17.5	-0.3
WB2	Warramunga Arr	23.53	225	P	P	09 23 17.5	-0.3
WB2				IAmb	IAmb	09 23 18.1	
	comp=Z,11nm,1.2s						
WRA	Warramunga Arr	23.54	225	P	P	09 23 17.4	-0.5
	comp=Z,3.5nm,0.7s,baz=48,slow=9.4,SNR=62						
WRA				ScP	ScP	09 29 50.6	+0.5
	comp=Z,1.0nm,1.0s,baz=54,slow=2.7,SNR=5.3						
	comp=Z,3.5nm,0.7s						
WRA	Warramunga Arr	23.54	225	P	P	09 23 17.0	-0.9
QLP	Quilpie	24.06	197	P	P	09 23 22.9	+0.4
KNRA	Kununurra	25.60	240	P	P	09 23 35.9	-0.4
KNRA				IAmb	IAmb	09 24 05.5	
	comp=Z,15nm,1.4s						
INKA	Innaminka	26.30	202	P	P	09 23 42.5	+0.2
AS31	Alice Springs	26.42	219	P	P	09 23 43.0	-0.5
ASAR	Alice Springs	26.42	219	P	P	09 23 43.0	-0.5
ARMA	Armidale	26.81	180	P	P	09 23 47.9	+0.9
ARMA				IAmb	IAmb	09 23 50.7	
	comp=Z,12nm,1.4s						
CMSA	Cobar Meteorol	28.48	191	P	P	09 24 02.0	+0.4
OOD	Oodnadatta	28.60	211	P	P	09 24 02.4	-0.3
LCRK	Leigh Creek	29.70	204	P	P	09 24 11.9	-0.4
STKA	Stephens Creek	29.81	197	P	P	09 24 12.4	-0.8
	comp=Z,1.7nm,0.4s,baz=38,slow=15,SNR=7.9						
	comp=Z,1.7nm,0.4s						
STKA	Stephens Creek	29.81	197	P	P	09 24 13.2	-0.1
STKA	Stephens Creek	29.81	197	P	P	09 24 12.7	-0.5
WRKA	Warakurna	31.08	224	P	P	09 24 23.1	-1.4
MULG	Mulgathing	31.45	210	P	P	09 24 26.9	-0.6
HTT	Hallett	32.10	200	P	P	09 24 33.2	0.0
BBOO	Buckleboo	32.65	205	P	P	09 24 37.6	-0.2
BBOO	Buckleboo	32.65	205	P	P	09 24 37.7	-0.2
FORT	Forrest	35.14	217	P	P	09 24 58.5	-0.5
CMAR	Chiang Mai Arr	56.30	295	P	P	09 27 43.4	+0.9
	comp=Z,1.9nm,0.3s,baz=113,slow=5.3,SNR=4.2						
	comp=Z,1.9nm,0.3s						
SONM	Songino Array	64.61	328	P	P	09 28 37.3	-0.3
	comp=Z,0.5nm,0.5s,baz=137,slow=3.4,SNR=4.8						
	comp=Z,0.5nm,0.5s						
MKAR	Makanchi Array	78.59	319	P	P	09 29 59.6	-0.2
	comp=Z,0.3nm,0.5s,baz=105,slow=7.0,SNR=4.9						
	comp=Z,0.3nm,0.5s						
ZALV	Zalesovo Beam	79.43	326	P	P	09 30 02.6	-1.5
	comp=Z,1.5nm,0.6s,baz=118,slow=6.5,SNR=4.8						
	comp=Z,1.5nm,0.6s						
ILAR	Eielson Array	81.36	22	P	P	09 30 13.0	-1.1
	comp=Z,0.7nm,0.8s,baz=251,slow=5.8,SNR=7.4						
	comp=Z,0.7nm,0.8s						
TORD	Torodi Ar. Bea	148.81	290	PKPbc	PKPbc	09 37 43.5	+0.1
	comp=Z,1.6nm,0.3s,baz=84,slow=2.5,SNR=51						
TORD	Torodi Ar. Bea	148.81	290		PKPbc	09 37 43.8	+0.4

TIR ***18*** *09:30:30.7,41˙.46N×20˙.17E,h19km,Md2.7,Ml2.6*
PDG ***18*** *09:30:31.7±0.3,41˙.46N×20˙.10E,h10km,ML2.4/8,Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
THE ***18*** *09:30:31.7,41˙.41N×20˙.23E,h5km±1km,ML2.5/3,Error ellipse: s-maj=1.8km s-min=0.5km az=339.0*
BEO ***18*** *09:30:32.0±0.4,41˙.45N×20˙.20E,h9km±4km,ML2.2/9*
ISC 18 09:30:31.4±0.9,41˚44N±0˙.02×20˚17E±0˙.02,h15km±7km, n45,σ0s70/79,1C-3D,Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.25	248	*e*Pg	Pg	09 30 36.9	0.0
TIR				*e*Sg	Sb	09 30 41.9	+0.1
TIR	Tirane	0.25	248	P	Pg	09 30 36.9	0.0
TIR				S	Sg	09 30 41.2	+0.5
	930nm,0.1s						
TIR	Tirane	0.25	248	P	Pg	09 30 36.9	0.0
	baz=245						
TIR				S	Sb	09 30 41.4	-0.4
	baz=245						
TIR				AMP			
	comp=N,3.0nm,0.1s,baz=245						
PHP	Peshkopia	0.31	40	P	Pg	09 30 37.5	-0.6
PHP				S	Sg	09 30 42.7	+0.1
	comp=N,3µm,0.3s						
PHP	Peshkopia	0.31	40	P	Pg	09 30 37.5	-0.6
	baz=41						
PHP				S	Sg	09 30 42.9	+0.4
	baz=41						
PHP				AMP			
	comp=N,7.2nm,0.2s,baz=41						
OHR	Ohrid	0.58	125	*e*Pg	Pg	09 30 42.6	-0.2
OHR				*e*Sg	Sb	09 30 51.6	+0.3
ULC	Ulcinj	0.87	307	*i*Pg	Pb	09 30 46.8	-1.4
ULC				*i* Sg	Sg	09 30 59.9	+0.2
BCI	Bajram Curri	0.93	355	P	Pb	09 30 49.2	0.0
	baz=356						
BCI				S	Sg	09 31 01.9	+0.3
	baz=356						
BCI				AMP			
	comp=E,0.8nm,0.4s,baz=356						
KBN	Korca	0.94	150	P	Pn	09 30 50.2	+0.1
	baz=150						
KBN				S	Sn	09 31 03.3	-0.1
	baz=150						
KBN				AMP			
	comp=E,0.3nm,0.4s,baz=150						
DRME	Dracevica, Mon	1.05	315	*e*Pg	Pb	09 30 50.2	-1.1
DRME				*i* Sg	Sn	09 31 06.2	+0.3
SKO	Skopje	1.08	60	*e*Pg	Pg	09 30 52.4	0.0
SKO				*e*Sg	Sb	09 31 06.2	+0.3
FNA	Florina	1.12	126	P	Pb	09 30 51.9	-0.7
FNA				S	Sg	09 31 07.5	-0.3
	comp=E,245nm,0.5s						
FNA	Florina	1.12	126	P	Pb	09 30 52.1	-0.5
	baz=126						
FNA				S	Sn	09 31 08.9	+1.1
	baz=126						
PDG	Podgorica	1.20	326	*e*Pg	Pn	09 30 53.6	-0.1
PDG				*e*Sg	Sg	09 31 11.4	+1.1
TTG	Podgorica	1.20	326	*i*Pg	Pn	09 30 53.2	-0.5
TTG				*i* Sg	Sg	09 31 11.4	+1.1
NEST	Nestorio	1.22	147	P	Pn	09 30 53.9	-0.2
BUM	Brajici-Budva	1.28	312	*e*Pg	Pn	09 30 54.2	-0.7
BUM				*i* Sg	Sg	09 31 13.8	+0.9
LSK	Leskovik	1.33	166	P	Pb	09 30 56.5	+0.4
	baz=165						
IVA	Berane	1.44	352	*e*Pg	Pb	09 30 57.8	-0.3

CEME	**Cevo**	**1.45**	**320**	*e*Pg		**Pn**	**09 30 57.5**	**+0.4**
CEME				*i* Sg		**Sg**	**09 31 19.2**	**+1.1**
KOME	**Kolasin**	**1.49**	**341**	*e*Pg		**Pn**	**09 30 58.3**	**+0.6**
KOME				*i* Sg		**Sg**	**09 31 20.8**	**+1.3**
SRN	**Sarande**	**1.57**	**185**	P		**Pb**	**09 31 00.5**	**+0.4**
	baz=185							
SRN				S		**Sg**	**09 31 22.1**	**+0.2**
	baz=185							
SRN				AMP				
	comp=N,0.4nm,0.4s,baz=177							
HCY	**Herceg Novi**	**1.60**	**309**	⇓*i*Pg		**Pb**	**09 31 00.3**	**-0.5**
HCY				*i* Sg		**Sg**	**09 31 23.8**	**+0.6**
GRG	**Griva**	**1.75**	**105**	P		**Pn**	**09 31 00.9**	**-0.4**
KEK	**Kerkira**	**1.75**	**190**	P		**Pn**	**09 31 01.7**	**+0.4**
PRVS	**Prvonek**	**1.77**	**53**	*e*Pg		**Pn**	**09 31 02.0**	**+0.4**
PRVS				*e*Sg		**Sg**	**09 31 27.6**	**-0.9**
VAY	**Valandovo**	**1.81**	**93**	*e*Pg		**Pb**	**09 31 04.0**	**-0.2**
VAY				*e*Sg		**Sg**	**09 31 28.7**	**-0.9**
SJES	**Sjenica**	**1.82**	**355**	*e*Pg		**Pb**	**09 31 05.4**	**+0.9**
SJES				*e*Sg		**Sg**	**09 31 29.7**	**-0.4**
BARS	**Barje**	**1.84**	**41**	*e*Pg		**Pb**	**09 31 05.3**	**+0.6**
BARS				*e*Sg		**Sg**	**09 31 30.0**	**-0.6**
BRY	**Bratogost**	**1.90**	**321**	⇓*i*Pn		**Pb**	**09 31 04.8**	**-1.0**
BRY				*i* Sn		**Sb**	**09 31 29.5**	**+0.1**
SELS	**Selova**	**1.91**	**21**	*e*Pg		**Pn**	**09 31 04.7**	**+1.3**
IGT	**Igoumenitsa**	**1.91**	**176**	P		**Pn**	**09 31 04.2**	**+0.7**
IGT	**Igoumenitsa**	**1.91**	**176**	P		**Pb**	**09 31 05.9**	**-0.1**
	baz=176							
DBRK	**Dubrovnik**	**1.94**	**310**	*e*Pn		**Pn**	**09 31 04.2**	**+0.3**
DBRK				Sn		**Sb**	**09 31 29.6**	**-0.9**
BOSS	**Bosilegrad**	**2.02**	**58**	*e*Pg		**Pb**	**09 31 06.7**	**-1.1**
IVAS	**Ivanjica**	**2.13**	**360**	*e*Pn		**Pn**	**09 31 06.8**	**+0.3**
STON	**Ston**	**2.33**	**309**	*e*Pn		**Pn**	**09 31 08.9**	**-0.2**
STON				Sn		**Sn**	**09 31 38.6**	**+1.1**
DIVS	**Divibare**	**2.66**	**357**	*e*Pn		**Pn**	**09 31 15.7**	**+1.9**
LSTV	**Lastovo**	**2.78**	**300**	*e*Pn		**Pn**	**09 31 14.6**	**-0.8**
LSTV				Sn		**Sn**	**09 31 48.3**	**-0.3**
MAKA	**Makarska**	**2.98**	**309**	*e*Pn		**Pn**	**09 31 17.6**	**-0.4**
MAKA				Sn		**Sn**	**09 31 53.5**	**+0.1**
RICI	**Ricice**	**3.04**	**313**	*e*Pn		**Pn**	**09 31 19.2**	**+0.2**
RICI				Sn		**Sn**	**09 31 56.6**	**+1.5**
KIJV	**Kijevo**	**3.78**	**314**	*e*Pn		**Pn**	**09 31 29.8**	**+0.7**
KIJV				Sn		**Sn**	**09 32 13.9**	**+0.6**
ZIRJ	**Zirje**	**4.01**	**305**	*e*Pn		**Pn**	**09 31 32.2**	**0.0**
ZIRJ				Sn		**Sn**	**09 32 18.0**	**-1.0**
DUGI	**Dugi Otok**	**4.55**	**306**	*e*Pn		**Pn**	**09 31 38.8**	**-0.9**
DUGI				Sn		**Sn**	**09 32 31.5**	**-0.8**
VIRC	**Vir**	**4.72**	**309**	*e*Pn		**Pn**	**09 31 41.4**	**-0.6**
VIRC				Sn		**Sn**	**09 32 36.0**	**-0.4**

INET ***18*** *09:37:04.4±0.6, 12°.88N×87°.08W, h1km±2km, ML2.9*
SNET ***18*** *09:37:06.7±0.3, 12°.84N×87°.25W, h63km±34km, ML2.2*
ISC 18 09:37:05.0±1.3**, 12°.82N**±0°.09**×87°.09W**±0°.07**, h25**km±12km**, n5, σ0§34/9, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
CRIN	**San Cristobal**	**0.13**	**162**	*e*P		**Pb**	**09 37 09.6**	**-0.4**
CRIN				*e*S		**Sb**	**09 37 13.8**	**+0.5**
CRIN				IAML			09 37 20.2	
	comp=N,3μm,0.6s							
CNCH	**Conchagua**	**0.85**	**302**	*e*P		**Pn**	**09 37 21.6**	**+0.1**
CNCH				*e*S		**Sn**	**09 37 33.5**	**+0.2**
CNCH				IAML			09 37 36.1	
	comp=Z,138nm,0.2s							
LCND	**La Caada**	**0.92**	**302**	*e*P		**Pb**	**09 37 22.1**	**-0.2**
LCND				*e*S		**Sb**	**09 37 34.1**	**0.0**
LCND				IAML			09 37 39.4	
	comp=Z,38nm,0.3s							
RCON	**San Juan de Ri**	**1.12**	**54**	*e*P		**Pn**	**09 37 25.3**	**0.0**
TGUH	**Tegucigalpa,Un**	**1.24**	**352**	*e*P		**Pb**	**09 37 27.6**	**-0.2**
TGUH				*e*S		**Sb**	**09 37 43.8**	**+0.2**

IDC ***18*** *09:57:30.2±1.7, 32°.91N×132°.20E, h0km, mb3.3/2, mbtmp3.3/5, ML2.7/3, MS3.2/1, Error ellipse: s-maj=30.2km s-min=15.1km az=9.0*
JMA ***18*** *09:57:36.7±0.1, 33°.1N±0°.2×132°.0E±0°.2, h48km, MV3.3/32, BUNGO CHANNEL*
JMA Felt I J1 at BUNGO CHANNEL
ISC 18 09:57:36.5±1.0**, 33°.05N**±0°.05×**132°.04E**±0°.04**, h51**km±8km**, n16, σ0§66/24, 5D, Shikoku**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
JUS	**Usuki**	**0.24**	**274**	⇓P		**Pn**	**09 57 44.7**	**-0.6**
JUS				⇓S		**Sn**	**09 57 50.7**	**-0.9**
JSKE	**Saikikamae**	**0.28**	**204**	P		**Pn**	**09 57 45.7**	**+0.1**
JSKE				S		**Sn**	**09 57 52.4**	**+0.3**
UWA2	**Uwa jima 2**	**0.52**	**72**	P		**Pn**	**09 57 48.1**	**0.0**
UWA2				S		**Sn**	**09 57 56.7**	**+0.2**
OIT2	**Oita 2**	**0.54**	**295**	P		**Pn**	**09 57 48.2**	**-0.2**
OIT2				S		**Sn**	**09 57 56.7**	**-0.2**
JNA	**Nagahama**	**0.63**	**36**	⇓P		**Pn**	**09 57 49.4**	**-0.1**
JNA				⇓S		**Sn**	**09 57 58.7**	**-0.1**
JTO	**Tosashimizu**	**0.67**	**106**	P		**Pn**	**09 57 49.9**	**-0.1**
JTO				S		**Sn**	**09 57 59.5**	**-0.2**
JKU	**Kubokawa**	**0.90**	**73**	P		**Pn**	**09 57 52.8**	**-0.2**
JKU				S		**Sn**	**09 58 05.1**	**0.0**
JNU	**Nakatsue**	**0.97**	**274**	Pg		**Pn**	**09 57 53.7**	**-0.3**
JNU				Lg		Lg	09 58 06.6	
	816nm,0.3s,baz=109,slow=0.3,SNR=30							
JIU3	**Izumi3**	**1.14**	**244**	P		**Pn**	**09 57 56.2**	**-0.1**
JIU3				eS		**Sn**	**09 58 11.1**	**+0.2**
JHM	**Kurahashi**	**1.16**	**21**	⇓P		**Pn**	**09 57 56.6**	**+0.2**
KSRS	**Korea Array**	**5.53**	**324**	Pn		**Pn**	**09 58 56.7**	**+0.4**
	0.4nm,0.3s,baz=143,slow=14,SNR=4.9							
KSRS				Sn		**Sn**	**09 59 57.2**	**-1.4**
	0.9nm,0.3s,baz=142,slow=24,SNR=6.4							
	0.9nm,0.4s							
MJAR	**Matsushiro Arr**	**6.16**	**54**	Pn		**Pn**	**09 59 03.6**	**-1.3**
	baz=241,slow=14,SNR=2.9							
	0.6nm,0.4s							
KLR	**Kul'dur**	**16.17**	**359**	Pn		**Pn**	**10 01 21.9**	**+1.7**
	baz=183,slow=9.1,SNR=3.8							
	1.0nm,0.6s							
SONM	**Songino Array**	**24.32**	**315**	P		**P**	**10 02 49.7**	**+0.3**
	0.8nm,0.7s,baz=111,slow=8.4,SNR=4.5							
	0.8nm,0.7s							
ZALV	**Zalesovo Beam**	**39.19**	**317**	LR		LR	10 23 23.4	
	comp=Z,35nm,20.6s,baz=11,slow=39							
WRA	**Warramunga Arr**	**52.74**	**177**	P		**P**	**10 06 45.6**	**-0.6**
	0.2nm,0.7s,baz=0.7,slow=8.7,SNR=1.6							
	0.2nm,0.7s							

NEIC ***18*** *10:24:52.4±2.5, 24°.34S±0°.05×67°.23W±0°.09, h157km±6km, mb4.7/31, Md4.2(SJA), ML4.6(GUC), Error ellipse: s-maj=12.0km s-min=8.0km az=95.0*
IDC ***18*** *10:24:52.7±1.1, 24°.23S×67°.08W, h155km±12km, mb3.9/10, mbtmp4.4/16, Error ellipse: s-maj=14.6km s-min=14.3km az=78.0*
GUC ***18*** *10:24:53.1±0.6, 24°.27S×67°.60W, h189km±5km, ML4.6*
VAO ***18*** *10:24:53.8±0.4, 24°.16S×67°.26W, h189km±3km, mb4.5*
SJA ***18*** *10:24:54.2±1.6, 24°.36S×67°.39W, h150km, ML4.5, MW4.3*
ISC 18 10:24:52.9±0.6**, 24°.27S**±0°.03×**67°.38W**±0°.04**, h174**km±6km**, n198, σ1§65/229, mb4.4/16, 8C-4D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
AF01	**San Pedro de A**	**1.50**	**331**			**Pn**	**10 25 26.4**	**+1.7**
AF01				Sn		**Sn**	**10 25 51.5**	**+2.2**
AF01	**San Pedro de A**	**1.50**	**331**	⇓*i*P		**Pn**	**10 25 26.4**	**+1.7**
AF01				*i* S		**Sn**	**10 25 51.6**	**+2.4**
AF01				IAML			10 25 54.3	
	comp=N,3μm,0.5s							
SLA	**San Lorenzo**	**1.77**	**105**	*e*P		**Pn**	**10 25 27.5**	**+0.3**
SLA				*e*S		**Sn**	**10 25 53.7**	**-0.1**
HJA	**Humahuaca**	**2.09**	**60**	*e*P		**Pn**	**10 25 31.8**	**+0.9**
HJA				*e*S		**Sn**	**10 26 02.0**	**+1.6**
LVC	**Limon Verde**	**2.17**	**319**	P		**Pn**	**10 25 33.3**	**+1.5**
	comp=N,95nm,0.2s,baz=120,slow=8.3,SNR=618							
LVC				S		**Sn**	**10 26 02.9**	**+1.0**
	comp=N,1μm,0.6s,baz=358,slow=19,SNR=192							
LVC	**Limon Verde**	**2.17**	**319**	*e*P		**Pn**	**10 25 33.1**	**+1.3**
LVC				*e*S		Sn	10 25 52.0	-10
LVC	**Limon Verde**	**2.17**	**319**	*e*P		**Pn**	**10 25 33.0**	**+1.2**
PB15	**IPOC Station P**	**2.19**	**298**			**Pn**	**10 25 32.9**	**+1.0**
PB15	**IPOC Station P**	**2.19**	**298**	⇓*i*P		**Pn**	**10 25 32.4**	**+0.5**
PB15				*i* S		**Sn**	**10 26 02.6**	**+0.6**
PB15	**IPOC Station P**	**2.19**	**298**	*e*P		**Pn**	**10 25 33.3**	**+1.4**
PB15				*e*S		**Sn**	**10 26 03.1**	**+1.1**
PB15				IAML			10 26 05.1	
	comp=Z,6μm,0.2s							
GO02	**Mina Guanaco**	**2.20**	**246**	Pn		**Pn**	**10 25 32.7**	**+0.7**
GO02				Sn		**Sn**	**10 26 02.8**	**+0.3**
GO02	**Mina Guanaco**	**2.20**	**246**	⇑*i*P		**Pn**	**10 25 32.8**	**+0.7**
GO02				*i* S		**Sn**	**10 26 02.6**	**+0.2**
GO02				IAML			10 26 04.0	
	comp=N,3μm,0.2s							
GO02	**Mina Guanaco**	**2.20**	**246**	*e*P		**Pn**	**10 25 32.8**	**+0.7**
GO02				*e*S		**Sn**	**10 26 03.3**	**+0.9**
PB06	**IPOC Station P**	**2.54**	**307**			**Pn**	**10 25 37.0**	**+1.1**
PB06	**IPOC Station P**	**2.54**	**307**	⇑*i*P		**Pn**	**10 25 37.1**	**+1.1**
PB06				*i* S		**Sn**	**10 26 09.5**	**+0.2**
PB06				IAML			10 26 11.7	
	comp=N,2μm,0.2s							
PB06	**IPOC Station P**	**2.54**	**307**	*e*P		**Pn**	**10 25 37.2**	**+1.3**
PB06				*e*S		**Sn**	**10 26 10.1**	**+0.8**
PB06				IAML			10 26 14.7	
	comp=Z,2μm,0.7s							
PB14	**IPOC Station P**	**2.78**	**262**	Pn		**Pn**	**10 25 39.0**	**+0.1**
PB14	**IPOC Station P**	**2.78**	**262**	⇑*i*P		**Pn**	**10 25 39.1**	**+0.2**
PB14				*i* S		**Sn**	**10 26 13.1**	**-1.5**
PB14	**IPOC Station P**	**2.78**	**262**	*e*P		**Pn**	**10 25 39.3**	**+0.4**
PB14				*e*P		**Pn**	**10 25 39.5**	**+0.6**
PB14				*e*S		**Sn**	**10 26 14.4**	**-0.2**
PB09	**IPOC Station P**	**3.00**	**325**			**Pn**	**10 25 43.1**	**+1.7**
PB09	**IPOC Station P**	**3.00**	**325**	⇓*i*P		**Pn**	**10 25 43.1**	**+1.7**
PB09				*i* S		**Sn**	**10 26 20.0**	**+0.8**
PB09				IAML			10 26 25.2	
	comp=E,1μm,0.7s							
PB09	**IPOC Station P**	**3.00**	**325**	*e*P		**Pn**	**10 25 43.1**	**+1.7**
PB09				*e*S		**Sn**	**10 26 20.3**	**+1.1**
PB09				IAML			10 26 21.0	
	comp=Z,1μm,0.6s							
AC02	**Maricunga**	**3.01**	**211**	Pn		**Pn**	**10 25 42.0**	**+0.2**
AC02	**Maricunga**	**3.01**	**211**	⇑*i*P		**Pn**	**10 25 42.1**	**+0.2**
AC02				*i* S		**Sn**	**10 26 19.5**	**-0.5**
AC02				IAML			10 26 26.9	
	comp=E,338nm,0.1s							
AC02	**Maricunga**	**3.01**	**211**	*e*P		**Pn**	**10 25 42.0**	**+0.2**
AC02				*e*S		**Sn**	**10 26 23.8**	**+3.8**
PB04	**IPOC Station P**	**3.19**	**307**			**Pn**	**10 25 44.5**	**+0.7**
PB04	**IPOC Station P**	**3.19**	**307**	⇑*i*P		**Pn**	**10 25 44.5**	**+0.7**
PB04				*i* S		**Sn**	**10 26 22.1**	**-1.3**
PB04	**IPOC Station P**	**3.19**	**307**	*e*P		**Pn**	**10 25 44.6**	**+0.7**
PB04				*e*S		**Sn**	**10 26 23.3**	**-0.1**
PB04				IAML			10 26 26.9	
	comp=Z,847nm,0.8s							
PB07	**IPOC Station P**	**3.42**	**317**	Pn		**Pn**	**10 25 47.5**	**+0.8**
PB07	**IPOC Station P**	**3.42**	**317**	⇓*i*P		**Pn**	**10 25 47.5**	**+0.8**
PB07				*i* S		**Sn**	**10 26 27.3**	**-1.3**
PB07				IAML			10 26 34.8	
	comp=E,1μm,0.5s							
PB07	**IPOC Station P**	**3.42**	**317**	*e*P		**Pn**	**10 25 47.5**	**+0.8**
PB07				*e*S		**Sn**	**10 26 27.5**	**-1.1**
PB07				*e*S		**Sn**	**10 26 28.6**	**0.0**
PB07				IAML			10 26 29.0	
	comp=Z,880nm,0.5s							
AC01	**Pan de Azucar**	**3.47**	**237**	Pn		**Pn**	**10 25 46.1**	**-0.9**
AC01	**Pan de Azucar**	**3.47**	**237**	⇑*i*P		**Pn**	**10 25 46.2**	**-0.9**
AC01				*i* S		**Sn**	**10 26 26.0**	**-3.3**
AC01				IAML			10 26 27.9	
	comp=E,1μm,0.4s							
AC01	**Pan de Azucar**	**3.47**	**237**	*e*P		**Pn**	**10 25 46.2**	**-0.9**
AC01				*e*S		**Sn**	**10 26 27.5**	**-1.9**
AC01				IAML			10 26 29.1	
	comp=Z,424nm,0.3s							
PB02	**IPOC Station P**	**3.74**	**321**			**Pn**	**10 25 51.0**	**+0.4**
PB02	**IPOC Station P**	**3.74**	**321**	⇑*i*P		**Pn**	**10 25 51.1**	**+0.4**
PB02				*i* S		**Sn**	**10 26 33.8**	**-1.9**
PB02				IAML			10 26 38.8	
	comp=E,1μm,0.4s							
PB01	**IPOC Station P**	**3.75**	**328**			**Pn**	**10 25 51.1**	**+0.3**
PB01	**IPOC Station P**	**3.75**	**328**	*e*P		**Pn**	**10 25 51.9**	**+1.1**
PB01				*i* S		**Sn**	**10 26 34.6**	**-1.3**
PB01				IAML			10 26 39.3	
	comp=E,404nm,0.2s							
TINO	**Tinogasta**	**3.79**	**183**	*e*P		**Pn**	**10 25 51.9**	**+0.7**
TINO				*e*S		**Sn**	**10 26 39.5**	**+2.7**
GO03	**Copiap**	**4.19**	**217**			**Pn**	**10 25 54.9**	**-1.5**
GO03	**Copiap**	**4.19**	**217**	⇑*i*P		**Pn**	**10 25 54.7**	**-1.7**
GO03				*i* S		**Sn**	**10 26 42.8**	**-3.2**
GO03	**Copiap**	**4.19**	**217**	*e*P		**Pn**	**10 25 55.0**	**-1.4**
GO03				*e*S		**Sn**	**10 26 43.4**	**-2.6**
PATCX	**Punta Patache**	**4.28**	**323**			**Pn**	**10 25 57.2**	**-0.3**
PB08	**IPOC Station P**	**4.42**	**338**			**Pn**	**10 26 00.5**	**+0.9**
TA01	**Diego Aracena**	**4.50**	**324**			**Pn**	**10 26 00.5**	**+0.2**
TA02	**Huaiquique**	**4.72**	**327**			**Pn**	**10 26 03.2**	**0.0**
GO01	**Chusmiza**	**4.87**	**339**			**Pn**	**10 26 06.2**	**+0.6**
PB11	**IPOC Station P**	**4.96**	**334**	Pn		**Pn**	**10 26 05.8**	**-0.5**
PB11	**IPOC Station P**	**4.96**	**334**	*e*P		**Pn**	**10 26 06.0**	**-0.5**
PB11				*e*S		**Sn**	**10 27 02.0**	**-1.9**
PB11				*e*S		**Sn**	**10 27 02.1**	**-1.9**
PB11				IAML			10 27 42.7	
	comp=Z,145nm,1.2s							
AC04	**Llanos de Chal**	**5.14**	**219**	Pn		**Pn**	**10 26 06.6**	**-2.0**
AC04	**Llanos de Chal**	**5.14**	**219**	*e*P		**Pn**	**10 26 06.2**	**-2.3**
AC04				*e*S		**Sn**	**10 27 05.1**	**-2.8**
AC04				IAML			10 27 08.3	
	comp=Z,221nm,0.5s							
ACLC	**CERRO LA CRUZ**	**5.15**	**176**	*e*P		**Pn**	**10 26 08.1**	**-0.8**
ACLC				*e*S		Sn	10 26 55.3	-13
LCO	**Las Campanas**	**5.58**	**211**	Pn		**Pn**	**10 26 12.2**	**-2.4**
CO01	**Juntas del Tor**	**6.18**	**202**			**Pn**	**10 26 21.5**	**-0.9**
PB16	**IPOC Station P**	**6.22**	**341**			**Pn**	**10 26 23.5**	**+0.1**
PB12	**IPOC Station P**	**6.26**	**333**	Pn		**Pn**	**10 26 21.2**	**-2.2**
GO04	**Tololo Observa**	**6.62**	**207**			**Pn**	**10 26 25.3**	**-3.0**
PB18	**Visviri**	**6.93**	**343**			**Pn**	**10 26 33.4**	**+0.8**
CO03	**El Pedregal**	**7.18**	**203**			**Pn**	**10 26 32.4**	**-3.0**
CO06	**Fray Jorge**	**7.42**	**210**	Pn		**Pn**	**10 26 34.5**	**-3.9**
CO02	**Combarbal**	**7.62**	**204**	Pn		**Pn**	**10 26 38.1**	**-3.2**
LPAZ	**La Paz**	**7.97**	**355**	P		**Pn**	**10 26 47.0**	**+0.5**
	comp=Z,21nm,0.4s,baz=154,slow=5.6,SNR=152							
LPAZ	**La Paz**	**7.97**	**355**	Pn		**Pn**	**10 26 47.3**	**+0.9**
LPAZ	**La Paz**	**7.97**	**355**	*e*P		**Pn**	**10 26 46.8**	**+0.4**
VA03	**San Esteban**	**8.91**	**198**	Pn		**Pn**	**10 26 55.7**	**-2.6**
CPUP	**Villa Florida**	**9.32**	**105**	P		**Pn**	**10 27 01.6**	**-2.0**
	comp=Z,6.9nm,0.8s,baz=293,slow=11,SNR=12							
CPUP	**Villa Florida**	**9.32**	**105**	Pn		**Pn**	**10 27 02.1**	**-1.5**
CPUP	**Villa Florida**	**9.32**	**105**	*e*P		**Pn**	**10 27 01.1**	**-2.6**
BO04	**La Punta**	**10.09**	**195**			**Pn**	**10 27 11.5**	**-2.2**
SIV	**San Ignacio**	**10.14**	**37**	P		**Pn**	**10 27 12.1**	**-2.4**
	comp=Z,11nm,0.4s,baz=214,slow=12,SNR=65							
SIV				S		Sn	10 28 51.6	-16
	comp=Z,5.8nm,0.7s,baz=221,slow=15,SNR=6.4							
ANTJ	**Antonio Joao (**	**10.71**	**80**	*e*P		**Pn**	**10 27 18.1**	**-3.8**
AMBA	**Amambai (Brazi**	**11.44**	**86**	*e*P		**Pn**	**10 27 28.3**	**-3.0**
AQDB	**Aquidauana**	**11.45**	**73**	*e*P		**Pn**	**10 27 31.3**	**-0.1**
PTLB	**Pontes e Lacer**	**11.70**	**43**	*e*P		**Pn**	**10 27 32.9**	**-1.8**
VBST	**Vila Bela da S**	**11.91**	**37**	*e*P		**Pn**	**10 27 36.0**	**-1.4**
ML02	**Panimavida**	**11.98**	**196**			**Pn**	**10 27 36.4**	**-1.8**
UNIS	**Unistalda (Bra**	**12.00**	**116**	*e*P		**Pn**	**10 27 39.2**	**+0.7**
MCR1	**Marechal Candi**	**12.17**	**94**	*e*P		**Pn**	**10 27 38.5**	**-2.2**
RODS	**Rosario do Sul**	**12.41**	**122**	*e*P		**Pn**	**10 27 44.7**	**+1.0**
CRSM	**Crissiumal (Br**	**12.43**	**108**	*e*P		**Pn**	**10 27 40.2**	**-3.8**
POCN	**Pocone**	**12.54**	**55**	*e*P		**Pn**	**10 27 44.1**	**-1.4**
PTET	**Porto Estrela**	**13.05**	**49**	*e*P		**Pn**	**10 27 50.5**	**-1.5**
FRBT	**Francisco Belt**	**13.08**	**100**	*e*P		**Pn**	**10 27 52.8**	**+0.4**
VILB	**Vilhena**	**13.14**	**32**	*e*P		**Pn**	**10 27 52.2**	**-1.1**
PP1B	**Ponte de Pedra**	**13.43**	**63**	*e*P		**Pn**	**10 27 54.2**	**-2.5**
TRCB	**Terra Rica**	**13.61**	**87**	P		**Pn**	**10 27 57.5**	**-1.5**
TRCB	**Terra Rica**	**13.61**	**87**	*e*P		**Pn**	**10 27 58.8**	**-0.2**
ALGR	**Alto Alegre (B**	**13.62**	**112**	*e*P		**Pn**	**10 27 58.5**	**-0.6**
SALV	**Santo Antonio**	**13.77**	**55**	*e*P		**Pn**	**10 27 59.1**	**-2.0**
CPSB	**Cacapava Do Su**	**13.81**	**119**	*e*P		**P**	**10 28 03.0**	**-1.3**
PTGB	**Pitanga**	**13.95**	**95**	*e*P		**P**	**10 28 05.0**	**-1.1**
ITAB	**Concordia**	**14.06**	**105**	*e*P		**Pn**	**10 28 05.7**	**+1.1**
PLTB	**Pedras Altas**	**14.27**	**125**	Pn		**Pn**	**10 28 04.8**	**-2.4**
PLTB	**Pedras Altas**	**14.27**	**125**	*e*P		**Pn**	**10 28 07.4**	**+0.2**
ETMB	**Extrema**	**14.41**	**5**	*e*P		**Pn**	**10 28 07.5**	**-1.6**
C2SB	**Chapadao do Su**	**14.59**	**71**	*e*P		**Pn**	**10 28 11.6**	**+0.3**
NBRS	**Nobres**	**14.75**	**50**	*e*P		**Pn**	**10 28 12.8**	**-0.5**
PCMB	**Pacaembu**	**15.08**	**83**	*e*P		**Pn**	**10 28 15.2**	**-2.2**
CNLB	**Canela**	**15.59**	**112**	*e*P		**Pn**	**10 28 23.4**	**-0.1**
SAML	**Samuel**	**15.75**	**15**	P		**Pn**	**10 28 24.8**	**-0.7**
LR03	**Panguipulli**	**15.89**	**194**	IAmb	IAmb		10 28 29.1	
	comp=Z,30nm,0.9s							
DVLD	**Doverlandia**	**16.14**	**65**	*e*P		**P**	**10 28 28.2**	**-2.1**
PDRB	**Porto dos Gac**	**16.14**	**41**	*e*P		**P**	**10 28 29.0**	**-1.2**
FRTB	**Fartura**	**16.33**	**90**	*e*P		**P**	**10 28 31.8**	**-0.6**
ITRB	**Iturama**	**16.42**	**77**	*e*P		**P**	**10 28 32.1**	**-1.2**
PLCA	**Paso Flores**	**16.64**	**188**	P		**Pn**	**10 28 36.3**	**+0.1**
	comp=Z,9.7nm,0.8s,baz=17,slow=11,SNR=26							
PLCA	**Paso Flores**	**16.64**	**188**	P		**P**	**10 28 35.0**	**-0.6**
PLCA				IAmb	IAmb		10 28 44.8	
	comp=Z,29nm,0.7s							
PLCA	**Paso Flores**	**16.64**	**188**	*e*P		**Pn**	**10 28 36.2**	**+0.1**
TIJ01	**Guaruva-PR**	**16.72**	**97**	*e*P		**P**	**10 28 36.0**	**-0.6**
TER01	**Tubarao-SC**	**16.89**	**108**	*e*P		**P**	**10 28 37.6**	**-0.8**
ARAG	**Araguaiana, MT**	**16.92**	**63**	*e*P		**P**	**10 28 38.2**	**-0.5**
LL04	**Puerto Octay**	**17.12**	**193**	P		**P**	**10 28 39.8**	**-1.0**
LL04				IAmb	IAmb		10 28 43.5	
	comp=Z,33nm,0.7s							
CZSB	**Cruzeiro do Su**	**17.21**	**342**	*e*P		**P**	**10 28 41.0**	**-1.0**
CLDB	**Colider**	**17.28**	**42**	*e*P		**P**	**10 28 41.5**	**-1.3**
BB19B	**Bebedouro**	**17.69**	**83**	*e*P		**P**	**10 28 47.4**	**+0.2**
LL05	**Los Muermos**	**17.83**	**195**	P		**P**	**10 28 46.5**	**-2.0**
RCLB	**Rio Claro- Sao**	**18.32**	**88**	*e*P		**P**	**10 28 52.8**	**-1.4**
PET01	**Itanhaem-SP**	**18.33**	**94**	*e*P		**P**	**10 28 53.0**	**-1.1**
VAO	**Valinhos**	**18.75**	**90**	*e*P		**P**	**10 28 57.5**	**-1.3**
IPMB	**Ipameri, GO**	**18.93**	**74**	*e*P		**P**	**10 28 59.9**	**-0.9**
LL02	**Futaleuf**	**19.23**	**190**	P		**P**	**10 29 05.0**	**+1.2**
SNDB	**Serra Nova Dou**	**19.55**	**54**	*e*P		**P**	**10 29 05.4**	**-2.0**
PARB	**Paraisuna**	**19.93**	**92**	*e*P		**P**	**10 29 10.8**	**-0.7**
BDFB	**Brasilia**	**20.11**	**68**	P		**P**	**10 29 12.3**	**-1.2**
	comp=Z,70nm,0.8s,baz=244,slow=10,SNR=88							
BDFB	**Brasilia**	**20.11**	**68**	P		**P**	**10 29 12.5**	**-1.0**
BDFB	**Brasilia**	**20.11**	**68**	*e*P		**P**	**10 29 12.2**	**-1.3**
TBTG	**Tabatinga, AM**	**20.11**	**353**	*e*P		**P**	**10 29 12.4**	**-1.0**
PMNB	**Patos De Minas**	**20.30**	**78**	*e*P		**P**	**10 29 13.8**	**-1.8**
SLP01	**Ubatuba-SP**	**20.36**	**92**	*e*P		**P**	**10 29 15.8**	**-0.4**
AY01	**Puyuhuapi**	**20.56**	**191**	P		**P**	**10 29 18.0**	**0.0**
NPGB	**Novo Progresso**	**20.64**	**36**	*e*P		**P**	**10 29 15.9**	**-3.2**
ESAR	**Angra dos Reis**	**21.05**	**91**	*e*P		**P**	**10 29 21.6**	**-1.8**
BSCB	**Bom Sucesso**	**21.11**	**86**	*e*P		**P**	**10 29 22.2**	**-2.0**
MAN01	**Angra dos Reis**	**21.51**	**91**	*e*P		**P**	**10 29 26.4**	**-1.9**

TWGZ	**Tauwhareparae**	**1.63**	**217**	P	Pn	10 32 08.1 +0.7
RUGZ	**Raukumara Rang**	**1.64**	**228**	P	Pn	10 32 08.1 +0.6
CNGZ	**Carnagh Statio**	**1.79**	**206**	P	Pn	10 32 10.2 +0.7
TKGZ	**Te Karaka**	**1.90**	**214**	P	Pn	10 32 11.2 +0.2
TKGZ				S	Sn	10 32 35.2 +1.4
MWZ	**Matawai**	**1.98**	**222**	P	Pn	10 32 12.6 +0.5
MWZ				S	Sn	10 32 36.5 +0.7
WHRZ	**Whale Island**	**2.03**	**240**	P	Pn	10 32 14.8 +2.0
RAGZ	**Rawiri**	**2.16**	**221**	P	Pn	10 32 15.0 +0.3
RAGZ				S	Sn	10 32 40.3 0.0
RIGZ	**Rimuhau**	**2.16**	**212**	P	Pn	10 32 14.3 -0.3
RIGZ				S	Sn	10 32 40.4 +0.1
URZ	**Urewera**	**2.17**	**230**	P	Pn	10 32 15.3 +0.6
URZ				S	Sn	10 32 40.6 +0.3
PRGZ	**Paritu Road**	**2.30**	**207**	P	Pn	10 32 16.0 -0.5
OPRZ	**Ohinepanea**	**2.33**	**245**	P	Pn	10 32 17.4 +0.6
SNGZ	**Shannon Statio**	**2.41**	**217**	P	Pn	10 32 17.9 -0.2
SNGZ				S	Sn	10 32 46.3 -0.2
KNZ	**Kokohu**	**2.46**	**209**	P	Pn	10 32 17.8 -0.9
RTZ	**Ruatahuna**	**2.48**	**225**	P	Pn	10 32 19.3 +0.2
RTZ				S	Sn	10 32 49.7 +1.5
MHGZ	**Mahia Peninsul**	**2.50**	**204**	P	Pn	10 32 18.5 -0.7
TGRZ	**Tauranga**	**2.50**	**249**	P	Pn	10 32 19.4 +0.1
MUGZ	**Murupara**	**2.51**	**230**	P	Pn	10 32 19.6 +0.2
RAHZ	**Arahi**	**2.64**	**219**	P	Pn	10 32 21.2 -0.1
RAHZ				S	Sn	10 32 52.3 +0.2
MTHZ	**Maungataniwha**	**2.72**	**223**	P	Pn	10 32 22.6 +0.2
PRRZ	**Plateau Road**	**2.76**	**233**	P	Pn	10 32 23.2 +0.3
KUZ	**Kuaotunu**	**2.80**	**272**	P	Pn	10 32 22.6 -0.8
ALRZ	**Allen Road**	**2.83**	**233**	P	Pn	10 32 24.1 +0.3
NMHZ	**Naumai**	**2.92**	**220**	P	Pn	10 32 25.4 +0.3
MRHZ	**Matea Rd**	**2.95**	**228**	P	Pn	10 32 25.1 -0.4
ARHZ	**Aropaoanui**	**2.96**	**216**	P	Pn	10 32 25.1 -0.5
TOZ	**Tahuroa Road**	**3.08**	**253**	P	Pn	10 32 26.8 -0.4
GRZ	**Great Barrier**	**3.08**	**281**	P	Pn	10 32 27.7 +0.5
KUTZ	**Kaahu Road**	**3.13**	**238**	P	Pn	10 32 28.8 +0.8
BKZ	**Black Stump Fm**	**3.14**	**222**	P	Pn	10 32 27.6 -0.5
MCHZ	**McNeill Hill**	**3.24**	**217**	P	Pn	10 32 28.7 -0.7
MKAZ	**Moumakai**	**3.25**	**265**	P	Pn	10 32 29.2 -0.4
ETAZ	**East Tamaki Re**	**3.43**	**267**	P	Pn	10 32 33.4 +1.4
KAHZ	**Kahuranaki**	**3.44**	**211**	P	Pn	10 32 30.6 -1.7
MBAZ	**Motutapu North**	**3.46**	**270**	P	Pn	10 32 33.9 +1.5
KRHZ	**Kereru**	**3.56**	**218**	P	Pn	10 32 32.9 -1.0
TMVZ	**Te Maari**	**3.56**	**230**	P	Pn	10 32 33.8 -0.2
NTVZ	**North Tongariro**	**3.57**	**230**	P	Pn	10 32 33.8 -0.2
ETVZ	**East Tongariro**	**3.57**	**230**	P	Pn	10 32 33.8 -0.3
KRVZ	**Karewarewa**	**3.59**	**231**	P	Pn	10 32 34.3 0.0
BHHZ	**Black Hill Sta**	**3.60**	**223**	P	Pn	10 32 33.9 -0.6
NNVZ	**North Ngauruho**	**3.62**	**230**	P	Pn	10 32 35.3 +0.4
SNVZ	**South Ngauruho**	**3.64**	**230**	P	Pn	10 32 35.0 -0.2
NGZ	**Ngauruhoe**	**3.66**	**230**	P	Pn	10 32 35.2 -0.1
AWAZ	**Awhitu Peninsu**	**3.66**	**266**	P	Pn	10 32 37.0 +1.7
TUVZ	**Tukino**	**3.69**	**228**	P	Pn	10 32 35.4 -0.3
TWVZ	**Taurewa**	**3.70**	**233**	P	Pn	10 32 36.7 +0.8
WTAZ	**Waiatarua**	**3.72**	**268**	P	Pn	10 32 38.0 +2.0
MOVZ	**Moawhango**	**3.72**	**226**	P	Pn	10 32 35.3 -0.7
RVAZ	**Riverhead Bore**	**3.72**	**270**	P	Pn	10 32 37.6 +1.6
HIZ	**Hauiti**	**3.82**	**243**	P	Pn	10 32 38.8 +1.4
PNHZ	**Pukenui**	**3.85**	**217**	P	Pn	10 32 36.2 -1.6
WPHZ	**Waipukurau**	**3.86**	**213**	P	Pn	10 32 35.9 -2.0
MTVZ	**Mangateitei**	**3.87**	**228**	P	Pn	10 32 37.9 -0.3
TSZ	**Takapari Road**	**4.08**	**218**	P	Pn	10 32 38.9 -2.1
VRZ	**Vera Road**	**4.17**	**236**	P	Pn	10 32 43.4 +1.1
NEZ	**North Egmont**	**4.69**	**238**	P	Pn	10 32 51.5 +2.0
MRZ	**Mangatainoka R**	**4.73**	**216**	P	Pn	10 32 46.9 -2.9
TUWZ	**Tuamarina**	**6.12**	**220**	P	Pn	10 33 06.5 -2.5
TKNZ	**Takaka Hill**	**6.40**	**228**	P	Pn	10 33 10.7 -2.2

MAN 18 11:04:22.3, 18°.11N×120°.80E, h29km, mb4.5, ML3.3, MS3.1, 4D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIPP	**Brgy, Tapao**	**0.37**	**241**	⇓*iP*	Pn	11 04 32.1	+5.7
SIPP				*iS*		11 04 40.5	
SAMP	**Sagada Mountai**	**1.02**	**174**	⇓*eP*	Pn	11 04 40.3	+1.0
SAMP				*eS*		11 04 53.3	
BOLP	**Bolinao**	**1.91**	**206**	⇓*eP*	Pn	11 04 55.2	+0.7
BOLP				*eS*		11 05 21.1	
SMPP	**San Manuel, Pa**	**1.95**	**183**	⇓*eP*	Pn	11 04 53.9	+1.8
SMPP				*eS*		11 05 13.8	

OTT 18 11:07:43.4±0.2, 69°.63N×70°.24W, h18km, MN3.6/2, 113km southwest from Clyde River, Nu Baffin Island Seismic Zone, Nt., Baffin Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLRN	**Clyde River**	**1.02**	**33**	PG	Pb	11 08 01.9	-0.6
CLRN				SG	Sb	11 08 15.9	+0.3
CLRN				Trac		11 08 19.4	
	comp=Z,242nm,0.1s						
FRB	**Frobisher Bay**	**5.94**	**173**	PN	Pn	11 09 07.4	-3.0
FRB				SN	Sn	11 10 14.1	-3.8
FRB				LG	Lg	11 10 46.1	
FRB				Trac		11 10 57.0	
	comp=Z,69nm,0.5s						
RES	**Resolute Bay**	**9.04**	**315**	PN	Pn	11 09 52.2	-0.5
RES				SN	Sn	11 11 27.0	-6.9
RES				LG	Lg	11 12 25.4	
RES				Trac		11 12 29.6	
	comp=Z,51nm,2.0s						

HEL 18 11:11:04.1±0.1, 67°.58N×30°.42E, h0km, ML1.5, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRF	**Varrio**	**0.35**	**299**	PG	Pg	11 11 10.7	-0.1
VRF				SG	Sg	11 11 15.2	-0.2
OLKF	**Oulanka, Finla**	**1.33**	**198**	PG	Pg	11 11 28.3	-1.2
OLKF				SG	Sg	11 11 45.4	-1.3
SGF	**Sodankyl**	**1.50**	**267**	PG	Pn	11 11 31.7	-0.6
SGF				SB	Sg	11 11 51.0	-1.3
KU6	**Riekki**	**1.58**	**188**	PG	Pn	11 11 32.4	-0.9
KU6				MSG		11 11 51.3	
	comp=Z,3.2nm,0.2s						
KU6				SN	Sn	11 11 52.5	-1.8
LVZ	**Lovozero**	**1.65**	**77**	PG	Pn	11 11 34.0	-0.3
LVZ				SG	Sn	11 11 54.8	-1.3
MSF	**Maaselka**	**1.76**	**199**	PG	Pn	11 11 35.7	-0.2
MSF				SN	Sn	11 11 58.4	-0.6
RNF	**Rovaniemi**	**1.98**	**243**	PG	Pn	11 11 39.7	+0.9
	baz=60						
RNF				SG	Sb	11 12 05.8	-0.3
KEV	**Kevo**	**2.52**	**332**	*eP*	Pn	11 11 46.9	+0.7
KEV	**Kevo**	**2.52**	**332**	PB	Pn	11 11 47.3	+1.1
KEV				MSG		11 12 18.5	
	comp=Z,1.5nm,0.2s						
KEV				SG	Sb	11 12 21.0	-0.5
KLF	**Kolari**	**2.52**	**265**	PB	Pn	11 11 46.4	+0.2
KLF				SG	Sb	11 12 21.1	-0.4
ARA0	**ARCESS Array S**	**2.67**	**320**	*eP*	Pn	11 11 49.5	+1.2
ARA0	**ARCESS Array S**	**2.67**	**320**	PB	Pn	11 11 49.3	+1.0
	baz=134						
ARA0				SG	Sb	11 12 26.9	+1.0
HEF	**Hetta**	**2.68**	**291**	PG	Pb	11 11 51.6	-1.2
HEF				MSG		11 12 22.9	
	comp=Z,2.1nm,0.2s						
HEF				SG	Sb	11 12 25.2	-1.0
TOF	**Tornio**	**2.84**	**241**	MSG		11 12 27.8	
	comp=Z,1.1nm,0.2s						
TOF				SG	Sb	11 12 30.4	-0.4
PAJU	**Pajala**	**2.89**	**262**	PN	Pn	11 11 51.3	0.0
PAJU				SN	Sn	11 12 26.4	-0.3
KTK1	**Kautokeino**	**3.03**	**302**	SG	Sb	11 12 36.2	-0.1
ERTU	**Ertsjaerv**	**3.38**	**256**	PN	Pn	11 11 58.6	+0.6
ERTU				SN	Sn	11 12 40.2	+1.4
KIF	**Kilpisjarvi**	**3.85**	**296**	SG	Sb	11 13 01.8	+2.1
OUF	**Merijarvi**	**3.98**	**218**	SB	Sb	11 13 03.4	-0.1

KOLA 18 11:12:03.4, 67°.63N×30°.53E, h0km, ML2.1, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA0	**Apatity Array**	**0.94**	**90**	P	Pg	11 12 19.3	-2.2
APA0				S	Sg	11 12 32.8	-0.9
LVZ	**Lovozero**	**1.59**	**78**	P	Pn	11 12 31.3	-1.5
LVZ				S	Sn	11 12 52.8	-1.3
PRVG	**Vayda Guba**	**2.21**	**15**	P	Pn	11 12 42.1	+0.8
PRVG				S	Sn	11 13 08.0	-1.4
ARCES	**ARCESS Array B**	**2.66**	**318**	P	Pn	11 12 47.2	-0.3
ARCES				S	Sn	11 13 19.1	-1.2

*SOME **18** 11:14:53.5, 41°.82N×78°.37E, h10km*
*KRNET **18** 11:14:53.2±0.1, 41°.81N×78°.39E, h13km, mb3.1*
*NNC **18** 11:14:55.1±1.2, 41°.88N×78°.41E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=8.0km s-min=4.3km az=153.0*
ISC 18 11:14:53.2±1.6, 41°.81N±0°.06×78°.38E±0°.04, h5km±11km, n46, σ1s00/82, 14C-6D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**0.44**	**260**	⇑*iP*	Pg	11 15 01.7	-0.1
	baz=60						
TARG				⇑*iS*	Sg	11 15 07.9	+0.3
	baz=60						
PRZ	**Przheval'sk**	**0.68**	**1**	⇑*iP*	Pg	11 15 06.4	+0.2
	baz=1.0						
PRZ				⇑*iS*	Sb	11 15 16.3	-1.0
	baz=1.0						
KDJ	**Kajisay**	**0.95**	**290**	⇑*iP*	Pg	11 15 11.0	-0.5
	baz=90						
KDJ				⇑*iS*	Sg	11 15 24.3	+0.4
	baz=90						
ANVS	**Anan'yevo**	**1.11**	**332**	⇑*iP*	Pg	11 15 14.4	-0.1
	baz=32						
ANVS				⇑*iS*	Sb	11 15 29.9	+0.1
	baz=32						
SATY	**Saty**	**1.25**	**1**	*eP*	Pb	11 15 17.2	-0.1
	baz=1.0						
SATY				*eS*	Sn	11 15 34.2	-0.5
	baz=1.0						
SATY	**Saty**	**1.25**	**1**	*eP*	Pb	11 15 17.2	-0.1
	9.9nm,0.1s						
SATY				*eS*	Sn	11 15 34.2	-0.5
	57nm,0.1s						
SATY	**Saty**	**1.25**	**1**	P	Pb	11 15 17.2	-0.1
	9.9nm,0.1s						
SATY				S	Sn	11 15 34.2	-0.5
	57nm,0.1s						
ZHN	**Zhinishke**	**1.36**	**2**	*eP*	Pb	11 15 19.0	-0.2
	baz=2.0						
ZHN				*eS*	Sg	11 15 37.2	+0.3
	baz=2.0						
ZHN	**Zhinishke**	**1.36**	**2**	*eP*	Pb	11 15 19.0	-0.2
	18nm,0.2s						
ZHN				*eS*	Sg	11 15 37.2	+0.3
	100nm,0.2s						
ZHN	**Zhinishke**	**1.36**	**2**	P	Pb	11 15 19.0	-0.2
	18nm,0.2s						
ZHN				S	Sg	11 15 37.2	+0.3
	100nm,0.2s						
UZB	**Uzynbulak**	**1.42**	**19**	*eP*	Pb	11 15 20.1	-0.1
	baz=19						
UZB				*eS*	Sg	11 15 39.0	+0.1
	baz=19						
UZB	**Uzynbulak**	**1.42**	**19**	*eP*	Pb	11 15 20.1	-0.1
	2.8nm,0.1s						
UZB				*eS*	Sg	11 15 39.0	+0.1
	19nm,0.2s						
UZB	**Uzynbulak**	**1.42**	**19**	P	Pb	11 15 20.0	-0.1
	2.8nm,0.1s						
UZB				S	Sg	11 15 39.0	+0.1
	19nm,0.2s						
TNSS	**Tian-Shan**	**1.63**	**320**	*eP*	Pg	11 15 24.2	-0.2
	baz=20						
TNSS				*eS*	Sg	11 15 46.1	+0.6
	baz=20						
TNSS	**Tian-Shan**	**1.63**	**320**	*eP*	Pg	11 15 24.2	-0.2
	26nm,0.3s						
TNSS				*eS*	Sg	11 15 46.0	+0.6
	63nm,0.3s						
TNSS	**Tian-Shan**	**1.63**	**320**	P	Pg	11 15 24.2	-0.2
	26nm,0.3s						
TNSS				S	Sg	11 15 46.0	+0.6
	63nm,0.3s						
ULHL	**Ulahol**	**1.66**	**286**	⇓*iP*	Pb	11 15 24.0	-0.2
	baz=86						
ULHL				⇓*iS*	Sg	11 15 46.6	+0.2
	baz=86						
KPKS	**Kokpek**	**1.67**	**7**	*eP*	Pb	11 15 24.6	+0.1
	baz=7.0						
KPKS				*eS*	Sg	11 15 46.8	-0.1
	baz=7.0						
KPKS	**Kokpek**	**1.67**	**7**	*eP*	Pb	11 15 24.6	+0.1
	11nm,0.1s						
KPKS				*eS*	Sg	11 15 46.8	-0.1
	49nm,0.3s						
KPKS	**Kokpek**	**1.67**	**7**	P	Pb	11 15 24.6	+0.1
	11nm,0.1s						
KPKS				S	Sg	11 15 46.8	-0.1
	49nm,0.3s						
BOOM	**Boomskoye usch**	**1.94**	**291**	⇓*iP*	Pb	11 15 29.1	0.0
	baz=91						
BOOM				⇓*iS*	Sg	11 15 55.3	-0.3
	baz=91						
MTBS	**Maitube**	**1.96**	**313**	*eP*	Pb	11 15 30.0	+0.6
	baz=13						
MTBS				*eS*	Sg	11 15 56.0	-0.2
	baz=13						
MTBS	**Maitube**	**1.96**	**313**	*eP*	Pb	11 15 30.0	+0.6
	12nm,0.1s						
MTBS				*eS*	Sg	11 15 56.0	-0.2
	91nm,0.2s						
MTBS	**Maitube**	**1.96**	**313**	Pg	Pb	11 15 30.0	+0.6
	12nm,0.1s						
MTBS				Lg	Lg	11 15 56.0	
	91nm,0.2s						
KST	**Kastek**	**2.18**	**305**	*eP*	Pb	11 15 33.9	+0.8
	5.3nm,0.2s						
KST				*eS*	Sg	11 16 02.7	-0.4
	112nm,0.4s						
KST	**Kastek**	**2.18**	**305**	Pg	Pb	11 15 33.9	+0.8
	5.3nm,0.2s						
KST				Lg	Lg	11 16 02.7	
	112nm,0.4s						
KTBS	**Karatobe**	**2.28**	**327**	*eP*	Pb	11 15 35.4	+0.6
	13nm,0.5s						
KTBS				*eS*	Sg	11 16 05.3	-1.1
	140nm,0.2s						
KTBS	**Karatobe**	**2.28**	**327**	Pg	Pb	11 15 35.4	+0.6
	13nm,0.5s						
KTBS				Lg	Lg	11 16 05.3	
	140nm,0.2s						
CHKK	**Chushkaly**	**2.29**	**334**	*eP*	Pb	11 15 35.8	+0.8
	10.0nm,0.2s						
CHKK				*eS*	Sg	11 16 06.3	-0.4
	90nm,0.2s						
CHKK	**Chushkaly**	**2.29**	**334**	Pg	Pb	11 15 35.8	+0.8
	10.0nm,0.2s						
CHKK				Lg	Lg	11 16 06.3	
	90nm,0.2s						
TKM2	**Tokmak 2**	**2.35**	**299**	⇑*iP*	Pb	11 15 34.8	-1.2
	baz=99						
TKM2				⇑*iS*	Sb	11 16 05.5	+0.1
	baz=99						
TKM2	**Tokmak 2**	**2.35**	**299**	⇓Pn	Pb	11 15 36.1	0.0
	3.8nm,0.3s						
TKM2				⇓Sn	Sg	11 16 08.0	-0.6
	9.2nm,0.2s						
DGS	**Degeres**	**2.41**	**307**	*eP*	Pb	11 15 37.7	+0.7
	8.6nm,0.3s						
DGS				*eS*	Sg	11 16 09.2	-1.2
	35nm,0.3s						
DGS	**Degeres**	**2.41**	**307**	Pg	Pb	11 15 37.7	+0.7
	8.6nm,0.3s						
DGS				Lg	Lg	11 16 09.2	
	35nm,0.3s						
ARXS	**Arharly**	**2.44**	**351**	*eP*	Pb	11 15 38.7	+1.1
	6.7nm,0.2s						
ARXS				*eS*	Sg	11 16 10.9	-0.7
	80nm,0.3s						
ARXS	**Arharly**	**2.44**	**351**	Pg	Pb	11 15 38.7	+1.1
	6.7nm,0.2s						
ARXS				Lg	Lg	11 16 10.9	
	80nm,0.3s						
KBK	**Karagaybulak**	**2.69**	**290**	⇑*iP*	Pb	11 15 39.5	-2.4
	baz=90						
KBK				⇑*iS*	Sb	11 16 13.6	-1.6
	baz=90						
DJR	**Jarkent**	**2.73**	**22**	*eP*	Pb	11 15 42.9	+0.5
	5.0nm,0.2s						
DJR				*eS*	Sg	11 16 18.2	-2.5
	32nm,0.2s						
DJR	**Jarkent**	**2.73**	**22**	Pg	Pb	11 15 42.9	+0.5
	5.0nm,0.2s						
DJR				Lg	Lg	11 16 18.2	
	32nm,0.2s						
KRBS	**Karabastau**	**2.75**	**314**	*eP*	Pb	11 15 43.7	+0.9
	2.2nm,0.2s						
KRBS				*eS*	Sg	11 16 20.2	-1.2
	29nm,0.2s						
KRBS	**Karabastau**	**2.75**	**314**	Pg	Pb	11 15 43.7	+0.9
	2.2nm,0.2s						
KRBS				Lg	Lg	11 16 20.2	
	29nm,0.2s						
CHMS	**Chumysh**	**2.94**	**295**	⇑*iP*	Pn	11 15 42.9	+2.3
	baz=95						
CHMS				⇑*iS*	Sb	11 16 19.4	-2.9
	baz=95						
SGDS	**Sogindy**	**3.22**	**302**	*eP*	Pb	11 15 52.2	+1.3
	1.7nm,0.2s						
SGDS				*eS*	Sg	11 16 34.0	-2.6
	21nm,0.4s						
SGDS	**Sogindy**	**3.22**	**302**	Pg	Pb	11 15 52.2	+1.3
	1.7nm,0.2s						
SGDS				Lg	Lg	11 16 34.0	
	21nm,0.4s						
KAPS	**Kapalarasan**	**3.55**	**11**	*eP*	Pb	11 15 57.5	+1.1
	1.6nm,0.1s						
KAPS				*eS*	Sg	11 16 43.2	-3.9
	15nm,0.3s						
KAPS	**Kapalarasan**	**3.55**	**11**	Pg	Pb	11 15 57.5	+1.1
	1.6nm,0.1s						
KAPS				Lg	Lg	11 16 43.2	
	15nm,0.3s						

*MDD **18** 11:20:22.2±0.9, 35°.68N×4°.71W, h76km±9km, Mb2.7/5, Error ellipse: s-maj=6.5km s-min=5.4km az=15.0*
*INMG **18** 11:20:22.3±1.3, 35°.72N×4°.75W, h73km±11km, ML1.9, Error ellipse: s-maj=4.4km s-min=4.1km az=0.0*
*SFS **18** 11:20:22.0, 35°.66N×4°.76W, h87km, ML2.2, ALBORAN OESTE*
ISC 18 11:20:21.9±2.0, 35°.72N±0°.07×4°.77W±0°.07, h69km±24km, n20, σ1s09/33, 5C, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVLZ	**Peæn de**	**0.67**	**145**	P	Pn	11 20 37.0	+0.7
PVLZ				S	Sn	11 20 45.8	-1.0
EMIJ	**Mijas**	**0.84**	**360**	P	Pn	11 20 39.2	+0.8
EMIJ				S	Sn	11 20 50.8	+0.1
ELGU	**Los Guajares,**	**1.47**	**38**	P	Pn	11 20 46.3	-0.1
ELGU				⇑*iV*mb_V		11 20 48.2	
	124nm,SNR=3.2						
ELGU				S	Sn	11 21 04.6	-0.4
ECAB	**El Cabril**	**2.41**	**348**	P	Pn	11 20 59.7	+0.7
ECAB				⇑*iV*mb_V		11 21 03.6	
	58nm,SNR=1.3						
ECAB				S	Sn	11 21 25.9	-1.6
EADA	**Adamuz**	**2.45**	**4**	P	Pn	11 21 00.7	+1.1
EADA				⇑*iV*mb_V		11 21 01.0	
	456nm,SNR=8.2						
EADA				S	Sn	11 21 27.9	-0.5
EMIN	**Mina Concepcio**	**2.55**	**324**	P	Pn	11 21 01.9	+0.9
EMIN				⇑*iV*mb_V		11 21 01.9	
	135nm,SNR=2.4						
EMIN				S	Sn	11 21 29.8	-1.1
EGRO	**El Granado**	**2.84**	**310**	P	Pn	11 21 05.6	+0.8
EGRO				⇑*iV*mb_V		11 21 05.7	
	188nm,SNR=2.4						
EGRO				S	Sn	11 21 35.7	-2.2
PVAQ	**Vaqueiros**	**2.91**	**306**	*eP*	Pn	11 21 06.5	+0.7
PVAQ				*eS*	Sn	11 21 38.7	-0.9
PVAQ				A	A	11 21 40.3	
	4.9nm,0.1s						
PBDV	**Barranco-do-Ve**	**2.97**	**302**	*eP*	Pn	11 21 07.4	+0.8
PBDV				*eS*	Sn	11 21 40.6	-0.5
PBDV				A	A	11 21 41.3	
	2.1nm,0.5s						
PBAR	**Barrancos**	**3.05**	**324**	*eS*	Sn	11 21 42.1	-1.0
PCVE	**Castro Verde**	**3.25**	**307**	*eP*	Pn	11 21 11.3	+0.9
PCVE				*eS*	Sn	11 21 47.0	-0.9
PCVE				A	A	11 21 48.1	
	2.7nm,0.4s						
PBEJ	**Beja**	**3.39**	**314**	*eS*	Sn	11 21 51.1	-0.2
MESJ	**Messejana**	**3.49**	**308**	*eP*	Pn	11 21 14.5	+0.8
MESJ				*eS*	Sn	11 21 52.8	-0.9
MESJ				A	A	11 21 55.2	
	3.0nm,0.4s						
MORF	**Marmelete**	**3.51**	**298**	*eS*	Sn	11 21 53.9	-0.4
PTEO	**Sao Teotonio**	**3.67**	**301**	*eS*	Sn	11 21 57.5	-0.6
EVO	**Evora**	**3.82**	**318**	*eS*	Sn	11 22 01.0	-0.9
EVO				A	A	11 22 03.9	
	3.5nm,0.4s						
PNCL	**Nicolau / Gran**	**3.85**	**309**	*eP*	Pn	11 21 19.2	+0.7
PNCL				*eS*	Sn	11 22 00.5	-2.0
PNCL				A	A	11 22 02.7	
	1.4nm,0.1s						
PESTR	**Estremoz**	**3.87**	**325**	*eP*	Pn	11 21 20.4	+1.6
PESTR				*eS*	Sn	11 22 01.9	-1.1
PMRV	**Marv??o**	**4.25**	**331**	*eS*	Sn	11 22 10.7	-1.7
PMTG	**Montargil**	**4.33**	**322**	*eS*	Sn	11 22 15.5	+1.1

IDC 18 11:23:53.8±6.3, 16°.81S×174°.45W, h57km±42km, mb3.3/4, mbtmp3.6/5, ML3.2/1, MS2.5/1, Error ellipse: s-maj=133.0km s-min=22.8km az=147.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.87**	**42**	P	Pn	11 24 50.9	0.0
	1.6nm,0.3s,baz=53,slow=20,SNR=2.3						
AFI				S	Sn	11 25 35.8	+0.6
	50nm,0.5s,baz=135,slow=20,SNR=8.7						
AFI				LR	LR	11 25 51.1	
	comp=Z,64nm,21.7s,baz=211,slow=30						
	36nm,0.9s						
WRA	**Warramunga Arr**	**48.55**	**258**	P	P	11 32 31.7	-0.1
	0.2nm,0.3s,baz=94,slow=7.9,SNR=18						
	0.2nm,0.3s						
NVAR	**Mina Array Bea**	**76.05**	**42**	P	P	11 35 35.8	+0.2
	0.7nm,0.9s,baz=226,slow=8.1,SNR=4.7						
	0.7nm,0.9s						
PDAR	**Pinedale Array**	**83.98**	**42**	P	P	11 36 17.8	-0.5
	0.4nm,0.7s,baz=216,slow=4.8,SNR=3.9						
	0.4nm,0.7s						
ILAR	**Eielson Array**	**84.02**	**12**	P	P	11 36 17.9	+0.3
	0.2nm,0.5s,baz=224,slow=6.4,SNR=5.7						
	0.2nm,0.5s						

*BJI **18** 11:46:53.5±0.0, 32°.38N×130°.85E, h23km, mb4.4/48, mB4.7/33, Ms4.4/41, Ms7 4.1/38*
*MOS **18** 11:46:55.0±0.8, 32°.65N×130°.60E, h17km, mb4.9/52, Error ellipse: s-maj=7.9km s-min=4.6km az=103.8*
*JMA **18** 11:46:55.2±0.0, 32°.7N±0°.1×130°.7E±0°.2, h10km, MD4.6/20, MW4.5/20, NW KUMAMOTO PREF*
JMA Felt IV J1 at NW KUMAMOTO PREF .
*NI

comp=E,83nm,2.7s,comp=E,104nm,5.3s
JHD Hondo 0.47 249 A A 11 47 05.6
comp=E,38nm,5.7s,comp=E,42nm,1.3s
JZO Okuchi 0.50 186 A A 11 47 06.0
comp=E,37nm,2.9s,comp=E,83nm,4.1s
JNU Nakatsue 0.52 21 Pg **Pg 11 47 04.0 -1.7**
baz=0.0,slow=1.0
JNU Lg Lg 11 47 10.0
3µm,0.3s,baz=180,slow=18,SNR=1.8
JNU Nakatsue 0.52 21 A A 11 47 04.2
comp=E,79nm,5.6s,comp=E,62nm,4.5s
JKIT Kitakata 0.67 91 A A 11 47 07.4
comp=E,41nm,3.7s,comp=E,44nm,1.0s
NGSJ Nagasakinomoza 0.72 270 A A 11 47 09.9
comp=E,11nm,5.6s,comp=E,15nm,1.6s
JUR Ureshino 0.75 307 A A 11 47 09.7
comp=E,27nm,5.1s,comp=E,96nm,5.4s
JTSN Tsuno 0.82 118 A A 11 47 10.5
comp=E,33nm,3.4s,comp=E,92nm,0.4s
JFI Itaya 0.82 344 A A 11 47 10.2
comp=E,56nm,1.2s,comp=E,41nm,4.8s
JTZ Takazaki 0.82 153 *i* P **Pn 11 47 12.1 -0.9**
JTZ Takazaki 0.82 153 A A 11 47 12.1
comp=E,38nm,5.3s,comp=E,52nm,4.4s
JHHC Hyugahichiya 0.85 103 A A 11 47 10.9
comp=E,49nm,3.0s,comp=E,38nm,2.5s
JBEP Beppuamama 0.94 42 A A 11 47 11.7
comp=E,39nm,3.2s,comp=E,45nm,4.0s
JUS Usuki 1.01 65 A A 11 47 13.2
comp=E,21nm,0.5s,comp=E,21nm,0.7s
JSKE Saikikamae 1.06 81 A A 11 47 14.2
comp=E,18nm,5.5s,comp=E,15nm,3.4s
JFA Akaike 1.08 6 A A 11 47 14.4
comp=E,29nm,0.7s,comp=E,36nm,0.7s
JSU Suzuyama 1.14 189 **Pn 11 47 17.6 +0.2**
JSU Sn **Sn 11 47 34.1 +1.0**
JSU Suzuyama 1.14 189 A A 11 47 17.4
comp=E,16nm,4.4s,comp=E,24nm,4.4s
JNKG Nichinankitago 1.15 148 A A 11 47 17.0
comp=E,32nm,2.1s,comp=E,29nm,2.3s
JNAR Kushima--Naru 1.23 155 A A 11 47 18.3
comp=E,38nm,4.4s,comp=E,52nm,2.8s
JSJ Shimokoshiki 1.25 220 A A 11 47 19.3
comp=E,10.0nm,1.8s,comp=E,18nm,6.1s
JKI Kunimi 1.25 37 A A 11 47 17.2
comp=E,47nm,2.1s,comp=E,51nm,0.8s
JII Iki 1.39 326 A A 11 47 20.3
comp=E,56nm,1.7s,comp=E,35nm,6.0s
JTSR Tashiro 2 1.48 171 A A 11 47 22.7
comp=E,10.0nm,4.1s,comp=E,6.0nm,6.9s
JFU Fukue jima 2 1.61 271 A A 11 47 24.6
comp=E,7.0nm,8.4s,comp=E,6.0nm,3.5s
JTY Toyota 1.66 12 A A 11 47 23.8
comp=E,15nm,0.9s,comp=E,20nm,1.1s
JKD Kudamatsu 1.72 35 A A 11 47 24.9
comp=E,13nm,5.2s,comp=E,10.0nm,2.7s
UWA2 Uwa jima 2 1.75 70 A A 11 47 25.2
comp=E,5.0nm,1.0s,comp=E,12nm,4.2s
JNA Nagahama 1.78 59 A A 11 47 25.6
comp=E,4.0nm,3.4s,comp=E,6.0nm,2.2s
JTO Tosashimizu 1.82 82 A A 11 47 26.4
comp=E,10.0nm,3.7s,comp=E,13nm,5.1s
JTN Tanegashima 3 2.00 172 A A 11 47 30.3
comp=E,5.0nm,6.6s,comp=E,7.0nm,4.0s
JTSM Tsushimamitsus 2.00 328 A A 11 47 29.4
comp=E,9.0nm,1.3s,comp=E,11nm,0.9s
JKU Kubokawa 2.13 71 A A 11 47 30.8
comp=E,6.0nm,3.2s,comp=E,10.0nm,5.8s
JTU Tsushima 2.15 331 Pn **Pn 11 47 29.9 -1.5**
JTU Tsushima 2.15 331 A A 11 47 31.7
comp=E,9.0nm,0.9s,comp=E,10.0nm,1.3s
JHIK Hikimi 2.17 29 A A 11 47 31.2
comp=E,7.0nm,6.6s,comp=E,9.0nm,5.2s
JHM Kurahashi 2.17 46 A A 11 47 31.2
comp=E,10.0nm,5.4s,comp=E,7.0nm,4.9s
JHGM Hagimishima 2.18 11 A A 11 47 31.4
comp=E,17nm,1.2s,comp=E,28nm,1.5s
JKC Kuchinoerabu 2.21 190 A A 11 47 33.5
comp=E,4.0nm,3.4s,comp=E,6.0nm,5.3s
JET Tanbara 2.31 60 A A 11 47 33.2
comp=E,4.0nm,5.0s,comp=E,8.0nm,3.6s
JHT Toyohira 2.50 36 A A 11 47 36.0
comp=E,7.0nm,6.1s,comp=E,8.0nm,6.1s
JKHR Kochiharuno 2.54 69 A A 11 47 36.7
comp=E,8.0nm,7.1s,comp=E,10.0nm,4.5s
JGT2 ShimaneMisato 2.87 32 A A 11 47 41.2
comp=E,6.0nm,4.9s,comp=E,9.0nm,4.6s
JJG Jouge 2.89 46 A A 11 47 41.5
comp=E,4.0nm,5.8s,comp=E,9.0nm,5.4s
JMN Monobe 2.91 67 Pn **Pn 11 47 43.1 +1.2**
JMN Monobe 2.91 67 A A 11 47 42.0
comp=E,11nm,4.7s,comp=E,12nm,4.3s
MRT2 Murotomisaki 2 3.02 75 A A 11 47 43.6
comp=E,4.0nm,6.9s,comp=E,4.0nm,4.6s
JHS Saijyo 3.12 40 Pn **Pn 11 47 45.0 +0.3**
JHS Saijyo 3.12 40 A A 11 47 44.9
comp=E,7.0nm,4.4s,comp=E,7.0nm,8.6s
JJS Sakaide 3.24 57 A A 11 47 46.6
comp=E,3.0nm,4.5s,comp=E,5.0nm,4.4s
JISK Izumosakaura 3.39 32 A A 11 47 48.6
comp=E,7.0nm,1.3s,comp=E,10.0nm,1.4s
JNM Ikuma 3.46 34 A A 11 47 49.8
comp=E,11nm,5.9s,comp=E,9.0nm,1.8s
JKR Kurayoshi 3.79 43 A A 11 47 54.4
comp=E,5.0nm,4.1s,comp=E,6.0nm,6.0s
NAWB Namwon 3.88 317 Pn **Pn 11 47 54.7 -0.3**
TJN Taejon 4.62 325 Pn **Pn 11 48 04.7 -0.5**
TJN Taejon 4.62 325⇑ *eP* **Pn 11 48 05.2 0.0**
KSCHJ Chungju 4.77 333 **Pn 11 48 07.3 0.0**
KSRS Korea Array 5.30 336 Pn **Pn 11 48 14.3 -0.3**
1.5nm,0.3s,baz=154,slow=14,SNR=18
KSRS Pg **Pb 11 48 31.3 +3.1**
2.7nm,0.3s,baz=152,slow=16,SNR=17
KSRS Lg Lg 11 49 42.2
11nm,0.3s,baz=154,slow=28,SNR=8.9
KSRS LR LR 11 50 31.5
comp=Z,443nm,21.1s,baz=155,slow=41
5.2nm,0.4s
KSAR Wonju Array Be 5.30 335 **Pn 11 48 15.2 +0.5**
KSAR Wonju Array Be 5.30 335 P **Pn 11 48 15.2 +0.5**
KS19 Wonju Array Si 5.37 336 **Pn 11 48 14.7 -0.8**
INCN Inchon 5.85 327 **Pn 11 48 22.2 0.0**
INCN Inchon 5.85 327 P **Pn 11 48 22.2 0.0**
INU Inuyama 5.93 61 Pn **Pn 11 48 24.3 +1.0**
SEHB SEOHWA 5.95 341 **Pn 11 48 24.2 +0.7**
JOW Kunigami 6.14 200 **Pn 11 48 28.9 +2.7**
7.1nm,0.3s,baz=101,slow=22,SNR=17
16nm,0.3s
JOW Kunigami 6.14 200 **Pn 11 48 27.2 +0.9**
JGF Kuroka 6.29 60 **Pn 11 48 29.1 +0.8**
MJB9 Matsu-Tunnel 7.34 56 Pn **Pn 11 48 43.9 +1.2**
MAJO Matsushiro 7.34 56 **Pn 11 48 43.8 +1.1**
MAJO Matsushiro 7.34 56*ce* P **Pn 11 48 45.4 +2.7**
MJAR Matsushiro Arr 7.34 56 Pn **Pn 11 48 43.7 +1.0**
0.5nm,0.3s,baz=239,slow=13,SNR=46
MJAR Lg Lg 11 50 48.1
baz=154,slow=32,SNR=6.1
MJAR LR LR 11 51 38.3
comp=Z,147nm,19.2s,baz=238,slow=39
11nm,0.6s
MJAR Matsushiro Arr 7.34 56 **Pn 11 48 43.9 +1.2**
MJAR Matsushiro Arr 7.34 56 P **Pn 11 48 43.9 +1.2**
JHJ Hachijo jima 2 7.69 84 Pn **Pn 11 48 48.4 +0.9**
32nm,0.3s,baz=28,slow=23,SNR=16
JHJ LR LR 11 51 50.0
comp=Z,185nm,19.8s,baz=270,slow=38
81nm,0.3s
JHJ2 Mitsune 7.72 84 **Pn 11 48 48.3 +0.5**
JSD Sado 8.22 47 **Pn 11 48 55.4 +0.7**
NJ2 Nanjing 10.00 270 ⇑P **Pn 11 49 17.1 -2.0**
NJ2 pmax pmax
comp=Z,13nm,0.5s
NJ2 LR LR
comp=N,740nm,9.8s
NJ2 LR LR
comp=E,430nm,9.2s
NJ2 LR LR
comp=Z,620nm,10.0s
USA0B Ussuriysk Arra 11.59 5 Pn **Pn 11 49 43.9 +3.1**
USA0B Ussuriysk Arra 11.59 5 P **Pn 11 49 43.9 +3.1**
USRK Ussuriysk Ar. 11.59 5 Pn **Pn 11 49 43.3 +2.4**
comp=Z,0.4nm,0.3s,baz=178,slow=17,SNR=14
USRK LR LR 11 53 47.5
comp=Z,359nm,18.5s,baz=177,slow=36
USRK Ussuriysk Ar. 11.59 5 Pn **Pn 11 49 43.9 +3.1**
USRK Ussuriysk Ar. 11.59 5 P **Pn 11 49 43.9 +3.1**
CN2 Changchun 11.87 341 *eP* Pn 11 49 49.8 +5.1
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 LR LR
comp=Z,600nm,10.0s
CN2 LR LR
comp=Z,2µm,10.0s
CN2 LR LR
comp=Z,500nm,11.0s
MDJ Mudanjiang 11.99 356 P **Pn 11 49 47.6 +1.3**
MDJ S **Sn 11 52 01.0 +1.0**
MDJ pmax pmax
comp=Z,12nm,1.6s
MDJ pmax pmax
comp=Z,120nm,7.2s
MDJ LR LR
comp=Z,460nm,11.1s
MDJ LR LR
comp=Z,380nm,11.6s
MDJ LR LR
comp=Z,500nm,22.4s
BNX BinXian 13.32 350 ⇑P **Pn 11 50 07.8 +3.3**
BNX pmax pmax
comp=Z,10.0nm,1.3s
BNX pmax pmax
comp=Z,140nm,5.1s
ERM Erimo 13.64 43⇓ *eP* **Pn 11 50 11.4 +2.5**
BJI Beijing 13.80 306 P **Pn 11 50 13.3 +2.2**
BJI pmax pmax
comp=Z,5.0nm,0.9s
BJI pmax pmax
comp=Z,120nm,7.5s
BJI LR LR
comp=Z,160nm,15.9s
BJI LR LR
comp=Z,500nm,15.5s
BJI LR LR
comp=Z,660nm,13.9s
HNS HongShan 13.90 294 ⇓P **P 11 50 18.6 -2.1**
HNS S S 11 52 59.0 -10
HNS pmax pmax
comp=Z,170nm,5.9s
HNS LR LR
comp=Z,580nm,11.9s
HNS LR LR
comp=Z,550nm,13.5s
ASAJ Asahikawa 14.78 36 LR LR 11 55 30.9
comp=Z,123nm,21.2s,baz=235,slow=35
ASAJ Asahikawa 14.78 36 P **Pn 11 50 24.8 +0.4**
JKA Kamikawa-asahi 14.78 36 Pn **Pn 11 50 24.8 +0.3**
LYN LuoYang 15.28 282 ⇑P **P 11 50 34.0 -2.0**
LYN LR LR
comp=Z,800nm,12.2s
LYN LR LR
comp=Z,900nm,11.2s
XLT XiLinHaoTe 16.02 319 *eP* **Pn 11 50 42.3 +1.5**
XLT pP P 11 50 45.8 +1.5
XLT sP sP 11 50 49.8 +0.9
XLT S **Sn 11 53 44.6 +6.2**
XLT sS S 11 53 53.0 +0.8
XLT SS **SnSn 11 54 02.8 +11**
XLT pmax pmax
comp=Z,18nm,1.0s
XLT LR LR
comp=Z,130nm,10.9s
XLT LR LR
comp=Z,1µm,8.8s
XLT LR LR
comp=Z,1µm,10.5s
KLR Kul'dur 16.60 3 Pn **Pn 11 50 49.9 +1.9**
comp=Z,0.6nm,0.3s,baz=172,slow=9.8,SNR=81
KLR LR LR 11 56 54.8
comp=Z,201nm,18.4s,baz=203,slow=36
KLR Kul'dur 16.60 3⇑ *eP* **Pn 11 50 49.8 +1.8**
KLR pmax pmax
comp=Z,40nm,1.3s
YSS Yuzh-Sakhalins 17.02 29 *eP* **Pn 11 50 54.7 +1.3**
YSS pmax pmax
comp=Z,20nm,1.0s
YSS MLR MLR
comp=Z,200nm,11.0s
YSS MLR MLR
comp=N,100nm,13.0s
YSS MLR MLR
comp=E,200nm,13.0s
HHC Hu-ho-hao-te 17.34 304 *eP* **Pn 11 50 57.3 -0.2**
HHC pmax pmax
comp=E,21nm,0.8s
HHC pmax pmax
comp=E,340nm,5.1s
HHC LR LR
comp=E,670nm,12.7s
HHC LR LR
comp=E,1µm,11.7s
HHC LR LR
comp=E,1µm,11.4s
ENH Enshi 18.21 268 P **Pn 11 51 08.2 -0.2**
XAN Xi'an 18.21 280 P **P 11 51 09.9 +1.3**
XAN sP sP 11 51 17.5 +4.2
XAN pmax pmax
comp=E,6.0nm,1.2s
XAN LR LR
comp=E,440nm,13.1s
XAN LR LR
comp=E,600nm,13.1s
XAN LR LR
comp=E,600nm,13.1s
KUR Kuril'sk 18.32 42⇓ *eP* **Pn 11 51 09.8 +0.3**
KUR pmax pmax
comp=Z,75nm,1.2s
HIA Hailar 18.51 337 P **Pn 11 51 13.2 +1.3**
HIA Hailar 18.51 337 P **Pn 11 51 13.2 +1.3**
HIA pmax pmax
comp=Z,22nm,1.1s
ZEA Zeya 21.23 354*de* P **P 11 51 42.3 +1.0**
ZEA *e*S **S 11 55 28.1 -8.9**
ZEA pmax pmax
comp=N,20nm,0.8s
ZEA pmax pmax
comp=Z,40nm,0.8s
ZEA pmax pmax
comp=N,100nm,3.0s
ZEA pmax pmax
comp=Z,100nm,3.3s
ZEA smax smax
comp=E,200nm,14.5s
ZEA smax smax
comp=N,200nm,12.5s
ZEA MLR MLR
comp=N,200nm,11.0s
ZEA MLR MLR
comp=E,100nm,11.0s
ZEA MLR MLR
comp=Z,100nm,12.0s
LZH Lanzhou 22.38 286 *eP* **P 11 51 54.9 +1.0**
LZH sP sP 11 52 04.0 +5.4
LZH pmax pmax
comp=Z,17nm,1.1s
LZH LR LR
comp=Z,420nm,10.6s
LZH LR LR
comp=Z,460nm,10.8s
LZH LR LR
comp=Z,600nm,12.2s
CD2 Chengdu 22.91 273 P **P 11 52 00.0 +0.4**
CD2 pP pP 11 52 01.8 -1.0
CD2 S **S 11 56 08.1 -1.4**
CD2 sS pS 11 56 12.8 -0.5
CD2 pmax pmax
comp=Z,190nm,7.6s
CD2 LR LR
comp=Z,900nm,15.2s
CD2 LR LR
comp=Z,960nm,11.3s
CD2 LR LR
comp=Z,1µm,12.3s
GUMO Guam 22.98 142 LR LR 11 59 16.9
comp=Z,80nm,21.9s,baz=12,slow=32
QIZ Qiongzhong 23.07 239 P **P 11 51 58.0 -3.1**
QIZ pmax pmax
comp=Z,16nm,1.5s
QIZ LR LR
comp=Z,370nm,15.9s
QIZ LR LR
comp=Z,120nm,12.9s
QIZ LR LR
comp=Z,200nm,11.4s
ULN Ulaanbaatar 23.45 317 P **P 11 52 03.8 -1.1**
ULN Ulaanbaatar 23.45 317*d i* P **P 11 52 05.9 +1.0**
ULN pmax pmax
comp=Z,23nm,1.5s
SONM Songino Array 23.81 317 P **P 11 52 08.5 0.0**
comp=Z,6.2nm,1.0s,baz=129,slow=9.4,SNR=18
SONM LR LR 12 02 56.2
comp=Z,163nm,18.2s,baz=118,slow=40
comp=Z,6.2nm,1.0s
SONM Songino Array 23.81 317 P **P 11 52 07.8 -0.6**
GTA Gaotai 25.76 294 ⇓P **P 11 52 27.6 +1.2**
GTA pP sP 11 52 31.0 -0.2
GTA sP pP 11 52 34.8 +5.0
GTA sS sS 11 57 05.0 +3.9
GTA pmax pmax
comp=Z,14nm,0.9s
GTA pmax pmax
comp=Z,110nm,5.1s
GTA LR LR
comp=Z,580nm,14.2s
GTA LR LR
comp=Z,400nm,13.1s
GTA LR LR
comp=Z,370nm,13.1s
PZH PanZhiHua 25.83 264 P **P 11 52 27.6 +0.5**
PZH S **S 11 56 54.4 -2.4**
PZH pmax pmax
comp=Z,20nm,1.2s
PZH pmax pmax
comp=Z,90nm,5.0s
PZH LR LR
comp=Z,440nm,15.9s
PZH LR LR
comp=Z,480nm,15.7s
PZH LR LR
comp=Z,380nm,15.7s
DAV Davao City (W) 25.88 192 LR LR 12 04 38.5
comp=Z,101nm,18.1s,baz=356,slow=41
ZAK Zakamensk 26.87 319 *eP* **P 11 52 35.6 -0.7**
ZAK pmax pmax
comp=Z,6.0nm,1.4s
PETK Petropavlovsk- 28.20 35 LR LR 12 05 38.3
comp=Z,51nm,18.8s,baz=187,slow=40
YAK Yakutsk 29.41 359 LR LR 12 04 38.3
comp=Z,114nm,18.4s,baz=259,slow=36
YAK Yakutsk 29.41 359 P **P 11 52 57.3 -1.3**
YAK IAmb IAmb 11 53 02.2
comp=Z,16nm,0.9s
YAK Yakutsk 29.41 359 *eP* **P 11 52 58.6 -0.1**
YAK pmax pmax
comp=Z,14nm,0.9s
YAK pmax pmax
comp=N,6.0nm,1.1s
GOMU GeErMu 29.68 287 P **P 11 53 02.1 +0.3**
GOMU pP pP 11 53 06.0 +0.8
GOMU sP sP 11 53 09.6 +3.0
GOMU S **S 11 58 06.1 +8.5**
GOMU pmax pmax
comp=N,5.0nm,1.0s
GOMU pmax pmax
comp=N,27nm,3.7s
GOMU LR LR
comp=N,100nm,14.5s
GOMU LR LR
comp=N,100nm,14.9s
GOMU LR LR
comp=N,130nm,14.9s
MA2 Magadan 30.09 20 LR LR 12 05 16.7
comp=N,82nm,18.2s,baz=259,slow=37
CHTO Chiang Mai 31.58 252 P **P 11 53 18.1 -0.2**
CHTO IAmb IAmb 11 53 24.2
comp=Z,12nm,1.1s
CHTO Chiang Mai 31.58 252 P **P 11 53 18.1 -0.2**
CHTO pmax pmax
comp=Z,12nm,1.2s
CM31 Chiang Mai Arr 31.77 251 P **P 11 53 21.4 +1.5**
CMAR Chiang Mai Arr 31.77 251 P **P 11 53 20.9 +1.0**
comp=Z,2.9nm,0.3s,baz=52,slow=7.2,SNR=9.7
CMAR PcP **PcP 11 56 11.4 +0.2**
comp=Z,0.6nm,0.3s,baz=67,slow=3.0,SNR=1.7
CMAR LR LR 12 08 10.4
comp=Z,70nm,20.7s,baz=200,slow=40
comp=Z,2.9nm,0.3s
CMAR Chiang Mai Arr 31.77 251 P **P 11 53 20.1 +0.1**
CMAR Chiang Mai Arr 31.77 251 *i* P **P 11 53 21.2 +1.3**
CMAR pmax pmax
comp=Z,3.0nm,0.3s
SEY Seymchan 33.29 18 LR LR 12 06 47.7
comp=Z,123nm,19.8s,baz=235,slow=36
SEY Seymchan 33.29 18⇑ *eP* **P 11 53 33.0 +0.2**
SEY pmax pmax
comp=Z,10.0nm,2.0s
WMQ Urumqi 35.19 301 *eP* **P 11 53 51.5 +1.9**
WMQ LR LR
comp=Z,370nm,14.9s
WMQ LR LR
comp=Z,150nm,18.5s
FAKI Fak Fak 35.40 177 P **P 11 53 51.2 -0.2**
FAKI IAmb IAmb 11 53 56.8
comp=Z,22nm,1.1s
ZAA0 Zalesovo Array 38.70 317 P **P 11 54 18.8 -0.4**
ZALV Zalesovo Beam 38.70 317 P **P 11 54 19.1 -0.1**
comp=Z,2.1nm,0.9s,baz=110,slow=8.1,SNR=4.8
ZALV PcP **PcP 11 56 29.6 -1.3**
comp=Z,1.3nm,0.8s,baz=72,slow=4.8,SNR=3.6
ZALV LR LR 12 11 17.2
comp=Z,168nm,18.6s,baz=104,slow=38
comp=Z,2.1nm,0.9s
ZALV Zalesovo Beam 38.70 317 P **P 11 54 18.8 -0.4**
ZALV Zalesovo Beam 38.70 317 *i* P **P 11 54 19.7 +0.5**
ZALV pmax pmax
comp=Z,2.0nm,0.8s
KAPI Kappang 38.85 197 LR LR 12 10 55.6
comp=Z,70nm,19.4s,baz=19,slow=37
KAPI Kappang 38.85 197 P **P 11 54 20.6 -0.2**
KAPI Kappang 38.85 197 P **P 11 54 20.6 -0.2**
KAPI pmax pmax
comp=Z,9.0nm,0.9s
TIXI Tiksi 39.08 359 LR LR 12 10 43.1
comp=Z,130nm,20.4s,baz=180,slow=37
TIXI Tiksi 39.08 359 P **P 11 54 20.7 -1.5**
TIXI Tiksi 39.08 359⇓ *eP* **P 11 54 21.4 -0.8**
TIXI pmax pmax
comp=Z,6.0nm,0.9s
MK31 Makanchi Array 39.18 306 P **P 11 54 23.0 -0.5**
MK31 Makanchi Array 39.18 306⇓ *eP* **P 11 54 22.9 -0.5**
MKAR Makanchi Array 39.18 306 P **P 11 54 23.4 0.0**
comp=Z,3.3nm,0.9s,baz=96,slow=9.6,SNR=8.7
MKAR LR LR 12 11 13.6
comp=Z,60nm,18.6s,baz=92,slow=37
comp=Z,3.3nm,0.9s
MKAR Makanchi Array 39.18 306 P **P 11 54 22.9 -0.6**
MKAR Makanchi Array 39.18 306 *i* P **P 11 54 24.7 +1.3**
MKAR pmax pmax
comp=Z,2.0nm,0.8s
MAKZ Makanchi 39.40 306 P **P 11 54 24.2 -1.0**
MAKZ Makanchi 39.40 306 P **P 11 54 24.2 -1.0**
MAKZ pmax pmax
comp=Z,5.0nm,1.0s
BILL Bilibino 40.95 20 P **P 11 54 38.4 +0.7**
BILL Bilibino 40.95 20⇑ *i* P **P 11 54 38.7 +1.0**
BILL *e* 11 56 14.0
BILL *e*PPP PPP 11 56 40.7
BILL pmax pmax
comp=Z,7.0nm,1.0s
BILL MLR MLR
comp=Z,54nm,15.0s
KURK Kurchatov 41.90 311 P **P 11 54 45.7 -0.1**
KURK IAmb IAmb 11 54 46.6
comp=Z,10nm,0.9s
KURK Kurchatov 41.90 311*d i* P **P 11 54 45.4 -0.4**
KURK pmax pmax
comp=Z,13nm,1.0s
KURBB Kurchatov Arra 41.95 311 LR LR 12 13 24.8
comp=Z,166nm,20.4s,baz=59,slow=38
TARG Taragay, Kyrgy 42.50 298 P **P 11 54 51.8 +0.5**
TARG Taragay, Kyrgy 42.50 298 P **P 11 54 51.8 +0.5**
TARG pmax pmax
comp=Z,8.0nm,1.1s
KSH Kashi 44.16 295 P **P 11 55 06.3 +1.9**
KSH pmax pmax
comp=Z,5.0nm,1.0s
KSH LR LR
comp=Z,320nm,14.1s
KSH LR LR
comp=Z,150nm,10.0s

KSH LR LR
comp=Z,240nm,15.8s
AAK Ala-Archa 44.85 300 LR LR 12 13 22.3
comp=Z,106nm,18.4s,baz=70,slow=35
AAK Ala-Archa 44.85 300 P **P** **11 55 09.5 -0.4**
AAK Ala-Archa 44.85 300 *d iP* **P** **11 55 10.3 +0.4**
AAK pmax pmax
comp=Z,5.0nm,1.3s
MTN Manton Dam 45.23 179 P **P** **11 55 12.3 -0.5**
MTN lAmb lAmb 11 55 15.0
comp=Z,9.4nm,0.9s
BVAR Borovoye Array 47.12 314 LR LR 12 16 32.1
comp=Z,107nm,18.9s,baz=329,slow=38
BRVK Borovoye 47.18 314 P **P** **11 55 27.5 -0.4**
BRVK lAmb lAmb 11 55 29.0
comp=Z,10nm,0.7s
BRVK Borovoye 47.18 314 *d iP* **P** **11 55 27.7 -0.2**
BRVK pmax pmax
comp=Z,13nm,1.0s
KK31 Karatay Array 47.70 301 P **P** **11 55 32.3 +0.2**
KK31 lAmb lAmb 11 55 33.6
comp=Z,16nm,0.9s
KK31 Karatay Array 47.70 301 P **P** **11 55 32.3 +0.2**
KK31 pmax pmax
comp=Z,16nm,0.9s
KKAR Karatay Array 47.70 301 P **P** **11 55 32.0 -0.1**
KKAR Karatay Array 47.70 301 P **P** **11 55 32.4 +0.3**
KKAR lAmb lAmb 11 55 33.6
comp=Z,16nm,0.9s
KKAR Karatay Array 47.70 301 P **P** **11 55 32.4 +0.3**
KKAR pmax pmax
comp=Z,16nm,0.9s
KNRA Kununurra 48.07 182 P **P** **11 55 35.3 +0.2**
KNRA lAmb lAmb 11 55 38.2
comp=Z,11nm,1.1s
GAR Garm 48.57 295 P **P** **11 55 37.7 -1.4**
GAR lAmb lAmb 11 55 40.5
comp=Z,17nm,1.3s
WB0 Warramunga Arr 52.23 176 P **P** **11 56 06.0 -0.7**
WRAB Tennant Creek 52.39 176 P **P** **11 56 08.3 +0.4**
WRAB Tennant Creek 52.39 176 *eP* **P** **11 56 09.0 +1.1**
WRAB pmax pmax
comp=Z,25nm,3.3s
WRA Warramunga Arr 52.40 176 P **P** **11 56 07.2 -0.8**
comp=Z,3.5nm,1.0s,baz=352,slow=8.0,SNR=15
comp=Z,3.5nm,1.0s
WRA Warramunga Arr 52.40 176 *i P* **P** **11 56 09.8 +1.9**
WRA pmax pmax
comp=Z,4.0nm,1.0s
WB2 Warramunga Arr 52.40 176 P **P** **11 56 07.3 -0.7**
WR0 Warramunga Arr 52.43 175 P **P** **11 56 05.6 -2.6**
WR0 lAmb lAmb 11 56 10.4
comp=Z,7.4nm,1.1s
SVE Sverdlovsk 52.64 319 *eP* **P** **11 56 10.0 +0.7**
SVE pmax pmax
comp=Z,11nm,0.8s
O16K Kokwok River B 53.12 37 P **P** **11 56 13.1 +0.2**
baz=273
ARU Arti 53.81 319 LR LR 12 19 25.8
comp=Z,68nm,20.2s,baz=319,slow=36
ARU Arti 53.81 319 *d iP* **P** **11 56 17.1 -0.9**
ARU 11 57 23.0
ARU 11 58 15.3
ARU S **S** **12 03 52.7 +0.3**
ARU SS **SKiKP** **12 07 29.1 -2.6**
ARU pmax pmax
comp=Z,11nm,0.9s
ABKAR Akbulak array 53.98 310 P **P** **11 56 19.3 0.0**
ABKAR Akbulak array 53.98 310 P **P** **11 56 19.2 -0.1**
ABKAR lAmb lAmb 11 56 22.4
comp=Z,6.7nm,0.8s
N18K Kilae Creek 54.16 36 P **P** **11 56 21.7 +1.2**
baz=274
L19K White Mountain 54.56 34 P **P** **11 56 24.3 +0.9**
L19K lAmb lAmb 11 56 27.8
comp=Z,9.6nm,1.2s
J20K Nowinta River 54.76 31 P **P** **11 56 25.1 +0.3**
J20K lAmb lAmb 11 56 26.8
comp=Z,8.9nm,1.1s
J20K Nowinta River 54.76 31 P **P** **11 56 26.0 +1.2**
baz=273
K20K Telida 54.84 32 P **P** **11 56 26.6 +1.2**
K20K lAmb lAmb 11 56 27.5
comp=Z,12nm,1.1s
K20K Telida 54.84 32 P **P** **11 56 26.3 +0.9**
baz=274,SNR=8.5
IMAR Indian Mountai 54.85 29 P **P** **11 56 25.5 0.0**
O19K Port Alsworth 54.98 36 P **P** **11 56 26.7 +0.4**
O19K lAmb lAmb 11 56 28.0
comp=Z,10nm,0.8s
O19K Port Alsworth 54.98 36 P **P** **11 56 27.0 +0.6**
baz=276
L20K Farewell, AK 54.99 33 P **P** **11 56 27.7 +1.1**
baz=274
AKTO Aktyubinsk 55.00 312 LR LR 12 22 06.1
comp=Z,103nm,18.3s,baz=81,slow=38
H21K Melozitna Rive 55.26 29 P **P** **11 56 28.7 +0.3**
baz=273
CHUM Lake Minchumin 55.59 32 P **P** **11 56 31.9 +1.2**
baz=275
I21K Tanana 55.63 30 P **P** **11 56 32.3 +1.2**
I21K lAmb lAmb 11 56 35.6
comp=Z,6.9nm,1.0s
I21K Tanana 55.63 30 P **P** **11 56 32.1 +1.1**
baz=274,SNR=7.0
RSO Redoubt South 55.72 36 P **P** **11 56 32.1 +0.1**
CAST Castle Rocks 55.73 32 P **P** **11 56 32.8 +1.0**
baz=275
PPLA Purkeypile 55.73 33 P **P** **11 56 33.2 +1.2**
baz=276
OHAK Old Harbor 55.88 40 P **P** **11 56 32.8 -0.1**
baz=278
SKT Skwentna 56.13 34 P **P** **11 56 35.3 +0.5**
baz=277
BPAW Bear Paw Mtn. 56.15 31 P **P** **11 56 34.3 -0.5**
BPAW Bear Paw Mtn. 56.15 31 P **P** **11 56 35.4 +0.6**
baz=276
MLY Manley 56.17 30 P **P** **11 56 35.7 +0.7**
MLY lAmb lAmb 11 56 36.9
comp=Z,5.0nm,0.9s
MLY Manley 56.17 30 P **P** **11 56 35.9 +0.9**
baz=275,SNR=6.0
KTH Kantishna Hill 56.24 32 P **P** **11 56 36.5 +1.0**
KTH lAmb lAmb 11 56 39.6
comp=Z,9.6nm,1.0s
TOLK Toolik Lake Re 56.34 26 P **P** **11 56 36.7 +0.6**
baz=274
TRF Thorofare Moun 56.53 32 P **P** **11 56 38.0 +0.2**
baz=277
SUA Susitna One 56.57 34 P **P** **11 56 39.1 +1.2**
SUA lAmb lAmb 11 56 39.8
comp=Z,16nm,0.8s
SUA Susitna One 56.57 34 P **P** **11 56 38.8 +0.8**
baz=278
H23K Yukon River 56.59 29 P **P** **11 56 38.9 +1.0**
H23K lAmb lAmb 11 56 40.2
comp=Z,9.1nm,0.8s
H23K Yukon River 56.59 29 P **P** **11 56 39.2 +1.3**
baz=276,SNR=12
I23K Minto, Yukon-K 56.74 30 P **P** **11 56 39.7 +0.8**
baz=276
M22K Willow 56.83 34 P **P** **11 56 40.0 +0.4**
baz=278
NEA2 Nenana 56.92 30 P **P** **11 56 40.9 +0.6**
NEA2 lAmb lAmb 11 56 44.9
comp=Z,12nm,0.9s
NEA2 Nenana 56.92 30 P **P** **11 56 41.1 +0.8**
baz=277,SNR=12
MDM Murphy Dome 57.23 30 P **P** **11 56 43.3 +0.7**
MDM lAmb lAmb 11 56 44.2
comp=Z,15nm,0.8s
H24K Noodor Dome 57.27 29 P **P** **11 56 43.7 +0.9**
H24K lAmb lAmb 11 56 44.9
comp=Z,8.6nm,1.1s
H24K Noodor Dome 57.27 29 P **P** **11 56 43.8 +1.1**
baz=277,SNR=7.0
PMR Palmer 57.32 34 P **P** **11 56 43.0 -0.1**
PMR lAmb lAmb 11 56 43.7
comp=Z,13nm,1.1s
PMR Palmer 57.32 34 P **P** **11 56 43.0 -0.1**
PMR pmax pmax
comp=Z,13nm,1.1s
PMR Palmer 57.32 34 P **P** **11 56 43.0 -0.1**
baz=279,SNR=5.5
SEW Seward 57.40 36 P **P** **11 56 43.5 -0.2**
baz=280

COLA College 57.41 30 *ceP* **P** **11 56 43.5 -0.2**
COLA pmax pmax
comp=Z,7.0nm,1.3s
POKR Poker Plat Res 57.55 30 P **P** **11 56 45.9 +1.2**
POKR lAmb lAmb 11 56 49.5
comp=Z,12nm,0.8s
POKR Poker Plat Res 57.55 30 P **P** **11 56 46.0 +1.3**
baz=278,SNR=6.8
SML Sawmill 57.66 34 P **P** **11 56 45.7 +0.1**
baz=280
KNK Knik Glacier 57.66 34 P **P** **11 56 45.8 +0.2**
baz=280
WAT6 Susitna Watana 57.80 33 P **P** **11 56 46.4 -0.3**
baz=280
IL31 57.83 30 P **P** **11 56 46.3 -0.4**
ILAR Eielson Array 57.83 30 P **P** **11 56 46.0 -0.7**
comp=Z,2.9nm,0.9s,baz=267,slow=5.6,SNR=32
comp=Z,2.9nm,0.9s
ILAR Eielson Array 57.83 30 P **P** **11 56 45.8 -0.9**
ILAR Eielson Array 57.83 30 P **P** **11 56 46.0 -0.7**
HDA Harding Lake 57.86 31 P **P** **11 56 46.6 -0.3**
baz=279,SNR=10
DHY Denali Highway 57.89 32 P **P** **11 56 47.6 +0.3**
baz=280
M23K Glacier View 57.94 34 P **P** **11 56 47.7 +0.1**
baz=280
SCM Sheep Creek Mo 58.12 34 P **P** **11 56 49.1 +0.2**
baz=280
BMAR Burnt Mountain 58.34 27 P **P** **11 56 51.2 +1.0**
KIRV Kirov 58.36 323 *ij iP* **P** **11 56 51.0 +0.5**
K24K Donnelly Dome 58.47 31 P **P** **11 56 51.0 -0.2**
baz=280
J25K Salcha River, 58.50 30 P **P** **11 56 51.9 +0.4**
baz=280
M24K Tolsona, Glenn 58.61 33 P **P** **11 56 52.9 +0.6**
baz=281
PAX Paxson 58.76 32 P **P** **11 56 53.6 +0.2**
baz=281
KLU Klutina 58.85 34 P **P** **11 56 54.2 +0.3**
baz=282
RIDG Independent Ri 58.89 31 P **P** **11 56 53.6 -0.6**
baz=281
HARP HAARP 59.02 33 P **P** **11 56 55.3 +0.2**
baz=282
EYAK Cordova Ski Ar 59.12 35 P **P** **11 56 56.0 +0.2**
baz=282
SCRK Sand Creek 59.21 31 P **P** **11 56 56.1 -0.4**
SCRK lAmb lAmb 11 57 00.1
comp=Z,10nm,0.9s
SCRK Sand Creek 59.21 31 P **P** **11 56 56.3 -0.2**
baz=282,SNR=20
J26L Joseph Creek 59.29 30 P **P** **11 56 56.4 -0.6**
baz=282,SNR=8.0
N25K Chitina, Valde 59.44 34 P **P** **11 56 58.8 +0.7**
N25K lAmb lAmb 11 57 00.5
comp=Z,7.0nm,0.7s
N25K Chitina, Valde 59.44 34 P **P** **11 56 58.6 +0.5**
baz=283,SNR=8.6
BMRM Bremner River 59.58 34 P **P** **11 56 59.8 +0.8**
BMRM Bremner River 59.58 34 P **P** **11 56 59.7 +0.7**
baz=283,SNR=8.5
L26K Log Cabin Wild 59.70 32 P **P** **11 57 00.4 +0.7**
baz=283,SNR=7.6
M26K Nabesna, AK 60.00 32 P **P** **11 57 02.6 +0.7**
M26K Nabesna, AK 60.00 32 P **P** **11 57 02.5 +0.7**
baz=284,SNR=19
K27K Chicken 60.02 31 P **P** **11 57 02.5 +0.6**
baz=284
MCARA McCarthy VSAT 60.23 34 P **P** **11 57 03.2 -0.2**
baz=284
L27K Beaver Creek, 60.36 32 P **P** **11 57 05.3 +0.9**
L27K lAmb lAmb 11 57 08.7
comp=Z,10nm,0.8s
L27K Beaver Creek, 60.36 32 P **P** **11 57 05.2 +0.9**
baz=284,SNR=22
BCAR Beaver Creek A 60.38 32 P **P** **11 57 05.1 +0.6**
M27K Edge Creek, AK 60.51 32 P **P** **11 57 06.2 +0.7**
baz=285,SNR=11
BELG Belogornoye 60.86 316 LR LR 12 25 25.9
comp=Z,100nm,18.7s,baz=289,slow=38
BELG Belogornoye 60.86 316 *eP* **P** **11 57 07.1 -0.7**
BELG pmax pmax
comp=Z,2.0nm,0.8s
BVCY Beaver Creek 60.96 32 P **P** **11 57 09.1 +0.7**
baz=285
CTG Chitna Glacier 61.12 34 P **P** **11 57 10.3 +0.6**
baz=286
DAWY Dawson 61.16 30 P **P** **11 57 10.3 +0.6**
DAWY Dawson 61.16 30 P **P** **11 57 09.9 +0.2**
baz=286
I29M Ogilvie Camp, 61.26 29 P **P** **11 57 11.5 +1.1**
I29M lAmb lAmb 11 57 11.9
comp=Z,5.3nm,0.8s
I29M Ogilvie Camp, 61.26 29 P **P** **11 57 10.9 +0.5**
baz=286,SNR=8.1
YUK3 Moose Creek 61.31 33 P **P** **11 57 11.2 +0.1**
baz=286
EPYK Eagle Plains 61.60 27 P **P** **11 57 13.2 +0.5**
EPYK Eagle Plains 61.60 27 P **P** **11 57 13.2 +0.5**
baz=287,SNR=14
YUK8 Steele Glacier 61.77 33 P **P** **11 57 15.2 +1.0**
baz=287
PINM Pinnacle 61.89 35 P **P** **11 57 15.3 +0.6**
baz=287
INK Inuvik 62.19 25 LR LR 12 24 33.5
comp=Z,52nm,21.5s,baz=241,slow=36
INK Inuvik 62.19 25 P **P** **11 57 17.0 +0.5**
INK lAmb lAmb 11 57 20.6
comp=Z,9.8nm,1.1s
INK Inuvik 62.19 25 P **P** **11 57 17.0 +0.5**
INK pmax pmax
comp=Z,10.0nm,1.1s
INK Inuvik 62.19 25 P **P** **11 57 17.0 +0.5**
baz=288,SNR=9.5
BCPM Bancas Point 62.23 35 P **P** **11 57 18.1 +1.1**
YUK4 Talbot Arm 62.27 33 P **P** **11 57 17.1 -0.3**
baz=288
PNL Peninsula 62.43 35 P **P** **11 57 18.3 0.0**
baz=288
YUK6 Outpost Mounta 62.52 33 P **P** **11 57 20.3 +1.1**
baz=288,SNR=7.1
M30M Minto, Yukon 62.72 31 P **P** **11 57 21.5 +1.2**
M30M lAmb lAmb 11 57 26.8
comp=Z,8.7nm,1.2s
M30M Minto, Yukon 62.72 31 P **P** **11 57 21.5 +1.2**
baz=289,SNR=8.5
N30M Aishikik Lake 62.94 33 P **P** **11 57 22.8 +1.0**
baz=289
HYT Haines Junctio 62.96 33 P **P** **11 57 23.4 +1.4**
HYT lAmb lAmb 11 57 27.1
comp=Z,10nm,1.0s
HYT Haines Junctio 62.96 33 P **P** **11 57 23.0 +1.0**
baz=289,SNR=11
SPB2 Spitsbergen Ar 63.02 348 P **P** **11 57 22.1 +0.1**
SPITS Spitsbergen Ar 63.02 348 LR LR 12 25 50.9
comp=Z,47nm,20.4s,baz=26,slow=37
SPITS Spitsbergen Ar 63.02 348 P **P** **11 57 21.9 -0.1**
SPITS pmax pmax
comp=Z,25nm,1.2s
FORT Forrest 63.12 183 P **P** **11 57 24.1 +1.0**
KBS Kingsbay 63.37 349 *i P* **P** **11 57 20.2 -4.0**
N31M Braeburn, Yuko 63.53 32 P **P** **11 57 26.9 +1.3**
N31M lAmb lAmb 11 57 30.6
comp=Z,8.7nm,0.8s
N31M Braeburn, Yuko 63.53 32 P **P** **11 57 27.1 +1.4**
baz=290
O30N Mendenhall 63.63 33 P **P** **11 57 26.8 +0.4**
baz=290
M31M Drury Creek, Y 63.90 31 P **P** **11 57 29.0 +1.0**
M31M lAmb lAmb 11 57 29.6
comp=Z,3.0nm,0.8s
M31M Drury Creek, Y 63.90 31 P **P** **11 57 28.7 +0.7**
baz=291
PLBC Pleasant Camp 63.95 35 P **P** **11 57 29.3 +0.9**
baz=290
WHY Whitehorse 64.23 33 P **P** **11 57 31.0 +0.7**
baz=291
KEV Kevo 64.29 338 P **P** **11 57 30.1 -0.3**
KEV Kevo 64.29 338 P **P** **11 57 30.1 -0.3**
KEV pmax pmax
comp=Z,18nm,1.1s
VRH Novokhopyorsk 64.72 316 *eP* **P** **11 57 31.8 -1.7**
VRH pmax pmax
comp=Z,10.0nm,0.5s
ARCES ARCESS Array B 64.86 338 P **P** **11 57 33.3 -0.9**
comp=Z,1.7nm,0.6s,baz=60,slow=7.2,SNR=8.8
ARCES LR LR 12 30 51.3
comp=Z,136nm,18.2s,baz=70,slow=41
comp=Z,1.7nm,0.6s
ARCES ARCESS Array B 64.86 338 P **P** **11 57 33.7 -0.5**
ARCES ARCESS Array B 64.86 338 P **P** **11 57 33.7 -0.5**
ARCES pmax pmax
comp=Z,20nm,1.4s
C36M Paulatuk 64.98 22 P **P** **11 57 35.3 +0.4**
C36M Paulatuk 64.98 22 P **P** **11 57 34.7 -0.2**
baz=296,SNR=12
STKA Stephens Creek 65.00 170 P **P** **11 57 34.9 -0.6**
comp=Z,3.4nm,1.0s,baz=316,slow=8.4,SNR=4.5
comp=Z,3.4nm,1.0s
STKA Stephens Creek 65.00 170 P **P** **11 57 35.3 -0.1**
STKA Stephens Creek 65.00 170 *ij eP* **P** **11 57 37.7 +2.3**
MMPY Sheldon Lake, 65.09 30 P **P** **11 57 36.7 +0.8**
baz=293
P32M Atlin 65.16 34 P **P** **11 57 36.9 +0.5**
baz=292
MOS Moscow 65.33 322 *eP* **P** **11 57 36.6 -0.8**
P33M Teslin, Yukon 65.34 33 P **P** **11 57 38.0 +0.4**
P33M lAmb lAmb 11 57 42.9
comp=Z,7.2nm,1.0s
P33M Teslin, Yukon 65.34 33 P **P** **11 57 38.6 +1.0**
baz=293,SNR=8.3
LPSR Galich'ya Gora 65.81 318 *eP* **P** **11 57 39.5 -1.1**
LPSR pmax pmax
comp=Z,8.0nm,0.7s
OBN Obninsk 66.12 321 *ij iP* **P** **11 57 43.1 +0.6**
OBN *e* 11 58 15.5
OBN *e* 12 00 08.2
OBN *e* PPP PPP 12 01 42.3
OBN pmax pmax
comp=Z,34nm,1.6s
OBN MLR MLR
comp=Z,62nm,18.0s
KBZ Khabaz 66.82 308 P **P** **11 57 47.3 +0.1**
comp=Z,7.8nm,0.9s,baz=97,slow=1.4,SNR=10
KBZ LR LR 12 27 48.8
comp=Z,51nm,18.8s,baz=155,slow=37
comp=Z,7.8nm,0.9s
KBZ Khabaz 66.82 308 *c iP* **P** **11 57 47.9 +0.7**
KBZ pmax pmax
comp=Z,11nm,1.0s
KIV Kislovodsk 66.87 308 P **P** **11 57 48.5 +0.9**
KIV Kislovodsk 66.87 308 *eP* **P** **11 57 47.9 +0.2**
KIV pmax pmax
comp=Z,17nm,1.0s
KIV MLR MLR
comp=Z,43nm,17.0s
FINES FINESS Array B 68.37 330 P **P** **11 57 55.9 -0.8**
comp=Z,7.0nm,0.8s,baz=76,slow=5.5,SNR=35
FINES LR LR 12 31 19.8
comp=Z,104nm,18.1s,baz=46,slow=39
comp=Z,7.0nm,0.8s
FINES FINESS Array B 68.37 330 *i P* **P** **11 57 55.5 -1.2**
FINES pmax pmax
comp=Z,7.0nm,0.8s
DAG Danmarks Havn 69.19 353 *i P* **P** **11 58 00.0 -1.6**
DAG lAmb lAmb 11 58 01.4
comp=Z,7.1nm,0.9s
NACGM Naroch 71.26 324 *ij eP* P 11 58 08.4 -6.2
baz=60
DBG Daneborg 71.59 352 *i P* **P** **11 58 13.4 -2.9**
DBG lAmb lAmb 11 58 28.9
comp=Z,42nm,2.2s
AKASG Malin Array Be 72.07 319 P **P** **11 58 18.9 -0.6**
comp=Z,3.1nm,0.5s,baz=52,slow=6.4,SNR=18
AKASG LR LR 12 31 30.4
comp=Z,54nm,18.4s,baz=62,slow=37
comp=Z,3.1nm,0.5s
AKASG Malin Array Be 72.07 319 *i P* **P** **11 58 18.7 -0.8**
AKASG pmax pmax
comp=Z,4.0nm,0.5s
AKBB Malin Array Si 72.07 319 *c iP* **P** **11 58 19.5 0.0**
AKBB pmax pmax
comp=Z,9.0nm,0.7s
JMIC Jan Mayen 72.67 347 LR LR 12 32 14.5
comp=Z,36nm,18.8s,baz=264,slow=37
RAYN Ar Rayn 73.83 288 P **P** **11 58 29.9 -0.7**
RAYN lAmb lAmb 11 58 31.7
comp=Z,7.0nm,1.1s
RAYN Ar Rayn 73.83 288 P **P** **11 58 29.9 -0.7**
RAYN pmax pmax
comp=Z,7.0nm,1.1s
HFS Hagfors 74.14 332 LR LR 12 35 17.4
comp=Z,72nm,18.7s,baz=46,slow=39
NC405 NORSAR Array S 74.28 334 P **P** **11 58 31.6 -0.8**
NB2 NORSAR Subarra 74.51 334 P **P** **11 58 32.5 -1.4**
comp=Z,11nm,1.0s,baz=50,slow=6.2
NOA NORSAR Array B 74.51 334 P **P** **11 58 32.6 -1.2**
comp=Z,4.9nm,0.8s,baz=49,slow=5.8,SNR=14
NOA LR LR 12 35 45.8
comp=Z,48nm,18.3s,baz=45,slow=39
comp=Z,4.9nm,0.8s
KLNR Kaliningrad 74.63 326 *ij eP* **P** **11 58 35.9 +1.4**
KLNR pmax pmax
comp=Z,345nm,1.8s
UPNV Upernavik 74.76 2 *i P* **P** **11 58 35.6 +0.6**
UPNV lAmb lAmb 11 58 38.1
comp=Z,6.5nm,0.8s
SUMG Summit 74.80 357 P **P** **11 58 36.0 +0.2**
SUMG lAmb lAmb 11 58 36.8
comp=Z,11nm,0.9s
SUMG Summit 74.80 357 P **P** **11 58 36.0 +0.2**
SUMG pmax pmax
comp=Z,11nm,0.9s
SUMG Summit 74.80 357 *i P* **P** **11 58 35.8 0.0**
SUMG lAmb lAmb 11 58 36.3
comp=Z,11nm,0.8s
BR131 Keskin Array S 74.80 308 P **P** **11 58 36.1 0.0**
BR131 lAmb lAmb 11 58 37.0
comp=Z,10nm,0.9s
BR131 Keskin Array S 74.80 308 *deP* **P** **11 58 35.7 -0.4**
BRTR Keskin Array B 74.80 308 P **P** **11 58 36.0 -0.1**
comp=Z,4.8nm,0.8s,baz=93,slow=5.4,SNR=27
comp=Z,4.8nm,0.8s
BRTR Keskin Array B 74.80 308 P **P** **11 58 35.6 -0.4**
BRTR Keskin Array B 74.80 308 *i P* **P** **11 58 36.2 +0.1**
BRTR pmax pmax
comp=Z,5.0nm,0.8s
BUR08 Bucovina Ar. S 75.91 318 P **P** **11 58 42.6 +0.3**
BUR08 lAmb lAmb 11 58 43.5
comp=Z,7.5nm,1.1s
BURAR Bucovina Array 75.92 318 P **P** **11 58 42.1 -0.2**
BURAR lAmb lAmb 11 58 44.3
comp=Z,6.8nm,1.0s
VRI Vrincioaia 75.99 316 P **P** **11 58 43.4 +0.8**
VRI pmax pmax
comp=Z,11nm,1.4s
KWP Kalwaria Pacla 76.19 320 *eP* **P** **11 58 45.0 +1.3**
KWP Kalwaria Pacla 76.19 320 P **P** **11 58 44.1 +0.4**
KWP Kalwaria Pacla 76.19 320 P **P** **11 58 44.1 +0.4**
KWP pmax pmax
comp=Z,202nm,0.9s
MLR Muntele Rosu 76.66 316 LR LR 12 35 57.3
comp=Z,74nm,18.9s,baz=57,slow=38
KOLS Kolonicke sedl 76.82 320 *eP* **P** **11 58 48.0 +0.7**
KOLS Kolonicke sedl 76.82 320 *eP* **P** **11 58 48.0 +0.7**
BORA Eskisehir 76.83 309 P **P** **11 58 47.2 -0.4**
BORA lAmb lAmb 11 58 48.1
comp=Z,8.2nm,0.8s
OJC Ojcow 77.39 322 *eP* **P** **11 58 50.2 -0.2**
OJC Ojcow 77.39 322 P **P** **11 58 50.0 -0.4**
OJC Ojcow 77.39 322 P **P** **11 58 50.0 -0.4**
OJC pmax pmax
comp=Z,23nm,1.0s
NIE Niedzica 77.60 321 *eP* **P** **11 58 52.3 +0.6**
B08A Colville Reser 78.03 40 P **P** **11 58 53.1 -1.0**
LANS Liptovska Anna 78.19 321 *eP* **P** **11 58 56.8 +1.8**
LANS pmax pmax
comp=Z,7.0nm,1.3s
LANS Liptovska Anna 78.19 321 *eP* **P** **11 58 56.8 +1.8**
ICESG Greenland Ices 78.32 356 *i P* **P** **11 58 54.9 -0.8**
ICESG lAmb lAmb 11 58 59.3
comp=Z,28nm,1.3s
PSZ Piszkesteto 78.70 320 P **P** **11 58 57.4 -0.4**
PSZ lAmb lAmb 11 58 59.3
comp=Z,11nm,1.0s
PSZ Piszkesteto 78.70 320 P **P** **11 58 57.4 -0.4**
PSZ pmax pmax
comp=Z,11nm,1.0s
KSP Ksiaz 78.79 324 *eP* **P** **11 58 58.3 +0.2**
MORC Moravsky Berou 78.82 323 P **P** **11 58 58.3 -0.1**
MORC lAmb lAmb 11 58 59.7
comp=Z,11nm,1.1s
MORC Moravsky Berou 78.82 323 P **P** **11 58 58.3 -0.1**

MORC					pmax	pmax		
	comp=Z,11nm,1.1s							
MORC	**Moravsky Berou**	**78.82**	**323**	*eP*	**P**	**11 58 58.8**	**+0.4**
VYHS	**Vyhne**	**78.92**	**321**	*eP*	**P**	**11 58 59.7**	**+0.7**
VYHS					pmax	pmax		
	comp=Z,6.0nm,1.0s							
VYHS	**Vyhne**	**78.92**	**321**	*eP*	**P**	**11 58 59.7**	**+0.7**
C09A	**Chrisman Ranch**	**78.93**	**40**	P	**P**	**11 58 58.9**	**-0.1**
C09A					lAmb	lAmb	11 59 02.8	
	comp=Z,7.0nm,1.0s							
KRLC	**Kraliky**	**79.02**	**323**	*eP*	**P**	**11 59 00.2**	**+0.7**
KRLC	**Kraliky**	**79.02**	**323**	*eP*	**P**	**11 59 00.2**	**+0.7**
CHVC	**Chvalec**	**79.07**	**324**	*eP*	**P**	**11 58 59.6**	**-0.1**
DPC	**Dobruska-Polom**	**79.08**	**324**	*eP*	**P**	**11 59 00.1**	**+0.2**
DPC	**Dobruska-Polom**	**79.08**	**324**	*eP*	**P**	**11 59 00.1**	**+0.2**
I05D	**Terrebonne, OR**	**79.24**	**44**	P	**P**	**11 59 01.0**	**+0.2**
	baz=305							
NEW	**Newport**	**79.27**	**39**	P	**P**	**11 59 01.1**	**+0.1**
	baz=308							
JAVC	**Velka Javorina**	**79.31**	**322**	*eP*	**P**	**11 59 02.7**	**+1.5**
J04D	**Umpqua Nationa**	**79.41**	**45**	P	**P**	**11 59 02.7**	**+0.7**
	baz=305							
VRAC	**Vranov**	**79.59**	**323**	LR	LR	12 35 17.0		
	comp=Z,55nm,18.7s,baz=54,slow=36							
VRAC	**Vranov**	**79.59**	**323**	*eP*	**P**	**11 59 03.4**	**+0.8**
SMOL	**Smolenice**	**79.65**	**322**	*eP*	**P**	**11 59 03.9**	**+1.0**
SMOL					pmax	pmax		
	comp=Z,7.0nm,1.0s							
SMOL	**Smolenice**	**79.65**	**322**	*eP*	**P**	**11 59 03.9**	**+1.0**
PINE	**Pine Mountain**	**79.79**	**44**	P	**P**	**11 59 04.6**	**+0.5**
MODS	**Modra-Piesok**	**79.82**	**322**	*eP*	**P**	**11 59 04.7**	**+0.8**
MODS					pmax	pmax		
	comp=Z,32nm,1.2s							
MODS	**Modra-Piesok**	**79.82**	**322**	*eP*	**P**	**11 59 04.7**	**+0.8**
KRUC	**Moravsky**	**79.85**	**322**	*eP*	**P**	**11 59 04.4**	**+0.4**
L04D	**Klamath Falls**	**79.88**	**46**	P	**P**	**11 59 04.8**	**+0.3**
	baz=305							
J05D	**Fort Rock, OR**	**79.91**	**45**	P	**P**	**11 59 05.0**	**+0.3**
	baz=306							
YBH	**Yreka Blue Hor**	**79.91**	**47**	P	**P**	**11 59 04.7**	**+0.1**
YBH	**Yreka Blue Hor**	**79.91**	**47**	P	**P**	**11 59 04.7**	**+0.1**
YBH					pmax	pmax		
	comp=Z,3.0nm,1.1s							
BRG	**Berggiesshubel**	**79.92**	**325**	*eP*	**P**	**11 59 04.5**	**+0.2**
BRG					Amp		11 59 05.4	
	comp=Z,6.2nm,1.0s							
BRG					Amp		12 38 24.0	
	comp=N,0.2nm,21.4s							
BRG					Amp		12 38 26.0	
	comp=Z,0.2nm,15.6s							
BRG					Amp		12 38 37.0	
	comp=E,0.1nm,13.7s							
BRG	**Berggiesshubel**	**79.92**	**325**	*eP*	**P**	**11 59 04.5**	**+0.2**
BRG					pmax	pmax		
	comp=Z,6.0nm,1.0s							
BRG					MLR	MLR		
	comp=N,150nm,21.4s							
BRG					MLR	MLR		
	comp=Z,170nm,15.6s							
BRG					MLR	MLR		
	comp=E,140nm,13.7s							
CLL	**Collm**	**80.09**	**326**	P	**P**	**11 59 05.1**	**-0.2**
CLL					lAmb	lAmb	11 59 06.0	
	comp=Z,18nm,0.9s							
CLL	**Collm**	**80.09**	**326**	*i* P	**P**	**11 59 05.1**	**-0.2**
CLL					pmax	pmax		
	comp=Z,23nm,1.0s							
CLL	**Collm**	**80.09**	**326**	*i* P	**P**	**11 59 05.1**	**-0.2**
	comp=Z,23nm,1.0s							
CLL				*i* pP	**pP**	**11 59 07.9**	**-1.1**	
	comp=Z,15nm,1.0s							
CLL				*i* PcP	**PcP**	**11 59 14.0**	**+1.4**	
BORG	**Borgarnes**	**80.48**	**348**	LR	LR	12 35 41.8		
	comp=Z,39nm,18.8s,baz=346,slow=36							
SFJD	**Kangerlussuaq**	**80.67**	**1**	LR	LR	12 34 43.0		
	comp=Z,71nm,19.7s,baz=357,slow=36							
RONA	**Rosalia, Austr**	**80.75**	**321**	*i* P	**P**	**11 59 09.5**	**+0.6**
	comp=Z,7.4nm,1.0s							
CONA	**Conrad Observa**	**80.84**	**322**	*i* P	**P**	**11 59 10.1**	**+0.7**
	comp=Z,13nm,1.1s,SNR=8.5							
CKRC	**Cesky Krumlov**	**81.06**	**323**	*eP*	**P**	**11 59 10.7**	**+0.1**
DY2G	**Dye2**	**81.18**	**359**	*i* P	P	11 59 06.3	-4.7	
DY2G					lAmb	lAmb	11 59 10.3	
	comp=Z,5.1nm,0.7s							
KHC	**Kasperske Hory**	**81.23**	**324**	*i* P	**P**	**11 59 11.6**	**+0.1**
KHC					pmax	pmax		
	comp=Z,15nm,1.0s							
KHC	**Kasperske Hory**	**81.23**	**324**	*eP*	**P**	**11 59 10.8**	**-0.7**
KHC					AMS	AMS	12 37 20.0	
	comp=Z,100nm,20.3s							
GERES	**GERESS Array B**	**81.36**	**323**	P	**P**	**11 59 11.8**	**-0.4**
	comp=Z,2.3nm,0.8s,baz=47,slow=6.0,SNR=16							
	comp=Z,2.3nm,0.8s							
GERES	**GERESS Array B**	**81.36**	**323**	P	**P**	**11 59 12.2**	**0.0**
GERES	**GERESS Array B**	**81.36**	**323**	P	**P**	**11 59 12.2**	**0.0**
GRA1	**Grafenberg Arr**	**82.02**	**325**	P	**P**	**11 59 16.0**	**+0.4**
GRF	**Grafenberg Arr**	**82.02**	**325**	P	**P**	**11 59 16.0**	**+0.4**
GRF					pmax	pmax		
	comp=Z,27nm,1.1s							
GRFO	**Grafenberg**	**82.02**	**325**	P	**P**	**11 59 15.6**	**0.0**
GRFO	**Grafenberg**	**82.02**	**325**	P	**P**	**11 59 15.6**	**0.0**
GRFO					pmax	pmax		
	comp=Z,32nm,1.2s							
SOKA	**Soboth**	**82.07**	**321**	*i* P	**P**	**11 59 16.1**	**+0.1**
	comp=Z,8.6nm,0.8s,SNR=7.5							
BIOA	**Bad Ischl, Aus**	**82.14**	**323**	*i* P	**P**	**11 59 16.7**	**+0.4**
	comp=Z,10nm,1.1s							
OBKA	**Obir**	**82.43**	**321**	*i* P	**P**	**11 59 17.1**	**-0.8**
	comp=Z,12nm,1.9s							
FRB	**Frobisher Bay**	**82.74**	**8**	LR	LR	12 37 55.3		
	comp=Z,70nm,19.5s,baz=5.0,slow=37							
MYKA	**Terra Mystica**	**82.83**	**322**	*eP*	**P**	**11 59 19.3**	**-0.6**
	comp=Z,4.6nm,0.6s							
IDI	**Anoyia**	**83.04**	**308**	LR	LR	12 41 10.8		
	comp=Z,22nm,20.9s,baz=78,slow=39							
ABTA	**Abfaltersbach**	**83.34**	**322**	*eP*	**P**	**11 59 21.7**	**-0.9**
	comp=Z,12nm,1.2s,SNR=6.3							
WATA	**Walderalm**	**83.42**	**323**	*eP*	**P**	**11 59 22.9**	**-0.3**
	comp=Z,9.1nm,1.1s							
WTTA	**Wattenberg**	**83.44**	**323**	*i* P	**P**	**11 59 22.9**	**-0.3**
	comp=Z,8.8nm,1.2s							
CMB	**Columbia Colle**	**83.52**	**49**	P	**P**	**11 59 23.4**	**-0.3**
CMB	**Columbia Colle**	**83.52**	**49**	P	**P**	**11 59 23.4**	**-0.3**
CMB					pmax	pmax		
	comp=Z,4.0nm,1.2s							
STAL	**STALIGIAL**	**83.56**	**322**	P	**P**	**11 59 22.2**	**-1.5**
STU	**Stuttgart**	**83.62**	**325**	P	**P**	**11 59 23.2**	**-0.7**
STU	**Stuttgart**	**83.62**	**325**	P	**P**	**11 59 23.2**	**-0.7**
STU					pmax	pmax		
	comp=Z,18nm,0.9s							
MOTA	**Moosalm**	**83.65**	**323**	*i* P	**P**	**11 59 23.9**	**-0.4**
	comp=Z,6.3nm,0.7s							
HLID	**Hailey**	**83.68**	**42**	P	**P**	**11 59 24.9**	**+0.3**
	baz=310							
SQTA	**Sankt Quirin**	**83.69**	**323**	*eP*	**P**	**11 59 23.7**	**-0.7**
	comp=Z,7.6nm,0.8s							
RETA	**Reutte**	**83.73**	**324**	*eP*	**P**	**11 59 24.5**	**-0.1**
	comp=Z,8.8nm,0.9s							
BTNL	**Ternell**	**83.76**	**328**	*dP*	**P**	**11 59 24.0**	**-0.6**
MEM	**Membach**	**83.80**	**328**	*dP*	**P**	**11 59 24.2**	**-0.5**
	comp=Z,12nm,0.9s							
BOZ	**Bozeman (W)**	**83.87**	**39**	P	**P**	**11 59 25.4**	**-0.1**
BOZ	**Bozeman (W)**	**83.87**	**39**	P	**P**	**11 59 25.4**	**-0.1**
BOZ					pmax	pmax		
	comp=Z,2.0nm,1.0s							
BOZ	**Bozeman (W)**	**83.87**	**39**	P	**P**	**11 59 25.1**	**-0.4**
	baz=312							
FETA	**Feichten**	**84.06**	**323**	*i* P	**P**	**11 59 26.2**	**-0.2**
	comp=Z,6.6nm,0.9s							
CTI	**Castel Tesino**	**84.25**	**322**	P	**P**	**11 59 26.2**	**-1.1**
CTI					lAmb	lAmb	11 59 27.1	
	comp=Z,11nm,1.0s							
CTI	**Castel Tesino**	**84.25**	**322**	P	**P**	**11 59 26.2**	**-1.1**
CTI					pmax	pmax		
	comp=Z,11nm,1.0s							
DAVA	**Damuels**	**84.30**	**324**	*eP*	**P**	**11 59 27.4**	**-0.2**
	comp=Z,25nm,1.0s,SNR=8.6							
KVN	**Kaiserville**	**84.33**	**47**	P	**P**	**11 59 28.1**	**+0.2**
KVN					lAmb	lAmb	11 59 29.2	
	comp=Z,5.5nm,0.9s							
KVN	**Kaiserville**	**84.33**	**47**	P	**P**	**11 59 28.2**	**+0.2**
KVN					pmax	pmax		
	comp=Z,6.0nm,0.9s							
BFO	**Black Forest**	**84.34**	**325**	P	**P**	**11 59 27.4**	**-0.2**
BFO	**Black Forest**	**84.34**	**325**	P	**P**	**11 59 27.4**	**-0.2**
BFO					pmax	pmax		
	comp=Z,19nm,0.9s							
WLF	**Walferdange**	**84.41**	**327**	P	**P**	**11 59 27.8**	**-0.1**
WLF	**Walferdange**	**84.41**	**327**	P	**P**	**11 59 27.8**	**-0.1**
WLF					pmax	pmax		
	comp=Z,24nm,1.0s							
WLF	**Walferdange**	**84.41**	**327**	*dP*	**P**	**11 59 28.2**	**+0.3**
	comp=Z,15nm,1.0s							
RCHB	**Rochefort**	**84.47**	**328**	*dP*	**P**	**11 59 27.6**	**-0.6**
	comp=Z,8.9nm,0.9s							
BMRD	**Maredsous**	**84.57**	**329**	*dP*	**P**	**11 59 28.1**	**-0.6**
	comp=Z,10nm,0.9s							
NVAR	**Mina Array Bea**	**84.59**	**47**	P	**P**	**11 59 29.7**	**+0.4**
	comp=Z,2.0nm,0.7s,baz=301,slow=5.0,SNR=18							
	comp=Z,2.0nm,0.7s							
NVAR	**Mina Array Bea**	**84.59**	**47**	P	**P**	**11 59 29.2**	**-0.1**
DAVOX	**Davos/Dischmat**	**84.65**	**324**	LR	LR	12 39 00.5		
	comp=Z,68nm,19.2s,baz=300,slow=37							
TEOL	**Teolo**	**84.70**	**322**	P	**P**	**11 59 28.7**	**-0.8**
ECH	**Echery**	**84.97**	**326**	P	**P**	**11 59 29.6**	**-1.2**
ECH					lAmb	lAmb	11 59 31.2	
	comp=Z,11nm,1.0s							
ECH	**Echery**	**84.97**	**326**	P	**P**	**11 59 29.6**	**-1.2**
ECH					pmax	pmax		
	comp=Z,11nm,1.0s							
TPH	**Tonopah**	**85.47**	**47**	P	**P**	**11 59 33.7**	**-0.1**
TPH	**Tonopah**	**85.47**	**47**	P	**P**	**11 59 33.7**	**-0.1**
TPH					pmax	pmax		
	comp=Z,25nm,0.9s							
NRCA	**Norcia**	**85.61**	**319**	P	**P**	**11 59 34.9**	**+0.7**
R11A	**Troy Canyon, C**	**86.31**	**46**	P	**P**	**11 59 37.7**	**-0.2**
	baz=310							
BW06	**Boulder Array**	**86.88**	**40**	P	**P**	**11 59 40.5**	**-0.2**
BW06	**Boulder Array**	**86.88**	**40**	P	**P**	**11 59 40.3**	**-0.4**
	baz=313							
PD31	**Pinedale Array**	**86.88**	**40**	P	**P**	**11 59 40.4**	**-0.2**
PDAR	**Pinedale Array**	**86.88**	**40**	P	**P**	**11 59 40.3**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=1.1,slow=0.7,SNR=15							
	comp=Z,1.6nm,0.8s							
PDAR	**Pinedale Array**	**86.88**	**40**	P	**P**	**11 59 40.0**	**-0.7**
ULM	**Lac du Bonnet**	**87.77**	**28**	P	**P**	**11 59 43.8**	**-0.8**
	comp=Z,11nm,0.9s,baz=313,slow=4.3,SNR=11							
	comp=Z,11nm,0.9s							
ULM	**Lac du Bonnet**	**87.77**	**28**	P	**P**	**11 59 43.6**	**-0.8**
P17A	**Butcher Ranch,**	**88.44**	**43**	P	**P**	**11 59 48.3**	**+0.1**
P17A					lAmb	lAmb	11 59 52.0	
	comp=Z,4.8nm,0.9s							
P18A	**Preston Nutter**	**88.62**	**42**	P	**P**	**11 59 49.1**	**0.0**
P18A					lAmb	lAmb	11 59 50.6	
	comp=Z,6.4nm,0.9s							
B35A	**Bob, Littlefor**	**90.13**	**28**	P	**P**	**11 59 55.5**	**-0.1**
B35A					lAmb	lAmb	11 59 59.0	
	comp=Z,10nm,0.8s							
EYMN	**Ely**	**91.33**	**27**	P	**P**	**12 00 01.0**	**-0.3**
EYMN	**Ely**	**91.33**	**27**	P	**P**	**12 00 01.1**	**-0.2**
	baz=326							
SCHQ	**Schefferville**	**91.59**	**10**	LR	LR	12 43 45.2		
	comp=Z,56nm,18.3s,baz=20,slow=37							
S22A	**4UR Ranch, Cre**	**91.85**	**42**	P	**P**	**12 00 05.0**	**+0.7**
	baz=315							
ANMO	**Albuquerque**	**94.03**	**44**	*iP*	**P**	**12 00 15.1**	**+0.9**
ESDC	**Sonseca Array**	**96.67**	**326**	LR	LR	12 49 20.4		
	comp=Z,52nm,18.3s,baz=352,slow=39							
TXAR	**Lajitas Array**	**99.67**	**46**	P	**Pdif**	**12 00 39.4**	**-0.3**	
	comp=Z,0.5nm,0.9s,baz=316,slow=3.5,SNR=4.1							
	comp=Z,0.5nm,0.9s							
SIV	**San Ignacio**	**160.31**	**35**	PKPab	**PKPab**	**12 07 34.2**	**-2.0**	
	comp=Z,1.7nm,0.8s,baz=286,slow=5.4,SNR=5.9							

*IDC **18** 11:56:07.0±0.9, 17°.15S×167°.71E, h0km, mb4.0/10, mbtmp4.0/11, ML4.1/1, MS3.6/2, Error ellipse: s-maj=30.4km s-min=21.7km az=117.0*
*NEIC **18** 11:56:08.7±1.6, 17°.2S±0°.1×167°.6E±0°.1, h10km±7km, mb4.5/10, Error ellipse: s-maj=20.9km s-min=17.1km az=209.0*
*NOU **18** 11:56:09.3, 17°.14S×167°.56E, h2km, MLv5.3/7, Vanuatu Islands*

ISC 18 11:56:08.6±0.7, 17°.28S±0°.08×167°.60E±0°.09, h10km, n29, σ1§13/28, mb4.1/13, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**0.72**	**129**	P	**Pn**	**11 56 25.6**	**+0.8**
MARNC	**Mare, Loyalty**	**4.20**	**175**	Pn	**Pn**	**11 57 12.7**	**-0.1**
KOUNC	**Koumac, New Ca**	**4.52**	**223**		**Pn**	**11 57 17.6**	**+0.5**
DZM	**Mont Dzumac**	**4.89**	**193**	Pn	**Pn**	**11 57 22.8**	**+0.4**
	6.6nm,0.3s,baz=89,slow=6.6,SNR=103						
DZM				Sn	**Sn**	**11 58 16.0**	**-3.1**
	3.1nm,0.3s,baz=319,slow=19,SNR=1.9						
	19nm,0.3s						
PINNC	**Pines Island,**	**5.31**	**182**	Pn	**Pn**	**11 57 29.1**	**+1.1**
CTA	**Charters Tower**	**20.41**	**259**	P	Pn	12 00 48.8	+0.6
	4.3nm,0.7s,baz=84,slow=12,SNR=5.6						
CTA				LR	LR	12 07 52.1	
	comp=Z,136nm,18.2s,baz=77,slow=34						
	4.3nm,0.7s						
CTAO	**Charters Tower**	**20.41**	**259**	P	**P**	**12 00 46.8**	**+0.7**
CTAO					lAmb	lAmb	12 00 54.7	
	comp=Z,18nm,1.4s						
URZ	**Urewera**	**22.51**	**160**	LR	LR	12 08 06.1	
	comp=Z,188nm,18.1s,baz=31,slow=32						
STKA	**Stephens Creek**	**27.66**	**233**	P	**P**	**12 01 58.0**	**+1.2**
	comp=Z,3.0nm,0.8s,baz=0.3,slow=5.3,SNR=6.1						
	comp=Z,3.0nm,0.8s						
STKA	**Stephens Creek**	**27.66**	**233**	P	**P**	**12 01 57.7**	**+0.9**
WB0	**Warramunga Arr**	**31.56**	**260**	P	**P**	**12 02 30.7**	**-0.8**
WB0					lAmb	lAmb	12 02 33.1	
	comp=Z,12nm,1.4s						
WB2	**Warramunga Arr**	**31.59**	**260**	P	**P**	**12 02 31.9**	**+0.1**
WB2					lAmb	lAmb	12 02 49.0	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**31.61**	**260**	P	**P**	**12 02 31.2**	**-0.7**
	comp=Z,1.2nm,1.0s,baz=89,slow=8.6,SNR=6.7						
	comp=Z,1.2nm,1.0s						
AS31	**Alice Springs**	**32.15**	**253**	P	**P**	**12 02 35.9**	**-0.7**
ASAR	**Alice Springs**	**32.15**	**253**	P	**P**	**12 02 36.4**	**-0.3**
KNRA	**Kununurra**	**37.24**	**267**	P	**P**	**12 03 19.5**	**-1.2**
KNRA					lAmb	lAmb	12 03 29.0	
	comp=Z,7.6nm,0.9s						
VNDA	**Vanda**	**60.34**	**181**	P	**P**	**12 06 18.3**	**+1.0**
VNDA					lAmb	lAmb	12 06 30.7	
	comp=Z,1.6nm,0.8s						
PETK	**Petropavlovsk-**	**70.61**	**354**	P	**P**	**12 07 23.7**	**-0.2**
	comp=Z,1.2nm,0.8s,baz=116,slow=10,SNR=3.5						
	comp=Z,1.2nm,0.8s						
QSPA	**South Pole Qui**	**72.77**	**180**	P	**P**	**12 07 38.6**	**+1.6**
	comp=Z,2.2nm,0.7s,baz=82,slow=1.6,SNR=5.8						
	comp=Z,2.2nm,0.7s						
QSPA	**South Pole Qui**	**72.77**	**180**	P	**P**	**12 07 37.9**	**+0.8**
QSPA					lAmb	lAmb	12 07 58.6	
	comp=Z,11nm,1.3s						
CMAR	**Chiang Mai Arr**	**76.28**	**294**	P	**P**	**12 07 59.7**	**+1.6**
	comp=Z,0.5nm,0.3s,baz=104,slow=3.8,SNR=1.7						
	comp=Z,0.5nm,0.3s						
CMAR	**Chiang Mai Arr**	**76.28**	**294**	P	**P**	**12 07 58.4**	**+0.3**
BELA	**Belgrano 2**	**84.17**	**175**	P	**P**	**12 08 39.7**	**+0.1**
SONM	**Songino Array**	**84.72**	**324**	P	**P**	**12 08 42.8**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=130,slow=4.6,SNR=3.6						
	comp=Z,0.4nm,0.3s						
NVAR	**Mina Array Bea**	**88.69**	**49**	P	**P**	**12 09 02.4**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=229,slow=8.1,SNR=4.4						
	comp=Z,0.4nm,0.7s						
NVAR	**Mina Array Bea**	**88.69**	**49**	P	**P**	**12 09 01.6**	**-1.1**
ILAR	**Eielson Array**	**88.84**	**18**	P	**P**	**12 09 00.4**	**-2.1**
	comp=Z,0.2nm,0.6s,baz=248,slow=4.7,SNR=5.7						
	comp=Z,0.2nm,0.6s						
SNAA	**Sanae**	**91.04**	**183**	P	**P**	**12 09 13.5**	**+0.6**
	comp=Z,2.2nm,0.9s,baz=146,slow=2.7,SNR=5.6						
	comp=Z,2.2nm,0.9s						
SNAA	**Sanae**	**91.04**	**183**	P	**P**	**12 09 12.1**	**-0.8**

IDC 18 12:03:28.1±2.1, 3°.76N×126°.25E, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=205.4km s-min=27.7km az=64.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.85**	**162**	P	P	12 08 52.3	-0.2
	1.0nm,0.8s,baz=341,slow=10,SNR=12						
	1.0nm,0.8s						
STKA	**Stephens Creek**	**38.32**	**159**	P	P	12 10 51.0	+0.2
	2.1nm,0.9s,baz=332,slow=15,SNR=2.8						
	2.1nm,0.9s						
MKAR	**Makanchi Array**	**57.27**	**325**	P	P	12 13 17.6	-0.1
	0.2nm,0.4s,baz=139,slow=6.6,SNR=4.8						
	0.2nm,0.4s						

*IDC **18** 12:17:22.9±0.9, 6°.57S×143°.52E, h0km, mb4.2/11, mbtmp4.2/13, ML3.6/1, MS3.1/6, Error ellipse: s-maj=25.8km s-min=20.1km az=88.0*
*NEIC **18** 12:17:27.4±1.3, 6°.6S±0°.1×143°.5E±0°.1, h28km±5km, mb4.3/19, Error ellipse: s-maj=16.7km s-min=14.6km az=68.0*

ISC 18 12:17:27.8±0.5, 6°.63S±0°.07×143°.49E±0°.09, h35km, n59, σ1§10/55, mb4.3/18, MS3.0/5, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.56**	**127**	Pn	**Pn**	**12 18 34.4**	**+0.1**
	15nm,0.6s,baz=23,slow=5.7,SNR=9.3						
PMG				Sn	**Sn**	**12 19 23.6**	**-2.6**
	6.2nm,0.3s,baz=40,slow=13,SNR=4.0						
PMG	**Port Moresby**	**4.56**	**127**		**Pn**	**12 18 36.4**	**+2.0**
FAKI	**Fak Fak**	**11.79**	**288**	P	Pn	12 20 19.1	+5.4
KDU	**Kakadu**	**12.41**	**240**	P	**Pn**	**12 20 21.1**	**-1.1**
CTA	**Charters Tower**	**13.65**	**169**	LR	LR	12 25 51.2	
	comp=Z,192nm,20.7s,baz=56,slow=37						
MTN	**Manton Dam**	**13.65**	**242**	Pn	**Pn**	**12 20 38.1**	**-1.0**
MTN	**Manton Dam**	**13.65**	**242**	P	**Pn**	**12 20 38.9**	**-0.2**
QIS	**Mount Isa**	**14.35**	**195**	P	P	**12 20 52.4**	**-2.8**
WB0	**Warramunga Arr**	**15.77**	**213**	Pn	**Pn**	**12 21 07.5**	**+0.1**
WR0	**Warramunga Arr**	**15.85**	**212**	Pn	**Pn**	**12 21 07.5**	**-0.9**
WR0				lAmb	lAmb	12 21 29.1	
	comp=Z,8.2nm,0.7s						
WRAB	**Tennant Creek**	**15.93**	**213**		**Pn**	**12 21 08.9**	**-0.5**
WRAB	**Tennant Creek**	**15.93**	**213**	P	**Pn**	**12 21 08.3**	**-1.1**
WB2	**Warramunga Arr**	**15.94**	**213**		**Pn**	**12 21 09.1**	**-0.4**
WRA	**Warramunga Arr**	**15.94**	**213**	Pn	**Pn**	**12 21 08.2**	**-1.5**
	comp=Z,0.3nm,0.3s,baz=29,slow=14,SNR=19						
WRA				Lg	Lg	12 25 54.1	
	comp=Z,0.4nm,0.3s,baz=44,slow=24,SNR=5.9						
	comp=Z,1.7nm,0.6s						
WRA	**Warramunga Arr**	**15.94**	**213**		**Pn**	**12 21 08.5**	**-1.1**
KNRA	**Kununurra**	**17.01**	**237**	Pn	**Pn**	**12 21 22.2**	**-0.9**
KNRA					lAmb	lAmb	12 21 39.9	
	comp=Z,15nm,0.7s						
KNRA	**Kununurra**	**17.01**	**237**	P	**Pn**	**12 21 22.2**	**-0.9**
AS31	**Alice Springs**	**19.28**	**208**		**Pn**	**12 21 53.0**	**+2.0**
AS31					lAmb	lAmb	12 21 54.2	
	comp=Z,6.0nm,0.7s						
ASAR	**Alice Springs**	**19.29**	**208**		**Pn**	**12 21 53.0**	**+2.0**
QLP	**Quilpie**	**19.86**	**178**	P	**Pn**	**12 21 58.7**	**+1.0**
GUMO	**Guam**	**20.13**	**4**	LR	LR	12 30 05.0	
	comp=Z,67nm,18.3s,baz=120,slow=38						
OOD	**Oodnadatta**	**22.32**	**198**	P	**P**	**12 22 25.1**	**+2.7**
DAV	**Davao City (W)**	**22.46**	**307**	LR	LR	12 30 14.3	
	comp=Z,26nm,21.6s,baz=144,slow=34						
WRKA	**Warakurna**	**23.38**	**217**	P	**P**	**12 22 34.1**	**+0.5**
KAPI	**Kappang**	**23.67**	**273**	P	**P**	**12 22 35.4**	**-1.0**
	comp=Z,5.4nm,0.4s,baz=70,slow=14,SNR=3.6						
KAPI				LR	LR	12 33 07.3	
	comp=Z,63nm,19.0s,baz=68,slow=40						
	comp=Z,5.4nm,0.4s						
YHNB	**Yeheng**	**37.84**	**326**	P	**P**	**12 24 41.1**	**-0.3**
JHS	**Saijyo**	**42.55**	**347**	P	**P**	**12 25 19.4**	**-0.8**
JHS					lAmb	lAmb	12 25 20.6	
	comp=Z,8.3nm,1.0s						
MJAR	**Matsushiro Arr**	**43.23**	**354**	P	**P**	**12 25 25.0**	**-0.7**
	comp=Z,1.8nm,0.6s,baz=183,slow=9.1,SNR=6.9						
	comp=Z,1.8nm,0.6s						
KSRS	**Korea Array**	**46.20**	**343**	P	**P**	**12 25 50.3**	**+0.9**
	comp=Z,6.5nm,1.1s,baz=162,slow=9.0,SNR=16						
KSRS				LR	LR	12 43 43.5	
	comp=Z,26nm,19.2s,baz=245,slow=34						
	comp=Z,6.5nm,1.1s						
KSAR	**Wonju Array Be**	**46.20**	**343**	P	**P**	**12 25 49.2**	**-0.2**
JTM	**Tenmabayashi**	**47.23**	**357**	P	**P**	**12 25 57.1**	**-0.3**
CMAR	**Chiang Mai Arr**	**50.51**	**300**	P	**P**	**12 26 24.4**	**+1.4**
	comp=Z,2.0nm,0.7s,baz=120,slow=6.0,SNR=15						
	comp=Z,2.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**50.51**	**300**	P	**P**	**12 26 22.6**	**-0.4**
ASAJ	**Asahikawa**	**50.52**	**359**	LR	LR	12 50 41.7	
	comp=Z,13nm,19.4s,baz=172,slow=40						
PETK	**Petropavlovsk-**	**60.72**	**10**	P	**P**	**12 27 36.4**	**+0.7**
	comp=Z,2.5nm,0.8s,baz=190,slow=7.4,SNR=5.4						
	comp=Z,2.5nm,0.8s						
PETK	**Petropavlovsk-**	**60.72**	**10**	P	**P**	**12 27 36.0**	**+0.3**
SONM

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
SONM	**Songino Array**	**44.91**	**321**	P	P	14 04 15.5	+0.3
	0.8nm,0.6s,baz=133,slow=8.5,SNR=4.3						
	0.8nm,0.6s						
ZALV	**Zalesovo Beam**	**59.78**	**323**	P	P	14 06 04.5	-0.8
	0.4nm,0.3s,baz=104,slow=6.1,SNR=3.8						
	0.4nm,0.3s						
MKAR	**Makanchi Array**	**60.26**	**314**	P	P	14 06 08.9	+0.1
	0.5nm,0.5s,baz=93,slow=7.6,SNR=5.8						
	0.5nm,0.5s						
FINES	**FINESS Array B**	**88.51**	**336**	P	P	14 08 52.9	+0.1
	1.7nm,0.8s,baz=60,slow=8.2,SNR=4.5						
	1.7nm,0.8s						

TEH 18 14:51:32.0,31.30N×56.39E,h8km,ML3.5,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
IBAF	**Bafgh**	**0.76**	**293**	*e*Pg	Pb	14 51 47.5	-0.1
IBAF				*e*Sg	Sg	14 51 56.6	+0.1
KHGB	**Koh Gabri**	**0.92**	**175**	*e*Pg	Pg	14 51 49.6	-0.1
TVBK	**TV Kerman**	**1.34**	**166**	*e*	Pg	14 52 02.2	+4.3
	comp=Z,8μm,0.3s						
IMEH	**Mehriz**	**1.52**	**274**	*e*Pg	Pg	14 52 01.8	+0.6
IMEH				*e*		14 52 24.6	
	comp=Z,5μm,0.2s						
NGRK	**Negar Kerman**	**1.67**	**170**	*e*		14 52 29.4	
	comp=Z,5μm,0.2s						
NGRK				*e*Pg	Pg	14 52 04.0	-0.1
CHMN	**Cheshme madani**	**1.74**	**145**	*e*		14 52 33.4	
	comp=Z,5μm,0.3s						
CHMN				*e*Pn	Pb	14 52 04.6	+0.1
TPRV	**Parvadeh(Tabas**	**1.75**	**8**	*e*Pg	Pg	14 52 05.5	0.0
ICHK	**Chekchek**	**1.93**	**300**	*e*		14 52 39.0	
	comp=Z,2μm,0.4s						
ICHK				*e*Pn	Pb	14 52 07.0	-0.6
ISAD	**Sadrabad**	**2.38**	**286**	*e*Pn	Pb	14 52 15.1	-0.3
ISAD				*e*		14 52 55.4	
	comp=Z,2μm,0.3s						
TKDS	**Koohdasht(Taba**	**2.39**	**15**	*e*Pn	Pb	14 52 13.8	-1.6
TKDS				*e*		14 52 51.8	
	comp=Z,2μm,0.3s						
IKOO	**Kooshah**	**2.50**	**63**	*e*Pn	Pn	14 52 15.0	+1.8
IKOO				*e*		14 52 52.5	
	comp=Z,3μm,0.4s						
ITEG	**Tejag**	**2.56**	**51**	*e*Pn	Pn	14 52 15.5	+1.4
ITEG				*e*		14 53 01.2	
	comp=Z,2μm,0.2s						
TNSJ	**Nastanj**	**2.67**	**4**	*e*Pn	Pb	14 52 18.3	-1.8
KBAM	**BAM**	**2.80**	**140**	*e*Pn	Pn	14 52 19.0	+1.8
KBAM				*e*		14 53 05.5	
	comp=Z,1μm,0.3s						
AFRZ	**Afriz**	**3.08**	**46**	*e*Pn	Pn	14 52 22.7	+1.6
NHDN	**Nehbandan**	**3.14**	**87**	*e*Pn	Pn	14 52 23.8	+1.9
NHDN				*e*		14 53 22.6	
	comp=Z,2μm,0.3s						
IRAM	**Rameshen**	**3.46**	**280**	*e*Pn	Pn	14 52 29.6	+3.2
ISFB	**Sefidab**	**4.63**	**312**	*e*Pn	Pn	14 52 45.2	+2.8
TBJM	**Torbat-e-JAM**	**5.16**	**39**	*e*Pn	Pn	14 52 51.8	+2.1
SBZV	**Sabzevar**	**5.18**	**11**	*e*Pn	Pn	14 52 52.3	+2.2

IDC ***18*** *14:52:36.1±0.5,31.83S×57.22E,h0km,mb4.4/23, mbtmp4.4/24,ML4.7/1,MS3.8/38,Error ellipse: s-maj=15.9km s-min=13.7km az=48.0*

NEIC ***18*** *14:52:38.0±1.4,31.84S±0.09×57.2E±0.1,h10km±1km, mb4.7/35,Error ellipse: s-maj=17.5km s-min=15.1km az=81.0*

GCMT ***18*** *14:52:38.0±0.5,31.83S±0.03×57.19E±0.06,h23km±1km, MW4.9/71,Moment Tensor Solution. s17,c18; s71,c82; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=3.21±.27; $M_{\theta\theta}$2.21±.17; $M_{\phi\phi}$1.00±.17; $M_{r\theta}$-0.38±.20; $M_{\theta\phi}$-0.79±.09; $M_{r\phi}$0.35±.28; Best double couple: M_o2.95100×10^{16} NP1:ϕ_s119.00000°,δ50.00000°,λ-87.00000°. NP2: ϕ_s294.00000°,δ40.00000°,λ-93.00000°. Principal axes: T 2.6440, Plg5.0000°, Azm207.0000°; N 0.6130, Plg2.0000°, Azm297.0000°; P -3.2570, Plg85.0000°, Azm50.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BJI ***18*** *14:52:39.6±0.0,31.27S×57.52E,h10km,mb4.8/30, mB5.0/14,Ms4.8/8,Ms7 4.4/8*

ISC 18 14:52:39.1±0.4,31.84S±0.07×57.23E±0.08,h19km,n222, o0s98/177,mb4.8/57,MS3.8/42,10C-6D,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
RER	**Riviere de l'E**	**10.72**	**353**	Pn	**Pn**	**14 55 08.7**	**-3.1**
FOMA	**Nahampoana Res**	**11.31**	**305**	Pn	**Pn**	**14 55 18.2**	**-1.6**
VOI	**Vohitsoka**	**13.57**	**314**	Pn	**Pn**	**14 55 49.9**	**-1.0**
VOI	**Vohitsoka**	**13.57**	**314**	P	**Pn**	**14 55 50.9**	**+0.1**
ABPO	**Ambohimpanom**	**15.62**	**322**	P	**Pn**	**14 56 18.9**	**+0.4**
OPO	**Ambohidratompo**	**16.02**	**323**	Pn	**Pn**	**14 56 24.1**	**+0.5**
	0.3nm,0.3s,baz=159,slow=11,SNR=14						
OPO				Sn	Sn	14 59 07.9	-13
	0.1nm,0.3s,baz=233,slow=20,SNR=1.9						
	7.7nm,0.5s						
MSEY	**Mahe Island**	**27.07**	**356**	P	**P**	**14 58 19.0**	**-1.7**
BOSA	**Boshof**	**27.76**	**268**	P	**P**	**14 58 26.1**	**-0.8**
	2.7nm,0.6s,baz=113,slow=9.1,SNR=6.4						
BOSA				LR	LR	15 08 00.7	
	comp=Z,115nm,19.3s,baz=150,slow=33						
	2.7nm,0.6s						
BOSA	**Boshof**	**27.76**	**268**	P	**P**	**14 58 25.9**	**-1.0**
BOSA				IAmb	IAmb	14 58 35.6	
	comp=Z,13nm,1.1s						
H08S1	**Diego Garcia H**	**27.95**	**34**	T	T	15 27 45.1	
	baz=207,slow=76,SNR=19						
H08S2	**Diego Garcia H**	**27.96**	**34**	T	T	15 27 47.5	
	baz=207,slow=76,SNR=23						
H08S3	**Diego Garcia H**	**27.97**	**34**	T	T	15 27 46.4	
	baz=207,slow=76,SNR=26						
MATP	**Matopo**	**28.10**	**287**	P	**P**	**14 58 28.5**	**-1.5**
	comp=Z,1.9nm,0.5s,baz=134,slow=9.1,SNR=8.6						
	comp=Z,1.9nm,0.5s						
LBTB	**Lobatse**	**28.57**	**276**	LR	LR	15 07 16.9	
	comp=Z,153nm,19.2s,baz=98,slow=31						
SUR	**Sutherland**	**30.76**	**259**	LR	LR	15 09 23.4	
	comp=Z,220nm,19.1s,baz=120,slow=33						
LSZ	**Lusaka**	**31.17**	**295**	P	**P**	**14 58 57.6**	**+0.4**
	comp=Z,4.7nm,0.6s,baz=118,slow=8.7,SNR=9.0						
LSZ				LR	LR	15 10 01.5	
	comp=Z,113nm,18.4s,baz=145,slow=34						
	comp=Z,4.7nm,0.6s						
KMBO	**Kilima Mbogo**	**35.90**	**324**	LR	LR	15 10 55.1	
	comp=Z,56nm,20.6s,baz=85,slow=31						
MAW	**Mawson**	**35.96**	**176**	P	**P**	**14 59 38.4**	**+0.3**
	comp=Z,5.4nm,1.0s,baz=328,slow=11,SNR=3.5						
MAW				LR	LR	15 12 25.0	
	comp=Z,136nm,19.1s,baz=348,slow=33						
	comp=Z,5.4nm,1.0s						
MAW	**Mawson**	**35.96**	**176**	P	**P**	**14 59 38.3**	**+0.1**
TSUM	**Tsumeb**	**37.72**	**280**	P	**P**	**14 59 52.5**	**-1.4**
	comp=Z,3.4nm,0.8s,baz=96,slow=7.2,SNR=4.6						
TSUM				LR	LR	15 13 55.6	
	comp=Z,141nm,19.0s,baz=150,slow=34						
	comp=Z,3.4nm,0.8s						
TSUM	**Tsumeb**	**37.72**	**280**	P	**P**	**14 59 53.1**	**-0.8**
MBAR	**Mbarara**	**39.90**	**316**	LR	LR	15 15 13.3	
	comp=Z,113nm,21.2s,baz=100,slow=34						
LODK	**Lodwar**	**40.77**	**325**	P	**P**	**15 00 20.8**	**+1.6**
PALK	**Pallekele**	**44.89**	**34**	LR	LR	15 15 49.7	
	comp=Z,144nm,18.5s,baz=286,slow=31						
ATD	**Arta Tunnel**	**45.27**	**340**	LR	LR	15 16 42.6	
	comp=Z,87nm,21.1s,baz=56,slow=32						
H01W2	**Cape Leeuwin H**	**47.08**	**110**	T	T	15 51 25.9	
	baz=256,slow=75,SNR=149						
H01W3	**Cape Leeuwin H**	**47.09**	**110**	T	T	15 51 26.3	
	baz=256,slow=75,SNR=42						
H01W1	**Cape Leeuwin H**	**47.10**	**110**	T	T	15 51 27.2	
	baz=256,slow=75,SNR=107						
TROLL	**Troll, Antarti**	**49.32**	**200**	P	**P**	**15 01 26.9**	**+0.2**
SNAA	**Sanae**	**50.77**	**201**	P	**P**	**15 01 38.0**	**+0.3**
SNAA	**Sanae**	**50.77**	**201**	PKiKP	**PKiKP**	**15 09 40.1**	**+2.2**
SNAA	**Sanae**	**50.77**	**201**	P	**P**	**15 01 37.7**	**0.0**
	comp=Z,9.5nm,1.0s,baz=112,slow=7.8,SNR=23						
SNAA				LR	LR	15 17 57.4	
	comp=Z,92nm,21.5s,baz=76,slow=30						
	comp=Z,9.5nm,1.0s						
SNAA	**Sanae**	**50.77**	**201**	P	**P**	**15 01 37.6**	**0.0**
SNAA				IAmb	IAmb	15 01 42.4	
	comp=Z,10nm,1.0s						
VNA2	**Neumayer--Watz**	**51.99**	**202**	P	**P**	**15 01 47.3**	**+0.5**
VNA3	**Neumayer Olymp**	**52.79**	**202**	P	**P**	**15 01 52.7**	**+0.1**
VNA3	**Neumayer Olymp**	**52.79**	**202**	PKiKP	**PKiKP**	**15 09 40.1**	**0.0**
WSAR	**Wadi Sarin**	**54.78**	**2**	LR	LR	15 19 42.8	
	comp=Z,119nm,21.4s,baz=192,slow=30						
IPM	**Ipoh**	**55.13**	**57**	P	**P**	**15 02 10.7**	**+0.2**
IPM				IAmb	IAmb	15 02 12.9	
	comp=Z,13nm,0.8s						
RAYN	**Ar Rayn**	**56.18**	**347**	P	**P**	**15 02 18.3**	**+0.4**
RAYN				IAmb	IAmb	15 02 26.9	
	comp=Z,4.8nm,1.1s						
QSPA	**South Pole Qui**	**58.33**	**180**	P	**P**	**15 02 32.9**	**+0.2**
	comp=Z,8.8nm,0.8s,baz=266,slow=2.7,SNR=38						
QSPA				LR	LR	15 25 51.1	
	comp=Z,78nm,18.7s,baz=264,slow=34						
	comp=Z,8.8nm,0.8s						
QSPA	**South Pole Qui**	**58.33**	**180**	P	**P**	**15 02 32.9**	**+0.2**
VNDA	**Vanda**	**62.25**	**166**	P	**P**	**15 02 59.5**	**+0.3**
	comp=Z,0.9nm,0.9s,baz=238,slow=8.0,SNR=4.0						
VNDA				LR	LR	15 26 55.8	
	comp=Z,116nm,20.4s,baz=244,slow=33						
	comp=Z,0.9nm,0.9s						
VNDA	**Vanda**	**62.25**	**166**	P	**P**	**15 02 57.6**	**-1.5**
CM31	**Chiang Mai Arr**	**64.03**	**45**	P	**P**	**15 03 12.0**	**+0.2**
CMAR	**Chiang Mai Arr**	**64.03**	**45**	P	**P**	**15 03 12.2**	**+0.4**
	comp=Z,12nm,0.7s,baz=228,slow=7.3,SNR=72						
CMAR				LR	LR	15 28 34.1	
	comp=Z,98nm,18.1s,baz=240,slow=34						
	comp=Z,12nm,0.7s						
CMAR	**Chiang Mai Arr**	**64.03**	**45**	P	**P**	**15 03 11.7**	**-0.1**
KAPI	**Kappang**	**64.10**	**79**	LR	LR	15 27 49.1	
	comp=Z,48nm,18.4s,baz=234,slow=33						
CHTO	**Chiang Mai**	**64.31**	**44**	P	**P**	**15 03 12.8**	**-0.7**
CHTO				IAmb	IAmb	15 03 17.3	
	comp=Z,7.2nm,1.1s						
EIL	**Elat**	**64.73**	**339**	LR	LR	15 28 34.0	
	comp=Z,51nm,18.5s,baz=249,slow=33						
KBL	**Kabul**	**66.96**	**11**	P	**P**	**15 03 30.6**	**0.0**
KBL				IAmb	IAmb	15 03 40.5	
	comp=Z,5.3nm,0.7s						
AS31	**Alice Springs**	**67.09**	**104**	P	**P**	**15 03 31.1**	**-0.5**
MMAI	**Mount Meron Ar**	**67.72**	**340**	LR	LR	15 31 01.6	
	comp=Z,35nm,19.1s,baz=335,slow=34						
WRA	**Warramunga Arr**	**69.11**	**101**	P	**P**	**15 03 44.1**	**-0.2**
	comp=Z,5.6nm,0.8s,baz=240,slow=5.7,SNR=41						
	comp=Z,5.6nm,0.8s						
WRA	**Warramunga Arr**	**69.11**	**101**	P	**P**	**15 03 44.2**	**-0.2**
WB2	**Warramunga Arr**	**69.12**	**101**	P	**P**	**15 03 43.9**	**-0.6**
WRAB	**Tennant Creek**	**69.12**	**101**	P	**P**	**15 03 43.3**	**-1.2**
WB0	**Warramunga Arr**	**69.24**	**101**	P	**P**	**15 03 44.6**	**-0.6**
WB0				IAmb	IAmb	15 03 45.3	
	comp=Z,7.0nm,0.8s						
GEYT	**Alibeck**	**69.41**	**1**	P	**P**	**15 03 45.6**	**-0.1**
	comp=Z,2.3nm,0.5s,baz=42,slow=20,SNR=2.8						
	comp=Z,2.3nm,0.5s						
GEYT	**Alibeck**	**69.41**	**1**	P	**P**	**15 03 45.3**	**-0.4**
GEYT				IAmb	IAmb	15 03 54.7	
	comp=Z,3.2nm,0.9s						
TOA0	**Torodi Ar. Sit**	**69.48**	**301**	P	**P**	**15 03 46.5**	**-0.1**
TOA0				IAmb	IAmb	15 03 47.6	
	comp=Z,3.8nm,0.8s						
TORD	**Torodi Ar. Bea**	**69.48**	**301**	P	**P**	**15 03 46.8**	**+0.2**
	comp=Z,3.2nm,0.7s,baz=136,slow=5.8,SNR=26						
TORD				LR	LR	15 34 50.2	
	comp=Z,63nm,18.1s,baz=222,slow=36						
	comp=Z,3.2nm,0.7s						
TORD	**Torodi Ar. Bea**	**69.48**	**301**	P	**P**	**15 03 46.3**	**-0.2**
TORD				IAmb	IAmb	15 03 47.6	
	comp=Z,3.4nm,0.8s						
STKA	**Stephens Creek**	**69.70**	**115**	P	**P**	**15 03 47.7**	**-0.2**
	comp=Z,3.6nm,0.6s,baz=266,slow=5.0,SNR=10						
	comp=Z,3.6nm,0.6s						
STKA	**Stephens Creek**	**69.70**	**115**	P	**P**	**15 03 46.7**	**-1.1**
DBIC	**Dimbokro**	**70.41**	**291**	P	**P**	**15 03 53.3**	**+0.9**
	comp=Z,3.9nm,0.7s,baz=144,slow=8.2,SNR=5.2						
DBIC				LR	LR	15 35 14.0	
	comp=Z,34nm,18.1s,baz=164,slow=36						
	comp=Z,3.9nm,0.7s						
DBIC	**Dimbokro**	**70.41**	**291**	P	**P**	**15 03 51.7**	**-0.6**
DBIC				IAmb	IAmb	15 04 12.4	
	comp=Z,18nm,1.3s						
CHGR	**Chuyangaron**	**71.01**	**10**	P	**P**	**15 03 55.9**	**+0.4**
PZH	**PanZhiHua**	**71.89**	**41**	P	**P**	**15 04 01.1**	**-0.1**
PZH				pmax	pmax		
	comp=Z,20nm,1.0s						
PZH				pmax	pmax		
	comp=Z,110nm,6.3s						
GNI	**Garni**	**72.56**	**350**	LR	LR	15 33 06.7	
	comp=Z,81nm,21.1s,baz=184,slow=34						
KSH	**Kashi**	**73.10**	**15**	P	**P**	**15 04 05.1**	**-3.0**
KSH				pP	pP	15 04 07.8	-5.2
KSH				sP	sP	15 04 12.8	-2.0
IDI	**Anoyia**	**73.36**	**333**	LR	LR	15 37 27.5	
	comp=Z,29nm,18.9s,baz=92,slow=37						
BR131	**Keskin Array S**	**74.49**	**341**	P	**P**	**15 04 15.7**	**-0.6**
BR131				IAmb	IAmb	15 04 17.1	
	comp=Z,7.1nm,0.8s						
BRTR	**Keskin Array B**	**74.49**	**341**	P	**P**	**15 04 16.1**	**-0.2**
	comp=Z,3.6nm,0.7s,baz=169,slow=8.2,SNR=27						
BRTR				LR	LR	15 32 55.9	
	comp=Z,52nm,21.8s,baz=136,slow=32						
	comp=Z,3.6nm,0.7s						
BRTR	**Keskin Array B**	**74.49**	**341**	P	**P**	**15 04 15.9**	**-0.3**
ONI	**Oni**	**75.14**	**350**	P	**P**	**15 04 20.4**	**+0.5**
ONI				IAmb	IAmb	15 04 29.8	
	comp=Z,5.4nm,0.8s						
KK31	**Karatay Array**	**75.57**	**10**	P	**P**	**15 04 23.1**	**+0.8**
KK31				IAmb	IAmb	15 04 26.7	
	comp=Z,7.8nm,0.9s						
KKAR	**Karatay Array**	**75.57**	**10**	P	**P**	**15 04 22.7**	**+0.4**
KKAR	**Karatay Array**	**75.57**	**10**	P	**P**	**15 04 23.0**	**+0.7**
KKAR				IAmb	IAmb	15 04 26.7	
	comp=Z,7.8nm,0.9s						
DAV	**Davao City (W)**	**75.67**	**72**	LR	LR	15 36 09.6	
	comp=Z,23nm,18.3s,baz=137,slow=34						
AAK	**Ala-Archa**	**75.79**	**13**	LR	LR	15 36 16.3	
	comp=Z,51nm,19.0s,baz=194,slow=35						
AAK	**Ala-Archa**	**75.79**	**13**	P	**P**	**15 04 24.4**	**+0.7**
AAK				IAmb	IAmb	15 04 28.7	
	comp=Z,9.8nm,1.1s						
GOMU	**GeErMu**	**76.30**	**31**	P	**P**	**15 04 27.3**	**+0.2**
GOMU				pP	pP	15 04 30.6	-1.5
GOMU				sP	sP	15 04 34.6	+0.8
GOMU				pmax	pmax		
	comp=Z,2.0nm,1.1s						
GOMU				pmax	pmax		
	comp=Z,40nm,4.3s						
KBZ	**Khabaz**	**76.34**	**349**	P	**P**	**15 04 27.0**	**+0.4**
	comp=Z,2.0nm,0.6s,baz=178,slow=7.5,SNR=4.5						
KBZ				LR	LR	15 36 22.8	
	comp=Z,79nm,20.4s,baz=145,slow=34						
	comp=Z,2.0nm,0.6s						
CD2	**Chengdu**	**76.41**	**40**	P	**P**	**15 04 29.9**	**+2.5**
WMQ	**Urumqi**	**80.28**	**22**	*e*P	**P**	**15 04 50.8**	**+2.3**
WMQ				LR	LR		
	comp=Z,220nm,26.7s						
WMQ				LR	LR		
	comp=Z,380nm,28.7s						
WMQ				LR	LR		
	comp=Z,180nm,26.7s						
LZH	**Lanzhou**	**80.46**	**37**	*e*P	**P**	**15 04 53.8**	**+4.0**
LZH				pP	pwP	15 04 58.8	-1.0
LZH				sP	PcP	15 05 02.0	+5.2
LZH				pmax	pmax		
	comp=Z,13nm,1.1s						
LZH				pmax	pmax		
	comp=Z,120nm,5.6s						
LZH				LR	LR		
	comp=Z,100nm,11.6s						
LZH				LR	LR		
	comp=Z,140nm,10.5s						
LZH				LR	LR		
	comp=Z,120nm,10.7s						
ABKAR	**Akbulak array**	**80.77**	**2**	P	**P**	**15 04 51.0**	**+0.1**
ABKAR	**Akbulak array**	**80.77**	**2**	P	**P**	**15 04 50.6**	**-0.3**
ABKAR				IAmb	IAmb	15 04 54.6	
	comp=Z,6.4nm,0.8s						
CFR	**Carcaliu**	**81.09**	**340**	⇓P	**P**	**15 04 52.7**	**0.0**
GTA	**Gaotai**	**81.17**	**32**	⇑P	**P**	**15 04 54.4**	**+0.9**
GTA				pP	pwP	15 05 03.0	-0.5
GTA				sP	sP	15 05 07.8	+7.5
GTA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,49nm,4.7s						
GTA				LR	LR		
	comp=Z,98nm,16.7s						
GTA				LR	LR		
	comp=Z,200nm,17.5s						
GTA				LR	LR		
	comp=Z,110nm,18.2s						
MAKZ	**Makanchi**	**81.41**	**17**	P	**P**	**15 04 54.5**	**+0.1**
MAKZ				IAmb	IAmb	15 04 59.9	
	comp=Z,4.9nm,0.9s						
MKAR	**Makanchi Array**	**81.47**	**17**	P	**P**	**15 04 54.9**	**+0.2**
	comp=Z,2.1nm,0.7s,baz=218,slow=5.7,SNR=11						
	comp=Z,2.1nm,0.7s						
MKAR	**Makanchi Array**	**81.47**	**17**	P	**P**	**15 04 55.8**	**+1.0**
XAN	**Xi'an**	**81.63**	**41**	⇓P	**P**	**15 04 56.0**	**+0.1**
XAN				pP	pwP	15 05 04.3	-1.6
XAN				pmax	pmax		
	comp=Z,13nm,1.2s						
XAN				LR	LR		
	comp=Z,130nm,15.1s						
AKTO	**Aktyubinsk**	**81.92**	**1**	LR	LR	15 40 18.8	
	comp=Z,29nm,19.1s,baz=171,slow=35						
MLR	**Muntele Rosu**	**82.04**	**338**	LR	LR	15 38 34.1	
	comp=Z,51nm,21.4s,baz=102,slow=34						
VRI	**Vrincioaia**	**82.13**	**339**	⇑P	**P**	**15 04 58.6**	**+0.4**
PLOR	**Plostina**	**82.14**	**339**	⇑P	**P**	**15 04 58.6**	**+0.3**
COVR	**Voineasa-Covas**	**82.28**	**339**	⇑P	**P**	**15 04 58.5**	**-0.5**
ARR	**Arges**	**82.35**	**337**	⇑P	**P**	**15 04 58.7**	**-0.7**
HERR	**Herculane**	**82.67**	**336**	⇑P	**P**	**15 05 00.6**	**-0.4**
MDVR	**Moldovita**	**82.83**	**335**	⇑P	**P**	**15 05 05.9**	**+4.0**
GZR	**Gura Zlata**	**82.99**	**336**	⇑P	**P**	**15 05 05.4**	**+2.6**
RPZ	**Rata Peaks**	**83.56**	**138**	LR	LR	15 36 28.7	
	comp=Z,141nm,18.1s,baz=347,slow=32						
BZS	**Buzias**	**83.59**	**336**	⇑P	**P**	**15 05 05.9**	**+0.2**
SIRR	**Siria**	**84.14**	**336**	⇓P	**P**	**15 05 08.7**	**+0.2**
BUR01	**Bucovina Ar. S**	**84.16**	**339**	⇑P	**P**	**15 05 07.1**	**-1.7**
DRGR		**84.24**	**337**	⇓P	P	15 05 02.7	-6.5
KURBB	**Kurchatov Arra**	**84.24**	**13**	LR	LR	15 40 37.6	
	comp=Z,43nm,19.7s,baz=185,slow=34						
BELG	**Belogornoye**	**84.29**	**354**	LR	LR	15 44 15.9	
	comp=Z,28nm,19.1s,baz=159,slow=37						
KURK	**Kurchatov**	**84.34**	**13**	P	**P**	**15 05 10.2**	**+0.8**
BRVK	**Borovoye**	**85.30**	**8**	P	**P**	**15 05 14.9**	**+0.6**
BRVK				IAmb	IAmb	15 05 18.4	
	comp=Z,9.1nm,0.9s						
AKASG	**Malin Array Be**	**85.83**	**343**	P	**P**	**15 05 16.6**	**-0.4**
	comp=Z,1.2nm,0.6s,baz=162,slow=4.0,SNR=8.2						
	comp=Z,1.2nm,0.6s						
NJ2	**Nanjing**	**86.20**	**48**	*e*P	**P**	**15 05 21.3**	**+2.0**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
SOKA	**Soboth**	**86.94**	**332**	*e*P	**P**	**15 05 24.5**	**+1.9**
	comp=Z,4.8nm,1.4s						
OBKA	**Obir**	**86.99**	**332**	*e*P	**P**	**15 05 25.1**	**+2.2**
	comp=Z,9.7nm,1.5s						
RONA	**Rosalia, Austr**	**87.29**	**334**	*e*P	**P**	**15 05 24.7**	**+0.5**
	comp=Z,6.7nm,1.4s						
HNS	**HongShan**	**87.31**	**42**	⇓P	**P**	**15 05 24.9**	**+0.4**
HNS				pmax	pmax		
	comp=Z,14nm,1.0s						
CONA	**Conrad Observa**	**87.64**	**334**	*i* P	**P**	**15 05 26.7**	**+0.7**
	comp=Z,11nm,1.6s						
KBA	**Koelnbreinsper**	**87.93**	**332**	*e*P	**P**	**15 05 27.8**	**+0.3**
	comp=Z,6.9nm,1.2s						
ABTA	**Abfaltersbach**	**88.01**	**331**	*e*P	**P**	**15 05 29.0**	**+1.2**
	comp=Z,9.1nm,1.0s						
HHC	**Hu-ho-hao-te**	**88.03**	**38**	*e*P	**P**	**15 05 30.8**	**+2.7**
HHC				pmax	pmax		
	comp=Z,27nm,1.0s						
HHC				pmax	pmax		
	comp=Z,150nm,4.6s						
MOA	**Molln**	**88.19**	**333**	*e*P	**P**	**15 05 29.3**	**+0.7**
	comp=Z,7.0nm,1.3s						
ZALV	**Zalesovo Beam**	**88.71**	**16**	P	**P**	**15 05 29.7**	**-1.1**
	comp=Z,0.6nm,0.4s,baz=210,slow=5.1,SNR=5.6						
	comp=Z,0.6nm,0.4s						
WTTA	**Wattenberg**	**88.78**	**331**	*e*P	**P**	**15 05 32.2**	**+0.6**
	comp=Z,8.8nm,0.8s						
WATA	**Walderalm**	**88.86**	**331**	*e*P	**P**	**15 05 32.3**	**+0.4**
	comp=Z,2.2nm,0.8s						
SQTA	**Sankt Quirin**	**88.92**	**331**	*e*P	**P**	**15 05 32.9**	**+0.7**
	comp=Z,9.5nm,0.8s						
FETA	**Feichten**	**88.97**	**330**	*i* P	**P**	**15 05 33.4**	**+1.0**
	comp=Z,7.4nm,0.9s						
MOTA	**Moosalm**	**89.07**	**331**	*e*P	**P**	**15 05 33.3**	**+0.4**
	comp=Z,9.2nm,1.1s						
GERES	**GERESS Array B**	**89.22**	**333**	P	**P**	**15 05 33.1**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=148,slow=4.3,SNR=5.2						
	comp=Z,0.5nm,0.6s						
DAVA	**Damuels**	**89.54**	**330**	*i* P	**P**	**15 05 35.1**	**0.0**
	comp=Z,6.5nm,0.8s						
RCBR	**Riachuelo**	**89.61**	**263**	LR	LR	15 38 29.6	
	comp=Z,76nm,19.2s,baz=323,slow=31						
NACGM	**Naroch**	**90.27**	**343**	⇓*e*P	**P**	**15 05 38.2**	**+0.1**
SONM	**Songino Array**	**90.75**	**31**	P	**P**	**15 05 40.4**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=196,slow=5.2,SNR=6.5						
SONM				LR	LR	15 43 20.5	
	comp=Z,99nm,21.8s,baz=251,slow=34						
	comp=Z,0.6nm,0.5s						
BRG	**Berggiesshubel**	**90.78**	**334**	*e*P	**P**	**15 05 42.0**	**+1.5**

RIDG	Independent Ri	145.19	17	P	PKPdf	15 12 14.4	-0.3
	baz=326,SNR=6.1						
SCRK	Sand Creek	145.20	16	P	PKPdf	15 12 15.1	+0.3
	baz=328,SNR=26						
M22K	Willow	145.23	23	P	PKPdf	15 12 14.5	-0.2
	baz=317,SNR=7.6						
SUA	Susitna One	145.23	23	P	PKPab	15 12 14.5	-0.2
	baz=316						
WAT6	Susitna Watana	145.34	20	P	PKPab	15 12 14.9	-0.2
	baz=321,SNR=9.5						
R17K	Ugashik Creek	145.47	32	P	PKPab	15 12 15.6	+0.1
	baz=304						
K27K	Chicken	145.59	15	P	PKPab	15 12 16.1	+0.3
	baz=330						
O53A	New Philadelph	145.62	296	P	PKPab	15 12 16.7	0.0
	baz=89						
PAX	Paxson	145.66	18	P	PKPab	15 12 16.6	+0.3
	baz=325,SNR=19						
PMR	Palmer	145.67	22	P	PKPab	15 12 15.7	-0.4
	baz=318						
SML	Sawmill	145.76	21	P	PKPab	15 12 16.3	-0.3
	baz=319,SNR=8.4						
M23K	Glacier View	145.95	21	P	PKPab	15 12 17.1	-0.2
	baz=320,SNR=9.7						
SCM	Sheep Creek Mo	146.04	21	P	PKPbc	15 12 17.1	0.0
	baz=321						
DAWY	Dawson	146.11	13	P	PKPab	15 12 17.6	-0.2
	baz=334,SNR=14						
L26K	Log Cabin Wild	146.16	17	P	PKPab	15 12 17.7	-0.3
	baz=328						
M24K	Tolsona, Glenn	146.16	20	P	PKPab	15 12 18.3	+0.1
	baz=323						
P52A	Corning	146.33	295	P	PKPbc	15 12 18.2	-0.4
	baz=90						
L27K	Beaver Creek,	146.49	16	P	PKPab	15 12 19.1	-0.2
	baz=330,SNR=16						
BCAR	Beaver Creek A	146.49	16	PKPdf	PKPab	15 12 19.5	+0.1
KLU	Klutina	146.73	20	P	PKPab	15 12 19.6	-0.7
	baz=323,SNR=7.4						
M26K	Nabesna, AK	146.77	17	P	PKPbc	15 12 18.9	-0.4
	baz=328						
GLI	Glacier Island	146.85	22	P	PKPbc	15 12 19.3	-0.2
	baz=320						
N25K	Chitina, Valde	147.01	19	P	PKPab	15 12 21.0	-0.5
	baz=320,SNR=12						
KDAK	Kodiak Island	147.02	29	PKPbc	PKPbc	15 12 20.0	+0.1
	comp=Z,4.8nm,0.7s,baz=251,slow=9.6,SNR=4.6						
OHAK	Old Harbor	147.07	31	P	PKPbc	15 12 20.2	+0.1
	baz=308						
M27K	Edge Creek, AK	147.08	16	P	PKPab	15 12 20.9	-0.9
	baz=329						
BVCY	Beaver Creek	147.27	16	P	PKPab	15 12 21.3	-1.1
	baz=331						
BMRM	Bremner River	147.53	20	P	PKPbc	15 12 22.1	+0.7
	baz=324,SNR=5.9						
MCARA	McCarthy VSAT	147.62	18	P	PKPbc	15 12 22.3	+0.7
	baz=327						
YUK3	Moose Creek	147.93	16	P	PKPbc	15 12 22.5	-0.2
	baz=331						
P49A	Miami Univ. Ec	148.33	295	P	PKPbc	15 12 23.1	-1.0
	baz=88						
CTG	Chitna Glacier	148.41	17	P	PKPbc	15 12 24.0	+0.2
	baz=329						
YUK8	Steele Glacier	148.52	16	P	PKiKP	15 12 24.9	-0.9
	baz=332						
M31M	Drury Creek, Y	148.71	10	P	PKPbc	15 12 23.8	-0.6
	baz=341,SNR=5.5						
YUK4	Talbot Arm	148.71	15	P	PKPbc	15 12 25.0	+0.3
	baz=334,SNR=6.6						
MMPY	Sheldon Lake,	148.73	8	P	PKiKP	15 12 25.4	-0.6
	baz=346,SNR=16						
YKA	Yellowknife Ar	148.88	353	PKPbc	PKPbc	15 12 24.8	0.0
	comp=Z,8.2nm,0.7s,baz=10,slow=2.5,SNR=18						
N30M	Aishikik Lake	148.93	13	P	PKPbc	15 12 25.2	+0.1
	baz=336						
YUK6	Outpost Mounta	149.13	15	P	PKPbc	15 12 25.0	-0.8
	baz=334						
N31M	Braeburn, Yuko	149.15	12	P	PKPbc	15 12 25.6	0.0
	baz=338,SNR=5.0						
HYT	Haines Junctio	149.42	14	P	PKPbc	15 12 26.7	+0.3
	baz=335,SNR=6.9						
O30N	Mendenhall	149.76	13	P	PKiKP	15 12 27.5	-0.6
	baz=337						
CMIG	Matias Romero	150.78	246	PKPbc	PKPbc	15 12 30.7	-0.1
	comp=Z,1.1nm,0.5s,baz=18,slow=6.4,SNR=4.1						
WVT	Waverly	150.81	288	P	PKPbc	15 12 29.6	-0.7
	baz=92						
PLBC	Pleasant Camp	150.91	14	P	PKiKP	15 12 30.0	-0.4
	baz=336						
P32M	Atlin	151.29	12	P	PKiKP	15 12 31.3	0.0
	baz=340						
EYMN	Ely	151.36	313	P	PKiKP	15 12 31.4	-0.3
	baz=67						
HDIL	Hopedale	151.75	297	P	PKiKP	15 12 32.3	-0.4
	baz=83						
JFWS	Jewell Farm	152.05	303	P	PKPbc	15 12 32.8	-0.2
	baz=78						
ULM	Lac du Bonnet	152.85	320	PKPbc	PKPbc	15 12 34.0	-0.5
	comp=Z,11nm,0.7s,baz=71,slow=1.7,SNR=23						
DLBC	Dease Lake	152.95	9	PKPbc	PKiKP	15 12 35.4	+0.6
	comp=Z,1.6nm,1.0s,baz=346,slow=1.7,SNR=7.3						
DLBC	Dease Lake	152.95	8	P	PKiKP	15 12 35.2	+0.5
	baz=346						
CCM	Cathedral Cave	153.50	292	P	PKiKP	15 12 36.3	-0.2
	baz=86						
AGMN	Agassiz Nation	153.84	317	P	PKPbc	15 12 36.4	-0.4
	baz=61						
NVAR	Mina Array Bea	172.47	332	PKPab	PKPab	15 14 12.8	+0.9
	comp=Z,0.7nm,0.7s,baz=33,slow=2.2,SNR=4.4						

*INET **18** 15:04:32.8±0.8, 12°.95N×87°.04W, h9^km±5^km, MW3.3*
*SNET **18** 15:04:36.2±1.1, 13°.03N×87°.20W, h12^km±999^km, ML2.5*

ISC 18 15:04:32.6±1.1**, 12°.96N**±0°.07×**87°.03W**±0°.06**, h13**^km**, n8, σ0°.94/11, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	San Cristobal	0.26	184	eP	Pg	15 04 38.7	+0.5
CSGN	Cosiguina Volc	0.52	271	eP	Pg	15 04 42.8	0.0
CNCH	Conchagua	0.84	292	eP	Pg	15 04 48.7	-0.3
CNCH				eS	Sg	15 04 58.8	-1.2
CNCH				IAML		15 05 02.9	
	comp=Z,361nm,0.3s						
LCND	La Caada	0.91	292	eP	Pg	15 04 49.4	-0.7
LCND				eS	Sg	15 05 00.7	-1.2
LCND				IAML		15 05 06.6	
	comp=Z,146nm,0.4s						
RCON	San Juan de Ri	1.00	59	eP	Pb	15 04 51.9	+0.1
MATN	Matagalpa	1.08	92	eP	Pb	15 04 52.0	-1.2
TGUH	Tegucigalpa,Un	1.11	348	eP	Pb	15 04 54.5	+0.6
TGUH				eS	Sb	15 05 08.8	+0.6
PACA	Pacayal	1.35	292	eP	Pn	15 04 58.4	+1.0

*NEIC **18** 15:06:58.4±2.3, 14°.72S±0°.07×70°.78W±0°.10, h196^km±8^km, mb4.4/37, ML4.4(ARE), Error ellipse: s-maj=13.8km s-min=10.0km az=75.0*
*IDC **18** 15:06:58.7±1.4, 14°.59S×70°.60W, h179^km±13^km, mb3.6/9, mbtmp4.2/13, Error ellipse: s-maj=20.5km s-min=10.9km az=57.0*
*VAO **18** 15:07:00.4±0.6, 14°.71S×70°.61W, h190^km±5^km, mb4.2*
*ARE **18** 15:07:01±3.3, 14°.75S±0°.07×70°.80W±0°.10, h209^km±6^km, Error ellipse: s-maj=0.0km s-min=0.0km az=162.0*

ISC 18 15:06:59.1±0.4**, 14°.77S**±0°.05×**70°.73W**±0°.06**, h200**^km**, n146,** σ1°.56/154**, mb4.4**/24**, 4C-1D, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	2.92	121	P	Pn	15 07 50.1	+1.6
	574nm,0.3s,baz=317,slow=8.6,SNR=3743						
LPAZ				S	Sn	15 08 27.2	+0.3
	176nm,0.4s,baz=47,slow=24,SNR=30						
LPAZ	La Paz	2.92	121	Pn	Pn	15 07 49.9	+1.4
LPAZ	La Paz	2.92	121	iP	Pn	15 07 49.9	+1.4
LPAZ	La Paz	2.92	121	eP	Pn	15 07 49.8	+1.4
AP01	Chacalluta	3.60	174	Pn	Pn	15 07 55.9	0.0
AP01	Chacalluta	3.60	174	eP	Pn	15 07 56.2	+0.2
AP01				eS	Sn	15 08 39.1	-1.6
PB16	IPOC Station P	3.73	162	Pn	Pn	15 07 59.7	+1.5
PB16	IPOC Station P	3.73	162	eP	Pn	15 07 59.5	+1.3
PB16				eS	Sn	15 08 47.3	+2.8
PB12	IPOC Station P	3.84	174	Pn	Pn	15 07 58.2	-0.8
PB12	IPOC Station P	3.84	174	eP	Pn	15 07 58.3	-0.8
PB12				eS	Sn	15 08 43.2	-3.0
PB11	IPOC Station P	5.07	169	Pn	Pn	15 08 13.4	-1.1
PB11	IPOC Station P	5.07	169	iP	Pn	15 08 13.8	-0.8
PB11				eS	Sn	15 09 09.5	-4.6
GO01	Chusmiza	5.09	163	Pn	Pn	15 08 15.6	+0.4
GO01	Chusmiza	5.09	163	iP	Pn	15 08 15.9	+0.8
TA02	Huaiquique	5.50	174		Pn	15 08 18.4	-1.6
TA02	Huaiquique	5.50	174	eP	Pn	15 08 18.3	-1.6
PB08	IPOC Station P	5.55	165		Pn	15 08 20.3	-0.7
PB08	IPOC Station P	5.55	165	eP	Pn	15 08 21.0	0.0
TA01	Diego Aracena	5.79	175		Pn	15 08 21.9	-1.8
TA01	Diego Aracena	5.79	175	eP	Pn	15 08 21.8	-1.8
PATCX	Punta Patache	6.04	175		Pn	15 08 25.0	-2.1
PB01	IPOC Station P	6.35	169		Pn	15 08 29.2	-1.8
NNA	Nana	6.56	294	P	Pn	15 08 33.1	-0.7
	53nm,0.5s,baz=138,slow=10,SNR=24						
NNA				S	Sn	15 09 50.5	+1.8
	8.8nm,0.3s,baz=274,slow=19,SNR=1.6						
NNA	Nana	6.56	294	Pn	Pn	15 08 32.7	-1.1
PB02	IPOC Station P	6.56	173		Pn	15 08 32.3	-1.4
ETMB	Extrema	6.61	42	eP	Pn	15 08 33.1	-1.3
PB07	IPOC Station P	6.97	174	Pn	Pn	15 08 37.1	-2.0
PB09	IPOC Station P	7.13	169		Pn	15 08 40.1	-1.1
PB04	IPOC Station P	7.54	176		Pn	15 08 44.3	-2.3
PB06	IPOC Station P	7.97	172		Pn	15 08 50.5	-1.7
LVC	Limon Verde	7.99	168	P	Pn	15 08 52.3	-0.3
	15nm,0.3s,baz=356,slow=9.5,SNR=65						
LVC				S	Sn	15 10 17.3	-5.5
	76nm,0.3s,baz=192,slow=19,SNR=33						
LVC	Limon Verde	7.99	168	Pn	Pn	15 08 52.0	-0.6
LVC	Limon Verde	7.99	168	eP	Pn	15 08 52.1	-0.4
PB15	IPOC Station P	8.48	172		Pn	15 08 57.4	-1.5
PB10	IPOC Station P	8.70	179	Pn	Pn	15 09 00.1	-1.4
SIV	San Ignacio	9.39	99	P	Pn	15 09 09.5	-1.1
	4.0nm,0.3s,baz=275,slow=12,SNR=17						
PB14	IPOC Station P	9.81	178	Pn	Pn	15 09 14.5	-1.7
VBST	Vila Bela da S	10.37	90	eP	Pn	15 09 21.6	-1.6
VILB	Vilhena	10.38	81	eP	Pn	15 09 22.7	-0.7
GO02	Mina Guanaco	10.39	174	Pn	Pn	15 09 22.7	-1.0
PTLB	Pontes e Lacer	11.21	95	eP	Pn	15 09 33.9	-0.1
AC01	Pan de Azucar	11.32	179	Pn	Pn	15 09 34.3	-1.1
AC02	Maricunga	12.10	173	Pn	Pn	15 09 46.6	+0.8
PTET	Porto Estrela	13.12	94	eP	Pn	15 09 58.8	+0.6
BOSC	San Juan Bosco	13.86	326		Pn	15 10 06.8	-0.7
PDRB	Porto dos Gac	13.98	79	eP	P	15 10 09.7	-1.3
LCO	Las Campanas	14.17	180	Pn	Pn	15 10 10.7	-0.7
NBRS	Nobres	14.48	90	eP	Pn	15 10 15.1	-0.1
SALV	Santo Antonio	14.54	96	eP	P	15 10 17.3	+0.2
CLDB	Colider	15.06	77	eP	P	15 10 23.1	+0.2
CO01	Juntas del Tor	15.15	178	P	P	15 10 24.6	+0.7
MACA	Manacapuru-AM	15.20	42	eP	Pn	15 10 22.9	-1.0
AQDB	Aquidauana	15.40	114	eP	P	15 10 27.4	+0.8
ANTJ	Antonio Joao (	15.71	119	eP	Pn	15 10 31.7	+1.6
CO06	Fray Jorge	15.85	183		Pn	15 10 31.9	+0.2
CO06				IAmb	IAmb	15 10 34.2	
	comp=Z,13nm,1.0s						
CO03	El Pedregal	15.99	180	Pn	Pn	15 10 35.2	+1.8
OTAV	Otavalo	16.75	332	P	Pn	15 10 43.3	+0.2
OTAV				IAmb	IAmb	15 10 50.6	
	comp=Z,6.6nm,0.6s						
OTAV	Otavalo	16.75	332	eP	Pn	15 10 43.5	+0.4
OTAV	Otavalo	16.75	332	eP	Pn	15 10 44.4	+1.3
NPGB	Novo Progresso	16.92	65	eP	Pn	15 10 44.0	-0.6
AMBA	Amambai (Brazi	16.95	121	eP	Pn	15 10 45.4	+0.5
CPUP	Villa Florida	17.00	135	P	Pn	15 10 46.0	+0.5
	comp=Z,7.9nm,0.5s,baz=323,slow=8.8,SNR=19						
CPUP	Villa Florida	17.00	135	P	P	15 10 43.8	-0.3
CPUP	Villa Florida	17.00	135	eP	Pn	15 10 45.8	+0.3
GCUF	Volcan Galeras	17.19	337	eP	Pn	15 10 50.0	+1.7
CRUC	La Cruz	17.36	339	eP	Pn	15 10 51.6	+1.4
GARC	Garzon, Huila	17.50	344	eP	Pn	15 10 50.6	-1.1
SOTA	Rioblanco	17.78	340	eP	Pn	15 10 55.3	+0.1
DVLD	Doverlandia	17.97	98	eP	Pn	15 10 56.8	-0.1
ITTB	Itaituba	18.02	56	eP	Pn	15 10 56.4	-1.1
POPC	Popayan, Colom	18.18	341	eP	Pn	15 10 58.7	-1.0
ARAG	Araguaiana, MT	18.27	95	eP	Pn	15 10 59.3	-1.2
MT02	Curacav	18.41	181	P	P	15 10 58.2	-1.2
MT02				IAmb	IAmb	15 10 58.9	
	comp=Z,16nm,1.1s						
MCR1	Marechal Candi	18.42	124	eP	Pn	15 11 00.9	-1.3
TRCB	Terra Rica	18.89	118	eP	P	15 11 05.7	+1.0
SNDB	Serra Nova Dou	19.11	84	eP	Pn	15 11 09.1	-1.3
YOTC	Yotoco, Valle	19.45	343	eP	P	15 11 10.1	-0.8
PCMB	Pacaembu	19.69	113	eP	P	15 11 14.1	+0.8
ITQB	Itaqui	19.73	141	P	P	15 11 14.0	+0.4
ITQB	Itaqui	19.73	141	eP	Pn	15 11 16.2	-1.4
BOAV	Boa Vista	19.82	31	eP	P	15 11 15.1	+0.3
FRBT	Francisco Belt	19.94	127	eP	P	15 11 16.3	+0.2
CRSM	Crissiumal (Br	20.03	132	eP	P	15 11 17.9	+0.9
ITRB	Iturama	20.06	107	eP	P	15 11 18.0	+0.7
PTGB	Pitanga	20.14	122	eP	P	15 11 18.6	+0.5
UNIS	Unistalda (Bra	20.30	137	eP	P	15 11 21.4	+1.7
MALB	Monte Alegre	20.71	53	eP	P	15 11 24.6	+0.4
RODS	Rosario do Sul	21.08	140	eP	P	15 11 29.5	+1.5
ITAB	Concordia	21.30	129	P	P	15 11 29.9	-0.4
ITAB	Concordia	21.30	129	eP	P	15 11 32.4	+2.1
ALGR	Alto Alegre (B	21.52	133	eP	P	15 11 34.9	+2.1
FRTB	Fartura	21.72	116	eP	P	15 11 36.1	+1.3
IPMB	Ipameri, GO	21.83	101	eP	P	15 11 35.2	-0.7
PEXB	Peixe	21.97	86	eP	P	15 11 39.1	+1.8
CPSB	Cacapava Do Su	22.24	137	eP	P	15 11 40.9	+1.2
ZARC	Zaragoza, Cauc	22.49	349	P	P	15 11 38.9	-3.2
ZARC				IAmb	IAmb	15 11 46.2	
	comp=Z,5.7nm,0.8s						
PLTB	Pedras Altas	23.04	140	P	P	15 11 47.2	+0.3
PLTB				IAmb	IAmb	15 11 50.7	
	comp=Z,8.7nm,0.8s						
PLTB	Pedras Altas	23.04	140	eP	P	15 11 49.2	+2.2
MCPB	Macapa, AP	23.36	54	eP	P	15 11 51.7	+1.8
CNLB	Canela	23.37	132	eP	P	15 11 51.6	+1.6
BAUV	El Baul	23.71	7	P	P	15 11 52.1	-0.9
SJCC	San Jacinto, C	24.90	350	P	P	15 12 02.7	-1.2
SJCC				IAmb	IAmb	15 12 06.3	
	comp=Z,17nm,1.1s						
BIRV	Birongo	25.47	10	P	P	15 12 07.9	-1.1
JANB	Januaria	25.52	94	eP	P	15 12 10.0	+0.4
PLCA	Paso Flores	25.87	180	P	P	15 12 15.2	+2.7
	comp=Z,1.3nm,0.6s,baz=357,slow=10,SNR=7.5						
	comp=Z,1.3nm,0.6s						
PLCA	Paso Flores	25.87	180	P	P	15 12 12.6	+0.2
PLCA	Paso Flores	25.87	180	eP	P	15 12 15.1	+2.7
ROSB	Rosrio	28.77	68	eP	P	15 12 40.6	+2.1
GUA01	Guaratinga, BA	29.81	98	eP	P	15 12 46.0	-1.7
MLPR	Magueyes Islan	32.73	6	P	P	15 13 11.2	-1.9
MLPR				IAmb	IAmb	15 13 23.4	
	comp=Z,21nm,1.0s						
CELP	Cerrillos	32.89	7	P	P	15 13 12.8	-1.7
CELP				IAmb	IAmb	15 13 22.1	
	comp=Z,15nm,1.1s						
PDPR	Patillas Dam,	32.91	8	P	P	15 13 12.4	-2.3
PDPR				IAmb	IAmb	15 13 19.6	
	comp=Z,10nm,0.9s						
CUPR	Culebra, Puert	33.30	9	P	P	15 13 15.8	-2.3
CUPR				IAmb	IAmb	15 13 20.0	
	comp=Z,13nm,0.8s						
RCBR	Riachuelo	35.35	79	P	P	15 13 34.6	-1.3
RCBR				IAmb	IAmb	15 13 48.6	
	comp=Z,11nm,1.1s						
SOR	Soroa	39.22	342	P	P	15 14 08.7	+0.5
SOR				IAmb	IAmb	15 14 10.1	
	comp=Z,11nm,0.8s						
CMIG	Matias Romero	39.63	322	P	P	15 14 13.5	+1.9
	comp=Z,2.8nm,0.8s,baz=159,slow=16,SNR=3.7						
	comp=Z,2.8nm,0.8s						
LRAL	Lakeview Retre	50.01	342	P	P	15 15 32.4	-0.9
Z47A	Carrollton	50.49	341	P	P	15 15 35.7	-1.1
Y49A	Blount Mountai	50.61	343	P	P	15 15 36.4	-1.4
Y49A				IAmb	IAmb	15 15 37.7	
	comp=Z,7.5nm,0.5s						
SWET	Sewanee	51.76	344	P	P	15 15 44.2	-2.2
SWET				IAmb	IAmb	15 15 46.1	
	comp=Z,5.1nm,0.6s						
WVT	Waverly	53.14	343	P	P	15 15 53.7	-2.7
WVT				IAmb	IAmb	15 15 55.7	
	comp=Z,5.2nm,0.6s						
MIAR	Mount Ida	53.64	337	P	P	15 15 59.6	-0.4
LCAR	Lake Charles	54.13	340	P	P	15 16 02.3	-1.3
LCAR				IAmb	IAmb	15 16 03.7	
	comp=Z,5.7nm,1.0s						
TXAR	Lajitas Array	54.17	324	P	P	15 16 04.9	+0.8
	comp=Z,0.3nm,0.6s,baz=152,slow=9.3,SNR=4.4						
	comp=Z,0.3nm,0.6s						
TXAR	Lajitas Array	54.17	324	P	P	15 16 03.3	-0.8
FCAR	Ozark Folk Cen	54.30	339	P	P	15 16 03.5	-1.3
FCAR				IAmb	IAmb	15 16 05.1	
	comp=Z,5.8nm,0.6s						
X37A	Clayton	54.39	335	P	P	15 16 05.4	-0.1
X37A				IAmb	IAmb	15 16 07.3	
	comp=Z,7.7nm,0.6s						
PBMO	Poplar Bluff	54.54	341	P	P	15 16 05.9	-0.6
S44A	Carbondale	55.01	342	P	P	15 16 09.4	-0.5
FVM	French Village	55.64	341	P	P	15 16 13.6	-0.8
VNA3	Neumayer Olymp	66.97	162	P	P	15 17 32.8	+2.9
PDAR	Pinedale Array	67.45	330	P	P	15 17 35.0	+1.5
	comp=Z,7.7nm,0.5s,baz=119,slow=9.1,SNR=4.9						
	comp=Z,0.7nm,0.5s						
VNA2	Neumayer--Watz	67.54	161	P	P	15 17 36.9	+3.4
	baz=284,slow=7.2						
ULM	Lac du Bonnet	68.41	343	P	P	15 17 38.8	-0.3
	comp=Z,4.6nm,0.3s,baz=156,slow=6.4,SNR=11						
	comp=Z,4.6nm,0.3s						
SNAA	Sanae	69.17	162	P	P	15 17 46.6	+3.0
SNAA	Sanae	69.17	162	P	P	15 17 46.7	+3.0
	comp=Z,2.0nm,0.6s,baz=277,slow=5.5,SNR=32						
	comp=Z,2.0nm,0.6s						
SNAA	Sanae	69.17	162	P	P	15 17 45.3	+1.6
TROLL	Troll, Antarti	70.89	162	P	P	15 17 57.4	+3.2
QSPA	South Pole Qui	75.38	180	P	P	15 18 23.8	+3.2
	comp=Z,1.1nm,0.6s,baz=233,slow=1.1,SNR=13						
	comp=Z,1.1nm,0.6s						
QSPA	South Pole Qui	75.38	180	P	P	15 18 21.1	+0.5
TORD	Torodi Ar. Bea	76.86	72	P	P	15 18 30.9	+1.2
	comp=Z,3.9nm,0.4s,baz=271,slow=5.1,SNR=5.3						
	comp=Z,0.3nm,0.4s						
TORD	Torodi Ar. Bea	76.86	72	P	P	15 18 27.2	-2.5
YKA	Yellowknife Ar	84.30	341	P	P	15 19 08.9	+0.9
	comp=Z,3.0nm,0.8s,baz=133,slow=4.7,SNR=5.8						
	comp=Z,3.0nm,0.8s						
ZALV	Zalesovo Beam	136.46	21	PKP	PKiKP	15 25 58.8	+0.1
	comp=Z,0.7nm,0.6s,baz=329,slow=5.0,SNR=2.1						
WRA	Warramunga Arr	137.60	216	PKP	PKiKP	15 26 02.0	-0.1
	comp=Z,0.5nm,1.1s,baz=135,slow=1.6,SNR=9.0						
WRA				SKPbc	SKiKP	15 29 18.2	-1.2
	comp=Z,0.2nm,0.5s,baz=135,slow=2.7,SNR=5.9						
SONM	Songino Array	146.94	4	PKPbc	PKiKP	15 26 19.7	-0.9
	comp=Z,0.8nm,0.4s,baz=319,slow=1.6,SNR=4.7						

DJA 18 15:29:27.0±0.4**, 10°.S**±3°×**12°.4E**±°**, h51**^km±7^km**, M3.8**/12**, mb4.1**/5**, MLv3.6**/12**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	Soe	0.41	105	P	Pn	15 29 38.5	+1.0
SOEI				S	Sn	15 29 48.6	+3.6
MMRI	Maumere	1.89	302	P	Pn	15 29 56.3	-0.6
MMRI				S	Sn	15 30 19.4	-0.2
EDFI	Ende, Flores	2.32	292	P	Pn	15 30 02.3	-0.6
EDFI				S	Sn	15 30 29.8	-0.5
BBSI	Bau Bau	4.33	343	P	Pn	15 30 30.9	+0.6
BSSI	Bau Bau, Buton	4.83	316	P	Pn	15 30 37.1	-0.1
BKSI	Bulukumba	5.68	319	P	Pn	15 30 49.9	+1.1
	0.1nm16nm,1.0s						
PLAI	Plampang	6.06	277	P	Pn	15 30 55.4	+1.3
	0.1nm32nm,1.0s						
BNSI	Bone	6.41	324	P	Pn	15 30 59.8	+0.9
	0.1nm20nm,1.1s						

*IDC **18** 15:35:01.4±3.1, 42°.87N×141°.96E, h121^km±26^km, mb3.2/6, mbtmp3.5/9, Error ellipse: s-maj=36.5km s-min=17.8km az=84.0*
*JMA **18** 15:35:02.4±0.1, 42°.8N±0°.5×141°.7E±0°.6, h119^km±1^km, MV3.3/39, ISHIKARI DEPRESSION*

ISC 18 15:35:02.0±0.8**, 42°.79N**±0°.05×**141°.73E**±0°.05**, h123**^km**±6km, n29,** σ0°.73/37**, mb3.3**/6**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEW	Eniwo	0.21	283	P	Pn	15 35 18.9	-0.1
JEW				S	Sn	15 35 31.3	-0.5
JIAM	Iburiatsuma	0.22	141	P	Pn	15 35 19.3	+0.2
JIAM				eS	Sn	15 35 32.3	+0.5
JISS	Ishikarishitsu	0.53	334	iP	Pn	15 35 20.6	+0.1
JISS				eS	Sn	15 35 34.2	-0.2
JNB	Noboribetsu	0.61	238	P	Pn	15 35 20.8	-0.2
JFR	Furan	0.73	59	iP	Pn	15 35 21.6	-0.3
JFR				eS	Sn	15 35 37.0	0.0
JAB	Ashibetsu	0.80	27	iP	Pn	15 35 23.0	+0.5
JAB				eS	Sn	15 35 38.1	+0.2
JNBK	Urakawa-nobuka	0.91	124	iP	Pn	15 35 24.1	+0.6
JNBK				eS	Sn	15 35 41.2	+1.5
JHR	Hokuryu	0.95	360	iP	Pn	15 35 24.4	+0.6
JHR				eS	Sn	15 35 40.9	+0.6
JKB	Kayabe	1.04	210	P	Pn	15 35 24.8	+0.1
JKB				eS	Sn	15 35 41.3	-0.5
JCH	Churui	1.22	98	P

SDDR	**Presa de Saban**	**2.03**	**256**	*i* P	**Pn**	**15 53 48.4**	**+0.6**
SDDR				*e*S	**Sn**	**15 54 12.2**	**+0.1**
SDDR				IAML		15 54 16.2	
	comp=Z,60nm,0.3s						
AGPR	**Aguadilla, PR**	**2.22**	**116**	*e*P	**Pn**	**15 53 51.4**	**+1.0**
AGPR	**Aguadilla, PR**	**2.22**	**116**	*e*S	**Sn**	**15 54 17.0**	**+0.4**
AGPR	**Aguadilla, PR**	**2.22**	**116**		**Sn**	**15 54 17.0**	**+0.4**
AGPR	**Aguadilla, PR**	**2.22**	**116**		**Pn**	**15 53 51.2**	**+0.9**
LOBA2	**Hotel Casa Bon**	**2.26**	**233**	*i* P	**Pn**	**15 53 50.9**	**0.0**
LOBA2				IAML		15 54 15.8	
	comp=Z,16nm,2.1s						
LOBA2				*e*S	**Sn**	**15 54 16.7**	**-1.0**
LSP	**Las Mesas**	**2.38**	**122**	*e*P	**Pn**	**15 53 54.4**	**+1.7**
LSP	**Las Mesas**	**2.38**	**122**	*e*S	**Sn**	**15 54 21.4**	**+0.7**
CRPR	**Cabo Rojo, PR**	**2.46**	**126**	*e*P	**Pn**	**15 53 54.9**	**+1.3**
CRPR	**Cabo Rojo, PR**	**2.46**	**126**	*e*S	**Sn**	**15 54 23.8**	**+1.3**
CRPR	**Cabo Rojo, PR**	**2.46**	**126**		**Sn**	**15 54 23.8**	**+1.3**
CRPR	**Cabo Rojo, PR**	**2.46**	**126**		**Pn**	**15 53 53.5**	**-0.1**
MLPR	**Magueyes Islan**	**2.53**	**126**	*e*P	**Pn**	**15 53 55.9**	**+1.3**
MLPR	**Magueyes Islan**	**2.53**	**126**	*e*S	**Sn**	**15 54 25.4**	**+1.1**
MLPR	**Magueyes Islan**	**2.53**	**126**		**Pn**	**15 53 55.9**	**+1.3**
MLPR					**Sn**	**15 54 25.4**	**+1.1**
AOPR	**Arecibo Observ**	**2.57**	**115**	*e*P	**Pn**	**15 53 55.1**	**-0.1**
AOPR	**Arecibo Observ**	**2.57**	**115**	*e*S	**Sn**	**15 54 24.6**	**-0.8**
AOPR	**Arecibo Observ**	**2.57**	**115**		**Pn**	**15 53 55.1**	**-0.1**
UUPR	**Utuado, UPR, P**	**2.65**	**117**	*e*S	**Sn**	**15 54 26.3**	**-0.8**
UUPR	**Utuado, UPR, P**	**2.65**	**117**	*e*P	**Pn**	**15 53 56.4**	**+0.2**
UUPR	**Utuado, UPR, P**	**2.65**	**117**		**Pn**	**15 53 56.4**	**+0.2**
UUPR					**Sn**	**15 54 26.3**	**-0.8**
EMPR	**Esperanza - Ma**	**2.72**	**111**	*e*P	**Pn**	**15 53 57.7**	**+0.5**
EMPR	**Esperanza - Ma**	**2.72**	**111**	*e*S	**Sn**	**15 54 28.0**	**-0.8**
EMPR	**Esperanza - Ma**	**2.72**	**111**	Pn	**Pn**	**15 53 57.6**	**+0.5**
GRTK	**Grand Turk**	**2.72**	**319**	*e*P	**Pn**	**15 53 57.3**	**+0.1**
GRTK	**Grand Turk**	**2.72**	**319**	*e*S	**Sn**	**15 54 28.6**	**-0.3**
GRTK	**Grand Turk**	**2.72**	**319**	Pn	**Pn**	**15 53 57.1**	**0.0**
OBIP	**Obispado Ponce**	**2.84**	**120**	*e*P	**Pn**	**15 54 01.1**	**+2.3**
OBIP	**Obispado Ponce**	**2.84**	**120**	*e*S	**Sn**	**15 54 32.6**	**+0.7**
OBIP	**Obispado Ponce**	**2.84**	**120**		**Sn**	**15 54 32.6**	**+0.7**
OBIP	**Obispado Ponce**	**2.84**	**120**		**Pn**	**15 53 58.0**	**-0.8**
CELP	**Cerrillos**	**2.85**	**119**	*e*P	**Pn**	**15 54 00.5**	**+1.6**
CELP	**Cerrillos**	**2.85**	**119**	*e*S	**Sn**	**15 54 32.2**	**+0.1**
CELP	**Cerrillos**	**2.85**	**119**		**Pn**	**15 54 00.5**	**+1.6**
CELP					**Sn**	**15 54 32.2**	**+0.1**
CBYP	**Canovanas**	**3.38**	**110**	Pn	**Pn**	**15 54 06.4**	**+0.1**
HUMP	**Col San Antoni**	**3.44**	**112**	*e*S	**Sn**	**15 54 45.1**	**-1.5**
CUPR	**Culebra, Puert**	**3.89**	**107**	*e*P	**Pn**	**15 54 12.8**	**-0.3**
CUPR	**Culebra, Puert**	**3.89**	**107**	*e*S	**Sn**	**15 54 56.2**	**-1.4**
CUPR	**Culebra, Puert**	**3.89**	**107**	Pn	**Pn**	**15 54 12.4**	**-0.7**
STVI	**Saint Thomas**	**4.17**	**105**	*e*S	**Sn**	**15 55 02.8**	**-1.8**
SJVI	**Gifft Hill Sch**	**4.34**	**104**	*e*P	**Pn**	**15 54 19.8**	**+0.4**
SJVI	**Gifft Hill Sch**	**4.34**	**104**	*e*S	**Sn**	**15 55 06.7**	**-2.1**

MAN 18 16:04:30.7, 13°05N×120°59E, h35km, mb4.4, ML3.3, MS3.0, Mindoro

*ANF **18** 16:05:56.0±0.4, 35°.84N×97°.25W, h8km, ML3.0/6, Error ellipse: s-maj=5.0km s-min=2.6km az=127.0*
*TUL **18** 16:05:56.1±1.2, 35°.80N±0°.01×97°.25W±0°.01, h6km±5km, ML3.2, mb_Lg2.8/44(NEIC), Error ellipse: s-maj=1.8km s-min=1.1km az=149.0*
*NEIC **18** 16:05:56.3±0.7, 35°.82N±0°.01×97°.261W±0°.009, h10km±5km, Error ellipse: s-maj=1.8km s-min=1.1km az=176.0*
ISC 18 16:05:55.8±1.3, 35°.84N±0°.05×97°.28W±0°.05, h9km±11km, n41, σ0°91/28, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK005	**Luther M Schoo**	**0.20**	**158**	Pg	**Pg**	**16 05 59.8**	**-0.1**
OKCFA	**Oklahoma City**	**0.45**	**198**	Pg	**Pg**	**16 06 04.6**	**+0.2**
OKCFA				Sg	**Sg**	**16 06 10.6**	**+0.3**
OKCFA	**Oklahoma City**	**0.45**	**198**	P	**Pg**	**16 06 04.6**	**+0.2**
	baz=21,SNR=22						
OKCFA				S	**Sg**	**16 06 10.8**	**+0.4**
	baz=21						
OKCSW	**OKLAHOMA CITY**	**0.45**	**196**		**Pg**	**16 06 04.6**	**0.0**
FNO	**Franklin**	**0.59**	**189**		**Pg**	**16 06 07.0**	**-0.1**
TUL1	**Leonard**	**1.21**	**86**		**Pb**	**16 06 17.5**	**-1.4**
TUL1	**Leonard**	**1.21**	**86**	P	**Pb**	**16 06 17.7**	**-1.2**
	baz=266,SNR=69						
TUL1				S	**Sb**	**16 06 34.0**	**-0.7**
	baz=266						
T35A	**Sooner Cattle**	**1.24**	**30**		**Pn**	**16 06 19.3**	**0.0**
T35B	**Sooner Cattle**	**1.24**	**30**	P	**Pn**	**16 06 19.4**	**0.0**
	baz=209,SNR=100						
T35B				S	**Sg**	**16 06 36.5**	**+0.8**
	baz=209						
X34A	**Smith Ranch, M**	**1.31**	**200**		**Pn**	**16 06 20.5**	**+0.1**
WMOK	**Wichita Mounta**	**1.65**	**229**	Pn	**Pn**	**16 06 25.7**	**+0.7**
WMOK	**Wichita Mounta**	**1.65**	**229**	P	**Pn**	**16 06 25.8**	**+0.8**
	baz=48,SNR=29						
X37A	**Clayton**	**2.00**	**128**		**Pn**	**16 06 30.9**	**+1.1**
X37A				IAmb_Lg		16 07 01.4	
	comp=Z,34nm,0.8s						
X37A	**Clayton**	**2.00**	**128**	P	**Pn**	**16 06 30.3**	**+0.5**
	baz=309,SNR=19						
X37A				S	**Sb**	**16 06 56.9**	**-0.5**
	baz=309						
U38A	**Gravette**	**2.42**	**75**		**Pn**	**16 06 37.5**	**+2.0**
HHAR	**Hobbs**	**2.74**	**80**		**Pn**	**16 06 42.3**	**+2.3**
W39A	**Magazine**	**2.92**	**102**	IAmb_Lg		16 07 31.1	
	comp=Z,20nm,0.9s						
W39A	**Magazine**	**2.92**	**102**	P	**Pn**	**16 06 43.2**	**+0.7**
	baz=283,SNR=6.4						
Z38A	**Mt. Pleasant**	**3.20**	**143**	IAmb_Lg		16 07 40.6	
	comp=Z,24nm,0.8s						
MIAR	**Mount Ida**	**3.30**	**112**		**Pn**	**16 06 48.2**	**+0.6**
MIAR				IAmb_Lg		16 07 48.5	
	comp=Z,17nm,0.8s						
KSU1	**Kansas State U**	**3.30**	**9**	IAmb_Lg		16 07 49.1	
	comp=Z,30nm,0.9s						
U40A	**Yellville**	**3.62**	**81**		**Pn**	**16 06 53.0**	**+0.9**
X40A	**Basin Creek Fa**	**3.89**	**109**	IAmb_Lg		16 08 03.1	
	comp=Z,27nm,1.0s						
WLAR	**White Oak Lake**	**4.05**	**121**	IAmb_Lg		16 08 08.5	
	comp=Z,18nm,1.1s						
WHAR	**Wooly Hollow**	**4.11**	**96**		**Pn**	**16 06 59.3**	**+0.5**
W41B	**Gary Mavity, V**	**4.16**	**98**		**Pn**	**16 07 00.2**	**+0.7**
W41B				IAmb_Lg		16 08 14.6	
	comp=Z,18nm,1.1s						
W41B	**Gary Mavity, V**	**4.16**	**98**	P	**Pn**	**16 07 00.0**	**+0.6**
	baz=280,SNR=24						
UALR	**University of**	**4.18**	**103**	IAmb_Lg		16 08 12.5	
	comp=Z,15nm,0.8s						
FCAR	**Ozark Folk Cen**	**4.19**	**88**	IAmb_Lg		16 08 13.3	
	comp=Z,13nm,0.8s						
MGMO	**Mountain Grove**	**4.25**	**71**	IAmb_Lg		16 08 12.2	
	comp=Z,20nm,0.9s						
P38A	**Dawn**	**4.81**	**37**	IAmb_Lg		16 08 36.3	
	comp=Z,15nm,0.7s						
KSCO	**Kaye Shedlock'**	**5.30**	**308**	IAmb_Lg		16 08 58.0	
	comp=Z,14nm,0.8s						
CCM	**Cathedral Cave**	**5.32**	**64**	IAmb_Lg		16 08 48.2	
	comp=Z,19nm,0.9s						
JCT	**Junction City**	**5.75**	**202**	IAmb_Lg		16 09 01.5	
	comp=Z,17nm,1.1s						
T25A	**Trinidad**	**5.89**	**285**	IAmb_Lg		16 09 08.9	
	comp=Z,10.0nm,0.7s						
FVM	**French Village**	**5.90**	**67**	IAmb_Lg		16 09 08.3	
	comp=Z,10nm,0.7s						
L34A	**Svendsen Farm,**	**6.16**	**6**	IAmb_Lg		16 09 22.2	
	comp=Z,17nm,0.8s						
N23A	**Red Feather La**	**8.47**	**309**	IAmb_Lg		16 10 32.0	
	comp=Z,11nm,0.9s						
JFWS	**Jewell Farm**	**8.92**	**35**	IAmb_Lg		16 10 39.2	
	comp=Z,7.8nm,0.8s						
K22A	**Casper**	**9.88**	**316**	IAmb_Lg		16 11 26.1	
	comp=Z,8.8nm,1.1s						
656A	**Willston**	**14.00**	**113**	P	**Pn**	**16 09 14.5**	**+0.2**
	baz=301,SNR=16						

MAN 18 16:18:51.4, 13°09N×120°64E, h32km, mb3.6, ML2.4, MS1.8, Mindoro

*IDC **18** 16:24:01.9±4.2, 4°.67S×144°.87E, h66km±41km, mb3.6/6, mbtmp4.0/8, ML4.2/1, MS3.0/2, Error ellipse: s-maj=36.8km s-min=25.0km az=67.0*

ISC 18 16:23:59.3±0.9, 4°.6S±0°.1×144°.7E±0°.2, h35km, n11, σ1°49/10, mb4.0/6, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.37**	**153**	P	**Pn**	**16 25 19.1**	**+2.1**
	16nm,0.3s,baz=326,slow=7.8,SNR=30						
PMG				S	**Sn**	**16 26 16.8**	**-0.9**
	22nm,0.6s,baz=123,slow=22,SNR=10						
PMG				LR	LR	16 28 00.1	
	comp=Z,101nm,18.5s,baz=330,slow=46						
GUMO	**Guam**	**18.05**	**0**	LR	LR	16 33 47.1	
	comp=Z,63nm,18.5s,baz=106,slow=32						
WRA	**Warramunga Arr**	**18.32**	**213**	P	**P**	**16 28 09.4**	**-1.2**
	0.9nm,0.3s,baz=37,slow=12,SNR=42						
	7.5nm,0.8s						
CMAR	**Chiang Mai Arr**	**50.59**	**298**	P	**P**	**16 32 56.5**	**+1.4**
	0.8nm,0.6s,baz=119,slow=5.9,SNR=5.3						
	0.8nm,0.6s						
SONM	**Songino Array**	**62.08**	**332**	P	**P**	**16 34 17.6**	**+1.0**
	0.2nm,0.4s,baz=160,slow=4.6,SNR=2.3						
	0.2nm,0.4s						
VNDA	**Vanda**	**73.47**	**176**	P	**P**	**16 35 26.7**	**-1.0**
	0.4nm,0.6s,baz=336,slow=6.2,SNR=3.4						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**74.97**	**321**	P	**P**	**16 35 37.5**	**+0.5**
	1.4nm,0.8s,baz=119,slow=7.6,SNR=6.6						
	1.4nm,0.8s						
ZALV	**Zalesovo Beam**	**76.61**	**328**	P	**P**	**16 35 44.3**	**-1.9**
	1.1nm,0.7s,baz=108,slow=4.8,SNR=4.4						
	1.1nm,0.7s						
ILAR	**Eielson Array**	**85.08**	**24**	P	**P**	**16 36 30.2**	**-0.9**
	1.9nm,0.7s,baz=250,slow=4.8,SNR=18						
	1.9nm,0.7s						
TORD	**Torodi Ar. Bea**	**142.54**	**286**	PKhKP	PKPpre	16 43 23.9	
	0.8nm,0.7s,baz=90,slow=4.6,SNR=5.6						
DBIC	**Dimbokro**	**149.66**	**275**	PKPbc	**PKPbc**	**16 43 45.9**	**-0.5**
	7.4nm,0.7s,baz=117,slow=3.4,SNR=11						

DJA 18 16:30:25.7±0.7, 2°S±5°×113°9E±°, h14km±3km, M3.9/4, mb4.4/1, MLv3.7/4, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.54**	**251**	P	Pg	16 30 36.6	+0.2
SMPI				S	Sb	16 30 45.2	+0.6
GENI	**Genyem**	**1.23**	**129**	P	Pn	16 30 48.5	+0.1
GENI				S	Sb	16 31 03.2	-1.2
WAMI	**Wamena**	**2.12**	**194**	P	Pb	16 31 03.2	-0.8
WAMI				S	Sg	16 31 32.2	-1.8
SRPI	**Serui, Papua**	**2.98**	**269**	P	Pn	16 31 13.1	+0.5
SRPI				S	Sn	16 31 47.0	-1.1
BAKI	**Biak**	**3.17**	**281**	P	Pn	16 31 15.6	+0.4
FAKI	**Fak Fak**	**7.05**	**261**	P	Pn	16 32 09.0	+0.4

*IDC **18** 16:30:26.9±1.8, 7°.85S×118°.85E, h0km, mb3.8/2, mbtmp3.8/4, ML3.8/2, MS2.6/1, Error ellipse: s-maj=64.0km s-min=24.7km az=64.0*
*DJA **18** 16:30:31.5±0.2, 8°S±2°×119°9E±°, h42km±12km, M4.3/24, mB5.1/4, mb4.2/9, MLv4.3/24, Mw(mB)4.5/4*
ISC 18 16:30:31.5±0.8, 7.78S±0°.04×119°.06E±0°.05, h34km, n30, σ0°89/38, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**1.64**	**230**	P	**Pn**	**16 30 57.4**	**-0.6**
PLAI				S	**Sn**	**16 31 16.4**	**-1.5**
WBSI	**Waikabubak, Su**	**1.88**	**170**	P	**Pn**	**16 31 01.0**	**-0.4**
WBSI				S	**Sn**	**16 31 23.6**	**-0.4**
BSSI	**Bau Bau, Buton**	**2.16**	**41**	P	**Pn**	**16 31 05.2**	**+0.1**
BSSI				S	**Sn**	**16 31 29.2**	**-1.6**
BKSI	**Bulukumba**	**2.66**	**24**	P	**Pn**	**16 31 12.1**	**+0.1**
BKSI				S	**Sn**	**16 31 41.2**	**-1.9**
EDFI	**Ende, Flores**	**2.78**	**111**	P	**Pn**	**16 31 13.9**	**+0.1**
EDFI				S	**Sn**	**16 31 45.2**	**-1.1**
KAPI	**Kappang**	**2.83**	**14**	Pn	**Pn**	**16 31 14.9**	**+0.6**
	22nm,0.3s,baz=196,slow=4.4,SNR=54						
KAPI				Sn	**Sn**	**16 31 46.4**	**-0.9**
	15nm,0.3s,baz=198,slow=10,SNR=4.7						
KAPI				LR	LR	16 32 32.5	
	comp=Z,103nm,18.6s,baz=196,slow=42						
	50nm,0.3s						
BASI	**Baing, Sumba**	**2.85**	**148**	P	**Pn**	**16 31 14.8**	**+0.1**
BASI				S	**Sn**	**16 31 47.4**	**-0.5**
MMRI	**Maumere**	**3.26**	**105**	P	**Pn**	**16 31 20.1**	**-0.2**
MMRI				S	**Sn**	**16 31 57.0**	**-1.0**
BNSI	**Bone**	**3.51**	**17**	P	**Pn**	**16 31 25.2**	**+1.4**
SRBI	**Singaraja**	**3.82**	**265**	P	**Pn**	**16 31 26.9**	**-1.1**
SPSI	**Sidrap Palu**	**3.85**	**11**	P	**Pn**	**16 31 28.9**	**+0.5**
DNP	**Denpasar**	**3.91**	**257**	P	**Pn**	**16 31 29.8**	**+0.6**
IGBI	**Denpasar**	**4.01**	**255**	P	**Pn**	**16 31 30.1**	**-0.4**
BBSI	**Bau Bau**	**4.17**	**57**	P	**Pn**	**16 31 33.7**	**+0.9**
TTSI	**Tana Toraja**	**4.76**	**9**	P	**Pn**	**16 31 42.7**	**+1.8**
ABJI	**Asem Bagus**	**4.78**	**269**	P	**Pn**	**16 31 41.1**	**0.0**
KMMI	**Kalianget**	**5.10**	**278**	P	**Pn**	**16 31 45.3**	**-0.3**
	0.5nm3µm59nm,0.7s						
BLJI	**Banyuglugur**	**5.41**	**270**	P	**Pn**	**16 31 49.7**	**-0.2**
	0.2nm1µm34nm,0.7s						
GMJI	**Gumukmas**	**5.58**	**265**	P	**Pn**	**16 31 52.2**	**0.0**
	0.2nm47nm,1.3s						
BBKI	**Banjar Baru**	**6.00**	**315**	P	**Pn**	**16 31 58.5**	**+0.6**
	0.2nm26nm,1.7s						
GRJI	**Gresik**	**6.58**	**277**	P	**Pn**	**16 32 05.9**	**0.0**
PWJI	**Pagerwojo**	**7.19**	**268**	P	**Pn**	**16 32 14.2**	**-0.1**
	0.4nm21nm,1.2s						
APSI	**Ampana**	**7.29**	**21**	P	**Pn**	**16 32 17.2**	**+1.5**
	0.1nm9.4nm,0.5s						
SMKI	**Samarinda**	**7.51**	**346**	P	**Pn**	**16 32 19.4**	**+0.7**
MPSI	**Mapaga**	**8.10**	**6**	P	**Pn**	**16 32 28.0**	**+1.1**
WRA	**Warramunga Arr**	**19.12**	**131**	P	**Pn**	**16 34 53.7**	**+0.8**
	0.3nm,0.3s,baz=310,slow=12,SNR=9.0						
WRA				S	Sn	16 38 11.5	-15
	1.3nm,0.8s,baz=302,slow=23,SNR=5.2						
	0.6nm,0.3s						
SMPI	**Sarmi**	**20.40**	**75**	P	**P**	**16 35 04.5**	**-1.3**
SISI	**Saibi**	**20.90**	**287**	P	**P**	**16 35 11.7**	**+0.5**
STKA	**Stephens Creek**	**31.86**	**142**	P	**P**	**16 36 54.0**	**+0.4**
	1.0nm,0.4s,baz=336,slow=10,SNR=5.0						
	1.0nm,0.4s						
MKAR	**Makanchi Array**	**63.40**	**333**	P	**P**	**16 40 58.1**	**+0.4**
	0.2nm,0.3s,baz=142,slow=6.9,SNR=6.2						
	0.2nm,0.3s						

*MDD **18** 16:46:23.7±0.4, 35°.50N×3°.76W, h0km, mb_Lg2.7/11, Error ellipse: s-maj=3.6km s-min=2.8km az=13.0*
*SFS **18** 16:46:23.0, 35°.50N×3°.70W, ML2.7, ALBORAN SUR*
*INMG **18** 16:46:24.3±1.0, 35°.57N×3°.74W, h0km, ML2.1, Error ellipse: s-maj=3.0km s-min=2.5km az=51.0*
ISC 18 16:46:21.3±1.3, 35°.49N±0°.03×3°.76W±0°.03, h2km±11km, n30, σ1°60/53, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVLZ	**Peæn de**	**0.55**	**234**	P	**Pb**	**16 46 34.7**	**+1.1**
PVLZ				S	**Sg**	**16 46 41.4**	**+2.5**
WMELI	**Melilla**	**0.68**	**105**	P	**Pb**	**16 46 35.9**	**-0.1**
WMELI				S	**Sb**	**16 46 45.4**	**-0.5**
EMEL	**Melilla**	**0.69**	**106**	Pg	**Pb**	**16 46 36.9**	**+0.9**
EMEL				Sg	**Sb**	**16 46 44.9**	**-1.0**
EALB	**Alboran**	**0.74**	**53**	Pg	**Pn**	**16 46 38.9**	**+0.1**
EALB				Sg	**Sn**	**16 46 48.9**	**-1.8**
EALB				*i* Vmb_Lg		16 46 51.6	
CHAS	**Isla Isabel II**	**1.13**	**105**	P	**Pg**	**16 46 43.2**	**+0.2**
CHAS				S	**Sg**	**16 46 57.0**	**-0.7**
EMIJ	**Mijas**	**1.35**	**323**	Pg	**Pn**	**16 46 47.9**	**+0.6**
EMIJ				Sg	**Sg**	**16 47 05.3**	**+0.6**
EMIJ				*i* Vmb_Lg		16 47 10.3	
CEU	**Ceuta**	**1.37**	**288**	P	**Pn**	**16 46 44.8**	**-2.7**
CEU				S	**Sg**	**16 46 59.9**	**-5.5**
ELGU	**Los Guajares,**	**1.38**	**4**	Pg	**Pb**	**16 46 48.4**	**+0.5**
ELGU				Sg	**Sg**	**16 47 05.3**	**-0.3**
ELGU				*i* Vmb_Lg		16 47 10.1	
EBER	**Berja**	**1.57**	**26**	Pn	**Pb**	**16 46 50.9**	**-0.4**
EBER				Sn	**Sg**	**16 47 09.8**	**-2.0**
EBER				*i* Vmb_Lg		16 47 15.5	
EGOR	**Sierra Gorda,**	**1.64**	**350**	Pn	**Pb**	**16 46 52.4**	**0.0**
EGOR				Sn	**Sg**	**16 47 13.8**	**-0.3**
EGOR				*i* Vmb_Lg		16 47 22.4	
EJIF	**Jimena Fronter**	**1.68**	**305**	Pn	**Pn**	**16 46 52.9**	**+1.0**
EQUE	**Quentar**	**1.73**	**9**	Pn	**Pn**	**16 46 52.9**	**+0.3**
EQUE				Sn	**Sn**	**16 47 14.7**	**-0.5**
EQUE				*i* Vmb_Lg		16 47 18.2	
IFR	**Ifrane**	**2.27**	**210**	P	**Pn**	**16 47 00.6**	**+0.5**
IFR				S	**Sn**	**16 47 26.5**	**-2.3**
EQES	**Quesada**	**2.37**	**13**	Pn	**Pb**	**16 47 04.8**	**-0.1**
EQES				Sn	**Sb**	**16 47 34.1**	**-0.5**
EQES				*i* Vmb_Lg		16 47 36.2	
EADA	**Adamuz**	**2.75**	**346**	Pn	**Pn**	**16 47 09.2**	**+2.6**
EADA				Sn	**Sn**	**16 47 39.1**	**-1.2**
EADA				*i* Vmb_Lg		16 47 48.2	
ECAB	**El Cabril**	**2.90**	**333**	Pn	**Pn**	**16 47 10.8**	**+2.2**
ECAB				Sn	**Sn**	**16 47 45.6**	**+1.5**
ETOB	**Tobarra**	**3.61**	**29**	Pn	**Pn**	**16 47 21.2**	**+2.8**
ETOB				Sn	**Sn**	**16 48 02.0**	**+0.4**
ETOB				*i* Vmb_Lg		16 49 55.2	
EGRO	**El Granado**	**3.62**	**305**	Pn	**Pn**	**16 47 18.2**	**-0.3**
EGRO				Sn	**Sn**	**16 48 00.0**	**-1.9**
EGRO				*i* Vmb_Lg		16 49 57.8	
PVAQ	**Vaqueiros**	**3.72**	**302**	*e*Pn	**Pn**	**16 47 21.3**	**+1.5**
PVAQ				*e*Sn	**Sn**	**16 48 04.4**	**+0.3**
PVAQ				A	A	16 48 06.3	
	4.7nm,0.7s						
PBAR	**Barrancos**	**3.75**	**316**	*e*Sn	**Sn**	**16 48 05.0**	**0.0**
PBDV	**Barranco-do-Ve**	**3.79**	**299**	*e*Pn	**Pn**	**16 47 22.3**	**+1.5**
PBDV				*e*Sn	**Sn**	**16 48 06.0**	**-0.1**
PBDV				A	A	16 48 10.3	
	3.2nm,0.7s						
PCVE	**Castro Verde**	**4.05**	**303**	*e*Pn	**Pn**	**16 47 25.9**	**+1.5**
PCVE				*e*Sn	**Sn**	**16 48 11.8**	**-0.6**
PCVE				A	A	16 48 19.7	
	2.5nm,0.5s						
EBAD	**Badajoz**	**4.17**	**322**	Pn	**Pn**	**16 47 27.2**	**+1.2**
EBAD				Sn	**Sn**	**16 48 12.5**	**-2.8**
EBAD				*i* Vmb_Lg		16 48 19.6	
MESJ	**Messejana**	**4.28**	**304**	*e*Pn	**Pn**	**16 47 29.4**	**+1.9**
MESJ				*e*Sn	**Sn**	**16 48 17.6**	**-0.5**
MORF	**Marmelete**	**4.34**	**296**	*e*Sn	**Sn**	**16 48 19.9**	**+0.3**
PTEO	**Sao Teotonio**	**4.49**	**299**	*e*Sn	**Sn**	**16 48 23.9**	**+0.6**
PESTR	**Estremoz**	**4.55**	**319**	*e*Sn	**Sn**	**16 48 24.1**	**-0.6**
PNCL	**Nicolau / Gran**	**4.63**	**306**	*e*Pn	**Pn**	**16 47 33.8**	**+1.4**
PNCL				*e*Sn	**Sn**	**16 48 26.3**	**-0.4**
PMRV	**Marv??o**	**4.88**	**325**	*e*Pn	**Pn**	**16 47 38.2**	**+2.5**
PMTG	**Montargil**	**5.04**	**316**	*e*Pn	**Pn**	**16 47 40.1**	**+2.1**

*SJA **18** 16:49:25.4±0.6, 23°.95S×66°.85W, h220km±5km, ML4.1, MW3.9*
*IDC **18** 16:49:26.4±1.3, 23°.91S×66°.72W, h194km±10km, mb3.3/4, mbtmp3.8/10, Error ellipse: s-maj=21.9km s-min=14.7km az=19.0*
*GUC **18** 16:49:27.6±0.7, 23°.94S×67°.17W, h237km±6km, ML4.4*
ISC 18 16:49:26.7±0.7, 23°.95S±0°.04×66°.90W±0°.04, h209km±7km, n47, σ1°26/76, mb3.5/4, 10C-1D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	**1.48**	**121**	*i* P	**Pn**	**16 50 01.1**	**-0.1**
SLA				*i* S	**S**	**16 50 27.0**	**-0.9**
SLA	**San Lorenzo**	**1.48**	**121**	*e*P	**Pn**	**16 50 01.2**	**-0.1**
SLA				*e*S	**S**	**16 50 27.6**	**-0.2**
AF01	**San Pedro de A**	**1.54**	**310**	*i* P	**Pn**	**16 50 03.1**	**+1.2**
AF01				*i* S	**S**	**16 50 31.1**	**+2.3**
HJA	**Humahuaca**	**1.56**	**62**	*e*P	**Pn**	**16 50 01.9**	**-0.3**
YJA	**Yavi**	**2.18**	**36**	*e*P	**Pn**	**16 50 08.4**	**+0.2**
YJA				*e*S	**S**	**16 50 40.3**	**+0.2**
LVC	**Limon Verde**	**2.28**	**305**	P	**Pn**	**16 50 09.8**	**+0.7**
	168nm,0.5s,baz=130,slow=6.0,SNR=242						
LVC				S	**S**	**16 50 42.3**	**+0.5**
	58nm,0.3s,baz=273,slow=16,SNR=9.6						
LVC	**Limon Verde**	**2.28**	**305**	*e*P	**Pn**	**16 50 09.7**	**+0.5**
LVC				*i* S	**S**	**16 50 42.0**	**+0.2**
LVC	**Limon Verde**	**2.28**	**305**	*e*P	**Pn**	**16 50 09.8**	**+0.7**
PB15	**IPOC Station P**	**2.47**	**287**	*i* P	**Pn**	**16 50 11.8**	**+0.8**
PB15				*i* S	**S**	**16 50 44.5**	**-0.6**
PB15	**IPOC Station P**	**2.47**	**287**	*e*P	**Pn**	**16 50 11.7**	**+0.6**
PB15				IAML		16 50 48.6	
	comp=Z,2µm,0.1s						
GO02	**Mina Guanaco**	**2.73**	**243**	*e*P	**Pn**	**16 50 14.6**	**+0.6**
GO02				*i* S	**S**	**16 50 50.9**	**+0.4**
GO02	**Mina Guanaco**	**2.73**	**243**	*e*P	**Pn**	**16 50 14.6**	**+0.6**
PB06	**IPOC Station P**	**2.75**	**296**	*i* P	**Pn**	**16 50 14.7**	**+0.6**
PB06	

comp=Z,3.8nm,0.6s,baz=162,slow=8.3,SNR=16
LPAZ S **S** **16 52 42.6 -1.9**
comp=Z,2.3nm,0.6s,baz=313,slow=22,SNR=3.8
CPUP Villa Florida 8.99 107 P **Pn** **16 51 30.6 -2.1**
comp=Z,2.9nm,0.6s,baz=293,slow=12,SNR=7.1
SIV San Ignacio 9.63 36 P **Pn** **16 51 38.5 -2.7**
comp=Z,0.9nm,0.5s,baz=240,slow=7.3,SNR=6.6
PLCA Paso Flores 17.01 190 P **Pn** **16 53 11.7 -1.0**
comp=Z,1.5nm,0.9s,baz=342,slow=9.6,SNR=3.0
BDFB Brasilia 19.59 68 P **P** **16 53 39.2 -0.1**
comp=Z,9.5nm,0.6s,baz=235,slow=11,SNR=14
TXAR Lajitas Array 63.69 324 P **P** **16 59 38.0 +1.8**
comp=Z,0.4nm,0.7s,baz=154,slow=8.0,SNR=4.8
comp=Z,0.4nm,0.7s
TORD Torodi Ar. Bea 76.47 69 P **P** **17 00 53.4 -0.6**
comp=Z,0.7nm,0.5s,baz=248,slow=5.8,SNR=6.4
comp=Z,0.7nm,0.5s
PDAR Pinedale Array 77.15 329 P **P** **17 00 59.5 +2.0**
comp=Z,0.3nm,0.6s,baz=131,slow=9.7,SNR=2.7
comp=Z,0.3nm,0.6s
ULM Lac du Bonnet 78.21 341 P **P** **17 01 03.8 +1.0**
comp=Z,1.3nm,0.5s,baz=180,slow=2.0,SNR=4.1
comp=Z,1.3nm,0.5s
MKAR Makanchi Array 146.43 40 PKPbc **PKPab** **17 08 43.5 -0.9**
comp=Z,0.8nm,0.6s,baz=310,slow=2.5,SNR=7.0

IDC ***18*** *16:54:22.7±3.0,36˚.79N×71˚.39E,h73km±28km,mb3.9/17, mbtmp4.3/22,MS3.2/11,Error ellipse: s-maj=16.9km s-min=12.3km az=8.0*

BJI ***18*** *16:54:24.5±0.0,36˚.96N×71˚.38E,h83km,mb4.4/30, mB4.4/17,Ms3.9/5,Ms7 3.5/5*

MOS ***18*** *16:54:24.1±1.2,36˚.97N×71˚.39E,h91km,mb4.4/16,Error ellipse: s-maj=7.8km s-min=3.5km az=76.9*

NEIC ***18*** *16:54:27.0±1.8,37˚.02N±0˚.07×71˚.25E±0˚.09,h108km±7km, mb4.4/30,Error ellipse: s-maj=11.5km s-min=9.2km az=121.0*

NNC ***18*** *16:54:31.0±2.2,37˚.36N×71˚.36E,h174km±28km,mb4.1, mpv5.2,Error ellipse: s-maj=20.7km s-min=13.9km az=178.0*

ISC 18 16:54:25.9±0.3,36˚.88N±0˚.04×71˚.43E±0˚.04,h106km,n231, σ2s39/254,mb4.3/45,12C-10D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GAR	**Garm**	**2.29**	**338**	Op		**Pn**	**16 55 01.5**	**-1.1**
CHGR	**Chuyangaron**	**2.53**	**315**			**Pn**	**16 55 04.0**	**-1.6**
CHGR	**Chuyangaron**	**2.53**	**315**	PN		**Pn**	**16 55 04.0**	**-1.6**
DRK	**Karamyk**	**2.61**	**6**	Pn		**Pn**	**16 55 07.6**	**+0.6**
KBL	**Kabul**	**3.03**	**220**	Pn		**Pn**	**16 55 15.2**	**+2.8**
KBL	**Kabul**	**3.03**	**220**	PN		**Pn**	**16 55 15.2**	**+2.8**
BTK	**Batken**	**3.21**	**352**			**Pn**	**16 55 15.1**	**+0.5**
BTK	**Batken**	**3.21**	**352**	PN		**Pn**	**16 55 15.1**	**+0.5**
CHCP	**Chirah Chowk**	**3.55**	**154**	P		**Pn**	**16 55 23.2**	**+4.1**
THW	**Thamme Wali**	**4.08**	**176**	P		**Pn**	**16 55 28.8**	**+2.5**
KSH	**Kashi**	**4.45**	**52**	P		**Pn**	**16 55 27.6**	**-3.6**
KSH				S		**Sn**	**16 56 13.6**	**-8.4**
KSH	comp=N,4μm,0.7s			smax		smax		
KSH	comp=E,2μm,0.5s			smax		smax		
JMU	**Jammu**	**5.04**	**144**	*e*P		**Pn**	**16 55 40.5**	**+1.3**
JMU				*e*P		**Pn**	**16 55 42.4**	**+3.2**
JMU				*e*S		**Sn**	**16 56 33.5**	**-2.7**
JMU				*e*S		**Sn**	**16 56 37.5**	**+1.3**
SARP	**Sargodha**	**5.05**	**168**	P		**Pn**	**16 55 40.7**	**+1.3**
IUG	**Iuzhnay**	**5.37**	**349**	*d* iPN		**Pn**	**16 55 42.9**	**-0.8**
IUG	**Iuzhnay** baz=348	**5.37**	**349**	⇓iP		**Pn**	**16 55 42.9**	**-0.8**
IUG	baz=348			*e*S		**Sn**	**16 56 39.2**	**-5.2**
AML	**Almayashu** SNR=264	**5.53**	**18**	P		**Pn**	**16 55 46.2**	**0.0**
THN	**Thein Dam**	**5.67**	**140**	*e*P		**Pn**	**16 55 50.2**	**+2.5**
THN				*e*S		**Sn**	**16 56 52.9**	**+1.4**
UCH	**Uchtor** SNR=89	**5.85**	**23**	P		**Pn**	**16 55 50.6**	**+0.1**
DZA	**Taraz**	**6.01**	**359**	*e*PN		**Pn**	**16 55 49.8**	**-2.4**
DZA	**Taraz** baz=360	**6.01**	**359**	*e*P		**Pn**	**16 55 49.9**	**-2.4**
DZA	baz=360			*e*S		**Sn**	**16 56 55.5**	**-4.1**
EKS2	**Erkin-Say** SNR=127	**6.05**	**17**	P		**Pn**	**16 55 53.1**	**+0.2**
AAK	**Ala-Archa** SNR=65	**6.22**	**21**	P		**Pn**	**16 55 55.7**	**+0.4**
AAK	**Ala-Archa** 122nm,0.5s,baz=201,slow=14,SNR=90	**6.22**	**21**	P		**Pn**	**16 55 55.8**	**+0.6**
AAK	99nm,0.7s,baz=331,slow=23,SNR=9.2			S		**Sn**	**16 57 01.9**	**-3.1**
AAK	**Ala-Archa**	**6.22**	**21**	Pn		**Pn**	**16 55 55.6**	**+0.4**
AAK	**Ala-Archa**	**6.22**	**21**	PN		**Pn**	**16 55 55.6**	**+0.4**
KK31	**Karatay Array**	**6.26**	**354**	Pn		**Pn**	**16 55 54.6**	**-1.0**
KK31	**Karatay Array**	**6.26**	**354**	PN		**Pn**	**16 55 54.6**	**-1.0**
KK31	**Karatay Array** 96nm,0.4s,baz=184,slow=14,SNR=1229	**6.26**	**354**	⇓P		**Pn**	**16 55 54.6**	**-1.0**
KK31	50nm,0.3s,baz=181,slow=24,SNR=7.9			S		**Sn**	**16 57 02.2**	**-3.5**
KKAR	**Karatay Array**	**6.26**	**354**			**Pn**	**16 55 54.6**	**-1.1**
KKAR	**Karatay Array**	**6.26**	**354**	Pn		**Pn**	**16 55 54.5**	**-1.1**
KKAR	**Karatay Array**	**6.26**	**354**	PN		**Pn**	**16 55 54.5**	**-1.1**
BRLS	**Boroldaу**	**6.26**	**349**	*e*PN		**Pn**	**16 55 51.1**	**-4.6**
BRLS	**Boroldaу** baz=347	**6.26**	**349**	*e*P		**Pn**	**16 55 51.1**	**-4.6**
BRLS	baz=347			*e*S		Sn	16 56 54.4	-12
KBK	**Karagaybulak** SNR=41	**6.38**	**24**	P		**Pn**	**16 55 58.1**	**+0.7**
FRU1	**Bishkek**	**6.42**	**22**	Pn		**Pn**	**16 55 58.6**	**+0.7**
FRU1	**Bishkek**	**6.42**	**22**	PN		**Pn**	**16 55 58.6**	**+0.7**
ULHL	**Ulahoi** SNR=15	**6.52**	**33**	P		**Pn**	**16 56 00.2**	**+0.7**
BOOM	**Boomskoye usch**	**6.60**	**30**			**Pn**	**16 56 01.0**	**+0.6**
BOOM	**Boomskoye usch**	**6.60**	**30**	PN		**Pn**	**16 56 01.0**	**+0.6**
CHMS	**Chumysh** SNR=121	**6.62**	**22**	P		**Pn**	**16 56 00.9**	**+0.2**
CHMS	**Chumysh**	**6.62**	**22**	*i* PN		**Pn**	**16 56 00.5**	**-0.1**
CHMS	comp=Z,288nm,1.0s			pmax	pmax			
CHMS	**Chumysh** comp=Z,288nm,1.0s	**6.62**	**22**	⇑P		**Pn**	**16 56 00.6**	**-0.1**
CHMS	comp=Z,97nm,0.6s			⇑S		**Sn**	**16 57 10.9**	**-3.8**
USP	**Ospenovka** SNR=44	**6.80**	**19**	P		**Pn**	**16 56 02.6**	**-0.5**
TKM2	**Tokmak 2** SNR=72	**6.83**	**27**	P		**Pn**	**16 56 03.9**	**+0.3**
TKM2	**Tokmak 2**	**6.83**	**27**	*i* PN		**Pn**	**16 56 03.4**	**-0.2**
TKM2	comp=Z,148nm,1.2s			pmax	pmax			
TKM2	**Tokmak 2** comp=Z,148nm,1.2s	**6.83**	**27**	⇑P		**Pn**	**16 56 03.5**	**-0.2**
TKM2	comp=Z,116nm,1.2s			⇑S		**Sn**	**16 57 17.3**	**-2.6**
BHK	**Bhakra**	**6.84**	**141**	*e*P		**Pn**	**16 56 07.3**	**+3.6**
BHK				*e*S		**Sn**	**16 57 18.4**	**-1.6**
KDJ	**Kajisay**	**6.88**	**39**	Pn		**Pn**	**16 56 05.4**	**+1.2**
KDJ	**Kajisay**	**6.88**	**39**	PN		**Pn**	**16 56 05.4**	**+1.2**
TARG	**Taragay, Kyrgy**	**6.92**	**44**	Pn		**Pn**	**16 56 06.2**	**+1.2**
TARG	**Taragay, Kyrgy**	**6.92**	**44**	PN		**Pn**	**16 56 06.2**	**+1.2**
SGDS	**Sogindy**	**7.01**	**19**	*d* iPN		**Pn**	**16 56 05.2**	**-0.7**
SGDS	**Sogindy** baz=21	**7.01**	**19**	⇓iP		**Pn**	**16 56 05.3**	**-0.7**
SGDS	baz=21			*e*S		**Sn**	**16 57 19.1**	**-5.0**
TNSS	**Tian-Shan**	**7.47**	**33**	*e*PN		**Pn**	**16 56 11.0**	**-1.4**
TNSS	**Tian-Shan** baz=35	**7.47**	**33**	*e*P		**Pn**	**16 56 11.1**	**-1.4**
AAA	**Alma-Ata**	**7.59**	**32**	*e*PN		**Pn**	**16 56 12.9**	**-0.9**
AAA	**Alma-Ata** baz=34	**7.59**	**32**	*e*P		**Pn**	**16 56 12.9**	**-0.9**
KNDC	**Almaty**	**7.62**	**32**	PN		**Pn**	**16 56 14.9**	**+0.7**
KNDC	**Almaty** comp=Z,121nm,0.8s	**7.62**	**32**	⇑P		**Pn**	**16 56 14.9**	**+0.7**
PRZ	**Przheval'sk**	**7.76**	**42**			**Pn**	**16 56 17.2**	**+1.0**
PRZ	**Przheval'sk**	**7.76**	**42**	PN		**Pn**	**16 56 17.2**	**+1.0**
KUU	**Kurty**	**7.95**	**27**	*e*PN		**Pn**	**16 56 17.1**	**-1.4**
KUU	**Kurty** baz=28	**7.95**	**27**	*e*P		**Pn**	**16 56 17.2**	**-1.4**
CHKK	**Chushkaly**	**8.16**	**30**	*e*PN		**Pn**	**16 56 20.0**	**-1.4**
CHKK	**Chushkaly** baz=31	**8.16**	**30**	*e*P		**Pn**	**16 56 20.1**	**-1.4**
SATY	**Saty**	**8.17**	**39**	*e*PN		**Pn**	**16 56 21.6**	**-0.1**
SATY	comp=Z,2.0nm,0.5s			pmax	pmax			
SATY	**Saty** comp=Z,2.3nm,0.5s,baz=41	**8.17**	**39**	*e*P		**Pn**	**16 56 21.7**	**-0.1**
BTLS	**Baital**	**8.39**	**13**	*e*PN		**Pn**	**16 56 22.8**	**-1.8**
BTLS	**Baital** baz=14	**8.39**	**13**	*e*P		**Pn**	**16 56 22.9**	**-1.7**
UZB	**Uzynbulak**	**8.55**	**41**	*e*PN		**Pn**	**16 56 26.3**	**-0.6**
UZB	**Uzynbulak** baz=42	**8.55**	**41**	*e*P		**Pn**	**16 56 26.3**	**-0.6**
KPKS	**Kokpek**	**8.61**	**38**	*e*PN		**Pn**	**16 56 26.3**	**-1.3**
KPKS	**Kokpek** baz=40	**8.61**	**38**	*e*P		**Pn**	**16 56 26.4**	**-1.3**
ARXS	**Arharly**	**8.80**	**32**	*e*PN		**Pn**	**16 56 28.8**	**-1.4**
NDI	**New Delhi**	**9.51**	**148**	*e*P		**Pn**	**16 56 41.0**	**+1.1**
NDI				*e*S		**Sn**	**16 58 21.0**	**-4.0**
KHET	**Khetri**	**9.53**	**156**	*e*P		**Pn**	**16 56 39.9**	**-0.2**
KHET				*e*S		**Sn**	**16 58 19.7**	**-5.6**
AYAN	**Aya Nagar**	**9.65**	**149**	*e*P		**Pn**	**16 56 42.5**	**+0.8**
AYAN				*e*S		**Sn**	**16 58 23.8**	**-4.5**
TDK	**Taldyqorghan**	**9.68**	**31**	*e*P		**Pn**	**16 56 40.5**	**-1.5**
TDK	**Taldyqorghan** baz=32	**9.68**	**31**	*e*P		**Pn**	**16 56 40.5**	**-1.5**
KUDL	**Kundal**	**9.70**	**152**	*e*P		**Pn**	**16 56 42.2**	**-0.3**
KUDL				*e*S		**Sn**	**16 58 23.3**	**-6.2**
SONA	**Sohna**	**9.84**	**149**	*e*S		**Sn**	**16 58 27.4**	**-5.4**
PTH	**Pithoragarh**	**10.37**	**132**	*e*P		**Pn**	**16 56 50.5**	**-1.3**
PTH				*e*S		**Sn**	**16 58 38.6**	**-7.4**
LGTI	**Lohaghat**	**10.46**	**133**	*e*P		**Pn**	**16 56 50.9**	**-1.8**
LGTI				*e*S		**Sn**	**16 58 40.1**	**-7.8**
GEYT	**Alibeck** comp=Z,3.0nm,0.3s,baz=94,slow=14,SNR=13	**10.64**	**280**	P		**Pn**	**16 56 51.0**	**-4.2**
GEYT	comp=Z,16nm,0.5s,baz=109,slow=18,SNR=6.4			S		Sn	16 58 42.0	-10
GEYT	comp=Z,48nm,19.3s,baz=70,slow=45			LR		LR	17 02 21.4	
GEYT	**Alibeck**	**10.64**	**280**			**Pn**	**16 56 51.5**	**-3.7**
GYA0B	**ALIBECK ARRAY**	**10.64**	**280**	Pn		**Pn**	**16 56 51.4**	**-3.9**
AJM	**Ajmer**	**10.72**	**164**	*e*P		**Pn**	**16 56 57.1**	**+0.7**
AJM				*e*S		**Sn**	**16 58 48.8**	**-5.7**
AJM	comp=N,120nm,0.3s			IAML			16 58 54.5	
AJM	comp=E,113nm,0.2s			IAML			16 58 54.9	
MAKZ	**Makanchi**	**12.65**	**35**	Pn		**Pn**	**16 57 20.8**	**-1.1**
MAKZ	**Makanchi**	**12.65**	**35**	P		**Pn**	**16 57 20.8**	**-1.1**
MK31	**Makanchi Array**	**12.78**	**36**			**Pn**	**16 57 22.8**	**-0.8**
MK31	**Makanchi Array**	**12.78**	**36**	*e*P		**Pn**	**16 57 23.2**	**-0.4**
MK31	**Makanchi Array** comp=E,7.1nm,0.7s,baz=220,slow=15,SNR=58	**12.78**	**36**	⇓P		**Pn**	**16 57 21.8**	**-1.8**
MKAR	**Makanchi Array** comp=E,8.4nm,0.7s,baz=223,slow=14,SNR=43	**12.78**	**36**	P		**Pn**	**16 57 22.9**	**-0.8**
MKAR	**Makanchi Array**	**12.78**	**36**	*i* P		**Pn**	**16 57 23.2**	**-0.4**
MKAR	comp=Z,8.0nm,0.7s			pmax	pmax			
JHNI	**Jhansi**	**12.90**	**150**	*e*P		**Pn**	**16 57 24.1**	**-1.1**
JHNI				*e*S		Sn	16 59 37.7	-9.5
BRZS	**Berezniki**	**13.13**	**4**	*e*P		**Pn**	**16 57 24.3**	**-3.8**
BRZS	comp=Z,4.0nm,0.7s			pmax	pmax			
BRZS	**Berezniki** comp=Z,4.4nm,0.7s,baz=3.7	**13.13**	**4**	*e*P		**Pn**	**16 57 24.3**	**-3.8**
WMQ	**Urumqi**	**14.20**	**56**	*e*P		**P**	**16 57 45.1**	**-1.2**
ZSN	**Zaisan**	**14.50**	**39**	*e*P		**Pn**	**16 57 44.3**	**-1.5**
ZSN	**Zaisan** baz=40	**14.50**	**39**	*e*P		**Pn**	**16 57 44.4**	**-1.5**
ALBI	**Allahabad**	**14.55**	**140**	*e*P		**Pn**	**16 57 45.0**	**-1.6**
ALBI				*e*S		Sn	17 00 16.0	-11
KURBB	**Kurchatov Arra** comp=Z,1.8nm,0.7s,baz=212,slow=12,SNR=18	**14.66**	**18**	P		**Pn**	**16 57 45.2**	**-2.5**
KURBB	**Kurtatov Arra**	**14.66**	**18**	P		**Pn**	**16 57 43.7**	**-4.0**
KURBB	**Kurchatov Arra** comp=Z,17nm,0.7s	**14.66**	**18**	⇓P		**Pn**	**16 57 43.8**	**-4.0**
KURK	**Kurchatov**	**14.76**	**18**	Pn		**Pn**	**16 57 46.7**	**-2.4**
KURK	**Kurchatov**	**14.76**	**18**	P		**Pn**	**16 57 46.7**	**-2.4**
AB31	**Akbulak array**	**14.93**	**330**	*i* P		**Pn**	**16 57 47.3**	**-3.9**
AB31	comp=Z,15nm,0.5s			pmax	pmax			
AB31	**Akbulak array** comp=Z,15nm,0.5s,baz=139,slow=12,SNR=315	**14.93**	**330**	⇑P		**Pn**	**16 57 47.3**	**-3.9**
ABKAR	**Akbulak array**	**14.93**	**330**	Pn		**Pn**	**16 57 47.4**	**-3.8**
ABKAR	**Akbulak array**	**14.93**	**330**	Pn		**Pn**	**16 57 47.4**	**-3.8**
SEM	**Semipalatinsk**	**14.94**	**22**	*e*P		**Pn**	**16 57 48.6**	**-3.0**
SEM	**Semipalatinsk** baz=23	**14.94**	**22**	*e*P		**Pn**	**16 57 48.6**	**-3.0**
JBP	**Jabalpur**	**15.53**	**149**	*e*P		**Pn**	**16 57 59.0**	**-0.1**
JBP				*e*S		Sn	17 00 37.2	-14
BRVK	**Borovoye**	**16.20**	**358**	Pn		**Pn**	**16 58 05.7**	**-1.4**
BRVK	comp=Z,22nm,0.7s			IAmb	IAmb	IAmb	16 58 09.8	
BRVK	**Borovoye**	**16.20**	**358**	*i* P		**Pn**	**16 58 03.8**	**-3.3**
BRVK	comp=Z,19nm,0.8s			pmax	pmax			
BRVK	**Borovoye** comp=Z,19nm,0.8s	**16.20**	**358**	⇑P		**Pn**	**16 58 03.8**	**-3.3**
AKTO	**Aktyubinsk** comp=Z,24nm,0.8s,baz=139,slow=13,SNR=36	**16.63**	**329**	P		**Pn**	**16 58 10.7**	**-1.8**
AKTO	comp=Z,35nm,18.6s,baz=122,slow=41			LR		LR	17 05 39.8	
AKL	**Akola**	**16.84**	**162**	*e*P		**P**	**16 58 15.5**	**-0.1**
AKL				*e*S		**Sn**	**17 01 13.0**	**-9.4**
UOSS	**Minazif**	**17.64**	**232**	P		**P**	**16 58 22.4**	**-2.0**
UOSS	comp=Z,16nm,1.1s			IAmb	IAmb	IAmb	16 58 38.9	
LSA	**Lhasa**	**17.96**	**108**	P		**Pn**	**16 58 30.8**	**+1.6**
LSA				S		**S**	**17 01 40.0**	**-9.4**
BOK	**Bokaro**	**18.02**	**132**	*e*S		S	17 01 36.2	-14
GOMU	**GeErMu**	**18.80**	**85**	P		**Pn**	**16 58 41.8**	**+2.7**
GOMU	comp=Z,17nm,0.8s			pmax	pmax			
GOMU	comp=Z,60nm,4.2s			pmax	pmax			
ZAA0	**Zalesovo Array**	**19.43**	**24**	P		**P**	**16 58 43.5**	**-0.2**
ZAA0	comp=Z,14nm,0.6s			IAmb	IAmb	IAmb	16 58 46.6	
ZALV	**Zalesovo Beam** comp=Z,12nm,0.5s,baz=221,slow=11,SNR=40	**19.43**	**24**	P		**P**	**16 58 43.6**	**0.0**
ZALV	**Zalesovo Beam**	**19.43**	**24**	P		**P**	**16 58 43.5**	**-0.2**
HYBB	**Hyderabad (bro**	**20.38**	**160**	*e*P		Pn	16 58 57.9	+0.6
GROC	**Groznyy**	**20.57**	**296**	*e*P		**P**	**16 58 54.8**	**-1.3**
GROC				*e**PP		**pP**	**16 59 14.8**	**-1.9**
GROC				*e**SP		**sP**	**16 59 27.7**	**-2.6**
GROC				*e*S		**S**	**17 02 37.8**	**-2.4**
GROC				*e**SS		**sS**	**17 03 12.5**	**-2.4**
GROC	comp=Z,18nm,0.4s			pmax	pmax			
SVE	**Sverdlovsk**	**21.23**	**343**	*e*P		**P**	**16 59 02.9**	**-0.1**
SVE				*e*S		**S**	**17 02 53.5**	**+0.8**
SVE	comp=Z,21nm,1.0s			pmax	pmax			
ARU	**Arti** comp=Z,4.7nm,0.5s,baz=135,slow=7.4,SNR=12	**21.39**	**340**	P		**P**	**16 59 05.1**	**+0.4**
ARU	comp=Z,48nm,21.9s,baz=140,slow=38			LR		LR	17 07 57.1	
ARU	**Arti** comp=Z,4.7nm,0.5s	**21.39**	**340**	P		**P**	**16 59 03.8**	**-0.9**
ARU	comp=Z,12nm,0.8s			IAmb	IAmb	IAmb	16 59 11.6	
ARU	**Arti**	**21.39**	**340**	*c* iP		**P**	**16 59 05.1**	**+0.4**
ARU				*PP		**pP**	**16 59 28.0**	**+2.0**
ARU							16 59 42.5	
ARU				S		**S**	**17 02 54.9**	**-1.0**
ARU				SS		**SnSn**	**17 03 38.9**	**+10**
ARU	comp=Z,12nm,0.9s			pmax	pmax			
ZEI	**Tsey**	**21.89**	**294**	*e*P		**P**	**16 59 15.5**	**+5.0**
ZEI	comp=Z,4.0nm,0.7s			pmax	pmax			
GTA	**Gaotai**	**22.43**	**75**	⇓P		**P**	**16 59 17.9**	**+1.9**
GTA	comp=Z,34nm,0.9s			pmax	pmax			
GTA	comp=Z,78nm,4.4s			pmax	pmax			
GTA	comp=Z,79nm,14.9s			LR	LR			
GTA	comp=Z,110nm,17.1s			LR	LR			
GTA	comp=Z,67nm,18.5s			LR	LR			
BELG	**Belogornoye** comp=Z,22nm,0.7s,baz=47,slow=1.2,SNR=4.0	**22.81**	**320**	P		**P**	**16 59 20.3**	**+0.8**
BELG	**Belogornoye** comp=Z,22nm,0.7s	**22.81**	**320**	⇑*e*P		**P**	**16 59 19.8**	**+0.3**
BELG				pmax	pmax			
KIV	**Kislovodsk** comp=Z,4.0nm,0.6s	**22.92**	**297**	*e*P		**P**	**16 59 22.6**	**+1.8**
KIV				*e*S		**S**	**17 03 22.8**	**+0.2**
KIV	comp=Z,4.0nm,1.0s			pmax	pmax			
KIRV	**Kirov** comp=Z,30nm,18.0s,baz=336,slow=41	**26.05**	**333**	LR		LR	17 12 11.0	
ZAK	**Zakamensk**	**26.48**	**49**	*e*P		**P**	**16 59 54.5**	**+1.4**
ZAK	comp=Z,5.0nm,1.5s			pmax	pmax			
CD2	**Chengdu**	**27.41**	**93**	*e*P		**P**	**17 00 03.3**	**+1.7**
PZH	**PanZhiHua**	**27.69**	**103**	P		**P**	**17 00 07.6**	**+3.4**
PZH	comp=Z,10.0nm,0.6s			pmax	pmax			
PZH	comp=Z,90nm,4.9s			pmax	pmax			
SONM	**Songino Array** comp=Z,4.0nm,0.8s,baz=256,slow=10,SNR=22 comp=Z,4.0nm,0.8s	**27.84**	**56**	P		**P**	**17 00 06.9**	**+1.6**
BRTR	**Keskin Array B** comp=Z,0.8nm,0.6s,baz=110,slow=9.2,SNR=8.4	**29.65**	**287**	P		**P**	**17 00 24.1**	**+2.6**
BRTR	**Keskin Array B**	**29.65**	**287**	*i* P		**P**	**17 00 24.6**	**+3.1**
BRTR	comp=Z,1.0nm,0.6s			pmax	pmax			
OBN	**Obninsk**	**29.88**	**319**	*e*P		**P**	**17 00 23.1**	**0.0**
OBN				*e*			17 03 24.1	
OBN	comp=Z,6.0nm,1.0s			pmax	pmax			
CMAR	**Chiang Mai Arr** comp=Z,1.4nm,0.9s,baz=307,slow=8.9,SNR=9.0 comp=Z,1.4nm,0.9s	**30.34**	**120**	P		**P**	**17 00 29.2**	**+1.7**
XAN	**Xi'an**	**30.55**	**84**	⇑P		**P**	**17 00 30.9**	**+1.6**
XAN				pP		pP	17 00 49.3	-4.7
XAN	comp=Z,8.0nm,1.2s			pmax	pmax			
EIL	**Elat** comp=Z,72nm,18.5s,baz=88,slow=44	**31.19**	**267**	LR		LR	17 17 05.5	
HHC	**Hu-ho-hao-te**	**31.31**	**70**	*e*P		**P**	**17 00 40.3**	**+4.2**
AKASG	**Malin Array Be** comp=Z,1.3nm,0.6s,baz=80,slow=7.3,SNR=11 comp=Z,1.3nm,0.6s	**32.98**	**308**	P		**P**	**17 00 51.1**	**+0.7**
AKBB	**Malin Array Si**	**32.98**	**308**	⇓*e*P		**P**	**17 00 51.2**	**+0.8**
KIEV	**Kiev**	**32.99**	**308**	P		**P**	**17 00 51.0**	**+0.5**
KMPD	**K-Podol'skiy**	**34.56**	**304**	P		**P**	**17 01 05.0**	**+0.9**
FIA1	**FINESS Array S**	**37.36**	**326**	P		**P**	**17 01 28.5**	**+0.7**
FIA1	comp=Z,11nm,1.1s			IAmb		IAmb	17 01 48.3	
FINES	**FINESS Array B** comp=Z,3.7nm,0.5s,baz=114,slow=8.6,SNR=30	**37.36**	**326**	P		**P**	**17 01 28.8**	**+1.0**
FINES	comp=Z,37nm,18.9s,baz=200,slow=38 comp=Z,3.7nm,0.5s			LR		LR	17 17 59.8	
FINES	**FINESS Array B**	**37.36**	**326**	P		**P**	**17 01 28.0**	**+0.2**
FINES	**FINESS Array B**	**37.36**	**326**	*i* P		**P**	**17 01 28.7**	**+0.9**
FINES	comp=Z,4.0nm,0.5s			pmax	pmax			
ARA0	**ARCESS Array S**	**40.93**	**337**	*e*P		**P**	**17 01 58.4**	**+1.0**
ARCES	**ARCESS Array B** comp=Z,2.1nm,0.5s,baz=108,slow=8.2,SNR=28	**40.93**	**337**	P		**P**	**17 01 58.6**	**+1.1**
ARCES	comp=Z,80nm,19.1s,baz=94,slow=38 comp=Z,2.1nm,0.5s			LR		LR	17 20 04.6	
ARCES	**ARCESS Array B**	**40.93**	**337**	P		**P**	**17 01 58.5**	**+1.1**
ARCES	comp=Z,5.8nm,1.1s			IAmb		IAmb	17 02 01.3	
KTK1	**Kautokeino**	**41.41**	**336**	*e*P		**P**	**17 02 02.3**	**+1.0**
ZEA	**Zeya**	**41.56**	**48**	*e*P		**P**	**17 02 05.3**	**+2.5**
ZEA	comp=Z,10.0nm,0.8s			pmax	pmax			
HAMF	**Hammerfest**	**42.00**	**338**	*e*P		**P**	**17 02 06.3**	**+0.2**
GERES	**GERESS Array B** comp=Z,0.2nm,0.6s,baz=118,slow=3.8,SNR=4.3	**42.99**	**305**	PcP		**PcP**	**17 04 04.3**	**+1.2**
TRO	**Tromso**	**43.06**	**336**	*e*P		**P**	**17 02 15.0**	**+0.3**
YAK	**Yakutsk** comp=Z,36nm,18.5s,baz=88,slow=37	**43.46**	**36**	LR		LR	17 21 05.3	
YAK	**Yakutsk**	**43.46**	**36**	P		**P**	**17 02 17.7**	**-0.2**
YAK	**Yakutsk**	**43.46**	**36**	*e*P		**P**	**17 02 17.8**	**-0.2**
YAK				*e*			17 02 46.5	
YAK	comp=Z,12nm,0.8s			pmax	pmax			
YAK	comp=N,3.0nm,1.1s			pmax	pmax			
YAK	comp=E,2.0nm,1.0s			pmax	pmax			
MOR8	**Moi Rana**	**43.66**	**330**	*e*P		**P**	**17 02 20.0**	**+0.4**
NC602	**NORSAR Array S**	**44.10**	**322**	*e*P		**P**	**17 02 23.6**	**+0.4**
NORES	**NORESS Array B**	**44.10**	**322**	P		**P**	**17 02 23.6**	**+0.4**
NB2	**NORSAR Subarra** baz=96,slow=7.9	**44.29**	**323**	P		**P**	**17 02 25.2**	**+0.5**
NB2	**NORSAR Subarra** comp=Z,0.9nm,0.4s,baz=96,slow=7.9	**44.29**	**323**	P		**P**	**17 02 25.2**	**+0.5**
NOA	**NORSAR Array B** comp=Z,1.9nm,0.5s,baz=107,slow=7.1,SNR=13	**44.29**	**323**	P		**P**	**17 02 25.1**	**+0.5**
NOA	comp=Z,15nm,20.9s,baz=85,slow=38 comp=Z,1.9nm,0.5s			LR		LR	17 22 06.9	
KSRS	**Korea Array** comp=Z,0.7nm,0.6s,baz=278,slow=6.9,SNR=5.5 comp=Z,0.7nm,0.6s	**44.43**	**71**	P		**P**	**17 02 25.5**	**-0.6**
KLR	**Kul'dur** comp=Z,52nm,18.7s,baz=162,slow=41	**44.65**	**54**	LR		LR	17 24 36.4	
KONO	**Kongsberg**	**45.01**	**321**	*e*P		**P**	**17 02 30.6**	**+0.2**
TIXI	**Tiksi**	**45.30**	**22**	P		**P**	**17 02 33.0**	**+0.5**
TIXI	**Tiksi**	**45.30**	**22**	P		**P**	**17 02 33.0**	**+0.5**
TIXI	comp=Z,13nm,0.5s			pmax	pmax			
SKAR	**Skarslia**	**45.69**	**322**	*e*P		**P**	**17 02 35.5**	**-0.3**
PPSI	**Pulau Pagai**	**47.57**	**140**	P		**P**	**17 02 53.8**	**+2.9**
KRJI	**Kerinci** comp=Z,44nm,0.5s	**47.77**	**138**	P		**P

ILAR	**Eielson Array**	**74.32**	**16**	P		**P**	**17 05 49.6**	**-1.7**
J25K	**Salcha River,**	**74.79**	**16**	P		**P**	**17 05 54.0**	**-0.1**
KNRA	**Kununurra**	**75.14**	**123**	P		**P**	**17 05 58.1**	**+1.4**
J26L	**Joseph Creek**	**75.27**	**15**	P		**P**	**17 05 57.1**	**+0.2**
J26L				IAmb		IAmb	17 05 58.0	
	comp=Z,2.3nm,0.7s							
SCRK	**Sand Creek**	**75.64**	**15**	P		**P**	**17 05 59.6**	**+0.5**
DHY	**Denali Highway**	**75.67**	**17**			**P**	**17 05 58.5**	**-0.8**
DHY				IAmb		IAmb	17 06 00.4	
	comp=Z,4.7nm,0.6s							
PAX	**Paxson**	**76.20**	**16**	P		**P**	**17 06 02.3**	**+0.1**
PAX				IAmb		IAmb	17 06 03.4	
	comp=Z,3.2nm,0.7s							
PAX	**Paxson**	**76.20**	**16**	P		**P**	**17 06 02.3**	**+0.1**
PAX				pmax		pmax		
	comp=Z,3.0nm,0.7s							
BCAR	**Beaver Creek A**	**76.91**	**15**	P		**P**	**17 06 07.6**	**+1.4**
BOSA	**Boshof**	**78.26**	**220**	P		**P**	**17 06 15.2**	**+1.1**
	comp=Z,4.1nm,1.1s,baz=314,slow=1.8,SNR=4.6							
	comp=Z,4.1nm,1.1s							
BOSA	**Boshof**	**78.26**	**220**	P		**P**	**17 06 14.8**	**+0.7**
YKA	**Yellowknife Ar**	**80.85**	**3**	P		**P**	**17 06 28.5**	**+0.9**
	comp=Z,4.8nm,0.8s,baz=353,slow=5.3,SNR=9.3							
	comp=Z,4.8nm,0.8s							
P33M	**Teslin, Yukon**	**81.22**	**12**	P		**P**	**17 06 29.2**	**-0.5**
P33M				IAmb		IAmb	17 06 31.2	
	comp=Z,4.8nm,0.9s							
WRA	**Warramunga Arr**	**81.90**	**122**	P		**P**	**17 06 33.6**	**0.0**
	comp=Z,4.1nm,0.8s,baz=322,slow=5.0,SNR=37							
	comp=Z,4.1nm,0.8s							
WRA	**Warramunga Arr**	**81.90**	**122**	P		**P**	**17 06 33.8**	**0.0**
WRA	**Warramunga Arr**	**81.90**	**122**	P		**P**	**17 06 33.8**	**0.0**
WB2	**Warramunga Arr**	**81.91**	**122**	P		**P**	**17 06 33.9**	**+0.1**
WB2				IAmb		IAmb	17 06 35.0	
	comp=Z,6.3nm,0.8s							
WR0	**Warramunga Arr**	**82.05**	**122**	P		**P**	**17 06 34.5**	**0.0**
WR0				IAmb		IAmb	17 06 38.7	
	comp=Z,5.2nm,1.1s							
AS31	**Alice Springs**	**84.19**	**125**	P		**P**	**17 06 45.6**	**0.0**
ASAR	**Alice Springs**	**84.19**	**125**	P		**P**	**17 06 45.6**	**+0.1**
ASAR	**Alice Springs**	**84.19**	**125**	P		**P**	**17 06 45.6**	**+0.1**
FORT	**Forrest**	**85.68**	**134**	P		**P**	**17 06 52.7**	**-0.1**
TROLL	**Troll, Antarti**	**118.57**	**199**	PKPdf		**PKiKP**	**17 13 00.6**	**+0.3**
SNAA	**Sanae**	**119.87**	**201**	PKPdf		**PKiKP**	**17 13 03.7**	**+1.0**
VNA3	**Neumayer Olymp**	**121.69**	**202**	PKPdf		**PKiKP**	**17 13 06.5**	**+0.3**

NNC ***18*** *17:23:32.9±0.5,45°.88N×80°.89E,h0km,mb4.0,mpv3.8, Error ellipse: s-maj=12.5km s-min=2.7km az=133.0*

SOME ***18*** *17:23:34.2,45°.85N×80°.83E,h10km*

ISC 18 17:23:32.6±0.8,45°.89N±0°.03×80°.90E±0°.04,h10km,n37, σ2s54/56,5C-5D,Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MAKZ	**Makanchi**	**1.18**	**39**	⇑P		**Pn**	**17 23 55.6**	**+0.4**
	19nm,0.3s							
MAKZ				⇑S		**Sb**	**17 24 11.5**	**+0.9**
	51nm,0.2s							
MK31	**Makanchi Array**	**1.32**	**46**	⇓P		**Pn**	**17 23 58.2**	**+1.0**
	10nm,0.2s,baz=220,slow=17,SNR=1427							
MK31				⇓S		**Sb**	**17 24 15.3**	**+0.8**
	218nm,0.5s							
DJR	**Jarkent**	**1.74**	**207**	*eP*		**Pb**	**17 24 05.3**	**+0.5**
	92nm,0.2s							
DJR				*eS*		**Sb**	**17 24 26.9**	**+0.2**
	310nm,0.3s							
DJR	**Jarkent**	**1.74**	**207**	P		**Pb**	**17 24 05.3**	**+0.5**
	92nm,0.2s							
DJR				S		**Sb**	**17 24 26.9**	**+0.2**
	186nm,0.4s							
TDK	**Taldyqorghan**	**1.97**	**244**	*eP*		**Pb**	**17 24 09.4**	**+0.8**
	165nm,0.4s							
TDK				*eS*		**Sg**	**17 24 34.4**	**-1.5**
	459nm,0.3s							
TDK	**Taldyqorghan**	**1.97**	**244**	P		**Pb**	**17 24 09.4**	**+0.8**
	165nm,0.4s							
TDK				S		**Sg**	**17 24 34.4**	**-1.5**
	459nm,0.3s							
ARXS	**Arharly**	**2.75**	**234**	*eP*		**Pb**	**17 24 23.0**	**+1.1**
	14nm,0.3s							
ARXS				*eS*		**Sb**	**17 24 57.4**	**+1.7**
	168nm,0.4s							
ARXS	**Arharly**	**2.75**	**234**	Pg		**Pb**	**17 24 23.0**	**+1.1**
	14nm,0.3s							
ARXS				Lg		Lg	17 24 57.4	
	168nm,0.4s							
KPKS	**Kokpek**	**2.89**	**214**	*eP*		**Pb**	**17 24 25.9**	**+1.5**
	24nm,0.1s							
KPKS				*eS*		**Sb**	**17 25 01.9**	**+2.1**
	702nm,0.4s							
KPKS	**Kokpek**	**2.89**	**214**	Pg		**Pb**	**17 24 25.9**	**+1.5**
	24nm,0.1s							
KPKS				Lg		Lg	17 25 01.9	
	702nm,0.4s							
UZB	**Uzynbulak**	**3.05**	**207**	*eP*		**Pb**	**17 24 28.4**	**+1.3**
	5.7nm,0.3s							
UZB				*eS*		**Sb**	**17 25 06.1**	**+1.6**
	142nm,0.4s							
UZB	**Uzynbulak**	**3.05**	**207**	Pg		**Pb**	**17 24 28.4**	**+1.3**
	5.7nm,0.3s							
UZB				Lg		Lg	17 25 06.1	
	142nm,0.4s							
ZSN	**Zaisan**	**3.14**	**59**	*eP*		**Pb**	**17 24 28.5**	**-0.1**
	7.6nm,0.3s							
ZSN				*eS*		**Sb**	**17 25 07.6**	**+0.7**
	62nm,0.6s							
ZSN	**Zaisan**	**3.14**	**59**	Pg		**Pb**	**17 24 31.1**	**+2.5**
	8.4nm,0.4s							
ZSN				Lg		Lg	17 25 10.5	
	56nm,0.6s							
ZHN	**Zhinishke**	**3.24**	**214**	*eP*		**Pb**	**17 24 32.1**	**+1.8**
	32nm,0.3s							
ZHN				*eS*		**Sb**	**17 25 12.5**	**+2.6**
	202nm,0.3s							
ZHN	**Zhinishke**	**3.24**	**214**	Pg		**Pb**	**17 24 32.1**	**+1.8**
	32nm,0.3s							
ZHN				Lg		Lg	17 25 12.5	
	202nm,0.3s							
SATY	**Saty**	**3.35**	**213**	*eP*		**Pb**	**17 24 34.0**	**+1.9**
	10nm,0.2s							
SATY				*eS*		**Sb**	**17 25 15.7**	**+2.8**
	211nm,0.3s							
SATY	**Saty**	**3.35**	**213**	Pg		**Pb**	**17 24 34.0**	**+1.9**
	10nm,0.2s							
SATY				Lg		Lg	17 25 15.7	
	211nm,0.3s							
CHKK	**Chushkaly**	**3.45**	**235**	*eP*		**Pg**	**17 24 37.1**	**-1.5**
	8.8nm,0.3s							
CHKK				*eS*		**Sg**	**17 25 19.5**	**-3.8**
	108nm,0.3s							
CHKK	**Chushkaly**	**3.45**	**235**	Pg		**Pg**	**17 24 37.1**	**-1.5**
	8.8nm,0.3s							
CHKK				Lg		Lg	17 25 19.5	
	108nm,0.3s							
KTBS	**Karatobe**	**3.71**	**236**	*eP*		**Pg**	**17 24 41.5**	**-2.2**
	18nm,0.5s							
KTBS				*eS*		**Sg**	**17 25 28.2**	**-3.5**
	73nm,0.4s							
KTBS	**Karatobe**	**3.71**	**236**	Pg		**Pg**	**17 24 41.5**	**-2.2**
	18nm,0.5s							
KTBS				Lg		Lg	17 25 28.2	
	73nm,0.4s							
TNSS	**Tian-Shan**	**4.02**	**226**	*eP*		**Pb**	**17 24 46.2**	**+2.5**
	5.6nm,0.3s							
TNSS				*eS*		**Sb**	**17 25 36.7**	**+4.2**
	21nm,0.6s							
TNSS	**Tian-Shan**	**4.02**	**226**	Pg		**Pb**	**17 24 46.2**	**+2.5**
	5.6nm,0.3s							
TNSS				Lg		Lg	17 25 36.7	
	21nm,0.6s							
MTBS	**Maitube**	**4.22**	**231**	*eP*		**Pb**	**17 24 50.5**	**+3.5**
	4.9nm,0.2s							
MTBS				*eS*		**Sg**	**17 25 44.0**	**-4.3**
	64nm,0.4s							
MTBS	**Maitube**	**4.22**	**231**	Pg		**Pb**	**17 24 50.5**	**+3.5**
	4.9nm,0.2s							
MTBS				Lg		Lg	17 25 43.9	
	64nm,0.4s							
KST	**Kastek**	**4.54**	**233**	*eP*		**Pg**	**17 24 56.5**	**-3.0**
	5.0nm,0.4s							
KST				*eS*		**Sg**	**17 25 54.6**	**-3.7**
	31nm,0.7s							
KST	**Kastek**	**4.54**	**233**	Pg		**Pg**	**17 24 56.5**	**-3.0**
	5.0nm,0.4s							
KST				Lg		Lg	17 25 54.6	
	31nm,0.7s							
SEM	**Semipalatinsk**	**4.54**	**355**	*eP*		**Pg**	**17 24 58.4**	**-1.2**
SEM				*eS*		**Sg**	**17 25 56.6**	**-1.8**
SEM	**Semipalatinsk**	**4.54**	**355**	Pg		**Pg**	**17 24 58.4**	**-1.2**
SEM				Lg		Lg	17 25 56.6	
TKM2	**Tokmak 2**	**4.82**	**234**	⇑Pg		**Pb**	**17 25 01.0**	**+3.7**
	3.2nm,0.5s							
TKM2				⇓Lg		Lg	17 26 04.6	
	26nm,0.7s							
KURBB	**Kurchatov Arra**	**5.00**	**342**	Pg		**Pb**	**17 25 02.0**	**+1.9**
KURBB				Lg		Lg	17 26 11.6	
KURK	**Kurchatov**	**5.07**	**343**	⇓Pg		**Pb**	**17 25 03.7**	**+2.4**
	3.7nm,0.6s							
KURK				⇓Lg		Lg	17 26 12.6	
	104nm,0.9s							
SGDS	**Sogindy**	**5.09**	**244**	*eP*		**Pb**	**17 25 06.2**	**+4.4**
	2.9nm,0.7s							
SGDS				*eS*		**Sg**	**17 26 11.6**	**-4.5**
	21nm,0.5s							
SGDS	**Sogindy**	**5.09**	**244**	Pg		**Pb**	**17 25 06.2**	**+4.4**
	2.9nm,0.7s							
SGDS				Lg		Lg	17 26 11.6	
	21nm,0.5s							
BRZS	**Berezniki**	**6.88**	**310**	*eP*		Pb	17 25 39.4	+7.2
	0.8nm,0.1s							
BRZS				*eS*		**Sg**	**17 27 06.7**	**-6.5**
	35nm,0.6s							
KK31	**Karatay Array**	**7.93**	**253**	⇑Pn		**Pn**	**17 25 29.1**	**+1.1**
	0.2nm,0.3s,baz=68,slow=12,SNR=14							
KK31				⇑Lg		Lg	17 27 43.9	
	4.6nm,0.6s,baz=70,slow=27,SNR=5.5							

MAN 18 17:28:07.0,9°.10N×126°.75E,h8km,mb4.1,ML2.9,MS2.6, Mindanao

BJI ***18*** *17:29:42.7±0.0,23°.81S×67°.56W,h153km,mB5.4/42*

MOS ***18*** *17:29:44.7±1.3,24°.10S×67°.02W,h174km,mb5.4/20, Error ellipse: s-maj=9.6km s-min=5.6km az=104.3*

IDC ***18*** *17:29:44.6±0.7,24°.14S×66°.94W,h163km±5km,mb5.0/18, mbtmp5.5/25,MS4.5/24, Error ellipse: s-maj=9.8km s-min=8.0km az=52.0*

SJA ***18*** *17:29:44.8±1.7,24°.17S×67°.10W,h150km,ML5.6,MW5.3*

VAO ***18*** *17:29:44.8±0.4,24°.17S×67°.03W,h176km±3km,mb5.6*

GUC ***18*** *17:29:46.7±0.6,24°.19S×67°.50W,h199km±5km,ML6.0*

NEIC ***18*** *17:29:46.5±2.7,24°.15S±0°.05×67°.15W±0°.07,h186km±1km, mb5.5/580,Mwb5.7/58,Mww5.7,Md5.5(SJA),Mwr5.7(GUC), Error ellipse: s-maj=11.6km s-min=9.0km az=88.0*

NEIC ***18*** *17:29:46.2,24°.23S×67°.10W,h182km,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr=3.07; Mθθ=-0.25; Mφφ3.31; Mrθ0.84; Mθφ0.31; Mφr-3.05; Fault plane solution: Mo4.51000×10¹⁷ NP1:φs350.69000°, δ67.76000°,λ-101.78000°. NP2:φs199.55000°, δ25.03000°,λ-63.47000°. Principal axes: T 4.5384, Plg22.0000°, Azm90.0000°; N -0.0595, Plg11.0000°, Azm355.0000°; P -4.4788, Plg65.0000°, Azm240.0000°;*

GCMT ***18*** *17:29:49.5±0.1,24°.21S±0°.01×67°.27W±0°.01,h192km, MW5.7/154, Moment Tensor Solution. s139,c251; s154,c305; Duration: 1s8 Moment tensor: Scale 10¹⁷ Nm; Mrr-3.16±.04; Mθθ-0.24±.05; Mφφ3.40±.06; Mrθ0.73±.04; Mθφ-0.23±.05; Mφr-3.51±.04; Best double couple: Mo4.86600×10¹⁷ NP1:φs183.00000°,δ22.00000°, λ-78.00000°. NP2:φs350.00000°,δ69.00000°, λ-95.00000°. Principal axes: T 4.9730, Plg24.0000°, Azm84.0000°; N -0.2170, Plg5.0000°, Azm352.0000°; P -4.7590, Plg66.0000°, Azm252.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***18*** *17:29:50,24°.31S×67°.20W,h170km,Moment Tensor Solution. Duration: 12s0 Moment tensor: Scale 10¹⁷Nm; Mrr-2.96; Mθθ0.09; Mφφ2.87; Mrθ1.11; Mθφ0.13; Mφr-3.51; Fault plane solution: Mo4.70000×10¹⁷ NP1: φs195.00000°,δ21.00000°,λ-64.00000°. NP2: φs347.00000°,δ71.00000°,λ-99.00000°. Principal axes: T 4.5452, Plg26.0000°, Azm85.0000°; N 0.2881, Plg9.0000°, Azm350.0000°; P -4.8333, Plg63.0000°, Azm243.0000°;*

ISC 18 17:29:45.4±0.2,24°.21S±0°.02×67°.15W±0°.03,h178km±1km, h178km:pP-P,n1493,σ1s68/1686,mb5.4/332,77C-476D, Fault plane solution: NP1:φs204.49251°,δ18.91300°, λ-92.77573°. NP2:φs27.42637°,δ71.11003°,λ-89.04942°. Principal axes: T Plg26.1042°, Azm116.6779°; N Plg0.8994°, Azm207.1186°; P Plg63.8780°, Azm298.9532°; Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AF01	**San Pedro de A**	**1.57**	**323**			**Pn**	**17 30 18.8**	**+0.6**
AF01				Sn		**Sn**	**17 30 44.6**	**+1.0**
AF01	**San Pedro de A**	**1.57**	**323**	⇑*i*P		**Pn**	**17 30 19.1**	**+0.9**
AF01				*e*S		**Sn**	**17 30 43.6**	**+0.1**
SLA	**San Lorenzo**	**1.58**	**109**	⇓*i*P		**Pn**	**17 30 19.1**	**+1.0**
SLA				*i* S		**Sn**	**17 30 44.7**	**+1.3**
SLA	**San Lorenzo**	**1.58**	**109**	*e*P		**Pn**	**17 30 19.1**	**+1.0**
SLA				*e*S		**Sn**	**17 30 45.7**	**+2.3**
SLA				IAML			17 30 46.4	
	comp=Z,14μm,1.3s							
HJA	**Humahuaca**	**1.88**	**58**	*e*P		**Pn**	**17 30 22.5**	**+1.0**
LVC	**Limon Verde**	**2.27**	**314**	P		**Pn**	**17 30 25.7**	**0.0**
	comp=Z,9μm,0.4s,baz=129,slow=8.3,SNR=6834							
LVC				S		**Sn**	**17 30 54.8**	**-2.1**
	comp=Z,11μm,0.3s,baz=25,slow=18,SNR=5.9							
LVC	**Limon Verde**	**2.27**	**314**			**Pn**	**17 30 25.7**	**0.0**
LVC				Sn		**Sn**	**17 30 55.4**	**-1.6**
LVC	**Limon Verde**	**2.27**	**314**	P		**Pn**	**17 30 25.0**	**-0.7**
LVC	**Limon Verde**	**2.27**	**314**	⇑*i*P		**Pn**	**17 30 25.7**	**0.0**
LVC				*e*S		**Sn**	**17 30 55.7**	**-1.3**
LVC	**Limon Verde**	**2.27**	**314**	*e*P		**Pn**	**17 30 26.0**	**+0.3**
PB15	**IPOC Station P**	**2.35**	**295**			**Pn**	**17 30 26.1**	**-0.4**
PB15	**IPOC Station P**	**2.35**	**295**	⇑*i*P		**Pn**	**17 30 26.2**	**-0.2**
PB15				*e*S		**Sn**	**17 30 55.6**	**-2.7**
PB15	**IPOC Station P**	**2.35**	**295**	*e*P		**Pn**	**17 30 26.0**	**-0.4**
PB15				*e*S		**Sn**	**17 30 57.8**	**-0.5**
PB15				IAML			17 31 02.2	
	comp=Z,86μm,0.2s							
GO02	**Mina Guanaco**	**2.41**	**246**			**Pn**	**17 30 26.7**	**-0.5**
GO02				Sn		**Sn**	**17 30 58.5**	**-1.2**
GO02	**Mina Guanaco**	**2.41**	**246**	*e*P		**Pn**	**17 30 26.5**	**-0.8**
GO02				*e*S		**Sn**	**17 30 58.1**	**-1.7**
GO02				IAML			17 31 01.6	
	comp=E,53μm,0.3s							
GO02	**Mina Guanaco**	**2.41**	**246**	*e*P		**Pn**	**17 30 26.0**	**-1.2**
GO02				*e*P		**Pn**	**17 30 26.7**	**-0.5**
GO02				*e*S		**Sn**	**17 30 59.5**	**-0.2**
YJA	**Yavi**	**2.52**	**37**	*e*P		**Pn**	**17 30 29.5**	**+0.8**
YJA				*e*S		**Sn**	**17 30 58.4**	**-3.9**
YJA				IAML			17 31 06.3	
	comp=Z,932nm,2.4s							
PB06	**IPOC Station P**	**2.69**	**304**			**Pn**	**17 30 29.2**	**-1.1**
PB06				Sn		**Sn**	**17 31 03.0**	**-2.2**
PB06	**IPOC Station P**	**2.69**	**304**	⇑*i*P		**Pn**	**17 30 29.9**	**-0.3**
PB06				*e*S		**Sn**	**17 31 02.6**	**-2.5**
PB06				IAML			17 31 06.1	
	comp=E,41μm,0.2s							
PB06	**IPOC Station P**	**2.69**	**304**	*e*P		**Pn**	**17 30 30.0**	**-0.3**
PB06				*e*S		**Sn**	**17 31 03.1**	**-2.0**
PB06				IAML			17 31 09.2	
	comp=Z,29μm,0.8s							
PB14	**IPOC Station P**	**3.00**	**261**	Pn		**Pn**	**17 30 32.9**	**-1.2**
PB14				Sn		**Sn**	**17 31 08.1**	**-4.0**
PB14	**IPOC Station P**	**3.00**	**261**	⇑*i*P		**Pn**	**17 30 32.9**	**-1.2**
PB14				*e*S		**Sn**	**17 31 08.7**	**-3.4**
PB14	**IPOC Station P**	**3.00**	**261**	*e*P		**Pn**	**17 30 33.2**	**-0.9**
PB14				*e*S		**Sn**	**17 31 09.9**	**-2.2**
PB14				IAML			17 31 15.1	
	comp=Z,14μm,0.7s							
PB09	**IPOC Station P**	**3.08**	**321**			**Pn**	**17 30 35.1**	**0.0**
PB09				Sn		**Sn**	**17 31 12.1**	**-1.8**
PB09	**IPOC Station P**	**3.08**	**321**	⇑*i*P		**Pn**	**17 30 35.2**	**+0.1**
PB09				*i* S		**Sn**	**17 31 12.3**	**-1.6**
PB09				IAML			17 31 16.0	
	comp=N,30μm,0.5s							
PB09	**IPOC Station P**	**3.08**	**321**	*e*P		**Pn**	**17 30 35.0**	**-0.1**
PB09				*e*P		**Pn**	**17 30 35.5**	**+0.3**
PB09				*e*S		**Sn**	**17 31 13.2**	**-0.7**
PB09				IAML			17 31 15.3	
	comp=Z,21μm,0.6s							
AC02	**Maricunga**	**3.17**	**214**			**Pn**	**17 30 36.0**	**-0.4**
AC02	**Maricunga**	**3.17**	**214**	⇑*i*P		**Pn**	**17 30 36.0**	**-0.4**
AC02				*i* S		**Sn**	**17 31 15.6**	**-0.6**
AC02	**Maricunga**	**3.17**	**214**	*e*P		**Pn**	**17 30 36.0**	**-0.4**
AC02				*e*S		**Sn**	**17 31 11.2**	**-5.0**
AC02				IAML			17 31 21.2	
	comp=Z,4μm,0.9s							
PB10	**IPOC Station P**	**3.19**	**282**	Pn		**Pn**	**17 30 35.5**	**-0.8**
PB10	**IPOC Station P**	**3.19**	**282**	⇑*i*P		**Pn**	**17 30 35.5**	**-0.8**
PB10				*e*S		**Sn**	**17 31 11.4**	**-4.6**
PB10				IAML			17 31 20.8	
	comp=E,18μm,0.7s							
PB10	**IPOC Station P**	**3.19**	**282**	*e*P		**Pn**	**17 30 35.5**	**-0.8**
PB10				*e*S		**Sn**	**17 31 13.9**	**-2.1**
PB10				IAML			17 31 18.6	
	comp=Z,15μm,0.6s							
PB04	**IPOC Station P**	**3.33**	**304**			**Pn**	**17 30 37.0**	**-1.2**
PB04	**IPOC Station P**	**3.33**	**304**	⇑*i*P		**Pn**	**17 30 37.1**	**-1.0**
PB04				*e*S		**Sn**	**17 31 15.6**	**-3.8**
PB04				IAML			17 31 28.1	
	comp=N,30μm,0.4s							
PB04	**IPOC Station P**	**3.33**	**304**	*e*P		**Pn**	**17 30 37.2**	**-1.0**
PB04				*e*S		**Sn**	**17 31 16.5**	**-2.9**
PB04				IAML			17 31 21.8	
	comp=Z,30μm,0.6s							
PB07	**IPOC Station P**	**3.54**	**314**	Pn		**Pn**	**17 30 39.4**	**-1.4**
PB07	**IPOC Station P**	**3.54**	**314**	⇑*i*P		**Pn**	**17 30 39.8**	**-0.9**
PB07				*e*S		**Sn**	**17 31 19.9**	**-4.0**
PB07	**IPOC Station P**	**3.54**	**314**	*e*P		**Pn**	**17 30 39.9**	**-0.8**
PB07				*e*S		**Sn**	**17 31 21.3**	**-2.6**
PB07				IAML			17 31 23.5	
	comp=Z,30μm,0.4s							
AC01	**Pan de Azucar**	**3.67**	**238**	Pn		**Pn**	**17 30 40.1**	**-2.1**
AC01	**Pan de Azucar**	**3.67**	**238**	⇑*i*P		**Pn**	**17 30 40.2**	**-2.1**
AC01				*e*S		**Sn**	**17 31 22.2**	**-4.5**
AC01	**Pan de Azucar**	**3.67**	**238**	*e*P		**Pn**	**17 30 40.1**	**-2.1**
AC01				*e*S		**Sn**	**17 31 22.2**	**-4.5**
AC01				IAML			17 31 26.9	
	comp=Z,10μm,0.3s							
PB01	**IPOC Station P**	**3.83**	**325**			**Pn**	**17 30 43.0**	**-1.2**
PB01	**IPOC Station P**	**3.83**	**325**	⇑*i*P		**Pn**	**17 30 43.1**	**-1.2**
PB01				*e*S		**Sn**	**17 31 27.1**	**-3.3**
PB01	**IPOC Station P**	**3.83**	**325**	*e*P		**Pn**	**17 30 43.2**	**-1.0**
PB01				*e*P		**Pn**	**17 30 43.3**	**-1.0**
PB01				*e*S		**Sn**	**17 31 27.6**	**-2.7**
PB01				*e*S		**Sn**	**17 31 27.7**	**-2.7**
PB01				IAML			17 31 30.6	
	comp=Z,11μm,0.4s							
PB02	**IPOC Station P**	**3.84**	**318**			**Pn**	**17 30 43.0**	**-1.5**
PB02	**IPOC Station P**	**3.84**	**318**	⇑*i*P		**Pn**	**17 30 43.1**	**-1.3**
PB02				*e*S		**Sn**	**17 31 25.8**	**-4.8**
PB02	**IPOC Station P**	**3.84**	**318**	*e*P		**Pn**	**17 30 43.3**	**-1.2**
PB02				*e*S		**Sn**	**17 31 27.9**	**-2.7**
PB02				IAML			17 31 37.7	
	comp=Z,23μm,0.3s							
GO03	**Copiap**	**4.37**	**219**			**Pn**	**17 30 48.7**	**-2.4**
GO03	**Copiap**	**4.37**	**219**	⇑*i*P		**Pn**	**17 30 48.7**	**-2.4**
GO03				*e*S		**Sn**	**17 31 38.6**	**-4.0**
PATCX	**Punta Patache**	**4.37**	**320**			**Pn**	**17 30 49.1**	**-2.2**
PATCX	**Punta Patache**	**4.37**	**320**	⇑*i*P		**Pn**	**17 30 49.1**	**-2.2**
PATCX				*e*S		**Sn**	**17 31 34.4**	**-8.5**
PATCX	**Punta Patache**	**4.37**	**320**	*e*P		**Pn**	**17 30 49.4**	**-1.9**
PATCX				*e*P		**Pn**	**17 30 49.7**	**-1.6**
PATCX				*e*P		**Pn**	**17 30 50.0**	**-1.3**
PATCX				IAML			17 31 54.0	
	comp=Z,7μm,0.4s							
PB08	**IPOC Station P**	**4.46**	**335**			**Pn**	**17 30 52.1**	**-0.5**
PB08	**IPOC Station P**	**4.46**	**335**	⇑*i*P		**Pn**	**17 30 52.2**	**-0.5**
PB08				*e*S		**Sn**	**17 31 43.1**	**-2.3**
PB08	**IPOC Station P**	**4.46**	**335**	*e*P		**Pn**	**17 30 52.5**	**-0.2**
PB08				*e*S		**Sn**	**17 31 44.1**	**-1.2**
PB08				IAML			17 31 51.1	
	comp=Z,4μm,0.5s							
TA01	**Diego Aracena**	**4.59**	**322**			**Pn**	**17 30 51.5**	**-2.5**
TA01	**Diego Aracena**	**4.59**	**322**	⇑*e*P		**Pn**	**17 30 51.6**	**-2.4**
TA01	**Diego Aracena**	**4.59**	**322**	*e*P		**Pn**	**17 30 52.0**	**-2.0**
TA02	**Huaiquique**	**4.80**	**324**	Pn		**Pn**	**17 30 54.5**	**-2.2**
TA02	**Huaiquique**	**4.80**	**324**	*e*P		**Pn**	**17 30 54.3**	**-2.4**
TA02	**Huaiquique**	**4.80**	**324**	*e*P		**Pn**	**17 30 55.2**	**-1.5**
TA02				*e*S		**Sn**	**17 31 47.7**	**-4.9**
TA02				IAML			17 32 02.6	
	comp=Z,5μm,0.9s							
GO01	**Chusmiza**	**4.91**	**337**			**Pn**	**17 30 57.2**	**-1.4**
PB11	**IPOC Station P**	**5.00**	**332**	Pn		**Pn**	**17 30 56.7**	**-2.8**
PB11	**IPOC Station P**	**5.00**	**332**	*e*P		**Pn**	**17 30 57.6**	**-2.0**
PB11				*e*S		**Sn**	**17 31 53.8**	**-3.9**
PB11				IAML			17 31 56.8	
	comp=Z,4μm,0.5s							
ACLC	**CERRO LA CRUZ**	**5.19**	**178**	*e*P		**Pn**	**17 31 01.0**	**-0.9**
ACLC				IAML			17 32 07.9	
	comp=Z,362nm,2.3s							
AC04	**Llanos de Chal**	**5.31**	**221**	Pn		**Pn**	**17 30 59.8**	**-3.5**
LCO	**Las Campanas**	**5.74**	**213**	Pn		**Pn**	**17 31 05.7**	**-3.4**
LCO	**Las Campanas**	**5.74**	**213**	P		**Pn**	**17 31 05.7**	**-3.4**
PB16	**IPOC Station P**	**6.25**	**339**			**Pn**	**17 31 14.4**	**-1.8**
PB12	**IPOC Station P**	**6

LPA SKIKS 17 52 48.4
TRCB Terra Rica 13.39 87 Pn **Pn 17 32 48.2 -0.4**
TRCB Terra Rica 13.39 87 *eP* **Pn 17 32 45.9 -2.7**
ALGR Alto Alegre (B 13.44 113 *eP* **Pn 17 32 47.3 -1.9**
BI05 Punta Hualpn 13.53 201 Pn 17 32 49.3 -0.9
SALV Santo Antonio 13.56 55 *eP* **Pn 17 32 48.6 -2.2**
CPSB Cacapava Do Su 13.65 120 *eP* **Pn 17 32 49.8 -2.1**
PTGB Pitanga 13.75 95 *eP* **Pn 17 32 52.4 -0.7**
ITAB Concordia 13.87 106 Pn **Pn 17 32 53.2 -1.3**
ITAB Concordia 13.87 106 *eP* **Pn 17 32 52.7 -1.8**
VA04 Juan Fernndez 13.88 225 Pn **Pn 17 32 53.4 -1.2**
PLTB Pedras Altas 14.12 125 Pn **Pn 17 32 55.2 -2.5**
PLTB Pedras Altas 14.12 125 *eP* **Pn 17 32 55.0 -2.7**
ETMB Extrema 14.35 4 *eP* **Pn 17 32 57.7 -2.9**
C2SB Chapadao do Su 14.38 71 *eP* **Pn 17 32 59.7 -1.2**
NBRS Nobres 14.55 50 *eP* **Pn 17 33 02.6 -0.6**
PCMB Pacaembu 14.87 83 *eP* **Pn 17 33 04.7 -2.3**
NNA Nana 15.25 321 P **P 17 33 12.6 0.0**
comp=Z,117nm,0.7s,baz=165,slow=9.6,SNR=41
NNA ScP **ScP 17 41 24.3 +1.6**
comp=Z,5.0nm,0.3s,baz=210,slow=1.9,SNR=3.6
NNA Nana 15.25 321 P **Pn 17 33 09.8 -2.0**
NNA Nana 15.25 321 *c iP* **Pn 17 33 11.5 -0.2**
NNA pmax pmax
comp=Z,601nm,1.7s
CNLB Canela 15.41 113 *eP* **Pn 17 33 11.9 -1.8**
LC02 Puerto Saavedr 15.47 199 Pn **Pn 17 33 10.3 -3.8**
SAML Samuel 15.65 15 P **Pn 17 33 14.5 -2.1**
SAML Samuel 15.65 15 P **Pn 17 33 14.5 -2.1**
DVLD Doverlandia 15.93 65 *eP* **Pn 17 33 18.5 -1.5**
PDRB Porto dos Gac 15.97 40 *eP* **Pn 17 33 18.3 -2.2**
LR03 Panguipulli 15.99 195 Pn 17 33 17.5 -3.0
FRTB Fartura 16.12 90 *eP* **P 17 33 21.2 -1.0**
ITRB Iturama 16.21 77 *eP* **P 17 33 22.4 -0.7**
LR04 Corral 16.49 197 P **P 17 33 25.2 -0.8**
TIJ01 Guaruva-PR 16.52 98 *eP* **P 17 33 25.3 -1.3**
ARAG Araguaiana, MT 16.71 62 *eP* **P 17 33 27.9 -0.8**
TER01 Tubaro-SC 16.71 109 *eP* **P 17 33 27.4 -1.2**
PLCA Paso Flores 16.72 189 P **Pn 17 33 29.3 -0.1**
comp=Z,116nm,0.9s,baz=12,slow=13,SNR=144
PLCA PcP **PcP 17 38 08.1 +0.9**
comp=Z,13nm,0.7s,baz=100,slow=2.8,SNR=6.6
PLCA ScP **ScP 17 41 27.0 +1.8**
comp=Z,38nm,0.9s,baz=345,slow=3.5,SNR=13
PLCA PKiKP **PKiKP 17 46 00.1 -0.1**
comp=Z,3.3nm,1.0s,baz=215,slow=6.2,SNR=3.9
PLCA Paso Flores 16.72 189 P 17 33 28.1 -0.5
PLCA Paso Flores 16.72 189 *eP* **P 17 33 28.6 -0.1**
CLDB Colider 17.11 41 *eP* **P 17 33 31.8 -1.3**
LL04 Puerto Octay 17.22 194 P **P 17 33 33.3 -0.8**
CZSB Cruzeiro do Su 17.23 341 *eP* **P 17 33 33.0 -1.5**
LL03 Petrohue 17.44 193 P **P 17 33 35.4 -1.1**
BB19B Bebedouro 17.47 83 *eP* **P 17 33 35.8 -1.3**
LL05 Los Muermos 17.94 193 P **P 17 33 43.2 -0.7**
RCLB Rio Claro- Sao 18.11 88 *eP* **P 17 33 43.2 -0.7**
PET01 Itanhaem-SP 18.12 94 *eP* **P 17 33 43.2 -0.8**
VAO Valinhos 18.54 90 *eP* **P 17 33 46.5 -2.2**
LL01 San Ignacio de 18.64 192 P **P 17 33 49.2 -0.3**
IPMB Ipameri, GO 18.72 74 *eP* **P 17 33 49.8 -0.8**
LL07 Hotel Espejo d 19.29 194 P **P 17 33 55.2 -1.3**
LL02 Futaleuf 19.32 190 P **P 17 33 55.9 -1.0**
SNDB Serra Nova Dou 19.35 54 *eP* **P 17 33 56.5 -1.0**
GO07 Milladeo Hill, 19.60 194 P **P 17 33 58.5 -1.4**
PARB Paraibuna 19.72 92 *eP* **P 17 33 59.1 -2.4**
BDFB Brasilia 19.89 68 P **P 17 34 02.5 -0.9**
comp=Z,754nm,0.8s,baz=244,slow=11,SNR=592
BDFB Brasilia 19.89 68 P **P 17 34 01.9 -1.5**
BDFB Brasilia 19.89 68 *eP* **P 17 34 02.1 -1.3**
PMNB Patos De Minas 20.09 78 *eP* **P 17 34 04.0 -1.4**
TBTG Tabatinga, AM 20.09 352 *eP* **P 17 34 05.9 +0.5**
ATAH Atahualpa 20.12 326 P Pn 17 34 08.7 -1.6
comp=Z,50nm,0.8s,baz=151,slow=8.3,SNR=26
ATAH ScP **ScP 17 41 36.0 +2.6**
comp=Z,16nm,0.9s,baz=126,slow=3.0,SNR=6.9
comp=Z,50nm,0.8s
SLP01 Ubatuba-SP 20.15 92 *eP* **P 17 34 04.5 -1.6**
NPGB Novo Progresso 20.48 35 *eP* **P 17 34 06.2 -3.4**
AY01 Puyuhuapi 20.65 191 P **P 17 34 10.2 -0.9**
ESAR Angra dos Reis 20.84 91 *eP* **P 17 34 12.0 -1.4**
BSCB Bom Sucesso 20.90 86 *eP* **P 17 34 12.4 -1.7**
MAN01 Angra dos Reis 21.30 91 *eP* **P 17 34 16.5 -1.8**
PEXB Peixe 21.59 99 *eP* **P 17 34 19.1 -1.8**
COYC Coyhaique 21.68 189 P **P 17 34 20.9 -1.1**
MACA Manacapuru-AM 21.84 18 *eP* **P 17 34 22.0 -1.9**
VAS01 Vassouras-RJ 21.86 90 *eP* **P 17 34 23.2 -0.9**
ITTB Itaituba 22.59 31 *eP* **P 17 34 29.1 -2.0**
DIAM Diamantina, MG 22.64 79 *eP* **P 17 34 30.1 -1.7**
DUB01 Friburgo-RJ 22.87 90 *eP* **P 17 34 32.6 -1.0**
JANB Januaria 23.33 71 *eP* **P 17 34 36.1 -1.7**
CAM01 Campos-RJ 23.57 89 *eP* **P 17 34 39.1 -0.8**
BOSC San Juan Bosco 23.63 331 P **P 17 34 40.4 -0.3**
ARNL Arenillas 24.03 327 P **P 17 34 44.3 +0.2**
SDBA SAO DESIDERIO 24.12 65 *eP* **P 17 34 43.2 -1.9**
SMTB Santa Maria do 24.13 54 *eP* **P 17 34 42.9 -2.2**
PRPB Parauapebas 24.47 46 *eP* **P 17 34 46.1 -2.1**
GO08 Villa O'Higgin 24.58 189 P **P 17 34 47.5 -1.3**
COHC Cochancay 24.58 330 P **P 17 34 49.4 +0.2**
COHC lAmb lAmb 17 34 55.4
comp=Z,60nm,0.7s
ALF01 Guarapari-ES 24.67 87 *eP* **P 17 34 48.2 -1.8**
SJMB Sao Joao De Ma 24.76 82 *eP* **P 17 34 49.4 -1.4**
BSFB Barra de Sao F 25.03 83 *eP* **P 17 34 51.1 -2.1**
PORT Chimborazo Vol 25.26 332 P **P 17 34 54.9 -1.1**
PORT lAmb lAmb 17 35 20.0
comp=Z,128nm,0.7s
RIB01 Linhares ES 25.30 84 *eP* **P 17 34 54.1 -1.6**
PTLC Puerto Leguiza 25.35 342 *eP* **P 17 34 51.9 -4.2**
MALB Monte Alegre 25.48 31 *eP* **P 17 34 55.8 -1.5**
SLOR San Lorenzo - 25.80 333 P **P 17 34 59.2 -1.5**
SLOR lAmb lAmb 17 35 28.1
comp=Z,64nm,0.8s
NAN01 Guarapari, ES 25.98 81 *eP* **P 17 35 00.5 -1.3**
OTAV Otavalo 26.66 334 P **P 17 35 08.3 -0.1**
OTAV Otavalo 26.66 334 P **P 17 35 08.3 -0.1**
OTAV pmax pmax
comp=Z,26nm,0.8s
OTAV Otavalo 26.66 334 *eP* **P 17 35 09.6 +1.2**
OTAV Otavalo 26.66 334 *eP* **P 17 35 08.3 -0.1**
GUA01 Guaratinga, BA 26.69 79 *eP* **P 17 35 06.7 -1.5**
TULM Tulcn-Chalpat 26.85 336 P **P 17 35 10.9 +0.8**
TULM lAmb lAmb 17 35 22.0
comp=Z,105nm,0.8s
TULM Tulcn-Chalpat 26.85 336 *eP* **P 17 35 11.4 +1.3**
FLOC Florencia 26.94 341 *eP* **P 17 35 11.6 +1.2**
MACC Macarena, Meta 27.00 345 *eP* **P 17 35 09.2 -1.7**
GCUF Volcan Galeras 27.16 337 *eP* **P 17 35 15.6 +2.8**
BOAV Boa Vista 27.22 15 *eP* **P 17 35 12.6 -0.3**
ABR01 Abrolhos, BA 27.23 82 *eP* **P 17 35 10.7 -2.3**
GO09 Cerro Castillo 27.31 187 P **P 17 35 12.8 -0.4**
GO09 lAmb lAmb 17 35 15.0
comp=Z,182nm,1.3s
CMC01 Camacan, BA 27.41 76 *eP* **P 17 35 12.6 -2.0**
GARC Garzon, Huila 27.47 342 *eP* **P 17 35 16.4 +1.0**
MG05 Puerto Natales 27.73 187 P **P 17 35 16.7 -0.3**
SOTA Rioblanco 27.76 339 *eP* **P 17 35 20.2 +2.0**
MCPB Macapa, AP 27.86 34 *eP* **P 17 35 17.3 -1.3**
BBAC Balboa, Cauca 27.86 338 *eP* **P 17 35 19.9 +1.0**
PCON Cinco Dias 27.87 340 *eP* **P 17 35 20.5 +1.2**
GDU01 Guandu, BA 28.03 73 *eP* **P 17 35 18.5 -1.7**
POPC Popayan, Colom 28.16 339 *eP* **P 17 35 23.0 +1.5**
TUMC Tumaco 28.22 335 P **P 17 35 20.3 -1.5**
MARP Paez Belalcaza 28.23 341 *eP* **P 17 35 23.0 +0.9**
EFI East Falkland 28.29 168 P **P 17 35 22.0 0.0**
EFI East Falkland 28.29 168 P **P 17 35 22.0 0.0**
EFI pmax pmax
comp=Z,311nm,1.7s
TMAB Tom-Au,PA,Br 28.47 43 *eP* **P 17 35 23.5 -0.5**
MG02 Cerro Sombrero 28.57 183 P **P 17 35 23.3 -1.1**
PTGC Puerto Gaitan, 28.66 350 *eP* **P 17 35 29.1 +3.5**
PRAC Prado 28.76 344 *eP* **P 17 35 25.5 -1.1**
MG04 Isla Riesco 28.80 186 P **P 17 35 25.6 -0.9**
VILC Villavicencio, 28.87 346 *eP* **P 17 35 29.2 +1.6**
ORTC Ortega, Tolima 29.04 343 *eP* **P 17 35 28.8 -0.3**
GO10 Punta Arenas 29.05 185 P **P 17 35 29.0 +0.2**
GR1C Gorgona, Isla 29.10 337 *eP* **P 17 35 31.2 +1.6**
CHIC Chingaza 29.38 347 *eP* **P 17 35 31.4 -1.1**
YOTC Yotoco, Valle 29.42 341 *eP* **P 17 35 31.3 -1.2**
MG03 Isla Dawson 29.70 184 P **P 17 35 33.9 -0.5**
DSPA Despedida 29.71 181 P **P 17 35 34.2 -0.3**
ROSC El Rosal 29.71 345 P **P 17 35 36.7 +1.3**
comp=Z,36nm,0.6s,baz=66,slow=19,SNR=12
ROSC ScP **ScP 17 42 01.8 +1.4**
comp=Z,12nm,0.6s,baz=148,slow=5.5,SNR=4.0
ROSC LR LR 17 49 19.3
comp=Z,1µm,18.9s,baz=176,slow=40
comp=Z,36nm,0.6s
ROSC El Rosal 29.71 345 P **P 17 35 35.5 +0.1**
ROSC **ScP 17 42 00.6 +0.2**
MALC Bahia Malaga 29.76 339 *eP* **P 17 35 37.5 +2.1**
GUY2C Guyana, Caldas 30.34 344 *eP* **P 17 35 41.4 +0.4**
RUSC La Rusia 30.48 348 *eP* **P 17 35 42.0 -0.2**
NORC Norcasia 30.54 345 *eP* **P 17 35 40.5 -1.8**
USHA Ushuaia 30.59 181 P **P 17 35 42.9 +0.6**
comp=Z,33nm,0.7s,baz=343,slow=1.3,SNR=5.6
comp=Z,33nm,0.7s
MG01 Puerto William 30.68 181 P **P 17 35 42.4 -0.6**
ROSB Rosrio 30.71 50 *eP* **P 17 35 42.9 -0.9**
NBLA Lagarto - SE 30.84 70 *eP* **P 17 35 42.0 -2.9**
CBOC Ciudad Bolivar 31.12 343 *eP* **P 17 35 45.8 -1.7**
BARC Barichara 31.18 348 *eP* **P 17 35 46.2 -2.0**
HELC Santa Helena 31.31 344 *eP* **P 17 35 46.2 -3.2**
PTBC PUERTO BERRIO, 31.39 346 *eP* **P 17 35 46.6 -3.1**
PAMC Pamplona, Colo 31.83 350 *eP* **P 17 35 53.0 -1.0**
NBMA Muriti-CE 31.93 63 *eP* **P 17 35 53.1 -1.4**
NBPB Pedra Branca-C 32.35 59 *eP* **P 17 35 56.7 -1.5**
MPGF Montagnes des 32.39 28 P **P 17 35 57.4 -1.1**
MPGF pP **pP 17 36 38.1 +1.3**
MPGF x x 17 36 49.5
ZARC Zaragoza, Cauc 32.40 346 P **P 17 35 56.1 -2.4**
PAYG Puerto Ayora 32.40 313 P **P 17 35 57.1 -1.5**
PAYG lAmb lAmb 17 36 02.7
comp=Z,113nm,0.9s
PAYG Puerto Ayora 32.40 313 P **P 17 36 01.0 +2.4**
SOCV Socops 32.50 353 *eP* **P 17 35 59.0 -0.5**
NBAN Anadia - AL 32.78 69 *eP* **P 17 35 59.9 -2.0**
OCAC Ocana 32.81 349 P **P 17 35 58.3 -3.9**
BAUV El Baul 32.97 358 P **P 17 36 01.8 -1.6**
BAUV lAmb lAmb 17 36 03.5
comp=Z,126nm,0.8s
SDV Santo Domingo 33.07 354 LR LR 17 51 25.0
comp=Z,1µm,19.1s,baz=184,slow=39
SDV Santo Domingo 33.07 354 P **P 17 36 02.5 -2.1**
SDV lAmb lAmb 17 36 10.2
comp=Z,48nm,0.7s
SDV Santo Domingo 33.07 354 *eP* **P 17 36 06.7 +2.1**
SDV Santo Domingo 33.07 354 *eP* **P 17 36 03.7 -0.9**
SDV Santo Domingo 33.07 354 P **P 17 36 08.7 +4.2**
SDV sP **sP 17 37 02.9 -1.0**
SDV ScP **ScP 17 42 12.8 +1.4**
NBMO Morrinhos-CE 33.40 56 *eP* **P 17 36 04.3 -3.0**
NBCA Caruaru-PE 33.74 67 *eP* **P 17 36 08.8 -1.5**
NBRF Rio Formoso - 34.26 69 *eP* **P 17 36 12.3 -2.4**
AZU Azuero 34.29 336 *eP* **P 17 36 14.0 -0.9**
BIRV Birongo 34.49 2 P **P 17 36 14.3 -2.3**
ARGC Ariguani, Magd 34.57 348 *eP* **P 17 36 15.0 -2.3**
SJCC San Jacinto, C 34.80 346 P **P 17 36 17.3 -2.0**
SJCC lAmb lAmb 17 36 22.7
comp=Z,76nm,0.8s
SJCC San Jacinto, C 34.80 346 *eP* **P 17 36 18.2 -1.1**
RCBR Riachuelo 35.14 64 P **P 17 36 20.8 -1.5**
RCBR lAmb lAmb 17 36 23.0
comp=Z,167nm,0.9s
RCBR Riachuelo 35.14 64 P **P 17 36 20.8 -1.5**
RCBR pmax pmax
comp=Z,167nm,0.9s
RCBR Riachuelo 35.14 64 *eP* **P 17 36 21.8 -0.5**
RCBR Riachuelo 35.14 64 P **P 17 36 21.6 -0.7**
RCBR pP **pP 17 37 02.2 +1.5**
RCBR sP **sP 17 37 18.8 -2.6**
RCBR ScP **ScP 17 42 20.6 +1.9**
BCIP Isla Barro Col 35.42 338 P **P 17 36 24.8 +0.3**
BCIP lAmb lAmb 17 36 28.2
comp=Z,279nm,1.6s
BCIP Isla Barro Col 35.42 338 P **P 17 36 24.8 +0.3**
BCIP pmax pmax
comp=Z,279nm,1.6s
BCIP Isla Barro Col 35.42 338 *eP* **P 17 36 22.4 -2.1**
SMRC Santa Marta, M 35.84 348 *eP* **P 17 36 25.9 -2.2**
TOSP Speyside 35.88 11 P **P 17 36 27.3 -1.1**
TOSP lAmb lAmb 17 36 32.1
comp=Z,108nm,0.8s
CDITO Canoas 36.02 333 P **P 17 36 29.3 -0.4**
CDITO lAmb lAmb 17 36 34.9
comp=Z,75nm,0.9s
BRU2 Volcan 36.15 333 P **P 17 36 30.6 -0.3**
GRGR Grenville 36.52 9 P **P 17 36 32.7 -1.2**
DRK0 Durika 36.80 333 P **P 17 36 38.4 +1.9**
DRK0 lAmb lAmb 17 36 40.5
comp=Z,169nm,1.0s
SRBA San Rafael, Bu 36.82 333 P **P 17 36 37.5 +0.9**
SRBA lAmb lAmb 17 36 40.8
comp=Z,61nm,0.7s
PEZE Perez Zeledon, 37.09 332 P **P 17 36 40.0 +1.2**
PEZE lAmb lAmb 17 36 43.1
comp=Z,80nm,0.8s
RIMA Rio Macho 37.51 332 P **P 17 36 43.9 +1.4**
RIMA lAmb lAmb 17 36 46.7
comp=Z,83nm,0.8s
SVB Belmont 37.70 9 P **P 17 36 42.9 -0.9**
SVB lAmb lAmb 17 36 47.7
comp=Z,77nm,0.9s
HOPE Hope Point 37.73 151 P **P 17 36 42.8 -0.9**
HOPE Hope Point 37.73 151 P **P 17 36 42.8 -0.9**
HOPE pmax pmax
comp=Z,236nm,1.1s
HOPE Hope Point 37.73 151 P **P 17 36 44.3 +0.6**
HOPE sP **sP 17 37 39.6 -3.3**
HOPE ScP **ScP 17 42 29.1 +1.6**
JACO JACO, Garabito 37.77 331 P **P 17 36 45.8 +1.4**
HDC Heredia 37.83 332 P **P 17 36 46.0 +0.9**
JTS Las Juntas de 38.45 331 P **P 17 36 50.9 +0.7**
JTS lAmb lAmb 17 36 55.2
comp=Z,88nm,1.1s
JTS **S 17 42 30.8 -1.5**
JTS Las Juntas de 38.45 331 P **P 17 36 52.8 +2.6**
JTS ScP **S 17 42 32.2 -0.1**
DUNO Dulce Nombre, 38.51 330 P **P 17 36 50.9 +0.2**
DUNO lAmb lAmb 17 36 55.4
comp=Z,74nm,1.0s
ORTG Ortega, Santa 38.74 330 P **P 17 36 53.5 +0.8**
ORTG lAmb lAmb 17 36 55.8
comp=Z,73nm,0.9s
ORTG **S 17 42 30.8 -5.9**
BIM Bigot 38.95 9 P **P 17 36 52.9 -1.4**
BIM Bigot 38.95 9 *eP* **P 17 37 03.3 +9.0**
HZTE Horizontes, Gu 39.11 330 P **P 17 36 56.6 +0.9**
FDF Fort de France 39.15 9 P **P 17 36 53.5 -2.5**
FDF lAmb lAmb 17 36 57.5
comp=Z,185nm,1.0s
FDF Fort de France 39.15 9 P **P 17 36 53.5 -2.5**
FDF pmax pmax
comp=Z,185nm,1.0s
FDF Fort de France 39.15 9 *eP* P 17 36 42.4 -14
FDF Fort de France 39.15 9 P **P 17 36 55.2 -0.7**
FDF pP **pP 17 37 35.6 +0.2**
FDF x x 17 37 48.9
FDF sP **sP 17 37 58.2 +2.2**
ILAM Ilet Lapin Mar 39.23 10 P **P 17 36 54.9 -1.7**
ILAM lAmb lAmb 17 37 11.2
comp=Z,176nm,1.0s
SVN Savane Anatole 39.25 9 P **P 17 36 55.1 -1.7**
ORCD Orcadas 39.65 163 P **P 17 36 59.1 -0.4**
ORCD lAmb lAmb 17 37 00.8
comp=Z,125nm,1.1s
DLPL La Plaine 39.73 9 P **P 17 36 59.3 -1.4**
PRVC Isla de Provid 39.86 338 P **P 17 37 02.6 +0.8**
ESPN Las Esperanzas 39.88 333 P **P 17 37 02.7 +0.7**
ESPN lAmb lAmb 17 37 04.8
comp=Z,60nm,0.7s
ACON Acoyapa 40.04 332 P **P 17 37 04.0 +0.7**
MAGL Barre de l'ile 40.33 9 P **P 17 37 05.7 +0.1**
MAGL Barre de l'ile 40.33 9 *eP* **P 17 37 05.6 0.0**
CBE Ff, Capester 40.40 8 P **P 17 37 05.7 -0.5**
CBE lAmb lAmb 17 37 54.3
comp=Z,113nm,1.0s
CBE Ff, Capester 40.40 8 *eP* P 17 37 17.2 +11
GDHS Morne Mazeau, 40.58 8 P **P 17 37 06.7 -1.1**
PMSA Palmer Station 40.61 178 P **P 17 37 06.5 -0.8**
comp=Z,56nm,0.9s,baz=2.6,slow=7.2,SNR=6.8
comp=Z,56nm,0.9s
PMSA Palmer Station 40.61 178 P **P 17 37 07.5 +0.2**
PMSA Palmer Station 40.61 178 *eP* **P 17 37 07.5 +0.2**
PMSA Palmer Station 40.61 178 P **P 17 37 08.4 +1.0**
BOAB BOACO BROADBAN 40.68 332 P **P 17 37 08.7 +0.1**
BOAB lAmb lAmb 17 37 11.3
comp=Z,104nm,0.9s
GDSD La Dsirade Is 40.72 9 P **P 17 37 06.6 -2.2**
ABD La Joyeuse, An 40.82 8 P **P 17 37 07.1 -2.4**
ABD lAmb lAmb 17 38 31.8
comp=Z,231nm,1.1s
CNGN Cerro Negro 41.19 330 P **P 17 37 10.8 -1.9**
MATN Matagalpa 41.22 332 P **P 17 37 11.8 -1.3**
CRIN San Cristobal 41.52 330 P **P 17 37 13.9 -1.6**
CDVI St. Croix 41.77 3 P **P 17 37 15.1 -2.3**
ICMP Isla Caja de M 41.85 1 P **P 17 37 15.7 -2.2**
ICMP lAmb lAmb 17 37 18.7
comp=Z,111nm,0.9s
MLPR Magueyes Islan 41.93 0 P **P 17 37 16.9 -1.7**
MLPR lAmb lAmb 17 37 19.4
comp=Z,71nm,0.8s
ANWB Willy Bob 41.95 8 P **P 17 37 15.4 -3.4**
ANWB lAmb lAmb 17 37 21.7
comp=Z,152nm,0.8s
CRPR Cabo Rojo, PR 41.96 0 P **P 17 37 16.8 -2.1**
CRPR lAmb lAmb 17 37 18.1
comp=Z,81nm,0.8s
SJG San Juan 42.08 1 P **P 17 37 17.7 -2.1**
SJG lAmb lAmb 17 37 18.7
comp=Z,74nm,0.8s
SJG San Juan 42.08 1 P **P 17 37 17.7 -2.1**
SJG pmax pmax
comp=Z,74nm,0.8s
SJG San Juan 42.08 1 *eP* P 17 37 26.5 +6.7
SJG San Juan 42.08 1 P **P 17 37 17.9 -2.0**
SJG pP **pP 17 37 59.4 -0.3**
PRSN Puerto Rico Se 42.17 0 P **P 17 37 18.5 -2.1**
SMRT St. Maarten 42.20 6 P **P 17 37 17.7 -3.1**
SMRT lAmb lAmb 17 37 18.9
comp=Z,99nm,1.1s
AOPR Arecibo Observ 42.30 1 P **P 17 37 19.6 -2.1**
BANI BANI 42.46 355 P **P 17 37 22.2 -0.8**
DR12 Loma Pena Alta 42.80 357 P **P 17 37 23.1 -2.6**
TGUH Tegucigalpa,Un 42.82 331 P **P 17 37 26.3 +0.2**
TGUH lAmb lAmb 17 37 28.8
comp=Z,159nm,0.8s
SDDR Presa de Saban 43.12 354 P **P 17 37 26.4 -2.0**
SC01 Santiago de lo 43.52 355 P **P 17 37 30.2 -1.2**
SC01 lAmb lAmb 17 37 32.1
comp=Z,73nm,0.5s
ESQI Esquipulas 44.22 328 P **P 17 37 37.5 +0.3**
ESQI lAmb lAmb 17 37 40.5
comp=Z,133nm,0.6s
GTBY Guantanamo Bay 44.55 349 P **P 17 37 38.4 -1.3**
LCCY Blossom Villag 45.40 343 P **P 17 37 45.4 -0.9**
GRTK Grand Turk 45.62 355 P **P 17 37 47.1 -0.8**
GRTK lAmb lAmb 17 37 48.1
comp=Z,131nm,0.8s
PETF Flores 46.51 329 P **P 17 37 54.6 -0.5**
PETF lAmb lAmb 17 37 57.8
comp=Z,100nm,0.7s
CCIG Comitan 47.07 326 P **P 17 37 59.5 -0.1**
TRIS Tristan da Cun 48.28 119 P **P 17 38 07.2 -1.4**
TRIS lAmb lAmb 17 38 09.5
comp=Z,198nm,1.2s
SOR Soroa 49.20 341 P **P 17 38 15.2 -0.5**
SOR lAmb lAmb 17 38 17.2
comp=Z,113nm,0.8s
SOR Soroa 49.20 341 P **P 17 38 15.2 -0.5**
SOR pmax pmax
comp=Z,113nm,0.8s
061Z Ochoppi 51.53 344 P **P 17 38 33.2 +0.2**
061Z Ochoppi 51.53 344 P **P 17 38 34.3 +1.2**
baz=164
060A Indiantown 52.52 345 P **P 17 38 40.3 0.0**
060A Indiantown 52.52 345 P **P 17 38 41.6 +1.2**
baz=165
DWPF Disney Wildern 53.81 344 P **P 17 38 50.5 +0.7**
baz=164
DWPF Disney Wildern 53.81 344 P **P 17 38 50.3 +0.5**
baz=164
DWPF Disney Wildern 53.81 344 P **P 17 38 50.3 +0.5**
BELA Belgrano 2 55.85 172 P **P 17 39 04.0 +0.1**
456A Hilliard 56.46 345 P **P 17 39 09.3 +0.7**
456A lAmb lAmb 17 39 12.1
comp=Z,84nm,0.8s
553A Crawfordville 56.58 342 P **P 17 39 09.2 -0.3**
VNA3 Neumayer Olymp 56.99 161 P **P 17 39 12.7 +0.7**
VNA3 Neumayer Olymp 56.99 161 PcP **PcP 17 40 06.3 +1.2**
VNA3 S **S 17 46 54.4 +2.4**
VNA3 Neumayer Olymp 56.99 161 pP pP 17 39 50.5 -3.6
VNA3 Neumayer Olymp 56.99 161 sP sP 17 40 09.1 -5.0
VNA1 Neumayer--Stat 57.19 160 P **P 17 39 14.6 +1.2**
VNA1 Neumayer--Stat 57.19 160 PcP **PcP 17 40 06.8 +1.1**
VNA1 S **S 17 47 01.3 +6.8**
TIGA Tifton 57.53 343 P **P 17 39 15.9 -0.3**
TIGA lAmb lAmb 17 39 16.9
comp=Z,51nm,0.9s
TIGA Tifton 57.53 343 P **P 17 39 16.3 +0.2**
baz=162
255A Hazlehurst 57.72 345 P **P 17 39 16.4 -1.0**
255A lAmb lAmb 17 39 18.4
comp=Z,77nm,1.0s
SHEL Horse Pasture 57.87 94 P **P 17 39 17.5 -1.5**
SHEL lAmb lAmb 17 39 22.1
comp=Z,59nm,0.7s
SHEL Horse Pasture 57.87 94 P **P 17 39 17.5 -1.5**
SHEL pmax pmax
comp=Z,59nm,0.7s
SHEL Horse Pasture 57.87 94 P **P 17 39 18.4 -0.6**
SHEL pP **pP 17 40 01.0 -0.2**
SHEL x x 17 40 12.5
352A Blakely 57.93 342 P **P 17 39 18.9 -0.1**
352A Blakely 57.93 342 P **P 17 39 19.2 +0.2**
baz=161,SNR=13
CSU Charleston Sou 58.20 347 P **P 17 39 20.9 +0.1**
BRAL Brewton 58.27 340 P **P 17 39 21.1 -0.2**
BRAL Brewton 58.27 340 P **P 17 39 21.8 +0.4**
baz=159,SNR=7.5
BRAL Brewton 58.27 340 P **P 17 39 21.8 +0.4**
baz=159,SNR=7.5
NHSC New Hope 58.34 347 P **P 17 39 22.6 +0.9**
NHSC New Hope 58.34 347 P **P 17 39 22.9 +1.1**
baz=166,SNR=9.3
NHSC New Hope 58.34 347 P **P 17 39 23.0 +1.3**
baz=166,SNR=9.3
154A Montrose 58.53 344 P **P 17 39 22.9 -0.2**
154A Montrose 58.53 344 P **P 17 39 22.8 -0.2**
baz=163,SNR=13
250A Grady 58.79 341 P **P 17 39 24.4 -0.5**
250A **PcP 17 40 13.1 +0.5**
250A Grady 58.79 341 P **P 17 39 24.6 -0.3**
baz=160,SNR=15
Y60A Bolivia 58.85 349 P **P 17 39 25.5 +0.3**
Y60A Bolivia 58.85 349 P **P 17 39 25.9 +0.7**
baz=168,SNR=8.9
Y60A P **P 17 39 25.9 +0.7**
baz=168,SNR=8.9
HAW Hawthorne Fire 58.89 346 P **P 17 39 26.2 +0.6**
baz=165
Y59A Loris 58.95 349 P **P 17 39 25.1 -0.9**
Y59A lAmb lAmb 17 39 27.4
comp=Z,120nm,0.9s
152A Waverly Hall 59.00 343 lAmb lAmb 17 39 26.6
comp=Z,50nm,0.9s
152A Waverly Hall 59.00 343 P **P 17 39 26.1 -0.2**
baz=161,SNR=14
Y58A Scranton 59.01 348 P **P 17 39 27.1 +0.7**
baz=167,SNR=8.8
Y58A P **P 17 39 27.1 +0.7**
baz=167,SNR=8.8
SNAA Sanae 59.19 161 P **P 17 39 27.8 +0.5**
SNAA S **S 17 47 21.5 +0.8**
SNAA Sanae 59.19 161 P **P 17 39 27.2 -0.1**
SNAA Sanae 59.19 161 P **P 17 39 27.2 -0.1**
SNAA pmax pmax
comp=Z,259nm,1.4s
Y57A Sumter 59.26 347 P **P 17 39 27.4 -0.7**
Y57A Sumter 59.26 347 P **P 17 39 28.9 +0.8**
baz=166,SNR=5.9
Y57A P **P 17 39 28.9 +0.8**
baz=166,SNR=5.9
346A Big Creek Wild 59.27 338 lAmb lAmb 17 39 30.1
comp=Z,100nm,0.7s
346A Big Creek Wild 59.27 338 P **P 17 39 28.2 0.0**
baz=156,SNR=8.7
GOGA Godfrey 59.38 344 lAmb lAmb 17 39 29.4
comp=Z,45nm,0.9s
GOGA Godfrey 59.38 344 P **P 17 39 28.8 -0.1**

GOGA	**Godfrey**	**59.38**	**344**	P	**P**	**17 39 28.7**	**-0.1**
	baz=163,SNR=7.5						
GOGA	**Godfrey**	**59.38**	**344**	P	**P**	**17 39 28.9**	**-0.1**
	baz=163,SNR=7.5						
GOGA				S	**S**	**17 47 21.6**	**-2.0**
	baz=163						
X58A	**Rowland**	**59.58**	**348**	P	**P**	**17 39 31.2**	**+1.0**
	baz=167,SNR=9.6						
X58A				P	**P**	**17 39 31.2**	**+1.0**
	baz=167,SNR=9.6						
JSC	**Jenkinsville**	**59.70**	**346**	IAmb	IAmb	17 39 32.8	
	comp=Z,96nm,0.8s						
JSC	**Jenkinsville**	**59.70**	**346**	P	**P**	**17 39 31.9**	**+0.8**
	baz=165,SNR=22						
Z51A	**Franklin**	**59.73**	**343**	P	**P**	**17 39 30.9**	**-0.4**
Z51A	**Franklin**	**59.73**	**343**	P	**P**	**17 39 31.4**	**0.0**
	baz=161,SNR=6.5						
344A	**Westbrook Farm**	**59.78**	**337**	IAmb	IAmb	17 39 34.0	
	comp=Z,77nm,0.8s						
344A	**Westbrook Farm**	**59.78**	**337**	P	**P**	**17 39 32.5**	**+0.8**
	baz=155,SNR=11						
HODGE	**Hodges**	**59.87**	**346**	P	**P**	**17 39 31.6**	**-0.6**
HODGE	**Hodges**	**59.87**	**346**	P	**P**	**17 39 32.3**	**0.0**
	baz=164,SNR=9.9						
BIRD	**Birdtown, Kers**	**59.88**	**347**	P	**P**	**17 39 32.5**	**+0.1**
	baz=166,SNR=23						
Y52A	**Lilburn**	**59.96**	**344**	IAmb	IAmb	17 39 33.9	
	comp=Z,54nm,0.8s						
Y52A	**Lilburn**	**59.96**	**344**	P	**P**	**17 39 32.7**	**-0.2**
	baz=162,SNR=12						
Y52A				P	**P**	**17 39 32.7**	**-0.2**
	baz=162,SNR=12						
LRAL	**Lakeview Retre**	**59.99**	**341**	P	**P**	**17 39 32.3**	**-0.9**
LRAL				PcP	**PcP**	**17 40 17.5**	**+0.2**
LRAL	**Lakeview Retre**	**59.99**	**341**	P	**P**	**17 39 32.9**	**-0.3**
	baz=159,SNR=14						
LRAL	**Lakeview Retre**	**59.99**	**341**	P	**P**	**17 39 32.9**	**-0.3**
	baz=159,SNR=14						
LRAL				S	**S**	**17 47 28.2**	**-3.3**
	baz=159						
441A	**DeRidder**	**60.08**	**334**	IAmb	IAmb	17 39 36.2	
	comp=Z,94nm,1.1s						
146A	**Union**	**60.28**	**339**	IAmb	IAmb	17 39 35.9	
	comp=Z,91nm,1.0s						
146A	**Union**	**60.28**	**339**	P	**P**	**17 39 35.4**	**+0.4**
	baz=157,SNR=6.6						
W57A	**Gilead**	**60.28**	**348**	P	**P**	**17 39 35.7**	**+0.6**
	baz=166,SNR=20						
W57A				P	**P**	**17 39 35.7**	**+0.6**
	baz=166,SNR=20						
342A	**Flagon Creek P**	**60.30**	**335**	P	**P**	**17 39 35.1**	**-0.2**
342B	**Flagon Creek P**	**60.30**	**335**	P	**P**	**17 39 36.8**	**+1.6**
	baz=154,SNR=16						
PAULI	**Pauline**	**60.34**	**346**	IAmb	IAmb	17 39 36.6	
	comp=Z,75nm,0.9s						
VBMS	**Vicksburg**	**60.39**	**337**	IAmb	IAmb	17 39 36.7	
	comp=Z,60nm,0.8s						
VBMS	**Vicksburg**	**60.39**	**337**	P	**P**	**17 39 36.3**	**+0.4**
	baz=155						
VBMS	**Vicksburg**	**60.39**	**337**	P	**P**	**17 39 36.1**	**+0.3**
	baz=155						
735A	**Kenedy**	**60.45**	**329**	IAmb	IAmb	17 39 38.2	
	comp=Z,90nm,0.8s						
735A	**Kenedy**	**60.45**	**329**	P	**P**	**17 39 36.6**	**+0.2**
	baz=148,SNR=8.2						
Z47A	**Carrollton**	**60.48**	**340**	P	**P**	**17 39 35.2**	**-1.2**
Z47A				IAmb	IAmb	17 39 36.7	
	comp=Z,58nm,0.8s						
Z47A					**PcP**	**17 40 19.5**	**+0.3**
Z47A	**Carrollton**	**60.48**	**340**	P	**P**	**17 39 36.2**	**-0.1**
	baz=158,SNR=12						
HKT	**Hockley**	**60.49**	**331**	P	**P**	**17 39 36.2**	**-0.3**
HKT				IAmb	IAmb	17 39 40.0	
	comp=Z,62nm,1.1s						
HKT				pP	**PcP**	**17 40 20.7**	**+1.3**
HKT	**Hockley**	**60.49**	**331**	P	**P**	**17 39 37.0**	**+0.5**
	baz=150						
HKT	**Hockley**	**60.49**	**331**	P	**P**	**17 39 37.5**	**+1.0**
HKT				pP	**PcP**	**17 40 21.0**	**+1.7**
HKT				sP	**sP**	**17 40 40.2**	**+1.3**
KMSC	**Kings Mountain**	**60.54**	**347**	P	**P**	**17 39 36.8**	**-0.1**
KMSC				IAmb	IAmb	17 39 38.5	
	comp=Z,74nm,0.8s						
KMSC					**pP**	**17 40 19.5**	**0.0**
KMSC	**Kings Mountain**	**60.54**	**347**	P	**P**	**17 39 37.5**	**+0.7**
	baz=165,SNR=21						
KMSC	**Kings Mountain**	**60.54**	**347**	P	**P**	**17 39 37.5**	**+0.7**
	baz=165,SNR=21						
KMSC				S	**S**	**17 47 38.8**	**+0.3**
	baz=165						
Y49A	**Blount Mountai**	**60.59**	**342**	IAmb	IAmb	17 39 37.4	
	comp=Z,51nm,1.0s						
Y49A	**Blount Mountai**	**60.59**	**342**	P	**P**	**17 39 37.1**	**-0.1**
	baz=160,SNR=10						
V58A	**Windy Hill, Pi**	**60.75**	**349**	IAmb	IAmb	17 39 39.1	
	comp=Z,47nm,0.8s						
V58A	**Windy Hill, Pi**	**60.75**	**349**	P	**P**	**17 39 37.8**	**-0.3**
	baz=168,SNR=8.2						
V58A				P	**P**	**17 39 37.8**	**-0.3**
	baz=168,SNR=8.2						
BG3	**Lake Jocassee**	**60.76**	**345**	IAmb	IAmb	17 39 39.8	
	comp=Z,46nm,0.7s						
CASEE	**Lake Jocassee**	**60.76**	**345**	P	**P**	**17 39 38.9**	**+0.6**
	baz=164,SNR=15						
833A	**Chaparral WMA,**	**60.77**	**327**	P	**P**	**17 39 39.5**	**+1.0**
	baz=146,SNR=91						
833A	**Chaparral WMA,**	**60.77**	**327**	P	**P**	**17 39 39.6**	**+1.1**
	baz=146,SNR=91						
833A				S	**S**	**17 47 41.7**	**+0.1**
	baz=146						
X51A	**Calhoun**	**60.83**	**343**	P	**P**	**17 39 39.0**	**+0.2**
	baz=162,SNR=24						
X51A				P	**P**	**17 39 39.0**	**+0.2**
	baz=162,SNR=24						
TROLL	**Troll, Antarti**	**60.91**	**161**	P	**P**	**17 39 40.0**	**+0.9**
TROLL				S	**S**	**17 47 43.6**	**+1.0**
FPAL	**Fort Paine**	**61.01**	**343**	IAmb	IAmb	17 39 42.1	
	comp=Z,51nm,0.9s						
U59A	**Littleton**	**61.07**	**350**	P	**P**	**17 39 41.0**	**+0.6**
	baz=169,SNR=6.1						
U59A				P	**P**	**17 39 41.0**	**+0.6**
	baz=169,SNR=6.1						
W52A	**Murphy**	**61.09**	**344**	IAmb	IAmb	17 39 41.4	
	comp=Z,55nm,0.9s						
W52A	**Murphy**	**61.09**	**344**	P	**P**	**17 39 40.9**	**+0.3**
	baz=162,SNR=9.5						
143A	**Socs Landing,**	**61.15**	**337**	P	**P**	**17 39 41.5**	**+0.6**
	baz=155,SNR=7.0						
V55A	**Taylorsville**	**61.20**	**347**	P	**P**	**17 39 40.6**	**-0.6**
V55A	**Taylorsville**	**61.20**	**347**	P	**P**	**17 39 42.2**	**+0.9**
	baz=165,SNR=43						
V55A				P	**P**	**17 39 42.2**	**+0.9**
	baz=165,SNR=43						
X48A	**Hartselle**	**61.33**	**341**	IAmb	IAmb	17 39 42.7	
	comp=Z,96nm,0.9s						
X48A	**Hartselle**	**61.33**	**341**	P	**P**	**17 39 42.2**	**+0.1**
	baz=159,SNR=28						
V53A	**Saluda**	**61.38**	**345**	IAmb	IAmb	17 39 43.8	
	comp=Z,42nm,0.8s						
V53A	**Saluda**	**61.38**	**345**	P	**P**	**17 39 42.5**	**0.0**
	baz=164,SNR=16						
V53A				P	**P**	**17 39 42.5**	**0.0**
	baz=164,SNR=16						
U56A	**King**	**61.52**	**348**	IAmb	IAmb	17 39 45.0	
	comp=Z,80nm,0.9s						
U56A	**King**	**61.52**	**348**	P	**P**	**17 39 44.3**	**+0.9**
	baz=166,SNR=5.2						
U56A				P	**P**	**17 39 44.3**	**+0.9**
	baz=166,SNR=5.2						
W50A	**Signal Mountai**	**61.55**	**343**	IAmb	IAmb	17 39 44.8	
	comp=Z,78nm,0.8s						
W50A	**Signal Mountai**	**61.55**	**343**	P	**P**	**17 39 43.3**	**-0.3**
	baz=161,SNR=21						
Y45A	**Yeager Farm, C**	**61.56**	**339**	IAmb	IAmb	17 39 44.5	
	comp=Z,94nm,0.8s						
Y45A	**Yeager Farm, C**	**61.56**	**339**	P	**P**	**17 39 43.0**	**-0.7**
	baz=157,SNR=7.3						
NATX	**Nacogdoches**	**61.56**	**333**	P	**P**	**17 39 44.3**	**+0.5**
NATX				pP	**PcP**	**17 40 24.5**	**+0.7**
NATX	**Nacogdoches**	**61.56**	**333**	P	**P**	**17 39 45.2**	**+1.4**
	baz=151,SNR=16						
NATX	**Nacogdoches**	**61.56**	**333**	P	**P**	**17 39 45.1**	**+1.4**
	baz=151,SNR=16						
NATX				S	**S**	**17 47 52.9**	**+1.4**
	baz=151						
CPCT	**Cooper Cave**	**61.58**	**344**	IAmb	IAmb	17 39 44.4	
	comp=Z,54nm,0.9s						
TKL	**Tuckaleechee C**	**61.59**	**345**	LR	LR	18 10 14.7	
	comp=Z,271nm,18.0s,baz=162,slow=40						
TKL	**Tuckaleechee C**	**61.59**	**345**	IAmb	IAmb	17 39 44.8	
	comp=Z,51nm,0.8s						
TKL	**Tuckaleechee C**	**61.59**	**345**	P	**P**	**17 39 43.7**	**-0.2**
	baz=163,SNR=16						
T59A	**Double "B" Far**	**61.64**	**351**	P	**P**	**17 39 44.4**	**+0.2**
	baz=169,SNR=7.1						
T59A				P	**P**	**17 39 44.4**	**+0.2**
	baz=169,SNR=7.1						
V52A	**Sevierville**	**61.72**	**345**	P	**P**	**17 39 44.1**	**-0.6**
V52A				IAmb	IAmb	17 39 45.2	
	comp=Z,65nm,0.9s						
V52A	**Sevierville**	**61.72**	**345**	P	**P**	**17 39 44.5**	**-0.3**
	baz=163,SNR=18						
V51A	**Loudon**	**61.87**	**344**	P	**P**	**17 39 45.5**	**-0.3**
	baz=162,SNR=12						
T57A	**Hurt**	**61.94**	**349**	P	**P**	**17 39 45.9**	**-0.3**
T57A	**Hurt**	**61.94**	**349**	P	**P**	**17 39 46.6**	**+0.4**
	baz=168,SNR=7.7						
T57A				P	**P**	**17 39 46.6**	**+0.4**
	baz=168,SNR=7.7						
U54A	**Nelsons Funny**	**61.98**	**347**	P	**P**	**17 39 47.0**	**+0.5**
	baz=165,SNR=31						
U54A				P	**P**	**17 39 47.0**	**+0.5**
	baz=165,SNR=31						
435B	**Jarrell**	**61.98**	**330**	IAmb	IAmb	17 39 48.9	
	comp=Z,50nm,0.7s						
435B	**Jarrell**	**61.98**	**330**	P	**P**	**17 39 47.3**	**+0.7**
	baz=148						
435B	**Jarrell**	**61.98**	**330**	P	**P**	**17 39 47.3**	**+0.7**
	baz=148						
435B				S	**S**	**17 47 55.8**	**-0.9**
	baz=148						
OXF	**Oxford**	**62.11**	**339**	P	**P**	**17 39 46.8**	**-0.6**
OXF	**Oxford**	**62.11**	**339**	P	**P**	**17 39 47.1**	**-0.3**
	baz=157,SNR=7.9						
OXF	**Oxford**	**62.11**	**339**	P	**P**	**17 39 46.5**	**-0.8**
	baz=157,SNR=7.9						
PLAL	**Pickwick Lake**	**62.13**	**341**	IAmb	IAmb	17 39 47.5	
	comp=Z,58nm,1.0s						
Z41A	**Richland Creek**	**62.16**	**336**	IAmb	IAmb	17 39 50.8	
	comp=Z,79nm,0.8s						
Z41A	**Richland Creek**	**62.16**	**336**	P	**P**	**17 39 48.6**	**+0.9**
	baz=154,SNR=15						
Z41A				P	**P**	**17 39 48.6**	**+0.9**
	baz=154,SNR=15						
Z41A	**Richland Creek**	**62.16**	**336**	P	**P**	**17 39 48.6**	**+0.9**
	baz=154,SNR=15						
Z41A				S	**S**	**17 48 00.7**	**+1.8**
	baz=154						
237A	**Washetta, Mont**	**62.25**	**333**	P	**P**	**17 39 49.0**	**+0.7**
237A	**Washetta, Mont**	**62.25**	**333**	P	**P**	**17 39 49.7**	**+1.3**
	baz=150,SNR=10						
BLA	**Blacksburg**	**62.36**	**348**	P	**P**	**17 39 48.7**	**-0.3**
BLA				IAmb	IAmb	17 39 50.5	
	comp=Z,58nm,0.8s						
BLA	**Blacksburg**	**62.36**	**348**	P	**P**	**17 39 48.7**	**-0.3**
BLA				pmax	pmax		
	comp=Z,58nm,0.9s						
BLA	**Blacksburg**	**62.36**	**348**	P	**P**	**17 39 50.0**	**+1.0**
	baz=166,SNR=15						
BLA	**Blacksburg**	**62.36**	**348**	P	**P**	**17 39 49.9**	**+0.8**
	baz=166,SNR=15						
BLA				S	**S**	**17 48 02.7**	**+1.3**
	baz=166						
TZTN	**Tazewell**	**62.38**	**345**	P	**P**	**17 39 49.1**	**0.0**
	baz=163,SNR=5.3						
TZTN	**Tazewell**	**62.38**	**345**	P	**P**	**17 39 48.9**	**-0.3**
	baz=163,SNR=5.3						
TZTN				S	**S**	**17 47 59.6**	**-2.1**
	baz=163						
V48A	**Smith Brothers**	**62.47**	**342**	P	**P**	**17 39 49.6**	**-0.1**
	baz=160,SNR=22						
W45A	**Hickory Valley**	**62.63**	**340**	P	**P**	**17 39 50.9**	**0.0**
	baz=157,SNR=6.9						
CLTN	**Cedars of Leba**	**62.66**	**343**	IAmb	IAmb	17 39 51.9	
	comp=Z,67nm,0.9s						
R58B	**Mineral**	**62.66**	**350**	P	**P**	**17 39 51.7**	**+0.8**
	baz=169,SNR=9.2						
R58B				P	**P**	**17 39 51.7**	**+0.8**
	baz=169,SNR=9.2						
JCT	**Junction City**	**62.76**	**328**	P	**P**	**17 39 51.9**	**+0.1**
JCT	**Junction City**	**62.76**	**328**	P	**P**	**17 39 51.9**	**+0.1**
JCT				pmax	pmax		
	comp=Z,143nm,0.8s						
JCT	**Junction City**	**62.76**	**328**	P	**P**	**17 39 52.5**	**+0.7**
	baz=146,SNR=61						
JCT	**Junction City**	**62.76**	**328**	P	**P**	**17 39 52.5**	**+0.7**
	baz=146,SNR=61						
JCT				S	**S**	**17 48 06.7**	**+0.1**
	baz=146						
CBN	**Corbin Frederi**	**62.83**	**351**	P	**P**	**17 39 52.5**	**+0.5**
	baz=170						
CBN				S	**S**	**17 48 07.4**	**+0.4**
	baz=170						
U49A	**Red Boiling Sp**	**62.91**	**343**	P	**P**	**17 39 51.6**	**-1.1**
U49A					**PcP**	**17 40 29.5**	**+0.4**
U49A	**Red Boiling Sp**	**62.91**	**343**	P	**P**	**17 39 52.2**	**-0.4**
	baz=161,SNR=11						
WHTX	**Lake Whitney,**	**62.95**	**331**	IAmb	IAmb	17 39 55.2	
	comp=Z,85nm,0.8s						
WHTX	**Lake Whitney,**	**62.95**	**331**	P	**P**	**17 39 53.5**	**+0.5**
	baz=149,SNR=11						
WHTX	**Lake Whitney,**	**62.95**	**331**	P	**P**	**17 39 53.6**	**+0.6**
	baz=149,SNR=11						
WHTX				S	**S**	**17 48 09.1**	**+0.3**
	baz=149						
HPIG		**63.00**	**321**	IAmb	IAmb	17 39 56.8	
	comp=Z,49nm,0.7s						
Z38A	**Mt. Pleasant**	**63.01**	**334**	IAmb	IAmb	17 39 56.0	
	comp=Z,100nm,0.8s						
Z38A	**Mt. Pleasant**	**63.01**	**334**	P	**P**	**17 39 54.6**	**+1.3**
	baz=152,SNR=8.4						
S54A	**Dingess, Beckl**	**63.10**	**347**	P	**P**	**17 39 54.4**	**+0.5**
	baz=166,SNR=40						
S54A				P	**P**	**17 39 54.4**	**+0.5**
	baz=166,SNR=40						
WVT	**Waverly**	**63.12**	**341**	P	**P**	**17 39 53.1**	**-0.9**
WVT				IAmb	IAmb	17 39 54.7	
	comp=Z,100nm,0.8s						
WVT	**Waverly**	**63.12**	**341**	P	**P**	**17 39 53.1**	**-0.9**
WVT				pmax	pmax		
	comp=Z,100nm,0.9s						
WVT	**Waverly**	**63.12**	**341**	P	**P**	**17 39 53.7**	**-0.4**
	baz=159,SNR=29						
WVT	**Waverly**	**63.12**	**341**	P	**P**	**17 39 53.6**	**-0.4**
	baz=159						
WVT				S	**S**	**17 48 07.7**	**-3.1**
	baz=159						
WVT	**Waverly**	**63.12**	**341**	P	**P**	**17 39 53.5**	**-0.5**
T50A	**Nancy**	**63.15**	**344**	IAmb	IAmb	17 39 54.8	
	comp=Z,42nm,0.8s						
SLBS	**Sierra La Lagu**	**63.17**	**316**	P	**P**	**17 39 56.4**	**+1.7**
SLBS				IAmb	IAmb	17 39 57.7	
	comp=Z,49nm,1.1s						
SLBS	**Sierra La Lagu**	**63.17**	**316**	P	**P**	**17 39 57.0**	**+2.2**
SLBS				pP	**pP**	**17 40 44.3**	**+6.6**
X40A	**Basin Creek Fa**	**63.27**	**336**	P	**P**	**17 39 54.8**	**-0.2**
	baz=154,SNR=15						
X40A				P	**P**	**17 39 54.8**	**-0.2**
	baz=154,SNR=15						
X40A	**Basin Creek Fa**	**63.27**	**336**	P	**P**	**17 39 54.9**	**-0.2**
	baz=154,SNR=15						
X40A				S	**S**	**17 48 10.8**	**-2.0**
	baz=154						
R55A	**Marlinton**	**63.35**	**349**	IAmb	IAmb	17 39 58.0	
	comp=Z,86nm,1.1s						
R55A	**Marlinton**	**63.35**	**349**	P	**P**	**17 39 56.3**	**+0.7**
	baz=167,SNR=15						
R55A				P	**P**	**17 39 56.3**	**+0.7**
	baz=167,SNR=15						
UALR	**University of**	**63.35**	**337**	IAmb	IAmb	17 39 56.2	
	comp=Z,42nm,0.8s						
S51A	**Beattyville**	**63.44**	**345**	P	**P**	**17 39 55.8**	**-0.3**
	baz=163,SNR=8.1						
S51A				P	**P**	**17 39 55.8**	**-0.3**
	baz=163,SNR=8.1						
MIAR	**Mount Ida**	**63.60**	**336**	IAmb	IAmb	17 39 58.1	
	comp=Z,57nm,0.8s						
MIAR	**Mount Ida**	**63.60**	**336**	P	**P**	**17 39 57.5**	**+0.4**
MIAR	**Mount Ida**	**63.60**	**336**	P	**P**	**17 39 57.6**	**+0.4**
	baz=153,SNR=43						
MIAR	**Mount Ida**	**63.60**	**336**	P	**P**	**17 39 57.6**	**+0.4**
	baz=153,SNR=43						
MIAR				S	**S**	**17 48 15.1**	**-1.7**
	baz=153						
W41B	**Gary Mavity, V**	**63.67**	**337**	P	**P**	**17 39 57.2**	**-0.5**
W41B	**Gary Mavity, V**	**63.67**	**337**	P	**P**	**17 39 57.8**	**+0.1**
	baz=154,SNR=16						
W41B	**Gary Mavity, V**	**63.67**	**337**	P	**P**	**17 39 57.8**	**+0.1**
	baz=154,SNR=16						
W41B				S	**S**	**17 48 15.3**	**-2.3**
	baz=154						
T47A	**Sharon Grove**	**63.72**	**342**	P	**P**	**17 39 57.5**	**-0.4**
	baz=160,SNR=35						
NVL	**N'lazarevskaya**	**63.73**	**159**	⇓iP	**P**	**17 39 57.1**	**-0.5**
NVL				*e**PP	**PcP**	**17 40 31.0**	**-1.1**
NVL				*e*S	**S**	**17 48 14.5**	**-3.0**
NVL				pmax	pmax		
	comp=Z,109nm,0.9s						
R53A	**Hurricane**	**63.75**	**347**	IAmb	IAmb	17 39 59.3	
	comp=Z,45nm,0.8s						
R53A	**Hurricane**	**63.75**	**347**	P	**P**	**17 39 58.3**	**+0.2**
	baz=165,SNR=10						
R53A				P	**P**	**17 39 58.3**	**+0.2**
	baz=165,SNR=10						
TXAR	**Lajitas Array**	**63.77**	**325**	P	**P**	**17 39 59.4**	**+0.8**
	comp=Z,16nm,0.7s,baz=151,slow=8.1,SNR=166						
TXAR				PKPPKP	**P'P'df**	**18 08 50.7**	**+1.1**
	comp=Z,0.7nm,0.9s,baz=184,slow=4.2,SNR=7.3						
	comp=Z,16nm,0.7s						
TX31	**Lajitas Ar. Si**	**63.77**	**325**	P	**P**	**17 39 59.4**	**+0.8**
	baz=143						
WHAR	**Wooly Hollow**	**63.79**	**337**	IAmb	IAmb	17 40 00.2	
	comp=Z,48nm,0.9s						
Q56A	**Snyder Ridge,**	**63.92**	**350**	IAmb	IAmb	17 40 01.5	
	comp=Z,44nm,0.8s						
Q56A	**Snyder Ridge,**	**63.92**	**350**	P	**P**	**17 40 00.6**	**+1.3**
	baz=168,SNR=10.0						
Q56A				P	**P**	**17 40 00.6**	**+1.3**
	baz=168,SNR=10.0						
Z35A	**Perchaven, San**	**64.01**	**332**	P	**P**	**17 40 00.9**	**+1.0**
	baz=149,SNR=13						
LCAR	**Lake Charles**	**64.11**	**339**	P	**P**	**17 39 59.9**	**-0.6**
LCAR	**Lake Charles**	**64.11**	**339**	P	**P**	**17 40 00.1**	**-0.3**
	baz=156,SNR=12						
Q54A	**Coxs Mills**	**64.16**	**348**	IAmb	IAmb	17 40 02.0	
	comp=Z,56nm,0.8s						
Q54A	**Coxs Mills**	**64.16**	**348**	P	**P**	**17 40 01.1**	**+0.3**
	baz=166,SNR=16						
Q54A				P	**P**	**17 40 01.1**	**+0.3**
	baz=166,SNR=16						
P57A	**Homestead Farm**	**64.17**	**351**	P	**P**	**17 40 02.1**	**+1.3**
	baz=169,SNR=8.5						
P57A				P	**P**	**17 40 02.1**	**+1.3**
	baz=169,SNR=8.5						
R50A	**Paris**	**64.22**	**345**	P	**P**	**17 40 00.9**	**-0.3**
	baz=163,SNR=13						
R50A				P	**P**	**17 40 00.9**	**-0.3**
	baz=163,SNR=13						
W39A	**Magazine**	**64.25**	**336**	P	**P**	**17 40 02.3**	**+0.9**
	baz=153,SNR=86						
W39A	**Magazine**	**64.25**	**336**	P	**P**	**17 40 02.3**	**+0.9**
	baz=153,SNR=86						
W39A				S	**S**	**17 48 24.8**	**0.0**
	baz=153						
FCAR	**Ozark Folk Cen**	**64.28**	**338**	P	**P**	**17 40 00.9**	**-0.7**
FCAR				IAmb	IAmb	17 40 01.9	
	comp=Z,43nm,0.9s						
X37A	**Clayton**	**64.33**	**334**	P	**P**	**17 40 02.7**	**+0.8**
	baz=151,SNR=50						
Q52A	**Bidwell**	**64.42**	**347**	IAmb	IAmb	17 40 03.5	
	comp=Z,64nm,0.8s						
Q52A	**Bidwell**	**64.42**	**347**	P	**P**	**17 40 02.4**	**0.0**
	baz=165,SNR=16						
Q52A				P	**P**	**17 40 02.4**	**0.0**
	baz=165,SNR=16						
R49A	**Shelbyville**	**64.44**	**344**	IAmb	IAmb	17 40 03.1	
	comp=Z,32nm,0.8s						
R49A	**Shelbyville**	**64.44**	**344**	P	**P**	**17 40 01.9**	**-0.7**
	baz=162,SNR=12						
R49A				P	**P**	**17 40 01.9**	**-0.7**
	baz=162,SNR=12						
MVL	**Millersville**	**64.45**	**352**	P	**P**	**17 40 01.8**	**-0.9**
ABTX	**Abilene, Hawle**	**64.47**	**330**	P	**P**	**17 40 03.5**	**+0.6**
	baz=147,SNR=27						
ABTX	**Abilene, Hawle**	**64.47**	**330**	P	**P**	**17 40 03.5**	**+0.6**
	baz=147,SNR=27						
ABTX				S	**S**	**17 48 25.8**	**-1.8**
	baz=147						
TUPA	**Temple Univers**	**64.48**	**353**	P	**P**	**17 40 03.4**	**+0.6**
	baz=172						
PBMO	**Poplar Bluff**	**64.52**	**339**	IAmb	IAmb	17 40 03.7	
	comp=Z,91nm,0.9s						
PBMO	**Poplar Bluff**	**64.52**	**339**	P	**P**	**17 40 03.0**	**-0.1**
	baz=156,SNR=35						
MCWV	**Mont Chateau**	**64.64**	**349**	IAmb	IAmb	17 40 05.7	
	comp=Z,66nm,0.8s						
MCWV	**Mont Chateau**	**64.64**	**349**	P	**P**	**17 40 04.6**	**+0.7**
	baz=167,SNR=13						
MCWV	**Mont Chateau**	**64.64**	**349**	P	**P**	**17 40 04.8**	**+0.9**
	baz=167,SNR=13						
MCWV				S	**S**	**17 48 31.0**	**+1.6**
	baz=167						
PANJ	**Princeton**	**64.64**	**354**	P	**P**	**17 40 04.4**	**+0.6**
	baz=172						
Q51A	**Peebles**	**64.71**	**346**	IAmb	IAmb	17 40 05.2	
	comp=Z,45nm,0.8s						
Q51A	**Peebles**	**64.71**	**346**	P	**P**	**17 40 04.2**	**-0.2**
	baz=164,SNR=16						
Q51A				P	**P**	**17 40 04.2**	**-0.2**
	baz=164,SNR=16						
P53A	**Whipple**	**64.75**	**348**	P	**P**	**17 40 05.1**	**+0.5**
	baz=166,SNR=27						
P53A				P	**P**	**17 40 05.1**	**+0.5**
	baz=166,SNR=27						
BRNJ	**Basking Ridge**	**64.93**	**354**	P	**P**	**17 40 06.9**	**+1.2**
	baz=172						
U40A	**Yellville**	**64.95**	**337**	P	**P**	**17 40 05.8**	**-0.1**
U40A				IAmb	IAmb	17 40 08.3	
	comp=Z,60nm,0.9s						
U40A	**Yellville**	**64.95**	**337**	P	**P**	**17 40 06.1**	**+0.1**
	baz=154,SNR=47						
U40A				P	**P**	**17 40 06.1**	**+0.1**
	baz=154,SNR=47						
U40A	**Yellville**	**64.95**	**337**	P	**P**	**17 40 06.1**	**+0.1**
	baz=154,SNR=47						
S44A	**Carbondale**	**64.99**	**341**	IAmb	IAmb	17 40 06.3	
	comp=Z,51nm,1.0s						
S44A	**Carbondale**	**64.99**	**341**	P	**P**	**17 40 05.6**	**-0.6**
	baz=158,SNR=7.7						
SIUC	**Southern Illin**	**65.00**	**341**	IAmb	IAmb	17 40 06.4	
	comp=Z,54nm,1.1s						
P52A	**Corning**	**65.04**	**347**	IAmb	IAmb	17 40 07.4	
	comp=Z,88nm,0.8s						
P52A	**Corning**	**65.04**	**347**	P	**P**	**17 40 06.4**	**0.0**
	baz=165,SNR=23						
P52A				S	**S**	**17 48 32.5**	**-1.8**
	baz=165						
FOR	**Fordham**	**65.05**	**354**	P	**P**	**17 40 07.2**	**+0.7**
	baz=173						
P51A	**Williamsport**	**65.09**	**346**	IAmb	IAmb	17 40 07.0	
	comp=Z,45nm,0.8s						
P51A	**Williamsport**	**65.09**	**346**	P	**P**	**17 40 06.5**	**-0.2**
	baz=164,SNR=8.1						
P51A				P	**P**	**17 40 06.5**	**-0.2**
	baz=164,SNR=8.1						
PAL	**Palisades**	**65.19**	**354**	P	**P**	**17 40 08.2**	**+0.9**
	baz=173			

ODNJ	Ogdensburg	65.33	354	P	P	17 40 08.7	+0.4
	baz=172,SNR=5.2						
X34A	Smith Ranch, M	65.34	332	IAmb	IAmb	17 40 09.8	
	comp=Z,70nm,0.8s						
YLE	Yale	65.42	355	IAmb	IAmb	17 40 10.9	
	comp=Z,43nm,0.9s						
O52A	Adamsville	65.45	348	IAmb	IAmb	17 40 10.1	
	comp=Z,71nm,0.7s						
O52A	Adamsville	65.45	348	P	P	17 40 09.2	+0.1
	baz=165,SNR=18						
O52A				P	P	17 40 09.2	+0.1
	baz=165,SNR=18						
O53A	New Philadelph	65.46	348	IAmb	IAmb	17 40 09.9	
	comp=Z,50nm,0.7s						
O53A	New Philadelph	65.46	348	P	P	17 40 09.4	+0.3
	baz=166,SNR=20						
O53A				S	S	17 48 38.7	-0.7
	baz=166						
MGMO	Mountain Grove	65.47	338	P	P	17 40 08.6	-0.7
MGMO				PcP	PcP	17 40 40.2	+0.5
P49A	Miami Univ. Ec	65.51	345	IAmb	IAmb	17 40 09.8	
	comp=Z,96nm,0.8s						
P49A	Miami Univ. Ec	65.51	345	P	P	17 40 08.9	-0.6
	baz=162,SNR=22						
P49A	Miami Univ. Ec	65.51	345	P	P	17 40 08.9	-0.6
	baz=162,SNR=22						
P49A				S	S	17 48 36.3	-3.7
	baz=162						
U38A	Gravette	65.58	336	IAmb	IAmb	17 40 11.8	
	comp=Z,55nm,0.7s						
U38A	Gravette	65.58	336	P	P	17 40 10.2	+0.2
	baz=153,SNR=34						
P48A	Milroy	65.61	345	IAmb	IAmb	17 40 10.2	
	comp=Z,50nm,0.8s						
P48A	Milroy	65.61	345	P	P	17 40 09.0	-1.1
	baz=162,SNR=15						
P48A				P	P	17 40 09.0	-1.1
	baz=162,SNR=15						
BLO	Bloomington	65.61	344	IAmb	IAmb	17 40 10.0	
	comp=Z,48nm,0.7s						
FVM	French Village	65.62	340	P	P	17 40 09.6	-0.6
FVM				IAmb	IAmb	17 40 10.8	
	comp=Z,95nm,0.9s						
FVM	French Village	65.62	340	P	P	17 40 09.6	-0.6
FVM				pmax	pmax		
	comp=Z,95nm,1.0s						
FVM	French Village	65.62	340	P	P	17 40 10.2	0.0
	baz=157,SNR=24						
TUL1	Leonard	65.65	335	IAmb	IAmb	17 40 13.1	
	comp=Z,74nm,0.8s						
TUL1	Leonard	65.65	335	P	P	17 40 10.8	+0.4
	baz=151,SNR=21						
TUL1	Leonard	65.65	335	P	P	17 40 10.8	+0.4
	baz=151,SNR=21						
TUL1				S	S	17 48 41.7	-0.2
	baz=151						
FNO	Franklin	65.73	333	IAmb	IAmb	17 40 12.8	
	comp=Z,63nm,0.8s						
ACSO	Alum Creek Sta	65.79	347	P	P	17 40 10.6	-0.7
ACSO				IAmb	IAmb	17 40 12.2	
	comp=Z,98nm,0.8s						
ACSO	Alum Creek Sta	65.79	347	P	P	17 40 11.2	-0.1
	baz=164,SNR=20						
ACSO	Alum Creek Sta	65.79	347	P	P	17 40 11.2	-0.1
	baz=164,SNR=20						
ACSO				S	S	17 48 40.5	-2.9
	baz=164						
WMOK	Wichita Mounta	65.87	332	P	P	17 40 11.4	-0.5
WMOK				PcP	PcP	17 40 41.8	+0.4
WMOK	Wichita Mounta	65.87	332	P	P	17 40 11.4	-0.5
WMOK						17 40 41.8	
WMOK				pmax	pmax		
	comp=Z,24nm,0.7s						
WMOK	Wichita Mounta	65.87	332	P	P	17 40 11.7	-0.2
	baz=148,SNR=16						
WMOK	Wichita Mounta	65.87	332	P	P	17 40 11.8	-0.2
	baz=148,SNR=16						
M57A	Sunshine Farm,	65.87	352	P	P	17 40 12.8	+1.1
	baz=170,SNR=8.1						
M57A				P	P	17 40 12.8	+1.1
	baz=170,SNR=8.1						
OKCFA	Oklahoma City	65.88	333	IAmb	IAmb	17 40 14.4	
	comp=Z,126nm,1.3s						
OKCFA	Oklahoma City	65.88	333	P	P	17 40 12.2	+0.2
	baz=150						
L64A	Middleborough	65.90	357	P	P	17 40 12.5	+0.6
	baz=176						
L64A				P	P	17 40 12.5	+0.6
	baz=176						
BRYW	Bryant College	65.92	356	IAmb	IAmb	17 40 13.9	
	comp=Z,66nm,0.9s						
KSPA	Keystone Colle	65.92	353	IAmb	IAmb	17 40 13.6	
	comp=Z,46nm,0.9s						
KSPA	Keystone Colle	65.92	353	P	P	17 40 12.9	+0.8
	baz=171,SNR=16						
CCM	Cathedral Cave	65.95	339	P	P	17 40 11.7	-0.6
CCM				IAmb	IAmb	17 40 12.9	
	comp=Z,81nm,0.8s						
CCM	Cathedral Cave	65.95	339	P	P	17 40 11.7	-0.6
CCM				pmax	pmax		
	comp=Z,81nm,0.8s						
CCM	Cathedral Cave	65.95	339	P	P	17 40 12.2	0.0
	baz=156,SNR=63						
CCM	Cathedral Cave	65.95	339	P	P	17 40 12.3	0.0
	baz=156						
CCM				S	S	17 48 43.6	-1.7
	baz=156						
CCM	Cathedral Cave	65.95	339	P	P	17 40 12.1	-0.2
CCM				pP	pP	17 40 57.4	+1.8
NPNY	Mohonk Preserv	65.95	354	P	P	17 40 13.0	+0.7
	baz=173,SNR=11						
QSPA	South Pole Qui	65.99	180	P	P	17 40 12.7	+0.2
QSPA				IAmb	IAmb	17 40 14.4	
	comp=Z,103nm,0.8s						
QSPA	South Pole Qui	65.99	180	P	P	17 40 13.7	+1.2
QSPA				pP	pP	17 40 58.7	+3.1
O49A	Covington	66.04	346	IAmb	IAmb	17 40 13.5	
	comp=Z,66nm,0.8s						
O49A	Covington	66.04	346	P	P	17 40 12.1	-0.8
	baz=163,SNR=18						
O49A				P	P	17 40 12.1	-0.8
	baz=163,SNR=18						
SLM	Saint Louis	66.16	340	P	P	17 40 13.0	-0.6
SLM				IAmb	IAmb	17 40 24.3	
	comp=Z,35nm,0.7s						
SLM				PcP	PcP	17 40 41.6	-0.8
P46A	Rosedale	66.21	343	IAmb	IAmb	17 40 13.6	
	comp=Z,53nm,0.9s						
P46A	Rosedale	66.21	343	P	P	17 40 12.9	-1.0
	baz=160,SNR=9.7						
M55A	Ridgway	66.23	350	IAmb	IAmb	17 40 15.3	
	comp=Z,61nm,0.9s						
M55A	Ridgway	66.23	350	P	P	17 40 14.6	+0.5
	baz=168,SNR=16						
M55A				P	P	17 40 14.6	+0.5
	baz=168,SNR=16						
O48B	Farmland	66.30	345	P	P	17 40 13.7	-0.8
	baz=162,SNR=29						
O48B	Farmland	66.30	345	P	P	17 40 13.8	-0.7
	baz=162,SNR=29						
O48B				S	S	17 48 46.5	-3.1
	baz=162						
S39A	Bolivar	66.31	338	P	P	17 40 15.1	+0.4
	baz=154,SNR=121						
N51A	Ashland	66.33	347	IAmb	IAmb	17 40 15.5	
	comp=Z,55nm,0.8s						
N51A	Ashland	66.33	347	P	P	17 40 14.4	-0.3
	baz=165,SNR=9.4						
N51A				P	P	17 40 14.4	-0.3
	baz=165,SNR=9.4						
L59A	Walton	66.47	354	IAmb	IAmb	17 40 17.9	
	comp=Z,99nm,0.8s						
L59A	Walton	66.47	354	P	P	17 40 16.7	+1.1
	baz=172,SNR=36						
L59A				P	P	17 40 16.7	+1.1
	baz=172,SNR=36						
R40A	Maddies Statio	66.50	339	P	P	17 40 15.7	-0.1
	baz=155,SNR=34						
HRV	Adam Dziewonsk	66.51	356	P	P	17 40 16.6	+0.8
HRV	Adam Dziewonsk	66.51	356	P	P	17 40 16.6	+0.8
HRV				pmax	pmax		
	comp=Z,30nm,0.9s						
HRV	Adam Dziewonsk	66.51	356	P	P	17 40 16.5	+0.8
	baz=176						
HRV				S	S	17 48 53.0	+1.0
	baz=176						
HRV	Adam Dziewonsk	66.51	356	P	P	17 40 16.6	+0.8

M53A	WI Miller and	66.51	349	IAmb	IAmb	17 40 16.7	
	comp=Z,52nm,0.8s						
M53A	WI Miller and	66.51	349	P	P	17 40 16.2	+0.3
	baz=166,SNR=14						
M53A				S	S	17 48 51.1	-1.0
	baz=166						
L61B	Northampton	66.53	356	P	P	17 40 16.4	+0.5
L61B	Northampton	66.53	356	P	P	17 40 16.8	+0.9
	baz=174						
L61B	Northampton	66.53	356	P	P	17 40 16.2	+0.4
	baz=174						
MNTX	Cornudas Mount	66.54	325	P	P	17 40 16.4	+0.2
	baz=142,SNR=79						
MNTX	Cornudas Mount	66.54	325	P	P	17 40 16.5	+0.2
	baz=142,SNR=79						
BINY	Binghamton	66.58	353	IAmb	IAmb	17 40 18.4	
	comp=Z,85nm,0.9s						
BINY	Binghamton	66.58	353	P	P	17 40 17.2	+1.0
	baz=171,SNR=33						
BINY	Binghamton	66.58	353	P	P	17 40 17.3	+1.0
	baz=171,SNR=33						
ALLY	Alegheny Colle	66.63	349	IAmb	IAmb	17 40 18.0	
	comp=Z,88nm,0.7s						
ALLY	Alegheny Colle	66.63	349	P	P	17 40 16.8	+0.2
	baz=167,SNR=19						
N49A	Columbus Grove	66.71	346	P	P	17 40 16.4	-0.6
N49A				IAmb	IAmb	17 40 17.9	
	comp=Z,113nm,0.8s						
N49A				PcP	PcP	17 40 44.1	-0.6
N49A				pP	pP	17 41 00.9	+0.4
N49A	Columbus Grove	66.71	346	P	P	17 40 16.8	-0.3
	baz=163,SNR=26						
N49A				P	P	17 40 16.8	-0.3
	baz=163,SNR=26						
L56A	Greenwood	66.72	352	IAmb	IAmb	17 40 18.5	
	comp=Z,64nm,0.9s						
L56A	Greenwood	66.72	352	P	P	17 40 17.6	+0.5
	baz=170,SNR=17						
L56A				P	P	17 40 17.6	+0.5
	baz=170,SNR=17						
M52A	Chesterland	66.73	348	IAmb	IAmb	17 40 18.5	
	comp=Z,54nm,0.8s						
M52A	Chesterland	66.73	348	P	P	17 40 17.5	+0.2
	baz=166,SNR=9.6						
M52A				P	P	17 40 17.5	+0.2
	baz=166,SNR=9.6						
T35A	Sooner Cattle	66.81	335	IAmb	IAmb	17 40 20.8	
	comp=Z,69nm,0.9s						
T35B	Sooner Cattle	66.81	335	P	P	17 40 18.4	+0.6
	baz=151,SNR=25						
P43A	Skaggs, Pawnee	66.87	341	P	P	17 40 17.0	-1.1
P43A				PcP	PcP	17 40 45.9	+0.5
P43A	Skaggs, Pawnee	66.87	341	P	P	17 40 17.4	-0.7
	baz=158,SNR=7.8						
TRY	Troy	66.88	355	IAmb	IAmb	17 40 20.4	
	comp=Z,53nm,0.8s						
TRY	Troy	66.88	355	P	P	17 40 19.2	+1.1
	baz=174,SNR=13						
SFIN	Lafayette	66.89	344	P	P	17 40 16.7	-1.6
SFIN				IAmb	IAmb	17 40 17.8	
	comp=Z,58nm,0.8s						
SFIN	Lafayette	66.89	344	P	P	17 40 17.2	-1.1
	baz=160,SNR=16						
SFIN	Lafayette	66.89	344	P	P	17 40 17.2	-1.1
	baz=160,SNR=16						
HCNY	Howe Caverns	66.91	354	P	P	17 40 19.3	+1.0
	baz=173,SNR=18						
M50A	Fremont	66.93	347	IAmb	IAmb	17 40 19.3	
	comp=Z,58nm,0.7s						
M50A	Fremont	66.93	347	P	P	17 40 18.4	0.0
	baz=164,SNR=5.1						
M50A				P	P	17 40 18.4	0.0
	baz=164,SNR=5.1						
N47A	Urbana	67.02	345	IAmb	IAmb	17 40 19.5	
	comp=Z,91nm,0.9s						
N47A	Urbana	67.02	345	P	P	17 40 18.4	-0.7
	baz=162,SNR=20						
N47A				P	P	17 40 18.4	-0.7
	baz=162,SNR=20						
MSTX	Muleshoe	67.05	328	P	P	17 40 19.6	0.0
MSTX				IAmb	IAmb	17 40 21.3	
	comp=Z,122nm,0.8s						
MSTX	Muleshoe	67.05	328	P	P	17 40 20.0	+0.4
	baz=145,SNR=27						
MSTX	Muleshoe	67.05	328	P	P	17 40 20.1	+0.6
	baz=145,SNR=27						
ERPA	Erie	67.06	350	P	P	17 40 19.6	+0.3
	baz=167,SNR=30						
ERPA	Erie	67.06	350	P	P	17 40 19.7	+0.4
	baz=167,SNR=30						
ERPA				S	S	17 48 57.8	-0.8
	baz=167						
WVNY	West Valley, N	67.12	351	IAmb	IAmb	17 40 21.6	
	comp=Z,100nm,0.8s						
WVNY	West Valley, N	67.12	351	P	P	17 40 20.6	+0.8
	baz=169,SNR=24						
K57A	Scipio Center	67.17	353	IAmb	IAmb	17 40 21.0	
	comp=Z,55nm,0.9s						
K57A	Scipio Center	67.17	353	P	P	17 40 20.5	+0.6
	baz=171,SNR=10						
KIDD	KIDD Seismic O	67.20	324	P	P	17 40 21.6	+1.0
	baz=141						
SRIG	Santa Rosalia	67.21	317	IAmb	IAmb	17 40 24.1	
	comp=Z,72nm,1.0s						
AMTX	Amarillo	67.28	330	P	P	17 40 20.7	-0.3
AMTX				IAmb	IAmb	17 40 22.0	
	comp=Z,58nm,1.1s						
AMTX	Amarillo	67.28	330	P	P	17 40 21.3	+0.4
	baz=146,SNR=9.9						
AMTX	Amarillo	67.28	330	P	P	17 40 21.4	+0.4
	baz=146						
MMNY	Mt. Morris Dam	67.35	351	IAmb	IAmb	17 40 22.2	
	comp=Z,88nm,0.9s						
J61A	Chester	67.41	356	IAmb	IAmb	17 40 24.2	
	comp=Z,134nm,1.9s						
J61A	Chester	67.41	356	P	P	17 40 22.6	+1.2
	baz=175,SNR=7.4						
J61A				P	P	17 40 22.6	+1.2
	baz=175,SNR=7.4						
ACCN	Adirondack Com	67.53	355	IAmb	IAmb	17 40 24.7	
	comp=Z,104nm,1.9s						
P40A	Paris	67.55	339	P	P	17 40 21.7	-0.6
P40A				PcP	PcP	17 40 48.5	+0.3
P40A	Paris	67.55	339	P	P	17 40 22.4	0.0
	baz=155,SNR=38						
LIC	Lamto	67.63	72⇑ *eP*		P	17 40 22.9	-0.6
	comp=Z,11nm,0.3s						
LIC	Lamto	67.63	72⇑ *iP*		S	17 49 04.6	-2.0
	comp=Z,9.3nm,0.8s						
HSIG		67.65	319	IAmb	IAmb	17 40 27.4	
	comp=Z,85nm,1.0s						
HDIL	Hopedale	67.65	342	P	P	17 40 22.4	-0.6
	baz=158						
HDIL	Hopedale	67.65	342	P	P	17 40 22.4	-0.6
	baz=158						
J58A	Remsen	67.65	354	P	P	17 40 23.8	+0.8
	baz=172,SNR=10.0						
J58A				P	P	17 40 23.8	+0.8
	baz=172,SNR=10.0						
J59A	Piesco	67.68	354	IAmb	IAmb	17 40 25.4	
	comp=Z,77nm,0.9s						
J59A	Piesco	67.68	354	P	P	17 40 24.1	+0.9
	baz=173,SNR=28						
J59A				P	P	17 40 24.1	+0.9
	baz=173,SNR=28						
L48A	N Adams	67.74	346	P	P	17 40 22.7	-0.9
L48A	N Adams	67.74	346	P	P	17 40 23.2	-0.4
	baz=163,SNR=28						
L48A				P	P	17 40 23.2	-0.4
	baz=163,SNR=28						
J56A	Wolcott	67.75	352	P	P	17 40 23.9	+0.4
	baz=170,SNR=45						
J56A				P	P	17 40 23.9	+0.4
	baz=170,SNR=45						
HNH	Hanover	67.75	356	IAmb	IAmb	17 40 26.2	
	comp=Z,100nm,1.8s						
J57A	Williamstown	67.78	353	P	P	17 40 23.5	-0.3
J57A				IAmb	IAmb	17 40 25.4	
	comp=Z,50nm,0.8s						
J57A				PcP	PcP	17 40 48.6	-0.5
J57A				pP	pP	17 41 08.2	+0.8
J57A	Williamstown	67.78	353	P	P	17 40 24.3	+0.5
	baz=171,SNR=23						
J57A				P	P	17 40 24.3	+0.5
	baz=171,SNR=23						
TIC	Toumodi	67.84	71⇑ *iP*		P	17 40 23.9	-1.0
	comp=Z,13nm,0.2s						
TIC	Toumodi	67.84	71 *eP*		S	17 49 06.6	-2.5

	comp=Z,1.9nm,0.3s						
J55A	Hilton	67.86	352	P	P	17 40 24.6	+0.3
	baz=170,SNR=13						
J55A				P	P	17 40 24.6	+0.3
	baz=170,SNR=13						
AAM	Ann Arbor	67.92	347	P	P	17 40 24.6	-0.1
	baz=164						
AAM	Ann Arbor	67.92	347	P	P	17 40 24.4	-0.3
	baz=164						
AAM				S	S	17 49 05.4	-3.4
	baz=164						
KIC	Kosan Boka	67.95	72⇑ *eP*		P	17 40 24.5	-1.0
	comp=Z,31nm,0.4s						
KIC	Kosan Boka	67.95	72⇑ *iP*		S	17 49 05.7	-4.6
	comp=Z,1.7nm,0.5s						
J54A	Appleton	67.98	351	IAmb	IAmb	17 40 26.0	
	comp=Z,45nm,0.8s						
J54A	Appleton	67.98	351	P	P	17 40 25.3	+0.3
	baz=169,SNR=6.2						
J54A				P	P	17 40 25.3	+0.3
	baz=169,SNR=6.2						
DBIC	Dimbokro	68.00	72	P	P	17 40 24.9	-0.9
	comp=Z,33nm,1.0s,baz=249,slow=5.2,SNR=31						
DBIC				S	S	17 49 07.2	-3.7
	comp=Z,4.8nm,0.9s,baz=329,slow=22,SNR=8.4						
DBIC				LR	LR	18 09 16.4	
	comp=Z,786nm,20.3s,baz=198,slow=35						
	comp=Z,33nm,1.0s						
DBIC	Dimbokro	68.00	72	P	P	17 40 25.3	-0.5
DBIC				IAmb	IAmb	17 40 26.3	
	comp=Z,68nm,1.1s						
DBIC	Dimbokro	68.00	72	P	P	17 40 25.3	-0.5
DBIC				pmax	pmax		
	comp=Z,68nm,1.1s						
DBIC	Dimbokro	68.00	72	P	P	17 40 24.8	-0.9
DBIC				pP	pP	17 41 10.1	+1.0
I63A	Otisfield	68.00	357	P	P	17 40 26.3	+1.2
	baz=177,SNR=5.5						
I63A				P	P	17 40 26.3	+1.2
	baz=177,SNR=5.5						
MCVT	Middlebury Col	68.04	355	P	P	17 40 26.4	+1.0
	baz=174,SNR=9.1						
M44A	Midewin, Midew	68.09	343	P	P	17 40 25.0	-0.7
	baz=160,SNR=8.8						
P38A	Dawn	68.12	338	P	P	17 40 25.8	-0.2
P38A				IAmb	IAmb	17 40 27.6	
	comp=Z,90nm,0.8s						
P38A	Dawn	68.12	338	P	P	17 40 26.1	+0.2
	baz=154,SNR=56						
NCB	Newcomb	68.16	355	P	P	17 40 27.1	+0.9
	baz=173,SNR=6.7						
K50A	Casco	68.17	348	P	P	17 40 26.0	-0.1
	baz=165,SNR=16						
K50A				P	P	17 40 26.0	-0.1
	baz=165,SNR=16						
L46A	Eue Claire	68.23	345	P	P	17 40 26.1	-0.5
	baz=161,SNR=9.0						
L46A				P	P	17 40 26.1	-0.5
	baz=161,SNR=9.0						
N41A	Harden Midland	68.25	341	IAmb	IAmb	17 40 27.4	
	comp=Z,108nm,0.9s						
N41A	Harden Midland	68.25	341	P	P	17 40 26.3	-0.4
	baz=157,SNR=9.9						
LBNH	Lisbon	68.26	356	IAmb	IAmb	17 40 29.4	
	comp=Z,128nm,2.0s						
LBNH	Lisbon	68.26	356	P	P	17 40 28.0	+1.2
	baz=175,SNR=5.2						
LBNH	Lisbon	68.26	356	P	P	17 40 27.6	+0.9
	baz=175,SNR=5.2						
WCNY	West Carthage	68.31	353	P	P	17 40 27.8	+0.8
	baz=172,SNR=35						
PECO	Prince Edward	68.41	352	IAmb	IAmb	17 40 29.3	
	comp=Z,70nm,0.8s						
121A	Cookes Peak, D	68.47	324	P	P	17 40 30.7	+2.1
	baz=140,SNR=77						
121A	Cookes Peak, D	68.47	324	P	P	17 40 30.7	+2.1
	baz=140,SNR=77						
121A				S	S	17 49 20.7	+4.5
	baz=140						
EMMW	East Machias	68.59	360	IAmb	IAmb	17 40 30.4	
	comp=Z,107nm,1.9s						
HAL	Halifax	68.59	3	P	P	17 40 28.6	-0.2
HAL	Halifax	68.59	3	P	P	17 40 28.6	-0.2
HAL				pmax	pmax		
	comp=Z,30nm,0.8s						
KSU1	Kansas State U	68.75	336	IAmb	IAmb	17 40 31.1	
	comp=Z,79nm,0.6s						
KSU1	Kansas State U	68.75	336	P	P	17 40 30.4	+0.5
	baz=151						
KSU1	Kansas State U	68.75	336	P	P	17 40 30.0	+0.1
	baz=151						
KSU1				S	S	17 49 18.1	-0.8
	baz=151						
L44A	Lake County Fo	68.79	344	P	P	17 40 29.6	-0.5
L44A				IAmb	IAmb	17 40 30.7	
	comp=Z,102nm,1.0s						
L44A	Lake County Fo	68.79	344	P	P	17 40 29.8	-0.3
	baz=160,SNR=5.1						
L44A	Lake County Fo	68.79	344	P	P	17 40 29.4	-0.7
	baz=160,SNR=5.1						
L44A				S	S	17 49 15.1	-4.0
	baz=160						
LONY	Lake Ozonia	68.83	354	P	P	17 40 31.1	+0.8
	baz=173,SNR=11						
LONY				S	S	17 49 20.9	+1.2
	baz=173						
FRNY	Flat Rock	68.97	355	P	P	17 40 31.4	+0.3
	baz=174,SNR=7.6						
R32A	Long Quarter,	68.98	334	P	P	17 40 32.1	+0.7
	baz=149,SNR=30						
GGN	Saint George	69.00	0	P	P	17 40 31.9	+0.7
BMNY	Brushton-Moira	69.05	354	P	P	17 40 32.4	+0.8
	baz=173,SNR=11						
J47A	Sunmer	69.06	346	IAmb	IAmb	17 40 33.6	
	comp=Z,80nm,0.8s						
J47A	Sunmer	69.06	346	P	P	17 40 31.8	+0.1
	baz=163,SNR=6.2						
J47A				P	P	17 40 31.8	+0.1
	baz=163,SNR=6.2						
G65A	Princeton	69.08	360	P	P	17 40 32.4	+0.6
	baz=180						
G65A				P	P	17 40 32.4	+0.6
	baz=180						
L42A	Oliver, Polo	69.10	342	IAmb	IAmb	17 40 32.2	
	comp=Z,58nm,0.8s						
L42A	Oliver, Polo	69.10	342	P	P	17 40 31.5	-0.5
	baz=158,SNR=22						
Y22A	Socorro	69.12	325	P	P	17 40 34.0	+1.5
	baz=141,SNR=24						
G62A	West of Eustis	69.17	357	P	P	17 40 32.6	+0.3
G62A				pP	pP	17 41 18.4	+2.4
G62A	West of Eustis	69.17	357	P	P	17 40 33.5	+1.2
	baz=177,SNR=7.9						
G62A				P	P	17 40 33.5	+1.2
	baz=177,SNR=7.9						
Y22D	IRIS PASSCAL I	69.20	325	P	P	17 40 35.2	+2.2
	baz=141						
I49A	Point Hope	69.33	348	IAmb	IAmb	17 40 34.0	
	comp=Z,104nm,0.8s						
I49A	Point Hope	69.33	348	P	P	17 40 32.7	-0.6
	baz=165,SNR=28						
I49A				P	P	17 40 32.7	-0.6
	baz=165,SNR=28						
K43A	Burlington	69.39	343	P	P	17 40 33.7	-0.1
	baz=159,SNR=34						
SADO	Sadowa	69.52	351	LR	LR	18 12 59.7	
	comp=Z,280nm,21.8s,baz=148,slow=37						
L40A	Anamosa	69.60	341	P	P	17 40 34.1	-1.0
L40A				IAmb	IAmb	17 40 36.1	
	comp=Z,157nm,1.1s						
L40A	Anamosa	69.60	341	P	P	17 40 34.9	-0.2
	baz=157,SNR=41						
MNTQ	Montreal, Queb	69.63	355	P	P	17 40 35.2	+0.1
MNTQ					pP	17 41 18.6	-0.2
ANMO	Albuquerque	69.65	326	P	P	17 40 37.0	+1.2
ANMO				IAmb	IAmb	17 40 38.2	
	comp=Z,67nm,0.9s						
ANMO	Albuquerque	69.65	326 *dP*		P	17 40 37.0	+1.2
ANMO				pmax	pmax		
	comp=Z,189nm,1.7s						
ANMO	Albuquerque	69.65	326	P	P	17 40 37.5	+1.7
	baz=142,SNR=116						
ANMO	Albuquerque	69.65	326	P	P	17 40 37.6	+1.7
	baz=142						
ANMO				S	S	17 49 31.8	+1.9
	baz=142						
ANMO	Albuquerque	69.65	326 ⇓	P	P	17 40 37.4	+1.7
ANMO				pP	pP	17 41 24.9	+5.4

ANMO sP **sP** 17 41 43.2 +4.0
CBKS Cedar Bluff 69.73 333 P **P** 17 40 37.2 +1.2
baz=148,SNR=34
CBKS Cedar Bluff 69.73 333 P **P** 17 40 37.2 +1.2
baz=148,SNR=34
CBKS S **S** 17 49 31.1 +0.6
baz=148
F64A Sherman 69.75 359 P **P** 17 40 36.2 +0.4
baz=179,SNR=10
F64A P **P** 17 40 36.2 +0.4
baz=179,SNR=10
LMN Caledonia Moun 69.76 2 P **P** 17 40 35.9 -0.1
N35A Tabor 69.95 337 P **P** 17 40 37.5 +0.3
baz=152,SNR=11
TUC Tucson 69.96 322 P **P** 17 40 37.6 0.0
TUC Tucson 69.96 322 P **P** 17 40 37.6 0.0
TUC pmax pmax
comp=Z,353nm,2.0s
TUC Tucson 69.96 322 P **P** 17 40 39.4 +1.8
baz=138
TUC S **S** 17 49 36.9 +3.4
baz=138
TUC Tucson 69.96 322 P **P** 17 40 39.2 +1.6
SCIA State Center 70.07 340 P **P** 17 40 38.0 +0.1
baz=155
JFWS Jewell Farm 70.11 342 IAmb IAmb 17 40 39.2
comp=Z,107nm,0.8s
JFWS Jewell Farm 70.11 342 P **P** 17 40 38.3 +0.2
baz=158,SNR=38
JFWS Jewell Farm 70.11 342 P **P** 17 40 38.3 +0.2
baz=158,SNR=38
JFWS S **S** 17 49 30.5 -4.1
baz=158
E63A Oxbow 70.31 359 P **P** 17 40 40.0 +0.8
baz=179,SNR=5.7
E63A P **P** 17 40 40.0 +0.8
baz=179,SNR=5.7
T25A Trinidad 70.40 329 IAmb IAmb 17 40 43.7
comp=Z,70nm,0.8s
T25A Trinidad 70.40 329 P **P** 17 40 42.0 +1.7
baz=144,SNR=76
N33B J Bar K, Exete 70.50 336 P **P** 17 40 41.2 +0.6
baz=151,SNR=11
E62A Clayton Lake 70.53 358 P **P** 17 40 41.5 +0.8
baz=178,SNR=7.1
E62A P **P** 17 40 41.5 +0.8
baz=178,SNR=7.1
K38A Parkersburg 70.60 340 IAmb IAmb 17 40 41.6
comp=Z,89nm,1.1s
I42A Draeger Farm, 70.65 343 P **P** 17 40 41.3 -0.1
I42A IAmb IAmb 17 40 42.1
comp=Z,105nm,0.9s
I42A Draeger Farm, 70.65 343 P **P** 17 40 41.6 +0.2
baz=159,SNR=48
214A Organ Pipe Nat 70.88 320 P **P** 17 40 45.2 +2.1
baz=136,SNR=38
214A S **S** 17 49 48.7 +4.6
baz=136
H43A Windswept, Lux 70.91 345 P **P** 17 40 42.9 -0.1
baz=160,SNR=36
G45A Suttons Bay 70.96 346 P **P** 17 40 43.3 +0.1
baz=162
G45A P **P** 17 40 43.3 +0.1
baz=162
D62A Allapoint, All 70.98 359 P **P** 17 40 44.0 +0.7
baz=178,SNR=10
D62A P **P** 17 40 44.0 +0.7
baz=178,SNR=10
I40A Norwalk 71.11 342 IAmb IAmb 17 40 44.6
comp=Z,60nm,1.0s
I40A Norwalk 71.11 342 P **P** 17 40 44.2 0.0
baz=157,SNR=14
KSCO Kaye Shedlock' 71.12 331 P **P** 17 40 45.6 +1.0
KSCO IAmb IAmb 17 40 46.7
comp=Z,101nm,0.8s
KSCO Kaye Shedlock' 71.12 331 P **P** 17 40 46.2 +1.7
baz=146,SNR=12
KSCO Kaye Shedlock' 71.12 331 P **P** 17 40 46.1 +1.5
baz=146,SNR=12
KSCO S **S** 17 49 47.9 +1.2
baz=146
L34A Svendsen Farm, 71.19 337 P **P** 17 40 45.0 +0.2
baz=152,SNR=21
BGNE Belgrade 71.34 336 P **P** 17 40 46.5 +0.8
baz=150,SNR=26
BGNE Belgrade 71.34 336 P **P** 17 40 46.5 +0.8
baz=150,SNR=26
BGNE S **S** 17 49 49.0 +0.1
baz=150
SDCO Great Sand Dun 71.40 329 P **P** 17 40 47.1 +0.7
SDCO Great Sand Dun 71.40 329 P **P** 17 40 48.1 +1.7
baz=143,SNR=102
SDCO Great Sand Dun 71.40 329 P **P** 17 40 48.1 +1.7
baz=143,SNR=102
SDCO S **S** 17 49 54.1 +3.8
baz=143
W18A Petrified Fore 71.49 324 P **P** 17 40 48.8 +1.9
baz=139,SNR=9.1
W18A S **S** 17 49 55.1 +3.9
baz=139
E46A Sault Ste Mari 71.95 348 P **P** 17 40 49.0 -0.2
baz=164,SNR=108
I37A Lemond, Waseca 72.04 340 IAmb IAmb 17 40 51.0
comp=Z,108nm,0.8s
S22A 4UR Ranch, Cre 72.04 328 P **P** 17 40 50.8 +0.6
S22A 4UR Ranch, Cre 72.04 328 P **P** 17 40 51.9 +1.7
baz=142,SNR=52
I37B Waseca 72.04 340 P **P** 17 40 50.0 +0.2
baz=155,SNR=43
PICO Pico 72.18 31 *e*pP pP 17 41 38.0 +3.3
Q24A Divide 72.21 330 IAmb IAmb 17 40 53.6
comp=Z,87nm,0.9s
Q24A Divide 72.21 330 P **P** 17 40 53.0 +1.7
baz=144,SNR=37
Q24A S **S** 17 50 03.1 +3.5
baz=144
G40A Rib Lake 72.27 343 P **P** 17 40 51.2 +0.1
baz=158,SNR=16
MVCO Mesa Verde 72.45 326 P **P** 17 40 54.4 +1.7
baz=141,SNR=63
MVCO S **SKiKP** 17 50 06.5 -3.0
baz=141
OGNE Ogallala 72.48 333 IAmb IAmb 17 40 54.5
comp=Z,80nm,0.9s
OGNE Ogallala 72.48 333 P **P** 17 40 53.9 +1.3
baz=147,SNR=20
OGNE Ogallala 72.48 333 P **P** 17 40 53.9 +1.3
baz=147,SNR=20
E43A Lone Tree Farm 72.52 346 IAmb IAmb 17 40 53.7
comp=Z,87nm,0.8s
E43A Lone Tree Farm 72.52 346 P **P** 17 40 52.7 +0.2
baz=161
K31A O'Neill 72.62 336 P **P** 17 40 53.4 +0.2
K31A O'Neill 72.62 336 P **P** 17 40 54.5 +1.3
baz=150,SNR=7.4
PSMN Pico do Norte, 72.66 34 *e*pP pP 17 41 37.3 -0.2
WUAZ Wupatki 72.67 323 P **P** 17 40 56.2 +2.3
baz=138,SNR=52
WUAZ S **SKiKP** 17 50 10.8 +1.0
baz=138
COWI Conover 72.77 344 P **P** 17 40 53.7 -0.3
baz=159
ECSD EROS Data Cent 72.83 338 IAmb IAmb 17 40 55.3
comp=Z,71nm,1.1s
ECSD EROS Data Cent 72.83 338 P **P** 17 40 54.6 +0.2
baz=152,SNR=52
ECSD EROS Data Cent 72.83 338 P **P** 17 40 54.6 +0.2
baz=152,SNR=52
ECSD S **S** 17 50 04.1 -1.7
baz=152
GLA Glamis 72.85 319 P **P** 17 40 56.8 +2.0
baz=135,SNR=26
GLA S **SKiKP** 17 50 11.8 +1.8
baz=135
SPMN Marine on St. 72.96 341 IAmb IAmb 17 40 56.1
comp=Z,71nm,0.9s
SPMN Marine on St. 72.96 341 P **P** 17 40 55.0 -0.2
baz=156,SNR=17
SPMN Marine on St. 72.96 341 P **P** 17 40 55.0 -0.2
baz=156,SNR=17
SPMN S **S** 17 50 05.2 -2.0
baz=156
PSET Sete Cidades 72.96 33 *e*pP pP 17 41 40.7 +1.4
PAGU Agualva, Azore 72.98 32 *e*pP pP 17 41 40.7 +1.3
CMLA Cha da Macela 73.01 33 *e*pP pP 17 41 39.6 0.0
ISCO Idaho Springs 73.10 330 P **P** 17 40 58.1 +1.6
ISCO Idaho Springs 73.10 330 P **P** 17 40 58.1 +1.6
baz=144,SNR=39
ISCO Idaho Springs 73.10 330 P **P** 17 40 58.1 +1.6
baz=144,SNR=39
ISCO S **SKiKP** 17 50 12.6 +2.1
baz=144
BLYC Blythe 73.17 320 P **P** 17 40 57.3 +0.7
BLYC IAmb IAmb 17 40 59.4
comp=Z,69nm,1.1s
SMCO Snowmass 73.24 329 IAmb IAmb 17 41 00.1
comp=Z,55nm,0.8s
IKP In-Ko-Pah, Jac 73.34 318 P **P** 17 40 59.9 +2.1
baz=134,SNR=13
PDMCI Parker Dam,Lak 73.34 321 P **P** 17 40 59.4 +1.8
baz=136,SNR=7.7
PDMCI S **S** 17 50 16.0 +4.2
baz=136
SWSC Sam W. Stewart 73.36 319 P **P** 17 40 59.9 +2.2
baz=134,SNR=8.5
SBA Scott Base 73.46 190 P **P** 17 40 59.1 +1.4
SBA IAmb IAmb 17 41 01.7
comp=Z,166nm,1.3s
SBA Scott Base 73.46 190 P **P** 17 40 59.1 +1.4
SBA pmax pmax
comp=Z,166nm,1.3s
D41A Chassel 73.53 345 P **P** 17 40 59.2 +0.8
baz=160,SNR=112
DRLN Deer Lake 73.64 7 P **P** 17 40 58.7 -0.3
DRLN IAmb IAmb 17 41 00.3
comp=Z,67nm,0.8s
BC3 Big Chuckawall 73.64 320 P **P** 17 41 01.5 +1.9
baz=135,SNR=53
MONP2 Monument Peak 73.69 318 P **P** 17 41 02.0 +2.0
baz=134,SNR=15
F36A Milaca 73.75 341 IAmb IAmb 17 41 00.8
comp=Z,60nm,0.8s
F36A Milaca 73.75 341 P **P** 17 40 59.6 -0.1
baz=155,SNR=57
IRM Iron Mountain 73.82 320 P **P** 17 41 02.5 +2.0
baz=135,SNR=41
E38A The Farm, Brul 73.87 343 P **P** 17 41 00.5 +0.1
baz=157,SNR=26
NEE2 Needles Airpor 73.94 321 P **P** 17 41 03.1 +1.9
baz=136
NEE2 S **S** 17 50 23.1 +4.5
baz=136
109C Camp Elliot, M 74.11 318 P **P** 17 41 03.9 +1.8
baz=134
109C S **S** 17 50 25.1 +4.5
baz=134
N23A Red Feather La 74.13 330 P **P** 17 41 03.6 +1.2
N23A Red Feather La 74.13 330 P **P** 17 41 04.2 +1.8
baz=144,SNR=28
N23A S **S** 17 50 23.8 +2.8
baz=144
TBI Tubuai 74.16 251 *e*P **P** 17 41 04.7 +1.9
comp=Z,908nm,1.4s
TPFO Pinon Flats 74.21 319 P **P** 17 41 04.9 +2.1
baz=134,SNR=18
BELC Belle Mtn. Jos 74.21 319 P **P** 17 41 04.8 +1.9
baz=134,SNR=29
BELC S **S** 17 50 27.3 +5.4
baz=134
PFO Pinyon Flats O 74.22 319 LR LR 18 08 46.8
comp=Z,152nm,20.7s,baz=128,slow=32
PFO Pinyon Flats O 74.22 319 *d* P **P** 17 41 04.7 +1.8
PFO pmax pmax
comp=Z,186nm,2.2s
PFO Pinyon Flats O 74.22 319 P **P** 17 41 04.8 +1.9
baz=134,SNR=15
SUSD Miller 74.27 337 IAmb IAmb 17 41 03.8
comp=Z,65nm,0.8s
SUSD Miller 74.27 337 P **P** 17 41 03.4 +0.6
baz=150,SNR=7.1
SUSD Miller 74.27 337 P **P** 17 41 03.1 +0.3
baz=150,SNR=7.1
SUSD S **S** 17 50 21.4 -0.5
baz=150
VNDA Vanda 74.47 190 P **P** 17 41 05.7 +2.1
comp=Z,46nm,1.1s,baz=134,slow=5.1,SNR=122
comp=Z,46nm,1.1s
VNDA Vanda 74.47 190 P **P** 17 41 04.2 +0.6
VNDA IAmb IAmb 17 41 07.2
comp=Z,91nm,1.2s
GMRC Granite Mounta 74.56 320 P **P** 17 41 07.1 +2.2
baz=135,SNR=98
GMRC S **S** 17 50 29.9 +4.1
baz=135
F33A 5 Mile Ranch, 74.58 339 P **P** 17 41 04.6 0.0
baz=153,SNR=17
O20A White River Ci 74.59 328 IAmb IAmb 17 41 07.5
comp=Z,93nm,0.9s
O20A White River Ci 74.59 328 P **P** 17 41 06.9 +1.9
baz=142,SNR=68
PKCU Pink Cliffs 74.61 324 P **P** 17 41 06.2 +0.9
MURC Murrieta 74.65 318 P **P** 17 41 07.3 +2.0
baz=134,SNR=14
MURC S **S** 17 50 32.0 +5.4
baz=134
PMPS Porto Santo 74.75 42 *e*P P 17 40 58.9 -6.9
comp=Z,214nm,1.7s
SRU San Rafael Swe 74.92 326 IAmb IAmb 17 41 10.2
comp=Z,87nm,0.7s
BBRC Big Bear Solar 74.94 319 P **P** 17 41 09.5 +2.3
baz=134
MTPU Mount Pierson 74.98 325 IAmb IAmb 17 41 11.1
comp=Z,55nm,0.7s
HEC Hector,Ludlow 74.99 320 P **P** 17 41 09.6 +2.3
baz=134,SNR=22
HEC S **S** 17 50 35.9 +5.5
baz=134
SCI2 San Clemente I 75.06 317 P **P** 17 41 09.5 +1.9
baz=132
EYMN Ely 75.09 343 IAmb IAmb 17 41 08.6
comp=Z,62nm,1.1s
EYMN Ely 75.09 343 P **P** 17 41 07.4 0.0
baz=157,SNR=40
EYMN Ely 75.09 343 P **P** 17 41 07.4 0.0
baz=157,SNR=40
EYMN S **S** 17 50 27.8 -3.0
baz=157
TUQ Turquoise Moun 75.17 321 P **P** 17 41 10.5 +2.1
baz=135,SNR=22
P18A Preston Nutter 75.18 327 P **P** 17 41 09.8 +1.3
P18A IAmb IAmb 17 41 12.2
comp=Z,82nm,0.7s
CCUT Cedar City 75.25 324 IAmb IAmb 17 41 12.2
comp=Z,92nm,0.9s
CIS Catalina Islan 75.26 318 P **P** 17 41 10.7 +1.9
baz=133
P17A Butcher Ranch, 75.31 327 IAmb IAmb 17 41 11.5
comp=Z,78nm,1.0s
RWWY Rawlins 75.34 330 IAmb IAmb 17 41 11.7
comp=Z,71nm,0.9s
BFSC Mount Baldy Ra 75.37 319 P **P** 17 41 11.4 +1.9
baz=133,SNR=16
VAH Vaihoa 75.39 260 *e*P **P** 17 41 11.8 +1.9
comp=Z,205nm,1.1s
FMP Fort Macarthur 75.40 318 P **P** 17 41 11.6 +2.1
baz=133
RRX Edison Barstow 75.41 320 P **P** 17 41 12.0 +2.4
baz=134,SNR=6.1
SHPR Sheep Range 75.49 322 P **P** 17 41 11.7 +1.5
TCRU Three Creeks R 75.54 325 IAmb IAmb 17 41 14.4
comp=Z,54nm,0.8s
RDMU Red Mountain 75.57 328 IAmb IAmb 17 41 12.8
comp=Z,64nm,0.8s
GSC Goldstone, Bar 75.59 320 P **P** 17 41 12.9 +2.1
baz=134,SNR=10.0
GSC S **S** 17 50 42.4 +5.3
baz=134
PASC Pasadena Art C 75.64 318 IAmb IAmb 17 41 13.5
comp=Z,69nm,1.1s
SHOC Shoshone, Teco 75.70 321 P **P** 17 41 13.1 +1.8
baz=135,SNR=7.8
SHOC S **S** 17 50 43.3 +5.2
baz=135
PMOR Pomariorio Ree 75.71 260 *e*P **P** 17 41 13.5 +1.8
comp=Z,368nm,1.1s
DECC Green Verdugo 75.79 318 P **P** 17 41 13.9 +2.1
baz=133
K22A Casper 75.80 331 IAmb IAmb 17 41 15.9
comp=Z,105nm,1.1s
K22A Casper 75.80 331 P **P** 17 41 13.2 +1.4
baz=143,SNR=22
K22A Casper 75.80 331 P **P** 17 41 13.5 +1.7
baz=143,SNR=22
K22A S **S** 17 50 41.2 +2.0
baz=143
SUR Sutherland 75.83 119 LR LR 18 12 29.8
comp=Z,454nm,18.2s,baz=250,slow=34
SUR Sutherland 75.83 119 P **P** 17 41 13.7 +1.3
SUR IAmb IAmb 17 41 15.3
comp=Z,52nm,0.8s
SNCC San Nicolas Is 75.85 317 P **P** 17 41 13.8 +1.7
baz=132
RSSD Black Hills 75.94 334 P **P** 17 41 13.5 +0.9
RSSD Black Hills 75.94 334 P **P** 17 41 13.5 +0.9
RSSD pmax pmax
comp=Z,40nm,0.8s
RSSD Black Hills 75.94 334 P **P** 17 41 13.8 +1.2
baz=146,SNR=36
RSSD Black Hills 75.94 334 P **P** 17 41 13.9 +1.2
baz=146
RSSD S **S** 17 50 43.4 +2.6
baz=146
D32A Dogwood Acres, 75.96 339 IAmb IAmb 17 41 13.4
comp=Z,79nm,0.8s
EDW2 Edwards Air Fo 76.01 319 P **P** 17 41 14.6 +1.6
baz=133,SNR=19
PRN Pahroc Range 76.07 322 P **P** 17 41 14.8 +1.3
B35A Bob, Littlefor 76.07 342 IAmb IAmb 17 41 14.3
comp=Z,76nm,0.8s
B35A Bob, Littlefor 76.07 342 P **P** 17 41 13.2 +0.2
baz=155,SNR=83
GWY Greenwater Val 76.13 321 IAmb IAmb 17 41 17.9
comp=Z,59nm,0.9s
PSUT Pine Spring 76.23 324 IAmb IAmb 17 41 18.3
comp=Z,68nm,0.9s
LRMC Laurel Mtn Rad 76.23 320 P **P** 17 41 16.2 +1.8
baz=134,SNR=17
LRMC S **S** 17 50 48.6 +4.4
baz=134
OSI Osito Audit: C 76.27 318 P **P** 17 41 16.2 +1.7
baz=133
OSI S **S** 17 50 48.1 +3.7
baz=133
PPT2 Papeete2 76.28 257 *e*P **P** 17 41 16.8 +1.8
comp=Z,260nm,1.5s
PPT2 Papeete2 76.28 257 *e*LR LR 18 05 08.4
comp=Z,549nm,27.8s
PPT Papeete 76.28 257 P **P** 17 41 18.0 +3.0
comp=Z,86nm,0.9s,baz=136,slow=7.3,SNR=6.3
comp=Z,86nm,0.9s
NLU North Lily Min 76.35 326 P **P** 17 41 16.3 +1.2
NLU IAmb IAmb 17 41 18.6
comp=Z,241nm,1.9s
SCZ2 Santa Cruz Isl 76.41 317 P **P** 17 41 16.9 +1.6
baz=132
TPNV Topopah Spring 76.42 321 P **P** 17 41 17.1 +1.6
TPNV Topopah Spring 76.42 321 P **P** 17 41 17.1 +1.6
TPNV pmax pmax
comp=Z,33nm,1.0s
TPNV Topopah Spring 76.42 321 P **P** 17 41 17.8 +2.4
baz=135,SNR=64
TPNV S **S** 17 50 51.6 +5.4
baz=135
FURC Furnace Creek, 76.44 321 P **P** 17 41 17.6 +2.3
baz=134,SNR=43
MPMC Manual Prospec 76.52 320 P **P** 17 41 17.6 +1.6
baz=134,SNR=34
MPMC S **S** 17 50 51.3 +3.9
baz=134
S11A Rachel 76.63 322 IAmb IAmb 17 41 20.9
comp=Z,198nm,1.4s
AGMN Agassiz Nation 76.64 341 IAmb IAmb 17 41 17.1
comp=Z,64nm,1.0s
AGMN Agassiz Nation 76.64 341 P **P** 17 41 16.6 +0.4
baz=153,SNR=56
AGMN Agassiz Nation 76.64 341 P **P** 17 41 16.6 +0.4
baz=153,SNR=56
AGMN S **S** 17 50 45.2 -2.5
baz=153
ARVC Arvin 76.68 319 P **P** 17 41 18.7 +1.9
baz=133
E28A Huff 76.72 337 P **P** 17 41 17.8 +1.1
baz=149,SNR=13
SBC Santa Barbara 76.76 318 P **P** 17 41 19.0 +1.8
baz=132
TORD Torodi Ar. Bea 76.77 69 P **P** 17 41 17.1 -0.5
comp=Z,63nm,0.7s,baz=268,slow=6.2,SNR=168
TORD S **S** 17 50 49.6 -0.9
comp=Z,5.5nm,1.0s,baz=245,slow=10,SNR=9.6
TORD LR LR 18 15 47.6
comp=Z,501nm,18.3s,baz=230,slow=36
comp=Z,63nm,0.7s
TORD Torodi Ar. Bea 76.77 69 P **P** 17 41 16.7 -1.0
ISA Isabella, Lake 76.83 319 IAmb IAmb 17 41 20.4
comp=Z,60nm,1.0s
ISA Isabella, Lake 76.83 319 P **P** 17 41 19.7 +2.0
baz=133,SNR=28
DUG Dugway, Tooele 76.91 326 P **P** 17 41 19.8 +1.7
DUG Dugway, Tooele 76.91 326 P **P** 17 41 20.0 +1.9
baz=138,SNR=39
DUG S **S** 17 50 55.5 +4.2
baz=138
BCW Bitter Crk WRg 76.91 318 P **P** 17 41 18.6 +0.4
R11A Troy Canyon, C 77.04 323 P **P** 17 41 21.1 +2.2
baz=136,SNR=100
R11A S **S** 17 50 58.1 +5.2
baz=136
GRAC Grapevine Rang 77.09 321 P **P** 17 41 21.2 +2.1
baz=134
GRAC S **S** 17 50 59.2 +5.9
baz=134
PKM Mcpherson Peak 77.12 318 P **P** 17 41 21.4 +2.0
baz=132,SNR=26
CWC Cottonwood Cre 77.12 320 P **P** 17 41 21.5 +2.1
baz=133
CWC S **S** 17 50 59.1 +5.2
baz=133
BW06 Boulder Array 77.26 329 P **P** 17 41 21.2 +1.1
baz=141,SNR=32
BW06 S **S** 17 50 56.5 +1.2
baz=141
PDAR Pinedale Array 77.26 329 P **P** 17 41 21.1 +0.9
comp=Z,9.7nm,0.6s,baz=123,slow=7.8,SNR=64
comp=Z,9.7nm,0.6s
VES Vestal, Richgr 77.31 319 P **P** 17 41 22.0 +1.8
baz=133,SNR=14
HWUT Hardware Ranch 77.33 327 P **P** 17 41 21.5 +1.0
LCH Last Change Ra 77.42 321 IAmb IAmb 17 41 25.5
comp=Z,184nm,1.9s
MDND Maddock 77.44 338 P **P** 17 41 22.0 +1.3
baz=150,SNR=18
MDND Maddock 77.44 338 P **P** 17 41 21.9 +1.3
baz=150,SNR=18
MDND S **S** 17 50 56.3 -0.2
baz=150
BGU Big Grassy Mou 77.56 326 IAmb IAmb 17 41 24.8
comp=Z,245nm,1.9s
TIN Tinemaha, Big 77.63 320 P **P** 17 41 24.3 +2.2
baz=133
TIN S **S** 17 51 04.2 +5.0
baz=133
TSUM Tsumeb 77.73 106 P **P** 17 41 22.1 -1.1
VOG Valley Oaks Go 77.81 319 P **P** 17 41 23.8 +0.8
baz=132
PAGB Antelope Grade 77.94 318 P **P** 17 41 24.3 +0.5
AHID Auburn Hatcher 77.99 328 IAmb IAmb 17 41 26.2
comp=Z,84nm,0.8s
Q09A Carvers 78.27 322 IAmb IAmb 17 41 28.4
comp=Z,103nm,0.8s
REDW Red Top Meadow 78.33 329 IAmb IAmb 17 41 28.2
comp=Z,55nm,0.9s
MLAC Mammoth, Mammo 78.38 321 P **P** 17 41 28.4 +2.0
baz=133
ULM Lac du Bonnet 78.39 342 P **P** 17 41 26.0 +0.1
comp=Z,50nm,0.7s,baz=152,slow=5.7,SNR=92
ULM LR LR 18 18 20.6
comp=Z,93nm,21.7s,baz=153,slow=37
comp=Z,50nm,0.7s
ULM Lac du Bonnet 78.39 342 P **P** 17 41 25.6 -0.2
ULM IAmb IAmb 17 41 26.7
comp=Z,73nm,0.9s
LOHW Long Hollow 78.40 329 IAmb IAmb 17 41 29.6
comp=Z,53nm,0.8s
OMMB Old Mammoth Mi 78.46 320 IAmb IAmb 17 41 29.4
comp=Z,60nm,0.9s
TPAW Teton Pass 78.47 329 IAmb IAmb 17 41 29.8
comp=Z,323nm,2.0s
ELK Elko 78.57 325 P **P** 17 41 28.8 +1.4
MOOW Moose Ponds 78.57 329 P **P** 17 41 28.1 +0.8
LHV Little Huntoon 78.61 321 IAmb IAmb 17 41 31.3
comp=Z,256nm,1.9s
NVAR Mina Array Bea 78.62 321 P **P** 17 41 29.3 +1.6
comp=Z,12nm,0.7s,baz=147,slow=6.4,SNR=18
comp=Z,12nm,0.7s

SCHQ Schefferville 78.72 0 P **P** 17 41 27.8 +0.2
comp=Z,12nm,0.6s,baz=185,slow=3.7,SNR=20
comp=Z,12nm,0.6s
FLWY Flagg Ranch 78.81 330 P **P** 17 41 29.2 +0.6
LAO LASA Array 78.92 334 IAmb IAmb 17 41 30.8
comp=Z,82nm,0.9s
LAO LASA Array 78.92 334 P **P** 17 41 30.3 +1.3
baz=144,SNR=11
LAO LASA Array 78.92 334 P **P** 17 41 30.1 +1.2
baz=144,SNR=11
LAO S **S** 17 51 14.8 +2.3
baz=144
RLMT Red Lodge 78.96 331 IAmb IAmb 17 41 32.6
comp=Z,65nm,0.9s
RLMT Red Lodge 78.96 331 P **P** 17 41 31.0 +1.6
baz=141,SNR=43
RLMT S **S** 17 51 15.8 +2.5
baz=141
BBGB Big Mountain B 78.98 319 IAmb IAmb 17 41 35.8
comp=Z,74nm,0.8s
H17A Grant Village 78.99 330 IAmb IAmb 17 41 37.2
comp=Z,128nm,1.9s
H17A Grant Village 78.99 330 P **P** 17 41 32.1 +2.4
baz=140
H17A S **S** 17 51 18.7 +5.0
baz=140
YFT Old Faithful 79.15 330 P **P** 17 41 32.1 +1.7
SAO San Andreas Ge 79.35 318 P **P** 17 41 31.9 +0.5
SAO San Andreas Ge 79.35 318 P **P** 17 41 31.9 +0.5
SAO pmax pmax
comp=Z,31nm,1.1s
DGMT Dagmar 79.60 336 P **P** 17 41 33.9 +1.4
baz=146,SNR=8.7
DGMT Dagmar 79.60 336 P **P** 17 41 34.2 +1.7
baz=146,SNR=8.7
GCMT Greycliff 79.66 331 P **P** 17 41 34.2 +1.1
PNTR Pine Nut 79.81 321 IAmb IAmb 17 41 38.4
comp=Z,95nm,0.7s
VCNR Virginia City 79.98 321 IAmb IAmb 17 41 38.5
comp=Z,251nm,2.0s
PAHR Pah Rah Range 80.11 322 IAmb IAmb 17 41 39.9
comp=Z,94nm,0.9s
HLID Hailey 80.19 327 P **P** 17 41 37.5 +1.5
HLID IAmb IAmb 17 41 38.9
comp=Z,87nm,0.9s
HLID Hailey 80.19 327 P **P** 17 41 38.2 +2.1
baz=137,SNR=184
HLID S **S** 17 51 31.7 +5.4
baz=137
MPK Martis Peak 80.20 321 IAmb IAmb 17 41 39.0
comp=Z,83nm,1.0s
BOZ Bozeman (W) 80.39 330 P **P** 17 41 38.2 +1.2
BOZ Bozeman (W) 80.39 330 P **P** 17 41 38.3 +1.2
baz=140,SNR=33
BOZ S **S** 17 51 30.8 +2.6
baz=140
BOSA Boshof 80.76 117 P **P** 17 41 40.0 +0.5
comp=Z,62nm,0.8s,baz=258,slow=4.2,SNR=85
comp=Z,62nm,0.8s
BOSA Boshof 80.76 117 P **P** 17 41 38.5 -1.0
BOSA IAmb IAmb 17 41 41.7
comp=Z,123nm,1.1s
BOSA Boshof 80.76 117 *i* P **P** 17 41 40.4 +0.9
BOSA Boshof 80.76 117 *i* P **P** 17 41 40.4 +0.9
BOSA Boshof 80.76 117 *i* P **P** 17 41 40.4 +0.9
BEKR Beckworth 80.77 321 IAmb IAmb 17 41 42.4
comp=Z,279nm,1.9s
MFID Camas Ranch 80.79 326 IAmb IAmb 17 41 42.6
comp=Z,293nm,1.9s
ORV Oroville 81.22 321 IAmb IAmb 17 41 45.5
comp=Z,124nm,1.3s
MAW Mawson 81.27 163 P **P** 17 41 42.5 +1.2
comp=Z,109nm,1.1s,baz=218,slow=6.1,SNR=83
comp=Z,109nm,1.1s
MAW Mawson 81.27 163 P **P** 17 41 42.0 +0.8
MAW Mawson 81.27 163 P **P** 17 41 42.0 +0.8
MAW pmax pmax
comp=Z,48nm,1.4s
EGMT Eagleton 81.44 333 IAmb IAmb 17 41 43.9
comp=Z,76nm,1.0s
EGMT Eagleton 81.44 333 P **P** 17 41 43.2 +0.8
baz=141
EGMT S **S** 17 51 40.1 +1.3
baz=141
GDXM Geysers 81.49 319 P **P** 17 41 43.3 +0.4
WVOR Wild Horse Val 81.56 324 IAmb IAmb 17 41 46.2
comp=Z,120nm,1.9s
WVOR Wild Horse Val 81.56 324 P **P** 17 41 44.4 +1.1
HOPS Hopland Field 81.78 319 IAmb IAmb 17 41 47.7
comp=Z,204nm,1.9s
PFVI Vila Bisbo 82.06 43 *e*S **S** 17 51 49.7 +4.3
PLID Pearl Lake 82.08 327 IAmb IAmb 17 41 48.1
comp=Z,80nm,0.9s
J08A Circle Bar Ran 82.12 325 P **P** 17 41 46.8 +0.7
MDT Midelt 82.27 49 LR LR 18 20 13.8
comp=Z,349nm,18.2s,baz=248,slow=37
MORF Marmelete 82.28 43 *e*P **pP** 17 42 28.9 -3.2
MORF *e*S **S** 17 51 49.6 +1.9
MORF Marmelete 82.28 43 *e*S **S** 17 51 54.4 +6.7
MSO Missoula 82.38 330 P **P** 17 41 49.0 +1.6
baz=138,SNR=25
MSO S **S** 17 51 51.4 +3.0
baz=138
LBTB Lobatse 82.42 114 LR LR 18 14 12.3
comp=Z,275nm,18.9s,baz=264,slow=32
LBTB Lobatse 82.42 114 IAmb IAmb 17 41 50.8
comp=Z,224nm,1.6s
LBTB Lobatse 82.42 114 *i* P **P** 17 41 49.3 +1.0
LBTB Lobatse 82.42 114 *i* P **P** 17 41 49.3 +1.0
LBTB Lobatse 82.42 114 *i* P **P** 17 41 49.3 +1.0
BMO Blue Mountains 82.56 327 P **P** 17 41 49.5 +1.1
PBDV Barranco-do-Ve 82.70 44 *e*P **P** 17 41 50.7 +1.6
comp=Z,53nm,1.5s
PBDV *e*pP **pP** 17 42 35.3 +1.0
PBDV *e*S **S** 17 51 56.0 +4.1
LIS Lisbon 82.85 42 *e*pP **pP** 17 42 31.8 -3.0
LIS *e*S **S** 17 51 55.0 +1.7
PNCL Nicolau / Gran 82.86 43 *e*P **P** 17 41 51.7 +1.8
comp=Z,36nm,1.4s
PNCL *e*pP **pP** 17 42 35.6 +0.7
PNCL *e*S **S** 17 51 58.6 +5.2
PCVE Castro Verde 82.87 43 *e*P **P** 17 41 51.3 +1.3
comp=Z,35nm,2.3s
PCVE *e*pP **pP** 17 42 35.5 +0.4
PCVE *e*S **S** 17 52 00.6 +7.1
MESJ Messejana 82.88 43 *e*P **P** 17 41 50.8 +0.7
MESJ IAmb IAmb 17 41 52.9
comp=Z,26nm,1.1s
MESJ *e*pP **pP** 17 42 32.0 -3.0
MESJ *e*SKSac **SKSac** 17 51 55.4 +0.7
MESJ Messejana 82.88 43 *e*P **P** 17 41 51.9 +1.9
comp=Z,38nm,1.8s
MESJ *e*pP **pP** 17 42 36.0 +1.0
MESJ Messejana 82.88 43 *e*P **P** 17 41 50.7 +0.7
MESJ *e* 17 42 31.9
MESJ *e* 17 51 55.4
PMAFR Mafra 82.92 42 *e*S **S** 17 51 59.8 +5.8
PVAQ Vaqueiros 82.93 44 *e*P **P** 17 41 51.8 +1.5
comp=Z,37nm,1.6s
PVAQ Vaqueiros 82.93 44 *e*S **S** 17 51 58.0 +3.8
K05A Summer Lake 82.98 323 IAmb IAmb 17 41 53.2
comp=Z,93nm,0.9s
JTMT Jette 83.21 330 IAmb IAmb 17 41 54.7
comp=Z,54nm,0.8s
PBEJ Beja 83.22 43 *e*P **P** 17 41 52.9 +1.1
comp=Z,24nm,1.3s
PBEJ *e*pP **pP** 17 42 38.4 +1.6
KMPM Mount Pierce 83.31 320 P **P** 17 41 52.4 +0.2
F10A Beach Ranch, E 83.32 327 IAmb IAmb 17 41 59.7
comp=Z,42nm,0.8s
K04D Chiloquin, OR 83.39 323 P **P** 17 41 54.0 +1.3
baz=132,SNR=5.9
L04D Klamath Falls 83.43 322 P **P** 17 41 53.6 +0.7
baz=131,SNR=20
EVO Evora 83.43 43 *e*P **P** 17 41 53.6 +0.7
EVO *e*pP **pP** 17 42 39.1 +1.2
J05D Fort Rock, OR 83.54 323 P **P** 17 41 54.9 +1.4
baz=132,SNR=38
J05D S **S** 17 52 03.6 +3.1
baz=132
PSBE So Bento 83.56 42 *e*S **S** 17 52 00.1 -0.4
PMTG Montargil 83.63 42 *e*P **P** 17 41 55.1 +1.3
comp=Z,59nm,1.7s
PMTG *e*pP **pP** 17 42 39.3 +0.4
PMTG *e*S **S** 17 52 06.4 +5.2
G08A Pilot Rock 83.71 326 IAmb IAmb 17 41 56.1
comp=Z,111nm,1.9s
KRPM Rodgers 83.72 320 P **P** 17 41 54.9 +0.5
KRPM IAmb IAmb 17 41 58.5
comp=Z,68nm,1.1s
PINE Pine Mountain 83.72 324 IAmb IAmb 17 41 57.0
comp=Z,76nm,0.9s
PBAR Barrancos 83.82 43 *e*S **S** 17 52 08.0 +4.9
PESTR Estremoz 83.90 43 *e*P **P** 17 41 57.1 +1.9
comp=Z,37nm,1.5s
PESTR *e*pP **pP** 17 42 41.3 +0.9
PESTR *e*S **S** 17 52 05.9 +2.0
J04D Umpqua Nationa 83.99 323 P **P** 17 41 57.2 +1.3
baz=131,SNR=10
WALA Waterton Lakes 84.02 331 P **P** 17 41 56.0 +0.3
PCAS Casmilo, Conde 84.08 41 *e*P **P** 17 41 58.1 +2.0
PCAS *e*pP **pP** 17 42 41.3 +0.1
PCAS *e*S **S** 17 52 03.8 -1.8
L02F Cave Junction 84.08 321 P **P** 17 41 57.6 +1.5
baz=130,SNR=13
COI Coimbra 84.22 41 *e*S **S** 17 52 05.9 -1.1
I05D Terrebonne, OR 84.30 324 P **P** 17 41 58.9 +1.7
baz=132,SNR=32
PMRV Marv??o 84.36 42 *e*P **P** 17 41 59.0 +1.4
comp=Z,38nm,1.7s
PMRV *e*pP **pP** 17 42 42.8 0.0
PMRV *e*S **S** 17 52 06.6 -1.9
K02D Willamette Mer 84.50 322 P **P** 17 41 59.8 +1.5
baz=130,SNR=18
I04A Tendick Farm, 84.52 323 P **P** 17 41 59.0 +0.7
baz=131,SNR=13
I04A S **S** 17 52 11.7 +1.7
baz=131
DBO Dodson Butte 84.54 322 P **P** 17 41 58.7 +0.2
PCBR Castelo Branco 84.56 42 *e*P **P** 17 41 59.9 +1.4
comp=Z,29nm,1.5s
E08A Dider Farm, El 84.59 327 IAmb IAmb 17 42 00.0
comp=Z,121nm,2.0s
PVIS Viseu 84.85 41 *e*P **P** 17 42 01.1 +1.1
comp=Z,63nm,1.8s
PVIS *e*pP **pP** 17 42 47.0 +1.8
MTE Manteigas 84.86 41 *e*P **P** 17 42 01.4 +1.3
comp=Z,64nm,1.1s
MTE *e*pP **pP** 17 42 44.8 -0.6
MTE *e*S **S** 17 52 08.6 -4.9
G05D Wamic, OR 84.90 325 P **P** 17 42 01.9 +1.8
baz=132,SNR=11
G05D S **S** 17 52 18.5 +5.0
baz=132
NEW Newport 84.90 329 LR LR 18 23 12.9
comp=Z,88nm,20.2s,baz=136,slow=38
NEW Newport 84.90 329 P **P** 17 42 00.3 +0.2
NEW Newport 84.90 329 P **P** 17 42 00.3 +0.2
baz=135,SNR=22
NEW S **S** 17 52 13.9 +0.5
baz=135
J01E Myrtle Point 84.95 322 P **P** 17 42 01.0 +0.6
J01E Myrtle Point 84.95 322 P **P** 17 42 02.1 +1.7
baz=130
J01E S **S** 17 52 18.0 +3.9
baz=130
I03D Drain, OR 84.97 323 P **P** 17 42 01.8 +1.3
baz=130,SNR=5.9
BUCK Buck Mountain 85.10 323 IAmb IAmb 17 42 04.5
comp=Z,70nm,0.8s
C09A Chrisman Ranch 85.12 328 IAmb IAmb 17 42 04.5
comp=Z,99nm,0.9s
HOOD Mount Hood Mea 85.12 325 IAmb IAmb 17 42 04.3
comp=Z,199nm,1.7s
H04D Lebanon 85.18 324 IAmb IAmb 17 42 03.9
comp=Z,89nm,1.6s
H04D Lebanon 85.18 324 P **P** 17 42 02.3 +0.8
baz=131
H04D S **S** 17 52 17.3 +1.1
baz=131
PVRL Vila Real 85.30 41 *e*P **P** 17 42 03.4 +1.2
comp=Z,91nm,1.9s
PVRL *e*pP **pP** 17 42 47.6 +0.1
POLO Lamas de Olo 85.31 41 *e*P **P** 17 42 03.5 +1.1
comp=Z,37nm,1.9s
POLO *e*pP **pP** 17 42 48.1 +0.5
POLO *e*S **S** 17 52 12.5 -5.4
PCAB Cabril 85.38 40 *e*P **P** 17 42 03.5 +0.9
comp=Z,82nm,1.8s
PCAB *e*pP **pP** 17 42 49.8 +1.9
PGAV Gavieira, Arco 85.40 40 *e*P **P** 17 42 03.6 +0.8
comp=Z,68nm,1.8s
PGAV *e*pP **pP** 17 42 48.7 +0.6
PGAV *e*S **S** 17 52 13.3 -5.5
I02E Swisshome, OR 85.51 323 IAmb IAmb 17 42 05.4
comp=Z,46nm,0.8s
I02E Swisshome, OR 85.51 323 P **P** 17 42 04.2 +1.1
baz=130
COR Corvallis 85.52 323 P **P** 17 42 03.9 +0.7
COR IAmb IAmb 17 42 05.6
comp=Z,95nm,0.9s
COR Corvallis 85.52 323 P **P** 17 42 03.9 +0.7
COR pmax pmax
comp=Z,95nm,0.9s
MVO Moncorvo 85.64 41 *e*P **P** 17 42 05.2 +1.2
comp=Z,87nm,1.9s
MVO *e*pP **pP** 17 42 49.3 0.0
MVO *e*S **S** 17 52 15.2 -5.9
G03D McMinnville, O 85.91 324 IAmb IAmb 17 42 08.1
comp=Z,79nm,1.2s
G03D McMinnville, O 85.91 324 P **P** 17 42 05.4 +0.4
baz=131
G03D S **S** 17 52 26.7 +3.4
baz=131
B08A Colville Reser 86.02 328 IAmb IAmb 17 42 07.6
comp=Z,197nm,1.9s
PBRG Braganca 86.20 41 *e*P **P** 17 42 07.8 +1.1
comp=Z,78nm,1.9s
PBRG *e*pP **pP** 17 42 52.1 0.0
PAB San Pablo 86.33 44 P **P** 17 42 07.7 +0.3
PAB IAmb IAmb 17 42 11.2
comp=Z,67nm,1.4s
PAB San Pablo 86.33 44 P **P** 17 42 07.7 +0.3
PAB pmax pmax
comp=Z,67nm,1.4s
F04D Rainier, OR 86.34 325 P **P** 17 42 08.6 +1.5
baz=131
D05A Enumclaw 86.54 326 IAmb IAmb 17 42 11.1
comp=Z,81nm,0.9s
ESDC Sonseca Array 86.64 44 P **P** 17 42 09.8 +1.0
comp=Z,12nm,0.9s,baz=235,slow=4.6,SNR=43
ESDC PKKPbc **PKKPbc** 18 00 04.2 -0.4
comp=Z,0.5nm,0.7s,baz=32,slow=2.1,SNR=5.2
ESDC LR LR 18 19 22.6
comp=Z,444nm,20.0s,baz=204,slow=34
comp=Z,12nm,0.9s
ESDC Sonseca Array 86.64 44 IAmb IAmb 17 42 58.5
comp=Z,65nm,1.5s
ESBB Sonseca Array 86.64 44 P **P** 17 42 08.7 -0.2
ESBB **pP** 17 42 56.0 +1.7
ESBB IAmb IAmb 17 42 58.5
comp=Z,142nm,1.9s
MATP Matopo 86.72 111 *i* P **P** 17 42 11.4 +1.5
MATP Matopo 86.72 111 *i* P **P** 17 42 11.4 +1.5
MATP Matopo 86.72 111 *i* P **P** 17 42 11.4 +1.5
BLWY Bulawayo 86.93 111 *i* P **P** 17 42 12.6 +1.7
BLWY Bulawayo 86.93 111 *i* P **P** 17 42 12.6 +1.7
BLWY Bulawayo 86.93 111 *i* P **P** 17 42 12.6 +1.7
E03A Lebam 86.94 325 IAmb IAmb 17 42 11.8
comp=Z,65nm,0.9s
MUSN Musina, Limpop 87.10 113 *i* P **P** 17 42 13.8 +2.2
MUSN Musina, Limpop 87.10 113 *i* P **P** 17 42 13.8 +2.2
MUSN Musina, Limpop 87.10 113 *i* P **P** 17 42 13.8 +2.2
B06A Marblemount 87.17 327 IAmb IAmb 17 42 13.0
comp=Z,50nm,0.7s
FRB Frobisher Bay 87.67 359 LR LR 18 22 02.6
comp=Z,122nm,21.6s,baz=185,slow=36
MOPA Mopani 87.86 115 *i* P **P** 17 42 16.7 +1.5
MOPA Mopani 87.86 115 *i* P **P** 17 42 16.7 +1.5
MOPA Mopani 87.86 115 *i* P **P** 17 42 16.7 +1.5
B04A Port Angeles 87.89 326 IAmb IAmb 17 42 16.5
comp=Z,40nm,0.9s
PGC Sidney 88.24 326 IAmb IAmb 17 42 18.0
comp=Z,64nm,1.1s
LSZ Lusaka 88.58 106 LR LR 18 19 22.3
comp=Z,373nm,19.8s,baz=280,slow=34
LLLB Lillooet 88.77 329 P **P** 17 42 18.3 -0.4
OZB Mount Ozzard 89.48 326 P **P** 17 42 21.5 -0.5
OZB IAmb IAmb 17 42 25.3
comp=Z,43nm,0.7s
CBB Campbell River 90.09 327 IAmb IAmb 17 42 26.5
comp=Z,33nm,0.9s
BBB Bella Bella 92.78 327 LR LR 18 26 52.7
comp=Z,122nm,19.6s,baz=132,slow=37
URZ Urewera 93.48 225 LR LR 18 16 32.5
comp=Z,213nm,21.5s,baz=31,slow=30
KEST Kesra 93.65 52 P **P** 17 42 42.6 +0.9
comp=Z,7.6nm,0.8s,baz=200,slow=4.3,SNR=7.6
KEST LR LR 18 24 49.5
comp=Z,384nm,21.4s,baz=190,slow=35
comp=Z,7.6nm,0.8s
KEST Kesra 93.65 52 P **P** 17 42 41.9 +0.2
LTZ Lake Taylor 93.78 219 P **P** 17 42 42.7 +0.4
LTZ IAmb IAmb 17 42 44.9
comp=Z,48nm,1.2s
FLN La Foliniere 93.81 38 *e*P **P** 17 42 42.0 0.0
FLN pmax pmax
comp=Z,22nm,1.3s
RPZ Rata Peaks 93.90 218 LR LR 18 16 55.7
comp=Z,140nm,20.2s,baz=114,slow=30
LDF La Druitiere 93.92 38 *e*P **P** 17 42 42.3 -0.3
LDF pmax pmax
comp=Z,9.0nm,0.8s
THZ Tophouse 94.03 221 P **P** 17 42 44.9 +1.4
THZ IAmb IAmb 17 42 48.0
comp=Z,24nm,0.7s
TCF Toulx Ste Croi 94.05 41 *e*P **P** 17 42 43.1 -0.2
TCF pmax pmax
comp=Z,6.0nm,1.0s
YKA Yellowknife Ar 94.28 340 P **P** 17 42 44.4 +0.5
comp=Z,23nm,0.7s,baz=130,slow=4.6,SNR=58
YKA LR LR 18 31 09.4
comp=Z,198nm,18.0s,baz=124,slow=39
comp=Z,23nm,0.7s
YKA Yellowknife Ar 94.28 340 P **P** 17 42 43.2 -0.7
YKA **pP** 17 43 28.4 -1.4
BGF Bois d'Agland 94.57 41 *e*P **P** 17 42 47.8 +2.2
BGF pmax pmax
comp=Z,14nm,1.2s
VIVF Saint-Julien-l 94.82 43 *e*P **P** 17 42 50.6 +3.8
VIVF pmax pmax
comp=Z,10.0nm,1.0s
AVF Avril sur Loir 94.99 41 *e*P **P** 17 42 47.1 -0.4
AVF pmax pmax
comp=Z,21nm,1.5s
SMF Signal de Mont 95.20 41 *e*P **P** 17 42 48.7 +0.2
SMF pmax pmax
comp=Z,15nm,1.2s
BORG Borgarnes 95.48 18 LR LR 18 22 39.1
comp=Z,150nm,20.2s,baz=226,slow=33
LOR Lormes 95.53 40 *e*P **P** 17 42 49.7 -0.3
LOR pmax pmax
comp=Z,4.0nm,0.8s
ORIF Oris-en-Rattie 95.60 43 *e*P **P** 17 42 51.6 +1.1
ORIF pmax pmax
comp=Z,33nm,1.5s
MBDF Montbardon 96.07 44 *e*P **P** 17 42 53.6 +0.9
MBDF pmax pmax
comp=Z,4.0nm,0.7s
EKA Eskdalemuir Ar 96.08 31 LR LR 18 22 34.1
comp=Z,262nm,21.6s,baz=228,slow=33
LPL La Plagne 96.42 43 *e*P **P** 17 42 55.5 +1.2
LPL pmax pmax
comp=Z,10.0nm,1.0s
LPG La Plagne 96.42 43 *e*P **P** 17 42 56.5 +2.1
LPG pmax pmax
comp=Z,12nm,1.0s
CABF La Chapelle 96.54 42 *e*P **P** 17 42 55.9 +1.2
CABF pmax pmax
comp=Z,27nm,1.5s
SENIN Lac Senin/Sane 97.16 42 P **P** 17 42 57.3 -0.4
SENIN IAmb IAmb 17 43 47.6
comp=Z,43nm,1.8s
WRAK Wrangell Islan 97.25 329 IAmb IAmb 17 43 00.4
comp=Z,13nm,1.0s
DLBC Dease Lake 97.35 332 LR LR 18 32 22.5
comp=Z,126nm,18.7s,baz=110,slow=39
DLBC Dease Lake 97.35 332 IAmb IAmb 17 42 59.8
comp=Z,15nm,0.8s
DLBC Dease Lake 97.35 332 P Pdif 17 42 59.4 +1.3
baz=125,SNR=15
HAU Haudompre 97.36 40 *e*P **P** 17 42 58.0 -0.2
HAU pmax pmax
comp=Z,2.0nm,0.6s
BMRD Maredsous 97.54 38 *d*P Pdif 17 42 59.2 +0.2
comp=Z,5.7nm,0.9s
HINF Hinteralfeld 97.57 41 *e*P Pdif 17 42 59.7 +0.4
HINF pmax pmax
comp=Z,24nm,1.9s
WLF Walferdange 98.02 39 *d*P Pdif 17 43 02.1 +0.9
comp=Z,9.2nm,1.0s
DAVOX Davos/Dischmat 98.94 43 LR LR 18 30 25.9
comp=Z,286nm,18.0s,baz=259,slow=37
DAVA Damuels 99.16 42 *e*P **Pdif** 17 43 07.4 +0.9
comp=Z,10nm,1.1s
DAVA *e*P **pP** 17 43 54.3 +1.8
comp=Z,17nm,1.4s
P33M Teslin, Yukon 99.53 333 Pdiff **Pdif** 17 43 08.6 +0.9
baz=122,SNR=13
FETA Feichten 99.57 43 *e*P **Pdif** 17 43 09.3 +0.9
comp=Z,8.5nm,1.1s
FETA *e*P **pP** 17 43 56.2 +1.8
comp=Z,16nm,1.6s
FETA *i* P **PKKPbc** 17 59 31.5 +0.3
comp=Z,5.3nm,1.1s
P32M Atlin 99.58 332 Pdiff **Pdif** 17 43 08.8 +0.9
baz=122
RETA Reutte 99.79 42 *e*P **Pdif** 17 43 10.3 +1.1
comp=Z,11nm,1.2s
RETA *i* P **PKKPbc** 17 59 30.4 -0.1
comp=Z,2.1nm,0.8s
MOTA Moosalm 99.94 43 *e*P **Pdif** 17 43 10.8 +0.9
comp=Z,10.0nm,1.0s
MOTA *e*P **pP** 17 43 57.5 +1.6
comp=Z,18nm,1.6s
MOTA *i* P **PKKPbc** 17 59 30.0 -0.1
comp=Z,6.1nm,0.8s
SQTA Sankt Quirin 99.95 43 *i* P **Pdif** 17 43 11.0 +1.0
comp=Z,6.6nm,0.6s
SQTA *e*P **pP** 17 43 58.0 +2.0
comp=Z,18nm,1.4s
SQTA *i* P **PKKPbc** 17 59 30.2 +0.1
comp=Z,5.7nm,0.8s
MMPY Sheldon Lake, 100.22 335 Pdiff **Pdif** 17 43 11.4 +0.7
baz=123
WATA Walderalm 100.23 43 *i* P **Pdif** 17 43 12.2 +0.9
comp=Z,12nm,1.2s
WATA *i* P pP 17 43 59.0 +1.8
comp=Z,15nm,1.4s
WTTA Wattenberg 100.23 43 *i* P **Pdif** 17 43 11.3 0.0
comp=Z,17nm,1.5s
WTTA *i* P pP 17 43 59.1 +1.8
comp=Z,20nm,1.5s
WTTA *i* P **PKKPbc** 17 59 29.3 0.0
comp=Z,5.9nm,0.8s
ABTA Abfaltersbach 100.57 43 *e*P **Pdif** 17 43 12.3 -0.4
comp=Z,3.3nm,0.7s
ABTA *e*P pP 17 44 00.7 +2.0
comp=Z,13nm,1.6s
ABTA *i* P **PKKPbc** 17 59 27.6 -0.6
comp=Z,2.1nm,0.6s
WHY Whitehorse 100.64 332 Pdiff **Pdif** 17 43 13.5 +0.8
baz=121
O30N Mendenhall 101.21 332 Pdiff **Pdif** 17 43 16.3 +1.2
baz=120
KBA Koelnbreinsper 101.22 43 *e*P **Pdif** 17 43 16.3 +0.6
comp=Z,4.3nm,1.0s
KBA *i* P pP 17 44 03.7 +1.9
comp=Z,2.6nm,0.8s
M31M Drury Creek, Y 101.23 334 Pdiff **Pdif** 17 43 16.2 +1.1
baz=121,SNR=5.1
MYKA Terra Mystica 101.23 44 *e*P **Pdif** 17 43 16.7 +1.0
comp=Z,6.6nm,1.1s
MYKA *e*P pP 17 44 04.2 +2.6
comp=Z,6.4nm,1.2s
N31M Braeburn, Yuko 101.43 333 Pdiff **Pdif** 17 43 17.1 +1.0
baz=120
BIOA Bad Ischl, Aus 101.65 43 *e*P **Pdif** 17 43 17.8 +0.3
comp=Z,4.9nm,1.3s
HYT Haines Junctio 101.84 332 Pdiff **Pdif** 17 43 19.2 +1.2
baz=118
N30M Aishikik Lake 101.97 333 Pdiff **Pdif** 17 43 19.9 +1.4
baz=119
MOA Molln 102.10 43 *e*P **Pdif** 17 43 20.2 +0.8
comp=Z,1.8nm,0.7s
MOA *e*P **pPdif** 17 44 07.6 +2.2
comp=Z,4.7nm,1.2s
MOA *e*P **PKKPbc** 17 59 23.7 0.0
comp=Z,3.2nm,1.0s

GERES	**GERESS Array B**	**102.14**	**42**		P	**Pdif**	**17 43 20.2**	**+0.6**
	comp=Z,0.2nm,0.4s,baz=45,slow=0.4,SNR=4.2							
GERES					PKiKP	**PKiKP**	**17 47 40.9**	**-0.1**
	comp=Z,1.2nm,0.8s,baz=174,slow=1.0,SNR=5.5							
GERES					PKKPbc	**PKKPbc**	**17 59 23.8**	**+0.1**
	comp=Z,1.0nm,0.6s,baz=77,slow=2.9,SNR=11							
GERES	**GERESS Array B**	**102.14**	**42**			**Pdif**	**17 43 17.2**	**-2.4**
GERES						**pPdif**	**17 44 04.3**	**-1.2**
GERES						**PKKPbc**	**17 59 23.0**	**-0.8**
M30M	**Minto, Yukon**	**102.38**	**334**		Pdiff	**Pdif**	**17 43 21.2**	**+0.8**
	baz=119,SNR=7.5							
YUK4	**Talbot Arm**	**102.57**	**332**		Pdiff	**Pdif**	**17 43 22.5**	**+1.1**
	baz=118,SNR=5.4							
ARSA	**Arzberg**	**102.66**	**44**	*e*	P	**PKKPbc**	**17 59 22.5**	**+0.5**
	comp=Z,0.5nm,0.5s							
CLL	**Collm**	**102.68**	**39**	*e*	pPdif	**pPdif**	**17 44 04.0**	**-3.7**
CLL				*e*	pPP		17 48 18.0	
CLL				*e*	SKSac	**SKSac**	**17 53 49.0**	**+4.9**
CLL				*e*	Sdif	**Sdif**	**17 54 53.0**	**+2.0**
CLL				*e*	SP	**SP**	**17 56 29.0**	**+2.2**
CLL				*e*	PP	SPP	17 57 16.0	
CLL				*e*	SS	**SS**	**18 02 03.0**	**-0.8**
CLL				*e*	SS		18 03 24.0	
CLL				*e*	SSS		18 07 18.0	
CLL					LmV		18 30 00.0	
	comp=Z,300nm,19.1s							
YUK8	**Steele Glacier**	**103.03**	**332**		Pdiff	**Pdif**	**17 43 24.4**	**+0.9**
	baz=117							
CONA	**Conrad Observa**	**103.13**	**43**	*e*	P	**pPdif**	**17 44 11.7**	**+1.8**
	comp=Z,3.5nm,1.0s							
CONA				*e*	P	**PKKPbc**	**17 59 21.2**	**+0.4**
	comp=Z,2.6nm,0.7s							
RONA	**Rosalia, Austr**	**103.32**	**44**	*e*	P	**pPdif**	**17 44 11.6**	**+0.9**
	comp=Z,1.8nm,0.7s							
RONA				*i*	P	**PKKPbc**	**17 59 20.4**	**+0.3**
	comp=Z,2.6nm,1.1s							
YUK3	**Moose Creek**	**103.54**	**332**		Pdiff	**Pdif**	**17 43 26.7**	**+1.0**
	baz=116							
KRUC	**Moravsky**	**103.87**	**42**	*e*	PKIKP	**PKiKP**	**17 47 44.4**	**+0.4**
KRUC				*e*	SKS		17 53 52.2	
KRUC				*e*	PKKP	**PKKPbc**	**17 59 18.7**	**+0.2**
INK	**Inuvik**	**104.04**	**339**		Pdiff	**Pdif**	**17 43 28.2**	**+0.7**
	comp=Z,2.2nm,0.8s,baz=122,slow=6.8,SNR=4.4							
INK	**Inuvik**	**104.04**	**339**		Pdif	**Pdif**	**17 43 26.0**	**-1.5**
INK	**Inuvik**	**104.04**	**339**		P	**Pdif**	**17 43 26.0**	**-1.5**
VRAC	**Vranov**	**104.08**	**42**	*e*	PKIKP	**PKiKP**	**17 47 45.4**	**+1.0**
VRAC				*e*	SKS		17 53 54.5	
DAWY	**Dawson**	**104.11**	**334**		Pdiff	**Pdif**	**17 43 28.5**	**+0.5**
	baz=116,SNR=5.1							
EPYK	**Eagle Plains**	**104.17**	**337**		Pdiff	**Pdif**	**17 43 28.6**	**+0.4**
	baz=118							
I29M	**Ogilvie Camp,**	**104.28**	**336**		Pdiff	**Pdif**	**17 43 29.3**	**+0.6**
	baz=117,SNR=7.3							
M27K	**Edge Creek, AK**	**104.40**	**332**		Pdiff	**Pdif**	**17 43 30.3**	**+0.9**
	baz=115							
JAVC	**Velka Javorina**	**104.58**	**43**	*e*	PKIKP	**PKiKP**	**17 47 45.2**	**-0.2**
JAVC				*e*	SKS		17 53 58.5	
JAVC				*e*	PKKP	**PKKPbc**	**17 59 17.7**	**+1.3**
BCAR	**Beaver Creek A**	**104.65**	**333**		Pdif	**Pdif**	**17 43 30.1**	**-0.3**
L27K	**Beaver Creek,**	**104.67**	**333**		Pdiff	**Pdif**	**17 43 31.4**	**+0.9**
	baz=114,SNR=6.6							
NOA	**NORSAR Array B**	**105.47**	**30**		PKKPab	PKKPab	17 59 29.9	+2.0
	comp=Z,1.9nm,0.9s,baz=68,slow=4.5,SNR=4.4							
KKB	**Krupnik**	**105.90**	**51**	*i*	P	**SKSac**	**17 54 01.1**	**+1.7**
J26L	**Joseph Creek**	**105.95**	**334**		P	**Pdif**	**17 43 37.1**	**+0.9**
	baz=113,SNR=10							
VTS	**Vitosha**	**106.24**	**50**	*i*	P	**SKSac**	**17 54 03.0**	**+1.9**
MMB	**Musomiste**	**106.27**	**51**	*i*	P	**SKSac**	**17 54 02.0**	**+0.9**
J25K	**Salcha River,**	**106.72**	**334**		P	**Pdif**	**17 43 40.4**	**+0.8**
	baz=111,SNR=6.5							
WAT6	**Susitna Watana**	**107.00**	**331**		P	**Pdif**	**17 43 41.6**	**+0.5**
	baz=110,SNR=5.9							
PLD	**Plovdiv**	**107.12**	**51**	*i*	P	**SKSac**	**17 54 05.5**	**+0.9**
ILAR	**Eielson Array**	**107.39**	**334**		Pdiff	**Pdif**	**17 43 42.8**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=156,slow=2.7,SNR=8.4							
ILAR					PKiKP	**PKiKP**	**17 47 50.2**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=65,slow=1.9,SNR=7.3							
ILAR					PKKPbc	**PKKPbc**	**17 59 06.0**	**-2.2**
	comp=Z,0.2nm,0.4s,baz=308,slow=4.9,SNR=4.8							
ILAR	**Eielson Array**	**107.39**	**334**		Pdif	**Pdif**	**17 43 42.5**	**0.0**
ILAR	**Eielson Array**	**107.39**	**334**		P	**Pdif**	**17 43 42.5**	**0.0**
SZH	**Strazhica**	**108.32**	**50**	*i*	P	**SKSac**	**17 54 12.4**	**+2.6**
JMB	**Yambol**	**108.56**	**51**	*i*	P	**SKSac**	**17 54 12.4**	**+1.6**
BPAW	**Bear Paw Mtn.**	**108.87**	**333**		PKiKP	**PKiKP**	**17 47 53.2**	**+0.4**
	baz=106							
MLR	**Muntele Rosu**	**108.94**	**48**		PKKPbc	PKKPbc	17 59 03.2	+0.4
	comp=Z,1.5nm,0.6s,baz=241,slow=7.5,SNR=4.8							
MLR					PKKPab	**PKKPab**	**17 59 15.2**	**+1.9**
	comp=Z,2.7nm,0.7s,baz=182,slow=8.2,SNR=4.7							
COLD	**Coldfoot**	**109.43**	**336**		PKiKP	**PKiKP**	**17 47 55.2**	**+1.5**
	baz=106							
TOLK	**Toolik Lake Re**	**109.60**	**337**		PKiKP	**PKiKP**	**17 47 55.3**	**+1.1**
	baz=106							
EIL	**Elat**	**111.56**	**66**		PKKPab	PKKPab	17 59 05.2	+2.8
	comp=Z,3.9nm,0.9s,baz=335,slow=6.2,SNR=4.3							
NACGM	**Naroch**	**111.66**	**38**		PP	PP	17 48 33.2	-10
MNK	**Minsk**	**112.21**	**39**	*i*	PKIKP	PKiKP	17 47 49.8	-10
MNK				*i*			17 48 48.1	
MNK				*i*	PPP	PPP	17 51 10.0	
MNK				*i*			17 54 54.7	
MNK				*i*	PS	PKKPbc	17 58 23.4	-29
MNK				*i*	SS	SS	18 04 12.2	-0.1
MNK				*i*	SSS	SSS	18 08 24.4	
MNK					pmax	pmax		
	comp=Z,7.0nm,1.0s							
MNK					pmax	pmax		
	comp=E,2.0nm,0.8s							
MNK					pmax	pmax		
	comp=N,16nm,0.8s							
MNK					MLR	MLR		
	comp=Z,6μm,25.0s							
MNK					MLR	MLR		
	comp=E,26nm,16.0s							
MNK					MLR	MLR		
	comp=N,799nm,21.0s							
MNK	**Minsk**	**112.21**	**39**	*i*	PKP	PKiKP	17 47 49.9	-10
	comp=E,2.0nm,0.8s							
MNK				*i*	PKP	PKiKP	17 47 49.9	-10
	comp=N,16nm,0.8s							
MNK				*i*	PKP	PKiKP	17 47 49.9	-10
	comp=Z,7.0nm,1.0s,baz=259							
MNK				*i*	PP	**PP**	**17 48 47.1**	**-0.2**
MNK				*i*	pPKP		17 48 48.1	
MNK				*i*	PPP	PPP	17 51 10.0	
MNK				*i*	SKS	**SKSdf**	**17 54 54.8**	**+0.3**
MNK				*i*	PS	**PS**	**17 58 23.4**	**+0.5**
MNK				*i*	SS	**SS**	**18 04 12.2**	**0.0**
MNK				*i*	SSS	SSS	18 08 24.5	
MNK				*i*	LRM	MLR	18 35 58.1	
	comp=Z,6μm,24.8s							
MNK				*i*	LRM	MLR	18 36 27.4	
	comp=E,26nm,16.4s							
MNK				*i*	LRM	MLR	18 36 39.0	
	comp=N,799nm,20.6s							
AKASG	**Malin Array Be**	**112.28**	**43**		PKiKP	**PKiKP**	**17 47 59.4**	**-0.2**
	comp=N,1.3nm,0.3s,baz=268,slow=2.6,SNR=28							
AKASG					PP	PP	17 48 39.3	-8.6
	comp=N,0.5nm,0.6s,baz=260,slow=5.5,SNR=5.2							
AKASG					PKKPbc	**PKKPbc**	**17 58 51.8**	**0.0**
	comp=N,1.3nm,0.5s,baz=60,slow=4.9,SNR=8.6							
AKASG					PKKPab	**PKKPab**	**17 59 00.2**	**+2.1**
	comp=N,1.7nm,0.5s,baz=62,slow=5.4,SNR=13							
AKBB	**Malin Array Si**	**112.28**	**43**	*c*	*i* PKIKP	**PKiKP**	**17 47 59.4**	**-0.2**
FINES	**FINESS Array B**	**112.48**	**31**		PKiKP	**PKiKP**	**17 48 00.3**	**+0.6**
	comp=N,1.7nm,0.8s,baz=160,slow=4.1,SNR=5.9							
FINES					PKKPbc	**PKKPbc**	**17 58 50.0**	**-1.6**
	comp=N,3.3nm,0.8s,baz=96,slow=5.9,SNR=9.4							
MMAI	**Mount Meron Ar**	**112.82**	**63**		PKiKP	**PKiKP**	**17 48 01.9**	**+0.5**
	comp=N,1.6nm,0.5s,baz=110,slow=1.2,SNR=8.0							
BR131	**Keskin Array S**	**113.04**	**55**	*i*	PKIKP	**PKiKP**	**17 48 01.0**	**-0.7**
BRTR	**Keskin Array B**	**113.04**	**55**		PKiKP	**PKiKP**	**17 48 02.1**	**+0.5**
	comp=N,3.0nm,0.7s,baz=188,slow=2.4,SNR=23							
BRTR					PP	**PP**	**17 48 49.0**	**-4.8**
	comp=N,0.9nm,0.9s,baz=264,slow=4.4,SNR=4.7							
BRTR					PKKPab	**PKKPab**	**17 58 58.0**	**+2.5**
	comp=N,2.2nm,0.7s,baz=105,slow=4.2,SNR=17							
ARCES	**ARCESS Array B**	**113.37**	**23**		PKKPbc	PKKPbc	17 58 47.5	-1.4
	comp=N,1.4nm,0.4s,baz=91,slow=3.9,SNR=14							
APA	**Apatity**	**116.16**	**25**	*j*	*i* PKIKP	PKiKP	17 48 16.1	+10
APA					pmax	pmax		
	comp=Z,5.0nm,1.0s							
OBN	**Obninsk**	**117.27**	**39**	*e*	PKIKP	**PKPdf**	**17 48 08.4**	**-0.6**
OBN				*e*			17 48 57.4	
OBN				*e*			17 49 18.4	
OBN					pmax	pmax		
	comp=Z,15nm,0.9s							
STKA	**Stephens Creek**	**117.82**	**208**		PKP	**PKiKP**	**17 48 11.7**	**+0.7**
	comp=Z,3.1nm,0.6s,baz=120,slow=5.9,SNR=8.0							
STKA					PKKPbc	**PKKPbc**	**17 58 31.9**	**-0.7**
	comp=Z,2.5nm,0.7s,baz=350,slow=5.0,SNR=5.8							
STKA	**Stephens Creek**	**117.82**	**208**		PKPdf	**PKPdf**	**17 48 09.4**	**-1.7**
MOS	**Moscow**	**117.91**	**38**	*i*	PKIKP	**PKPdf**	**17 48 09.8**	**-0.5**
MOS				*e*			17 49 29.2	
SOC	**Sochi**	**118.21**	**52**	*i*	PKIKP	**PKiKP**	**17 48 11.6**	**+0.3**
SOC				*e*			17 49 28.8	
SOC				*e*	PS	**PS**	**17 59 15.8**	**-2.2**
SOC				*e*	SS	SS	18 05 28.2	-3.1
SOC				*e*	SSS	SSS	18 09 57.0	
SOC					pmax	pmax		
	comp=Z,23nm,0.6s							
VORR	**Voronezh**	**118.64**	**43**	*e*	PKIKP	**PKPdf**	**17 48 11.2**	**-0.6**
VORR					pmax	pmax		
	comp=Z,30nm,0.4s							
KLMR	**Klimovskoe**	**118.94**	**32**	*e*	PKIKP	**PKPdf**	**17 48 09.3**	**-2.8**
KLMR					pmax	pmax		
	comp=Z,35nm,1.2s							
KLMR	**Klimovskoe**	**118.94**	**32**	*e*	PKPdf	**PKPdf**	**17 48 09.4**	**-2.7**
KLMR					AMP		17 48 13.6	
	comp=Z,35nm,1.2s							
KLMR				*e*	PP	**PP**	**17 49 28.6**	**-5.5**
KLMR				*e*	SKP		17 51 28.6	
KLMR				*e*	PKKPbc	**PKKPab**	**17 58 26.5**	**-1.9**
RAYN	**Ar Rayn**	**118.99**	**76**	*i*	PKiKP	**PKiKP**	**17 48 14.6**	**+1.1**
	SNR=6.8							
KIV	**Kislovodsk**	**120.39**	**52**			**PKPdf**	**17 48 14.7**	**-0.9**
KIV	**Kislovodsk**	**120.39**	**52**	*i*	PKIKP	**PKPdf**	**17 48 15.5**	**-0.1**
KIV				*e*			17 49 44.3	
KIV				*e*			17 54 55.1	
KIV				*e*	PS	**PS**	**17 59 36.2**	**-1.5**
KIV				*e*	SS	SS	18 05 59.9	+0.3
KIV					pmax	pmax		
	comp=Z,23nm,1.1s							
KVAR	**Kislovodsk Arr**	**120.39**	**52**		PKP	**PKPdf**	**17 48 15.4**	**-0.2**
	comp=Z,9.1nm,1.1s,baz=266,slow=15,SNR=3.6							
KBZ	**Khabaz**	**120.52**	**52**		PKP	**PKiKP**	**17 48 16.9**	**+1.1**
	comp=Z,14nm,0.8s,baz=204,slow=3.0,SNR=21							
KBZ	**Khabaz**	**120.52**	**52**	*d*	*i* PKIKP	**PKiKP**	**17 48 16.2**	**+0.4**
ZEI	**Tsey**	**121.16**	**53**	*i*	PKIKP	**PKPdf**	**17 48 17.1**	**-0.2**
ZEI					pmax	pmax		
	comp=Z,10.0nm,0.9s							
GNI	**Garni**	**121.52**	**57**		PKP	**PKiKP**	**17 48 19.3**	**+1.2**
	comp=Z,9.0nm,0.4s,baz=121,slow=5.9,SNR=3.1							
PRGR	**Permogore**	**121.81**	**31**	*e*	PKIKP	**PKPdf**	**17 48 17.2**	**-0.4**
PRGR				*e*			17 49 51.1	
HNR	**Honiara**	**123.15**	**240**		PKP	**PKPdf**	**17 48 20.4**	**-1.3**
	comp=Z,59nm,0.5s,baz=333,slow=3.9,SNR=3.9							
MAK	**Makhachkala**	**123.82**	**53**	*i*	P	**Pdif**	**17 44 56.0**	**0.0**
MAK				*i*			17 48 22.2	
MAK				*e*			17 49 04.9	
MAK				*e*			17 50 05.7	
MAK				*e*	PPP	PPP	17 52 55.2	
MAK				*e*			17 55 07.1	
MAK				*e*	SS	SS	18 06 47.8	+4.9
MAK				*e*	SSS	SSS	18 11 24.0	
MAK					pmax	pmax		
	comp=Z,19nm,0.3s							
BELG	**Belogornoye**	**123.83**	**42**		PKP	**PKiKP**	**17 48 22.4**	**+0.4**
	comp=Z,52nm,0.7s,baz=250,slow=1.9,SNR=8.1							
BELG	**Belogornoye**	**123.83**	**42**	*d*	*i* PKIKP	**PKiKP**	**17 48 21.9**	**-0.1**
KIRV	**Kirov**	**124.15**	**34**	*d*	*i* PKIKP	**PKPdf**	**17 48 22.3**	**+0.1**
BILL	**Bilibino**	**125.63**	**338**			**PKiKP**	**17 48 25.0**	**-0.2**
BILL	**Bilibino**	**125.63**	**338**	*e*	PKIKP	**PKiKP**	**17 48 25.3**	**+0.1**
BILL				*e*			17 49 13.4	
BILL				*e*			17 50 16.8	
BILL					pmax	pmax		
	comp=Z,13nm,0.8s							
MZR	**Muzera**	**125.95**	**78**	*i*	PKiKP	**PKiKP**	**17 48 28.3**	**+1.1**
	SNR=13							
MORW	**Morawa**	**126.94**	**183**			**PKPdf**	**17 48 28.0**	**-0.6**
ASUD	**Al Ashush, Dub**	**127.97**	**77**		PKiKP	**PKiKP**	**17 48 31.8**	**+0.6**
FAQ	**Al Faqa, Dubai**	**128.23**	**77**	*i*	PKiKP	**PKiKP**	**17 48 32.0**	**+0.3**
	SNR=7.1							
NAZ	**Nazwa, Dubai**	**128.34**	**77**		PKiKP	**PKiKP**	**17 48 31.9**	**0.0**
ASHO	**Ashiyiah**	**128.63**	**77**	*i*	PKPdf	**PKPdf**	**17 48 31.9**	**0.0**
	SNR=13							
HATD	**Hatta, Dubai**	**128.72**	**77**	*i*	PKiKP	**PKiKP**	**17 48 33.0**	**+0.3**
	SNR=6.5							
UOSS	**Minazif**	**128.81**	**77**		PKPdf	**PKPdf**	**17 48 32.1**	**-0.1**
MSFE	**Esma-Masafi**	**128.85**	**76**		PKPdf	**PKPdf**	**17 48 32.4**	**+0.3**
SHME	**Shamm**	**128.97**	**75**	*i*	PKPdf	**PKiKP**	**17 48 32.9**	**-0.2**
	SNR=10							
BANOM	**Banah**	**129.09**	**75**		PKiKP	**PKiKP**	**17 48 33.7**	**+0.3**
ARU	**Arti**	**129.43**	**36**		PKP	**PKiKP**	**17 48 33.7**	**+0.5**
	baz=258,slow=0.9							
ARU					SKPbc	SKPbc	17 51 39.6	+2.2
	comp=Z,12nm,0.8s,baz=288,slow=2.5,SNR=16							
ARU	**Arti**	**129.43**	**36**			**PKiKP**	**17 48 32.9**	**-0.3**
ARU	**Arti**	**129.43**	**36**	*i*	PKIKP	**PKiKP**	**17 48 33.1**	**0.0**
ARU							17 50 45.7	
ARU					PPP	PPP	17 53 30.2	
AKTO	**Aktyubinsk**	**130.53**	**43**		PKP	**PKiKP**	**17 48 35.9**	**+0.3**
	comp=Z,13nm,0.9s,baz=284,slow=2.8,SNR=9.4							
AKTO					SKPbc	**SKPab**	**17 51 43.5**	**+1.6**
	comp=Z,80nm,1.2s,baz=286,slow=3.2,SNR=52							
WSAR	**Wadi Sarin**	**130.62**	**79**		PKP	**PKiKP**	**17 48 36.7**	**+0.1**
	comp=Z,23nm,0.8s,baz=241,slow=2.7,SNR=15							
WSAR					SKPbc	**SKPab**	**17 51 44.1**	**+1.0**
	comp=Z,77nm,0.9s,baz=270,slow=4.5,SNR=37							
WRA	**Warramunga Arr**	**131.38**	**207**		PKiKP	PKPpre	17 48 25.4	
	comp=Z,1.9nm,0.6s,baz=134,slow=2.1,SNR=11							
WRA					PKP	**PKiKP**	**17 48 37.8**	**-0.5**
	comp=Z,16nm,0.5s,baz=157,slow=1.7,SNR=96							
WRA					SKPbc	**SKPab**	**17 51 46.3**	**-0.1**
	comp=Z,22nm,0.8s,baz=164,slow=3.5,SNR=27							
WRA	**Warramunga Arr**	**131.38**	**207**			PKPpre	17 48 19.1	
WRA					PKPdf	**PKPdf**	**17 48 36.0**	**-1.3**
WRA	**Warramunga Arr**	**131.38**	**207**		PKIKP	**PKPdf**	**17 48 36.0**	**-1.3**
TIXI	**Tiksi**	**131.67**	**353**		PKhKP	PKPpre	17 48 30.4	
	comp=Z,2.9nm,0.7s,baz=277,slow=2.1,SNR=8.7							
TIXI					PKP	**PKPdf**	**17 48 36.4**	**+0.2**
	comp=Z,4.2nm,0.3s,baz=281,slow=9.6,SNR=20							
TIXI					SKPbc	**SKPab**	**17 51 45.6**	**-0.4**
	comp=Z,69nm,0.9s,baz=91,slow=23,SNR=88							
TIXI	**Tiksi**	**131.67**	**353**			PKPpre	17 48 20.0	
TIXI						**PKPdf**	**17 48 35.4**	**-0.8**
GEYT	**Alibeck**	**131.80**	**60**		PKP	**PKiKP**	**17 48 38.1**	**-0.4**
	comp=Z,4.1nm,0.8s,baz=229,slow=14,SNR=4.9							
GEYT					SKPbc	**SKPab**	**17 51 48.8**	**+1.1**
	comp=Z,30nm,0.9s,baz=240,slow=11,SNR=24							
ABKAR	**Akbulak array**	**131.98**	**45**		PKPdf	**PKPdf**	**17 48 37.6**	**+0.1**
KRVT	**Keravat (AS076**	**132.49**	**239**		PKP	**PKiKP**	**17 48 40.5**	**-0.1**
	comp=Z,26nm,0.9s,baz=194,slow=7.0,SNR=9.3							
PMG	**Port Moresby**	**132.69**	**229**		PKP	**PKiKP**	**17 48 41.8**	**+0.8**
	comp=Z,47nm,1.2s,baz=43,slow=6.9,SNR=9.1							
PMG					SKPbc	**SKPab**	**17 51 52.3**	**+0.2**
	comp=Z,84nm,1.1s,baz=70,slow=4.3,SNR=13							
SEY	**Seymchan**	**133.22**	**336**		PKhKP	PKPpre	17 48 33.8	
	comp=Z,2.3nm,0.8s,baz=147,slow=9.7,SNR=6.2							
SEY					PKP	**PKiKP**	**17 48 40.9**	**+0.3**
	comp=Z,19nm,0.6s,baz=102,slow=2.9,SNR=50							
SEY					PP	**PP**	**17 51 04.9**	**-3.4**
	comp=Z,3.4nm,0.9s,baz=65,slow=11,SNR=3.9							
SEY					SKPbc	**SKPab**	**17 51 52.1**	**-0.8**
	comp=Z,14nm,0.9s,baz=89,slow=3.9,SNR=11							
SEY	**Seymchan**	**133.22**	**336**	*j*	*e* PKIKP	**PKPdf**	**17 48 38.8**	**-0.5**
PSA00	**Pilbara Seismi**	**133.98**	**189**			**PKPdf**	**17 48 41.5**	**-0.7**
PET	**Petropavlovsk**	**135.20**	**322**	*i*	PKIKP	**PKPdf**	**17 48 42.9**	**-0.4**
PET				*e*			17 51 19.9	
PET				*e*	SS	SS	18 08 57.0	-4.6
PET					pmax	pmax		
	comp=Z,300nm,17.8s							
PET					MLR	MLR		
	comp=Z,200nm,20.0s							
PEA0B	**Petropavlovsk-**	**135.70**	**323**	*ce*	PKIKP	**PKPdf**	**17 48 44.6**	**+0.3**
PETK	**Petropavlovsk-**	**135.70**	**323**		PKhKP	PKPpre	17 48 37.9	
	comp=Z,1.1nm,0.5s,baz=101,slow=4.6,SNR=8.2							
PETK					PKP	**PKPdf**	**17 48 45.0**	**+0.7**
	comp=Z,12nm,0.8s,baz=167,slow=2.9,SNR=22							
PETK					SKPbc	**SKPbc**	**17 52 00.9**	**+1.8**
	comp=Z,36nm,1.1s,baz=80,slow=9.2,SNR=23							
PETK	**Petropavlovsk-**	**135.70**	**323**			PKPpre	17 48 30.1	
PETK					PKPdf	**PKPdf**	**17 48 44.2**	**-0.1**
MA2	**Magadan**	**135.86**	**333**		PKP	**PKiKP**	**17 48 45.5**	**-0.5**
	comp=Z,10nm,0.7s,baz=40,slow=3.3,SNR=6.7							
MA2					SKPbc	**SKPbc**	**17 51 58.8**	**-0.6**
	comp=Z,28nm,1.2s,baz=27,slow=3.5,SNR=4.3							
MA2	**Magadan**	**135.86**	**333**			**PKPdf**	**17 48 44.3**	**-0.1**
MA2	**Magadan**	**135.86**	**333**		PKIKP	**PKPdf**	**17 48 44.3**	**-0.1**
BRVK	**Borovoye**	**136.97**	**37**		PKPdf	**PKPdf**	**17 48 47.5**	**+0.8**
BRVK	**Borovoye**	**136.97**	**37**		PKIKP	**PKPdf**	**17 48 47.5**	**+0.8**
MTN	**Manton Dam**	**139.07**	**208**			PKPpre	17 48 41.1	
BRZS	**Berezniki**	**139.63**	**40**	*e*	PKIKP	**PKPdf**	**17 48 50.6**	**-1.0**
BRZS	**Berezniki**	**139.63**	**40**	*e*	PKP	**PKPdf**	**17 48 50.6**	**-1.0**
	baz=40							
BRZS				*e*	PKiKP	**PKiKP**	**17 48 53.6**	**-0.5**
	baz=40							
CHGR	**Chuyangaron**	**140.41**	**58**			PKPpre	17 48 45.5	
CHGR	**Chuyangaron**	**140.41**	**58**		PKHKP	PKPpre	17 48 45.5	
IUG	**Iuzhnay**	**140.42**	**52**	*i*	PKIKP	**PKPdf**	**17 48 54.5**	**+1.0**
IUG	**Iuzhnay**	**140.42**	**52**	*e*	PKiKP	**PKPdf**	**17 48 54.5**	**+1.0**
	baz=52							
YAK	**Yakutsk**	**140.51**	**348**		SKP		17 52 11.5	
	comp=Z,3.9nm,0.6s,baz=359,slow=2.5,SNR=6.7							
YAK	**Yakutsk**	**140.51**	**348**			PKPpre	17 48 44.0	
YAK	**Yakutsk**	**140.51**	**348**	*e*	PKHKP	PKPpre	17 48 44.7	
YAK				*e*			17 52 03.4	
YAK					pmax	pmax		
	comp=Z,19nm,0.9s							
YAK					pmax	pmax		
	comp=N,3.0nm,1.1s							
BTLS	**Baital**	**142.38**	**47**	*e*	PKIKP	**PKPdf**	**17 48 55.6**	**-1.1**
BTLS	**Baital**	**142.38**	**47**	*e*	PKP	**PKPdf**	**17 48 55.6**	**-1.1**
	baz=47							
GENI	**Genyem**	**142.38**	**229**		PKP	**PKPdf**	**17 48 55.7**	**-2.0**
KURK	**Kurchatov**	**142.63**	**36**		PKPdf	**PKPdf**	**17 48 53.7**	**-3.3**
KURK	**Kurchatov**	**142.63**	**36**		PKIKP	**PKPdf**	**17 48 53.7**	**-3.3**
KURBB	**Kurchatov Arra**	**142.63**	**36**		SKP		17 52 17.2	
	comp=N,4.7nm,0.9s,baz=288,slow=3.6,SNR=6.2							
EKS2	**Erkin-Say**	**142.96**	**51**		P	**PKiKP**	**17 49 00.1**	**-1.2**
	SNR=9.4							
AML	**Almayashu**	**143.06**	**51**		P	PKPbc	17 48 56.5	+0.5
	SNR=10.0							
AML	**Almayashu**	**143.06**	**51**	*i*	PKPdf	PKPbc	17 48 56.5	+0.6
	SNR=11							
USP	**Ospenovka**	**143.28**	**49**		P	**PKPdf**	**17 49 00.1**	**+1.6**
	SNR=12							
SAUI	**Saumlaki**	**143.28**	**212**		PKP	**PKPdf**	**17 48 58.3**	**-1.0**
SGDS	**Sogindy**	**143.31**	**49**	*e*	PKIKP	PKPbc	17 48 56.6	+0.4
SGDS	**Sogindy**	**143.31**	**49**	*e*	PKP	PKPbc	17 48 56.6	+0.5
	baz=49							
AAK	**Ala-Archa**	**143.47**	**50**		SKPbc	**SKiKP**	**17 52 21.7**	**-0.1**
	comp=N,9.6nm,0.7s,baz=244,slow=1.2,SNR=11							
AAK	**Ala-Archa**	**143.47**	**50**		PKPdf	**PKPdf**	**17 48 57.9**	**-1.1**
AAK	**Ala-Archa**	**143.47**	**50**		PKIKP	**PKPdf**	**17 48 57.9**	**-1.1**
AAK	**Ala-Archa**	**143.47**	**50**	*i*	PKPdf	**PKPdf**	**17 48 58.1**	**-0.9**
	SNR=7.0							
CHMS	**Chumysh**	**143.54**	**50**		P	**PKPdf

ZEA	**Zeya**	**148.59**	**344**	*e*PKIKP	**PKPdf**	**17 49 07.8**	**+0.8**
ZEA				*e*		18 12 41.3	
ZEA				pmax	pmax		
	comp=N,20nm,2.1s						
ZEA				pmax	pmax		
	comp=Z,80nm,1.8s						
ZEA				pmax	pmax		
	comp=Z,500nm,2.5s						
SMRI	**Semarang**	**148.84**	**175**	PKP	**PKPdf**	**17 49 10.4**	**+1.7**
DBJI	**Dramaga**	**148.84**	**168**	PKP	**PKPdf**	**17 49 09.7**	**+1.0**
KMMI	**Kalianget**	**148.91**	**182**	PKP	**PKPdf**	**17 49 09.4**	**+0.6**
KMMI				PKP	**PKPbc**	**17 49 10.0**	**-2.9**
KMMI				PKP	**PKiKP**	**17 49 13.5**	**-0.7**
BSSI	**Bau Bau, Buton**	**148.92**	**195**	PKP	**PKPdf**	**17 49 09.4**	**+0.6**
BBSI	**Bau Bau**	**149.00**	**199**	PKP	**PKPbc**	**17 49 12.1**	**-1.1**
BBSI				PKP	**PKPab**	**17 49 16.9**	**-0.8**
GRJI	**Gresik**	**149.06**	**179**	PKP	**PKiKP**	**17 49 15.1**	**+0.6**
TNG	**Tangerang**	**149.20**	**168**	PKP	**PKPdf**	**17 49 08.9**	**-0.4**
SWI	**Sorong**	**149.33**	**218**	PKP	**PKPdf**	**17 49 10.0**	**+0.5**
SWI				PKP	**PKiKP**	**17 49 15.0**	**-0.1**
KASI	**Kota Agung**	**149.34**	**164**	PKP	**PKPdf**	**17 49 09.9**	**+0.4**
NLAI	**Namlea**	**149.39**	**209**	PKP	**PKPdf**	**17 49 10.4**	**+0.8**
BLSI	**Bandar Lampung**	**149.68**	**165**	PKP	**PKPdf**	**17 49 09.4**	**-0.7**
LWLI	**Liwa**	**149.71**	**162**	PKP	**PKPdf**	**17 49 09.2**	**-1.1**
BKSI	**Bulukumba**	**149.80**	**195**	PKP	**PKPdf**	**17 49 11.3**	**+1.1**
BKSI				PKP	**PKiKP**	**17 49 15.8**	**-0.2**
KLI	**Kotabumi**	**150.07**	**164**	PKP	**PKPdf**	**17 49 10.2**	**-0.5**
KAPI	**Kappang**	**150.18**	**194**	PKP	**PKPdf**	**17 49 11.2**	**+0.3**
	comp=Z,12nm,0.7s,baz=86,slow=2.8,SNR=4.8						
KAPI				PKPbc	**PKiKP**	**17 49 17.2**	**+0.4**
	comp=Z,69nm,0.7s,baz=192,slow=2.7,SNR=25						
KAPI	**Kappang**	**150.18**	**194**	PKPdf	**PKPdf**	**17 49 11.1**	**+0.3**
KAPI				PKPbc	**PKiKP**	**17 49 16.7**	**-0.2**
KAPI				PKPab	**PKPab**	**17 49 23.1**	**+0.6**
BNSI	**Bone**	**150.69**	**195**	PKP	**PKPbc**	**17 49 15.9**	**-1.4**
MASI	**Maura Aman, Be**	**150.91**	**158**	PKP	**PKPdf**	**17 49 12.5**	**+0.5**
SANI	**Sanana**	**150.94**	**208**	PKP	**PKPdf**	**17 49 12.5**	**+0.5**
KLR	**Kul'dur**	**150.96**	**334**	PKP	**PKPdf**	**17 49 12.2**	**+1.3**
	comp=Z,34nm,0.9s,baz=58,slow=1.3,SNR=17						
KLR				PKPbc	**PKiKP**	**17 49 17.2**	**-0.1**
	comp=Z,58nm,0.7s,baz=61,slow=3.8,SNR=83						
MOY	**Mondy**	**151.12**	**15**	*e*PKIKP	**PKPdf**	**17 49 12.8**	**+1.5**
MOY				pmax	pmax		
	comp=Z,191nm,1.7s						
SPSI	**Sidrap Palu**	**151.19**	**194**	PKP	**PKPdf**	**17 49 12.8**	**+0.4**
SPSI				PKP	**PKiKP**	**17 49 19.1**	**+0.2**
IRK	**Irkutsk**	**151.26**	**11**	*e*PKIKP	**PKPdf**	**17 49 11.7**	**+0.4**
IRK				pmax	pmax		
	comp=Z,171nm,1.9s						
SISI	**Saibi**	**151.31**	**150**	PKP	**PKiKP**	**17 49 20.7**	**+1.5**
LBMI	**Labuha**	**151.50**	**212**	PKP	**PKPdf**	**17 49 12.8**	**-0.1**
WMQ	**Urumqi**	**151.60**	**40**	*e*PKPbc	**PKPdf**	**17 49 13.5**	**+1.3**
WMQ				LR	LR		
	comp=Z,180nm,25.7s						
WMQ				LR	LR		
	comp=Z,180nm,23.9s						
KRJI	**Kerinci**	**151.60**	**155**	PKP	**PKPdf**	**17 49 13.5**	**+0.3**
TEY	**Ternei**	**151.66**	**323**⇓	*e*PKIKP	**PKiKP**	**17 49 19.3**	**+0.4**
TEY				pmax	pmax		
	comp=Z,100nm,2.6s						
TEY				pmax	pmax		
	comp=N,10.0nm,0.7s						
TEY				pmax	pmax		
	comp=E,20nm,0.7s						
TEY				pmax	pmax		
	comp=Z,80nm,0.8s						
PMBI	**Palembang**	**151.90**	**163**	PKP	**PKPbc**	**17 49 18.7**	**-1.4**
TTSI	**Tana Toraja**	**152.07**	**195**	PKP	**PKPdf**	**17 49 13.9**	**+0.2**
TTSI				PKP	**PKiKP**	**17 49 21.5**	**+0.8**
CIT	**Chita**	**152.23**	**359**	*e*PKIKP	**PKPdf**	**17 49 14.5**	**+1.6**
CIT				*e*		17 49 25.9	
CIT				*e*		17 50 20.5	
CIT				pmax	pmax		
	comp=Z,168nm,1.7s						
JMM	**Marumori**	**152.58**	**306**		**PKPdf**	**17 49 11.4**	**-2.3**
JMM				PKPbc	**PKPbc**	**17 49 20.9**	**0.0**
TNTI	**Ternate**	**152.78**	**213**		**PKPdf**	**17 49 11.9**	**-2.8**
TNTI				PKPbc	**PKPbc**	**17 49 19.6**	**-2.5**
TNTI				PKPab	**PKPab**	**17 49 32.2**	**-1.2**
ZAK	**Zakamensk**	**152.84**	**13**	*e*PKIKP	**PKPdf**	**17 49 15.0**	**+1.1**
ZAK				pmax	pmax		
	comp=Z,23nm,1.5s						
LUWI	**Luwuk**	**153.11**	**202**	PKP	**PKPdf**	**17 49 16.2**	**+1.0**
LUWI				PKP	**PKPbc**	**17 49 18.0**	**-4.8**
APSI	**Ampana**	**153.60**	**200**	PKP	**PKPdf**	**17 49 16.9**	**+0.9**
BKNI	**Bangkinang**	**153.64**	**153**	PKP	**PKPdf**	**17 49 14.9**	**-1.1**
BKNI				PKP	**PKiKP**	**17 49 25.4**	**+1.4**
SBSI	**Sibolga**	**153.73**	**147**	PKP	**PKPdf**	**17 49 16.1**	**-0.1**
USRK	**Ussuriysk Ar.**	**154.66**	**327**	PKP	**PKPdf**	**17 49 17.6**	**+1.1**
	comp=Z,7.3nm,0.9s,baz=297,slow=0.4,SNR=18						
USRK				PKPbc	**PKiKP**	**17 49 26.1**	**+0.9**
	comp=Z,10nm,0.8s,baz=32,slow=2.2,SNR=14						
USRK	**Ussuriysk Ar.**	**154.66**	**327**	PKPdf	**PKPdf**	**17 49 15.8**	**-0.6**
USRK					**PKPbc**	**17 49 24.4**	**-0.7**
USRK				PKPab	**PKPab**	**17 49 39.5**	**-1.1**
KCSI	**Kotacane, Aceh**	**154.80**	**142**	PKP	**PKPdf**	**17 49 17.7**	**0.0**
MTKI	**Muara Teweh, K**	**154.92**	**185**	PKP	**PKPdf**	**17 49 17.0**	**-0.8**
MTKI				PKP	**PKPbc**	**17 49 19.9**	**-6.7**
MJAR	**Matsushiro Arr**	**154.99**	**305**	PKP	**PKPdf**	**17 49 18.0**	**+0.7**
	comp=Z,4.0nm,0.9s,baz=319,slow=0.6,SNR=22						
MJAR				PKPab	**PKPab**	**17 49 43.6**	**+1.2**
	comp=Z,26nm,0.8s,baz=95,slow=3.6,SNR=27						
MJAR				PP	**PP**	**17 53 19.6**	**+0.3**
	comp=Z,4.0nm,1.2s,baz=74,slow=3.7,SNR=5.8						
MPSI	**Mapaga**	**155.30**	**197**	PKP	**PKPdf**	**17 49 18.2**	**-0.1**
BNX	**BinXian**	**155.51**	**335**	⇑PKPbc	**PKPdf**	**17 49 17.8**	**+0.2**
BNX				PP	**PP**	**17 53 20.6**	**-0.4**
BNX				SS	SS	18 12 50.8	-0.9
SONM	**Songino Array**	**155.87**	**11**	PKP	**PKPdf**	**17 49 19.4**	**+1.2**
	comp=Z,5.7nm,0.8s,baz=291,slow=0.9,SNR=41						
SONM				PKPbc	PKPbc	17 49 28.8	
	comp=Z,6.2nm,0.7s,baz=294,slow=1.3,SNR=14						
SONM				PKPab	**PKPab**	**17 49 47.0**	**+1.1**
	comp=Z,10nm,0.7s,baz=318,slow=4.1,SNR=17						
SGSI	**Sangihe**	**156.21**	**213**	PKP	**PKPdf**	**17 49 18.5**	**-1.0**
INU	**Inuyama**	**156.33**	**304**	PKPdf	**PKPdf**	**17 49 18.1**	**-0.9**
INU				PKPab	**PKPab**	**17 49 47.3**	**-0.9**
CN2	**Changchun**	**157.90**	**335**	*e*PKP	**PKPdf**	**17 49 21.0**	**+0.3**
CN2				PP	**PP**	**17 53 33.5**	**-0.7**
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
LSA	**Lhasa**	**159.91**	**69**	Pn	**PKPdf**	**17 49 25.4**	**+1.2**
LSA				Sn	**PKPab**	**17 50 06.3**	**+1.8**
LSA	**Lhasa**	**159.91**	**69** *i*	PKPdf	**PKPdf**	**17 49 25.0**	**+0.9**
	SNR=8.2						
XLT	**XiLinHaoTe**	**160.19**	**353**	*e*PKP	**PKPdf**	**17 49 24.4**	**+0.9**
XLT				pPKP	PKPab	17 50 05.3	+0.7
XLT				PP	**PP**	**17 53 44.1**	**-2.2**
XLT				SS	SS	18 13 37.8	-3.1
XLT				AMB	AMB		
	comp=Z,530nm,4.7s						
SNY	**Shenyang**	**160.30**	**336**	⇑PKP	**PKPdf**	**17 49 24.8**	**+1.2**
SNY				pPKP	**PKPab**	**17 50 06.4**	**+1.4**
SNY				sPKP		17 50 24.3	
SNY				PP	**PP**	**17 53 47.4**	**+0.3**
SNY				AMB	AMB		
	comp=Z,220nm,6.4s						
SNY				LR	LR		
	comp=Z,81nm,5.3s						
SNY				LR	LR		
	comp=Z,120nm,8.4s						
SNY				LR	LR		
	comp=Z,190nm,21.8s						
GOMU	**GeErMu**	**160.40**	**48**	PKP	**PKPdf**	**17 49 26.5**	**+2.1**
GOMU				SKKS		18 00 18.0	
GOMU				SS	**SS**	**18 13 43.3**	**-2.6**
GOMU				LR	LR		
	comp=Z,74nm,13.5s						
GOMU				LR	LR		
	comp=Z,58nm,13.5s						
GOMU				LR	LR		
	comp=Z,83nm,13.4s						
GTA	**Gaotai**	**161.26**	**33**	⇓PKP	**PKPdf**	**17 49 25.8**	**+0.9**
GTA				PKPab	**PKPab**	**17 50 10.4**	**+0.8**
GTA				PP	**PP**	**17 53 59.8**	**+7.0**
GTA				SKKS		18 00 25.1	
GTA				SS	**SS**	**18 13 55.6**	**+2.2**
GTA				AMB	AMB		
	comp=Z,98nm,6.2s						
GTA				LR	LR		
	comp=Z,120nm,21.1s						
GTA				LR	LR		
	comp=Z,100nm,24.0s						
GTA				LR	LR		
	comp=Z,130nm,21.1s						
KSRS	**Korea Array**	**161.55**	**319**	PKP	**PKPdf**	**17 49 26.0**	**+1.0**
	comp=Z,11nm,1.0s,baz=80,slow=1.0,SNR=44						
KSRS				PKPab	**pPKPdf**	**17 50 12.2**	**-1.0**
	comp=Z,8.4nm,0.9s,baz=48,slow=4.3,SNR=17						
HHC	**Hu-ho-hao-te**	**163.38**	**3**	*e*PKP	**PKPdf**	**17 49 28.6**	**+1.7**
HHC				pPKP	pPKPdf	17 50 11.8	-3.3
HHC				SS	SS	18 14 11.1	-2.9
HHC				AMB	AMB		
	comp=Z,310nm,8.1s						
JOW	**Kunigami**	**165.83**	**284**	PKPab	**PKPab**	**17 50 32.1**	**+2.1**
	comp=Z,23nm,0.8s,baz=125,slow=9.5,SNR=5.2						
CMAR	**Chiang Mai Arr**	**165.84**	**111**	PKP	**PKPdf**	**17 49 30.4**	**+0.8**
	comp=Z,7.2nm,1.1s,baz=252,slow=1.7,SNR=34						
CMAR				PKPab	**PKPab**	**17 50 30.4**	**+0.2**
	comp=Z,14nm,1.1s,baz=252,slow=4.8,SNR=21						
CMAR				PP	**PP**	**17 54 18.8**	**+0.9**
	comp=Z,2.5nm,0.9s,baz=261,slow=5.1,SNR=7.8						
LZH	**Lanzhou**	**165.84**	**31**	*e*PKP	**PKPdf**	**17 49 30.6**	**+1.3**
LZH				pPKP	pPKPdf	17 50 13.3	-4.1
LZH				sPKP		17 50 30.9	
LZH				SKKS		18 00 46.9	
LZH				SS	**SS**	**18 14 41.4**	**+1.0**
LZH				AMB	AMB		
	comp=Z,370nm,4.6s						
CHTO	**Chiang Mai**	**165.99**	**110**		**PKPdf**	**17 49 26.9**	**-2.8**
CHTO				PKPab	**PKPab**	**17 50 29.3**	**-1.5**
CHTO	**Chiang Mai**	**165.99**	**110**	PKP2	**PKPab**	**17 50 29.3**	**-1.5**
CHTO						18 49 26.9	
TIY	**Taiyuan**	**166.54**	**1**	PKP	**PKPdf**	**17 49 30.5**	**+0.8**
TIY				PP	**PP**	**17 54 19.8**	**+0.1**
TIY				SS	SS	18 14 48.4	+2.2
TIY				AMB	AMB		
	comp=Z,240nm,5.3s						
TIY				LR	LR		
	comp=Z,140nm,16.5s						
TIY				LR	LR		
	comp=Z,110nm,8.4s						
TIY				LR	LR		
	comp=Z,160nm,19.2s						
HNS	**HongShan**	**166.76**	**354**	⇓PKP	**PKPdf**	**17 49 31.1**	**+1.4**
HNS				PKPab	**PKPab**	**17 50 33.8**	**+0.3**
HNS				PP	**PP**	**17 54 18.9**	**-1.8**
HNS				SKKS		18 00 53.0	
HNS				SS	**SS**	**18 14 42.5**	**-5.7**
HNS				AMB	AMB		
	comp=Z,290nm,9.6s						
HNS				LR	LR		
	comp=Z,130nm,19.8s						
HNS				LR	LR		
	comp=Z,120nm,18.6s						
HNS				LR	LR		
	comp=Z,170nm,19.1s						
TIA	**Tai'an**	**167.49**	**344**	PKP	**PKPdf**	**17 49 31.3**	**+1.0**
CD2	**Chengdu**	**169.53**	**48**	PKP	**PKPdf**	**17 49 28.5**	**-3.4**
CD2				PP	**PP**	**17 54 35.3**	**-0.8**
CD2				SKS	**SKSdf**	**17 56 19.3**	**+0.4**
CD2				SKKS	**SKKSac**	**18 01 05.3**	**-0.9**
CD2				SS	**SS**	**18 15 18.8**	**+0.5**
CD2				AMB	AMB		
	comp=Z,200nm,14.2s						
CD2				LR	LR		
	comp=Z,300nm,15.2s						
CD2				LR	LR		
	comp=Z,320nm,15.2s						
CD2				LR	LR		
	comp=Z,210nm,17.1s						
XAN	**Xi'an**	**169.62**	**18**	⇓PKP	**PKPdf**	**17 49 32.8**	**+0.9**
XAN				PKPab	**PKPab**	**17 50 46.8**	**+0.5**
XAN				SKS	**SKSdf**	**17 56 17.8**	**-1.0**
XAN				SKKS	**SKKSac**	**18 01 06.6**	**+0.5**
XAN				SS	**SS**	**18 15 14.0**	**-3.4**
XAN				AMB	AMB		
	comp=Z,420nm,11.4s						
XAN				LR	LR		
	comp=Z,160nm,20.6s						
XAN				LR	LR		
	comp=Z,310nm,21.3s						
LYN	**LuoYang**	**169.69**	**2**	⇓PKP	**PKPdf**	**17 49 32.3**	**+0.5**
LYN				PP	**PP**	**17 54 34.8**	**-0.8**
LYN				SKKS		18 01 11.6	
LYN				SS	**SS**	**18 15 13.8**	**-3.7**
LYN				AMB	AMB		
	comp=Z,350nm,5.5s						
PZH	**PanZhiHua**	**169.70**	**75**	PKP	**PKPdf**	**17 49 32.3**	**+0.1**
PZH				PKPab	**PKPab**	**17 50 47.9**	**+0.6**
PZH				PP	**PP**	**17 54 37.8**	**-0.1**
PZH				SKKS		18 01 06.3	
PZH				SS	**SS**	**18 15 22.4**	**+0.8**
PZH				AMB	AMB		
	comp=Z,180nm,10.0s						
NJ2	**Nanjing**	**170.57**	**327** *i*	PKP	**PKPdf**	**17 49 33.1**	**+0.7**
NJ2				PKPab	**PKPab**	**17 50 50.5**	**0.0**
NJ2				PP	**PP**	**17 54 40.8**	**+0.2**
NJ2				AMB	AMB		
	comp=Z,30nm,4.9s						
KMI	**Kunming**	**170.76**	**82**	⇓PKP	**PKPdf**	**17 49 33.5**	**+0.5**
WHN	**Wuhan**	**173.56**	**348**	⇓PKP	**PKPdf**	**17 49 34.4**	**+0.6**
WHN				sPKP		17 50 24.8	
WHN				PP	**PP**	**17 54 55.1**	**+0.4**
WHN				SS	SS	18 15 51.0	-4.4
WHN				AMB	AMB		
	comp=Z,630nm,6.0s						
GYA	**Guiyang**	**173.97**	**67**	⇓PKP	**PKPdf**	**17 49 34.8**	**+0.6**
QIZ	**Qiongzhong**	**174.13**	**151**	PKP	**PKPdf**	**17 49 34.8**	**+0.5**
QIZ				pPKP	**pPKPdf**	**17 50 20.3**	**-2.3**
QIZ				AMB	AMB		
	comp=Z,270nm,6.8s						
QIZ				LR	LR		
	comp=Z,230nm,18.3s						
QIZ				LR	LR		
	comp=Z,150nm,19.1s						
QIZ				LR	LR		
	comp=Z,160nm,16.7s						
QZH	**Quanzhou**	**174.72**	**279** *i*	PKP	**PKPdf**	**17 49 35.0**	**+0.7**
QZH				PKPab	**PKPab**	**17 51 09.4**	**-0.1**
QZH				PP	**PP**	**17 54 58.5**	**-4.0**
QZH				AMB	AMB		
	comp=Z,220nm,5.2s						
QZH				LR	LR		
	comp=Z,220nm,20.4s						

IDC ***18*** *17:31:17.0±4.9, 6.36N×124.10E, h562km±74km, mb3.0/8, mbtmp4.0/8 Error ellipse: s-maj=30.8km s-min=14.8km az=64.0*
NEIC ***18*** *17:31:16.3±1.9, 6.37N±0.08×124.1E±0.1, h554km±11km, mb4.3/32, Error ellipse: s-maj=20.7km s-min=5.2km az=56.0*

ISC 18 17:31:15.6±0.5, 6.37N±0.07×124.0E±0.1, h550km, n56, σ0.986/55, mb4.1/19, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MYLDM	**Lahad Datu**	**5.62**	**258**	P	**P**	**17 32 52.4**	**+1.6**
TOLI2	**Tolitoli**	**6.14**	**212**	P	**P**	**17 32 54.8**	**-0.8**
TOLI2	**Tolitoli**	**6.14**	**212**	P	**P**	**17 32 55.7**	**+0.1**
KKM	**Kota Kinabalu**	**7.77**	**268**	P	**P**	**17 33 10.7**	**-0.6**
SANI	**Sanana**	**8.59**	**167**	P	**P**	**17 33 20.3**	**+1.0**
FAKI	**Fak Fak**	**12.35**	**138**	P	**P**	**17 33 56.9**	**-1.0**
SOEI	**Soe**	**16.02**	**179**	P	**P**	**17 34 34.3**	**-1.2**
SOEI	**Soe**	**16.02**	**179**	P	**P**	**17 34 35.0**	**-0.6**
	16nm,0.4s						
PLAI	**Plampang**	**16.33**	**202**	P	**P**	**17 34 38.5**	**+0.2**
	32nm,0.7s						
TWG	**Pinlang**	**16.60**	**350**	P	**P**	**17 34 38.4**	**-2.4**
YULB	**Yu-li**	**17.13**	**351**	P	**P**	**17 34 44.1**	**-1.3**
YULB				IAmb	IAmb	17 35 00.5	
	comp=Z,7.5nm,1.1s						
TPUB	**Ta-pu**	**17.15**	**349**	P	**P**	**17 34 46.3**	**+0.6**
TPUB	**Ta-pu**	**17.15**	**349**	P	**P**	**17 34 46.4**	**+0.7**
SSLB	**Suanglung**	**17.57**	**351**	P	**P**	**17 34 50.4**	**+0.8**
SSLB				IAmb	IAmb	17 34 52.8	
	comp=Z,5.0nm,0.8s						
YHNB	**Yeheng**	**18.37**	**352**	P	**P**	**17 34 56.5**	**-0.5**
YHNB				IAmb	IAmb	17 35 40.3	
	comp=Z,17nm,1.3s						
MTN	**Manton Dam**	**20.35**	**160**	P	**P**	**17 35 15.1**	**+0.1**
MTN				IAmb	IAmb	17 35 52.7	
	comp=Z,11nm,1.4s						
MTN	**Manton Dam**	**20.35**	**160**	P	**P**	**17 35 16.3**	**+1.3**
JOW	**Kunigami**	**20.75**	**11**	P	**P**	**17 35 18.6**	**+0.1**
KNRA	**Kununurra**	**22.40**	**168**	P	**P**	**17 35 33.0**	**-0.4**
KNRA				IAmb	IAmb	17 35 43.0	
	comp=Z,9.4nm,1.1s						
KNRA	**Kununurra**	**22.40**	**168**	P	**P**	**17 35 33.6**	**+0.2**
	comp=Z,7.8nm,2.0s						
CMAR	**Chiang Mai Arr**	**27.23**	**298**	P	**P**	**17 36 17.6**	**+1.4**
	comp=Z,0.5nm,0.6s,baz=125,slow=7.4,SNR=4.8						
	comp=Z,0.5nm,0.6s						
MBWA	**Marble Bar**	**27.68**	**189**	P	**P**	**17 36 18.9**	**-1.1**
MBWA				IAmb	IAmb	17 36 43.3	
	comp=Z,17nm,1.2s						
WB0	**Warramunga Arr**	**27.91**	**159**	P	**P**	**17 36 21.7**	**-0.3**
WB0				IAmb	IAmb	17 36 43.5	
	comp=Z,9.8nm,1.4s						
WRAB	**Tennant Creek**	**28.04**	**159**	P	**P**	**17 36 23.5**	**+0.3**
WRA	**Warramunga Arr**	**28.05**	**159**	P	**P**	**17 36 23.1**	**-0.2**
	comp=Z,1.2nm,0.3s,baz=331,slow=11,SNR=61						
	comp=Z,1.2nm,0.3s						
WRA	**Warramunga Arr**	**28.05**	**159**	P	**P**	**17 36 21.9**	**-1.4**
WB2	**Warramunga Arr**	**28.05**	**159**	P	**P**	**17 36 22.8**	**-0.5**
WB2				IAmb	IAmb	17 37 06.8	
	comp=Z,8.8nm,1.2s						
PSA00	**Pilbara Seismi**	**28.07**	**188**	P	**P**	**17 36 22.5**	**-0.8**
PSA00				IAmb	IAmb	17 36 40.9	
	comp=Z,14nm,1.2s						
WR0	**Warramunga Arr**	**28.14**	**159**	P	**P**	**17 36 23.8**	**-0.2**
WR0				IAmb	IAmb	17 36 34.3	
	comp=Z,5.7nm,1.1s						
GIRL	**Giralia**	**30.38**	**198**	P	**P**	**17 36 43.8**	**+0.4**
AS31	**Alice Springs**	**31.37**	**162**	P	**P**	**17 36 52.3**	**+0.4**
ASAR	**Alice Springs**	**31.37**	**162**	P	**P**	**17 36 52.3**	**+0.4**
JGF	**Kuroka**	**31.57**	**21**	P	**P**	**17 36 54.6**	**+1.2**
MJAR	**Matsushiro Arr**	**32.72**	**21**	P	**P**	**17 37 03.6**	**+0.4**
	comp=Z,0.8nm,0.8s,baz=189,slow=9.8,SNR=5.7						
	comp=Z,0.8nm,0.8s						
JMM	**Marumori**	**34.86**	**24**	P	**P**	**17 37 21.1**	**-0.1**
JMM				IAmb	IAmb	17 37 58.3	
	comp=Z,15nm,1.0s						
MORW	**Morawa**	**36.06**	**192**	P	**P**	**17 37 30.9**	**-0.3**
MORW				IAmb	IAmb	17 37 48.9	
	comp=Z,22nm,1.5s						
FORT	**Forrest**	**37.14**	**174**	P	**P**	**17 37 40.4**	**+0.3**
NWAO	**Narrogin (SRO)**	**39.61**	**189**	P	**P**	**17 38 00.1**	**+0.1**
BBOO	**Buckleboo**	**40.61**	**164**	P	**P**	**17 38 08.4**	**+0.4**
BBOO				IAmb	IAmb	17 38 30.5	
	comp=Z,16nm,1.2s						
STKA	**Stephens Creek**	**41.56**	**157**	P	**P**	**17 38 16.6**	**+0.9**
	comp=Z,1.2nm,0.3s,baz=355,slow=8.3,SNR=4.8						
	comp=Z,1.2nm,0.3s						
STKA	**Stephens Creek**	**41.56**	**157**	P	**P**	**17 38 16.2**	**+0.6**
SONM	**Songino Array**	**43.98**	**343**	P	**P**	**17 38 35.5**	**+1.1**
	comp=Z,1.0nm,0.8s,baz=162,slow=9.2,SNR=5.4						
	comp=Z,1.0nm,0.8s						
SONM	**Songino Array**	**43.98**	**343**	IAmb	IAmb	17 38 36.8	
	comp=Z,1.1nm,1.0s						
MK31	**Makanchi Array**	**53.87**	**326**	P	**P**	**17 39 48.5**	**+1.0**
MKAR	**Makanchi Array**	**53.87**	**326**	P	**P**	**17 39 48.5**	**+1.1**
	comp=Z,1.4nm,0.4s,baz=122,slow=7.6,SNR=34						
	comp=Z,1.4nm,0.4s						
MKAR	**Makanchi Array**	**53.87**	**326**	P	**P**	**17 39 48.4**	**+0.9**
MAKZ	**Makanchi**	**54.05**	**325**	P	**P**	**17 39 48.6**	**-0.1**
KDJ	**Kajisay**	**54.60**	**318**	P	**P**	**17 39 52.9**	**+0.1**
KDJ				IAmb	IAmb	17 40 33.2	
	comp=Z,9.3nm,1.0s						
ZALV	**Zalesovo Beam**	**57.03**	**334**	P	**P**	**17 40 08.5**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=123,slow=5.3,SNR=2.2						
	comp=Z,0.5nm,0.3s						
KURK	**Kurchatov**	**58.08**	**328**	P	**P**	**17 40 16.9**	**+0.5**
KKAR	**Karatay Array**	**59.48**	**317**	P	**P**	**17 40 25.7**	**-0.3**
TIXI	**Tiksi**	**65.28**	**2**	P	**P**	**17 41 03.3**	**+0.4**
	comp=Z,1.5nm,0.4s,baz=274,slow=22,SNR=11						
	comp=Z,1.5nm,0.4s						
TIXI	**Tiksi**	**65.28**	**2**	P	**P**	**17 41 02.6**	**-0.3**
TIXI				IAmb	IAmb	17 41 03.7	
	comp=Z,2.1nm,0.4s						
ABKAR	**Akbulak array**	**68.41**	**321**	P	**P**	**17 41 20.7**	**-1.9**
N31M	**Braeburn, Yuko**	**89.30**	**28**		**P**	**17 43 12.3**	**-1.0**
M31M	**Drury Creek, Y**	**89.79**	**27**	P	**P**	**17 43 15.5**	**0.0**
M31M				IAmb	IAmb	17 43 17.7	
	comp=Z,4.8nm,0.8s						

MAN 18 17:48:19.2, 13.38N×120.66E, h3km, mb4.2, ML3.0, MS2.6, 2C-3D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PGP	**Puerto Galera**	**0.31**	**68**⇑ *e*	P	Pb	17 48 25.6	+6.0
PGP				*i* S		17 48 30.5	
LUBP	**Lubang**	**0.53**	**311**⇓ *e*	P	Pn	17 48 29.7	+1.6
LUBP				eS		17 48 36.3	
MACP	**Maragondon, Ca**	**0.88**	**4**⇓ *e*	P	Pb	17 48 37.5	+0.9
MACP				eS		17 48 47.7	
SJMP	**San Jose**	**1.02**	**154**⇓ *e*	P	Pn	17 48 41.3	+0.5
SJMP				eS		17 48 57.5	
PCPH	**Palayan**	**2.21**	**11**⇑ *e*	P	Pb	17 48 57.8	+1.4

IDC ***18*** *17:52:09.6±1.8, 32.01S×57.18E, h0km, mb3.9/6, mbtmp3.9/7, ML4.0/1, Error ellipse: s-maj=60.8km s-min=30.1km az=21.0*
NEIC ***18*** *17:52:10.7±2.5, 31.85S±0.10×57.1E±0.1, h10km±1km, mb4.4/13, Error ellipse: s-maj=20.0km s-min=16.5km az=78.0*

ISC 18 17:52:12.0±0.6, 31.82S±0.09×57.1E±0.1, h19km, n30, σ1.958/25, mb4.2/11, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res

KURK	**Kurchatov**	**84.34**	**14**	IAmb	IAmb	18 05 00.6	
	comp=Z,4.4nm,1.2s						
YKA	**Yellowknife Ar**	**148.85 353**		PKPbc	**PKPbc**	**18 11 57.6**	**0.0**
	comp=Z,2.1nm,0.8s,baz=6.5,slow=4.0,SNR=5.0						

*IDC **18** 18:02:15.3±2.1,31.77S×57.28E,h0km,mb3.7/4, mbtmp3.7/5,ML4.1/1,Error ellipse: s-maj=71.6km s-min=32.9km az=21.0*
*NEIC **18** 18:02:15.9±2.0,31.7S±0.1×57.2E±0.1,h10km±1km, mb4.4/12,Error ellipse: s-maj=25.4km s-min=5.3km az=220.0*

ISC 18 18:02:15.9±0.7,31.7S±0.1×57.1E±0.1,h10km,n26, σ1s90/20,mb4.2/9,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FOMA	**Nahampoana Res**	**11.12**	**304**	Pn	**Pn**	**18 04 56.8**	**+2.0**
VOI	**Vohitsoka**	**13.37**	**314**	Pn	**Pn**	**18 05 26.5**	**+0.7**
ABPO	**Ambohimpanom**	**15.41**	**322**	Pn	**Pn**	**18 05 54.2**	**+0.5**
OPO	**Ambohidratompo**	**15.81**	**323**	Pn	**P**	**18 06 03.3**	**+0.7**
	0.1nm,0.3s,baz=141,slow=13,SNR=3.1						
OPO				Sn	**Sn**	**18 08 48.3**	**-5.9**
	baz=132,slow=14,SNR=1.4						
	1.7nm,0.4s						
H08S1	**Diego Garcia H**	**27.88**	**34**	T	T	18 37 24.4	
	baz=207,slow=76,SNR=14						
H08S2	**Diego Garcia H**	**27.89**	**34**	T	T	18 37 24.2	
	baz=207,slow=76,SNR=8.9						
H08S3	**Diego Garcia H**	**27.90**	**34**	T	T	18 37 24.9	
	baz=207,slow=76,SNR=12						
H01W2	**Cape Leeuwin H**	**47.26**	**110**	T	T	19 01 06.9	
	baz=256,slow=75,SNR=12						
H01W3	**Cape Leeuwin H**	**47.26**	**110**	T	T	19 01 02.4	
	baz=256,slow=75,SNR=9.1						
H01W1	**Cape Leeuwin H**	**47.27**	**110**	T	T	19 01 10.5	
	baz=256,slow=75,SNR=14						
SNAA	**Sanae**	**50.89**	**201**	P	**P**	**18 11 16.9**	**+0.2**
SNAA				IAmb	IAmb	18 11 56.4	
	comp=Z,11nm,1.5s						
QSPA	**South Pole Qui**	**58.50**	**180**	P	**P**	**18 12 10.6**	**-1.5**
QSPA				IAmb	IAmb	18 12 25.8	
	comp=Z,3.9nm,1.4s						
SHEL	**Horse Pasture**	**58.84**	**270**	P	**P**	**18 12 14.0**	**-1.1**
CMAR	**Chiang Mai Arr**	**64.00**	**45**	P	**P**	**18 12 50.9**	**+1.2**
	comp=Z,1.4nm,0.8s,baz=232,slow=6.6,SNR=9.5						
	comp=Z,1.4nm,0.8s						
KNRA	**Kununurra**	**66.52**	**94**	P	**P**	**18 13 05.0**	**-1.3**
WRA	**Warramunga Arr**	**69.27**	**101**	P	**P**	**18 13 23.1**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=251,slow=7.8,SNR=3.1						
	comp=Z,0.5nm,0.6s						
WRAB	**Tennant Creek**	**69.28**	**101**	P	**P**	**18 13 21.0**	**-2.6**
WRAB				IAmb	IAmb	18 14 01.5	
	comp=Z,5.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**69.28**	**301**	P	**P**	**18 13 25.3**	**+1.8**
	comp=Z,0.4nm,0.8s,baz=124,slow=5.5,SNR=2.2						
	comp=Z,0.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**69.28**	**301**	IAmb	IAmb	18 13 28.3	
	comp=Z,2.7nm,1.4s						
GNI	**Garni**	**72.37**	**350**	P	**P**	**18 13 42.1**	**+0.1**
BRTR	**Keskin Array B**	**74.29**	**341**	P	**P**	**18 13 55.2**	**+1.8**
	comp=Z,0.3nm,0.6s,baz=155,slow=7.9,SNR=1.8						
	comp=Z,0.3nm,0.6s						
KK31	**Karatay Array**	**75.42**	**10**	P	**P**	**18 14 00.4**	**+0.7**
KK31				IAmb	IAmb	18 14 03.1	
	comp=Z,1.9nm,1.0s						
KK31	**Karatay Array**	**75.42**	**10**	P	**P**	**18 14 00.6**	**+1.0**
	comp=Z,0.7nm,0.5s,baz=180,slow=13,SNR=4.4						
KKAR	**Karatay Array**	**75.42**	**10**	P	**P**	**18 13 59.7**	**0.0**
KKAR	**Karatay Array**	**75.42**	**10**	P	**P**	**18 13 59.1**	**-0.5**
KKAR				IAmb	IAmb	18 14 03.1	
	comp=Z,1.9nm,1.0s						
KURK	**Kurchatov**	**84.21**	**14**	P	**P**	**18 14 47.1**	**+0.1**
KURK				IAmb	IAmb	18 14 52.6	
	comp=Z,3.4nm,1.1s						

MAN 18 18:06:25.5,13.64N×120.74E,h19km,mb3.5,ML2.1, MS1.5,Mindoro

*NEIC **18** 18:11:52.5±2.3,45.83N±0.04×106.52W±0.04,h0km±1km, ML3.1/38,Error ellipse: s-maj=7.5km s-min=4.2km az=151.0*
*IDC **18** 18:11:52.4±1.6,45.78N×106.55W,h0km,mbtmp3.0/3, ML3.1/3,Error ellipse: s-maj=43.2km s-min=11.2km az=135.0*

ISC 18 18:11:51.8±1.0,45.86N±0.05×106.39W±0.06,h0km,n39, σ1s29/38,Montana

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LAO	**LASA Array**	**0.84**	**8**		**Pb**	**18 12 09.7**	**+0.4**
RLMT	**Red Lodge**	**2.15**	**251**		**Pn**	**18 12 29.4**	**+0.2**
RLMT				IAML		18 12 58.7	
	201nm,0.4s						
RLMT				IAML		18 13 02.4	
	160nm,0.7s						
GCMT	**Greycliff**	**2.29**	**269**		**Pn**	**18 12 30.3**	**-0.7**
RSSD	**Black Hills**	**2.41**	**135**		**Pb**	**18 12 35.0**	**-1.2**
RSSD				IAML		18 13 13.6	
	62nm,0.5s						
RSSD				IAML		18 13 23.7	
	65nm,0.7s						
DGMT	**Dagmar**	**3.01**	**29**		**Pn**	**18 12 40.5**	**-0.3**
EGMT	**Eagleton**	**3.16**	**314**		**Pn**	**18 12 43.8**	**+0.9**
K22A	**Casper**	**3.21**	**182**		**Pn**	**18 12 45.7**	**+2.1**
K22A				IAML		18 13 34.8	
	comp=N,72nm,0.4s						
K22A				IAML		18 13 50.0	
	comp=E,55nm,0.7s						
YNR	**Norris Junctio**	**3.23**	**251**	Pn	**Pn**	**18 12 45.5**	**+1.4**
YNR				IAML		18 13 34.0	
	comp=E,38nm,0.5s						
YNR				IAML		18 13 41.0	
	comp=N,33nm,1.4s						
FLWY	**Flagg Ranch**	**3.54**	**241**		**Pn**	**18 12 45.9**	**-2.3**
FLWY				IAML		18 14 36.3	
	comp=N,49nm,1.9s						
BOZ	**Bozeman (W)**	**3.68**	**268**		**Pn**	**18 12 48.6**	**-1.5**
BOZ				IAML		18 13 47.8	
	comp=N,56nm,1.9s						
QLMT	**Earthquake Lak**	**3.70**	**256**	Pn	**Pn**	**18 12 50.8**	**+0.4**
LOHW	**Long Hollow**	**3.75**	**235**		**Pn**	**18 12 49.7**	**-1.4**
LOHW				IAML		18 15 00.9	
	comp=N,22nm,3.4s						
MOOW	**Moose Ponds**	**3.75**	**237**	Pn	**Pn**	**18 12 52.0**	**+0.9**
BW06	**Boulder Array**	**3.84**	**217**		**Pn**	**18 12 51.8**	**-0.6**
BW06				IAML		18 13 54.0	
	comp=N,28nm,1.1s						
PD31	**Pinedale Array**	**3.84**	**217**		**Pn**	**18 12 53.3**	**+1.0**
PDAR	**Pinedale Array**	**3.84**	**217**	Pn	**Pn**	**18 12 53.7**	**+1.4**
	comp=N,0.9nm,0.3s,baz=45,slow=12,SNR=17						
PDAR				Pg	**Pn**	**18 13 01.7**	**+1.2**
	comp=N,2.2nm,0.3s,baz=39,slow=19,SNR=22						
PDAR				Lg	Lg	18 13 48.5	
	comp=N,2.7nm,0.3s,baz=42,slow=34,SNR=2.2						
	comp=N,0.7nm,0.3s						
HRY	**Holter Researc**	**3.87**	**285**		**Pn**	**18 12 51.9**	**-0.8**
FXWY	**Fox Creek**	**3.98**	**238**	Pn	**Pn**	**18 12 52.1**	**-2.1**
FXWY				IAML		18 13 32.3	
	comp=N,18nm,3.6s						
TPAW	**Teton Pass**	**4.02**	**236**		**Pn**	**18 12 54.2**	**-0.7**
TPAW				IAML		18 14 19.0	
	comp=N,20nm,1.6s						
RWWY	**Rawlins**	**4.21**	**188**	Pn	**Pn**	**18 12 56.7**	**-0.8**
LRM	**Limekiln Ridge**	**4.24**	**272**		**Pn**	**18 12 57.0**	**-0.8**
DLMT	**Dillon**	**4.38**	**266**	Pn	**Pn**	**18 12 58.7**	**-1.0**
DLMT				IAML		18 14 23.0	
	comp=N,25nm,2.4s						
DLMT				IAML		18 14 24.0	
	comp=N,27nm,2.4s						
PHWY	**Pilot Hill**	**4.61**	**171**	Pn	**Pn**	**18 13 01.8**	**-1.2**
PHWY				IAML		18 14 24.0	
	comp=N,13nm,0.7s						
PHWY				IAML		18 14 25.5	
	comp=N,20nm,0.5s						
MCMT	**McKenzie Canyo**	**4.67**	**260**		**Pn**	**18 13 02.6**	**-1.1**
N23A	**Red Feather La**	**4.97**	**176**		**Pn**	**18 13 07.5**	**-0.5**
MSO	**Missoula**	**5.32**	**283**		**Pn**	**18 13 11.0**	**-1.5**
JTMT	**Jette**	**5.74**	**292**	Pn	**Pn**	**18 13 18.4**	**+0.1**
P18A	**Preston Nutter**	**6.84**	**206**		**Pn**	**18 13 33.4**	**-0.3**
P17A	**Butcher Ranch,**	**7.14**	**208**		**Pn**	**18 13 37.1**	**-0.5**
SRU	**San Rafael Swe**	**7.40**	**206**		**Pn**	**18 13 40.8**	**-0.4**
PV07	**Paradox Valley**	**7.60**	**194**		**Pn**	**18 13 39.8**	**-4.2**
PV15	**Paradox Valley**	**7.67**	**192**	Pn	**Pn**	**18 13 45.9**	**+0.9**
NEW	**Newport**	**7.71**	**292**	Lg	Lg	18 15 49.8	
	comp=N,0.4nm,0.3s,baz=2.3,slow=20,SNR=3.0						
I56US	**NEWPORT INFRAS**	**7.71**	**292**	*i*		18 53 00.0	
	baz=105,slow=308,SNR=2.8						
PV11	**David Mesa, Pa**	**7.78**	**195**		**Pn**	**18 13 46.7**	**+0.3**
PV13	**Radium Mtn., P**	**7.90**	**194**	Pn	**Pn**	**18 13 48.7**	**+0.5**
ULM	**Lac du Bonnet**	**8.30**	**54**	Pn	**Pn**	**18 13 54.2**	**+0.9**
	comp=N,0.4nm,0.3s,baz=238,slow=13,SNR=3.3						
ULM				Lg	Lg	18 16 06.9	
	baz=141,slow=16						
	comp=N,1.1nm,0.3s						
ULM	**Lac du Bonnet**	**8.30**	**54**	Pn	**Pn**	**18 13 53.7**	**+0.4**
TXAR	**Lajitas Array**	**16.64**	**172**	Pn	**Pn**	**18 15 46.1**	**-0.3**
	baz=352,slow=12,SNR=2.0						
	comp=N,0.1nm,0.5s						

MAN 18 18:47:38.6,10.40N×125.19E,h84km,mb4.1,ML2.9, MS2.6,Leyte

*IDC **18** 18:58:16.4±0.5,31.84S×57.23E,h0km,mb4.2/17, mbtmp4.2/18,ML4.1/1,MS4.0/2,Error ellipse: s-maj=18.2km s-min=15.2km az=39.0*
*NEIC **18** 18:58:18.1±0.9,31.85S±0.07×57.2E±0.1,h10km±1km, mb4.9/54,Error ellipse: s-maj=16.9km s-min=11.6km az=101.0*
*GCMT **18** 18:58:18.1±0.4,31.90S±0.02×57.43E±0.04,h13km±1km, MW4.9/90,Moment Tensor Solution. s18,c19; s90,c119; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=2.41±.22; Mθθ1.95±.14; Mϕϕ0.45±.13; Mrθ-0.34±.30; Mrϕ-0.90±.07; Mθϕ-2.38±.52; Best double couple: M₀3.19900×10^16 NP1:ϕs96.00000°,δ40.00000°,λ-136.00000°. NP2: ϕs330.00000°,δ64.00000°,λ-59.00000°. Principal axes: T 2.5480, Plg14.0000°, Azm38.0000°; N 1.2970, Plg27.0000°, Azm135.0000°; P -3.8500, Plg59.0000°, Azm284.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 18:58:19.2±0.4,31.82S±0.08×57.21E±0.09,h19km,n102, σ0s62/88,mb4.7/41,MS4.2/4,1D,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FOMA	**Nahampoana Res**	**11.29**	**305**	Pn	**Pn**	**19 00 58.8**	**-0.8**
VOI	**Vohitsoka**	**13.55**	**314**	Pn	**Pn**	**19 01 29.6**	**-1.0**
ABPO	**Ambohimpanom**	**15.60**	**322**		**Pn**	**19 01 57.9**	**-0.4**
OPO	**Ambohidratompo**	**15.99**	**323**	Pn	**Pn**	**19 02 03.5**	**+0.2**
	0.1nm,0.3s,baz=330,slow=16,SNR=2.7						
OPO				Sn	Sn	19 04 46.7	-14
	0.1nm,0.3s,baz=340,slow=20,SNR=1.4						
	2.6nm,0.4s						
BOSA	**Boshof**	**27.74**	**268**	P	**P**	**19 04 05.9**	**-0.9**
	2.6nm,0.9s,baz=122,slow=7.8,SNR=3.0						
	2.6nm,0.9s						
H08S1	**Diego Carcia H**	**27.94**	**34**	T	T	19 33 25.2	
	baz=207,slow=76						
H08S2	**Diego Garcia H**	**27.95**	**34**	T	T	19 33 25.8	
	baz=207						
H08S3	**Diego Garcia H**	**27.96**	**34**	T	T	19 33 26.7	
	baz=207,slow=76						
MATP	**Matopo**	**28.08**	**287**	P	**P**	**19 04 09.2**	**-0.7**
	1.1nm,0.5s,baz=109,slow=8.1,SNR=5.6						
	1.1nm,0.5s						
LSZ	**Lusaka**	**31.15**	**295**	P	**P**	**19 04 37.7**	**+0.6**
	2.4nm,0.3s,baz=120,slow=9.6,SNR=6.4						
	2.4nm,0.3s						
LSZ	**Lusaka**	**31.15**	**295**	IAmb	IAmb	19 05 07.5	
	comp=Z,17nm,1.6s						
KMBO	**Kilima Mbogo**	**35.88**	**324**	P	**P**	**19 05 19.3**	**+0.9**
	comp=Z,0.5nm,0.3s,baz=40,slow=23,SNR=3.0						
	comp=Z,0.5nm,0.3s						
MAW	**Mawson**	**35.98**	**176**	LR	LR	19 16 45.8	
	comp=Z,277nm,21.3s,baz=2.0,slow=31						
TSUM	**Tsumeb**	**37.70**	**280**	P	**P**	**19 05 34.2**	**+0.3**
	comp=Z,2.8nm,0.7s,baz=116,slow=8.9,SNR=6.1						
	comp=Z,2.8nm,0.7s						
TSUM	**Tsumeb**	**37.70**	**280**	IAmb	IAmb	19 05 37.2	
	comp=Z,32nm,1.9s						
LODK	**Lodwar**	**40.74**	**325**	P	**P**	**19 05 59.8**	**+0.7**
H01W2	**Cape Leeuwin H**	**47.10**	**110**	T	T	19 57 03.1	
	baz=256,slow=74						
H01W3	**Cape Leeuwin H**	**47.11**	**110**	T	T	19 56 46.4	
	baz=256						
H01W1	**Cape Leeuwin H**	**47.12**	**110**	T	T	19 57 04.8	
	baz=256,slow=74						
TROLL	**Troll, Antarti**	**49.34**	**200**	P	**P**	**19 07 08.1**	**+1.2**
SNAA	**Sanae**	**50.79**	**201**	P	**P**	**19 07 18.3**	**+0.4**
SNAA	**Sanae**	**50.79**	**201**	P	**P**	**19 07 18.0**	**+0.1**
	comp=Z,4.5nm,1.0s,baz=72,slow=8.8,SNR=9.8						
	comp=Z,4.5nm,1.0s						
SNAA	**Sanae**	**50.79**	**201**	P	**P**	**19 07 17.7**	**-0.2**
VNA3	**Neumayer Olymp**	**52.80**	**202**	P	**P**	**19 07 33.9**	**+1.1**
H09N1	**TRISTAN DA CUN**	**56.42**	**244**	T	T	20 10 23.8	
	SNR=5.9						
UOSS	**Minazif**	**56.45**	**359**	P	**P**	**19 07 59.8**	**0.0**
UOSS				IAmb	IAmb	19 08 26.8	
	comp=Z,25nm,1.6s						
QSPA	**South Pole Qui**	**58.35**	**180**	P	**P**	**19 08 13.2**	**+0.2**
	comp=Z,4.1nm,0.9s,baz=271,slow=2.3,SNR=17						
	comp=Z,4.1nm,0.9s						
QSPA	**South Pole Qui**	**58.35**	**180**	P	**P**	**19 08 13.2**	**+0.2**
QSPA				IAmb	IAmb	19 08 28.6	
	comp=Z,20nm,1.2s						
VNDA	**Vanda**	**62.27**	**166**	P	**P**	**19 08 39.8**	**+0.4**
	comp=Z,1.4nm,1.1s,baz=264,slow=5.3,SNR=3.9						
	comp=Z,1.4nm,1.1s						
VNDA	**Vanda**	**62.27**	**166**	IAmb	IAmb	19 08 56.7	
	comp=Z,12nm,2.0s						
CM31	**Chiang Mai Arr**	**64.03**	**45**	P	**P**	**19 08 52.5**	**+0.7**
CMAR	**Chiang Mai Arr**	**64.03**	**45**	P	**P**	**19 08 51.9**	**+0.1**
	comp=Z,4.9nm,0.8s,baz=228,slow=6.9,SNR=33						
	comp=Z,4.9nm,0.8s						
CMAR	**Chiang Mai Arr**	**64.03**	**45**	P	**P**	**19 08 51.7**	**-0.2**
CHTO	**Chiang Mai**	**64.31**	**44**	P	**P**	**19 08 54.2**	**+0.5**
CHTO				IAmb	IAmb	19 08 55.6	
	comp=Z,14nm,1.4s						
SHL	**Shillong**	**65.97**	**34**	P	**P**	**19 09 04.0**	**-0.6**
HRA	**Herat**	**66.02**	**5**	P	**P**	**19 09 04.7**	**0.0**
HRA				IAmb	IAmb	19 09 08.1	
	comp=Z,3.7nm,0.6s						
KNRA	**Kununurra**	**66.40**	**94**	P	**P**	**19 09 07.2**	**-0.2**
ASAR	**Alice Springs**	**67.11**	**104**	P	**P**	**19 09 11.9**	**0.0**
AS31	**Alice Springs**	**67.11**	**104**	P	**P**	**19 09 11.2**	**-0.7**
ORCD	**Orcadas**	**68.26**	**211**	P	**P**	**19 09 18.1**	**-0.3**
TOLI2	**Tolitoli**	**68.36**	**74**	P	**P**	**19 09 19.2**	**-0.6**
WRA	**Warramunga Arr**	**69.13**	**101**	P	**P**	**19 09 24.6**	**0.0**
	comp=Z,6.7nm,0.9s,baz=239,slow=5.3,SNR=22						
	comp=Z,6.7nm,0.9s						
WRA	**Warramunga Arr**	**69.13**	**101**	P	**P**	**19 09 24.4**	**-0.2**
WB2	**Warramunga Arr**	**69.14**	**101**	P	**P**	**19 09 24.6**	**-0.1**
WB2				IAmb	IAmb	19 09 34.1	
	comp=Z,14nm,1.3s						
WRAB	**Tennant Creek**	**69.14**	**101**	P	**P**	**19 09 24.6**	**-0.1**
WRAB				IAmb	IAmb	19 09 25.5	
	comp=Z,14nm,1.1s						
LSA	**Lhasa**	**69.15**	**31**	P	**P**	**19 09 24.6**	**-0.4**
LSA				IAmb	IAmb	19 09 27.7	
	comp=Z,12nm,1.2s						
WB0	**Warramunga Arr**	**69.25**	**101**	P	**P**	**19 09 24.5**	**-0.9**
WB0				IAmb	IAmb	19 09 37.0	
	comp=Z,8.8nm,1.1s						
WR0	**Warramunga Arr**	**69.29**	**101**	P	**P**	**19 09 25.1**	**-0.5**
WR0				IAmb	IAmb	19 09 26.2	
	comp=Z,10nm,1.1s						
GEYT	**Alibeck**	**69.39**	**1**	P	**P**	**19 09 25.5**	**-0.2**
TOA0	**Torodi Ar. Sit**	**69.45**	**301**	P	**P**	**19 09 25.9**	**-0.6**
TOA0				IAmb	IAmb	19 09 50.2	
	comp=Z,19nm,1.9s						
TORD	**Torodi Ar. Bea**	**69.45**	**301**	P	**P**	**19 09 27.2**	**+0.6**
	comp=Z,1.3nm,0.9s,baz=152,slow=3.4,SNR=6.2						
	comp=Z,1.3nm,0.9s						
TORD	**Torodi Ar. Bea**	**69.45**	**301**	P	**P**	**19 09 26.4**	**-0.1**
STKA	**Stephens Creek**	**69.72**	**115**	P	**P**	**19 09 27.6**	**-0.6**
	comp=Z,5.1nm,1.0s,baz=303,slow=7.5,SNR=6.1						
	comp=Z,5.1nm,1.0s						
STKA	**Stephens Creek**	**69.72**	**115**	IAmb	IAmb	19 09 29.2	
	comp=Z,1.4nm,1.0s						
CHGR	**Chuyangaron**	**70.99**	**10**	P	**P**	**19 09 35.4**	**-0.2**
PZH	**PanZhiHua**	**71.89**	**41**	P	**P**	**19 09 41.5**	**+0.2**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,140nm,7.6s						
BTK	**Batken**	**72.62**	**11**	P	**P**	**19 09 46.0**	**+0.7**
BTK				IAmb	IAmb	19 10 01.0	
	comp=Z,7.4nm,0.5s						
BNN	**Bunyan**	**73.07**	**343**	P	**P**	**19 09 48.8**	**+0.8**
KOPT	**Kop Dagi**	**73.13**	**347**	P	**P**	**19 09 48.8**	**+0.2**
BR131	**Keskin Array S**	**74.47**	**341**	P	**P**	**19 09 56.3**	**+0.1**
BR131				IAmb	IAmb	19 09 58.0	
	comp=Z,12nm,1.6s						
BRTR	**Keskin Array B**	**74.47**	**341**	P	**P**	**19 09 56.8**	**+0.6**
	comp=Z,2.2nm,1.0s,baz=176,slow=8.4,SNR=8.8						
	comp=Z,2.2nm,1.0s						
BRTR	**Keskin Array B**	**74.47**	**341**	P	**P**	**19 09 56.3**	**+0.1**
ANTO	**Ankara**	**74.83**	**341**	P	**P**	**19 09 58.9**	**+0.6**
ANTO				IAmb	IAmb	19 10 41.9	
	comp=Z,5.3nm,0.7s						
ONI	**Oni**	**75.11**	**350**	P	**P**	**19 10 00.2**	**+0.4**
ONI				IAmb	IAmb	19 10 02.7	
	comp=Z,13nm,1.6s						
KK31	**Karatay Array**	**75.55**	**10**		**P**	**19 10 03.2**	**+0.9**
KK31				IAmb	IAmb	19 10 04.9	
	comp=Z,9.1nm,1.1s						
KKAR	**Karatay Array**	**75.55**	**10**		**P**	**19 10 03.0**	**+0.8**
KKAR	**Karatay Array**	**75.55**	**10**	P	**P**	**19 10 03.2**	**+1.0**
KKAR				IAmb	IAmb	19 10 04.9	
	comp=Z,9.1nm,1.1s						
AAK	**Ala-Archa**	**75.78**	**13**	LR	LR	19 41 38.9	
	comp=Z,93nm,19.1s,baz=189,slow=34						
AAK	**Ala-Archa**	**75.78**	**13**	P	**P**	**19 10 05.1**	**+1.4**
AAK				IAmb	IAmb	19 10 07.0	
	comp=Z,23nm,1.6s						
MDUB	**Mudurnu**	**75.85**	**340**	P	**P**	**19 10 05.0**	**+0.9**
KBZ	**Khabaz**	**76.31**	**349**	P	**P**	**19 10 07.2**	**+0.7**
	comp=Z,0.7nm,0.4s,baz=176,slow=2.6,SNR=5.6						
	comp=Z,0.7nm,0.4s						
RDO	**Rodhopi**	**78.27**	**336**	P	**P**	**19 10 16.7**	**-0.9**
LIT	**Litokhoron**	**78.46**	**334**	P	**P**	**19 10 17.7**	**-1.0**
ENH	**Enshi**	**79.20**	**44**	P	**P**	**19 10 23.2**	**+0.2**
ABKAR	**Akbulak array**	**80.75**	**2**	P	**P**	**19 10 31.1**	**+0.2**
ABKAR	**Akbulak array**	**80.75**	**2**	P	**P**	**19 10 31.2**	**+0.3**
ABKAR				IAmb	IAmb	19 10 40.6	
	comp=Z,12nm,1.4s						
KEST	**Kesra**	**80.81**	**322**	P	**P**	**19 10 31.7**	**0.0**
KEST				IAmb	IAmb	19 10 47.7	
	comp=Z,27nm,1.7s						
GTA	**Gaotai**	**81.16**	**32**	*eP*	**P**	**19 10 34.4**	**+0.9**
GTA				pP	pwP	19 10 42.6	-1.5
GTA				sP	sP	19 10 49.4	+9.0
GTA				pmax	pmax		
	comp=Z,8.0nm,1.3s						
GTA				LR	LR		
	comp=N,130nm,16.4s						
GTA				LR	LR		
	comp=E,76nm,17.4s						
GTA				LR	LR		
	comp=Z,160nm,20.7s						
MK31	**Makanchi Array**	**81.46**	**17**	P	**P**	**19 10 35.4**	**+0.6**
MK31				IAmb	IAmb	19 10 37.8	
	comp=Z,11nm,1.6s						
MKAR	**Makanchi Array**	**81.46**	**17**	P	**P**	**19 10 35.5**	**+0.7**
	comp=Z,1.0nm,0.8s,baz=226,slow=6.3,SNR=5.9						
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**81.46**	**17**	P	**P**	**19 10 35.0**	**+0.2**
XAN	**Xi'an**	**81.62**	**41**	||P	**P**	**19 10 36.6**	**+0.6**
XAN				sP	sP	19 10 44.6	+1.6
XAN				pmax	pmax		
	comp=Z,10.0nm,1.4s						
XAN				LR	LR		
	comp=N,150nm,19.2s						
XAN				LR	LR		
	comp=Z,130nm,22.0s						
MLR	**Muntele Rosu**	**82.01**	**338**	P	**P**	**19 10 38.4**	**+0.5**
MLR				IAmb	IAmb	19 10 40.5	
	comp=Z,12nm,1.5s						
SSLB	**Suanglung**	**82.27**	**56**	P	**P**	**19 10 38.5**	**-1.2**
SSLB				IAmb	IAmb	19 11 01.7	
	comp=Z,8.4nm,1.0s						
BURAR	**Bucovina Array**	**84.14**	**339**	P	**P**	**19 10 48.9**	**+0.1**
BUR08	**Bucovina Ar. S**	**84.17**	**339**	P	**P**	**19 10 49.0**	**+0.1**
BUR08				IAmb	IAmb	19 10 57.9	
	comp=Z,8.5nm,1.5s						
KURK	**Kurchatov**	**84.33**	**13**	P	**P**	**19 10 50.3**	**+0.8**
OXZ	**Oxford**	**84.39**	**138**	P	**P**	**19 10 51.0**	**+0.6**
BRVK	**Borovoye**	**85.28**	**8**	P	**P**	**19 10 54.6**	**+0.3**
ARU	**Arti**	**87.90**	**1**	P	**P**	**19 11 07.8**	**+0.8**
ZALV	**Zalesovo Beam**	**88.70**	**16**	P	**P**	**19 11 11.1**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=205,slow=6.4,SNR=2.0						
	comp=Z,0.3nm,0.3s						
SONM	**Songino Array**	**90.73**	**31**	P	**P**	**19 11 20.8**	**+0.1**
	comp=Z,1.5nm,1.1s,baz=214,slow=5.0,SNR=6.4						
	comp=Z,1.5nm,1.1s						
SONM	**Songino Array**	**90.73**	**31**	P	**P**	**19 11 20.2**	**-0.5**
BRG	**Berggiesshubel**	**90.75**	**334**	*eP*	P	19 11 27.3	+6.8
BRG				Amp		19 11 29.8	
	comp=Z,5.6nm,1.3s						
ILAR	**Eielson Array**	**143.81**	**17**	PKhKP	PKPpre	19 17 48.9	
	comp=Z,0.7nm,0.9s,baz=321,slow=3.9,SNR=7.3						
ILAR	**Eielson Array**	**143.81**	**17**		PKPab	19 17 49.6	+0.3
YKA	**Yellowknife Ar**	**148.86**	**353**	PKPbc	**PKiKP**	**19 18 05.6**	**-0.6**
	comp=Z,3.2nm,0.8s,baz=357,slow=2.5,SNR=6.2						
YKA	**Yellowknife Ar**	**148.86**	**353**	PKPdf	**PKPdf**	**19 17 59.0**	**-1.9**
YKA					**PKPbc**	**19 18 04.7**	**-0.2**
ULM	**Lac du Bonnet**	**152.82**	**320**	PKPbc	**PKPbc**	**19 18 13.9**	**-0

comp=Z,3.8nm,0.9s,baz=257,slow=6.9,SNR=2.5
comp=Z,3.8nm,0.9s

QSPA	**South Pole Qui**	**58.48**	**180**	P		**P**	**19 09 17.6**	**-0.8**
QSPA				IAmb		IAmb	19 09 33.3	

comp=Z,14nm,1.2s

CM31	**Chiang Mai Arr**	**63.96**	**45**	P		**P**	**19 09 56.7**	**+0.8**
CMAR	**Chiang Mai Arr**	**63.96**	**45**	P		**P**	**19 09 56.3**	**+0.4**

comp=Z,4.7nm,0.6s,baz=228,slow=7.2,SNR=13
comp=Z,4.7nm,0.6s

CMAR	**Chiang Mai Arr**	**63.96**	**45**	P		**P**	**19 09 56.8**	**+0.9**
CHTO	**Chiang Mai**	**64.23**	**44**	P		**P**	**19 09 58.6**	**+0.8**
ASAR	**Alice Springs**	**67.16**	**104**	P		**P**	**19 10 16.3**	**-0.5**
AS31	**Alice Springs**	**67.16**	**104**	P		**P**	**19 10 16.1**	**-0.7**
TOLI2	**Tolitoli**	**68.35**	**74**	P		**P**	**19 10 23.4**	**-0.9**
WRA	**Warramunga Arr**	**69.18**	**101**	P		**P**	**19 10 29.1**	**-0.4**

comp=Z,6.3nm,0.9s,baz=241,slow=5.4,SNR=10.0
comp=Z,6.3nm,0.9s

WRA	**Warramunga Arr**	**69.18**	**101**	IAmb		IAmb	19 10 30.3	

comp=Z,1.0nm,1.3s

WB2	**Warramunga Arr**	**69.19**	**101**	P		**P**	**19 10 28.4**	**-1.1**
WB2				IAmb		IAmb	19 10 30.2	

comp=Z,10nm,1.0s

WRAB	**Tennant Creek**	**69.19**	**101**	P		**P**	**19 10 29.2**	**-0.3**
WRAB				IAmb		IAmb	19 10 30.3	

comp=Z,12nm,1.1s

GEYT	**Alibeck**	**69.27**	**1**	P		**P**	**19 10 31.2**	**+1.7**
GEYT				IAmb		IAmb	19 10 40.9	

comp=Z,15nm,2.0s

WB0	**Warramunga Arr**	**69.30**	**101**	P		**P**	**19 10 29.3**	**-0.9**
WB0				IAmb		IAmb	19 10 30.8	

comp=Z,12nm,1.1s

TOA0	**Torodi Ar. Sit**	**69.37**	**301**	P		**P**	**19 10 30.5**	**-0.1**
TOA0				IAmb		IAmb	19 10 39.9	

comp=Z,6.6nm,1.2s

TORD	**Torodi Ar. Bea**	**69.37**	**301**	P		**P**	**19 10 30.9**	**+0.4**

comp=Z,2.0nm,0.8s,baz=145,slow=3.1,SNR=6.1
comp=Z,2.0nm,0.8s

TORD	**Torodi Ar. Bea**	**69.37**	**301**	P		**P**	**19 10 29.8**	**-0.8**
TORD				IAmb		IAmb	19 10 39.9	

comp=Z,5.1nm,1.2s

STKA	**Stephens Creek**	**69.80**	**116**	P		**P**	**19 10 32.5**	**-0.7**

comp=Z,6.1nm,1.0s,baz=313,slow=13,SNR=6.4
comp=Z,6.1nm,1.0s

STKA	**Stephens Creek**	**69.80**	**116**	IAmb		IAmb	19 10 33.9	

comp=Z,1.2nm,0.8s

BTK	**Batken**	**72.50**	**11**	P		**P**	**19 10 49.2**	**0.0**
BTK				IAmb		IAmb	19 10 59.8	

comp=Z,15nm,1.4s

BNN	**Bunyan**	**72.94**	**343**	P		**P**	**19 10 52.2**	**+0.4**
KOPT	**Kop Dagi**	**73.01**	**347**	P		**P**	**19 10 53.8**	**+1.4**
BR131	**Keskin Array S**	**74.34**	**341**	P		**P**	**19 10 59.6**	**-0.4**
BR131				IAmb		IAmb	19 11 02.1	

comp=Z,4.3nm,0.8s

BRTR	**Keskin Array B**	**74.34**	**341**	P		**P**	**19 11 01.0**	**+0.9**

comp=Z,2.9nm,1.0s,baz=173,slow=8.7,SNR=7.0
comp=Z,2.9nm,1.0s

BRTR	**Keskin Array B**	**74.34**	**341**	P		**P**	**19 11 00.9**	**+0.9**
ONI	**Oni**	**74.99**	**350**	P		**P**	**19 11 02.1**	**-1.5**
KK31	**Karatay Array**	**75.43**	**10**	P		**P**	**19 11 06.8**	**+0.6**
KK31				IAmb		IAmb	19 11 22.8	

comp=Z,8.9nm,1.1s

KKAR	**Karatay Array**	**75.43**	**10**	P		**P**	**19 11 07.2**	**+1.1**
KKAR				IAmb		IAmb	19 11 22.8	

comp=Z,8.9nm,1.1s

KKAR	**Karatay Array**	**75.43**	**10**			**P**	**19 11 06.8**	**+0.6**
AAK	**Ala-Archa**	**75.66**	**13**	P		**P**	**19 11 10.4**	**+2.7**
MDUB	**Mudurnu**	**75.72**	**340**	P		**P**	**19 11 09.5**	**+1.5**
KBZ	**Khabaz**	**76.19**	**349**	P		**P**	**19 11 11.1**	**+0.7**

comp=Z,1.8nm,0.8s,baz=140,slow=7.8,SNR=2.2
comp=Z,1.8nm,0.8s

RDO	**Rodhopi**	**78.15**	**336**	P		**P**	**19 11 17.5**	**-4.0**
LIT	**Litokhoron**	**78.33**	**334**	P		**P**	**19 11 22.0**	**-0.6**
LIT				IAmb		IAmb	19 11 32.4	

comp=Z,20nm,1.7s

ENH	**Enshi**	**79.12**	**44**	P		**P**	**19 11 26.9**	**-0.3**
ENH				IAmb		IAmb	19 11 29.3	

comp=Z,14nm,1.1s

ABKAR	**Akbulak array**	**80.62**	**2**	P		**P**	**19 11 34.9**	**+0.1**
ABKAR				IAmb		IAmb	19 11 45.4	

comp=Z,9.1nm,1.3s

ABKAR	**Akbulak array**	**80.62**	**2**	P		**P**	**19 11 34.8**	**0.0**
MK31	**Makanchi Array**	**81.34**	**17**	P		**P**	**19 11 39.7**	**+0.9**
MKAR	**Makanchi Array**	**81.34**	**17**	P		**P**	**19 11 39.2**	**+0.4**

comp=Z,1.4nm,0.8s,baz=216,slow=4.7,SNR=5.7
comp=Z,1.4nm,0.8s

RPZ	**Rata Peaks**	**83.69**	**138**	LR		LR	19 41 36.3	

comp=Z,128nm,18.3s,baz=324,slow=30

BURAR	**Bucovina Array**	**84.01**	**339**	P		**P**	**19 11 53.5**	**+0.8**
BUR08	**Bucovina Ar. S**	**84.04**	**339**	P		**P**	**19 11 54.2**	**+1.3**
BUR08				IAmb		IAmb	19 11 55.7	

comp=Z,14nm,1.7s

KURK	**Kurchatov**	**84.21**	**14**	P		**P**	**19 11 55.0**	**+1.5**
BRVK	**Borovoye**	**85.16**	**8**	P		**P**	**19 11 58.8**	**+0.5**
ARU	**Arti**	**87.78**	**1**	LR		LR	19 50 11.0	

comp=Z,50nm,19.7s,baz=140,slow=35

ARU	**Arti**	**87.78**	**1**	P		**P**	**19 12 11.4**	**+0.4**
ZALV	**Zalesovo Beam**	**88.58**	**16**	P		**P**	**19 12 13.7**	**-1.2**

comp=Z,0.8nm,0.7s,baz=202,slow=7.2,SNR=1.5
comp=Z,0.8nm,0.7s

GERES	**GERESS Array B**	**89.08**	**333**	P		**P**	**19 12 18.6**	**+1.1**
KIRV	**Kirov**	**90.17**	**356**	LR		LR	19 52 14.9	

comp=Z,44nm,20.5s,baz=198,slow=35

SONM	**Songino Array**	**90.64**	**31**	P		**P**	**19 12 25.1**	**+0.3**

comp=Z,1.2nm,1.0s,baz=197,slow=4.6,SNR=5.3
comp=Z,1.2nm,1.0s

SONM	**Songino Array**	**90.64**	**31**	P		**P**	**19 12 23.3**	**-1.6**
SONM				IAmb		IAmb	19 12 28.8	

comp=Z,5.3nm,1.6s

GUMO	**Guam**	**95.08**	**77**	LR		LR	19 57 24.5	

comp=Z,20nm,18.4s,baz=134,slow=37

JCJ	**Chichijima**	**99.83**	**64**	LR		LR	19 57 38.1	

comp=Z,19nm,18.8s,baz=348,slow=35

ILAR	**Eielson Array**	**143.70**	**17**	PKP		PKPab	19 18 54.5	+1.0

comp=Z,1.1nm,0.8s,baz=314,slow=3.5,SNR=5.6

YKA	**Yellowknife Ar**	**148.73**	**353**	PKPbc		**PKPbc**	**19 19 08.5**	**-0.6**

comp=Z,4.7nm,0.8s,baz=18,slow=2.0,SNR=6.7

YKA	**Yellowknife Ar**	**148.73**	**353**			**PKPbc**	**19 19 08.7**	**-0.4**
ULM	**Lac du Bonnet**	**152.71**	**321**	PKPbc		**PKPbc**	**19 19 19.0**	**+0.1**

comp=Z,5.4nm,0.8s,baz=44,slow=3.7,SNR=7.0

ULM	**Lac du Bonnet**	**152.71**	**321**			**PKPbc**	**19 19 19.4**	**+0.4**

MAN 18 19:05:19.4, 10°.51N×122°.44E, h33km, mb3.6, ML2.3, MS1.7, Panay

*IDC **18** 19:19:50.4±2.5, 37°.17N×142°.32E, h0km, mb4.0/2, mbtmp3.9/4, ML3.0/2, Error ellipse: s-maj=41.6km s-min=30.3km az=81.0*
*JMA **18** 19:19:53.1±0.1, 37°.7N±0°.3×141°.9E±0°.7, h31km±1km, MV3.7/40, SE OFF MIYAGI PREF*

ISC 18 19:19:48.7±1.7, 37°.64N±0°.04×142°.12E±0°.07, h16km±10km, n24, σ1°.902/33, 8D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.84**	**322**	⇓*iP*		**Pn**	**19 20 06.5**	**+0.6**
JIKH				⇓S		**Sg**	**19 20 15.5**	**-0.6**
JMST	**Minamisoumatoc**	**0.98**	**275**	*i*P		**Pn**	**19 20 08.3**	**+0.5**
JMST				S		**Sb**	**19 20 18.7**	**-1.2**
JIO	**Ouri**	**1.01**	**323**	⇓*i*P		**Pn**	**19 20 09.1**	**+0.9**
JIO				⇓S		**Sb**	**19 20 19.9**	**-1.0**
JFK	**Kawauchi**	**1.03**	**255**	*i*P		**Pn**	**19 20 09.3**	**+0.9**
JFK				S		**Sb**	**19 20 20.6**	**-0.8**
JMM	**Marumori**	**1.07**	**282**	⇓*i*P		**Pg**	**19 20 09.8**	**+0.3**
JMM				⇓S		**Sb**	**19 20 21.2**	**-1.5**
ONAJ	**Iwakimizuishiy**	**1.18**	**243**	*i*P		**Pg**	**19 20 11.7**	**+0.3**
ONAJ				S		**Sb**	**19 20 25.0**	**-0.9**
JKMT	**Kesennumamotoy**	**1.27**	**337**	P		**Pg**	**19 20 13.3**	**+0.1**
JKMT				S		**Sb**	**19 20 26.8**	**-1.5**
JOU	**Okura**	**1.35**	**303**	⇓*i*P		**Pb**	**19 20 14.6**	**+0.9**
JOU				⇓S		**Sn**	**19 20 29.6**	**-1.0**
JFT	**Otama**	**1.42**	**265**	*i*P		**Pg**	**19 20 15.8**	**-0.2**
JFT				S		**Sn**	**19 20 32.0**	**-0.2**
JMK	**Ichinoseki**	**1.48**	**332**	P		**Pb**	**19 20 16.5**	**+0.6**
JMK				S		**Sn**	**19 20 33.3**	**-0.5**
JYS	**Shirataka**	**1.72**	**290**	P		**Pb**	**19 20 20.2**	**+0.3**
JYS				S		**Sn**	**19 20 40.6**	**+1.0**
JYK	**Kaneyama**	**1.88**	**313**	P		**Pb**	**19 20 22.0**	**-0.6**
JYK				*eS*		**Sn**	**19 20 44.0**	**+0.5**
JFY	**Yanaizu**	**1.93**	**264**	P		**Pb**	**19 20 23.4**	**-0.1**
JFY				S		**Sn**	**19 20 45.2**	**+0.3**
JOM	**Ohasama**	**1.94**	**341**	P		**Pb**	**19 20 23.4**	**-0.2**
JOM				*eS*		**Sn**	**19 20 44.9**	**-0.1**
MJAR	**Matsushiro Arr**	**3.31**	**252**	Pn		**Pn**	**19 20 42.7**	**+2.8**

0.5nm,0.3s,baz=76,slow=16,SNR=42

MJAR				Sn		**Sb**	**19 21 25.0**	**-2.1**

0.2nm,0.3s,baz=69,slow=25,SNR=1.9
3.4nm,0.3s

JHJ	**Hachijo jima 2**	**4.90**	**204**	Pn		**Pn**	**19 21 01.8**	**+0.1**

7.5nm,0.3s,baz=253,slow=20,SNR=1.6

JHJ				Sn		**Sn**	**19 21 56.6**	**-1.4**

3.2nm,0.3s,baz=238,slow=23,SNR=1.5
23nm,0.4s

H11N2	**WAKE ISLAND Hy**	**27.99**	**123**	T		T	19 55 12.2	

baz=315

H11N1	**WAKE ISLAND Hy**	**28.00**	**123**	T		T	19 55 15.7	

baz=315

H11N3	**WAKE ISLAND Hy**	**28.01**	**123**	T		T	19 55 16.3	

baz=315

H11S1	**WAKE ISLAND Hy**	**28.73**	**125**	T		T	19 56 11.4	

baz=314

H11S3	**WAKE ISLAND Hy**	**28.73**	**125**	T		T	19 56 16.4	

baz=314

H11S2	**WAKE ISLAND Hy**	**28.75**	**125**	T		T	19 56 14.2	

baz=314

ZALV	**Zalesovo Beam**	**41.92**	**312**	P		P	19 27 46.5	+8.3

1.0nm,0.6s,baz=80,slow=9.5,SNR=4.0
1.0nm,0.6s

WRA	**Warramunga Arr**	**57.74**	**189**	P		**P**	**19 29 39.3**	**+0.4**

0.8nm,0.3s,baz=0.6,slow=7.5,SNR=3.3
0.8nm,0.3s

*NEIC **18** 19:24:23.6±2.4, 29°.90N±0°.06×140°.4E±0°.1, h10km±1km, mb4.3/14, Error ellipse: s-maj=16.6km s-min=9.5km az=251.0*
*JMA **18** 19:24:25.8±0.1, 30°.N±1°×141°.1E±°, h36km, MV4.0/21, NEAR TORISHIMA IS*
*IDC **18** 19:24:27.4±1.4, 29°.93N×140°.29E, h43km±13km, mb3.6/15, mbtmp3.8/19, ML3.2/4, MS2.9/3, Error ellipse: s-maj=20.7km s-min=9.1km az=70.0*

ISC 18 19:24:23.0±0.5, 29°.93N±0°.05×140°.39E±0°.09, h10km, n73, σ1°.45/68, mb4.1/21, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**3.18**	**351**	*eS*		**Sn**	**19 25 50.5**	**-0.5**
JHJ2	**Mitsune**	**3.21**	**351**	Pn		**Pn**	**19 25 14.7**	**+1.2**
JHJ	**Hachijo jima 2**	**3.23**	**351**	P		**Pn**	**19 25 15.8**	**+2.1**

14nm,0.3s,baz=256,slow=21,SNR=6.4

JHJ				S		**Sn**	**19 25 51.8**	**-0.4**

93nm,0.4s,baz=79,slow=23,SNR=2.1
30nm,0.3s

CBIJ	**Chichi jima**	**3.23**	**150**	*eP*		**Pn**	**19 25 14.9**	**+1.2**
CBIJ				*eS*		**Sn**	**19 25 51.3**	**-1.0**
JCJ	**Chichijima**	**3.23**	**150**	P		**Pn**	**19 25 16.1**	**+2.3**

5.2nm,0.3s,baz=91,slow=23,SNR=1.5

JCJ				S		**Sn**	**19 25 54.3**	**+2.0**

56nm,0.4s,baz=271,slow=22,SNR=2.0

JCJ				LR		LR	19 26 36.4	

comp=Z,132nm,19.3s,baz=304,slow=39
33nm,0.5s

JCJ	**Chichijima**	**3.23**	**150**			**Pn**	**19 25 14.6**	**+0.9**
JCJ				Sn		**Sn**	**19 25 51.7**	**-0.6**
JHH2	**Haha-jima-NKT2**	**3.64**	**154**	P		**Pn**	**19 25 21.8**	**+2.5**
JMKN	**Mikurajimanish**	**4.01**	**350**	*eP*		**Pn**	**19 25 27.0**	**+2.5**
JMKN				*eS*		**Sn**	**19 26 12.1**	**+0.5**
BSO1	**Boso 1**	**4.74**	**6**	*eP*		**Pn**	**19 25 33.2**	**-0.8**
BSO3	**Boso 3**	**4.86**	**1**	*eP*		**Pn**	**19 25 35.8**	**-0.1**
JOD2	**Odawara 2**	**5.44**	**349**	*eP*		**Pn**	**19 25 47.5**	**+3.4**
JNY	**Yasuok**	**5.82**	**339**	*eP*		Pn	19 25 56.0	+6.5
JHU	**Hanno**	**5.98**	**351**	*eP*		**Pn**	**19 25 53.9**	**+2.3**
INU	**Inuyama**	**6.11**	**333**	Pn		**Pn**	**19 25 55.0**	**+1.6**
JRY	**Ryogami san**	**6.20**	**349**	*eP*		**Pn**	**19 25 58.0**	**+3.3**
JGF	**Kuroka**	**6.21**	**336**			**Pn**	**19 25 57.6**	**+2.8**
JYT	**Yasato**	**6.29**	**359**	Pn		**Pn**	**19 25 58.5**	**+2.7**
JAG	**Ashikaga**	**6.53**	**353**	*eP*		**Pn**	**19 26 00.6**	**+1.5**
JHO	**Hitachi**	**6.67**	**1**	*eP*		**Pn**	**19 26 01.2**	**+0.2**
MJAR	**Matsushiro Arr**	**6.85**	**345**	P		**Pn**	**19 26 05.5**	**+2.1**

0.3nm,0.3s,baz=164,slow=14,SNR=28

MJAR				LR		LR	19 28 45.2	

comp=Z,117nm,20.5s,baz=171,slow=38
1.8nm,0.3s

MJAR	**Matsushiro Arr**	**6.85**	**345**			**Pn**	**19 26 06.5**	**+3.1**
MJB9	**Matsu-Tunnel**	**6.85**	**345**			**Pn**	**19 26 05.7**	**+2.2**
JMM	**Marumori**	**7.93**	**2**	Pn		**Pn**	**19 26 18.8**	**+0.5**
JSD	**Sado**	**8.28**	**348**	Pn		**Pn**	**19 26 26.0**	**+2.9**
JTM	**Tenmabayashi**	**10.85**	**3**	Pn		**Pn**	**19 26 59.0**	**+0.7**
ERM	**Erimo**	**12.27**	**10**	Pn		**Pn**	**19 27 17.4**	**-0.3**
KSRS	**Korea Array**	**12.81**	**309**	P		**Pn**	**19 27 25.7**	**+0.7**

0.1nm,0.3s,baz=114,slow=13,SNR=1.8

KSRS				LR		LR	19 32 03.3	

comp=Z,55nm,20.7s,baz=120,slow=36
0.4nm,0.5s

KLR	**Kul'dur**	**20.37**	**344**	P		**P**	**19 29 00.9**	**+1.3**

1.1nm,0.6s,baz=168,slow=6.1,SNR=6.1
1.1nm,0.6s

H11N2	**WAKE ISLAND Hy**	**26.05**	**107**	T		T	19 57 28.3	

baz=300,slow=75,SNR=50

H11N1	**WAKE ISLAND Hy**	**26.05**	**107**	T		T	19 57 28.4	

baz=300,slow=75,SNR=112

H11N3	**WAKE ISLAND Hy**	**26.07**	**107**	T		T	19 57 35.1	

baz=300,slow=75,SNR=40

H11S3	**WAKE ISLAND Hy**	**26.48**	**109**	T		T	19 58 09.2	

baz=302,slow=75,SNR=49

H11S1	**WAKE ISLAND Hy**	**26.48**	**109**	T		T	19 57 52.3	

baz=302,slow=75,SNR=30

H11S2	**WAKE ISLAND Hy**	**26.50**	**109**	T		T	19 57 58.4	

baz=302,slow=75,SNR=14

MYLDM	**Lahad Datu**	**32.14**	**224**	P		**P**	**19 30 52.5**	**+1.7**
CHTO	**Chiang Mai**	**39.15**	**263**	P		**P**	**19 31 51.2**	**+0.1**
CHTO				IAmb		IAmb	19 31 53.9	

comp=Z,2.6nm,0.7s

CMAR	**Chiang Mai Arr**	**39.30**	**263**	P		**P**	**19 31 52.1**	**-0.3**

comp=Z,0.8nm,0.6s,baz=72,slow=5.3,SNR=8.4
comp=Z,0.8nm,0.6s

TIXI	**Tiksi**	**42.25**	**355**	P		**P**	**19 32 15.5**	**-0.5**

comp=Z,0.3nm,0.4s,baz=264,slow=22,SNR=5.5
comp=Z,0.3nm,0.4s

TIXI	**Tiksi**	**42.25**	**355**	P		**P**	**19 32 15.5**	**-0.5**
MTN	**Manton Dam**	**43.45**	**193**	P		**P**	**19 32 26.6**	**+0.4**
MTN				IAmb		IAmb	19 32 43.2	

comp=Z,14nm,1.4s

UNV	**Unalaska Valle**	**44.87**	**42**	P		**P**	**19 32 38.6**	**+1.3**
MK31	**Makanchi Array**	**47.48**	**308**	P		**P**	**19 32 58.0**	**-0.1**
MK31				IAmb		IAmb	19 33 26.6	

comp=Z,3.0nm,1.2s

MKAR	**Makanchi Array**	**47.48**	**308**	P		**P**	**19 32 57.6**	**-0.5**

comp=Z,2.0nm,0.5s,baz=184,slow=23,SNR=9.8
comp=Z,2.0nm,0.5s

MKAR	**Makanchi Array**	**47.48**	**308**	P		**P**	**19 32 57.4**	**-0.7**
WB0	**Warramunga Arr**	**49.74**	**187**	P		**P**	**19 33 15.8**	**+0.2**
WB0				IAmb		IAmb	19 33 21.2	

comp=Z,7.1nm,1.2s

WRA	**Warramunga Arr**	**49.92**	**187**	P		**P**	**19 33 16.8**	**-0.1**

comp=Z,2.0nm,0.9s,baz=4.0,slow=7.6,SNR=12
comp=Z,2.0nm,0.9s

WRA	**Warramunga Arr**	**49.92**	**187**	P		**P**	**19 33 16.7**	**-0.3**
K20K	**Telida**	**52.76**	**31**	P		**P**	**19 33 38.7**	**+0.8**
K20K				IAmb		IAmb	19 33 47.1	

comp=Z,4.9nm,1.0s

AS31	**Alice Springs**	**53.65**	**187**	P		**P**	**19 33 44.9**	**+0.1**
ASAR	**Alice Springs**	**53.65**	**187**	P		**P**	**19 33 44.5**	**-0.3**
ILAR	**Eielson Array**	**56.02**	**30**	P		**P**	**19 34 02.6**	**+1.1**

comp=Z,0.4nm,0.8s,baz=272,slow=6.2,SNR=3.7
comp=Z,0.4nm,0.8s

KKAR	**Karatay Array**	**56.18**	**304**	P		**P**	**19 34 02.0**	**-1.0**
BMAR	**Burnt Mountain**	**57.01**	**26**	P		**P**	**19 34 10.4**	**+1.8**
J26L	**Joseph Creek**	**57.45**	**30**	P		**P**	**19 34 12.2**	**+0.5**
J26L				IAmb		IAmb	19 34 19.0	

comp=Z,4.6nm,1.2s

FORT	**Forrest**	**61.50**	**192**	P		**P**	**19 34 39.4**	**-0.5**
ABKAR	**Akbulak array**	**62.01**	**313**	P		**P**	**19 34 41.4**	**-1.9**
ABKAR				IAmb		IAmb	19 34 43.2	

comp=Z,1.3nm,0.7s

ABKAR	**Akbulak array**	**62.01**	**313**	P		**P**	**19 34 41.4**	**-1.9**
ARCES	**ARCESS Array B**	**70.36**	**340**	P		**P**	**19 35 36.5**	**-0.1**

comp=Z,1.6nm,0.7s,baz=70,slow=8.7,SNR=4.1
comp=Z,1.6nm,0.7s

FINES	**FINESS Array B**	**74.72**	**333**	P		**P**	**19 36 01.9**	**-0.7**

comp=Z,1.3nm,0.5s,baz=114,slow=4.8,SNR=8.6
comp=Z,1.3nm,0.5s

FINES	**FINESS Array B**	**74.72**	**333**	P		**P**	**19 36 01.6**	**-1.0**
KBZ	**Khabaz**	**74.94**	**312**	P		**P**	**19 36 03.3**	**-1.0**

comp=Z,1.7nm,0.6s,baz=82,slow=5.9,SNR=3.5
comp=Z,1.7nm,0.6s

AKASG	**Malin Array Be**	**79.41**	**323**	P		**P**	**19 36 27.9**	**-1.3**

comp=Z,1.1nm,0.4s,baz=52,slow=6.8,SNR=7.0
comp=Z,1.1nm,0.4s

NVAR	**Mina Array Bea**	**80.00**	**51**	P		**P**	**19 36 33.5**	**+0.5**

comp=Z,0.4nm,0.5s,baz=299,slow=5.6,SNR=3.9
comp=Z,0.4nm,0.5s

NVAR	**Mina Array Bea**	**80.00**	**51**	P		**P**	**19 36 33.1**	**+0.1**
NOA	**NORSAR Array B**	**80.41**	**338**	P		**P**	**19 36 33.7**	**-0.8**

comp=Z,0.6nm,0.6s,baz=36,slow=5.4,SNR=1.9
comp=Z,0.6nm,0.6s

BRTR	**Keskin Array B**	**82.94**	**312**	P		**P**	**19 36 47.5**	**-0.9**

comp=Z,0.8nm,0.8s,baz=79,slow=2.6,SNR=4.5
comp=Z,0.8nm,0.8s

PDAR	**Pinedale Array**	**83.30**	**44**	P		**P**	**19 36 49.4**	**-1.0**

comp=Z,2.0nm,0.3s,baz=302,slow=2.0,SNR=1.5
comp=Z,2.0nm,0.3s

TXAR	**Lajitas Array**	**95.14**	**52**	P		**P**	**19 37 46.4**	**-0.6**

comp=Z,2.0nm,0.7s,baz=309,slow=3.1,SNR=2.1
comp=Z,2.0nm,0.7s

H03N2	**Juan Fernandez**	**146.49**	**106**	T		T	22 27 59.1	

baz=279,slow=75,SNR=9.2

H03N3	**Juan Fernandez**	**146.50**	**106**	T		T	22 27 56.9	

baz=279,slow=75,SNR=7.7

H03N1	**Juan Fernandez**	**146.50**	**106**	T		T	22 27 57.5	

baz=279,slow=75,SNR=9.9

LPAZ	**La Paz**	**150.56**	**69**	PKPbc		**PKPbc**	**19 44 16.4**	**-0.1**

comp=Z,0.5nm,0.3s,baz=160,slow=2.7,SNR=4.0

PLCA	**Paso Fl

DBIC	**Dimbokro**	**70.40**	**291**	P	**P**	**19 45 29.2**	**-0.3**
DBIC				IAmb	IAmb	19 46 07.6	
	comp=Z,19nm,1.5s						
CHGR	**Chuyangaron**	**71.00**	**10**	P	**P**	**19 45 33.1**	**+0.4**
DRK	**Karamyk**	**72.22**	**12**	P	**P**	**19 45 40.6**	**+0.2**
GNI	**Garni**	**72.54**	**350**	P	**P**	**19 45 42.3**	**+0.2**
	comp=Z,4.2nm,0.7s,baz=128,slow=7.4,SNR=3.6						
GNI				LR	LR	20 14 45.4	
	comp=Z,53nm,21.6s,baz=156,slow=34						
	comp=Z,4.2nm,0.7s						
GNI	**Garni**	**72.54**	**350**	P	**P**	**19 45 42.6**	**+0.6**
BTK	**Batken**	**72.62**	**11**	P	**P**	**19 45 43.4**	**+0.9**
BTK				IAmb	IAmb	19 45 52.2	
	comp=Z,8.5nm,1.2s						
BNN	**Bunyan**	**73.07**	**343**	P	**P**	**19 45 45.7**	**+0.5**
IDI	**Anoyia**	**73.34**	**333**	LR	LR	20 19 08.5	
	comp=Z,19nm,18.2s,baz=121,slow=37						
IDI	**Anoyia**	**73.34**	**333**	P	**P**	**19 45 47.5**	**+0.7**
IDI				IAmb	IAmb	19 45 55.4	
	comp=Z,19nm,1.3s						
TOKA	**Tokat**	**74.31**	**344**	P	**P**	**19 45 53.3**	**+0.9**
TOKA				IAmb	IAmb	19 46 02.0	
	comp=Z,4.6nm,0.5s						
BR131	**Keskin Array S**	**74.47**	**341**	P	**P**	**19 45 53.6**	**+0.2**
BR131				IAmb	IAmb	19 45 54.6	
	comp=Z,3.5nm,0.8s						
BRTR	**Keskin Array B**	**74.47**	**341**	P	**P**	**19 45 53.9**	**+0.4**
	comp=Z,1.7nm,0.7s,baz=169,slow=8.1,SNR=14						
	comp=Z,1.7nm,0.7s						
BRTR	**Keskin Array B**	**74.47**	**341**	P	**P**	**19 45 53.4**	**0.0**
ONI	**Oni**	**75.12**	**350**	P	**P**	**19 45 58.2**	**+1.1**
KK31	**Karatay Array**	**75.55**	**10**	P	**P**	**19 46 00.6**	**+1.1**
KK31				IAmb	IAmb	19 46 15.3	
	comp=Z,6.4nm,1.2s						
KKAR	**Karatay Array**	**75.55**	**10**	P	**P**	**19 46 00.2**	**+0.7**
AAK	**Ala-Archa**	**75.78**	**13**	P	**P**	**19 46 01.3**	**+0.4**
	comp=Z,1.7nm,0.3s,baz=202,slow=6.7,SNR=5.7						
AAK				LR	LR	20 17 55.9	
	comp=Z,40nm,18.3s,baz=178,slow=35						
	comp=Z,1.7nm,0.3s						
AAK	**Ala-Archa**	**75.78**	**13**	P	**P**	**19 46 01.4**	**+0.4**
AAK				IAmb	IAmb	19 46 05.7	
	comp=Z,10.0nm,1.2s						
KBZ	**Khabaz**	**76.32**	**349**	P	**P**	**19 46 04.8**	**+1.1**
	comp=Z,1.2nm,0.6s,baz=120,slow=6.3,SNR=3.7						
KBZ				LR	LR	20 19 36.6	
	comp=Z,26nm,18.9s,baz=145,slow=36						
	comp=Z,1.2nm,0.6s						
KIV	**Kislovodsk**	**76.58**	**349**	P	**P**	**19 46 06.1**	**+0.7**
KIV				IAmb	IAmb	19 46 08.6	
	comp=Z,4.4nm,0.8s						
ENH	**Enshi**	**79.19**	**44**	P	**P**	**19 46 20.2**	**0.0**
ENH				IAmb	IAmb	19 46 21.7	
	comp=Z,9.9nm,1.1s						
ABKAR	**Akbulak array**	**80.75**	**2**	P	**P**	**19 46 27.9**	**-0.2**
ABKAR	**Akbulak array**	**80.75**	**2**	P	**P**	**19 46 28.0**	**-0.2**
ABKAR				IAmb	IAmb	19 46 29.0	
	comp=Z,2.8nm,0.9s						
MAKZ	**Makanchi**	**81.39**	**17**	P	**P**	**19 46 31.5**	**-0.1**
MKAR	**Makanchi Array**	**81.46**	**17**	P	**P**	**19 46 32.2**	**+0.2**
	comp=Z,0.9nm,0.7s,baz=221,slow=5.4,SNR=7.5						
MKAR				LR	LR	20 20 12.8	
	comp=Z,41nm,19.1s,baz=146,slow=34						
	comp=Z,0.9nm,0.7s						
KURK	**Kurchatov**	**84.33**	**13**	P	**P**	**19 46 47.1**	**+0.4**
KURK				IAmb	IAmb	19 47 03.2	
	comp=Z,9.0nm,1.2s						
BRVK	**Borovoye**	**85.29**	**8**	P	**P**	**19 46 51.5**	**0.0**
BRVK				IAmb	IAmb	19 46 53.3	
	comp=Z,10.0nm,1.5s						
AKASG	**Malin Array Be**	**85.81**	**343**	P	**P**	**19 46 54.0**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=155,slow=4.5,SNR=2.1						
	comp=Z,0.4nm,0.5s						
ARU	**Arti**	**87.91**	**1**	LR	LR	20 23 55.7	
	comp=Z,42nm,19.9s,baz=82,slow=34						
ZALV	**Zalesovo Beam**	**88.70**	**16**	P	**P**	**19 47 08.0**	**0.0**
	comp=Z,0.3nm,0.3s,baz=204,slow=3.2,SNR=1.8						
	comp=Z,0.3nm,0.3s						
SONM	**Songino Array**	**90.73**	**31**	P	**P**	**19 47 17.5**	**-0.4**
	comp=Z,0.9nm,1.1s,baz=228,slow=1.8,SNR=3.8						
	comp=Z,0.9nm,1.1s						
KSRS	**Korea Array**	**95.39**	**49**	LR	LR	20 29 48.0	
	comp=Z,22nm,19.0s,baz=285,slow=35						
ILAR	**Eielson Array**	**143.81**	**17**	PKhKP	PKPpre	19 53 46.6	
	comp=Z,0.7nm,0.7s,baz=314,slow=3.8,SNR=7.4						
YKA	**Yellowknife Ar**	**148.87**	**353**	PKPbc	**PKPbc**	**19 54 02.2**	**+0.1**
	comp=Z,5.2nm,0.8s,baz=5.4,slow=2.7,SNR=10						
YKA	**Yellowknife Ar**	**148.87**	**353**		**PKPbc**	**19 54 00.9**	**-1.1**
ULM	**Lac du Bonnet**	**152.83**	**320**	PKPbc	**PKPbc**	**19 54 11.6**	**-0.3**
	comp=Z,4.8nm,0.7s,baz=5.3,slow=3.4,SNR=8.5						

*IDC **18** 19:34:19.6±1.3,4.7°1N×126.°68E,h0km,mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=152.3km s-min=20.4km az=68.0*

*MAN **18** 19:34:25.3,5.°60N×126.°80E,h253km,mb4.5,ML3.4, MS3.2*

ISC 18 19:34:31.3±1.1,4.°6N±0.°2×126.°7E±0.°4,h100km,n7, σ1s84/8,mb3.7/5,1D,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**2.28**	**311**	*eP*	**Pn**	**19 35 06.1**	**-1.6**
KCP	**Kidapawan**	**2.88**	**327**	*eP*	**Pn**	**19 35 14.6**	**-1.0**
KCP				*i* S	**Sn**	**19 35 52.9**	**+3.2**
WRA	**Warramunga Arr**	**25.51**	**163**	P	**P**	**19 39 50.8**	**+0.2**
	1.0nm,0.6s,baz=342,slow=10,SNR=13						
	1.0nm,0.6s						
STKA	**Stephens Creek**	**38.94**	**160**	P	**P**	**19 41 48.7**	**+1.1**
	1.6nm,0.7s,baz=318,slow=11,SNR=3.6						
	1.6nm,0.7s						
SONM	**Songino Array**	**46.48**	**341**	P	**P**	**19 42 47.4**	**-1.1**
	0.5nm,0.5s,baz=154,slow=7.2,SNR=6.7						
	0.5nm,0.5s						
MKAR	**Makanchi Array**	**56.83**	**325**	P	**P**	**19 44 05.7**	**+0.3**
	0.4nm,0.5s,baz=118,slow=7.6,SNR=6.1						
	0.4nm,0.5s						
ZALV	**Zalesovo Beam**	**59.81**	**333**	P	**P**	**19 44 25.3**	**-0.7**
	0.2nm,0.3s,baz=145,slow=5.3,SNR=1.5						
	0.2nm,0.3s						

*DDA **18** 19:46:44.6±0.0,39.°73N×25.°56E,h7km±1km,ML1.0*

ISK 18 19:46:43.9,39.°67N×25.°58E,h6km,ML1.6/4,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOZC	**Bozcaada**	**0.40**	**65**	PG	Pg	19 46 52.3	+0.6
BOZC				SG	Sg	19 46 58.3	+1.3
BOZC	**Bozcaada**	**0.40**	**65**	P	Pg	19 46 52.5	+0.8
BOZC				S	Sb	19 46 58.5	-1.2
BOZC				*i* AML	AML	19 46 59.0	
	comp=N,20nm,0.1s						
BOZC				*i* AML	AML	19 47 00.0	
	comp=E,14nm,0.3s						
KOCA	**Canakkale, Ayv**	**0.46**	**111**	P	Pb	19 46 54.6	+0.2
KOCA				*i* AML	AML	19 47 02.0	
	comp=N,15nm,0.3s						
KOCA				*i* AML	AML	19 47 02.0	
	comp=E,12nm,0.5s						
KOCA				S	Sb	19 47 02.0	+0.5
EZN	**Ezine**	**0.59**	**75**	PG	Pg	19 46 55.6	+0.2
EZN				SG	Sb	19 47 04.6	-0.7
BAYC	**CANAKKALE_Bayr**	**0.75**	**84**	P	Pb	19 46 59.1	-0.2
BAYC				S	Sb	19 47 10.0	+0.2
BAYC				*i* AML	AML	19 47 12.0	
	comp=N,5.7nm,0.4s						
BAYC				*i* AML	AML	19 47 13.0	
	comp=E,5.9nm,0.2s						
GELI	**Tayfur-Gelibol**	**1.00**	**43**	PG	Pb	19 47 03.6	0.0
GELI				SG	Sb	19 47 17.8	+0.8
CHOS	**Chios island**	**1.33**	**164**	PN	Pb	19 47 09.2	-0.1
CHOS				SN	Sn	19 47 28.0	+0.9

ATH 18 19:47:08.3,40.°33N×24.°01E,h7km±4km,ML1.7/5,Error ellipse: s-maj=4.8km s-min=0.7km az=271.0,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLG	**Polygyros**	**0.43**	**276**	P	Pg	19 47 16.5	-0.2
PLG				S	Sg	19 47 22.4	0.0
PLG				AML	AML	19 47 23.2	
	comp=E,341μm,0.2s						
PLG				AML	AML	19 47 23.2	
	comp=N,312μm,0.2s						
PAIG	**Paliouri**	**0.48**	**212**	P	Pg	19 47 17.4	-0.2
PAIG				S	Sg	19 47 24.1	+0.4
PAIG				AML	AML	19 47 26.9	
	comp=E,226μm,0.1s						
PAIG				AML	AML	19 47 27.1	
	comp=N,272μm,0.2s						
KOKK	**Kokkinochori,**	**0.49**	**359**	P	Pg	19 47 17.5	-0.2
KVLA	**Kavala**	**0.67**	**25**	P	Pg	19 47 21.3	+0.1
KVLA				S	Sg	19 47 30.1	+0.1
SOH	**Sokhos**	**0.70**	**315**	P	Pg	19 47 21.7	-0.1
SOH				S	Sg	19 47 30.7	-0.2
SOH				AML	AML	19 47 30.8	
	comp=E,269μm,0.3s						
SOH				AML	AML	19 47 32.1	
	comp=N,215μm,0.4s						
HORT	**Hortiatis**	**0.74**	**291**	P	Pg	19 47 22.0	-0.7
KAVA	**Kavala**	**0.77**	**30**	P	Pg	19 47 22.6	-0.5
KAVA				S	Sg	19 47 33.2	+0.1
SRS	**Serrai**	**0.85**	**338**	P	Pg	19 47 24.1	-0.5
SRS				S	Sg	19 47 35.9	+0.2
SRS				AML	AML	19 47 38.9	
	comp=N,95μm,0.2s						
SRS				AML	AML	19 47 39.9	
	comp=E,119μm,0.1s						
LIA	**Limnos Island**	**1.00**	**115**	P	Pg	19 47 27.0	-0.5
LIA				S	Sg	19 47 40.3	-0.2
LIA				AML	AML	19 47 41.9	
	comp=E,82μm,0.4s						
LIA				AML	AML	19 47 42.7	
	comp=N,74μm,0.3s						
NVR	**Nevrokopi**	**1.02**	**354**	P	Pg	19 47 27.9	-0.1
XOR	**Xorichti**	**1.15**	**213**	P	Pg	19 47 29.7	-0.7
XOR				S	Sb	19 47 45.7	0.0
SMTH	**Samothraki Isl**	**1.17**	**83**	P	Pg	19 47 30.6	-0.2
KNT	**Kendrikon**	**1.18**	**315**	P	Pg	19 47 30.2	-0.8
GRG	**Griva**	**1.37**	**298**	P	Pn	19 47 33.9	-0.1
ALN	**Alexandroupoli**	**1.65**	**69**	P	Pn	19 47 38.2	+0.5

IDC 18 19:48:24.4±14.0,42.°46S×89.°56W,h0km,mb3.8/4, mbtmp3.8/4,MS3.8/16,Error ellipse: s-maj=402.9km s-min=56.8km az=168.0,Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H03S2	**Juan Fernandez**	**12.00**	**48**	T	T	20 03 44.0	
	baz=220						
H03S1	**Juan Fernandez**	**12.00**	**48**	T	T	20 03 46.5	
	baz=220						
H03S3	**Juan Fernandez**	**12.01**	**48**	T	T	20 03 45.3	
	baz=220						
RPN	**Rapa Nui**	**22.23**	**307**	LR	LR	19 59 46.5	
	comp=Z,38nm,19.7s,baz=108,slow=31						
LVC	**Limon Verde**	**26.23**	**47**	LR	LR	20 01 39.9	
	comp=Z,326nm,21.8s,baz=214,slow=30						
CPUP	**Villa Florida**	**30.85**	**69**	LR	LR	20 06 03.6	
	comp=Z,220nm,19.2s,baz=232,slow=34						
LPAZ	**La Paz**	**31.89**	**42**	P	P	19 54 52.1	0.0
	2.4nm,1.0s,baz=205,slow=10.0,SNR=6.2						
LPAZ				LR	LR	20 04 53.2	
	comp=Z,130nm,20.6s,baz=186,slow=31						
	2.4nm,1.0s						
NNA	**Nana**	**32.32**	**24**	LR	LR	20 03 58.6	
	comp=Z,227nm,21.8s,baz=179,slow=29						
SIV	**San Ignacio**	**35.93**	**51**	LR	LR	20 08 21.6	
	comp=Z,199nm,21.8s,baz=268,slow=33						
ATAH	**Atahualpa**	**36.54**	**19**	LR	LR	20 06 27.4	
	comp=Z,223nm,20.3s,baz=196,slow=30						
SNAA	**Sanae**	**49.35**	**155**	LR	LR	20 15 36.1	
	comp=Z,78nm,18.4s,baz=312,slow=33						
JTS	**Las Juntas de**	**52.66**	**6**	LR	LR	20 14 17.3	
	comp=Z,112nm,19.0s,baz=118,slow=30						
VNDA	**Vanda**	**52.76**	**195**	LR	LR	20 16 46.3	
	comp=Z,59nm,20.1s,baz=156,slow=32						
SDV	**Santo Domingo**	**53.95**	**23**	LR	LR	20 18 34.7	
	comp=Z,111nm,19.1s,baz=170,slow=34						
MDP	**Montagnes des**	**58.00**	**45**	LR	LR	20 21 39.8	
	comp=Z,95nm,18.9s,baz=236,slow=34						
RCBR	**Riachuelo**	**59.73**	**68**	LR	LR	20 24 06.7	
	comp=Z,110nm,18.6s,baz=349,slow=36						
SJG	**San Juan**	**64.02**	**25**	LR	LR	20 25 39.2	
	comp=Z,65nm,19.6s,baz=148,slow=35						
TXAR	**Lajitas Array**	**72.61**	**347**	P	P	19 59 53.5	-0.1
	0.9nm,1.1s,baz=165,slow=7.3,SNR=4.2						
	0.9nm,1.1s						
NVAR	**Mina Array Bea**	**84.65**	**338**	P	P	20 00 59.8	-0.1
	0.2nm,0.3s,baz=172,slow=7.3,SNR=3.6						
	0.2nm,0.3s						
PDAR	**Pinedale Array**	**86.73**	**345**	P	P	20 01 10.2	+0.2
	0.6nm,0.8s,baz=152,slow=5.9,SNR=3.9						
	0.6nm,0.8s						
SADO	**Sadowa**	**87.34**	**7**	LR	LR	20 35 55.5	
	comp=Z,56nm,19.7s,baz=189,slow=33						
LBTB	**Lobatse**	**90.14**	**125**	LR	LR	20 38 08.0	
	comp=Z,87nm,18.1s,baz=230,slow=33						

KRSC 18 19:51:04.0±1.9,49.°48N×157.°02E,h43km±33km,ML3.5, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.34**	**335**	P	Pn	19 51 26.9	+0.7
SKR				S	Sn	19 51 41.8	-1.0
PAU	**Pauzhetka**	**2.00**	**356**	S	Sn	19 52 02.2	+3.3
KDTR	**Khodutka, Kamc**	**2.43**	**16**	P	Pn	19 51 44.4	+3.2
KDTR				S	Sn	19 52 13.8	+4.2
MTVR	**Mutnovka**	**3.10**	**13**	P	Pn	19 51 54.4	+3.9
MTVR				S	Sn	19 52 31.3	+5.0
RUS	**Russkaya**	**3.10**	**17**	P	Pn	19 51 53.6	+3.2
RUS				S	Sn	19 52 30.4	+4.2
UGLR	**Uglovaya**	**3.90**	**16**	P	Pn	19 52 06.1	+4.6
AVH	**Avacha**	**3.94**	**15**	P	Pn	19 52 06.8	+4.8
KOK	**Koryaka**	**3.95**	**14**	P	Pn	19 52 06.9	+4.7
SMAR	**Somma**	**3.95**	**16**	P	Pn	19 52 05.8	+3.5
SDLR	**Sedlovina**	**3.98**	**16**	P	Pn	19 52 05.9	+3.3
KRX	**Arik**	**4.02**	**14**	P	Pn	19 52 07.9	+4.8
SPN	**Mys Shipunski**	**4.08**	**26**	P	Pn	19 52 08.2	+4.3
SPN				S	Sn	19 52 55.6	+5.2
MKZ	**Mys Kozlova**	**5.86**	**28**	P	Pn	19 52 31.8	+3.6

NOU 18 19:54:12.3,16.°04S×167.°55E,h11km,MLv4.5/10, Vanuatu Islands,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**1.78**	**160**	P	Pn	19 54 43.1	0.0
MARNC	**Mare, Loyalty**	**5.43**	**175**	P	Pn	19 55 34.8	+1.6
KOUNC	**Koumac, New Ca**	**5.45**	**214**	P	Pn	19 55 31.7	-1.9
NOUC	**Port Laguerre**	**6.14**	**191**	P	Pn	19 55 42.9	-0.1

*IDC **18** 20:02:13.9±1.1,5.°99S×130.°64E,h0km,mb4.0/7, mbtmp4.1/9,ML4.0/2,Error ellipse: s-maj=35.2km s-min=22.6km az=69.0*

*DJA **18** 20:02:29.9±0.2,6.°5S±2.°×13.°1E±.°,h128km±4km,M4.6/27, mB5.1/7,mb4.5/27,MLv4.8/15,Mw(mB)4.4/7*

*NEIC **18** 20:02:29.5±1.5,6.°09S±0.°05×130.°57E±0.°07,h134km±7km, mb4.4/37,Error ellipse: s-maj=10.9km s-min=5.9km az=115.0*

ISC 18 20:02:28.2±0.4,6.°08S±0.°04×130.°65E±0.°05,h124km,n114, σ1s75/117,mb4.4/27,1C,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**1.71**	**334**	P	**Pn**	**20 03 03.1**	**+4.7**
SAUI	**Saumlaki**	**2.00**	**161**	Pn	**Pn**	**20 03 04.3**	**+2.4**
SAUI				Sn	**Sn**	**20 03 28.1**	**+0.6**
SAUI	**Saumlaki**	**2.00**	**161**	P	**Pn**	**20 03 04.0**	**+2.2**
SAUI				S	**Sn**	**20 03 31.8**	**+4.2**
SAUI	**Saumlaki**	**2.00**	**161**	P	**Pn**	**20 03 04.6**	**+2.8**
MSAI	**Masohi**	**3.21**	**328**	P	**Pn**	**20 03 19.5**	**+2.1**
MSAI				S	**Sn**	**20 03 56.5**	**+1.1**
AAI	**Ambon**	**3.41**	**314**	P	**Pn**	**20 03 22.5**	**+2.5**
FAKI	**Fak Fak**	**3.52**	**27**	Pn	**Pn**	**20 03 23.2**	**+1.7**
FAKI				Sn	**Sn**	**20 04 03.4**	**+0.6**
FAKI	**Fak Fak**	**3.52**	**27**	P	**Pn**	**20 03 22.8**	**+1.3**
FAKI				S	**Sn**	**20 04 03.5**	**+0.8**
FAKI	**Fak Fak**	**3.52**	**27**	P	**Pn**	**20 03 23.5**	**+2.0**
NLAI	**Namlea**	**4.52**	**308**	P	**Pn**	**20 03 37.1**	**+2.3**
SWI	**Sorong**	**5.22**	**7**	P	**Pn**	**20 03 44.9**	**+0.8**
SANI	**Sanana**	**6.13**	**311**	P	**Pn**	**20 03 58.4**	**+1.5**
	0.2nm811nm56nm,0.6s						
SANI	**Sanana**	**6.13**	**311**	P	**Pn**	**20 03 58.4**	**+1.9**
LBMI	**Labuha**	**6.25**	**330**	P	**Pn**	**20 03 59.7**	**+1.6**
	0.4nm956nm65nm,0.9s						
MTN	**Manton Dam**	**6.74**	**176**	Pn	**Pn**	**20 04 04.6**	**-0.1**
KDU	**Kakadu**	**6.81**	**165**	P	**Pn**	**20 04 04.7**	**-0.9**
SRPI	**Serui, Papua**	**6.97**	**53**	P	**Pn**	**20 04 10.7**	**+2.9**
	0.6nm57nm,0.8s						
BAKI	**Biak**	**7.30**	**49**	P	**Pn**	**20 04 15.7**	**+3.5**
	5um728nm,0.7s						
SOEI	**Soe**	**7.30**	**240**	Pn	**Pn**	**20 04 12.5**	**+0.2**
SOEI	**Soe**	**7.30**	**240**	P	**Pn**	**20 04 12.8**	**+0.5**
	0.5nm50nm,0.8s						
SOEI	**Soe**	**7.30**	**240**	P	**Pn**	**20 04 13.2**	**+0.9**
TNTI	**Ternate**	**7.55**	**334**	Pn	**Pn**	**20 04 16.1**	**+0.5**
TNTI	**Ternate**	**7.55**	**334**	P	**Pn**	**20 04 16.6**	**+1.0**
	0.1nm35nm,0.8s						
WAMI	**Wamena**	**8.32**	**75**	P	Pn	20 04 32.6	+6.5
	102nm,0.8s						
MMRI	**Maumere**	**8.72**	**253**	P	**Pn**	**20 04 34.7**	**+3.3**
	48nm,1.1s						
SMPI	**Sarmi**	**9.01**	**64**	P	**Pn**	**20 04 36.7**	**+1.4**
	17nm,0.9s						
EDFI	**Ende, Flores**	**9.27**	**253**	P	**Pn**	**20 04 40.5**	**+1.6**
	5.9nm,1.4s						
KNRA	**Kununurra**	**9.72**	**191**	Pn	**Pn**	**20 04 42.6**	**-2.2**
KNRA	**Kununurra**	**9.72**	**191**	P	**Pn**	**20 04 42.5**	**-2.3**
APSI	**Ampana**	**10.34**	**299**	P	**Pn**	**20 04 55.1**	**+1.8**
	32nm,1.1s						
MRSI	**Marisa**	**10.86**	**307**	P	**Pn**	**20 05 01.1**	**+0.9**
	534nm70nm,0.8s						
KAPI	**Kappang**	**10.90**	**275**	Pn	Pn	20 04 51.1	-10
	0.3nm,0.3s,baz=96,slow=10,SNR=1.5						
	5.3nm,1.0s						
KAPI	**Kappang**	**10.90**	**275**	P	**Pn**	**20 05 02.1**	**+1.4**
TTSI	**Tana Toraja**	**11.21**	**285**	P	**Pn**	**20 05 07.2**	**+2.4**
	15nm,1.3s						
WBSI	**Waikabubak, Su**	**11.70**	**252**	P	**Pn**	**20 05 12.0**	**+0.6**
	38nm,1.1s						
TOLI2	**Tolitoli**	**12.17**	**306**	Pn	**Pn**	**20 05 20.0**	**+2.5**
TOLI2	**Tolitoli**	**12.17**	**306**	P	**Pn**	**20 05 20.6**	**+3.1**
MPSI	**Mapaga**	**12.48**	**300**	P	**Pn**	**20 05 23.8**	**+2.2**
	1μm12nm,0.7s						
PLAI	**Plampang**	**13.05**	**257**	P	**Pn**	**20 05 29.5**	**+0.5**
	26nm,1.0s						
PLAI	**Plampang**	**13.05**	**257**	P	**Pn**	**20 05 29.1**	**+0.1**
WB0	**Warramunga Arr**	**14.09**	**165**	Pn	**Pn**	**20 05 39.4**	**-3.0**
WRAB	**Tennant Creek**	**14.23**	**166**		**Pn**	**20 05 41.3**	**-2.9**
WRAB	**Tennant Creek**	**14.23**	**166**	P	**Pn**	**20 05 41.8**	**-2.4**
WRA	**Warramunga Arr**	**14.24**	**166**	Pn	**Pn**	**20 05 40.0**	**-4.3**
	1.3nm,0.3s,baz=351,slow=13,SNR=40						
WRA				Sn	Sn	20 08 07.3	-14
	1.6nm,0.3s,baz=348,slow=17,SNR=5.4						
	3.8nm,0.5s						
WRA	**Warramunga Arr**	**14.24**	**166**		**Pn**	**20 05 41.9**	**-2.4**
COEN	**Coen**	**14.60**	**123**	Pn	**Pn**	**20 05 50.5**	**+1.6**
COEN	**Coen**	**14.60**	**123**	P	**P**	**20 05 51.0**	**-0.9**
BBKI	**Banjar Baru**	**15.96**	**279**	P	**P**	**20 06 07.8**	**+0.8**
	60nm,2.0s						
MYLDM	**Lahad Datu**	**16.50**	**312**		**P**	**20 06 13.6**	**+0.8**
MYLDM				IAmb	IAmb	20 06 32.8	
	comp=Z,23nm,1.0s						
KMMI	**Kalianget**	**16.60**	**266**	P	**P**	**20 06 15.8**	**+1.8**
	comp=Z,62nm,0.7s						
PMG	**Port Moresby**	**16.69**	**102**	Pn	**P**	**20 06 17.3**	**+2.3**
	comp=Z,1.4nm,0.3s,baz=118,slow=23,SNR=2.0						
PMG				Sn	**Sn**	**20 09 12.1**	**-8.7**
	comp=Z,0.6nm,0.3s,baz=307,slow=20,SNR=2.5						
PMG	**Port Moresby**	**16.69**	**102**		**P**	**20 06 16.3**	**+1.2**
PMG				IAmb	IAmb	20 06 35.6	
	comp=Z,31nm,1.2s						
QIS	**Mount Isa**	**16.81**	**150**	P	**P**	**20 06 16.5**	**+0.1**
AS31	**Alice Springs**	**17.76**	**170**		**P**	**20 06 26.9**	**+0.1**
ASAR	**Alice Springs**	**17.77**	**170**	P	**Pn**	**20 06 27.9**	**+0.2**
MBWA	**Marble Bar**	**18.35**	**214**	P	**P**	**20 06 32.4**	**-0.7**
MBWA				IAmb	IAmb	20 06 45.8	
	comp=Z,30nm,1.4s						
PSA00	**Pilbara Seismi**	**18.61**	**213**	P	**P**	**20 06 35.6**	**-0.5**
PSA00				IAmb	IAmb	20 06 51.0	
	comp=Z,33nm,1.4s						
PSA00	**Pilbara Seismi**	**18.61**	**213**	P	**P**	**20 06 35.2**	**-0.9**
PSA00				IAmb	IAmb	20 06 50.8	
	comp=Z,7.8nm,1.4s						
PSA00	**Pilbara Seismi**	**18.61**	**213**	P	**P**	**20 06 35.6**	**-0.5**
	comp=Z,16nm,1.2s						
KKM	**Kota Kinabalu**	**18.78**	**310**	P	**P**	**20 06 38.1**	**+0.1**
KKM	**Kota Kinabalu**	**18.78**	**310**	P	**Pn**	**20 06 40.0**	**+0.1**
WRKA	**Warakurna**	**18.99**	**187**	P	**P**	**20 06 40.8**	**+0.6**
SBUM	**Sibu**	**20.26**	**294**	P	**P**	**20 06 53.9**	**-0.1**
SBUM				IAmb	IAmb	20 06 57.0	
	comp=Z,20nm,1.0s						
CTA	**Charters Tower**	**20.59**	**134**	P	**P**	**20 06 59.2**	**+1.7**
	comp=Z,9.1nm,1.2s,baz=322,slow=11,SNR=1.6						
CTAO	**Charters Tower**	**20.59**	**134**	P	**P**	**20 06 58.8**	**+1.3**
CTAO				IAmb	IAmb	20 07 21.7	
	comp=Z,14nm,1.1s						
KSM	**Kuching**	**21.65**	**290**	P	**P**	**20 07 07.2**	**-1.8**
KSM				IAmb	IAmb	20 07 11.4	
	comp=Z,14nm,0.9s						
TGY	**Tagaytay City**	**22.25**	**334**	P	**P**	**20 07 13.6**	**-1.6**
	comp=Z,111nm,0.3s,baz=98,slow=1.6,SNR=4.8						

MAKZ	**Makanchi**	**68.00**	**326**	P	**P**	**20 13 14.3 +0.3**
AAK	**Ala-Archa**	**70.26**	**319**	P	**P**	**20 13 28.0 -0.2**
AAK				IAmb	IAmb	20 13 29.9
	comp=Z,3.8nm,0.7s					
DRK	**Karamyk**	**70.64**	**315**	P	**P**	**20 13 30.6 -0.2**
ZAA0	**Zalesovo Array**	**71.05**	**333**	P	**P**	**20 13 31.8 -0.8**
ZAA0				IAmb	IAmb	20 13 32.7
	comp=Z,2.9nm,0.8s					
ZALV	**Zalesovo Beam**	**71.05**	**333**	P	**P**	**20 13 31.9 -0.6**
	comp=Z,2.9nm,0.6s,baz=120,slow=5.7,SNR=12					
	comp=Z,2.9nm,0.6s					
GAR	**Garm**	**71.48**	**314**	P	**P**	**20 13 35.4 -0.2**
BTK	**Batken**	**71.57**	**316**	P	**P**	**20 13 35.9 -0.2**
BTK				IAmb	IAmb	20 13 36.7
	comp=Z,3.9nm,0.7s					
KURK	**Kurchatov**	**72.08**	**328**	P	**P**	**20 13 38.4 -0.4**
KURK				IAmb	IAmb	20 13 39.6
	comp=Z,6.5nm,0.9s					
CHGR	**Chuyangaron**	**72.17**	**314**	P	**P**	**20 13 39.3 -0.4**
KK31	**Karatay Array**	**73.08**	**318**	P	**P**	**20 13 44.1 -0.8**
KKAR	**Karatay Array**	**73.08**	**318**	P	**P**	**20 13 44.6 -0.4**
KKAR	**Karatay Array**	**73.08**	**318**	P	**P**	**20 13 44.3 -0.7**
KKAR				IAmb	IAmb	20 13 45.9
	comp=Z,3.2nm,0.9s					
TIXI	**Tiksi**	**77.58**	**359**	P	**P**	**20 14 10.1 +0.1**
BRVK	**Borovoye**	**77.71**	**328**	P	**P**	**20 14 10.6 -0.5**
BRVK				IAmb	IAmb	20 14 11.7
	comp=Z,3.9nm,0.8s					
VOI	**Vohitsoka**	**82.07**	**249**	P	**P**	**20 14 34.5 -1.0**
ABKAR	**Akbulak array**	**82.19**	**321**	P	**P**	**20 14 34.8 -0.6**
ABKAR	**Akbulak array**	**82.19**	**321**	P	**P**	**20 14 34.4 -0.9**
ABKAR				IAmb	IAmb	20 14 35.9
	comp=Z,4.7nm,1.4s					
QSPA	**South Pole Qui**	**83.89**	**180**	P	**P**	**20 14 43.5 -0.5**
ARU	**Arti**	**85.27**	**328**	P	**P**	**20 14 50.2 -0.6**
ARU				IAmb	IAmb	20 14 51.4
	comp=Z,4.4nm,1.2s					
RAYN	**Ar Rayn**	**87.96**	**294**	P	**P**	**20 15 04.0 -0.8**
RAYN				IAmb	IAmb	20 15 05.5
	comp=Z,4.5nm,0.9s					

MAN 18 20:11:00.7, 16.41N×119.73E, h22km, mb4.2, ML3.0, MS2.7, Luzon

*TUL **18** 20:16:56.5±0.5, 36.50N±0.01×97.204W±0.009, h6km±5km, ML2.7, mb_Lg2.5/30(NEIC), Error ellipse: s-maj=1.7km s-min=1.0km az=176.0*
*ANF **18** 20:16:57.0±0.4, 36.47N×97.17W, h6km, ML3.0/9, Error ellipse: s-maj=4.2km s-min=3.5km az=117.0*
*NEIC **18** 20:16:57.1±0.3, 36.50N±0.01×97.21W±0.02, h4km±6km, Error ellipse: s-maj=2.4km s-min=1.5km az=217.0*
ISC 18 20:16:56.9±0.9, 36.50N±0.04×97.20W±0.04, h10km, n44, σ1§00/36, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T35A	**Sooner Cattle**	**0.69**	**53**	Pg	**Pg**	**20 17 09.8**	**-0.5**
T35B	**Sooner Cattle**	**0.69**	**53**	P	**Pg**	**20 17 09.8**	**-0.5**
	baz=234						
OKCFA	**Oklahoma City**	**1.10**	**191**	Pg	**Pb**	**20 17 16.9**	**-1.1**
OKCFA	**Oklahoma City**	**1.10**	**191**	P	**Pb**	**20 17 17.2**	**-0.9**
	baz=10						
OKCFA				S	**Sg**	**20 17 32.3**	**-0.1**
	baz=10						
OKCSW	**OKLAHOMA CITY**	**1.11**	**190**	Pg	**Pb**	**20 17 17.4**	**-0.8**
FNO	**Franklin**	**1.25**	**188**		**Pn**	**20 17 19.8**	**-0.7**
TUL1	**Leonard**	**1.28**	**117**	Pg	**Pn**	**20 17 20.3**	**-0.6**
TUL1	**Leonard**	**1.28**	**117**	P	**Pn**	**20 17 20.3**	**-0.6**
	baz=298						
TUL1				S	**Sb**	**20 17 37.3**	**-0.2**
	baz=298						
X34A	**Smith Ranch, M**	**1.96**	**196**	Pn	**Pn**	**20 17 31.7**	**+1.4**
WMOK	**Wichita Mounta**	**2.18**	**217**		**Pn**	**20 17 34.1**	**+0.8**
WMOK				IAmb_Lg		20 18 10.5	
	comp=Z,15nm,0.8s						
WMOK	**Wichita Mounta**	**2.18**	**217**	P	**Pn**	**20 17 34.6**	**+1.3**
	baz=36						
U38A	**Gravette**	**2.27**	**91**		**Pn**	**20 17 35.8**	**+1.4**
U38A	**Gravette**	**2.27**	**91**	P	**Pn**	**20 17 36.4**	**+2.0**
	baz=272						
R32A	**Long Quarter,**	**2.27**	**328**	Pn	**Pn**	**20 17 34.9**	**+0.3**
R32A	**Long Quarter,**	**2.27**	**328**	S	**Sn**	**20 18 04.4**	**+1.8**
	baz=148						
X37A	**Clayton**	**2.42**	**141**		**Pn**	**20 17 37.3**	**+0.8**
X37A	**Clayton**	**2.42**	**141**	P	**Pn**	**20 17 37.4**	**+0.9**
	baz=323						
HHAR	**Hobbs**	**2.63**	**94**		**Pn**	**20 17 38.8**	**-0.8**
W39A	**Magazine**	**3.06**	**114**	IAmb_Lg		20 18 40.5	
	comp=Z,20nm,0.8s						
CBKS	**Cedar Bluff**	**3.07**	**320**	Pn	**Pn**	**20 17 44.1**	**-1.4**
Z35A	**Perchaven, San**	**3.16**	**181**	Pn	**Pn**	**20 17 46.5**	**-0.2**
S39A	**Bolivar**	**3.32**	**68**	Pn	**Pn**	**20 17 49.9**	**+0.9**
S39A	**Bolivar**	**3.32**	**68**	P	**Pn**	**20 17 49.8**	**+0.9**
	baz=250						
U40A	**Yellville**	**3.50**	**91**		**Pn**	**20 17 52.6**	**+1.1**
U40A	**Yellville**	**3.50**	**91**	S	**Sn**	**20 18 34.1**	**+1.1**
	baz=274						
U40A				S	**Sn**	**20 18 34.1**	**+1.1**
	baz=274						
MIAR	**Mount Ida**	**3.54**	**122**	Pn	**Pn**	**20 17 51.9**	**0.0**
MIAR				IAmb_Lg		20 18 51.8	
	comp=Z,14nm,0.9s						
AMTX	**Amarillo**	**3.99**	**248**	Pn	**Pn**	**20 17 59.3**	**+1.0**
AMTX				IAmb_Lg		20 19 10.0	
	comp=Z,8.3nm,0.7s						
MGMO	**Mountain Grove**	**4.01**	**79**	Pn	**Pn**	**20 17 59.2**	**+0.8**
MGMO				IAmb_Lg		20 19 04.5	
	comp=Z,9.8nm,0.8s						
FCAR	**Ozark Folk Cen**	**4.15**	**97**	IAmb_Lg		20 19 16.6	
	comp=Z,8.2nm,0.9s						
WHAR	**Wooly Hollow**	**4.16**	**105**	Pn	**Pn**	**20 18 01.6**	**+1.1**
W41B	**Gary Mavity, V**	**4.23**	**107**	IAmb_Lg		20 19 09.9	
	comp=Z,13nm,0.8s						
P38A	**Dawn**	**4.25**	**42**		**Pn**	**20 18 01.7**	**-0.1**
UALR	**University of**	**4.31**	**112**	IAmb_Lg		20 19 20.5	
	comp=Z,14nm,1.0s						
R40A	**Maddies Statio**	**4.31**	**64**	Pn	**Pn**	**20 18 03.3**	**+0.7**
R40A				IAmb_Lg		20 19 15.5	
	comp=Z,7.1nm,0.8s						
R40A	**Maddies Statio**	**4.31**	**64**	P	**Pn**	**20 18 03.1**	**+0.5**
	baz=247						
ABTX	**Abilene, Hawle**	**4.36**	**208**	IAmb_Lg		20 19 17.0	
	comp=Z,7.5nm,1.1s						
WLAR	**White Oak Lake**	**4.37**	**129**	IAmb_Lg		20 19 18.5	
	comp=Z,12nm,0.9s						
N35A	**Tabor**	**4.52**	**15**		**Pn**	**20 18 06.0**	**+0.5**
LCAR	**Lake Charles**	**4.90**	**93**	IAmb_Lg		20 19 32.2	
	comp=Z,10nm,0.8s						
KSCO	**Kaye Shedlock'**	**4.98**	**302**	IAmb_Lg		20 19 43.8	
	comp=Z,7.4nm,0.7s						
CCM	**Cathedral Cave**	**4.99**	**70**	Pn	**Pn**	**20 18 10.7**	**-1.3**
PBMO	**Poplar Bluff**	**5.45**	**85**	IAmb_Lg		20 19 58.1	
	comp=Z,8.6nm,0.8s						
435B	**Jarrell**	**5.71**	**183**	IAmb_Lg		20 20 12.7	
	comp=Z,7.8nm,0.8s						
T25A	**Trinidad**	**5.82**	**278**	IAmb_Lg		20 20 02.8	
	comp=Z,10nm,0.8s						

MAN 18 20:30:48.6, 13.42N×120.79E, h20km, mb3.6, ML2.3, MS1.7, Mindoro

*GUC **18** 20:30:59.8±0.7, 52.28S×75.57W, h10km±29km, ML4.4*
*IDC **18** 20:30:59.1±0.8, 52.28S×75.42W, h0km, mb4.2/8, mbtmp4.2/9, ML4.1/1, MS3.6/2, Error ellipse: s-maj=25.5km s-min=17.3km az=75.0*
*NEIC **18** 20:31:02.0±1.3, 52.31S±0.05×75.4W±0.2, h13km±6km, mb4.5/16, ML4.4(GUC), Error ellipse: s-maj=15.6km s-min=7.9km az=93.0*
ISC 18 20:31:00.9±0.6, 52.32S±0.05×75.46W±0.06, h10km, n59, σ1§19/62, mb4.5/17, 6C, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MG05	**Puerto Natales**	**1.93**	**72**		**Pn**	**20 31 33.9**	**+0.1**
MG05					**Sn**	**20 31 59.1**	**+1.0**
MG05	**Puerto Natales**	**1.93**	**72**	*eP*	**Pn**	**20 31 33.9**	**+0.1**
MG05				*eS*	**Sn**	**20 31 59.3**	**+1.2**
MG05				IAML		20 32 06.4	
	comp=E,4μm,0.5s						
GO09	**Cerro Castillo**	**2.20**	**63**		**Pn**	**20 31 37.7**	**+0.2**
GO09				Sn	**Sb**	**20 32 06.7**	**-1.3**
GO09	**Cerro Castillo**	**2.20**	**63**	*eP*	**Pn**	**20 31 37.8**	**+0.2**
GO09				*eS*	**Sb**	**20 32 07.3**	**-0.7**
GO09				IAML		20 32 12.4	
	comp=E,2μm,0.4s						
MG04	**Isla Riesco**	**2.43**	**104**		**Pn**	**20 31 41.2**	**+0.6**
MG04	**Isla Riesco**	**2.43**	**104**	*eP*	**Pn**	**20 31 41.4**	**+0.7**
MG04				*eS*	**Sb**	**20 32 14.0**	**-0.7**
MG04				IAML		20 32 23.2	
	comp=E,4μm,0.6s						
GO10	**Punta Arenas**	**2.81**	**109**		**Pn**	**20 31 46.6**	**+0.7**
GO10	**Punta Arenas**	**2.81**	**109**	*eP*	**Pn**	**20 31 46.6**	**+0.7**
GO10				*eS*	**Sn**	**20 32 22.5**	**+2.7**
GO10				IAML		20 32 38.2	
	comp=N,2μm,0.6s						
MG03	**Isla Dawson**	**3.38**	**119**		**Pn**	**20 31 53.8**	**+0.1**
MG03	**Isla Dawson**	**3.38**	**119**	*eP*	**Pn**	**20 31 53.7**	**+0.1**
MG03				*eS*	**Sn**	**20 32 36.8**	**+3.0**
MG03				IAML		20 32 48.5	
	comp=E,365nm,0.6s						
MG02	**Cerro Sombrero**	**3.83**	**99**	Pn	**Pn**	**20 32 00.1**	**+0.2**
MG02	**Cerro Sombrero**	**3.83**	**99**	*eP*	**Pn**	**20 32 00.4**	**+0.5**
MG02				*eS*	**Sn**	**20 32 46.1**	**+1.2**
DSPA	**Despedida**	**4.63**	**114**		**Pn**	**20 32 10.1**	**-0.7**
USHA	**Ushuaia**	**4.88**	**124**	Pn	**Pn**	**20 32 13.5**	**-0.8**
	comp=E,7.0nm,0.3s,baz=308,slow=1.4,SNR=27						
USHA				Sn	**Sn**	**20 33 07.2**	**-3.6**
	comp=E,13nm,0.3s,baz=266,slow=18,SNR=1.8						
USHA				Lg	Lg	20 33 32.8	
	comp=E,13nm,0.3s,baz=176,slow=21,SNR=2.2						
	comp=E,28nm,0.4s						
USHA	**Ushuaia**	**4.88**	**124**	*eP*	**Pn**	**20 32 12.3**	**-2.0**
USHA				*eS*	**Sn**	**20 33 06.5**	**-4.4**
MG01	**Puerto William**	**5.34**	**122**		**Pn**	**20 32 20.9**	**+0.3**
MG01	**Puerto William**	**5.34**	**122**	*eP*	**Pn**	**20 32 21.7**	**+1.1**
EFI	**East Falkland**	**10.75**	**93**	Pn	**Pn**	**20 33 34.3**	**-0.4**
CO02	**Combarbal**	**21.35**	**11**	P	**P**	**20 35 48.8**	**+0.6**
CO03	**El Pedregal**	**21.74**	**11**	P	**P**	**20 35 51.8**	**-0.6**
CO03				IAmb	IAmb	20 36 03.9	
	comp=Z,30nm,1.4s						
GO04	**Tololo Observa**	**22.39**	**11**	P	**P**	**20 35 59.3**	**-0.2**
GO04				IAmb	IAmb	20 36 22.1	
	comp=Z,26nm,1.3s						
CO01	**Juntas del Tor**	**22.67**	**12**	P	**P**	**20 36 03.1**	**+0.6**
LCO	**Las Campanas**	**23.55**	**10**	P	**P**	**20 36 11.6**	**+0.1**
LCO				IAmb	IAmb	20 36 35.8	
	comp=Z,26nm,1.5s						
AC02	**Maricunga**	**25.89**	**13**		**P**	**20 36 34.9**	**+1.5**
AC02				IAmb	IAmb	20 36 38.6	
	comp=Z,13nm,1.5s						
PLTB	**Pedras Altas**	**25.99**	**46**	P	**P**	**20 36 32.2**	**-1.5**
PLTB				IAmb	IAmb	20 36 49.9	
	comp=Z,12nm,1.3s						
CPUP	**Villa Florida**	**29.33**	**35**	P	**P**	**20 37 02.8**	**-0.8**
	comp=Z,3.1nm,0.7s,baz=210,slow=8.6,SNR=9.6						
CPUP				LR	LR	20 48 30.1	
	comp=Z,127nm,21.9s,baz=210,slow=36						
	comp=Z,3.1nm,0.7s						
CPUP	**Villa Florida**	**29.33**	**35**		**P**	**20 37 02.8**	**-0.8**
CPUP				IAmb	IAmb	20 37 03.7	
	comp=Z,6.2nm,0.9s						
BELA	**Belgrano 2**	**29.57**	**164**	P	**P**	**20 37 06.3**	**+1.0**
LVC	**Limon Verde**	**30.08**	**12**	LR	LR	20 48 53.2	
	comp=Z,130nm,20.6s,baz=203,slow=36						
VNA3	**Neumayer Olymp**	**34.06**	**148**	P	**P**	**20 37 45.8**	**+1.0**
SNAA	**Sanae**	**36.21**	**149**	P	**P**	**20 38 03.8**	**+0.4**
SNAA	**Sanae**	**36.21**	**149**	P	**P**	**20 38 03.4**	**0.0**
	comp=Z,1.0nm,0.5s,baz=254,slow=8.0,SNR=9.9						
	comp=Z,1.0nm,0.5s						
SNAA	**Sanae**	**36.21**	**149**	P	**P**	**20 38 03.6**	**+0.3**
SNAA				IAmb	IAmb	20 38 04.4	
	comp=Z,9.4nm,1.4s						
LPAZ	**La Paz**	**36.41**	**12**	P	**P**	**20 38 06.2**	**-0.1**
	comp=Z,1.6nm,0.7s,baz=160,slow=2.1,SNR=7.3						
	comp=Z,1.6nm,0.7s						
LPAZ	**La Paz**	**36.41**	**12**	P	**P**	**20 38 07.4**	**+1.2**
TROLL	**Troll, Antarti**	**37.81**	**150**	P	**P**	**20 38 17.5**	**+0.4**
QSPA	**South Pole Qui**	**37.93**	**180**	P	**P**	**20 38 18.9**	**+0.8**
	comp=Z,3.0nm,0.7s,baz=120,slow=9.2,SNR=10						
	comp=Z,3.0nm,0.7s						
QSPA	**South Pole Qui**	**37.93**	**180**	P	**P**	**20 38 19.7**	**+1.6**
BDFB	**Brasilia**	**42.58**	**41**	P	**P**	**20 38 57.0**	**0.0**
	comp=Z,4.9nm,0.6s,baz=228,slow=7.6,SNR=9.8						
	comp=Z,4.9nm,0.6s						
BDFB	**Brasilia**	**42.58**	**41**	P	**P**	**20 38 56.8**	**-0.2**
CASY	**Casey**	**61.65**	**183**	P	**P**	**20 41 19.2**	**+1.0**
CASY				IAmb	IAmb	20 41 33.7	
	comp=Z,5.9nm,1.2s						
LIC	**Lamto**	**83.14**	**71**	*iPKP1*	**P**	**20 43 27.5**	**+0.5**
	comp=Z,10nm,0.5s						
KIC	**Kosan Boka**	**83.42**	**71**	*iPKP1*	**P**	**20 43 28.2**	**-0.3**
	comp=Z,4.2nm,0.5s						
TIC	**Toumodi**	**83.48**	**70**	*iPKP1*	**P**	**20 43 28.7**	**-0.1**
	comp=Z,2.8nm,0.2s						
DBIC	**Dimbokro**	**83.60**	**71**	P	**P**	**20 43 28.9**	**-0.5**
	comp=Z,4.2nm,0.6s,baz=218,slow=4.1,SNR=8.9						
	comp=Z,4.2nm,0.6s						
DBIC	**Dimbokro**	**83.60**	**71**	P	**P**	**20 43 29.0**	**-0.4**
TXAR	**Lajitas Array**	**84.97**	**336**	P	**P**	**20 43 35.1**	**-1.0**
	comp=Z,0.2nm,0.5s,baz=161,slow=3.8,SNR=2.1						
	comp=Z,0.2nm,0.5s						
TORD	**Torodi Ar. Bea**	**92.60**	**72**	P	**P**	**20 44 12.2**	**-0.5**
	comp=Z,1.6nm,0.6s,baz=226,slow=4.9,SNR=11						
	comp=Z,1.6nm,0.6s						
TORD	**Torodi Ar. Bea**	**92.60**	**72**	P	**P**	**20 44 12.7**	**0.0**
H11S2	**WAKE ISLAND Hyl**	**21.39**	**259**	T	T	23 03 04.6	
	baz=141,slow=76,SNR=1519						
H11S3	**WAKE ISLAND Hyl**	**21.41**	**259**	T	T	23 03 05.6	
	baz=141,slow=76,SNR=832						
H11S1	**WAKE ISLAND Hyl**	**21.41**	**259**	T	T	23 03 05.8	
	baz=141,slow=76,SNR=901						
H11N3	**WAKE ISLAND Hyl**	**22.21**	**261**	T	T	23 04 03.5	
	baz=142,slow=75,SNR=252						
H11N1	**WAKE ISLAND Hyl**	**22.22**	**261**	T	T	23 04 05.1	
	baz=142,slow=75,SNR=216						
H11N2	**WAKE ISLAND Hyl**	**22.23**	**261**	T	T	23 04 05.6	
	baz=142,slow=75,SNR=218						
ILAR	**Eielson Array**	**129.01**	**328**	PKP	**PKPdf**	**20 50 06.9**	**-0.5**
	comp=Z,0.8nm,1.0s,baz=174,slow=1.8,SNR=4.3						
AKASG	**Malin Array Be**	**135.09**	**61**	PKP	**PKPdf**	**20 50 18.4**	**-0.9**
	comp=Z,0.2nm,0.4s,baz=310,slow=0.9,SNR=1.0						
MJAR	**Matsushiro Arr**	**151.57**	**290**	PKPbc	**PKPbc**	**20 50 54.6**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=132,slow=4.7,SNR=2.2						
SEY	**Seymchan**	**152.93**	**312**	PKPbc	**PKPbc**	**20 50 55.7**	**-1.2**
	comp=Z,2.7nm,0.9s,baz=103,slow=4.4,SNR=6.3						

*NEIC **18** 20:36:14.8±1.5, 52.1N±0.2×172.1W±0.1, h41km±64km, Error ellipse: s-maj=26.6km s-min=2.7km az=158.0*
AEIC 18 20:36:13±1.2, 51.9N±0.2×172.09W±0.10, h31km±9km, ML2.8, MLS.3.6/6(NEIC), Error ellipse: s-maj=22.6km s-min=7.0km az=165.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOFP	**Korovin Flat P**	**1.28**	**286**		Pn	20 36 35.6	+0.8
ATKA	**Atka Island**	**1.33**	**282**		Pn	20 36 35.8	+0.4
GSMY	**Great Sitkin M**	**2.46**	**274**		Pn	20 36 52.0	+1.1
GSTR	**Great Sitkin T**	**2.46**	**275**		Pn	20 36 52.3	+1.3
GSTD	**Great Sitkin T**	**2.51**	**274**		Pn	20 36 52.8	+1.0
ADK	**Adak**	**2.85**	**271**		Pn	20 36 57.8	+1.6
ADK	**Adak**	**2.85**	**271**	IAML		20 37 42.7	
	114nm,0.2s						
KIWB	**Kanaga Island**	**3.14**	**270**		Pn	20 37 01.7	+1.4
UNV	**Unalaska Valle**	**3.88**	**58**	Pn	Pn	20 37 11.3	+0.8
AKUT	**Akutan**	**4.40**	**57**	Pn	Pn	20 37 19.0	+1.4
AKUT				IAML		20 39 58.0	
	comp=N,76nm,2.0s						
SPIA	**Saint Paul Isl**	**5.36**	**11**	Pn	Pn	20 37 32.6	+1.9
SDPT	**Sand Point**	**7.70**	**59**	Pn	Pn	20 38 01.8	-1.1

*IDC **18** 20:38:02.3±0.7, 20.14S×168.90E, h0km, mb4.4/15, mbtmp4.5/17, ML4.1/1, MS4.4/22, Error ellipse: s-maj=20.6km s-min=17.6km az=123.0*
*NEIC **18** 20:38:04.8±2.4, 20.40S±0.07×168.70E±0.07, h10km±1km, mb5.1/61, Error ellipse: s-maj=12.5km s-min=10.8km az=136.0*
*NOU **18** 20:38:07.7, 20.49S×168.70E, h0km, mb5.0/43, Loyalty Islands*
*GCMT **18** 20:38:09.8±0.2, 20.26S±0.02×168.59E±0.02, h28km, MW5.2/93, Moment Tensor Solution. s75,c85; s93,c131;*
Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 4.70±.20; Mθθ 0.06±.15; Mϕϕ -4.64±.13; Mrθ 0.49±.34; Mrϕ 2.40±.10; Mθϕ -4.17±.25; Best double couple: M=6.69200×10^16 NP1: ϕs 323.00000°, δ 27.00000°, λ 67.00000°. NP2: ϕs 168.00000°, δ 65.00000°, λ 101.00000°. Principal axes: T 6.3180, Plg68.0000°, Azm100.0000°; N 0.7460, Plg10.0000°, Azm343.0000°; P -7.0650, Plg19.0000°, Azm250.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
ISC 18 20:38:04.4±0.3, 20.32S±0.05×168.83E±0.05, h10km, n249, σ1§66/221, mb5.0/57, MS4.4/24, 2C-10D, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**1.37**	**213**	Pn	**Pn**	**20 38 27.9**	**-1.7**
MARNC	**Mare, Loyalty**	**1.37**	**213**	P	**Pn**	**20 38 28.2**	**-1.4**
PINNC	**Pines Island,**	**2.62**	**209**	Pn	**Pn**	**20 38 45.5**	**-1.2**
PINNC	**Pines Island,**	**2.62**	**209**	P	**Pn**	**20 38 45.7**	**-1.0**
DZM	**Mont Dzumac**	**2.82**	**231**	Pn	**Pn**	**20 38 49.1**	**-0.6**
	28nm,0.3s,baz=70,slow=18,SNR=80						
DZM				Sn	**Sn**	**20 39 21.7**	**-2.1**
	94nm,0.3s,baz=6.7,slow=20,SNR=9.2						
DZM				LR	LR	20 39 29.8	
	comp=Z,5μm,19.8s,baz=1.0,slow=29						
	243nm,0.6s						
NOUC	**Port Laguerre**	**2.95**	**233**	P	**Pn**	**20 38 50.6**	**-0.7**
KOUNC	**Koumac, New Ca**	**4.26**	**266**	Pn	**Pn**	**20 39 08.2**	**-1.2**
KOUNC	**Koumac, New Ca**	**4.26**	**266**	P	**Pn**	**20 39 09.2**	**-0.2**
MSVF	**Nonsavu**	**9.10**	**75**	Pn	**Pn**	**20 40 20.5**	**+4.7**
	0.4nm,0.3s,baz=247,slow=14,SNR=9.2						
MSVF				LR	LR	20 43 07.3	
	comp=Z,7μm,18.2s,baz=246,slow=34						
MSVF	**Nonsavu**	**9.10**	**75**	Pn	**Pn**	**20 40 18.7**	**+2.9**
MSVF	**Nonsavu**	**9.10**	**75**	P	Pn	20 40 21.7	+5.8
DGTI	**Dogotuki**	**11.11**	**71**	P	Pn	20 40 50.0	+6.7
TAVE	**Taveuni**	**11.28**	**73**	P	Pn	20 40 51.8	+6.1
	133nm,1.4s						
HNR	**Honiara**	**13.81**	**320**	LR	LR	20 45 56.3	
	comp=Z,659nm,20.1s,baz=146,slow=35						
RAO	**Raoul Island**	**14.96**	**129**	LR	LR	20 46 08.4	
	comp=Z,1μm,20.4s,baz=272,slow=32						
OUZ	**Omahuta**	**15.43**	**165**		**Pn**	**20 41 42.9**	**+0.8**
EIDS	**Eidsvold**	**17.11**	**250**	Pn	**Pn**	**20 42 02.3**	**-1.4**
RK1H	**Rockhampton Ha**	**17.29**	**257**	P	**P**	**20 42 09.9**	**+2.5**
	32nm,1.2s						
ARMA	**Armidale**	**18.49**	**234**	P	**P**	**20 42 23.6**	**+2.8**
	baz=19,SNR=3.5						
ARMA	**Armidale**	**18.49**	**234**	P	**Pn**	**20 42 19.6**	**-1.3**
ARMA	**Armidale**	**18.49**	**234**	P	**P**	**20 42 23.4**	**+2.6**
URZ	**Urewera**	**19.27**	**160**	P	**Pn**	**20 42 31.6**	**+1.5**
	26nm,1.1s,baz=354,slow=8.7,SNR=4.3						
URZ				LR	LR	20 49 16.2	
	comp=Z,2μm,18.3s,baz=31,slow=35						
URZ	**Urewera**	**19.27**	**160**		**Pn**	**20 42 30.6**	**+0.6**
RMQ	**Roma**	**19.40**	**248**	P	**Pn**	**20 42 33.7**	**+1.8**
	baz=20,SNR=18						
RMQ	**Roma**	**19.40**	**248**	P	**Pn**	**20 42 34.2**	**+2.3**
AFI	**Afiamalu**	**19.59**	**74**	LR	LR	20 48 31.9	
	comp=Z,1μm,18.9s,baz=274,slow=32						
BKZ	**Black Stump Fm**	**19.91**	**162**	P	**P**	**20 42 34.7**	**-1.5**
BKZ	**Black Stump Fm**	**19.91**	**162**	P	**Pn**	**20 42 39.3**	**+1.4**
SYDH	**Sydney Hard Ro**	**20.90**	**226**	P	Pn	20 42 49.5	0.0
CTA	**Charters Tower**	**21.18**	**267**	P	**P**	**20 42 50.6**	**+0.4**
	32nm,1.1s,baz=4.3,slow=0.8,SNR=6.3						
CTA				LR	LR	20 50 32.7	
	comp=Z,986nm,19.5s,baz=86,slow=35						
	32nm,1.1s						
CTA	**Charters Tower**	**21.18**	**267**	P	**P**	**20 42 54.0**	**+3.8**
CTAO	**Charters Tower**	**21.18**	**267**		**P**	**20 42 50.4**	**+0.2**
CTAO				IAmb	IAmb	20 43 07.3	
	comp=Z,69nm,1.1s						
CTAO	**Charters Tower**	**21.18**	**267**	P	**P**	**20 42 53.8**	**+3.6**
TUWZ	**Tuamarina**	**21.49**	**169**	P	**P**	**20 42 52.4**	**-0.8**
CNB	**Canberra Magne**	**22.73**	**225**	P	**P**	**20 43 09.1**	**+2.5**
	baz=23,SNR=5.9						
CNB	**Canberra Magne**	**22.73**	**225**	P	**P**	**20 43 09.5**	**+2.8**
KRVT	**Keravat (AS076**	**22.82**	**312**	P	**P**	**20 43 06.6**	**-1.1**
	comp=Z,9.0nm,0.4s,baz=337,slow=9.3,SNR=5.0						
	comp=Z,9.0nm,0.4s						
CAN	**Canberra**	**22.97**	**225**	P	**P**	**20 43 15.1**	**+5.9**
MTSU	**Mount Surprise**	**23.24**	**271**	P	**P**	**20 43 14.0**	**+2.0**
	baz=23,SNR=24						
MTSU	**Mount Surprise**	**23.24**	**271**	P	**P**	**20 43 14.2**	**+2.1**
QLP	**Quilpie**	**23.39**	**250**	P	**P**	**20 43 14.3**	**+0.8**
	baz=24,SNR=14						
QLP	**Quilpie**	**23.39**	**250**	P	**P**	**20 43 15.8**	**+2.4**
RPZ	**Rata Peaks**	**23.40**	**176**	LR	LR	20 52 29.3	
	comp=Z,2μm,18.0s,baz=350,slow=37						
PMG	**Port Moresby**	**23.55**	**294**	P	**P**	**20 43 14.3**	**-0.9**
	comp=Z,26nm,0.9s,baz=157,slow=5.7,SNR=3.7						
PMG				LR	L

KDU	Kakadu	35.61	277	P	P	20 45 08.3	+5.8	
	comp=Z,18nm,1.5s							
MTN	Manton Dam	36.82	276	P	P	20 45 13.1	+0.2	
	baz=37,SNR=5.8							
MTN	Manton Dam	36.82	276	P	P	20 45 11.9	-0.9	
MTN				IAmb	IAmb	20 45 18.0		
	comp=Z,48nm,1.4s							
MTN	Manton Dam	36.82	276	P	P	20 45 15.1	+2.2	
WRKA	Warakurna	37.59	255	P	P	20 45 19.3	-0.1	
	baz=38,SNR=6.1							
WRKA	Warakurna	37.59	255	P	P	20 45 19.7	+0.3	
KNRA	Kununurra	38.32	270	P	P	20 45 25.0	-0.6	
	baz=38,SNR=5.3							
KNRA	Kununurra	38.32	270	P	P	20 45 25.0	-0.6	
KNRA	Kununurra	38.32	270	P	P	20 45 29.3	+3.7	
TBI	Tubuai	38.74	102	eLR	LR	20 56 10.6		
	comp=Z,422nm,24.2s							
PPT2	Papeete2	39.36	93	eS	S	20 51 35.4	-0.7	
	comp=Z,286nm,24.8s							
PPT2				eLR	LR	20 56 27.9		
	comp=Z,652nm,23.2s							
PPT	Papeete	39.37	93	LR	LR	21 01 10.2		
	comp=Z,230nm,18.2s,baz=285,slow=35							
PSA00	Pilbara Seismi	45.61	259	P	P	20 46 25.1	-0.2	
PSA00	Pilbara Seismi	45.61	259	P	P	20 46 25.0	-0.2	
PSA00				IAmb	IAmb	20 46 37.9		
	comp=Z,30nm,1.2s							
PSA00	Pilbara Seismi	45.61	259	P	P	20 46 30.4	+5.2	
MBWA	Marble Bar	45.77	260	P	P	20 46 26.3	-0.2	
MBWA	Marble Bar	45.77	260	P	P	20 46 32.0	+5.5	
KLBR	Kellerberrin	46.90	245	P	P	20 46 35.4	+0.2	
	baz=47,SNR=4.4							
KLBR	Kellerberrin	46.90	245	P	P	20 46 39.5	+4.2	
NWAO	Narrogin (SRO)	47.38	244	P	P	20 46 38.3	-0.6	
BLDU	Ballidu	47.80	247	P	P	20 46 43.4	+1.2	
	baz=48,SNR=3.9							
BLDU	Ballidu	47.80	247	P	P	20 46 48.2	+6.0	
	comp=Z,17nm,1.0s							
MORW	Morawa	48.41	249	P	P	20 46 46.8	-0.2	
MORW	Morawa	48.41	249	P	P	20 46 50.6	+3.6	
LUWI	Luwuk	48.90	287	P	P	20 46 51.3	+0.5	
KAPI	Kappang	50.02	281	P	P	20 46 59.9	+0.4	
TAOE	Nuku Hiva Isla	50.49	85	eLR	LR	21 01 39.3		
	comp=Z,428nm,26.9s							
TOLI2	Tolitoli	51.63	289	P	P	20 47 11.0	-0.6	
VNDA	Vanda	57.34	182	P	P	20 47 53.1	+0.9	
	comp=Z,1.2nm,1.1s,baz=345,slow=6.0,SNR=2.4							
VNDA				LR	LR	21 08 12.3		
	comp=Z,171nm,20.9s,baz=24,slow=32							
	comp=Z,1.2nm,1.1s							
VNDA	Vanda	57.34	182	P	P	20 47 51.8	-0.4	
VNDA				IAmb	IAmb	20 48 34.8		
	comp=Z,24nm,1.9s							
SBA	Scott Base	57.59	181	P	P	20 47 53.6	-0.3	
SBA				IAmb	IAmb	20 48 08.3		
	comp=Z,32nm,1.4s							
TGY	Tagaytay City	58.20	302	P	P	20 47 58.5	-0.6	
	comp=Z,166nm,0.3s,baz=178,slow=7.4,SNR=5.8							
CASY	Casey	58.98	204	P	P	20 48 03.5	-0.4	
CASY				IAmb	IAmb	20 48 09.4		
	comp=Z,18nm,1.3s							
MJAR	Matsushiro Arr	63.52	333	P	P	20 48 33.9	-1.1	
	comp=Z,3.9nm,1.1s,baz=156,slow=6.8,SNR=5.0							
	comp=Z,3.9nm,1.1s							
MJAR	Matsushiro Arr	63.52	333	P	P	20 48 33.8	-1.2	
MAJO	Matsushiro	63.53	333	P	P	20 48 34.5	-0.5	
MAJO				IAmb	IAmb	20 48 35.0		
	comp=Z,9.2nm,1.1s							
JSD	Sado	64.77	334	P	P	20 48 43.2	+0.2	
KSAR	Wonju Array Be	69.19	326	P	P	20 49 11.0	-0.2	
BKNI	Bangkinang	69.34	278	P	P	20 49 12.1	-0.6	
QSPA	South Pole Qui	69.74	180	LR	LR	21 18 15.9		
	comp=Z,354nm,18.2s,baz=26,slow=34							
QSPA	South Pole Qui	69.74	180	P	P	20 49 13.3	-1.1	
NJ2	Nanjing	70.72	316	eP	P	20 49 23.1	+2.4	
NJ2				pmax	pmax			
	comp=Z,5.0nm,0.5s							
USA0B	Ussuriysk Arra	72.52	333	P	P	20 49 31.2	-0.1	
USRK	Ussuriysk Ar.	72.52	333	P	P	20 49 30.7	-0.7	
	comp=Z,9.2nm,1.0s,baz=161,slow=4.4,SNR=9.5							
	comp=Z,9.2nm,1.0s							
USRK	Ussuriysk Ar.	72.52	333	P	P	20 49 31.2	-0.1	
PEA0B	Petropavlovsk-	73.75	353	P	P	20 49 38.1	-0.3	
PEA0B				IAmb	IAmb	20 49 39.0		
	comp=Z,30nm,1.2s							
PETK	Petropavlovsk-	73.75	353	P	P	20 49 37.5	-0.9	
	comp=Z,4.0nm,0.9s,baz=98,slow=9.1,SNR=7.4							
	comp=Z,4.0nm,0.9s							
PETK	Petropavlovsk-	73.75	353	P	P	20 49 37.9	-0.6	
MDJ	Mudanjiang	73.89	332	P	P	20 49 40.3	+0.9	
MDJ				S	S	20 59 13.1	+1.9	
MDJ				SS	SS	21 03 57.8	+1.8	
MDJ				pmax	pmax			
	comp=Z,11nm,1.4s							
MDJ				pmax	pmax			
	comp=Z,98nm,3.5s							
MDJ				LR	LR			
	comp=Z,150nm,4.4s							
MDJ				LR	LR			
	comp=Z,180nm,4.6s							
MDJ				LR	LR			
	comp=Z,120nm,6.0s							
RPN	Rapa Nui	74.02	113	LR	LR	21 14 16.9		
	comp=Z,116nm,20.7s,baz=306,slow=29							
CN2	Changchun	75.18	329	eP	P	20 49 46.8	-0.1	
CN2				PcP	pwP	20 49 57.6	+2.3	
CN2				pmax	pmax			
	comp=Z,10.0nm,1.1s							
BNX	BinXian	75.73	331	eP	P	20 49 49.3	-0.8	
BNX				pmax	pmax			
	comp=Z,10.0nm,0.9s							
BNX				pmax	pmax			
	comp=Z,160nm,4.0s							
ENH	Enshi	76.06	310	P	P	20 49 51.7	-0.7	
ENH				IAmb	IAmb	20 50 25.3		
	comp=Z,14nm,1.3s							
LYN	LuoYang	76.45	315	⇑iP	P	20 49 49.4	-5.0	
LYN				S	S	20 59 34.8	-5.3	
LYN	LuoYang	76.45	315	SS	SS	21 04 25.3	-10	
LYN				pmax	pmax			
	comp=Z,120nm,5.9s							
LYN				LR	LR			
	comp=N,200nm,21.1s							
LYN				LR	LR			
	comp=Z,210nm,21.1s							
KLR	Kul'dur	76.69	336	P	P	20 49 54.2	-1.3	
	comp=Z,3.8nm,1.0s,baz=137,slow=5.6,SNR=11							
	comp=Z,3.8nm,1.0s							
HNS	HongShan	76.74	318	⇓P	P	20 49 56.6	+0.6	
HNS				S	S	20 59 45.3	+2.1	
HNS				pmax	pmax			
	comp=Z,12nm,1.4s							
HNS				LR	LR			
	comp=Z,160nm,19.1s							
HNS				LR	LR			
	comp=Z,190nm,19.1s							
BJT	Baijiatuau	77.52	321	P	P	20 49 59.8	-0.6	
BJT				IAmb	IAmb	20 50 11.8		
	comp=Z,29nm,1.7s							
BJI	Beijing	77.53	321	P	P	20 50 00.6	+0.2	
BJI				pmax	pmax			
	comp=Z,6.0nm,1.1s							
BJI				pmax	pmax			
	comp=Z,110nm,5.8s							
XAN	Xi'an	78.55	313	⇑P	P	20 50 07.8	+1.5	
XAN				pP	pwP	20 50 15.5	+0.8	
XAN				S	S	21 00 01.0	-2.1	
XAN				sS	ScS	21 00 25.8	-1.8	
XAN				pmax	pmax			
	comp=Z,7.0nm,1.9s							
XAN				LR	LR			
	comp=Z,140nm,19.2s							
XAN				LR	LR			
	comp=Z,200nm,19.9s							
CMAR	Chiang Mai Arr	78.59	295	P	P	20 50 06.5	-0.3	
	comp=Z,0.9nm,0.7s,baz=129,slow=2.6,SNR=4.5							
	comp=Z,0.9nm,0.7s							
CMAR	Chiang Mai Arr	78.59	295	P	P	20 50 06.3	-0.4	
CHTO	Chiang Mai	78.75	295		P	20 50 07.9	+0.3	
PZH	PanZhiHua	79.96	303	P	P	20 50 15.4	+1.1	
PZH				pmax	pmax			
	comp=Z,10.0nm,0.8s							
PZH				pmax	pmax			
	comp=Z,90nm,7.4s							
XLT	XiLinHaoTe	80.09	324	eP	P	20 50 24.4	+10	
XLT				pP	pwP	20 50 35.5	+13	
XLT				sP	PcP	20 50 38.8	+17	
XLT				SKS	S	21 00 08.4	-11	
CD2	Chengdu	80.58	308	P	P	20 50 17.8	+0.4	
HHC	Hu-ho-hao-te	80.79	320	eP	P	20 50 20.1	+1.7	
HHC				pmax	pmax			
	comp=Z,29nm,0.9s							
BELA	Belgrano 2	81.06	175	P	P	20 50 18.4	-0.8	
BELA				IAmb	IAmb	20 50 24.6		
	comp=Z,26nm,1.3s							
HIA	Hailar	81.85	330	P	P	20 50 23.1	-0.5	
HIA				IAmb	IAmb	20 53 29.2		
	comp=Z,8.6nm,0.4s							
LZH	Lanzhou	83.16	312	eP	P	20 50 32.1	+1.1	
LZH				pmax	pmax			
	comp=Z,20nm,1.0s							
LZH				LR	LR			
	comp=Z,120nm,17.2s							
LZH				LR	LR			
	comp=Z,130nm,15.2s							
KMPM	Mount Pierce	86.77	45	P	P	20 50 48.9	0.0	
KHMM	Horse Mountain	87.25	45	P	P	20 50 51.4	0.0	
KHMM				IAmb	IAmb	20 50 52.0		
	comp=Z,14nm,1.1s							
TROLL	Troll, Antarti	87.43	184	P	P	20 50 50.9	-1.0	
ULN	Ulaanbaatar	87.50	324	P	P	20 50 52.2	-0.3	
SHL	Shillong	87.52	298	P	P	20 50 52.0	-1.1	
SHL				IAmb	IAmb	20 51 33.5		
	comp=Z,19nm,1.6s							
GTA	Gaotai	87.58	314	⇓P	P	20 50 53.4	+0.4	
GTA				pP	pwP	20 51 03.1	+1.7	
GTA				sP	sP	20 51 07.1	+12	
GTA				S	S	21 01 34.4	-0.5	
GTA				pmax	pmax			
	comp=Z,3.0nm,1.0s							
GTA				pmax	pmax			
	comp=Z,55nm,7.3s							
GTA				LR	LR			
	comp=Z,94nm,16.7s							
GTA				LR	LR			
	comp=Z,94nm,18.2s							
GTA				LR	LR			
	comp=Z,260nm,19.3s							
YAK	Yakutsk	87.78	343	P	P	20 50 52.2	-1.0	
SONM	Songino Array	87.85	323	P	P	20 50 53.3	-0.8	
	comp=Z,5.8nm,1.0s,baz=140,slow=4.9,SNR=33							
	comp=Z,5.8nm,1.0s							
SONM	Songino Array	87.85	323	P	P	20 50 53.5	-0.5	
SONM				IAmb	IAmb	20 51 05.7		
	comp=Z,16nm,1.2s							
SNAA	Sanae	88.07	183	P	P	20 50 54.4	-0.5	
SNAA	Sanae	88.07	183	P	P	20 50 53.4	-1.4	
SNAA				IAmb	IAmb	20 51 23.8		
	comp=Z,16nm,1.3s							
ORV	Oroville	88.10	46	P	P	20 50 54.0	-1.3	
ORV				IAmb	IAmb	20 50 55.4		
	comp=Z,9.4nm,1.2s							
CMB	Columbia Colle	88.16	48	P	P	20 50 54.1	-1.6	
CMB				IAmb	IAmb	20 50 55.6		
	comp=Z,8.6nm,1.3s							
YBH	Yreka Blue Hor	88.34	44	LR	LR	21 22 54.7		
	comp=Z,230nm,20.0s,baz=216,slow=30							
ISA	Isabella, Lake	88.46	51	P	P	20 50 55.9	-1.4	
ISA				IAmb	IAmb	20 51 29.8		
	comp=Z,6.6nm,1.0s							
HUMO	Hull Mountain	88.61	43	P	P	20 50 56.7	-1.0	
HUMO				IAmb	IAmb	20 50 58.3		
	comp=Z,14nm,1.3s							
VNA3	Neumayer Olymp	88.67	180	P	P	20 50 56.2	-1.4	
VNA3	Neumayer Olymp	88.67	180	pP	pP	20 51 07.1	+8.0	
L04D	Klamath Falls	88.84	44	P	P	20 50 58.2	-0.8	
L04D				IAmb	IAmb	20 50 59.0		
	comp=Z,8.9nm,0.9s							
PFO	Pinyon Flats O	89.07	54	LR	LR	21 21 51.0		
	comp=Z,126nm,21.5s,baz=250,slow=30							
VNA1	Neumayer--Stat	89.25	181	P	P	20 50 59.4	-0.9	
VNA1	Neumayer--Stat	89.25	181	sP	sP	20 51 13.7	+11	
LHV	Little Huntoon	89.58	49	P	P	20 51 01.9	-0.4	
LHV				IAmb	IAmb	20 51 34.6		
	comp=Z,14nm,1.4s							
PAHR	Pah Rah Range	89.62	47	P	P	20 51 01.8	-0.9	
PAHR				IAmb	IAmb	20 51 02.8		
	comp=Z,13nm,1.3s							
NVAR	Mina Array Bea	89.80	49	P	P	20 51 01.0	-2.6	
	comp=Z,3.3nm,1.0s,baz=228,slow=7.4,SNR=15							
NVAR				LR	LR	21 23 06.0		
	comp=Z,284nm,21.1s,baz=263,slow=30							
	comp=Z,3.3nm,1.0s							
NVAR	Mina Array Bea	89.80	49	P	P	20 51 02.3	-1.3	
NV11	Mina Array Sit	89.91	49	P	P	20 51 02.8	-1.2	
LPIG	La Paz	90.23	64	LR	LR	21 22 52.2		
	comp=Z,211nm,19.9s,baz=235,slow=30							
TPH	Tonopah	90.42	49	P	P	20 51 05.4	-1.1	
PINE	Pine Mountain	90.47	43	P	P	20 51 05.6	-1.0	
PINE				IAmb	IAmb	20 51 16.5		
	comp=Z,13nm,1.1s							
ILAR	Eielson Array	91.37	17	P	P	20 51 07.4	-2.7	
	comp=Z,0.3nm,0.5s,baz=228,slow=5.8,SNR=4.7							
	comp=Z,0.3nm,0.5s							
TUC	Tucson	92.92	57	P	P	20 51 16.8	-1.3	
ELK	Elko	92.93	48	LR	LR	21 27 35.1		
	comp=Z,154nm,18.8s,baz=238,slow=32							
X16A	Lo Mia Camp, P	93.21	55	P	P	20 51 18.2	-1.3	
ANMO	Albuquerque	97.23	56	LR	LR	21 31 16.4		
	comp=Z,88nm,18.5s,baz=219,slow=33							
TXAR	Lajitas Array	97.62	62	P	P	20 51 38.5	-1.1	
	comp=Z,0.5nm,1.0s,baz=280,slow=5.4,SNR=3.5							
	comp=Z,0.5nm,1.0s							
WMQ	Urumqi	97.67	314	eP	Pdif	20 51 41.4	+1.9	
WMQ				LR	LR			
	comp=Z,240nm,6.3s							
MKAR	Makanchi Array	102.23	315	PKiKP	PKiKP	20 56 20.1	-1.7	
	comp=Z,0.6nm,0.9s,baz=79,slow=3.1,SNR=2.7							
ARCES	ARCESS Array B	126.01	345	PKhKP	PKPpre	20 56 56.9		
	comp=Z,2.7nm,0.8s,baz=58,slow=2.2,SNR=2.2							
ARCES				PKP	PKPdf	20 57 05.3	-0.9	
	comp=Z,2.4nm,0.8s,baz=42,slow=2.8,SNR=1.9							
KLMR	Klimovskoe	126.30	332	PKPdf	PKiKP	20 57 07.6	+0.3	
KLMR				AMP		20 57 09.4		
	comp=Z,10.0nm,1.4s							
FINES	FINESS Array B	131.43	337	PKP	PKPdf	20 57 16.4	-0.2	
	comp=Z,4.2nm,1.0s,baz=56,slow=3.3,SNR=4.0							
MORC	Moravsky Berou	142.79	329	ePKP	PKPdf	20 57 34.8	-3.2	
BRG	Berggiesshubel	143.66	333	ePKP	PKPab	20 57 36.0	-0.1	
BRG				Amp		20 57 38.0		
	comp=Z,8.5nm,1.4s							
BRG				ex	x	20 57 54.6		
BRG				Amp		20 57 56.3		
	comp=Z,7.0nm,1.3s							
CLL	Collm	143.72	334	i PKPdf	PKPab	20 57 36.2	-0.1	
	comp=Z,30nm,2.3s							
KRUC	Moravsky	143.83	329	ePKP	PKPbc	20 57 39.1	+1.6	
MODS	Modra-Pìesok	143.85	327	ePKP	PKPbc	20 57 37.9	+0.3	
PRU	Pruhonice	144.04	332	ePKP	PKPbc	20 57 38.7	+0.6	
NKC	Novy Kostel	144.77	334	ePKP	PKPab	20 57 39.8	-0.5	
RONA	Rosalia, Austr	144.79	327	i P	PKPab	20 57 40.2	-0.3	
	comp=Z,27nm,1.5s,SNR=13							
CONA	Conrad Observa	144.85	328	i P	PKPab	20 57 40.5	-0.3	
	comp=Z,28nm,1.5s,SNR=13							
DIVS	Divibare	144.88	320		PKPab	20 57 40.2	-0.8	
CKRC	Cesky Krumlov	144.99	330	ePKP	PKPbc	20 57 40.6	-0.6	
KHC	Kasperske Hory	145.10	331		PKPbc	20 57 40.5	-1.0	
KHC	Kasperske Hory	145.10	331	ePKP	PKPbc	20 57 40.8	-0.7	
KHC				epPKP	PKiKP	20 57 48.3	+2.4	
LIT	Litokhoron	145.15	312		PKPbc	20 57 40.1	-1.9	
GEC2	GERESS Array S	145.25	331		PKPbc	20 57 41.0	-1.1	
GERES	GERESS Array B	145.25	331	PKPbc	PKPbc	20 57 41.5	-0.6	
	comp=Z,1.1nm,0.6s,baz=46,slow=3.9,SNR=24							
GERES	GERESS Array B	145.25	331		PKPbc	20 57 40.6	-1.4	
FNA	Florina	145.62	314		PKPdf	20 57 41.1	-2.2	
MOA	Molln	145.69	329	i P	PKPdf	20 57 42.9	-0.3	
	comp=Z,29nm,1.4s,SNR=14							
GRA1	Grafenberg Arr	145.69	334		PKPdf	20 57 41.9	-1.2	
BIOA	Bad Ischl, Aus	146.10	329	eP	PKPdf	20 57 43.4	-0.5	
	comp=Z,8.9nm,1.2s							
SOKA	Soboth	146.11	327	i P	PKPdf	20 57 43.6	-0.4	
	comp=Z,16nm,1.5s,SNR=11							
OBKA	Obir	146.47	327	eP	PKPdf	20 57 44.8	+0.2	
	comp=Z,7.4nm,1.2s							
MOZS	Mozjanca	146.67	327	i PKPbc	PKPdf	20 57 45.2	+0.3	
KBA	Koelnbreinsper	146.68	329	i P	PKPdf	20 57 44.9	-0.1	
	comp=Z,7.1nm,1.5s							
BTNL	Ternell	146.84	340	dPKP	PKPdf	20 57 46.1	+1.1	
MEM	Membach	146.86	340	dPKP	PKPdf	20 57 45.7	+0.7	
GORS	Gorjuse	146.88	327	i PKPbc	PKPdf	20 57 45.2	-0.1	
CRNS	Crni Vrh	146.91	327	i PKPbc	PKPdf	20 57 45.7	+0.5	
BSTI	Sart Tilman	147.03	340	dPKP	PKPdf	20 57 46.0	+0.8	
BHOU	Houvegnez	147.08	340	dPKP	PKPbc	20 57 47.2	-0.3	
VOJS	Vojsko	147.14	327	i PKPbc	PKPdf	20 57 46.2	+0.5	
STU	Stuttgart	147.24	335		PKPdf	20 57 46.5	+0.8	
ABTA	Abfaltersbach	147.31	329	eP	PKPdf	20 57 45.8	-0.2	
	comp=Z,9.9nm,1.0s,SNR=5.0							
WATA	Walderalm	147.32	331	eP	PKPdf	20 57 47.0	+0.9	
	comp=Z,15nm,1.3s,SNR=7.9							
WTTA	Wattenberg	147.35	331	i P	PKPdf	20 57 47.4	+1.2	
	comp=Z,25nm,1.3s,SNR=10.0							
RCHB	Rochefort	147.50	340	dPKP	PKPdf	20 57 47.3	+1.3	
BMRD	Maredsous	147.52	341	dPKP	PKPdf	20 57 47.4	+1.3	
MOTA	Moosalm	147.53	331	i P	PKPdf	20 57 47.6	+1.2	
	comp=Z,16nm,1.2s,SNR=6.8							
STAL	STALIGIAL	147.56	328		PKPdf	20 57 46.2	-0.1	
RETA	Reutte	147.58	332	i P	PKPdf	20 57 47.8	+1.4	
	comp=Z,8.5nm,1.3s,SNR=6.7							
SQTA	Sankt Quirin	147.58	331	eP	PKPdf	20 57 47.8	+1.3	
	comp=Z,15nm,1.2s,SNR=7.3							
WLF	Walferdange	147.63	339		PKPdf	20 57 47.2	+1.0	
WLF	Walferdange	147.63	339	dPKP	PKPbc	20 57 48.3	-0.6	
DOU	Dourbes	147.76	341	dPKP	PKPdf	20 57 48.3	+1.8	
BFO	Black Forest	147.94	335		PKPdf	20 57 46.9	0.0	
FETA	Feichten	147.94	331	eP	PKPbc	20 57 49.1	-1.0	
	comp=Z,9.3nm,1.0s,SNR=5.8							
DAVA	Damuels	148.12	332	i P	PKPdf	20 57 49.4	+2.0	
	comp=Z,12nm,1.1s							
CTI	Castel Tesino	148.23	329		PKPdf	20 57 49.6	+2.1	
ECH	Echery	148.48	336	PKPdf	PKPdf	20 57 48.1	+0.4	
TEOL	Teolo	148.72	328	PKPdf	PKPdf	20 57 49.2	+1.0	
NRCA	Norcia	149.67	323		PKPdf	20 57 50.1	+0.2	
MURB	Monte Urbino	149.72	324		PKPbc	20 57 53.2	-1.5	
SENIN	Lac Senin/Sane	149.94	334		PKPdf	20 57 52.8	+2.4	
BNI	Bardonecchia	151.25	333		PKPbc	20 57 56.9	-1.5	
ESDC	Sonseca Array	159.74	344	PKPab	PKPab	20 58 40.7	-1.8	
	comp=Z,1.3nm,1.0s,baz=9.5,slow=4.5,SNR=5.8							
TORD	Torodi Ar. Bea	165.77	242	PKPab	PKPab	20 59 10.1	+0.5	
	comp=Z,1.1nm,1.1s,baz=103,slow=4.6,SNR=4.2							

IDC ***18*** *20:43:13.8±0.8,30.56N×138.46E,h444km±11km,mb3.1/5, mbtmp4.1/12,Error ellipse: s-maj=23.6km s-min=13.8km az=88.0*

NEIC ***18*** *20:43:15.0±2.7,30.5°N±0.1°×138.3°E±0.1°,h440km±11km, mb4.1/23,Error ellipse: s-maj=16.1km s-min=15.1km az=80.0*

JMA ***18*** *20:43:15.7±0.4,31°N±3°×13°9E±°,h455km,MV3.4/31, NEAR TORISHIMA IS*

ISC 18 20:43:13.8±0.6,30.44N±0.06×138.44E±0.08,h440km,n77, σ1s24/82,mb3.9/19,2C,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	2.31	29	eP	P		20 44 18.2	+3.0
JHCJ	Hachijojimakas	2.87	24	eP	P		20 44 20.9	+1.9
JHCJ				S	S		20 45 11.7	-0.2
JHJ	Hachijo jima 2	2.90	23	P	P		20 44 20.3	+1.1
	69nm,0.3s,baz=304,slow=15,SNR=18							
JHJ				S	S		20 45 11.7	-0.7
	86nm,0.3s,baz=263,slow=22,SNR=7.8							
JHJ2	Mitsune	2.91	23	P	P		20 44 20.8	+1.6
JHJ2	Mitsune	2.91	23	P	P		20 44 21.1	+1.8
JTNC	Tanabenakahech	4.13	325	P	P		20 44 31.6	+2.2
JIE	Ise	4.20	340	eP	P		20 44 32.3	+2.3
JKN2	Miekihoku	4.20	335	P	P		20 44 32.2	+2.2
HMMJ	Hamamatsu 2	4.44	352	eP	P		20 44 33.0	+0.8
JCJ	Chichijima	4.69	134	P	P		20 44 34.2	-0.5
	28nm,0.3s,baz=298,slow=21,SNR=8.9							
JCJ				S	S		20 45 37.5	-3.0
	253nm,0.4s,baz=285,slow=20,SNR=21							
JCJ	Chichijima	4.69	134	P	P		20 44 33.9	-0.8
BSO1	Boso 1	4.71	26	P	P		20 44 35.6	+1.4
BSO1				eS	S		20 45 39.4	-0.5
BSO4	Boso 4	4.81	19	eP	P		20 44 37.3	+1.7
BSO4				eS	S		20 45 42.5	+0.2
JAO	Obara	4.91	349	P	P		20 44 38.4	+1.7
JNY	Yasuok	4.92	355	eP	P		20 44 38.2	+1.4
INU	Inuyama	5.04	347	P	P		20 44 39.4	+1.6
JGF	Kuroka	5.22	350	P	P		20 44 40.2	+0.4
JYT	Yasato	5.95	14	P	P		20 44 45.8	-1.3
MJAR	Matsushiro Arr	6.08	358	P	P		20 44 47.3	-1.2
	9.8nm,0.4s,baz=171,slow=11,SNR=68							
MJAR	Matsushiro Arr	6.08	358	P	P		20 44 47.4	-1.1
MAJO	Matsushiro	6.09	358	P	P		20 44 47.6	-0.9
MJB9	Matsu-Tunnel	6.09	358	P	P		20 44 48.0	-0.5
JHS	Saijyo	6.38	317		P		20 44 53.4	+1.8
JSU	Suzuyama	6.93	281	P	P		20 44 59.5	+1.8
JSD	Sado	7.58	359	P	P		20 45 03.4	-1.0
JMM	Marumori	7.66	14	P	P		20 45 04.7	-0.5
JOW	Kunigami	9.62	251	P	P		20 45 27.8	+0.9
	14nm,0.4s,baz=102,slow=17,SNR=13							
JTM	Tenmabayashi	10.54	11		P		20 45 37.0	+0.4
KSRS	Korea Array	11.18	312	P	P		20 45 42.3	-1.3
	2.2nm,0.8s,baz=126,slow=11,SNR=8.4							
SEHB	SEOHWA	11.47	316	P	P		20 45 47.0	+0.1
ERM	Erimo	12.16	17	P	P		20 45 55.3	+1.0
JEW	Eniwo	12.61	10	P	P

WRA	Warramunga Arr	50.25	185	P	P	20 51 29.2	+1.1	
BOOM	Boomskoye usch	50.63	302	P	P	20 51 31.0	0.0	
BOOM				IAmb	IAmb	20 51 33.5		
	comp=Z,4.6nm,0.9s							
Q19K	Cape Douglas,	53.17	37	P	P	20 51 49.9	+1.0	
K20K	Telida	53.20	31	P	P	20 51 50.8	+1.7	
K20K				IAmb	IAmb	20 52 08.8		
	comp=Z,8.2nm,1.4s							
MBWA	Marble Bar	54.37	202	P	P	20 51 58.7	+0.8	
MBWA				IAmb	IAmb	20 52 02.0		
	comp=Z,9.5nm,1.0s							
KK31	Karatay Array	54.48	304	P	P	20 51 57.4	-1.1	
KKAR	Karatay Array	54.48	304	P	P	20 51 57.6	-0.9	
KKAR	Karatay Array	54.48	304	P	P	20 51 57.4	-1.2	
KKAR				IAmb	IAmb	20 52 22.5		
	comp=Z,2.1nm,1.3s							
SCM	Sheep Creek Mo	56.28	33	P	P	20 52 11.9	+1.1	
SCM				IAmb	IAmb	20 52 17.0		
	comp=Z,18nm,1.5s							
SCRK	Sand Creek	57.70	31	P	P	20 52 21.1	+0.4	
SCRK				IAmb	IAmb	20 52 27.5		
	comp=Z,5.3nm,1.4s							
BCAR	Beaver Creek A	58.76	32	P	P	20 52 29.9	+2.1	
ABKAR	Akbulak array	60.41	312	P	P	20 52 38.3	-0.8	
ABKAR	Akbulak array	60.41	312	P	P	20 52 38.3	-0.8	
ABKAR				IAmb	IAmb	20 52 39.7		
	comp=Z,1.7nm,0.5s							
ARCES	ARCESS Array B	69.29	340	P	P	20 53 33.9	-1.2	
	comp=Z,2.6nm,0.9s,baz=59,slow=7.6,SNR=6.5							
	comp=Z,2.6nm,0.9s							
FINES	FINESS Array B	73.48	332	P	P	20 53 58.7	-1.2	
	comp=Z,0.4nm,0.5s,baz=83,slow=7.9,SNR=4.7							
	comp=Z,0.4nm,0.5s							

MAN 18 20:44:55.5, 9.31N×125.48E, h93km, mb3.9, ML2.6, MS2.2, Mindanao

IDC ***18*** *20:53:07.4±3.0, 20.01S×167.91E, h0km, mb3.7/4, mbtmp3.7/5, ML3.4/1, Error ellipse: s-maj=70.5km s-min=30.1km az=114.0*

ISC 18 20:53:11.8±2.3, 20.15S±0.2×168.30E±0.3, h35km, n6, σ1§33/7, mb3.6/3, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
DZM	Mont Dzumac	2.44	217	Pn		Pn	20 53 47.8	-1.5
	7.6nm,0.3s,baz=93,slow=8.1,SNR=53							
DZM				Sn		Sn	20 54 19.5	+1.6
	29nm,0.3s,baz=122,slow=20,SNR=8.1							
	25nm,0.4s							
CTA	Charters Tower	20.45	266	P		P	20 57 45.4	-1.1
	4.8nm,1.0s,baz=90,slow=10,SNR=1.9							
	4.8nm,1.0s							
STKA	Stephens Creek	26.41	238	P		P	20 58 45.3	0.0
	0.7nm,0.5s,baz=70,slow=9.4,SNR=2.8							
	0.7nm,0.5s							
WRA	Warramunga Arr	31.62	264	P		P	20 59 32.5	+0.7
	0.9nm,0.9s,baz=90,slow=8.2,SNR=4.8							
	0.9nm,0.9s							
SONM	Songino Array	87.25	324	P		P	21 05 55.0	+0.2
	0.2nm,0.5s,baz=119,slow=5.1,SNR=1.9							
	0.2nm,0.5s							
GERES	GERESS Array B	144.72	330	PKP		PKPdf	21 12 45.7	+0.7
	0.4nm,0.6s,baz=40,slow=5.1,SNR=4.4							

NOU ***18*** *20:53:39.4, 39.51S×177.74E, h76km, MLv4.6/10, Off E. Coast of N. Island, N.Z.*
WEL ***18*** *20:53:41.6±0.7, 39.5S±4.1×17.8E±.1, h37km±7km, M4.3/12, ML4.7/12, MLv4.3/12, Error ellipse: s-maj=0.0km s-min=0.0km az=116.7*

ISC 18 20:53:38.9±1.5, 39.44S±0.03×177.77E±0.05, h70km±9km, n154, σ1§21/165, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
MHGZ	Mahia Peninsul	0.31	21	P		Pn	20 53 51.4	+1.3
KNZ	Kokohu	0.42	350	P		Pn	20 53 51.3	+0.4
KNZ				S		Sn	20 53 58.4	-1.4
PRGZ	Paritu Road	0.52	10	P		Pn	20 53 52.9	+0.9
CKHZ	Cape Kidnapper	0.58	248	P		Pn	20 53 53.5	+1.0
CKHZ				S		Sn	20 54 02.6	+0.2
ARHZ	Aropaoanui	0.62	286	P		Pn	20 53 53.5	+0.6
ARHZ				S		Sn	20 54 02.5	-0.8
RIGZ	Rimuhau	0.73	360	P		Pn	20 53 55.2	+1.0
SNGZ	Shannon Statio	0.74	333	P		Pn	20 53 54.8	+0.6
SNGZ				S		Sn	20 54 04.3	-1.2
RAHZ	Arahi	0.74	314	P		Pn	20 53 54.8	+0.5
RAHZ				S		Sn	20 54 04.1	-1.6
KAHZ	Kahuranaki	0.77	242	P		Pn	20 53 55.9	+1.2
NMHZ	Naumai	0.82	294	P		Pn	20 53 55.9	+0.6
MCHZ	McNeill Hill	0.83	269	P		Pn	20 53 56.3	+1.1
MCHZ				S		Sn	20 54 07.6	+0.2
PXZ	Pawanui	0.91	229	P		Pn	20 53 57.4	+1.2
PXZ				S		Sn	20 54 10.3	+1.1
MTHZ	Maungataniwha	0.93	309	P		Pn	20 53 56.8	+0.3
MTHZ				S		Sn	20 54 07.7	-1.9
RAGZ	Rawiri	0.98	344	P		Pn	20 53 57.8	+0.6
RAGZ				S		Sn	20 54 10.1	-0.8
TKGZ	Te Karaka	1.00	4	P		Pn	20 53 58.4	+1.0
CNGZ	Carnagh Statio	1.01	20	P		Pn	20 53 59.4	+1.8
BKZ	Black Stump Fm	1.03	285	P		Pn	20 53 58.3	+0.6
BKZ				S		Sn	20 54 10.4	-1.4
BKZ	Black Stump Fm	1.03	285	P		Pn	20 53 58.4	+0.6
RTZ	Ruatahuna	1.03	323	P		Pn	20 53 58.3	+0.5
RTZ				S		Sn	20 54 10.0	-1.8
KWHZ	Kaweka Forest	1.04	270	P		Pn	20 53 58.8	+0.9
KRHZ	Kereru	1.10	259	P		Pn	20 53 59.5	+0.8
MWZ	Matawai	1.12	350	P		Pn	20 53 59.6	+0.7
WPHZ	Waipukurau	1.20	238	P		Pn	20 54 01.2	+1.3
PRHZ	Porangahau	1.20	226	P		Pn	20 54 01.1	+1.2
MRHZ	Matea Rd	1.21	300	P		Pn	20 54 01.0	+0.9
MUGZ	Murupara	1.24	321	P		Pn	20 54 01.0	+0.7
TWGZ	Tauwhareparae	1.27	8	P		Pn	20 54 02.3	+1.4
URZ	Urewera	1.28	336	P		Pn	20 54 01.7	+0.7
URZ	Urewera	1.28	336	P		Pn	20 54 01.8	+0.8
PNHZ	Pukenui	1.30	248	P		Pn	20 54 02.3	+1.0
BHHZ	Black Hill Sta	1.32	267	P		Pn	20 54 02.5	+1.0
HATZ	Hinemaiaia	1.41	292	P		Pn	20 54 03.7	+1.0
ALRZ	Allen Road	1.41	308	P		Pn	20 54 03.4	+0.7
PUZ	Puketiti	1.42	16	P		Pn	20 54 03.8	+1.0
ANWZ	Angora Road	1.42	224	P		Pn	20 54 03.9	+1.2
PRRZ	Plateau Road	1.43	311	P		Pn	20 54 03.4	+0.5
RRRZ	Republican Roa	1.47	318	P		Pn	20 54 04.1	+0.6
RUGZ	Raukumara Rang	1.47	357	P		Pn	20 54 04.2	+0.6
DVHZ	Dannevirke	1.50	235	P		Pn	20 54 05.0	+1.2
TSZ	Takapari Road	1.52	245	P		Pn	20 54 05.1	+1.0
WPRZ	Whakapapataran	1.55	306	P		Pn	20 54 05.3	+0.8
RITZ	Rihia Road	1.55	287	P		Pn	20 54 05.9	+1.4
TARZ	Mount Tarawera	1.55	320	P		Pn	20 54 05.5	+0.9
EDRZ	Edgecumbe	1.56	329	P		Pn	20 54 05.6	+1.0
HRRZ	Handcock Road	1.56	312	P		Pn	20 54 05.4	+0.7
MOVZ	Moawhango	1.56	271	P		Pn	20 54 06.3	+1.7
PKGZ	Pakihiroa	1.57	9	P		Pn	20 54 06.0	+1.2
WHTZ	Whakaora	1.61	298	P		Pn	20 54 06.5	+1.2
HLRZ	Highlands Stat	1.62	317	P		Pn	20 54 06.5	+1.1
ETVZ	East Tongariro	1.62	280	P		Pn	20 54 06.9	+1.4
TMVZ	Te Maari	1.63	281	P		Pn	20 54 07.0	+1.3
HSRZ	Hossack Road	1.64	313	P		Pn	20 54 06.6	+0.9
TUVZ	Tukino	1.65	275	P		Pn	20 54 07.5	+1.6
MKRZ	Makatiti	1.65	322	P		Pn	20 54 07.8	+1.9
RATZ	Rangitukua	1.65	290	P		Pn	20 54 07.0	+1.1
OTVZ	Oturere	1.65	279	P		Pn	20 54 07.4	+1.4
NTVZ	North Tongarir	1.66	281	P		Pn	20 54 07.3	+1.2
SNVZ	South Ngauruho	1.67	278	P		Pn	20 54 07.7	+1.4
KATZ	Kakaramea	1.68	285	P		Pn	20 54 07.5	+1.2
HAZ	Te Kaha	1.68	0	P		Pn	20 54 07.2	+1.0
MARZ	Manawahe	1.69	329	P		Pn	20 54 07.3	+1.0
WNVZ	Wahianoa	1.69	273	P		Pn	20 54 07.9	+1.5
KRVZ	Karewarewa	1.69	281	P		Pn	20 54 07.6	+1.2
GRRZ	Galatos Road	1.69	310	P		Pn	20 54 07.4	+1.0
WHVZ	Whangaehu Hut	1.70	275	P		Pn	20 54 08.1	+1.4
WMGZ	Waiomatatini S	1.70	18	P		Pn	20 54 07.7	+1.3
NNVZ	North Ngauruho	1.70	280	P		Pn	20 54 08.0	+1.4
WHRZ	Whale Island	1.70	338	P		Pn	20 54 07.7	+1.2
NGZ	Ngauruhoe	1.70	278	P		Pn	20 54 08.0	+1.4
BFZ	Birch Farm	1.70	223	P		Pn	20 54 07.5	+1.0
BFZ	Birch Farm	1.70	223	P		Pn	20 54 07.5	+1.0
DRZ	Dome Shelter	1.72	275	P		Pn	20 54 08.4	+1.4
OMRZ	Omania	1.72	320	P		Pn	20 54 07.4	+0.6
WTVZ	West Tongariro	1.72	280	P		Pn	20 54 08.2	+1.4
TRVZ	Turoa	1.73	274	P		Pn	20 54 08.4	+1.4
FWVZ	Far West T-bar	1.73	275	P		Pn	20 54 08.4	+1.3
WATZ	Wairara	1.74	294	P		Pn	20 54 07.8	+0.7
UTU	Utuhina	1.76	315	P		Pn	20 54 08.2	+0.9
PRWZ	Pori Road	1.77	231	P		Pn	20 54 08.8	+1.4
MTVZ	Mangateitei	1.78	271	P		Pn	20 54 09.0	+1.4
KUTZ	Kaahu Road	1.79	301	P		Pn	20 54 08.5	+0.9
POWZ	Post Office Ro	1.81	238	P		Pn	20 54 09.2	+1.3
NGRZ	Ngongotaha	1.82	317	P		Pn	20 54 09.1	+1.0
TWVZ	Taurewa	1.85	281	P		Pn	20 54 09.4	+0.9
KARZ	Kaharoa	1.85	319	P		Pn	20 54 08.8	+0.3
OPRZ	Ohinepanea	1.85	329	P		Pn	20 54 08.6	+0.1
PKVZ	Pokaka	1.88	274	P		Pn	20 54 10.3	+1.4
CPWZ	Castlepoint	1.90	219	P		Pn	20 54 10.4	+1.3
MXZ	Matakaoa Point	1.92	13	P		Pn	20 54 11.0	+1.6
WIZ	White Island	1.96	346	P		Pn	20 54 10.3	+0.3
TIWZ	Tintock	1.97	227	P		Pn	20 54 11.1	+1.0
OHWZ	Ohakea	2.04	247	P		Pn	20 54 13.1	+2.1
TLZ	Tolley Road	2.06	302	P		Pn	20 54 11.9	+0.5
MRZ	Mangatainoka R	2.08	233	P		Pn	20 54 12.4	+0.9
TGRZ	Tauranga	2.08	325	P		Pn	20 54 11.7	+0.2
WAZ	Wanganui	2.17	261	P		Pn	20 54 15.2	+2.3
TMWZ	Te Maipa	2.20	220	P		Pn	20 54 13.7	+0.5
HOWZ	Holdsworth Sta	2.26	229	P		Pn	20 54 14.5	+0.5
VRZ	Vera Road	2.36	277	P		Pn	20 54 16.6	+1.3
OGWZ	Otaki Gorge	2.42	235	P		Pn	20 54 16.8	+0.6
MTW	Mount Morrison	2.44	225	P		Pn	20 54 16.4	0.0
HIZ	Hauiti	2.45	291	P		Pn	20 54 17.6	+1.1
HIZ	Hauiti	2.45	291	P		Pn	20 54 17.7	+1.1
TOZ	Tahuroa Road	2.46	313	P		Pn	20 54 17.5	+0.8
TRWZ	Traveller	2.52	218	P		Pn	20 54 17.4	-0.1
LREZ	Lake Rotokare	2.60	268	P		Pn	20 54 20.7	+2.0
KIW	Kapiti Island	2.61	236	P		Pn	20 54 19.4	+0.6
PAWZ	Paruwai Farm	2.64	222	P		Pn	20 54 19.1	-0.1
CAW	Cannon Point	2.65	230	P		Pn	20 54 19.5	+0.2
MSWZ	Moikau Station	2.75	223	P		Pn	20 54 20.4	-0.3
DREZ	Durham Road	2.78	274	P		Pn	20 54 23.2	+2.2
PREZ	Palmer Road	2.80	271	P		Pn	20 54 23.7	+2.4
NEZ	North Egmont	2.85	272	P		Pn	20 54 24.3	+2.2
PLWZ	Palliser	2.86	221	P		Pn	20 54 21.7	-0.5
KHEZ	Kahui Hut	2.91	272	P		Pn	20 54 25.4	+2.4
WEL	Wellington	2.94	230	P		Pn	20 54 23.3	+0.1
PKE	Pukeiti	2.94	274	P		Pn	20 54 25.6	+2.3
BHW	Baring Head	2.96	227	P		Pn	20 54 23.1	-0.4
SNZO	South Karori	2.99	230	P		Pn	20 54 23.5	-0.4
NMEZ	Namu Road	3.01	269	P		Pn	20 54 26.5	+2.3
NBEZ	Newall Road No	3.03	272	P		Pn	20 54 26.8	+2.4
MKAZ	Moumakai	3.10	318	P		Pn	20 54 26.5	+1.0
KUZ	Kuaotunu	3.14	328	P		Pn	20 54 26.6	+0.7
TCW	Tory Channel	3.20	235	P		Pn	20 54 26.6	-0.2
DUWZ	D'Urville Isla	3.25	244	P		Pn	20 54 27.3	-0.1
ETAZ	East Tamaki Re	3.34	317	P		Pn	20 54 30.3	+1.6
WIAZ	Waiheke Island	3.36	321	P		Pn	20 54 30.0	+1.1
AWAZ	Awhitu Peninsu	3.42	313	P		Pn	20 54 31.1	+1.4
MBAZ	Motutapu North	3.50	319	P		Pn	20 54 32.4	+1.6
TUWZ	Tuamarina	3.53	235	P		Pn	20 54 30.6	-0.7
WTAZ	Waiatarua	3.55	314	P		Pn	20 54 33.2	+1.6
ABAZ	Army Bay	3.66	320	P		Pn	20 54 34.8	+1.8
RVAZ	Riverhead Bore	3.66	316	P		Pn	20 54 34.5	+1.4
BSWZ	Blackbirch Sta	3.73	231	P		Pn	20 54 33.5	-0.6
NNZ	Nelson	3.79	241	P		Pn	20 54 35.3	+0.5
TKNZ	Takaka Hill	4.01	245	P		Pn	20 54 37.7	-0.1
QRZ	Quartz Range	4.25	249	P		Pn	20 54 40.4	-0.7
QRZ	Quartz Range	4.25	249	P		Pn	20 54 40.0	-1.0
MRNZ	Matariki Terra	4.29	241	P		Pn	20 54 41.5	-0.2
KHZ	Kahutara	4.37	226	P		Pn	20 54 42.5	-0.2
KHZ	Kahutara	4.37	226	P		Pn	20 54 42.7	0.0
WCZ	Waipu Caves	4.42	321	P		Pn	20 54 45.1	+1.6
GVZ	Greta Valley S	5.02	224	P		Pn	20 54 51.8	+0.3
OUZ	Omahuta	5.37	320	P		Pn	20 54 58.5	+2.2
OUZ	Omahuta	5.37	320	P		Pn	20 54 58.3	+2.0
OKCZ	Okains Bay	5.55	218	P		Pn	20 54 58.6	-0.3
CTZ	Chatham Island	6.01	137	P		Pn	20 55 09.6	+4.5
RACZ	Rakaia	6.01	223	P		Pn	20 55 04.5	-0.6
WACZ	Wakanui South	6.32	223	P		Pn	20 55 08.9	-0.4
WVZ	Waitaha Valley	6.42	233	P		Pn	20 55 11.3	+0.6
RPZ	Rata Peaks	6.60	228	P		Pn	20 55 12.7	-0.5
RPZ	Rata Peaks	6.60	228	P		Pn	20 55 12.7	-0.5
ARCZ	Arundel	6.68	225	P		Pn	20 55 13.8	-0.5
ODZ	Otahua Downs	7.70	221	P		Pn	20 55 27.2	-1.0
	29nm,2.1s							

BJI ***18*** *21:15:48.3±0.0, 3.59S×101.29E, h57km, mb5.2/84, mB5.2/67, Ms5.2/87, Ms7 5.0/82*
KLM ***18*** *21:15:51, 3.46S×101.16E, h30km, mb5.5*
NEIC ***18*** *21:15:51.5±1.6, 3.33S±0.06×101.27E±0.06, h40km±4km, mb5.5/185, Ms_20 5.0/181, Mww5.4, Error ellipse: s-maj=9.6km s-min=7.5km az=51.0*
MOS ***18*** *21:15:51.2±1.0, 3.05S×101.48E, h49km, mb5.8/60, MS4.6/37, Error ellipse: s-maj=7.1km s-min=3.5km az=115.7*
IDC ***18*** *21:15:52.3±1.3, 3.15S×101.48E, h45km±11km, mb5.0/34, mbtmp5.3/35, ML4.9/1, MS4.6/76, Error ellipse: s-maj=12.5km s-min=9.7km az=35.0*
DJA ***18*** *21:15:52.9±0.2, 3.5S±2×10.1E±.1, h55km±2km, M5.2/100, mb5.3/100, mB5.6/57, MLv5.7/25, Mw(mB)5.1/57, MwMwp5.2/24, Mwp5.5/24*
NEIC ***18*** *21:15:55, 3.48S×101.23E, h50km, Moment Tensor Solution. Duration: 8s0 Moment tensor: Scale 10^17 Nm; Mrr 1.49; Mθθ -0.72; Mφφ -0.77; Mrθ 0.83; Mrφ 0.84; Mθφ -0.49; Fault plane solution: M0 1.82000×10^17 NP1: φs325.00000°, δ30.00000°, λ105.00000°. NP2: φs128.00000°, δ61.00000°, λ82.00000°. Principal axes: T 1.7850, Plg73.0000°, Azm18.0000°; N 0.0617, Plg7.0000°, Azm132.0000°; P -1.8467, Plg16.0000°, Azm224.0000°;*
GCMT ***18*** *21:15:55.5±0.1, 3.45S±0.01×101.15E±0.01, h47km, MW5.5/128, Moment Tensor Solution. s121,c229; s128,c239; Duration: 1s3 Moment tensor: Scale 10^17 Nm; Mrr 1.50±.03; Mθθ -0.75±.02; Mφφ -0.74±.02; Mrθ 0.98±.02; Mrφ 0.87±.01; Mθr -0.59±.02; Best double couple: M0 1.93500×10^17 NP1:φs324.00000°, δ28.00000°, λ106.00000°. NP2:φs126.00000°, δ63.00000°, λ82.00000°. Principal axes: T 1.8930, Plg71.0000°, Azm19.0000°; N 0.0840, Plg7.0000°, Azm130.0000°; P -1.9770, Plg18.0000°, Azm222.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 21:15:52.4±0.2, 3.23S±0.03×101.37E±0.03, h52km±1km, h52km:pP-P, n1289, σ1§41/1391, mb5.5/259, MS4.9/225, 181C-41D, Fault plane solution: NP1:φs338.05127°, δ44.25747°, λ108.96516°. **NP2:**φs132.41896°, δ48.70012°, λ72.42822°. **Principal axes:** T Plg76.6874°, Azm334.4329°; N Plg13.1092°, Azm144.2242°; P Plg2.2779°, Azm234.7550°; **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
MASI	Maura Aman, Be	0.87	84	P		Pn	21 16 09.1	+0.7
MASI				S		Sn	21 16 22.4	+2.2
KRJI	Kerinci	1.13	4	P		Pn	21 16 13.5	+1.5
PPSI	Pulau Pagai	1.44	289	P		Pn	21 16 16.3	+0.3
PPSI				S		Sn	21 16 34.9	+1.1
MNAI	Manna	1.94	126	Pn		Pn	21 16 22.6	-0.3
MNAI				Sn		Sn	21 16 46.0	-0.1
MNAI	Manna	1.94	126	P		Pn	21 16 22.7	-0.3
MNAI				S		Sn	21 16 46.5	+0.4
MNAI	Manna	1.94	126	P		Pn	21 16 25.0	+2.1
JMBI	JAMBI	2.77	55	P		Pn	21 16 35.9	+1.7
PPI	Padang Panjang	2.92	340	P		Pn	21 16 37.9	+1.6
SISI	Saibi	2.96	310	P		Pn	21 16 37.2	+0.3
SISI				S		Sn	21 17 10.9	-0.3
LWLI	Liwa	3.21	124	P		Pn	21 16 41.6	+1.1
PMBI	Palembang	3.41	85	P		Pn	21 16 43.3	+0.3
PMBI	Palembang	3.41	85	P		Pn	21 16 43.3	+0.3
PMBI	Palembang	3.41	85	P		Pn	21 16 43.3	+0.8
BKNI	Bangkinang	3.55	355			Pn	21 16 46.7	+1.8
BKNI	Bangkinang	3.55	355	P		Pn	21 16 47.3	+2.4
BKNI	Bangkinang	3.55	355	P		Pn	21 16 47.8	+2.9
KLI	Kotabumi	3.84	115	P		Pn	21 16 52.0	+3.1
KLI	Kotabumi	3.84	115	P		Pn	21 16 51.1	+2.2
KASI	Kota Agung	3.86	126	P		Pn	21 16 49.5	+0.3
DSRI	Dabo	4.21	50	P		Pn	21 16 56.2	+2.2
BLSI	Bandar Lampung	4.41	119	P		Pn	21 16 58.5	+1.7
PPBI	Pangkal Pinang	4.87	78	P		Pn	21 17 05.3	+2.1
TPRI	Tanjung Pinang	5.19	37	P		Pn	21 17 10.0	+2.6
	7.0nm22µm2µm,0.9s							
SBJI	Serang	5.54	121	P		Pn	21 17 16.5	+4.2
	3.8nm113µm8µm657nm,1.0s							
MYKOM	Kota Tinggi	5.56	26	Pn		Pn	21 17 14.3	+1.7
MYKOM	Kota Tinggi	5.56	26	P		Pn	21 17 16.0	+3.4
GSI	Gunungsitoli	5.89	320	Pn		Pn	21 17 16.6	-0.5
GSI	Gunungsitoli	5.89	320	P		Pn	21 17 16.8	-0.3
	10.0nm12µm8µm452nm,0.5s							
GSI	Gunungsitoli	5.89	320	P		Pn	21 17 17.6	+0.5
TPI	Tanjungpandan	6.29	86	P		Pn	21 17 23.3	+0.7
DBJI	Dramaga	6.29	122	P		Pn	21 17 25.0	+2.3
	4.6nm22µm446nm,0.9s							
CBJI	Citeko	6.31	120	P		Pn	21 17 28.1	+5.2
	3.9nm590nm,0.7s							
SKJI	Sukabumi	6.38	126	P		Pn	21 17 25.9	+2.0
	2.8nm4µm347nm,0.7s							
CNJI	Cibinong	7.02	126	P		Pn	21 17 32.0	-0.6
	2.9nm7µm381nm,0.9s							
JRMM	Jerantut	7.15	9	P		Pn	21 17 38.0	+3.6
TSI	Tuntungan	7.25	337	P		Pn	21 17 37.2	+1.4
	5.5nm8µm6µm580nm,0.9s							
JCJI	Jatiwangi	7.60	116	P		Pn	21 17 43.7	+3.2
	2.4nm298nm,0.8s							
KCSI	Kotacane, Aceh	7.61	332	P		Pn	21 17 41.5	+0.8
	3.3nm2µm195nm,0.9s							
IPM	Ipoh	7.66	357			Pn	21 17 44.1	+2.6
IPM	Ipoh	7.66	357	P		Pn	21 17 45.0	+3.5
IPM	Ipoh	7.66	357	P		Pn	21 17 46.0	+4.5
CMJI	Cimerak	8.37	123	P		Pn	21 17 50.0	-1.1
	3µm158nm,0.8s							
KULM	Kulim	8.49	355	Pn		Pn	21 17 53.6	+0.8
KULM	Kulim	8.49	355	P		Pn	21 17 55.0	+2.2
LHMI	Lhok Sumawe	9.49	332	Pn		Pn	21 18 06.1	-0.4
LHMI	Lhok Sumawe	9.49	332	P		Pn	21 18 06.3	-0.2
	4µm126nm,1.0s							
SMRI	Semarang	9.79	113	Pn		Pn	21 18 11.1	+0.4
SMRI	Semarang	9.79	113	P		Pn	21 18 13.9	+3.2
	6µm359nm,0.9s							
SMRI	Semarang	9.79	113	P		Pn	21 18 15.3	+4.6
COCO	West Island	9.97	207	Pn		Pn	21 18 06.7	-6.4
YOGI	Yogyakarta	9.98	118	P		Pn	21 18 14.1	+0.9
	248nm,1.5s							
KSM	Kuching	10.08	63	Pn		Pn	21 18 16.2	+1.7
KSM	Kuching	10.08	63	P		Pn	21 18 19.5	+5.0
UGM	Wanagama	10.22	117			Pn	21 18 16.2	-0.4
UGM	Wanagama	10.22	117	P		Pn	21 18 17.1	+0.5
	163nm,0.8s							
PBKI	Pangkalan Bun	10.30	87	P		Pn	21 18 21.5	+4.0
	278nm,1.0s							
WOJI	Wonogiri, Jawa	10.55	116	P		Pn	21 18 20.9	-0.1
	84nm,0.9s							
STKI	Sintang	10.62	72	P		Pn	21 18 25.9	+4.0
	76nm,1.1s							
PCJI	Pacitan	10.93	117	P		Pn	21 18 25.8	-0.4
	113nm,1.0s							
TBJI	Tambak Boyo	11.03	109	P		Pn	21 18 28.1	+0.6
	156nm,1.8s							
PWJI	Pagerwojo	11.42	115	P		Pn	21 18 33.9	+1.0
	100nm,1.0s							
GRJI	Gresik	11.65	109	P		Pn	21 18 38.6	+2.6
	1µm116nm,1.1s							
SRIT	Nakonsritamara	11.88	351			Pn	21 18 39.4	+0.3
SBUM	Sibu	12.22	63			Pn	21 18 43.1	-0.8
SBUM	Sibu	12.22	63	P		P	21 18 50.0	-4.8
BLJI	Banyuglugur	12.96	111	P		Pn	21 18 57.2	+3.2
	1µm51nm,0.4s							
GMJI	Gumukmas	13.01	113	P		Pn	21 18 55.7	+1.1
	49nm,0.6s							
KMMI	Kalianget	13.10	107	P		Pn	21 18 56.0	+0.1
	4µm3µm131nm,1.3s							
BBKI	Banjar Baru	13.45	91	P		P	21 19 04.6	-3.8
	383nm,0.9s							
ABJI	Asem Bagus	13.58	110	P		Pn	21 19 03.9	+1.5
	3µm323nm,0.7s							
SRBI	Singaraja	14.59	110	P		Pn	21 19

CHTO pmax pmax
comp=Z,48nm,1.2s
CHTO MLR MLR
comp=Z,3μm,18.0s
CHTO Chiang Mai 22.03 354 P **P** **21 20 40.4 -2.3**
CHTO P **P** **21 20 40.4 -2.3**
CHTO P **P** **21 20 40.4 -2.3**
CHTO Chiang Mai 22.03 354 P **P** **21 20 42.2 -0.5**
KMSI Cibinong 22.91 81 P **P** **21 20 52.8 +0.7**
GIRL Giralia 22.98 148 P **P** **21 20 55.7 +3.1**
baz=23,SNR=3.6
GIRL Giralia 22.98 148 P **P** **21 20 51.8 -0.9**
PALK Pallekele 23.12 297 P **P** **21 20 54.7 +0.4**
comp=Z,28nm,1.0s,baz=212,slow=4.8,SNR=4.6
PALK LR LR 21 28 47.3
comp=Z,2μm,20.7s,baz=218,slow=33
comp=Z,28nm,1.0s
PALK Pallekele 23.12 297 P **P** **21 20 52.5 -1.7**
PALK Pallekele 23.12 297 P **P** **21 20 57.5 +3.3**
QIZ Qiongzhong 23.64 20 P **P** **21 20 59.5 +0.5**
QIZ IAmb IAmb 21 21 02.6
comp=Z,204nm,1.7s
QIZ Qiongzhong 23.64 20⇑*iP* **P** **21 21 00.3 +1.3**
QIZ pP **pP** **21 21 12.0 +0.2**
QIZ S **S** **21 25 15.8 +5.7**
QIZ sS Sn 21 25 34.1 -0.2
QIZ pmax pmax
comp=Z,49nm,1.2s
QIZ pmax pmax
comp=Z,580nm,6.5s
QIZ LR LR
comp=Z,2μm,21.5s
QIZ LR LR
comp=Z,930nm,23.9s
QIZ LR LR
comp=Z,2μm,23.9s
QIZ Qiongzhong 23.64 20 P **P** **21 21 00.6 +1.6**
SANI Sanana 24.62 88 P **P** **21 21 07.5 -0.6**
comp=Z,2μmcomp=Z,1μmcomp=Z,68nm,1.1s
SANI Sanana 24.62 88 P **P** **21 21 08.8 +0.7**
SGSI Sangihe 25.10 74 P **P** **21 21 14.7 +2.2**
comp=Z,114nm,0.9s
MBWA Marble Bar 25.23 136 P **P** **21 21 12.9 -0.7**
MBWA Marble Bar 25.23 136 P **P** **21 21 15.7 +2.0**
MBWA P **P** **21 21 15.7 +2.0**
MBWA Marble Bar 25.23 136 P **P** **21 21 16.1 +2.5**
PSA00 Pilbara Seismi 25.59 137 P **P** **21 21 16.7 -0.2**
PSA00 Pilbara Seismi 25.59 137 P **P** **21 21 16.9 0.0**
PSA00 IAmb IAmb 21 21 21.1
comp=Z,22nm,0.9s
PSA00 Pilbara Seismi 25.59 137 P **P** **21 21 18.9 +2.0**
NLAI Namlea 25.68 91 P **P** **21 21 18.5 +0.7**
comp=Z,1μmcomp=Z,50nm,1.0s
TGY Tagaytay City 25.94 48 LR LR 21 32 58.4
comp=Z,2μm,20.5s,baz=225,slow=40
DAV Davao City (W) 26.24 67 P **P** **21 21 22.8 0.0**
comp=Z,34nm,0.3s,baz=255,slow=12,SNR=1.2
DAV LR LR 21 33 26.7
comp=Z,1μm,19.1s,baz=258,slow=40
comp=Z,34nm,0.3s
DAV Davao City (W) 26.24 67 P **P** **21 21 22.4 -0.4**
DAV IAmb IAmb 21 22 19.9
comp=Z,170nm,1.1s
DAV Davao City (W) 26.24 67 P **P** **21 21 18.3 -4.5**
LBMI Labuha 26.24 85 P **P** **21 21 22.8 0.0**
comp=Z,2μmcomp=Z,184nm,1.0s
TNTI Ternate 26.28 82 P **P** **21 21 22.2 -1.0**
TNTI Ternate 26.28 82 P **P** **21 21 22.5 -0.8**
comp=Z,714nmcomp=Z,44nm,1.3s
TNTI Ternate 26.28 82 P **P** **21 21 26.3 +3.0**
AAI Ambon 26.78 92 P **P** **21 21 29.2 +1.5**
comp=Z,4μmcomp=Z,57nm,1.0s
VIS Vishakhapatnam 27.39 320 *eP* **P** **21 21 35.7 +2.6**
MSAI Masohi 27.51 91 P **P** **21 21 35.0 +0.7**
comp=Z,362nmcomp=Z,7.8nm,0.8s
KMI Kunming 28.21 3⇑P **P** **21 21 41.3 +0.7**
KMI sP sP 21 21 58.9 -1.2
KMI S **S** **21 26 29.4 +6.3**
KMI sS sS 21 26 53.9 +8.5
KMI pmax pmax
comp=Z,21nm,1.5s
KMI pmax pmax
comp=Z,210nm,7.2s
KMI LR LR
comp=Z,3μm,19.2s
KMI LR LR
comp=Z,910nm,16.2s
KMI LR LR
comp=Z,3μm,20.2s
H08S2 Diego Garcia H 29.07 260 T T 21 51 30.1
baz=84,slow=75,SNR=2491
H08S3 Diego Garcia H 29.08 260 T T 21 51 40.4
baz=84,slow=75,SNR=3177
DGAR Diego Garcia 29.09 261 P **P** **21 21 51.7 +3.4**
H08S1 Diego Garcia H 29.09 260 T T 21 51 31.5
baz=84,slow=75,SNR=1953
MORW Morawa 29.24 153 P **P** **21 21 48.7 -0.8**
PZH PanZhiHua 29.56 1 P **P** **21 21 52.5 0.0**
PZH sP **sP** **21 22 14.6 +2.7**
PZH PcP **PcP** **21 24 56.6 -0.1**
PZH S **S** **21 26 47.3 +3.3**
PZH sS **sS** **21 27 12.4 +6.0**
PZH ScS **ScS** **21 32 27.3 -2.1**
PZH pmax pmax
comp=Z,10.0nm,1.0s
PZH pmax pmax
comp=Z,150nm,7.8s
PZH LR LR
comp=Z,6μm,21.6s
PZH LR LR
comp=Z,5μm,19.6s
PZH LR LR
comp=Z,8μm,21.8s
KNRA Kununurra 29.66 116 P **P** **21 21 52.1 -1.3**
baz=30,SNR=33
KNRA Kununurra 29.66 116 P **P** **21 21 51.7 -1.7**
KNRA IAmb IAmb 21 21 53.4
comp=Z,52nm,1.0s
KNRA Kununurra 29.66 116 P **P** **21 21 52.4 -1.0**
GYA Guiyang 29.95 10⇓*iP* **P** **21 21 56.6 +0.6**
GYA pP pP 21 22 05.5 -3.8
GYA S **S** **21 26 50.4 +0.2**
GYA pmax pmax
comp=Z,50nm,1.2s
GYA pmax pmax
comp=Z,370nm,5.8s
GYA LR LR
comp=Z,2μm,19.6s
GYA LR LR
comp=Z,2μm,18.8s
GYA LR LR
comp=Z,4μm,17.5s
SWI Sorong 29.96 86 P **P** **21 21 55.6 -0.5**
comp=Z,2μmcomp=Z,948nmcomp=Z,84nm,1.0s
SHL Shillong 30.07 343 P **P** **21 21 56.1 -0.9**
SHL IAmb IAmb 21 21 58.8
comp=Z,128nm,1.3s
SHL Shillong 30.07 343 P **P** **21 21 56.1 -0.9**
SHL pmax pmax
comp=Z,128nm,1.3s
SHL Shillong 30.07 343 P **P** **21 21 56.6 -0.4**
SNR=12
SHL Shillong 30.07 343 *eP* **P** **21 21 56.2 -0.9**
SHL IAmb IAmb 21 21 59.5
comp=Z,47nm,0.5s
SAUI Saumlaki 30.15 100 IAMs_20 IAMs_20 21 35 29.9
comp=Z,3μm,22.0s
HYBB Hyderabad (bro 30.46 313 *eP* **P** **21 21 59.9 -0.6**
HYBB eS **S** **21 27 00.8 +2.5**
BOK Bokaro 30.80 331 *eP* **P** **21 22 05.4 +2.0**
BOK IAmb IAmb 21 22 10.3
comp=Z,166nm,1.0s
FAKI Fak Fak 30.83 90 P **P** **21 22 02.9 -0.8**
FAKI IAmb IAmb 21 22 04.9
comp=Z,59nm,0.9s
FAKI Fak Fak 30.83 90 P **P** **21 22 03.0 -0.8**
comp=Z,76nm,1.0s
FAKI Fak Fak 30.83 90 P **P** **21 22 03.8 0.0**
MTN Manton Dam 30.94 110 P **P** **21 22 05.2 +0.5**
baz=31,SNR=4.7
MTN Manton Dam 30.94 110 P **P** **21 22 04.2 -0.6**
BLSP Bilaspur 31.45 324 *eP* **P** **21 22 09.9 +0.8**
KNMB Chin-men Tao 32.12 30 P **P** **21 22 13.8 -1.1**
KNMB IAmb IAmb 21 22 17.9
comp=Z,58nm,0.9s

KDU Kakadu 32.16 109 P **P** **21 22 13.8 -1.6**
baz=32,SNR=14
TWG Pinlang 32.25 36 P **P** **21 22 18.0 +1.8**
TWG IAmb IAmb 21 22 37.0
comp=Z,75nm,1.2s
TPUB Ta-pu 32.37 34 P **P** **21 22 17.7 +0.5**
TPUB IAmb IAmb 21 22 33.6
comp=Z,80nm,1.1s
TPUB Ta-pu 32.37 34 P **P** **21 22 19.0 +1.8**
comp=Z,57nm,1.1s
QZH Quanzhou 32.62 30⇑*iP* P 21 22 31.1 +12
QZH S S 21 27 51.0 +19
QZH pmax pmax
comp=Z,40nm,0.9s
QZH pmax pmax
comp=Z,210nm,7.9s
QZH LR LR
comp=N,1μm,27.0s
QZH LR LR
comp=E,590nm,26.5s
QZH LR LR
comp=Z,2μm,26.5s
YULB Yu-li 32.82 35 P **P** **21 22 21.8 +0.6**
SSLB Suanglung 32.94 34 P **P** **21 22 22.4 +0.3**
SSLB IAmb IAmb 21 22 42.9
comp=Z,80nm,1.4s
SSLB Suanglung 32.94 34 P **P** **21 22 23.9 +1.8**
comp=Z,34nm,1.5s
NWAO Narrogin (SRO) 33.07 155 P **P** **21 22 22.0 -1.2**
NWAO Narrogin (SRO) 33.07 155 IAMs_20 IAMs_20 21 34 16.6
comp=Z,2μm,21.0s
NWAO Narrogin (SRO) 33.07 155 P **P** **21 22 22.0 -1.2**
NWAO pmax pmax
comp=Z,44nm,1.2s
NWAO MLR MLR
comp=Z,2μm,21.0s
NWAO Narrogin (SRO) 33.07 155 P **P** **21 22 26.8 +3.6**
CNSH ChangSha 33.15 19⇑P **P** **21 22 24.4 +0.5**
CNSH S **S** **21 27 40.6 +0.7**
CNSH pmax pmax
comp=Z,34nm,1.2s
CNSH LR LR
comp=Z,1μm,19.9s
CNSH LR LR
comp=Z,2μm,18.4s
CNSH LR LR
comp=Z,2μm,24.6s
JBP Jabalpur 33.52 323 *eP* **P** **21 22 28.0 +0.8**
JBP eS **S** **21 27 50.8 +5.1**
NACB Ninganchiao 33.60 35 P **P** **21 22 27.9 0.0**
NACB IAmb IAmb 21 22 31.3
comp=Z,48nm,1.1s
H01W3 Cape Leeuwin H 33.66 161 T T 21 57 11.6
baz=338,slow=76,SNR=33
H01W2 Cape Leeuwin H 33.67 161 T T 21 57 12.7
baz=338,slow=76,SNR=56
H01W1 Cape Leeuwin H 33.67 161 T T 21 57 12.9
baz=338,slow=76,SNR=30
KAD Karad 33.71 308 *eP* **P** **21 22 30.0 +1.0**
WRKA Warakurna 33.79 132 P **P** **21 22 30.4 +0.8**
baz=34,SNR=19
WRKA Warakurna 33.79 132 P **P** **21 22 30.5 +0.8**
YHNB Yeheng 33.87 34 P **P** **21 22 30.9 +0.6**
YHNB IAmb IAmb 21 22 37.9
comp=Z,53nm,1.1s
YHNB Yeheng 33.87 34 P **P** **21 22 33.4 +3.1**
CD2 Chengdu 34.02 4 P **P** **21 22 33.3 +1.8**
CD2 pP pP 21 22 47.8 +2.9
CD2 S **S** **21 27 58.4 +5.0**
CD2 sS sS 21 28 20.1 +4.2
CD2 pmax pmax
comp=Z,50nm,1.0s
CD2 pmax pmax
comp=Z,310nm,10.4s
CD2 LR LR
comp=Z,3μm,18.9s
CD2 LR LR
comp=Z,3μm,18.0s
CD2 LR LR
comp=Z,4μm,19.9s
ALBI Allahabad 34.13 327 *eP* **P** **21 22 33.9 +1.4**
LSA Lhasa 34.17 344 P **P** **21 22 32.8 -0.6**
LSA IAmb IAmb 21 22 36.3
comp=Z,64nm,1.1s
LSA Lhasa 34.17 344 P **P** **21 22 32.8 -0.6**
LSA pmax pmax
comp=Z,64nm,1.1s
LSA MLR MLR
comp=Z,700nm,22.0s
LSA Lhasa 34.17 344 P **P** **21 22 34.0 +0.6**
LSA pmax pmax
comp=Z,67nm,1.1s
LSA Lhasa 34.17 344 *i* P **P** **21 22 34.2 +0.8**
SNR=9.9
LSA Lhasa 34.17 344 P **P** **21 22 34.4 +1.0**
LSA pP **pP** **21 22 46.2 -0.5**
LSA x x 21 23 01.8
ENH Enshi 34.20 13 P **P** **21 22 32.1 -1.0**
ENH IAmb IAmb 21 22 47.7
comp=Z,82nm,1.0s
ENH IAMs_20 IAMs_20 21 37 49.6
comp=Z,2μm,20.0s
ENH Enshi 34.20 13 P **P** **21 22 32.9 -0.2**
ENH x x 21 22 41.7
ENH pP **pP** **21 22 46.0 -0.5**
ENH sP **sP** **21 22 51.4 -1.2**
PKI Pulchoki 34.27 334 *eP* **P** **21 22 34.9 +0.8**
PKIN Phulchoki 34.28 334 *eP* **P** **21 22 34.9 +0.8**
GUN Gumba 34.37 335 *eP* **P** **21 22 36.3 +1.4**
comp=Z,269nm,0.4s
DMN Daman 34.44 334 *eP* **P** **21 22 36.5 +1.1**
KKN Kakani 34.52 334 *eP* **P** **21 22 36.7 +0.6**
BAKI Biak 34.76 87 P **P** **21 22 36.9 -1.3**
comp=Z,986nmcomp=Z,80nm,1.1s
SRPI Serui, Papua 34.86 89 P **P** **21 22 38.0 -1.0**
GKN Gorkha 34.98 334 *eP* **P** **21 22 41.3 +1.3**
BHPL Bhopal 35.18 320 *eP* **P** **21 22 42.3 +0.6**
BHPL IAmb IAmb 21 22 49.1
comp=Z,22nm,0.8s
KOLN Koldanda 35.26 332 *eP* **P** **21 22 43.0 +0.6**
DANN Dangsing 35.67 333 *eP* **P** **21 22 47.4 +1.3**
comp=Z,552nm,0.5s
WHN Wuhan 35.80 19⇑*iP* **P** **21 22 46.9 +0.2**
WHN pP **pP** **21 23 00.0 -0.2**
WHN S **S** **21 28 23.3 +2.7**
WHN pmax pmax
comp=Z,93nm,1.1s
WHN pmax pmax
comp=Z,650nm,3.6s
WHN LR LR
comp=Z,2μm,11.7s
WHN LR LR
comp=Z,770nm,11.0s
WHN LR LR
comp=Z,3μm,14.7s
JHNI Jhansi 36.11 323 *eP* **P** **21 22 49.6 +0.1**
WB0 Warramunga Arr 36.17 120 P **P** **21 22 49.3 -0.9**
WRA Warramunga Arr 36.19 120 P **P** **21 22 49.7 -0.7**
comp=Z,98nm,0.9s,baz=291,slow=11,SNR=136
WRA PcP **PcP** **21 25 15.0 -0.2**
comp=Z,8.4nm,0.9s,baz=301,slow=2.6,SNR=5.9
WRA S **S** **21 28 22.5 -4.6**
comp=Z,10nm,0.9s,baz=295,slow=16,SNR=10
WRA LR LR 21 39 34.8
comp=Z,959nm,21.4s,baz=230,slow=39
WRA P3KPbc 21 53 27.1
comp=Z,0.7nm,1.1s,baz=118,slow=4.5,SNR=5.1
comp=Z,98nm,0.9s
WRA Warramunga Arr 36.19 120 P **P** **21 22 49.4 -1.0**
WRA Warramunga Arr 36.19 120 *eP* **P** **21 22 49.7 -0.7**
WRA pmax pmax
comp=Z,115nm,0.9s
WRAB Tennant Creek 36.20 120 P **P** **21 22 49.8 -0.7**
WRAB Tennant Creek 36.20 120 P **P** **21 22 49.8 -0.7**
WRAB pmax pmax
comp=Z,104nm,0.9s
WRAB MLR MLR
comp=Z,1μm,19.0s
WRAB Tennant Creek 36.20 120 P **P** **21 22 50.6 +0.2**
WRAB Tennant Creek 36.20 120 P **P** **21 22 50.0 -0.4**
WB2 Warramunga Arr 36.20 120 P **P** **21 22 50.4 -0.1**
baz=36
FORT Forrest 37.23 140 P **P** **21 22 58.8 -0.2**
FORT IAmb IAmb 21 23 53.8
comp=Z,59nm,0.9s

FORT Forrest 37.23 140 P **P** **21 23 00.0 +1.0**
SMPI Sarmi 37.32 89 P **P** **21 22 58.7 -1.3**
comp=Z,21nm,1.1s
AS31 Alice Springs 37.43 126 P **P** **21 23 00.6 -0.3**
ASAR Alice Springs 37.43 126 P **P** **21 23 00.8 -0.1**
ASAR Alice Springs 37.43 126 P **P** **21 23 00.8 -0.1**
XAN Xi'an 37.74 10⇑*iP* **P** **21 23 02.9 -0.5**
XAN pP pP 21 23 15.5 -1.4
XAN sP sP 21 23 21.6 -1.4
XAN PP **PnPn** **21 24 32.6 +0.6**
XAN PcP **PcP** **21 25 17.0 -2.6**
XAN S **S** **21 28 48.3 -2.1**
XAN sS sS 21 29 18.5 +5.5
XAN ScS **ScS** **21 33 08.6 -3.2**
XAN pmax pmax
comp=Z,80nm,0.9s
XAN pmax pmax
comp=Z,470nm,6.3s
XAN LR LR
comp=Z,2μm,24.0s
XAN LR LR
comp=Z,3μm,22.0s
XAN LR LR
comp=Z,4μm,19.2s
XAN Xi'an 37.74 10 P **P** **21 23 02.9 -0.5**
XAN pP **pP** **21 23 16.6 -0.3**
XAN sP **sP** **21 23 21.5 -1.5**
LGTI Lohaghat 38.28 330 *eP* **P** **21 23 09.5 +1.6**
LGTI *eP* pP 21 23 12.9 -8.4
PTH Pithoragarh 38.38 330 *eP* **P** **21 23 10.3 +1.4**
GENI Genyem 38.75 90 P **P** **21 23 10.2 -1.9**
comp=Z,55nm,1.1s
GENI Genyem 38.75 90 P **P** **21 23 12.0 -0.1**
comp=Z,57nm,1.1s
NJ2 Nanjing 38.82 24⇓P **P** **21 23 14.0 +1.7**
NJ2 pP **pP** **21 23 26.9 +1.0**
NJ2 sP **sP** **21 23 31.4 -0.6**
NJ2 PcP **PcP** **21 25 24.5 +1.6**
NJ2 S **S** **21 29 11.0 +4.5**
NJ2 pmax pmax
comp=Z,20nm,0.6s
NJ2 pmax pmax
comp=Z,380nm,6.5s
NJ2 LR LR
comp=Z,2μm,18.6s
NJ2 LR LR
comp=Z,2μm,16.2s
NJ2 LR LR
comp=Z,3μm,16.7s
LYN LuoYang 39.00 15⇑P **P** **21 23 14.4 +0.5**
LYN pP pP 21 23 26.6 -0.8
LYN S **S** **21 29 10.0 +0.8**
LYN pmax pmax
comp=Z,160nm,0.9s
LYN LR LR
comp=Z,5μm,17.6s
LYN LR LR
comp=Z,2μm,15.2s
LYN LR LR
comp=Z,5μm,17.6s
SSE Sheshan 39.01 28 P **P** **21 23 16.8 +2.9**
SSE S **S** **21 29 13.1 +3.7**
SSE pmax pmax
comp=Z,33nm,0.9s
SSE pmax pmax
comp=Z,180nm,9.6s
SSE LR LR
comp=Z,550nm,22.0s
SSE LR LR
comp=Z,260nm,22.0s
SONA Sohna 39.06 325 *eP* **P** **21 23 15.5 +1.1**
LZH Lanzhou 39.18 3 *eP* **P** **21 23 15.9 +0.4**
LZH pP pP 21 23 24.8 -4.3
LZH PP **PP** **21 24 47.4 +1.2**
LZH PcP **PcP** **21 25 25.5 +1.4**
LZH S **S** **21 29 07.5 -4.7**
LZH sS sS 21 29 38.8 +3.9
LZH pmax pmax
comp=Z,67nm,1.2s
LZH pmax pmax
comp=Z,360nm,4.6s
LZH LR LR
comp=Z,4μm,15.2s
LZH LR LR
comp=Z,2μm,16.8s
LZH LR LR
comp=Z,5μm,17.6s
AYAN Aya Nagar 39.21 325 *eP* **P** **21 23 17.0 +1.3**
AJM Ajmer 39.24 320 *eP* **P** **21 23 17.4 +1.3**
KUDL Kundal 39.32 324 *eP* **P** **21 23 17.2 +0.6**
KUDL *i* P **P** **21 23 17.2 +0.6**
JOW Kunigami 39.60 39 P **P** **21 23 19.8 +0.8**
comp=Z,22nm,0.9s,baz=271,slow=7.4,SNR=4.1
JOW LR LR 21 39 14.4
comp=Z,693nm,22.0s,baz=130,slow=36
comp=Z,22nm,0.9s
JOW Kunigami 39.60 39 P **P** **21 23 19.9 +1.0**
JOW Kunigami 39.60 39 P **P** **21 23 21.8 +2.8**
comp=Z,44nm,1.4s
GOMU GeErMu 39.70 352 P **P** **21 23 19.9 -0.2**
GOMU S **S** **21 29 27.5 +7.1**
GOMU pmax pmax
comp=Z,7.0nm,1.2s
GOMU LR LR
comp=Z,670nm,18.8s
GOMU LR LR
comp=Z,490nm,18.5s
GOMU LR LR
comp=Z,790nm,18.5s
DDI Dehra Dun 40.12 328 *eP* **P** **21 23 23.9 +0.6**
DDI IAmb IAmb 21 23 34.2
comp=Z,179nm,0.7s
OOD Oodnadatta 40.84 130 P **P** **21 23 30.1 +0.8**
MULG Mulgathing 40.98 135 P **P** **21 23 31.1 +0.7**
QIS Mount Isa 41.02 118 P **P** **21 23 30.7 -0.3**
baz=41,SNR=48
QIS Mount Isa 41.02 118 P **P** **21 23 30.6 -0.3**
SMLA Simla 41.22 328 *eP* **P** **21 23 33.0 +0.7**
SMLA IAmb IAmb 21 23 54.2
comp=N,108nm,0.8s
BHK Bhakra 41.85 327 *eP* **P** **21 23 37.6 +0.1**
TIA Tai'an 41.91 19⇓P **P** **21 23 37.8 0.0**
TIA pmax pmax
comp=N,17nm,1.1s
TIA pmax pmax
comp=N,170nm,4.7s
TIA LR LR
comp=N,2μm,15.3s
TIA LR LR
comp=N,1μm,15.5s
TIA LR LR
comp=N,3μm,15.5s
TIY Taiyuan 42.01 13 P **P** **21 23 40.8 +2.1**
TIY pP **pP** **21 23 52.9 +0.5**
TIY pmax pmax
comp=N,26nm,0.6s
TIY pmax pmax
comp=N,280nm,5.0s
TIY LR LR
comp=N,3μm,16.5s
TIY LR LR
comp=N,1μm,15.8s
TIY LR LR
comp=N,2μm,16.5s
HNS HongShan 42.28 16⇓P **P** **21 23 42.1 +1.3**
HNS pP **pP** **21 23 53.8 -0.7**
HNS S **S** **21 29 59.4 +1.5**
HNS pmax pmax
comp=N,350nm,6.3s
HNS LR LR
comp=N,2μm,17.5s
HNS LR LR
comp=N,2μm,17.7s
HNS LR LR
comp=N,2μm,17.7s
GTA Gaotai 42.45 358⇑P **P** **21 23 42.3 -0.1**
GTA pP pP 21 23 55.5 -0.6
GTA sP sP 21 24 04.4 +2.2
GTA PcP **PcP** **21 25 34.4 -0.3**
GTA ScP **ScP** **21 29 21.6 +0.3**
GTA S **S** **21 29 56.5 -4.2**
GTA ScS **ScS** **21 33 36.6 -3.1**
GTA pmax pmax
comp=N,7.0nm,1.0s
GTA pmax pmax

comp=N,320nm,4.4s
GTA LR LR
comp=N,2µm,18.2s
GTA LR LR
comp=N,2µm,18.5s
GTA LR LR
comp=N,3µm,18.9s
COEN Coen 42.61 107 P **P** **21 23 43.4 -0.5**
baz=43,SNR=4.8
COEN Coen 42.61 107 P **P** **21 23 43.6 -0.4**
COEN Coen 42.61 107 P **P** **21 23 45.7 +1.8**
THN Thein Dam 43.01 328 *e*P **P** **21 23 47.7 +0.8**
JMU Jammu 43.67 327 *e*P **P** **21 23 52.9 +0.7**
BBOO Buckleboo 43.82 136 P **P** **21 23 53.7 +0.2**
baz=44,SNR=5.6
BBOO Buckleboo 43.82 136 P **P** **21 23 52.6 -0.8**
BBOO Buckleboo 43.82 136 P **P** **21 23 53.9 +0.5**
LCRK Leigh Creek 44.09 132 P **P** **21 23 56.4 +0.7**
JSU Suzuyama 44.26 37 P **P** **21 23 56.8 -0.1**
JSU IAmb IAmb 21 24 12.3
comp=Z,178nm,1.5s
MTSU Mount Surprise 44.58 113 P **P** **21 23 59.6 -0.2**
baz=45,SNR=31
MTSU Mount Surprise 44.58 113 P **P** **21 24 00.2 +0.5**
INKA Innaminka 44.77 127 P **P** **21 24 04.8 +3.7**
HHC Hu-ho-hao-te 44.84 11 *e*P **P** **21 24 03.6 +2.0**
HHC S **S** **21 30 31.8 -3.8**
HHC SS **ScS** **21 33 53.0 -1.6**
HHC pmax pmax
comp=Z,88nm,1.2s
HHC pmax pmax
comp=Z,800nm,8.2s
HHC LR LR
comp=Z,3µm,14.6s
HHC LR LR
comp=Z,1µm,15.9s
HHC LR LR
comp=Z,3µm,15.2s
WHYH Whyalla 45.00 135 P **P** **21 24 04.7 +1.9**
comp=Z,35nm,0.9s
BJT Baijiatuau 45.13 16 P **P** **21 24 04.3 +0.6**
BJT IAmb IAmb 21 24 19.2
comp=Z,61nm,1.1s
BJT Baijiatuau 45.13 16 IAMs_20 IAMs_20 21 45 01.8
comp=Z,2µm,20.0s
BJT Baijiatuau 45.13 16 P **P** **21 24 04.3 +0.6**
BJT pmax pmax
comp=Z,61nm,1.1s
BJT MLR MLR
comp=Z,2µm,20.0s
BJT Baijiatuau 45.13 16 P **P** **21 24 04.8 +1.0**
BJT pP **pP** **21 24 17.3 -0.2**
BJI Beijing 45.15 16 P **P** **21 24 04.5 +0.6**
BJI pP **pP** **21 24 17.8 +0.1**
BJI sP **sP** **21 24 23.4 -0.3**
BJI S **S** **21 30 38.6 -1.2**
BJI pmax pmax
comp=Z,36nm,1.3s
BJI pmax pmax
comp=Z,380nm,10.8s
BJI LR LR
comp=Z,200nm,24.4s
BJI LR LR
comp=Z,870nm,23.4s
BJI LR LR
comp=Z,1µm,24.7s
PMG Port Moresby 45.89 100 LR LR 21 46 46.8
comp=Z,460nm,18.9s,baz=266,slow=40
PMG Port Moresby 45.89 100 P **P** **21 24 10.0 -0.2**
DL2 Dalian 45.90 22⇑ *i*P **P** **21 24 10.1 +0.2**
DL2 S **S** **21 30 50.9 +0.2**
DL2 pmax pmax
comp=Z,28nm,1.5s
DL2 pmax pmax
comp=Z,430nm,4.8s
DL2 LR LR
comp=Z,780nm,18.8s
DL2 LR LR
comp=Z,1µm,18.9s
DL2 LR LR
comp=Z,1µm,17.8s
HTT Hallett 46.16 135 P **P** **21 24 13.0 +0.9**
baz=46,SNR=14
HTT Hallett 46.16 135 P **P** **21 24 13.5 +1.4**
GUMO Guam 46.27 68 P **P** **21 24 10.7 -2.5**
comp=Z,39nm,0.5s,baz=168,slow=14,SNR=5.3
GUMO LR LR 21 44 25.8
comp=Z,189nm,21.5s,baz=246,slow=37
comp=Z,39nm,0.5s
TWOA Tennyson Woods 46.80 137 P **P** **21 24 18.9 +1.9**
comp=Z,28nm,0.8s
CTA Charters Tower 46.84 115 P **P** **21 24 17.6 -0.1**
comp=Z,162nm,1.0s,baz=286,slow=8.2,SNR=52
CTA LR LR 21 45 42.8
comp=Z,908nm,20.2s,baz=282,slow=38
comp=Z,162nm,1.0s
CTA Charters Tower 46.84 115 P **P** **21 24 17.5 -0.1**
CTAO Charters Tower 46.84 115 P **P** **21 24 17.5 -0.1**
CTAO Charters Tower 46.84 115 P **P** **21 24 17.5 -0.1**
CTAO pmax pmax
comp=Z,146nm,0.9s
CTAO Charters Tower 46.84 115 P **P** **21 24 17.5 -0.1**
CTAO Charters Tower 46.84 115 P **P** **21 24 17.7 +0.1**
KSCHJ Chungju 46.96 29 P **P** **21 24 18.8 +0.6**
QLP Quilpie 47.14 124 P **P** **21 24 20.9 +1.1**
baz=47,SNR=12
QLP Quilpie 47.14 124 P **P** **21 24 21.2 +1.4**
STKA Stephens Creek 47.31 132 P **P** **21 24 21.7 +0.6**
comp=Z,14nm,0.6s,baz=308,slow=8.4,SNR=31
STKA LR LR 21 44 33.5
comp=Z,1µm,21.6s,baz=293,slow=36
comp=Z,14nm,0.6s
STKA Stephens Creek 47.31 132 P **P** **21 24 21.7 +0.6**
baz=47,SNR=35
STKA Stephens Creek 47.31 132 P **P** **21 24 21.6 +0.4**
STKA Stephens Creek 47.31 132*c i*P **P** **21 24 21.5 +0.4**
STKA pmax pmax
comp=Z,14nm,0.6s
STKA Stephens Creek 47.31 132 P **P** **21 24 22.6 +1.5**
KSAR Wonju Array Be 47.37 29 P **P** **21 24 21.9 +0.5**
KSAR Wonju Array Be 47.37 29 P **P** **21 24 21.9 +0.5**
KSRS Korea Array 47.40 29 P **P** **21 24 22.4 +0.8**
comp=Z,28nm,1.1s,baz=218,slow=7.8,SNR=42
KSRS LR LR 21 46 03.4
comp=Z,356nm,18.2s,baz=210,slow=38
comp=Z,28nm,1.1s
KS19 Wonju Array Si 47.41 29 P **P** **21 24 22.2 +0.5**
KS19 IAmb IAmb 21 24 37.2
comp=Z,49nm,1.1s
SEHB SEOHWA 48.20 29 P **P** **21 24 28.4 +0.5**
SEHB IAmb IAmb 21 24 42.7
comp=Z,52nm,1.5s
JHS Saijyo 48.31 35 P **P** **21 24 29.1 +0.3**
JHS IAmb IAmb 21 24 43.9
comp=Z,72nm,1.1s
KBL Kabul 48.33 324 P **P** **21 24 29.0 -0.1**
KBL IAmb IAmb 21 24 45.7
comp=Z,29nm,0.8s
KBL Kabul 48.33 324 P **P** **21 24 29.0 -0.1**
KBL pmax pmax
comp=Z,29nm,0.8s
KBL Kabul 48.33 324 P **P** **21 24 29.2 +0.1**
SNR=18
KBL P **P** **21 24 29.2 +0.1**
SNR=18
WMQ Urumqi 48.42 347⇑ *i*P **P** **21 24 30.6 +1.1**
WMQ pP sP 21 24 47.8 -1.6
WMQ S **S** **21 31 25.0 -1.6**
WMQ pmax pmax
comp=Z,420nm,1.7s
WMQ pmax pmax
comp=Z,600nm,3.8s
WMQ LR LR
comp=Z,700nm,14.9s
WMQ LR LR
comp=Z,900nm,19.1s
WMQ LR LR
comp=Z,810nm,19.1s
WMQ Urumqi 48.42 347 P **P** **21 24 30.8 +1.3**
WMQ pP **pP** **21 24 43.0 -0.4**
KSH Kashi 48.53 334 P **P** **21 24 29.4 -1.1**
KSH pP pP 21 24 42.9 -1.5
KSH S **S** **21 31 27.6 -0.8**
KSH pmax pmax
comp=Z,41nm,0.9s
KSH pmax pmax
comp=Z,460nm,4.5s
KSH LR LR
comp=Z,400nm,13.7s
KSH LR LR
comp=Z,490nm,17.5s
KSH LR LR
comp=Z,1µm,22.0s
WBK Wadi Bani Khal 48.71 304 P **P** **21 24 34.7 +2.6**
XLT XiLinHaoTe 48.74 14 *e*P **P** **21 24 31.5 -0.5**
XLT pP pP 21 24 43.8 -2.1
XLT sP sP 21 24 52.3 +0.4
XLT PcP **PcP** **21 25 58.1 +1.7**
XLT ScP **ScP** **21 29 47.3 +0.1**
XLT PcS **PcS** **21 29 53.0 +0.4**
XLT S **S** **21 31 29.0 -2.1**
XLT sS sS 21 32 00.3 +5.9
XLT pmax pmax
comp=Z,55nm,1.1s
XLT pmax pmax
comp=Z,340nm,4.0s
XLT LR LR
comp=Z,98nm,17.7s
XLT LR LR
comp=Z,930nm,19.0s
XLT LR LR
comp=Z,1µm,17.7s
DQM DQM 48.80 300 P **P** **21 24 34.6 +1.9**
MHTO MHTO 48.86 301 P **P** **21 24 33.9 +0.7**
SNY Shenyang 49.18 22⇓ P **P** **21 24 35.0 -0.2**
SNY pmax pmax
comp=Z,31nm,1.1s
SNY pmax pmax
comp=Z,400nm,6.4s
SNY LR LR
comp=Z,1µm,18.4s
SNY LR LR
comp=Z,1µm,19.4s
SNY LR LR
comp=Z,1µm,20.4s
WSAR Wadi Sarin 49.27 305 P **P** **21 24 37.7 +1.4**
comp=Z,18nm,1.0s,baz=176,slow=6.5,SNR=6.0
WSAR LR LR 21 45 20.6
comp=Z,517nm,18.4s,baz=138,slow=36
comp=Z,18nm,1.0s
WSAR Wadi Sarin 49.27 305 P **P** **21 24 38.2 +1.9**
JMDO Jabal Madar 49.33 303 P **P** **21 24 38.8 +2.1**
JCJ Chichijima 49.58 50 P **P** **21 24 37.1 -1.5**
comp=Z,31nm,0.5s,baz=291,slow=21,SNR=4.9
JCJ LR LR 21 46 31.6
comp=Z,287nm,19.5s,baz=268,slow=37
comp=Z,31nm,0.5s
TARG Taragay, Kyrgy 49.62 337 P **P** **21 24 40.0 +0.9**
TARG Taragay, Kyrgy 49.62 337 P **P** **21 24 40.0 +0.9**
TARG pmax pmax
comp=Z,109nm,1.0s
SMDO Samad 49.67 304 P **P** **21 24 40.9 +1.5**
SNR=5.9
BIDO Bidbid 49.81 305 P **P** **21 24 42.3 +1.9**
SNR=5.4
PRZ Przheval'sk 50.03 338 P **P** **21 24 43.5 +1.5**
PRZ Przheval'sk 50.03 338 P **P** **21 24 43.5 +1.5**
PRZ pmax pmax
comp=Z,150nm,1.0s
KDJ Kajisay 50.20 337 P **P** **21 24 44.3 +1.0**
KDJ Kajisay 50.20 337 P **P** **21 24 44.3 +1.0**
KDJ pmax pmax
comp=Z,217nm,1.0s
CMSA Cobar Meteorol 50.28 129 P **P** **21 24 44.6 +0.8**
baz=50,SNR=52
CMSA Cobar Meteorol 50.28 129 P **P** **21 24 45.0 +1.2**
UZB Uzunbulak 50.38 339 *e*P **P** **21 24 45.1 +0.6**
UZB *e*S **S** **21 31 53.6 -0.5**
UZB pmax pmax
comp=Z,9.0nm,0.6s
UZB Uzunbulak 50.38 339 *e*P **P** **21 24 45.2 +0.6**
comp=Z,9.3nm,0.6s,baz=339
UZB *e*S **S** **21 31 53.6 -0.5**
baz=339
DRK Karamyk 50.46 330 P **P** **21 24 46.2 +0.8**
HOQ Hoqain 50.51 304 P **P** **21 24 47.5 +1.8**
HOQ P **P** **21 24 47.5 +1.8**
SATY Saty 50.53 338 *e*P **P** **21 24 45.9 +0.3**
SATY *e*S **S** **21 31 56.0 -0.2**
SATY pmax pmax
comp=Z,28nm,0.9s
SATY Saty 50.53 338 *e*P **P** **21 24 46.0 +0.3**
comp=Z,28nm,0.9s,baz=338
SATY *e*S **S** **21 31 56.0 -0.2**
baz=338
KRVT Keravat (AS076 50.55 93 LR LR 21 50 17.2
comp=Z,208nm,19.5s,baz=40,slow=41
ZHN Zhinishke 50.61 338 *e*P **P** **21 24 45.0 -1.2**
ZHN *e*S **S** **21 31 53.0 -4.3**
ZHN Zhinishke 50.61 338 *e*P **P** **21 24 45.0 -1.2**
baz=338
ZHN *e*S **S** **21 31 53.1 -4.3**
baz=338
ULHL Ulahol 50.68 336 P **P** **21 24 44.8 -2.1**
SNR=17
KPKS Kokpek 50.78 339*c i*P **P** **21 24 48.0 +0.5**
KPKS *e*S **S** **21 32 00.6 +1.1**
KPKS pmax pmax
comp=Z,24nm,0.7s
KPKS Kokpek 50.78 339⇑ *i*P **P** **21 24 48.0 +0.5**
comp=Z,24nm,0.7s,baz=339
KPKS *e*S **S** **21 32 00.7 +1.1**
baz=339
GAR Garm 50.84 329 P **P** **21 24 47.5 -0.6**
INU Inuyama 50.87 38 P **P** **21 24 49.3 +1.1**
INU Inuyama 50.87 38 P **P** **21 24 50.4 +2.2**
comp=Z,16nm,1.1s
INU Inuyama 50.87 38 P **P** **21 24 47.8 -0.4**
INU pP **pP** **21 24 59.7 -2.5**
RBK Rabkut 50.88 296 P **P** **21 24 50.9 +2.3**
RMQ Roma 50.90 122 P **P** **21 24 50.2 +1.5**
baz=51,SNR=13
RMQ Roma 50.90 122 P **P** **21 24 52.5 +3.9**
BOOM Boomskoye usch 51.00 336 P **P** **21 24 49.0 -0.3**
BOOM Boomskoye usch 51.00 336 P **P** **21 24 49.0 -0.3**
BOOM pmax pmax
comp=Z,124nm,1.0s
SONM Songino Array 51.04 4 P **P** **21 24 50.4 +1.0**
comp=Z,59nm,0.8s,baz=187,slow=8.2,SNR=156
SONM PcP **PcP** **21 26 04.6 -0.2**
comp=Z,10nm,0.5s,baz=190,slow=4.5,SNR=7.0
SONM ScP **ScP** **21 29 57.3 +0.3**
comp=Z,4.0nm,1.0s,baz=178,slow=4.0,SNR=5.1
SONM LR LR 21 49 43.8
comp=Z,2µm,18.7s,baz=188,slow=40
comp=Z,59nm,0.8s
SONM Songino Array 51.04 4 P **P** **21 24 50.3 +0.9**
SONM IAmb IAmb 21 25 05.0
comp=Z,83nm,0.9s
TNSS Tian-Shan 51.06 337 *e*P **P** **21 24 50.2 +0.2**
TNSS Tian-Shan 51.06 337 *e*P **P** **21 24 50.3 +0.2**
baz=337
JASK Jask - Hormozg 51.09 307 P **P** **21 24 52.8 +2.8**
ULN Ulaanbaatar 51.12 5 P **P** **21 24 50.7 +0.7**
ULN IAmb IAmb 21 25 05.5
comp=Z,59nm,1.1s
ULN Ulaanbaatar 51.12 5 IAMs_20 IAMs_20 21 49 44.8
comp=Z,1µm,20.0s
ULN Ulaanbaatar 51.12 5 P **P** **21 24 50.7 +0.7**
ULN pmax pmax
comp=Z,59nm,1.1s
ULN MLR MLR
comp=Z,1µm,20.0s
ULN Ulaanbaatar 51.12 5 P **P** **21 24 51.0 +0.9**
ULN pP **pP** **21 25 03.1 -1.0**
ULN sP **sP** **21 25 08.3 -1.7**
CHGR Chuyangaron 51.20 328 P **P** **21 24 49.8 -1.0**
CHGR Chuyangaron 51.20 328 P **P** **21 24 49.8 -1.0**
CHGR pmax pmax
comp=Z,222nm,1.1s
AAA Alma-Ata 51.22 337 *e*P **P** **21 24 50.6 -0.2**
AAA *e*S **S** **21 32 04.9 -0.7**
AAA Alma-Ata 51.22 337 *e*P **P** **21 24 50.6 -0.2**
baz=337
AAA *e*S **S** **21 32 04.9 -0.7**
baz=337
JHJ Hachijo jima 2 51.23 42 LR LR 21 44 36.7
comp=Z,302nm,21.6s,baz=250,slow=34
JGF Kuroka 51.24 38 P **P** **21 24 50.5 -0.6**
DOK Doka 51.32 297 P **P** **21 24 53.1 +1.3**
UCH Uchtor 51.38 335 P **P** **21 24 53.3 +0.8**
SNR=35
UCH Uchtor 51.38 335 P **P** **21 24 53.3 +0.8**
UCH pmax pmax
comp=Z,67nm,1.1s
BTK Batken 51.39 330 P **P** **21 24 52.4 +0.3**
BTK IAmb IAmb 21 25 12.6
comp=Z,62nm,1.1s
BTK Batken 51.39 330 P **P** **21 24 52.4 +0.3**
BTK pmax pmax
comp=Z,62nm,1.1s
WHFO Wadi Hawf 51.40 296 P **P** **21 24 53.8 +1.3**
TKM2 Tokmak 2 51.50 336 P **P** **21 24 53.9 +0.8**
SNR=82
RK1H Rockhampton Ha 51.50 117 P **P** **21 24 54.0 +0.8**
comp=Z,20nm,0.9s
KBK Karagaybulak 51.55 335 P **P** **21 24 54.8 +1.4**
SNR=41
KBK Karagaybulak 51.55 335 P **P** **21 24 54.6 +1.2**
KBK pmax pmax
comp=Z,119nm,1.0s
CN2 Changchun 51.58 22 *e*P **P** **21 24 53.0 -0.3**
CN2 *e*pP pP 21 25 05.6 -1.8
CN2 S **S** **21 32 09.3 -1.1**
CN2 pmax pmax
comp=Z,50nm,1.2s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=Z,1µm,16.0s
CN2 LR LR
comp=Z,700nm,16.0s
CN2 LR LR
comp=Z,800nm,17.0s
ABTO Aybut 51.65 295 P **P** **21 24 54.7 +0.3**
AML Almayashu 51.66 334 P **P** **21 24 55.2 +0.7**
SNR=15
AML Almayashu 51.66 334 P **P** **21 24 55.5 +1.0**
AML Almayashu 51.66 334 *i*P **P** **21 24 55.4 +1.0**
SNR=16
AAK Ala-Archa 51.73 335 P **P** **21 24 55.6 +1.0**
SNR=9.1
AAK Ala-Archa 51.73 335 P **P** **21 24 55.4 +0.7**
comp=Z,21nm,0.9s,baz=173,slow=4.9,SNR=20
AAK LR LR 21 51 12.4
comp=Z,228nm,18.8s,baz=152,slow=41
comp=Z,21nm,0.9s
AAK Ala-Archa 51.73 335 P **P** **21 24 55.4 +0.7**
AAK IAmb IAmb 21 25 25.6
comp=Z,43nm,1.1s
AAK Ala-Archa 51.73 335 P **P** **21 24 55.4 +0.7**
AAK pmax pmax
comp=Z,43nm,1.1s
AAK MLR MLR
comp=Z,700nm,22.0s
AAK Ala-Archa 51.73 335 P **P** **21 24 56.0 +1.3**
AAK Ala-Archa 51.73 335 *i*P **P** **21 24 55.7 +1.0**
SNR=9.6
AAK Ala-Archa 51.73 335 P **P** **21 24 55.6 +1.0**
AAK pP **pP** **21 25 09.5 +0.8**
AAK sP **sP** **21 25 14.9 +0.2**
ARXS Arharly 51.73 339 *e*P **P** **21 24 54.5 -0.1**
CHKK Chushkaly 51.74 338 *e*P **P** **21 24 53.6 -1.0**
CHKK Chushkaly 51.74 338 *e*P **P** **21 24 53.7 -1.0**
baz=338
FRU1 Bishkek 51.81 335 P **P** **21 24 55.6 +0.5**
FRU1 Bishkek 51.81 335 P **P** **21 24 55.7 +0.5**
FRU1 pmax pmax
comp=Z,134nm,1.0s
CHMS Chumysh 51.91 335 P **P** **21 24 56.4 +0.5**
SNR=23
UMZA Um Al Zommool 51.94 302 P **P** **21 24 58.0 +1.5**
ALNE Al Ain 52.00 304 P **P** **21 24 58.5 +1.6**
SNR=8.5
ALNE Al Ain 52.00 304 *i*P **P** **21 24 58.5 +1.6**
SNR=13
UOSS Minazif 52.01 305 P **P** **21 24 56.2 -0.7**
UOSS Minazif 52.01 305 P **P** **21 24 58.7 +1.7**
UOSS P **P** **21 24 58.7 +1.7**
UOSS Minazif 52.01 305 P **P** **21 24 58.7 +1.7**
UOSS Minazif 52.01 305 P **P** **21 24 57.7 +0.8**
ASHO Ashiyiah 52.01 305 P **P** **21 24 59.2 +2.2**
ASHO Ashiyiah 52.01 305 *i*P **P** **21 24 58.6 +1.5**
SNR=10
HATD Hatta, Dubai 52.02 305 P **P** **21 24 58.8 +1.9**
HATD Hatta, Dubai 52.02 305 *i*P **P** **21 24 58.4 +1.4**
SNR=8.5
KUU Kurty 52.02 337 *e*P **P** **21 24 55.1 -1.6**
KUU *e*S **S** **21 32 15.9 -0.6**
KUU Kurty 52.02 337 *e*P **P** **21 24 55.1 -1.6**
baz=337
KUU *e*S **S** **21 32 16.0 -0.6**
baz=337
EKS2 Erkin-Say 52.05 334 P **P** **21 24 58.2 +1.1**
SNR=7.0
EKS2 Erkin-Say 52.05 334 P **P** **21 24 58.0 +0.9**
EKS2 pmax pmax
comp=Z,112nm,1.0s
TDK Taldyqorghan 52.21 339 *e*P **P** **21 24 56.3 -1.7**
TDK *e*S **S** **21 32 18.3 -0.8**
TDK pmax pmax
comp=Z,16nm,0.7s
TDK Taldyqorghan 52.21 339 *e*P **P** **21 24 56.3 -1.7**
comp=Z,16nm,0.7s,baz=340
TDK *e*S **S** **21 32 18.4 -0.8**
baz=340
MSFE Esma-Masafi 52.23 306 P **P** **21 25 01.0 +2.4**
MASF Masafi 52.23 306 P **P** **21 25 01.3 +2.7**
USP Ospenovka 52.24 335 P **P** **21 24 58.8 +0.4**
SNR=44
USP Ospenovka 52.24 335 P **P** **21 24 58.8 +0.4**
USP pmax pmax
comp=Z,89nm,1.3s
SGDS Sogindy 52.34 336 *e*P **P** **21 24 59.2 +0.1**
SGDS pmax pmax
comp=Z,23nm,1.5s
SGDS Sogindy 52.34 336 *e*P **P** **21 24 56.1 -3.0**
baz=336
SGDS *e*S **S** **21 32 21.4 +0.3**
baz=336
BANOM Banah 52.36 306 P **P** **21 25 00.9 +1.3**
MAJO Matsushiro 52.38 38 P **P** **21 24 58.8 -0.7**
MAJO IAmb IAmb 21 25 13.3
comp=Z,44nm,1.2s
MAJO Matsushiro 52.38 38 P **P** **21 24 58.8 -0.7**
MAJO pmax pmax
comp=Z,44nm,1.2s
MAJO MLR MLR
comp=Z,600nm,20.0s
MAJO Matsushiro 52.38 38 P **P** **21 24 59.2 -0.3**
comp=Z,29nm,1.1s
MAJO Matsushiro 52.38 38 P **P** **21 24 58.9 -0.7**
MAJO pP **pP** **21 25 11.5 -2.1**
MJAR Matsushiro Arr 52.38 38 P **P** **21 24 58.8 -0.7**
comp=Z,29nm,1.0s,baz=220,slow=7.3,SNR=62
MJAR ScP **ScP** **21 30 02.8 -0.2**
comp=Z,3.5nm,0.9s,baz=219,slow=4.5,SNR=9.5
MJAR LR LR 21 47 34.8
comp=Z,510nm,21.6s,baz=226,slow=36
comp=Z,29nm,1.0s
MJAR Matsushiro Arr 52.38 38 P **P** **21 24 58.4 -1.1**
MJB9 Matsu-Tunnel 52.38 38 P **P** **21 24 59.1 -0.4**
MJB9 IAmb IAmb 21 25 13.3
comp=Z,40nm,1.1s
MJA0 Matsu Arr-Jizo 52.41 38 *e*P **P** **21 24 58.8 -0.9**
MJA0 pmax pmax
comp=Z,29nm,1.0s
FAQ Al Faqa, Dubai 52.42 305 P **P** **21 25 01.3 +1.3**
SNR=5.0
FAQ Al Faqa, Dubai 52.42 305 *i*P **P** **21 25 01.3 +1.3**
SNR=17
NAZ Nazwa, Dubai 52.47 305 P **P** **21 25 01.9 +1.5**
NAZ Nazwa, Dubai 52.47 305 *i*P **P** **21 25 01.7 +1.4**
SNR=6.1
HRA Herat 52.48 319 P **P** **21 24 59.7 -0.8**
ZSN Zaisan 52.51 346 *e*P **P** **21 25 00.3 +0.1**
ZSN *e*S **S** **21 32 22.5 -0.6**
ZSN pmax pmax
comp=Z,85nm,1.1s
ZSN Zaisan 52.51 346 *e*P **P** **21 25 00.3 +0.1**
comp=Z,84nm,1.1s,baz=346
ZSN *e*S **S** **21 32 22.6 -0.6**
baz=346
SHME Shamm 52.55 306 P **P** **21 25 03.2 +2.3**
SHME Shamm 52.55 306 P **P** **21 25 03.1 +2.3**
EIDS Eidsvold 52.56 120 P **P** **21 25 01.7 +0.7**
baz=53,SNR=8.6
EIDS Eidsvold 52.56 120 P **P** **21 25 01.1 +0.1**

EIDS IAmb IAmb 21 25 03.5
comp=Z,94nm,1.2s
EIDS Eidsvold 52.56 120 P **P** **21 25 02.9 +1.9**
MK31 Makanchi Array 52.58 344 P **P** **21 25 01.0 +0.2**
MK31 IAmb IAmb 21 25 20.8
comp=Z,61nm,0.9s
MK31 Makanchi Array 52.58 344 *c i*P **P** **21 25 00.5 -0.3**
MKAR Makanchi Array 52.58 344 P **P** **21 25 01.1 +0.2**
comp=Z,54nm,0.5s,baz=156,slow=8.4,SNR=421
MKAR LR LR 21 52 18.2
comp=Z,537nm,20.9s,baz=146,slow=42
comp=Z,54nm,0.5s
MKAR Makanchi Array 52.58 344 *e*P **P** **21 25 01.0 +0.2**
MKAR pmax pmax
comp=Z,55nm,0.4s
ASUD Al Ashush, Dub 52.59 304 P **P** **21 25 03.2 +2.0**
ASUD Al Ashush, Dub 52.59 304 P **P** **21 25 03.1 +1.9**
MAKZ Makanchi 52.68 343 P **P** **21 25 01.4 -0.1**
MAKZ IAmb IAmb 21 25 21.5
comp=Z,61nm,1.0s
MAKZ Makanchi 52.68 343 P **P** **21 25 01.4 -0.1**
MAKZ pmax pmax
comp=Z,61nm,1.0s
MAKZ Makanchi 52.68 343 P **P** **21 25 01.6 +0.1**
MAKZ pP **pP** **21 25 15.0 -0.6**
MAKZ sP **sP** **21 25 20.0 -1.5**
TOO Toolangi 52.88 136 P **P** **21 25 02.3 -0.9**
TOO Toolangi 52.88 136 P **P** **21 25 02.3 -0.9**
TOO pmax pmax
comp=Z,36nm,1.4s
TAS Tashkent 53.10 330 P **P** **21 25 04.2 -0.6**
TAS Tashkent 53.10 330 P **P** **21 25 04.2 -0.6**
TAS pmax pmax
comp=Z,94nm,0.9s
IUG Iuzhnay 53.36 331 *e*P **P** **21 25 05.4 -1.3**
IUG *e*S **S** **21 32 33.7 -1.4**
IUG Iuzhnay 53.36 331 *e*P **P** **21 25 05.5 -1.3**
baz=331
IUG *e*S **S** **21 32 33.8 -1.4**
baz=331
JSD Sado 53.40 36 P **P** **21 25 07.2 +0.2**
JSD IAmb IAmb 21 25 08.7
comp=Z,45nm,1.4s
ZAK Zakamensk 53.42 2 *e*P **P** **21 25 07.2 +0.2**
ZAK pmax pmax
comp=Z,26nm,1.1s
MZWR Madinat Zayed 53.44 303 P **P** **21 25 08.9 +1.4**
MZR Muzera 53.48 302 P **P** **21 25 09.2 +1.4**
MZR Muzera 53.48 302 *i* P **P** **21 25 09.2 +1.4**
SNR=17
KNGR Kungurtug, Tuv 53.72 357⇑ *e*P **P** **21 25 10.0 +0.8**
KK31 Karatay Array 53.87 332 P **P** **21 25 09.7 -0.6**
KK31 IAmb IAmb 21 25 52.6
comp=Z,29nm,1.0s
KK31 Karatay Array 53.87 332 P **P** **21 25 09.7 -0.6**
KK31 pmax pmax
comp=Z,29nm,1.0s
KKAR Karatay Array 53.87 332 P **P** **21 25 09.8 -0.5**
KKAR Karatay Array 53.87 332 P **P** **21 25 09.9 -0.5**
KKAR IAmb IAmb 21 25 52.6
comp=Z,29nm,1.0s
KKAR Karatay Array 53.87 332 P **P** **21 25 09.9 -0.4**
KKAR pmax pmax
comp=Z,29nm,1.0s
BTLS Baital 53.88 336 *e*P **P** **21 25 08.7 -1.7**
BTLS *e*S **S** **21 32 41.1 -0.7**
BTLS Baital 53.88 336 *e*P **P** **21 25 08.7 -1.7**
baz=336
BTLS *e*S **S** **21 32 41.1 -0.7**
baz=336
MDJ Mudanjiang 53.90 25 P **P** **21 25 10.5 0.0**
MDJ IAmb IAmb 21 25 13.6
comp=Z,47nm,1.0s
MDJ IAMs_20 IAMs_20 21 47 41.3
comp=Z,1μm,21.0s
MDJ Mudanjiang 53.90 25 P **P** **21 25 10.9 +0.4**
MDJ pP pP 21 25 24.3 -0.3
MDJ sP sP 21 25 30.3 -0.3
MDJ ScP **ScP** **21 30 09.4 +0.1**
MDJ S **S** **21 32 42.4 +0.3**
MDJ sS sS 21 33 04.3 -1.6
MDJ pmax pmax
comp=Z,54nm,1.1s
MDJ pmax pmax
comp=Z,370nm,5.7s
MDJ LR LR
comp=Z,830nm,24.2s
MDJ LR LR
comp=Z,1μm,20.2s
MDJ LR LR
comp=Z,2μm,24.6s
MDJ Mudanjiang 53.90 25 P **P** **21 25 11.3 +0.8**
comp=Z,48nm,1.1s
MDJ Mudanjiang 53.90 25 P **P** **21 25 10.8 +0.4**
MDJ pP **pP** **21 25 24.6 0.0**
BNX BinXian 53.96 22⇑ P **P** **21 25 11.3 +0.4**
BNX pP **pP** **21 25 24.6 -0.4**
BNX sP **sP** **21 25 31.6 +0.6**
BNX S **S** **21 32 41.5 -1.3**
BNX sS **sS** **21 33 09.8 +3.0**
BNX pmax pmax
comp=Z,180nm,1.0s
BNX pmax pmax
comp=Z,520nm,3.6s
BNX LR LR
comp=Z,1μm,17.6s
BNX LR LR
comp=Z,850nm,17.7s
BNX LR LR
comp=Z,1μm,17.9s
BRLS Borolday 54.13 332 *e*P **P** **21 25 11.1 -1.1**
BRLS *e*S **S** **21 32 41.9 -3.3**
BRLS Borolday 54.13 332 *e*P **P** **21 25 11.2 -1.1**
baz=332
BRLS *e*S **S** **21 32 42.0 -3.3**
baz=332
CAN Canberra 54.38 132 P **P** **21 25 13.9 -0.3**
CAN IAmb IAmb 21 25 36.8
comp=Z,85nm,1.2s
CAN Canberra 54.38 132 P **P** **21 25 13.9 -0.3**
CAN pmax pmax
comp=Z,85nm,1.2s
CAN Canberra 54.38 132 P **P** **21 25 15.4 +1.2**
CAN Canberra 54.38 132 P **P** **21 25 15.1 +0.8**
CAN pP **pP** **21 25 27.2 -1.2**
ARMA Armidale 54.58 125 P **P** **21 25 17.5 +1.7**
baz=55,SNR=3.9
ARMA Armidale 54.58 125 P **P** **21 25 16.3 +0.4**
ARMA Armidale 54.58 125 P **P** **21 25 19.1 +3.2**
comp=Z,25nm,1.2s
USA0B Ussuriysk Arra 54.61 27 P **P** **21 25 16.1 +0.5**
USA0B Ussuriysk Arra 54.61 27 P **P** **21 25 16.1 +0.5**
USA0B pmax pmax
comp=Z,156nm,1.1s
USRK Ussuriysk Ar. 54.61 27 P **P** **21 25 16.1 +0.5**
comp=Z,128nm,0.9s,baz=221,slow=6.0,SNR=86
USRK LR LR 21 51 18.4
comp=Z,820nm,18.0s,baz=211,slow=39
comp=Z,128nm,0.9s
HIA Hailar 54.66 15 P **P** **21 25 15.5 -0.4**
HIA Hailar 54.66 15 IAMs_20 IAMs_20 21 51 04.0
comp=Z,1μm,20.0s
HIA Hailar 54.66 15 *ce*P **P** **21 25 15.7 -0.3**
HIA pmax pmax
comp=Z,36nm,1.3s
MOY Mondy 54.69 360 *e*P **P** **21 25 16.7 +0.5**
MOY pmax pmax
comp=Z,52nm,2.1s
JMM Marumori 54.81 38 P **P** **21 25 17.1 -0.2**
JMM IAmb IAmb 21 25 19.7
comp=Z,66nm,1.1s
OPO Ambohidratompo 55.12 250 P **P** **21 25 22.2 +2.2**
comp=Z,6.8nm,0.8s,baz=52,slow=5.0,SNR=6.0
OPO LR LR 21 45 41.7
comp=Z,312nm,18.2s,baz=231,slow=32
comp=Z,6.8nm,0.8s
IRK Irkutsk 55.32 2 *e*P **P** **21 25 21.5 +0.9**
IRK pmax pmax
comp=Z,105nm,2.2s
CIT Chita 56.01 9 *e*P **P** **21 25 27.0 +1.4**
CIT *e* 21 25 40.3
CIT *e* 21 25 45.5
CIT pmax pmax
comp=Z,142nm,1.2s
VOI Vohitsoka 56.07 246 P **P** **21 25 24.6 -2.2**
VOI IAmb IAmb 21 25 45.7
comp=Z,141nm,1.9s
KHOR Al-Khor Airpor 56.15 304 P **P** **21 25 28.5 +1.4**
SMRA Abu-Samra 56.39 303 P **P** **21 25 29.6 +0.8**
SEM Semipalatinsk 56.43 344 *e*P **P** **21 25 27.2 -1.7**
SEM *e*S **S** **21 33 13.7 -2.5**
SEM Semipalatinsk 56.43 344 *e*P **P** **21 25 27.3 -1.7**
baz=344
SEM *e*S **S** **21 33 13.7 -2.5**
baz=344
SHMA Al-Shehemyia 56.70 304 P **P** **21 25 32.7 +1.7**
JTM Tenmabayashi 56.84 35 P **P** **21 25 31.8 0.0**
SAKB Bahrain 57.10 304 P **P** **21 25 35.3 +1.5**
KURBB Kurchatov Arra 57.11 343 P **P** **21 25 33.5 0.0**
comp=Z,22nm,0.8s,baz=161,slow=6.8,SNR=70
KURBB LR LR 21 53 12.5
comp=Z,645nm,20.7s,baz=132,slow=39
KURBB PKP2bc 21 55 32.6
comp=Z,0.7nm,0.9s,baz=336,slow=2.0,SNR=4.9
comp=Z,22nm,0.8s
KURK Kurchatov 57.17 343 P **P** **21 25 33.8 0.0**
KURK Kurchatov 57.17 343 P **P** **21 25 33.8 0.0**
KURK pmax pmax
comp=Z,172nm,1.0s
KURK MLR MLR
comp=Z,600nm,19.0s
KURK Kurchatov 57.17 343 P **P** **21 25 34.3 +0.4**
KURK P **P** **21 25 34.3 +0.4**
KURK Kurchatov 57.17 343 P **P** **21 25 34.0 +0.2**
KURK pP **pP** **21 25 46.3 -1.7**
KURK sP **sP** **21 25 52.5 -1.4**
GEYT Alibeck 57.26 320 P **P** **21 25 35.1 +0.3**
comp=Z,35nm,0.9s,baz=222,slow=18,SNR=29
GEYT LR LR 21 52 31.7
comp=Z,491nm,21.8s,baz=142,slow=38
comp=Z,35nm,0.9s
GEYT Alibeck 57.26 320 P **P** **21 25 34.8 0.0**
GEYT IAmb IAmb 21 25 36.9
comp=Z,27nm,1.0s
GYA0B ALIBECK ARRAY 57.26 320 P **P** **21 25 34.8 -0.1**
GYA0B IAmb IAmb 21 25 37.4
comp=Z,41nm,1.0s
TEY Ternei 57.40 29 *e*P **P** **21 25 37.2 +1.7**
JEW Eniwo 58.40 34 P **P** **21 25 43.0 +0.4**
HNR Honiara 58.48 99 LR LR 21 53 24.5
comp=Z,281nm,19.6s,baz=265,slow=39
BRZS Berezniki 58.49 339 *e*P **P** **21 25 41.8 -1.3**
BRZS *e*S **S** **21 33 41.7 -1.0**
BRZS pmax pmax
comp=Z,19nm,1.2s
BRZS Berezniki 58.49 339 *e*P **P** **21 25 41.9 -1.3**
comp=Z,19nm,1.2s,baz=339
BRZS *e*S **S** **21 33 41.8 -1.0**
baz=339
KLR Kul'dur 58.51 23 P **P** **21 25 43.6 +0.4**
comp=Z,54nm,0.8s,baz=232,slow=5.8,SNR=154
KLR LR LR 21 53 44.1
comp=Z,2μm,18.1s,baz=229,slow=39
comp=Z,54nm,0.8s
ZAA0 Zalesovo Array 58.63 349 P **P** **21 25 43.9 0.0**
ZALV Zalesovo Beam 58.63 349 P **P** **21 25 44.0 0.0**
comp=Z,121nm,0.7s,baz=160,slow=4.7,SNR=349
ZALV LR LR 21 54 19.3
comp=Z,887nm,20.9s,baz=154,slow=39
ZALV PKP2ab 21 55 41.6
comp=Z,0.9nm,0.7s,baz=270,slow=2.2,SNR=3.9
comp=Z,121nm,0.7s
ZALV Zalesovo Beam 58.63 349 P **P** **21 25 43.9 -0.1**
ZALV Zalesovo Beam 58.63 349 *e*P **P** **21 25 44.0 0.0**
ZALV pmax pmax
comp=Z,126nm,0.7s
ERM Érimo 58.84 35 P **P** **21 25 46.0 +0.3**
ERM Érimo 58.84 35 P **P** **21 25 46.0 +0.3**
ERM pmax pmax
comp=Z,119nm,1.5s
ASAJ Asahikawa 59.86 33 LR LR 21 53 45.3
comp=Z,147nm,18.4s,baz=216,slow=38
ASAJ Asahikawa 59.86 33 P **P** **21 25 52.7 0.0**
JKA Kamikawa-asahi 59.86 33 P **P** **21 25 52.7 0.0**
JKA IAmb IAmb 21 25 55.4
comp=Z,45nm,1.0s
ATD Arta Tunnel 60.01 285 LR LR 21 50 04.6
comp=Z,258nm,18.0s,baz=104,slow=34
RAYN Ar Rayn 60.53 299 P **P** **21 25 57.6 -0.2**
RAYN Ar Rayn 60.53 299 P **P** **21 25 57.6 -0.2**
RAYN pmax pmax
comp=Z,18nm,1.0s
RAYN MLR MLR
comp=Z,600nm,22.0s
RAYN Ar Rayn 60.53 299 P **P** **21 25 58.5 +0.7**
RAYN Ar Rayn 60.53 299 *i* P **P** **21 25 58.5 +0.7**
SNR=16
RAYN Ar Rayn 60.53 299 P **P** **21 25 58.4 +0.7**
ZEA Zeya 60.75 17 *e*P **P** **21 25 59.4 +0.8**
ZEA *e*S **S** **21 34 15.5 +3.8**
ZEA pmax pmax
comp=N,20nm,1.0s
ZEA pmax pmax
comp=E,20nm,1.1s
ZEA pmax pmax
comp=Z,50nm,1.1s
ZEA pmax pmax
comp=N,100nm,4.0s
ZEA pmax pmax
comp=Z,100nm,8.1s
ZEA smax smax
comp=E,100nm,12.7s
ZEA MLR MLR
comp=E,300nm,13.0s
ZEA MLR MLR
comp=N,800nm,15.0s
ZEA MLR MLR
comp=Z,700nm,15.0s
GRNR Gornyy 61.59 24⇑ *i*P **P** **21 26 04.9 +0.5**
GRNR pmax pmax
comp=N,10.0nm,1.1s
GRNR pmax pmax
comp=Z,20nm,1.2s
GRNR MLR MLR
comp=Z,500nm,16.0s
BOD Bodaibo 61.70 8 *e*P **P** **21 26 05.1 +0.2**
BOD pmax pmax
comp=Z,94nm,1.2s
BVAR Borovoye Array 61.80 339 LR LR 21 57 45.8
comp=Z,205nm,19.2s,baz=20,slow=41
YSS Yuzh-Sakhalins 61.81 31 P **P** **21 26 06.0 +0.2**
YSS Yuzh-Sakhalins 61.81 31 *ce*P **P** **21 26 06.3 +0.4**
YSS *e**PP **pP** **21 26 17.2 -3.0**
YSS *e**SP **sP** **21 26 25.4 -0.7**
YSS *e*S **S** **21 34 25.7 +0.3**
YSS pmax pmax
comp=Z,150nm,1.0s
YSS pmax pmax
comp=Z,400nm,3.3s
YSS Yuzh-Sakhalins 61.81 31 P **P** **21 26 06.3 +0.4**
YSS pP **pP** **21 26 19.3 -1.0**
YSS sP **sP** **21 26 25.9 -0.3**
BRVK Borovoye 61.87 339 P **P** **21 26 05.7 -0.5**
BRVK IAmb IAmb 21 26 21.1
comp=Z,70nm,1.1s
BRVK Borovoye 61.87 339 P **P** **21 26 05.7 -0.5**
BRVK pmax pmax
comp=Z,70nm,1.2s
BRVK MLR MLR
comp=Z,300nm,20.0s
BRVK Borovoye 61.87 339 P **P** **21 26 05.8 -0.4**
BRVK Borovoye 61.87 339 P **P** **21 26 05.7 -0.5**
BRVK pP **pP** **21 26 18.8 -1.7**
UGL Uglegorsk 62.89 29 *e*P **P** **21 26 13.8 +0.7**
UGL *e*S S 21 34 56.6 +18
UGL pmax pmax
comp=Z,140nm,1.1s
KIBK Kibwezi 63.25 269 IAMs_20 IAMs_20 21 48 17.1
comp=Z,716nm,20.0s
KIBK Kibwezi 63.25 269 P **P** **21 26 19.7 +3.4**
CASY Casey 63.26 176 P **P** **21 26 14.2 -1.1**
CASY Casey 63.26 176 P **P** **21 26 17.2 +1.9**
CASY pP **pP** **21 26 32.5 +3.0**
ABKAR Akbulak array 63.37 331 P **P** **21 26 16.1 -0.2**
ABKAR Akbulak array 63.37 331 P **P** **21 26 16.0 -0.2**
KOUNC Koumac, New Ca 63.54 111 P **P** **21 26 17.9 0.0**
FURI Furi 63.64 282 P **P** **21 26 18.6 -0.6**
KMBO Kilima Mbogo 64.10 270 P **P** **21 26 25.2 +3.1**
comp=Z,2.8nm,0.9s,baz=46,slow=9.4,SNR=5.5
KMBO LR LR 21 48 49.9
comp=Z,586nm,21.9s,baz=92,slow=31
KMBO Kilima Mbogo 64.10 270 P **P** **21 26 20.7 -1.4**
KMBO Kilima Mbogo 64.10 270 IAMs_20 IAMs_20 21 48 03.7
comp=Z,778nm,22.0s
KMBO Kilima Mbogo 64.10 270 P **P** **21 26 24.9 +2.8**
KMBO Kilima Mbogo 64.10 270 P **P** **21 26 24.9 +2.8**
KMBO Kilima Mbogo 64.10 270 P **P** **21 26 24.9 +2.8**
KMBO pP **pP** **21 26 34.2 -2.1**
KMBO sP **sP** **21 26 40.4 -1.6**
TYV Tymovskoe 64.39 28 *e*P **P** **21 26 21.4 -1.5**
TYV *e*S **S** **21 34 54.9 -2.6**
TYV pmax pmax
comp=Z,11nm,1.7s
TYV pmax pmax
comp=Z,100nm,2.4s
TYV smax smax
comp=N,300nm,5.8s
TYV smax smax
comp=E,900nm,5.8s
AKTO Aktyubinsk 65.09 331 LR LR 21 58 27.6
comp=E,479nm,21.6s,baz=131,slow=39
NKL Nikolayevsk 65.12 25 *e*P **P** **21 26 29.0 +1.4**
NKL *e*S **S** **21 35 05.1 -1.3**
NKL pmax pmax
comp=N,122nm,0.7s
NKL pmax pmax
comp=E,3.0nm,1.0s
NKL pmax pmax
comp=Z,44nm,1.0s
NKL smax smax
comp=E,4.0nm,0.9s
NKL smax smax
comp=N,201nm,0.7s
NKL MLR MLR
comp=Z,347nm,15.0s
DZM Mont Dzumac 65.72 113 P **P** **21 26 32.8 +0.5**
comp=Z,25nm,1.1s,baz=132,slow=20,SNR=3.7
DZM LR LR 21 58 11.5
comp=Z,608nm,18.5s,baz=237,slow=39
comp=Z,25nm,1.1s
LODK Lodwar 66.30 275 IAMs_20 IAMs_20 21 55 42.3
comp=Z,637nm,19.0s
LODK Lodwar 66.30 275 P **P** **21 26 38.8 +2.6**
MAK Makhachkala 66.78 320 *e*P **P** **21 26 38.6 +0.1**
MAK *e**PP **pP** **21 26 53.2 +0.3**
MAK *e**SP **sP** **21 26 59.0 +0.3**
MAK *e* 21 29 10.0
MAK *e*S **S** **21 35 28.2 +1.1**
MAK *e**SS **sS** **21 35 51.8 +0.6**
MAK pmax pmax
comp=Z,73nm,1.1s
DDFL Dedoflistskaro 66.99 318 P **P** **21 26 43.6 +3.6**
GNI Garni 67.36 316 LR LR 21 58 58.0
comp=Z,126nm,20.9s,baz=106,slow=38
GNI Garni 67.36 316 P **P** **21 26 42.3 -0.2**
GNI IAmb IAmb 21 27 18.7
comp=Z,45nm,1.1s
GNI Garni 67.36 316 P **P** **21 26 42.3 -0.2**
GNI pmax pmax
comp=Z,45nm,1.1s
GNI Garni 67.36 316 P **P** **21 26 43.5 +1.1**
GNI Garni 67.36 316 P **P** **21 26 43.4 +0.9**
GROC Groznyy 68.00 319 *e*P **P** **21 26 46.8 +0.5**
GROC *e**SP **sP** **21 27 05.5 -1.0**
GROC *e* 21 27 13.7
GROC *e* 21 29 18.1
GROC *e**SS **sS** **21 36 04.9 -1.1**
GROC pmax pmax
comp=Z,103nm,1.1s
SVE Sverdlovsk 68.33 337 *d i*P **P** **21 26 48.1 0.0**
SVE pmax pmax
comp=Z,116nm,1.1s
SVE MLR MLR
comp=Z,543nm,24.0s
YAK Yakutsk 68.59 14 LR LR 22 00 32.2
comp=Z,1μm,18.7s,baz=258,slow=39
YAK Yakutsk 68.59 14 P **P** **21 26 48.7 -0.8**
YAK IAMs_20 IAMs_20 22 00 20.6
comp=Z,1μm,18.0s
YAK Yakutsk 68.59 14 *c i*P **P** **21 26 48.7 -0.8**
YAK *e**PP **pP** **21 27 03.2 -0.9**
YAK *e* 21 27 15.7
YAK *e* 21 29 21.0
YAK *e*PPP PPP 21 30 57.6
YAK *e*S **S** **21 35 46.8 -1.1**
YAK *e**SS **sS** **21 36 11.7 -0.9**
YAK *e* 21 36 42.6
YAK *e*SS **SS** **21 40 12.6 -0.5**
YAK pmax pmax
comp=Z,215nm,1.0s
YAK pmax pmax
comp=N,61nm,1.1s
YAK pmax pmax
comp=E,58nm,1.1s
YAK pmax pmax
comp=Z,24nm,1.5s
YAK pmax pmax
comp=N,16nm,1.6s
YAK pmax pmax
comp=E,23nm,1.4s
YAK smax smax
comp=N,14nm,1.8s
YAK smax smax
comp=E,15nm,1.6s
YAK Yakutsk 68.59 14 P **P** **21 26 48.7 -0.8**
YAK pP **pP** **21 27 01.2 -2.9**
YAK sP **sP** **21 27 08.3 -1.6**
GURO Guroymak-BITLI 68.62 314 P **P** **21 26 50.6 +0.2**
GURO IAmb IAmb 21 27 12.6
comp=Z,65nm,1.5s
KARS Kars 68.71 316 P **P** **21 26 51.4 +0.5**
KARS Kars 68.71 316 P **P** **21 26 51.4 +0.5**
KARS pmax pmax
comp=Z,103nm,0.8s
AKH Akhalkalaki 68.75 317⇓ P **P** **21 26 52.4 +1.2**
AKH Akhalkalaki 68.75 317 P **P** **21 26 52.4 +1.2**
DRV Dumont d'Urvil 68.78 165 P **P** **21 26 51.9 +1.3**
ARU Arti 68.88 336 LR LR 21 59 48.3
comp=Z,511nm,21.2s,baz=134,slow=38
ARU Arti 68.88 336 P **P** **21 26 50.8 -0.6**
ARU IAmb IAmb 21 26 53.4
comp=Z,87nm,1.2s
ARU IAMs_20 IAMs_20 21 59 32.9
comp=Z,625nm,21.0s
ARU Arti 68.88 336 *c i*P **P** **21 26 51.1 -0.3**
ARU *PP **pP** **21 27 04.2 -1.8**
ARU 21 27 15.5
ARU 21 29 21.1
ARU PPP PPP 21 31 04.2
ARU S **S** **21 35 52.8 +1.2**
ARU 21 36 51.4
ARU pmax pmax
comp=Z,82nm,1.2s
ARU MLR MLR
comp=Z,684nm,24.0s
ARU Arti 68.88 336 P **P** **21 26 51.1 -0.3**
ARU pP **pP** **21 27 05.1 -0.9**
ARU sP **sP** **21 27 10.2 -1.6**
ZEI Tsey 69.06 318 *e*P **P** **21 26 53.7 +0.5**
ZEI pmax pmax
comp=Z,46nm,1.0s
MARD Mardin 69.08 312 P **P** **21 26 53.5 +0.2**
MARD IAmb IAmb 21 26 56.2
comp=Z,60nm,0.7s
ONI Oni 69.28 318 P **P** **21 26 54.9 +0.6**
ONI IAmb IAmb 21 27 25.0
comp=Z,56nm,1.3s
ONI Oni 69.28 318 P **P** **21 26 54.9 +0.6**
ONI pmax pmax
comp=Z,56nm,1.3s
MAW Mawson 69.45 195 LR LR 21 50 52.7
comp=Z,2μm,21.6s,baz=28,slow=30
MAW Mawson 69.45 195 P **P** **21 26 55.8 +1.0**
MAW Mawson 69.45 195 P **P** **21 26 55.8 +1.0**
MAW pmax pmax
comp=Z,6.0nm,1.2s
BATM Batumi 70.06 316⇓ P **P** **21 26 59.6 +0.5**
BATM Batumi 70.06 316 P **P** **21 26 59.5 +0.5**
KBZ Khabaz 70.13 319 P **P** **21 27 00.1 +0.7**
comp=Z,56nm,0.9s,baz=122,slow=5.0,SNR=54
KBZ LR LR 22 01 51.8
comp=Z,176nm,20.7s,baz=108,slow=39
comp=Z,56nm,0.9s
KBZ Khabaz 70.13 319 *c i*P **P** **21 26 59.8 +0.4**
KBZ pmax pmax

comp=Z,78nm,1.0s
CHVG Ch'k'valeri 70.25 318 ⇑P **P** **21 27 01.3 +1.1**
KOPT Kop Dagi 70.28 315 P **P** **21 27 01.3 +0.5**
KVAR Kislovodsk Arr 70.36 319 LR LR 22 02 32.8
comp=Z,119nm,19.6s,baz=281,slow=40
KIV Kislovodsk 70.36 319 P **P** **21 27 01.3 +0.2**
KIV IAmb IAmb 21 27 03.8
comp=Z,73nm,1.0s
KIV Kislovodsk 70.36 319 *e*P **P** **21 27 01.2 +0.2**
KIV *e*S **S** **21 36 10.5 +0.7**
KIV pmax pmax
comp=Z,80nm,1.1s
KIV pmax pmax
comp=Z,113nm,4.5s
KIV MLR MLR
comp=Z,141nm,18.0s
KIV Kislovodsk 70.36 319 P **P** **21 27 01.6 +0.6**
KIV pP **pP** **21 27 15.9 +0.4**
KIV sP **sP** **21 27 21.4 +0.1**
ASF Jabal al Asfar 70.42 306 LR LR 21 57 39.6
comp=Z,453nm,21.8s,baz=108,slow=36
GOF Gofitskoye 70.61 320⇑ *e*P **P** **21 27 02.9 +0.6**
GOF pmax pmax
comp=Z,128nm,1.0s
MBAR Mbarara 70.63 270 LR LR 21 54 10.5
comp=Z,416nm,19.4s,baz=71,slow=32
MBAR Mbarara 70.63 270 P **P** **21 27 02.9 -0.4**
MBAR Mbarara 70.63 270 IAMs_20 IAMs_20 21 54 10.0
comp=Z,590nm,19.0s
MBAR Mbarara 70.63 270 P **P** **21 27 02.9 -0.4**
MBAR MLR MLR
comp=Z,600nm,19.0s
MBAR Mbarara 70.63 270 P **P** **21 27 05.5 +2.2**
MBAR Mbarara 70.63 270 P **P** **21 27 05.3 +1.9**
MBAR sP **sP** **21 27 23.2 -0.3**
MBAR x x 21 27 28.4
SKR Severo-Kuril's 71.13 33 *e*P **P** **21 27 05.1 -0.2**
SKR *e*S **S** **21 36 13.0 -5.1**
SKR pmax pmax
comp=Z,117nm,0.9s
SKR MLR MLR
comp=Z,200nm,17.0s
GHAJ Ghor Haditha 71.26 304 P **P** **21 27 06.1 -0.4**
GHAJ IAmb IAmb 21 27 10.1
comp=Z,48nm,1.0s
GHAJ IAMs_20 IAMs_20 21 57 09.1
comp=Z,823nm,21.0s
EIL Elat 71.33 303 LR LR 21 57 22.4
comp=Z,621nm,20.5s,baz=102,slow=35
BELG Belogornoye 71.48 329 LR LR 22 02 57.0
comp=Z,318nm,21.9s,baz=141,slow=40
BELG Belogornoye 71.48 329*c i*P **P** **21 27 07.0 -0.4**
BELG pmax pmax
comp=Z,29nm,1.0s
MMAI Mount Meron Ar 71.86 306 LR LR 22 00 22.5
comp=Z,347nm,19.1s,baz=267,slow=37
VSLR Vesyoloye 71.92 318*c i*P **P** **21 27 10.5 +0.2**
SOC Sochi 72.18 318 *e*P **P** **21 27 10.4 -1.5**
SOC *e* 21 29 50.1
SOC *e*PPP PPP 21 31 37.2
SOC *e*S **S** **21 36 28.8 -1.8**
SOC pmax pmax
comp=Z,49nm,0.9s
SOC MLR MLR
comp=Z,170nm,22.0s
MATP Matopo 72.83 250 LR LR 21 53 46.3
comp=Z,881nm,21.4s,baz=60,slow=31
LSZ Lusaka 72.94 255 LR LR 21 54 09.2
comp=Z,732nm,21.8s,baz=102,slow=31
RPZ Rata Peaks 73.15 135 P **P** **21 27 18.1 +0.4**
comp=Z,24nm,1.0s,baz=118,slow=6.4,SNR=3.8
RPZ LR LR 21 58 14.8
comp=Z,802nm,21.2s,baz=275,slow=35
comp=Z,24nm,1.0s
RPZ Rata Peaks 73.15 135 P **P** **21 27 17.7 0.0**
RPZ IAmb IAmb 21 28 07.8
comp=Z,161nm,1.6s
PEA0B Petropavlovsk- 73.19 32 P **P** **21 27 17.6 0.0**
PEA0B IAmb IAmb 21 27 20.5
comp=Z,39nm,1.1s
PEA0B Petropavlovsk- 73.19 32*c i*P **P** **21 27 17.2 -0.5**
PETK Petropavlovsk- 73.19 32 P **P** **21 27 17.2 -0.5**
comp=Z,25nm,1.0s,baz=200,slow=3.9,SNR=24
PETK LR LR 22 00 44.3
comp=Z,86nm,19.1s,baz=257,slow=37
comp=Z,25nm,1.0s
PETK Petropavlovsk- 73.19 32 P **P** **21 27 17.0 -0.7**
BNN Bunyan 73.26 312 P **P** **21 27 18.6 +0.1**
BNN IAmb IAmb 21 27 21.1
comp=Z,94nm,1.1s
TOKA Tokat 73.27 314 P **P** **21 27 18.6 +0.1**
MA2 Magadan 73.59 24 LR LR 22 00 53.1
comp=Z,546nm,21.9s,baz=238,slow=37
MA2 Magadan 73.59 24 P **P** **21 27 20.0 +0.2**
MA2 IAMs_20 IAMs_20 22 00 20.3
comp=Z,587nm,22.0s
MA2 Magadan 73.59 24 P **P** **21 27 20.0 +0.2**
MA2 pmax pmax
comp=Z,124nm,1.2s
MA2 MLR MLR
comp=Z,600nm,22.0s
PET Petropavlovsk 73.65 32 P **P** **21 27 20.2 -0.2**
PET IAmb IAmb 21 27 22.4
comp=Z,74nm,1.0s
PET Petropavlovsk 73.65 32 *e*P **P** **21 27 20.0 -0.3**
PET *e**PP **pP** **21 27 32.8 -2.3**
PET *e*SP **PcP** **21 27 38.0 +2.1**
PET *e* 21 30 07.7
PET *e*S **S** **21 36 47.6 +0.7**
PET pmax pmax
comp=Z,105nm,1.0s
PET pmax pmax
comp=Z,200nm,17.8s
PET MLR MLR
comp=Z,500nm,20.0s
CSS Mathiatis 74.05 308 P **P** **21 27 23.2 0.0**
CSS IAmb IAmb 21 27 26.2
comp=Z,60nm,1.0s
CSS IAMs_20 IAMs_20 21 59 15.2
comp=Z,513nm,22.0s
KIRV Kirov 74.06 335*c i*P **P** **21 27 22.7 +0.1**
VRH Novokhopyorsk 74.10 326 *e*P **P** **21 27 22.2 -0.8**
VRH pmax pmax
comp=Z,170nm,0.6s
BRTR Keskin Array B 75.16 312 P **P** **21 27 29.2 -0.4**
comp=Z,35nm,1.0s,baz=131,slow=6.4,SNR=78
comp=Z,35nm,1.0s
BRTR Keskin Array B 75.16 312 P **P** **21 27 29.1 -0.5**
BRTR Keskin Array B 75.16 312 *e*P **P** **21 27 29.2 -0.4**
BRTR pmax pmax
comp=Z,36nm,1.0s
BR131 Keskin Array S 75.16 312 P **P** **21 27 29.1 -0.5**
BR131 IAmb IAmb 21 27 31.4
comp=Z,45nm,0.8s
BR131 Keskin Array S 75.16 312*c i*P **P** **21 27 29.0 -0.5**
BR131 Keskin Array S 75.16 312 P **P** **21 27 29.4 -0.2**
SNR=28
SNZO South Karori 75.37 132 IAMs_20 IAMs_20 21 59 11.4
comp=Z,1µm,22.0s
ILGA Ilgaz 75.50 314 P **P** **21 27 31.3 -0.4**
VSR Storozhevoye 75.56 325 *e*P **P** **21 27 31.0 -0.5**
VSR pmax pmax
comp=Z,100nm,0.6s
BZK Bozkurt 75.56 315 ⇑P **P** **21 27 31.5 -0.2**
BZK Bozkurt 75.56 315 P **P** **21 27 31.3 -0.4**
VORR Voronezh 75.73 325⇓ *i*P **P** **21 27 32.8 +0.4**
VORR *e*S **S** **21 37 06.8 -3.3**
VORR pmax pmax
comp=Z,109nm,1.6s
LBTB Lobatse 75.75 245 LR LR 21 54 40.5
comp=Z,772nm,20.0s,baz=86,slow=31
LBTB Lobatse 75.75 245 P **P** **21 27 31.9 -1.4**
LBTB Lobatse 75.75 245 P **P** **21 27 31.9 -1.4**
LBTB pmax pmax
comp=Z,18nm,1.1s
ANTO Ankara 75.82 312 P **P** **21 27 33.1 -0.2**
ANTO IAmb IAmb 21 27 35.6
comp=Z,51nm,1.1s
ANTO Ankara 75.82 312 P **P** **21 27 33.1 -0.2**
ANTO pmax pmax
comp=Z,51nm,1.1s
BR231 Keskin MP Arra 75.83 312 P **P** **21 27 33.2 -0.2**
BR231 IAmb IAmb 21 27 54.6
comp=Z,54nm,1.1s
SEY Seymchan 76.25 21 LR LR 22 05 30.0
comp=Z,985nm,18.1s,baz=242,slow=39
SEY Seymchan 76.25 21*c i*P **P** **21 27 35.5 +0.3**
SEY pmax pmax
comp=Z,63nm,1.1s
LPSR Galich'ya Gora 76.27 326 *e*P **P** **21 27 34.9 -0.5**
LPSR pmax pmax
comp=Z,110nm,1.1s
BOSA Boshof 76.28 241 P **P** **21 27 37.6 +1.4**
comp=Z,1.9nm,0.7s,baz=98,slow=3.8,SNR=8.9
BOSA LR LR 21 54 54.0
comp=Z,565nm,19.2s,baz=92,slow=31
BOSA Boshof 76.28 241 P **P** **21 27 36.1 -0.1**
BOSA IAmb IAmb 21 28 12.3
comp=Z,109nm,2.0s
MSVF Nonsavu 76.34 107 P **P** **21 27 37.0 +0.3**
comp=Z,21nm,1.0s,baz=189,slow=5.8,SNR=6.0
MSVF LR LR 22 00 15.2
comp=Z,325nm,21.4s,baz=217,slow=35
comp=Z,21nm,1.0s
MSVF Nonsavu 76.34 107 P **P** **21 27 36.0 -0.7**
MSVF IAmb IAmb 21 27 51.8
comp=Z,42nm,1.1s
MSVF Nonsavu 76.34 107 P **P** **21 27 37.0 +0.3**
SIM Simferopol' 76.42 318 *e*P **P** **21 27 36.1 -0.4**
SIM *e**PP **pP** **21 27 51.0 -0.2**
SIM *e*S **S** **21 37 10.0 -8.1**
SIM *e*S **S** **21 37 14.0 -4.1**
SIM pmax pmax
comp=Z,79nm,1.1s
BKZ Black Stump Fm 76.44 129 P **P** **21 27 36.5 -0.4**
BKZ IAmb IAmb 21 28 08.6
comp=Z,41nm,0.9s
URZ Urewera 76.81 128 LR LR 22 01 43.1
comp=Z,481nm,21.4s,baz=211,slow=36
URZ Urewera 76.81 128 IAMs_20 IAMs_20 21 57 27.9
comp=Z,1µm,21.0s
TIXI Tiksi 76.85 9 LR LR 22 05 44.8
comp=Z,2µm,19.2s,baz=181,slow=39
TIXI Tiksi 76.85 9 P **P** **21 27 37.2 -1.1**
TIXI IAmb IAmb 21 27 58.3
comp=Z,45nm,1.0s
TIXI Tiksi 76.85 9 P **P** **21 27 37.3 -1.1**
TIXI pmax pmax
comp=Z,45nm,1.0s
TIXI MLR MLR
comp=Z,2µm,20.0s
MDUB Mudurnu 77.16 313 P **P** **21 27 40.9 -0.1**
PRGR Permogore 77.34 336⇑ *i*P **P** **21 27 42.2 +0.9**
PRGR *e**PP **pP** **21 27 55.0 -1.0**
PRGR *e*S **S** **21 37 24.7 -2.6**
BORA Eskisehir 77.56 312 P **P** **21 27 42.7 -0.4**
MOS Moscow 78.25 329 *e*P **P** **21 27 44.5 -2.0**
MOS *e* 21 27 54.5
MOS *e**PP **pP** **21 28 00.3 -1.0**
MOS *e*S **S** **21 37 34.0 -3.4**
MOS *e* 21 37 53.0
MOS *e**SS **SKKSac** **21 37 58.7 +1.1**
MOS pmax pmax
comp=Z,125nm,1.1s
MOS pmax pmax
comp=Z,300nm,1.8s
MOS MLR MLR
comp=Z,400nm,22.0s
ARG Arkhangelos 78.47 308 P **P** **21 27 48.6 +0.4**
ARG IAmb IAmb 21 28 09.9
comp=Z,107nm,1.3s
ARG Arkhangelos 78.47 308 P **P** **21 27 48.6 +0.4**
ARG pmax pmax
comp=Z,107nm,1.3s
OBN Obninsk 78.56 328 LR LR 22 06 47.4
comp=Z,70nm,20.8s,baz=117,slow=39
OBN Obninsk 78.56 328 P **P** **21 27 48.0 -0.2**
OBN Obninsk 78.56 328*c e*P **P** **21 27 47.3 -0.9**
OBN *e* 21 28 00.0
OBN *e**PP **pP** **21 28 04.6 +1.6**
OBN *e* 21 30 46.5
OBN *e*PPP PPP 21 32 35.7
OBN pmax pmax
comp=Z,79nm,1.0s
OBN MLR MLR
comp=Z,476nm,23.0s
ISK Istanbul-Kandi 78.89 313 P **P** **21 27 50.4 +0.1**
KARP Karpathos 79.10 307 P **P** **21 27 51.4 -0.3**
KARP IAMs_20 IAMs_20 22 08 07.8
comp=Z,499nm,22.0s
KLMR Klimovskoe 79.53 334 *e*P **P** **21 27 52.5 -0.9**
KLMR *e* 21 30 55.4
KLMR pmax pmax
comp=Z,114nm,1.3s
KLMR Klimovskoe 79.53 334 *e*P **P** **21 27 52.5 -0.9**
KLMR AMP 21 27 56.1
comp=Z,114nm,1.3s
KLMR *e**PP **PP** **21 30 55.4 +1.0**
EDC Edincik 79.60 312 P **P** **21 27 54.6 +0.3**
PURM Purcari 79.73 318 ⇑P **P** **21 27 54.8 0.0**
TLCR 80.09 317 ⇑P **P** **21 27 57.5 +0.7**
TLCR 80.09 317 P **P** **21 27 57.5 +0.7**
MFTR Murfatlar 80.11 316 ⇑P **P** **21 27 57.4 +0.5**
TIRR Tirgusor 80.18 316 ⇑P **P** **21 27 57.5 +0.2**
TIRR Tirgusor 80.18 316 P **P** **21 27 56.8 -0.5**
TIRR Tirgusor 80.18 316 P **P** **21 27 56.8 -0.5**
TIRR pmax pmax
comp=Z,128nm,1.0s
TPGR Topolog 80.28 316 ⇑P **P** **21 27 57.8 -0.1**
SUR Sutherland 80.31 238 LR LR 21 57 48.1
comp=Z,606nm,19.6s,baz=103,slow=31
RAO Raoul Island 80.33 119 LR LR 22 03 41.7
comp=Z,458nm,21.2s,baz=154,slow=36
ICOR Ion Corvin 80.53 316 ⇑P **P** **21 28 00.5 +1.4**
MILM Milestii Mici 80.54 318⇑ *i*P **P** **21 27 59.0 -0.1**
comp=Z,140nm,0.9s
MILM Milestii Mici 80.54 318 ⇑P **P** **21 27 59.4 +0.3**
MILM Milestii Mici 80.54 318*c i*P **P** **21 27 59.0 -0.1**
MILM *i* 21 28 15.0
MILM pmax pmax
comp=Z,330nm,6.5s
CFR Carcaliu 80.55 317 ⇓P **P** **21 27 59.5 +0.2**
CFR Carcaliu 80.55 317 P **P** **21 27 59.5 +0.2**
KIS Kishinev 80.56 319⇑ *e*P **P** **21 28 00.0 +0.8**
comp=Z,60nm,0.9s
KIS Kishinev 80.56 319*c e*P **P** **21 28 00.0 +0.8**
KIS *e* 21 28 18.0
KIS pmax pmax
comp=Z,60nm,0.9s
HARR Harsova 80.58 316 ⇑P **P** **21 28 00.5 +1.1**
HARR Harsova 80.58 316 P **P** **21 28 00.5 +1.1**
EZN Ezine 80.64 311 P **P** **21 27 59.4 -0.4**
VNDA Vanda 80.70 169 P **P** **21 27 59.5 0.0**
comp=Z,3.6nm,1.0s,baz=284,slow=5.9,SNR=7.6
VNDA LR LR 21 58 31.3
comp=Z,463nm,21.9s,baz=310,slow=32
comp=Z,3.6nm,1.0s
VNDA Vanda 80.70 169 P **P** **21 27 58.9 -0.6**
LEOM Leova 80.80 318 ⇓P **P** **21 28 00.9 +0.4**
LEOM Leova 80.80 318 P **P** **21 28 00.9 +0.4**
IDI Anoyia 80.87 306 ⇑P **P** **21 28 02.1 +0.8**
IDI Anoyia 80.87 306 LR LR 22 05 05.6
comp=Z,204nm,21.7s,baz=92,slow=36
IDI Anoyia 80.87 306 P **P** **21 28 01.1 -0.2**
IDI IAmb IAmb 21 28 23.4
comp=Z,48nm,1.0s
ALN Alexandroupoli 81.07 312 P **P** **21 28 00.6 -1.5**
ALN Alexandroupoli 81.07 312 P **P** **21 28 01.8 -0.3**
ALN IAmb IAmb 21 28 04.1
comp=Z,34nm,1.0s
ALN Alexandroupoli 81.07 312 P **P** **21 28 01.8 -0.3**
ALN pmax pmax
comp=Z,34nm,1.0s
VASR Vaslui 81.15 318 ⇑P **P** **21 28 02.7 +0.3**
GHRR 81.26 317 ⇓P **P** **21 28 04.5 +1.4**
AKASG Malin Array Be 81.29 322 P **P** **21 28 02.7 -0.3**
comp=Z,20nm,1.0s,baz=82,slow=5.4,SNR=66
comp=Z,20nm,1.0s
AKASG Malin Array Be 81.29 322 *e*P **P** **21 28 02.7 -0.3**
AKASG pmax pmax
comp=Z,25nm,0.9s
AKBB Malin Array Si 81.29 322*c i*P **P** **21 28 02.9 -0.2**
RAZG Razgrad 81.31 315 ⇓P **P** **21 28 04.1 +0.7**
SMTH Samothraki Isl 81.36 312 P P 21 27 58.7 -5.1
IAS Iasi 81.44 319 ⇑P **P** **21 28 04.9 +1.0**
IAS Iasi 81.44 319 P **P** **21 28 04.9 +1.0**
RDO Rodhopi 81.50 312 P **P** **21 28 03.7 -0.7**
RDO Rodhopi 81.50 312 P **P** **21 28 04.2 -0.2**
RDO IAmb IAmb 21 28 25.1
comp=Z,43nm,1.1s
LIA Limnos Island 81.51 311 P **P** **21 28 03.7 -0.8**
VRI Vrincioaia 81.68 317 ⇑P **P** **21 28 06.4 +1.1**
VRI Vrincioaia 81.68 317 P **P** **21 28 06.4 +1.1**
PLOR Plostina 81.73 317 ⇑P **P** **21 28 07.3 +1.7**
PLOR Plostina 81.73 317 P **P** **21 28 07.4 +1.8**
SBA Scott Base 81.79 169 P **P** **21 28 05.1 -0.2**
SBA Scott Base 81.79 169 P **P** **21 28 05.1 -0.2**
SBA pmax pmax
comp=Z,25nm,1.2s
NEHR Nehoiu 81.87 317 ⇑P **P** **21 28 06.3 0.0**
TESR Tescani 81.88 318 ⇑P **P** **21 28 07.2 +0.8**
THAS Thassos island 82.00 312 P **P** **21 28 06.6 -0.4**
COVR Voineasa-Covas 82.03 317 ⇓P **P** **21 28 07.1 -0.1**
KYMI Kymi, Euboea I 82.10 310 P **P** **21 28 06.5 -1.1**
DION Dionisos Attik 82.13 309 P **P** **21 28 07.0 -0.8**
MLR Muntele Rosu 82.13 317 ⇑P **P** **21 28 08.6 +0.8**
MLR Muntele Rosu 82.13 317 LR LR 22 10 46.6
comp=Z,157nm,19.0s,baz=70,slow=40
MLR Muntele Rosu 82.13 317 P **P** **21 28 08.1 +0.3**
MLR IAmb IAmb 21 28 11.1
comp=Z,93nm,1.2s
MLR Muntele Rosu 82.13 317 P **P** **21 28 08.1 +0.3**
MLR pmax pmax
comp=Z,93nm,1.2s
ZIMR 82.14 315 ⇑P **P** **21 28 09.0 +1.3**
PTL Penteli 82.17 309 P **P** **21 28 07.6 -0.5**
SHEM Shemya Is, Ala 82.19 36 LR LR 22 05 36.7
comp=Z,84nm,21.0s,baz=284,slow=36
VLY Voula,Athens 82.19 309 P **P** **21 28 06.9 -1.3**
KAVA Kavala 82.23 312 P **P** **21 28 07.8 -0.4**
ANKY Antikythira Is 82.24 307 P **P** **21 28 08.4 0.0**
BIZ Bicaz 82.34 318 ⇓P **P** **21 28 09.5 +0.7**
COPA Copaceanca 82.34 315 ⇑P **P** **21 28 10.0 +1.2**
KTHA Kythira Island 82.50 307 P **P** **21 28 07.9 -1.9**
KTHR Kythira 82.55 307 P **P** **21 28 09.1 -0.9**
KOKK Kokkinochori, 82.58 312 P **P** **21 28 09.5 -0.6**
HUMR Humele 82.59 315 ⇑P **P** **21 28 10.6 +0.5**
DOPR Dopca 82.61 317 ⇑P **P** **21 28 10.7 +0.5**
KRND KRANIDI 82.62 308 P **P** **21 28 09.1 -1.3**
VILL Villia 82.62 309 P **P** **21 28 08.6 -1.9**
PAIG Paliouri 82.65 311 P **P** **21 28 08.8 -1.7**
PAIG Paliouri 82.65 311 P **P** **21 28 10.6 +0.1**
VLI Veliai 82.67 307 P **P** **21 28 09.2 -1.5**
NVR Nevrokopi 82.78 312 P **P** **21 28 09.8 -1.4**
PLG Polygyros 82.91 311 P **P** **21 28 10.6 -1.3**
SRS Serrai 82.93 312 P **P** **21 28 10.8 -1.2**
ATAL Atalanti 82.94 309 P **P** **21 28 09.2 -2.8**
ARR Arges 83.00 316 ⇓P **P** **21 28 12.3 0.0**
BURAR Bucovina Array 83.08 319 ⇓P **P** **21 28 14.1 +1.4**
BURAR Bucovina Array 83.08 319 P **P** **21 28 13.8 +1.1**
BURAR IAmb IAmb 21 28 16.1
comp=Z,45nm,0.8s
BURAR Bucovina Array 83.08 319 P **P** **21 28 13.8 +1.1**
BURAR pmax pmax
comp=Z,45nm,0.8s
TSUM Tsumeb 83.09 251 LR LR 22 00 16.7
comp=Z,678nm,22.0s,baz=78,slow=32
BUR08 Bucovina Ar. S 83.10 319 P **P** **21 28 13.6 +0.8**
BUR08 IAmb IAmb 21 28 16.5
comp=Z,66nm,1.1s
GUR Goura 83.34 309 P **P** **21 28 13.3 -0.9**
KNT Kendrikon 83.46 312 P **P** **21 28 12.1 -2.6**
KLV Kalavryta, Ach 83.51 309 P **P** **21 28 14.2 -0.8**
ARCR ARCALIA 83.55 318 ⇑P **P** **21 28 16.5 +1.5**
ITM Ithomi 83.55 308 P **P** **21 28 14.0 -1.2**
ITM Ithomi 83.55 308 P **P** **21 28 14.9 -0.3**
ITM IAmb IAmb 21 28 36.6
comp=Z,55nm,1.1s
LIT Litokhoron 83.58 311 P **P** **21 28 14.1 -1.2**
LIT Litokhoron 83.58 311 P **P** **21 28 14.5 -0.8**
LIT IAmb IAmb 21 28 17.1
comp=Z,77nm,1.1s
LIT Litokhoron 83.58 311 P **P** **21 28 14.5 -0.8**
LIT pmax pmax
comp=Z,77nm,1.1s
VALR Valaam 83.59 333⇓ *e*P **P** **21 28 15.8 +1.0**
VALR pmax pmax
comp=Z,95nm,0.9s
LOT Lotru 83.62 316 ⇑P **P** **21 28 16.5 +0.9**
PYL PYLOS 83.65 307 P **P** **21 28 11.4 -4.3**
GRG Griva 83.79 312 P **P** **21 28 14.3 -2.1**
NACGM Naroch 83.83 326 *e*P **P** **21 28 17.3 +1.2**
BILL Bilibino 83.83 20 P **P** **21 28 15.5 -0.5**
BILL Bilibino 83.83 20*d i*P **P** **21 28 15.3 -0.6**
BILL *e**PP **pP** **21 28 31.2 +0.3**
BILL *e* 21 31 28.8
BILL pmax pmax
comp=Z,17nm,1.2s
EVR Evrytania 83.91 310 P **P** **21 28 15.2 -1.9**
IDID Didziasalis 83.95 326 *e*P **P** **21 28 17.8 +1.0**
PVO Paravola 84.08 309 P **P** **21 28 17.3 -0.6**
BMR Baia Mare 84.23 318 ⇓P **P** **21 28 19.8 +1.4**
BMR Baia Mare 84.23 318 P **P** **21 28 19.8 +1.4**
IIGN Ignalina 84.25 326 *e*P **P** **21 28 19.1 +0.8**
DEV Deva 84.30 317 ⇑P **P** **21 28 20.1 +1.3**
DEV Deva 84.30 317 P **P** **21 28 20.1 +1.3**
LVV L'vov 84.31 321 *e*P **P** **21 28 19.1 +0.3**
LVV *e* 21 28 33.7
ISAL Salakas 84.36 327 *e*P **P** **21 28 19.9 +1.0**
LVZ Lovozero 84.40 340 P **P** **21 28 18.1 -0.8**
LVZ Lovozero 84.40 340 P **P** **21 28 18.1 -0.8**
LVZ pmax pmax
comp=Z,107nm,1.5s
HERR Herculane 84.45 315 ⇓P **P** **21 28 20.3 +0.7**
MESR Meseseni 84.50 318 ⇑P **P** **21 28 21.2 +1.4**
DRGR 84.59 317 ⇑P **P** **21 28 21.5 +1.1**
DRGR 84.59 317 P **P** **21 28 21.4 +1.1**
APA Apatity 84.72 339⇓ *i*P **P** **21 28 19.0 -1.4**
APA pmax pmax
comp=Z,18nm,1.0s
NYDR Nydri-Lefkada 84.74 309 P **P** **21 28 19.7 -1.5**
BOVS Bovan 84.75 314 ⇑P **P** **21 28 20.9 -0.2**
VSU Vasula 84.75 329 P **P** **21 28 21.8 +1.0**
VSU Vasula 84.75 329 *e*P **P** **21 28 22.0 +1.2**
LKD2 Lefkada island 84.78 309 P **P** **21 28 20.7 -0.8**
MDVR Moldovita 84.93 315 ⇑P **P** **21 28 22.8 +0.7**
KWP Kalwaria Pacla 85.12 320 *e*P **P** **21 28 24.6 +1.7**
KWP *e**PP **PP** **21 31 39.7 -1.0**
KWP Kalwaria Pacla 85.12 320 P **P** **21 28 23.3 +0.4**
KWP Kalwaria Pacla 85.12 320 P **P** **21 28 23.3 +0.4**
IGT Igoumenitsa 85.14 310 P **P** **21 28 22.5 -0.7**
BZS Buzias 85.14 316 ⇑P **P** **21 28 23.7 +0.6**
BZS Buzias 85.14 316 P **P** **21 28 23.6 +0.6**
UZH Uzhgorod 85.20 319 *e*P **P** **21 28 23.7 +0.4**
UZH *i* 21 28 41.7
SIRR Siria 85.22 317 ⇑P **P** **21 28 24.5 +1.0**
LTVH Ltavrtes, Hu 85.24 318 ⇑P **P** **21 28 24.6 +1.1**
LTVH Ltavrtes, Hu 85.24 318 P **P** **21 28 26.0 +2.5**
KOLS Kolonicke sedl 85.27 319 *e*P **P** **21 28 25.2 +1.5**
KOLS *e* 21 28 44.6
KOLS pmax pmax
comp=Z,167nm,0.9s
KOLS Kolonicke sedl 85.27 319 *e*P **P** **21 28 25.2 +1.5**
KOLS *e* 21 28 44.6
PABE Paberze 85.53 326 P **P** **21 28 24.9 +0.2**
PABE Paberze 85.53 326 *e*P **P** **21 28 25.6 +0.8**
KEK Kerkira 85.57 310 P **P** **21 28 25.2 -0.1**
VSVD Vaisvydziai 85.66 327 *e*P **P** **21 28 26.1 +0.7**
SUW Suwalki 85.67 325 *e*P **P** **21 28 25.9 +0.3**
SUW Suwalki 85.67 325 P **P** **21 28 25.8 +0.3**
SUW IAMs_20 IAMs_20 22 13 51.9
comp=Z,387nm,21.0s
SUW Suwalki 85.67 325 P **P** **21 28 25.8 +0.3**
SUW pmax pmax
comp=Z,368nm,1.1s
SUW MLR MLR
comp=Z,400nm,21.0s
SUW Suwalki 85.67 325 *e*P **P** **21 28 25.6 +0.1**
CRVS Cervenica-Dubn 85.79 319 *e*P **P** **21 28 28.0 +1.7**
CRVS *e* 21 28 46.8
CRVS pmax pmax
comp=Z,32nm,1.0s
CRVS Cervenica-Dubn 85.79 319 *e*P **P** **21 28 28.0 +1.7**
CRVS *e* 21 28 46.8
FIA1 FINESS Array S 85.83 332 P **P** **21 28 26.6 +0.5**
FIA1 IAmb IAmb 21 28 28.9
comp=Z,40nm,1.1s
FINES FINESS Array B 85.83 332 P **P** **21 28 26.5 +0.4**
comp=Z,19nm,1.0s,baz=96,slow=5.5,SNR=33
FINES PP **PP** **21 31 42.2 -3.9**
comp=Z,2.5nm,0.6s,baz=112,slow=7.1,SNR=4.2

FINES LR LR 22 10 35.6
comp=Z,453nm,21.4s,baz=78,slow=38
comp=Z,19nm,1.0s
SJES Sjenica 85.94 314 ⇑*i*P **P 21 28 28.1 +0.9**
DIVS Divibare 86.04 314 P **P 21 28 28.1 +0.4**
DIVS IAmb IAmb 21 28 30.9
comp=Z,48nm,1.3s
DIVS Divibare 86.04 314 ⇑*i*P **P 21 28 28.2 +0.4**
AFI Afiamalu 86.18 104 LR LR 22 08 17.3
comp=Z,107nm,19.1s,baz=284,slow=36
FRGS Fruska Gora 86.32 315 ⇑*i*P **P 21 28 28.8 -0.2**
MEF Metsahovi 86.34 331 *e*P **P 21 28 29.8 +1.2**
PDG Podgorica 86.34 313 ⇑P **P 21 28 29.4 +0.3**
PDG Podgorica 86.34 313 P **P 21 28 28.9 -0.2**
PDG IAmb IAmb 21 28 49.9
comp=Z,41nm,1.1s
PDG Podgorica 86.34 313 ⇑*i*P **P 21 28 29.2 +0.1**
KECS Kecovo 86.36 319 *e*P **P 21 28 30.2 +1.1**
KECS pmax pmax
comp=Z,31nm,1.1s
KECS Kecovo 86.36 319 *e*P **P 21 28 30.2 +1.1**
DRME Dracevica, Mon 86.36 312 *e*P **P 21 28 29.3 +0.1**
RUDO Rudo 86.42 314 *e*P **P 21 28 28.5 -1.0**
BBLS Lazići 86.43 314 ⇑*i*P **P 21 28 30.3 +0.7**
TEKS Tekeris 86.44 315 *e*P **P 21 28 29.0 -0.5**
NIE Niedzica 86.63 320 *e*P **P 21 28 31.7 +1.3**
NIE *e*PP **PP 21 31 53.5 +0.6**
PSZ Piszkesteto 86.67 318 ⇑P **P 21 28 31.4 +0.7**
PSZ Piszkesteto 86.67 318 P **P 21 28 30.1 -0.6**
PSZ IAmb IAmb 21 28 33.1
comp=Z,24nm,1.0s
PSZ Piszkesteto 86.67 318 P **P 21 28 30.1 -0.6**
PSZ pmax pmax
comp=Z,24nm,1.0s
PSZ MLR MLR
comp=Z,200nm,20.0s
PSZ Piszkesteto 86.67 318 P **P 21 28 31.1 +0.4**
UPM Unac-Piva 86.70 313 *e*P **P 21 28 30.5 -0.6**
BEL Belsk 86.70 322 *e*P **P 21 28 31.8 +1.1**
QSPA South Pole Qui 86.74 180 LR LR 22 02 24.8
comp=Z,661nm,20.6s,baz=313,slow=32
QSPA South Pole Qui 86.74 180 P **P 21 28 30.4 -0.3**
QSPA IAmb IAmb 21 28 50.0
comp=Z,54nm,1.8s
HCY Herceg Novi 86.91 313 *e*P **P 21 28 31.7 -0.2**
BRY Bratogost 86.93 313 *e*P **P 21 28 31.9 -0.3**
TREB Trebinje 87.04 313 *e*P **P 21 28 32.8 +0.3**
OJC Ojcow 87.07 320 *e*P **P 21 28 32.9 +0.4**
OJC *e*S **S 21 39 08.5 +0.9**
OJC Ojcow 87.07 320 P **P 21 28 32.6 +0.1**
OJC IAmb IAmb 21 28 34.8
comp=Z,30nm,1.1s
OJC Ojcow 87.07 320 P **P 21 28 32.6 +0.1**
OJC pmax pmax
comp=Z,31nm,1.1s
LANS Liptovska Anna 87.13 319 *e*P **P 21 28 33.5 +0.7**
LANS pmax pmax
comp=Z,7.0nm,1.1s
LANS Liptovska Anna 87.13 319 *e*P **P 21 28 33.5 +0.7**
BUD Budapest 87.19 318 P **P 21 28 34.3 +1.2**
KIWB Kanaga Island 87.25 38 P **P 21 28 33.4 +0.1**
MORH Mrgy, Hungar 87.28 316 ⇑P **P 21 28 34.3 +0.7**
MORH Mrgy, Hungar 87.28 316 ⇑*i*P **P 21 28 33.8 +0.3**
MORH Mrgy, Hungar 87.28 316 P **P 21 28 33.9 +0.3**
VYHS Vyhne 87.45 319 *e*P **P 21 28 35.3 +0.9**
VYHS pmax pmax
comp=Z,15nm,1.2s
VYHS Vyhne 87.45 319 *e*P **P 21 28 35.2 +0.9**
STON Ston 87.54 313 ⇑*i*P **P 21 28 35.7 +0.8**
KEV Kevo 87.64 340 P **P 21 28 35.2 +0.5**
KEV Kevo 87.64 340 P **P 21 28 35.3 +0.5**
KEV pmax pmax
comp=Z,255nm,2.0s
KOVH Kovagotottos 87.64 316 P **P 21 28 35.9 +0.6**
SRO2 Moca 87.65 318 *e*P **P 21 28 36.0 +0.7**
SRO2 pmax pmax
comp=Z,36nm,1.0s
SRO2 Moca 87.65 318 *e*P **P 21 28 36.0 +0.7**
CSKK Cskako 87.69 318 P **P 21 28 36.6 +1.1**
SRO Srobarova 87.71 318 *e*P **P 21 28 37.2 +1.6**
SRO *e* 21 28 54.5
SRO pmax pmax
comp=Z,55nm,1.2s
SRO Srobarova 87.71 318 *e*P **P 21 28 37.2 +1.6**
SRO *e* 21 28 54.5
KOLL Kolacno 87.75 319 *e*P **P 21 28 37.2 +1.4**
RAF Rauma 87.77 331 *e*P **P 21 28 36.5 +1.0**
TIP Timpagrande 87.84 309 ⇓P **P 21 28 38.0 +1.5**
TIP Timpagrande 87.84 309 P **P 21 28 37.1 +0.6**
TIP IAmb IAmb 21 28 58.6
comp=Z,40nm,1.2s
MATE Matera 88.03 311 ⇑P **P 21 28 38.6 +1.3**
OKC Ostrava-Krasne 88.07 320 *e*P **P 21 28 38.4 +1.1**
OKC *e**PP **sP 21 28 57.5 -0.5**
OKC MLR MLR
comp=Z,300nm,23.4s
OKC Ostrava-Krasne 88.07 320 *e*P **P 21 28 38.4 +1.1**
OKC *es*P **sP 21 28 57.5 -0.5**
OKC *e*SKS 21 30 56.8
OKC AMS AMS 22 17 30.0
comp=Z,300nm,23.4s
ARA0 ARCESS Array S 88.09 340 *e*P **P 21 28 37.6 +0.7**
ARCES ARCESS Array B 88.09 340 P **P 21 28 37.6 +0.7**
comp=Z,41nm,0.9s,baz=98,slow=3.5,SNR=28
ARCES PP **PP 21 32 03.1 -1.0**
comp=Z,12nm,1.0s,baz=119,slow=9.9,SNR=4.5
ARCES LR LR 22 12 05.4
comp=Z,448nm,20.5s,baz=107,slow=38
comp=Z,41nm,0.9s
ARCES ARCESS Array B 88.09 340 P **P 21 28 37.3 +0.3**
BLY Banja Luka 88.12 315 ⇑*i*P **P 21 28 38.5 +0.9**
MPLH Magyarpolny 88.15 317 P **P 21 28 39.2 +1.4**
MGRS Mrkonjic Grad 88.16 314 *e*P **P 21 28 35.1 -2.8**
MAUC Maruska 88.22 319 *e*P **P 21 28 39.1 +1.0**
JAVC Velka Javorina 88.26 319 *e*P **P 21 28 40.0 +1.7**
JAVC *e* 21 28 59.1
EGYH Egyhazaskeszo 88.32 317 P **P 21 28 39.9 +1.4**
SMOL Smolenice 88.38 319 *e*P **P 21 28 40.6 +1.8**
SMOL Smolenice 88.38 319 *e*P **P 21 28 40.6 +1.8**
CEL Celeste 88.43 308 P **P 21 28 39.9 +0.5**
MORC Moravsky Berou 88.45 320 ⇑P **P 21 28 40.3 +1.2**
MORC Moravsky Berou 88.45 320 P **P 21 28 40.1 +1.0**
MORC IAmb IAmb 21 28 42.5
comp=Z,42nm,1.1s
MORC Moravsky Berou 88.45 320 P **P 21 28 40.1 +1.0**
MORC pmax pmax
comp=Z,42nm,1.1s
MORC Moravsky Berou 88.45 320 *e*P **P 21 28 40.2 +1.0**
MORC *e* 21 28 59.3
MODS Modra-Piesok 88.46 318 *e*P **P 21 28 40.8 +1.6**
MODS pmax pmax
comp=Z,90nm,1.1s
MODS Modra-Piesok 88.46 318 *e*P **P 21 28 40.8 +1.6**
ZST Bratislava 88.56 318 *e*P **P 21 28 40.8 +1.2**
ZST *e* 21 28 59.9
ZST pmax pmax
comp=Z,92nm,1.0s
ZST Bratislava 88.56 318 *e*P **P 21 28 40.8 +1.2**
ZST *e* 21 28 59.9
BEHE Becsehely 88.59 317 ⇑*i*P **P 21 28 40.8 +1.0**
BEHE Becsehely 88.59 317 P **P 21 28 41.2 +1.4**
CUC Castrocucco 88.65 310 P **P 21 28 40.5 +0.2**
CUC IAmb IAmb 21 28 42.7
comp=Z,22nm,1.1s
KTK1 Kautokeino 88.75 339 *e*P **P 21 28 40.9 +0.8**
KTK1 IAmb IAmb 21 28 48.1
comp=Z,698nm,3.2s
KTK1 IAMs_20 IAMs_20 22 09 17.6
comp=Z,956nm,31.0s
SOP Sopron 88.87 318 P **P 21 28 41.9 +0.8**
KOGS Kog 88.95 316 *e*P **P 21 28 42.5 +1.0**
HAMF Hammerfest 88.95 341 *e*P **P 21 28 41.6 +0.6**
HAMF IAmb IAmb 21 29 12.2
comp=Z,189nm,1.6s
HAMF IAMs_20 IAMs_20 22 10 20.2
comp=Z,1μm,3.6s
KRLC Kraliky 88.98 320 *e*P **P 21 28 43.0 +1.4**
KRLC MLR MLR
comp=Z,300nm,27.0s
KRLC Kraliky 88.98 320 *e*P **P 21 28 43.0 +1.4**
KRLC AMS AMS 22 17 30.0
comp=Z,300nm,27.5s
VRAC Vranov 89.02 319 *e*P **P 21 28 42.6 +0.8**
RONA Rosalia, Austr 89.05 318 *e*P **P 21 28 42.7 +0.7**
comp=Z,18nm,1.2s,SNR=10.0
RONA *e*S **sP 21 29 02.5 -0.2**
comp=Z,14nm,1.1s
GKP Gorka Klasztor 89.05 323 *e*P **P 21 28 42.2 +0.5**
GKP Gorka Klasztor 89.05 323 *e*P **P 21 28 43.1 +1.3**
KRUC Moravsky 89.12 319 *e*P **P 21 28 43.0 +0.8**
KRUC *e* 21 29 02.0
DPC Dobruska-Polom 89.30 320 *e*P **P 21 28 44.7 +1.6**
DPC *e* 21 39 18.2
DPC MLR MLR
comp=Z,300nm,23.4s
DPC Dobruska-Polom 89.30 320 *e*P **P 21 28 44.7 +1.6**
DPC *e*SKS **SKKSac 21 39 17.9 -3.3**
DPC AMS AMS 22 17 50.0
comp=Z,300nm,23.4s
GOLS Golise 89.34 316 *i* P **P 21 28 44.7 +1.3**
CONA Conrad Observa 89.36 318 *e*P **P 21 28 44.1 +0.6**
comp=Z,16nm,1.1s,SNR=10
CONA *i* S **sP 21 29 04.0 -0.2**
comp=Z,12nm,1.0s
CONA *e*P **PP 21 32 19.6 +4.6**
comp=Z,8.4nm,1.7s
KSP Ksiaz 89.37 321 *e*P **P 21 28 44.5 +1.1**
OSTC Ostas 89.39 321 *e*P **P 21 28 45.1 +1.6**
OSTC AMS AMS 22 17 20.0
comp=Z,400nm,21.7s
CRES Cresnjev 89.44 316 ⇑*i*P **P 21 28 43.5 -0.4**
CHVC Chvalec 89.49 321 *e*P **P 21 28 45.6 +1.6**
CHVC AMS AMS 22 17 40.0
comp=Z,400nm,22.1s
UPC Upice 89.51 320 *e*P **P 21 28 45.6 +1.5**
UPC MLR MLR
comp=Z,400nm,22.7s
UPC Upice 89.51 320 *e*P **P 21 28 45.6 +1.5**
UPC AMS AMS 22 17 40.0
comp=Z,400nm,22.7s
VAE Valguarnera 89.53 307 LR LR 22 13 17.7
comp=Z,67nm,21.3s,baz=114,slow=38
BOJS Bojanci 89.56 315 *i* P **P 21 28 45.3 +1.0**
PAOL Paolisi 89.68 311 P **P 21 28 45.2 0.0**
PAOL IAmb IAmb 21 29 07.9
comp=Z,70nm,1.7s
TROLL Troll, Antarti 89.69 198 P **P 21 28 47.5 +2.8**
TROLL Troll, Antarti 89.69 198 PKiKP **PKiKP 21 33 36.5 -4.9**
TREC Trest 89.73 319 *e*P **P 21 28 46.4 +1.2**
TREC *e**PP **sP 21 29 05.5 -0.4**
TREC MLR MLR
comp=Z,300nm,20.1s
TREC Trest 89.73 319 *e*P **P 21 28 46.4 +1.2**
TREC *es*P **sP 21 29 05.5 -0.4**
TREC AMS AMS 22 18 00.0
comp=Z,300nm,20.1s
SOKA Soboth 89.81 317 *i* P **P 21 28 46.7 +1.1**
comp=Z,64nm,1.2s,SNR=46
SOKA *e*S **sP 21 29 06.8 +0.4**
comp=Z,39nm,1.0s
SOKA *i* P **PP 21 32 23.8 +5.2**
comp=Z,7.1nm,1.2s
JETT Jettan, Norway 89.84 340 *e*P **P 21 28 45.9 +0.7**
LJU Ljubljana 90.11 316 ⇑*i*P **P 21 28 48.1 +1.1**
OBKA Obir 90.13 316 *e*P **P 21 28 48.3 +1.1**
comp=Z,35nm,1.2s,SNR=15
CEY Cerknica 90.15 316 ⇑*i*P **P 21 28 47.7 +0.5**
TRO Tromso 90.37 340 *e*P **P 21 28 47.8 +0.2**
TRO IAMs_20 IAMs_20 22 10 36.5
comp=Z,721nm,17.9s
PRU Pruhonice 90.41 320 *e*P **P 21 28 49.4 +1.2**
PRU *e**PP **sP 21 29 07.9 -1.0**
PRU MLR MLR
comp=Z,300nm,20.5s
PRU Pruhonice 90.41 320 *e*P **P 21 28 49.4 +1.2**
PRU *es*P **sP 21 29 07.9 -1.0**
PRU AMS AMS 22 18 20.0
comp=Z,300nm,20.5s
MOA Molln 90.42 318 *e*P **P 21 28 49.0 +0.6**
comp=Z,12nm,0.9s,SNR=7.6
MOA *e*P **PP 21 32 26.0 +2.6**
comp=Z,5.2nm,1.0s
SKDS Skadanscina 90.43 315 ⇑*i*P **P 21 28 48.4 -0.1**
PVCC Panska Ves 90.43 320 *e*P **P 21 28 49.7 +1.4**
PVCC *e**PP **sP 21 29 08.7 -0.3**
PVCC MLR MLR
comp=Z,400nm,21.8s
PVCC Panska Ves 90.43 320 *e*P **P 21 28 49.7 +1.4**
PVCC *es*P **sP 21 29 08.7 -0.3**
PVCC AMS AMS 22 16 10.0
comp=Z,400nm,21.8s
CKRC Cesky Krumlov 90.47 319 *e*P **P 21 28 50.1 +1.5**
CKRC AMS AMS 22 18 40.0
comp=Z,300nm,22.4s
VOJS Vojsko 90.55 316 *e*P **P 21 28 49.7 +0.5**
BSD Bornholm Skovb 90.59 325 *e*P **P 21 28 50.0 +1.0**
TRI Trieste 90.61 316 P **P 21 28 49.1 -0.2**
TRI IAmb IAmb 21 29 10.1
comp=Z,19nm,0.9s
TRI Trieste 90.61 316 P **P 21 28 49.1 -0.2**
TRI pmax pmax
comp=Z,19nm,0.9s
AQU L'Aquila 90.65 312 P **P 21 28 49.9 +0.3**
AQU L'Aquila 90.65 312 P **P 21 28 49.9 +0.3**
AQU pmax pmax
comp=Z,60nm,1.1s
MYKA Terra Mystica 90.76 316 *e*P **P 21 28 50.8 +0.7**
comp=Z,9.5nm,0.7s,SNR=8.1
MYKA *e*S **sP 21 29 09.9 -0.9**
comp=Z,17nm,1.4s
BIOA Bad Ischl, Aus 90.83 318 *e*P **P 21 28 50.7 +0.3**
comp=Z,24nm,1.1s,SNR=10
BRG Berggiesshubel 90.85 321 *i* P **P 21 28 51.4 +1.1**
BRG Amp 21 28 53.8
comp=Z,29nm,1.1s
BRG *ex* x 21 29 08.6
BRG Amp 21 29 09.4
comp=Z,19nm,1.1s
BRG PP **PP 21 32 26.0 -0.6**
BRG Amp 21 32 30.6
comp=Z,9.4nm,1.1s
BRG Berggiesshubel 90.85 321 *i* P **P 21 28 51.4 +1.1**
BRG *e* 21 29 08.5
BRG 21 32 26.0
BRG S **S 21 39 45.0 +1.9**
BRG pmax pmax
comp=Z,29nm,1.1s
BRG pmax pmax
comp=Z,9.0nm,1.2s
BRG MLR MLR
comp=E,280nm,25.1s
BRG MLR MLR
comp=N,110nm,17.2s
BRG MLR MLR
comp=Z,290nm,20.1s
GEC2 GERESS Array S 90.87 319 P **P 21 28 51.3 +0.7**
GEC2 IAmb IAmb 21 28 53.8
comp=Z,45nm,1.3s
GERES GERESS Array B 90.87 319 P **P 21 28 51.7 +1.2**
comp=Z,17nm,1.0s,baz=126,slow=2.3,SNR=82
comp=Z,17nm,1.0s
GERES GERESS Array B 90.87 319 P **P 21 28 51.0 +0.5**
NRCA Norcia 90.89 313 P **P 21 28 50.9 +0.1**
NRCA IAmb IAmb 21 29 12.1
comp=Z,30nm,1.0s
KHC Kasperske Hory 90.97 319 P **P 21 28 51.5 +0.5**
KHC Kasperske Hory 90.97 319 *e*P **P 21 28 51.9 +1.0**
KHC *e**PP **pP 21 29 09.1 +3.1**
KHC MLR MLR
comp=Z,400nm,18.9s
KHC Kasperske Hory 90.97 319 *e*P **P 21 28 51.9 +1.0**
KHC *es*P **pP 21 29 09.1 +3.1**
KHC AMS AMS 22 18 50.0
comp=Z,400nm,18.9s
KBA Koelnbreinsper 90.99 317 *e*P **P 21 28 51.3 0.0**
comp=Z,23nm,1.2s,SNR=13
KBA *e*S **sP 21 29 11.2 -0.8**
comp=Z,22nm,1.3s
DEL Delary 91.28 326 *e*P **P 21 28 53.1 +0.9**
STAL STALIGIAL 91.38 316 P **P 21 28 53.4 +0.5**
SNAA Sanae 91.40 198 P **P 21 28 56.1 +3.5**
SNAA Sanae 91.40 198 LR LR 22 02 36.4
comp=Z,357nm,21.6s,baz=97,slow=31
FAUS Fauske 91.44 337 *e*P **P 21 28 53.3 +0.7**
FAUS IAmb IAmb 21 29 08.7
comp=Z,47nm,1.0s
FAUS IAMs_20 IAMs_20 22 14 56.6
comp=Z,663nm,21.9s
CLL Collm 91.47 321 P **P 21 28 53.6 +0.5**
CLL IAmb IAmb 21 28 56.0
comp=Z,19nm,1.1s
CLL IAMs_20 IAMs_20 22 17 04.2
comp=Z,358nm,21.0s
CLL Collm 91.47 321 ⇑*i*P **P 21 28 53.6 +0.5**
CLL *e*S **S 21 39 46.0 -2.7**
CLL pmax pmax
comp=Z,22nm,1.1s
CLL Collm 91.47 321 ⇑*i*P **P 21 28 53.6 +0.5**
comp=Z,22nm,1.1s
CLL *i* sP **sP 21 29 12.7 -1.2**
comp=Z,14nm,1.1s
CLL *e*S **S 21 39 50.0 +1.3**
CLL *es*S **sS 21 40 17.0 +2.8**
CLL *e*SS **SS 21 45 54.0 -1.6**
CLL *e*SSSS 21 52 48.0
CLL Lm MLR 22 17 00.0
comp=Z,300nm,21.8s
STEI Steigen 91.51 338 *e*P **P 21 28 53.5 +0.6**
STEI IAMs_20 IAMs_20 22 12 34.6
comp=Z,474nm,15.5s
ABTA Abfaltersbach 91.55 317 *e*P **P 21 28 53.7 0.0**
comp=Z,17nm,0.9s,SNR=10
ABTA *e*S **sP 21 29 13.7 -0.7**
comp=Z,19nm,1.0s
HFS Hagfors 91.61 330 LR LR 22 15 55.8
comp=Z,327nm,19.0s,baz=80,slow=39
MOR8 Moi Rana 91.68 336 *e*P **P 21 28 53.7 -0.2**
MOR8 IAMs_20 IAMs_20 22 15 54.8
comp=Z,513nm,13.7s
NKC Novy Kostel 91.77 320 *e*P **P 21 28 55.9 +1.3**
NKC MLR MLR
comp=Z,300nm,16.3s
NKC Novy Kostel 91.77 320 *e*P **P 21 28 55.9 +1.3**
NKC AMS AMS 22 19 20.0
comp=Z,300nm,16.3s
CTI Castel Tesino 92.11 316 P **P 21 28 57.2 +0.8**
CTI Castel Tesino 92.11 316 P **P 21 28 57.2 +0.8**
CTI pmax pmax
comp=Z,45nm,1.1s
SPA0 Spitsbergen Ar 92.11 348 *e*P **P 21 28 55.0 -0.7**
SPITS Spitsbergen Ar 92.11 348 LR LR 22 17 26.5
comp=Z,494nm,19.1s,baz=56,slow=40
SPITS Spitsbergen Ar 92.11 348 P **P 21 28 54.8 -0.8**
SPITS pmax pmax
comp=Z,42nm,1.2s
WTTA Wattenberg 92.17 317 *i* P **P 21 28 56.8 +0.1**
comp=Z,31nm,1.0s,SNR=14
WTTA *e*S **sP 21 29 16.8 -0.7**
comp=Z,26nm,0.9s
WATA Walderalm 92.21 317 *e*P **P 21 28 56.8 -0.1**
comp=Z,26nm,1.2s,SNR=10.0
WATA *i* S **sP 21 29 16.6 -1.0**
comp=Z,16nm,1.1s
SQTA Sankt Quirin 92.46 317 *e*P **P 21 28 58.2 +0.2**
comp=Z,12nm,0.6s,SNR=12
SQTA *i* S **sP 21 29 18.0 -0.7**
comp=Z,18nm,0.9s
MOTA Moosalm 92.53 317 *e*P **P 21 28 58.4 0.0**
comp=Z,29nm,1.0s,SNR=16
MOTA *i* S **sP 21 29 18.4 -0.7**
comp=Z,29nm,1.0s
MOTA *i* P **PP 21 32 37.5 -2.8**
comp=Z,4.8nm,1.1s
GRFO Grafenberg 92.54 319 P **P 21 28 58.4 +0.3**
GRFO IAmb IAmb 21 29 01.0
comp=Z,21nm,1.1s
GRFO Grafenberg 92.54 319 P **P 21 28 58.4 +0.3**
GRFO pmax pmax
comp=Z,21nm,1.1s
GRFO MLR MLR
comp=Z,200nm,21.0s
NSS Namsos 92.63 334 *e*P **P 21 28 58.5 +0.3**
NC602 NORSAR Array S 92.71 331 P **P 21 28 58.4 -0.3**
NC602 NORSAR Array S 92.71 331 *e*P **P 21 28 58.9 +0.2**
NC602 IAMs_20 IAMs_20 22 16 12.5
comp=Z,591nm,4.9s
NORES NORESS Array B 92.71 331 P **P 21 29 02.2 +3.5**
RETA Reutte 92.77 317 *e*P **P 21 28 59.7 +0.4**
comp=Z,21nm,0.9s,SNR=13
RETA *i* S **sP 21 29 19.7 -0.4**
comp=Z,21nm,0.9s
FETA Feichten 92.78 317 *e*P **P 21 29 00.1 +0.6**
comp=Z,21nm,1.0s,SNR=11
FETA *i* S **sP 21 29 20.1 -0.2**
comp=Z,18nm,1.1s
NB2 NORSAR Subarra 92.88 331 P **P 21 29 00.1 +0.6**
NB2 pmax pmax
comp=Z,11nm,1.3s
NB2 NORSAR Subarra 92.88 331 P **P 21 28 59.2 -0.3**
baz=92,slow=4.8
NB2 NORSAR Subarra 92.88 331 P **P 21 28 59.2 -0.3**
comp=Z,22nm,1.1s,baz=92,slow=4.8
NOA NORSAR Array B 92.88 331 P **P 21 28 59.4 -0.1**
comp=Z,12nm,1.0s,baz=93,slow=4.5,SNR=11
NOA PP **PP 21 32 41.5 -0.9**
comp=Z,2.6nm,0.9s,baz=96,slow=7.6,SNR=4.1
NOA LR LR 22 15 21.4
comp=Z,301nm,21.9s,baz=100,slow=38
comp=Z,12nm,1.0s
KBS Kingsbay 93.03 349 IAMs_20 IAMs_20 22 17 32.5
comp=Z,746nm,20.0s
DAVOX Davos/Dischmat 93.35 317 LR LR 22 19 09.7
comp=Z,118nm,18.4s,baz=80,slow=41
DAVA Damuels 93.36 317 *e*P **P 21 29 02.9 +0.7**
comp=Z,31nm,1.1s,SNR=11
DAVA *i* S **sP 21 29 22.9 -0.1**
comp=Z,26nm,1.1s
KEST Kesra 93.51 305 P **P 21 29 05.0 +1.9**
comp=Z,22nm,1.1s,baz=344,slow=0.8,SNR=12
KEST LR LR 22 16 11.2
comp=Z,144nm,18.6s,baz=12,slow=39
comp=Z,22nm,1.1s
KEST Kesra 93.51 305 P **P 21 29 03.6 +0.5**
KEST IAmb IAmb 21 29 26.3
comp=Z,37nm,1.1s
KEST Kesra 93.51 305 P **P 21 29 02.0 -1.1**
VNA3 Neumayer Olymp 93.61 198 P **P 21 29 03.9 +1.2**
KONO Kongsberg 93.66 329 *e*P **P 21 29 03.8 +0.8**
KONO IAmb IAmb 21 29 34.2
comp=Z,339nm,2.9s
KONO IAMs_20 IAMs_20 22 15 25.2
comp=Z,500nm,19.5s
DOMB Dombas 93.92 332 *e*P **P 21 29 05.0 +0.7**
DOMB IAmb IAmb 21 29 06.2
comp=Z,183nm,2.5s
DOMB IAMs_20 IAMs_20 22 17 38.4
comp=Z,690nm,22.9s
ANM Nome 94.30 26 IAMs_20 IAMs_20 22 17 42.4
comp=Z,492nm,19.0s
SKAR Skarslia 94.30 330 *e*P **P 21 29 07.0 +0.9**
SKAR IAMs_20 IAMs_20 22 17 38.5
comp=Z,569nm,22.8s
BFO Black Forest 94.42 318 P **P 21 29 06.8 -0.1**
BFO Black Forest 94.42 318 P **P 21 29 06.8 -0.1**
BFO pmax pmax
comp=Z,8.0nm,1.0s
BFO MLR MLR
comp=Z,200nm,21.0s
ECH Echery 95.20 318 P **P 21 29 10.7 +0.3**
ECH Echery 95.20 318 P **P 21 29 10.7 +0.3**
A21K Barrow 96.89 19 IAMs_20 IAMs_20 22 19 18.3
comp=Z,712nm,18.0s
RAR Rarotonga 97.08 112 LR LR 22 13 38.5
comp=Z,246nm,20.4s,baz=276,slow=36
IMAR Indian Mountai 98.97 24 P **P 21 29 26.8 -0.3**
N18K Kilae Creek 99.03 29 IAMs_20 IAMs_20 22 16 08.9
comp=Z,318nm,20.0s
L19K White Mountain 99.26 27 IAMs_20 IAMs_20 22 21 09.7
comp=Z,424nm,18.0s
K20K Telida 99.38 26 IAMs_20 IAMs_20 22 22 56.9
comp=Z,414nm,19.0s
H21K Melozitna Rive 99.42 24 IAMs_20 IAMs_20 22 20 25.8
comp=Z,267nm,19.0s
H21K Melozitna Rive 99.42 24 P **Pdif 21 29 29.6 +0.5**
baz=283
JMIC Jan Mayen 99.44 342 LR LR 22 20 28.8
comp=Z,389nm,21.9s,baz=70,slow=39
M19K Big River Lodg 99.53 28 IAMs_20 IAMs_20 22 10 38.8
comp=Z,349nm,22.0s
I21K Tanana 99.87 24 P **Pdif 21 29 31.3 +0.3**
baz=284
TOLK Toolik Lake Re 99.87 21 IAMs_20 IAMs_20 22 22 47.4
comp=Z,698nm,19.0s
TOLK Toolik Lake Re 99.87 21 P **Pdif 21 29 31.7 +0.6**
baz=287

H22K Ishtalitna Cre 99.94 23 P Pdif 21 29 31.9 +0.5
baz=285
M20K Styx River 100.11 28 IAMs_20 IAMs_20 22 21 35.6
comp=Z,417nm,19.0s
TORD Torodi Ar. Bea 100.15 283 P Pdif 21 29 33.0 -0.4
comp=Z,1.9nm,1.1s,baz=103,slow=3.3,SNR=6.4
TORD PP PP 21 33 41.1 +1.3
comp=Z,0.9nm,1.0s,baz=72,slow=4.7,SNR=3.0
TORD PKKPbc PKKPbc 21 45 53.6 +2.4
comp=Z,0.2nm,0.4s,baz=298,slow=3.9,SNR=6.0
CAST Castle Rocks 100.24 26 IAMs_20 IAMs_20 22 16 47.6
comp=Z,405nm,22.0s
MLY Manley 100.42 24 IAMs_20 IAMs_20 22 22 13.0
comp=Z,418nm,18.0s
BPAW Bear Paw Mtn. 100.55 25 IAMs_20 IAMs_20 22 20 14.7
comp=Z,397nm,21.0s
BPAW Bear Paw Mtn. 100.55 25 P Pdif 21 29 35.0 +0.8
baz=285
H23K Yukon River 100.68 23 IAMs_20 IAMs_20 22 22 18.1
comp=Z,583nm,21.0s
SKT Skwentna 100.83 27 IAMs_20 IAMs_20 22 15 19.2
comp=Z,351nm,21.0s
I23K Minto, Yukon-K 100.95 24 IAMs_20 IAMs_20 22 22 22.1
comp=Z,383nm,18.0s
NEA2 Nenana 101.22 24 IAMs_20 IAMs_20 22 22 40.4
comp=Z,414nm,19.0s
H24K Noodor Dome 101.34 23 IAMs_20 IAMs_20 22 22 47.3
comp=Z,557nm,18.0s
MDM Murphy Dome 101.46 24 IAMs_20 IAMs_20 22 22 46.6
comp=Z,397nm,20.0s
MCK McKinley 101.52 25 IAMs_20 IAMs_20 22 20 54.4
comp=Z,369nm,20.0s
M22K Willow 101.53 27 IAMs_20 IAMs_20 22 24 16.8
comp=Z,363nm,20.0s
COLA College 101.64 24 IAMs_20 IAMs_20 22 22 52.3
comp=Z,405nm,19.0s
RND Reindeer 101.65 26 IAMs_20 IAMs_20 22 23 24.7
comp=Z,427nm,20.0s
WRH Wood River Hil 101.66 24 IAMs_20 IAMs_20 22 21 14.0
comp=Z,332nm,20.0s
CCB Clear Creek Bu 101.73 24 IAMs_20 IAMs_20 22 25 30.7
comp=Z,349nm,21.0s
POKR Poker Plat Res 101.73 24 IAMs_20 IAMs_20 22 22 45.9
comp=Z,374nm,18.0s
RC01 Rabbit Creek A 101.89 28 IAMs_20 IAMs_20 22 24 15.1
comp=Z,432nm,18.0s
ILAR Eielson Array 102.06 24 P Pdif 21 29 40.2 -0.7
comp=Z,0.3nm,0.5s,baz=289,slow=5.6,SNR=3.3
ILAR PP PP 21 33 45.4 -7.3
comp=Z,3.4nm,1.1s,baz=279,slow=7.9,SNR=6.6
ILAR PKKPbc PKKPbc 21 45 44.9 -2.3
comp=Z,0.7nm,0.9s,baz=129,slow=0.7,SNR=5.5
ILAR PKKP PKKPdf 21 45 58.8 +5.1
comp=Z,1.3nm,0.9s,baz=129,slow=2.0,SNR=7.6
GHO Glory Hole Cre 102.08 27 IAMs_20 IAMs_20 22 09 07.2
comp=Z,395nm,22.0s
HDA Harding Lake 102.16 24 IAMs_20 IAMs_20 22 23 10.0
comp=Z,389nm,18.0s
KNK Knik Glacier 102.39 28 IAMs_20 IAMs_20 22 24 45.5
comp=Z,483nm,18.0s
J25K Salcha River, 102.73 24 IAMs_20 IAMs_20 22 23 35.3
comp=Z,588nm,20.0s
GLI Glacier Island 103.18 28 IAMs_20 IAMs_20 22 25 20.4
comp=Z,397nm,18.0s
J26L Joseph Creek 103.50 24 IAMs_20 IAMs_20 22 24 41.6
comp=Z,491nm,21.0s
SCRK Sand Creek 103.52 24 IAMs_20 IAMs_20 22 24 10.1
comp=Z,477nm,21.0s
HIN Hinchinbrook I 103.61 28 IAMs_20 IAMs_20 22 11 33.7
comp=Z,427nm,21.0s
SCO Scoresbysund 103.71 343 IAMs_20 IAMs_20 22 23 42.5
comp=Z,416nm,20.0s
ESDC Sonseca Array 103.85 310 PP PP 21 34 05.4 -1.5
comp=Z,1.7nm,1.0s,baz=72,slow=6.4,SNR=6.0
N25K Chitina, Valde 104.09 27 IAMs_20 IAMs_20 22 23 10.4
comp=Z,362nm,19.0s
HMT Hamilton 104.68 28 IAMs_20 IAMs_20 22 22 49.0
comp=Z,563nm,18.0s
TGL Tana Glacier 105.19 27 IAMs_20 IAMs_20 22 13 26.6
comp=Z,373nm,22.0s
WAX Waxell Ridge 105.29 28 IAMs_20 IAMs_20 22 17 09.3
comp=Z,374nm,19.0s
EPYK Eagle Plains 105.30 21 IAMs_20 IAMs_20 22 17 04.9
comp=Z,547nm,21.0s
EPYK Eagle Plains 105.30 21 P PKiKP 21 34 09.2 +0.2
baz=299
SNH Sunshine Point 105.40 28 IAMs_20 IAMs_20 22 27 03.0
comp=Z,483nm,18.0s
J29M Klondike Camp 105.64 23 IAMs_20 IAMs_20 22 27 07.9
comp=Z,641nm,19.0s
CTGM Chitina Glacie 105.79 27 IAMs_20 IAMs_20 22 24 59.3
comp=Z,405nm,22.0s
LOGN Logan Glacier 106.00 27 IAMs_20 IAMs_20 22 27 50.7
comp=Z,308nm,21.0s
TABL Table Mountain 106.08 27 IAMs_20 IAMs_20 22 17 47.1
comp=Z,393nm,19.0s
TULEG Thule 106.55 358 IAMs_20 IAMs_20 22 25 50.7
comp=Z,461nm,21.0s
M30M Minto, Yukon 107.06 24 IAMs_20 IAMs_20 22 27 54.7
comp=Z,487nm,20.0s
N31M Braeburn, Yuko 108.00 25 IAMs_20 IAMs_20 22 28 50.4
comp=Z,604nm,19.0s
N31M Braeburn, Yuko 108.00 25 P PKiKP 21 34 14.1 0.0
baz=298
YKA Yellowknife Ar 115.13 18 PKP PKiKP 21 34 26.3 -1.2
comp=Z,3.0nm,0.9s,baz=317,slow=2.4,SNR=5.2
YKA Yellowknife Ar 115.13 18 *e*PKIKP PKPdf 21 34 27.9 +0.4
YKA pmax pmax
comp=Z,3.0nm,0.9s
F04A Amboy 122.89 35 PKPdf PKPdf 21 34 43.0 0.0
FCC Fort Churchill 123.31 10 PKPdf PKPdf 21 34 42.6 -0.8
FCC Fort Churchill 123.31 10 PKIKP PKPdf 21 34 42.6 -0.8
H04D Lebanon 123.50 37 P PKiKP 21 34 44.9 +0.5
baz=304
J01E Myrtle Point 123.50 39 P PKiKP 21 34 45.1 +0.6
baz=302
BUCK Buck Mountain 123.53 37 PKPdf PKiKP 21 34 44.8 +0.2
I03D Drain, OR 123.58 38 P PKiKP 21 34 45.1 +0.5
baz=303
K02D Willamette Mer 123.91 39 P PKiKP 21 34 45.7 +0.3
baz=302
I04A Tendick Farm, 124.09 37 P PKPdf 21 34 45.6 +0.2
baz=304
HAWA Hanford 124.24 33 PKiKP 21 34 46.0 +0.1
L02F Cave Junction 124.27 39 P PKiKP 21 34 46.9 +0.8
baz=302
NEW Newport 124.31 30 PKP PKiKP 21 34 45.9 0.0
comp=Z,7.8nm,1.1s,baz=308,slow=2.0,SNR=7.3
NEW Newport 124.31 30 PKPdf PKiKP 21 34 46.0 0.0
NEW Newport 124.31 30 PKIKP PKiKP 21 34 46.0 0.0
NEW Newport 124.31 30 P PKiKP 21 34 46.0 0.0
baz=311
HUMO Hull Mountain 124.40 39 PKPdf PKPdf 21 34 46.1 +0.1
I05D Terrebonne, OR 124.43 36 P PKiKP 21 34 46.7 +0.3
baz=305
J04D Umpqua Nationa 124.58 38 PKPdf 21 34 46.6 0.0
J04D Umpqua Nationa 124.58 38 P PKiKP 21 34 47.4 +0.4
baz=304
PINE Pine Mountain 124.98 37 PKPdf PKiKP 21 34 48.0 +0.3
L04D Klamath Falls 125.02 39 P PKiKP 21 34 47.8 +0.1
baz=303
YBH Yreka Blue Hor 125.02 39 PKP PKiKP 21 34 47.8 +0.1
comp=Z,2.3nm,0.9s,baz=112,slow=4.1,SNR=5.6
J05D Fort Rock, OR 125.09 37 P PKiKP 21 34 48.5 +0.6
baz=304
BMO Blue Mountains 126.42 34 IAMs_20 IAMs_20 22 39 02.6
comp=Z,327nm,21.0s
MOD Modoc Plateau 126.44 38 PKPdf PKiKP 21 34 50.8 +0.2
MSO Missoula 126.87 30 PKPdf 21 34 50.0 -0.7
MSO Missoula 126.87 30 P PKPdf 21 34 50.7 0.0
baz=314,SNR=10
PLID Pearl Lake 126.98 33 PKPdf PKPdf 21 34 51.5 +0.3
BEKR Beckworth 127.53 40 PKPdf 21 34 52.4 0.0
SCHQ Schefferville 127.67 351 PKP PKPdf 21 34 52.2 +0.3
comp=Z,6.0nm,0.7s,baz=252,slow=8.9,SNR=8.4
EGMT Eagleton 127.97 26 IAMs_20 IAMs_20 22 40 57.7
comp=Z,392nm,18.0s
EGMT Eagleton 127.97 26 P PKPdf 21 34 52.6 -0.2
baz=319
HLID Hailey 128.84 33 P PKiKP 21 34 56.0 +0.7
baz=312,SNR=7.6
BOZ Bozeman (W) 128.88 29 IAMs_20 IAMs_20 22 41 54.2
comp=Z,377nm,20.0s
BOZ Bozeman (W) 128.88 29 P PKiKP 21 34 55.7 +0.4
baz=316
NVAR Mina Array Bea 129.66 41 PKP PKiKP 21 34 58.0 +0.7
comp=Z,3.0nm,0.6s,baz=264,slow=1.9,SNR=22
NVAR SKPbc SKPbc 21 38 14.8 +0.4
comp=Z,4.8nm,1.1s,baz=271,slow=4.0,SNR=9.3
NVAR Mina Array Bea 129.66 41 PKiKP 21 34 57.5 +0.3
ELK Elko 130.19 36 PKP PKiKP 21 34 58.3 0.0
comp=Z,2.8nm,0.6s,baz=18,slow=6.9,SNR=8.6
ELK SKPbc SKPbc 21 38 16.4 +0.1
comp=Z,3.2nm,1.1s,baz=295,slow=3.2,SNR=6.8
FLWY Flagg Ranch 130.43 30 IAMs_20 IAMs_20 22 39 32.2
comp=Z,305nm,20.0s
LOHW Long Hollow 130.81 31 IAMs_20 IAMs_20 22 25 56.5
comp=Z,278nm,19.0s
ULM Lac du Bonnet 130.92 15 PKP PKPdf 21 34 58.5 +0.3
comp=Z,7.4nm,0.8s,baz=360,slow=2.6,SNR=8.2
ULM Lac du Bonnet 130.92 15 PKPdf PKPdf 21 34 58.3 +0.1
R11A Troy Canyon, C 131.44 39 PKiKP 21 35 00.5 -0.3
R11A Troy Canyon, C 131.44 39 P PKiKP 21 35 00.9 +0.2
baz=307
MPMC Manual Prospec 131.51 43 P PKiKP 21 35 01.2 +0.2
baz=303
PDAR Pinedale Array 131.95 31 PKP PKiKP 21 35 01.4 -0.3
comp=Z,0.8nm,0.5s,baz=210,slow=1.2,SNR=9.5
PDAR SKPbc SKPbc 21 38 20.9 -1.8
comp=Z,2.2nm,1.0s,baz=354,slow=1.5,SNR=4.6
DUG Dugway, Tooele 131.96 35 P PKiKP 21 35 03.0 +1.3
baz=311,SNR=12
GSC Goldstone, Bar 132.39 43 P PKiKP 21 35 02.7 +0.1
baz=303
AGMN Agassiz Nation 132.72 16 P PKPdf 21 35 01.9 +0.2
baz=336
B35A Bob, Littlefor 133.20 14 P PKPdf 21 35 00.7 -1.9
baz=339
GMRC Granite Mounta 133.46 43 P PKiKP 21 35 05.3 +0.4
baz=304
RSSD Black Hills 133.50 25 PKPdf PKPdf 21 35 02.9 -0.7
RSSD Black Hills 133.50 25 PKIKP PKPdf 21 35 02.9 -0.7
RSSD Black Hills 133.50 25 P PKPdf 21 35 02.8 -0.7
baz=324
RSSD Black Hills 133.50 25 P PKPdf 21 35 03.4 -0.2
baz=324
K22A Casper 133.53 28 P PKPdf 21 35 03.5 -0.1
baz=320
PFO Pinyon Flats O 133.54 45 PKP PKiKP 21 35 05.5 +0.4
comp=Z,5.9nm,0.9s,baz=286,slow=1.3,SNR=5.0
PFO SKPbc SKPab 21 38 29.5 -1.0
comp=Z,15nm,1.1s,baz=165,slow=3.9,SNR=6.7
PFO Pinyon Flats O 133.54 45 P PKiKP 21 35 05.1 0.0
baz=302
BELC Belle Mtn. Jos 133.66 44 P PKiKP 21 35 05.5 +0.2
baz=303
RWWY Rawlins 133.93 30 IAMs_20 IAMs_20 22 44 45.8
comp=Z,349nm,20.0s
EYMN Ely 134.09 12 PKiKP 21 35 05.1 -0.6
EYMN Ely 134.09 12 IAMs_20 IAMs_20 22 41 40.4
comp=Z,425nm,20.0s
EYMN Ely 134.09 12 P PKPdf 21 35 04.2 -0.1
baz=342
EYMN Ely 134.09 12 P PKPdf 21 35 04.2 -0.1
baz=342
IRM Iron Mountain 134.16 43 P PKiKP 21 35 06.8 +0.6
baz=304
BC3 Big Chuckawall 134.22 44 P PKiKP 21 35 06.6 +0.2
baz=304
O20A White River Ci 134.54 32 P PKPdf 21 35 05.9 +0.3
baz=316
F33A 5 Mile Ranch, 134.83 17 P PKPdf 21 35 05.3 -0.4
baz=335
N23A Red Feather La 135.15 30 P PKPdf 21 35 06.5 -0.3
baz=320
SUSD Miller 135.21 21 P PKPdf 21 35 07.2 +0.7
baz=331
D41A Chassel 135.49 10 P PKPdf 21 35 07.6 +0.7
baz=346
F36A Milaca 135.58 15 PKPdf 21 35 06.5 -0.6
F36A Milaca 135.58 15 P PKPdf 21 35 06.6 -0.5
baz=339
WUAZ Wupatki 135.84 39 P PKiKP 21 35 09.4 -0.4
baz=309
ISCO Idaho Springs 136.14 30 P PKPdf 21 35 09.3 +0.5
baz=319
ISCO Idaho Springs 136.14 30 P PKPdf 21 35 09.3 +0.5
baz=319
COWI Conover 136.32 11 P PKPdf 21 35 08.6 +0.1
baz=345
MVCO Mesa Verde 136.46 35 P PKiKP 21 35 10.5 -0.5
baz=314
ECSD EROS Data Cent 136.63 19 P PKPdf 21 35 07.3 -1.8
baz=334
ECSD EROS Data Cent 136.63 19 P PKPdf 21 35 07.5 -1.7
baz=334
E46A Sault Ste Mari 136.75 6 P PKPdf 21 35 08.8 -0.4
baz=352
S22A 4UR Ranch, Cre 137.02 33 P PKPdf 21 35 11.3 +0.9
baz=316
W18A Petrified Fore 137.12 38 P PKiKP 21 35 12.2 -0.2
baz=311,SNR=9.8
I37B Waseca 137.33 16 P PKPdf 21 35 09.7 -0.7
baz=338
SDCO Great Sand Dun 137.74 32 PKPdf 21 35 11.1 -0.7
SDCO IAMs_20 IAMs_20 22 45 42.0
comp=Z,301nm,20.0s
BMNY Brushton-Moira 138.40 356 P PKPdf 21 35 11.9 -0.4
baz=6.3
SADO Sadowa 138.63 1 PKhKP PKPpre 21 35 10.3
comp=Z,1.1nm,0.9s,baz=33,slow=2.1,SNR=3.8
VT1 Waterbury 138.74 354 IAMs_20 IAMs_20 22 41 13.9
comp=Z,330nm,19.0s
ANMO Albuquerque 139.22 36 PKhKP PKPpre 21 35 09.3
comp=Z,3.5nm,1.0s,baz=274,slow=3.5,SNR=6.9
HNH Hanover 139.30 353 IAMs_20 IAMs_20 22 42 48.5
comp=Z,415nm,20.0s
L40A Anamosa 139.72 15 P PKPdf 21 35 14.4 -0.5
baz=340
TRY Troy 140.42 354 IAMs_20 IAMs_20 22 44 19.1
comp=Z,392nm,19.0s
EPT El Paso 141.35 40 IAMs_20 IAMs_20 22 47 15.5
comp=Z,265nm,20.0s
AMTX Amarillo 141.92 31 IAMs_20 IAMs_20 22 46 36.5
comp=Z,412nm,21.0s
M55A Ridgway 141.93 0 P PKPdf 21 35 15.3 -3.6
baz=360
M55A P PKPdf 21 35 15.3 -3.6
baz=360
MNTX Cornudas Mount 142.11 39 P PKPdf 21 35 16.5 -3.0
baz=313
MNTX Cornudas Mount 142.11 39 P PKPdf 21 35 20.2 +0.7
baz=313,SNR=11
P43A Skaggs, Pawnee 142.43 14 P PKPdf 21 35 18.0 -1.8
baz=342
SSPA Standing Stone 142.75 359 P PKPdf 21 35 16.9 -3.5
baz=1.4
O49A Covington 142.85 7 P PKPdf 21 35 17.8 -2.7
baz=351
O49A P PKPdf 21 35 17.8 -2.7
baz=351
ACSO Alum Creek Sta 142.95 6 IAMs_20 IAMs_20 22 45 52.5
comp=Z,407nm,20.0s
ACSO Alum Creek Sta 142.95 6 P PKPdf 21 35 17.3 -3.4
baz=353
O53A New Philadelph 143.07 3 P PKPab 21 35 16.4 +0.1
baz=356
P49A Miami Univ. Ec 143.44 8 P PKPbc 21 35 18.9 +0.1
baz=350
P52A Corning 143.62 5 P PKPab 21 35 18.9 +0.4
baz=354
CPUP Villa Florida 144.11 214 PKP PKPbc 21 35 22.2 +1.0
comp=Z,7.6nm,0.9s,baz=121,slow=3.1,SNR=13
Q52A Bidwell 144.28 5 P PKPab 21 35 20.1 -0.9
baz=354
Q52A P PKPab 21 35 20.1 -0.9
baz=354
SIUC Southern Illin 144.33 14 PKPab 21 35 21.1 -0.1
S44A Carbondale 144.34 15 P PKPab 21 35 21.1 -0.2
baz=342
Q56A Snyder Ridge, 144.35 1 P PKPab 21 35 20.0 -1.3
baz=359
Q56A P PKPab 21 35 20.0 -1.3
baz=359
Q54A Coxs Mills 144.35 3 P PKPab 21 35 20.1 -1.1
baz=356,SNR=11
Q54A P PKPab 21 35 20.1 -1.1
baz=356,SNR=11
BDFB Brasilia 144.38 237 PKP PKPdf 21 35 24.1 +0.1
comp=Z,6.8nm,1.0s,baz=83,slow=6.8,SNR=6.9
R49A Shelbyville 144.59 9 P PKPab 21 35 21.8 -0.4
baz=349,SNR=24
R49A P PKPab 21 35 21.8 -0.4
baz=349,SNR=24
R50A Paris 144.72 8 P PKPab 21 35 21.8 -0.9
baz=350,SNR=11
R50A P PKPab 21 35 21.8 -0.9
baz=350,SNR=11
TX31 Lajitas Ar. Si 144.80 40 P PKPbc 21 35 23.9 +0.5
baz=313
TXAR Lajitas Array 144.80 40 PKP PKPdf 21 35 24.0 -0.4
comp=Z,34nm,1.0s,baz=290,slow=2.6,SNR=139
TXAR Lajitas Array 144.80 40 PKPab 21 35 23.3 -0.1
TXAR Lajitas Array 144.80 40 PKIKP PKPab 21 35 23.3 -0.1
PBMO Poplar Bluff 144.89 17 P PKPab 21 35 21.8 -1.5
baz=339
R53A Hurricane 144.93 5 P PKPab 21 35 22.9 -0.5
baz=354,SNR=12
R53A P PKPab 21 35 22.9 -0.5
baz=354,SNR=12
R55A Marlinton 145.08 2 P PKPbc 21 35 20.1 -3.9
baz=358
R55A P PKPbc 21 35 20.1 -3.9
baz=358
CBN Corbin Frederi 145.17 358 PKPbc 21 35 23.6 -0.6
CBN Corbin Frederi 145.17 358 P PKPbc 21 35 23.5 -0.7
baz=2.4,SNR=8.7
Z35A Perchaven, San 145.35 28 P PKPbc 21 35 23.9 -1.1
baz=326,SNR=5.4
R58B Mineral 145.42 359 P PKPbc 21 35 24.2 -0.8
baz=1.5,SNR=17
R58B P PKPbc 21 35 24.2 -0.8
baz=1.5,SNR=17
S51A Beattyville 145.45 7 P PKPbc 21 35 24.3 -0.8
baz=351,SNR=10
S51A P PKPbc 21 35 24.3 -0.8
baz=351,SNR=10
S54A Dingess, Beckl 145.50 4 P PKPdf 21 35 24.1 -1.2
baz=356,SNR=9.0
S54A P PKPdf 21 35 24.1 -1.2
baz=356,SNR=9.0
T47A Sharon Grove 145.51 12 P PKPdf 21 35 24.7 -0.6
baz=355,SNR=22
S57A Dark Hollow, R 145.63 0 P PKPdf 21 35 25.6 +0.1
baz=360,SNR=21
S57A P PKPdf 21 35 25.6 +0.1
baz=360,SNR=21
T50A Nancy 145.89 9 P PKPdf 21 35 25.2 -0.8
baz=349
T50A P PKPdf 21 35 25.2 -0.8
baz=349
WVT Waverly 146.17 13 PKPdf 21 35 25.9 -0.5
WVT Waverly 146.17 13 PKP2 PKPdf 21 35 25.9 -0.5
WVT MLR MLR
comp=Z,400nm,19.0s
WVT Waverly 146.17 13 P PKPdf 21 35 26.4 0.0
baz=344,SNR=45
WVT Waverly 146.17 13 P PKPdf 21 35 26.6 +0.2
baz=344
U49A Red Boiling Sp 146.23 10 P PKPdf 21 35 26.6 0.0
baz=347,SNR=17
JCT Junction City 146.30 34 P PKPbc 21 35 28.1 +0.1
baz=320,SNR=7.3
T57A Hurt 146.39 1 P PKPbc 21 35 27.5 -0.5
baz=359,SNR=5.7
T57A P PKPbc 21 35 27.5 -0.5
baz=359,SNR=5.7
T59A Double "B" Far 146.40 358 P PKPbc 21 35 27.7 -0.4
baz=2.1,SNR=9.0
T59A P PKPbc 21 35 27.7 -0.4
baz=2.1,SNR=9.0
TZTN Tazewell 146.54 7 PKPdf PKPdf 21 35 26.9 -0.2
TZTN Tazewell 146.54 7 P PKPbc 21 35 28.1 -0.5
baz=351,SNR=7.5
TZTN Tazewell 146.54 7 P PKPbc 21 35 28.0 -0.5
baz=351
V48A Smith Brothers 146.77 12 P PKPdf 21 35 27.8 +0.4
baz=345,SNR=27
U59A Littleton 147.03 359 P PKPdf 21 35 27.0 -0.9
baz=1.7
U59A P PKPdf 21 35 27.0 -0.9
baz=1.7
V51A Loudon 147.16 9 P PKPdf 21 35 27.9 -0.2
baz=350,SNR=8.4
PLAL Pickwick Lake 147.21 14 IAMs_20 IAMs_20 22 49 28.8
comp=Z,384nm,19.0s
V52A Sevierville 147.22 7 P PKPdf 21 35 28.8 +0.5
baz=351,SNR=7.8
435B Jarrell 147.26 31 P PKPbc 21 35 31.6 +0.8
baz=323
OXF Oxford 147.30 17 PKPbc 21 35 29.8 -0.9
OXF IAMs_20 IAMs_20 22 50 21.3
comp=Z,298nm,20.0s
OXF Oxford 147.30 17 PKP2 PKPbc 21 35 29.8 -0.9
OXF MLR MLR
comp=Z,300nm,20.0s
OXF Oxford 147.30 17 P PKPdf 21 35 29.1 +0.8
baz=340,SNR=7.4
OXF Oxford 147.30 17 P PKPbc 21 35 30.0 -0.7
baz=340,SNR=7.4
TKL Tuckaleechee C 147.38 8 PKPbc PKPdf 21 35 29.6 +1.1
comp=Z,29nm,0.9s,baz=110,slow=8.2,SNR=25
TKL Tuckaleechee C 147.38 8 PKPdf 21 35 29.4 +0.9
TKL Tuckaleechee C 147.38 8 P PKPdf 21 35 28.8 +0.3
baz=351,SNR=10
V55A Taylorsville 147.45 4 P PKPbc 21 35 30.2 -0.9
baz=355,SNR=5.9
V55A P PKPbc 21 35 30.2 -0.9
baz=355,SNR=5.9
SWET Sewanee 147.46 11 PKPdf 21 35 29.7 +1.0
V53A Saluda 147.49 6 P PKPdf 21 35 29.1 +0.4
baz=352,SNR=14
V53A P PKPdf 21 35 29.1 +0.4
baz=352,SNR=14
W50A Signal Mountai 147.59 10 P PKPdf 21 35 30.2 +1.3
baz=348,SNR=11
V58A Windy Hill, Pi 147.59 1 P PKPbc 21 35 30.6 -0.9
baz=359,SNR=8.5
V58A P PKPbc 21 35 30.6 -0.9
baz=359,SNR=8.5
W52A Murphy 147.91 8 P PKPbc 21 35 31.8 -0.7
baz=350,SNR=8.2
X48A Hartselle 147.96 13 P PKPdf 21 35 29.6 +0.1
baz=344,SNR=23
CNNC Cliffs of the 148.14 359 PKPbc 21 35 32.2 -0.8
BG3 Lake Jocassee 148.14 7 PKPbc 21 35 31.8 -1.2
CASEE Lake Jocassee 148.14 7 P PKPbc 21 35 31.5 -1.5
baz=352,SNR=18
KMSC Kings Mountain 148.15 4 P PKPdf 21 35 30.2 +0.4
baz=355,SNR=14
KMSC Kings Mountain 148.15 4 P PKPdf 21 35 30.1 +0.3
baz=355,SNR=14
833A Chaparral WMA, 148.15 36 P PKPdf 21 35 30.8 +0.8
baz=318
W57A Gilead 148.21 2 P PKPdf 21 35 28.5 -1.4
baz=358,SNR=9.5
W57A P PKPdf 21 35 28.5 -1.4
baz=358,SNR=9.5
X51A Calhoun 148.28 10 P PKPdf 21 35 31.1 +1.1
baz=348,SNR=9.0
X51A P PKPdf 21 35 31.1 +1.1
baz=348,SNR=9.0
GO03 Copiap 148.31 194 PKPbc 21 35 33.8 +0.1
Y49A Blount Mountai 148.67 13 P PKPdf 21 35 31.2 +0.5
baz=345,SNR=19
BIRD Birdtown, Kers 148.69 3 P PKPbc 21 35 33.5 -0.9
baz=357,SNR=7.8
HKT Hockley 148.82 30 PKPdf PKPdf 21 35 29.9 -1.0
HKT Hockley 148.82 30 PKIKP PKPdf 21 35 29.9 -1.0
HKT Hockley 148.82 30 P PKPdf 21 35 32.1 +1.2
baz=325
Z47A Carrollton 148.90 15 P PKPbc 21 35 33.7 -1.3
baz=342,SNR=11
HODGE Hodges 148.97 6 P PKPdf 21 35 32.0 +0.9
baz=353,SNR=9.0
Y52A Lilburn 149.10 9 P PKPdf 21 35 32.1 +0.8
baz=350,SNR=11
Y52A P PKPdf 21 35 32.1 +0.8
baz=350,SNR=11
146A Union 149.15 17 P PKPdf 21 35 32.1 +0.7
baz=340,SNR=19
Y57A Sumter 149.32 3 P PKPbc 21 35 35.6 -0.4
baz=357,SNR=8.2
Y57A P PKPbc 21 35 35.6 -0.4
baz=357,SNR=8.2
LRAL Lakeview Retre 149.33 14 PKPdf PKPdf 21 35 31.6 -0.1
LRAL Lakeview Retre 149.33 14 P PKPdf 21 35 32.6 +0.9
baz=344,SNR=6.1
LRAL Lakeview Retre 149.33 14 P PKPdf 21 35 32.1 +0.4
baz=344,SNR=6.1
Z51A Franklin 149.44 11 PKPdf 21 35 31.6 -0.3
Z51A Franklin 149.44 11 P PKPdf 21 35 32.0 +0.1
baz=347

GOGA	**Godfrey**	**149.63**	**8**	P		**PKPdf**	**21 35 32.2**	**0.0**
	baz=351,SNR=5.9							
GOGA	**Godfrey**	**149.63**	**8**	P		**PKPbc**	**21 35 36.6**	**-0.2**
	baz=351,SNR=5.9							
344A	**Westbrook Farm**	**149.69**	**21**	P		**PKPdf**	**21 35 34.6**	**+2.2**
	baz=336,SNR=10.0							
152A	**Waverly Hall**	**150.16**	**10**	P		**PKPdf**	**21 35 33.6**	**+0.6**
	baz=348,SNR=7.9							
154A	**Montrose**	**150.47**	**8**	P		**PKPdf**	**21 35 35.6**	**+2.1**
	baz=351,SNR=6.0							
250A	**Grady**	**150.51**	**13**	P		**PKPdf**	**21 35 34.9**	**+1.2**
	baz=345,SNR=12							
BRAL	**Brewton**	**151.09**	**15**	P		**PKPdf**	**21 35 36.0**	**+1.4**
	baz=343,SNR=8.6							
BRAL	**Brewton**	**151.09**	**15**	P		**PKiKP**	**21 35 41.1**	**+0.2**
	baz=343,SNR=8.6							
352A	**Blakely**	**151.28**	**11**	P		**PKPdf**	**21 35 36.5**	**+1.7**
	baz=347,SNR=12							
451A	**Vernon**	**151.94**	**13**	P		**PKPdf**	**21 35 34.7**	**-1.2**
	baz=345,SNR=5.4							
MDP	**Montagnes des**	**154.02 275**		PKP		**PKPdf**	**21 35 40.4**	**+1.1**
	comp=Z,4.0nm,0.9s,baz=56,slow=3.6,SNR=1.5							
SIV	**San Ignacio**	**154.19 222**		PKP		**PKPdf**	**21 35 40.7**	**+1.2**
	comp=Z,1.9nm,0.8s,baz=180,slow=1.9,SNR=2.8							
LPAZ	**La Paz**	**158.01 208**		PKP		**PKPdf**	**21 35 46.3**	**+1.0**
	comp=Z,3.4nm,1.0s,baz=49,slow=6.3,SNR=10							
SMRT	**St. Maarten**	**158.80 315**		IAMs_20		IAMs_20	22 40 17.8	
	comp=Z,261nm,21.0s							
CMIG	**Matias Romero**	**158.91**	**48**	PKP		**PKPdf**	**21 35 45.5**	**0.0**
	comp=Z,4.0nm,0.8s,baz=296,slow=3.1,SNR=6.9							
SEUS	**St. Eustatius**	**159.11 314**		IAMs_20		IAMs_20	22 56 24.9	
	comp=Z,341nm,21.0s							
ROSC	**El Rosal**	**175.41 291**		PKP		**PKPdf**	**21 35 57.7**	**-0.5**
	comp=Z,5.4nm,0.4s,baz=112,slow=7.3,SNR=4.3							
ROSC	**El Rosal**	**175.41 291**				**PKPdf**	**21 35 56.7**	**-1.6**
OTAV	**Otavalo**	**177.03 183**		PKIKP		**PKPdf**	**21 35 59.8**	**+1.1**

MAN 18 21:20:01.6,13°.13N×122°.26E,h10km,mb4.7,ML3.6, MS3.5,3C-9D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GQP	**Guinayangan**	**0.79**	**13**	⇓*eP*	Pn	21 20 16.3	-3.3
GQP				*eS*	Sn	21 20 27.0	-4.1
JCNP	**Jose Panganiba**	**1.23**	**20**	⇓*eP*	Pn	21 20 24.1	-1.6
JCNP				*eS*	Sn	21 20 40.1	-1.9
PGP	**Puerto Galera**	**1.32**	**286**	⇑*eP*	Pn	21 20 25.4	+0.8
PGP				*i* S	Sn	21 20 43.9	+4.0
TGY	**Tagaytay City**	**1.61**	**307**	⇑*eP*	Pn	21 20 30.9	+1.9
TGY				*eS*	Sn	21 20 53.7	+5.8
RCP	**Roxas**	**1.63**	**163**	⇓*eP*	Pn	21 20 33.4	+3.2
RCP				*eS*	Sn	21 20 56.0	+6.0
MACP	**Maragondon, Ca**	**1.87**	**307**	⇓*eP*	Pn	21 20 33.9	+1.3
MACP				*eS*	Sn	21 20 55.2	+0.9
PVCP	**Virac**	**1.90**	**76**	⇓*eP*	Pn	21 20 37.1	+1.6
LUBP	**Lubang**	**2.05**	**287**	⇓*eP*	Pn	21 20 36.6	+2.0
LUBP				*eS*	Sn	21 20 59.0	+1.2
PCPH	**Palayan**	**2.67**	**335**	⇑*eP*	Pn	21 20 45.7	+1.4
PCPH				*eS*	Sn	21 21 21.4	+6.1
LLP	**Lapu-Lapu**	**3.26**	**149**	*eP*	Pn	21 20 54.5	+1.5
LLP				*eS*	Sn	21 21 37.0	+6.3
ENPP	**El Nido**	**3.37**	**236**	⇓*eP*	Pn	21 20 54.3	+1.8
SMPP	**San Manuel, Pa**	**3.37**	**333**	⇓*eP*	Pn	21 20 55.4	+1.5
TBP	**Tagbilaran**	**3.76**	**155**	*eP*	Pn	21 21 12.7	+13
SAMP	**Sagada Mountai**	**4.14**	**342**	⇓*eP*	Pn	21 21 07.3	+2.5

*NEIC **18** 21:21:23.8±2.2,24°.65S×0°.04×177°.0W±0°.1,h142km,8km, mb4.5/18,Error ellipse: s-maj=17.7km s-min=6.2km az=82.0*
*IDC **18** 21:21:29.2±3.9,24°.61S×177°.32W,h190km,30km,mb3.9/6, mbtmp4.4/9,Error ellipse: s-maj=33.4km s-min=21.9km az=106.0*

ISC 18 21:21:22.3±0.6,24°.46S±0°.08×177°.2W±0°.1,h132km,n41, σ1s09/40,mb4.5/14,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.82 188**		S	**Sn**	**21 23 31.1**	**+3.2**
	499nm,0.5s,baz=270,slow=22,SNR=6.1						
MSVF	**Nonsavu**	**8.03 326**		P	Pn	21 23 24.4	+8.1
	11nm,0.7s,baz=183,slow=19,SNR=8.7						
MSVF	**Nonsavu**	**8.03 326**			Pn	21 23 23.9	+7.6
NIUE	**Niue**	**8.62**	**53**	Pn	**Pn**	**21 23 25.1**	**+1.0**
AFI	**Afiamalu**	**11.67**	**27**	S	Sn	21 26 02.4	-11
	19nm,0.3s,baz=59,slow=23,SNR=2.5						
PINNC	**Pines Island,**	**14.21 274**		Pn	**P**	**21 24 40.9**	**-0.1**
URZ	**Urewera**	**14.59 198**		P	**P**	**21 24 43.5**	**-1.5**
	8.1nm,0.5s,baz=234,slow=2.2,SNR=18						
URZ				S	Sn	21 27 10.1	-13
	8.7nm,0.6s,baz=144,slow=19,SNR=3.3						
URZ	**Urewera**	**14.59 198**			**Pn**	**21 24 41.8**	**-0.4**
DZM	**Mont Dzumac**	**15.23 276**		P	**P**	**21 24 53.8**	**+1.4**
	11nm,0.8s,baz=118,slow=17,SNR=6.0						
BKZ	**Black Stump Fm**	**15.61 199**		Pn	**Pn**	**21 24 53.8**	**-1.2**
BKZ				IAmb	IAmb	21 25 03.8	
	comp=Z,23nm,1.4s						
ARMA	**Armidale**	**28.25 251**		P	**P**	**21 27 05.4**	**+2.3**
ARMA				IAmb	IAmb	21 27 34.2	
	comp=Z,11nm,1.1s						
CTA	**Charters Tower**	**34.04 270**		P	**P**	**21 27 55.3**	**+1.3**
	comp=Z,4.6nm,0.4s,baz=91,slow=11,SNR=11						
	comp=Z,4.6nm,0.4s						
CTAO	**Charters Tower**	**34.04 270**		P	**P**	**21 27 54.9**	**+0.9**
STKA	**Stephens Creek**	**36.91 249**		P	**P**	**21 28 18.0**	**-0.4**
	comp=Z,2.3nm,0.5s,baz=54,slow=8.7,SNR=1.9						
	comp=Z,2.3nm,0.5s						
STKA	**Stephens Creek**	**36.91 249**		P	**P**	**21 28 18.5**	**+0.1**
COEN	**Coen**	**38.73 278**		P	**P**	**21 28 35.0**	**+1.0**
COEN				IAmb	IAmb	21 28 50.6	
	comp=Z,16nm,1.2s						
AS31	**Alice Springs**	**44.47 261**		P	**P**	**21 29 21.4**	**+0.8**
WB2	**Warramunga Arr**	**44.91 266**		P	**P**	**21 29 23.4**	**-0.7**
WB2				IAmb	IAmb	21 29 25.4	
	comp=Z,8.9nm,0.9s						
WRA	**Warramunga Arr**	**44.92 266**		P	**P**	**21 29 23.5**	**-0.8**
	comp=Z,3.4nm,0.5s,baz=100,slow=7.7,SNR=19						
	comp=Z,3.4nm,0.5s						
WRA	**Warramunga Arr**	**44.92 266**		P	**P**	**21 29 23.4**	**-0.8**
FORT	**Forrest**	**48.52 250**		P	**P**	**21 29 50.7**	**-1.4**
KNRA	**Kununurra**	**51.24 269**		P	**P**	**21 30 12.5**	**-0.4**
KNRA				IAmb	IAmb	21 30 13.2	
	comp=Z,18nm,1.1s						
PSA00	**Pilbara Seismi**	**57.58 259**		P	**P**	**21 30 57.4**	**-1.2**
PSA00				IAmb	IAmb	21 31 01.9	
	comp=Z,9.2nm,1.4s						
PSA00	**Pilbara Seismi**	**57.58 259**		P	**P**	**21 30 57.6**	**-1.0**
PSA00				IAmb	IAmb	21 31 09.4	
	comp=Z,12nm,1.1s						
MBWA	**Marble Bar**	**57.80 260**		P	**P**	**21 30 58.6**	**-1.5**
MBWA				IAmb	IAmb	21 31 27.1	
	comp=Z,17nm,1.2s						
MORW	**Morawa**	**59.09 250**		P	**P**	**21 31 08.6**	**-0.4**
GIRL	**Giralia**	**62.28 256**		P	**P**	**21 31 31.6**	**+0.9**
QSPA	**South Pole Qui**	**65.63 180**		P	**P**	**21 31 52.5**	**+0.5**
QSPA				IAmb	IAmb	21 32 07.1	
	comp=Z,7.5nm,1.2s						
MJAR	**Matsushiro Arr**	**73.83 324**		P	**P**	**21 32 42.0**	**-0.5**
	comp=Z,1.0nm,0.8s,baz=152,slow=7.3,SNR=5.4						
	comp=Z,1.0nm,0.8s						
BELA	**Belgrano 2**	**75.55 172**		P	**P**	**21 32 51.0**	**-0.9**
PETK	**Petropavlovsk-**	**80.27 345**		P	**P**	**21 33 18.9**	**+0.9**
	comp=Z,3.5nm,0.8s,baz=151,slow=9.5,SNR=7.0						
	comp=Z,3.5nm,0.8s						
PETK	**Petropavlovsk-**	**80.27 345**		P	**P**	**21 33 18.4**	**+0.4**
SNAA	**Sanae**	**84.05 178**		P	**P**	**21 33 37.3**	**-0.5**
SNAA				IAmb	IAmb	21 33 49.2	
	comp=Z,5.9nm,1.5s						
CMAR	**Chiang Mai Arr**	**92.13 289**		P	**P**	**21 34 18.9**	**+1.6**
	comp=Z,1.5nm,0.8s,baz=138,slow=3.5,SNR=9.4						
	comp=Z,1.5nm,0.8s						
CMAR	**Chiang Mai Arr**	**92.13 289**		P	**P**	**21 34 18.1**	**+0.9**
AKASG	**Malin Array Be**	**146.80 329**		PKPbc	**PKPbc**	**21 40 47.9**	**-0.8**
	comp=Z,1.2nm,0.4s,baz=44,slow=4.1,SNR=13						
BRTR	**Keskin Array B**	**149.95 308**		PKPbc	**PKPbc**	**21 40 57.1**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=139,slow=4.3,SNR=6.9						
BRTR				PKPab	**PKPab**	**21 41 03.1**	**-0.4**
	comp=Z,1.6nm,0.7s,baz=89,slow=3.1,SNR=8.6						
BRTR	**Keskin Array B**	**149.95 308**			**PKPbc**	**21 40 56.7**	**-0.7**
CLL	**Collm**	**152.07 346**		*i* PKPbc	**PKiKP**	**21 41 02.0**	**-0.1**
	comp=Z,4.0nm,0.9s						
CLL				*e*PKPab	**PKPab**	**21 41 11.0**	**-0.7**
TORD	**Torodi Ar. Bea**	**168.70 174**		PKPab	**PKPab**	**21 42 24.6**	**-0.2**
	comp=Z,0.8nm,0.9s,baz=180,slow=5.7,SNR=4.1						
TORD	**Torodi Ar. Bea**	**168.70 174**			**PKPab**	**21 42 24.2**	**-0.5**

MAN 18 21:31:04.7,13°.25N×122°.17E,h1km,mb4.5,ML3.4,MS3.2, 1C-6D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GQP	**Guinayangan**	**0.71**	**22**	⇓*eP*	Pb	21 31 18.4	+0.3
GQP				*eS*		21 31 33.5	
JCNP	**Jose Panganiba**	**1.15**	**26**	⇓*eP*	Pn	21 31 26.2	+0.2
JCNP				*eS*		21 31 41.8	
PGP	**Puerto Galera**	**1.22**	**282**	⇓*eP*	Pn	21 31 27.9	+0.3
PGP				*i* S		21 31 46.0	
MACP	**Maragondon, Ca**	**1.74**	**306**	⇓*eP*	Pb	21 31 36.4	+0.4
MACP				*eS*		21 31 57.1	
RCP	**Roxas**	**1.77**	**162**	⇑*eP*	Pn	21 31 36.9	+0.7
LUBP	**Lubang**	**1.94**	**285**	⇓*eP*	Pn	21 31 38.6	+0.6
LUBP				*eS*		21 32 03.9	
PCPH	**Palayan**	**2.53**	**336**	⇓*eP*	Pb	21 31 50.6	+1.0

*ANF **18** 21:33:14.9±0.4,35°.59N×97°.13W,h4km±3km,ML3.7/13, Error ellipse: s-maj=2.8km s-min=1.9km az=144.0*
*TUL **18** 21:33:15±0.7,35°.53N±0°.03×97°.11W±0°.03,h7km±7km, ML3.6,mb_Lg3.2/91(NEIC),Error ellipse: s-maj=4.2km s-min=2.3km az=151.0*
*NEIC **18** 21:33:15.8±0.8,35°.55N±0°.01×97°.12W±0°.04,h6km±6km, Error ellipse: s-maj=4.8km s-min=1.2km az=109.0*

ISC 18 21:33:15.5±0.9,35°.56N±0°.03×97°.11W±0°.03,h11km±8km, n83,σ0s67/68,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK005	**Luther M Schoo**	**0.12**	**326**		**Pg**	**21 33 18.3**	**-0.1**
OK005				Sg	**Sg**	**21 33 20.7**	**+0.2**
ADOK	**Arcadia Dam**	**0.23**	**294**	Pg	**Pg**	**21 33 20.2**	**-0.1**
ADOK				Sg	**Sg**	**21 33 24.0**	**+0.4**
OK009	**Oakdale Elemen**	**0.26**	**275**	Pg	**Pg**	**21 33 20.5**	**-0.3**
OK009				Sg	**Sg**	**21 33 24.5**	**+0.2**
OKCSW	**OKLAHOMA CITY**	**0.31**	**240**		**Pg**	**21 33 21.0**	**-0.7**
OKCSW				Sg	**Sg**	**21 33 25.5**	**-0.3**
OKCFA	**Oklahoma City**	**0.31**	**243**		**Pg**	**21 33 21.1**	**-0.6**
OKCFA				Sg	**Sg**	**21 33 25.8**	**-0.2**
OKCFA	**Oklahoma City**	**0.31**	**243**	P	**Pg**	**21 33 21.2**	**-0.6**
	baz=67,SNR=152						
OKCFA				S	**Sg**	**21 33 25.7**	**-0.3**
	baz=67						
FNO	**Franklin**	**0.38**	**218**		**Pg**	**21 33 22.3**	**-0.8**
X34A	**Smith Ranch, M**	**1.12**	**212**	Pg	**Pg**	**21 33 36.2**	**-0.9**
TUL1	**Leonard**	**1.13**	**72**		**Pg**	**21 33 35.7**	**-1.5**
TUL1	**Leonard**	**1.13**	**72**	P	**Pg**	**21 33 35.7**	**-1.5**
	baz=251,SNR=48						
T35A	**Sooner Cattle**	**1.44**	**20**		**Pn**	**21 33 41.4**	**-0.2**
T35B	**Sooner Cattle**	**1.44**	**20**	P	**Pn**	**21 33 41.5**	**-0.1**
	baz=199,SNR=195						
T35B				S	**Sg**	**21 34 01.5**	**-0.3**
	baz=199						
WMOK	**Wichita Mounta**	**1.59**	**240**		**Pn**	**21 33 43.4**	**-0.4**
WMOK	**Wichita Mounta**	**1.59**	**240**	P	**Pn**	**21 33 43.4**	**-0.4**
	baz=59,SNR=152						
WMOK				S	**Sb**	**21 34 04.8**	**-0.5**
	baz=59						
X37A	**Clayton**	**1.72**	**124**		**Pn**	**21 33 45.9**	**+0.5**
X37A	**Clayton**	**1.72**	**124**	P	**Pn**	**21 33 46.0**	**+0.5**
	baz=304,SNR=67						
X37A				S	**Sb**	**21 34 09.7**	**+0.8**
	baz=304						
Z35A	**Perchaven, San**	**2.23**	**183**		**Pn**	**21 33 53.2**	**+0.8**
Z35A	**Perchaven, San**	**2.23**	**183**	P	**Pn**	**21 33 53.1**	**+0.8**
	baz=3.0,SNR=43						
Z35A				S	**Sb**	**21 34 23.2**	**-0.1**
	baz=3.0						
U38A	**Gravette**	**2.38**	**68**		**Pn**	**21 33 56.0**	**+1.4**
U38A	**Gravette**	**2.38**	**68**	P	**Pn**	**21 33 55.3**	**+0.8**
	baz=248,SNR=103						
HHAR	**Hobbs**	**2.67**	**73**		**Pn**	**21 33 58.6**	**0.0**
HHAR	**Hobbs**	**2.67**	**73**	P	**Pn**	**21 33 59.4**	**+0.9**
	baz=255						
W39A	**Magazine**	**2.74**	**97**		**Pn**	**21 33 59.8**	**+0.3**
W39A	**Magazine**	**2.74**	**97**	P	**Pn**	**21 33 59.9**	**+0.3**
	baz=278,SNR=10						
W39A				S	**Sn**	**21 34 34.1**	**+1.4**
	baz=278						
Z38A	**Mt. Pleasant**	**2.89**	**142**		**Pn**	**21 34 02.0**	**+0.5**
Z38A				IAmb_Lg		21 34 46.3	
	comp=Z,48nm,0.8s						
Z38A	**Mt. Pleasant**	**2.89**	**142**	P	**Pn**	**21 34 02.0**	**+0.5**
	baz=323						
MIAR	**Mount Ida**	**3.07**	**108**		**Pn**	**21 34 04.5**	**+0.5**
MIAR	**Mount Ida**	**3.07**	**108**	P	**Pn**	**21 34 04.7**	**+0.7**
	baz=290,SNR=35						
R32A	**Long Quarter,**	**3.13**	**336**		**Pn**	**21 34 05.5**	**+0.6**
R32A	**Long Quarter,**	**3.13**	**336**	P	**Pn**	**21 34 05.2**	**+0.4**
	baz=156,SNR=7.6						
U40A	**Yellville**	**3.54**	**76**	Pn	**Pn**	**21 34 10.8**	**+0.2**
U40A	**Yellville**	**3.54**	**76**	P	**Pn**	**21 34 10.8**	**+0.2**
	baz=258,SNR=12						
U40A				P	**Pn**	**21 34 10.8**	**+0.2**
	baz=258,SNR=12						
KSU1	**Kansas State U**	**3.56**	**6**		**Pn**	**21 34 11.2**	**+0.5**
KSU1				IAmb_Lg		21 35 18.6	
	comp=Z,35nm,0.7s						
KSU1	**Kansas State U**	**3.56**	**6**	P	**Pn**	**21 34 11.2**	**+0.5**
	baz=186,SNR=5.4						
WHTX	**Lake Whitney,**	**3.57**	**185**		**Pn**	**21 34 11.3**	**+0.4**
ABTX	**Abilene, Hawle**	**3.60**	**216**		**Pn**	**21 34 12.0**	**+0.6**
X40A	**Basin Creek Fa**	**3.67**	**106**		**Pn**	**21 34 13.0**	**+0.8**
X40A				IAmb_Lg		21 35 12.7	
	comp=Z,35nm,0.8s						
237A	**Washetta, Mont**	**3.71**	**163**	Pn	**Pn**	**21 34 12.7**	**-0.1**
S39A	**Bolivar**	**3.72**	**54**		**Pn**	**21 34 13.5**	**+0.6**
WLAR	**White Oak Lake**	**3.79**	**118**	IAmb_Lg		21 35 21.9	
	comp=Z,38nm,0.8s						
AMTX	**Amarillo**	**3.80**	**261**	Pn	**Pn**	**21 34 14.4**	**+0.3**
AMTX				IAmb_Lg		21 35 24.0	
	comp=Z,42nm,0.7s						
WHAR	**Wooly Hollow**	**3.95**	**93**		**Pn**	**21 34 16.3**	**+0.3**
WHAR				IAmb_Lg		21 35 28.7	
	comp=Z,62nm,0.9s						
UALR	**University of**	**3.98**	**100**		**Pn**	**21 34 17.3**	**+0.7**
UALR				IAmb_Lg		21 35 26.5	
	comp=Z,36nm,0.7s						
W41B	**Gary Mavity, V**	**3.99**	**94**		**Pn**	**21 34 17.1**	**+0.5**
W41B	**Gary Mavity, V**	**3.99**	**94**	P	**Pn**	**21 34 17.3**	**+0.6**
	baz=277,SNR=17						
FCAR	**Ozark Folk Cen**	**4.07**	**84**		**Pn**	**21 34 17.2**	**-0.5**
MGMO	**Mountain Grove**	**4.22**	**66**	Pn	**Pn**	**21 34 21.1**	**+1.2**
MGMO				IAmb_Lg		21 35 37.6	
	comp=Z,55nm,0.7s						
Z41A	**Richland Creek**	**4.24**	**122**	Pn	**Pn**	**21 34 19.2**	**-0.8**
Z41A				IAmb_Lg		21 35 39.4	
	comp=Z,30nm,0.8s						
R40A	**Maddies Statio**	**4.74**	**53**	Pn	**Pn**	**21 34 27.0**	**+0.1**
R40A				IAmb_Lg		21 35 48.5	
	comp=Z,62nm,0.8s						
435B	**Jarrell**	**4.78**	**185**	IAmb_Lg		21 35 54.3	
	comp=Z,60nm,0.9s						
LCAR	**Lake Charles**	**4.87**	**82**	IAmb_Lg		21 35 57.2	
	comp=Z,32nm,0.8s						
MSTX	**Muleshoe**	**4.92**	**253**	IAmb_Lg		21 35 55.2	
	comp=Z,55nm,1.2s						
P38A	**Dawn**	**4.95**	**34**		**Pn**	**21 34 30.6**	**+0.7**
P38A				IAmb_Lg		21 36 02.8	
	comp=Z,55nm,0.9s						
N33A	**J Bar K, Exete**	**5.18**	**357**	Pn	**Pn**	**21 34 31.6**	**-1.4**
N33A				IAmb_Lg		21 36 11.7	
	comp=Z,26nm,0.8s						
CCM	**Cathedral Cave**	**5.33**	**60**	Pn	**Pn**	**21 34 34.5**	**-0.5**
CCM				IAmb_Lg		21 36 16.6	
	comp=Z,31nm,0.8s						
N35A	**Tabor**	**5.42**	**12**	Pn	**Pn**	**21 34 36.5**	**+0.2**
143A	**Socs Landing,**	**5.52**	**119**	IAmb_Lg		21 36 19.5	
	comp=Z,32nm,0.9s						
PBMO	**Poplar Bluff**	**5.54**	**75**	IAmb_Lg		21 36 18.9	
	comp=Z,45nm,0.7s						
KSCO	**Kaye Shedlock'**	**5.59**	**310**	Pn	**Pn**	**21 34 39.9**	**+1.2**
KSCO				IAmb_Lg		21 36 25.8	
	comp=Z,32nm,0.8s						
P40A	**Paris**	**5.65**	**44**	IAmb_Lg		21 36 22.1	
	comp=Z,38nm,0.8s						
HKT	**Hockley**	**5.70**	**169**	IAmb_Lg		21 36 22.6	
	comp=Z,23nm,1.2s						
342A	**Flagon Creek P**	**5.78**	**135**	IAmb_Lg		21 36 23.2	
	comp=Z,20nm,0.9s						
441A	**DeRidder**	**5.81**	**144**	IAmb_Lg		21 36 14.8	
	comp=Z,27nm,1.0s						
FVM	**French Village**	**5.89**	**64**	IAmb_Lg		21 36 24.5	
	comp=Z,42nm,0.9s						
BGNE	**Belgrade**	**5.90**	**352**	IAmb_Lg		21 36 32.4	
	comp=Z,22nm,0.7s						
T25A	**Trinidad**	**6.10**	**287**	IAmb_Lg		21 36 32.8	
	comp=Z,39nm,0.9s						
OXF	**Oxford**	**6.41**	**97**	Pn	**Pn**	**21 34 50.0**	**+0.2**
VBMS	**Vicksburg**	**6.42**	**119**	IAmb_Lg		21 36 47.8	
	comp=Z,44nm,1.2s						
L34A	**Svendsen Farm,**	**6.42**	**5**		**Pn**	**21 34 50.5**	**+0.4**
L34A				IAmb_Lg		21 36 52.9	
	comp=Z,45nm,0.7s						
W45A	**Hickory Valley**	**6.49**	**91**	IAmb_Lg		21 36 49.0	
	comp=Z,35nm,0.8s						
OGNE	**Ogallala**	**6.62**	**326**	IAmb_Lg		21 36 50.0	
	comp=Z,36nm,0.8s						
S44A	**Carbondale**	**6.67**	**69**	Pn	**Pn**	**21 34 53.2**	**-0.2**
735A	**Kenedy**	**6.71**	**185**	IAmb_Lg		21 37 01.2	
	comp=Z,30nm,0.8s						
N41A	**Harden Midland**	**7.12**	**42**	IAmb_Lg		21 37 13.9	
	comp=Z,41nm,0.8s						
K31A	**O'Neill**	**7.17**	**350**	IAmb_Lg		21 37 13.5	
	comp=Z,25nm,0.7s						
833A	**Chaparral WMA,**	**7.47**	**196**	IAmb_Lg		21 37 17.0	
	comp=Z,15nm,1.1s						
WVT	**Waverly**	**7.56**	**83**	IAmb_Lg		21 37 33.0	
	comp=Z,15nm,1.1s						
L40A	**Anamosa**	**7.95**	**34**	IAmb_Lg		21 37 32.8	
	comp=Z,33nm,1.0s						
O44A	**Mansfield**	**8.23**	**54**	IAmb_Lg		21 37 37.1	
	comp=Z,32nm,0.8s						
L42A	**Oliver, Polo**	**8.67**	**40**	IAmb_Lg		21 38 00.5	
	comp=Z,29nm,0.9s						
N23A	**Red Feather La**	**8.75**	**310**	IAmb_Lg		21 38 03.4	
	comp=Z,22nm,0.9s						
JFWS	**Jewell Farm**	**9.07**	**34**	IAmb_Lg		21 38 05.6	
	comp=Z,24nm,0.8s						
I40A	**Norwalk**	**9.71**	**29**	IAmb_Lg		21 38 38.5	
	comp=Z,21nm,1.1s						

*KRNET **18** 22:22:57.8±0.1,42°.77N×71°.79E,h19km,mb2.5*
*NNC **18** 22:22:58.1±0.9,42°.84N×71°.75E,h0km,mb3.3,mpv2.8, Error ellipse: s-maj=8.4km s-min=5.2km az=154.0*
*SOME **18** 22:22:58.6,42°.82N×71°.80E,h5km*

ISC 18 22:22:58.0±1.2,42°.77N±0°.03×71°.80E±0°.02,h3km±11km, n23,σ0s76/43,21C-5D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZA	**Taraz**	**0.37**	**290**	*eP*	**Pg**	**22 23 05.4**	**+0.3**
	baz=90						
DZA				*eS*	**Sg**	**22 23 10.6**	**+0.7**
	baz=90						
DZA	**Taraz**	**0.37**	**290**	*eP*	**Pg**	**22 23 05.4**	**+0.3**
	37nm,0.1s						
DZA				*eS*	**Sg**	**22 23 10.6**	**+0.7**
	257nm,0.2s						
ARK	**Arkit**	**0.98**	**173**	⇑*iP*	**Pg**	**22 23 16.1**	**-0.6**
	baz=72						
ARK				⇑*iS*	**Sg**	**22 23 29.2**	**-0.2**
	baz=72						
KK31	**Karatay Array**	**1.00**	**290**	⇑P	**Pg**	**22 23 16.3**	**-1.0**
	0.3nm,0.2s,baz=110,slow=16,SNR=94						
KK31				⇑S	**Sg**	**22 23 29.5**	**-0.8**
	1.9nm,0.2s,baz=105,slow=28,SNR=19						
KKAR	**Karatay Array**	**1.00**	**290**	⇑*iP*	**Pg**	**22 23 16.2**	**-1.1**
	baz=90						
KKAR				⇑*iS*	**Sg**	**22 23 29.6**	**-0.7**
	baz=90						
TRKS	**Terek-Say**	**1.33**	**202**	⇑*iP*	**Pn**	**22 23 23.1**	**-0.6**
	baz=99						
TRKS				⇑*iS*	**Sg**	**22 23 41.7**	**+0.9**
	baz=99						
IUG	**Iuzhnay**	**1.45**	**245**	*eP*	**Pn**	**22 23 25.5**	**+0.2**
	56nm,0.2s						
IUG				*eS*	**Sn**	**22 23 44.8**	**0.0**
	57nm,0.3s						
IUG	**Iuzhnay**	**1.45**	**245**	P	**Pn**	**22 23 25.5**	**+0.2**
	56nm,0.2s						
IUG				S	**Sn**	**22 23 44.8**	**0.0**
	57nm,0.3s						
EKS2	**Erkin-Say**	**1.46**	**94**	⇓*iP*	**Pn**	**22 23 24.8**	**-0.6**
	baz=93						
EKS2				⇓*iS*	**Sb**	**22 23 44.4**	**-0.5**
	baz=93						
BRLS	**Borolday**	**1.47**	**281**	*eP*	**Pg**	**22 23 26.4**	**+0.3**
	0.8nm,0.1s						
BRLS				*eS*	**Sg**	**22 23 46.4**	**+1.2**

mB4.7/22
*NEIC **18** 22:34:01.5±1.2, 15°.68S±0°.10×168°.1E±0°.1, h197km±6km, mb4.8/55, Error ellipse: s-maj=15.6km s-min=14.4km az=103.0*
*NOU **18** 22:34:02.4, 15°.66S×168°.02E, h205km, mb4.9/45, Vanuatu Islands*
*IDC **18** 22:34:03.0±1.8, 15°.71S×167°.97E, h212km±16km, mb4.2/14, mbtmp4.7/17, Error ellipse: s-maj=14.4km s-min=12.0km az=57.0*
ISC 18 22:34:01.5±0.4, **15.70S**±0°.06×**167.98E**±0°.07, **h200**km, **n209**, σ1.5**21**/210, **mb4.8**/70, **4C-4D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**2.02**	**174**	P		**Pn**		**22 34 41.9**	**+1.7**
MARNC	**Mare, Loyalty**	**5.75**	**180**			**Pn**		**22 35 25.4**	**-0.1**
MARNC	**Mare, Loyalty**	**5.75**	**180**	P		**Pn**		**22 35 25.8**	**+0.3**
KOUNC	**Koumac, New Ca**	**5.96**	**216**			**Pn**		**22 35 30.3**	**+2.0**
KOUNC	**Koumac, New Ca**	**5.96**	**216**	P		**Pn**		**22 35 30.7**	**+2.4**
DZM	**Mont Dzumac**	**6.50**	**193**	P		**Pn**		**22 35 37.0**	**+1.6**
	67nm,0.6s,baz=39,slow=18,SNR=61								
DZM				S		**Sn**		**22 36 49.0**	**-0.7**
	81nm,1.0s,baz=306,slow=23,SNR=8.5								
NOUC	**Port Laguerre**	**6.56**	**194**	P		**Pn**		**22 35 37.9**	**+1.9**
PINNC	**Pines Island,**	**6.89**	**184**			**Pn**		**22 35 41.5**	**+1.2**
PINNC	**Pines Island,**	**6.89**	**184**	P		**Pn**		**22 35 41.8**	**+1.5**
MSVF	**Nonsavu**	**9.85**	**103**	P		**Pn**		**22 36 21.7**	**+2.7**
	2.6nm,0.3s,baz=265,slow=1.7,SNR=3.6								
MSVF	**Nonsavu**	**9.85**	**103**	Pn		**Pn**		**22 36 18.0**	**-1.1**
LHI	**Lord Howe Isla**	**17.72**	**206**	P		**P**		**22 37 55.7**	**+1.3**
	baz=18								
EIDS	**Eidsvold**	**18.50**	**236**	P		**Pn**		**22 38 05.4**	**-0.1**
	baz=18,SNR=4.7								
EIDS	**Eidsvold**	**18.50**	**236**			**P**		**22 38 04.0**	**+1.2**
EIDS				IAmb		IAmb		22 38 06.2	
	comp=Z,20nm,0.8s								
EIDS	**Eidsvold**	**18.50**	**236**	P		**Pn**		**22 38 05.3**	**-0.2**
RABL	**Rabaul**	**19.31**	**305**	P		**P**		**22 38 11.5**	**-0.2**
KRVT	**Keravat (AS076**	**19.35**	**304**	P		**P**		**22 38 12.0**	**-0.1**
	comp=Z,58nm,0.7s,baz=152,slow=2.6,SNR=9.5								
OUZ	**Omahuta**	**20.08**	**167**			**P**		**22 38 21.2**	**+1.5**
OUZ				IAmb		IAmb		22 38 22.9	
	comp=Z,45nm,0.8s								
RMQ	**Roma**	**20.87**	**236**	P		**P**		**22 38 30.2**	**+1.9**
	baz=21,SNR=8.4								
RMQ	**Roma**	**20.87**	**236**	P		**P**		**22 38 30.8**	**+2.5**
ARMA	**Armidale**	**20.96**	**223**	P		**P**		**22 38 30.8**	**+1.6**
	baz=21,SNR=13								
ARMA	**Armidale**	**20.96**	**223**			**P**		**22 38 30.4**	**+1.1**
ARMA				IAmb		IAmb		22 38 32.5	
	comp=Z,27nm,0.9s								
ARMA	**Armidale**	**20.96**	**223**	P		**P**		**22 38 30.7**	**+1.5**
CTA	**Charters Tower**	**21.13**	**255**	P		**P**		**22 38 31.7**	**+0.7**
	comp=Z,27nm,0.7s,baz=86,slow=10,SNR=26								
	comp=Z,27nm,0.7s								
CTA	**Charters Tower**	**21.13**	**255**	P		**P**		**22 38 32.1**	**+1.0**
CTAO	**Charters Tower**	**21.13**	**255**	P		**P**		**22 38 31.4**	**+0.4**
CTAO				IAmb		IAmb		22 38 33.6	
	comp=Z,31nm,0.8s								
CTAO	**Charters Tower**	**21.13**	**255**	P		**P**		**22 38 32.0**	**+1.0**
PMG	**Port Moresby**	**21.26**	**285**	P		**P**		**22 38 33.6**	**+1.2**
	comp=Z,49nm,0.8s,baz=85,slow=7.6,SNR=15								
	comp=Z,49nm,0.8s								
PMG	**Port Moresby**	**21.26**	**285**	P		**P**		**22 38 32.6**	**+0.2**
PMG	**Port Moresby**	**21.26**	**285**	P		**P**		**22 38 33.6**	**+1.2**
MTSU	**Mount Surprise**	**22.77**	**261**	P		**P**		**22 38 47.8**	**+0.8**
	baz=23,SNR=17								
MTSU	**Mount Surprise**	**22.77**	**261**	P		**P**		**22 38 47.9**	**+0.9**
URZ	**Urewera**	**23.87**	**162**	P		**P**		**22 38 57.6**	**+0.9**
	comp=Z,30nm,0.8s,baz=14,slow=5.9,SNR=12								
	comp=Z,30nm,0.8s								
URZ	**Urewera**	**23.87**	**162**	P		**P**		**22 38 56.7**	**+0.1**
URZ				IAmb		IAmb		22 39 01.0	
	comp=Z,33nm,0.8s								
URZ	**Urewera**	**23.87**	**162**	P		**P**		**22 38 58.6**	**+1.9**
COEN	**Coen**	**24.04**	**271**	P		**P**		**22 38 58.8**	**+0.3**
	baz=24,SNR=8.9								
COEN	**Coen**	**24.04**	**271**	P		**P**		**22 38 58.7**	**+0.1**
COEN				IAmb		IAmb		22 39 01.5	
	comp=Z,48nm,1.1s								
COEN	**Coen**	**24.04**	**271**	P		**P**		**22 38 59.3**	**+0.7**
BKZ	**Black Stump Fm**	**24.54**	**164**	P		**P**		**22 39 03.0**	**+0.2**
BKZ				IAmb		IAmb		22 39 04.5	
	comp=Z,74nm,1.5s								
QLP	**Quilpie**	**24.61**	**240**	P		**P**		**22 39 04.5**	**+0.9**
	baz=25								
QLP	**Quilpie**	**24.61**	**240**	P		**P**		**22 39 04.8**	**+1.2**
QIS	**Mount Isa**	**27.38**	**256**	P		**P**		**22 39 29.0**	**+0.5**
INKA	**Innaminka**	**27.92**	**240**	P		**P**		**22 39 34.0**	**+0.8**
STKA	**Stephens Creek**	**28.91**	**231**	P		**P**		**22 39 42.1**	**+0.2**
	comp=Z,6.9nm,0.8s,baz=44,slow=7.7,SNR=14								
STKA				PcP		**PcP**		**22 42 45.6**	**-0.4**
	comp=Z,3.0nm,0.5s,baz=25,slow=8.3,SNR=5.0								
	comp=Z,6.9nm,0.8s								
STKA	**Stephens Creek**	**28.91**	**231**	P		**P**		**22 39 43.5**	**+1.5**
	baz=29,SNR=6.1								
STKA	**Stephens Creek**	**28.91**	**231**	P		**P**		**22 39 42.0**	**+0.1**
STKA	**Stephens Creek**	**28.91**	**231**	P		**P**		**22 39 43.5**	**+1.5**
GENI	**Genyem**	**30.34**	**293**	P		**P**		**22 39 55.2**	**+0.5**
	comp=Z,2μmcomp=Z,96nm,0.9s								
GENI	**Genyem**	**30.34**	**293**	P		**P**		**22 39 56.3**	**+1.6**
HTT	**Hallett**	**31.62**	**231**	P		**P**		**22 40 06.7**	**+0.8**
	baz=32,SNR=3.1								
SMPI	**Sarmi**	**31.90**	**292**	P		**P**		**22 40 08.8**	**+0.3**
	comp=Z,69nm,1.2s								
WB0	**Warramunga Arr**	**32.22**	**258**	P		**P**		**22 40 09.6**	**-1.6**
WB0				IAmb		IAmb		22 40 10.8	
	comp=Z,14nm,0.8s								
OOD	**Oodnadatta**	**32.22**	**243**	P		**P**		**22 40 11.8**	**+0.8**
WB2	**Warramunga Arr**	**32.26**	**257**	P		**P**		**22 40 10.4**	**-1.1**
	baz=32								
WRAB	**Tennant Creek**	**32.26**	**257**	P		**P**		**22 40 10.4**	**-1.2**
WRAB	**Tennant Creek**	**32.26**	**257**	P		**P**		**22 40 10.3**	**-1.2**
WRA	**Warramunga Arr**	**32.27**	**257**	P		**P**		**22 40 10.3**	**-1.4**
	comp=Z,7.8nm,0.8s,baz=85,slow=8.6,SNR=52								
WRA				PcP		**PcP**		**22 42 55.0**	**-0.1**
	comp=Z,1.1nm,0.7s,baz=87,slow=3.7,SNR=3.0								
WRA				S		**S**		**22 45 05.0**	**-5.4**
	comp=Z,2.1nm,0.9s,baz=89,slow=18,SNR=6.1								
WRA				ScP		**ScP**		**22 46 19.7**	**-0.2**
	comp=Z,1.1nm,0.7s,baz=87,slow=3.7,SNR=5.8								
	comp=Z,7.8nm,0.8s								
WRA	**Warramunga Arr**	**32.27**	**257**	P		**P**		**22 40 10.2**	**-1.4**
AS31	**Alice Springs**	**32.98**	**251**	P		**P**		**22 40 17.3**	**-0.6**
ASAR	**Alice Springs**	**32.99**	**251**	P		**P**		**22 40 17.2**	**-0.6**
BBOO	**Buckleboo**	**33.54**	**234**	P		**P**		**22 40 23.4**	**+0.9**
	baz=34,SNR=8.5								
BBOO	**Buckleboo**	**33.54**	**234**	P		**P**		**22 40 22.8**	**+0.3**
BBOO				IAmb		IAmb		22 40 50.9	
	comp=Z,25nm,1.4s								
MULG	**Mulgathing**	**34.28**	**239**	P		**P**		**22 40 29.1**	**+0.2**
KDU	**Kakadu**	**34.53**	**270**	P		**P**		**22 40 30.5**	**-0.7**
	baz=34,SNR=8.3								
KDU	**Kakadu**	**34.53**	**270**	P		**P**		**22 40 30.8**	**-0.4**
BAKI	**Biak**	**34.59**	**292**	P		**P**		**22 40 33.0**	**+1.3**
	comp=Z,1μmcomp=Z,146nm,1.1s								
MTN	**Manton Dam**	**35.80**	**270**	P		**P**		**22 40 41.8**	**-0.3**
	baz=36,SNR=5.0								
MTN	**Manton Dam**	**35.80**	**270**	P		**P**		**22 40 41.3**	**-0.8**
MTN				IAmb		IAmb		22 40 49.2	
	comp=Z,11nm,0.8s								
FAKI	**Fak Fak**	**37.40**	**286**	P		**P**		**22 40 55.1**	**-0.5**
FAKI	**Fak Fak**	**37.40**	**286**	P		**P**		**22 40 54.8**	**-0.8**
	comp=Z,65nm,0.9s								
FAKI	**Fak Fak**	**37.40**	**286**	P		**P**		**22 40 55.8**	**+0.2**
KNRA	**Kununurra**	**37.72**	**265**	P		**P**		**22 40 57.6**	**-0.6**
	baz=38,SNR=23								
KNRA	**Kununurra**	**37.72**	**265**	P		**P**		**22 40 57.0**	**-1.2**
KNRA	**Kununurra**	**37.72**	**265**	P		**P**		**22 40 57.7**	**-0.6**
WRKA	**Warakurna**	**38.23**	**249**	P		**P**		**22 41 01.9**	**-0.6**
	baz=38,SNR=50								
WRKA	**Warakurna**	**38.23**	**249**	P		**P**		**22 41 02.2**	**-0.3**
SWI	**Sorong**	**39.11**	**289**	P		**P**		**22 41 10.2**	**+0.4**
	comp=Z,638nmcomp=Z,58nm,1.3s								
FORT	**Forrest**	**39.41**	**240**	P		**P**		**22 41 12.4**	**+0.3**
	baz=39,SNR=12								
FORT	**Forrest**	**39.41**	**240**	P		**P**		**22 41 11.9**	**-0.2**
FORT				IAmb		IAmb		22 41 12.7	
	comp=Z,22nm,0.7s								
AAI	**Ambon**	**40.91**	**283**	P		**P**		**22 41 24.5**	**-0.1**
	comp=Z,1μmcomp=Z,37nm,1.3s								
NLAI	**Namlea**	**42.09**	**283**	P		**P**		**22 41 34.2**	**0.0**
	comp=Z,44nm,1.0s								
LBMI	**Labuha**	**42.65**	**287**	P		**P**		**22 41 39.1**	**+0.3**
	comp=Z,27nm,0.9s								
	comp=Z,10.0nm,0.9s								
PZH					pmax	pmax			
	comp=Z,100nm,6.9s								
HIA	**Hailar**	**77.47**	**330**	P		**P**		**22 45 34.7**	**0.0**
HIA					IAmb	IAmb		22 45 37.0	
	comp=Z,14nm,1.2s								
LZH	**Lanzhou**	**79.48**	**312**	*e*P		**P**		**22 45 47.8**	**+1.6**
LZH					pP	pP		22 46 31.3	-2.8
LZH					pmax	pmax			
	comp=Z,32nm,1.1s								
M19K	**Big River Lodg**	**82.86**	**17**	P		**P**		**22 46 03.6**	**+0.4**
L19K	**White Mountain**	**82.96**	**17**	P		**P**		**22 46 04.2**	**+0.4**
YAK	**Yakutsk**	**83.16**	**343**	P		**P**		**22 46 04.7**	**0.0**
YAK					IAmb	IAmb		22 46 06.1	
	comp=Z,9.5nm,0.8s								
ULN	**Ulaanbaatar**	**83.33**	**324**	P		**P**		**22 46 06.7**	**+0.6**
ULN					IAmb	IAmb		22 46 07.9	
	comp=Z,18nm,0.9s								
SONM	**Songino Array**	**83.69**	**323**	P		**P**		**22 46 08.7**	**+0.8**
	comp=Z,6.7nm,0.8s,baz=139,slow=5.3,SNR=32								
	comp=Z,6.7nm,0.8s								
SONM	**Songino Array**	**83.69**	**323**	P		**P**		**22 46 08.4**	**+0.4**
SONM					IAmb	IAmb		22 46 09.6	
	comp=Z,12nm,1.0s								
GTA	**Gaotai**	**83.83**	**314**	⇓P		**P**		**22 46 09.8**	**+0.9**
GTA					sP	sP		22 47 19.8	+2.2
GTA					pmax	pmax			
	comp=Z,14nm,1.2s								
SHL	**Shillong**	**84.63**	**298**	P		**P**		**22 46 13.2**	**-0.1**
I21K	**Tanana**	**86.13**	**16**	P		**P**		**22 46 19.8**	**+0.3**
IMAR	**Indian Mountai**	**86.33**	**15**	P		**P**		**22 46 20.4**	**-0.1**
LSA	**Lhasa**	**86.66**	**302**	P		**P**		**22 46 23.4**	**-0.1**
IL31		**87.24**	**18**	P		**P**		**22 46 23.8**	**-1.0**
ILAR	**Eielson Array**	**87.24**	**18**	P		**P**		**22 46 23.9**	**-1.0**
	comp=Z,1.5nm,0.5s,baz=241,slow=5.0,SNR=28								
	comp=Z,1.5nm,0.5s								
NVAR	**Mina Array Bea**	**87.38**	**49**	P		**P**		**22 46 25.9**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=251,slow=5.4,SNR=4.2								
TROLL	**Troll, Antarti**	**91.95**	**184**	P		**P**		**22 46 46.8**	**-0.4**
SNAA	**Sanae**	**92.62**	**183**	P		**P**		**22 46 49.3**	**-0.8**
VNA3	**Neumayer Olymp**	**93.26**	**181**	P		**P**		**22 46 52.1**	**-1.0**
WMQ	**Urumqi**	**93.90**	**314**	*e*P		**P**		**22 46 57.6**	**+1.1**
MKAR	**Makanchi Array**	**98.38**	**316**	P		Pdif		22 47 17.4	+0.7
	comp=Z,1.9nm,0.9s,baz=86,slow=7.3,SNR=8.0								
	comp=Z,1.9nm,0.9s								
MKAR	**Makanchi Array**	**98.38**	**316**	P		Pdif		22 47 17.2	+0.6
ZALV	**Zalesovo Beam**	**98.58**	**324**	P		**P**		**22 47 16.4**	**-0.9**
	comp=Z,0.9nm,0.6s,baz=110,slow=6.5,SNR=5.6								
	comp=Z,0.9nm,0.6s								
ARCES	**ARCESS Array B**	**121.36**	**345**		PKP		**PKPdf**	**22 52 29.9**	**-0.4**
	comp=Z,1.8nm,0.5s,baz=77,slow=1.4,SNR=19								
ARCES	**ARCESS Array B**	**121.36**	**345**		PKP		**PKPdf**	**22 52 30.0**	**-0.3**
FINES	**FINESS Array B**	**126.88**	**338**		PKP		**PKPdf**	**22 52 40.5**	**-0.5**
	comp=Z,7.6nm,1.1s,baz=48,slow=2.8,SNR=8.3								
FINES	**FINESS Array B**	**126.88**	**338**				**PKPdf**	**22 52 41.1**	**0.0**
NOA	**NORSAR Array B**	**131.74**	**345**		PKP		**PKPdf**	**22 52 49.5**	**-0.9**
	comp=Z,0.7nm,0.8s,baz=48,slow=5.4,SNR=3.4								
AKASG	**Malin Array Be**	**131.92**	**326**		PKP		**PKPdf**	**22 52 50.4**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=82,slow=2.3,SNR=4.8								
BRTR	**Keskin Array B**	**133.66**	**310**		PKP		**PKPdf**	**22 52 54.2**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=147,slow=2.5,SNR=5.0								
BRTR	**Keskin Array B**	**133.66**	**310**				**PKPdf**	**22 52 54.5**	**-0.3**
GERES	**GERESS Array B**	**140.82**	**333**		PKhKP		PKPpre	22 53 01.8	
	comp=Z,0.6nm,0.7s,baz=48,slow=2.0,SNR=6.1								
SOKA	**Soboth**	**141.78**	**330**	*i* P			**PKPdf**	**22 53 04.7**	**-4.7**
	comp=Z,1.7nm,0.7s								
OBKA	**Obir**	**142.14**	**330**	*i* P			**PKPdf**	**22 53 05.9**	**-4.2**
	comp=Z,4.4nm,1.1s								
MYKA	**Terra Mystica**	**142.49**	**331**	*i* P			**PKPdf**	**22 53 06.7**	**-4.0**
	comp=Z,4.8nm,1.0s								
WATA	**Walderalm**	**142.89**	**333**	*e*P			**PKPdf**	**22 53 08.8**	**-2.7**
	comp=Z,4.8nm,1.1s								
ABTA	**Abfaltersbach**	**142.92**	**332**	*e*P			**PKPdf**	**22 53 08.0**	**-3.4**
	comp=Z,9.1nm,0.7s,SNR=8.2								
WTTA	**Wattenberg**	**142.92**	**333**	*e*P			**PKPdf**	**22 53 09.1**	**-2.4**
	comp=Z,7.1nm,1.1s								
MOTA	**Moosalm**	**143.09**	**334**	*e*P			PKPbc	22 53 09.4	+0.1
	comp=Z,12nm,1.3s,SNR=5.6								
RETA	**Reutte**	**143.12**	**334**	*e*P			PKPbc	22 53 09.8	+0.5
	comp=Z,2.2nm,0.6s								
SQTA	**Sankt Quirin**	**143.14**	**333**	*e*P			PKPbc	22 53 09.8	+0.4
	comp=Z,7.8nm,0.9s								
FETA	**Feichten**	**143.50**	**334**	*e*P			PKPbc	22 53 10.6	+0.2
	comp=Z,14nm,1.0s,SNR=6.4								
DAVA	**Damuels**	**143.65**	**335**	*e*P			PKPbc	22 53 10.9	+0.1
	comp=Z,11nm,0.8s,SNR=5.4								
KEST	**Kesra**	**152.40**	**320**		PKPbc		**PKiKP**	**22 53 34.7**	**+0.2**
	comp=Z,1.6nm,0.6s,baz=238,slow=5.6,SNR=6.3								
ESDC	**Sonseca Array**	**155.10**	**345**		PKPab		**PKPab**	**22 53 54.2**	**-2.2**
	comp=Z,0.6nm,0.8s,baz=17,slow=6.0,SNR=3.8								
TORD	**Torodi Ar. Bea**	**166.48**	**261**		PKP		**PKPdf**	**22 53 43.0**	**-0.8**
	comp=Z,1.2nm,0.7s,baz=327,slow=1.7,SNR=9.2								
TORD					PKPab		**PKPab**	**22 54 46.4**	**-0.5**
	comp=Z,1.8nm,0.9s,baz=98,slow=3.6,SNR=7.6								
TORD	**Torodi Ar. Bea**	**166.48**	**261**				**PKPdf**	**22 53 42.7**	**-1.1**
TORD					PKPab		**PKPab**	**22 54 46.5**	**-0.4**
DBIC	**Dimbokro**	**168.60**	**219**		PKPab		**PKPab**	**22 54 55.6**	**-0.5**
	comp=Z,2.2nm,0.7s,baz=278,slow=2.9,SNR=4.1								

*KNET **18** 22:47:58.0±0.6, 43°.22N×75°.14E, h18km±2km, ml1.5, Error ellipse: s-maj=4.6km s-min=2.3km az=6.0*
*KRNET **18** 22:47:58.1±0.1, 43°.26N×75°.16E, h16km, mb2.5*
*NNC **18** 22:47:58.3±0.4, 43°.30N×75°.21E, h0km, mb2.4, mpv2.9, Error ellipse: s-maj=4.5km s-min=2.2km az=11.0*
*SOME **18** 22:47:58.0, 43°.25N×75°.13E, h15km*
ISC 18 22:47:58.2±0.9, **43°.25N**±0°.02×**75°.18E**±0°.01, **h13**km±8km, **n51**, σ0°**72**/98, **28C-11D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CHMS	**Chumysh**	**0.40**	**232**	⇑P		**Pg**		**22 48 06.1**	**0.0**
	11nm,0.1s,SNR=15								
CHMS				⇑S		**Sg**		**22 48 11.7**	**+0.2**
	43nm,0.2s								
CHMS	**Chumysh**	**0.40**	**232**	⇑*i*P		**Pg**		**22 48 05.9**	**-0.2**
	baz=29								
CHMS				⇑*i*S		**Sg**		**22 48 11.5**	**0.0**
	baz=29								
DGS	**Degeres**	**0.43**	**90**	*e*P		**Pg**		**22 48 07.1**	**+0.3**
	baz=92								
DGS				*e*S		**Sg**		**22 48 13.3**	**+0.6**
	baz=92								
DGS	**Degeres**	**0.43**	**90**	*e*P		**Pg**		**22 48 07.1**	**+0.3**
	15nm,0.1s								
DGS				*e*S		**Sg**		**22 48 13.3**	**+0.6**
	43nm,0.2s								
DGS	**Degeres**	**0.43**	**90**	P		**Pg**		**22 48 07.1**	**+0.3**
	15nm,0.1s								
DGS				S		**Sg**		**22 48 13.4**	**+0.6**
	43nm,0.2s								
TKM2	**Tokmak 2**	**0.45**	**136**	⇓P		**Pg**		**22 48 07.2**	**+0.1**
	19nm,0.1s,SNR=7.4								
TKM2				⇑S		**Sg**		**22 48 13.5**	**+0.4**
	49nm,0.1s								
TKM2	**Tokmak 2**	**0.45**	**136**	⇑*i*P		**Pg**		**22 48 07.0**	**-0.1**
	baz=36								
TKM2				⇑*i*S		**Sg**		**22 48 13.4**	**+0.3**
	baz=36								
TKM2	**Tokmak 2**	**0.45**	**136**	⇓P		**Pg**		**22 48 06.9**	**-0.2**
	2.9nm,0.2s								
TKM2				⇓S		**Sg**		**22 48 13.3**	**+0.2**
	13nm,0.2s								
SGDS	**Sogindy**	**0.45**	**298**	*e*P		**Pg**		**22 48 06.5**	**-0.6**
	12nm,0.1s								
SGDS				*e*S		**Sg**		**22 48 12.4**	**-0.8**
	41nm,0.1s								
SGDS	**Sogindy**	**0.45**	**298**	P		**Pg**		**22 48 06.5**	**-0.6**
	12nm,0.1s								
SGDS				S		**Sg**		**22 48 12.4**	**-0.8**
	38nm,0.1s								
USP	**Ospenovka**	**0.49**	**273**	⇑P		**Pg**		**22 48 07.5**	**-0.5**
	8.0nm,0.1s,SNR=58								
USP				⇓S		**Sg**		**22 48 13.9**	**-0.6**
	39nm,0.1s								
USP	**Ospenovka**	**0.49**	**273**	⇑*i*P		**Pg**		**22 48 07.4**	**-0.5**
	baz=71								
USP				⇑*i*S		**Sg**		**22 48 14.0**	**-0.6**
	baz=71								
KRBS	**Karabastau**	**0.58**	**39**	*e*P		**Pg**		**22 48 09.4**	**-0.1**
	8.5nm,0.1s								
KRBS				*e*S		**Sg**		**22 48 17.1**	**-0.1**
	22nm,0.2s								
KST	**Kastek**	**0.61**	**109**	*e*P		**Pg**		**22 48 10.4**	**+0.3**
	baz=10.0								
KST				*e*S		**Sb**		**22 48 19.0**	**-0.2**

	baz=10.0									
KST	**Kastek**	**0.61**	**109**	*e*P		**Pg**	**22 48 10.4**	**+0.3**		
	5.9nm,0.1s									
KST				*e*S		**Sb**	**22 48 19.0**	**-0.2**		
	19nm,0.2s									
KST	**Kastek**	**0.61**	**109**	P		**Pg**	**22 48 10.4**	**+0.3**		
	5.9nm,0.1s									
KST				S		**Sb**	**22 48 19.0**	**-0.2**		
	19nm,0.2s									
KBK	**Karagaybulak**	**0.61**	**196**	⇓P		**Pb**	**22 48 10.6**	**-0.2**		
	2.8nm,0.1s,SNR=11									
KBK				⇓S		**Sb**	**22 48 19.1**	**-0.3**		
	74nm,0.3s									
KBK	**Karagaybulak**	**0.61**	**196**	⇑*i*P		**Pg**	**22 48 10.1**	**-0.1**		
	baz=95									
KBK				⇑*i*S		**Sg**	**22 48 18.9**	**+0.6**		
	baz=95									
AAK	**Ala-Archa**	**0.79**	**220**	⇑*i*P		**Pg**	**22 48 13.3**	**-0.2**		
	baz=19									
AAK				⇑*i*S		**Sb**	**22 48 24.2**	**-0.2**		
	baz=19									
MTBS	**Maitube**	**0.92**	**97**	*e*P		**Pb**	**22 48 15.8**	**-0.2**		
	baz=97									
MTBS				*e*S		**Sb**	**22 48 28.2**	**0.0**		
	baz=97									
MTBS	**Maitube**	**0.92**	**97**	*e*P		**Pb**	**22 48 15.8**	**-0.2**		
	2.5nm,0.1s									
MTBS				*e*S		**Sb**	**22 48 28.2**	**0.0**		
	6.4nm,0.1s									
MTBS	**Maitube**	**0.92**	**97**	P		**Pb**	**22 48 15.8**	**-0.2**		
	2.5nm,0.1s									
MTBS				S		**Sb**	**22 48 28.2**	**0.0**		
	6.4nm,0.1s									
BOOM	**Boomskoye usch**	**0.94**	**143**	⇑*i*P		**Pb**	**22 48 16.1**	**-0.3**		
	baz=43									
BOOM				⇑*i*S		**Sg**	**22 48 29.1**	**+0.4**		
	baz=43									
UCH	**Uchtor**	**1.13**	**206**	⇑P		**Pb**	**22 48 19.6**	**-0.1**		
	0.8nm,0.1s,SNR=7.8									
UCH				⇑S		**Sb**	**22 48 34.6**	**+0.1**		
	2.7nm,0.1s									
UCH	**Uchtor**	**1.13**	**206**	⇑*i*P		**Pb**	**22 48 19.4**	**-0.4**		
	baz=5.0									
UCH				⇑*i*S		**Sg**	**22 48 34.9**	**+0.2**		
	baz=5.0									
EKS2	**Erkin-Say**	**1.18**	**241**	⇑P		**Pb**	**22 48 20.2**	**-0.2**		
	3.5nm,0.2s,SNR=8.0									
EKS2				⇑S		**Sg**	**22 48 36.2**	**-0.1**		
	4.4nm,0.1s									
EKS2	**Erkin-Say**	**1.18**	**241**	⇑*i*P		**Pb**	**22 48 20.1**	**-0.4**		
	baz=40									
EKS2				⇑*i*S		**Sg**	**22 48 36.2**	**-0.1**		
	baz=40									
KTBS	**Karatobe**	**1.19**	**66**	*e*P		**Pn**	**22 48 20.3**	**-0.2**		
	baz=67									
KTBS				*e*S		**Sn**	**22 48 36.1**	**-0.5**		
	baz=67									
KTBS	**Karatobe**	**1.19**	**66**	*e*P		**Pn**	**22 48 20.3**	**-0.2**		
	2.2nm,0.1s									
KTBS				*e*S		**Sn**	**22 48 36.1**	**-0.5**		
	13nm,0.3s									
KTBS	**Karatobe**	**1.19**	**66**	P		**Pn**	**22 48 20.3**	**-0.2**		
	2.2nm,0.1s									
KTBS				S		**Sn**	**22 48 36.1**	**-0.5**		
	13nm,0.3s									
ULHL	**Ulahol**	**1.27**	**142**	⇓P		**Pb**	**22 48 22.0**	**-0.1**		
	2.1nm,0.2s,SNR=9.0									
ULHL				⇓S		**Sg**	**22 48 39.3**	**+0.1**		
	8.6nm,0.2s									
TNSS	**Tian-Shan**	**1.31**	**99**	*e*P		**Pb**	**22 48 23.2**	**+0.3**		
	baz=99									
TNSS				*e*S		**Sg**	**22 48 40.6**	**0.0**		
	baz=99									
TNSS	**Tian-Shan**	**1.31**	**99**	*e*P		**Pb**	**22 48 23.2**	**+0.3**		
	1.7nm,0.1s									
TNSS				*e*S		**Sg**	**22 48 40.6**	**0.0**		
	5.4nm,0.4s									
TNSS	**Tian-Shan**	**1.31**	**99**	P		**Pb**	**22 48 23.2**	**+0.3**		
	1.7nm,0.1s									
TNSS				S		**Sg**	**22 48 40.6**	**0.0**		
	5.4nm,0.4s									
KOTS	**Kotyrbulak**	**1.41**	**90**	*e*P		**Pb**	**22 48 24.7**	**+0.3**		
	baz=90									
KOTS				*e*S		**Sg**	**22 48 43.8**	**+0.1**		
	baz=90									
KOTS	**Kotyrbulak**	**1.41**	**90**	*e*P		**Pb**	**22 48 24.7**	**+0.3**		
	1.8nm,0.2s									
KOTS				*e*S		**Sg**	**22 48 43.9**	**+0.1**		
	5.4nm,0.2s									
KOTS	**Kotyrbulak**	**1.41**	**90**	P		**Pb**	**22 48 24.7**	**+0.3**		
	1.8nm,0.2s									
KOTS				S		**Sg**	**22 48 43.9**	**+0.1**		
	5.4nm,0.2s									
CHKK	**Chushkaly**	**1.45**	**65**	*e*P		**Pb**	**22 48 24.8**	**-0.2**		
	2.9nm,0.1s									
CHKK				*e*S		**Sb**	**22 48 43.8**	**+0.4**		
	13nm,0.2s									
CHKK	**Chushkaly**	**1.45**	**65**	P		**Pb**	**22 48 24.8**	**-0.2**		
	2.9nm,0.1s									
CHKK				S		**Sb**	**22 48 43.7**	**+0.4**		
	13nm,0.2s									
MRKS	**Merke**	**1.52**	**251**	*e*P		**Pg**	**22 48 28.5**	**+1.2**		
	1.4nm,0.2s									
MRKS				*e*S		**Sg**	**22 48 50.1**	**+3.1**		
	5.8nm,0.2s									
MRKS	**Merke**	**1.52**	**251**	P		**Pg**	**22 48 28.5**	**+1.2**		
	1.4nm,0.2s									
MRKS				S		**Sg**	**22 48 50.1**	**+3.1**		
	5.8nm,0.2s									
ARLS	**Aral**	**1.52**	**205**	⇓*i*P		**Pb**	**22 48 26.2**	**-0.1**		
	baz=4.0									
ARLS				⇓*i*S		**Sg**	**22 48 46.5**	**-0.6**		
	baz=4.0									
KDJ	**Kajisay**	**1.85**	**126**	⇑*i*P		**Pb**	**22 48 32.4**	**+0.5**		
	baz=26									
KDJ				⇑*i*S		**Sg**	**22 48 57.2**	**-0.5**		
	baz=26									
BTLS	**Baital**	**1.97**	**336**	*e*P		**Pb**	**22 48 33.7**	**-0.2**		
	2.0nm,0.1s									
BTLS				*e*S		**Sb**	**22 48 59.1**	**+0.8**		
	5.2nm,0.2s									
BTLS	**Baital**	**1.97**	**336**	Pg		**Pb**	**22 48 33.7**	**-0.2**		
	1.5nm,0.2s									
BTLS				Lg		Lg	22 48 59.1			
	5.2nm,0.2s									
TARG	**Taragay, Kyrgy**	**2.46**	**127**	⇑*i*P		**Pb**	**22 48 40.8**	**-1.7**		
	baz=27									
TARG				⇑*i*S		**Sb**	**22 49 11.9**	**-1.0**		
	baz=27									
KPKS	**Kokpek**	**2.57**	**84**	*e*P		**Pb**	**22 48 44.5**	**+0.4**		
KPKS				*e*S		**Sb**	**22 49 17.5**	**+1.9**		
KPKS	**Kokpek**	**2.57**	**84**	Pg		**Pb**	**22 48 44.5**	**+0.4**		
KPKS				Lg		Lg	22 49 17.5			
UZB	**Uzynbulak**	**2.81**	**91**	*e*P		**Pb**	**22 48 49.5**	**+1.2**		
UZB				*e*S		**Sg**	**22 49 26.3**	**-2.2**		
UZB	**Uzynbulak**	**2.81**	**91**	Pg		**Pb**	**22 48 49.5**	**+1.2**		
UZB				Lg		Lg	22 49 26.3			
KK31	**Karatay Array**	**3.42**	**269**	⇓Pg		**Pb**	**22 48 59.3**	**+0.8**		
	0.2nm,0.5s,baz=81,slow=16,SNR=7.0									
KK31				Lg		Lg	22 49 43.7			
	1.0nm,0.5s,baz=86,slow=30,SNR=11									

MAN ***18*** *22:56:50.2, 13.32N×122.17E, h7km, mb4.6, ML3.5, MS3.4*
ISC 18 22:56:49.5±2.1, 13.3N±0.1×122.19E±0.05, h8km±12km, n9, σ1§10/14, 2C-7D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GQP	**Guinayangan**	**0.68**	**21**	⇓*e*P	**Pg**	**22 57 02.8**	**+0.3**
GQP				*e*S	**Sn**	**22 57 16.0**	**-0.2**
JCNP	**Jose Panganiba**	**1.12**	**26**	⇓*e*P	**Pg**	**22 57 10.4**	**-0.7**
JCNP				*e*S	**Sn**	**22 57 27.2**	**0.0**
PGP	**Puerto Galera**	**1.23**	**281**	⇑*e*P	**Pb**	**22 57 11.8**	**-1.2**
PGP				*i* S	**Sn**	**22 57 30.1**	**+0.3**
TGY	**Tagaytay City**	**1.48**	**304**	⇑*e*P	**Pg**	**22 57 17.4**	**-0.4**
TGY				*e*S	**Sg**	**22 57 38.8**	**+1.8**
MACP	**Maragondon, Ca**	**1.74**	**305**	⇓*e*P	**Pb**	**22 57 20.7**	**-1.0**
PVCP	**Virac**	**1.94**	**80**	⇓*e*P	**Pn**	**22 57 23.6**	**+1.0**
LUBP	**Lubang**	**1.95**	**284**	⇓*e*P	**Pn**	**22 57 23.1**	**+0.3**
LUBP				*e*S	**Sn**	**22 57 47.8**	**+0.3**
PCPH	**Palayan**	**2.51**	**335**	⇓*e*P	**Pb**	**22 57 33.1**	**-1.8**
SMPP	**San Manuel, Pa**	**3.22**	**333**	⇓*e*P	**Pn**	**22 57 41.5**	**+1.2**

ASIES ***18*** *22:58:20.0, 23.17N×121.00E, h11km, MW3.6*
TAP 18 22:58:20.1, 23.18N×121.00E, h6km, ML3.7, 18C-9D, B,

Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELDTW	**Lidau**	**0.02**	**41**	⇑*i*P	Pg	22 58 21.7	+0.4
	baz=58						
ELDTW				*i* S	Sg	22 58 22.5	+0.3
	baz=58						
STYH	**Taoyuan**	**0.21**	**269**	⇓*i*P	Pg	22 58 24.8	+0.5
	baz=270						
STYH				S	Sg	22 58 27.5	+0.5
	baz=270						
ECS	**Chishang**	**0.21**	**112**	⇓*i*P	Pg	22 58 25.3	+1.0
	baz=111						
ECS				*i* S	Sg	22 58 28.9	+1.7
	baz=111						
STYT	**Tauyuan**	**0.23**	**267**	⇓*i*P	Pg	22 58 25.1	+0.5
	baz=267						
STYT				*i* S	Sg	22 58 28.3	+0.7
	baz=267						
FULB	**Fuli**	**0.27**	**85**	⇓*i*P	Pb	22 58 26.6	-0.7
	baz=75						
FULB				*i* S	Sb	22 58 31.1	-1.0
	baz=75						
LONT	**Longtian**	**0.29**	**157**	⇓*i*P	Pg	22 58 26.5	+0.8
	baz=156						
LONT				*i* S	Sg	22 58 30.6	+1.0
	baz=156						
YUS	**Yu-Shan**	**0.32**	**351**	⇑*i*P	Pg	22 58 26.7	+0.2
	baz=353						
YUS				*i* S	Sg	22 58 30.6	-0.1
	baz=353						
TWF1	**Yuli**	**0.32**	**57**	⇑*i*P	Pg	22 58 26.9	+0.5
	baz=57						
TWF1				S	Sg	22 58 30.9	+0.3
	baz=57						
EYUL	**Yuli**	**0.34**	**59**	⇑*i*P	Pg	22 58 27.2	+0.6
	baz=59						
EYUL				*e*S	Sg	22 58 31.0	-0.1
	baz=59						
EDH	**Donghe**	**0.34**	**126**	P	Pb	22 58 27.9	-0.6
	baz=134						
EDH				*e*S	Sb	22 58 33.9	-0.3
	baz=134						
YULB	**Yu-li**	**0.35**	**51**	⇑*i*P	Pg	22 58 27.1	+0.3
	baz=51						
YULB				*e*S	Sg	22 58 31.8	+0.4
	baz=51						
TWG	**Pinlang**	**0.36**	**170**	⇑*i*P	Pg	22 58 27.6	+0.6
	baz=160						
TWG				*i* S	Sg	22 58 32.4	+0.6
	baz=160						
TWGBT	**Beinan**	**0.36**	**169**	*i* P	Pg	22 58 27.7	+0.5
	baz=160						
TWGBT				*i* S	Sg	22 58 32.4	+0.5
	baz=160						
TPUB	**Ta-pu**	**0.37**	**290**	⇓*i*P	Pb	22 58 28.3	-0.7
	baz=299						
TPUB				S	Sb	22 58 33.6	-1.4
	baz=299						
ALS	**Alishan**	**0.38**	**331**	⇓*i*P	Pg	22 58 28.2	+0.7
	baz=333						
ALS				S	Sg	22 58 33.4	+0.7
	baz=333						
SGST	**Jiashian**	**0.40**	**257**	⇑*i*P	Pg	22 58 27.9	+0.1
	baz=253						
SGST				S	Sg	22 58 33.8	+0.7
	baz=253						
CHN1	**Nanshi**	**0.44**	**271**	⇓*i*P	Pb	22 58 29.9	-0.3
	baz=266						
CHN1				*e*S	Sb	22 58 36.4	-0.7
	baz=266						
TTN	**Taitung**	**0.44**	**163**	*e*P	Pb	22 58 30.1	-0.1
	baz=161						
TTN				S	Sb	22 58 37.2	+0.1
	baz=161						
EHY	**Hungye**	**0.44**	**42**	⇑*i*P	Pg	22 58 28.7	+0.1
	baz=42						
EHY				*e*S	Sg	22 58 34.8	+0.4
	baz=42						
SNST	**Tainan City**	**0.47**	**276**	P	Pb	22 58 30.7	0.0
	baz=277						
SNST				S	Sb	22 58 38.1	+0.2
	baz=277						
TWK	**Hsinying**	**0.48**	**281**	⇓*i*P	Pb	22 58 30.8	-0.3
	baz=294						
TWK				*i* S	Sb	22 58 38.3	-0.1
	baz=294						
HGSD	**Ruisui**	**0.50**	**51**	⇑*i*P	Pb	22 58 30.6	-0.6
	baz=42						
HGSD				*e*S	Sb	22 58 38.3	-0.5
	baz=42						
CHN5	**Tsauling**	**0.52**	**325**	*e*P	Pb	22 58 31.1	-0.6
	baz=325						
SSD	**Sandimen**	**0.55**	**219**	⇑*i*P	Pg	22 58 30.6	0.0
	baz=224						
SSD				S	Sg	22 58 37.8	0.0
	baz=224						
SCST	**Cishan**	**0.55**	**239**	P	Pb	22 58 31.9	-0.2
	baz=240						
SCST				*e*S	Sb	22 58 42.1	+1.8
	baz=240						
TSMG	**Majia**	**0.57**	**215**	⇑*i*P	Pg	22 58 31.0	-0.1
	baz=221						
TSMG				*e*S	Sg	22 58 38.2	-0.4
	baz=221						
ECL	**Taimali**	**0.58**	**185**	⇑*i*P	Pg	22 58 31.2	0.0
	baz=184						
ECL				*i* S	Sg	22 58 38.3	-0.4
	baz=184						
VWDT	**VWDT**	**0.59**	**12**	P	Pg	22 58 31.1	-0.3
	baz=18						
VWDT				*e*S	Sb	22 58 41.2	-0.3
	baz=18						
CHN3	**Shinhua**	**0.60**	**261**	P	Pn	22 58 34.7	-0.4
	baz=261						
CHN3				*e*S	Sn	22 58 44.7	-0.4
	baz=261						
CHN2	**Minshiung**	**0.60**	**306**	P	Pb	22 58 33.6	+0.6
	baz=307						
CHN2				S	Sb	22 58 43.4	+1.6
	baz=307						
SSLB	**Suanglung**	**0.61**	**356**	*e*P	Pg	22 58 31.6	-0.2
	baz=356						
SSLB				*e*S	Sg	22 58 39.6	-0.3
	baz=356						
CHY	**Chiayi**	**0.62**	**301**	*e*P	Pb	22 58 33.3	-0.1
	baz=302						
CHY				*e*S	Sb	22 58 43.5	+1.1
	baz=302						
SHHT	**Tainan City**	**0.62**	**256**	P	Pn	22 58 35.0	-0.4
	baz=256						
SHHT				*e*S	Sn	22 58 45.0	-0.7
	baz=256						
EGFH	**Guangfu**	**0.63**	**38**	*e*P	Pg	22 58 32.0	-0.1
	baz=39						
TWM1	**Shoushan**	**0.64**	**237**	⇑*i*P	Pb	22 58 34.3	+0.6
	baz=236						
SGLT	**Jiouru**	**0.65**	**227**	*e*P	Pb	22 58 33.6	-0.3
	baz=220						
MASBT	**Mashibuluo**	**0.66**	**211**	⇑*i*P	Pg	22 58 32.5	-0.2
	baz=203						
LDUT	**Ludao**	**0.66**	**139**	P	Pg	22 58 33.0	+0.3
	baz=138						
LDUT				*e*S	Sb	22 58 43.6	+0.2
	baz=138						
WDLH	**Douliu**	**0.67**	**320**	P	Pb	22 58 34.8	+0.7
	baz=321						
WDLH				*i* S	Sb	22 58 45.0	+1.3
	baz=321						
ICHU	**Yijhu**	**0.69**	**286**	*e*P	Pb	22 58 35.0	+0.4
	baz=287						
ICHU				*e*S	Sn	22 58 46.5	-0.9
	baz=287						
WJS	**Zhushan**	**0.69**	**339**	*e*P	Pb	22 58 34.8	+0.2
	baz=344						
WJS				*e*S	Sb	22 58 45.3	+0.9
	baz=344						
SMLT	**Sun Moon Lake**	**0.71**	**352**	*e*P	Pg	22 58 34.3	+0.5
	baz=2.0						
SMLT				*e*S	Sb	22 58 45.9	+0.9
	baz=2.0						
TAI1	**Yung-k'ang**	**0.73**	**260**	*e*P	Pn	22 58 36.2	-0.6
	baz=274						
SCLT	**Jiali**	**0.74**	**270**	*e*P	Pb	22 58 36.3	+0.8
	baz=271						
SCLT				*e*S	Sn	22 58 48.5	-0.2
	baz=271						
ESL	**Shilin**	**0.75**	**32**	P	Pg	22 58 34.2	-0.3
	baz=38						
ESL				*e*S	Sg	22 58 44.2	0.0
	baz=38						
CHN8	**Yiju**	**0.75**	**283**	*e*P	Pb	22 58 36.1	+0.6
	baz=285						
CHN8				S	Sn	22 58 48.0	-0.8
	baz=285						
WNT	**Mingjian**	**0.76**	**337**	P	Pb	22 58 36.4	+0.7
	baz=339						
WNT				S	Sb	22 58 47.6	+1.3
	baz=339						
WTK	**Tuku**	**0.76**	**312**	*e*P	Pb	22 58 36.1	+0.4
	baz=313						
WTK				*e*S	Sn	22 58 48.7	-0.5
	baz=313						
WSL	**Shuilin Townsh**	**0.79**	**296**	P	Pb	22 58 36.6	+0.3
	baz=297						
WSL				S	Sb	22 58 48.3	+1.0
	baz=297						
SSPT	**Xinbi**	**0.80**	**210**	⇑*i*P	Pg	22 58 35.7	+0.3
	baz=208						
SSPT				S	Sb	22 58 47.6	+0.2
	baz=208						
EAST	**Anshuo**	**0.80**	**190**	⇑P	Pg	22 58 35.6	+0.2
	baz=189						
TAW	**Tawu**	**0.82**	**187**	P	Pg	22 58 35.9	+0.1
	baz=186						
TAW				*e*S	Sg	22 58 45.9	-0.6
	baz=186						
TAWH	**Dawu Township**	**0.84**	**187**	⇑P	Pg	22 58 36.2	0.0
	baz=187						
TAWH				*e*S	Sg	22 58 46.2	-0.9
	baz=187						
WSF	**Szhu**	**0.85**	**303**	*e*P	Pb	22 58 37.4	0.0
	baz=304						
WSF				*e*S	Sb	22 58 50.1	+1.1
	baz=304						
SCZT	**Fangliau**	**0.87**	**204**	⇑*i*P	Pg	22 58 36.7	-0.2
	baz=195						
WCS	**Beigang Elemen**	**0.88**	**355**	*e*P	Pb	22 58 38.1	+0.3
	baz=355						
WCS				*e*S	Sn	22 58 51.3	-0.9
	baz=355						
CHGB	**Renai**	**0.90**	**10**	*e*P	Pg	22 58 36.5	-0.8
	baz=11						
WRL	**Guolierlin Hig**	**0.92**	**322**	*e*P	Pb	22 58 38.4	-0.1
	baz=321						
HWA	**Hwalien**	**0.97**	**35**	*e*P	Pn	22 58 40.0	-0.3
	baz=47						
SLIU	**Shizi**	**0.97**	**191**	*e*P	Pg	22 58 38.6	-0.2
	baz=191						
WCHH	**Zhanghua**	**0.99**	**336**	*e*P	Pn	22 58 40.2	-0.3
	baz=337						
WCHH				*e*S	Sn	22 58 54.5	-0.3
	baz=337						
WHF	**Hehuan Shan**	**0.99**	**14**	*e*P	Pg	22 58 39.2	0.0
	baz=21						
WHF				*e*S	Sn	22 58 55.0	-0.6
	baz=21						
TCU	**Taichung**	**1.01**	**343**	*e*P	Pn	22 58 40.9	+0.1
	baz=331						
TCU				*e*S	Sn	22 58 55.6	+0.1
	baz=331						
TWD	**Chiawan**	**1.05**	**31**	P	Pg	22 58 39.9	-0.3
	baz=21						
TWD				*e*S	Sn	22 58 55.6	-0.8
	baz=21						
TDCB	**Techi**	**1.08**	**7**	*e*P	Pg	22 58 41.1	+0.2
	baz=8.0						
TWT	**Tachien**	**1.08**	**8**	*e*P	Pb	22 58 41.6	+0.2
	baz=9.0						
FUSS	**Fushou**	**1.09**	**12**	*e*P	Pg	22 58 40.2	-0.8
	baz=23						
FUSS				*e*S	Sn	22 58 57.8	+0.1
	baz=23						
WHP	**Taichung City**	**1.10**	**357**	*e*P	Pn	22 58 42.7	+0.6
	baz=358						
WHP				*e*S	Sn	22 58 58.3	+0.7
	baz=358						
ETLH	**Xiulin Townshi**	**1.12**	**23**	*e*P	Pg	22 58 41.1	-0.4
	baz=23						
ETLH				*e*S	Sn	22 58 58.1	0.0
	baz=23						
ETL	**Fush Village**	**1.13**	**30**	*e*P	Pg	22 58 41.8	-0.1
	baz=46						
NACB	**Ninganchiao**	**1.13**	**28**	*e*P	Pg	22 58 41.3	-0.5
	baz=28						
NACB				*e*S	Sg	22 58 56.1	-0.4
	baz=28						
TWQ1	**Liyutan**	**1.19**	**350**	*e*P	Pn	22 58 44.0	+0.8
	baz=337						
TWQ1				*e*S	Sn	22 59 01.0	+1.3
	baz=337						
HEN	**Hengchun**	**1.19**	**192**	*e*P	Pn	22 58 43.8	+0.6
	baz=179						
WDJ	**Dajia District**	**1.21**	**344**	*e*P	Pg	22 58 42.1	-1.3
	baz=334						
WDJ				*e*S	Sn	22 59 01.6	+1.2
	baz=334						
LAY	**Lan-yu**	**1.24**	**156**	*e*P	Pg	22 58 42.2	-1.7
	baz=157						
WDGT	**Dungji**	**1.24**	**274**	P	Pg	22 58 43.4	-0.5
	baz=276						
WDGT				S	Sb	22 59 00.1	0.0
	baz=276						
TWK1	**Hengchun**	**1.24**	**189**	*e*P	Pn	22 58 44.0	0.0
	baz=179						
TWKBT	**Hengchun**	**1.24**	**188**	*e*P	Pn	22 58 44.1	+0.2
	baz=176						
TWKBT				*e*S	Sn	22 59 02.6	+1.6
	baz=176						
NSY	**Sanyi**	**1.25**	**350**	*e*P	Pn	22 58 45.2	+1.0
	baz=338						
NSY				*e*S	Sn	22 59 02.6	+1.2
	baz=338						
TSEB	**Hengchuen, Pin**	**1.27**	**184**	*e*P	Pg	22 58 44.9	+0.4
	baz=176						
LYUB	**Lan-yu**	**1.28**	**155**	*e*P	Pn	22 58 41.5	-3.0
	baz=156						
NNSB	**Datong**	**1.29**	**15**	*e*P	Pn	22 58 44.1	-0.8
	baz=25						
NNSB				*e*S	Sn	22 59 02.4	-0.2
	baz=25						
NNS	**Nan Shan**	**1.30**	**15**	*e*P	Pn	22 58 44.6	-0.3
	baz=25						
NNS				*e*S	Sn	22 59 03.9	+1.1
	baz=25						
PHUB	**P'eng-hu**	**1.36**	**285**	*e*P	Pn	22 58 45.0	-0.6
	baz=286						
PHUB				*e*S	Sb	22 59 03.1	-0.4
	baz=286						
NMLH	**Miaoli**	**1.37**	**352**	*e*P	Pg	22 58 47.5	+1.2
	baz=353						
NMLH				*e*S	Sn	22 59 05.0	+0.7
	baz=353						
PNG	**Penghu**	**1.39**	**287**	P	Pn	22 58 45.5	-0.4
	baz=288						
PNG				*e*S	Sb	22 59 03.8	-0.6
	baz=288						
ENA	**Nanau**	**1.42**	**28**	*e*P	Pb	22 58 46.9	0.0
	baz=41						
LATG	**Datong**	**1.44**	**19**	P	Pn	22 58 46.3	-0.4
	baz=32						
LATG				S	Sg	22 59 08.0	+1.7
	baz=32						
NSTT	**Nanjuang**	**1.45**	**360**	P	Pg	22 58 48.3	+0.4
	baz=349						
NSTT				S	Sg	22 59 08.2	+1.5
	baz=349						
VCHM	**Qimei**	**1.45**	**272**	*e*P	Pn	22 58 46.0	-0.8
	baz=273						
VCHM				*e*S	Sn	22 59 05.0	-1.2
	baz=273						
EWUT	**Wuta**	**1.45**	**29**	*e*P	Pb	22 58 47.3	-0.2
	baz=41						
NFF	**Wufeng Townshi**	**1.45**	**4**	*e*P	Pg	22 58 48.6	+0.7
	baz=16						
NFF				*e*S	Sg	22 59 06.8	-0.1
	baz=16						
LIOB	**Emei**	**1.46**	**0**	*e*P	Pg	22 58 48.6	+0.4

NSK				*e*S		Sg	22 59 09.6	+0.3	
	baz=25								
NDS	**Dongshan**	**1.59**	**24**	*e*P		Pb	22 58 49.8	-0.1	
	baz=42								
NDS				*e*S		Sg	22 59 11.2	-0.1	
	baz=42								
TWC	**Suao**	**1.62**	**28**	P		Pb	22 58 50.0	-0.4	
	baz=29								
TWC				*e*S		Sg	22 59 11.9	-0.4	
	baz=29								
NWLT	**Wulai**	**1.66**	**16**	*e*P		Pb	22 58 51.4	+0.3	
	baz=17								
NWLT				*e*S		Sb	22 59 12.7	+0.4	
	baz=17								
FUSB	**Fushanzhiwuyua**	**1.67**	**19**	*e*P		Pb	22 58 51.1	-0.1	
	baz=38								
NTC	**Toucheng**	**1.83**	**24**	*e*P		Pb	22 58 53.4	-0.6	
	baz=41								
NHDH	**Xindian Distri**	**1.84**	**15**	*e*P		Pg	22 58 55.0	-0.4	
	baz=27								
TWA	**Mucha**	**1.87**	**16**	*e*P		Pg	22 58 55.7	-0.3	
	baz=352								
TIPB	**Shuangxi**	**1.94**	**23**	*e*P		Pn	22 58 54.5	+0.9	
	baz=40								
YM01	**YM01**	**2.03**	**15**	*e*P		Pb	22 58 58.0	+0.6	
	baz=353								
SXI1	**Grass Mountain**	**2.07**	**22**	*e*P		Pb	22 58 57.8	-0.3	
	baz=40								

IDC ***18*** *23:22:08.4±3.2,58.°54N×152.°73W,h0km,mb3.9/1, mbtmp3.6/3,ML3.4/2,Error ellipse: s-maj=58.1km s-min=25.8km az=144.0*

NEIC ***18*** *23:22:22.9±1.1,59.°63N±0.°03×152.°29W±0.°05,h64km±6km, Error ellipse: s-maj=4.5km s-min=3.7km az=189.0*

AEIC ***18*** *23:22:23±1.3,59.°61N±0.°03×152.°29W±0.°05,h63km±5km, ML2.9,ML3.1/118(NEIC),Error ellipse: s-maj=4.4km s-min=3.8km az=182.0*

ISC 18 23:22:21.4±1.1,59.°58N±0.°04×152.°29W±0.°03,h76km±8km, n141,σ1ᵍ08/135,Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOM	**Homer**	**0.34**	**76**		**Pn**	**23 22 33.9**	**+0.4**
OPT	**Oil Point**	**0.48**	**279**		**Pn**	**23 22 35.4**	**+0.7**
O20K	**Slope Mountain**	**0.53**	**342**		**Pn**	**23 22 35.5**	**+0.3**
CNPM	**China Poot**	**0.54**	**95**		**Pn**	**23 22 35.7**	**+0.5**
CNPM					**Sn**	**23 22 45.3**	**-0.1**
IVE	**Iliamna Volcan**	**0.57**	**321**		**Pn**	**23 22 35.5**	**-0.2**
IVE					**Sn**	**23 22 45.2**	**-0.8**
AU22	**Augustine Moun**	**0.58**	**250**		**Pn**	**23 22 36.4**	**+0.9**
AUQ	**Augustine Qik'**	**0.61**	**249**		**Pn**	**23 22 37.0**	**+1.0**
BRLK	**Bradley Lake**	**0.74**	**75**		**Pn**	**23 22 37.5**	**+0.3**
BRLK					**Sn**	**23 22 48.6**	**-0.3**
BRSE	**Bradley Lake S**	**0.81**	**77**		**Pn**	**23 22 38.5**	**+0.6**
BRSE					**Sn**	**23 22 50.2**	**0.0**
RED	**Redoubt Volcan**	**0.88**	**344**		**Pn**	**23 22 39.0**	**+0.2**
RSO	**Redoubt South**	**0.92**	**346**		**Pn**	**23 22 39.7**	**+0.3**
Q19K	**Cape Douglas,**	**0.95**	**227**		**Pn**	**23 22 40.9**	**+1.2**
Q19K					**Sn**	**23 22 55.0**	**+1.7**
Q19K	**Cape Douglas,**	**0.95**	**227**	IAML		23 22 55.8	
	comp=N,505nm,0.6s						
RDWB	**Redoubt West**	**0.95**	**343**		**Pn**	**23 22 40.0**	**+0.1**
RDWB					**Sn**	**23 22 53.3**	**-0.2**
SYI	**Shuyak Island**	**0.97**	**183**		**Pn**	**23 22 41.4**	**+1.6**
DFR	**Drift River**	**1.04**	**349**		**Pn**	**23 22 41.0**	**+0.2**
NCT	**North Crescent**	**1.04**	**342**		**Pn**	**23 22 41.1**	**+0.3**
RDJH	**Redoubt Jeurge**	**1.05**	**346**		**Pn**	**23 22 41.5**	**+0.5**
O19K	**Port Alsworth**	**1.20**	**302**		**Pn**	**23 22 43.1**	**+0.5**
CAPN	**Captain Cook N**	**1.32**	**25**		**Pn**	**23 22 46.4**	**+2.2**
SLKM	**Skilak Lake**	**1.40**	**47**		**Pn**	**23 22 45.5**	**+0.2**
SLKM					**Sn**	**23 23 04.2**	**+0.9**
O18K	**Koktuh Hills**	**1.50**	**282**		**Pn**	**23 22 47.0**	**+0.3**
P18K	**Big Mountain,**	**1.51**	**264**		**Pn**	**23 22 47.1**	**+0.3**
SEW	**Seward**	**1.53**	**69**		**Pn**	**23 22 48.0**	**+1.1**
O22K	**Cooper Landing**	**1.58**	**54**		**Pn**	**23 22 49.3**	**+1.7**
SPU	**Mount Spurr**	**1.61**	**4**		**Pn**	**23 22 48.9**	**+0.7**
CKN	**Chakachatna No**	**1.65**	**2**		**Pn**	**23 22 49.9**	**+1.2**
N19K	**Bonanza Creek**	**1.65**	**320**		**Pn**	**23 22 49.2**	**+0.5**
N19K					**Sn**	**23 23 09.2**	**-0.1**
SPCP	**Crater Peak Br**	**1.70**	**2**		**Pn**	**23 22 50.4**	**+1.1**
SPWE	**Spurr West**	**1.71**	**356**		**Pn**	**23 22 50.6**	**+1.1**
SPCG	**Spurr Capps Gl**	**1.73**	**4**		**Pn**	**23 22 50.9**	**+1.3**
SPCG					**Sn**	**23 23 12.5**	**+1.5**
KDAK	**Kodiak Island**	**1.81**	**185**		**Pn**	**23 22 51.8**	**+1.2**
KDAK	**Kodiak Island**	**1.81**	**185**	IAML		23 23 23.1	
	comp=N,122nm,0.3s						
KDAK				IAML		23 23 23.4	
	comp=N,147nm,0.3s						
STLK	**Strandline Lak**	**1.94**	**7**		**Pn**	**23 22 53.9**	**+1.4**
RC01	**Rabbit Creek A**	**1.98**	**39**		**Pn**	**23 22 53.9**	**+1.0**
RC01	**Rabbit Creek A**	**1.98**	**39**	IAML		23 23 21.3	
	comp=N,221nm,0.3s						
SUA	**Susitna One**	**2.04**	**21**		**Pn**	**23 22 55.4**	**+1.6**
SUA	**Susitna One**	**2.04**	**21**	IAML		23 23 24.8	
	comp=E,217nm,0.5s						
SUA				IAML		23 23 25.1	
	comp=N,194nm,0.4s						
N18K	**Kilae Creek**	**2.11**	**303**		**Pn**	**23 22 55.5**	**+0.8**
P17K	**Kvichak River**	**2.16**	**262**		**Pn**	**23 22 56.6**	**+1.4**
SVW2	**Sparrevohn**	**2.24**	**314**		**Pn**	**23 22 56.7**	**+0.4**
M20K	**Styx River**	**2.35**	**350**		**Pn**	**23 22 59.0**	**+1.0**
OHAK	**Old Harbor**	**2.42**	**193**		**Pn**	**23 22 59.6**	**+0.8**
OHAK	**Old Harbor**	**2.42**	**193**	IAML		23 23 39.5	
	comp=N,82nm,0.6s						
OHAK				IAML		23 23 41.2	
	comp=E,72nm,1.0s						
M22K	**Willow**	**2.43**	**25**		**Pn**	**23 23 00.4**	**+1.4**
SKT	**Skwentna**	**2.44**	**8**		**Pn**	**23 23 00.0**	**+0.9**
SKT	**Skwentna**	**2.44**	**8**	IAML		23 23 33.9	
	comp=E,102nm,0.7s						
SKT				IAML		23 23 34.0	
	comp=N,68nm,0.3s						
O17K	**Koliganek Bris**	**2.44**	**277**		**Pn**	**23 23 00.1**	**+1.0**
M19K	**Big River Lodg**	**2.55**	**337**	Pn	**Pn**	**23 23 01.6**	**+1.0**
PMR	**Palmer**	**2.55**	**36**		**Pn**	**23 23 00.9**	**+0.3**
PMR				IAML		23 23 31.1	
	comp=N,63nm,0.4s						
PMR				IAML		23 23 39.4	
	comp=E,80nm,0.4s						
KNK	**Knik Glacier**	**2.64**	**44**		**Pn**	**23 23 02.2**	**+0.3**
GHO	**Glory Hole Cre**	**2.76**	**36**		**Pn**	**23 23 04.3**	**+0.9**
GHO				IAML		23 23 50.8	
	comp=N,99nm,0.7s						
L19K	**White Mountain**	**2.90**	**335**		**Pn**	**23 23 06.3**	**+1.0**
L19K	**White Mountain**	**2.90**	**335**	IAML		23 23 39.8	
	comp=N,42nm,0.7s						
GLI	**Glacier Island**	**2.90**	**61**		**Pn**	**23 23 04.4**	**-0.9**
GLI				IAML		23 23 52.4	
	comp=E,77nm,0.4s						
GLI				IAML		23 23 55.4	
	comp=N,61nm,0.5s						
O16K	**Kokwok River B**	**2.95**	**273**		**Pn**	**23 23 07.3**	**+1.3**
SML	**Sawmill**	**2.97**	**39**		**Pn**	**23 23 06.8**	**+0.5**
SML	**Sawmill**	**2.97**	**39**	IAML		23 23 54.7	
	comp=N,67nm,0.9s						
SML				IAML		23 23 59.1	
	comp=E,53nm,0.9s						
CUT	**Chulitna**	**3.00**	**18**		**Pn**	**23 23 07.8**	**+1.1**
HIN	**Hinchinbrook I**	**3.02**	**72**		**Pn**	**23 23 06.8**	**-0.2**
HIN	**Hinchinbrook I**	**3.02**	**72**	IAML		23 23 59.6	
	comp=N,36nm,1.1s						
HIN				IAML		23 24 08.2	
	comp=E,37nm,1.7s						
Q23K	**Middleton Isla**	**3.03**	**90**	Pn	**Pn**	**23 23 07.4**	**+0.3**
Q23K				IAML		23 24 32.3	
	comp=N,80nm,1.3s						
Q23K				IAML		23 24 54.5	
	comp=E,81nm,2.4s						
MID	**Middleton Isla**	**3.04**	**90**	Pn	**Pn**	**23 23 07.0**	**-0.1**
MID				IAML		23 24 32.3	
	comp=N,78nm,1.3s						
MID				IAML		23 24 54.4	
	comp=E,84nm,2.3s						
FID	**Port Fidalgo**	**3.13**	**65**		**Pn**	**23 23 07.4**	**-1.1**
FID	**Port Fidalgo**	**3.13**	**65**	IAML		23 23 56.0	
	comp=N,44nm,0.6s						
FID				IAML		23 23 57.2	
	comp=E,60nm,0.6s						
SII	**Sitkinak Islan**	**3.19**	**199**	Pn	**Pn**	**23 23 10.4**	**+1.2**
JPK	**Jack Peak**	**3.20**	**60**		**Pn**	**23 23 08.9**	**-0.5**
SCM	**Sheep Creek Mo**	**3.33**	**45**		**Pn**	**23 23 11.6**	**+0.4**
SCM	**Sheep Creek Mo**	**3.33**	**45**	IAML		23 24 06.1	
	comp=E,58nm,0.7s						
SCM				IAML		23 24 11.1	
	comp=N,50nm,0.8s						
PPLA	**Purkeypile**	**3.33**	**1**		**Pn**	**23 23 12.9**	**+1.7**
EYAK	**Cordova Ski Ar**	**3.42**	**71**	Pn	**Pn**	**23 23 12.9**	**+0.5**
DIV	**Divide**	**3.59**	**62**	Pn	**Pn**	**23 23 14.5**	**-0.3**
KLU	**Klutina**	**3.69**	**56**		**Pn**	**23 23 16.2**	**+0.2**
KLU	**Klutina**	**3.69**	**56**	IAML		23 24 03.0	
	comp=N,30nm,0.4s						
KLU				IAML		23 24 22.7	
	comp=E,22nm,0.5s						
WAT1	**Susitna Watana**	**3.73**	**27**		**Pn**	**23 23 17.9**	**+1.2**
WAT6	**Susitna Watana**	**3.74**	**34**		**Pn**	**23 23 17.5**	**+0.7**
TT01	**Tatalina**	**3.80**	**333**		**Pn**	**23 23 18.3**	**+0.9**
TTA	**Tatalina**	**3.81**	**334**		**Pn**	**23 23 18.4**	**+0.7**
CAST	**Castle Rocks**	**3.86**	**1**		**Pn**	**23 23 20.0**	**+1.7**
K20K	**Telida**	**3.89**	**348**		**Pn**	**23 23 20.0**	**+1.3**
M24K	**Tolsona, Glenn**	**3.92**	**47**		**Pn**	**23 23 20.2**	**+1.0**
M24K	**Tolsona, Glenn**	**3.92**	**47**	IAML		23 24 21.8	
	comp=N,37nm,0.9s						
M24K				IAML		23 24 33.9	
	comp=E,42nm,0.9s						
TRF	**Thorofare Moun**	**4.00**	**13**		**Pn**	**23 23 21.5**	**+1.1**
TRF				IAML		23 24 13.5	
	comp=E,33nm,1.3s						
TRF				IAML		23 24 14.0	
	comp=N,32nm,0.9s						
KTH	**Kantishna Hill**	**4.04**	**9**		**Pn**	**23 23 23.1**	**+2.2**
KTH				IAML		23 24 18.3	
	comp=E,28nm,0.7s						
KTH				IAML		23 24 20.5	
	comp=N,27nm,0.6s						
BMRM	**Bremner River**	**4.08**	**67**	Pn	**Pn**	**23 23 22.1**	**+0.8**
BMRM				IAML		23 24 31.3	
	comp=N,22nm,0.6s						
BMRM				IAML		23 24 37.1	
	comp=E,13nm,0.6s						
HMT	**Hamilton**	**4.11**	**76**	Pn	**Pn**	**23 23 21.8**	**0.0**
HMT				IAML		23 24 23.8	
	comp=N,20nm,1.6s						
RND	**Reindeer**	**4.18**	**22**	Pn	**Pn**	**23 23 23.8**	**+1.0**
RND				IAML		23 24 32.3	
	comp=E,20nm,0.7s						
RND				IAML		23 24 33.3	
	comp=N,17nm,0.9s						
DHY	**Denali Highway**	**4.23**	**32**		**Pn**	**23 23 24.5**	**+1.0**
DHY	**Denali Highway**	**4.23**	**32**	IAML		23 24 15.0	
	comp=E,32nm,0.4s						
DHY				IAML		23 24 34.1	
	comp=N,19nm,0.7s						
N25K	**Chitina, Valde**	**4.30**	**58**		**Pn**	**23 23 24.4**	**0.0**
N25K	**Chitina, Valde**	**4.30**	**58**	IAML		23 24 34.5	
	comp=E,12nm,0.5s						
N25K				IAML		23 24 37.4	
	comp=N,12nm,0.6s						
CHUM	**Lake Minchumin**	**4.32**	**360**		**Pn**	**23 23 26.5**	**+1.9**
SUCK	**Suckling Hills**	**4.33**	**80**	Pn	**Pn**	**23 23 25.9**	**+1.1**
SUCK				IAML		23 26 09.0	
	comp=E,22nm,2.9s						
SUCK				IAML		23 26 19.8	
	comp=N,21nm,2.7s						
MCK	**McKinley**	**4.47**	**20**		**Pn**	**23 23 28.6**	**+2.0**
MCK				IAML		23 24 26.5	
	comp=N,20nm,1.3s						
MCK				IAML		23 24 44.0	
	comp=E,13nm,1.3s						
BPAW	**Bear Paw Mtn.**	**4.58**	**7**		**Pn**	**23 23 29.7**	**+1.5**
BPAW				IAML		23 24 49.3	
	comp=N,8.2nm,1.8s						
BPAW				IAML		23 25 02.6	
	comp=E,9.6nm,2.3s						
GLB	**Gilahina Butte**	**4.59**	**62**		**Pn**	**23 23 27.9**	**-0.4**
GLB				IAML		23 24 47.9	
	comp=N,12nm,0.9s						
VRDI	**Verde Repeater**	**4.69**	**66**	Pn	**Pn**	**23 23 29.4**	**-0.4**
J20K	**Nowinta River**	**4.70**	**350**		**Pn**	**23 23 30.8**	**+1.1**
J20K	**Nowinta River**	**4.70**	**350**	IAML		23 25 02.5	
	comp=E,8.6nm,1.9s						
PAX	**Paxson**	**4.73**	**41**		**Pn**	**23 23 30.9**	**+0.6**
SNH	**Sunshine Point**	**4.80**	**79**	Pn	**Pn**	**23 23 32.5**	**+1.3**
ISLE	**Juniper Island**	**5.09**	**74**		**Pn**	**23 23 35.9**	**+0.7**
KIAG	**Kiagna River**	**5.13**	**70**		**Pn**	**23 23 36.8**	**+1.0**
PTPK	**Patty Peak**	**5.14**	**67**		**Pn**	**23 23 36.3**	**+0.4**
MESA	**MESA**	**5.25**	**79**		**Pn**	**23 23 38.2**	**+0.8**
NEA2	**Nenana**	**5.26**	**15**		**Pn**	**23 23 37.7**	**+0.4**
WRH	**Wood River Hil**	**5.29**	**20**		**Pn**	**23 23 38.3**	**+0.5**
WRH				IAML		23 24 40.5	
	comp=N,6.7nm,2.8s						
WRH				IAML		23 25 13.7	
	comp=E,7.4nm,2.7s						
M26K	**Nabesna, AK**	**5.34**	**54**		**Pn**	**23 23 39.0**	**+0.5**
M26K				IAML		23 25 15.0	
	comp=N,6.0nm,0.6s						
M26K				IAML		23 27 07.9	
	comp=E,6.8nm,1.1s						
GRNC	**Granite Creek**	**5.39**	**73**		**Pn**	**23 23 40.8**	**+1.4**
HDA	**Harding Lake**	**5.46**	**25**		**Pn**	**23 23 41.1**	**+0.9**
RIDG	**Independent Ri**	**5.48**	**37**		**Pn**	**23 23 41.5**	**+1.1**
CCB	**Clear Creek Bu**	**5.51**	**21**		**Pn**	**23 23 41.2**	**+0.5**
MLY	**Manley**	**5.52**	**7**		**Pn**	**23 23 42.4**	**+1.4**
I21K	**Tanana**	**5.63**	**1**		**Pn**	**23 23 44.0**	**+1.6**
CTGM	**Chitina Glacie**	**5.63**	**71**		**Pn**	**23 23 44.2**	**+1.7**
CHX	**Chaix Hills**	**5.66**	**80**		**Pn**	**23 23 44.6**	**+1.6**
TABL	**Table Mountain**	**5.66**	**76**		**Pn**	**23 23 44.3**	**+1.2**
MDM	**Murphy Dome**	**5.72**	**18**		**Pn**	**23 23 44.6**	**+0.9**
I23K	**Minto, Yukon-K**	**5.75**	**12**		**Pn**	**23 23 45.0**	**+0.9**
LOGN	**Logan Glacier**	**5.77**	**73**		**Pn**	**23 23 45.5**	**+1.0**
M27K	**Edge Creek, AK**	**5.79**	**57**	Pn	**Pn**	**23 23 44.1**	**-0.7**
IL31		**5.79**	**24**		**Pn**	**23 23 45.4**	**+0.8**
ILAR	**Eielson Array**	**5.79**	**24**	Pn	**Pn**	**23 23 45.4**	**+0.7**
	comp=E,0.6nm,0.3s,baz=203,slow=13,SNR=18						
ILAR				Pg		23 23 58.5	
	comp=E,0.6nm,0.3s,baz=198,slow=20,SNR=7.4						
ILAR				Sn	**Sn**	**23 24 48.1**	**-1.5**
	comp=E,1.0nm,0.3s,baz=200,slow=24,SNR=1.9 comp=E,1.1nm,0.5s						
ILAR	**Eielson Array**	**5.79**	**24**		**Pn**	**23 23 45.0**	**+0.4**
SCRK	**Sand Creek**	**5.92**	**38**	Pn	**Pn**	**23 23 46.1**	**-0.3**
POKR	**Poker Plat Res**	**6.00**	**20**	Pn	**Pn**	**23 23 48.0**	**+0.5**
J25K	**Salcha River,**	**6.01**	**30**		**Pn**	**23 23 49.0**	**+1.3**
PCA	**Pinnacle**	**6.09**	**80**		**Pn**	**23 23 50.0**	**+1.2**
H21K	**Melozitna Rive**	**6.11**	**358**		**Pn**	**23 23 50.0**	**+1.1**
BCAR	**Beaver Creek A**	**6.15**	**51**	Pn	**Pn**	**23 23 50.2**	**+0.6**
H23K	**Yukon River**	**6.40**	**10**		**Pn**	**23 23 53.8**	**+0.9**
J26L	**Joseph Creek**	**6.42**	**36**		**Pn**	**23 23 53.9**	**+0.6**
IM03		**6.47**	**355**		**Pn**	**23 23 55.3**	**+1.5**
IMAR	**Indian Mountai**	**6.47**	**355**	Pn	**Pn**	**23 23 55.0**	**+1.2**
PNL	**Peninsula**	**6.54**	**84**		**Pn**	**23 23 55.6**	**+0.7**
H24K	**Noodor Dome**	**6.60**	**16**		**Pn**	**23 23 57.2**	**+1.5**
M30M	**Minto, Yukon**	**8.09**	**62**	Pn	**Pn**	**23 24 16.0**	**0.0**
N31M	**Braeburn, Yuko**	**8.36**	**70**	Pn	**Pn**	**23 24 20.4**	**+0.7**
BMAR	**Burnt Mountain**	**8.59**	**20**	Pn	**Pn**	**23 24 23.2**	**+0.3**
YKA	**Yellowknife Ar**	**18.30**	**65**	P	**P**	**23 26 30.8**	**+1.8**
	comp=E,0.1nm,0.3s,baz=274,slow=9.8,SNR=4.2 comp=E,0.9nm,0.6s						
PETK	**Petropavlovsk-**	**27.88**	**279**	P	**P**	**23 27 59.2**	**-4.4**
	comp=E,0.9nm,0.6s,baz=65,slow=8.3,SNR=2.6 comp=E,0.9nm,0.6s						

MAN ***18*** *23:23:41.7, 11.°36N×126.°69E,h21km,mb4.6,ML3.5, MS3.4*

IDC 18 23:23:42.4±3.6,11.°65N×127.°27E,h0km,mb3.8/3, mbtmp3.8/3,1D,Error ellipse: s-maj=297.5km s-min=27.8km az=64.0,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBP	**Tagbilaran**	**3.87**	**240**	*e*P	Pn	23 24 32.1	-11
TBP				*i* S	Sn	23 25 04.7	-25
WRA	**Warramunga Arr**	**32.16**	**167**	P	P	23 30 11.6	-0.4
	0.3nm,0.7s,baz=349,slow=9.2,SNR=2.2 0.3nm,0.7s						
STKA	**Stephens Creek**	**45.41**	**163**	P	P	23 32 03.2	+0.3
	0.7nm,0.4s,baz=313,slow=8.1,SNR=1.7 0.7nm,0.4s						
MKAR	**Makanchi Array**	**51.54**	**322**	P	P	23 32 50.1	-0.1
	1.3nm,0.6s,baz=117,slow=8.4,SNR=10 1.3nm,0.6s						

ISK ***18*** *23:28:23.1,38.°28N×25.°48E,h15km,ML2.8/9*

THE ***18*** *23:28:24.0,38.°32N×25.°53E,h16km±1km,ML2.5/4,Error ellipse: s-maj=1.3km s-min=0.6km az=96.0*

ATH ***18*** *23:28:24.1,38.°30N×25.°49E,h16km±2km,ML2.5/5,Error ellipse: s-maj=3.3km s-min=1.2km az=54.0*

ISC 18 23:28:23.7±1.1,38.°31N±0.°03×25.°51E±0.°03,h18km±7km, n26,σ0ᵍ37/37,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSRA	**Psara**	**0.23**	**11**	P	**Pb**	**23 28 29.6**	**+0.2**
PSRA				S	**Sg**	**23 28 33.1**	**+0.2**
CHOS	**Chios island**	**0.44**	**80**	P	**Pb**	**23 28 33.2**	**+0.3**
CHOS				S	**Sb**	**23 28 39.5**	**+0.3**
CHOS				AML	AML	23 28 40.5	
	comp=N,2679μm,0.3s						
CHOS				AML	AML	23 28 40.5	
	comp=E,4282μm,0.3s						
CHOS	**Chios island**	**0.44**	**80**	P	**Pg**	**23 28 32.6**	**0.0**
CHOS				S	**Sg**	**23 28 38.5**	**-0.1**
	comp=E,2μm,0.3s						
CHOS	**Chios island**	**0.44**	**80**	PG	**Pb**	**23 28 32.9**	**0.0**
CHOS				SG	**Sb**	**23 28 39.4**	**+0.2**
TNSA	**Tinos**	**0.82**	**200**	P	**Pb**	**23 28 39.0**	**-0.3**
TNSA				S	**Sb**	**23 28 50.0**	**-0.1**
TNSA				AML	AML	23 28 51.4	
	comp=E,587μm,0.3s						
TNSA				AML	AML	23 28 51.6	
	comp=N,996μm,0.2s						
URLA	**Izmir**	**0.86**	**86**	PG	**Pg**	**23 28 40.7**	**+0.3**
URLA				SG	**Sn**	**23 28 53.1**	**+0.1**
SIGR	**SIGRI**	**0.94**	**17**	P	**Pb**	**23 28 41.3**	**-0.2**
SIGR				AML	AML	23 28 57.3	
	comp=E,561μm,0.5s						
SIGR				AML	AML	23 28 58.0	
	comp=N,515μm,0.3s						
SIGR	**SIGRI**	**0.94**	**17**	P	**Pb**	**23 28 40.7**	**-0.8**
SIGR				S	**Sg**	**23 28 54.3**	**0.0**
	comp=N,270nm,0.4s						
SKY	**Skiros Island**	**0.94**	**307**	P	**Pb**	**23 28 41.8**	**+0.3**
SKY				AML	AML	23 28 56.8	
	comp=N,425μm,0.4s						
SKY				AML	AML	23 28 56.9	
	comp=E,360μm,0.4s						
SKY	**Skiros Island**	**0.94**	**307**	P	**Pb**	**23 28 41.3**	**-0.2**
FOCM	**Foa**	**1.04**	**67**	PG	**Pg**	**23 28 44.1**	**+0.3**
PRK	**Paraskevi**	**1.11**	**32**	P	**Pg**	**23 28 44.9**	**-0.3**
PRK				AML	AML	23 29 05.7	
	comp=E,359μm,0.5s						
PRK				AML	AML	23 29 12.2	
	comp=N,267μm,0.3s						
PRK	**Paraskevi**	**1.11**	**32**	P	**Pn**	**23 28 43.8**	**-0.5**
PRK				S	**Sb**	**23 28 58.6**	**+0.1**
	comp=N,165nm,0.4s						
KYMI	**Kymi, Euboea I**	**1.15**	**287**	P	**Pn**	**23 28 44.5**	**-0.4**
BLCB	**Balcova**	**1.21**	**86**	P	**Pn**	**23 28 45.2**	**-0.5**
BLCB	**Balcova**	**1.21**	**86**	PN	**Pg**	**23 28 46.8**	**-0.2**
SMG	**Samos**	**1.21**	**119**	P	**Pn**	**23 28 45.7**	**0.0**
SMG	**Samos**	**1.21**	**119**	P	**Pn**	**23 28 45.5**	**-0.2**
APE	**Apeiranthos**	**1.24**	**179**	P	**Pb**	**23 28 46.9**	**+0.3**
APE	**Apeiranthos**	**1.24**	**179**	P	**Pn**	**23 28 45.5**	**-0.7**
APE				S	**Sn**	**23 29 02.7**	**+0.2**
	comp=N,188nm,0.2s						
APE	**Apeiranthos**	**1.24**	**179**	PN	**Pn**	**23 28 46.4**	**+0.2**
APE				SN	**Sn**	**23 29 02.6**	**+0.1**
GPNR	**Gulpinar-Canak**	**1.24**	**23**	PN	**Pn**	**23 28 46.3**	**+0.1**
GPNR				SN	**Sg**	**23 29 04.5**	**+0.5**
DION	**Dionisos Attik**	**1.26**	**260**	P	**Pn**	**23 28 46.6**	**+0.1**
GCAM	**G?zelcaml?**	**1.49**	**114**	PN	**Pb**	**23 28 50.7**	**-0.2**
BOZC	**Bozcaada**	**1.59**	**15**	PN	**Pn**	**23 28 51.8**	**+0.9**
EZN	**Ezine**	**1.64**	**23**	PN	**Pb**	**23 28 52.7**	**-0.7**

DDA 18 23:28:35.5±0.0,38.°78N×27.°84E,h6km±1km,ML1.5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.11**	**348**	P	Pg	23 28 37.8	-0.1
AKHS				*i* AML	AML	23 28 40.0	
	comp=E,264nm,0.7s						
AKHS				S	Sg	23 28 40.0	+0.6
ZEDA	**zmir-Bergama**	**0.63**	**288**	P	Pg	23 28 48.0	+0.4
USAK	**Uak-Merkez**	**0.92**	**93**	P	Pg	23 28 53.2	0.0
USAK				*i* AML	AML	23 29 07.0	
	comp=N,41nm,1.3s						
USAK				*i* AML	AML	23 29 07.0	
	comp=E,18nm,1.0s						
DURS	**Dursunbey**	**0.96**	**31**	P	Pb	23 28 54.8	+0.2
DURS				*i* AML	AML	23 29 09.0	
	comp=E,15nm,0.4s						
DURS				*i* AML	AML	23 29 09.0	
	comp=N,6.6nm,0.1s						
DURS				S	Sn	23 29 09.1	-0.5

IDC ***18*** *23:36:10.6±2.4,42.°42S×105.°33W,h0km,mb3.9/4, mbtmp3.9/4,Error ellipse: s-maj=87.1km s-min=37.1km az=28.0*

ISC 18 23:36:11.7±2.2,42.°5S±0.°5×105.°4W±0.°3,h10km,n10, σ0ᵍ38/7,mb3.8/4,Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**22.44**	**76**	T	T	00 04 06.0	
	baz=241						
H03S1	**Juan Fernandez**	**22.45**	**76**	T	T	00 04 07.2	
	baz=241						
H03S3	**Juan Fernandez**	**22.46**	**76**	T	T	00 04 06.5	
	baz=241						
PLCA	**Paso Flores**	**25.98**	**98**	P	**P**	**23 41 44.8**	**+0.3**

ASAR	**Alice Springs**	**18.90 181**		**Pn**	**23 51 44.7**	**+0.1**
CTAO	**Charters Tower**	**19.32 144**	P	**Pn**	**23 51 50.2**	**+0.5**
CTAO			IAmb	IAmb	23 51 53.0	
	comp=Z,22nm,1.4s					
MBWA	**Marble Bar**	**21.59 219**	P	**P**	**23 52 13.4**	**+0.2**
MBWA			IAmb	IAmb	23 52 14.4	
	comp=Z,20nm,0.8s					
PSA00	**Pilbara Seismi**	**21.82 218**	P	**P**	**23 52 15.7**	**0.0**
PSA00			IAmb	IAmb	23 52 19.8	
	comp=Z,21nm,0.8s					
PSA00	**Pilbara Seismi**	**21.82 218**	P	**P**	**23 52 15.9**	**+0.2**
PSA00			IAmb	IAmb	23 52 16.9	
	comp=Z,6.9nm,0.8s					
GIRL	**Giralia**	**26.31 225**	P	**P**	**23 53 00.3**	**+1.3**
FORT	**Forrest**	**26.62 192**	P	**P**	**23 53 04.5**	**+2.8**
BBOO	**Buckleboo**	**28.06 177**	P	**P**	**23 53 15.9**	**+1.2**
BBOO			IAmb	IAmb	23 53 17.1	
	comp=Z,13nm,1.1s					
MORW	**Morawa**	**29.75 213**	P	**P**	**23 53 29.7**	**-0.1**
MORW			IAmb	IAmb	23 53 45.0	
	comp=Z,8.3nm,1.1s					
MK31	**Makanchi Array**	**68.66 325**	P	**P**	**23 58 26.8**	**+0.4**
MK31			IAmb	IAmb	23 58 34.5	
	comp=Z,2.0nm,0.9s					
MKAR	**Makanchi Array**	**68.66 325**	P	**P**	**23 58 27.3**	**+0.9**
KK31	**Karatay Array**	**74.41 317**	P	**P**	**23 59 02.8**	**+1.6**
KKAR	**Karatay Array**	**74.41 317**	P	**P**	**23 59 02.8**	**+1.5**
ABKAR	**Akbulak array**	**83.32 321**	P	**P**	**23 59 49.7**	**-0.2**

*SKHL **18** 23:48:57.5±0.2, 46°.00N×153°.60E, h61km±2km, mb4.7/4*
*MOS **18** 23:48:57.2±1.4, 46°.69N×153°.10E, h43km, mb4.1/4, Error ellipse: s-maj=11.8km s-min=7.8km az=56.7*
*NEIC **18** 23:48:58.7±2.0, 46°.7N±0°.1×153°.1E±0°.1, h35km±2km, mb4.2/9, Error ellipse: s-maj=21.5km s-min=12.8km az=140.0*
*JMA **18** 23:48:59.5±0.9, 47°.N±6°×15°3E±°, h30km, MV4.5/12, KURILE ISLANDS REGION*
*IDC **18** 23:49:02.4±3.2, 46°.86N×152°.94E, h67km±28km, mb3.5/12, mbtmp3.8/18, ML3.0/4, MS3.0/5, Error ellipse: s-maj=27.2km s-min=14.9km az=153.0*

ISC 18 23:48:58.0±0.7, 46°.51N±0°.08×153°.15E±0°.07, h40km, n86, σ1§98/80, mb4.0/18, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**3.90**	**253**	*e*PN	**Pn**	**23 49 58.4**	**+3.0**
KUR				*e*S	**Sn**	**23 50 42.9**	**+3.0**
KUR				pmax	pmax		
	comp=N,64nm,0.4s						
KUR				pmax	pmax		
	comp=Z,196nm,0.4s						
KUR				pmax	pmax		
	comp=E,30nm,0.3s						
KUR				smax	smax		
	comp=N,228nm,0.5s						
KUR				smax	smax		
	comp=E,109nm,0.4s						
KUR	**Kuril'sk**	**3.90**	**253**	*e*P	**Pn**	**23 49 58.0**	**+2.6**
KUR				AMB	AMB	23 50 04.2	
	comp=E,40nm,0.3s						
KUR				*e*S	**Sn**	**23 50 42.7**	**+2.8**
KUR				A	A	23 50 56.5	
	comp=E,230nm,0.5s						
KUR				A	A	23 50 56.5	
	comp=E,110nm,0.5s						
SHO	**Shikotan**	**5.19**	**242**	*e*PN	**Pn**	**23 50 13.3**	**+0.3**
SHO				pmax	pmax		
	comp=Z,54nm,0.5s						
SHO				pmax	pmax		
	comp=N,20nm,0.2s						
SHO				pmax	pmax		
	comp=E,18nm,0.3s						
SHO	**Shikotan**	**5.19**	**242**	*e*P	**Pn**	**23 50 13.5**	**+0.5**
SHO				AMB	AMB	23 50 17.4	
	comp=E,40nm,0.4s						
SHO				*e*S	**Sn**	**23 51 10.4**	**-1.1**
SHO				A	A	23 51 19.5	
	comp=E,120nm,0.5s						
SHO				A	A	23 51 19.5	
	comp=E,50nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**5.71**	**247**	*e*PN	**Pn**	**23 50 22.5**	**+2.4**
YUK				pmax	pmax		
	comp=N,33nm,0.2s						
YUK				pmax	pmax		
	comp=Z,140nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**5.71**	**247**	*e*P	**Pn**	**23 50 22.1**	**+2.0**
YUK				AMB	AMB	23 50 24.1	
	comp=Z,70nm,0.4s						
YUK				*e*S	**Sn**	**23 51 24.7**	**+0.4**
YUK				A	A	23 51 42.7	
	comp=Z,190nm,0.6s						
YUK				A	A	23 51 42.7	
	comp=Z,140nm,0.6s						
NEM2	**Nemuro 2**	**6.12**	**242**	*e*P	**Pn**	**23 50 26.2**	**+0.3**
NEM2				*e*S	**Sn**	**23 51 30.8**	**-3.8**
NMR	**Nemuro--Hokkai**	**6.13**	**242**	*e*PN	**Pn**	**23 50 26.4**	**+0.4**
NMR	**Nemuro--Hokkai**	**6.13**	**242**	*e*P	**Pn**	**23 50 26.4**	**+0.4**
NMR				*e*S	**Sn**	**23 51 33.2**	**-1.6**
JRA	**Rausu**	**6.22**	**248**	*e*P	**Pn**	**23 50 29.9**	**+2.7**
JNK	**Nakash**	**6.65**	**247**	*e*P	**Pn**	**23 50 35.3**	**+2.2**
AKK	**Akkeshi**	**6.87**	**242**	*e*P	**Pn**	**23 50 36.7**	**+0.6**
AKK				*e*S	**Sn**	**23 51 50.9**	**-2.0**
JAK	**Akkeshi**	**6.97**	**243**	*e*P	**Pn**	**23 50 37.8**	**+0.3**
JAK				*e*S	**Sn**	**23 51 52.0**	**-3.3**
JTKR	**Abashiri--Toko**	**7.00**	**252**	*e*P	**Pn**	**23 50 40.9**	**+3.0**
YSS	**Yuzh-Sakhalins**	**7.16**	**277**		**Pn**	**23 50 40.0**	**0.0**
YSS	**Yuzh-Sakhalins**	**7.16**	**277**	*e*PN	**Pn**	**23 50 43.8**	**+3.8**
YSS				*e*S	**Sn**	**23 52 03.3**	**+3.3**
YSS				pmax	pmax		
	comp=Z,20nm,0.5s						
YSS				smax	smax		
	comp=E,30nm,0.5s						
YSS				MLR	MLR		
	comp=Z,200nm,16.0s						
YSS	**Yuzh-Sakhalins**	**7.16**	**277**	*e*P	Pn	23 50 45.9	+5.9
YSS				AMB	AMB	23 50 49.3	
	comp=Z,20nm,0.5s						
PEA0B	**Petropavlovsk-**	**7.23**	**22**	Pn	**Pn**	**23 50 38.5**	**-2.5**
PEA0B	**Petropavlovsk-**	**7.23**	**22**	PN	**Pn**	**23 50 38.5**	**-2.5**
PETK	**Petropavlovsk-**	**7.23**	**22**	P	**Pn**	**23 50 41.6**	**+0.6**
	comp=Z,2.3nm,0.7s,baz=129,slow=4.0,SNR=3.6						
PETK				LR	LR	23 53 10.3	
	comp=Z,51nm,21.6s,baz=63,slow=36						
PETK	**Petropavlovsk-**	**7.23**	**22**		**Pn**	**23 50 39.7**	**-1.3**
JAR	**Ashorobuto**	**7.39**	**248**	*e*P	**Pn**	**23 50 45.7**	**+2.4**
JAR				*e*S	**Sn**	**23 52 06.1**	**+0.3**
JKK2	**Kamakawa 2**	**7.80**	**254**	*e*P	**Pn**	**23 50 52.2**	**+3.3**
JKA	**Kamikawa-asahi**	**7.81**	**256**		**Pn**	**23 50 50.3**	**+1.3**
JKA	**Kamikawa-asahi**	**7.81**	**256**	*e*P	**Pn**	**23 50 50.3**	**+1.3**
ASAJ	**Asahikawa**	**7.81**	**256**	LR	LR	23 53 48.4	
	comp=Z,78nm,20.8s,baz=14,slow=37						
ASAJ	**Asahikawa**	**7.81**	**256**	PN	**Pn**	**23 50 50.3**	**+1.2**
JCH	**Churui**	**8.00**	**244**	*e*P	**Pn**	**23 50 52.4**	**+0.8**
ERM	**Erimo**	**8.46**	**242**	Pn	**Pn**	**23 50 59.0**	**+1.1**
ERM	**Erimo**	**8.46**	**242**	PN	**Pn**	**23 50 59.0**	**+1.1**
JNBK	**Urakawa-nobuka**	**8.56**	**244**	*e*S	**Sn**	**23 52 27.4**	**-7.1**
JANG	**Nango**	**10.44**	**238**	*e*S	Sn	23 53 11.8	-8.9
MA2	**Magadan**	**13.17**	**355**	P	**Pn**	**23 52 03.0**	**+0.9**
	comp=Z,2.9nm,0.3s,baz=159,slow=22,SNR=6.4						
MA2	**Magadan**	**13.17**	**355**		**Pn**	**23 52 01.9**	**-0.3**
JSD	**Sado**	**13.88**	**238**	P	**Pn**	**23 52 14.2**	**+2.1**
KLR	**Kul'dur**	**14.61**	**289**	P	**P**	**23 52 23.8**	**-3.8**
	comp=Z,0.1nm,0.3s,baz=102,slow=18,SNR=1.6						
	comp=Z,0.6nm,0.6s						
SHEM	**Shemya Is, Ala**	**14.91**	**58**	LR	LR	23 57 37.5	
	comp=Z,72nm,19.5s,baz=340,slow=35						
MJAR	**Matsushiro Arr**	**14.96**	**234**	P	**Pn**	**23 52 29.0**	**+2.5**
	baz=38,slow=12,SNR=5.4						
	comp=Z,1.3nm,0.9s						
USRK	**Ussuriysk Ar.**	**15.05**	**269**	P	**Pn**	**23 52 27.4**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=76,slow=12,SNR=3.0						
	comp=Z,3.3nm,0.6s						
SEY	**Seymchan**	**16.46**	**359**	P	**Pn**	**23 52 43.4**	**-2.3**
	comp=Z,0.2nm,0.3s,baz=235,slow=16,SNR=1.9						
	comp=Z,1.1nm,0.2s						
YAK	**Yakutsk**	**20.54**	**328**	LR	LR	00 01 45.7	
	comp=Z,46nm,19.8s,baz=89,slow=38						
KSRS	**Korea Array**	**20.75**	**253**	P	Pn	23 53 37.2	-0.5
	comp=Z,1.5nm,0.8s,baz=56,slow=10,SNR=5.7						
	comp=Z,1.5nm,0.8s						
BILL	**Bilibino**	**22.62**	**13**	*e*P	**P**	**23 53 57.5**	**+2.5**
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						

H11N2	**WAKE ISLAND Hy**	**29.00**	**152**	T	T	00 26 20.2
	baz=340,slow=76					
H11N1	**WAKE ISLAND Hy**	**29.01**	**153**	T	T	00 26 24.9
	baz=340,slow=76					
H11N3	**WAKE ISLAND Hy**	**29.01**	**152**	T	T	00 26 25.5
	baz=340,slow=76					
H11S1	**WAKE ISLAND Hy**	**30.08**	**154**	T	T	00 27 43.2
	baz=341,slow=76					
H11S3	**WAKE ISLAND Hy**	**30.09**	**154**	T	T	00 27 43.6
	baz=341,slow=76					
H11S2	**WAKE ISLAND Hy**	**30.10**	**154**	T	T	00 27 46.4
	baz=341,slow=76					
SONM	**Songino Array**	**31.44**	**290**	P	**P**	**23 55 15.8**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=98,slow=8.9,SNR=2.2					
	comp=Z,0.2nm,0.3s					
SONM	**Songino Array**	**31.44**	**290**	P	**P**	**23 55 15.8**	**+0.4**
SONM	**Songino Array**	**31.44**	**290**	P	**P**	**23 55 15.8**	**+0.4**
SONM				pmax	pmax		
	comp=Z,2.0nm,1.4s						
IMAR	**Indian Mountai**	**33.95**	**36**	P	**P**	**23 55 37.3**	**+0.3**
TOLK	**Toolik Lake Re**	**35.94**	**32**	P	**P**	**23 55 54.8**	**+0.7**
ILAR	**Eielson Array**	**36.72**	**38**	P	**P**	**23 56 01.8**	**+0.9**
	comp=Z,0.7nm,1.0s,baz=260,slow=6.1,SNR=4.8						
	comp=Z,0.7nm,1.0s						
BCAR	**Beaver Creek A**	**39.06**	**41**	P	**P**	**23 56 20.7**	**0.0**
INK	**Inuvik**	**41.84**	**32**	P	**P**	**23 56 42.1**	**-1.3**
	comp=Z,1.2nm,0.6s,baz=262,slow=7.4,SNR=3.3						
	comp=Z,1.2nm,0.6s						
MK31	**Makanchi Array**	**47.07**	**298**	P	**P**	**23 57 24.3**	**-1.3**
MK31				IAmb	IAmb	23 57 53.7	
	comp=Z,2.6nm,1.0s						
MK31	**Makanchi Array**	**47.07**	**298**	P	**P**	**23 57 24.3**	**-1.3**
MK31				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MKAR	**Makanchi Array**	**47.07**	**298**	P	**P**	**23 57 24.1**	**-1.5**
	comp=Z,0.5nm,0.7s,baz=64,slow=8.0,SNR=4.1						
	comp=Z,0.5nm,0.7s						
MKAR	**Makanchi Array**	**47.07**	**298**	P	**P**	**23 57 24.2**	**-1.4**
YKA	**Yellowknife Ar**	**51.10**	**37**	P	**P**	**23 57 56.9**	**+0.8**
	comp=Z,1.2nm,0.6s,baz=298,slow=7.1,SNR=3.5						
	comp=Z,1.2nm,0.6s						
ABKAR	**Akbulak array**	**58.60**	**310**	P	**P**	**23 58 49.2**	**-1.3**
ABKAR	**Akbulak array**	**58.60**	**310**	P	**P**	**23 58 49.9**	**-0.6**
ABKAR				IAmb	IAmb	23 59 05.2	
	comp=Z,2.6nm,1.4s						
PLID	**Pearl Lake**	**59.79**	**55**	P	**P**	**23 58 59.3**	**+0.2**
PLID				IAmb	IAmb	23 59 01.1	
	comp=Z,2.4nm,0.8s						
NVAR	**Mina Array Bea**	**62.52**	**62**	P	**P**	**23 59 18.8**	**+1.1**
	comp=Z,0.6nm,0.6s,baz=297,slow=6.7,SNR=5.2						
	comp=Z,0.6nm,0.6s						
FIA1	**FINESS Array S**	**64.27**	**335**	P	**P**	**23 59 27.6**	**-0.9**
FINES	**FINESS Array B**	**64.27**	**335**	P	**P**	**23 59 27.1**	**-1.4**
	comp=Z,4.3nm,1.0s,baz=48,slow=8.5,SNR=4.5						
	comp=Z,4.3nm,1.0s						
FINES	**FINESS Array B**	**64.27**	**335**	P	**P**	**23 59 26.8**	**-1.8**
PDAR	**Pinedale Array**	**64.87**	**54**	P	**P**	**23 59 33.4**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=307,slow=3.0,SNR=6.1						
	comp=Z,0.7nm,0.8s						
PDAR	**Pinedale Array**	**64.87**	**54**	P	**P**	**23 59 33.5**	**+0.4**
OBN	**Obninsk**	**65.52**	**326**	*e*P	**P**	**23 59 37.5**	**+0.7**
OBN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
WRA	**Warramunga Arr**	**68.29**	**199**	P	**P**	**23 59 58.8**	**+4.0**
	comp=Z,0.5nm,0.8s,baz=19,slow=7.2,SNR=2.1						
	comp=Z,0.5nm,0.8s						
NOA	**NORSAR Array B**	**68.46**	**341**	P	**P**	**23 59 53.9**	**-1.6**
	comp=Z,0.9nm,0.9s,baz=28,slow=6.5,SNR=2.0						
	comp=Z,0.9nm,0.9s						
AKASG	**Malin Array Be**	**71.76**	**326**	LR	LR	00 33 37.1	
	comp=Z,32nm,18.9s,baz=18,slow=38						
ASAR	**Alice Springs**	**71.99**	**199**	P	**P**	**00 00 19.4**	**+2.0**
ASAR	**Alice Springs**	**71.99**	**199**	P	**P**	**00 00 19.4**	**+2.0**
BUR08	**Bucovina Ar. S**	**75.78**	**327**	P	**P**	**00 00 39.5**	**-0.1**
BUR08				IAmb	IAmb	00 00 53.0	
	comp=Z,6.5nm,1.4s						
BURAR	**Bucovina Array**	**75.80**	**327**	P	**P**	**00 00 39.8**	**+0.1**
TX32	**Lajitas Array**	**77.59**	**61**	P	**P**	**00 00 50.9**	**+0.9**
TX32				IAmb	IAmb	00 00 51.7	
	comp=Z,1.3nm,0.7s						
TXAR	**Lajitas Array**	**77.59**	**61**	P	**P**	**00 00 51.0**	**+1.0**
	comp=Z,1.2nm,0.5s,baz=310,slow=4.6,SNR=18						
	comp=Z,1.2nm,0.5s						
TXAR	**Lajitas Array**	**77.59**	**61**	P	**P**	**00 00 50.9**	**+0.8**
BRTR	**Keskin Array B**	**78.58**	**317**	P	**P**	**00 00 55.9**	**+0.4**
	baz=28,slow=6.5,SNR=2.9						
H03N2	**Juan Fernandez**	**138.73**	**91**	T	T	02 43 50.3	
	baz=308,slow=77,SNR=28						
H03N1	**Juan Fernandez**	**138.74**	**91**	T	T	02 43 42.7	
	baz=308,slow=77,SNR=30						
H03N3	**Juan Fernandez**	**138.74**	**91**	T	T	02 43 45.9	
	baz=308,slow=77,SNR=28						

*IDC **19** 00:01:02.3±1.9, 30°.64S×71°.38W, h0km, mb3.6/3, mbtmp3.6/7, ML3.6/4, MS3.2/2, Error ellipse: s-maj=46.8km s-min=37.9km az=174.0*
*GUC **19** 00:01:06.4±0.8, 30°.50S×71°.57W, h31km±3km, ML4.1*
*NEIC **19** 00:01:07.1±1.7, 30°.46S±0°.01×71°.6W±0°.1, h25km±7km, Error ellipse: s-maj=12.5km s-min=1.6km az=88.0*

ISC 19 00:01:06.3±0.8, 30°.43S±0°.03×71°.69W±0°.05, h30km±5km, n68, σ1§62/83, mb3.7/4, 1C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CO06	**Fray Jorge**	**0.25**	**168**		**Pb**	**00 01 12.7**	**-0.4**
CO06				Sg	**Sb**	**00 01 17.0**	**-0.7**
CO06	**Fray Jorge**	**0.25**	**168**	*e*P	**Pb**	**00 01 12.7**	**-0.4**
CO06				*e*S	**Sb**	**00 01 17.0**	**-0.7**
CO06				IAML		00 01 17.5	
	comp=N,44μm,0.2s						
CO05	**La Serena**	**0.65**	**38**		**Pb**	**00 01 19.4**	**+0.3**
CO05				Sn	**Sb**	**00 01 28.3**	**+0.5**
CO05	**La Serena**	**0.65**	**38**	*e*P	**Pb**	**00 01 19.4**	**+0.3**
CO05				*e*S	**Sb**	**00 01 26.9**	**-0.9**
GO04	**Tololo Observa**	**0.81**	**72**		**Pn**	**00 01 22.1**	**+0.1**
GO04				Sn	**Sn**	**00 01 33.3**	**+0.2**
GO04	**Tololo Observa**	**0.81**	**72**	*e*P	**Pn**	**00 01 22.0**	**0.0**
GO04				*e*S	**Sn**	**00 01 33.4**	**+0.2**
CO03	**El Pedregal**	**0.95**	**115**		**Pb**	**00 01 23.8**	**-0.6**
CO03				Sn	**Sn**	**00 01 35.3**	**-1.2**
CO03	**El Pedregal**	**0.95**	**115**	*e*P	**Pb**	**00 01 23.8**	**-0.6**
CO03				*e*S	**Sn**	**00 01 35.2**	**-1.2**
CO03				IAML		00 01 37.5	
	comp=N,5μm,0.3s						
CO02	**Combarbal**	**0.97**	**142**		**Pn**	**00 01 23.9**	**-0.1**
CO02				Sn	**Sb**	**00 01 36.8**	**-0.5**
CO02	**Combarbal**	**0.97**	**142**	*e*P	**Pn**	**00 01 23.8**	**-0.2**
CO02				*e*S	**Sb**	**00 01 36.0**	**-1.3**
CO02				IAML		00 01 41.0	
	comp=N,18μm,0.4s						
CO01	**Juntas del Tor**	**1.46**	**72**		**Pb**	**00 01 32.1**	**-0.7**
CO01	**Juntas del Tor**	**1.46**	**72**	*e*P	**Pb**	**00 01 32.2**	**-0.7**
CO01				*i* S	**Sb**	**00 01 51.4**	**+0.2**
LCO	**Las Campanas**	**1.66**	**32**		**Pn**	**00 01 35.0**	**+1.4**
LCO	**Las Campanas**	**1.66**	**32**	*e*P	**Pn**	**00 01 34.9**	**+1.4**
LCO				*i* S	**Sb**	**00 01 57.4**	**+0.4**
VA06	**Catapilco**	**2.15**	**171**		**Pn**	**00 01 40.4**	**+0.4**
VA06	**Catapilco**	**2.15**	**171**	*e*P	**Pn**	**00 01 40.3**	**+0.3**
VA06				*e*S	**Sb**	**00 02 09.3**	**-1.5**
VA06				IAML		00 02 17.8	
	comp=N,2μm,0.5s						
AC04	**Llanos de Chal**	**2.29**	**14**		**Pn**	**00 01 42.4**	**+0.5**
VA03	**San Esteban**	**2.52**	**158**		**Pn**	**00 01 47.2**	**+1.9**
VA03	**San Esteban**	**2.52**	**158**	*e*P	**Pn**	**00 01 47.0**	**+1.7**
VA03				*e*S	**Sb**	**00 02 18.4**	**-3.2**
VA03				IAML		00 02 28.1	
	comp=N,1μm,0.5s						
VA01	**Torpederas**	**2.58**	**179**		**Pn**	**00 01 48.5**	**+2.5**
ROCH	**El Roble**	**2.60**	**167**	*e*P	**Pn**	**00 01 47.2**	**+0.7**
ROCH				*e*S	**Sn**	**00 02 20.1**	**+3.0**
ROCH				IAML		00 02 30.3	
	comp=N,1μm,0.5s						
ROC1	**El Roble**	**2.60**	**167**		**Pn**	**00 01 47.2**	**+0.7**
PEL	**Peldehue**	**2.84**	**163**		**Pn**	**00 01 50.9**	**+1.2**
PEL	**Peldehue**	**2.84**	**163**	*e*P	**Pn**	**00 01 50.8**	**+1.2**
PEL				*e*S	**Sn**	**00 02 25.9**	**+3.1**
PEL				IAML		00 02 41.2	
	comp=E,565nm,0.6s						
MT02	**Curacav**	**2.86**	**171**		**Pn**	**00 01 51.7**	**+1.9**
MT02	**Curacav**	**2.86**	**171**	*e*P	**Pn**	**00 01 51.2**	**+1.4**
MT02				*e*S	**Sn**	**00 02 24.3**	**+1.1**
MT02				IAML		00 02 41.6	
	comp=E,316nm,0.6s						
MT05	**Renca**	**3.06**	**165**		**Pn**	**00 01 53.7**	**+1.0**
MT05	**Renca**	**3.06**	**165**	*e*P	**Pn**	**00 01 53.9**	**+1.3**
MT05				*e*S	**Sn**	**00 02 31.2**	**+2.9**
MT05				IAML		00 02 40.5	
	comp=E,729nm,0.4s						
GO03	**Copiap**	**3.10**	**25**		**Pn**	**00 01 54.7**	**+1.4**
MT03	**Universidad Ad**	**3.21**	**162**		**Pn**	**00 01 56.2**	**+1.4**
MT03	**Universidad Ad**	**3.21**	**162**	*e*P	**Pn**	**00 01 56.8**	**+2.0**
VA05	**Santo Domingo**	**3.22**	**179**		**Pn**	**00 01 56.0**	**+1.3**
VA05	**Santo Domingo**	**3.22**	**179**	*e*P	**Pn**	**00 01 54.7**	**-0.1**
MT09	**Talagante**	**3.39**	**170**		**Pn**	**00 01 58.3**	**+1.0**
MT09	**Talagante**	**3.39**	**170**	*e*P	**Pn**	**00 01 58.2**	**+1.0**
MT09				*e*S	**Sn**	**00 02 37.0**	**+0.5**
MT09				IAML		00 02 57.9	
	comp=N,364nm,0.5s						
MT01	**Popeta**	**3.44**	**174**		**Pn**	**00 01 58.4**	**+0.6**
MT01	**Popeta**	**3.44**	**174**	*e*P	**Pn**	**00 01 58.2**	**+0.3**
LMEL	**Las Melosas**	**3.63**	**160**		**Pn**	**00 02 02.8**	**+2.1**
BO04	**La Punta**	**3.66**	**166**		**Pn**	**00 02 01.9**	**+1.0**
BO01	**Tunca**	**3.98**	**173**		**Pn**	**00 02 05.7**	**+0.4**
AC02	**Maricunga**	**4.23**	**33**		**Pn**	**00 02 10.7**	**+1.5**
AC01	**Pan de Azucar**	**4.38**	**13**	Pn	**Pn**	**00 02 09.8**	**-0.9**
GO05	**Huala**	**4.57**	**182**		**Pn**	**00 02 12.4**	**-1.0**
ML02	**Panimavida**	**5.32**	**178**		**Pn**	**00 02 26.0**	**+2.3**
GO02	**Mina Guanaco**	**5.57**	**20**		**Pn**	**00 02 26.8**	**-0.6**
H03N1	**Juan Fernandez**	**6.83**	**242**	Pn	**Pn**	**00 02 43.0**	**-1.2**
	baz=322,slow=76						
H03N1				T	T	00 09 45.5	
	baz=69,slow=72,SNR=4503						
H03N2	**Juan Fernandez**	**6.84**	**242**	Pn	**Pn**	**00 02 43.0**	**-1.3**
	baz=322,slow=76						
H03N2				T	T	00 09 41.8	
	baz=69,slow=72,SNR=3874						
H03N3	**Juan Fernandez**	**6.84**	**242**	Pn	**Pn**	**00 02 42.6**	**-1.8**
	baz=322,slow=76						
H03N3				T	T	00 09 43.3	
	baz=69,slow=72,SNR=3069						
H03S1	**Juan Fernandez**	**7.00**	**239**	Pn	**Pn**	**00 02 43.9**	**-2.6**
LVC	**Limon Verde**	**8.18**	**18**	Pn	**Pn**	**00 03 04.3**	**+1.0**
	comp=N,0.4nm,0.3s,baz=198,slow=8.5,SNR=1.6						
LVC				Sn	**Sn**	**00 04 27.7**	**-7.2**
	comp=N,0.4nm,0.3s,baz=173,slow=12,SNR=1.8						
LVC				Lg	Lg	00 05 01.2	
	comp=N,1.0nm,0.3s,baz=64,slow=8.7,SNR=4.7						
LVC				LR	LR	00 06 00.2	
	comp=N,154nm,21.9s,baz=204,slow=36						
	comp=N,0.5nm,0.3s						
ITQB	**Itaqui**	**13.08**	**90**	Pn	**Pn**	**00 04 09.0**	**-1.0**
CPUP	**Villa Florida**	**13.29**	**76**	Pn	**Pn**	**00 04 08.8**	**-4.1**
	comp=N,0.1nm,0.3s,baz=166,slow=14,SNR=2.3						
CPUP				Sn	Sn	00 06 19.3	-20
	comp=N,0.1nm,0.3s,baz=236,slow=17,SNR=3.0						
CPUP				Lg	Lg	00 07 48.4	
	comp=N,0.1nm,0.3s,baz=178,slow=20,SNR=3.1						
	comp=N,0.6nm,0.4s						
LPAZ	**La Paz**	**14.45**	**14**	Pn	**Pn**	**00 04 30.2**	**+0.8**
	comp=N,0.2nm,0.3s,baz=179,slow=8.2,SNR=5.1						
LPAZ				LR	LR	00 10 35.8	
	comp=N,109nm,19.0s,baz=170,slow=39						
	comp=N,0.7nm,0.5s						
PLTB	**Pedras Altas**	**15.56**	**100**	Pn	**Pn**	**00 04 44.7**	**+1.2**
SIV	**San Ignacio**	**17.36**	**36**	P	**Pn**	**00 05 07.1**	**+0.7**
	baz=224,slow=11,SNR=11						
	comp=N,2.0nm,0.7s						
BDFB	**Brasilia**	**26.22**	**61**	P	**P**	**00 06 37.4**	**-1.4**
	comp=N,1.5nm,0.7s,baz=168,slow=12,SNR=1.8						
	comp=N,1.5nm,0.7s						
SNAA	**Sanae**	**54.78**	**159**	P	**P**	**00 10 33.1**	**+0.2**
QSPA	**South Pole Qui**	**59.79**	**180**	P	**P**	**00 11 09.5**	**+1.0**
QSPA				IAmb	IAmb	00 11 37.2	
	comp=Z,3.3nm,1.4s						
TXAR	**Lajitas Array**	**66.79**	**330**	P	**P**	**00 11 57.3**	**+2.2**
	comp=Z,0.2nm,0.7s,baz=127,slow=5.7,SNR=2.1						
	comp=Z,0.2nm,0.7s						
TORD	**Torodi Ar. Bea**	**82.72**	**70**	P	**P**	**00 13 27.6**	**0.0**
	comp=Z,0.4nm,0.7s,baz=236,slow=4.9,SNR=2.3						
	comp=Z,0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**82.72**	**70**	P	**P**	**00 13 28.2**	**+0.6**
TORD				IAmb	IAmb	00 13 42.3	
	comp=Z,1.0nm,1.1s						
H11S2	**WAKE ISLAND Hy**	**26.04**	**272**	T	T	02 38 44.4	
	baz=115,slow=75,SNR=49						
H11S1	**WAKE ISLAND Hy**	**26.06**	**272**	T	T	02 38 47.9	
	baz=115,slow=75,SNR=71						
H11S3	**WAKE ISLAND Hy**	**26.06**	**272**	T	T	02 38 46.6	
	baz=115,slow=75,SNR=54					

	comp=Z,21nm,0.9s								
NACB	**Ninganchiao**	**20.34**	**353**	P	**P**	**00 41 34.9**	**-0.4**		
NACB				IAmb	IAmb	00 41 37.1			
	comp=Z,12nm,0.9s								
YOJ	**Yonaguni jima**	**20.51**	**357**	P	**P**	**00 41 37.3**	**+0.5**		
YHNB	**Yeheng**	**20.86**	**353**	P	**P**	**00 41 40.4**	**+0.3**		
MBWA	**Marble Bar**	**25.24**	**190**	P	**P**	**00 42 19.1**	**-0.6**		
MBWA				IAmb	IAmb	00 42 23.5			
	comp=Z,30nm,1.2s								
WB0	**Warramunga Arr**	**25.55**	**157**	P	**P**	**00 42 21.7**	**-0.8**		
WB0				IAmb	IAmb	00 42 22.6			
	comp=Z,6.7nm,0.4s								
PSA00	**Pilbara Seismi**	**25.63**	**189**	P	**P**	**00 42 22.8**	**-0.3**		
PSA00				IAmb	IAmb	00 42 50.2			
	comp=Z,11nm,1.0s								
PSA00	**Pilbara Seismi**	**25.63**	**189**	P	**P**	**00 42 22.8**	**-0.3**		
PSA00				IAmb	IAmb	00 42 23.7			
	comp=Z,9.6nm,1.1s								
PSA00	**Pilbara Seismi**	**25.63**	**189**	P	**P**	**00 42 23.1**	**0.0**		
WRAB	**Tennant Creek**	**25.69**	**157**	P	**P**	**00 42 23.1**	**-0.6**		
WRA	**Warramunga Arr**	**25.69**	**157**	P	**P**	**00 42 23.0**	**-0.7**		
	comp=Z,3.4nm,0.4s,baz=334,slow=10,SNR=107								
WRA				PcP	**PcP**	**00 45 42.8**	**-0.9**		
	comp=Z,0.6nm,0.6s,baz=335,slow=2.0,SNR=2.3								
WRA				S	**S**	**00 46 20.8**	**-5.4**		
	comp=Z,1.2nm,0.9s,baz=337,slow=16,SNR=4.7								
WRA				ScP	**ScP**	**00 48 46.1**	**-3.4**		
	comp=Z,0.4nm,0.5s,baz=341,slow=2.7,SNR=2.0								
	comp=Z,3.4nm,0.4s								
WRA	**Warramunga Arr**	**25.69**	**157**	P	**P**	**00 42 22.1**	**-1.6**		
CMAR	**Chiang Mai Arr**	**28.60**	**302**	P	**P**	**00 42 50.9**	**+1.4**		
	comp=Z,1.6nm,0.3s,baz=107,slow=6.2,SNR=5.2								
CMAR				ScP	**ScP**	**00 48 55.8**	**-2.6**		
	comp=Z,0.6nm,0.3s,baz=161,slow=3.1,SNR=4.3								
	comp=Z,1.6nm,0.3s								
QIS	**Mount Isa**	**28.62**	**149**	P	**P**	**00 42 48.8**	**-0.9**		
JCJ	**Chichijima**	**28.83**	**35**	P	**P**	**00 42 50.9**	**-0.5**		
	comp=Z,49nm,0.4s,baz=274,slow=19,SNR=9.3								
JCJ	**Chichijima**	**28.83**	**35**	P	**P**	**00 42 50.4**	**-1.0**		
AS31	**Alice Springs**	**28.97**	**161**	P	**P**	**00 42 52.5**	**-0.2**		
ASAR	**Alice Springs**	**28.97**	**161**	P	**P**	**00 42 52.3**	**-0.4**		
WRKA	**Warakurna**	**29.01**	**172**	P	**P**	**00 42 53.4**	**+0.4**		
OOD	**Oodnadatta**	**33.38**	**161**	P	**P**	**00 43 31.1**	**+0.2**		
KSRS	**Korea Array**	**33.61**	**5**	P	**P**	**00 43 31.9**	**-0.9**		
	comp=Z,0.5nm,0.3s,baz=184,slow=11,SNR=1.9								
	comp=Z,0.5nm,0.3s								
MORW	**Morawa**	**33.65**	**193**	P	**P**	**00 43 32.8**	**-0.5**		
MORW				IAmb	IAmb	00 43 53.2			
	comp=Z,15nm,1.4s								
MORW	**Morawa**	**33.65**	**193**	P	**P**	**00 43 33.2**	**-0.1**		
JGF	**Kuroka**	**33.86**	**20**	P	**P**	**00 43 34.7**	**-0.3**		
FORT	**Forrest**	**34.65**	**174**	P	**P**	**00 43 41.3**	**-0.4**		
FORT	**Forrest**	**34.65**	**174**	P	**P**	**00 43 41.9**	**+0.2**		
MAJO	**Matsushiro**	**35.01**	**20**	P	**P**	**00 43 44.3**	**-0.4**		
MJAR	**Matsushiro Arr**	**35.01**	**20**	P	**P**	**00 43 43.1**	**-1.6**		
	comp=Z,4.2nm,0.7s,baz=190,slow=9.4,SNR=17								
	comp=Z,4.2nm,0.7s								
MJAR	**Matsushiro Arr**	**35.01**	**20**	P	**P**	**00 43 43.4**	**-1.3**		
BLDU	**Ballidu**	**35.01**	**191**	P	**P**	**00 43 44.5**	**-0.3**		
MULG	**Mulgathing**	**35.25**	**165**	P	**P**	**00 43 47.4**	**+0.6**		
INKA	**Innaminka**	**35.26**	**154**	P	**P**	**00 43 48.4**	**+1.5**		
KLBR	**Kellerberrin**	**35.78**	**189**	P	**P**	**00 43 51.0**	**-0.3**		
JSD	**Sado**	**36.38**	**19**	P	**P**	**00 43 55.9**	**-0.3**		
LCRK	**Leigh Creek**	**36.67**	**159**	P	**P**	**00 43 59.5**	**+0.7**		
NWNO	**Narrogin (SRO)**	**37.17**	**190**	P	**P**	**00 44 02.7**	**-0.2**		
BBOO	**Buckleboo**	**38.18**	**164**	P	**P**	**00 44 11.5**	**+0.2**		
BBOO				IAmb	IAmb	00 44 12.0			
	comp=Z,15nm,0.9s								
BBOO	**Buckleboo**	**38.18**	**164**	P	**P**	**00 44 11.8**	**+0.5**		
STKA	**Stephens Creek**	**39.23**	**156**	P	**P**	**00 44 20.9**	**+0.9**		
	comp=Z,7.0nm,0.3s,baz=334,slow=7.6,SNR=24								
	comp=Z,7.0nm,0.3s								
STKA	**Stephens Creek**	**39.23**	**156**	P	**P**	**00 44 20.5**	**+0.6**		
JTM	**Tenmabayashi**	**39.80**	**20**	P	**P**	**00 44 24.9**	**+0.5**		
ARMA	**Armidale**	**43.04**	**144**	P	**P**	**00 44 51.5**	**+0.7**		
ARMA				IAmb	IAmb	00 45 06.0			
	comp=Z,34nm,1.4s								
JKA	**Kamikawa-asahi**	**43.27**	**19**	P	**P**	**00 44 53.1**	**+0.8**		
JKA				IAmb	IAmb	00 45 12.5			
	comp=Z,22nm,1.4s								
CAN	**Canberra**	**45.43**	**151**	P	**P**	**00 45 10.7**	**+1.2**		
CAN				IAmb	IAmb	00 45 17.7			
	comp=Z,24nm,1.5s								
KLR	**Kul'dur**	**45.67**	**7**	P	**P**	**00 45 09.7**	**-1.3**		
	comp=Z,0.9nm,0.4s,baz=243,slow=4.5,SNR=3.7								
	comp=Z,0.9nm,0.4s								
TOO	**Toolangi**	**45.75**	**156**	P	**P**	**00 45 12.9**	**+1.0**		
TOO				IAmb	IAmb	00 45 13.9			
	comp=Z,18nm,1.2s								
MK31	**Makanchi Array**	**56.00**	**326**	P	**P**	**00 46 27.4**	**0.0**		
MKAR	**Makanchi Array**	**56.00**	**326**	P	**P**	**00 46 27.1**	**-0.3**		
	comp=Z,3.4nm,0.4s,baz=122,slow=7.3,SNR=117								
MKAR				ScP	**ScP**	**00 50 42.6**	**-3.5**		
	comp=Z,0.3nm,0.6s,baz=116,slow=7.1,SNR=1.9								
	comp=Z,3.4nm,0.4s								
MKAR	**Makanchi Array**	**56.00**	**326**	P	**P**	**00 46 27.3**	**-0.1**		
PETK	**Petropavlovsk-**	**56.31**	**24**	P	**P**	**00 46 30.2**	**+0.8**		
KDJ	**Kajisay**	**56.55**	**319**	P	**P**	**00 46 31.5**	**0.0**		
KDJ				IAmb	IAmb	00 46 41.9			
	comp=Z,11nm,1.3s								
ZALV	**Zalesovo Beam**	**59.32**	**334**	P	**P**	**00 46 49.2**	**-0.9**		
	comp=Z,0.9nm,0.5s,baz=103,slow=6.5,SNR=5.4								
	comp=Z,0.9nm,0.5s								
ZALV	**Zalesovo Beam**	**59.32**	**334**	P	**P**	**00 46 48.7**	**-1.4**		
KURBB	**Kurchatov Arra**	**60.26**	**328**	P	**P**	**00 46 55.9**	**-0.6**		
	comp=Z,3.2nm,0.5s,baz=126,slow=6.1,SNR=37								
	comp=Z,3.2nm,0.5s								
KURK	**Kurchatov**	**60.26**	**329**	P	**P**	**00 46 56.0**	**-0.5**		
KURK				IAmb	IAmb	00 46 57.0			
	comp=Z,8.2nm,0.6s								
KKAR	**Karatay Array**	**61.39**	**318**	P	**P**	**00 47 04.5**	**+0.2**		
LBZ	**Lake Benmore**	**63.26**	**145**	P	**P**	**00 47 16.5**	**0.0**		
TIXI	**Tiksi**	**67.76**	**2**	P	**P**	**00 47 43.2**	**-1.3**		
TIXI				IAmb	IAmb	00 47 45.1			
	comp=Z,2.0nm,0.5s								
ABKAR	**Akbulak array**	**70.42**	**321**	P	**P**	**00 48 00.1**	**-1.1**		
VOI	**Vohitsoka**	**79.74**	**247**	P	**P**	**00 48 53.1**	**-1.6**		
MAW	**Mawson**	**83.00**	**200**	P	**P**	**00 49 10.1**	**-0.3**		
	comp=Z,1.7nm,0.6s,baz=59,slow=5.6,SNR=3.0								
	comp=Z,1.7nm,0.6s								
IMAR	**Indian Mountai**	**83.27**	**24**	P	**P**	**00 49 12.0**	**+0.1**		
VNDA	**Vanda**	**83.89**	**172**	P	**P**	**00 49 13.9**	**-0.9**		
	comp=Z,1.0nm,0.5s,baz=318,slow=6.9,SNR=9.3								
	comp=Z,1.0nm,0.5s								
VNDA	**Vanda**	**83.89**	**172**	P	**P**	**00 49 14.2**	**-0.6**		
VNDA				IAmb	IAmb	00 49 14.7			
	comp=Z,4.6nm,1.4s								
BPAW	**Bear Paw Mtn.**	**84.30**	**26**	P	**P**	**00 49 17.6**	**+0.5**		
BMAR	**Burnt Mountain**	**86.95**	**23**	P	**P**	**00 49 30.4**	**+0.4**		
FINES	**FINESS Array B**	**90.49**	**332**	P	**P**	**00 49 45.3**	**-1.3**		
	comp=Z,4.8nm,1.1s,baz=50,slow=3.0,SNR=9.1								
	comp=Z,4.8nm,1.1s								
FINES	**FINESS Array B**	**90.49**	**332**	P	**P**	**00 49 45.2**	**-1.4**		
TORD	**Torodi Ar. Bea**	**120.42**	**288**	PKP	**PKPdf**	**00 55 33.4**	**-1.9**		
	comp=Z,0.2nm,0.3s,baz=90,slow=2.2,SNR=8.8								
TORD	**Torodi Ar. Bea**	**120.42**	**288**		**PKPdf**	**00 55 33.2**	**-2.1**		
TXAR	**Lajitas Array**	**123.54**	**51**	PKP	**PKPdf**	**00 55 40.6**	**-0.5**		
	comp=Z,0.2nm,0.6s,baz=243,slow=6.0,SNR=2.2								

IDC ***19*** *00:39:55.3±1.5,29°.43N×128°.31E,h218km±15km, mb3.6/16,mbtmp4.1/20,Error ellipse: s-maj=16.3km s-min=11.1km az=77.0*
JMA ***19*** *00:39:56.7±0.3,29°.N±1°×12°8E±°, h226km,MV4.1/25,NW OFF AMAMI-OSHIMA IS*
NEIC ***19*** *00:39:57.9±1.8,29°.30N±0°.07×128°.3E±0°.1, h233km±7km, mb4.2/44,Error ellipse: s-maj=16.9km s-min=10.2km az=102.0*
ISC 19 00:39:56.4±0.6,29°.31N±0°.04×128°.30E±0°.07,h226km±6km, n158,σ1§10/172,mb4.1/36,Northwest of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTAJ	**Takarajima**	**0.81**	**101**	P	**Pn**	**00 40 28.9**	**+1.1**
JTAJ				*eS*	**S**	**00 40 53.2**	**+1.0**
JAMN	**Amaminishikomi**	**1.31**	**144**	P	**Pn**	**00 40 31.5**	**+0.4**
JAMN				S	**S**	**00 40 57.2**	**-0.7**
JAM	**Amami Oshima**	**1.46**	**128**	*eP*	**Pn**	**00 40 32.5**	**+0.4**
JNN	**Nakanoshima**	**1.47**	**69**	*eP*	**Pn**	**00 40 33.2**	**+1.0**
JTK	**Tokunoshima**	**1.62**	**159**	P	**Pn**	**00 40 33.9**	**+0.3**
JTK				S	**S**	**00 41 02.3**	**-0.1**
JZK	**Kikaishima**	**1.77**	**124**	P	**Pn**	**00 40 36.7**	**+1.9**
JZK				S	**S**	**00 41 06.0**	**+1.4**
JOKE	**Okinoerabujima**	**1.96**	**173**	P	**Pn**	**00 40 36.6**	**0.0**
JOKE				*eS*	**S**	**00 41 07.1**	**-0.8**
JKC	**Kuchinoerabu**	**2.01**	**55**	*eP*	**Pn**	**00 40 38.1**	**+1.2**
JYAK	**Yakushimahairau**	**2.13**	**64**	P	**Pn**	**00 40 38.3**	**+0.1**
JYAK				S	**S**	**00 41 08.4**	**-2.3**
JYRO	**Yoronjima**	**2.28**	**177**	P	**Pn**	**00 40 39.5**	**-0.2**
JYRO				S	**S**	**00 41 11.4**	**-2.1**
JIH	**Iheya**	**2.29**	**187**	P	**Pn**	**00 40 39.9**	**+0.1**
JIH				S	**S**	**00 41 12.1**	**-1.6**
JOW	**Kunigami**	**2.47**	**180**	P	**Pn**	**00 40 41.6**	**-0.1**
	158nm,0.3s,baz=121,slow=18,SNR=61						
JOW				S	**S**	**00 41 14.5**	**-2.6**
	247nm,0.3s,baz=154,slow=29,SNR=6.9						
JOW	**Kunigami**	**2.47**	**180**	*eP*	**Pn**	**00 40 41.6**	**-0.1**
JOW				*eS*	**S**	**00 41 15.6**	**-1.5**
JMTN	**Minamitane**	**2.51**	**64**	*eP*	**Pn**	**00 40 43.1**	**+1.1**
JMTN				*eS*	**S**	**00 41 15.9**	**-1.7**
JTN	**Tanegashima 3**	**2.68**	**59**	*eP*	**Pn**	**00 40 43.9**	**0.0**
JTN				*eS*	**S**	**00 41 19.0**	**-2.0**
JAGN	**Aguni-jima**	**2.87**	**199**	P	**Pn**	**00 40 45.8**	**-0.2**
JAGN				S	**S**	**00 41 24.2**	**-0.6**
JSU	**Suzuyama**	**2.87**	**40**	Pn	**Pn**	**00 40 47.6**	**+1.6**
JJT3	**Tamagusuku3**	**3.19**	**188**	*eS*	**S**	**00 41 30.4**	**-1.0**
JKE	**Kume jima 2**	**3.26**	**205**	*i* P	**Pn**	**00 40 50.2**	**-0.3**
JTZ	**Takazaki**	**3.53**	**42**	P	**Pn**	**00 40 54.9**	**+1.4**
JTZ				S	**S**	**00 41 37.3**	**-1.1**
JHS	**Saijyo**	**6.99**	**35**	Pn	**Pn**	**00 41 34.8**	**-1.9**
KSRS	**Korea Array**	**8.13**	**358**	P	**Pn**	**00 41 53.0**	**+1.8**
	3.2nm,0.5s,baz=176,slow=11,SNR=13						
SEHB	**SEOHWA**	**8.93**	**360**	Pn	**Pn**	**00 42 02.8**	**+1.2**
MJAR	**Matsushiro Arr**	**11.01**	**47**	P	**Pn**	**00 42 26.2**	**-1.8**
	0.4nm,0.6s,baz=229,slow=8.7,SNR=1.7						
JSD	**Sado**	**12.02**	**41**		**P**	**00 42 45.1**	**+0.6**
BJT	**Baijiatuan**	**14.60**	**320**		**P**	**00 43 15.8**	**+2.6**
USRK	**Ussuriysk Ar.**	**15.15**	**10**	P	**Pn**	**00 43 15.9**	**-3.3**
	3.2nm,0.5s,baz=204,slow=9.5,SNR=1.9						
USRK	**Ussuriysk Ar.**	**15.15**	**10**	P	**P**	**00 43 20.2**	**+1.0**
ENH	**Enshi**	**16.36**	**278**	P	**Pn**	**00 43 34.7**	**+0.8**
KLR	**Kul'dur**	**20.07**	**7**	P	**P**	**00 44 09.7**	**-2.8**
	1.0nm,0.3s,baz=202,slow=9.1,SNR=5.5						
HIA	**Hailar**	**20.97**	**344**	P	**P**	**00 44 24.5**	**+2.3**
HIA				IAmb	IAmb	00 44 26.0	
	comp=Z,8.2nm,1.0s						
ULN	**Ulaanbaatar**	**24.74**	**324**	P	**P**	**00 44 57.7**	**+0.4**
ULN				IAmb	IAmb	00 45 00.8	
	comp=Z,5.6nm,0.8s						
SONM	**Songino Array**	**25.06**	**324**	P	**P**	**00 45 00.6**	**+0.4**
	comp=Z,2.4nm,0.5s,baz=133,slow=11,SNR=16						
	comp=Z,2.4nm,0.5s						
SONM	**Songino Array**	**25.06**	**324**	P	**P**	**00 45 01.7**	**+1.5**
SONM				IAmb	IAmb	00 45 03.9	
	comp=Z,4.4nm,1.0s						
PETK	**Petropavlovsk-**	**32.08**	**34**	P	**P**	**00 45 59.9**	**-2.1**
	comp=Z,1.5nm,0.8s,baz=235,slow=10.0,SNR=2.4						
	comp=Z,1.5nm,0.8s						
PETK	**Petropavlovsk-**	**32.08**	**34**	P	**P**	**00 46 03.2**	**+1.1**
FAKI	**Fak Fak**	**32.27**	**173**	P	**P**	**00 46 05.0**	**+0.9**
KULM	**Kulim**	**35.41**	**233**	P	**P**	**00 46 32.9**	**+1.7**
KULM				IAmb	IAmb	00 46 57.1	
	comp=Z,19nm,1.5s						
MK31	**Makanchi Array**	**39.59**	**309**	P	**P**	**00 47 05.8**	**-0.1**
MKAR	**Makanchi Array**	**39.59**	**309**	P	**P**	**00 47 04.1**	**-1.7**
	comp=Z,1.2nm,0.7s,baz=81,slow=9.2,SNR=5.3						
	comp=Z,1.2nm,0.7s						
MKAR	**Makanchi Array**	**39.59**	**309**	P	**P**	**00 47 05.3**	**-0.5**
ZALV	**Zalesovo Beam**	**39.87**	**321**	P	**P**	**00 47 07.0**	**-1.0**
	comp=Z,1.5nm,0.4s,baz=106,slow=9.1,SNR=7.3						
	comp=Z,1.5nm,0.4s						
ZALV	**Zalesovo Beam**	**39.87**	**321**	P	**P**	**00 47 06.9**	**-1.1**
GSI	**Gunungsitoli**	**40.39**	**232**	P	**P**	**00 47 14.2**	**+1.4**
MTN	**Manton Dam**	**42.00**	**176**	P	**P**	**00 47 25.9**	**+0.2**
MTN				IAmb	IAmb	00 47 26.2	
	comp=Z,9.6nm,0.8s						
TARG	**Taragay, Kyrgy**	**42.37**	**301**	P	**P**	**00 47 28.2**	**-0.8**
TARG				IAmb	IAmb	00 47 31.3	
	comp=Z,2.7nm,0.7s						
KURK	**Kurchatov**	**42.67**	**314**	P	**P**	**00 47 30.8**	**0.0**
KURBB	**Kurchatov Arra**	**42.71**	**314**	P	**P**	**00 47 30.3**	**-0.8**
	comp=Z,2.6nm,0.5s,baz=100,slow=9.0,SNR=20						
	comp=Z,2.6nm,0.5s						
KDJ	**Kajisay**	**42.83**	**302**	P	**P**	**00 47 32.4**	**-0.1**
KDJ				IAmb	IAmb	00 48 01.5	
	comp=Z,8.0nm,1.3s						
KNRA	**Kununurra**	**44.73**	**179**	P	**P**	**00 47 48.2**	**+0.8**
COEN	**Coen**	**45.35**	**159**	P	**P**	**00 47 53.2**	**+0.8**
COEN				IAmb	IAmb	00 48 11.9	
	comp=Z,18nm,1.4s						
KK31	**Karatay Array**	**47.73**	**303**	P	**P**	**00 48 11.0**	**+0.4**
KKAR	**Karatay Array**	**47.73**	**303**	P	**P**	**00 48 11.3**	**+0.6**
KKAR	**Karatay Array**	**47.73**	**303**	P	**P**	**00 48 11.0**	**+0.3**
WB0	**Warramunga Arr**	**49.15**	**172**	P	**P**	**00 48 21.7**	**+0.1**
WB0				IAmb	IAmb	00 48 49.3	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**49.31**	**172**	P	**P**	**00 48 23.1**	**+0.3**
	comp=Z,1.3nm,0.5s,baz=353,slow=8.1,SNR=12						
	comp=Z,1.3nm,0.5s						
WRA	**Warramunga Arr**	**49.31**	**172**	P	**P**	**00 48 22.4**	**-0.5**
PSA00	**Pilbara Seismi**	**51.24**	**190**	P	**P**	**00 48 37.5**	**+0.3**
AS31	**Alice Springs**	**52.95**	**174**	P	**P**	**00 48 50.5**	**+0.7**
ASAR	**Alice Springs**	**52.95**	**174**	P	**P**	**00 48 50.3**	**+0.5**
ABKAR	**Akbulak array**	**54.62**	**312**	P	**P**	**00 49 00.8**	**-0.8**
ABKAR	**Akbulak array**	**54.62**	**312**	P	**P**	**00 49 00.8**	**-0.8**
ABKAR				IAmb	IAmb	00 49 04.1	
	comp=Z,2.6nm,1.4s						
L19K	**White Mountain**	**58.44**	**32**	P	**P**	**00 49 29.1**	**+0.8**
L19K				IAmb	IAmb	00 49 30.4	
	comp=Z,3.5nm,0.9s						
L19K	**White Mountain**	**58.44**	**32**	P	**P**	**00 49 29.8**	**+1.4**
	baz=274						
J20K	**Nowinta River**	**58.65**	**30**	P	**P**	**00 49 30.9**	**+1.3**
J20K				IAmb	IAmb	00 49 31.9	
	comp=Z,6.0nm,0.9s						
J20K	**Nowinta River**	**58.65**	**30**	P	**P**	**00 49 31.0**	**+1.3**
	baz=273,SNR=5.6						
K20K	**Telida**	**58.73**	**31**	P	**P**	**00 49 31.5**	**+1.2**
K20K				IAmb	IAmb	00 49 32.2	
	comp=Z,4.6nm,0.8s						
K20K	**Telida**	**58.73**	**31**	P	**P**	**00 49 31.7**	**+1.4**
	baz=274						
IMAR	**Indian Mountai**	**58.73**	**28**	P	**P**	**00 49 31.2**	**+0.9**
H21K	**Melozitna Rive**	**59.14**	**28**	P	**P**	**00 49 33.6**	**+0.6**
H21K				IAmb	IAmb	00 49 35.0	
	comp=Z,4.9nm,0.8s						
H21K	**Melozitna Rive**	**59.14**	**28**	P	**P**	**00 49 34.2**	**+1.2**
	baz=273,SNR=5.9						
M20K	**Styx River**	**59.27**	**33**	P	**P**	**00 49 35.7**	**+1.6**
	baz=275						
SII	**Sitkinak Islan**	**59.33**	**39**	P	**P**	**00 49 35.4**	**+0.9**
	baz=278						
CHUM	**Lake Minchumin**	**59.47**	**30**	P	**P**	**00 49 36.7**	**+1.3**
	baz=275,SNR=6.0						
I21K	**Tanana**	**59.51**	**29**	P	**P**	**00 49 36.8**	**+1.2**
I21K				IAmb	IAmb	00 49 37.9	
	comp=Z,5.7nm,0.8s						
I21K	**Tanana**	**59.51**	**29**	P	**P**	**00 49 37.0**	**+1.4**
	baz=274,SNR=5.8						
CAST	**Castle Rocks**	**59.62**	**31**	P	**P**	**00 49 37.2**	**+0.8**
	baz=275						
PPLA	**Purkeypile**	**59.62**	**31**	P	**P**	**00 49 37.6**	**+1.0**
PPLA				IAmb	IAmb	00 49 38.5	
	comp=Z,6.2nm,0.8s						
PPLA	**Purkeypile**	**59.62**	**31**	P	**P**	**00 49 37.9**	**+1.3**
	baz=275						
H22K	**Ishtalitna Cre**	**59.71**	**28**	P	**P**	**00 49 38.6**	**+1.6**
	baz=274						
N20K	**Mount Spurr**	**59.78**	**33**	P	**P**	**00 49 38.8**	**+1.2**
	baz=276						
SKT	**Skwentna**	**60.02**	**32**	P	**P**	**00 49 39.6**	**+0.5**
	baz=276						
KDAK	**Kodiak Island**	**60.03**	**37**	P	**P**	**00 49 39.4**	**+0.2**
BPAW	**Bear Paw Mtn.**	**60.03**	**30**	P	**P**	**00 49 40.2**	**+1.0**
BPAW				IAmb	IAmb	00 49 40.9	
	comp=Z,3.7nm,0.6s						
BPAW	**Bear Paw Mtn.**	**60.03**	**30**	P	**P**	**00 49 40.2**	**+1.0**
	baz=276						
MLY	**Manley**	**60.05**	**29**	P	**P**	**00 49 40.5**	**+1.1**
MLY	**Manley**	**60.05**	**29**	P	**P**	**00 49 40.5**	**+1.1**
	baz=275,SNR=6.3						
G23K	**Bananza Creek**	**60.19**	**27**	P	**P**	**00 49 41.2**	**+1.0**
	baz=275						
TOLK	**Toolik Lake Re**	**60.20**	**25**	P	**P**	**00 49 41.2**	**+1.0**
	baz=274						
D24K	**Happy Valley**	**60.43**	**24**	P	**P**	**00 49 42.7**	**+1.0**
	baz=275						
SUA	**Susitna One**	**60.45**	**33**	P	**P**	**00 49 43.1**	**+0.9**
	baz=278						
H23K	**Yukon River**	**60.47**	**28**	P	**P**	**00 49 43.6**	**+1.5**
H23K				IAmb	IAmb	00 49 44.5	
	comp=Z,8.4nm,0.8s						
H23K	**Yukon River**	**60.47**	**28**	P	**P**	**00 49 43.8**	**+1.7**
	baz=276,SNR=7.8						
I23K	**Minto, Yukon-K**	**60.62**	**29**	P	**P**	**00 49 44.0**	**+0.9**
I23K				IAmb	IAmb	00 49 56.0	
	comp=Z,5.3nm,1.3s						
I23K	**Minto, Yukon-K**	**60.62**	**29**	P	**P**	**00 49 44.2**	**+1.2**
	baz=277						
M22K	**Willow**	**60.71**	**33**	P	**P**	**00 49 44.2**	**+0.5**
	baz=278						
NEA2	**Nenana**	**60.81**	**29**	P	**P**	**00 49 45.2**	**+0.8**
NEA2	**Nenana**	**60.81**	**29**	P	**P**	**00 49 45.0**	**+0.6**
	baz=277,SNR=8.6						
MCK	**McKinley**	**60.98**	**30**	P	**P**	**00 49 46.0**	**+0.4**
	baz=278						
MDM	**Murphy Dome**	**61.12**	**29**	P	**P**	**00 49 47.4**	**+0.9**
H24K	**Noodor Dome**	**61.15**	**28**	P	**P**	**00 49 48.0**	**+1.3**
	baz=278						
POKR	**Poker Plat Res**	**61.43**	**29**	P	**P**	**00 49 49.8**	**+1.3**
	baz=278						
WAT6	**Susitna Watana**	**61.69**	**32**	P	**P**	**00 49 50.3**	**-0.3**
	baz=279						
IL31		**61.71**	**29**	P	**P**	**00 49 50.3**	**0.0**
IL31				IAmb	IAmb	00 49 53.0	
	comp=Z,3.4nm,0.7s						
ILAR	**Eielson Array**	**61.71**	**29**	P	**P**	**00 49 49.9**	**-0.6**
	comp=Z,1.9nm,0.7s,baz=268,slow=4.9,SNR=25						
	comp=Z,1.9nm,0.7s						
HDA	**Harding Lake**	**61.74**	**29**	P	**P**	**00 49 50.2**	**-0.5**
	baz=279,SNR=5.9						
DHY	**Denali Highway**	**61.77**	**31**	P	**P**	**00 49 51.2**	**+0.1**
	baz=279						
M23K	**Glacier View**	**61.83**	**32**	P	**P**	**00 49 52.2**	**+0.9**
	baz=280						
SCM	**Sheep Creek Mo**	**62.01**	**32**	P	**P**	**00 49 53.2**	**+0.7**
	baz=280						
STKA	**Stephens Creek**	**62.15**	**167**	P	**P**	**00 49 54.0**	**+0.4**
	comp=Z,1.7nm,0.5s,baz=347,slow=6.7,SNR=6.8						
	comp=Z,1.7nm,0.5s						
STKA	**Stephens Creek**	**62.15**	**167**	P	**P**	**00 49 53.8**	**+0.1**
BMAR	**Burnt Mountain**	**62.21**	**26**	P	**P**	**00 49 54.9**	**+1.1**
GLI	**Glacier Island**	**62.29**	**33**	P	**P**	**00 49 54.8**	**+0.4**
	baz=281						
K24K	**Donnelly Dome**	**62.35**	**30**	P	**P**	**00 49 55.2**	**+0.4**
	baz=280						
J25K	**Salcha River,**	**62.38**	**29**	P	**P**	**00 49 55.6**	**+0.6**
	baz=280						
PAX	**Paxson**	**62.65**	**31**	P	**P**	**00 49 57.2**	**+0.4**
	baz=281						
KLU	**Klutina**	**62.73**	**33**	P	**P**	**00 49 58.0**	**+0.7**
	baz=282						
RIDG	**Independent Ri**	**62.77**	**30**	P	**P**	**00 49 57.5**	**0.0**
	baz=281						
SCRK	**Sand Creek**	**63.10**	**30**	P	**P**	**00 49 59.8**	**0.0**
	baz=282,SNR=6.4						
J26L	**Joseph Creek**	**63.17**	**29**	P	**P**	**00 50 00.1**	**-0.1**
	baz=282,SNR=11						
I26K	**Coal Creek Min**	**63.17**	**28**	P	**P**	**00 50 00.1**	**0.0**
	baz=282						
N25K	**Chitina, Valde**	**63.33**	**32**	P	**P**	**00 50 00.9**	**-0.4**
	baz=282	

TSUM				LR	LR	00 55 33.2		
	comp=Z,344nm,20.4s,baz=271,slow=32							
	2.7nm,0.8s							
TSUM	**Tsumeb**	**29.22**	**87**	P	**P**	**00 46 04.2**	**-1.3**	
TSUM				IAmb	IAmb	00 46 15.4		
	comp=Z,28nm,1.8s							
LIC	**Lamto**	**31.02**	**16**	⇑*i*PKP1	**P**	**00 46 24.2**	**+2.9**	
	comp=Z,9.9nm,1.0s							
KIC	**Kosan Boka**	**31.23**	**17**	⇑*i*PKP1	**P**	**00 46 24.1**	**+0.9**	
	comp=Z,7.5nm,0.7s							
TIC	**Toumodi**	**31.43**	**16**	⇑*e*PKP1	**P**	**00 46 25.0**	**+0.1**	
	comp=Z,2.9nm,0.2s							
DBIC	**Dimbokro**	**31.50**	**17**	P	**P**	**00 46 25.2**	**-0.3**	
	comp=Z,2.7nm,0.7s,baz=188,slow=9.2,SNR=4.9							
DBIC				LR	LR	00 55 58.2		
	comp=Z,253nm,20.7s,baz=195,slow=30							
	comp=Z,2.7nm,0.7s							
DBIC	**Dimbokro**	**31.50**	**17**	P	**P**	**00 46 25.7**	**+0.2**	
DBIC				IAmb	IAmb	00 46 32.9		
	comp=Z,8.8nm,1.1s							
BDFB	**Brasilia**	**33.46**	**278**	P	**P**	**00 46 41.8**	**-1.2**	
	comp=Z,4.1nm,0.8s,baz=107,slow=8.0,SNR=6.6							
BDFB				LR	LR	00 58 07.0		
	comp=Z,305nm,21.4s,baz=151,slow=32							
	comp=Z,4.1nm,0.8s							
BDFB	**Brasilia**	**33.46**	**278**	P	**P**	**00 46 43.2**	**+0.2**	
BDFB				IAmb	IAmb	00 46 46.2		
	comp=Z,7.7nm,1.0s							
BOSA	**Boshof**	**34.94**	**106**	P	**P**	**00 46 54.8**	**-1.0**	
	comp=Z,4.1nm,0.8s,baz=289,slow=9.6,SNR=7.8							
BOSA				LR	LR	00 58 05.3		
	comp=Z,202nm,20.4s,baz=253,slow=31							
	comp=Z,4.1nm,0.8s							
BOSA	**Boshof**	**34.94**	**106**	P	**P**	**00 46 56.1**	**+0.4**	
BOSA				IAmb	IAmb	00 47 08.1		
	comp=Z,26nm,1.4s							
LBTB	**Lobatse**	**35.49**	**100**	P	**P**	**00 47 00.2**	**-0.2**	
	comp=Z,5.7nm,0.9s,baz=262,slow=9.0,SNR=5.9							
LBTB				LR	LR	00 58 38.6		
	comp=Z,194nm,21.6s,baz=254,slow=32							
	comp=Z,5.7nm,0.9s							
LBTB	**Lobatse**	**35.49**	**100**	P	**P**	**00 47 00.3**	**-0.2**	
MATP	**Matopo**	**38.92**	**93**	P	**P**	**00 47 28.5**	**-1.1**	
	comp=Z,2.3nm,0.9s,baz=187,slow=8.9,SNR=3.1							
	comp=Z,2.3nm,0.9s							
CPUP	**Villa Florida**	**39.66**	**257**	P	**P**	**00 47 34.2**	**-1.4**	
	comp=Z,1.2nm,0.7s,baz=123,slow=11,SNR=2.4							
CPUP				LR	LR	01 00 45.6		
	comp=Z,126nm,19.8s,baz=86,slow=31							
	comp=Z,1.2nm,0.7s							
TOA0	**Torodi Ar. Sit**	**39.66**	**24**	P	**P**	**00 47 35.9**	**+0.2**	
TOA0				IAmb	IAmb	00 47 39.1		
	comp=Z,16nm,1.1s							
TORD	**Torodi Ar. Bea**	**39.66**	**24**	P	**P**	**00 47 35.9**	**+0.3**	
	comp=Z,8.6nm,0.8s,baz=200,slow=8.0,SNR=31							
TORD				LR	LR	01 00 44.1		
	comp=Z,262nm,20.8s,baz=206,slow=31							
	comp=Z,8.6nm,0.8s							
TORD	**Torodi Ar. Bea**	**39.66**	**24**	P	**P**	**00 47 35.8**	**+0.1**	
LSZ	**Lusaka**	**40.04**	**86**	P	**P**	**00 47 39.5**	**+0.4**	
	comp=Z,0.9nm,0.3s,baz=254,slow=7.0,SNR=7.6							
LSZ				LR	LR	01 02 35.1		
	comp=Z,352nm,18.8s,baz=262,slow=34							
	comp=Z,0.9nm,0.3s							
SIV	**San Ignacio**	**45.27**	**271**	P	**P**	**00 48 21.5**	**+0.1**	
	comp=Z,4.5nm,1.0s,baz=113,slow=8.5,SNR=18							
SIV				LR	LR	01 06 19.9		
	comp=Z,185nm,18.3s,baz=122,slow=35							
	comp=Z,4.5nm,1.0s							
VNA1	**Neumayer--Stat**	**46.90**	**178**	P	**P**	**00 48 34.1**	**+0.6**	
VNA3	**Neumayer Olymp**	**47.45**	**178**	P	**P**	**00 48 37.0**	**-0.8**	
MDP	**Montagnes des**	**47.83**	**302**	LR	LR	01 06 17.3		
	comp=Z,90nm,20.0s,baz=188,slow=33							
SNAA	**Sanae**	**48.21**	**176**	P	**P**	**00 48 43.1**	**-0.6**	
SNAA	**Sanae**	**48.21**	**176**	P	**P**	**00 48 43.6**	**-0.1**	
	comp=Z,1.3nm,0.9s,baz=344,slow=4.1,SNR=3.8							
SNAA				LR	LR	01 04 13.8		
	comp=Z,96nm,19.7s,baz=48,slow=30							
	comp=Z,1.3nm,0.9s							
SNAA	**Sanae**	**48.21**	**176**	P	**P**	**00 48 44.0**	**+0.3**	
SNAA				IAmb	IAmb	00 48 45.8		
	comp=Z,15nm,1.7s							
MBAR	**Mbarara**	**48.66**	**68**	LR	LR	01 06 01.1		
	comp=Z,94nm,20.5s,baz=220,slow=32							
MBAR	**Mbarara**	**48.66**	**68**	P	**P**	**00 48 48.8**	**+0.7**	
MBAR				IAmb	IAmb	00 48 52.1		
	comp=Z,17nm,1.1s							
SAML	**Samuel**	**49.69**	**279**	P	**P**	**00 48 57.1**	**+1.2**	
AC02	**Maricunga**	**50.06**	**254**	P	**P**	**00 48 59.2**	**+0.1**	
AC02				IAmb	IAmb	00 49 07.4		
	comp=Z,13nm,1.3s							
PLCA	**Paso Flores**	**50.24**	**236**	P	**P**	**00 48 60.0**	**+0.2**	
	comp=Z,1.7nm,0.9s,baz=73,slow=13,SNR=3.3							
PLCA				LR	LR	01 07 13.1		
	comp=Z,168nm,19.3s,baz=182,slow=32							
	comp=Z,1.7nm,0.9s							
LVC	**Limon Verde**	**50.68**	**260**	LR	LR	01 09 38.3		
	comp=Z,103nm,18.6s,baz=181,slow=35							
MT09	**Talagante**	**50.80**	**245**	P	**P**	**00 49 03.9**	**-0.3**	
PB14	**IPOC Station P**	**51.59**	**257**	P	**P**	**00 49 11.1**	**+0.6**	
LPAZ	**La Paz**	**51.64**	**268**	P	**P**	**00 49 09.3**	**-2.0**	
	comp=Z,1.6nm,0.8s,baz=102,slow=4.5,SNR=7.2							
LPAZ				LR	LR	01 11 15.6		
	comp=Z,60nm,18.2s,baz=122,slow=36							
	comp=Z,1.6nm,0.8s							
LPAZ	**La Paz**	**51.64**	**268**	P	**P**	**00 49 10.8**	**-0.5**	
PB16	**IPOC Station P**	**52.30**	**265**	P	**P**	**00 49 16.8**	**+0.6**	
KMBO	**Kilima Mbogo**	**54.03**	**73**	P	**P**	**00 49 28.3**	**-0.2**	
	comp=Z,2.3nm,1.0s,baz=214,slow=8.1,SNR=2.1							
KMBO				LR	LR	01 10 30.4		
	comp=Z,170nm,19.0s,baz=276,slow=34							
	comp=Z,2.3nm,1.0s							
LODK	**Lodwar**	**54.70**	**67**	P	**P**	**00 49 34.7**	**+1.5**	
LODK				IAmb	IAmb	00 49 36.9		
	comp=Z,11nm,1.2s							
BELA	**Belgrano 2**	**54.99**	**185**	P	**P**	**00 49 34.4**	**+0.2**	
BELA				IAmb	IAmb	00 49 35.5		
	comp=Z,6.9nm,0.9s							
MDT	**Midelt**	**57.00**	**9**	LR	LR	01 12 43.6		
	comp=Z,126nm,18.6s,baz=178,slow=34							
NNA	**Nana**	**61.03**	**269**	LR	LR	01 16 18.3		
	comp=Z,87nm,18.1s,baz=150,slow=36							
MAW	**Mawson**	**62.96**	**155**	P	**P**	**00 50 28.4**	**-1.3**	
	comp=Z,4.8nm,1.0s,baz=294,slow=5.8,SNR=4.8							
	comp=Z,4.8nm,1.0s							
MAW	**Mawson**	**62.96**	**155**	P	**P**	**00 50 30.8**	**+1.1**	
ESDC	**Sonseca Array**	**63.83**	**8**	P	**P**	**00 50 34.2**	**-1.7**	
	comp=Z,1.4nm,1.1s,baz=213,slow=9.2,SNR=4.1							
	comp=Z,1.4nm,1.1s							
ATAH	**Atahualpa**	**64.24**	**274**	LR	LR	01 18 10.4		
	comp=Z,100nm,18.8s,baz=129,slow=36							
SDV	**Santo Domingo**	**64.62**	**293**	LR	LR	01 16 35.5		
	comp=Z,102nm,21.3s,baz=88,slow=34							
ROSC	**El Rosal**	**65.76**	**287**	LR	LR	01 18 30.6		
	comp=Z,131nm,19.2s,baz=228,slow=35							
QSPA	**South Pole Qui**	**66.34**	**180**	P	**P**	**00 50 53.2**	**+1.2**	
RAYN	**Ar Rayn**	**74.13**	**55**	P	**P**	**00 51 41.4**	**+1.2**	
GERES	**GERESS Array B**	**76.35**	**18**	P	**P**	**00 51 52.4**	**-0.1**	
	comp=Z,0.4nm,0.7s,baz=240,slow=5.5,SNR=3.0							
	comp=Z,0.4nm,0.7s							
BR131	**Keskin Array S**	**77.03**	**35**	P	**P**	**00 51 57.6**	**+1.0**	
BR131				IAmb	IAmb	00 51 59.2		
	comp=Z,6.2nm,1.1s							
BRTR	**Keskin Array B**	**77.03**	**35**	P	**P**	**00 51 58.4**	**+1.7**	
	comp=Z,2.9nm,1.0s,baz=193,slow=5.1,SNR=16							
	comp=Z,2.9nm,1.0s							
BRTR	**Keskin Array B**	**77.03**	**35**	P	**P**	**00 51 57.8**	**+1.2**	
BNN	**Bunyan**	**77.60**	**37**	P	**P**	**00 52 00.6**	**+0.8**	
MLR	**Muntele Rosu**	**77.79**	**27**	P	**P**	**00 52 01.0**	**+0.3**	
MLR				IAmb	IAmb	00 52 02.1		
	comp=Z,7.9nm,1.0s							
ILGA	**Ilgaz**	**78.03**	**35**	P	**P**	**00 52 03.1**	**+0.8**	
VNDA	**Vanda**	**78.80**	**179**	P	**P**	**00 52 06.3**	**+0.5**	
	comp=Z,2.3nm,1.1s,baz=213,slow=7.5,SNR=4.9							
	comp=Z,2.3nm,1.1s							
VNDA	**Vanda**	**78.80**	**179**	P	**P**	**00 52 07.8**	**+2.0**	
KOPT	**Kop Dagi**	**81.03**	**39**	P	**P**	**00 52 21.4**	**+2.7**	
KOPT				IAmb	IAmb	00 52 23.3		
	comp=Z,9.0nm,1.0s							
AKASG	**Malin Array Be**	**83.26**	**26**	P	**P**	**00 52 29.1**	**-0.7**	
	comp=Z,0.5nm,0.5s,baz=219,slow=3.1,SNR=7.3							
	comp=Z,0.5nm,0.5s							
KIV	**Kislovodsk**	**84.84**	**37**	P	**P**	**00 52 38.9**	**+0.8**	
KIV				IAmb	IAmb	00 52 40.7		
	comp=Z,8.8nm,1.2s							
Q56A	**Snyder Ridge,**	**87.67**	**315**	P	**P**	**00 52 52.2**	**+0.1**	
CMIG	**Matias Romero**	**89.25**	**289**	LR	LR	01 31 29.8		
	comp=Z,48nm,21.8s,baz=122,slow=35							

WRA	**Warramunga Arr**	**126.32**	**142**	PKP	**PKPdf**	**00 59 06.0**	**-1.2**	
	comp=Z,1.1nm,1.1s,baz=232,slow=2.4,SNR=4.7							
SONM	**Songino Array**	**127.19**	**47**	PKP	**PKPdf**	**00 59 07.9**	**-0.1**	
	comp=Z,0.3nm,0.6s,baz=280,slow=0.9,SNR=2.2							
ILAR	**Eielson Array**	**129.29**	**336**	PKP	**PKiKP**	**00 59 11.5**	**-0.5**	
	comp=Z,1.7nm,0.9s,baz=358,slow=1.7,SNR=13							
ILAR	**Eielson Array**	**129.29**	**336**	PKPdf	**PKPdf**	**00 59 10.8**	**-0.5**	
KSRS	**Korea Array**	**144.38**	**59**	PKP	**PKPab**	**00 59 37.6**	**-0.5**	
	comp=Z,1.7nm,0.8s,baz=283,slow=2.5,SNR=6.5							
USRK	**Ussuriysk Ar.**	**145.27**	**46**	PKPbc	**PKPbc**	**00 59 38.7**	**-2.3**	
	comp=Z,3.8nm,0.9s,baz=291,slow=5.9,SNR=4.5							
USRK	**Ussuriysk Ar.**	**145.27**	**46**		**PKPbc**	**00 59 39.6**	**-1.5**	
PETK	**Petropavlovsk-**	**150.04**	**11**	PKP	**PKPdf**	**00 59 49.0**	**+0.1**	
	comp=Z,6.9nm,1.2s,baz=284,slow=6.0,SNR=2.5							
MJAR	**Matsushiro Arr**	**152.56**	**56**	PKP	**PKPdf**	**00 59 54.3**	**+1.0**	
	comp=Z,0.4nm,0.6s,baz=6.9,slow=1.7,SNR=2.0							

IDC ***19*** *00:55:15.1±1.2, 35°.82N×135°.94E, h343*^{km}*±13*^{km}*, mb3.2/8, mbtmp3.9/12, Error ellipse: s-maj=25.9km s-min=15.2km az=70.0*

JMA ***19*** *00:55:16.1±0.1, 35°.8N±0°.7×135°.7E±0°.6, h338*^{km}*±1*^{km}*, MV3.1/32, E PART OF WAKASA BAY*

ISC 19 00:55:15.4±0.7, 35°.80N±0°.07×135°.79E±0°.07, h343^{km}**±6**^{km}**, n29, σ0°91/35, mb3.4/8, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JWT	**Wachi**	**0.60**	**212**	P	**Pn**	**00 55 59.5**	**+0.3**
JWT				S	**S**	**00 56 33.0**	**-1.2**
JKG	**Kaga**	**0.65**	**42**	P	**Pn**	**00 55 59.6**	**+0.4**
JKG				S	**S**	**00 56 33.7**	**-0.5**
JYTA	**Yamagatataniai**	**0.80**	**104**	P	**Pn**	**00 56 00.2**	**+0.5**
JYTA				S	**S**	**00 56 35.2**	**+0.1**
JWY	**Kouya**	**1.58**	**186**	P	**Pn**	**00 56 04.1**	**+0.6**
JIE	**Ise**	**1.59**	**151**	P	**Pn**	**00 56 04.4**	**+0.9**
JIE				S	**S**	**00 56 42.3**	**+0.4**
JTNC	**Tanabenakahech**	**1.98**	**184**	P	**Pn**	**00 56 06.2**	**+0.2**
JTNC				S	**S**	**00 56 45.6**	**-1.0**
JSZ	**Suzu**	**2.08**	**37**	P	**Pn**	**00 56 07.2**	**+0.7**
MAT	**Matsushiro**	**2.10**	**68**	P	**Pn**	**00 56 07.3**	**+0.6**
MJAR	**Matsushiro Arr**	**2.10**	**68**	P	**Pn**	**00 56 06.1**	**-0.7**
	13nm,0.6s,baz=256,slow=8.1,SNR=50						
JOI	**OKI**	**2.12**	**284**	P	**Pn**	**00 56 07.2**	**+0.4**
JYN	**Shimob**	**2.26**	**97**	P	**Pn**	**00 56 08.6**	**+0.5**
JAI	**Aioi**	**2.28**	**209**	P	**Pn**	**00 56 08.6**	**+0.4**
JAI				S	**S**	**00 56 50.1**	**-0.4**
JHS	**Saijyo**	**2.32**	**251**	P	**Pn**	**00 56 08.7**	**+0.1**
JFNN	**Fujinakano**	**2.44**	**103**	P	**Pn**	**00 56 10.9**	**+1.5**
TK02	**Tokai 2**	**2.45**	**138**	P	**Pn**	**00 56 10.8**	**+1.5**
JRY	**Ryogami san**	**2.54**	**84**	P	**Pn**	**00 56 10.7**	**+0.5**
JOD2	**Odawara 2**	**2.74**	**100**	P	**Pn**	**00 56 13.0**	**+1.0**
JHJ	**Hachijo jima 2**	**4.25**	**128**	S	**S**	**00 57 21.3**	**-2.7**
	55nm,0.7s,baz=37,slow=17,SNR=2.3						
KSRS	**Korea Array**	**6.54**	**287**	P	**Pn**	**00 56 52.3**	**+0.2**
	3.4nm,0.8s,baz=103,slow=13,SNR=15						
USRK	**Ussuriysk Ar.**	**8.88**	**342**	P	**Pn**	**00 57 19.8**	**0.0**
	11nm,0.7s,baz=163,slow=12,SNR=16						
KLR	**Kul'dur**	**13.75**	**349**	P	**P**	**00 58 16.1**	**-0.3**
	3.6nm,0.5s,baz=166,slow=10,SNR=16						
SONM	**Songino Array**	**24.83**	**308**	P	**P**	**01 00 09.8**	**+2.2**
	0.7nm,0.6s,baz=122,slow=9.8,SNR=5.4						
	0.7nm,0.6s						
CMAR	**Chiang Mai Arr**	**36.80**	**252**	P	**P**	**01 01 51.9**	**+0.1**
	0.7nm,0.3s,baz=46,slow=7.7,SNR=2.0						
	0.7nm,0.3s						
MKAR	**Makanchi Array**	**40.94**	**303**	P	**P**	**01 02 25.7**	**+0.2**
	1.3nm,0.6s,baz=85,slow=11,SNR=11						
	1.3nm,0.6s						
WRA	**Warramunga Arr**	**55.45**	**182**	P	**P**	**01 04 15.3**	**-0.1**
	0.5nm,0.4s,baz=356,slow=7.7,SNR=14						
	0.5nm,0.4s						
ARCES	**ARCESS Array B**	**63.51**	**338**	P	**P**	**01 05 08.6**	**-0.8**
	3.3nm,1.0s,baz=94,slow=12,SNR=1.5						
	3.3nm,1.0s						
FINES	**FINESS Array B**	**67.73**	**331**	P	**P**	**01 05 36.2**	**-0.1**
	1.2nm,0.5s,baz=83,slow=6.0,SNR=11						
	1.2nm,0.5s						
AKASG	**Malin Array Be**	**72.42**	**320**	P	**P**	**01 06 04.6**	**-0.1**
	0.2nm,0.4s,baz=191,slow=25,SNR=1.7						
	0.2nm,0.4s						
NOA	**NORSAR Array B**	**73.49**	**335**	P	**P**	**01 06 10.2**	**-0.6**
	0.7nm,0.8s,baz=46,slow=5.8,SNR=2.3						
	0.7nm,0.8s						

IDC ***19*** *01:08:34.8±3.6, 36°.40N×71°.40E, h135*^{km}*±30*^{km}*, mb3.4/8, mbtmp3.8/14, Error ellipse: s-maj=29.5km s-min=19.8km az=178.0*

NNC ***19*** *01:08:41.5±4.5, 37°.24N×71°.26E, h0*^{km}*, mb4.0, mpv3.8, Error ellipse: s-maj=36.1km s-min=27.2km az=162.0*

ISC 19 01:08:37.4±1.0, 36°.64N±0°.09×71°.38E±0°.09, h150^{km}**, n20, σ1°74/25, mb3.5/8, 5C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**6.45**	**21**	P	**Pn**	**01 10 09.9**	**-0.3**
	2.6nm,0.3s,baz=237,slow=2.4,SNR=3.7						
AAK				S	**Sn**	**01 11 21.5**	**-1.3**
	8.0nm,0.5s,baz=143,slow=20,SNR=13						
KK31	**Karatay Array**	**6.49**	**354**	⇓P	**Pn**	**01 10 12.3**	**+1.8**
	3.5nm,0.2s,baz=170,slow=11,SNR=309						
KK31				⇑S	**Sn**	**01 11 20.0**	**-3.5**
	5.9nm,0.3s,baz=186,slow=21,SNR=25						
CHMS	**Chumysh**	**6.86**	**21**	⇑P	**Pn**	**01 10 16.3**	**+0.9**
	2.1nm,0.3s						
CHMS				⇑S	**Sn**	**01 11 30.0**	**-2.4**
	12nm,0.8s						
TKM2	**Tokmak 2**	**7.06**	**26**	⇓P	**Pn**	**01 10 19.8**	**+1.5**
	3.6nm,0.6s						
TKM2				⇓S	**Sn**	**01 11 36.0**	**-1.4**
	5.2nm,0.7s						
GEYT	**Alibeck**	**10.65**	**281**	P	**Pn**	**01 11 04.9**	**-1.0**
	0.6nm,0.3s,baz=112,slow=11,SNR=1.7						
MKAR	**Makanchi Array**	**13.00**	**35**	P	**Pn**	**01 11 37.8**	**+1.5**
	0.5nm,0.5s,baz=222,slow=14,SNR=2.7						
KURBB	**Kurchatov Arra**	**14.89**	**18**	P	**P**	**01 12 02.3**	**+0.2**
	0.6nm,0.5s,baz=207,slow=10,SNR=5.0						
AB31	**Akbulak array**	**15.11**	**330**	⇓P	**P**	**01 12 05.1**	**+0.5**
	1.0nm,0.5s,baz=224,slow=69,SNR=38						
AB31				⇑S	**Sn**	**01 14 49.6**	**-1.1**
	0.4nm,0.4s,baz=165,slow=22,SNR=3.6						
AKTO	**Aktyubinsk**	**16.81**	**329**	P	**Pn**	**01 12 24.2**	**+0.5**
	1.8nm,0.5s,baz=125,slow=14,SNR=3.6						
AKTO	**Aktyubinsk**	**16.81**	**329**	⇑P	**Pn**	**01 12 29.0**	**+5.2**
	1.9nm,0.7s						
ZALV	**Zalesovo Beam**	**19.66**	**24**	P	**P**	**01 12 54.7**	**+0.4**
	1.7nm,0.3s,baz=223,slow=12,SNR=9.9						
SONM	**Songino Array**	**28.00**	**55**	P	**P**	**01 14 13.3**	**-0.8**
	0.5nm,0.7s,baz=184,slow=4.3,SNR=3.3						
	0.5nm,0.7s						
FINES	**FINESS Array B**	**37.54**	**326**	P	**P**	**01 15 37.0**	**+0.5**
	6.4nm,0.9s,baz=159,slow=7.4,SNR=5.7						
	6.4nm,0.9s						
ARCES	**ARCESS Array B**	**41.13**	**337**	P	**P**	**01 16 07.2**	**+0.9**
	2.0nm,0.9s,baz=94,slow=5.2,SNR=3.8						
	2.0nm,0.9s						
NB2	**NORSAR Subarra**	**44.45**	**323**	P	**P**	**01 16 33.6**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=95,slow=7.9						
NOA	**NORSAR Array B**	**44.45**	**323**	P	**P**	**01 16 33.6**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=106,slow=7.1,SNR=4.2						
	comp=Z,0.4nm,0.5s						
TORD	**Torodi Ar. Bea**	**66.03**	**269**	P	**P**	**01 19 06.6**	**-1.6**
	comp=Z,2.2nm,1.1s,baz=52,slow=6.4,SNR=1.3						
	comp=Z,2.2nm,1.1s						
INK	**Inuvik**	**73.72**	**9**	P	**P**	**01 19 54.9**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=324,slow=10,SNR=4.1						
	comp=Z,0.5nm,0.5s						
YKA	**Yellowknife Ar**	**81.09**	**3**	P	**P**	**01 20 35.7**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=360,slow=3.7,SNR=1.6						
	comp=Z,0.4nm,0.5s						
WRA	**Warramunga Arr**	**81.81**	**122**	P	**P**	**01 20 38.5**	**-1.2**
	comp=Z,0.2nm,0.5s,baz=327,slow=4.9,SNR=5.1						
	comp=Z,0.2nm,0.5s						

PGC 19 01:09:19.0±10.0, 50°.26N×130°.31W, h10^{km}**, MLSn3.3/27, Mw3.9/27, Mw3.9/27, 210km west of Pt. Hardy, Bc Vancouver Island, Canada Region, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOLB	**Holberg**	**1.44**	**74**	P	Pn	01 09 42.8	-2.4
HOLB				Sn	Sn	01 09 59.9	-4.3
BPBC	**Brooks Peninsu**	**1.63**	**93**	Pn	Pn	01 09 45.5	-2.3
BPBC				Pg	Pb	01 09 47.5	-1.7
PACB	**Port Alice, BC**	**1.81**	**83**	Pn	Pn	01 09 47.9	-2.3
PACB				Pg	Pb	01 09 49.8	-2.4
PHC	**Port Hardy**	**1.89**	**75**	Pn	Pn	01 09 49.2	-2.0
PHC				Pg	Pb	01 09 51.0	-2.5
PHC				Sn	Sn	01 10 11.6	-3.5
MAYB	**Maynard**	**2.02**	**85**	Pn	Pn	01 09 51.2	-1.9
MAYB				Pg	Pb	01 09 53.2	-2.6
MAYB				Sn	Sn	01 10 10.4	-8.0
EDB	**Eliza Dome**	**2.09**	**100**	Pn	Pn	01 09 52.9	-1.1
HG4B	**Hotspring**	**2.11**	**345**	Pn	Pn	01 09 52.2	-2.1
TLCB	**Telegraph Cove**	**2.24**	**81**	Pn	Pn	01 09 54.6	-1.4
BBB	**Bella Bella**	**2.37**	**35**	Pn	Pn	01 09 55.6	-2.2
BBB				Pg	Pb	01 09 57.5	-4.1
WOSB	**Woss**	**2.40**	**91**	Pn	Pn	01 09 57.2	-1.2
WOSB				Pg	Pb	01 09 59.3	-3.1
BNB	**Barry Inlet**	**2.48**	**339**	Pn	Pn	01 09 58.9	-0.6
NCRB	**Newcastle Ridg**	**2.73**	**85**	Pn	Pn	01 10 01.6	-1.4
NCRB				Pg	Pb	01 10 03.7	-4.2
GDR	**Gold River**	**2.80**	**98**	Pn	Pn	01 10 04.2	+0.5
BUTB	**Butedale**	**3.03**	**22**	Pn	Pn	01 10 05.9	-1.2
BUTB				Sn	Sn	01 10 40.0	-3.4
BNKB	**Banks Island**	**3.08**	**5**	Pn	Pn	01 10 05.5	-2.2
CBB	**Campbell River**	**3.19**	**92**	Pn	Pn	01 10 08.6	-0.5
CBB				Pg	Pb	01 10 10.3	-5.4
BTB	**Buttle Lake**	**3.20**	**103**	Pn	Pn	01 10 08.8	-0.6
BTB				Pg	Pb	01 10 10.6	-5.3
DIB	**Dawson Inlet,**	**3.24**	**336**	Pn	Pn	01 10 09.4	-0.3
BNAB	**Bonilla**	**3.24**	**357**	Pn	Pn	01 10 08.3	-1.5
BNAB				Sn	Sn	01 10 44.1	-4.3
OZB	**Mount Ozzard**	**3.39**	**111**	Pn	Pn	01 10 13.6	+1.6
HWKB	**Hawksbury Isla**	**3.42**	**12**	Pn	Pn	01 10 09.7	-2.6
GRNB	**Grenville Isla**	**3.59**	**3**	Pn	Pn	01 10 12.8	-2.0
GRNB				Sn	Sn	01 10 53.6	-3.6
TXB	**Texada**	**3.83**	**96**	Pn	Pn	01 10 18.2	+0.2
MGB	**Mount Grey**	**3.86**	**107**	Pn	Pn	01 10 19.0	+0.5
KITB	**Kitimat**	**3.96**	**14**	Pn	Pn	01 10 17.5	-2.1
PFB	**Port Renfrew**	**4.19**	**112**	Pn	Pn	01 10 24.6	+1.7
SHB	**Sechelt**	**4.21**	**97**	Pn	Pn	01 10 23.7	+0.5
NLLB	**Nanaimo Lost L**	**4.23**	**102**	Pn	Pn	01 10 25.7	+2.3
GOBB	**Galiano Island**	**4.61**	**104**	Pn	Pn	01 10 30.4	+1.7
UBRB	**Upper Baezaeko**	**4.69**	**53**	Pn	Pn	01 10 30.1	+0.2
SNB	**Saturna Island**	**4.88**	**105**	Pn	Pn	01 10 35.3	+2.9
HNBB	**Haney**	**5.11**	**98**	Pn	Pn	01 10 34.5	-0.9
MCW	**Mount Constitu**	**5.13**	**105**	Pn	Pn	01 10 37.8	+2.0
LLLB	**Lillooet**	**5.40**	**83**	Pn	Pn	01 10 39.7	+0.2
VDB	**Vedder Mountai**	**5.47**	**100**	Pn	Pn	01 10 42.5	+1.9
A05A	**Maple Falls**	**5.49**	**100**	Pn	Pn	01 10 43.3	+2.6
FSJB	**Fort Saint Jam**	**5.59**	**39**	Pn	Pn	01 10 42.0	-0.1
FSJB	**Fort St James**	**5.59**	**39**	Pg	Pn	01 10 43.7	+1.6
FSJB				Sn	Sn	01 11 42.7	-3.6
MBW	**Mount Baker**	**5.67**	**102**	Pn	Pn	01 10 45.4	+2.0

IDC ***19*** *01:12:10.3±0.5, 5°.51S×11°.54W, h0*^{km}*, mb4.3/28, mbtmp4.3/29, ML3.6/1,

MALB	**Monte Alegre**	**42.81**	**273**	*eP*	**P**	**01 20 10.2**	**-0.2**
TRCB	**Terra Rica**	**43.20**	**242**	P	**P**	**01 20 14.4**	**+0.8**
PTGB	**Pitanga**	**43.30**	**240**	*eP*	**P**	**01 20 15.9**	**+1.5**
NPGB	**Novo Progresso**	**43.59**	**266**	*eP*	**P**	**01 20 16.0**	**-0.8**
PP1B	**Ponte de Pedra**	**44.03**	**250**	*eP*	**P**	**01 20 21.1**	**+0.9**
ITTB	**Itaituba**	**44.06**	**269**	*eP*	**P**	**01 20 20.2**	**-0.3**
CLDB	**Colider**	**44.11**	**260**	*eP*	**P**	**01 20 21.1**	**+0.2**
NBRS	**Nobres**	**44.39**	**255**	*eP*	**P**	**01 20 24.1**	**+0.9**
SALV	**Santo Antonio**	**44.52**	**253**	*eP*	**P**	**01 20 25.0**	**+0.8**
PDRB	**Porto dos Gac**	**45.07**	**259**	*eP*	**P**	**01 20 28.8**	**+0.2**
KEST	**Kesra**	**45.50**	**24**	P	**P**	**01 20 32.5**	**+0.8**
	comp=Z,12nm,1.1s,baz=205,slow=8.3,SNR=4.9						
KEST				LR	LR	01 39 52.1	
	comp=Z,288nm,19.3s,baz=211,slow=36						
	comp=Z,12nm,1.1s						
KEST	**Kesra**	**45.50**	**24**	P	**P**	**01 20 33.2**	**+1.5**
KEST				IAmb	IAmb	01 20 47.7	
	comp=Z,21nm,1.1s						
ESDC	**Sonseca Array**	**45.53**	**8**	P	**P**	**01 20 32.3**	**+0.4**
	comp=Z,1.4nm,1.1s,baz=188,slow=9.0,SNR=4.6						
ESDC				PP	**PP**	**01 22 17.5**	**-1.2**
	comp=Z,0.3nm,0.7s,baz=271,slow=13.SNR=2.8						
ESDC				LR	LR	01 39 31.8	
	comp=Z,62nm,18.5s,baz=206,slow=36						
	comp=Z,1.4nm,1.1s						
ESDC	**Sonseca Array**	**45.53**	**8**	P	**P**	**01 20 35.2**	**+3.3**
POCN	**Pocone**	**45.61**	**252**	*eP*	**P**	**01 20 34.2**	**+1.4**
CRSM	**Crissiumal (Br**	**45.92**	**237**	*eP*	**P**	**01 20 35.2**	**+0.1**
ANTJ	**Antonio Joao (**	**45.99**	**245**	*eP*	**P**	**01 20 36.8**	**+0.9**
CPSB	**Cacapava Do Su**	**46.52**	**233**	*eP*	**P**	**01 20 41.3**	**+1.5**
PLTB	**Pedras Altas**	**47.20**	**231**	*eP*	**P**	**01 20 47.0**	**+1.8**
LODK	**Lodwar**	**47.66**	**80**	P	**P**	**01 20 49.6**	**+0.6**
LODK				IAmb	IAmb	01 20 57.7	
	comp=Z,6.7nm,1.1s						
PTLB	**Pontes e Lacer**	**47.75**	**254**	*eP*	**P**	**01 20 50.8**	**+1.2**
CPUP	**Villa Florida**	**48.32**	**240**	P	**P**	**01 20 54.1**	**+0.2**
	comp=Z,2.0nm,0.8s,baz=64,slow=5.2,SNR=4.4						
CPUP				LR	LR	01 39 00.7	
	comp=Z,98nm,18.9s,baz=78,slow=33						
	comp=Z,2.0nm,0.8s						
CPUP	**Villa Florida**	**48.32**	**240**	*eP*	**P**	**01 20 54.9**	**+1.0**
VBST	**Vila Bela da S**	**48.50**	**256**	*eP*	**P**	**01 20 56.4**	**+1.0**
ITQB	**Itaqui**	**48.80**	**235**	P	**P**	**01 20 57.9**	**+0.4**
ITQB				IAmb	IAmb	01 21 02.3	
	comp=Z,12nm,1.1s						
ITQB	**Itaqui**	**48.80**	**235**	*eP*	**P**	**01 20 59.2**	**+1.6**
KMBO	**Kilima Mbogo**	**48.86**	**87**	P	**P**	**01 20 58.6**	**0.0**
	comp=Z,0.4nm,0.3s,baz=243,slow=7.4,SNR=3.6						
	comp=Z,0.4nm,0.3s						
KMBO	**Kilima Mbogo**	**48.86**	**87**	P	**P**	**01 20 58.3**	**-0.3**
KIBK	**Kibwezi**	**49.53**	**88**	P	**P**	**01 21 03.6**	**+0.1**
BOAV	**Boa Vista**	**49.58**	**278**	*eP*	**P**	**01 21 03.5**	**-0.3**
SIV	**San Ignacio**	**49.66**	**254**	P	**P**	**01 21 05.2**	**+0.8**
	comp=Z,2.4nm,0.7s,baz=98,slow=9.5,SNR=14						
SIV				LR	LR	01 41 25.7	
	comp=Z,224nm,18.2s,baz=110,slow=35						
	comp=Z,2.4nm,0.7s						
SAML	**Samuel**	**51.34**	**263**	P	**P**	**01 21 16.6**	**-0.4**
ITM	**Ithomi**	**52.73**	**34**	P	**P**	**01 21 28.0**	**+1.0**
ITM				IAmb	IAmb	01 21 35.7	
	comp=Z,7.4nm,0.8s						
AQU	**L'Aquila**	**52.79**	**23**	P	**P**	**01 21 29.0**	**+1.6**
AQU				IAmb	IAmb	01 21 36.5	
	comp=Z,9.6nm,0.9s						
BNI	**Bardonecchia**	**52.95**	**16**	P	**P**	**01 21 30.7**	**+2.0**
NRCA	**Norcia**	**53.09**	**23**	P	**P**	**01 21 31.5**	**+1.8**
IDI	**Anoyia**	**53.12**	**37**	⇑P	**P**	**01 21 30.9**	**+0.9**
IDI	**Anoyia**	**53.12**	**37**	P	**P**	**01 21 29.5**	**-0.5**
ETMB	**Extrema**	**54.33**	**262**	*eP*	**P**	**01 21 39.5**	**+0.3**
FNA	**Florina**	**55.09**	**30**	IAmb	IAmb	01 21 53.0	
	comp=Z,9.1nm,1.0s						
LIT	**Litokhoron**	**55.16**	**32**	P	**P**	**01 21 45.4**	**+0.7**
LIT				IAmb	IAmb	01 21 56.3	
	comp=Z,7.4nm,1.0s						
CTI	**Castel Tesino**	**55.36**	**19**	P	**P**	**01 21 48.7**	**+2.6**
DAVA	**Damuels**	**55.90**	**17**	*eP*	**P**	**01 21 49.8**	**-0.3**
	comp=Z,6.2nm,1.2s						
FETA	**Feichten**	**55.92**	**18**	*eP*	**P**	**01 21 50.3**	**0.0**
	comp=Z,11nm,1.1s						
SQTA	**Sankt Quirin**	**56.25**	**18**	*eP*	**P**	**01 21 52.6**	**0.0**
	comp=Z,16nm,1.0s						
ABTA	**Abfaltersbach**	**56.26**	**20**	*eP*	**P**	**01 21 53.3**	**+0.7**
	comp=Z,9.9nm,1.2s						
MOTA	**Moosalm**	**56.33**	**18**	*eP*	**P**	**01 21 52.4**	**-0.8**
	comp=Z,6.2nm,1.1s						
BFO	**Black Forest**	**56.41**	**16**	P	**P**	**01 21 56.4**	**+2.8**
WTTA	**Wattenberg**	**56.42**	**19**	*eP*	**P**	**01 21 54.1**	**+0.2**
	comp=Z,8.9nm,1.0s						
LPAZ	**La Paz**	**56.45**	**254**	P	**P**	**01 21 54.2**	**-1.0**
	comp=Z,1.0nm,0.8s,baz=37,slow=10,SNR=4.4						
LPAZ				PcP	**PcP**	**01 22 51.3**	**-0.8**
	comp=Z,2.0nm,0.8s,baz=57,slow=3.2,SNR=3.7						
LPAZ				LR	LR	01 44 54.5	
	comp=Z,104nm,18.6s,baz=104,slow=35						
	comp=Z,1.0nm,0.8s						
LPAZ	**La Paz**	**56.45**	**254**	P	**P**	**01 21 53.9**	**-1.3**
LPAZ	**La Paz**	**56.45**	**254**	*eP*	**P**	**01 21 54.9**	**-0.2**
WATA	**Walderalm**	**56.47**	**19**	*eP*	**P**	**01 21 54.1**	**-0.1**
	comp=Z,6.3nm,1.3s						
AKAS	**Kas**	**56.65**	**40**	P	**P**	**01 21 56.1**	**+0.5**
AKAS				IAmb	IAmb	01 22 08.8	
	comp=Z,15nm,1.0s						
DIVS	**Divibare**	**56.98**	**27**	IAmb	IAmb	01 22 06.7	
	comp=Z,13nm,1.1s						
STU	**Stuttgart**	**57.05**	**16**	P	**P**	**01 22 00.6**	**+2.5**
SOKA	**Soboth**	**57.08**	**22**	*eP*	**P**	**01 21 59.7**	**+1.3**
	comp=Z,3.6nm,0.9s						
RDO	**Rodhopi**	**57.52**	**33**	IAmb	IAmb	01 22 10.1	
	comp=Z,12nm,1.1s						
ALN	**Alexandroupoli**	**57.62**	**33**	P	**P**	**01 22 02.5**	**+0.2**
ALN				IAmb	IAmb	01 22 13.7	
	comp=Z,4.8nm,0.9s						
FRGS	**Fruska Gora**	**57.74**	**26**	⇑P	**P**	**01 22 03.6**	**+0.5**
KOVH	**Kovagotottos**	**57.77**	**24**	P	**P**	**01 22 04.2**	**+1.0**
MOA	**Molln**	**57.81**	**20**	*eP*	**P**	**01 22 04.8**	**+1.3**
	comp=Z,7.9nm,1.2s						
MORH	**Mrgy, Hungar**	**58.09**	**24**	⇑P	**P**	**01 22 05.9**	**+0.4**
MORH	**Mrgy, Hungar**	**58.09**	**24**	P	**P**	**01 22 06.4**	**+1.0**
BAUV	**El Baul**	**58.16**	**284**	P	**P**	**01 22 06.2**	**-0.3**
RONA	**Rosalia, Austr**	**58.41**	**22**	*eP*	**P**	**01 22 09.0**	**+1.3**
	comp=Z,11nm,1.3s						
MPLH	**Magyarpolny**	**58.43**	**23**	P	**P**	**01 22 08.8**	**+1.0**
CONA	**Conrad Observa**	**58.44**	**21**	*eP*	**P**	**01 22 09.0**	**+1.0**
	comp=Z,3.0nm,0.9s						
GEC2	**GERESS Array S**	**58.48**	**19**	P	**P**	**01 22 08.6**	**+0.3**
GEC2				IAmb	IAmb	01 22 15.9	
	comp=Z,13nm,1.1s						
GERES	**GERESS Array B**	**58.48**	**19**	P	**P**	**01 22 08.2**	**0.0**
	comp=Z,3.1nm,1.0s,baz=201,slow=7.1,SNR=20						
GERES				PP	**PP**	**01 24 17.9**	**0.0**
	comp=Z,0.6nm,0.7s,baz=193,slow=5.2,SNR=2.7						
	comp=Z,3.1nm,1.0s						
SOP	**Sopron**	**58.49**	**22**	P	**P**	**01 22 08.3**	**+0.1**
PB02	**IPOC Station P**	**58.58**	**248**	P	**P**	**01 22 09.7**	**+0.2**
PB02				IAmb	IAmb	01 22 17.8	
	comp=Z,11nm,0.8s						
CKRC	**Cesky Krumlov**	**58.66**	**20**	*eP*	**P**	**01 22 09.5**	**+0.1**
CKRC				*ex*	x	01 22 14.1	
KHC	**Kasperske Hory**	**58.69**	**19**	*eP*	**P**	**01 22 14.2**	**+4.6**
HERR	**Herculane**	**58.69**	**28**	⇓P	**P**	**01 22 10.4**	**+0.7**
SJG	**San Juan**	**58.79**	**295**	LR	LR	01 43 25.5	
	comp=Z,119nm,19.0s,baz=85,slow=32						
NKC	**Novy Kostel**	**59.30**	**18**	*eP*	P	01 22 19.7	+5.9
ASF	**Jabal al Asfar**	**59.37**	**47**	P	**P**	**01 22 15.1**	**+0.3**
	comp=Z,1.0nm,0.3s,baz=267,slow=5.1,SNR=4.2						
	comp=Z,1.0nm,0.3s						
SIRR	**Siria**	**59.41**	**26**	⇑P	**P**	**01 22 15.1**	**+0.3**
BORA	**Eskisehir**	**59.46**	**37**	IAmb	IAmb	01 22 23.9	
	comp=Z,6.1nm,0.9s						
KRUC	**Moravsky**	**59.59**	**21**	*eP*	**P**	**01 22 15.4**	**-0.4**
VRAC	**Vranov**	**59.86**	**21**	*eP*	P	01 22 23.6	+5.9
JAVC	**Velka Javorina**	**59.88**	**22**	*eP*	**P**	**01 22 19.2**	**+1.3**
KOLL	**Kolacno**	**59.92**	**23**	*eP*	**P**	**01 22 19.0**	**+0.9**
PSZ	**Piszkesteto**	**59.97**	**24**	P	**P**	**01 22 19.6**	**+1.0**
PSZ	**Piszkesteto**	**59.97**	**24**	P	**P**	**01 22 20.0**	**+1.4**
VYHS	**Vyhne**	**60.02**	**23**	*eP*	**P**	**01 22 19.7**	**+0.9**
VYHS				*e*		01 22 25.8	
ARR	**Arges**	**60.10**	**29**	⇑P	**P**	**01 22 19.7**	**+0.2**
PVCC	**Panska Ves**	**60.22**	**19**	*eP*	P	01 22 25.9	+5.8
MDUB	**Mudurnu**	**60.27**	**37**	P	**P**	**01 22 21.7**	**+0.8**
DRGR		**60.28**	**26**	⇓P	**P**	**01 22 21.1**	**+0.3**
BRG	**Berggiesshubel**	**60.32**	**18**	*eP*	P	01 22 27.6	+6.8
BRG				Amp		01 22 29.1	
	comp=Z,8.9nm,1.4s						
VOIR		**60.35**	**29**	⇑P	**P**	**01 22 21.7**	**+0.4**
MAUC	**Maruska**	**60.36**	**22**	*eP*	**P**	**01 22 22.1**	**+0.9**
MAUC				*ex*	x	01 22 28.8	
ORCD	**Orcadas**	**60.48**	**198**	P	**P**	**01 22 21.9**	**+0.1**
KRLC	**Kraliky**	**60.58**	**21**	*eP*	**P**	**01 22 22.3**	**-0.3**
KRLC				*ex*	x	01 22 29.4	
MORC	**Moravsky Berou**	**60.59**	**21**	IAmb	IAmb	01 22 30.8	
	comp=Z,9.2nm,1.1s						
MORC	**Moravsky Berou**	**60.59**	**21**	*eP*	**P**	**01 22 23.2**	**+0.4**
DPC	**Dobruska-Polom**	**60.65**	**20**	*eP*	P	01 22 12.8	-10
DPC				*ex*	x	01 22 22.7	
SDV	**Santo Domingo**	**60.65**	**283**	LR	LR	01 46 52.6	
	comp=Z,82nm,19.6s,baz=16,slow=34						
CHVC	**Chvalec**	**60.76**	**20**	*eP*	**P**	**01 22 23.8**	**-0.1**
CHVC				*ex*	x	01 22 28.9	
OSTC	**Ostas**	**60.79**	**20**	*eP*	**P**	**01 22 24.4**	**+0.3**
OSTC				*ex*	x	01 22 30.5	
LANS	**Liptovska Anna**	**60.80**	**23**	*eP*	**P**	**01 22 25.3**	**+1.1**
MLR	**Muntele Rosu**	**60.82**	**29**	⇓P	**P**	**01 22 24.2**	**-0.4**
MLR	**Muntele Rosu**	**60.82**	**29**	P	**P**	**01 22 25.0**	**+0.5**
ANTO	**Ankara**	**60.86**	**38**	P	**P**	**01 22 25.7**	**+0.8**
OKC	**Ostrava-Krasne**	**60.87**	**22**	*eP*	**P**	**01 22 22.3**	**-2.2**
OKC				*ex*	x	01 22 32.0	
BR131	**Keskin Array S**	**61.30**	**39**	IAmb	IAmb	01 22 36.9	
	comp=Z,13nm,1.1s						
BRTR	**Keskin Array B**	**61.30**	**39**	P	**P**	**01 22 28.8**	**+0.9**
	comp=Z,4.8nm,1.0s,baz=208,slow=7.0,SNR=24						
	comp=Z,4.8nm,1.0s						
BRTR	**Keskin Array B**	**61.30**	**39**	P	**P**	**01 22 28.9**	**+1.0**
CRVS	**Cervenica-Dubn**	**61.39**	**24**	*eP*	**P**	**01 22 29.4**	**+1.2**
CRVS				*e*		01 22 35.6	
OJC	**Ojcow**	**61.79**	**22**	IAmb	IAmb	01 22 38.5	
	comp=Z,9.8nm,0.9s						
BIZ	**Bicaz**	**61.95**	**28**	⇑P	**P**	**01 22 31.6**	**-0.3**
BURAR	**Bucovina Array**	**62.03**	**27**	P	**P**	**01 22 34.1**	**+1.5**
BNN	**Bunyan**	**62.19**	**40**	P	**P**	**01 22 34.8**	**+0.8**
BANI	**BANI**	**62.69**	**294**	P	**P**	**01 22 39.0**	**+1.4**
TOKA	**Tokat**	**63.42**	**39**	P	**P**	**01 22 43.2**	**+1.2**
TOKA				IAmb	IAmb	01 22 50.5	
	comp=Z,5.3nm,0.8s						
ROSC	**El Rosal**	**63.56**	**278**	LR	LR	01 49 03.7	
	comp=Z,194nm,19.8s,baz=70,slow=35						
ZARC	**Zaragoza, Cauc**	**64.51**	**281**	P	**P**	**01 22 48.5**	**-1.1**
ZARC				IAmb	IAmb	01 22 51.1	
	comp=Z,7.9nm,1.1s						
MARD	**Mardin**	**64.69**	**44**	P	**P**	**01 22 51.3**	**+0.7**
MARD				IAmb	IAmb	01 22 52.4	
	comp=Z,6.5nm,0.7s						
NNA	**Nana**	**64.76**	**259**	LR	LR	01 49 47.2	
	comp=Z,236nm,20.4s,baz=108,slow=35						
LL02	**Futaleuf**	**64.80**	**225**	P	**P**	**01 22 50.6**	**-0.4**
LL02				IAmb	IAmb	01 22 52.2	
	comp=Z,10nm,1.0s						
VNA1	**Neumayer--Stat**	**65.05**	**179**	P	**P**	**01 22 52.9**	**+0.8**
VNA3	**Neumayer Olymp**	**65.63**	**179**	P	**P**	**01 22 57.0**	**+1.2**
AKASG	**Malin Array Be**	**66.08**	**27**	P	**P**	**01 22 58.4**	**-0.7**
	comp=Z,5.1nm,0.7s,baz=225,slow=6.6,SNR=31						
	comp=Z,5.1nm,0.7s						
GURO	**Guroymak-BITLI**	**66.16**	**44**	P	**P**	**01 23 01.2**	**+1.2**
GURO				IAmb	IAmb	01 23 08.6	
	comp=Z,5.5nm,0.9s						
SNAA	**Sanae**	**66.27**	**177**	P	**P**	**01 23 01.6**	**+1.6**
SNAA	**Sanae**	**66.27**	**177**	P	**P**	**01 23 01.1**	**+1.1**
	comp=Z,2.1nm,0.9s,baz=299,slow=5.9,SNR=6.2						
	comp=Z,2.1nm,0.9s						
SNAA	**Sanae**	**66.27**	**177**	P	**P**	**01 23 01.2**	**+1.1**
SNAA				IAmb	IAmb	01 23 08.9	
	comp=Z,5.7nm,1.1s						
ATAH	**Atahualpa**	**66.44**	**265**	LR	LR	01 52 01.0	
	comp=Z,415nm,18.6s,baz=100,slow=36						
TROLL	**Troll, Antarti**	**66.96**	**175**	P	**P**	**01 23 05.8**	**+1.3**
NACGM	**Naroch**	**68.11**	**23**	⇓*e*P	**P**	**01 23 12.5**	**+0.6**
	baz=222						
MNK	**Minsk**	**68.24**	**23**	*i* P	**P**	**01 23 11.9**	**-0.8**
	comp=E,1.0nm,0.9s						
MNK				*i* P	**P**	**01 23 11.9**	**-0.8**
	comp=N,18nm,0.9s						
MNK				*i* P	**P**	**01 23 11.9**	**-0.8**
	comp=Z,20nm,0.9s,baz=223						
MNK				*i* PcP	**PcP**	**01 23 39.2**	**+0.9**
MNK				*i* PP	**PP**	**01 25 40.3**	**-3.1**
MNK				*i* PPP	PPP	01 27 20.0	
MNK				*i* S	**S**	**01 32 12.4**	**-0.5**
MNK				*i* SS	**SS**	**01 36 33.7**	**-2.5**
MNK				*i* SSS	SSS	01 39 50.6	
MNK				*i* LQ	LQ	01 48 15.6	
MNK				*i* LR	LR	01 53 26.7	
MNK				*i* LRM	MLR	01 58 52.6	
	comp=Z,9μm,24.3s						
MNK				*i* LRM	MLR	01 59 14.3	
	comp=E,10.0nm,16.6s						
MNK				*i* LRM	MLR	01 59 14.3	
	comp=N,179nm,14.7s						
NOA	**NORSAR Array B**	**68.72**	**12**	P	**P**	**01 23 16.0**	**+0.4**
	comp=N,1.0nm,0.9s,baz=203,slow=7.3,SNR=2.2						
	comp=N,1.0nm,0.9s						
ONI	**Oni**	**69.07**	**40**	P	**P**	**01 23 19.4**	**+1.2**
KIV	**Kislovodsk**	**69.26**	**39**	P	**P**	**01 23 19.6**	**+0.2**
KIV				IAmb	IAmb	01 23 34.4	
	comp=Z,12nm,1.1s						
KVAR	**Kislovodsk Arr**	**69.27**	**39**	P	**P**	**01 23 20.0**	**+0.5**
	comp=Z,0.7nm,0.3s,baz=329,slow=12,SNR=1.9						
	comp=Z,0.7nm,0.3s						
KBZ	**Khabaz**	**69.28**	**39**	P	**P**	**01 23 20.0**	**+0.7**
	comp=Z,4.3nm,0.9s,baz=282,slow=5.4,SNR=6.6						
	comp=Z,4.3nm,0.9s						
FINES	**FINESS Array B**	**72.86**	**18**	P	**P**	**01 23 40.4**	**-0.3**
	comp=Z,3.7nm,1.0s,baz=185,slow=8.4,SNR=2.2						
	comp=Z,3.7nm,1.0s						
JTS	**Las Juntas de**	**74.80**	**282**	LR	LR	01 57 02.4	
	comp=Z,76nm,19.4s,baz=190,slow=36						
J56A	**Wolcott**	**76.25**	**317**	P	**P**	**01 24 02.2**	**+1.4**
J56A				IAmb	IAmb	01 24 03.6	
	comp=Z,9.7nm,0.9s						
KLMR	**Klimovskoe**	**77.13**	**23**	*eP*	**P**	**01 24 06.8**	**+1.4**
KLMR				AMP		01 24 10.1	
	comp=Z,16nm,1.5s						
KLMR				*e*PP	**PP**	**01 27 03.5**	**+4.3**
GEYT	**Alibeck**	**77.57**	**49**	P	**P**	**01 24 08.2**	**-0.3**
	comp=Z,2.1nm,0.7s,baz=279,slow=2.8,SNR=3.6						
	comp=Z,2.1nm,0.7s						
SADO	**Sadowa**	**78.32**	**318**	LR	LR	01 54 02.0	
	comp=Z,126nm,18.7s,baz=114,slow=32						
TKL	**Tuckaleechee C**	**78.97**	**308**	LR	LR	01 51 29.3	
	comp=Z,86nm,21.5s,baz=130,slow=30						
HRA	**Herat**	**79.85**	**54**	P	**P**	**01 24 21.6**	**+0.3**
AKTO	**Aktyubinsk**	**81.44**	**37**	P	**P**	**01 24 29.5**	**+0.2**
	comp=Z,2.9nm,0.9s,baz=201,slow=4.9,SNR=9.2						
AKTO				LR	LR	02 06 15.2	
	comp=Z,298nm,19.6s,baz=164,slow=40						
	comp=Z,2.9nm,0.9s						
ABKAR	**Akbulak array**	**82.25**	**39**	P	**P**	**01 24 33.3**	**-0.2**
ARU	**Arti**	**83.77**	**32**	P	**P**	**01 24 41.2**	**0.0**
	comp=Z,0.9nm,0.3s,baz=266,slow=7.4,SNR=4.9						
	comp=Z,0.9nm,0.3s						
ARU	**Arti**	**83.77**	**32**	P	**P**	**01 24 41.0**	**-0.2**
ARU				IAmb	IAmb	01 24 48.5	
	comp=Z,7.6nm,1.1s						
QSPA	**South Pole Qui**	**84.56**	**180**	P	**P**	**01 24 46.1**	**+0.8**
	comp=Z,2.4nm,0.9s,baz=227,slow=2.6,SNR=6.1						
	comp=Z,2.4nm,0.9s						
QSPA	**South Pole Qui**	**84.56**	**180**	P	**P**	**01 24 45.8**	**+0.5**
KK31	**Karatay Array**	**87.95**	**47**	P	**P**	**01 25 01.1**	**-1.2**
KKAR	**Karatay Array**	**87.95**	**47**	P	**P**	**01 25 01.6**	**-0.7**
I37A	**Lemond, Waseca**	**88.00**	**314**	P	**P**	**01 25 02.4**	**-0.1**
PALK	**Pallekele**	**92.88**	**83**	LR	LR	02 06 02.9	
	comp=Z,107nm,18.1s,baz=22,slow=35						
KURK	**Kurchatov**	**94.33**	**40**	P	**P**	**01 25 32.4**	**+0.6**
KURK				IAmb	IAmb	01 25 39.4	
	comp=Z,2.8nm,1.0s						
TXAR	**Lajitas Array**	**94.56**	**299**	P	**P**	**01 25 33.0**	**-0.4**
	comp=Z,0.4nm,0.8s,baz=125,slow=6.3,SNR=4.0						
	comp=Z,0.4nm,0.8s						
TXAR	**Lajitas Array**	**94.56**	**299**	P	**P**	**01 25 31.1**	**-2.3**
HPIG		**96.18**	**296**	P	**P**	**01 25 38.5**	**-2.5**
MKAR	**Makanchi Array**	**96.61**	**44**	P	**P**	**01 25 40.8**	**-1.5**
	comp=Z,0.7nm,0.8s,baz=270,slow=2.4,SNR=4.0						
	comp=Z,0.7nm,0.8s						
WMQ	**Urumqi**	**100.46**	**47**	*eP*	**Pdif**	**01 26 02.5**	**+2.8**
CD2	**Chengdu**	**114.48**	**59**	PKP	**PKiKP**	**01 30 53.3**	**+0.4**
XAN	**Xi'an**	**118.18**	**54**	PKP	**PKPdf**	**01 30 55.6**	**-4.4**
XAN				sPKP		01 31 06.6	
XAN				LR	LR		
	comp=E,170nm,17.9s						
XLT	**XiLinHaoTe**	**120.35**	**42**	*e*PKP	**PKPdf**	**01 31 02.9**	**-1.0**

IDC ***19*** *01:16:07.8±0.4,31°.91S×57°.08E,h0km,mb4.7/28, mbtmp4.7/29,ML5.1/1,MS4.6/63,Error ellipse: s-maj=14.5km s-min=12.1km az=53.0*

MOS ***19*** *01:16:08.8±1.1,31°.94S×57°.22E,h10km,mb5.4/54, MS4.6/21,Error ellipse: s-maj=11.7km s-min=5.1km az=101.4*

NEIC ***19*** *01:16:11.4±2.1,31°.88S±0°.08×57°.2E±0°.1,h10km±1km, mb5.3/99,Error ellipse: s-maj=16.3km s-min=12.2km az=235.0*

GCMT ***19*** *01:16:12.4±0.1,31°.78S±0°.01×57°.15E±0°.01,h12km, MW5.3/106,Moment Tension Solution. s71,c106; s106,c198; Duration: 1ś1 Moment tensor: Scale 10^17 Nm; Mrr-1.19±.02; Mθθ 1.15±.02; Mφφ 0.03±.02; Mrθ 0.07±.04; Mθφ-0.21±.01; Mφr 0.26±.05; Best double couple: M₀1.21800×10^17 NP1:φs112.00000°,δ46.00000°, λ-73.00000°. NP2:φs269.00000°,δ47.00000°, λ-107.00000°. Principal axes: T 1.1900, Plg1.0000°, Azm10.0000°; N 0.0550, Plg12.0000°, Azm280.0000°; P -1.2460, Plg78.0000°, Azm103.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 01:16:09.4±0.6,31°.88S±0°.05×57°.08E±0°.05,h6km±3km, h6km:pP-P,n681,σ1ś58/708,mb5.2/151,MS4.7/108, 40C-28D,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RER	**Riviere de l'E**	**10.75**	**353**	Pn	**Pn**	**01 18 42.0**	**-2.0**
RER	**Riviere de l'E**	**10.75**	**353**	P	**Pn**	**01 18 42.2**	**-1.9**
FOMA	**Nahampoana Res**	**11.24**	**305**	Pn	**Pn**	**01 18 51.5**	**+0.8**
FOMA	**Nahampoana Res**	**11.24**	**305**	P	**Pn**	**01 18 51.7**	**+1.1**
VOI	**Vohitsoka**	**13.52**	**315**	Pn	**Pn**	**01 19 21.4**	**-0.6**
VOI	**Vohitsoka**	**13.52**	**315**	P	**Pn**	**01 19 22.7**	**+0.8**
VOI	**Vohitsoka**	**13.52**	**315**	P	**Pn**	**01 19 23.6**	**+1.6**
ABPO	**Ambohimpanom**	**15.59**	**323**	Pn	**Pn**	**01 19 50.3**	**+0.3**
ABPO	**Ambohimpanom**	**15.59**	**323**	P	**Pn**	**01 19 50.3**	**+0.3**
ABPO				pmax	pmax		
	comp=Z,39nm,0.5s						
OPO	**Ambohidratompo**	**15.98**	**324**	Pn	**Pn**	**01 19 54.7**	**-0.5**
	comp=Z,0.7nm,0.3s,baz=158,slow=11,SNR=37						
OPO				Sn	Sn	01 22 39.9	-13
	comp=Z,0.6nm,0.3s,baz=158,slow=13,SNR=3.5						
	comp=Z,28nm,0.5s						
PAF	**Port-aux-Franc**	**20.04**	**154**	P	**P**	**01 20 42.1**	**-1.0**
PAF	**Port-aux-Franc**	**20.04**	**154**	P	**P**	**01 20 42.1**	**-1.0**
PAF				pmax	pmax		
	comp=Z,451nm,1.5s						
MOPA	**Mopani**	**24.18**	**284**	*i* P	**P**	**01 21 27.8**	**+1.1**
MOPA	**Mopani**	**24.18**	**284**	*i* P	**P**	**01 21 27.8**	**+1.1**
MOPA	**Mopani**	**24.18**	**284**	*i* P	**P**	**01 21 27.8**	**+1.1**
MUSN	**Musina, Limpop**	**25.99**	**285**	*e*P	**P**	**01 21 45.7**	**+2.4**
MUSN	**Musina, Limpop**	**25.99**	**285**	*e*P	**P**	**01 21 45.7**	**+2.4**
MUSN	**Musina, Limpop**	**25.99**	**285**	*e*P	**P**	**01 21 45.7**	**+2.4**
BOSA	**Boshof**	**27.63**	**268**	P	**P**	**01 21 56.7**	**-1.4**
	comp=Z,6.5nm,0.8s,baz=102,slow=7.9,SNR=11						
BOSA				LR	LR	01 30 51.8	
	comp=Z,805nm,21.6s,baz=110,slow=32						
	comp=Z,6.5nm,0.8s						
BOSA	**Boshof**	**27.63**	**268**	P	**P**	**01 21 59.0**	**+0.9**
BOSA	**Boshof**	**27.63**	**268**	P	**P**	**01 21 59.0**	**+0.9**
BOSA				pmax	pmax		
	comp=Z

H01W3 Cape Leeuwin H 47.19 110 T T 02 15 06.7
baz=256,slow=75,SNR=758
H01W1 Cape Leeuwin H 47.20 110 T T 02 15 07.6
baz=256,slow=75,SNR=973
TROLL Troll, Antarti 49.24 200 P **P** **01 24 59.6 +1.1**
WHFO Wadi Hawf 49.62 356 P **P** **01 25 03.0 +1.2**
SHAO Shalim 49.64 358 P **P** **01 25 03.2 +1.2**
DOK Doka 50.29 356 P **P** **01 25 07.1 +0.2**
SNAA Sanae 50.69 201 P **P** **01 25 10.0 +0.6**
SNAA Sanae 50.69 201 P **P** **01 25 09.0 -0.4**
comp=Z,18nm,1.1s,baz=90,slow=5.9,SNR=22
SNAA LR LR 01 41 52.9
comp=Z,828nm,21.8s,baz=71,slow=30
comp=Z,18nm,1.1s
SNAA Sanae 50.69 201 P **P** **01 25 10.1 +0.7**
SNAA Sanae 50.69 201 P **P** **01 25 10.1 +0.7**
SNAA pmax pmax
comp=Z,23nm,1.1s
DQM DQM 51.52 1 P **P** **01 25 18.6 +2.5**
VNA1 Neumayer--Stat 52.13 203 P **P** **01 25 21.7 +1.6**
BKNI Bangkinang 52.45 61 P **P** **01 25 23.6 +0.4**
MHTO MHTO 52.58 1 P **P** **01 25 23.3 -0.6**
MHTO P **P** **01 25 23.3 -0.6**
VNA3 Neumayer Olymp 52.70 202 P **P** **01 25 24.7 +0.3**
HYBB Hyderabad (bro 53.17 26 *eP* **P** **01 25 28.6 +0.1**
HYBB *eS* **S** **01 33 00.6 +0.8**
JMDO Jabal Madar 53.95 1 P **P** **01 25 35.3 +1.2**
WBK Wadi Bani Khal 54.22 2 P **P** **01 25 35.6 -0.4**
WBK P **P** **01 25 35.6 -0.4**
SMDO Samad 54.64 1 P **P** **01 25 38.7 -0.4**
SMDO P **P** **01 25 38.7 -0.4**
WSAR Wadi Sarin 54.83 2 LR LR 01 43 46.9
comp=Z,1μm,20.2s,baz=198,slow=30
WSAR Wadi Sarin 54.83 2 P **P** **01 25 40.7 +0.2**
BIDO Bidbid 55.10 1 P **P** **01 25 43.3 +0.9**
BIDO P **P** **01 25 43.3 +0.9**
HOQ Hoqain 55.15 0 P **P** **01 25 44.2 +1.4**
IPM Ipoh 55.26 57 P **P** **01 25 44.3 +0.5**
IPM IAmb IAmb 01 25 47.1
comp=Z,37nm,1.1s
MZWR Madinat Zayed 55.42 356 P **P** **01 25 46.1 +1.5**
RAYN Ar Rayn 56.20 347 P **P** **01 25 50.8 +0.5**
RAYN IAmb IAmb 01 25 54.2
comp=Z,43nm,1.3s
RAYN Ar Rayn 56.20 347 P **P** **01 25 50.8 +0.5**
RAYN pmax pmax
comp=Z,43nm,1.3s
RAYN Ar Rayn 56.20 347 P **P** **01 25 51.0 +0.7**
ASUD Al Ashush, Dub 56.22 358 P **P** **01 25 50.7 +0.3**
FAQ Al Faqa, Dubai 56.33 358 P **P** **01 25 51.3 +0.1**
FAQ P **P** **01 25 51.3 +0.1**
HATD Hatta, Dubai 56.40 359 P **P** **01 25 51.2 -0.5**
HATD P **P** **01 25 51.2 -0.5**
UOSS Minazif 56.52 359 P **P** **01 25 53.2 +0.6**
UOSS IAmb IAmb 01 26 18.1
comp=Z,39nm,1.4s
UOSS Minazif 56.52 359 P **P** **01 25 52.0 -0.5**
UOSS P **P** **01 25 52.0 -0.5**
NAZ Nazwa, Dubai 56.57 358 P **P** **01 25 52.7 -0.2**
SNR=5.4
NAZ P **P** **01 25 52.7 -0.2**
SNR=5.4
JRN Qarnain Island 56.65 355 P **P** **01 25 54.2 +0.7**
MASF Masafi 56.94 359 P **P** **01 25 54.9 -0.7**
SNR=5.4
MASF P **P** **01 25 54.9 -0.7**
SNR=5.4
JASK Jask - Hormozg 57.43 1 P **P** **01 25 59.7 +0.7**
BANOM Banah 57.49 359 P **P** **01 25 59.0 -0.5**
SHME Shamm 57.62 359 P **P** **01 25 59.4 -0.9**
QSPA South Pole Qui 58.29 180 P **P** **01 26 04.2 -0.6**
comp=Z,21nm,1.1s,baz=250,slow=3.1,SNR=31
QSPA LR LR 01 49 24.0
comp=Z,720nm,18.7s,baz=268,slow=34
comp=Z,21nm,1.1s
QSPA South Pole Qui 58.29 180 P **P** **01 26 05.0 +0.2**
QSPA IAmb IAmb 01 26 16.1
comp=Z,49nm,1.3s
SRBI Singaraja 58.79 79 P **P** **01 26 10.1 +1.2**
comp=Z,47nm,1.1s
VNDA Vanda 62.23 166 P **P** **01 26 30.7 -0.8**
comp=Z,2.2nm,1.0s,baz=280,slow=5.8,SNR=6.0
VNDA LR LR 01 51 28.0
comp=Z,1μm,19.0s,baz=244,slow=34
comp=Z,2.2nm,1.0s
VNDA Vanda 62.23 166 P **P** **01 26 32.6 +1.2**
VNDA Vanda 62.23 166 P **P** **01 26 32.7 +1.2**
VNDA pmax pmax
comp=Z,10.0nm,1.4s
SBA Scott Base 63.06 167 P **P** **01 26 38.9 +1.9**
SBA Scott Base 63.06 167 P **P** **01 26 38.9 +1.9**
SBA pmax pmax
comp=Z,12nm,1.4s
CMAR Chiang Mai Arr 64.15 45 P **P** **01 26 44.7 -0.3**
comp=Z,21nm,0.9s,baz=230,slow=6.3,SNR=67
CMAR LR LR 01 52 16.3
comp=Z,688nm,18.1s,baz=220,slow=34
comp=Z,21nm,0.9s
CMAR Chiang Mai Arr 64.15 45 P **P** **01 26 44.4 -0.6**
KAPI Kappang 64.23 79 P **P** **01 26 46.0 +0.3**
comp=Z,4.0nm,0.3s,baz=245,slow=10,SNR=2.3
KAPI LR LR 01 48 53.5
comp=Z,124nm,20.4s,baz=240,slow=31
comp=Z,4.0nm,0.3s
KAPI Kappang 64.23 79 P **P** **01 26 45.6 -0.1**
KAPI IAmb IAmb 01 26 47.5
comp=Z,36nm,1.4s
KAPI Kappang 64.23 79 P **P** **01 26 46.0 +0.3**
CHTO Chiang Mai 64.43 44 P **P** **01 26 47.3 +0.5**
CHTO IAmb IAmb 01 26 49.5
comp=Z,40nm,1.3s
CHTO Chiang Mai 64.43 44 P **P** **01 26 47.3 +0.5**
CHTO pmax pmax
comp=Z,40nm,1.3s
EIL Elat 64.72 339 LR LR 01 52 45.7
comp=Z,583nm,18.5s,baz=152,slow=34
ASF Jabal al Asfar 66.51 341 P **P** **01 27 00.3 +0.2**
comp=Z,24nm,1.1s,baz=207,slow=1.6,SNR=25
comp=Z,24nm,1.1s
KBL Kabul 67.03 11 P **P** **01 27 03.4 -0.1**
KBL IAmb IAmb 01 27 06.9
comp=Z,13nm,0.9s
KBL Kabul 67.03 11 P **P** **01 27 03.4 -0.1**
KBL pmax pmax
comp=Z,13nm,0.9s
ASAR Alice Springs 67.19 104 P **P** **01 27 03.6 -1.2**
ASAR Alice Springs 67.19 104 P **P** **01 27 03.6 -1.2**
MMAI Mount Meron Ar 67.72 340 P **P** **01 27 08.5 +0.7**
comp=Z,14nm,0.8s,baz=155,slow=8.1,SNR=18
MMAI LR LR 01 53 19.2
comp=Z,550nm,20.8s,baz=318,slow=33
comp=Z,14nm,0.8s
APSI Ampana 68.06 77 P **P** **01 27 09.5 -0.8**
comp=Z,572nmcomp=Z,28nm,1.5s
TOLI2 Tolitoli 68.49 74 P **P** **01 27 12.5 -0.4**
WRA Warramunga Arr 69.22 101 P **P** **01 27 17.1 -0.5**
comp=Z,12nm,1.0s,baz=240,slow=5.5,SNR=46
WRA LR LR 01 53 59.0
comp=Z,340nm,20.0s,baz=203,slow=33
comp=Z,12nm,1.0s
WB2 Warramunga Arr 69.23 101 IAmb IAmb 01 27 26.9
comp=Z,34nm,1.3s
WRAB Tennant Creek 69.23 101 P **P** **01 27 17.3 -0.3**
WRAB IAmb IAmb 01 27 20.0
comp=Z,42nm,1.3s
WRAB Tennant Creek 69.23 101 P **P** **01 27 17.3 -0.3**
WRAB pmax pmax
comp=Z,42nm,1.3s
LSA Lhasa 69.27 31 P **P** **01 27 18.6 +0.6**
LSA IAmb IAmb 01 27 21.5
comp=Z,36nm,1.1s
LSA Lhasa 69.27 31 P **P** **01 27 18.6 +0.6**
LSA pmax pmax
comp=Z,36nm,1.1s
LSA Lhasa 69.27 31 P **P** **01 27 18.6 +0.6**
LSA S **S** **01 36 21.1 -4.1**
LSA pmax pmax
comp=Z,36nm,1.3s
LSA LR LR
comp=Z,630nm,19.9s
LSA LR LR
comp=Z,330nm,19.9s
LSA LR LR
comp=Z,630nm,21.4s
WB0 Warramunga Arr 69.35 101 IAmb IAmb 01 27 29.2
comp=Z,37nm,1.4s
WR0 Warramunga Arr 69.38 101 IAmb IAmb 01 27 26.7
comp=Z,28nm,1.4s
TOA0 Torodi Ar. Sit 69.39 301 P **P** **01 27 19.5 +1.0**
TOA0 IAmb IAmb 01 27 41.1
comp=Z,18nm,1.3s
TOA0 Torodi Ar. Sit 69.39 301 P **P** **01 27 19.2 +0.7**
SNR=6.6
TORD Torodi Ar. Bea 69.39 301 P **P** **01 27 18.6 +0.1**
comp=Z,4.9nm,0.8s,baz=132,slow=5.7,SNR=37
TORD PP **PP** **01 29 48.3 -3.8**
comp=Z,7.2nm,1.3s,baz=119,slow=8.8,SNR=4.6
TORD LR LR 01 57 10.2
comp=Z,644nm,20.0s,baz=156,slow=36
comp=Z,4.9nm,0.8s
TORD Torodi Ar. Bea 69.39 301 P **P** **01 27 19.5 +1.0**
TORD IAmb IAmb 01 27 23.1
comp=Z,17nm,1.3s
GEYT Alibeck 69.46 1 P **P** **01 27 16.8 -1.7**
comp=Z,3.2nm,0.8s,baz=179,slow=12,SNR=11
GEYT LR LR 01 55 35.3
comp=Z,285nm,19.6s,baz=168,slow=34
comp=Z,3.2nm,0.8s
GEYT Alibeck 69.46 1 IAmb IAmb 01 27 28.1
comp=Z,18nm,1.4s
GYA0B ALIBECK ARRAY 69.46 1 P **P** **01 27 19.9 +1.4**
GYA0B IAmb IAmb 01 27 28.1
comp=Z,29nm,1.4s
STKA Stephens Creek 69.79 116 P **P** **01 27 20.9 0.0**
comp=Z,3.6nm,0.5s,baz=222,slow=3.5,SNR=15
STKA LR LR 01 52 44.4
comp=Z,394nm,19.0s,baz=222,slow=32
comp=Z,3.6nm,0.5s
STKA Stephens Creek 69.79 116 P **P** **01 27 20.9 0.0**
STKA Stephens Creek 69.79 116 *d iP* **P** **01 27 20.5 -0.4**
KIC Kosan Boka 70.04 291 ⇑ *iP* **P** **01 27 24.3 +1.7**
comp=Z,5.2nm,0.4s
LIC Lamto 70.18 291 ⇑ *iP* **P** **01 27 27.2 +3.8**
comp=Z,1.9nm,0.2s
DBIC Dimbokro 70.31 291 P **P** **01 27 22.4 -1.8**
comp=Z,3.5nm,0.6s,baz=180,slow=14,SNR=3.6
DBIC LR LR 01 55 29.7
comp=Z,356nm,21.3s,baz=132,slow=34
comp=Z,3.5nm,0.6s
DBIC Dimbokro 70.31 291 P **P** **01 27 26.0 +1.8**
DBIC IAmb IAmb 01 27 29.7
comp=Z,20nm,1.2s
DBIC Dimbokro 70.31 291 P **P** **01 27 26.0 +1.8**
DBIC pmax pmax
comp=Z,20nm,1.3s
TIC Toumodi 70.43 291 ⇑ *iP* **P** **01 27 25.3 +0.3**
comp=Z,3.1nm,0.3s
MARD Mardin 70.51 346 P **P** **01 27 26.4 +1.4**
GEVA Gevas 71.05 348 IAmb IAmb 01 27 32.9
comp=Z,52nm,1.3s
KMI Kunming 71.52 43 ⇓ P **P** **01 27 33.5 +1.9**
KMI S **S** **01 36 56.1 +4.9**
KMI pmax pmax
comp=Z,18nm,1.1s
KMI LR LR
comp=Z,320nm,22.0s
KMI LR LR
comp=Z,320nm,25.2s
KMI LR LR
comp=Z,570nm,23.2s
QIZ Qiongzhong 71.54 53 P **P** **01 27 32.6 +1.1**
QIZ S **S** **01 36 47.1 -4.1**
QIZ sS **SKiKP** **01 37 06.3 -5.5**
QIZ SS **SS** **01 41 27.4 +0.7**
QIZ pmax pmax
comp=Z,220nm,5.9s
QIZ LR LR
comp=Z,610nm,19.1s
QIZ LR LR
comp=Z,380nm,19.1s
QIZ LR LR
comp=Z,680nm,21.5s
PZH PanZhiHua 72.01 41 ⇑ P **P** **01 27 35.3 +0.9**
PZH pP **pwP** **01 27 40.3 -0.2**
PZH S **S** **01 36 55.3 -1.3**
PZH pmax pmax
comp=Z,30nm,1.1s
PZH pmax pmax
comp=Z,100nm,5.8s
PZH LR LR
comp=Z,1μm,19.6s
PZH LR LR
comp=Z,1μm,21.5s
PZH LR LR
comp=Z,1μm,19.4s
GNI Garni 72.58 350 LR LR 01 56 39.9
comp=Z,966nm,21.5s,baz=174,slow=34
KOPT Kop Dagi 73.17 347 IAmb IAmb 01 27 47.0
comp=Z,31nm,1.2s
KSH Kashi 73.17 15 P **P** **01 27 37.8 -3.2**
KSH sP pwP 01 27 45.8 -1.3
KSH PcP **PcP** **01 27 54.6 -3.0**
KSH S **S** **01 37 01.6 -7.8**
KSH SKS **SKSac** **01 37 36.8 -11**
KSH pmax pmax
comp=Z,33nm,1.1s
KSH pmax pmax
comp=Z,440nm,6.3s
KSH LR LR
comp=Z,430nm,22.7s
KSH LR LR
comp=Z,670nm,20.4s
KSH LR LR
comp=Z,1μm,29.9s
IDI Anoyia 73.34 333 ⇑ P **P** **01 27 42.8 +0.8**
IDI Anoyia 73.34 333 LR LR 02 01 21.1
comp=Z,231nm,19.5s,baz=149,slow=37
IDI Anoyia 73.34 333 P **P** **01 27 42.7 +0.7**
PMSA Palmer Station 73.35 203 LR LR 01 53 09.7
comp=Z,431nm,19.4s,baz=112,slow=30
DAT Datca 73.63 336 P **P** **01 27 41.5 -2.2**
YER Yerkesik 73.75 336 P **P** **01 27 43.9 -0.5**
YER Yerkesik 73.75 336 P **P** **01 27 45.8 +1.4**
AKH Akhalkalaki 74.00 349 ⇓ P **P** **01 27 47.1 +1.2**
AKH ⇓ P **P** **01 27 47.1 +1.2**
AKH Akhalkalaki 74.00 349 P **P** **01 27 46.8 +0.9**
LGD Lagodekhi 74.03 352 P **P** **01 27 47.5 +1.6**
KTUT Trabzon 74.25 346 ⇑ P **P** **01 27 47.9 +0.8**
TOKA Tokat 74.34 344 IAmb IAmb 01 27 51.7
comp=Z,38nm,1.2s
ANKY Antikythira Is 74.47 332 P **P** **01 27 48.0 -0.5**
BATM Batumi 74.49 348 ⇑ P **P** **01 27 49.3 +0.8**
BR131 Keskin Array S 74.50 341 IAmb IAmb 01 27 51.8
comp=Z,43nm,1.2s
BR131 Keskin Array S 74.50 341 *d iP* **P** **01 27 48.5 -0.3**
BR131 Keskin Array S 74.50 341 P **P** **01 27 49.2 +0.5**
SNR=19
BR131 P **P** **01 27 49.2 +0.5**
SNR=19
BRTR Keskin Array B 74.50 341 P **P** **01 27 48.7 -0.1**
comp=Z,7.8nm,0.8s,baz=168,slow=8.0,SNR=39
BRTR LR LR 01 59 07.4
comp=Z,150nm,18.0s,baz=157,slow=35
comp=Z,7.8nm,0.8s
IUG Iuzhnay 74.62 10 *eP* **P** **01 27 49.5 +0.1**
GYA Guiyang 74.84 45 ⇓ *iP* **P** **01 27 52.8 +1.7**
GYA sP pwP 01 27 58.6 +1.4
GYA S **S** **01 37 29.8 +1.1**
GYA pmax pmax
comp=Z,26nm,1.3s
GYA pmax pmax
comp=Z,320nm,6.0s
GYA LR LR
comp=Z,420nm,18.0s
GYA LR LR
comp=Z,410nm,19.1s
GYA LR LR
comp=Z,750nm,21.0s
ANTO Ankara 74.86 341 P **P** **01 27 51.2 +0.4**
ANTO IAmb IAmb 01 27 54.2
comp=Z,70nm,1.4s
ANTO Ankara 74.86 341 P **P** **01 27 51.2 +0.4**
ANTO pmax pmax
comp=Z,69nm,1.5s
KTHA Kythira Island 74.91 332 P **P** **01 27 51.1 0.0**
MAK Makhachkala 75.00 353 *eP* **P** **01 27 50.2 -1.2**
MAK *eS* **S** **01 37 27.3 -2.1**
MAK pmax pmax
comp=Z,45nm,0.8s
MAK MLR MLR
comp=Z,309nm,17.0s
ONI Oni 75.16 350 P **P** **01 27 53.2 +0.7**
AML Almayashu 75.22 13 P **P** **01 27 54.0 +0.7**
SNR=14
AML Almayashu 75.22 13 P **P** **01 27 55.9 +2.7**
AML pmax pmax
comp=Z,40nm,1.4s
ZEI Tsey 75.29 350 *eP* **P** **01 27 53.7 +0.3**
ZEI pmax pmax
comp=Z,32nm,1.3s
GROC Groznyy 75.44 351 *eP* **P** **01 27 56.3 +2.4**
GROC *e* 01 28 08.2
GROC *eS* **S** **01 37 35.5 +1.2**
GROC pmax pmax
comp=Z,15nm,0.6s
UCH Uchtor 75.47 13 P **P** **01 27 57.6 +2.8**
SNR=16
UCH Uchtor 75.47 13 P **P** **01 27 57.0 +2.2**
UCH pmax pmax
comp=Z,22nm,1.8s
CHVG Ch'k'valeri 75.51 349 ⇑ P **P** **01 27 55.3 +0.9**
BORA Eskisehir 75.55 339 IAmb IAmb 01 27 58.4
comp=Z,59nm,1.4s
KKAR Karatay Array 75.63 10 P **P** **01 27 55.1 0.0**
KKAR Karatay Array 75.63 10 P **P** **01 27 55.1 0.0**
EKS2 Erkin-Say 75.75 13 P **P** **01 27 57.0 +1.1**
SNR=23
DAV Davao City (W) 75.81 72 LR LR 01 58 10.5
comp=Z,202nm,19.7s,baz=225,slow=33
KRND KRANIDI 75.85 333 P **P** **01 27 55.9 -0.5**
AAK Ala-Archa 75.86 13 P **P** **01 27 59.9 +3.3**
SNR=9.3
AAK Ala-Archa 75.86 13 LR LR 01 59 39.9
comp=Z,674nm,19.0s,baz=190,slow=34
AAK Ala-Archa 75.86 13 P **P** **01 27 57.6 +1.0**
AAK IAmb IAmb 01 28 00.8
comp=Z,49nm,1.1s
AAK Ala-Archa 75.86 13 P **P** **01 27 57.6 +1.0**
AAK pmax pmax
comp=Z,49nm,1.2s
AAK Ala-Archa 75.86 13 P **P** **01 27 59.6 +3.0**
DIKM Dikmen 75.89 343 ⇑ P **P** **01 27 57.2 +0.7**
KBK Karagaybulak 75.97 13 P **P** **01 28 00.0 +2.8**
SNR=6.2
PYL PYLOS 75.99 331 P **P** **01 27 57.0 -0.3**
VLY Voula,Athens 76.01 333 P **P** **01 27 56.8 -0.6**
DION Dionisos Attik 76.16 334 P **P** **01 27 58.2 0.0**
PTL Penteli 76.16 334 P **P** **01 27 58.1 -0.1**
CHMS Chumysh 76.26 13 P **P** **01 28 01.0 +2.3**
SNR=8.2
TGY Tagaytay City 76.32 64 LR LR 01 57 33.9
comp=Z,477nm,20.4s,baz=235,slow=33
TKM2 Tokmak 2 76.36 14 P **P** **01 28 00.1 +0.7**
SNR=21
KBZ Khabaz 76.36 349 P **P** **01 27 59.1 0.0**
comp=Z,8.8nm,1.0s,baz=170,slow=3.9,SNR=20
KBZ LR LR 02 00 06.6
comp=Z,744nm,20.5s,baz=171,slow=34
comp=Z,8.8nm,1.0s
KBZ Khabaz 76.36 349 *d iP* **P** **01 27 59.4 +0.2**
KBZ pmax pmax
comp=Z,34nm,1.5s
GOMU GeErMu 76.40 31 P **P** **01 27 58.8 -1.3**
GOMU sP pwP 01 28 06.4 +0.2
GOMU S S 01 37 36.0 -10
GOMU pmax pmax
comp=Z,160nm,5.8s
GOMU LR LR
comp=Z,390nm,19.6s
GOMU LR LR
comp=Z,370nm,19.9s
GOMU LR LR
comp=Z,520nm,19.6s
VILL Villia 76.47 333 P **P** **01 27 59.5 -0.5**
USP Osepenovka 76.47 13 P **P** **01 28 02.2 +2.3**
SNR=23
CD2 Chengdu 76.53 40 P **P** **01 27 59.9 -0.6**
CD2 pP pwP 01 28 05.3 -1.4
CD2 sP PcP 01 28 07.1 -5.0
CD2 S **S** **01 37 48.3 +1.3**
CD2 sS sS 01 37 59.5 +12
CD2 pmax pmax
comp=Z,40nm,1.3s
CD2 pmax pmax
comp=Z,320nm,5.7s
CD2 LR LR
comp=Z,500nm,20.6s
CD2 LR LR
comp=Z,410nm,17.1s
CD2 LR LR
comp=Z,360nm,19.9s
VSLR Vesyoloye 76.59 347 *ceP* **P** **01 28 00.8 +0.3**
KVAR Kislovodsk Arr 76.61 349 LR LR 02 00 38.1
comp=Z,211nm,19.9s,baz=107,slow=35
KIV Kislovodsk 76.61 349 P **P** **01 28 00.8 0.0**
KIV IAmb IAmb 01 28 12.1
comp=Z,61nm,1.5s
KIV Kislovodsk 76.61 349 *eP* **P** **01 28 00.8 0.0**
KIV *eS* **S** **01 37 48.1 +0.6**
KIV *eSS* **SS** **01 42 44.3 +0.7**
KIV pmax pmax
comp=Z,26nm,1.0s
GUR Goura 76.65 332 P **P** **01 28 01.0 -0.1**
SGDS Sogindy 76.67 13 *eP* **P** **01 28 01.0 -0.1**
SGDS pmax pmax
comp=Z,20nm,2.9s
SOC Sochi 76.77 347 *c iP* **P** **01 28 02.0 +0.5**
SOC *ePPP* PPP 01 32 51.7
SOC *eS* **S** **01 37 50.7 +1.8**
SOC *eSS* **SS** **01 42 45.9 +0.2**
SOC pmax pmax
comp=Z,27nm,1.2s
SOC MLR MLR
comp=Z,312nm,17.0s
KLV Kalavryta, Ach 76.82 332 P **P** **01 28 01.4 -0.6**
LAKA Lakka 77.05 332 P **P** **01 28 03.7 +0.4**
ISK Istanbul-Kandi 77.06 339 P **P** **01 28 03.4 +0.2**
RLS Riolos of Patr 77.10 332 P **P** **01 28 03.6 +0.1**
EFP Efpalio 77.24 332 P **P** **01 28 04.9 +0.6**
KPKS Kokpek 77.55 16 *eP* **P** **01 28 07.5 +1.4**
KPKS pmax pmax
comp=Z,30nm,1.6s
PVO Paravola 77.56 332 P **P** **01 28 07.1 +1.0**
VLS Valsamata 77.56 331 P **P** **01 28 06.3 +0.2**
GOF Gofitskoye 77.64 350 ⇑ *eP* **P** **01 28 06.6 +0.2**
GOF pmax pmax
comp=Z,39nm,0.9s
MAKR Makrakomi, Fth 77.66 333 P **P** **01 28 08.1 +1.4**
EVR Evrytania 77.70 333 P **P** **01 28 07.2 +0.2**
FSK Fiskardo 77.81 331 P **P** **01 28 07.1 -0.4**
PAIG Paliouri 77.87 334 P **P** **01 28 07.8 0.0**
ALN Alexandroupoli 77.89 336 P **P** **01 28 07.9 0.0**
EVGI Lefkada island 77.91 332 P **P** **01 28 08.9 +0.9**
ARXS Arharly 78.06 15 *eP* **P** **01 28 10.6 +1.7**
BTLS Baital 78.10 12 *eP* **P** **01 28 09.2 +0.2**
BTLS pmax pmax
comp=Z,28nm,1.4s
THL Klokotos Trika 78.19 333 P **P** **01 28 09.4 -0.1**
ANN Anapa 78.39 346 *eP* **P** **01 28 10.8 +0.3**
ANN *eS* **S** **01 38 07.3 +0.9**
ANN pmax pmax
comp=Z,45nm,1.6s
ANN MLR MLR
comp=Z,443nm,18.0s
LIT Litokhoron 78.47 334 P **P** **01 28 11.0 -0.1**
LIT Litokhoron 78.47 334 P **P** **01 28 11.1 -0.1**
EDRB Edirne 78.51 337 P **P** **01 28 10.3 -1.0**
KDZ Kurdzhali 78.78 336 *i P* **P** **01 28 14.0 +1.2**
IGT Igoumenitsa 78.82 332 P **P** **01 28 13.0 -0.1**
CTA Charters Tower 78.99 107 LR LR 01 58 56.1
comp=Z,301nm,20.9s,baz=244,slow=32
RZN Rozhen 79.05 336 *i P* **P** **01 28 10.0 -4.5**
NVR Nevrokopi 79.06 335 P **P** **01 28 13.8 -0.6**
JMB Yambol 79.12 338 *i P* **P** **01 28 16.3 +1.7**
KNT Kendrikon 79.24 334 P **P** **01 28 15.2 -0.1**
LSK Leskovik 79.24 332 P **P** **01 28 16.5 +1.0**
GRG Griva 79.25 334 P **P** **01 28 15.3 -0.1**
SIM Simferopol' 79.27 344 *eP* **P** **01 28 15.2 -0.2**
SIM *eS* **S** **01 38 12.0 -3.9**
SIM pmax pmax
comp=Z,54nm,1.2s
MMB Musomiste 79.31 335 *i P* **P** **01 28 16.2 +0.4**
ENH Enshi 79.32 44 P **P** **01 28 16.6 +0.6**
PLD Plovdiv 79.43 336 *i P* **P** **01 28 18.0 +1.7**
FNA Florina 79.48 333 P **P** **01 28 15.8 -0.9**

VAY Valandovo 79.50 334 *e*P P **01 28 19.1 +2.3**
PRD Provadia 79.52 338 *i* P P **01 28 18.0 +1.2**
VAE Valguarnera 79.68 327 LR LR 02 05 11.0
comp=Z,532nm,18.2s,baz=142,slow=37
KKB Krupnik 79.79 335 *i* P P **01 28 18.9 +0.6**
CNSH ChangSha 79.94 48 ⇑P P **01 28 21.3 +1.8**
CNSH S S **01 38 29.9 +6.2**
CNSH pmax pmax
comp=Z,21nm,1.5s
CNSH LR LR
comp=Z,320nm,22.6s
CNSH LR LR
comp=Z,310nm,21.1s
CNSH LR LR
comp=Z,400nm,20.4s
OHR Ohrid 79.99 333 *e*P P **01 28 22.7 +3.2**
TIP Timpagrande 80.02 329 ⇑P P **01 28 19.3 -0.4**
SZH Strazhica 80.05 337 *i* P P **01 28 20.5 +0.8**
TIRR Tirgusor 80.35 340 ⇑P P **01 28 21.7 +0.5**
TIRR ⇑P P **01 28 21.7 +0.5**
TIRR Tirgusor 80.35 340 P P **01 28 22.9 +1.7**
WMQ Urumqi 80.37 22 *e*P P **01 28 24.6 +3.1**
WMQ S S **01 38 29.6 +1.8**
WMQ pmax pmax
comp=Z,27nm,0.9s
WMQ pmax pmax
comp=Z,310nm,6.3s
WMQ LR LR
comp=Z,1μm,19.3s
WMQ LR LR
comp=Z,1μm,18.9s
WMQ LR LR
comp=Z,1μm,18.1s
VTS Vitosha 80.39 335 *i* P P **01 28 22.6 +0.9**
SKO Skopje 80.48 334 *e*P P **01 28 24.7 +2.6**
TIR Tirane 80.55 333 ⇓P P **01 28 21.7 -0.8**
TIR Tirane 80.55 333 IAmb IAmb 01 28 29.1
comp=Z,48nm,1.1s
TIR Tirane 80.55 333 P P **01 28 21.6 -0.8**
LZH Lanzhou 80.57 37 *e*P P **01 28 25.3 +2.4**
LZH sP PcP 01 28 31.1 +1.4
LZH S S **01 38 33.3 +2.9**
LZH SS SS **01 43 48.4 +4.8**
LZH pmax pmax
comp=Z,31nm,1.0s
LZH pmax pmax
comp=Z,300nm,5.2s
LZH LR LR
comp=Z,380nm,14.4s
LZH LR LR
comp=Z,340nm,14.1s
LZH LR LR
comp=Z,560nm,16.8s
HARR Harsova 80.70 339 ⇑P P **01 28 22.6 -0.6**
HARR Harsova 80.70 339 P P **01 28 22.5 -0.6**
KEST Kesra 80.80 322 P P **01 28 23.5 -0.5**
comp=Z,2.2nm,0.7s,baz=113,slow=12,SNR=1.9
KEST LR LR 02 03 01.5
comp=Z,360nm,21.9s,baz=79,slow=35
comp=Z,2.2nm,0.7s
KEST Kesra 80.80 322 P P **01 28 26.1 +2.1**
KEST IAmb IAmb 01 28 30.6
comp=Z,38nm,1.4s
ABKAR Akbulak array 80.82 2 P P **01 28 23.3 -0.4**
CFR Carcaliu 81.09 340 ⇑P P **01 28 25.5 +0.3**
CFR Carcaliu 81.09 340 P P **01 28 25.4 +0.3**
MATE Matera 81.26 330 ⇑P P **01 28 26.3 +0.2**
GTA Gaotai 81.27 32 *e*P P **01 28 26.9 +0.4**
GTA pP PcP 01 28 34.4 +1.7
GTA S S **01 38 36.1 -1.4**
GTA sS SKKSac 01 38 50.8 +1.9
GTA pmax pmax
comp=Z,29nm,1.2s
GTA pmax pmax
comp=Z,260nm,5.8s
GTA LR LR
comp=Z,490nm,20.4s
GTA LR LR
comp=Z,380nm,18.9s
GTA LR LR
comp=Z,850nm,22.2s
MAKZ Makanchi 81.49 17 P P **01 28 28.5 +1.2**
MAKZ IAmb IAmb 01 28 30.6
comp=Z,33nm,1.4s
MAKZ Makanchi 81.49 17 P P **01 28 28.5 +1.2**
MAKZ pmax pmax
comp=Z,33nm,1.4s
QZH Quanzhou 81.49 54 ⇓*i*P P **01 28 28.8 +1.0**
QZH S S **01 38 42.9 +2.8**
QZH pmax pmax
comp=Z,170nm,5.0s
QZH LR LR
comp=Z,360nm,20.8s
QZH LR LR
comp=Z,510nm,17.5s
QZH LR LR
comp=Z,790nm,19.4s
MK31 Makanchi Array 81.55 17 P P **01 28 29.1 +1.4**
MK31 IAmb IAmb 01 28 36.8
comp=Z,28nm,1.4s
MK31 Makanchi Array 81.55 17*c i*P P **01 28 28.5 +0.8**
MKAR Makanchi Array 81.55 17 P P **01 28 26.6 -1.1**
comp=Z,3.5nm,0.7s,baz=225,slow=4.7,SNR=16
MKAR LR LR 02 02 19.7
comp=Z,307nm,20.3s,baz=203,slow=34
comp=Z,3.5nm,0.7s
PDG Podgorica 81.71 333 ⇓P P **01 28 29.4 +0.9**
PDG Podgorica 81.71 333 IAmb IAmb 01 28 58.4
comp=Z,39nm,1.5s
XAN Xi'an 81.74 41 ⇓P P **01 28 28.4 -0.6**
XAN sP pwP 01 28 35.3 +0.1
XAN S S **01 38 42.4 -0.1**
XAN SS SS **01 44 01.8 +0.9**
XAN pmax pmax
comp=Z,38nm,1.3s
XAN pmax pmax
comp=Z,380nm,6.0s
XAN LR LR
comp=Z,320nm,20.6s
XAN LR LR
comp=Z,430nm,20.6s
XAN LR LR
comp=Z,520nm,22.0s
MLR Muntele Rosu 82.03 338 ⇑P P **01 28 30.6 +0.2**
MLR Muntele Rosu 82.03 338 LR LR 02 02 41.0
comp=Z,247nm,21.9s,baz=98,slow=34
MLR Muntele Rosu 82.03 338 IAmb IAmb 01 28 39.5
comp=Z,55nm,1.3s
MLR Muntele Rosu 82.03 338 P P **01 28 32.1 +1.7**
VRI Vrincioaia 82.13 339 ⇑P P **01 28 31.3 +0.5**
VRI Vrincioaia 82.13 339 P P **01 28 31.2 +0.5**
ABSA Djebel Ababsia 82.19 322 P 01 28 37.2
VOIR 82.27 338 ⇑P P **01 28 31.1 -0.5**
VOIR 82.27 338 P P **01 28 31.0 -0.5**
COVR Voineasa-Covas 82.27 339 ⇑P P **01 28 30.9 -0.6**
ARR Arges 82.34 338 ⇑P P **01 28 31.6 -0.3**
SSLB Suanglung 82.39 56 P P **01 28 33.9 +1.2**
SSLB IAmb IAmb 01 28 36.6
comp=Z,24nm,1.1s
WHN Wuhan 82.47 47 ⇓*i*P P **01 28 35.3 +2.5**
WHN pmax pmax
comp=Z,75nm,1.2s
WHN pmax pmax
comp=Z,750nm,5.7s
MILM Milestii Mici 82.48 341 ⇑P P **01 28 32.3 -0.2**
MILM Milestii Mici 82.48 341 P P **01 28 32.3 -0.2**
CMAH Djebel Manchou 82.48 322 P 01 28 36.5
PAOL Paolisi 82.49 329 IAmb IAmb 01 28 46.0
comp=Z,34nm,1.4s
OZUR 82.63 339 ⇓P P **01 28 32.9 -0.5**
HERR Herculane 82.66 336 ⇑P P **01 28 33.7 +0.2**
BRZS Berezniki 82.67 10 *e*P P **01 28 33.3 -0.2**
BRZS pmax pmax
comp=Z,44nm,3.0s
CKFL Kef-Lekhel 82.69 321 P 01 28 38.3
LOT Lotru 82.70 337 ⇑P P **01 28 33.7 -0.2**
TESR Tescani 82.74 339 ⇑P P **01 28 33.2 -0.6**
MDVR Moldovita 82.82 335 ⇑P P **01 28 34.6 +0.2**
GZR Gura Zlata 82.98 336 ⇑P P **01 28 35.8 +0.6**
DFRA Djebel Bou Aff 83.25 321 P 01 28 41.7
BIZ Bicaz 83.28 339 ⇓P P **01 28 37.4 +0.7**
BZS Buzias 83.58 336 ⇑P P **01 28 38.5 +0.3**
BZS Buzias 83.58 336 P P **01 28 38.5 +0.3**
RPZ Rata Peaks 83.61 138 LR LR 01 58 05.7
comp=Z,852nm,20.1s,baz=228,slow=30

FRGS Fruska Gora 83.83 334 ⇑P P **01 28 40.0 +0.5**
VRH Novokhopyorsk 83.83 350 *e*P P **01 28 39.4 +0.1**
VRH pmax pmax
comp=Z,40nm,0.9s
CBBR Cluj-Babes-Bol 83.93 338 ⇑P P **01 28 39.6 -0.4**
ARCR ARCALIA 83.96 338 ⇓P P **01 28 40.8 +0.7**
AQU L'Aquila 84.08 329 IAmb IAmb 01 28 54.1
comp=Z,20nm,1.1s
SIRR Siria 84.13 336 ⇑P P **01 28 40.8 -0.2**
LYN LuoYang 84.14 43 ⇑P P **01 28 42.0 +0.6**
LYN sP pwP 01 28 49.6 +2.1
LYN S S **01 39 03.3 -3.4**
LYN pmax pmax
comp=Z,30nm,1.5s
LYN pmax pmax
comp=Z,410nm,6.3s
LYN LR LR
comp=Z,730nm,22.0s
LYN LR LR
comp=Z,280nm,24.9s
LYN LR LR
comp=Z,820nm,23.9s
BURAR Bucovina Array 84.16 339 ⇓P P **01 28 41.7 +0.4**
BURAR Bucovina Array 84.16 339 P P **01 28 42.1 +0.8**
BURAR Bucovina Array 84.16 339 P P **01 28 41.7 +0.4**
BUR08 Bucovina Ar. S 84.19 339 IAmb IAmb 01 28 45.3
comp=Z,24nm,1.4s
DRGR 84.23 337 ⇑P P **01 28 41.2 -0.5**
DRGR 84.23 337 P P **01 28 41.1 -0.5**
VSR Storozhevoye 84.24 349 *e*P P **01 28 41.1 -0.3**
VSR pmax pmax
comp=Z,30nm,0.8s
KURBB Kurchatov Arra 84.31 14 LR LR 02 04 24.3
comp=Z,445nm,19.8s,baz=182,slow=34
BELG Belogornoye 84.33 354 LR LR 02 08 18.5
comp=Z,153nm,19.3s,baz=141,slow=37
BELG Belogornoye 84.33 354*c i*P P **01 28 42.6 +0.8**
BELG pmax pmax
comp=Z,11nm,1.1s
KURK Kurchatov 84.42 14 P P **01 28 43.0 +0.6**
KURK Kurchatov 84.42 14 P P **01 28 43.0 +0.6**
KURK pmax pmax
comp=Z,95nm,1.4s
KURK Kurchatov 84.42 14 P P **01 28 43.4 +1.0**
KURK P P **01 28 43.4 +1.0**
NRCA Norcia 84.59 329 IAmb IAmb 01 28 46.6
comp=Z,42nm,1.5s
VORR Voronezh 84.67 349 *e*P P **01 28 42.9 -0.7**
VORR pmax pmax
comp=Z,31nm,1.3s
MORH Mrgy, Hungar 85.16 334 ⇓P P **01 28 46.1 -0.1**
PMG Port Moresby 85.17 98 LR LR 02 02 51.3
comp=Z,174nm,21.4s,baz=235,slow=33
BRVK Borovoye 85.36 8 P P **01 28 47.6 +0.5**
BRVK Borovoye 85.36 8 P P **01 28 47.6 +0.5**
BRVK pmax pmax
comp=Z,57nm,1.3s
BRVK Borovoye 85.36 8 P P **01 28 47.4 +0.3**
BRVK P P **01 28 47.4 +0.3**
LPSR Galich'ya Gora 85.61 349 *e*P P **01 28 49.2 +0.9**
LPSR pmax pmax
comp=Z,20nm,1.0s
AKASG Malin Array Be 85.84 343 P P **01 28 47.8 -1.7**
comp=Z,1.8nm,0.5s,baz=161,slow=4.2,SNR=23
AKASG LR LR 02 05 30.2
comp=Z,182nm,20.8s,baz=138,slow=34
comp=Z,1.8nm,0.5s
AKBB Malin Array Si 85.84 343*c i*P P **01 28 50.4 +0.9**
AKBB pmax pmax
comp=Z,24nm,1.3s
BOJS Bojanci 85.87 332 *e*P P **01 28 50.3 +0.5**
UZH Uzhgorod 85.98 338 ⇓*i*P P **01 28 51.7 +1.5**
UZH *e* 01 28 55.2
UZH *i* 01 34 17.3
UZH *i* S S **01 39 23.1 -1.1**
CRES Cresnjev 86.05 332 *e*P P **01 28 51.2 +0.5**
PSZ Piszkesteto 86.16 336 P P **01 28 52.5 +1.2**
PSZ Piszkesteto 86.16 336 P P **01 28 52.5 +1.2**
PSZ pmax pmax
comp=Z,18nm,1.5s
NJ2 Nanjing 86.33 49 *e*P P **01 28 53.8 +1.4**
NJ2 pmax pmax
comp=Z,19nm,0.7s
TIY Taiyuan 86.37 41 P P **01 28 53.8 +1.3**
TIY S S **01 39 33.3 +4.5**
TIY SS SS **01 45 10.8 +1.6**
TIY pmax pmax
comp=Z,220nm,5.7s
TIY LR LR
comp=Z,200nm,19.2s
TIY LR LR
comp=Z,290nm,19.2s
TIY LR LR
comp=Z,290nm,21.3s
CRVS Cervenica-Dubn 86.48 337 *e*P P **01 28 54.7 +1.9**
CRVS pmax pmax
comp=Z,58nm,1.7s
CRVS Cervenica-Dubn 86.48 337 *e*P P **01 28 54.7 +1.9**
GROS Grobnik 86.56 333 *e*P P **01 28 53.4 +0.1**
SRO2 Moca 86.56 335 *e*P P **01 28 54.7 +1.6**
SRO2 pmax pmax
comp=Z,33nm,1.8s
SRO2 Moca 86.56 335 *e*P P **01 28 54.7 +1.6**
SRO Srobarova 86.63 335 *e*P P **01 28 55.8 +2.3**
SRO pmax pmax
comp=Z,85nm,2.1s
SRO Srobarova 86.63 335 *e*P P **01 28 55.8 +2.3**
TRI Trieste 86.64 331 P P **01 28 55.7 +2.2**
TRI IAmb IAmb 01 28 56.9
comp=Z,37nm,1.5s
TRI Trieste 86.64 331 P P **01 28 55.7 +2.2**
TRI pmax pmax
comp=Z,37nm,1.5s
MDT Midelt 86.78 312 LR LR 02 08 20.2
comp=Z,444nm,19.9s,baz=144,slow=36
SOKA Soboth 86.92 332 *e*P P **01 28 56.7 +1.7**
comp=Z,22nm,1.5s,SNR=10
OBKA Obir 86.97 332 *e*P P **01 28 57.4 +2.1**
comp=Z,15nm,1.3s,SNR=10
VYHS Vyhne 87.02 336 *e*P P **01 28 56.8 +1.4**
VYHS pmax pmax
comp=Z,14nm,1.7s
VYHS Vyhne 87.02 336 *e*P P **01 28 56.8 +1.4**
SSE Sheshan 87.22 51 P P 01 28 51.0 -5.7
SSE Sheshan 87.22 51 S **SKSac 01 39 27.5 +2.7**
SSE pmax pmax
comp=Z,13nm,0.5s
SSE pmax pmax
comp=Z,120nm,4.2s
SSE LR LR
comp=N,130nm,17.8s
SSE LR LR
comp=E,120nm,18.2s
KOLL Kolacno 87.25 335 *e*P P **01 28 59.0 +2.5**
RONA Rosalia, Austr 87.28 334 *e*P P **01 28 57.4 +0.7**
comp=E,27nm,1.6s,SNR=14
LANS Liptovska Anna 87.36 336 *e*P P **01 28 59.0 +1.9**
LANS pmax pmax
comp=Z,8.0nm,1.3s
LANS Liptovska Anna 87.36 336 *e*P P **01 28 59.0 +1.9**
ZST Bratislava 87.39 335 *e*P P **01 28 59.2 +2.0**
ZST pmax pmax
comp=Z,112nm,1.5s
ZST Bratislava 87.39 335 *e*P P **01 28 59.2 +2.0**
HNS HongShan 87.43 42 ⇓P P **01 28 57.3 -0.3**
HNS S S **01 39 45.4 +6.6**
HNS pmax pmax
comp=Z,34nm,1.4s
HNS pmax pmax
comp=Z,350nm,6.7s
HNS LR LR
comp=Z,220nm,21.1s
HNS LR LR
comp=Z,440nm,22.1s
HNS LR LR
comp=Z,610nm,22.1s
MYKA Terra Mystica 87.43 332 *e*P P **01 29 00.2 +2.7**
comp=Z,8.7nm,1.2s
MODS Modra-Piesok 87.48 335 *e*P P **01 28 59.3 +1.7**
MODS pmax pmax
comp=Z,103nm,1.6s
MODS Modra-Piesok 87.48 335 *e*P P **01 28 59.3 +1.7**
STAL STALIGIAL 87.52 331 IAmb IAmb 01 29 09.7
comp=Z,13nm,1.1s
SMOL Smolenice 87.54 335 *e*P P **01 28 59.2 +1.3**

SMOL pmax pmax
comp=Z,9.0nm,1.4s
SMOL Smolenice 87.54 335 *e*P P **01 28 59.2 +1.3**
CONA Conrad Observa 87.63 334 *e*P P **01 28 58.9 +0.5**
comp=Z,33nm,1.4s,SNR=23
JAVC Velka Javorina 87.74 335 *e*P P **01 29 01.8 +2.9**
CTI Castel Tesino 87.79 330 IAmb IAmb 01 29 08.8
comp=Z,16nm,0.9s
KBA Koelnbreinsper 87.92 332 *e*P P **01 29 01.3 +1.4**
comp=Z,20nm,1.3s,SNR=7.2
ARU Arti 87.97 1 P P **01 28 59.2 -0.5**
ARU Arti 87.97 1*d i*P P **01 28 59.8 +0.1**
ARU S **SKSac 01 39 27.5 -0.7**
ARU pmax pmax
comp=Z,56nm,1.4s
ARU MLR MLR
comp=Z,535nm,19.0s
ABTA Abfaltersbach 87.99 331 *e*P P **01 29 01.3 +1.1**
comp=Z,21nm,1.5s,SNR=18
TIA Tai'an 88.03 45 ⇓P P **01 29 02.3 +1.7**
TIA S **SKSac 01 39 34.3 +4.8**
TIA sS **ScS 01 39 51.3 +0.3**
TIA SS **SS 01 45 31.5 -2.0**
TIA pmax pmax
comp=Z,15nm,1.0s
TIA pmax pmax
comp=Z,200nm,5.9s
TIA LR LR
comp=Z,180nm,18.2s
TIA LR LR
comp=Z,100nm,14.7s
TIA LR LR
comp=Z,350nm,23.4s
MAUC Maruska 88.11 336 *e*P P **01 29 01.2 +0.5**
MAUC AMS AMS 02 02 10.0
comp=Z,700nm,33.0s
HHC Hu-ho-hao-te 88.14 38 *e*P P **01 29 02.3 +1.2**
HHC PP **PP 01 32 31.5 +3.1**
HHC S S **01 39 49.5 +3.7**
HHC SS SS **01 45 38.3 +3.2**
HHC pmax pmax
comp=Z,59nm,1.0s
HHC pmax pmax
comp=Z,380nm,4.8s
HHC LR LR
comp=Z,660nm,19.0s
HHC LR LR
comp=Z,500nm,14.9s
HHC LR LR
comp=Z,700nm,20.4s
OJC Ojcow 88.17 337 IAmb IAmb 01 29 03.7
comp=Z,38nm,1.4s
MOA Molln 88.18 333 *e*P P **01 29 01.3 +0.3**
comp=Z,16nm,1.5s,SNR=9.3
BIOA Bad Ischl, Aus 88.30 332 *e*P P **01 29 02.2 +0.6**
comp=Z,38nm,2.1s,SNR=13
KRUC Moravsky 88.37 335 *e*P P **01 29 03.6 +1.7**
OKC Ostrava-Krasne 88.40 336 *e*P P **01 29 04.0 +2.0**
OKC *e* 01 29 07.1
OKC Ostrava-Krasne 88.40 336 *e*P P **01 29 04.0 +2.0**
OKC *e*pP **pwP 01 29 07.1 -1.7**
OKC AMS AMS 02 02 50.0
comp=Z,300nm,27.6s
SVE Sverdlovsk 88.41 2 *e*P P **01 29 02.4 +0.6**
SVE pmax pmax
comp=Z,46nm,1.6s
SVE MLR MLR
comp=Z,467nm,19.0s
OBN Obninsk 88.42 348 LR LR 02 09 09.8
comp=Z,67nm,18.9s,baz=167,slow=36
OBN Obninsk 88.42 348 P P **01 29 04.1 +2.3**
OBN Obninsk 88.42 348*c i*P P **01 29 02.3 +0.4**
OBN *i* 01 29 09.8
OBN *i* 01 32 27.8
OBN *i* S **SKSac 01 39 31.2 +0.3**
OBN *e*SS SS **01 45 33.3 -5.1**
OBN pmax pmax
comp=Z,38nm,1.2s
OBN MLR MLR
comp=Z,291nm,18.0s
VRAC Vranov 88.51 335 LR LR 02 09 33.6
comp=Z,95nm,20.9s,baz=156,slow=36
VRAC Vranov 88.51 335 *e*P P **01 29 04.4 +1.9**
MORC Moravsky Berou 88.56 336 IAmb IAmb 01 29 11.2
comp=Z,11nm,1.1s
MORC Moravsky Berou 88.56 336 P P **01 29 03.2 +0.4**
MORC Moravsky Berou 88.56 336 *e*P P **01 29 04.8 +2.0**
WTTA Wattenberg 88.76 331 *e*P P **01 29 04.8 +0.8**
comp=Z,37nm,1.5s,SNR=11
ZALV Zalesovo Beam 88.79 16 P P **01 29 01.9 -1.7**
comp=Z,1.4nm,0.6s,baz=198,slow=4.4,SNR=9.2
ZALV LR LR 02 05 50.2
comp=Z,464nm,21.6s,baz=236,slow=34
comp=Z,1.4nm,0.6s
ZALV Zalesovo Beam 88.79 16 P P **01 29 03.2 -0.5**
ZALV Zalesovo Beam 88.79 16 P P **01 29 03.2 -0.5**
WATA Walderalm 88.84 331 *e*P P **01 29 04.7 +0.4**
comp=Z,31nm,1.4s,SNR=11
MOS Moscow 88.85 349 *e*P P **01 29 05.5 +1.6**
MOS pmax pmax
comp=Z,47nm,1.0s
TREC Trest 88.90 334 *e*P P **01 29 06.5 +2.1**
TREC MLR MLR
comp=Z,200nm,22.3s
TREC Trest 88.90 334 *e*P P **01 29 06.5 +2.1**
TREC AMS AMS 02 04 20.0
comp=Z,200nm,22.3s
SQTA Sankt Quirin 88.90 331 *e*P P **01 29 05.5 +0.9**
comp=Z,19nm,1.0s,SNR=9.5
FETA Feichten 88.95 330 *e*P P **01 29 05.7 +0.9**
comp=Z,21nm,1.5s,SNR=7.0
CKRC Cesky Krumlov 88.95 333 *e*P P **01 29 06.8 +2.2**
CKRC *e*S **SKSac 01 39 28.6 -5.9**
MOTA Moosalm 89.05 331 *e*P P **01 29 05.7 +0.4**
comp=Z,25nm,1.4s,SNR=9.8
KRLC Kraliky 89.08 335 *e*P P **01 29 04.8 -0.4**
KRLC *e* 01 29 10.5
KRLC MLR MLR
comp=Z,200nm,25.9s
KRLC Kraliky 89.08 335 *e*P P **01 29 04.8 -0.4**
KRLC *e*pP **pwP 01 29 10.5 -1.5**
KRLC AMS AMS 02 03 30.0
comp=Z,200nm,25.9s
DAVOX Davos/Dischmat 89.12 330 LR LR 02 09 24.8
comp=Z,122nm,21.4s,baz=135,slow=36
GEC2 GERESS Array S 89.21 333 P P **01 29 07.2 +1.3**
GERES GERESS Array B 89.21 333 P P **01 29 05.3 -0.6**
comp=Z,1.0nm,0.6s,baz=165,slow=5.5,SNR=12
GERES LR LR 02 13 43.8
comp=Z,77nm,18.1s,baz=99,slow=39
comp=Z,1.0nm,0.6s
RETA Reutte 89.30 331 *e*P P **01 29 07.1 +0.7**
comp=Z,18nm,1.3s,SNR=13
DPC Dobruska-Polom 89.47 335 *e*P P **01 29 07.5 +0.4**
DPC *e*S **SKSac 01 39 32.3 -5.2**
DPC Dobruska-Polom 89.47 335 *e*P P **01 29 07.5 +0.4**
DPC *e*SKS **SKSac 01 39 32.3 -5.2**
DPC AMS AMS 02 03 40.0
comp=Z,300nm,29.4s
JOW Kunigami 89.48 58 LR LR 02 04 04.0
comp=Z,228nm,21.6s,baz=204,slow=32
RCBR Riachuelo 89.49 264 LR LR 02 02 02.9
comp=Z,418nm,20.8s,baz=284,slow=31
KHC Kasperske Hory 89.49 333 IAmb IAmb 01 29 10.1
comp=Z,22nm,1.5s
KHC Kasperske Hory 89.49 333 *e*P P **01 29 08.0 +0.9**
KHC *e*S S **01 39 56.6 -1.4**
KHC MLR MLR
comp=Z,200nm,22.6s
KHC Kasperske Hory 89.49 333 *e*P P **01 29 08.0 +0.9**
KHC *ex* x 01 29 15.3
KHC *e*S S **01 39 56.6 -1.4**
KHC AMS AMS 02 06 00.0
comp=Z,200nm,22.6s
DAVA Damuels 89.52 330 *e*P P **01 29 07.8 +0.3**
comp=Z,5.6nm,0.7s
KNGR Kungurtug, Tuv 89.57 24 ⇓*e*P P **01 29 08.9 +1.3**
OSTC Ostas 89.68 335 *e*P P **01 29 08.4 +0.4**
OSTC *ex* x 01 29 13.7
OSTC AMS AMS 02 03 50.0
comp=Z,200nm,15.8s
UPC Upice 89.71 335 *e*P P **01 29 10.1 +2.0**
UPC *e*S **SKSac 01 39 36.8 -2.1**
UPC MLR MLR
comp=Z,200nm,21.5s

UPC Upice 89.71 335 *e*P **P** **01 29 10.1 +2.0**
UPC *e*SKS **SKSac** **01 39 36.8 -2.1**
UPC AMS AMS 02 04 00.0
comp=Z,200nm,21.5s
CHVC Chvalec 89.77 335 *e*P **P** **01 29 08.9 +0.5**
CHVC AMS AMS 02 04 00.0
comp=Z,300nm,24.5s
PRU Pruhonice 89.82 334 *e*P **P** **01 29 11.2 +2.6**
PRU *e*S **SKSac** **01 39 32.3 -7.2**
PRU MLR MLR
comp=Z,300nm,24.7s
PRU Pruhonice 89.82 334 *e*P **P** **01 29 11.2 +2.6**
PRU *e*SKS **SKSac** **01 39 32.3 -7.2**
PRU AMS AMS 02 05 00.0
comp=Z,300nm,24.7s
BJT Baijiatuau 90.06 41 P **P** **01 29 10.7 +0.7**
BJT Baijiatuau 90.06 41 P **P** **01 29 10.7 +0.7**
BJT pmax pmax
comp=Z,5.0nm,0.9s
BJI Beijing 90.08 41 P **P** **01 29 11.1 +1.0**
BJI pmax pmax
comp=Z,6.0nm,0.9s
BJI pmax pmax
comp=Z,130nm,7.2s
BJI LR LR
comp=Z,73nm,18.6s
BJI LR LR
comp=Z,230nm,18.4s
BJI LR LR
comp=Z,520nm,19.4s
PVCC Panska Ves 90.25 334 *e*P **P** **01 29 13.8 +3.2**
PVCC MLR MLR
comp=Z,200nm,24.5s
PVCC Panska Ves 90.25 334 *e*P **P** **01 29 13.8 +3.2**
PVCC AMS AMS 02 07 10.0
comp=Z,200nm,24.5s
NACGM Naroch 90.28 343|| *e*P **P** **01 29 13.0 +2.4**
baz=154
KIRV Kirov 90.35 356 LR LR 02 08 56.2
comp=Z,318nm,21.1s,baz=195,slow=35
KIRV Kirov 90.35 356|| *e*P **P** **01 29 12.4 +1.6**
URZ Urewera 90.63 137 LR LR 02 02 57.0
comp=Z,608nm,20.6s,baz=211,slow=31
BRG Berggiesshubel 90.77 334 *i* P **P** **01 29 15.9 +2.9**
BRG Amp 01 29 18.0
comp=Z,54nm,1.9s
BRG *e*x x 01 29 21.1
BRG Amp 01 29 23.0
comp=Z,27nm,1.6s
BRG *e*x x 01 29 47.5
BRG Amp 01 29 50.4
comp=Z,10.0nm,1.7s
BRG Berggiesshubel 90.77 334 *i* P **P** **01 29 15.9 +2.9**
BRG *e* 01 29 21.0
BRG pmax pmax
comp=Z,54nm,1.9s
NKC Novy Kostel 90.81 333 *e*P **P** **01 29 16.7 +3.4**
NKC MLR MLR
comp=Z,300nm,25.0s
NKC Novy Kostel 90.81 333 *e*P **P** **01 29 16.7 +3.4**
NKC *e*S SKSac 01 39 34.0 -11
NKC AMS AMS 02 06 10.0
comp=Z,300nm,25.0s
SONM Songino Array 90.85 31 P **P** **01 29 12.5 -1.1**
comp=Z,9.7nm,1.3s,baz=207,slow=4.3,SNR=18
SONM LR LR 02 08 03.3
comp=Z,879nm,19.2s,baz=222,slow=34
comp=Z,9.7nm,1.3s
SONM Songino Array 90.85 31 P **P** **01 29 14.1 +0.5**
SONM IAmb IAmb 01 29 16.2
comp=Z,13nm,1.4s
SONM Songino Array 90.85 31 P **P** **01 29 14.1 +0.5**
SONM pmax pmax
comp=Z,13nm,1.4s
GRFO Grafenberg 90.86 332 P **P** **01 29 15.9 +2.4**
GRFO IAmb IAmb 01 29 25.4
comp=Z,32nm,1.3s
GRFO Grafenberg 90.86 332 P **P** **01 29 15.9 +2.4**
GRFO pmax pmax
comp=Z,32nm,1.3s
ESDC Sonseca Array 90.94 318 P **P** **01 29 12.7 -1.5**
comp=Z,5.4nm,1.2s,baz=163,slow=6.1,SNR=4.4
ESDC LR LR 02 12 24.2
comp=Z,288nm,18.1s,baz=130,slow=37
comp=Z,5.4nm,1.2s
ESDC Sonseca Array 90.94 318 IAmb IAmb 01 29 25.0
comp=Z,12nm,1.4s
BFO Black Forest 90.98 330 P **P** **01 29 16.0 +1.9**
BFO IAmb IAmb 01 29 23.3
comp=Z,11nm,1.3s
BFO Black Forest 90.98 330 P **P** **01 29 16.0 +1.9**
BFO pmax pmax
comp=Z,11nm,1.3s
ULN Ulaanbaatar 91.16 31 P **P** **01 29 15.8 +0.7**
ULN Ulaanbaatar 91.16 31 P **P** **01 29 15.8 +0.7**
ULN pmax pmax
comp=Z,6.0nm,1.1s
CLL Collm 91.47 334|| *i*P **P** **01 29 18.7 +2.5**
CLL *e*S **S** **01 40 16.0 +0.1**
CLL pmax pmax
comp=Z,65nm,2.1s
CLL MLR MLR
comp=Z,300nm,23.6s
CLL Collm 91.47 334|| *i*P **P** **01 29 18.7 +2.5**
comp=Z,65nm,2.1s
CLL *i* x x 01 29 40.2
comp=Z,36nm,2.1s
CLL *e*PP **PP** **01 33 00.0 +5.4**
CLL *e*S **S** **01 40 16.0 +0.1**
CLL *e*PS **PnS** **01 41 27.0 +0.5**
CLL *e*SS SS 01 46 12.0 -11
CLL *e*SSS SSS 01 50 12.0
ZAK Zakamensk 91.54 28 *e*P **P** **01 29 17.4 +0.6**
ZAK pmax pmax
comp=Z,4.0nm,1.7s
KRVT Keravat (AS076 91.94 96 LR LR 02 07 31.9
comp=Z,90nm,19.6s,baz=264,slow=34
XLT XiLinHaoTe 92.66 38 *e*P **P** **01 29 23.0 +0.9**
XLT pP pwP 01 29 27.9 -0.4
XLT sP PcP 01 29 29.3 +6.5
XLT S **S** **01 40 29.8 +2.5**
XLT sS ScS 01 40 36.4 +7.1
XLT SS **SS** **01 46 44.0 +3.5**
XLT pmax pmax
comp=Z,7.0nm,0.5s
XLT pmax pmax
comp=Z,110nm,6.7s
XLT LR LR
comp=Z,340nm,18.1s
XLT LR LR
comp=Z,350nm,20.2s
PLCA Paso Flores 93.04 217 LR LR 02 03 48.2
comp=Z,567nm,22.0s,baz=136,slow=31
KLMR Klimovskoe 93.52 351 *e*P **P** **01 29 23.4 -2.0**
KLMR *e* 01 33 08.0
KLMR pmax pmax
comp=Z,20nm,1.5s
KLMR Klimovskoe 93.52 351 *e*P **P** **01 29 23.5 -2.0**
KLMR AMP 01 29 28.4
comp=Z,20nm,1.5s
KLMR *e*PP **PP** **01 33 08.0 -2.5**
PRGR Permogore 93.65 355 *e*P **P** **01 29 24.8 -1.3**
PRGR *e* 01 33 10.4
DZM Mont Dzumac 93.74 119 *e*LR LR 01 59 53.9
comp=Z,251nm,21.7s
DZM Mont Dzumac 93.74 119 LR LR 02 04 47.2
comp=Z,278nm,19.4s,baz=212,slow=31
BDFB Brasilia 94.16 249 LR LR 02 06 13.4
comp=Z,479nm,18.3s,baz=150,slow=32
CPUP Villa Florida 94.80 235 LR LR 02 04 01.8
comp=Z,142nm,21.9s,baz=156,slow=30
GUMO Guam 95.21 77 LR LR 02 07 01.4
comp=Z,81nm,21.5s,baz=104,slow=32
KSAR Wonju Array Be 95.48 49 P **P** **01 29 35.4 +0.3**
KSAR Wonju Array Be 95.48 49 P **P** **01 29 35.4 +0.3**
KSRS Korea Array 95.52 49 P **P** **01 29 32.8 -2.4**
comp=Z,0.5nm,0.3s,baz=251,slow=3.7,SNR=2.1
comp=Z,0.5nm,0.3s
FINES FINESS Array B 96.35 346 LR LR 02 13 34.0
comp=Z,191nm,19.1s,baz=140,slow=36
CN2 Changchun 97.78 43 *e*P **P** **01 29 43.3 -2.1**
CN2 PP **PP** **01 33 45.1 +1.1**
CN2 SKS **SKSac** **01 40 19.3 -4.0**
CN2 SS **SS** **01 47 51.4 -1.7**
CN2 LR LR
comp=Z,150nm,22.0s
CN2 LR LR
comp=Z,230nm,22.0s
CN2 LR LR
comp=Z,170nm,22.0s
HFS Hagfors 98.38 340 LR LR 02 13 32.2
comp=Z,168nm,20.4s,baz=124,slow=35
NOA NORSAR Array B 99.84 339 LR LR 02 14 18.5
comp=Z,187nm,21.1s,baz=145,slow=35
JCJ Chichijima 99.99 64 LR LR 02 10 26.5
comp=Z,82nm,21.2s,baz=302,slow=33
TBI Tubuai 119.49 152 *e*LR LR 02 11 50.6
comp=Z,353nm,39.0s
PPT2 Papeete2 124.56 149 *e*LR LR 02 14 12.7
comp=Z,344nm,22.5s
SCHQ Schefferville 134.70 318 PKP **PKPdf** **01 35 25.6 -2.9**
comp=Z,2.7nm,1.0s,baz=117,slow=9.0,SNR=2.2
TAOE Nuku Hiva Isla 136.27 155 *e*LR LR 02 19 35.9
comp=Z,257nm,23.0s
IMAR Indian Mountai 141.13 20 **PKPdf** **01 35 37.6 -2.4**
H22K Ishtalitna Cre 141.85 18 P **PKPdf** **01 35 41.9 +0.6**
baz=319
I21K Tanana 142.22 20 P **PKPdf** **01 35 42.1 +0.2**
baz=317
C36M Paulatuk 142.49 1 PKPdf **PKPdf** **01 35 43.2 +1.0**
MLY Manley 142.68 19 P **PKPdf** **01 35 40.9 -1.9**
baz=319
K20K Telida 142.88 23 P **PKPdf** **01 35 41.1 -2.1**
baz=313
I23K Minto, Yukon-K 142.97 18 P **PKPdf** **01 35 40.9 -2.3**
baz=321
INK Inuvik 143.02 7 **PKPdf** **01 35 41.8 -1.4**
INK Inuvik 143.02 7 PKIKP **PKPdf** **01 35 41.8 -1.4**
CHUM Lake Minchumin 143.07 21 P PKPbc 01 35 41.3 +1.0
baz=316,SNR=8.7
BPAW Bear Paw Mtn. 143.31 20 P PKPbc 01 35 42.0 +1.0
baz=318,SNR=6.8
L19K White Mountain 143.41 25 P PKPbc 01 35 42.3 +1.0
baz=311
CAST Castle Rocks 143.48 22 P PKPbc 01 35 42.4 +0.9
baz=316,SNR=14
TCOL CIGO, UAF Yank 143.58 18 PKPdf **PKPdf** **01 35 43.2 -1.1**
X58A Rowland 143.65 286 PKPdf **PKPdf** **01 35 45.2 -0.2**
SADO Sadowa 143.75 304 PKhKP PKPpre 01 35 39.4
comp=Z,3.7nm,1.0s,baz=152,slow=5.7,SNR=2.8
M19K Big River Lodg 143.75 25 P PKPbc 01 35 43.4 +1.1
baz=311
CCB Clear Creek Bu 143.77 18 PKPdf **PKPdf** **01 35 43.9 -0.8**
PPLA Purkeypile 143.82 22 PKPdf **PKPdf** **01 35 44.5 -0.6**
PPLA Purkeypile 143.82 22 P PKPbc 01 35 43.2 +0.5
baz=315,SNR=7.8
ILAR Eielson Array 143.91 17 PKP PKPab 01 35 41.6 -0.5
comp=Z,2.2nm,1.0s,baz=322,slow=4.1,SNR=15
TRF Thorofare Moun 144.00 21 P **PKPab** **01 35 42.8 +0.1**
baz=318
MCK McKinley 144.19 19 P **PKPab** **01 35 43.4 +0.2**
baz=320
HDA Harding Lake 144.19 18 P **PKPab** **01 35 42.4 -0.8**
baz=324
M20K Styx River 144.21 24 P PKPbc 01 35 43.8 0.0
baz=313,SNR=10
I26K Coal Creek Min 144.32 14 P PKPbc 01 35 44.0 +0.1
baz=330
J25K Salcha River, 144.41 16 P PKPbc 01 35 44.3 0.0
baz=326,SNR=19
N19K Bonanza Creek 144.43 26 P **PKPab** **01 35 44.4 +0.1**
baz=310
RND Reindeer 144.46 20 PKPdf **PKPdf** **01 35 45.8 -0.2**
RND Reindeer 144.46 20 PKIKP **PKPdf** **01 35 45.8 -0.2**
EPYK Eagle Plains 144.49 10 P **PKPab** **01 35 44.4 +0.1**
baz=339,SNR=25
P17K Kvichak River 144.66 29 P **PKPdf** **01 35 46.1 -0.3**
baz=306
SKT Skwentna 144.69 23 P **PKPab** **01 35 44.5 -0.6**
baz=315,SNR=13
U56A King 144.71 289 P **PKPdf** **01 35 46.8 -0.4**
baz=95
U56A P **PKPdf** **01 35 46.8 -0.4**
baz=95
O18K Koktuh Hills 144.76 28 P PKPbc 01 35 45.7 +0.1
baz=308
BLA Blacksburg 144.81 291 P **PKPdf** **01 35 47.0 -0.4**
baz=94
BLA Blacksburg 144.81 291 P **PKPdf** **01 35 47.0 -0.4**
baz=94
O54A Avila 144.89 296 P **PKPdf** **01 35 47.4 0.0**
baz=90
O54A P **PKPdf** **01 35 47.4 0.0**
baz=90
J26L Joseph Creek 144.93 15 P PKPbc 01 35 46.3 +0.3
baz=328,SNR=36
K24K Donnelly Dome 144.98 17 P **PKPab** **01 35 46.1 0.0**
baz=325
WAT1 Susitna Watana 144.99 20 P **PKPdf** **01 35 46.6 -0.3**
baz=320
N20K Mount Spurr 145.00 24 P **PKPdf** **01 35 48.3 +1.2**
baz=313
SPU Mount Spurr 145.07 24 **PKPdf** **01 35 47.8 +0.7**
M53A WI Miller and 145.09 298 P **PKPbc** **01 35 47.2 0.0**
baz=88
DHY Denali Highway 145.14 19 P **PKPab** **01 35 47.0 +0.1**
baz=322
I29M Ogilvie Camp, 145.19 11 P **PKPbc** **01 35 45.8 -1.0**
baz=337,SNR=39
Q54A Coxs Mills 145.23 294 P **PKPbc** **01 35 47.1 -0.6**
baz=91
Q54A P **PKPbc** **01 35 47.1 -0.6**
baz=91
N53A Lisbon 145.23 297 P **PKPbc** **01 35 47.7 0.0**
baz=89
N53A P **PKPbc** **01 35 47.7 0.0**
baz=89
RIDG Independent Ri 145.27 17 P **PKPbc** **01 35 46.2 -0.9**
baz=326,SNR=14
SCRK Sand Creek 145.28 16 P **PKPab** **01 35 47.4 +0.1**
baz=327,SNR=49
M22K Willow 145.32 22 P **PKPbc** **01 35 47.2 0.0**
baz=317,SNR=6.9
SUA Susitna One 145.32 23 P **PKPbc** **01 35 47.3 -0.1**
baz=316
V55A Taylorsville 145.34 288 P **PKPab** **01 35 48.4 +0.1**
baz=96
V55A P **PKPab** **01 35 48.4 +0.1**
baz=96
KMSC Kings Mountain 145.35 287 **PKPbc** **01 35 48.2 0.0**
WAT6 Susitna Watana 145.42 20 P **PKPbc** **01 35 47.7 -0.1**
baz=321,SNR=21
O53A New Philadelph 145.53 296 P **PKPab** **01 35 49.1 +0.2**
baz=89
M52A Chesterland 145.60 298 P **PKPbc** **01 35 48.9 +0.1**
baz=87
M52A P **PKPbc** **01 35 48.9 +0.1**
baz=87
K27K Chicken 145.67 15 P **PKPab** **01 35 49.0 +0.3**
baz=330
P53A Whipple 145.67 295 P **PKPab** **01 35 49.4 0.0**
baz=90,SNR=6.6
P53A P **PKPab** **01 35 49.4 0.0**
baz=90,SNR=6.6
PAX Paxson 145.74 18 P **PKPab** **01 35 49.1 0.0**
baz=324,SNR=40
PMR Palmer 145.75 22 P **PKPbc** **01 35 48.6 0.0**
baz=318,SNR=6.4
SML Sawmill 145.84 21 **PKPab** **01 35 50.1 +0.6**
SML Sawmill 145.84 21 P **PKPab** **01 35 49.4 0.0**
baz=319,SNR=9.3
U54A Nelsons Funny 145.88 289 P **PKPab** **01 35 50.4 0.0**
baz=94
U54A P **PKPab** **01 35 50.4 0.0**
baz=94
O52A Adamsville 146.01 296 P **PKPab** **01 35 50.6 -0.1**
baz=89,SNR=11
O52A P **PKPab** **01 35 50.6 -0.1**
baz=89,SNR=11
M23K Glacier View 146.04 21 P **PKPbc** **01 35 49.5 -0.1**
baz=320,SNR=12
R53A Hurricane 146.08 292 P **PKPbc** **01 35 50.5 0.0**
baz=92
R53A P **PKPbc** **01 35 50.5 0.0**
baz=92
SCM Sheep Creek Mo 146.13 21 P **PKPbc** **01 35 50.0 +0.1**
baz=321,SNR=5.4
DAWY Dawson 146.18 13 P **PKPbc** **01 35 50.1 +0.1**
baz=334
L26K Log Cabin Wild 146.24 17 PKPbc **PKiKP** **01 35 52.6 -0.7**
L26K Log Cabin Wild 146.24 17 P **PKPab** **01 35 50.7 -0.2**
baz=328
P52A Corning 146.24 295 P **PKPbc** **01 35 51.0 +0.1**
baz=90
Q52A Bidwell 146.34 294 P **PKPab** **01 35 51.7 -0.3**
baz=90
Q52A P **PKPab** **01 35 51.7 -0.3**
baz=90
N51A Ashland 146.39 297 P **PKPab** **01 35 51.8 -0.3**
baz=88
N51A P **PKPab** **01 35 51.8 -0.3**
baz=88
L27K Beaver Creek, 146.56 16 P **PKPab** **01 35 51.9 -0.3**
baz=330
BCAR Beaver Creek A 146.57 16 **PKPbc** **01 35 51.3 +0.1**
KLU Klutina 146.81 20 P **PKPbc** **01 35 52.2 +0.3**
baz=322,SNR=11
FCC Fort Churchill 146.82 333 **PKPbc** **01 35 52.0 +0.1**
FCC Fort Churchill 146.82 333 PKP2 **PKPbc** **01 35 52.0 +0.1**
M26K Nabesna, AK 146.85 17 P **PKiKP** **01 35 54.6 0.0**
baz=328,SNR=9.1
GOGA Godfrey 146.88 283 P **PKPbc** **01 35 52.3 -0.6**
baz=98
ACSO Alum Creek Sta 146.88 296 P **PKPbc** **01 35 52.5 -0.2**
baz=88
ACSO Alum Creek Sta 146.88 296 P **PKPbc** **01 35 52.7 -0.1**
baz=88
GLI Glacier Island 146.94 22 P **PKPbc** **01 35 52.3 +0.1**
baz=320
P51A Williamsport 146.96 295 P **PKPbc** **01 35 52.9 -0.1**
baz=89,SNR=7.4
P51A P **PKPbc** **01 35 52.9 -0.1**
baz=89,SNR=7.4
E46A Sault Ste Mari 147.09 307 P **PKPbc** **01 35 53.2 +0.1**
baz=78
N25K Chitina, Valde 147.10 19 **PKPbc** **01 35 53.4 +0.7**
N25K Chitina, Valde 147.10 19 P **PKPbc** **01 35 53.5 +0.7**
baz=324,SNR=42
M27K Edge Creek, AK 147.16 16 P **PKPbc** **01 35 52.7 -0.3**
baz=329,SNR=14
BVCY Beaver Creek 147.35 15 P **PKPbc** **01 35 53.9 +0.6**
baz=331
S51A Beattyville 147.36 291 P **PKPbc** **01 35 53.7 -0.4**
baz=92
S51A P **PKPbc** **01 35 53.7 -0.4**
baz=92
TKL Tuckaleechee C 147.39 287 PKPbc **PKPdf** **01 35 51.8 0.0**
comp=Z,6.8nm,1.2s,baz=90,slow=6.1,SNR=2.3
TKL Tuckaleechee C 147.39 287 PKPbc **PKPab** **01 35 55.5 -0.7**
W52A Murphy 147.46 286 P **PKPbc** **01 35 54.7 +0.1**
baz=96
BMRM Bremner River 147.61 20 P **PKPbc** **01 35 54.1 0.0**
baz=324,SNR=5.5
MCARA McCarthy VSAT 147.71 18 P **PKPbc** **01 35 55.0 +0.7**
baz=327,SNR=13
VRDI Verde Repeater 147.72 19 **PKPbc** **01 35 55.1 +0.5**
N49A Columbus Grove 147.76 297 P **PKPbc** **01 35 55.5 +0.4**
baz=86
N49A P **PKPbc** **01 35 55.5 +0.4**
baz=86
L48A N Adams 147.87 299 P **PKPbc** **01 35 54.9 -0.5**
baz=84
L48A P **PKPbc** **01 35 54.9 -0.5**
baz=84
V51A Loudon 147.87 288 P **PKPbc** **01 35 55.2 -0.4**
baz=94
O49A Covington 147.92 296 P **PKPbc** **01 35 54.7 -0.8**
baz=87
O49A P **PKPbc** **01 35 54.7 -0.8**
baz=87
YUK3 Moose Creek 148.00 16 P **PKPbc** **01 35 55.4 0.0**
baz=331,SNR=10
M30M Minto, Yukon 148.03 12 **PKPbc** **01 35 54.4 -0.8**
M30M Minto, Yukon 148.03 12 P **PKPbc** **01 35 54.2 -1.0**
baz=337,SNR=6.4
P49A Miami Univ. Ec 148.24 295 P **PKPdf** **01 35 54.3 +1.2**
baz=88
P49A Miami Univ. Ec 148.24 295 P **PKPbc** **01 35 55.2 -1.2**
baz=88
Z51A Franklin 148.28 283 **PKPbc** **01 35 56.2 -0.5**
CTG Chitna Glacier 148.50 17 P **PKPbc** **01 35 56.9 +0.3**
baz=329
O48B Farmland 148.54 296 P **PKPdf** **01 35 54.3 +0.7**
baz=87
O48B Farmland 148.54 296 P **PKPbc** **01 35 55.7 -1.5**
baz=87
YUK8 Steele Glacier 148.59 16 P **PKPbc** **01 35 57.0 0.0**
baz=332,SNR=7.3
R49A Shelbyville 148.62 292 P **PKPdf** **01 35 53.5 -0.2**
baz=90
R49A P **PKPdf** **01 35 53.5 -0.2**
baz=90
M31M Drury Creek, Y 148.78 10 P **PKPbc** **01 35 55.2 -1.9**
baz=341
MMPY Sheldon Lake, 148.79 7 P **PKPbc** **01 35 57.8 +0.7**
baz=346,SNR=19
YUK4 Talbot Arm 148.79 15 P **PKPbc** **01 35 57.7 +0.3**
baz=334,SNR=6.5
E43A Lone Tree Farm 148.90 308 P **PKPdf** **01 35 53.6 -0.3**
baz=75
N47A Urbana 148.91 297 P **PKPdf** **01 35 55.5 +1.4**
baz=85
N47A P **PKPdf** **01 35 55.5 +1.4**
baz=85
YKA Yellowknife Ar 148.91 353 PKPbc **PKPbc** **01 35 56.3 -1.1**
comp=Z,10nm,0.8s,baz=7.7,slow=2.6,SNR=23
YKA Yellowknife Ar 148.91 353 PKPbc **PKPbc** **01 35 56.6 -0.8**
N30M Aishikik Lake 149.00 13 P **PKPbc** **01 35 58.2 +0.4**
baz=336
U49A Red Boiling Sp 149.06 289 **PKPbc** **01 35 58.0 -0.6**
U49A Red Boiling Sp 149.06 289 P **PKPdf** **01 35 54.9 +0.4**
baz=92
YUK6 Outpost Mounta 149.21 15 P **PKPbc** **01 35 58.8 +0.2**
baz=334,SNR=8.3
N31M Braeburn, Yuko 149.22 12 P **PKPbc** **01 35 58.2 -0.1**
baz=338,SNR=8.4
Y49A Blount Mountai 149.37 284 PKPbc **PKPbc** **01 35 59.6 +0.1**
HYT Haines Junctio 149.50 14 P **PKPbc** **01 35 59.6 +0.5**
baz=335,SNR=8.5
PINM Pinnacle 149.52 17 P **PKiKP** **01 35 59.9 -0.3**
baz=330
BLO Bloomington 149.65 294 PKPbc **PKiKP** **01 36 01.1 0.0**
BLO Bloomington 149.65 294 PKP2 **PKiKP** **01 36 01.1 0.0**
D41A Chassel 149.74 310 P **PKPdf** **01 35 56.0 +0.8**
baz=72
LRAL Lakeview Retre 149.76 282 P **PKPbc** **01 36 00.4 -0.1**
baz=98
O30N Mendenhall 149.83 13 P **PKPbc** **01 36 00.1 +0.3**
baz=337
V48A Smith Brothers 149.87 287 P **PKPdf** **01 35 57.0 +1.1**
baz=93
WHY Whitehorse 150.15 12 P **PKPbc** **01 35 59.3 -1.4**
baz=339
P30M Million Dollar 150.25 14 P **PKiKP** **01 36 01.7 +0.1**
baz=335
COWI Conover 150.40 308 P **PKPdf** **01 35 58.2 +1.8**
baz=73
M44A Midewin, Midew 150.62 299 P **PKPbc** **01 36 02.6 +0.4**
baz=82
K43A Burlington 150.63 301 **PKPbc** **01 36 02.1 -0.2**
K43A **PKPab** **01 36 10.4 +1.3**
K43A Burlington 150.63 301 P **PKPbc** **01 36 02.6 +0.4**
baz=80
CMIG Matias Romero 150.65 247 PKPbc **PKPbc** **01 36 02.2 -0.9**
comp=Z,3.1nm,0.7s,baz=31,slow=1.7,SNR=5.3
WVT Waverly 150.71 288 **PKPbc** **01 36 02.0 -0.7**
WVT Waverly 150.71 288 PKIKP **PKPbc** **01 36 02.0 -0.7**
WVT Waverly 150.71 288 P **PKPbc** **01 36 01.4 -1.2**
baz=92
WVT Waverly 150.71 288 P **PKPbc** **01 36 01.2 -1.4**
baz=92
I42A Draeger Farm, 150.81 304 P **PKPbc** **01 36 01.5 -1.1**
baz=77
O44A Mansfield 151.08 296 P **PKPbc** **01 36 00.6 -2.8**
baz=84,SNR=5.1
EYMN Ely 151.30 313 P **PKPbc** **01 36 01.0 -2.7**
baz=67
EYMN Ely 151.30 313 P **PKPbc** **01 36 03.9 +0.2**
baz=67
G40A Rib Lake 151.35 307 P **PKPbc** **01 36 03.9 0.0**
baz=73
P32M Atlin 151.36 11 P **PKPbc** **01 36 03.3 -0.1**
baz=340
HDIL Hopedale 151.66 297 P **PKPbc** **01 36 04.9 +0.2**
baz=83
HDIL Hopedale 151.66 297 P **PKPbc** **01 36 04.8 +0.1**
baz=83
E38A The Farm, Brul 151.83 311 P **PKPbc** **01 36 05.0 +0.1**
baz=70
P43A Skaggs, Pawnee 151.94 295 P **PKPbc** **01 36 05.3 0.0**
baz=84,SNR=6.7

JFWS	**Jewell Farm**	**151.97**	**302**	P		**PKPbc**	**01 36 05.5**	**+0.1**
	baz=78							
JFWS	**Jewell Farm**	**151.97**	**302**	P		**PKPbc**	**01 36 05.5**	**+0.1**
	baz=78							
B35A	**Bob, Littlefor**	**152.50**	**315**	P		**PKPbc**	**01 36 06.2**	**-0.1**
	baz=64							
FVM	**French Village**	**152.76**	**292**	P		**PKiKP**	**01 36 07.6**	**+0.1**
	baz=87							
ULM	**Lac du Bonnet**	**152.80**	**320**	PKP		**PKPdf**	**01 35 60.0**	**+0.2**
	comp=Z,2.3nm,0.9s,baz=127,slow=1.8,SNR=3.4							
ULM				PKPbc		**PKPbc**	**01 36 06.4**	**-0.6**
	comp=Z,13nm,0.8s,baz=40,slow=2.4,SNR=23							
ULM	**Lac du Bonnet**	**152.80**	**320**	PKPdf		**PKPdf**	**01 36 00.3**	**+0.4**
ULM				PKPbc		**PKPbc**	**01 36 06.6**	**-0.3**
ULM				PKPab		**PKPab**	**01 36 18.1**	**+0.2**
N41A	**Harden Midland**	**152.82**	**298**	P		**PKPbc**	**01 36 07.3**	**0.0**
	baz=81							
L40A	**Anamosa**	**152.85**	**301**	P		**PKPbc**	**01 36 07.4**	**+0.1**
	baz=78							
DLBC	**Dease Lake**	**153.01**	**8**	P		**PKiKP**	**01 36 07.4**	**0.0**
	baz=346							
LCAR	**Lake Charles**	**153.40**	**288**	PKPbc		**PKPbc**	**01 36 08.6**	**-0.1**
LCAR						**PKPab**	**01 36 21.3**	**+0.4**
CCM	**Cathedral Cave**	**153.41**	**292**	P		**PKPbc**	**01 36 08.4**	**-0.3**
	baz=86							
CCM	**Cathedral Cave**	**153.41**	**292**	P		**PKPbc**	**01 36 08.6**	**-0.1**
	baz=86							
AGMN	**Agassiz Nation**	**153.79**	**317**	P		**PKPbc**	**01 36 09.0**	**-0.2**
	baz=61							
AGMN	**Agassiz Nation**	**153.79**	**317**	P		**PKPbc**	**01 36 09.3**	**+0.1**
	baz=61							
P40A	**Paris**	**153.89**	**296**	P		**PKiKP**	**01 36 10.3**	**+0.5**
	baz=82,SNR=5.7							
435B	**Jarrell**	**158.34**	**274**	PKPdf		**PKPdf**	**01 36 07.5**	**-0.4**
435B						**PKPab**	**01 36 42.5**	**+0.2**
JCT	**Junction City**	**160.18**	**272**	PKPdf		**PKPdf**	**01 36 09.6**	**-0.5**
JCT						**PKPab**	**01 36 49.1**	**-1.2**
JCT	**Junction City**	**160.18**	**272**	PKP2		**PKPab**	**01 36 49.1**	**-1.2**
JCT							02 36 09.6	
TXAR	**Lajitas Array**	**163.23**	**266**	PKP		**PKPdf**	**01 36 10.5**	**-2.9**
	comp=Z,0.1nm,0.3s,baz=151,slow=2.1,SNR=2.7							
PDAR	**Pinedale Array**	**164.82**	**319**	PKP		**PKPdf**	**01 36 12.8**	**-1.7**
	comp=Z,0.7nm,0.8s,baz=34,slow=0.3,SNR=8.6							
MNTX	**Cornudas Mount**	**165.08**	**274**	PKPdf		**PKPdf**	**01 36 15.8**	**+0.9**
MNTX				PKPab		**PKPab**	**01 37 12.3**	**+0.4**
SMCO	**Snowmass**	**165.13**	**304**	PKPdf		**PKPdf**	**01 36 16.3**	**+1.1**
SMCO						**sPKPab**	**01 37 11.3**	**-1.2**
PV07	**Paradox Valley**	**166.62**	**303**			**PKPdf**	**01 36 13.4**	**-2.8**
PV07				PKPab		**sPKPab**	**01 37 15.6**	**-3.4**
ELK	**Elko**	**169.21**	**327**	PKP		**PKPdf**	**01 36 16.4**	**-1.5**
	comp=Z,0.3nm,0.3s,baz=79,slow=5.2,SNR=1.4							
ELK				PKPab		**sPKPab**	**01 37 27.9**	**-2.4**
	comp=Z,0.3nm,0.3s,baz=315,slow=6.9,SNR=1.5							
YBH	**Yreka Blue Hor**	**170.17**	**359**	PKPab		**PKPab**	**01 37 34.0**	**+0.2**
	comp=Z,0.8nm,0.8s,baz=99,slow=1.5,SNR=4.3							
YBH	**Yreka Blue Hor**	**170.17**	**359**	PKP2		**PKPab**	**01 37 44.0**	**+0.2**
NVAR	**Mina Array Bea**	**172.46**	**331**	PKPab		**PKPab**	**01 37 44.6**	**+0.3**
	comp=Z,1.0nm,0.9s,baz=44,slow=2.7,SNR=0.6							

*IDC **19** 01:25:19.9±0.6,31°.82S×57°.13E,h0km,mb4.3/13, mbtmp4.3/14,ML4.2/1,Error ellipse: s-maj=20.2km s-min=18.3km az=22.0*

*NEIC **19** 01:25:23.1±2.0,31°.9S±0°.1×57°.1E±0°.2,h10km±1km, mb4.5/22,Error ellipse: s-maj=22.7km s-min=19.2km az=247.0*

ISC 19 01:25:23.5±0.5,**31°.8S**±0°.1×**56°.99E**±0°.10,**h19**km,**n62,** σ1**s59**/55,**mb4.5/23,Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FOMA	**Nahampoana Res**	**11.10**	**305**	Pn	**Pn**	**01 28 03.0**	**+1.7**
VOI	**Vohitsoka**	**13.37**	**315**	Pn	**Pn**	**01 28 34.2**	**+1.8**
ABPO	**Ambohimpanom**	**15.44**	**323**	Pn	**Pn**	**01 29 00.4**	**-0.1**
OPO	**Ambohidratompo**	**15.83**	**324**	Pn	**Pn**	**01 29 08.0**	**+2.4**
	0.1nm,0.3s,baz=120,slow=17,SNR=7.5						
OPO				Sn	**Sn**	**01 31 53.2**	**-7.5**
	baz=72,slow=20,SNR=2.8						
	4.0nm,0.7s						
BOSA	**Boshof**	**27.56**	**268**	P	**P**	**01 31 09.9**	**+0.4**
	2.9nm,0.8s,baz=76,slow=6.0,SNR=3.9						
	2.9nm,0.8s						
MATP	**Matopo**	**27.88**	**287**	P	**P**	**01 31 13.8**	**+1.3**
	1.1nm,0.8s,baz=152,slow=9.9,SNR=1.5						
	1.1nm,0.8s						
H08S1	**Diego Carcia H**	**27.99**	**34**	T	T	02 00 30.2	
	baz=207,slow=76,SNR=14						
H08S2	**Diego Garcia H**	**28.00**	**34**	T	T	02 00 30.7	
	baz=207,slow=76,SNR=11						
H08S3	**Diego Garcia H**	**28.01**	**34**	T	T	02 00 31.8	
	baz=207,slow=76,SNR=15						
KIBK	**Kibwezi**	**34.28**	**325**	P	**P**	**01 32 07.8**	**-1.0**
KIBK				IAmb	IAmb	01 32 21.7	
	comp=Z,13nm,1.5s						
TSUM	**Tsumeb**	**37.51**	**280**	P	**P**	**01 32 37.3**	**+0.8**
	comp=Z,1.8nm,0.7s,baz=133,slow=2.2,SNR=2.4						
	comp=Z,1.8nm,0.7s						
TSUM	**Tsumeb**	**37.51**	**280**	IAmb	IAmb	01 32 39.4	
	comp=Z,7.5nm,1.1s						
H01W2	**Cape Leeuwin H**	**47.30**	**110**	T	T	02 24 15.3	
	baz=256,slow=75,SNR=9.2						
H01W3	**Cape Leeuwin H**	**47.30**	**110**	T	T	02 24 14.3	
	baz=256,slow=75,SNR=9.7						
H01W1	**Cape Leeuwin H**	**47.31**	**110**	T	T	02 24 27.3	
	baz=256,slow=75,SNR=34						
SNAA	**Sanae**	**50.78**	**201**	P	**P**	**01 34 20.6**	**-1.6**
	comp=Z,3.9nm,0.8s,baz=131,slow=6.0,SNR=5.1						
	comp=Z,3.9nm,0.8s						
SNAA	**Sanae**	**50.78**	**201**	IAmb	IAmb	01 34 26.8	
	comp=Z,6.8nm,1.0s						
QSPA	**South Pole Qui**	**58.42**	**180**	P	**P**	**01 35 17.6**	**-0.1**
	comp=Z,5.6nm,0.8s,baz=269,slow=1.7,SNR=25						
	comp=Z,5.6nm,0.8s						
QSPA	**South Pole Qui**	**58.42**	**180**	P	**P**	**01 35 18.1**	**+0.4**
QSPA				IAmb	IAmb	01 35 26.3	
	comp=Z,6.5nm,0.9s						
CM31	**Chiang Mai Arr**	**64.11**	**45**	P	**P**	**01 35 57.9**	**+1.2**
CMAR	**Chiang Mai Arr**	**64.11**	**45**	P	**P**	**01 35 57.1**	**+0.5**
	comp=Z,4.9nm,0.7s,baz=230,slow=7.2,SNR=18						
	comp=Z,4.9nm,0.7s						
HRA	**Herat**	**65.97**	**5**	P	**P**	**01 36 09.9**	**+1.2**
HRA				IAmb	IAmb	01 36 10.3	
	comp=Z,2.9nm,0.8s						
TOA0	**Torodi Ar. Sit**	**69.26**	**301**	P	**P**	**01 36 31.3**	**+1.6**
TOA0				IAmb	IAmb	01 36 41.8	
	comp=Z,3.0nm,0.8s						
TORD	**Torodi Ar. Bea**	**69.26**	**301**	P	**P**	**01 36 30.8**	**+1.2**
	comp=Z,1.8nm,0.7s,baz=133,slow=5.1,SNR=14						
	comp=Z,1.8nm,0.7s						
TORD	**Torodi Ar. Bea**	**69.26**	**301**	P	**P**	**01 36 31.4**	**+1.7**
WRA	**Warramunga Arr**	**69.32**	**101**	P	**P**	**01 36 28.6**	**-1.5**
	comp=Z,3.6nm,0.8s,baz=242,slow=4.4,SNR=4.6						
	comp=Z,3.6nm,0.8s						
STKA	**Stephens Creek**	**69.92**	**116**	P	**P**	**01 36 33.0**	**-0.6**
	comp=Z,3.6nm,0.7s,baz=261,slow=4.4,SNR=4.5						
	comp=Z,3.6nm,0.7s						
BR131	**Keskin Array S**	**74.35**	**341**	P	**P**	**01 37 00.7**	**+0.9**
BR131				IAmb	IAmb	01 37 04.9	
	comp=Z,4.3nm,0.9s						
BRTR	**Keskin Array B**	**74.35**	**341**	P	**P**	**01 37 00.5**	**+0.7**
	comp=Z,2.1nm,0.8s,baz=165,slow=8.1,SNR=17						
	comp=Z,2.1nm,0.8s						
BORA	**Eskisehir**	**75.40**	**339**	P	**P**	**01 37 06.8**	**+1.0**
BORA				IAmb	IAmb	01 37 08.6	
	comp=Z,4.0nm,0.8s						
KK31	**Karatay Array**	**75.52**	**10**	P	**P**	**01 37 07.0**	**+0.7**
KK31				IAmb	IAmb	01 37 09.0	
	comp=Z,4.6nm,1.1s						
KKAR	**Karatay Array**	**75.52**	**10**	P	**P**	**01 37 07.8**	**+1.5**
KKAR				IAmb	IAmb	01 37 09.0	
	comp=Z,4.6nm,1.1s						
AAK	**Ala-Archa**	**75.75**	**13**	P	**P**	**01 37 09.5**	**+1.6**
AAK				IAmb	IAmb	01 37 11.1	
	comp=Z,4.4nm,1.1s						
ENH	**Enshi**	**79.28**	**44**	P	**P**	**01 37 27.6**	**-0.2**
ABKAR	**Akbulak array**	**80.69**	**2**	P	**P**	**01 37 35.2**	**+0.3**
GTA	**Gaotai**	**81.20**	**32**	*e*P	**P**	**01 37 39.4**	**+1.3**
GTA				pP	pwP	01 37 48.1	-0.5
GTA				sP	sP	01 37 50.9	+6.2
GTA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MKAR	**Makanchi Array**	**81.45**	**17**	P	**P**	**01 37 38.3**	**-0.7**
	comp=Z,1.1nm,0.7s,baz=222,slow=4.5,SNR=7.8						
	comp=Z,1.1nm,0.7s						

MLR	**Muntele Rosu**	**81.89**	**339**	P	**P**	**01 37 42.7**	**+1.2**
MLR				IAmb	IAmb	01 37 47.3	
	comp=Z,10nm,1.4s						
BURAR	**Bucovina Array**	**84.01**	**339**	P	**P**	**01 37 54.4**	**+2.0**
KURK	**Kurchatov**	**84.31**	**14**	P	**P**	**01 37 54.4**	**+0.7**
BRVK	**Borovoye**	**85.25**	**8**	P	**P**	**01 37 57.3**	**-1.1**
BRVK				IAmb	IAmb	01 38 28.3	
	comp=Z,2.8nm,0.7s						
ZALV	**Zalesovo Beam**	**88.69**	**16**	P	**P**	**01 38 13.8**	**-1.3**
	comp=Z,0.7nm,0.5s,baz=202,slow=7.3,SNR=2.0						
	comp=Z,0.7nm,0.5s						
SONM	**Songino Array**	**90.77**	**31**	P	**P**	**01 38 24.6**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=186,slow=2.9,SNR=2.2						
	comp=Z,0.6nm,0.7s						
STU	**Stuttgart**	**90.81**	**331**	P	**P**	**01 38 26.0**	**+0.8**
INK	**Inuvik**	**142.90**	**6**	PKP	**PKPdf**	**01 44 52.2**	**-2.7**
	comp=Z,1.3nm,0.8s,baz=338,slow=11,SNR=3.8						
ILAR	**Eielson Array**	**143.81**	**17**	PKP	PKPbc	01 44 53.9	-0.4
	comp=Z,0.8nm,0.7s,baz=321,slow=4.0,SNR=8.1						
I26K	**Coal Creek Min**	**144.22**	**14**	PKPdf	**PKPdf**	**01 44 57.3**	**0.0**
EPYK	**Eagle Plains**	**144.38**	**9**	PKPdf	**PKPdf**	**01 44 57.3**	**-0.3**
J26L	**Joseph Creek**	**144.82**	**15**	PKPdf	**PKPdf**	**01 44 59.2**	**+0.7**
I29M	**Ogilvie Camp,**	**145.08**	**11**	PKPbc	**PKPdf**	**01 44 58.9**	**+0.1**
DOT	**Dot Lake**	**145.43**	**16**		**PKPab**	**01 45 00.1**	**+0.4**
K27K	**Chicken**	**145.56**	**15**		**PKPab**	**01 45 01.2**	**+1.1**
PAX	**Paxson**	**145.64**	**18**		**PKPab**	**01 45 01.7**	**+1.1**
DAWY	**Dawson**	**146.07**	**13**	PKPbc	**PKPab**	**01 45 02.9**	**+0.8**
L27K	**Beaver Creek,**	**146.46**	**15**	PKPbc	**PKiKP**	**01 45 04.4**	**-1.2**
BCAR	**Beaver Creek A**	**146.46**	**15**	PKPbc	**PKiKP**	**01 45 04.4**	**-1.2**
M27K	**Edge Creek, AK**	**147.06**	**16**	PKPbc	**PKiKP**	**01 45 06.5**	**-0.5**
M31M	**Drury Creek, Y**	**148.66**	**10**	PKPbc	**PKPbc**	**01 45 08.6**	**-0.1**
YKA	**Yellowknife Ar**	**148.77**	**352**	PKPbc	**PKPbc**	**01 45 07.8**	**-1.1**
	comp=Z,5.3nm,0.7s,baz=14,slow=2.4,SNR=12						
YKA	**Yellowknife Ar**	**148.77**	**352**		**PKiKP**	**01 45 09.4**	**-0.9**
ULM	**Lac du Bonnet**	**152.66**	**320**	PKPbc	**PKPbc**	**01 45 16.3**	**-2.2**
	comp=Z,4.6nm,0.7s,baz=52,slow=3.3,SNR=8.9						
ULM				PKPab	**PKPab**	**01 45 27.2**	**-2.0**
	comp=Z,4.4nm,0.8s,baz=41,slow=4.4,SNR=6.6						
ULM	**Lac du Bonnet**	**152.66**	**320**		**PKiKP**	**01 45 18.9**	**+0.2**

*CNRM **19** 01:26:11.1,35°.63N×3°.59W,h18km,ml2.6*

*MDD **19** 01:26:13.4±0.5,35°.40N×3°.60W,h21km±4km,mb_Lg2.3/17, Error ellipse: s-maj=4.0km s-min=2.7km az=161.0*

*SFS **19** 01:26:13.0,35°.40N×3°.59W,h21km,ML2.3,ALBORAN SUR*

ISC 19 01:26:12.3±1.1,**35°.43N**±0°.02×**3°.61W**±0°.02,**h30**km±12km, **n39,** σ1**s44/65,Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALE	**Palemas**	**0.34**	**233**	P	**Pn**	**01 26 20.7**	**-0.6**
PALE				S	**Sn**	**01 26 26.9**	**-0.3**
GOG	**Mont Gurugu**	**0.54**	**112**	P	**Pn**	**01 26 24.2**	**+0.1**
GOG				S	**Sn**	**01 26 31.2**	**-0.9**
EMEL	**Melilla**	**0.54**	**103**	Pg	**Pn**	**01 26 24.1**	**+0.1**
EMEL				Sg	**Sb**	**01 26 30.9**	**-0.2**
WMELI	**Melilla**	**0.55**	**101**	P	**Pn**	**01 26 23.8**	**-0.2**
WMELI				S	**Sn**	**01 26 31.8**	**-0.4**
PVLZ	**Peæn de**	**0.62**	**246**	P	**Pn**	**01 26 25.6**	**+0.5**
PVLZ				S	**Sn**	**01 26 34.2**	**+0.2**
EALB	**Alboran**	**0.69**	**42**	Pg	**Pn**	**01 26 26.2**	**+0.2**
EALB				Sg	**Sn**	**01 26 36.4**	**+0.6**
EALB				*i* Vmb_Lg		01 26 37.3	
AKLM	**AKL**	**0.94**	**193**	P	**Pb**	**01 26 32.1**	**+2.0**
AKLM				S	**Sn**	**01 26 46.7**	**+4.7**
CHAS	**Isla Isabel II**	**0.99**	**104**	P	**Pb**	**01 26 30.8**	**-0.1**
CHAS				S	**Sn**	**01 26 43.1**	**0.0**
TAF	**Taforalt**	**1.15**	**122**	P	**Pb**	**01 26 33.8**	**+0.1**
JBK	**JBK**	**1.38**	**142**	P	**Pb**	**01 26 37.1**	**-0.6**
JBK				S	**Sb**	**01 26 55.6**	**+0.6**
ELGU	**Los Guajares,**	**1.44**	**359**	Pn	**Pn**	**01 26 37.2**	**+0.8**
ELGU				Sn	**Sn**	**01 26 54.5**	**+0.2**
ELGU				*i* Vmb_Lg		01 26 55.5	
CHEFC	**Chefchaouen**	**1.46**	**258**	P	**Pb**	**01 26 38.7**	**-0.1**
SMIR	**Smir Dam**	**1.47**	**281**	P	**Pn**	**01 26 36.7**	**-0.1**
SMIR				S	**Sn**	**01 26 53.4**	**-1.6**
EMIJ	**Mijas**	**1.48**	**321**	Pn	**Pn**	**01 26 36.9**	**0.0**
EMIJ				Sn	**Sn**	**01 26 54.4**	**-0.9**
EMIJ				*i* Vmb_Lg		01 26 56.5	
CEU	**Ceuta**	**1.52**	**289**	P	**Pn**	**01 26 36.7**	**-0.7**
CEU				S	**Sn**	**01 26 43.3**	**-13**
EBER	**Berja**	**1.58**	**21**	Pn	**Pn**	**01 26 39.3**	**+0.8**
EBER				Sn	**Sn**	**01 26 58.5**	**+0.5**
EBER				*i* Vmb_Lg		01 27 02.7	
EGOR	**Sierra Gorda,**	**1.73**	**347**	Pn	**Pb**	**01 26 42.5**	**-1.0**
EGOR				Sn	**Sn**	**01 27 02.1**	**+0.5**
EGOR				*i* Vmb_Lg		01 27 11.7	
EQUE	**Quentar**	**1.78**	**4**	Pn	**Pb**	**01 26 43.1**	**-1.3**
EQUE				Sn	**Sn**	**01 27 02.8**	**0.0**
EQUE				*i* Vmb_Lg		01 27 07.7	
EJIF	**Jimena Fronter**	**1.83**	**305**	Pn	**Pb**	**01 26 43.9**	**-1.1**
EJIF				Sn	**Sn**	**01 27 04.7**	**+0.9**
ENIJ	**Nijar**	**1.91**	**36**	Pn	**Pn**	**01 26 42.5**	**-0.4**
ENIJ				Sn	**Sn**	**01 27 05.4**	**-0.6**
ENIJ				*i* Vmb_Lg		01 27 14.5	
SICH	**Sidi Chahed**	**1.93**	**227**	P	**Pb**	**01 26 47.5**	**+0.6**
IFR	**Ifrane**	**2.28**	**214**	P	**Pb**	**01 26 50.4**	**-2.6**
IFR				S	**Sn**	**01 27 16.9**	**+1.6**
EQES	**Quesada**	**2.41**	**10**	Pn	**Pb**	**01 26 53.6**	**-1.5**
EQES				Sn	**Sn**	**01 27 20.3**	**+1.9**
EQES				*i* Vmb_Lg		01 27 24.6	
CZD	**Col de Zad**	**2.67**	**207**	P	**Pb**	**01 26 56.3**	**-3.3**
TDRA	**Tendrara**	**2.71**	**151**	P	**Pb**	**01 26 58.0**	**-2.3**
MD31	**MD31**	**2.73**	**201**	P	**Pb**	**01 26 57.9**	**-2.6**
MDT	**Midelt**	**2.73**	**198**	P	**Pb**	**01 26 59.2**	**-1.5**
EADA	**Adamuz**	**2.84**	**344**	Pn	**Pn**	**01 26 58.1**	**+2.4**
EADA				Sn	**Sn**	**01 27 29.6**	**+0.6**
EADA				*i* Vmb_Lg		01 27 38.6	
EZAR	**Zarzadilla de**	**2.89**	**32**	Pn	**Pn**	**01 26 56.3**	**0.0**
EZAR				Sn	**Sn**	**01 27 30.8**	**+0.7**
ECAB	**El Cabril**	**3.02**	**332**	Pn	**Pn**	**01 26 59.3**	**+1.2**
ECAB				Sn	**Sn**	**01 27 33.3**	**0.0**
ECAB				*i* Vmb_Lg		01 27 44.5	
EMUR	**La Murta**	**3.07**	**38**	Sn	**Sn**	**01 27 33.5**	**-1.0**
EMUR				*i* Vmb_Lg		01 27 41.1	
ZHG	**ZHG**	**3.19**	**233**	P	**Pb**	**01 27 04.9**	**-3.5**
ETOB	**Tobarra**	**3.61**	**27**	Pn	**Pn**	**01 27 08.3**	**+2.0**
ETOB				Sn	**Sn**	**01 27 48.3**	**+0.4**
ETOB				*i* Vmb_Lg		01 27 56.2	
PVAQ	**Vaqueiros**	**3.86**	**302**	*e*Pn	**Pn**	**01 27 11.7**	**+2.1**
PVAQ				*e*Sn	**Sn**	**01 27 54.4**	**+0.5**
PVAQ				A	A	01 27 59.0	
	1.9nm,0.5s						
PBAR	**Barrancos**	**3.89**	**316**	*e*Sn	**Sn**	**01 27 54.6**	**-0.1**
ESDC	**Sonseca Array**	**4.25**	**356**	Pn	**Pn**	**01 27 17.3**	**+2.3**
ESDC				Sn	**Sn**	**01 28 02.3**	**-1.4**
ESDC				*i* Vmb_Lg		01 28 19.6	
EBAD	**Badajoz**	**4.30**	**322**	Pn	**Pn**	**01 27 17.0**	**+1.3**
EBAD				Sn	**Sn**	**01 28 04.9**	**+0.2**
EBAD				*i* Vmb_Lg		01 28 20.6	
PTEO	**Sao Teotonio**	**4.63**	**299**	*e*Sn	**Sn**	**01 28 13.7**	**+0.6**
EVO	**Evora**	**4.70**	**313**	*e*Pn	**Pn**	**01 27 23.6**	**+2.5**

*NEIC **19** 01:27:43.8±2.2,7°.24S±0°.08×129°.07E±0°.10,h116km±6km, mb4.4/24,Error ellipse: s-maj=13.8km s-min=11.1km az=76.0*

*DJA **19** 01:27:45.1±0.2,7°.S±2°×12°.9E±°,h110km±5km,M4.4/23, mB4.9/6,mb4.4/23,MLv4.4/13,Mw(mB)4.2/6*

*IDC **19** 01:27:45.9±2.2,7°.21S×129°.08E,h132km±18km,mb3.8/12, mbtmp4.3/13,MS3.1/2,Error ellipse: s-maj=28.4km s-min=12.6km az=59.0*

ISC 19 01:27:42.3±0.4,**7°.31S**±0°.04×**129°.06E**±0°.06,**h100**km,**n92,** σ1**s97**/91,**mb4.3/23,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.32**	**107**		**Pn**	**01 28 20.9**	**+1.9**
SAUI	**Saumlaki**	**2.32**	**107**	P	**Pn**	**01 28 22.8**	**+3.8**
AAI	**Ambon**	**3.70**	**346**	P	**Pn**	**01 28 41.2**	**+3.7**
MSAI	**Masohi**	**3.94**	**358**	P	**Pn**	**01 28 44.9**	**+4.2**
NLAI	**Namlea**	**4.49**	**334**	P	Pn	01 28 53.6	+5.5
FAKI	**Fak Fak**	**5.39**	**36**	Pn	**Pn**	**01 29 00.2**	**-0.2**
FAKI	**Fak Fak**	**5.39**	**36**	P	**Pn**	**01 29 01.4**	**+1.0**
	0.5nm2µm57nm,0.6s						
MTN	**Manton Dam**	**5.87**	**160**	Pn	**Pn**	**01 29 09.0**	**+2.2**
MTN	**Manton Dam**	**5.87**	**160**	P	**Pn**	**01 29 09.9**	**+3.1**
SANI	**Sanana**	**6.06**	**329**	P	**Pn**	**01 29 11.1**	**+1.7**
	0.2nm28nm,0.6s						

KDU	**Kakadu**	**6.31**	**148**	P	**Pn**	**01 29 15.0**	**+2.1**
BBSI	**Bau Bau**	**6.70**	**285**	P	Pn	01 29 23.7	+5.6
	0.1nm9.5nm,1.2s						
SWI	**Sorong**	**6.77**	**19**	P	**Pn**	**01 29 18.9**	**-0.2**
	0.3nm1µm26nm,0.6s						
LBMI	**Labuha**	**6.81**	**347**	P	**Pn**	**01 29 23.2**	**+3.6**
	0.2nm744nm50nm,1.1s						
EDFI	**Ende, Flores**	**7.44**	**258**	P	**Pn**	**01 29 32.4**	**+4.1**
	0.1nm14nm,1.3s						
KNRA	**Kununurra**	**8.32**	**182**	Pn	**Pn**	**01 29 40.9**	**+0.7**
KNRA	**Kununurra**	**8.32**	**182**	P	**Pn**	**01 29 42.1**	**+1.9**
BAKI	**Biak**	**9.29**	**49**	P	**Pn**	**01 29 54.7**	**+1.3**
	1µm139nm,1.1s						
KAPI	**Kappang**	**9.53**	**283**	LR	LR	01 33 32.7	
	comp=Z,140nm,19.6s,baz=95,slow=36						
APSI	**Ampana**	**9.75**	**310**	P	**Pn**	**01 30 01.9**	**+2.3**
	14nm,1.1s						
WBSI	**Waikabubak, Su**	**9.84**	**256**	P	**Pn**	**01 30 02.7**	**+1.8**
	62nm,0.7s						
MRSI	**Marisa**	**10.50**	**317**	P	Pn	01 30 14.7	+4.8
	636nm52nm,1.1s						
PLAI	**Plampang**	**11.28**	**262**	P	**Pn**	**01 30 21.4**	**+1.0**
	31nm,0.8s						
WB0	**Warramunga Arr**	**13.42**	**158**	Pn	**Pn**	**01 30 47.0**	**-1.8**
WRAB	**Tennant Creek**	**13.56**	**158**		**Pn**	**01 30 49.4**	**-1.1**
WRA	**Warramunga Arr**	**13.56**	**158**	P	**Pn**	**01 30 48.3**	**-2.3**
	12nm,0.4s,baz=339,slow=13,SNR=102						
WRA				S	Sn	01 33 10.9	-9.0
	16nm,0.6s,baz=330,slow=23,SNR=10						
WRA				LR	LR	01 36 42.1	
	comp=Z,62nm,19.7s,baz=182,slow=39						
WRA				ScP	**ScP**	**01 39 29.4**	**-4.7**
	3.2nm,0.5s,baz=348,slow=1.3,SNR=31						
WB2	**Warramunga Arr**	**13.57**	**158**		**Pn**	**01 30 49.0**	**-1.7**
WR0	**Warramunga Arr**	**13.65**	**158**		**Pn**	**01 30 50.3**	**-1.5**
BLJI	**Banyuglugur**	**15.34**	**267**	P	**P**	**01 31 18.4**	**+2.5**
	18nm,1.0s						
COEN	**Coen**	**15.36**	**117**	Pn	**Pn**	**01 31 14.0**	**+0.3**
COEN	**Coen**	**15.36**	**117**	P	**Pn**	**01 31 15.6**	**+1.9**
MYLDM	**Lahad Datu**	**16.28**	**319**	P	**P**	**01 31 27.1**	**+0.8**
QIS	**Mount Isa**	**16.66**	**143**	P	**Pn**	**01 31 31.1**	**+1.2**
PSA00	**Pilbara Seismi**	**16.74**	**211**		**Pn**	**01 31 30.3**	**-0.5**
PSA00				IAmb	IAmb	01 31 54.5	
	comp=Z,15nm,0.6s						
AS31	**Alice Springs**	**16.91**	**165**		**Pn**	**01 31 32.5**	**-0.5**
ASAR	**Alice Springs**	**16.92**	**165**		**Pn**	**01 31 33.3**	**+0.3**
WRKA	**Warakurna**	**17.64**	**182**	P	**P**	**01 31 43.3**	**+1.9**
PCJI	**Pacitan**	**17.74**	**266**	P	**P**	**01 31 44.2**	**+1.7**
	comp=Z,76nm,1.6s						
PMG	**Port Moresby**	**18.03**	**98**	P	**P**	**01 31 46.8**	**+1.2**
	comp=Z,22nm,0.8s,baz=296,slow=10,SNR=6.9						
PMG	**Port Moresby**	**18.03**	**98**		**P**	**01 31 45.2**	**-0.4**
PMG	**Port Moresby**	**18.03**	**98**	P	**Pn**	**01 31 47.8**	**+1.3**
KKM	**Kota Kinabalu**	**18.45**	**316**	P	Pn	01 31 59.2	+7.6
MANU	**Manus Island**	**18.97**	**75**	P	**P**	**01 31 54.6**	**-1.4**
MANU				IAmb	IAmb	01 32 03.9	
	comp=Z,16nm,0.9s						
SBUM	**Sibu**	**19.40**	**299**	P	**P**	**01 32 02.1**	**+1.5**
KSM	**Kuching**	**20.64**	**294**	P	**P**	**01 32 16.0**	**+1.9**
CTA	**Charters Tower**	**20.96**	**129**	P	**P**	**

comp=Z,1.2nm,0.7s,baz=156,slow=1.0,SNR=4.1
LPAZ La Paz 151.03 144 PKPab **PKPab 01 47 34.4 +1.3**
comp=Z,1.5nm,0.7s,baz=177,slow=6.5,SNR=7.4
LPAZ La Paz 151.03 144 PKPbc **PKPdf 01 47 21.2 +1.7**

NEIC ***19*** *01:34:57.9±1.0, 36.57N±0.01×98.53W±0.01, h5km±2km, Error ellipse: s-maj=3.1km s-min=2.6km az=253.0*
TUL ***19*** *01:34:57.8±1.1, 36.59N±0.02×98.54W±0.02, h6km±7km, ML3.3, mb_Lg3.2/91(NEIC), Error ellipse: s-maj=3.1km s-min=2.1km az=154.0*
ANF ***19*** *01:34:58.3±0.4, 36.56N×98.55W, h5km, ML4.0/12, Error ellipse: s-maj=4.7km s-min=3.4km az=85.0*
ISC 19 01:34:57.4±0.9, 36.57N±0.03×98.56W±0.04, h10km, n81, σ1§08/56, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKCFA	**Oklahoma City**	**1.46**	**142**	Pn	**Pb**	**01 35 23.9**	**-0.9**
OKCSW	**OKLAHOMA CITY**	**1.48**	**142**		**Pb**	**01 35 24.1**	**-0.9**
FNO	**Franklin**	**1.62**	**144**	Pn	**Pb**	**01 35 26.6**	**-0.7**
T35A	**Sooner Cattle**	**1.68**	**78**		**Pb**	**01 35 27.5**	**-1.0**
T35B	**Sooner Cattle** baz=258,SNR=89	**1.68**	**78**	P	**Pb**	**01 35 28.0**	**-0.5**
T35B	baz=258			S	**Sg**	**01 35 50.5**	**-1.1**
WMOK	**Wichita Mounta**	**1.84**	**186**		**Pb**	**01 35 30.1**	**-1.1**
WMOK	**Wichita Mounta** baz=7.1	**1.84**	**186**	P	**Pb**	**01 35 30.4**	**-0.8**
WMOK	baz=7.1			S	**Sg**	**01 35 55.2**	**-1.3**
R32A	**Long Quarter,**	**1.85**	**356**		**Pb**	**01 35 30.5**	**-1.0**
R32A	**Long Quarter,** baz=175,SNR=116	**1.85**	**356**	P	**Pb**	**01 35 30.7**	**-0.7**
R32A	baz=175			S	**Sb**	**01 35 55.6**	**+0.9**
X34A	**Smith Ranch, M**	**2.05**	**163**	Pn	**Pb**	**01 35 33.3**	**-1.5**
TUL1	**Leonard**	**2.34**	**106**		**Pn**	**01 35 37.2**	**+1.3**
TUL1	comp=Z,148nm,0.9s			lAmb_Lg		01 36 12.8	
TUL1	**Leonard** baz=287,SNR=74	**2.34**	**106**	P	**Pn**	**01 35 37.0**	**+1.1**
TUL1	baz=287			S	**Sb**	**01 36 09.4**	**+0.8**
CBKS	**Cedar Bluff**	**2.42**	**338**		**Pn**	**01 35 38.2**	**+1.0**
CBKS	**Cedar Bluff** baz=156	**2.42**	**338**	P	**Pb**	**01 35 39.5**	**-1.6**
CBKS	baz=156			S	**Sb**	**01 36 12.3**	**+1.1**
AMTX	**Amarillo**	**3.04**	**237**	Pn	**Pn**	**01 35 46.9**	**+1.1**
AMTX	comp=Z,72nm,0.8s			lAmb_Lg		01 36 36.9	
X37A	**Clayton**	**3.27**	**126**	Pn	**Pn**	**01 35 49.0**	**+0.3**
U38A	**Gravette**	**3.37**	**91**		**Pn**	**01 35 50.7**	**+0.6**
U38A	**Gravette** baz=273,SNR=28	**3.37**	**91**	P	**Pn**	**01 35 51.9**	**+1.8**
Z35A	**Perchaven, San** baz=343	**3.41**	**161**	P	**Pn**	**01 35 52.0**	**+1.3**
HHAR	**Hobbs**	**3.74**	**93**		**Pn**	**01 35 56.4**	**+1.1**
HHAR	comp=Z,51nm,0.8s			lAmb_Lg		01 36 58.2	
ABTX	**Abilene, Hawle**	**4.04**	**193**	Pn	**Pn**	**01 35 59.9**	**+0.6**
ABTX	comp=Z,42nm,0.8s			lAmb_Lg		01 37 10.4	
ABTX	**Abilene, Hawle** baz=13	**4.04**	**193**	P	**Pn**	**01 36 00.3**	**+1.0**
KSCO	**Kaye Shedlock'**	**4.04**	**308**	Pn	**Pn**	**01 36 00.2**	**+0.8**
KSCO	comp=Z,88nm,0.7s			lAmb_Lg		01 37 08.2	
W39A	**Magazine**	**4.12**	**108**		**Pn**	**01 36 00.0**	**-0.4**
N33B	**J Bar K, Exete** baz=191,SNR=13	**4.25**	**11**	P	**Pn**	**01 36 02.7**	**+0.4**
N33A	**J Bar K, Exete**	**4.25**	**11**		**Pn**	**01 36 02.0**	**-0.2**
N33A	comp=Z,78nm,0.8s			lAmb_Lg		01 37 22.2	
MSTX	**Muleshoe**	**4.31**	**234**	Pn	**Pn**	**01 36 04.8**	**+1.6**
S39A	**Bolivar**	**4.33**	**73**		**Pn**	**01 36 03.7**	**+0.3**
S39A	comp=Z,37nm,0.8s			lAmb_Lg		01 37 19.5	
S39A	**Bolivar** baz=256,SNR=7.1	**4.33**	**73**	P	**Pn**	**01 36 04.1**	**+0.7**
Z38A	**Mt. Pleasant** comp=Z,63nm,0.8s	**4.42**	**137**	lAmb_Lg		01 37 23.1	
MIAR	**Mount Ida**	**4.54**	**115**		**Pn**	**01 36 07.1**	**+0.9**
U40A	**Yellville**	**4.61**	**91**	Pn	**Pn**	**01 36 08.8**	**+1.7**
U40A	comp=Z,78nm,0.7s			lAmb_Lg		01 37 24.9	
U40A	**Yellville** baz=274,SNR=16	**4.61**	**91**	P	**Pn**	**01 36 08.7**	**+1.5**
U40A	baz=274,SNR=16			P	**Pn**	**01 36 08.7**	**+1.5**
WHTX	**Lake Whitney,**	**4.66**	**168**	Pn	**Pn**	**01 36 08.4**	**+0.5**
T25A	**Trinidad**	**4.72**	**279**	Pn	**Pn**	**01 36 10.1**	**+1.2**
N35A	**Tabor**	**4.85**	**27**	Pn	**Pn**	**01 36 10.6**	**0.0**
P38A	**Dawn**	**5.00**	**51**		**Pn**	**01 36 13.1**	**+0.5**
P38A	**Dawn** baz=233,SNR=8.4	**5.00**	**51**	P	**Pn**	**01 36 13.7**	**+1.1**
MGMO	**Mountain Grove**	**5.08**	**82**	Pn	**Pn**	**01 36 12.9**	**-0.8**
237A	**Washetta, Mont**	**5.10**	**153**	Pn	**Pn**	**01 36 14.6**	**+0.7**
237A	comp=Z,32nm,0.9s			lAmb_Lg		01 37 52.8	
X40A	**Basin Creek Fa**	**5.11**	**112**	Pn	**Pn**	**01 36 15.1**	**+1.0**
X40A	comp=Z,60nm,0.8s			lAmb_Lg		01 37 48.5	
OGNE	**Ogallala**	**5.14**	**329**	Pn	**Pn**	**01 36 16.4**	**+1.8**
OGNE	comp=Z,62nm,0.7s			lAmb_Lg		01 37 48.0	
FCAR	**Ozark Folk Cen**	**5.25**	**96**		**Pn**	**01 36 16.6**	**+0.6**
FCAR	comp=Z,33nm,0.7s			lAmb_Lg		01 37 53.0	
WHAR	**Wooly Hollow**	**5.25**	**102**	Pn	**Pn**	**01 36 17.2**	**+1.2**
WHAR	comp=Z,64nm,1.1s			lAmb_Lg		01 37 51.9	
R40A	**Maddies Statio**	**5.30**	**69**	Pn	**Pn**	**01 36 17.4**	**+0.8**
WLAR	**White Oak Lake**	**5.31**	**121**	lAmb_Lg		01 37 59.4	
W41B	**Gary Mavity, V**	**5.31**	**103**	Pn	**Pn**	**01 36 18.3**	**+1.5**
W41B	comp=Z,36nm,0.7s			lAmb_Lg		01 37 45.2	
UALR	**University of**	**5.37**	**108**	Pn	**Pn**	**01 36 19.7**	**+2.0**
L34A	**Svendsen Farm,**	**5.65**	**17**	Pn	**Pn**	**01 36 21.5**	**+0.1**
SDCO	**Great Sand Dun**	**5.66**	**284**	Pn	**Pn**	**01 36 23.0**	**+1.1**
Q24A	**Divide**	**5.74**	**297**	Pn	**Pn**	**01 36 23.7**	**+0.7**
Q24A	comp=Z,47nm,0.7s			lAmb_Lg		01 38 03.6	
Z41A	**Richland Creek** comp=Z,27nm,0.8s	**5.77**	**123**	lAmb_Lg		01 38 12.8	
435B	**Jarrell** comp=Z,37nm,0.8s	**5.83**	**172**	lAmb_Lg		01 38 08.6	
P40A	**Paris** comp=Z,58nm,0.8s	**5.93**	**58**	lAmb_Lg		01 38 07.7	
LCAR	**Lake Charles** comp=Z,30nm,0.8s	**6.00**	**93**	lAmb_Lg		01 38 10.2	
CCM	**Cathedral Cave** comp=Z,47nm,0.8s	**6.02**	**74**	lAmb_Lg		01 38 06.4	
CCAR	**Cane Creek** comp=Z,45nm,0.9s	**6.16**	**113**	lAmb_Lg		01 38 24.4	
JCT	**Junction City** comp=Z,40nm,0.9s	**6.16**	**190**	lAmb_Lg		01 38 21.0	
ISCO	**Idaho Springs**	**6.42**	**302**	Pn	**Pn**	**01 36 32.2**	**-0.1**
PBMO	**Poplar Bluff** comp=Z,48nm,0.9s	**6.54**	**86**	lAmb_Lg		01 38 25.7	
FVM	**French Village** comp=Z,28nm,0.8s	**6.64**	**75**	lAmb_Lg		01 38 24.3	
SLM	**Saint Louis** comp=Z,33nm,0.8s	**6.92**	**70**	lAmb_Lg		01 38 37.0	
143A	**Socs Landing,** comp=Z,36nm,0.8s	**7.05**	**121**	lAmb_Lg		01 38 52.3	
PARMO	**Parma** comp=Z,46nm,0.7s	**7.09**	**87**	lAmb_Lg		01 38 46.1	
PHWY	**Pilot Hill** comp=Z,20nm,0.9s	**7.15**	**313**	lAmb_Lg		01 39 03.4	
Y22D	**IRIS PASSCAL I** comp=Z,24nm,0.8s	**7.27**	**252**	lAmb_Lg		01 39 01.8	
ECSD	**EROS Data Cent** comp=Z,24nm,0.9s	**7.31**	**11**	lAmb_Lg		01 38 58.7	
N41A	**Harden Midland** comp=Z,30nm,0.8s	**7.31**	**53**	lAmb_Lg		01 39 05.9	
S44A	**Carbondale** comp=Z,29nm,0.7s	**7.52**	**79**	lAmb_Lg		01 38 59.2	
735A	**Kenedy** comp=Z,29nm,1.2s	**7.72**	**175**	lAmb_Lg		01 39 14.5	
P43A	**Skaggs, Pawnee** comp=Z,38nm,0.8s	**7.76**	**64**	lAmb_Lg		01 39 08.9	
SUSD	**Miller**	**7.87**	**358**	lAmb_Lg		01 39 29.3	
	comp=Z,23nm,0.8s						
L40A	**Anamosa** comp=Z,31nm,0.8s	**7.90**	**44**	lAmb_Lg		01 39 25.4	
833A	**Chaparral WMA,** comp=Z,17nm,0.9s	**8.25**	**185**	lAmb_Lg		01 39 25.1	
RWWY	**Rawlins** comp=Z,17nm,0.9s	**8.44**	**310**	lAmb_Lg		01 39 39.9	
RSSD	**Black Hills** comp=Z,16nm,0.9s	**8.62**	**333**	lAmb_Lg		01 39 47.3	
K22A	**Casper** comp=Z,28nm,1.1s	**8.63**	**317**	lAmb_Lg		01 39 44.1	
L42A	**Oliver, Polo** comp=Z,27nm,0.9s	**8.77**	**49**	lAmb_Lg		01 39 39.4	
JFWS	**Jewell Farm** comp=Z,20nm,0.7s	**9.01**	**43**	lAmb_Lg		01 39 44.9	
F33A	**5 Mile Ranch,** comp=Z,20nm,0.9s	**9.42**	**10**	lAmb_Lg		01 39 59.7	
SPMN	**Marine on St.** comp=Z,15nm,1.0s	**9.68**	**25**	lAmb_Lg		01 40 24.3	

DJA ***19*** *01:43:10.7±1.8, 6.1N±5.5×12.5E±.1, h29km±21km, M4.2/9, mb4.3/7, mB5.2/4, MLv4.1/9, Mw(mB)4.6/4*
MAN ***19*** *01:43:11.7, 6.00N×124.72E, h17km, mb4.6, ML3.4, MS3.3*
ISC 19 01:43:10.3±1.2, 5.80N±0.04×124.69E±0.09, h35km, n10, σ1§37/14, 2C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**0.38**	**42**	*i*P	**Pn**	**01 43 18.7**	**-0.8**
GSPH				*i* S	**Sn**	**01 43 26.8**	**+1.0**
KCP	**Kidapawan**	**1.27**	**181**	*i*P	**Pn**	**01 43 30.6**	**-1.0**
KCP				*i* S	**Sn**	**01 43 46.7**	**-0.6**
CTBH	**Cotabato--PC H**	**1.48**	**343**	*i*P	**Pn**	**01 43 33.9**	**-0.5**
CTBH				*i* S	**Sn**	**01 43 52.5**	**-0.1**
SGSI	**Sangihe**	**2.26**	**158**	P	**Pn**	**01 43 45.4**	**+0.2**
SGSI				S	**Sn**	**01 44 11.0**	**-0.9**
CGP	**Cagayan de Oro**	**2.64**	**0**	*e*P	**Pn**	**01 43 52.8**	**+2.4**
MRSI	**Marisa** 0.3nm1µm77nm,0.6s	**5.96**	**208**	P	**Pn**	**01 44 35.8**	**-0.3**
LUWI	**Luwuk** 0.4nm4µm37nm,0.4s	**7.06**	**196**	P	**Pn**	**01 44 49.7**	**-1.6**
MPSI	**Mapaga** 0.0nm3.8nm,0.6s	**7.23**	**222**	P	**Pn**	**01 44 52.7**	**-0.9**
APSI	**Ampana**	**7.33**	**205**	P	**Pn**	**01 44 57.6**	**+2.7**
BSSI	**Bau Bau, Buton**	**12.58**	**200**	P	**Pn**	**01 46 06.6**	**-0.4**

TUL ***19*** *01:52:23.5±1.2, 36.28N±0.02×96.65W±0.01, h5km±6km, ML2.6, mb_Lg2.4/32(NEIC), Error ellipse: s-maj=2.9km s-min=1.5km az=189.0*
NEIC 19 01:52:23.9±1.2, 36.292N±0.010×96.68W±0.04, h11km±6km, Error ellipse: s-maj=5.1km s-min=1.4km az=87.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T35A	**Sooner Cattle**	**0.64**	**12**	Pg	**Pg**	**01 52 35.4**	**-0.8**
OKCFA	**Oklahoma City**	**1.07**	**216**		**Pb**	**01 52 43.8**	**-0.7**
OKCSW	**OKLAHOMA CITY**	**1.08**	**215**		**Pb**	**01 52 44.1**	**-0.4**
FNO	**Franklin**	**1.19**	**210**	Pg	**Pb**	**01 52 45.6**	**-0.8**
U38A	**Gravette**	**1.86**	**85**		**Pn**	**01 52 56.3**	**+0.6**
X34A	**Smith Ranch, M**	**1.93**	**209**	Pn	**Pn**	**01 52 57.7**	**+1.0**
X34A	comp=Z,16nm,1.0s			lAmb_Lg		01 53 24.9	
X37A	**Clayton**	**2.01**	**147**		**Pn**	**01 52 58.1**	**+0.4**
HHAR	**Hobbs**	**2.22**	**89**		**Pn**	**01 53 01.2**	**+0.6**
WMOK	**Wichita Mounta**	**2.31**	**228**		**Pn**	**01 53 03.1**	**+1.3**
W39A	**Magazine**	**2.60**	**114**	Pn	**Pn**	**01 53 06.1**	**+0.3**
R32A	**Long Quarter,**	**2.67**	**323**	Pn	**Pn**	**01 53 07.7**	**+0.8**
R32A	comp=Z,10nm,1.0s			lAmb_Lg		01 53 55.1	
S39A	**Bolivar**	**3.03**	**62**	Pn	**Pn**	**01 53 10.9**	**-0.9**
MIAR	**Mount Ida**	**3.08**	**124**	Pn	**Pn**	**01 53 12.4**	**0.0**
U40A	**Yellville**	**3.09**	**88**	Pn	**Pn**	**01 53 12.7**	**+0.1**
X40A	**Basin Creek Fa**	**3.62**	**119**	Pn	**Pn**	**01 53 20.5**	**+0.6**
X40A	comp=Z,8.0nm,0.8s			lAmb_Lg		01 54 20.8	
MGMO	**Mountain Grove**	**3.65**	**75**	Pn	**Pn**	**01 53 20.1**	**-0.2**
MGMO	comp=Z,14nm,0.8s			lAmb_Lg		01 54 23.3	
WHAR	**Wooly Hollow**	**3.71**	**104**	Pn	**Pn**	**01 53 21.1**	**0.0**
WHAR	comp=Z,7.5nm,0.7s			lAmb_Lg		01 54 20.1	
FCAR	**Ozark Folk Cen** comp=Z,9.6nm,0.8s	**3.71**	**95**	lAmb_Lg		01 54 19.9	
W41B	**Gary Mavity, V**	**3.78**	**106**	Pn	**Pn**	**01 53 22.1**	**+0.1**
W41B	comp=Z,10nm,0.7s			lAmb_Lg		01 54 30.9	
UALR	**University of** comp=Z,8.3nm,0.9s	**3.85**	**112**	lAmb_Lg		01 54 32.2	
R40A	**Maddies Statio**	**4.05**	**59**	Pn	**Pn**	**01 53 25.7**	**0.0**
R40A	comp=Z,6.5nm,0.8s			lAmb_Lg		01 54 37.1	
P38A	**Dawn**	**4.16**	**36**	Pn	**Pn**	**01 53 27.6**	**+0.4**
AMTX	**Amarillo** comp=Z,12nm,0.7s	**4.31**	**252**	lAmb_Lg		01 54 47.4	
CCM	**Cathedral Cave**	**4.69**	**66**	Pn	**Pn**	**01 53 34.2**	**-0.3**
CCM	comp=Z,8.4nm,0.8s			lAmb_Lg		01 54 48.6	
PBMO	**Poplar Bluff** comp=Z,8.0nm,0.8s	**5.06**	**83**	lAmb_Lg		01 55 12.9	
L34A	**Svendsen Farm,** comp=Z,7.5nm,0.8s	**5.67**	**2**	lAmb_Lg		01 55 25.0	
T25A	**Trinidad** comp=Z,3.9nm,0.7s	**6.26**	**280**	lAmb_Lg		01 55 56.6	
JCT	**Junction City** comp=Z,5.6nm,0.9s	**6.36**	**205**	lAmb_Lg		01 55 59.5	

IDC ***19*** *01:54:06.2±0.7, 35.86S×136.50E, h0km, mb4.1/7, mbtmp4.2/9, ML4.8/2, MS4.3/1, Error ellipse: s-maj=30.5km s-min=17.1km az=104.0*
NEIC ***19*** *01:54:07.9±1.8, 35.88S±0.07×136.46E±0.08, h10km±1km, Error ellipse: s-maj=12.0km s-min=10.2km az=145.0*
NOU ***19*** *01:54:08.1, 35.97S×136.29E, h10km, mb4.6/31, Near Coast of South Australia*
ISC 19 01:54:07.8±0.6, 35.86S±0.06×136.35E±0.06, h10km, n81, σ1§55/71, mb4.2/9, Near coast of South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWOA	**Tennyson Woods**	**1.99**	**66**	P	**Pb**	**01 54 43.9**	**-0.3**
GHSS	**Government Hou**	**2.06**	**64**	P	**Pb**	**01 54 45.9**	**+0.6**
WHYH	**Whyalla**	**2.99**	**20**	P	**Pb**	**01 54 58.8**	**-2.4**
PTPS	**Port Pirie**	**3.00**	**27**	P	**Pn**	**01 54 57.5**	**+2.1**
BBOO	**Buckleboo**	**3.05**	**355**	Pn	**Pn**	**01 54 57.8**	**+1.7**
BBOO	**Buckleboo**	**3.05**	**355**	P	**Pn**	**01 54 58.8**	**+2.7**
NAPP	**Napperby**	**3.05**	**30**	P	**Pn**	**01 54 58.9**	**+2.8**
HTT	**Hallett**	**3.22**	**42**	P	**Pn**	**01 55 01.4**	**+3.0**
ARPS	**Mount Arapiles**	**4.52**	**103**	P	**Pn**	**01 55 17.5**	**+1.2**
LCRK	**Leigh Creek**	**5.62**	**17**	P	**Pn**	**01 55 33.2**	**+1.8**
MULG	**Mulgathing**	**5.89**	**340**	P	**Pn**	**01 55 38.1**	**+3.0**
STKA	**Stephens Creek** 12nm,0.3s,baz=226,slow=11,SNR=112	**5.90**	**49**	Pn	**Pn**	**01 55 35.4**	**+0.1**
STKA	31nm,0.3s,baz=173,slow=19,SNR=4.6			Sn	**Sn**	**01 56 44.7**	**+1.9**
STKA	79nm,0.3s,baz=304,slow=23,SNR=7.0 32nm,0.3s			Lg	Lg	01 57 11.6	
STKA	**Stephens Creek**	**5.90**	**49**		**Pn**	**01 55 36.4**	**+1.2**
STKA	**Stephens Creek**	**5.90**	**49**	P	**Pn**	**01 55 36.9**	**+1.7**
BRAT	**Ballarat**	**6.32**	**108**	P	**Pn**	**01 55 40.5**	**-0.4**
GEXS	**Deakin Univers**	**6.76**	**113**	P	**Pn**	**01 55 49.5**	**+2.4**
TOO	**Toolangi**	**7.53**	**106**		**Pn**	**01 55 56.5**	**-1.3**
TOO	**Toolangi**	**7.53**	**106**	P	**Pn**	**01 55 57.5**	**-0.2**
OOD	**Oodnadatta**	**8.06**	**356**	P	**Pn**	**01 56 06.4**	**+1.5**
FORT	**Forrest**	**8.59**	**304**		**Pn**	**01 56 14.0**	**+1.8**
FORT	**Forrest**	**8.59**	**304**	P	**Pn**	**01 56 14.4**	**+2.2**
INKA	**Innaminka**	**8.91**	**26**	P	**Pn**	**01 56 17.6**	**+1.0**
GLAD	**Gladstone**	**10.47**	**123**	P	**Pn**	**01 56 36.4**	**-1.6**
MOO	**Moorlands**	**10.67**	**131**	P	**Pn**	**01 56 41.0**	**+0.3**
TAU	**Tasmania Unive**	**11.02**	**133**	Pn	**Pn**	**01 56 44.2**	**-1.2**
QLP	**Quilpie**	**11.44**	**38**	P	**Pn**	**01 56 50.8**	**-0.5**
ASAR	**Alice Springs**	**12.34**	**349**	Pn	**Pn**	**01 57 03.1**	**-0.4**
AS31	**Alice Springs**	**12.34**	**349**	Pn	**Pn**	**01 57 03.5**	**0.0**
WRKA	**Warakurna**	**12.82**	**325**	P	**Pn**	**01 57 10.7**	**+0.5**
ARMA	**Armidale**	**13.90**	**71**	Pn	**Pn**	**01 57 23.3**	**-1.7**
ARMA	**Armidale**	**13.90**	**71**	P	**Pn**	**01 57 26.6**	**+1.7**
WR0	**Warramunga Arr** comp=Z,35nm,0.7s	**15.92**	**354**		**Pn**	**01 57 49.1**	**-2.9**
WR0				lAmb	lAmb	01 57 53.5	
WB2	**Warramunga Arr**	**15.96**	**353**		**Pn**	**01 57 49.9**	**-2.5**
WB2	comp=Z,26nm,0.6s			lAmb	lAmb	01 57 53.1	
WRA	**Warramunga Arr** comp=Z,7.5nm,0.3s,baz=175,slow=13,SNR=329	**15.96**	**353**	Pn	**Pn**	**01 57 49.3**	**-3.1**
WRA	comp=Z,1.5nm,0.3s,baz=180,slow=23,SNR=4.8			Sn	Sn	02 00 38.0	-12
WRA	baz=177,slow=25			Lg	Lg	02 02 29.0	
WRAB	**Tennant Creek**	**15.96**	**353**		**Pn**	**01 57 49.9**	**-2.7**
WRAB	comp=Z,30nm,0.5s			lAmb	lAmb	01 57 51.1	
KLBR	**Kellerberrin**	**16.05**	**280**	P	**Pn**	**01 57 52.8**	**-0.8**
NWAO	**Narrogin (SRO)**	**16.05**	**275**	Pn	**Pn**	**01 57 54.0**	**+0.4**
NWAO	comp=Z,61nm,1.4s			lAmb	lAmb	01 58 09.9	
NWAO	**Narrogin (SRO)**	**16.05**	**275**	P	**Pn**	**01 57 54.2**	**+0.6**
WB0	**Warramunga Arr**	**16.12**	**353**		**Pn**	**01 57 51.6**	**-3.0**
MUN	**Mundaring**	**17.16**	**277**	P	**Pn**	**01 58 07.7**	**0.0**
BLDU	**Ballidu**	**17.24**	**282**	P	**Pn**	**01 58 07.3**	**-1.4**
CTA	**Charters Tower** comp=Z,2.2nm,0.3s,baz=205,slow=13,SNR=11	**17.96**	**32**	P	**Pn**	**01 58 17.2**	**-0.4**
CTA	**Charters Tower**	**17.96**	**32**	P	**Pn**	**01 58 17.8**	**+0.1**
CTAO	**Charters Tower**	**17.96**	**32**	Pn	**Pn**	**01 58 17.1**	**-0.6**
CTAO	**Charters Tower**	**17.96**	**32**	P	**Pn**	**01 58 17.9**	**+0.2**
MORW	**Morawa**	**18.41**	**286**	P	**P**	**01 58 22.3**	**-0.9**
PSA00	**Pilbara Seismi**	**20.26**	**310**	P	**P**	**01 58 43.7**	**+0.2**
PSA00	comp=Z,16nm,0.9s			lAmb	lAmb	01 58 50.5	
MBWA	**Marble Bar**	**20.64**	**311**	P	Pn	01 58 49.4	-0.4
MBWA	comp=Z,28nm,1.4s			lAmb	lAmb	01 59 19.0	
MBWA	**Marble Bar**	**20.64**	**311**	P	**P**	**01 58 48.7**	**+1.2**
KNRA	**Kununurra**	**21.21**	**339**	P	**P**	**01 58 54.4**	**+0.7**
KNRA	**Kununurra**	**21.21**	**339**	P	**P**	**01 58 54.7**	**+1.0**
COEN	**Coen**	**22.65**	**17**	P	**P**	**01 59 07.8**	**-1.4**
COEN	comp=Z,16nm,1.1s			lAmb	lAmb	01 59 28.9	
COEN	**Coen**	**22.65**	**17**	P	**P**	**01 59 10.4**	**+1.2**
GIRL	**Giralia**	**23.30**	**298**	P	**P**	**01 59 18.7**	**+2.9**
MTN	**Manton Dam**	**23.39**	**347**	P	**P**	**01 59 17.0**	**+0.2**
VNDA	**Vanda** comp=Z,1.6nm,0.6s,baz=329,slow=8.5,SNR=16 comp=Z,1.6nm,0.6s	**43.22**	**172**	P	**P**	**02 02 08.0**	**-0.6**
VNDA	**Vanda**	**43.22**	**172**	P	**P**	**02 02 08.3**	**-0.3**
QSPA	**South Pole Qui** comp=Z,1.1nm,0.4s,baz=307,slow=4.4,SNR=19 comp=Z,1.1nm,0.4s	**54.25**	**180**	P	**P**	**02 03 33.8**	**+0.1**
QSPA	**South Pole Qui** comp=Z,1.5nm,0.7s	**54.25**	**180**	lAmb	lAmb	02 03 39.0	
RAR	**Rarotonga** comp=Z,261nm,19.0s,baz=288,slow=34	**57.07**	**94**	LR	LR	02 26 53.4	
CMAR	**Chiang Mai Arr** comp=Z,1.3nm,0.3s,baz=150,slow=6.4,SNR=4.2 comp=Z,1.3nm,0.3s	**64.60**	**320**	P	**P**	**02 04 48.0**	**+2.4**
CMAR	**Chiang Mai Arr**	**64.60**	**320**	P	**P**	**02 04 45.7**	**+0.2**
MJAR	**Matsushiro Arr** comp=Z,1.0nm,0.7s,baz=148,slow=9.7,SNR=5.3 comp=Z,1.0nm,0.7s	**72.06**	**2**	P	**P**	**02 05 31.7**	**-0.2**
MJAR	**Matsushiro Arr** comp=Z,3.6nm,1.4s	**72.06**	**2**	P	**P**	**02 05 34.0**	**+2.1**
MJAR				lAmb	lAmb	02 05 34.6	
KSRS	**Korea Array** comp=Z,2.0nm,0.9s,baz=171,slow=7.6,SNR=6.0 comp=Z,2.0nm,0.9s	**73.36**	**353**	P	**P**	**02 05 38.7**	**-0.9**
USRK	**Ussuriysk Ar.** comp=Z,3.1nm,0.8s,baz=194,slow=10.0,SNR=4.8 comp=Z,3.1nm,0.8s	**79.78**	**357**	P	**P**	**02 06 15.0**	**-0.8**
ULN	**Ulaanbaatar**	**87.37**	**341**	P	**P**	**02 06 54.1**	**-0.8**
ULN	comp=Z,4.9nm,1.4s			lAmb	lAmb	02 07 00.6	
SONM	**Songino Array** comp=Z,0.6nm,0.7s,baz=157,slow=9.2,SNR=3.6 comp=Z,0.6nm,0.7s	**87.52**	**340**	P	**P**	**02 06 54.2**	**-1.4**
SONM	**Songino Array** comp=Z,2.2nm,1.5s	**87.52**	**340**	lAmb	lAmb	02 07 10.8	
H03S2	**Juan Fernandez** baz=207	**103.22**	**150**	T	T	04 03 14.1	
H03S1	**Juan Fernandez** baz=207	**103.22**	**150**	T	T	04 03 18.4	
H03S3	**Juan Fernandez** baz=207	**103.24**	**150**	T	T	04 03 18.8	
BRTR	**Keskin Array B** comp=Z,0.2nm,0.4s,baz=127,slow=3.8,SNR=1.8	**120.61**	**299**	PKP	**PKPdf**	**02 12 58.6**	**-1.2**
H10S2	**ASCENSION HYDR** baz=149,slow=74,SNR=21	**127.71**	**217**	T	T	04 34 45.9	
H10S3	**ASCENSION HYDR** baz=71,slow=74,SNR=107	**127.73**	**217**	T	T	04 34 46.2	
FINES	**FINESS Array B** comp=Z,2.0nm,0.8s,baz=157,slow=6.2,SNR=4.1	**130.30**	**324**	PKP	**PKiKP**	**02 13 18.2**	**0.0**
TORD	**Torodi Ar. Bea** comp=Z,0.3nm,0.7s,baz=174,slow=1.9,SNR=1.3	**133.47**	**253**	PKP	**PKPdf**	**02 13 24.7**	**-0.2**
COWI	**Conover**	**144.60**	**59**	PKPdf	PKPbc	02 13 43.0	0.0
I42A	**Draeger Farm,**	**144.71**	**63**	PKPdf	PKPbc	02 13 43.5	0.0
D41A	**Chassel**	**144.97**	**57**	PKPdf	**PKPdf**	**02 13 44.7**	**-0.1**
ESDC	**Sonseca Array** comp=Z,0.9nm,0.6s,baz=81,slow=2.2,SNR=9.9	**148.58**	**289**	PKPbc	**PKiKP**	**02 13 55.9**	**-0.5**

IDC ***19*** *02:18:30.0±2.3, 47.43N×147.17E, h406km±26km, mb2.8/6, mbtmp3.5/10, Error ellipse: s-maj=24.5km s-min=16.2km az=145.0*
ISC 19 02:18:29.9±0.9, 47.4N±0.2×147.2E±0.1, h403km, n10, σ0§89/10, mb3.2/6, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-** 0.6nm,0.5s,baz=226,slow=29,SNR=1.5	**8.82**	**46**	P	**P**	**02 20 34.3**	**+0.2**
KLR	**Kul'dur** 1.6nm,0.7s,baz=95,slow=6.4,SNR=6.3	**10.43**	**286**	P	**P**	**02 20 51.9**	**-0.1**
USRK	**Ussuriysk Ar.** 1.2nm,0.5s,baz=62,slow=11,SNR=4.5	**11.07**	**259**	P	**P**	**02 20 58.3**	**-0.9**
KSRS	**Korea Array** 1.2nm,0.7s,baz=43,slow=11,SNR=4.2	**17.31**	**242**	P	**P**	**02 22 07.7**	**+0.9**
ILAR	**Eielson Array** 0.2nm,0.6s,baz=256,slow=7.5,SNR=

NNC ***19*** *03:05:11.9 1.1, 42°.23N 81°.40E, h0km, mb5.4, mpv5.2,*
Error ellipse: s-maj=8.8km s-min=4.6km az=150.0
ISC 19 03:05:08.1±0.9, 42°.04N±0°.03 81°.37E±0°.03, h7km±5km,
n307, σ2≥08/333, mb4.2/49, MS3.6/29, 41C-21D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
UZB	**Uzynbulak**	**2.06**	**303**	*e*PN	**Pb**	**03 05 46.8**	**+1.0**
UZB	**Uzynbulak**	**2.06**	**303**	*e*P	**Pg**	**03 05 48.2**	**+0.7**
	5μm,0.4s						
UZB				*e*S	**Sg**	**03 06 15.8**	**+1.6**
	13μm,0.2s						
UZB	**Uzynbulak**	**2.06**	**303**	*e*Pn	**Pb**	**03 05 46.9**	**+1.0**
	baz=299						
UZB				*e*Pg	**Pg**	**03 05 47.1**	**-0.4**
	baz=299						
UZB				*e*Lg	Lg	03 06 14.4	
	baz=299						
UZB	**Uzynbulak**	**2.06**	**303**	Pg	**Pg**	**03 05 48.4**	**+0.9**
	5μm,0.4s						
UZB				Lg	Lg	03 06 16.3	
	13μm,0.5s						
SATY	**Saty**	**2.41**	**296**	*e*PN	**Pb**	**03 05 52.0**	**0.0**
SATY				*e*		03 05 54.5	
SATY	**Saty**	**2.41**	**296**	*e*P	**Pg**	**03 05 54.9**	**+0.5**
	983nm,0.2s						
SATY				*e*S	**Sg**	**03 06 27.2**	**+1.6**
	7μm,0.1s						
SATY	**Saty**	**2.41**	**296**	*e*Pn	**Pb**	**03 05 52.0**	**0.0**
	baz=292						
SATY				*e*Pg	**Pg**	**03 05 54.6**	**+0.2**
	baz=292						
SATY				*e*Lg	Lg	03 06 26.3	
	baz=292						
SATY	**Saty**	**2.41**	**296**	Pg	**Pg**	**03 05 54.9**	**+0.5**
	995nm,0.4s						
SATY				Lg	Lg	03 06 27.2	
	8μm,0.4s						
KPKS	**Kokpek**	**2.44**	**307**	*e*PN	**Pb**	**03 05 52.0**	**-0.3**
KPKS	**Kokpek**	**2.44**	**307**	*e*P	**Pb**	**03 05 53.9**	**+1.5**
	2μm,0.1s						
KPKS				*e*S	**Sg**	**03 06 25.2**	**-1.2**
	8μm,0.1s						
KPKS	**Kokpek**	**2.44**	**307**	*e*Pn	**Pb**	**03 05 52.0**	**-0.3**
	baz=304						
KPKS				*e*Lg	Lg	03 06 25.4	
	baz=304						
KPKS	**Kokpek**	**2.44**	**307**	Pg	**Pb**	**03 05 52.2**	**-0.1**
	2μm,0.2s						
ZHN	**Zhinishke**	**2.44**	**299**	*e*PN	**Pb**	**03 05 52.3**	**-0.1**
ZHN				*e*		03 05 56.1	
ZHN	**Zhinishke**	**2.44**	**299**	*e*P	**Pg**	**03 05 55.8**	**+0.9**
	4μm,0.1s						
ZHN				*e*S	**Sg**	**03 06 28.4**	**+1.9**
	12μm,0.5s						
ZHN	**Zhinishke**	**2.44**	**299**	*e*Pn	**Pb**	**03 05 52.4**	**-0.1**
	baz=295						
ZHN				*e*Pg	**Pg**	**03 05 56.2**	**+1.3**
	baz=295						
ZHN				*e*Lg	Lg	03 06 27.9	
	baz=295						
ZHN	**Zhinishke**	**2.44**	**299**	Pg	**Pg**	**03 05 55.8**	**+0.9**
	4μm,0.3s						
ZHN				Lg	Lg	03 06 28.4	
	12μm,0.5s						
DJR	**Jarkent**	**2.57**	**334**	*e*P	**Pb**	**03 05 56.6**	**+2.1**
	393nm,0.1s						
DJR				*e*S	**Sg**	**03 06 29.6**	**-1.0**
	3μm,0.3s						
DJR	**Jarkent**	**2.57**	**334**	Pg	**Pb**	**03 05 55.9**	**+1.4**
	693nm,0.4s						
DJR				Lg	Lg	03 06 28.4	
	3μm,0.5s						
KOTS	**Kotyrbulak**	**3.36**	**292**	Pg	**Pg**	**03 06 16.0**	**+3.5**
	891nm,0.4s						
ARXS	**Arharly**	**3.38**	**311**	*i* PN	**Pn**	**03 06 04.4**	**+3.0**
ARXS	**Arharly**	**3.38**	**311**	*e*P	**Pb**	**03 06 11.1**	**+2.7**
	1μm,0.8s						
ARXS				*e*S	**Sg**	**03 06 54.4**	**-2.3**
	1μm,0.6s						
ARXS	**Arharly**	**3.38**	**311**	Pg	**Pg**	**03 06 12.7**	**-0.2**
	1μm,0.8s						
ARXS				Lg	Lg	03 06 57.8	
	1μm,0.6s						
TNSS	**Tian-Shan**	**3.42**	**288**	*e*PN	**Pn**	**03 06 06.0**	**+3.9**
TNSS				*e*		03 06 13.1	
TNSS	**Tian-Shan**	**3.42**	**288**	*e*P	**Pg**	**03 06 12.5**	**-1.1**
	464nm,0.0s						
TNSS				*e*S	**Sg**	**03 06 57.0**	**-0.8**
	859nm,0.7s						
TNSS	**Tian-Shan**	**3.42**	**288**	*e*Pn	**Pn**	**03 06 06.0**	**+3.9**
	baz=285						
TNSS				*e*Pg	**Pg**	**03 06 13.1**	**-0.5**
	baz=285						
TNSS				*e*Lg	Lg	03 06 58.0	
	baz=285						
TNSS	**Tian-Shan**	**3.42**	**288**	Pg	**Pg**	**03 06 13.6**	**0.0**
	604nm,0.5s						
TNSS				Lg	Lg	03 06 58.9	
	859nm,0.7s						
KNDC	**Almaty**	**3.46**	**291**	PN	**Pb**	**03 06 07.2**	**-2.4**
KNDC						03 06 16.5	
KNDC				pmax	pmax		
	comp=Z,704nm,0.8s						
KNDC	**Almaty**	**3.46**	**291**	⇑Pn	**Pb**	**03 06 07.2**	**-2.4**
	comp=Z,704nm,0.8s						
KNDC				⇓Pg	**Pg**	**03 06 14.5**	**+0.2**
	comp=Z,2μm,0.7s						
KNDC				⇑Lg	Lg	03 06 60.0	
	comp=Z,4μm,0.8s						
AAA	**Alma-Ata**	**3.49**	**291**	*e*PN	**Pb**	**03 06 07.8**	**-2.4**
AAA	**Alma-Ata**	**3.49**	**291**	*e*P	**Pg**	**03 06 13.9**	**-1.0**
	comp=Z,1μm,0.2s						
AAA				*e*S	**Sg**	**03 06 59.2**	**-0.9**
	comp=Z,2μm,0.1s						
AAA	**Alma-Ata**	**3.49**	**291**	*e*Pn	**Pb**	**03 06 07.8**	**-2.4**
	baz=288						
AAA				*e*Lg	Lg	03 07 01.0	
	baz=288						
AAA	**Alma-Ata**	**3.49**	**291**	Pg	**Pg**	**03 06 14.6**	**-0.4**
	comp=Z,1μm,0.6s						
AAA				Lg	Lg	03 07 00.8	
TDK	**Taldyqorghan**	**3.66**	**325**	*de*PN	**Pn**	**03 06 08.3**	**+3.1**
TDK				*e*		03 06 17.5	
TDK	**Taldyqorghan**	**3.66**	**325**	*e*P	**Pb**	**03 06 16.2**	**+3.1**
	comp=Z,2μm,0.5s						
TDK				*e*S	**Sg**	**03 07 03.6**	**-2.1**
	comp=Z,5μm,0.2s						
TDK	**Taldyqorghan**	**3.66**	**325**	⇓*e*Pn	**Pn**	**03 06 08.3**	**+3.1**
	baz=324						
TDK				*e*Pg	**Pg**	**03 06 17.6**	**-0.7**
	baz=324						
TDK				*e*Lg	Lg	03 07 04.6	
	baz=324						
TDK	**Taldyqorghan**	**3.66**	**325**	Pg	**Pg**	**03 06 17.4**	**-0.9**
	comp=Z,2μm,0.5s						
TDK				Lg	Lg	03 07 05.4	
	comp=Z,5μm,0.8s						
CHKK	**Chushkaly**	**3.69**	**301**	*e*PN	**Pn**	**03 06 08.8**	**+3.2**
CHKK				*e*		03 06 19.1	
CHKK	**Chushkaly**	**3.69**	**301**	*e*P	**Pg**	**03 06 17.6**	**-1.2**
	comp=Z,861nm,0.4s						
CHKK				*e*S	**Sg**	**03 07 06.3**	**-0.4**
	comp=Z,1μm,0.6s						
CHKK	**Chushkaly**	**3.69**	**301**	*e*Pn	**Pn**	**03 06 08.8**	**+3.2**
	baz=299						
CHKK				*e*Pg	**Pg**	**03 06 19.1**	**+0.3**
	baz=299						
CHKK				*e*Lg	Lg	03 07 07.4	
	baz=299						
CHKK	**Chushkaly**	**3.69**	**301**	Pg	**Pg**	**03 06 17.6**	**-1.2**
	comp=Z,861nm,0.4s						
CHKK				Lg	Lg	03 07 06.3	
	comp=Z,1μm,0.6s						
MTBS	**Maitube**	**3.81**	**288**	*e*P	**Pg**	**03 06 19.6**	**-1.4**
	comp=Z,421nm,0.1s						
MTBS				*e*S	**Sg**	**03 07 09.7**	**-0.6**
	comp=Z,1μm,0.6s						
MTBS	**Maitube**	**3.81**	**288**	Pg	**Pg**	**03 06 21.2**	**+0.2**
	comp=Z,973nm,0.6s						
MTBS				Lg	Lg	03 07 11.9	
	comp=Z,1μm,0.6s						
ULHL	**Ulahol**	**3.82**	**275**	P	**Pn**	**03 06 11.0**	**+3.5**
	SNR=73						
KTBS	**Karatobe**	**3.83**	**297**	*e*P	**Pg**	**03 06 19.6**	**-1.8**
	comp=Z,1μm,0.5s						
KTBS				*e*S	**Sg**	**03 07 09.5**	**-1.5**
	comp=Z,3μm,0.5s						
KTBS	**Karatobe**	**3.83**	**297**	Pg	**Pg**	**03 06 19.6**	**-1.8**
	comp=Z,1μm,0.5s						
KTBS				Lg	Lg	03 07 09.5	
	comp=Z,3μm,0.5s						
KST	**Kastek**	**4.12**	**286**	*e*P	**Pg**	**03 06 25.2**	**-1.7**
	comp=Z,828nm,0.7s						
KST				*e*S	**Sg**	**03 07 19.2**	**-1.1**
	comp=Z,3μm,0.6s						
KST	**Kastek**	**4.12**	**286**	Pg	**Pg**	**03 06 26.7**	**-0.3**
	comp=Z,828nm,0.7s						
KST				Lg	Lg	03 07 21.6	
	comp=Z,3μm,0.6s						
KUU	**Kurty**	**4.13**	**298**	*e*PN	**Pn**	**03 06 16.0**	**+4.4**
KUU				*e*		03 06 26.2	
KUU	**Kurty**	**4.13**	**298**	*e*P	**Pg**	**03 06 26.0**	**-1.2**
	comp=Z,502nm,0.6s						
KUU				*e*S	**Sg**	**03 07 20.1**	**-0.6**
	comp=Z,818nm,0.5s						
KUU	**Kurty**	**4.13**	**298**	*e*Pn	**Pn**	**03 06 16.1**	**+4.4**
	baz=296						
KUU				*e*Pg	**Pg**	**03 06 26.3**	**-0.9**
	baz=296						
KUU				*e*Lg	Lg	03 07 20.1	
	baz=296						
KUU	**Kurty**	**4.13**	**298**	Pg	**Pg**	**03 06 26.0**	**-1.2**
	comp=Z,502nm,0.6s						
KUU				Lg	Lg	03 07 20.1	
	comp=Z,818nm,0.5s						
DGS	**Degeres**	**4.30**	**288**	*e*P	**Pg**	**03 06 28.4**	**-2.1**
	comp=Z,798nm,0.6s						
DGS				*e*S	**Sg**	**03 07 24.9**	**-1.3**
	comp=Z,615nm,0.1s						
DGS	**Degeres**	**4.30**	**288**	Pg	**Pg**	**03 06 28.4**	**-2.1**
	comp=Z,798nm,0.6s						
DGS				Lg	Lg	03 07 25.6	
	comp=Z,636nm,0.7s						
TKM2	**Tokmak 2**	**4.36**	**284**	P	**Pn**	**03 06 19.2**	**+4.3**
	SNR=56						
TKM2	**Tokmak 2**	**4.36**	**284**	PN	**Pn**	**03 06 18.9**	**+3.9**
TKM2	**Tokmak 2**	**4.36**	**284**	⇑Pn	**Pn**	**03 06 18.9**	**+3.9**
	comp=Z,485nm,1.0s						
TKM2				⇑Lg	Lg	03 07 29.4	
	comp=Z,2μm,0.8s						
KRBS	**Karabastau**	**4.50**	**294**	*e*P	**Pg**	**03 06 32.2**	**-2.1**
	comp=Z,2.5nm,0.1s						
KRBS				*e*S	**Sg**	**03 07 30.5**	**-2.1**
	comp=Z,604nm,0.2s						
KRBS	**Karabastau**	**4.50**	**294**	Pg	**Pb**	**03 06 31.5**	**+4.0**
	comp=Z,3.8nm,0.4s						
KRBS				Lg	Lg	03 07 30.0	
	comp=Z,606nm,0.5s						
MAKZ	**Makanchi**	**4.79**	**5**	Pn	**Pn**	**03 06 22.8**	**+2.1**
MAKZ	**Makanchi**	**4.79**	**5**	PN	**Pn**	**03 06 22.8**	**+2.1**
MAKZ	**Makanchi**	**4.79**	**5**	⇑Pn	**Pn**	**03 06 22.9**	**+2.3**
	comp=Z,40nm,0.6s						
MAKZ				⇑Sn	**Sn**	**03 07 16.9**	**+0.5**
	comp=Z,232nm,0.3s						
MAKZ				⇑Lg	Lg	03 07 37.3	
	comp=Z,804nm,0.8s						
KBK	**Karagaybulak**	**4.80**	**280**	P	**Pn**	**03 06 25.2**	**+4.2**
	SNR=32						
MK31	**Makanchi Array**	**4.80**	**8**		**Pn**	**03 06 22.9**	**+2.1**
MK31	**Makanchi Array**	**4.80**	**8**	*e*PN	**Pn**	**03 06 22.9**	**+2.1**
MK31	**Makanchi Array**	**4.80**	**8**	⇑Pn	**Pn**	**03 06 22.9**	**+2.1**
	comp=Z,4.1nm,0.2s,baz=193,slow=13,SNR=16						
MK31				⇑Pg	**Pb**	**03 06 36.1**	**+3.6**
	comp=Z,176nm,0.6s,baz=187,slow=15,SNR=15						
MK31				⇑Sn	**Sn**	**03 07 17.4**	**+0.7**
	comp=Z,392nm,0.6s,baz=172,slow=15,SNR=5.9						
MK31				Lg	Lg	03 07 37.4	
	comp=Z,869nm,0.7s,baz=186,slow=29,SNR=10						
MKAR	**Makanchi Array**	**4.80**	**8**	Pn	**Pn**	**03 06 22.9**	**+2.0**
	comp=Z,12nm,0.3s,baz=189,slow=13,SNR=899						
MKAR				Sn	**Sn**	**03 07 17.0**	**+0.3**
	comp=Z,323nm,0.3s,baz=195,slow=24,SNR=22						
MKAR				Lg	Lg	03 07 36.2	
	comp=Z,172nm,0.3s,baz=187,slow=29,SNR=16						
	comp=Z,19nm,0.3s						
MKAR	**Makanchi Array**	**4.80**	**8**	Pn	**Pn**	**03 06 23.1**	**+2.3**
KSH	**Kashi**	**4.81**	**240**	Pn	**Pb**	**03 06 31.8**	**-0.9**
KSH				Sn	**Sb**	**03 07 28.9**	**-1.9**
KSH				smax	smax		
	comp=Z,690nm,0.9s						
KSH				smax	smax		
	comp=Z,860nm,1.0s						
WMQ	**Urumqi**	**4.98**	**67**	*e*Pn	**Pn**	**03 06 25.1**	**+1.8**
WMQ				Sn	**Sn**	**03 07 25.8**	**+4.7**
WMQ				smax	smax		
	comp=Z,2μm,0.9s						
WMQ				smax	smax		
	comp=Z,3μm,0.9s						
CHMS	**Chumysh**	**4.98**	**283**	P	**Pn**	**03 06 26.9**	**+3.5**
	SNR=10						
CHMS	**Chumysh**	**4.98**	**283**	PN	Pn	03 06 27.8	+4.5
CHMS	**Chumysh**	**4.98**	**283**	⇑Pn	Pn	03 06 27.8	+4.5
	comp=Z,34nm,0.6s						
CHMS				⇓Pg	**Pg**	**03 06 42.1**	**-1.4**
	comp=Z,211nm,0.8s						
CHMS				⇑Lg	Lg	03 07 49.7	
	comp=Z,794nm,0.8s						
UCH	**Uchtor**	**5.10**	**274**	P	**Pn**	**03 06 29.6**	**+4.3**
	SNR=21						
AAK	**Ala-Archa**	**5.13**	**279**	P	**Pb**	**03 06 35.1**	**-3.2**
	SNR=9.2						
AAK	**Ala-Archa**	**5.13**	**279**	Pn	**Pn**	**03 06 27.2**	**+1.7**
	comp=Z,7.5nm,0.3s,baz=148,slow=14,SNR=18						
AAK				Lg	Lg	03 07 53.5	
	comp=Z,66nm,0.3s,baz=246,slow=20,SNR=7.8						
AAK				LR	LR	03 08 46.5	
	comp=Z,901nm,19.2s,baz=98,slow=42						
	comp=Z,6.8nm,0.3s						
AAK	**Ala-Archa**	**5.13**	**279**	Pn	**Pn**	**03 06 28.2**	**+2.7**
AAK	**Ala-Archa**	**5.13**	**279**	PN	**Pn**	**03 06 28.2**	**+2.7**
SGDS	**Sogindy**	**5.16**	**288**	*e*PN	**Pn**	**03 06 28.9**	**+3.1**
SGDS				*e*		03 06 44.8	
SGDS	**Sogindy**	**5.16**	**288**	*e*P	**Pg**	**03 06 45.1**	**-1.8**
	comp=Z,132nm,0.3s						
SGDS				*e*S	**Sg**	**03 07 52.9**	**-0.9**
	comp=Z,560nm,0.7s						
SGDS	**Sogindy**	**5.16**	**288**	*e*Pn	**Pn**	**03 06 28.9**	**+3.1**
	baz=286						
SGDS				*e*Pg	**Pg**	**03 06 44.9**	**-2.0**
	baz=286						
SGDS				*e*Lg	Lg	03 07 53.1	
	baz=286						
SGDS	**Sogindy**	**5.16**	**288**	Pg	**Pg**	**03 06 45.1**	**-1.8**
	comp=Z,134nm,0.7s						
SGDS				Lg	Lg	03 07 52.9	
	comp=Z,560nm,0.7s						
USP	**Ospenovka**	**5.21**	**286**	P	**Pn**	**03 06 30.2**	**+3.7**
	SNR=15						
EKS2	**Erkin-Say**	**5.66**	**279**	P	Pn	03 06 37.3	+4.6
	SNR=18						
AML	**Almayashu**	**5.71**	**273**	P	**Pg**	**03 06 57.6**	**+0.1**
	SNR=7.1						
ZSN	**Zaisan**	**5.96**	**24**	*e*PN	**Pn**	**03 06 39.5**	**+2.8**
ZSN				*e*		03 06 58.8	
ZSN	**Zaisan**	**5.96**	**24**	*e*P	Pg	03 06 58.3	-3.8
	comp=Z,108nm,0.5s						
ZSN				*e*S	**Sg**	**03 08 15.6**	**-3.7**
	comp=Z,587nm,1.0s						
ZSN	**Zaisan**	**5.96**	**24**	*e*Pn	**Pn**	**03 06 39.5**	**+2.8**
	baz=25						
ZSN				*e*Pg	**Pg**	**03 06 58.9**	**-3.3**
	baz=25						
ZSN				*e*Lg	Lg	03 08 18.5	
	baz=25						
ZSN	**Zaisan**	**5.96**	**24**	Pg	Pg	03 06 58.3	-3.8
	comp=Z,108nm,0.5s						
MRKS	**Merke**	**6.07**	**279**	*e*P	**Pg**	**03 07 03.8**	**-0.6**
	comp=Z,218nm,0.5s						
MRKS				*e*S	**Sg**	**03 08 24.9**	**+2.0**
	comp=Z,516nm,0.2s						
MRKS	**Merke**	**6.07**	**279**	Pg	**Pg**	**03 07 05.3**	**+0.9**
	comp=Z,218nm,0.5s						
BTLS	**Baital**	**6.11**	**302**	*e*PN	**Pn**	**03 06 42.7**	**+4.0**
BTLS				*e*		03 07 01.2	
BTLS	**Baital**	**6.11**	**302**	*e*P	**Pg**	**03 07 03.2**	**-1.8**
	comp=Z,150nm,0.0s						
BTLS				*e*S	**Sg**	**03 08 24.0**	**-0.2**
	comp=Z,92nm,0.3s						
BTLS	**Baital**	**6.11**	**302**	*e*Pn	**Pn**	**03 06 42.8**	**+4.0**
	baz=300						
BTLS				*e*Pg	**Pg**	**03 07 01.2**	**-3.8**
	baz=300						
BTLS				*e*Lg	Lg	03 08 22.8	
	baz=300						
BTLS	**Baital**	**6.11**	**302**	Pg	**Pg**	**03 07 01.7**	**-3.4**
	comp=Z,234nm,0.5s						
BTLS				Lg	Lg	03 08 22.9	
	comp=Z,92nm,0.9s						
KK31	**Karatay Array**	**8.08**	**281**	Pn	**Pn**	**03 07 07.7**	**+1.8**
KK31	**Karatay Array**	**8.08**	**281**	P	**Pn**	**03 07 07.7**	**+1.8**
KK31	**Karatay Array**	**8.08**	**281**	⇑Pn	Pn	03 07 10.8	+4.9
	comp=Z,5.7nm,0.8s,baz=89,slow=12,SNR=8.2						
KK31				Pg	**Pg**	**03 07 39.1**	**-3.7**
	comp=Z,18nm,0.5s,baz=92,slow=16,SNR=16						
KK31				Lg	Lg	03 09 28.2	
	comp=Z,116nm,0.6s,baz=96,slow=27,SNR=3.6						
KKAR	**Karatay Array**	**8.08**	**281**	Pn	**Pn**	**03 07 07.7**	**+1.8**
KKAR	**Karatay Array**	**8.08**	**281**	P	**Pn**	**03 07 07.7**	**+1.8**
SEM	**Semipalatinsk**	**8.41**	**355**	*e*P	**Pn**	**03 07 12.0**	**+1.5**
SEM				*e*		03 08 42.0	
SEM	**Semipalatinsk**	**8.41**	**355**	*e*Pn	**Pn**	**03 07 12.0**	**+1.5**
	baz=355						
SEM				*e*Sn	**Sn**	**03 08 42.0**	**-3.7**
	baz=355						
SEM				*e*Lg	Lg	03 09 35.1	
	baz=355						
IUG	**Iuzhnay**	**8.43**	**275**	*e*P	Pn	03 07 15.2	+4.4
IUG	**Iuzhnay**	**8.43**	**275**	*e*Pn	Pn	03 07 15.2	+4.4
	baz=273						
IUG				*e*Pg	**Pg**	**03 07 45.8**	**-3.7**
	baz=273						
IUG				*e*Lg	Lg	03 09 38.8	
	baz=273						
BRLS	**Borolday**	**8.57**	**281**	*e*Pg	**Pg**	**03 07 50.1**	**-2.1**
	baz=278						
BRLS				*e*Lg	Lg	03 09 46.5	
	baz=278						
KURBB	**Kurchatov Arra**	**8.81**	**348**	Pn	**Pn**	**03 07 16.7**	**+0.9**
	comp=Z,0.5nm,0.3s,baz=173,slow=12,SNR=22						
KURBB				Sn	**Sn**	**03 08 52.5**	**-2.7**
	comp=Z,8.7nm,0.3s,baz=168,slow=21,SNR=9.4						
KURBB				Lg	Lg	03 09 50.5	
	comp=Z,6.0nm,0.3s,baz=164,slow=31,SNR=9.2						
KURBB				LR	LR	03 10 53.7	
	comp=Z,440nm,20.3s,baz=142,slow=39						
	comp=Z,1.8nm,0.5s						
KURBB	**Kurchatov Arra**	**8.81**	**348**	P	**Pn**	**03 07 16.8**	**+1.1**
KURBB				S	Sn	03 09 07.2	+12
KURK	**Kurchatov**	**8.88**	**349**	Pn	**Pn**	**03 07 17.3**	**+0.5**
KURK	**Kurchatov**	**8.88**	**349**	P	**Pn**	**03 07 16.7**	**-0.1**
KURK						03 08 52.5	
KURK	**Kurchatov**	**8.88**	**349**	⇓Pn	**Pn**	**03 07 17.0**	**+0.2**
	comp=Z,1.9nm,0.2s						
KURK				⇑Sn	Sn	03 09 07.0	+10
	comp=Z,232nm,0.8s						
KURK				⇑Lg	Lg	03 09 50.6	
	comp=Z,365nm,0.7s						
OTUK	**Ortayu**	**8.90**	**317**	P	**Pn**	**03 07 19.7**	**+2.7**
OTUK				S	**Sn**	**03 08 59.8**	**+2.3**
OTUK	**Ortayu**	**8.90**	**317**	⇓Pn	**Pn**	**03 07 19.7**	**+2.7**
	comp=Z,10.0nm,0.6s						
OTUK				⇓Sn	**Sn**	**03 08 59.9**	**+2.3**
	comp=Z,88nm,0.7s						
OTUK				⇑Lg	Lg	03 09 49.4	
	comp=Z,325nm,1.0s						
UKR	**Ust'-Kan**	**9.21**	**14**	P	**Pn**	**03 07 23.0**	**+1.7**
UKR				S	**Sn**	**03 09 03.4**	**-1.7**
CUR	**Chagan-Uzun**	**9.41**	**29**	P	**Pn**	**03 07 24.9**	**+0.8**
CUR				S	**Sn**	**03 09 11.0**	**+0.9**
BRZS	**Berezniki**	**9.98**	**326**	*e*P	**Pn**	**03 07 33.4**	**+1.6**
BRZS	**Berezniki**	**9.98**	**326**	*e*Pn	**Pn**	**03 07 33.5**	**+1.6**
	baz=325						
BRZS				*e*Sn	**Sn**	**03 09 20.7**	**-3.3**
	baz=325						
BRZS				*e*Lg	Lg	03 10 23.9	
	baz=325						
CHCP	**Chirah Chowk**	**10.53**	**220**	P	**Pn**	**03 07 42.8**	**+3.3**
ARTR	**Artybash**	**10.56**	**20**	P	**Pn**	**03 07 40.2**	**+0.4**
ARTR				S	**Sn**	**03 09 35.0**	**-3.3**
GOMU	**GeErMu**	**11.96**	**115**	P	**Pn**	**03 07 58.0**	**-1.3**
GOMU				pP		03 08 01.0	
GOMU				sP		03 08 05.8	
GOMU				S	Sn	03 10 05.6	-7.5
GOMU				pmax	pmax		
	comp=Z,54nm,0.5s						
GOMU				LR	LR		
	comp=N,370nm,5.9s						
GOMU				LR	LR		
	comp=E,320nm,5.8s						
GOMU				LR	LR		
	comp=Z,120nm,5.6s						
THW	**Thamme Wali**	**11.98**	**223**	P	**Pn**	**03 08 00.9**	**+1.6**
ZAA0	**Zalesovo Array**	**12.14**	**10**		**Pn**	**03 08 01.4**	**+0.1**
ZAA0	**Zalesovo Array**	**12.14**	**10**	⇑Pn	**Pn**	**03 08 03.7**	**+2.4**
	comp=Z,5.4nm,0.9s						
ZAA0				⇓Sn	**Sn**	**03 10 17.2**	**+0.4**
	comp=Z,8.3nm,0.6s						
ZAA0				⇑Lg	Lg	03 11 31.1	
	comp=Z,41nm,1.4s						
ZALV	**Zalesovo Beam**	**12.14**	**10**	Pn	**Pn**	**03 08 01.1**	**-0.2**
	comp=Z,1.0nm,0.3s,baz=188,slow=13,SNR=12						
ZALV				Sn	**Sn**	**03 10 08.5**	**-8.3**
	comp=Z,6.9nm,0.3s,baz=200,slow=23,SNR=8.2						
ZALV				LR	LR	03 12 57.5	
	comp=Z,196nm,21.0s,baz=221,slow=39						
	comp=Z,2.0nm,0.3s						
ZALV	**Zalesovo Beam**	**12.14**	**10**	Pn	**Pn**	**03 08 01.5**	**+0.2**
ZALV	**Zalesovo Beam**	**12.14**	**10**	*e*P	**Pn**	**03 08 01.7**	**+0.4**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KBL	**Kabul**	**12.23**	**236**	Pn	**Pn**	**03 08 03.3**	**+0.4**
KBL	**Kabul**	**12.23**	**236**	P	**Pn**	**03 08 03.3**	**+0.4**
BVAR	**Borovoye Array**	**13.24**	**330**	LR	LR	03 13 26.4	
	comp=Z,224nm,19.3s,baz=25,slow=38						
BRVK	**Borovoye**	**13.31**	**330**	Pn	**Pn**	**03 08 17.2**	**-0.1**
BRVK	**Borovoye**	**13.31**	**330**	P	**Pn**	**03 08 19.4**	**+2.1**
BRVK				S	**Sn**	**03 10 47.4**	**+2.0**
BRVK	**Borovoye**	**13.31**	**330**	⇓Pn	**Pn**	**03 08 19.4**	**+2.1**
	comp=Z,1.9nm,0.3s						
BRVK				⇓Sn	**Sn**	**03 10 47.4**	**+2.0**
	comp=Z,51nm,0.9s						
BRVK				⇓Lg	Lg	03 12 09.3	
	comp=Z,168nm,0.8s						
NDI	**New Delhi**	**13.75**	**196**	*e*P	**Pn**	**03 08 23.0**	**-0.4**
KNGR	**Kungurtug, Tuv**	**14.04**	**47**	⇓*e*P	**Pn**	**03 08 31.3**	**+3.8**
GTA	**Gaotai**	**14.23**	**94**	*e*P	**Pn**	**03 08 27.3**	**-2.9**
GTA				sP

GYA0B **ALIBECK ARRAY** 18.27 265 Pn 03 09 22.0 -0.1
LZH Lanzhou 18.42 101 *e*P Pn 03 09 31.9 +7.9
LZH pP sP 03 09 36.3 +8.1
LZH sP pP 03 09 39.4 +13
LZH S **Sn** **03 12 44.8 -5.2**
LZH pmax pmax
comp=Z,24nm,1.0s
LZH LR LR
comp=Z,480nm,9.0s
LZH LR LR
comp=Z,260nm,9.5s
LZH LR LR
comp=Z,240nm,9.5s
SONM Songino Array 18.60 63 P **P** **03 09 23.8 -2.2**
comp=Z,0.4nm,0.3s,baz=262,slow=11,SNR=11
SONM Lg Lg 03 14 56.1
comp=Z,0.4nm,0.3s,baz=248,slow=29,SNR=2.7
SONM LR LR 03 17 53.4
comp=Z,36nm,18.1s,baz=262,slow=41
comp=Z,1.8nm,0.6s
SONM Songino Array 18.60 63 P **P** **03 09 26.2 +0.2**
SONM IAmb IAmb 03 09 51.2
comp=Z,18nm,1.1s
SONM Songino Array 18.60 63 *e*P **P** **03 09 26.8 +0.8**
ULN Ulaanbaatar 19.04 63 P **P** **03 09 31.8 +1.0**
ULN IAmb IAmb 03 09 49.6
comp=Z,10.0nm,0.8s
ULN Ulaanbaatar 19.04 63 P **P** **03 09 31.8 +1.0**
ULN pmax pmax
comp=Z,10.0nm,0.8s
SVE Sverdlovsk 19.90 325 *e*P **P** **03 09 40.2 +0.3**
SVE *e*S **S** **03 13 15.0 -8.9**
SVE pmax pmax
comp=Z,25nm,1.1s
ARU Arti 20.58 322 P **P** **03 09 46.3 -1.0**
comp=Z,36nm,0.5s,baz=122,slow=6.7,SNR=61
ARU S **S** **03 13 30.0 -7.4**
comp=Z,4.3nm,0.6s,baz=107,slow=19,SNR=2.4
ARU Lg Lg 03 15 55.6
baz=183,slow=19
ARU LR LR 03 17 56.7
comp=Z,187nm,21.4s,baz=116,slow=37
comp=Z,36nm,0.5s
ARU Arti 20.58 322 P **P** **03 09 46.6 -0.7**
ARU Arti 20.58 322 *c i*P **P** **03 09 47.3 0.0**
ARU S Sn 03 13 39.7 -1.8
ARU SS **SnSn** **03 14 00.9 +4.9**
ARU pmax pmax
comp=Z,56nm,0.8s
ARU MLR MLR
comp=Z,192nm,18.0s
CD2 Chengdu 21.09 115 P **P** **03 09 54.1 +1.0**
CD2 S **S** **03 13 49.9 +1.8**
CD2 sS sS 03 13 54.6 +2.2
CD2 pmax pmax
comp=Z,110nm,7.6s
CD2 LR LR
comp=Z,300nm,9.5s
CD2 LR LR
comp=Z,220nm,8.5s
CD2 LR LR
comp=Z,370nm,8.5s
BTO Baotou 21.53 84 *e*P P 03 09 45.6 -12
BTO S S 03 13 24.9 -32
BTO LR LR
comp=N,1μm,4.8s
BTO LR LR
comp=E,810nm,4.1s
HHC Hu-ho-hao-te 22.62 83 *e*P **P** **03 10 11.3 +1.8**
HHC pmax pmax
comp=E,36nm,1.0s
HHC pmax pmax
comp=E,140nm,5.6s
PZH PanZhiHua 22.80 126 P **P** **03 10 13.8 +2.3**
PZH pmax pmax
comp=E,10.0nm,0.8s
PZH pmax pmax
comp=E,100nm,4.3s
XAN Xi'an 23.05 101 P **P** **03 10 18.5 +4.4**
XAN pP sP 03 10 24.3 +6.0
XAN S **S** **03 14 22.9 -2.4**
XAN pmax pmax
comp=E,7.0nm,1.2s
XAN LR LR
comp=E,260nm,11.7s
XAN LR LR
comp=E,290nm,13.1s
XAN LR LR
comp=E,350nm,11.7s
MAK Makhachkala 24.89 284 *e*P **P** **03 10 27.0 -4.4**
MAK *e*S **S** **03 14 47.3 -7.4**
MAK pmax pmax
comp=Z,21nm,0.4s
MAK MLR MLR
comp=Z,63nm,11.0s
BELG Belogornoye 24.93 306 P **P** **03 10 31.3 -0.4**
comp=Z,17nm,0.6s,baz=183,slow=1.2,SNR=4.7
BELG LR LR 03 21 00.1
comp=Z,120nm,21.8s,baz=138,slow=38
comp=Z,17nm,0.6s
BELG Belogornoye 24.93 306 *c i*P **P** **03 10 31.1 -0.6**
LYN LuoYang 25.43 97 ⇑P P 03 10 49.6 +13
LYN S S 03 15 34.9 +31
LYN pmax pmax
comp=Z,20nm,0.8s
LYN pmax pmax
comp=Z,140nm,7.5s
LYN LR LR
comp=N,310nm,10.7s
LYN LR LR
comp=E,330nm,10.2s
LYN LR LR
comp=Z,190nm,9.2s
KIRV Kirov 25.92 321 P **P** **03 10 40.5 -0.1**
comp=Z,12nm,0.6s,baz=198,slow=20,SNR=7.1
KIRV LR LR 03 21 36.5
comp=Z,122nm,20.6s,baz=113,slow=38
comp=Z,12nm,0.6s
HNS HongShan 25.96 89 ⇓P P 03 10 49.4 +8.3
HNS LR LR
comp=Z,160nm,17.5s
HNS LR LR
comp=Z,200nm,17.5s
GROC Groznyy 26.09 285 *e*P **P** **03 10 43.4 +1.2**
GROC *e* 03 11 23.7
GROC pmax pmax
comp=Z,14nm,0.5s
CMAR Chiang Mai Arr 27.87 142 P **P** **03 10 54.7 -3.8**
comp=Z,0.7nm,0.3s,baz=319,slow=10,SNR=1.2
CMAR LR LR 03 23 28.1
comp=Z,61nm,19.0s,baz=335,slow=40
comp=Z,0.7nm,0.3s
CMAR Chiang Mai Arr 27.87 142 P **P** **03 11 00.9 +2.5**
CMAR Chiang Mai Arr 27.87 142 *e*P **P** **03 11 02.5 +4.0**
CMAR pmax pmax
comp=Z,1.0nm,0.4s
KBZ Khabaz 28.07 287 LR LR 03 24 24.4
comp=Z,62nm,20.0s,baz=71,slow=41
KVAR Kislovodsk Arr 28.18 287 LR LR 03 23 50.0
comp=Z,82nm,19.1s,baz=283,slow=40
KIV Kislovodsk 28.18 287 *e*P **P** **03 10 59.7 -1.5**
KIV pmax pmax
comp=Z,3.0nm,1.0s
KIV MLR MLR
comp=Z,39nm,15.0s
PRGR Permogore 28.97 325 *e*P **P** **03 11 06.6 -1.2**
VORR Voronezh 30.02 303 *e*P **P** **03 11 18.3 +1.0**
VORR pmax pmax
comp=Z,30nm,0.4s
KOPT Kop Dagi 30.69 280 P **P** **03 11 22.9 -0.9**
KOPT IAmb IAmb 03 11 50.5
comp=Z,6.7nm,0.9s
NJ2 Nanjing 31.32 96 *e*P **P** **03 11 32.4 +3.4**
NJ2 pmax pmax
comp=Z,8.0nm,0.7s
MARD Mardin 31.38 275 P **P** **03 11 30.4 +0.7**
KLMR Klimovskoe 31.42 321 *e*P **P** **03 11 27.8 -1.7**
KLMR pmax pmax
comp=Z,5.0nm,0.6s
KLMR Klimovskoe 31.42 321 *e*P **P** **03 11 27.9 -1.6**
KLMR AMP 03 11 30.0
comp=Z,5.0nm,0.6s
OBN Obninsk 31.82 310 LR LR 03 25 01.5
comp=Z,35nm,18.5s,baz=190,slow=38
PALK Pailekele 34.63 181 LR LR 03 25 55.2
comp=Z,81nm,18.7s,baz=106,slow=36

YAK Yakutsk 34.72 38 LR LR 03 26 29.8
comp=Z,108nm,18.6s,baz=258,slow=37
RAYN Ar Rayn 35.03 250 P **P** **03 12 01.8 +0.3**
RAYN IAmb IAmb 03 12 20.6
comp=Z,4.3nm,0.7s
RAYN Ar Rayn 35.03 250 P **P** **03 12 01.8 +0.3**
RAYN pmax pmax
comp=Z,4.0nm,0.7s
KSRS Korea Array 35.74 82 P **P** **03 12 05.4 -2.1**
comp=Z,0.5nm,0.3s,baz=283,slow=8.9,SNR=2.7
KSRS LR LR 03 28 17.5
comp=Z,53nm,20.3s,baz=55,slow=39
comp=Z,0.5nm,0.3s
BR131 Keskin Array S 35.80 283 P **P** **03 12 08.7 +0.6**
BR131 IAmb IAmb 03 12 32.2
comp=Z,6.1nm,0.8s
BR131 Keskin Array S 35.80 283 ⇑*e*P **P** **03 12 09.9 +1.8**
BRTR Keskin Array B 35.80 283 P **P** **03 12 07.7 -0.4**
comp=Z,1.1nm,0.8s,baz=90,slow=8.3,SNR=8.9
comp=Z,1.1nm,0.8s
BRTR Keskin Array B 35.80 283 P **P** **03 12 08.2 +0.1**
BRTR Keskin Array B 35.80 283 *e*P **P** **03 12 09.4 +1.3**
BRTR pmax pmax
comp=Z,1.0nm,0.6s
AKASG Malin Array Be 36.33 302 P **P** **03 12 10.8 -1.6**
comp=Z,1.0nm,0.6s,baz=66,slow=9.8,SNR=6.3
comp=Z,1.0nm,0.6s
AKASG Malin Array Be 36.33 302 *e*P **P** **03 12 11.2 -1.1**
AKASG pmax pmax
comp=Z,2.0nm,0.6s
AKBB Malin Array Si 36.33 302 *de*P **P** **03 12 12.1 -0.2**
USRK Ussuriysk Ar. 36.54 69 P **P** **03 12 11.2 -3.0**
comp=Z,1.0nm,0.6s,baz=210,slow=21,SNR=2.2
comp=Z,1.0nm,0.6s
MMAI Mount Meron Ar 37.17 271 LR LR 03 30 07.3
comp=Z,40nm,20.3s,baz=234,slow=40
TIXI Tiksi 37.61 22 P **P** **03 12 23.6 +0.7**
comp=Z,1.8nm,0.5s,baz=297,slow=6.2,SNR=4.7
TIXI LR LR 03 28 34.7
comp=Z,88nm,18.4s,baz=183,slow=37
comp=Z,1.8nm,0.5s
TIXI Tiksi 37.61 22 P **P** **03 12 23.4 +0.5**
TIXI IAmb IAmb 03 12 43.5
comp=Z,4.1nm,0.7s
FINES FINESS Array B 37.92 320 P **P** **03 12 24.8 -0.8**
comp=Z,3.5nm,0.8s,baz=108,slow=8.8,SNR=13
FINES LR LR 03 28 38.9
comp=Z,176nm,19.2s,baz=76,slow=37
comp=Z,3.5nm,0.8s
FINES FINESS Array B 37.92 320 *e*P **P** **03 12 25.3 -0.4**
FINES pmax pmax
comp=Z,4.0nm,0.8s
TESR Tescani 38.77 296 ⇑P **P** **03 12 33.1 0.0**
VRI Vrincioaia 38.88 295 ⇓P **P** **03 12 33.8 -0.2**
VRI Vrincioaia 38.88 295 ⇓P **P** **03 12 33.8 -0.2**
BIZ Bicaz 39.03 297 ⇑P **P** **03 12 34.8 -0.5**
EIL Elat 39.15 267 LR LR 03 31 30.8
comp=Z,61nm,20.6s,baz=68,slow=40
BURAR Bucovina Array 39.47 298 ⇑P **P** **03 12 39.0 0.0**
BURAR Bucovina Array 39.47 298 P **P** **03 12 39.1 +0.1**
BURAR Bucovina Array 39.47 298 ⇑P **P** **03 12 39.0 0.0**
MLR Muntele Rosu 39.51 294 ⇑P **P** **03 12 40.2 +0.8**
MLR Muntele Rosu 39.51 294 P **P** **03 12 40.1 +0.7**
MLR IAmb IAmb 03 13 05.7
comp=Z,9.2nm,0.8s
MLR Muntele Rosu 39.51 294 ⇑P **P** **03 12 40.2 +0.8**
ARCES ARCESS Array B 39.51 333 P **P** **03 12 37.9 -1.1**
comp=Z,2.0nm,0.5s,baz=90,slow=8.3,SNR=22
ARCES LR LR 03 29 56.0
comp=Z,124nm,18.4s,baz=51,slow=38
comp=Z,2.0nm,0.5s
ARCES ARCESS Array B 39.51 333 IAmb IAmb 03 13 04.4
comp=Z,10nm,1.1s
ARCES ARCESS Array B 39.51 333 *e*P **P** **03 12 38.6 -0.3**
ARCES pmax pmax
comp=Z,2.0nm,0.5s
DOPR Dopca 39.76 295 ⇑P **P** **03 12 42.0 +0.7**
VOIR 40.13 295 ⇑P **P** **03 12 44.3 -0.2**
VOIR 40.13 295 ⇑P **P** **03 12 44.3 -0.2**
ARCR ARCALIA 40.16 297 ⇑P **P** **03 12 43.8 -0.9**
ARR Arges 40.43 295 ⇑P **P** **03 12 47.3 +0.3**
KWP Kalwaria Pacla 40.64 302 P **P** **03 12 49.9 +1.3**
LOT Lotru 40.99 295 ⇑P **P** **03 12 52.1 +0.4**
DRGR 41.33 297 ⇑P **P** **03 12 54.8 +0.4**
DRGR 41.33 297 ⇑P **P** **03 12 54.8 +0.4**
HERR Herculane 42.07 295 ⇑P **P** **03 13 00.6 +0.2**
SIRR Siria 42.17 297 ⇓P **P** **03 13 00.3 -0.9**
NIE Niedzica 42.22 302 P **P** **03 13 05.2 +3.6**
OJC Ojcow 42.34 303 P **P** **03 13 02.4 -0.2**
OJC IAmb IAmb 03 13 27.8
comp=Z,7.7nm,0.8s
OJC Ojcow 42.34 303 P **P** **03 13 02.4 -0.2**
OJC pmax pmax
comp=Z,8.0nm,0.8s
BZS Buzias 42.39 296 ⇓P **P** **03 13 02.9 0.0**
BZS Buzias 42.39 296 ⇓P **P** **03 13 02.9 0.0**
MDVR Moldovita 42.58 295 ⇑P **P** **03 13 04.1 -0.5**
PSZ Piszkesteto 42.87 300 P **P** **03 13 08.0 +1.1**
PSZ IAmb IAmb 03 13 33.9
comp=Z,6.3nm,1.2s
PSZ Piszkesteto 42.87 300 P **P** **03 13 08.0 +1.1**
PSZ pmax pmax
comp=Z,6.0nm,1.2s
KOLL Kolacno 43.64 301 *e*P **P** **03 13 16.0 +2.9**
MORC Moravsky Berou 43.86 303 ⇑P **P** **03 13 13.3 -1.6**
MORC Moravsky Berou 43.86 303 P **P** **03 13 15.3 +0.4**
MORC IAmb IAmb 03 13 39.6
comp=Z,3.8nm,1.0s
MORC Moravsky Berou 43.86 303 P **P** **03 13 15.3 +0.4**
MORC pmax pmax
comp=Z,4.0nm,1.0s
MORC Moravsky Berou 43.86 303 *e*P **P** **03 13 15.4 +0.5**
JAVC Velka Javorina 44.03 302 *e*P **P** **03 13 20.1 +3.8**
MORH Mrgy, Hungar 44.18 298 ⇑P **P** **03 13 17.1 -0.3**
MORH Mrgy, Hungar 44.18 298 P **P** **03 13 10.1 -7.4**
KRLC Kraliky 44.26 304 *e*P **P** **03 13 18.7 +0.6**
KRLC Kraliky 44.26 304 *e*P **P** **03 13 18.7 +0.6**
DPC Dobruska-Polom 44.47 304 *e*P **P** **03 13 20.3 +0.5**
DPC Dobruska-Polom 44.47 304 *e*P **P** **03 13 20.3 +0.5**
DPC *ex* x 03 13 40.3
OSTC Ostas 44.48 304 *e*P P 03 13 26.4 +6.6
OSTC *ex* x 03 13 32.6
CHVC Chvalec 44.57 304 *e*P **P** **03 13 20.6 0.0**
VRAC Vranov 44.59 302 LR LR 03 35 29.7
comp=Z,101nm,18.4s,baz=38,slow=41
VRAC Vranov 44.59 302 *e*P **P** **03 13 23.1 +2.4**
UPC Upice 44.62 304 *e*P **P** **03 13 21.7 +0.8**
UPC Upice 44.62 304 *e*P **P** **03 13 21.7 +0.8**
KRUC Moravsky 44.78 302 *e*P **P** **03 13 22.5 +0.3**
NORES NORESS Array B 44.98 319 P **P** **03 13 23.2 -0.5**
PDG Podgorica 45.05 292 ⇓P **P** **03 13 24.0 -0.4**
NB2 NORSAR Subarra 45.10 320 P **P** **03 13 24.1 -0.5**
comp=Z,2.6nm,0.5s,baz=81,slow=7.9
NOA NORSAR Array B 45.10 320 P **P** **03 13 23.8 -0.8**
comp=Z,4.0nm,0.6s,baz=83,slow=7.2,SNR=17
NOA LR LR 03 33 10.7
comp=Z,112nm,19.0s,baz=315,slow=37
comp=Z,4.0nm,0.6s
NOA NORSAR Array B 45.10 320 *e*P **P** **03 13 23.8 -0.8**
NOA pmax pmax
comp=Z,2.0nm,0.6s
RONA Rosalia, Austr 45.25 300 *e*P **P** **03 13 26.7 +0.7**
comp=Z,2.3nm,1.1s
CONA Conrad Observa 45.46 301 *e*P **P** **03 13 28.0 +0.3**
comp=Z,1.6nm,0.9s
PVCC Panska Ves 45.50 305 *e*P **P** **03 13 29.3 +1.4**
PVCC Panska Ves 45.50 305 *e*P **P** **03 13 29.3 +1.4**
PRU Pruhonice 45.67 304 *e*P **P** **03 13 29.8 +0.5**
PRU Pruhonice 45.67 304 *e*P **P** **03 13 29.8 +0.5**
BRG Berggiesshubel 45.79 305 *e*P **P** **03 13 30.7 +0.6**
BRG Amp 03 13 38.2
comp=Z,1.2nm,0.5s
BRG *ex* x 03 13 48.9
BRG Amp 03 13 52.0
comp=Z,3.9nm,0.8s
BRG Berggiesshubel 45.79 305 *e*P **P** **03 13 30.7 +0.6**
BRG pmax pmax
comp=Z,1.0nm,0.5s
CKRC Cesky Krumlov 46.17 302 *e*P **P** **03 13 33.0 -0.2**
CLL Collm 46.23 306 *i*P **P** **03 13 34.2 +0.6**
CLL pmax pmax
comp=Z,7.0nm,0.9s
CLL Collm 46.23 306 *i*P **P** **03 13 34.2 +0.6**
comp=Z,7.0nm,0.9s
KHC Kasperske Hory 46.53 303 *e*P P 03 13 45.3 +9.2
KHC *e* 03 13 52.7
GERES GERESS Array B 46.54 303 P **P** **03 13 36.5 +0.2**
comp=Z,0.4nm,0.5s,baz=70,slow=7.7,SNR=6.4
comp=Z,0.4nm,0.5s
GERES GERESS Array B 46.54 303 P **P** **03 13 36.8 +0.5**
GERES GERESS Array B 46.54 303 *e*P **P** **03 13 36.9 +0.7**
GRFO Grafenberg 47.81 304 P **P** **03 13 46.7 +0.7**
GRFO Grafenberg 47.81 304 P **P** **03 13 46.7 +0.7**
GRFO pmax pmax
comp=Z,16nm,1.2s
WTTA Wattenberg 48.38 301 *e*P **P** **03 13 51.1 +0.4**
comp=Z,1.4nm,0.6s
WATA Walderalm 48.39 301 *e*P **P** **03 13 50.5 -0.2**
comp=Z,4.9nm,1.2s
SQTA Sankt Quirin 48.66 301 *e*P **P** **03 13 52.6 -0.2**
comp=Z,2.4nm,0.5s
MOTA Moosalm 48.69 302 *e*P **P** **03 13 52.9 -0.1**
comp=Z,2.0nm,0.7s
RETA Reutte 48.85 302 *e*P **P** **03 13 54.3 +0.1**
comp=Z,1.7nm,0.6s
FETA Feichten 49.04 301 P **P** **03 13 55.2 -0.5**
comp=Z,2.2nm,1.2s
BILL Bilibino 49.98 29 *i*P P 03 14 11.9 +9.5
BILL pmax pmax
comp=Z,3.0nm,1.0s
PETK Petropavlovsk- 50.33 50 LR LR 03 37 10.6
comp=Z,65nm,19.4s,baz=122,slow=38
DAV Davao City (W) 52.30 119 LR LR 03 39 00.0
comp=Z,62nm,18.7s,baz=342,slow=39
EKA Eskdalemuir Ar 53.98 315 P **P** **03 14 31.7 -0.6**
KMBO Kilima Mbogo 58.55 235 LR LR 03 44 04.5
comp=Z,75nm,21.7s,baz=92,slow=40
ESDC Sonseca Array 61.90 299 P **P** **03 15 27.4 -0.8**
comp=Z,0.6nm,0.8s,baz=57,slow=6.6,SNR=3.1
comp=Z,0.6nm,0.8s
ESDC Sonseca Array 61.90 299 IAmb IAmb 03 15 51.3
comp=Z,2.2nm,0.9s
MBAR Mbarara 62.25 241 P **P** **03 15 30.6 -0.5**
MBAR IAmb IAmb 03 15 39.5
comp=Z,2.5nm,0.9s
MBAR Mbarara 62.25 241 P **P** **03 15 30.6 -0.5**
MBAR pmax pmax
comp=Z,3.0nm,0.9s
IMAR Indian Mountai 64.26 22 P **P** **03 15 44.4 +1.0**
SFJD Kangerlussuaq 65.32 341 LR LR 03 49 37.7
comp=Z,48nm,19.2s,baz=5.5,slow=41
INK Inuvik 66.91 13 P **P** **03 15 58.2 -2.2**
comp=Z,1.5nm,0.9s,baz=240,slow=7.4,SNR=2.6
comp=Z,1.5nm,0.9s
ILAR Eielson Array 67.03 20 P **P** **03 16 00.2 -1.2**
comp=Z,0.5nm,0.7s,baz=317,slow=5.2,SNR=8.7
comp=Z,0.5nm,0.7s
ILAR Eielson Array 67.03 20 P **P** **03 16 02.9 +1.5**
ILAR Eielson Array 67.03 20 *e*P **P** **03 16 02.5 +1.1**
ILAR pmax pmax
comp=Z,1.0nm,0.8s
C36M Paulatuk 67.35 10 P **P** **03 16 04.0 +0.7**
J26L Joseph Creek 68.09 19 P **P** **03 16 09.5 +1.4**
J26L IAmb IAmb 03 16 26.5
comp=Z,3.2nm,0.8s
BCAR Beaver Creek A 69.73 19 P **P** **03 16 19.2 +0.9**
KDAK Kodiak Island 70.82 27 LR LR 03 52 32.6
comp=Z,136nm,18.0s,baz=216,slow=40
TOA0 Torodi Ar. Sit 73.69 273 P **P** **03 16 43.4 +0.5**
TORD Torodi Ar. Bea 73.69 273 P **P** **03 16 41.4 -1.4**
comp=Z,1.1nm,0.5s,baz=46,slow=5.0,SNR=36
comp=Z,1.1nm,0.5s
TORD Torodi Ar. Bea 73.69 273 P **P** **03 16 43.4 +0.5**
TORD IAmb IAmb 03 17 03.8
comp=Z,2.7nm,0.8s
YKA Yellowknife Ar 75.03 8 P **P** **03 16 50.0 +0.1**
comp=Z,0.8nm,0.6s,baz=343,slow=5.6,SNR=2.5
comp=Z,0.8nm,0.6s
YKA Yellowknife Ar 75.03 8 P **P** **03 16 50.0 +0.1**
DLBC Dease Lake 76.53 16 LR LR 03 54 36.2
comp=Z,61nm,18.4s,baz=281,slow=39
WRA Warramunga Arr 78.71 130 P **P** **03 17 10.4 -0.7**
comp=Z,1.8nm,0.7s,baz=324,slow=5.5,SNR=17
WRA LR LR 03 58 39.9
comp=Z,71nm,18.1s,baz=186,slow=41
comp=Z,1.8nm,0.7s
DBIC Dimbokro 82.78 272 P **P** **03 17 31.7 -1.5**
comp=Z,4.1nm,1.1s,baz=22,slow=5.4,SNR=2.0
comp=Z,4.1nm,1.1s

IDC 19 03:35:31.8±7.8, 29°.60N×80°.90E, h0km, mb3.4/3, mbtmp3.4/4, ML3.4/1, MS3.8/1, Error ellipse: s-maj=322.4km s-min=29.0km az=72.0, Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LGTI	**Lohaghat**	**0.59**	**256**	*e*Pg		Pn	03 35 49.9	+2.5
LGTI				*e*Sg		Sn	03 35 59.1	+1.3
MKAR	**Makanchi Array**	**17.20**	**3**	P		Pn	03 39 33.9	+0.5
	0.1nm,0.3s,baz=190,slow=11,SNR=5.8							
	0.3nm,0.4s							
KURBB	**Kurchatov Array**	**21.07**	**356**	P		P	03 40 16.4	-1.1
	0.5nm,0.7s,baz=181,slow=11,SNR=4.2							
	0.5nm,0.7s							
ZALV	**Zalesovo Beam**	**24.50**	**6**	P		P	03 40 53.5	+0.9
	0.6nm,0.5s,baz=184,slow=8.3,SNR=2.2							
	0.6nm,0.5s							
VAE	**Valguarnera**	**54.96**	**297**	LR		LR	04 15 14.9	
	comp=Z,79nm,18.7s,baz=254,slow=43							
WRA	**Warramunga Arr**	**71.25**	**127**	P		P	03 46 53.1	-0.1
	0.6nm,0.8s,baz=322,slow=6.3,SNR=6.0							
	0.6nm,0.8s							

*IDC **19** 03:44:36.1±1.0, 0°.96N×126°.01E, h0km, mb3.9/8, mbtmp3.9/8, MS3.3/2, Error ellipse: s-maj=52.0km s-min=19.2km az=78.0*
*DJA **19** 03:44:43.2±1.2, 1°.N±3°×12°6E±°, h23km±10km, M3.9/9, mb3.9/1, MLv4.0/9*
*NEIC **19** 03:44:45.4±1.1, 0°.98N±0°.07×126°.32E±0°.06, h64km±8km, mb4.2/10, Error ellipse: s-maj=12.0km s-min=5.2km az=221.0*

ISC 19 03:44:43.6±0.6, 1°.02N±0°.06×126°.20E±0°.05, h50km, n33, σ1s 73/32, mb4.1/12, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.20**	**102**			**Pn**	**03 45 04.5**	**+0.6**
TNTI	**Ternate**	**1.20**	**102**	P		Pn	03 45 04.7	+0.8
TNTI				S		Sn	03 45 22.6	+3.5
LBMI	**Labuha**	**2.10**	**142**	P		Pn	03 45 17.6	+1.2
LBMI				S		Sn	03 45 44.0	+2.7
KMSI	**Cibinong**	**2.26**	**259**	P		Pn	03 45 18.1	-0.4
KMSI				S		Sn	03 45 45.4	+0.2
SGSI	**Sangihe**	**2.73**	**346**	P		Pn	03 45 25.8	+0.9
LUWI	**Luwuk**	**3.99**	**239**	Pn		Pn	03 45 46.5	+4.2
APSI	**Ampana**	**4.94**	**247**	P		Pn	03 45 56.1	+0.9
TOLI2	**Tolitoli**	**5.42**	**271**			**Pn**	**03 46 05.2**	**+3.4**
MYLDM	**Lahad Datu**	**8.72**	**298**	Pn		Pn	03 46 50.6	+3.4
KNRA	**Kununurra**	**16.79**	**171**	Pn		Pn	03 48 34.9	-0.4
KNRA				IAmb		IAmb	03 48 47.0	
	comp=Z,43nm,1.4s							
WB0	**Warramunga Arr**	**22.17**	**159**	P		P	03 49 34.5	-1.1
WB0				IAmb		IAmb	03 49 39.3	
	comp=Z,6.9nm,0.7s							
WRAB	**Tennant Creek**	**22.31**	**159**	P		P	03 49 36.0	-1.1
WRAB				IAmb		IAmb	03 50 08.5	
	comp=Z,25nm,1.5s							
WRA	**Warramunga Arr**	**22.31**	**159**	P		P	03 49 35.5	-1.6
	comp=Z,5.8nm,0.7s,baz=336,slow=12,SNR=38							
	comp=Z,5.8nm,0.7s							
WRA	**Warramunga Arr**	**22.31**	**159**	IAmb		IAmb	03 49 41.4	
	comp=Z,2.0nm,0.7s							
MBWA	**Marble Bar**	**22.93**	**196**	P		P	03 49 41.9	-1.7
AS31	**Alice Springs**	**25.66**	**164**	P		P	03 50 07.1	-1.8
ASAR	**Alice Springs**	**25.66**	**164**	P		P	03 50 07.9	-1.0
BBOO	**Buckleboo**	**34.92**	**165**	P		P	03 51 29.2	-1.4
STKA	**Stephens Creek**	**35.83**	**157**	P		P	03 51 37.6	-0.8
	comp=Z,0.7nm,0.4s,baz=359,slow=14,SNR=2.8							
	comp=Z,0.7nm,0.4s							
STKA	**Stephens Creek**	**35.83**	**157**	IAmb		IAmb	03 51 47.9	
	comp=Z,3.3nm,1.4s							
KSAR	**Wonju Array Be**	**36.27**	**2**	P		P	03 51 42.6	+0.4
KSRS	**Korea Array**	**36.29**	**2**	P		P	03 51 43.0	+0.8
	comp=Z,0.3nm,0.3s,baz=191,slow=12,SNR=1.8							
	comp=Z,0.3nm,0.3s							
MJAR	**Matsushiro Arr**	**37.05**	**16**	P		P	03 51 47.8	-1.0
	comp=Z,1.2nm,0.7s,baz=181,slow=9.6,SNR=6.9							
	comp=Z,1.2nm,0.7s							

USRK Ussuriysk Ar. 43.30 6 P **P** **03 52 40.4 0.0**
comp=Z,2.2nm,0.6s,baz=213,slow=14,SNR=4.3
comp=Z,2.2nm,0.6s
ASAJ Asahikawa 45.32 17 LR LR 04 13 50.7
comp=Z,38nm,18.8s,baz=154,slow=39
SONM Songino Array 49.69 343 P **P** **03 53 30.5 -0.2**
comp=Z,0.5nm,0.6s,baz=151,slow=6.3,SNR=2.7
comp=Z,0.5nm,0.6s
PETK Petropavlovsk- 58.12 22 P **P** **03 54 32.6 +0.6**
comp=Z,1.4nm,0.6s,baz=180,slow=1.4,SNR=2.2
comp=Z,1.4nm,0.6s
MK31 Makanchi Array 59.48 326 P **P** **03 54 40.1 -1.5**
MK31 IAmb IAmb 03 54 47.2
comp=Z,2.2nm,1.3s
MKAR Makanchi Array 59.48 326 P **P** **03 54 40.2 -1.3**
comp=Z,0.7nm,0.4s,baz=123,slow=7.1,SNR=10
comp=Z,0.7nm,0.4s
YAK Yakutsk 60.91 2 LR LR 04 18 09.3
comp=Z,28nm,21.7s,baz=125,slow=33
KURK Kurchatov 63.74 328 P **P** **03 55 10.8 +0.7**
KURK IAmb IAmb 03 55 14.7
comp=Z,2.4nm,0.8s
TORD Torodi Ar. Bea 123.21 286 PKP **PKPdf** **04 03 35.6 -0.3**
comp=Z,0.3nm,0.8s,baz=32,slow=5.0,SNR=1.7
TORD Torodi Ar. Bea 123.21 286 **PKPdf** **04 03 34.8 -1.1**

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*INET **19** 03:53:59.8±0.5, 12.°92N×87.°05W, h3km±2km, MW3.2*
*SNET **19** 03:54:01.6±0.9, 12.°93N×87.°08W, h20km±12km, ML2.7*
ISC 19 03:53:59.9±1.1, 12.°94N±0.°04×87.°04W±0.°03, h18km±4km, n13, σ0°57/18, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.24**	**181**	*eP*	**Pg**	**03 54 05.2**	**-0.3**
CRIN				*eS*	**Sb**	**03 54 09.6**	**+0.2**
TELN	**Telica**	**0.39**	**148**	*eP*	**Pb**	**03 54 08.3**	**-0.2**
CSGN	**Cosiguina Volc**	**0.50**	**274**	*eP*	**Pb**	**03 54 10.6**	**+0.3**
CNGN	**Cerro Negro**	**0.55**	**142**	*eP*	**Pg**	**03 54 10.8**	**-0.2**
MOMN	**Momotombo**	**0.72**	**137**	*eP*	**Pb**	**03 54 13.9**	**-0.1**
CNCH	**Conchagua**	**0.84**	**294**	*eP*	**Pn**	**03 54 16.5**	**-0.4**
CNCH				*eS*	**Sn**	**03 54 29.3**	**+0.4**
COPN	**Copaltepe**	**0.88**	**150**	*eP*	**Pb**	**03 54 16.4**	**-0.2**
LCND	**La Caada**	**0.90**	**294**	*eP*	**Pg**	**03 54 17.4**	**-0.2**
LCND				*eS*	**Sg**	**03 54 29.5**	**0.0**
LCND				IAML		03 54 41.3	
	comp=Z,210nm,0.5s						
RCON	**San Juan de Ri**	**1.02**	**58**	*eP*	**Pn**	**03 54 19.5**	**0.0**
HUEN		**1.04**	**125**	*eP*	**Pb**	**03 54 19.5**	**+0.1**
MATN	**Matagalpa**	**1.09**	**90**	*eP*	**Pb**	**03 54 19.1**	**-1.2**
MATN				*eS*	**Sg**	**03 54 36.9**	**+1.4**
TGUH	**Tegucigalpa,Un**	**1.13**	**349**	*eP*	**Pg**	**03 54 22.0**	**+0.1**
TGUH				*eS*	**Sg**	**03 54 37.0**	**+0.3**
COEB	**Comit de Eme**	**1.55**	**291**	*eP*	**Pb**	**03 54 27.9**	**-0.3**
COEB				IAML		03 54 58.5	
	comp=Z,98nm,0.5s						

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*IDC **19** 03:54:40.5±0.6, 13.°19S×141.°97W, h0km, mb4.0/13, mbtmp4.0/13, MS3.7/20, Error ellipse: s-maj=28.0km s-min=20.8km az=127.0*
*NEIC **19** 03:54:43.0±1.9, 13.°5S±0.°2×142.°3W±0.°1, h16km±4km, mb4.4/26, Error ellipse: s-maj=27.6km s-min=13.6km az=146.0*
ISC 19 03:54:41.4±0.5, 13.°4S±0.°1×142.°24W±0.°09, h10km, n82, σ1§65/65, mb4.3/24, MS3.8/19, Tuamotu Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAOE	**Nuku Hiva Isla**	**4.94**	**25**	*eP*	Pn	03 55 48.8	-7.1
	630nm,0.1s						
TAOE				*eS*	Sn	03 56 37.4	-16
	647nm,0.1s						
TAOE				*eLR*	LR	03 56 48.4	
	comp=Z,738nm,26.6s						
TAOE				*eT*	T	04 01 35.7	
	63nm,0.2s						
VAH	**Vaihoa**	**5.54**	**250**	*eP*	**Pn**	**03 56 05.3**	**+1.3**
	39nm,0.2s						
VAH				*eS*	**Sn**	**03 57 07.9**	**+0.1**
	39nm,0.1s						
PMOR	**Pomariorio Ree**	**5.72**	**253**	*eP*	**Pn**	**03 56 08.2**	**+1.8**
	14nm,0.1s						
PMOR				*eS*	**Sn**	**03 57 07.5**	**-4.7**
	433nm,0.3s						
TIAR	**Tiarei**	**8.01**	**238**	*eP*	**Pn**	**03 56 40.3**	**+2.3**
	2.7nm,0.2s						
TIAR				*eS*	**Sn**	**03 58 06.6**	**-2.2**
	26nm,0.3s						
TVO	**Taravao**	**8.05**	**236**	*eP*	Pn	03 56 43.5	+4.9
	1.8nm,0.2s						
TVO				*eS*	**Sn**	**03 58 07.0**	**-2.8**
	45nm,0.3s						
PPT	**Papeete**	**8.21**	**239**	Pn	Pn	**03 56 40.2**	**-0.5**
	0.3nm,0.3s,baz=66,slow=15,SNR=1.4						
PPT				Sn	**Sn**	**03 58 11.7**	**-1.9**
	3.7nm,0.3s,baz=60,slow=23,SNR=11						
PPT				LR	LR	03 59 04.2	
	comp=Z,201nm,20.6s,baz=308,slow=31						
PPT2	**Papeete2**	**8.22**	**238**	*ePn*	**Pn**	**03 56 43.0**	**+2.1**
	3.7nm,0.2s						
PPT2				*eSn*	**Sn**	**03 58 10.3**	**-3.6**
	58nm,0.3s						
PPT2				*eLR*	LR	03 58 24.5	
	comp=Z,359nm,26.0s						
PAE	**Paea**	**8.26**	**238**	*ePn*	**Pn**	**03 56 45.7**	**+4.4**
	3.3nm,0.2s						
PAE				*eSn*	**Sn**	**03 58 11.3**	**-3.4**
	4.5nm,0.2s						
TBI	**Tubuai**	**12.05**	**214**	*ePn*	**Pn**	**03 57 34.3**	**+1.0**
	3.9nm,0.2s						
TBI				*eLR*	LR	04 00 13.0	
	comp=Z,302nm,27.2s						
RPN	**Rapa Nui**	**33.64**	**119**	LR	LR	04 10 56.7	
	comp=Z,97nm,18.6s,baz=168,slow=29						
LPIG	**La Paz**	**48.59**	**40**	LR	LR	04 20 07.0	
	comp=Z,53nm,18.3s,baz=202,slow=32						
PFO	**Pinyon Flats O**	**52.80**	**27**	LR	LR	04 22 12.1	
	comp=Z,72nm,18.3s,baz=241,slow=32						
ISA	**Isabella, Lake**	**53.71**	**24**	P	**P**	**04 04 05.8**	**+2.0**
ISA				IAmb	IAmb	04 04 23.3	
	comp=Z,3.2nm,0.9s						
BLYC	**Blythe**	**53.80**	**29**	P	**P**	**04 04 06.1**	**+1.7**
CMIG	**Matias Romero**	**55.71**	**58**	LR	LR	04 22 14.0	
	comp=Z,39nm,18.8s,baz=225,slow=30						
X16A	**Lo Mia Camp, P**	**55.83**	**31**	P	**P**	**04 04 20.5**	**+1.2**
X16A				IAmb	IAmb	04 04 26.4	
	comp=Z,3.4nm,1.1s						
NVAR	**Mina Array Bea**	**56.20**	**23**	P	**P**	**04 04 19.9**	**-2.1**
	comp=Z,0.2nm,0.5s,baz=205,slow=10.0,SNR=1.6						
	comp=Z,0.2nm,0.5s						
TXAR	**Lajitas Array**	**56.47**	**41**	P	**P**	**04 04 23.5**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=215,slow=8.8,SNR=5.8						
	comp=Z,0.4nm,0.7s						
WUAZ	**Wupatki**	**56.74**	**30**	P	**P**	**04 04 26.7**	**+1.0**
WUAZ				IAmb	IAmb	04 04 33.6	
	comp=Z,5.2nm,1.1s						
KVN	**Kaiserville**	**56.82**	**22**	P	**P**	**04 04 27.6**	**+1.3**
KVN				IAmb	IAmb	04 04 30.7	
	comp=Z,5.8nm,1.4s						
PAHR	**Pah Rah Range**	**56.94**	**21**	P	**P**	**04 04 27.7**	**+0.6**
LCMT	**Little Creek M**	**57.08**	**28**	P	**P**	**04 04 29.1**	**+1.0**
YBH	**Yreka Blue Hor**	**57.72**	**17**	LR	LR	04 22 06.3	
	comp=Z,99nm,21.6s,baz=218,slow=29						
ANMO	**Albuquerque**	**58.84**	**34**	LR	LR	04 24 13.1	
	comp=Z,70nm,19.3s,baz=226,slow=30						
ELK	**Elko**	**59.38**	**24**	LR	LR	04 24 48.0	
	comp=Z,87nm,19.2s,baz=249,slow=31						
ELK	**Elko**	**59.38**	**24**	P	**P**	**04 04 45.0**	**+0.6**
ELK				IAmb	IAmb	04 04 48.6	
	comp=Z,2.0nm,0.7s						
H11S2	**WAKE ISLAND Hy**	**59.47**	**301**	T	T	05 08 21.1	
	baz=118						
H11S1	**WAKE ISLAND Hy**	**59.48**	**301**	T	T	05 08 20.5	
	baz=118,slow=74						
H11S3	**WAKE ISLAND Hy**	**59.49**	**301**	T	T	05 08 19.7	
	baz=118,slow=74						
H11N3	**WAKE ISLAND Hy**	**59.89**	**302**	T	T	05 09 13.8	
	baz=115						
H11N1	**WAKE ISLAND Hy**	**59.90**	**302**	T	T	05 09 24.1	
	baz=115						
H11N2	**WAKE ISLAND Hy**	**59.91**	**302**	T	T	05 09 17.4	
	baz=115						
SRU	**San Rafael Swe**	**60.03**	**28**	P	**P**	**04 04 49.6**	**+0.9**
SRU				IAmb	IAmb	04 04 58.5	
	comp=Z,2.9nm,0.8s						
H03N2	**Juan Fernandez**	**60.55**	**121**	T	T	05 09 30.4	
	baz=276						
H03N3	**Juan Fernandez**	**60.55**	**121**	T	T	05 09 30.9	
	baz=276						
H03N1	**Juan Fernandez**	**60.56**	**121**	T	T	05 09 32.8	
	baz=276						
JLU	**Jordanelle**	**60.82**	**27**	P	**P**	**04 04 53.8**	**-0.4**
JLU				IAmb	IAmb	04 05 01.6	
	comp=Z,3.0nm,0.9s						
I07A	**Izee**	**60.83**	**19**	P	**P**	**04 04 54.7**	**+0.7**
I07A				IAmb	IAmb	04 05 04.0	
	comp=Z,3.1nm,0.7s						
SDCO	**Great Sand Dun**	**61.44**	**33**	P	**P**	**04 04 59.1**	**+0.6**
SDCO				IAmb	IAmb	04 05 04.5	
	comp=Z,3.6nm,1.1s						
SMCO	**Snowmass**	**61.77**	**31**	P	**P**	**04 05 00.8**	**-0.1**
O20A	**White River Ci**	**61.91**	**29**	P	**P**	**04 05 02.4**	**+0.9**
PD31	**Pinedale Array**	**63.41**	**26**	P	**P**	**04 05 13.0**	**+1.5**
PDAR	**Pinedale Array**	**63.41**	**26**	P	**P**	**04 05 11.3**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=199,slow=2.7,SNR=4.3						
PDAR				LR	LR	04 26 50.1	
	comp=Z,32nm,19.4s,baz=236,slow=31						
	comp=Z,0.3nm,0.6s						
NNA	**Nana**	**63.65**	**97**	LR	LR	04 27 12.6	
	comp=Z,73nm,18.9s,baz=216,slow=31						
LOHW	**Long Hollow**	**63.66**	**25**	P	**P**	**04 05 13.3**	**+0.2**
LOHW				IAmb	IAmb	04 05 17.1	
	comp=Z,2.4nm,0.8s						
NEW	**Newport**	**65.31**	**18**	LR	LR	04 27 01.1	
	comp=Z,74nm,21.9s,baz=204,slow=30						
BBB	**Bella Bella**	**66.43**	**9**	LR	LR	04 27 42.4	
	comp=Z,25nm,21.9s,baz=212,slow=30						
VNDA	**Vanda**	**69.93**	**191**	P	**P**	**04 05 55.2**	**+2.8**
	comp=Z,0.7nm,0.7s,baz=72,slow=5.9,SNR=2.7						
VNDA				LR	LR	04 27 32.3	
	comp=Z,48nm,21.2s,baz=70,slow=28						
	comp=Z,0.7nm,0.7s						
ECSD	**EROS Data Cent**	**70.43**	**33**	P	**P**	**04 05 54.9**	**-1.0**
LPAZ	**La Paz**	**71.33**	**103**	P	**P**	**04 06 02.9**	**+0.1**
	comp=Z,1.4nm,0.9s,baz=327,slow=13,SNR=5.3						
	comp=Z,1.4nm,0.9s						
LPAZ	**La Paz**	**71.33**	**103**	P	**P**	**04 06 02.4**	**-0.4**
LPAZ				IAmb	IAmb	04 06 11.8	
	comp=Z,3.6nm,0.9s						
STKA	**Stephens Creek**	**71.41**	**241**	P	**P**	**04 06 05.3**	**+3.0**
	comp=Z,1.3nm,0.7s,baz=115,slow=5.3,SNR=3.7						
	comp=Z,1.3nm,0.7s						
STKA	**Stephens Creek**	**71.41**	**241**	P	**P**	**04 06 01.2**	**-1.1**
KDAK	**Kodiak Island**	**71.42**	**354**	LR	LR	04 34 25.5	
	comp=Z,82nm,18.3s,baz=218,slow=34						
ULM	**Lac du Bonnet**	**75.24**	**29**	P	**P**	**04 06 23.1**	**-1.2**
	comp=Z,2.0nm,0.7s,baz=232,slow=7.8,SNR=3.1						
ULM				LR	LR	04 33 25.0	
	comp=Z,45nm,21.8s,baz=274,slow=31						
	comp=Z,2.0nm,0.7s						
KTH	**Kantishna Hill**	**76.99**	**356**	P	**P**	**04 06 34.0**	**-0.1**
SCRK	**Sand Creek**	**77.13**	**359**	P	**P**	**04 06 35.1**	**+0.1**
SCRK				IAmb	IAmb	04 06 39.1	
	comp=Z,4.0nm,0.9s						
SAML	**Samuel**	**77.40**	**96**	P	**P**	**04 06 36.7**	**-0.7**
J26L	**Joseph Creek**	**77.65**	**359**	P	**P**	**04 06 38.2**	**+0.4**
ILAR	**Eielson Array**	**78.00**	**358**	P	**P**	**04 06 39.0**	**-0.6**
	comp=Z,2.1nm,0.7s,baz=183,slow=6.1,SNR=24						
ILAR				LR	LR	04 35 59.1	
	comp=Z,56nm,18.2s,baz=192,slow=32						
	comp=Z,2.1nm,0.7s						
ILAR	**Eielson Array**	**78.00**	**358**	P	**P**	**04 06 38.6**	**-1.0**
YKA	**Yellowknife Ar**	**78.66**	**13**	P	**P**	**04 06 42.1**	**-1.2**
	comp=Z,1.5nm,0.7s,baz=208,slow=4.8,SNR=5.5						
YKA				LR	LR	04 36 13.8	
	comp=Z,27nm,21.4s,baz=264,slow=32						
	comp=Z,1.5nm,0.7s						
WRA	**Warramunga Arr**	**79.47**	**252**	P	**P**	**04 06 51.1**	**+2.3**
	comp=Z,1.5nm,0.9s,baz=102,slow=4.3,SNR=6.7						
	comp=Z,1.5nm,0.9s						
WRA	**Warramunga Arr**	**79.47**	**252**	P	**P**	**04 06 47.2**	**-1.6**
CPUP	**Villa Florida**	**79.69**	**115**	P	**P**	**04 06 48.9**	**-1.0**
	comp=Z,2.5nm,1.1s,baz=165,slow=5.3,SNR=2.9						
	comp=Z,2.5nm,1.1s						
CPUP	**Villa Florida**	**79.69**	**115**	IAmb	IAmb	04 07 10.1	
	comp=Z,5.5nm,1.2s						
SADO	**Sadowa**	**81.24**	**40**	LR	LR	04 38 05.8	
	comp=Z,22nm,20.2s,baz=250,slow=32						
PETK	**Petropavlovsk-**	**83.72**	**328**	P	**P**	**04 07 11.3**	**+0.8**
	comp=Z,1.9nm,0.8s,baz=151,slow=10,SNR=3.6						
	comp=Z,1.9nm,0.8s						
MJAR	**Matsushiro Arr**	**89.67**	**308**	P	**P**	**04 07 41.8**	**+1.8**
	comp=Z,1.6nm,1.0s,baz=148,slow=8.1,SNR=5.0						
	comp=Z,1.6nm,1.0s						
SCHQ	**Schefferville**	**92.62**	**34**	LR	LR	04 44 48.0	
	comp=Z,58nm,18.8s,baz=121,slow=33						
FRB	**Frobisher Bay**	**94.84**	**25**	LR	LR	04 48 00.7	
	comp=Z,56nm,18.6s,baz=210,slow=34						
CMAR	**Chiang Mai Arr**	**121.18**	**284**	PKP	**PKPdf**	**04 13 36.0**	**+0.5**
	comp=Z,1.0nm,0.3s,baz=330,slow=1.7,SNR=4.1						
ZALV	**Zalesovo Beam**	**125.27**	**328**	PKP	**PKPdf**	**04 13 42.1**	**-0.2**
	comp=Z,0.9nm,0.6s,baz=119,slow=1.1,SNR=4.9						
MKAR	**Makanchi Array**	**130.07**	**321**	PKP	**PKPdf**	**04 13 52.5**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=72,slow=1.8,SNR=4.0						
FINES	**FINESS Array B**	**131.27**	**7**	PKP	**PKPdf**	**04 13 54.2**	**+0.7**
	comp=Z,2.2nm,1.0s,baz=76,slow=0.6,SNR=7.2						
DBIC	**Dimbokro**	**137.55**	**95**	PKP	**PKPdf**	**04 14 04.7**	**-2.0**
	comp=Z,7.3nm,1.1s,baz=186,slow=9.2,SNR=3.3						
AKASG	**Malin Array Be**	**142.14**	**9**	PKP	**PKPdf**	**04 14 12.8**	**-1.2**
	comp=Z,0.3nm,0.4s,baz=339,slow=2.5,SNR=4.2						
KBL	**Kabul**	**144.72**	**312**	PKPdf	**PKPab**	**04 14 18.4**	**+0.4**
TOA0	**Torodi Ar. Sit**	**144.91**	**86**	PKPdf	**PKPab**	**04 14 18.7**	**-0.4**
TORD	**Torodi Ar. Bea**	**144.91**	**86**	PKP	**PKPab**	**04 14 17.7**	**-1.3**
	comp=Z,2.2nm,0.8s,baz=297,slow=3.3,SNR=12						
TORD	**Torodi Ar. Bea**	**144.91**	**86**		**PKPab**	**04 14 17.9**	**-1.1**
BRTR	**Keskin Array B**	**153.51**	**7**	PKP	**PKPdf**	**04 14 31.8**	**-1.3**
	comp=Z,0.5nm,0.7s,baz=292,slow=4.5,SNR=1.5						
BRTR				PKPbc	**PKiKP**	**04 14 41.4**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=54,slow=2.5,SNR=3.8						
BRTR				PKPab	**PKPab**	**04 14 53.0**	**0.0**
	comp=Z,0.6nm,0.9s,baz=299,slow=4.8,SNR=2.7						

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*NOU **19** 04:43:45.4, 37.°12S×176.°61E, h374km, mb3.7/6, North Island, New Zealand*
WEL 19 04:44:08.5, 38.°5S±14.°×177.°6E±2.°1, h192km±27km, M2.4/25, MLv2.4/25, Error ellipse: s-maj=0.0km s-min=0.0km az=104.5, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MUGZ	**Murupara**	**0.45**	**142**	P	Pn	04 44 35.2	+0.8
URZ	**Urewera**	**0.56**	**104**	P	Pn	04 44 34.6	-0.3
URZ	**Urewera**	**0.56**	**104**	P	Pn	04 44 34.5	-0.3
RTZ	**Ruatahuna**	**0.66**	**138**	P	Pn	04 44 36.3	+0.9
MRHZ	**Matea Rd**	**0.71**	**180**	P	Pn	04 44 37.0	+1.4
MTHZ	**Maungataniwha**	**0.80**	**156**	P	Pn	04 44 37.4	+1.3
TOZ	**Tahuroa Road**	**0.82**	**298**	P	Pn	04 44 38.8	-1.4
MWZ	**Matawai**	**0.90**	**104**	P	Pn	04 44 36.3	-0.4
RAHZ	**Arahi**	**0.95**	**147**	P	Pn	04 44 38.6	+1.5
SNGZ	**Shannon Statio**	**0.98**	**133**	P	Pn	04 44 38.2	+1.0
RUGZ	**Raukumara Rang**	**1.00**	**81**	P	Pn	04 44 35.0	-2.5
NMHZ	**Naumai**	**1.02**	**163**	P	Pn	04 44 39.6	+2.0
BKZ	**Black Stump Fm**	**1.04**	**177**	P	Pn	04 44 39.1	+1.3
BKZ	**Black Stump Fm**	**1.04**	**177**	P	Pn	04 44 38.9	+1.2
HAZ	**Te Kaha**	**1.14**	**72**	P	Pn	04 44 35.2	-3.2
TKGZ	**Te Karaka**	**1.17**	**106**	P	Pn	04 44 38.1	-0.5
WTVZ	**West Tongariro**	**1.19**	**213**	P	Pn	04 44 39.7	+0.9
RIGZ	**Rimuhau**	**1.20**	**119**	P	Pn	04 44 39.1	+0.2
TWVZ	**Taurewa**	**1.22**	**219**	P	Pn	04 44 39.8	+0.7
ARHZ	**Aropaoanui**	**1.23**	**159**	P	Pn	04 44 40.6	+1.6
SNVZ	**South Ngauruho**	**1.23**	**210**	P	Pn	04 44 40.4	+1.2
TWGZ	**Tauwhareparae**	**1.23**	**93**	P	Pn	04 44 37.3	-1.9
HIZ	**Hauiti**	**1.29**	**252**	P	Pn	04 44 39.2	-0.3
HIZ	**Hauiti**	**1.29**	**252**	P	Pn	04 44 39.3	-0.3
KWHZ	**Kaweka Forest**	**1.30**	**180**	P	Pn	04 44 41.1	+1.4
PKGZ	**Pakihiroa**	**1.33**	**80**	P	Pn	04 44 37.6	-2.4
KNZ	**Kokohu**	**1.33**	**133**	P	Pn	04 44 40.3	+0.4
MCHZ	**McNeill Hill**	**1.34**	**171**	P	Pn	04 44 41.5	+1.6
WNVZ	**Wahianoa**	**1.36**	**208**	P	Pn	04 44 41.1	+0.7
MOVZ	**Moawhango**	**1.38**	**202**	P	Pn	04 44 41.0	+0.5
BHHZ	**Black Hill Sta**	**1.39**	**191**	P	Pn	04 44 41.4	+0.9
PKVZ	**Pokaka**	**1.44**	**215**	P	Pn	04 44 41.5	+0.6
PUZ	**Puketiti**	**1.45**	**89**	P	Pn	04 44 38.3	-2.7
CNGZ	**Carnagh Statio**	**1.45**	**105**	P	Pn	04 44 41.5	+0.5
KRHZ	**Kereru**	**1.52**	**181**	P	Pn	04 44 42.6	+1.0
MHGZ	**Mahia Peninsul**	**1.55**	**132**	P	Pn	04 44 42.2	+0.3
MXZ	**Matakaoa Point**	**1.59**	**70**	P	Pn	04 44 38.0	-4.3
WMGZ	**Waiomatatini S**	**1.60**	**80**	P	Pn	04 44 38.8	-3.6
KAHZ	**Kahuranaki**	**1.71**	**168**	P	Pn	04 44 44.6	+1.2
PNHZ	**Pukenui**	**1.80**	**185**	P	Pn	04 44 44.6	+0.3
TSZ	**Takapari Road**	**1.97**	**190**	P	Pn	04 44 45.9	-0.1
DVHZ	**Dannevirke**	**2.18**	**185**	P	Pn	04 44 48.4	+0.1
ANWZ	**Angora Road**	**2.33**	**179**	P	Pn	04 44 49.9	0.0
BFZ	**Birch Farm**	**2.56**	**183**	P	Pn	04 44 51.7	-0.7
BFZ	**Birch Farm**	**2.56**	**183**	P	Pn	04 44 51.7	-0.8
MRZ	**Mangatainoka R**	**2.62**	**194**	P	Pn	04 44 51.5	-1.6
HOWZ	**Holdsworth Sta**	**2.86**	**194**	P	Pn	04 44 53.9	-2.1
OGWZ	**Otaki Gorge**	**2.86**	**199**	P	Pn	04 44 53.9	-2.1
KIW	**Kapiti Island**	**2.97**	**203**	P	Pn	04 44 54.7	-2.6
CAW	**Cannon Point**	**3.16**	**199**	P	Pn	04 44 56.8	-2.7
TCW	**Tory Channel**	**3.50**	**208**	P	Pn	04 45 00.5	-3.2
TUWZ	**Tuamarina**	**3.81**	**209**	P	Pn	04 45 03.2	-4.3
NNZ	**Nelson**	**3.88**	**216**	P	Pn	04 45 03.0	-5.4
QRZ	**Quartz Range**	**4.04**	**227**	P	Pn	04 45 03.7	-6.8
QRZ	**Quartz Range**	**4.04**	**227**	P	Pn	04 45 04.0	-6.4
BSWZ	**Blackbirch Sta**	**4.09**	**208**	P	Pn	04 45 06.9	-4.1
MRNZ	**Matariki Terra**	**4.32**	**220**	P	Pn	04 45 08.1	-5.9
THZ	**Tophouse**	**4.53**	**216**	P	Pn	04 45 10.7	-5.9
KHZ	**Kahutara**	**4.82**	**206**	P	Pn	04 45 15.4	-4.9
KHZ	**Kahutara**	**4.82**	**206**	P	Pn	04 45 15.3	-5.0
GVZ	**Greta Valley S**	**5.48**	**207**	P	Pn	04 45 22.4	-6.5

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*NEIC **19** 05:00:08.8±1.6, 1.°02N±0.°06×126.°11E±0.°05, h8km±3km, mb5.2/183, Error ellipse: s-maj=8.9km s-min=7.0km az=189.0*
*MOS **19** 05:00:09.3±1.0, 1.°09N×126.°09E, h25km, mb5.4/61, Error ellipse: s-maj=8.1km s-min=4.3km az=114.5*
*BJI **19** 05:00:10.0±0.0, 1.°00N×126.°20E, h26km, mb5.0/73, mB4.9/38, Ms4.4/46, Ms7 4.1/47*
*IDC **19** 05:00:11.7±1.7, 1.°09N×126.°22E, h33km±12km, mb4.9/37, mbtmp5.0/39, ML5.1/3, MS3.9/39, Error ellipse: s-maj=12.8km s-min=8.5km az=61.0*
*DJA **19** 05:00:14.7±0.2, 1.°1N±2.°×12.°6E±.°, h64km±2km, M5.1/76, mB5.6/41, mb5.4/76, MLv5.3/18, Mw(mB)5.1/41, MwMwp4.8/6, Mwp5.1/6*
*GCMT **19** 05:00:14.8±0.2, 1.°12N±0.°01×126.°04E±0.°01, h29km±1km, MW5.2/101, Moment Tensor Solution. s68,c88; s101,c154; Duration: 1s0 Moment tensor: Scale 10^16 Nm; Mrr0.48±.17; Mθθ4.69±.13; Mϕϕ-5.17±.14; Mrθ-3.50±.28; Mrϕ 1.33±.12; Mθϕ5.08±.38; Best double couple: Mo7.84100×10^16 NP1:ϕs222.00000°, δ39.00000°, λ178.00000°. NP2:ϕs313.00000°, δ89.00000°, λ51.00000°. Principal axes: T 6.8720, Plg34.0000°, Azm190.0000°; N 1.9420, Plg39.0000°, Azm314.0000°; P -8.8100, Plg32.0000°, Azm75.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 19 05:00:11.2±0.6, 0.°98N±0.°03×126.°10E±0.°03, h31km±2km, n757, σ1§40/750, mb5.2/204, MS4.1/62, 39C-22D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.28**	**99**	Pn	**Pb**	**05 00 34.6**	**-0.2**
TNTI	**Ternate**	**1.28**	**99**	P	**Pb**	**05 00 34.7**	**-0.2**
TNTI				S	**Sb**	**05 00 51.1**	**+0.1**
TNTI	**Ternate**	**1.28**	**99**	P	**Pb**	**05 00 34.5**	**-0.3**
LBMI	**Labuha**	**2.13**	**139**	P	**Pb**	**05 00 48.0**	**-1.2**
LBMI				S	**Sb**	**05 01 14.5**	**-0.8**
KMSI	**Cibinong**	**2.16**	**259**	P	**Pb**	**05 00 48.6**	**-1.1**
SGSI	**Sangihe**	**2.75**	**348**	P	**Pn**	**05 00 55.7**	**+2.5**
SGSI				S	**Sn**	**05 01 28.6**	**+3.2**
SANI	**Sanana**	**3.01**	**182**	P	**Pn**	**05 00 58.5**	**+1.7**
SANI				S	**Sn**	**05 01 33.4**	**+1.6**
SANI	**Sanana**	**3.01**	**182**	P	**Pn**	**05 00 59.1**	**+2.3**
LUWI	**Luwuk**	**3.89**	**239**		**Pn**	**05 01 09.9**	**+1.1**
LUWI	**Luwuk**	**3.89**	**239**	P	Pn	05 01 13.8	+4.9
LUWI	**Luwuk**	**3.89**	**239**	P	**Pb**	**05 01 15.3**	**-3.8**
MRSI	**Marisa**	**4.19**	**263**	P	**Pb**	**05 01 16.3**	**+3.3**
NLAI	**Namlea**	**4.31**	**167**	P	**Pn**	**05 01 17.2**	**+2.6**
APSI	**Ampana**	**4.83**	**247**	P	Pn	05 01 26.7	+4.8
AAI	**Ambon**	**5.08**	**156**	P	**Pn**	**05 01 29.0**	**+3.6**
AAI				pmax	pmax		
	comp=Z,452nm,0.9s						
AAI	**Ambon**	**5.08**	**156**	P	**Pn**	**05 01 28.2**	**+2.8**
	comp=Z,2.0nmcomp=Z,5μmcomp=Z,446nm,0.9s						
MSAI

comp=Z,3µmcomp=Z,310nm,1.0s
PLAI Plampang 12.79 220 P **P** **05 03 18.4 -3.3**
SMPI Sarmi 12.95 103 P **Pn** **05 03 17.1 +3.9**
comp=Z,1µmcomp=Z,73nm,1.5s
TGY Tagaytay City 14.00 339 Pn **Pn** **05 03 27.0 -0.7**
comp=Z,41nm,0.3s,baz=19,slow=3.1,SNR=1.8
TGY Tagaytay City 14.00 339 P **Pn** **05 03 27.0 -0.7**
SRBI Singaraja 14.10 230 P **P** **05 03 33.5 -2.8**
comp=Z,2µmcomp=Z,244nm,1.0s
DNP Denpasar 14.48 228 P **P** **05 03 41.4 +0.9**
DNP pmax pmax
comp=Z,1µm,1.0s
DNP Denpasar 14.48 228 P **Pn** **05 03 37.6 +3.4**
comp=Z,27µmcomp=Z,1µm,1.0s
KMMI Kalianget 14.50 236 P **P** **05 03 38.6 -2.1**
comp=Z,8µmcomp=Z,953nm,0.9s
GENI Genyem 14.50 104 P **Pn** **05 03 36.3 +1.8**
comp=Z,3µmcomp=Z,229nm,1.1s
GENI Genyem 14.50 104 P **Pn** **05 03 36.6 +2.1**
MTN Manton Dam 14.61 160 P **Pn** **05 03 36.4 +0.4**
baz=15,SNR=36
MTN Manton Dam 14.61 160 Pn **Pn** **05 03 35.7 -0.3**
MTN Manton Dam 14.61 160 P **Pn** **05 03 36.6 +0.7**
IGBI Denpasar 14.62 228 P **Pn** **05 03 39.3 +3.2**
comp=Z,3µmcomp=Z,266nm,0.9s
STKI Sintang 14.65 267 P **P** **05 03 40.7 -1.7**
comp=Z,72nm,1.2s
ABJI Asem Bagus 14.70 233 P **P** **05 03 42.3 -0.6**
comp=Z,4µmcomp=Z,270nm,0.9s
PBKI Pangkalan Bun 14.88 256 P **Pn** **05 03 42.0 +2.4**
comp=Z,7µmcomp=Z,220nm,1.2s
KDU Kakadu 14.98 155 P **Pn** **05 03 39.1 -1.7**
baz=15,SNR=21
KDU Kakadu 14.98 155 P **Pn** **05 03 39.7 -1.1**
BLJI Banyuglugur 15.19 235 P **P** **05 03 49.3 +1.0**
comp=Z,2µmcomp=Z,168nm,1.1s
GMJI Gumukmas 15.61 234 P **P** **05 03 53.3 +0.3**
comp=Z,137nm,1.0s
GRJI Gresik 15.69 240 P **P** **05 03 53.6 -0.4**
KSM Kuching 15.80 272 Pn **Pn** **05 03 50.8 -0.8**
KSM IAmb IAmb 05 03 59.8
comp=Z,122nm,0.7s
KSM Kuching 15.80 272 P **P** **05 03 54.6 -0.5**
TBJI Tambak Boyo 16.20 241 P **P** **05 04 00.2 +0.7**
comp=Z,186nm,1.1s
KNRA Kununurra 16.76 171 P **Pn** **05 04 05.0 +1.2**
baz=17,SNR=119
KNRA Kununurra 16.76 171 **Pn** **05 04 04.1 +0.3**
KNRA Kununurra 16.76 171 P **Pn** **05 04 05.0 +1.2**
PWJI Pagerwojo 16.83 238 P **P** **05 04 07.5 +0.9**
comp=Z,4µmcomp=Z,547nm,0.7s
PCJI Pacitan 17.45 238 P **P** **05 04 15.8 +2.4**
comp=Z,483nm,0.7s
WOJI Wonogiri, Jawa 17.49 240 P **P** **05 04 15.7 +1.8**
comp=Z,147nm,1.0s
SMRI Semarang 17.54 243 P **Pn** **05 04 14.3 +0.6**
SMRI IAmb IAmb 05 04 22.6
comp=Z,131nm,0.9s
SMRI Semarang 17.54 243 P **P** **05 04 15.5 +1.0**
comp=Z,181nm,1.0s
SMRI Semarang 17.54 243 P **P** **05 04 17.0 +2.5**
CMJI Cimerak 19.64 243 P **P** **05 04 37.7 +0.2**
comp=Z,111nm,0.8s
PPBI Pangkal Pinang 20.20 261 P **P** **05 04 43.6 -0.1**
comp=Z,14µmcomp=Z,45nm,0.5s
CBJI Citeko 20.57 249 P **P** **05 04 48.1 +0.4**
CNJI Cibinong 20.64 246 P Pn 05 04 50.5 -0.3
comp=Z,128nm,0.7s
DBJI Dramaga 20.71 249 P Pn 05 04 52.2 +0.5
comp=Z,64nm,0.9s
MANU Manus Island 21.47 98 P **P** **05 04 54.7 -2.7**
DSRI Dabo 21.57 266 P **P** **05 05 00.4 +1.9**
comp=Z,34nm,1.0s
PMBI Palembang 21.67 260 P **P** **05 04 59.4 -0.2**
KLI Kotabumi 22.00 255 P **P** **05 05 03.7 +0.6**
comp=Z,147nm,0.8s
WB0 Warramunga Arr 22.16 159 P **P** **05 05 04.6 -0.2**
TWG Pinlang 22.25 348 P **P** **05 05 02.8 -2.9**
TWG IAmb IAmb 05 05 11.6
comp=Z,88nm,0.5s
MYKOM Kota Tinggi 22.26 272 P **P** **05 05 06.2 +0.3**
MYKOM IAmb IAmb 05 05 10.8
comp=Z,86nm,0.8s
WRAB Tennant Creek 22.30 159 P **P** **05 05 06.1 -0.2**
WRAB Tennant Creek 22.30 159 P **P** **05 05 06.1 -0.2**
WRAB pmax pmax
comp=Z,224nm,0.7s
WRA Warramunga Arr 22.31 159 P **P** **05 05 06.3 0.0**
comp=Z,88nm,0.6s,baz=334,slow=11,SNR=345
WRA S **S** **05 09 06.3 -3.7**
comp=Z,29nm,1.0s,baz=336,slow=20,SNR=7.9
WRA Warramunga Arr 22.31 159 P **P** **05 05 06.1 -0.2**
WRA Warramunga Arr 22.31 159 *e*P **P** **05 05 05.7 -0.6**
WRA pmax pmax
comp=Z,89nm,0.6s
WB2 Warramunga Arr 22.31 159 P **P** **05 05 06.0 -0.3**
WR0 Warramunga Arr 22.39 159 P **P** **05 05 06.9 -0.3**
WR0 IAmb IAmb 05 05 14.1
comp=Z,150nm,0.9s
GUMO Guam 22.41 55 P **P** **05 05 05.8 -1.6**
comp=Z,41nm,0.5s,baz=40,slow=19,SNR=2.2
comp=Z,41nm,0.5s
GUMO Guam 22.41 55 P **P** **05 05 05.5 -1.9**
GUMO IAmb IAmb 05 05 14.0
comp=Z,96nm,0.8s
COEN Coen 22.50 132 P **P** **05 05 06.9 -1.6**
baz=22,SNR=19
COEN Coen 22.50 132 P **P** **05 05 07.2 -1.3**
COEN IAmb IAmb 05 05 21.1
comp=Z,75nm,0.8s
COEN Coen 22.50 132 P **P** **05 05 07.2 -1.3**
KASI Kota Agung 22.52 253 P **P** **05 05 09.0 +0.3**
comp=Z,108nm,0.8s
JMBI JAMBI 22.61 263 P **P** **05 05 11.8 +2.2**
comp=Z,90nm,0.7s
YULB Yu-li 22.76 349 P **P** **05 05 07.9 -3.3**
YULB IAmb IAmb 05 05 15.0
comp=Z,53nm,0.6s
LWLI Liwa 22.81 255 P **P** **05 05 12.0 +0.1**
comp=Z,4µmcomp=Z,107nm,0.7s
TPUB Ta-pu 22.82 347 P **P** **05 05 10.2 -1.5**
TPUB Ta-pu 22.82 347 P **P** **05 05 10.1 -1.6**
MBWA Marble Bar 22.87 195 P **P** **05 05 11.9 -0.3**
MBWA IAmb IAmb 05 05 14.3
comp=Z,90nm,0.7s
MBWA Marble Bar 22.87 195 P **P** **05 05 12.0 -0.2**
SSLB Suanglung 23.22 348 P **P** **05 05 13.6 -2.2**
SSLB IAmb IAmb 05 05 19.7
comp=Z,60nm,0.8s
SSLB Suanglung 23.22 348 P **P** **05 05 13.7 -2.1**
PSA00 Pilbara Seismi 23.23 195 P **P** **05 05 15.6 -0.4**
PSA00 Pilbara Seismi 23.23 195 IAmb IAmb 05 05 17.3
comp=Z,36nm,0.8s
PSA00 Pilbara Seismi 23.23 195 P **P** **05 05 15.9 0.0**
XMI Christmas Isla 23.27 240 P **P** **05 05 16.8 +0.4**
XMIS Christmas Isla 23.31 240 P **P** **05 05 16.8 -0.1**
XMIS Christmas Isla 23.31 240 P **P** **05 05 16.9 0.0**
PMG Port Moresby 23.37 117 P **P** **05 05 17.6 +0.2**
comp=Z,60nm,0.9s,baz=310,slow=6.2,SNR=19
PMG S **S** **05 09 27.9 -0.7**
comp=Z,4.6nm,0.5s,baz=296,slow=18,SNR=1.4
PMG LR LR 05 17 15.0
comp=Z,709nm,18.9s,baz=306,slow=44
comp=Z,60nm,0.9s
PMG Port Moresby 23.37 117 P **P** **05 05 17.2 -0.2**
PMG IAmb IAmb 05 05 18.9
comp=Z,86nm,0.9s
PMG Port Moresby 23.37 117 P **P** **05 05 18.0 +0.6**
PMG Port Moresby 23.37 117 P **P** **05 05 18.1 +0.6**
YHNB Yeheng 23.99 349 P **P** **05 05 21.6 -1.7**
YHNB IAmb IAmb 05 05 31.7
comp=Z,49nm,0.7s
YHNB Yeheng 23.99 349 P **P** **05 05 23.1 -0.2**
QIZ Qiongzhong 24.00 319 P **P** **05 05 23.2 -0.1**
QIZ Qiongzhong 24.00 319 P **P** **05 05 23.4 +0.1**
QIZ S **S** **05 09 40.5 +2.0**
QIZ LR LR
comp=Z,870nm,16.7s
QIZ LR LR
comp=Z,500nm,20.7s
QIZ LR LR
comp=Z,380nm,25.5s
MASI Maura Aman, Be 24.20 260 P **P** **05 05 26.8 +1.4**
comp=Z,282nm,0.7s
KRJI Kerinci 24.82 263 P **P** **05 05 32.3 +1.2**
comp=Z,396nm,1.0s

BKNI Bangkinang 25.07 269 P **P** **05 05 33.6 +0.4**
BKNI IAmb IAmb 05 05 36.0
comp=Z,79nm,0.8s
QIS Mount Isa 25.16 149 P **P** **05 05 34.2 +0.2**
baz=25,SNR=54
QIS Mount Isa 25.16 149 P **P** **05 05 34.4 +0.5**
IPM Ipoh 25.28 278 P **P** **05 05 35.5 +0.4**
IPM IAmb IAmb 05 05 40.3
comp=Z,119nm,1.2s
IPM Ipoh 25.28 278 P **P** **05 05 35.7 +0.5**
AS31 Alice Springs 25.64 163 P **P** **05 05 38.2 -0.1**
ASAR Alice Springs 25.64 163 P **P** **05 05 38.4 +0.1**
ASAR Alice Springs 25.64 163 P **P** **05 05 38.4 +0.1**
KULM Kulim 25.77 280 P **P** **05 05 39.5 0.0**
JOW Kunigami 25.79 4 P **P** **05 05 39.1 -0.5**
comp=Z,118nm,0.9s,baz=197,slow=6.9,SNR=25
JOW S **S** **05 10 04.8 -2.1**
comp=Z,5.7nm,0.4s,baz=119,slow=19,SNR=1.7
comp=Z,118nm,0.9s
WRKA Warakurna 25.95 175 P **P** **05 05 41.6 +0.6**
baz=26,SNR=269
WRKA Warakurna 25.95 175 P **P** **05 05 42.1 +1.0**
MTSU Mount Surprise 26.11 138 P **P** **05 05 42.4 -0.2**
baz=26,SNR=9.0
MTSU Mount Surprise 26.11 138 P **P** **05 05 43.0 +0.3**
GIRL Giralia 26.17 206 P **P** **05 05 44.7 +1.6**
baz=26,SNR=16
GIRL Giralia 26.17 206 P **P** **05 05 44.2 +1.1**
GIRL Giralia 26.17 206 P **P** **05 05 44.8 +1.7**
KRVT Keravat (AS076 26.43 102 P **P** **05 05 43.5 -2.1**
comp=Z,46nm,0.6s,baz=264,slow=4.9,SNR=11
KRVT LR LR 05 14 41.4
comp=Z,575nm,21.1s,baz=55,slow=33
comp=Z,46nm,0.6s
RABL Rabaul 26.55 101 P **P** **05 05 45.0 -1.6**
RABL Rabaul 26.55 101 P **P** **05 05 48.5 +1.9**
comp=Z,171nm,0.7s
KCSI Kotacane, Aceh 28.42 276 P **P** **05 06 02.3 -1.1**
comp=Z,78nm,0.7s
GSI Gunungsitoli 28.52 271 P **P** **05 06 03.8 -0.5**
GSI Gunungsitoli 28.52 271 P **P** **05 06 03.2 -1.1**
comp=Z,7µmcomp=Z,121nm,1.0s
GSI Gunungsitoli 28.52 271 P **P** **05 06 04.1 -0.2**
CTA Charters Tower 28.78 138 P **P** **05 06 05.9 -0.7**
comp=Z,9.6nm,0.9s,baz=320,slow=6.3,SNR=4.9
CTA ScP **ScP** **05 12 55.7 +0.2**
comp=Z,8.1nm,1.0s,baz=86,slow=2.2,SNR=3.5
comp=Z,9.6nm,0.9s
CTA Charters Tower 28.78 138 P **P** **05 06 07.4 +0.8**
CTAO Charters Tower 28.78 138 P **P** **05 06 06.2 -0.4**
CTAO Charters Tower 28.78 138 P **P** **05 06 06.2 -0.4**
CTAO pmax pmax
comp=Z,31nm,1.1s
CTAO Charters Tower 28.78 138 P **P** **05 06 07.2 +0.6**
OOD Oodnadatta 30.05 163 P **P** **05 06 17.7 0.0**
JCJ Chichijima 30.21 29 LR LR 05 18 55.1
comp=Z,68nm,19.4s,baz=274,slow=37
MORW Morawa 31.39 197 P **P** **05 06 29.9 +0.4**
baz=32,SNR=15
MORW Morawa 31.39 197 P **P** **05 06 29.4 -0.1**
MORW IAmb IAmb 05 06 30.8
comp=Z,34nm,0.8s
WHN Wuhan 31.45 340 ⇑P **P** **05 06 32.5 +2.5**
WHN pP **pP** **05 06 38.3 -0.2**
WHN LR LR
comp=Z,1µm,24.4s
GYA Guiyang 31.49 325 ⇓P **P** **05 06 31.6 +1.1**
GYA S **S** **05 11 40.5 +3.6**
GYA pmax pmax
comp=Z,16nm,0.8s
GYA LR LR
comp=Z,350nm,15.1s
FORT Forrest 31.64 177 P **P** **05 06 32.3 +0.6**
baz=32,SNR=28
FORT Forrest 31.64 177 P **P** **05 06 31.9 +0.3**
FORT Forrest 31.64 177 P **P** **05 06 32.0 +0.3**
NJ2 Nanjing 31.66 348 *e*P **P** **05 06 34.8 +3.0**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
CM31 Chiang Mai Arr 31.81 305 P **P** **05 06 32.0 -1.3**
CM31 IAmb IAmb 05 07 44.5
comp=Z,18nm,0.4s
CMAR Chiang Mai Arr 31.81 305 P **P** **05 06 34.2 +0.8**
comp=Z,2.7nm,0.4s,baz=131,slow=7.9,SNR=27
CMAR PcP **PcP** **05 09 25.7 +1.5**
comp=Z,3.5nm,0.7s,baz=157,slow=1.7,SNR=6.6
CMAR ScP **ScP** **05 13 05.2 -0.3**
comp=Z,0.8nm,0.3s,baz=151,slow=2.8,SNR=5.1
comp=Z,2.7nm,0.4s
CMAR Chiang Mai Arr 31.81 305 P **P** **05 06 33.5 +0.1**
INKA Innaminka 31.84 155 P **P** **05 06 35.2 +1.8**
CHTO Chiang Mai 31.99 305 P **P** **05 06 35.0 +0.1**
CHTO Chiang Mai 31.99 305 P **P** **05 06 35.0 +0.1**
CHTO pmax pmax
comp=Z,11nm,0.8s
CHTO Chiang Mai 31.99 305 P **P** **05 06 35.4 +0.5**
MULG Mulgathing 32.00 167 P **P** **05 06 35.2 +0.4**
QLP Quilpie 32.51 149 P **P** **05 06 39.2 -0.1**
BLDU Ballidu 32.67 195 P **P** **05 06 41.1 +0.4**
baz=33,SNR=30
BLDU Ballidu 32.67 195 P **P** **05 06 41.1 +0.4**
KMI Kunming 32.94 319 ⇑P P 05 06 51.9 +8.5
KMI pmax pmax
comp=Z,17nm,0.8s
KMI LR LR
comp=N,290nm,16.8s
KMI LR LR
comp=E,190nm,18.7s
KMI LR LR
comp=Z,390nm,19.2s
ENH Enshi 33.13 333 P **P** **05 06 44.1 -0.8**
ENH IAmb IAmb 05 06 46.6
comp=Z,39nm,0.8s
LCRK Leigh Creek 33.31 161 P **P** **05 06 46.8 +0.5**
KLBR Kellerberrin 33.35 193 P **P** **05 06 47.2 +0.6**
baz=34,SNR=34
KLBR Kellerberrin 33.35 193 P **P** **05 06 47.0 +0.4**
RK1H Rockhampton Ha 33.90 137 P **P** **05 06 52.1 +0.5**
MUN Mundaring 34.09 195 P **P** **05 06 53.7 +0.7**
baz=34,SNR=6.1
NAWB Namwon 34.29 2 P **P** **05 06 55.1 +0.3**
NAWB IAmb IAmb 05 06 56.7
comp=Z,27nm,1.0s
JHJ Hachijo jima 2 34.46 21 LR LR 05 21 33.4
comp=Z,162nm,19.3s,baz=294,slow=37
PZH PanZhiHua 34.54 319 ⇑P **P** **05 06 57.6 +0.4**
PZH S **S** **05 12 23.5 -0.9**
PZH pmax pmax
comp=Z,10.0nm,1.2s
PZH pmax pmax
comp=Z,100nm,5.4s
PZH LR LR
comp=Z,2µm,19.0s
PZH LR LR
comp=Z,1µm,20.8s
PZH LR LR
comp=Z,1µm,20.6s
NWAO Narrogin (SRO) 34.75 193 P **P** **05 06 59.5 +0.8**
NWAO Narrogin (SRO) 34.75 193 P **P** **05 06 59.5 +0.8**
NWAO pmax pmax
comp=Z,241nm,1.9s
BBOO Buckleboo 34.90 165 P **P** **05 06 60.0 -0.1**
baz=35,SNR=31
BBOO Buckleboo 34.90 165 P **P** **05 07 00.1 +0.1**
BBOO IAmb IAmb 05 07 02.9
comp=Z,40nm,0.9s
BBOO Buckleboo 34.90 165 P **P** **05 07 00.5 +0.4**
HNR Honiara 35.26 108 P **P** **05 07 03.2 -0.2**
HNR Honiara 35.26 108 P **P** **05 07 03.2 -0.2**
HNR pmax pmax
comp=Z,340nm,0.9s
WHYH Whyalla 35.52 163 P **P** **05 07 05.8 +0.4**
EIDS Eidsvold 35.64 139 P **P** **05 07 06.6 0.0**
EIDS IAmb IAmb 05 07 09.1
comp=Z,71nm,1.6s
INU Inuyama 35.67 15 P **P** **05 07 07.0 +0.3**
LYN LuoYang 35.75 341 ⇑P **P** **05 07 09.1 +1.8**
LYN S **S** **05 12 46.9 +4.4**
LYN SS **SnSn** **05 15 08.6 +2.4**
LYN pmax pmax
comp=Z,20nm,0.5s
LYN LR LR
comp=Z,260nm,20.8s
LYN LR LR
comp=Z,520nm,24.5s

KSCHJ Chungju 35.76 3 IAmb IAmb 05 07 10.2
comp=Z,45nm,1.0s
STKA Stephens Creek 35.82 157 P **P** **05 07 08.4 +0.4**
comp=Z,32nm,0.7s,baz=323,slow=9.1,SNR=34
STKA S **S** **05 12 40.2 -3.5**
comp=Z,2.3nm,0.8s,baz=360,slow=19,SNR=1.8
comp=Z,32nm,0.7s
STKA Stephens Creek 35.82 157 P **P** **05 07 08.2 +0.1**
baz=36,SNR=61
STKA Stephens Creek 35.82 157 P **P** **05 07 08.6 +0.5**
STKA Stephens Creek 35.82 157 P **P** **05 07 08.5 +0.4**
NAPP Napperby 35.83 163 P **P** **05 07 08.9 +0.9**
TIA Tai'an 36.03 348 ⇑P **P** **05 07 11.8 +2.0**
TIA S **S** **05 12 49.4 +2.6**
TIA pmax pmax
comp=Z,9.0nm,0.7s
TIA pmax pmax
comp=Z,66nm,8.0s
TIA LR LR
comp=Z,190nm,20.6s
TIA LR LR
comp=Z,100nm,8.8s
TIA LR LR
comp=Z,260nm,20.4s
HTT Hallett 36.30 162 P **P** **05 07 12.8 +0.7**
baz=36,SNR=20
HTT Hallett 36.30 162 P **P** **05 07 13.3 +1.2**
KSAR Wonju Array Be 36.32 2 P **P** **05 07 11.9 -0.3**
KSAR Wonju Array Be 36.32 2 P **P** **05 07 11.9 -0.3**
INCN Inchon 36.33 1 P **P** **05 07 13.3 +1.0**
INCN Inchon 36.33 1 P **P** **05 07 13.3 +1.0**
INCN pmax pmax
comp=Z,17nm,0.8s
KSRS Korea Array 36.34 2 P **P** **05 07 11.4 -0.8**
comp=Z,9.3nm,0.8s,baz=180,slow=10.0,SNR=35
KSRS PP **PnPn** **05 08 31.6 -3.3**
comp=Z,3.6nm,1.1s,baz=181,slow=9.7,SNR=0.9
KSRS PcP **PcP** **05 09 37.1 +0.5**
comp=Z,3.5nm,0.8s,baz=191,slow=2.8,SNR=6.7
comp=Z,9.3nm,0.8s
KSRS Korea Array 36.34 2 *e*P **P** **05 07 13.3 +1.0**
KSRS pmax pmax
comp=Z,10.0nm,0.8s
KS19 Wonju Array Si 36.38 2 P **P** **05 07 13.4 +0.7**
RKGY Rocky Gully 36.42 193 P **P** **05 07 15.2 +2.1**
baz=37,SNR=19
RKGY Rocky Gully 36.42 193 P **P** **05 07 15.2 +2.1**
CD2 Chengdu 36.53 327 P **P** **05 07 13.8 -0.4**
CD2 pP pwP 05 07 24.1 -1.1
CD2 sP sP 05 07 26.5 -0.1
CD2 S **S** **05 12 57.8 +3.1**
CD2 pmax pmax
comp=Z,20nm,0.9s
CD2 LR LR
comp=Z,400nm,10.4s
CD2 LR LR
comp=Z,500nm,11.4s
CD2 LR LR
comp=Z,330nm,10.4s
XAN Xi'an 36.61 336 ⇑*i*P **P** **05 07 14.1 -0.7**
XAN pP sP 05 07 28.3 +1.1
XAN PcP **PcP** **05 09 38.4 +0.7**
XAN ScP **ScP** **05 13 22.8 +0.5**
XAN pmax pmax
comp=Z,37nm,0.8s
XAN LR LR
comp=Z,400nm,22.7s
XAN LR LR
comp=Z,450nm,24.7s
MAJO Matsushiro 37.12 16 P **P** **05 07 18.2 -0.9**
MAJO IAmb IAmb 05 07 19.3
comp=Z,41nm,0.7s
MAJO Matsushiro 37.12 16 P **P** **05 07 18.2 -0.9**
MAJO pmax pmax
comp=Z,41nm,0.7s
MAJO Matsushiro 37.12 16 P **P** **05 07 18.4 -0.7**
MJAR Matsushiro Arr 37.12 16 P **P** **05 07 17.2 -1.9**
comp=Z,34nm,0.9s,baz=178,slow=9.2,SNR=69
MJAR PP **PP** **05 08 44.2 +0.1**
comp=Z,4.5nm,1.1s,baz=173,slow=11,SNR=1.1
MJAR PcP **PcP** **05 09 39.3 +0.2**
comp=Z,4.3nm,0.9s,baz=158,slow=3.6,SNR=4.0
MJAR LR LR 05 22 30.6
comp=Z,144nm,18.9s,baz=214,slow=36
comp=Z,34nm,0.9s
MJAR Matsushiro Arr 37.12 16 P **P** **05 07 17.6 -1.5**
MJAR IAmb IAmb 05 07 20.6
comp=Z,35nm,0.9s
MJAR Matsushiro Arr 37.12 16 P **P** **05 07 17.6 -1.5**
MJAR pmax pmax
comp=Z,35nm,0.9s
MJB9 Matsu-Tunnel 37.12 16 P **P** **05 07 18.6 -0.5**
MJB9 IAmb IAmb 05 07 19.2
comp=Z,40nm,0.7s
MJA0 Matsu Arr-Jizo 37.13 16 *e*P **P** **05 07 17.1 -2.1**
MJA0 pmax pmax
comp=Z,41nm,0.9s
CMSA Cobar Meteorol 37.30 152 P **P** **05 07 21.2 +0.6**
baz=37,SNR=8.4
CMSA Cobar Meteorol 37.30 152 P **P** **05 07 21.2 +0.6**
TWOA Tennyson Woods 37.68 163 P **P** **05 07 25.9 +2.1**
HNS HongShan 37.74 345 ⇓P **P** **05 07 23.4 -0.8**
HNS S **S** **05 13 14.9 +2.2**
HNS pmax pmax
comp=Z,13nm,1.0s
HNS LR LR
comp=Z,240nm,17.8s
HNS LR LR
comp=Z,220nm,20.1s
DL2 Dalian 37.97 354 P **P** **05 07 27.1 +1.0**
DL2 pmax pmax
comp=Z,94nm,0.7s
ARMA Armidale 39.57 144 P **P** **05 07 40.3 +0.4**
baz=40,SNR=7.2
ARMA Armidale 39.57 144 P **P** **05 07 39.8 -0.1**
ARMA Armidale 39.57 144 P **P** **05 07 41.1 +1.2**
BJT Baijiatuau 39.90 348 P **P** **05 07 42.3 0.0**
BJT IAmb IAmb 05 07 45.9
comp=Z,26nm,0.6s
BJT Baijiatuau 39.90 348 P **P** **05 07 42.3 0.0**
BJT pmax pmax
comp=Z,27nm,0.6s
BJI Beijing 39.92 348 P **P** **05 07 42.5 +0.1**
BJI S **S** **05 13 46.6 +1.1**
BJI pmax pmax
comp=Z,35nm,0.6s
ARPS Mount Arapiles 40.30 160 P **P** **05 07 46.5 +0.8**
baz=40,SNR=45
ARPS Mount Arapiles 40.30 160 P **P** **05 07 47.1 +1.4**
LZH Lanzhou 40.58 332 *e*P **P** **05 07 48.9 +0.6**
LZH pP pP 05 07 56.9 -0.1
LZH sP sP 05 08 01.8 +1.1
LZH PcP **PcP** **05 09 51.8 +1.6**
LZH ScP **ScP** **05 13 38.8 +1.3**
LZH pmax pmax
comp=Z,30nm,1.1s
LZH LR LR
comp=Z,460nm,16.8s
LZH LR LR
comp=Z,190nm,13.6s
LZH LR LR
comp=Z,580nm,17.4s
SNY Shenyang 40.73 357 ⇓P **P** **05 07 49.8 +0.7**
SNY S **S** **05 13 54.0 -3.6**
SNY pmax pmax
comp=Z,100nm,0.9s
SNY LR LR
comp=Z,210nm,18.2s
SNY LR LR
comp=Z,180nm,22.5s
SNY LR LR
comp=Z,280nm,18.0s
SHL Shillong 41.06 309 IAmb IAmb 05 07 59.2
comp=Z,21nm,0.6s
BRAT Ballarat 41.74 159 P **P** **05 07 59.3 +1.8**
HHC Hu-ho-hao-te 41.82 343 *e*P **P** **05 07 59.6 +1.3**
HHC S **S** **05 14 16.9 +2.8**
HHC pmax pmax
comp=Z,32nm,1.2s
HHC pmax pmax
comp=Z,170nm,6.3s
HHC LR LR
comp=Z,430nm,19.2s
HHC LR LR
comp=Z,280nm,14.1s
HHC LR LR

comp=Z,690nm,22.7s
CAN Canberra 41.98 152 P P 05 08 01.2 +1.6
TOO Toolangi 42.35 157 P P 05 08 03.2 +0.6
baz=42,SNR=5.7
TOO Toolangi 42.35 157 P P 05 08 03.9 +1.4
TOO IAmb IAmb 05 08 07.8
comp=Z,82nm,1.8s
TOO Toolangi 42.35 157 P P 05 08 03.9 +1.4
TOO pmax pmax
comp=Z,82nm,1.8s
TOO Toolangi 42.35 157 P P 05 08 04.5 +1.9
CN2 Changchun 42.64 359 *e*P **P 05 08 03.5 -1.3**
CN2 pP sP 05 08 18.9 +1.7
CN2 *e*PP **PP 05 09 46.3 +2.2**
CN2 S **S 05 14 22.8 -3.1**
CN2 pmax pmax
comp=Z,20nm,0.8s
CN2 LR LR
comp=Z,140nm,16.0s
CN2 LR LR
comp=Z,160nm,16.0s
CN2 LR LR
comp=Z,140nm,18.0s
USA0B Ussuriysk Arra 43.35 6 P P 05 08 11.3 +0.7
USA0B IAmb IAmb 05 08 12.4
comp=Z,47nm,0.8s
USA0B Ussuriysk Arra 43.35 6 P P 05 08 11.3 +0.7
USA0B pmax pmax
comp=Z,47nm,0.9s
USRK Ussuriysk Ar. 43.35 6 P P 05 08 11.4 +0.8
comp=Z,33nm,0.6s,baz=189,slow=7.6,SNR=49
comp=Z,33nm,0.6s
USRK Ussuriysk Ar. 43.35 6 P P 05 08 11.1 +0.6
MDJ Mudanjiang 43.56 4 P P 05 08 12.9 +0.6
MDJ Mudanjiang 43.56 4 P P 05 08 13.3 +1.1
MDJ pmax pmax
comp=Z,110nm,0.8s
MDJ pmax pmax
comp=Z,110nm,3.6s
MDJ Mudanjiang 43.56 4 P P 05 08 13.3 +1.1
ERM Erimo 43.64 18 P P 05 08 13.0 +0.1
ERM IAmb IAmb 05 08 23.1
comp=Z,32nm,0.9s
ERM Erimo 43.64 18 P P 05 08 13.0 +0.1
ERM pmax pmax
comp=Z,32nm,0.9s
XLT XiLinHaoTe 43.66 350 ⇑*i*P **P 05 08 14.1 +0.9**
XLT pP pP 05 08 21.4 -0.5
XLT sP sP 05 08 25.9 +0.5
XLT S **S 05 14 41.8 +0.8**
XLT pmax pmax
comp=Z,47nm,0.9s
XLT pmax pmax
comp=Z,100nm,4.8s
XLT LR LR
comp=Z,19nm,21.4s
XLT LR LR
comp=Z,160nm,18.6s
XLT LR LR
comp=Z,250nm,18.4s
LSA Lhasa 43.83 314 P P 05 08 15.2 0.0
LSA Lhasa 43.83 314 P P 05 08 15.2 0.0
LSA pmax pmax
comp=Z,12nm,0.7s
LSA Lhasa 43.83 314 P P 05 08 15.8 +0.6
LSA pmax pmax
comp=Z,15nm,0.7s
BNX BinXian 44.59 1 ⇑P **P 05 08 20.5 0.0**
BNX S **S 05 14 54.8 +0.5**
BNX pmax pmax
comp=Z,45nm,0.9s
BNX pmax pmax
comp=Z,110nm,5.2s
BNX LR LR
comp=Z,160nm,16.1s
BNX LR LR
comp=Z,150nm,14.5s
BNX LR LR
comp=Z,210nm,19.2s
GTA Gaotai 45.15 331 ⇑P **P 05 08 25.3 +0.1**
GTA pP pwP 05 08 36.0 -0.5
GTA sP sP 05 08 40.8 +3.1
GTA PcP **PcP 05 10 06.9 +1.5**
GTA ScP **ScP 05 13 56.4 +0.5**
GTA ScS **ScS 05 18 17.9 -2.3**
GTA pmax pmax
comp=Z,9.0nm,0.8s
GTA pmax pmax
comp=Z,60nm,5.8s
GTA LR LR
comp=Z,250nm,18.9s
GTA LR LR
comp=Z,340nm,21.5s
GTA LR LR
comp=Z,420nm,23.3s
ASAJ Asahikawa 45.39 17 LR LR 05 25 47.0
comp=Z,115nm,21.2s,baz=194,slow=34
GOMU GeErMu 45.48 324 P P 05 08 28.8 +0.6
GOMU S **S 05 15 01.1 -7.2**
GOMU pmax pmax
comp=Z,6.0nm,1.3s
GOMU pmax pmax
comp=Z,38nm,3.6s
GOMU LR LR
comp=Z,220nm,18.4s
GOMU LR LR
comp=Z,71nm,18.1s
GOMU LR LR
comp=Z,140nm,18.2s
PALK Pallekele 45.68 279 LR LR 05 29 14.7
comp=Z,229nm,21.2s,baz=197,slow=38
PALK Pallekele 45.68 279 P P 05 08 29.5 -0.2
PALK Pallekele 45.68 279 P P 05 08 29.5 -0.2
PALK pmax pmax
comp=Z,185nm,2.0s
GUN Gumba 46.88 308 *e*P **P 05 08 39.5 +0.2**
comp=Z,97nm,0.8s
PKI Pulchoki 47.09 308 *e*P **P 05 08 41.4 +0.4**
comp=Z,16nm,0.4s
PKIN Phulchoki 47.11 308 *e*P **P 05 08 41.4 +0.4**
comp=Z,22nm,0.5s
DMN Daman 47.35 308 *e*P **P 05 08 43.6 +0.7**
GKN Gorkha 47.90 308 *e*P **P 05 08 47.9 +0.9**
YSS Yuzh-Sakhalins 48.04 15 P **P 05 08 47.7 +0.1**
YSS Yuzh-Sakhalins 48.04 15 *e*P **P 05 08 48.0 +0.5**
YSS *e**PP **pwP 05 08 58.3 -0.3**
YSS *e*S **S 05 15 40.3 -3.5**
YSS pmax pmax
comp=Z,30nm,0.9s
YSS MLR MLR
comp=Z,200nm,12.0s
YSS Yuzh-Sakhalins 48.04 15 P P 05 08 48.1 +0.5
HIA Hailar 48.41 354 P P 05 08 50.9 +0.5
HIA Hailar 48.41 354 P P 05 08 50.9 +0.5
HIA pmax pmax
comp=Z,50nm,1.1s
KOLN Koldanda 48.62 307 *e*P **P 05 08 52.2 -0.4**
comp=Z,12nm,0.7s
DANN Dangsing 48.75 308 *e*P **P 05 08 53.7 0.0**
comp=Z,121nm,0.7s
HYBB Hyderabad (bro 49.51 292 *e*P **P 05 09 00.2 +0.8**
HYBB *e*S **S 05 16 08.1 +2.7**
ULN Ulaanbaatar 49.54 343 P P 05 08 59.5 +0.2
ULN IAmb IAmb 05 09 01.4
comp=Z,15nm,0.7s
ULN Ulaanbaatar 49.54 343 P P 05 08 59.5 +0.2
ULN pmax pmax
comp=Z,15nm,0.7s
SONM Songino Array 49.70 343 P P 05 09 00.8 +0.3
comp=Z,11nm,0.7s,baz=155,slow=8.3,SNR=26
SONM PcP **PcP 05 10 21.2 -0.2**
comp=Z,7.7nm,0.8s,baz=178,slow=4.5,SNR=5.8
SONM LR LR 05 31 54.0
comp=Z,238nm,20.5s,baz=162,slow=38
comp=Z,11nm,0.7s
SONM Songino Array 49.70 343 P P 05 09 00.6 +0.1
PCHI Peechi 50.34 283‖ *e*P **P 05 09 06.4 +0.7**
CIT Chita 51.94 350 *e*P **P 05 09 18.1 +0.9**
CIT *e* 05 09 29.8
CIT pmax pmax
comp=Z,169nm,1.8s
ZEA Zeya 52.59 1 *e*P **P 05 09 21.9 0.0**
ZEA pmax pmax
comp=N,10.0nm,0.8s
ZEA pmax pmax
comp=Z,10.0nm,1.0s
ZAK Zakamensk 52.91 342 *e*P **P 05 09 24.7 +0.2**
ZAK pmax pmax
comp=Z,6.0nm,1.3s
MSVF Nonsavu 54.39 113 LR LR 05 34 21.9
comp=Z,156nm,18.5s,baz=315,slow=38
MSVF Nonsavu 54.39 113 P P 05 09 37.5 +1.6
MSVF pmax pmax
comp=Z,46nm,1.1s
WMQ Urumqi 54.63 327 *e*P **P 05 09 37.8 +0.7**
WMQ pP pP 05 09 44.3 -2.0
WMQ pmax pmax
comp=Z,42nm,0.9s
WMQ pmax pmax
comp=Z,160nm,3.9s
WMQ LR LR
comp=Z,400nm,16.5s
WMQ LR LR
comp=Z,220nm,19.7s
WMQ LR LR
comp=Z,250nm,23.7s
MOY Mondy 54.75 341 *e*P **P 05 09 39.0 +1.1**
MOY pmax pmax
comp=Z,29nm,1.6s
KNGR Kungurtug, Tuv 55.07 338‖ *e*P **P 05 09 41.4 +1.1**
BOD Bodaibo 57.48 352 *e*P **P 05 09 57.7 +0.5**
BOD pmax pmax
comp=Z,67nm,1.0s
PEA0B Petropavlovsk- 58.20 22 P P 05 10 02.6 +0.3
PEA0B Petropavlovsk- 58.20 22 P P 05 10 02.6 +0.3
PEA0B pmax pmax
comp=Z,36nm,0.7s
PETK Petropavlovsk- 58.20 22 P P 05 10 02.8 +0.5
comp=Z,30nm,0.7s,baz=193,slow=5.8,SNR=30
PETK LR LR 05 33 07.7
comp=Z,78nm,21.4s,baz=198,slow=34
comp=Z,30nm,0.7s
PETK Petropavlovsk- 58.20 22 P P 05 10 02.6 +0.3
MK31 Makanchi Array 59.47 326 P P 05 10 11.2 0.0
MK31 IAmb IAmb 05 10 14.0
comp=Z,32nm,1.3s
MK31 Makanchi Array 59.47 326 *d* **iP P 05 10 10.8 -0.5**
MKAR Makanchi Array 59.47 326 P P 05 10 11.0 -0.3
comp=Z,12nm,0.4s,baz=124,slow=8.5,SNR=131
MKAR LR LR 05 36 40.1
comp=Z,154nm,20.8s,baz=114,slow=37
comp=Z,12nm,0.4s
MKAR Makanchi Array 59.47 326 P P 05 10 10.8 -0.5
KSH Kashi 59.56 316 P P 05 10 12.9 +0.7
KSH ScS **ScS 05 19 59.4 -1.2**
KSH pmax pmax
comp=Z,8.0nm,1.4s
MAKZ Makanchi 59.65 326 P P 05 10 12.1 -0.4
MAKZ IAmb IAmb 05 10 15.7
comp=Z,25nm,0.7s
MAKZ Makanchi 59.65 326 P P 05 10 12.1 -0.4
MAKZ pmax pmax
comp=Z,25nm,0.7s
KPKS Kokpek 59.72 322 *e*P **P 05 10 12.7 -0.5**
KPKS pmax pmax
comp=Z,8.0nm,0.6s
RPZ Rata Peaks 59.91 144 LR LR 05 35 40.8
comp=Z,146nm,21.3s,baz=315,slow=36
TUWZ Tuamarina 60.43 140 P P 05 10 17.4 -0.6
YAK Yakutsk 60.96 2 LR LR 05 39 51.7
comp=Z,92nm,19.0s,baz=224,slow=39
YAK Yakutsk 60.96 2 P P 05 10 21.4 +0.3
YAK Yakutsk 60.96 2 *e*P **P 05 10 21.6 +0.5**
YAK *e* 05 11 03.0
YAK *e*S **S 05 18 35.8 -1.3**
YAK *e**SS sS 05 19 08.3 +16
YAK *e* 05 20 05.1
YAK *e*SS **SS 05 22 41.5 +4.6**
YAK pmax pmax
comp=Z,84nm,0.8s
YAK pmax pmax
comp=N,17nm,0.9s
YAK pmax pmax
comp=E,11nm,1.0s
YAK smax smax
comp=E,74nm,3.0s
YAK smax smax
comp=N,134nm,3.3s
BKZ Black Stump Fm 61.00 137 P P 05 10 21.2 -0.8
BKZ IAmb IAmb 05 10 22.1
comp=Z,20nm,0.8s
URZ Urewera 61.00 136 P P 05 10 20.9 -1.0
URZ IAmb IAmb 05 10 22.3
comp=Z,27nm,1.1s
TKM2 Tokmak 2 61.40 320 P P 05 10 24.7 -0.2
SNR=15
TKM2 Tokmak 2 61.40 320 P P 05 10 24.6 -0.2
TKM2 pmax pmax
comp=Z,11nm,0.7s
MA2 Magadan 61.51 14 P P 05 10 26.1 +1.2
MA2 Magadan 61.51 14 P P 05 10 26.1 +1.2
MA2 pmax pmax
comp=Z,31nm,0.8s
UCH Uchtor 61.79 319 P P 05 10 28.3 +0.5
SNR=20
AAK Ala-Archa 61.99 319 P P 05 10 28.7 0.0
comp=Z,5.8nm,0.8s,baz=123,slow=4.5,SNR=11
AAK LR LR 05 38 24.1
comp=Z,56nm,18.1s,baz=109,slow=37
comp=Z,5.8nm,0.8s
AAK Ala-Archa 61.99 319 P P 05 10 28.7 0.0
AAK Ala-Archa 61.99 319 P P 05 10 28.7 0.0
AAK pmax pmax
comp=Z,9.0nm,0.8s
USP Ospenovka 62.27 320 P P 05 10 30.5 0.0
SNR=22
USP Ospenovka 62.27 320 P P 05 10 30.5 0.0
USP pmax pmax
comp=Z,28nm,0.9s
AML Almayashu 62.29 318 P P 05 10 31.4 +0.4
SNR=9.8
AML Almayashu 62.29 318 P P 05 10 31.4 +0.4
AML pmax pmax
comp=Z,30nm,1.1s
EKS2 Erkin-Say 62.47 319 P P 05 10 32.3 +0.5
SNR=13
EKS2 Erkin-Say 62.47 319 P P 05 10 32.6 +0.7
EKS2 pmax pmax
comp=Z,21nm,1.0s
KBL Kabul 62.72 309 P P 05 10 33.1 -0.7
KBL IAmb IAmb 05 10 37.5
comp=Z,13nm,0.7s
KBL Kabul 62.72 309 P P 05 10 33.1 -0.7
KBL pmax pmax
comp=Z,13nm,0.7s
ZAA0 Zalesovo Array 62.75 334 P P 05 10 32.5 -0.9
ZAA0 IAmb IAmb 05 10 34.3
comp=Z,20nm,1.2s
ZALV Zalesovo Beam 62.75 334 P P 05 10 32.7 -0.7
comp=Z,6.1nm,0.5s,baz=130,slow=6.0,SNR=26
ZALV PcP **PcP 05 11 11.0 -0.7**
comp=Z,9.6nm,0.9s,baz=115,slow=7.0,SNR=4.7
ZALV LR LR 05 40 41.7
comp=Z,72nm,18.1s,baz=106,slow=39
comp=Z,6.1nm,0.5s
ZALV Zalesovo Beam 62.75 334 P P 05 10 32.4 -1.0
ZALV Zalesovo Beam 62.75 334 *e*P **P 05 10 32.6 -0.7**
ZALV pmax pmax
comp=Z,7.0nm,0.6s
BTLS Baital 63.39 321 *e*P **P 05 10 38.0 +0.2**
BTLS pmax pmax
comp=Z,4.0nm,0.6s
KURBB Kurchatov Arra 63.72 328 P P 05 10 39.3 -0.5
comp=Z,26nm,0.6s,baz=128,slow=6.3,SNR=183
KURBB S **S 05 19 08.3 -4.0**
comp=Z,0.2nm,0.3s,baz=355,slow=21,SNR=1.1
comp=Z,26nm,0.6s
KURBB Kurchatov Arra 63.72 328 P P 05 10 39.0 -0.8
KURBB pmax pmax
comp=Z,39nm,0.7s
KURK Kurchatov 63.73 328 P P 05 10 39.4 -0.5
KURK Kurchatov 63.73 328 P P 05 10 39.4 -0.5
KURK pmax pmax
comp=Z,50nm,0.7s
IUG Iuzhnay 64.76 317 *e*P **P 05 10 46.8 -0.2**
KK31 Karatay Array 64.83 318 P P 05 10 46.8 -0.5
KK31 IAmb IAmb 05 10 49.7
comp=Z,12nm,0.8s
KK31 Karatay Array 64.83 318 P P 05 10 46.8 -0.5
KK31 pmax pmax
comp=Z,12nm,0.8s
KKAR Karatay Array 64.83 318 P P 05 10 46.8 -0.5
KKAR IAmb IAmb 05 10 49.7
comp=Z,12nm,0.8s
KKAR Karatay Array 64.83 318 P P 05 10 46.8 -0.5
KKAR pmax pmax
comp=Z,12nm,0.8s
SEY Seymchan 64.84 13 LR LR 05 38 06.9
comp=Z,26nm,21.4s,baz=194,slow=35
SEY Seymchan 64.84 13‖ *e*P **P 05 10 48.1 +1.2**
SEY pmax pmax
comp=Z,39nm,1.5s
SHEM Shemya Is, Ala 65.14 30 LR LR 05 33 13.8
comp=Z,68nm,21.8s,baz=252,slow=30
BRZS Berezniki 66.57 326 *e*P **P 05 10 57.8 -0.6**
BRZS pmax pmax
comp=Z,9.0nm,0.9s
CASY Casey 68.03 187 P P 05 11 08.2 +1.0
BVAR Borovoye Array 69.28 328 LR LR 05 44 37.1
comp=Z,37nm,19.4s,baz=9.0,slow=38
KIWB Kanaga Island 69.31 34 P P 05 11 15.9 +0.4
BRVK Borovoye 69.35 328 P P 05 11 15.8 0.0
BRVK IAmb IAmb 05 11 17.4
comp=Z,15nm,0.8s
BRVK Borovoye 69.35 328 P P 05 11 15.8 0.0
BRVK pmax pmax
comp=Z,15nm,0.8s
TIXI Tiksi 70.58 1 P P 05 11 22.4 -0.6
TIXI IAmb IAmb 05 11 24.1
comp=Z,39nm,1.1s
TIXI Tiksi 70.58 1 P P 05 11 22.4 -0.6
TIXI pmax pmax
comp=Z,39nm,1.1s
GEYT Alibeck 72.14 310 P P 05 11 33.2 +0.1
comp=Z,9.2nm,0.8s,baz=186,slow=3.0,SNR=9.8
GEYT LR LR 05 46 27.9
comp=Z,50nm,18.5s,baz=99,slow=38
comp=Z,9.2nm,0.8s
GEYT Alibeck 72.14 310 P P 05 11 34.2 +1.0
BILL Bilibino 72.36 15 *d* **iP P 05 11 33.5 -0.3**
BILL *i* 05 11 47.2
BILL *i* 05 14 11.0
BILL pmax pmax
comp=Z,6.0nm,1.2s
BILL MLR MLR
comp=Z,150nm,18.0s
AB31 Akbulak array 73.88 321 P P 05 11 42.3 -0.9
AB31 pmax pmax
comp=Z,3.0nm,0.5s
ABKAR Akbulak array 73.88 321 P P 05 11 42.8 -0.4
AKTO Aktyubinsk 75.42 322 P P 05 11 52.0 -0.1
comp=Z,10.0nm,0.6s,baz=102,slow=6.9,SNR=29
AKTO LR LR 05 47 41.0
comp=Z,128nm,21.4s,baz=102,slow=38
comp=Z,10.0nm,0.6s
AKTO Aktyubinsk 75.42 322 P P 05 11 52.0 -0.1
SVE Sverdlovsk 75.97 329 *ce*P **P 05 11 54.9 -0.2**
SVE pmax pmax
comp=Z,58nm,0.9s
ARU Arti 76.92 328 P P 05 11 59.7 -0.8
comp=Z,28nm,0.6s,baz=111,slow=2.0,SNR=55
comp=Z,28nm,0.6s
ARU Arti 76.92 328 P P 05 11 59.7 -0.8
ARU Arti 76.92 328 *d* **iP P 05 11 59.6 -0.8**
ARU 05 12 10.7
ARU 05 14 54.1
ARU S **S 05 21 46.8 +0.5**
ARU SS **SS 05 26 38.8 -4.4**
ARU pmax pmax
comp=Z,39nm,0.8s
GAMB Gambell 77.15 24 P P 05 12 03.0 +1.5
baz=245
SDPT Sand Point 79.81 34 P P 05 12 16.3 -0.1
SDPT Sand Point 79.81 34 P P 05 12 16.9 +0.4
baz=257
VOI Vohitsoka 80.45 248 P P 05 12 21.5 +0.8
VOI IAmb IAmb 05 12 26.0
comp=Z,16nm,0.7s
VNDA Vanda 80.80 173 P P 05 12 22.1 +0.7
comp=Z,3.7nm,0.7s,baz=313,slow=6.4,SNR=15
VNDA LR LR 05 48 41.2
comp=Z,87nm,19.6s,baz=335,slow=36
comp=Z,3.7nm,0.7s
VNDA Vanda 80.80 173 P P 05 12 22.0 +0.7
MAW Mawson 80.97 200 P P 05 12 23.2 +0.8
comp=Z,6.6nm,0.7s,baz=54,slow=5.1,SNR=9.9
MAW LR LR 05 47 08.1
comp=Z,65nm,18.4s,baz=50,slow=35
comp=Z,6.6nm,0.7s
MAW Mawson 80.97 200 P P 05 12 23.8 +1.4
baz=81,SNR=11
MAW Mawson 80.97 200 P P 05 12 23.8 +1.4
MAW Mawson 80.97 200 P P 05 12 23.8 +1.4
MAW pmax pmax
comp=Z,7.0nm,1.5s
RAYN Ar Rayn 80.99 294 P P 05 12 23.8 +0.3
RAYN IAmb IAmb 05 12 26.6
comp=Z,19nm,0.8s
RAYN Ar Rayn 80.99 294 P P 05 12 23.8 +0.3
RAYN pmax pmax
comp=Z,19nm,0.9s
SBA Scott Base 81.72 172 P P 05 12 28.0 +1.8
SBA Scott Base 81.72 172 P P 05 12 28.0 +1.8
SBA pmax pmax
comp=Z,11nm,1.0s
O16K Kokwok River B 81.99 30 P P 05 12 29.0 +1.1
baz=258,SNR=6.3
RDOG Red Dog Mine 82.06 21 P P 05 12 24.7 -3.5
baz=253
BELG Belogornoye 82.19 323 P P 05 12 28.8 -0.4
comp=Z,94nm,0.9s,baz=127,slow=4.5,SNR=13
BELG LR LR 05 51 06.6
comp=Z,54nm,21.0s,baz=149,slow=37
comp=Z,94nm,0.9s
KIRV Kirov 82.24 329 P P 05 12 30.1 +0.9
comp=Z,30nm,0.5s,baz=82,slow=2.6,SNR=9.4
comp=Z,30nm,0.5s
KIRV Kirov 82.24 329 *c* **iP P 05 12 29.5 +0.2**
GROC Groznyy 82.26 313 *e*P **P 05 12 29.7 -0.1**
GROC *e* 05 15 36.8
GROC *e*S **S 05 22 45.3 +2.0**
GROC pmax pmax
comp=Z,33nm,0.6s
R17K Ugashik Creek 82.50 32 P P 05 12 30.8 +0.1
baz=260
O17K Koliganek Bris 82.52 30 P P 05 12 31.9 +1.1
baz=259
CHIR Chirikof Islan 82.61 34 P P 05 12 32.5 +1.2
GNI Garni 82.76 310 P P 05 12 32.8 +0.1
comp=Z,4.3nm,0.3s,baz=47,slow=20,SNR=1.0
GNI LR LR 05 55 05.0
comp=Z,32nm,19.6s,baz=91,slow=40
comp=Z,4.3nm,0.3s
N18K Kilae Creek 83.28 29 IAmb IAmb 05 12 37.3
comp=Z,24nm,0.9s
N18K Kilae Creek 83.28 29 P P 05 12 36.5 +1.7
baz=260,SNR=5.4
Q18K Katmai Hardscr 83.39 31 P P 05 12 35.4 0.0
baz=261
O18K Koktuh Hills 83.48 30 P P 05 12 37.0 +1.2
baz=261
SVW2 Sparrevohn 83.50 29 P P 05 12 37.6 +1.8
GCSA Galena City Sc 83.59 25 P P 05 12 37.7 +1.6
baz=259,SNR=15
ZEI Tsey 83.61 313 *e*P **P 05 12 36.9 -0.1**
ZEI pmax pmax
comp=Z,28nm,0.9s
TTA Tatalina 83.62 27 P P 05 12 38.0 +1.5
baz=260,SNR=14
AKH Akhalkalaki 83.80 311 ⇑P **P 05 12 39.4 +1.3**
AKH Akhalkalaki 83.80 311 P P 05 12 39.3 +1.3
GEVA Gevas 83.93 308 P P 05 12 39.4 +0.6
N19K Bonanza Creek 83.98 29 P P 05 12 40.1 +1.7
baz=261,SNR=22
L19K White Mountain 84.02 28 P P 05 12 39.3 +0.8
L19K White Mountain 84.02 28 P P 05 12 40.1 +1.6
baz=261,SNR=14
OHAK Old Harbor 84.09 33 P P 05 12 40.1 +1.2
baz=263
Q19K Cape Douglas, 84.13 31 P P 05 12 39.2 +0.1
baz=262
M19K Big River Lodg 84.19 28 P P 05 12 41.1 +1.7
baz=261
KBZ Khabaz 84.41 314 P P 05 12 40.0 -0.7
comp=Z,9.6nm,0.9s,baz=173,slow=1.7,SNR=12
comp=Z,9.6nm,0.9s
KBZ Khabaz 84.41 314 *e*P **P 05 12 41.3 +0.5**
KBZ pmax pmax

KDAK **Kodiak Island** 84.54 32 LR LR 05 47 24.4
comp=Z,7.0nm,0.7s
KDAK **Kodiak Island** 84.54 32 P **P** 05 12 41.6 +0.5
comp=Z,40nm,19.7s,baz=244,slow=34
KDAK **Kodiak Island** 84.54 32 *d* iP **P** 05 12 41.7 +0.5
KDAK pmax pmax
comp=Z,84nm,0.9s
K20K **Telida** 84.56 26 P **P** 05 12 42.1 +0.8
K20K **Telida** 84.56 26 P **P** 05 12 42.6 +1.3
baz=261,SNR=9.2
KVAR **Kislovodsk Arr** 84.57 314 P **P** 05 12 41.7 -0.1
comp=Z,1.7nm,0.4s,baz=264,slow=22,SNR=2.3
comp=Z,1.7nm,0.4s
KIV **Kislovodsk** 84.58 314 P **P** 05 12 41.6 -0.3
KIV IAmb IAmb 05 12 48.0
comp=Z,12nm,0.7s
KIV **Kislovodsk** 84.58 314 *e*P **P** 05 12 41.5 -0.3
KIV pmax pmax
comp=Z,17nm,1.0s
KIV MLR MLR
comp=Z,44nm,20.0s
PRGR **Permogore** 84.61 332 ⇑*i*P **P** 05 12 41.5 +0.1
PRGR *e* 05 12 47.0
PRGR *e**PP **pwP** 05 12 52.4 -0.7
PRGR *e*S **S** 05 23 04.3 -2.0
J20K **Nowinta River** 84.65 26 IAmb IAmb 05 13 05.3
comp=Z,36nm,1.6s
J20K **Nowinta River** 84.65 26 P **P** 05 12 43.0 +1.3
baz=261,SNR=9.3
M20K **Styx River** 84.78 28 IAmb IAmb 05 12 50.6
comp=Z,44nm,1.5s
A21K **Barrow** 85.01 18 P **P** 05 12 44.8 +1.6
baz=258
BATM **Batumi** 85.16 311 ⇑P **P** 05 12 45.4 +0.6
BATM **Batumi** 85.16 311 P **P** 05 12 45.3 +0.6
H21K **Melozitna Rive** 85.43 24 P **P** 05 12 46.6 +1.0
baz=262,SNR=6.6
CAST **Castle Rocks** 85.46 27 P **P** 05 12 46.8 +1.0
baz=263
SKT **Skwentna** 85.55 28 P **P** 05 12 45.4 -0.8
baz=264
MARD **Mardin** 85.68 307 IAmb IAmb 05 12 50.4
comp=Z,19nm,0.7s
BRSE **Bradley Lake S** 85.70 30 P **P** 05 12 47.4 +0.4
baz=264
VRH **Novokhopyorsk** 85.71 321 *e*P **P** 05 12 46.4 -0.8
VRH pmax pmax
comp=Z,50nm,0.7s
I21K **Tanana** 85.71 25 P **P** 05 12 47.9 +1.0
baz=263,SNR=6.8
SUA **Susitna One** 85.86 29 P **P** 05 12 47.9 0.0
baz=264
KOPT **Kop Dagi** 86.00 310 IAmb IAmb 05 13 02.2
comp=Z,23nm,0.9s
BPAW **Bear Paw Mtn.** 86.02 26 IAmb IAmb 05 12 52.1
comp=Z,32nm,1.8s
BPAW **Bear Paw Mtn.** 86.02 26 P **P** 05 12 49.1 +0.6
baz=264
H22K **Ishtalitna Cre** 86.05 24 P **P** 05 12 49.6 +1.0
baz=264
MLY **Manley** 86.22 25 P **P** 05 12 49.9 +0.4
baz=264,SNR=18
PMR **Palmer** 86.65 28 IAmb IAmb 05 12 58.4
comp=Z,19nm,1.3s
PMR **Palmer** 86.65 28 P **P** 05 12 51.5 0.0
baz=266
COLD **Coldfoot** 86.65 23 IAmb IAmb 05 12 53.7
comp=Z,18nm,0.7s
COLD **Coldfoot** 86.65 23 P **P** 05 12 52.8 +1.2
baz=264,SNR=6.4
SOC **Sochi** 86.70 313 *e*P **P** 05 12 50.9 -1.4
SOC *e* 05 16 11.1
SOC *e*S **SKSac** 05 23 14.5 -2.5
SOC *e*SSS SSS 05 32 41.0
SOC pmax pmax
comp=Z,15nm,0.8s
GHO **Glory Hole Cre** 86.76 28 IAmb IAmb 05 13 02.9
comp=Z,9.5nm,0.8s
H23K **Yukon River** 86.79 24 IAmb IAmb 05 12 53.8
comp=Z,9.9nm,0.8s
H23K **Yukon River** 86.79 24 P **P** 05 12 52.8 +0.5
baz=265,SNR=14
I23K **Minto, Yukon-K** 86.81 25 IAmb IAmb 05 12 53.5
comp=Z,15nm,0.8s
I23K **Minto, Yukon-K** 86.81 25 P **P** 05 12 52.6 +0.2
baz=265,SNR=13
MCK **McKinley** 86.89 26 P **P** 05 12 52.1 -0.6
baz=266
NEA2 **Nenana** 86.89 25 P **P** 05 12 52.8 0.0
baz=266
RND **Reindeer** 86.90 27 IAmb IAmb 05 12 52.9
comp=Z,12nm,0.9s
WAT1 **Susitna Watana** 87.00 27 P **P** 05 12 53.4 0.0
baz=266
TOLK **Toolik Lake Re** 87.02 21 IAmb IAmb 05 12 55.5
comp=Z,12nm,0.8s
TOLK **Toolik Lake Re** 87.02 21 P **P** 05 12 54.3 +0.9
baz=265
SML **Sawmill** 87.04 28 IAmb IAmb 05 12 54.8
comp=Z,16nm,0.8s
SML **Sawmill** 87.04 28 P **P** 05 12 53.6 0.0
baz=266,SNR=6.9
VORR **Voronezh** 87.31 322 *e*P **P** 05 12 55.7 +0.7
VORR pmax pmax
comp=Z,42nm,1.7s
WRH **Wood River Hil** 87.31 26 IAmb IAmb 05 12 54.8
comp=Z,10nm,0.9s
VSR **Storozhevoye** 87.32 321 *e*P **P** 05 12 53.6 -1.5
VSR pmax pmax
comp=Z,10.0nm,0.6s
M23K **Glacier View** 87.33 28 P **P** 05 12 54.7 -0.3
baz=267
D24K **Happy Valley** 87.33 21 P **P** 05 12 55.8 +1.0
baz=266
WAT6 **Susitna Watana** 87.36 28 P **P** 05 12 55.2 -0.1
baz=267,SNR=7.3
CCB **Clear Creek Bu** 87.44 25 IAmb IAmb 05 12 55.7
comp=Z,9.4nm,0.8s
H24K **Noodor Dome** 87.48 24 P **P** 05 12 56.2 +0.6
baz=267,SNR=10
KLMR **Klimovskoe** 87.48 331 *e*P **P** 05 12 53.8 -1.8
KLMR pmax pmax
comp=Z,24nm,0.8s
KLMR **Klimovskoe** 87.48 331 *e*P **P** 05 12 53.8 -1.8
KLMR AMP 05 13 00.6
comp=Z,24nm,0.8s
LPSR **Galich'ya Gora** 87.50 322 *e*P **P** 05 12 56.7 +0.8
LPSR pmax pmax
comp=Z,20nm,0.8s
SCM **Sheep Creek Mo** 87.52 28 IAmb IAmb 05 12 58.4
comp=Z,14nm,0.8s
SCM **Sheep Creek Mo** 87.52 28 P **P** 05 12 55.7 -0.2
baz=267
DHY **Denali Highway** 87.55 27 P **P** 05 12 56.2 +0.1
baz=267
HDA **Harding Lake** 87.80 26 IAmb IAmb 05 12 57.0
comp=Z,11nm,0.9s
HDA **Harding Lake** 87.80 26 P **P** 05 12 55.8 -1.4
baz=268,SNR=8.3
ILAR **Eielson Array** 87.84 25 P **P** 05 12 55.5 -1.8
comp=Z,2.6nm,0.7s,baz=238,slow=5.2,SNR=32
ILAR PP **PP** 05 16 27.4 +4.1
comp=Z,1.2nm,0.9s,baz=254,slow=6.3,SNR=4.7
comp=Z,2.6nm,0.7s
M24K **Tolsona, Glenn** 88.07 28 P **P** 05 12 59.1 +0.5
baz=268
KIBK **Kibwezi** 88.10 268 P **P** 05 13 02.6 +2.9
KIBK IAmb IAmb 05 13 19.4
comp=Z,15nm,1.1s
KLU **Klutina** 88.18 29 P **P** 05 12 59.6 +0.5
baz=269
DIV **Divide** 88.24 29 P **P** 05 12 59.3 -0.1
DIV IAmb IAmb 05 13 11.6
comp=Z,16nm,1.0s
K24K **Donnelly Dome** 88.29 26 P **P** 05 12 58.8 -0.7
baz=269
MOS **Moscow** 88.34 326 *e*P **P** 05 13 03.0 +3.2
ANN **Anapa** 88.37 315 *e*P **P** 05 12 58.7 -1.5
ANN *e*S **SKSac** 05 23 24.7 -2.3
ANN pmax pmax
comp=Z,35nm,0.9s
PAX **Paxson** 88.42 27 P **P** 05 12 59.9 -0.3
PAX IAmb IAmb 05 13 01.7
comp=Z,11nm,1.0s
PAX **Paxson** 88.42 27 P **P** 05 12 59.9 -0.3
PAX pmax pmax
comp=Z,11nm,1.0s
PAX **Paxson** 88.42 27 P **P** 05 12 60.0 -0.3
baz=269,SNR=8.1
J25K **Salcha River,** 88.49 26 P **P** 05 12 59.4 -1.1
baz=269,SNR=7.1
HARP **HAARP** 88.55 28 P **P** 05 13 00.7 0.0
baz=269
RIDG **Independent Ri** 88.71 26 IAmb IAmb 05 13 02.0
comp=Z,18nm,0.8s
RIDG **Independent Ri** 88.71 26 P **P** 05 13 01.4 -0.2
baz=270,SNR=14
ASF **Jabal al Asfar** 88.81 302 P **P** 05 13 03.5 +0.8
comp=Z,18nm,0.8s,baz=90,slow=2.6,SNR=11
comp=Z,18nm,0.8s
N25K **Chitina, Valde** 88.81 29 P **P** 05 13 02.5 +0.5
N25K **Chitina, Valde** 88.81 29 P **P** 05 13 02.5 +0.5
baz=270
BMAR **Burnt Mountain** 88.84 23 P **P** 05 13 02.7 +0.6
KMBO **Kilima Mbogo** 88.87 269 P **P** 05 13 04.7 +1.1
comp=Z,8.3nm,0.9s,baz=62,slow=6.9,SNR=20
KMBO LR LR 05 47 14.3
comp=Z,119nm,21.7s,baz=90,slow=32
comp=Z,8.3nm,0.9s
KMBO **Kilima Mbogo** 88.87 269 P **P** 05 13 03.2 -0.4
OBN **Obninsk** 88.94 325 LR LR 05 56 36.3
comp=Z,15nm,18.8s,baz=169,slow=38
OBN **Obninsk** 88.94 325 *i* P **P** 05 13 02.5 -0.1
OBN *i* 05 13 13.5
OBN *i* S **SKSac** 05 23 25.0 -4.9
OBN *i* SS **SS** 05 29 45.3 +4.0
OBN pmax pmax
comp=Z,15nm,1.0s
OBN MLR MLR
comp=Z,132nm,22.0s
DOT **Dot Lake** 89.06 27 P **P** 05 13 03.0 -0.1
DOT IAmb IAmb 05 13 03.7
comp=Z,8.7nm,0.8s
SCRK **Sand Creek** 89.09 26 P **P** 05 13 03.4 0.0
SCRK **Sand Creek** 89.09 26 P **P** 05 13 03.3 -0.1
baz=270,SNR=7.6
J26L **Joseph Creek** 89.27 26 IAmb IAmb 05 13 05.2
comp=Z,11nm,0.8s
J26L **Joseph Creek** 89.27 26 P **P** 05 13 03.8 -0.4
baz=271,SNR=20
L26K **Log Cabin Wild** 89.39 27 P **P** 05 13 04.8 +0.1
baz=271
I26K **Coal Creek Min** 89.43 25 P **P** 05 13 04.8 0.0
baz=271
M26K **Nabesna, AK** 89.56 28 P **P** 05 13 05.5 0.0
baz=271
MCARA **McCarthy VSAT** 89.57 29 P **P** 05 13 08.2 +2.7
baz=271
WAX **Waxell Ridge** 89.67 30 IAmb IAmb 05 13 12.9
comp=Z,15nm,0.8s
K27K **Chicken** 89.93 26 IAmb IAmb 05 13 09.2
comp=Z,24nm,0.9s
K27K **Chicken** 89.93 26 P **P** 05 13 08.2 +1.0
baz=272
MMAI **Mount Meron Ar** 90.06 303 P **P** 05 13 09.8 +1.2
comp=Z,4.1nm,0.6s,baz=64,slow=5.8,SNR=7.8
comp=Z,4.1nm,0.6s
L27K **Beaver Creek,** 90.08 27 IAmb IAmb 05 13 09.5
comp=Z,14nm,0.8s
L27K **Beaver Creek,** 90.08 27 P **P** 05 13 08.5 +0.6
baz=272,SNR=22
M27K **Edge Creek, AK** 90.08 28 P **P** 05 13 08.4 +0.3
baz=272
APA **Apatity** 90.14 337 ⇓*i*P P 05 13 01.2 -6.8
APA pmax pmax
comp=Z,5.0nm,1.0s
APA MLR MLR
comp=Z,300nm,15.0s
GRNC **Granite Creek** 90.21 29 IAmb IAmb 05 13 10.3
comp=Z,10nm,0.8s
YAH **Yahtse** 90.23 30 IAmb IAmb 05 13 10.7
comp=Z,10nm,0.8s
BARN **Barnard Glacie** 90.24 29 IAmb IAmb 05 13 10.6
comp=Z,17nm,0.8s
CTG **Chitna Glacier** 90.40 29 P **P** 05 13 10.6 +1.0
baz=273,SNR=7.1
CTGM **Chitina Glacie** 90.40 29 IAmb IAmb 05 13 11.4
comp=Z,17nm,0.8s
EIL **Elat** 90.52 300 LR LR 05 56 27.5
comp=Z,74nm,21.8s,baz=90,slow=37
TABL **Table Mountain** 90.52 30 IAmb IAmb 05 13 13.3
comp=Z,12nm,0.8s
SIM **Simferopol'** 90.72 315 *e*P **P** 05 13 12.1 +0.8
SIM *e* 05 16 45.0
SIM pmax pmax
comp=Z,19nm,0.9s
SIM pmax pmax
comp=Z,60nm,16.0s
YUK3 **Moose Creek** 90.78 28 P **P** 05 13 12.0 +0.5
baz=274,SNR=5.8
QSPA **South Pole Qui** 90.90 180 LR LR 05 56 16.6
comp=Z,79nm,18.8s,baz=11,slow=37
QSPA **South Pole Qui** 90.90 180 P **P** 05 13 12.3 +0.5
QSPA IAmb IAmb 05 13 22.1
comp=Z,14nm,1.4s
PINM **Pinnacle** 90.98 30 P **P** 05 13 12.5 +0.2
baz=274
DAWY **Dawson** 91.11 26 P **P** 05 13 13.0 +0.4
DAWY IAmb IAmb 05 13 14.0
comp=Z,10nm,0.9s
DAWY **Dawson** 91.11 26 P **P** 05 13 13.1 +0.4
baz=274,SNR=9.3
YUK8 **Steele Glacier** 91.14 29 P **P** 05 13 14.1 +0.9
baz=274,SNR=6.8
BR131 **Keskin Array S** 91.28 310 P **P** 05 13 13.1 -1.1
BR131 IAmb IAmb 05 13 19.3
comp=Z,9.4nm,0.9s
BR131 **Keskin Array S** 91.28 310 ⇑*e*P **P** 05 13 13.0 -1.1
BRTR **Keskin Array B** 91.28 310 P **P** 05 13 13.5 -0.7
comp=Z,4.2nm,0.9s,baz=127,slow=5.9,SNR=18
comp=Z,4.2nm,0.9s
BRTR **Keskin Array B** 91.28 310 *e*P **P** 05 13 16.1 +1.9
BRTR pmax pmax
comp=Z,5.0nm,0.9s
I29M **Ogilvie Camp,** 91.46 25 IAmb IAmb 05 13 15.4
comp=Z,12nm,1.0s
I29M **Ogilvie Camp,** 91.46 25 P **P** 05 13 14.5 +0.2
baz=275,SNR=11
VALR **Valaam** 91.66 331 *d* iP **P** 05 13 15.6 +0.4
VALR pmax pmax
comp=Z,58nm,0.9s
YUK4 **Talbot Arm** 91.68 29 P **P** 05 13 16.6 +1.0
baz=275,SNR=5.8
EPYK **Eagle Plains** 92.00 24 P **P** 05 13 16.7 -0.1
EPYK IAmb IAmb 05 13 18.2
comp=Z,19nm,1.1s
EPYK **Eagle Plains** 92.00 24 P **P** 05 13 17.1 +0.4
baz=277,SNR=9.6
HYT **Haines Junctio** 92.28 29 IAmb IAmb 05 13 19.9
comp=Z,8.0nm,0.8s
HYT **Haines Junctio** 92.28 29 P **P** 05 13 18.8 +0.5
baz=276,SNR=6.5
N30M **Aishikik Lake** 92.41 29 P **P** 05 13 19.7 +0.9
baz=276,SNR=9.1
M30M **Minto, Yukon** 92.42 27 IAmb IAmb 05 13 20.6
comp=Z,13nm,0.9s
M30M **Minto, Yukon** 92.42 27 P **P** 05 13 19.6 +0.7
baz=277,SNR=19
P30M **Million Dollar** 92.62 30 P **P** 05 13 20.7 +0.8
baz=276
ARCES **ARCESS Array B** 92.80 340 P **P** 05 13 19.5 -0.9
comp=Z,6.1nm,0.7s,baz=57,slow=4.5,SNR=11
ARCES LR LR 05 58 55.0
comp=Z,47nm,20.0s,baz=76,slow=38
comp=Z,6.1nm,0.7s
ARCES **ARCESS Array B** 92.80 340 *e*P **P** 05 13 18.9 -1.5
ARCES pmax pmax
comp=Z,6.0nm,0.7s
INK **Inuvik** 92.93 21 IAmb IAmb 05 13 21.6
comp=Z,9.9nm,0.9s
INK **Inuvik** 92.93 21 P **P** 05 13 20.6 -0.4
baz=280,SNR=7.6
O30N **Mendenhall** 92.97 29 P **P** 05 13 22.1 +0.7
baz=277,SNR=5.7
PLBC **Pleasant Camp** 93.00 30 P **P** 05 13 22.3 +0.9
baz=277
N31M **Braeburn, Yuko** 93.03 28 P **P** 05 13 22.6 +0.9
baz=278,SNR=13
SPITS **Spitsbergen Ar** 93.04 349 P **P** 05 13 20.7 -0.7
comp=Z,10nm,0.8s,baz=112,slow=5.6,SNR=6.6
SPITS LR LR 06 00 40.8
comp=Z,76nm,20.1s,baz=38,slow=39
comp=Z,10nm,0.8s
SKAG **Skagway** 93.53 30 IAmb IAmb 05 13 25.7
comp=Z,16nm,0.8s
SKAG **Skagway** 93.53 30 P **P** 05 13 24.8 +0.9
baz=278,SNR=5.2
WHY **Whitehorse** 93.58 29 P **P** 05 13 25.1 +0.8
baz=278,SNR=16
M31M **Drury Creek, Y** 93.58 28 IAmb IAmb 05 13 25.4
comp=Z,7.8nm,0.9s
M31M **Drury Creek, Y** 93.58 28 P **P** 05 13 24.3 +0.2
baz=279,SNR=10
AKASG **Malin Array Be** 93.61 321 P **P** 05 13 24.0 -0.5
comp=Z,2.0nm,0.8s,baz=67,slow=5.0,SNR=8.0
AKASG LR LR 06 00 58.9
comp=Z,46nm,20.2s,baz=73,slow=39
comp=Z,2.0nm,0.8s
AKASG **Malin Array Be** 93.61 321 *e*P **P** 05 13 25.5 +1.0
AKASG pmax pmax
comp=Z,2.0nm,0.6s
AKBB **Malin Array Si** 93.61 321 ⇓*i*P **P** 05 13 23.8 -0.7
AKBB pmax pmax
comp=Z,4.0nm,1.0s
BESE **Bessie Mountai** 93.89 31 IAmb IAmb 05 13 27.5
comp=Z,14nm,1.0s
FINES **FINESS Array B** 93.94 332 P **P** 05 13 25.7 0.0
comp=Z,3.5nm,0.7s,baz=69,slow=6.5,SNR=13
FINES LR LR 05 58 57.7
comp=Z,73nm,20.1s,baz=68,slow=38
comp=Z,3.5nm,0.7s
FINES **FINESS Array B** 93.94 332 *e*P **P** 05 13 29.2 +3.5
FINES pmax pmax
comp=Z,3.0nm,0.6s
JIS **Juneau Island** 94.18 32 IAmb IAmb 05 13 30.0
comp=Z,14nm,1.1s
P32M **Atlin** 94.32 30 P **P** 05 13 28.2 +0.6
baz=279
N32M **Quiet Lake** 94.37 29 P **P** 05 13 28.5 +0.7
baz=280
NACGM **Naroch** 94.57 325 *e*P P 05 13 39.9 +11
baz=82
P33M **Teslin, Yukon** 94.66 29 IAmb IAmb 05 13 30.5
comp=Z,7.2nm,0.9s
P33M **Teslin, Yukon** 94.66 29 P **P** 05 13 29.7 +0.5
baz=280,SNR=9.0
CFR **Carcaliu** 94.93 315 ⇓P **P** 05 13 31.6 +0.9
CFR **Carcaliu** 94.93 315 ⇓P **P** 05 13 31.6 +0.9
MMPY **Sheldon Lake,** 94.94 27 P **P** 05 13 31.2 +0.8
baz=282,SNR=24
MBAR **Mbarara** 95.37 269 LR LR 05 57 53.8
comp=Z,59nm,18.7s,baz=64,slow=36
WRAK **Wrangell Islan** 95.58 33 IAmb IAmb 05 13 34.8
comp=Z,15nm,1.0s
WRAK **Wrangell Islan** 95.58 33 P **P** 05 13 33.5 +0.2
baz=280
TESR **Tescani** 95.80 317 ⇑P **P** 05 13 33.9 -0.8
VRI **Vrincioaia** 95.83 316 ⇑P **P** 05 13 35.8 +1.0
VRI **Vrincioaia** 95.83 316 ⇑P **P** 05 13 35.8 +1.0
PLOR **Plostina** 95.89 316 ⇑P **P** 05 13 34.4 -0.7
PLOR **Plostina** 95.89 316 ⇑P **P** 05 13 34.4 -0.7
C36M **Paulatuk** 96.00 20 IAmb IAmb 05 13 35.4
comp=Z,13nm,0.8s
C36M **Paulatuk** 96.00 20 P **P** 05 13 34.8 -0.2
baz=289,SNR=6.2
BIZ **Bicaz** 96.12 317 ⇑P **P** 05 13 36.0 -0.1
DLBC **Dease Lake** 96.41 31 LR LR 05 53 15.8
comp=Z,34nm,20.2s,baz=283,slow=33
DLBC **Dease Lake** 96.41 31 P **P** 05 13 37.7 +0.5
baz=282
MLR **Muntele Rosu** 96.43 316 ⇑P **P** 05 13 38.3 +0.6
MLR **Muntele Rosu** 96.43 316 P **P** 05 13 38.4 +0.6
comp=Z,4.6nm,0.8s,baz=185,slow=1.0,SNR=9.3
MLR LR LR 06 03 13.4
comp=Z,82nm,20.9s,baz=70,slow=39
comp=Z,4.6nm,0.8s
MLR **Muntele Rosu** 96.43 316 IAmb IAmb 05 13 44.5
comp=Z,5.9nm,0.8s
TGTN **Hyland Airport** 96.56 28 P **P** 05 13 38.2 +0.4
baz=284
BURAR **Bucovina Array** 96.62 318 ⇑P **P** 05 13 38.8 +0.3
BURAR **Bucovina Array** 96.62 318 P **P** 05 13 38.5 +0.1
BURAR **Bucovina Array** 96.62 318 ⇑P **P** 05 13 38.8 +0.3
BUR08 **Bucovina Ar. S** 96.62 318 P **P** 05 13 38.8 +0.3
BUR08 IAmb IAmb 05 13 43.5
comp=Z,7.9nm,0.8s
LSZ **Lusaka** 97.89 255 LR LR 05 55 15.9
comp=Z,76nm,20.3s,baz=140,slow=34
SANT **Santorini** 97.99 307 ⇑P Pdif 05 13 53.6 +8.8
UZH **Uzhgorod** 98.37 319 *e*P Pdif 05 13 47.4 +1.2
UZH *e* 05 13 54.5
UZH *e* 05 13 59.0
DRGR 98.44 317 ⇑P **P** 05 13 46.5 -0.1
DRGR 98.44 317 ⇑P **P** 05 13 46.5 -0.1
IDI **Anoyia** 98.58 306 P **P** 05 13 46.7 -0.8
comp=Z,1.6nm,0.6s,baz=35,slow=4.3,SNR=2.1
IDI LR LR 06 06 07.1
comp=Z,19nm,18.6s,baz=99,slow=40
comp=Z,1.6nm,0.6s
CRVS **Cervenica-Dubn** 98.86 320 *i* P Pdif 05 13 49.7 +1.3
CRVS **Cervenica-Dubn** 98.86 320 *e*PDIFF Pdif 05 13 49.7 +1.3
BBB **Bella Bella** 98.86 37 LR LR 05 50 51.1
comp=Z,64nm,21.4s,baz=274,slow=31
SIRR **Siria** 99.25 317 ⇑P **Pdif** 05 13 50.8 +0.5
BZS **Buzias** 99.41 316 ⇓P **Pdif** 05 13 50.6 -0.3
BZS **Buzias** 99.41 316 ⇓P **Pdif** 05 13 50.6 -0.3
HFS **Hagfors** 100.14 332 P **Pdif** 05 13 54.7 +0.9
comp=Z,1.2nm,0.6s,baz=82,slow=10,SNR=1.9
NOA **NORSAR Array B** 100.95 333 P **Pdif** 05 13 56.6 -0.8
comp=Z,1.3nm,0.9s,baz=69,slow=4.6,SNR=3.4
YKA **Yellowknife Ar** 102.25 24 P **Pdif** 05 14 01.4 -1.7
comp=Z,0.4nm,0.5s,baz=295,slow=3.9,SNR=4.1
GERES **GERESS Array B** 103.83 321 Pdiff **Pdif** 05 14 10.2 -0.4
comp=Z,0.1nm,0.3s,baz=34,slow=7.4,SNR=1.8
NVAR **Mina Array Bea** 109.19 49 Pdiff **Pdif** 05 14 35.5 +0.5
comp=Z,0.2nm,0.5s,baz=274,slow=4.0,SNR=4.0
NVAR PKiKP **PKiKP** 05 18 39.5 +0.7
comp=Z,0.5nm,0.7s,baz=247,slow=1.5,SNR=4.4
NVAR PP **PP** 05 19 03.8 -3.7
comp=Z,0.6nm,0.8s,baz=261,slow=5.3,SNR=3.6
HLID **Hailey** 110.25 42 P **PKiKP** 05 18 42.1 +1.4
baz=292
PDAR **Pinedale Array** 113.82 42 PKiKP **PKiKP** 05 18 48.2 +0.7
comp=Z,0.4nm,0.7s,baz=294,slow=1.5,SNR=4.1
PDAR PKKPbc **PKKPbc** 05 29 30.1 -1.1
comp=Z,0.4nm,0.7s,baz=132,slow=5.3,SNR=2.9
PDAR PKKPab **PKKPab** 05 29 38.5 +1.0
comp=Z,0.8nm,0.8s,baz=112,slow=6.9,SNR=5.9
PV23 **Carpenter Ridg** 116.01 46 **PKiKP** 05 18 52.0 0.0
PV13 **Radium Mtn., P** 116.27 46 **PKiKP** 05 18 53.0 +0.6
RSSD **Black Hills** 116.73 38 **PKPdf** 05 18 52.5 -0.6
RSSD **Black Hills** 116.73 38 PKIKP **PKPdf** 05 18 52.5 -0.6
RSSD **Black Hills** 116.73 38 P **PKPdf** 05 18 52.8 -0.3
baz=301
TUC **Tucson** 116.97 53 P **PKiKP** 05 18 54.7 +1.0
baz=290
ULM **Lac du Bonnet** 117.66 29 PKP **PKPdf** 05 18 52.1 -2.2
comp=Z,3.8nm,0.8s,baz=313,slow=3.0,SNR=6.8
ULM **Lac du Bonnet** 117.66 29 **PKPdf** 05 18 53.4 -0.9
ULM **Lac du Bonnet** 117.66 29 *e*PKIKP **PKPdf** 05 18 54.2 -0.2
ULM pmax pmax
comp=Z,4.0nm,0.8s
S22A **4UR Ranch, Cre** 117.87 46 P **PKiKP** 05 18 56.8 +1.2
baz=296
SDCO **Great Sand Dun** 118.81 45 P **PKiKP** 05 18 58.5 +1.1
baz=297
LENM **Lemitar** 119.25 49 **PKPdf** 05 18 57.9 -0.2
121A **Cookes Peak, D** 119.26 51 P **PKiKP** 05 18 59.3 +1.1
baz=292
ANMO **Albuquerque** 119.32 48 PKPdf **PKiKP** 05 18 58.6 +0.2
ANMO **Albuquerque** 119.32 48 PKIKP **PKiKP** 05 18 58.6 +0.2
ANMO **Albuquerque** 119.32 48 P **PKiKP** 05 18 59.2 +0.8
baz=294
CRNM **Carthage** 119.52 50 **PKPdf** 05 18 58.8 +0.1
T25A **Trinidad** 119.86 45 P **PKiKP** 05 19 00.2 +0.8
baz=297
B35A **Bob, Littlefor** 119.97 30 **PKPdf** 05 18 58.2 -0.6
B35A **Bob, Littlefor** 119.97 30 P **PKPdf** 05 18 58.1 -0.8
baz=312
F33A **5 Mile Ranch,** 120.27 33 **PKPdf** 05 18 58.9 -0.6
F33A **5 Mile Ranch,** 120.27 33 P **PKPdf** 05 18 59.3 -0.2
baz=309
EYMN **Ely** 121.34 29 **PKPdf** 05 19 00.8 -0.7
EYMN **Ely** 121.34 29 P **PKPdf** 05 19 01.1 -0.4
baz=314
EYMN **Ely** 121.34 29 P **PKPdf** 05 19 01.2 -0.4
baz=314
ECSD **EROS Data Cent** 121.39 35 **PKPdf** 05 19 01.8 0.0
ECSD **EROS Data Cent** 121.39 35 P **PKPdf** 05 19 01.4 -0.3
baz=307
ECSD **EROS Data Cent** 121.39 35 P **PKPdf** 05 19 01.4 -0.3

baz=307
MNTX Cornudas Mount 121.46 51 P PKiKP 05 19 02.7 +0.3
baz=294
MNTX Cornudas Mount 121.46 51 P PKiKP 05 19 03.1 +0.7
baz=294,SNR=13
F36A Milaca 121.74 32 PKPdf 05 19 02.3 0.0
F36A Milaca 121.74 32 P PKPdf 05 19 01.7 -0.7
baz=312
E38A The Farm, Brul 122.24 30 PKPdf 05 19 02.7 -0.6
E38A The Farm, Brul 122.24 30 P PKPdf 05 19 02.9 -0.4
baz=314
MSTX Muleshoe 122.49 48 P PKiKP 05 19 04.8 +0.3
baz=297
MSTX Muleshoe 122.49 48 P PKiKP 05 19 04.8 +0.3
baz=297
SPMN Marine on St. 122.54 32 PKPdf 05 19 03.2 -0.7
SPMN Marine on St. 122.54 32 P PKPdf 05 19 03.9 0.0
baz=312
SPMN Marine on St. 122.54 32 P PKPdf 05 19 03.9 0.0
baz=312
I37A Lemond, Waseca 123.02 33 PKPdf 05 19 04.6 -0.3
I37B Waseca 123.02 33 P PKPdf 05 19 04.8 -0.1
baz=311
TOA0 Torodi Ar. Sit 123.13 286 PKPdf PKPdf 05 19 05.5 -0.3
TORD Torodi Ar. Bea 123.13 286 PKP PKPdf 05 19 05.9 +0.1
comp=Z,5.3nm,0.7s,baz=56,slow=2.0,SNR=37
TORD PP PP 05 20 45.5 -0.2
comp=Z,1.6nm,1.0s,baz=112,slow=6.4,SNR=2.9
TORD PKKPbc PKKPbc 05 28 56.6 +0.2
comp=Z,3.9nm,0.7s,baz=280,slow=3.7,SNR=26
D41A Chassel 123.36 28 PKPdf 05 19 05.0 -0.4
SCHQ Schefferville 123.36 9 PKP PKPdf 05 19 04.7 -0.5
comp=Z,3.6nm,0.6s,baz=333,slow=2.9,SNR=8.4
TX31 Lajitas Ar. Si 123.75 53 PKPdf 05 19 06.7 -0.1
TX31 Lajitas Ar. Si 123.75 53 P PKPdf 05 19 06.8 -0.1
baz=293,SNR=9.3
TX32 Lajitas Array 123.75 53 PKPdf 05 19 06.8 0.0
TXAR Lajitas Array 123.75 53 PKP PKiKP 05 19 07.2 +0.1
comp=Z,2.8nm,0.7s,baz=228,slow=1.1,SNR=39
TXAR PKKPbc PKKPbc 05 28 55.3 +0.9
comp=Z,0.1nm,0.5s,baz=117,slow=4.5,SNR=4.2
COWI Conover 123.78 29 PKPdf 05 19 06.0 -0.3
COWI Conover 123.78 29 P PKPdf 05 19 06.0 -0.3
baz=316
G40A Rib Lake 123.85 30 P PKPdf 05 19 06.2 -0.2
baz=315,SNR=10.0
F42A Maple Grove Fa 124.51 29 P PKiKP 05 19 08.1 +0.1
baz=317
E43A Lone Tree Farm 124.59 27 PKPdf 05 19 07.8 0.0
E43A Lone Tree Farm 124.59 27 P PKiKP 05 19 08.2 0.0
baz=318
I40A Norwalk 124.59 32 P PKPdf 05 19 07.2 -0.7
baz=314
JFWS Jewell Farm 125.46 32 PKPdf 05 19 08.9 -0.7
JFWS Jewell Farm 125.46 32 PKIKP PKPdf 05 19 08.9 -0.7
JFWS Jewell Farm 125.46 32 P PKPdf 05 19 08.8 -0.7
baz=313,SNR=9.9
JFWS Jewell Farm 125.46 32 P PKPdf 05 19 08.8 -0.7
baz=313
I42A Draeger Farm, 125.47 31 PKPdf 05 19 08.7 -0.9
I42A Draeger Farm, 125.47 31 P PKPdf 05 19 08.8 -0.8
baz=315,SNR=8.3
L40A Anamosa 125.50 34 P PKPdf 05 19 09.2 -0.5
baz=312,SNR=13
P38A Dawn 125.73 37 P PKPdf 05 19 09.8 -0.4
baz=308
E46A Sault Ste Mari 125.80 26 PKPdf 05 19 10.1 0.0
E46A Sault Ste Mari 125.80 26 P PKPdf 05 19 10.0 -0.1
baz=321
G45A Suttons Bay 126.21 28 P PKPdf 05 19 11.1 +0.2
baz=319
G45A P PKPdf 05 19 11.1 +0.2
baz=319
JCT Junction City 126.31 50 PKPdf 05 19 12.0 +0.3
JCT Junction City 126.31 50 PKIKP PKPdf 05 19 12.0 +0.3
JCT Junction City 126.31 50 P PKPdf 05 19 11.9 +0.3
baz=297,SNR=17
JCT Junction City 126.31 50 P PKPdf 05 19 12.0 +0.3
baz=297
L42A Oliver, Polo 126.39 33 P PKPdf 05 19 11.2 -0.2
baz=314,SNR=6.4
P40A Paris 126.68 37 P PKPdf 05 19 12.2 +0.2
baz=310
S39A Bolivar 127.04 39 PKPdf 05 19 12.6 -0.2
S39A Bolivar 127.04 39 P PKPdf 05 19 12.4 -0.4
baz=307,SNR=15
U38A Gravette 127.10 41 P PKPdf 05 19 12.9 0.0
baz=306
R40A Maddies Statio 127.33 38 P PKPdf 05 19 13.3 0.0
baz=309,SNR=9.5
833A Chaparral WMA, 127.58 53 P PKiKP 05 19 14.6 0.0
baz=296
833A Chaparral WMA, 127.58 53 P PKiKP 05 19 15.3 +0.7
baz=296
HDIL Hopedale 127.59 34 P PKPdf 05 19 13.7 0.0
baz=313
HDIL Hopedale 127.59 34 P PKPdf 05 19 13.7 0.0
baz=313
M44A Midewin, Midew 127.70 32 P PKPdf 05 19 14.2 +0.3
baz=315
J47A Sunmer 127.97 28 PKPdf 05 19 14.5 +0.2
MGMO Mountain Grove 128.03 39 PKPdf 05 19 14.5 -0.2
CCM Cathedral Cave 128.10 37 PKPdf 05 19 14.6 -0.2
CCM Cathedral Cave 128.10 37 PKIKP PKPdf 05 19 14.6 -0.2
CCM Cathedral Cave 128.10 37 P PKPdf 05 19 15.2 +0.4
baz=310
U40A Yellville 128.14 40 PKPdf 05 19 14.6 -0.4
U40A Yellville 128.14 40 P PKPdf 05 19 14.9 0.0
baz=307,SNR=5.7
U40A P PKPdf 05 19 14.9 0.0
baz=307,SNR=5.7
U40A Yellville 128.14 40 P PKPdf 05 19 15.2 +0.3
baz=307,SNR=5.7
MIAR Mount Ida 128.73 42 P PKiKP 05 19 17.5 +0.8
baz=305
L48A N Adams 129.14 29 PKPdf 05 19 16.2 -0.5
L48A N Adams 129.14 29 P PKPdf 05 19 16.4 -0.2
baz=319
L48A P PKPdf 05 19 16.4 -0.2
baz=319
O48B Farmland 130.03 31 P PKPdf 05 19 18.7 +0.3
baz=317
KIC Kosan Boka 130.39 279⇑*iP* PKiKP 05 19 20.7 +0.1
comp=Z,5.0nm,0.7s
DBIC Dimbokro 130.47 280 PKP PKiKP 05 19 21.2 +0.4
comp=Z,3.8nm,0.8s,baz=276,slow=2.9,SNR=4.9
DBIC SKPbc SKPab 05 22 41.2 -0.1
comp=Z,15nm,0.9s,baz=103,slow=5.1,SNR=12
TIC Toumodi 130.64 280⇑*iP* PKPdf 05 19 20.6 +0.3
comp=Z,3.2nm,0.2s
LIC Lamto 130.69 279⇑*iP* PKPdf 05 19 18.2 -2.1
comp=Z,5.0nm,0.4s
ACSO Alum Creek Sta 131.15 30 P PKPdf 05 19 21.0 +0.5
baz=320
M53A WI Miller and 131.30 27 P PKPdf 05 19 21.2 +0.5
baz=323
WVT Waverly 131.43 37 PKiKP 05 19 21.9 -0.2
WVT Waverly 131.43 37 PKIKP PKiKP 05 19 21.9 -0.2
WVT Waverly 131.43 37 P PKPdf 05 19 21.5 +0.4
baz=312
P52A Corning 132.03 29 P PKPdf 05 19 21.9 -0.2
baz=320
PLAL Pickwick Lake 132.03 38 PKPdf 05 19 22.5 +0.2
BINY Binghamton 132.62 22 P PKPdf 05 19 24.0 +0.7
baz=329
SSPA Standing Stone 133.17 25 P PKPdf 05 19 24.9 +0.6
baz=326
LRAL Lakeview Retre 133.98 40 P PKPdf 05 19 26.7 +0.7
baz=311
PLCA Paso Flores 137.65 161 PKP PKPdf 05 19 33.4 +0.6
comp=Z,3.4nm,1.0s,baz=144,slow=8.0,SNR=2.8
VA03 San Esteban 144.71 155 PKPbc 05 19 45.2 +0.7
CO01 Juntas del Tor 147.31 153 PKPdf 05 19 49.2 -1.2
CO01 PKPbc PKPab 05 19 54.1 -0.3
LCO Las Campanas 147.84 152 PKPdf PKPdf 05 19 52.1 +0.8
LCO PKPbc 05 19 55.4 +1.1
LCO Las Campanas 147.84 152 PKIKP PKPdf 05 19 52.1 +0.8
LCO 05 19 55.4
ITQB Itaqui 151.35 175 PKiKP 05 20 03.5 +0.5
CPUP Villa Florida 154.58 173 PKP PKPdf 05 20 01.9 +0.5
comp=Z,0.4nm,0.3s,baz=13,slow=5.0,SNR=3.9
CPUP Villa Florida 154.58 173 PKiKP 05 20 10.5 +0.7
ROSC El Rosal 158.80 74 PKP PKPdf 05 20 07.1 -0.5
comp=Z,5.5nm,0.5s,baz=121,slow=21,SNR=2.3
ROSC PKPab PKPab 05 20 44.3 +0.9
comp=Z,18nm,0.8s,baz=77,slow=5.3,SNR=6.7
ROSC El Rosal 158.80 74 PKPdf 05 20 05.4 -2.2
ROSC PKPab PKPab 05 20 45.1 +1.6
LPAZ La Paz 159.31 138 PKP PKPdf 05 20 08.5 +0.1
comp=Z,2.5nm,0.9s,baz=282,slow=3.4,SNR=8.7
LPAZ PKPab PKPab 05 20 46.6 +1.0
comp=Z,3.5nm,0.8s,baz=115,slow=3.8,SNR=5.2
BAUV El Baul 162.80 55 PKPab 05 20 59.7 -0.6
BDFB Brasilia 164.32 201 PKP PKPdf 05 20 13.3 +0.4
comp=Z,0.8nm,0.4s,baz=174,slow=7.1,SNR=3.5
SAML Samuel 167.83 131 PKPdf 05 20 15.6 -0.1
SAML PKPab 05 21 22.6 +0.2

MAN 19 05:11:14.3, 8.73N×126.54E, h20km, mb3.9, ML2.7, MS2.3, 5C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.57**	**198**	⇑*iP*	Pn	05 11 26.2	+0.1
BIPH				*i* S		05 11 34.7	
GLSP	**General Luna,**	**1.12**	**339**	⇑*iP*	Pb	05 11 33.9	+0.5
BUKP	**Musuan**	**1.69**	**240**	⇑*iP*	Pb	05 11 44.8	+0.6
BUKP				*eS*		05 11 48.3	
MATI	**Mati**	**1.80**	**189**	⇑*iP*	Pn	05 11 44.3	+1.1
CGP	**Cagayan de Oro**	**1.85**	**262**	⇑*eP*	Pn	05 11 44.7	+0.9
CGP				*eS*		05 12 08.8	

IDC 19 06:09:19.5±9.8, 13.79S×166.84E, h91km±104km, mb3.6/3, mbtmp3.9/4, ML3.7/1, MS3.6/1, Error ellipse: s-maj=108.2km s-min=35.2km az=147.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**8.24**	**183**	P	Pn	06 11 16.4	0.0
	0.9nm,0.3s,baz=142,slow=19,SNR=11						
DZM				S	Sn	06 12 39.7	-8.3
	2.4nm,0.5s,baz=85,slow=24,SNR=1.0						
	8.1nm,1.0s						
STKA	**Stephens Creek**	**29.30**	**228**	P	P	06 15 13.2	-0.2
	2.7nm,0.4s,baz=36,slow=11,SNR=6.6						
	2.7nm,0.4s						
WRA	**Warramunga Arr**	**31.66**	**254**	P	P	06 15 34.6	+0.1
	0.2nm,0.4s,baz=85,slow=8.5,SNR=7.1						
	0.2nm,0.4s						
GUMO	**Guam**	**34.84**	**320**	LR	LR	06 30 22.9	
	comp=Z,89nm,19.5s,baz=70,slow=36						
ILAR	**Eielson Array**	**85.77**	**18**	P	P	06 21 48.2	0.0
	0.4nm,0.7s,baz=238,slow=5.3,SNR=5.3						
	0.4nm,0.7s						

*IDC **19** 06:26:40.9±1.0, 14.32N×146.97E, h0km, mb3.9/8, mbtmp4.0/9, ML4.1/1, MS3.0/4, Error ellipse: s-maj=28.8km s-min=22.6km az=129.0*

*NEIC **19** 06:26:42.1±1.5, 14.08N±0.07×146.99E±0.09, h10km±1km, mb4.6/9, Error ellipse: s-maj=16.6km s-min=8.5km az=235.0*

ISC 19 06:26:45.0±0.6, 14.1N±0.1×147.02E±0.08, h35km, n27, σ1ş18/26, mb4.2/12, MS2.8/4, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.14**	**258**	Pn	**Pn**	**06 27 17.7**	**-0.5**
	59nm,0.3s,baz=80,slow=3.1,SNR=19						
GUMO				Sn	**Sn**	**06 27 43.5**	**0.0**
	37nm,0.3s,baz=170,slow=23,SNR=8.5						
	141nm,0.3s						
GUMO	**Guam**	**2.14**	**258**		**Pn**	**06 27 17.2**	**-1.0**
PATS	**Pohnpei**	**13.21**	**122**	Pn	**Pn**	**06 29 48.5**	**-1.8**
RABL	**Rabaul**	**18.83**	**164**	P	**P**	**06 31 01.3**	**-0.6**
WAKE	**Wake Island**	**19.51**	**72**	P	**P**	**06 31 10.3**	**+0.9**
DAV	**Davao City (W)**	**22.18**	**254**	LR	LR	06 41 39.4	
	comp=Z,29nm,18.6s,baz=29,slow=40						
MJAR	**Matsushiro Arr**	**23.75**	**342**	P	**P**	**06 31 51.9**	**-2.2**
	0.7nm,0.4s,baz=162,slow=9.0,SNR=4.3						
	0.7nm,0.4s						
KAPI	**Kappang**	**33.02**	**237**	LR	LR	06 45 04.5	
	comp=Z,22nm,21.9s,baz=224,slow=33						
WR0	**Warramunga Arr**	**35.95**	**200**	P	**P**	**06 33 43.9**	**+1.4**
WRAB	**Tennant Creek**	**35.99**	**201**	P	**P**	**06 33 43.6**	**+0.7**
WRAB				IAmb	IAmb	06 33 51.8	
	comp=Z,10nm,1.3s						
WB2	**Warramunga Arr**	**36.00**	**201**	P	**P**	**06 33 42.5**	**-0.5**
WB2				IAmb	IAmb	06 34 08.6	
	comp=Z,8.8nm,1.3s						
WRA	**Warramunga Arr**	**36.01**	**201**	P	**P**	**06 33 45.6**	**+2.6**
	comp=Z,1.1nm,0.7s,baz=24,slow=9.5,SNR=5.7						
	comp=Z,1.1nm,0.7s						
CMAR	**Chiang Mai Arr**	**46.26**	**282**	P	**P**	**06 35 08.5**	**+1.1**
	comp=Z,1.1nm,0.4s,baz=93,slow=5.6,SNR=1.0						
CMAR				LR	LR	06 54 30.4	
	comp=Z,7.1nm,20.0s,baz=255,slow=36						
	comp=Z,1.1nm,0.4s						
ZALV	**Zalesovo Beam**	**62.48**	**324**	P	**P**	**06 37 04.0**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=90,slow=5.8,SNR=4.7						
	comp=Z,0.6nm,0.3s						
ZALV	**Zalesovo Beam**	**62.48**	**324**	P	**P**	**06 37 04.3**	**-0.5**
MK31	**Makanchi Array**	**62.62**	**316**	P	**P**	**06 37 06.8**	**+0.9**
MKAR	**Makanchi Array**	**62.62**	**316**	P	**P**	**06 37 06.5**	**+0.6**
	comp=Z,0.6nm,0.4s,baz=96,slow=7.6,SNR=11						
	comp=Z,0.6nm,0.4s						
MKAR	**Makanchi Array**	**62.62**	**316**	P	**P**	**06 37 06.1**	**+0.2**
K20K	**Telida**	**63.82**	**25**	P	**P**	**06 37 13.6**	**+0.1**
K20K				IAmb	IAmb	06 37 39.5	
	comp=Z,4.4nm,1.2s						
SKT	**Skwentna**	**64.43**	**27**	P	**P**	**06 37 17.6**	**0.0**
KURK	**Kurchatov**	**65.59**	**320**	P	**P**	**06 37 25.6**	**+0.4**
KURK				IAmb	IAmb	06 37 26.4	
	comp=Z,4.1nm,0.8s						
ILAR	**Eielson Array**	**67.27**	**25**	P	**P**	**06 37 34.8**	**-1.0**
	comp=Z,0.8nm,0.7s,baz=251,slow=6.4,SNR=8.0						
	comp=Z,0.8nm,0.7s						
ILAR	**Eielson Array**	**67.27**	**25**	P	**P**	**06 37 36.8**	**+1.0**
NVAR	**Mina Array Bea**	**85.00**	**52**	P	**P**	**06 39 19.7**	**+2.2**
	comp=Z,0.4nm,0.6s,baz=272,slow=5.8,SNR=5.4						
	comp=Z,0.4nm,0.6s						
FINES	**FINESS Array B**	**91.62**	**336**	P	**P**	**06 39 47.4**	**-0.9**
	comp=Z,1.9nm,0.8s,baz=57,slow=5.1,SNR=6.5						
FINES				LR	LR	07 23 01.2	
	comp=Z,38nm,18.4s,baz=64,slow=37						
	comp=Z,1.9nm,0.8s						
DBIC	**Dimbokro**	**145.32**	**305**	PKPbc	**PKPbc**	**06 46 19.4**	**-0.6**
	comp=Z,6.4nm,1.0s,baz=17,slow=5.6,SNR=3.5						
LPAZ	**La Paz**	**146.03**	**98**	PKPbc	**PKPab**	**06 46 24.1**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=346,slow=4.2,SNR=1.8						

*NEIC **19** 06:33:13.7±1.7, 16.70S±0.06×69.73W±0.08, h172km±5km, mb4.6/56, Error ellipse: s-maj=10.9km s-min=8.6km az=104.0*

*VAO **19** 06:33:14.6±0.5, 16.67S×69.45W, h162km±4km, mb4.5*

*GUC **19** 06:33:14.4±0.8, 17.11S×69.96W, h200km±7km, ML4.5*

*IDC **19** 06:33:15.7±0.8, 16.69S×69.46W, h182km±6km, mb3.8/14, mbtmp4.4/17, Error ellipse: s-maj=15.5km s-min=12.6km az=50.0*

ISC 19 06:33:13.4±0.6, 16.72S±0.04×69.69W±0.05, h170km±6km, n200, σ1ş46/206, mb4.5/31, 3C-2D, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB18	**Visviri**	**0.89**	**167**	P	**Pn**	**06 33 43.1**	**+3.2**
PB18	**Visviri**	**0.89**	**167**	⇓*iP*	**Pn**	**06 33 43.3**	**+3.4**
LPAZ	**La Paz**	**1.56**	**74**	P	**Pn**	**06 33 47.9**	**+2.2**
	493nm,0.3s,baz=277,slow=7.5,SNR=6313						
LPAZ				S	**Sn**	**06 34 11.2**	**+0.6**
	1μm,0.9s,baz=145,slow=24,SNR=31						
PB16	**IPOC Station P**	**1.62**	**174**		**Pn**	**06 33 49.0**	**+2.7**
PB16				Sn	**Sn**	**06 34 14.8**	**+3.1**
AP01	**Chacalluta**	**1.76**	**201**	Pn	**Pn**	**06 33 48.4**	**+1.3**
AP01				Sn	**Sn**	**06 34 13.7**	**+0.4**
PB12	**IPOC Station P**	**1.98**	**198**		**Pn**	**06 33 50.4**	**+0.7**
PB12				Sn	**Sn**	**06 34 17.2**	**-0.6**
GO01	**Chusmiza**	**2.97**	**171**		**Pn**	**06 34 03.7**	**+2.0**
GO01				Sn	**Sn**	**06 34 40.3**	**+1.1**
PB11	**IPOC Station P**	**3.02**	**179**	Pn	**Pn**	**06 34 03.0**	**+1.0**
PB08	**IPOC Station P**	**3.44**	**172**		**Pn**	**06 34 09.0**	**+1.6**
TA02	**Huaiquique**	**3.56**	**187**		**Pn**	**06 34 09.0**	**+0.5**
TA02	**Huaiquique**	**3.56**	**187**	*eP*	**Pn**	**06 34 08.5**	**-0.1**
TA02				*eS*	**Sn**	**06 34 46.7**	**-4.9**
TA01	**Diego Aracena**	**3.85**	**187**		**Pn**	**06 34 12.3**	**0.0**
TA01	**Diego Aracena**	**3.85**	**187**	⇓*iP*	**Pn**	**06 34 12.1**	**-0.2**
TA01				*i* S	**Sn**	**06 34 53.3**	**-5.0**
PATCX	**Punta Patache**	**4.10**	**186**		**Pn**	**06 34 15.2**	**-0.4**
PB01	**IPOC Station P**	**4.30**	**177**		**Pn**	**06 34 18.4**	**+0.2**
PB02	**IPOC Station P**	**4.58**	**182**		**Pn**	**06 34 22.2**	**+0.4**
PB07	**IPOC Station P**	**4.98**	**182**	Pn	**Pn**	**06 34 27.5**	**+0.4**
PB09	**IPOC Station P**	**5.07**	**175**		**Pn**	**06 34 28.7**	**+0.5**
PB04	**IPOC Station P**	**5.60**	**184**		**Pn**	**06 34 34.8**	**-0.4**
LVC	**Limon Verde**	**5.91**	**173**	P	**Pn**	**06 34 40.1**	**+0.7**
	176nm,0.4s,baz=328,slow=9.4,SNR=222						
LVC				S	**Sn**	**06 35 43.4**	**-3.5**
	77nm,0.2s,baz=55,slow=22,SNR=2.5						
LVC	**Limon Verde**	**5.91**	**173**	Pn	**Pn**	**06 34 40.0**	**+0.6**
LVC	**Limon Verde**	**5.91**	**173**	*eP*	**Pn**	**06 34 39.9**	**+0.5**
PB06	**IPOC Station P**	**5.96**	**179**		**Pn**	**06 34 39.4**	**-0.5**
AF01	**San Pedro de A**	**6.36**	**167**		**Pn**	**06 34 46.3**	**+0.9**
PB15	**IPOC Station P**	**6.46**	**178**		**Pn**	**06 34 46.1**	**-0.4**
PB10	**IPOC Station P**	**6.81**	**187**	Pn	**Pn**	**06 34 49.9**	**-1.1**
ETMB	**Extrema**	**7.65**	**27**	*eP*	Pn	**06 35 02.3**	**+0.1**
ETMB				*eS*	**Sn**	**06 36 26.2**	**-1.8**
PB14	**IPOC Station P**	**7.89**	**185**	Pn	**Pn**	**06 35 03.9**	**-1.8**
SIV	**San Ignacio**	**8.30**	**86**	P	**Pn**	**06 35 08.8**	**-2.1**
	54nm,0.4s,baz=272,slow=10.0,SNR=188						
NNA	**Nana**	**8.38**	**303**	P	**Pn**	**06 35 13.2**	**+1.3**
	63nm,0.5s,baz=141,slow=11,SNR=35						
NNA				S	**Sn**	**06 36 41.0**	**-4.4**
	27nm,0.4s,baz=228,slow=18,SNR=4.7						
NNA	**Nana**	**8.38**	**303**		**Pn**	**06 35 12.7**	**+0.8**
GO02	**Mina Guanaco**	**8.40**	**179**		**Pn**	**06 35 11.4**	**-0.9**
CZSB	**Cruzeiro do Su**	**9.41**	**341**	*eP*	**Pn**	**06 35 25.6**	**+0.2**
AC01	**Pan de Azucar**	**9.42**	**185**		**Pn**	**06 35 23.5**	**-2.0**
VBST	**Vila Bela da S**	**9.57**	**78**	*eP*	**Pn**	**06 35 25.1**	**-2.5**
VILB	**Vilhena**	**9.91**	**69**	*eP*	**Pn**	**06 35 30.3**	**-1.7**
SAML	**Samuel**	**9.99**	**40**		**Pn**	**06 35 32.3**	**-0.8**
AC02	**Maricunga**	**10.08**	**177**		**Pn**	**06 35 34.0**	**-0.6**
PTLB	**Pontes e Lacer**	**10.22**	**84**	*eP*	**Pn**	**06 35 33.8**	**-2.3**
GO03	**Copiap**	**10.83**	**183**		**Pn**	**06 35 42.3**	**-1.7**
AC04	**Llanos de Chal**	**11.50**	**186**		**Pn**	**06 35 49.5**	**-3.1**
PTET	**Porto Estrela**	**12.12**	**85**	*eP*	**Pn**	**06 35 58.0**	**-2.7**
LCO	**Las Campanas**	**12.27**	**184**		**Pn**	**06 36 00.9**	**-1.9**
POCN	**Pocone**	**12.41**	**91**	*eP*	**Pn**	**06 36 02.4**	**-2.2**
TBTG	**Tabatinga, AM**	**12.46**	**359**	*eP*	**Pn**	**06 36 07.2**	**+2.1**
CO01	**Juntas del Tor**	**13.20**	**182**		**Pn**	**06 36 15.0**	**+0.3**
GO04	**Tololo Observa**	**13.43**	**184**		**Pn**	**06 36 16.6**	**-1.0**
SALV	**Santo Antonio**	**13.46**	**89**	*eP*	**Pn**	**06 36 16.6**	**-1.3**
PDRB	**Porto dos Gac**	**13.55**	**70**	*eP*	**Pn**	**06 36 15.4**	**-3.6**
NBRS	**Nobres**	**13.62**	**82**	*eP*	**Pn**	**06 36 18.1**	**-1.8**
AQDB	**Aquidauana**	**13.78**	**108**	*eP*	**Pn**	**06 36 20.9**	**-0.9**
ANTJ	**Antonio Joao (**	**13.94**	**114**	*eP*	**Pn**	**06 36 23.7**	**-0.2**
PP1B	**Ponte de Pedra**	**14.18**	**96**	*eP*	**Pn**	**06 36 26.6**	**-0.3**
CO02	**Combarbal**	**14.47**	**185**		**Pn**	**06 36 29.6**	**-0.9**
CLDB	**Colider**	**14.69**	**68**	*eP*	**Pn**	**06 36 32.8**	**-0.4**
CPUP	**Villa Florida**	**14.95**	**132**	P	**Pn**	**06 36 35.5**	**-0.8**
	2.7nm,0.6s,baz=308,slow=12,SNR=7.7						
CPUP	**Villa Florida**	**14.95**	**132**	Pn	**Pn**	**06 36 35.3**	**-1.0**
CPUP	**Villa Florida**	**14.95**	**132**	*eP*	**P**	**06 36 36.8**	**-0.8**
AMBA	**Amanbai (Brazi**	**15.14**	**116**	*eP*	**Pn**	**06 36 38.6**	**-0.1**
MAMA	**Manacapuru-AM**	**16.12**	**34**	*eP*	**P**	**06 36 51.3**	**+0.5**
ROC1	**El Roble**	**16.23**	**184**	IAmb	IAmb	06 36 57.0	
	comp=Z,24nm,0.7s						
MT05	**Renca**	**16.63**	**183**		**Pn**	**06 36 59.3**	**+2.5**
MT05				IAmb	IAmb	06 36 59.5	
	comp=Z,28nm,0.8s						
DVLD	**Doverlandia**	**16.79**	**92**	*eP*	**Pn**	**06 36 58.8**	**-0.1**
NPGB	**Novo Progresso**	**16.99**	**57**	*eP*	**P**	**06 37 00.1**	**-0.3**
MT09	**Talagante**	**17.02**	**184**	IAmb	IAmb	06 37 06.5	
	comp=Z,19nm,0.6s						
MT01	**Popeta**	**17.13**	**184**	IAmb	IAmb	06 37 07.4	
	comp=Z,32nm,0.8s						
ARAG	**Araguaiana, MT**	**17.20**	**89**	*eP*	**P**	**06 37 02.4**	**-0.3**
ITQB	**Itaqui**	**17.60**	**139**	P	**P**	**06 37 06.5**	**-0.4**
ITQB				IAmb	IAmb	06 37 10.7	
	comp=Z,15nm,0.8s						
ITQB	**Itaqui**	**17.60**	**139**	*eP*	**Pn**	**06 37 07.5**	**-0.9**
FRBT	**Francisco Belt**	**18.00**	**124**	*eP*	**Pn**	**06 37 12.0**	**-1.2**
CRSM	**Crissiumal (Br**	**18.01**	**129**	*eP*	**P**	**06 37 11.8**	**+0.3**
PCMB	**Pacaembu**	**18.07**	**108**	*eP*	**P**	**06 37 12.2**	**+0.1**
UNIS	**Unistalda (Bra**	**18.21**	**135**	*eP*	**Pn**	**06 37 14.4**	**-1.1**
PTGB	**Pitanga**	**18.29**	**119**	*eP*	**P**	**06 37 15.0**	**+0.4**
ITTB	**Itaituba**	**18.39**	**50**	*eP*	**P**	**06 37 15.5**	**-0.2**
SNDB	**Serra Nova Dou**	**18.43**	**78**	*eP*	**P**	**06 37 16.4**	**+0.3**
ITRB	**Iturama**	**18.60**	**102**	*eP*	**P**	**06 37 17.8**	**-0.2**
OTAV	**Otavalo**	**18.93**	**332**	P	**P**	**06 37 20.3**	**-1.8**
OTAV	**Otavalo**	**18.93**	**332**	*eP*	**Pn**	**06 37 27.1**	**+2.4**
OTAV	**Otavalo**	**18.93**	**332**	*eP*	**Pn**	**06 37 24.8**	**+0.1**
RODS	**Rosario do Sul**	**18.96**	**138**	*eP*	**P**	**06 37 22.4**	**+0.7**
CUSE	**Cuicocha Este**	**18.97**	**332**	*eP*	**Pn**	**06 37 28.0**	**+2.9**
MACC	**Macarena, Meta**	**19.19**	**347**	*eP*	**P**	**06 37 23.9**	**-0.5**
ITAB	**Concordia**	**19.33**	**126**	P	**P**	**06 37 25.6**	**-0.2**
ITAB				IAmb	IAmb	06 37 28.2	
	comp=Z,23nm,0.7s						
ITAB	**Concordia**	**19.33**	**126**	*eP*	**P**	**06 37 26.1**	**+0.3**
GCUF	**Volcan Galeras**	**19.37**	**336**	*eP*	**Pn**	**06 37 29.7**	**0.0**
ALGR	**Alto Alegre (B**	**19.48**	**131**	*eP*	**P**	**06 37 26.8**	**-0.6**
FRTB	**Fartura**	**20.01**	**112**	*eP*	**P**	**06 37 33.0**	**-0.2**
PCON	**Cinco Dias**	**20.05**	**340**	*eP*	**P**	**06 37 30.1**	**-4.1**
BBAC	**Balboa, Cauca**	**20.06**	**337**	*eP*	**P**	**06 37 34.2**	**+0.2**
CPSB	**Cacapava Do Su**	**20.15**	**135**	*eP*	**P**	**06 37 34.1**	**-0.5**
POPC	**Popayan, Colom**	**20.34**	**340**	*eP*	**P**	**06 37 36.8**	**-0.2**
BB19B	**Bebedouro**	**20.48**	**105**	*eP*	**P**	**06 37 38.0**	**-0.2**
IPMB	**Ipameri, GO**	**20.54**	**97**	*eP*	**P**	**06 37 37.0**	**-1.9**
BDFB	**Brasilia**	**20.84**	**90**	P	**P**	**06 37 41.5**	**-0.8**
	comp=Z,12nm,0.5s,baz=262,slow=10,SNR=48						
	comp=Z,12nm,0.5s						
BDFB	**Brasilia**	**20.84**	**90**	P	**P**	**06 37 41.6**	**-0.6**
BDFB				IAmb	IAmb	06 37 44.1	
	comp=Z,17nm,0.7s						
BDFB	**Brasilia**	**20.84**	**90**	*eP*	**P**	**06 37 41.2**	**-1.0**
PLTB	**Pedras Altas**	**20.92**	**139**	P	**P**	**06 37 41.9**	**-0.8**
PLTB	**Pedras Altas**	**20.92**	**139**	*eP*	**P**	**06 37 42.0**	**-0.8**
PTGC	**Puerto Gaitan,**	**20.92**	**353**	*eP*	**P**	**06 37 41.8**	**-1.3**
BOAV	**Boa Vista**	**21.04**	**26**	*eP*	**P**	**06 37 45.5**	**+1.4**
TIJ01	**Guaruva-PR**	**21.10**	**117**	*eP*	**P**	**06 37 44.0**	**-0.9**
MALB	**Monte Alegre**	**21.18**	**47**	*eP*	**P**	**06 37 46.3**	**+0.6**
PEXB	**Peixe**	**21.21**	**80**	*eP*	**P**	**06 37 45.4**	**-0.7**
ORTC	**Ortega, Tolima**	**21.22**	**345**	*eP*	**P**	**06 37 43.6**	**-2.5**
CNLB	**Canela**	**21.36**	**129**	*eP*	**P**	**06 37 48.1**	**+0.6**
RCLB	**Rio Claro- Sao**	**21.62**	**109**	*eP*	**P**	**06 37 49.7**	**-0.7**
PRPB	**Parauapebas**	**22.09**	**64**	*eP*	**P**	**06 37 53.4**	**-1.8**
PMNB	**Patos De Minas**	**22.23**	**98**	*eP*	**P**	**06 37 55.8**	**-0

NBAN	**Anadia - AL**	**33.24**	**82**	*e*P		**P**	**06 39 33.4**	**-1.4**
NBCA	**Caruaru-PE**	**33.90**	**80**	*e*P		**P**	**06 39 39.8**	**-0.8**
NBRF	**Rio Formoso -**	**34.60**	**81**	*e*P		**P**	**06 39 45.2**	**-1.3**
CELP	**Cerrillos**	**34.71**	**5**	P		**P**	**06 39 47.0**	**-0.2**
RCBR	**Riachuelo**	**34.80**	**76**	P		**P**	**06 39 46.9**	**-1.3**
RCBR				IAmb		IAmb	06 40 11.9	
	comp=Z,23nm,1.2s							
HUMP	**Col San Antoni**	**34.85**	**6**	P		**P**	**06 39 47.5**	**-0.9**
HUMP				IAmb		IAmb	06 40 14.4	
	comp=Z,25nm,1.4s							
GCPR	**Guaynabo City**	**34.99**	**6**	P		**P**	**06 39 48.2**	**-1.5**
CMIG	**Matias Romero**	**41.77**	**322**	P		**P**	**06 40 48.1**	**+1.8**
	comp=Z,1.6nm,0.5s,baz=135,slow=5.2,SNR=6.5							
	comp=Z,1.6nm,0.5s							
WVT	**Waverly**	**55.29**	**342**	P		**P**	**06 42 28.1**	**-1.2**
WVT				IAmb		IAmb	06 42 30.5	
	comp=Z,7.8nm,1.4s							
W41B	**Gary Mavity, V**	**55.88**	**338**	P		**P**	**06 42 33.1**	**-0.3**
LCAR	**Lake Charles**	**56.30**	**339**	P		**P**	**06 42 35.3**	**-1.1**
TXAR	**Lajitas Array**	**56.32**	**324**	P		**P**	**06 42 38.4**	**+1.5**
	comp=Z,0.7nm,0.6s,baz=151,slow=8.8,SNR=11							
	comp=Z,0.7nm,0.6s							
TXAR	**Lajitas Array**	**56.32**	**324**	P		**P**	**06 42 38.8**	**+1.9**
FCAR	**Ozark Folk Cen**	**56.47**	**338**	P		**P**	**06 42 37.1**	**-0.6**
PBMO	**Poplar Bluff**	**56.70**	**340**	P		**P**	**06 42 38.0**	**-1.2**
ABTX	**Abilene, Hawle**	**56.82**	**330**	P		**P**	**06 42 39.1**	**-1.2**
ABTX				IAmb		IAmb	06 42 42.7	
	comp=Z,6.7nm,0.9s							
X34A	**Smith Ranch, M**	**57.63**	**333**	P		**P**	**06 42 47.6**	**+1.7**
X34A				IAmb		IAmb	06 42 48.0	
	comp=Z,6.5nm,0.7s							
S39A	**Bolivar**	**58.51**	**338**	P		**P**	**06 42 51.5**	**-0.4**
S39A				IAmb		IAmb	06 42 52.4	
	comp=Z,4.8nm,0.6s							
R40A	**Maddies Statio**	**58.68**	**339**	P		**P**	**06 42 52.6**	**-0.4**
R40A				IAmb		IAmb	06 42 53.2	
	comp=Z,3.2nm,0.6s							
HRV	**Adam Dziewonsk**	**58.95**	**358**	P		**P**	**06 42 54.2**	**-0.6**
HRV				IAmb		IAmb	06 42 55.6	
	comp=Z,5.9nm,0.8s							
G65A	**Princeton**	**61.65**	**2**	P		**P**	**06 43 12.9**	**-0.1**
G65A				IAmb		IAmb	06 43 29.8	
	comp=Z,15nm,1.2s							
LMN	**Caledonia Moun**	**62.43**	**4**	P		**P**	**06 43 17.6**	**-0.7**
E62A	**Clayton Lake**	**63.04**	**0**	P		**P**	**06 43 22.6**	**+0.3**
E62A				IAmb		IAmb	06 43 22.7	
	comp=Z,3.7nm,0.7s							
D62A	**Allapoint, All**	**63.51**	**0**	P		**P**	**06 43 25.2**	**-0.1**
D62A				IAmb		IAmb	06 43 31.6	
	comp=Z,16nm,1.4s							
SDCO	**Great Sand Dun**	**63.79**	**329**	P		**P**	**06 43 30.3**	**+2.5**
VNA3	**Neumayer Olymp**	**64.82**	**162**	P		**P**	**06 43 35.4**	**+1.7**
YUH	**Yuha Desert**	**66.07**	**318**	P		**P**	**06 43 39.9**	**-2.3**
YUH				IAmb		IAmb	06 43 45.6	
	comp=Z,5.5nm,1.1s							
SNAA	**Sanae**	**67.02**	**162**	P		**P**	**06 43 49.3**	**+1.5**
EYMN	**Ely**	**67.26**	**344**	P		**P**	**06 43 49.1**	**-0.4**
LIC	**Lamto**	**67.86**	**76**	⇑*i*P		**P**	**06 43 53.0**	**-0.9**
	comp=Z,3.6nm,0.3s							
TIC	**Toumodi**	**68.01**	**76**	⇑*i*P		**P**	**06 43 53.6**	**-1.3**
	comp=Z,2.3nm,0.2s							
SHPR	**Sheep Range**	**68.16**	**322**	P		**P**	**06 43 53.9**	**-1.6**
KIC	**Kosan Boka**	**68.17**	**76**	⇑*i*P		**P**	**06 43 55.2**	**-0.7**
	comp=Z,12nm,0.4s							
DBIC	**Dimbokro**	**68.17**	**76**	P		**P**	**06 43 55.3**	**-0.6**
	comp=Z,4.8nm,0.5s,baz=262,slow=7.2,SNR=11							
	comp=Z,4.8nm,0.5s							
DBIC	**Dimbokro**	**68.17**	**76**	P		**P**	**06 43 55.4**	**-0.6**
DBIC				IAmb		IAmb	06 43 57.0	
	comp=Z,9.3nm,1.0s							
TROLL	**Troll, Antarti**	**68.73**	**161**	P		**P**	**06 44 00.5**	**+1.9**
QSM	**Queen of Sheba**	**68.83**	**320**	P		**P**	**06 44 01.6**	**+2.1**
QSM				IAmb		IAmb	06 44 03.5	
	comp=Z,5.3nm,0.7s							
PDAR	**Pinedale Array**	**69.62**	**330**	P		**P**	**06 44 05.5**	**+1.0**
	comp=Z,0.5nm,0.4s,baz=128,slow=9.4,SNR=7.2							
	comp=Z,0.5nm,0.4s							
ULM	**Lac du Bonnet**	**70.56**	**343**	P		**P**	**06 44 09.5**	**-0.2**
	comp=Z,2.8nm,0.5s,baz=154,slow=6.0,SNR=6.4							
	comp=Z,2.8nm,0.5s							
ULM	**Lac du Bonnet**	**70.56**	**343**	P		**P**	**06 44 09.6**	**-0.2**
NVAR	**Mina Array Bea**	**71.30**	**322**	P		**P**	**06 44 17.2**	**+2.4**
	comp=Z,0.7nm,0.7s,baz=133,slow=6.1,SNR=5.5							
	comp=Z,0.7nm,0.7s							
QSPA	**South Pole Qui**	**73.45**	**180**	P		**P**	**06 44 29.3**	**+2.3**
YBH	**Yreka Blue Hor**	**76.01**	**322**	P		**P**	**06 44 43.3**	**+1.3**
	comp=Z,1.1nm,0.9s,baz=153,slow=6.8,SNR=3.2							
	comp=Z,1.1nm,0.9s							
TOA0	**Torodi Ar. Sit**	**76.50**	**72**	P		**P**	**06 44 44.9**	**-0.4**
TOA0				IAmb		IAmb	06 44 45.9	
	comp=Z,9.2nm,0.7s							
TORD	**Torodi Ar. Bea**	**76.50**	**72**	P		**P**	**06 44 44.6**	**-0.6**
	comp=Z,7.1nm,0.5s,baz=273,slow=5.3,SNR=78							
	comp=Z,7.1nm,0.5s							
TORD	**Torodi Ar. Bea**	**76.50**	**72**	P		**P**	**06 44 44.7**	**-0.5**
TORD				IAmb		IAmb	06 44 45.9	
	comp=Z,7.2nm,0.8s							
ESDC	**Sonseca Array**	**82.98**	**45**	P		**P**	**06 45 18.3**	**-1.3**
	comp=Z,0.5nm,0.7s,baz=248,slow=5.4,SNR=2.9							
	comp=Z,0.5nm,0.7s							
BOSA	**Boshof**	**86.35**	**119**	P		**P**	**06 45 38.0**	**+1.0**
	comp=Z,0.9nm,0.4s,baz=263,slow=4.0,SNR=5.6							
	comp=Z,0.9nm,0.4s							
BOSA	**Boshof**	**86.35**	**119**	P		**P**	**06 45 38.3**	**+1.3**
BOSA				IAmb		IAmb	06 46 03.1	
	comp=Z,10nm,1.4s							
YKA	**Yellowknife Ar**	**86.45**	**341**	P		**P**	**06 45 37.9**	**+1.5**
	comp=Z,1.6nm,0.7s,baz=134,slow=5.2,SNR=7.8							
	comp=Z,1.6nm,0.7s							
WRA	**Warramunga Arr**	**136.59**	**214**	PKP		**PKiKP**	**06 52 17.9**	**-0.1**
	comp=Z,0.4nm,1.0s,baz=141,slow=1.6,SNR=5.2							
ZALV	**Zalesovo Beam**	**137.89**	**22**	PKP		**PKPdf**	**06 52 18.3**	**+0.8**
	comp=Z,0.5nm,0.4s,baz=346,slow=0.6,SNR=2.2							
MKAR	**Makanchi Array**	**142.09**	**32**	PKhKP	PKPpre		06 52 20.6	
	comp=Z,0.1nm,0.3s,baz=335,slow=3.2,SNR=2.3							
SONM	**Songino Array**	**148.80**	**5**	PKPbc		**PKiKP**	**06 52 43.0**	**+0.7**
	comp=Z,1.4nm,0.4s,baz=327,slow=2.0,SNR=5.8							
SONM	**Songino Array**	**148.80**	**5**			**PKiKP**	**06 52 43.6**	**+1.3**

*NEIC **19** 06:36:43.1±1.8, 16°.75S±0°.08×69°.68W±0°.10, h178km±8km, mb4.4/8, Error ellipse: s-maj=14.0km s-min=11.1km az=119.0*
*GUC **19** 06:36:44.8±0.7, 16°.83S×69°.80W, h180km±3km, ML3.9*
*IDC **19** 06:36:44.8±1.0, 16°.68S×69°.41W, h184km±8km, mb3.3/7, mbtmp3.9/9, Error ellipse: s-maj=20.3km s-min=17.1km az=71.0*

ISC 19 06:36:42.9±0.7, 16°.82S±0°.04×69°.74W±0°.06, h180km±6km, n64, σ1°95/82, mb3.8/8, 1C-6D, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB18	**Visviri**	**0.81**	**162**	Pn	**Pn**	**06 37 12.3**	**+2.4**
PB18	**Visviri**	**0.81**	**162**	⇓*i*P	**Pn**	**06 37 12.1**	**+2.2**
PB18				*e*S	**Sn**	**06 37 32.6**	**+1.7**
PB16	**IPOC Station P**	**1.53**	**172**	Pn	**Pn**	**06 37 18.1**	**+2.3**
PB16	**IPOC Station P**	**1.53**	**172**	⇓*i*P	**Pn**	**06 37 18.0**	**+2.3**
PB16				*i* S	**Sn**	**06 37 42.7**	**+1.5**
LPAZ	**La Paz**	**1.63**	**71**	P	**Pn**	**06 37 16.6**	**-0.2**
	144nm,0.3s,baz=304,slow=3.1,SNR=42						
LPAZ				S	**Sn**	**06 37 39.8**	**-3.1**
	144nm,0.7s,baz=142,slow=23,SNR=10						
LPAZ	**La Paz**	**1.63**	**71**		**Pn**	**06 37 16.6**	**-0.2**
LPAZ				Sn	**Sn**	**06 37 41.0**	**-2.0**
LPAZ	**La Paz**	**1.63**	**71**	⇑*i*P	**Pn**	**06 37 16.8**	**0.0**
LPAZ				*i* S	**Sn**	**06 37 39.8**	**-3.1**
AP01	**Chacalluta**	**1.65**	**200**	*e*P	**Pn**	**06 37 17.0**	**+0.8**
AP01				*e*S	**Sn**	**06 37 37.2**	**-5.0**
PB12	**IPOC Station P**	**1.87**	**197**		**Pn**	**06 37 19.4**	**+0.7**
PB12	**IPOC Station P**	**1.87**	**197**	*e*P	**Pn**	**06 37 19.4**	**+0.7**
PB12				*i* S	**Sn**	**06 37 46.2**	**-0.4**
PB12				IAML		06 37 49.7	
	comp=E,567nm,0.2s						
GO01	**Chusmiza**	**2.88**	**170**	Pn	**Pn**	**06 37 32.3**	**+1.7**
GO01	**Chusmiza**	**2.88**	**170**	*e*P	**Pn**	**06 37 32.4**	**+1.8**
GO01				*i* S	**Sn**	**06 38 09.3**	**+1.5**
GO01				IAML		06 38 12.5	
	comp=N,194nm,0.1s						
PB11	**IPOC Station P**	**2.93**	**178**	Pn	**Pn**	**06 37 31.9**	**+1.2**
PB11	**IPOC Station P**	**2.93**	**178**	⇓*i*P	**Pn**	**06 37 32.0**	**+1.2**
PB11				*i* S	**Sn**	**06 38 08.0**	**-0.3**
PB11				IAML		06 38 11.0	
	comp=N,432nm,0.1s						
PB08	**IPOC Station P**	**3.35**	**170**	Pn	**Pn**	**06 37 37.6**	**+1.4**
PB08	**IPOC Station P**	**3.35**	**170**	⇓*i*P	**Pn**	**06 37 38.0**	**+1.8**
PB08				*i* S	**Sn**	**06 38 18.5**	**+0.6**
TA02	**Huaiquique**	**3.45**	**186**		**Pn**	**06 37 38.3**	**+1.2**
TA02	**Huaiquique**	**3.45**	**186**	*e*P	**Pn**	**06 37 38.3**	**+1.2**
TA02				*e*S	**Sn**	**06 38 17.2**	**-2.3**
TA01	**Diego Aracena**	**3.75**	**186**		**Pn**	**06 37 41.2**	**+0.4**
TA01	**Diego Aracena**	**3.75**	**186**	*e*P	**Pn**	**06 37 40.9**	**+0.1**
TA01				*i* S	**Sn**	**06 38 21.9**	**-4.4**
PATCX	**Punta Patache**	**4.00**	**186**		**Pn**	**06 37 44.9**	**+0.8**
PATCX	**Punta Patache**	**4.00**	**186**	*e*P	**Pn**	**06 37 44.6**	**+0.6**
PATCX				*i* S	**Sn**	**06 38 28.6**	**-3.5**
PB01	**IPOC Station P**	**4.21**	**177**	Pn	**Pn**	**06 37 47.3**	**+0.5**
PB01	**IPOC Station P**	**4.21**	**177**	⇓*e*P	**Pn**	**06 37 47.5**	**+0.7**
PB01				*i* S	**Sn**	**06 38 34.3**	**-2.6**
PB02	**IPOC Station P**	**4.48**	**182**	Pn	**Pn**	**06 37 51.0**	**+0.8**
PB02	**IPOC Station P**	**4.48**	**182**	*e*P	**Pn**	**06 37 51.2**	**+1.0**
PB02				*i* S	**Sn**	**06 38 40.3**	**-2.8**
PB07	**IPOC Station P**	**4.88**	**182**	Pn	**Pn**	**06 37 56.5**	**+0.9**
PB07	**IPOC Station P**	**4.88**	**182**	*e*P	**Pn**	**06 37 56.4**	**+0.9**
PB09	**IPOC Station P**	**4.97**	**175**	Pn	**Pn**	**06 37 58.1**	**+1.4**
PB09	**IPOC Station P**	**4.97**	**175**	*e*P	**Pn**	**06 37 57.9**	**+1.2**
PB04	**IPOC Station P**	**5.50**	**184**		**Pn**	**06 38 04.0**	**+0.5**
PB04	**IPOC Station P**	**5.50**	**184**	*e*P	**Pn**	**06 38 03.2**	**-0.3**
PB04				*e*S	**Sn**	**06 39 01.8**	**-5.2**
LVC	**Limon Verde**	**5.82**	**172**	P	**Pn**	**06 38 09.1**	**+1.3**
	comp=N,42nm,0.3s,baz=25,slow=7.9,SNR=7.3						
LVC				S	**Sn**	**06 39 12.5**	**-2.2**
	comp=N,24nm,0.4s,baz=136,slow=20,SNR=3.2						
LVC	**Limon Verde**	**5.82**	**172**		**Pn**	**06 38 08.9**	**+1.1**
LVC	**Limon Verde**	**5.82**	**172**	*e*P	**Pn**	**06 38 08.8**	**+1.1**
LVC				*i* S	**Sn**	**06 39 12.1**	**-2.5**
PB06	**IPOC Station P**	**5.86**	**178**		**Pn**	**06 38 08.5**	**+0.3**
PB06	**IPOC Station P**	**5.86**	**178**	⇓*i*P	**Pn**	**06 38 08.4**	**+0.3**
PB06				*i* S	**Sn**	**06 39 10.8**	**-4.7**
AF01	**San Pedro de A**	**6.28**	**167**	Pn	**Pn**	**06 38 15.4**	**+1.6**
PB15	**IPOC Station P**	**6.36**	**178**	Pn	**Pn**	**06 38 15.2**	**+0.3**
PB10	**IPOC Station P**	**6.71**	**186**		**Pn**	**06 38 18.8**	**-0.3**
PB14	**IPOC Station P**	**7.79**	**184**	Pn	**Pn**	**06 38 33.3**	**-0.4**
GO02	**Mina Guanaco**	**8.30**	**179**	Pn	**Pn**	**06 38 40.4**	**-0.1**
SIV	**San Ignacio**	**8.36**	**86**	P	**Pn**	**06 38 37.7**	**-3.4**
	comp=N,16nm,0.6s,baz=264,slow=9.0,SNR=6.6						
NNA	**Nana**	**8.39**	**304**	P	**Pn**	**06 38 41.9**	**+0.5**
	comp=N,18nm,0.4s,baz=130,slow=12,SNR=4.2						
NNA				S	**Sn**	**06 40 11.0**	**-4.3**
	comp=N,18nm,0.3s,baz=196,slow=18,SNR=8.7						
NNA	**Nana**	**8.39**	**304**		**Pn**	**06 38 42.1**	**+0.7**
AC01	**Pan de Azucar**	**9.32**	**185**	Pn	**Pn**	**06 38 52.3**	**-1.2**
AC02	**Maricunga**	**9.99**	**177**	Pn	**Pn**	**06 39 03.0**	**+0.3**
PLTB	**Pedras Altas**	**20.88**	**138**	P	**P**	**06 41 10.2**	**-0.9**
PLTB				IAmb	IAmb	06 41 33.4	
	comp=Z,11nm,1.1s						
BDFB	**Brasilia**	**20.90**	**90**	P	**P**	**06 41 10.5**	**-1.0**
	comp=Z,3.7nm,0.6s,baz=260,slow=12,SNR=5.2						
	comp=Z,3.7nm,0.6s						
BDFB	**Brasilia**	**20.90**	**90**	P	**P**	**06 41 11.1**	**-0.4**
PLCA	**Paso Flores**	**23.84**	**182**	P	**P**	**06 41 43.4**	**+3.7**
	comp=Z,3.4nm,0.8s,baz=358,slow=11,SNR=8.4						
	comp=Z,3.4nm,0.8s						
BAUV	**El Baul**	**25.65**	**4**	P	**P**	**06 41 55.1**	**-1.0**
BIRV	**Birongo**	**27.34**	**7**	P	**P**	**06 42 11.1**	**-0.1**
CELP	**Cerrillos**	**34.81**	**5**	P	**P**	**06 43 16.6**	**-0.1**
CELP				IAmb	IAmb	06 43 50.9	
	comp=Z,10nm,0.9s						
GCPR	**Guaynabo City**	**35.09**	**6**	P	**P**	**06 43 17.2**	**-1.8**
GCPR				IAmb	IAmb	06 43 38.5	
	comp=Z,19nm,1.2s						
CMIG	**Matias Romero**	**41.82**	**322**	P	**P**	**06 44 16.6**	**+1.4**
	comp=Z,1.2nm,0.6s,baz=152,slow=17,SNR=2.0						
	comp=Z,1.2nm,0.6s						
TXAR	**Lajitas Array**	**56.37**	**324**	P	**P**	**06 46 07.0**	**+1.3**
	comp=Z,0.2nm,0.6s,baz=157,slow=9.8,SNR=4.6						
	comp=Z,0.2nm,0.6s						
TXAR	**Lajitas Array**	**56.37**	**324**	P	**P**	**06 46 05.8**	**+0.1**
PDAR	**Pinedale Array**	**69.68**	**330**	P	**P**	**06 47 35.2**	**+1.9**
	comp=Z,0.2nm,0.4s,baz=114,slow=9.0,SNR=2.4						
	comp=Z,0.2nm,0.4s						
NVAR	**Mina Array Bea**	**71.35**	**322**	P	**P**	**06 47 46.9**	**+3.5**
	comp=Z,0.1nm,0.3s,baz=147,slow=7.1,SNR=2.0						
	comp=Z,0.1nm,0.3s						
TORD	**Torodi Ar. Bea**	**76.58**	**72**	P	**P**	**06 48 13.3**	**-0.7**
	comp=Z,1.4nm,0.5s,baz=274,slow=5.1,SNR=11						
	comp=Z,1.4nm,0.5s						
TORD	**Torodi Ar. Bea**	**76.58**	**72**	P	**P**	**06 48 13.8**	**-0.3**
ZALV	**Zalesovo Beam**	**138.00**	**22**	PKhKP	PKPpre	06 55 37.3	
	comp=Z,0.7nm,0.6s,baz=290,slow=4.3,SNR=3.8						
MKAR	**Makanchi Array**	**142.20**	**32**	PKhKP	PKPpre	06 55 48.2	
	comp=Z,0.3nm,0.8s,baz=302,slow=1.4,SNR=3.7						

*JMA **19** 06:58:39.5±0.2, 43°.5N±0°.9×13°.9E±°, h225km±1km, MV3.4/39, NW OFF SHAKOTAN PEN*
*IDC **19** 06:58:39.6±1.6, 43°.54N×139°.19E, h218km±17km, mb3.4/16, mbtmp4.0/22, Error ellipse: s-maj=17.2km s-min=12.6km az=176.0*

ISC 19 06:58:39.8±0.6, 43°.47N±0°.06×139°.32E±0°.06, h226km±6km, n42, σ1°96/54, mb3.5/15, Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSK	**Shakotan**	**0.85**	**98**	*e*P	**Pn**	**06 59 11.1**	**-0.2**
JSK				*e*S	**S**	**06 59 35.4**	**-0.6**
JSH	**Shimam**	**0.98**	**147**	*e*P	**Pn**	**06 59 11.9**	**-0.3**
JSH				*e*S	**S**	**06 59 36.6**	**-0.7**
JHST	**Hiyamasetana**	**1.12**	**158**	*e*P	**Pn**	**06 59 13.1**	**+0.1**
JHST				*e*S	**S**	**06 59 39.2**	**+0.3**
JOSM	**Okushiri--Mats**	**1.39**	**175**	*e*P	**Pn**	**06 59 15.3**	**+0.3**
JOSM				*e*S	**S**	**06 59 42.5**	**+0.1**
JISS	**Ishikarishitsu**	**1.54**	**97**	*e*S	**S**	**06 59 45.7**	**+1.3**
JEW	**Eniwo**	**1.68**	**111**	P	**Pn**	**06 59 17.9**	**+0.6**
JEW				*e*S	**S**	**06 59 48.2**	**+1.7**
JHR	**Hokuryu**	**1.77**	**80**	*e*P	**Pn**	**06 59 18.4**	**+0.3**
JOMM	**Oshimamatsumae**	**2.01**	**165**	*e*P	**Pn**	**06 59 20.8**	**+0.4**
JSS	**Shosan**	**2.05**	**62**	*e*P	**Pn**	**06 59 21.0**	**+0.3**
JRBN	**Rebuntou**	**2.32**	**32**	P	**Pn**	**06 59 22.6**	**-0.7**
JRBN				*e*S	**S**	**06 59 55.5**	**-1.9**
JOT	**Ohata**	**2.45**	**148**	*e*P	**Pn**	**06 59 24.4**	**-0.4**
JKK2	**Kamakawa 2**	**2.52**	**80**	*e*P	**Pn**	**06 59 25.8**	**+0.3**
JKK2				*e*S	**S**	**07 00 02.4**	**+1.2**
JWK2	**Keihoku**	**2.61**	**44**	*e*P	**Pn**	**06 59 27.0**	**+0.6**
JSE	**Soyaes**	**2.78**	**57**	*e*P	**Pn**	**06 59 28.3**	**+0.1**
JNBK	**Urakawa-nobuka**	**2.79**	**114**	*e*P	**Pn**	**06 59 28.4**	**-0.1**
JCH	**Churui**	**3.08**	**105**	*e*P	**Pn**	**06 59 30.6**	**-1.2**
JCH				*e*S	**S**	**07 00 09.6**	**-2.8**
JAR	**Ashorobuto**	**3.25**	**92**	*e*P	**Pn**	**06 59 33.5**	**-0.1**
JAR				*e*S	**S**	**07 00 15.6**	**-0.2**
JTKR	**Abashiri--Toko**	**3.36**	**80**	*e*P	**Pn**	**06 59 35.0**	**+0.1**
JTKR				*e*S	**S**	**07 00 17.2**	**-1.0**
JANG	**Nango**	**3.50**	**151**	*e*P	**Pn**	**06 59 36.4**	**-0.2**
JANG				*e*S	**S**	**07 00 18.5**	**-2.7**
JAK	**Akkeshi**	**3.96**	**95**	*e*P	**Pn**	**06 59 41.1**	**-0.9**
JAK				*e*S	**S**	**07 00 27.8**	**-3.1**
USRK	**Ussuriysk Ar.**	**5.35**	**280**	P	**Pn**	**06 59 57.7**	**-1.5**
	4.1nm,0.7s,baz=81,slow=14,SNR=2.9						
MJAR	**Matsushiro Arr**	**6.97**	**187**	P	**Pn**	**07 00 19.4**	**-0.5**
	4.7nm,0.3s,baz=9.2,slow=14,SNR=33						
KLR	**Kul'dur**	**7.78**	**320**	P	**Pn**	**07 00 28.6**	**-1.4**
	11nm,0.8s,baz=130,slow=12,SNR=25						
KSRS	**Korea Array**	**10.55**	**239**	P	**Pn**	**07 01 06.7**	**+1.1**
	2.1nm,0.6s,baz=48,slow=13,SNR=9.9						
PETK	**Petropavlovsk-**	**15.53**	**45**	P	**Pn**	**07 02 06.9**	**-0.2**
	1.0nm,0.6s,baz=232,slow=7.1,SNR=4.1						
JCJ	**Chichijima**	**16.50**	**171**	P	**P**	**07 02 18.1**	**+0.6**
	29nm,0.6s,baz=291,slow=22,SNR=6.5						
SEY	**Seymchan**	**20.93**	**17**	P	**P**	**07 03 04.5**	**-0.3**
	1.3nm,0.5s,baz=203,slow=3.4,SNR=5.1						
	1.3nm,0.5s						
SONM	**Songino Array**	**23.32**	**292**	P	**P**	**07 03 27.6**	**-0.1**
	1.3nm,0.4s,baz=81,slow=9.4,SNR=6.1						
	1.3nm,0.4s						
ZALV	**Zalesovo Beam**	**36.60**	**306**	P	**P**	**07 05 23.6**	**-0.4**
	3.9nm,0.3s,baz=86,slow=8.7,SNR=18						
	3.9nm,0.3s						
MKAR	**Makanchi Array**	**39.62**	**295**	P	**P**	**07 05 49.3**	**0.0**
	0.9nm,0.7s,baz=81,slow=12,SNR=10						
	0.9nm,0.7s						
ILAR	**Eielson Array**	**45.05**	**36**	P	**P**	**07 06 32.9**	**+0.2**
	0.7nm,0.7s,baz=285,slow=4.9,SNR=9.5						
	0.7nm,0.7s						
INK	**Inuvik**	**49.47**	**29**	P	**P**	**07 07 07.4**	**+0.8**
	1.3nm,0.3s,baz=301,slow=10,SNR=27						
	1.3nm,0.3s						
ARCES	**ARCESS Array B**	**57.43**	**338**	P	**P**	**07 08 03.3**	**-1.1**
	3.3nm,0.9s,baz=41,slow=8.4,SNR=2.4						
	3.3nm,0.9s						
YKA	**Yellowknife Ar**	**59.10**	**31**	P	**P**	**07 08 16.5**	**+0.5**
	0.5nm,0.5s,baz=308,slow=6.8,SNR=2.0						
	0.5nm,0.5s						
FINES	**FINESS Array B**	**62.41**	**330**	P	**P**	**07 08 38.0**	**-0.3**
	2.3nm,0.5s,baz=35,slow=9.1,SNR=17						
	2.3nm,0.5s						
NOA	**NORSAR Array B**	**67.65**	**336**	P	**P**	**07 09 11.4**	**-0.6**
	0.5nm,0.6s,baz=39,slow=8.0,SNR=4.1						
	0.5nm,0.6s						
AKASG	**Malin Array Be**	**68.28**	**320**	P	**P**	**07 09 15.7**	**-0.3**
	0.4nm,0.4s,baz=45,slow=4.9,SNR=2.4						
	0.4nm,0.4s						
NVAR	**Mina Array Bea**	**72.44**	**54**	P	**P**	**07 09 43.5**	**+1.8**
	0.6nm,0.7s,baz=310,slow=7.0,SNR=6.0						
	0.6nm,0.7s						
PDAR	**Pinedale Array**	**74.30**	**46**	P	**P**	**07 09 53.6**	**+1.1**
	0.6nm,0.7s,baz=90,slow=1.5,SNR=6.3						
	0.6nm,0.7s						
ULM	**Lac du Bonnet**	**75.00**	**33**	P	**P**	**07 09 56.2**	**+0.2**
	2.2nm,0.4s,baz=332,slow=7.2,SNR=5.8						
	2.2nm,0.4s						
GERES	**GERESS Array B**	**76.43**	**326**	P	**P**	**07 10 03.0**	**-1.4**
	0.2nm,0.5s,baz=40,slow=7.7,SNR=2.0						
	0.2nm,0.5s						
TXAR	**Lajitas Array**	**87.40**	**51**	P	**P**	**07 11 02.9**	**+1.2**
	0.1nm,0.5s,baz=280,slow=2.2,SNR=6.2						
	0.1nm,0.5s						

*IDC **19** 07:17:33.6±1.4, 27°.48S×179°.26W, h380km±18km, mb3.6/5, mbtmp4.5/7, Error ellipse: s-maj=41.2km s-min=16.9km az=158.0*
*NEIC **19** 07:17:34.2±1.2, 27°.7S±0°.1×179°.1W±0°.1, h386km±8km, mb4.2/21, Error ellipse: s-maj=19.9km s-min=14.6km az=161.0*

ISC 19 07:17:33.7±0.5, 27°.82S±0°.05×178°.94W±0°.09, h400km, n72, σ2°15/86, mb4.0/15, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**1.67**	**148**	P	**Pn**	**07 18 27.9**	**+0.2**
RIZ				S	**S**	**07 19 10.1**	**-1.3**
RAO	**Raoul Island**	**1.68**	**148**	P	**Pn**	**07 18 28.4**	**+0.7**
	1μm,0.2s,baz=76,slow=8.6,SNR=35						
RAO				S	**S**	**07 19 07.7**	**-3.8**
	1μm,0.3s,baz=49,slow=23,SNR=11						
RAO	**Raoul Island**	**1.68**	**148**	Pn	**Pn**	**07 18 28.1**	**+0.4**
GLKZ	**Green Lake**	**1.69**	**148**	P	**Pn**	**07 18 27.5**	**-0.3**
GLKZ				S	**S**	**07 19 10.9**	**-0.6**
KUZ	**Kuaotunu**	**9.98**	**206**	P	**Pn**	**07 19 53.2**	**+1.8**
MXZ	**Matakaoa Point**	**9.99**	**193**	P	**P**	**07 19 51.3**	**+0.3**
MXZ				S	**S**	07 21 37.4	-6.7
WMGZ	**Waiomatatini S**	**10.21**	**192**	P	**P**	07 19 49.6	-3.9
WMGZ				S	**S**

HPIG		**88.94**	**59**	P		**P**	**07 29 46.4**	**+1.8**
MKAR	**Makanchi Array**	**115.48**	**311**	PKiKP		**PKPdf**	**07 35 28.4**	**-0.2**
	comp=Z,0.1nm,0.4s,baz=118,slow=1.3,SNR=1.7							
FINES	**FINESS Array B**	**142.45**	**341**	PKhKP		PKPpre	07 36 16.1	
	comp=Z,2.7nm,0.8s,baz=90,slow=5.7,SNR=5.2							
NB2	**NORSAR Subarra1**	**146.09**	**351**	PKP		**PKPab**	**07 36 27.8**	**-0.8**
	comp=Z,0.7nm,0.5s,baz=16,slow=3.0							
NOA	**NORSAR Array B**	**146.09**	**351**	PKPbc		**PKPdf**	**07 36 26.1**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=56,slow=1.5,SNR=4.8							
AKASG	**Malin Array Be**	**148.75**	**325**	PKPbc		**PKiKP**	**07 36 35.1**	**-0.3**
	comp=Z,2.6nm,0.6s,baz=45,slow=3.8,SNR=15							
BRTR	**Keskin Array B**	**150.59**	**302**	PKPbc		**PKiKP**	**07 36 39.8**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=151,slow=3.3,SNR=3.0							
CLL	**Collm**	**154.87**	**342**	*i* PKPab		**PKPab**	**07 37 06.0**	**+0.7**

*IDC **19** 07:25:04.4±4.3, 16°.92N×101°.34W, h0km, mb3.7/5, mbtmp3.6/8, ML3.1/3, MS3.1/6, Error ellipse: s-maj=94.4km s-min=35.0km az=26.0*
*MEX **19** 07:25:07.8±1.1, 17°.12N×101°.44W, h18km±115km, MD4.5*
*NEIC **19** 07:25:08.3±2.6, 17°.29N±0°.04×101°.19W±0°.08, h10km±2km, mb3.9/27, Md4.5/8(MEX), Error ellipse: s-maj=13.4km s-min=5.9km az=255.0*
ISC 19 07:25:08.7±1.1**, 17°.4N**±0°.1×**101°.09W**±0°.07**, h10**km**, n58,** σ1$**42/54, mb4.0/9, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.42**	**301**	Op		**Pg**	**07 25 16.0**	**-1.0**
ZIIG						**Sg**	**07 25 21.9**	**-0.6**
ZIIG	**Zihuatanejo**	**0.42**	**301**	*i* P		**Pg**	**07 25 16.0**	**-1.0**
ZIIG				*i* S		**Sg**	**07 25 21.9**	**-0.6**
CAIG	**El Cayaco**	**0.86**	**113**			**Pg**	**07 25 24.7**	**-0.5**
CAIG						**Sb**	**07 25 38.3**	**+1.1**
CAIG	**El Cayaco**	**0.86**	**113**	*eP*		**Pg**	**07 25 24.7**	**-0.5**
CAIG				*eS*		**Sb**	**07 25 38.3**	**+1.1**
ARIG	**Puente Sto Nin**	**1.14**	**38**			**Pn**	**07 25 31.4**	**+0.7**
ARIG	**Puente Sto Nin**	**1.14**	**38**	*eP*		**Pn**	**07 25 31.4**	**+0.7**
PLIG	**Platanillo**	**1.81**	**56**			**Pn**	**07 25 42.4**	**+2.3**
PLIG	**Platanillo**	**1.81**	**56**	*eP*		**Pn**	**07 25 42.4**	**+2.3**
MOIG	**Morelia**	**2.28**	**358**			**Pn**	**07 25 49.0**	**+2.4**
MOIG	**Morelia**	**2.28**	**358**	*eP*		**Pn**	**07 25 48.5**	**+1.9**
TLIG	**Tlapa**	**2.42**	**85**			**Pn**	**07 25 49.3**	**+0.9**
TLIG	**Tlapa**	**2.42**	**85**	*eP*		**Pn**	**07 25 49.3**	**+0.9**
ZAIG	**Zacatecas**	**5.53**	**346**			**Pn**	**07 26 31.8**	**+0.4**
CMIG	**Matias Romero**	**5.94**	**92**	Pn		**Pn**	**07 26 37.5**	**+0.8**
	0.7nm,0.3s,baz=264,slow=15,SNR=10							
CMIG				Sn		**Sn**	**07 27 39.7**	**-5.2**
	1.5nm,0.3s,baz=295,slow=15,SNR=5.0							
CMIG				Lg		Lg	07 28 13.9	
	2.4nm,0.3s,baz=62,slow=23,SNR=5.8							
CMIG				LR		LR	07 28 57.4	
	comp=Z,115nm,21.9s,baz=265,slow=38 2.2nm,0.4s							
CCIG	**Comitan**	**8.64**	**96**	Pn		**Pn**	**07 27 16.0**	**+1.9**
H06E1	**SOCORRO T-PHAS**	**9.46**	**280**	T		T	07 36 50.8	
	SNR=96							
H06S1	**SOCORRO T**	**9.48**	**280**	T		T	07 36 55.9	
	SNR=5.9							
H06N1	**SOCORRO T-PHAS**	**9.52**	**280**	T		T	07 36 58.4	
	SNR=5.2							
LPIG	**La Paz**	**10.90**	**309**	LR		LR	07 31 29.9	
	comp=Z,83nm,21.6s,baz=120,slow=35							
TXAR	**Lajitas Array**	**12.12**	**349**	Pn		**Pn**	**07 28 05.9**	**+4.2**
	baz=167,slow=12,SNR=2.5							
TXAR				Lg		Lg	07 31 31.7	
	baz=269,slow=21,SNR=3.8							
TXAR				LR		LR	07 33 35.4	
	comp=Z,68nm,20.2s,baz=177,slow=41 0.3nm,0.9s							
MNTX	**Cornudas Mount**	**14.77**	**346**			**P**	**07 28 44.1**	**+0.3**
ABTX	**Abilene, Hawle**	**15.23**	**5**			**Pn**	**07 28 44.5**	**+0.6**
ABTX				IAmb		IAmb	07 28 48.9	
	comp=Z,5.9nm,0.8s							
NATX	**Nacogdoches**	**15.45**	**21**	Pn		**Pn**	**07 28 46.5**	**-0.4**
214A	**Organ Pipe Nat**	**17.97**	**326**			**P**	**07 29 19.5**	**+0.2**
ANMO	**Albuquerque**	**18.13**	**346**	P		**P**	**07 29 22.6**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=156,slow=9.9,SNR=6.6							
ANMO				LR		LR	07 37 03.7	
	comp=Z,144nm,19.5s,baz=174,slow=39 comp=Z,3.1nm,1.1s							
ANMO	**Albuquerque**	**18.13**	**346**	P		**P**	**07 29 21.8**	**+0.6**
TUL1	**Leonard**	**19.04**	**13**	P		**P**	**07 29 29.8**	**-1.2**
X16A	**Lo Mia Camp, P**	**19.32**	**333**	P		**Pn**	**07 29 37.0**	**+1.6**
HHAR	**Hobbs**	**19.86**	**17**	P		**P**	**07 29 38.5**	**-1.4**
HHAR				IAmb		IAmb	07 29 39.7	
	comp=Z,4.2nm,0.8s							
T35A	**Sooner Cattle**	**19.87**	**11**	P		**P**	**07 29 38.3**	**-1.8**
T35A				IAmb		IAmb	07 30 17.7	
	comp=Z,6.6nm,1.1s							
FCAR	**Ozark Folk Cen**	**20.07**	**22**	P		**P**	**07 29 42.0**	**-0.4**
FCAR				IAmb		IAmb	07 29 42.2	
	comp=Z,5.6nm,0.8s							
LRAL	**Lakeview Retre**	**20.10**	**37**	P		**P**	**07 29 41.6**	**-1.0**
LRAL				IAmb		IAmb	07 29 48.2	
	comp=Z,8.2nm,1.2s							
WUAZ	**Wupatki**	**20.24**	**335**	P		**P**	**07 29 45.0**	**+0.6**
WUAZ				IAmb		IAmb	07 29 46.7	
	comp=Z,6.8nm,0.8s							
BLYC	**Blythe**	**20.27**	**326**	P		**P**	**07 29 44.6**	**+0.2**
BLYC				IAmb		IAmb	07 29 46.5	
	comp=Z,4.4nm,0.8s							
SDCO	**Great Sand Dun**	**20.65**	**350**	P		**P**	**07 29 49.1**	**+0.2**
SDCO				IAmb		IAmb	07 29 49.8	
	comp=Z,2.8nm,0.8s							
MVCO	**Mesa Verde**	**20.80**	**343**	P		**P**	**07 29 51.0**	**+0.5**
MVCO				IAmb		IAmb	07 29 54.3	
	comp=Z,4.1nm,0.9s							
S22A	**4UR Ranch, Cre**	**20.90**	**347**	P		**P**	**07 29 52.4**	**+0.8**
W13A	**Hualapai Mount**	**21.01**	**330**	P		**P**	**07 29 53.7**	**+1.0**
PLAL	**Pickwick Lake**	**21.02**	**31**	P		**P**	**07 29 51.7**	**-0.9**
Y49A	**Blount Mountai**	**21.03**	**36**	P		**P**	**07 29 52.9**	**+0.1**
Y49A				IAmb		IAmb	07 29 58.8	
	comp=Z,9.9nm,1.1s							
S39A	**Bolivar**	**21.35**	**17**	P		**P**	**07 29 55.5**	**-0.6**
S39A				IAmb		IAmb	07 29 56.1	
	comp=Z,2.4nm,0.6s							
SMCO	**Snowmass**	**22.31**	**348**	P		**P**	**07 30 05.5**	**-1.4**
P18A	**Preston Nutter**	**23.55**	**342**	P		**P**	**07 30 19.5**	**-0.1**
TPNV	**Topopah Spring**	**23.64**	**328**	P		**P**	**07 30 20.9**	**+0.5**
TPNV				IAmb		IAmb	07 30 23.0	
	comp=Z,2.0nm,1.0s							
TKL	**Tuckaleechee C**	**23.83**	**37**	LR		LR	07 41 50.7	
	comp=Z,28nm,18.7s,baz=192,slow=41							
TPH	**Tonopah**	**25.00**	**329**	P		**P**	**07 30 33.7**	**+0.7**
NV11	**Mina Array Sit**	**25.74**	**328**	P		**P**	**07 30 39.1**	**-0.6**
NV11				IAmb		IAmb	07 30 42.9	
	comp=Z,3.4nm,1.1s							
NVAR	**Mina Array Bea**	**25.81**	**328**	P		**P**	**07 30 41.0**	**+0.6**
	comp=Z,4.8nm,0.9s,baz=148,slow=10,SNR=25 comp=Z,4.8nm,0.9s							
NVAR	**Mina Array Bea**	**25.81**	**328**	P		**P**	**07 30 39.4**	**-1.0**
KVN	**Kaiserville**	**26.19**	**329**	P		**P**	**07 30 42.3**	**-1.4**
PDAR	**Pinedale Array**	**26.30**	**346**	P		**P**	**07 30 46.1**	**+1.3**
	comp=Z,0.3nm,0.6s,baz=162,slow=9.2,SNR=4.3 comp=Z,0.3nm,0.6s							
NEW	**Newport**	**33.47**	**340**	LR		LR	07 46 51.7	
	comp=Z,72nm,19.7s,baz=174,slow=39							
YKA	**Yellowknife Ar**	**46.04**	**351**	P		**P**	**07 33 32.1**	**-0.2**
	comp=Z,1.1nm,0.7s,baz=167,slow=7.3,SNR=5.4 comp=Z,1.1nm,0.7s							
H03N2	**Juan Fernandez**	**54.79**	**157**	T		T	08 33 38.1	
	baz=335,slow=77,SNR=36							
H03N1	**Juan Fernandez**	**54.80**	**157**	T		T	08 33 40.1	
	baz=335,slow=77,SNR=24							
H03N3	**Juan Fernandez**	**54.81**	**157**	T		T	08 33 39.4	
	baz=335,slow=77,SNR=21							
INK	**Inuvik**	**54.88**	**346**	P		**P**	**07 34 38.8**	**-0.2**
	comp=Z,1.8nm,0.9s,baz=165,slow=9.0,SNR=3.4 comp=Z,1.8nm,0.9s							
ILAR	**Eielson Array**	**56.38**	**338**	P		**P**	**07 34 49.1**	**-0.9**
	comp=Z,0.3nm,0.9s,baz=129,slow=7.2,SNR=2.5 comp=Z,0.3nm,0.9s							

*IDC **19** 07:28:14.3±1.1, 34°.80N×138°.53E, h0km, mb3.7/4, mbtmp3.8/6, ML2.3/1, MS3.0/3, Error ellipse: s-maj=42.2km s-min=13.0km az=83.0*
*JMA **19** 07:28:16.3±0.2, 35°.6N±0°.6×140°.1E±0°.9, h68km±2km, MV3.2/34, CENTRAL CHIBA PREF*
JMA Felt I J1 at CENTRAL CHIBA PREF .
ISC 19 07:28:16.3±1.0**, 35°.48N**±0°.06×**140°.17E**±0°.06**, h74**km±7km**, n25,** σ1$**73/25, mb3.5/4, 7D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JCN	**Nagara**	**0.07**	**155**	⇓*i* P		**Pn**	**07 28 27.1**	**+0.1**
JCN				⇓S		**Sn**	**07 28 35.3**	**+0.4**
JSMT	**Sammumatsuo**	**0.28**	**54**	⇓P		**Pn**	**07 28 27.7**	**-0.2**
TOK	**Tokyo**	**0.39**	**302**	P		**Pn**	**07 28 28.4**	**-0.2**
TOK				*e*S		**Sn**	**07 28 37.5**	**0.0**
BSO3	**Boso 3**	**0.73**	**157**	*i* P		**Pn**	**07 28 32.5**	**+0.9**
JOD2	**Odawara 2**	**0.91**	**257**	⇓*i* P		**Pn**	**07 28 33.6**	**-0.3**
JOD2				⇓S		**Sn**	**07 28 45.9**	**-1.2**
JIM2	**Oshima 2**	**0.97**	**219**	*i* P		**Pn**	**07 28 34.5**	**-0.2**
JIM2				S		**Sn**	**07 28 48.3**	**0.0**
BSO1	**Boso 1**	**1.06**	**141**	P		**Pn**	**07 28 35.8**	**+0.6**
JAG	**Ashikaga**	**1.11**	**329**	*i* P		**Pn**	**07 28 35.0**	**-1.4**
JRY	**Ryogami san**	**1.16**	**298**	⇓*i* P		**Pn**	**07 28 36.7**	**-0.4**
JRY				⇓S		**Sn**	**07 28 52.1**	**-0.6**
JFNN	**Fujinakano**	**1.25**	**257**	P		**Pn**	**07 28 38.5**	**+0.4**
JFNN				S		**Sn**	**07 28 54.3**	**-0.2**
JYN	**Shimob**	**1.32**	**271**	*i* P		**Pn**	**07 28 39.0**	**-0.2**
MJAR	**Matsushiro Arr**	**1.91**	**304**	Pg		**Pn**	**07 28 45.6**	**-1.3**
	1.6nm,0.3s,baz=130,slow=15,SNR=61							
MJAR				Lg		Lg	07 29 08.7	
	2.0nm,0.3s,baz=62,slow=27,SNR=5.9							
JHJ	**Hachijo jima 2**	**2.37**	**188**	Pn		**Pn**	**07 28 54.6**	**+1.5**
	65nm,0.3s,baz=347,slow=8.9,SNR=21							
JHJ				Sn		**Sn**	**07 29 22.3**	**+1.1**
	254nm,0.3s,baz=287,slow=23,SNR=18							
JHJ				LR		LR	07 29 33.6	
	comp=Z,50nm,19.5s,baz=82,slow=40							
JCJ	**Chichijima**	**8.53**	**168**	Pn		**Pn**	**07 30 15.7**	**-1.5**
	24nm,0.4s,baz=298,slow=23,SNR=8.5							
JCJ				Sn		**Sn**	**07 31 44.9**	**-6.9**
	5.1nm,0.3s,baz=296,slow=21,SNR=2.1							
USRK	**Ussuriysk Ar.**	**10.74**	**327**	Pn		**Pn**	**07 30 47.4**	**+0.3**
	0.2nm,0.3s,baz=146,slow=13,SNR=2.1 1.3nm,0.7s							
KLR	**Kul'dur**	**15.07**	**338**	LR		LR	07 38 14.7	
	comp=Z,28nm,18.5s,baz=99,slow=39							
GUMO	**Guam**	**22.20**	**168**	LR		LR	07 40 13.3	
	comp=Z,26nm,20.7s,baz=100,slow=33							
H11S3	**WAKE ISLAND Hy**	**28.93**	**119**	T		T	08 04 18.3	
	baz=311,slow=76,SNR=8.3							
H11S1	**WAKE ISLAND Hy**	**28.93**	**119**	T		T	08 04 18.8	
	baz=311,slow=76,SNR=9.7							
H11S2	**WAKE ISLAND Hy**	**28.94**	**119**	T		T	08 04 21.1	
	baz=311,slow=76,SNR=7.4							
MKAR	**Makanchi Array**	**44.11**	**303**	P		**P**	**07 36 18.3**	**+1.1**
	0.7nm,0.8s,baz=91,slow=9.0,SNR=5.9 0.7nm,0.8s							
ILAR	**Eielson Array**	**51.34**	**32**	P		P	07 37 30.1	+17
	0.4nm,0.7s,baz=271,slow=5.3,SNR=4.4 0.4nm,0.7s							
WRA	**Warramunga Arr**	**55.39**	**187**	P		**P**	**07 37 43.8**	**+0.9**
	1.1nm,0.4s,baz=360,slow=7.5,SNR=20 1.1nm,0.4s							
ARU	**Arti**	**56.86**	**319**	LR		LR	08 04 57.1	
	comp=Z,44nm,18.3s,baz=22,slow=39							
AKASG	**Malin Array Be**	**74.91**	**322**	P		P	07 39 56.4	+7.4
	0.3nm,0.5s,baz=46,slow=6.8,SNR=1.7 0.3nm,0.5s							

*IDC **19** 07:46:07.0±0.8, 30°.65S×177°.11W, h0km, mb4.1/8, mbtmp4.1/8, MS3.7/3, Error ellipse: s-maj=25.3km s-min=24.0km az=0.0*
*NEIC **19** 07:46:09.6±1.5, 30°.68S±0°.09×177°.26W±0°.06, h10km±2km, mb4.6/8, Error ellipse: s-maj=15.8km s-min=8.9km az=176.0*
ISC 19 07:46:10.8±0.6**, 30°.62S**±0°.08×**177°.2W**±0°.1**, h24**km**, n38,** σ1$**03/34, mb4.3/12, MS3.6/3, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.49**	**336**	Pn		**Pn**	**07 46 37.0**	**+0.9**
	286nm,0.3s,baz=79,slow=8.8,SNR=12							
RAO				Sn		**Sb**	**07 46 57.0**	**+0.7**
	208nm,0.3s,baz=327,slow=23,SNR=5.5							
RAO	**Raoul Island**	**1.49**	**336**			**Pn**	**07 46 36.2**	**+0.1**
URZ	**Urewera**	**8.94**	**210**	Pn		Pn	07 48 11.1	-7.3
	0.9nm,0.3s,baz=296,slow=22,SNR=7.3							
URZ				Sn		Sn	07 49 48.3	-10
	2.8nm,0.3s,baz=176,slow=12,SNR=11							
OUZ	**Omahuta**	**8.97**	**237**	Pn		**Pn**	**07 48 19.4**	**+0.5**
THZ	**Tophouse**	**13.66**	**213**	Pn		Pn	07 49 17.1	-6.0
RPZ	**Rata Peaks**	**16.04**	**212**	Pn		Pn	07 49 47.0	-7.8
	1.3nm,0.3s,baz=37,slow=5.5,SNR=5.7							
DZM	**Mont Dzumac**	**16.91**	**296**	Pn		**Pn**	**07 50 02.8**	**-3.3**
	0.1nm,0.3s,baz=332,slow=8.6,SNR=2.2							
CTA	**Charters Tower**	**34.49**	**279**	LR		LR	08 06 38.1	
	comp=Z,155nm,18.3s,baz=82,slow=36							
CTAO	**Charters Tower**	**34.49**	**279**	P		**P**	**07 52 57.4**	**+0.3**
CTAO				IAmb		IAmb	07 53 16.3	
	comp=Z,16nm,1.4s							
STKA	**Stephens Creek**	**35.07**	**257**	P		**P**	**07 53 03.2**	**+1.1**
	comp=Z,6.1nm,0.8s,baz=83,slow=8.4,SNR=11 comp=Z,6.1nm,0.8s							
STKA	**Stephens Creek**	**35.07**	**257**	P		**P**	**07 53 02.4**	**+0.3**
PMG	**Port Moresby**	**39.30**	**295**	LR		LR	08 08 59.8	
	comp=Z,73nm,18.3s,baz=84,slow=35							
BBOO	**Buckleboo**	**39.55**	**254**	P		**P**	**07 53 39.7**	**-0.3**
BBOO				IAmb		IAmb	07 53 58.5	
	comp=Z,22nm,1.4s							
ASAR	**Alice Springs**	**43.76**	**267**	P		**P**	**07 54 15.1**	**+0.4**
WR0	**Warramunga Arr**	**44.59**	**272**	P		**P**	**07 54 20.6**	**-0.7**
WR0				IAmb		IAmb	07 54 22.9	
	comp=Z,4.8nm,1.1s							
WB2	**Warramunga Arr**	**44.76**	**272**	P		**P**	**07 54 22.6**	**-0.1**
WRA	**Warramunga Arr**	**44.77**	**272**	P		**P**	**07 54 22.6**	**-0.2**
	comp=Z,3.6nm,0.8s,baz=111,slow=8.0,SNR=29							
WRA				LR		LR	08 11 21.7	
	comp=Z,73nm,18.6s,baz=154,slow=34 comp=Z,3.6nm,0.8s							
WRA	**Warramunga Arr**	**44.77**	**272**	P		**P**	**07 54 21.7**	**-1.1**
WB0	**Warramunga Arr**	**44.79**	**272**	P		**P**	**07 54 22.8**	**-0.1**
WB0				IAmb		IAmb	07 54 24.5	
	comp=Z,11nm,1.1s							
QSPA	**South Pole Qui**	**59.49**	**180**	P		**P**	**07 56 12.7**	**+0.9**
TROLL	**Troll, Antarti**	**77.65**	**180**	P		**P**	**07 58 04.9**	**-0.1**
VNA3	**Neumayer Olymp**	**78.04**	**176**	P		**P**	**07 58 06.3**	**-0.7**
KSRS	**Korea Array**	**84.95**	**319**	P		**P**	**07 58 43.3**	**-0.5**
	comp=Z,1.0nm,0.8s,baz=123,slow=4.5,SNR=3.1 comp=Z,1.0nm,0.8s							
PETK	**Petropavlovsk-**	**86.19**	**345**	P		**P**	**07 58 51.4**	**+1.7**
	comp=Z,2.5nm,0.9s,baz=81,slow=4.5,SNR=3.0 comp=Z,2.5nm,0.9s							
NVAR	**Mina Array Bea**	**87.95**	**42**	P		**P**	**07 59 00.0**	**+1.1**
	comp=Z,1.0nm,0.8s,baz=220,slow=7.3,SNR=7.3 comp=Z,1.0nm,0.8s							
TXAR	**Lajitas Array**	**91.95**	**57**	P		**P**	**07 59 17.6**	**-0.1**
	comp=Z,0.2nm,0.8s,baz=289,slow=2.8,SNR=2.0 comp=Z,0.2nm,0.8s							
PDAR	**Pinedale Array**	**95.84**	**43**	P		**P**	**07 59 33.8**	**-1.6**
	comp=Z,0.2nm,0.6s,baz=225,slow=6.2,SNR=2.1 comp=Z,0.2nm,0.6s							
ILAR	**Eielson Array**	**98.00**	**13**	P		**P**	**07 59 44.0**	**-0.3**
	comp=Z,0.4nm,1.0s,baz=240,slow=5.1,SNR=3.2 comp=Z,0.4nm,1.0s							
FINES	**FINESS Array B**	**145.58**	**340**	PKPbc		**PKPdf**	**08 05 45.4**	**-0.9**
	comp=Z,6.7nm,0.9s,baz=344,slow=1.3,SNR=10							
FINES	**FINESS Array B**	**145.58**	**340**	PKPdf		**PKPdf**	**08 05 45.8**	**-0.5**
KBZ	**Khabaz**	**145.78**	**304**	PKPbc		**PKPab**	**08 05 49.8**	**+1.6**
	comp=Z,1.5nm,0.5s,baz=39,slow=1.5,SNR=2.9							
NB2	**NORSAR Subarra1**	**149.06**	**352**	PKP		**PKPbc**	**08 05 56.8**	**+0.5**
	comp=Z,1.0nm,0.9s,baz=11,slow=2.6							
NOA	**NORSAR Array B**	**149.06**	**352**	PKPbc		**PKPbc**	**08 05 55.6**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=14,slow=4.2,SNR=3.7							
AKASG	**Malin Array Be**	**151.88**	**323**	PKPbc		**PKiKP**	**08 06 03.6**	**-0.1**
	comp=Z,2.0nm,0.8s,baz=55,slow=2.6,SNR=7.7							
BRTR	**Keskin Array B**	**153.29**	**298**	PKPbc		**PKiKP**	**08 06 07.8**	**+0.6**
	comp=Z,0.2nm,0.4s,baz=126,slow=2.0,SNR=3.1							
CLL	**Collm**	**157.98**	**343**	*e*PKPab		**PKPab**	**08 06 39.0**	**+0.6**
TORD	**Torodi Ar. Bea**	**162.58**	**177**	PKPab		**PKPab**	**08 06 59.0**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=187,slow=2.6,SNR=2.1							
ESDC	**Sonseca Array**	**169.42**	**30**	PKPab		**PKPab**	**08 07 27.3**	**-1.7**
	comp=Z,0.2nm,0.4s,baz=327,slow=2.1,SNR=1.8							

*IDC **19** 08:08:21.9±3.2, 6°.74N×60°.18E, h0km, mb3.7/7, mbtmp3.7/7, MS3.6/48, Error ellipse: s-maj=82.4km s-min=26.4km az=140.0*
ISC 19 08:08:25.2±3.2**, 6°.7N**±0°.4×**60°.2E**±0°.4**, h23**km**, n50,** σ0$**77/7, mb3.8/7, MS3.6/46, Carlsberg Ridge**

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

WSAR	**Wadi Sarin**	**16.50**	**355**	LR		LR	08 17 18.9	
	comp=Z,158nm,20.7s,baz=194,slow=33							
ATD	**Arta Tunnel**	**17.78**	**287**	LR		LR	08 18 13.4	
	comp=Z,108nm,19.4s,baz=182,slow=33							
PALK	**Pallekele**	**20.36**	**87**	LR		LR	08 18 56.1	
	comp=Z,155nm,20.1s,baz=7.7,slow=31							
KMBO	**Kilima Mbogo**	**24.19**	**252**	P		**P**	**08 13 40.8**	**+0.2**
	4.8nm,0.8s,baz=54,slow=11,SNR=11							
KMBO				LR		LR	08 22 50.2	
	comp=Z,159nm,18.5s,baz=72,slow=36 4.8nm,0.8s							
OPO	**Ambohidratompo**	**28.22**	**207**	LR		LR	08 22 38.4	
	comp=Z,160nm,18.6s,baz=176,slow=30							
MBAR	**Mbarara**	**30.29**	**257**	LR		LR	08 25 19.7	
	comp=Z,88nm,20.4s,baz=62,slow=34							
GEYT	**Alibeck**	**31.13**	**357**	LR		LR	08 26 20.9	
	comp=Z,41nm,18.5s,baz=189,slow=35							
EIL	**Elat**	**32.96**	**317**	LR		LR	08 26 35.8	
	comp=Z,76nm,20.1s,baz=88,slow=33							
GNI	**Garni**	**36.06**	**340**	LR		LR	08 30 40.0	
	comp=Z,64nm,21.2s,baz=138,slow=37							
AAK	**Ala-Archa**	**37.94**	**17**	LR		LR	08 31 34.3	
	comp=Z,65nm,21.2s,baz=202,slow=37							
LSZ	**Lusaka**	**38.52**	**235**	LR		LR	08 29 48.0	
	comp=Z,177nm,19.0s,baz=88,slow=33							
CMAR	**Chiang Mai Arr**	**39.48**	**69**	LR		LR	08 31 22.6	
	comp=Z,50nm,18.3s,baz=250,slow=35							
KBZ	**Khabaz**	**39.87**	**340**	LR		LR	08 35 00.6	
	comp=Z,56nm,18.5s,baz=179,slow=40							
BRTR	**Keskin Array B**	**40.61**	**328**	P		**P**	**08 16 04.5**	**+1.0**
	0.9nm,0.9s,baz=136,slow=9.4,SNR=3.8							
BRTR				LR		LR	08 33 28.3	
	comp=Z,77nm,18.3s,baz=143,slow=37 0.9nm,0.9s							
AKTO	**Aktyubinsk**	**43.61**	**358**	LR		LR	08 36 09.1	
	comp=Z,55nm,19.7s,baz=164,slow=38							
MKAR	**Makanchi Array**	**44.21**	**22**	P		**P**	**08 16 32.9**	**+0.3**
	0.5nm,0.9s,baz=198,slow=8.7,SNR=3.8							
MKAR				LR		LR	08 36 24.9	
	comp=Z,53nm,19.9s,baz=200,slow=38 0.5nm,0.9s							
LBTB	**Lobatse**	**46.14**	**226**	LR		LR	08 33 28.2	
	comp=Z,90nm,18.3s,baz=54,slow=33							
KURBB	**Kurchatov Arra**	**46.36**	**16**	LR		LR	08 38 44.0	
	comp=Z,68nm,18.2s,baz=165,slow=39							
BELG	**Belogornoye**	**46.70**	**349**	LR		LR	08 39 06.0	
	comp=Z,41nm,20.0s,baz=165,slow=40							
BVAR	**Borovoye Array**	**46.91**	**8**	LR		LR	08 37 34.6	
	comp=Z,103nm,21.6s,baz=96,slow=37							
BOSA	**Boshof**	**48.66**	**222**	LR		LR	08 34 55.8	
	comp=Z,101nm,21.6s,baz=26,slow=33							
MLR	**Muntele Rosu**	**48.70**	**328**	LR		LR	08 38 32.7	
	comp=Z,47nm,20.2s,baz=250,slow=37							
TSUM	**Tsumeb**	**49.25**	**238**	LR		LR	08 37 05.8	
	comp=Z,74nm,18.8s,baz=142,slow=35							
ARU	**Arti**	**49.59**	**359**	LR		LR	08 40 54.4	
	comp=Z,53nm,18.1s,baz=158,slow=39							
AKASG	**Malin Array Be**	**50.86**	**335**	P		**P**	**08 17 23.4**	**-0.7**
	0.6nm,0.7s,baz=130,slow=7.1,SNR=4.1							
AKASG				LR		LR	08 42 59.1	
	comp=Z,43nm,19.1s,baz=228,slow=41 0.6nm,0.7s							
ZALV	**Zalesovo Beam**	**51.14**	**18**	P		**P**	**08 17 26.1**	**-0.1**
	1.0nm,0.7s,baz=218,slow=9.1,SNR=5.3							
ZALV				LR		LR	08 40 09.7	
	comp=Z,39nm,18.6s,baz=214,slow=37 1.0nm,0.7s							
KIRV	**Kirov**	**52.41**	**353**	LR		LR	08 41 59.1	
	comp=Z,48nm,20.7s,baz=152,slow=38							
SUR	**S

WB0	**Warramunga Arr**	**14.35 159**	P	**Pn**	08 14 21.8	-0.4
WRAB	**Tennant Creek**	**14.49 159**	P	**Pn**	08 14 23.6	-0.2
WRA	**Warramunga Arr**	**14.49 160**	P	**Pn**	08 14 23.5	-0.4
	3.1nm,0.5s,baz=341,slow=11,SNR=52					
WRA			S	**S**	08 17 00.7	-3.6
	7.6nm,0.8s,baz=336,slow=22,SNR=14					
WRA	**Warramunga Arr**	**14.49 160**	P	**Pn**	08 14 22.2	-1.7
WB2	**Warramunga Arr**	**14.49 159**	P	**Pn**	08 14 23.6	-0.4
WR0	**Warramunga Arr**	**14.58 159**	P	**Pn**	08 14 24.8	-0.2
COEN	**Coen**	**15.87 120**	P	**Pn**	08 14 41.9	+1.4
COEN	**Coen**	**15.87 120**	P	**Pn**	08 14 42.1	+1.7
MBWA	**Marble Bar**	**17.26 210**	P	**P**	08 14 54.1	-0.4
MBWA	**Marble Bar**	**17.26 210**	P	**P**	08 14 54.0	-0.4
QIS	**Mount Isa**	**17.49 145**	P	**Pn**	08 14 59.1	-0.3
PSA00	**Pilbara Seismi**	**17.55 209**	P	**P**	08 14 57.3	-0.3
PSA00			IAmb	IAmb	08 15 10.9	
	comp=Z,16nm,1.1s					
PSA00	**Pilbara Seismi**	**17.55 209**	P	**P**	08 14 57.6	0.0
AS31	**Alice Springs**	**17.87 165**	P	**P**	08 15 02.8	+1.7
AS31			IAmb	IAmb	08 15 03.6	
	comp=Z,8.1nm,0.6s					
ASAR	**Alice Springs**	**17.87 165**	P	**P**	08 15 03.0	+2.0
WRKA	**Warakurna**	**18.61 182**	P	**P**	08 15 10.2	+1.1
MTSU	**Mount Surprise**	**19.00 130**	P	**P**	08 15 15.3	+2.1
GIRL	**Giralia**	**21.59 220**	P	**P**	08 15 40.2	+0.2
CTA	**Charters Tower**	**21.62 131**	P	**P**	08 15 41.9	+1.4
	comp=Z,3.0nm,0.8s,baz=312,slow=14,SNR=2.6					
	comp=Z,3.0nm,0.8s					
CTAO	**Charters Tower**	**21.62 131**	P	**P**	08 15 42.0	+1.5
CTAO			IAmb	IAmb	08 16 08.9	
	comp=Z,31nm,1.5s					
OOD	**Oodnadatta**	**22.27 164**	P	**P**	08 15 46.7	+0.5
INKA	**Innaminka**	**24.04 154**	P	**P**	08 16 04.0	+1.7
RK1H	**Rockhampton Ha**	**26.75 132**	P	**P**	08 16 28.5	+1.8
BBOO	**Buckleboo**	**27.16 167**	P	**P**	08 16 30.6	+0.3
BBOO			IAmb	IAmb	08 16 45.0	
	comp=Z,23nm,1.4s					
BBOO	**Buckleboo**	**27.16 167**	P	**P**	08 16 30.9	+0.7
STKA	**Stephens Creek**	**28.01 157**	P	**P**	08 16 38.8	+0.9
	comp=Z,1.1nm,0.5s,baz=336,slow=6.7,SNR=5.4					
	comp=Z,1.1nm,0.5s					
STKA	**Stephens Creek**	**28.01 157**	P	**P**	08 16 37.4	-0.4
STKA	**Stephens Creek**	**28.01 157**	P	**P**	08 16 39.3	+1.5
CMSA	**Cobar Meteorol**	**29.54 150**	P	**P**	08 16 53.0	+1.6
ARMA	**Armidale**	**32.04 141**	P	**P**	08 17 11.4	-2.0
ARMA			IAmb	IAmb	08 17 25.6	
	comp=Z,27nm,1.5s					
ARPS	**Mount Arapiles**	**32.49 161**	P	**P**	08 17 19.1	+2.0
CAN	**Canberra**	**34.22 150**	P	**P**	08 17 35.0	+2.9
MJAR	**Matsushiro Arr**	**43.51 11**	P	**P**	08 18 46.3	-2.5
	comp=Z,1.9nm,0.7s,baz=181,slow=9.1,SNR=6.3					
	comp=Z,1.9nm,0.7s					
KSRS	**Korea Array**	**43.57 359**	P	**P**	08 18 48.8	-0.3
	comp=Z,1.0nm,0.6s,baz=176,slow=9.4,SNR=2.7					
	comp=Z,1.0nm,0.6s					
WHZ	**Wether Hill Ro**	**51.81 146**	P	**P**	08 19 51.6	-0.6
KHZ	**Kahutara**	**53.25 140**	P	**P**	08 20 01.8	-1.1
KHZ			IAmb	IAmb	08 20 02.1	
	comp=Z,36nm,1.3s					
SONM	**Songino Array**	**57.50 342**	P	**P**	08 20 34.0	+1.0
	comp=Z,0.7nm,0.6s,baz=157,slow=7.7,SNR=2.4					
SONM			LR	LR	08 46 52.9	
	comp=Z,48nm,19.8s,baz=249,slow=37					
	comp=Z,0.7nm,0.6s					
CASY	**Casey**	**61.21 188**	P	**P**	08 20 56.0	-1.9
CASY			IAmb	IAmb	08 21 10.6	
	comp=Z,3.0nm,0.6s					
MK31	**Makanchi Array**	**67.13 327**	P	**P**	08 21 37.2	+0.6
MKAR	**Makanchi Array**	**67.13 327**	P	**P**	08 21 37.0	+0.3
	comp=Z,2.4nm,0.5s,baz=119,slow=8.4,SNR=32					
	comp=Z,2.4nm,0.5s					
MKAR	**Makanchi Array**	**67.13 327**	P	**P**	08 21 37.1	+0.5
ZALV	**Zalesovo Beam**	**70.55 334**	P	**P**	08 21 56.8	-0.6
	comp=Z,0.5nm,0.3s,baz=116,slow=6.0,SNR=3.9					
	comp=Z,0.5nm,0.3s					
ZALV	**Zalesovo Beam**	**70.55 334**	P	**P**	08 21 57.4	-0.1
SEY	**Seymchan**	**71.34 11**	P	**P**	08 22 01.0	-1.1
	comp=Z,1.7nm,0.7s,baz=258,slow=4.3,SNR=4.5					
	comp=Z,1.7nm,0.7s					
KKAR	**Karatay Array**	**72.19 319**	P	**P**	08 22 07.6	0.0
VNDA	**Vanda**	**73.23 173**	P	**P**	08 22 10.4	-2.6
TIXI	**Tiksi**	**77.82 360**	P	**P**	08 22 39.1	+0.1
TIXI			IAmb	IAmb	08 22 39.8	
	comp=Z,2.7nm,0.5s					
QSPA	**South Pole Qui**	**83.64 180**	P	**P**	08 23 09.8	-0.4

TAP 19 08:11:14.5,24.58N×121.85E,h10km,ML1.4,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.03**	**358**	P	Pg	08 11 16.7	+0.3
	baz=21						
TWC				S	Sg	08 11 17.8	+0.1
	baz=21						
NDS	**Dongshan**	**0.13**	**292**	P	Pg	08 11 18.1	+0.4
	baz=293						
NDS				*eS*	Sg	08 11 20.4	+0.6
	baz=293						
EWUT	**Wuta**	**0.15**	**205**	*eP*	Pg	08 11 18.4	+0.5
	baz=205						
EWUT				*eS*	Sg	08 11 20.7	+0.4
	baz=205						
ENA	**Nanau**	**0.18**	**213**	*eP*	Pg	08 11 18.9	+0.4
	baz=210						
ENA				*eS*	Sg	08 11 21.5	+0.3
	baz=210						
TWE	**Neicheng**	**0.21**	**309**	*eP*	Pg	08 11 19.6	+0.5
	baz=312						
TWE				*eS*	Sg	08 11 23.4	+1.3
	baz=312						
NTC	**Toucheng**	**0.27**	**356**	*eS*	Sb	08 11 25.1	-1.0
	baz=356						
FUSB	**Fushanzhiwuyua**	**0.30**	**306**	*eP*	Pb	08 11 21.3	-0.7
	baz=306						
FUSB				*eS*	Sb	08 11 25.9	-1.1
	baz=306						
LATG	**Datong**	**0.30**	**261**	P	Pg	08 11 20.9	+0.3
	baz=273						
NWLT	**Wulai**	**0.37**	**301**	*eP*	Pg	08 11 22.5	+0.6
	baz=302						
NWLT				*eS*	Sg	08 11 27.8	+1.0
	baz=302						
TIPB	**Shuangxi**	**0.39**	**357**	*eP*	Pb	08 11 23.3	-0.2
	baz=357						
TIPB				*eS*	Sg	08 11 28.4	+1.1
	baz=357						
YHNB	**Yeheng**	**0.44**	**281**	*eP*	Pg	08 11 23.8	+0.6
	baz=288						
YHNB				*eS*	Sg	08 11 28.6	-0.5
	baz=288						

TAP 19 08:11:18.8,24.25N×121.63E,h6km,ML1.5,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**0.08**	**202**	P	Pg	08 11 20.6	0.0
	baz=203						
NACB				*eS*	Sg	08 11 23.0	+1.0
	baz=203						
ETL	**Fush Village**	**0.09**	**183**	*eS*	Sg	08 11 23.2	+0.9
	baz=185						
ETLH	**Xiulin Townshi**	**0.14**	**252**	P	Pg	08 11 22.1	+0.4
	baz=252						
ETLH				*eS*	Sg	08 11 25.2	+1.5
	baz=252						
TWD	**Chiawan**	**0.17**	**190**	*eP*	Pg	08 11 22.5	+0.2
	baz=196						
TWD				*eS*	Sg	08 11 25.7	+1.2
	baz=196						
NNSB	**Datong**	**0.28**	**308**	*eP*	Pg	08 11 24.8	+0.4
	baz=308						
NNSB				*eS*	Sg	08 11 29.6	+1.4
	baz=308						
NNSH	**Datong**	**0.28**	**308**	*eP*	Pg	08 11 24.6	+0.2
	baz=251						
NNSH	**Datong**	**0.28**	**308**	*eP*	Pg	08 11 24.8	+0.4
	baz=306						
NNSH				*eS*	Sg	08 11 29.4	+1.2
	baz=306						
LATG	**Datong**	**0.30**	**342**	*eS*	Sb	08 11 30.8	-1.0
	baz=340						
NNS	**Nan Shan**	**0.30**	**309**	*eP*	Pg	08 11 25.2	+0.6
	baz=242						
NNS				*eS*	Sb	08 11 30.3	-1.5
	baz=242						
NNS	**Nan Shan**	**0.30**	**309**	*eP*	Pg	08 11 25.4	+0.8
	baz=309						
NNS				*eS*	Sb	08 11 30.4	-1.5
	baz=309						
ETM	**Tongmen**	**0.31**	**204**	*eP*	Pb	08 11 25.8	-0.9
	baz=205						
ETM				*eS*	Sb	08 11 30.8	-1.2
	baz=205						
WHF	**Hehuan Shan**	**0.35**	**252**	*eP*	Pg	08 11 26.3	+0.6
	baz=252						
WHF				*eS*	Sb	08 11 32.0	-1.6
	baz=252						
FUSS	**Fushou**	**0.35**	**269**	*eP*	Pg	08 11 26.1	+0.4
	baz=269						
FUSS				*eS*	Sb	08 11 32.0	-1.5
	baz=269						
NDT	**Datong Townshi**	**0.36**	**343**	*eS*	Sg	08 11 31.8	+1.1
	baz=342						
NSK	**Sanguang**	**0.49**	**330**	*eS*	Sg	08 11 28.9	-5.7
	baz=288						
NSK	**Sanguang**	**0.49**	**330**	*eP*	Pg	08 11 28.9	+0.7
	baz=329						
NSK				*eS*	Sb	08 11 36.3	-1.0
	baz=329						
WUSB	**Renai**	**0.53**	**241**	*eP*	Pb	08 11 29.9	-0.7
	baz=231						
WUSB				*eS*	Sb	08 11 38.1	-0.5
	baz=231						

*IDC **19** 09:20:46.1±2.6,38.85S×75.06W,h0km,mb3.5/2, mbtmp3.5/3,ML4.0/1,Error ellipse: s-maj=74.2km s-min=28.5km az=42.0*
*GUC **19** 09:20:49.5±0.5,39.14S×75.05W,h26km±4km,ML3.8*
ISC 19 09:20:44.1±1.0,**39.04S**±0.08×**75.40W**±0.07,**h10km,n16,**
σ3°39/28,3C,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LC02	**Puerto Saavedr**	**1.59**	**82**	*iP*	**Pn**	**09 21 11.7**	**-0.6**
LC02				*iS*	**Sn**	**09 21 29.0**	**-3.8**
LC02				IAML		09 21 30.1	
	comp=N,4μm,0.5s						
LR04	**Corral**	**1.74**	**120**	*iP*	**Pn**	**09 21 14.0**	**-0.4**
LR04				*iS*	**Sn**	**09 21 32.1**	**-4.6**
LR04				IAML		09 21 33.1	
	comp=N,3μm,0.2s						
LR02	**Universidad Au**	**1.83**	**116**	*eP*	**Pn**	**09 21 15.4**	**-0.1**
LR02				IAML		09 21 38.1	
	comp=E,2μm,0.4s						
LR03	**Panguipulli**	**2.44**	**105**	*iP*	**Pn**	**09 21 24.6**	**+0.6**
LR03				*eS*	**Sn**	**09 21 51.0**	**-2.9**
LR03				IAML		09 21 55.7	
	comp=E,959nm,0.2s						
LL05	**Los Muermos**	**2.79**	**149**	*iP*	**Pn**	**09 21 29.7**	**+1.0**
LL05				*iS*	**Sn**	**09 21 59.6**	**-2.8**
LL03	**Petrohue**	**3.11**	**133**	*iP*	**Pn**	**09 21 33.9**	**+0.7**
LL01	**San Ignacio de**	**4.04**	**147**	*eP*	**Pn**	**09 21 47.2**	**+1.4**
LL01				*eS*	**Sn**	**09 22 28.8**	**-4.4**
PLCA	**Paso Flores**	**4.09**	**116**	Pn	**Pn**	**09 21 47.6**	**+0.9**
	comp=E,2.3nm,0.3s,baz=294,slow=8.4,SNR=96						
PLCA				Sn	**Sn**	**09 22 37.3**	**+2.5**
	comp=E,1.3nm,0.3s,baz=323,slow=20,SNR=1.3						
	comp=E,7.5nm,0.4s						
H03S1	**Juan Fernandez**	**5.90**	**330**	Pn	**Pn**	**09 22 14.6**	**+3.3**
H03S1				Sn	**Sn**	**09 23 14.6**	**-4.3**
H03S1				T	T	09 29 31.6	
	baz=143						
H03S2	**Juan Fernandez**	**5.92**	**330**	Pn	**Pn**	**09 22 15.0**	**+3.5**
H03S2				Sn	**Sn**	**09 23 15.1**	**-4.0**
H03S2				T	T	09 29 38.3	
	baz=143						
H03S3	**Juan Fernandez**	**5.92**	**330**	Pn	**Pn**	**09 22 14.8**	**+3.3**
H03S3				Sn	**Sn**	**09 23 15.0**	**-4.3**
H03S3				T	T	09 29 10.5	
	baz=143						
H03N3	**Juan Fernandez**	**6.25**	**332**	Pn	**Pn**	**09 22 19.2**	**+3.0**
	baz=135,slow=26						
H03N3				Sn	**Sn**	**09 23 22.5**	**-5.1**
	baz=273,slow=76						
H03N1	**Juan Fernandez**	**6.26**	**332**	Pn	**Pn**	**09 22 18.6**	**+2.4**
	baz=135,slow=26						
H03N1				Sn	**Sn**	**09 23 22.5**	**-5.2**
	baz=273,slow=76						
H03N2	**Juan Fernandez**	**6.27**	**332**	Pn	**Pn**	**09 22 19.1**	**+2.7**
	baz=135,slow=26						
H03N2				Sn	**Sn**	**09 23 22.5**	**-5.4**
	baz=273,slow=76						
LPAZ	**La Paz**	**23.54**	**18**	P	**P**	**09 25 56.1**	**+0.9**
	comp=E,0.4nm,0.5s,baz=180,slow=3.0,SNR=2.3						
	comp=E,0.4nm,0.5s						
TXAR	**Lajitas Array**	**72.95**	**334**	P	**P**	**09 32 17.1**	**+3.5**
	comp=E,0.6nm,0.7s,baz=153,slow=7.3,SNR=9.2						
	comp=E,0.6nm,0.7s						

*NEIC **19** 09:26:09.9±0.6, 13.56N±0.04×145.71E±0.2,h80km±8km, mb4.2/7,Error ellipse: s-maj=22.6km s-min=6.2km az=88.0*
*IDC **19** 09:26:09.9±0.8, 13.61N×144.87E,h80km±6km,mb3.2/5, mbtmp3.6/5,Error ellipse: s-maj=50.2km s-min=21.8km az=95.0*
ISC 19 09:26:09.6±0.8,**13.6N**±0.1×**145.1E**±0.2,**h81km±7km,n22,**
σ0°68/18,mb3.9/10,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.21**	**281**	P	**Pn**	**09 26 21.9**	**+0.4**
	2μm,0.3s,baz=14,slow=4.2,SNR=509						
GUMO				S	**Sn**	**09 26 30.2**	**-0.1**
	4μm,0.3s,baz=49,slow=19,SNR=24						
GUMO	**Guam**	**0.21**	**281**		**Pn**	**09 26 21.6**	**+0.1**
GUMO				Sn	**Sn**	**09 26 30.1**	**-0.2**
PATS	**Pohnpei**	**14.62**	**116**	Pn	**Pn**	**09 29 32.2**	**-0.2**
H11S3	**WAKE ISLAND Hy**	**21.33**	**74**	T	T	09 52 43.6	
	baz=262						
H11S1	**WAKE ISLAND Hy**	**21.35**	**74**	T	T	09 53 22.8	
	baz=262,slow=74						
H11S2	**WAKE ISLAND Hy**	**21.35**	**74**	T	T	09 52 52.8	
	baz=262,slow=74						
H11N1	**WAKE ISLAND Hy**	**21.77**	**71**	T	T	09 53 52.8	
	baz=257,slow=75,SNR=8.4						
H11N2	**WAKE ISLAND Hy**	**21.77**	**71**	T	T	09 53 53.8	
	baz=257,slow=75,SNR=6.1						
H11N3	**WAKE ISLAND Hy**	**21.78**	**71**	T	T	09 53 53.2	
	baz=257,slow=75,SNR=18						
MAJO	**Matsushiro**	**23.71**	**346**	P	**P**	**09 31 13.8**	**-0.5**
MAJO				IAmb	IAmb	09 31 41.8	
	comp=Z,8.0nm,1.1s						
KSRS	**Korea Array**	**28.30**	**330**	P	**P**	**09 31 55.8**	**+0.3**
	comp=Z,0.8nm,0.8s,baz=159,slow=10,SNR=1.9						
	comp=Z,0.8nm,0.8s						
WB0	**Warramunga Arr**	**34.74**	**198**	P	**P**	**09 32 51.8**	**-0.4**
WB0				IAmb	IAmb	09 32 53.0	
	comp=Z,2.8nm,1.1s						
WRAB	**Tennant Creek**	**34.91**	**198**	P	**P**	**09 32 53.0**	**-0.6**
WRAB				IAmb	IAmb	09 33 16.5	
	comp=Z,3.7nm,0.9s						
WB2	**Warramunga Arr**	**34.92**	**198**	P	**P**	**09 32 52.9**	**-0.8**
WB2				IAmb	IAmb	09 33 07.5	
	comp=Z,4.0nm,1.1s						
WRA	**Warramunga Arr**	**34.92**	**198**	P	**P**	**09 32 53.9**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=21,slow=9.2,SNR=5.9						
	comp=Z,0.4nm,0.6s						
STKA	**Stephens Creek**	**45.29**	**184**	P	**P**	**09 34 19.5**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=14,slow=7.5,SNR=3.7						
	comp=Z,0.7nm,0.5s						
STKA	**Stephens Creek**	**45.29**	**184**	P	**P**	**09 34 18.9**	**-0.5**
BBOO	**Buckleboo**	**46.90**	**190**	P	**P**	**09 34 32.2**	**+0.3**
BBOO				IAmb	IAmb	09 34 35.1	
	comp=Z,3.3nm,0.9s						
TOO	**Toolangi**	**50.85**	**180**	P	**P**	**09 35 03.7**	**+1.5**
ILAR	**Eielson Array**	**68.52**	**25**	P	**P**	**09 37 02.2**	**-0.9**
	comp=Z,0.2nm,0.5s,baz=253,slow=6.2,SNR=2.5						
	comp=Z,0.2nm,0.5s						
NVAR	**Mina Array Bea**	**86.78**	**51**	P	**P**	**09 38 46.6**	**+1.1**
	comp=Z,0.2nm,0.5s,baz=280,slow=3.2,SNR=2.0						
	comp=Z,0.2nm,0.5s						
LPAZ	**La Paz**	**147.81**	**99**	PKPbc	**PKPbc**	**09 45 47.0**	**0.0**
	comp=Z,0.3nm,0.4s,baz=255,slow=5.8,SNR=2.0						

*NEIC **19** 09:38:26.1±1.4, 61.57S±0.08×35.7W±0.2,h10km±1km, mb4.3/13,Error ellipse: s-maj=18.0km s-min=11.6km az=122.0*

*IDC **19** 09:38:30.7±1.1, 61.60S×37.95W,h0km,mb4.0/4, mbtmp4.0/4,MS3.0/1,Error ellipse: s-maj=41.8km s-min=31.6km az=68.0*
ISC 19 09:38:27.0±0.6,**61.48S**±0.08×**35.78W**±0.10,**h10km,n30,**
σ1°64/22,mb4.1/7,Scotia Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ORCD	**Orcadas**	**4.41**	**276**	Pn	**Pn**	**09 39 34.1**	**+0.3**
HOPE	**Hope Point**	**7.22**	**357**	Pn	**Pn**	**09 40 12.8**	**+0.4**
VNA3	**Neumayer Olymp**	**14.18**	**144**	P	**Pn**	**09 41 47.4**	**-0.1**
VNA1	**Neumayer--Stat**	**14.30**	**141**	P	**Pn**	**09 41 49.1**	**-0.1**
EFI	**East Falkland**	**15.63**	**299**		**P**	**09 42 09.5**	**-1.8**
EFI				IAmb	IAmb	09 42 21.5	
	comp=Z,76nm,1.3s						
SNAA	**Sanae**	**16.33**	**142**	LR	LR	09 47 00.8	
	comp=Z,59nm,21.1s,baz=220,slow=30						
SNAA	**Sanae**	**16.33**	**142**	P	**Pn**	**09 42 17.0**	**+1.0**
BELA	**Belgrano 2**	**16.48**	**179**		**Pn**	**09 42 16.6**	**-1.3**
TROLL	**Troll, Antarti**	**18.03**	**142**	P	**P**	**09 42 39.4**	**+1.6**
DSPA	**Despedida**	**18.75**	**279**	P	**P**	**09 42 44.9**	**-0.8**
QSPA	**South Pole Qui**	**28.76**	**180**	P	**P**	**09 44 29.2**	**+4.8**
	comp=Z,1.1nm,0.9s,baz=176,slow=5.0,SNR=3.0						
	comp=Z,1.1nm,0.9s						
QSPA	**South Pole Qui**	**28.76**	**180**	P	**P**	**09 44 21.9**	**-2.5**
QSPA				IAmb	IAmb	09 44 42.8	
	comp=Z,4.8nm,1.2s						
PLTB	**Pedras Altas**	**31.92**	**330**	IAmb	IAmb	09 44 50.9	
	comp=Z,7.1nm,1.2s						
PLTB				P	**P**	**09 44 51.9**	**-0.5**
ITQB	**Itaqui**	**34.67**	**327**	P	**P**	**09 45 16.6**	**+0.3**
CPUP	**Villa Florida**	**38.03**	**328**	P	**P**	**09 45 47.0**	**+1.9**
	comp=Z,1.8nm,0.6s,baz=167,slow=14,SNR=5.5						
	comp=Z,1.8nm,0.6s						
CPUP	**Villa Florida**	**38.03**	**328**	P	**P**	**09 45 45.3**	**+0.2**
CPUP				IAmb	IAmb	09 45 48.3	
	comp=Z,4.5nm,0.9s						
VNDA	**Vanda**	**40.82**	**186**	P	**P**	**09 46 06.6**	**-1.2**
BOSA	**Boshof**	**51.51**	**79**	P	P	09 47 45.0	+12
	comp=Z,1.5nm,0.7s,baz=217,slow=5.1,SNR=1.8						
	comp=Z,1.5nm,0.7s						
BOSA	**Boshof**	**51.51**	**79**	P	**P**	**09 47 31.1**	**-1.6**
H10S2	**ASCENSION HYDR**	**54.69**	**26**	T	T	10 47 21.8	
	baz=197						
H10S3	**ASCENSION HYDR**	**54.69**	**26**	T	T	10 47 10.0	
	baz=23						
H10N1	**ASCENSION HYDR**	**55.80**	**26**	T	T	10 48 40.1	
	baz=191,slow=75,SNR=11						
H10N3	**ASCENSION HYDR**	**55.80**	**26**	T	T	10 48 44.4	
	baz=191,slow=75,SNR=17						
H10N2	**ASCENSION HYDR**	**55.82**	**26**	T	T	10 48 36.9	
	baz=191,slow=75,SNR=22						
SAML	**Samuel**	**56.18**	**327**	P	**P**	**09 48 07.0**	**+0.3**
SAML				IAmb	IAmb	09 48 09.6	
	comp=Z,1.9nm,0.8s						
TOA0	**Torodi Ar. Sit**	**80.05**	**37**	P	**P**	**09 50 37.1**	**+0.6**
TOA0				IAmb	IAmb	09 50 49.2	
	comp=Z,6.0nm,1.4s						
TORD	**Torodi Ar. Bea**	**80.05**	**37**	P	P	09 50 46.8	+10
	comp=Z,0.8nm,0.7s,baz=203,slow=6.8,SNR=3.7						
	comp=Z,0.8nm,0.7s						
TORD	**Torodi Ar. Bea**	**80.05**	**37**	P	**P**	**09 50 35.3**	**-1.1**
TORD				IAmb	IAmb	09 50 59.8	
	comp=Z,3.4nm,1.5s						
INK	**Inuvik**	**146.98**	**317**	PKPbc	**PKPab**	**09 58 09.8**	**+0.4**
	comp=Z,2.7nm,1.2s,baz=135,slow=4.0,SNR=4.7						
ILAR	**Eielson Array**	**150.08**	**307**	PKPbc	**PKiKP**	**09 58 18.7**	**+1.8**
	comp=Z,0.7nm,0.8s,baz=134,slow=2.3,SNR=6.4						

*NEIC **19** 09:38:44.4±1.4,20.6S±0.2×169.0E±0.2,h10km±2km, mb4.5/16,Error ellipse: s-maj=33.6km s-min=29.2km az=26.0*
*IDC **19** 09:38:44.8±1.9,20.43S×168.57E,h0km,mb3.8/5, mbtmp3.8/6,ML3.8/1,MS3.1/1,Error ellipse: s-maj=75.4km s-min=22.8km az=140.0*
ISC 19 09:38:45.4±0.8,**20.6S**±0.1×**168.7E**±0.1,**h10km,n27,**
σ1°14/28,mb4.4/13,Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.59**	**235**	Pn	**Pn**	**09 39 27.6**	**+0.2**
	20nm,0.3s,baz=60,slow=16,SNR=117						
DZM				Sn	**Sn**	**09 39 59.1**	**+0.1**
	43nm,0.3s,baz=91,slow=22,SNR=9.1						
DZM				LR	LR	09 40 07.0	
	comp=Z,331nm,19.2s,baz=22,slow=32						
	51nm,0.4s						
COEN	**Coen**	**25.25**	**281**	P	**P**	**09 44 13.5**	**+1.6**
STKA	**Stephens Creek**	**26.73**	**240**	P	**P**	**09 44 26.9**	**+1.7**
	1.5nm,0.7s,baz=82,slow=11,SNR=5.7						
	1.5nm,0.7s						
STKA	**Stephens Creek**	**26.73**	**240**	P	**P**	**09 44 26.6**	**+1.4**
BBOO	**Buckleboo**	**31.49**	**240**	P	**P**	**09 45 08.9**	**+1.4**
BBOO				IAmb	IAmb	09 45 33.7	
	comp=Z,9.2nm,1.1s						
WR0	**Warramunga Arr**	**32.04**	**265**	P	**P**	**09 45 12.1**	**-0.4**
WR0				IAmb	IAmb	09 45 26.5	
	comp=Z,9.8nm,1.3s						
WB0	**Warramunga Arr**	**32.20**	**265**	P	**P**	**09 45 13.9**	**0.0**
WB0				IAmb	IAmb	09 45 38.0	
	comp=Z,12nm,1.4s						
WB2	**Warramunga Arr**	**32.22**	**265**		**P**	**09 45 13.8**	**-0.2**
WB2				IAmb	IAmb	09 45 19.5	
	comp=Z,12nm,1.4s						
WRAB	**Tennant Creek**	**32.22**	**265**	P	**P**	**09 45 13.6**	**-0.5**
WRAB				IAmb	IAmb	09 45 29.2	
	comp=Z,6.2nm,1.1s						
WRA	**Warramunga Arr**	**32.23**	**265**	P	**P**	**09 45 12.3**	**-1.9**
	comp=Z,0.5nm,0.4s,baz=91,slow=8.3,SNR=9.0						
	comp=Z,0.5nm,0.4s						
WRA	**Warramunga Arr**	**32.23**	**265**	P	**P**	**09 45 12.9**	**-1.3**
AS31	**Alice Springs**	**32.35**	**258**	P	**P**	**09 45 15.3**	**+0.1**
ASAR	**Alice Springs**	**32.35**	**258**	P	**P**	**09 45 15.3**	**+0.1**
MTN	**Manton Dam**	**36.75**	**276**	P	**P**	**09 45 53.0**	**-0.3**
KNRA	**Kununurra**	**38.22**	**271**	P	**P**	**09 46 05.3**	**-0.5**
PSA00	**Pilbara Seismi**	**45.47**	**260**	P	**P**	**09 47 02.2**	**-2.9**
CASY	**Casey**	**58.70**	**204**	P	**P**	**09 48 42.8**	**-0.1**
CASY				IAmb	IAmb	09 48 51.8	
	comp=Z,4.6nm,1.3s						
**QSPA

MSVF	Nonsavu	9.12	76	Pn	Pn	09 49	18.2	+2.2
OUZ	Omahuta	15.55	165		P	09 50	46.5	-0.8
EIDS	Eidsvold	17.09	249	P	Pn	09 51	03.6	+0.6
TOZ	Tahuroa Road	18.42	163	P	P	09 51	18.6	-0.3
ARMA	Armidale	18.51	233	P	Pn	09 51	21.4	+0.9
	baz=18,SNR=7.2							
HAZ	Te Kaha	19.16	158	P	Pn	09 51	29.0	+0.8
URZ	Urewera	19.39	160	P	P	09 51	28.9	-0.7
	0.2nm,0.3s,baz=354,slow=12,SNR=7.0							
	36nm,1.1s							
URZ	Urewera	19.39	160	P	Pn	09 51	32.4	+1.5
URZ				IAmb	IAmb	09 51	33.4	
	comp=Z,55nm,1.2s							
URZ	Urewera	19.39	160	P	Pn	09 51	32.1	+1.1
RMQ	Roma	19.40	247	P	Pn	09 51	33.5	+2.4
	baz=19,SNR=8.8							
TWGZ	Tauwhareparae	19.61	158	P	Pn	09 51	34.7	+1.1
SNGZ	Shannon Statio	19.94	160	P	Pn	09 51	39.0	+1.5
RAHZ	Arahi	19.98	161	P	Pn	09 51	38.8	+0.8
BKZ	Black Stump Fm	20.04	162	P	Pn	09 51	38.0	-0.6
MCHZ	McNeill Hill	20.35	162	P	Pn	09 51	42.9	+0.6
PXZ	Pawanui	20.94	162	P	P	09 51	45.2	-1.3
CTA	Charters Tower	21.14	266	P	P	09 51	50.5	+1.8
	comp=Z,14nm,0.8s,baz=96,slow=11,SNR=11							
	comp=Z,14nm,0.8s							
CTAO	Charters Tower	21.14	266	P	P	09 51	50.2	+1.4
NNZ	Nelson	21.31	170	P	P	09 51	54.2	+3.8
SNZO	South Karori	21.64	168	P	P	09 51	53.6	-0.3
SNZO				IAmb	IAmb	09 51	55.0	
	comp=Z,117nm,1.3s							
KHZ	Kahutara	22.51	171	P	P	09 52	06.0	+2.8
LTZ	Lake Taylor	22.70	173	P	P	09 52	06.1	+0.7
LTZ				IAmb	IAmb	09 52	18.9	
	comp=Z,125nm,1.7s							
CNB	Canberra Magne	22.77	225	P	P	09 52	09.4	+3.1
	baz=23,SNR=7.2							
MTSU	Mount Surprise	23.18	271	P	P	09 52	12.4	+1.9
	baz=23,SNR=20							
OXZ	Oxford	23.21	174	P	P	09 52	11.6	+1.0
OXZ				IAmb	IAmb	09 52	25.0	
	comp=Z,106nm,1.6s							
QLP	Quilpie	23.37	250	P	P	09 52	13.0	+0.7
	baz=23,SNR=3.8							
PMG	Port Moresby	23.46	294	P	P	09 52	14.9	+1.7
	comp=Z,16nm,0.8s,baz=111,slow=11,SNR=7.4							
	comp=Z,16nm,0.8s							
PMG	Port Moresby	23.46	294	P	P	09 52	09.7	-3.5
PMG				IAmb	IAmb	09 52	22.6	
	comp=Z,54nm,1.1s							
RPZ	Rata Peaks	23.52	176	P	P	09 52	13.2	-0.4
	comp=Z,9.4nm,1.0s,baz=276,slow=19,SNR=2.3							
	comp=Z,9.4nm,1.0s							
RPZ	Rata Peaks	23.52	176	P	P	09 52	12.6	-0.9
RPZ				IAmb	IAmb	09 52	20.9	
	comp=Z,51nm,1.3s							
CMSA	Cobar Meteorol	23.58	237	P	P	09 52	15.6	+1.3
	baz=24,SNR=46							
COEN	Coen	25.22	280	P	P	09 52	31.3	+1.8
	baz=25,SNR=7.8							
COEN	Coen	25.22	280	P	P	09 52	29.4	-0.1
COEN				IAmb	IAmb	09 52	39.4	
	comp=Z,31nm,0.9s							
TOO	Toolangi	26.62	224	P	P	09 52	43.7	+1.7
	baz=27,SNR=3.8							
TOO	Toolangi	26.62	224	P	P	09 52	43.5	+1.5
STKA	Stephens Creek	26.96	239	P	P	09 52	45.8	+0.7
	comp=Z,5.1nm,0.6s,baz=67,slow=8.2,SNR=16							
	comp=Z,5.1nm,0.6s							
STKA	Stephens Creek	26.96	239	P	P	09 52	46.3	+1.2
	baz=27,SNR=9.7							
STKA	Stephens Creek	26.96	239	P	P	09 52	46.3	+1.2
QIS	Mount Isa	27.32	264	P	P	09 52	50.9	+2.4
	baz=27,SNR=6.2							
ARPS	Mount Arapiles	28.71	229	P	P	09 53	02.0	+1.3
	baz=29,SNR=6.1							
PATS	Pohnpei	28.77	338	P	P	09 53	00.1	-1.2
RAR	Rarotonga	29.42	98	P	P	09 53	06.2	-0.9
	comp=Z,13nm,0.6s,baz=186,slow=6.6,SNR=1.9							
	comp=Z,13nm,0.6s							
HTT	Hallett	29.60	237	P	P	09 53	09.5	+0.9
	baz=30,SNR=3.9							
BBOO	Buckleboo	31.71	240	P	P	09 53	27.7	+0.4
	baz=32,SNR=5.6							
BBOO	Buckleboo	31.71	240	P	P	09 53	27.1	-0.2
BBOO				IAmb	IAmb	09 53	40.4	
	comp=Z,9.4nm,0.8s							
WR0	Warramunga Arr	32.11	264	P	P	09 53	30.5	-0.4
WR0				IAmb	IAmb	09 53	35.7	
	comp=Z,19nm,1.2s							
WB0	Warramunga Arr	32.27	265	P	P	09 53	31.6	-0.7
WB0				IAmb	IAmb	09 53	46.1	
	comp=Z,17nm,1.0s							
WB2	Warramunga Arr	32.29	264	P	P	09 53	31.8	-0.7
	baz=32							
WB2	Warramunga Arr	32.29	264	P	P	09 53	30.9	-1.6
WB2				IAmb	IAmb	09 53	42.7	
	comp=Z,15nm,1.2s							
WRAB	Tennant Creek	32.30	264	P	P	09 53	30.7	-1.8
WRAB				IAmb	IAmb	09 53	37.9	
	comp=Z,25nm,1.6s							
WRA	Warramunga Arr	32.30	264	P	P	09 53	31.7	-0.9
	comp=Z,5.1nm,1.0s,baz=89,slow=8.0,SNR=45							
	comp=Z,5.1nm,1.0s							
WRA	Warramunga Arr	32.30	264	P	P	09 53	31.5	-1.2
AS31	Alice Springs	32.47	257	P	P	09 53	33.3	-0.8
AS31				IAmb	IAmb	09 53	47.2	
	comp=Z,6.4nm,0.6s							
ASAR	Alice Springs	32.47	257	P	P	09 53	33.9	-0.3
ASPA	Alice Springs	32.48	257	P	P	09 53	34.0	-0.2
	baz=32							
MTN	Manton Dam	36.75	276	P	P	09 54	10.9	-0.2
MTN				IAmb	IAmb	09 54	23.4	
	comp=Z,17nm,0.6s							
WRKA	Warakurna	37.57	255	P	P	09 54	18.0	-0.1
	baz=38,SNR=11							
FORT	Forrest	38.04	246	P	P	09 54	22.3	+0.4
KNRA	Kununurra	38.26	270	P	P	09 54	24.1	+0.2
	baz=38,SNR=7.8							
KNRA	Kununurra	38.26	270	P	P	09 54	23.6	-0.2
KNRA				IAmb	IAmb	09 54	36.4	
	comp=Z,21nm,0.7s							
FAKI	Fak Fak	39.54	291	P	P	09 54	32.6	-2.0
PSA00	Pilbara Seismi	45.58	259	P	P	09 55	23.4	-0.2
PSA00				IAmb	IAmb	09 55	36.4	
	comp=Z,20nm,0.8s							
PSA00	Pilbara Seismi	45.58	259	P	P	09 55	24.0	+0.3
PSA00				IAmb	IAmb	09 55	36.5	
	comp=Z,7.3nm,0.8s							
MBWA	Marble Bar	45.74	260	P	P	09 55	25.9	+1.0
MBWA				IAmb	IAmb	09 55	37.7	
	comp=Z,16nm,0.8s							
KLBR	Kellerberrin	46.90	245	P	P	09 55	34.8	+0.9
	baz=47,SNR=8.9							
NWAO	Narrogin (SRO)	47.38	243	P	P	09 55	36.6	-1.1
MORW	Morawa	48.40	249	P	P	09 55	44.7	-1.0
GIRL	Giralia	50.59	257	P	P	09 56	01.2	-1.1
TOLI2	Tolitoli	51.55	288	P	P	09 56	08.2	-1.5
TOLI2				IAmb	IAmb	09 56	21.4	
	comp=Z,13nm,1.0s							
VNDA	Vanda	57.45	182	P	P	09 56	51.3	-0.3
	comp=Z,1.0nm,0.8s,baz=323,slow=6.9,SNR=2.8							
	comp=Z,1.0nm,0.8s							
VNDA	Vanda	57.45	182	P	P	09 56	55.4	+3.8
SBA	Scott Base	57.70	181	P	P	09 56	56.5	+3.2
CASY	Casey	59.07	204	P	P	09 57	04.7	+1.7
MJAR	Matsushiro Arr	63.40	333	P	P	09 57	32.9	+0.2
	comp=Z,1.8nm,0.9s,baz=161,slow=8.0,SNR=5.1							
	comp=Z,1.8nm,0.9s							
MJAR	Matsushiro Arr	63.40	333	P	P	09 57	31.8	-1.0
NAWB	Namwon	67.82	324	P	P	09 58	00.5	-0.8
KSRS	Korea Array	69.05	326	P	P	09 58	09.8	+0.9
	comp=Z,0.8nm,0.9s,baz=125,slow=7.8,SNR=4.6							
	comp=Z,0.8nm,0.9s							
KSRS	Korea Array	69.05	326	P	P	09 58	09.8	+0.9
KSAR	Wonju Array Be	69.06	326	P	P	09 58	08.5	-0.5
KS19	Wonju Array Si	69.12	326	P	P	09 58	08.1	-1.3
KS19				IAmb	IAmb	09 58	17.0	
	comp=Z,22nm,1.7s							
QSPA	South Pole Qui	69.85	180	P	P	09 58	12.6	-1.1
	comp=Z,6.0nm,1.0s,baz=358,slow=1.8,SNR=11							
	comp=Z,6.0nm,1.0s							
QSPA	South Pole Qui	69.85	180	P	P	09 58	13.2	-0.6
YSS	Yuzh-Sakhalins	70.85	341	P	P	09 58	21.0	+1.3
YSS				IAmb	IAmb	09 58	22.9	
	comp=Z,15nm,1.1s							
USA0B	Ussuriysk Arra	72.39	333	P	P	09 58	29.4	+0.3
USA0B				IAmb	IAmb	09 58	31.3	
	comp=Z,10nm,1.1s							
USRK	Ussuriysk Ar.	72.39	333	P	P	09 58	29.9	+0.8
	comp=Z,7.0nm,0.9s,baz=157,slow=3.1,SNR=8.6							
	comp=Z,7.0nm,0.9s							
USRK	Ussuriysk Ar.	72.39	333	P	P	09 58	30.4	+1.3
PEA0B	Petropavlovsk-	73.64	353	P	P	09 58	35.6	-0.6
PETK	Petropavlovsk-	73.64	353	P	P	09 58	37.1	+0.8
	comp=Z,5.4nm,0.8s,baz=170,slow=9.9,SNR=9.0							
	comp=Z,5.4nm,0.8s							
PETK	Petropavlovsk-	73.64	353	P	P	09 58	35.7	-0.6
MDJ	Mudanjiang	73.76	332	P	P	09 58	37.4	+0.1
MDJ				IAmb	IAmb	09 58	39.3	
	comp=Z,9.2nm,0.8s							
KLR	Kul'dur	76.57	336	P	P	09 58	55.0	+1.7
	comp=Z,2.4nm,0.8s,baz=158,slow=11,SNR=7.3							
	comp=Z,2.4nm,0.8s							
KLR	Kul'dur	76.57	336	P	P	09 58	55.0	+1.7
MAW	Mawson	77.38	202	P	P	09 58	57.0	-0.7
	comp=Z,1.3nm,0.6s,baz=44,slow=3.8,SNR=1.6							
	comp=Z,1.3nm,0.6s							
CMAR	Chiang Mai Arr	78.50	295	P	P	09 59	06.5	+1.7
	comp=Z,0.9nm,0.3s,baz=128,slow=4.3,SNR=5.8							
	comp=Z,0.9nm,0.3s							
CMAR	Chiang Mai Arr	78.50	295	P	P	09 59	05.4	+0.7
BELA	Belgrano 2	81.18	175	P	P	09 59	17.1	-1.2
BELA				IAmb	IAmb	09 59	31.4	
	comp=Z,14nm,1.0s							
SMAI	San Martin Ant	83.05	162	P	P	09 59	28.4	+0.2
SEY	Seymchan	83.86	353	P	P	09 59	34.2	+1.9
	comp=Z,4.2nm,1.2s,baz=245,slow=4.7,SNR=2.9							
	comp=Z,4.2nm,1.2s							
P18K	Big Mountain,	84.62	18	P	P	09 59	34.8	-1.4
ULN	Ulaanbaatar	87.37	324	P	P	09 59	50.9	+0.6
TROLL	Troll, Antarti	87.54	184	P	P	09 59	50.2	-0.7
YAK	Yakutsk	87.66	343	P	P	09 59	51.9	+0.8
SONM	Songino Array	87.72	323	P	P	09 59	52.9	+1.0
	comp=Z,5.3nm,1.1s,baz=154,slow=4.4,SNR=12							
	comp=Z,5.3nm,1.1s							
SONM	Songino Array	87.72	323	P	P	09 59	52.0	+0.1
CMB	Columbia Colle	88.13	48	P	P	09 59	54.3	+0.3
SNAA	Sanae	88.18	183	P	P	09 59	53.0	-0.7
SNAA				IAmb	IAmb	10 00	07.0	
	comp=Z,7.5nm,1.0s							
YBH	Yreka Blue Hor	88.30	44	P	P	09 59	54.9	+0.1
ISA	Isabella, Lake	88.43	51	P	P	09 59	55.3	-0.3
ISA				IAmb	IAmb	09 59	57.1	
	comp=Z,14nm,1.4s							
HUMO	Hull Mountain	88.56	43	P	P	09 59	56.4	+0.4
HUMO				IAmb	IAmb	10 00	01.9	
	comp=Z,4.9nm,1.1s							
EMB	Emerald Bay	88.76	48	P	P	09 59	56.5	-0.7
VNA3	Neumayer Olymp	88.79	181	P	P	09 59	55.6	-1.0
L04D	Klamath Falls	88.80	44	P	P	09 59	56.1	-1.1
L04D				IAmb	IAmb	09 59	58.7	
	comp=Z,18nm,1.2s							
OMMB	Old Mammoth Mi	88.92	49	P	P	09 59	58.7	+0.6
VNA1	Neumayer--Stat	89.36	181	P	P	09 59	58.6	-0.7
NVAR	Mina Array Bea	89.77	49	P	P	10 00	01.9	-0.1
	comp=Z,5.0nm,1.1s,baz=230,slow=7.0,SNR=20							
	comp=Z,5.0nm,1.1s							
NVAR	Mina Array Bea	89.77	49	P	P	10 00	01.7	-0.3
NV11	Mina Array Sit	89.88	49	P	P	10 00	02.5	+0.1
NV11				IAmb	IAmb	10 00	03.8	
	comp=Z,8.3nm,1.1s							
MOD	Modoc Plateau	89.97	45	P	P	10 00	01.4	-1.2
MOD				IAmb	IAmb	10 00	04.2	
	comp=Z,7.7nm,1.1s							
H04A	Detroit Lake	90.06	42	P	P	10 00	02.1	-0.8
H04A				IAmb	IAmb	10 00	04.0	
	comp=Z,16nm,1.2s							
TPH	Tonopah	90.38	49	P	P	10 00	04.7	-0.1
F04A	Amboy	90.52	41	P	P	10 00	03.2	-1.7
ILAR	Eielson Array	91.28	17	P	P	10 00	06.6	-1.5
	comp=Z,0.9nm,0.8s,baz=228,slow=5.4,SNR=5.2							
	comp=Z,0.9nm,0.8s							
ILAR	Eielson Array	91.28	17	P	P	10 00	06.3	-1.8
D05A	Enumclaw	91.38	40	P	P	10 00	08.9	0.0
PRN	Pahroc Range	91.67	51	P	P	10 00	10.0	-0.7
PRN				IAmb	IAmb	10 00	12.4	
	comp=Z,12nm,1.2s							
R11A	Troy Canyon, C	91.67	50	P	P	10 00	09.3	-1.4
TUC	Tucson	92.91	57	P	P	10 00	16.2	-0.2
TUC				IAmb	IAmb	10 00	18.1	
	comp=Z,6.2nm,1.1s							
DLBC	Dease Lake	93.10	27	P	P	10 00	15.2	-1.5
DLBC				IAmb	IAmb	10 00	17.3	
	comp=Z,7.2nm,1.2s							
X16A	Lo Mia Camp, P	93.19	55	P	P	10 00	17.3	-0.5
X16A				IAmb	IAmb	10 00	19.5	
	comp=Z,5.4nm,1.1s							
BMAR	Burnt Mountain	93.89	16	P	P	10 00	20.4	+0.3
EPYK	Eagle Plains	95.42	19	P	P	10 00	25.7	-1.4
EPYK				IAmb	IAmb	10 00	38.2	
	comp=Z,4.3nm,1.1s							
PDAR	Pinedale Array	97.59	47	P	P	10 00	36.4	-1.4
	comp=Z,0.4nm,0.9s,baz=354,slow=7.5,SNR=1.9							
	comp=Z,0.4nm,0.9s							
INK	Inuvik	97.60	18	P	P	10 00	36.3	-0.5
	comp=Z,0.8nm,0.6s,baz=296,slow=9.0,SNR=4.4							
	comp=Z,0.8nm,0.6s							
TXAR	Lajitas Array	97.62	62	P	P	10 00	36.9	-1.1
	comp=Z,0.6nm,1.0s,baz=239,slow=4.1,SNR=4.6							
	comp=Z,0.6nm,1.0s							
ARCES	ARCESS Array B	125.88	345	PKP	PKPdf	10 06	03.6	-0.6
	comp=Z,4.2nm,1.0s,baz=62,slow=2.3,SNR=5.3							
ARCES	ARCESS Array B	125.88	345		PKPdf	10 06	02.6	-1.6
SCHQ	Schefferville	125.95	36	PKP	PKiKP	10 06	05.7	+0.5
	comp=Z,1.9nm,0.9s,baz=298,slow=9.9,SNR=1.6							
SCHQ	Schefferville	125.95	36		PKPdf	10 06	04.4	-0.4
KMBO	Kilima Mbogo	128.00	252	*e*P	PKiKP	10 06	11.2	+0.4
KMBO	Kilima Mbogo	128.00	252	*e*P	PKiKP	10 06	11.2	+0.4
DESE	Dese	130.36	268	*e*P	PKPdf	10 06	12.7	-2.1
DESE	Dese	130.36	268	*e*P	PKiKP	10 06	19.8	+4.2
DESE	Dese	130.36	268	*e*P	PKPdf	10 06	10.8	-4.0
AAE	Adis Abeba	130.53	265	*e*P	PKPdf	10 06	12.8	-2.3
FURI	Furi	130.57	264	*e*P	PKPdf	10 06	12.8	-2.4
FINES	FINESS Array B	131.31	337	PKP	PKiKP	10 06	15.5	-0.1
	comp=Z,2.2nm,0.9s,baz=134,slow=6.0,SNR=1.7							
LODK	Lodwar	131.65	256	*e*P	PKPdf	10 06	16.8	-0.2
LODK	Lodwar	131.65	256	*e*P	PKPdf	10 06	16.8	-0.2
LODK	Lodwar	131.65	256	*e*P	PKPdf	10 06	10.8	-6.2
LODK	Lodwar	131.65	256	*e*P	PKiKP	10 06	20.8	+2.8
AKASG	Malin Array Be	136.01	324	PKP	PKiKP	10 06	25.5	0.0
	comp=Z,0.3nm,0.4s,baz=50,slow=1.0,SNR=1.7							
NOA	NORSAR Array B	136.25	344	PKP	PKiKP	10 06	25.7	-0.1
	comp=Z,0.3nm,0.6s,baz=64,slow=1.9,SNR=1.8							
BRTR	Keskin Array B	137.04	307	PKP	PKiKP	10 06	27.4	-0.8
	comp=Z,0.2nm,0.3s,baz=132,slow=8.6,SNR=2.1							
OSTC	Ostas	142.76	331	*e*PKP	PKPdf	10 06	37.5	+1.2
CHVC	Chvalec	142.81	331	*e*PKP	PKPdf	10 06	36.4	0.0
KRLC	Kraliky	142.83	330	*e*PKP	PKiKP	10 06	41.3	+1.7
KRLC	Kraliky	142.83	330	*e*PKHKP	PKiKP	10 06	41.3	+1.7
DPC	Dobruska-Polom	142.85	331	*e*PKP	PKPdf	10 06	35.3	-1.2
BRG	Berggiesshubel	143.53	333	*e*PKP	PKPdf	10 06	36.4	-1.2
BRG				Amp		10 06	46.9	
	comp=Z,31nm,1.9s							
BRG				*ex*	x	10 06	54.8	
BRG				Amp		10 06	59.4	
	comp=Z,52nm,1.4s							
BRG				*ex*	x	10 07	12.0	
BRG				Amp		10 07	16.5	
	comp=Z,40nm,1.3s							
BRG				SKP		10 10	39.3	
BRG				Amp		10 10	44.2	
	comp=Z,43nm,1.8s							
CLL	Collm	143.60	334	*e*PKPdf	PKPbc	10 06	35.0	-0.1
CLL				*ex*	x	10 06	46.0	
MORH	Mrgy, Hungar	144.35	324	PKP	PKPdf	10 06	38.6	-0.5
MPLH	Magyarpolny	144.36	326	PKP	PKiKP	10 06	41.6	-1.1
VAY	Valandovo	144.46	314	*i* P	PKiKP	10 06	41.9	-1.2
NKC	Novy Kostel	144.64	334	*e*PKP	PKPbc	10 06	38.8	+0.4
EDMD	Edmundbyers	144.72	351	*e*P	PKPdf	10 06	39.1	-0.4
KOVH	Kovagotoltos	144.73	324	PKP	PKPdf	10 06	39.7	-0.1
NEWG	New Galloway	144.74	353	*e*P	PKPdf	10 06	40.8	+1.2
CKRC	Cesky Krumlov	144.86	330	*e*PKP	PKPbc	10 06	39.5	+0.4
SKO	Skopje	144.92	316	*i* P	PKPdf	10 06	40.3	0.0
KHC	Kasperske Hory	144.97	331	*e*PKP	PKPbc	10 06	39.5	0.0
KHC				*ex*	x	10 06	49.5	
GAL1	Galloway	145.04	353	*e*P	PKPab	10 06	39.6	+0.1
GERES	GERESS Array B	145.12	331	PKPbc	PKPdf	10 06	40.5	0.0
	comp=Z,1.0nm,0.6s,baz=64,slow=3.1,SNR=16							
HPK	Haverah Park	145.51	350	*e*P	PKPab	10 06	41.1	-0.2
OHR	Ohrid	145.74	315	*i* P	PKPab	10 06	42.8	+0.2
WIM	Isle of Man	145.75	353	*e*P	PKPbc	10 06	41.7	-0.1
LMK	Market Rasen	145.76	348	*e*P	PKiKP	10 06	45.4	0.0
LBWR	Ladybower, Pea	146.06	350	*e*P	PKPbc	10 06	42.4	-0.3
WME	Myndd Eilian	146.44	352	*e*P	PKPbc	10 06	43.4	-0.4
WPS	Cemaes, Angles	146.46	353	*e*P	PKPab	10 06	44.7	-0.1
WLF1	Llynfaes	146.56	353	*e*P	PKPbc	10 06	44.1	0.0
YRC	Rhoscolyn	146.62	353	*e*P	PKPbc	10 06	44.5	+0.2
CWF	Charnwood Fore	146.63	349	*e*P	PKPbc	10 06	44.3	-0.1
BTNL	Ternell	146.72	340	*d*PKP	PKPab	10 06	45.4	-0.6
MEM	Membach	146.74	340	*d*PKPdf	PKPdf	10 06	43.1	0.0
MEM				*d*PKPab	PKPbc	10 06	45.2	+0.4
MEM				*dp*PKPdf	PKPab	10 06	46.7	+0.7
FOEL	Foel Wylfa	146.79	351	*e*P	PKPbc	10 06	45.0	+0.1
BSTI	Sart Tilman	146.90	340	*d*PKP	PKPbc	10 06	45.9	+0.6
BHOU	Houvegnez	146.96	340	*d*PKPdf	PKPdf	10 06	43.4	-0.1
BHOU				*dp*PKPdf	PKPab	10 06	46.8	-0.1
BHOU				*d*PKiKP	PKiKP	10 06	47.8	-0.3
HLM1	Long Mynd	147.10	351	*e*P	PKPbc	10 06	45.6	-0.2
SNF	Seneffe	147.36	342	*dp*PKPdf	PKPab	10 06	47.5	-1.0
BMRD	Maredsous	147.40	341	*d*PKP	PKPbc	10 06	46.8	+0.1
WLF	Walferdange	147.50	339	*d*PKiKP	PKPab	10 06	48.5	-0.6
MCH1	Michaelchurch	147.62	350	*e*P	PKPbc	10 06	47.8	+0.5
DOU	Dourbes	147.63	341	*dp*PKPdf	PKPbc	10 06	47.7	+0.4
DOU				*d*PKiKP	PKiKP	10 06	48.6	-0.8
MONM	Monmouth	147.75	350	*e*P	PKPbc	10 06	48.1	+0.6
SWN1	Swindon	147.89	349	*e*P	PKPbc	10 06	48.8	+0.8
TORD	Torodi Ar. Bea	165.77	242	PKP	PKPdf	10 07	09.5	+0.8
	comp=Z,0.4nm,0.9s,baz=146,slow=3.3,SNR=2.1							

IDC ***19*** *09:47:20.9±0.4,20.24S×169.02E,h0km,mb5.1/29, mbtmp5.0/33,ML4.7/4,MS6.2/39,Error ellipse: s-maj=14.3km s-min=10.4km az=82.0*

BJI ***19*** *09:47:20.0±0.0,20.45S×169.50E,h10km,mb5.1/61, mB6.2/69,Ms6.2/83,Ms7 6.0/79*

NEIC ***19*** *09:47:23.6±2.1,20.28S±0.09×169.1E±0.1,h13km±1km, mb5.7/136,Ms_20 6.3/411,Mwb6.2/68,Mwc6.3/116, Mww6.3,Error ellipse: s-maj=16.6km s-min=14.9km az=87.0*

NEIC ***19*** *09:47:23,20.41S×169.19E,h13km,Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr1.42; Mθθ-0.23; Mϕϕ-1.19; Mrθ0.80; Mrϕ0.24; Mθϕ-1.44; Fault plane solution: M₀2.13000×10¹⁸ NP1:ϕs154.92000°, δ70.69000°,λ83.50000°. NP2:ϕs353.92000°,δ20.33000°, λ107.89000°. Principal axes: T 2.2312, Plg64.0000°, Azm55.0000°; N -0.2276, Plg6.0000°, Azm157.0000°; P -2.0036, Plg25.0000°, Azm250.0000°;*

MOS ***19*** *09:47:24.9±1.2,20.15S×168.95E,h30km,mb5.7/52, MS6.1/32 Error ellipse: s-maj=8.4km s-min=6.9km az=114.7*

NEIC ***19*** *09:47:26,20.36S×169.11E,h20km,Moment Tensor Solution. Duration: 7ˢ4 Moment tensor: Scale 10¹⁸Nm; Mrr3.06; Mθθ-0.29; Mϕϕ-2.77; Mrθ1.21; Mθϕ0.79; Mϕr-1.52; Fault plane solution: M₀3.60000×10¹⁸ NP1: ϕs354.00000°,δ30.00000°,λ109.00000°. NP2: ϕs152.00000°,δ61.00000°,λ79.00000°. Principal axes: T 3.6912, Plg72.0000°, Azm38.0000°; N -0.1847, Plg9.0000°, Azm158.0000°; P -3.5065, Plg16.0000°, Azm250.0000°;*

GCMT ***19*** *09:47:31.6±0.0,20.27S×168.60E,h20km,MW6.3/128, Moment Tensor Solution. s128,c316; s128,c513; Duration: 3ˢ6 Moment tensor: Scale 1018Nm; Mrr2.91±.02; Mθθ-0.28±.01; Mϕϕ-2.63±.01; Mrθ1.26±.03; Mθϕ1.24±.01; Mϕr-2.33±.04; Best double couple: M₀4.03000×1018 NP1:ϕs341.00000°,δ25.00000°, λ97.00000°. NP2:ϕs153.00000°,δ66.00000°,λ87.00000°. Principal axes: T 3.9090, Plg69.0000°, Azm57.0000°

comp=Z,54µm,20.0s
SNZO South Karori 21.41 168 P **P** **09 52 14.0 +2.8**
KHZ Kahutara 22.28 171 IAMs_20 IAMs_20 10 00 47.9
comp=Z,101µm,18.0s
LTZ Lake Taylor 22.48 174 IAMs_20 IAMs_20 10 01 35.4
comp=Z,91µm,18.0s
RABL Rabaul 22.94 312 P **P** **09 52 25.7 -2.2**
KRVT Keravat (AS076 22.95 312 P **P** **09 52 25.7 -2.3**
comp=Z,70nm,0.4s,baz=180,slow=9.5,SNR=6.7
KRVT S **S** **09 56 33.1 -5.2**
comp=Z,28nm,0.6s,baz=142,slow=19,SNR=1.5
comp=Z,70nm,0.4s
CAN Canberra 22.98 226 P **P** **09 52 31.9 +3.7**
CAN pmax pmax
comp=Z,372nm,2.2s
OXZ Oxford 23.00 174 IAMs_20 IAMs_20 10 01 23.1
comp=Z,80µm,18.0s
OXZ Oxford 23.00 174 P **P** **09 52 31.2 +3.0**
FOZ Fox Glacier 23.07 178 P **P** **09 52 33.3 +4.5**
RPZ Rata Peaks 23.31 176 P **P** **09 52 33.2 +1.9**
comp=Z,16nm,1.0s,baz=331,slow=19,SNR=2.3
RPZ S **S** **09 56 45.6 +1.7**
comp=Z,12nm,1.0s,baz=312,slow=5.7,SNR=1.8
RPZ LR LR 10 01 14.5
comp=Z,64µm,18.6s,baz=350,slow=36
comp=Z,16nm,1.0s
RPZ Rata Peaks 23.31 176 IAMs_20 IAMs_20 10 01 39.4
comp=Z,115µm,18.0s
RPZ Rata Peaks 23.31 176 P **P** **09 52 31.6 +0.3**
WACZ Wakanui South 23.59 175 P **P** **09 52 39.1 +4.9**
JCZ Jackson Bay 23.60 180 P **P** **09 52 36.1 +1.7**
PMG Port Moresby 23.68 294 P **P** **09 52 35.6 +0.3**
comp=Z,73nm,0.8s,baz=103,slow=10.0,SNR=17
PMG S **S** **09 56 46.7 -3.6**
comp=Z,3.2nm,0.5s,baz=143,slow=12,SNR=1.0
comp=Z,73nm,0.8s
PMG Port Moresby 23.68 294 P **P** **09 52 35.6 +0.3**
PMG Port Moresby 23.68 294 *de*P **P** **09 52 36.0 +0.7**
PMG pmax pmax
comp=Z,723nm,1.7s
LBZ Lake Benmore 23.93 178 IAMs_20 IAMs_20 10 02 32.0
comp=Z,66µm,18.0s
LBZ Lake Benmore 23.93 178 P **P** **09 52 36.6 -0.9**
TMZ Timaru 23.97 176 P **P** **09 52 38.5 +0.7**
WKZ Wanaka 24.35 180 IAMs_20 IAMs_20 10 02 38.3
comp=Z,114µm,18.0s
ODZ Otahua Downs 24.61 177 IAMs_20 IAMs_20 10 02 56.9
comp=Z,63µm,18.0s
ODZ Otahua Downs 24.61 177 P **P** **09 52 46.9 +3.2**
EAZ Earnscleugh 24.76 179 P **P** **09 52 51.0 +6.0**
MLZ Mavora Lakes 24.90 181 IAMs_20 IAMs_20 10 01 52.9
comp=Z,71µm,18.0s
MLZ Mavora Lakes 24.90 181 P **P** **09 52 50.3 +4.0**
COEN Coen 25.41 281 P **P** **09 52 52.4 +1.2**
COEN IAmb IAmb 09 53 00.5
comp=Z,115nm,0.8s
TUZ Tuapeka 25.48 179 P **P** **09 52 56.6 +5.1**
TOO Toolangi 26.58 225 P **P** **09 53 01.9 +0.2**
TOO IAmb IAmb 09 53 19.4
comp=Z,321nm,1.8s
TOO Toolangi 26.58 225 P **P** **09 53 01.9 +0.2**
TOO pmax pmax
comp=Z,321nm,1.8s
STKA Stephens Creek 26.99 239 P **P** **09 53 06.4 +1.0**
comp=Z,26nm,0.7s,baz=64,slow=7.9,SNR=17
STKA S **S** **09 57 44.8 +1.9**
comp=Z,5.1nm,1.1s,baz=68,slow=5.4,SNR=1.0
STKA LR LR 10 03 50.4
comp=Z,49µm,18.4s,baz=81,slow=36
comp=Z,26nm,0.7s
STKA Stephens Creek 26.99 239 P **P** **09 53 05.8 +0.4**
PATS Pohnpei 29.02 338 IAMs_20 IAMs_20 10 04 27.3
comp=Z,54µm,18.0s
BBOO Buckleboo 31.75 240 P **P** **09 53 49.1 +1.5**
WB0 Warramunga Arr 32.41 265 P **P** **09 53 53.3 -0.3**
WB0 IAmb IAmb 09 54 09.5
comp=Z,146nm,1.1s
WRAB Tennant Creek 32.43 265 P **P** **09 53 53.6 -0.2**
WRAB IAmb IAmb 09 54 09.7
comp=Z,144nm,1.1s
WRAB Tennant Creek 32.43 265 IAMs_20 IAMs_20 10 07 20.4
comp=Z,63µm,18.0s
WRAB Tennant Creek 32.43 265 *ce*P **P** **09 53 53.5 -0.2**
WRAB pmax pmax
comp=Z,155nm,1.7s
WRA Warramunga Arr 32.44 265 P **P** **09 53 53.2 -0.7**
comp=Z,28nm,1.0s,baz=90,slow=8.5,SNR=18
WRA PcP **PcP** **09 56 42.4 +1.1**
comp=Z,2.5nm,0.6s,baz=97,slow=3.3,SNR=1.1
WRA S S 09 58 59.5 -9.2
comp=Z,1.2nm,0.8s,baz=100,slow=19,SNR=1.3
WRA ScP **ScP** **10 00 25.9 +0.6**
comp=Z,1.6nm,1.1s,baz=72,slow=3.4,SNR=2.2
WRA LR LR 10 07 22.0
comp=Z,57µm,18.4s,baz=92,slow=37
comp=Z,28nm,1.0s
WRA Warramunga Arr 32.44 265 P **P** **09 53 53.8 -0.1**
WRA Warramunga Arr 32.44 265 P **P** **09 53 53.8 -0.1**
WRA pmax pmax
comp=Z,13nm,1.3s
AS31 Alice Springs 32.58 258 P **P** **09 53 54.9 -0.2**
ASAR Alice Springs 32.58 258 P **P** **09 53 55.6 +0.5**
ASAR Alice Springs 32.58 258 P **P** **09 53 55.6 +0.5**
GENI Genyem 33.17 299 P **P** **09 54 03.9 +3.6**
comp=Z,20µmcomp=Z,9µmcomp=Z,247nm,1.6s
SMPI Sarmi 34.72 298 P P 09 54 18.8 +5.1
comp=Z,8µmcomp=Z,3µmcomp=Z,62nm,2.1s
MTN Manton Dam 36.92 276 P **P** **09 54 33.5 +0.8**
BAKI Biak 37.32 297 P P 09 54 40.9 +4.8
comp=Z,12µmcomp=Z,4µmcomp=Z,114nm,2.4s
FORT Forrest 38.10 246 P **P** **09 54 43.1 +0.6**
FORT IAmb IAmb 09 55 18.6
comp=Z,114nm,0.9s
SAUI Saumlaki 38.41 283 P **P** **09 54 45.7 +0.4**
KNRA Kununurra 38.41 270 P **P** **09 54 45.6 +0.3**
KNRA IAmb IAmb 09 55 01.0
comp=Z,154nm,0.9s
TBI Tubuai 38.63 102 *e*P P 09 54 56.3 +9.3
comp=Z,2µm,24.8s
TBI *e*S **S** **10 00 48.0 +4.3**
comp=Z,29µm,26.0s
TBI *e*LR LR 10 05 17.0
comp=Z,29µm,26.0s
PPT2 Papeete2 39.26 93 *e*P P 09 55 01.5 +9.0
comp=Z,3µm,24.2s
PPT2 *e*S **S** **10 00 59.0 +5.6**
comp=Z,19µm,25.2s
PPT2 *e*LR LR 10 05 31.9
comp=Z,59µm,25.2s
PPT Papeete 39.27 93 LR LR 10 09 41.4
comp=Z,19µm,18.5s,baz=260,slow=34
TIAR Tiarei 39.48 93 *e*P P 09 55 02.8 +8.5
comp=Z,15nm,0.9s
FAKI Fak Fak 39.75 291 P **P** **09 54 56.3 -0.2**
FAKI IAmb IAmb 09 55 02.4
comp=Z,377nm,1.9s
FAKI Fak Fak 39.75 291 P **P** **09 55 01.2 +4.7**
comp=Z,12µmcomp=Z,3µmcomp=Z,75nm,1.7s
GUMO Guam 41.25 323 S **S** **10 01 16.6 -6.2**
comp=Z,67nm,1.1s,baz=90,slow=20,SNR=1.6
GUMO LR LR 10 11 36.0
comp=Z,16µm,19.2s,baz=136,slow=35
SWI Sorong 41.62 293 P P 09 55 17.3 +5.4
comp=Z,12µmcomp=Z,3µmcomp=Z,105nm,1.0s
JOHN Johnston Islan 42.54 31 IAMs_20 IAMs_20 10 12 46.5
comp=Z,28µm,18.0s
AAI Ambon 42.99 287 P **P** **09 55 27.1 +3.9**
AAI pmax pmax
comp=Z,121nm,1.3s
AAI Ambon 42.99 287 P **P** **09 55 27.8 +4.6**
comp=Z,12µmcomp=Z,3µmcomp=Z,122nm,1.3s
NLAI Namlea 44.17 287 P **P** **09 55 36.4 +3.8**
comp=Z,11µmcomp=Z,5µmcomp=Z,195nm,2.0s
LBMI Labuha 45.00 291 P **P** **09 55 43.6 +4.3**
comp=Z,8µmcomp=Z,4µmcomp=Z,150nm,2.2s
PSA00 Pilbara Seismi 45.69 259 P **P** **09 55 45.3 +0.6**
PSA00 IAmb IAmb 09 56 04.7
comp=Z,85nm,1.2s
SANI Sanana 45.69 288 P P 09 55 50.0 +5.2
comp=Z,12µmcomp=Z,5µmcomp=Z,146nm,1.0s
TNTI Ternate 45.80 292 P **P** **09 55 44.7 -1.0**
TNTI Ternate 45.80 292 P P 09 55 55.2 +10
comp=Z,6µmcomp=Z,3µmcomp=Z,83nm,2.5s
MBWA Marble Bar 45.85 260 P **P** **09 55 47.0 +1.0**
MMRI Maumere 46.54 278 P **P** **09 55 53.0 +1.6**
EDFI Ende, Flores 47.01 277 P **P** **09 55 58.6 +3.3**
comp=Z,6µmcomp=Z,2µmcomp=Z,37nm,1.8s

NWAO Narrogin (SRO) 47.43 244 P **P** **09 55 59.3 +1.1**
NWAO Narrogin (SRO) 47.43 244 P **P** **09 55 59.3 +1.1**
NWAO pmax pmax
comp=Z,123nm,1.0s
NWAO MLR MLR
comp=Z,61µm,18.0s
BASI Baing, Sumba 47.57 275 P P 09 56 05.8 +6.3
comp=Z,7µmcomp=Z,4µmcomp=Z,272nm,1.5s
MORW Morawa 48.47 249 P **P** **09 56 07.1 +0.8**
WBSI Waikabubak, Su 48.86 275 P **P** **09 56 13.9 +4.3**
comp=Z,3µmcomp=Z,121nm,1.1s
LUWI Luwuk 49.01 287 P **P** **09 56 10.9 +0.2**
LUWI Luwuk 49.01 287 P P 09 56 15.6 +4.9
comp=Z,13µmcomp=Z,6µmcomp=Z,219nm,1.5s
BKSI Bulukumba 49.68 281 P **P** **09 56 19.4 +3.6**
comp=Z,11µmcomp=Z,3µmcomp=Z,42nm,1.4s
BNSI Bone 50.05 282 P P 09 56 23.9 +5.4
comp=Z,10µmcomp=Z,4µmcomp=Z,130nm,2.0s
KAPI Kappang 50.14 281 P **P** **09 56 20.3 +1.1**
KAPI Kappang 50.14 281 *d* iP **P** **09 56 19.9 +0.7**
KAPI pmax pmax
comp=Z,295nm,1.9s
DAV Davao City (W) 50.61 298 P **P** **09 56 22.2 -0.6**
comp=Z,82nm,0.4s,baz=98,slow=17,SNR=1.6
comp=Z,82nm,0.4s
PLAI Plampang 50.63 275 P **P** **09 56 26.7 +3.7**
comp=Z,12µmcomp=Z,6µmcomp=Z,143nm,2.4s
GIRL Giralia 50.69 257 P **P** **09 56 25.4 +2.0**
TTSI Tana Toraja 50.84 283 P **P** **09 56 28.9 +4.3**
TOLI2 Tolitoli 51.75 289 P **P** **09 56 30.3 -1.2**
KIP Kipapa 52.66 40 IAMs_20 IAMs_20 10 18 28.3
comp=Z,26µm,18.0s
CBIJ Chichi jima 53.87 330 P **P** **09 56 44.4 -2.3**
JCJ Chichijima 53.87 330 P **P** **09 56 45.7 -1.0**
comp=Z,80nm,0.9s,baz=198,slow=3.2,SNR=4.6
comp=Z,80nm,0.9s
VNDA Vanda 57.26 182 P **P** **09 57 10.0 -0.5**
comp=Z,3.3nm,1.0s,baz=23,slow=6.7,SNR=5.6
VNDA S **S** **10 05 04.6 -1.5**
comp=Z,0.4nm,0.8s,baz=10,slow=19,SNR=1.2
comp=Z,3.3nm,1.0s
VNDA Vanda 57.26 182 P **P** **09 57 09.2 -1.3**
VNDA Vanda 57.26 182 P **P** **09 57 10.0 -0.5**
SBA Scott Base 57.50 181 P **P** **09 57 13.0 +0.8**
SBA IAmb IAmb 09 57 33.9
comp=Z,91nm,1.1s
SBA Scott Base 57.50 181 P **P** **09 57 13.0 +0.8**
SBA pmax pmax
comp=Z,91nm,1.2s
TGY Tagaytay City 58.33 302 P **P** **09 57 18.4 -0.5**
comp=Z,109nm,0.4s,baz=153,slow=4.0,SNR=1.7
CASY Casey 58.94 204 P **P** **09 57 21.6 -0.8**
SBUM Sibu 60.02 285 P **P** **09 57 31.9 +1.1**
SBUM IAmb IAmb 09 58 02.3
comp=Z,142nm,1.8s
JOW Kunigami 61.30 318 P **P** **09 57 37.5 -1.7**
comp=Z,26nm,0.9s,baz=141,slow=9.7,SNR=5.5
JOW S **S** **10 05 56.2 -3.5**
comp=Z,5.8nm,0.6s,baz=79,slow=25,SNR=1.4
JOW LR LR 10 25 03.1
comp=Z,10µm,18.1s,baz=126,slow=37
comp=Z,26nm,0.9s
KSM Kuching 61.35 283 P **P** **09 57 39.7 -0.2**
KSM IAmb IAmb 09 58 01.3
comp=Z,72nm,1.1s
JAM Amami Oshima 61.64 321 P **P** **09 57 39.1 -2.3**
JOD2 Odawara 2 62.19 333 P **P** **09 57 43.0 -2.0**
JRY Ryogami san 62.91 333 P **P** **09 57 49.1 -0.7**
JMN Monobe 63.36 328 P **P** **09 57 53.2 +0.3**
MJAR Matsushiro Arr 63.65 333 P **P** **09 57 52.2 -2.5**
comp=Z,28nm,1.2s,baz=164,slow=6.1,SNR=12
comp=Z,28nm,1.2s
MJAR Matsushiro Arr 63.65 333 P **P** **09 57 52.5 -2.2**
MJAR Matsushiro Arr 63.65 333 P **P** **09 57 52.5 -2.2**
MJAR pmax pmax
comp=Z,20nm,0.9s
MAJO Matsushiro 63.65 333 *c* iP **P** **09 57 53.7 -1.0**
MAJO pmax pmax
comp=Z,46nm,1.2s
MAT Matsushiro 63.65 333 P **P** **09 57 52.6 -2.1**
JMM Marumori 63.72 335 P **P** **09 57 53.6 -1.5**
JGN Niukaw 63.77 332 *e*P **P** **09 57 53.6 -2.0**
JWT Wachi 63.87 330 P **P** **09 57 54.8 -1.4**
JAD Aida 64.19 329 *e*P **P** **09 57 56.8 -1.5**
JNU Nakatsue 64.45 325 S **S** **10 06 36.5 -2.6**
baz=180,slow=20
JNU Nakatsue 64.45 325 *e*P **P** **09 57 58.4 -1.6**
JHS Saijyo 64.75 328 P **P** **09 58 01.4 -0.6**
JYA Atsumi 64.78 335 *e*P **P** **09 57 59.1 -2.9**
JSD Sado 64.89 334 P **P** **09 57 58.4 -4.4**
JOM Ohasama 64.93 337 P **P** **09 57 58.5 -4.5**
JFU Fukue jima 2 65.27 323 P **P** **09 58 02.5 -2.9**
ERM Erimo 66.53 339 IAMs_20 IAMs_20 10 24 12.7
comp=Z,21µm,19.0s
ERM Erimo 66.53 339 *i* P **P** **09 58 12.5 -0.7**
ERM pmax pmax
comp=Z,34nm,1.2s
QZH Quanzhou 66.54 310⇑ *i*P **P** **09 58 13.1 -0.6**
QZH pP **sP** **09 58 17.8 +1.8**
QZH S **S** **10 07 05.6 +0.8**
QZH pmax pmax
comp=Z,2µm,8.0s
QZH LR LR
comp=Z,3µm,16.2s
QZH LR LR
comp=Z,4µm,16.4s
QZH LR LR
comp=Z,5µm,16.1s
YUK Yuzh-Kuril'sk 67.52 342 *d* iP **P** **09 58 17.9 -1.6**
YUK *e* 10 00 51.9
YUK PPP PPP 10 02 23.7
YUK *e*S **S** **10 07 12.8 -3.1**
YUK *e*SS SS 10 11 25.4 -12
YUK pmax pmax
comp=Z,473nm,5.6s
YUK pmax pmax
comp=N,216nm,1.2s
YUK pmax pmax
comp=E,229nm,1.2s
YUK pmax pmax
comp=Z,244nm,1.2s
DLV T Lat 67.57 293 **P** **09 58 22.0 +1.3**
KUR Kuril'sk 68.09 344 *c* iP **P** **09 58 23.5 +0.5**
KUR *e* 09 58 47.3
KUR *e* 10 00 54.9
KUR *e*PPP PPP 10 02 32.6
KUR *e*S **S** **10 07 25.2 +2.6**
KUR *e*SS **SS** **10 11 43.4 -2.3**
KUR MLR MLR
comp=Z,14µm,18.0s
KUR MLR MLR
comp=N,17µm,17.0s
KUR MLR MLR
comp=E,7µm,18.0s
ASAJ Asahikawa 68.59 340 LR LR 10 25 19.6
comp=E,20µm,20.3s,baz=163,slow=33
SSE Sheshan 68.72 317 P **P** **09 58 26.8 -0.5**
SSE pmax pmax
comp=E,17nm,0.8s
SSE pmax pmax
comp=E,800nm,7.1s
SSE LR LR
comp=E,3µm,19.8s
SSE LR LR
comp=E,3µm,19.3s
TJN Taejon 68.80 325 *ce*P **P** **09 58 26.6 -1.1**
KSRS Korea Array 69.31 326 P **P** **09 58 28.6 -2.2**
comp=E,5.3nm,1.0s,baz=143,slow=7.0,SNR=12
KSRS S **S** **10 07 35.2 -2.2**
comp=E,0.2nm,0.3s,baz=188,slow=13,SNR=1.4
comp=E,5.3nm,1.0s
KSAR Wonju Array Be 69.32 326 **P** **09 58 30.7 -0.2**
KSAR Wonju Array Be 69.32 326 P **P** **09 58 30.7 -0.2**
GZH Guangzhou 69.33 306 P **P** **09 58 30.8 -0.5**
GZH S **S** **10 07 41.4 +3.1**
GZH LR LR
comp=E,3µm,18.7s
GZH LR LR
comp=E,2µm,18.8s
BKNI Bangkinang 69.45 278 IAMs_20 IAMs_20 10 32 06.6
comp=Z,12µm,19.0s
QSPA South Pole Qui 69.65 180 P **P** **09 58 33.5 +0.7**
comp=Z,23nm,0.9s,baz=35,slow=1.2,SNR=14
QSPA LR LR 10 27 46.4
comp=Z,21µm,18.1s,baz=40,slow=35
comp=Z,23nm,0.9s

QSPA South Pole Qui 69.65 180 P **P** **09 58 34.2 +1.4**
QSPA South Pole Qui 69.65 180 IAMs_20 IAMs_20 10 27 52.7
comp=Z,22µm,18.0s
SEHB SEOHWA 69.75 327 P **P** **09 58 34.7 +1.1**
SEHB IAmb IAmb 09 58 43.3
comp=Z,149nm,1.9s
QIZ Qiongzhong 69.91 300⇑ *i*P **P** **09 58 35.5 +0.5**
QIZ PcP **PcP** **09 58 57.6 +0.2**
QIZ PP **PP** **10 01 10.6 +0.7**
QIZ S **S** **10 07 48.8 +3.5**
QIZ SS **SS** **10 12 23.4 +8.7**
QIZ pmax pmax
comp=Z,2µm,10.4s
QIZ LR LR
comp=Z,2µm,21.0s
QIZ LR LR
comp=Z,4µm,14.0s
QIZ LR LR
comp=Z,5µm,15.7s
INCN Inchon 70.01 325 P **P** **09 58 34.0 -1.2**
INCN IAmb IAmb 09 58 44.5
comp=Z,85nm,1.1s
INCN Inchon 70.01 325 P **P** **09 58 34.0 -1.2**
INCN pmax pmax
comp=Z,85nm,1.1s
INCN MLR MLR
comp=Z,9µm,18.0s
NJ2 Nanjing 70.85 316 *e*P **P** **09 58 41.4 +1.0**
NJ2 sP **pwP** **09 58 50.8 +2.2**
NJ2 PcP **PcP** **09 59 03.8 +2.8**
NJ2 S **S** **10 07 57.1 +1.4**
NJ2 SKS **ScS** **10 08 44.6 +0.1**
NJ2 pmax pmax
comp=Z,25nm,1.4s
NJ2 pmax pmax
comp=Z,2µm,6.6s
NJ2 LR LR
comp=Z,8µm,18.9s
NJ2 LR LR
comp=Z,5µm,21.8s
NJ2 LR LR
comp=Z,11µm,19.9s
HJU Haeju 70.91 325 P **P** **09 58 40.4 -0.2**
HJU pP **pwP** **09 58 48.2 -0.7**
HJU S **S** **10 07 55.8 -0.4**
HJU AmB
comp=Z,4µm,6.8s
HJU AMS AMS
comp=N,7µm,19.3s
HJU AMS AMS
comp=E,3µm,9.8s
HJU AMS AMS
comp=Z,5µm,13.4s
IPM Ipoh 71.04 282 P **P** **09 58 42.5 +0.5**
IPM IAmb IAmb 09 59 08.2
comp=Z,76nm,1.2s
YSS Yuzh-Sakhalins 71.09 341 **P** **09 58 40.7 -0.9**
YSS IAmb IAmb 09 59 02.0
comp=Z,90nm,1.1s
YSS Yuzh-Sakhalins 71.09 341⇑ *e*P **P** **09 58 41.5 0.0**
YSS pmax pmax
comp=Z,148nm,2.5s
YSS MLR MLR
comp=Z,18µm,18.5s
HHU Hamhung 71.37 328 P **P** **09 58 43.3 -0.1**
HHU pP **sP** **09 58 47.4 +1.7**
HHU S **S** **10 08 03.3 +1.8**
HHU AmB
comp=Z,3µm,6.2s
HHU AMS AMS
comp=N,287nm,13.1s
HHU AMS AMS
comp=E,318nm,14.6s
HHU AMS AMS
comp=Z,46nm,2.1s
TEY Ternei 71.49 336⇓ *e*P **P** **09 58 43.4 -0.6**
TEY *e* 10 07 58.0
TEY pmax pmax
comp=Z,100nm,12.4s
TEY pmax pmax
comp=N,100nm,12.6s
TEY pmax pmax
comp=E,200nm,15.7s
PYAG Pyongyang 71.63 326 P **P** **09 58 45.1 +0.1**
PYAG pP **sP** **09 58 49.8 +2.5**
PYAG S **S** **10 08 06.2 +1.7**
PYAG AmB
comp=Z,1µm,3.7s
PYAG AMS AMS
comp=N,467nm,6.3s
PYAG AMS AMS
comp=E,1µm,16.9s
PYAG AMS AMS
comp=Z,153nm,2.1s
SKR Severo-Kuril's 71.68 351 *e*P **P** **09 58 42.2 -2.8**
SKR *e*S **S** **10 08 05.0 +0.5**
SKR pmax pmax
comp=Z,45nm,1.0s
SKR pmax pmax
comp=Z,1µm,7.4s
SKR MLR MLR
comp=Z,5µm,19.0s
KULM Kulim 71.70 283 **P** **09 58 44.7 -1.4**
KULM IAmb IAmb 09 59 14.7
comp=Z,103nm,1.5s
MSHR Mys Shultsa 71.70 332 *c* iP **P** **09 58 44.8 -0.6**
MSHR pmax pmax
comp=Z,46nm,1.4s
MSHR MLR MLR
comp=Z,3µm,16.0s
CNSH ChangSha 72.53 310⇓ P **P** **09 58 46.5 -4.2**
CNSH S **S** **10 08 13.3 -2.1**
CNSH LR LR
comp=N,3µm,16.5s
CNSH LR LR
comp=E,4µm,23.4s
CNSH LR LR
comp=Z,5µm,22.8s
USA0B Ussuriysk Arra 72.64 333 **P** **09 58 49.4 -1.6**
USA0B IAmb IAmb 09 58 53.4
comp=Z,76nm,1.2s
USA0B Ussuriysk Arra 72.64 333 P **P** **09 58 49.4 -1.6**
USA0B pmax pmax
comp=Z,76nm,1.2s
USRK Ussuriysk Ar. 72.64 333 P **P** **09 58 49.8 -1.1**
comp=Z,38nm,0.9s,baz=144,slow=4.9,SNR=21
USRK S **S** **10 08 15.2 -0.7**
comp=Z,2.0nm,0.6s,baz=135,slow=42,SNR=1.4
USRK LR LR 10 28 34.0
comp=Z,9µm,20.0s,baz=134,slow=34
comp=Z,38nm,0.9s
USRK Ussuriysk Ar. 72.64 333 P **P** **09 58 48.9 -2.1**
GULI GuiLin 72.81 306 P **P** **09 58 51.1 -1.3**
GULI pmax pmax
comp=Z,20nm,1.5s
GULI LR LR
comp=Z,4µm,17.1s
GULI LR LR
comp=Z,3µm,19.9s
GULI LR LR
comp=Z,6µm,18.5s
WHN Wuhan 72.92 313⇓ P **P** **09 58 55.0 +2.1**
WHN sP **pwP** **09 59 03.6 +2.5**
WHN S **S** **10 08 18.8 -0.9**
WHN SKS **SKSac** **10 08 53.9 -4.8**
WHN pmax pmax
comp=Z,3µm,7.3s
WHN LR LR
comp=Z,5µm,16.9s
WHN LR LR
comp=Z,9µm,15.3s
WHN LR LR
comp=Z,20µm,22.4s
SHEM Shemya Is, Ala 72.97 3 P **P** **09 58 50.4 -2.3**
comp=Z,32nm,0.8s,baz=97,slow=5.7,SNR=2.6
SHEM LR LR 10 26 09.1
comp=Z,11µm,20.1s,baz=193,slow=32
comp=Z,32nm,0.8s
SUJ Sinuiju 73.07 326 P **P** **09 58 53.5 -0.1**
SUJ pP **pP** **09 58 55.2 0.0**
SUJ S **S** **10 08 21.9 +0.9**
SUJ AmB
comp=Z,4µm,6.3s
SUJ AMS AMS
comp=N,3µm,9.7s
SUJ AMS AMS

comp=E,3µm,10.0s
SUJ AMS AMS
comp=Z,3µm,9.5s
ADK Adak 73.08 9 P **P** **09 58 51.2 -2.1**
ADK IAmb IAmb 09 59 06.1
comp=Z,98nm,1.4s
ADK Adak 73.08 9 IAMs_20 IAMs_20 10 24 49.6
comp=Z,16µm,21.0s
ADK Adak 73.08 9 P **P** **09 58 51.2 -2.1**
ADK pmax pmax
comp=Z,98nm,1.4s
UGL Uglegorsk 73.20 342 *d* iP **P** **09 58 58.0 +3.9**
UGL *e*S **SKiKP** **10 08 25.1 -1.3**
UGL pmax pmax
comp=Z,4µm,7.8s
UGL smax smax
comp=E,7µm,16.0s
UGL smax smax
comp=N,4µm,13.0s
PET Petropavlovsk 73.67 354 P **P** **09 58 55.2 -1.5**
PET IAmb IAmb 09 59 07.3
comp=Z,73nm,1.2s
PET IAMs_20 IAMs_20 10 25 14.3
comp=Z,15µm,22.0s
PET Petropavlovsk 73.67 354 *e*P **P** **09 58 57.5 +0.7**
PET *e*S **SKiKP** **10 08 24.1 -2.9**
PET *e*PS **PnS** **10 08 58.3 -1.7**
PET pmax pmax
comp=Z,4µm,9.3s
PET pmax pmax
comp=Z,4µm,11.2s
PET smax smax
comp=N,2µm,9.5s
PET smax smax
comp=N,2µm,12.8s
PET MLR MLR
comp=Z,8µm,18.0s
DL2 Dalian 73.77 323 P **P** **09 58 57.8 0.0**
DL2 S **S** **10 08 29.4 +0.4**
DL2 pmax pmax
comp=Z,49nm,0.8s
DL2 pmax pmax
comp=Z,2µm,11.0s
DL2 LR LR
comp=Z,4µm,29.4s
DL2 LR LR
comp=Z,4µm,27.3s
DL2 LR LR
comp=Z,6µm,19.6s
PEA0B Petropavlovsk- 73.85 353 **P** **09 58 56.9 -1.0**
PEA0B Petropavlovsk- 73.85 353 *ce*P **P** **09 58 57.0 -0.9**
PETK Petropavlovsk- 73.85 353 P **P** **09 58 56.4 -1.6**
comp=Z,28nm,0.9s,baz=149,slow=6.1,SNR=12
PETK LR LR 10 27 56.4
comp=Z,13µm,19.9s,baz=165,slow=33
comp=Z,28nm,0.9s
PETK Petropavlovsk- 73.85 353 P **P** **09 58 56.7 -1.2**
PETK Petropavlovsk- 73.85 353 P **P** **09 58 56.7 -1.2**
MDJ Mudanjiang 74.01 332 P **P** **09 58 58.3 -0.7**
MDJ IAmb IAmb 09 59 04.0
comp=Z,66nm,1.1s
MDJ Mudanjiang 74.01 332 P **P** **09 58 58.8 -0.2**
MDJ PP **PP** **10 01 43.8 -0.8**
MDJ S **S** **10 08 32.0 +0.5**
MDJ pmax pmax
comp=Z,46nm,1.2s
MDJ pmax pmax
comp=Z,4µm,8.0s
MDJ LR LR
comp=Z,5µm,17.9s
MDJ LR LR
comp=Z,3µm,19.5s
MDJ LR LR
comp=Z,9µm,19.6s
TIA Tai'an 74.62 319 ⇑P **P** **09 59 01.8 -1.0**
TIA S **S** **10 08 37.0 -1.8**
TIA pmax pmax
comp=Z,16nm,1.1s
TIA pmax pmax
comp=Z,2µm,6.0s
TIA LR LR
comp=Z,4µm,16.7s
TIA LR LR
comp=Z,5µm,16.6s
TIA LR LR
comp=Z,10µm,16.8s
TYV Tymovskoe 74.64 343 *e*P **P** **09 59 02.4 -0.2**
TYV pmax pmax
comp=Z,26nm,1.2s
TYV pmax pmax
comp=Z,3µm,8.3s
SNY Shenyang 74.79 327 ⇑P **P** **09 59 02.6 -1.0**
SNY S **S** **10 08 41.8 +1.5**
SNY pmax pmax
comp=Z,21nm,1.3s
SNY LR LR
comp=Z,4µm,18.5s
SNY LR LR
comp=Z,2µm,17.8s
SNY LR LR
comp=Z,7µm,19.7s
CN2 Changchun 75.31 329 *e*P **P** **09 59 03.8 -2.8**
CN2 *e*PP **PP** **10 01 55.8 +0.2**
CN2 S **S** **10 08 43.5 -2.5**
CN2 *e*SS **SS** **10 13 38.5 +2.0**
CN2 pmax pmax
comp=Z,30nm,1.6s
CN2 pmax pmax
comp=Z,1µm,8.5s
CN2 LR LR
comp=Z,3µm,18.0s
CN2 LR LR
comp=Z,5µm,18.0s
CN2 LR LR
comp=Z,3µm,19.0s
NIKH Nikolski High 75.58 14 P **P** **09 59 10.2 +2.3**
baz=201
BNX BinXian 75.86 331 ⇑P **P** **09 59 08.1 -1.6**
BNX pP **pwP** **09 59 15.5 -2.5**
BNX PcP **PcP** **09 59 23.5 +1.3**
BNX S **S** **10 08 51.3 -0.7**
BNX sS sS 10 09 04.3 +9.5
BNX pmax pmax
comp=Z,41nm,1.0s
BNX pmax pmax
comp=Z,2µm,7.8s
BNX LR LR
comp=Z,3µm,17.7s
BNX LR LR
comp=Z,6µm,18.7s
BNX LR LR
comp=Z,6µm,20.1s
ENH Enshi 76.19 310 P **P** **09 59 10.9 -1.1**
ENH IAmb IAmb 09 59 51.9
comp=Z,117nm,1.4s
GYA Guiyang 76.25 305 ⇓*i*P **P** **09 59 15.0 +2.5**
GYA S **S** **10 09 00.5 +3.1**
GYA SS **SS** **10 14 00.3 +8.6**
GYA pmax pmax
comp=Z,2µm,8.0s
GYA LR LR
comp=Z,3µm,19.1s
GYA LR LR
comp=Z,3µm,20.5s
GYA LR LR
comp=Z,6µm,18.5s
LYN LuoYang 76.58 315 ⇑P P 09 59 04.3 -10
LYN sP pP 09 59 13.4 -2.4
LYN S **SKiKP** **10 08 38.5 +6.4**
LYN SKS **S** **10 09 00.4 -0.1**
LYN LuoYang 76.58 315 SS SS 10 13 47.0 -9.2
LYN pmax pmax
comp=Z,20nm,1.5s
LYN pmax pmax
comp=Z,4µm,8.3s
LYN LR LR
comp=N,9µm,20.4s
LYN LR LR
comp=E,10µm,19.8s
LYN LR LR
comp=Z,16µm,21.0s
KLR Kul'dur 76.81 336 P **P** **09 59 14.0 -1.0**
comp=Z,13nm,0.9s,baz=123,slow=5.4,SNR=19
KLR S **S** **10 08 58.5 -3.8**
comp=Z,0.2nm,0.3s,baz=113,slow=21,SNR=1.1
KLR LR LR 10 30 37.5
comp=Z,13µm,20.1s,baz=142,slow=34
comp=Z,13nm,0.9s
KLR Kul'dur 76.81 336 *ce*P **P** **09 59 14.9 -0.1**
KLR pmax pmax
comp=Z,119nm,2.5s
KLR MLR MLR
comp=Z,5µm,18.0s
HNS HongShan 76.88 318 ⇑P **P** **09 59 17.5 +1.9**
HNS PP **PP** **10 02 10.4 +1.4**
HNS S **S** **10 09 04.8 +1.3**
HNS pmax pmax
comp=Z,3µm,9.0s
HNS LR LR
comp=Z,5µm,19.2s
HNS LR LR
comp=Z,3µm,20.2s
HNS LR LR
comp=Z,7µm,19.6s
UNV Unalaska Valle 76.92 15 P **P** **09 59 17.7 +2.2**
baz=203
NKL Nikolayevsk 77.24 343 *e*P **P** **09 59 15.9 -1.4**
NKL *e*S **S** **10 09 07.3 +0.6**
NKL pmax pmax
comp=N,347nm,1.5s
NKL pmax pmax
comp=E,5.0nm,1.2s
NKL pmax pmax
comp=Z,59nm,1.2s
NKL smax smax
comp=E,9.0nm,1.5s
NKL smax smax
comp=N,390nm,2.3s
NKL MLR MLR
comp=N,3µm,15.0s
NKL MLR MLR
comp=Z,4µm,17.0s
MAW Mawson 77.25 202 P **P** **09 59 18.1 +0.8**
comp=Z,19nm,0.9s,baz=111,slow=9.6,SNR=12
MAW S **S** **10 09 04.6 -2.2**
comp=Z,1.1nm,0.8s,baz=34,slow=3.6,SNR=1.3
MAW LR LR 10 30 37.8
comp=Z,13µm,18.9s,baz=100,slow=34
comp=Z,19nm,0.9s
MAW Mawson 77.25 202 P **P** **09 59 17.6 +0.3**
BJT Baijiatuau 77.65 321 **P** **09 59 19.3 -0.7**
BJT IAmb IAmb 09 59 36.9
comp=Z,69nm,1.2s
BJT Baijiatuau 77.65 321 P **P** **09 59 19.3 -0.7**
BJT pmax pmax
comp=Z,69nm,1.2s
BJI Beijing 77.66 321 P **P** **09 59 21.5 +1.5**
BJI S **S** **10 09 19.8 +7.8**
BJI pmax pmax
comp=Z,31nm,1.7s
BJI pmax pmax
comp=Z,3µm,7.9s
BJI LR LR
comp=Z,2µm,19.4s
BJI LR LR
comp=Z,3µm,19.8s
BJI LR LR
comp=Z,7µm,21.2s
TIY Taiyuan 78.50 318 P **P** **09 59 26.3 +1.5**
TIY S **S** **10 09 24.5 +3.2**
TIY pmax pmax
comp=Z,2µm,8.3s
TIY LR LR
comp=Z,3µm,16.5s
TIY LR LR
comp=Z,5µm,16.5s
TIY LR LR
comp=Z,6µm,15.8s
FALS False Pass 78.61 16 P **P** **09 59 26.7 +1.9**
baz=206
KMI Kunming 78.64 302 ⇑P **P** **09 59 28.1 +2.0**
KMI pP pwP 09 59 32.9 -1.4
KMI S **S** **10 09 25.6 +1.9**
KMI SS **SS** **10 14 29.5 +1.4**
KMI pmax pmax
comp=Z,39nm,1.5s
KMI pmax pmax
comp=Z,2µm,8.2s
KMI LR LR
comp=Z,3µm,17.9s
KMI LR LR
comp=Z,3µm,17.9s
KMI LR LR
comp=Z,6µm,20.8s
XAN Xi'an 78.69 313 ⇓P **P** **09 59 25.0 -0.9**
XAN pP sP 09 59 30.0 +1.8
XAN sP pwP 09 59 32.4 -1.7
XAN PcP **PcP** **09 59 34.3 -0.5**
XAN PP **PP** **10 02 31.0 +6.7**
XAN S **S** **10 09 22.4 -1.0**
XAN ScS **SKKSac** **10 09 43.8 +1.2**
XAN SS **SS** **10 14 31.6 +3.5**
XAN pmax pmax
comp=Z,23nm,2.2s
XAN pmax pmax
comp=Z,3µm,7.8s
XAN LR LR
comp=Z,2µm,16.7s
XAN LR LR
comp=Z,7µm,18.1s
XAN LR LR
comp=Z,11µm,18.1s
CMAR Chiang Mai Arr 78.72 295 P **P** **09 59 26.1 -0.3**
comp=Z,5.3nm,0.9s,baz=135,slow=4.2,SNR=9.6
CMAR S **S** **10 09 19.6 -4.6**
comp=Z,2.8nm,0.3s,baz=40,slow=15,SNR=4.5
CMAR LR LR 10 34 29.3
comp=Z,1µm,19.9s,baz=125,slow=36
comp=Z,5.3nm,0.9s
CMAR Chiang Mai Arr 78.72 295 P **P** **09 59 26.4 0.0**
CMAR Chiang Mai Arr 78.72 295 P **P** **09 59 26.4 0.0**
CHTO Chiang Mai 78.88 295 P **P** **09 59 26.4 -0.8**
CHTO IAmb IAmb 09 59 54.8
comp=Z,61nm,1.2s
CHTO Chiang Mai 78.88 295 P **P** **09 59 26.4 -0.8**
CHTO pmax pmax
comp=Z,61nm,1.3s
CNBA Chernabura Isl 79.62 18 IAMs_20 IAMs_20 10 33 55.4
comp=Z,15µm,19.0s
CHNA Chernabura Isl 79.63 18 P **P** **09 59 31.8 +1.3**
baz=210
SDPT Sand Point 79.83 17 P **P** **09 59 33.8 +2.3**
baz=209
PZH PanZhiHua 80.09 303 P P 09 59 39.3 +5.4
PZH pP **PcP** **09 59 41.0 -0.2**
PZH PP **PP** **10 02 40.3 +4.0**
PZH S **S** **10 09 41.8 +3.0**
PZH sS **SKSac** **10 09 50.8 -1.1**
PZH SS **SS** **10 14 53.3 +3.6**
PZH pmax pmax
comp=Z,80nm,1.1s
PZH pmax pmax
comp=Z,620nm,6.8s
PZH LR LR
comp=Z,8µm,16.7s
PZH LR LR
comp=Z,9µm,16.3s
PZH LR LR
comp=Z,9µm,16.4s
XLT XiLinHaoTe 80.22 324 ⇑*i*P **P** **09 59 34.4 +0.3**
XLT pP PcP 09 59 39.4 -1.9
XLT sP pwP 09 59 41.9 -0.5
XLT S **S** **10 09 37.8 -1.5**
XLT sS sS 10 09 46.6 +4.4
XLT pmax pmax
comp=Z,35nm,1.7s
XLT pmax pmax
comp=Z,3µm,8.2s
XLT LR LR
comp=Z,530nm,18.6s
XLT LR LR
comp=Z,5µm,18.2s
XLT LR LR
comp=Z,8µm,18.8s
CD2 Chengdu 80.72 308 P **P** **09 59 39.1 +2.1**
CD2 sP pwP 09 59 45.3 +0.1
CD2 PP **PP** **10 02 40.6 -0.7**
CD2 S **S** **10 09 48.8 +3.8**
CD2 SS **SS** **10 15 04.5 +5.8**
CD2 pmax pmax
comp=Z,30nm,1.3s
CD2 pmax pmax
comp=Z,2µm,8.8s
CD2 LR LR
comp=Z,5µm,19.9s
CD2 LR LR
comp=Z,5µm,20.8s
CD2 LR LR
comp=Z,6µm,23.7s
S14K Fog Glacier 80.90 17 P **P** **09 59 38.1 +0.7**
baz=210
HHC Hu-ho-hao-te 80.92 320 *e*P **P** **09 59 37.9 -0.1**
HHC S **S** **10 09 49.0 +2.2**
HHC pmax pmax
comp=Z,53nm,1.0s
HHC pmax pmax
comp=Z,4µm,7.6s
HHC LR LR
comp=Z,9µm,17.3s
HHC LR LR
comp=Z,6µm,16.3s
HHC LR LR
comp=Z,13µm,16.7s
BELA Belgrano 2 80.96 175 P **P** **09 59 36.8 -0.8**
BELA IAmb IAmb 10 00 01.1
comp=Z,99nm,1.1s
MA2 Magadan 81.07 351 P **P** **09 59 36.4 -1.8**
comp=Z,16nm,0.9s,baz=178,slow=8.5,SNR=3.8
MA2 LR LR 10 30 10.5
comp=Z,17µm,21.8s,baz=169,slow=32
comp=Z,16nm,0.9s
MA2 Magadan 81.07 351 P **P** **09 59 37.2 -0.9**
MA2 IAMs_20 IAMs_20 10 29 59.4
comp=Z,18µm,22.0s
MA2 Magadan 81.07 351 *i* P **P** **09 59 38.2 0.0**
MA2 pmax pmax
comp=Z,43nm,1.2s
MA2 MLR MLR
comp=Z,7µm,18.0s
CHIR Chirikof Islan 81.66 19 P **P** **09 59 43.9 +2.6**
baz=213
BTO Baotou 81.72 319 *e*P **P** **09 59 42.3 +0.1**
BTO S **S** **10 10 00.8 +5.6**
BTO LR LR
comp=Z,10µm,16.9s
BTO LR LR
comp=Z,12µm,18.8s
HIA Hailar 81.97 330 P **P** **09 59 42.1 -1.1**
HIA Hailar 81.97 330 P **P** **09 59 42.1 -1.1**
HIA pmax pmax
comp=Z,40nm,1.2s
HIA MLR MLR
comp=Z,6µm,20.0s
ZEA Zeya 82.11 336 *e*P **P** **09 59 43.5 -0.3**
ZEA *e*S **S** **10 10 02.7 +4.4**
ZEA *e*SS **SS** **10 15 21.4 +3.0**
ZEA pmax pmax
comp=N,10.0nm,0.9s
ZEA pmax pmax
comp=Z,20nm,1.1s
ZEA pmax pmax
comp=E,400nm,12.5s
ZEA pmax pmax
comp=N,600nm,9.2s
ZEA pmax pmax
comp=Z,2µm,12.9s
SII Sitkinak Islan 82.72 20 P **P** **09 59 49.8 +2.8**
baz=214
SMAI San Martin Ant 82.81 162 P **P** **09 59 47.1 -0.3**
SMAI IAmb IAmb 10 00 01.4
comp=Z,82nm,1.0s
R17K Ugashik Creek 82.96 18 P **P** **09 59 51.4 +3.2**
baz=212
LZH Lanzhou 83.30 312 *e*P P 09 59 42.3 -8.3
LZH pP pP 09 59 46.4 -5.9
LZH sP sP 09 59 49.0 -3.9
LZH pmax pmax
comp=Z,42nm,1.0s
LZH Lanzhou 83.30 312 *e*P **P** **09 59 51.6 +1.0**
LZH pP PcP 09 59 55.5 +0.4
LZH sP pwP 09 59 58.3 -0.6
LZH S **S** **10 10 14.0 +2.4**
LZH sS ScS 10 10 25.3 -0.1
LZH SS **SS** **10 15 38.4 +1.3**
LZH pmax pmax
comp=Z,26nm,1.1s
LZH pmax pmax
comp=Z,2µm,4.6s
LZH LR LR
comp=Z,4µm,12.7s
LZH LR LR
comp=Z,4µm,15.5s
LZH LR LR
comp=Z,7µm,17.3s
OHAK Old Harbor 83.55 20 **P** **09 59 48.7 -2.5**
OHAK Old Harbor 83.55 20 P **P** **09 59 51.9 +0.8**
baz=215
P16K Nushagak River 83.70 16 P **P** **09 59 52.2 +0.3**
baz=211
Q16K King Salmon 83.76 17 P **P** **09 59 52.2 0.0**
baz=212
SEY Seymchan 84.08 352 P **P** **09 59 51.8 -2.0**
comp=Z,9.1nm,1.0s,baz=112,slow=2.8,SNR=12
SEY LR LR 10 34 41.1
comp=Z,14µm,19.8s,baz=162,slow=34
comp=Z,9.1nm,1.0s
SEY Seymchan 84.08 352 *ce*P **P** **09 59 53.0 -0.8**
SEY pmax pmax
comp=Z,66nm,2.5s
SEY MLR MLR
comp=Z,5µm,18.0s
O16K Kokwok River B 84.16 16 P **P** **09 59 54.4 +0.1**
baz=211
Q18K Katmai Hardscr 84.21 18 P **P** **09 59 54.9 +0.3**
baz=214
KDAK Kodiak Island 84.23 20 P **P** **09 59 53.3 -1.3**
comp=Z,18nm,0.8s,baz=136,slow=3.5,SNR=4.9
KDAK LR LR 10 36 06.1
comp=Z,19µm,18.0s,baz=232,slow=35
comp=Z,18nm,0.8s
KDAK Kodiak Island 84.23 20 *i* P **P** **09 59 51.7 -2.9**
KDAK pmax pmax
comp=Z,169nm,2.7s
P17K Kvichak River 84.26 17 P **P** **09 59 54.4 -0.4**
baz=212
O17K Koliganek Bris 84.58 16 P **P** **09 59 56.5 +0.1**
baz=212
N16K Nishlik Lake 84.75 15 P **P** **09 59 58.8 +1.5**
baz=210
P18K Big Mountain, 84.77 18 P **P** **09 59 55.2 -2.2**
P18K Big Mountain, 84.77 18 P **P** **09 59 57.2 -0.2**
baz=213
Q19K Cape Douglas, 84.84 18 P **P** **09 59 58.3 +0.5**
baz=215
Q20K Shuyak Island 84.96 19 P **P** **09 59 59.2 +0.9**
baz=216
O18K Koktuh Hills 85.16 17 P **P** **09 59 59.3 0.0**
baz=213
GAMB Gambell 85.26 9 P **P** **10 00 01.0 +1.3**
baz=198
N18K Kilae Creek 85.67 17 P **P** **10 00 02.3 +0.5**
baz=213
O19K Port Alsworth 85.69 17 P **P** **10 00 00.2 -1.7**
O19K IAmb IAmb 10 00 32.2
comp=Z,56nm,1.0s
O19K Port Alsworth 85.69 17 P **P** **10 00 01.3 -0.6**
baz=214
PMSA Palmer Station 85.92 160 LR LR 10 35 41.7
comp=Z,10µm,18.2s,baz=225,slow=34
PMSA Palmer Station 85.92 160 IAMs_20 IAMs_20 10 36 05.3
comp=Z,14µm,18.0s
HOM Homer 86.03 19 P **P** **10 00 04.7 +1.0**
baz=216
O20K Slope Mountain 86.08 18 P **P** **10 00 04.2 +0.2**
baz=216
O20K S **S** **10 10 42.3 +4.2**
baz=216
SVW2 Sparrevohn 86.10 16 P **P** **10 00 02.8 -1.2**
SVW2 IAmb IAmb 10 00 18.6
comp=Z,55nm,1.4s
N19K Bonanza Creek 86.16 17 P **P** **10 00 04.3 -0.1**
baz=214
BRSE Bradley Lake S 86.38 19 P **P** **10 00 05.4 0.0**
baz=217
BRSE S **S** **10 10 44.2 +3.3**
baz=217
MCCM Marconi Confer 86.47 47 IAMs_20 IAMs_20 10 33 48.0
comp=Z,12µm,19.0s
SNCC San Nicolas Is 86.58 53 P **P** **10 00 09.1 +2.1**

baz=243
CIT Chita 86.75 329 *e*P **P** **10 00 06.1 -1.3**
CIT pmax pmax
comp=Z,208nm,3.1s
HOPS Hopland Field 86.76 46 IAMs_20 IAMs_20 10 29 38.5
comp=Z,11µm,22.0s
KMPM Mount Pierce 86.76 45 P **P** **10 00 06.7 -1.1**
SAO San Andreas Ge 86.81 49 P **P** **10 00 06.6 -1.4**
SAO IAmb IAmb 10 00 21.9
comp=Z,50nm,1.4s
SAO San Andreas Ge 86.81 49 P **P** **10 00 06.6 -1.4**
SAO pmax pmax
comp=Z,50nm,1.4s
SCZ2 Santa Cruz Isl 86.84 52 P **P** **10 00 09.3 +1.0**
baz=243
KMRM Mail Ridge 86.94 45 P **P** **10 00 07.5 -1.2**
KMRM IAmb IAmb 10 00 32.1
comp=Z,66nm,1.1s
SBC Santa Barbara 86.98 52 P **P** **10 00 11.1 +2.2**
baz=243
ANM Nome 87.00 11 IAMs_20 IAMs_20 10 32 23.7
comp=Z,12µm,21.0s
ANM Nome 87.00 11 P **P** **10 00 09.2 +0.9**
baz=204
ANM S S 10 10 56.8 +10
baz=204
JCC Jacoby Creek, 87.02 44 IAMs_20 IAMs_20 10 32 14.5
comp=Z,15µm,19.0s
SEW Seward 87.06 19 P **P** **10 00 07.4 -1.2**
baz=218
SEW S **S** **10 10 51.9 +4.5**
baz=218
CAPN Captain Cook N 87.07 18 P **P** **10 00 09.1 +0.4**
baz=217
M19K Big River Lodg 87.09 16 P **P** **10 00 09.7 +0.9**
baz=214
M19K S **S** **10 10 54.1 +6.4**
baz=214
PKM Mcpherson Peak 87.11 51 P **P** **10 00 11.9 +2.1**
baz=243
SCI2 San Clemente I 87.19 53 P **P** **10 00 11.6 +1.6**
baz=244
L19K White Mountain 87.20 16 **P** **10 00 07.0 -2.4**
L19K IAmb IAmb 10 00 18.7
comp=Z,32nm,0.9s
L19K IAMs_20 IAMs_20 10 42 52.7
comp=Z,9µm,18.0s
L19K White Mountain 87.20 16 P **P** **10 00 10.5 +1.1**
baz=214,SNR=5.3
O22K Cooper Landing 87.28 19 P **P** **10 00 09.6 -0.1**
baz=218
M20K Styx River 87.41 17 P **P** **10 00 10.5 0.0**
baz=215
CIS Catalina Islan 87.48 53 P **P** **10 00 12.6 +1.2**
baz=244
TNA Tin City 87.50 9 P **P** **10 00 11.6 +1.0**
baz=202
TNA S **S** **10 10 59.8 +8.3**
baz=202
TTA Tatalina 87.53 15 P **P** **10 00 12.2 +1.2**
baz=212
Q23K Middleton Isla 87.55 21 IAMs_20 IAMs_20 10 39 15.1
comp=Z,13µm,18.0s
Q23K Middleton Isla 87.55 21 P **P** **10 00 10.7 -0.3**
baz=221
ULN Ulaanbaatar 87.63 324 P **P** **10 00 10.9 -1.1**
ULN Ulaanbaatar 87.63 324 *ce*P **P** **10 00 12.1 +0.2**
ULN pmax pmax
comp=Z,101nm,1.7s
NVL N'lazarevskaya 87.67 187 *e*P **P** **10 00 13.6 +1.9**
NVL *e* 10 03 38.6
NVL *e*PPP PPP 10 05 33.5
NVL *e*S **SKSac** **10 10 39.9 +0.4**
NVL *e* 10 10 59.4
NVL pmax pmax
comp=Z,29nm,1.0s
NVL MLR MLR
comp=Z,8µm,15.0s
L20K Farewell, AK 87.70 16 P **P** **10 00 12.2 +0.4**
baz=214
L20K S **S** **10 11 00.5 +6.8**
baz=214
FMP Fort Macarthur 87.71 53 P **P** **10 00 13.8 +1.3**
baz=244
GTA Gaotai 87.72 314 ⇑P **P** **10 00 12.0 -0.6**
GTA pP sP 10 00 16.6 +1.7
GTA sP pwP 10 00 21.3 +0.5
GTA PP **PP** **10 03 40.5 +2.1**
GTA SKS **SKSac** **10 10 38.0 -2.9**
GTA S **SKKSac** **10 10 46.1 -4.5**
GTA sS ScS 10 11 01.8 +0.1
GTA pmax pmax
comp=Z,10.0nm,1.1s
GTA pmax pmax
comp=Z,2µm,7.6s
GTA LR LR
comp=Z,3µm,17.4s
GTA LR LR
comp=Z,4µm,21.1s
GTA LR LR
comp=Z,4µm,20.4s
SUA Susitna One 87.75 18 IAMs_20 IAMs_20 10 38 37.1
comp=Z,14µm,19.0s
SUA Susitna One 87.75 18 P **P** **10 00 11.6 -0.5**
baz=217
RC01 Rabbit Creek A 87.75 19 P **P** **10 00 12.3 +0.3**
baz=218
RC01 S **S** **10 10 59.1 +5.0**
baz=218
OSI Osito Audit: C 87.79 52 P **P** **10 00 14.3 +1.4**
baz=243
OSI S S 10 11 07.6 +12
baz=243
YAK Yakutsk 87.89 343 S **SKSac** **10 10 38.5 -2.0**
comp=Z,3.5nm,0.3s,baz=109,slow=0.9,SNR=6.8
YAK LR LR 10 39 31.5
comp=Z,10µm,18.6s,baz=142,slow=36
YAK Yakutsk 87.89 343 P **P** **10 00 10.7 -1.9**
YAK IAMs_20 IAMs_20 10 41 01.5
comp=Z,14µm,19.0s
YAK Yakutsk 87.89 343 *e*P **P** **10 00 11.2 -1.4**
YAK *e*S **SKSac** **10 10 38.6 -2.0**
YAK pmax pmax
comp=Z,75nm,1.0s
YAK pmax pmax
comp=N,16nm,1.1s
YAK pmax pmax
comp=E,12nm,1.2s
YAK smax smax
comp=N,3µm,9.8s
YAK smax smax
comp=E,4µm,10.5s
YAK MLR MLR
comp=Z,15µm,20.0s
YAK MLR MLR
comp=N,6µm,17.0s
YAK MLR MLR
comp=E,5µm,19.0s
DECC Green Verdugo 87.92 52 P **P** **10 00 14.8 +1.3**
baz=244
SKT Skwentna 87.94 18 IAMs_20 IAMs_20 10 37 57.1
comp=Z,9µm,19.0s
SKT Skwentna 87.94 18 P **P** **10 00 11.3 -1.6**
baz=217
ARVC Arvin 87.94 51 P **P** **10 00 13.2 -0.3**
baz=243,SNR=7.1
L02F Cave Junction 87.97 43 P **P** **10 00 15.3 +1.7**
baz=240
L02F S S 10 11 06.4 +9.4
baz=240
SONM Songino Array 87.98 323 P **P** **10 00 12.1 -1.5**
comp=Z,16nm,1.1s,baz=137,slow=4.8,SNR=18
SONM S **SKSac** **10 10 43.2 +1.0**
comp=Z,0.4nm,0.5s,baz=190,slow=7.3,SNR=1.4
SONM LR LR 10 40 44.1
comp=Z,6µm,18.5s,baz=122,slow=36
comp=Z,16nm,1.1s
SONM Songino Array 87.98 323 P **P** **10 00 13.0 -0.6**
SONM Songino Array 87.98 323 P **P** **10 00 13.0 -0.6**
SONM pmax pmax
comp=Z,619nm,2.5s
SNAA Sanae 87.98 183 LR LR 10 39 20.0
comp=Z,8µm,18.3s,baz=180,slow=35
SNAA Sanae 87.98 183 P **P** **10 00 11.7 -1.6**
SNAA IAMs_20 IAMs_20 10 40 01.2
comp=Z,12µm,18.0s
SNAA Sanae 87.98 183 *ce*P **P** **10 00 09.3 -4.0**
SNAA pmax pmax
comp=Z,9.0nm,1.0s
VES Vestal, Richgr 88.08 51 P **P** **10 00 15.3 +1.1**
baz=243
VES S S 10 11 07.6 +9.3
baz=243
VOG Valley Oaks Go 88.08 50 P **P** **10 00 13.5 -0.7**
baz=243
ORV Oroville 88.09 46 **P** **10 00 12.8 -1.4**
ORV IAmb IAmb 10 00 28.4
comp=Z,41nm,1.2s
ORV Oroville 88.09 46 P **P** **10 00 12.8 -1.4**
ORV pmax pmax
comp=Z,41nm,1.3s
CMB Columbia Colle 88.15 48 IAMs_20 IAMs_20 10 34 51.4
comp=Z,14µm,19.0s
M22K Willow 88.16 18 P **P** **10 00 12.8 -1.1**
baz=218
K02D Willamette Mer 88.20 43 P **P** **10 00 14.3 -0.4**
baz=240
K02D S **S** **10 11 07.0 +7.7**
baz=240
BILL Bilibino 88.21 359 **P** **10 00 12.7 -1.4**
BILL IAmb IAmb 10 01 04.6
comp=Z,53nm,1.2s
BILL Bilibino 88.21 359 *de*P **P** **10 00 12.3 -1.7**
BILL *i* 10 00 20.5
BILL *i* 10 00 28.4
BILL *i* S **SKSac** **10 10 41.5 -0.8**
BILL pmax pmax
comp=Z,68nm,2.4s
BILL MLR MLR
comp=Z,3µm,17.0s
HIN Hinchinbrook I 88.23 20 IAMs_20 IAMs_20 10 36 35.9
comp=Z,13µm,19.0s
109C Camp Elliot, M 88.24 54 P **P** **10 00 14.5 -0.5**
baz=244
J01E Myrtle Point 88.26 42 P **P** **10 00 16.4 +1.5**
baz=240
PMR Palmer 88.33 19 P **P** **10 00 13.8 -0.9**
baz=219
PMR S **S** **10 11 04.8 +5.3**
baz=219
ELS Elsinore Mount 88.33 53 **P** **10 00 13.3 -2.2**
YBH Yreka Blue Hor 88.34 44 LR LR 10 32 39.7
comp=Z,15µm,19.9s,baz=236,slow=31
YBH Yreka Blue Hor 88.34 44 P **P** **10 00 14.1 -1.3**
YBH IAmb IAmb 10 00 29.5
comp=Z,53nm,1.2s
YBH IAMs_20 IAMs_20 10 31 58.4
comp=Z,14µm,20.0s
YBH Yreka Blue Hor 88.34 44 P **P** **10 00 14.1 -1.3**
YBH pmax pmax
comp=Z,53nm,1.2s
K20K Telida 88.38 16 IAMs_20 IAMs_20 10 44 41.8
comp=Z,11µm,18.0s
K20K Telida 88.38 16 P **P** **10 00 15.2 +0.2**
baz=214
K20K S **S** **10 11 05.6 +5.6**
baz=214
KNK Knik Glacier 88.39 19 IAMs_20 IAMs_20 10 44 01.1
comp=Z,14µm,18.0s
KNK Knik Glacier 88.39 19 P **P** **10 00 13.9 -1.2**
baz=219
KNK S **S** **10 11 04.1 +3.8**
baz=219
GLI Glacier Island 88.41 20 IAMs_20 IAMs_20 10 44 57.5
comp=Z,10µm,18.0s
GLI Glacier Island 88.41 20 P **P** **10 00 15.1 0.0**
baz=220
GLI S **S** **10 11 05.6 +5.2**
baz=220
BFSC Mount Baldy Ra 88.41 53 P **P** **10 00 15.4 -0.6**
baz=244
BFSC S S 10 11 11.5 +10
baz=244
ISA Isabella, Lake 88.44 51 P **P** **10 00 14.5 -1.5**
ISA IAmb IAmb 10 00 30.4
comp=Z,43nm,1.1s
ISA Isabella, Lake 88.44 51 P **P** **10 00 14.5 -1.5**
ISA pmax pmax
comp=Z,43nm,1.1s
ISA Isabella, Lake 88.44 51 P **P** **10 00 15.7 -0.3**
baz=244,SNR=5.7
ISA S S 10 11 12.2 +10
baz=244
EDW2 Edwards Air Fo 88.45 52 P **P** **10 00 15.8 -0.3**
baz=244
EDW2 S S 10 11 12.2 +10
baz=244
MURC Murrieta 88.48 53 P **P** **10 00 15.0 -1.2**
baz=244
PPLA Purkeypile 88.49 17 P **P** **10 00 14.5 -1.2**
baz=216
FID Port Fidalgo 88.51 20 IAMs_20 IAMs_20 10 37 13.7
comp=Z,11µm,20.0s
EYAK Cordova Ski Ar 88.59 21 P **P** **10 00 14.6 -1.4**
baz=222
EYAK S **S** **10 11 07.4 +5.4**
baz=222
HUMO Hull Mountain 88.61 43 P **P** **10 00 15.4 -1.2**
HUMO IAmb IAmb 10 00 30.6
comp=Z,57nm,1.2s
HUMO IAMs_20 IAMs_20 10 32 16.2
comp=Z,16µm,20.0s
CUT Chulitna 88.63 18 IAMs_20 IAMs_20 10 38 41.6
comp=Z,11µm,19.0s
CUT Chulitna 88.63 18 P **P** **10 00 15.7 -0.4**
baz=218
DBO Dodson Butte 88.68 43 P **P** **10 00 15.9 -1.0**
DBO IAmb IAmb 10 00 19.5
comp=Z,42nm,1.3s
SML Sawmill 88.73 19 IAMs_20 IAMs_20 10 43 39.2
comp=Z,10µm,18.0s
SML Sawmill 88.73 19 P **P** **10 00 16.2 -0.5**
baz=219
MONP2 Monument Peak 88.77 54 P **P** **10 00 19.5 +1.7**
baz=245
MONP2 S S 10 11 15.6 +10
baz=245
I02E Swisshome, OR 88.79 42 P **P** **10 00 19.2 +1.9**
baz=240
I02E S S 10 11 13.8 +9.2
baz=240
L04D Klamath Falls 88.84 44 P **P** **10 00 15.5 -2.3**
L04D IAMs_20 IAMs_20 10 33 24.3
comp=Z,15µm,20.0s
L04D Klamath Falls 88.84 44 P **P** **10 00 19.2 +1.4**
baz=241
L04D S **S** **10 11 09.5 +4.0**
baz=241
GCSA Galena City Sc 88.87 14 P **P** **10 00 17.9 +0.7**
baz=212
I03D Drain, OR 88.90 42 P **P** **10 00 19.4 +1.5**
baz=240
IKP In-Ko-Pah, Jac 88.90 55 P **P** **10 00 20.2 +2.0**
baz=245
M23K Glacier View 88.91 19 P **P** **10 00 17.0 -0.5**
baz=220
M23K S **S** **10 11 08.9 +3.8**
baz=220
SUCK Suckling Hills 88.91 22 IAMs_20 IAMs_20 10 36 55.8
comp=Z,12µm,19.0s
LRMC Laurel Mtn Rad 88.94 51 P **P** **10 00 19.9 +1.5**
baz=244
LRMC S S 10 11 17.0 +10
baz=244
CAST Castle Rocks 88.95 16 P **P** **10 00 15.6 -2.0**
baz=216
BBRC Big Bear Solar 88.97 53 P **P** **10 00 20.2 +1.4**
baz=244
BBRC S S 10 11 16.6 +9.2
baz=244
DIB Dawson Inlet, 89.02 31 P **P** **10 00 17.0 -1.2**
DIB IAmb IAmb 10 00 38.4
comp=Z,40nm,1.2s
J20K Nowinta River 89.04 15 IAMs_20 IAMs_20 10 37 08.3
comp=Z,15µm,20.0s
J20K Nowinta River 89.04 15 P **P** **10 00 18.8 +0.8**
baz=214
PFO Pinyon Flats O 89.04 54 LR LR 10 33 25.2
comp=Z,8µm,19.9s,baz=252,slow=31
PFO Pinyon Flats O 89.04 54 IAMs_20 IAMs_20 10 33 11.8
comp=Z,9µm,19.0s
PFO Pinyon Flats O 89.04 54 P **P** **10 00 19.6 +0.6**
baz=245
YUH Yuha Desert 89.04 55 P **P** **10 00 16.1 -2.7**
TPFO Pinon Flats 89.04 54 P **P** **10 00 19.6 +0.6**
baz=245
MLAC Mammoth, Mammo 89.06 49 P **P** **10 00 20.5 +1.4**
baz=243
MLAC S **S** **10 11 16.7 +8.6**
baz=243
SCM Sheep Creek Mo 89.06 19 P **P** **10 00 18.4 +0.1**
baz=220
SCM S **S** **10 11 11.1 +4.5**
baz=220
CWC Cottonwood Cre 89.07 50 P **P** **10 00 20.6 +1.5**
baz=244
CWC S **S** **10 11 15.2 +7.1**
baz=244
BGLC Bering Glacier 89.11 22 P **P** **10 00 19.4 +0.9**
baz=224
RRX Edison Barstow 89.18 52 P **P** **10 00 18.7 -0.7**
baz=244
PNTR Pine Nut 89.18 48 P **P** **10 00 18.2 -1.4**
PNTR IAmb IAmb 10 00 46.5
comp=Z,60nm,1.4s
TIN Tinemaha, Big 89.23 50 P **P** **10 00 21.4 +1.6**
baz=244
TIN S **S** **10 11 17.5 +8.0**
baz=244
KLU Klutina 89.24 20 IAMs_20 IAMs_20 10 45 47.7
comp=Z,10µm,18.0s
KLU Klutina 89.24 20 P **P** **10 00 19.1 -0.1**
baz=222
KLU S **S** **10 11 12.9 +4.5**
baz=222
SWSC Sam W. Stewart 89.26 54 P **P** **10 00 21.5 +1.7**
baz=245
CHUM Lake Minchumin 89.26 16 P **P** **10 00 17.1 -2.0**
baz=216
BMRM Bremner River 89.28 21 P **P** **10 00 18.6 -0.7**
baz=223
MPMC Manual Prospec 89.33 51 P **P** **10 00 20.0 -0.3**
baz=244,SNR=6.9
K04D Chiloquin, OR 89.39 44 P **P** **10 00 20.1 -0.3**
baz=241
TRF Thorofare Moun 89.46 17 P **P** **10 00 18.9 -1.3**
baz=218
J04D Umpqua Nationa 89.46 43 IAMs_20 IAMs_20 10 33 13.7
comp=Z,15µm,20.0s
J04D Umpqua Nationa 89.46 43 P **P** **10 00 20.5 -0.3**
baz=241
J04D S S 10 11 20.8 +9.3
baz=241
WAT1 Susitna Watana 89.46 18 P **P** **10 00 19.3 -0.8**
baz=219
WAT1 S **S** **10 11 13.5 +3.2**
baz=219
WAX Waxell Ridge 89.50 22 IAMs_20 IAMs_20 10 37 34.4
comp=Z,11µm,19.0s
GSC Goldstone, Bar 89.51 52 P **P** **10 00 20.6 -0.5**
baz=244
WAT6 Susitna Watana 89.51 19 P **P** **10 00 19.0 -1.5**
baz=220
WAT6 S **S** **10 11 13.7 +2.7**
baz=220
I04A Tendick Farm, 89.54 42 P **P** **10 00 20.3 -0.6**
baz=241
I04A S **S** **10 11 17.2 +5.4**
baz=241
BELC Belle Mtn. Jos 89.56 53 P **P** **10 00 21.1 -0.3**
baz=245
MESA MESA 89.62 22 P **P** **10 00 21.4 +0.3**
baz=225
M24K Tolsona, Glenn 89.62 19 P **P** **10 00 21.2 +0.3**
baz=221
HEC Hector,Ludlow 89.65 53 P **P** **10 00 21.3 -0.5**
baz=245
H04D Lebanon 89.69 42 P **P** **10 00 23.2 +1.7**
baz=241
G03D McMinnville, O 89.70 41 P **P** **10 00 23.2 +1.6**
baz=240
RYN Ryan 89.72 48 P **P** **10 00 20.3 -1.8**
TGL Tana Glacier 89.73 21 IAMs_20 IAMs_20 10 39 22.5
comp=Z,12µm,19.0s
LCH Last Change Ra 89.73 50 P **P** **10 00 20.8 -1.4**
LCH IAmb IAmb 10 01 07.7
comp=Z,90nm,2.2s
QSM Queen of Sheba 89.75 51 P **P** **10 00 21.3 -0.8**
QSM IAmb IAmb 10 00 35.5
comp=Z,36nm,1.3s
N25K Chitina, Valde 89.75 20 IAMs_20 IAMs_20 10 37 45.2
comp=Z,8µm,20.0s
N25K Chitina, Valde 89.75 20 P **P** **10 00 21.9 +0.4**
baz=223
N25K S **S** **10 11 15.8 +2.6**
baz=223
GOMU GeErMu 89.78 309 P **P** **10 00 22.5 -0.2**
GOMU pP sP 10 00 26.3 +1.3
GOMU sP pwP 10 00 30.4 -0.5
GOMU pmax pmax
comp=Z,7.0nm,0.9s
GOMU pmax pmax
comp=Z,1µm,10.4s
GOMU LR LR
comp=Z,3µm,21.2s
GOMU LR LR
comp=Z,3µm,21.2s
GOMU LR LR
comp=Z,3µm,21.4s
BPAW Bear Paw Mtn. 89.79 16 IAMs_20 IAMs_20 10 42 46.0
comp=Z,14µm,18.0s
BPAW Bear Paw Mtn. 89.79 16 P **P** **10 00 19.7 -1.9**
baz=217
ISLE Juniper Island 89.79 22 IAMs_20 IAMs_20 10 37 25.1
comp=Z,9µm,19.0s
NVAR Mina Array Bea 89.79 49 P **P** **10 00 20.6 -1.9**
comp=Z,17nm,1.0s,baz=229,slow=6.8,SNR=22
NVAR S **SKSac** **10 10 48.5 -5.0**
comp=Z,0.1nm,0.4s,baz=272,slow=40,SNR=1.7
NVAR LR LR 10 32 31.0
comp=Z,19µm,21.1s,baz=256,slow=30
comp=Z,17nm,1.0s
NVAR Mina Array Bea 89.79 49 P **P** **10 00 20.9 -1.6**
BC3 Big Chuckawall 89.82 54 P **P** **10 00 24.6 +2.0**
baz=245
GRAC Grapevine Rang 89.83 50 P **P** **10 00 22.5 +0.1**
baz=244,SNR=5.6
VRDI Verde Repeater 89.86 21 IAMs_20 IAMs_20 10 42 28.9
comp=Z,8µm,19.0s
LSA Lhasa 89.89 302 P **P** **10 00 23.1 -0.4**
LSA pmax pmax
comp=Z,11nm,1.0s
LSA LR LR
comp=Z,2µm,19.9s
LSA LR LR
comp=Z,2µm,20.6s
LSA LR LR
comp=Z,2µm,22.8s
FURC Furnace Creek, 89.96 51 P **P** **10 00 22.8 -0.2**
baz=244,SNR=8.9
DHY Denali Highway 90.00 18 P **P** **10 00 22.3 -0.4**
baz=220
MOD Modoc Plateau 90.00 45 IAMs_20 IAMs_20 10 33 14.4
comp=Z,12µm,20.0s
J05D Fort Rock, OR 90.04 43 P **P** **10 00 23.2 -0.3**
baz=242
J05D S **S** **10 11 24.5 +7.7**
baz=242
GLA Glamis 90.05 55 P **P** **10 00 22.4 -1.1**
GLA IAmb IAmb 10 00 37.8
comp=Z,88nm,1.5s
GLA Glamis 90.05 55 P **P** **10 00 22.5 -1.1**
GLA pmax pmax
comp=Z,89nm,1.5s
GLA Glamis 90.05 55 P **P** **10 00 24.5 +0.9**
baz=246
MCK McKinley 90.06 17 P **P** **10 00 24.5 +1.6**
baz=219
GRNC Granite Creek 90.08 22 IAMs_20 IAMs_20 10 41 30.9
comp=Z,10µm,18.0s
CRAG Craig 90.09 29 P **P** **10 00 24.0 +0.9**
baz=232
CRAG S **S** **10 11 24.8 +8.6**
baz=232
TABL Table Mountain 90.09 22 IAMs_20 IAMs_20 10 39 54.2
comp=Z,14µm,18.0s
SIT Sitka 90.11 27 P **P** **10 00 23.6 +0.5**
baz=231
H04A Detroit Lake 90.11 42 **P** **10 00 20.9 -2.7**
H04A IAmb IAmb 10 01 05.4
comp=Z,49nm,1.2s
MCARA McCarthy VSAT 90.11 21 IAMs_20 IAMs_20 10 42 46.7

comp=Z,9µm,18.0s
MCARA **McCarthy VSAT** 90.11 21 P P 10 00 22.6 -0.6
baz=224
GMRC **Granite Mounta** 90.14 53 P P 10 00 23.6 -0.5
baz=245,SNR=6.0
SHOC **Shoshone, Teco** 90.15 52 P P 10 00 23.7 -0.3
baz=245
HARP **HAARP** 90.16 20 P P 10 00 23.0 -0.3
baz=222
PINM **Pinnacle** 90.18 23 P P 10 00 22.6 -0.9
baz=226
LPIG **La Paz** 90.18 64 LR LR 10 31 46.7
comp=Z,18µm,21.1s,baz=248,slow=30
PNL **Peninsula** 90.20 23 P P 10 00 23.2 -0.4
baz=227
KVN **Kaiserville** 90.21 48 P P 10 00 22.8 -1.6
KVN IAmb IAmb 10 00 37.7
comp=Z,68nm,1.5s
KVN **Kaiserville** 90.21 48 P P 10 00 22.8 -1.6
KVN pmax pmax
comp=Z,68nm,1.5s
TUQ **Turquoise Moun** 90.22 52 P P 10 00 25.7 +1.3
baz=245,SNR=6.2
BOD **Bodaibo** 90.25 334 *e*P P 10 00 21.4 -2.4
BOD pmax pmax
comp=Z,67nm,1.0s
IRM **Iron Mountain** 90.26 54 P P 10 00 24.8 +0.2
baz=245
F04D **Rainier, OR** 90.28 40 P P 10 00 24.1 -0.2
baz=240
BCPM **Bancas Point** 90.31 23 IAMs_20 IAMs_20 10 42 15.7
comp=Z,12µm,18.0s
SLBS **Sierra La Lagu** 90.33 65 P 10 00 23.4 -1.7
BARN **Barnard Glacie** 90.35 22 IAMs_20 IAMs_20 10 37 42.8
comp=Z,8µm,19.0s
CTG **Chitna Glacier** 90.39 22 P P 10 00 23.4 -1.2
baz=226
CTGM **Chitina Glacie** 90.39 22 IAMs_20 IAMs_20 10 41 42.0
comp=Z,8µm,19.0s
I21K **Tanana** 90.40 15 IAMs_20 IAMs_20 10 37 49.2
comp=Z,14µm,20.0s
I21K **Tanana** 90.40 15 P P 10 00 24.3 -0.1
baz=216
LOGN **Logan Glacier** 90.41 22 IAMs_20 IAMs_20 10 41 33.6
comp=Z,10µm,18.0s
NLWA **Neilton Lookou** 90.42 39 P 10 00 23.5 -1.5
NLWA IAmb IAmb 10 00 38.8
comp=Z,54nm,1.2s
NLWA IAMs_20 IAMs_20 10 34 05.2
comp=Z,12µm,19.0s
PINE **Pine Mountain** 90.47 43 P P 10 00 23.1 -2.3
PINE IAmb IAmb 10 00 35.9
comp=Z,34nm,0.8s
I05D **Terrebonne, OR** 90.47 42 P P 10 00 24.8 -0.5
baz=242
I05D S S 10 11 30.4 +10
baz=242
PAX **Paxson** 90.49 19 P P 10 00 24.3 -0.7
baz=222
BLYC **Blythe** 90.57 54 P P 10 00 24.4 -1.5
BLYC IAmb IAmb 10 00 57.0
comp=Z,32nm,1.2s
USHA **Ushuaia** 90.57 151 LR LR 10 34 14.3
comp=Z,4µm,18.8s,baz=216,slow=31
H21K **Melozitna Rive** 90.59 15 IAMs_20 IAMs_20 10 38 54.2
comp=Z,12µm,20.0s
H21K **Melozitna Rive** 90.59 15 P P 10 00 25.8 +0.6
baz=215
H21K S S 10 11 27.2 +6.6
baz=215
MLY **Manley** 90.59 16 P P 10 00 24.1 -1.3
baz=217
MLY S S 10 11 24.2 +3.5
baz=217
RDOG **Red Dog Mine** 90.60 10 IAMs_20 IAMs_20 10 35 01.8
comp=Z,9µm,21.0s
RDOG **Red Dog Mine** 90.60 10 P P 10 00 21.0 -4.3
baz=206
RDOG S S 10 11 23.0 +2.5
baz=206
BBB **Bella Bella** 90.61 33 LR LR 10 36 45.6
comp=Z,10µm,18.1s,baz=249,slow=33
TPNV **Topopah Spring** 90.61 51 IAMs_20 IAMs_20 10 32 41.7
comp=Z,11µm,20.0s
TPNV **Topopah Spring** 90.61 51 P P 10 00 26.0 -0.3
baz=245,SNR=6.6
TPNV S S 10 11 33.2 +11
baz=245
IMAR **Indian Mountai** 90.63 14 P 10 00 23.2 -2.2
NEA2 **Nenana** 90.69 17 P P 10 00 24.5 -1.3
baz=219
NEA2 S S 10 11 24.6 +3.1
baz=219
113A **Mohawk Valley,** 90.75 55 P P 10 00 25.7 -1.1
113A IAmb IAmb 10 00 40.6
comp=Z,46nm,1.4s
HOOD **Mount Hood Mea** 90.75 41 P P 10 00 24.5 -2.2
BWNR **Bhubaneshwar** 90.81 291 *e*P P 10 00 28.7 +1.4
M26K **Nabesna, AK** 90.85 20 P P 10 00 26.2 -0.4
baz=224
NEE2 **Needles Airpor** 90.91 53 P P 10 00 27.6 +0.1
baz=246
NEE2 S S 10 11 36.4 +12
baz=246
G05D **Wamic, OR** 90.92 42 P P 10 00 25.8 -1.5
baz=242
G05D S S 10 11 34.0 +9.5
baz=242
CBB **Campbell River** 90.92 36 P 10 00 24.2 -3.0
CBB IAmb IAmb 10 00 41.6
comp=Z,63nm,1.4s
SLGI **Shiliguri** 90.95 298 *e*P P 10 00 26.6 -1.2
WRAK **Wrangell Islan** 91.01 28 IAMs_20 IAMs_20 10 36 21.5
comp=Z,12µm,19.0s
WRAK **Wrangell Islan** 91.01 28 P P 10 00 26.5 -0.9
baz=233
WRAK S S 10 11 31.0 +6.4
baz=233
K24K **Donnelly Dome** 91.02 18 P P 10 00 26.3 -1.1
baz=222
I23K **Minto, Yukon-K** 91.05 16 IAMs_20 IAMs_20 10 41 45.4
comp=Z,13µm,19.0s
I23K **Minto, Yukon-K** 91.05 16 P P 10 00 26.6 -0.7
baz=218
I23K S S 10 11 26.8 +2.1
baz=218
ZAK **Zakamensk** 91.07 324 *e*P P 10 00 25.9 -2.1
ZAK pmax pmax
comp=Z,43nm,1.5s
PDMCI **Parker Dam,Lak** 91.08 54 P P 10 00 28.0 -0.3
baz=246
PDMCI S S 10 11 38.1 +12
baz=246
H22K **Ishtalitna Cre** 91.13 15 P P 10 00 26.4 -1.4
baz=217
HDA **Harding Lake** 91.14 18 P P 10 00 26.0 -1.9
HDA **Harding Lake** 91.14 18 P P 10 00 27.1 -0.8
baz=221
HDA S S 10 11 28.6 +3.0
baz=221
HDA S S 10 11 28.6 +3.0
baz=221
214A **Organ Pipe Nat** 91.17 56 P 10 00 27.6 -1.2
214A **Organ Pipe Nat** 91.17 56 P P 10 00 29.5 +0.6
baz=247
214A S S 10 11 39.9 +13
baz=247
YUK8 **Steele Glacier** 91.17 22 P P 10 00 28.4 0.0
baz=227
M27K **Edge Creek, AK** 91.19 21 P P 10 00 28.1 -0.2
baz=225
L26K **Log Cabin Wild** 91.19 20 IAMs_20 IAMs_20 10 46 17.1
comp=Z,10µm,18.0s
L26K **Log Cabin Wild** 91.19 20 P P 10 00 27.5 -0.7
baz=224
L26K S S 10 11 31.7 +5.5
baz=224
MDM **Murphy Dome** 91.20 17 P P 10 00 25.4 -2.8
MDM IAMs_20 IAMs_20 10 37 11.5
comp=Z,9µm,20.0s
PLBC **Pleasant Camp** 91.22 25 P P 10 00 28.2 -0.1
baz=230
TCOL **CIGO, UAF Yank** 91.24 17 IAMs_20 IAMs_20 10 44 06.4
comp=Z,13µm,18.0s
TCOL **CIGO, UAF Yank** 91.24 17 P P 10 00 27.3 -0.9
baz=220
TCOL S S 10 11 28.1 +1.7
baz=220

COLA **College** 91.24 17 IAMs_20 IAMs_20 10 43 57.4
comp=Z,13µm,18.0s
COLA **College** 91.24 17 *i*P P 10 00 25.3 -3.0
COLA pmax pmax
comp=Z,15nm,1.2s
RIDG **Independent Ri** 91.25 19 P P 10 00 28.1 -0.3
RIDG S S 10 11 32.5 +5.8
baz=222
YUK3 **Moose Creek** 91.26 22 P P 10 00 28.8 +0.1
baz=226
YUK3 S S 10 11 31.5 +4.2
baz=226
BESE **Bessie Mountai** 91.26 26 P 10 00 26.9 -1.7
BESE IAmb IAmb 10 00 42.2
comp=Z,37nm,1.2s
JIS **Juneau Island** 91.27 26 IAMs_20 IAMs_20 10 36 19.2
comp=Z,13µm,19.0s
WVOR **Wild Horse Val** 91.34 45 IAMs_20 IAMs_20 10 34 40.0
comp=Z,14µm,20.0s
BMN **Battle Mountai** 91.42 47 P P 10 00 28.0 -2.0
BMN IAmb IAmb 10 01 02.2
comp=Z,36nm,1.3s
BMN **Battle Mountai** 91.42 47 P P 10 00 28.0 -2.0
BMN pmax pmax
comp=Z,36nm,1.3s
P30M **Million Dollar** 91.42 24 P P 10 00 29.8 +0.5
baz=229
IL31 91.43 17 P P 10 00 26.6 -2.5
ILAR **Eielson Array** 91.43 17 P P 10 00 26.9 -2.2
comp=Z,3.5nm,0.8s,baz=234,slow=5.9,SNR=14
ILAR S SKSac 10 10 57.7 -3.6
comp=Z,0.1nm,0.5s,baz=316,slow=33,SNR=1.6
ILAR LR LR 10 41 05.7
comp=Z,17µm,18.1s,baz=224,slow=35
comp=Z,3.5nm,0.8s
ILAR **Eielson Array** 91.43 17 P P 10 00 27.0 -2.2
YUK6 **Outpost Mounta** 91.44 23 P P 10 00 29.6 0.0
baz=228
IRK **Irkutsk** 91.52 326 *e*P P 10 00 29.2 -0.7
IRK pmax pmax
comp=Z,90nm,3.1s
H23K **Yukon River** 91.53 16 P P 10 00 28.4 -1.3
H23K IAMs_20 IAMs_20 10 37 38.2
comp=Z,9µm,20.0s
H23K **Yukon River** 91.53 16 P P 10 00 29.5 -0.2
baz=218
H23K S S 10 11 32.0 +2.8
baz=218
H23K S ScS 10 11 40.8 +8.8
baz=218
POKR **Poker Plat Res** 91.54 17 IAMs_20 IAMs_20 10 44 07.4
comp=Z,14µm,18.0s
POKR **Poker Plat Res** 91.54 17 P P 10 00 28.2 -1.5
baz=220
POKR S S 10 11 33.0 +3.7
baz=220
BVCY **Beaver Creek** 91.57 21 P P 10 00 30.0 0.0
baz=226
W13A **Hualapai Mount** 91.59 53 P P 10 00 30.1 -0.8
YUK4 **Talbot Arm** 91.61 22 P P 10 00 30.7 +0.3
baz=228
SKAG **Skagway** 91.63 25 P P 10 00 28.4 -1.8
SKAG IAmb IAmb 10 00 47.0
comp=Z,46nm,1.3s
SKAG **Skagway** 91.63 25 P P 10 00 30.7 +0.5
baz=231
HYT **Haines Junctio** 91.68 23 P P 10 00 30.4 -0.2
baz=229
HYT S S 10 11 33.3 +2.4
baz=229
R11A **Troy Canyon, C** 91.68 50 P P 10 00 32.5 +1.2
baz=245
R11A S S 10 11 39.6 +7.5
baz=245
SCRK **Sand Creek** 91.68 19 P P 10 00 30.2 -0.3
baz=223
SCRK S S 10 11 35.5 +4.7
baz=223
L27K **Beaver Creek,** 91.70 20 P P 10 00 30.3 -0.3
baz=225
L27K S S 10 11 37.5 +6.6
baz=225
J25K **Salcha River,** 91.74 18 P P 10 00 30.2 -0.5
baz=222
J25K S S 10 11 34.3 +3.1
baz=222
H24K **Noodor Dome** 91.97 16 IAMs_20 IAMs_20 10 41 59.9
comp=Z,9µm,19.0s
H24K **Noodor Dome** 91.97 16 P P 10 00 31.2 -0.6
baz=220
H24K S S 10 11 36.0 +2.7
baz=220
O30N **Mendenhall** 92.17 24 P P 10 00 32.8 0.0
baz=230
J26L **Joseph Creek** 92.19 19 P P 10 00 31.8 -1.0
J26L IAmb IAmb 10 00 45.0
comp=Z,36nm,1.8s
J26L **Joseph Creek** 92.19 19 P P 10 00 33.1 +0.2
baz=224
J26L S S 10 11 41.3 +5.9
baz=224
N30M **Aishikik Lake** 92.25 23 P P 10 00 32.8 -0.3
baz=229
N30M S S 10 11 42.3 +6.5
baz=229
T35M **Bob Quinn** 92.28 29 P P 10 00 34.5 +1.2
baz=235
T35M S S 10 11 43.2 +7.0
baz=235
K27K **Chicken** 92.31 19 P P 10 00 31.5 -1.8
K27K IAmb IAmb 10 00 49.7
comp=Z,53nm,1.9s
K27K IAMs_20 IAMs_20 10 38 44.7
comp=Z,9µm,20.0s
K27K **Chicken** 92.31 19 P P 10 00 33.6 +0.3
baz=225
K27K S S 10 11 42.8 +6.6
baz=225
P32M **Atlin** 92.35 25 P P 10 00 34.0 +0.4
baz=232
P32M S S 10 11 44.2 +7.3
baz=232
G08A **Pilot Rock** 92.42 42 P 10 00 32.9 -1.5
COLD **Coldfoot** 92.48 15 P 10 00 32.0 -1.9
COLD **Coldfoot** 92.48 15 P P 10 00 34.8 +0.8
baz=218
COLD S S 10 11 43.7 +6.1
baz=218
HAWA **Hanford** 92.56 41 P P 10 00 34.4 -0.5
HAWA IAmb IAmb 10 00 49.2
comp=Z,71nm,1.6s
WHY **Whitehorse** 92.56 24 P P 10 00 33.0 -1.6
WHY IAmb IAmb 10 01 12.3
comp=Z,35nm,1.6s
WHY **Whitehorse** 92.56 24 P P 10 00 34.7 0.0
baz=231
WHY S S 10 11 44.2 +5.4
baz=231
N31M **Braeburn, Yuko** 92.74 23 P 10 00 33.0 -2.4
N31M IAmb IAmb 10 00 54.5
comp=Z,24nm,1.1s
N31M IAMs_20 IAMs_20 10 45 54.2
comp=Z,13µm,18.0s
N31M **Braeburn, Yuko** 92.74 23 P P 10 00 35.4 0.0
baz=230
N31M S S 10 11 44.6 +4.3
baz=230
TUC **Tucson** 92.89 57 IAMs_20 IAMs_20 10 36 33.5
comp=Z,8µm,18.0s
TUC **Tucson** 92.89 57 P P 10 00 39.0 +2.1
baz=248
TUC S S 10 11 54.7 +12
baz=248
I26K **Coal Creek Min** 92.89 18 IAMs_20 IAMs_20 10 41 09.2
comp=Z,11µm,19.0s
I26K **Coal Creek Min** 92.89 18 P P 10 00 35.5 -0.4
baz=224
I26K S S 10 11 46.0 +4.6
baz=224
ELK **Elko** 92.92 48 LR LR 10 37 46.3
comp=Z,8µm,18.3s,baz=234,slow=33
ELK **Elko** 92.92 48 IAMs_20 IAMs_20 10 36 39.7
comp=Z,8µm,19.0s
ELK **Elko** 92.92 48 P P 10 00 35.7 -1.3
M30M **Minto, Yukon** 93.08 22 IAMs_20 IAMs_20 10 39 21.1
comp=Z,12µm,19.0s

M30M **Minto, Yukon** 93.08 22 P P 10 00 34.9 -2.1
baz=230,SNR=6.7
M30M S S 10 11 46.7 +3.5
baz=230
P33M **Teslin, Yukon** 93.09 25 P P 10 00 35.0 -2.1
P33M **Teslin, Yukon** 93.09 25 P P 10 00 37.1 0.0
baz=233
P33M S S 10 11 47.1 +3.6
baz=233
LLLB **Lillooet** 93.14 37 P 10 00 37.1 -0.4
X16A **Lo Mia Camp, P** 93.18 55 P P 10 00 36.8 -1.5
DAWY **Dawson** 93.19 20 P P 10 00 34.9 -2.5
DAWY **Dawson** 93.19 20 P P 10 00 36.8 -0.6
baz=227
DLBC **Dease Lake** 93.21 27 LR LR 10 39 22.1
comp=Z,18µm,18.0s,baz=250,slow=34
DLBC **Dease Lake** 93.21 27 P P 10 00 37.5 -0.1
baz=235
DLBC S S 10 11 50.5 +5.9
baz=235
BMO **Blue Mountains** 93.28 43 P P 10 00 36.4 -1.9
BMO **Blue Mountains** 93.28 43 P P 10 00 36.4 -1.9
BMO pmax pmax
comp=Z,11nm,1.3s
N32M **Quiet Lake** 93.56 24 P P 10 00 38.9 -0.2
baz=233
N32M S S 10 11 50.7 +3.2
baz=233
B08A **Colville Reser** 93.57 39 P 10 00 38.2 -1.3
MFID **Camas Ranch** 93.63 45 P 10 00 37.2 -2.9
WUAZ **Wupatki** 93.65 54 P 10 00 38.3 -2.1
WUAZ IAmb IAmb 10 00 53.3
comp=Z,21nm,1.1s
WUAZ IAMs_20 IAMs_20 10 40 03.7
comp=Z,7µm,19.0s
WUAZ **Wupatki** 93.65 54 P P 10 00 42.1 +1.7
baz=248
WUAZ S S 10 12 01.2 +12
baz=248
M31M **Drury Creek, Y** 93.71 23 P P 10 00 36.5 -3.3
M31M **Drury Creek, Y** 93.71 23 P P 10 00 38.7 -1.1
baz=232
TOLK **Toolik Lake Re** 93.74 14 P P 10 00 38.1 -1.7
TOLK **Toolik Lake Re** 93.74 14 P P 10 00 40.6 +0.8
baz=218
TOLK S S 10 11 55.9 +7.1
baz=218
F10A **Beach Ranch, E** 93.81 42 P P 10 00 39.1 -1.7
J29M **Klondike Camp** 93.83 20 P P 10 00 40.6 +0.3
baz=228
J29M S S 10 11 53.1 +3.3
baz=228
TCRU **Three Creeks R** 94.04 50 P P 10 00 41.8 -0.4
TCRU IAmb IAmb 10 02 33.9
comp=Z,12nm,0.5s
BMAR **Burnt Mountain** 94.04 16 P 10 00 39.1 -2.2
PLID **Pearl Lake** 94.22 43 P 10 00 41.3 -1.6
D24K **Happy Valley** 94.31 14 P P 10 00 43.4 +1.0
baz=219
X18A **Snowflake** 94.36 55 P P 10 00 42.9 -0.9
DUG **Dugway, Tooele** 94.39 49 P P 10 00 44.0 +0.3
baz=247
I29M **Ogilvie Camp,** 94.41 20 IAMs_20 IAMs_20 10 47 43.1
comp=Z,8µm,18.0s
I29M **Ogilvie Camp,** 94.41 20 P P 10 00 42.2 -0.8
baz=228
A21K **Barrow** 94.53 11 IAMs_20 IAMs_20 10 38 28.8
comp=Z,8µm,20.0s
A21K **Barrow** 94.53 11 P P 10 00 43.5 +0.2
baz=212
A21K S S 10 12 00.1 +4.6
baz=212
HLID **Hailey** 94.63 45 P P 10 00 42.6 -2.1
baz=246,SNR=6.6
HLID S S 10 12 05.5 +7.6
baz=246
BLSP **Bilaspur** 94.66 292 *e*P P 10 00 44.3 -0.9
W18A **Petrified Fore** 94.74 54 P P 10 00 46.9 +1.5
baz=248
W18A S S 10 12 06.2 +6.8
baz=248
C24K **Franklin Bluff** 94.78 14 P P 10 00 45.2 +0.7
baz=219
NEW **Newport** 94.85 40 LR LR 10 39 12.7
comp=Z,10µm,18.4s,baz=257,slow=33
NEW **Newport** 94.85 40 IAMs_20 IAMs_20 10 39 11.4
comp=Z,11µm,19.0s
NEW **Newport** 94.85 40 P P 10 00 46.1 +0.7
baz=245
NEW S S 10 12 05.8 +6.4
baz=245
KOD **Kodaikanal** 94.86 279 *e*P P 10 00 50.5 +3.9
VLK **Valmikinagar** 94.96 297 *e*P P 10 00 49.2 +2.9
VAR **Varanasi** 94.98 295 *e*P P 10 00 47.1 +0.6
MMPY **Sheldon Lake,** 95.12 24 P P 10 00 45.2 -1.1
baz=234,SNR=5.9
MMPY S S 10 12 03.7 +2.6
baz=234
121A **Cookes Peak, D** 95.33 57 P P 10 00 49.6 +1.4
baz=249
121A S S 10 12 15.1 +11
baz=249
EPYK **Eagle Plains** 95.56 19 IAMs_20 IAMs_20 10 39 57.7
comp=Z,9µm,19.0s
EPYK **Eagle Plains** 95.56 19 P P 10 00 47.9 -0.3
baz=230
TGTN **Hyland Airport** 95.67 25 P P 10 00 49.3 +0.5
baz=237
TGTN S S 10 12 13.5 +7.6
baz=237
KAAM **Kaadhehdhoo** 95.74 268 IAMs_20 IAMs_20 10 40 48.3
comp=Z,11µm,20.0s
HWUT **Hardware Ranch** 95.81 48 IAMs_20 IAMs_20 10 39 56.1
comp=Z,9µm,19.0s
TIXI **Tiksi** 95.82 348 PP PP 10 04 37.9 -3.6
comp=Z,2.3nm,0.9s,baz=90,slow=20,SNR=3.4
TIXI S SKSac 10 11 19.9 -5.1
comp=Z,0.5nm,0.3s,baz=85,slow=24,SNR=1.3
TIXI LR LR 10 39 17.5
comp=Z,6µm,21.9s,baz=180,slow=33
TIXI **Tiksi** 95.82 348 P 10 00 46.4 -2.9
TIXI **Tiksi** 95.82 348 *c*eP P 10 00 46.5 -2.7
TIXI pmax pmax
comp=Z,7.0nm,1.3s
TIXI MLR MLR
comp=Z,4µm,18.0s
PCHI **Peechi** 96.00 279 *e*S SKSac 10 11 28.3 -0.2
EPT **El Paso** 96.08 59 IAMs_20 IAMs_20 10 39 02.2
comp=Z,11µm,18.0s
MSO **Missoula** 96.23 42 P P 10 00 51.8 -0.1
baz=247
MSO S S 10 12 16.3 +4.8
baz=247
HYBB **Hyderabad (bro** 96.26 286 *e*P P 10 00 45.4 -7.1
HYBB *e*P PcP 10 00 46.5 -6.2
HYBB *es*P pwP 10 00 58.1 -2.6
HYBB *e*SKSac SKSac 10 11 28.4 -1.4
MVCO **Mesa Verde** 96.43 53 IAMs_20 IAMs_20 10 37 41.3
comp=Z,8µm,20.0s
MVCO **Mesa Verde** 96.43 53 P P 10 00 54.3 +1.2
baz=249
MVCO S S 10 12 24.6 +11
baz=249
Y22D **IRIS PASSCAL I** 96.54 56 IAMs_20 IAMs_20 10 39 09.3
comp=Z,10µm,19.0s
Y22D **IRIS PASSCAL I** 96.54 56 P P 10 00 55.2 +1.6
baz=250
Y22D S S 10 12 31.4 +16
baz=250
AHID **Auburn Hatcher** 96.56 47 IAMs_20 IAMs_20 10 43 38.0
comp=Z,8µm,18.0s
FXWY **Fox Creek** 96.93 46 IAMs_20 IAMs_20 10 37 57.8
comp=Z,8µm,21.0s
REDW **Red Top Meadow** 96.95 46 IAMs_20 IAMs_20 10 40 32.2
comp=Z,9µm,19.0s
BRCI **Bahraich** 96.95 297 *e*P P 10 00 54.8 -0.7
MNTX **Cornudas Mount** 96.96 59 IAMs_20 IAMs_20 10 41 37.2
comp=Z,9µm,18.0s
MNTX **Cornudas Mount** 96.96 59 P P 10 00 56.6 +1.2
baz=250
NGP **Nagpur** 97.04 290 *e*P Pdif 10 00 57.3 +1.3
SNOW **Snow King Moun** 97.05 46 IAMs_20 IAMs_20 10 40 54.9
comp=Z,8µm,19.0s
MOOW **Moose Ponds** 97.16 46 IAMs_20 IAMs_20 10 35 40.9
comp=Z,9µm,22.0s
ANMO **Albuquerque** 97.20 56 LR LR 10 40 56.9
comp=Z,8µm,18.0s,baz=250,slow=33

ANMO Albuquerque 97.20 56 IAMs_20 IAMs_20 10 40 17.7
comp=Z,8µm,19.0s
ANMO Albuquerque 97.20 56 *i* P P 10 00 50.7 -6.0
ANMO pmax pmax
comp=Z,12nm,2.9s
ANMO Albuquerque 97.20 56 P Pdif 10 00 57.6 +0.9
baz=250
LOHW Long Hollow 97.21 46 IAMs_20 IAMs_20 10 35 53.1
comp=Z,6µm,22.0s
BOZ Bozeman (W) 97.25 44 P **P** **10 00 54.5 -2.1**
BOZ Bozeman (W) 97.25 44 P Pdif 10 00 57.5 +0.9
baz=248
BOZ S **S** **10 12 28.2 +7.7**
baz=248
FLWY Flagg Ranch 97.31 46 IAMs_20 IAMs_20 10 36 19.9
comp=Z,9µm,21.0s
H17A Grant Village 97.51 45 P Pdif 10 00 59.9 +1.9
baz=249
H17A S S 10 12 37.6 +15
baz=249
TX31 Lajitas Ar. Si 97.58 62 P **P** **10 00 56.5 -1.9**
TX32 Lajitas Array 97.58 62 P **P** **10 00 56.7 -1.7**
TX32 IAmb IAmb 10 01 44.9
comp=Z,88nm,2.9s
TXAR Lajitas Array 97.58 62 P **P** **10 00 57.1 -1.3**
comp=Z,1.9nm,0.9s,baz=222,slow=4.2,SNR=14
TXAR S **SKSac** **10 11 30.3 -6.0**
comp=Z,0.1nm,0.5s,baz=340,slow=1.5,SNR=1.4
TXAR LR LR 10 39 46.0
comp=Z,17µm,18.0s,baz=244,slow=32
comp=Z,1.9nm,0.9s
TXAR Lajitas Array 97.58 62 P **P** **10 00 57.4 -1.0**
TXAR Lajitas Array 97.58 62 P **P** **10 00 57.4 -1.0**
BW06 Boulder Array 97.62 47 P Pdif 10 00 59.0 +0.6
baz=249
BW06 S **S** **10 12 29.2 +5.3**
baz=249
PDAR Pinedale Array 97.62 47 P **P** **10 00 57.4 -1.0**
comp=Z,0.9nm,0.8s,baz=241,slow=3.1,SNR=5.6
PDAR PP **PP** **10 04 51.3 -5.0**
comp=Z,0.1nm,0.4s,baz=256,slow=2.7,SNR=3.0
PDAR S **SKSac** **10 11 30.5 -5.7**
comp=Z,0.2nm,0.4s,baz=349,slow=1.8,SNR=1.7
comp=Z,0.9nm,0.8s
PDAR Pinedale Array 97.62 47 P **P** **10 00 56.1 -2.3**
O20A White River Ci 97.63 50 P Pdif 10 00 59.6 +1.1
baz=250
O20A S **S** **10 12 29.2 +5.1**
baz=250
LKWY Lake 97.69 45 IAMs_20 IAMs_20 10 38 06.8
comp=Z,13µm,20.0s
INK Inuvik 97.74 18 P **P** **10 00 55.6 -2.4**
comp=Z,2.9nm,0.9s,baz=213,slow=8.6,SNR=6.1
INK S **SKSac** **10 11 31.1 -4.0**
comp=Z,2.2nm,1.1s,baz=34,slow=29,SNR=8.9
INK LR LR 10 42 53.9
comp=Z,8µm,18.6s,baz=228,slow=34
comp=Z,2.9nm,0.9s
INK Inuvik 97.74 18 **P** **10 00 55.1 -2.9**
INK IAmb IAmb 10 01 30.4
comp=Z,28nm,1.6s
INK Inuvik 97.74 18 P **P** **10 00 57.6 -0.3**
baz=233
WMQ Urumqi 97.80 314 P Pdif 10 01 00.8 +1.8
WMQ sP pwP 10 01 10.5 +3.2
WMQ PP **PP** **10 04 56.8 -0.7**
WMQ SKS **SKSac** **10 11 40.3 +3.6**
WMQ S **S** **10 12 24.3 -0.8**
WMQ pmax pmax
comp=Z,1µm,6.7s
WMQ LR LR
comp=Z,3µm,19.9s
WMQ LR LR
comp=Z,5µm,17.5s
WMQ LR LR
comp=Z,3µm,17.5s
PLCA Paso Flores 97.85 139 P Pdif 10 01 00.1 +0.6
comp=Z,1.3nm,0.9s,baz=222,slow=8.2,SNR=2.1
comp=Z,1.3nm,0.9s
S22A 4UR Ranch, Cre 97.86 53 P Pdif 10 01 01.3 +1.6
baz=250
S22A S S 10 12 36.9 +11
baz=250
SMCO Snowmass 98.23 51 IAMs_20 IAMs_20 10 45 58.0
comp=Z,7µm,18.0s
RLMT Red Lodge 98.64 45 P Pdif 10 01 03.5 +0.6
baz=250
RLMT S S 10 12 43.1 +11
baz=250
LGTI Lohaghat 98.67 298 *eP* Pdif 10 01 07.7 +4.6
AKL Akola 98.69 289 *eP* **P** **10 01 02.0 -1.4**
PTH Pithoragarh 98.73 298 *eP* **P** **10 01 03.4 -0.3**
SDCO Great Sand Dun 98.85 53 P Pdif 10 01 05.1 +0.9
baz=251
JHNI Jhansi 98.86 294 *eP* Pdif 10 01 05.1 +1.0
RWWY Rawlins 98.89 49 IAMs_20 IAMs_20 10 43 53.7
comp=Z,10µm,18.0s
EGMT Eagleton 99.32 42 IAMs_20 IAMs_20 10 43 18.5
comp=Z,10µm,18.0s
EGMT Eagleton 99.32 42 P **Pdif** **10 01 06.1 +0.4**
baz=250
ISCO Idaho Springs 99.43 51 P **Pdif** **10 01 04.9 -1.8**
baz=251
T25A Trinidad 99.48 54 P **Pdif** **10 01 07.8 +1.0**
baz=252
Q24A Divide 99.50 52 P **Pdif** **10 01 08.5 +1.4**
baz=252
N23A Red Feather La 99.54 50 P **Pdif** **10 01 08.9 +1.8**
baz=251
K22A Casper 99.69 48 P **Pdif** **10 01 08.2 +0.6**
baz=251
MSTX Muleshoe 99.77 57 P **Pdif** **10 01 08.4 +0.3**
baz=252
833A Chaparral WMA, 100.83 64 P **Pdif** **10 01 11.5 -1.2**
baz=253
ZSN Zaisan 100.88 317 *e*PKiKP **PKiKP** **10 05 33.0 -5.2**
baz=316
AMTX Amarillo 100.90 57 IAMs_20 IAMs_20 10 41 22.7
comp=Z,7µm,20.0s
AMTX Amarillo 100.90 57 P **Pdif** **10 01 13.9 +0.8**
baz=253
JCT Junction City 101.12 62 P **Pdif** **10 01 13.2 -0.9**
baz=253
LAO LASA Array 101.16 44 P **Pdif** **10 01 16.1 +2.2**
baz=252
C36M Paulatuk 101.19 19 P **Pdif** **10 01 13.0 -0.3**
baz=242
KSCO Kaye Shedlock' 101.39 53 P **Pdif** **10 01 16.2 +1.0**
baz=253
YKA Yellowknife Ar 101.84 27 P **Pdif** **10 01 15.9 -0.5**
comp=Z,2.2nm,0.9s,baz=254,slow=4.1,SNR=6.2
RSSD Black Hills 101.86 47 IAMs_20 IAMs_20 10 47 00.3
comp=Z,6µm,18.0s
RSSD Black Hills 101.86 47 P **Pdif** **10 01 17.5 +0.2**
baz=253
KVTX Kingsville 101.87 65 IAMs_20 IAMs_20 10 42 06.0
comp=Z,8µm,18.0s
ABTX Abilene, Hawle 101.87 60 P **Pdif** **10 01 18.9 +1.5**
baz=253
A36M Sachs Harbour 102.12 17 P **Pdif** **10 01 20.0 +2.6**
baz=241
MKAR Makanchi Array 102.36 315 P **Pdif** **10 01 18.4 -0.8**
comp=Z,1.7nm,0.8s,baz=102,slow=5.4,SNR=7.1
MKAR PP **PP** **10 05 31.2 -0.9**
comp=Z,4.4nm,1.0s,baz=102,slow=5.6,SNR=6.7
MKAR Makanchi Array 102.36 315 *i* P **Pdif** **10 01 21.7 +2.5**
MKAR pmax pmax
comp=Z,2.0nm,0.8s
OGNE Ogallala 102.38 51 IAMs_20 IAMs_20 10 39 35.9
comp=Z,9µm,22.0s
OGNE Ogallala 102.38 51 P **Pdif** **10 01 20.3 +0.8**
baz=254
HOPE Hope Point 102.47 165 IAMs_20 IAMs_20 10 46 33.1
comp=Z,11µm,18.0s
ZALV Zalesovo Beam 102.87 323 P **Pdif** **10 01 19.8 -1.4**
comp=Z,0.8nm,0.6s,baz=125,slow=7.4,SNR=4.6
DGMT Dagmar 102.99 43 IAMs_20 IAMs_20 10 43 03.6
comp=Z,7µm,19.0s
DGMT Dagmar 102.99 43 P **Pdif** **10 01 24.4 +2.5**
baz=254
435B Jarrell 103.04 62 P **Pdif** **10 01 23.6 +1.1**
baz=254
WMOK Wichita Mounta 103.15 58 IAMs_20 IAMs_20 10 42 15.2
comp=Z,9µm,19.0s
WHTX Lake Whitney, 103.47 61 P **Pdif** **10 01 25.4 +1.0**
baz=254
CBKS Cedar Bluff 103.50 53 IAMs_20 IAMs_20 10 49 18.5
comp=Z,6µm,18.0s

CBKS Cedar Bluff 103.50 53 P **Pdif** **10 01 23.8 -0.7**
baz=255
KPKS Kokpek 103.92 311 *e*PP **PKiKP** **10 05 42.6 -1.3**
baz=311
KPKS *e*SS SS 10 20 32.3 +0.7
baz=311
SATY Saty 104.01 311 *e*PP **PKiKP** **10 05 43.9 -0.2**
baz=311
LCO Las Campanas 104.36 129 IAMs_20 IAMs_20 10 47 14.2
comp=Z,7µm,18.0s
SEM Semipalatinsk 104.63 319 *e*PP **PKiKP** **10 05 46.4 +1.3**
baz=318
KSH Kashi 104.90 307 Pdif **Pdif** **10 01 33.9 +3.1**
KSH S **Sdif** **10 13 31.9 +7.1**
KSH LR LR
comp=Z,3µm,19.9s
KSH LR LR
comp=Z,3µm,17.9s
KSH LR LR
comp=Z,5µm,18.6s
KUU Kurty 105.67 311 *e*PP **PP** **10 05 55.4 -1.4**
baz=311
KURK Kurchatov 105.71 319 IAMs_20 IAMs_20 10 54 45.8
comp=Z,7µm,18.0s
KURBB Kurchatov Arra 105.75 319 Pdiff **Pdif** **10 01 33.5 -0.6**
comp=Z,0.3nm,0.6s,baz=72,slow=18,SNR=2.3
KURBB PP **PP** **10 05 56.5 -0.5**
comp=Z,2.3nm,1.0s,baz=100,slow=7.0,SNR=5.6
TUL1 Leonard 105.81 57 IAMs_20 IAMs_20 10 44 37.6
comp=Z,10µm,19.0s
KSU1 Kansas State U 105.93 54 IAMs_20 IAMs_20 10 47 27.9
comp=Z,11µm,18.0s
SGDS Sogindy 106.79 311 *e*PP **PP** **10 06 04.8 -0.3**
baz=310
ECSD EROS Data Cent 106.96 49 IAMs_20 IAMs_20 10 41 56.2
comp=Z,12µm,22.0s
W39A Magazine 107.24 58 IAMs_20 IAMs_20 10 45 22.4
comp=Z,11µm,19.0s
MIAR Mount Ida 107.26 59 IAMs_20 IAMs_20 10 43 38.9
comp=Z,8µm,20.0s
TGUH Tegucigalpa,Un 107.50 81 IAMs_20 IAMs_20 10 43 21.5
comp=Z,8µm,18.0s
BTLS Baital 107.52 312 *e*PP **PP** **10 06 08.7 -1.6**
baz=312
BTLS *e*SS SS 10 21 21.0 +0.4
baz=312
NNA Nana 107.76 110 IAMs_20 IAMs_20 10 45 25.8
comp=Z,6µm,18.0s
X40A Basin Creek Fa 107.84 59 IAMs_20 IAMs_20 10 45 51.3
comp=Z,6µm,19.0s
U40A Yellville 108.23 57 IAMs_20 IAMs_20 10 43 30.6
comp=Z,7µm,20.0s
JTS Las Juntas de 108.53 86 IAMs_20 IAMs_20 10 41 38.8
comp=Z,8µm,19.0s
LPA La Plata 109.25 141 PKiKP **PKiKP** **10 06 00.0 +6.0**
LPA PP **PP** **10 06 17.3 -4.8**
LPA pPP 10 06 33.7
LPA PPP PPP 10 08 37.7
LPA SKIKP 10 09 21.4
LPA PKIKS 10 09 27.9
LPA SKS SKSac 10 12 15.3 -15
LPA SKIKS 10 12 57.2
LPA SDIFF **Sdif** **10 13 54.5 -6.7**
LPA PS **PS** **10 15 50.6 +1.3**
LPA PPS PPS 10 16 44.1
LPA SS **SS** **10 21 37.3 -5.1**
LPA SSS SSS 10 25 30.9
BRZS Berezniki 109.31 317 *e*PKiKP **PKiKP** **10 05 48.7 -4.9**
baz=317
BRZS *e*PP **PP** **10 06 20.8 -2.5**
baz=317
BRZS *e*PPP PPP 10 08 39.2
baz=317
VOI Vohitsoka 109.56 237 IAMs_20 IAMs_20 10 51 08.7
comp=Z,7µm,18.0s
IUG Iuzhnay 109.86 309 *i* PP **PP** **10 06 24.9 -2.7**
baz=308
ABPO Ambohimpanom 110.74 239 IAMs_20 IAMs_20 10 48 51.2
comp=Z,8µm,19.0s
BRVK Borovoye 111.19 320 IAMs_20 IAMs_20 10 56 47.5
comp=Z,6µm,18.0s
BRVK Borovoye 111.19 320 *i* PKiKP **PKiKP** **10 05 53.3 -3.7**
BRVK pmax pmax
comp=Z,3.0nm,1.1s
OTAV Otavalo 111.23 98 IAMs_20 IAMs_20 10 46 18.4
comp=Z,6µm,18.0s
JFWS Jewell Farm 111.38 51 IAMs_20 IAMs_20 10 47 34.1
comp=Z,11µm,20.0s
PLAL Pickwick Lake 111.78 59 IAMs_20 IAMs_20 10 48 16.6
comp=Z,9µm,19.0s
BRAL Brewton 111.92 64 IAMs_20 IAMs_20 10 47 48.3
comp=Z,9µm,20.0s
WVT Waverly 112.17 58 IAMs_20 IAMs_20 10 48 11.1
comp=Z,5µm,19.0s
LRAL Lakeview Retre 112.31 62 IAMs_20 IAMs_20 10 49 22.7
comp=Z,8µm,19.0s
LPAZ La Paz 113.15 119 PKiKP **PKiKP** **10 06 03.4 +0.7**
comp=Z,0.7nm,0.8s,baz=198,slow=6.4,SNR=3.5
P49A Miami Univ. Ec 115.09 55 IAMs_20 IAMs_20 10 52 39.2
comp=Z,6µm,20.0s
CPUP Villa Florida 115.41 134 PKP **PKiKP** **10 06 05.7 -0.3**
comp=Z,1.7nm,0.8s,baz=222,slow=5.5,SNR=2.4
TZTN Tazewell 115.65 58 IAMs_20 IAMs_20 10 51 54.2
comp=Z,7µm,19.0s
DWPF Disney Wildern 116.16 68 IAMs_20 IAMs_20 10 50 25.7
comp=Z,6µm,20.0s
ACSO Alum Creek Sta 116.49 54 IAMs_20 IAMs_20 10 50 37.2
comp=Z,7µm,19.0s
SVE Sverdlovsk 116.84 324 *i* PKiKP **PKiKP** **10 06 14.2 +6.5**
SVE MLR MLR
comp=Z,3µm,18.0s
P52A Corning 117.09 55 IAMs_20 IAMs_20 10 52 14.2
comp=Z,6µm,19.0s
ZARC Zaragoza, Cauc 117.11 92 **PKPdf** **10 06 07.5 -2.0**
SOCY Socotra 117.35 273 IAMs_20 IAMs_20 10 59 50.1
comp=Z,6µm,18.0s
MTDJ Mount Denham 117.63 80 IAMs_20 IAMs_20 10 49 27.8
comp=Z,9µm,19.0s
O53A New Philadelph 117.84 54 IAMs_20 IAMs_20 10 53 35.0
comp=Z,8µm,19.0s
NHSC New Hope 117.98 63 IAMs_20 IAMs_20 10 53 43.8
comp=Z,8µm,18.0s
ARU Arti 118.01 324 **PKPdf** **10 06 09.7 -0.3**
ARU Arti 118.01 324 *i* PKiKP **PKPdf** **10 06 07.0 -3.0**
ARU 10 07 22.3
ARU PPP PPP 10 09 51.3
ARU 10 13 19.5
ARU SP SP 10 17 09.9 +1.7
ARU SS **SS** **10 23 28.9 -10**
ARU MLR MLR
comp=Z,5µm,19.0s
BLA Blacksburg 118.22 58 IAMs_20 IAMs_20 10 51 51.1
comp=Z,9µm,20.0s
M53A WI Miller and 118.32 53 IAMs_20 IAMs_20 10 54 11.6
comp=Z,7µm,19.0s
GEYT Alibeck 118.41 303 PKP **PKPdf** **10 06 09.4 -2.0**
comp=Z,1.5nm,0.5s,baz=69,slow=4.9,SNR=1.9
GEYT Alibeck 118.41 303 **PKPdf** **10 06 09.7 -1.7**
OCAC Ocana 118.79 92 **PKPdf** **10 06 11.8 -1.1**
SUR Sutherland 119.29 211 IAMs_20 IAMs_20 10 45 52.0
comp=Z,7µm,18.0s
BOSA Boshof 119.95 217 PKP **PKiKP** **10 06 15.1 +0.1**
comp=Z,5.4nm,1.0s,baz=118,slow=0.8,SNR=8.0
BOSA Boshof 119.95 217 **PKPdf** **10 06 14.1 -0.8**
CBN Corbin Frederi 120.70 57 IAMs_20 IAMs_20 10 52 34.7
comp=Z,7µm,19.0s
SAML Samuel 121.03 114 **PKPdf** **10 06 15.2 -1.9**
SAML Samuel 121.03 114 PKiKP **PKPdf** **10 06 15.2 -1.9**
SDV Santo Domingo 121.52 92 IAMs_20 IAMs_20 10 58 07.7
comp=Z,5µm,18.0s
BINY Binghamton 121.84 52 IAMs_20 IAMs_20 10 57 35.8
comp=Z,8µm,19.0s
KIRV Kirov 122.50 327 PKP **PKiKP** **10 06 18.6 -0.1**
comp=Z,6.7nm,0.5s,baz=100,slow=8.5,SNR=2.4
TRIS Tristan da Cun 122.82 179 IAMs_20 IAMs_20 10 59 24.9
comp=Z,4µm,18.0s
NCB Newcomb 123.07 50 **PKPdf** **10 06 17.6 -2.5**
PRGR Permogore 123.40 331 *e*PKiKP **PKPdf** **10 06 17.6 -2.6**
PAL Palisades 123.41 54 IAMs_20 IAMs_20 10 52 29.5
comp=Z,9µm,22.0s
SDDR Presa de Saban 123.57 80 IAMs_20 IAMs_20 10 51 20.2
comp=Z,9µm,20.0s
WSPT Westport, CT 123.84 54 IAMs_20 IAMs_20 11 00 30.0
comp=Z,8µm,18.0s
BAUV El Baul 123.96 93 **PKPdf** **10 06 20.1 -2.6**
SC01 Santiago de lo 124.18 80 **PKPdf** **10 06 22.1 -0.8**

GRTK Grand Turk 124.21 77 IAMs_20 IAMs_20 10 52 52.2
comp=Z,7µm,20.0s
L61B Northampton 124.28 52 **PKPdf** **10 06 20.1 -2.4**
LVZ Lovozero 124.66 341 IAMs_20 IAMs_20 11 08 06.3
comp=Z,6µm,19.0s
BELG Belogornoye 124.93 320 PKP **PKiKP** **10 06 24.1 +0.4**
comp=Z,36nm,0.9s,baz=50,slow=2.0,SNR=6.5
BELG Belogornoye 124.93 320 *i* PKiKP **PKPdf** **10 06 20.5 -2.9**
BELG pmax pmax
comp=Z,10.0nm,1.1s
H62A Milan 125.22 49 **PKPdf** **10 06 23.5 -0.8**
APA Apatity 125.24 341 *i* PKiKP **PKPdf** **10 06 22.2 -1.4**
APA *i* 10 08 10.5
APA *i* 10 13 27.0
APA *i* PPS PPS 10 19 38.0
APA pmax pmax
comp=Z,8.0nm,0.9s
ILULI Ilulissat 125.47 16 **PKPdf** **10 06 21.9 -2.0**
ILULI IAMs_20 IAMs_20 11 01 00.9
comp=Z,8µm,19.0s
ILULI Ilulissat 125.47 16 PKiKP **PKPdf** **10 06 21.9 -2.0**
ILULI MLR MLR
comp=Z,8µm,19.0s
SUMG Summit 125.56 10 **PKPdf** **10 06 23.4 -1.2**
SUMG IAMs_20 IAMs_20 11 01 57.5
comp=Z,5µm,20.0s
SUMG Summit 125.56 10 PKiKP **PKPdf** **10 06 23.4 -1.2**
SUMG MLR MLR
comp=Z,5µm,20.0s
KEV Kevo 125.59 345 IAMs_20 IAMs_20 11 04 28.4
comp=Z,6µm,20.0s
SCHQ Schefferville 126.02 36 PKP **PKPdf** **10 06 23.1 -2.4**
comp=Z,2.9nm,0.6s,baz=277,slow=7.1,SNR=4.2
BIRV Birongo 126.10 92 **PKPdf** **10 06 25.4 -1.4**
ARCES ARCESS Array B 126.12 345 PKP **PKPdf** **10 06 22.5 -2.8**
comp=Z,8.5nm,0.8s,baz=68,slow=1.8,SNR=13
ARCES ARCESS Array B 126.12 345 **PKiKP** **10 06 25.7 0.0**
ARCES ARCESS Array B 126.12 345 PKiKP **PKiKP** **10 06 25.7 0.0**
KLMR Klimovskoe 126.43 332 *e*PKiKP **PKPdf** **10 06 21.8 -4.2**
KLMR *e* 10 08 20.2
KLMR *e*SS SS 10 25 23.9 -1.5
KLMR pmax pmax
comp=Z,20nm,0.9s
KLMR MLR MLR
comp=Z,5µm,19.0s
KLMR Klimovskoe 126.43 332 *e*PKPdf **PKPdf** **10 06 21.8 -4.2**
KLMR AMP 10 06 40.5
comp=Z,20nm,0.9s
KLMR *e*PP **PP** **10 08 20.2 -1.3**
KLMR *e*PKS **PKSdf** **10 09 58.4 -3.8**
KLMR *e*PKS **PKSdf** **10 09 58.4 -3.8**
KLMR *e*SKKSac **SKKSac** **10 15 17.0 -2.3**
KLMR *e*SKKSac **SKKSac** **10 15 17.0 -2.3**
KLMR *e*SS **SS** **10 25 24.0 -1.4**
KLMR *e*SS **SS** **10 25 24.0 -1.4**
KLMR LQ LQ 10 48 26.5
KLMR LQ LQ 10 48 26.5
KLMR LR LR 10 57 16.0
KLMR AMP 11 01 46.2
comp=Z,5µm,19.2s
MAK Makhachkala 126.47 309 *i* P **Pdif** **10 03 02.2 -4.2**
MAK *e* 10 13 21.0
MAK *e*SS SS 10 25 24.5 -2.9
MAK *e*SSS SSS 10 30 10.6
MAK pmax pmax
comp=Z,30nm,0.5s
LSZ Lusaka 127.60 230 IAMs_20 IAMs_20 11 00 25.4
comp=Z,8µm,18.0s
OBIP Obispado Ponce 127.72 83 **PKPdf** **10 06 27.6 -2.1**
RAYN Ar Rayn 127.72 284 **PKiKP** **10 06 30.0 -0.3**
RAYN Ar Rayn 127.72 284 PKiKP **PKiKP** **10 06 30.0 -0.3**
KMBO Kilima Mbogo 128.08 252 PKP **PKPdf** **10 06 30.7 -0.2**
comp=Z,2.4nm,0.9s,baz=28,slow=5.6,SNR=3.9
KMBO Kilima Mbogo 128.08 252 IAMs_20 IAMs_20 10 56 39.8
comp=Z,7µm,20.0s
KMBO Kilima Mbogo 128.08 252 *e*P **PKPdf** **10 06 26.8 -4.2**
KMBO Kilima Mbogo 128.08 252 *e*P **PKPdf** **10 06 26.8 -4.2**
KMBO Kilima Mbogo 128.08 252 *e*P **PKPdf** **10 06 26.8 -4.2**
SJG San Juan 128.15 83 **PKPdf** **10 06 27.4 -3.2**
SJG San Juan 128.15 83 PKiKP **PKPdf** **10 06 27.4 -3.2**
PDPR Patillas Dam, 128.25 83 **PKPdf** **10 06 27.8 -3.0**
VRH Novokhopyorsk 128.78 320 *e*PKiKP **PKiKP** **10 06 32.8 +1.4**
VRH pmax pmax
comp=Z,10.0nm,1.3s
BDFB Brasilia 129.00 132 PKP **PKPdf** **10 06 29.8 -2.7**
comp=Z,3.0nm,0.8s,baz=198,slow=14,SNR=3.4
BDFB Brasilia 129.00 132 **PKPdf** **10 06 31.8 -0.7**
BDFB Brasilia 129.00 132 PKiKP **PKPdf** **10 06 31.8 -0.7**
ZEI Tsey 129.12 309 *i* PKiKP **PKiKP** **10 06 37.7 +5.0**
ZEI pmax pmax
comp=Z,8.0nm,1.0s
TEND Ethiopian Broa 129.41 269 *e*P **PKPdf** **10 06 28.6 -4.5**
MOS Moscow 129.50 327 *i* PKiKP **PKPdf** **10 06 28.6 -3.4**
MOS *e* 10 08 43.2
MOS *e*SS SS 10 26 00.5 -3.3
SCO Scoresbysund 129.50 5 IAMs_20 IAMs_20 11 08 54.9
comp=Z,6µm,18.0s
KBZ Khabaz 129.70 310 PKP **PKPdf** **10 06 32.2 -0.5**
comp=Z,0.9nm,0.5s,baz=158,slow=5.8,SNR=1.7
KBZ Khabaz 129.70 310 *i* PKiKP **PKPdf** **10 06 28.5 -4.3**
KBZ pmax pmax
comp=Z,4.0nm,0.9s
KIV Kislovodsk 129.81 311 *i* P **Pdif** **10 03 19.4 -2.0**
KIV *i* 10 06 30.4
KIV *e* 10 08 43.1
KIV *e*PS **PS** **10 18 53.9 -1.6**
KIV *e*SS SS 10 26 11.2 +2.2
KIV *e*SSS SSS 10 31 00.3
KIV pmax pmax
comp=Z,3.0nm,1.1s
ANKE Ethiopia-Afar 129.94 265 *e*P **PKPdf** **10 06 33.9 -0.7**
ANKE Ethiopia-Afar 129.94 265 *e*P **PKPdf** **10 06 29.9 -4.7**
LPSR Galich'ya Gora 129.98 322 *e*PKiKP **PKPdf** **10 06 33.2 +0.2**
LPSR pmax pmax
comp=Z,20nm,1.7s
VORR Voronezh 130.13 321 *e*PKiKP **PKPdf** **10 06 32.6 -0.7**
VORR pmax pmax
comp=Z,60nm,0.5s
DILA Dilla 130.22 261 *e*P **PKiKP** **10 06 36.6 +0.8**
DILA Dilla 130.22 261 *e*P **PKiKP** **10 06 40.2 +4.4**
OBN Obninsk 130.31 326 IAMs_20 IAMs_20 11 04 39.9
comp=Z,7µm,21.0s
OBN Obninsk 130.31 326 *i* PKiKP **PKPdf** **10 06 30.2 -3.3**
OBN *i* 10 06 38.8
OBN pmax pmax
comp=Z,8.0nm,0.9s
VSR Storozhevoye 130.31 321 *e*PKiKP **PKPdf** **10 06 32.6 -1.1**
VSR pmax pmax
comp=Z,10.0nm,1.6s
DESE Dese 130.50 267 *e*P PKiKP 10 06 48.6 +12
AAE Adis Abeba 130.66 264 *e*P PKPpre 10 06 26.8
AAE Adis Abeba 130.66 264 *e*P PKPpre 10 06 26.8
AAE Adis Abeba 130.66 264 *e*P **PKiKP** **10 06 39.8 +3.0**
AAE Adis Abeba 130.66 264 *e*P **PKiKP** **10 06 38.2 +1.4**
AAE Adis Abeba 130.66 264 *e*P PKPpre 10 06 26.7
FURI Furi 130.70 264 *e*P **PKPdf** **10 06 30.8 -5.2**
FURI Furi 130.70 264 *e*P **PKPdf** **10 06 30.8 -5.2**
FURI Furi 130.70 264 *e*P **PKPdf** **10 06 31.2 -4.8**
FURI Furi 130.70 264 *e*P **PKPdf** **10 06 31.3 -4.8**
FURI Furi 130.70 264 *e*P PKPpre 10 06 26.7
FURI Furi 130.70 264 *e*P **PKPdf** **10 06 35.4 -0.6**
FURI Furi 130.70 264 *e*P PKPpre 10 06 24.7
BBSR BB Station 130.95 64 IAMs_20 IAMs_20 10 58 43.3
comp=Z,5µm,20.0s
FINES FINESS Array B 131.55 337 PKP **PKPdf** **10 06 34.2 -1.5**
comp=Z,5.2nm,0.8s,baz=61,slow=0.5,SNR=9.6
FINES SKPbc **SKPbc** **10 09 59.9 -1.3**
comp=Z,16nm,1.0s,baz=66,slow=6.5,SNR=7.6
FINES FINESS Array B 131.55 337 **PKiKP** **10 06 37.6 +0.9**
FINES FINESS Array B 131.55 337 PKiKP **PKiKP** **10 06 37.6 +0.9**
LODK Lodwar 131.75 256 IAMs_20 IAMs_20 11 00 26.5
comp=Z,5µm,20.0s
GDHS Morne Mazeau, 131.85 86 IAMs_20 IAMs_20 10 58 14.8
comp=Z,4µm,20.0s
TDBA Terre de Bas, 131.88 87 IAMs_20 IAMs_20 10 57 51.0
comp=Z,5µm,21.0s
CBE Ff, Capester 131.95 86 IAMs_20 IAMs_20 10 58 00.8
comp=Z,6µm,20.0s
SOC Sochi 132.00 311 *i* PKiKP **PKPdf** **10 06 35.3 -1.9**
SOC *e* 10 09 01.0
SOC *e*PPP PPP 10 11 45.2
SOC *e*PS **PS** **10 19 05.5 -8.7**
SOC *e*SS SS 10 26 32.6 -2.9

BIM	**Bigot**	**132.09**	**89**	IAMs_20	IAMs_20	11 00 07.8		
	comp=Z,5µm,20.0s							
MAGL	**Barre de l'ile**	**132.23**	**87**	IAMs_20	IAMs_20	10 58 20.3		
	comp=Z,5µm,20.0s							
MPOM	**Morne Pois Mar**	**132.27**	**89**	IAMs_20	IAMs_20	11 02 02.5		
	comp=Z,4µm,18.0s							
ILAM	**Ilet Lapin Mar**	**132.34**	**88**	IAMs_20	IAMs_20	11 12 01.2		
	comp=Z,4µm,18.0s							
BBGH	**Gun Hill**	**133.15**	**91**	IAMs_20	IAMs_20	10 58 47.0		
	comp=Z,8µm,21.0s							
ANN	**Anapa**	**133.31 313**		*i* PKIKP	**PKPdf**	**10 06 38.1**	**-1.5**	
ANN				*i*		10 09 05.1		
ANN				*e*PPP	PPP	10 11 59.9		
ANN				*e*		10 13 49.9		
ANN				pmax	pmax			
	comp=Z,18nm,1.0s							
ANN				MLR	MLR			
	comp=Z,4µm,22.0s							
ANN				MLR	MLR			
	comp=N,5µm,21.0s							
ANN				MLR	MLR			
	comp=E,1µm,21.0s							
MNK	**Minsk**	**135.00 329**		*i* PKIKP	**PKPdf**	**10 06 40.1**	**-2.3**	
MNK				*i*		10 09 17.3		
MNK				*i* PPP	PPP	10 12 13.8		
MNK				*i*		10 13 50.6		
MNK				pmax	pmax			
	comp=E,4.0nm,1.4s							
MNK				pmax	pmax			
	comp=N,38nm,1.0s							
MNK				pmax	pmax			
	comp=Z,34nm,1.2s							
MNK				MLR	MLR			
	comp=E,1µm,24.0s							
MNK				MLR	MLR			
	comp=Z,14µm,23.0s							
MNK				MLR	MLR			
	comp=N,4µm,22.0s							
MNK	**Minsk**	**135.00 329**		*i* PKP	**PKPdf**	**10 06 40.2**	**-2.3**	
	comp=E,4.0nm,1.4s							
MNK				*i* PKP	**PKPdf**	**10 06 40.2**	**-2.3**	
	comp=N,38nm,1.0s							
MNK				*i* PKP	**PKPdf**	**10 06 40.2**	**-2.3**	
	comp=Z,34nm,1.2s,baz=56							
MNK				*i* PP	**PP**	**10 09 17.4**	**+0.3**	
MNK				*i* PPP	PPP	10 12 13.8		
MNK				*i* SKS	**SKSdf**	**10 13 50.6**	**-2.9**	
MNK				*i* SKKS	**SKKSdf**	**10 23 35.2**	**-5.6**	
MNK				*i* SS	**SS**	**10 27 15.9**	**+5.3**	
MNK				*i* SSS	SSS	10 32 17.3		
MNK				*i* LR	LR	11 04 06.1		
MNK				*i* LRM	MLR	11 07 24.1		
	comp=E,1µm,23.6s							
MNK				*i* LRM	MLR	11 07 31.1		
	comp=Z,14µm,23.0s							
MNK				*i* LRM	MLR	11 07 47.1		
	comp=N,4µm,21.7s							
BORG	**Borgarnes**	**135.16**	**6**	IAMs_20	IAMs_20	11 03 08.4		
	comp=Z,4µm,20.0s							
NACGM	**Naroch**	**135.30 330**	⇓	*e*PKP	**PKiKP**	**10 06 47.8**	**+3.3**	
	baz=54							
SIM	**Simferopol'**	**135.52 314**		*i* PKIKP	**PKPdf**	**10 06 43.7**	**-0.1**	
SIM				*i*		10 09 24.0		
AKASG	**Malin Array Be**	**136.26 323**		PKP	**PKPdf**	**10 06 44.1**	**-0.8**	
	comp=Z,1.7nm,0.7s,baz=61,slow=2.5,SNR=5.5							
AKASG				PP	**PP**	**10 09 22.8**	**-2.4**	
	comp=Z,0.9nm,0.7s,baz=51,slow=7.1,SNR=5.1							
AKASG				SKPbc	**SKPbc**	**10 10 16.9**	**-0.3**	
	comp=Z,6.0nm,0.9s,baz=46,slow=4.5,SNR=5.0							
NB2	**NORSAR Subarra1**	**136.49 344**		PKPdf	**PKPdf**	**10 06 41.2**	**-3.9**	
	baz=27,slow=1.8							
NB2	**NORSAR Subarra1**	**136.49 344**		PKPdf	**PKPdf**	**10 06 41.2**	**-3.9**	
	comp=Z,80nm,2.0s,baz=27,slow=1.8							
NOA	**NORSAR Array B**	**136.49 344**		PKP	**PKPdf**	**10 06 43.8**	**-1.3**	
	comp=Z,1.3nm,0.8s,baz=81,slow=1.7,SNR=4.7							
NOA				SKP	**SKPbc**	**10 10 19.0**	**+1.4**	
	comp=Z,0.6nm,0.7s,baz=293,slow=9.9,SNR=2.4							
GHAJ	**Ghor Haditha**	**136.93 294**		IAMs_20	IAMs_20	11 19 36.7		
	comp=Z,4µm,18.0s							
BRTR	**Keskin Array B**	**137.29 307**		PKP	**PKPdf**	**10 06 45.5**	**-1.9**	
	comp=Z,2.7nm,1.1s,baz=352,slow=2.9,SNR=6.4							
BRTR				PP	**PP**	**10 09 32.1**	**-0.4**	
	comp=Z,0.9nm,0.9s,baz=127,slow=7.0,SNR=2.1							
BRTR	**Keskin Array B**	**137.29 307**			**PKPdf**	**10 06 46.9**	**-0.5**	
BRTR	**Keskin Array B**	**137.29 307**		PKIKP	**PKPdf**	**10 06 46.9**	**-0.5**	
SUW	**Suwalki**	**137.51 331**		*e*PKPdf	**PKiKP**	**10 06 48.2**	**-0.8**	
SUW				*e*PP	**PP**	**10 09 32.0**	**-0.8**	
KONO	**Kongsberg**	**138.10 344**		IAMs_20	IAMs_20	11 08 47.1		
	comp=Z,6µm,20.0s							
KIS	**Kishinev**	**138.19 319**	⇓	*i* PKP	**PKiKP**	**10 06 51.0**	**+0.3**	
	comp=Z,460nm,9.4s							
KIS	**Kishinev**	**138.19 319**		*e*PP	PP	10 09 48.0	+11	
KIS	**Kishinev**	**138.19 319**		*e*PKS		10 10 25.0		
KIS				eL	L	11 01 23.0		
KIS				LRM	MLR	11 10 40.0		
	comp=Z,2µm,21.5s							
KIS	**Kishinev**	**138.19 319**	*d*	*i* PKIKP	**PKiKP**	**10 06 54.0**	**+3.3**	
KIS				pmax	pmax			
	comp=Z,460nm,9.4s							
MILM	**Milestii Mici**	**138.23 319**		*e*PKHKP	PKPpre	10 06 43.0		
MILM	**Milestii Mici**	**138.23 319**		*i* PKiKP	**PKiKP**	**10 06 50.5**	**-0.2**	
MILM	**Milestii Mici**	**138.23 319**		*e*PP	PP	10 09 48.0	+10	
MILM				*e*SKP		10 10 30.0		
MILM	**Milestii Mici**	**138.23 319**		*e*PKIKP	**PKPdf**	**10 06 43.0**	**-5.7**	
MILM				*i*		10 06 50.5		
MILM				pmax	pmax			
	comp=Z,970nm,6.6s							
CSS	**Mathiatis**	**138.43 300**		IAMs_20	IAMs_20	11 12 13.4		
	comp=Z,6µm,19.0s							
LVV	**L'vov**	**139.57 325**		*i* PKIKP	**PKPdf**	**10 06 49.7**	**-1.4**	
LVV				*e*		10 09 48.0		
LVV				*e*		10 20 05.0		
LVV				MLR	MLR			
	comp=Z,4µm,22.0s							
HARR	**Harsova**	**139.72 316**	⇓	P	**PKPdf**	**10 06 51.4**	**-0.1**	
HARR	**Harsova**	**139.72 316**	⇓	PKIKP	**PKPdf**	**10 06 51.4**	**-0.1**	
TESR	**Tescani**	**139.74 319**	⇓	P	**PKiKP**	**10 06 55.6**	**+1.7**	
BIZ	**Bicaz**	**139.87 320**	⇓	P	**PKPdf**	**10 06 50.0**	**-1.7**	
VRI	**Vrincioaia**	**139.99 318**	⇓	P	**PKiKP**	**10 07 01.3**	**+6.9**	
BEL	**Belsk**	**140.01 329**		*e*PKPdf	**PKPdf**	**10 06 50.3**	**-1.5**	
BEL				*e*PP	**PP**	**10 09 47.7**	**-0.6**	
BURAR	**Bucovina Array**	**140.07 321**	⇑	P	**PKiKP**	**10 06 54.5**	**-0.1**	
BURAR	**Bucovina Array**	**140.07 321**			**PKPdf**	**10 06 51.5**	**-0.7**	
BURAR	**Bucovina Array**	**140.07 321**		PKIKP	**PKPdf**	**10 06 51.5**	**-0.7**	
MLR	**Muntele Rosu**	**140.65 318**	⇑	P	**PKiKP**	**10 07 02.5**	**+6.6**	
MLR	**Muntele Rosu**	**140.65 318**		IAMs_20	IAMs_20	11 17 00.9		
	comp=Z,6µm,20.0s							
DOPR	**Dopca**	**140.77 319**	⇑	P	**PKiKP**	**10 06 55.1**	**-0.9**	
ARCR	**ARCALIA**	**140.84 321**	⇓	P	**PKiKP**	**10 06 58.2**	**+2.1**	
UZH	**Uzhgorod**	**141.18 324**		*e*PKHKP	PKPpre	10 06 47.6		
UZH				*i*		10 06 52.2		
UZH				*i*		10 06 59.7		
UZH				*i*		10 09 51.0		
UZH				*e*		10 13 11.3		
RGN	**Rugen**	**141.21 337**		IAMs_20	IAMs_20	11 11 52.4		
	comp=Z,7µm,20.0s							
CRVS	**Cervenica-Dubn**	**141.47 325**		*e*PKIKP	**PKPdf**	**10 06 49.6**	**-5.0**	
CRVS	**Cervenica-Dubn**	**141.47 325**		*e*PKP	**PKPdf**	**10 06 49.6**	**-5.0**	
JMB	**Yambol**	**141.51 313**		*i* P	**PKPdf**	**10 06 51.2**	**-3.6**	
ARR	**Arges**	**141.52 319**	⇓	P	**PKPdf**	**10 06 54.0**	**-0.9**	
OJC	**Ojcow**	**141.53 328**		*e*PKPdf	PKPpre	10 06 46.6		
OJC				*e*PP	**PP**	**10 09 54.6**	**-3.1**	
SZH	**Strazhica**	**141.62 315**		*i* P	**PKPdf**	**10 06 49.3**	**-5.7**	
NIE	**Niedzica**	**141.77 327**		*e*PKPdf	**PKPdf**	**10 06 51.0**	**-4.1**	
NIE				*e*PP	**PP**	**10 09 58.2**	**-1.0**	
DRGR		**141.96 322**	⇑	P	**PKPdf**	**10 06 53.8**	**-1.8**	
DRGR		**141.96 322**	⇑	PKIKP	**PKPdf**	**10 06 53.8**	**-1.8**	
OKC	**Ostrava-Krasne**	**142.59 329**		*e*PKHKP	PKPpre	10 06 46.3		
OKC				MLR	MLR			
	comp=Z,7µm,20.5s							
OKC	**Ostrava-Krasne**	**142.59 329**		*e*PKP	PKPpre	10 06 46.3		
OKC				*e*SS	SS	10 28 45.5	+5.4	
OKC				AMS	AMS	11 12 00.0		
	comp=Z,7µm,20.5s							
KDZ	**Kurdzhali**	**142.63 313**		*i* P	**PKPdf**	**10 06 53.5**	**-3.4**	
KSP	**Ksiaz**	**142.77 331**		*e*PKPdf	**PKPdf**	**10 06 53.3**	**-3.5**	
SIRR	**Siria**	**142.85 322**	⇓	P	**PKPdf**	**10 06 52.3**	**-4.8**	
MORC	**Moravsky Berou**	**142.92 329**	⇓	P	**PKiKP**	**10 06 59.3**	**-1.0**	
MORC	**Moravsky Berou**	**142.92 329**			**PKPdf**	**10 06 54.8**	**-2.4**	
MORC	**Moravsky Berou**	**142.92 329**		PKIKP	**PKPdf**	**10 06 54.8**	**-2.4**	
MORC	**Moravsky Berou**	**142.92 329**		*e*PKP	**PKPdf**	**10 06 53.2**	**-4.0**	
PLD	**Plovdiv**	**142.93 314**		*i* P	**PKPdf**	**10 06 54.3**	**-3.0**	
OSTC	**Ostas**	**143.01 331**		*e*PKP	PKPbc	10 06 55.1	+1.1	
OSTC				*e*SS	SS	10 28 43.2	-1.7	
OSTC				AMS	AMS	11 10 50.0		
	comp=Z,10µm,21.1s							
MAUC	**Maruska**	**143.05 328**		*e*PKP	PKPab	10 06 50.3	-2.4	
MAUC				AMS	AMS	11 12 10.0		
	comp=Z,13µm,21.2s							
CHVC	**Chvalec**	**143.06 331**		*e*PKP	PKPab	10 06 53.1	+0.4	
CHVC				AMS	AMS	11 11 50.0		
	comp=Z,10µm,20.5s							
KRLC	**Kraliky**	**143.08 330**		*e*	**PKPdf**	**10 06 57.0**	**-0.4**	
KRLC				*e*SS	SS	10 28 43.0	-2.9	
KRLC	**Kraliky**	**143.08 330**		*e*PKP	**PKPdf**	**10 06 57.0**	**-0.4**	
KRLC				*e*SS	SS	10 28 43.0	-2.9	
RZN	**Rozhen**	**143.09 313**		*i* P	PKPbc	10 06 54.5	-0.2	
PGB	**Panagyurishte**	**143.10 315**		*i* P	PKPbc	10 06 55.6	+1.0	
VYHS	**Vyhne**	**143.10 326**		*e*PKIKP	**PKiKP**	**10 07 00.2**	**-0.5**	
VYHS	**Vyhne**	**143.10 326**		*e*	**PKiKP**	**10 07 00.2**	**-0.5**	
DPC	**Dobruska-Polom**	**143.10 331**		*e*PKP	**PKPdf**	**10 06 56.3**	**-1.2**	
DPC				*e*SS	SS	10 28 38.3	-7.8	
DPC				AMS	AMS	11 10 30.0		
	comp=Z,9µm,22.6s							
HERR	**Herculane**	**143.13 319**	⇓	P	**PKPdf**	**10 06 59.1**	**+1.5**	
UPC	**Upice**	**143.13 331**		*e*PKHKP	PKPpre	10 06 44.3		
UPC				*e*SS	SS	10 28 44.2	-2.1	
UPC				MLR	MLR			
	comp=Z,10µm,20.6s							
UPC	**Upice**	**143.13 331**		*e*PKP	PKPab	10 06 44.3	-8.7	
UPC				*e*SS	SS	10 28 44.2	-2.1	
UPC				AMS	AMS	11 11 10.0		
	comp=Z,10µm,20.6s							
BZS	**Buzias**	**143.23 321**	⇓	P	PKPab	10 06 47.6	-5.9	
BZS	**Buzias**	**143.23 321**	⇓	PKHKP	PKPpre	10 06 47.6		
JAVC	**Velka Javorina**	**143.46 328**		*e*PKP	**PKPdf**	**10 06 57.3**	**-0.9**	
SHEL	**Horse Pasture**	**143.48 189**		IAMs_20	IAMs_20	11 08 57.3		
	comp=Z,5µm,19.0s							
MDVR	**Moldovita**	**143.61 319**	⇓	P	**PKiKP**	**10 07 07.8**	**+5.8**	
VTS	**Vitosha**	**143.69 315**		*i* P	**PKPdf**	**10 06 58.9**	**0.0**	
VRAC	**Vranov**	**143.69 329**	⇑	P	**PKPdf**	**10 06 57.9**	**-0.6**	
VRAC	**Vranov**	**143.69 329**	⇑	PKIKP	**PKPdf**	**10 06 57.9**	**-0.6**	
VRAC	**Vranov**	**143.69 329**		*e*PKP	PKPab	10 06 55.1	-0.1	
PVCC	**Panska Ves**	**143.76 332**		*e*PKIKP	**PKPdf**	**10 06 57.9**	**-0.7**	
PVCC				*e*SS	SS	10 28 56.2	+2.7	
PVCC				MLR	MLR			
	comp=Z,7µm,22.0s							
PVCC	**Panska Ves**	**143.76 332**		*e*PKP	**PKPdf**	**10 06 57.9**	**-0.7**	
PVCC				*e*SS	SS	10 28 56.2	+2.7	
PVCC				AMS	AMS	11 11 20.0		
	comp=Z,7µm,22.0s							
MMB	**Musomiste**	**143.81 314**		*i* P	PKPbc	10 06 57.4	+0.8	
NVR	**Nevrokopi**	**143.82 313**		P	PKPab	10 06 55.5	-0.5	
CLL	**Collm**	**143.85 334**			**PKPdf**	**10 06 58.0**	**-0.6**	
CLL				IAMs_20	IAMs_20	11 18 27.6		
	comp=Z,6µm,18.0s							
CLL	**Collm**	**143.85 334**		*i* PKIKP	PKPab	10 06 54.9	-0.8	
CLL				pmax	pmax			
	comp=Z,98nm,1.6s							
CLL				MLR	MLR			
	comp=Z,6µm,18.4s							
CLL	**Collm**	**143.85 334**		*i* PKPdf	PKPab	10 06 54.9	-0.8	
	comp=Z,98nm,1.6s							
CLL				*e*PP	**PP**	**10 10 12.0**	**+0.6**	
	comp=Z,2µm,14.5s							
CLL				*e*PPP	PPP	10 13 26.0		
CLL				*e*PPPrev		10 21 38.0		
CLL				*e*SPP	SPP	10 22 42.0		
CLL				*e*x	x	10 24 18.0		
CLL				*e*SS	**SS**	**10 28 54.0**	**-0.3**	
CLL				*e*SSS	SSS	10 34 06.0		
CLL				Lm	MLR	11 18 00.0		
	comp=N,4µm,19.4s							
CLL				Lm	MLR	11 18 00.0		
	comp=E,2µm,19.0s							
CLL				Lm	MLR	11 18 00.0		
	comp=Z,6µm,18.4s							
KRUC	**Moravsky**	**143.96 329**		*e*PKP	**PKPdf**	**10 06 58.3**	**-0.6**	
MODS	**Modra-Piesok**	**143.98 327**		*e*PKIKP	PKPbc	10 06 57.6	+0.7	
MODS	**Modra-Piesok**	**143.98 327**		*e*PKP	PKPbc	10 06 57.6	+0.7	
SRS	**Serrai**	**144.10 313**		P	**PKPab**	**10 06 54.6**	**-2.4**	
KKB	**Krupnik**	**144.12 314**		*i* P	**PKPab**	**10 06 57.1**	**0.0**	
APE	**Apeiranthos**	**144.13 306**	⇓	P	**PKPdf**	**10 07 00.4**	**+0.7**	
APE	**Apeiranthos**	**144.13 306**	⇓	PKIKP	**PKPdf**	**10 07 00.4**	**+0.7**	
PRU	**Pruhonice**	**144.17 332**		*e*PKIKP	**PKPab**	**10 06 55.7**	**-1.2**	
PRU				MLR	MLR			
	comp=Z,6µm,22.5s							
PRU	**Pruhonice**	**144.17 332**		*e*PKP	**PKPab**	**10 06 55.7**	**-1.2**	
PRU				*e*SS	SS	10 29 06.5	+8.3	
PRU				AMS	AMS	11 09 50.0		
	comp=Z,6µm,22.5s							
ZST	**Bratislava**	**144.18 327**		*e*PKIKP	PKPbc	10 06 57.9	+0.5	
ZST	**Bratislava**	**144.18 327**		*e*PKP	PKPbc	10 06 57.9	+0.5	
BOVS	**Bovan**	**144.19 318**	⇑	P	**PKPab**	**10 06 57.4**	**+0.1**	
TREC	**Trest**	**144.23 330**		*e*PKHKP	PKPpre	10 06 46.3		
TREC				*e*SS	SS	10 28 58.0	-1.0	
TREC				MLR	MLR			
	comp=Z,8µm,22.0s							
TREC	**Trest**	**144.23 330**		*e*PKP	PKPab	10 06 46.3	-11	
TREC				*e*SS	SS	10 28 58.0	-1.0	
TREC				AMS	AMS	11 11 40.0		
	comp=Z,8µm,22.0s							
RCBR	**Riachuelo**	**144.29 134**		IAMs_20	IAMs_20	11 11 57.8		
	comp=Z,5µm,18.0s							
SANT	**Santorini**	**144.39 304**	⇓	P	**PKPab**	**10 06 57.5**	**-0.8**	
SANT	**Santorini**	**144.39 304**			**PKPab**	**10 06 57.2**	**-1.0**	
PLG	**Polygyros**	**144.50 312**		P	**PKPab**	**10 06 56.3**	**-2.3**	
FRGS	**Fruska Gora**	**144.54 321**	⇑	P	**PKPab**	**10 06 58.1**	**-0.5**	
KNT	**Kendrikon**	**144.55 313**		P	**PKPab**	**10 06 56.5**	**-2.2**	
MORH	**Mrgy, Hungar**	**144.60 324**	⇓	P	**PKPab**	**10 06 58.5**	**-0.2**	
ESK	**Eskdalemuir**	**144.65 352**			**PKPab**	**10 06 57.9**	**-0.7**	
ESK	**Eskdalemuir**	**144.65 352**		PKIKP	**PKPab**	**10 06 58.1**	**-0.4**	
NKC	**Novy Kostel**	**144.89 334**		*e*PKP	**PKPab**	**10 06 57.0**	**-2.7**	
NKC				*e*SS	SS	10 29 11.4	+5.0	
NKC				AMS	AMS	11 15 50.0		
	comp=Z,5µm,18.9s							
RONA	**Rosalia, Austr**	**144.92 327**		*e*P	**PKPdf**	**10 07 00.5**	**-0.2**	
	comp=Z,56nm,1.0s							
CONA	**Conrad Observa**	**144.98 328**		*e*P	**PKPdf**	**10 07 00.9**	**0.0**	
	comp=Z,56nm,1.4s							
PTL	**Penteli**	**145.07 308**		P	**PKPbc**	**10 06 57.7**	**-3.0**	
XOR	**Xorichti**	**145.08 310**		P	**PKPbc**	**10 06 57.8**	**-2.9**	
CKRC	**Cesky Krumlov**	**145.11 330**		*e*PKP	**PKPbc**	**10 06 57.3**	**-3.2**	
CKRC				*e*SS	SS	10 29 12.6	+3.5	
IDI	**Anoyia**	**145.13 303**	⇓	P	**PKPab**	**10 07 01.1**	**0.0**	
KHC	**Kasperske Hory**	**145.22 331**		*e*PKP	**PKPbc**	**10 06 57.5**	**-3.3**	
KHC				*e*SS	SS	10 29 19.5	+9.1	
KHC				AMS	AMS	11 11 40.0		
	comp=Z,8µm,22.2s							
LIT	**Litokhoron**	**145.28 312**		P	**PKPbc**	**10 06 58.5**	**-2.8**	
GERES	**GERESS Array B**	**145.37 331**		PKPbc	**PKPbc**	**10 06 58.6**	**-2.8**	
	comp=Z,5.9nm,0.7s,baz=38,slow=2.4,SNR=8.5							
GERES	**GERESS Array B**	**145.37 331**			**PKPbc**	**10 07 00.5**	**-0.9**	
GERES	**GERESS Array B**	**145.37 331**		PKIKP	**PKPbc**	**10 07 00.5**	**-0.9**	
VILL	**Villia**	**145.44 308**		P	**PKPbc**	**10 06 57.0**	**-4.9**	
ATAL	**Atalanti**	**145.46 309**		P	**PKPbc**	**10 06 57.3**	**-4.6**	
LTK	**Loutraki**	**145.74 308**		P	**PKPdf**	**10 06 57.1**	**-5.3**	
FNA	**Florina**	**145.76 314**		P	**PKPdf**	**10 06 59.3**	**-3.1**	
KOGS	**Kog**	**145.76 326**		*e*PKPbc	**PKPdf**	**10 07 01.8**	**-0.3**	
KOGS				*e*		10 07 03.6		
KOGS				*e*		10 07 26.3		
GRA1	**Grafenberg Arr**	**145.82 334**		IAMs_20	IAMs_20	11 24 20.7		
	comp=Z,5µm,18.0s							
GRFO	**Grafenberg**	**145.82 334**		IAMs_20	IAMs_20	11 24 19.8		
	comp=Z,5µm,19.0s							
GVDS	**Gavdos**	**145.88 302**		P	**PKPdf**	**10 06 58.5**	**-4.2**	
ANKY	**Antikythira Is**	**146.21 304**		P	**PKPdf**	**10 06 58.1**	**-5.1**	
BIOA	**Bad Ischl, Aus**	**146.23 329**		*e*P	**PKPbc**	**10 07 04.3**	**+0.3**	
	comp=Z,32nm,1.2s							
GUR	**Goura**	**146.24 308**		P	**PKPdf**	**10 07 02.7**	**-0.7**	
SOKA	**Soboth**	**146.24 327**		*e*P	**PKPab**	**10 07 04.6**	**-0.2**	
	comp=Z,32nm,1.4s							
KTHA	**Kythira Island**	**146.27 305**		P	**PKPdf**	**10 07 01.4**	**-2.0**	
KLV	**Kalavryta, Ach**	**146.34 309**		P	**PKPdf**	**10 07 02.5**	**-1.0**	
PDG	**Podgorica**	**146.35 318**	⇑	P	**PKPbc**	**10 07 04.5**	**0.0**	
PDG	**Podgorica**	**146.35 318**		IAMs_20	IAMs_20	11 14 23.9		
	comp=Z,6µm,21.0s							
EFP	**Efpalio**	**146.37 309**		P	**PKPdf**	**10 07 01.4**	**-2.0**	
TIR	**Tirane**	**146.50 315**	⇓	P	**PKPab**	**10 07 05.8**	**-0.1**	
TIR	**Tirane**	**146.50 315**		IAMs_20	IAMs_20	11 20 26.4		
	comp=Z,6µm,20.0s							
TIR	**Tirane**	**146.50 315**	⇓	PKP2	**PKPab**	**10 07 05.8**	**-0.1**	
OBKA	**Obir**	**146.60 327**		*e*P	**PKPbc**	**10 07 05.6**	**+0.3**	
	comp=Z,20nm,1.4s							
KBA	**Koelnbreinsper**	**146.81 329**		*e*P	**PKPdf**	**10 07 04.5**	**+0.4**	
	comp=Z,31nm,1.0s							
BOJS	**Bojanci**	**146.90 325**		*e*PKPbc	**PKPbc**	**10 07 05.4**	**-0.5**	
BOJS				*e*		10 07 09.2		
BEBN	**Eben Emael**	**146.92 340**		*d*PKiKP	**PKPab**	**10 07 07.2**	**0.0**	
LJU	**Ljubljana**	**146.93 327**		*e*PKPbc	**PKPbc**	**10 07 05.1**	**-0.9**	
LJU				*e*		10 07 08.6		
BTNL	**Ternell**	**146.96 340**		*d*PKP	**PKPbc**	**10 07 05.1**	**-0.7**	
MEM	**Membach**	**146.98 340**		*d*PKP	**PKPbc**	**10 07 05.3**	**-0.7**	
DSB	**Dublin**	**147.02 355**			**PKPdf**	**10 07 03.8**	**-0.2**	
DSB				IAMs_20	IAMs_20	11 16 56.8		
	comp=Z,4µm,19.0s							
BSTI	**Sart Tilman**	**147.14 340**		*d*PKP	**PKPbc**	**10 07 05.9**	**-0.6**	
BHOU	**Houvegnez**	**147.20 340**		*d*PKP	**PKPbc**	**10 07 06.4**	**-0.3**	
STU	**Stuttgart**	**147.36 335**		IAMs_20	IAMs_20	11 12 19.4		
	comp=Z,4µm,21.0s							
ABTA	**Abfaltersbach**	**147.44 329**		*e*P	**PKPbc**	**10 07 07.6**	**0.0**	
	comp=Z,34nm,0.9s							
WATA	**Walderalm**	**147.45 331**		*e*P	**PKPbc**	**10 07 07.8**	**+0.2**	
	comp=Z,28nm,1.2s							
WTTA	**Wattenberg**	**147.48 331**		*e*P	**PKPbc**	**10 07 06.8**	**-1.0**	
	comp=Z,48nm,1.3s,SNR=6.2							
SNF	**Seneffe**	**147.60 342**		*d*PKP	**PKPbc**	**10 07 07.4**	**-0.3**	
RCHB	**Rochefort**	**147.62 340**		*d*PKP	**PKPbc**	**10 07 07.0**	**-0.8**	
BMRD	**Maredsous**	**147.64 341**		*d*PKP	**PKPbc**	**10 07 07.3**	**-0.6**	
MOTA	**Moosalm**	**147.66 331**		*e*P	**PKPbc**	**10 07 07.1**	**-1.1**	
	comp=Z,46nm,1.0s,SNR=9.4							
STAL	**STALIGIAL**	**147.69 328**			**PKPdf**	**10 07 06.6**	**+1.1**	
RETA	**Reutte**	**147.70 332**		*e*P	**PKPbc**	**10 07 09.1**	**+0.8**	
	comp=Z,50nm,1.3s,SNR=7.7							
SQTA	**Sankt Quirin**	**147.70 331**		*e*P	**PKPbc**	**10 07 07.0**	**-1.4**	
	comp=Z,34nm,0.7s,SNR=6.5							
WLF	**Walferdange**	**147.74 339**		*d*PKP	**PKPbc**	**10 07 08.2**	**0.0**	
DOU	**Dourbes**	**147.87 341**		*d*PKPdf	**PKPdf**	**10 07 06.3**	**+0.7**	
DOU				*dp*PKP	**sPKPbc**	**10 07 12.0**	**+0.2**	
SCTE	**Santa Cesarea**	**148.05 314**			**PKPbc**	**10 07 08.1**	**-1.2**	
BFO	**Black Forest**	**148.06 335**		IAMs_20	IAMs_20	11 20 35.8		
	comp=Z,5µm,19.0s							
FETA	**Feichten**	**148.07 331**		*e*P	**PKiKP**	**10 07 10.4**	**-0.8**	
	comp=Z,52nm,0.9s,SNR=8.5							
DAVA	**Damuels**	**148.24 332**		*e*P	**PKPbc**	**10 07 10.5**	**+0.7**	
	comp=Z,39nm,1.0s							
TEOL	**Teolo**	**148.84 328**			**PKPbc**	**10 07 09.5**	**-1.7**	
SGRT	**San Giovanni R**	**148.91 319**			**PKPbc**	**10 07 10.5**	**-1.1**	
MATE	**Matera**	**148.92 317**	⇓	P	**PKPab**	**10 07 19.8**	**+4.3**	
SALO	**Salr**	**149.21 330**			**PKPbc**	**10 07 10.6**	**-1.6**	
TIP	**Timpagrande**	**149.64 314**	⇑	P	**PKPbc**	**10 07 13.8**	**+0.3**	
CEL	**Celeste**	**150.68 313**		IAMs_20	IAMs_20	11 19 37.4		
	comp=Z,4µm,21.0s							
ASCN	**Ascension**	**151.65 173**		IAMs_20	IAMs_20	11 09 16.6		
	comp=Z,4µm,21.0s							
**VSL

PCVE	**Castro Verde**	**162.64 352**	*e*PKPdf	**PKPdf**	**10 07 26.4**	**+0.6**
PCVE	**Castro Verde**	**162.64 352**	*e*PKPab	**PKPab**	**10 08 13.4**	**-0.5**
PCVE	**Castro Verde**	**162.64 352**	*e*PP	PP	10 12 07.4	+10
PTEO	**Sao Teotonio**	**162.80 354**	*e*PKPdf	**PKPdf**	**10 07 25.8**	**-0.2**
PTEO	**Sao Teotonio**	**162.80 354**	*e*PKPab	**PKPab**	**10 08 14.7**	**+0.1**
PVAQ	**Vaqueiros**	**162.82 351**	*e*PKPdf	**PKPdf**	**10 07 26.5**	**+0.5**
PVAQ	**Vaqueiros**	**162.82 351**	*e*PKPab	**PKPab**	**10 08 14.4**	**-0.3**
PVAQ	**Vaqueiros**	**162.82 351**	*e*PP	**PP**	**10 12 01.8**	**+3.5**
PVAQ	**Vaqueiros**	**162.82 351**	*e*LR	LR	11 12 43.0	
	comp=Z,13μm,20.0s					
PBDV	**Barranco-do-Ve**	**163.00 351**	*e*PKPdf	**PKPdf**	**10 07 27.5**	**+1.3**
PBDV	**Barranco-do-Ve**	**163.00 351**	*e*PKPab	**PKPab**	**10 08 15.5**	**-0.1**
PBDV	**Barranco-do-Ve**	**163.00 351**	*e*PP	**PP**	**10 12 06.7**	**+7.4**
MORF	**Marmelete**	**163.03 353**	*e*PKPdf	**PKPdf**	**10 07 25.4**	**-0.9**
MORF			*e*PP	**PP**	**10 12 01.3**	**+1.9**
MORF			IAMs_20	IAMs_20	11 29 06.9	
	comp=Z,9μm,35.7s					
MORF	**Marmelete**	**163.03 353**	*e*PKPdf	**PKPdf**	**10 07 27.1**	**+0.8**
MORF	**Marmelete**	**163.03 353**	*e*PP	**PP**	**10 12 06.3**	**+6.8**
MORF	**Marmelete**	**163.03 353**	*e*PKIKP	**PKPdf**	**10 07 25.4**	**-0.9**
MORF			*e*		10 12 01.3	
PFVI	**Vila Bisbo**	**163.22 354**	*e*PKPdf	**PKPdf**	**10 07 27.2**	**+0.8**
CHAS	**Isla Isabel II**	**163.43 334**	PKP	**PKPdf**	**10 07 25.1**	**-1.5**
CHAS	**Isla Isabel II**	**163.43 334**	PP	PP	10 12 02.6	+0.7
SFS	**San Fernando**	**163.44 346**	PKP	**PKPdf**	**10 07 27.2**	**+0.6**
SFS	**San Fernando**	**163.44 346**	PP	PP	10 12 06.1	+4.5
WMELI	**Melilla**	**163.52 336**	PKP	**PKPdf**	**10 07 25.5**	**-1.2**
WMELI	**Melilla**	**163.52 336**	PP	PP	10 12 04.4	+2.2
CEU	**Ceuta**	**163.78 343**	PKP	**PKPdf**	**10 07 26.2**	**-0.7**
CEU	**Ceuta**	**163.78 343**	PP	PP	10 12 05.5	+2.1
PVLZ	**Peæn de**	**164.13 339**	PKP	**PKPdf**	**10 07 25.5**	**-1.7**
PVLZ	**Peæn de**	**164.13 339**	PP	PP	10 12 05.0	-0.3
LIC	**Lamto**	**164.73 203**⇑	*i*PKP1	**PKPab**	**10 08 29.7**	**+6.0**
	comp=Z,13nm,0.6s					
KIC	**Kosan Boka**	**164.74 205**⇑	*i*PKP1	**PKPab**	**10 08 29.9**	**+6.1**
	comp=Z,8.9nm,0.6s					
DBIC	**Dimbokro**	**165.07 205**	PKP	**PKPdf**	**10 07 31.4**	**+2.7**
	comp=Z,6.8nm,1.1s,baz=208,slow=1.6,SNR=1.5					
DBIC			PKPab	**pPKPab**	**10 08 26.7**	**-0.7**
	comp=Z,10nm,1.0s,baz=130,slow=5.8,SNR=5.0					
DBIC			PP	**PP**	**10 12 14.3**	**+3.9**
	comp=Z,2.9nm,0.8s,baz=117,slow=13,SNR=1.9					
DBIC	**Dimbokro**	**165.07 205**	PKPdf	**PKPdf**	**10 07 26.3**	**-2.5**
DBIC			PKPab	**PKPab**	**10 08 24.6**	**-0.7**
TIC	**Toumodi**	**165.11 204**⇑	*i*PKP1	**PKPab**	**10 08 30.7**	**+5.3**
	comp=Z,4.9nm,0.3s					
TORD	**Torodi Ar. Bea**	**165.81 241**	PKP	**PKPdf**	**10 07 28.9**	**-0.4**
	comp=Z,0.5nm,0.8s,baz=116,slow=3.4,SNR=5.1					
TORD			PKPab	**PKPab**	**10 08 29.3**	**+0.6**
	comp=Z,4.7nm,1.1s,baz=116,slow=2.6,SNR=4.4					
TORD			PP	**PP**	**10 12 18.0**	**+2.3**
	comp=Z,0.6nm,0.9s,baz=90,slow=1.4,SNR=0.8					
TORD	**Torodi Ar. Bea**	**165.81 241**		**PKPdf**	**10 07 26.9**	**-2.4**
TORD				**PKPab**	**10 08 27.4**	**-1.3**
IFR	**Ifrane**	**165.92 339**	PKP	**PKPdf**	**10 07 28.7**	**-0.4**
IFR	**Ifrane**	**165.92 339**	PP	PP	10 12 15.2	+0.2
PMOZ	**Porto Moniz, M**	**166.48 23**	*e*PP	PP	10 12 28.3	+10
PMOZ	**Porto Moniz, M**	**166.48 23**	*e*LR	LR	11 09 09.4	
	comp=Z,4μm,20.0s					
AVE	**Averroes**	**166.76 347**	PKP	**PKPdf**	**10 07 29.9**	**+0.3**
AVE	**Averroes**	**166.76 347**	PP	PP	10 12 17.7	-1.3

IDC 19 09:48:48.4±1.2,27°98N×101°42E,h0km,mb3.7/6, mbtmp3.7/7,ML4.0/1,MS3.6/1 Error ellipse: s-maj=33.2km s-min=19.0km az=83.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**9.74**	**194**	Pn	Pn	09 51 11.8	+1.9
	0.4nm,0.3s,baz=4.1,slow=27,SNR=4.4						
CMAR				Pg		09 51 48.0	
	0.4nm,0.3s,baz=4.6,slow=17,SNR=14						
CMAR				Lg	Lg	09 53 55.9	
	0.6nm,0.3s,baz=32,slow=28,SNR=1.6						
	1.0nm,0.4s						
SONM	**Songino Array**	**20.20**	**10**	P	P	09 53 24.1	-0.8
	1.3nm,0.8s,baz=203,slow=12,SNR=3.7						
	1.3nm,0.8s						
MKAR	**Makanchi Array**	**24.05**	**326**	P	P	09 54 05.6	+0.3
	1.8nm,0.7s,baz=127,slow=11,SNR=12						
	1.8nm,0.7s						
KSRS	**Korea Array**	**24.15**	**60**	P	P	09 54 07.1	+0.9
	0.7nm,0.7s,baz=236,slow=8.6,SNR=2.0						
	0.7nm,0.7s						
AAK	**Ala-Archa**	**26.26**	**311**	LR	LR	10 05 36.8	
	comp=Z,112nm,18.9s,baz=307,slow=38						
KURBB	**Kurchatov Arra**	**28.51**	**329**	P	P	09 54 45.2	-0.2
	0.7nm,0.7s,baz=141,slow=9.7,SNR=4.6						
	0.7nm,0.7s						
ZALV	**Zalesovo Beam**	**28.67**	**339**	P	P	09 54 46.6	-0.2
	0.4nm,0.4s,baz=156,slow=11,SNR=1.9						
	0.4nm,0.4s						
WRA	**Warramunga Arr**	**57.30**	**143**	P	P	09 58 37.1	-1.2
	2.4nm,0.9s,baz=329,slow=8.1,SNR=2.7						
	2.4nm,0.9s						

*IDC **19** 09:54:54.1±2.0,20°.28S×168°.81E,h0km,mb3.9/4, mbtmp3.9/5,ML3.9/1,Error ellipse: s-maj=82.2km s-min=24.8km az=141.0*
*NEIC **19** 09:54:55.3±1.9,20°.57S±0°.08×169°.3E±0°.1,h10km±1km, mb4.7/13,Error ellipse: s-maj=21.0km s-min=9.4km az=60.0*
ISC 19 09:54:57.6±0.6,20°.6S±0°.1×169°.23E±0°.10,h31km,n26, σ1§41/27,mb4.6/10,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.96**	**241**	Pn	**Pn**	**09 55 40.7**	**-1.9**
	18nm,0.3s,baz=69,slow=14,SNR=10						
DZM				Sn	**Sn**	**09 56 14.8**	**-2.3**
	45nm,0.3s,baz=60,slow=20,SNR=7.5						
	38nm,0.3s						
MSVF	**Nonsavu**	**8.82**	**72**	Pn	**Pn**	**09 57 01.5**	**-1.6**
ARMA	**Armidale**	**18.61**	**235**	P	**Pn**	**09 59 13.2**	**+0.1**
COEN	**Coen**	**25.73**	**281**	P	**P**	**10 00 27.3**	**+1.8**
BBOO	**Buckleboo**	**31.88**	**241**	P	**P**	**10 01 23.1**	**+2.9**
BBOO				IAmb	IAmb	10 01 35.7	
	comp=Z,14nm,1.3s						
WR0	**Warramunga Arr**	**32.51**	**265**	P	**P**	**10 01 25.0**	**-0.8**
WB2	**Warramunga Arr**	**32.69**	**265**	P	**P**	**10 01 27.0**	**-0.4**
WB2				IAmb	IAmb	10 01 44.9	
	comp=Z,12nm,1.2s						
WRAB	**Tennant Creek**	**32.69**	**265**	P	**P**	**10 01 27.3**	**-0.1**
WRAB				IAmb	IAmb	10 01 41.4	
	comp=Z,16nm,1.4s						
WRA	**Warramunga Arr**	**32.70**	**265**	P	**P**	**10 01 24.9**	**-2.6**
	comp=Z,1.1nm,0.6s,baz=90,slow=8.5,SNR=6.7						
	comp=Z,1.1nm,0.6s						
AS31	**Alice Springs**	**32.81**	**258**	P	**P**	**10 01 29.4**	**+0.9**
ASAR	**Alice Springs**	**32.81**	**258**	P	**P**	**10 01 28.3**	**-0.2**
KNRA	**Kununurra**	**38.70**	**270**	P	**P**	**10 02 20.7**	**+1.7**
KNRA				IAmb	IAmb	10 02 25.5	
	comp=Z,16nm,1.2s						
QSPA	**South Pole Qui**	**69.42**	**180**	P	**P**	**10 06 04.0**	**+1.4**
USA0B	**Ussuriysk Arra**	**72.97**	**333**	P	**P**	**10 06 23.5**	**-0.5**
USRK	**Ussuriysk Ar.**	**72.97**	**333**	P	**P**	**10 06 24.4**	**+0.3**
BELA	**Belgrano 2**	**80.71**	**175**	P	**P**	**10 07 07.9**	**+0.6**
BELA				IAmb	IAmb	10 07 21.2	
	comp=Z,11nm,1.5s						
TROLL	**Troll, Antarti**	**87.14**	**184**	P	**P**	**10 07 38.5**	**-1.9**
SNAA	**Sanae**	**87.77**	**183**	P	**P**	**10 07 44.7**	**+1.4**
SNAA				IAmb	IAmb	10 07 50.0	
	comp=Z,4.0nm,1.3s						
SONM	**Songino Array**	**88.33**	**323**	P	**P**	**10 07 46.6**	**+0.3**
	comp=Z,1.6nm,0.9s,baz=142,slow=6.4,SNR=4.4						
	comp=Z,1.6nm,0.9s						
SONM	**Songino Array**	**88.33**	**323**	P	**P**	**10 07 45.6**	**-0.7**
SONM				IAmb	IAmb	10 07 47.5	
	comp=Z,4.1nm,1.2s						
VNA3	**Neumayer Olymp**	**88.36**	**180**	P	**P**	**10 07 45.1**	**-1.0**
NVAR	**Mina Array Bea**	**89.73**	**48**	P	**P**	**10 07 54.6**	**+1.3**
	comp=Z,0.2nm,0.4s,baz=223,slow=7.2,SNR=3.7						
	comp=Z,0.2nm,0.4s						
NVAR	**Mina Array Bea**	**89.73**	**48**	P	**P**	**10 07 53.2**	**-0.1**
ILAR	**Eielson Array**	**91.57**	**17**	P	**P**	**10 07 59.9**	**-1.0**
	comp=Z,0.4nm,0.8s,baz=238,slow=5.1,SNR=2.6						
	comp=Z,0.4nm,0.8s						
GERES	**GERESS Array B**	**145.71**	**331**	PKPbc	**PKPbc**	**10 14 33.6**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=36,slow=4.0,SNR=4.1						
GERES	**GERESS Array B**	**145.71**	**331**		**PKPab**	**10 14 34.3**	**+0.5**

*IDC **19** 09:58:08.0±1.8,31°.24S×177°.74W,h0km,mb4.1/2, mbtmp4.0/3,ML3.1/1,Error ellipse: s-maj=45.9km s-min=30.0km az=102.0*
*NEIC **19** 09:58:13.3±1.4,30°.98S±0°.06×177°.7W±0°.2,h23km±6km, mb4.6/12,Error ellipse: s-maj=22.3km s-min=3.4km az=109.0*
ISC 19 09:58:13.0±0.9,31°.00S±0°.08×177°.6W±0°.2,h27km,n23, σ1§09/24,mb4.5/8,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.76**	**352**	Pn	**Pn**	**09 58 42.3**	**+0.6**
	71nm,0.3s,baz=221,slow=19,SNR=2.0						
RAO				Sn	**Sb**	**09 59 06.8**	**+0.5**
	78nm,0.3s,baz=98,slow=23,SNR=2.5						
RAO	**Raoul Island**	**1.76**	**352**		**Pn**	**09 58 41.9**	**+0.2**
URZ	**Urewera**	**8.44**	**209**	Pn	Pn	10 00 05.8	-7.7
	0.3nm,0.3s,baz=38,slow=19,SNR=1.7						
URZ				Sn	Sn	10 01 38.6	-9.2
	0.2nm,0.3s,baz=38,slow=19,SNR=2.0						
	3.2nm,0.6s						
OUZ	**Omahuta**	**8.48**	**238**	Pn	**Pn**	**10 00 14.3**	**+0.3**
CTA	**Charters Tower**	**34.21**	**280**	P	**P**	**10 04 55.8**	**-0.8**
	3.2nm,0.9s,baz=114,slow=8.6,SNR=2.1						
	3.2nm,0.9s						
CTAO	**Charters Tower**	**34.21**	**280**	P	**P**	**10 04 56.8**	**+0.3**
BBOO	**Buckleboo**	**39.12**	**255**	P	**P**	**10 05 40.2**	**+2.0**
BBOO				IAmb	IAmb	10 05 52.6	
	comp=Z,11nm,1.2s						
AS31	**Alice Springs**	**43.40**	**267**	P	**P**	**10 06 13.7**	**+0.2**
ASAR	**Alice Springs**	**43.40**	**267**	P	**P**	**10 06 13.3**	**-0.3**
WR0	**Warramunga Arr**	**44.26**	**273**	P	**P**	**10 06 19.6**	**-0.9**
WR0				IAmb	IAmb	10 06 24.7	
	comp=Z,7.6nm,1.0s						
WB2	**Warramunga Arr**	**44.43**	**273**	P	**P**	**10 06 20.9**	**-0.9**
WB2				IAmb	IAmb	10 06 25.9	
	comp=Z,7.5nm,0.8s						
WRAB	**Tennant Creek**	**44.44**	**273**	P	**P**	**10 06 21.1**	**-0.7**
WRAB				IAmb	IAmb	10 06 32.3	
	comp=Z,5.6nm,0.8s						
WRA	**Warramunga Arr**	**44.44**	**273**	P	**P**	**10 06 20.1**	**-1.8**
	comp=Z,1.9nm,0.7s,baz=131,slow=7.5,SNR=19						
	comp=Z,1.9nm,0.7s						
WRA	**Warramunga Arr**	**44.44**	**273**	P	**P**	**10 06 20.8**	**-1.1**
WB0	**Warramunga Arr**	**44.47**	**273**	P	**P**	**10 06 21.0**	**-1.1**
WB0				IAmb	IAmb	10 06 26.2	
	comp=Z,8.2nm,0.8s						
FORT	**Forrest**	**46.20**	**256**	P	**P**	**10 06 35.1**	**-0.7**
PSA00	**Pilbara Seismi**	**56.22**	**264**	P	**P**	**10 07 50.7**	**-0.4**
QSPA	**South Pole Qui**	**59.11**	**180**	P	**P**	**10 08 11.9**	**+1.0**
SNAA	**Sanae**	**77.55**	**178**	P	**P**	**10 10 07.5**	**+1.4**
SNAA				IAmb	IAmb	10 10 24.9	
	comp=Z,7.0nm,1.2s						
FINES	**FINESS Array B**	**145.82**	**340**	PKPbc	**PKPdf**	**10 17 48.2**	**-0.2**
	comp=Z,3nm,0.5s,baz=60,slow=3.2,SNR=17						
FINES	**FINESS Array B**	**145.82**	**340**		**PKPbc**	**10 17 48.5**	**-0.5**
TORD	**Torodi Ar. Bea**	**162.22**	**178**	PKPab	**PKPab**	**10 18 58.0**	**-1.4**
	comp=Z,0.7nm,1.0s,baz=207,slow=4.8,SNR=2.3						
TORD	**Torodi Ar. Bea**	**162.22**	**178**	PKPdf	**PKPdf**	**10 18 11.3**	**-1.4**
TORD					**PKPab**	**10 18 57.6**	**-1.9**

*IDC **19** 10:01:58.7±1.7,20°.03S×168°.81E,h0km,mb3.7/4, mbtmp3.7/5,ML3.8/1,Error ellipse: s-maj=91.4km s-min=26.4km az=142.0*
*NEIC **19** 10:02:01.2±2.2,20°.46S±0°.03×168°.9E±0°.1,h10km±1km, mb4.3/18,Error ellipse: s-maj=19.3km s-min=5.0km az=90.0*
ISC 19 10:02:00.4±0.6,20°.4S±0°.1×168°.95E±0°.09,h10km,n32, σ1§29/33,mb4.2/14,Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.86**	**234**	Pn	**Pn**	**10 02 47.1**	**+0.8**
	11nm,0.3s,baz=60,slow=19,SNR=17						
DZM				Sn	**Sn**	**10 03 19.4**	**-1.4**
	23nm,0.3s,baz=176,slow=23,SNR=6.0						
	32nm,0.3s						
MSVF	**Nonsavu**	**9.01**	**74**	Pn	**Pn**	**10 04 10.6**	**-0.2**
EIDS	**Eidsvold**	**17.18**	**250**	P	**Pn**	**10 06 00.4**	**-0.3**
EIDS				IAmb	IAmb	10 06 27.8	
	comp=Z,31nm,1.4s						
CTA	**Charters Tower**	**21.29**	**267**	P	**P**	**10 06 51.5**	**+4.1**
	comp=Z,3.6nm,0.8s,baz=99,slow=9.8,SNR=1.9						
COEN	**Coen**	**25.42**	**281**	P	**P**	**10 07 28.4**	**-0.1**
COEN				IAmb	IAmb	10 07 54.6	
	comp=Z,8.9nm,1.1s						
TOO	**Toolangi**	**26.59**	**225**	P	**P**	**10 07 36.8**	**-2.2**
STKA	**Stephens Creek**	**27.00**	**239**	P	**P**	**10 07 42.4**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=338,slow=16,SNR=1.6						
	comp=Z,0.9nm,0.5s						
STKA	**Stephens Creek**	**27.00**	**239**	P	**P**	**10 07 41.8**	**-0.9**
WR0	**Warramunga Arr**	**32.26**	**265**	P	**P**	**10 08 30.0**	**+0.5**
WR0				IAmb	IAmb	10 08 31.1	
	comp=Z,3.2nm,1.1s						
WB0	**Warramunga Arr**	**32.42**	**265**	P	**P**	**10 08 30.5**	**-0.4**
WB2	**Warramunga Arr**	**32.44**	**265**	P	**P**	**10 08 32.0**	**+0.9**
WB2				IAmb	IAmb	10 08 37.8	
	comp=Z,16nm,1.4s						
WRAB	**Tennant Creek**	**32.44**	**265**	P	**P**	**10 08 31.7**	**+0.6**
WRA	**Warramunga Arr**	**32.45**	**265**	P	**P**	**10 08 30.9**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=92,slow=8.4,SNR=6.7						
	comp=Z,0.4nm,0.6s						
AS31	**Alice Springs**	**32.59**	**258**	P	**P**	**10 08 33.3**	**+0.9**
ASAR	**Alice Springs**	**32.59**	**258**	P	**P**	**10 08 32.2**	**-0.2**
FORT	**Forrest**	**38.11**	**246**	P	**P**	**10 09 20.2**	**+0.4**
KNRA	**Kununurra**	**38.43**	**270**	P	**P**	**10 09 21.5**	**-1.1**
KNRA				IAmb	IAmb	10 09 25.6	
	comp=Z,11nm,1.1s						
NWAO	**Narrogin (SRO)**	**47.44**	**244**	P	**P**	**10 10 34.9**	**-0.6**
MORW	**Morawa**	**48.48**	**249**	P	**P**	**10 10 41.4**	**-2.2**
CASY	**Casey**	**58.95**	**204**	P	**P**	**10 11 58.6**	**-1.1**
CASY				IAmb	IAmb	10 12 16.4	
	comp=Z,4.6nm,1.1s						
KSAR	**Wonju Array Be**	**69.33**	**326**	P	**P**	**10 13 08.4**	**+0.2**
KS19	**Wonju Array Si**	**69.38**	**326**	P	**P**	**10 13 09.2**	**+0.7**
QSPA	**South Pole Qui**	**69.65**	**180**	P	**P**	**10 13 10.3**	**+0.3**
QSPA				IAmb	IAmb	10 13 33.8	
	comp=Z,1.7nm,1.0s						
BELA	**Belgrano 2**	**80.96**	**175**	P	**P**	**10 14 15.8**	**+1.1**
BELA				IAmb	IAmb	10 14 24.5	
	comp=Z,2.3nm,1.0s						
SNAA	**Sanae**	**87.98**	**183**	P	**P**	**10 14 52.5**	**+2.0**
SNAA				IAmb	IAmb	10 14 55.0	
	comp=Z,1.8nm,1.1s						
SONM	**Songino Array**	**87.99**	**323**	P	**P**	**10 14 52.3**	**+1.5**
SONM				IAmb	IAmb	10 14 52.8	
	comp=Z,1.6nm,1.1s						
NVAR	**Mina Array Bea**	**89.78**	**49**	P	**P**	**10 14 59.4**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=227,slow=7.3,SNR=3.0						
	comp=Z,0.3nm,0.6s						
NVAR	**Mina Array Bea**	**89.78**	**49**	P	**P**	**10 15 00.3**	**+0.7**
ILAR	**Eielson Array**	**91.43**	**17**	P	**P**	**10 15 04.1**	**-2.2**
	comp=Z,0.1nm,0.5s,baz=224,slow=6.3,SNR=1.6						
	comp=Z,0.1nm,0.5s						
EKA	**Eskdalemuir Ar**	**144.63**	**352**	PKP	**PKPab**	**10 21 35.4**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=356,slow=2.1,SNR=4.7						
GERES	**GERESS Array B**	**145.38**	**331**	PKP	**PKPbc**	**10 21 37.5**	**-1.0**
	comp=Z,0.5nm,0.5s,baz=57,slow=4.2,SNR=5.4						
GERES	**GERESS Array B**	**145.38**	**331**		**PKPbc**	**10 21 38.0**	**-0.5**

*IDC **19** 10:03:21.1±0.6,20°.20S×168°.96E,h0km,mb4.4/17, mbtmp4.4/19,ML4.1/2,Error ellipse: s-maj=19.9km s-min=16.1km az=107.0*
*NEIC **19** 10:03:23.7±1.4,20°.27S±0°.07×168°.87E±0°.08,h10km±1km, mb4.8/73,Error ellipse: s-maj=16.5km s-min=2.8km az=227.0*
*NOU **19** 10:03:26.5,20°.44S×168°.64E,h0km,MLv5.1/6,Loyalty Islands*
*BJI **19** 10:03:30.3±0.0,20°.18S×168°.94E,h79km,mb4.6/14, mB5.0/2*
ISC 19 10:03:23.2±0.4,20°.28S±0°.05×168°.85E±0°.07,h10km,n153, σ0§90/145,mb4.8/56,1C-18D,Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**1.42**	**212**	P	**Pn**	**10 03 48.1**	**-1.0**
DVP	**Devils Point**	**2.62**	**346**	P	**Pb**	**10 04 11.6**	**+1.4**
PINNC	**Pines Island,**	**2.66**	**209**	P	**Pn**	**10 04 08.0**	**+1.8**
DZM	**Mont Dzumac**	**2.87**	**231**	Pn	**Pn**	**10 04 08.8**	**-0.2**
	87nm,0.3s,baz=96,slow=12,SNR=14						
DZM				Sn	**Sn**	**10 04 41.4**	**-2.3**
	46nm,0.3s,baz=262,slow=23,SNR=3.0						
	237nm,0.4s						
NOUC	**Port Laguerre**	**2.99**	**232**	P	**Pn**	**10 04 11.7**	**+1.0**
KOUNC	**Koumac, New Ca**	**4.29**	**266**	P	**Pn**	**10 04 30.1**	**+1.6**
MSVF	**Nonsavu**	**9.07**	**75**	Pn	Pn	10 05 41.0	+6.7
	0.7nm,0.3s,baz=244,slow=13,SNR=11						
MSVF	**Nonsavu**	**9.07**	**75**	Pn	Pn	10 05 41.1	+6.8
OUZ	**Omahuta**	**15.46**	**165**	P	**Pn**	**10 07 03.8**	**+2.4**
EIDS	**Eidsvold**	**17.14**	**250**	P	**P**	**10 07 25.1**	**+0.5**
ARMA	**Armidale**	**18.53**	**234**	P	**P**	**10 07 38.9**	**-1.2**
URZ	**Urewera**	**19.30**	**160**	P	**P**	**10 07 49.1**	**+0.8**
	0.2nm,0.3s,baz=25,slow=4.2,SNR=2.5						
	18nm,0.8s						
URZ	**Urewera**	**19.30**	**160**	P	**Pn**	**10 07 49.6**	**+0.3**
BKZ	**Black Stump Fm**	**19.94**	**162**	P	**P**	**10 07 55.6**	**+0.2**
BKZ				IAmb	IAmb	10 08 15.1	
	comp=Z,48nm,1.1s						
CTA	**Charters Tower**	**21.21**	**267**	P	**P**	**10 08 11.0**	**+1.7**
	comp=Z,40nm,0.8s,baz=95,slow=12,SNR=24						
	comp=Z,40nm,0.8s						
CTAO	**Charters Tower**	**21.21**	**267**	P	**P**	**10 08 10.0**	**+0.7**
CTAO				IAmb	IAmb	10 08 15.8	
	comp=Z,46nm,1.0s						
PMG	**Port Moresby**	**23.55**	**294**	P	**P**	**10 08 34.4**	**+0.4**
	comp=Z,49nm,1.0s,baz=106,slow=5.1,SNR=10						
	comp=Z,49nm,1.0s						
PMG	**Port Moresby**	**23.55**	**294**	P	**P**	**10 08 34.8**	**+0.8**
COEN	**Coen**	**25.31**	**280**	P	**P**	**10 08 50.9**	**+0.7**
TOO	**Toolangi**	**26.62**	**225**	P	**P**	**10 09 03.1**	**+1.1**
STKA	**Stephens Creek**	**26.99**	**239**	P	**P**	**10 09 06.8**	**+1.5**
	comp=Z,10nm,0.8s,baz=67,slow=8.0,SNR=18						
	comp=Z,10nm,0.8s						
STKA	**Stephens Creek**	**26.99**	**239**	P	**P**	**10 09 06.4**	**+1.1**
TAU	**Tasmania Unive**	**28.91**	**214**	P	**P**	**10 09 22.4**	**0.0**
KWAJ	**Kwajalein Atol**	**28.92**	**357**	P	**P**	**10 09 22.6**	**-0.1**
BBOO	**Buckleboo**	**31.74**	**240**	P	**P**	**10 09 47.8**	**+0.2**
BBOO				IAmb	IAmb	10 10 13.2	
	comp=Z,19nm,1.1s						
WR0	**Warramunga Arr**	**32.18**	**265**	P	**P**	**10 09 51.3**	**-0.3**
WB0	**Warramunga Arr**	**32.34**	**265**	P	**P**	**10 09 52.2**	**-0.8**
WB2	**Warramunga Arr**	**32.36**	**265**	P	**P**	**10 09 52.2**	**-0.9**
WRAB	**Tennant Creek**	**32.36**	**265**	P	**P**	**10 09 52.0**	**-1.1**
WRAB				IAmb	IAmb	10 09 53.8	
	comp=Z,22nm,1.1s						
WRA	**Warramunga Arr**	**32.37**	**265**	P	**P**	**10 09 52.1**	**-1.2**
	comp=Z,15nm,0.8s,baz=93,slow=8.8,SNR=43						
	comp=Z,15nm,0.8s						
WRA	**Warramunga Arr**	**32.37**	**265**	P	**P**	**10 09 52.4**	**-0.9**
AS31	**Alice Springs**	**32.53**	**258**	P	**P**	**10 09 54.4**	**-0.2**
AS31				IAmb	IAmb	10 09 56.1	
	comp=Z,17nm,0.8s						
ASAR	**Alice Springs**	**32.53**	**258**	P	**P**	**10 09 54.5**	**-0.1**
MTN	**Manton Dam**	**36.83**	**276**	P	**P**	**10 10 32.5**	**+0.6**
MTN				IAmb	IAmb	10 10 39.2	
	comp=Z,12nm,0.7s						
FORT	**Forrest**	**38.08**	**246**	P	**P**	**10 10 41.7**	**-0.6**
FORT				IAmb	IAmb	10 10 58.0	
	comp=Z,22nm,0.8s						
KNRA	**Kununurra**	**38.34**	**270**	P	**P**	**10 10 44.2**	**-0.4**
KNRA				IAmb	IAmb	10 10 51.4	
	comp=Z,29nm,0.9s						
PSA00	**Pilbara Seismi**	**45.64**	**259**	P	**P**	**10 11 44.2**	**0.0**
PSA00	**Pilbara Seismi**	**45.64**	**259**	P	**P**	**10 11 43.2**	**-1.0**
PSA00				IAmb	IAmb	10 11 51.2	
	comp=Z,15nm,1.2s						
MBWA	**Marble Bar**	**45.80**	**260**	P	**P**	**10 11 45.3**	**-0.2**
MMRI	**Maumere**	**46.44**	**277**	P	**P**	**10 11 49.7**	**-0.9**
NWAO	**Narrogin (SRO)**	**47.42**	**244**	P	**P**	**10 11 58.0**	**-0.1**
MORW	**Morawa**	**48.45**	**249**	P	**P**	**10 12 05.9**	**-0.2**
TOLI2	**Tolitoli**	**51.64**	**288**	P	**P**	**10 12 29.2**	**-1.3**
TOLI2				IAmb	IAmb	10 12 47.1	
	comp=Z,13nm,0.9s						
VNDA	**Vanda**	**57.39**	**182**	P	**P**	**10 13 10.3**	**-1.0**
	comp=Z,0.3nm,0.4s,baz=341,slow=8.7,SNR=2.5				

SNAA IAmb IAmb 10 16 34.4
comp=Z,6.6nm,1.0s
CMB Columbia Colle 88.12 48 P P 10 16 13.5 -0.9
YBH Yreka Blue Hor 88.30 44 P P 10 16 14.3 -0.8
YBH IAmb IAmb 10 16 16.5
comp=Z,5.0nm,1.1s
ISA Isabella, Lake 88.42 51 P P 10 16 15.2 -0.6
ISA IAmb IAmb 10 16 26.9
comp=Z,3.7nm,0.8s
HUMO Hull Mountain 88.57 43 P P 10 16 16.6 +0.3
HUMO IAmb IAmb 10 16 25.2
comp=Z,6.8nm,1.1s
VNA3 Neumayer Olymp 88.72 180 P P 10 16 16.0 -0.6
J20K Nowinta River 88.93 15 P P 10 16 18.1 +0.6
J20K IAmb IAmb 10 16 32.9
comp=Z,6.7nm,1.6s
BEKR Beckworth 88.98 47 P P 10 16 17.6 -1.0
VNA1 Neumayer--Stat 89.29 181 P P 10 16 19.3 0.0
LHV Little Huntoon 89.54 49 P P 10 16 19.7 -1.2
LHV IAmb IAmb 10 16 22.8
comp=Z,4.7nm,0.9s
PAHR Pah Rah Range 89.58 47 P P 10 16 20.7 -0.6
NVAR Mina Array Bea 89.76 49 P P 10 16 21.9 -0.4
comp=Z,3.5nm,1.0s,baz=228,slow=7.9,SNR=16
comp=Z,3.5nm,1.0s
GRAC Grapevine Rang 89.81 50 P P 10 16 22.2 -0.1
GRAC IAmb IAmb 10 16 33.4
comp=Z,5.3nm,0.8s
NV11 Mina Array Sit 89.87 49 P P 10 16 22.0 -0.7
MOD Modoc Plateau 89.96 45 P P 10 16 23.3 +0.2
GWY Greenwater Val 89.96 51 P P 10 16 22.8 -0.4
GWY IAmb IAmb 10 16 23.8
comp=Z,4.7nm,1.0s
KVN Kaiserville 90.18 48 P P 10 16 23.7 -0.5
TPH Tonopah 90.37 49 P P 10 16 24.8 -0.3
PINE Pine Mountain 90.43 43 P P 10 16 25.5 +0.3
TPNV Topopah Spring 90.59 51 P P 10 16 24.9 -1.2
TPNV IAmb IAmb 10 16 36.7
comp=Z,4.5nm,0.8s
WVOR Wild Horse Val 91.31 45 P P 10 16 28.9 -0.4
WVOR IAmb IAmb 10 16 39.9
comp=Z,3.1nm,0.8s
ILAR Eielson Array 91.33 17 P P 10 16 26.0 -2.7
comp=Z,0.9nm,0.7s,baz=233,slow=4.9,SNR=9.1
comp=Z,0.9nm,0.7s
ILAR Eielson Array 91.33 17 P P 10 16 27.2 -1.5
I07A Izee 91.48 43 P P 10 16 29.9 -0.2
I07A IAmb IAmb 10 16 31.0
comp=Z,4.2nm,1.0s
PRN Pahroc Range 91.65 51 P P 10 16 31.1 +0.1
J08A Circle Bar Ran 91.83 44 P P 10 16 31.1 -0.5
J08A IAmb IAmb 10 16 42.4
comp=Z,4.8nm,0.7s
G08A Pilot Rock 92.37 42 P P 10 16 33.5 -0.6
G08A IAmb IAmb 10 16 34.2
comp=Z,3.5nm,1.0s
LCMT Little Creek M 92.82 52 P P 10 16 36.6 +0.2
LCMT IAmb IAmb 10 16 37.2
comp=Z,3.0nm,1.0s
TUC Tucson 92.88 57 P P 10 16 36.4 -0.3
CCUT Cedar City 92.94 51 P P 10 16 36.5 -0.6
X16A Lo Mia Camp, P 93.17 55 P P 10 16 38.6 +0.4
X16A IAmb IAmb 10 16 40.2
comp=Z,3.6nm,0.9s
U15A North Rim 93.29 52 P P 10 16 38.2 -0.6
U15A IAmb IAmb 10 16 53.0
comp=Z,5.5nm,1.4s
WUAZ Wupatki 93.63 54 P P 10 16 39.6 -0.6
WUAZ IAmb IAmb 10 16 43.8
comp=Z,3.6nm,1.1s
TXAR Lajitas Array 97.58 62 P P 10 16 56.9 -1.5
comp=Z,0.5nm,0.8s,baz=234,slow=4.2,SNR=7.0
comp=Z,0.5nm,0.8s
TXAR Lajitas Array 97.58 62 P P 10 16 56.3 -2.0
WMQ Urumqi 97.66 314 *eP* Pdif 10 16 59.1 +0.8
ARCES ARCESS Array B 125.97 345 PKP **PKPdf 10 22 24.6 -0.3**
comp=Z,3.0nm,0.8s,baz=5.2,slow=2.7,SNR=4.3
AKASG Malin Array Be 136.11 324 SKPbc **SKPbc 10 26 16.6 -0.1**
comp=Z,0.5nm,0.6s,baz=46,slow=3.9,SNR=1.8
NOA NORSAR Array B 136.34 344 SKPab **SKPab 10 26 21.6 -1.1**
comp=Z,1.3nm,0.8s,baz=29,slow=3.3,SNR=4.4
DPC Dobruska-Polom 142.95 331 *e*PKP **PKPdf 10 22 57.6 +0.5**
DPC *ex* x 10 24 08.6
BRG Berggiesshubel 143.63 333 *e*PKP PKPbc 10 22 55.8 +0.2
BRG Amp 10 22 58.7
comp=Z,3.6nm,1.1s
BRG *ex* x 10 23 06.6
BRG Amp 10 23 12.1
comp=Z,5.0nm,0.9s
CLL Collm 143.69 334 *e*PKPdf **PKPdf 10 22 58.0 -0.3**
comp=Z,4.0nm,0.9s
PRU Pruhonice 144.02 332 *e*PKP **PKPdf 10 22 58.5 -0.4**
PRU *ex* x 10 23 07.6
PRU *ex* x 10 24 02.2
NKC Novy Kostel 144.74 334 *e*PKP **PKPab 10 22 59.4 +0.4**
NKC *ex* x 10 23 08.5
NKC *ex* x 10 24 02.7
RONA Rosalia, Austr 144.76 327 *e*P PKPbc 10 23 00.3 +0.9
comp=Z,7.7nm,1.1s,SNR=4.3
CONA Conrad Observa 144.83 328 *e*P PKPbc 10 23 00.4 +0.8
comp=Z,6.2nm,0.9s,SNR=5.7
CKRC Cesky Krumlov 144.96 330 *e*PKP **PKPab 10 22 59.6 -0.3**
CKRC *ex* x 10 23 06.9
CKRC *ex* x 10 24 03.5
KHC Kasperske Hory 145.07 331 *e*PKP **PKPbc 10 23 00.2 -0.1**
KHC *ex* x 10 23 07.0
KHC *ex* x 10 24 04.2
GERES GERESS Array B 145.22 331 PKPbc **PKPbc 10 23 00.3 -0.5**
comp=Z,1.5nm,0.7s,baz=46,slow=5.6,SNR=13
GERES GERESS Array B 145.22 331 PKPbc 10 23 00.9 0.0
MOA Molln 145.67 329 *e*P **PKPdf 10 23 01.2 -0.7**
comp=Z,8.7nm,0.9s,SNR=7.8
SOKA Soboth 146.09 327 *e*P **PKPbc 10 23 03.8 +0.2**
comp=Z,3.7nm,1.2s
BTNL Ternell 146.81 340 *d*PKP **PKPbc 10 23 05.8 +0.3**
BTNL *dx* x 10 23 15.7
MYKA Terra Mystica 146.82 328 *e*P **PKPbc 10 23 06.3 +0.5**
comp=Z,2.3nm,0.7s
MEM Membach 146.83 340 *d*PKP **PKPbc 10 23 05.7 +0.1**
MEM *dx* x 10 23 16.4
BSTI Sart Tilman 146.99 340 *d*PKP **PKPbc 10 23 05.9 -0.1**
BSTI *dx* x 10 23 16.7
BHOU Houvegnez 147.05 340 *d*PKP **PKPbc 10 23 06.5 +0.3**
BHOU *dx* x 10 23 17.1
ABTA Abfaltersbach 147.29 329 *e*P **PKPbc 10 23 07.1 0.0**
comp=Z,6.7nm,0.7s
WATA Walderalm 147.30 331 *e*P **PKPbc 10 23 06.7 -0.5**
comp=Z,3.4nm,1.0s
WTTA Wattenberg 147.32 331 *e*P **PKPbc 10 23 07.0 -0.3**
comp=Z,8.5nm,1.0s
SNF Seneffe 147.45 342 *d*PKP **PKPbc 10 23 07.5 +0.3**
SNF *dx* x 10 23 17.4
BMRD Maredsous 147.49 341 *d*PKP **PKPbc 10 23 07.8 +0.4**
BMRD *dx* x 10 23 17.8
MOTA Moosalm 147.51 331 *e*P **PKPbc 10 23 07.1 -0.7**
comp=Z,9.6nm,0.8s,SNR=7.3
RETA Reutte 147.55 332 *e*P **PKPbc 10 23 07.2 -0.6**
comp=Z,3.8nm,1.1s
SQTA Sankt Quirin 147.55 331 *e*P **PKPbc 10 23 07.7 -0.2**
comp=Z,4.8nm,0.6s
WLF Walferdange 147.59 339 *d*PKP **PKPbc 10 23 08.7 +1.0**
WLF *dx* x 10 23 18.6
DOU Dourbes 147.72 341 *d*PKP **PKPbc 10 23 08.4 +0.4**
DOU *dx* x 10 23 18.3
FETA Feichten 147.92 331 *e*P **PKPbc 10 23 08.7 -0.2**
comp=Z,10nm,0.8s,SNR=12
DAVA Damuels 148.09 332 *e*P **PKPbc 10 23 09.4 +0.1**
comp=Z,8.2nm,0.9s
ESDC Sonseca Array 159.71 344 PKPab **PKPab 10 23 60.0 -1.2**
comp=Z,1.1nm,0.9s,baz=18,slow=4.5,SNR=6.3
ESDC Sonseca Array 159.71 344 PKPdf **PKPdf 10 23 20.4 -2.3**
ESDC **PKPab 10 24 00.7 -0.5**

IDC ***19*** *10:04:25.0±0.7,20°.28S×168°.94E,h0km,mb4.7/17, mbtmp4.7/18,ML4.2/1,Error ellipse: s-maj=23.6km s-min=18.0km az=108.0*
NEIC ***19*** *10:04:27.2±1.8,20°.26S±0°.09×168°.6E±0°.1,h10km±1km, mb5.1/75,Error ellipse: s-maj=16.6km s-min=16.0km az=90.0*
MOS ***19*** *10:04:28.7±1.3,20°.26S×168°.70E,h29km,mb5.2/26,Error ellipse: s-maj=11.7km s-min=10.9km az=125.2*
BJI ***19*** *10:04:29.0±0.0,20°.30S×168°.50E,h30km,mb4.8/22,*

mB5.6/5
ISC 19 10:04:27.1±0.3,20°.26S±0°.07×168°.74E±0°.07,h10km,n191, σ1906/191,mb5.1/65,11C-14D,Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.80**	**230**	Pn	**Pn**	**10 05 12.7**	**+0.8**
	37nm,0.3s,baz=339,slow=22,SNR=3.8						
DZM				Sn	**Sn**	**10 05 45.6**	**-0.3**
	79nm,0.3s,baz=323,slow=20,SNR=3.4						
	427nm,0.6s						
MSVF	**Nonsavu**	**9.16**	**76**	Pn	Pn	10 06 45.4	+6.0
	1.9nm,0.3s,baz=234,slow=8.1,SNR=9.6						
MSVF	**Nonsavu**	**9.16**	**76**		Pn	10 06 45.7	+6.3
MSVF	**Nonsavu**	**9.16**	**76**	*i* P	**Pn**	**10 06 40.7**	**+1.3**
OUZ	**Omahuta**	**15.50**	**165**		**Pn**	**10 08 06.0**	**+0.2**
URZ	**Urewera**	**19.34**	**160**	P	**Pn**	**10 08 55.6**	**+1.8**
	45nm,1.0s,baz=12,slow=7.9,SNR=7.6						
URZ	**Urewera**	**19.34**	**160**		**P**	**10 08 53.3**	**+0.6**
BKZ	**Black Stump Fm**	**19.99**	**162**		Pn	10 09 02.7	+1.3
CTA	**Charters Tower**	**21.11**	**267**	P	**P**	**10 09 15.9**	**+3.9**
	42nm,1.1s,baz=86,slow=12,SNR=3.7						
PMG	**Port Moresby**	**23.46**	**294**	P	**P**	**10 09 38.5**	**+1.6**
	34nm,1.0s,baz=121,slow=6.4,SNR=5.0						
	34nm,1.0s						
PMG	**Port Moresby**	**23.46**	**294**	P	**P**	**10 09 38.1**	**+1.3**
PMG	**Port Moresby**	**23.46**	**294**	*ce*P	**P**	**10 09 38.2**	**+1.3**
PMG				pmax	pmax		
	comp=Z,41nm,1.0s						
COEN	**Coen**	**25.21**	**280**	P	**P**	**10 09 54.1**	**+0.9**
TOO	**Toolangi**	**26.56**	**225**	P	**P**	**10 10 04.9**	**-0.4**
TOO				IAmb	IAmb	10 10 42.7	
	comp=Z,52nm,1.6s						
TOO	**Toolangi**	**26.56**	**225**	P	**P**	**10 10 04.9**	**-0.4**
TOO				pmax	pmax		
	comp=Z,52nm,1.6s						
STKA	**Stephens Creek**	**26.91**	**239**	P	**P**	**10 10 08.8**	**+0.3**
	comp=Z,5.4nm,0.7s,baz=50,slow=12,SNR=2.2						
	comp=Z,5.4nm,0.7s						
STKA	**Stephens Creek**	**26.91**	**239**	P	**P**	**10 10 06.4**	**-2.1**
STKA	**Stephens Creek**	**26.91**	**239**	*i* P	**P**	**10 10 09.2**	**+0.7**
WR0	**Warramunga Arr**	**32.08**	**265**	P	**P**	**10 10 53.9**	**-0.7**
WR0				IAmb	IAmb	10 11 00.0	
	comp=Z,88nm,2.0s						
WB0	**Warramunga Arr**	**32.24**	**265**	P	**P**	**10 10 55.1**	**-0.8**
WB0				IAmb	IAmb	10 11 08.1	
	comp=Z,17nm,0.8s						
WB2	**Warramunga Arr**	**32.26**	**265**	P	**P**	**10 10 55.8**	**-0.4**
WB2				IAmb	IAmb	10 10 57.2	
	comp=Z,24nm,1.1s						
WRAB	**Tennant Creek**	**32.26**	**265**	P	**P**	**10 10 55.1**	**-1.0**
WRAB				IAmb	IAmb	10 10 57.1	
	comp=Z,20nm,1.1s						
WRAB	**Tennant Creek**	**32.26**	**265**	*ce*P	**P**	**10 10 56.0**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,13nm,1.0s						
WRA	**Warramunga Arr**	**32.27**	**265**	P	**P**	**10 10 56.0**	**-0.2**
	comp=Z,8.7nm,0.9s,baz=90,slow=8.5,SNR=9.2						
WRA				PcP	**PcP**	**10 13 44.5**	**0.0**
	comp=Z,2.2nm,0.9s,baz=89,slow=4.8,SNR=4.3						
	comp=Z,8.7nm,0.9s						
WRA	**Warramunga Arr**	**32.27**	**265**	P	**P**	**10 10 55.1**	**-1.1**
WRA	**Warramunga Arr**	**32.27**	**265**	P	**P**	**10 10 55.1**	**-1.1**
WRA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
AS31	**Alice Springs**	**32.44**	**258**	P	**P**	**10 10 57.0**	**-0.7**
ASAR	**Alice Springs**	**32.44**	**258**	P	**P**	**10 10 56.7**	**-0.9**
ASAR	**Alice Springs**	**32.44**	**258**	P	**P**	**10 10 56.7**	**-0.9**
MTN	**Manton Dam**	**36.73**	**276**	P	**P**	**10 11 35.2**	**+0.4**
KNRA	**Kununurra**	**38.23**	**270**	P	**P**	**10 11 46.4**	**-1.2**
KNRA				IAmb	IAmb	10 11 49.0	
	comp=Z,27nm,0.9s						
PSA00	**Pilbara Seismi**	**45.54**	**259**	P	**P**	**10 12 43.7**	**-3.6**
MORW	**Morawa**	**48.36**	**249**	P	**P**	**10 13 07.5**	**-1.8**
VNDA	**Vanda**	**57.40**	**182**	P	**P**	**10 14 16.1**	**+0.8**
	comp=Z,1.5nm,0.8s,baz=6.9,slow=6.0,SNR=2.1						
	comp=Z,1.5nm,0.8s						
VNDA	**Vanda**	**57.40**	**182**	P	**P**	**10 14 16.3**	**+1.0**
VNDA	**Vanda**	**57.40**	**182**	P	**P**	**10 14 16.3**	**+1.0**
VNDA				pmax	pmax		
	comp=Z,16nm,1.5s						
CASY	**Casey**	**59.00**	**204**	P	**P**	**10 14 26.2**	**-0.5**
CASY				IAmb	IAmb	10 14 33.3	
	comp=Z,26nm,1.4s						
MJAR	**Matsushiro Arr**	**63.44**	**333**	P	**P**	**10 14 56.9**	**-0.2**
	comp=Z,10nm,1.2s,baz=156,slow=6.8,SNR=7.9						
	comp=Z,10nm,1.2s						
MJAR	**Matsushiro Arr**	**63.44**	**333**		**P**	**10 14 55.1**	**-1.9**
MJAR	**Matsushiro Arr**	**63.44**	**333**	P	**P**	**10 14 55.2**	**-1.9**
MJAR				pmax	pmax		
	comp=Z,8.0nm,1.3s						
MAJO	**Matsushiro**	**63.44**	**333**	P	**P**	**10 14 54.7**	**-2.4**
MAJO				IAmb	IAmb	10 15 12.4	
	comp=Z,11nm,1.1s						
MAJO	**Matsushiro**	**63.44**	**333**	P	**P**	**10 14 54.7**	**-2.4**
MAJO				pmax	pmax		
	comp=Z,11nm,1.2s						
TJN	**Taejon**	**68.58**	**325**	*ce*P	**P**	**10 15 29.6**	**-0.5**
KSRS	**Korea Array**	**69.09**	**326**	P	**P**	**10 15 34.1**	**+0.8**
	comp=Z,3.8nm,1.1s,baz=146,slow=6.4,SNR=9.3						
	comp=Z,3.8nm,1.1s						
KSAR	**Wonju Array Be**	**69.10**	**326**		**P**	**10 15 33.6**	**+0.3**
KSAR	**Wonju Array Be**	**69.10**	**326**	P	**P**	**10 15 33.6**	**+0.3**
QSPA	**South Pole Qui**	**69.79**	**180**	P	**P**	**10 15 36.7**	**-0.8**
	comp=Z,13nm,1.0s,baz=14,slow=1.9,SNR=6.1						
	comp=Z,13nm,1.0s						
QSPA	**South Pole Qui**	**69.79**	**180**	P	**P**	**10 15 37.7**	**+0.2**
QSPA				IAmb	IAmb	10 16 04.2	
	comp=Z,15nm,0.9s						
NJ2	**Nanjing**	**70.62**	**316**	*eP*	**P**	**10 15 45.1**	**+2.3**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
YSS	**Yuzh-Sakhalins**	**70.89**	**341**		**P**	**10 15 44.9**	**+0.8**
YSS	**Yuzh-Sakhalins**	**70.89**	**341**	*i* P	**P**	**10 15 45.5**	**+1.3**
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
KULM	**Kulim**	**71.50**	**283**	P	**P**	**10 15 47.7**	**-0.9**
KULM				IAmb	IAmb	10 15 50.7	
	comp=Z,28nm,1.6s						
USA0B	**Ussuriysk Arra**	**72.43**	**333**	P	**P**	**10 15 53.6**	**+0.1**
USA0B				IAmb	IAmb	10 15 55.7	
	comp=Z,32nm,1.1s						
USA0B	**Ussuriysk Arra**	**72.43**	**333**	P	**P**	**10 15 53.6**	**+0.1**
USA0B				pmax	pmax		
	comp=Z,32nm,1.2s						
USRK	**Ussuriysk Ar.**	**72.43**	**333**	P	**P**	**10 15 54.2**	**+0.8**
	comp=Z,21nm,1.1s,baz=154,slow=4.3,SNR=14						
	comp=Z,21nm,1.1s						
USRK	**Ussuriysk Ar.**	**72.43**	**333**	P	**P**	**10 15 53.1**	**-0.4**
USRK	**Ussuriysk Ar.**	**72.43**	**333**	P	**P**	**10 15 53.1**	**-0.4**
PEA0B	**Petropavlovsk-**	**73.69**	**353**	P	**P**	**10 16 00.6**	**-0.2**
PEA0B	**Petropavlovsk-**	**73.69**	**353**	*ce*P	**P**	**10 16 00.7**	**-0.1**
PETK	**Petropavlovsk-**	**73.69**	**353**	P	**P**	**10 16 00.3**	**-0.4**
	comp=Z,24nm,1.0s,baz=149,slow=6.4,SNR=16						
	comp=Z,24nm,1.0s						
PETK	**Petropavlovsk-**	**73.69**	**353**	P	**P**	**10 16 00.3**	**-0.4**
MDJ	**Mudanjiang**	**73.80**	**332**		**P**	**10 16 02.4**	**+0.8**
TIA	**Tai'an**	**74.40**	**319**	⇓P	**P**	**10 16 06.3**	**+1.0**
TIA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
CN2	**Changchun**	**75.09**	**329**	*eP*	**P**	**10 16 08.4**	**-0.7**
LYN	**LuoYang**	**76.36**	**315**	⇓P	**P**	**10 16 17.8**	**+1.2**
LYN				pmax	pmax		
	comp=Z,20nm,1.1s						
KLR	**Kul'dur**	**76.61**	**336**	P	**P**	**10 16 18.5**	**+0.8**
	comp=Z,7.6nm,1.1s,baz=128,slow=4.0,SNR=7.8						
	comp=Z,7.6nm,1.1s						
KLR	**Kul'dur**	**76.61**	**336**	*ce*P	**P**	**10 16 19.1**	**+1.4**
KLR				pmax	pmax		
	comp=Z,15nm,1.7s						
BJT	**Baijiatuan**	**77.43**	**321**	P	**P**	**10 16 22.7**	**+0.2**
BJT	**Baijiatuan**	**77.43**	**321**	P	**P**	**10 16 22.7**	**+0.2**
BJT				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**78.50**	**295**	P	**P**	**10 16 30.3**	**+1.4**
	comp=Z,1.4nm,0.4s,baz=127,slow=3.8,SNR=5.9						
	comp=Z,1.4nm,0.4s						
CHTO	**Chiang Mai**	**78.65**	**295**	P	**P**	**10 16 29.5**	**-0.3**
CHTO	**Chiang Mai**	**78.65**	**295**	P	**P**	**10 16 29.5**	**-0.3**
CHTO				pmax	pmax		
	comp=Z,19nm,1.5s						
BELA	**Belgrano 2**	**81.12**	**175**	P	**P**	**10 16 41.3**	**-1.0**
BELA				IAmb	IAmb	10 17 00.4	
	comp=Z,24nm,1.1s						
HIA	**Hailar**	**81.76**	**330**	*i* P	**P**	**10 16 46.5**	**+0.6**
HIA				pmax	pmax		
	comp=Z,20nm,1.2s						
ZEA	**Zeya**	**81.90**	**337**	*e*P	**P**	**10 16 46.8**	**+0.3**
ZEA				pmax	pmax		
	comp=N,10.0nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LZH	**Lanzhou**	**83.06**	**312**	*e*P	**P**	**10 16 56.3**	**+3.1**
LZH				sP	pwP	10 17 06.3	+4.5
LZH				pmax	pmax		
	comp=Z,25nm,0.9s						
SEY	**Seymchan**	**83.92**	**353**	P	**P**	**10 16 56.5**	**-0.2**
	comp=Z,8.1nm,1.1s,baz=321,slow=3.0,SNR=5.1						
	comp=Z,8.1nm,1.1s						
SEY	**Seymchan**	**83.92**	**353**	*ce*P	**P**	**10 16 57.3**	**+0.6**
SEY				pmax	pmax		
	comp=Z,12nm,1.3s						
GDXM	**Geysers**	**86.89**	**47**	P	**P**	**10 17 13.1**	**+0.8**
GDXM				IAmb	IAmb	10 17 14.3	
	comp=Z,19nm,1.2s						
ULN	**Ulaanbaatar**	**87.40**	**324**	P	**P**	**10 17 15.0**	**+0.3**
ULN	**Ulaanbaatar**	**87.40**	**324**	*ce*P	**P**	**10 17 15.9**	**+1.2**
ULN				pmax	pmax		
	comp=Z,44nm,1.3s						
KSXB	**Camp Six Broad**	**87.65**	**44**		**P**	**10 17 18.1**	**+2.2**
KSXB				IAmb	IAmb	10 17 19.4	
	comp=Z,20nm,1.1s						
YAK	**Yakutsk**	**87.70**	**343**	P	**P**	**10 17 15.3**	**-0.2**
	comp=Z,5.0nm,0.4s,baz=163,slow=1.1,SNR=5.4						
	comp=Z,5.0nm,0.4s						
YAK	**Yakutsk**	**87.70**	**343**	P	**P**	**10 17 14.8**	**-0.7**
YAK	**Yakutsk**	**87.70**	**343**	*ce*P	**P**	**10 17 16.2**	**+0.7**
YAK				pmax	pmax		
	comp=Z,60nm,1.7s						
SONM	**Songino Array**	**87.75**	**323**	P	**P**	**10 17 15.9**	**-0.4**
	comp=Z,14nm,1.1s,baz=151,slow=3.3,SNR=21						
	comp=Z,14nm,1.1s						
SONM	**Songino Array**	**87.75**	**323**		**P**	**10 17 16.4**	**+0.1**
SONM	**Songino Array**	**87.75**	**323**	P	**P**	**10 17 16.4**	**+0.1**
SONM				pmax	pmax		
	comp=Z,27nm,1.2s						
BILL	**Bilibino**	**88.06**	**359**	*i* P	**P**	**10 17 16.7**	**-0.4**
BILL				pmax	pmax		
	comp=Z,16nm,1.9s						
SNAA	**Sanae**	**88.12**	**183**	*ce*P	**P**	**10 17 18.3**	**+0.6**
SNAA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
YBH	**Yreka Blue Hor**	**88.36**	**44**		**P**	**10 17 18.9**	**-0.3**
YBH				IAmb	IAmb	10 17 20.7	
	comp=Z,16nm,1.2s						
YBH	**Yreka Blue Hor**	**88.36**	**44**	P	**P**	**10 17 19.0**	**-0.3**
YBH				pmax	pmax		
	comp=Z,16nm,1.2s						
HUMO	**Hull Mountain**	**88.62**	**43**		**P**	**10 17 20.8**	**+0.3**
HUMO				IAmb	IAmb	10 17 21.9	
	comp=Z,19nm,1.1s						
EMB	**Emerald Bay**	**88.82**	**48**	P	**P**	**10 17 21.4**	**-0.3**
EMB				IAmb	IAmb	10 17 22.6	
	comp=Z,20nm,1.5s						
L04D	**Klamath Falls**	**88.86**	**44**	P	**P**	**10 17 21.3**	**-0.4**
MDPB	**Devils Postpil**	**88.93**	**49**	P	**P**	**10 17 21.9**	**-0.4**
MDPB				IAmb	IAmb	10 17 23.3	
	comp=Z,17nm,1.2s						
OMMB	**Old Mammoth Mi**	**88.97**	**49**		**P**	**10 17 22.4**	**-0.2**
OMMB				IAmb	IAmb	10 17 23.6	
	comp=Z,11nm,1.3s						
PNTR	**Pine Nut**	**89.22**	**48**	P	**P**	**10 17 23.1**	**-0.5**
PNTR				IAmb	IAmb	10 17 24.6	
	comp=Z,19nm,1.2s						
BUCK	**Buck Mountain**	**89.38**	**42**		**P**	**10 17 24.2**	**+0.1**
LHV	**Little Huntoon**	**89.61**	**49**	P	**P**	**10 17 25.5**	**+0.4**
LHV				IAmb	IAmb	10 17 26.5	
	comp=Z,21nm,1.2s						
PAHR	**Pah Rah Range**	**89.64**	**47**	P	**P**	**10 17 24.9**	**-0.5**
PAHR				IAmb	IAmb	10 17 26.5	
	comp=Z,18nm,1.2s						
RYN	**Ryan**	**89.76**	**48**	P	**P**	**10 17 25.8**	**-0.3**
RYN				IAmb	IAmb	10 17 26.9	
	comp=Z,13nm,1.2s						
QSM	**Queen of Sheba**	**89.79**	**51**	P	**P**	**10 17 25.5**	**-0.6**
QSM				IAmb	IAmb	10 17 26.8	
	comp=Z,15nm,1.2s						
NVAR	**Mina Array Bea**	**89.83**	**49**	P	**P**	**10 17 25.9**	**-0.5**
	comp=Z,10nm,1.0s,baz=227,slow=7.0,SNR=16						
	comp=Z,10nm,1.0s						
NVAR	**Mina Array Bea**	**89.83**	**49**	P	**P**	**10 17 26.0**	**-0.5**
NV11	**Mina Array Sit**	**89.93**	**49**	P	**P**	**10 17 26.4**	**-0.4**
NV11				IAmb	IAmb	10 17 28.3	
	comp=Z,12nm,1.0s						
K05A	**Summer Lake**	**90.02**	**44**		**P**	**10 17 27.1**	**-0.1**
MOD	**Modoc Plateau**	**90.02**	**45**	P	**P**	**10 17 27.0**	**-0.2**
MOD				IAmb	IAmb	10 17 28.1	
	comp=Z,15nm,1.1s						
GWY	**Greenwater Val**	**90.03**	**51**	P	**P**	**10 17 26.5**	**-0.9**
GWY				IAmb	IAmb	10 17 28.5	
	comp=Z,14nm,1.0s						
H04A	**Detroit Lake**	**90.12**	**42**		**P**	**10 17 26.5**	**-0.9**
E03A	**Lebam**	**90.19**	**40**		**P**	**10 17 27.6**	**0.0**
SLBS	**Sierra La Lagu**	**90.44**	**65**	P	**P**	**10 17 29.7**	**+0.3**
SLBS				IAmb	IAmb	10 17 31.3	
	comp=Z,13nm,1.1s						
PINE	**Pine Mountain**	**90.48**	**43**		**P**	**10 17 29.1**	**-0.2**
F04A	**Amboy**	**90.58**	**41**	P	**P**	**10 17 29.5**	**+0.1**
BLYC	**Blythe**	**90.63**	**54**		**P**	**10 17 29.7**	**-0.3**
BLYC				IAmb	IAmb	10 17 31.2	
	comp=Z,14nm,1.1s						
TPNV	**Topopah Spring**	**90.66**	**51**	P	**P**	**10 17 29.6**	**-0.7**
TPNV				IAmb	IAmb	10 17 31.2	
	comp=Z,16nm,1.1s						
TPNV	**Topopah Spring**	**90.66**	**51**	P	**P**	**10 17 29.6**	**-0.7**
TPNV				pmax	pmax		
	comp=Z,16nm,1.1s						
113A	**Mohawk Valley,**	**90.81**	**55**	P	**P**	**10 17 30.7**	**-0.2**
ZAK	**Zakamensk**	**90.85**	**324**	*eP*	**P**	**10 17 30.8**	**0.0**
ZAK				pmax	pmax		
	comp=Z,19nm,1.3s						
CBB	**Campbell River**	**90.91**	**36**		**P**	**10 17 30.8**	**-0.1**
SHPR	**Sheep Range**	**91.27**	**51**		**P**	**10 17 32.7**	**-0.5**
SHPR				IAmb	IAmb	10 17 34.4	
	comp=Z,10nm,1.2s						
IL31		**91.34**	**17**	P	**P**	**10 17 31.8**	**-0.8**
IL31				IAmb	IAmb	10 17 32.6	
	comp=Z,12nm,1.6s						
ILAR	**Eielson Array**	**91.34**	**17**	P	**P**	**10 17 30.3**	**-2.3**
	comp=Z,1.5nm,1.0s,baz=249,slow=5.3,SNR=5.6						
	comp=Z,1.5nm,1.0s						
WVOR	**Wild Horse Val**	**91.37**	**45**	P	**P**	**10 17 33.2**	**-0.2**
WVOR				IAmb	IAmb	10 17 34.4	
	comp=Z,15nm,1.2s						
WVOR	**Wild Horse Val**	**91.37**	**45**	P	**P**	**10 17 33.2**	**-0.2**
WVOR				pmax	pmax		
	comp=Z,15nm,1.2s						
D05A	**Enumclaw**	**91.44**	**40**		**P**	**10 17 33.6**	**+0.

ARCES	ARCESS Array B	125.93	345			PKPdf	10 23 28.5	-0.2
ARCES	ARCESS Array B	125.93	345	PKIKP		PKPdf	10 23 28.5	-0.2
KLMR	Klimovskoe	126.22	332	*e*PKIKP		PKiKP	10 23 31.1	+1.3
KLMR	comp=Z,11nm,1.2s			pmax	pmax			
KLMR	Klimovskoe	126.22	332	*e*PKPdf		PKiKP	10 23 31.1	+1.3
KLMR	comp=Z,11nm,1.2s			AMP			10 23 34.5	
HUMP	Col San Antoni	128.60	83			PKPdf	10 23 33.1	-2.1
KBZ	Khabaz	129.47	310	*i* PKIKP		PKiKP	10 23 38.6	+1.7
KBZ	comp=Z,1.0nm,0.9s			pmax	pmax			
KIV	Kislovodsk	129.58	311	*i* PKIKP		PKiKP	10 23 37.5	+0.2
KIV	comp=Z,4.0nm,1.1s			pmax	pmax			
KIV	comp=Z,5μm,23.0s			MLR	MLR			
OBN	Obninsk	130.09	326	*i* PKIKP		PKPdf	10 23 36.2	-0.7
OBN	comp=Z,5.0nm,1.0s			pmax	pmax			
FINES	FINESS Array B	131.35	337	PKP		PKPdf	10 23 39.5	+0.4
FINES	comp=Z,3.1nm,0.9s,baz=101,slow=1.4,SNR=4.4			PP		PP	10 25 59.6	+2.4
FINES	comp=Z,5.7nm,0.8s,baz=97,slow=8.3,SNR=8.3			SKPbc		SKPbc	10 27 03.6	-0.6
FINES	comp=Z,9.6nm,0.9s,baz=32,slow=5.6,SNR=9.8					PKPdf	10 23 38.9	-0.2
FINES	FINESS Array B	131.35	337			PKPdf	10 23 38.9	-0.2
AKASG	FINESS Array B	131.35	337	PKIKP				
	Malin Array Be	136.04	324	SKPbc		SKPbc	10 27 21.1	+0.9
NOA	comp=Z,1.6nm,0.8s,baz=45,slow=2.9,SNR=5.2			PKP		PKPdf	10 23 48.3	-0.3
NOA	NORSAR Array B	136.30	344	SKPbc		SKPbc	10 27 22.4	+1.6
HFS	comp=Z,1.7nm,1.0s,baz=31,slow=2.1,SNR=3.5			PKP		PKPdf	10 23 48.7	0.0
BRTR	comp=Z,2.2nm,0.9s,baz=26,slow=3.4,SNR=4.4			PKP		PKPdf	10 23 48.9	-1.9
CLL	Hagfors	136.39	342					
CLL	comp=Z,4.2nm,0.9s,baz=151,slow=3.3,SNR=3.7			PKP		PKPdf	10 23 58.7	0.0
CLL	Keskin Array B	137.06	307					
	comp=Z,0.9nm,1.0s,baz=165,slow=6.0,SNR=2.6							
	Collm	143.64	334	*i* PKIKP		PKPab	10 23 58.7	0.0
	comp=Z,11nm,1.2s			pmax	pmax			
	Collm	143.64	334	*i* PKPdf		PKPab	10 23 58.7	0.0
	comp=Z,11nm,1.2s							
SANT	Santorini	144.16	304			PKPab	10 24 00.4	-0.9
RONA	Rosalia, Austr	144.70	327	*e*P		PKPdf	10 24 03.7	-0.4
	comp=Z,18nm,1.2s,SNR=6.2							
CONA	Conrad Observa	144.76	328	*e*P		PKPdf	10 24 04.1	-0.2
	comp=Z,15nm,1.3s,SNR=11							
GERES	GERESS Array B	145.16	331	PKPbc		PKPab	10 24 04.4	-0.2
	comp=Z,16nm,1.3s,baz=32,slow=5.8,SNR=7.0							
GERES	GERESS Array B	145.16	331			PKPdf	10 24 04.8	-0.2
GERES	GERESS Array B	145.16	331	PKIKP		PKPdf	10 24 04.8	-0.2
MOA	Molln	145.60	329	*e*P		PKPab	10 24 06.2	0.0
	comp=Z,38nm,1.3s,SNR=7.5							
BIOA	Bad Ischl, Aus	146.01	329	*e*P		PKPbc	10 24 06.9	-0.3
	comp=Z,12nm,1.1s							
SOKA	Soboth	146.02	327	*e*P		PKPab	10 24 08.4	+0.5
	comp=Z,13nm,1.6s							
MYKA	Terra Mystica	146.76	328	*e*P		PKPbc	10 24 08.5	-0.9
	comp=Z,6.0nm,1.1s							
BTNL	Ternell	146.76	340	*d*PKP		PKPbc	10 24 09.7	+0.4
BTNL				*dk*		x	10 24 20.1	
MEM	Membach	146.78	340	*d*PKP		PKPbc	10 24 09.0	-0.2
DSB	Dublin	146.86	355			PKPdf	10 24 08.1	+0.5
BSTI	Sart Tilman	146.95	340	*d*PKP		PKPbc	10 24 09.6	-0.1
BSTI				*dk*		x	10 24 23.2	
BHOU	Houvegnez	147.00	340	*d*PKP		PKPbc	10 24 10.2	+0.2
ABTA	Abfaltersbach	147.22	329	*e*P		PKPdf	10 24 09.5	+1.0
	comp=Z,10nm,1.0s							
WATA	Walderalm	147.24	331	*e*P		PKPbc	10 24 10.6	-0.3
	comp=Z,14nm,1.6s							
WTTA	Wattenberg	147.26	331	*e*P		PKPbc	10 24 10.2	-0.8
	comp=Z,31nm,1.1s							
SNF	Seneffe	147.41	341	*d*PKP		PKPbc	10 24 11.5	+0.5
SNF				*dk*		x	10 24 21.5	
RCHB	Rochefort	147.43	340	*d*PKP		PKPbc	10 24 11.0	-0.1
MOTA	Moosalm	147.44	331	*e*P		PKPbc	10 24 11.0	-0.4
	comp=Z,16nm,1.0s							
SQTA	Sankt Quirin	147.49	331	*e*P		PKPbc	10 24 11.5	-0.1
	comp=Z,18nm,1.0s							
RETA	Reutte	147.49	332	*e*P		PKPbc	10 24 10.8	-0.7
	comp=Z,11nm,1.1s							
WLF	Walferdange	147.54	339	*d*PKP		PKPbc	10 24 11.9	+0.5
DOU	Dourbes	147.68	341	*d*PKP		PKPbc	10 24 12.4	+0.6
DOU				*dk*		x	10 24 31.1	
BFO	Black Forest	147.85	335			PKPbc	10 24 12.6	+0.2
BFO	Black Forest	147.85	335	PKP2		PKPbc	10 24 12.6	+0.2
FETA	Feichten	147.86	331	*e*P		PKPbc	10 24 11.3	-1.3
	comp=Z,17nm,0.9s							
DAVA	Damuels	148.03	332	*e*P		PKPbc	10 24 11.7	-1.4
	comp=Z,18nm,1.0s							
TEOL	Teolo	148.63	328	PKPab		PKPbc	10 24 14.9	+0.5
AQU	L'Aquila	149.72	322			PKPdf	10 24 09.8	-2.9
AQU	L'Aquila	149.72	322	PKIKP		PKPdf	10 24 09.8	-2.9
ESDC	Sonseca Array	159.66	344	PKPab		PKPab	10 25 04.7	-0.1
	comp=Z,4.4nm,1.1s,baz=24,slow=3.3,SNR=10							
ESDC	Sonseca Array	159.66	344	PKPab		PKPab	10 25 04.3	-0.5
TORD	Torodi Ar. Bea	165.72	242	PKP		PKPdf	10 24 32.5	-0.6
	comp=Z,0.5nm,0.8s,baz=108,slow=4.7,SNR=2.1							

UPA ***19*** *10:20:30.7±0.9,8°.91N×82°.81W, h17km±1km, MW3.8*
UCR ***19*** *10:20:31.0±1.5,8°.88N×82°.89W, h24km±3km, MW3.6*

ISC 19 10:20:30.8±0.9,8°.94N±0°.04×82°.84W±0°.03,h24km±7km, n23,σ0°82/39,8C-3D,Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MLIR3	Monte Lirio, C	0.14	175	⇑*i*	*i*	P	Pb	10 20 35.4	-0.5
EDSV	San Vito	0.18	229	⇑*i*	*i*	P	Pb	10 20 35.7	-0.5
EDSV				*e*	S		Sb	10 20 40.5	+0.7
BRU2	Volcan	0.20	134	⇑*i*	*i*	P	Pb	10 20 35.9	-0.6
BRU2				*e*	S		Sb	10 20 40.5	+0.1
BC3P	Paso Ancho	0.25	118	⇑*i*	*i*	P	Pb	10 20 36.5	-0.7
BC3P				*e*	S		Sb	10 20 41.2	-0.4
CDITO	Canoas	0.36	186	⇓*i*	*i*	P	Pb	10 20 37.9	-0.8
CDITO				*e*	S		Sb	10 20 43.5	-0.6
LNBQ3	Los Naranjos,	0.42	110	⇑*i*	*i*	P	Pb	10 20 38.7	-1.0
LNBQ3				*e*	S		Sb	10 20 45.6	-0.1
EDBA	Buenos Aires	0.49	298	⇑*e*	*e*	P	Pb	10 20 40.6	-0.2
EDBA				*e*	S		Sb	10 20 48.3	+0.7
DRK0	Durika	0.52	309	*e*	P		Pb	10 20 41.0	-0.4
DRK0				*e*	S		Sb	10 20 48.5	-0.2
BAGA3	Bagala, Chiriq	0.56	147	⇑*i*	*i*	P	Pb	10 20 41.4	-0.5
BAGA3				*e*	S		Sb	10 20 49.1	-0.4
CNI2	El Empalme, Bo	0.60	37	⇓*i*	*i*	P	Pb	10 20 41.6	-1.2
CNI2				*e*	S		Sb	10 20 50.8	-0.1
EDPN	Palmar Norte	0.61	272	⇓*e*	P		Pb	10 20 41.5	-1.4
EDPN				*e*	S		Sb	10 20 50.5	-0.6
DVD	David	0.63	142	*e*	P		Pb	10 20 42.3	-0.8
DVD				*i*	S		Sb	10 20 51.4	-0.1
CHGR2	Aguacate	0.68	90	*e*	P		Pb	10 20 43.4	-0.7
CHGR2				*e*	S		Sb	10 20 52.6	-0.5
CHIR3	Chiriqui UPA,	0.73	137	*e*	P		Pb	10 20 44.0	-0.9
CHIR3				*e*	S		Sb	10 20 54.0	-0.6
EDDO	Dominical	1.06	287	*e*	P		Pn	10 20 49.1	-1.1
EDDO				*e*	S		Sb	10 21 03.5	-0.6
RIMA	Rio Macho	1.31	309	*e*	P		Pn	10 20 52.9	-0.9
HDC	Heredia	1.65	310	*e*	P		Pn	10 20 59.0	+0.7
HDC	Heredia	1.65	310	⇓*e*	P		Pn	10 20 59.0	+0.7
HDC				*e*	S		Sn	10 21 20.6	+1.7
JACO	JACO, Garabito	1.94	292	*e*	P		Pn	10 21 02.5	+0.3
SRA1	San Ramn	1.98	305	*e*	P		Pn	10 21 03.4	+0.4
LAFE	Finca La Fe, P	2.22	293	*e*	P		Pn	10 21 06.9	+0.7
ARE1	Arenal 1	2.40	309	*e*	P		Pn	10 21 09.3	+0.7
CACAO	El Cacao, Vera	2.52	129	*e*	P		Pn	10 21 12.3	+2.1
CACAO				*e*	S		Sn	10 21 40.0	-0.1

IDC ***19*** *10:31:48.0±0.5,20°.36S×168°.86E, h0km, mb4.5/20, mbtmp4.5/21, ML4.4/1, MS4.6/9, Error ellipse: s-maj=18.1km s-min=15.1km az=100.0*
NOU ***19*** *10:31:49.9,20°.32S×168°.80E, h3km, mb5.1/49, Loyalty Islands*
NEIC ***19*** *10:31:51.9±2.6,20°.43S±0°.10×168°.57E±0°.08, h10km±1km, mb5.0/64, Error ellipse: s-maj=17.7km s-min=10.7km az=149.0*
MOS ***19*** *10:31:52.8±1.2,20°.38S×168°.68E, h34km, mb5.0/28, Error ellipse: s-maj=11.0km s-min=9.3km az=175.3*
BJI ***19*** *10:31:53.0±0.0,20°.29S×169°.07E, h46km, mb4.7/22, mB5.3/2, Ms5.5/2, Ms7 5.5/2*

ISC 19 10:31:50.9±0.3,20°.38S±0°.04×168°.67E±0°.05,h10km±1km,n296, σ1839/286,mb4.9/73,MS4.7/7,9C-16D,Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	1.25	209	P		P	Pb	10 32 12.9	-1.8
PINNC	Pines Island,	2.50	207	P		P	Pn	10 32 31.1	-0.6
DVP	Devils Point	2.68	350	P		P	Pn	10 32 33.1	-1.0
DZM	Mont Dzumac	2.68	231	Pn		Pn	Pn	10 32 33.6	-0.6
DZM	53nm,0.3s,baz=59,slow=18,SNR=140			LR		LR		10 32 59.9	
DZM	comp=Z,3μm,19.6s,baz=46,slow=26			Sn		Sn	Sn	10 33 06.3	-0.5
NOUC	72nm,0.3s,baz=210,slow=23,SNR=7.0 352nm,0.6s Port Laguerre	2.80	232	P		P	Pn	10 32 35.8	0.0
KOUNC	Koumac, New Ca	4.12	267	P		P	Pn	10 32 54.9	+1.0
MSVF	Nonsavu	9.25	75	Pn		P	Pn	10 34 07.9	+3.4
MSVF	2.1nm,0.3s,baz=246,slow=12,SNR=12			LR		LR		10 36 19.1	
MSVF	comp=Z,1μm,21.6s,baz=278,slow=30	9.25	75	Pn		P	Pn	10 34 08.3	+3.8
MSVF	Nonsavu	9.25	75	*i* P		P	Pn	10 34 05.6	+1.1
OUZ	Nonsavu	15.41	165			P		10 35 31.8	-1.2
OUZ	Omahuta	15.41	165	P		P	Pn	10 35 27.0	-1.5
EIDS	Omahuta	16.95	250			P		10 35 49.7	-0.5
EIDS	Eidsvold	16.95	250	P		P		10 35 49.6	-0.7
ARMA	Eidsvold	18.34	234	P		P		10 36 08.1	+2.4
ARMA	Armidale	18.34	234	P		P		10 36 06.7	+1.0
ARMA	Armidale	18.34	234	P		P		10 36 08.7	+3.0
HAZ	Te Kaha	19.04	157	P		P	Pn	10 36 16.1	+2.1
RMQ	Roma	19.25	248	P		P	Pn	10 36 19.2	+2.6
RMQ	baz=19,SNR=19 Roma	19.25	248	P		P	Pn	10 36 18.8	+2.2
URZ	Urewera	19.26	160	P		P		10 36 16.4	+0.8
URZ	20nm,0.7s,baz=28,slow=4.7,SNR=11 Urewera	19.26	160			P	Pn	10 36 17.8	+1.2
URZ	Urewera	19.26	160	P		P	Pn	10 36 18.8	+2.2
URZ	Urewera	19.26	160	P		P		10 36 16.3	+0.7
PKGZ	Pakihiroa	19.27	157	P		P	Pn	10 36 18.4	+1.7
WMGZ	Waiomatatini S	19.33	156	P		P	Pn	10 36 18.2	+0.8
MWZ	Matawai	19.47	159	P		P	Pn	10 36 21.4	+2.3
TWGZ	Tauwhareparae	19.49	158	P		P	Pn	10 36 20.5	+1.1
PUZ	Puketiti	19.49	157	P		P		10 36 19.6	+1.4
AFI	Afiamalu	19.75	74	P		P		10 36 22.9	+1.8
AFI	31nm,0.8s,baz=292,slow=19,SNR=3.1 Afiamalu	19.75	74	P		P		10 36 23.1	+1.9
AFI	comp=Z,53nm,0.9s			IAmb		IAmb		10 36 35.8	
AFI	Afiamalu	19.75	74	P		P		10 36 23.1	+1.9
AFI	comp=Z,53nm,1.0s			pmax		pmax			
RAHZ	Arahi	19.85	160	P		P	Pn	10 36 24.8	+1.1
RIGZ	Rimuhau	19.88	159	P		P		10 36 24.0	+1.5
BKZ	Black Stump Fm	19.90	162	P		P		10 36 23.9	+1.2
BKZ	Black Stump Fm	19.90	162	P		P	Pn	10 36 24.7	+0.4
BKZ	Black Stump Fm	19.90	162	P		P		10 36 22.7	0.0
KWHZ	Kaweka Forest	20.12	162	P		P	Pn	10 36 29.2	+2.3
KAHZ	Kahuranaki	20.59	162	P		P		10 36 32.0	+1.8
CTA	Charters Tower	21.04	267	P		P		10 36 36.2	+1.1
CTA	comp=Z,22nm,0.5s,baz=90,slow=10.0,SNR=31			LR		LR		10 44 45.4	
CTA	comp=Z,2μm,18.5s,baz=85,slow=37 comp=Z,22nm,0.5s								
CTA	Charters Tower	21.04	267	P		P		10 36 36.9	+1.8
CTA	comp=Z,60nm,0.8s			pmax		pmax			
CTA	Charters Tower	21.04	267	P		P		10 36 37.5	+2.4
CTAO	Charters Tower	21.04	267	P		P		10 36 36.8	+1.7
CTAO	comp=Z,105nm,1.2s			IAmb		IAmb		10 36 42.9	
CTAO	Charters Tower	21.04	267	P		P		10 36 36.8	+1.7
CTAO	comp=Z,105nm,1.2s			pmax		pmax			
CTAO	Charters Tower	21.04	267	P		P		10 36 37.5	+2.4
BFZ	Birch Farm	21.25	164	P		P		10 36 37.7	+0.5
BFZ	comp=Z,48nm,0.9s			IAmb		IAmb		10 36 54.4	
BFZ	Birch Farm	21.25	164	P		P		10 36 38.3	+1.1
PLWZ	Palliser	21.85	167	P		P		10 36 45.1	+1.4
KHZ	Kahutara	22.35	170	P		P		10 36 49.4	+0.4
KHZ	Kahutara	22.35	170	P		P		10 36 49.8	+0.8
LTZ	Lake Taylor	22.54	173	P		P		10 36 53.0	+1.9
CNB	Canberra Magne	22.59	225	P		P		10 36 54.0	+2.3
CNB	baz=23,SNR=11 Canberra Magne	22.59	225	P		P		10 36 54.9	+3.2
KRVT	Karavat (AS076	22.75	312	P		P		10 36 54.3	+0.8
	comp=Z,38nm,0.9s,baz=226,slow=2.5,SNR=6.9 comp=Z,38nm,0.9s								
CAN	Canberra	22.83	225	P		P		10 36 56.9	+2.6
MTSU	Mount Surprise	23.10	271	P		P		10 36 58.5	+1.3
MTSU	baz=23,SNR=84 Mount Surprise	23.10	271	P		P		10 36 59.1	+1.9
QLP	Quilpie	23.23	250	P		P		10 36 59.6	+1.2
CMSA	baz=23,SNR=24 Cobar Meteorol	23.41	237	P		P		10 37 01.0	+0.8
CMSA	baz=24,SNR=67 Cobar Meteorol	23.41	237	P		P		10 37 01.9	+1.7
PMG	Port Moresby	23.45	295	P		P		10 37 00.7	0.0
PMG	comp=Z,74nm,1.0s,baz=121,slow=5.7,SNR=18			LR		LR		10 43 45.2	
PMG	comp=Z,3μm,18.4s,baz=243,slow=30 comp=Z,74nm,1.0s								
PMG	Port Moresby	23.45	295	P		P		10 37 00.9	+0.3
PMG	Port Moresby	23.45	295	*ce*P		P		10 37 01.0	+0.3
PMG	comp=Z,130nm,1.3s			pmax		pmax			
COEN	Coen	25.17	281	P		P		10 37 18.2	+1.5
COEN	baz=25,SNR=26 Coen	25.17	281	P		P		10 37 18.2	+1.5
COEN	Coen	25.17	281	P		P		10 37 19.0	+2.3
TOO	Toolangi	26.44	225	P		P		10 37 29.0	+1.0
TOO	baz=27,SNR=4.8 Toolangi	26.44	225	P		P		10 37 29.1	+1.1
TOO	Toolangi	26.44	225	P		P		10 37 29.2	+1.1
TOO	comp=Z,22nm,1.3s			pmax		pmax			
TOO	Toolangi	26.44	225	P		P		10 37 29.8	+1.7
INKA	Innaminka	26.50	249	P		P		10 37 31.4	+2.8
STKA	Stephens Creek	26.80	239	P		P		10 37 32.2	+0.8
STKA	comp=Z,15nm,0.7s,baz=79,slow=8.5,SNR=36 comp=Z,2μm,18.0s,baz=12,slow=39 comp=Z,15nm,0.7s			LR		LR		10 49 12.4	
STKA	Stephens Creek	26.80	239	P		P		10 37 32.4	+1.1
STKA	baz=27,SNR=32 Stephens Creek	26.80	239	P		P		10 37 32.6	+1.2
STKA	Stephens Creek	26.80	239	*i* P		P		10 37 32.5	+1.1
STKA	Stephens Creek	26.80	239	P		P		10 37 32.7	+1.4
QIS	Mount Isa	27.22	264	P		P		10 37 35.6	+0.4
GEXS	baz=27,SNR=3.6 Deakin Univers	27.58	225	P		P		10 37 39.4	+1.2
MOO	Moorlands	28.49	215	P		P		10 37 48.5	+2.2
ARPS	Mount Arapiles	28.54	229	P		P		10 37 47.9	+1.0
ARPS	baz=29,SNR=6.7 Mount Arapiles	28.54	229	P		P		10 37 47.9	+1.0
PATS	comp=Z,43nm,0.9s Pohnpei	28.90	338	P		P		10 37 51.9	+1.8
LCRK	baz=29,SNR=3.6 Leigh Creek	29.20	244	P		P		10 37 53.6	+0.8
HTT	Hallett	29.43	238	P		P		10 37 55.8	+0.9
HTT	baz=30,SNR=10 Hallett	29.43	238	P		P		10 37 57.0	+2.1
RAR	Rarotonga	29.49	97	LR		LR		10 48 15.3	
OOD	comp=Z,1μm,19.5s,baz=282,slow=34 Oodnadatta	30.94	250	P		P		10 38 10.2	+2.0
BBOO	Buckleboo	31.55	240	P		P		10 38 14.3	+0.6
BBOO	baz=32,SNR=6.0 Buckleboo	31.55	240	P		P		10 38 14.1	+0.4
BBOO	comp=Z,17nm,0.9s			IAmb		IAmb		10 38 14.7	
BBOO	Buckleboo	31.55	240	P		P		10 38 14.2	+0.6
WR0	comp=Z,25nm,1.6s Warramunga Arr	32.01	265	P		P		10 38 16.9	-0.8
WB0	Warramunga Arr	32.17	265	P		P		10 38 18.2	-1.0
WB2	Warramunga Arr baz=32	32.19	265	P		P		10 38 18.6	-0.7
WB2	Warramunga Arr	32.19	265	P		P		10 38 18.8	-0.6
WB2	comp=Z,34nm,1.1s			IAmb		IAmb		10 38 19.8	
WRAB	Tennant Creek	32.19	265	P		P		10 38 18.1	-1.2
WRAB	comp=Z,32nm,1.1s			IAmb		IAmb		10 38 19.7	
WRAB	Tennant Creek	32.19	265	*ce*P		P		10 38 17.8	-1.6
WRAB	comp=Z,26nm,1.0s			pmax		pmax			
WRA	Warramunga Arr	32.20	265	P		P		10 38 17.6	-1.8
WRA	comp=Z,17nm,0.8s,baz=89,slow=6.8,SNR=93			PcP		PcP		10 41 07.4	-0.8
WRA	comp=Z,1.5nm,0.9s,baz=99,slow=4.3,SNR=2.3			ScP		ScP		10 44 52.2	+0.1
WRA	comp=Z,1.8nm,1.1s,baz=93,slow=3.8,SNR=6.0			LR		LR		10 51 47.3	
WRA	comp=Z,2μm,19.9s,baz=36,slow=37 comp=Z,17nm,0.8s								
WRA	Warramunga Arr	32.20	265	P		P		10 38 18.5	-1.0
WRA	Warramunga Arr	32.20	265	P		P		10 38 18.5	-1.0
AS31	comp=Z,3.0nm,1.2s Alice Springs	32.35	258	P		P		10 38 20.1	-0.7
ASAR	Alice Springs	32.35	258	P		P		10 38 20.2	-0.6
ASAR	Alice Springs	32.35	258	P		P		10 38 20.2	-0.6
MULG	Mulgathing	32.70	245	P		P		10 38 24.3	+0.6
MTN	Manton Dam	36.68	276	P		P		10 38 58.3	+0.1
MTN	baz=37,SNR=7.4 Manton Dam	36.68	276	P		P		10 38 58.4	+0.1
MTN	comp=Z,32nm,0.8s			IAmb		IAmb		10 39 10.1	
WRKA	Warakurna	37.44	255	P		P		10 39 04.4	-0.3
WRKA	baz=38,SNR=15 Warakurna	37.44	255	P		P		10 39 05.0	+0.3
FORT	Forrest	37.89	246	P		P		10 39 08.4	0.0
FORT	comp=Z,31nm,0.7s			IAmb		IAmb		10 39 21.7	
FORT	Forrest	37.89	246	P		P		10 39 08.4	0.0
KNRA	Kununurra	38.17	270	P		P		10 39 10.4	-0.5
KNRA	baz=38,SNR=28 Kununurra	38.17	270	P		P		10 39 09.7	-1.2
KNRA	Kununurra	38.17	270	P		P		10 39 11.5	+0.6
FAKI	Fak Fak	39.52	291	P		P		10 39 20.7	-1.5
FAKI	comp=Z,22nm,0.8s			IAmb		IAmb		10 39 33.5	
FAKI	Fak Fak	39.52	291	P		P		10 39 22.2	0.0
SWI	Sorong	41.39	293	P		P		10 39 36.3	-1.4
SWI	comp=Z,67nm,0.8s			pmax		pmax			
SWI	Sorong	41.39	293	P		P		10 39 37.2	-0.5
SANI	comp=Z,67nm,0.8s Sanana	45.45	288	P		P		10 40 10.6	+0.1
SANI	comp=Z,84nm,0.8s Sanana	45.45	288	P		P		10 40 11.6	+1.1
PSA00	comp=Z,84nm,0.8s Pilbara Seismi	45.46	259	P		P		10 40 11.0	+0.5
PSA00	Pilbara Seismi	45.46	259	P		P		10 40 09.0	-1.6
PSA00	comp=Z,28nm,1.2s			IAmb		IAmb		10 40 11.9	
PSA00	Pilbara Seismi	45.46	259	P		P		10 40 11.2	+0.7
MBWA	Marble Bar	45.62	260	P		P		10 40 11.6	-0.2
MBWA	Marble Bar	45.62	260	P		P		10 40 12.3	+0.5
KLBR	Kellerberrin	46.75	245	P		P		10 40 20.1	-0.5
KLBR	baz=47,SNR=10 Kellerberrin	46.75	245	P		P		10 40 19.9	-0.7
NWAO	comp=Z,163nm,0.8s Narrogin (SRO)	47.23	244	P		P		10 40 24.1	-0.2
NWAO	Narrogin (SRO)	47.23	244	P		P		10 40 24.1	-0.2
NWAO	comp=Z,59nm,0.9s			pmax		pmax			
BLDU	Ballidu	47.64	247	P		P		10 40 27.1	-0.5
BLDU	baz=48,SNR=5.9 Ballidu	47.64	247	P		P		10 40 26.8	-0.8
MORW	comp=Z,29nm,2.9s Morawa	48.26	249	P		P		10 40 31.8	-0.6
PLAI	Plampang	50.39	275	P		P		10 40 49.0	+0.2
GIRL	comp=Z,52nm,0.8s Giralia	50.47	257	P		P		10 40 48.2	-1.1
TOLI2	Tolitoli	51.52	289	P		P		10 40 57.0	-0.3
TOLI2	comp=Z,23nm,0.8s			IAmb		IAmb		10 41 08.4	
TOLI2	Tolitoli	51.52	289	P		P		10 40 57.3	0.0
POHA	Pohakuloa	53.10	44	P		P		10 41 06.7	-2.5
VNDA	Vanda	57.28	182	P		P		10 41 37.3	-1.0
VNDA	comp=Z,0.6nm,0.5s,baz=346,slow=5.9,SNR=2.3 comp=Z,0.6nm,0.5s								
VNDA	Vanda	57.28	182	P		P		10 41 37.6	-0.7
VNDA	Vanda	57.28	182	P		P		10 41 37.6	-0.7
VNDA	comp=Z,2.0nm,0.8s			pmax		pmax			
SBA	Scott Base	57.53	180	P		P		10 41 40.7	+0.7
SBA	comp=Z,14nm,1.0s			IAmb		IAmb		10 41 53.3	
SBA	Scott Base	57.53	180	P		P		10 41 40.7	+0.7
SBA	comp=Z,14nm,1.0s			pmax		pmax			
CASY	Casey	58.88	204	P		P		10 41 48.9	-0.7
STKI	Sintang	59.48	283	P		P		10 41 55.2	+0.6
DBJI	comp=Z,32nm,1.1s Dramaga	61.45	274	P		P		10 42 08.7	+0.6
MJAR	comp=Z,19μmcomp=Z,102nm,1.0s Matsushiro Arr	63.51	333	P		P		10 42 19.9	-1.6
MJAR	comp=Z,1.0nm,0.6s,baz=154,slow=9.0,SNR=5.1 comp=Z,1.0nm,0.6s								
MJAR	Matsushiro Arr	63.51	333	P		P		10 42 22.2	+0.8
MJAR	Matsushi

	comp=Z,3.0nm,0.8s							
HNS	**HongShan**	**76.69**	**319**	⇓P		P	10 43 53.3	+11
HNS				pmax		pmax		
	comp=Z,12nm,0.9s							
MAW	**Mawson**	**77.19**	**202**	P		**P**	**10 43 44.4**	**-0.3**
	comp=Z,5.1nm,0.8s,baz=140,slow=13,SNR=6.1							
	comp=Z,5.1nm,0.8s							
MAW	**Mawson**	**77.19**	**202**	P		**P**	**10 43 44.5**	**-0.1**
MAW	**Mawson**	**77.19**	**202**	P		**P**	**10 43 44.5**	**-0.1**
MAW				pmax		pmax		
	comp=Z,3.0nm,1.2s							
XAN	**Xi'an**	**78.49**	**313**	P		P	10 44 02.3	+10
XAN				pmax		pmax		
	comp=Z,7.0nm,1.6s							
CM31	**Chiang Mai Arr**	**78.49**	**295**	P		**P**	**10 43 53.4**	**+0.7**
CM31				IAmb		IAmb	10 44 04.9	
	comp=Z,10.0nm,1.1s							
CMAR	**Chiang Mai Arr**	**78.49**	**295**	P		**P**	**10 43 52.6**	**-0.1**
	comp=Z,2.4nm,0.8s,baz=129,slow=4.0,SNR=17							
	comp=Z,2.4nm,0.6s							
CMAR	**Chiang Mai Arr**	**78.49**	**295**	P		**P**	**10 43 53.0**	**+0.2**
CMAR	**Chiang Mai Arr**	**78.49**	**295**	*ce*P		**P**	**10 43 53.7**	**+0.9**
CMAR				pmax		pmax		
	comp=Z,2.0nm,0.4s							
CHTO	**Chiang Mai**	**78.64**	**295**	P		**P**	**10 43 53.4**	**-0.2**
CHTO	**Chiang Mai**	**78.64**	**295**	P		P	**10 43 53.4**	**-0.2**
CHTO				pmax		pmax		
	comp=Z,7.0nm,1.0s							
PZH	**PanZhiHua**	**79.88**	**303**	P		**P**	**10 44 02.6**	**+2.3**
PZH				pmax		pmax		
	comp=Z,10.0nm,0.9s							
PZH				pmax		pmax		
	comp=Z,100nm,5.3s							
CD2	**Chengdu**	**80.51**	**308**	*e*P		**P**	**10 44 04.1**	**+0.5**
HHC	**Hu-ho-hao-te**	**80.74**	**320**	*e*P		**P**	**10 44 08.8**	**+4.2**
HHC				pmax		pmax		
	comp=Z,55nm,1.1s							
BELA	**Belgrano 2**	**81.02**	**175**	P		**P**	**10 44 05.4**	**-0.1**
BELA				IAmb		IAmb	10 44 21.8	
	comp=Z,17nm,1.0s							
ZEA	**Zeya**	**81.98**	**337**	*e*P		P	10 44 20.0	+9.2
ZEA				pmax		pmax		
	comp=Z,10.0nm,0.6s							
SEY	**Seymchan**	**84.02**	**353**	*ce*P		**P**	**10 44 22.5**	**+1.4**
SEY				pmax		pmax		
	comp=Z,9.0nm,2.5s							
KDAK	**Kodiak Island**	**84.28**	**20**	P		**P**	**10 44 25.7**	**+3.2**
KDAK	**Kodiak Island**	**84.28**	**20**	P		P	**10 44 25.7**	**+3.2**
KDAK				pmax		pmax		
	comp=Z,38nm,1.2s							
TROLL	**Troll, Antarti**	**87.37**	**184**	P		**P**	**10 44 36.6**	**-1.4**
ULN	**Ulaanbaatar**	**87.46**	**324**	P		**P**	**10 44 38.3**	**-0.5**
ULN				IAmb		IAmb	10 44 49.7	
	comp=Z,8.8nm,0.8s							
ULN	**Ulaanbaatar**	**87.46**	**324**	*ce*P		**P**	**10 44 38.6**	**-0.2**
ULN				pmax		pmax		
	comp=Z,5.0nm,0.7s							
GTA	**Gaotai**	**87.52**	**314**	*e*P		**P**	**10 44 39.4**	**+0.1**
GTA				pP		pwP	10 44 50.1	+1.1
GTA				pmax		pmax		
	comp=Z,4.0nm,0.9s							
YAK	**Yakutsk**	**87.79**	**343**	*i* P		**P**	**10 44 38.8**	**-1.0**
YAK				pmax		pmax		
	comp=Z,11nm,0.9s							
SONM	**Songino Array**	**87.81**	**323**	P		**P**	**10 44 39.8**	**-0.6**
	comp=Z,2.9nm,0.8s,baz=156,slow=6.4,SNR=9.0							
	comp=Z,2.9nm,0.8s							
SONM	**Songino Array**	**87.81**	**323**	P		**P**	**10 44 39.5**	**-0.9**
SONM				IAmb		IAmb	10 44 52.6	
	comp=Z,9.7nm,1.2s							
SONM	**Songino Array**	**87.81**	**323**	P		**P**	**10 44 39.5**	**-0.9**
SONM				pmax		pmax		
	comp=Z,10.0nm,1.2s							
SNAA	**Sanae**	**88.01**	**183**	P		**P**	**10 44 40.2**	**-0.9**
	comp=Z,3.0nm,0.8s,baz=198,slow=13,SNR=9.5							
	comp=Z,3.0nm,0.8s							
SNAA	**Sanae**	**88.01**	**183**	P		**P**	**10 44 40.0**	**-1.1**
SNAA				IAmb		IAmb	10 44 52.4	
	comp=Z,8.8nm,0.8s							
SNAA	**Sanae**	**88.01**	**183**	*ce*P		**P**	**10 44 39.9**	**-1.1**
SNAA				pmax		pmax		
	comp=Z,8.0nm,1.3s							
BILL	**Bilibino**	**88.17**	**359**	*ce*P		**P**	**10 44 40.5**	**-1.0**
BILL				pmax		pmax		
	comp=Z,2.0nm,0.8s							
VNA3	**Neumayer Olymp**	**88.62**	**181**	P		**P**	**10 44 43.6**	**-0.3**
HUMO	**Hull Mountain**	**88.75**	**43**	P		**P**	**10 44 44.0**	**-0.9**
HUMO				IAmb		IAmb	10 44 55.2	
	comp=Z,6.5nm,1.0s							
MDPB	**Devils Postpil**	**89.05**	**49**	P		**P**	**10 44 45.8**	**-0.9**
MDPB				IAmb		IAmb	10 45 05.7	
	comp=Z,13nm,1.5s							
VNA1	**Neumayer--Stat**	**89.19**	**181**	P		**P**	**10 44 45.4**	**-1.2**
LHV	**Little Huntoon**	**89.73**	**49**	P		**P**	**10 44 49.1**	**-0.4**
PAHR	**Pah Rah Range**	**89.77**	**47**	P		**P**	**10 44 48.5**	**-1.4**
PAHR				IAmb		IAmb	10 45 15.3	
	comp=Z,6.9nm,1.2s							
NVAR	**Mina Array Bea**	**89.95**	**49**	P		**P**	**10 44 48.1**	**-2.8**
	comp=Z,2.7nm,0.9s,baz=224,slow=7.0,SNR=15							
	comp=Z,2.7nm,0.9s							
NVAR	**Mina Array Bea**	**89.95**	**49**	P		**P**	**10 44 49.5**	**-1.4**
NV11	**Mina Array Sit**	**90.05**	**49**	P		**P**	**10 44 49.7**	**-1.6**
NV11				IAmb		IAmb	10 44 51.0	
	comp=Z,6.5nm,1.2s							
K05A	**Summer Lake**	**90.14**	**44**	P		**P**	**10 44 49.9**	**-1.7**
K05A				IAmb		IAmb	10 45 06.3	
	comp=Z,6.4nm,0.9s							
H04A	**Detroit Lake**	**90.24**	**42**	P		**P**	**10 44 50.2**	**-1.6**
H04A				IAmb		IAmb	10 45 01.3	
	comp=Z,14nm,1.2s							
KVN	**Kaiserville**	**90.36**	**48**	P		**P**	**10 44 50.7**	**-2.1**
KVN				IAmb		IAmb	10 44 53.5	
	comp=Z,7.5nm,1.4s							
KVN	**Kaiserville**	**90.36**	**48**	P		**P**	**10 44 50.7**	**-2.1**
KVN				pmax		pmax		
	comp=Z,8.0nm,1.4s							
PINE	**Pine Mountain**	**90.61**	**43**	P		**P**	**10 44 52.4**	**-1.4**
PINE				IAmb		IAmb	10 45 03.9	
	comp=Z,6.9nm,0.8s							
ZAK	**Zakamensk**	**90.91**	**324**	*e*P		**P**	**10 44 53.1**	**-1.8**
ZAK				pmax		pmax		
	comp=Z,4.0nm,1.4s							
ILAR	**Eielson Array**	**91.47**	**17**	P		**P**	**10 44 54.1**	**-2.9**
	comp=Z,1.0nm,0.7s,baz=233,slow=5.6,SNR=12							
	comp=Z,1.0nm,0.7s							
ILAR	**Eielson Array**	**91.47**	**17**	P		**P**	**10 44 54.7**	**-2.3**
ILAR	**Eielson Array**	**91.47**	**17**	P		**P**	**10 44 54.7**	**-2.3**
WVOR	**Wild Horse Val**	**91.49**	**45**	P		**P**	**10 44 55.6**	**-2.2**
WVOR				IAmb		IAmb	10 45 07.8	
	comp=Z,6.7nm,1.2s							
WVOR	**Wild Horse Val**	**91.49**	**45**	P		**P**	**10 44 55.6**	**-2.2**
WVOR				pmax		pmax		
	comp=Z,7.0nm,1.2s							
D05A	**Enumclaw**	**91.57**	**40**	P		**P**	**10 44 56.2**	**-1.7**
TUC	**Tucson**	**93.07**	**57**	P		**P**	**10 45 04.7**	**-0.6**
TUC				pmax		pmax		
	comp=Z,6.0nm,2.5s							
TIXI	**Tiksi**	**95.74**	**348**	*i* P		**P**	**10 45 16.5**	**0.0**
TIXI				pmax		pmax		
	comp=Z,2.0nm,1.0s							
H03S2	**Juan Fernandez**	**96.07**	**129**	T		T	12 32 42.7	
	SNR=4.6							
H03N3	**Juan Fernandez**	**96.26**	**129**	T		T	12 32 56.1	
	baz=233,slow=72,SNR=12							
H03N2	**Juan Fernandez**	**96.26**	**129**	T		T	12 32 54.8	
	baz=233,slow=72,SNR=12							
H03N1	**Juan Fernandez**	**96.27**	**129**	T		T	12 32 54.0	
	baz=233,slow=72,SNR=14							
WMQ	**Urumqi**	**97.61**	**314**	*e*P		Pdif	10 45 27.0	+1.2
TXAR	**Lajitas Array**	**97.77**	**62**	P		**P**	**10 45 24.2**	**-2.6**
	comp=Z,0.3nm,0.8s,baz=206,slow=5.4,SNR=5.4							
	comp=Z,0.3nm,0.8s							
PDAR	**Pinedale Array**	**97.77**	**47**	P		**P**	**10 45 24.6**	**-2.1**
	comp=Z,0.2nm,0.6s,baz=272,slow=3.2,SNR=1.0							
	comp=Z,0.2nm,0.6s							
MKAR	**Makanchi Array**	**102.17**	**315**	P		**Pdif**	**10 45 44.8**	**-1.2**
	comp=Z,0.7nm,0.8s,baz=105,slow=5.9,SNR=4.9							
MKAR	**Makanchi Array**	**102.17**	**315**	*i* P		**Pdif**	**10 45 47.7**	**+1.7**
MKAR				pmax		pmax		
	comp=Z,1.0nm,0.8s							
ARU	**Arti**	**117.84**	**324**	*i* PKIKP		**PKPdf**	**10 50 36.7**	**-0.6**
ARU							10 51 50.7	
ARU							10 57 44.3	
ARCES	**ARCESS Array B**	**126.02**	**345**	PKP		**PKPdf**	**10 50 50.9**	**-1.8**
	comp=Z,4.8nm,1.1s,baz=77,slow=1.9,SNR=5.8							
BDFB	**Brasilia**	**129.20**	**132**	PKP		**PKPdf**	**10 50 59.6**	**-0.9**
	comp=Z,2.5nm,0.8s,baz=244,slow=3.5,SNR=4.4							
BDFB	**Brasilia**	**129.20**	**132**		PKIKP	**PKPdf**	**10 50 59.0**	**-1.5**
BDFB	**Brasilia**	**129.20**	**132**		PKIKP	**PKPdf**	**10 50 59.0**	**-1.5**
OBN	**Obninsk**	**130.14**	**326**	*i*	PKIKP	**PKPdf**	**10 50 59.0**	**-1.9**
OBN					pmax	pmax		
	comp=Z,3.0nm,0.9s							
FINES	**FINESS Array B**	**131.43**	**337**		PKP	**PKPdf**	**10 51 02.2**	**-0.9**
	comp=Z,2.4nm,0.9s,baz=48,slow=2.1,SNR=5.5							
FINES					SKPbc	**SKPbc**	**10 54 26.5**	**-1.9**
	comp=Z,8.1nm,0.9s,baz=94,slow=5.6,SNR=10							
FINES	**FINESS Array B**	**131.43**	**337**			**PKPdf**	**10 51 03.9**	**+0.7**
FINES	**FINESS Array B**	**131.43**	**337**		PKIKP	**PKPdf**	**10 51 03.9**	**+0.7**
AKASG	**Malin Array Be**	**136.09**	**323**		SKPbc	**SKPbc**	**10 54 43.8**	**-0.5**
	comp=Z,2.1nm,0.8s,baz=45,slow=4.6,SNR=9.7							
NB2	**NORSAR Subarra**	**136.39**	**344**		PKPdf	**PKiKP**	**10 51 19.5**	**+5.2**
	comp=Z,0.3nm,0.5s,baz=32,slow=1.8							
NOA	**NORSAR Array B**	**136.39**	**344**		PKP	**PKPdf**	**10 51 12.5**	**-0.1**
	comp=Z,0.8nm,0.9s,baz=41,slow=4.3,SNR=2.2							
NOA					SKPab	**SKiKP**	**10 54 49.1**	**-1.5**
	comp=Z,1.8nm,0.8s,baz=30,slow=3.5,SNR=6.6							
BRTR	**Keskin Array B**	**137.08**	**307**		PKP	**PKPdf**	**10 51 14.0**	**-0.7**
	comp=Z,0.2nm,0.4s,baz=126,slow=2.0,SNR=1.7							
BRTR	**Keskin Array B**	**137.08**	**307**			**PKPdf**	**10 51 14.0**	**-0.7**
BRTR	**Keskin Array B**	**137.08**	**307**		PKIKP	**PKPdf**	**10 51 14.0**	**-0.7**
MORC	**Moravsky Berou**	**142.77**	**329**	*e*	PKP	**PKPdf**	**10 51 24.1**	**-0.4**
KRLC	**Kraliky**	**142.93**	**330**	*e*	PKIKP	**PKPdf**	**10 51 24.4**	**-0.4**
KRLC				*e*			10 51 30.4	
KRLC	**Kraliky**	**142.93**	**330**	*e*	PKP	**PKPdf**	**10 51 24.4**	**-0.4**
KRLC				*ex*		x	10 51 30.4	
DPC	**Dobruska-Polom**	**142.96**	**330**	*e*	PKIKHKP	PKPpre	10 51 16.4	
DPC				*e*			10 51 21.7	
DPC	**Dobruska-Polom**	**142.96**	**330**	*e*	PKP	**PKPdf**	**10 51 21.7**	**-3.2**
JAVC	**Velka Javorina**	**143.31**	**328**	*e*	PKP	**PKPdf**	**10 51 25.1**	**-0.4**
VRAC	**Vranov**	**143.54**	**329**	*e*	PKP	PKPbc	10 51 24.4	+1.2
BRG	**Berggiesshubel**	**143.64**	**333**	*e*	PKP	**PKiKP**	**10 51 29.9**	**+0.5**
BRG					Amp		10 51 32.3	
	comp=Z,4.2nm,0.7s							
BRG					Amp		11 18 09.0	
	comp=N,4.4nm,18.7s							
BRG					Amp		11 18 13.0	
	comp=E,2.2nm,19.9s							
BRG					Amp		11 18 14.0	
	comp=Z,6.2nm,18.8s							
BRG	**Berggiesshubel**	**143.64**	**333**	*e*	PKIKP	**PKiKP**	**10 51 29.8**	**+0.5**
BRG					pmax	pmax		
	comp=Z,4.0nm,0.7s							
CLL	**Collm**	**143.71**	**334**	*e*	PKIKP	**PKPdf**	**10 51 26.0**	**-0.1**
CLL					pmax	pmax		
	comp=Z,6.0nm,0.9s							
CLL	**Collm**	**143.71**	**334**	*e*	PKPdf	**PKPdf**	**10 51 26.0**	**-0.1**
	comp=Z,6.0nm,0.9s							
KRUC	**Moravsky**	**143.80**	**329**	*e*	PKP	PKPbc	10 51 25.1	+1.2
NKC	**Novy Kostel**	**144.75**	**333**	*e*	PKIKP	PKPbc	10 51 28.2	+1.3
NKC				*e*			10 51 32.9	
NKC	**Novy Kostel**	**144.75**	**333**	*e*	PKP	PKPbc	10 51 28.2	+1.3
NKC				*ex*		x	10 51 32.9	
RONA	**Rosalia, Austr**	**144.76**	**327**	*e*P		**PKPdf**	**10 51 28.6**	**+0.5**
	comp=Z,6.2nm,0.9s							
CONA	**Conrad Observa**	**144.83**	**328**	*e*P		**PKPab**	**10 51 27.9**	**+0.7**
	comp=Z,3.1nm,0.8s							
CKRC	**Cesky Krumlov**	**144.96**	**330**	*e*	PKP	**PKPab**	**10 51 27.3**	**-0.3**
CKRC				*ex*		x	10 51 37.9	
KHC	**Kasperske Hory**	**145.08**	**331**			**PKPbc**	**10 51 27.4**	**-0.6**
KHC	**Kasperske Hory**	**145.08**	**331**	*e*	PKIKP	**PKPdf**	**10 51 29.7**	**+1.1**
KHC				*e*			10 51 37.8	
KHC	**Kasperske Hory**	**145.08**	**331**	*e*	PKP	**PKPdf**	**10 51 29.7**	**+1.1**
KHC				*ex*		x	10 51 37.8	
GEC2	**GERESS Array S**	**145.23**	**331**			**PKPbc**	**10 51 27.2**	**-1.4**
GERES	**GERESS Array B**	**145.23**	**331**		PKPbc	**PKPbc**	**10 51 28.1**	**-0.4**
	comp=Z,2.3nm,0.7s,baz=35,slow=5.3,SNR=23							
MOA	**Molln**	**145.67**	**329**	*e*P		**PKPab**	**10 51 31.1**	**+0.8**
	comp=Z,6.5nm,0.9s							
KBA	**Koelnbreinsper**	**146.65**	**329**	*e*P		**PKPdf**	**10 51 33.2**	**+1.7**
	comp=Z,2.9nm,0.6s							
MYKA	**Terra Mystica**	**146.82**	**328**	*e*P		**PKPbc**	**10 51 33.8**	**+0.3**
	comp=Z,4.0nm,0.9s							
BTNL	**Ternell**	**146.85**	**340**	*d*	PKP	**PKPbc**	**10 51 34.4**	**+1.0**
BTNL				*ds*	PKP		10 51 44.8	
MEM	**Membach**	**146.87**	**340**	*d*	PKP	**PKPbc**	**10 51 34.2**	**+0.9**
MEM				*ds*	PKP		10 51 41.8	
DSB	**Dublin**	**146.97**	**355**		PKPdf	**PKPdf**	**10 51 31.5**	**-0.1**
BSTI	**Sart Tilman**	**147.03**	**340**	*d*	PKP	**PKPbc**	**10 51 34.5**	**+0.7**
BHOU	**Houvegnez**	**147.09**	**339**	*d*	PKP	**PKPbc**	**10 51 35.6**	**+1.6**
ABTA	**Abfaltersbach**	**147.29**	**329**	*e*P		**PKPdf**	**10 51 33.6**	**+1.1**
	comp=Z,6.0nm,0.8s							
WTTA	**Wattenberg**	**147.33**	**331**	*e*P		**PKPbc**	**10 51 35.5**	**+0.5**
	comp=Z,5.6nm,0.9s							
SNF	**Seneffe**	**147.49**	**341**	*d*	PKP	**PKPbc**	**10 51 36.0**	**+0.9**
SNF				*ds*	PKP		10 51 42.4	
RCHB	**Rochefort**	**147.51**	**340**	*d*	PKP	**PKPbc**	**10 51 36.1**	**+1.0**
RCHB				*ds*	PKP		10 51 42.1	
MOTA	**Moosalm**	**147.51**	**331**	*e*P		**PKPbc**	**10 51 35.9**	**+0.3**
	comp=Z,5.3nm,0.9s							
BMRD	**Maredsous**	**147.53**	**341**	*d*	PKP	**PKPdf**	**10 51 34.5**	**+1.9**
BMRD				*ds*	PKP		10 51 43.0	
SQTA	**Sankt Quirin**	**147.56**	**331**	*e*P		**PKPbc**	**10 51 36.2**	**+0.6**
	comp=Z,6.7nm,0.7s							
RETA	**Reutte**	**147.56**	**332**	*e*P		**PKPdf**	**10 51 35.1**	**+2.2**
	comp=Z,2.0nm,0.6s							
WLF	**Walferdange**	**147.63**	**339**	*d*	PKP	**PKPbc**	**10 51 37.0**	**+1.5**
DOU	**Dourbes**	**147.76**	**341**	*d*	PKP	**PKPbc**	**10 51 35.5**	**-0.3**
DOU				*ds*	PKP		10 51 42.8	
FETA	**Feichten**	**147.93**	**331**	*e*P		**PKPbc**	**10 51 36.5**	**-0.2**
	comp=Z,6.1nm,0.7s							
ESDC	**Sonseca Array**	**159.75**	**343**		PKPab	**PKPab**	**10 52 27.0**	**-2.1**
	comp=Z,0.9nm,0.9s,baz=15,slow=3.5,SNR=5.8							
TORD	**Torodi Ar. Bea**	**165.61**	**242**		PKP	**PKPdf**	**10 51 56.2**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=113,slow=0.4,SNR=1.6							
TORD					PKPab	**PKPab**	**10 52 53.2**	**-2.3**
	comp=Z,1.0nm,0.9s,baz=102,slow=4.9,SNR=3.1							
TORD	**Torodi Ar. Bea**	**165.61**	**242**			**PKPdf**	**10 51 55.2**	**-1.6**
TORD						**PKPab**	**10 52 52.9**	**-2.6**

MAN 19 10:32:11.7,9.72N×124.90E,h12km,mb4.5,ML3.4,MS3.2,
10C-3D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
MSLP	**Maasin**	**0.41**	**355**	*i*	P		Pb	10 32 20.9	+0.4
MSLP					S		Sn	10 32 32.3	+1.6
SCPH	**Surigao**	**0.59**	**84**	*e*	P		Pg	10 32 23.1	+0.3
SCPH				*i*	S		Sb	10 32 32.3	+0.3
TBP	**Tagbilaran**	**1.02**	**268**	⇑	*i* P		Pb	10 32 29.8	-0.4
LLP	**Lapu-Lapu**	**1.09**	**303**	⇑	*i* P		Pb	10 32 31.8	0.0
LLP					*i* S		Sn	10 32 48.5	+1.5
GLSP	**General Luna,**	**1.22**	**87**	⇑	*e*P		Pn	10 32 32.9	-1.1
GLSP					*e*S		Sg	10 32 51.6	+0.8
CGP	**Cagayan de Oro**	**1.27**	**189**	⇓	*e*P		Pg	10 32 40.8	+5.7
CGP					*e*S		Sn	10 32 50.8	-0.1
OCLP	**Ormoc**	**1.35**	**348**	⇑	*e*P		Pn	10 32 36.0	+0.2
OCLP					*e*S		Sg	10 33 04.2	+9.0
BUKP	**Musuan**	**1.84**	**175**	⇑	*e*P		Pn	10 32 42.8	+0.8
BUKP					*e*S		Sg	10 33 12.8	+3.2
BESP	**Borongan**	**1.94**	**16**	⇑	*e*P		Pn	10 32 44.2	+0.2
BESP					*e*S		Sb	10 33 10.9	-0.3
BIPH	**Bislig**	**2.10**	**136**	⇑	*i* P		Pn	10 32 45.6	-0.3
BIPH					*i* S		Sn	10 33 12.1	+0.2
PAGZ	**Pagadian**	**2.36**	**219**	⇑	*e*P		Pn	10 32 50.2	+0.7
PAGZ					*e*S		Sb	10 33 22.6	+0.1
CTBH	**Cotabato--PC H**	**2.57**	**195**	⇓	*i* P		Pn	10 32 54.1	+2.1
KCP	**Kidapawan**	**2.70**	**176**	⇓	*e*P		Pb	10 32 59.2	+0.2
RCP	**Roxas**	**2.79**	**311**	⇑	*e*P		Pn	10 32 56.1	+0.6

*BUL **19** 10:49:22.3±1.0,21.30S×33.68E,h38km±66km,MD4.3*
*PRE **19** 10:49:23.4±1.0,21.37S×33.16E,h5km,ML3.5*
ISC 19 10:49:25.6±2.6,21.51S±0.07×33.1E±0.1,h10km,n16,
σ1.9 10/28,Mozambique

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
MOPA	**Mopani**	**2.53**	**217**	*i*	P		**Pb**	**10 50 09.6**	**-1.6**
MOPA					*i* S		**Sb**	**10 50 43.0**	**+0.7**
MOPA	**Mopani**	**2.53**	**217**	*i*	P		**Pb**	**10 50 09.6**	**-1.6**
MOPA					*i* S		**Sb**	**10 50 43.0**	**+0.7**
MUSN	**Musina, Limpop**	**3.08**	**255**	*i*	P		**Pn**	**10 50 15.8**	**+1.4**
MUSN	**Musina, Limpop**	**3.08**	**255**	*i*	P		**Pn**	**10 50 15.8**	**+1.4**
BLWY	**Bulawayo**	**4.39**	**287**	*i*	P		**Pn**	**10 50 32.8**	**+0.2**
BLWY					*i* S		**Sn**	**10 51 24.2**	**+0.4**
BLWY	**Bulawayo**	**4.39**	**287**	*i*	P		**Pn**	**10 50 32.8**	**+0.2**
BLWY					*i* S		**Sn**	**10 51 24.2**	**+0.4**
MATP	**Matopo**	**4.41**	**283**	*e*P			**Pn**	**10 50 33.4**	**+0.7**
MATP				*e*S			**Sn**	**10 51 22.4**	**-1.8**
MATP				IAML				10 51 54.7	
	comp=Z,2μm,1.3s								
MATP	**Matopo**	**4.41**	**283**	*i*	P		**Pn**	**10 50 33.4**	**+0.7**
MATP				*i*	S		**Sn**	**10 51 25.4**	**+1.1**
MATP	**Matopo**	**4.41**	**283**	*i*	P		**Pn**	**10 50 33.4**	**+0.7**
MATP				*i*	S		**Sn**	**10 51 25.4**	**+1.1**
CRLN	**Carolina, Mapu**	**5.27**	**211**	*e*P			**Pn**	**10 50 45.7**	**+1.1**
CRLN				*e*S			**Sn**	**10 51 46.0**	**+0.5**
CRLN				IAML				10 52 19.6	
	comp=Z,44nm,0.5s								
POGA	**Pongola**	**5.95**	**192**	*e*P			**Pn**	**10 50 54.7**	**+0.9**
POGA				*e*S			**Sn**	**10 52 02.3**	**+0.3**
POGA				IAML				10 52 47.2	
	comp=Z,47nm,0.5s								
SLR	**Silverton**	**6.08**	**225**	*e*P			**Pn**	**10 50 57.5**	**+1.7**
SLR				*e*S			**Sn**	**10 52 06.4**	**+0.9**
SLR				IAML				10 52 11.7	
	comp=Z,24nm,0.3s								
LBTB	**Lobatse**	**7.71**	**242**	*i*	P		**Pn**	**10 51 19.2**	**+1.2**
LBTB				*i*	S		**Sn**	**10 52 44.4**	**-1.2**
LBTB	**Lobatse**	**7.71**	**242**	*i*	P		**Pn**	**10 51 19.2**	**+1.2**
LBTB				*i*	S		**Sn**	**10 52 44.4**	**-1.2**
BOSA	**Boshof**	**10.01**	**223**	*i*	P		**Pn**	**10 51 48.8**	**-0.8**
BOSA	**Boshof**	**10.01**	**223**	*i*	P		**Pn**	**10 51 48.8**	**-0.8**

JMA 19 10:50:22.6±0.2,30.9N±0.7×141.4E±0.9,h42km,MV3.5/10,
NEAR TORISHIMA IS,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
JHJ2	**Mitsune**	**2.59**	**329**	*e*S			Sn	10 51 34.0	+1.7
JHO	**Hitachi**	**5.75**	**353**	P			Pn	10 51 47.6	+2.3
JHO				*e*S			Sn	10 52 51.4	+1.5

WEL 19 10:54:42.1±1.2,39.5S±5.5×177.9E±,h25km±8km,M4.0/9,
ML4.3/9,MLv4.0/9,Error ellipse: s-maj=0.0km
s-min=0.0km az=107.1,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
CNGZ	**Carnagh Statio**	**0.29**	**308**	P			Pn	10 54 49.9	-0.9
CNGZ				S			Sn	10 54 56.7	+0.4
PRGZ	**Paritu Road**	**0.55**	**242**	P			Pn	10 54 54.1	-0.3
PRGZ				S			Sn	10 55 03.4	+0.7
TKGZ	**Te Karaka**	**0.56**	**293**	P			Pb	10 54 53.8	+0.5
TKGZ				S			Sn	10 55 02.8	0.0
RIGZ	**Rimuhau**	**0.58**	**266**	P			Pn	10 54 54.3	-0.5
RIGZ				S			Sn	10 55 03.8	+0.2
PUZ	**Puketiti**	**0.62**	**342**	P			Pn	10 54 55.2	-0.1
TWGZ	**Tauwhareparae**	**0.64**	**320**	P			Pn	10 54 55.4	-0.1
TWGZ				S			Sn	10 55 05.7	+0.8
MHGZ	**Mahia Peninsul**	**0.67**	**223**	P			Pn	10 54 56.1	+0.1
KNZ	**Kokohu**	**0.74**	**241**	P			Pb	10 54 56.6	+0.2
MWZ	**Matawai**	**0.83**	**293**	P			Pb	10 54 58.0	0.0
PKGZ	**Pakihiroa**	**0.84**	**336**	P			Pn	10 54 58.9	+0.5
WMGZ	**Waiomatatini S**	**0.85**	**355**	P			Pn	10 54 59.4	+1.0
RAGZ	**Rawiri**	**0.87**	**261**	P			Pb	10 54 58.6	0.0
SNGZ	**Shannon Statio**	**0.92**	**262**	P			Pn	10 54 59.2	-0.2
RUGZ	**Raukumara Rang**

THZ	**Tophouse**	**5.29 232**	P	Pn	10 55 56.8	-2.7
KHZ	**Kahutara**	**5.32 224**	P	Pn	10 55 57.0	-2.9
CTZ	**Chatham Island**	**6.26 146**	P	Pn	10 56 14.2	+1.4
LTZ	**Lake Taylor**	**6.27 227**	P	Pn	10 56 10.3	-2.7

*ECX **19** 11:05:41.2±0.8, 30.˚71N×114.˚21W, h0km±13km, MD3.3, ML3.3*
*MEX **19** 11:05:44.9±1.0, 30.˚48N×114.˚40W, h20km, MD4.2*
ISC 19 11:05:41.8±1.6, **30.˚62N**±0.˚06×**114.˚35W**±0.˚07, **h33**km±7km, **n9**, σ1§**73**/11, **2C-1D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFX	**San Felipe**	**0.60**	**314**	*e*P	**Pb**	**11 05 53.3**	**-0.6**
SFX				*e*S	**Sb**	**11 06 02.2**	**0.0**
SFX				⇑*e*		11 06 12.6	
SFX				IAML		11 06 12.6	
	comp=E,1μm,0.9s						
ECBX	**El Chinero**	**1.04**	**325**	*e*P	**Pn**	**11 05 59.2**	**-0.9**
ECBX				*e*S	**Sn**	**11 06 14.4**	**+1.0**
SPIG	**San Pedro Mart**	**1.05**	**294**	*e*P	Pn	11 06 00.9	+0.4
SPIG				*i* S	**Sb**	**11 06 16.7**	**+1.5**
SPIG	**San Pedro Mart**	**1.05**	**294**	*e*P	Pn	11 06 00.9	+0.4
SPIG				*e*S	**Sb**	**11 06 17.0**	**+1.8**
LAPR	**La Primavera**	**1.76**	**93**	*e*P	Pn	11 06 11.4	+1.5
LAPR				*e*S	**Sn**	**11 06 33.3**	**+2.1**
LAPR	**La Primavera**	**1.76**	**93**	*e*P	**Sn**	11 06 10.2	+0.2
LAPR				*e*S	**Sn**	**11 06 33.0**	**+1.8**
BAHB	**Baha de los**	**1.81**	**157**	*e*P	**Pn**	**11 06 10.7**	**+0.1**
BAHB				*i* S	**Sn**	**11 06 30.5**	**-1.8**
214A	**Organ Pipe Nat**	**1.88**	**44**	*e*P	**Pn**	**11 06 10.0**	**-1.6**
CPBX	**Cerro Prieto**	**1.97**	**336**	⇓*e*		11 07 28.4	
CPBX				IAML		11 07 28.4	
	comp=N,759nm,0.7s						
CPBX				IAML		11 07 32.2	
	comp=E,830nm,0.8s						
CPBX				⇑*e*		11 07 32.2	

*IDC **19** 11:20:24.2±0.9, 20.˚10S×168.˚85E, h0km, mb4.0/9, mbtmp4.0/11, ML3.7/2, Error ellipse: s-maj=32.3km s-min=21.9km az=135.0*
*NEIC **19** 11:20:25.1±1.5, 20.˚4S±0.˚1×169.˚1E±0.˚1, h10km±1km, mb4.5/18, Error ellipse: s-maj=20.5km s-min=19.4km az=154.0*
ISC 19 11:20:25.0±0.5, **20.˚33S**±0.˚10×**168.˚99E**±0.˚08, **h10**km, **n40**, σ1§**37**/40, **mb4.4**/15, **Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.94**	**233**	Pn	**Pn**	**11 21 11.7**	**-0.2**
	20nm,0.3s,baz=69,slow=18,SNR=25						
DZM				Sn	**Sn**	**11 21 42.6**	**-4.8**
	63nm,0.3s,baz=50,slow=18,SNR=8.7						
	81nm,0.4s						
MSVF	**Nonsavu**	**8.95**	**75**	Pn	Pn	11 22 44.0	+10
	0.6nm,0.3s,baz=226,slow=12,SNR=5.5						
MSVF	**Nonsavu**	**8.95**	**75**	Pn	**Pn**	**11 22 31.9**	**-2.6**
URZ	**Urewera**	**19.21**	**160**	P	**Pn**	**11 24 53.3**	**+3.3**
	0.1nm,0.3s,baz=127,slow=20,SNR=2.8						
	10nm,1.1s						
URZ	**Urewera**	**19.21**	**160**	P	**P**	**11 24 47.4**	**-1.7**
URZ				IAmb	IAmb	11 24 47.6	
	comp=Z,33nm,1.5s						
CTA	**Charters Tower**	**21.34**	**267**	P	**P**	**11 25 15.4**	**+3.0**
	comp=Z,8.0nm,1.1s,baz=86,slow=9.8,SNR=6.0						
CTAO	**Charters Tower**	**21.34**	**267**	P	**P**	**11 25 13.9**	**+1.4**
CTAO				IAmb	IAmb	11 25 41.7	
	comp=Z,46nm,1.4s						
STKA	**Stephens Creek**	**27.08**	**239**	P	**P**	**11 26 09.9**	**+2.0**
	comp=Z,1.6nm,0.8s,baz=97,slow=13,SNR=2.8						
	comp=Z,1.6nm,0.8s						
STKA	**Stephens Creek**	**27.08**	**239**	P	**P**	**11 26 07.3**	**-0.6**
BBOO	**Buckleboo**	**31.84**	**240**	P	**P**	**11 26 50.8**	**+0.6**
BBOO				IAmb	IAmb	11 27 17.2	
	comp=Z,12nm,1.2s						
WR0	**Warramunga Arr**	**32.31**	**265**	P	**P**	**11 26 54.3**	**-0.2**
WR0				IAmb	IAmb	11 27 00.1	
	comp=Z,8.0nm,1.1s						
WB0	**Warramunga Arr**	**32.47**	**265**	P	**P**	**11 26 55.5**	**-0.4**
WB2	**Warramunga Arr**	**32.49**	**265**	P	**P**	**11 26 55.1**	**-1.0**
WRAB	**Tennant Creek**	**32.49**	**265**	P	**P**	**11 26 55.9**	**-0.2**
WRAB				IAmb	IAmb	11 27 01.3	
	comp=Z,7.3nm,1.4s						
WRA	**Warramunga Arr**	**32.50**	**265**	P	**P**	**11 26 55.2**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=89,slow=8.6,SNR=16						
WRA				PcP	**PcP**	**11 29 43.4**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=105,slow=3.1,SNR=2.9						
	comp=Z,0.5nm,0.5s						
WRA	**Warramunga Arr**	**32.50**	**265**	P	**P**	**11 26 56.1**	**-0.1**
AS31	**Alice Springs**	**32.65**	**258**	P	**P**	**11 26 57.7**	**+0.2**
ASAR	**Alice Springs**	**32.65**	**258**	P	**P**	**11 26 57.4**	**-0.1**
KNRA	**Kununurra**	**38.47**	**270**	P	**P**	**11 27 47.9**	**+0.4**
KNRA				IAmb	IAmb	11 27 52.3	
	comp=Z,13nm,1.1s						
NWAO	**Narrogin (SRO)**	**47.52**	**244**	P	**P**	**11 29 00.2**	**-0.4**
QSPA	**South Pole Qui**	**69.73**	**180**	P	**P**	**11 31 35.0**	**0.0**
PEA0B	**Petropavlovsk-**	**73.78**	**353**	P	**P**	**11 32 00.1**	**+0.9**
PETK	**Petropavlovsk-**	**73.78**	**353**	P	**P**	**11 31 59.2**	**-0.1**
	comp=Z,3.6nm,0.9s,baz=148,slow=11,SNR=4.4						
	comp=Z,3.6nm,0.9s						
PETK	**Petropavlovsk-**	**73.78**	**353**	P	**P**	**11 31 59.5**	**+0.2**
KLR	**Kul'dur**	**76.76**	**336**	P	**P**	**11 32 16.6**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=126,slow=5.8,SNR=3.9						
	comp=Z,1.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**78.74**	**295**	P	**P**	**11 32 28.3**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=122,slow=3.4,SNR=4.9						
	comp=Z,0.4nm,0.3s						
CMAR	**Chiang Mai Arr**	**78.74**	**295**	P	**P**	**11 32 29.1**	**+0.9**
BELA	**Belgrano 2**	**81.04**	**175**	P	**P**	**11 32 40.9**	**+1.2**
BELA				IAmb	IAmb	11 32 52.6	
	comp=Z,6.6nm,1.3s						
TROLL	**Troll, Antarti**	**87.44**	**184**	P	**P**	**11 33 13.3**	**+0.8**
SONM	**Songino Array**	**87.94**	**323**	P	**P**	**11 33 14.1**	**-1.1**
	comp=Z,2.2nm,0.9s,baz=130,slow=4.9,SNR=9.2						
	comp=Z,2.2nm,0.9s						
SONM	**Songino Array**	**87.94**	**323**	P	**P**	**11 33 14.2**	**-1.0**
SONM				IAmb	IAmb	11 33 17.1	
	comp=Z,2.8nm,1.0s						
SNAA	**Sanae**	**88.07**	**183**	P	**P**	**11 33 16.6**	**+1.2**
SNAA				IAmb	IAmb	11 33 32.3	
	comp=Z,2.0nm,1.1s						
VNA3	**Neumayer Olymp**	**88.67**	**180**	P	**P**	**11 33 18.4**	**+0.2**
NVAR	**Mina Array Bea**	**89.69**	**49**	P	**P**	**11 33 24.1**	**+0.3**
	comp=Z,0.8nm,1.0s,baz=227,slow=7.6,SNR=4.8						
	comp=Z,0.8nm,1.0s						
NVAR	**Mina Array Bea**	**89.69**	**49**	P	**P**	**11 33 23.3**	**-0.5**
ILAR	**Eielson Array**	**91.33**	**17**	P	**P**	**11 33 30.1**	**-0.3**
	comp=Z,0.2nm,0.6s,baz=230,slow=5.6,SNR=5.4						
	comp=Z,0.2nm,0.6s						
TXAR	**Lajitas Array**	**97.49**	**62**	P	Pdif	11 33 59.6	-0.2
	comp=Z,0.3nm,0.9s,baz=248,slow=4.8,SNR=2.2						
	comp=Z,0.3nm,0.9s						
IDI	**Anoyia**	**145.13**	**303**	PKP	**PKPbc**	**11 40 02.7**	**-0.1**
	comp=Z,3.3nm,0.6s,baz=127,slow=5.1,SNR=8.2						
KHC	**Kasperske Hory**	**145.18**	**331**	*e*PKP	**PKPdf**	**11 40 03.3**	**+0.4**
GERES	**GERESS Array B**	**145.33**	**331**	PKPbc	**PKPdf**	**11 40 03.4**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=38,slow=5.0,SNR=8.0						

*NNC **19** 11:22:18.5±10.0, 37.˚20N×71.˚22E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=79.2km s-min=77.1km az=162.0*
*IDC **19** 11:22:20.2±2.1, 40.˚49N×67.˚29E, h0km, mb3.5/1, mbtmp3.6/4, ML3.5/3, Error ellipse: s-maj=102.3km s-min=19.8km az=159.0*
ISC 19 11:22:20.4±3.2, **37.˚1N**±0.˚2×**71.˚5E**±0.˚2, **h200**km, **n14**, σ2§**59**/17, **2C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**5.33**	**18**	P	**Pn**	**11 23 39.9**	**+0.6**
	SNR=7.9						
UCH	**Uchtor**	**5.64**	**23**	P	**Pn**	**11 23 43.7**	**+0.2**
	SNR=17						
EKS2	**Erkin-Say**	**5.85**	**17**	P	**Pn**	**11 23 46.8**	**+1.0**
	SNR=8.2						
AAK	**Ala-Archa**	**6.01**	**21**	P	**Pn**	**11 23 48.9**	**+1.0**
	SNR=8.9						
AAK	**Ala-Archa**	**6.01**	**21**	Pn	**Pn**	**11 23 48.7**	**+0.8**
	6.0nm,0.3s,baz=198,slow=6.4,SNR=14						
AAK				Sn	**Sn**	**11 24 51.6**	**-5.6**
	2.2nm,0.3s,baz=181,slow=14,SNR=15						
	14nm,0.3s						

KK31	**Karatay Array**	**6.07**	**353**	⇓P	**Pn**	**11 23 50.8**	**+2.2**
	2.9nm,0.3s,baz=161,slow=11,SNR=120						
KK31				⇑S	**Sn**	**11 24 55.7**	**-2.7**
	5.1nm,0.4s,baz=166,slow=15,SNR=13						
ULHL	**Ulahol**	**6.32**	**34**	P	**Pn**	**11 23 51.1**	**-0.9**
	SNR=7.4						
CHMS	**Chumysh**	**6.42**	**22**	⇓P	**Pn**	**11 23 51.8**	**-1.2**
	11nm,0.9s						
CHMS				⇓S	**Sn**	**11 25 09.4**	**+2.9**
	13nm,0.9s						
USP	**Ospenovka**	**6.59**	**19**	P	**Pn**	**11 23 56.9**	**+1.5**
	SNR=5.8						
TKM2	**Tokmak 2**	**6.63**	**27**	P	**Pn**	**11 23 56.2**	**+0.2**
	SNR=7.6						
TKM2	**Tokmak 2**	**6.63**	**27**	⇓P	**Pn**	**11 23 55.7**	**-0.3**
	9.8nm,1.0s						
TKM2				⇑S	**Sn**	**11 25 16.6**	**+4.9**
	4.1nm,0.8s						
MKAR	**Makanchi Array**	**12.59**	**36**	Pn	**P**	**11 25 17.6**	**+1.2**
	0.1nm,0.3s,baz=250,slow=12,SNR=1.7						
	0.2nm,0.4s						
ZALV	**Zalesovo Beam**	**19.22**	**24**	P	**Pn**	**11 26 29.6**	**-2.9**
	0.5nm,0.3s,baz=234,slow=11,SNR=7.0						
	1.5nm,0.5s						
TORD	**Torodi Ar. Bea**	**66.14**	**269**	P	P	11 32 49.5	+2.8
	0.2nm,0.5s,baz=32,slow=6.0,SNR=4.5						
	0.2nm,0.5s						

IDC 19 11:36:48.8±5.5, **9.˚47S**×**164.˚95E**, **h0**km, **mb3.7**/3, **mbtmp3.9**/4, **ML4.5**/1, **Error ellipse: s-maj=210.9km s-min=31.2km az=169.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.94**	**270**	Pn	Pn	11 38 05.6	+1.3
	19nm,0.3s,baz=182,slow=6.7,SNR=6.0						
HNR				Sn	Sn	11 39 03.3	+1.0
	11nm,0.3s,baz=203,slow=15,SNR=1.7						
	109nm,0.5s						
ILAR	**Eielson Array**	**82.28**	**19**	P	P	11 49 12.5	+0.6
	0.4nm,0.6s,baz=236,slow=5.1,SNR=9.4						
	0.4nm,0.6s						
NVAR	**Mina Array Bea**	**85.61**	**50**	P	P	11 49 29.8	0.0
	0.3nm,0.8s,baz=251,slow=7.5,SNR=2.3						
	0.3nm,0.8s						
MKAR	**Makanchi Array**	**91.84**	**317**	P	P	11 49 57.4	-1.6
	0.6nm,0.7s,baz=90,slow=6.1,SNR=2.7						
	0.6nm,0.7s						

*IDC **19** 11:37:35.2±1.7, 6.˚07S×152.˚21E, h0km, mb3.8/2, mbtmp3.9/3, ML2.0/1, Error ellipse: s-maj=39.2km s-min=14.0km az=101.0*
*NEIC **19** 11:37:39.8±1.9, 6.˚04S±0.˚09×152.˚3E±0.˚1, h19km±4km, mb4.3/13, Error ellipse: s-maj=17.5km s-min=10.1km az=129.0*
ISC 19 11:37:41.2±0.9, **6.˚02S**±0.˚10×**152.˚2E**±0.˚1, **h35**km, **n25**, σ1§**23**/28, **mb4.2**/9, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.71**	**355**	Pg	**Pn**	**11 38 08.3**	**-0.3**
	32nm,0.3s,baz=14,slow=1.6,SNR=29						
KRVT				Lg	Lg	11 38 30.6	
	52nm,0.3s,baz=237,slow=20,SNR=12						
RABL	**Rabaul**	**1.82**	**359**	Pn	**Pn**	**11 38 09.9**	**-0.2**
PMG	**Port Moresby**	**6.01**	**236**	Pn	**Pn**	**11 39 07.0**	**-0.7**
	2.3nm,0.3s,baz=54,slow=5.4,SNR=11						
PMG				Sn	**Sn**	**11 40 14.3**	**-1.1**
	0.8nm,0.3s,baz=151,slow=19,SNR=2.1						
	19nm,0.7s						
PMG	**Port Moresby**	**6.01**	**236**		**Pn**	**11 39 08.3**	**+0.5**
MANU	**Manus Island**	**6.23**	**309**	Pn	**Pn**	**11 39 11.8**	**+1.1**
MTN	**Manton Dam**	**21.84**	**250**	P	**P**	**11 42 28.4**	**-2.4**
MTN				IAmb	IAmb	11 42 30.3	
	comp=Z,23nm,1.4s						
WB0	**Warramunga Arr**	**22.05**	**230**	P	**P**	**11 42 34.3**	**+1.2**
WR0	**Warramunga Arr**	**22.05**	**229**	P	**P**	**11 42 34.2**	**+1.1**
WR0				IAmb	IAmb	11 43 01.9	
	comp=Z,6.6nm,1.1s						
WRAB	**Tennant Creek**	**22.18**	**230**	P	**P**	**11 42 34.9**	**+0.4**
WRAB				IAmb	IAmb	11 43 02.6	
	comp=Z,12nm,1.4s						
WB2	**Warramunga Arr**	**22.18**	**230**	P	**P**	**11 42 34.4**	**-0.2**
WB2				IAmb	IAmb	11 43 03.4	
	comp=Z,10nm,1.2s						
WRA	**Warramunga Arr**	**22.19**	**230**	P	**P**	**11 42 33.1**	**-1.6**
	comp=Z,2.3nm,0.8s,baz=55,slow=10,SNR=16						
	comp=Z,2.3nm,0.8s						
WRA	**Warramunga Arr**	**22.19**	**230**	P	**P**	**11 42 34.0**	**-0.6**
AS31	**Alice Springs**	**24.84**	**223**	P	**P**	**11 43 01.7**	**+1.1**
ASAR	**Alice Springs**	**24.84**	**223**	P	**P**	**11 43 01.5**	**+0.8**
KNRA	**Kununurra**	**24.90**	**245**	P	**P**	**11 42 59.5**	**-1.7**
MBWA	**Marble Bar**	**34.85**	**241**	P	**P**	**11 44 31.4**	**+2.1**
IL31		**83.51**	**22**	P	**P**	**11 50 04.4**	**-0.8**
IL31				IAmb	IAmb	11 50 08.9	
	comp=Z,5.3nm,1.4s						
ILAR	**Eielson Array**	**83.51**	**22**	P	**P**	**11 50 05.1**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=241,slow=5.4,SNR=9.9						
	comp=Z,0.7nm,0.7s						
ILAR	**Eielson Array**	**83.51**	**22**	P	**P**	**11 50 05.9**	**+0.6**
QSPA	**South Pole Qui**	**83.94**	**180**	P	**P**	**11 50 08.5**	**+0.9**
J25K	**Salcha River,**	**84.01**	**23**	P	**P**	**11 50 08.4**	**+0.6**
J25K				IAmb	IAmb	11 50 10.1	
	comp=Z,2.2nm,0.8s						
BMAR	**Burnt Mountain**	**85.60**	**20**	P	**P**	**11 50 17.7**	**+1.9**
M30M	**Minto, Yukon**	**86.71**	**26**	P	**P**	**11 50 20.4**	**-0.9**
M30M				IAmb	IAmb	11 50 21.6	
	comp=Z,1.0nm,0.8s						
TORD	**Torodi Ar. Bea**	**150.08**	**286**	PKPbc	**PKPbc**	**11 57 27.8**	**-1.6**
	comp=Z,0.7nm,0.9s,baz=94,slow=3.9,SNR=3.5						
TORD	**Torodi Ar. Bea**	**150.08**	**286**	PKPdf	**PKPdf**	**11 57 22.3**	**-2.0**
TORD					**PKPbc**	**11 57 29.0**	**-0.4**
TORD				PKPab	**pPKPdf**	**11 57 34.0**	**+0.7**

*RSNC **19** 11:39:13.9±0.9, 6.˚82N×73.˚14W, h154km±3km, ML3.6*
*IDC **19** 11:39:14.4±4.2, 6.˚82N×73.˚42W, h160km±39km, mb3.2/6, mbtmp3.7/7, Error ellipse: s-maj=73.1km s-min=25.6km az=66.0*
ISC 19 11:39:12.8±0.8, **6.˚83N**±0.˚03×**73.˚14W**±0.˚04, **h156**km±6km, **n50**, σ1§**54**/85, **mb3.3**/6, **6C-4D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.23**	**190**	⇓*i*P	**Pn**	**11 39 34.5**	**+0.2**
BARC				*i*		11 39 51.1	
	comp=Z,2μm,0.2s						
BRRC	**Barranca, Sant**	**0.63**	**296**	⇑*i*P	**Pn**	**11 39 36.3**	**+0.8**
BRRC				*e*S	**Sn**	**11 39 53.5**	**+0.6**
BRRC				*i*		11 39 57.4	
	comp=Z,1μm,0.3s						
PAMC	**Pamplona, Colo**	**0.67**	**40**	⇑*i*P	**Pn**	**11 39 37.3**	**+0.9**
PAMC				*e*S	**Sn**	**11 39 54.5**	**+0.2**
PAMC				*i*		11 39 57.8	
	comp=Z,551nm,0.5s						
RUSC	**La Rusia**	**0.93**	**177**	⇓*i*P	**Pn**	**11 39 38.5**	**+0.3**
RUSC				*e*S	**Sn**	**11 39 57.2**	**-0.4**
RUSC				*i*		11 39 58.6	
	comp=Z,473nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.34**	**258**	*e*P	**Pn**	**11 39 40.8**	**-0.4**
PTBC				*e*S	**Sn**	**11 40 03.1**	**+0.1**
PTBC				*i*		11 40 08.9	
	comp=Z,546nm,0.3s						
TAMC	**Tame, Arauca**	**1.39**	**106**	⇑*i*P	**Pn**	**11 39 42.9**	**+1.1**
TAMC				*i*		11 40 03.8	
	comp=Z,311nm,0.3s						
TAMC				*e*S	**Sn**	**11 40 04.5**	**+0.5**
OCAC	**Ocana**	**1.42**	**353**	⇑*e*P	**Pn**	**11 39 42.5**	**+0.4**
OCAC				*e*S	**Sn**	**11 40 05.6**	**+0.9**
OCAC				*i*		11 40 08.1	
	comp=Z,1μm,0.2s						
SPBC	**San Pablo de B**	**1.49**	**219**	*e*P	**Pn**	**11 39 43.4**	**+0.5**
SPBC				*e*S	**Sn**	**11 40 05.8**	**0.0**
SPBC				*i*		11 40 10.3	
	comp=Z,934nm,0.1s						
ZARC	**Zaragoza, Cauc**	**1.83**	**291**	*e*P	**Pn**	**11 39 46.7**	**+0.3**
ZARC				*e*S	**Sn**	**11 40 12.5**	**+0.3**
ZARC				*i*		11 40 17.7	
	comp=Z,695nm,0.3s						
NORC	**Norcasia**	**2.13**	**234**	*e*P	**Pn**	**11 39 50.6**	**+0.7**
NORC				*e*S	**Sn**	**11 40 18.2**	**-0.2**
NORC				*i*		11 40 24.0	
	comp=Z,320nm,0.3s						

CHIC	**Chingaza**	**2.26**	**195**	*e*P	**Pn**	**11 39 52.4**	**+0.6**
CHIC				*e*S	**Sn**	**11 40 22.0**	**+0.2**
CHIC				*i*		11 40 25.8	
	comp=Z,316nm,0.5s						
ROSC	**El Rosal**	**2.30**	**211**	P	**Pn**	**11 39 54.2**	**+2.1**
	comp=Z,201nm,0.4s,baz=305,slow=21,SNR=239						
ROSC				S	**Sn**	**11 40 21.6**	**-0.9**
	comp=Z,696nm,0.5s,baz=47,slow=18,SNR=8.2						
ROSC	**El Rosal**	**2.30**	**211**	*e*P	**Pn**	**11 39 54.3**	**+2.1**
ROSC				*e*S	**Sn**	**11 40 24.6**	**+2.1**
HELC	**Santa Helena**	**2.46**	**255**	*e*P	**Pn**	**11 39 54.9**	**+0.8**
HELC				*e*S	**Sn**	**11 40 26.8**	**+1.0**
HELC				*i*		11 40 32.5	
	comp=Z,244nm,0.3s						
UREC	**San Jos de Ur**	**2.55**	**291**	*e*P	**Pn**	**11 39 54.3**	**-0.5**
UREC				*e*S	**Sn**	**11 40 25.2**	**-2.1**
UREC				*i*		11 40 32.9	
	comp=Z,262nm,0.2s						
SOCV	**Socops**	**2.69**	**57**	*e*P	**Pn**	**11 39 57.1**	**+0.6**
GUY2C	**Guyana, Caldas**	**2.73**	**234**	*e*P	**Pn**	**11 39 58.4**	**+0.9**
GUY2C				*e*S	**Sn**	**11 40 32.0**	**0.0**
GUY2C				*i*		11 40 40.7	
	comp=Z,400nm,0.3s						
LL1C	**La Loma 1 Cana**	**2.73**	**351**	*e*P	**Pn**	**11 39 59.3**	**+2.2**
LL1C				*e*S	**Sn**	**11 40 35.0**	**+3.6**
PTGC	**Puerto Gaitan,**	**2.79**	**159**	⇓*e*P	**Pn**	**11 39 57.6**	**-0.4**
PTGC				*e*S	**Sn**	**11 40 31.2**	**-1.6**
PTGC				*i*		11 40 33.8	
	comp=Z,128nm,0.3s						
LL6C	**La Loma 6 Bece**	**2.89**	**357**	⇑*e*P	**Pn**	**11 39 59.0**	**-0.1**
LL6C				*e*S	**Sn**	**11 40 35.0**	**0.0**
LL6C				*i*		11 40 40.5	
	comp=Z,129nm,0.4s						
CBOC	**Ciudad Bolivar**	**3.01**	**252**	*e*P	**Pn**	**11 40 02.1**	**+1.3**
CBOC				*e*S	**Sn**	**11 40 39.7**	**+1.9**
CBOC				*i*		11 40 49.1	
	comp=Z,75nm,0.5s						
SDV	**Santo Domingo**	**3.22**	**50**	*e*P	**Pn**	**11 40 03.9**	**+0.5**
SDV				*e*S	**Sn**	**11 40 43.0**	**+0.4**
ANIL	**Santa Ana**	**3.23**	**224**	*e*P	**Pn**	**11 40 04.9**	**+1.2**
ANIL				*e*S	**Sn**	**11 40 46.1**	**+3.1**
PRAC	**Prado**	**3.55**	**209**	*e*P	**Pn**	**11 40 07.9**	**+0.5**
PRAC				*e*S	**Sn**	**11 40 49.7**	**-0.2**
ORTC	**Ortega, Tolima**	**3.58**	**216**	*e*P	**Pn**	**11 40 08.7**	**+0.9**
ORTC				*e*S	**Sn**	**11 40 52.1**	**+1.5**
ORTC				*i*		11 40 58.2	
	comp=Z,152nm,0.7s						
SJCC	**San Jacinto, C**	**3.66**	**327**	⇑*e*P	**Pn**	**11 40 08.7**	**-0.2**
SJCC				*e*S	**Sn**	**11 40 49.8**	**-2.7**
SJCC				*i*		11 41 04.1	
	comp=Z,112nm,0.8s						
PLMC	**San Jos del P**	**3.66**	**239**	*e*P	**Pn**	**11 40 09.9**	**+0.9**
PLMC				*e*S	**Sn**	**11 40 52.4**	**-0.2**
PLMC				*i*		11 40 56.3	
	comp=Z,60nm,0.2s						
LCBC	**Los crdobas,**	**3.78**	**302**	*e*S	**Sn**	**11 40 57.3**	**+2.1**
CRJC	**Cerrejon, Guaj**	**4.18**	**3**	*e*P	**Pn**	**11 40 14.7**	**-0.9**
CRJC				*e*S	**Sn**	**11 41 02.5**	**-2.1**
CRJC				*i*		11 41 10.0	
	comp=Z,152nm,0.2s						
YOTC	**Yotoco, Valle**	**4.26**	**229**	⇓*e*P	**Pn**	**11 40 17.0**	**+0.2**
GUVC	**San Jose del G**	**4.28**	**173**	*e*P	**Pn**	**11 40 17.2**	**+0.2**
GUVC				*e*S	**Sn**	**11 41 03.5**	**-3.5**
GUVC				*i*		11 41 13.2	
	comp=Z,124nm,0.3s						
SMRC	**Santa Marta, M**	**4.44**	**346**	*e*P	**Pn**	**11 40 19.2**	**+0.1**
SMRC				*e*S	**Sn**	**11 41 08.1**	**-2.6**
SMRC				*i*		11 41 14.3	
	comp=Z,54nm,0.3s						
CAPC	**Capurgana**	**4.54**	**294**	*e*S	**Sn**	**11 41 11.3**	**-1.8**
CAPC				*i*		11 41 14.2	
	comp=Z,46nm,0.1s						
MACC	**Macarena, Meta**	**4.70**	**189**	*e*P	**Pn**	**11 40 21.5**	**-1.1**
MACC				*e*S	**Sn**	**11 41 12.5**	**-4.4**
MACC				*i*		11 41 18.7	
	comp=Z,123nm,0.9s						
DABV	**Dabajuro**	**4.76**	**31**	*e*P	**Pn**	**11 40 23.4**	**+0.2**
DABV				*e*S	**Sn**	**11 41 18.7**	**+0.4**
MARP	**Paez Belalcaza**	**4.85**	**215**	*e*P	**Pn**	**11 40 26.2**	**+1.5**
MARP				*e*S	**Sn**	**11 41 19.9**	**-0.8**
URIC	**Uribia, Colomb**	**4.98**	**13**	*e*P	**Pn**	**11 40 24.6**	**-1.4**
URIC				*e*S	**Sn**	**11 41 20.7**	**-2.6**
URIC				*i*		11 41 23.5	
	comp=Z,20nm,0.5s						
MALC	**Bahia Malaga**	**5.03**	**236**	*e*P	**Pn**	**11 40 28.5**	**+1.8**
GARC	**Garzon, Huila**	**5.17**	**207**	*e*P	**Pn**	**11 40 28.5**	**-0.4**
GARC				*e*S	**Sn**	**11 41 26.1**	**-2.2**
GARC				*i*		11 41 31.0	
	comp=Z,70nm,0.5s						
PCON	**Cinco Dias**	**5.52**	**216**	*e*P	**Pn**	**11 40 35.7**	**+1.8**
PCON				*i*		11 42 14.8	
	comp=Z,23nm

AOPR	**Arecibo Observ**	**1.14 151**	⇑	*eP*	**Pn**	**11 46 03.2**	**-0.6**
AOPR	**Arecibo Observ**	**1.14 151**		*eS*	**Sb**	**11 46 18.4**	**0.0**
AOPR	**Arecibo Observ**	**1.14 151**			**Pn**	**11 46 03.2**	**-0.6**
AOPR					**Sb**	**11 46 18.4**	**0.0**
AOPR	**Arecibo Observ**	**1.14 151**		IAML		11 46 22.1	
	comp=N,330nm,0.3s						
PRSN	**Puerto Rico Se**	**1.15 171**			**Pb**	**11 46 04.7**	**+0.6**
LSP	**Las Mesas**	**1.20 169**	⇑	*eP*	**Pn**	**11 46 04.3**	**-0.2**
LSP	**Las Mesas**	**1.20 169**		*eS*	**Sn**	**11 46 20.4**	**+0.2**
CRPR	**Cabo Rojo, PR**	**1.36 171**	⇑	*eP*	**Pn**	**11 46 06.5**	**-0.2**
CRPR	**Cabo Rojo, PR**	**1.36 171**		*eS*	**Sn**	**11 46 24.4**	**+0.4**
CRPR	**Cabo Rojo, PR**	**1.36 171**			**Pn**	**11 46 06.5**	**-0.2**
CRPR					**Sn**	**11 46 24.4**	**+0.4**
CRPR	**Cabo Rojo, PR**	**1.36 171**		IAML		11 46 32.6	
	comp=N,134nm,0.8s						
CRPR	**Cabo Rojo, PR**	**1.36 171**		*i* P	**Pn**	**11 46 06.6**	**-0.2**
CRPR				*eS*	**Sn**	**11 46 23.6**	**-0.5**
CRPR				IAML		11 46 27.3	
	comp=Z,91nm,0.2s						
MLPR	**Magueyes Islan**	**1.40 169**	⇑	*eP*	**Pn**	**11 46 07.2**	**-0.1**
MLPR	**Magueyes Islan**	**1.40 169**		*eS*	**Sn**	**11 46 25.3**	**+0.1**
MLPR	**Magueyes Islan**	**1.40 169**			**Pn**	**11 46 07.2**	**-0.1**
MLPR					**Sn**	**11 46 25.3**	**+0.1**
MLPR	**Magueyes Islan**	**1.40 169**		IAML		11 46 31.9	
	comp=E,74nm,0.2s						
GBPR	**Guanica, Bosqu**	**1.44 163**	⇑	*eP*	**Pn**	**11 46 08.1**	**+0.3**
GBPR	**Guanica, Bosqu**	**1.44 163**		*eS*	**Sn**	**11 46 25.9**	**-0.1**
CELP	**Cerrillos**	**1.46 151**	⇑	*eP*	**Pn**	**11 46 08.5**	**+0.4**
CELP	**Cerrillos**	**1.46 151**		*eS*	**Sn**	**11 46 26.9**	**+0.3**
CELP	**Cerrillos**	**1.46 151**			**Pn**	**11 46 08.5**	**+0.4**
CELP					**Sn**	**11 46 26.9**	**+0.3**
CELP	**Cerrillos**	**1.46 151**		IAML		11 46 28.0	
	comp=N,110nm,0.6s						
CELP				IAML		11 46 28.6	
	comp=E,125nm,0.3s						
OBIP	**Obispado Ponce**	**1.47 152**	⇓	*eP*	**Pn**	**11 46 08.5**	**+0.2**
OBIP	**Obispado Ponce**	**1.47 152**		*eS*	**Sn**	**11 46 26.6**	**-0.3**
OBIP	**Obispado Ponce**	**1.47 152**			**Pn**	**11 46 08.5**	**+0.2**
OBIP					**Sn**	**11 46 26.6**	**-0.3**
OBIP	**Obispado Ponce**	**1.47 152**		IAML		11 46 32.0	
	comp=N,100nm,0.5s						
GCPR	**Guaynabo City**	**1.57 131**			**Pn**	**11 46 09.6**	**-0.1**
SJG	**San Juan**	**1.67 138**			**Pb**	**11 46 12.2**	**-0.7**
SJG				IAML		11 46 46.7	
	comp=N,86nm,0.2s						
SJG				IAML		11 46 51.0	
	comp=N,76nm,0.4s						
CBYP	**Canovanas**	**1.76 127**			**Pn**	**11 46 12.2**	**-0.2**
IGPR	**InterUniversit**	**1.80 140**	⇑	*eP*	**Pn**	**11 46 13.2**	**+0.4**
IGPR	**InterUniversit**	**1.80 140**		*eS*	**Sn**	**11 46 35.0**	**-0.1**
IGPR	**InterUniversit**	**1.80 140**			**Sn**	**11 46 35.0**	**-0.1**
PDPR	**Patillas Dam,**	**1.82 137**			**Pn**	**11 46 13.2**	**+0.2**
HUMP	**Col San Antoni**	**1.85 130**	⇓	*eP*	**Pn**	**11 46 13.4**	**-0.1**
HUMP	**Col San Antoni**	**1.85 130**		*eS*	**Sn**	**11 46 36.4**	**+0.2**
HUMP	**Col San Antoni**	**1.85 130**			**Pn**	**11 46 13.4**	**-0.1**
HUMP					**Sn**	**11 46 36.4**	**+0.2**
HUMP	**Col San Antoni**	**1.85 130**		IAML		11 46 38.0	
	comp=N,67nm,0.3s						
DR12	**Loma Pena Alta**	**2.02 254**			**Pn**	**11 46 15.8**	**-0.1**
CUPR	**Culebra, Puert**	**2.20 118**	⇓	*eP*	**Pn**	**11 46 18.2**	**-0.1**
CUPR	**Culebra, Puert**	**2.20 118**		*eS*	**Sn**	**11 46 45.9**	**+1.0**
CUPR	**Culebra, Puert**	**2.20 118**			**Pn**	**11 46 18.2**	**-0.1**
CUPR					**Sn**	**11 46 45.9**	**+1.0**
STVI	**Saint Thomas**	**2.46 114**		Pn	**Pn**	**11 46 22.5**	**+0.7**
STVI				IAML		11 47 00.5	
	comp=N,36nm,0.2s						
SJVI	**Gifft Hill Sch**	**2.63 112**	⇑	*eP*	**Pn**	**11 46 23.8**	**-0.4**
SJVI	**Gifft Hill Sch**	**2.63 112**		*eS*	**Sn**	**11 46 55.2**	**-0.2**
SJVI	**Gifft Hill Sch**	**2.63 112**			**Pn**	**11 46 23.8**	**-0.4**
SJVI					**Sn**	**11 46 55.2**	**-0.2**
BANI	**BANI**	**3.02 252**		Pn	**Pn**	**11 46 29.4**	**-0.3**
SDDR	**Presa de Saban**	**3.76 265**		Pn	**Pn**	**11 46 40.1**	**+0.3**
SDDR				IAML		11 47 25.6	
	comp=N,23nm,0.8s						
SDDR				IAML		11 47 55.5	
	comp=N,23nm,0.9s						

JMA ***19*** *11:50:51.4±0.7, 44°N±3°×15°0E±°, h30km, MV3.8/15, SE OFF ETOROFU*
SKHL ***19*** *11:50:52.6±0.1, 44°.20N×149°.70E, h54km±4km, mb4.3/3*
ISC 19 11:50:49.2±3.9**, 44°.00N**±0°.10×**149°.9E**±0°.2**, h50km, n17, σ2s22/28, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
KUR	**Kuril'sk**	**1.89**	**311**	*eP*		**Pn**	**11 51 18.8**	**-0.2**
KUR					AMB	AMB	11 51 21.1	
	200nm,0.4s							
KUR				*eS*		**Sn**	**11 51 38.5**	**-3.1**
KUR				A		A	11 51 42.3	
	420nm,0.5s							
KUR				A		A	11 51 42.3	
	280nm,0.5s							
SHO	**Shikotan**	**2.20**	**268**	*eP*		**Pn**	**11 51 24.6**	**+1.3**
SHO					AMB	AMB	11 51 25.7	
	40nm,0.3s							
SHO				*eS*		**Sn**	**11 51 48.5**	**-0.8**
SHO				A		A	11 51 50.2	
	80nm,0.3s							
SHO				A		A	11 51 50.2	
	180nm,0.3s							
YUK	**Yuzh-Kuril'sk**	**2.90**	**272**	*eP*		**Pn**	**11 51 34.4**	**+1.7**
YUK					AMB	AMB	11 51 34.9	
	30nm,0.3s							
YUK				*eS*		**Sn**	**11 52 05.7**	**-0.6**
YUK				A		A	11 52 14.4	
	110nm,0.5s							
YUK				A		A	11 52 14.4	
	70nm,0.5s							
NEM2	**Nemuro 2**	**3.06**	**259**	*eP*		**Pn**	**11 51 36.1**	**+1.0**
NEM2				*eS*		**Sn**	**11 52 08.9**	**-1.6**
NMR	**Nemuro--Hokkai**	**3.07**	**260**	*eP*		**Pn**	**11 51 36.1**	**+0.9**
NMR				*eS*		**Sn**	**11 52 08.9**	**-1.8**
JRA	**Rausu**	**3.43**	**271**	*eP*		**Pn**	**11 51 42.3**	**+2.2**
JNK	**Nakash**	**3.76**	**265**	*eP*		**Pn**	**11 51 46.2**	**+1.6**
JNK				*eS*		**Sn**	**11 52 26.7**	**-0.8**
AKK	**Akkeshi**	**3.79**	**257**	*eP*		**Pn**	**11 51 46.6**	**+1.6**
AKK				*eS*		**Sn**	**11 52 26.9**	**-1.4**
JAK	**Akkeshi**	**3.90**	**257**	*eP*		**Pn**	**11 51 47.8**	**+1.3**
JAK				*eS*		**Sn**	**11 52 30.0**	**-1.0**
JTKR	**Abashiri--Toko**	**4.31**	**272**	*eP*		**Pn**	**11 51 54.4**	**+2.3**
JAR	**Ashorobuto**	**4.49**	**263**	*eP*		**Pn**	**11 51 57.0**	**+2.5**
JAR				*eS*		**Sn**	**11 52 45.4**	**-0.1**
JOB	**Onbets**	**4.53**	**258**	*eP*		**Pn**	**11 51 57.5**	**+2.2**
JOB				*eS*		**Sn**	**11 52 46.0**	**-0.6**
JCH	**Churui**	**4.95**	**256**	*eP*		**Pn**	**11 52 03.1**	**+2.2**
JCH				*eS*		**Sn**	**11 52 56.4**	**-0.5**
JKK2	**Kamakawa 2**	**5.15**	**271**	*eP*		**Pn**	**11 52 06.9**	**+3.2**
JNBK	**Urakawa-nobuka**	**5.49**	**254**	*eP*		**Pn**	**11 52 10.5**	**+2.2**
JANG	**Nango**	**7.19**	**243**	*eS*		**Sn**	**11 53 46.8**	**-5.1**
JTH	**Tanohata**	**7.22**	**239**	*eS*		**Sn**	**11 53 48.0**	**-4.7**

IDC ***19*** *11:52:55.4±3.8, 43°.81N×149°.11E, h0km, mb3.7/8, mbtmp3.7/8, MS3.5/1, Error ellipse: s-maj=104.4km s-min=28.1km az=173.0*
JMA ***19*** *11:53:01.2±0.5, 44°N±2°×15°0E±°, h30km, MV3.8/14, SE OFF ETOROFU*
SKHL ***19*** *11:53:01.4±0.5, 44°.10N×149°.70E, h48km±6km, mb4.5/4*
ISC 19 11:53:03.5±2.6**, 44°.07N**±0°.09×**149°.4E**±0°.1**, h53km±22km, n33, σ1s68/40, mb3.6/8, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
KUR	**Kuril'sk**	**1.62**	**317**	*i* P		**Pn**	**11 53 27.6**	**-2.0**
KUR					AMB	AMB	11 53 28.8	
	170nm,0.4s							
KUR				*eS*		**Sn**	**11 53 47.5**	**-1.8**
KUR				A		A	11 53 51.7	
	520nm,0.5s							
KUR				A		A	11 53 51.7	
	440nm,0.5s							
SHO	**Shikotan**	**1.90**	**265**	*eP*		**Pn**	**11 53 32.8**	**-0.6**
SHO					AMB	AMB	11 53 34.8	
	60nm,0.3s							
SHO				*eS*		**Sn**	**11 53 56.5**	**+0.4**
SHO				A		A	11 53 58.8	
	180nm,0.2s							
SHO				A		A	11 53 58.8	
	120nm,0.2s							
YUK	**Yuzh-Kuril'sk**	**2.58**	**270**	*eP*		**Pn**	**11 53 43.0**	**+0.2**
YUK					AMB	AMB	11 53 47.2	
	70nm,0.3s							
YUK				*i* S		**Sn**	**11 54 14.0**	**+1.1**
YUK				A		A	11 54 16.4	
	110nm,0.2s							
YUK				A		A	11 54 16.4	
	160nm,0.2s							
NEM2	**Nemuro 2**	**2.77**	**257**	*eP*		**Pn**	**11 53 45.2**	**-0.2**
NEM2				*eS*		**Sn**	**11 54 17.3**	**-0.3**
NMR	**Nemuro--Hokkai**	**2.78**	**257**	*eP*		**Pn**	**11 53 45.2**	**-0.3**
NMR				*eS*		**Sn**	**11 54 18.5**	**+0.7**
GLVR	**Golovnino**	**2.85**	**265**	*eP*		**Pn**	**11 53 46.9**	**+0.4**
GLVR					AMB	AMB	11 53 48.1	
	50nm,0.2s							
GLVR				*eS*		**Sn**	**11 54 21.1**	**+1.5**
GLVR				A		A	11 54 27.4	
	120nm,0.3s							
GLVR				A		A	11 54 27.4	
	270nm,0.3s							
JRA	**Rausu**	**3.12**	**269**	*eP*		**Pn**	**11 53 51.3**	**+1.2**
JRA				*eS*		**Sn**	**11 54 28.9**	**+2.8**
JNK	**Nakash**	**3.45**	**264**	*eP*		**Pn**	**11 53 55.2**	**+0.5**
JNK				*eS*		**Sn**	**11 54 35.8**	**+1.5**
AKK	**Akkeshi**	**3.50**	**254**	*eP*		**Pn**	**11 53 56.0**	**+0.6**
AKK				*eS*		**Sn**	**11 54 36.4**	**+0.8**
JAK	**Akkeshi**	**3.61**	**254**	*eP*		**Pn**	**11 53 57.0**	**+0.1**
JAK				*eS*		**Sn**	**11 54 38.2**	**0.0**
JTKR	**Abashiri--Toko**	**3.99**	**270**	*eP*		**Pn**	**11 54 03.5**	**+1.4**
JAR	**Ashorobuto**	**4.19**	**261**	*eP*		**Pn**	**11 54 06.3**	**+1.6**
JAR				*eS*		**Sn**	**11 54 54.5**	**+2.1**
JOB	**Onbets**	**4.24**	**256**	*eP*		**Pn**	**11 54 06.4**	**+0.8**
JOB				*eS*		**Sn**	**11 54 54.3**	**+0.5**
JCH	**Churui**	**4.67**	**254**	*eP*		**Pn**	**11 54 12.0**	**+0.6**
JCH				*eS*		**Sn**	**11 55 04.4**	**+0.2**
JNBK	**Urakawa-nobuka**	**5.21**	**252**	*eP*		**Pn**	**11 54 19.6**	**+0.8**
JNBK				*eS*		**Sn**	**11 55 17.8**	**+0.3**
JANG	**Nango**	**6.95**	**241**	*eS*		**Sn**	**11 55 55.9**	**-4.3**
JTH	**Tanohata**	**6.99**	**236**	*eS*		**Sn**	**11 55 56.5**	**-4.8**
JCJ	**Chichijima**	**17.92**	**201**	LR		LR	12 03 35.7	
	comp=Z,159nm,18.1s,baz=336,slow=36							
H11N2	**WAKE ISLAND Hy**	**28.31**	**143**	T		T	12 27 50.2	
	baz=334,slow=75							
H11N1	**WAKE ISLAND Hy**	**28.33**	**143**	T		T	12 27 47.0	
	baz=334,slow=75							
H11N3	**WAKE ISLAND Hy**	**28.33**	**143**	T		T	12 27 49.4	
	baz=334,slow=75							
H11S1	**WAKE ISLAND Hy**	**29.32**	**145**	T		T	12 29 02.5	
	baz=335,slow=76							
H11S3	**WAKE ISLAND Hy**	**29.33**	**145**	T		T	12 28 59.9	
	baz=335,slow=76							
H11S2	**WAKE ISLAND Hy**	**29.34**	**145**	T		T	12 29 04.7	
	baz=335,slow=76							
SONM	**Songino Array**	**29.88**	**293**	P		**P**	**11 59 04.5**	**-1.5**
	0.3nm,0.3s,baz=88,slow=10,SNR=3.7 0.3nm,0.3s							
ILAR	**Eielson Array**	**40.25**	**36**	P		**P**	**12 00 38.2**	**+3.5**
	0.3nm,0.9s,baz=271,slow=7.0,SNR=2.7 0.3nm,0.9s							
INK	**Inuvik**	**45.29**	**31**	P		**P**	**12 01 17.4**	**+1.9**
	1.5nm,0.9s,baz=291,slow=15,SNR=1.7 1.5nm,0.9s							
MKAR	**Makanchi Array**	**45.90**	**298**	P		**P**	**12 01 20.2**	**-0.4**
	0.9nm,0.8s,baz=83,slow=8.1,SNR=5.9 0.9nm,0.8s							
FINES	**FINESS Array B**	**65.33**	**334**	P		**P**	**12 03 38.9**	**-0.7**
	2.8nm,1.0s,baz=43,slow=8.4,SNR=4.7 2.8nm,1.0s							
NB2	**NORSAR Subarra**	**69.89**	**340**	P		**P**	**12 04 08.9**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=28,slow=6.5							
NOA	**NORSAR Array B**	**69.89**	**340**	P		**P**	**12 04 08.1**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=28,slow=6.6,SNR=4.5 comp=Z,0.4nm,0.5s							
AKASG	**Malin Array Be**	**72.29**	**325**	P		**P**	**12 04 21.1**	**-2.0**
	comp=Z,0.3nm,0.4s,baz=24,slow=7.3,SNR=2.3 comp=Z,0.3nm,0.4s							
TXAR	**Lajitas Array**	**81.09**	**58**	P		**P**	**12 05 13.9**	**+0.7**
	comp=Z,0.2nm,0.6s,baz=325,slow=4.6,SNR=1.7 comp=Z,0.2nm,0.6s							

IDC ***19*** *11:55:20.1±0.6, 22°.69N×45°.06W, h0km, mb4.1/21, mbtmp4.1/21, MS4.3/5, Error ellipse: s-maj=16.9km s-min=13.6km az=148.0*
NEIC ***19*** *11:55:22.9±2.4, 22°.6N±0°.1×45°.00W±0°.05, h10km±1km, mb4.6/49, Error ellipse: s-maj=19.6km s-min=5.9km az=161.0*
ISC 19 11:55:22.2±0.4**, 22°.57N**±0°.08×**44°.98W**±0°.07**, h14km, n109, σ1s36/102, mb4.5/47, MS4.3/5, 1C, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
GDSD	**La Dsirade Is**	**16.39**	**251**	Pn		**Pn**	**11 59 12.0**	**+0.1**
HUMP	**Col San Antoni**	**20.05**	**261**	P		**P**	**11 59 54.5**	**-0.5**
SJG	**San Juan**	**20.33**	**261**	P		**P**	**11 59 58.1**	**0.0**
	5.4nm,0.7s,baz=8.1,slow=7.1,SNR=2.3							
SJG				LR		LR	12 07 13.1	
	comp=Z,1μm,18.4s,baz=86,slow=35 5.4nm,0.7s							
SJG	**San Juan**	**20.33**	**261**	P		Pn	11 59 60.0	-0.2
SJG					IAmb	IAmb	12 00 10.2	
	comp=Z,25nm,1.0s							
CELP	**Cerrillos**	**20.74**	**261**	P		Pn	12 00 04.1	-0.8
CELP					IAmb	IAmb	12 00 13.5	
	comp=Z,42nm,1.1s							
OBIP	**Obispado Ponce**	**20.77**	**261**	P		**P**	**12 00 03.2**	**+0.3**
OBIP					IAmb	IAmb	12 00 14.4	
	comp=Z,53nm,1.1s							
AOPR	**Arecibo Observ**	**20.82**	**262**	P		Pn	12 00 04.8	-1.1
AOPR					IAmb	IAmb	12 00 06.1	
	comp=Z,39nm,1.0s							
CRPR	**Cabo Rojo, PR**	**21.24**	**262**	P		**P**	**12 00 09.8**	**+1.8**
CRPR					IAmb	IAmb	12 00 11.6	
	comp=Z,65nm,1.6s							
DR12	**Loma Pena Alta**	**23.13**	**265**	P		**P**	**12 00 29.3**	**+1.1**
FRNY	**Flat Rock**	**32.27**	**320**	P		**P**	**12 01 51.4**	**+1.0**
FRNY					IAmb	IAmb	12 01 58.4	
	comp=Z,11nm,1.0s							
M53A	**WI Miller and**	**35.31**	**311**	P		**P**	**12 02 17.5**	**+0.6**
M53A					IAmb	IAmb	12 02 48.9	
	comp=Z,12nm,1.2s							
SAML	**Samuel**	**36.04**	**212**	P		**P**	**12 02 23.9**	**+0.6**
BDFB	**Brasilia**	**38.09**	**185**	P		**P**	**12 02 43.0**	**+2.2**
	comp=Z,2.8nm,0.9s,baz=15,slow=10.0,SNR=3.7 comp=Z,2.8nm,0.9s							
BDFB	**Brasilia**	**38.09**	**185**	P		**P**	**12 02 42.0**	**+1.2**
ESDC	**Sonseca Array**	**38.66**	**54**	P		**P**	**12 02 45.7**	**+0.3**
	comp=Z,1.4nm,1.0s,baz=255,slow=7.8,SNR=7.1							
ESDC					PcP	**PcP**	**12 04 57.2**	**-0.2**
	comp=Z,0.9nm,1.0s,baz=272,slow=3.3,SNR=3.1 comp=Z,1.4nm,1.0s							
ESDC	**Sonseca Array**	**38.66**	**54**	P		**P**	**12 02 45.2**	**-0.2**
SIV	**San Ignacio**	**41.44**	**204**	P		**P**	**12 03 09.5**	**+0.9**
	comp=Z,1.0nm,0.9s,baz=3.4,slow=11,SNR=2.4 comp=Z,1.0nm,0.9s							
DBIC	**Dimbokro**	**41.75**	**106**	P		**P**	**12 03 11.2**	**0.0**
	comp=Z,3.1nm,0.9s,baz=298,slow=14,SNR=3.1 comp=Z,3.1nm,0.9s							
DBIC	**Dimbokro**	**41.75**	**106**	P		**P**	**12 03 10.6**	**-0.7**
DBIC					IAmb	IAmb	12 04 33.9	
	comp=Z,23nm,1.4s							
CCM	**Cathedral Cave**	**42.38**	**302**	P		**P**	**12 03 16.5**	**+0.4**
H10N3	**ASCENSION HYDR**	**42.48**	**132**	T		T	12 48 33.9	
	baz=316,slow=75							
H10N2	**ASCENSION HYDR**	**42.48**	**132**	T		T	12 48 29.4	
	baz=316,slow=75							
H10N1	**ASCENSION HYDR**	**42.50**	**132**	T		T	12 48 32.9	
	baz=316,slow=75							
D41A	**Chassel**	**42.59**	**316**	P		**P**	**12 03 18.6**	**+0.9**
W41B	**Gary Mavity, V**	**42.89**	**298**	P		**P**	**12 03 20.1**	**-0.2**
W41B					IAmb	IAmb	12 03 27.2	
	comp=Z,15nm,1.2s							
FRB	**Frobisher Bay**	**44.06**	**345**	LR		LR	12 20 22.5	
	comp=Z,342nm,20.2s,baz=166,slow=34							
HHAR	**Hobbs**	**44.34**	**299**	P		**P**	**12 03 32.9**	**+0.8**
LPAZ	**La Paz**	**44.78**	**212**	P		**P**	**12 03 37.1**	**+0.8**
	comp=Z,6.0nm,1.0s,baz=14,slow=7.5,SNR=11 comp=Z,6.0nm,1.0s							
LPAZ	**La Paz**	**44.78**	**212**	P		**P**	**12 03 36.8**	**+0.5**
LPAZ					IAmb	IAmb	12 03 41.2	
	comp=Z,6.4nm,1.0s							
TOA0	**Torodi Ar. Sit**	**45.25**	**94**	P		**P**	**12 03 39.7**	**+0.2**
TOA0					IAmb	IAmb	12 03 42.1	
	comp=Z,8.7nm,1.0s							
TORD	**Torodi Ar. Bea**	**45.25**	**94**	P		**P**	**12 03 39.3**	**-0.2**
	comp=Z,5.0nm,0.8s,baz=297,slow=6.4,SNR=24 comp=Z,5.0nm,0.8s							
TORD	**Torodi Ar. Bea**	**45.25**	**94**	P		**P**	**12 03 39.7**	**+0.2**
TORD					IAmb	IAmb	12 03 42.1	
	comp=Z,6.7nm,1.0s							
BNI	**Bardonecchia**	**47.50**	**49**	P		**P**	**12 03 59.6**	**+2.7**
ULM	**Lac du Bonnet**	**48.17**	**318**	P		**P**	**12 04 00.9**	**-1.0**
	comp=Z,4.3nm,1.1s,baz=73,slow=6.6,SNR=3.6 comp=Z,4.3nm,1.1s							
ULM	**Lac du Bonnet**	**48.17**	**318**	P		**P**	**12 04 01.2**	**-0.8**
ULM					IAmb	IAmb	12 04 08.5	
	comp=Z,5.1nm,1.0s							
WMOK	**Wichita Mounta**	**48.24**	**297**	P		**P**	**12 04 02.8**	**+0.1**
WMOK					IAmb	IAmb	12 04 07.5	
	comp=Z,7.9nm,1.4s							
PB11	**IPOC Station P**	**48.48**	**212**	P		**P**	**12 04 04.0**	**-0.8**
KEST	**Kesra**	**48.67**	**62**	P		**P**	**12 04 08.1**	**+1.9**
	comp=Z,17nm,0.9s,baz=235,slow=6.3,SNR=10 comp=Z,17nm,0.9s							
KEST	**Kesra**	**48.67**	**62**	P		**P**	**12 04 08.0**	**+1.9**
BFO	**Black Forest**	**49.25**	**45**	P		**P**	**12 04 11.7**	**+1.3**
BFO					IAmb	IAmb	12 04 13.3	
	comp=Z,7.3nm,1.0s							
CPUP	**Villa Florida**	**50.06**	**194**	P		**P**	**12 04 15.9**	**-0.6**
	comp=Z,4.1nm,1.2s,baz=9.1,slow=7.6,SNR=3.3 comp=Z,4.1nm,1.2s							
DAVA	**Damuels**	**50.08**	**47**	*eP*		**P**	**12 04 18.3**	**+1.5**
	comp=Z,6.6nm,1.0s							
LVC	**Limon Verde**	**50.59**	**209**	LR		LR	12 25 06.6	
	comp=Z,358nm,18.8s,baz=16,slow=35							
FETA	**Feichten**	**50.61**	**47**	*eP*		**P**	**12 04 22.1**	**+1.2**
	comp=Z,10nm,1.1s							
MOTA	**Moosalm**	**50.91**	**47**	*eP*		**P**	**12 04 25.2**	**+2.1**
	comp=Z,4.6nm,0.8s							
SQTA	**Sankt Quirin**	**50.97**	**47**	*eP*		**P**	**12 04 24.5**	**+1.1**
	comp=Z,6.2nm,0.6s							
CTI	**Castel Tesino**	**51.10**	**48**	P		**P**	**12 04 25.7**	**+1.2**
CTI					IAmb	IAmb	12 04 27.1	
	comp=Z,12nm,0.9s							
WATA	**Walderalm**	**51.23**	**47**	*eP*		**P**	**12 04 26.3**	**+0.8**
	comp=Z,5.7nm,0.9s							
WTTA	**Wattenberg**	**51.26**	**47**	*eP*		**P**	**12 04 26.7**	**+1.0**
	comp=Z,9.9nm,1.4s							
ABTA	**Abfaltersbach**	**51.78**	**48**	*eP*		**P**	**12 04 29.9**	**+0.4**
	comp=Z,5.4nm,1.2s							
NKC	**Novy Kostel**	**52.26**	**43**	*eP*		**P**	**12 04 34.9**	**+1.9**
BIOA	**Bad Ischl, Aus**	**52.66**	**47**	*eP*		**P**	**12 04 37.4**	**+1.4**
	comp=Z,3.2nm,1.0s							
TXAR	**Lajitas Array**	**52.74**	**290**	P		**P**	**12 04 35.2**	**-1.8**
	comp=Z,0.6nm,1.0s,baz=116,slow=5.7,SNR=4.2 comp=Z,0.6nm,1.0s							
TXAR	**Lajitas Array**	**52.74**	**290**	P		**P**	**12 04 35.7**	**-1.2**
CLL	**Collm**	**52.80**	**42**	*i* P		**P**	**12 04 38.5**	**+1.6**
	comp=Z,35nm,2.3s							
CLL				*i* x		x	12 04 43.8	
	comp=Z,7.0nm,1.1s							
KHC	**Kasperske Hory**	**52.81**	**45**	P		**P**	**12 04 38.4**	**+1.3**
KHC					IAmb	IAmb	12 04 45.0	
	comp=Z,12nm,1.6s							
KHC	**Kasperske Hory**	**52.81**	**45**	*eP*		**P**	**12 04 33.8**	**-3.3**
JMIC	**Jan Mayen**	**52.84**	**14**	LR		LR	12 20 17.7	
	comp=Z,183nm,19.5s,baz=134,slow=28							
GEC2	**GERESS Array S**	**52.85**	**45**	P		**P**	**12 04 39.6**	**+2.1**
GEC2					IAmb	IAmb	12 04 45.8	
	comp=Z,9.7nm,1.3s							
GERES	**GERESS Array B**	**52.85**	**45**	P		**P**	**12 04 36.0**	**-1.4**
	comp=Z,0.9nm,0.8s,baz=244,slow=5.8,SNR=11							
GERES					PKKP	**PKKPdf**	**12 26 42.3**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=35,slow=5.4,SNR=5.9 comp=Z,0.9nm,0.8s							
GERES	**GERESS Array B**	**52.85**	**45**	P		**P**	**12 04 38.3**	**+0.8**
GO02	**Mina Guanaco**	**53.12**	**208**	P		**P**	**12 04 39.5**	**-0.3**
GO02					IAmb	IAmb	12 05 05.9	
	comp=Z,16nm,1.4s							
OBKA	**Obir**	**53.15**	**48**	*eP*		**P**	**12 04 40.4**	**+0.7**
	comp=Z,4.5nm,0.7s							
CKRC	**Cesky Krumlov**	**53.25**	**45**	*eP*		**P**	**12 04 40.4**	**+0.1**
CKRC				*ex*		x	12 04 47.2	
BRG	**Berggiesshubel**	**53.31**	**43**	*eP*		**P**	**12 04 42.6**	**+1.9**
BRG					Amp		12 04 45.3	
	comp=Z,7.2nm,1.3s							
CONA	**Conrad Observa**	**54.18**	**46**	*eP*		**P**	**12 04 47.5**	**+0.3**
	comp=Z,1.9nm,0.8s							
NB2	**NORSAR Subarra**	**54.29**	**30**	P		**P**	**12 04 47.6**	**-0.2**
	comp=Z,13nm,1.4s,baz=251,slow=7.4	

*NAO **19** 12:03:24.9±21.0, 79°41N×2°95E, ML3.6*
*IDC **19** 12:03:26.2±2.9, 79°22N×1°95E, h0km, mb3.6/3, mbtmp3.7/5, ML2.8/2, MS4.4/2/1, Error ellipse: s-maj=50.5km s-min=37.9km az=120.0*
*BER **19** 12:03:27.1±2.9, 79°25N×3°03E, h10km, ML2.5, MW2.8, ML3.6(NAO), Confirmed Earthquake*
*DNK **19** 12:03:29.2±3.6, 79°30N×3°65E, h36km±80km, ML2.1*
*IEPN **19** 12:03:32.0, 79°01N×4°28E, h10km*

ISC 19 12:03:30.4±2.9, **79°25N**±0°06×**4°89E**±0°08, **h14**km±15km, **n36**, σ1§**32**/45, **mb3.5**/3, **1C-3D**, **Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**1.38**	**100**			**Pn**	**Pn**	**12 03 55.4**	**+0.3**
KBS						Lg	Lg	12 04 14.7	
KBS	**Kingsbay**	**1.38**	**100**	*i*	P	**Pn**	**Sn**	**12 03 55.4**	**+0.3**
KBS				*i*	S		**Sn**	**12 04 12.5**	**-0.6**
KBS	**Kingsbay**	**1.38**	**100**	↓*i*	P	**Pn**	**Pn**	**12 03 55.5**	**+0.3**
KBS				*e*	S		**Sg**	**12 04 14.4**	**-0.4**
KBS					IAML			12 04 16.6	
	comp=Z,112nm,0.2s								
KBS	**Kingsbay**	**1.38**	**100**	↓*i*	P	**Pn**		**12 03 55.4**	**+0.3**
KBS				*i*	S		**Sg**	**12 04 14.2**	**-0.6**
BRBB	**Barentsburg B**	**2.18**	**118**		P	Pn	**Pn**	**12 04 07.3**	**+1.3**
BRBB					S	Sn	**Sb**	**12 04 35.9**	**-0.3**
BRBB	**Barentsburg B**	**2.18**	**118**	*e*	P		**Pn**	**12 04 06.7**	**+0.6**
BRBB				*e*	S		**Sb**	**12 04 35.9**	**-0.3**
BRBA	**Barentsburg A**	**2.20**	**118**		P	Pn	**Pn**	**12 04 07.6**	**+1.3**
BRBA					S	Sn	**Sb**	**12 04 35.9**	**-0.9**
BRBA	**Barentsburg A**	**2.20**	**118**	*e*	P		**Pn**	**12 04 06.2**	**-0.1**
BRBA				*e*	S		**Sn**	**12 04 33.8**	**+0.6**
BRBA					IAML			12 04 38.8	
	comp=Z,66nm,0.4s								
SPA0	**Spitsbergen Ar**	**2.50**	**110**		P	Pn	**Pn**	**12 04 11.4**	**+0.9**
	baz=313,slow=9.3								
SPA0					S	Sn	**Sn**	**12 04 42.3**	**+1.6**
	baz=291,slow=18								
SPA0	**Spitsbergen Ar**	**2.50**	**110**		P	Pn	**Pn**	**12 04 11.4**	**+0.9**
	baz=313,slow=9.3								
SPA0					S	Sn	**Sn**	**12 04 42.3**	**+1.6**
	baz=291,slow=18								
SPA0					IAML			12 04 48.3	
	comp=Z,50nm,0.3s								
SPA0	**Spitsbergen Ar**	**2.50**	**110**	↓*i*	P	**Pn**	**Pn**	**12 04 11.6**	**+1.1**
SPA0				*i*	S		**Sn**	**12 04 41.7**	**+1.0**
HSPB	**Hornsund (broa**	**3.15**	**130**		P	Pn	**Pn**	**12 04 19.4**	**0.0**
HSPB					S	Sn	**Sn**	**12 04 56.0**	**-0.6**
HSPB	**Hornsund (broa**	**3.15**	**130**	*e*	P		**Pn**	**12 04 18.5**	**-0.9**
HSPB				*e*	S		**Sn**	**12 04 56.1**	**-0.6**
HSPB					IAML			12 04 59.3	
	comp=Z,17nm,0.5s								
HSPB					IAML			12 04 59.3	
	comp=Z,16nm,0.5s								
HSPB	**Hornsund (broa**	**3.15**	**130**	*e*	P		**Pn**	**12 04 18.4**	**-1.0**
HSPB				*e*	S		**Sn**	**12 04 54.8**	**-1.9**
NOR	**Nord**	**4.28**	**314**		P	Pn	Pn	12 04 27.0	-7.8
NOR	**Nord**	**4.28**	**314**	*i*	P	Pn	Pn	12 04 26.8	-8.1
NOR					IAML			12 04 27.4	
	comp=Z,13nm,0.4s								
NOR				*i*	S		Pn	12 04 28.8	-6.0
NOR	**Nord**	**4.28**	**314**	↓*i*	P		Pn	12 04 26.8	-8.0
HOPEN	**Hopen**	**5.03**	**113**		P	Pn	**Pn**	**12 04 45.3**	**+0.1**
HOPEN					S	Sn	**Sn**	**12 05 42.5**	**-0.4**
HOPEN	**Hopen**	**5.03**	**113**	*e*	P	Pn	**Pn**	**12 04 45.2**	**+0.1**
HOPEN				*e*	S		**Sn**	**12 05 42.5**	**-0.4**
HOPEN					IAML			12 05 45.0	
	comp=Z,17nm,0.3s								
HOPEN					IAML			12 05 45.1	
	comp=Z,16nm,0.3s								
HOPEN	**Hopen**	**5.03**	**113**	*e*	P		**Pn**	**12 04 45.1**	**-0.1**
HOPEN				*e*	S		**Sn**	**12 05 39.5**	**-3.4**
ZFI2	**Zemlya Franca-**	**7.43**	**58**	*e*	P		**Pn**	**12 05 19.1**	**+1.0**
ZFI2				*e*	S		**Sn**	**12 06 39.1**	**-2.9**
	comp=Z,31nm,1.7s								
ZFI	**Zemlya Franca-**	**7.43**	**58**	*e*	P		**Pn**	**12 05 19.5**	**+1.4**
ZFI				*e*	S		**Sn**	**12 06 39.4**	**-2.6**
	comp=Z,21nm,2.0s								
DBG	**Daneborg**	**7.52**	**242**		P	Pn	Pn	12 05 11.0	-8.3
DBG					S	Sn	Sn	12 06 23.1	-21
DBG	**Daneborg**	**7.52**	**242**	*i*	P	Pn	Pn	12 05 09.3	-10
DBG					IAML			12 06 34.1	
	comp=Z,4.8nm,0.6s								
DBG	**Daneborg**	**7.52**	**242**	*e*	P		Pn	12 05 10.2	-9.1
DBG				*e*	S		Sn	12 06 22.8	-21
JMIC	**Jan Mayen**	**8.95**	**209**	*e*	P		Pn	12 05 31.5	-7.5
ARA0	**ARCESS Array S**	**11.11**	**140**		P	Pn	**Pn**	**12 06 09.2**	**+0.7**
	baz=356,slow=11								
ARA0	**ARCESS Array S**	**11.11**	**140**		P	Pn	**Pn**	**12 06 09.2**	**+0.7**
	baz=356,slow=11								
ARCES	**ARCESS Array B**	**11.11**	**140**		P	Pn	**Pn**	**12 06 09.4**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=335,slow=10,SNR=8.9								
	comp=Z,2.9nm,0.8s								
SUMG	**Summit**	**12.12**	**260**	*i*	P		Pn	12 06 13.5	-9.1
FINES	**FINESS Array B**	**19.00**	**148**		P		**Pn**	**12 07 51.9**	**0.0**
	comp=Z,0.1nm,0.3s,baz=356,slow=8.8,SNR=2.1								
	comp=Z,3.9nm,1.1s								
HFS	**Hagfors**	**19.41**	**167**		P		**P**	**12 07 54.8**	**-0.8**
	slow=10								
ZALV	**Zalesovo Beam**	**35.74**	**85**		P		**P**	**12 10 31.1**	**+3.1**
	comp=Z,0.3nm,0.5s,baz=348,slow=12,SNR=1.5								
	comp=Z,0.3nm,0.5s								
MKAR	**Makanchi Array**	**42.11**	**91**		P		**P**	**12 11 23.6**	**+2.1**
	comp=Z,0.7nm,0.7s,baz=331,slow=7.0,SNR=4.3								
	comp=Z,0.7nm,0.7s								
EIL	**Elat**	**51.31**	**146**		LR		LR	12 36 36.4	
	comp=Z,246nm,20.4s,baz=242,slow=39								
TORD	**Torodi Ar. Bea**	**66.14**	**183**		P		**P**	**12 14 14.7**	**-2.1**
	comp=Z,0.4nm,0.6s,baz=348,slow=6.6,SNR=4.1								
	comp=Z,0.4nm,0.6s								

*IDC **19** 12:08:37.2±0.7, 20°39S×168°87E, h0km, mb4.2/16, mbtmp4.2/18, ML3.9/2, MS4.4/1, Error ellipse: s-maj=20.7km s-min=16.7km az=115.0*
*NEIC **19** 12:08:40.1±2.1, 20°35S±0°1×168°9E±0°1, h10km±1km, mb4.6/33, Error ellipse: s-maj=20.0km s-min=17.7km az=167.0*

ISC 19 12:08:39.5±0.4, **20°32S**±0°08×**168°87E**±0°09, **h10**km, **n95**, σ1§**34**/95, **mb4.6**/34, **10D**, **Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.85**	**232**			Pn	**Pn**	**12 09 22.4**	**-2.8**
	47nm,0.3s,baz=91,slow=11,SNR=41								
DZM						Sn	**Sn**	**12 09 58.6**	**-1.1**
	140nm,0.3s,baz=28,slow=18,SNR=8.2								
	126nm,0.4s								
MSVF	**Nonsavu**	**9.06**	**75**			Pn	Pn	12 10 57.0	+6.6
	0.4nm,0.3s,baz=261,slow=15,SNR=5.1								
MSVF					LR		LR	12 13 42.0	
	comp=Z,2μm,18.7s,baz=229,slow=34								
MSVF	**Nonsavu**	**9.06**	**75**			Pn	Pn	12 10 57.1	+6.7
OUZ	**Omahuta**	**15.41**	**165**		P		**P**	**12 12 26.2**	**+4.6**
ARMA	**Armidale**	**18.52**	**234**		P		**Pn**	**12 13 00.6**	**+4.3**
URZ	**Urewera**	**19.25**	**160**		P		**Pn**	**12 13 04.0**	**0.0**
	0.2nm,0.3s,baz=307,slow=20,SNR=1.3								
	4.4nm,1.0s								
URZ	**Urewera**	**19.25**	**160**		P		**P**	**12 13 03.6**	**-0.4**
URZ					IAmb		IAmb	12 13 19.1	
	comp=Z,40nm,1.4s								
CTA	**Charters Tower**	**21.23**	**267**		P		**P**	**12 13 25.8**	**+0.1**
	comp=Z,2.8nm,0.6s,baz=88,slow=11,SNR=2.0								
	comp=Z,2.8nm,0.6s								
CTAO	**Charters Tower**	**21.23**	**267**		P		**P**	**12 13 28.9**	**+3.2**
CTAO					IAmb		IAmb	12 13 51.1	
	comp=Z,36nm,1.4s								
PMG	**Port Moresby**	**23.59**	**294**		P		**P**	**12 13 50.9**	**+0.2**
	comp=Z,18nm,1.0s,baz=119,slow=7.3,SNR=5.5								
	comp=Z,18nm,1.0s								
PMG	**Port Moresby**	**23.59**	**294**		P		**P**	**12 13 51.0**	**+0.2**
PMG					IAmb		IAmb	12 13 53.7	
	comp=Z,28nm,1.1s								
COEN	**Coen**	**25.34**	**280**		P		**P**	**12 14 09.1**	**+2.3**
COEN					IAmb		IAmb	12 14 10.1	
	comp=Z,21nm,1.2s								
TOO	**Toolangi**	**26.61**	**225**		P		**P**	**12 14 19.1**	**+1.0**
STKA	**Stephens Creek**	**26.98**	**239**		P		**P**	**12 14 22.3**	**+0.7**
	comp=Z,1.0nm,0.4s,baz=73,slow=11,SNR=1.9								
	comp=Z,1.0nm,0.4s								
STKA	**Stephens Creek**	**26.98**	**239**		P		**P**	**12 14 23.4**	**+1.8**
BBOO	**Buckleboo**	**31.74**	**240**		P		**P**	**12 15 00.5**	**-3.3**
BBOO					IAmb		IAmb	12 15 23.2	
	comp=Z,9.4nm,1.1s								

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WR0	**Warramunga Arr**	**32.20**	**265**			P	**P**	**12 15 06.6**	**-1.4**
WB0	**Warramunga Arr**	**32.36**	**265**			P	**P**	**12 15 09.8**	**+0.3**
WB0						IAmb	IAmb	12 15 14.7	
	comp=Z,9.3nm,1.1s								
WB2	**Warramunga Arr**	**32.38**	**265**			P	**P**	**12 15 08.2**	**-1.4**
WB2						IAmb	IAmb	12 15 15.4	
	comp=Z,11nm,1.1s								
WRAB	**Tennant Creek**	**32.38**	**265**			P	**P**	**12 15 07.0**	**-2.6**
WRA	**Warramunga Arr**	**32.39**	**265**			P	**P**	**12 15 07.5**	**-2.2**
	comp=Z,2.6nm,0.5s,baz=92,slow=8.2,SNR=39								
WRA						PcP	**PcP**	**12 17 54.9**	**-2.4**
	comp=Z,0.8nm,0.9s,baz=83,slow=2.5,SNR=3.0								
	comp=Z,2.6nm,0.5s								
WRA	**Warramunga Arr**	**32.39**	**265**			P	**P**	**12 15 08.6**	**-1.1**
AS31	**Alice Springs**	**32.54**	**258**			P	**P**	**12 15 09.7**	**-1.4**
ASAR	**Alice Springs**	**32.54**	**258**			P	**P**	**12 15 09.9**	**-1.1**
FORT	**Forrest**	**38.08**	**246**			P	**P**	**12 15 58.4**	**-0.2**
KNRA	**Kununurra**	**38.36**	**270**			P	**P**	**12 16 00.7**	**-0.4**
KNRA						IAmb	IAmb	12 16 14.7	
	comp=Z,11nm,0.9s								
PSA00	**Pilbara Seismi**	**45.65**	**259**			P	**P**	**12 17 00.3**	**-0.4**
VNDA	**Vanda**	**57.34**	**182**			P	**P**	**12 18 25.5**	**-1.8**
	comp=Z,0.9nm,1.1s,baz=7.6,slow=5.4,SNR=2.7								
	comp=Z,0.9nm,1.1s								
VNDA	**Vanda**	**57.34**	**182**			P	**P**	**12 18 27.7**	**+0.4**
CASY	**Casey**	**59.00**	**204**			P	**P**	**12 18 39.8**	**+0.7**
CASY						IAmb	IAmb	12 18 40.5	
	comp=Z,8.3nm,1.4s								
MJAR	**Matsushiro Arr**	**63.55**	**333**			P	**P**	**12 19 09.6**	**-0.7**
	comp=Z,2.2nm,1.0s,baz=157,slow=9.1,SNR=5.1								
	comp=Z,2.2nm,1.0s								
MJAR	**Matsushiro Arr**	**63.55**	**333**			P	**P**	**12 19 09.0**	**-1.2**
KSRS	**Korea Array**	**69.20**	**326**			P	**P**	**12 19 46.5**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=166,slow=7.7,SNR=5.1								
	comp=Z,0.7nm,0.8s								
QSPA	**South Pole Qui**	**69.74**	**180**			P	**P**	**12 19 49.2**	**-0.4**
	comp=Z,3.9nm,0.9s,baz=28,slow=2.6,SNR=9.5								
	comp=Z,3.9nm,0.9s								
QSPA	**South Pole Qui**	**69.74**	**180**			P	**P**	**12 19 50.6**	**+1.0**
QSPA						IAmb	IAmb	12 20 04.9	
	comp=Z,4.7nm,0.9s								
USRK	**Ussuriysk Ar.**	**72.54**	**333**			P	**P**	**12 20 05.0**	**-1.6**
	comp=Z,10nm,1.0s,baz=128,slow=4.8,SNR=8.8								
	comp=Z,10nm,1.0s								
USRK	**Ussuriysk Ar.**	**72.54**	**333**			P	**P**	**12 20 06.9**	**+0.3**
PEA0B	**Petropavlovsk-**	**73.76**	**353**			P	**P**	**12 20 14.0**	**+0.4**
PETK	**Petropavlovsk-**	**73.76**	**353**			P	**P**	**12 20 13.7**	**+0.1**
	comp=Z,1.2nm,0.4s,baz=159,slow=8.6,SNR=1.4								
	comp=Z,1.2nm,0.4s								
PETK	**Petropavlovsk-**	**73.76**	**353**			P	**P**	**12 20 13.6**	**0.0**
MDJ	**Mudanjiang**	**73.91**	**332**			P	**P**	**12 20 15.5**	**+0.8**
KLR	**Kul'dur**	**76.71**	**336**			P	**P**	**12 20 31.1**	**+0.3**
	comp=Z,4.0nm,1.0s,baz=128,slow=3.7,SNR=5.2								
	comp=Z,4.0nm,1.0s								
BJT	**Baijiatuau**	**77.55**	**321**			P	**P**	**12 20 36.4**	**+0.8**
BJI	**Beijing**	**77.56**	**321**			P	**P**	**12 20 37.3**	**+1.6**
BJI						pmax	pmax		
	comp=Z,7.0nm,0.7s								
XAN	**Xi'an**	**78.59**	**313**			P	**P**	**12 20 42.8**	**+1.2**
XAN						sP	pwP	12 20 49.6	+0.6
XAN						pmax	pmax		
	comp=Z,4.0nm,1.4s								
CMAR	**Chiang Mai Arr**	**78.63**	**295**			P	**P**	**12 20 42.1**	**0.0**
	comp=Z,0.7nm,0.4s,baz=130,slow=3.9,SNR=13								
	comp=Z,0.7nm,0.4s								
CMAR	**Chiang Mai Arr**	**78.63**	**295**			P	**P**	**12 20 43.1**	**+0.9**
HHC	**Hu-ho-hao-te**	**80.82**	**320**	*e*	P		**P**	**12 20 56.3**	**+2.7**
HHC						pmax	pmax		
	comp=Z,32nm,1.0s								
BELA	**Belgrano 2**	**81.05**	**175**			P	**P**	**12 20 54.3**	**0.0**
BELA						IAmb	IAmb	12 20 55.7	
	comp=Z,7.1nm,1.0s								
LZH	**Lanzhou**	**83.20**	**312**	*e*	P		**P**	**12 21 09.3**	**+3.0**
LZH						sP	pwP	12 21 18.8	+5.1
LZH						pmax	pmax		
	comp=Z,9.0nm,1.0s								
TROLL	**Troll, Antarti**	**87.43**	**184**			P	**P**	**12 21 26.7**	**-0.3**
GTA	**Gaotai**	**87.62**	**314**	*e*	P		**P**	**12 21 29.5**	**+1.2**
GTA						pP	pwP	12 21 47.8	+12
GTA						pmax	pmax		
	comp=Z,3.0nm,1.0s								
SONM	**Songino Array**	**87.88**	**323**			P	**P**	**12 21 30.0**	**+0.7**
	comp=Z,5.9nm,1.0s,baz=135,slow=4.9,SNR=22								
	comp=Z,5.9nm,1.0s								
SONM	**Songino Array**	**87.88**	**323**			P	**P**	**12 21 29.1**	**-0.2**
SNAA	**Sanae**	**88.07**	**183**			P	**P**	**12 21 30.7**	**+0.8**
SNAA						IAmb	IAmb	12 21 44.7	
	comp=Z,3.8nm,1.1s								
CMB	**Columbia Colle**	**88.13**	**48**			P	**P**	**12 21 29.9**	**-0.8**
CMB						IAmb	IAmb	12 21 36.2	
	comp=Z,2.5nm,0.8s								
VNA3	**Neumayer Olymp**	**88.67**	**180**			P	**P**	**12 21 31.5**	**-1.2**
NVAR	**Mina Array Bea**	**89.77**	**49**			P	**P**	**12 21 38.5**	**-0.1**
	comp=Z,2.0nm,0.9s,baz=227,slow=6.8,SNR=12								
	comp=Z,2.0nm,0.9s								
NVAR	**Mina Array Bea**	**89.77**	**49**			P	**P**	**12 21 38.4**	**-0.2**
KVN	**Kaiserville**	**90.19**	**48**			P	**P**	**12 21 40.0**	**-0.6**
KVN						IAmb	IAmb	12 21 41.4	
	comp=Z,5.7nm,1.3s								
TPNV	**Topopah Spring**	**90.60**	**51**			P	**P**	**12 21 42.0**	**-0.5**
TPNV						IAmb	IAmb	12 21 43.6	
	comp=Z,5.8nm,1.4s								
WVOR	**Wild Horse Val**	**91.32**	**45**			P	**P**	**12 21 45.2**	**-0.4**
WVOR						IAmb	IAmb	12 21 47.2	
	comp=Z,2.6nm,0.9s								
ILAR	**Eielson Array**	**91.36**	**17**			P	**P**	**12 21 44.9**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=230,slow=4.6,SNR=9.2								
	comp=Z,0.5nm,0.6s								
ILAR	**Eielson Array**	**91.36**	**17**			P	**P**	**12 21 44.0**	**-1.1**
TXAR	**Lajitas Array**	**97.58**	**62**			P	**P**	**12 22 13.8**	**-0.9**
	comp=Z,0.1nm,0.9s,baz=256,slow=3.6,SNR=1.6								
	comp=Z,0.1nm,0.9s								
WMQ	**Urumqi**	**97.70**	**314**	*e*	P		Pdif	12 22 16.3	+1.5
WMQ						pmax	pmax		
	comp=Z,12nm,0.7s								
ARCES	**ARCESS Array B**	**126.02**	**345**		PKP		**PKPdf**	**12 27 39.3**	**-2.0**
	comp=Z,3.4nm,0.8s,baz=64,slow=2.8,SNR=5.4								
ARCES	**ARCESS Array B**	**126.02**	**345**				**PKPdf**	**12 27 40.7**	**-0.6**
FINES	**FINESS Array B**	**131.45**	**337**		PKP		**PKPdf**	**12 27 49.9**	**-1.8**
	comp=Z,2.0nm,0.8s,baz=93,slow=2.8,SNR=3.4								
FINES						SKPbc	**SKPbc**	**12 31 15.4**	**-1.6**
	comp=Z,3.4nm,0.8s,baz=42,slow=5.9,SNR=4.8								
FINES	**FINESS Array B**	**131.45**	**337**		PKPdf		**PKiKP**	**12 27 54.3**	**+1.6**
NKC	**Novy Kostel**	**144.79**	**334**	*e*	PKP		**PKPab**	**12 28 16.0**	**+0.5**
RONA	**Rosalia, Austr**	**144.81**	**327**	*e*	P		**PKPab**	**12 28 16.2**	**+0.5**
	comp=Z,8.1nm,1.2s,SNR=7.7								
CONA	**Conrad Observa**	**144.88**	**328**	*e*	P		PKPbc	12 28 16.9	+0.8
	comp=Z,8.0nm,1.5s,SNR=6.8								
CKRC	**Cesky Krumlov**	**145.01**	**330**	*e*	PKP		**PKPab**	**12 28 15.8**	**-0.6**
KHC	**Kasperske Hory**	**145.12**	**331**	*e*	PKP		**PKPab**	**12 28 17.3**	**+0.5**
GERES	**GERESS Array B**	**145.27**	**331**		PKPbc		**PKPbc**	**12 28 16.9**	**-0.4**
	comp=Z,1.5nm,0.7s,baz=26,slow=4.7,SNR=19								
MOA	**Moln**	**145.72**	**329**	*e*	P		**PKPdf**	**12 28 19.0**	**+0.7**
	comp=Z,14nm,1.3s,SNR=8.8								
BTNL	**Ternell**	**146.86**	**340**	*d*	PKPbc		**PKPbc**	**12 28 22.0**	**0.0**
MEM	**Membach**	**146.88**	**340**	*d*	PKPbc		**PKPbc**	**12 28 21.9**	**-0.1**
BSTI	**Sart Tilman**	**147.04**	**340**	*d*	PKPbc		**PKPbc**	**12 28 23.0**	**+0.5**
BHOU	**Houvegnez**	**147.10**	**340**	*d*	PKP		**PKPbc**	**12 28 23.3**	**+0.6**
ABTA	**Abfaltersbach**	**147.34**	**329**	*e*	P		**PKPdf**	**12 28 22.9**	**+1.7**
	comp=Z,6.6nm,1.3s								
WATA	**Walderalm**	**147.35**	**331**	*e*	P		**PKPbc**	**12 28 23.9**	**+0.3**
	comp=Z,11nm,1.8s								
WTTA	**Wattenberg**	**147.37**	**331**	*e*	P		**PKPbc**	**12 28 23.6**	**-0.1**
	comp=Z,6.1nm,1.0s								
SNF	**Seneffe**	**147.50**	**342**	*d*	PKPbc		**PKPbc**	**12 28 23.8**	**+0.1**
RCHB	**Rochefort**	**147.52**	**340**	*d*	PKPbc		**PKPbc**	**12 28 23.5**	**-0.3**
BMRD	**Maredsous**	**147.54**	**341**	*d*	PKPdf		**PKPdf**	**12 28 21.8**	**+0.5**
BMRD					*d*	PKPbc	**pPKPdf**	**12 28 23.9**	**+0.7**
MOTA	**Moosalm**	**147.56**	**331**	*e*	P		**PKPbc**	**12 28 23.8**	**-0.4**
	comp=Z,6.2nm,0.8s								
RETA	**Reutte**	**147.60**	**332**	*e*	P		**PKPbc**	**12 28 23.9**	**-0.3**
	comp=Z,2.6nm,0.9s								
SQTA	**Sankt Quirin**	**147.60**	**331**	*e*	P		**PKPbc**	**12 28 24.0**	**-0.3**
	comp=Z,4.9nm,0.7s								
WLF	**Walferdange**	**147.64**	**339**	*d*	PKP		**PKPbc**	**12 28 25.1**	**+0.9**
DOU	**Dourbes**	**147.77**	**341**	*d*	PKPbc		**PKPbc**	**12 28 24.2**	**-0.3**
FETA	**Feichten**	**147.97**	**331**	*e*	P		**PKPbc**	**12 28 25.5**	**+0.2**
	comp=Z,3.2nm,0.7s								
DAVA	**Damuels**	**148.14**	**332**	*i*	P		**PKPbc**	**12 28 24.9**	**-0.9**
	comp=Z,8.3nm,1.4s								
ESDC	**Sonseca Array**	**159.75**	**344**		PKPab		**PKPab**	**12 29 17.4**	**-0.2**
	comp=Z,0.8nm,0.9s,baz=13,slow=4.2,SNR=5.5								

*NEIC **19** 12:12:45.5±1.6, 20°4S±0°2×169°3E±0°1, h10km±1km, mb4.4/20, Error ellipse: s-maj=26.2km s-min=22.5km az=1.0*
*IDC **19** 12:12:47.2±2.8, 20°21S×168°79E, h0km, mb3.8/4, mbtmp3.8/5, ML3.5/1, Error ellipse: s-maj=92.0km s-min=30.3km az=141.0*

ISC 19 12:12:46.2±0.9, **20°55S**±0°1×**169°3E**±0°1, **h10**km, **n30**, σ1§**59**/30, **mb4.4**/12, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.06**	**238**			Pn	**Pn**	**12 13 33.6**	**-1.1**
	7.7nm,0.3s,baz=77,slow=11,SNR=70								
	30nm,0.6s								
LHI	**Lord Howe Isla**	**14.30**	**218**			Pn	**Pn**	**12 16 10.4**	**+1.7**
EIDS	**Eidsvold**	**17.42**	**250**			Pn	**Pn**	**12 16 48.6**	**-0.9**
ARMA	**Armidale**	**18.71**	**235**			P	**Pn**	**12 17 09.4**	**+3.9**
ARMA						IAmb	IAmb	12 17 31.9	
	comp=Z,26nm,1.3s								
BKZ	**Black Stump Fm**	**19.64**	**163**			P	**P**	**12 17 15.3**	**+0.1**
BKZ						IAmb	IAmb	12 17 43.8	
	comp=Z,26nm,1.4s								
BHW	**Baring Head**	**21.41**	**168**			P	**P**	**12 17 32.2**	**-1.9**
CTA	**Charters Tower**	**21.57**	**267**			P	**P**	**12 17 35.6**	**-0.5**
	comp=Z,7.0nm,0.9s,baz=102,slow=9.8,SNR=6.0								
	comp=Z,7.0nm,0.9s								
CTAO	**Charters Tower**	**21.57**	**267**			P	**P**	**12 17 39.1**	**+3.0**
COEN	**Coen**	**25.71**	**280**			P	**P**	**12 18 17.7**	**+0.8**
WR0	**Warramunga Arr**	**32.53**	**265**			P	**P**	**12 19 16.3**	**-1.4**
WR0						IAmb	IAmb	12 19 40.5	
	comp=Z,7.6nm,1.4s								
WB0	**Warramunga Arr**	**32.70**	**265**			P	**P**	**12 19 17.9**	**-1.1**
WB0						IAmb	IAmb	12 19 35.9	
	comp=Z,6.6nm,1.3s								
WB2	**Warramunga Arr**	**32.71**	**265**			P	**P**	**12 19 17.9**	**-1.4**
WB2						IAmb	IAmb	12 19 30.5	
	comp=Z,9.6nm,1.5s								
WRAB	**Tennant Creek**	**32.72**	**265**			P	**P**	**12 19 17.8**	**-1.5**
WRAB						IAmb	IAmb	12 19 30.4	
	comp=Z,10nm,1.4s								
WRA	**Warramunga Arr**	**32.73**	**265**			P	**P**	**12 19 17.7**	**-1.7**
	comp=Z,1.3nm,0.9s,baz=92,slow=8.3,SNR=9.3								
	comp=Z,1.3nm,0.9s								
WRA	**Warramunga Arr**	**32.73**	**265**			P	**P**	**12 19 17.9**	**-1.4**
AS31	**Alice Springs**	**32.85**	**258**			P	**P**	**12 19 19.9**	**-0.6**
ASAR	**Alice Springs**	**32.85**	**258**			P	**P**	**12 19 19.6**	**-0.8**
FORT	**Forrest**	**38.34**	**246**			P	**P**	**12 20 06.6**	**-0.8**
KNRA	**Kununurra**	**38.71**	**270**			P	**P**	**12 20 10.4**	**-0.3**
KNRA						IAmb	IAmb	12 20 23.2	
	comp=Z,6.9nm,0.9s								
PSA00	**Pilbara Seismi**	**45.97**	**259**			P	**P**	**12 21 11.8**	**+2.0**
PSA00						IAmb	IAmb	12 21 36.4	
	comp=Z,2.9nm,0.8s								
NWAO	**Narrogin (SRO)**	**47.66**	**244**			P	**P**	**

comp=Z,0.3nm,0.6s,baz=258,slow=4.5,SNR=1.8
comp=Z,0.3nm,0.6s
ARCES ARCESS Array B 126.18 345 PKP **PKPdf 12 32 23.7 -1.7**
comp=Z,3.1nm,1.0s,baz=45,slow=1.7,SNR=1.9
DPC Dobruska-Polom 143.11 330 *e*PKP **PKiKP 12 33 01.0 +0.2**
NKC Novy Kostel 144.91 333 *e*PKP **PKiKP 12 33 08.9 +4.4**
CONA Conrad Observa 144.98 328 *e*P **PKPab 12 33 00.3 +0.1**
comp=Z,0.6nm,0.6s
CKRC Cesky Krumlov 145.12 330 *e*PKP **PKiKP 12 33 09.2 +4.2**
KHC Kasperske Hory 145.23 331 *e*PKP **PKiKP 12 33 09.1 +3.9**
GERES GERESS Array B 145.38 331 PKPbc **PKPbc 12 33 00.5 -1.0**
comp=Z,0.8nm,0.6s,baz=35,slow=4.9,SNR=6.3
GERES GERESS Array B 145.38 331 PKPbc 12 33 00.3 -1.2
MOA Molln 145.82 329 *e*P **PKPdf 12 33 02.4 0.0**
comp=Z,4.7nm,1.2s
WATA Walderalm 147.46 331 *e*P **PKPdf 12 33 06.5 +1.2**
comp=Z,3.3nm,1.0s
MOTA Moosalm 147.67 331 *e*P **PKPdf 12 33 07.1 +1.5**
comp=Z,3.3nm,0.9s
SQTA Sankt Quirin 147.71 331 *e*P **PKPdf 12 33 06.3 +0.6**
comp=Z,1.1nm,0.5s
FETA Feichten 148.08 331 *e*P **PKPdf 12 33 08.5 +2.2**
comp=Z,4.6nm,1.1s

*IDC **19** 12:17:49.9±0.8,20°.24S×168°.91E,h0km,mb4.3/17, mbtmp4.3/18,ML4.2/1,MS4.4/31,Error ellipse: s-maj=24.2km s-min=17.6km az=146.0*
*NEIC **19** 12:17:53.4±2.8,20°.45S±0°.10×168°.61E±0°.10,h10km±1km, mb4.9/42,Error ellipse: s-maj=16.9km s-min=15.4km az=151.0*
*NOU **19** 12:17:54.4,20°.32S×168°.67E,h0km,mb4.8/23,Loyalty Islands*
*BJI **19** 12:17:57.0±0.0,20°.30S×168°.70E,h57km,mb4.7/23, mB5.2/9,Ms5.1/2,Ms7 4.7/2*
*GCMT **19** 12:17:59.4±0.4,20°.26S±0°.03×168°.43E±0°.02,h35km±1km, MW5.3/65,Moment Tensor Solution. s24,c27; s65,c77; Duration: 1§1 Moment tensor: Scale 10^17^Nm; Mrr0.86±.09; Mθθ0.24±.05; Mϕϕ-1.10±.05; Mrθ0.14±.06; Mθϕ0.30±.05; Mϕr-0.55±.04; Best double couple: M◎1.15900×10^17^ NP1◎s350.00000°,δ30.00000°, λ93.00000°. NP2◎s167.00000°,δ60.00000°,λ88.00000°. Principal axes: T 1.0080, Plg75.0000°, Azm71.0000°; N 0.3070, Plg2.0000°, Azm167.0000°; P -1.3110, Plg15.0000°, Azm258.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 19 12:17:54.9±0.4,20°.30S±0°.06×168°.74E±0°.06,h26km,n173,
σ1§70/150,mb4.8/39,MS4.5/29,8D,Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res ISC
MARNC	**Mare, Loyalty**	**1.35**	**209**	P		**Pn**		**12 18 15.8**	**-2.2**
PINNC	**Pines Island,**	**2.59**	**207**	P		**Pn**		**12 18 35.7**	**+0.5**
DZM	**Mont Dzumac**	**2.77**	**230**	*e*Pn		**Pn**		**12 18 37.6**	**-0.1**
	2μm,1.1s								
DZM	**Mont Dzumac**	**2.77**	**230**	Pn		**Pn**		**12 18 36.5**	**-1.2**
	34nm,0.3s,baz=87,slow=8.7,SNR=38								
DZM				Sn		**Sn**		**12 19 09.7**	**-0.7**
	138nm,0.3s,baz=341,slow=22,SNR=8.2								
	168nm,0.5s								
NOUC	**Port Laguerre**	**2.89**	**231**	P		**Pn**		**12 18 39.8**	**+0.5**
KOUNC	**Koumac, New Ca**	**4.18**	**266**	P		**Pn**		**12 18 57.6**	**+0.6**
MSVF	**Nonsavu**	**9.17**	**75**	Pn		**Pn**		**12 20 08.7**	**+3.0**
	0.2nm,0.3s,baz=216,slow=8.2,SNR=6.3								
MSVF				LR		LR		12 22 55.7	
	comp=Z,8μm,18.4s,baz=260,slow=34								
MSVF	**Nonsavu**	**9.17**	**75**			**Pn**		**12 20 07.8**	**+2.2**
DGTI	**Dogotuki**	**11.18**	**71**	P		**Pn**		**12 20 36.5**	**+3.4**
	69nm,1.4s								
TAVE	**Taveuni**	**11.35**	**73**	P		**Pn**		**12 20 39.7**	**+4.3**
	116nm,1.4s								
HNR	**Honiara**	**13.74**	**321**	LR		LR		12 25 33.4	
	comp=Z,902nm,19.6s,baz=140,slow=34								
RAO	**Raoul Island**	**15.03**	**129**	LR		LR		12 25 48.6	
	comp=Z,2μm,21.1s,baz=169,slow=32								
RAO	**Raoul Island**	**15.03**	**129**	Pn		**Pn**		**12 21 25.1**	**-0.5**
OUZ	**Omahuta**	**15.46**	**165**	Pn		**Pn**		**12 21 29.6**	**-1.6**
EIDS	**Eidsvold**	**17.04**	**249**	P		**Pn**		**12 21 50.6**	**-0.8**
ARMA	**Armidale**	**18.43**	**233**	P		**Pn**		**12 22 11.2**	**+2.5**
	baz=19,SNR=5.0								
ARMA	**Armidale**	**18.43**	**233**	P		**P**		**12 22 06.1**	**-2.4**
HIZ	**Hauiti**	**18.90**	**165**	P		**Pn**		**12 22 15.2**	**+1.0**
HIZ				IAmb		IAmb		12 22 19.2	
	comp=Z,135nm,1.4s								
URZ	**Urewera**	**19.31**	**160**	P		**Pn**		**12 22 20.5**	**+1.4**
	comp=Z,34nm,1.0s,baz=304,slow=22,SNR=9.9								
URZ				LR		LR		12 29 05.7	
	comp=Z,2μm,18.4s,baz=31,slow=35								
URZ	**Urewera**	**19.31**	**160**	P		**Pn**		**12 22 21.2**	**+2.1**
URZ				IAmb		IAmb		12 22 22.8	
	comp=Z,58nm,1.1s								
RMQ	**Roma**	**19.34**	**248**	P		**Pn**		**12 22 21.7**	**+2.1**
	baz=20,SNR=5.3								
AFI	**Afiamalu**	**19.67**	**74**	LR		LR		12 28 20.4	
	comp=Z,2μm,19.6s,baz=284,slow=32								
AFI	**Afiamalu**	**19.67**	**74**	P		**Pn**		**12 22 27.3**	**+3.6**
AFI				IAmb		IAmb		12 22 27.9	
	comp=Z,91nm,1.2s								
BKZ	**Black Stump Fm**	**19.95**	**162**	P		**Pn**		**12 22 27.7**	**+0.9**
BKZ				IAmb		IAmb		12 22 28.2	
	comp=Z,55nm,1.2s								
BKZ	**Black Stump Fm**	**19.95**	**162**	P		**Pn**		**12 22 28.3**	**+1.5**
CTA	**Charters Tower**	**21.10**	**267**	P		**P**		**12 22 39.5**	**+1.9**
	comp=Z,22nm,0.9s,baz=86,slow=11,SNR=13								
CTA				LR		LR		12 30 20.2	
	comp=Z,1μm,20.1s,baz=116,slow=35								
	comp=Z,22nm,0.9s								
CTA	**Charters Tower**	**21.10**	**267**	P		**P**		**12 22 40.6**	**+2.9**
CTAO	**Charters Tower**	**21.10**	**267**	P		**P**		**12 22 39.6**	**+1.9**
CTAO	**Charters Tower**	**21.10**	**267**	P		**P**		**12 22 40.7**	**+3.0**
KRVT	**Keravat (AS076**	**22.75**	**312**	P		**P**		**12 22 54.6**	**-0.7**
	comp=Z,24nm,1.0s,baz=216,slow=19,SNR=6.1								
	comp=Z,24nm,1.0s								
CAN	**Canberra**	**22.93**	**225**	P		**P**		**12 22 59.9**	**+2.8**
MTSU	**Mount Surprise**	**23.16**	**271**	P		**P**		**12 23 01.4**	**+1.9**
	baz=23,SNR=25								
MTSU	**Mount Surprise**	**23.16**	**271**	P		**P**		**12 23 01.7**	**+2.2**
QLP	**Quilpie**	**23.31**	**250**	P		**P**		**12 23 02.4**	**+1.4**
	baz=24,SNR=8.9								
QLP	**Quilpie**	**23.31**	**250**	P		**P**		**12 23 03.9**	**+2.9**
PMG	**Port Moresby**	**23.47**	**294**	P		**P**		**12 23 02.7**	**+0.1**
	comp=Z,34nm,1.1s,baz=102,slow=8.2,SNR=8.5								
PMG				LR		LR		12 31 36.5	
	comp=Z,1μm,18.1s,baz=120,slow=35								
	comp=Z,34nm,1.1s								
PMG	**Port Moresby**	**23.47**	**294**	P		**P**		**12 23 03.2**	**+0.5**
PMG				IAmb		IAmb		12 23 06.0	
	comp=Z,33nm,1.0s								
PMG	**Port Moresby**	**23.47**	**294**	P		**P**		**12 23 06.1**	**+3.4**
PMG	**Port Moresby**	**23.47**	**294**	P		**P**		**12 23 06.0**	**+3.4**
CMSA	**Cobar Meteorol**	**23.50**	**237**	P		**P**		**12 23 05.3**	**+2.4**
	baz=24,SNR=9.9								
CMSA	**Cobar Meteorol**	**23.50**	**237**	P		**P**		**12 23 05.8**	**+3.0**
COEN	**Coen**	**25.21**	**280**	P		**P**		**12 23 20.3**	**+1.5**
	baz=25,SNR=5.0								
COEN	**Coen**	**25.21**	**280**	P		**P**		**12 23 18.0**	**-0.8**
COEN				IAmb		IAmb		12 23 23.4	
	comp=Z,37nm,1.1s								
COEN	**Coen**	**25.21**	**280**	P		**P**		**12 23 22.6**	**+3.9**
TOO	**Toolangi**	**26.53**	**225**	P		**P**		**12 23 27.9**	**-2.6**
STKA	**Stephens Creek**	**26.89**	**239**	P		**P**		**12 23 34.8**	**+1.0**
	comp=Z,6.2nm,0.9s,baz=43,slow=5.8,SNR=8.4								
STKA				LR		LR		12 34 00.7	
	comp=Z,957nm,19.7s,baz=162,slow=36								
	comp=Z,6.2nm,0.9s								
STKA	**Stephens Creek**	**26.89**	**239**	P		**P**		**12 23 35.2**	**+1.4**
	baz=27,SNR=6.9								
STKA	**Stephens Creek**	**26.89**	**239**	P		**P**		**12 23 34.8**	**+1.0**
STKA	**Stephens Creek**	**26.89**	**239**	P		**P**		**12 23 36.9**	**+3.1**
QIS	**Mount Isa**	**27.29**	**264**	P		**P**		**12 23 40.7**	**+3.2**
RAR	**Rarotonga**	**29.43**	**97**	LR		LR		12 33 31.0	
	comp=Z,494nm,19.0s,baz=291,slow=32								
HTT	**Hallett**	**29.52**	**238**	P		**P**		**12 24 00.3**	**+3.0**
	baz=30,SNR=3.2								
OOD	**Oodnadatta**	**31.02**	**250**	P		**P**		**12 24 13.8**	**+3.2**
BBOO	**Buckleboo**	**31.64**	**240**	P		**P**		**12 24 15.5**	**-0.5**
BBOO				IAmb		IAmb		12 24 30.0	
	comp=Z,17nm,1.0s								
BBOO	**Buckleboo**	**31.64**	**240**	P		**P**		**12 24 19.4**	**+3.4**
WR0	**Warramunga Arr**	**32.08**	**265**	P		**P**		**12 24 19.3**	**-0.7**
WR0				IAmb		IAmb		12 24 21.9	
	comp=Z,10nm,0.8s								
WB0	**Warramunga Arr**	**32.24**	**265**	P		**P**		**12 24 21.0**	**-0.4**
WB0				IAmb		IAmb		12 24 23.6	
	comp=Z,11nm,0.8s								
WB2	**Warramunga Arr**	**32.26**	**265**	P		**P**		**12 24 20.8**	**-0.7**
	baz=32								
WB2	**Warramunga Arr**	**32.26**	**265**	P		**P**		**12 24 20.0**	**-1.5**
WB2				IAmb		IAmb		12 24 23.4	
	comp=Z,9.7nm,0.9s								
WRAB	**Tennant Creek**	**32.26**	**265**	P		**P**		**12 24 21.0**	**-0.6**
WRAB				IAmb		IAmb		12 24 27.9	
	comp=Z,17nm,1.2s								
WRA	**Warramunga Arr**	**32.27**	**265**	P		**P**		**12 24 20.6**	**-1.1**
	comp=Z,13nm,1.1s,baz=91,slow=8.4,SNR=39								
WRA				LR		LR		12 37 30.5	
	comp=Z,1μm,19.8s,baz=159,slow=36								
	comp=Z,13nm,1.1s								
WRA	**Warramunga Arr**	**32.27**	**265**	P		**P**		**12 24 20.9**	**-0.8**
AS31	**Alice Springs**	**32.43**	**258**	P		**P**		**12 24 22.3**	**-0.7**
ASAR	**Alice Springs**	**32.43**	**258**	P		**P**		**12 24 23.0**	**0.0**
MULG	**Mulgathing**	**32.78**	**245**	P		**P**		**12 24 29.6**	**+3.6**
MTN	**Manton Dam**	**36.73**	**276**	P		**P**		**12 25 00.3**	**0.0**
MTN				IAmb		IAmb		12 25 07.3	
	comp=Z,34nm,1.4s								
WRKA	**Warakurna**	**37.52**	**255**	P		**P**		**12 25 07.5**	**+0.5**
	baz=38,SNR=5.9								
KNRA	**Kununurra**	**38.23**	**270**	P		**P**		**12 25 13.6**	**+0.5**
	baz=38,SNR=4.0								
KNRA	**Kununurra**	**38.23**	**270**	P		**P**		**12 25 12.1**	**-0.9**
KNRA				IAmb		IAmb		12 25 26.7	
	comp=Z,24nm,1.3s								
TBI	**Tubuai**	**38.83**	**102**	*e*LR		LR		12 35 56.5	
	comp=Z,878nm,26.8s								
PPT2	**Papeete2**	**39.45**	**93**	*e*LR		LR		12 36 14.9	
	comp=Z,1μm,25.0s								
PPT	**Papeete**	**39.45**	**93**	LR		LR		12 38 34.5	
	comp=Z,250nm,20.5s,baz=302,slow=32								
GUMO	**Guam**	**41.05**	**323**	LR		LR		12 42 30.0	
	comp=Z,419nm,18.7s,baz=135,slow=36								
PSA00	**Pilbara Seismi**	**45.53**	**259**	P		**P**		**12 26 11.5**	**-1.2**
PSA00				IAmb		IAmb		12 26 20.1	
	comp=Z,17nm,1.4s								
MBWA	**Marble Bar**	**45.70**	**260**	P		**P**		**12 26 12.7**	**-1.3**
NWAO	**Narrogin (SRO)**	**47.31**	**244**	P		**P**		**12 26 25.5**	**-1.0**
KAPI	**Kappang**	**49.94**	**281**	LR		LR		12 50 41.7	
	comp=Z,471nm,18.2s,baz=218,slow=39								
VNDA	**Vanda**	**57.36**	**182**	P		**P**		**12 27 39.8**	**-0.5**
	comp=Z,0.7nm,0.8s,baz=11,slow=7.9,SNR=3.0								
VNDA				LR		LR		12 51 02.9	
	comp=Z,692nm,18.3s,baz=202,slow=35								
	comp=Z,0.7nm,0.8s								
VNDA	**Vanda**	**57.36**	**182**	P		**P**		**12 27 39.9**	**-0.5**
SBA	**Scott Base**	**57.60**	**180**	P		**P**		**12 27 42.8**	**+0.8**
CASY	**Casey**	**58.97**	**204**	P		**P**		**12 27 51.6**	**-0.1**
CASY				IAmb		IAmb		12 27 52.4	
	comp=Z,11nm,1.1s								
MJAR	**Matsushiro Arr**	**63.47**	**333**	P		**P**		**12 28 20.9**	**-1.8**
	comp=Z,3.2nm,1.1s,baz=143,slow=6.0,SNR=4.4								
	comp=Z,3.2nm,1.1s								
ASAJ	**Asahikawa**	**68.43**	**340**	LR		LR		12 53 53.6	
	comp=Z,187nm,21.1s,baz=160,slow=32								
KSRS	**Korea Array**	**69.12**	**326**	P		**P**		**12 28 58.0**	**-0.8**
	comp=Z,0.7nm,0.9s,baz=134,slow=8.7,SNR=1.9								
KSRS				LR		LR		12 57 42.8	
	comp=Z,121nm,19.1s,baz=160,slow=35								
	comp=Z,0.7nm,0.9s								
KSAR	**Wonju Array Be**	**69.13**	**326**	P		**P**		**12 28 59.1**	**+0.3**
QSPA	**South Pole Qui**	**69.76**	**180**	P		**P**		**12 29 02.2**	**-0.4**
NJ2	**Nanjing**	**70.65**	**317**	*e*P		**P**		**12 29 09.0**	**+0.7**
NJ2				pmax		pmax			
	comp=Z,7.0nm,0.6s								
USRK	**Ussuriysk Ar.**	**72.47**	**333**	P		**P**		**12 29 18.0**	**-1.0**
	comp=Z,6.6nm,1.0s,baz=97,slow=4.4,SNR=7.2								
	comp=Z,6.6nm,1.0s								
USRK	**Ussuriysk Ar.**	**72.47**	**333**	P		**P**		**12 29 19.8**	**+0.8**
SHEM	**Shemya Is, Ala**	**72.87**	**3**	LR		LR		12 55 25.4	
	comp=Z,192nm,21.2s,baz=113,slow=31								
PEA0B	**Petropavlovsk-**	**73.73**	**353**	P		**P**		**12 29 29.0**	**+2.7**
PEA0B				IAmb		IAmb		12 29 31.7	
	comp=Z,17nm,1.2s								
PETK	**Petropavlovsk-**	**73.73**	**353**	P		**P**		**12 29 26.2**	**-0.1**
	comp=Z,3.5nm,1.0s,baz=170,slow=9.8,SNR=4.7								
	comp=Z,3.5nm,1.0s								
PETK	**Petropavlovsk-**	**73.73**	**353**	P		**P**		**12 29 26.0**	**-0.3**
RPN	**Rapa Nui**	**74.10**	**113**	LR		LR		12 54 39.1	
	comp=Z,215nm,18.6s,baz=252,slow=30								
CN2	**Changchun**	**75.12**	**329**	*e*P		**P**		**12 29 33.3**	**-1.3**
CN2				SKS		SKSac		12 39 31.1	-11
CN2				LR		LR			
	comp=Z,210nm,17.0s								
CN2				LR		LR			
	comp=Z,390nm,17.0s								
CN2				LR		LR			
	comp=Z,180nm,17.0s								
LYN	**LuoYang**	**76.38**	**315**	*e*P		**P**		**12 29 42.8**	**+0.8**
KLR	**Kul'dur**	**76.64**	**336**	P		**P**		**12 29 41.9**	**-1.2**
	comp=Z,1.0nm,0.5s,baz=186,slow=2.8,SNR=7.1								
	comp=Z,1.0nm,0.5s								
BJI	**Beijing**	**77.47**	**321**	P		**P**		**12 29 48.5**	**+0.5**
BJI				pmax		pmax			
	comp=Z,7.0nm,1.2s								
CMAR	**Chiang Mai Arr**	**78.51**	**295**	P		**P**		**12 29 55.0**	**+0.7**
	comp=Z,1.1nm,0.8s,baz=122,slow=4.5,SNR=8.8								
	comp=Z,1.1nm,0.8s								
CMAR	**Chiang Mai Arr**	**78.51**	**295**	P		**P**		**12 29 55.3**	**+1.0**
PZH	**PanZhiHua**	**79.89**	**303**	P		**P**		**12 30 03.8**	**+2.0**
PZH				pmax		pmax			
	comp=Z,10.0nm,0.8s								
PZH				pmax		pmax			
	comp=Z,100nm,4.9s								
XLT	**XiLinHaoTe**	**80.03**	**324**	*e*P		**P**		**12 30 03.8**	**+1.7**
XLT				pP		pwP		12 30 21.6	+6.0
XLT				S		**S**		**12 40 01.0**	**-3.7**
XLT				pmax		pmax			
	comp=Z,13nm,0.5s								
XLT				pmax		pmax			
	comp=Z,260nm,10.6s								
HHC	**Hu-ho-hao-te**	**80.72**	**320**	*e*P		**P**		**12 30 07.1**	**+1.1**
HHC				pmax		pmax			
	comp=Z,25nm,0.9s								
BELA	**Belgrano 2**	**81.08**	**175**	P		**P**		**12 30 06.7**	**-0.6**
LZH	**Lanzhou**	**83.09**	**312**	*e*P		**P**		**12 30 20.3**	**+1.7**
LZH				pmax		pmax			
	comp=Z,17nm,1.1s								
SEY	**Seymchan**	**83.96**	**353**	LR		LR		13 07 42.2	
	comp=Z,222nm,18.1s,baz=154,slow=36								
ULN	**Ulaanbaatar**	**87.44**	**324**	P		**P**		**12 30 40.1**	**+0.1**
TROLL	**Troll, Antarti**	**87.44**	**184**	P		**P**		**12 30 38.8**	**-1.0**
GTA	**Gaotai**	**87.51**	**314**	*e*P		**P**		**12 30 41.5**	**+0.9**
GTA				pP		sP		12 30 51.1	+1.5
GTA				sP		pwP		12 31 02.5	+7.9
GTA				pmax		pmax			
	comp=Z,4.0nm,1.2s								
YAK	**Yakutsk**	**87.74**	**343**	LR		LR		13 04 41.5	
	comp=Z,188nm,21.9s,baz=90,slow=32								
SONM	**Songino Array**	**87.78**	**323**	P		**P**		**12 30 40.5**	**-1.2**
	comp=Z,4.5nm,1.0s,baz=141,slow=4.8,SNR=21								
	comp=Z,4.5nm,1.0s								
SONM	**Songino Array**	**87.78**	**323**	P		**P**		**12 30 41.8**	**+0.1**
SNAA	**Sanae**	**88.08**	**183**	LR		LR		13 08 25.7	
	comp=Z,170nm,18.7s,baz=206,slow=34								
SNAA	**Sanae**	**88.08**	**183**	P		**P**		**12 30 42.2**	**-0.6**
CMB	**Columbia Colle**	**88.21**	**48**	P		**P**		**12 30 42.9**	**-1.0**
YBH	**Yreka Blue Hor**	**88.39**	**44**	P		**P**		**12 30 42.2**	**-2.5**
	comp=Z,3.8nm,1.1s,baz=289,slow=0.5,SNR=4.8								
	comp=Z,3.8nm,1.1s								
YBH	**Yreka Blue Hor**	**88.39**	**44**	P		**P**		**12 30 44.8**	**+0.1**
YBH				IAmb		IAmb		12 30 45.2	
	comp=Z,11nm,1.3s								
VNA3	**Neumayer Olymp**	**88.69**	**181**	P		**P**		**12 30 44.6**	**-1.0**
MDPB	**Devils Postpil**	**88.95**	**49**	P		**P**		**12 30 47.0**	**-0.6**
MDPB				IAmb		IAmb		12 30 47.8	
	comp=Z,6.8nm,1.2s								
OMMB	**Old Mammoth Mi**	**89.00**	**49**	P		**P**		**12 30 46.4**	**-1.5**
OMMB				IAmb		IAmb		12 30 48.1	
	comp=Z,8.3nm,1.5s								
BEKR	**Beckworth**	**89.08**	**47**	P		**P**		**12 30 47.4**	**-0.7**
BEKR				IAmb		IAmb		12 30 48.2	
	comp=Z,8.5nm,1.4s								
PFO	**Pinyon Flats O**	**89.12**	**54**	LR		LR		13 03 40.3	
	comp=Z,149nm,19.2s,baz=252,slow=31								
VNA1	**Neumayer--Stat**	**89.27**	**181**	P		**P**		**12 30 47.4**	**-0.8**
J04D	**Umpqua Nationa**	**89.50**	**43**	P		**P**		**12 30 50.1**	**+0.1**
LHV	**Little Huntoon**	**89.63**	**49**	P		**P**		**12 30 50.2**	**-0.3**
LHV				IAmb		IAmb		12 30 51.1	
	comp=Z,6.8nm,1.1s								
NVAR	**Mina Array Bea**	**89.85**	**49**	P		**P**		**12 30 50.9**	**-0.9**
	comp=Z,3.4nm,1.1s,baz=229,slow=7.0,SNR=17								
NVAR				LR		LR		13 03 04.2	
	comp=Z,215nm,21.1s,baz=252,slow=30								
	comp=Z,3.4nm,1.1s								
NVAR	**Mina Array Bea**	**89.85**	**49**	P		**P**		**12 30 51.0**	**-0.8**
LPIG	**La Paz**	**90.30**	**64**	LR		LR		13 02 49.8	
	comp=Z,254nm,19.3s,baz=229,slow=30								
BBB	**Bella Bella**	**90.62**	**33**	LR		LR		13 06 43.2	
	comp=Z,196nm,18.5s,baz=240,slow=32								
PALK	**Pallekele**	**90.66**	**277**	LR		LR		13 10 51.5	
	comp=Z,114nm,21.9s,baz=209,slow=35								
ILAR	**Eielson Array**	**91.38**	**17**	P		**P**		**12 30 57.3**	**-0.7**
	comp=Z,0.8nm,0.9s,baz=322,slow=33,SNR=7.9								
ILAR				LR		LR		13 10 35.9	
	comp=Z,199nm,18.0s,baz=205,slow=35								
	comp=Z,0.8nm,0.9s								
ILAR	**Eielson Array**	**91.38**	**17**	P		**P**		**12 30 54.6**	**-3.4**
ELK	**Elko**	**92.98**	**48**	LR		LR		13 07 04.6	
	comp=Z,152nm,18.8s,baz=224,slow=32								
TIXI	**Tiksi**	**95.68**	**348**	LR		LR		13 14 26.8	
	comp=Z,94nm,18.8s,baz=180,slow=36								
WMQ	**Urumqi**	**97.60**	**314**	*e*P		Pdif		12 31 27.9	+0.7
PDAR	**Pinedale Array**	**97.68**	**47**	LR		LR		13 10 26.3	
	comp=Z,57nm,18.1s,baz=272,slow=32								
TXAR	**Lajitas Array**	**97.68**	**62**	P		**P**		**12 31 24.7**	**-3.1**
	comp=Z,0.2nm,0.9s,baz=255,slow=3.5,SNR=2.0								
TXAR				LR		LR		13 09 43.1	
	comp=Z,230nm,18.3s,baz=248,slow=32								
	comp=Z,0.2nm,0.9s								
ARCES	**ARCESS Array B 125.97 345**			PKP		**PKPdf**		**12 36 53.5**	**-0.4**
	comp=Z,2.7nm,0.8s,baz=48,slow=1.3,SNR=2.1								
ARCES	**ARCESS Array B 125.97 345**					**PKPdf**		**12 36 52.9**	**-1.0**
FINES	**FINESS Array B 131.38 337**			PKP		**PKPdf**		**12 37 04.4**	**0.0**
	comp=Z,1.6nm,0.9s,baz=48,slow=2.1,SNR=1.7								
KRLC	**Kraliky**	**142.90**	**330**	*e*PKP		**PKiKP**		**12 37 33.8**	**+4.5**
DPC	**Dobruska-Polom**	**142.92**	**331**	*e*PKP		**PKPdf**		**12 37 22.6**	**-3.5**
DPC				*ex*		x		12 37 34.2	
BRG	**Berggiesshubel**	**143.60**	**333**	*e*PKP		PKPbc		12 37 24.3	-0.3
BRG				Amp				12 37 25.9	
	comp=Z,16nm,1.6s								
CLL	**Collm**	**143.67**	**334**	*i* PKPdf		**PKiKP**		**12 37 29.3**	**-1.4**
NKC	**Novy Kostel**	**144.72**	**333**	*e*PKP		**PKPab**		**12 37 27.9**	**-0.1**
RONA	**Rosalia, Austr**	**144.73**	**327**	*e*P		PKPbc		12 37 28.4	+0.1
	comp=Z,14nm,1.2s,SNR=11								
CONA	**Conrad Observa**	**144.80**	**328**	*e*P		PKPbc		12 37 28.5	0.0
	comp=Z,25nm,1.4s,SNR=11								
CKRC	**Cesky Krumlov**	**144.93**	**330**	*e*PKP		**PKPab**		**12 37 28.4**	**-0.4**
CKRC				*ex*		x		12 37 38.4	
KHC	**Kasperske Hory**	**145.04**	**331**	*e*PKP		**PKPbc**		**12 37 29.2**	**0.0**
KHC				*ex*		x		12 37 39.5	
GERES	**GERESS Array B**	**145.19**	**331**	PKPbc		**PKPbc**		**12 37 29.5**	**-0.3**
	comp=Z,2.5nm,1.0s,baz=90,slow=0.4,SNR=16								
GERES	**GERESS Array B**	**145.19**	**331**			**PKPbc**		**12 37 29.7**	**-0.1**
MOA	**Molln**	**145.63**	**329**	*e*P		**PKPdf**		**12 37 30.7**	**-0.2**
	comp=Z,23nm,1.4s,SNR=14								
BIOA	**Bad Ischl, Aus**	**146.05**	**329**	*e*P		**PKPdf**		**12 37 31.7**	**+0.1**
	comp=Z,3.2nm,0.6s								
SOKA	**Soboth**	**146.05**	**327**	*e*P		**PKPdf**		**12 37 31.8**	**+0.1**
	comp=Z,14nm,1.6s,SNR=7.1								
MYKA	**Terra Mystica**	**146.79**	**328**	*e*P		**PKPdf**		**12 37 33.4**	**+0.4**
	comp=Z,2.3nm,0.5s								
MEM	**Membach**	**146.82**	**340**	*d*PKP		**PKPbc**		**12 37 34.4**	**-0.1**
BSTI	**Sart Tilman**	**146.98**	**340**	*d*PKP		**PKPbc**		**12 37 34.3**	**-0.7**
BHOU	**Houvegnez**	**147.04**	**340**	*d*PKP		**PKPbc**		**12 37 35.4**	**+0.2**
ABTA	**Abfaltersbach**	**147.26**	**329**	*e*P		**PKPbc**		**12 37 35.4**	**-0.7**
	comp=Z,6.5nm,1.0s								
WATA	**Walderalm**	**147.27**	**331**	*e*P		**PKPbc**		**12 37 35.0**	**-1.1**
	comp=Z,9.4nm,1.3s								
WTTA	**Wattenberg**	**147.30**	**331**	*e*P		**PKPbc**		**12 37 35.6**	**-0.7**
	comp=Z,22nm,1.4s,SNR=6.2								
SNF	**Seneffe**	**147.44**	**341**	*d*PKP		**PKPbc**		**12 37 36.2**	**0.0**
RCHB	**Rochefort

comp=Z,0.4nm,0.5s
CMAR Chiang Mai Arr 78.93 295 P P 12 35 54.8 -0.6
TROLL Troll, Antarti 86.95 184 P P 12 36 39.3 +3.1
SNAA Sanae 87.58 183 P P 12 36 38.7 -0.5
SNAA IAmb IAmb 12 36 59.9
comp=Z,3.5nm,1.3s
VNA3 Neumayer Olymp 88.18 180 P P 12 36 44.7 +2.7
SONM Songino Array 88.33 323 P P 12 36 43.3 +0.2
comp=Z,0.7nm,0.7s,baz=163,slow=5.3,SNR=2.2
comp=Z,0.7nm,0.7s
SONM Songino Array 88.33 323 P P 12 36 44.6 +1.5
NVAR Mina Array Bea 90.03 49 P P 12 36 51.0 -0.4
comp=Z,0.3nm,0.6s,baz=233,slow=5.4,SNR=3.6
comp=Z,0.3nm,0.6s
NVAR Mina Array Bea 90.03 49 P P 12 36 50.4 -1.0
ILAR Eielson Array 91.80 17 P P 12 36 57.8 -0.9
comp=Z,0.3nm,0.7s,baz=235,slow=3.2,SNR=1.5
comp=Z,0.3nm,0.7s
GERES GERESS Array B 145.75 331 PKPbc PKPdf 12 43 29.0 -1.0
comp=Z,0.4nm,0.5s,baz=54,slow=6.8,SNR=4.5
GERES GERESS Array B 145.75 331 PKPdf 12 43 28.0 -2.0

IDC 19 12:27:17.0±2.6, 20°48S×168°52E, h0km, mb3.6/2, mbtmp3.6/3, ML3.4/1, Error ellipse: s-maj=92.7km s-min=28.7km az=136.0, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.50**	**230**	Pn	Pn	12 27 59.4	+0.3
	8.1nm,0.3s,baz=55,slow=18,SNR=4.3						
DZM				Sn	Sn	12 28 30.3	-0.2
	26nm,0.3s,baz=131,slow=21,SNR=6.3						
	30nm,0.5s						
WRA	**Warramunga Arr**	**32.05**	**265**	P	P	12 33 45.6	-0.2
	0.8nm,1.1s,baz=91,slow=8.3,SNR=2.2						
	0.8nm,1.1s						
ILAR	**Eielson Array**	**91.61**	**18**	P	P	12 40 25.2	-0.2
	0.3nm,0.8s,baz=218,slow=5.7,SNR=3.0						
	0.3nm,0.8s						
GERES	**GERESS Array B**	**145.25**	**330**	PKPbc	PKPbc	12 46 55.9	-0.6
	0.2nm,0.5s,baz=27,slow=4.6,SNR=1.9						

*NEIC **19** 13:17:25.9±1.1, 21°.60N±0°.03×143°.0E±0°.1, h315km±6km, mb4.2/98, Error ellipse: s-maj=17.0km s-min=2.6km az=80.0*
*IDC **19** 13:17:25.8±1.5, 21°.59N×143°.07E, h320km±14km, mb3.6/23, mbtmp4.4/28, Error ellipse: s-maj=14.2km s-min=10.0km az=84.0*

ISC 19 13:17:25.0±0.4, 21°.62N±0°.05×142°.97E±0°.08, h311km, n140, σ0.95/142, mb4.1/62, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**5.50**	**353**	P	**Pn**	**13 18 50.0**	**+1.3**
	127nm,0.4s,baz=282,slow=24,SNR=30						
JCJ				S	**S**	**13 19 55.3**	**-0.8**
	66nm,0.3s,baz=322,slow=24,SNR=2.5						
GUMO	**Guam**	**8.19**	**167**	P	**Pn**	**13 19 22.3**	**+1.2**
	111nm,1.0s,baz=233,slow=3.6,SNR=3.9						
JHJ	**Hachijo jima 2**	**11.80**	**347**	P	**Pn**	**13 20 05.2**	**+0.3**
	96nm,0.8s,baz=73,slow=19,SNR=2.4						
JHJ				S	**S**	**13 22 11.4**	**-4.9**
	42nm,0.6s,baz=79,slow=18,SNR=1.6						
JOW	**Kunigami**	**14.37**	**294**	P	**Pn**	**13 20 38.0**	**+2.2**
	12nm,0.7s,baz=51,slow=5.6,SNR=4.2						
MJAR	**Matsushiro Arr**	**15.44**	**345**	P	**P**	**13 20 47.0**	**+0.7**
	9.4nm,0.8s,baz=162,slow=9.1,SNR=30						
MJAR				S	**S**	**13 23 28.7**	**-4.5**
	0.5nm,0.4s,baz=158,slow=30,SNR=1.8						
MJAR				ScP	**ScP**	**13 28 31.7**	**-1.7**
	1.9nm,1.2s,baz=160,slow=3.9,SNR=4.1						
MJAR	**Matsushiro Arr**	**15.44**	**345**	P	**P**	**13 20 45.9**	**-0.3**
MJAR				IAmb	IAmb	13 20 48.4	
	comp=Z,5.3nm,0.7s						
MAJO	**Matsushiro**	**15.44**	**345**	P	**P**	**13 20 46.7**	**+0.5**
MJB9	**Matsu-Tunnel**	**15.44**	**345**	P	**P**	**13 20 46.8**	**+0.5**
NACB	**Ninganchiao**	**19.86**	**281**	P	**P**	**13 21 33.3**	**-0.6**
NACB				IAmb	IAmb	13 21 35.4	
	comp=Z,24nm,1.4s						
KSCHJ	**Chungju**	**20.01**	**323**	P	**P**	**13 21 33.7**	**-1.7**
KSCHJ				IAmb	IAmb	13 21 35.4	
	comp=Z,19nm,1.3s						
YHNB	**Yeheng**	**20.09**	**283**	P	**P**	**13 21 36.3**	**-0.1**
YHNB				IAmb	IAmb	13 21 51.3	
	comp=Z,8.3nm,0.7s						
ERM	**Erimo**	**20.33**	**0**	P	**P**	**13 21 40.4**	**+1.9**
SSLB	**Suanglung**	**20.43**	**280**	P	**P**	**13 21 39.4**	**-0.3**
SSLB				IAmb	IAmb	13 21 42.5	
	comp=Z,8.0nm,0.6s						
KSRS	**Korea Array**	**20.46**	**324**	P	**P**	**13 21 40.2**	**+0.4**
	comp=Z,10nm,0.6s,baz=146,slow=8.9,SNR=77						
	comp=Z,10nm,0.6s						
KSAR	**Wonju Array Be**	**20.47**	**324**	P	**P**	**13 21 40.5**	**+0.5**
KS19	**Wonju Array Si**	**20.52**	**324**	P	**P**	**13 21 41.0**	**+0.5**
KS19				IAmb	IAmb	13 21 41.9	
	comp=Z,13nm,0.7s						
SEHB	**SEOHWA**	**20.88**	**326**	P	**P**	**13 21 43.9**	**0.0**
SEHB				IAmb	IAmb	13 21 45.8	
	comp=Z,16nm,1.2s						
USA0B	**Ussuriysk Arra**	**24.29**	**341**	P	**P**	**13 22 15.8**	**+1.0**
USA0B				IAmb	IAmb	13 22 17.9	
	comp=Z,6.7nm,0.8s						
USRK	**Ussuriysk Ar.**	**24.29**	**341**	P	**P**	**13 22 16.2**	**+1.5**
	comp=Z,4.3nm,0.6s,baz=164,slow=10,SNR=9.0						
	comp=Z,4.3nm,0.6s						
USRK	**Ussuriysk Ar.**	**24.29**	**341**	P	**P**	**13 22 15.7**	**+1.0**
KLR	**Kul'dur**	**28.96**	**345**	P	**P**	**13 22 57.3**	**+1.0**
	comp=Z,14nm,0.7s,baz=148,slow=7.9,SNR=47						
	comp=Z,14nm,0.7s						
COEN	**Coen**	**35.36**	**180**	P	**P**	**13 23 52.0**	**0.0**
SONM	**Songino Array**	**39.27**	**321**	P	**P**	**13 24 25.1**	**+0.7**
	comp=Z,0.6nm,0.4s,baz=129,slow=6.7,SNR=4.0						
	comp=Z,0.6nm,0.4s						
KNRA	**Kununurra**	**39.60**	**202**	P	**P**	**13 24 26.8**	**-0.5**
KNRA				IAmb	IAmb	13 24 27.5	
	comp=Z,12nm,0.8s						
CMAR	**Chiang Mai Arr**	**41.38**	**274**	P	**P**	**13 24 42.4**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=83,slow=6.2,SNR=9.8						
	comp=Z,0.9nm,0.7s						
CMAR	**Chiang Mai Arr**	**41.38**	**274**	P	**P**	**13 24 41.0**	**-0.9**
YAK	**Yakutsk**	**41.41**	**351**	P	**P**	**13 24 40.7**	**-0.7**
	comp=Z,7.8nm,0.6s,baz=160,slow=2.4,SNR=6.8						
	comp=Z,7.8nm,0.6s						
YAK	**Yakutsk**	**41.41**	**351**	P	**P**	**13 24 41.0**	**-0.4**
YAK				IAmb	IAmb	13 24 42.7	
	comp=Z,20nm,0.8s						
CTAO	**Charters Tower**	**41.58**	**175**	P	**P**	**13 24 43.2**	**-0.1**
SEY	**Seymchan**	**41.78**	**6**	P	**P**	**13 24 44.0**	**-0.4**
	comp=Z,2.7nm,0.9s,baz=163,slow=5.8,SNR=5.5						
	comp=Z,2.7nm,0.9s						
WB0	**Warramunga Arr**	**41.98**	**192**	P	**P**	**13 24 46.1**	**-0.5**
WR0	**Warramunga Arr**	**42.14**	**192**	P	**P**	**13 24 47.1**	**-0.8**
WRAB	**Tennant Creek**	**42.15**	**192**	P	**P**	**13 24 47.4**	**-0.5**
WRAB				IAmb	IAmb	13 24 48.2	
	comp=Z,13nm,0.7s						
WB2	**Warramunga Arr**	**42.16**	**192**	P	**P**	**13 24 47.5**	**-0.5**
WB2				IAmb	IAmb	13 24 48.4	
	comp=Z,15nm,0.8s						
WRA	**Warramunga Arr**	**42.16**	**192**	P	**P**	**13 24 47.5**	**-0.5**
	comp=Z,8.8nm,0.7s,baz=13,slow=8.5,SNR=85						
	comp=Z,8.8nm,0.7s						
UGM	**Wanagama**	**43.30**	**231**	P	**P**	**13 24 56.2**	**-1.1**
KULM	**Kulim**	**44.06**	**255**	P	**P**	**13 25 04.5**	**+1.2**
KULM				IAmb	IAmb	13 25 14.2	
	comp=Z,9.9nm,1.1s						
AS31	**Alice Springs**	**45.87**	**192**	P	**P**	**13 25 16.5**	**-0.7**
ASAR	**Alice Springs**	**45.87**	**192**	P	**P**	**13 25 16.5**	**-0.8**
EIDS	**Eidsvold**	**47.37**	**170**	P	**P**	**13 25 28.1**	**-0.6**
MBWA	**Marble Bar**	**48.20**	**210**	P	**P**	**13 25 34.5**	**-0.6**
MBWA				IAmb	IAmb	13 25 35.6	
	comp=Z,11nm,0.9s						
PSA00	**Pilbara Seismi**	**48.51**	**209**	P	**P**	**13 25 37.3**	**-0.1**
PSA00				IAmb	IAmb	13 25 38.0	
	comp=Z,9.2nm,1.0s						
BILL	**Bilibino**	**48.63**	**11**	P	**P**	**13 25 38.6**	**+0.8**
BILL				IAmb	IAmb	13 25 39.5	
	comp=Z,8.1nm,0.6s						
UNV	**Unalaska Valle**	**49.79**	**37**	P	**P**	**13 25 47.0**	**+0.4**
AKUT	**Akutan**	**50.29**	**37**	P	**P**	**13 25 51.1**	**+0.8**
TIXI	**Tiksi**	**50.70**	**354**	P	**P**	**13 25 53.1**	**-0.1**
	comp=Z,2.8nm,0.6s,baz=269,slow=23,SNR=14						
	comp=Z,2.8nm,0.6s						
TIXI	**Tiksi**	**50.70**	**354**	P	**P**	**13 25 52.9**	**-0.3**
GIRL	**Giralia**	**52.16**	**214**	P	**P**	**13 26 05.8**	**+1.3**
STKA	**Stephens Creek**	**53.21**	**181**	P	**P**	**13 26 11.1**	**-1.0**
	comp=Z,2.0nm,0.6s,baz=17,slow=6.5,SNR=7.2						
	comp=Z,2.0nm,0.6s						
STKA	**Stephens Creek**	**53.21**	**181**	P	**P**	**13 26 11.4**	**-0.7**
SDPT	**Sand Point**	**53.58**	**36**	P	**P**	**13 26 14.6**	**+0.1**
FORT	**Forrest**	**54.03**	**196**	P	**P**	**13 26 17.6**	**-0.4**
ZAA0	**Zalesovo Array**	**54.15**	**322**	P	**P**	**13 26 18.8**	**+0.2**
ZALV	**Zalesovo Beam**	**54.15**	**322**	P	**P**	**13 26 19.1**	**+0.6**
	comp=Z,3.2nm,0.5s,baz=100,slow=7.6,SNR=12						
	comp=Z,3.2nm,0.5s						
ZALV	**Zalesovo Beam**	**54.15**	**322**	P	**P**	**13 26 18.8**	**+0.2**
BBOO	**Buckleboo**	**54.53**	**187**	P	**P**	**13 26 20.5**	**-1.0**
BBOO				IAmb	IAmb	13 26 28.8	
	comp=Z,22nm,1.4s						
MK31	**Makanchi Array**	**54.60**	**313**	P	**P**	**13 26 22.7**	**+0.6**
MKAR	**Makanchi Array**	**54.60**	**313**	P	**P**	**13 26 22.9**	**+0.8**
	comp=Z,1.4nm,0.6s,baz=92,slow=9.0,SNR=16						
MKAR				PcP	**PcP**	**13 27 20.6**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=76,slow=6.4,SNR=3.8						
	comp=Z,1.4nm,0.6s						
MKAR	**Makanchi Array**	**54.60**	**313**	P	**P**	**13 26 22.8**	**+0.7**
MAKZ	**Makanchi**	**54.82**	**313**	P	**P**	**13 26 24.1**	**+0.5**
MORW	**Morawa**	**56.69**	**208**	P	**P**	**13 26 36.1**	**-0.8**
N18K	**Kilae Creek**	**57.32**	**31**	P	**P**	**13 26 41.3**	**+0.4**
N18K				IAmb	IAmb	13 26 45.3	
	comp=Z,11nm,1.1s						
KURBB	**Kurchatov Arra**	**57.45**	**317**	P	**P**	**13 26 42.2**	**+0.3**
	comp=Z,5.5nm,0.5s,baz=94,slow=7.6,SNR=32						
	comp=Z,5.5nm,0.5s						
K20K	**Telida**	**58.82**	**28**	P	**P**	**13 26 52.5**	**+1.3**
K20K				IAmb	IAmb	13 27 18.7	
	comp=Z,7.3nm,1.4s						
J20K	**Nowinta River**	**58.99**	**27**	P	**P**	**13 26 53.6**	**+1.3**
J20K				IAmb	IAmb	13 27 07.5	
	comp=Z,7.9nm,1.5s						
PPLA	**Purkeypile**	**59.54**	**29**	P	**P**	**13 26 57.4**	**+1.1**
PPLA				IAmb	IAmb	13 27 14.9	
	comp=Z,7.7nm,1.0s						
IMAR	**Indian Mountai**	**59.63**	**25**	P	**P**	**13 26 57.0**	**+0.3**
CAST	**Castle Rocks**	**59.70**	**28**	P	**P**	**13 26 58.0**	**+0.8**
CAST				IAmb	IAmb	13 26 59.2	
	comp=Z,5.2nm,0.8s						
H21K	**Melozitna Rive**	**59.92**	**26**	P	**P**	**13 26 59.6**	**+0.9**
H21K				IAmb	IAmb	13 27 00.8	
	comp=Z,3.5nm,0.6s						
I21K	**Tanana**	**60.14**	**26**	P	**P**	**13 27 01.4**	**+1.3**
I21K				IAmb	IAmb	13 27 02.1	
	comp=Z,3.3nm,0.7s						
KTH	**Kantishna Hill**	**60.24**	**28**	P	**P**	**13 27 02.1**	**+1.2**
KTH				IAmb	IAmb	13 27 28.7	
	comp=Z,7.0nm,1.2s						
BPAW	**Bear Paw Mtn.**	**60.33**	**28**	P	**P**	**13 27 02.0**	**+0.7**
BPAW				IAmb	IAmb	13 27 03.1	
	comp=Z,5.3nm,0.6s						
A21K	**Barrow**	**60.34**	**19**	P	**P**	**13 27 02.1**	**+0.8**
A21K				IAmb	IAmb	13 27 02.9	
	comp=Z,6.3nm,0.8s						
PMR	**Palmer**	**60.71**	**31**	P	**P**	**13 27 04.0**	**0.0**
PMR				IAmb	IAmb	13 27 23.8	
	comp=Z,11nm,1.3s						
SML	**Sawmill**	**61.12**	**30**	P	**P**	**13 27 07.1**	**+0.3**
SML				IAmb	IAmb	13 27 17.6	
	comp=Z,9.3nm,1.1s						
I23K	**Minto, Yukon-K**	**61.22**	**26**	P	**P**	**13 27 08.4**	**+1.1**
I23K				IAmb	IAmb	13 27 09.7	
	comp=Z,4.9nm,0.6s						
NEA2	**Nenana**	**61.24**	**27**	P	**P**	**13 27 08.1**	**+0.6**
NEA2				IAmb	IAmb	13 27 09.2	
	comp=Z,6.1nm,1.3s						
H23K	**Yukon River**	**61.28**	**26**	P	**P**	**13 27 08.9**	**+1.2**
SCM	**Sheep Creek Mo**	**61.60**	**30**	P	**P**	**13 27 10.7**	**+0.7**
MDM	**Murphy Dome**	**61.66**	**27**	P	**P**	**13 27 11.2**	**+0.9**
DHY	**Denali Highway**	**61.74**	**29**	P	**P**	**13 27 11.2**	**+0.2**
DHY				IAmb	IAmb	13 27 24.6	
	comp=Z,7.5nm,1.5s						
CCB	**Clear Creek Bu**	**61.78**	**27**	P	**P**	**13 27 11.3**	**+0.2**
TOLK	**Toolik Lake Re**	**61.86**	**23**	P	**P**	**13 27 12.4**	**+0.8**
TOLK				IAmb	IAmb	13 27 13.5	
	comp=Z,4.6nm,0.6s						
H24K	**Noodor Dome**	**61.95**	**26**	P	**P**	**13 27 13.2**	**+0.9**
IL31		**62.19**	**27**	P	**P**	**13 27 13.1**	**-0.7**
IL31				IAmb	IAmb	13 27 14.1	
	comp=Z,3.3nm,0.7s						
ILAR	**Eielson Array**	**62.19**	**27**	P	**P**	**13 27 13.0**	**-0.8**
	comp=Z,2.3nm,0.7s,baz=256,slow=5.5,SNR=31						
	comp=Z,2.3nm,0.7s						
ILAR	**Eielson Array**	**62.19**	**27**	P	**P**	**13 27 12.8**	**-1.0**
KLU	**Klutina**	**62.23**	**31**	P	**P**	**13 27 14.3**	**+0.1**
KLU				IAmb	IAmb	13 27 14.7	
	comp=Z,5.5nm,1.1s						
PAX	**Paxson**	**62.59**	**29**	P	**P**	**13 27 17.2**	**+0.6**
BRVK	**Borovoye**	**62.66**	**320**	P	**P**	**13 27 17.5**	**+0.5**
BMRM	**Bremner River**	**62.81**	**32**	P	**P**	**13 27 19.0**	**+1.1**
BMRM				IAmb	IAmb	13 27 35.4	
	comp=Z,8.7nm,1.2s						
J25K	**Salcha River,**	**62.82**	**27**	P	**P**	**13 27 17.5**	**-0.5**
N25K	**Chitina, Valde**	**62.87**	**31**	P	**P**	**13 27 19.3**	**+0.9**
N25K				IAmb	IAmb	13 27 44.7	
	comp=Z,6.8nm,1.3s						
KK31	**Karatay Array**	**62.95**	**308**	P	**P**	**13 27 19.1**	**-0.1**
RIDG	**Independent Ri**	**62.95**	**28**	P	**P**	**13 27 18.9**	**0.0**
RIDG				IAmb	IAmb	13 27 19.6	
	comp=Z,5.4nm,0.7s						
DOT	**Dot Lake**	**63.29**	**29**	P	**P**	**13 27 21.3**	**+0.3**
SCRK	**Sand Creek**	**63.35**	**28**	P	**P**	**13 27 21.5**	**-0.1**
SCRK				IAmb	IAmb	13 27 22.7	
	comp=Z,4.4nm,0.6s						
BMAR	**Burnt Mountain**	**63.49**	**24**	P	**P**	**13 27 23.7**	**+1.4**
J26L	**Joseph Creek**	**63.58**	**28**	P	**P**	**13 27 22.9**	**-0.1**
J26L				IAmb	IAmb	13 27 24.1	
	comp=Z,4.5nm,0.8s						
L27K	**Beaver Creek,**	**64.25**	**29**	P	**P**	**13 27 27.7**	**+0.4**
BCAR	**Beaver Creek A**	**64.27**	**29**	P	**P**	**13 27 27.6**	**+0.2**
TABL	**Table Mountain**	**64.49**	**32**	P	**P**	**13 27 29.3**	**+0.3**
TABL				IAmb	IAmb	13 27 56.7	
	comp=Z,5.8nm,1.0s						
DAWY	**Dawson**	**65.38**	**28**	P	**P**	**13 27 35.2**	**+0.8**
I29M	**Ogilvie Camp,**	**65.86**	**27**	P	**P**	**13 27 37.9**	**+0.4**
I29M				IAmb	IAmb	13 27 38.8	
	comp=Z,2.4nm,0.8s						
EPYK	**Eagle Plains**	**66.52**	**26**	P	**P**	**13 27 42.3**	**+0.6**
M30M	**Minto, Yukon**	**66.56**	**30**	P	**P**	**13 27 42.9**	**+0.9**
INK	**Inuvik**	**67.71**	**24**	P	**P**	**13 27 49.0**	**0.0**
	comp=Z,1.5nm,0.5s,baz=148,slow=4.1,SNR=9.1						
	comp=Z,1.5nm,0.5s						
INK	**Inuvik**	**67.71**	**24**	IAmb	IAmb	13 27 49.8	
	comp=Z,2.4nm,0.7s						
BKZ	**Black Stump Fm**	**68.12**	**152**	P	**P**	**13 27 51.3**	**-0.7**
SNZO	**South Karori**	**69.19**	**155**	P	**P**	**13 27 56.7**	**-1.6**
ABKAR	**Akbulak array**	**69.47**	**316**	P	**P**	**13 28 00.0**	**-0.1**
C36M	**Paulatuk**	**71.00**	**22**	P	**P**	**13 28 09.4**	**+0.4**
C36M				IAmb	IAmb	13 28 38.8	
	comp=Z,7.9nm,1.1s						
EUNU	**Eureka**	**75.20**	**8**	P	**P**	**13 28 33.1**	**-0.2**
EUNU				IAmb	IAmb	13 28 42.5	
	comp=Z,3.3nm,1.1s						
NLWA	**Neilton Lookou**	**76.47**	**44**	P	**P**	**13 28 42.3**	**+1.3**
YKA	**Yellowknife Ar**	**76.61**	**28**	P	**P**	**13 28 41.4**	**0.0**
	comp=Z,2.6nm,0.5s,baz=293,slow=5.5,SNR=12						
	comp=Z,2.6nm,0.5s						
KEBM	**Edson Butte**	**77.51**	**49**	P	**P**	**13 28 46.0**	**-1.0**
BUCK	**Buck Mountain**	**78.03**	**47**	P	**P**	**13 28 51.1**	**+1.3**
ARCES	**ARCESS Array B**	**78.93**	**341**	P	**P**	**13 28 54.5**	**+0.4**
	comp=Z,3.4nm,0.6s,baz=74,slow=8.1,SNR=19						
	comp=Z,3.4nm,0.6s						
ARCES	**ARCESS Array B**	**78.93**	**341**	IAmb	IAmb	13 29 00.6	
	comp=Z,17nm,1.4s						
B08A	**Colville Reser**	**79.05**	**42**	P	**P**	**13 28 55.5**	**+0.2**
B08A				IAmb	IAmb	13 28 56.7	
	comp=Z,2.6nm,0.8s						
PINE	**Pine Mountain**	**79.56**	**47**	P	**P**	**13 28 58.5**	**+0.3**
PINE				IAmb	IAmb	13 29 00.0	
	comp=Z,3.7nm,0.7s						
NEW	**Newport**	**80.47**	**42**	P	**P**	**13 29 02.6**	**-0.2**
NEW				IAmb	IAmb	13 29 04.0	
	comp=Z,2.3nm,0.6s						
BMO	**Blue Mountains**	**81.62**	**45**	P	**P**	**13 29 09.1**	**+0.1**
BMO				IAmb	IAmb	13 29 10.5	
	comp=Z,1.9nm,0.8s						
CMB	**Columbia Colle**	**81.96**	**52**	P	**P**	**13 29 11.3**	**+0.5**
CMB				IAmb	IAmb	13 29 11.9	
	comp=Z,1.9nm,0.8s						
KBZ	**Khabaz**	**82.28**	**314**	P	**P**	**13 29 12.9**	**+0.7**
	comp=Z,2.2nm,0.7s,baz=109,slow=6.6,SNR=3.9						
	comp=Z,2.2nm,0.7s						
FIA1	**FINESS Array S**	**83.16**	**334**	P	**P**	**13 29 15.7**	**-0.6**
FINES	**FINESS Array B**	**83.16**	**334**	P	**P**	**13 29 15.5**	**-0.9**
	comp=Z,3.9nm,0.7s,baz=62,slow=3.8,SNR=19						
	comp=Z,3.9nm,0.7s						
KVN	**Kaiserville**	**83.25**	**51**	P	**P**	**13 29 17.4**	**-0.2**
NVAR	**Mina Array Bea**	**83.34**	**51**	P	**P**	**13 29 17.9**	**-0.2**
	comp=Z,1.3nm,0.7s,baz=264,slow=5.5,SNR=14						
	comp=Z,1.3nm,0.7s						
LRM	**Limekiln Ridge**	**84.37**	**43**	P	**P**	**13 29 23.4**	**+0.2**
HRY	**Holter Researc**	**84.38**	**42**	P	**P**	**13 29 23.2**	**+0.2**
ELK	**Elko**	**84.62**	**48**	P	**P**	**13 29 24.8**	**+0.3**
BOZ	**Bozeman (W)**	**84.98**	**43**	P	**P**	**13 29 26.0**	**-0.1**
TPNV	**Topopah Spring**	**85.42**	**52**	P	**P**	**13 29 28.5**	**+0.1**
SUMG	**Summit**	**86.04**	**0**	P	**P**	**13 29 31.5**	**+0.5**
PDAR	**Pinedale Array**	**87.58**	**45**	P	**P**	**13 29 38.3**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=284,slow=3.6,SNR=2.1						
	comp=Z,0.2nm,0.4s						
NC405	**NORSAR Array S**	**88.72**	**339**	P	**P**	**13 29 42.8**	**-0.6**
NOA	**NORSAR Array B**	**88.94**	**339**	P	**P**	**13 29 43.2**	**-1.3**
	comp=Z,0.3nm,0.6s,baz=45,slow=4.7,SNR=1.7						
	comp=Z,0.3nm,0.6s						
TXAR	**Lajitas Array**	**98.25**	**54**	P	Pdif	13 30 28.9	+1.0
	baz=292,slow=4.8,SNR=1.2						
LPAZ	**La Paz**	**150.14**	**85**	PKPbc	**PKPbc**	**13 36 41.0**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=305,slow=0.7,SNR=6.6						

*GUC **19** 13:30:05.8±0.7, 31°.46S×68°.94W, h196km±8km, ML4.0*
*NEIC **19** 13:30:05.2±1.9, 31°.48S±0°.07×68°.6W±0°.1, h137km±9km, mb4.3/6, ML4.1(GUC), Error ellipse: s-maj=16.4km s-min=9.4km az=98.0*
*IDC **19** 13:30:05.0±0.7, 31°.57S×68°.41W, h103km±5km, mb3.4/6, mbtmp3.8/9, MS4.4/1, Error ellipse: s-maj=26.8km s-min=20.1km az=78.0*

ISC 19 13:30:04.5±0.6, 31°.41S±0°.05×68°.47W±0°.07, h111km±6km, n85, σ1.985/108, mb3.8/8, 4C-1D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CO03	**El Pedregal**	**1.99**	**286**		**Pn**	**13 30 39.7**	**+2.3**
CO03	**El Pedregal**	**1.99**	**286**	*e*P	**Pn**	**13 30 39.9**	**+2.5**
CO03				*e*S	**Sn**	**13 31 05.0**	**+2.4**
CO03				IAML		13 31 07.6	
	comp=E,2µm,0.4s						
CO01	**Juntas del Tor**	**2.00**	**315**		**Pn**	**13 30 40.8**	**+3.0**
CO01	**Juntas del Tor**	**2.00**	**315**	*i*P	**Pn**	**13 30 41.0**	**+3.3**
CO01				*e*P	**Pn**	**13 30 41.0**	**+3.3**
CO01				*i* S	**Sn**	**13 31 06.8**	**+3.7**
CO01				IAML		13 31 07.8	
	comp=N,550nm,0.6s						
CO02	**Combarbal**	**2.18**	**275**		**Pn**	**13 30 41.7**	**+1.9**
CO02	**Combarbal**	**2.18**	**275**	*e*P	**Pn**	**13 30 41.8**	**+1.9**
CO02				*e*S	**Sn**	**13 31 08.7**	**+1.8**
CO02				IAML		13 31 11.6	
	comp=N,2µm,0.4s						
VA03	**San Esteban**	**2.23**	**232**		**Pn**	**13 30 42.2**	**+1.7**
VA03	**San Esteban**	**2.23**	**232**	*e*P	**Pn**	**13 30 42.2**	**+1.7**
VA03				*i* S	**Sn**	**13 31 09.9**	**+1.9**
VA03				IAML		13 31 17.5	
	comp=E,634nm,0.6s						
GO04	**Tololo Observa**	**2.35**	**301**		**Pn**	**13 30 44.0**	**+1.8**
GO04	**Tololo Observa**	**2.35**	**301**	*e*P	**Pn**	**13 30 44.1**	**+1.8**
GO04				*e*S	**Sn**	**13 31 13.3**	**+2.1**
FCH	**Farellones**	**2.46**	**218**	*e*P	**Pn**	**13 30 45.6**	**+1.9**
FCH				*e*S	**Sn**	**13 31 16.8**	**+3.1**
PEL	**Peldehue**	**2.56**	**227**	*e*P	**Pn**	**13 30 45.8**	**+1.2**
PEL				*i* S	**Sn**	**13 31 16.5**	**+0.9**
ROCH	**El Roble**	**2.66**	**233**	*e*P	**Pn**	**13 30 46.8**	**+0.6**
ROCH				*e*S	**Sn**	**13 31 17.5**	**-0.8**
ROCH				IAML		13 31 26.2	
	comp=N,447nm,0.5s						
VA06	**Catapilco**	**2.67**	**244**		**Pn**	**13 30 45.9**	**-0.2**
VA06	**Catapilco**	**2.67**	**244**	*e*P	**Pn**	**13 30 45.9**	**-0.2**
VA06				*i* S	**Sn**	**13 31 17.3**	**-0.8**
ROC1	**El Roble**	**2.67**	**233**		**Pn**	**13 30 46.4**	**+0.1**
MT03	**Universidad Ad**	**2.71**	**219**		**Pn**	**13 30 47.6**	**+0.9**
MT03	**Universidad Ad**	**2.71**	**219**	*e*P	**Pn**	**13 30 48.5**	**+1.8**
MT03				*e*S	**Sn**	**13 31 19.9**	**+0.7**
MT03				IAML		13 31 28.9	
	comp=E,344nm,0.5s						
MT05	**Renca**	**2.76**	**224**		**Pn**	**13 30 48.0**	**+0.6**
MT05	**Renca**	**2.

VNDA	**Vanda**	**67.21**	**190**	IAmb	IAmb	13 41 05.5	
	comp=Z,1.9nm,1.2s						
TXAR	**Lajitas Array**	**69.06**	**327**	P	**P**	**13 41 01.2**	**+2.8**
	comp=Z,0.4nm,0.6s,baz=151,slow=8.1,SNR=6.4						
TXAR				pP	**pP**	**13 41 27.2**	**+0.5**
	comp=Z,0.4nm,0.7s,baz=145,slow=7.5,SNR=5.1						
	comp=Z,0.4nm,0.6s						
BOSA	**Boshof**	**78.57**	**116**	P	**P**	**13 41 54.7**	**+0.5**
	comp=Z,2.9nm,0.9s,baz=224,slow=4.1,SNR=3.9						
	comp=Z,2.9nm,0.9s						
BOSA	**Boshof**	**78.57**	**116**	P	**P**	**13 41 51.9**	**-2.3**
BOSA				IAmb	IAmb	13 41 53.8	
	comp=Z,24nm,1.5s						
TOA0	**Torodi Ar. Sit**	**80.48**	**68**	P	**P**	**13 42 02.5**	**-1.9**
TOA0				IAmb	IAmb	13 42 16.0	
	comp=Z,3.1nm,1.3s						
TORD	**Torodi Ar. Bea**	**80.48**	**68**	P	**P**	**13 42 06.3**	**+1.9**
	comp=Z,0.6nm,0.6s,baz=278,slow=5.5,SNR=5.3						
TORD				pP	**pP**	**13 42 33.2**	**-0.2**
	comp=Z,1.2nm,0.6s,baz=282,slow=5.4,SNR=6.6						
	comp=Z,0.6nm,0.6s						
PDAR	**Pinedale Array**	**82.89**	**331**	P	**P**	**13 42 18.9**	**+2.0**
	comp=Z,0.3nm,0.7s,baz=152,slow=4.0,SNR=2.3						
PDAR				pP	**pP**	**13 42 45.5**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=151,slow=2.6,SNR=2.5						
	comp=Z,0.3nm,0.7s						
NVAR	**Mina Array Bea**	**83.56**	**323**	P	**P**	**13 42 22.9**	**+2.6**
	comp=Z,0.3nm,0.6s,baz=148,slow=5.3,SNR=2.8						
	comp=Z,0.3nm,0.6s						
WRA	**Warramunga Arr**	**124.45**	**206**	PKP	**PKiKP**	**13 48 51.6**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=156,slow=1.8,SNR=7.2						
KURBB	**Kurchatov Arra**	**148.93**	**42**	PKPbc	**PKiKP**	**13 49 40.5**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=303,slow=3.0,SNR=5.9						
KURBB				pPKPbc	**pPKPbc**	**13 50 08.1**	**-0.9**
	comp=Z,1.0nm,0.7s,baz=301,slow=3.3,SNR=4.3						
KURK	**Kurchatov**	**148.94**	**42**		**PKiKP**	**13 49 40.5**	**+0.3**
ZALV	**Zalesovo Beam**	**150.43**	**33**	PKPbc	**PKiKP**	**13 49 44.1**	**+1.0**
	comp=Z,2.1nm,0.6s,baz=297,slow=4.6,SNR=10						
ZALV				pPKPbc	**pPKPbc**	**13 50 11.7**	**-1.0**
	comp=Z,1.4nm,0.6s,baz=317,slow=2.8,SNR=4.1						
MKAR	**Makanchi Array**	**152.80**	**47**	PKPbc	**PKiKP**	**13 49 49.5**	**+1.2**
	comp=Z,0.8nm,0.8s,baz=268,slow=3.6,SNR=4.9						
MKAR				PKPab	**PKPab**	**13 50 01.4**	**+1.9**
	comp=Z,0.9nm,0.8s,baz=284,slow=4.2,SNR=5.1						
MKAR				pPKPbc	**pPKPbc**	**13 50 17.5**	**-0.9**
	comp=Z,0.8nm,0.8s,baz=324,slow=3.1,SNR=3.5						

*TUL **19** 13:56:15.1±1.0,36.36°N±0.02°×96.80°W±0.03,h6km±7km, ML2.6,mb_Lg2.3/25(NEIC),Error ellipse: s-maj=4.0km s-min=1.7km az=54.0*

NEIC 19 13:56:14.9±0.7,36°38'N±0'10"×96°79'W±0'03", h10km±6km,Error ellipse: s-maj=3.1km s-min=1.2km az=74.0,Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
T35A	**Sooner Cattle**	**0.57**	**23**	Pg		Pg	13 56 26.4	+0.4
TUL1	**Leonard**	**0.94**	**120**	P		Pg	13 56 32.8	-0.1
FNO	**Franklin**	**1.23**	**204**	Pg		Pn	13 56 38.0	-0.3
U38A	**Gravette**	**1.94**	**88**			Pb	13 56 49.5	-0.9
X34A	**Smith Ranch, M**	**1.98**	**206**	Pn		Pn	13 56 49.6	+1.1
X37A	**Clayton**	**2.13**	**147**			Pn	13 56 50.5	-0.2
X37A				IAmb_Lg			13 57 24.7	
	comp=Z,15nm,0.9s							
R32A	**Long Quarter,**	**2.54**	**324**	Pn		Pn	13 56 56.6	+0.2
R32A				IAmb_Lg			13 57 35.6	
	comp=Z,7.7nm,0.7s							
MIAR	**Mount Ida**	**3.20**	**124**	IAmb_Lg			13 58 02.8	
	comp=Z,12nm,0.8s							
MGMO	**Mountain Grove**	**3.71**	**77**	Pn		Pn	13 57 12.2	-0.2
MGMO				IAmb_Lg			13 58 18.4	
	comp=Z,5.1nm,0.8s							
X40A	**Basin Creek Fa**	**3.74**	**119**	IAmb_Lg			13 58 21.6	
	comp=Z,8.2nm,0.8s							
FCAR	**Ozark Folk Cen**	**3.81**	**96**	Pn		Pn	13 57 14.2	+0.5
FCAR				IAmb_Lg			13 58 17.2	
	comp=Z,9.0nm,0.8s							
WHAR	**Wooly Hollow**	**3.82**	**105**	IAmb_Lg			13 58 24.9	
	comp=Z,7.8nm,0.8s							
W41B	**Gary Mavity, V**	**3.89**	**107**	IAmb_Lg			13 58 27.4	
	comp=Z,5.4nm,0.9s							
R40A	**Maddies Statio**	**4.07**	**61**	IAmb_Lg			13 58 28.4	
	comp=Z,8.4nm,0.8s							
P38A	**Dawn**	**4.13**	**38**	IAmb_Lg			13 58 27.5	
	comp=Z,7.2nm,0.7s							
AMTX	**Amarillo**	**4.26**	**251**	IAmb_Lg			13 58 36.5	
	comp=Z,4.6nm,0.8s							
CCM	**Cathedral Cave**	**4.73**	**68**	IAmb_Lg			13 58 46.2	
	comp=Z,6.7nm,0.7s							
T25A	**Trinidad**	**6.17**	**279**	IAmb_Lg			13 59 34.8	
	comp=Z,8.2nm,0.9s							

*IDC **19** 13:59:14.3±2.0,1.78°N×126.77°E,h0km,mb3.8/3, mbtmp3.8/3,Error ellipse: s-maj=175.3km s-min=26.6km az=64.0*

*DJA **19** 13:59:21.3±1.1,2.°N±4.°×12.°7E±.°,h25km±15km,M3.9/8, mb4.2/2,MLv3.7/8*

*NEIC **19** 13:59:23.2±0.8,1.°9N±0.°1×127.°3E±0.°2,h71km±10km, mb4.0/11,Error ellipse: s-maj=34.4km s-min=12.6km az=71.0*

ISC 19 13:59:22.1±0.8,1.°98N±0.°08×127.°2E±0.°1,h63km,n25, σ1s25/24,mb4.0/7,Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.21**	**173**			**Pn**	**13 59 43.3**	**+0.3**
TNTI	**Ternate**	**1.21**	**173**	P		**Pn**	**13 59 44.2**	**+1.2**
SGSI	**Sangihe**	**2.40**	**315**	P		**Pn**	**13 59 56.9**	**-2.2**
LBMI	**Labuha**	**2.62**	**174**	P		**Pn**	**14 00 04.2**	**+2.2**
KMSI	**Cibinong**	**3.54**	**247**	P		**Pn**	**14 00 13.6**	**-1.0**
SANI	**Sanana**	**4.19**	**197**	P		**Pn**	**14 00 24.1**	**+0.6**
NLAI	**Namlea**	**5.19**	**181**	P		**Pn**	**14 00 39.1**	**+1.9**
	0.1nm15nm,0.9s							
MYLDM	**Lahad Datu**	**9.27**	**290**	Pn		**Pn**	**14 01 34.9**	**+1.7**
MTN	**Manton Dam**	**15.23**	**165**	Pn		**Pn**	**14 02 52.7**	**-0.8**
MTN				IAmb		IAmb	14 03 04.6	
	comp=Z,11nm,1.1s							
KNRA	**Kununurra**	**17.61**	**175**	P		**Pn**	**14 03 23.6**	**+0.3**
KNRA				IAmb		IAmb	14 03 24.8	
	comp=Z,5.2nm,0.6s							
WB0	**Warramunga Arr**	**22.73**	**162**	P		**P**	**14 04 17.7**	**-1.3**
WB0				IAmb		IAmb	14 04 18.6	
	comp=Z,8.3nm,1.2s							
WRAB	**Tennant Creek**	**22.87**	**163**	P		**P**	**14 04 19.2**	**-1.3**
WRAB				IAmb		IAmb	14 04 20.3	
	comp=Z,6.9nm,1.1s							
WRA	**Warramunga Arr**	**22.88**	**163**	P		**P**	**14 04 19.5**	**-1.0**
	comp=Z,1.8nm,0.4s,baz=340,slow=11,SNR=36							
	comp=Z,1.8nm,0.4s							
WRA	**Warramunga Arr**	**22.88**	**163**	P		**P**	**14 04 18.9**	**-1.6**
WB2	**Warramunga Arr**	**22.88**	**163**	P		**P**	**14 04 19.5**	**-1.1**
WB2				IAmb		IAmb	14 04 39.0	
	comp=Z,8.8nm,1.4s							
WR0	**Warramunga Arr**	**22.95**	**162**	P		**P**	**14 04 20.2**	**-1.1**
WR0				IAmb		IAmb	14 04 46.6	
	comp=Z,9.6nm,1.4s							
AS31	**Alice Springs**	**26.31**	**166**	P		**P**	**14 04 51.2**	**-0.8**
ASAR	**Alice Springs**	**26.31**	**166**	P		**P**	**14 04 51.6**	**-0.4**
KSAR	**Wonju Array Be**	**35.30**	**1**	P		**P**	**14 06 12.3**	**+1.3**
BBOO	**Buckleboo**	**35.60**	**167**	P		**P**	**14 06 13.4**	**-0.3**
STKA	**Stephens Creek**	**36.33**	**159**	P		**P**	**14 06 19.4**	**-0.6**
	comp=Z,1.1nm,0.4s,baz=352,slow=9.8,SNR=6.2							
	comp=Z,1.1nm,0.4s							
STKA	**Stephens Creek**	**36.33**	**159**	IAmb		IAmb	14 06 48.2	
	comp=Z,2.4nm,1.4s							
MK31	**Makanchi Array**	**59.27**	**326**	P		**P**	**14 09 17.3**	**+0.1**
MKAR	**Makanchi Array**	**59.27**	**326**	P		**P**	**14 09 17.2**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=115,slow=7.8,SNR=4.4							
	comp=Z,0.1nm,0.3s							
IMAR	**Indian Mountai**	**83.73**	**24**	P		**P**	**14 11 44.3**	**+0.4**

*GUC **19** 14:07:47.8±0.7, 17.°81S×69.°40W,h146km±4km,ML3.6*
*IDC **19** 14:07:48.5±4.5, 17.°76S×68.°90W,h171km±40km,mb3.1/2, mbtmp3.6/2,Error ellipse: s-maj=292.2km s-min=30.6km az=118.0*

ISC 19 14:07:45.1±1.2,17°79S±0°07×69°5W±0°1,h160km±8km, n14,σ1s73/26,2C,Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
PB16	**IPOC Station P**	**0.55**	**177**	⇑*iP*		**Pn**	**14 08 09.4**	**+0.8**
PB16				*i* S		**Sn**	**14 08 26.6**	**-0.1**
PB12	**IPOC Station P**	**1.11**	**222**	⇑*iP*		**Pn**	**14 08 12.4**	**+0.5**
PB12				*e*S		**Sn**	**14 08 32.4**	**-0.1**
PB12				IAML			14 08 33.2	
	comp=N,777nm,0.2s							
GO01	**Chusmiza**	**1.90**	**170**	*e*P		**Pn**	**14 08 21.4**	**+1.2**
GO01				*e*S		**Sn**	**14 08 47.6**	**+0.2**
GO01				IAML			14 08 52.5	
	comp=N,352nm,0.1s							
PB11	**IPOC Station P**	**1.97**	**183**	*e*P		**Pn**	**14 08 21.1**	**+0.5**
PB11				*e*S		**Sn**	**14 08 47.7**	**-0.5**
PB11				IAML			14 08 49.1	
	comp=E,275nm,0.2s							
LPAZ	**La Paz**	**2.01**	**42**	P		**Pn**	**14 08 21.9**	**+0.3**
	comp=E,52nm,0.3s,baz=233,slow=4.9,SNR=200							
LPAZ				S		**Sn**	**14 08 47.5**	**-2.2**
	comp=E,15nm,0.6s,baz=300,slow=20,SNR=10.0							
PB08	**IPOC Station P**	**2.37**	**171**	*e*P		**Pn**	**14 08 26.8**	**+1.2**
PB08				*e*S		**Sn**	**14 08 56.1**	**-0.8**
HMBC	**Humberstone**	**2.50**	**187**	*e*P		**Pn**	**14 08 27.3**	**+0.4**
HMBC				*e*S		**Sn**	**14 08 57.5**	**-1.7**
HMBC				IAML			14 09 04.5	
	comp=N,131nm,0.4s							
TA02	**Huaiquique**	**2.53**	**193**	*e*P		**Pn**	**14 08 28.2**	**+1.1**
TA02				*e*S		**Sn**	**14 08 57.8**	**-2.0**
TA02				IAML			14 08 59.9	
	comp=E,308nm,0.1s							
TA01	**Diego Aracena**	**2.83**	**192**	*e*P		**Pn**	**14 08 30.7**	**0.0**
TA01				*e*S		**Sn**	**14 09 03.4**	**-2.8**
PATCX	**Punta Patache**	**3.07**	**191**	*e*P		**Pn**	**14 08 34.7**	**+0.8**
PATCX				*e*S		**Sn**	**14 09 08.0**	**-3.8**
PB01	**IPOC Station P**	**3.24**	**179**	*e*P		**Pn**	**14 08 36.8**	**+0.8**
PB01				*e*S		**Sn**	**14 09 13.2**	**-2.4**
PB01				IAML			14 09 14.2	
	comp=N,206nm,0.1s							
PB02	**IPOC Station P**	**3.53**	**185**	*e*P		**Pn**	**14 08 41.1**	**+1.4**
PB02				*e*S		**Sn**	**14 09 19.5**	**-2.7**
PLCA	**Paso Flores**	**22.89**	**182**	P		**P**	**14 12 37.8**	**+3.0**
	comp=N,1.0nm,0.7s,baz=13,slow=7.4,SNR=3.6							
	comp=N,1.0nm,0.7s							
TORD	**Torodi Ar. Bea**	**76.71**	**71**	P		**P**	**14 19 18.1**	**-0.9**
	comp=N,0.3nm,0.5s,baz=263,slow=4.7,SNR=5.4							
	comp=N,0.3nm,0.5s							

*IGIL **19** 14:08:07.5,39.°04N×12.°46W,h10km,ML2.3*
*MDD **19** 14:08:08.1±0.9,39.°17N×12.°18W,h0km,Mb4.1/13,Error ellipse: s-maj=7.9km s-min=4.7km az=70.0*
*INMG **19** 14:08:11.7±1.2,39.°04N×11.°48W,h10km,ML2.3,Error ellipse: s-maj=6.4km s-min=3.2km az=83.0*
*CNRM **19** 14:08:17.6,38.°64N×11.°63W,h130km,ml2.4*

ISC 19 14:08:05.9±3.4,39°08N±0°04×12°2W±0°1,h12km±23km, n47,σ2s46/85,13C-3D,North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
PMAFR	**Mafra**	**2.26**	**92**	*e*Pn		**Pb**	**14 08 47.2**	**+0.5**
PMAFR				*e*Sn		**Sb**	**14 09 14.4**	**-0.3**
PMAFR				A		A	14 09 17.3	
	32nm,0.2s							
PMST	**Lisbon--Monsan**	**2.37**	**97**	*e*Sn		**Sb**	**14 09 17.7**	**+0.1**
PMST				A		A	14 09 20.0	
	15nm,0.2s							
PACT	**Alcochete**	**2.63**	**96**	*e*Pn		**Pb**	**14 08 53.5**	**+0.5**
PACT				*e*Sn		**Sb**	**14 09 23.6**	**-1.6**
PSBE	**So Bento**	**2.66**	**80**	*e*Pn		**Pb**	**14 08 52.6**	**-1.0**
PSBE				*e*Sn		**Sb**	**14 09 23.8**	**-2.4**
PCAS	**Casmilo, Conde**	**3.01**	**70**	⇓*e*Pn		**Pn**	**14 08 56.2**	**+2.8**
PCAS				*e*Sn		**Sn**	**14 09 30.5**	**+1.1**
PCAS				A		A	14 09 34.4	
	4.5nm,0.6s							
PNCL	**Nicolau / Gran**	**3.02**	**108**	*e*Pn		**Pn**	**14 08 56.3**	**+2.7**
PNCL				*e*Sn		**Sn**	**14 09 29.7**	**0.0**
PNCL				A		A	14 09 36.9	
	4.6nm,0.1s							
PMTG	**Montargil**	**3.08**	**89**	*e*Pn		**Pb**	**14 08 57.9**	**-2.8**
PMTG				*e*Sn		**Sn**	**14 09 32.4**	**+1.2**
PMTG				A		A	14 09 38.2	
	4.3nm,0.5s							
PTEO	**Sao Teotonio**	**3.12**	**118**	*e*Pn		**Pn**	**14 08 57.5**	**+2.5**
PTEO				*e*Sn		**Sn**	**14 09 31.6**	**-0.6**
PTEO				A		A	14 09 32.4	
	17nm,0.4s							
PFVI	**Vila Bisbo**	**3.28**	**125**	⇓*e*Pn		**Pn**	**14 08 59.1**	**+1.9**
PFVI				*e*Sn		**Sn**	**14 09 35.2**	**-1.0**
PFVI				A		A	14 09 38.9	
	7.8nm,0.3s							
PFVI	**Vila Bisbo**	**3.28**	**125**	P		**Pn**	**14 08 59.1**	**+1.9**
PFVI				S		**Sn**	**14 09 33.7**	**-2.5**
MORF	**Marmelete**	**3.30**	**121**	*e*P		**Pn**	**14 08 59.7**	**+2.3**
MORF	**Marmelete**	**3.30**	**121**	⇓*e*Pn		**Pn**	**14 08 59.7**	**+2.3**
MORF				*e*Sn		**Sn**	**14 09 35.7**	**-0.9**
MORF				A		A	14 09 39.2	
	13nm,0.2s							
EVO	**Evora**	**3.30**	**98**	*e*Pn		**Pb**	**14 09 02.1**	**-2.4**
EVO				*e*Sn		**Sn**	**14 09 39.1**	**+2.4**
EVO				A		A	14 09 41.3	
	4.8nm,0.1s							
MESJ	**Messejana**	**3.35**	**110**	*e*P		**Pn**	**14 09 00.8**	**+2.7**
MESJ				*e*S		**Sn**	**14 09 39.7**	**+1.9**
MESJ				IAML			14 09 42.8	
	comp=N,9.1nm,0.2s							
MESJ	**Messejana**	**3.35**	**110**	*e*Pn		**Pn**	**14 09 01.2**	**+3.1**
MESJ				*e*Sn		**Sn**	**14 09 37.6**	**-0.1**
MESJ				A		A	14 09 43.7	
	comp=N,5.8nm,0.1s							
PESTR	**Estremoz**	**3.59**	**92**	*e*Pn		**Pn**	**14 09 04.4**	**+3.0**
PESTR				*e*Sn		**Sn**	**14 09 44.3**	**+0.6**
PESTR				A		A	14 09 49.5	
	comp=N,1.7nm,0.2s							
PESTR	**Estremoz**	**3.59**	**92**	P		**Pb**	**14 09 05.3**	**-4.0**
PESTR				S		**Sn**	**14 09 44.6**	**+0.9**
PVIS	**Viseu**	**3.68**	**62**	*e*Pn		**Pn**	**14 09 05.9**	**+3.2**
PVIS				*e*Sn		**Sn**	**14 09 46.0**	**-0.1**
PVIS				A		A	14 09 50.0	
	comp=N,5.5nm,0.1s							
PCBR	**Castelo Branco**	**3.72**	**77**	*e*Pn		**Pn**	**14 09 06.2**	**+3.0**
PMRV	**Marv??o**	**3.74**	**83**	*e*Pn		**Pn**	**14 09 06.4**	**+3.0**
PMRV				*e*Sn		**Sn**	**14 09 48.1**	**+0.7**
PMRV				A		A	14 09 52.6	
	comp=N,4.7nm,0.2s							
MTE	**Manteigas**	**3.81**	**68**	*e*Pn		**Pn**	**14 09 07.8**	**+3.3**
PBDV	**Barranco-do-Ve**	**3.82**	**117**	*e*Pn		**Pn**	**14 09 07.7**	**+3.1**
PBDV				*e*Sn		**Sn**	**14 09 49.1**	**-0.3**
PBDV				A		A	14 09 55.7	
	comp=N,6.2nm,0.4s							
PVAQ	**Vaqueiros**	**3.89**	**114**	*e*Pn		**Pn**	**14 09 08.4**	**+2.8**
PVAQ				*e*Sn		**Sn**	**14 09 51.2**	**0.0**
PVAQ				A		A	14 09 52.7	
	comp=N,6.5nm,0.3s							
PVAQ	**Vaqueiros**	**3.89**	**114**	P		**Pn**	**14 09 08.6**	**+3.0**
PVAQ				S		**Sn**	**14 09 48.7**	**-2.5**
EGRO	**El Granado**	**4.00**	**111**	Pn		**Pn**	**14 09 10.1**	**+3.0**
EGRO				⇑*i*Vmb_V			14 09 10.7	
	comp=N,220nm,SNR=1.8							
EGRO				Sn		**Sn**	**14 09 54.8**	**+0.9**
EBAD	**Badajoz**	**4.04**	**93**	Pn		**Pn**	**14 09 10.6**	**+3.0**
EBAD				⇑*i*Vmb_V			14 09 12.5	
	comp=N,178nm,SNR=3.3							
EBAD				Sn		**Sn**	**14 09 55.8**	**+0.8**
EZAM	**Zamans**	**4.05**	**40**	Pn		**Pn**	**14 09 08.9**	**+1.1**
EZAM				⇑*i*Vmb_V			14 09 11.1	
	comp=N,515nm,SNR=5.1							
EZAM				Sn		**Sn**	**14 09 52.7**	**-2.6**
POLO	**Lamas de Olo**	**4.07**	**54**	*e*Pn		**Pn**	**14 09 11.1**	**+3.0**
POLO				*e*Sn		**Sn**	**14 09 54.3**	**-1.3**
POLO				A		A	14 10 01.0	
	comp=N,1.0nm,0.2s							
PCAB	**Cabril**	**4.12**	**49**	*e*Pn		**Pn**	**14 09 10.4**	**+1.7**
PCAB				*e*Sn		**Sn**	**14 09 56.3**	**-0.6**
PCAB				A		A	14 09 57.6	
	comp=N,4.0nm,0.3s							
PBAR	**Barrancos**	**4.13**	**101**	*e*Sn		**Sn**	**14 09 56.5**	**-0.5**
PGAV	**Gavieira, Arco**	**4.15**	**45**	*e*Pn		**Pn**	**14 09 11.6**	**+2.4**
PGAV				*e*Sn		**Sn**	**14 09 56.6**	**-1.0**
PGAV				A		A	14 10 03.1	
	comp=N,4.6nm,0.7s							
ELOB	**Lobios**	**4.20**	**47**	Pn		**Pn**	**14 09 11.5**	**+1.6**
ELOB				⇑*i*Vmb_V			14 09 14.1	
	comp=N,395nm,SNR=6.0							
ELOB				Sn		**Sn**	**14 09 57.1**	**-1.8**
MVO	**Moncorvo**	**4.47**	**61**	*e*Pn		**Pn**	**14 09 16.4**	**+2.9**
MVO				*e*Sn		**Sn**	**14 10 03.8**	**-1.6**
MVO				A		A	14 10 09.2	
	comp=N,3.5nm,0.3s							
EMIN	**Mina Concepcio**	**4.52**	**105**	Pn		**Pn**	**14 09 17.4**	**+3.2**
EMIN				⇑*i*Vmb_V			14 09 21.3	
	comp=N,108nm,SNR=1.6							
EMIN				Sn		**Sn**	**14 10 07.5**	**+0.8**
EPLA	**Plasencia**	**4.82**	**76**	Pn		**Pn**	**14 09 21.5**	**+3.2**
EPLA				⇑*i*Vmb_V			14 09 23.1	
	comp=N,85nm,SNR=1.3							
EPLA				Sn		**Sn**	**14 10 13.3**	**-0.8**
EAGO	**Agolada(Pontev**	**4.84**	**38**	Pn		**Pn**	**14 09 19.4**	**+0.7**
EAGO				⇑*i*Vmb_V			14 09 21.1	
	comp=N,462nm,SNR=6.1							
EAGO				Sn		**Sn**	**14 10 10.3**	**-4.3**
PBRG	**Braganca**	**4.96**	**55**	*e*Pn		**Pn**	**14 09 23.1**	**+2.8**
ECAL	**Calabor**	**5.04**	**54**	Pn		**Pn**	**14 09 23.0**	**+1.6**
ECAL				⇑*i*Vmb_V			14 09 25.0	
	comp=N,177nm,SNR=2.4							
ECAL				Sn		**Sn**	**14 10 19.0**	**-0.6**
ECAB	**El Cabril**	**5.39**	**99**	Pn		**Pn**	**14 09 29.4**	**+3.1**
ECAB				⇑*i*Vmb_V			14 09 29.5	
	comp=N,67nm,SNR=1.6							
ECAB				Sn		**Sn**	**14 10 29.8**	**+1.5**
ESPR	**Espera**	**5.46**	**112**	Pn		**Pn**	**14 09 31.1**	**+4.0**
ESPR				⇑*i*Vmb_V			14 09 34.7	
	comp=N,159nm,SNR=1.2							
ESPR				Sn		**Sn**	**14 10 32.1**	**+2.2**
EADA	**Adamuz**	**6.03**	**96**	Pn		**Pn**	**14 09 37.4**	**+2.5**
EADA				⇑*i*Vmb_V			14 09 40.7	
	comp=N,59nm,SNR=1.5							
EADA				Sn		**Sn**	**14 10 44.4**	**+0.5**
EARI	**Arriondas**	**6.74**	**49**	Pn		**Pn**	**14 09 46.6**	**+1.9**
EARI				⇑*i*Vmb_V			14 09 49.3	
	comp=N,75nm,SNR=0.7							
ELAN	**Lanestosa**	**7.79**	**55**	Pn		**Pn**	**14 10 00.2**	**+1.0**
ELAN				⇑*i*Vmb_V			14 10 05.8	
	comp=N,92nm,SNR=1.1							
MD31	**MD31**	**8.64**	**134**	P		**Pn**	**14 10 12.1**	**+1.3**
MD31				S		**Sn**	**14 11 39.7**	**-8.5**
MDT	**Midelt**	**8.76**	**133**	P		**Pn**	**14 10 14.3**	**+1.8**
MDT				S		**Sn**	**14 11 44.5**	**-6.8**

IDC 19 14:10:19.7±6.5,20°08S×168°74E,h0km,mb3.9/4, mbtmp3.9/4,MS3.3/3,Error ellipse: s-maj=217.7km s-min=47.6km az=149.0,Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**9.12**	**77**	LR		LR	14 15 21.9	
	comp=Z,261nm,20.7s,baz=94,slow=33							
CTA	**Charters Tower**	**21.12**	**266**	P		P	14 15 07.2	+1.1
	3.9nm,1.0s,baz=82,slow=17,SNR=2.3							
CTA				LR		LR	14 22 00.2	
	comp=Z,99nm,21.1s,baz=87,slow=33							
	3.9nm,1.0s							
WRA	**Warramunga Arr**	**32.29**	**264**	P		P	14 16 49.5	-1.0
	0.8nm,0.3s,baz=92,slow=8.3,SNR=44							
	0.8nm,0.3s							
KAPI	**Kappang**	**49.90**	**281**	LR		LR	14 42 52.7	
	comp=Z,18nm,20.1s,baz=300,slow=39							
CMAR	**Chiang Mai Arr**	**78.42**	**295**	P		P	14 22 23.8	+1.0
	0.3nm,0.4s,baz=123,slow=4.4,SNR=2.3							
	0.3nm,0.4s							
SONM	**Songino Array**	**87.61**	**323**	P		P	14 23 09.7	-0.2
	0.3nm,0.3s,baz=127,slow=3.8,SNR=2.4							
	0.3nm,0.3s							
GERES	**GERESS Array B**	**145.00**	**331**	PKPbc		PKPab	14 29 57.3	-1.0
	0.3nm,0.6s,baz=46,slow=5.6,SNR=2.1							

*WEL **19** 14:17:18.9±0.8,34°S±5°×18°0E±°,h136km±30km,M5.1/19, ML5.6/5,MLv5.1/19,Error ellipse: s-maj=0.0km s-min=0.0km az=114.4*

*NEIC **19** 14:17:20.8±1.3,34°8S±0°2×179°3E±0°2,h220km±14km, mb4.1/10,Error ellipse: s-maj=31.7km s-min=13.9km az=144.0*

*IDC **19** 14:17:21.6±2.2,34°54S×179°03E,h220km±22km,mb3.9/6, mbtmp4.6/8,Error ellipse: s-maj=22.8km s-min=19.4km az=152.0*

ISC 19 14:17:19.0±0.7,34°64S±0°06×179°34E±0°09,h200km, n141,σ2s17/152,mb4.1/11,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.04**	**196**	Pn		**Pn**	**14 18 10.9**	**+1.9**
MXZ	**Matakaoa Point**	**3.04**	**196**	P		**Pn**	**14 18 10.9**	**+1.9**
MXZ				S		**Sn**	**14 18 51.3**	**+3.1**
HAZ	**Te Kaha**	**3.36**	**202**	P		**Pn**	**14 18 14.5**	**+1.7**
HAZ				S		**Sn**	**14 18 55.6**	**+0.5**
WSRZ	**White Island S**	**3.37**	**211**	P		**Pn**	**14 18 16.1**	**+3.1**
WSRZ

KUTZ	Kaahu Road	4.77	215	P		Pn	14 18 33.0	+2.6
TLZ	Tolley Road	4.79	219	P		Pn	14 18 33.5	+2.8
MRHZ	Matea Rd	4.80	208	P		Pn	14 18 31.7	+0.9
WHTZ	Whakaora	4.85	213	P		Pn	14 18 35.0	+3.5
NMHZ	Naumai	4.89	204	P		Pn	14 18 32.7	+0.7
HATZ	Hinemaiaia	4.98	211	P		Pn	14 18 34.1	+1.0
ARHZ	Aropaoanui	4.99	201	P		Pn	14 18 33.5	+0.4
WATZ	Wairara	4.99	214	P		Pn	14 18 36.1	+2.9
BKZ	Black Stump Fm	5.06	206	Pn		Pn	14 18 34.5	+0.3
BKZ	Black Stump Fm	5.06	206	P		Pn	14 18 34.7	+0.5
RATZ	Rangitukua	5.10	213	P		Pn	14 18 36.9	+2.2
RITZ	Rihia Road	5.15	212	P		Pn	14 18 37.5	+2.2
KATZ	Kakaramea	5.22	213	P		Pn	14 18 38.3	+2.0
MCHZ	McNeill Hill	5.24	203	P		Pn	14 18 36.5	+0.1
HIZ	Hauiti	5.29	222	P		Pn	14 18 40.4	+3.4
KWHZ	Kaweka Forest	5.32	205	P		Pn	14 18 37.3	-0.1
CKHZ	Cape Kidnapper	5.33	199	P		Pn	14 18 37.7	+0.2
NTVZ	North Tongarir	5.33	212	P		Pn	14 18 38.6	+0.9
TMVZ	Te Maari	5.34	212	P		Pn	14 18 38.2	+0.5
KRVZ	Karewarewa	5.35	213	P		Pn	14 18 39.6	+1.8
ETVZ	East Tongariro	5.35	212	P		Pn	14 18 38.3	+0.4
WTVZ	West Tongariro	5.39	213	P		Pn	14 18 39.6	+1.3
NNVZ	North Ngauruho	5.39	213	P		Pn	14 18 39.8	+1.3
OTVZ	Oturere	5.39	212	P		Pn	14 18 38.9	+0.4
TWVZ	Taurewa	5.42	214	P		Pn	14 18 40.4	+1.6
SNVZ	South Ngauruho	5.42	212	P		Pn	14 18 39.3	+0.4
NGZ	Ngauruhoe	5.43	212	P		Pn	14 18 40.0	+1.1
TUVZ	Tukino	5.48	211	P		Pn	14 18 40.4	+0.8
BHHZ	Black Hill Sta	5.51	207	P		Pn	14 18 39.5	-0.4
KAHZ	Kahuranaki	5.51	200	P		Pn	14 18 39.9	+0.1
FWVZ	Far West T-bar	5.52	212	P		Pn	14 18 40.4	+0.2
WHVZ	Whangaehu Hut	5.52	212	P		Pn	14 18 40.7	+0.4
KRHZ	Kereru	5.53	204	P		Pn	14 18 39.5	-0.6
TRVZ	Turoa	5.55	212	P		Pn	14 18 41.5	+0.9
WNVZ	Wahianoa	5.56	211	P		Pn	14 18 40.3	-0.3
MOVZ	Moawhango	5.56	210	P		Pn	14 18 40.1	-0.4
PKVZ	Pokaka	5.64	213	P		Pn	14 18 42.8	+1.3
MTVZ	Mangateitei	5.66	212	P		Pn	14 18 42.8	+0.9
PXZ	Pawanui	5.74	199	P		Pn	14 18 41.4	-1.3
VRZ	Vera Road	5.79	218	P		Pn	14 18 45.8	+2.4
PNHZ	Pukenui	5.83	204	P		Pn	14 18 43.1	-0.9
GLKZ	Green Lake	5.84	24	P		Pn	14 18 39.5	-4.7
GLKZ				S		Sn	14 19 40.3	-11
RAO	Raoul Island	5.85	24	S		Sn	14 19 41.2	-11
	243nm,0.4s,baz=132,slow=18,SNR=1.8							
WPHZ	Waipukurau	5.89	202	P		Pn	14 18 43.9	-0.8
PRHZ	Porangahau	6.02	200	P		Pn	14 18 45.3	-1.1
TSZ	Takapari Road	6.04	205	P		Pn	14 18 45.7	-1.0
WAZ	Wanganui	6.18	213	P		Pn	14 18 48.4	-0.1
DVHZ	Dannevirke	6.19	203	P		Pn	14 18 47.3	-1.3
ANWZ	Angora Road	6.24	201	P		Pn	14 18 49.0	-0.3
BFZ	Birch Farm	6.51	201			Pn	14 18 51.2	-1.6
MSWZ	Moikau Station	7.50	204			Pn	14 19 02.6	-3.0
SNZO	South Karori	7.60	207			Pn	14 19 03.8	-3.1
BHW	Baring Head	7.62	206			Pn	14 19 03.9	-3.3
PLWZ	Palliser	7.63	204			Pn	14 19 04.4	-3.0
TUWZ	Tuamarina	8.01	211			Pn	14 19 08.9	-3.3
NNZ	Nelson	8.08	214			Pn	14 19 10.2	-2.9
CMWZ	Cape Campbell	8.16	208	Pn		Pn	14 19 11.3	-3.0
QRZ	Quartz Range	8.20	219	Pn		Pn	14 19 11.7	-3.0
BSWZ	Blackbirch Sta	8.27	210	Pn		Pn	14 19 12.4	-3.2
THZ	Tophouse	8.73	214	Pn		Pn	14 19 18.8	-2.9
KHZ	Kahutara	9.00	209	Pn		Pn	14 19 21.5	-3.5
LTZ	Lake Taylor	9.83	212	Pn		Pn	14 19 32.0	-3.9
OXZ	Oxford	10.37	211	Pn		Pn	14 19 37.8	-5.0
MQZ	McQueen's Vall	10.43	208	Pn		Pn	14 19 38.9	-4.8
RPZ	Rata Peaks	11.11	213	P		Pn	14 19 50.0	-2.4
	13nm,0.3s,baz=33,slow=1.8,SNR=23							
RPZ				S		Sn	14 21 44.7	-11
	10nm,0.3s,baz=129,slow=22,SNR=10							
RPZ	Rata Peaks	11.11	213	Pn		Pn	14 19 49.0	-3.4
FOZ	Fox Glacier	11.55	217	P		Pn	14 19 51.1	-6.9
MSVF	Nonsavu	16.87	356	P		P	14 21 02.1	-0.6
	42nm,0.7s,baz=170,slow=8.1,SNR=16							
AFI	Afiamalu	22.15	23	P		P	14 22 00.3	+1.6
	44nm,0.7s,baz=109,slow=3.8,SNR=10.0 44nm,0.7s							
AFI	Afiamalu	22.15	23	P		P	14 21 59.6	+0.9
CTA	Charters Tower	32.59	288	P		P	14 23 30.8	-1.0
	3.6nm,0.7s,baz=123,slow=13,SNR=3.7 3.6nm,0.7s							
CTAO	Charters Tower	32.59	288	P		P	14 23 32.2	+0.5
CTAO				IAmb		IAmb	14 23 52.5	
	comp=Z,11nm,1.4s							
COEN	Coen	38.56	293	P		P	14 24 22.4	-0.2
KRVT	Keravat (AS076	39.39	314	P		P	14 24 27.8	-1.6
	comp=Z,20nm,0.8s,baz=190,slow=6.1,SNR=3.7 comp=Z,20nm,0.8s							
RABL	Rabaul	39.40	314	P		P	14 24 29.1	-0.5
AS31	Alice Springs	40.85	273	P		P	14 24 39.4	-2.1
ASAR	Alice Springs	40.85	273	P		P	14 24 39.3	-2.1
WR0	Warramunga Arr	42.06	278	P		P	14 24 50.0	-1.2
WR0				IAmb		IAmb	14 25 17.5	
	comp=Z,4.8nm,1.1s							
WB2	Warramunga Arr	42.23	278	P		P	14 24 51.5	-1.1
WB2				IAmb		IAmb	14 24 52.9	
	comp=Z,3.7nm,0.7s							
WRAB	Tennant Creek	42.23	278	P		P	14 24 51.3	-1.3
WRAB				IAmb		IAmb	14 25 16.6	
	comp=Z,12nm,1.4s							
WRA	Warramunga Arr	42.24	278	P		P	14 24 51.9	-0.8
	comp=Z,1.6nm,0.5s,baz=119,slow=7.4,SNR=31 comp=Z,1.6nm,0.5s							
WRA	Warramunga Arr	42.24	278	IAmb		IAmb	14 24 53.1	
	comp=Z,0.3nm,1.2s							
WB0	Warramunga Arr	42.28	279	P		P	14 24 52.0	-1.1
WB0				IAmb		IAmb	14 24 53.8	
	comp=Z,15nm,1.4s							
QSPA	South Pole Qui	55.48	180	P		P	14 26 38.0	+5.1
	comp=Z,1.5nm,0.5s,baz=352,slow=1.7,SNR=20							
PLCA	Paso Flores	81.24	134	P		P	14 29 15.7	+2.9
	comp=Z,0.4nm,0.5s,baz=231,slow=9.9,SNR=3.4 comp=Z,0.4nm,0.5s							
NVAR	Mina Array Bea	92.85	44	P		P	14 30 10.2	+1.1
	comp=Z,1.7nm,0.9s,baz=220,slow=8.1,SNR=8.5 comp=Z,1.7nm,0.9s							
NVAR	Mina Array Bea	92.85	44	P		P	14 30 07.2	-1.8
FINES	FINESS Array B	148.21	336	PKPbc		PKPdf	14 36 38.4	+1.6
	comp=Z,0.6nm,0.4s,baz=35,slow=7.0,SNR=8.0							
BRTR	Keskin Array B	152.31	291	PKPbc		PKPbc	14 36 48.9	-2.1
	comp=Z,0.3nm,0.5s,baz=90,slow=2.8,SNR=2.5							

*IDC **19** 14:19:16.9±1.2,49°.92N×179°.11E,h0km,mb3.8/9, mbtmp3.8/11,ML2.7/2,Error ellipse: s-maj=36.0km s-min=22.0km az=12.0*

*NEIC **19** 14:19:22.0±0.7,50°.1N±0°.1×179°.2E±0°.1,h27km±9km, mb4.2/8,ML3.8(AEIC),Error ellipse: s-maj=16.8km s-min=10.5km az=170.0*

*AEIC **19** 14:19:22±1.5,50°.1N±0°.1×179°.5E±0°.1,h26km±7km,Error ellipse: s-maj=16.1km s-min=10.3km az=170.0*

ISC 19 14:19:22.6±0.9,50°.1N±0°.1×179°.18E±0°.06,h35km,n41, σ0s75/46,mb3.8/12,Rat Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GASW	Gareloi Southw	2.07	36			Pn	14 19 54.2	-0.6
GASW						Sn	14 20 19.2	-0.2
GALAA	Gareloi Lava P	2.09	38			Pn	14 19 54.5	-0.5
TASE	Tanaga Southea	2.46	45			Pn	14 19 59.9	-0.2
TAFP	Tanaga Falls P	2.52	44			Pn	14 20 00.9	-0.2
TAFP						Sn	14 20 30.5	-0.1
TAPA	Tanaga Point A	2.54	47			Pn	14 20 01.1	-0.3
KIMD	Kanaga Island	2.80	53			Pn	14 20 04.2	-0.6
KIWB	Kanaga Island	2.89	52			Pn	14 20 05.6	-0.5
KIKV	Kanaga Island	2.90	51			Pn	14 20 05.7	-0.5
KICM	Kanaga Island	2.91	50			Pn	14 20 05.7	-0.6
ADK	Adak	3.15	54			Pn	14 20 09.0	-0.6
ADK						Sn	14 20 44.3	-1.6
GSCK	Great Sitkin C	3.49	55			Pn	14 20 14.1	-0.2
GSTD	Great Sitkin T	3.52	55			Pn	14 20 14.5	-0.4
GSMY	Great Sitkin M	3.56	56			Pn	14 20 14.9	-0.4
GSTR	Great Sitkin T	3.59	55			Pn	14 20 15.6	-0.1
SHEM	Shemya Is, Ala	4.11	311	Sn		Sn	14 21 07.5	-2.1
	5.3nm,0.3s,baz=114,slow=18,SNR=12							
ATKA	Atka Island	4.66	61			Pn	14 20 29.2	-1.1
ATKA						Sn	14 21 22.1	-1.0
KOKL	Mount Kliuchef	4.71	60			Pn	14 20 30.8	-0.2
KOFP	Korovin Flat P	4.74	60			Pn	14 20 31.2	-0.3
NIKH	Nikolski High	7.99	65			Pn	14 21 15.5	-0.5
UNV	Unalaska Valle	9.58	62	Pn		Pn	14 21 36.1	-1.7
PEA0B	Petropavlovsk-	13.67	291	Pn		Pn	14 22 34.1	+0.4
PETK	Petropavlovsk-	13.67	291	Pn		Pn	14 22 34.1	+0.4
	0.1nm,0.3s,baz=120,slow=17,SNR=4.5 3.0nm,0.9s							
SEY	Seymchan	19.38	322	P		Pn	14 23 46.1	-0.1
	0.1nm,0.3s,baz=78,slow=20,SNR=2.3 1.6nm,0.8s							
PPLA	Purkeypile	20.10	40	P		P	14 23 52.6	-0.4
PPLA				IAmb		IAmb	14 23 53.4	
	comp=Z,10.0nm,0.8s							
DHY	Denali Highway	22.19	42	P		P	14 24 15.6	0.0
DHY				IAmb		IAmb	14 24 16.9	
	comp=Z,6.5nm,0.7s							
H24K	Noodor Dome	23.10	35	P		P	14 24 24.8	-0.1
H24K				IAmb		IAmb	14 24 29.4	
	comp=Z,8.1nm,1.1s							
RIDG	Independent Ri	23.49	41	P		P	14 24 27.5	-1.3
TOLK	Toolik Lake Re	23.98	28	P		P	14 24 33.2	-0.1
TABL	Table Mountain	24.46	50	P		P	14 24 37.9	-0.2
LOGN	Logan Glacier	24.58	49	P		P	14 24 39.2	+0.1
LOGN				IAmb		IAmb	14 24 42.7	
	comp=Z,5.0nm,0.7s							
PCA	Pinnacle	24.86	51	P		P	14 24 41.4	-0.1
YKA	Yellowknife Ar	37.03	45	P		P	14 26 29.1	+0.7
	comp=Z,1.8nm,0.6s,baz=279,slow=7.9,SNR=5.0 comp=Z,1.8nm,0.6s							
NVAR	Mina Array Bea	45.01	80	P		P	14 27 35.5	+0.8
	comp=Z,0.7nm,0.8s,baz=280,slow=7.8,SNR=4.8 comp=Z,0.7nm,0.8s							
PDAR	Pinedale Array	47.93	70	P		P	14 27 57.8	+0.2
	comp=Z,0.6nm,0.7s,baz=243,slow=0.7,SNR=5.7 comp=Z,0.6nm,0.7s							
TXAR	Lajitas Array	60.13	79	P		P	14 29 26.6	0.0
	comp=Z,0.4nm,0.9s,baz=308,slow=4.1,SNR=4.5							
TXAR				PcP		PcP	14 30 12.4	+0.4
	comp=Z,0.5nm,0.9s,baz=242,slow=2.7,SNR=4.0 comp=Z,0.4nm,0.9s							
FINES	FINESS Array B	66.71	346	P		P	14 30 09.8	+0.4
	comp=Z,1.3nm,0.7s,baz=53,slow=9.8,SNR=4.4 comp=Z,1.3nm,0.7s							
NB2	NORSAR Subarra	68.77	354	P		P	14 30 23.6	+1.2
	comp=Z,0.4nm,0.6s,baz=6.6,slow=6.2							
NOA	NORSAR Array B	68.77	354	P		P	14 30 23.2	+0.8
	comp=Z,0.6nm,0.6s,baz=7.5,slow=6.2,SNR=3.8 comp=Z,0.6nm,0.6s							
AKASG	Malin Array Be	76.33	341	P		P	14 31 07.9	+0.4
	comp=Z,0.3nm,0.4s,baz=23,slow=6.4,SNR=2.7 comp=Z,0.3nm,0.4s							
WRA	Warramunga Arr	80.22	222	P		P	14 31 27.8	-1.5
	comp=Z,0.6nm,1.0s,baz=32,slow=6.0,SNR=2.7 comp=Z,0.6nm,1.0s							
BRTR	Keskin Array B	85.53	334	P		P	14 31 57.7	+0.8
	comp=Z,0.6nm,0.7s,baz=35,slow=4.5,SNR=3.9 comp=Z,0.6nm,0.7s							

*JMA **19** 14:31:37.7±0.3,24°.N±2°.×122°.1E±0°.8,h56km±4km, MV3.0/10,TAIWAN REGION*

*TAP **19** 14:31:38.3,24°.28N×122°.14E,h20km,ML3.6,D*

ISC 19 14:31:36.3±1.0,24°.18N±0°.02×122°.18E±0°.02,h13km±9km, n70,σ0s69/111,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EWUT	Wuta	0.45	306	P		Pb	14 31 46.2	+0.2
	baz=304							
EWUT				S		Sb	14 31 51.8	-0.8
	baz=304							
ENA	Nanau	0.47	302	*i* P		Pb	14 31 46.5	+0.2
	baz=296							
ETL	Fush Village	0.51	268	P		Pn	14 31 49.1	-0.1
	baz=260							
ETL				*e*S		Sn	14 31 57.8	0.0
	baz=260							
TWC	Suao	0.52	325	*e*P		Pb	14 31 47.1	-0.2
	baz=322							
TWC				*i* S		Sg	14 31 52.8	-0.7
	baz=322							
NACB	Ninganchiao	0.53	269	*e*P		Pn	14 31 49.2	-0.3
	baz=263							
NACB				*e*S		Sn	14 31 57.7	-0.6
	baz=263							
TWD	Chiawan	0.54	259	*i* P		Pn	14 31 49.6	0.0
	baz=254							
TWD				S		Sn	14 31 58.4	-0.1
	baz=254							
HWA	Hwalien	0.56	249	*i* P		Pn	14 31 50.5	+0.6
	baz=237							
HWA				S		Sn	14 32 00.6	+1.6
	baz=237							
NDS	Dongshan	0.62	317	*i* P		Pb	14 31 48.9	0.0
	baz=313							
ETLH	Xiulin Townshi	0.64	272	*e*P		Pn	14 31 50.6	-0.4
	baz=263							
ETM	Tongmen	0.66	251	P		Pn	14 31 51.5	+0.2
	baz=231							
ETM				S		Sn	14 32 01.4	-0.2
	baz=231							
LATG	Datong	0.69	301	P		Pb	14 31 50.6	+0.4
	baz=301							
LATG				S		Sb	14 32 00.0	+0.4
	baz=301							
EGS		0.70	341	P		Pb	14 31 50.7	+0.4
	baz=343							
EGS				S		Sb	14 31 59.5	-0.3
	baz=343							
ILA	Ilan	0.70	326	P		Pb	14 31 50.6	+0.3
	baz=324							
ILA				S		Sb	14 31 59.7	-0.2
	baz=324							
TWE	Neicheng	0.71	319	*i* P		Pb	14 31 50.6	+0.1
	baz=321							
TWE				S		Sb	14 31 59.8	-0.3
	baz=321							
NTC	Toucheng	0.74	335	P		Pb	14 31 51.2	+0.2
	baz=341							
NTC				S		Sb	14 32 00.7	-0.4
	baz=341							
JYNG	Yonagunijimaku	0.75	69	P		Pn	14 31 53.8	+1.3
JYNG				S		Sn	14 32 04.5	+0.7
NNSB	Datong	0.77	289	*i* P		Pn	14 31 52.5	-0.4
	baz=282							
NNS	Nan Shan	0.78	290	*i* P		Pn	14 31 52.6	-0.4
	baz=291							
FUSB	Fushanzhiwuyua	0.79	317	P		Pb	14 31 52.1	+0.2
	baz=313							
FUSB				S		Sb	14 32 02.7	+0.2
	baz=313							
YOJ	Yonaguni jima	0.81	70	P		Pn	14 31 54.7	+1.4
YOJ				S		Sn	14 32 06.5	+1.3
WHF	Hehuan Shan	0.83	268	P		Pn	14 31 54.0	-0.1
	baz=259							
WHF				*e*S		Sn	14 32 05.4	-1.0
	baz=259							
TWB1	Santiao Chiao	0.84	348	*e*P		Pn	14 31 53.3	-0.4
	baz=354							
TIPB	Shuangxi	0.85	338	P		Pb	14 31 53.0	+0.1
	baz=338							
TIPB				S		Sg	14 32 02.7	-1.2
	baz=338							
FUSS	Fushou	0.85	275	P		Pn	14 31 54.3	+0.1
	baz=271							
NWLT	Wulai	0.85	314	P		Pn	14 31 53.3	-0.7
	baz=311							
NSK	Sanguang	0.89	304	P		Pn	14 31 54.2	-0.4
	baz=299							
CHGB	Renai	0.92	263	*e*P		Pn	14 31 55.4	+0.3
	baz=238							
CHGB				*e*S		Sn	14 32 08.0	-0.4
	baz=238							
TDCB	Techi	0.93	275	P		Pn	14 31 56.0	+0.8
	baz=258							
OWD	Renai	0.94	256	*e*P		Pn	14 31 55.5	+0.2
	baz=248							
OWD				*e*S		Sn	14 32 07.6	-1.1
	baz=248							
SXI1	Grass Mountain	0.95	343	*e*P		Pn	14 31 54.8	-0.6
	baz=349							
WFSB	Wu-fen Shan	0.96	338	P		Pn	14 31 55.3	-0.1
	baz=338							
WFSB				S		Sg	14 32 07.6	+0.3
	baz=338							
TWA	Mucha	0.96	326	P		Pn	14 31 55.3	-0.1
	baz=313							
NHDH	Xindian Distri	0.98	323	P		Pn	14 31 56.1	+0.5
	baz=311							
WUSB	Renai	0.99	259	*e*P		Pn	14 31 56.5	+0.6
	baz=237							
WUSB				*e*S		Sn	14 32 09.5	-0.2
	baz=237							
TATO	Taipei	1.01	322	P		Pn	14 31 57.0	+0.9
	baz=311							
TATO				S		Sn	14 32 09.5	-0.7
	baz=311							
TNOU	National Taiwa	1.03	339	P		Pn	14 31 56.2	-0.2
	baz=331							
TNOU				S		Sb	14 32 08.7	-0.7
	baz=331							
VWDT	VWDT	1.04	246	P		Pn	14 31 57.6	+1.1
	baz=226							
TAP	Taipei	1.05	325	P		Pn	14 31 57.6	+1.0
	baz=338							
TAP				S		Sn	14 32 10.5	-0.7
	baz=338							
NFF	Wufeng Townshi	1.06	295	P		Pn	14 31 57.3	+0.3
	baz=295							
YM01	YM01	1.11	330	P		Pg	14 31 58.2	+0.6
	baz=343							
YM01				*e*S		Sn	14 32 12.5	-0.1
	baz=343							
YULB	Yu-li	1.12	226	*e*P		Pg	14 31 57.9	-0.1
	baz=234							
WHP	Taichung City	1.13	275	P		Pg	14 31 59.1	+1.1
	baz=269							
WHP				*e*S		Sn	14 32 13.6	+0.4
	baz=269							
YM08	YM08	1.14	332	*e*P		Pg	14 31 58.1	-0.1
	baz=331							
NTY	Taoyuan	1.14	316	P		Pg	14 31 58.4	+0.1
	baz=327							
NTY				*e*S		Sn	14 32 14.9	+1.4
	baz=327							
EYUL	Yuli	1.14	224	*e*P		Pg	14 31 58.9	+0.6
	baz=232							
TWS1	Kuangyinshan	1.15	323	*e*P		Pg	14 31 58.7	+0.3
	baz=322							
LIOB	Emei	1.16	294	*e*P		Pg	14 31 59.3	+0.7
	baz=290							
NSTT	Nanjuang	1.16	293	*e*P		Pg	14 31 59.2	+0.6
	baz=289							
SSLB	Suanglung	1.19	251	P		Pg	14 31 59.4	+0.3
	baz=231							
NCU	National Centr	1.20	311	*e*P		Pg	14 31 59.6	+0.2
	baz=309							
SMLT	Sun Moon Lake	1.20	256	*e*P		Pg	14 32 00.1	+0.6
	baz=236							
TYC	Yuchr	1.24	257	*e*P		Pg	14 32 00.2	+0.1
	baz=237							
YUS	Yu-Shan	1.32	239	*e*P		Pg	14 32 02.0	+0.4
	baz=221							
WJS	Zhushan	1.37	255	*e*P		Pg	14 32 04.0	+1.3
	baz=235							
WJS				*e*S		Sg	14 32 22.1	+1.6
	baz=235							
IRIF	Iriomote-Funau	1.43	84	P		Pg	14 32 03.7	0.0
IRIF				*e*S		Sg	14 32 22.4	+0.1
EDH	Donghe	1.45	214	*e*P		Pn	14 32 02.3	+0.2
	baz=196							
EDH				*e*S		Sn	14 32 20.4	-0.4
	baz=196							
PCYT	Pengchaiyu	1.45	356	P		Pn	14 32 02.0	-0.1
	baz=345							
PCYT				*e*S		Sn	14 32 19.8	-1.1
	baz=345							
ELDTW	Lidau	1.45	227	*e*P		Pb	14 32 02.5	-0.6
	baz=222							
STYH	Taoyuan	1.63	232	*e*P		Pb	14 32 06.3	+0.1
	baz=214							
STYH				*e*S		Sb	14 32 27.1	+0.4
	baz=214							
LDUT	Ludao	1.64	204	*e*P		Pn	14 32 04.4	-0.3
	baz=199							
LDUT				*e*S		Sn	14 32 24.5	-1.1
	baz=199							
STYT	Tauyuan	1.65	232	P		Pb	14 32 07.1	+0.5
	baz=214							
STYT				S		Sg	14 32 28.1	-1.3
	baz=214							
TPUB	Ta-pu	1.67	239	P		Pg	14 32 08.2	-0.1
	baz=221							
TPUB				*e*S		Sb	14 32 28.4	+0.7
	baz=221							
JKRS	Kuro-shima	1.67	88	P		Pg	14 32 08.0	-0.4
JKRS				*e*S		Sg	14 32 29.4	-0.8
WTP	Ta-pu	1.71	237	P		Pg	14 32 08.6	-0.5
	baz=220							
JIJ	Ishigaki jima	1.80	84	P		Pb	14 32 09.2	0.0
JIJ				S		Sb	14 32 32.2	+0.5
SGST	Jiashian	1.83	233	*e*P		Pb	14 32 09.4	-0.1
	baz=216							
SGST				*e*S		Sb	14 32 32.4	+0.1
	baz=216							
LAY	Lan-yu	2.21	195	*e*P		Pn	14 32 12.8	+0.2
	baz=191							
LAY				*e*S		Sn	14 32 40.0	+0.1
	baz=191							
LYUB	Lan-yu	2.24	194	*e*P		Pn	14 32 12.4	-0.5
	baz=190							
LYUB				*e*S		Sn	14 32 39.4	-1.1
	baz=190							
JTJ	Tarama	2.35	78	P		Pb	14 32 17.3	-1.1
JTJ				S		Sb	14 32 45.7	-1.6
JMJ2	Miyako jima3	2.92	78	S		Sn	14 32 59.8	+2.4

TAP 19 14:40:55.4,24°.55N×121°.88E,h6km,ML2.0,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TWC	Suao	0.06	334	*i* P		Pg	14 40 56.9	0.0
	baz=342							
TWC				*i* S		Sg	14 40 57.9	-0.1
	baz=342							
EWUT	Wuta	0.14	221	P		Pg	14 40 58.5	+0.3
	baz=220							
EWUT				S		Sg	14 41 00.8	+0.6
	baz=220							
NDS	Dongshan	0.17	298	P		Pg	14 40 58.7	-0.1
	baz=298							
NDS				S		Sg	14 41 01.1	0.0
	baz=298							
ENA	Nanau	0.18	225	P		Pg	14 40 58.3	-0.6
	baz=223							
ILA	Ilan	0.24	331	P		Pg	14 41 00.1	0.0
	baz=331							
ILA				*e*S		Sg	14 41

YHNB	**Yeheng**	**0.47 284**	P		Pg	14 41 04.6	+0.1
	baz=284						
NSK	**Sanguang**	**0.49 285**	*e*P		Pg	14 41 05.2	+0.3
	baz=284						
NSK			*i* S		Sg	14 41 11.4	+0.2
	baz=284						
ETLH	**Xiulin Townshi**	**0.50 227**	*i* P		Pg	14 41 04.9	-0.1
	baz=226						
ETLH			*e*S		Sb	14 41 13.3	-0.9
	baz=226						
WFSB	**Wu-fen Shan**	**0.52 350**	*i* P		Pg	14 41 05.5	+0.1
	baz=350						
WFSB			*e*S		Sg	14 41 12.0	-0.3
	baz=350						
TWD	**Chiawan**	**0.54 209**	P		Pg	14 41 05.7	0.0
	baz=208						
TWD			*i* S		Sg	14 41 13.2	+0.5
	baz=208						
SXI1	**Grass Mountain**	**0.54 360**	P		Pg	14 41 06.1	+0.3
	baz=359						
SXI1			*e*S		Sg	14 41 12.6	-0.2
	baz=359						
NHY	**Taipei**	**0.56 330**	*e*P		Pb	14 41 07.8	+0.2
	baz=329						
FUSS	**Fushou**	**0.65 242**	*i* P		Pg	14 41 07.9	-0.1
	baz=242						
FUSS			S		Sg	14 41 17.2	+0.7
	baz=242						
YM01	**YM01**	**0.65 335**	P		Pg	14 41 08.4	+0.5
	baz=334						
ETM	**Tongmen**	**0.68 211**	P		Pg	14 41 08.2	-0.3
	baz=211						
ETM			*e*S		Sg	14 41 17.2	-0.2
	baz=211						
WHF	**Hehuan Shan**	**0.69 234**	*e*P		Pg	14 41 08.7	-0.1
	baz=233						
WHF			*e*S		Sg	14 41 17.8	0.0
	baz=233						
NFF	**Wufeng Townshi**	**0.70 277**	P		Pg	14 41 09.1	+0.3
	baz=276						
NFF			S		Sg	14 41 18.3	+0.5
	baz=276						
CHGB	**Renai**	**0.81 233**	*e*P		Pb	14 41 11.5	-0.5
	baz=232						
CHGB			S		Sg	14 41 21.8	+0.4
	baz=232						
ESL	**Shilin**	**0.84 209**	P		Pg	14 41 10.7	-0.8
	baz=208						
ESL			S		Sg	14 41 22.8	+0.4
	baz=208						
OWD	**Renai**	**0.88 227**	*i* P		Pg	14 41 11.9	-0.2
	baz=227						
OWD			S		Sg	14 41 24.1	+0.5
	baz=227						
WUSB	**Renai**	**0.89 231**	P		Pg	14 41 12.4	-0.1
	baz=231						
WUSB			S		Sg	14 41 23.8	-0.2
	baz=231						
EGFH	**Guangfu**	**0.97 205**	P		Pg	14 41 13.4	-0.6
	baz=205						
SSLB	**Suanglung**	**1.14 228**	P		Pg	14 41 16.9	-0.3
	baz=227						
SSLB			*e*S		Sb	14 41 32.9	+0.4
	baz=227						
EHY	**Hungye**	**1.16 206**	P		Pg	14 41 17.1	-0.5
	baz=205						
EHY			S		Sg	14 41 32.9	+0.2
	baz=205						
YULB	**Yu-li**	**1.27 205**	P		Pn	14 41 18.9	-0.8
	baz=204						
YULB			S		Sg	14 41 35.5	-0.8
	baz=204						

*IDC **19** 14:41:34.9±1.7,25°.10N×122°.64E,h0km,mb3.8/4, mbtmp3.9/5,ML3.8/1,Error ellipse: s-maj=64.3km s-min=28.0km az=66.0*
*JMA **19** 14:41:56.0±0.3,26°.N±3°×123°.8E±0°.9,h190km±4km, MV4.0/14,NW OFF ISHIGAKIJIMA IS*

ISC 19 14:41:54.2±0.9,25°.6N±0°.1×123°.79E±0°.08,h198km±10km, n16,σ0s73/27,mb3.4/4,Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTJ	**Tarama**	**1.28**	**139**	P	**Pn**	**14 42 26.6**	**+0.7**
JTJ				S	**Sn**	**14 42 49.8**	**-0.6**
IRIF	**Iriomote-Funau**	**1.28**	**182**	P	**Pn**	**14 42 26.1**	**+0.2**
IRIF				S	**Sn**	**14 42 49.9**	**-0.5**
JIJ	**Ishigaki jima**	**1.29**	**166**	P	**Pn**	**14 42 26.1**	**+0.2**
JIJ				S	**Sn**	**14 42 49.1**	**-1.5**
YOJ	**Yonaguni jima**	**1.35**	**212**	P	**Pn**	**14 42 27.2**	**+0.8**
YOJ				S	**Sn**	**14 42 51.4**	**0.0**
JKRS	**Kuro-shima**	**1.39**	**172**	P	**Pn**	**14 42 27.3**	**+0.5**
JKRS				S	**Sn**	**14 42 51.5**	**-0.6**
JYNG	**Yonagunijimaku**	**1.39**	**214**	P	**Pn**	**14 42 27.6**	**+0.8**
JYNG				S	**Sn**	**14 42 52.1**	**+0.1**
JIRB	**Irabujima**	**1.48**	**122**	P	**Pn**	**14 42 27.9**	**+0.3**
JIRB				S	**Sn**	**14 42 52.4**	**-1.0**
JIKM	**Ikemajima**	**1.49**	**117**	P	**Pn**	**14 42 28.2**	**+0.5**
JIKM				S	**Sn**	**14 42 53.0**	**-0.5**
HATJ	**Hateruma jima**	**1.56**	**179**	P	**Pn**	**14 42 29.0**	**+0.8**
HATJ				S	**Sn**	**14 42 54.4**	**-0.4**
JMJ2	**Miyako jima3**	**1.65**	**122**	P	**Pn**	**14 42 30.0**	**+0.9**
JMJ2				S	**Sn**	**14 42 55.7**	**-0.4**
JOGS	**Gusukube**	**1.70**	**120**	P	**Pn**	**14 42 30.6**	**+1.0**
JOGS				S	**Sn**	**14 42 56.7**	**-0.3**
KSRS	**Korea Array**	**12.31**	**16**	Pn	**Pn**	**14 44 43.5**	**+0.5**
	0.5nm,0.3s,baz=199,slow=12,SNR=26						
	6.8nm,0.6s						
MKAR	**Makanchi Array**	**39.01**	**314**	P	**P**	**14 49 00.7**	**-0.7**
	0.5nm,0.3s,baz=93,slow=8.6,SNR=20						
	0.5nm,0.3s						
ZALV	**Zalesovo Beam**	**40.38**	**325**	P	**P**	**14 49 11.4**	**-1.1**
	1.4nm,0.5s,baz=110,slow=9.2,SNR=6.4						
	1.4nm,0.5s						
KURBB	**Kurchatov Arra**	**42.58**	**318**	P	**P**	**14 49 30.0**	**-0.5**
	0.4nm,0.5s,baz=109,slow=9.7,SNR=3.6						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**46.44**	**166**	P	**P**	**14 50 01.7**	**+0.4**
	0.4nm,0.5s,baz=349,slow=8.4,SNR=2.6						
	0.4nm,0.5s						

MAN 19 14:42:55.3,5°.91N×125°.86E,h23km,mb4.2,ML3.1,MS2.8, Mindanao

*IDC **19** 14:47:14.6±6.1,20°.03S×168°.83E,h0km,mb3.8/4, mbtmp3.9/4,MS3.6/10,Error ellipse: s-maj=203.2km s-min=45.2km az=150.0*
*NEIC **19** 14:47:15.4±2.5,20°.2S±0°.2×169°.0E±0°.2,h10km±1km, mb4.5/15,Error ellipse: s-maj=31.7km s-min=23.9km az=44.0*

ISC 19 14:47:15.1±1.3,20°.2S±0°.2×168°.9E±0°.2,h10km,n30, σ1s27/21,mb4.5/11,MS3.5/7,Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**8.96**	**76**	LR	LR	14 52 20.1	
	comp=Z,1μm,18.6s,baz=224,slow=34						
URZ	**Urewera**	**19.39**	**160**	LR	LR	14 58 00.9	
	comp=Z,214nm,19.4s,baz=31,slow=33						
AFI	**Afiamalu**	**19.45**	**74**	LR	LR	14 57 45.1	
	comp=Z,176nm,19.6s,baz=140,slow=32						
CTA	**Charters Tower**	**21.29**	**266**	P	**P**	**14 52 04.0**	**+1.9**
	2.9nm,0.5s,baz=93,slow=13,SNR=7.4						
CTA				LR	LR	14 59 43.5	
	comp=Z,169nm,19.4s,baz=86,slow=35						
	2.9nm,0.5s						
CTAO	**Charters Tower**	**21.29**	**266**		**P**	**14 52 04.2**	**+2.1**
CTAO				IAmb	IAmb	14 52 06.2	
	comp=Z,33nm,1.5s						
BHW	**Baring Head**	**21.79**	**168**	P	**P**	**14 52 08.7**	**+1.5**
STKA	**Stephens Creek**	**27.12**	**239**	LR	LR	15 03 22.0	
	comp=Z,86nm,18.9s,baz=32,slow=36						
RAR	**Rarotonga**	**29.28**	**98**	LR	LR	15 04 10.9	
	comp=Z,252nm,18.8s,baz=115,slow=35						
WR0	**Warramunga Arr**	**32.27**	**264**	P	**P**	**14 53 41.6**	**-2.7**
WB0	**Warramunga Arr**	**32.43**	**265**	P	**P**	**14 53 44.8**	**-0.9**
WB0				IAmb	IAmb	14 53 58.9	
	comp=Z,12nm,1.3s						
WB2	**Warramunga Arr**	**32.45**	**264**	P	**P**	**14 53 45.4**	**-0.5**
WB2				IAmb	IAmb	14 54 04.4	
	comp=Z,8.6nm,1.3s						
WRAB	**Tennant Creek**	**32.45**	**264**	P	**P**	**14 53 45.3**	**-0.5**
WRAB				IAmb	IAmb	14 53 57.9	
	comp=Z,10.0nm,1.4s						
WRA	**Warramunga Arr**	**32.46**	**264**	P	**P**	**14 53 44.8**	**-1.2**
	comp=Z,1.3nm,0.8s,baz=90,slow=8.5,SNR=9.4						
WRA				LR	LR	15 06 20.0	
	comp=Z,177nm,19.6s,baz=27,slow=35						
	comp=Z,1.3nm,0.8s						
WRA	**Warramunga Arr**	**32.46**	**264**	P	**P**	**14 53 44.8**	**-1.2**
AS31	**Alice Springs**	**32.63**	**257**	P	**P**	**14 53 46.5**	**-1.0**
ASAR	**Alice Springs**	**32.63**	**257**	P	**P**	**14 53 46.1**	**-1.4**
MTN	**Manton Dam**	**36.90**	**275**	P	**P**	**14 54 24.1**	**-0.2**
MTN				IAmb	IAmb	14 54 34.4	
	comp=Z,14nm,1.3s						
KNRA	**Kununurra**	**38.41**	**270**	P	**P**	**14 54 37.1**	**0.0**
KNRA				IAmb	IAmb	14 54 50.6	
	comp=Z,8.4nm,1.1s						
PSA00	**Pilbara Seismi**	**45.74**	**259**	P	**P**	**14 55 36.4**	**-0.5**
MORW	**Morawa**	**48.56**	**249**	P	**P**	**14 55 58.7**	**-0.2**
KAPI	**Kappang**	**50.09**	**281**	LR	LR	15 16 21.3	
	comp=Z,26nm,20.8s,baz=128,slow=35						
DAV	**Davao City (W)**	**50.49**	**298**	LR	LR	15 17 07.2	
	comp=Z,32nm,18.4s,baz=140,slow=36						
VNDA	**Vanda**	**57.52**	**182**	P	**P**	**14 57 05.3**	**+1.1**
QSPA	**South Pole Qui**	**69.91**	**180**	P	**P**	**14 58 25.3**	**-1.0**
QSPA				IAmb	IAmb	14 58 26.3	
	comp=Z,5.1nm,1.1s						
CMAR	**Chiang Mai Arr**	**78.61**	**295**	P	**P**	**14 59 17.9**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=139,slow=4.2,SNR=6.8						
	comp=Z,0.4nm,0.5s						
MA2	**Magadan**	**80.81**	**351**	LR	LR	15 31 14.2	
	comp=Z,35nm,19.2s,baz=162,slow=33						
BELA	**Belgrano 2**	**81.22**	**175**	P	**P**	**14 59 29.5**	**-1.3**
BELA				IAmb	IAmb	14 59 30.7	
	comp=Z,5.0nm,1.1s						
SONM	**Songino Array**	**87.77**	**323**	P	**P**	**15 00 04.9**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=142,slow=5.1,SNR=5.3						
	comp=Z,0.5nm,0.7s						
SONM	**Songino Array**	**87.77**	**323**	IAmb	IAmb	15 00 06.2	
	comp=Z,3.8nm,1.5s						
GERES	**GERESS Array B**	**145.15**	**331**	PKPbc	**PKPab**	**15 06 53.0**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=20,slow=4.7,SNR=4.0						

WEL 19 14:52:06.0±0.7,36°.S±6°×17°.8E±°,h266km±7km,M3.7/30, mB4.2/4,ML4.3/25,MLv3.8/30,Mw(mB)3.4/4,Error ellipse: s-maj=0.0km s-min=0.0km az=75.8,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.78**	**180**	P	Pn	14 52 47.7	-0.2
MXZ				S	S	14 53 20.4	-0.6
HAZ	**Te Kaha**	**2.01**	**192**	P	Pn	14 52 49.6	-0.2
HAZ				S	S	14 53 24.3	-0.3
PUZ	**Puketiti**	**2.28**	**181**	P	Pn	14 52 51.4	-0.9
PUZ				S	S	14 53 29.3	+0.2
KUZ	**Kuaotunu**	**2.29**	**244**	P	Pn	14 52 51.2	-1.2
OPRZ	**Ohinepanea**	**2.49**	**214**	P	Pn	14 52 55.3	+1.2
URZ	**Urewera**	**2.65**	**201**	P	Pn	14 52 55.7	-0.1
URZ				S	S	14 53 34.9	-0.4
WIAZ	**Waiheke Island**	**2.75**	**248**	P	Pn	14 52 56.1	-0.7
RAGZ	**Rawiri**	**2.80**	**194**	P	Pn	14 52 58.0	+0.6
RAGZ				S	S	14 53 39.4	+1.1
TARZ	**Mount Tarawera**	**2.84**	**210**	P	Pn	14 53 00.6	+2.8
RIGZ	**Rimuhau**	**2.95**	**188**	P	Pn	14 52 59.0	+0.1
RIGZ				S	S	14 53 41.5	+0.5
MUGZ	**Murupara**	**2.95**	**204**	P	Pn	14 52 59.2	+0.3
MUGZ				S	S	14 53 41.1	+0.1
ETAZ	**East Tamaki Re**	**2.96**	**246**	P	Pn	14 52 58.7	-0.2
TOZ	**Tahuroa Road**	**2.97**	**228**	P	Pn	14 53 00.4	+1.3
RTZ	**Ruatahuna**	**3.02**	**200**	P	Pn	14 52 59.8	+0.1
HRRZ	**Handcock Road**	**3.06**	**211**	P	Pn	14 53 01.5	+1.4
SNGZ	**Shannon Statio**	**3.09**	**194**	P	Pn	14 53 01.1	+0.7
SNGZ				S	S	14 53 44.0	+0.4
PRRZ	**Plateau Road**	**3.11**	**209**	P	Pn	14 53 01.4	+0.9
PRGZ	**Paritu Road**	**3.15**	**186**	P	Pn	14 53 02.4	+1.3
PRGZ				S	S	14 53 44.4	-0.4
ALRZ	**Allen Road**	**3.18**	**209**	P	Pn	14 53 02.3	+0.9
ALRZ				S	S	14 53 46.3	+0.9
WCZ	**Waipu Caves**	**3.21**	**266**	P	Pn	14 53 00.0	-1.7
WTAZ	**Waiatarua**	**3.21**	**248**	P	Pn	14 53 02.0	+0.3
KNZ	**Kokohu**	**3.27**	**188**	P	Pn	14 53 01.9	-0.4
KNZ				S	S	14 53 46.6	-0.5
RAHZ	**Arahi**	**3.27**	**197**	P	Pn	14 53 02.6	+0.3
RAHZ				S	S	14 53 47.7	+0.5
MTHZ	**Maungataniwha**	**3.27**	**200**	P	Pn	14 53 02.8	+0.5
MTHZ				S	S	14 53 47.1	-0.2
MHGZ	**Mahia Peninsul**	**3.38**	**185**	P	Pn	14 53 03.9	+0.5
MHGZ				S	S	14 53 48.2	-1.1
NMHZ	**Naumai**	**3.51**	**199**	P	Pn	14 53 05.8	+0.8
NMHZ				S	S	14 53 52.9	+0.8
HATZ	**Hinemaiaia**	**3.56**	**209**	P	Pn	14 53 06.0	+0.4
HATZ				S	S	14 53 52.8	-0.2
ARHZ	**Aropaoanui**	**3.62**	**196**	P	Pn	14 53 06.7	+0.6
ARHZ				S	S	14 53 56.4	+2.2
BKZ	**Black Stump Fm**	**3.67**	**202**	P	Pn	14 53 06.7	0.0
BKZ				S	S	14 53 54.9	-0.3
HIZ	**Hauiti**	**3.87**	**224**	P	Pn	14 53 11.3	+2.3
MCHZ	**McNeill Hill**	**3.87**	**199**	P	Pn	14 53 09.8	+0.9
MCHZ				S	S	14 54 00.8	+1.6
NTWZ	**North Tongarir**	**3.91**	**211**	P	Pn	14 53 11.3	+1.8
TMVZ	**Te Maari**	**3.91**	**211**	P	Pn	14 53 10.3	+0.7
KWHZ	**Kaweka Forest**	**3.93**	**202**	P	Pn	14 53 09.9	+0.2
OTVZ	**Oturere**	**3.97**	**211**	P	Pn	14 53 10.8	+0.6
CKHZ	**Cape Kidnapper**	**3.99**	**194**	P	Pn	14 53 10.9	+0.6
BHHZ	**Black Hill Sta**	**4.10**	**205**	P	Pn	14 53 11.4	-0.2
WNVZ	**Wahianoa**	**4.14**	**210**	P	Pn	14 53 12.1	-0.1
KRHZ	**Kereru**	**4.14**	**201**	P	Pn	14 53 12.0	-0.2
KAHZ	**Kahuranaki**	**4.16**	**195**	P	Pn	14 53 12.7	+0.4
PXZ	**Pawanui**	**4.39**	**195**	P	Pn	14 53 14.9	0.0
PNHZ	**Pukenui**	**4.44**	**201**	P	Pn	14 53 15.1	-0.5
WPHZ	**Waipukurau**	**4.52**	**198**	P	Pn	14 53 16.4	-0.1
PRHZ	**Porangahau**	**4.66**	**196**	P	Pn	14 53 18.4	+0.2
DVHZ	**Dannevirke**	**4.81**	**200**	P	Pn	14 53 19.2	-0.8
ANWZ	**Angora Road**	**4.88**	**197**	P	Pn	14 53 20.9	+0.1
PRWZ	**Pori Road**	**5.10**	**200**	P	Pn	14 53 23.4	-0.1
BFZ	**Birch Farm**	**5.15**	**198**	P	Pn	14 53 23.6	-0.4
MRZ	**Mangatainoka R**	**5.32**	**203**	P	Pn	14 53 24.7	-1.4
TIWZ	**Tintock**	**5.33**	**200**	P	Pn	14 53 25.6	-0.7
HOWZ	**Holdsworth Sta**	**5.55**	**202**	P	Pn	14 53 27.6	-1.4
OGWZ	**Otaki Gorge**	**5.59**	**205**	P	Pn	14 53 28.2	-1.1
TMWZ	**Te Maipa**	**5.64**	**199**	P	Pn	14 53 29.7	-0.3
KIW	**Kapiti Island**	**5.72**	**207**	P	Pn	14 53 29.7	-1.4
CAW	**Cannon Point**	**5.89**	**205**	P	Pn	14 53 31.2	-1.8
TCW	**Tory Channel**	**6.27**	**209**	P	Pn	14 53 35.8	-1.9
TUWZ	**Tuamarina**	**6.59**	**210**	P	Pn	14 53 39.6	-2.0
THZ	**Tophouse**	**7.30**	**214**	P	Pn	14 53 50.4	-0.2

*VAO **19** 14:58:17.6±0.4,35°.67S×70°.97W,h10km,mb4.3*
*NEIC **19** 14:58:23.2±1.6,35°.80S±0°.05×71°.33W±0°.08,h93km±4km, mb4.6/186,ML4.4(GUC),Error ellipse: s-maj=10.0km s-min=6.3km az=104.0*
*IDC **19** 14:58:24.4±0.8,35°.81S×71°.20W,h104km±6km,mb4.0/11, mbtmp4.2/15,MS3.4/3,Error ellipse: s-maj=21.9km s-min=12.7km az=89.0*
*GUC **19** 14:58:26.5±0.6,35°.60S×71°.54W,h72km±7km,ML4.4*

ISC 19 14:58:23.3±0.5,35°.78S±0°.04×71°.26W±0°.06,h95km±4km, n289,σ0s99/303,mb4.6/99,3C,Central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ML02	**Panimavida**	**0.13**	**277**		**Pn**	**14 58 36.8**	**+0.2**
ML02				Sn	**Sn**	**14 58 46.7**	**+0.1**
ML02	**Panimavida**	**0.13**	**277**	*e*P	**Pn**	**14 58 37.0**	**+0.3**
ML02				IAML		14 58 48.5	
	comp=N,64μm,0.6s						
GO05	**Huala**	**0.94**	**324**		**Pn**	**14 58 42.7**	**0.0**
GO05				Sn	**Sn**	**14 58 55.8**	**-1.5**
GO05	**Huala**	**0.94**	**324**	IAML		14 59 01.5	
	comp=N,11μm,0.3s						
BO01	**Tunca**	**1.39**	**6**		**Pn**	**14 58 48.7**	**+0.8**
BO01				Sn	**Sn**	**14 59 06.5**	**-0.1**
BO01	**Tunca**	**1.39**	**6**	*e*P	**Pn**	**14 58 48.3**	**+0.4**
BO01				IAML		14 59 08.7	
	comp=N,4μm,0.1s						
BI05	**Punta Hualpn**	**1.83**	**238**		**Pn**	**14 58 52.2**	**-1.3**
BO04	**La Punta**	**1.86**	**17**		**Pn**	**14 58 55.0**	**+1.0**
BO04	**La Punta**	**1.86**	**17**	*e*P	**Pn**	**14 58 55.0**	**+1.0**
BO04				*i* S	**Sn**	**14 59 17.0**	**-0.3**
BO04				IAML		14 59 26.4	

	comp=E,2μm,0.6s						
MT01	**Popeta**	**1.91**	**0**		**Pn**	**14 58 54.9**	**+0.4**
MT01	**Popeta**	**1.91**	**0**	*e*P	**Pn**	**14 58 54.7**	**+0.1**
MT01				IAML		14 59 21.2	
	comp=E,7μm,0.2s						
MT09	**Talagante**	**2.01**	**7**		**Pn**	**14 58 56.5**	**+0.5**
MT09	**Talagante**	**2.01**	**7**	*e*P	**Pn**	**14 58 56.6**	**+0.7**
MT09				*i* S	**Sn**	**14 59 19.0**	**-1.8**
MT09				IAML		14 59 21.6	
	comp=E,4μm,0.1s						
LMEL	**Las Melosas**	**2.12**	**25**		**Pn**	**14 58 59.3**	**+2.0**
VA05	**Santo Domingo**	**2.14**	**352**		**Pn**	**14 58 57.2**	**-0.2**
VA05	**Santo Domingo**	**2.14**	**352**	*e*P	**Pn**	**14 58 57.3**	**-0.2**
VA05				*i* S	**Sn**	**14 59 20.6**	**-2.9**
VA05				IAML		14 59 31.1	
	comp=E,8μm,0.5s						
MT03	**Universidad Ad**	**2.36**	**15**		**Pn**	**14 59 01.6**	**+1.0**
MT05	**Renca**	**2.42**	**10**		**Pn**	**14 59 01.9**	**+0.6**
MT05	**Renca**	**2.42**	**10**	*e*P	**Pn**	**14 59 02.1**	**+0.9**
MT05				*i* S	**Sn**	**14 59 29.7**	**-0.7**
MT05				IAML		14 59 36.7	
	comp=E,5μm,0.4s						
MT02	**Curacav**	**2.52**	**2**		**Pn**	**14 59 02.8**	**+0.3**
MT02	**Curacav**	**2.52**	**2**	*e*P	**Pn**	**14 59 03.0**	**+0.5**
MT02				*i* S	**Sn**	**14 59 30.7**	**-1.8**
MT02				IAML		14 59 34.1	
	comp=N,3μm,0.5s						
VA01	**Torpederas**	**2.77**	**353**	Pn	**Pn**	**14 59 05.5**	**-0.3**
VA01	**Torpederas**	**2.77**	**353**	*e*P	**Pn**	**14 59 05.8**	**0.0**
VA01				*i* S	**Sn**	**14 59 35.2**	**-3.3**
VA01				IAML		14 59 39.4	
	comp=E,4μm,0.1s						
ROC1	**El Roble**	**2.80**	**4**		**Pn**	**14 59 06.9**	**+0.4**
ROCH	**El Roble**	**2.81**	**4**	*e*P	**Pn**	**14 59 07.0**	**+0.4**
ROCH				*i* S	**Sn**	**14 59 38.5**	**-1.3**
VA03	**San Esteban**	**3.06**	**11**		**Pn**	**14 59 10.2**	**+0.3**
VA06	**Catapilco**	**3.21**	**359**		**Pn**	**14 59 11.3**	**-0.4**
LC02	**Puerto Saavedr**	**3.45**	**209**	Pn	**Pn**	**14 59 12.7**	**-2.2**
LR03	**Panguipulli**	**3.94**	**192**	Pn	**Pn**	**14 59 19.4**	**-2.1**
LR04	**Corral**	**4.44**	**202**		**Pn**	**14 59 26.2**	**-2.0**
CO02	**Combarbal**	**4.57**	**3**		**Pn**	**14 59 28.8**	**-1.5**
CO03	**El Pedregal**	**4.95**	**6**		**Pn**	**14 59 35.1**	**-0.3**
PLCA	**Paso Flores**	**4.98**	**174**	P	**Pn**	**14 59 36.3**	**+0.6**
	comp=E,18nm,0.6s,baz=346,slow=11,SNR=121						
PLCA	**Paso Flores**	**4.98**	**174**	Pn	**Pn**	**14 59 35.7**	**0.0**
PLCA	**Paso Flores**	**4.98**	**174**	*e*P	**Pn**	**14 59 34.5**	**-1.1**
CO06	**Fray Jorge**	**5.10**	**356**	Pn	**Pn**	**14 59 36.1**	**-1.2**
LL03	**Petrohue**	**5.43**	**189**		**Pn**	**14 59 40.3**	**-1.4**
GO04	**Tololo Observa**	**5.60**	**4**		**Pn**	**14 59 43.7**	**-0.7**
CO05	**La Serena**	**5.84**	**0**		**Pn**	**14 59 47.1**	**-0.3**
CO01	**Juntas del Tor**	**5.87**	**10**		**Pn**	**14 59 46.3**	**-1.7**
VA04	**Juan Fernndez**	**6.59**	**287**	Pn	**Pn**	**14 59 56.5**	**-1.0**
LC0	**Las Campanas**	**6.76**	**4**	Pn	**Pn**	**14 59 59.0**	**-1.2**
AC04	**Llanos de Chal**	**7.55**	**1**		**Pn**	**15 00 08.7**	**-2.0**
GO07	**Milladeo Hill,**	**7.56**	**193**	Pn	**Pn**	**15 00 06.3**	**-4.4**
GO03	**Copiap**	**8.21**	**6**	Pn	**Pn**	**15 00 18.1**	**-1.5**
AC02	**Maricunga**	**9.10**	**12**		**Pn**	**15 00 31.0**	**-1.2**
GO02	**Mina Guanaco**	**10.68**	**8**	Pn	**Pn**	**15 00 53.0**	**-0.6**
PB15	**IPOC Station P**	**12.62**	**8**		**Pn**	**15 01 18.9**	**-0.6**
PB06	**IPOC Station P**	**13.11**	**7**	Pn	**Pn**	**15 01 25.9**	**0.0**
LVC	**Limon Verde**	**13.28**	**10**	P	**Pn**	**15 01 30.6**	**+2.2**
	comp=E,2.2nm,0.5s,baz=228,slow=9.0,SNR=3.1						
LVC				LR	LR	15 07 28.6	
	comp=E,132nm,20.4s,baz=218,slow=41						
LVC	**Limon Verde**	**13.28**	**10**	Pn	**Pn**	**15 01 29.2**	**+0.8**
LVC	**Limon Verde**	**13.28**	**10**	*e*P	**Pn**	**15 01 25.2**	**-3.2**
ITQB	**Itaqui**	**13.74**	**68**	P	**P**	**15 01 39.4**	**+0.1**
PB09	**IPOC Station P**	**14.04**	**8**	Pn	**Pn**	**15 01 38.2**	**0.0**
PB02	**IPOC Station P**	**14.46**	**5**	P	**P**	**15 01 47.9**	**+0.4**
RODS	**Rosario do Sul**	**14.51**	**73**	*e*P	**Pn**	**15 01 40.4**	**-3.6**
PB01	**IPOC Station P**	**14.76**	**7**	Pn	**Pn**	**15 01 46.6**	**-0.8**
PB01				P	**P**	**15 01 52.3**	**+1.5**
CPUP	**Villa Florida**	**15.19**	**56**	P	**P**	**15 01 54.8**	**-0.7**
	comp=E,0.9nm,0.6s,baz=233,slow=12,SNR=3.3						
CPUP				LR	LR	15 07 39.1	
	comp=E,119nm,19.4s,baz=222,slow=37						
PLTB	**Pedras Altas**	**15.22**	**80**		**P**	**15 01 54.7**	**-1.1**
GO09	**Cerro Castillo**	**15.51**	**183**	P	**P**	**15 02 00.3**	**+1.5**
MG05	**Puerto Natales**	**15.92**	**183**	P	**P**	**15 02 05.0**	**+1.7**
MG05				IAmb	IAmb	15 02 23.9	
	comp=Z,43nm,1.4s						
PB11	**IPOC Station P**	**16.02**	**5**	P	**P**	**15 02 06.4**	**+1.5**
ALGR	**Alto Alegre (B**	**16.91**	**71**	*e*P	**Pn**	**15 02 09.2**	**-4.8**
MG03	**Isla Dawson**	**18.08**	**178**	P	**Pn**	**15 02 28.2**	**+0.3**
MG03				IAmb	IAmb	15 02 32.0	
	comp=Z,34nm,1.1s						
CNLB	**Canela**	**18.36**	**75**	*e*P	**P**	**15 02 29.5**	**-1.0**
ITAB	**Concordia**	**18.38**	**68**	P	**P**	**15 02 31.0**	**+0.3**
ITAB	**Concordia**	**18.38**	**68**	*e*P	**P**	**15 02 29.8**	**-0.9**
FRBT	**Francisco Belt**

X51A	**Calhoun**	**71.12 348**	P	**P**	**15 09 31.2**	**0.0**
JCT	**Junction City**	**71.16 334**	P	**P**	**15 09 31.9**	**+0.3**
KMSC	**Kings Mountain**	**71.18 351**	P	**P**	**15 09 31.6**	**+0.1**
KMSC			IAmb	IAmb	15 09 48.7	
	comp=Z,10.0nm,1.1s					
FPAL	**Fort Paine**	**71.23 348**	P	**P**	**15 09 31.1**	**-0.8**
FPAL			IAmb	IAmb	15 09 32.2	
	comp=Z,7.3nm,0.9s					
BG3	**Lake Jocassee**	**71.25 350**	P	**P**	**15 09 31.9**	**-0.1**
BG3			IAmb	IAmb	15 09 32.5	
	comp=Z,6.9nm,0.7s					
237A	**Washetta, Mont**	**71.25 338**	P	**P**	**15 09 32.3**	**+0.2**
MAW	**Mawson**	**71.30 163**	P	**P**	**15 09 32.1**	**+0.1**
	comp=Z,2.8nm,0.7s,baz=208,slow=6.4,SNR=7.6					
	comp=Z,2.8nm,0.7s					
MAW	**Mawson**	**71.30 163**	P	**P**	**15 09 32.1**	**+0.1**
X48A	**Hartselle**	**71.41 346**	P	**P**	**15 09 32.7**	**-0.2**
V58A	**Windy Hill, Pi**	**71.58 353**	P	**P**	**15 09 33.5**	**-0.5**
TXAR	**Lajitas Array**	**71.59 330**	P	**P**	**15 09 35.0**	**+0.6**
	comp=Z,3.4nm,0.6s,baz=151,slow=8.6,SNR=67					
TXAR			pP	**pP**	**15 10 01.3**	**+2.6**
	comp=Z,0.7nm,0.8s,baz=150,slow=9.3,SNR=2.2					
	comp=Z,3.4nm,0.6s					
TXAR	**Lajitas Array**	**71.59 330**	P	**P**	**15 09 34.6**	**+0.3**
TX31	**Lajitas Ar. Si**	**71.59 330**	P	**P**	**15 09 34.5**	**+0.2**
TX32	**Lajitas Array**	**71.59 330**	P	**P**	**15 09 34.6**	**+0.3**
TX32			IAmb	IAmb	15 09 36.0	
	comp=Z,4.8nm,0.7s					
WHTX	**Lake Whitney,**	**71.75 337**	P	**P**	**15 09 35.2**	**+0.1**
W50A	**Signal Mountai**	**71.82 348**	P	**P**	**15 09 35.2**	**-0.3**
V55A	**Taylorsville**	**71.87 352**	P	**P**	**15 09 35.3**	**-0.4**
V55A			IAmb	IAmb	15 09 36.4	
	comp=Z,11nm,0.8s					
V53A	**Saluda**	**71.89 350**	P	**P**	**15 09 35.1**	**-0.8**
V53A			IAmb	IAmb	15 09 38.8	
	comp=Z,8.9nm,1.1s					
CPCT	**Cooper Cave**	**71.93 349**	P	**P**	**15 09 35.4**	**-0.7**
CPCT			IAmb	IAmb	15 09 36.4	
	comp=Z,7.5nm,0.7s					
SWET	**Sewanee**	**71.94 347**	P	**P**	**15 09 35.7**	**-0.5**
OXF	**Oxford**	**71.95 344**	P	**P**	**15 09 35.6**	**-0.6**
TKL	**Tuckaleechee C**	**72.02 349**	P	**P**	**15 09 35.8**	**-0.9**
TKL			IAmb	IAmb	15 09 36.9	
	comp=Z,20nm,1.4s					
PLAL	**Pickwick Lake**	**72.12 346**	P	**P**	**15 09 37.0**	**-0.2**
V52A	**Sevierville**	**72.18 349**	P	**P**	**15 09 37.0**	**-0.6**
V52A			IAmb	IAmb	15 09 39.1	
	comp=Z,16nm,1.3s					
V51A	**Loudon**	**72.25 349**	P	**P**	**15 09 37.5**	**-0.5**
V51A			IAmb	IAmb	15 09 38.7	
	comp=Z,15nm,1.4s					
U54A	**Nelsons Funny**	**72.60 351**	P	**P**	**15 09 39.7**	**-0.5**
V48A	**Smith Brothers**	**72.62 347**	P	**P**	**15 09 40.0**	**-0.1**
T59A	**Double "B" Far**	**72.62 355**	P	**P**	**15 09 40.2**	**+0.1**
T57A	**Hurt**	**72.79 353**	P	**P**	**15 09 41.1**	**0.0**
T57A			IAmb	IAmb	15 09 41.5	
	comp=Z,6.9nm,0.8s					
TZTN	**Tazewell**	**72.86 350**	P	**P**	**15 09 41.3**	**-0.3**
CLTN	**Cedars of Leba**	**72.87 347**	P	**P**	**15 09 41.4**	**-0.2**
CLTN			IAmb	IAmb	15 09 42.4	
	comp=Z,9.1nm,0.9s					
Z35A	**Perchaven, San**	**72.93 337**	P	**P**	**15 09 42.2**	**+0.1**
MIAR	**Mount Ida**	**73.00 341**	P	**P**	**15 09 42.1**	**-0.3**
ABTX	**Abilene, Hawle**	**73.06 335**	P	**P**	**15 09 42.9**	**0.0**
ABTX			IAmb	IAmb	15 09 44.1	
	comp=Z,11nm,0.9s					
U49A	**Red Boiling Sp**	**73.18 348**	P	**P**	**15 09 43.0**	**-0.5**
U49A			IAmb	IAmb	15 09 43.5	
	comp=Z,4.4nm,0.5s					
WVT	**Waverly**	**73.19 346**	P	**P**	**15 09 43.1**	**-0.4**
W41B	**Gary Mavity, V**	**73.25 342**	P	**P**	**15 09 43.3**	**-0.6**
W41B			IAmb	IAmb	15 09 45.0	
	comp=Z,17nm,1.4s					
JSRW	**J. Sargeant Re**	**73.36 355**	P	**P**	**15 09 44.8**	**+0.3**
WHAR	**Wooly Hollow**	**73.37 342**	P	**P**	**15 09 44.5**	**-0.2**
S57A	**Dark Hollow, R**	**73.52 354**	P	**P**	**15 09 45.6**	**+0.2**
S57A			IAmb	IAmb	15 09 51.5	
	comp=Z,18nm,1.4s					
R58B	**Mineral**	**73.63 355**	P	**P**	**15 09 46.4**	**+0.4**
R58B			IAmb	IAmb	15 10 03.5	
	comp=Z,20nm,1.4s					
W39A	**Magazine**	**73.67 341**	P	**P**	**15 09 46.9**	**+0.5**
S54A	**Dingess, Beckl**	**73.80 352**	P	**P**	**15 09 46.5**	**-0.7**
S54A			IAmb	IAmb	15 09 47.1	
	comp=Z,10nm,0.9s					
LCAR	**Lake Charles**	**73.84 343**	P	**P**	**15 09 46.9**	**-0.4**
FCAR	**Ozark Folk Cen**	**73.90 342**	P	**P**	**15 09 47.3**	**-0.4**
FCAR			IAmb	IAmb	15 09 48.2	
	comp=Z,4.8nm,0.7s					
S51A	**Beattyville**	**73.94 350**	P	**P**	**15 09 47.4**	**-0.5**
PARMO	**Parma**	**74.10 345**	P	**P**	**15 09 49.0**	**+0.2**
R55A	**Marlinton**	**74.15 353**	P	**P**	**15 09 49.5**	**+0.3**
R55A			IAmb	IAmb	15 09 50.0	
	comp=Z,8.0nm,0.8s					
X34A	**Smith Ranch, M**	**74.28 337**	P	**P**	**15 09 50.2**	**+0.2**
X34A			IAmb	IAmb	15 09 51.8	
	comp=Z,10nm,0.8s					
PBMO	**Poplar Bluff**	**74.36 344**	P	**P**	**15 09 50.0**	**-0.3**
MNTX	**Cornudas Mount**	**74.37 330**	P	**P**	**15 09 50.0**	**-0.6**
MNTX			IAmb	IAmb	15 09 50.9	
	comp=Z,5.7nm,0.7s					
R53A	**Hurricane**	**74.40 351**	P	**P**	**15 09 50.6**	**0.0**
R53A			IAmb	IAmb	15 10 06.0	
	comp=Z,15nm,1.2s					
U40A	**Yellville**	**74.53 342**	P	**P**	**15 09 51.1**	**-0.3**
WMOK	**Wichita Mounta**	**74.71 337**	P	**P**	**15 09 51.9**	**-0.6**
HHAR	**Hobbs**	**74.73 341**	P	**P**	**15 09 52.1**	**-0.5**
HHAR			IAmb	IAmb	15 09 53.2	
	comp=Z,6.0nm,0.8s					
LIC	**Lamto**	**74.75 71⇑**	*iP*	**P**	**15 09 51.6**	**-1.6**
	comp=Z,8.5nm,0.9s					
Q56A	**Snyder Ridge,**	**74.81 354**	P	**P**	**15 09 53.5**	**+0.5**
Q56A			IAmb	IAmb	15 10 13.9	
	comp=Z,21nm,1.4s					
TUL1	**Leonard**	**74.89 340**	P	**P**	**15 09 53.3**	**-0.2**
TUL1			IAmb	IAmb	15 09 54.2	
	comp=Z,9.3nm,0.8s					
Q54A	**Coxs Mills**	**74.92 352**	P	**P**	**15 09 52.9**	**-0.7**
Q54A			IAmb	IAmb	15 10 12.6	
	comp=Z,8.5nm,1.1s					
S44A	**Carbondale**	**74.98 345**	P	**P**	**15 09 53.4**	**-0.5**
S44A			IAmb	IAmb	15 09 54.2	
	comp=Z,6.6nm,0.8s					
SIUC	**Southern Illin**	**75.00 345**	P	**P**	**15 09 53.7**	**-0.4**
SIUC			IAmb	IAmb	15 09 54.8	
	comp=Z,6.5nm,0.8s					
TIC	**Toumodi**	**75.02 70⇑**	*iP*	**P**	**15 09 54.9**	**+0.1**
	comp=Z,2.0nm,0.2s					
KIC	**Kosan Boka**	**75.05 71⇑**	*iP*	**P**	**15 09 55.0**	**0.0**
	comp=Z,6.3nm,0.6s					
MGMO	**Mountain Grove**	**75.14 343**	P	**P**	**15 09 54.2**	**-0.7**
DBIC	**Dimbokro**	**75.16 70**	P	**P**	**15 09 55.5**	**0.0**
	comp=Z,3.8nm,0.7s,baz=224,slow=5.7,SNR=5.0					
	comp=Z,3.8nm,0.7s					
DBIC	**Dimbokro**	**75.16 70**	P	**P**	**15 09 55.8**	**+0.3**
DBIC			IAmb	IAmb	15 09 56.4	
	comp=Z,6.5nm,0.8s					
Q51A	**Peebles**	**75.27 350**	P	**P**	**15 09 55.1**	**-0.5**
Q51A			IAmb	IAmb	15 09 56.2	
	comp=Z,8.2nm,0.7s					
MSTX	**Muleshoe**	**75.38 333**	P	**P**	**15 09 56.6**	**+0.1**
MSTX			IAmb	IAmb	15 09 57.5	
	comp=Z,7.5nm,0.8s					
WUPA	**West Chester U**	**75.45 357**	P	**P**	**15 09 57.2**	**+0.7**
WUPA			IAmb	IAmb	15 09 58.1	
	comp=Z,5.8nm,0.9s					
FVM	**French Village**	**75.51 344**	P	**P**	**15 09 56.5**	**-0.5**
FVM			IAmb	IAmb	15 09 57.8	
	comp=Z,13nm,1.1s					
CCM	**Cathedral Cave**	**75.76 344**	P	**P**	**15 09 58.0**	**-0.4**
AMTX	**Amarillo**	**75.81 335**	P	**P**	**15 09 59.0**	**+0.1**
S39A	**Bolivar**	**75.91 342**	P	**P**	**15 09 58.7**	**-0.5**
S39A			IAmb	IAmb	15 10 00.1	
	comp=Z,14nm,1.4s					
P49A	**Miami Univ. Ec**	**75.96 349**	P	**P**	**15 09 58.7**	**-0.8**
P49A			IAmb	IAmb	15 09 59.5	
	comp=Z,13nm,1.2s					
P48A	**Milroy**	**76.00 349**	P	**P**	**15 09 58.6**	**-1.1**
P48A			IAmb	IAmb	15 09 59.7	
	comp=Z,16nm,1.1s					
T35A	**Sooner Cattle**	**76.04 339**	P	**P**	**15 10 00.1**	**0.0**
T35A			IAmb	IAmb	15 10 01.1	
	comp=Z,9.6nm,0.9s					
121A	**Cookes Peak, D**	**76.09 329**	P	**P**	**15 10 01.9**	**+1.3**
R40A	**Maddies Statio**	**76.22 343**	P	**P**	**15 10 00.8**	**-0.2**
SSPA	**Standing Stone**	**76.29 355**	P	**P**	**15 10 01.9**	**+0.6**
SSPA			IAmb	IAmb	15 10 09.8	
	comp=Z,7.4nm,1.1s					
ODNJ	**Ogdensburg**	**76.55 357**	P	**P**	**15 10 03.2**	**+0.5**
ODNJ			IAmb	IAmb	15 10 17.5	
	comp=Z,6.9nm,1.1s					
LENM	**Lemitar**	**77.17 330**	P	**P**	**15 10 07.6**	**+0.9**
N49A	**Columbus Grove**	**77.25 350**	P	**P**	**15 10 06.2**	**-0.5**
N49A			IAmb	IAmb	15 10 07.0	
	comp=Z,5.5nm,0.7s					
P40A	**Paris**	**77.35 344**	P	**P**	**15 10 07.1**	**-0.2**
ANMO	**Albuquerque**	**77.64 331**	P	**P**	**15 10 10.1**	**+0.8**
L56A	**Greenwood**	**77.75 355**	P	**P**	**15 10 09.2**	**-0.4**
L56A			IAmb	IAmb	15 10 10.2	
	comp=Z,5.1nm,0.7s					
P38A	**Dawn**	**77.79 343**	P	**P**	**15 10 09.0**	**-0.8**
P38A			IAmb	IAmb	15 10 10.3	
	comp=Z,10nm,0.7s					
214A	**Organ Pipe Nat**	**77.84 325**	P	**P**	**15 10 10.3**	**0.0**
214A			IAmb	IAmb	15 10 12.7	
	comp=Z,5.0nm,0.8s					
L61B	**Northampton**	**77.86 359**	P	**P**	**15 10 10.8**	**+0.6**
L61B			IAmb	IAmb	15 10 11.9	
	comp=Z,17nm,1.4s					
CASY	**Casey**	**78.26 181**	P	**P**	**15 10 12.6**	**+0.5**
CASY			IAmb	IAmb	15 10 14.1	
	comp=Z,8.5nm,1.1s					
M44A	**Midewin, Midew**	**78.32 347**	P	**P**	**15 10 11.9**	**-0.8**
M44A			IAmb	IAmb	15 10 12.9	
	comp=Z,6.3nm,0.6s					
BOSA	**Boshof**	**78.69 117**	P	**P**	**15 10 15.2**	**-0.2**
	comp=Z,4.4nm,1.0s,baz=237,slow=4.6,SNR=3.6					
	comp=Z,4.4nm,1.0s					
BOSA	**Boshof**	**78.69 117**	IAmb	IAmb	15 10 16.4	
	comp=Z,19nm,1.4s					
X18A	**Snowflake**	**78.72 328**	P	**P**	**15 10 16.4**	**+1.2**
T25A	**Trinidad**	**78.81 334**	P	**P**	**15 10 16.8**	**+1.1**
T25A			IAmb	IAmb	15 10 17.9	
	comp=Z,9.7nm,0.8s					
N38A	**Joes South For**	**78.83 343**	P	**P**	**15 10 15.1**	**-0.3**
J56A	**Wolcott**	**78.85 356**	P	**P**	**15 10 15.4**	**-0.1**
J56A			IAmb	IAmb	15 10 16.2	
	comp=Z,8.4nm,0.8s					
L42A	**Oliver, Polo**	**79.22 346**	P	**P**	**15 10 17.2**	**-0.4**
L42A			IAmb	IAmb	15 10 17.9	
	comp=Z,9.4nm,0.9s					
X16A	**Lo Mia Camp, P**	**79.27 327**	P	**P**	**15 10 19.5**	**+1.1**
N35A	**Tabor**	**79.49 341**	P	**P**	**15 10 18.7**	**-0.4**
SDCO	**Great Sand Dun**	**79.74 333**	P	**P**	**15 10 21.5**	**+0.6**
WUAZ	**Wupatki**	**80.17 328**	P	**P**	**15 10 24.1**	**+1.0**
WUAZ			IAmb	IAmb	15 10 25.6	
	comp=Z,6.5nm,1.1s					
S22A	**4UR Ranch, Cre**	**80.24 332**	P	**P**	**15 10 24.2**	**+0.6**
HAL	**Halifax**	**80.34 6**	P	**P**	**15 10 25.0**	**+1.5**
HAL			IAmb	IAmb	15 10 25.2	
	comp=Z,11nm,0.8s					
MVCO	**Mesa Verde**	**80.42 331**	P	**P**	**15 10 25.6**	**+1.1**
SADO	**Sadowa**	**80.49 354**	P	**P**	**15 10 24.0**	**-0.4**
Q24A	**Divide**	**80.69 334**	P	**P**	**15 10 26.9**	**+0.8**
Q24A			IAmb	IAmb	15 10 27.8	
	comp=Z,6.9nm,0.7s					
PFO	**Pinyon Flats O**	**80.94 323**	P	**P**	**15 10 28.4**	**+1.2**
PFO			IAmb	IAmb	15 10 29.9	
	comp=Z,9.5nm,0.9s					
W13A	**Hualapai Mount**	**80.94 326**	P	**P**	**15 10 28.5**	**+1.2**
F63A	**Nahmakanta, Br**	**81.13 2**	P	**P**	**15 10 28.7**	**+1.0**
F63A			IAmb	IAmb	15 10 47.6	
	comp=Z,10nm,1.2s					
F64A	**Sherman**	**81.31 2**	P	**P**	**15 10 30.4**	**+1.8**
F64A			IAmb	IAmb	15 10 46.8	
	comp=Z,8.7nm,1.2s					
U15A	**North Rim**	**81.34 328**	P	**P**	**15 10 30.6**	**+1.1**
PV13	**Radium Mtn., P**	**81.37 331**	P	**P**	**15 10 30.2**	**+0.7**
PV13			IAmb	IAmb	15 10 31.3	
	comp=Z,6.6nm,0.9s					
ELS	**Elsinore Mount**	**81.44 323**	P	**P**	**15 10 31.0**	**+1.2**
LMN	**Caledonia Moun**	**81.47 5**	P	**P**	**15 10 30.3**	**+0.8**
LMN			IAmb	IAmb	15 10 52.9	
	comp=Z,19nm,1.3s					
ISCO	**Idaho Springs**	**81.60 334**	P	**P**	**15 10 31.5**	**+0.7**
TRQ	**Mont Tremblant**	**81.68 358**	P	**P**	**15 10 30.5**	**-0.2**
TRQ			IAmb	IAmb	15 10 31.7	
	comp=Z,6.8nm,1.0s					
E62A	**Clayton Lake**	**82.04 1**	P	**P**	**15 10 33.1**	**+0.6**
E62A			IAmb	IAmb	15 10 40.9	
	comp=Z,16nm,1.3s					
LCMT	**Little Creek M**	**82.25 327**	P	**P**	**15 10 34.9**	**+0.9**
ECSD	**EROS Data Cent**	**82.43 342**	P	**P**	**15 10 34.7**	**0.0**
ECSD			IAmb	IAmb	15 10 35.6	
	comp=Z,18nm,1.5s					
E46A	**Sault Ste Mari**	**82.61 351**	P	**P**	**15 10 35.3**	**-0.2**
E46A			IAmb	IAmb	15 10 36.1	
	comp=Z,10nm,0.8s					
MTPU	**Mount Pierson**	**82.65 329**	P	**P**	**15 10 37.1**	**+0.7**
SHPR	**Sheep Range**	**82.69 326**	P	**P**	**15 10 37.1**	**+0.7**
N23A	**Red Feather La**	**82.69 334**	P	**P**	**15 10 37.0**	**+0.7**
LTZ	**Lake Taylor**	**82.70 222**	P	**P**	**15 10 37.2**	**+0.8**
CCUT	**Cedar City**	**82.75 328**	P	**P**	**15 10 37.4**	**+0.6**
CCUT			IAmb	IAmb	15 10 39.5	
	comp=Z,5.7nm,1.1s					
WHZ	**Wether Hill Ro**	**82.77 217**	P	**P**	**15 10 37.1**	**+0.4**
SRU	**San Rafael Swe**	**82.87 330**	P	**P**	**15 10 37.7**	**+0.5**
SRU			IAmb	IAmb	15 10 38.7	
	comp=Z,4.6nm,0.8s					
MSU	**Marysvale**	**83.04 329**	P	**P**	**15 10 39.3**	**+1.1**
P18A	**Preston Nutter**	**83.20 331**	P	**P**	**15 10 39.5**	**+0.4**
P18A			IAmb	IAmb	15 10 41.0	
	comp=Z,7.0nm,0.9s					
P17A	**Butcher Ranch,**	**83.27 330**	P	**P**	**15 10 39.8**	**+0.5**
P17A			IAmb	IAmb	15 10 41.0	
	comp=Z,6.9nm,1.3s					
TMUT	**Trail Mountain**	**83.31 330**	P	**P**	**15 10 40.4**	**+0.7**
TMUT			IAmb	IAmb	15 10 42.7	
	comp=Z,3.5nm,0.7s					
PRN	**Pahroc Range**	**83.38 326**	P	**P**	**15 10 40.8**	**+0.9**
PRN			IAmb	IAmb	15 10 42.5	
	comp=Z,7.5nm,1.1s					
F36A	**Milaca**	**83.71 345**	P	**P**	**15 10 40.8**	**-0.4**
RDMU	**Red Mountain**	**83.75 332**	P	**P**	**15 10 41.8**	**0.0**
RDMU			IAmb	IAmb	15 10 43.2	
	comp=Z,5.9nm,0.8s					
PSUT	**Pine Spring**	**83.78 328**	P	**P**	**15 10 42.9**	**+0.9**
NLU	**North Lily Min**	**84.22 330**	P	**P**	**15 10 45.3**	**+1.1**
TOA0	**Torodi Ar. Sit**	**84.23 69**	P	**P**	**15 10 44.6**	**+0.1**
TOA0			IAmb	IAmb	15 10 44.9	
	comp=Z,7.9nm,1.4s					
TORD	**Torodi Ar. Bea**	**84.23 69**	P	**P**	**15 10 44.4**	**-0.1**
	comp=Z,2.3nm,0.8s,baz=258,slow=4.2,SNR=14					
TORD			pP	**pP**	**15 11 10.0**	**0.0**
	comp=Z,1.1nm,0.7s,baz=221,slow=3.6,SNR=4.4					
	comp=Z,2.3nm,0.8s					
TORD	**Torodi Ar. Bea**	**84.23 69**	P	**P**	**15 10 44.4**	**-0.1**
R11A	**Troy Canyon, C**	**84.39 326**	P	**P**	**15 10 45.7**	**+0.6**
JLU	**Jordanelle**	**84.51 330**	P	**P**	**15 10 45.9**	**+0.2**
JLU			IAmb	IAmb	15 10 47.2	
	comp=Z,3.5nm,0.7s					
DUG	**Dugway, Tooele**	**84.72 329**	P	**P**	**15 10 47.3**	**+0.6**
RSSD	**Black Hills**	**84.92 337**	P	**P**	**15 10 47.6**	**0.0**
RSSD			IAmb	IAmb	15 10 48.8	
	comp=Z,4.8nm,0.8s					
DRLN	**Deer Lake**	**85.54 9**	P	**P**	**15 10 50.4**	**+0.1**
BW06	**Boulder Array**	**85.63 333**	P	**P**	**15 10 50.5**	**-0.8**
PD31	**Pinedale Array**	**85.63 333**	P	**P**	**15 10 50.5**	**-0.8**
PDAR	**Pinedale Array**	**85.63 333**	P	**P**	**15 10 51.1**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=150,slow=3.3,SNR=8.1					
	comp=Z,0.8nm,0.6s					
PDAR	**Pinedale Array**	**85.63 333**	P	**P**	**15 10 51.4**	**+0.2**
NVAR	**Mina Array Bea**	**85.70 325**	P	**P**	**15 10 52.6**	**+0.9**
	comp=Z,1.8nm,0.8s,baz=163,slow=6.0,SNR=13					
	comp=Z,1.8nm,0.8s					
NVAR	**Mina Array Bea**	**85.70 325**	P	**P**	**15 10 51.9**	**+0.2**
HVU	**Hansel Valley**	**86.04 330**	P	**P**	**15 10 53.4**	**+0.2**
HVU			IAmb	IAmb	15 10 54.3	
	comp=Z,4.6nm,0.8s					
KVN	**Kaiserville**	**86.11 325**	P	**P**	**15 10 53.9**	**+0.2**
KVN			IAmb	IAmb	15 10 55.3	
	comp=Z,5.5nm,1.1s					
ELK	**Elko**	**86.21 328**	P	**P**	**15 10 54.4**	**+0.2**
CMB	**Columbia Colle**	**86.39 323**	P	**P**	**15 10 55.5**	**+0.7**
AGMN	**Agassiz Nation**	**86.54 344**	P	**P**	**15 10 55.1**	**-0.1**
AGMN			IAmb	IAmb	15 10 56.8	
	comp=Z,3.3nm,0.7s					
PNTR	**Pine Nut**	**86.84 324**	P	**P**	**15 10 58.2**	**+1.0**
PNTR			IAmb	IAmb	15 10 59.6	
	comp=Z,6.0nm,0.8s					
RLMT	**Red Lodge**	**87.56 334**	P	**P**	**15 11 00.8**	**+0.2**
ULM	**Lac du Bonnet**	**88.38 344**	P	**P**	**15 11 03.6**	**-0.4**
	comp=Z,5.1nm,0.6s,baz=176,slow=5.1,SNR=8.6					
	comp=Z,5.1nm,0.6s					
ULM	**Lac du Bonnet**	**88.38 344**	P	**P**	**15 11 03.9**	**-0.1**
MCMT	**McKenzie Canyo**	**88.64 332**	P	**P**	**15 11 07.5**	**+1.8**
LRM	**Limekiln Ridge**	**89.32 333**	P	**P**	**15 11 09.1**	**+0.2**
MOD	**Modoc Plateau**	**89.39 326**		**P**	**15 11 09.6**	**+0.4**
MOD			IAmb	IAmb	15 11 11.0	
	comp=Z,2.9nm,0.7s					
J08A	**Circle Bar Ran**	**89.73 328**	P	**P**	**15 11 11.6**	**+0.9**
J08A			IAmb	IAmb	15 11 12.8	
	comp=Z,7.0nm,1.5s					
ILAR	**Eielson Array**	**116.06 332**	PKP	**PKPdf**	**15 16 53.4**	**-0.8**
	comp=Z,0.3nm,0.7s,baz=132,slow=1.3,SNR=5.0					
WRA	**Warramunga Arr**	**119.51 208**	PKP	**PKPdf**	**15 17 00.8**	**-1.6**
	comp=Z,0.5nm,0.7s,baz=156,slow=1.5,SNR=8.3					
BRTR	**Keskin Array B**	**122.13 62**	PKP	**PKPdf**	**15 17 06.2**	**-0.7**
	comp=Z,0.5nm,0.8s,baz=208,slow=4.2,SNR=4.1					
AKASG	**Malin Array Be**	**122.91 48**	PKP	**PKPdf**	**15 17 06.4**	**-1.3**
	comp=Z,0.9nm,0.6s,baz=262,slow=1.0,SNR=4.9					
KURBB	**Kurchatov Arra**	**153.68 46**	PKPbc	**PKPbc**	**15 18 09.7**	**-0.8**
	comp=Z,1.7nm,0.7s,baz=296,slow=2.9,SNR=11					
KURBB			PKPab	**PKPab**	**15 18 23.9**	**+0.2**
	comp=Z,1.4nm,0.7s,baz=288,slow=4.9,SNR=8.0					
KURK	**Kurchatov**	**153.70 46**		**PKPbc**	**15 18 09.7**	**-0.8**
ZALV	**Zalesovo Beam**	**155.35 35**	PKPbc	PKPdf	15 18 14.0	+9.1
	comp=Z,2.0nm,0.6s,baz=278,slow=3.1,SNR=8.1					
ZALV			PKPab	**PKPab**	**15 18 29.4**	**-1.3**
	comp=Z,1.0nm,0.6s,baz=294,slow=7.0,SNR=3.7					
MKAR	**Makanchi Array**	**157.39 53**	PKP	**PKPdf**	**15 18 06.2**	**-1.6**
	comp=Z,0.4nm,0.7s,baz=286,slow=1.0,SNR=2.9					
MKAR			pPKP	**pPKPdf**	**15 18 35.8**	**+1.4**
	comp=Z,2.0nm,0.9s,baz=287,slow=3.5,SNR=7.1					
MKAR			PKPab	**PKPab**	**15 18 39.6**	**-0.2**
	comp=Z,2.0nm,0.9s,baz=278,slow=3.3,SNR=8.9					
MKAR			pPKPab	**pPKPab**	**15 19 05.6**	**+0.1**
	comp=Z,1.5nm,0.8s,baz=267,slow=4.4,SNR=5.3					
MKAR	**Makanchi Array**	**157.39 53**		**PKPab**	**15 18 39.1**	**-0.7**
CMAR	**Chiang Mai Arr**	**160.69 151**	PKP	**PKPdf**	**15 18 11.5**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=263,slow=2.4,SNR=2.6					
SONM	**Songino Array**	**167.83 8**	PKPab	**PKPab**	**15 19 25.7**	**+0.3**
	comp=Z,0.9nm,0.5s,baz=333,slow=3.8,SNR=4.8					

MAN 19 15:02:02.9, 13°.83N×120°.61E, h14km, mb3.7, ML2.4, MS1.9, Mindoro

IDC 19 15:17:24.4±4.2, 20°.90S×169°.11E, h0km, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=174.5km s-min=57.8km az=158.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**32.56**	**265**	P	P	15 23 57.0	-0.6
	0.9nm,0.7s,baz=94,slow=8.3,SNR=2.2						
	0.9nm,0.7s						
CMAR	**Chiang Mai Arr**	**79.08**	**295**	P	P	15 29 32.2	+1.1
	0.3nm,0.4s,baz=123,slow=3.3,SNR=1.8						
	0.3nm,0.4s						
SONM	**Songino Array**	**88.47**	**323**	P	P	15 30 17.9	-0.8
	0.4nm,0.4s,baz=108,slow=4.7,SNR=2.0						
	0.4nm,0.4s						
ARCES	**ARCESS Array B**	**126.63**	**345**	PKP	PKPdf	15 36 28.6	-0.5
	2.3nm,1.0s,baz=67,slow=2.3,SNR=3.9						
GERES	**GERESS Array B**	**145.88**	**331**	PKPbc	PKPdf	15 37 05.2	0.0
	0.5nm,0.6s,baz=69,slow=3.4,SNR=5.3						

*IDC **19** 15:19:21.8±1.8, 20°.06S×168°.89E, h0km, mb3.9/6, mbtmp3.9/6, Error ellipse: s-maj=84.0km s-min=25.9km az=151.0*
*NEIC **19** 15:19:21.7±0.8, 20°.0S±0°.1×169°.0E±0°.2, h10km±2km, mb4.5/15, Error ellipse: s-maj=34.2km s-min=12.0km az=65.0*

ISC 19 15:19:22.4±0.7, 20°.1S±0°.1×168°.8E±0°.1, h10km, n23, σ1s08/23, mb4.5/13, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKZ	**Black Stump Fm**	**20.14**	**162**	P	**P**	**15 23 56.3**	**-0.5**
BKZ				IAmb	IAmb	15 24 03.6	
	comp=Z,20nm,1.1s						
CTA	**Charters Tower**	**21.19**	**266**	P	**P**	**15 24 10.8**	**+2.5**
	comp=Z,7.7nm,0.5s,baz=77,slow=9.7,SNR=8.6						
	comp=Z,3.7nm,0.5s						
CTAO	**Charters Tower**	**21.19**	**266**	P	**P**	**15 24 08.0**	**-0.3**
CTAO				IAmb	IAmb	15 24 28.5	
	comp=Z,19nm,1.3s						
STKA	**Stephens Creek**	**27.07**	**239**	P	**P**	**15 25 06.9**	**+1.7**
	comp=Z,2.0nm

HIZ	**Hauiti**	**18.83 165**	P	**P**	**15 28 58.2**	**-1.0**
URZ	**Urewera**	**19.23 160**	P	**Pn**	**15 29 05.8**	**+1.3**
	0.3nm,0.3s,baz=307,slow=20,SNR=2.5					
URZ			LR	LR	15 35 31.7	
	comp=Z,473nm,19.0s,baz=31,slow=34					
	6.5nm,0.8s					
URZ	**Urewera**	**19.23 160**	P	**P**	**15 29 04.0**	**+0.5**
RMQ	**Roma**	**19.38 248**	P	**Pn**	**15 29 08.0**	**+1.6**
AFI	**Afiamalu**	**19.62 74**	P	**P**	**15 29 07.0**	**-1.0**
	1.7nm,0.3s,baz=210,slow=16,SNR=2.0					
AFI			LR	LR	15 35 06.0	
	comp=Z,659nm,19.2s,baz=284,slow=32					
	24nm,0.9s					
BKZ	**Black Stump Fm**	**19.88 162**	Pn	**Pn**	**15 29 13.1**	**+0.8**
BKZ			IAmb	IAmb	15 29 16.7	
	comp=Z,33nm,1.3s					
CTA	**Charters Tower**	**21.17 267**	P	**P**	**15 29 27.0**	**+2.2**
	comp=Z,14nm,0.7s,baz=96,slow=11,SNR=30					
CTA			LR	LR	15 37 08.1	
	comp=Z,401nm,19.8s,baz=85,slow=35					
	comp=Z,14nm,0.7s					
CTA	**Charters Tower**	**21.17 267**	P	**P**	**15 29 28.1**	**+3.3**
CTAO	**Charters Tower**	**21.17 267**	P	**P**	**15 29 25.4**	**+0.6**
CTAO	**Charters Tower**	**21.17 267**	P	**P**	**15 29 28.3**	**+3.5**
BFZ	**Birch Farm**	**21.23 164**	P	**P**	**15 29 25.3**	**0.0**
BFZ			IAmb	IAmb	15 29 48.8	
	comp=Z,36nm,1.2s					
BFZ	**Birch Farm**	**21.23 164**	P	**P**	**15 29 25.0**	**-0.2**
KRVT	**Keravat (AS07s**	**22.84 312**	P	**P**	**15 29 42.2**	**-0.4**
	comp=Z,16nm,0.9s,baz=219,slow=19,SNR=2.4					
	comp=Z,16nm,0.9s					
MTSU	**Mount Surprise**	**23.23 271**	P	**P**	**15 29 48.4**	**+1.7**
CMSA	**Cobar Meteorol**	**23.53 237**	P	**P**	**15 29 51.3**	**+1.6**
PMG	**Port Moresby**	**23.56 294**	P	**P**	**15 29 49.0**	**-1.0**
	comp=Z,30nm,1.1s,baz=121,slow=5.8,SNR=5.9					
PMG			LR	LR	15 37 35.7	
	comp=Z,312nm,20.1s,baz=126,slow=33					
	comp=Z,30nm,1.1s					
PMG	**Port Moresby**	**23.56 294**	P	**P**	**15 29 49.0**	**-1.0**
PMG			IAmb	IAmb	15 29 52.8	
	comp=Z,36nm,1.2s					
COEN	**Coen**	**25.29 280**	P	**P**	**15 30 07.4**	**+1.3**
COEN			IAmb	IAmb	15 30 21.0	
	comp=Z,20nm,1.0s					
COEN	**Coen**	**25.29 280**	P	**P**	**15 30 06.9**	**+0.8**
KNTN	**Kanton**	**25.81 50**	P	**P**	**15 30 11.5**	**+0.8**
STKA	**Stephens Creek**	**26.92 239**	P	**P**	**15 30 21.7**	**+1.0**
	comp=Z,5.7nm,0.6s,baz=82,slow=9.4,SNR=19					
STKA			LR	LR	15 40 55.3	
	comp=Z,283nm,18.9s,baz=50,slow=36					
	comp=Z,5.7nm,0.6s					
STKA	**Stephens Creek**	**26.92 239**	P	**P**	**15 30 21.6**	**+1.0**
STKA	**Stephens Creek**	**26.92 239**	P	**P**	**15 30 20.8**	**+0.1**
QIS	**Mount Isa**	**27.35 264**	P	**P**	**15 30 25.8**	**+1.1**
ARPS	**Mount Arapiles**	**28.65 229**	P	**P**	**15 30 37.7**	**+1.6**
	comp=Z,15nm,0.8s					
LCRK	**Leigh Creek**	**29.32 244**	P	**P**	**15 30 44.0**	**+1.8**
RAR	**Rarotonga**	**29.36 97**	LR	LR	15 40 08.1	
	comp=Z,306nm,19.4s,baz=284,slow=32					
HTT	**Hallett**	**29.55 238**	P	**P**	**15 30 46.0**	**+1.8**
	comp=Z,9.7nm,0.8s					
OOD	**Oodnadatta**	**31.07 250**	P	**P**	**15 31 00.1**	**+2.5**
WR0	**Warramunga Arr**	**32.14 265**	P	**P**	**15 31 06.3**	**-0.9**
WR0			IAmb	IAmb	15 31 08.2	
	comp=Z,6.2nm,0.7s					
WB0	**Warramunga Arr**	**32.30 265**	P	**P**	**15 31 07.6**	**-1.0**
WB0			IAmb	IAmb	15 31 09.2	
	comp=Z,7.2nm,0.8s					
WB2	**Warramunga Arr**	**32.32 265**	P	**P**	**15 31 08.0**	**-0.8**
WB2			IAmb	IAmb	15 31 09.1	
	comp=Z,13nm,1.3s					
WRAB	**Tennant Creek**	**32.32 265**	P	**P**	**15 31 07.5**	**-1.3**
WRAB			IAmb	IAmb	15 31 09.1	
	comp=Z,17nm,1.3s					
WRA	**Warramunga Arr**	**32.33 265**	P	**P**	**15 31 07.9**	**-0.9**
	comp=Z,4.3nm,0.5s,baz=91,slow=8.2,SNR=144					
WRA			PcP	**PcP**	**15 33 56.2**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=94,slow=3.2,SNR=3.8					
WRA			LR	LR	15 44 45.3	
	comp=Z,404nm,18.0s,baz=58,slow=37					
	comp=Z,4.3nm,0.5s					
AS31	**Alice Springs**	**32.48 258**	P	**P**	**15 31 09.9**	**-0.3**
AS31			IAmb	IAmb	15 31 11.2	
	comp=Z,6.5nm,0.7s					
ASAR	**Alice Springs**	**32.48 258**	P	**P**	**15 31 09.9**	**-0.3**
MULG	**Mulgathing**	**32.82 245**	P	**P**	**15 31 13.5**	**+0.5**
MTN	**Manton Dam**	**36.81 276**	P	**P**	**15 31 47.6**	**0.0**
MTN			IAmb	IAmb	15 31 55.1	
	comp=Z,12nm,0.9s					
MTN	**Manton Dam**	**36.81 276**	P	**P**	**15 31 48.3**	**+0.7**
WRKA	**Warakurna**	**37.57 255**	P	**P**	**15 31 55.0**	**+0.9**
KNRA	**Kununurra**	**38.30 270**	P	**P**	**15 31 59.7**	**-0.6**
KNRA			IAmb	IAmb	15 32 13.2	
	comp=Z,13nm,0.8s					
KNRA	**Kununurra**	**38.30 270**	P	**P**	**15 32 01.0**	**+0.7**
TBI	**Tubuai**	**38.75 102**	*e*LR	LR	15 42 22.5	
	comp=Z,284nm,22.0s					
PPT2	**Papeete2**	**39.38 93**	*e*LR	LR	15 42 35.4	
	comp=Z,595nm,24.0s					
FAKI	**Fak Fak**	**39.63 291**	P	**P**	**15 32 10.4**	**-1.0**
FAKI	**Fak Fak**	**39.63 291**	P	**P**	**15 32 10.7**	**-0.7**
GUMO	**Guam**	**41.14 323**	LR	LR	15 47 11.7	
	comp=Z,114nm,21.2s,baz=102,slow=33					
PSA00	**Pilbara Seismi**	**45.59 259**	P	**P**	**15 32 59.2**	**-0.6**
PSA00			IAmb	IAmb	15 33 06.6	
	comp=Z,7.6nm,0.8s					
MBWA	**Marble Bar**	**45.75 260**	P	**P**	**15 32 59.4**	**-1.7**
NWAO	**Narrogin (SRO)**	**47.35 244**	P	**P**	**15 33 13.2**	**-0.3**
MORW	**Morawa**	**48.39 249**	P	**P**	**15 33 21.8**	**+0.1**
KAPI	**Kappang**	**50.02 281**	LR	LR	15 56 59.4	
	comp=Z,121nm,18.0s,baz=104,slow=39					
DAV	**Davao City (W)**	**50.49 298**	LR	LR	15 55 32.8	
	comp=Z,38nm,19.3s,baz=124,slow=37					
TAOE	**Nuku Hiva Isla**	**50.51 85**	*e*LR	LR	15 47 34.4	
	comp=Z,234nm,25.2s					
JCJ	**Chichijima**	**53.77 330**	LR	LR	15 55 07.4	
	comp=Z,28nm,20.7s,baz=131,slow=34					
VNDA	**Vanda**	**57.30 182**	P	**P**	**15 34 28.3**	**+1.5**
	comp=Z,0.4nm,0.6s,baz=8.0,slow=7.9,SNR=2.3					
	comp=Z,0.4nm,0.6s					
VNDA	**Vanda**	**57.30 182**	P	**P**	**15 34 26.0**	**-0.8**
CASY	**Casey**	**58.94 204**	P	**P**	**15 34 37.2**	**-1.1**
CASY			IAmb	IAmb	15 35 00.5	
	comp=Z,11nm,1.4s					
JOW	**Kunigami**	**61.19 318**	LR	LR	16 01 58.3	
	comp=Z,50nm,18.4s,baz=62,slow=37					
MJAR	**Matsushiro Arr**	**63.55 333**	P	**P**	**15 35 09.0**	**-1.0**
	comp=Z,0.4nm,0.5s,baz=147,slow=5.9,SNR=2.1					
	comp=Z,0.4nm,0.5s					
MJAR	**Matsushiro Arr**	**63.55 333**	P	**P**	**15 35 09.8**	**-0.2**
ASAJ	**Asahikawa**	**68.51 340**	LR	LR	16 01 59.6	
	comp=Z,78nm,20.6s,baz=164,slow=33					
QSPA	**South Pole Qui**	**69.70 180**	P	**P**	**15 35 48.3**	**-0.7**
QSPA			IAmb	IAmb	15 36 00.5	
	comp=Z,10nm,1.4s					
IPM	**Ipoh**	**70.92 282**	P	**P**	**15 35 57.3**	**0.0**
IPM			IAmb	IAmb	15 36 12.2	
	comp=Z,5.8nm,0.7s					
SHEM	**Shemya Is, Ala**	**72.92 3**	LR	LR	16 02 14.4	
	comp=Z,41nm,21.1s,baz=97,slow=31					
GSTR	**Great Sitkin T**	**73.34 10**	P	**P**	**15 36 10.3**	**-0.6**
PEA0B	**Petropavlovsk-**	**73.79 353**	P	**P**	**15 36 13.0**	**-0.5**
PETK	**Petropavlovsk-**	**73.79 353**	P	**P**	**15 36 13.8**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=138,slow=6.7,SNR=2.1					
PETK			LR	LR	16 05 29.8	
	comp=Z,60nm,19.5s,baz=144,slow=33					
	comp=Z,0.5nm,0.4s					
PETK	**Petropavlovsk-**	**73.79 353**	P	**P**	**15 36 13.2**	**-0.3**
RPN	**Rapa Nui**	**74.02 113**	LR	LR	16 00 39.2	
	comp=Z,100nm,21.3s,baz=288,slow=29					
KLR	**Kul'dur**	**76.72 336**	LR	LR	16 07 29.6	
	comp=Z,74nm,20.3s,baz=130,slow=34					
MAW	**Mawson**	**77.25 202**	P	**P**	**15 36 33.8**	**+0.5**
	comp=Z,2.8nm,0.8s,baz=100,slow=8.3,SNR=6.2					
MAW			LR	LR	16 08 09.6	
	comp=Z,76nm,18.1s,baz=171,slow=34					
	comp=Z,2.8nm,0.8s					
MAW	**Mawson**	**77.25 202**	IAmb	IAmb	15 36 34.8	
	comp=Z,0.8nm,0.8s					
CMAR	**Chiang Mai Arr**	**78.60 295**	P	**P**	**15 36 42.9**	**+1.2**
	comp=Z,1.0nm,0.6s,baz=131,slow=3.8,SNR=8.7					
	comp=Z,1.0nm,0.6s					
MA2	**Magadan**	**81.00 351**	LR	LR	16 07 23.3	
	comp=Z,110nm,21.8s,baz=176,slow=32					
BELA	**Belgrano 2**	**81.02 175**	P	**P**	**15 36 52.4**	**-1.4**
BELA			IAmb	IAmb	15 37 00.9	
	comp=Z,6.1nm,0.7s					
SEY	**Seymchan**	**84.02 353**	LR	LR	16 09 36.4	
	comp=Z,81nm,21.9s,baz=150,slow=32					
KDAK	**Kodiak Island**	**84.22 20**	LR	LR	16 10 13.3	
	comp=Z,88nm,18.9s,baz=217,slow=32					
TROLL	**Troll, Antarti**	**87.39 184**	P	**P**	**15 37 25.4**	**-1.1**
YAK	**Yakutsk**	**87.81 343**	LR	LR	16 13 00.6	
	comp=Z,63nm,19.0s,baz=89,slow=33					
SONM	**Songino Array**	**87.87 323**	P	**P**	**15 37 29.8**	**+0.8**
	comp=Z,1.1nm,0.6s,baz=134,slow=4.3,SNR=7.4					
SONM			LR	LR	16 14 48.1	
	comp=Z,30nm,21.9s,baz=126,slow=34					
	comp=Z,1.1nm,0.6s					
SONM	**Songino Array**	**87.87 323**		**P**	**15 37 28.4**	**-0.6**
SNAA	**Sanae**	**88.03 183**	P	**P**	**15 37 27.8**	**-1.7**
SNAA			IAmb	IAmb	15 37 28.8	
	comp=Z,4.9nm,1.2s					
YBH	**Yreka Blue Hor**	**88.38 44**	LR	LR	16 11 08.4	
	comp=Z,62nm,18.9s,baz=224,slow=32					
VNA3	**Neumayer Olymp**	**88.64 180**	P	**P**	**15 37 30.8**	**-1.4**
PFO	**Pinyon Flats O**	**89.10 54**	LR	LR	16 12 43.8	
	comp=Z,36nm,18.6s,baz=204,slow=32					
NVAR	**Mina Array Bea**	**89.84 49**	P	**P**	**15 37 37.5**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=229,slow=8.2,SNR=5.5					
NVAR			LR	LR	16 10 12.8	
	comp=Z,87nm,20.5s,baz=264,slow=30					
	comp=Z,0.3nm,0.3s					
LPIG	**La Paz**	**90.26 64**	LR	LR	16 09 47.0	
	comp=Z,71nm,18.8s,baz=224,slow=30					
BBB	**Bella Bella**	**90.62 33**	LR	LR	16 14 22.6	
	comp=Z,62nm,18.0s,baz=238,slow=33					
PALK	**Pallekele**	**90.73 277**	LR	LR	16 17 39.6	
	comp=Z,32nm,22.0s,baz=228,slow=35					
ELK	**Elko**	**92.97 48**	LR	LR	16 14 38.6	
	comp=Z,58nm,19.0s,baz=232,slow=32					
NEW	**Newport**	**94.89 40**	LR	LR	16 14 12.8	
	comp=Z,58nm,19.3s,baz=201,slow=31					
TIXI	**Tiksi**	**95.75 348**	LR	LR	16 19 56.0	
	comp=Z,34nm,18.5s,baz=180,slow=35					
ANMO	**Albuquerque**	**97.26 56**	LR	LR	16 20 56.9	
	comp=Z,42nm,18.1s,baz=234,slow=35					
TXAR	**Lajitas Array**	**97.65 62**	LR	LR	16 16 48.8	
	comp=Z,85nm,18.1s,baz=230,slow=32					
PDAR	**Pinedale Array**	**97.67 47**	LR	LR	16 18 45.5	
	comp=Z,34nm,18.1s,baz=238,slow=33					
ARCES	**ARCESS Array B**	**126.04 345**	PKP	**PKPdf**	**15 43 39.6**	**-1.4**
	comp=Z,1.5nm,0.6s,baz=63,slow=2.3,SNR=12					
FINES	**FINESS Array B**	**131.46 337**	PKhKP	PKPpre	15 43 45.8	
	comp=Z,2.0nm,0.9s,baz=72,slow=4.5,SNR=1.5					
NKC	**Novy Kostel**	**144.80 333**	*e*PKP	**PKiKP**	**15 44 21.5**	**+1.4**
RONA	**Rosalia, Austr**	**144.81 327**	*e*P	PKPbc	15 44 16.1	+0.7
	comp=Z,12nm,1.6s					
CONA	**Conrad Observa**	**144.88 328**	*e*P	**PKPdf**	**15 44 16.7**	**+0.1**
	comp=Z,3.2nm,0.9s					
CKRC	**Cesky Krumlov**	**145.01 330**	*e*PKP	**PKPbc**	**15 44 15.4**	**-0.6**
CKRC			*ex*	x	15 44 25.3	
KHC	**Kasperske Hory**	**145.12 331**	*e*PKP	**PKPbc**	**15 44 15.7**	**-0.7**
GERES	**GERESS Array B**	**145.28 331**	PKPbc	**PKPbc**	**15 44 16.2**	**-0.8**
	comp=Z,0.7nm,0.5s,baz=43,slow=5.2,SNR=9.3					
GERES	**GERESS Array B**	**145.28 331**		**PKPbc**	**15 44 15.7**	**-1.3**
MOA	**Molln**	**145.72 329**	*e*P	**PKPbc**	**15 44 18.7**	**+0.3**
	comp=Z,9.1nm,1.4s					
SOKA	**Soboth**	**146.14 327**	*e*P	**PKiKP**	**15 44 23.0**	**-0.1**
	comp=Z,5.6nm,1.7s					
KBA	**Koelnbreinsper**	**146.70 329**	*e*P	**PKPab**	**15 44 22.5**	**-0.1**
	comp=Z,1.8nm,0.5s					
WTTA	**Wettenberg**	**147.38 331**	*e*P	**PKPbc**	**15 44 23.4**	**0.0**
	comp=Z,7.0nm,1.2s					
MOTA	**Moosalm**	**147.56 331**	*e*P	**PKPdf**	**15 44 22.8**	**+1.5**
	comp=Z,2.4nm,0.8s					
SQTA	**Sankt Quirin**	**147.60 331**	*e*P	**PKPbc**	**15 44 23.1**	**-0.9**
	comp=Z,2.7nm,0.6s					
FETA	**Feichten**	**147.97 331**	*e*P	**PKPdf**	**15 44 23.6**	**+1.6**
	comp=Z,1.5nm,0.5s					
DAVA	**Damuels**	**148.15 332**	*e*P	**PKPbc**	**15 44 24.7**	**-0.8**
	comp=Z,3.5nm,1.1s					

*NEIC **19** 16:18:19.7±1.8,20°.85S±0°.04×68°.75W±0°.08,h114km±8km, mb4.0/8,ML4.0(GUC),Error ellipse: s-maj=10.8km s-min=5.7km az=103.0*
*VAO **19** 16:18:19.3±0.7,20°.87S×68°.96W,h147km±5km,mb4.4*
*IDC **19** 16:18:20.5±1.2,20°.88S×68°.42W,h114km±14km,mb3.8/3, mbtmp4.1/8,Error ellipse: s-maj=28.2km s-min=14.1km az=108.0*
*GUC **19** 16:18:20.1±0.8,20°.82S×68°.72W,h116km±4km,ML3.9*

ISC 19 16:18:19.0±0.6,20°.84S±0°.04×68°.79W±0°.06,h123km±6km, n96,σ1§54/114,mb4.1/3,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB01	**IPOC Station P**	**0.68**	**253**		**Pn**	**16 18 38.5**	**-0.1**
PB01				Sn	**Sn**	**16 18 51.8**	**-1.7**
PB01	**IPOC Station P**	**0.68**	**253**	*e*P	**Pn**	**16 18 38.6**	**-0.1**
PB01				*i* S	**Sn**	**16 18 53.1**	**-0.4**
PB01				IAML		16 18 54.9	
	comp=N,3μm,0.3s						
PB08	**IPOC Station P**	**0.78**	**334**		**Pn**	**16 18 40.0**	**+0.2**
PB08	**IPOC Station P**	**0.78**	**334**	*e*P	**Pn**	**16 18 40.2**	**+0.4**
PB08				*i* S	**Sn**	**16 18 55.0**	**-0.4**
PB08				IAML		16 18 56.1	
	comp=N,10μm,0.3s						
PB09	**IPOC Station P**	**1.04**	**204**		**Pn**	**16 18 42.7**	**+0.8**
PB09				Sn	**Sn**	**16 18 58.7**	**-0.6**
PB09	**IPOC Station P**	**1.04**	**204**	*e*P	**Pn**	**16 18 42.8**	**+0.8**
PB09				*i* S	**Sn**	**16 19 00.4**	**+1.1**
PB09				IAML		16 19 03.1	
	comp=E,1μm,0.6s						
PB02	**IPOC Station P**	**1.14**	**245**		**Pn**	**16 18 43.1**	**+0.3**
PB02	**IPOC Station P**	**1.14**	**245**	*e*P	**Pn**	**16 18 43.4**	**+0.6**
PB02				*i* S	**Sn**	**16 19 01.5**	**+0.6**
PB02				IAML		16 19 02.9	
	comp=N,4μm,0.3s						
HMBC	**Humberstone**	**1.17**	**298**	*e*P	**Pn**	**16 18 43.5**	**+0.2**
HMBC				*i* S	**Sn**	**16 19 01.6**	**+0.1**
HMBC				IAML		16 19 04.5	
	comp=N,2μm,0.3s						
GO01	**Chusmiza**	**1.23**	**342**		**Pn**	**16 18 44.5**	**+0.3**
GO01	**Chusmiza**	**1.23**	**342**	*e*P	**Pn**	**16 18 44.6**	**+0.4**
GO01				*i* S	**Sn**	**16 19 03.1**	**-0.2**
PATCX	**Punta Patache**	**1.28**	**271**		**Pn**	**16 18 44.7**	**+0.4**
PATCX	**Punta Patache**	**1.28**	**271**	*e*P	**Pn**	**16 18 44.8**	**+0.6**
PATCX				*i* S	**Sn**	**16 19 03.7**	**+0.3**
PATCX				IAML		16 19 07.0	
	comp=N,2μm,0.4s						
TA01	**Diego Aracena**	**1.33**	**282**		**Pn**	**16 18 45.0**	**+0.2**
TA01	**Diego Aracena**	**1.33**	**282**	*e*P	**Pn**	**16 18 45.2**	**+0.4**
TA01				*i* S	**Sn**	**16 19 04.8**	**+0.4**
TA01				IAML		16 19 07.2	
	comp=E,1μm,0.3s						
PB11	**IPOC Station P**	**1.35**	**323**		**Pn**	**16 18 45.5**	**+0.3**
PB07	**IPOC Station P**	**1.35**	**229**		**Pn**	**16 18 45.9**	**+0.8**
PB07	**IPOC Station P**	**1.35**	**229**	*e*P	**Pn**	**16 18 46.0**	**+0.8**
PB07				*i* S	**Sn**	**16 19 05.6**	**+0.6**
PB07				IAML		16 19 07.3	
	comp=E,3μm,0.4s						
TA02	**Huaiquique**	**1.38**	**294**		**Pn**	**16 18 45.7**	**+0.4**
TA02	**Huaiquique**	**1.38**	**294**	*e*P	**Pn**	**16 18 45.7**	**+0.4**
TA02				*i* S	**Sn**	**16 19 05.7**	**+0.4**
LVC	**Limon Verde**	**1.76**	**184**	P	**Pn**	**16 18 51.4**	**+1.3**
	comp=E,426nm,0.5s,baz=12,slow=8.5,SNR=161						
LVC				S	**Sn**	**16 19 15.0**	**+1.1**
	comp=E,228nm,0.5s,baz=253,slow=19,SNR=14						
LVC	**Limon Verde**	**1.76**	**184**	*e*P	**Pn**	**16 18 51.3**	**+1.1**
LVC				*i* S	**Sn**	**16 19 15.4**	**+1.5**
LVC	**Limon Verde**	**1.76**	**184**	*e*P	**Pn**	**16 18 51.5**	**+1.3**
LVC				*e*S	**Sn**	**16 19 15.5**	**+1.7**
PB04	**IPOC Station P**	**1.95**	**220**		**Pn**	**16 18 53.2**	**+1.0**
PB04	**IPOC Station P**	**1.95**	**220**	*e*P	**Pn**	**16 18 53.3**	**+1.0**
PB04				*i* S	**Sn**	**16 19 18.1**	**+0.5**
PB04				IAML		16 19 28.4	
	comp=N,1μm,0.5s						
PB06	**IPOC Station P**	**1.99**	**201**		**Pn**	**16 18 53.4**	**+0.7**
PB06	**IPOC Station P**	**1.99**	**201**	*e*P	**Pn**	**16 18 53.6**	**+0.9**
PB06				*i* S	**Sn**	**16 19 18.9**	**+0.4**
PB06				IAML		16 19 19.9	
	comp=E,1μm,0.3s						
AF01	**San Pedro de A**	**2.17**	**165**		**Pn**	**16 18 57.0**	**+1.8**
PB15	**IPOC Station P**	**2.44**	**195**		**Pn**	**16 18 59.2**	**+0.8**
PB16	**IPOC Station P**	**2.58**	**345**		**Pn**	**16 19 01.9**	**+1.3**
PB12	**IPOC Station P**	**2.65**	**327**	Pn	**Pn**	**16 19 00.6**	**-0.4**
PB12	**IPOC Station P**	**2.65**	**327**	*e*P	**Pn**	**16 19 00.8**	**-0.2**
PB12				*i* S	**Sn**	**16 19 32.8**	**-0.5**
AP01	**Chacalluta**	**2.86**	**329**	Pn	**Pn**	**16 19 03.9**	**+0.2**
PB10	**IPOC Station P**	**3.12**	**211**	Pn	**Pn**	**16 19 06.8**	**-0.2**
PB14	**IPOC Station P**	**4.05**	**201**	Pn	**Pn**	**16 19 19.0**	**-0.6**
GO02	**Mina Guanaco**	**4.36**	**190**	Pn	**Pn**	**16 19 23.3**	**-0.5**
LPAZ	**La Paz**	**4.57**	**8**	P	**Pn**	**16 19 28.9**	**+2.0**
	comp=E,60nm,0.3s,baz=205,slow=6.0,SNR=526						
LPAZ	**La Paz**	**4.57**	**8**	Pn	**Pn**	**16 19 28.4**	**+1.5**
LPAZ	**La Paz**	**4.57**	**8**	*e*P	**Pn**	**16 19 28.6**	**+1.6**
AC01	**Pan de Azucar**	**5.54**	**197**	Pn	**Pn**	**16 19 37.7**	**-1.5**
AC02	**Maricunga**	**5.97**	**183**	Pn	**Pn**	**16 19 45.2**	**-0.4**
GO03	**Copiap**	**6.85**	**191**		**Pn**	**16 19 54.9**	**-2.1**
AC04	**Llanos de Chal**	**7.62**	**195**	Pn	**Pn**	**16 20 03.3**	**-4.0**
LCO	**Las Campanas**	**8.32**	**192**	Pn	**Pn**	**16 20 13.7**	**-3.3**
SIV	**San Ignacio**	**8.77**	**58**	P	**Pn**	**16 20 19.8**	**-3.2**
	comp=E,5.4nm,0.4s,baz=236,slow=10,SNR=45						
SIV				S	Sn	16 21 51.9	-8.2
	comp=E,1.2nm,0.6s,baz=308,slow=19,SNR=1.4						
CO01	**Juntas del Tor**	**9.17**	**187**		**Pn**	**16 20 26.1**	**-2.4**
GO04	**Tololo Observa**	**9.47**	**191**	Pn	**Pn**	**16 20 29.1**	**-3.4**
CO03	**El Pedregal**	**10.10**	**189**	Pn	**Pn**	**16 20 36.6**	**-4.2**
CO06	**Fray Jorge**	**10.12**	**194**	Pn	**Pn**	**16 20 37.1**	**-3.9**
CO02	**Combarbal**	**10.51**	**190**	Pn	**Pn**	**16 20 41.9**	**-4.4**
VILB	**Vilhena**	**11.36**	**48**	*e*P	**Pn**	**16 20 58.2**	**+0.4**
CPUP	**Villa Florida**	**11.84**	**120**	P	**Pn**	**16 21 01.9**	**-2.1**
	comp=E,1.1nm,0.3s,baz=305,slow=12,SNR=6.8						
CPUP	**Villa Florida**	**11.84**	**120**	Pn	**Pn**	**16 21 01.8**	**-2.2**
VA06	**Catapilco**	**11.88**	**190**	Pn	**Pn**	**16 20 59.8**	**-4.8**
VA03	**San Esteban**	**11.98**	**187**	Pn	**Pn**	**16 21 01.5**	**-4.3**
VA01	**Torpederas**	**12.40**	**191**	Pn	**Pn**	**16 21 07.6**	**-3.6**
SAML	**Samuel**	**13.00**	**25**	Pn	**Pn**	**16 21 17.8**	**-1.5**
LMEL	**Las Melosas**	**13.02**	**185**	Pn	**Pn**	**16 21 19.4**	**-0.1**
BO01	**Tunca**	**13.65**	**188**	Pn	**Pn**	**16 21 27.3**	**-0.2**
PDRB	**Porto dos Gac**	**14.77**	**53**	*e*P	**Pn**	**16 21 43.2**	**+1.3**
FRBT	**Francisco Belt**	**15.31**	**112**	*e*P	**P**	**16 21 50.5**	**-0.2**
PTGB	**Pitanga**	**15.90**	**107**	*e*P	**P**	**16 21 58.1**	**+0.9**
CLDB	**Colider**	**15.94**	**54**	*e*P	**P**	**16 21 57.9**	**+0.3**
PCMB	**Pacaembu**	**16.36**	**96**	*e*P	**P**	**16 22 03.3**	**+1.1**
ITAB	**Concordia**	**16.49**	**116**		**Pn**	**16 22 03.3**	**+0.2**
ITAB	**Concordia**	**16.49**	**116**	*e*P	**P**	**16 22 04.4**	**+0.8**
ATAH	**Athahualpa**	**16.50**	**324**	P	**P**	**16 22 08.2**	**+4.0**
	comp=E,3.5nm,0.7s,baz=90,slow=6.1,SNR=2.5						
CPSB	**Cacapava Do Su**	**16.79**	**128**	*e*P	**Pn**	**16 22 07.4**	**+0.6**
PLTB	**Pedras Altas**	**17.40**	**132**		**P**	**16 22 13.7**	**0.0**
PLTB				IAmb	IAmb	16 22 29.7	
	comp=Z,8.5nm,1.1s						
FRTB	**Fartura**	**17.99**	**101**	*e*P	**P**	**16 22 20.3**	**+0.1**
BB19B	**Bebedouro**	**18.93**	**94**	*e*P	**P**	**16 22 30.2**	**-0.2**
SNDB	**Serra Nova Dou**	**18.94**	**65**	*e*P	**P**	**16 22 30.0**	**-0.6**
TER01	**Tubaro-SC**	**19.42**	**117**	*e*P	**P**	**16 22 34.8**	**-1.0**
TER01				*ep*P	**pP**	**16 23 00.9**	**+1.7**
IPMB	**Ipameri, GO**	**19.61**	**85**	*e*P	**P**	**16 22 37.5**	**-0.5**
RCLB	**Rio Claro- Sao**	**19.82**	**98**	*e*P	**P**	**16 22 39.8**	**-0.4**
PLCA	**Paso Flores**	**19.89**	**184**	P	**Pn**	**16 22 43.1**	**-0.4**
	comp=Z,2.6nm,0.7s,baz=4.3,slow=13,SNR=10						
PLCA	**Paso Flores**	**19.89**	**184**	IAmb	IAmb	16 22 52.9	
	comp=Z,4.6nm,0.8s						
PET01	**Itanhaem-SP**	**20.16**	**104**	*e*P	**P**	**16 22 43.8**	**+0.1**
VAO	**Valinhos**	**20.36**	**100**	*e*P	**P**	**16 22 45.1**	**-0.9**
BDFB	**Brasilia**	**20.39**	**79**	P	**P**	**16 22 45.8**	**-0.6**
	comp=Z,1.7nm,0.4s,baz=268,slow=8.8,SNR=5.3						
	comp=Z,1.7nm,0.4s						
BDFB	**Brasilia**	**20.39**	**79**	P	**P**	**16 22 45.8**	**-0.6**
ITTB	**Ita

baz=285
H11S1 WAKE ISLAND Hy 22.83 96 T T 16 59 41.2
baz=285
H11S2 WAKE ISLAND Hy 22.84 96 T T 16 59 27.4
baz=285
CMAR Chiang Mai Arr 41.09 272 P **P** **16 38 29.2 +1.1**
0.3nm,0.7s,baz=55,slow=6.8,SNR=2.1
0.3nm,0.7s
WRA Warramunga Arr 43.27 192 P **P** **16 38 45.6 -0.1**
1.0nm,0.7s,baz=12,slow=8.3,SNR=8.4
1.0nm,0.7s
ILAR Eielson Array 61.25 27 P **P** **16 40 59.6 +0.9**
0.2nm,0.8s,baz=277,slow=7.2,SNR=2.8
0.2nm,0.8s
FINES FINESS Array B 82.00 334 P **P** **16 43 02.0 -1.4**
1.0nm,0.6s,baz=46,slow=4.0,SNR=6.5
1.0nm,0.6s

*NEIC **19** 16:31:54.8±0.8,36°.83N±0°.02×97°.36W±0°.03,h6km±6km, Error ellipse: s-maj=4.0km s-min=1.9km az=48.0*
*TUL **19** 16:31:54.7±0.7,36°.88N±0°.02×97°.32W±0°.03,h7km±5km, ML3.0,mb_Lg3.2/96(NEIC),Error ellipse: s-maj=4.3km s-min=1.8km az=45.0*
*ANF **19** 16:31:55.6±0.3,36°.85N×97°.31W,h7km,ML3.8/8,Error ellipse: s-maj=3.9km s-min=3.3km az=16.0*
ISC 19 16:31:55.0±0.9,36°.87N±0°.04×97°.31W±0°.04,h10km,n73, σ0s82/40,Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T35A	**Sooner Cattle**	**0.65**	**86**	Pg	**Pg**	**16 32 07.3**	**-0.1**
T35B	**Sooner Cattle**	**0.65**	**86**	P	**Pg**	**16 32 07.3**	**-0.2**
	baz=267						
T35B				S	**Sg**	**16 32 16.1**	**+0.2**
	baz=267						
OKCFA	**Oklahoma City**	**1.46**	**184**	Pn	**Pn**	**16 32 21.2**	**-0.2**
OKCFA	**Oklahoma City**	**1.46**	**184**	P	**Pb**	**16 32 21.9**	**-0.2**
	baz=4.1						
OKCFA				S	**Sg**	**16 32 41.8**	**0.0**
	baz=4.1						
OKCSW	**OKLAHOMA CITY**	**1.47**	**184**		**Pb**	**16 32 21.7**	**-0.6**
TUL1	**Leonard**	**1.56**	**127**		**Pn**	**16 32 23.1**	**+0.3**
TUL1	**Leonard**	**1.56**	**127**	P	**Pb**	**16 32 23.3**	**-0.6**
	baz=309						
TUL1				S	**Sg**	**16 32 44.2**	**-0.8**
	baz=309						
FNO	**Franklin**	**1.61**	**183**		**Pn**	**16 32 23.9**	**+0.4**
R32A	**Long Quarter,**	**1.91**	**325**		**Pn**	**16 32 28.3**	**+0.7**
R32A	**Long Quarter,**	**1.91**	**325**	P	**Pn**	**16 32 28.5**	**+0.9**
	baz=144						
R32A				S	**Sb**	**16 32 54.4**	**+0.7**
	baz=144						
KSU1	**Kansas State U**	**2.30**	**14**	Pn	**Pn**	**16 32 34.0**	**+1.1**
KSU1				IAmb_Lg		16 33 10.2	
	comp=Z,65nm,0.9s						
X34A	**Smith Ranch, M**	**2.30**	**191**	IAmb_Lg		16 33 10.1	
	comp=Z,80nm,0.7s						
U38A	**Gravette**	**2.39**	**99**		**Pn**	**16 32 34.7**	**+0.4**
U38A	**Gravette**	**2.39**	**99**	P	**Pb**	**16 32 36.8**	**-1.4**
	baz=282						
WMOK	**Wichita Mounta**	**2.44**	**210**	P	**Pn**	**16 32 35.7**	**+0.9**
	baz=28						
CBKS	**Cedar Bluff**	**2.73**	**316**	IAmb_Lg		16 33 24.1	
	comp=Z,80nm,0.7s						
X37A	**Clayton**	**2.77**	**145**		**Pn**	**16 32 39.8**	**+0.4**
X37A				IAmb_Lg		16 33 26.8	
	comp=Z,96nm,0.9s						
HHAR	**Hobbs**	**2.78**	**101**		**Pn**	**16 32 39.8**	**+0.2**
HHAR	**Hobbs**	**2.78**	**101**	P	**Pn**	**16 32 41.3**	**+1.7**
	baz=284						
S39A	**Bolivar**	**3.29**	**74**	Pn	**Pn**	**16 32 47.0**	**+0.4**
S39A	**Bolivar**	**3.29**	**74**	P	**Pn**	**16 32 47.2**	**+0.6**
	baz=257						
W39A	**Magazine**	**3.31**	**119**	Pn	**Pn**	**16 32 46.9**	**0.0**
W39A				IAmb_Lg		16 33 42.7	
	comp=Z,112nm,0.8s						
W39A	**Magazine**	**3.31**	**119**	Sb	**Sb**	**16 33 37.1**	**+3.0**
	baz=302						
U40A	**Yellville**	**3.62**	**97**	Pn	**Pn**	**16 32 51.8**	**+0.6**
U40A	**Yellville**	**3.62**	**97**	P	**Pn**	**16 32 52.2**	**+1.0**
	baz=280						
U40A				P	**Pn**	**16 32 52.2**	**+1.0**
	baz=280						
MIAR	**Mount Ida**	**3.83**	**126**	IAmb_Lg		16 33 58.0	
	comp=Z,87nm,1.0s						
N33A	**J Bar K, Exete**	**3.87**	**358**	Pn	**Pn**	**16 32 54.6**	**+0.2**
MGMO	**Mountain Grove**	**4.05**	**84**	IAmb_Lg		16 34 01.8	
	comp=Z,45nm,0.8s						
P38A	**Dawn**	**4.05**	**46**	Pn	**Pn**	**16 32 57.5**	**+0.4**
P38A				IAmb_Lg		16 34 04.1	
	comp=Z,72nm,0.9s						
R40A	**Maddies Statio**	**4.25**	**69**	Pn	**Pn**	**16 32 59.9**	**+0.1**
R40A				IAmb_Lg		16 34 14.8	
	comp=Z,68nm,0.8s						
X40A	**Basin Creek Fa**	**4.35**	**122**	IAmb_Lg		16 34 25.0	
	comp=Z,52nm,0.8s						
WHAR	**Wooly Hollow**	**4.37**	**110**		**Pn**	**16 33 01.7**	**+0.4**
WHAR				IAmb_Lg		16 34 18.5	
	comp=Z,83nm,0.9s						
W41B	**Gary Mavity, V**	**4.44**	**111**	Pn	**Pn**	**16 33 02.6**	**+0.2**
W41B				IAmb_Lg		16 34 13.8	
	comp=Z,35nm,0.7s						
UALR	**University of**	**4.55**	**116**	IAmb_Lg		16 34 32.1	
	comp=Z,40nm,1.0s						
BGNE	**Belgrade**	**4.58**	**352**	IAmb_Lg		16 34 28.7	
	comp=Z,61nm,0.9s						
WLAR	**White Oak Lake**	**4.68**	**131**	IAmb_Lg		16 34 22.9	
	comp=Z,44nm,0.8s						
KSCO	**Kaye Shedlock'**	**4.71**	**299**	IAmb_Lg		16 34 36.2	
	comp=Z,36nm,0.7s						
P40A	**Paris**	**4.92**	**56**	IAmb_Lg		16 34 30.3	
	comp=Z,54nm,0.8s						
CCM	**Cathedral Cave**	**4.97**	**74**	IAmb_Lg		16 34 39.1	
	comp=Z,47nm,0.7s						
237A	**Washetta, Mont**	**5.01**	**165**	IAmb_Lg		16 34 40.5	
	comp=Z,24nm,0.8s						
LCAR	**Lake Charles**	**5.03**	**97**	Pn	**Pn**	**16 33 10.6**	**+0.1**
N38A	**Joes South For**	**5.05**	**38**		**Pn**	**16 33 10.6**	**-0.1**
L34A	**Svendsen Farm,**	**5.14**	**8**	IAmb_Lg		16 34 49.4	
	comp=Z,68nm,0.7s						
Z41A	**Richland Creek**	**5.16**	**133**	IAmb_Lg		16 34 45.5	
	comp=Z,38nm,0.8s						
CCAR	**Cane Creek**	**5.40**	**121**	IAmb_Lg		16 35 02.0	
	comp=Z,42nm,0.8s						
OGNE	**Ogallala**	**5.49**	**319**	IAmb_Lg		16 34 49.0	
	comp=Z,60nm,0.8s						
PBMO	**Poplar Bluff**	**5.52**	**89**	IAmb_Lg		16 34 51.3	
	comp=Z,31nm,0.8s						
NATX	**Nacogdoches**	**5.55**	**156**	IAmb_Lg		16 35 03.7	
	comp=Z,34nm,0.8s						
FVM	**French Village**	**5.59**	**76**	IAmb_Lg		16 34 53.4	
	comp=Z,54nm,1.0s						
T25A	**Trinidad**	**5.69**	**275**	IAmb_Lg		16 35 08.6	
	comp=Z,20nm,0.8s						
435B	**Jarrell**	**6.08**	**182**	IAmb_Lg		16 35 15.5	
	comp=Z,53nm,1.2s						
143A	**Socs Landing,**	**6.40**	**129**	IAmb_Lg		16 35 23.8	
	comp=Z,26nm,0.8s						
S44A	**Carbondale**	**6.48**	**80**	IAmb_Lg		16 35 23.3	
	comp=Z,43nm,0.9s						
Q24A	**Divide**	**6.54**	**291**	IAmb_Lg		16 35 24.8	
	comp=Z,31nm,1.0s						
W45A	**Hickory Valley**	**6.81**	**102**	IAmb_Lg		16 35 39.5	
	comp=Z,46nm,1.0s						
OXF	**Oxford**	**6.85**	**108**	IAmb_Lg		16 35 39.4	
	comp=Z,26nm,0.8s						
ECSD	**EROS Data Cent**	**6.88**	**4**		**Pn**	**16 33 35.5**	**-0.3**
L40A	**Anamosa**	**7.01**	**40**		**Pn**	**16 33 37.5**	**0.0**
L40A				IAmb_Lg		16 35 34.3	
	comp=Z,38nm,0.8s						
ISCO	**Idaho Springs**	**7.15**	**297**	IAmb_Lg		16 35 41.3	
	comp=Z,20nm,0.8s						
O44A	**Mansfield**	**7.67**	**62**	IAmb_Lg		16 36 01.1	
	comp=Z,45nm,0.7s						
WVT	**Waverly**	**7.67**	**93**	Pn	**Pn**	**16 33 46.7**	**-0.1**
I37A	**Lemond, Waseca**	**7.74**	**21**	IAmb_Lg		16 36 07.5	
	comp=Z,21nm,0.9s						
N23A	**Red Feather La**	**7.84**	**303**	IAmb_Lg		16 36 06.1	
	comp=Z,29nm,0.8s						
M44A	**Midewin, Midew**	**8.50**	**55**	IAmb_Lg		16 36 31.2	
	comp=Z,25nm,0.8s						
I40A	**Norwalk**	**8.68**	**34**	IAmb_Lg		16 36 41.8	
	comp=Z,15nm,0.8s						
RSSD	**Black Hills**	**8.87**	**327**	IAmb_Lg		16 36 49.1	
	comp=Z,12nm,0.8s						
F33A	**5 Mile Ranch,**	**8.99**	**5**	IAmb_Lg		16 36 57.4	
	comp=Z,12nm,1.0s						
RWWY	**Rawlins**	**9.05**	**305**	IAmb_Lg		16 37 02.9	
	comp=Z,14nm,0.7s						
K22A	**Casper**	**9.14**	**312**	IAmb_Lg		16 36 59.2	
	comp=Z,24nm,0.9s						
TX31	**Lajitas Ar. Si**	**9.21**	**217**	Pn	**Pn**	**16 34 06.9**	**-1.0**
TXAR	**Lajitas Array**	**9.21**	**217**	Pn	**Pn**	**16 34 07.3**	**-0.7**
I42A	**Draeger Farm,**	**9.50**	**40**	IAmb_Lg		16 36 54.1	
	comp=Z,17nm,0.9s						
G40A	**Rib Lake**	**9.96**	**30**	IAmb_Lg		16 37 23.7	
	comp=Z,11nm,0.9s						

*IDC **19** 16:38:18.5±2.8,3°.26S×129°.09E,h0km,mb3.4/2, mbtmp3.6/3,ML4.1/1,MS3.2/1,Error ellipse: s-maj=128.9km s-min=37.1km az=62.0*
*DJA **19** 16:38:21.3±0.3,3°.3S×12°.9E±°,h10km,M4.0/8,mb4.6/5, mB4.8/1,MLv3.7/8,Mw(mB)4.0/1*
*NEIC **19** 16:38:23.3±2.7,3°.0S±0°.1×129°.36E±0°.09,h38km±7km, mb4.0/9,Error ellipse: s-maj=18.2km s-min=9.8km az=216.0*
ISC 19 16:38:21.9±0.7,2°.99S±0°.06×129°.42E±0°.07,h28km,n28, σ1s56/28,mb3.8/4,Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.60**	**234**	P	**Pn**	**16 39 35.2**	**+0.5**
AAI	**Ambon**	**1.41**	**240**	P	**Pb**	**16 38 48.6**	**+1.1**
NLAI	**Namlea**	**2.33**	**264**	P	**Pn**	**16 39 00.3**	**+1.9**
FAKI	**Fak Fak**	**2.83**	**89**	Pn	**Pn**	**16 39 06.2**	**+1.0**
FAKI	**Fak Fak**	**2.83**	**89**	P	**Pn**	**16 39 06.3**	**+1.0**
LBMI	**Labuha**	**3.02**	**321**	P	**Pn**	**16 39 06.5**	**-1.5**
SANI	**Sanana**	**3.55**	**285**	P	**Pn**	**16 39 14.9**	**-0.4**
TNTI	**Ternate**	**4.26**	**331**	Pn	**Pn**	**16 39 24.9**	**-0.1**
LUWI	**Luwuk**	**6.92**	**286**	Pn	**Pn**	**16 40 00.1**	**-1.4**
APSI	**Ampana**	**8.04**	**285**	P	**Pn**	**16 40 16.7**	**-0.2**
	0.1nm541nm32nm,0.6s						
MRSI	**Marisa**	**8.23**	**295**	P	**Pn**	**16 40 18.6**	**-1.0**
	20nm,0.5s						
SMPI	**Sarmi**	**9.34**	**84**	P	**Pn**	**16 40 36.6**	**+1.9**
	12nm,1.0s						
GENI	**Genyem**	**10.74**	**88**	P	**Pn**	**16 40 57.0**	**+3.0**
KNRA	**Kununurra**	**12.62**	**183**		**Pn**	**16 41 20.4**	**+0.7**
WB0	**Warramunga Arr**	**17.37**	**164**		**Pn**	**16 42 22.2**	**-0.3**
WRAB	**Tennant Creek**	**17.52**	**164**	Pn	**Pn**	**16 42 22.5**	**-1.8**
WRAB				IAmb	IAmb	16 42 47.7	
	comp=Z,6.7nm,0.9s						
WRA	**Warramunga Arr**	**17.52**	**164**	P	**Pn**	**16 42 22.6**	**-1.8**
	comp=Z,0.7nm,0.3s,baz=342,slow=13,SNR=41						
WRA				S	**Sn**	**16 45 34.0**	**-4.8**
	comp=Z,0.3nm,0.5s,baz=341,slow=21,SNR=1.3						
	comp=Z,2.0nm,0.5s						
WB2	**Warramunga Arr**	**17.52**	**164**	Pn	**Pn**	**16 42 22.7**	**-1.7**
WB2				IAmb	IAmb	16 42 42.6	
	comp=Z,10.0nm,1.2s						
PSA00	**Pilbara Seismi**	**20.69**	**206**	P	**P**	**16 42 59.3**	**-0.6**
PSA00				IAmb	IAmb	16 43 00.7	
	comp=Z,16nm,1.2s						
AS31	**Alice Springs**	**21.01**	**168**	P	**P**	**16 43 04.2**	**+0.8**
AS31				IAmb	IAmb	16 43 06.2	
	comp=Z,3.9nm,0.7s						
ASAR	**Alice Springs**	**21.01**	**168**	P	**P**	**16 43 03.8**	**+0.3**
JOW	**Kunjani**	**29.67**	**358**	LR	LR	16 55 43.3	
	comp=Z,44nm,20.5s,baz=116,slow=35						
BBOO	**Buckleboo**	**30.31**	**169**	P	**P**	**16 44 30.2**	**-0.9**
CMAR	**Chiang Mai Arr**	**36.81**	**307**	P	**P**	**16 45 28.8**	**+1.0**
	comp=Z,0.2nm,0.5s,baz=128,slow=8.2,SNR=4.2						
	comp=Z,0.2nm,0.5s						
CMAR	**Chiang Mai Arr**	**36.81**	**307**	P	**P**	**16 45 27.9**	**+0.2**
CASY	**Casey**	**64.56**	**188**	P	**P**	**16 48 56.3**	**+0.1**
MKAR	**Makanchi Array**	**64.58**	**326**	P	**P**	**16 48 56.6**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=116,slow=8.1,SNR=2.8						
	comp=Z,0.4nm,0.8s						
KURK	**Kurchatov**	**68.82**	**328**	P	**P**	**16 49 23.2**	**-0.5**
KURK				IAmb	IAmb	16 49 31.4	
	comp=Z,1.9nm,0.9s						

*JMA **19** 16:44:49.1±0.3,36°.2N±0°.8×14°.2E±°,h92km,MV2.5/16, FAR E OFF IBARAKI PREF*
*IDC **19** 16:44:53.5±3.0,36°.42N×141°.91E,h0km,mb3.3/2, mbtmp3.0/3,ML1.7/1,Error ellipse: s-maj=69.0km s-min=34.7km az=37.0*
ISC 19 16:44:53.9±1.9,36°.4N±0°.2×142°.1E±0°.1,h10km,n13, σ1s71/10,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHYU	**Hitachinakayam**	**1.20**	**267**	eP	**Pn**	**16 45 15.1**	**-1.6**
JHYU				eS	**Sn**	**16 45 34.4**	**+1.4**
JHO	**Hitachi**	**1.23**	**280**	P	**Pn**	**16 45 15.0**	**-2.1**
JHO				eS	**Sn**	**16 45 35.4**	**+1.7**
JFT	**Otama**	**1.78**	**309**	S	**Sb**	**16 45 49.9**	**+1.0**
JAG	**Ashikaga**	**2.11**	**271**	P	**Pn**	**16 45 27.6**	**-1.7**
MJAR	**Matsushiro Arr**	**3.12**	**274**	Pn	**Pn**	**16 45 41.1**	**-1.9**
	0.1nm,0.3s,baz=108,slow=8.0,SNR=8.4						
MJAR				Sn	**Sn**	**16 46 20.3**	**-0.1**
	0.1nm,0.3s,baz=83,slow=30,SNR=4.2						
	0.4nm,0.3s						
H11N2	**WAKE ISLAND Hy**	**27.38**	**121**	T	T	17 18 48.0	
	baz=312						
H11N1	**WAKE ISLAND Hy**	**27.38**	**121**	T	T	17 18 52.8	
	baz=312						
H11N3	**WAKE ISLAND Hy**	**27.39**	**121**	T	T	17 18 44.1	
	baz=312						
H11S1	**WAKE ISLAND Hy**	**28.08**	**123**	T	T	17 19 44.0	
	baz=314						
H11S3	**WAKE ISLAND Hy**	**28.08**	**123**	T	T	17 19 42.6	
	baz=314						
H11S2	**WAKE ISLAND Hy**	**28.09**	**123**	T	T	17 19 45.6	
	baz=314						
MKAR	**Makanchi Array**	**44.90**	**303**	P	**P**	**16 53 08.7**	**+0.1**
	0.3nm,0.8s,baz=78,slow=8.5,SNR=2.4						
	0.3nm,0.8s						
WRA	**Warramunga Arr**	**56.52**	**189**	P	**P**	**16 54 37.5**	**+1.1**
	0.3nm,0.9s,baz=4.4,slow=7.6,SNR=1.9						
	0.3nm,0.9s						

*IDC **19** 16:49:26.3±0.7,52°.26N×169°.39W,h0km,mb4.2/28, mbtmp4.2/30,ML3.8/2,MS3.5/13,Error ellipse: s-maj=21.8km s-min=11.6km az=172.0*
*BJI **19** 16:49:28.4±0.0,52°.85N×170°.11W,h6km,mb4.7/28, mB4.7/12,Ms4.3/4,Ms7 4.1/4*
*AEIC **19** 16:49:29±2.9,52°.15N±0°.07×169°.26W±0°.09,h17km±4km, Error ellipse: s-maj=11.1km s-min=7.0km az=153.0*
*NEIC **19** 16:49:32.0±2.0,52°.34N±0°.08×169°.34W±0°.09,h35km±1km, mb4.4/124,ML4.2/6,ML3.9(AEIC),Error ellipse: s-maj=14.7km s-min=8.0km az=155.0*
ISC 19 16:49:28.0±2.0,52°.2N±0°.1×169°.31W±0°.05,h13km±11km, n266,σ1s25/255,mb4.5/82,MS3.5/12,2C-4D,Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIKH	**Nikolski High**	**0.80**	**20**	Pn	**Pn**	**16 49 45.6**	**+0.6**
OKSP	**Okmok Steeple**	**1.20**	**31**		**Pg**	**16 49 51.7**	**+0.6**
OKSO	**Okmok South**	**1.33**	**31**		**Pg**	**16 49 54.1**	**+0.5**
OKER	**Okmok East Rim**	**1.45**	**31**		**Pg**	**16 49 56.0**	**+0.2**
OKFG	**Magazine Ridge**	**1.46**	**35**		**Pg**	**16 49 55.4**	**-0.6**
MGOD	**Makushin Gods**	**2.15**	**42**		**Pb**	**16 50 05.5**	**-1.4**
MSW	**Makushin Switc**	**2.28**	**41**		**Pb**	**16 50 07.3**	**-1.7**
UNV	**Unalaska Valle**	**2.34**	**45**		**Pb**	**16 50 07.9**	**-2.2**
MTBL	**Makushin Table**	**2.36**	**41**		**Pb**	**16 50 09.3**	**-1.1**
AKBBA	**Akutan Broad B**	**2.77**	**46**		**Pb**	**16 50 15.1**	**-2.2**
AKGG	**Akutan Green G**	**2.81**	**44**		**Pb**	**16 50 15.4**	**-2.6**
AKUT	**Akutan**	**2.86**	**47**		**Pb**	**16 50 15.9**	**-3.0**
AKUT	**Akutan**	**2.86**	**47**	IAML		16 51 03.5	
	comp=N,452nm,1.2s						
AKSA	**Akutan Strait**	**2.90**	**47**		**Pn**	**16 50 16.1**	**+2.3**
KOSE	**Korovin Southe**	**2.92**	**274**		**Pn**	**16 50 17.1**	**+2.9**
KOFP	**Korovin Flat P**	**2.94**	**273**		**Pn**	**16 50 16.8**	**+2.3**
ATKA	**Atka Island**	**3.01**	**271**		**Pn**	**16 50 16.5**	**+1.2**
KOKL	**Mount Kliuchef**	**3.01**	**274**		**Pb**	**16 50 18.7**	**-2.7**
GSTR	**Great Sitkin T**	**4.16**	**271**		**Pn**	**16 50 33.1**	**+1.9**
GSMY	**Great Sitkin M**	**4.16**	**270**		**Pn**	**16 50 33.1**	**+1.8**
ISLZ	**Isanotski Laza**	**4.18**	**51**		**Pn**	**16 50 33.1**	**+1.7**
GSTD	**Great Sitkin T**	**4.21**	**270**		**Pn**	**16 50 33.8**	**+1.8**
GSCK	**Great Sitkin C**	**4.23**	**270**		**Pn**	**16 50 34.1**	**+1.9**
FALS	**False Pass**	**4.39**	**51**		**Pn**	**16 50 37.1**	**+2.8**
ADK	**Adak**	**4.56**	**269**		**Pn**	**16 50 38.3**	**+1.6**
ADK	**Adak**	**4.56**	**269**	IAML		16 51 34.9	
	comp=N,222nm,0.7s						
KIWB	**Kanaga Island**	**4.86**	**269**		**Pn**	**16 50 43.0**	**+2.2**
KIKV	**Kanaga Island**	**4.87**	**269**		**Pn**	**16 50 43.0**	**+2.1**
KIMD	**Kanaga Island**	**4.92**	**268**		**Pn**	**16 50 43.4**	**+1.8**
TAPA	**Tanaga Point A**	**5.27**	**269**		**Pn**	**16 50 48.6**	**+2.2**
TAFP	**Tanaga Falls P**	**5.36**	**270**		**Pn**	**16 50 50.6**	**+2.8**
TASE	**Tanaga Southea**	**5.40**	**269**		**Pn**	**16 50 50.7**	**+2.4**
GAEA	**Gareloi East**	**5.85**	**269**		**Pn**	**16 50 56.8**	**+2.4**
SDPT	**Sand Point**	**6.10**	**56**		**Pn**	**16 50 59.7**	**+2.0**
CHIR	**Chirikof Islan**	**8.82**	**61**	Pn	**Pn**	**16 51 36.9**	**+1.7**
SII	**Sitkinak Islan**	**9.82**	**58**	Pn	**Pn**	**16 51 50.3**	**+1.4**
SHEM	**Shemya Is, Ala**	**10.14**	**279**	Pn	**Pn**	**16 51 57.1**	**+4.0**
	comp=N,3.7nm,0.3s,baz=133,slow=1.4,SNR=6.3						
SHEM				LR	LR	16 55 44.6	
	comp=N,198nm,20.8s,baz=114,slow=38						
OHAK	**Old Harbor**	**10.52**	**55**	Pn	**Pn**	**16 51 58.2**	**-0.2**
O18K	**Koktuh Hills**	**10.96**	**40**	Pn	**Pn**	**16 52 07.1**	**+2.7**
KDAK	**Kodiak Island**	**11.09**	**53**	Pn	**Pn**	**16 52 05.4**	**-0.7**
	comp=N,0.6nm,0.3s,baz=224,slow=4.3,SNR=10.0						
Q19K	**Cape Douglas,**	**11.10**	**47**	Pn	**Pn**	**16 52 08.9**	**+2.6**
RSO	**Redoubt South**	**12.31**	**41**	Pn	**Pn**	**16 52 25.3**	**+2.3**
CNPM	**China Poot**	**12.47**	**47**	Pn	**Pn**	**16 52 26.7**	**+1.6**
M19K	**Big River Lodg**	**12.61**	**34**	Pn	**Pn**	**16 52 29.2**	**+2.2**
L19K	**White Mountain**	**12.65**	**32**		**Pn**	**16 52 29.6**	**+2.1**
SUA	**Susitna One**	**13.69**	**40**	Pn	**Pn**	**16 52 43.5**	**+1.7**
K20K	**Telida**	**13.75**	**30**	Pn	**Pn**	**16 52 45.4**	**+2.9**
GHO	**Glory Hole Cre**	**14.59**	**41**	Pn	**Pn**	**16 52 55.1**	**+1.1**
KTH	**Kantishna Hill**	**14.91**	**33**		**Pn**	**16 53 00.2**	**+1.9**
BPAW	**Bear Paw Mtn.**	**15.25**	**32**	Pn	**P**	**16 53 05.1**	**-2.7**
BPAW				IAmb	IAmb	16 53 09.3	
	comp=Z,15nm,0.8s						
SCM	**Sheep Creek Mo**	**15.27**	**42**	Pn	**Pn**	**16 53 02.2**	**-1.0**
SCM				IAmb	IAmb	16 53 37.3	
	comp=Z,19nm,0.8s						
DIV	**Divide**	**15.62**	**46**	Pn	**Pn**	**16 53 06.5**	**-1.2**
DIV				IAmb	IAmb	16 53 16.3	
	comp=Z,12nm,0.8s						
KLU	**Klutina**	**15.71**	**45**	Pn	**Pn**	**16 53 08.2**	**-0.7**
KLU				IAmb	IAmb	16 53 09.5	
	comp=Z,17nm,0.5s						
I21K	**Tanana**	**15.72**	**28**		**P**	**16 53 11.6**	**-1.3**
I21K				IAmb	IAmb	16 53 44.1	
	comp=Z,19nm,1.3s						
H21K	**Melozitna Rive**	**15.85**	**26**	Pn	**Pn**	**16 53 11.0**	**+0.4**
IMAR	**Indian Mountai**	**15.87**	**24**	P	**P**	**16 53 16.5**	**+2.0**
M24K	**Tolsona, Glenn**	**15.88**	**42**	Pn	**Pn**	**16 53 10.9**	**-0.2**
M24K				IAmb	IAmb	16 53 41.1	
	comp=Z,24nm,0.6s						
DHY	**Denali Highway**	**15.90**	**38**	Pn	**Pn**	**16 53 10.8**	**-0.6**
MLY	**Manley**	**15.97**	**29**	P	**P**	**16 53 16.9**	**+1.2**
MLY				IAmb	IAmb	16 53 19.6	
	comp=Z,17nm,1.2s						
BMRM	**Bremner River**	**16.08**	**47**	Pn	**Pn**	**16 53 13.0**	**-0.6**
BMRM				IAmb	IAmb	16 53 22.8	
	comp=Z,24nm,1.1s						
NEA2	**Nenana**	**16.20**	**32**	Pn	**P**	**16 53 16.5**	**-1.8**
N25K	**Chitina, Valde**	**16.34**	**45**	P	**Pn**	**16 53 16.2**	**-0.8**
WRH	**Wood River Hil**	**16.45**	**34**	Pn	**P**	**16 53 19.2**	**-1.8**
I23K	**Minto, Yukon-K**	**16.48**	**31**		**P**	**16 53 20.3**	**-1.0**
PAX	**Paxson**	**16.59**	**40**	Pn	**Pn**	**16 53 19.4**	**-0.8**
GLB	**Gilahina Butte**	**16.62**	**46**	Pn	**Pn**	**16 53 19.8**	**-0.7**
CCB	**Clear Creek Bu**	**16.66**	**33**		**Pn**	**16 53 21.2**	**+0.2**
VRDI	**Verde Repeater**	**16.70**	**47**		**Pn**	**16 53 21.0**	**-0.6**
MDM	**Murphy Dome**	**16.71**	**32**		**Pn**	**16 53 21.7**	**0.0**
WAX	**Waxell Ridge**	**16.72**	**50**	Pn	**Pn**	**16 53 22.0**	**+0.2**
WAX				IAmb	IAmb	16 53 37.6	
	comp=Z,26nm,0.8s						
HDA	**Harding Lake**	**16.81**	**35**	Pn	**Pn**	**16 53 23.1**	**+0.2**
H23K	**Yukon River**	**16.89**	**29**		**P**	**16 53 25.9**	**0.0**
MCARA	**McCarthy VSAT**	**16.95**	**47**		**P**	**16 53 25.8**	**-0.7**
MCARA				IAmb	IAmb	16 53 58.7	
	comp=Z,17nm,0.9s						
ISLE	**Juniper Island**	**17.01**	**50**	Pn	**Pn**	**16 53 26.0**	**+0.5**
ISLE				IAmb	IAmb	16 53 31.4	
	comp=Z,15nm,0.8s						
IL31		**17.05**	**34**		**Pn**	**16 53 25.2**	**-0.6**
ILAR	**Eielson Array**	**17.05**	**34**	Pn	**Pn**	**16 53 25.0**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=226,slow=9.6,SNR=13						
ILAR				PcP	**PcP**	**16 58 10.4**	**0.0**
	comp=Z,0.3nm,0.6s,baz=240,slow=3.7,SNR=4.9						
	comp=Z,0.8nm,0.7s						
ILAR	**Eielson Array**	**17.05**	**34**	Pn	**Pn**	**16 53 25.9**	**0.0**
RIDG	**Independent Ri**	**17.21**	**38**		**P**	**16 53 29.6**	**0.0**
YAH	**Yahtse**	**17.22**	**51**		**P**	**16 53 29.3**	**-0.5**
YAH				IAmb	IAmb	16 53 33.5	
	comp=Z,22nm,1.0s						
GRNC	**Granite Creek**	**17.32**	**50**	Pn	**Pn**	**16 53 29.7**	**+0.2**

comp=Z,71nm,21.2s,baz=66,slow=35
TIXI Tiksi 32.88 329 P **P** **16 56 00.5 -0.7**
comp=Z,1.1nm,0.5s,baz=92,slow=23,SNR=4.6
TIXI PcP **PcP** **16 58 45.8 +0.5**
comp=Z,2.4nm,0.8s,baz=315,slow=4.4,SNR=4.7
TIXI LR LR 17 10 15.3
comp=Z,51nm,19.0s,baz=180,slow=38
comp=Z,1.1nm,0.5s
TIXI Tiksi 32.88 329 lAmb lAmb 16 56 12.1
comp=Z,3.2nm,1.1s
TIXI **PcP** **16 58 45.8 +0.5**
YBH Yreka Blue Hor 32.94 90 LR LR 17 06 37.0
comp=Z,100nm,20.8s,baz=242,slow=31
NEW Newport 33.01 76 P **P** **16 56 03.1 +0.5**
comp=Z,1.7nm,0.8s,baz=281,slow=6.4,SNR=3.0
comp=Z,1.7nm,0.8s
YAK Yakutsk 33.29 311 P **P** **16 56 04.4 -0.5**
comp=Z,1.9nm,0.5s,baz=139,slow=5.5,SNR=5.2
YAK LR LR 17 09 35.1
comp=Z,92nm,20.4s,baz=90,slow=36
comp=Z,1.9nm,0.5s
KLR Kul'dur 36.54 289 P **P** **16 56 31.8 -1.3**
comp=Z,3.5nm,0.6s,baz=52,slow=6.8,SNR=16
KLR LR LR 17 12 38.3
comp=Z,86nm,18.5s,baz=112,slow=38
comp=Z,3.5nm,0.6s
MCMT McKenzie Canyo 37.27 78 P **P** **16 56 40.5 +0.8**
H11N2 WAKE ISLAND Hy 37.37 219 T T 17 36 47.5
baz=26,slow=75
H11N3 WAKE ISLAND Hy 37.37 219 T T 17 36 33.9
baz=26
H11N1 WAKE ISLAND Hy 37.38 219 T T 17 37 10.5
baz=26,slow=75
BOZ Bozeman (W) 37.59 77 P **P** **16 56 43.1 +0.9**
BOZ lAmb lAmb 16 56 57.5
comp=Z,8.6nm,1.5s
NVAR Mina Array Bea 37.62 91 P **P** **16 56 46.1 +3.5**
comp=Z,0.2nm,0.3s,baz=301,slow=7.2,SNR=2.6
ELK Elko 38.11 86 LR LR 17 10 21.0
comp=Z,93nm,18.6s,baz=254,slow=33
H11S1 WAKE ISLAND Hy 38.55 218 T T 17 38 05.7
baz=23,slow=76,SNR=58
H11S2 WAKE ISLAND Hy 38.57 218 T T 17 38 01.5
baz=23,slow=76,SNR=53
H11S3 WAKE ISLAND Hy 38.57 218 T T 17 37 57.2
baz=23,slow=76,SNR=50
MJAR Matsushiro Arr 39.73 268 P **P** **16 56 59.8 -0.3**
comp=Z,0.8nm,0.7s,baz=334,slow=3.5,SNR=6.0
comp=Z,0.8nm,0.7s
MJAR Matsushiro Arr 39.73 268 lAmb lAmb 16 57 02.8
comp=Z,1.0nm,0.8s
PD31 Pinedale Array 40.39 79 P **P** **16 57 06.2 +0.4**
PD31 lAmb lAmb 16 57 21.1
comp=Z,5.4nm,1.2s
PDAR Pinedale Array 40.39 79 P **P** **16 57 06.9 +1.1**
comp=Z,1.4nm,0.7s,baz=306,slow=5.0,SNR=9.8
comp=Z,1.4nm,0.7s
PDAR Pinedale Array 40.39 79 P **P** **16 57 06.4 +0.6**
BNX BinXian 40.85 287 ⇑P **P** **16 57 08.4 -0.8**
BNX pmax pmax
comp=Z,9.0nm,0.7s
BNX pmax pmax
comp=Z,79nm,4.4s
RDMU Red Mountain 41.67 82 P **P** **16 57 17.6 +1.3**
RDMU lAmb lAmb 16 57 33.6
comp=Z,4.8nm,1.0s
PV13 Radium Mtn., P 43.62 84 P **P** **16 57 33.6 +1.4**
PV13 lAmb lAmb 16 57 48.4
comp=Z,5.6nm,0.9s
SEHB SEOHWA 44.74 278 P **P** **16 57 41.4 +0.5**
SEHB lAmb lAmb 16 57 42.7
comp=Z,11nm,0.9s
KSRS Korea Array 45.46 277 P **P** **16 57 47.4 +0.8**
comp=Z,4.8nm,0.9s,baz=53,slow=7.6,SNR=29
comp=Z,4.8nm,0.9s
KS19 Wonju Array Si 45.46 277 P **P** **16 57 47.4 +0.8**
KS19 lAmb lAmb 16 57 52.6
comp=Z,17nm,1.4s
KSAR Wonju Array Be 45.49 277 P **P** **16 57 46.7 -0.2**
TJN Taejon 46.49 276 P **P** **16 57 54.8 0.0**
ANMO Albuquerque 47.14 86 LR LR 17 16 22.8
comp=Z,68nm,18.1s,baz=264,slow=34
ECSD EROS Data Cent 47.49 70 P **P** **16 58 01.8 -0.7**
ECSD lAmb lAmb 16 58 03.0
comp=Z,6.9nm,1.3s
SPITS Spitsbergen Ar 49.81 358 P **P** **16 58 19.4 -0.5**
comp=Z,2.7nm,0.7s,baz=38,slow=7.4,SNR=6.6
comp=Z,2.7nm,0.7s
SPB2 Spitsbergen Ar 49.82 358 P **P** **16 58 19.1 -0.9**
SUMG Summit 50.91 17 P **P** **16 58 28.4 -0.3**
SUMG lAmb lAmb 16 58 37.9
comp=Z,12nm,1.4s
SUMG Summit 50.91 17 *i*P **P** **16 58 28.0 -0.7**
ULN Ulaanbaatar 51.04 301 P **P** **16 58 29.3 -0.4**
ULN lAmb lAmb 16 58 30.6
comp=Z,4.1nm,0.8s
E43A Lone Tree Farm 51.25 62 P **P** **16 58 31.4 +0.2**
E43A lAmb lAmb 16 58 37.0
comp=Z,4.8nm,0.8s
SONM Songino Array 51.41 301 P **P** **16 58 33.0 +0.5**
comp=Z,2.7nm,0.9s,baz=54,slow=7.5,SNR=8.5
comp=Z,2.7nm,0.9s
SONM Songino Array 51.41 301 P **P** **16 58 32.3 -0.2**
SONM lAmb lAmb 16 58 34.2
comp=Z,6.5nm,1.3s
TX31 Lajitas Ar. Si 52.71 89 P **P** **16 58 42.6 +0.2**
TX32 Lajitas Array 52.71 89 P **P** **16 58 42.6 +0.2**
TX32 lAmb lAmb 16 59 26.4
comp=Z,5.7nm,1.4s
TXAR Lajitas Array 52.71 89 P **P** **16 58 42.2 -0.2**
comp=Z,0.5nm,0.5s,baz=309,slow=6.0,SNR=12
comp=Z,0.5nm,0.5s
TXAR Lajitas Array 52.71 89 P **P** **16 58 42.6 +0.2**
TIA Tai'an 52.81 283 ⇓P **P** **16 58 43.5 +0.6**
TIA pmax pmax
comp=Z,8.0nm,1.0s
NJ2 Nanjing 54.60 278 *e*P **P** **16 58 55.8 -0.3**
NJ2 pmax pmax
comp=Z,12nm,0.8s
VLDQ Val d'Or 55.12 55 P **P** **16 58 59.6 +0.1**
VLDQ lAmb lAmb 16 59 01.3
comp=Z,4.0nm,1.0s
SCO Scoresbysund 55.35 13 P **P** **16 59 01.6 +0.6**
SCHQ Schefferville 55.51 43 P **P** **16 59 02.7 +0.3**
comp=Z,4.1nm,0.8s,baz=295,slow=8.4,SNR=4.7
comp=Z,4.1nm,0.8s
ZALV Zalesovo Beam 57.55 318 P **P** **16 59 16.6 -0.3**
comp=Z,1.3nm,0.7s,baz=42,slow=6.8,SNR=4.6
ZALV PcP **PcP** **17 00 10.9 +0.7**
comp=Z,0.9nm,0.5s,baz=39,slow=5.5,SNR=2.4
comp=Z,1.3nm,0.7s
ARCES ARCESS Array B 58.07 354 P **P** **16 59 20.1 -0.2**
comp=Z,3.7nm,0.9s,baz=32,slow=7.1,SNR=7.1
comp=Z,3.7nm,0.9s
ARCES ARCESS Array B 58.07 354 lAmb lAmb 16 59 55.5
comp=Z,7.6nm,1.1s
WHN Wuhan 58.40 280 ⇑P **P** **16 59 23.3 +0.2**
WHN pmax pmax
comp=Z,32nm,0.7s
LVZ Lovozero 58.86 350 P **P** **16 59 25.6 -0.2**
M55A Ridgway 58.95 61 P **P** **16 59 27.2 +0.3**
LONY Lake Ozonia 58.95 56 P **P** **16 59 26.9 +0.1**
LONY lAmb lAmb 16 59 43.7
comp=Z,5.2nm,1.0s
J57A Williamstown 59.07 58 P **P** **16 59 28.8 +1.2**
J57A lAmb lAmb 16 59 46.6
comp=Z,7.8nm,1.1s
XAN Xi'an 59.17 287 ⇓P **P** **16 59 28.9 +0.3**
XAN pmax pmax
comp=Z,9.0nm,1.4s
NCB Newcomb 59.59 56 P **P** **16 59 31.7 +0.4**
NCB lAmb lAmb 16 59 33.2
comp=Z,6.3nm,1.1s
J59A Piesco 59.80 57 P **P** **16 59 32.8 +0.1**
J59A lAmb lAmb 16 59 51.5
comp=Z,9.2nm,1.3s
BINY Binghamton 59.92 59 P **P** **16 59 34.4 +0.8**
M57A Sunshine Farm, 59.92 60 P **P** **16 59 33.7 +0.1**
SSPA Standing Stone 60.01 61 P **P** **16 59 34.5 +0.3**
SSPA lAmb lAmb 16 59 49.9
comp=Z,6.1nm,0.9s
E62A Clayton Lake 60.05 52 P **P** **16 59 36.0 +1.7**
S54A Dingess, Beckl 60.12 66 P **P** **16 59 34.5 -0.5**
L59A Walton 60.42 58 P **P** **16 59 38.4 +1.3**
GTA Gaotai 60.58 297 ⇓P **P** **16 59 38.1 -0.1**
GTA pP sP 16 59 43.9 +1.4
GTA pmax pmax
comp=Z,5.0nm,0.7s
GTA pmax pmax
comp=Z,41nm,5.8s
GTA LR LR
comp=Z,63nm,16.7s
GTA LR LR
comp=Z,90nm,15.6s
GTA LR LR
comp=Z,110nm,17.8s
H62A Milan 60.72 54 P **P** **16 59 39.0 0.0**
ENH Enshi 61.52 283 P **P** **16 59 44.1 -0.5**
K62A Royalston 61.54 56 P **P** **16 59 45.5 +0.9**
T57A Hurt 61.84 65 P **P** **16 59 47.0 +0.3**
KURK Kurchatov 62.51 318 P **P** **16 59 50.5 -0.4**
KURK lAmb lAmb 16 59 52.1
comp=Z,5.1nm,0.7s
LMN Caledonia Moun 62.86 50 P **P** **16 59 54.0 +0.6**
WMQ Urumqi 63.65 308 *e*P **P** **16 59 54.3 -4.4**
BRVK Borovoye 63.85 325 P **P** **16 59 59.5 -0.3**
BRVK lAmb lAmb 17 00 00.9
comp=Z,6.5nm,1.3s
MK31 Makanchi Array 63.93 313 P **P** **16 59 59.7 -0.7**
MK31 lAmb lAmb 17 00 00.7
comp=Z,1.7nm,0.8s
MKAR Makanchi Array 63.93 313 P **P** **16 59 59.7 -0.8**
comp=Z,2.1nm,0.8s,baz=53,slow=6.2,SNR=16
MKAR LR LR 17 28 40.2
comp=Z,42nm,20.3s,baz=46,slow=37
comp=Z,2.1nm,0.8s
MAKZ Makanchi 64.06 314 P **P** **17 00 00.5 -0.8**
MAKZ lAmb lAmb 17 00 01.5
comp=Z,1.9nm,0.8s
ARU Arti 64.76 333 P **P** **17 00 05.4 -0.3**
GOMU GeErMu 65.63 298 P **P** **17 00 11.1 -1.0**
GOMU pP pP 17 00 15.0 -0.3
GOMU sP sP 17 00 18.5 +2.1
GOMU pmax pmax
comp=Z,3.0nm,0.9s
GOMU pmax pmax
comp=Z,70nm,6.3s
FIA1 FINESS Array S 66.02 352 P **P** **17 00 13.4 -0.3**
FINES FINESS Array B 66.02 352 P **P** **17 00 13.2 -0.5**
comp=Z,5.0nm,0.8s,baz=17,slow=8.0,SNR=13
comp=Z,5.0nm,0.8s
FINES FINESS Array B 66.02 352 P **P** **17 00 13.3 -0.4**
NC204 NORSAR Array S 66.85 360 P **P** **17 00 18.9 -0.2**
NC303 NORSAR Array S 66.90 360 P **P** **17 00 19.3 -0.1**
NC405 NORSAR Array S 67.01 359 P **P** **17 00 20.2 +0.1**
NB2 NORSAR Subarra 67.08 360 P **P** **17 00 20.6 0.0**
comp=Z,1.7nm,0.6s,baz=0.3,slow=6.5
NOA NORSAR Array B 67.08 360 P **P** **17 00 20.4 -0.2**
comp=Z,2.9nm,0.8s,baz=0.1,slow=6.3,SNR=15
comp=Z,2.9nm,0.8s
KONO Kongsberg 68.47 1 P **P** **17 00 29.9 +0.5**
KMI Kunming 69.34 284 ⇓P **P** **17 00 35.1 -0.4**
KMI pmax pmax
comp=Z,16nm,0.8s
TARG Taragay, Kyrgy 69.89 313 P **P** **17 00 39.1 +0.1**
TARG lAmb lAmb 17 00 41.0
comp=Z,4.6nm,0.7s
BOOM Boomskoye usch 70.11 314 P **P** **17 00 40.6 +0.5**
BOOM lAmb lAmb 17 00 41.8
comp=Z,6.4nm,0.7s
ABKAR Akbulak array 70.58 328 P **P** **17 00 42.2 -0.3**
ABKAR Akbulak array 70.58 328 P **P** **17 00 42.3 -0.3**
ABKAR lAmb lAmb 17 00 43.5
comp=Z,4.2nm,0.9s
AAK Ala-Archa 70.63 315 P **P** **17 00 42.5 -0.6**
KK31 Karatay Array 71.92 318 P **P** **17 00 50.4 -0.3**
KK31 lAmb lAmb 17 00 51.6
comp=Z,5.9nm,0.9s
KKAR Karatay Array 71.92 318 P **P** **17 00 50.4 -0.4**
PABE Paberze 72.07 352 P **P** **17 00 51.5 +0.2**
KSH Kashi 72.50 313 P **P** **17 00 58.1 +3.7**
KSH pP pwP 17 01 03.6 +2.0
KSH PcP **PcP** **17 01 13.8 +1.7**
KSH pmax pmax
comp=Z,12nm,0.8s
AKASG Malin Array Be 76.25 348 P **P** **17 01 15.5 -0.4**
comp=Z,3.6nm,0.6s,baz=14,slow=5.6,SNR=16
comp=Z,3.6nm,0.6s
CHTO Chiang Mai 76.41 283 P **P** **17 01 16.8 -0.5**
CHTO lAmb lAmb 17 01 18.5
comp=Z,9.9nm,1.4s
CM31 Chiang Mai Arr 76.69 283 P **P** **17 01 18.9 0.0**
CM31 lAmb lAmb 17 01 20.5
comp=Z,5.4nm,0.8s
CMAR Chiang Mai Arr 76.69 283 P **P** **17 01 19.5 +0.7**
comp=Z,5.0nm,0.9s,baz=26,slow=6.7,SNR=43
comp=Z,5.0nm,0.9s
CMAR Chiang Mai Arr 76.69 283 P **P** **17 01 18.7 -0.2**
BRG Berggiesshubel 77.24 358 *e*P **P** **17 01 21.9 +0.5**
BRG Amp 17 01 24.5
comp=Z,4.3nm,1.1s
OSTC Ostas 77.49 356 *e*P **P** **17 01 24.1 +1.2**
DPC Dobruska-Polom 77.69 356 *e*P **P** **17 01 24.9 +0.8**
KRLC Kraliky 77.94 356 *e*P **P** **17 01 26.3 +0.8**
MORC Moravsky Berou 78.21 355 *e*P **P** **17 01 27.3 +0.4**
VRAC Vranov 78.72 356 *e*P **P** **17 01 30.3 +0.6**
LANS Liptovska Anna 78.72 354 *e*P **P** **17 01 31.2 +1.4**
CRVS Cervenica-Dubn 78.83 353 *e*P **P** **17 01 31.6 +1.2**
KRUC Moravsky 78.97 356 *e*P **P** **17 01 31.7 +0.6**
KHC Kasperske Hory 78.99 358 *e*P **P** **17 01 32.2 +0.9**
JAVC Velka Javorina 79.12 355 *e*P **P** **17 01 33.5 +1.5**
GERES GERESS Array B 79.27 358 P **P** **17 01 33.6 +0.7**
comp=Z,0.9nm,0.7s,baz=19,slow=4.5,SNR=8.9
comp=Z,0.9nm,0.7s
GERES GERESS Array B 79.27 358 P **P** **17 01 33.1 +0.2**
CKRC Cesky Krumlov 79.28 358 *e*P **P** **17 01 31.9 -1.0**
VYHS Vyhne 79.42 354 *e*P **P** **17 01 34.2 +0.6**
SMOL Smolenice 79.47 355 *e*P **P** **17 01 35.4 +1.5**
MODS Modra-Piesok 79.62 356 *e*P **P** **17 01 35.9 +1.2**
KBL Kabul 79.71 314 P **P** **17 01 34.8 -0.9**
KBL lAmb lAmb 17 01 35.9
comp=Z,7.0nm,0.8s
BUR08 Bucovina Ar. S 79.74 350 P **P** **17 01 34.5 -0.9**
BUR08 lAmb lAmb 17 01 37.7
comp=Z,1.7nm,0.8s
BURAR Bucovina Array 79.76 350 P **P** **17 01 34.9 -0.7**
CLF Chambon-Foret 79.87 6 P **P** **17 01 36.8 +0.8**
CONA Conrad Observa 80.12 356 *e*P **P** **17 01 39.0 +1.5**
comp=Z,5.8nm,0.9s
SRO Srobarova 80.12 355 *e*P **P** **17 01 39.5 +2.1**
SRO2 Moca 80.17 355 *e*P **P** **17 01 38.7 +1.1**
KIV Kislovodsk 80.29 337 P **P** **17 01 39.1 +0.5**
KIV lAmb lAmb 17 01 40.7
comp=Z,6.9nm,0.7s
RONA Rosalia, Austr 80.34 356 *e*P **P** **17 01 41.7 +3.1**
comp=Z,3.4nm,0.7s
KBZ Khabaz 80.46 337 P **P** **17 01 40.0 +0.8**
comp=Z,4.7nm,0.8s,baz=23,slow=2.1,SNR=8.6
comp=Z,4.7nm,0.8s
MOTA Moosalm 80.81 360 *e*P **P** **17 01 42.8 +1.5**
comp=Z,1.0nm,1.5s
WATA Walderalm 80.81 359 *e*P **P** **17 01 42.4 +1.1**
comp=Z,7.5nm,1.1s
DAVA Damuels 80.86 1 *e*P **P** **17 01 43.2 +1.6**
comp=Z,5.8nm,1.1s
WTTA Wattenberg 80.89 359 *e*P **P** **17 01 43.2 +1.4**
comp=Z,5.6nm,0.8s
SQTA Sankt Quirin 80.93 360 *e*P **P** **17 01 43.3 +1.4**
comp=Z,5.8nm,0.9s
KBA Koenbreinsper 81.05 358 *e*P **P** **17 01 44.2 +1.6**
comp=Z,9.7nm,0.9s
FETA Feichten 81.13 360 *e*P **P** **17 01 45.0 +2.0**
comp=Z,7.7nm,1.2s
GEYT Alibeck 81.17 324 P **P** **17 01 43.6 +0.4**
comp=Z,3.9nm,0.8s,baz=240,slow=12,SNR=6.4
comp=Z,3.9nm,0.8s
GEYT Alibeck 81.17 324 P **P** **17 01 43.0 -0.2**
GEYT lAmb lAmb 17 01 44.8
comp=Z,4.7nm,1.1s
GYA0B ALIBECK ARRAY 81.17 324 P **P** **17 01 43.0 -0.2**
GYA0B lAmb lAmb 17 01 47.7
comp=Z,10nm,1.3s
SOKA Soboth 81.40 357 *e*P **P** **17 01 45.7 +1.3**
comp=Z,7.0nm,1.0s
CTAO Charters Tower 81.74 222 P **P** **17 01 45.8 -0.4**
TEOL Teolo 82.79 359 P **P** **17 01 52.3 +0.7**
RDO Rodhopi 86.11 349 P **P** **17 02 08.9 +0.4**
BRTR Keskin Array B 86.27 342 P **P** **17 02 10.3 +0.8**
comp=Z,1.3nm,0.9s,baz=66,slow=1.5,SNR=5.4
comp=Z,1.3nm,0.9s
BRTR Keskin Array B 86.27 342 P **P** **17 02 09.9 +0.4**
ALN Alexandroupoli 86.30 348 P **P** **17 02 09.6 +0.2**
FNA Florina 86.90 352 P **P** **17 02 12.3 -0.1**
FNA lAmb lAmb 17 02 13.1
comp=Z,5.2nm,0.9s
WRA Warramunga Arr 86.94 232 P **P** **17 02 11.0 -1.6**
comp=Z,0.8nm,0.9s,baz=36,slow=5.8,SNR=5.1
comp=Z,0.8nm,0.9s
ESDC Sonseca Array 87.59 11 P **P** **17 02 15.8 +0.1**
comp=Z,1.9nm,0.8s,baz=343,slow=4.3,SNR=11
comp=Z,1.9nm,0.8s
ESDC Sonseca Array 87.59 11 P **P** **17 02 15.6 -0.2**
ESDC lAmb lAmb 17 02 17.1
comp=Z,1.9nm,0.9s
BOSA Boshof 154.04 330 PKPbc **PKiKP** **17 09 27.7 +0.4**
comp=Z,1.0nm,0.5s,baz=63,slow=2.3,SNR=4.3

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*DJA **19** 16:50:32.8±0.9,2°N±4°×12°7E±°, h15km±9km, M4.3/14, mb4.4/12, mB4.9/4, MLv4.3/14, Mw(mB)4.2/4*
*NEIC **19** 16:50:33.7±1.9, 1°91N±0°07×127°05E±0°10, h85km±8km, mb4.4/20, Error ellipse: s-maj=14.3km s-min=9.6km az=72.0*
*IDC **19** 16:50:33.7±8.6, 1°94N×127°29E, h76km±74km, mb3.9/4, mbtmp4.2/5, ML3.8/1, Error ellipse: s-maj=90.2km s-min=20.8km az=61.0*
ISC 19 16:50:31.9±0.7, 1°96N±0°07×127°14E±0°08, h63km, n66, σ1s87/67, mb4.4/15, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.20**	**169**	Pn	**Pn**	**16 50 55.1**	**+2.4**
TNTI				Sn	**Sn**	**16 51 10.4**	**+2.2**
TNTI	**Ternate**	**1.20**	**169**	P	**Pn**	**16 50 55.4**	**+2.7**
SGSI	**Sangihe**	**2.35**	**317**	P	**Pn**	**16 51 09.7**	**+1.5**
LBMI	**Labuha**	**2.60**	**172**	P	**Pn**	**16 51 14.9**	**+3.2**
KMSI	**Cibinong**	**3.44**	**247**	P	**Pn**	**16 51 26.1**	**+3.0**
SANI	**Sanana**	**4.14**	**196**	P	**Pn**	**16 51 32.9**	**+0.2**
NLAI	**Namlea**	**5.16**	**180**	P	**Pn**	**16 51 49.9**	**+3.2**
	0.4nm919nm44nm,0.5s						
LUWI	**Luwuk**	**5.28**	**236**	Pn	**Pn**	**16 51 48.2**	**-0.2**
LUWI	**Luwuk**	**5.28**	**236**	P	**Pn**	**16 51 51.8**	**+3.5**
	0.9nm973nm67nm,0.7s						
MRSI	**Marisa**	**5.40**	**254**	P	**Pn**	**16 51 53.3**	**+3.4**
	0.4nm1μm93nm,0.5s						
AAI	**Ambon**	**5.71**	**169**	P	**Pn**	**16 51 58.4**	**+4.3**
	0.2nm36nm,0.8s						
APSI	**Ampana**	**6.18**	**243**	P	**Pn**	**16 52 03.5**	**+2.8**
	0.2nm838nm31nm,0.7s						
TOLI2	**Tolitoli**	**6.41**	**263**	Pn	**Pn**	**16 52 05.3**	**+1.5**
FAKI	**Fak Fak**	**7.04**	**133**	Pn	**Pn**	16 52 16.2	+3.8
MPSI	**Mapaga**	**7.41**	**258**	P	**Pn**	**16 52 20.6**	**+3.1**
	0.1nm19nm,1.2s						
BBSI	**Bau Bau**	**8.69**	**212**	P	Pn	16 52 39.9	+4.9
	3.7nm,1.1s						
TTSI	**Tana Toraja**	**8.84**	**236**	P	**Pn**	**16 52 38.9**	**+1.8**
	13nm,1.0s						
MYLDM	**Lahad Datu**	**9.19**	**291**	Pn	**Pn**	**16 52 42.9**	**+1.0**
SPSI	**Sidrap Palu**	**9.42**	**231**	P	**Pn**	**16 52 47.6**	**+2.6**
	14nm,0.6s						
BNSI	**Bone**	**9.45**	**228**	P	**Pn**	**16 52 47.0**	**+1.7**
	19nm,1.6s						
BKSI	**Bulukumba**	**10.07**	**224**	P	**Pn**	**16 52 57.1**	**+3.3**
	9.4nm,1.5s						
KAPI	**Kappang**	**10.12**	**227**	P	**Pn**	**16 52 57.1**	**+2.6**
	0.8nm,0.3s,baz=41,slow=9.3,SNR=5.3						
KAPI				S	**Sn**	**16 54 43.6**	**-2.9**
	8.9nm,0.8s,baz=303,slow=13,SNR=1.7						
	4.5nm,0.6s						
KAPI	**Kappang**	**10.12**	**227**	Pn	**Pn**	**16 52 54.8**	**+0.3**
EDFI	**Ende, Flores**	**11.94**	**207**	P	**Pn**	**16 53 24.2**	**+4.6**
MTN	**Manton Dam**	**15.23**	**165**	P	**Pn**	**16 54 03.4**	**0.0**
	baz=16,SNR=6.9						
MTN	**Manton Dam**	**15.23**	**165**	Pn	**Pn**	**16 54 02.4**	**-0.9**
KDU	**Kakadu**	**15.48**	**160**	P	**P**	**16 54 09.3**	**-0.5**
	baz=16,SNR=16						
KNRA	**Kununurra**	**17.59**	**175**	P	**P**	**16 54 33.4**	**+0.3**
	baz=18,SNR=12						
KNRA	**Kununurra**	**17.59**	**175**	P	**Pn**	**16 54 32.0**	**-1.0**
KNRA				lAmb	lAmb	16 54 34.5	
	comp=Z,17nm,0.6s						
WB0	**Warramunga Arr**	**22.73**	**162**	P	**P**	**16 55 27.8**	**-1.1**
WB0				lAmb	lAmb	16 55 28.6	
	comp=Z,17nm,0.4s						
WRAB	**Tennant Creek**	**22.88**	**162**	P	**P**	**16 55 29.3**	**-1.1**
WRAB				lAmb	lAmb	16 55 30.7	
	comp=Z,20nm,1.2s						
WRA	**Warramunga Arr**	**22.88**	**162**	P	**P**	**16 55 29.3**	**-1.2**
	comp=Z,8.3nm,0.3s,baz=343,slow=10,SNR=170						
WRA				PcP	**PcP**	**16 59 19.7**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=351,slow=1.9,SNR=2.0						
	comp=Z,8.3nm,0.3s						
WRA	**Warramunga Arr**	**22.88**	**162**	P	**P**	**16 55 28.1**	**-2.4**
WB2	**Warramunga Arr**	**22.89**	**162**	P	**P**	**16 55 29.4**	**-1.1**
WB2				lAmb	lAmb	16 55 30.2	
	comp=Z,11nm,0.9s						
WR0	**Warramunga Arr**	**22.96**	**162**	P	**P**	**16 55 30.1**	**-1.2**
MBWA	**Marble Bar**	**24.09**	**197**	P	**P**	**16 55 40.9**	**-0.8**
MBWA				lAmb	lAmb	16 55 43.4	
	comp=Z,9.3nm,1.1s						
PSA00	**Pilbara Seismi**	**24.45**	**197**	P	**P**	**16 55 44.8**	**-0.2**
PSA00				lAmb	lAmb	16 55 46.5	
	comp=Z,8.6nm,0.9s						
QIS	**Mount Isa**	**25.50**	**152**	P	**P**	**16 55 54.7**	**+0.1**
	baz=26,SNR=14						
AS31	**Alice Springs**	**26.31**	**166**	P	**P**	**16 56 01.2**	**-0.7**
AS31				lAmb	lAmb	16 56 05.0	
	comp=Z,3.7nm,0.3s						
ASAR	**Alice Springs**	**26.31**	**166**	P	**P**	**16 56 01.0**	**-0.9**
WRKA	**Warakurna**	**26.86**	**178**	P	**P**	**16 56 06.6**	**-0.2**
	baz=28,SNR=28						
GIRL	**Giralia**	**27.50**	**207**	P	**P**	**16 56 12.0**	**-0.6**
	baz=28,SNR=3.6						
GIRL	**Giralia**	**27.50**	**207**	P	**P**	**16 56 10.7**	**-1.9**
FORT	**Forrest**	**32.57**	**179**	P	**P**	**16 56 56.6**	**-0.7**
MORW	**Morawa**	**32.63**	**198**	P	**P**	**16 56 58.2**	**+0.3**
	baz=33,SNR=4.8						
MORW	**Morawa**	**32.63**	**198**	P	**P**	**16 56 56.1**	**-1.7**
MORW				lAmb	lAmb	16 56 58.7	
	comp=Z,7.1nm,0.8s						
PZH	**PanZhiHua**	**34.50**	**317**	P	**P**	**16 57 15.3**	**+0.9**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,100nm,5.2s						
KLBR	**Kellerberrin**	**34.53**	**194**	P	**P**	**16 57 14.6**	**+0.1**
	baz=35,SNR=8.4						
MUN	**Mundaring**	**35.31**	**196**	P	**P**	**16 57 21.2**	**+0.1**
	baz=36,SNR=3.7						
BBOO	**Buckleboo**	**35.59**	**167**	P	**P**	**16 57 23.1**	**-0.4**
	baz=36,SNR=15						
BBOO	**Buckleboo**	**35.59**	**167**	P	**P**	**16 57 22.8**	**-0.7**
NWAO	**Narrogin (SRO)**	**35.94**	**194**	P	**P**	**16 57 26.3**	**-0.2**
CD2	**Chengdu**	**36.31**	**325**	*e*P	**P**	**16 57 29.3**	**-0.5**
STKA	**Stephens Creek**	**36.34**	**159**	P	**P**	**16 57 29.8**	**-0.2**
	comp=Z,5.0nm,0.5s,baz=335,slow=8.4,SNR=23						
	comp=Z,5.0nm,0.5s						
STKA	**Stephens Creek**	**36.34**	**159**	P	**P**	**16 57 30.0**	**+0.1**
	baz=37,SNR=13						
STKA	**Stephens Creek**	**36.34**	**159**	P	**P**	**16 57 29.5**	**-0.4**
HTT	**Hallett**	**36.91**	**163**	P	**P**	**16 57 34.6**	**-0.2**
	baz=38,SNR=3.5						
CMSA	**Cobar Meteorol**	**37.69**	**154**	P	**P**	**16 57 41.1**	**-0.3**
	baz=38,SNR=8.1						
HHC	**Hu-ho-hao-te**	**41.20**	**342**	*e*P	**P**	**16 58 12.9**	**+2.3**
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,4.5s						
TOO	**Toolangi**	**42.85**	**158**	P	**P**	**16 58 22.3**	**-1.7**
TOO				lAmb	lAmb	16 58 41.6	
	comp=Z,19nm,1.4s						
MKAR	**Makanchi Array**	**59.23**	**326**	P	**P**	**17 00 28.3**	**+1.4**
	comp=Z,0.5nm,0.5s,baz=124,slow=8.4,SNR=9.4						
	comp=Z,0.5nm,0.5s						
LBZ	**Lake Benmore**	**60.00**	**146**	P	**P**	**17 00 31.8**	**-0.3**
MSWZ	**Moikau Station**	**61.35**	**140**	P	**P**	**17 00 39.4**	**-1.9**
ZAA0	**Zalesovo Array**	**62.34**	**333**	P	**P**	**17 00 44.5**	**-3.2**
ZAA0				lAmb	lAmb	17 00 52.1	
	comp=Z,1.3nm,0.7s						
VNDA	**Vanda**	**81.63**	**173**	P	**P**	**17 02 42.5**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=330,slow=7.9,SNR=4.4						
	comp=Z,0.6nm,0.6s						
VNDA	**Vanda**	**81.63**	**173**	P	**P**	**17 02 41.2**	**-1.5**

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*IDC **19** 16:50:57.6±5.7, 52°18N×169°32W, h0km, mb3.9/6,*

mbtmp3.8/8,ML3.6/1,MS3.3/1,Error ellipse: s-maj=140.6km s-min=28.2km az=151.0
*NEIC **19** 16:51:06.2±1.3,52.6°N±0.2°×169.4°W±0.08,h52km±11km, mb3.9/12,Error ellipse: s-maj=25.2km s-min=5.1km az=168.0*

ISC 19 16:51:05.2±1.8,**52.6N**±0.3°×**169.4W**±0.1,**h40**km,**n32,**
σ0s92/32,mb3.9/7,Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIKH	**Nikolski High**	**0.52**	**38**	Pn	**Pn**	**16 51 17.4**	**+1.3**
UNV	**Unalaska Valle**	**2.15**	**52**	Pn	**Pn**	**16 51 39.4**	**+0.9**
KIWB	**Kanaga Island**	**4.83**	**265**	Pn	**Pn**	**16 52 17.1**	**+1.7**
CNBA	**Chernabura Isl**	**6.24**	**65**	Pn	**Pn**	**16 52 35.1**	**+0.6**
CHIR	**Chirikof Islan**	**8.70**	**63**	Pn	**Pn**	**16 53 08.4**	**+0.1**
SII	**Sitkinak Islan**	**9.68**	**60**	Pn	**Pn**	**16 53 22.9**	**+1.0**
OHAK	**Old Harbor**	**10.37**	**57**	Pn	**Pn**	**16 53 30.6**	**-0.5**
O18K	**Koktuh Hills**	**10.73**	**42**	Pn	**Pn**	**16 53 37.6**	**+1.5**
RC01	**Rabbit Creek A**	**13.68**	**44**	Pn	**Pn**	**16 54 16.5**	**+0.2**
PPLA	**Purkeypile**	**13.78**	**35**	Pn	**Pn**	**16 54 16.7**	**-1.2**
FID	**Port Fidalgo**	**14.95**	**48**	Pn	**Pn**	**16 54 32.0**	**-1.5**
SCM	**Sheep Creek Mo**	**15.05**	**43**	Pn	**Pn**	**16 54 34.5**	**-0.4**
RND	**Reindeer**	**15.29**	**37**	Pn	**Pn**	**16 54 37.5**	**-0.4**
RND				IAmb	IAmb	16 54 47.2	
	comp=Z,8.0nm,1.0s						
DIV	**Divide**	**15.42**	**47**	Pn	**Pn**	**16 54 38.8**	**-0.8**
DIV				IAmb	IAmb	16 55 09.2	
	comp=Z,15nm,1.4s						
KLU	**Klutina**	**15.50**	**46**	Pn	**Pn**	**16 54 40.1**	**-0.6**
KLU				IAmb	IAmb	16 54 52.7	
	comp=Z,7.0nm,1.0s						
N25K	**Chitina, Valde**	**16.13**	**46**	Pn	**Pn**	**16 54 48.0**	**-0.8**
N25K				IAmb	IAmb	16 55 16.4	
	comp=Z,15nm,1.4s						
I23K	**Minto, Yukon-K**	**16.21**	**31**	P	**P**	**16 54 53.1**	**+0.8**
GLB	**Gilahina Butte**	**16.41**	**47**	Pn	**Pn**	**16 54 51.6**	**-0.8**
VRDI	**Verde Repeater**	**16.50**	**48**	Pn	**Pn**	**16 54 52.8**	**-0.8**
WAX	**Waxell Ridge**	**16.53**	**51**	Pn	**Pn**	**16 54 52.5**	**-1.4**
TGL	**Tana Glacier**	**16.64**	**50**		**Pn**	**16 54 55.2**	**0.0**
TGL				IAmb	IAmb	16 55 06.9	
	comp=Z,12nm,1.2s						
ILAR	**Eielson Array**	**16.79**	**35**	Pn	**P**	**16 54 57.4**	**-1.4**
	comp=Z,0.2nm,0.5s,baz=228,slow=9.4,SNR=1.3						
PEA0B	**Petropavlovsk-**	**19.81**	**285**	P	**P**	**16 55 32.1**	**+0.1**
PETK	**Petropavlovsk-**	**19.81**	**285**	P	**P**	**16 55 32.1**	**+0.2**
	comp=Z,0.9nm,0.3s,baz=92,slow=12,SNR=5.6						
	comp=Z,4.0nm,0.6s						
EPYK	**Eagle Plains**	**21.25**	**37**	P	**P**	**16 55 47.3**	**-0.2**
EPYK				IAmb	IAmb	16 56 15.5	
	comp=Z,3.8nm,0.8s						
MA2	**Magadan**	**23.03**	**304**	P	**P**	**16 56 05.5**	**-0.9**
KLR	**Kul'dur**	**36.39**	**289**	P	**P**	**16 58 03.9**	**-1.4**
	comp=Z,0.7nm,0.5s,baz=98,slow=7.3,SNR=2.2						
	comp=Z,0.7nm,0.5s						
ARCES	**ARCESS Array B**	**57.73**	**354**	P	**P**	**17 00 52.2**	**+1.0**
	comp=Z,2.7nm,0.9s,baz=6.6,slow=8.6,SNR=1.7						
ARCES				LR	LR	17 26 15.6	
	comp=Z,24nm,20.4s,baz=78,slow=36						
	comp=Z,2.7nm,0.9s						
FINES	**FINESS Array B**	**65.67**	**352**	P	**P**	**17 01 44.9**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=28,slow=8.6,SNR=1.2						
	comp=Z,0.8nm,0.6s						
NOA	**NORSAR Array B**	**66.74**	**360**	P	**P**	**17 01 52.2**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=4.1,slow=6.8,SNR=2.0						
	comp=Z,0.6nm,0.6s						
AKASG	**Malin Array Be**	**75.91**	**348**	P	**P**	**17 02 47.2**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=17,slow=6.8,SNR=2.9						
	comp=Z,0.7nm,0.5s						
CMAR	**Chiang Mai Arr**	**76.57**	**283**	P	**P**	**17 02 51.4**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=34,slow=5.3,SNR=1.8						
	comp=Z,0.5nm,0.7s						

NOU 19 16:51:45.7,20.90S×169.52E,h163km,MLv4.1/6,
Vanuatu Islands,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PINNC	**Pines Island,**	**2.57**	**228**	P	Pn	16 52 28.4	+0.1
NOUC	**Port Laguerre**	**3.23**	**248**	P	Pn	16 52 36.6	+0.2
KOUNC	**Koumac, New Ca**	**4.91**	**273**	P	Pn	16 52 57.9	-0.3
LKBA	**Tubou, Lakemba**	**11.31**	**78**	P	Pn	16 54 22.7	0.0
	1.4nm,1.1s						

*IDC **19** 17:06:29.5±0.8,0.03S×143.60E,h0km,mb3.9/10, mbtmp4.0/12,ML2.2/1,MS3.3/7,Error ellipse: s-maj=30.2km s-min=15.9km az=78.0*
*NEIC **19** 17:06:31.5±2.8,0.01S±0.10×143.38E±0.05,h10km±1km, mb4.5/12,Error ellipse: s-maj=16.8km s-min=8.6km az=172.0*
*DJA **19** 17:06:32.8±2.2,0°N±8°×14°4E±°,h21km±15km,M5.0/17, mB5.1/3,mb4.8/17,MLv5.1/5,Mw(mB)4.4/3*

ISC 19 17:06:34.5±0.6,**0.05S**±0.07°×**143.59E**±0.09,**h35**km,**n55,**
σ1s29/43,mb4.4/17,MS3.3/4,Ninigo Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GENI	**Genyem**	**4.25**	**234**	P	**Pn**	**17 07 35.3**	**-1.5**
MANU	**Manus Island**	**4.26**	**118**		**Pn**	**17 07 35.3**	**-1.6**
SMPI	**Sarmi**	**5.25**	**248**	P	**Pn**	**17 07 47.8**	**-2.7**
	0.4nm827nm55nm,0.6s						
WAMI	**Wamena**	**6.19**	**232**	P	**Pn**	**17 08 04.7**	**+1.3**
	3µm195nm,0.5s						
BAKI	**Biak**	**7.57**	**261**	P	**Pn**	**17 08 23.9**	**+1.5**
	0.4nm154nm,0.8s						
SRPI	**Serui, Papua**	**7.57**	**256**	P	**Pn**	**17 08 25.5**	**+3.1**
	0.6nm1µm72nm,0.9s						
KRVT	**Keravat (AS076**	**9.43**	**117**	Pn	**Pn**	**17 08 48.8**	**+0.9**
	13nm,0.6s,baz=100,slow=2.6,SNR=7.1						
RABL	**Rabaul**	**9.50**	**116**		**Pn**	**17 08 49.6**	**+0.7**
PMG	**Port Moresby**	**9.95**	**159**	Pn	**Pn**	**17 08 55.5**	**+0.5**
	1.0nm,0.3s,baz=334,slow=2.5,SNR=7.0						
PMG				LR	LR	17 12 49.9	
	comp=Z,338nm,19.1s,baz=34,slow=38						
	7.2nm,0.6s						
PMG	**Port Moresby**	**9.95**	**159**		**Pn**	**17 08 55.6**	**+0.6**
FAKI	**Fak Fak**	**11.69**	**256**	Pn	Pn	17 09 09.5	-9.5
GUMO	**Guam**	**13.61**	**5**	LR	LR	17 14 00.4	
	comp=Z,59nm,20.4s,baz=108,slow=33						
COEN	**Coen**	**13.82**	**182**	Pn	**Pn**	**17 09 46.2**	**-1.9**
LBMI	**Labuha**	**16.10**	**268**	P	P	17 10 31.9	+11
DAV	**Davao City (W)**	**19.31**	**292**	LR	LR	17 18 21.2	
	comp=Z,65nm,18.3s,baz=64,slow=37						
KMSI	**Cibinong**	**19.62**	**272**	P	**P**	**17 10 59.0**	**-1.2**
	66nm,0.6s						
CTA	**Charters Tower**	**20.08**	**173**	P	**P**	**17 11 06.2**	**+1.1**
	5.4nm,0.8s,baz=350,slow=11,SNR=6.4						
CTA				LR	LR	17 18 58.0	
	comp=Z,98nm,18.2s,baz=60,slow=37						
	5.4nm,0.8s						
CTAO	**Charters Tower**	**20.08**	**173**	P	**P**	**17 11 04.4**	**-0.8**
CTAO				IAmb	IAmb	17 11 18.5	
	comp=Z,24nm,1.2s						
LUWI	**Luwuk**	**20.84**	**267**	P	**P**	**17 11 10.2**	**-3.3**
LUWI	**Luwuk**	**20.84**	**267**	P	**P**	**17 11 13.8**	**+0.4**
	comp=Z,63nm,1.0s						
KNRA	**Kununurra**	**21.34**	**223**	P	**P**	**17 11 18.1**	**-0.7**
KNRA				IAmb	IAmb	17 11 25.5	
	comp=Z,28nm,1.2s						
WB0	**Warramunga Arr**	**21.57**	**204**	P	**P**	**17 11 21.2**	**0.0**
WB0				IAmb	IAmb	17 11 24.9	
	comp=Z,14nm,0.8s						
WR0	**Warramunga Arr**	**21.68**	**204**	P	**P**	**17 11 23.0**	**+0.6**
WR0				IAmb	IAmb	17 11 29.5	
	comp=Z,30nm,1.0s						
WRAB	**Tennant Creek**	**21.73**	**204**	P	**P**	**17 11 23.0**	**0.0**
WB2	**Warramunga Arr**	**21.74**	**204**	P	**P**	**17 11 22.9**	**-0.2**
WB2				IAmb	IAmb	17 11 26.2	
	comp=Z,19nm,0.6s						
WRA	**Warramunga Arr**	**21.75**	**204**	P	**P**	**17 11 22.7**	**-0.4**
	comp=Z,10nm,0.5s,baz=31,slow=10,SNR=48						
	comp=Z,10nm,0.5s						
WRA	**Warramunga Arr**	**21.75**	**204**	P	**P**	**17 11 21.4**	**-1.7**
APSI	**Ampana**	**21.96**	**268**	P	P	17 11 37.5	+12
BNSI	**Bone**	**23.86**	**259**	P	**P**	**17 11 45.9**	**+1.0**
TTSI	**Tana Toraja**	**23.95**	**263**	P	**P**	**17 11 47.6**	**+1.9**
	comp=Z,31nm,1.2s						
SPSI	**Sidrap Palu**	**24.12**	**260**	P	**P**	**17 11 46.9**	**-0.4**
	comp=Z,38nm,1.0s						
AS31	**Alice Springs**	**25.29**	**201**	P	**P**	**17 11 58.9**	**+1.0**
ASAR	**Alice Springs**	**25.29**	**201**	P	**P**	**17 11 58.1**	**+0.2**
H11S3	**WAKE ISLAND Hy**	**29.23**	**50**	T	T	17 43 54.5	
	baz=235						
H11S2	**WAKE ISLAND Hy**	**29.24**	**50**	T	T	17 43 46.8	
	baz=235						
H11S1	**WAKE ISLAND Hy**	**29.25**	**50**	T	T	17 43 47.8	
	baz=235						
H11N1	**WAKE ISLAND Hy**	**30.12**	**48**	T	T	17 45 56.4	
	baz=231,slow=74						
H11N2	**WAKE ISLAND Hy**	**30.14**	**48**	T	T	17 45 59.8	
	baz=231						
H11N3	**WAKE ISLAND Hy**	**30.14**	**48**	T	T	17 45 43.3	
	baz=231,slow=74						
STKA	**Stephens Creek**	**31.71**	**183**	P	**P**	**17 12 55.0**	**-0.1**
	comp=Z,0.6nm,0.4s,baz=354,slow=14,SNR=1.6						
STKA				LR	LR	17 28 18.3	
	comp=Z,86nm,19.4s,baz=25,slow=41						
	comp=Z,0.6nm,0.4s						
STKA	**Stephens Creek**	**31.71**	**183**	P	**P**	**17 12 54.3**	**-0.7**
NACB	**Ninganchiao**	**32.17**	**320**	P	**P**	**17 12 57.1**	**-2.1**
KSRS	**Korea Array**	**40.03**	**340**	P	**P**	**17 14 06.5**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=156,slow=10.0,SNR=8.0						
	comp=Z,1.1nm,0.6s						
KSAR	**Wonju Array Be**	**40.03**	**340**	P	**P**	**17 14 05.8**	**-0.4**
KS19	**Wonju Array Si**	**40.09**	**340**	P	**P**	**17 14 05.7**	**-1.1**
KS19				IAmb	IAmb	17 14 11.6	
	comp=Z,12nm,1.2s						
CMAR	**Chiang Mai Arr**	**47.55**	**295**	P	**P**	**17 15 08.2**	**+1.2**
	comp=Z,1.9nm,0.9s,baz=110,slow=5.8,SNR=21						
CMAR				LR	LR	17 36 27.7	
	comp=Z,9.1nm,18.2s,baz=170,slow=38						
	comp=Z,1.9nm,0.9s						
PETK	**Petropavlovsk-**	**54.27**	**10**	P	**P**	**17 15 57.8**	**+0.9**
	comp=Z,3.3nm,0.8s,baz=199,slow=13,SNR=7.0						
	comp=Z,3.3nm,0.8s						
PETK	**Petropavlovsk-**	**54.27**	**10**	P	**P**	**17 15 57.6**	**+0.6**
GTA	**Gaotai**	**56.03**	**320**	*eP*	**P**	**17 16 11.4**	**+1.3**
GTA				pP	pP	17 16 20.1	+0.5
GTA				sP	sP	17 16 22.9	-0.4
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
YAK	**Yakutsk**	**62.82**	**353**	LR	LR	17 45 40.5	
	comp=Z,34nm,18.3s,baz=262,slow=37						
MKAR	**Makanchi Array**	**70.78**	**320**	P	**P**	**17 17 48.0**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=97,slow=10,SNR=4.5						
	comp=Z,0.5nm,0.7s						
MKAR	**Makanchi Array**	**70.78**	**320**	P	**P**	**17 17 47.1**	**-0.4**
ZALV	**Zalesovo Beam**	**72.20**	**328**	P	**P**	**17 17 55.3**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=111,slow=7.9,SNR=2.6						
	comp=Z,0.5nm,0.5s						
VNDA	**Vanda**	**78.03**	**176**	P	**P**	**17 18 28.5**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=332,slow=0.9,SNR=4.3						
	comp=Z,0.6nm,0.6s						
ILAR	**Eielson Array**	**81.42**	**24**	P	**P**	**17 18 46.8**	**-0.8**
	comp=Z,0.5nm,0.8s,baz=262,slow=5.8,SNR=6.4						
	comp=Z,0.5nm,0.8s						

*JMA **19** 17:18:13.2±0.3,24°N±2°×122.4E±0.6,h15km,MV2.2/9, NW OFF ISHIGAKIJIMA IS*
*TAP **19** 17:18:14.0,24.06N×122.39E,h24km,ML2.6,D*

ISC 19 17:18:12.2±1.0,**23.98N**±0.02°×**122.38E**±0.02,**h15**km±8km,
n76,σ0s68/141,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.70**	**48**	P	**Pg**	**17 18 26.1**	**+0.2**
JYNG				S	**Sg**	**17 18 34.2**	**-0.9**
ETL	**Fush Village**	**0.71**	**284**	*eP*	**Pn**	**17 18 27.5**	**-0.2**
	baz=262						
ETL				*eS*	**Sn**	**17 18 36.9**	**-1.5**
	baz=262						
EWUT	**Wuta**	**0.71**	**310**	P	**Pb**	**17 18 27.0**	**+0.6**
	baz=303						
EWUT				*eS*	**Sn**	**17 18 36.7**	**-1.7**
	baz=303						
TWD	**Chiawan**	**0.72**	**278**	*eP*	**Pn**	**17 18 27.5**	**-0.3**
	baz=271						
TWD				*eS*	**Sn**	**17 18 37.4**	**-1.2**
	baz=271						
ENA	**Nanau**	**0.73**	**307**	P	**Pb**	**17 18 27.2**	**+0.6**
	baz=301						
ENA				S	**Sn**	**17 18 37.3**	**-1.5**
	baz=301						
NACB	**Ninganchiao**	**0.74**	**285**	P	**Pn**	**17 18 27.7**	**-0.4**
	baz=264						
NACB				*eS*	**Sn**	**17 18 37.8**	**-1.3**
	baz=264						
YOJ	**Yonaguni jima**	**0.75**	**50**	*eP*	**Pb**	**17 18 27.1**	**+0.2**
	baz=63						
YOJ				*eS*	**Sb**	**17 18 36.0**	**-0.9**
	baz=63						
YOJ	**Yonaguni jima**	**0.75**	**50**	P	**Pb**	**17 18 27.0**	**+0.1**
YOJ				S	**Sb**	**17 18 35.8**	**-1.1**
TWC	**Suao**	**0.79**	**322**	P	**Pg**	**17 18 27.9**	**+0.3**
	baz=317						
TWC				S	**Sb**	**17 18 37.5**	**-0.5**
	baz=317						
ETLH	**Xiulin Townshi**	**0.85**	**285**	P	**Pn**	**17 18 29.5**	**-0.2**
	baz=267						
ETLH				S	**Sn**	**17 18 41.5**	**-0.4**
	baz=267						
ESL	**Shilin**	**0.88**	**259**	*eP*	**Pn**	**17 18 30.7**	**+0.7**
	baz=245						
ESL				*eS*	**Sn**	**17 18 42.4**	**-0.2**
	baz=245						
NDS	**Dongshan**	**0.89**	**317**	P	**Pn**	**17 18 29.9**	**-0.2**
	baz=311						
NDS				*eS*	**Sn**	**17 18 41.5**	**-1.1**
	baz=311						
EGFH	**Guangfu**	**0.93**	**250**	*eP*	**Pn**	**17 18 31.8**	**+1.2**
	baz=246						
EGFH				*eS*	**Sn**	**17 18 44.0**	**+0.3**
	baz=246						
EGS		**0.95**	**335**	*eP*	**Pn**	**17 18 31.5**	**+0.5**
	baz=320						
EGS				*eS*	**Sn**	**17 18 43.8**	**-0.4**
	baz=320						
LATG	**Datong**	**0.95**	**305**	P	**Pn**	**17 18 31.5**	**+0.4**
	baz=299						
LATG				*eS*	**Sn**	**17 18 43.9**	**-0.6**
	baz=299						
TWE	**Neicheng**	**0.98**	**319**	P	**Pn**	**17 18 31.8**	**+0.4**
	baz=314						
TWE				S	**Sn**	**17 18 44.6**	**-0.3**
	baz=314						
NTC	**Toucheng**	**1.00**	**330**	*eP*	**Pn**	**17 18 32.1**	**+0.5**
	baz=325						
NTC				*eS*	**Sn**	**17 18 45.5**	**0.0**
	baz=325						
HGSD	**Ruisui**	**1.00**	**241**	*eP*	**Pb**	**17 18 31.1**	**-0.1**
	baz=238						
HGSD				*eS*	**Sn**	**17 18 47.3**	**+1.7**
	baz=238						
NNSB	**Datong**	**1.01**	**296**	P	**Pn**	**17 18 32.5**	**+0.6**
	baz=290						
NNSB				S	**Sn**	**17 18 46.0**	**+0.1**
	baz=290						
NNS	**Nan Shan**	**1.02**	**297**	P	**Pn**	**17 18 32.7**	**+0.5**
	baz=291						
NNS				*eS*	**Sn**	**17 18 46.8**	**+0.5**
	baz=291						
WHF	**Hehuan Shan**	**1.03**	**279**	P	**Pn**	**17 18 32.7**	**+0.2**
	baz=262						
WHF				*eS*	**Sn**	**17 18 46.2**	**-0.7**
	baz=262						
FUSB	**Fushanzhiwuyua**	**1.06**	**317**	P	**Pg**	**17 18 33.1**	**+0.4**
	baz=311						
FUSB				S	**Sn**	**17 18 47.0**	**0.0**
	baz=311						
FUSS	**Fushou**	**1.07**	**284**	*eP*	**Pg**	**17 18 33.1**	**+0.2**
	baz=279						
FUSS				*eS*	**Sn**	**17 18 47.7**	**+0.2**
	baz=279						
EHY	**Hungye**	**1.08**	**244**	*eP*	**Pn**	**17 18 32.8**	**+0.1**
	baz=241						
EHY				*eS*	**Sn**	**17 18 47.4**	**0.0**
	baz=241						
OWD	**Renai**	**1.10**	**269**	*eP*	**Pn**	**17 18 33.3**	**+0.1**
	baz=264						
OWD				*eS*	**Sg**	**17 18 47.5**	**-0.4**
	baz=264						
CHGB	**Renai**	**1.10**	**274**	*eP*	**Pg**	**17 18 33.6**	**0.0**
	baz=257						
CHGB				*eS*	**Sn**	**17 18 48.9**	**+0.5**
	baz=257						
TIPB	**Shuangxi**	**1.10**	**333**	*eP*	**Pg**	**17 18 33.9**	**+0.3**
	baz=328						
TIPB				*eS*	**Sn**	**17 18 48.3**	**+0.2**
	baz=328						
NWLT	**Wulai**	**1.12**	**315**	*eP*	**Pg**	**17 18 34.5**	**+0.5**
	baz=309						
NWLT				*eS*	**Sg**	**17 18 48.8**	**+0.2**
	baz=309						
YHNB	**Yeheng**	**1.14**	**307**	P	**Pg**	**17 18 34.7**	**+0.4**
	baz=289						
YHNB				S	**Sg**	**17 18 49.3**	**+0.1**
	baz=289						
WUSB	**Renai**	**1.15**	**271**	*eP*	**Pg**	**17 18 34.9**	**+0.4**
	baz=266						
WUSB				*eS*	**Sg**	**17 18 50.3**	**+0.7**
	baz=266						
YULB	**Yu-li**	**1.15**	**239**	*eP*	**Pn**	**17 18 33.5**	**-0.3**
	baz=253						
YULB				*eS*	**Sb**	**17 18 48.6**	**0.0**
	baz=253						
VWDT	**VWDT**	**1.16**	**259**	*eP*	**Pb**	**17 18 33.9**	**0.0**
	baz=255						
VWDT				*eS*	**Sg**	**17 18 50.0**	**+0.4**
	baz=255						
NSK	**Sanguang**	**1.16**	**307**	P	**Pg**	**17 18 34.9**	**+0.3**
	baz=289						
NSK				*eS*	**Sg**	**17 18 50.0**	**+0.3**
	baz=289						
EYUL	**Yuli**	**1.16**	**237**	*eP*	**Pn**	**17 18 33.7**	**-0.2**
	baz=235						
EYUL				*eS*	**Sn**	**17 18 49.1**	**-0.3**
	baz=235						
SXI1	**Grass Mountain**	**1.20**	**338**	*eP*	**Pb**	**17 18 34.9**	**+0.2**
	baz=332						
SXI1				*eS*	**Sg**	**17 18 51.2**	**+0.3**
	baz=332						
TWA	**Mucha**	**1.23**	**324**	*eP*	**Pg**	**17 18 36.0**	**0.0**
	baz=319						
TWA				*eS*	**Sg**	**17 18 51.4**	**-0.6**
	baz=319						
NHDH	**Xindian Distri**	**1.25**	**322**	*eP*	**Pg**	**17 18 36.3**	**0.0**
	baz=307						
NHDH				*eS*	**Sg**	**17 18 52.5**	**-0.1**
	baz=307						
FULB	**Fuli**	**1.27**	**232**	*eS*	**Sg**	**17 18 54.6**	**+1.5**
	baz=231						
IRIF	**Iriomote-Funau**	**1.28**	**74**	P	Pn	**17 18 36.3**	**+0.7**
IRIF				*eS*	**Sn**	**17 18 52.2**	**-0.2**
HATJ	**Hateruma jima**	**1.31**	**87**	*eS*	**Sn**	**17 18 52.9**	**-0.1**
NFF	**Wufeng Townshi**	**1.32**	**300**	*eP*	**Pg**	**17 18 37.4**	**-0.3**
	baz=294						
SSLB	**Suanglung**	**1.32**	**262**	*eP*	**Pg**	**17 18 37.8**	**+0.2**
	baz=249						
SSLB				*eS*	**Sg**	**17 18 54.4**	**-0.5**
	baz=249						
WHP	**Taichung City**	**1.34**	**283**	*eP*	**Pg**	**17 18 38.3**	**+0.2**
	baz=267						
WHP				*eS*	**Sg**	**17 18 55.5**	**-0.1**
	baz=267						
WCS	**Beigang Elemen**	**1.34**	**273**	*eP*	**Pg**	**17 18 38.2**	**+0.1**
	baz=269						
SMLT	**Sun Moon Lake**	**1.36**	**266**	*eP*	**Pg**	**17 18 38.1**	**-0.3**
	baz=253						
SMLT				*eS*	**Sg**	**17 18 55.3**	**-0.8**
	baz=253						
YM01	**YM01**	**1.37**	**328**	*eP*	**Pb**	**17 18 38.1**	**+0.5**
	baz=322						
YM01				*eS*	**Sb**	**17 18 55.4**	**+0.4**
	baz=322						
TYC	**Yuchr**	**1.39**	**267**	*eP*	**Pb**	**17 18 38.3**	**+0.4**
	baz=263						
TYC				*eS*	**Sg**	**17 18 56.1**	**-1.2**
	baz=263						
YUS	**Yu-Shan**	**1.40**	**250**	*eP*	**Pb**	**17 18 38.1**	**-0.2**
	baz=247						
YUS				*eS*	**Sb**	**17 18 55.9**	**-0.2**
	baz=247						
LIOB	**Emei**	**1.41**	**298**	*eP*	**Pg**	**17 18 39.2**	**-0.2**
	baz=293						
LIOB				*eS*	**Sg**	**17 18 56.6**	**-1.0**
	baz=293						
EDH	**Donghe**	**1.41**	**225**	*eP*	**Pn**	**17 18 37.8**	**+0.5**
	baz=224						
EDH				*eS*	**Sn**	**17 18 55.2**	**-0.4**
	baz=224						
NSTT	**Nanjuang**	**1.41**	**297**	*eP*	**Pg**	**17 18 39.1**	**-0.3**
	baz=292						
NSTT				*eS*	**Sb**	**17 18 56.1**	**0.0**
	baz=292						
TWS1	**Kuangyinshan**	**1.41**	**322**	*eP*	**Pg**	**17 18 39.0**	**-0.5**
	baz=332						
TWS1				*eS*	**Sb**	**17 18 56.2**	**+0.1**
	baz=332						
ELDTW	**Lidau**	**1.48**	**238**	*eP*	**Pn**	**17 18 38.0**	**-0.4**
	baz=236						
ELDTW				*eS*	**Sn**	**17 18 55.9**	**-1.5**
	baz=236						
JKRS	**Kuro-shima**	**1.51**	**80**	*eS*	**Sn**	**17 18 58.8**	**+0.7**
ALS	**Alishan**	**1.52**	**252**	*eP*	**Pb**	**17 18 40.4**	**+0.2**
	baz=249						
ALS				*eS*	**Sb**	**17 18 59.6**	**+0.2**
	baz=249						
LDUT	**Ludao**	**1.55**	**213**	*eP*	Pn	**17 18 40.0**	**+0.8**
	baz=211						
WNT	**Mingjian**	**1.55**	**266**	*eP*	**Pg**	**17 18 41.7**	**-0.5**
	baz=263						
WNT				*eS*	**Sg**	**17 19 02.4**	**+0.1**
	baz=263						
TCU	**Taichung**	**1.56**	**276**	*eP*	**Pg**	**17 18 41.7**	**-0.6**
	baz=272						
TCU				*eS*	**Sg**	**17 19 02.4**	**-0.3**
	baz=272						
CHN5	**Tsauling**	**1.60**	**256**	*eP*	**Pb**	**17 18 41.8**	**+0.2**
	baz=243						
CHN5				*eS*	**Sg**	**17 19 02.6**	**-1.4**
	baz=243						
JIJ	**Ishigaki jima**	**1.66**	**76**	P	Pn	**17 18 40.9**	**+0.2**
JIJ				S	**Sn**	**17 19 01.1**	**-0.5**
TPUB	**Ta-pu**	**1.74**	**247**	*eP*	**Pb**	**17 18 44.3**	**+0.4**
	baz=245						
TPUB				*eS*	**Sb**	**17 19 06.1**	**+0.5**
	baz=245						
WTP	**Ta-pu**	**1.78**	**246**	*eP*	**Pb**	**17 18 44.4**	**-0.1**
	baz=244						
WTP				*eS*	**Sb**	**17 19 06.7**	**+0.1**
	baz=244						
WRL	**Guolierlin Hig**	**1.83**	**268**	*eS*	**Sg**	**17 19 09.5**	**-1.8**
	baz=265						
WTK	**Tuku**	**1.84**	**261**	*eS*	**Sg**	**17 19 10.0**	**-1.7**
	baz=258						
CHN1	**Nanshi**	**1.87**	**245**	*eP*	**Pb**	**17 18 46.3**	**+0.2**
	baz=244						
CHN1			

*STR **19** 17:27:35.6±0.6,47˚N±1˚×˚±˚, h9km±4km, MLv3.4/10, preliminary*
*LDG **19** 17:27:37.7±0.0,47˚.25N×0˚.88W, h8km, Md3.4/2, Ml3.4/41, Error ellipse: s-maj=0.9km s-min=0.8km az=56.0*
*NEIC **19** 17:27:38.3±0.9,47˚.21N±0˚.02×0˚.61W±0˚.09, h12km±6km, Error ellipse: s-maj=9.3km s-min=2.3km az=77.0*
*BGS **19** 17:27:39.3±1.1,47˚.24N×0˚.56W, h10km, ML2.9, ML2.9*

ISC 19 17:27:36.0±0.7,**47˚.24N**±0˚.02×**0˚.76W**±0˚.02,**h10**km,**n134,** σ1§**46**/204,**8D, France**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MFF	**Saint Martin d**	**0.77**	**146**	*e*Pg			**Pn**	**17 27 53.5**	**+0.6**
MFF				*e*Sg			**Sn**	**17 28 04.0**	**-0.5**
	374nm,0.2s								
MFF	**Saint Martin d**	**0.77**	**146**	Pn			**Pn**	**17 27 53.6**	**+0.6**
MFF				Sg			**Sb**	**17 28 02.2**	**+0.2**
CHIF	**Chize**	**1.14**	**167**	*e*P			**Pn**	**17 27 59.0**	**+1.1**
CHIF				*e*S			**Sn**	**17 28 14.2**	**+0.6**
CHIF	**Chize**	**1.14**	**167**				**Pn**	**17 27 59.0**	**+1.1**
CHIF							**Sn**	**17 28 14.2**	**+0.6**
CHIF	**Chize**	**1.14**	**167**	⇓Pn			**Pn**	**17 27 59.1**	**+1.1**
CHIF				Sn			**Sn**	**17 28 14.2**	**+0.6**
GRR	**Gorron**	**1.15**	**357**	*e*Pn			**Pb**	**17 27 58.4**	**+0.5**
GRR	**Gorron**	**1.15**	**357**	*e*Pg			**Pb**	**17 27 59.2**	**+1.3**
GRR				*e*Sg			**Sb**	**17 28 14.0**	**+1.1**
	204nm,0.2s								
LDF	**La Druitiere**	**1.42**	**17**	*e*Pn			**Pn**	**17 28 02.3**	**+0.5**
LDF	**La Druitiere**	**1.42**	**17**	*e*Pg			**Pg**	**17 28 04.3**	**+1.1**
LDF				*e*Sg			**Sb**	**17 28 22.5**	**+1.8**
	98nm,0.3s								
FLN	**La Foliniere** baz=190	**1.53**	**7**	*e*Pn			**Pn**	**17 28 03.5**	**+0.1**
FLN	**La Foliniere** baz=190	**1.53**	**7**	*e*Pg			**Pb**	**17 28 06.3**	**+1.8**
FLN				*e*Sg			**Sb**	**17 28 25.6**	**+1.7**
	169nm,0.3s,baz=189								
SGMF	**Saint Gilles**	**1.58**	**311**	*e*Pn			**Pn**	**17 28 03.4**	**-0.6**
SGMF	**Saint Gilles**	**1.58**	**311**	*e*Pg			**Pn**	**17 28 05.7**	**+1.7**
SGMF				*e*Sg			**Sn**	**17 28 25.4**	**+0.9**
	34nm,0.2s								
QUIF	**Quistinic**	**1.76**	**293**	*e*Pn			**Pn**	**17 28 05.8**	**-0.7**
QUIF	**Quistinic**	**1.76**	**293**	*e*Pg			**Pn**	**17 28 09.0**	**+2.5**
QUIF				*e*Sg			**Sn**	**17 28 29.5**	**+0.5**
	142nm,0.2s								
ROSF	**Rostrenen**	**2.02**	**304**	*e*Pn			**Pn**	**17 28 09.2**	**-0.8**
ROSF	**Rostrenen**	**2.02**	**304**	*e*Pg			**Pb**	**17 28 13.4**	**+0.7**
ROSF				*e*Sg			**Sn**	**17 28 37.2**	**+1.9**
	61nm,0.2s								
ROSF	**Rostrenen**	**2.02**	**304**	*e*P			**Pn**	**17 28 12.9**	**+2.9**
ROSF	**Rostrenen**	**2.02**	**304**				**Pn**	**17 28 12.9**	**+2.9**
ROSF	**Rostrenen**	**2.02**	**304**		Sn		**Sn**	**17 28 33.1**	**-2.2**
ROSF	**Rostrenen**	**2.02**	**304**		Pn		**Pn**	**17 28 09.1**	**-1.0**
JDC	**Jersey Dam (Cr**	**2.12**	**337**	*e*P			**Pb**	**17 28 15.2**	**+0.7**
JDC	**Jersey Dam (Cr**	**2.12**	**337**				**Pb**	**17 28 15.2**	**+0.7**
JQE	**Queens East**	**2.13**	**337**	*e*P			**Pb**	**17 28 15.0**	**+0.2**
JQE	**Queens East**	**2.13**	**337**				**Pb**	**17 28 15.0**	**+0.2**
JRS	**Jersey**	**2.14**	**336**	*e*P			**Pb**	**17 28 15.1**	**+0.2**
JRS						IAML		17 28 44.7	
	comp=E,56nm,0.1s								
JRS						IAML		17 28 46.8	
	comp=N,74nm,0.5s								
JRS	**Jersey**	**2.14**	**336**				**Pb**	**17 28 15.1**	**+0.2**
JSA	**Saint Aubin**	**2.16**	**335**	*e*P			**Pb**	**17 28 15.3**	**+0.2**
JSA				*e*S			**Sb**	**17 28 42.4**	**+0.4**
JSA						IAML		17 28 45.5	
	comp=E,86nm,0.2s								
JSA						IAML		17 28 46.5	
	comp=N,61nm,0.3s								
JSA	**Saint Aubin**	**2.16**	**335**				**Pb**	**17 28 15.3**	**+0.2**
JSA							**Sb**	**17 28 42.4**	**+0.4**
JSA	**Saint Aubin**	**2.16**	**335**		Sn		**Sn**	**17 28 36.7**	**-2.1**
JSA	**Saint Aubin**	**2.16**	**335**		Pn		**Pn**	**17 28 11.0**	**-1.0**
CLF	**Chambon-Foret**	**2.19**	**68**		Pn		**Pn**	**17 28 13.4**	**+1.0**
JVM	**Valle D.L. Mar**	**2.20**	**334**	*e*P			**Pb**	**17 28 15.9**	**+0.1**
JVM	**Valle D.L. Mar**	**2.20**	**334**				**Pb**	**17 28 15.9**	**+0.1**
TCF	**Toulx Ste Croi**	**2.26**	**114**	*e*Pn			**Pn**	**17 28 15.1**	**+1.7**
TCF	**Toulx Ste Croi**	**2.26**	**114**	*e*Pg			**Pg**	**17 28 21.1**	**+1.9**
TCF				*e*Sn			**Sn**	**17 28 41.3**	**0.0**
TCF				*e*Sg			**Sg**	**17 28 51.0**	**+2.5**
	comp=N,72nm,0.3s								
HYF	**Humbligny**	**2.32**	**88**	*e*Pn			**Pn**	**17 28 15.5**	**+1.3**
HYF	**Humbligny**	**2.32**	**88**	*e*Pg			**Pg**	**17 28 22.0**	**+1.6**
HYF				*e*Sg			**Sg**	**17 28 52.7**	**+2.3**
LRVF	**chteau la Riv**	**2.32**	**172**	Pn			**Pn**	**17 28 14.4**	**+0.2**
LRVF				Sn			**Sn**	**17 28 42.3**	**-0.4**
RJF	**Les Rejaudoux**	**2.50**	**140**	*e*Pn			**Pn**	**17 28 17.7**	**+0.9**
RJF	**Les Rejaudoux**	**2.50**	**140**	*e*Pg			**Pg**	**17 28 25.0**	**+1.1**
RJF				*e*Sg			**Sg**	**17 28 57.6**	**+1.2**
	comp=N,104nm,0.3s								
LFF	**La Frestale**	**2.53**	**155**	*e*Pn			**Pn**	**17 28 18.1**	**+1.0**
LFF	**La Frestale**	**2.53**	**155**	*e*Pg			**Pg**	**17 28 25.1**	**+0.6**
LFF				*e*Sg			**Sg**	**17 28 59.6**	**+2.3**
	comp=N,67nm,0.3s								
BGF	**Bois d'Agland**	**2.57**	**104**	*e*Pn			**Pn**	**17 28 19.4**	**+1.7**
BGF	**Bois d'Agland**	**2.57**	**104**	*e*Pg			**Pg**	**17 28 26.8**	**+1.6**
BGF				*e*Sg			**Sg**	**17 29 00.4**	**+1.9**
	comp=N,188nm,0.3s								
CAMF	**Camaret-sur-Me**	**2.79**	**293**	Pn			**Pn**	**17 28 20.6**	**-0.1**
AVF	**Avril sur Loir**	**2.85**	**98**	*e*Pn			**Pn**	**17 28 22.8**	**+1.3**
AVF				*e*Sg			**Sg**	**17 29 08.7**	**+1.1**
	comp=N,32nm,0.3s								
SSF	**Saint Saulge**	**2.92**	**92**	*e*Pn			**Pn**	**17 28 23.7**	**+1.2**
SSF	**Saint Saulge**	**2.92**	**92**	*e*Pg			**Pg**	**17 28 33.0**	**+1.1**
SSF				*e*Sg			**Sg**	**17 29 10.8**	**+1.1**
	comp=N,26nm,0.2s								
AGO	**Saint Agoulin**	**2.94**	**113**	Pn			**Pn**	**17 28 24.4**	**+1.7**
PYM	**Petit Puy Mans**	**3.00**	**118**	Sn			**Sn**	**17 28 58.0**	**-1.8**
PYM	**Petit Puy Mans**	**3.00**	**118**	Pn			**Pn**	**17 28 25.1**	**+1.4**
CAF	**Calviac**	**3.04**	**139**	*e*Pn			**Pn**	**17 28 25.2**	**+1.0**
CAF	**Calviac**	**3.04**	**139**	*e*Pg			**Pg**	**17 28 34.8**	**+0.6**
CAF				*e*Sn			**Sn**	**17 28 59.8**	**-0.8**
CAF				*e*Sg			**Sg**	**17 29 14.8**	**+1.2**
	comp=N,41nm,0.3s								
LOR	**Lormes** baz=270	**3.15**	**88**	*e*Pn			**Pn**	**17 28 26.6**	**+1.0**
LOR	**Lormes** baz=268	**3.15**	**88**	*e*Pg			**Pg**	**17 28 37.1**	**+0.8**
LOR				*e*Sn			**Sn**	**17 29 01.8**	**-1.5**
LOR				*e*Sg			**Sg**	**17 29 16.8**	**-0.3**
	comp=N,34nm,0.3s								
LOR	**Lormes**	**3.15**	**88**	Sn			**Sn**	**17 29 01.6**	**-1.7**
LOR	**Lormes**	**3.15**	**88**	Pn			**Pn**	**17 28 26.6**	**+1.0**
MONQ	**Montcuq**	**3.19**	**154**	Pn			**Pn**	**17 28 26.8**	**+0.6**
MONQ				Sn			**Sn**	**17 29 02.5**	**-1.6**
SMF	**Signal de Mont**	**3.21**	**99**	*e*Pn			**Pn**	**17 28 27.6**	**+1.1**
SMF	**Signal de Mont**	**3.21**	**99**	*e*Pg			**Pg**	**17 28 38.6**	**+1.1**
SMF				*e*Sg			**Sg**	**17 29 18.6**	**-0.5**
	comp=N,22nm,0.2s								
LBL	**Lubilhac**	**3.43**	**124**	Sn			**Sn**	**17 29 08.7**	**-1.7**
LBL	**Lubilhac**	**3.43**	**124**	Pn			**Pn**	**17 28 30.8**	**+1.1**
DYA	**Yadsworthy**	**3.82**	**328**	Pn			**Pn**	**17 28 34.1**	**-0.7**
MENF	**Mencas**	**3.83**	**29**	Sn			**Sn**	**17 29 17.8**	**-2.3**
MENF	**Mencas**	**3.83**	**29**	Pn			**Pn**	**17 28 35.0**	**0.0**
OSSF	**Osses**	**4.00**	**185**	Pn			**Pn**	**17 28 37.3**	**-0.1**
OSSF				Sn			**Sn**	**17 29 20.7**	**-3.6**
SFTF	**Sexfontaines**	**4.03**	**74**	*e*Pn			**Pn**	**17 28 38.2**	**+0.4**
SFTF	**Sexfontaines**	**4.03**	**74**	*e*Pg			**Pg**	**17 28 53.7**	**+0.5**
SFTF				*e*Sn			**Sn**	**17 29 22.5**	**-2.5**
SFTF				*e*Sg			**Sg**	**17 29 47.0**	**+1.6**
	comp=N,9.2nm,0.3s								
ELSH	**Elham, Standar**	**4.10**	**17**	Pn			**Pn**	**17 28 38.4**	**-0.2**
MEZF	**Maizieres J'vi**	**4.11**	**70**	*e*Pn			**Pn**	**17 28 39.4**	**+0.6**
MEZF	**Maizieres J'vi**	**4.11**	**70**	*e*Pg			**Pg**	**17 28 55.2**	**+0.5**
MEZF				*e*Sn			**Sn**	**17 29 24.8**	**-2.2**
MEZF				*e*Sg			**Sg**	**17 29 48.5**	**+0.6**
	comp=N,9.1nm,0.2s								
SJPF	**Ste Jean**	**4.14**	**185**	*e*Pn			**Pn**	**17 28 38.9**	**-0.4**
SJPF	**Ste Jean**	**4.14**	**185**	*e*Pg			**Pg**	**17 28 54.5**	**-0.8**
SJPF				*e*Sn			**Sn**	**17 29 24.6**	**-3.2**
SJPF				*e*Sg			**Sg**	**17 29 47.7**	**-1.3**
	comp=N,13nm,0.4s								
ATE	**Arette**	**4.16**	**179**	Pn			**Pn**	**17 28 39.2**	**-0.3**
CCA1	**Carnmenellis**	**4.17**	**317**	Pn			**Pn**	**17 28 38.9**	**-0.8**
SAVF	**Savonnieres en**	**4.19**	**69**	*e*Pn			**Pn**	**17 28 40.9**	**+1.0**
SAVF	**Savonnieres en**	**4.19**	**69**	*e*Pg			**Pg**	**17 28 56.1**	**-0.1**
SAVF				*e*Sn			**Sn**	**17 29 27.0**	**-1.9**
SAVF				*e*Sg			**Sg**	**17 29 50.9**	**+0.5**
	comp=N,20nm,0.5s								
EPF	**Esparros**	**4.29**	**169**	*e*Pn			**Pn**	**17 28 41.4**	**+0.1**
EPF	**Esparros**	**4.29**	**169**	*e*Pg			**Pg**	**17 28 59.0**	**+0.9**
EPF				*e*Sn			**Sn**	**17 29 28.3**	**-3.1**
EPF				*e*Sg			**Sg**	**17 29 53.0**	**-0.5**
	comp=N,17nm,0.4s								
BAIF	**Baives**	**4.33**	**48**	*e*Pn			**Pn**	**17 28 42.8**	**+0.9**
BAIF	**Baives**	**4.33**	**48**	*e*Pg			**Pg**	**17 28 59.1**	**+0.1**
BAIF				*e*Sn			**Sn**	**17 29 30.3**	**-2.2**
BAIF				*e*Sg			**Sg**	**17 29 54.5**	**-0.6**
	comp=N,5.1nm,0.3s								
ETSF	**Etsaut**	**4.35**	**178**	*e*Pn			**Pn**	**17 28 41.5**	**-0.7**
ETSF	**Etsaut**	**4.35**	**178**	*e*Pg			**Pg**	**17 28 58.5**	**-0.8**
ETSF				*e*Sn			**Sn**	**17 29 29.6**	**-3.3**
ETSF				*e*Sg			**Sg**	**17 29 54.4**	**-1.2**
	comp=N,15nm,0.5s								
VIEF	**Viey**	**4.40**	**172**	Pn			**Pn**	**17 28 42.4**	**-0.5**
MTLF	**Montolieu**	**4.43**	**151**	*e*Pn			**Pn**	**17 28 44.0**	**+0.7**
MTLF	**Montolieu**	**4.43**	**151**	*e*Pg			**Pg**	**17 29 00.9**	**0.0**
MTLF				*e*Sn			**Sn**	**17 29 32.4**	**-2.5**
MTLF				*e*Sg			**Sg**	**17 29 58.0**	**-0.3**
	comp=N,14nm,0.3s								
MTLF	**Montolieu**	**4.43**	**151**	Pn			**Pn**	**17 28 43.3**	**0.0**
VIVF	**Saint-Julien-l**	**4.47**	**120**	*e*Pn			**Pn**	**17 28 45.4**	**+1.5**
VIVF	**Saint-Julien-l**	**4.47**	**120**	*e*Pg			**Pg**	**17 29 01.9**	**+0.2**
VIVF				*e*Sn			**Sn**	**17 29 34.9**	**-1.1**
VIVF				*e*Sg			**Sg**	**17 30 00.0**	**+0.4**
	comp=N,27nm,0.4s								
MLS	**Moulis**	**4.48**	**162**	Pn			**Pn**	**17 28 44.6**	**+0.6**
CANF	**Canfranc**	**4.48**	**178**	Pn			**Pn**	**17 28 43.9**	**-0.2**
LASF	**Ste Croix**	**4.53**	**133**	*e*Pn			**Pn**	**17 28 45.8**	**+1.2**
LASF	**Ste Croix**	**4.53**	**133**	*e*Pg			**Pg**	**17 29 02.8**	**+0.1**
LASF				*e*Sn			**Sn**	**17 29 35.2**	**-2.2**
LASF				*e*Sg			**Sg**	**17 30 02.5**	**+1.1**
	comp=N,12nm,0.4s								
DOU	**Dourbes**	**4.55**	**49**	*e*P			**Pn**	**17 28 46.0**	**+1.1**
DOU	**Dourbes**	**4.55**	**49**				**Pn**	**17 28 46.0**	**+1.1**
DOU	**Dourbes**	**4.55**	**49**		Pn		**Pn**	**17 28 46.0**	**+1.1**
DOU	**Dourbes**	**4.55**	**49**	*d*P			**Pn**	**17 28 46.1**	**+1.2**
DOU				*d*S			**Sn**	**17 29 34.9**	**-3.0**
PAGF	**Fort de Pagny**	**4.56**	**71**	*e*Pn			**Pn**	**17 28 45.9**	**+0.9**
PAGF	**Fort de Pagny**	**4.56**	**71**	*e*Pg			**Pg**	**17 29 03.8**	**+0.6**
PAGF				*e*Sn			**Sn**	**17 29 35.2**	**-2.8**
PAGF				*e*Sg			**Sg**	**17 30 03.3**	**+1.1**
	comp=N,9.8nm,0.5s								
ECHI	**Chisagues Biel**	**4.63**	**171**	Pn			**Pn**	**17 28 46.2**	**0.0**
GIVF	**Givet**	**4.68**	**50**	*e*Pn			**Pn**	**17 28 47.4**	**+0.8**
GIVF	**Givet**	**4.68**	**50**	*e*Pg			**Pg**	**17 29 04.5**	**-1.0**
GIVF				*e*Sn			**Sn**	**17 29 37.8**	**-3.1**
GIVF				*e*Sg			**Sg**	**17 30 05.3**	**-0.8**
	comp=N,11nm,0.4s								
CABF	**La Chapelle**	**4.74**	**95**	*e*Pn			**Pn**	**17 28 48.7**	**+1.2**
CABF	**La Chapelle**	**4.74**	**95**	*e*Pg			**Pg**	**17 29 06.0**	**-0.7**
CABF				*e*Sn			**Sn**	**17 29 39.3**	**-3.2**
CABF				*e*Sg			**Sg**	**17 30 08.4**	**+0.4**
	comp=N,18nm,0.6s								
BMRD	**Maredsous**	**4.77**	**48**	*d*P			**Pn**	**17 28 48.8**	**+0.9**
BMRD				*d*S			**Sn**	**17 29 40.8**	**-2.4**
BOUC	**Bouclans**	**4.78**	**87**	Pn			**Pn**	**17 28 48.6**	**+0.5**
HAU	**Haudompre**	**4.87**	**78**	*e*Pn			**Pn**	**17 28 48.8**	**-0.5**
HAU	**Haudompre**	**4.87**	**78**	*e*Pg			**Pg**	**17 29 10.0**	**+0.8**
HAU				*e*Sn			**Sn**	**17 29 41.5**	**-4.2**
HAU				*e*Sg			**Sg**	**17 30 12.2**	**0.0**
	comp=N,22nm,0.3s								
BRANT	**Les Verrieres**	**4.95**	**91**	Pn			**Pn**	**17 28 52.1**	**+1.6**
MCH1	**Michaelchurch**	**4.97**	**344**	Pn			**Pn**	**17 28 50.6**	**-0.1**
CHMF	**Charmoille**	**5.05**	**87**	Pn			**Pn**	**17 28 52.3**	**+0.5**
ORIF	**Oris-en-Rattie**	**5.17**	**114**	*e*Pn			**Pn**	**17 28 55.0**	**+1.5**
ORIF				*e*Sg			**Sg**	**17 30 21.6**	**-0.4**
	comp=N,7.9nm,0.6s								
HINF	**Hinteralfeld**	**5.19**	**81**	*e*Pn			**Pn**	**17 28 53.3**	**-0.4**
HINF	**Hinteralfeld**	**5.19**	**81**	*e*Pg			**Pg**	**17 29 15.9**	**+0.5**
HINF				*e*Sn			**Sn**	**17 29 48.5**	**-5.2**
HINF				*e*Sg			**Sg**	**17 30 22.6**	**0.0**
	comp=N,10nm,0.3s								
WLF	**Walferdange**	**5.20**	**60**	Pn			**Pn**	**17 28 54.2**	**+0.4**
RSL	**Roselend**	**5.34**	**104**	Pn			**Pn**	**17 28 57.0**	**+1.2**
AIGLE	**Aigle**	**5.38**	**97**	Pn			**Pn**	**17 28 57.5**	**+1.2**
SJAF	**Saint Jean de**	**5.42**	**150**	Pn			**Pn**	**17 28 57.6**	**+0.7**
BOURR	**Bourrignon**	**5.44**	**85**	Pn			**Pn**	**17 28 58.0**	**+0.9**
BHOU	**Houvegnez**	**5.45**	**53**	*d*P			**Pn**	**17 28 58.4**	**+1.1**
BHOU				*d*S			**Sn**	**17 29 56.1**	**-3.8**
LPL	**La Plagne**	**5.47**	**106**	*e*Pn			**Pn**	**17 28 58.7**	**+1.0**
LPL				*e*Sg			**Sg**	**17 30 31.4**	**-0.1**
	comp=N,3.6nm,0.3s								
LPG	**La Plagne**	**5.49**	**106**	*e*Pn			**Pn**	**17 29 00.0**	**+2.0**
LPG	**La Plagne**	**5.49**	**106**	*e*Pg			**Pg**	**17 29 20.5**	**-0.5**
LPG				*e*Sn			**Sn**	**17 29 59.6**	**-1.7**
LPG				*e*Sg			**Sg**	**17 30 31.9**	**-0.2**
	comp=N,2.5nm,0.3s								
SMRF	**Simiane la Rot**	**5.52**	**124**	*e*Pn			**Pn**	**17 29 00.1**	**+1.9**
SMRF	**Simiane la Rot**	**5.52**	**124**	*e*Pg			**Pg**	**17 29 22.1**	**+0.5**
SMRF				*e*Sg			**Sg**	**17 30 32.8**	**-0.3**
	comp=N,6.8nm,0.5s								
CDF	**Champ du Feu**	**5.54**	**75**	*e*Pn			**Pn**	**17 28 58.8**	**+0.3**
CDF	**Champ du Feu**	**5.54**	**75**	*e*Pg			**Pg**	**17 29 21.2**	**-0.8**
CDF				*e*Sn			**Sn**	**17 29 57.3**	**-5.0**
CDF				*e*Sg			**Sg**	**17 30 33.1**	**-0.6**
	comp=N,4.5nm,0.3s								
MEM	**Membach**	**5.59**	**50**	*d*P			Pn	17 28 52.4	-6.8
SENIN	**Lac Senin/Sane**	**5.61**	**96**	Pn			**Pn**	**17 28 59.1**	**-0.5**
MBDF	**Montbardon**	**5.82**	**113**	*e*Pn			**Pn**	**17 29 04.0**	**+1.5**
MBDF				*e*Sn			**Sn**	**17 30 07.4**	**-2.0**
MBDF				*e*Sg			**Sg**	**17 30 42.5**	**-0.3**
	comp=N,0.2nm,0.2s								
BFO	**Black Forest**	**6.22**	**77**	Pn			**Pn**	**17 29 08.6**	**+0.7**
MSSA	**Maissana**	**7.76**	**108**	Pn			**Pn**	**17 29 26.2**	**-2.8**
ESK	**Eskdalemuir**	**8.23**	**350**	Pn			**Pn**	**17 29 33.6**	**-1.7**

*BJI **19** 17:30:44.0±0.0,20˚.20S×168˚.50E, h5km, mb4.6/15, mB5.1/9, Ms4.6/3, Ms7 4.2/3*
*IDC **19** 17:30:46.2±0.8, 19˚.85S×168˚.57E, h0km, mb4.3/15, mbtmp4.4/16, ML3.8/1, MS4.1/17, Error ellipse: s-maj=22.0km s-min=18.7km az=88.0*
*NOU **19** 17:30:47.9, 20˚.10S×168˚.59E, h29km, MLv5.0/7, Loyalty Islands*
*NEIC **19** 17:30:48.6±2.2, 20˚.32S±0˚.07×168˚.40E±0˚.04, h10km±1km, mb4.8/22, Error ellipse: s-maj=11.8km s-min=4.9km az=21.0*
*GCMT **19** 17:30:54.6±0.3, 20˚.11S±0˚.03×168˚.36E±0˚.02, h21km±1km, MW5.0/81, Moment Tensor Solution. s27,c35; s81,c112; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.97±.18; $M_{\theta\theta}$-0.41±.11; $M_{\phi\phi}$-2.56±.11; $M_{r\theta}$1.03±.23; $M_{r\phi}$0.73±.08; $M_{\theta\phi}$-1.87±.19; Best double couple: M_o3.58200×10^{16} NP1:ϕ_s349.00000°, δ27.00000°, λ101.00000°. NP2: ϕ_s156.00000°, δ63.00000°, λ84.00000°. Principal axes: T 3.6930, Plg71.0000°, Azm54.0000°; N -0.2210, Plg5.0000°, Azm159.0000°; P -3.4710, Plg18.0000°, Azm250.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 17:30:49.5±0.4,**20˚.15S**±0˚.05×**168˚.50E**±0˚.07,**h25**km,**n97,** σ1§**42**/80,**mb4.6**/28,**MS4.1**/17,**8D, Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**1.40**	**198**	Pn			**Pn**	**17 31 10.0**	**-3.5**
DVP	**Devils Point**	**2.42**	**353**	P			**Pn**	**17 31 25.3**	**-2.3**
PINNC	**Pines Island,**	**2.64**	**202**	Pn			**Pn**	**17 31 29.6**	**-1.0**
PINNC	**Pines Island,**	**2.64**	**202**	P			**Pn**	**17 31 29.6**	**-1.0**
NOUC	**Port Laguerre**	**2.83**	**226**	P			**Pn**	**17 31 32.3**	**-0.8**
KOUNC	**Koumac, New Ca**	**3.97**	**263**	Pn			**Pn**	**17 31 48.2**	**-0.8**
KOUNC	**Koumac, New Ca**	**3.97**	**263**	P			**Pn**	**17 31 48.1**	**-0.8**
MSVF	**Nonsavu** baz=227,slow=7.4	**9.35**	**77**	Pn			**Pn**	**17 33 05.9**	**+3.0**
MSVF						LR	LR	17 35 57.9	
	comp=Z,3μm,19.6s,baz=207,slow=34								
MSVF	**Nonsavu**	**9.35**	**77**	Pn			**Pn**	**17 33 05.0**	**+2.2**
HNR	**Honiara**	**13.48**	**321**	LR			LR	17 38 31.3	
	comp=Z,448nm,19.1s,baz=103,slow=35								
FUNA	**Funafuti**	**15.51**	**43**	Pn			**P**	**17 34 29.4**	**-1.4**
FUNA						IAmb	IAmb	17 34 56.0	
	comp=Z,76nm,1.1s								
URZ	**Urewera**	**19.53**	**159**	P			**Pn**	**17 35 18.7**	**+2.2**
	comp=Z,0.3nm,0.3s,baz=123,slow=23,SNR=11								
URZ						LR	LR	17 42 15.4	
	comp=Z,883nm,18.1s,baz=31,slow=35								
	comp=Z,27nm,0.9s								
URZ	**Urewera**	**19.53**	**159**				**P**	**17 35 14.6**	**-0.5**
URZ						IAmb	IAmb	17 35 22.4	
	comp=Z,38nm,1.0s								
AFI	**Afiamalu**	**19.84**	**75**	LR			LR	17 41 21.5	
	comp=Z,830nm,18.9s,baz=282,slow=32								

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CTA	**Charters Tower** comp=Z,8.7nm,0.9s,baz=84,slow=10,SNR=5.3	**20.89**	**266**	P			Pn	17 35 31.4	-1.3
CTA						LR	LR	17 43 05.1	
	comp=Z,532nm,18.7s,baz=83,slow=35								
	comp=Z,8.7nm,0.9s								
CTAO	**Charters Tower**	**20.89**	**266**	P			Pn	17 35 30.7	-2.0
CTAO						IAmb	IAmb	17 35 46.8	
	comp=Z,62nm,1.2s								
KRVT	**Keravat (AS076**	**22.48**	**312**	P			**P**	**17 35 46.5**	**-0.6**
	comp=Z,16nm,0.8s,baz=268,slow=4.4,SNR=2.6								
	comp=Z,16nm,0.8s								
CAN	**Canberra**	**22.88**	**225**	P			**P**	**17 35 50.5**	**-0.8**
PMG	**Port Moresby** comp=Z,17nm,0.9s,baz=92,slow=8.7,SNR=5.8	**23.20**	**294**	P			**P**	**17 35 54.8**	**+0.1**
	comp=Z,17nm,0.9s								
PMG	**Port Moresby**	**23.20**	**294**	P			**P**	**17 35 53.9**	**-0.9**
OXZ	**Oxford**	**23.30**	**173**	P			**P**	**17 35 52.8**	**-2.6**
RPZ	**Rata Peaks** comp=Z,5.7nm,0.7s,baz=332,slow=17,SNR=2.0	**23.60**	**175**	P			**P**	**17 36 02.1**	**+3.7**
RPZ						LR	LR	17 45 16.1	
	comp=Z,708nm,18.6s,baz=348,slow=36								
	comp=Z,5.7nm,0.7s								
COEN	**Coen**	**24.96**	**280**	P			**P**	**17 36 11.0**	**-0.3**
COEN						IAmb	IAmb	17 36 16.5	
	comp=Z,22nm,1.1s								
TOO	**Toolangi**	**26.49**	**224**	P			**P**	**17 36 24.5**	**-0.4**
TOO						IAmb	IAmb	17 36 33.1	
	comp=Z,33nm,1.1s								
STKA	**Stephens Creek** comp=Z,14nm,0.9s,baz=59,slow=9.1,SNR=13	**26.78**	**239**	P			**P**	**17 36 29.2**	**+1.7**
STKA						LR	LR	17 47 44.6	
	comp=Z,457nm,18.1s,baz=61,slow=38								
	comp=Z,14nm,0.9s								
STKA	**Stephens Creek**	**26.78**	**239**	P			**P**	**17 36 26.4**	**-1.2**
RAR	**Rarotonga** comp=Z,328nm,19.0s,baz=284,slow=34	**29.68**	**98**	LR			LR	17 47 24.5	
WR0	**Warramunga Arr**	**31.87**	**264**	P			**P**	**17 37 11.3**	**-1.6**
WR0						IAmb	IAmb	17 37 15.9	
	comp=Z,13nm,0.9s								
**WB

GERES	**GERESS Array B**	144.95	331	PKP		**PKPdf**	17 50 23.9	-0.7
	comp=Z,1.3nm,0.8s,baz=339,slow=1.9,SNR=10							
MOA	**Molln**	145.38	329	*e*P		**PKPab**	17 50 24.7	-0.6
	comp=Z,14nm,1.2s							
BIOA	**Bad Ischl, Aus**	145.80	329	*e*P		**PKPab**	17 50 25.8	-1.1
	comp=Z,5.7nm,1.2s							
MYKA	**Terra Mystica**	146.54	328	*e*P		**PKPab**	17 50 28.9	-0.8
	comp=Z,7.6nm,1.5s							
BTNL	**Ternell**	146.57	339	*d*PKPdf		**PKPbc**	17 50 27.5	-1.2
MEM	**Membach**	146.59	340	*d*PKP		**PKPab**	17 50 28.4	-1.4
BSTI	**Sart Tilman**	146.76	340	*d*PKP		**PKPab**	17 50 29.0	-1.4
BHOU	**Houvegnez**	146.81	339	*d*PKPbc		**PKPbc**	17 50 28.5	-0.9
WATA	**Walderalm**	147.02	331	*e*P		**PKPbc**	17 50 29.0	-1.2
	comp=Z,11nm,1.6s							
WTTA	**Wattenberg**	147.05	331	*e*P		**PKPab**	17 50 30.2	-1.7
	comp=Z,13nm,1.6s							
MOTA	**Moosalm**	147.23	331	*e*P		**PKPbc**	17 50 30.2	-0.7
	comp=Z,7.2nm,1.1s							
RCHB	**Rochefort**	147.24	340	*d*PKP		**PKPbc**	17 50 30.1	-0.4
BMRD	**Maredsous**	147.26	341	*d*PKP		**PKPbc**	17 50 30.4	-0.2
SQTA	**Sankt Quirin**	147.28	331	*e*P		**PKPbc**	17 50 30.1	-0.8
	comp=Z,5.0nm,1.0s							
WLF	**Walferdange**	147.35	339	*d*PKP		**PKPab**	17 50 31.2	-1.6
DOU	**Dourbes**	147.49	341	*d*PKPdf		**PKPbc**	17 50 30.1	-1.2
FETA	**Feichten**	147.65	331	*e*P		**PKPbc**	17 50 31.1	-0.9
	comp=Z,7.2nm,1.2s							
DAVA	**Damuels**	147.82	332	*e*P		**PKPab**	17 50 33.9	-1.0
	comp=Z,9.5nm,1.3s							

IDC 19 17:33:10.3±4.0, 23°.08N×141°.34E, h0km, mb4.0/2, mbtmp3.8/3, ML2.6/1, MS2.9/2, Error ellipse: s-maj=277.1km s-min=32.3km az=86.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**13.68**	**349**	Pn		17 36 23.7	-1.9
	baz=162,slow=14,SNR=1.5						
	0.6nm,0.6s						
ASAJ	**Asahikawa**	**21.00**	**3**	LR	LR	17 46 52.7	
	comp=Z,25nm,19.3s,baz=138,slow=39						
DAV	**Davao City (W)**	**21.99**	**226**	LR	LR	17 46 24.1	
	comp=Z,33nm,19.5s,baz=93,slow=36						
WRA	**Warramunga Arr**	**43.31**	**190**	P	P	17 41 13.7	-0.4
	0.7nm,0.8s,baz=7.7,slow=8.0,SNR=5.6						
	0.7nm,0.8s						
FINES	**FINESS Array B**	**81.20**	**334**	P	P	17 45 28.2	+0.6
	3.6nm,1.1s,baz=77,slow=6.0,SNR=4.2						
	3.6nm,1.1s						

*NEIC **19** 17:33:25.4±2.6, 20°.05S±0°.05×69°.19W±0°.07, h104km±3km, mb4.0/9, ML4.0(GUC), Error ellipse: s-maj=10.2km s-min=7.0km az=100.0*

*GUC **19** 17:33:26.9±0.6, 20°.03S×69°.15W, h95km±2km, ML4.0*

*IDC **19** 17:33:27.6±1.1, 19°.96S×68°.94W, h114km±11km, mb3.2/5, mbtmp3.8/9, Error ellipse: s-maj=25.4km s-min=8.7km az=98.0*

*VAO **19** 17:33:27.3±0.7, 20°.06S×69°.13W, h129km±4km, mb3.9*

ISC 19 17:33:25.1±0.6, 20°.03S±0°.03×69°.20W±0°.05, h104km±5km, n82, σ1°42/100, mb3.7/4, 3C-6D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**0.12**	**159**		Pn	17 33 39.6	-0.5
PB08	**IPOC Station P**	**0.12**	**159**	↓*i* P	Pn	17 33 40.5	+0.3
PB08				*i* S	Sn	17 33 51.3	0.0
PB08				IAML		17 33 53.0	
	comp=E,8μm,0.2s						
GO01	**Chusmiza**	**0.36**	**1**		Pn	17 33 41.4	+0.3
GO01	**Chusmiza**	**0.36**	**1**	*e*P	Pn	17 33 41.3	+0.2
GO01				*i* S	Sn	17 33 53.1	+0.1
GO01				IAML		17 33 54.1	
	comp=N,18μm,0.2s						
PB11	**IPOC Station P**	**0.51**	**302**	Pn	Pn	17 33 41.9	+0.3
PB11	**IPOC Station P**	**0.51**	**302**	↑*i* P	Pn	17 33 42.1	+0.5
PB11				*i* S	Sn	17 33 53.0	-0.9
PB11				IAML		17 33 55.1	
	comp=E,6μm,0.4s						
HMBC	**Humberstone**	**0.69**	**249**	↓*e*P	Pn	17 33 43.6	+0.6
HMBC				*e*S	Sn	17 33 57.0	+0.5
HMBC				IAML		17 33 59.3	
	comp=E,8μm,0.7s						
TA02	**Huaiquique**	**0.91**	**254**		Pn	17 33 45.8	+0.9
TA02	**Huaiquique**	**0.91**	**254**	*e*P	Pn	17 33 45.8	+0.9
TA02				*e*S	Sn	17 34 00.5	+0.7
TA02				IAML		17 34 05.3	
	comp=N,12μm,0.1s						
PB01	**IPOC Station P**	**1.05**	**195**		Pn	17 33 46.7	+0.2
PB01	**IPOC Station P**	**1.05**	**195**	↓*i* P	Pn	17 33 47.3	+0.8
PB01				*e*S	Sn	17 34 02.9	+0.4
PB01				IAML		17 34 04.7	
	comp=E,5μm,0.2s						
TA01	**Diego Aracena**	**1.07**	**240**		Pn	17 33 47.2	+0.7
TA01	**Diego Aracena**	**1.07**	**240**	↑*i* P	Pn	17 33 47.3	+0.7
TA01				*e*S	Sn	17 34 03.2	+0.5
TA01				IAML		17 34 07.9	
	comp=N,2μm,0.3s						
PATCX	**Punta Patache**	**1.19**	**228**		Pn	17 33 48.8	+0.7
PATCX	**Punta Patache**	**1.19**	**228**	↑*i* P	Pn	17 33 48.8	+0.7
PATCX				*e*S	Sn	17 34 06.3	+0.9
PATCX				IAML		17 34 07.9	
	comp=N,3μm,0.4s						
PB02	**IPOC Station P**	**1.44**	**207**		Pn	17 33 51.8	+0.8
PB02	**IPOC Station P**	**1.44**	**207**	*e*P	Pn	17 33 52.0	+1.0
PB02				*e*S	Sn	17 34 11.0	+0.3
PB02				IAML		17 34 21.4	
	comp=E,4μm,0.3s						
PB16	**IPOC Station P**	**1.71**	**350**		Pn	17 33 56.8	+2.0
PB16	**IPOC Station P**	**1.71**	**350**	↓*i* P	Pn	17 33 56.8	+2.0
PB16				*e*S	Sn	17 34 19.8	+2.6
PB16				IAML		17 34 23.7	
	comp=N,625nm,0.4s						
PB09	**IPOC Station P**	**1.76**	**181**		Pn	17 33 56.5	+1.5
PB09	**IPOC Station P**	**1.76**	**181**	↓*e*P	Pn	17 33 56.5	+1.5
PB09				*e*S	Sn	17 34 19.1	+1.3
PB12	**IPOC Station P**	**1.76**	**323**	Pn	Pn	17 33 55.1	+0.1
PB12	**IPOC Station P**	**1.76**	**323**	↓*e*P	Pn	17 33 55.7	+0.7
PB12				*e*S	Sn	17 34 18.6	+0.9
PB12				IAML		17 34 26.4	
	comp=N,2μm,0.3s						
PB07	**IPOC Station P**	**1.81**	**201**	Pn	Pn	17 33 56.4	+0.7
PB07	**IPOC Station P**	**1.81**	**201**	*e*P	Pn	17 33 56.5	+0.9
PB07				*e*S	Sn	17 34 19.6	+0.8
PB07				IAML		17 34 26.3	
	comp=E,2μm,0.3s						
AP01	**Chacalluta**	**1.97**	**327**	*e*P	Pn	17 33 58.6	+1.2
AP01				*e*S	Sn	17 34 23.6	+1.5
AP01				IAML		17 34 34.5	
	comp=E,4μm,0.3s						
PB18	**Visviri**	**2.44**	**354**		Pn	17 34 04.2	+0.1
PB04	**IPOC Station P**	**2.46**	**201**		Pn	17 34 05.9	+1.9
PB04	**IPOC Station P**	**2.46**	**201**	*e*P	Pn	17 34 05.5	+1.5
PB04				*e*S	Sn	17 34 34.8	+1.0
PB04				IAML		17 34 46.8	
	comp=E,894nm,0.2s						
LVC	**Limon Verde**	**2.58**	**174**	P	Pn	17 34 07.6	+1.7
	comp=E,46nm,0.2s,baz=19,slow=12,SNR=243						
LVC				S	Sn	17 34 42.0	+5.0
	comp=E,146nm,0.3s,baz=134,slow=18,SNR=36						
LVC	**Limon Verde**	**2.58**	**174**	*e*P	Pn	17 34 07.5	+1.7
LVC				*e*S	Sn	17 34 37.4	+0.4
LVC	**Limon Verde**	**2.58**	**174**	*e*P	Pn	17 34 07.7	+1.7
PB06	**IPOC Station P**	**2.69**	**187**		Pn	17 34 08.5	+1.5
PB06	**IPOC Station P**	**2.69**	**187**	*e*P	Pn	17 34 08.4	+1.5
PB06				*e*S	Sn	17 34 40.6	+1.4
PB06				IAML		17 34 46.4	
	comp=E,491nm,0.2s						
PB15	**IPOC Station P**	**3.18**	**185**		Pn	17 34 14.9	+1.4
PB15	**IPOC Station P**	**3.18**	**185**	*e*P	Pn	17 34 15.0	+1.5
PB15				*e*S	Sn	17 34 53.3	+2.5
LPAZ	**La Paz**	**3.85**	**15**	P	Pn	17 34 26.0	+2.9
	comp=E,20nm,0.6s,baz=205,slow=5.8,SNR=85						
LPAZ				S	Sn	17 35 07.8	+0.1
	comp=E,7.2nm,0.6s,baz=204,slow=15,SNR=3.7						
LPAZ	**La Paz**	**3.85**	**15**	Pn	Pn	17 34 26.1	+3.1
LPAZ	**La Paz**	**3.85**	**15**	*e*P	Pn	17 34 26.1	+3.1
GO02	**Mina Guanaco**	**5.12**	**184**	Pn	Pn	17 34 39.9	0.0
SIV	**San Ignacio**	**8.71**	**64**	P	Pn	17 35 26.6	-1.8
	comp=E,18nm,0.6s,baz=252,slow=10,SNR=110						
VBST	**Vila Bela da S**	**10.33**	**60**	*e*P	Pn	17 35 52.5	+2.1
PTLB	**Pontes e Lacer**	**10.61**	**66**	*e*P	Pn	17 35 54.0	-0.2
ANTJ	**Antonio Joao (**	**12.48**	**101**	*e*P	Pn	17 36 20.2	+1.1
CPUP	**Villa Florida**	**12.59**	**122**	P	Pn	17 36 18.6	-1.9
	comp=E,3.2nm,0.9s,baz=300,slow=13,SNR=5.7						
CPUP	**Villa Florida**	**12.59**	**122**		Pn	17 36 18.3	-2.2
FRBT	**Francisco Belt**	**15.99**	**115**	*e*P	Pn	17 37 03.9	-0.3
ITAB	**Concordia**	**17.20**	**118**		P	17 37 16.1	-2.9
ITAB				IAmb	IAmb	17 37 20.2	
	comp=E,11nm,1.0s						
PLTB	**Pedras Altas**	**18.23**	**133**	P	P	17 37 28.8	-1.5
PLTB				IAmb	IAmb	17 37 47.6	
	comp=E,6.9nm,1.1s						
FRTB	**Fartura**	**18.54**	**104**	*e*P	Pn	17 37 33.9	-1.3
SNDB	**Serra Nova Dou**	**18.97**	**68**	*e*P	P	17 37 37.8	-0.7
CNLB	**Canela**	**19.05**	**123**	*e*P	P	17 37 39.1	-0.1
IPMB	**Ipameri, GO**	**19.95**	**88**	*e*P	P	17 37 48.5	-0.7
COHC	**Cochancay**	**20.03**	**329**	P	P	17 37 48.9	-1.1
COHC				IAmb	IAmb	17 37 51.7	
	comp=E,5.6nm,0.3s						
TER01	**Tubaro-SC**	**20.14**	**119**	*e*P	P	17 37 51.1	0.0
ITTB	**Itaituba**	**20.36**	**42**	*e*P	P	17 37 52.1	-1.3
ITTB				*e*pP	pP	17 38 16.4	+2.1
BDFB	**Brasilia**	**20.63**	**81**	P	P	17 37 55.9	-0.6
	comp=Z,1.7nm,0.5s,baz=220,slow=8.4,SNR=3.6						
	comp=Z,1.7nm,0.5s						
BDFB	**Brasilia**	**20.63**	**81**	P	P	17 37 56.0	-0.6
BDFB				IAmb	IAmb	17 38 02.4	
	comp=Z,2.2nm,0.8s						
BDFB	**Brasilia**	**20.63**	**81**	*e*P	P	17 37 55.7	-0.9
PLCA	**Paso Flores**	**20.67**	**183**	P	Pn	17 37 59.5	-0.5
	comp=Z,0.7nm,0.6s,baz=4.6,slow=10,SNR=4.8						
	comp=Z,0.7nm,0.6s						
PLCA	**Paso Flores**	**20.67**	**183**	P	P	17 37 53.7	-3.0
VAO	**Valinhos**	**20.89**	**102**	*e*P	P	17 37 57.7	-1.6
PMNB	**Patos De Minas**	**21.54**	**90**	*e*P	P	17 38 05.5	-0.7
PEXB	**Peixe**	**21.55**	**72**	*e*P	P	17 38 06.9	+0.5
BSCB	**Bom Sucesso**	**22.89**	**97**	*e*P	P	17 38 19.4	-0.9
TUMC	**Tumaco**	**23.64**	**336**	P	P	17 38 26.5	-0.6
SMTB	**Santa Maria do**	**23.66**	**65**	*e*P	P	17 38 27.1	-0.3
BOAV	**Boa Vista**	**23.86**	**22**	*e*P	P	17 38 29.2	+0.2
JANB	**Januaria**	**24.23**	**82**	*e*P	P	17 38 32.2	-0.3
SDBA	**SAO DESIDERIO**	**24.51**	**76**	*e*P	P	17 38 34.7	-0.4
SDBA				*e*pP	pP	17 39 01.0	+2.2
SJCC	**San Jacinto, C**	**30.31**	**348**	P	P	17 39 25.4	-1.6
NBLA	**Lagarto - SE**	**31.52**	**78**	*e*P	P	17 39 36.9	-0.7
TXAR	**Lajitas Array**	**59.27**	**325**	P	P	17 43 17.5	+1.4
	comp=Z,0.1nm,0.5s,baz=101,slow=7.4,SNR=2.0						
	comp=Z,0.1nm,0.5s						
QSPA	**South Pole Qui**	**70.16**	**180**	P	P	17 44 26.2	-0.2
QSPA				IAmb	IAmb	17 44 45.5	
	comp=Z,2.9nm,1.1s						
TORD	**Torodi Ar. Bea**	**77.12**	**71**	P	P	17 45 08.2	+0.4
	comp=Z,0.2nm,0.3s,baz=254,slow=5.5,SNR=7.0						
	comp=Z,0.2nm,0.3s						
TORD	**Torodi Ar. Bea**	**77.12**	**71**	P	P	17 45 06.0	-1.8
YKA	**Yellowknife Ar**	**89.71**	**341**	P	P	17 46 12.8	+1.6
	comp=Z,1.5nm,0.8s,baz=166,slow=36,SNR=3.2						
	comp=Z,1.5nm,0.8s						
H11N3	**WAKE ISLAND Hy**	**27.45**	**280**	T	T	20 12 11.1	
	baz=102,slow=75,SNR=14						
H11N2	**WAKE ISLAND Hy**	**27.47**	**280**	T	T	20 12 10.3	
	baz=102,slow=75,SNR=15						
H11N1	**WAKE ISLAND Hy**	**27.47**	**280**	T	T	20 12 11.8	
	baz=102,slow=75,SNR=14						
WRA	**Warramunga Arr**	**134.07**	**212**	PKP	**PKiKP**	**17 52 31.9**	**-0.7**
	comp=Z,0.2nm,0.7s,baz=158,slow=1.8,SNR=1.4						
MKAR	**Makanchi Array**	**144.59**	**34**	PKP	**PKPdf**	**17 52 49.3**	**-0.2**
	comp=Z,0.1nm,0.4s,baz=322,slow=1.9,SNR=1.7						

*IDC **19** 17:33:35.7±1.9, 23°.06N×142°.85E, h0km, mb3.9/5, mbtmp3.7/7, ML2.8/2, MS3.0/3, Error ellipse: s-maj=61.1km s-min=25.9km az=83.0*

ISC 19 17:33:37.2±1.8, 23°.1N±0°.1×142°.8E±0°.3, h10km, n14, σ0°68/7, mb4.1/5, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOW	**Kunigami**	**13.73**	**289**	LR	LR	17 41 08.2	
	comp=Z,74nm,20.9s,baz=100,slow=33						
MJAR	**Matsushiro Arr**	**14.01**	**344**	Pn	Pn	17 36 55.6	-0.2
	baz=159,slow=10,SNR=2.7						
	1.0nm,0.8s						
KSRS	**Korea Array**	**19.23**	**322**	P	Pn	17 38 03.4	+0.9
	0.1nm,0.3s,baz=132,slow=12,SNR=2.6						
KSRS				LR	LR	17 45 19.0	
	comp=Z,34nm,18.1s,baz=125,slow=36						
	0.5nm,0.6s						
H11N1	**WAKE ISLAND Hy**	**22.64**	**94**	T	T	18 02 28.2	
	baz=282,slow=74,SNR=88						
H11N2	**WAKE ISLAND Hy**	**22.64**	**94**	T	T	18 02 14.7	
	baz=282,slow=74,SNR=105						
H11N3	**WAKE ISLAND Hy**	**22.65**	**94**	T	T	18 02 15.8	
	baz=282,slow=74,SNR=95						
H11S3	**WAKE ISLAND Hy**	**22.75**	**97**	T	T	18 02 21.7	
	baz=285,slow=75,SNR=28						
H11S1	**WAKE ISLAND Hy**	**22.75**	**97**	T	T	18 02 35.9	
	baz=285,slow=75,SNR=17						
H11S2	**WAKE ISLAND Hy**	**22.76**	**97**	T	T	18 02 41.5	
	baz=285,slow=75,SNR=17						
CMAR	**Chiang Mai Arr**	**41.19**	**272**	P	P	17 41 21.6	-0.8
	0.2nm,0.3s,baz=52,slow=7.4,SNR=4.4						
CMAR				LR	LR	17 56 13.0	
	comp=Z,16nm,20.8s,baz=110,slow=33						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**43.55**	**192**	P	P	17 41 41.6	+0.2
	2.8nm,0.7s,baz=12,slow=8.5,SNR=10						
	2.8nm,0.7s						
MKAR	**Makanchi Array**	**53.54**	**312**	P	P	17 42 58.7	+0.5
	0.2nm,0.5s,baz=92,slow=11,SNR=1.3						
	0.2nm,0.5s						
ARCES	**ARCESS Array B**	**77.52**	**341**	P	P	17 45 32.9	+0.1
	2.6nm,1.0s,baz=60,slow=8.9,SNR=1.6						
	2.6nm,1.0s						
FINES	**FINESS Array B**	**81.81**	**334**	P	P	17 45 55.9	-0.3
	1.2nm,0.6s,baz=63,slow=5.2,SNR=7.2						
	1.2nm,0.6s						

*NEIC **19** 18:20:50.5±1.9, 20°.17N±0°.06×121°.38E±0°.05, h16km±1km, mb5.5/231, Ms_20 5.0/210, Mwb5.4/24, Mww5.6, Error ellipse: s-maj=10.1km s-min=8.0km az=175.0*

*MOS **19** 18:20:51.0±0.9, 20°.11N×121°.48E, h35km, mb5.5/118, MS5.1/38, Error ellipse: s-maj=5.7km s-min=3.1km az=114.9*

*GCMT **19** 18:20:52.5±0.1, 20°.22N±0°.01×121°.12E±0°.01, h35km, MW5.6/136, Moment Tensor Solution. s126,c230; s136,c277; Duration: 1s5 Moment tensor: Scale 10^17 Nm; Mrr2.08±.04; Mtt0.36±.03; Mpp-2.45±.03; Mrt0.90±.04; Mrp-0.73±.02; Mtp-1.35±.04; Best double couple: Mw2.87400×10^17 NP1:φs358.00000°, δ30.00000°, λ64.00000°. NP2:φs207.00000°, δ63.00000°, λ104.00000°. Principal axes: T 2.6620, Plg69.0000°, Azm146.0000°; N 0.4150, Plg13.0000°, Azm20.0000°; P -3.0806, Plg17.0000°, Azm286.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **19** 18:20:53.5±1.3, 20°.13N×121°.50E, h40km±11km, mb4.8/36, mbtmp5.1/39, ML5.2/4, MS5.0/75 Error ellipse: s-maj=11.4km s-min=9.8km az=65.0*

*NIED **19** 18:20:53.3, 20°.22N×121°.50E, h107km, MW5.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^17Nm; Mrr0.78; Mtt0.42; Mpp-1.20; Mrt0.17; Mtp-0.15; Mrp-0.30; Fault plane solution: Mw1.08000×10^17 NP1:φs29.00000°, δ42.00000°, λ125.00000°. NP2:φs165.00000°, δ57.00000°, λ63.00000°.*

*MAN **19** 18:20:53.9, 19°.96N×121°.38E, h26km, mb6.2, ML5.3, MS5.9*

MAN INTENSITY V - SABTANG UYUGAN IVANA AND MAHATAO BATANES; INTENSITY IV - BASCO AND ITBAYAT BATANES; PAMPLONA CAGAYAN.

*JMA **19** 18:20:53.3±0.4, 20°.1N±2°×121°.1E±.°, h107km, MD5.2/24, MV5.0/24, PHILIPPINE ISL REGION*

*NEIC **19** 18:20:53, 20°.15N×121°.40E, h20km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr1.04; Mtt0.14; Mpp-0.90; Mrt-0.38; Mtp-0.71; Mrp-0.49; Fault plane solution: Mw1.36000×10^17 NP1:φs215.41000°, δ58.86000°, λ95.40000°. NP2:φs25.06000°, δ31.56000°, λ81.15000°. Principal axes: T 1.2006, Plg76.0000°, Azm141.0000°; N 0.2762, Plg5.0000°, Azm33.0000°; P -1.4768, Plg14.0000°, Azm301.0000°;*

*BJI **19** 18:20:54.4±0.0, 20°.61N×120°.72E, h10km, mb5.0/73, mB5.3/61, ML4.8/5, Ms5.3/88, Ms7 5.3/80*

*NEIC **19** 18:20:55, 20°.04N×121°.29E, h26km, Moment Tensor Solution. Duration: 10s6 Moment tensor: Scale 10^17Nm; Mrr2.13; Mtt0.06; Mpp-2.07; Mrt-1.52; Mtp-0.49; Mrp-0.48; Fault plane solution: Mw2.68000×10^17 NP1: φs353.00000°, δ39.00000°, λ50.00000°. NP2: φs219.00000°, δ61.00000°, λ117.00000°. Principal axes: T 2.9172, Plg63.0000°, Azm175.0000°; N -0.5507, Plg23.0000°, Azm25.0000°; P -2.3665, Plg12.0000°, Azm290.0000°;*

ISC 19 18:20:52.1±0.4, 20°.13N±0°.02×121°.38E±0°.03, h31km±2km, h32km: pP-P, n1486, σ1s61/1442, mb5.5/360, MS5.0/215, 374C-202D, Fault plane solution: NP1:φs222.23009°, δ67.33746°, λ105.04290°. NP2:φs7.33401°, δ26.97964°, λ58.13506°. Principal axes: T Plg64.5021°, Azm157.4647°; N Plg13.8572°, Azm36.3181°; P Plg20.9590°, Azm300.8961°; Fault plane solution: NP1:φs314.28088°, δ55.00231°, λ26.18732°. NP2: φs208.52921°, δ68.80717°, λ142.03745°. Principal axes: T Plg41.3900°, Azm166.5253°; N Plg47.3150°, Azm3.6694°; P Plg8.6230°, Azm264.2056°; Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGCP	**Gonzaga**	**1.98**	**161**	↑*i* P	Pn	18 21 24.5	+1.1
SGCP				*e*S	Sb	18 21 52.7	+1.1
SIPP	**Brgy, Tapao**	**2.36**	**202**	↑*i* P	Pb	18 21 38.6	+4.8
TWG	**Pinlang**	**2.70**	**354**		Pn	18 21 31.7	-1.6
SAMP	**Sagada Mountai**	**3.06**	**189**	↑*e*P	Pn	18 21 39.9	+1.5
SAMP				*e*S	Sb	18 22 19.0	-3.8
PALP	**Palanan**	**3.20**	**162**	↑*e*P	Pn	18 21 42.4	+2.1
PALP				*e*S	Sb	18 22 41.8	+15
TPUB	**Ta-pu**	**3.24**	**348**		Pn	18 21 39.8	-0.9
TPUB	**Ta-pu**	**3.24**	**348**	P	Pn	18 21 40.5	-0.2
YULB	**Yu-li**	**3.25**	**359**		Pn	18 21 39.5	-1.4
SSLB	**Suanglung**	**3.67**	**354**	Pn	Pn	18 21 46.1	-0.5
SSLB	**Suanglung**	**3.67**	**354**	P	Pn	18 21 47.3	+0.6
BOLP	**Bolinao**	**3.98**	**201**	↑*e*P	Pn	18 21 52.2	+1.3
BOLP				*e*S	Sb	18 22 50.9	+1.8
SMPP	**San Manuel, Pa**	**4.01**	**190**	↑*i* P	Pn	18 21 52.1	+0.7
SMPP				*e*S	Sn	18 22 38.9	+1.5
SMPP	**San Manuel, Pa**	**4.01**	**190**	↑*e*P	Pn	18 21 52.7	+1.3
SMPP				*e*S	Sn	18 22 41.5	+4.2
NACB	**Ninganchiao**	**4.03**	**3**		Pn	18 21 51.4	-0.3
HATJ	**Hateruma jima**	**4.51**	**29**	P	Pn	18 21 58.9	+0.6
HATJ				*e*S	Sn	18 22 48.8	-0.9
HATJ	**Hateruma jima**	**4.51**	**29**	A	A	18 21 58.9	
	comp=E,21nm,2.5s,comp=E,17nm,2.6s						
YHNB	**Yeheng**	**4.52**	**360**		Pn	18 21 58.9	+0.4
YHNB	**Yeheng**	**4.52**	**360**	P	Pn	18 22 02.0	+3.5
JYNG	**Yonagunijimaku**	**4.54**	**18**	P	Pn	18 21 59.4	+0.7
JYNG				*e*S	Sn	18 22 51.0	+0.5
JYNG	**Yonagunijimaku**	**4.54**	**18**	A	A	18 21 59.4	
	comp=E,11nm,4.0s,comp=E,11nm,4.5s						
PCPH	**Palayan**	**4.55**	**183**	↑*e*P	Pn	18 22 00.7	+2.0
PCPH				*e*S	Sn	18 22 57.0	+6.5
YOJ	**Yonaguni jima**	**4.57**	**19**	Pn	Pn	18 21 59.8	+0.7
YOJ	**Yonaguni jima**	**4.57**	**19**	P	Pn	18 21 59.8	+0.7
YOJ	**Yonaguni jima**	**4.57**	**19**	P	Pn	18 22 01.3	+2.2
YOJ	**Yonaguni jima**	**4.57**	**19**	P	Pn	18 22 00.5	+1.4
YOJ				*e*S	Sn	18 22 53.0	+1.8
YOJ	**Yonaguni jima**	**4.57**	**19**	A	A	18 22 00.5	
	comp=E,11nm,3.5s,comp=E,9.0nm,2.5s						
IRIF	**Iriomote-Funau**	**4.72**	**27**	P	Pn	18 22 01.9	+0.7
IRIF				S	Sn	18 22 54.0	-0.8
IRIF	**Iriomote-Funau**	**4.72**	**27**	A	A	18 22 01.9	
	comp=E,13nm,1.5s,comp=E,13nm,1.3s						
JKRS	**Kuro-shima**	**4.76**	**30**	P	Pn	18 22 02.5	+0.8
JKRS				S	Sn	18 22 56.0	+0.2
JKRS	**Kuro-shima**	**4.76**	**30**	A	A	18 22 02.5	
	comp=E,22nm,3.3s,comp=E,18nm,2.3s						
TATO	**Taipei**	**4.83**	**1**		Pn	18 22 03.4	+0.8
JIJ	**Ishigaki jima**	**4.93**	**31**	P	Pn	18 22 04.2	+0.2
JIJ				*e*S	Sn	18 22 58.2	-1.9
JIJ	**Ishigaki jima**	**4.93**	**31**	A	A	18 22 04.2	
	comp=E,5.0nm,4.2s,comp=E,6.0nm,1.8s						
KNMB	**Chin-men Tao**	**5.13**	**328**	Pn	Pn	18 22 04.2	-2.6
QZH	**Quanzhou**	**5.44**	**332**	↓*i* Pn	Pn	18 22 08.6	-2.5
QZH				Sn	Sn	18 23 05.5	-7.1
QZH				smax	smax		
	comp=N,200nm,0.7s						
QZH				smax	smax		
	comp=E,330nm,1.1s						
QZH				LR	LR		
	comp=N,18μm,12.5s						
QZH				LR	LR		
	comp=E,14μm,15.4s						
QZH				LR	LR		
	comp=Z,19μm,14.2s						
JTJ	**Tarama**	**5.45**	**34**	*e*P	Pn	18 22 11.4	+0.4
JTJ				*e*S	Sn	18 23 11.4	-1.2
JTJ	**Tarama**	**5.45**	**34**	A	A	18 22 11.4	
	comp=E,11nm,1.2s,comp=E,10.0nm,2.7s						
QVP	**Quezon City--P**	**5.48**	**184**	↑*i* P	Pn	18 22 14.1	+2.5
JIRB	**Irabujima**	**5.85**	**36**	P	Pn	18 22 16.8	+0.2
JIRB				S	Sn	18 23 21.2	-1.4
JIRB	**Irabujima**	**5.85**	**36**	A	A	18 22 16.8	
	comp=E,10.0nm,1.7s,comp=E,8.0nm,4.4s						
MACP	**Maragondon, Ca**	**5.86**	**186**	↑*i* P	Pn	18 22 18.3	+1.4
MACP				*e*S

JYRO Yoronjima 9.44 42 P Pn 18 23 05.2 -0.7
GUIM Jordan 9.52 173⇓ eP Pn 18 23 10.8 +3.8
JOKE Okinoerabujima 9.76 41 P Pn 18 23 09.1 -1.2
LLP Lapu-Lapu 10.06 165 eP Pn 18 23 16.6 +2.0
TBP Tagbilaran 10.65 167⇑ eP Pn 18 23 25.7 +3.2
SSE Sheshan 10.93 359 P Pn 18 23 24.3 -2.0
SSE S Sn 18 25 34.1 +6.7
SSE pmax pmax
comp=Z,9.0nm,0.6s
SSE pmax pmax
comp=Z,110nm,4.3s
SSE LR LR
comp=N,3μm,14.4s
SSE LR LR
comp=E,3μm,17.3s
QIZ Qiongzhong 10.93 266 Pn Pn 18 23 24.8 -1.6
QIZ Qiongzhong 10.93 266⇑ iP Pn 18 23 24.8 -1.6
QIZ pmax pmax
comp=Z,89nm,0.6s
QIZ pmax pmax
comp=Z,770nm,6.0s
QIZ LR LR
comp=N,8μm,11.9s
QIZ LR LR
comp=E,9μm,17.5s
QIZ LR LR
comp=Z,12μm,18.3s
QIZ Qiongzhong 10.93 266 P Pn 18 23 24.7 -1.6
CNSH ChangSha 11.12 318 ⇓P Pn 18 23 24.3 -4.7
CNSH S Sn 18 25 19.3 -13
CNSH LR LR
comp=N,10μm,17.9s
CNSH LR LR
comp=E,14μm,15.9s
GULI GuiLin 11.39 299 P Pn 18 23 22.5 -10
GULI S Sn 18 25 21.6 -17
GULI LR LR
comp=N,8μm,16.5s
GULI LR LR
comp=E,12μm,14.9s
GULI LR LR
comp=Z,17μm,16.4s
BATP Bataraza 11.78 198⇑ iP Pn 18 23 40.1 +2.0
BATP eS 18 26 57.4
CGP Cagayan de Oro 12.04 164⇓ eP P 18 23 49.2 -4.9
NJ2 Nanjing 12.09 350 eP Pn 18 23 41.1 -1.1
NJ2 pP P 18 23 51.4 -3.2
NJ2 S Sn 18 25 58.3 +2.3
NJ2 pmax pmax
comp=Z,20nm,0.8s
NJ2 pmax pmax
comp=Z,460nm,8.1s
NJ2 LR LR
comp=Z,9μm,19.9s
NJ2 LR LR
comp=Z,5μm,15.6s
NJ2 LR LR
comp=Z,11μm,19.9s
WHN Wuhan 12.16 330 ⇑P Pn 18 23 41.3 -1.9
WHN pP Pn 18 23 44.3 +1.1
WHN sP P 18 23 46.4 -9.0
WHN LR LR
comp=Z,22μm,11.7s
WHN LR LR
comp=Z,9μm,9.8s
WHN LR LR
comp=Z,34μm,14.7s
CTBH Cotabato--PC H 13.12 167⇑ eP Pn 18 23 58.3 +1.8
ZCP Zamboanga City 13.13 177⇑ eP Pn 18 23 57.5 +0.9
KCP Kidapawan 13.53 164⇓ iP Pn 18 24 04.4 +2.4
DAV Davao City (W) 13.60 162 P Pn 18 24 04.4 +1.4
comp=Z,25nm,0.3s,baz=343,slow=6.5,SNR=8.1
DAV LR LR 18 29 44.1
comp=Z,11μm,20.4s,baz=342,slow=39
comp=Z,67nm,0.4s
DAV Davao City (W) 13.60 162 Pn Pn 18 24 04.3 +1.3
SKMP Bagumbayan, Su 13.87 167⇑ eP Pn 18 24 08.9 +2.3
JSU Suzuyama 13.96 34 Pn Pn 18 24 07.7 -0.2
GSPH General Santos 14.38 166 eP P 18 24 17.8 -2.5
ENH Enshi 14.75 316 Pn 18 24 17.4 -1.1
DLV T Lat 14.82 239 Pn Pn 18 24 19.6 -0.1
DLV T Lat 14.82 239 P Pn 18 24 20.4 +0.7
KKM Kota Kinabalu 14.87 200 Pn Pn 18 24 21.7 +1.4
KKM Kota Kinabalu 14.87 200 P Pn 18 24 21.8 +1.5
GYA Guiyang 14.91 298⇓ iP Pn 18 24 20.1 -0.7
GYA pP P 18 24 27.6 +1.4
GYA S Sn 18 27 04.8 -0.3
GYA pmax pmax
comp=Z,170nm,1.8s
GYA pmax pmax
comp=Z,900nm,3.9s
GYA LR LR
comp=Z,4μm,13.4s
GYA LR LR
comp=Z,9μm,15.0s
GYA LR LR
comp=Z,15μm,15.4s
MYLDM Lahad Datu 15.12 191 Pn Pn 18 24 22.8 -0.7
MYLDM IAmb IAmb 18 24 47.9
comp=Z,206nm,1.0s
JNU Nakatsue 15.47 31 P P 18 24 30.7 -1.6
comp=Z,119nm,0.4s,baz=219,slow=0.8,SNR=7.1
JNU Nakatsue 15.47 31 P P 18 24 31.9 -0.4
JNU Nakatsue 15.47 31 P P 18 24 33.1 +0.9
NAWB Namwon 16.14 18 P P 18 24 40.3 +0.8
LYN LuoYang 16.39 333 ⇓P Pn 18 24 39.1 -0.8
LYN PP sP 18 24 52.8 -0.4
LYN pmax pmax
comp=Z,120nm,1.9s
LYN pmax pmax
comp=Z,2μm,6.6s
LYN LR LR
comp=Z,8μm,15.9s
LYN LR LR
comp=Z,8μm,17.6s
LYN LR LR
comp=Z,8μm,15.5s
TIA Tai'an 16.46 348 ⇓P P 18 24 41.9 -1.2
TIA pP pP 18 24 45.5 -4.9
TIA sP sP 18 24 49.0 -5.0
TIA PP pwP 18 24 56.5 +1.4
TIA S Sn 18 27 43.0 +0.6
TIA pmax pmax
comp=Z,25nm,0.9s
TIA pmax pmax
comp=Z,900nm,5.8s
TIA LR LR
comp=Z,7μm,20.6s
TIA LR LR
comp=Z,6μm,19.2s
TIA LR LR
comp=Z,11μm,19.3s
SGSI Sangihe 16.83 166 P Pn 18 24 44.5 -1.0
comp=Z,215nm,0.7s
TJN Taejon 17.02 17 ceP P 18 24 49.2 -0.1
TJN Taejon 17.02 17 P P 18 24 50.5 +1.2
KSCHJ Chungju 17.66 18 P P 18 24 57.0 +0.6
XAN Xi'an 17.73 324⇓ iP P 18 24 56.9 -0.4
XAN pP pP 18 25 01.8 -2.8
XAN sP sP 18 25 05.6 -2.5
XAN PP pwP 18 25 09.5 +0.4
XAN pmax pmax
comp=Z,160nm,1.7s
XAN pmax pmax
comp=Z,4μm,6.8s
XAN LR LR
comp=Z,13μm,14.4s
XAN LR LR
comp=Z,5μm,11.2s
XAN LR LR
comp=Z,16μm,14.1s
INCN Inchon 17.89 14 Pn 18 24 58.3 -0.3
INCN Inchon 17.89 14 P Pn 18 24 58.3 -0.3
INCN pmax pmax
comp=Z,100nm,1.1s
INCN Inchon 17.89 14 P P 18 25 02.7 +3.7
KMI Kunming 17.91 290 ⇓P Pn 18 24 58.8 -0.3
KMI sP sP 18 25 08.0 -2.4
KMI S Sn 18 28 13.8 -4.2
KMI pmax pmax
comp=Z,100nm,1.7s
KMI pmax pmax
comp=Z,2μm,6.6s
KMI LR LR
comp=Z,4μm,12.3s
KMI LR LR
comp=Z,10μm,16.4s
KMI LR LR
comp=Z,11μm,15.9s
JHS Saijyo 18.08 33 P 18 25 01.3 +0.2
KSAR Wonju Array Be 18.16 17 P Pn 18 25 01.4 -0.4
KSAR Wonju Array Be 18.16 17 P Pn 18 25 01.4 -0.4
HNS HongShan 18.17 343 ⇓P P 18 25 03.6 +1.6
HNS PP pwP 18 25 19.8 +5.8
HNS pmax pmax
comp=Z,99nm,1.6s
HNS pmax pmax
comp=Z,2μm,4.9s
HNS LR LR
comp=Z,6μm,18.6s
HNS LR LR
comp=Z,8μm,17.5s
HNS LR LR
comp=Z,10μm,19.6s
KSRS Korea Array 18.18 17 P P 18 25 02.7 +0.5
comp=Z,3.2nm,0.3s,baz=196,slow=11,SNR=102
KSRS PcP PcP 18 29 34.5 +0.1
comp=Z,3.1nm,0.9s,baz=177,slow=2.2,SNR=5.5
KSRS LR LR 18 32 17.0
comp=Z,2μm,21.4s,baz=205,slow=38
KSRS ScP ScP 18 33 06.7 -0.8
comp=Z,3.5nm,1.0s,baz=209,slow=2.6,SNR=9.0
comp=Z,29nm,0.9s
KS19 Wonju Array Si 18.21 17 P P 18 25 02.9 +0.4
DL2 Dalian 18.72 1 P Pn 18 25 09.3 +0.7
DL2 S Sn 18 28 35.4 -1.6
DL2 pmax pmax
comp=Z,16nm,0.7s
DL2 pmax pmax
comp=Z,340nm,7.7s
DL2 LR LR
comp=Z,6μm,14.5s
DL2 LR LR
comp=Z,5μm,16.0s
DL2 LR LR
comp=Z,5μm,15.5s
TOLI2 Tolitoli 18.91 182 P P 18 25 10.4 +0.2
TOLI2 Tolitoli 18.91 182 P Pn 18 25 10.9 -0.1
SEHB SEOHWA 19.04 17 P Pn 18 25 12.3 -0.2
PZH PanZhiHua 19.11 293 ⇓P Pn 18 25 14.3 +0.7
PZH PP PnPn 18 25 29.1 +2.5
PZH S Sn 18 28 39.5 -7.4
PZH pmax pmax
comp=Z,120nm,1.6s
PZH pmax pmax
comp=Z,3μm,4.8s
PZH LR LR
comp=Z,3μm,14.7s
PZH LR LR
comp=Z,4μm,16.3s
PZH LR LR
comp=Z,4μm,15.6s
CD2 Chengdu 19.16 308 P P 18 25 13.3 +0.2
CD2 pP pP 18 25 17.6 -2.8
CD2 sP sP 18 25 20.8 -3.2
CD2 pmax pmax
comp=Z,230nm,1.1s
CD2 pmax pmax
comp=Z,3μm,5.7s
CD2 LR LR
comp=Z,11μm,14.7s
CD2 LR LR
comp=Z,13μm,16.3s
CD2 LR LR
comp=Z,17μm,15.6s
TIY Taiyuan 19.18 338 ⇓P Pn 18 25 15.0 +0.8
TIY pP pP 18 25 20.6 +0.1
TIY sP pwP 18 25 24.9 -0.3
TIY pmax pmax
comp=Z,1μm,4.9s
TIY LR LR
comp=Z,10μm,15.0s
TIY LR LR
comp=Z,7μm,15.0s
TIY LR LR
comp=Z,10μm,14.4s
MRSI Marisa 19.54 178 P Pn 18 25 18.0 -0.6
comp=Z,5μmcomp=Z,4μmcomp=Z,329nm,0.8s
KMSI Cibinong 19.60 172 P P 18 25 17.3 -0.5
comp=Z,5μmcomp=Z,553nm,0.8s
SBUM Sibu 19.71 208 P Pn 18 25 20.0 -0.7
SBUM IAmb IAmb 18 25 21.9
comp=Z,725nm,1.4s
MPSI Mapaga 19.72 184 P P 18 25 19.2 0.0
comp=Z,5μmcomp=Z,1μmcomp=Z,88nm,0.7s
TNTI Ternate 20.11 162 P P 18 25 21.5 -1.9
TNTI Ternate 20.11 162 P P 18 25 21.0 -2.4
comp=Z,3μmcomp=Z,2μmcomp=Z,137nm,0.8s
TNTI Ternate 20.11 162 P P 18 25 21.2 -2.2
JCJ Chichijima 20.27 66 P P 18 25 26.0 +0.8
comp=Z,129nm,0.3s,baz=260,slow=3.2,SNR=37
JCJ LR LR 18 31 43.5
comp=Z,3μm,21.3s,baz=240,slow=32
comp=Z,129nm,0.3s
JCJ Chichijima 20.27 66 P P 18 25 25.2 0.0
JCJ IAmb IAmb 18 25 52.8
comp=Z,365nm,1.0s
JCJ Chichijima 20.27 66 P Pn 18 25 26.2 -1.1
BJT Baijiatuau 20.33 348 P P 18 25 26.4 +0.8
BJT Baijiatuau 20.33 348 IAMs_20 IAMs_20 18 33 53.3
comp=Z,7μm,20.0s
BJT Baijiatuau 20.33 348 P P 18 25 26.4 +0.8
BJT pmax pmax
comp=Z,164nm,1.1s
BJT MLR MLR
comp=Z,7μm,20.0s
BJI Beijing 20.35 348 P Pn 18 25 26.9 -1.1
BJI S S 18 29 11.3 -0.9
BJI pmax pmax
comp=Z,70nm,0.8s
BJI LR LR
comp=Z,1μm,18.8s
BJI LR LR
comp=Z,3μm,17.1s
BJI LR LR
comp=Z,7μm,19.6s
INU Inuyama 20.49 39 P Pn 18 25 29.5 -0.2
INU IAmb IAmb 18 25 45.7
comp=Z,168nm,1.0s
INU Inuyama 20.49 39 P Pn 18 25 30.2 +0.5
SMKI Samarinda 20.85 192 P Pn 18 25 33.4 -0.6
comp=Z,9μmcomp=Z,10μmcomp=Z,1μm,1.0s
JGF Kuroka 20.86 39 P Pn 18 25 33.1 -1.1
JGF IAmb IAmb 18 25 47.4
comp=Z,193nm,1.0s
JHJ Hachijo jima 2 20.89 48 P Pn 18 25 35.7 +1.3
comp=Z,188nm,0.8s,baz=126,slow=14,SNR=4.8
JHJ LR LR 18 32 24.8
comp=Z,3μm,20.2s,baz=262,slow=33
APSI Ampana 20.91 179 P P 18 25 32.1 0.0
comp=Z,4μmcomp=Z,496nm,0.9s
JHJ2 Mitsune 20.91 48 Pn 18 25 34.7 +0.1
JHJ2 Mitsune 20.91 48 P Pn 18 25 36.0 +1.4
LUWI Luwuk 21.08 176 P P 18 25 32.6 -1.4
LUWI Luwuk 21.08 176 P P 18 25 32.1 -1.8
comp=Z,5μmcomp=Z,7μmcomp=Z,797nm,0.9s
LUWI Luwuk 21.08 176 P P 18 25 33.7 -0.2
CHTO Chiang Mai 21.19 270 P P 18 25 34.5 -0.7
CHTO Chiang Mai 21.19 270 IAMs_20 IAMs_20 18 33 47.1
comp=Z,6μm,20.0s
CHTO Chiang Mai 21.19 270 P P 18 25 34.5 -0.7
CHTO pmax pmax
comp=Z,154nm,1.4s
CHTO MLR MLR
comp=Z,6μm,20.0s
CHTO Chiang Mai 21.19 270 P P 18 25 36.5 +1.3
CM31 Chiang Mai Arr 21.24 269 P P 18 25 35.3 -0.4
CM31 Chiang Mai Arr 21.24 269 P P 18 25 37.0 +1.3
SNR=31
CMAR Chiang Mai Arr 21.24 269 P P 18 25 36.9 +1.2
comp=Z,23nm,1.0s,baz=72,slow=9.0,SNR=161
CMAR PcP PcP 18 29 41.4 +1.1
comp=Z,7.4nm,0.8s,baz=98,slow=0.4,SNR=18
CMAR ScP ScP 18 33 14.2 -0.8
comp=Z,2.6nm,1.0s,baz=351,slow=0.2,SNR=4.9
CMAR LR LR 18 33 59.5
comp=Z,6μm,20.6s,baz=85,slow=37
comp=Z,23nm,1.0s
CMAR Chiang Mai Arr 21.24 269 P P 18 25 36.3 +0.6
CMAR Chiang Mai Arr 21.24 269 iP P 18 25 36.9 +1.2
CMAR pmax pmax
comp=Z,24nm,1.0s
KSM Kuching 21.47 212 P P 18 25 38.1 0.0
KSM IAmb IAmb 18 25 45.8
comp=Z,179nm,0.7s
KSM Kuching 21.47 212 P P 18 25 38.6 +0.5
LBMI Labuha 21.49 163 P P 18 25 35.9 -2.4
comp=Z,4μmcomp=Z,3μmcomp=Z,265nm,0.9s
BKB Balikpapan 21.70 192 P P 18 25 41.2 +0.6
BKB IAMs_20 IAMs_20 18 34 59.6
comp=Z,5μm,19.0s
BKB Balikpapan 21.70 192 P P 18 25 41.4 +0.8
comp=Z,6μmcomp=Z,15μmcomp=Z,1μm,1.1s
BKB Balikpapan 21.70 192 P P 18 25 42.4 +1.8
SNY Shenyang 21.72 4 ⇓P P 18 25 42.3 +1.8
SNY S S 18 29 32.6 -6.6
SNY pmax pmax
comp=Z,42nm,0.6s
SNY LR LR
comp=Z,4μm,15.4s
SNY LR LR
comp=Z,3μm,14.5s
SNY LR LR
comp=Z,6μm,16.1s
MTKI Muara Teweh, K 21.88 198 P P 18 25 43.2 +0.7
comp=Z,5μmcomp=Z,482nm,0.9s
MAJO Matsushiro 22.01 38 P P 18 25 43.4 -0.4
MAJO Matsushiro 22.01 38 iP P 18 25 44.0 +0.2
MAJO pmax pmax
comp=Z,217nm,1.9s
MAJO Matsushiro 22.01 38 P P 18 25 44.7 +0.9
MJB9 Matsu-Tunnel 22.01 38 P P 18 25 44.6 +0.8
MJAR Matsushiro Arr 22.01 38 P P 18 25 44.8 +1.0
comp=Z,11nm,0.9s,baz=223,slow=7.1,SNR=47
MJAR ScP ScP 18 33 16.4 -0.3
comp=Z,15nm,1.2s,baz=210,slow=2.7,SNR=15
comp=Z,11nm,0.9s
MJAR Matsushiro Arr 22.01 38 P P 18 25 44.7 +0.9
LZH Lanzhou 22.13 320 ⇓iP P 18 25 46.5 +1.3
LZH sP pP 18 25 53.3 +0.7
LZH SS Sn 18 30 07.8 +8.4
LZH pmax pmax
comp=Z,130nm,1.2s
LZH pmax pmax
comp=Z,2μm,4.6s
LZH LR LR
comp=Z,9μm,13.6s
LZH LR LR
comp=Z,8μm,16.5s
LZH LR LR
comp=Z,10μm,17.9s
STKI Sintang 22.17 207 P P 18 25 46.0 +0.4
comp=Z,2μmcomp=Z,134nm,1.4s
HHC Hu-ho-hao-te 22.29 340 eP P 18 25 48.3 +1.4
HHC sP pP 18 25 55.3 +1.0
HHC pmax pmax
comp=Z,110nm,1.2s
HHC pmax pmax
comp=Z,2μm,4.3s
HHC LR LR
comp=Z,17μm,13.5s
HHC LR LR
comp=Z,6μm,16.1s
HHC LR LR
comp=Z,21μm,14.2s
SANI Sanana 22.50 168 P P 18 25 46.2 -2.9
comp=Z,3μmcomp=Z,2μmcomp=Z,155nm,0.7s
SANI Sanana 22.50 168 P P 18 25 46.3 -2.9
BTO Baotou 22.61 337 eP P 18 25 52.1 +1.9
BTO LR LR
comp=Z,17μm,16.5s
BTO LR LR
comp=Z,24μm,18.8s
JYT Yasato 23.01 42 P P 18 25 52.3 -2.1
TTSI Tana Toraja 23.08 184 P P 18 25 55.4 +0.2
comp=Z,3μmcomp=Z,3μmcomp=Z,237nm,1.0s
JSD Sado 23.09 36 P P 18 25 55.0 -0.2
GUMO Guam 23.39 102 P P 18 25 57.2 -1.1
comp=Z,453nm,1.1s,baz=231,slow=2.5,SNR=9.3
GUMO LR LR 18 34 54.5
comp=Z,5μm,19.3s,baz=268,slow=36
comp=Z,453nm,1.1s
GUMO Guam 23.39 102 P P 18 25 57.5 -0.8
GUMO Guam 23.39 102 IAMs_20 IAMs_20 18 34 44.0
comp=Z,5μm,19.0s
GUMO Guam 23.39 102 P P 18 25 57.5 -0.8
GUMO pmax pmax
comp=Z,866nm,1.3s
GUMO MLR MLR
comp=Z,5μm,19.0s
GUMO Guam 23.39 102 P P 18 25 59.2 +0.9
comp=Z,653nm,1.3s
CN2 Changchun 23.85 7 eP P 18 25 58.8 -3.7
CN2 ePP PnPn 18 26 31.9 +0.6
CN2 eS S 18 30 10.8 -5.7
CN2 eS pS 18 30 17.5 -7.4
CN2 eSS SnSn 18 31 00.3 +3.2
CN2 LR LR
comp=N,4μm,16.0s
CN2 LR LR
comp=E,4μm,16.0s
CN2 LR LR
comp=Z,3μm,17.0s
MSHR Mys Shultsa 23.86 18 iP P 18 26 02.9 +0.3
MSHR pmax pmax
comp=Z,33nm,0.9s
MSHR MLR MLR
comp=Z,2μm,17.0s
NLAI Namlea 23.89 166 P P 18 26 01.9 -1.2
comp=Z,5μmcomp=Z,723nm,1.0s
SRIT Nakonsritamara 23.97 245 P P 18 26 03.6 -0.4
SPSI Sidrap Palu 23.99 184 P P 18 26 03.2 -0.8
comp=Z,5μmcomp=Z,361nm,1.1s
XLT XiLinHaoTe 24.12 351⇑ iP P 18 26 04.8 -0.3
XLT pP pP 18 26 08.6 -4.5
XLT sP sP 18 26 12.5 -4.1
XLT PP PnPn 18 26 39.6 +4.6
XLT S S 18 30 19.3 -1.6
XLT sS pS 18 30 29.3 +0.1
XLT SS SnSn 18 31 06.3 +2.6
XLT pmax pmax
comp=Z,39nm,0.9s
XLT LR LR
comp=Z,350nm,18.8s
XLT LR LR
comp=Z,3μm,19.4s
XLT LR LR
comp=Z,5μm,19.6s
BBKI Banjar Baru 24.30 196 P P 18 26 07.8 +0.9
comp=Z,15μmcomp=Z,1μm,1.5s
BNSI Bone 24.40 183 P P 18 26 07.1 -0.7
comp=Z,3μmcomp=Z,3μmcomp=Z,278nm,0.9s
JMM Marumori 24.43 40 P P 18 26 07.0 -0.9
JMM IAmb IAmb 18 26 14.1
comp=Z,113nm,1.0s
MSAI Masohi 24.48 162 P P 18 26 08.3 -0.2
comp=Z,1μmcomp=Z,84nm,0.7s
VLA Vladivostok 24.57 19 iP P 18 26 09.7 +0.6
VLA pmax pmax
comp=Z,76nm,1.0s
VLA MLR MLR
comp=Z,3μm,18.0s
AAI Ambon 24.59 163 P P 18 26 09.4 -0.2
AAI pmax pmax
comp=Z,428nm,1.1s
AAI Ambon 24.59 163 P P 18 26 09.6 0.0
comp=Z,3μmcomp=Z,426nm,1.1s
PBKI Pangkalan Bun 24.61 204 P P 18 26 08.9 -0.8
comp=Z,3μmcomp=Z,153nm,1.0s
KULM Kulim 24.98 237 P P 18 26 13.0 -0.1
KULM IAmb IAmb 18 26 28.2
comp=Z,112nm,1.1s
KULM IAMs_20 IAMs_20 18 36 04.3
comp=Z,3μm,18.0s
MYKOM Kota Tinggi 25.01 225 P P 18 26 12.5 -0.9
MYKOM IAMs_20 IAMs_20 18 35 34.5
comp=Z,4μm,19.0s
KAPI Kappang 25.03 184 P P 18 26 14.0 +0.5
comp=Z,170nm,0.8s,baz=11,slow=3.9,SNR=60
KAPI LR LR 18 36 36.6
comp=Z,4μm,19.8s,baz=350,slow=38
comp=Z,170nm,0.8s
KAPI Kappang 25.03 184 P P 18 26 13.5 0.0
KAPI Kappang 25.03 184 IAMs_20 IAMs_20 18 36 25.0
comp=Z,4μm,19.0s
KAPI Kappang 25.03 184c iP P 18 26 12.7 -0.8
KAPI pmax pmax

KAPI Kappang 25.03 184 P P 18 26 13.8 +0.3
KAPI P P 18 26 13.8 +0.3
comp=Z,473nm,1.8s
IPM Ipoh 25.19 235 P P 18 26 14.2 -0.9
IPM IAmb IAmb 18 26 32.3
comp=Z,82nm,0.8s
IPM Ipoh 25.19 235 P P 18 26 15.5 +0.4
FAKI Fak Fak 25.27 154 P P 18 26 13.5 -2.2
FAKI IAmb IAmb 18 26 18.3
comp=Z,86nm,0.8s
FAKI Fak Fak 25.27 154 P P 18 26 13.6 -2.1
comp=Z,3μmcomp=Z,2μmcomp=Z,118nm,0.7s
FAKI Fak Fak 25.27 154 P P 18 26 14.9 -0.8
BKSI Bulukumba 25.32 183 P P 18 26 15.1 -1.0
comp=Z,3μmcomp=Z,2μmcomp=Z,147nm,0.7s
MDJ Mudanjiang 25.36 14 P P 18 26 16.3 0.0
MDJ PP PnPn 18 26 52.4 +0.5
MDJ S S 18 30 45.8 +5.1
MDJ pmax pmax
comp=Z,32nm,1.4s
MDJ pmax pmax
comp=Z,410nm,4.3s
MDJ LR LR
comp=Z,3μm,21.1s
MDJ LR LR
comp=Z,5μm,20.6s
MDJ LR LR
comp=Z,6μm,16.2s
MDJ Mudanjiang 25.36 14 P P 18 26 17.3 +1.0
comp=Z,40nm,1.0s
BBSI Bau Bau 25.48 177 P P 18 26 17.4 -0.2
comp=Z,422nmcomp=Z,54nm,0.9s
USA0B Ussuriysk Arra 25.59 18 P P 18 26 18.0 -0.3
USA0B Ussuriysk Arra 25.59 18 P P 18 26 18.0 -0.3
USA0B pmax pmax
comp=Z,36nm,1.0s
USRK Ussuriysk Ar. 25.59 18 P P 18 26 18.9 +0.6
comp=Z,18nm,0.7s,baz=205,slow=8.5,SNR=25
USRK ScP ScP 18 33 24.9 -1.2
comp=Z,3.3nm,0.8s,baz=129,slow=4.6,SNR=5.6
USRK LR LR 18 37 42.5
comp=Z,2μm,18.2s,baz=184,slow=40
comp=Z,18nm,0.7s
USRK Ussuriysk Ar. 25.59 18 P P 18 26 17.5 -0.8
BAKI Biak 25.64 144 P P 18 26 18.1 -1.0
BNDI Bandanaira 25.89 160 P P 18 26 21.6 +0.3
BNX BinXian 26.02 10 ⇓P P 18 26 22.5 +0.2
BNX S S 18 30 57.1 +6.0
BNX pmax pmax
comp=Z,21nm,1.3s
BNX pmax pmax
comp=Z,250nm,5.4s
BNX LR LR
comp=Z,3μm,17.9s
BNX LR LR
comp=Z,3μm,20.4s
BNX LR LR
comp=Z,3μm,16.5s
BSSI Bau Bau, Buton 26.12 182 P P 18 26 21.9 -1.5
comp=Z,1μmcomp=Z,98nm,0.7s
DSRI Dabo 26.27 221 P P 18 26 26.2 +1.4
comp=Z,1μmcomp=Z,889nmcomp=Z,74nm,1.1s
SRPI Serui, Papua 26.27 145 P P 18 26 23.8 -1.0
comp=Z,4μmcomp=Z,79nm,1.1s
JTM Tenmabayashi 26.57 35 P P 18 26 25.9 -1.4
GTA Gaotai 26.71 321 ⇓P P 18 26 29.5 +0.8
GTA pP pP 18 26 36.1 -0.7
GTA sP pwP 18 26 40.5 -0.7
GTA PcP PcP 18 29 52.9 +1.1
GTA S S 18 31 03.1 +0.7
GTA PcS PcS 18 33 33.0 -0.1
GTA pmax pmax
comp=Z,20nm,1.7s
GTA pmax pmax
comp=Z,370nm,4.7s
GTA LR LR
comp=Z,3μm,16.0s
GTA LR LR
comp=Z,3μm,19.6s
GTA LR LR
comp=Z,4μm,16.7s
PPBI Pangkal Pinang 26.73 216 P P 18 26 29.6 +0.7
comp=Z,17μmcomp=Z,96nm,1.3s
SHL Shillong 27.68 287 P P 18 26 37.5 -0.2
SHL Shillong 27.68 287 P P 18 26 37.5 -0.2
SHL pmax pmax
comp=Z,72nm,1.2s
SHL Shillong 27.68 287 P P 18 26 38.7 +1.0
SNR=12
SHL Shillong 27.68 287 *e*P P 18 26 37.8 +0.1
SHL IAmb IAmb 18 26 54.7
comp=Z,96nm,1.5s
JMBI JAMBI 27.75 221 P P 18 26 40.6 +2.5
SMPI Sarmi 27.79 140 P P 18 26 37.1 -1.3
comp=Z,570nmcomp=Z,28nm,1.2s
TEY Ternei 27.86 23 *e*P P 18 26 38.0 -0.8
KMMI Kalianget 27.97 196 P P 18 26 41.2 +1.2
comp=Z,3μmcomp=Z,303nm,1.3s
BKNI Bangkinang 27.99 228 P P 18 26 40.9 +0.6
comp=Z,2μmcomp=Z,111nm,1.0s
GOMU GeErMu 28.24 310 P P 18 26 44.3 +1.5
GOMU pP pP 18 26 47.6 -3.3
GOMU sP sP 18 26 52.1 -2.1
GOMU pmax pmax
comp=Z,16nm,1.5s
GOMU pmax pmax
comp=Z,530nm,5.1s
GOMU LR LR
comp=Z,3μm,15.6s
GOMU LR LR
comp=Z,7μm,15.0s
GOMU LR LR
comp=Z,9μm,15.3s
GRJI Gresik 28.26 199 P P 18 26 44.2 +1.6
comp=Z,1μmcomp=Z,189nm,0.9s
UWJI Ujung Watu 28.30 202 P P 18 26 44.3 +1.3
comp=Z,7μmcomp=Z,151nm,1.1s
KCSI Kotacane, Aceh 28.32 237 P P 18 26 43.1 -0.2
comp=Z,51nm,1.4s
TBJI Tambak Boyo 28.37 200 P P 18 26 45.1 +1.5
comp=Z,4μmcomp=Z,374nm,1.3s
ERM Erimo 28.55 35 *i*P P 18 26 45.6 +0.6
ERM pmax pmax
comp=Z,5.0nm,0.3s
MMRI Maumere 28.59 178 P P 18 26 45.6 0.0
MMRI Maumere 28.59 178 P P 18 26 45.4 -0.2
comp=Z,3μmcomp=Z,4μmcomp=Z,276nm,1.0s
MMRI Maumere 28.59 178 P P 18 26 46.3 +0.7
ABJI Asem Bagus 28.62 195 P P 18 26 46.6 +0.8
comp=Z,3μmcomp=Z,230nm,1.4s
SRBI Singaraja 28.68 193 P P 18 26 46.8 +0.4
comp=Z,3μmcomp=Z,140nm,2.0s
EDFI Ende, Flores 28.70 179 P P 18 26 46.1 -0.5
comp=Z,4μmcomp=Z,381nm,1.1s
BLJI Banyuglugur 28.73 196 P P 18 26 47.5 +0.7
comp=Z,2μmcomp=Z,217nm,1.3s
LSA Lhasa 28.95 295 P P 18 26 51.2 +1.9
LSA pmax pmax
comp=Z,29nm,1.5s
LSA Lhasa 28.95 295 P P 18 26 51.1 +1.8
LSA S S 18 31 38.8 +0.2
LSA pmax pmax
comp=Z,25nm,1.0s
LSA LR LR
comp=Z,1μm,13.5s
LSA LR LR
comp=Z,2μm,14.9s
LSA LR LR
comp=Z,1μm,14.2s
LSA Lhasa 28.95 295 *i* P P 18 26 50.1 +0.8
SNR=6.5
PLAI Plampang 28.99 187 P P 18 26 49.1 0.0
comp=Z,3μmcomp=Z,4μmcomp=Z,262nm,1.0s
PLAI Plampang 28.99 187 P P 18 26 50.1 +1.0
SMRI Semarang 29.07 203 P P 18 26 50.9 +1.0
comp=Z,228nm,1.1s
SMRI Semarang 29.07 203 P P 18 26 51.6 +1.7
GENI Genyem 29.15 139 P P 18 26 49.4 -1.2
comp=Z,1μmcomp=Z,28nm,0.6s
GENI Genyem 29.15 139 P P 18 26 51.3 +0.7
DNP Denpasar 29.26 193 P P 18 26 53.1 +1.6
DNP pmax pmax
comp=Z,1μm,1.2s
DNP Denpasar 29.26 193 P P 18 26 52.7 +1.2
comp=Z,17μmcomp=Z,1μm,1.2s
GMJI Gumukmas 29.28 196 P P 18 26 51.7 0.0
comp=Z,137nm,1.8s
IGBI Denpasar 29.41 193 P P 18 26 52.9 +0.1
comp=Z,5μmcomp=Z,451nm,1.0s
KRJI Kerinci 29.48 224 P P 18 26 54.3 +0.6
comp=Z,3μmcomp=Z,88nm,0.9s
PWJI Pagerwojo 29.52 200 P P 18 26 54.0 +0.2
comp=Z,2μmcomp=Z,218nm,1.0s
WOJI Wonogiri, Jawa 29.63 201 P P 18 26 55.3 +0.5
comp=Z,4μmcomp=Z,280nm,1.3s
WBSI Waikabubak, Su 29.64 184 P P 18 26 52.2 -2.8
comp=Z,2μmcomp=Z,212nm,0.9s
KLI Kotabumi 29.67 215 P P 18 26 55.5 +0.3
comp=Z,146nm,0.7s
ASAJ Asahikawa 29.75 32 LR LR 18 39 13.8
comp=Z,2μm,20.8s,baz=250,slow=37
ASAJ Asahikawa 29.75 32 P P 18 26 55.6 0.0
ASAJ pmax pmax
comp=Z,30nm,0.8s
JKA Kamikawa-asahi 29.75 32 P P 18 26 55.5 -0.1
MASI Maura Aman, Be 29.80 221 P P 18 26 57.1 +0.7
comp=Z,3μmcomp=Z,183nm,0.9s
YOGI Yogyakarta 29.83 203 P P 18 26 58.3 +1.7
comp=Z,4μmcomp=Z,271nm,1.4s
UGM Wanagama 29.84 202 P P 18 26 57.4 +0.7
UGM PcP PcP 18 29 58.7 -1.0
UGM Wanagama 29.84 202 P P 18 26 58.1 +1.4
comp=Z,353nm,1.6s
UGM Wanagama 29.84 202 P P 18 26 57.7 +1.0
GSI Gunungsitoli 29.86 234 P P 18 26 57.6 +0.7
GSI IAmb IAmb 18 27 09.7
comp=Z,42nm,0.8s
PCJI Pacitan 29.88 201 P P 18 26 58.2 +1.2
comp=Z,155nm,1.3s
TNG Tangerang 29.88 211 P P 18 26 59.9 +2.9
comp=Z,260nm,0.4s
BLSI Bandar Lampung 29.89 214 P P 18 26 58.2 +1.1
comp=Z,1μmcomp=Z,72nm,1.3s
ULN Ulaanbaatar 30.01 341 P P 18 26 58.3 +0.2
ULN IAmb IAmb 18 27 15.0
comp=Z,99nm,1.4s
ULN Ulaanbaatar 30.01 341 *ce*P P 18 26 59.1 +1.0
ULN pmax pmax
comp=Z,62nm,1.3s
BASI Baing, Sumba 30.16 182 P P 18 26 59.1 -0.4
comp=Z,3μmcomp=Z,292nm,1.4s
DBJI Dramaga 30.17 210 P P 18 27 00.9 +1.3
comp=Z,7μmcomp=Z,114nm,0.4s
SONM Songino Array 30.19 340 P P 18 27 00.9 +1.2
comp=Z,6.0nm,0.7s,baz=158,slow=10,SNR=16
SONM PcP PcP 18 30 00.7 +0.5
comp=Z,16nm,1.1s,baz=162,slow=3.9,SNR=6.0
SONM ScP ScP 18 33 39.4 -1.0
comp=Z,3.6nm,1.0s,baz=146,slow=2.8,SNR=5.0
SONM LR LR 18 40 39.9
comp=Z,6μm,19.4s,baz=148,slow=39
comp=Z,6.0nm,0.7s
SONM Songino Array 30.19 340 P P 18 26 59.5 -0.2
KLR Kul'dur 30.20 14 LR LR 18 41 20.1
comp=Z,5μm,18.4s,baz=202,slow=41
KLR Kul'dur 30.20 14 *ce*P P 18 26 59.2 -0.4
KLR pmax pmax
comp=Z,86nm,1.7s
KLR MLR MLR
comp=Z,5μm,16.0s
LWLI Liwa 30.23 216 P P 18 27 00.5 +0.2
comp=Z,216nm,0.5s
KASI Kota Agung 30.42 215 P P 18 27 01.7 -0.1
comp=Z,91nm,0.9s
SISI Saibi 30.53 228 P P 18 27 01.9 -0.9
comp=Z,40nm,0.9s
CNJI Cibinong 30.66 209 P P 18 27 03.6 -0.3
comp=Z,2μmcomp=Z,152nm,1.0s
YSS Yuzh-Sakhalins 31.94 28 P P 18 27 14.6 -0.3
YSS IAmb IAmb 18 27 16.6
comp=Z,95nm,1.0s
YSS Yuzh-Sakhalins 31.94 28 *α iP P 18 27 15.3 +0.4
YSS *e**SS 18 27 24.1
YSS *e*S S 18 32 22.2 -1.8
YSS pmax pmax
comp=Z,400nm,4.7s
YSS pmax pmax
comp=N,100nm,4.6s
YSS pmax pmax
comp=Z,90nm,1.0s
YSS Yuzh-Sakhalins 31.94 28 P P 18 27 16.7 +1.8
GRNR Gornyy 32.81 18 ⇓P P 18 27 22.1 -0.4
GRNR pmax pmax
comp=Z,10.0nm,1.2s
GRNR MLR MLR
comp=N,550nm,16.0s
GRNR MLR MLR
comp=Z,1μm,15.0s
BOK Bokaro 33.07 283 *e*P P 18 27 26.3 +1.2
BOK IAmb IAmb 18 27 43.0
comp=Z,132nm,1.7s
KUR Kuril'sk 33.25 35 *e*P P 18 27 26.7 +0.3
KUR *e* 18 28 36.0
KUR S S 18 32 47.4 +3.0
KUR pmax pmax
comp=N,143nm,1.1s
KUR pmax pmax
comp=Z,220nm,1.1s
KUR pmax pmax
comp=E,79nm,1.2s
BWNR Bhubaneshwar 33.34 277 *e*P P 18 27 28.6 +1.0
ZAK Zakamensk 33.43 339 *e*P P 18 27 28.4 +0.4
ZAK *e* 18 30 09.4
ZAK pmax pmax
comp=Z,22nm,1.4s
ZEA Zeya 33.86 6 *e*P P 18 27 31.3 -0.3
ZEA pmax pmax
comp=Z,200nm,6.4s
ZEA pmax pmax
comp=N,30nm,1.1s
ZEA pmax pmax
comp=Z,40nm,1.2s
ZEA MLR MLR
comp=N,2μm,14.0s
ZEA MLR MLR
comp=Z,2μm,15.0s
XMI Christmas Isla 34.08 208 P P 18 27 33.4 -0.5
MTN Manton Dam 34.14 163 P P 18 27 32.0 -2.3
baz=34,SNR=60
MTN Manton Dam 34.14 163 P P 18 27 32.1 -2.3
MTN IAmb IAmb 18 27 49.0
comp=Z,50nm,1.0s
MTN PcP PcP 18 30 12.1 +0.8
MTN Manton Dam 34.14 163 P P 18 27 32.2 -2.2
KDU Kakadu 34.38 161 P P 18 27 33.9 -2.6
baz=34,SNR=13
KDU Kakadu 34.38 161 P P 18 27 33.9 -2.6
IRK Irkutsk 34.72 341 *e*P P 18 27 41.1 +2.0
IRK pmax pmax
comp=Z,137nm,1.5s
TYV Tymovskoe 34.97 24 *e*P P 18 27 42.5 +1.3
TYV *e*S S 18 33 15.2 +4.3
TYV pmax pmax
comp=Z,33nm,1.8s
TYV pmax pmax
comp=Z,200nm,4.1s
TYV smax smax
comp=N,200nm,4.2s
TYV smax smax
comp=E,200nm,4.2s
MOY Mondy 35.30 338 *e*P P 18 27 45.4 +1.2
MOY pmax pmax
comp=Z,102nm,2.0s
RAGD RAYAGADA 35.67 275 *e*P P 18 27 49.0 +1.3
NKL Nikolayevsk 36.18 20 *e*P P 18 27 50.7 -0.8
NKL *e*S S 18 33 30.6 +1.2
NKL pmax pmax
comp=E,5.0nm,1.0s
NKL pmax pmax
comp=N,232nm,0.9s
NKL pmax pmax
comp=Z,40nm,1.2s
NKL smax smax
comp=E,6.0nm,0.8s
NKL smax smax
comp=N,203nm,1.1s
NKL MLR MLR
comp=N,4μm,18.0s
NKL MLR MLR
comp=Z,2μm,17.0s
KNRA Kununurra 36.31 168 P P 18 27 51.2 -1.9
baz=36,SNR=37
KNRA Kununurra 36.31 168 P P 18 27 50.9 -2.1
KNRA IAmb IAmb 18 27 53.8
comp=Z,78nm,0.8s
KNRA PcP PcP 18 30 18.2 +0.6
KNRA ScP ScP 18 34 01.8 -0.1
KNRA Kununurra 36.31 168 P P 18 27 51.2 -1.9
BLSP Bilaspur 36.60 280 *e*P P 18 27 56.2 +0.6
WMQ Urumqi 36.68 318 *e*P P 18 27 58.3 +2.2
WMQ pP pP 18 28 03.3 -1.0
WMQ PcP PcP 18 30 18.6 +0.1
WMQ S S 18 33 40.4 +2.8
WMQ pmax pmax
comp=Z,40nm,1.5s
WMQ pmax pmax
comp=Z,470nm,3.9s
WMQ LR LR
comp=Z,7μm,15.7s
WMQ LR LR
comp=Z,3μm,14.9s
WMQ LR LR
comp=Z,3μm,17.1s
BOD Bodaibo 38.03 354 *e*P P 18 28 08.6 +1.3
BOD pmax pmax
comp=Z,29nm,1.3s
PATS Pohnpei 38.16 105 P P 18 28 07.5 -1.4
baz=38,SNR=4.3
PATS Pohnpei 38.16 105 P P 18 28 08.7 -0.2
PATS Pohnpei 38.16 105 P P 18 28 11.0 +2.1
comp=Z,264nm,1.3s
LGTI Lohaghat 38.31 292 *e*P P 18 28 10.3 +0.2
PTH Pithoragarh 38.35 292 *e*P P 18 28 10.1 -0.5
KRVT Keravat (AS076 38.68 126 LR LR 18 41 09.2
comp=Z,4μm,21.1s,baz=80,slow=32
RABL Rabaul 38.71 125 P P 18 28 13.2 -0.3
RABL Rabaul 38.71 125 P P 18 28 14.4 +0.9
PMG Port Moresby 38.79 137 P P 18 28 12.2 -1.9
PMG Port Moresby 38.79 137 *ce*P P 18 28 13.1 -1.1
PMG pmax pmax
comp=Z,68nm,1.3s
PMG Port Moresby 38.79 137 P P 18 28 13.0 -1.1
NGP Nagpur 39.54 279 *e*P P 18 28 21.4 +1.0
JHNI Jhansi 39.73 286 *e*P P 18 28 23.4 +1.4
COEN Coen 40.08 146 P P 18 28 23.1 -1.9
baz=40,SNR=4.3
COEN Coen 40.08 146 P P 18 28 22.3 -2.6
COEN PcP PcP 18 30 28.2 -1.1
COEN Coen 40.08 146 P P 18 28 23.0 -1.9
ZSN Zaisan 40.20 321 *e*P P 18 28 26.4 +0.8
ZSN *e* 18 29 59.0
ZSN *e*S S 18 34 32.6 +2.1
ZSN *e*SS SS 18 37 27.4 -1.7
ZSN Zaisan 40.20 321 *e*P P 18 28 26.4 +0.8
baz=321
ZSN *e*PP PP 18 29 59.1 +0.7
baz=321
ZSN *e*S S 18 34 32.6 +2.1
baz=321
ZSN *e*SS SS 18 37 27.5 -1.7
baz=321
ZSN *e*SSS SSS 18 37 51.5
baz=321
HYB Hyderabad 40.56 274 *e*P P 18 28 29.4 +0.4
HYB IAmb IAmb 18 28 43.4
comp=Z,52nm,1.2s
HYBB Hyderabad (bro 40.56 274 *e*P P 18 28 28.7 -0.3
HYBB *e*PP PP 18 30 02.4 -0.3
HYBB *e*PcP PcP 18 30 30.9 -0.2
HYBB *e*S S 18 34 37.9 +1.3
BHPL Bhopal 40.85 283 *e*P P 18 28 32.0 +0.7
BHPL IAmb IAmb 18 28 47.8
comp=Z,82nm,1.2s
MBWA Marble Bar 41.06 182 P P 18 28 31.5 -1.4
MBWA Marble Bar 41.06 182 P P 18 28 32.0 -0.9
SMLA Simla 41.10 295 *e*P P 18 28 33.5 +0.2
SMLA IAmb IAmb 18 28 55.9
comp=Z,137nm,1.2s
PALK Pallekele 41.41 258 LR LR 18 47 18.5
comp=Z,1μm,18.2s,baz=159,slow=38
PALK Pallekele 41.41 258 IAMs_20 IAMs_20 18 46 49.2
comp=Z,2μm,20.0s
MK31 Makanchi Array 41.44 319 P P 18 28 36.5 +0.6
MK31 Makanchi Array 41.44 319 *d iP P 18 28 37.2 +1.3
MKAR Makanchi Array 41.44 319 P P 18 28 37.2 +1.4
comp=Z,27nm,0.9s,baz=110,slow=10,SNR=113
MKAR ScP ScP 18 34 19.3 -2.0
comp=Z,4.9nm,1.0s,baz=120,slow=4.8,SNR=5.6
MKAR LR LR 18 48 03.5
comp=Z,3μm,18.8s,baz=106,slow=39
comp=Z,27nm,0.9s
MKAR Makanchi Array 41.44 319 P P 18 28 36.8 +1.0
PSA00 Pilbara Seismi 41.47 182 P P 18 28 35.4 -0.8
PSA00 Pilbara Seismi 41.47 182 P P 18 28 35.5 -0.8
AKL Akola 41.48 279 *e*P P 18 28 36.9 +0.4
KUDL Kundal 41.55 290 *e*P P 18 28 34.7 -2.2
MAKZ Makanchi 41.64 319 P P 18 28 38.1 +0.6
MAKZ IAmb IAmb 18 28 57.9
comp=Z,90nm,1.3s
MAKZ Makanchi 41.64 319 P P 18 28 38.1 +0.6
MAKZ pmax pmax
comp=Z,91nm,1.3s
MAKZ MLR MLR
comp=Z,3μm,18.0s
WB0 Warramunga Arr 41.65 161 P P 18 28 35.5 -2.2
WRAB Tennant Creek 41.79 162 P P 18 28 36.8 -2.1
WRAB Tennant Creek 41.79 162 *ce*P P 18 28 37.4 -1.5
WRAB pmax pmax
comp=Z,297nm,0.8s
WRA Warramunga Arr 41.80 162 P P 18 28 37.8 -1.2
comp=Z,204nm,0.7s,baz=342,slow=9.0,SNR=346
WRA PcP PcP 18 30 34.5 -0.3
comp=Z,24nm,1.0s,baz=328,slow=3.7,SNR=6.6
WRA S S 18 34 49.3 -5.3
comp=Z,26nm,1.0s,baz=343,slow=16,SNR=24
WRA LR LR 18 45 59.5
comp=Z,685nm,21.5s,baz=304,slow=36
WRA Warramunga Arr 41.80 162 P P 18 28 37.5 -1.4
WRA Warramunga Arr 41.80 162 *i* P P 18 28 36.7 -2.2
WRA pmax pmax
comp=Z,204nm,0.7s
WB2 Warramunga Arr 41.80 162 P P 18 28 37.7 -1.3
SHLS Shalkode 41.86 313 *d iP P 18 28 38.7 -0.7
SHLS *i* S S 18 34 54.7 -0.8
SHLS Shalkode 41.86 313 ⇓*i*P P 18 28 38.8 -0.7
baz=312
SHLS *i* S S 18 34 54.8 -0.8
baz=312
WR0 Warramunga Arr 41.87 161 P P 18 28 38.4 -1.2
KHET Khetri 42.15 290 *e*P P 18 28 41.6 -0.4
UZB Uzynbulak 42.16 313 *e*P P 18 28 43.4 +1.5
UZB *i* S S 18 35 02.8 +2.8
UZB Uzynbulak 42.16 313 *e*P P 18 28 43.5 +1.5
baz=312
UZB *i* S S 18 35 02.9 +2.8
baz=312
LATR Latur 42.25 276 *e*P P 18 28 41.6 -1.1
YAK Yakutsk 42.27 6 LR LR 18 48 15.5
comp=Z,2μm,19.1s,baz=194,slow=39
YAK Yakutsk 42.27 6 P P 18 28 40.5 -1.8
YAK IAmb IAmb 18 28 57.6
comp=Z,54nm,0.8s
YAK PcP PcP 18 30 35.0 -0.6
YAK IAMs_20 IAMs_20 18 47 42.9
comp=Z,2μm,21.0s
YAK Yakutsk 42.27 6 *c iP P 18 28 40.9 -1.4
YAK *e**PP pwP 18 28 54.9 -0.2
YAK *e* 18 30 18.0
YAK *e* 18 30 35.1
YAK *e*S S 18 35 00.2 -0.5
YAK *e**SS sS 18 35 15.6 +1.5
YAK *e*SS SS 18 38 09.0 -0.5
YAK *e* 18 38 33.3
YAK pmax pmax
comp=Z,32nm,0.8s
YAK pmax pmax
comp=N,14nm,0.9s
YAK pmax pmax
comp=E,7.0nm,1.1s
YAK pmax pmax
comp=Z,52nm,1.9s
YAK pmax pmax
comp=N,28nm,1.8s
YAK pmax pmax
comp=E,16nm,1.6s
YAK smax smax
comp=E,48nm,1.5s

YAK smax smax
comp=N,76nm,2.0s
YAK MLR MLR
comp=Z,2µm,16.0s
YAK MLR MLR
comp=N,1µm,15.0s
THN Thein Dam 42.45 296 *e*P **P 18 28 44.9 +0.7**
KPKS Kokpek 42.50 313 *d i*P **P 18 28 45.8 +1.2**
KPKS *i* S **S 18 35 08.5 +3.7**
KPKS pmax pmax
comp=Z,15nm,0.9s
KPKS Kokpek 42.50 313 ⇓*i*P **P 18 28 45.9 +1.2**
comp=Z,15nm,0.9s,baz=312
KPKS *i* S **S 18 35 08.6 +3.7**
baz=312
SATY Saty 42.56 312 *e*P **P 18 28 46.9 +1.7**
SATY *e*S **S 18 35 09.6 +3.8**
SATY pmax pmax
comp=Z,53nm,2.4s
SATY Saty 42.56 312 *e*P **P 18 28 46.1 +0.9**
comp=Z,53nm,2.4s,baz=312
SATY *e*S **S 18 35 09.6 +3.8**
baz=312
ZHN Zhinishke 42.57 313 *e*P **P 18 28 45.9 +0.7**
ZHN *e*S **S 18 35 07.7 +1.7**
ZHN Zhinishke 42.57 313 *e*P **P 18 28 45.9 +0.7**
baz=312
ZHN *e*S **S 18 35 07.8 +1.7**
baz=312
H11N1 WAKE ISLAND Hy 42.69 82 T T 19 14 30.6
baz=278,slow=75,SNR=300
H11N2 WAKE ISLAND Hy 42.69 82 T T 19 14 19.1
baz=278,slow=75,SNR=217
H11S3 WAKE ISLAND Hy 42.69 84 T T 19 13 58.4
baz=280,slow=74,SNR=130
H11S1 WAKE ISLAND Hy 42.70 84 T T 19 13 58.0
baz=280,slow=74,SNR=175
H11N3 WAKE ISLAND Hy 42.70 82 T T 19 14 34.8
baz=278,slow=75,SNR=229
H11S2 WAKE ISLAND Hy 42.71 84 T T 19 14 02.8
baz=280,slow=74,SNR=163
GIRL Giralia 43.08 190 P **P 18 28 50.1 +0.8**
baz=43,SNR=58
GIRL Giralia 43.08 190 P **P 18 28 50.1 +0.8**
GIRL Giralia 43.08 190 P **P 18 28 49.9 +0.6**
JMU Jammu 43.16 297 *e*P **P 18 28 52.4 +2.4**
PEA0B Petropavlovsk- 43.17 31 P **P 18 28 49.9 +0.1**
PEA0B Petropavlovsk- 43.17 31 *c i*P **P 18 28 49.4 -0.4**
PETK Petropavlovsk- 43.17 31 P **P 18 28 49.4 -0.4**
comp=Z,18nm,0.9s,baz=220,slow=13,SNR=27
PETK LR LR 18 45 37.4
comp=Z,1µm,21.9s,baz=232,slow=34
comp=Z,18nm,0.9s
PETK Petropavlovsk- 43.17 31 P **P 18 28 49.3 -0.4**
AJM Ajmer 43.20 288 *e*P **P 18 28 50.1 -0.5**
TDK Taldyqorghan 43.21 315 *e*P **P 18 28 51.9 +1.6**
TDK *e*S **S 18 35 16.6 +1.4**
TDK pmax pmax
comp=Z,187nm,2.3s
TDK Taldyqorghan 43.21 315 *e*P **P 18 28 51.9 +1.6**
comp=Z,187nm,2.3s,baz=314
TDK *e*S **S 18 35 16.6 +1.4**
baz=314
ARXS Arharly 43.33 314 *i* P **P 18 28 52.3 +1.0**
KSH Kashi 43.36 307 P **P 18 28 55.0 +3.3**
KSH sP sP 18 29 03.0 -0.2
KSH PcP **PcP 18 30 43.3 +3.3**
KSH S **S 18 35 20.8 +3.1**
KSH pmax pmax
comp=Z,12nm,0.9s
KSH pmax pmax
comp=Z,480nm,3.6s
KSH LR LR
comp=Z,3µm,16.5s
KSH LR LR
comp=Z,2µm,15.1s
KSH LR LR
comp=Z,4µm,15.8s
KOD Kodaikanal 43.39 264 *e*P **P 18 28 55.3 +2.9**
TNSS Tian-Shan 43.57 312 *e*P **P 18 28 55.3 +1.7**
TNSS Tian-Shan 43.57 312 *e*P **P 18 28 55.3 +1.7**
baz=311
PET Petropavlovsk 43.59 32 P **P 18 28 52.2 -0.9**
PET IAmb IAmb 18 28 55.4
comp=Z,69nm,1.0s
PET Petropavlovsk 43.59 32 *e*P **P 18 28 53.4 +0.3**
PET *e* 18 30 37.1
PET *e*S **S 18 35 19.7 -0.7**
PET pmax pmax
comp=Z,135nm,1.8s
PET pmax pmax
comp=Z,200nm,16.1s
PET pmax pmax
comp=Z,400nm,16.0s
PET pmax pmax
comp=Z,300nm,15.9s
PET pmax pmax
comp=Z,200nm,16.7s
PET MLR MLR
comp=Z,1µm,19.0s
PET Petropavlovsk 43.59 32 P **P 18 28 53.5 +0.3**
ZAA0 Zalesovo Array 43.78 329 P **P 18 28 54.5 -0.1**
ZAA0 IAmb IAmb 18 29 11.4
comp=Z,133nm,1.4s
ZALV Zalesovo Beam 43.78 329 P **P 18 28 55.4 +0.7**
comp=Z,18nm,0.8s,baz=118,slow=7.0,SNR=43
ZALV LR LR 18 48 34.3
comp=Z,3µm,18.7s,baz=132,slow=38
comp=Z,18nm,0.8s
ZALV Zalesovo Beam 43.78 329 P **P 18 28 54.9 +0.2**
ZALV Zalesovo Beam 43.78 329 *i* P **P 18 28 55.4 +0.7**
ZALV pmax pmax
comp=Z,18nm,0.8s
CHKK Chushkaly 43.79 313 *e*P **P 18 28 55.7 +0.8**
CHKK Chushkaly 43.79 313 *e*P **P 18 28 55.8 +0.8**
baz=312
MTSU Mount Surprise 44.18 148 P **P 18 28 58.1 -0.2**
baz=44,SNR=89
MTSU Mount Surprise 44.18 148 P **P 18 28 58.2 -0.1**
QIS Mount Isa 44.19 155 P **P 18 28 57.3 -1.1**
baz=44,SNR=151
QIS Mount Isa 44.19 155 P **P 18 28 57.4 -1.0**
KUU Kurty 44.25 313 *d i*P **P 18 29 00.2 +1.6**
KUU *e*S **S 18 35 29.7 -0.6**
KUU pmax pmax
comp=Z,155nm,2.6s
KUU Kurty 44.25 313 ⇓*i*P **P 18 29 00.2 +1.6**
comp=Z,155nm,2.6s,baz=312
KUU *e*S **S 18 35 29.8 -0.6**
baz=312
SEM Semipalatinsk 44.30 323 *d i*P **P 18 28 59.6 +0.4**
SEM pmax pmax
comp=Z,39nm,2.1s
SEM Semipalatinsk 44.30 323 ⇓*i*P **P 18 28 59.6 +0.4**
comp=Z,39nm,2.1s,baz=322
PCHI Peechi 44.34 264 *e*P **P 18 28 56.5 -3.3**
TKM2 Tokmak 2 44.48 311 P **P 18 29 02.8 +2.0**
SNR=8.5
MA2 Magadan 44.67 21 LR LR 18 50 26.0
comp=Z,2µm,18.2s,baz=216,slow=40
MA2 Magadan 44.67 21 IAMs_20 IAMs_20 18 50 05.9
comp=Z,2µm,19.0s
MA2 Magadan 44.67 21 *ce*P **P 18 29 00.5 -1.3**
MA2 pmax pmax
comp=Z,57nm,1.7s
MA2 Magadan 44.67 21 P **P 18 29 03.5 +1.7**
POO Poona 44.76 276 *e*P **P 18 29 05.0 +1.9**
KBK Karagaybulak 44.87 311 P **P 18 29 06.2 +2.4**
SNR=7.7
KBK Karagaybulak 44.87 311 P **P 18 29 07.0 +3.2**
KBK pmax pmax
comp=Z,52nm,1.1s
UCH Uchtor 45.07 310 P **P 18 29 08.4 +2.6**
SNR=11
UCH Uchtor 45.07 310 P **P 18 29 08.9 +3.1**
UCH pmax pmax
comp=Z,87nm,1.4s
CHMS Chumysh 45.10 311 P **P 18 29 07.7 +2.2**
SNR=7.7
AAK Ala-Archa 45.19 311 LR LR 18 50 42.2
comp=Z,6µm,19.2s,baz=90,slow=40
AAK Ala-Archa 45.19 311 *ce*P **P 18 29 09.4 +3.0**
AAK pmax pmax
comp=Z,16nm,1.7s
AS31 Alice Springs 45.20 164 P **P 18 29 05.7 -0.8**
AS31 IAmb IAmb 18 29 07.2
comp=Z,72nm,0.8s
ASAR Alice Springs 45.21 164 P **P 18 29 05.4 -1.0**
ASAR Alice Springs 45.21 164 P **P 18 29 05.4 -1.0**
SGDS Sogindy 45.31 312 *d i*P **P 18 29 07.7 +0.6**
SGDS *e*S **S 18 35 49.4 +3.6**
SGDS pmax pmax
comp=Z,31nm,2.7s
SGDS Sogindy 45.31 312 ⇓*i*P **P 18 29 07.8 +0.6**
comp=Z,32nm,2.7s,baz=311
SGDS *e*S **S 18 35 49.5 +3.6**
baz=311
KURK Kurchatov 45.36 323 P **P 18 29 07.9 +0.5**
KURK IAmb IAmb 18 29 22.4
comp=Z,76nm,1.2s
KURK Kurchatov 45.36 323 IAMs_20 IAMs_20 18 48 52.8
comp=Z,2µm,20.0s
KURK Kurchatov 45.36 323 *ce*P **P 18 29 08.4 +1.0**
KURK pmax pmax
comp=Z,64nm,2.5s
KURBB Kurchatov Arra 45.37 323 LR LR 18 49 16.5
comp=Z,1µm,19.0s,baz=94,slow=38
WRKA Warakurna 45.39 171 P **P 18 29 07.3 -0.6**
baz=46,SNR=382
WRKA Warakurna 45.39 171 P **P 18 29 07.9 0.0**
AML Almayashu 45.64 310 P **P 18 29 13.0 +2.8**
SNR=5.8
AML Almayashu 45.64 310 *i* P **P 18 29 11.9 +1.7**
SNR=6.7
BTLS Baital 46.15 314 *d i*P **P 18 29 14.8 +1.1**
BTLS *e*S **S 18 35 57.8 0.0**
BTLS pmax pmax
comp=Z,24nm,2.2s
BTLS Baital 46.15 314 ⇓*i*P **P 18 29 14.8 +1.1**
comp=Z,24nm,2.2s,baz=313
BTLS *e*S **S 18 35 57.9 0.0**
baz=313
CTA Charters Tower 46.80 147 LR LR 18 47 33.1
comp=Z,2µm,21.7s,baz=330,slow=34
CTA Charters Tower 46.80 147 P **P 18 29 19.2 +0.2**
CTA pmax pmax
comp=Z,188nm,0.9s
CTA Charters Tower 46.80 147 P **P 18 29 19.1 0.0**
CTAO Charters Tower 46.80 147 P **P 18 29 18.6 -0.5**
CTAO PcP **PcP 18 30 53.8 +1.9**
CTAO Charters Tower 46.80 147 IAMs_20 IAMs_20 18 47 31.1
comp=Z,2µm,21.0s
CTAO Charters Tower 46.80 147 P **P 18 29 18.6 -0.5**
CTAO 18 30 53.8
CTAO pmax pmax
comp=Z,128nm,0.9s
CTAO MLR MLR
comp=Z,2µm,21.0s
CTAO Charters Tower 46.80 147 P **P 18 29 19.3 +0.2**
SEY Seymchan 47.73 19 LR LR 18 50 06.2
comp=Z,989nm,20.4s,baz=216,slow=37
SEY Seymchan 47.73 19 *ce*P **P 18 29 25.9 +0.2**
SEY pmax pmax
comp=Z,26nm,1.7s
SEY MLR MLR
comp=Z,982nm,19.0s
HNR Honiara 47.99 124 LR LR 18 49 27.4
comp=Z,1µm,19.1s,baz=293,slow=36
HNR Honiara 47.99 124 IAMs_20 IAMs_20 18 49 15.7
comp=Z,2µm,20.0s
KK31 Karatay Array 48.15 310 P **P 18 29 28.1 -1.3**
KK31 PcP **PcP 18 30 56.8 +0.3**
KK31 Karatay Array 48.15 310 P **P 18 29 28.1 -1.3**
KK31 18 30 56.8
KK31 pmax pmax
comp=Z,29nm,1.1s
KKAR Karatay Array 48.15 310 PcP **PcP 18 30 56.8 +0.3**
KBL Kabul 48.16 299 P **P 18 29 30.2 +0.4**
KBL IAmb IAmb 18 29 55.3
comp=Z,84nm,1.4s
KBL Kabul 48.16 299 P **P 18 29 30.2 +0.4**
KBL pmax pmax
comp=Z,84nm,1.4s
KBL Kabul 48.16 299 P **P 18 29 31.6 +1.8**
SNR=18
IUG Iuzhnay 48.31 309 *d i*P **P 18 29 32.1 +1.4**
IUG *e*S **S 18 36 32.2 +3.4**
IUG Iuzhnay 48.31 309 ⇓*i*P **P 18 29 32.2 +1.4**
baz=308
IUG *e*S **S 18 36 32.2 +3.4**
baz=308
CHGR Chuyangaron 48.43 304 PcP **PcP 18 30 57.7 0.0**
CHGR Chuyangaron 48.43 304 P **P 18 29 32.5 +0.8**
BRZS Berezniki 48.58 320 *d i*P **P 18 29 33.7 +1.2**
BRZS *e* 18 31 26.7
BRZS *i* S **S 18 36 34.9 +2.7**
BRZS pmax pmax
comp=Z,24nm,2.3s
BRZS Berezniki 48.58 320 ⇓*i*P **P 18 29 33.8 +1.2**
comp=Z,24nm,2.3s,baz=319
BRZS *e*PP **PP 18 31 26.8 +1.3**
baz=319
BRZS *i* S **S 18 36 35.0 +2.7**
baz=319
MORW Morawa 49.18 186 P **P 18 29 37.1 -0.2**
baz=49,SNR=46
MORW Morawa 49.18 186 P **P 18 29 36.8 -0.4**
MORW Morawa 49.18 186 P **P 18 29 37.2 0.0**
OOD Oodnadatta 49.61 163 P **P 18 29 40.4 -0.1**
BLDU Ballidu 50.65 185 P **P 18 29 47.8 -0.6**
baz=51,SNR=36
BLDU Ballidu 50.65 185 P **P 18 29 47.9 -0.5**
BVAR Borovoye Array 50.96 323 LR LR 18 52 42.1
comp=Z,887nm,20.1s,baz=339,slow=37
FORT Forrest 51.02 173 P **P 18 29 51.1 0.0**
baz=51,SNR=224
FORT Forrest 51.02 173 P **P 18 29 51.0 -0.2**
FORT Forrest 51.02 173 P **P 18 29 51.5 +0.3**
BRVK Borovoye 51.03 323 P **P 18 29 51.4 +0.3**
BRVK IAmb IAmb 18 30 06.3
comp=Z,48nm,0.9s
BRVK Borovoye 51.03 323 IAMs_20 IAMs_20 18 52 29.7
comp=Z,1µm,19.0s
BRVK Borovoye 51.03 323 *ce*P **P 18 29 52.4 +1.3**
BRVK pmax pmax
comp=Z,60nm,2.5s
INKA Innaminka 51.14 158 P **P 18 29 52.5 +0.3**
QLP Quilpie 51.45 154 P **P 18 29 53.8 -0.7**
baz=52,SNR=38
QLP Quilpie 51.45 154 P **P 18 29 54.4 -0.1**
KLBR Kellerberrin 51.54 184 P **P 18 29 54.7 -0.4**
baz=52,SNR=63
KLBR Kellerberrin 51.54 184 P **P 18 29 54.8 -0.3**
MULG Mulgathing 51.58 166 P **P 18 29 55.5 +0.1**
TIXI Tiksi 51.72 3 LR LR 18 54 44.9
comp=Z,3µm,18.5s,baz=180,slow=39
TIXI Tiksi 51.72 3 P **P 18 29 53.8 -2.1**
TIXI IAmb IAmb 18 30 13.1
comp=Z,129nm,1.4s
TIXI Tiksi 51.72 3 *ce*P **P 18 29 54.4 -1.5**
TIXI pmax pmax
comp=Z,89nm,1.7s
TIXI MLR MLR
comp=Z,3µm,18.0s
RK1H Rockhampton Ha 51.73 145 P **P 18 29 56.8 +0.1**
MUN Mundaring 52.04 186 P **P 18 29 58.5 -0.3**
baz=52,SNR=11
MUN Mundaring 52.04 186 P **P 18 29 58.5 -0.3**
LCRK Leigh Creek 52.83 162 P **P 18 30 04.8 +0.1**
NWAO Narrogin (SRO) 52.90 184 P **P 18 30 05.0 -0.2**
NWAO Narrogin (SRO) 52.90 184 P **P 18 30 05.0 -0.2**
NWAO pmax pmax
comp=Z,233nm,0.9s
NWAO Narrogin (SRO) 52.90 184 P **P 18 30 05.4 +0.2**
RMQ Roma 53.41 149 P **P 18 30 09.4 +0.3**
baz=53,SNR=68
RMQ Roma 53.41 149 P **P 18 30 09.9 +0.8**
EIDS Eidsvold 53.65 146 P **P 18 30 10.6 -0.3**
baz=54,SNR=36
EIDS Eidsvold 53.65 146 P **P 18 30 10.5 -0.4**
EIDS Eidsvold 53.65 146 P **P 18 30 10.7 -0.2**
BBOO Buckleboo 54.48 165 P **P 18 30 16.7 0.0**
baz=55,SNR=140
BBOO Buckleboo 54.48 165 P **P 18 30 16.6 -0.1**
BBOO Buckleboo 54.48 165 P **P 18 30 17.0 +0.3**
RKGY Rocky Gully 54.59 184 P **P 18 30 18.3 +0.8**
baz=55,SNR=5.6
RKGY Rocky Gully 54.59 184 P **P 18 30 18.3 +0.8**
WHYH Whyalla 55.08 163 P **P 18 30 22.4 +1.4**
comp=Z,30nm,0.7s
STKA Stephens Creek 55.22 159 P **P 18 30 21.8 -0.3**
comp=Z,46nm,0.8s,baz=335,slow=7.7,SNR=59
STKA LR LR 18 58 05.7
comp=Z,491nm,18.1s,baz=344,slow=40
comp=Z,46nm,0.8s
STKA Stephens Creek 55.22 159 P **P 18 30 21.8 -0.3**
baz=55,SNR=70
STKA Stephens Creek 55.22 159 P **P 18 30 20.9 -1.3**
STKA Stephens Creek 55.22 159 *c i*P **P 18 30 21.7 -0.4**
STKA Stephens Creek 55.22 159 P **P 18 30 22.7 +0.6**
BILL Bilibino 55.44 19 P **P 18 30 22.4 -0.8**
BILL IAmb IAmb 18 30 24.0
comp=Z,34nm,0.7s
BILL IAMs_20 IAMs_20 18 57 07.2
comp=Z,848nm,18.0s
BILL Bilibino 55.44 19 *d i*P **P 18 30 22.7 -0.6**
BILL *i* 18 32 27.9
BILL pmax pmax
comp=Z,33nm,0.7s
BILL MLR MLR
comp=Z,786nm,16.0s
HTT Hallett 55.83 162 P **P 18 30 26.7 +0.2**
baz=56,SNR=22
HTT Hallett 55.83 162 P **P 18 30 27.2 +0.7**
MIDW Midway 55.96 69 P **P 18 30 27.8 +0.1**
MIDW Midway 55.96 69 P **P 18 30 29.3 +1.6**
comp=Z,255nm,1.1s
CMSA Cobar Meteorol 56.41 155 P **P 18 30 31.5 +0.8**
baz=56,SNR=18
CMSA Cobar Meteorol 56.41 155 P **P 18 30 32.0 +1.3**
ABKAR Akbulak array 56.44 316 P **P 18 30 31.8 +1.0**
ABKAR IAmb IAmb 18 30 46.0
comp=Z,64nm,1.1s
ABKAR Akbulak array 56.44 316 P **P 18 30 31.7 +1.0**
GEYT Alibeck 57.07 303 P **P 18 30 38.0 +2.5**
comp=Z,8.1nm,0.8s,baz=231,slow=14,SNR=16
GEYT LR LR 19 00 06.2
comp=Z,1µm,18.8s,baz=112,slow=41
comp=Z,8.1nm,0.8s
GHSS Government Hou 57.13 163 P **P 18 30 36.9 +1.2**
comp=Z,215nm,0.9s
ADK Adak 57.15 41 P **P 18 30 35.6 -0.1**
TWOA Tennyson Woods 57.23 163 P **P 18 30 37.3 +0.9**
SVE Sverdlovsk 57.44 325 *de*P **P 18 30 38.6 +0.9**
SVE *e*S **S 18 38 33.0 +0.4**
SVE *e* 18 42 19.2
SVE pmax pmax
comp=Z,137nm,1.4s
SVE MLR MLR
comp=Z,2µm,18.0s
GSTR Great Sitkin T 57.57 40 P **P 18 30 37.8 -0.9**
AKTO Aktyubinsk 57.83 318 LR LR 18 57 17.0
comp=Z,2µm,18.0s,baz=98,slow=38
WSAR Wadi Sarin 58.00 285 LR LR 18 57 11.0
comp=Z,1µm,21.9s,baz=106,slow=38
WSAR Wadi Sarin 58.00 285 P **P 18 30 42.8 +0.6**
SNR=11
ARMA Armidale 58.07 149 P **P 18 30 43.4 +0.9**
baz=58,SNR=23
ARMA Armidale 58.07 149 P **P 18 30 43.2 +0.6**
ARMA IAmb IAmb 18 30 44.1
comp=Z,68nm,0.9s
ARMA Armidale 58.07 149 P **P 18 30 43.0 +0.4**
KOUNC Koumac, New Ca 58.29 131 P **P 18 30 43.4 -0.7**
KOUNC IAmb IAmb 18 30 47.4
comp=Z,58nm,1.0s
KOUNC Koumac, New Ca 58.29 131 P **P 18 30 46.5 +2.4**
BIDO Bidbid 58.40 286 P **P 18 30 46.2 +1.2**
SNR=16
ARU Arti 58.48 325 LR LR 18 59 40.9
comp=Z,1µm,18.1s,baz=94,slow=40
ARU Arti 58.48 325 P **P 18 30 44.5 -0.5**
ARU IAmb IAmb 18 31 03.0
comp=Z,50nm,0.8s
ARU IAMs_20 IAMs_20 18 59 28.5
comp=Z,1µm,20.0s
ARU Arti 58.48 325 *d i*P **P 18 30 45.8 +0.8**
ARU 18 31 31.1
ARU 18 32 51.0
ARU PPP PPP 18 34 16.3
ARU S **S 18 38 50.5 +4.3**
ARU 18 40 24.6
ARU SS **SS 18 42 45.3 +6.8**
ARU pmax pmax
comp=Z,85nm,1.4s
ARU MLR MLR
comp=Z,3µm,16.0s
MHTO MHTO 59.02 283 P **P 18 30 49.0 -0.4**
HOQ Hoqain 59.13 286 P **P 18 30 50.5 +0.4**
SNR=10
BANOM Banah 59.65 289 P **P 18 30 55.4 +1.7**
BANOM Banah 59.65 289 P **P 18 30 55.1 +1.4**
ARPS Mount Arapiles 59.80 161 P **P 18 30 54.8 +0.6**
baz=60,SNR=92
ARPS Mount Arapiles 59.80 161 P **P 18 30 55.0 +0.7**
HATD Hatta, Dubai 59.98 288 P **P 18 30 57.6 +1.6**
HATD Hatta, Dubai 59.98 288 P **P 18 30 57.5 +1.6**
ASHO Ashiyiah 60.07 287 P **P 18 30 57.0 +0.4**
SNR=11
ASHO Ashiyiah 60.07 287 *i* P **P 18 30 57.6 +1.0**
SNR=8.1
NTLH Newcastle Hard 60.16 151 P **P 18 30 57.7 +0.8**
NTLS Newcastle Soft 60.22 151 P **P 18 30 57.6 +0.4**
ALNE Al Ain 60.45 287 P **P 18 31 00.7 +1.5**
SNR=13
SYDH Sydney Hard Ro 60.46 152 P **P 18 30 59.9 +1.0**
FAQ Al Faqa, Dubai 60.48 288 P **P 18 31 00.1 +0.8**
ASUD Al Ashush, Dub 60.73 288 P **P 18 31 02.3 +1.2**
CAN Canberra 61.05 154 P **P 18 31 03.1 +0.1**
CAN Canberra 61.05 154 P **P 18 31 03.1 +0.1**
CAN pmax pmax
comp=Z,173nm,1.1s
CAN Canberra 61.05 154 P **P 18 31 03.9 +0.9**
BRAT Ballarat 61.17 160 P **P 18 31 04.8 +1.2**
CNB Canberra Magne 61.20 154 P **P 18 31 05.0 +1.0**
baz=61,SNR=32
CNB Canberra Magne 61.20 154 P **P 18 31 04.9 +1.0**
TOO Toolangi 61.72 158 P **P 18 31 08.5 +1.1**
baz=62,SNR=66
TOO Toolangi 61.72 158 P **P 18 31 08.1 +0.7**
TOO Toolangi 61.72 158 P **P 18 31 08.1 +0.7**
TOO pmax pmax
comp=Z,354nm,1.0s
TOO Toolangi 61.72 158 P **P 18 31 08.5 +1.1**
MLBS Spotswood, Mel 61.74 159 P **P 18 31 09.4 +1.9**
comp=Z,169nm,0.7s
GEXS Deakin Univers 61.88 160 P **P 18 31 10.3 +1.9**
comp=Z,612nm,0.9s
GAMB Gambell 61.96 28 P **P 18 31 09.1 +0.4**
GAMB IAmb IAmb 18 31 10.7
comp=Z,68nm,1.2s
GAMB Gambell 61.96 28 P **P 18 31 09.7 +1.1**
baz=258,SNR=6.4
NIKH Nikolski High 62.03 40 P **P 18 31 08.4 -0.9**
NIKH Nikolski High 62.03 40 P **P 18 31 09.0 -0.4**
baz=267
MZR Muzera 62.70 286 *i* P **P 18 31 14.7 +0.3**
SNR=9.0
JRN Qarnain Island 62.89 288 P **P 18 31 17.2 +1.6**
UNV Unalaska Valle 63.48 39 P **P 18 31 17.3 -1.7**
UNV IAmb IAmb 18 31 43.9
comp=Z,68nm,1.3s
KIRV Kirov 63.66 326 LR LR 19 01 11.2
comp=Z,3µm,19.8s,baz=95,slow=38
KIRV Kirov 63.66 326 *ce*P **P 18 31 20.8 +0.8**
TNA Tin City 63.88 26 P **P 18 31 21.5 +0.1**
TNA IAmb IAmb 18 31 32.0
comp=Z,43nm,1.3s
ABTO Aybut 64.13 280 P **P 18 31 25.4 +1.5**
LKRN Lenkeran, Azer 64.35 304 P **P 18 31 26.7 +1.7**
BELG Belogornoye 64.44 319 P **P 18 31 25.5 +0.2**
comp=Z,27nm,1.0s,baz=73,slow=3.2,SNR=2.0
BELG LR LR 19 01 33.7
comp=Z,1µm,19.6s,baz=110,slow=38
comp=Z,27nm,1.0s
BELG Belogornoye 64.44 319 *i* P **P 18 31 26.1 +0.8**
BELG pmax pmax
comp=Z,7.0nm,1.2s
ANM Nome 64.82 27 P **P 18 31 28.6 +1.0**
baz=264
MAK Makhachkala 64.92 309 *e*P **P 18 31 24.1 -4.5**
MAK *e*S **S 18 40 00.5 -7.7**
MAK *e*SS **SS 18 44 18.0 -1.9**
MAK pmax pmax
comp=Z,63nm,0.9s
MAK MLR MLR

comp=Z,1µm,15.0s
FALS False Pass 65.30 38 P P 18 31 29.7 -1.2
baz=270
SEKA Sheki 65.31 307 P P 18 31 32.3 +1.0
MNGR Mingechevir, A 65.44 306 P P 18 31 33.6 +1.6
GLAD Gladstone 65.64 158 P P 18 31 34.2 +1.1
ZKTA Zakatala 65.70 307 P P 18 31 35.3 +1.5
PRGR Permogore 65.73 329 eP P 18 31 34.1 +0.5
CORO Coronation Par 65.76 159 P P 18 31 34.9 +1.0
GANJ Ganja 66.03 306 P P 18 31 37.2 +1.3
DDFL Dedoflistskaro 66.09 307 P P 18 31 37.2 +0.8
GROC Groznyy 66.15 309 eP P 18 31 32.6 -4.0
GROC e 18 32 03.5
GROC eS S 18 40 22.5 -0.7
GROC pmax pmax
comp=Z,22nm,0.5s
RDOG Red Dog Mine 66.16 23 IAMs_20 IAMs_20 18 59 46.0
comp=Z,811nm,20.0s
RDOG Red Dog Mine 66.16 23 P P 18 31 32.1 -4.1
baz=265
MOO Moorlands 66.66 159 P P 18 31 40.2 +0.6
baz=67,SNR=5.7
MOO Moorlands 66.66 159 P P 18 31 40.8 +1.1
NAX Nakhchivan 66.84 305 P P 18 31 42.6 +1.4
SDPT Sand Point 66.98 37 P P 18 31 39.6 -2.1
SDPT Sand Point 66.98 37 P P 18 31 40.2 -1.5
baz=272
TAU Tasmania Unive 67.12 160 P P 18 31 43.4 +0.8
TAU Tasmania Unive 67.12 160 P P 18 31 43.4 +0.8
TAU pmax pmax
comp=Z,353nm,1.5s
MSVF Nonsavu 67.14 120 LR LR 18 56 10.9
comp=Z,2µm,21.5s,baz=317,slow=32
MSVF Nonsavu 67.14 120 iP P 18 31 43.8 +0.5
MSVF Nonsavu 67.14 120 c 18 31 43.8 +0.3
GNI Garni 67.29 306 P P 18 31 45.6 +1.4
comp=Z,39nm,1.2s,baz=183,slow=2.9,SNR=19
GNI LR LR 19 05 53.9
comp=Z,971nm,18.7s,baz=89,slow=40
comp=Z,39nm,1.2s
GNI Garni 67.29 306 ceP P 18 31 45.5 +1.4
GNI pmax pmax
comp=Z,81nm,1.7s
CHNA Chernabura Isl 67.52 38 P P 18 31 44.0 -1.1
baz=273
ZEI Tsey 67.58 309 eP P 18 31 44.9 -1.1
ZEI pmax pmax
comp=Z,71nm,1.5s
N16K Nishlik Lake 67.72 32 P P 18 31 47.5 +1.2
baz=272,SNR=9.3
GOF Gofitskoye 67.92 311⇑ eP P 18 31 49.5 +1.7
GOF pmax pmax
comp=Z,41nm,1.1s
ONI Oni 67.93 309 P P 18 31 50.1 +2.1
O16K Kokwok River B 68.09 33 P P 18 31 49.5 +0.9
baz=273,SNR=8.4
VRH Novokhopyorsk 68.16 318 eP P 18 31 49.5 +0.3
VRH pmax pmax
comp=Z,30nm,0.8s
KBZ Khabaz 68.18 310 P P 18 31 51.0 +1.6
comp=Z,12nm,0.9s,baz=68,slow=7.4,SNR=27
KBZ LR LR 19 06 00.9
comp=Z,1µm,18.3s,baz=74,slow=40
comp=Z,12nm,0.9s
KBZ Khabaz 68.18 310 ceP P 18 31 50.4 +0.9
KBZ pmax pmax
comp=Z,33nm,1.2s
TAVE Taveuni 68.29 118 P P 18 31 52.0 +1.5
KIV Kislovodsk 68.31 310 P P 18 31 50.7 +0.3
KIV IAMs_20 IAMs_20 19 05 50.3
comp=Z,1µm,18.0s
KIV Kislovodsk 68.31 310 eP P 18 31 51.4 +1.0
KIV eS S 18 40 51.9 +2.5
KIV eSS SS 18 45 16.5 +3.9
KIV pmax pmax
comp=Z,7.0nm,3.1s
KIV pmax pmax
comp=Z,50nm,1.1s
KIV MLR MLR
comp=Z,964nm,17.0s
GCSA Galena City Sc 68.48 27 P P 18 31 52.0 +1.1
baz=272,SNR=7.9
A21K Barrow 68.54 20 P P 18 31 51.4 +0.2
A21K IAmb IAmb 18 32 06.4
comp=Z,54nm,1.0s
A21K Barrow 68.54 20 P P 18 31 52.4 +1.2
baz=269,SNR=16
O17K Koliganek Bris 68.59 33 P P 18 31 52.4 +0.7
baz=273
KLMR Klimovskoe 68.69 329 eP P 18 31 51.5 -0.8
KLMR pmax pmax
comp=Z,77nm,1.1s
KLMR Klimovskoe 68.69 329 eP P 18 31 51.5 -0.8
KLMR AMP 18 32 07.5
comp=Z,77nm,1.1s
KLMR LQ LQ 18 56 18.4
KLMR LQ LQ 18 56 18.4
KLMR LR LR 19 01 06.2
Q16K King Salmon 68.88 34 P P 18 31 53.8 +0.3
baz=274
CHVG Ch'k'valeri 68.91 309 ⇑P P 18 32 03.7 +10
CHVG Ch'k'valeri 68.91 309 ⇑P P 18 32 03.7 +10
TTA Tatalina 68.93 29 P P 18 31 54.7 +0.7
TTA IAmb IAmb 18 31 55.6
comp=Z,51nm,1.0s
TTA Tatalina 68.93 29 P P 18 31 54.7 +0.7
TTA pmax pmax
comp=Z,51nm,1.0s
TTA Tatalina 68.93 29 P P 18 31 54.6 +0.7
baz=273,SNR=19
P17K Kvichak River 68.96 33 P P 18 31 55.0 +0.9
baz=274,SNR=14
R17K Ugashik Creek 69.11 35 P P 18 31 55.0 0.0
baz=275
N18K Kilae Creek 69.13 32 P P 18 31 55.8 +0.6
baz=274,SNR=7.2
SVW2 Sparrevohn 69.25 31 P P 18 31 55.8 0.0
SVW2 IAmb IAmb 18 31 57.9
comp=Z,56nm,1.1s
BATM Batumi 69.36 308 ⇑P P 18 31 58.8 +1.9
BATM Batumi 69.36 308 ⇑P P 18 31 58.8 +1.9
KNTN Kanton 69.40 101 IAMs_20 IAMs_20 18 53 52.6
comp=Z,726nm,21.0s
L19K White Mountain 69.52 30 P P 18 31 58.0 +0.5
L19K White Mountain 69.52 30 P P 18 31 58.7 +1.2
baz=274,SNR=32
O18K Koktuh Hills 69.53 32 P P 18 31 57.6 0.0
O18K Koktuh Hills 69.53 32 P P 18 31 58.5 +0.9
baz=275,SNR=18
P18K Big Mountain, 69.56 33 P P 18 31 58.2 +0.4
baz=275,SNR=5.9
VORR Voronezh 69.68 319 eP P 18 31 59.7 +1.1
VORR eS S 18 41 04.7 -0.4
VORR pmax pmax
comp=Z,57nm,1.5s
J20K Nowinta River 69.69 28 P P 18 31 59.5 +1.0
J20K IAmb IAmb 18 32 00.7
comp=Z,44nm,0.7s
J20K IAMs_20 IAMs_20 19 02 40.4
comp=Z,658nm,20.0s
J20K Nowinta River 69.69 28 P P 18 31 59.6 +1.1
baz=274,SNR=41
IMAR Indian Mountai 69.73 26 P P 18 31 59.0 +0.3
LPSR Galich'ya Gora 69.74 320 eP P 18 31 59.4 +0.4
LPSR pmax pmax
comp=Z,30nm,0.6s
Q18K Katmai Hardscr 69.74 34 P P 18 31 58.1 -0.9
baz=276
RAYN Ar Rayn 69.74 288 P P 18 31 59.1 -0.6
RAYN IAmb IAmb 18 32 16.4
comp=Z,75nm,1.2s
RAYN Ar Rayn 69.74 288 IAMs_20 IAMs_20 19 07 29.7
comp=Z,1µm,22.0s
RAYN Ar Rayn 69.74 288 P P 18 31 59.1 -0.6
RAYN pmax pmax
comp=Z,75nm,1.2s
RAYN MLR MLR
comp=Z,1µm,22.0s
M19K Big River Lodg 69.76 30 P P 18 31 59.5 +0.5
M19K IAmb IAmb 18 32 01.2
comp=Z,61nm,1.1s
M19K Big River Lodg 69.76 30 P P 18 32 00.1 +1.1
baz=275
VSR Storozhevoye 69.76 318 eP P 18 31 57.1 -2.0
VSR pmax pmax
comp=Z,20nm,1.0s
K20K Telida 69.79 29 P P 18 32 00.0 +0.9
K20K IAmb IAmb 18 32 00.9
comp=Z,40nm,1.0s
K20K Telida 69.79 29 P P 18 32 00.2 +1.1
baz=275
N19K Bonanza Creek 69.81 31 P P 18 32 00.1 +0.7
baz=275,SNR=8.6
O19K Port Alsworth 69.94 32 P P 18 32 00.8 +0.8
baz=276,SNR=5.5
L20K Farewell, AK 69.95 30 P P 18 32 01.0 +0.8
baz=275,SNR=11
MOS Moscow 70.13 323 eP P 18 32 00.7 -0.6
MOS e 18 32 21.4
MOS eS S 18 41 09.0 -1.3
MOS pmax pmax
comp=Z,44nm,1.0s
MOS MLR MLR
comp=Z,2µm,20.0s
H21K Melozitna Rive 70.14 26 P P 18 32 02.2 +1.0
H21K IAmb IAmb 18 32 03.5
comp=Z,60nm,0.9s
H21K Melozitna Rive 70.14 26 P P 18 32 02.0 +0.8
baz=275,SNR=55
M20K Styx River 70.35 30 P P 18 32 03.3 +0.6
M20K IAmb IAmb 18 32 04.3
comp=Z,42nm,1.0s
M20K Styx River 70.35 30 P P 18 32 03.5 +0.8
baz=276,SNR=14
SII Sitkinak Islan 70.41 36 P P 18 32 03.2 +0.1
SII Sitkinak Islan 70.41 36 P P 18 32 02.4 -0.6
baz=277
SII Sitkinak Islan 70.41 36 P P 18 32 03.2 +0.1
Q19K Cape Douglas, 70.42 33 P P 18 32 02.2 -0.9
baz=277
SOC Sochi 70.49 310 eP P 18 32 03.9 +0.1
SOC ePPP PPP 18 36 17.7
SOC eS S 18 41 17.2 +2.3
SOC pmax pmax
comp=Z,21nm,0.8s
SOC MLR MLR
comp=Z,1µm,20.0s
CHUM Lake Minchumin 70.52 28 P P 18 32 04.5 +1.0
baz=276,SNR=18
I21K Tanana 70.53 27 P P 18 32 04.4 +0.8
I21K IAmb IAmb 18 32 05.9
comp=Z,53nm,1.1s
I21K Tanana 70.53 27 P P 18 32 04.6 +1.0
baz=276,SNR=26
CAST Castle Rocks 70.67 28 P P 18 32 05.1 +0.6
baz=276,SNR=56
PPLA Purkeypile 70.68 29 P P 18 32 04.5 -0.3
PPLA IAmb IAmb 18 32 26.3
comp=Z,81nm,1.1s
PPLA Purkeypile 70.68 29 P P 18 32 05.2 +0.4
baz=276,SNR=8.9
H22K Ishtalitna Cre 70.71 26 P P 18 32 05.9 +1.1
baz=276
O20K Slope Mountain 70.80 32 P P 18 32 05.1 -0.3
baz=277
OBN Obninsk 70.81 323 P P 18 32 05.5 0.0
comp=Z,2.9nm,0.4s,baz=106,slow=7.2,SNR=11
OBN LR LR 19 06 25.7
comp=Z,426nm,18.8s,baz=56,slow=39
comp=Z,2.9nm,0.4s
OBN Obninsk 70.81 323 i P P 18 32 05.3 -0.1
OBN i 18 32 13.3
OBN i 18 34 42.2
OBN i S S 18 41 13.2 -4.9
OBN i SS SS 18 45 54.4 +4.1
OBN pmax pmax
comp=Z,35nm,1.5s
OBN MLR MLR
comp=Z,2µm,18.0s
OHAK Old Harbor 70.82 35 P P 18 32 05.3 -0.2
baz=278,SNR=6.5
APA Apatity 70.82 336 ⇓ iP P 18 32 05.4 +0.1
APA pmax pmax
comp=Z,30nm,1.1s
KTUT Trabzon 70.90 308 ⇑P P 18 32 07.1 +0.8
SPU Mount Spurr 70.94 31 P P 18 32 05.9 -0.4
COLD Coldfoot 71.03 24 P P 18 32 07.7 +1.1
baz=277,SNR=7.3
MLY Manley 71.07 27 IAmb IAmb 18 32 08.9
comp=Z,51nm,1.0s
MLY Manley 71.07 27 P P 18 32 07.5 +0.6
baz=277,SNR=45
BPAW Bear Paw Mtn. 71.08 28 P P 18 32 07.4 +0.4
baz=277,SNR=42
SKT Skwentna 71.09 30 IAmb IAmb 18 32 07.9
comp=Z,59nm,1.1s
SKT Skwentna 71.09 30 P P 18 32 06.6 -0.6
baz=277
TOLK Toolik Lake Re 71.10 23 IAmb IAmb 18 32 08.8
comp=Z,28nm,0.9s
TOLK IAMs_20 IAMs_20 19 05 18.3
comp=Z,734nm,20.0s
TOLK Toolik Lake Re 71.10 23 P P 18 32 08.0 +0.9
baz=277,SNR=24
Q20K Shuyak Island 71.11 34 P P 18 32 07.0 -0.2
baz=278,SNR=7.0
KDAK Kodiak Island 71.12 34 P P 18 32 06.6 -0.7
KDAK Kodiak Island 71.12 34 P P 18 32 06.6 -0.7
KDAK pmax pmax
comp=Z,154nm,1.3s
KTH Kantishna Hill 71.17 28 P P 18 32 07.4 -0.2
KTH IAmb IAmb 18 32 35.7
comp=Z,36nm,1.0s
C24K Franklin Bluff 71.28 22 P P 18 32 08.9 +0.9
baz=277
D24K Happy Valley 71.30 22 P P 18 32 09.4 +1.2
baz=277
H23K Yukon River 71.46 26 IAmb IAmb 18 32 11.7
comp=Z,68nm,1.0s
H23K Yukon River 71.46 26 P P 18 32 10.3 +1.0
baz=278,SNR=63
TRF Thorofare Moun 71.47 28 P P 18 32 10.3 +0.7
baz=278
SUA Susitna One 71.53 30 IAMs_20 IAMs_20 19 09 19.3
comp=Z,564nm,18.0s
SUA Susitna One 71.53 30 P P 18 32 09.7 -0.2
baz=278
CNPM China Poot 71.57 32 IAmb IAmb 18 32 11.6
comp=Z,37nm,0.8s
CUT Chulitna 71.62 29 P P 18 32 10.1 -0.1
baz=278,SNR=5.1
I23K Minto, Yukon-K 71.63 26 IAmb IAmb 18 32 12.1
comp=Z,69nm,1.4s
I23K Minto, Yukon-K 71.63 26 P P 18 32 11.2 +0.9
baz=278,SNR=25
BWN Browne 71.73 27 IAMs_20 IAMs_20 19 08 07.2
comp=Z,649nm,19.0s
M22K Willow 71.79 30 P P 18 32 10.9 -0.3
baz=279,SNR=14
BRSE Bradley Lake S 71.79 32 P P 18 32 10.9 -0.5
baz=279
NEA2 Nenana 71.84 27 IAmb IAmb 18 32 12.9
comp=Z,49nm,1.0s
NEA2 Nenana 71.84 27 P P 18 32 12.0 +0.5
baz=279,SNR=30
ANN Anapa 71.90 312 eP P 18 32 12.0 -0.2
ANN eS S 18 41 31.2 +0.1
ANN pmax pmax
comp=Z,92nm,1.2s
ANN pmax pmax
comp=N,33nm,1.2s
ANN pmax pmax
comp=E,48nm,1.2s
ANN MLR MLR
comp=Z,1µm,18.0s
MCK McKinley 72.03 28 IAmb IAmb 18 32 13.7
comp=Z,102nm,1.2s
MCK IAMs_20 IAMs_20 19 08 17.1
comp=Z,664nm,19.0s
MCK McKinley 72.03 28 P P 18 32 12.6 -0.1
baz=279,SNR=22
RND Reindeer 72.11 28 IAmb IAmb 18 32 13.9
comp=Z,88nm,1.0s
MDM Murphy Dome 72.14 27 IAmb IAmb 18 32 14.9
comp=Z,76nm,1.1s
H24K Noodor Dome 72.14 26 IAmb IAmb 18 32 15.5
comp=Z,40nm,1.1s
H24K Noodor Dome 72.14 26 P P 18 32 14.2 +0.8
baz=279,SNR=31
PMR Palmer 72.28 30 IAmb IAmb 18 32 14.7
comp=Z,44nm,1.0s
PMR Palmer 72.28 30 P P 18 32 13.6 -0.6
baz=280,SNR=12
TCOL CIGO, UAF Yank 72.30 27 P P 18 32 13.6 -0.7
baz=280
COLA College 72.31 27 P P 18 32 12.7 -1.6
COLA IAmb IAmb 18 32 34.1
comp=Z,33nm,1.1s
COLA College 72.31 27 ⇑P P 18 32 14.3 0.0
WAT1 Susitna Watana 72.34 29 P P 18 32 13.9 -0.7
baz=280
GHO Glory Hole Cre 72.35 30 IAmb IAmb 18 32 40.4
comp=Z,42nm,0.9s
SEW Seward 72.37 32 P P 18 32 14.3 -0.4
baz=280
POKR Poker Plat Res 72.44 26 P P 18 32 14.8 -0.4
POKR IAmb IAmb 18 32 37.1
comp=Z,59nm,1.2s
POKR Poker Plat Res 72.44 26 P P 18 32 16.6 +1.5
baz=280,SNR=6.7
SML Sawmill 72.62 30 IAmb IAmb 18 32 36.8
comp=Z,91nm,1.2s
SML Sawmill 72.62 30 P P 18 32 16.2 -0.1
baz=280,SNR=12
KNK Knik Glacier 72.63 30 IAmb IAmb 18 32 17.2
comp=Z,73nm,1.0s
KNK Knik Glacier 72.63 30 P P 18 32 16.5 +0.1
baz=280,SNR=7.8
ILAR Eielson Array 72.73 27 P P 18 32 15.8 -1.1
comp=Z,3.1nm,0.5s,baz=269,slow=4.6,SNR=61
comp=Z,3.1nm,0.5s
ILAR Eielson Array 72.73 27 P P 18 32 16.2 -0.7
ILAR Eielson Array 72.73 27 P P 18 32 16.2 -0.7
WAT6 Susitna Watana 72.75 29 P P 18 32 16.9 -0.3
baz=280,SNR=23
HDA Harding Lake 72.77 27 IAmb IAmb 18 32 29.8
comp=Z,33nm,1.1s
HDA Harding Lake 72.77 27 P P 18 32 15.9 -1.2
baz=280,SNR=14
MSF Maaselka 72.77 335 P P 18 32 17.9 +0.8
MSF pmax pmax
comp=Z,56nm,1.1s
KEV Kevo 72.80 339 IAMs_20 IAMs_20 19 06 20.7
comp=Z,845nm,18.0s
DHY Denali Highway 72.83 28 P P 18 32 17.8 +0.1
DHY Denali Highway 72.83 28 P P 18 32 17.6 -0.1
baz=280,SNR=7.4
KEKH Kekaha 72.84 72 P P 18 32 18.4 +0.1
M23K Glacier View 72.90 30 P P 18 32 17.8 -0.2
baz=281,SNR=9.1
SCM Sheep Creek Mo 73.08 30 P P 18 32 18.7 -0.4
SCM Sheep Creek Mo 73.08 30 P P 18 32 18.7 -0.4
SCM pmax pmax
comp=Z,91nm,1.0s
SCM Sheep Creek Mo 73.08 30 P P 18 32 19.3 +0.2
baz=281,SNR=12
ARA0 ARCESS Array S 73.36 339 eP P 18 32 21.3 +0.8
ARCES ARCESS Array B 73.36 339 P P 18 32 21.1 +0.5
comp=Z,33nm,1.1s,baz=79,slow=5.5,SNR=21
ARCES LR LR 19 08 43.5
comp=Z,945nm,18.2s,baz=74,slow=39
comp=Z,33nm,1.1s
ARCES ARCESS Array B 73.36 339 P P 18 32 20.8 +0.3
ARCES IAmb IAmb 18 32 37.6
comp=Z,57nm,1.3s
GLI Glacier Island 73.38 31 P P 18 32 20.7 0.0
baz=281
K24K Donnelly Dome 73.39 28 P P 18 32 21.2 +0.3
baz=282
J25K Salcha River, 73.40 27 P P 18 32 19.0 -2.0
J25K Salcha River, 73.40 27 P P 18 32 19.6 -1.4
baz=282,SNR=9.2
SGF Sodankyl 73.45 336 P P 18 32 22.5 +1.5
SGF pmax pmax
comp=Z,68nm,1.5s
SPA0 Spitsbergen Ar 73.47 348 eP P 18 32 21.6 +0.5
SPITS Spitsbergen Ar 73.47 348 LR LR 19 09 42.1
comp=Z,2µm,18.9s,baz=32,slow=40
SPITS Spitsbergen Ar 73.47 348 P P 18 32 21.2 +0.1
SPITS pmax pmax
comp=Z,133nm,1.4s
M24K Tolsona, Glenn 73.56 29 P P 18 32 22.7 +0.8
baz=282,SNR=7.4
PAX Paxson 73.70 28 P P 18 32 22.8 0.0
baz=282,SNR=11
HAMF Hammerfest 73.71 340 eP P 18 32 23.3 +0.8
KLU Klutina 73.81 30 IAmb IAmb 18 32 35.2
comp=Z,32nm,0.9s
KLU IAMs_20 IAMs_20 19 09 20.4
comp=Z,604nm,18.0s
KLU Klutina 73.81 30 P P 18 32 23.4 0.0
baz=282,SNR=8.7
RIDG Independent Ri 73.81 28 IAmb IAmb 18 32 43.6
comp=Z,106nm,1.2s
RIDG Independent Ri 73.81 28 P P 18 32 23.0 -0.3
baz=282,SNR=16
AFI Afiamalu 73.91 112 LR LR 18 59 11.3
comp=Z,687nm,21.7s,baz=283,slow=31
AFI Afiamalu 73.91 112 P P 18 32 24.1 -0.6
AFI Afiamalu 73.91 112 P P 18 32 24.1 -0.6
AFI pmax pmax
comp=Z,235nm,1.5s
AFI Afiamalu 73.91 112 P P 18 32 24.5 -0.2
DIV Divide 73.95 30 IAmb IAmb 18 32 25.5
comp=Z,72nm,1.1s
HARP HAARP 73.97 29 P P 18 32 24.3 +0.1
baz=283
KBS Kingsbay 74.03 349 P P 18 32 23.7 -0.6
KBS Kingsbay 74.03 349 ceP P 18 32 26.0 +1.7
KBS pmax pmax
comp=Z,29nm,1.7s
KBS Kingsbay 74.03 349 iP P 18 32 22.3 -2.0
KBS Kingsbay 74.03 349 eP P 18 32 23.5 -0.8
HSPB Hornsund (broa 74.03 347 eP P 18 32 25.0 +0.7
HSPB eL L 19 09 20.7
comp=Z,4µm,21.4s
HSPB Hornsund (broa 74.03 347 eP P 18 32 24.9 +0.5
EYAK Cordova Ski Ar 74.09 31 P P 18 32 25.4 +0.5
baz=283
SCRK Sand Creek 74.13 27 IAmb IAmb 18 32 41.8
comp=Z,52nm,1.4s
SCRK Sand Creek 74.13 27 P P 18 32 24.8 -0.5
baz=283,SNR=19
I26K Coal Creek Min 74.17 26 P P 18 32 25.2 -0.1
baz=284
SIM Simferopol' 74.18 313 iP P 18 32 25.6 -0.2
SIM e 18 35 17.0
SIM ePPP PPP 18 36 56.0
SIM eS S 18 41 56.0 -1.1
SIM pmax pmax
comp=Z,83nm,1.1s
SIM MLR MLR
comp=Z,1µm,19.0s
J26L Joseph Creek 74.19 27 P P 18 32 24.9 -0.7
baz=283,SNR=26
N25K Chitina, Valde 74.40 30 P P 18 32 27.4 +0.5
baz=283,SNR=12
KIP Kipapa 74.51 73 P P 18 32 27.8 -0.3
KIP Kipapa 74.51 73 P P 18 32 27.8 -0.3
KIP pmax pmax
comp=Z,208nm,1.1s
KIP Kipapa 74.51 73 P P 18 32 30.0 +1.9
comp=Z,221nm,1.1s
BMRM Bremner River 74.55 30 IAMs_20 IAMs_20 19 03 39.9
comp=Z,707nm,22.0s
BMRM Bremner River 74.55 30 P P 18 32 28.1 +0.4
baz=284,SNR=6.9
L26K Log Cabin Wild 74.63 28 P P 18 32 28.6 +0.5
baz=284,SNR=15
GLB Gilahina Butte 74.81 30 IAmb IAmb 18 32 46.3
comp=Z,53nm,1.0s
K27K Chicken 74.93 27 IAmb IAmb 18 32 44.9
comp=Z,40nm,1.0s
K27K Chicken 74.93 27 P P 18 32 30.4 +0.7
baz=285
M26K Nabesna, AK 74.94 29 IAmb IAmb 18 32 44.4
comp=Z,64nm,1.1s
M26K IAMs_20 IAMs_20 19 12 03.3
comp=Z,643nm,19.0s
M26K Nabesna, AK 74.94 29 P P 18 32 30.1 +0.1
baz=284,SNR=20
VRDI Verde Repeater 75.03 30 IAmb IAmb 18 32 31.8
comp=Z,54nm,1.3s
FINES FINESS Array B 75.03 330 P P 18 32 31.0 +0.6
comp=Z,18nm,0.8s,baz=54,slow=5.3,SNR=34
FINES LR LR 19 08 48.4
comp=Z,3µm,18.3s,baz=76,slow=38
comp=Z,18nm,0.8s
FINES FINESS Array B 75.03 330 iP P 18 32 31.0 +0.6
FINES pmax pmax

	comp=Z,18nm,0.8s									
ASF	**Jabal al Asfar**	**75.06**	**299**		P		**P**	**18 32 32.6**	**+1.3**
	comp=Z,12nm,1.2s,baz=138,slow=0.7,SNR=20									
ASF					LR		LR	19 09 40.8		
	comp=Z,666nm,21.0s,baz=89,slow=39									
	comp=Z,12nm,1.2s									
JETT	**Jettan, Norway**	**75.08**	**339**	*e*	P		**P**	**18 32 31.4**	**+0.8**
MCARA	**McCarthy VSAT**	**75.19**	**30**		P		**P**	**18 32 32.0**	**+0.6**
	baz=285,SNR=7.0									
L27K	**Beaver Creek,**	**75.29**	**28**		IAMs_20		IAMs_20	19 06 21.5		
	comp=Z,608nm,20.0s									
L27K	**Beaver Creek,**	**75.29**	**28**		P		**P**	**18 32 32.6**	**+0.7**	
	baz=285,SNR=30									
TGL	**Tana Glacier**	**75.44**	**30**		IAmb		IAmb	18 32 46.5		
	comp=Z,37nm,1.0s									
M27K	**Edge Creek, AK**	**75.46**	**29**		IAMs_20		IAMs_20	19 05 47.9		
	comp=Z,624nm,21.0s									
M27K	**Edge Creek, AK**	**75.46**	**29**		P		**P**	**18 32 33.4**	**+0.4**	
	baz=285,SNR=11									
ATD	**Arta Tunnel**	**75.46**	**277**		LR		LR	19 05 03.8		
	comp=Z,327nm,21.2s,baz=98,slow=35									
VSU	**Vasula**	**75.47**	**327**	*e*	P		**P**	**18 32 33.5**	**+0.6**
WAX	**Waxell Ridge**	**75.51**	**31**		IAmb		IAmb	18 32 35.5		
	comp=Z,30nm,0.8s									
TRO	**Tromso**	**75.56**	**339**	*e*	P		**P**	**18 32 33.7**	**+0.5**
ISLE	**Juniper Island**	**75.71**	**30**		IAmb		IAmb	18 32 48.0		
	comp=Z,29nm,0.9s									
ISLE					IAMs_20		IAMs_20	19 11 12.8		
	comp=Z,659nm,19.0s									
BR131	**Keskin Array S**	**75.74**	**307**		IAmb		IAmb	18 32 36.8		
	comp=Z,52nm,1.5s									
BR131	**Keskin Array S**	**75.74**	**307**		P		**P**	**18 32 36.5**	**+1.4**	
	SNR=14									
BRTR	**Keskin Array B**	**75.74**	**307**		P		**P**	**18 32 35.4**	**+0.3**	
	comp=Z,2.7nm,0.6s,baz=114,slow=5.5,SNR=34									
BRTR					LR		LR	19 11 32.9		
	comp=Z,705nm,19.7s,baz=70,slow=40									
	comp=Z,2.7nm,0.6s									
BRTR	**Keskin Array B**	**75.74**	**307**	*i*	P		**P**	**18 32 35.4**	**+0.3**	
BRTR					pmax		pmax			
	comp=Z,6.0nm,1.0s									
MNK	**Minsk**	**75.85**	**323**	*i*	P		**P**	**18 32 32.8**	**-2.4**	
MNK				*i*	S		**S**	**18 42 13.6**	**-1.8**	
MNK				*i*	SS		**SS**	**18 47 07.7**	**+0.4**	
MNK				*i*	SSS		SSS	18 50 32.3		
MNK					pmax		pmax			
	comp=N,22nm,1.0s									
MNK					pmax		pmax			
	comp=E,9.0nm,1.2s									
MNK					pmax		pmax			
	comp=Z,69nm,1.2s									
MNK					MLR		MLR			
	comp=Z,2µm,9.0s									
MNK					MLR		MLR			
	comp=E,110nm,20.0s									
MNK					MLR		MLR			
	comp=N,981nm,20.4s									
MNK	**Minsk**	**75.85**	**323**	*i*	P		**P**	**18 32 32.9**	**-2.4**	
	comp=E,9.0nm,1.2s									
MNK				*i*	P		**P**	**18 32 32.9**	**-2.4**	
	comp=N,22nm,1.0s									
MNK				*i*	P		**P**	**18 32 32.9**	**-2.4**	
	comp=Z,69nm,1.2s,baz=75									
MNK				*i*	S		**S**	**18 42 13.6**	**-1.8**	
MNK				*i*	SS		**SS**	**18 47 07.7**	**+0.4**	
MNK				*i*	SSS		SSS	18 50 32.3		
MNK				*i*	LR		LR	19 05 27.0		
MNK				*i*	LRM		MLR	19 07 15.7		
	comp=Z,2µm,9.3s									
MNK				*i*	LRM		MLR	19 07 23.9		
	comp=E,110nm,19.8s									
MNK				*i*	LRM		MLR	19 08 20.2		
	comp=N,981nm,20.4s									
BVCY	**Beaver Creek**	**75.90**	**28**		P		**P**	**18 32 36.2**	**+0.8**	
	baz=286,SNR=7.3									
BARN	**Barnard Glacie**	**75.91**	**30**		IAmb		IAmb	18 32 48.0		
	comp=Z,26nm,0.8s									
GRNC	**Granite Creek**	**75.95**	**30**		IAmb		IAmb	18 32 37.6		
	comp=Z,81nm,1.4s									
GRNC					IAMs_20		IAMs_20	19 04 36.2		
	comp=Z,618nm,18.0s									
MESA	**MESA**	**76.01**	**31**		P		**P**	**18 32 36.6**	**+0.3**	
	baz=286									
AKASG	**Malin Array Be**	**76.03**	**319**		P		**P**	**18 32 36.0**	**-0.3**	
	comp=Z,10nm,0.8s,baz=62,slow=5.9,SNR=62									
AKASG					LR		LR	19 08 16.9		
	comp=Z,1µm,19.1s,baz=70,slow=37									
	comp=Z,10nm,0.8s									
AKASG	**Malin Array Be**	**76.03**	**319**	*i*	P		**P**	**18 32 36.0**	**-0.3**	
AKASG					pmax		pmax			
	comp=Z,8.0nm,0.7s									
AKBB	**Malin Array Si**	**76.03**	**319**	*c*	*e*P		**P**	**18 32 36.3**	**0.0**	
DAWY	**Dawson**	**76.06**	**27**		IAmb		IAmb	18 32 50.8		
	comp=Z,38nm,1.1s									
DAWY	**Dawson**	**76.06**	**27**		P		**P**	**18 32 36.4**	**0.0**	
	baz=287,SNR=26									
MMAI	**Mount Meron Ar**	**76.06**	**300**		P		**P**	**18 32 38.0**	**+1.0**	
	comp=Z,9.0nm,1.2s,baz=90,slow=4.6,SNR=13									
MMAI					LR		LR	19 11 52.9		
	comp=Z,873nm,19.9s,baz=242,slow=40									
	comp=Z,9.0nm,1.2s									
CTG	**Chitna Glacier**	**76.08**	**30**		P		**P**	**18 32 37.2**	**+0.6**	
	baz=286,SNR=20									
CTGM	**Chitina Glacie**	**76.09**	**30**		IAmb		IAmb	18 32 38.3		
	comp=Z,52nm,0.8s									
I29M	**Ogilvie Camp,**	**76.11**	**25**		IAMs_20		IAMs_20	19 09 58.0		
	comp=Z,734nm,22.0s									
I29M	**Ogilvie Camp,**	**76.11**	**25**		P		**P**	**18 32 36.6**	**0.0**	
	baz=288,SNR=16									
MEF	**Metsahovi**	**76.15**	**329**	*e*	P		**P**	**18 32 37.7**	**+0.9**	
YUK3	**Moose Creek**	**76.26**	**29**		P		**P**	**18 32 37.8**	**+0.1**	
	baz=287,SNR=14									
IDID	**Didziasalis**	**76.28**	**324**	*e*	P		**P**	**18 32 38.5**	**+0.9**	
LOGN	**Logan Glacier**	**76.28**	**30**		IAmb		IAmb	18 32 44.9		
	comp=Z,60nm,1.2s									
LOGN					IAMs_20		IAMs_20	19 04 46.8		
	comp=Z,668nm,20.0s									
ANTO	**Ankara**	**76.34**	**308**		P		**P**	**18 32 36.9**	**-1.5**	
ANTO					IAmb		IAmb	18 32 57.3		
	comp=Z,52nm,1.4s									
ANTO	**Ankara**	**76.34**	**308**		P		**P**	**18 32 36.9**	**-1.5**	
ANTO					pmax		pmax			
	comp=Z,52nm,1.4s									
NACGM	**Naroch**	**76.36**	**324**	⇑	*e*P		**P**	**18 32 38.5**	**+0.4**	
GHAJ	**Ghor Haditha**	**76.38**	**299**		IAMs_20		IAMs_20	19 10 19.7		
	comp=Z,619nm,20.0s									
RAO	**Raoul Island**	**76.38**	**128**		LR		LR	19 05 03.0		
	comp=Z,405nm,18.2s,baz=158,slow=35									
NOR	**Nord**	**76.38**	**354**	*i*	P		**P**	**18 32 36.1**	**-1.6**	
NOR					IAmb		IAmb	18 32 54.1		
	comp=Z,78nm,1.9s									
EPYK	**Eagle Plains**	**76.41**	**24**		IAmb		IAmb	18 32 55.4		
	comp=Z,37nm,1.1s									
EPYK					IAMs_20		IAMs_20	19 12 29.9		
	comp=Z,583nm,19.0s									
EPYK	**Eagle Plains**	**76.41**	**24**		P		**P**	**18 32 37.6**	**-0.7**	
	baz=289,SNR=19									
ISAL	**Salakas**	**76.55**	**324**	*e*	P		**P**	**18 32 40.0**	**+0.9**	
IIGN	**Ignalina**	**76.56**	**324**	*e*	P		**P**	**18 32 40.0**	**+0.8**	
YUK8	**Steele Glacier**	**76.72**	**29**		P		**P**	**18 32 41.4**	**+1.0**	
	baz=288,SNR=9.7									
PINM	**Pinnacle**	**76.85**	**31**		P		**P**	**18 32 41.7**	**+0.7**	
	baz=287,SNR=5.9									
MTSE	**Matsula**	**76.87**	**328**	*e*	P		**P**	**18 32 41.8**	**+0.9**	
HIZ	**Hauiti**	**76.90**	**140**		P		**P**	**18 32 43.2**	**+1.9**	
INK	**Inuvik**	**76.91**	**22**		LR		LR	19 09 34.0		
	comp=Z,500nm,20.4s,baz=294,slow=38									
INK	**Inuvik**	**76.91**	**22**		IAmb		IAmb	18 32 58.1		
	comp=Z,34nm,1.1s									
INK	**Inuvik**	**76.91**	**22**		P		**P**	**18 32 39.8**	**-1.1**	
INK					pmax		pmax			
	comp=Z,33nm,1.3s									
INK	**Inuvik**	**76.91**	**22**		P		**P**	**18 32 40.7**	**-0.3**	
	baz=291,SNR=14									
QRZ	**Quartz Range**	**77.02**	**143**		IAmb		IAmb	18 32 43.6		
	comp=Z,70nm,0.9s									
QRZ	**Quartz Range**	**77.02**	**143**		P		**P**	**18 32 42.8**	**+0.8**	
RAF	**Rauma**	**77.16**	**330**	*e*	P		**P**	**18 32 42.6**	**+0.1**	
CSS	**Mathiatis**	**77.21**	**303**		IAMs_20		IAMs_20	19 12 21.4		
	comp=Z,749nm,21.0s									
YUK4	**Talbot Arm**	**77.22**	**29**		P		**P**	**18 32 44.1**	**+1.0**	
	baz=288,SNR=6.8									
LREZ	**Lake Rotokare**	**77.23**	**141**		P		**P**	**18 32 45.2**	**+2.1**	
SORM	**Soroca**	**77.25**	**317**	⇑	P		**P**	**18 32 42.9**	**-0.3**	
SORM	**Soroca**	**77.25**	**317**	⇑	P		**P**	**18 32 42.9**	**-0.3**	
KIS	**Kishinev**	**77.25**	**315**		*e*P		**P**	**18 32 43.0**	**-0.3**	
KIS					*e*S		**S**	**18 42 26.0**	**-5.0**	
KIS					*e*L		L	19 10 34.0		
KIS					LRM		MLR	19 12 49.0		
	comp=Z,600nm,18.0s									
KIS	**Kishinev**	**77.25**	**315**		*e*P		**P**	**18 32 43.0**	**-0.3**	
KIS					*e*			18 32 55.0		
KIS					*e*S		**S**	**18 42 26.0**	**-5.0**	
KHU	**Kahuku**	**77.28**	**74**		P		**P**	**18 32 44.4**	**+0.1**	
KHU	**Kahuku**	**77.28**	**74**		P		**P**	**18 32 44.4**	**+0.1**	
KHU					pmax		pmax			
	comp=Z,356nm,1.1s									
MILM	**Milestii Mici**	**77.28**	**315**	⇑	*i*P		**P**	**18 32 43.0**	**-0.4**	
	comp=Z,56nm,1.5s									
MILM				⇓	*i*S		**S**	**18 42 28.0**	**-3.3**	
MILM	**Milestii Mici**	**77.28**	**315**	*c*	*i*P		**P**	**18 32 43.0**	**-0.4**	
MILM					*i* S		**S**	**18 42 28.0**	**-3.3**	
MILM					*e*PS		**PnS**	**18 43 00.0**	**-13**	
MILM					pmax		pmax			
	comp=Z,210nm,5.5s									
HMH	**Humu'ula Sheep**	**77.30**	**74**		P		**P**	**18 32 44.4**	**0.0**	
EIL	**Elat**	**77.33**	**297**		P		**P**	**18 32 44.8**	**+0.7**	
	comp=Z,28nm,1.3s,baz=110,slow=2.3,SNR=14									
EIL					LR		LR	19 10 50.0		
	comp=Z,1µm,21.2s,baz=70,slow=39									
	comp=Z,28nm,1.3s									
PNL	**Peninsula**	**77.39**	**31**		P		**P**	**18 32 44.4**	**+0.5**	
	baz=288,SNR=6.9									
STEI	**Steigen**	**77.41**	**338**	*e*	P		**P**	**18 32 43.8**	**0.0**	
YUK6	**Outpost Mounta**	**77.48**	**29**		P		**P**	**18 32 45.9**	**+1.3**	
	baz=289,SNR=11									
FAUS	**Fauske**	**77.60**	**338**	*e*	P		**P**	**18 32 45.3**	**+0.4**	
TWVZ	**Taurewa**	**77.61**	**140**		P		**P**	**18 32 47.2**	**+1.8**	
VSVD	**Vaisvydziai**	**77.62**	**325**	*e*	P		**P**	**18 32 45.9**	**+0.7**	
M30M	**Minto, Yukon**	**77.64**	**28**		IAmb		IAmb	18 33 00.5		
	comp=Z,55nm,1.1s									
M30M					IAMs_20		IAMs_20	19 13 22.7		
	comp=Z,604nm,19.0s									
M30M	**Minto, Yukon**	**77.64**	**28**		P		**P**	**18 32 46.1**	**+0.8**	
	baz=290,SNR=36									
PKVZ	**Pokaka**	**77.69**	**140**		P		**P**	**18 32 47.1**	**+1.3**	
WTVZ	**West Tongariro**	**77.72**	**140**		P		**P**	**18 32 47.5**	**+1.4**	
PABE	**Paberze**	**77.74**	**325**	*e*	P		**P**	**18 32 46.5**	**+0.7**	
KRVZ	**Karewarewa**	**77.74**	**140**		P		**P**	**18 32 47.5**	**+1.3**	
NNVZ	**North Ngauruho**	**77.75**	**140**		P		**P**	**18 32 47.5**	**+1.2**	
TLCR		**77.75**	**314**	⇓	P		**P**	**18 32 46.8**	**+0.7**	
TLCR		**77.75**	**314**	⇓	P		**P**	**18 32 46.8**	**+0.7**	
WAZ	**Wanganui**	**77.76**	**141**		P		**P**	**18 32 47.5**	**+1.4**	
NNZ	**Nelson**	**77.76**	**143**		P		**P**	**18 32 45.7**	**-0.3**	
NNZ					IAmb		IAmb	18 32 46.8		
	comp=Z,80nm,0.9s									
NNZ	**Nelson**	**77.76**	**143**		P		**P**	**18 32 46.0**	**0.0**	
NTVZ	**North Tongarir**	**77.77**	**140**		P		**P**	**18 32 46.9**	**+0.6**	
NGZ	**Ngauruhoe**	**77.77**	**140**		P		**P**	**18 32 47.4**	**+1.0**	
NIUE	**Niue**	**77.77**	**116**		P		**P**	**18 32 44.7**	**-1.9**	
NIUE	**Niue**	**77.77**	**116**		P		**P**	**18 32 47.3**	**+0.7**	
FWVZ	**Far West T-bar**	**77.79**	**140**		P		**P**	**18 32 47.6**	**+1.1**	
TMVZ	**Te Maari**	**77.80**	**140**		P		**P**	**18 32 47.2**	**+0.7**	
SNVZ	**South Ngauruho**	**77.80**	**140**		P		**P**	**18 32 48.0**	**+1.4**	
OTVZ	**Oturere**	**77.80**	**140**		P		**P**	**18 32 47.9**	**+1.3**	
DUWZ	**D'Urville Isla**	**77.81**	**142**		P		**P**	**18 32 46.4**	**0.0**	
ETVZ	**East Tongariro**	**77.81**	**140**		P		**P**	**18 32 47.9**	**+1.3**	
JURR	**Jurilovca**	**77.83**	**313**	⇑	P		**P**	**18 32 47.0**	**+0.5**	
THZ	**Tophouse**	**77.85**	**143**		IAmb		IAmb	18 32 46.7		
	comp=Z,50nm,1.0s									
TUVZ	**Tukino**	**77.86**	**140**		P		**P**	**18 32 48.2**	**+1.3**	
WNVZ	**Wahianoa**	**77.86**	**140**		P		**P**	**18 32 48.1**	**+1.2**	
N30M	**Aishikik Lake**	**77.89**	**29**		P		**P**	**18 32 47.4**	**+0.7**	
	baz=290,SNR=24									
HYT	**Haines Junctio**	**77.91**	**29**		IAmb		IAmb	18 33 01.9		
	comp=Z,55nm,1.2s									
HYT	**Haines Junctio**	**77.91**	**29**		P		**P**	**18 32 47.7**	**+0.8**	
	baz=290,SNR=24									
LOF	**Lofoten**	**77.92**	**339**	*e*	P		**P**	**18 32 48.1**	**+1.5**	
MOVZ	**Moawhango**	**78.01**	**140**		P		**P**	**18 32 48.0**	**+0.4**	
VASR	**Vaslui**	**78.03**	**315**	⇑	P		**P**	**18 32 47.9**	**+0.2**	
VLDR	**Vladesti**	**78.06**	**314**	⇑	P		**P**	**18 32 48.8**	**+0.9**	
TPGR	**Topolog**	**78.12**	**313**	⇓	P		**P**	**18 32 49.3**	**+1.1**	
URZ	**Urewera**	**78.13**	**138**		LR		LR	19 06 31.7		
	comp=Z,456nm,20.3s,baz=31,slow=35									
URZ	**Urewera**	**78.13**	**138**		IAMs_20		IAMs_20	19 02 02.9		
	comp=Z,1µm,22.0s									
URZ	**Urewera**	**78.13**	**138**		P		**P**	**18 32 47.5**	**-0.7**	
RPZ	**Rata Peaks**	**78.15**	**146**		LR		LR	19 07 08.6		
	comp=Z,553nm,20.0s,baz=316,slow=36									
LBZ	**Lake Benmore**	**78.15**	**147**		IAmb		IAmb	18 33 05.8		
	comp=Z,77nm,1.2s									
SCTR	**Scanteiesti**	**78.17**	**314**	⇑	P		**P**	**18 32 49.0**	**+0.6**	
LTZ	**Lake Taylor**	**78.17**	**144**		IAmb		IAmb	18 32 50.6		
	comp=Z,49nm,1.0s									
CFR	**Carcaliu**	**78.22**	**314**	⇓	P		**P**	**18 32 49.1**	**+0.4**	
CFR	**Carcaliu**	**78.22**	**314**	⇓	P		**P**	**18 32 49.1**	**+0.4**	
TIRR	**Tirgusor**	**78.23**	**313**	⇑	P		P	18 32 43.8	-5.0	
TIRR	**Tirgusor**	**78.23**	**313**	⇑	P		P	18 32 43.8	-5.0	
TIRR	**Tirgusor**	**78.23**	**313**	⇑	P		P	18 32 43.8	-5.0	
BHHZ	**Black Hill Sta**	**78.25**	**140**		P		**P**	**18 32 49.1**	**+0.2**	
RTZ	**Ruatahuna**	**78.27**	**139**		P		**P**	**18 32 48.7**	**-0.4**	
BKZ	**Black Stump Fm**	**78.31**	**139**		IAmb		IAmb	18 32 50.2		
	comp=Z,40nm,0.9s									
BKZ	**Black Stump Fm**	**78.31**	**139**		P		**P**	**18 32 49.8**	**+0.5**	
BKZ	**Black Stump Fm**	**78.31**	**139**		P		**P**	**18 32 49.1**	**-0.1**	
SCHL	**Schela**	**78.33**	**314**	⇑	P		**P**	**18 32 50.8**	**+1.4**	
MOR8	**Moi Rana**	**78.39**	**337**	*e*	P		**P**	**18 32 48.5**	**-0.8**	
P30M	**Million Dollar**	**78.41**	**30**		P		**P**	**18 32 50.6**	**+1.0**	
	baz=290									
KIW	**Kapiti Island**	**78.42**	**141**		P		**P**	**18 32 48.9**	**-0.9**	
MWZ	**Matawai**	**78.44**	**138**		P		**P**	**18 32 49.8**	**-0.2**	
N31M	**Braeburn, Yuko**	**78.47**	**29**		P		**P**	**18 32 51.1**	**+1.2**	
	baz=291,SNR=8.4									
HARR	**Harsova**	**78.50**	**313**	⇓	P		**P**	**18 32 51.0**	**+0.7**	
HARR	**Harsova**	**78.50**	**313**	⇓	P		**P**	**18 32 51.0**	**+0.7**	
TSZ	**Takapari Road**	**78.54**	**140**		P		**P**	**18 32 50.5**	**0.0**	
OGWZ	**Otaki Gorge**	**78.55**	**141**		P		**P**	**18 32 50.3**	**-0.2**	
O30N	**Mendenhall**	**78.58**	**29**		P		**P**	**18 32 50.9**	**+0.4**	
	baz=291,SNR=20									
KHZ	**Kahutara**	**78.64**	**143**		IAmb		IAmb	18 32 51.5		
	comp=Z,73nm,0.9s									
SUW	**Suwalki**	**78.64**	**323**		*e*P		**P**	**18 32 51.0**	**+0.1**	
SUW					*e*PcP		**PcP**	**18 32 59.9**	**+0.1**	
SUW					*e*L		L	19 10 46.8		
	comp=Z,1µm,20.9s									
SUW	**Suwalki**	**78.64**	**323**		P		**P**	**18 32 51.2**	**+0.3**	
SUW					pmax		pmax			
	comp=Z,160nm,1.1s									
SUW	**Suwalki**	**78.64**	**323**		*e*P		**P**	**18 32 51.1**	**+0.3**	
PANC	**Panciu**	**78.68**	**315**	⇑	P		**P**	**18 32 51.3**	**+0.1**	
MRZ	**Mangatainoka R**	**78.69**	**141**		P		**P**	**18 32 50.5**	**-0.7**	
ISK	**Istanbul-Kandi**	**78.75**	**310**		P		**P**	**18 32 49.9**	**-1.8**	
ICOR	**Ion Corvin**	**78.75**	**313**	⇑	P		**P**	**18 32 52.8**	**+1.1**	
ODBI	**Odobesti**	**78.78**	**315**	⇑	P		**P**	**18 32 54.0**	**+2.2**	
DVHZ	**Dannevirke**	**78.81**	**140**		P		**P**	**18 32 51.5**	**-0.4**	
TESR	**Tescani**	**78.82**	**315**	⇑	P		**P**	**18 32 52.4**	**+0.4**	
M31M	**Drury Creek, Y**	**78.82**	**28**		IAMs_20		IAMs_20	19 14 04.8		
	comp=Z,578nm,20.0s									
M31M	**Drury Creek, Y**	**78.82**	**28**		P		**P**	**18 32 51.9**	**+0.1**	
	baz=292,SNR=13									
PRWZ	**Pori Road**	**78.85**	**141**		P		**P**	**18 32 52.3**	**+0.2**	
PLBC	**Pleasant Camp**	**78.92**	**31**		P		**P**	**18 32 52.8**	**+0.5**	
	baz=291,SNR=10.0									
GRER		**78.94**	**314**	⇑	P		**P**	**18 32 56.7**	**+3.9**	
VRI	**Vrincioaia**	**78.96**	**315**	⇑	P		**P**	**18 32 53.9**	**+1.0**	
VRI	**Vrincioaia**	**78.96**	**315**	⇑	P		**P**	**18 32 53.9**	**+1.0**	
MQZ	**McQueen's Vall**	**79.00**	**145**		IAmb		IAmb	18 32 54.5		
	comp=Z,74nm,1.0s									
PLOR	**Plostina**	**79.02**	**315**	⇑	P		**P**	**18 32 53.9**	**+0.7**	
PLOR	**Plostina**	**79.02**	**315**	⇑	P		**P**	**18 32 53.9**	**+0.7**	
BIZ	**Bicaz**	**79.05**	**316**	⇑	P		**P**	**18 32 54.2**	**+0.8**	
PAWZ	**Paruwai Farm**	**79.05**	**142**		P		**P**	**18 32 51.9**	**-1.3**	
PLWZ	**Pallliser**	**79.07**	**142**		P		**P**	**18 32 53.2**	**-0.1**	
BFZ	**Birch Farm**	**79.10**	**141**		P		**P**	**18 32 53.4**	**0.0**	
BFZ	**Birch Farm**	**79.10**	**141**		P		**P**	**18 32 53.3**	**-0.2**	
WHY	**Whitehorse**	**79.18**	**29**		IAmb		IAmb	18 33 08.2		
	comp=Z,42nm,1.1s									
WHY	**Whitehorse**	**79.18**	**29**		P		**P**	**18 32 54.3**	**+0.4**	
	baz=292,SNR=18									
TRWZ	**Traveller**	**79.22**	**142**		P		**P**	**18 32 54.3**	**+0.1**	
ISR	**Istrita**	**79.31**	**314**	⇑	P		**P**	**18 32 57.1**	**+2.3**	
ISR	**Istrita**	**79.31**	**314**	⇑	P		**P**	**18 32 57.1**	**+2.3**	
COVR	**Voineasa-Covas**	**79.32**	**315**	⇑	P		**P**	**18 32 55.3**	**+0.5**	
ELL	**Elmali**	**79.38**	**305**		P		**P**	**18 32 55.6**	**+0.2**	
NEHR	**Nehoiu**	**79.39**	**314**	⇓	P		**P**	**18 32 56.1**	**+0.9**	
SKAG	**Skagway**	**79.41**	**30**		P		**P**	**18 32 56.2**	**+1.2**	
	baz=292									
BURAR	**Bucovina Array**	**79.42**	**317**	⇑	P		**P**	**18 32 56.0**	**+0.6**	
BURAR	**Bucovina Array**	**79.42**	**317**	⇑	P		**P**	**18 32 56.0**	**+0.6**	
LVV	**L'vov**	**79.47**	**319**		*e*P		**P**	**18 32 56.0**	**+0.5**	
LVV					*e*PPP		PPP	18 37 54.9		
LVV					*e*S		**S**	**18 42 52.8**	**-1.9**	
LVV					*e*PS		**PnS**	**18 43 41.4**	**+0.7**	
LVV					*e*SS		**SS**	**18 47 59.5**	**-2.5**	
LVV					pmax		pmax			
	comp=Z,90nm,1.6s									
OZUR		**79.52**	**315**	⇑	P		**P**	**18 32 57.7**	**+1.7**	
C36M	**Paulatuk**	**79.56**	**19**		IAmb		IAmb	18 33 12.2		
	comp=Z,49nm,1.2s									
C36M					IAMs_20		IAMs_20	19 09 41.7		
	comp=Z,718nm,21.0s									
C36M	**Paulatuk**	**79.56**	**19**		P		**P**	**18 32 55.4**	**-0.2**	
	baz=300,SNR=6.7									
MLR	**Muntele Rosu**	**79.60**	**315**	⇑	P		**P**	**18 32 57.1**	**+0.6**	
MLR	**Muntele Rosu**	**79.60**	**315**		P		**P**	**18 32 57.4**	**+0.9**	
	comp=Z,12nm,0.6s,baz=16,slow=5.5,SNR=19									
MLR					LR		LR	19 14 29.4		
	comp=Z,2µm,18.1s,baz=56,slow=40									
	comp=Z,12nm,0.6s									
MLR	**Muntele Rosu**	**79.60**	**315**		IAmb		IAmb	18 33 13.1		
	comp=Z,99nm,1.5s									
SULR		**79.64**	**314**	⇑	P		**P**	**18 32 57.0**	**+0.5**	
SECR		**79.66**	**314**	⇑	P		**P**	**18 32 59.1**	**+2.4**	
RAZG	**Razgrad**	**79.81**	**313**	⇑	P		**P**	**18 32 58.3**	**+0.7**	
DOPR	**Dopca**	**79.82**	**315**	⇑	P		**P**	**18 32 58.7**	**+1.2**	
BESE	**Bessie Mountai**	**79.97**	**31**		IAmb		IAmb	18 33 13.1		
	comp=Z,73nm,1.5s									
SGRR	**Singureni**	**79.97**	**313**	⇑	P		**P**	**18 32 55.2**	**-3.2**	
MMPY	**Sheldon Lake,**	**80.00**	**27**		P		**P**	**18 32 59.1**	**+0.8**	
	baz=294									
P32M	**Atlin**	**80.12**	**30**		P		**P**	**18 32 59.4**	**+0.5**	
	baz=293									
ARCR	**ARCALIA**	**80.14**	**316**	⇑	P		**P**	**18 32 59.7**	**+0.5**	
EDRB	**Edirne**	**80.18**	**311**		P		**P**	**18 32 58.9**	**-0.6**	
VOIR		**80.22**	**315**	⇑	P		**P**	**18 32 59.7**	**0.0**	
VOIR		**80.22**	**315**	⇑	P		**P**	**18 32 59.7**	**0.0**	
P33M	**Teslin, Yukon**	**80.30**	**29**		IAMs_20		IAMs_20	19 15 16.9		
	comp=Z,548nm,18.0s									
P33M	**Teslin, Yukon**	**80.30**	**29**		P		**P**	**18 33 00.6**	**+0.7**	
	baz=294,SNR=8.4									
SIT	**Sitka**	**80.31**	**33**		IA

DBG IAmb IAmb 18 33 12.5
comp=Z,100nm,1.3s
OSL Oslo 82.61 332 *e*P **P** **18 33 12.2 +0.2**
RES Resolute Bay 82.62 9 LR LR 19 13 13.4
comp=Z,658nm,20.2s,baz=320,slow=38
RES Resolute Bay 82.62 9 P **P** **18 33 11.1 -0.7**
RES pmax pmax
comp=Z,26nm,1.1s
SRS Serrai 82.65 311 P **P** **18 33 09.3 -3.4**
SRS Serrai 82.65 311 P **P** **18 33 12.1 -0.6**
SRS pmax pmax
comp=Z,25nm,1.3s
MDVR Moldovita 82.66 315 ⇑P **P** **18 33 13.3 +0.6**
DEL Delary 82.67 328 *e*P **P** **18 33 13.1 +0.8**
BSZH Besenyszg 82.69 318 P **P** **18 33 12.0 -0.7**
MOL Molde 82.69 335 *e*P **P** **18 33 13.0 +0.7**
PSZ Piszkesteto 82.69 318 ⇑P **P** **18 33 13.0 +0.2**
PSZ Piszkesteto 82.69 318 ⇑P **P** **18 33 13.0 +0.2**
PSZ Piszkesteto 82.69 318 P **P** **18 33 13.5 +0.7**
PSZ Piszkesteto 82.69 318 P **P** **18 33 13.4 +0.6**
BSD Bornholm Skovb 82.71 326 P **P** **18 33 13.3 +0.7**
BSD pmax pmax
comp=Z,103nm,1.3s
BSD Bornholm Skovb 82.71 326 *e*P **P** **18 33 13.1 +0.5**
JMIC Jan Mayen 82.78 345 LR LR 19 14 47.1
comp=Z,1μm,19.4s,baz=56,slow=39
T35M Bob Quinn 82.87 32 P **P** **18 33 14.9 +1.4**
baz=296,SNR=5.9
SANT Santorini 82.89 306 ⇑P **P** **18 33 10.3 -3.8**
SOH Sokhos 82.92 311 P **P** **18 33 13.7 -0.4**
SOH pmax pmax
comp=Z,7.0nm,1.2s
PAIG Paliouri 83.00 310 P **P** **18 33 14.0 -0.5**
PAIG pmax pmax
comp=Z,60nm,1.1s
OKC Ostrava-Krasne 83.03 321 *e*P **P** **18 33 14.3 -0.1**
OKC *e* 18 33 23.4
OKC MLR MLR
comp=Z,900nm,16.3s
OKC Ostrava-Krasne 83.03 321 *e*P **P** **18 33 14.3 -0.1**
OKC *ex* x 18 33 23.4
OKC AMS AMS 19 13 30.0
comp=Z,900nm,16.3s
BOVS Bovan 83.08 314 ⇑P **P** **18 33 14.9 +0.1**
AKN Aaknes 83.11 335 *e*P **P** **18 33 14.9 +0.3**
VYHS Vyhne 83.13 319 *e*P **P** **18 33 15.9 +0.9**
VYHS pmax pmax
comp=Z,28nm,1.3s
VYHS Vyhne 83.13 319 *e*P **P** **18 33 15.9 +0.9**
KNT Kendrikon 83.13 311 P **P** **18 33 13.8 -1.3**
KNT Kendrikon 83.13 311 P **P** **18 33 14.8 -0.3**
KNT pmax pmax
comp=Z,25nm,1.5s
KONO Kongsberg 83.25 332 *ce*P **P** **18 33 17.2 +1.9**
KONO pmax pmax
comp=Z,43nm,2.5s
THE Thessaloniki 83.27 311 P **P** **18 33 15.5 -0.3**
THE pmax pmax
comp=Z,15nm,1.2s
VAY Valandovo 83.31 311 *i* P **P** **18 33 15.6 -0.4**
SKAR Skarslia 83.31 333 *e*P **P** **18 33 16.5 +0.8**
KOLL Kolacno 83.36 319 *e*P **P** **18 33 17.8 +1.6**
BUD Budapest 83.40 318 P **P** **18 33 16.9 +0.5**
BUD pmax pmax
comp=Z,41nm,1.4s
BUD Budapest 83.40 318 P **P** **18 33 17.3 +0.9**
BUD Budapest 83.40 318 P **P** **18 33 17.9 +1.5**
MAUC Maruska 83.40 320 *e*P **P** **18 33 17.1 +0.7**
MAUC *ex* x 18 33 26.9
MAUC AMS AMS 19 13 50.0
comp=Z,2μm,16.9s
MORC Moravsky Berou 83.41 321 ⇑P **P** **18 33 16.8 +0.3**
MORC Moravsky Berou 83.41 321 ⇑P **P** **18 33 16.8 +0.3**
MORC Moravsky Berou 83.41 321 *e*P **P** **18 33 16.8 +0.3**
GRG Griva 83.55 311 P **P** **18 33 15.7 -1.7**
GRG Griva 83.55 311 P **P** **18 33 16.6 -0.8**
GRG pmax pmax
comp=Z,34nm,1.1s
SRO2 Moca 83.69 319 *e*P **P** **18 33 18.4 +0.6**
SRO2 pmax pmax
comp=Z,23nm,1.1s
SRO2 Moca 83.69 319 *e*P **P** **18 33 18.4 +0.6**
IDI Anoyia 83.69 305 ⇑P **P** **18 33 17.3 -0.9**
IDI Anoyia 83.69 305 P **P** **18 33 18.2 0.0**
comp=Z,4.9nm,0.9s,baz=89,slow=15,SNR=6.7
IDI LR LR 19 17 51.9
comp=Z,224nm,18.6s,baz=82,slow=41
comp=Z,4.9nm,0.9s
JAVC Velka Javorina 83.70 320 *e*P **P** **18 33 20.0 +2.0**
SRO Srobarova 83.72 319 *e*P **P** **18 33 19.1 +1.1**
SRO pmax pmax
comp=Z,31nm,1.3s
SRO Srobarova 83.72 319 *e*P **P** **18 33 19.1 +1.1**
KSP Ksiaz 83.72 322 *e*P **P** **18 33 18.6 +0.7**
KSP Ksiaz 83.72 322 P **P** **18 33 18.8 +0.9**
KSP pmax pmax
comp=Z,124nm,1.3s
KRLC Kraliky 83.74 321 *e*P **P** **18 33 18.6 +0.4**
KRLC *e* 18 33 33.3
KRLC *e* 18 43 35.3
KRLC MLR MLR
comp=Z,1μm,18.1s
KRLC Kraliky 83.74 321 *e*P **P** **18 33 18.6 +0.4**
KRLC *ex* x 18 33 33.3
KRLC *e*SKS **S** **18 43 35.3 -3.7**
KRLC AMS AMS 19 14 10.0
comp=Z,1μm,18.1s
FRGS Fruska Gora 83.78 316 ⇑P **P** **18 33 18.8 +0.4**
FRGS Fruska Gora 83.78 316 ⇑*i*P **P** **18 33 18.6 +0.2**
LIT Litokhoron 83.80 310 P **P** **18 33 17.4 -1.2**
LIT Litokhoron 83.80 310 IAmb IAmb 18 33 19.1
comp=Z,48nm,1.3s
LIT Litokhoron 83.80 310 P **P** **18 33 17.7 -0.9**
LIT pmax pmax
comp=Z,38nm,1.6s
SKO Skopje 83.86 312 *i* P **P** **18 33 19.5 +0.6**
OSTC Ostas 83.88 322 *e*P **P** **18 33 18.9 +0.1**
OSTC *ex* x 18 33 33.8
OSTC *e*SKS **S** **18 43 33.5 -6.8**
OSTC AMS AMS 19 14 20.0
comp=Z,2μm,17.1s
DPC Dobruska-Polom 83.90 322 *e*P **P** **18 33 19.6 +0.6**
DPC *e* 18 33 34.5
DPC *e* 18 43 33.0
DPC MLR MLR
comp=Z,2μm,17.3s
DPC Dobruska-Polom 83.90 322 *e*P **P** **18 33 19.6 +0.6**
DPC *ex* x 18 33 34.5
DPC *e*SKS **S** **18 43 33.0 -7.6**
DPC AMS AMS 19 14 10.0
comp=Z,2μm,17.3s
CSKK Cskako 83.92 318 P **P** **18 33 19.6 +0.6**
CSKK Cskako 83.92 318 P **P** **18 33 20.3 +1.2**
HYA Hoyanger 83.96 334 *e*P **P** **18 33 18.9 0.0**
CHVC Chvalec 83.96 322 *e*P **P** **18 33 19.6 +0.4**
CHVC *ex* x 18 33 28.8
CHVC AMS AMS 19 14 20.0
comp=Z,2μm,17.9s
VOI Vohitsoka 83.97 244 P **P** **18 33 19.6 -0.3**
VOI IAmb IAmb 18 33 21.7
comp=Z,85nm,1.4s
VOI Vohitsoka 83.97 244 P **P** **18 33 20.2 +0.4**
SNR=6.1
VOI Vohitsoka 83.97 244 P **P** **18 33 20.9 +1.1**
SMOL Smolenice 83.98 320 *e*P **P** **18 33 20.7 +1.3**
SMOL pmax pmax
comp=Z,27nm,1.4s
SMOL Smolenice 83.98 320 *e*P **P** **18 33 20.7 +1.3**
UPC Upice 84.02 322 *e*P **P** **18 33 20.2 +0.7**
UPC *e* 18 33 35.5
UPC *e* 18 43 36.2
UPC MLR MLR
comp=Z,2μm,17.1s
UPC Upice 84.02 322 *e*P **P** **18 33 20.2 +0.7**
UPC *ex* x 18 33 35.5
UPC *e*SKS **SKSac** **18 43 36.2 -4.3**
UPC AMS AMS 19 14 20.0
comp=Z,2μm,17.1s
DIVS Divibare 84.06 315 IAmb IAmb 18 33 22.1
comp=Z,47nm,1.3s
DIVS IAMs_20 IAMs_20 19 16 20.8
comp=Z,777nm,19.0s
DIVS Divibare 84.06 315 ⇑*i*P **P** **18 33 20.0 +0.1**

MORH Mrgy, Hungar 84.13 317 ⇑P **P** **18 33 20.3 +0.2**
MORH Mrgy, Hungar 84.13 317 ⇑*i*P **P** **18 33 20.2 +0.1**
MORH Mrgy, Hungar 84.13 317 P **P** **18 33 20.7 +0.6**
MORH Mrgy, Hungar 84.13 317 P **P** **18 33 21.2 +1.1**
MODS Modra-Piesok 84.13 319 *e*P **P** **18 33 20.9 +0.8**
MODS pmax pmax
comp=Z,97nm,1.4s
MODS Modra-Piesok 84.13 319 *e*P **P** **18 33 20.9 +0.8**
VRAC Vranov 84.17 320 ⇑P **P** **18 33 21.6 +1.3**
VRAC Vranov 84.17 320 P **P** **18 33 21.2 +0.9**
comp=Z,47nm,1.1s,baz=70,slow=5.0,SNR=60
VRAC LR LR 19 15 13.2
comp=Z,1μm,20.3s,baz=69,slow=39
comp=Z,47nm,1.1s
VRAC Vranov 84.17 320 ⇑P **P** **18 33 21.6 +1.3**
VRAC Vranov 84.17 320 *e*P **P** **18 33 21.2 +0.9**
FOO Floro 84.20 334 *e*P **P** **18 33 20.4 +0.3**
ZST Bratislava 84.31 319 *e*P **P** **18 33 22.3 +1.3**
ZST pmax pmax
comp=Z,68nm,1.3s
ZST Bratislava 84.31 319 *e*P **P** **18 33 22.3 +1.3**
IMMV Iera Moni Meta 84.33 306 P **P** **18 33 20.4 -1.0**
TIH Tihany 84.34 318 P **P** **18 33 21.8 +0.6**
TIH Tihany 84.34 318 P **P** **18 33 21.8 +0.6**
FNA Florina 84.34 311 P **P** **18 33 19.8 -1.6**
FNA Florina 84.34 311 P **P** **18 33 20.5 -0.9**
FNA pmax pmax
comp=Z,29nm,0.9s
KRUC Moravsky 84.39 320 P **P** **18 33 22.3 +0.9**
KRUC pmax pmax
comp=Z,36nm,1.7s
KRUC Moravsky 84.39 320 *e*P **P** **18 33 22.2 +0.9**
SJES Sjenica 84.39 314 ⇑*i*P **P** **18 33 22.4 +0.7**
MPLH Magyarpolny 84.45 318 P **P** **18 33 22.0 +0.2**
MPLH Magyarpolny 84.45 318 P **P** **18 33 23.0 +1.3**
EGYH Egyhazaskeszo 84.48 319 P **P** **18 33 23.3 +1.4**
EGYH Egyhazaskeszo 84.48 319 P **P** **18 33 23.3 +1.7**
KOVH Kovagotottos 84.53 317 P **P** **18 33 22.4 +0.2**
KOVH Kovagotottos 84.53 317 P **P** **18 33 23.2 +1.1**
BBLS Lazići 84.54 315 ⇑*i*P **P** **18 33 22.6 +0.2**
KIBK Kibwezi 84.54 266 P **P** **18 33 24.2 +1.3**
SNR=5.7
RUDO Rudo 84.66 314 *e*P **P** **18 33 22.4 -0.5**
BER Bergen 84.73 333 P **P** **18 33 23.2 +0.4**
BER pmax pmax
comp=Z,54nm,1.6s
BER Bergen 84.73 333 *e*P **P** **18 33 23.2 +0.4**
ASK Askoy 84.73 333 *e*P **P** **18 33 23.6 +0.8**
BLS5 Blasjo 84.75 332 *e*P **P** **18 33 23.8 +0.7**
KLV Kalavryta, Ach 84.78 309 P **P** **18 33 21.1 -2.6**
TREC Trest 84.83 321 *e*P **P** **18 33 24.5 +0.8**
TREC *e* 18 43 46.5
TREC MLR MLR
comp=Z,1μm,18.8s
TREC Trest 84.83 321 *e*P **P** **18 33 24.5 +0.8**
TREC *e*SKS **SKSac** **18 43 46.5 +0.6**
TREC AMS AMS 19 14 50.0
comp=Z,1μm,18.8s
PVCC Panska Ves 84.84 322 *e*P **P** **18 33 24.6 +0.9**
PVCC *e* 18 43 45.1
PVCC MLR MLR
comp=Z,2μm,18.5s
PVCC Panska Ves 84.84 322 *e*P **P** **18 33 24.6 +0.9**
PVCC *e*SKS **SKSac** **18 43 45.1 -0.7**
PVCC AMS AMS 19 14 50.0
comp=Z,2μm,18.5s
SOP Sopron 84.85 319 P **P** **18 33 24.4 +0.6**
SOP pmax pmax
comp=Z,32nm,1.4s
SOP Sopron 84.85 319 P **P** **18 33 24.1 +0.3**
SOP Sopron 84.85 319 P **P** **18 33 25.0 +1.2**
KMBO Kilima Mbogo 84.87 267 P **P** **18 33 25.8 +1.1**
comp=Z,16nm,1.1s,baz=47,slow=6.8,SNR=17
KMBO LR LR 19 09 54.1
comp=Z,734nm,20.6s,baz=92,slow=35
comp=Z,16nm,1.1s
KMBO Kilima Mbogo 84.87 267 P **P** **18 33 24.1 -0.7**
KMBO IAmb IAmb 18 33 40.7
comp=Z,41nm,1.2s
KMBO Kilima Mbogo 84.87 267 *i* P **P** **18 33 26.0 +1.2**
SNR=16
SNART Snartemo 84.97 331 *e*P **P** **18 33 24.6 +0.4**
MUD Monsted U'grnd 84.99 329 P **P** **18 33 24.9 +0.7**
MUD pmax pmax
comp=Z,139nm,1.4s
MUD Monsted U'grnd 84.99 329 *i* P **P** **18 33 20.4 -3.8**
MUD IAmb IAmb 18 33 40.6
comp=Z,222nm,1.3s
RONA Rosalia, Austr 85.01 319 *e*P **P** **18 33 24.9 +0.3**
comp=Z,20nm,1.1s,SNR=10
BRG Berggiesshubel 85.05 323 *i* P **P** **18 33 25.4 +0.6**
BRG Amp 18 33 27.2
comp=Z,52nm,1.3s
BRG pP **pP** **18 33 34.4 +0.9**
BRG Amp 18 33 35.8
comp=Z,27nm,1.3s
BRG sP **pwP** **18 33 41.1 +2.9**
BRG Amp 18 33 42.0
comp=Z,81nm,1.2s
BRG Berggiesshubel 85.05 323 S **S** **18 43 47.0 -4.9**
BRG Berggiesshubel 85.05 323 SS SS 18 49 27.0 +2.2
BRG Amp 19 15 41.0
comp=N,0.8nm,19.7s
BRG Amp 19 15 46.0
comp=Z,1.7nm,16.7s
BRG Amp 19 15 50.0
comp=E,1.2nm,15.6s
BRG Berggiesshubel 85.05 323 *i* P **P** **18 33 25.3 +0.6**
BRG 18 33 34.4
BRG SP 18 33 41.0
BRG S **S** **18 43 47.0 -4.9**
BRG SP **SPn** **18 44 44.0 -1.2**
BRG SS **SS** **18 49 27.0 +2.2**
BRG pmax pmax
comp=Z,52nm,1.3s
BRG MLR MLR
comp=N,750nm,19.7s
BRG MLR MLR
comp=Z,2μm,16.7s
BRG MLR MLR
comp=E,1μm,15.6s
PRU Pruhonice 85.09 322 *e*P **P** **18 33 25.5 +0.6**
PRU *e* 18 33 40.7
PRU *e* 18 43 39.0
PRU MLR MLR
comp=Z,2μm,17.5s
PRU Pruhonice 85.09 322 *e*P **P** **18 33 25.5 +0.6**
PRU *ex* x 18 33 40.7
PRU *e*SKS **SKSac** **18 43 39.0 -8.4**
PRU AMS AMS 19 15 00.0
comp=Z,2μm,17.5s
LODK Lodwar 85.10 272 P **P** **18 33 27.2 +1.5**
SNR=9.3
UPM Unac-Piva 85.13 314 *e*P **P** **18 33 24.9 -0.6**
CONA Conrad Observa 85.18 319 *e*P **P** **18 33 26.3 +0.7**
comp=Z,57nm,1.3s,SNR=25
TIR Tirane 85.19 312 ⇑P **P** **18 33 25.6 0.0**
TIR Tirane 85.19 312 IAMs_20 IAMs_20 19 16 03.0
comp=Z,710nm,21.0s
TIR Tirane 85.19 312 ⇑P **P** **18 33 25.6 0.0**
PDG Podgorica 85.19 313 ⇑P **P** **18 33 22.3 -3.2**
PDG Podgorica 85.19 313 IAMs_20 IAMs_20 19 17 27.8
comp=Z,725nm,21.0s
PDG Podgorica 85.19 313 *e*P **P** **18 33 22.6 -3.0**
BEHE Becsehely 85.21 318 ⇑*i*P **P** **18 33 26.2 +0.6**
BEHE Becsehely 85.21 318 P **P** **18 33 25.9 +0.2**
BEHE Becsehely 85.21 318 P **P** **18 33 27.0 +1.4**
ITM Ithomi 85.27 308 P **P** **18 33 24.1 -2.0**
ITM Ithomi 85.27 308 IAmb IAmb 18 33 38.7
comp=Z,51nm,0.9s
DRME Dracevica, Mon 85.34 313 *e*P **P** **18 33 26.2 -0.1**
KMY Karmoy 85.39 332 *e*P **P** **18 33 27.2 +1.0**
CLL Collm 85.39 323 IAmb IAmb 18 33 43.3
comp=Z,58nm,1.1s
CLL Collm 85.39 323 ⇑*i*P **P** **18 33 26.5 +0.1**
CLL *e* 18 43 45.0
CLL pmax pmax
comp=Z,56nm,1.4s
CLL MLR MLR
comp=Z,2μm,20.4s
CLL Collm 85.39 323 ⇑*i*P **P** **18 33 26.5 +0.1**
comp=Z,56nm,1.4s
CLL *i* pP **pwP** **18 33 41.5 +1.6**
comp=Z,92nm,1.3s

CLL *e*SKSac **SKSac** **18 43 45.0 -4.3**
CLL *e*S **S** **18 43 53.0 -2.3**
CLL *e*SP **SPn** **18 44 47.0 -2.3**
CLL *e*SS **SS** **18 49 30.0 +0.3**
CLL *e*(SSS) 18 53 48.0
CLL *e*SSSS 18 56 06.0
CLL Lm MLR 19 15 00.0
comp=N,1μm,20.1s
CLL Lm MLR 19 15 00.0
comp=E,1μm,20.4s
CLL Lm MLR 19 15 00.0
comp=Z,2μm,20.4s
BRY Bratogost 85.50 314 ⇑*i*P **P** **18 33 27.1 -0.2**
KOGS Kog 85.55 318 *i* P **P** **18 33 27.4 +0.1**
BSEG Bad Segeberg 85.63 326 P **P** **18 33 28.3 +0.8**
BSEG pmax pmax
comp=Z,95nm,1.3s
BLY Banja Luka 85.65 316 ⇑*i*P **P** **18 33 28.3 +0.5**
CKRC Cesky Krumlov 85.73 321 *e*P **P** **18 33 28.7 +0.5**
CKRC *ex* x 18 33 44.6
CKRC *e*SKS **SKSac** **18 43 42.7 -8.9**
MGRS Mrkonjic Grad 85.86 316 *e*P **P** **18 33 29.4 +0.5**
SRKY Kupres RS 85.94 316 *e*P **P** **18 33 29.9 +0.5**
KHC Kasperske Hory 86.03 321 *e*P **P** **18 33 29.4 -0.3**
KHC *e* 18 33 44.4
KHC *e* 18 43 48.1
KHC MLR MLR
comp=Z,1μm,17.4s
KHC Kasperske Hory 86.03 321 *e*P **P** **18 33 29.4 -0.3**
KHC *ex* x 18 33 44.4
KHC *e*SKS **SKSac** **18 43 48.1 -5.4**
KHC AMS AMS 19 15 30.0
comp=Z,1μm,17.4s
SCO Scoresbysund 86.05 348 P **P** **18 33 30.1 +0.8**
SCO pmax pmax
comp=Z,32nm,1.6s
STON Ston 86.07 314 ⇑*i*P **P** **18 33 29.1 -0.8**
GEC2 GERESS Array S 86.08 321 P **P** **18 33 30.2 +0.2**
GEC2 pmax pmax
comp=Z,30nm,1.5s
GERES GERESS Array B 86.08 321 P **P** **18 33 29.9 -0.1**
comp=Z,5.1nm,0.9s,baz=64,slow=3.1,SNR=42
comp=Z,5.1nm,0.9s
MOA Molln 86.18 320 *e*P **P** **18 33 30.7 +0.3**
comp=Z,41nm,1.4s,SNR=19
NKC Novy Kostel 86.19 322 *e*P **P** **18 33 31.2 +0.8**
NKC *e* 18 33 46.6
NKC *e* 18 43 50.2
NKC MLR MLR
comp=Z,2μm,17.4s
NKC Novy Kostel 86.19 322 *e*P **P** **18 33 31.2 +0.8**
NKC *ex* x 18 33 46.6
NKC *e*SKS **SKSac** **18 43 50.2 -4.2**
NKC AMS AMS 19 16 00.0
comp=Z,2μm,17.4s
SOKA Soboth 86.22 319 *e*P **P** **18 33 30.8 +0.1**
comp=Z,19nm,1.0s,SNR=9.4
CRES Cresnjev 86.32 318 ⇑*i*P **P** **18 33 31.4 +0.3**
CRES Cresnjev 86.32 318 *i* P **P** **18 33 31.5 +0.4**
WET Wettzell 86.44 321 P **P** **18 33 32.2 +0.5**
WET pmax pmax
comp=Z,16nm,1.8s
MOX Moxa 86.48 323 P **P** **18 33 32.1 +0.3**
MOX pmax pmax
comp=Z,24nm,1.7s
CASY Casey 86.53 184 P **P** **18 33 31.6 +0.2**
CASY IAmb IAmb 18 33 33.6
comp=Z,51nm,1.2s
SUMG Summit 86.54 354 IAmb IAmb 18 33 33.7
comp=Z,76nm,1.2s
SUMG Summit 86.54 354 *i* P **P** **18 33 30.5 -1.7**
SUMG IAmb IAmb 18 33 33.2
comp=Z,901nm,2.9s
OBKA Obir 86.59 319 *e*P **P** **18 33 32.2 -0.4**
comp=Z,20nm,1.3s
YKA Yellowknife Ar 86.62 23 P **P** **18 33 31.9 -0.3**
comp=Z,10nm,0.6s,baz=308,slow=4.5,SNR=35
YKA PKKPbc **PKKPdf** **18 51 25.1 +3.8**
comp=Z,0.8nm,0.5s,baz=131,slow=2.9,SNR=5.6
YKA LR LR 19 17 03.6
comp=Z,239nm,18.5s,baz=306,slow=39
comp=Z,10nm,0.6s
YKA Yellowknife Ar 86.62 23 *i* P **P** **18 33 31.6 -0.6**
YKA pmax pmax
comp=Z,11nm,0.6s
BIOA Bad Ischl, Aus 86.63 320 *e*P **P** **18 33 32.7 +0.1**
comp=Z,4.5nm,0.5s
LJU Ljubljana 86.81 318 ⇑*i*P **P** **18 33 33.5 0.0**
LJU Ljubljana 86.81 318 *i* P **P** **18 33 33.8 +0.3**
CEY Cerknica 87.00 318 ⇑*i*P **P** **18 33 34.5 0.0**
GRB1 Grafenberg Arr 87.04 322 P **P** **18 33 35.1 +0.5**
GRB1 pmax pmax
comp=Z,14nm,1.0s
KBA Koelnbreinsper 87.08 319 *i* P **P** **18 33 34.5 -0.5**
comp=Z,5.0nm,0.7s
KBA Koelnbreinsper 87.08 319 P **P** **18 33 34.8 -0.3**
KBA pmax pmax
comp=Z,15nm,1.0s
MYKA Terra Mystica 87.10 319 *e*P **P** **18 33 34.3 -0.7**
comp=Z,12nm,1.6s
GRF Grafenberg Arr 87.15 322 P **P** **18 33 35.7 +0.6**
GRF pmax pmax
comp=Z,12nm,1.6s
GRFO Grafenberg 87.15 322 P **P** **18 33 35.5 +0.4**
GRFO pmax pmax
comp=Z,12nm,1.6s
RAR Rarotonga 87.33 114 LR LR 19 06 16.3
comp=Z,377nm,22.0s,baz=295,slow=31
SKDS Skadanscina 87.35 318 *e*P **P** **18 33 35.9 -0.3**
ABTA Abfaltersbach 87.74 319 *e*P **P** **18 33 37.1 -1.0**
comp=Z,8.5nm,0.7s
FUR Furstenfeldbru 87.83 321 P **P** **18 33 39.2 +0.8**
FUR pmax pmax
comp=Z,35nm,1.0s
WTTA Wattenberg 88.04 320 *e*P **P** **18 33 39.2 -0.5**
comp=Z,13nm,0.8s,SNR=9.1
WTTA Wattenberg 88.04 320 P **P** **18 33 37.5 -2.1**
WTTA pmax pmax
comp=Z,30nm,1.5s
WATA Walderalm 88.04 320 *i* P **P** **18 33 38.6 -1.0**
comp=Z,9.5nm,1.0s,SNR=6.3
TIP Timpagrande 88.23 311 ⇑P **P** **18 33 41.6 +1.0**
TIP Timpagrande 88.23 311 IAMs_20 IAMs_20 19 20 21.6
comp=Z,666nm,20.0s
SQTA Sankt Quirin 88.31 320 *e*P **P** **18 33 40.5 -0.3**
comp=Z,10nm,0.8s,SNR=6.0
MOTA Moosalm 88.32 320 *e*P **P** **18 33 39.6 -1.4**
comp=Z,9.7nm,0.9s,SNR=6.4
TNS Taunus Mts 88.46 324 P **P** **18 33 42.1 +0.7**
TNS pmax pmax
comp=Z,32nm,1.1s
BUG Bochum-Univer 88.48 325 P **P** **18 33 41.7 +0.3**
BUG pmax pmax
comp=Z,37nm,1.4s
CTI Castel Tesino 88.60 319 P **P** **18 33 40.2 -2.0**
CTI Castel Tesino 88.60 319 P **P** **18 33 40.2 -2.0**
CTI pmax pmax
comp=Z,14nm,1.1s
FETA Feichten 88.70 320 *e*P **P** **18 33 42.6 -0.2**
comp=Z,14nm,1.0s,SNR=5.9
CBB Campbell River 88.73 36 IAmb IAmb 18 33 44.3
comp=Z,23nm,0.9s
TEOL Teolo 88.90 318 IAmb IAmb 18 34 00.5
comp=Z,40nm,0.8s
DAVA Damuels 89.08 321 *e*P **P** **18 33 44.4 -0.2**
comp=Z,8.7nm,1.1s
AQU L'Aquila 89.16 315 IAMs_20 IAMs_20 19 20 43.8
comp=Z,865nm,20.0s
CEL Celeste 89.23 311 IAMs_20 IAMs_20 19 21 01.1
comp=Z,700nm,21.0s
DAVOX Davos/Dischmat 89.33 320 P **P** **18 33 45.7 0.0**
comp=Z,13nm,1.0s,baz=61,slow=2.1,SNR=16
DAVOX LR LR 19 18 14.2
comp=Z,1μm,18.5s,baz=76,slow=38
comp=Z,13nm,1.0s
BFO Black Forest 89.47 322 P **P** **18 33 43.7 -2.5**
BFO Black Forest 89.47 322 P **P** **18 33 44.8 -1.4**
BFO pmax pmax
comp=Z,12nm,1.2s
BTNL Ternell 89.54 325 *d*PcP **P** **18 33 46.6 +0.2**
BTNL *dx* x 18 34 01.8
MEM Membach 89.59 325 P **P** **18 33 47.1 +0.5**
MEM pmax pmax
comp=Z,30nm,1.4s
MEM Membach 89.59 325 *d*PcP **P** **18 33 46.5 -0.2**

MEM dx x 18 34 01.9
SLE Schleitheim 89.66 322 P **P** **18 33 46.7 -0.4**
SLE pmax pmax
comp=Z,18nm,1.4s
BHOU Houvegnez 89.73 325 *d*PcP **P** **18 33 47.5 +0.1**
BSTI Sart Tilman 89.85 325 *d*PcP **P** **18 33 48.0 +0.2**
BSTI dx x 18 34 03.6
ICESG Greenland Ices 89.99 353 *i* P **P** **18 33 46.5 -2.1**
ICESG IAmb IAmb 18 34 03.6
comp=Z,879nm,3.1s
WLF Walferdange 90.01 324 *d*PcP **PcP** **18 33 49.4 -0.5**
WLF dx x 18 34 04.6
ECH Echery 90.20 322 P **P** **18 33 49.9 +0.3**
RCHB Rochefort 90.26 325 *d*PcP **P** **18 33 49.9 +0.1**
RCHB dx x 18 34 04.9
BMRD Maredsous 90.43 325 *d*PcP **P** **18 33 50.7 +0.2**
BMRD dx x 18 34 05.7
GIVF Givet 90.51 325 *e*P **P** **18 33 50.5 -0.4**
GIVF pmax pmax
comp=Z,35nm,1.4s
SNF Seneffe 90.58 325 *d*PcP **P** **18 33 51.2 0.0**
SNF dx x 18 34 06.0
HINF Hinteralfeld 90.59 322 *e*P **P** **18 33 50.5 -0.9**
HINF pmax pmax
comp=Z,31nm,1.6s
VAE Valguarnera 90.63 310 LR LR 19 21 28.1
comp=Z,466nm,19.7s,baz=36,slow=40
DOU Dourbes 90.63 325 *d*PcP **P** **18 33 51.6 +0.1**
DOU dx x 18 34 06.7
BORG Borgarnes 90.67 345 LR LR 19 18 07.1
comp=Z,1µm,20.5s,baz=27,slow=38
HAU Haudompre 90.78 323 *e*P **P** **18 33 51.3 -1.0**
HAU pmax pmax
comp=Z,18nm,1.3s
MBAR Mbarara 90.81 270 LR LR 19 13 26.5
comp=Z,369nm,21.1s,baz=42,slow=35
MBAR Mbarara 90.81 270 P **P** **18 33 51.9 -1.3**
MBAR Mbarara 90.81 270 *c*e**P** **18 33 54.3 +1.1**
MBAR pmax pmax
comp=Z,9.0nm,1.7s
BAIF Baives 90.86 325 *e*P **P** **18 33 52.1 -0.5**
BAIF pmax pmax
comp=Z,17nm,1.2s
EKA Eskdalemuir Ar 91.36 332 P **P** **18 33 54.8 +0.1**
comp=Z,7.6nm,1.0s,baz=31,slow=1.7,SNR=5.2
EKA LR LR 19 20 27.8
comp=Z,1µm,19.3s,baz=44,slow=39
comp=Z,7.6nm,1.0s
ESK Eskdalemuir 91.39 332 P **P** **18 33 55.2 +0.3**
ESK pmax pmax
comp=Z,41nm,1.6s
LPG La Plagne 91.85 320 *e*P **P** **18 33 57.5 -0.1**
LPG pmax pmax
comp=Z,28nm,1.2s
LPL La Plagne 91.85 320 *e*P **P** **18 33 57.3 -0.3**
LPL pmax pmax
comp=Z,34nm,1.2s
PGF Pioggiola 91.94 317 P **P** **18 33 58.4 +0.5**
PGF pmax pmax
comp=Z,66nm,1.1s
BNI Bardonecchia 92.12 320 P **P** **18 33 59.3 +0.6**
BNI pmax pmax
comp=Z,19nm,1.1s
G03D McMinnville, O 92.44 40 P **P** **18 34 00.8 +0.8**
baz=302
I02E Swisshome, OR 92.66 41 P **P** **18 34 02.0 +1.0**
baz=302
SFJD Kangerlussuaq 92.94 357 LR LR 19 19 10.4
comp=Z,456nm,18.6s,baz=13,slow=38
J01E Myrtle Point 93.10 42 IAMs_20 IAMs_20 19 23 06.7
comp=Z,422nm,20.0s
J01E Myrtle Point 93.10 42 P **P** **18 34 04.4 +1.3**
baz=301
H04D Lebanon 93.12 40 P **P** **18 34 04.3 +1.2**
baz=302
AVF Avril sur Loir 93.15 323 *e*P **P** **18 34 02.4 -0.8**
AVF pmax pmax
comp=Z,16nm,1.0s
DY2G Dye2 93.17 355 *i* P **P** **18 34 01.7 -1.5**
DY2G IAmb IAmb 18 34 03.6
comp=Z,262nm,1.9s
I03D Drain, OR 93.18 41 P **P** **18 34 04.2 +0.8**
baz=302,SNR=5.2
K02D Willamette Mer 93.51 42 P **P** **18 34 05.1 +0.1**
baz=302
BGF Bois d'Agland 93.56 323 *e*P **P** **18 34 04.5 -0.7**
BGF pmax pmax
comp=Z,28nm,1.4s
I04A Tendick Farm, 93.71 41 P **P** **18 34 06.5 +0.6**
baz=302,SNR=8.3
L02F Cave Junction 93.87 42 P **P** **18 34 06.9 +0.3**
baz=302
I05D Terrebonne, OR 94.06 40 P **P** **18 34 08.2 +0.6**
baz=303
J04D Umpqua Nationa 94.19 41 P **P** **18 34 08.9 +0.5**
baz=303
NEW Newport 94.22 35 P **P** **18 34 06.7 -1.5**
NEW pmax pmax
comp=Z,8.0nm,1.2s
NEW Newport 94.22 35 P **P** **18 34 08.6 +0.4**
baz=307
L04D Klamath Falls 94.62 42 IAmb IAmb 18 34 11.5
comp=Z,29nm,1.0s
L04D Klamath Falls 94.62 42 P **P** **18 34 10.6 +0.3**
baz=302,SNR=7.1
YBH Yreka Blue Hor 94.62 42 LR LR 19 11 41.9
comp=Z,194nm,20.8s,baz=311,slow=32
J05D Fort Rock, OR 94.70 41 P **P** **18 34 11.2 +0.6**
baz=303,SNR=11
CAF Calviac 94.94 322 *e*P **P** **18 34 12.9 +1.3**
CAF pmax pmax
comp=Z,10.0nm,1.1s
PPT Papeete 95.03 107 P **P** **18 34 12.7 +0.3**
comp=Z,54nm,0.5s,baz=79,slow=13,SNR=2.3
PPT LR LR 19 08 38.0
comp=Z,378nm,20.9s,baz=310,slow=30
PPT2 Papeete2 95.04 107 *e*LR LR 19 04 47.9
comp=Z,2µm,24.8s
RJF Les Rejaudoux 95.04 322 *e*P **P** **18 34 12.0 0.0**
RJF pmax pmax
comp=Z,22nm,1.1s
KEST Kesra 95.05 311 LR LR 19 23 34.1
comp=Z,383nm,21.0s,baz=7.0,slow=40
MFF Saint Martin d 95.22 324 *e*P **P** **18 34 12.3 -0.4**
MFF pmax pmax
comp=Z,16nm,1.2s
FRB Frobisher Bay 96.05 4 LR LR 19 21 22.3
comp=Z,523nm,20.7s,baz=356,slow=38
WVOR Wild Horse Val 96.76 40 P **P** **18 34 20.7 +0.7**
WVOR pmax pmax
comp=Z,5.0nm,1.2s
MSO Missoula 96.80 35 IAMs_20 IAMs_20 19 26 45.9
comp=Z,412nm,21.0s
TBI Tubuai 97.02 112 *e*LR LR 19 05 43.1
comp=Z,887nm,28.0s
MAW Mawson 97.34 199 LR LR 19 17 20.6
comp=Z,238nm,18.7s,baz=54,slow=35
PNTR Pine Nut 98.05 43 P **Pdif** **18 34 31.8 +0.3**
comp=Z,4.2nm,0.9s,baz=276,slow=5.5,SNR=28
NVAR PKKPbc **PKKPbc** **18 50 56.4 +0.2**
comp=Z,0.3nm,0.6s,baz=138,slow=5.5,SNR=4.0
NVAR LR LR 19 13 46.1
comp=Z,171nm,20.6s,baz=293,slow=32
comp=Z,4.2nm,0.9s
ELK Elko 99.81 40 P **Pdif** **18 34 34.2 +0.3**
comp=Z,0.3nm,0.4s,baz=75,slow=5.0,SNR=4.4
comp=Z,0.3nm,0.4s
LKWY Lake 100.16 35 IAMs_20 IAMs_20 19 21 39.7
comp=Z,481nm,20.0s
VNDA Vanda 100.27 172 P **Pdif** **18 34 34.8 +0.2**
comp=Z,4.6nm,1.2s,baz=311,slow=7.0,SNR=6.3
FLWY Flagg Ranch 100.31 35 IAMs_20 IAMs_20 19 23 41.0
comp=Z,374nm,20.0s
MOOW Moose Ponds 100.51 36 IAMs_20 IAMs_20 19 27 41.1
comp=Z,445nm,22.0s
LOHW Long Hollow 100.68 36 IAMs_20 IAMs_20 19 27 42.5
comp=Z,392nm,19.0s

TAOE Nuku Hiva Isla 100.90 95 *e*LR LR 19 07 31.6
comp=Z,2µm,23.6s
CART Cartagena 101.07 317 IAMs_20 IAMs_20 19 25 56.9
comp=Z,540nm,18.0s
HWUT Hardware Ranch 101.44 38 IAMs_20 IAMs_20 19 24 51.0
comp=Z,354nm,20.0s
BW06 Boulder Array 101.81 36 IAMs_20 IAMs_20 19 27 43.5
comp=Z,406nm,19.0s
PDAR Pinedale Array 101.81 36 P **Pdif** **18 34 43.5 +0.8**
comp=Z,0.1nm,0.4s,baz=255,slow=40,SNR=2.4
MVO Moncorvo 102.50 323 *e*PP **PP** **18 39 01.2 +3.2**
MVO *e*SKSac **SKSac** **18 45 26.8 +3.4**
MVO *e*SS **SS** **18 53 39.8 +5.7**
MVO Moncorvo 102.50 323 *e*LR LR 19 16 54.3
comp=Z,1µm,18.0s
PGAV Gavieira, Arco 102.67 324 *e*PP **PP** **18 39 01.9 +2.6**
PGAV *e*SKSac **SKSac** **18 45 23.9 -0.3**
PGAV *e*SS **SS** **18 53 40.8 +4.4**
PGAV Gavieira, Arco 102.67 324 *e*LQ LQ 19 05 49.2
PGAV *e*LR LR 19 11 18.2
comp=Z,1µm,18.0s
POLO Lamas de Olo 102.80 323 *e*PP **PKiKP** **18 39 10.5 +3.0**
POLO *e*SKSac **SKSac** **18 45 27.1 +2.3**
POLO *e*SS SS 18 53 54.5 +16
109C Camp Elliot, M 103.20 47 IAMs_20 IAMs_20 19 16 05.9
comp=Z,363nm,20.0s
MTE Manteigas 103.30 322 *e*PP PKiKP 18 39 16.9 +8.5
MTE *e*SKSac **SKSac** **18 45 29.0 +1.9**
MTE *e*SS SS 18 53 56.4 +11
MTE Manteigas 103.30 322 *e*LR LR 19 22 43.7
comp=Z,1µm,18.0s
RSSD Black Hills 103.75 32 IAMs_20 IAMs_20 19 29 35.6
comp=Z,352nm,21.0s
RWWY Rawlins 103.82 35 IAMs_20 IAMs_20 19 29 28.7
comp=Z,641nm,22.0s
PMRV Marv??o 103.85 322 *e*PP PP 18 39 21.0 +13
PMRV *e*SKSac **SKSac** **18 45 34.2 +4.6**
PMRV *e*SS SS 18 54 05.3 +13
PMRV Marv??o 103.85 322 *e*LR LR 19 21 02.2
comp=Z,684nm,18.0s
COI Coimbra 103.92 323 *e*PP PKiKP 18 39 18.7 +9.3
COI Coimbra 103.92 323 *e*SS SS 18 53 37.7 -16
PCAS Casmilo, Conde 104.08 323 *e*PP PP 18 39 22.3 +13
PCAS *e*SKSac **SKSac** **18 45 34.3 +3.7**
PESTR Estremoz 104.33 321 *e*SKSac **SKSac** **18 45 36.7 +4.9**
PESTR *e*SS SS 18 54 10.7 +11
PBAR Barrancos 104.46 320 *e*SKSac **SKSac** **18 45 36.7 +4.3**
PVAQ Vaqueiros 105.37 320 *e*PP PP 18 39 28.4 +9.0
PVAQ *e*SKSac **SKSac** **18 45 39.5 +3.0**
PVAQ Vaqueiros 105.37 320 *e*LR LR 19 24 04.5
comp=Z,803nm,16.0s
PNCL Nicolau / Gran 105.39 321 *e*PP PP 18 39 32.0 +13
PNCL *e*SKSac **SKSac** **18 45 42.8 +6.2**
PBDV Barranco-do-Ve 105.60 320 *e*PP PP 18 39 39.7 +19
PBDV *e*SKSac **SKSac** **18 45 44.3 +6.6**
EYMN Ely 106.11 22 IAMs_20 IAMs_20 19 27 48.8
comp=Z,546nm,20.0s
PFVI Vila Bisbo 106.21 321 *e*PP PP 18 39 45.8 +20
OGNE Ogallala 107.09 33 IAMs_20 IAMs_20 19 31 07.9
comp=Z,310nm,19.0s
SDCO Great Sand Dun 107.50 37 IAMs_20 IAMs_20 19 25 29.3
comp=Z,358nm,19.0s
ECSD EROS Data Cent 107.53 28 IAMs_20 IAMs_20 19 30 57.0
comp=Z,494nm,20.0s
TUC Tucson 107.83 45 IAMs_20 IAMs_20 19 14 52.9
comp=Z,486nm,21.0s
ANMO Albuquerque 108.85 40 IAMs_20 IAMs_20 19 33 58.5
comp=Z,517nm,18.0s
Y22D IRIS PASSCAL I 109.16 41 IAMs_20 IAMs_20 19 26 33.6
comp=Z,447nm,20.0s
CBKS Cedar Bluff 109.85 33 IAMs_20 IAMs_20 19 35 23.0
comp=Z,466nm,20.0s
JFWS Jewell Farm 110.84 24 IAMs_20 IAMs_20 19 32 10.3
comp=Z,537nm,21.0s
EPT El Paso 110.95 43 IAMs_20 IAMs_20 19 33 55.3
comp=Z,405nm,20.0s
KSU1 Kansas State U 111.19 31 IAMs_20 IAMs_20 19 35 21.2
comp=Z,365nm,18.0s
MNTX Cornudas Mount 111.71 42 IAMs_20 IAMs_20 19 32 12.3
comp=Z,380nm,19.0s
TORD Torodi Ar. Bea 112.09 294 PKiKP **PKiKP** **18 39 24.1 -1.1**
comp=Z,2.5nm,0.8s,baz=26,slow=1.9,SNR=15
TORD PKKPbc **PKKPbc** **18 50 16.5 +0.3**
comp=Z,2.7nm,1.0s,baz=276,slow=2.8,SNR=7.5
L44A Lake County Fo 112.36 23 IAMs_20 IAMs_20 19 31 43.3
comp=Z,538nm,19.0s
AAM Ann Arbor 113.72 20 IAMs_20 IAMs_20 19 36 00.1
comp=Z,562nm,20.0s
TUL1 Leonard 114.09 32 IAMs_20 IAMs_20 19 29 57.1
comp=Z,463nm,21.0s
PMOZ Porto Moniz, M 114.13 322 *e*PP PP 18 40 34.2 +11
PMOZ Porto Moniz, M 114.13 322 *e*LR LR 19 26 13.6
comp=Z,464nm,22.0s
TXAR Lajitas Array 114.39 43 PKP **PKiKP** **18 39 29.2 -0.3**
comp=Z,2.1nm,0.8s,baz=354,slow=2.5,SNR=3.9
TXAR PKKPab **PKKPab** **18 50 14.7 -2.3**
comp=Z,1.1nm,0.7s,baz=150,slow=8.2,SNR=14
CCM Cathedral Cave 114.51 28 IAMs_20 IAMs_20 19 32 52.7
comp=Z,428nm,20.0s
VT1 Waterbury 114.57 11 IAMs_20 IAMs_20 19 29 56.2
comp=Z,557nm,22.0s
EMMW East Machias 114.98 7 IAMs_20 IAMs_20 19 32 56.6
comp=Z,519nm,20.0s
U40A Yellville 115.17 30 IAMs_20 IAMs_20 19 38 45.5
comp=Z,455nm,18.0s
HNH Hanover 115.26 11 IAMs_20 IAMs_20 19 38 46.2
comp=Z,496nm,21.0s
FFD Franklin Falls 115.60 10 IAMs_20 IAMs_20 19 30 28.1
comp=Z,576nm,21.0s
ACSO Alum Creek Sta 115.80 21 IAMs_20 IAMs_20 19 35 38.3
comp=Z,481nm,20.0s
P49A Miami Univ. Ec 115.83 22 IAMs_20 IAMs_20 19 35 57.3
comp=Z,515nm,20.0s
TRY Troy 115.94 12 IAMs_20 IAMs_20 19 39 33.2
comp=Z,390nm,21.0s
O53A New Philadelph 116.35 19 IAMs_20 IAMs_20 19 38 09.7
comp=Z,437nm,19.0s
HRV Adam Dziewonsk 116.55 11 IAMs_20 IAMs_20 19 36 32.3
comp=Z,553nm,20.0s
P52A Corning 116.62 20 IAMs_20 IAMs_20 19 35 59.0
comp=Z,470nm,20.0s
X40A Basin Creek Fa 116.69 31 IAMs_20 IAMs_20 19 36 49.8
comp=Z,487nm,18.0s
BRYW Bryn Mawr College 117.12 11 IAMs_20 IAMs_20 19 34 26.6
comp=Z,545nm,20.0s
YLE Yale 117.45 12 IAMs_20 IAMs_20 19 38 02.1
comp=Z,490nm,18.0s
WSPT Westport, CT 117.51 12 IAMs_20 IAMs_20 19 38 15.8
comp=Z,412nm,20.0s
WVT Waverly 117.59 26 IAMs_20 IAMs_20 19 35 27.3
comp=Z,527nm,20.0s
WVT Waverly 117.59 26 PKiKP **PKPdf** **18 39 34.6 -0.7**
TROLL Troll, Antarti 117.78 198 PKPdf **PKPdf** **18 39 34.6 -0.1**
OXF Oxford 118.28 29 IAMs_20 IAMs_20 19 41 01.6
comp=Z,464nm,18.0s
PLAL Pickwick Lake 118.47 27 IAMs_20 IAMs_20 19 39 11.5
comp=Z,390nm,21.0s
HKT Hockley 118.66 37 IAMs_20 IAMs_20 19 33 10.4
comp=Z,521nm,20.0s
BLA Blacksburg 119.38 20 IAMs_20 IAMs_20 19 32 54.9
comp=Z,516nm,20.0s
SNAA Sanae 119.45 197 PKPdf **PKPdf** **18 39 37.1 -0.7**
SNAA Sanae 119.45 197 PKPdf **PKPdf** **18 39 37.3 -0.5**
SNAA Sanae 119.45 197 PKiKP **PKPdf** **18 39 37.3 -0.5**
TKL Tuckaleechee C 119.61 23 PKP **PKPdf** **18 39 38.1 -1.1**
comp=Z,7.6nm,1.1s,baz=160,slow=2.1,SNR=4.7
LRAL Lakeview Retre 120.59 28 IAMs_20 IAMs_20 19 43 14.8
comp=Z,312nm,19.0s
DBIC Dimbokro 120.82 291 PKP **PKPdf** **18 39 41.5 -0.5**
comp=Z,6.6nm,0.7s,baz=125,slow=3.2,SNR=8.1
KIC Kosan Boka 120.86 291 *e*P **PKPdf** **18 39 40.9 -1.3**
comp=Z,7.7nm,0.5s
TIC Toumodi 120.97 291 ⇑ *i*P **PKPdf** **18 39 41.4 -1.0**
comp=Z,2.3nm,0.3s
LIC Lamto 121.17 291 ⇑ *i*P **PKPdf** **18 39 42.4 -0.4**
comp=Z,3.1nm,0.5s
VNA1 Neumayer--Stat 121.49 198 PKPdf **PKPdf** **18 39 41.2 -0.5**
VNA3 Neumayer Olymp 121.55 197 PKPdf **PKPdf** **18 39 41.1 -0.7**
SJG San Juan 141.29 11 IAMs_20 IAMs_20 19 46 12.6
comp=Z,342nm,21.0s
SMRT St. Maarten 141.81 7 IAMs_20 IAMs_20 19 57 07.1
comp=Z,290nm,20.0s
BCIP Isla Barro Col 144.18 38 IAMs_20 IAMs_20 19 43 47.9
comp=Z,416nm,22.0s
AZU Azuero 145.02 40 *e*P **PKPbc** **18 40 25.5 -1.0**
MG03 Isla Dawson 145.13 168 **PKPdf** **18 40 26.6 +0.4**

DSPA Despedida 145.43 170 PKPdf **PKPab** **18 40 27.8 +1.0**
CAPC Capurgana 145.99 35 *e*P **PKPdf** **18 40 27.1 -1.7**
SJCC San Jacinto, C 146.00 30 *e*P **PKPdf** **18 40 27.8 -1.2**
CRJC Cerrejon, Guaj 146.02 26 *e*P **PKPdf** **18 40 29.0 0.0**
MG05 Puerto Natales 146.68 164 **PKPab** **18 40 31.6 0.0**
LL6C La Loma 6 Bece 147.01 27 *e*P **PKPdf** **18 40 30.9 +0.3**
DBBC Dabeiba 147.95 34 *e*P **PKPdf** **18 40 31.9 -0.4**
ZARC Zaragoza, Cauc 148.24 32 *e*P **PKPdf** **18 40 33.4 +0.7**
EFI East Falkland 148.51 181 **PKiKP** **18 40 36.4 -0.7**
EFI East Falkland 148.51 181 PKP2 **PKiKP** **18 40 36.4 -0.7**
SDV Santo Domingo 148.84 23 *e*P **PKPdf** **18 40 32.8 -1.1**
SDV Santo Domingo 148.84 23 *e*P **PKPdf** **18 40 33.7 -0.2**
HELC Santa Helena 149.01 34 *e*P **PKPdf** **18 40 34.8 +0.4**
BRRC Barranca, Sant 149.13 30 *e*P **PKPdf** **18 40 35.1 +1.0**
PTBC PUERTO BERRIO 149.26 32 *e*P **PKPbc** **18 40 36.7 -1.9**
SOCV Socops 149.31 24 *e*P **PKPbc** **18 40 37.8 -1.0**
PLMC San Jos del P 149.67 37 *e*P **PKPdf** **18 40 34.8 -0.2**
BARC Barichara 149.83 30 *e*P **PKPbc** **18 40 39.4 -0.9**
GUY2C Guyana, Caldas 149.91 35 *e*P **PKPdf** **18 40 35.8 -0.2**
SPBC San Pablo de B 150.22 32 *e*P **PKPbc** **18 40 39.7 -1.4**
YOTC Yotoco, Valle 150.38 38 *e*P **PKPdf** **18 40 36.5 +0.2**
RUSC La Rusia 150.49 30 *e*P **PKPdf** **18 40 36.4 -0.5**
ANIL Santa Ana 150.50 36 *e*P **PKPbc** **18 40 39.8 -2.2**
TAMC Tame, Arauca 150.60 27 *e*P **PKPbc** **18 40 41.1 -0.8**
ROSC El Rosal 150.78 34 PKP **PKPdf** **18 40 38.5 +1.2**
comp=Z,7.2nm,0.5s,baz=210,slow=2.9,SNR=12
ROSC El Rosal 150.78 34 *e*P **PKPdf** **18 40 38.2 +1.0**
ELOV Elorza 151.00 23 *e*P **PKPdf** **18 40 37.9 +0.8**
ORTC Ortega, Tolima 151.07 36 *e*P **PKPbc** **18 40 40.9 -2.1**
CHIC Chingaza 151.26 33 *e*P **PKPdf** **18 40 37.1 -0.9**
POPC Popayan, Colom 151.34 40 *e*P **PKPdf** **18 40 37.5 -0.4**
BBAC Balboa, Cauca 151.40 42 *e*P **PKPdf** **18 40 37.1 -0.8**
MARP Paez Belalcaza 151.53 39 *e*P **PKPdf** **18 40 36.8 -1.5**
PCON Cinco Dias 151.68 40 *e*P **PKPdf** **18 40 38.6 -0.2**
VILC Villavicencio, 151.73 33 *e*P **PKPbc** **18 40 43.5 -1.1**
GCUF Volcan Galeras 151.94 43 *e*P **PKPbc** **18 40 43.8 -1.8**
OTAV Otavalo 151.95 46 PKiKP **PKPdf** **18 40 40.5 +1.4**
OTAV Otavalo 151.95 46 *e*P **PKPdf** **18 40 37.7 -1.4**
OTAV Otavalo 151.95 46 *e*P **PKPdf** **18 40 38.3 -0.8**
GARC Garzon, Huila 152.33 39 *e*P **PKPbc** **18 40 44.9 -1.2**
FLOC Florencia 152.72 40 *e*P **PKPdf** **18 40 39.4 -0.3**
PLCA Paso Flores 157.07 156 PKP **PKPdf** **18 40 44.3 -0.6**
comp=Z,6.1nm,1.1s,baz=146,slow=3.4,SNR=7.2
PLCA Paso Flores 157.07 156 *e*P **PKPdf** **18 40 43.2 -1.7**
MALB Monte Alegre 161.35 346 *e*P **PKPdf** **18 40 50.2 -0.4**
BDFB Brasilia 168.96 292 PKP **PKPdf** **18 40 56.6 -0.4**
comp=Z,13nm,1.2s,baz=6.7,slow=3.7,SNR=12
BDFB Brasilia 168.96 292 *e*P **PKPdf** **18 40 57.4 +0.3**
LVC Limon Verde 170.10 106 PKiKP **PKPdf** **18 40 59.0 +1.1**
LVC Limon Verde 170.10 106 *e*P **PKPdf** **18 40 58.2 +0.3**
LPAZ La Paz 170.19 69 PKP **PKPdf** **18 40 58.6 +0.2**
comp=Z,16nm,1.1s,baz=21,slow=2.3,SNR=50
LPAZ PKPab **PKPab** **18 42 14.0 -0.3**
comp=Z,3.5nm,0.7s,baz=268,slow=4.0,SNR=5.5
LPAZ La Paz 170.19 69 *e*P **PKPdf** **18 40 57.9 -0.5**
CPUP Villa Florida 173.71 191 PKP **PKPdf** **18 40 59.2 +0.2**
comp=Z,8.6nm,1.1s,baz=101,slow=1.7,SNR=10
CPUP PKPab **PKPab** **18 42 28.8 +0.3**
comp=Z,8.2nm,1.1s,baz=146,slow=4.5,SNR=7.0

IDC ***19*** *18:41:21.6±3.1, 19°.90S×168°.70E, h0km, mb3.7/2, mbtmp3.7/2 Error ellipse: s-maj=149.4km s-min=49.5km az=158.0*

ISC 19 18:41:20.7±2.7**, 20°.5S**±0°.9×**169°.0E**±0°.4**, h10**km**, n6,**
σ**0°.90**/6**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**32.52**	**265**	P	**P**		**18 47 51.9**	**0.0**
	0.6nm,0.6s,baz=91,slow=8.1,SNR=8.0							
	0.6nm,0.6s							
SONM	**Songino Array**	**88.10**	**323**	P	**P**		**18 54 11.6**	**0.0**
	0.3nm,0.5s,baz=131,slow=4.0,SNR=2.1							
	0.3nm,0.5s							
ARCES	**ARCESS Array B**	**126.23**	**345**	PKP	**PKiKP**		**19 00 23.5**	**+0.2**
	2.4nm,0.9s,baz=60,slow=5.3,SNR=1.7							
EKA	**Eskdalemuir Ar**	**144.73**	**352**	PKP	**PKPdf**		**19 00 56.7**	**-0.7**
	1.0nm,0.6s,baz=1.7,slow=2.6,SNR=4.5							
GERES	**GERESS Array B**	**145.50**	**331**	PKP	**PKPdf**		**19 01 00.3**	**+1.2**
	0.5nm,0.5s,baz=39,slow=6.3,SNR=5.6							
DAVOX	**Davos/Dischmat**	**148.75**	**332**	PKPbc	**PKiKP**		**19 01 09.4**	**-0.7**
	2.7nm,0.5s,baz=278,slow=22,SNR=5.1							

EAF ***19*** *18:45:23.6±6.3, 11°.33N×43°.10E, h38km±112km*
AAE ***19*** *18:45:30.2±0.9, 10°.85N×42°.50E, h37km±20km*

ISC 19 18:45:24.9±0.8**, 10°.72N**±0°.03×**42°.42E**±0°.02**, h10**km**, n29,**
σ**1°.79**/58**, 4D, Ethiopia**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
ATD	**Arta Tunnel**	**0.91**	**27**	*e*P	**Pn**		**18 45 44.9**	**+1.0**
ATD				*e*S	**Sn**		**18 45 56.5**	**-0.6**
ATD	**Arta Tunnel**	**0.91**	**27**	*e*P	**Pn**		**18 45 44.9**	**+1.0**
ATD				*e*S	**Sn**		**18 45 57.1**	**0.0**
ATD	**Arta Tunnel**	**0.91**	**27**	*e*P	**Pn**		**18 45 44.2**	**+0.3**
ATD				*e*S	**Sg**		**18 45 53.9**	**-0.4**
ATD	**Arta Tunnel**	**0.91**	**27**	*e*P	**Pn**		**18 45 43.7**	**-0.2**
ATD				*e*S	**Sg**		**18 45 53.2**	**-1.2**
HARA	**HARA**	**1.66**	**149**	*e*P	**Pb**		**18 45 55.4**	**-0.3**
HARA				⇓*e*S	**Sb**		**18 46 16.9**	**+0.2**
HARA	**HARA**	**1.66**	**149**	*e*P	**Pb**		**18 45 56.0**	**+0.4**
HARA				*e*S	**Sb**		**18 46 17.2**	**+0.5**
HARA	**HARA**	**1.66**	**149**	*e*P	**Pg**		**18 45 56.2**	**-0.5**
HARA				*e*S	**Sb**		**18 46 17.3**	**+0.6**
HARA				IAML			18 46 20.9	
	comp=N,500nm,0.3s							
HARA	**HARA**	**1.66**	**149**	*e*P	**Pg**		**18 45 56.5**	**-0.2**
HARA				*e*S	**Sb**		**18 46 17.3**	**+0.6**
HARA				IAML			18 46 20.9	
	comp=N,500nm,0.3s							
HARA	**HARA**	**1.66**	**149**	*e*P	**Pb**		**18 45 55.4**	**-0.3**
HARA				⇓*e*S	**Sb**		**18 46 16.9**	**+0.2**
HARA	**HARA**	**1.66**	**149**	*e*P	**Pg**		**18 45 56.6**	**-0.2**
HARA				*e*S	**Sb**		**18 46 17.2**	**+0.5**
TEND	**Ethiopian Broa**	**1.75**	**308**	*e*P	**Pn**		**18 45 55.8**	**+0.4**
TEND				*e*S	**Sb**		**18 46 18.9**	**-0.4**
DESE	**Dese**	**2.76**	**279**	⇓*e*P	**Pb**		**18 46 14.8**	**+0.1**
DESE				*e*S	**Sb**		**18 46 49.7**	**+0.9**
DESE	**Dese**	**2.76**	**279**	*e*P	**Pb**		**18 46 15.1**	**+0.5**
DESE				*e*S	**Sb**		**18 46 49.9**	**+1.2**
DESE	**Dese**	**2.76**	**279**	*e*P	**Pb**		**18 46 14.6**	**0.0**
DESE				*e*S	**Sb**		**18 46 49.6**	**+0.9**
DESE				IAML			18 46 57.0	
	comp=N,72nm,0.5s							
DESE	**Dese**	**2.76**	**279**	*e*P	**Pb**		**18 46 15.7**	**+1.1**
DESE				*e*S	**Sb**		**18 46 50.2**	**+1.5**
DESE				IAML			18 46 57.0	
	comp=N,72nm,0.5s							
DESE	**Dese**	**2.76**	**279**	⇓*e*P	**Pb**		**18 46 14.8**	**+0.1**
DESE				*e*S	**Sb**		**18 46 49.7**	**+0.9**
DESE	**Dese**	**2.76**	**279**	*e*P	**Pb**		**18 46 12.3**	**-2.4**
DESE				*e*S	**Sn**		**18 46 43.1**	**-0.1**
ANKE	**Ethiopia-Afar**	**2.87**	**247**	*e*P	**Pb**		**18 46 16.3**	**-0.2**
ANKE				*e*S	**Sg**		**18 46 55.5**	**-1.8**
ANKE	**Ethiopia-Afar**	**2.87**	**247**	*e*P	**Pb**		**18 46 16.3**	**-0.2**
ANKE				*e*S	**Sg**		**18 46 55.5**	**-1.8**
AAE	**Adis Abeba**	**3.97**	**245**	*e*P	**Pb**		**18 46 37.1**	**+1.8**
AAE				*e*S	**Sg**		**18 47 29.3**	**-3.3**
AAE	**Adis Abeba**	**3.97**	**245**	*e*P	**Pn**		**18 46 28.4**	**+2.2**
AAE				*e*S	**Sg**		**18 47 29.0**	**-3.6**
AAE				IAML			18 47 33.4	
	comp=N,210nm,0.6s							
AAE	**Adis Abeba**	**3.97**	**245**	*e*P	**Pb**		**18 46 36.0**	**+0.7**
AAE				*e*S	**Sb**		**18 47 24.9**	**+1.4**
AAE				IAML			18 47 33.4	
	comp=N,210nm,0.6s							
AAE	**Adis Abeba**	**3.97**	**245**	*e*P	**Pn**		**18 46 29.9**	**+3.7**
AAE				*e*S	**Sn**		**18 47 13.1**	**+0.1**
FURI	**Furi**	**4.11**	**244**	*e*P	**Pg**		**18 46 41.7**	**-2.0**
FURI				*e*S	**Sg**		**18 47 32.6**	**-4.4**
FURI	**Furi**	**4.11**	**244**	*e*P	**Pg**		**18 46 47.9**	**+4.2**
FURI				*e*S	**Sg**		**18 47 36.8**	**-0.2**
FURI	**Furi**	**4.11**	**244**	*e*P	**Pb**		**18 46 38.3**	**+0.7**
FURI				*e*S	**Sg**		**18 47 32.2**	**-4.7**
FURI				IAML			18 47 57.2	
	comp=N,83nm,0.7s							
FURI	**Furi**	**4.11**	**244**	*e*P	**Pb**		**18 46 36.6**	**-1.0**
FURI				*e*S	**Sb**		**18 47 27.5**	**+0.1**
FURI				IAML			18 47 57.2	
	comp=N,83nm,0.7s							

FURI	**Furi**	**4.11**	**244**	*eP*	**Pg**	**18 46 41.7**	**-2.0**
FURI				*eS*	**Sg**	**18 47 32.6**	**-4.4**
FURI	**Furi**	**4.11**	**244**	*eP*	**Pn**	**18 46 31.7**	**+3.7**
FURI				*eS*	**Sn**	**18 47 16.1**	**-0.3**

AZER ***19*** *18:47:48.9±0.0,40.66N×47.40E, h25km, Error ellipse: s-maj=0.7km s-min=0.6km az=285.0*
MOS ***19*** *18:47:50.6±0.0,40.73N×47.46E, h12km, MPVA3.7*
DRS ***19*** *18:47:55.0±0.0,40.54N×47.45E, h24km*
ISC 19 18:47:51.0±1.0,**40.63N**±0.02×**47.43E**±0.02,**h21**km±3km,
n54,σ1§41/107, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
MNGR	**Mingechevir, A**	**0.30**	**299**	P		**Pb**		**18 47 57.1**	**-0.7**
	SNR=32								
MNGR				P		**Pb**		**18 47 57.1**	**-0.7**
	SNR=32								
MNGR				S		**Sb**		**18 48 01.9**	**-0.5**
ZRD	**Zardab**	**0.40**	**151**	P		**Pb**		**18 47 59.0**	**-0.3**
	SNR=5.4								
ZRD				S		**Sn**		**18 48 07.0**	**-1.4**
BRDA	**Brd**	**0.41**	**208**	P		**Pb**		**18 47 59.7**	**+0.2**
BRDA				S		**Sn**		**18 48 08.5**	**-0.2**
QBL	**Gabala**	**0.44**	**44**	P		**Pb**		**18 47 58.7**	**-1.4**
	SNR=75								
QBL				S		**Sb**		**18 48 06.0**	**-0.4**
AGDM	**Agdam**	**0.57**	**205**	P		**Pb**		**18 48 01.8**	**-0.7**
	SNR=48								
AGDM				S		**Sn**		**18 48 11.7**	**-1.0**
IML	**Ismayilli**	**0.59**	**74**	P		**Pb**		**18 48 00.9**	**-1.9**
	SNR=17								
IML				S		**Sb**		**18 48 09.9**	**-1.0**
SEKA	**Sheki**	**0.60**	**343**	P		**Pb**		**18 48 01.3**	**-1.8**
	SNR=40								
SEKA				S		**Sb**		**18 48 10.5**	**-0.7**
KDMR	**Kurdemir**	**0.63**	**113**	P		**Pb**		**18 48 02.1**	**-1.2**
	SNR=7.6								
KDMR				S		**Sn**		**18 48 13.2**	**-0.8**
XNQ	**Khinaliq**	**0.76**	**45**	P		**Pb**		**18 48 03.5**	**-2.3**
	SNR=122								
XNQ				S		**Sb**		**18 48 14.8**	**-1.0**
GANJ	**Ganja**	**0.84**	**271**	P		**Pb**		**18 48 05.0**	**-2.0**
	SNR=20								
GANJ				S		**Sb**		**18 48 16.5**	**-1.3**
PQL	**Pirkuli**	**0.90**	**79**	P		**Pb**		**18 48 06.3**	**-1.7**
	SNR=70								
PQL				S		**Sn**		**18 48 19.9**	**-1.1**
BLQ	**Beylaqan**	**0.91**	**174**	P		**Pb**		**18 48 07.1**	**-1.0**
	SNR=6.5								
BLQ				S		**Sb**		**18 48 20.2**	**+0.4**
SAAT	**Saatly**	**1.08**	**135**	P		**Pn**		**18 48 08.6**	**-2.3**
SAAT				S		**Sb**		**18 48 23.5**	**-1.2**
QUBA	**Quba, Azerbaij**	**1.08**	**48**	P		**Pb**		**18 48 10.0**	**-1.1**
	SNR=11								
QUBA				S		**Sn**		**18 48 25.4**	**+0.1**
QSAR	**Qusar**	**1.09**	**35**	P		**Pb**		**18 48 10.0**	**-1.2**
	SNR=24								
QSAR				S		**Sn**		**18 48 24.9**	**-0.5**
KSMR	**Kasumkent**	**1.11**	**28**	*eP*	**g**	**Pb**		**18 48 12.3**	**+0.8**
KSMR				*eS*	**g**	**Sn**		**18 48 26.6**	**+0.6**
GBS	**Qobustan**	**1.16**	**94**	P		**Pb**		**18 48 12.0**	**-0.3**
	SNR=9.1								
GBS				S		**Sn**		**18 48 31.4**	**+4.2**
ATGJ	**Altiaghaj**	**1.17**	**78**	P		**Pn**		**18 48 11.8**	**-0.4**
	SNR=6.8								
ATGJ				S		**Sn**		**18 48 28.3**	**+0.7**
QRD	**Qoradiz**	**1.17**	**184**	Pn		**Pn**		**18 48 11.3**	**-0.8**
	SNR=12								
QRD				Sn		**Sn**		**18 48 28.3**	**+0.9**
ZKTA	**Zakatala**	**1.18**	**329**	P		**Pn**		**18 48 10.9**	**-1.4**
	SNR=165								
ZKTA				S		**Sn**		**18 48 27.6**	**0.0**
SIZA	**Siyzn**	**1.20**	**68**	P		**Pn**		**18 48 12.0**	**-0.6**
	SNR=16								
SIZA				S		**Sn**		**18 48 28.4**	**+0.1**
GDB	**GEDABAY**	**1.28**	**275**	Pn		**Pn**		**18 48 11.9**	**-1.9**
	SNR=260								
GDB				Sn		**Sn**		**18 48 29.3**	**-1.0**
DDFL	**Dedoflistskaro**	**1.28**	**310**	P		**Pb**		**18 48 11.8**	**+1.3**
DDFL				S		**Sb**		**18 48 34.0**	**+3.4**
ALIB	**Äli-Bayra**	**1.38**	**119**	Pg		**Pb**		**18 48 16.5**	**+0.4**
	SNR=7.5								
ALIB				Sg		**Sb**		**18 48 38.3**	**+5.1**
LGD	**Lagodekhi**	**1.50**	**324**	P		**Pn**		**18 48 16.5**	**-0.2**
LGD				S		**Sb**		**18 48 36.3**	**-0.5**
KMKR	**Kumukh**	**1.52**	**351**	*eP*	**g**	**Pb**		**18 48 18.8**	**+0.1**
KMKR				*eS*	**g**	**Sb**		**18 48 39.2**	**+1.6**
URKR	**Urkarakh**	**1.54**	**6**	*eP*	**g**	**Pb**		**18 48 19.5**	**+0.5**
URKR				*eS*	**g**	**Sb**		**18 48 40.3**	**+2.2**
DRN	**Derbent**	**1.56**	**26**	*eP*	**g**	**Pb**		**18 48 18.6**	**-0.5**
DRN				*eS*	**g**	**Sb**		**18 48 40.1**	**+1.8**
GLBA	**Clilabad**	**1.57**	**152**	Pn		**Pn**		**18 48 17.3**	**-0.3**
	SNR=7.2								
GLBA				Sn		**Sb**		**18 48 39.2**	**+0.4**
QZX	**Qazax, Azerbai**	**1.62**	**286**	Pn		**Pn**		**18 48 18.0**	**-0.3**
	SNR=77								
QZX				S		**Sb**		**18 48 39.4**	**-0.7**
DGRG	**David-gareji**	**1.76**	**298**	P		**Pn**		**18 48 21.0**	**+0.8**
DGRG				S		**Sb**		**18 48 45.5**	**+1.3**
GNBR	**Gunib**	**1.79**	**349**	*eP*	**g**	**Pb**		**18 48 23.7**	**+0.5**
GNBR				*eS*	**g**	**Sb**		**18 48 47.0**	**+1.7**
YRD	**Yardimli**	**1.82**	**160**	Pn		**Pn**		**18 48 21.0**	**-0.3**
	SNR=21								
YRD				Sn		**Sn**		**18 48 43.7**	**0.0**
SGKR	**Sergokala**	**1.84**	**5**	*eP*	**g**	**Pb**		**18 48 24.1**	**+0.2**
SGKR				*eS*	**g**	**Sb**		**18 48 48.1**	**+1.6**
SBZ	**Shahbuz**	**1.90**	**230**	Pg		**Pb**		**18 48 24.0**	**-1.0**
	SNR=25								
SBZ				Sg		**Sb**		**18 48 49.0**	**+0.8**
NDR	**Nardaran**	**1.95**	**91**	Sg		**Sb**		**18 48 51.2**	**+1.6**
XNZR	**Khunzakh**	**1.99**	**344**	*eP*	**g**	**Pb**		**18 48 26.3**	**-0.3**
XNZR				*eS*	**g**	**Sb**		**18 48 52.0**	**+1.0**
ARKR	**Arakani**	**2.00**	**351**	*eP*	**g**	**Pb**		**18 48 26.3**	**-0.4**
ARKR				*eS*	**g**	**Sb**		**18 48 52.4**	**+1.3**
ORD	**Ordubad**	**2.03**	**214**	Pg		**Pn**		**18 48 25.0**	**+1.0**
	SNR=15								
ORD				Sn		**Sb**		**18 48 51.4**	**-0.6**
NAX	**Nakhchivan**	**2.08**	**226**	Pg		**Pb**		**18 48 26.8**	**-1.3**
NAX				Sg		**Sb**		**18 48 55.0**	**+1.5**
LRK	**Lerik**	**2.10**	**160**	Pn		**Pn**		**18 48 26.0**	**+0.9**
	SNR=10								
LRK				Sn		**Sn**		**18 48 51.3**	**+0.6**
UNCR	**Uncukul**	**2.14**	**347**	*eP*	**g**	**Pb**		**18 48 28.2**	**-0.9**
UNCR				*eS*	**g**	**Sb**		**18 48 56.2**	**+1.1**
HYR	**Heyderabad**	**2.17**	**246**	Pg		**Pn**		**18 48 27.3**	**+1.3**
HYR				Sg		**Sb**		**18 48 58.1**	**+1.9**
LKRN	**Lenkeran, Azer**	**2.18**	**151**	Sn		**Sn**		**18 48 53.7**	**+1.4**
BTLR	**Botlikh**	**2.23**	**336**	*eP*	**g**	**Pb**		**18 48 30.1**	**-0.5**
BTLR				*eS*	**g**	**Sb**		**18 48 57.9**	**+0.2**
KRNR	**Karanay**	**2.23**	**350**	*eP*	**g**	**Pb**		**18 48 29.8**	**-0.9**
KRNR				*eS*	**g**	**Sb**		**18 48 58.4**	**+0.5**
BTNK	**Botanikuri**	**2.25**	**299**	P		**Pn**		**18 48 24.0**	**-3.0**
BTNK				S		**Sn**		**18 48 54.0**	**-0.1**
ASTR	**Astara**	**2.32**	**153**	Pn		**Pn**		**18 48 27.8**	**-0.1**
ASTR				Sn		**Sn**		**18 48 56.6**	**+0.9**
DVE	**Vedeno**	**2.52**	**338**	*eP*	**n**	**Pn**		**18 48 31.7**	**+0.9**
DVE				*i*	**Sn**	**Sb**		**18 49 03.2**	**-3.0**
DMNI	**Dmanisi**	**2.55**	**287**	P		**Pn**		**18 48 32.8**	**+1.6**
DMNI				S		**Sb**		**18 49 05.4**	**-1.7**
TRLG	**Trialeti**	**2.67**	**291**	P		**Pn**		**18 48 34.5**	**+1.6**
TRLG				S		**Sn**		**18 49 07.5**	**+2.7**
GUDG	**Gudauri**	**2.88**	**311**	P		**Pn**		**18 48 36.3**	**+0.5**
GUDG				S		**Sn**		**18 49 11.2**	**+1.4**
PNSH	**Pansheti**	**2.91**	**314**	P		**Pn**		**18 48 37.1**	**+0.9**
PNSH				S		**Sn**		**18 49 12.2**	**+1.6**
LACR	**Lac**	**3.21**	**314**	*eP*	**n**	**Pb**		**18 48 45.1**	**-2.3**
LACR				*eS*	**n**	**Sb**		**18 49 24.3**	**-1.8**

IDC 19 18:54:32.7±1.4,**19.94N**×**121.38E, h0km, mb3.5/4, mbtmp3.5/5, ML3.5/1, Error ellipse: s-maj=66.9km s-min=25.1km az=70.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
KSRS	**Korea Array**	**18.36**	**17**	P		Pn		18 58 47.8	-1.1
	0.1nm,0.3s,baz=200,slow=11,SNR=4.8 0.5nm,0.4s								
SONM	**Songino Array**	**30.37**	**340**	P		P		19 00 48.1	+1.6
	0.2nm,0.5s,baz=164,slow=7.0,SNR=2.0 0.2nm,0.5s								
MKAR	**Makanchi Array**	**41.58**	**319**	P		P		19 02 22.3	0.0
	0.5nm,0.5s,baz=110,slow=9.1,SNR=8.8 0.5nm,0.5s								
WRA	**Warramunga Arr**	**41.62**	**161**	P		P		19 02 22.7	-0.1
	0.4nm,0.7s,baz=342,slow=9.0,SNR=5.4 0.4nm,0.7s								
ZALV	**Zalesovo Beam**	**43.94**	**330**	P		P		19 02 39.7	-1.6
	0.5nm,0.5s,baz=116,slow=6.7,SNR=2.5 0.5nm,0.5s								

IDC ***19*** *19:17:48.9±0.6,35.74N×26.59E, h0km, mb4.1/20, mbtmp4.0/25, ML3.6/5, Error ellipse: s-maj=15.4km s-min=9.3km az=161.0*
ISK ***19*** *19:17:50.9,35.69N×26.53E, h14km, ML4.0/19*
MOS ***19*** *19:17:50.2±1.5,35.57N×26.63E, h21km, mb4.3/8, Error ellipse: s-maj=7.2km s-min=4.4km az=93.0*
ATH ***19*** *19:17:51.4,35.64N×26.58E, h35km±2km, ML4.0/17, Error ellipse: s-maj=2.8km s-min=0.8km az=140.0*
THE ***19*** *19:17:52.6,35.59N×26.60E, h17km±1km, ML4.0/9, Error ellipse: s-maj=1.5km s-min=0.4km az=144.0*
NEIC ***19*** *19:17:52.0±2.4,35.63N±0.07×26.56E±0.04, h19km±6km, mb4.3/9, ML4.0(THE), ML4.1(ATH), ML4.0(ISK), Error ellipse: s-maj=10.5km s-min=4.3km az=185.0*
DDA ***19*** *19:17:52.0±0.0,35.71N×26.39E, h25km±1km, MW4.0*
HLW ***19*** *19:17:53.0,35.60N×26.78E, h24km±22km, Md4.3, Ml4.1*
NIC ***19*** *19:17:53.7±0.0,35.45N×26.70E, h32km±22km, Ml4.5/5*
GII ***19*** *19:17:55.3±0.0,35.29N×26.92E, h10km, mb4.0/1, MD3.6/3, Mm3.9/2*
ISC 19 19:17:52.6±0.9,**35.58N**±0.02×**26.62E**±0.02,**h33**km±4km,
n277,σ1§46/333, mb4.2/30, 13C-10D, Crete

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
KARP	**Karpathos**	**0.45**	**94**	P		**Pb**		**19 18 02.0**	**-0.4**
KARP				S		**Sn**		**19 18 10.0**	**+0.3**
KARP				AML		AML		19 18 11.7	
	comp=E,51124μm,0.3s								
KARP				AML		AML		19 18 12.1	
	comp=N,47025μm,0.4s								
KARP	**Karpathos**	**0.45**	**94**	P		**Pb**		**19 18 02.0**	**-0.4**
KARP				S		**Sb**		**19 18 08.9**	**-0.2**
	comp=N,26μm,0.4s								
KARP	**Karpathos**	**0.45**	**94**	PG		**Pb**		**19 18 01.6**	**-0.8**
KARP				SG		**Sn**		**19 18 10.0**	**+0.3**
KARP	**Karpathos**	**0.45**	**94**	Pg		**Pb**		**19 18 01.3**	**-1.1**
KARP				Sg		**Sn**		**19 18 10.8**	**+1.1**
KARP	**Karpathos**	**0.45**	**94**	P		**Pb**		**19 18 01.7**	**-0.7**
KARP				S		**Sn**		**19 18 10.0**	**+0.3**
ZKR	**Zakros**	**0.56**	**216**	P		**Pb**		**19 18 03.9**	**-0.3**
ZKR				S		**Sb**		**19 18 12.7**	**+0.5**
ZKR				AML		AML		19 18 13.4	
	comp=E,95822μm,0.4s								
ZKR				AML		AML		19 18 15.0	
	comp=N,25951μm,0.3s								
ZKR	**Zakros**	**0.56**	**216**	P		**Pb**		**19 18 03.9**	**-0.3**
ZKR				S		**Sb**		**19 18 12.5**	**+0.3**
	comp=N,30μm,0.3s								
ZKR	**Zakros**	**0.56**	**216**	PG		**Pb**		**19 18 03.7**	**-0.6**
ZKR				SG		**Sb**		**19 18 12.9**	**+0.7**
ZKR	**Zakros**	**0.56**	**216**	P		**Pb**		**19 18 03.2**	**-1.1**
ZKR				AML		AML		19 18 12.0	
	comp=N,88nm,0.5s								
ZKR				AML		AML		19 18 12.0	
	comp=N,88nm,0.5s								
ZKR				S		**Sb**		**19 18 12.8**	**+0.5**
NPS	**Neapolis**	**0.88**	**249**	P		**Pb**		**19 18 08.9**	**-0.6**
NPS				S		**Sb**		**19 18 20.4**	**-0.5**
NPS	**Neapolis**	**0.88**	**249**	P		**Pb**		**19 18 08.9**	**-0.6**
NPS				S		**Sb**		**19 18 20.6**	**-0.3**
NPS	**Neapolis**	**0.88**	**249**	P		**Pb**		**19 18 08.8**	**-0.6**
NPS				S		**Sb**		**19 18 20.4**	**-0.5**
FRMA	**Ierapetra Chan**	**0.91**	**232**	P		**Pb**		**19 18 08.6**	**-1.4**
FRMA				S		**Sb**		**19 18 20.1**	**-1.7**
FRMA				AML		AML		19 18 21.6	
	comp=E,41878μm,0.5s								
FRMA				AML		AML		19 18 22.8	
	comp=N,36425μm,0.3s								
FRMA	**Ierapetra Chan**	**0.91**	**232**	P		**Pb**		**19 18 08.3**	**-1.7**
FRMA				S		**Sb**		**19 18 19.7**	**-2.2**
	comp=N,7μm,0.4s								
NISR	**Nisiros**	**1.11**	**22**	P		**Pn**		**19 18 11.2**	**-0.7**
NISR				AML		AML		19 18 30.0	
	comp=N,16594μm,0.4s								
NISR				AML		AML		19 18 31.4	
	comp=E,20700μm,0.3s								
NISR	**Nisiros**	**1.11**	**22**	P		**Pn**		**19 18 11.2**	**-0.7**
NISR				S		**Sn**		**19 18 26.9**	**+0.8**
	comp=E,9μm,0.4s								
NIS1	**Nisyros Isl.**	**1.12**	**24**	P		**Pn**		**19 18 11.6**	**-0.4**
NIS1				AML		AML		19 18 35.0	
	comp=E,15590μm,0.6s								
NIS1				AML		AML		19 18 36.0	
	comp=N,13380μm,0.6s								
NIS1	**Nisyros Isl.**	**1.12**	**24**	P		**Pn**		**19 18 11.7**	**-0.4**
NIS1	**Nisyros Isl.**	**1.12**	**24**	PG		**Pn**		**19 18 11.7**	**-0.4**
KOSK	**Kos Island**	**1.21**	**14**	P		**Pn**		**19 18 12.9**	**-0.3**
KOSK				AML		AML		19 18 34.2	
	comp=E,22689μm,0.6s								
KOSK				AML		AML		19 18 34.8	
	comp=N,25883μm,0.6s								
KOSK	**Kos Island**	**1.21**	**14**	P		**Pn**		**19 18 12.9**	**-0.3**
KOSK				S		**Sn**		**19 18 29.5**	**+1.0**
	comp=N,4μm,0.6s								
KOSK	**Kos Island**	**1.21**	**14**	PN		**Pn**		**19 18 13.2**	**0.0**
SANT	**Santorini**	**1.23**	**311**	⇑P		**Pn**		**19 18 13.1**	**-0.5**
SANT				⇓S		**Sb**		**19 18 27.7**	**-3.2**
SANT	**Santorini**	**1.23**	**311**	P		**Pn**		**19 18 13.4**	**-0.2**
SANT				AML		AML		19 18 31.9	
	comp=N,4111μm,0.3s								
SANT				AML		AML		19 18 32.7	
	comp=E,15518μm,0.5s								
SANT	**Santorini**	**1.23**	**311**	P		**Pn**		**19 18 13.1**	**-0.5**
SANT	**Santorini**	**1.23**	**311**	PN		**Pn**		**19 18 13.0**	**-0.5**
SANT	**Santorini**	**1.23**	**311**			**Pn**		**19 18 12.6**	**-1.0**
THR8	**Santorini-Mono**	**1.24**	**312**	P		**Pn**		**19 18 13.4**	**-0.3**
THR6	**Thira Island,**	**1.26**	**309**	P		**Pn**		**19 18 13.7**	**-0.2**
HRKL	**Herakleio**	**1.27**	**258**	P		**Pn**		**19 18 14.0**	**0.0**
HRKL				AML		AML		19 18 42.4	
	comp=N,80178μm,0.7s								
HRKL				AML		AML		19 18 42.7	
	comp=E,54558μm,0.6s								
HRKL	**Herakleio**	**1.27**	**258**	P		**Pn**		**19 18 14.1**	**+0.1**
HRKL				S		**Sb**		**19 18 30.8**	**-1.1**
	comp=E,11μm,0.6s								
HRKL	**Herakleio**	**1.27**	**258**	PN		**Pn**		**19 18 13.9**	**0.0**
SFIR	**Foira Santorin**	**1.28**	**312**	P		**Pn**		**19 18 14.3**	**0.0**
THR9	**Santorini-Faro**	**1.29**	**308**	P		**Pn**		**19 18 14.3**	**0.0**
THR3	**Thira Island,**	**1.29**	**310**	P		**Pn**		**19 18 14.0**	**-0.3**
IACM	**Heraklion**	**1.29**	**258**	P		**Pn**		**19 18 14.3**	**0.0**
IACM	**Heraklion**	**1.29**	**258**	P		**Pn**		**19 18 14.3**	**0.0**
IACM				S		**Sn**		**19 18 31.4**	**+0.9**
	comp=E,33μm,0.3s								
CMBO	**Columbo, Santo**	**1.33**	**313**	P		**Pn**		**19 18 14.8**	**0.0**
CMBO				AML		AML		19 18 37.1	
	comp=E,22097μm,0.4s								
CMBO				AML		AML		19 18 37.1	
	comp=N,24860μm,0.5s								
CMBO	**Columbo, Santo**	**1.33**	**313**	P		**Pn**		**19 18 14.8**	**0.0**
THR5	**Thira Island,**	**1.33**	**310**	P		**Pn**		**19 18 15.1**	**+0.2**
ARG	**Arkhangelos**	**1.38**	**62**	P		**Pb**		**19 18 16.7**	**-1.2**
ARG				S		**Sn**		**19 18 33.8**	**+1.0**
ARG				AML		AML		19 18 39.3	
	comp=E,5956μm,0.3s								
ARG				AML		AML		19 18 40.9	
	comp=N,5066μm,0.6s								
ARG	**Arkhangelos**	**1.38**	**62**	P		**Pn**		**19 18 16.4**	**+0.8**
ARG				S		**Sn**		**19 18 33.7**	**+1.0**
	comp=N,3μm,0.3s								
ARG	**Arkhangelos**	**1.38**	**62**	PN		**Pn**		**19 18 16.4**	**+0.8**
ARG				SN		**Sb**		**19 18 36.4**	**+1.2**
ARG	**Arkhangelos**	**1.38**	**62**			**Pn**		**19 18 16.4**	**+0.8**
ARG	**Arkhangelos**	**1.38**	**62**	P		**Pn**		**19 18 16.4**	**+0.8**
ARG	**Arkhangelos**	**1.38**	**62**	*i*P		**Pb**		**19 18 16.6**	**-1.3**
ARG				S		**Sb**		**19 18 34.2**	**-1.1**
DAT	**Datca**	**1.39**	**34**	P		**Pn**		**19 18 15.5**	**-0.4**
DAT				S		**Sb**		**19 18 34.2**	**-1.4**
DAT	**Datca**	**1.39**	**34**	PN		**Pn**		**19 18 15.4**	**-0.4**
DAT	**Datca**	**1.39**	**34**	P		**Pn**		**19 18 15.3**	**-0.5**
DAT				S		**Sb**		**19 18 34.3**	**-1.2**
DAT				*i*	AML	AML		19 18 43.0	
	comp=N,637nm,0.5s								

IDI	**Anoyia**	**1.44**	**259**	⇑P		**Pn**		**19 18 16.0**	**-0.5**
IDI				⇑S		**Sn**		**19 18 34.0**	**-0.3**
IDI	**Anoyia**	**1.44**	**259**	Pg		**Pn**		**19 18 15.9**	**-0.5**
	comp=N,232nm,0.3s,baz=83,slow=12,SNR=491								
IDI				Lg		Lg		19 18 36.7	
	comp=N,599nm,0.3s,baz=355,slow=20,SNR=12								
IDI	**Anoyia**	**1.44**	**259**	P		**Pn**		**19 18 16.6**	**+0.2**
IDI				S		**Sn**		**19 18 35.2**	**+0.9**
IDI				AML		AML		19 18 39.0	
	comp=E,5514μm,0.3s								
IDI				AML		AML		19 18 39.3	
	comp=N,11707μm,0.4s								
IDI	**Anoyia**	**1.44**	**259**	P		**Pn**		**19 18 16.6**	**+0.2**
IDI				S		**Sn**		**19 18 34.2**	**-0.1**
	comp=N,4μm,0.3s								
IDI	**Anoyia**	**1.44**	**259**	PN		**Pn**		**19 18 16.5**	**0.0**
BODT	**Bodrum**	**1.59**	**20**	P		**Pn**		**19 18 18.0**	**-0.4**
BODT	**Bodrum**	**1.59**	**20**	PN		**Pn**		**19 18 17.7**	**-0.7**
TMBK	**Timbaki Herakl**	**1.59**	**252**	P		**Pn**		**19 18 19.8**	**+1.3**
TMBK				AML		AML		19 18 46.4	
	comp=E,18976μm,0.5s								
TMBK				AML		AML		19 18 52.6	
	comp=N,13497μm,0.6s								
BDRM	**Kayabasi**	**1.63**	**24**	P		**Pn**		**19 18 17.0**	**-2.1**
APE	**Apeiranthos**	**1.73**	**330**	⇓P		**Pn**		**19 18 20.1**	**-0.4**
APE				⇓S		**Sn**		**19 18 39.9**	**-1.6**
APE	**Apeiranthos**	**1.73**	**330**	P		**Pn**		**19 18 20.1**	**-0.4**
APE				AML		AML		19 18 40.5	
	comp=E,4435μm,0.3s								
APE				AML		AML		19 18 41.8	
	comp=N,5934μm,0.4s								
APE	**Apeiranthos**	**1.73**	**330**	P		**Pn**		**19 18 20.0**	**-0.4**
APE	**Apeiranthos**	**1.73**	**330**	PN		**Pn**		**19 18 20.0**	**-0.4**
APE	**Apeiranthos**	**1.73**	**330**	*d*P		**Pn**		**19 18 19.6**	**-0.8**
TURN	**Turunc**	**1.78**	**47**	PN		**Pn**		**19 18 21.5**	**+0.4**
TURN	**Turunc**	**1.78**	**47**	P		**Pn**		**19 18 19.4**	**-1.7**
TURN				S		**Sb**		**19 18 44.1**	**-2.4**
TURN				*i*	AML	AML		19 18 50.0	
	comp=N,351nm,0.8s								
DDIM	**Aydin, Didim**	**1.94**	**15**	P		**Pb**		**19 18 27.5**	**0.0**
MLSB	**Milas**	**1.95**	**28**	PN		**Pn**		**19 18 23.6**	**+0.1**
YER	**Yerkesik**	**2.06**	**40**	PN		**Pn**		**19 18 25.6**	**+0.6**
YER	**Yerkesik**	**2.06**	**40**	P		**Pn**		**19 18 25.9**	**+0.9**
DALY	**Dalyan (Mula)**	**2.06**	**52**	PN		**Pn**		**19 18 26.3**	**+1.4**
CHAN	**Chania**	**2.10**	**269**	P		**Pn**		**19 18 25.5**	**+0.1**
MHLO	**Agia Marina, M**	**2.11**	**302**	P		**Pn**		**19 18 26.4**	**+0.8**
SMG	**Samos**	**2.14**	**5**	P		**Pn**		**19 18 25.2**	**-0.8**
SMG				AML		AML		19 19 05.8	
	comp=E,2504μm,0.5s								
SMG				AML		AML		19 19 06.7	
	comp=N,1522μm,0.4s								
IMMV	**Iera Moni Meta**	**2.15**	**268**	P		**Pn**		**19 18 26.1**	**-0.1**
IMMV	**Iera Moni Meta**	**2.15**	**268**	P		**Pn**		**19 18 26.1**	**-0.1**
MULA	**Mugla, Merkez-**	**2.17**	**39**	P		**Pn**		**19 18 27.6**	**+1.1**
MULA				S		**Sn**		**19 18 53.4**	**+1.1**
MULA				*i*	AML	AML		19 19 11.0	
	comp=N,270nm,0.9s								
GCAM	**G?zlcaml?**	**2.18**	**13**	PN		**Pn**		**19 18 27.6**	**+1.1**
GVD	**Gavdhos**	**2.20**	**251**	P		**Pn**		**19 18 29.0**	**+2.1**
FETY	**Fethiye**	**2.26**	**61**	PN		**Pn**		**19 18 29.6**	**+1.9**
FETY	**Fethiye**	**2.26**	**61**	P		**Pn**		**19 18 29.7**	**+1.5**
AYDN	**Tasoluk**	**2.32**	**26**	P		**Pb**		**19 18 31.2**	**-2.6**
KNDR	**Palaiochora Ch**	**2.42**	**263**	P		**Pn**		**19 18 31.1**	**+1.3**
DGB	**zmir**	**2.48**	**5**	P		**Pn**		**19 18 28.9**	**-1.8**
DGB				S		**Sb**		**19 19 12.6**	**+6.0**
DGB				*i*	AML	AML		19 19 15.0	
	comp=N,300nm,0.7s								
AKAS	**Kas**	**2.51**	**74**	PN		**Pn**		**19 18 33.4**	**+2.1**
AKAS	**Kas**	**2.51**	**74**	Pn		**Pn**		**19 18 33.5**	**+2.1**
AKAS	**Kas**	**2.51**	**74**	P		**Pn**		**19 18 33.6**	**+2.3**
CAME	**Cameli-Denizli**	**2.56**	**57**	PN		**Pn**		**19 18 34.2**	**+2.2**
TAVA	**DENIZLI_Tavas**	**2.64**	**44**	P		**Pn**		**19 18 34.9**	**+1.9**
TAVA				S		**Sb**		**19 19 07.3**	**-4.1**
TAVA				*i*	AML	AML		19 19 13.0	
	comp=N,168nm,0.7s								

EFP	**Efpalio**	**4.72**	**308**	P		**Pn**	19 19 03.6	+2.0
DOGA	**KONYA_Doganhis**	**4.77**	**57**	P		**Pn**	19 19 04.7	+2.3
DOGA				S		**Sn**	19 19 55.8	-0.9
DOGA				*i* AML		AML	19 20 00.0	
	comp=N,74nm,0.7s							
DOGA				*i* AML		AML	19 20 00.0	
	comp=N,74nm,0.8s							
ALFC	**Alefka**	**4.91**	**93**	P		**Pn**	19 19 05.1	+1.0
ALFC				AML		AML	19 20 02.9	
	comp=N,1.2nm,0.7s							
ALFC				AML		AML	19 20 04.5	
	comp=N,1.1nm,0.6s							
PAIG	**Paliouri**	**4.93**	**333**	P		**Pn**	19 19 05.2	+0.9
NATA	**Nata**	**4.94**	**98**	P		**Pn**	19 19 05.2	+0.6
NATA				AML		AML	19 20 02.3	
	comp=N,1.3nm,0.4s							
NATA				AML		AML	19 20 07.9	
	comp=N,1.9nm,0.5s							
ULDT	**Uludag**	**4.97**	**23**	P		**Pn**	19 19 05.4	+0.2
KMER	**Konya-Meram**	**5.11**	**63**	P		**Pn**	19 19 09.5	+2.5
LEF	**Lefka**	**5.15**	**93**	P		**Pn**	19 19 09.8	+2.4
LEF				S		**Sn**	19 20 00.2	-5.4
SZAC	**Souni**	**5.20**	**97**	P		**Pn**	19 19 08.6	+0.5
SZAC				AML		AML	19 20 07.3	
	comp=N,0.5nm,0.6s							
SZAC				AML		AML	19 20 09.1	
	comp=N,0.7nm,0.7s							
OSC2	**CSNet OBS 4**	**5.30**	**116**	P		**Pn**	19 19 10.9	+1.5
OSC2				S		**Sn**	19 20 08.8	-0.6
ALN	**Alexandroupoli**	**5.33**	**355**	P		**Pn**	19 19 10.2	+0.3
ALN				pmax	pmax			
	comp=Z,17nm,0.7s							
ASGA	**Asgata**	**5.49**	**96**	P		**Pn**	19 19 13.3	+1.2
LIT	**Litokhoron**	**5.57**	**325**	Pn		**Pn**	19 19 14.6	+1.4
LIT	**Litokhoron**	**5.57**	**325**	P		**Pn**	19 19 14.6	+1.4
RDO	**Rodhopi**	**5.63**	**352**			**Pn**	19 19 14.0	+0.1
GULN	**MERSIN_Gulnar**	**5.66**	**82**	P		**Pn**	19 19 16.2	+1.8
GULN				S		**Sn**	19 20 16.7	-1.5
GULN				*i* AML		AML	19 20 19.0	
	comp=Z,31nm,0.6s							
GULN				*i* AML		AML	19 20 20.0	
	comp=Z,31nm,0.5s							
MVOU	**Mavrovouni**	**5.76**	**94**	P		**Pn**	19 19 17.0	+1.2
THE	**Thessaloniki**	**5.81**	**331**	P		**Pn**	19 19 18.4	+1.9
THE				pmax	pmax			
	comp=Z,13nm,0.7s							
SOH	**Sokhos**	**5.83**	**335**	P		**Pn**	19 19 17.1	+0.3
SOH				pmax	pmax			
	comp=Z,6.0nm,0.6s							
SRS	**Serrai**	**6.02**	**338**	P		**Pn**	19 19 20.8	+1.4
SRS				pmax	pmax			
	comp=Z,11nm,1.0s							
EREN	**Erenkoy**	**6.16**	**88**	P		**Pn**	19 19 24.1	+2.8
KNT	**Kendrikon**	**6.29**	**333**	P		**Pn**	19 19 25.8	+2.6
KNT				pmax	pmax			
	comp=Z,13nm,0.7s							
GRG	**Griva**	**6.31**	**330**	P		**Pn**	19 19 25.3	+1.9
GRG				pmax	pmax			
	comp=Z,23nm,0.9s							
SWA2		**6.39**	**189**	P		**Pn**	19 19 26.7	+2.3
	baz=191							
SWA2				S		**Sn**	19 20 34.4	-1.9
	baz=191							
ANTO	**Ankara**	**6.50**	**47**	P		**Pn**	19 19 24.8	-1.3
FNA	**Florina**	**6.64**	**323**			**Pn**	19 19 27.9	0.0
FNA	**Florina**	**6.64**	**323**	P		**Pn**	19 19 27.9	0.0
BR131	**Keskin Array S**	**6.94**	**51**	*i* P		**Pn**	19 19 32.4	+0.3
BRTR	**Keskin Array B**	**6.94**	**51**	Pn		**Pn**	19 19 34.4	+2.3
	comp=Z,0.7nm,0.3s,baz=220,slow=14,SNR=20							
BRTR				Sn		**Sn**	19 20 50.0	0.0
	comp=Z,0.1nm,0.3s,baz=254,slow=19,SNR=1.9							
	comp=Z,2.3nm,0.5s							
BRTR	**Keskin Array B**	**6.94**	**51**			**Pn**	19 19 33.5	+1.3
BRTR	**Keskin Array B**	**6.94**	**51**	*i* P		**Pn**	19 19 34.4	+2.3
BRTR				pmax	pmax			
	comp=Z,3.0nm,0.5s							
KOT	**Kottamia**	**7.14**	**141**	P		**Pn**	19 19 35.8	+1.0
	baz=141							
RYAN	**Fayoum**	**7.18**	**153**	P		**Pn**	19 19 36.3	+1.0
	baz=154							
RYAN				S		**Sn**	19 20 52.2	-3.5
	baz=154							
HSAF	**As Saff**	**7.25**	**144**	P		**Pn**	19 19 37.1	+0.7
	baz=144							
GLL	**Jalalah**	**7.36**	**143**	P		**Pn**	19 19 39.0	+1.2
	baz=144							
VTS	**Vitosha**	**7.51**	**341**	⇓S		**Sn**	19 21 05.8	+1.8
MMA0B	**Mount Meron ar**	**7.71**	**107**	Pn		**Pn**	19 19 43.0	+0.4
MMA0B				Sn		**Sn**	19 21 08.0	-0.8
MMAI	**Mount Meron Ar**	**7.71**	**107**	Pn		**Pn**	19 19 42.9	+0.3
	comp=Z,1.1nm,0.3s,baz=300,slow=12,SNR=9.7							
MMAI				Sn		**Sn**	19 21 08.2	-0.6
	comp=Z,4.9nm,0.3s,baz=309,slow=29,SNR=7.4							
	comp=Z,0.8nm,0.2s							
SUZ	**Suez**	**7.75**	**136**	P		**Pn**	19 19 43.6	+0.4
	baz=136							
GEM	**Giv'at Ha'Em**	**7.84**	**105**	Pn		**Pn**	19 19 45.2	+0.8
SCTE	**Santa Cesarea**	**7.86**	**307**	Pn		**Pn**	19 19 44.1	-0.5
NATI	**Neve Ativ**	**7.88**	**104**	Pn		**Pn**	19 19 45.2	+0.3
KZIT	**Kziot**	**8.01**	**123**	Pn		**Pn**	19 19 47.0	+0.3
KZIT				Sn		**Sn**	19 21 13.5	-2.6
AMAZ	**Amatzia**	**8.01**	**118**	Pn		**Pn**	19 19 47.8	+1.0
AMAZ				Sn		**Sn**	19 21 13.9	-2.4
KSHT	**Keshet**	**8.04**	**106**	Pn		**Pn**	19 19 48.0	+0.9
HMDT	**Nahal Hemdat**	**8.11**	**112**	Pn		**Pn**	19 19 49.1	+1.0
YTIR	**Yattir**	**8.25**	**118**	Pn		**Pn**	19 19 51.2	+1.1
YTIR				Sn		**Sn**	19 21 19.6	-2.6
DSI	**Dead Sea**	**8.33**	**116**	Pn		**Pn**	19 19 51.9	+0.8
DSI				Sn		**Sn**	19 21 22.1	-2.0
MSBI	**Mazada**	**8.45**	**118**	Pn		**Pn**	19 19 53.5	+0.8
MSBI				Sn		**Sn**	19 21 25.7	-1.2
GHAJ	**Ghor Haditha**	**8.61**	**117**	Pn		**Pn**	19 19 57.1	+2.2
GHAJ	**Ghor Haditha**	**8.61**	**117**	Pn		**Pn**	19 19 55.7	+0.8
TIP	**Timpagrande**	**8.63**	**298**	⇑P		**Pn**	19 19 54.8	-0.5
TIP				⇓S		**Sn**	19 21 25.7	-5.8
TIP	**Timpagrande**	**8.63**	**298**	P		**Pn**	19 19 54.4	-0.8
KRMI	**Paran Flat**	**8.72**	**126**	Pn		**Pn**	19 19 56.5	0.0
ZFRI	**Zfri**	**8.76**	**122**	Pn		**Pn**	19 19 56.7	-0.2
PRNI	**Paran**	**8.76**	**124**	Pn		**Pn**	19 19 57.3	+0.3
PRNI				Sn		**Sn**	19 21 32.5	-2.2
GRB	**Gharib**	**8.97**	**143**	P		**Pn**	19 20 00.7	+0.7
	baz=143							
HRFI	**Mount Harif**	**8.98**	**126**	Pn		**Pn**	19 20 00.3	+0.2
HRFI				Sn		**Sn**	19 21 36.6	-3.5
EIL	**Elat**	**9.17**	**128**	Pn		**Pn**	19 20 03.1	+0.6
	comp=Z,0.9nm,0.3s,baz=257,slow=2.0,SNR=13							
EIL				Sn		**Sn**	19 21 40.4	-4.2
	comp=Z,3.9nm,0.3s,baz=64,slow=22,SNR=8.1							
	comp=Z,6.5nm,0.6s							
EIL	**Elat**	**9.17**	**128**	Pn		**Pn**	19 20 02.7	+0.1
ASF	**Jabal al Asfar**	**9.20**	**109**	Pn		**Pn**	19 20 04.9	+1.9
	comp=Z,0.3nm,0.3s,baz=287,slow=4.7,SNR=2.9							
ASF				Sn		**Sn**	19 21 46.2	+0.8
	comp=Z,0.9nm,0.3s,baz=173,slow=21,SNR=7.2							
	comp=Z,1.1nm,0.4s							
MATE	**Matera**	**9.31**	**306**	⇓P		**Pn**	19 20 02.8	-1.6
HBST	**Basata**	**9.34**	**130**	P		**Pn**	19 20 06.3	+1.4
	baz=131							
CUC	**Castrocucco**	**9.62**	**300**			**Pn**	19 20 09.4	+0.6
MLR	**Muntele Rosu**	**9.92**	**357**	⇓P		**Pn**	19 20 13.1	+0.2
MLR	**Muntele Rosu**	**9.92**	**357**	Pn		**Pn**	19 20 13.6	+0.7
	comp=Z,0.1nm,0.3s,baz=272,slow=9.4,SNR=3.9							
	comp=Z,3.2nm,0.9s							
GIUM	**Giurgiulesti**	**9.97**	**6**	⇑P		**Pn**	19 20 14.4	+0.9
RAFF	**Raffo Rosso**	**10.02**	**283**	Pn		**Pn**	19 20 14.4	+0.2
HHRG	**Al Ghardaqah**	**10.23**	**143**	P		**Pn**	19 20 19.9	+2.8
	baz=143							
SGRT	**San Giovanni R**	**10.50**	**309**	Pn		**Pn**	19 20 19.5	-1.4
BZS	**Buzias**	**10.72**	**341**	⇓P		**Pn**	19 20 23.9	+0.1
BZS	**Buzias**	**10.72**	**341**	P		**Pn**	19 20 23.9	+0.1
NRCA	**Norcia**	**12.73**	**309**	Pn		**Pn**	19 20 52.5	+1.2
KIV	**Kislovodsk**	**14.91**	**51**	*e*P		**Pn**	19 21 22.8	+1.8
KIV				pmax	pmax			
	comp=Z,6.0nm,1.0s							
KBZ	**Khabaz**	**14.94**	**52**	Pn		**P**	19 21 28.0	+1.6
	comp=Z,0.2nm,0.3s,baz=244,slow=9.0,SNR=6.7							
KBZ	**Khabaz**	**14.94**	**52**	*ce*P		**P**	19 21 24.7	-1.8
AKASG	**Malin Array Be**	**15.24**	**6**	Pn		**Pn**	19 21 26.7	+1.5
	comp=Z,1.9nm,0.3s,baz=193,slow=10,SNR=30							
AKASG	**Malin Array Be**	**15.24**	**6**	*ce*P		**P**	19 21 29.7	-0.1
AKASG				pmax	pmax			
	comp=Z,8.0nm,0.7s							
AKBB	**Malin Array Si**	**15.24**	**6**	*ce*P		**P**	19 21 27.8	-2.0
CKRC	**Cesky Krumlov**	**16.04**	**329**	*e*P		**P**	19 21 40.0	+1.2
KRLC	**Kraliky**	**16.16**	**337**	*e*P		**P**	19 21 40.6	+0.4
KRLC	**Kraliky**	**16.16**	**337**	*e*P		**P**	19 21 40.6	+0.4
GERES	**GERESS Array B**	**16.32**	**328**	Pn		**P**	19 21 41.4	-0.5
	comp=Z,0.3nm,0.3s,baz=127,slow=12,SNR=22							
GERES	**GERESS Array B**	**16.32**	**328**	P		**P**	19 21 41.8	-0.1
GERES	**GERESS Array B**	**16.32**	**328**	P		**P**	19 21 41.8	-0.1
DPC	**Dobruska-Polom**	**16.55**	**336**	*e*P		**P**	19 21 44.9	+0.5
DPC	**Dobruska-Polom**	**16.55**	**336**	*e*P		**P**	19 21 44.9	+0.5
KHC	**Kasperske Hory**	**16.59**	**329**	*e*P		**P**	19 21 45.2	+0.3
KHC	**Kasperske Hory**	**16.59**	**329**	*e*P		**P**	19 21 45.2	+0.3
OSTC	**Ostas**	**16.76**	**336**	*e*P		**P**	19 21 47.5	+0.7
PRU	**Pruhonice**	**16.88**	**332**	*e*P		**P**	19 21 48.6	+0.6
PRU	**Pruhonice**	**16.88**	**332**	*e*P		**P**	19 21 48.6	+0.6
SENIN	**Lac Senin/Sane**	**18.09**	**312**			**Pn**	19 22 01.2	-0.3
VORR	**Voronezh**	**18.45**	**25**	*e*P		**P**	19 22 00.5	-4.8
VORR				pmax	pmax			
	comp=Z,30nm,0.4s							
CLL	**Collm**	**18.52**	**332**	*e*P		**P**	19 22 05.0	-1.1
KLNR	**Kaliningrad**	**19.54**	**349**	*i* P		**P**	19 22 17.8	+0.6
KLNR				pmax	pmax			
	comp=Z,23nm,0.8s							
PABE	**Paberze**	**20.02**	**356**	P		**P**	19 22 20.2	-2.1
OBN	**Obninsk**	**20.71**	**16**	*i* P		**P**	19 22 28.4	-1.5
OBN				*i*			19 22 38.4	
OBN				*i*			19 22 52.9	
OBN				pmax	pmax			
	comp=Z,5.0nm,0.9s							
OBN				MLR	MLR			
	comp=Z,177nm,18.0s							
BELG	**Belogornoye**	**22.48**	**35**	P		**P**	19 22 49.3	+0.4
	comp=Z,7.8nm,0.7s,baz=115,slow=2.7,SNR=4.5							
	comp=Z,7.8nm,0.7s							
ESDC	**Sonseca Array**	**24.50**	**289**	P		**P**	19 23 09.7	+0.8
	comp=Z,1.1nm,0.7s,baz=83,slow=9.6,SNR=13							
	comp=Z,1.1nm,0.7s							
ESDC	**Sonseca Array**	**24.50**	**289**	P		**P**	19 23 08.6	-0.3
PAB	**San Pablo**	**24.80**	**288**	P		**P**	19 23 11.4	-0.3
PAB				IAmb	IAmb		19 23 31.1	
	comp=Z,9.6nm,1.5s							
PAB	**San Pablo**	**24.80**	**288**	P		**P**	19 23 11.4	-0.3
PAB				pmax	pmax			
	comp=Z,10.0nm,1.5s							
GEYT	**Alibeck**	**25.29**	**75**	P		**P**	19 23 17.8	+1.8
	comp=Z,3.4nm,0.5s,baz=316,slow=6.2,SNR=6.6							
	comp=Z,3.4nm,0.5s							
GEYT	**Alibeck**	**25.29**	**75**	P		**P**	19 23 14.5	-1.5
GYA0B	**ALIBECK ARRAY**	**25.29**	**75**	P		**P**	19 23 14.4	-1.7
GYA0B				IAmb	IAmb		19 23 19.7	
	comp=Z,8.6nm,1.1s							
FINES	**FINESS Array B**	**25.89**	**359**	P		**P**	19 23 22.0	+0.8
	comp=Z,1.2nm,0.5s,baz=169,slow=10,SNR=12							
	comp=Z,1.2nm,0.5s							
FINES	**FINESS Array B**	**25.89**	**359**	P		**P**	19 23 19.3	-1.9
MDT	**Midelt**	**25.92**	**273**	P		**P**	19 23 23.2	+1.3
	comp=Z,1.6nm,0.8s,baz=133,slow=14,SNR=2.1							
	comp=Z,1.6nm,0.8s							
HFS	**Hagfors**	**25.96**	**345**	P		**P**	19 23 20.0	-1.8
	comp=Z,0.6nm,0.4s,baz=134,slow=8.3,SNR=4.8							
	comp=Z,0.6nm,0.4s							
AKTO	**Aktyubinsk**	**27.10**	**47**	P		**P**	19 23 32.2	0.0
	comp=Z,2.3nm,0.6s,baz=271,slow=9.9,SNR=4.7							
	comp=Z,2.3nm,0.6s							
NOA	**NORSAR Array B**	**27.32**	**344**	P		**P**	19 23 34.0	-0.1
	comp=Z,0.3nm,0.7s,baz=151,slow=8.4,SNR=1.7							
	comp=Z,0.3nm,0.7s							
ABKAR	**Akbulak array**	**27.89**	**50**	P		**P**	19 23 38.9	-0.4
EKA	**Eskdalemuir Ar**	**28.40**	**323**	P		**P**	19 23 42.8	-1.1
	comp=Z,1.5nm,0.5s,baz=123,slow=10,SNR=5.9							
	comp=Z,1.5nm,0.5s							
ARU	**Arti**	**30.02**	**36**	P		**P**	19 23 57.7	-0.4
	comp=Z,2.0nm,0.4s,baz=267,slow=13,SNR=4.4							
	comp=Z,2.0nm,0.4s							
TOA0	**Torodi Ar. Sit**	**31.67**	**231**	P		**P**	19 24 14.1	+1.0
TOA0				IAmb	IAmb		19 24 29.8	
	comp=Z,9.3nm,1.5s							
TORD	**Torodi Ar. Bea**	**31.67**	**231**	P		**P**	19 24 14.5	+1.4
	comp=Z,0.8nm,0.5s,baz=33,slow=9.1,SNR=14							
	comp=Z,0.8nm,0.5s							
TORD	**Torodi Ar. Bea**	**31.67**	**231**	P		**P**	19 24 14.3	+1.2
TORD				IAmb	IAmb		19 24 22.4	
	comp=Z,1.5nm,1.1s							
ARCES	**ARCESS Array B**	**34.02**	**359**	P		**P**	19 24 31.4	-1.7
	comp=Z,1.6nm,0.8s,baz=175,slow=10,SNR=4.4							
	comp=Z,1.6nm,0.8s							
AAK	**Ala-Archa**	**37.41**	**64**	*ce*P		**P**	19 25 03.9	+1.2
AAK				pmax	pmax			
	comp=Z,8.0nm,1.6s							
KSH	**Kashi**	**38.94**	**69**	P		**P**	19 25 15.5	-0.1
KSH				pmax	pmax			
	comp=Z,4.0nm,0.5s							
KURK	**Kurchatov**	**39.99**	**51**	*ce*P		**P**	19 25 23.9	-0.1
KURK				pmax	pmax			
	comp=Z,8.0nm,0.9s							
MK31	**Makanchi Array**	**42.55**	**57**	P		**P**	19 25 46.2	+1.1
MK31				IAmb	IAmb		19 25 47.0	
	comp=Z,4.8nm,0.6s							
MK31	**Makanchi Array**	**42.55**	**57**	*d* iP		**P**	19 25 46.1	+0.9
MKAR	**Makanchi Array**	**42.55**	**57**	P		**P**	19 25 46.2	+1.1
	comp=Z,4.5nm,0.5s,baz=271,slow=8.3,SNR=69							
	comp=Z,4.5nm,0.5s							
ZAA0	**Zalesovo Array**	**43.86**	**46**	P		**P**	19 25 54.7	-0.8
ZALV	**Zalesovo Beam**	**43.86**	**46**	P		**P**	19 25 55.7	+0.2
	comp=Z,5.6nm,0.5s,baz=269,slow=8.2,SNR=29							
	comp=Z,5.6nm,0.5s							
ZALV	**Zalesovo Beam**	**43.86**	**46**	P		**P**	19 25 55.1	-0.4
SONM	**Songino Array**	**58.30**	**51**	P		**P**	19 27 45.6	+1.3
	comp=Z,0.8nm,0.4s,baz=291,slow=7.6,SNR=7.3							
	comp=Z,0.8nm,0.4s							
ULN	**Ulaanbaatar**	**58.71**	**51**	*ce*P		**P**	19 27 48.3	+1.2
ULN				pmax	pmax			
	comp=Z,3.0nm,1.3s							
TIXI	**Tiksi**	**60.36**	**21**	*ce*P		**P**	19 27 57.4	-0.5
TIXI				pmax	pmax			
	comp=Z,3.0nm,1.1s							
SCHQ	**Schefferville**	**63.64**	**320**	P		**P**	19 28 19.4	-0.9
	comp=Z,3.4nm,0.6s,baz=60,slow=4.2,SNR=7.2							
	comp=Z,3.4nm,0.6s							
BOSA	**Boshof**	**63.86**	**181**	P		**P**	19 28 24.3	+2.3
	comp=Z,0.8nm,0.5s,baz=224,slow=19,SNR=1.3							
	comp=Z,0.8nm,0.5s							
YAK	**Yakutsk**	**64.92**	**30**	*i* P		**P**	19 28 29.2	+0.8
YAK				pmax	pmax			
	comp=Z,4.0nm,1.2s							
CMAR	**Chiang Mai Arr**	**65.34**	**84**	P		**P**	19 28 32.8	+0.9
	comp=Z,0.8nm,0.9s,baz=296,slow=7.5,SNR=7.9							
	comp=Z,0.8nm,0.9s							
SEY	**Seymchan**	**72.72**	**23**	P		**P**	19 29 17.7	+0.7
	comp=Z,1.6nm,0.9s,baz=323,slow=20,SNR=2.8							
	comp=Z,1.6nm,0.9s							
KSRS	**Korea Array**	**77.08**	**53**	P		**P**	19 29 43.4	+0.8
	comp=Z,1.3nm,0.5s,baz=307,slow=4.4,SNR=11							
	comp=Z,1.3nm,0.5s							

IDC ***19*** *19:18:08.6±1.2, 20.06°N×121.44°E, h0km, mb3.8/5, mbtmp3.8/7, ML3.6/2, MS3.3/3, Error ellipse: s-maj=32.3km s-min=23.4km az=80.0*

MAN ***19*** *19:18:10.8, 20.25°N×121.39°E, h12km, mb4.6, ML3.5, MS3.3*

JMA ***19*** *19:18:14.7±0.7, 20.2°N×3.2°×12.1°E±0.1°, h42km, MV4.1/9, PHILIPPINE ISL REGION*

ISC 19 19:18:15.2±0.7, 20.24N±0.04°×121.31E±0.09°, h40km, n21, σ2s12/31, mb3.6/6, MS2.9/3, 4C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SGCP	**Gonzaga**	**2.11**	**161**	⇑*i*	P		**Pn**	19 18 46.5	-1.5
SGCP				*e*	S		**Sn**	19 19 12.7	-0.3
SIPP	**Brgy, Tapao**	**2.44**	**199**	⇓*e*	P		**Pn**	19 18 51.4	-1.1
SIPP				*i*	S		**Sn**	19 19 23.1	+1.9
SAMP	**Sagada Mountai**	**3.17**	**187**	⇑*i*	P		**Pn**	19 19 01.2	-1.4
SAMP				*e*	S		**Sn**	19 19 35.8	-3.3
PALP	**Palanan**	**3.33**	**161**	⇑*i*	P		**Pn**	19 19 03.4	-1.4
PALP				*e*	S		**Sn**	19 19 48.9	+5.7
SMPP	**San Manuel, Pa**	**4.11**	**188**	⇑*i*	P		**Pn**	19 19 14.0	-1.6
SMPP				*e*	S		**Sn**	19 19 59.3	-3.2
HATJ	**Hateruma jima**	**4.45**	**31**	P			**Pn**	19 19 20.1	0.0
HATJ				*e*	S		**Sn**	19 20 08.8	-1.8
JYNG	**Yonagunijimaku**	**4.46**	**20**	*e*	P		**Pn**	19 19 22.7	+2.4
JYNG				*e*	S		**Sn**	19 20 12.1	+1.3
IRIF	**Iriomote-Funau**	**4.65**	**28**	P			**Pn**	19 19 23.1	+0.2
IRIF				S			**Sn**	19 20 14.7	-0.9
PCPH	**Palayan**	**4.66**	**183**	⇓*e*	P		**Pn**	19 19 23.4	+0.3
JKRS	**Kuro-shima**	**4.70**	**32**	P			**Pn**	19 19 23.7	+0.1
JKRS				*e*	S		**Sn**	19 20 15.8	-1.1
JIJ	**Ishigaki jima**	**4.87**	**32**	*e*	P		**Pn**	19 19 25.6	-0.3
JIJ				*e*	S		**Sn**	19 20 19.0	-2.1
JTJ	**Tarama**	**5.39**	**35**	*e*	P		**Pn**	19 19 33.4	+0.4
JTJ				S			**Sn**	19 20 32.3	-1.6
JOW	**Kunigami**	**9.16**	**43**	Pn			**Pn**	19 20 23.9	-0.9
	1.3nm,0.3s,baz=110,slow=25,SNR=8.6								
	6.6nm,0.4s								
KSRS	**Korea Array**	**18.09**	**17**	P			**P**	19 22 23.8	+0.3
	0.2nm,0.3s,baz=198,slow=11,SNR=8.4								
	0.8nm,0.5s								
CMAR	**Chiang Mai Arr**	**21.18**	**269**	P			**P**	19 22 58.2	+0.9
	0.7nm,0.6s,baz=75,slow=8.5,SNR=10.0								
CMAR				LR			LR	19 31 40.9	
	comp=Z,52nm,18.6s,baz=60,slow=38								
	0.7nm,0.6s								
MJAR	**Matsushiro Arr**	**21.96**	**39**	P			**P**	19 23 10.8	+5.3
	0.9nm,0.6s,baz=242,slow=12,SNR=4.0								
GUMO	**Guam**	**23.48**	**103**	LR			LR	19 30 37.6	
	comp=Z,47nm,20.6s,baz=151,slow=32								
SONM	**Songino Array**	**30.06**	**340**	P			**P**	19 24 21.0	+0.3
	0.4nm,0.5s,baz=162,slow=8.8,SNR=3.8								
	0.4nm,0.5s								
WRA	**Warramunga Arr**	**41.93**	**161**	P			**P**	19 25 59.4	-2.8
	1.0nm,0.4s,baz=343,slow=9.0,SNR=11								
	1.0nm,0.4s								
ZALV	**Zalesovo Beam**	**43.64**	**329**	P			**P**	19 26 16.6	+0.9
	2.5nm,0.7s,baz=128,slow=4.5,SNR=8.3								
	2.5nm,0.7s								
NOA	**NORSAR Array B**	**81.75**	**332**	P			**P**	19 30 28.7	-0.9
	0.8nm,0.7s,baz=64,slow=5.3,SNR=3.6								
NOA				LR			LR	20 09 24.2	
	comp=Z,31nm,18.9s,baz=45,slow=38								
	0.8nm,0.7s								

WEL 19 19:21:36.0±1.1, 35°S±7°×17°9E±1°7, h33km, M3.7/11, ML4.0/12, MLv3.7/11, Error ellipse: s-maj=0.0km s-min=0.0km az=99.3, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.58**	**188**	P			**Pn**	19 22 16.5	+1.1
MXZ				S			**Sn**	19 22 48.0	+2.5
WMGZ	**Waiomatatini S**	**2.82**	**186**	P			**Pn**	19 22 19.7	+1.0
WMGZ				S			**Sn**	19 22 53.6	+2.1
HAZ	**Te Kaha**	**2.86**	**196**	P			**Pn**	19 22 20.3	+1.1
HAZ				S			**Sn**	19 22 55.7	+3.3
PKGZ	**Pakihiroa**	**2.93**	**191**	P			**Pn**	19 22 21.0	+0.8
PKGZ				S			**Sn**	19 22 55.8	+1.5
RUGZ	**Raukumara Rang**	**3.08**	**196**	P			**Pn**	19 22 22.7	+0.3
RUGZ				S			**Sn**	19 22 59.0	+0.8
PUZ	**Puketiti**	**3.08**	**188**	P			**Pn**	19 22 22.4	0.0
PUZ				S			**Sn**	19 22 57.3	-0.8
MWZ	**Matawai**	**3.47**	**196**	P			**Pn**	19 22 27.7	+0.1
MWZ				S			**Sn**	19 23 08.0	+0.5
CNGZ	**Carnagh Statio**	**3.50**	**187**	P			**Pn**	19 22 28.1	+0.1
TKGZ	**Te Karaka**	**3.50**	**192**	P			**Pn**	19 22 27.6	-0.5
TKGZ				S			**Sn**	19 23 09.0	+0.6
RAGZ	**Rawiri**	**3.65**	**197**	P			**Pn**	19 22 29.9	-0.3
RAGZ				S			**Sn**	19 23 12.1	0.0
RIGZ	**Rimuhau**	**3.78**	**192**	P			**Pn**	19 22 31.1	-0.8
RIGZ				S			**Sn**	19 23 13.3	-1.9
**TOZ

KDAK				Sn		**Sn**	**19 27 25.5**	**-1.9**
	comp=E,2.8nm,0.3s,baz=127,slow=19,SNR=1.2							
KDAK				Lg		Lg	19 27 45.7	
	comp=E,2.4nm,0.3s,baz=114,slow=20,SNR=1.5							
KDAK	**Kodiak Island**	**3.96**	**51**			**Pn**	**19 26 41.6**	**+0.1**
KDAK				IAML			19 27 58.4	
	comp=E,50nm,0.9s							
KDAK				IAML			19 28 02.7	
	comp=E,48nm,1.2s							
O16K	**Kokwok River B**	**4.21**	**1**	P		**Pn**	**19 26 45.6**	**+0.6**
	baz=182							
P18K	**Big Mountain,**	**4.33**	**21**	Pn		**Pn**	**19 26 48.0**	**+1.3**
P18K	**Big Mountain,**	**4.33**	**21**	P		**Pn**	**19 26 47.6**	**+0.8**
	baz=204							
Q19K	**Cape Douglas,**	**4.35**	**34**			**Pn**	**19 26 48.6**	**+1.7**
Q19K	**Cape Douglas,**	**4.35**	**34**	P		**Pn**	**19 26 47.7**	**+0.7**
	baz=218							
Q20K	**Shuyak Island**	**4.55**	**43**	P		**Pn**	**19 26 50.5**	**+0.7**
	baz=228							
O18K	**Koktuh Hills**	**4.76**	**19**			**Pn**	**19 26 54.0**	**+1.3**
O18K				IAML			19 28 13.1	
	comp=N,29nm,1.7s							
O18K				IAML			19 28 18.0	
	comp=E,29nm,1.3s							
O18K	**Koktuh Hills**	**4.76**	**19**	P		**Pn**	**19 26 53.7**	**+1.1**
	baz=202							
N16K	**Nishlik Lake**	**5.10**	**357**	P		**Pn**	**19 26 58.2**	**+0.9**
	baz=177							
N19K	**Bonanza Creek**	**5.79**	**19**			**Pn**	**19 27 07.8**	**+1.0**
N19K	**Bonanza Creek**	**5.79**	**19**	P		**Pn**	**19 27 07.8**	**+1.0**
	baz=202							
SVW2	**Sparrevohn**	**5.89**	**13**			**Pn**	**19 27 09.5**	**+1.4**
M19K	**Big River Lodg**	**6.83**	**16**			**Pn**	**19 27 22.3**	**+1.2**
M19K	**Big River Lodg**	**6.83**	**16**	P		**Pn**	**19 27 22.3**	**+1.2**
	baz=199							
L19K	**White Mountain**	**7.03**	**13**			**Pn**	**19 27 24.7**	**+0.9**
L19K	**White Mountain**	**7.03**	**13**	P		**Pn**	**19 27 24.9**	**+1.1**
	baz=196							
M20K	**Styx River**	**7.03**	**20**			**Pn**	**19 27 26.4**	**+2.5**
M20K	**Styx River**	**7.03**	**20**	P		**Pn**	**19 27 25.3**	**+1.4**
	baz=205							
SUA	**Susitna One**	**7.25**	**30**	Pn		**Pn**	**19 27 27.5**	**+0.6**
SUA	**Susitna One**	**7.25**	**30**	P		**Pn**	**19 27 28.2**	**+1.3**
	baz=217							
RC01	**Rabbit Creek A**	**7.27**	**35**	Pn		**Pn**	**19 27 27.8**	**+0.8**
L20K	**Farewell, AK**	**7.46**	**16**	P		**Pn**	**19 27 30.5**	**+0.9**
	baz=200							
TTA	**Tatalina**	**7.64**	**8**	Pn		**Pn**	**19 27 32.1**	**-0.1**
GHO	**Glory Hole Cre**	**8.04**	**34**	Pn		**Pn**	**19 27 39.0**	**+1.3**
FID	**Port Fidalgo**	**8.23**	**45**	Pn		**Pn**	**19 27 41.0**	**+0.7**
SML	**Sawmill**	**8.26**	**35**	Pn		**Pn**	**19 27 40.4**	**-0.2**
SML	**Sawmill**	**8.26**	**35**	P		**Pn**	**19 27 41.2**	**+0.6**
	baz=224							
K20K	**Telida**	**8.27**	**13**	Pn		**Pn**	**19 27 41.5**	**+0.8**
SCM	**Sheep Creek Mo**	**8.61**	**37**	Pn		**Pn**	**19 27 45.4**	**-0.1**
SCM	**Sheep Creek Mo**	**8.61**	**37**	P		**Pn**	**19 27 46.3**	**+0.8**
	baz=227							
KLU	**Klutina**	**8.90**	**42**	Pn		**Pn**	**19 27 49.8**	**+0.4**
KLU	**Klutina**	**8.90**	**42**	P		**Pn**	**19 27 50.3**	**+0.9**
	baz=232							
CHUM	**Lake Minchumin**	**9.03**	**17**	P		**Pn**	**19 27 51.0**	**0.0**
	baz=202							
J20K	**Nowinta River**	**9.05**	**12**	P		**Pn**	**19 27 50.9**	**-0.4**
	baz=195							
BPAW	**Bear Paw Mtn.**	**9.46**	**20**	Pn		**Pn**	**19 27 56.7**	**-0.4**
N25K	**Chitina, Valde**	**9.47**	**43**	Pn		**Pn**	**19 27 58.3**	**+1.0**
WAX	**Waxell Ridge**	**9.63**	**52**	Pn		**Pn**	**19 28 00.5**	**+1.0**
ANM	**Nome**	**9.85**	**342**	Pn		**Pn**	**19 28 02.7**	**+0.3**
PAX	**Paxson**	**10.03**	**36**	Pn		**Pn**	**19 28 06.0**	**+1.1**
YAH	**Yahtse**	**10.10**	**54**	Pn		**Pn**	**19 28 06.2**	**+0.1**
I21K	**Tanana**	**10.29**	**15**	Pn		**Pn**	**19 28 10.0**	**+1.6**
TABL	**Table Mountain**	**10.41**	**54**	Pn		**Pn**	**19 28 11.5**	**+1.3**
WRH	**Wood River Hil**	**10.42**	**25**	Pn		**Pn**	**19 28 10.5**	**+0.4**
H21K	**Melozitna Rive**	**10.63**	**12**	Pn		**Pn**	**19 28 13.2**	**+0.1**
I23K	**Minto, Yukon-K**	**10.72**	**21**	Pn		**Pn**	**19 28 14.3**	**+0.1**
IMAR	**Indian Mountai**	**10.85**	**10**	Pn		**Pn**	**19 28 17.4**	**+1.4**
IL31		**10.97**	**26**	Pn		**Pn**	**19 28 17.5**	**0.0**
ILAR	**Eielson Array**	**10.97**	**26**	Pn		Pn	19 28 12.5	-5.2
	baz=221,slow=14,SNR=2.4							
ILAR				Sn		Sn	19 30 13.2	-6.5
	comp=E,0.1nm,0.3s,baz=217,slow=19,SNR=2.2							
	comp=E,0.5nm,0.4s							
TNA	**Tin City**	**11.23**	**339**	Pn		**Pn**	**19 28 22.4**	**+1.2**
H23K	**Yukon River**	**11.29**	**19**	Pn		**Pn**	**19 28 22.8**	**+0.7**
BCAR	**Beaver Creek A**	**11.39**	**41**	Pn		**Pn**	**19 28 22.8**	**-0.7**
J26L	**Joseph Creek**	**11.70**	**33**	Pn		**Pn**	**19 28 28.9**	**+1.2**
SHEM	**Shemya Is, Ala**	**16.38**	**272**	Pn		Pn	19 29 23.2	-7.4
	comp=E,1.0nm,0.3s,baz=278,slow=9.0,SNR=2.5							
	comp=E,26nm,0.8s							
H11N2	**WAKE ISLAND Hy**	**44.21**	**230**	T		T	20 20 09.8	
	baz=30							
H11N3	**WAKE ISLAND Hy**	**44.21**	**230**	T		T	20 20 11.4	
	baz=30							
H11N1	**WAKE ISLAND Hy**	**44.23**	**230**	T		T	20 20 10.9	
	baz=30							
TXAR	**Lajitas Array**	**46.47**	**101**	P		P	19 34 22.4	+15
	comp=E,0.2nm,0.6s,baz=324,slow=5.6,SNR=4.6							
	comp=E,0.2nm,0.6s							
FINES	**FINESS Array B**	**63.45**	**358**	P		**P**	**19 36 07.6**	**-2.2**
	comp=E,1.1nm,0.8s,baz=353,slow=11,SNR=6.2							
	comp=E,1.1nm,0.8s							
MKAR	**Makanchi Array**	**66.16**	**319**	P		P	19 36 24.2	-3.6
	comp=E,0.3nm,0.8s,baz=36,slow=10.0,SNR=1.4							
	comp=E,0.3nm,0.8s							
AKASG	**Malin Array Be**	**74.08**	**355**	P		P	19 37 13.8	-2.5
	comp=E,0.5nm,0.3s,baz=11,slow=6.2,SNR=7.4							
	comp=E,0.5nm,0.3s							
CMAR	**Chiang Mai Arr**	**82.02**	**291**	P		P	19 37 58.3	-2.5
	comp=E,0.5nm,0.8s,baz=14,slow=5.2,SNR=7.4							
	comp=E,0.5nm,0.8s							

*MAN **19** 19:33:20.7, 16°.50N×120°.92E, h1km, mb4.6, ML3.5, MS3.4*
*IDC **19** 19:33:28.4±2.7, 16°.69N×121°.20E, h76km±33km, mb3.1/5, mbtmp3.4/5, Error ellipse: s-maj=33.2km s-min=20.1km az=82.0*

ISC 19 19:33:20.4±1.1, 16°.48N±0°.03×121°.03E±0°.04, h11km±9km, n19, σ1§67/29, mb3.4/5, 9C-4D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPP	**San Manuel, Pa**	**0.47**	**226**	**↑eP**	**Pg**	**19 33 29.5**	**-0.2**
SMPP				*eS*	**Sg**	**19 33 36.0**	**0.0**
SAMP	**Sagada Mountai**	**0.61**	**348**	**↓eP**	**Pg**	**19 33 32.0**	**-0.3**
PCPH	**Palayan**	**0.92**	**176**	**↓eP**	**Pn**	**19 33 38.9**	**-0.4**
PCPH				*eS*	**Sn**	**19 33 52.7**	**+0.2**
BOLP	**Bolinao**	**1.08**	**265**	**↑iP**	**Pb**	**19 33 40.0**	**-1.1**
BOLP				*eS*	**Sg**	**19 33 55.7**	**+0.5**
PALP	**Palanan**	**1.46**	**66**	**↑eP**	**Pg**	**19 33 48.4**	**0.0**
SIPP	**Brgy, Tapao**	**1.53**	**339**	**↓eP**	**Pn**	**19 33 47.6**	**-0.2**
SIPP				*eS*	Sg	19 34 22.5	+13
QVP	**Quezon City--P**	**1.85**	**181**	**↑eP**	**Pb**	**19 33 53.5**	**-0.8**
SGCP	**Gonzaga**	**2.00**	**29**	**↑eP**	**Pg**	**19 33 58.1**	**-0.8**
SGCP				*eS*	**Sg**	**19 34 28.2**	**+3.4**
MACP	**Maragondon, Ca**	**2.23**	**188**	**↑iP**	**Pn**	**19 33 58.8**	**+1.5**
MACP				*eS*	**Sg**	**19 34 30.4**	**-1.7**
TGY	**Tagaytay City**	**2.37**	**182**	P	**Pg**	**19 34 06.5**	**+0.6**
	464nm,0.4s,baz=63,slow=1.7,SNR=8.9						
TGY				S	**Sg**	**19 34 39.8**	**+3.2**
	611nm,0.5s,baz=73,slow=18,SNR=7.1						
JCNP	**Jose Panganiba**	**2.71**	**143**	**↑iP**	**Pb**	**19 34 07.3**	**-1.6**
JCNP				*eS*	**Sb**	**19 34 41.9**	**-0.3**
LUBP	**Lubang**	**2.83**	**196**	**↑eP**	**Pn**	**19 34 06.6**	**+0.9**
LUBP				*eS*	**Sb**	**19 34 46.9**	**+1.0**
GQP	**Guinayangan**	**2.90**	**152**	**↓eP**	**Pb**	**19 34 10.6**	**-1.7**
GQP				*eS*	**Sb**	**19 34 47.9**	**+0.1**
PGP	**Puerto Galera**	**2.96**	**181**	**↓eP**	**Pb**	**19 34 10.5**	**-2.9**
PGP				*i* S	**Sb**	**19 34 47.7**	**-1.9**
CMAR	**Chiang Mai Arr**	**21.16**	**279**	P	**P**	**19 38 09.1**	**+3.3**
	0.5nm,0.9s,baz=95,slow=7.9,SNR=5.8						
	0.5nm,0.9s						
KSRS	**Korea Array**	**21.76**	**15**	P	**P**	**19 38 12.2**	**+0.1**
	0.9nm,0.6s,baz=193,slow=11,SNR=6.7						
	0.9nm,0.6s						
KLR	**Kul'dur**	**33.81**	**13**	P	**P**	**19 39 59.9**	**-2.6**
	1.0nm,0.8s,baz=210,slow=14,SNR=1.7						
	1.0nm,0.8s						
WRA	**Warramunga Arr**	**38.49**	**160**	P	**P**	**19 40 44.4**	**+1.5**
	0.9nm,0.9s,baz=339,slow=9.2,SNR=5.4						
	0.9nm,0.9s						
MKAR	**Makanchi Array**	**44.02**	**322**	P	**P**	**19 41 27.9**	**-0.3**
	0.4nm,0.8s,baz=113,slow=3.7,SNR=3.7						
	0.4nm,0.8s						

*IDC **19** 19:53:52.2±6.3, 7°.51S×128°.39E, h107km±60km, mb3.6/7, mbtmp4.0/8, Error ellipse: s-maj=52.6km s-min=19.6km az=68.0*

ISC 19 19:53:56.7±0.8, 7°.58S±0°.09×128°.4E±0°.1, h151km, n22, σ1§31/21, mb3.8/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.92**	**98**	P	**Pn**	**19 54 42.9**	**-0.2**
MTN	**Manton Dam**	**5.89**	**153**	P	**Pn**	**19 55 21.5**	**-0.5**
KDU	**Kakadu**	**6.48**	**142**	P	**Pn**	**19 55 29.0**	**-0.8**
KNRA	**Kununurra**	**8.06**	**177**	P	**Pn**	**19 55 50.4**	**-0.5**
WRA	**Warramunga Arr**	**13.58**	**155**	P	**Pn**	**19 56 59.8**	**-3.6**
	3.3nm,0.3s,baz=340,slow=13,SNR=60						
WRA				S	Sn	19 59 23.7	-10
	2.9nm,0.4s,baz=333,slow=23,SNR=6.3						
COEN	**Coen**	**15.85**	**115**	P	**Pn**	**19 57 31.4**	**-0.3**
QIS	**Mount Isa**	**16.86**	**141**	P	**P**	**19 57 43.2**	**-0.4**
WRKA	**Warakurna**	**17.36**	**180**	P	**Pn**	**19 57 51.0**	**+1.0**
GIRL	**Giralia**	**20.24**	**221**	P	Pn	19 58 25.1	+1.2
	68nm,1.4s						
OOD	**Oodnadatta**	**21.26**	**162**	P	**P**	**19 58 33.2**	**+2.1**
CTA	**Charters Tower**	**21.32**	**127**	P	**P**	**19 58 32.0**	**+0.1**
	2.3nm,0.9s,baz=319,slow=15,SNR=1.5						
	2.3nm,0.9s						
FORT	**Forrest**	**23.08**	**181**	P	**P**	**19 58 51.1**	**+1.9**
	29nm,1.0s						
MULG	**Mulgathing**	**23.20**	**167**	P	**P**	**19 58 51.6**	**+1.3**
INKA	**Innaminka**	**23.22**	**151**	P	**P**	**19 58 51.9**	**+1.5**
LCRK	**Leigh Creek**	**24.55**	**159**	P	**P**	**19 59 03.7**	**+1.2**
STKA	**Stephens Creek**	**27.13**	**155**	P	**P**	**19 59 26.1**	**+0.3**
	3.8nm,0.5s,baz=328,slow=8.9,SNR=15						
	3.8nm,0.5s						
KSRS	**Korea Array**	**44.80**	**359**	P	**P**	**20 01 54.8**	**-0.7**
	0.5nm,0.5s,baz=178,slow=8.2,SNR=2.2						
	0.5nm,0.5s						
SONM	**Songino Array**	**58.50**	**343**	P	**P**	**20 03 37.7**	**+0.5**
	0.3nm,0.5s,baz=165,slow=6.1,SNR=2.8						
	0.3nm,0.5s						
PETK	**Petropavlovsk-**	**65.38**	**19**	P	**P**	**20 04 22.2**	**-0.6**
	1.7nm,0.6s,baz=182,slow=3.6,SNR=6.2						
	1.7nm,0.6s						
MKAR	**Makanchi Array**	**67.84**	**328**	P	**P**	**20 04 39.0**	**+0.3**
	0.6nm,0.3s,baz=116,slow=8.1,SNR=19						
	0.6nm,0.3s						
ZALV	**Zalesovo Beam**	**71.40**	**335**	P	**P**	**20 04 59.4**	**-0.8**
	0.5nm,0.4s,baz=143,slow=4.8,SNR=4.3						
	0.5nm,0.4s						
LPAZ	**La Paz**	**151.20**	**145**	PKPbc	**PKiKP**	**20 13 34.5**	**0.0**
	0.8nm,0.4s,baz=119,slow=2.0,SNR=7.3						

*ISK **19** 19:54:56.8, 39°.12N×28°.25E, h8km, ML2.5/10*
*DDA **19** 19:54:57.0±0.0, 39°.17N×28°.29E, h7km±2km, ML1.7*

ISC 19 19:54:56.9±1.0, 39°.16N±0°.03×28°.26E±0°.03, h11km±10km, n21, σ0§47/31, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEMI	**Demirci**	**0.37**	**108**	P	**Pg**	**19 55 04.6**	**+0.3**
DEMI				S	**Sg**	**19 55 09.6**	**+0.3**
AKHS	**Akhisar**	**0.45**	**231**	P	**Pb**	**19 55 06.6**	**-0.3**
AKS	**Akhisar**	**0.45**	**231**	PG	**Pg**	**19 55 05.7**	**-0.1**
DURS	**Dursunbey**	**0.47**	**20**	P	**Pg**	**19 55 06.3**	**+0.1**
DURS				S	**Sg**	**19 55 12.6**	**+0.2**
DURS				*i* AML	AML	19 55 13.0	
	comp=N,64nm,0.4s						
STEP	**BALIKESIR_Sava**	**0.47**	**297**	P	**Pg**	**19 55 06.7**	**+0.4**
STEP				S	**Sb**	**19 55 14.3**	**-0.1**
STEP				*i* AML	AML	19 55 18.0	
	comp=E,47nm,0.6s						
SMAA	**Simav-Kutahya**	**0.56**	**96**	PG	**Pb**	**19 55 08.4**	**-0.4**
SIMA	**Simav-Kutahya**	**0.56**	**98**	PG	**Pb**	**19 55 08.4**	**-0.5**
KULA	**Kula-Manisa**	**0.72**	**154**	PG	**Pb**	**19 55 11.2**	**-0.2**
KULA				SG	**Sg**	**19 55 19.9**	**-0.3**
USAK	**Uak-Merkez**	**0.74**	**127**	P	**Pg**	**19 55 11.0**	**-0.2**
USAK				S	**Sg**	**19 55 20.6**	**-0.2**
USAK				*i* AML	AML	19 55 21.0	
	comp=N,26nm,0.2s						
GEDZ	**Gediz**	**0.90**	**97**	PG	**Pb**	**19 55 14.8**	**+0.2**
GDZ	**Gediz**	**0.95**	**94**	P	**Pg**	**19 55 15.1**	**-0.1**
GDZ				S	**Sg**	**19 55 27.7**	**0.0**
GDZ				*i* AML	AML	19 55 28.0	
	comp=N,30nm,0.5s						
GDZ				*i* AML	AML	19 55 28.0	
	comp=E,39nm,0.3s						
TVSB	**Tavsanli**	**0.97**	**72**	PG	**Pn**	**19 55 16.6**	**0.0**
KCTX	**Karacabey (Bur**	**1.11**	**4**	PN	**Pg**	**19 55 18.2**	**0.0**
ULDT	**Uludag**	**1.19**	**34**	P	**Pg**	**19 55 18.3**	**-1.5**
ULDT				S	**Sg**	**19 55 34.7**	**-0.6**
ULDT				*i* AML	AML	19 55 37.0	
	comp=E,31nm,0.3s						
ULDT				*i* AML	AML	19 55 39.0	
	comp=N,33nm,0.3s						
AYDB	**Zeytinkoy-Aydi**	**1.25**	**194**	PN	**Pb**	**19 55 19.9**	**-0.6**
PASA	**Karahalli, USA**	**1.25**	**130**	P	**Pg**	**19 55 21.5**	**+0.5**
PASA				S	**Sn**	**19 55 37.5**	**+0.1**
MDNY	**Mudanya-Bursa**	**1.30**	**21**	PN	**Pg**	**19 55 22.4**	**+0.5**
ANDZ	**Kutahya, Merke**	**1.31**	**74**	P	**Pn**	**19 55 21.5**	**+0.2**
ANDZ				S	**Sg**	**19 55 39.4**	**+0.1**
ANDZ				*i* AML	AML	19 55 42.0	
	comp=N,28nm,0.6s						
ANDZ				*i* AML	AML	19 55 42.0	
	comp=E,31nm,0.4s						
IGD	**Bursa**	**1.32**	**33**	P	**Pn**	**19 55 21.4**	**+0.2**
IGD				S	**Sb**	**19 55 38.6**	**0.0**
IGD				*i* AML	AML	19 55 41.0	
	comp=E,13nm,0.2s						
IGD				*i* AML	AML	19 55 41.0	
	comp=N,16nm,0.2s						
GEMT	**Gemlik**	**1.46**	**29**	PN	**Pg**	**19 55 25.2**	**+0.3**
BORA	**Eskisehir**	**1.84**	**66**	PN	**Pn**	**19 55 29.5**	**+1.0**

*IDC **19** 19:59:27.1±0.9, 13°.17N×143°.87E, h223km±10km, mb3.3/6, mbtmp3.9/6, Error ellipse: s-maj=34.8km s-min=18.6km az=96.0*

ISC 19 19:59:26.0±0.9, 13°.2N±0°.2×143°.5E±0°.1, h200km, n8, σ1§28/9, mb3.7/6, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.43**	**75**	P	**Pn**	**19 59 59.7**	**+0.7**
	18nm,0.3s,baz=312,slow=5.5,SNR=8.4						
GUMO				S	**Sn**	**20 00 25.0**	**+0.4**
	64nm,0.3s,baz=144,slow=20,SNR=8.4						
WRA	**Warramunga Arr**	**34.15**	**195**	P	**P**	**20 05 52.0**	**-0.3**
	1.6nm,0.6s,baz=16,slow=9.4,SNR=11						
	1.6nm,0.6s						
SONM	**Songino Array**	**46.26**	**326**	P	**P**	**20 07 32.7**	**+1.2**
	0.2nm,0.4s,baz=141,slow=7.1,SNR=2.6						
	0.2nm,0.4s						
MKAR	**Makanchi Array**	**60.81**	**316**	P	**P**	**20 09 17.8**	**+0.7**
	0.7nm,0.7s,baz=101,slow=8.0,SNR=5.8						
	0.7nm,0.7s						
ILAR	**Eielson Array**	**69.50**	**25**	P	**P**	**20 10 10.7**	**-1.8**
	0.3nm,0.5s,baz=251,slow=5.8,SNR=7.2						
	0.3nm,0.5s						
ARCES	**ARCESS Array B**	**87.02**	**342**	P	**P**	**20 11 47.8**	**-0.6**
	2.1nm,0.9s,baz=64,slow=8.2,SNR=1.6						
	2.1nm,0.9s						
FINES	**FINESS Array B**	**90.92**	**335**	P	**P**	**20 12 05.3**	**-1.5**
	0.4nm,0.4s,baz=72,slow=4.5,SNR=6.5						
	0.4nm,0.4s						
LPAZ	**La Paz**	**149.32**	**100**	PKPbc	**PKPdf**	**20 18 49.4**	**+1.1**
	0.5nm,0.4s,baz=196,slow=3.4,SNR=2.3						

*IDC **19** 20:01:08.2±0.9, 20°.70S×173°.54W, h0km, mb4.0/11, mbtmp3.9/11, MS3.5/2, Error ellipse: s-maj=33.3km s-min=22.0km az=140.0*

ISC 19 20:01:09.7±0.8, 20°.6S±0°.2×173°.5W±0°.2, h10km, n16, σ1§39/15, mb3.9/11, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**6.82**	**14**	Pn	**Pn**	**20 02 48.1**	**-1.9**
	3.7nm,0.3s,baz=169,slow=16,SNR=2.4						
AFI				Sn	Sn	20 03 52.3	-15
	2.8nm,0.3s,baz=0.7,slow=23,SNR=1.9						
RAR	**Rarotonga**	**12.87**	**95**	LR	LR	20 07 58.6	
	comp=Z,214nm,19.9s,baz=284,slow=32						
CTA	**Charters Tower**	**37.66**	**263**	P	**P**	**20 08 25.9**	**+0.6**
	1.2nm,0.4s,baz=88,slow=9.8,SNR=2.5						
CTA				LR	LR	20 22 44.9	
	comp=Z,71nm,19.4s,baz=84,slow=34						

*NOU **19** 20:15:25.2, 22°.33S×178°.93W, h624km, mb4.5/10, South of Fiji Islands*
*NEIC **19** 20:15:27.1±1.4, 22°.5S±0°.2×179°.4W±0°.1, h582km±8km, mb4.4/21, Error ellipse: s-maj=24.3km s-min=12.5km az=201.0*
*IDC **19** 20:15:27.8±1.0, 22°.35S×179°.49W, h583km±11km, mb3.3/12, mbtmp4.2/13, Error ellipse: s-maj=17.0km s-min=12.3km az=80.0*

ISC 19 20:15:27.1±0.5, 22°.49S±0°.06×179°.5W±0°.1, h579km, n77, σ1§60/89, mb4.1/20, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.25**	**334**	P	**P**	**20 17 01.4**	**+0.4**
	55nm,0.4s,baz=183,slow=5.2,SNR=62						
MSVF				S	**S**	**20 18 18.9**	**+1.5**
	24nm,0.9s,baz=305,slow=22,SNR=2.0						
MSVF	**Nonsavu**	**5.25**	**334**	P	**P**	**20 17 01.5**	**+0.6**
DGTI	**Dogotuki**	**6.20**	**353**	P	**P**	**20 17 08.9**	**-0.2**
RAO	**Raoul Island**	**6.88**	**168**	P	**P**	**20 17 15.3**	**+0.4**
	366nm,0.3s,baz=214,slow=1.2,SNR=7.0						
RAO				S	**S**	**20 18 46.7**	**+3.2**
	99nm,0.3s,baz=272,slow=23,SNR=2.0						
RAO	**Raoul Island**	**6.88**	**168**	P	**P**	**20 17 15.1**	**+0.1**
RAO	**Raoul Island**	**6.88**	**168**	P	**P**	**20 17 15.7**	**+0.7**
GLKZ	**Green Lake**	**6.89**	**168**	P	**P**	**20 17 15.6**	**+0.6**
GLKZ				S	**S**	**20 18 42.8**	**-0.8**
OUZ	**Omahuta**	**14.03**	**204**	P	**P**	**20 18 27.1**	**+0.8**
WIAZ	**Waiheke Island**	**14.98**	**197**	P	**P**	**20 18 38.1**	**+2.6**
MKAZ	**Moumakai**	**15.27**	**196**	P	**P**	**20 18 40.4**	**+2.1**
AWAZ	**Awhitu Peninsu**	**15.37**	**198**	P	**P**	**20 18 41.3**	**+2.1**
HAZ	**Te Kaha**	**15.39**	**188**	P	**P**	**20 18 39.9**	**+0.5**
RUGZ	**Raukumara Rang**	**15.61**	**188**	P	**P**	**20 18 41.0**	**-0.6**
TWGZ	**Tauwhareparae**	**15.78**	**187**	P	**P**	**20 18 44.7**	**+1.5**
TWGZ				S	**S**	**20 21 19.6**	**-3.6**
URZ	**Urewera**	**15.98**	**190**	P	**P**	**20 18 43.6**	**-1.3**
	13nm,0.4s,baz=121,slow=22,SNR=13						
URZ				S	**S**	**20 21 20.0**	**-6.3**
	3.3nm,0.7s,baz=304,slow=23,SNR=1.4						
URZ	**Urewera**	**15.98**	**190**	P	**P**	**20 18 43.7**	**-1.3**
URZ	**Urewera**	**15.98**	**190**	P	**P**	**20 18 43.8**	**-1.2**
URZ				S	**S**	**20 21 19.5**	**-6.8**
URZ	**Urewera**	**15.98**	**190**	P	**P**	**20 18 43.9**	**-1.1**
MWZ	**Matawai**	**15.99**	**188**	S	**S**	**20 21 22.4**	**-4.2**
RAGZ	**Rawiri**	**16.16**	**189**	P	**P**	**20 18 46.6**	**-0.2**
MTHZ	**Maungataniwha**	**16.60**	**190**	P	**P**	**20 18 51.0**	**+0.3**
MTHZ				S	**S**	**20 21 35.0**	**-1.6**
RAHZ	**Arahi**	**16.62**	**189**	P	**P**	**20 18 50.8**	**-0.1**
NMHZ	**Naumai**	**16.84**	**190**	P	**P**	**20 18 52.8**	**-0.2**
NMHZ				S	**S**	**20 21 42.6**	**+2.0**
BKZ	**Black Stump Fm**	**16.96**	**191**	P	**P**	**20 18 52.7**	**-1.3**
BKZ				IAmb	IAmb	20 18 58.4	
	comp=Z,13nm,1.1s						
BKZ	**Black Stump Fm**	**16.96**	**191**	P	**P**	**20 18 52.7**	**-1.3**
TMVZ	**Te Maari**	**17.06**	**193**	P	**P**	**20 18 55.1**	**+0.1**
TWVZ	**Taurewa**	**17.07**	**193**	P	**P**	**20 18 55.9**	**+0.8**
ETVZ	**East Tongariro**	**17.08**	**193**	P	**P**	**20 18 55.4**	**+0.2**
BFZ	**Birch Farm**	**18.48**	**190**	P	**P**	**20 19 06.8**	**-1.0**
BFZ	**Birch Farm**	**18.48**	**190**	P	**P**	**20 19 07.6**	**-0.2**
MSWZ	**Moikau Station**	**19.37**	**192**	P	**P**	**20 19 16.3**	**+0.4**
PLWZ	**Palliser**	**19.52**	**192**	P	**P**	**20 19 17.4**	**+0.1**
NNZ	**Nelson**	**19.60**	**196**	P	**P**	**20 19 17.7**	**-0.3**
NNZ				IAmb	IAmb	20 19 22.8	
	comp=Z,8.0nm,0.7s						
TUWZ	**Tuamarina**	**19.66**	**195**	P	**P**	**20 19 20.1**	**+1.6**
THZ	**Tophouse**	**20.24**	**197**	P	**P**	**20 19 24.0**	**+0.2**
THZ				IAmb	IAmb	20 19 30.8	
	comp=Z,11nm,0.9s						
KHZ	**Kahutara**	**20.69**	**195**	P	**P**	**20 19 27.3**	**-0.5**
LTZ	**Lake Taylor**	**21.36**	**197**	P	**P**	**20 19 33.0**	**-0.8**
LTZ				IAmb	IAmb	20 19 36.6	
	comp=Z,13nm,1.0s						
WHZ	**Wether Hill Ro**	**25.47**	**201**	P	**P**	**20 20 10.9**	**+0.6**
WHZ				IAmb	IAmb	20 20 40.3	
	comp=Z,11nm,1.2s						
CTAO	**Charters Tower**	**31.93**	**268**	P	**P**	**20 21 07.3**

comp=Z,0.9nm,0.8s,baz=219,slow=8.3,SNR=4.7
comp=Z,0.9nm,0.8s

PLCA	**Paso Flores**	**88.93**	**134**	P		**P**	**20 27 21.9**	**+1.1**
	comp=Z,1.0nm,0.7s,baz=263,slow=4.8,SNR=4.4								
	comp=Z,1.0nm,0.7s								
PLCA	**Paso Flores**	**88.93**	**134**	P		**P**	**20 27 19.8**	**-1.1**
TXAR	**Lajitas Array**	**89.32**	**58**	P		**P**	**20 27 23.1**	**+0.3**
	comp=Z,1.3nm,0.9s,baz=214,slow=5.6,SNR=11								
	comp=Z,1.3nm,0.9s								
CMAR	**Chiang Mai Arr**	**89.45**	**290**	P		**P**	**20 27 25.4**	**+1.9**
	comp=Z,2.0nm,0.8s,baz=136,slow=3.1,SNR=21								
	comp=Z,2.0nm,0.8s								
PDAR	**Pinedale Array**	**91.38**	**44**	P		**P**	**20 27 32.4**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=204,slow=3.3,SNR=4.1								
	comp=Z,0.4nm,0.7s								
FINES	**FINESS Array B**	**137.25**	**342**	PKP		**PKPdf**	**20 33 43.5**	**-1.2**
	comp=Z,1.1nm,0.7s,baz=85,slow=3.3,SNR=5.1								
AKASG	**Malin Array Be**	**144.01**	**329**	PKP	PKPbc		20 33 55.2	-1.4	
	comp=Z,1.7nm,0.4s,baz=39,slow=4.1,SNR=7.6								
BRTR	**Keskin Array B**	**147.05**	**309**	PKPbc		**PKPbc**	**20 34 05.3**	**-0.6**
	comp=Z,1.0nm,0.6s,baz=111,slow=3.2,SNR=5.1								
OSTC	**Ostas**	**149.40**	**340**	*e*PKP		**PKPbc**	**20 34 11.3**	**0.0**
DPC	**Dobruska-Polom**	**149.54**	**340**	*e*PKP		**PKPbc**	**20 34 11.7**	**0.0**
DPC				*ex*		**PKPab**	**20 34 16.2**	**-3.0**
CLL	**Collm**	**149.63**	**344**	*i* PKPbc		**PKPbc**	**20 34 11.4**	**-0.3**
	comp=Z,3.0nm,0.5s								
CLL				*e*PKPab		**PKPab**	**20 34 19.0**	**-0.4**	
KRLC	**Kraliky**	**149.63**	**339**	*e*PKP		**PKPbc**	**20 34 11.5**	**-0.4**
PRU	**Pruhonice**	**150.41**	**341**	*e*PKP		**PKPab**	**20 34 22.5**	**-0.2**
KHC	**Kasperske Hory**	**151.46**	**342**	*e*PKP		**PKPbc**	**20 34 15.8**	**-0.3**
KHC				*ex*		**PKPab**	**20 34 26.8**	**-0.4**
CKRC	**Cesky Krumlov**	**151.52**	**341**	*e*PKP		**PKPbc**	**20 34 15.5**	**-0.7**
GERES	**GERESS Array B**	**151.68**	**341**	PKPbc		**PKPbc**	**20 34 16.4**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=356,slow=1.5,SNR=2.4								
GERES				PKPab		**PKPab**	**20 34 27.3**	**-0.9**	
	comp=Z,0.4nm,0.6s,baz=27,slow=3.3,SNR=3.8								

*IDC **19** 20:54:14.4±1.7, 11°.45N×145°.05E, h0km, mb3.6/6, mbtmp3.6/6, MS4.0/1, Error ellipse: s-maj=47.2km s-min=32.5km az=99.0*
ISC 19 20:54:19.7±1.4, 11°.4N±0°.2×145°.0E±0°.3, h35km, n14, σ0§47/7, mb3.7/7, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11S3	**WAKE ISLAND Hy**	**22.07**	**69**	T	T	21 22 17.8	
	baz=254,slow=75,SNR=25						
H11S1	**WAKE ISLAND Hy**	**22.09**	**69**	T	T	21 22 19.9	
	baz=254,slow=75,SNR=13						
H11S2	**WAKE ISLAND Hy**	**22.09**	**69**	T	T	21 22 18.8	
	baz=254,slow=75,SNR=20						
H11N1	**WAKE ISLAND Hy**	**22.61**	**66**	T	T	21 23 20.5	
	baz=249,slow=75,SNR=3.9						
H11N2	**WAKE ISLAND Hy**	**22.61**	**66**	T	T	21 23 16.5	
	baz=249,slow=75,SNR=3.3						
H11N3	**WAKE ISLAND Hy**	**22.62**	**66**	T	T	21 23 25.6	
	baz=249,slow=75,SNR=3.8						
WRA	**Warramunga Arr**	**32.91**	**199**	P	**P**	**21 00 50.8**	**0.0**
	0.4nm,0.8s,baz=22,slow=9.4,SNR=2.1						
	0.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**44.96**	**285**	P	**P**	**21 02 31.9**	**+0.1**
	0.6nm,0.8s,baz=84,slow=5.9,SNR=7.2						
	0.6nm,0.8s						
SONM	**Songino Array**	**48.57**	**326**	P	**P**	**21 02 59.6**	**-0.1**
	0.5nm,0.5s,baz=126,slow=7.4,SNR=4.4						
	0.5nm,0.5s						
RPZ	**Rata Peaks**	**59.80**	**158**	LR	LR	21 27 39.1	
	comp=Z,117nm,18.8s,baz=62,slow=34						
MKAR	**Makanchi Array**	**63.14**	**317**	P	**P**	**21 04 44.6**	**+0.6**
	0.5nm,0.7s,baz=95,slow=9.2,SNR=4.6						
	0.5nm,0.7s						
ZALV	**Zalesovo Beam**	**63.45**	**325**	P	**P**	**21 04 45.8**	**-0.1**
	0.4nm,0.3s,baz=95,slow=7.8,SNR=2.4						
	0.4nm,0.3s						
ILAR	**Eielson Array**	**70.44**	**25**	P	**P**	**21 05 30.6**	**+0.3**
	0.3nm,0.7s,baz=250,slow=6.6,SNR=2.5						
	0.3nm,0.7s						
FINES	**FINESS Array B**	**93.16**	**335**	P	**P**	**21 07 29.4**	**-0.6**
	2.0nm,1.1s,baz=40,slow=5.4,SNR=4.2						

*IDC **19** 20:54:59.2±1.1, 31°.04S×71°.81W, h0km, mb3.9/5, mbtmp3.9/10, ML4.0/5, MS3.2/2, Error ellipse: s-maj=37.4km s-min=17.8km az=101.0*
*SJA **19** 20:55:00.4±0.8, 31°.005×71°.86W, h22km±3km, ML4.0, MW4.0*
*NEIC **19** 20:55:03.8±2.1, 31°.005±0°.04×71°.83W±0°.03, h35km±2km, mb4.1/4, ML4.1(GUC), Error ellipse: s-maj=7.7km s-min=3.3km az=31.0*
*GUC **19** 20:55:04.0±0.7, 31°.02S×71°.69W, h24km±4km, ML4.1*
ISC 19 20:55:00.5±1.2, 31°.02S±0°.02×71°.80W±0°.04, h12km±8km, n94, σ1§70/130, mb4.0/5, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.37**	**23**		**Pn**	**20 55 12.1**	**+0.4**
CO02	**Combarbal**	**0.71**	**105**		**Pn**	**20 55 15.9**	**-0.7**
CO02	**Combarbal**	**0.71**	**105**	*e*P	**Pn**	**20 55 15.9**	**-0.7**
CO02				*i* S	**Sb**	**20 55 24.9**	**+0.1**
CO02				IAML		20 55 25.6	
	comp=N,18μm,0.3s						
CO02	**Combarbal**	**0.71**	**105**	*e*P	**Pn**	**20 55 16.0**	**-0.6**
CO02				IAML		20 55 31.5	
	comp=Z,4μm,0.2s						
CO03	**El Pedregal**	**0.97**	**80**		**Pn**	**20 55 19.9**	**-0.2**
CO03	**El Pedregal**	**0.97**	**80**	*e*P	**Pn**	**20 55 20.0**	**-0.2**
CO03				*i* S	**Sg**	**20 55 31.8**	**-0.2**
CO03				IAML		20 55 35.1	
	comp=E,8μm,0.4s						
CO03	**El Pedregal**	**0.97**	**80**	*e*P	**Pn**	**20 55 20.1**	**0.0**
CO03				*e*S	**Sb**	**20 55 32.9**	**+0.6**
CO03				IAML		20 55 35.0	
	comp=Z,3μm,0.3s						
CO05	**La Serena**	**1.20**	**24**		**Pg**	**20 55 24.6**	**+1.0**
CO05	**La Serena**	**1.20**	**24**	*e*P	**Pg**	**20 55 24.5**	**+1.0**
CO05				*i* S	**Sn**	**20 55 39.8**	**+0.4**
CO05				IAML		20 55 44.9	
	comp=N,5μm,0.4s						
GO04	**Tololo Observa**	**1.21**	**46**		**Pg**	**20 55 24.4**	**+0.6**
GO04	**Tololo Observa**	**1.21**	**46**	*e*P	**Pg**	**20 55 24.5**	**+0.7**
GO04				*i* S	**Sg**	**20 55 39.3**	**-0.2**
GO04	**Tololo Observa**	**1.21**	**46**	*e*P	**Pg**	**20 55 24.0**	**+0.2**
GO04				*e*S	**Sn**	**20 55 41.6**	**+1.6**
VA06	**Catapilco**	**1.60**	**164**		**Pb**	**20 55 29.6**	**-0.4**
VA06	**Catapilco**	**1.60**	**164**	*e*P	**Pb**	**20 55 29.8**	**-0.1**
VA06				*i* S	**Sb**	**20 55 50.9**	**+0.8**
VA06				IAML		20 55 56.3	
	comp=E,3μm,0.4s						
CO01	**Juntas del Tor**	**1.80**	**55**		**Pb**	**20 55 33.7**	**+0.1**
CO01	**Juntas del Tor**	**1.80**	**55**	*e*P	**Pb**	**20 55 33.9**	**+0.2**
CO01				*i* S	**Sb**	**20 55 56.5**	**+0.2**
CO01				IAML		20 55 57.7	
	comp=N,4μm,0.4s						
CO01	**Juntas del Tor**	**1.80**	**55**	*e*P	**Pb**	**20 55 33.8**	**+0.1**
CO01				*e*S	**Sg**	**20 55 57.5**	**-1.1**
CO01				IAML		20 55 58.0	
	comp=Z,2μm,0.4s						
VA01	**Torpederas**	**2.00**	**176**	Pn	**Pn**	**20 55 34.8**	**+0.6**
VA01	**Torpederas**	**2.00**	**176**	*e*P	**Pn**	**20 55 35.6**	**+1.4**
VA01				*e*S	**Sn**	**20 55 51.8**	**-7.4**
VA03	**San Esteban**	**2.04**	**149**		**Pb**	**20 55 36.9**	**-0.7**
VA03	**San Esteban**	**2.04**	**149**	*e*P	**Pb**	**20 55 36.7**	**-0.9**
VA03				*i* S	**Sb**	**20 56 03.4**	**+0.4**
VA03				IAML		20 56 12.1	
	comp=N,2μm,0.3s						
VA03	**San Esteban**	**2.04**	**149**	*e*P	**Pb**	**20 55 36.8**	**-0.9**
VA03				IAML		20 56 14.2	
	comp=Z,869nm,0.6s						
ROCH	**El Roble**	**2.06**	**161**	*e*P	**Pn**	**20 55 36.7**	**+1.5**
ROCH				*i* S	**Sb**	**20 56 04.6**	**+0.9**
ROCH				IAML		20 56 08.6	
	comp=N,2μm,0.3s						
ROC1	**El Roble**	**2.06**	**161**		**Pn**	**20 55 36.4**	**+1.1**
ROC1	**El Roble**	**2.06**	**161**	*e*P	**Pn**	**20 55 36.7**	**+1.5**
ROC1				*e*S	**Sb**	**20 56 05.6**	**+1.8**
AROD	**Rodeo**	**2.18**	**68**	*e*P	**Pb**	**20 55 40.0**	**-0.1**
AROD				*e*P	**Pg**	**20 55 40.6**	**-1.8**
AROD				*e*S	**Sn**	**20 56 02.6**	**-1.5**
AROD				*e*S	**Sg**	**20 56 09.5**	**-1.2**
LCO	**Las Campanas**	**2.22**	**26**	Pn	**Pb**	**20 55 39.0**	**-1.7**
LCO	**Las Campanas**	**2.22**	**26**	*e*P	**Pb**	**20 55 39.0**	**-1.7**
RTLS	**Leoncito**	**2.28**	**111**	*e*P	**Pb**	**20 55 42.0**	**+0.2**
RTLS				IAML		20 56 14.0	
RTLS				*e*S	**Sg**	**20 56 14.1**	**+0.3**
MT02	**Curacav**	**2.30**	**166**		**Pn**	**20 55 39.3**	**+1.0**
MT02	**Curacav**	**2.30**	**166**	*i* S	**Sb**	**20 56 11.2**	**+0.7**
MT02	**Curacav**	**2.30**	**166**	*e*P	**Pn**	**20 55 39.0**	**+0.6**
MT02				*e*P	**Pn**	**20 55 39.3**	**+1.0**
MT02				*e*S	**Sn**	**20 56 08.1**	**+1.4**
MT02				IAML		20 56 18.1	
	comp=Z,536nm,0.7s						
PEL	**Peldehue**	**2.32**	**156**		**Pn**	**20 55 40.4**	**+1.8**
PEL	**Peldehue**	**2.32**	**156**	*e*P	**Pn**	**20 55 40.0**	**+1.4**
PEL				*e*P	**Pn**	**20 55 40.4**	**+1.8**
PEL				*e*S	**Sn**	**20 56 07.1**	**-0.1**
PEL				*e*S	**Sb**	**20 56 10.1**	**-1.0**
AUSP	**Uspallata**	**2.38**	**121**	*e*P	**Pb**	**20 55 43.9**	**+0.3**
AUSP				*e*S	**Sn**	**20 56 10.1**	**+1.0**
AUSP				*e*S	**Sb**	**20 56 15.4**	**+2.3**
ACCO	**Cerro Coronel**	**2.40**	**80**	*e*P	**Pb**	**20 55 43.8**	**0.0**
ACCO				*e*S	**Sb**	**20 56 11.6**	**-1.8**
ACDV	**Cuesta del Vie**	**2.46**	**71**	*e*P	**Pb**	**20 55 43.1**	**-1.7**
ACDV				*e*S	**Sn**	**20 56 12.6**	**+1.7**
ACDV				IAML		20 56 18.3	
	comp=Z,675nm,0.6s						
MT05	**Renca**	**2.53**	**159**	Pn	**Pn**	**20 55 43.5**	**+1.9**
MT05	**Renca**	**2.53**	**159**	*e*P	**Pn**	**20 55 43.4**	**+1.8**
MT05				*i* S	**Sb**	**20 56 16.1**	**-1.1**
MT05				IAML		20 56 35.4	
	comp=N,1μm,0.4s						
MT05	**Renca**	**2.53**	**159**	*e*P	**Pn**	**20 55 43.4**	**+1.8**
MT05				*e*S	**Sn**	**20 56 13.6**	**+1.2**
MT05				IAML		20 56 31.8	
	comp=Z,538nm,1.3s						
VA05	**Santo Domingo**	**2.64**	**177**		**Pn**	**20 55 43.5**	**+0.6**
MT03	**Universidad Ad**	**2.70**	**156**		**Pn**	**20 55 45.9**	**+2.1**
MT03	**Universidad Ad**	**2.70**	**156**	*e*P	**Pn**	**20 55 46.0**	**+2.1**
MT03				*e*S	**Sb**	**20 56 21.1**	**-0.9**
MT03				IAML		20 56 30.3	
	comp=Z,669nm,0.5s						
MT09	**Talagante**	**2.83**	**166**		**Pn**	**20 55 47.6**	**+1.8**
MT09	**Talagante**	**2.83**	**166**	*e*P	**Pn**	**20 55 47.4**	**+1.7**
MT09				*i* S	**Sb**	**20 56 24.0**	**-1.9**
MT09				IAML		20 56 32.0	
	comp=N,829nm,0.2s						
RTLL	**Cerro Villicun**	**2.87**	**97**	*e*P	**Pb**	**20 55 49.9**	**-1.8**
RTLL				*e*S	**Sn**	**20 56 23.6**	**+2.9**
RTLL				*e*S	**Sb**	**20 56 24.1**	**-2.7**
RTLL				*e*S	**Sb**	**20 56 28.6**	**+1.8**
AC04	**Llanos de Chal**	**2.88**	**13**	Pn	**Pn**	**20 55 47.4**	**+1.2**
AC04	**Llanos de Chal**	**2.88**	**13**	*e*P	**Pn**	**20 55 47.4**	**+1.2**
AC04				*e*P	**Pn**	**20 55 47.5**	**+1.2**
AC04				*e*S	**Sb**	**20 56 26.6**	**-0.4**
AC04				IAML		20 56 41.3	
	comp=Z,412nm,0.7s						
MT01	**Popeta**	**2.88**	**171**		**Pn**	**20 55 47.4**	**+1.2**
MT01	**Popeta**	**2.88**	**171**	*e*P	**Pn**	**20 55 47.5**	**+1.2**
MT01				*e*S	**Sb**	**20 56 27.6**	**+0.6**
MT01				IAML		20 56 34.3	
	comp=Z,401nm,0.5s						
ASAL	**Salagasta**	**2.97**	**123**	*e*P	**Pn**	**20 55 47.1**	**-0.6**
ASAL				*e*P	**Pb**	**20 55 52.0**	**-1.5**
ASAL				*e*S	**Sg**	**20 56 38.3**	**+2.2**
ARCO	**CERRO ARCO**	**3.04**	**127**	*e*P	**Pn**	**20 55 48.6**	**-0.1**
ARCO				*e*S	**Sn**	**20 56 28.6**	**+3.4**
ARCO				IAML		20 56 43.0	
	comp=Z,502nm,0.4s						
LMEL	**Las Melosas**	**3.13**	**155**	*i* S	**Sb**	**20 56 31.1**	**-3.3**
BO04	**La Punta**	**3.13**	**162**		**Pn**	**20 55 51.4**	**+1.7**
AAGR	**Agrelo**	**3.26**	**130**	*e*P	**Pb**	**20 55 56.9**	**-1.5**
AAGR				*e*S	**Sg**	**20 56 44.7**	**-0.5**
BO01	**Tunca**	**3.42**	**170**	Pn	**Pn**	**20 55 54.8**	**+1.2**
BO01	**Tunca**	**3.42**	**170**	*e*P	**Pn**	**20 55 54.9**	**+1.2**
BO01				*e*S	**Sb**	**20 56 40.6**	**-2.0**
BO01				IAML		20 56 49.7	
	comp=Z,175nm,0.6s						
GO03	**Copiap**	**3.68**	**22**	Pn	**Pn**	**20 55 58.9**	**+1.7**
GO03	**Copiap**	**3.68**	**22**	*e*P	**Pn**	**20 55 59.0**	**+1.7**
GO03				*e*S	**Sb**	**20 56 46.6**	**-3.5**
AVFE	**Valle Fertil**	**3.76**	**86**	*e*P	**Pn**	**20 56 01.0**	**+2.6**
AVFE				*e*P	Pb	20 56 01.4	-5.5
AVFE				*e*S	**Sn**	**20 56 47.1**	**+4.5**
AVFE				IAML		20 56 54.5	
	comp=Z,388nm,0.4s						
GO05	**Huala**	**3.98**	**181**		**Pn**	**20 56 01.6**	**+0.1**
ACHE	**Chepes**	**4.41**	**93**	*e*S	**Sn**	**20 57 02.6**	**+3.7**
AC02	**Maricunga**	**4.78**	**30**	Pn	**Pn**	**20 56 15.1**	**+2.2**
AC01	**Pan de Azucar**	**4.97**	**13**		**Pn**	**20 56 14.6**	**-0.4**
BI05	**Punta Hualpn**	**5.83**	**191**	Pn	**Pn**	**20 56 27.2**	**+0.4**
GO02	**Mina Guanaco**	**6.15**	**19**	Pn	**Pn**	**20 56 31.5**	**0.0**
H03N1	**Juan Fernandez**	**6.49**	**246**	T	T	21 03 25.5	
	baz=74,slow=72,SNR=1266						
H03N3	**Juan Fernandez**	**6.50**	**246**	T	T	21 03 26.0	
	baz=74,slow=72,SNR=1814						
H03N2	**Juan Fernandez**	**6.50**	**246**	T	T	21 03 27.3	
	baz=74,slow=72,SNR=1325						
PB15	**IPOC Station P**	**8.05**	**16**		**Pn**	**20 56 58.7**	**+1.2**
PB06	**IPOC Station P**	**8.52**	**14**	Pn	**Pn**	**20 57 04.2**	**+0.3**
LVC	**Limon Verde**	**8.76**	**18**	Pn	**Pn**	**20 57 06.2**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=166,slow=9.8,SNR=6.7						
LVC				Sn	**Sn**	**20 58 50.1**	**+3.7**
	comp=Z,0.5nm,0.3s,baz=207,slow=17,SNR=1.8						
	comp=Z,1.6nm,0.5s						
PLCA	**Paso Flores**	**9.75**	**174**	Pn	**Pn**	**20 57 21.9**	**+1.2**
	comp=Z,0.6nm,0.3s,baz=339,slow=13,SNR=16						
PLCA				LR	LR	21 01 51.4	
	comp=Z,142nm,19.4s,baz=334,slow=42						
	comp=Z,2.0nm,0.3s						
PLCA	**Paso Flores**	**9.75**	**174**		**Pn**	**20 57 21.6**	**+1.0**
CPUP	**Villa Florida**	**13.54**	**73**	Pn	**Pn**	**20 58 14.3**	**+1.9**
	comp=Z,0.4nm,0.3s,baz=236,slow=14,SNR=6.4						
CPUP				Sn	**Sn**	**21 00 37.1**	**-5.7**
	comp=Z,0.2nm,0.3s,baz=160,slow=17,SNR=2.9						
CPUP				Lg	Lg	21 01 43.6	
	comp=Z,0.2nm,0.3s,baz=324,slow=20,SNR=3.0						
CPUP				LR	LR	21 04 28.7	
	comp=Z,86nm,20.7s,baz=232,slow=42						
	comp=Z,1.4nm,0.4s						
CPUP	**Villa Florida**	**13.54**	**73**		**Pn**	**20 58 11.5**	**-0.9**
LPAZ	**La Paz**	**15.04**	**14**	Pn	**Pn**	**20 58 34.9**	**+1.3**
	comp=Z,0.3nm,0.3s,baz=202,slow=2.7,SNR=4.2						
	comp=Z,1.6nm,0.5s						
PLTB	**Pedras Altas**	**15.56**	**97**	Pn	**Pn**	**20 58 36.9**	**-2.9**
SIV	**San Ignacio**	**17.89**	**36**	P	**Pn**	**20 59 09.5**	**+0.2**
	baz=205,slow=13,SNR=6.4						
	comp=Z,1.1nm,0.5s						
BDFB	**Brasilia**	**26.59**	**60**	P	**P**	**21 00 39.5**	**+0.6**
	comp=Z,2.4nm,0.7s,baz=217,slow=10,SNR=3.7						
	comp=Z,2.4nm,0.7s						
SNAA	**Sanae**	**54.27**	**159**	P	**P**	**21 04 26.1**	**0.0**
	comp=Z,1.7nm,0.6s,baz=284,slow=9.3,SNR=12						
	comp=Z,1.7nm,0.6s						
SNAA	**Sanae**	**54.27**	**159**	P	**P**	**21 04 25.3**	**-0.8**
SNAA				IAmb	IAmb	21 04 43.3	
	comp=Z,2.7nm,1.1s						
QSPA	**South Pole Qui**	**59.21**	**180**	P	**P**	**21 05 01.7**	**+0.3**
	comp=Z,2.2nm,0.7s,baz=180,slow=1.5,SNR=11						
	comp=Z,2.2nm,0.7s						
QSPA	**South Pole Qui**	**59.21**	**180**	P	**P**	**21 04 59.6**	**-1.7**
TXAR	**Lajitas Array**	**67.25**	**330**	P	**P**	**21 05 56.5**	**+1.5**
	comp=Z,0.2nm,0.7s,baz=150,slow=7.3,SNR=2.3						
	comp=Z,0.2nm,0.7s						
TORD	**Torodi Ar. Bea**	**83.01**	**70**	P	**P**	**21 07 27.0**	**+0.9**
	comp=Z,0.3nm,0.7s,baz=232,slow=2.7,SNR=6.8						
	comp=Z,0.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**83.01**	**70**	P	**P**	**21 07 26.4**	**+0.3**
TORD				IAmb	IAmb	21 08 01.2	
	comp=Z,2.5nm,1.4s						
H11S2	**WAKE ISLAND Hy**	**25.96**	**271**	T	T	23 32 45.8	
	baz=116,slow=75,SNR=102						
H11S1	**WAKE ISLAND Hy**	**25.97**	**271**	T	T	23 32 44.9	
	baz=116,slow=75,SNR=69						
H11S3	**WAKE ISLAND Hy**	**25.98**	**271**	T	T	23 32 45.7	
	baz=116,slow=75,SNR=92						
H11N3	**WAKE ISLAND Hy**	**26.30**	**273**	T	T	23 33 15.6	
	baz=115,slow=74						
H11N1	**WAKE ISLAND Hy**	**26.31**	**273**	T	T	23 33 15.7	
	baz=115						
H11N2	**WAKE ISLAND Hy**	**26.32**	**273**	T	T	23 33 17.9	
	baz=115,slow=74						
ZALV	**Zalesovo Beam**	**151.57**	**30**	PKPbc	**PKPbc**	**21 14 53.7**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=314,slow=1.8,SNR=4.2						

*BEO **19** 21:10:58.7±0.3, 43°.09N×18°.24E, h12km±2km, ML2.6/9*
*PDG **19** 21:10:58.7±0.2, 43°.04N×18°.28E, h18km, MD2.6/3,*

ML2.5/13, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0
*RHSSO **19** 21:10:59.3±0.2, 43°.07N×18°.26E, h5km, 2km, ML2.9/17*
ISC 19 21:10:59.1±0.9, 43°.06N±0°.02×18°.30E±0°.01, h16km±6km, n99, σ1§38/177, 23C-13D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRY	**Bratogost**	**0.23**	**131**	⇑*i* Pg	**Pg**	**21 11 04.5**	**+0.1**
BRY				*e*Sg	**Sg**	**21 11 08.9**	**+0.8**
BRY	**Bratogost**	**0.23**	**131**	⇓*i* Pg	**Pg**	**21 11 03.9**	**-0.5**
BRY				*i* Sg	**Sg**	**21 11 08.8**	**+0.7**
TREB	**Trebinje**	**0.34**	**173**	*e*Pg	**Pb**	**21 11 05.9**	**-0.9**
TREB				*e*Sg	**Sb**	**21 11 11.7**	**-0.3**
TREB	**Trebinje**	**0.34**	**173**	⇑*i* Pg	**Pg**	**21 11 05.7**	**-0.4**
TREB				*e*Sg	**Sb**	**21 11 11.7**	**-0.3**
DBRK	**Dubrovnik**	**0.40**	**196**	*i* Pg	**Pb**	**21 11 06.8**	**-1.1**
DBRK				Sg	**Sb**	**21 11 12.3**	**-1.4**
UPM	**Unac-Piva**	**0.47**	**71**	⇓*i* Pg	**Pg**	**21 11 08.2**	**-0.3**
UPM				*e*Sg	**Sg**	**21 11 15.1**	**+0.2**
UPM	**Unac-Piva**	**0.47**	**71**	*e*Pg	**Pg**	**21 11 07.9**	**-0.6**
UPM				*e*Sg	**Sg**	**21 11 16.3**	**+1.4**
STON	**Ston**	**0.47**	**247**	*e*Pg	**Pg**	**21 11 07.6**	**-1.0**
STON				*e*Sg	**Sb**	**21 11 14.7**	**-1.1**
STON	**Ston**	**0.47**	**247**	⇑*i* Pg	**Pg**	**21 11 07.5**	**-1.0**
STON				*e*Sg	**Sb**	**21 11 14.4**	**-1.4**
STON	**Ston**	**0.47**	**247**	*e*Pg	**Pg**	**21 11 07.3**	**-1.2**
STON				Sg	**Sb**	**21 11 14.5**	**-1.4**
NKME	**Niksic**	**0.56**	**121**	*e*Pg	**Pg**	**21 11 09.3**	**-0.9**
NKME				*i* Sg	**Sb**	**21 11 18.9**	**+0.5**
NKY	**Niksic**	**0.57**	**115**	*e*Pg	**Pg**	**21 11 09.8**	**-0.5**
NKY				*i* Sg	**Sb**	**21 11 19.3**	**+0.7**
HCY	**Herceg Novi**	**0.62**	**166**	*e*Pg	**Pg**	**21 11 10.6**	**-0.7**
HCY				*e*Sg	**Sb**	**21 11 21.0**	**+0.8**
HCY	**Herceg Novi**	**0.62**	**166**	*e*Pg	**Pg**	**21 11 10.2**	**-1.1**
HCY				*i* Sg	**Sb**	**21 11 20.8**	**+0.6**
CEME	**Cevo**	**0.68**	**138**	⇑*i* Pg	**Pg**	**21 11 11.4**	**-1.1**
CEME				*e*Sg	**Sb**	**21 11 22.9**	**+1.0**
PLE	**Pljevlja**	**0.84**	**71**	⇓*i* Pg	**Pg**	**21 11 14.6**	**-0.9**
PLE				*e*Sg	**Sb**	**21 11 28.9**	**+2.3**
BUM	**Brajici-Budva**	**0.87**	**149**	⇓*i* Pg	**Pg**	**21 11 14.9**	**-1.1**
BUM				*e*Sg	**Sn**	**21 11 29.2**	**0.0**
KMME	**Kolasin**	**0.92**	**102**	*e*Pg	**Pg**	**21 11 16.0**	**-0.9**
KOME				*e*Sg	**Sn**	**21 11 31.1**	**+0.7**
PDG	**Podgorica**	**0.94**	**131**	*e*Pg	**Pg**	**21 11 16.9**	**-0.4**
PDG				*e*Sg	**Sn**	**21 11 31.5**	**+0.7**
PDG	**Podgorica**	**0.94**	**131**	⇓P	**Pg**	**21 11 16.7**	**-0.6**
PDG				⇑S	**Sb**	**21 11 30.4**	**+1.0**
PDG	**Podgorica**	**0.94**	**131**	⇑*i* Pg	**Pg**	**21 11 16.2**	**-1.1**
PDG				*e*Sg	**Sb**	**21 11 30.3**	**+1.0**
TTG	**Podgorica**	**0.94**	**131**	⇑*i* Pg	**Pg**	**21 11 16.2**	**-1.1**
TTG				*i* Sg	**Sn**	**21 11 31.7**	**+0.9**
RICI	**Ricice**	**0.96**	**298**	*e*Pg	**Pg**	**21 11 16.5**	**-1.1**
RICI				Sg	**Sg**	**21 11 29.8**	**-0.4**
MAKA	**Makarska**	**0.96**	**284**	*e*Pg	**Pg**	**21 11 16.2**	**-1.5**
MAKA				Sg	**Sb**	**21 11 30.0**	**+0.1**
RUDO	**Rudo**	**0.96**	**54**	⇓*i* Pg	**Pg**	**21 11 16.4**	**-1.4**
RUDO				*e*Sg	**Sg**	**21 11 30.0**	**-0.4**
LSTV	**Lastovo**	**1.07**	**255**	*e*Pg	**Pg**	**21 11 18.1**	**-1.6**
LSTV				Sg	**Sb**	**21 11 32.8**	**-0.2**
DRME	**Dracevica, Mon**	**1.09**	**143**	*e*Pg	**Pb**	**21 11 18.9**	**-0.6**
DRME				*e*Sg	**Sn**	**21 11 35.0**	**+0.6**
DRME	**Dracevica, Mon**	**1.09**	**143**	*e*Pg	**Pb**	**21 11 19.3**	**-0.2**
DRME				*e*Sg	**Sn**	**21 11 36.

SMRN	**Sveta Marina**	**3.58**	**305**	*e*Pn		**Pn**	**21 11 54.9**	**+1.0**
SMRN				Sn		**Sn**	**21 12 37.6**	**+1.7**
VTS	**Vitosha**	**3.66**	**95**	⇑S		**Sn**	**21 12 39.4**	**+1.4**
BRJN	**Brijuni**	**3.77**	**301**	*e*Pn		**Pn**	**21 11 57.6**	**+1.2**
BRJN				Sn		**Sn**	**21 12 42.3**	**+1.8**
CEY	**Cerknica**	**3.86**	**315**	⇓*i* Pn		**Pn**	**21 11 59.2**	**+1.4**
CEY				*e*Sn		**Sn**	**21 12 43.2**	**+0.4**
SKDS	**Skadanscina**	**3.96**	**310**	*e*Pn		**Pn**	**21 11 59.4**	**+0.3**
SKDS				*e*Sn		**Sn**	**21 12 45.1**	**-0.1**
SIRR	**Siria**	**4.01**	**36**	⇑P		**Pn**	**21 11 56.9**	**-2.9**
SIRR				⇑S		**Sn**	**21 12 44.1**	**-2.4**
SOKA	**Soboth**	**4.30**	**328**	*e*Pn		**Pn**	**21 12 04.5**	**+0.6**
	5.0nm,0.3s							
SOKA				*e*Sn		**Sn**	**21 12 53.9**	**+0.1**
	2.5nm,0.7s							
OBKA	**Obir**	**4.36**	**324**	*e*Pn		**Pn**	**21 12 06.2**	**+1.4**
	1.1nm,0.4s							
OBKA	**Obir**	**4.36**	**324**	*e*Pn		**Pn**	**21 12 06.1**	**+1.3**
OBKA				*e*Sn		**Sn**	**21 12 54.8**	**-0.6**
DRGR		**4.88**	**38**	⇑P		**Pn**	**21 12 08.7**	**-3.1**
DRGR				⇑S		**Sn**	**21 13 05.2**	**-2.8**
PSZ	**Piszkesteto**	**4.99**	**12**	⇑S		**Sn**	**21 13 07.5**	**-3.3**
CONA	**Conrad Observa**	**5.17**	**342**	*e*Pn		**Pn**	**21 12 16.8**	**+1.0**
	0.9nm,0.3s							
KBA	**Koelnbreinsper**	**5.34**	**321**	*e*Pn		**Pn**	**21 12 18.6**	**+0.4**
	1.2nm,0.4s							
ABTA	**Abfaltersbach**	**5.52**	**314**	*e*Pn		**Pn**	**21 12 22.5**	**+1.8**
	1.2nm,0.2s							
MOA	**Molln**	**5.57**	**331**	*e*Pn		**Pn**	**21 12 23.3**	**+2.0**
	0.9nm,0.2s							
BIOA	**Bad Ischl, Aus**	**5.68**	**326**	*e*Pn		**Pn**	**21 12 24.3**	**+1.5**
	1.0nm,0.3s							
MOTA	**Moosalm**	**6.65**	**313**	*e*Pn		**Pn**	**21 12 37.8**	**+1.6**
	1.0nm,0.5s							

IDC ***19*** *21:41:19.2±0.9, 74.°60N×132.°57E, h0km, mb3.7/9, mbtmp3.7/10, ML4.4/1, MS3.2/1, Error ellipse: s-maj=23.5km s-min=16.1km az=129.0*

ISC 19 21:41:20.8±0.8, 74.°5N±0.°1×132.°7E±0.°1, h10km, n11, σ1§46/11, mb3.6/9, Laptev Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TIXI	**Tiksi**	**3.12**	**203**	Pn		**Pn**	**21 42 10.2**	**+0.4**
	182nm,0.3s,baz=273,slow=22,SNR=17							
TIXI				Sn		**Sn**	**21 42 45.7**	**-1.3**
	813nm,0.3s,baz=91,slow=23,SNR=4.9							
TIXI				Lg		Lg	21 42 59.7	
	2μm,0.3s,baz=91,slow=22,SNR=8.6							
	7.3nm,0.4s							
PETK	**Petropavlovsk-**	**23.78**	**141**	P		**P**	**21 46 34.6**	**+1.5**
	3.0nm,0.7s,baz=337,slow=3.3,SNR=7.4							
	3.0nm,0.7s							
ILAR	**Eielson Array**	**27.19**	**68**	P		**P**	**21 47 05.0**	**+1.0**
	1.0nm,0.7s,baz=320,slow=8.9,SNR=14							
	1.0nm,0.7s							
SHEM	**Shemya Is, Ala**	**27.50**	**119**	LR		LR	21 59 18.9	
	comp=Z,44nm,18.0s,baz=245,slow=39							
SONM	**Songino Array**	**29.08**	**218**	P		**P**	**21 47 22.5**	**+1.3**
	0.3nm,0.7s,baz=14,slow=6.4,SNR=2.2							
	0.3nm,0.7s							
KURBB	**Kurchatov Arra**	**32.57**	**254**	P		**P**	**21 47 52.8**	**+1.2**
	0.5nm,0.8s,baz=26,slow=8.4,SNR=4.0							
	0.5nm,0.8s							
MKAR	**Makanchi Array**	**35.16**	**247**	P		**P**	**21 48 12.7**	**-1.6**
	0.7nm,1.0s,baz=32,slow=6.8,SNR=3.4							
	0.7nm,1.0s							
AKASG	**Malin Array Be**	**45.26**	**299**	P		**P**	**21 49 39.0**	**+1.2**
	0.4nm,0.6s,baz=24,slow=8.2,SNR=2.7							
	0.4nm,0.6s							
TXAR	**Lajitas Array**	**70.14**	**51**	P		**P**	**21 52 31.8**	**-1.3**
	0.8nm,0.9s,baz=300,slow=2.7,SNR=4.0							
	0.8nm,0.9s							
TORD	**Torodi Ar. Bea**	**87.33**	**313**	P		**P**	**21 54 06.3**	**-1.2**
	0.7nm,0.9s,baz=21,slow=4.3,SNR=3.7							
	0.7nm,0.9s							
WRA	**Warramunga Arr**	**94.27**	**178**	P		**P**	**21 54 38.6**	**-1.1**
	0.9nm,0.9s,baz=352,slow=5.3,SNR=4.1							
	0.9nm,0.9s							

INET ***19*** *21:43:47.2±0.9, 12.°92N×87.°03W, h6km±4km, MW3.5*
SNET ***19*** *21:43:49.1±1.0, 13.°00N×87.°11W, h8km±28km, ML3.1*

ISC 19 21:43:47.0±1.1, 12.°95N±0.°05×87.°04W±0.°05, h18km±7km, n16, σ0§28/22, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CRIN	**San Cristobal**	**0.25**	**182**	*e*P		**Pg**	**21 43 52.8**	**+0.1**
CRIN				*e*S		**Sg**	**21 43 56.8**	**+0.1**
TELN	**Telica**	**0.40**	**149**	*e*P		**Pg**	**21 43 55.3**	**0.0**
TELN				*e*S		**Sg**	**21 44 00.6**	**-0.3**
TEL3	**Telica 3**	**0.42**	**153**	*e*P		**Pg**	**21 43 55.7**	**0.0**
CSGN	**Cosiguina Volc**	**0.51**	**273**	*e*P		**Pb**	**21 43 57.5**	**+0.1**
CNGN	**Cerro Negro**	**0.56**	**143**	*e*P		**Pg**	**21 43 58.1**	**-0.1**
MOMN	**Momotombo**	**0.73**	**138**	*e*P		**Pg**	**21 44 01.0**	**-0.3**
CNCH	**Conchagua**	**0.84**	**293**	*e*P		**Pg**	**21 44 03.3**	**-0.1**
CNCH				*e*S		**Sg**	**21 44 15.1**	**+0.5**
COPN	**Copaltepe**	**0.88**	**150**	*e*P		**Pb**	**21 44 03.7**	**-0.1**
LCND	**La Caada**	**0.90**	**293**	*e*P		**Pg**	**21 44 04.3**	**-0.3**
LCND				*e*S		**Sg**	**21 44 16.8**	**+0.3**
LCND				IAML			21 44 22.4	
	comp=Z,720nm,0.3s							
HUEN		**1.04**	**126**	*e*P		**Pb**	**21 44 06.3**	**-0.2**
HUEN				*e*S		**Sn**	**21 44 21.2**	**+0.3**
TGUH	**Tegucigalpa,Un**	**1.12**	**348**	*e*P		**Pg**	**21 44 08.8**	**-0.1**
TGUH				*e*S		**Sn**	**21 44 23.4**	**+0.3**
TGUH	**Tegucigalpa,Un**	**1.12**	**348**	*e*P		**Pg**	**21 44 08.7**	**-0.1**
PACA	**Pacayal**	**1.35**	**293**	*e*P		**Pb**	**21 44 11.8**	**-0.1**
BOAB	**BOACO BROADBAN**	**1.43**	**110**	*e*P		**Pn**	**21 44 12.1**	**0.0**
COEB	**Comit de Eme**	**1.55**	**291**	*e*P		**Pg**	**21 44 16.2**	**-0.7**
SCLA	**Alcaldia de Sa**	**1.81**	**295**	*e*P		**Pb**	**21 44 19.5**	**-0.1**

KRSC 19 21:50:14.3±2.3, 49.°59N×157.°24E, h49km±48km, ML3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.31**	**327**	*e*P		Pn	21 50 35.5	-0.7
SKR				*e*S		Sn	21 50 51.5	-1.1
PAU	**Pauzhetka**	**1.90**	**352**	*e*P		Pn	21 50 45.8	+1.5
PAU				*e*S		Sn	21 51 10.0	+3.0
KDTR	**Khodutka, Kamc**	**2.29**	**13**	*e*P		Pn	21 50 52.6	+3.0
KDTR				*e*S		Sn	21 51 20.9	+4.4
ASAK	**Asacha**	**2.83**	**8**	*e*P		Pn	21 51 00.9	+3.8
ASAK				*e*S		Sn	21 51 35.5	+5.5
MTVR	**Mutnovka**	**2.96**	**11**	*e*P		Pn	21 51 02.4	+3.5
MTVR				*e*S		Sn	21 51 37.4	+4.1
RUS	**Russkaya**	**2.96**	**15**	*e*P		Pn	21 51 01.5	+2.7
RUS				*e*S		Sn	21 51 37.0	+4.0
GRL	**Gorelyy**	**3.02**	**10**	*e*P		Pn	21 51 03.5	+3.8
GRL				*e*S		Sn	21 51 39.6	+5.0
UGLR	**Uglovaya**	**3.76**	**15**	*e*P		Pn	21 51 14.4	+4.5
AVH	**Avacha**	**3.80**	**14**	*e*P		Pn	21 51 15.5	+5.1
SMAR	**Somma**	**3.81**	**14**	*e*P		Pn	21 51 14.5	+3.9
KOK	**Koryaka**	**3.81**	**13**	*e*P		Pn	21 51 15.1	+4.5
SPN	**Mys Shipunski**	**3.93**	**25**	*e*P		Pn	21 51 16.6	+4.6
SPN				*e*S		Sn	21 52 02.2	+5.5
MKZ	**Mys Kozlova**	**5.70**	**27**	*e*P		Pn	21 51 38.6	+2.4
MKZ				*e*S		Sn	21 52 42.2	+2.0

NAO ***19*** *21:53:12.9±2.6, 79.°56N×17.°29W, ML3.4*
DNK ***19*** *21:53:13.8±2.4, 79.°63N×17.°41W, h4km±17km, ML2.5*

ISC 19 21:53:12.8±0.9, 79.°54N±0.°05×17.°23W±0.°05, h10km, n19, σ1§61/33, Eastern Kalaallit Nunaat

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NOR	**Nord**	**2.07**	**2**	Pn		**Pn**	**21 53 48.8**	**+1.2**
NOR				Sn		**Sn**	**21 54 13.5**	**+0.1**
NOR	**Nord**	**2.07**	**2**	*i* P		**Pn**	**21 53 48.8**	**+1.2**
NOR				*i* S		**Sn**	**21 54 14.2**	**+0.8**
NOR				IAML			21 54 20.2	
	comp=Z,216nm,0.4s							
NOR	**Nord**	**2.07**	**2**	*e*P		**Pn**	**21 53 48.7**	**+1.2**
NOR				*e*S		**Sn**	**21 54 14.0**	**+0.6**
DBG	**Daneborg**	**5.31**	**189**	Pn		**Pn**	**21 54 33.3**	**+1.4**
DBG				Sn		**Sn**	**21 55 34.4**	**+1.4**
DBG	**Daneborg**	**5.31**	**189**	*e*		**Pn**	**21 54 32.6**	**+0.6**
	baz=13,slow=12							
DBG				*i* P		**Pn**	**21 54 33.4**	**+1.4**
DBG				*i* S		**Sn**	**21 55 33.9**	**+0.9**
DBG				IAML			21 56 12.3	
	comp=Z,18nm,0.4s							
DBG	**Daneborg**	**5.31**	**189**	*e*P		**Pn**	**21 54 32.7**	**+0.8**
DBG				*e*S		**Sn**	**21 55 33.2**	**+0.2**
KBS	**Kingsbay**	**5.46**	**82**	Pn		**Pn**	**21 54 34.8**	**+0.8**
KBS				Sn		**Sn**	**21 55 34.5**	**-2.3**
KBS	**Kingsbay**	**5.46**	**82**	*i* P		**Pn**	**21 54 35.0**	**+0.9**
KBS				*i* S		**Sn**	**21 55 34.6**	**-2.2**
KBS				IAML			21 55 41.8	
	comp=Z,9.9nm,0.5s							
KBS	**Kingsbay**	**5.46**	**82**	*e*P		**Pn**	**21 54 34.9**	**+0.8**
KBS				*e*S		**Sn**	**21 55 33.6**	**-3.2**
KBS				IAML			21 55 41.6	
	comp=Z,6.2nm,0.5s							
BRBA	**Barentsburg A**	**6.24**	**88**	Pn		**Pn**	**21 54 46.4**	**+1.6**
BRBA				Sn		**Sn**	**21 55 54.9**	**-1.1**
BRBA	**Barentsburg A**	**6.24**	**88**	*e*P		**Pn**	**21 54 46.1**	**+1.4**
BRBA				*e*S		**Sn**	**21 55 54.7**	**-1.3**
BRBA				IAML			21 55 57.8	
	comp=Z,4.0nm,0.7s							
SPA0	**Spitsbergen Ar**	**6.58**	**85**	Pn		**Pn**	**21 54 51.0**	**+1.6**
	baz=316,slow=11							
SPA0				Sn		**Sn**	**21 56 03.7**	**-0.6**
SPA0	**Spitsbergen Ar**	**6.58**	**85**	Pn		**Pn**	**21 54 51.0**	**+1.6**
	baz=316,slow=11							
SPA0				Sn		**Sn**	**21 56 03.7**	**-0.6**
SPA0				IAML			21 56 16.7	
	comp=Z,4.9nm,0.7s							
SUMG	**Summit**	**8.58**	**227**	*i* P		**Pn**	**21 55 17.0**	**-0.2**
TULEG	**Thule**	**10.77**	**281**	*i* P		**Pn**	**21 55 43.0**	**-3.8**
TULEG				*i* S		Sn	21 57 34.2	-13
TULEG				IAML			21 57 43.5	
	comp=Z,5.0nm,0.4s							
UPNV	**Upernavik**	**11.22**	**254**	*i* P		**Pn**	**21 55 50.4**	**-2.5**
UPNV				*i* S		Sn	21 57 46.8	-11
UPNV				IAML			21 57 54.5	
	comp=Z,6.8nm,0.4s							
ICESG	**Greenland Ices**	**11.97**	**221**	*i* P		**Pn**	**21 56 02.5**	**-1.0**
ICESG				*i*			21 58 14.7	
FIA0	**FINESS Array S**	**22.16**	**119**	P		**P**	**21 58 10.4**	**+2.1**
	baz=344,slow=10							
FIA0	**FINESS Array S**	**22.16**	**119**	P		**P**	**21 58 10.4**	**+2.1**
	baz=344,slow=10							

NNC 19 22:15:54.5±4.9, 39.°02N×71.°45E, h0km, mb3.7, mpv3.3, 4C-1D, Error ellipse: s-maj=47.7km s-min=38.9km az=177.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AML	**Almayashu**	**3.55**	**28**	P		Pn	22 16 53.6	+2.5
	SNR=55							
UCH	**Uchtor**	**3.96**	**35**	P		Pn	22 16 58.7	+1.8
	SNR=18							
EKS2	**Erkin-Say**	**4.04**	**25**	P		Pn	22 17 00.5	+2.8
	SNR=8.3							
KK31	**Karatay Array**	**4.14**	**350**	Pn		Pn	22 16 58.2	-0.8
	0.5nm,0.2s,baz=165,slow=11,SNR=14							
KK31				⇓Lg		Lg	22 18 07.2	
	0.7nm,0.3s,baz=140,slow=31,SNR=5.3							
CHMS	**Chumysh**	**4.70**	**31**	⇑Pn		Pn	22 17 07.3	+0.7
	2.3nm,0.4s							
CHMS				⇑Lg		Lg	22 18 26.1	
	4.3nm,0.8s							
USP	**Ospenovka**	**4.83**	**28**	P		Pn	22 17 09.8	+1.3
	SNR=7.0							
TKM2	**Tokmak 2**	**5.00**	**38**	P		Pn	22 17 11.9	+0.9
	SNR=6.2							
TKM2	**Tokmak 2**	**5.00**	**38**	⇑Pn		Pn	22 17 11.3	+0.3
	8.5nm,0.5s							
TKM2				⇑Lg		Lg	22 18 30.1	
	3.1nm,0.9s							

IDC 19 22:19:22.4±8.6, 0.°12N×121.°67E, h211km±96km, mb2.9/3, mbtmp3.5/4, Error ellipse: s-maj=136.7km s-min=21.2km az=57.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KAPI	**Kappang**	**5.45**	**201**	P		Pn	22 20 42.8	0.0
	8.2nm,0.6s,baz=57,slow=18,SNR=5.2							
WRA	**Warramunga Arr**	**23.49**	**149**	P		P	22 24 13.3	0.0
	0.2nm,0.4s,baz=324,slow=11,SNR=8.4							
	0.2nm,0.4s							
SONM	**Songino Array**	**49.34**	**346**	P		P	22 27 50.3	-0.1
	0.5nm,0.7s,baz=144,slow=5.2,SNR=2.6							
	0.5nm,0.7s							
MKAR	**Makanchi Array**	**57.82**	**329**	P		P	22 28 51.8	0.0
	0.4nm,0.3s,baz=122,slow=7.6,SNR=12							
	0.4nm,0.3s							

IDC 19 22:40:16.3±2.9, 22.°96N×143.°72E, h0km, mb3.9/2, mbtmp3.8/5, ML3.5/3, Error ellipse: s-maj=139.7km s-min=26.4km az=81.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JCJ	**Chichijima**	**4.34**	**342**	Pn		Pn	22 41 24.9	+1.3
	3.5nm,0.3s,baz=297,slow=18,SNR=1.7							
	11nm,0.4s							
MJAR	**Matsushiro Arr**	**14.35**	**342**	Pn		Pn	22 43 40.1	-0.7
	0.1nm,0.3s,baz=163,slow=13,SNR=2.2							
	0.8nm,0.4s							
KSRS	**Korea Array**	**19.83**	**320**	P		Pn	22 44 49.6	-0.6
	0.2nm,0.3s,baz=130,slow=12,SNR=1.7							
	0.3nm,0.3s							
H11N1	**WAKE ISLAND Hy**	**21.82**	**94**	T		T	23 08 59.7	
	baz=282,slow=74,SNR=22							
H11N2	**WAKE ISLAND Hy**	**21.82**	**94**	T		T	23 09 09.3	
	baz=282,slow=74,SNR=27							
H11N3	**WAKE ISLAND Hy**	**21.83**	**94**	T		T	23 09 15.3	
	baz=282,slow=74,SNR=20							
H11S3	**WAKE ISLAND Hy**	**21.93**	**97**	T		T	23 09 26.8	
	baz=284,slow=75,SNR=11							
H11S1	**WAKE ISLAND Hy**	**21.93**	**97**	T		T	23 09 22.4	
	baz=284,slow=75,SNR=4.8							
H11S2	**WAKE ISLAND Hy**	**21.94**	**97**	T		T	23 09 27.8	
	baz=284,slow=75,SNR=6.3							
WRA	**Warramunga Arr**	**43.62**	**193**	P		P	22 48 22.7	+0.1
	1.0nm,0.8s,baz=12,slow=7.8,SNR=5.5							
	1.0nm,0.8s							
FINES	**FINESS Array B**	**82.26**	**335**	P		P	22 52 38.7	-0.6
	1.8nm,1.0s,baz=61,slow=6.5,SNR=7.6							
	1.8nm,1.0s							

IDC ***19*** *22:52:21.6±0.7, 5.°48S×11.°56W, h0km, mb4.0/13, mbtmp4.0/14, ML3.2/1, MS4.1/7, Error ellipse: s-maj=21.2km s-min=16.2km az=143.0*
NEIC ***19*** *22:52:23.0±1.2, 5.°61S±0.°08×11.°58W±0.°06, h10km±1km, mb4.8/28, Error ellipse: s-maj=16.4km s-min=4.5km az=140.0*
GCMT ***19*** *22:52:27.0±0.4, 5.°38S±0.°04×11.°50W±0.°03, h16km±1km, MW4.9/84, Moment Tensor Solution. s23,c25; s84,c106; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=2.39±.22; Mθθ=0.22±.12; Mϕϕ=2.17±.16; Mrθ=1.38±.43; Mθϕ=-0.59±.08; Mrϕ=-0.14±.40; Best double couple: Mo=2.69200×10¹⁶ NP1: ϕs=184.00000°, δ=43.00000°, λ=-56.00000°. NP2: ϕs=321.00000°, δ=56.00000°, λ=-117.00000°. Principal axes: T 2.3980, Plg7.0000°, Azm70.0000°; N 0.5910, Plg22.0000°, Azm338.0000°; P -2.9860, Plg66.0000°, Azm177.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 22:52:22.8±0.4, 5.°60S±0.°07×11.°59W±0.°07, h13km, n57, σ0§93/50, mb4.4/21, MS3.9/6, Ascension Island region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ASCN	**Ascension**	**3.60**	**230**	Pn		**Pn**	**22 53 16.0**	**-2.3**
ASCN				Sn		**Sn**	**22 54 01.0**	**+0.4**
H10N2	**ASCENSION HYDR**	**3.63**	**232**	T		T	22 57 07.8	
	baz=55,slow=74,SNR=3397							
H10N1	**ASCENSION HYDR**	**3.63**	**232**	T		T	22 57 08.2	
	baz=55,slow=74,SNR=4844							
H10N3	**ASCENSION HYDR**	**3.65**	**232**	T		T	22 57 09.3	
	baz=55,slow=74,SNR=3460							
H10S2	**ASCENSION HYDR**	**4.51**	**222**	T		T	22 58 12.9	
	baz=176,slow=74,SNR=79							
H10S3	**ASCENSION HYDR**	**4.51**	**222**	T		T	22 58 13.5	
	baz=44,slow=74,SNR=357							

SHEL	**Horse Pasture**	**11.78**	**151**	Pn		**Pn**	**22 55 09.2**	**-1.5**
DBIC	**Dimbokro**	**13.92**	**29**	Pn		**Pn**	**22 55 38.0**	**-1.9**
	0.1nm,0.3s,baz=216,slow=12,SNR=5.0							
DBIC				LR		LR	22 59 55.7	
	comp=Z,485nm,20.1s,baz=205,slow=33							
	16nm,1.2s							
DBIC	**Dimbokro**	**13.92**	**29**	Pn		**Pn**	**22 55 39.6**	**-0.3**
MBO	**M'Bour**	**20.56**	**345**			**P**	**22 57 02.4**	**+1.0**
MBO				IAmb		IAmb	22 57 17.9	
	comp=Z,74nm,1.2s							
TOA0	**Torodi Ar. Sit**	**22.83**	**35**	P		**P**	**22 57 25.7**	**-0.1**
TOA0				IAmb		IAmb	22 57 33.3	
	comp=Z,29nm,1.4s							
TORD	**Torodi Ar. Bea**	**22.83**	**35**	P		**P**	**22 57 25.1**	**-0.7**
	comp=Z,5.1nm,0.8s,baz=215,slow=11,SNR=43							
TORD				LR		LR	23 05 05.2	
	comp=Z,459nm,21.4s,baz=204,slow=34							
	comp=Z,5.1nm,0.8s							
TORD	**Torodi Ar. Bea**	**22.83**	**35**	P		**P**	**22 57 25.5**	**-0.3**
RCBR	**Riachuelo**	**24.19**	**268**	LR		LR	23 04 39.0	
	comp=Z,375nm,21.0s,baz=240,slow=30							
TSUM	**Tsumeb**	**31.46**	**118**	LR		LR	23 09 34.8	
	comp=Z,244nm,18.9s,baz=292,slow=33							
BDFB	**Brasilia**	**37.10**	**251**	P		**P**	**22 59 35.0**	**+1.6**
	comp=Z,4.8nm,0.9s,baz=37,slow=13							
BDFB				LR		LR	23 11 43.5	
	comp=Z,352nm,21.6s,slow=31							
	comp=Z,4.8nm,0.9s							
BDFB	**Brasilia**	**37.10**	**251**	P		**P**	**22 59 33.0**	**-0.4**
BDFB				IAmb		IAmb	22 59 41.6	
	comp=Z,19nm,1.5s							
PMOZ	**Porto Moniz, M**	**38.58**	**352**	P		**P**	**22 59 45.5**	**-0.1**
LSZ	**Lusaka**	**40.22**	**107**	P		**P**	**23 00 01.2**	**+1.6**
	comp=Z,0.8nm,0.3s,baz=290,slow=11,SNR=5.1							
	comp=Z,0.8nm,0.3s							
LSZ	**Lusaka**	**40.22**	**107**	P		**P**	**22 59 59.8**	**+0.2**
LBTB	**Lobatse**	**40.52**	**122**	P		**P**	**23 00 03.8**	**+1.7**
	comp=Z,2.8nm,0.6s,baz=302,slow=9.5,SNR=3.7							
LBTB				LR		LR	23 15 03.5	
	comp=Z,110nm,18.6s,baz=331,slow=34							
	comp=Z,2.8nm,0.6s							
LBTB	**Lobatse**	**40.52**	**122**	P		**P**	**23 00 01.7**	**-0.3**
LBTB				IAmb		IAmb	23 00 05.1	
	comp=Z,28nm,1.5s							
MATP	**Matopo**	**41.60**	**115**	P		**P**	**23 00 11.0**	**0.0**
	comp=Z,6.5nm,1.1s,baz=273,slow=3.9,SNR=5.7							
	comp=Z,6.5nm,1.1s							
MBAR	**Mbarara**	**42.54**	**85**	LR		LR	23 16 19.3	
	comp=Z,609nm,19.9s,baz=230,slow=34							
MBAR	**Mbarara**	**42.54**	**85**	P		**P**	**23 00 18.1**	**-0.7**
PVAQ	**Vaqueiros**	**42.94**	**5**	P		**P**	**23 00 21.4**	**0.0**
PVAQ				IAmb		IAmb	23 00 39.5	
	comp=Z,18nm,1.2s							
PESTR	**Estremoz**	**44.40**	**4**	P		**P**	**23 00 33.9**	**+0.7**
SIV	**San Ignacio**	**49.57**	**254**	P		**P**	**23 01 15.2**	**+1.1**
	comp=Z,1.6nm,0.8s,baz=94,slow=9.1,SNR=9.5							
	comp=Z,1.6nm,0.8s							
KIBK	**Kibwezi**	**49.61**	**88**	P		**P**	**23 01 14.3**	**-0.2**
KIBK				IAmb		IAmb	23 01 17.2	
	comp=Z,17nm,1.5s							
SAML	**Samuel**	**51.25**	**263**	P		**P**	**23 01 27.4**	**+0.6**
IDI	**Anoyia**	**53.21**	**37**	P		**P**	**23 01 39.2**	**-1.8**
IDI				IAmb		IAmb	23 01 51.9	
	comp=Z,9.7nm,1.1s							
KARP	**Karpathos**	**54.77**	**39**	P		**P**	**23 01 53.1**	**+0.7**
LPAZ	**La Paz**	**56.36**	**254**	P		**P**	**23 02 06.5**	**+1.6**
	comp=Z,0.6nm,0.8s,baz=40,slow=11,SNR=2.0							
	comp=Z,0.6nm,0.8s							
LPAZ	**La Paz**	**56.36**	**254**	P		**P**	**23 02 04.0**	**-0.9**
BAUV	**El Baul**	**58.10**	**284**	P		**P**	**23 02 16.7**	**+0.2**
GERES	**GERESS Array B**	**58.56**	**19**	P		**P**	**23 02 19.3**	**+0.1**
	comp=Z,0.8nm,0.8s,baz=203,slow=5.2,SNR=7.4							
	comp=Z,0.8nm,0.8s							
GERES	**GERESS Array B**	**58.56**	**19**	P		**P**	**23 02 19.1**	**-0.1**
GO02	**Mina Guanaco**	**58.74**	**244**	P		**P**	**23 02 21.0**	**-0.2**
MLR	**Muntele Rosu**	**60.91**	**29**	P		**P**	**23 02 36.6**	**+1.2**
BRTR	**Keskin Array B**	**61.39**	**39**	P		**P**	**23 02 39.9**	**+1.0**
	comp=Z,1.2nm,1.0s,baz=221,slow=7.4,SNR=5.9							
	comp=Z,1.2nm,1.0s							
BRTR	**Keskin Array B**	**61.39**	**39**	P		**P**	**23 02 38.7**	**-0.2**
BNN	**Bunyan**	**62.28**	**41**	P		**P**	**23 02 45.3**	**+0.3**
ZARC	**Zaragoza, Cauc**	**64.45**	**281**	P		**P**	**23 02 59.2**	**-0.4**
ZARC				IAmb		IAmb	23 03 00.8	
	comp=Z,5.3nm,0.9s							
ZARC	**Zaragoza, Cauc**	**64.45**	**281**	*e*P		**P**	**23 02 59.4**	**-0.2**
LL02	**Futaleuf**	**64.71**	**225**	P		**P**	**23 03 01.6**	**+0.9**
AKASG	**Malin Array Be**	**66.16**	**27**	P		**P**	**23 03 09.1**	**-0.8**
	comp=Z,1.0nm,0.5s,baz=226,slow=6.0,SNR=

MS5.0/25,Error ellipse: s-maj=6.7km s-min=3.4km az=66.0

*IDC **19** 23:13:42.2±0.3,5.°55S×11.°50W,h0km,mb4.9/40, mbtmp4.9/41,ML4.0/1,MS4.9/78,Error ellipse: s-maj=11.8km s-min=9.8km az=140.0*

*NEIC **19** 23:13:44.6±1.2,5.°65S±0.°08×11.°57W±0.°08,h10km±1km, mb5.4/539,Mwb5.4/23,Error ellipse: s-maj=13.8km s-min=12.0km az=321.0*

*BJI **19** 23:13:44.1±0.0,5.°60S×11.°50W,h10km,mb5.3/7, mB5.8/16,Ms5.4/25,Ms7 5.1/23*

*NEIC **19** 23:13:44.8,5.°68S×11.°52W,h4km,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; Mrr-0.98; Mθθ-0.46; Mϕϕ 1.44; Mrθ-0.68; Mθϕ-0.36; Mϕr-0.38; Fault plane solution: M0 1.54000×10^{17} NP1:ϕs20.18000°, δ60.63000°,λ-48.19000°. NP2:ϕs138.92000°,δ49.49000°, λ-139.83000°. Principal axes: T 1.5328, Plg6.0000°, Azm82.0000°; N 0.0078, Plg36.0000°, Azm176.0000°; P -1.5406, Plg54.0000°, Azm343.0000°;*

*GCMT **19** 23:13:46.6±0.1,5.°47S±0.°01×11.°47W,h12km,MW5.5/157, Moment Tensor Solution. s127,c206; s157,c327; Duration: 1s3 Moment tensor: Scale 10^{17}Nm; Mrr-2.04±.02; Mθθ-0.04±.02; Mϕϕ 2.07±.02; Mrθ 0.15±.05; Mθϕ-0.49±.02; Mϕr-0.18±.05; Best double couple: M0 2.12200×10^{17} NP1:ϕs171.00000°,δ42.00000°, λ-85.00000°. NP2:ϕs344.00000°,δ48.00000°, λ-94.00000°. Principal axes: T 2.1890, Plg3.0000°, Azm77.0000°; N -0.1370, Plg3.0000°, Azm347.0000°; P -2.0560, Plg86.0000°, Azm209.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 23:13:43.2±0.6,5.°62S±0.°04×11.°52W±0.°04,h7km±3km, h7km:pP-P,n1354,σ1§65/1376,mb5.4/436,MS5.1/117, 135C-245D,Fault plane solution: NP1:ϕs185.54027°, δ44.43931°,λ-90.71174°. **NP2:ϕs6.53706°,δ45.56502°,** λ-89.30211°. **Principal axes:** T Plg0.5629°, Azm96.0436°; N Plg0.4983°, Azm186.0485°; P Plg89.2482°, Azm317.5649°; **Ascension Island region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ASCN	**Ascension**	**3.64**	**231**	Pn		**Pn**	**23 14 37.0**	**-3.0**
H10N2	**ASCENSION HYDR**	**3.67**	**233**	T		T	23 18 09.3	
	baz=53,slow=74,SNR=8116							
H10N1	**ASCENSION HYDR**	**3.68**	**233**	T		T	23 18 13.1	
	baz=53,slow=74,SNR=6139							
H10N3	**ASCENSION HYDR**	**3.69**	**233**	T		T	23 18 15.1	
	baz=53,slow=74,SNR=5201							
SHEL	**Horse Pasture**	**11.73**	**152**	Pn		**Pn**	**23 16 30.7**	**-0.5**
SHEL	**Horse Pasture**	**11.73**	**152**	P		**Pn**	**23 16 30.7**	**-0.5**
LIC	**Lamto**	**13.43**	**29↑**	*e*P		**Pn**	**23 16 53.9**	**-0.5**
	273nm,1.4s							
KIC	**Kosan Boka**	**13.69**	**30↓**	*e*P		**Pn**	**23 16 56.5**	**-1.4**
	218nm,1.2s							
TIC	**Toumodi**	**13.80**	**28↓**	*e*P		**Pn**	**23 16 58.7**	**-0.8**
	984nm,1.4s							
DBIC	**Dimbokro**	**13.90**	**29**	*e*P		**Pn**	**23 17 00.5**	**-0.4**
DBIC	**Dimbokro**	**13.90**	**29**	Pn		**Pn**	**23 17 00.1**	**-0.7**
	0.8nm,0.3s,baz=218,slow=13,SNR=53							
DBIC					LR	LR	23 21 15.1	
	comp=Z,7μm,19.9s,baz=204,slow=33							
	198nm,1.2s							
DBIC	**Dimbokro**	**13.90**	**29**	Pn		**Pn**	**23 17 00.3**	**-0.5**
DBIC	**Dimbokro**	**13.90**	**29**	P		**Pn**	**23 17 00.3**	**-0.5**
MBO	**M'Bour**	**20.60**	**345**	P		**P**	**23 18 23.2**	**+0.1**
MBO					IAmb	IAmb	23 18 30.8	
	comp=Z,254nm,1.3s							
TOA0	**Torodi Ar. Sit**	**22.80**	**35**	P		**P**	**23 18 44.3**	**-2.5**
TOA0	**Torodi Ar. Sit**	**22.80**	**35**	P		**P**	**23 18 44.5**	**-2.3**
	SNR=65							
TORD	**Torodi Ar. Bea**	**22.80**	**35**	P		**P**	**23 18 44.9**	**-1.9**
	comp=Z,85nm,1.0s,baz=214,slow=10,SNR=70							
TORD					LR	LR	23 26 34.7	
	comp=Z,7μm,19.9s,baz=210,slow=34							
	comp=Z,85nm,1.0s							
TORD	**Torodi Ar. Bea**	**22.80**	**35**	P		**P**	**23 18 44.2**	**-2.5**
NBRF	**Rio Formoso -**	**23.62**	**261**	*e*P		**P**	**23 18 54.2**	**-1.0**
SACV	**Santiago Islan**	**23.71**	**330**	P		**P**	**23 18 55.4**	**-0.6**
RCBR	**Riachuelo**	**24.26**	**268**	P		**P**	**23 19 01.8**	**+0.5**
	comp=Z,116nm,1.2s,baz=228,slow=13,SNR=9.6							
RCBR					LR	LR	23 26 00.7	
	comp=Z,7μm,20.8s,baz=244,slow=30							
	comp=Z,116nm,1.2s							
RCBR	**Riachuelo**	**24.26**	**268**	P		**P**	**23 19 01.0**	**-0.3**
RCBR					IAmb	IAmb	23 19 03.7	
	comp=Z,109nm,1.1s							
RCBR	**Riachuelo**	**24.26**	**268**	P		**P**	**23 19 01.0**	**-0.3**
RCBR					pmax	pmax		
	comp=Z,109nm,1.2s							
RCBR	**Riachuelo**	**24.26**	**268**	*e*P		**P**	**23 19 02.2**	**+0.9**
NBAN	**Anadia - AL**	**24.86**	**259**	*e*P		**P**	**23 19 05.5**	**-1.2**
NBLA	**Lagarto - SE**	**26.52**	**257**	*e*P		**P**	**23 19 21.4**	**-0.4**
NBMA	**Muriti-CE**	**27.12**	**265**	*e*P		**P**	**23 19 28.0**	**+0.7**
NBPB	**Pedra_Branca-C**	**27.93**	**269**	*e*P		**P**	**23 19 35.1**	**+0.7**
NBMO	**Morrinhos-CE**	**28.52**	**273**	*e*P		**P**	**23 19 40.0**	**+0.3**
TSUM	**Tsumeb**	**31.39**	**118**	*e*P		**P**	**23 20 05.1**	**-0.1**
TSUM					IAmb	IAmb	23 20 12.1	
	comp=Z,656nm,1.9s							
TSUM	**Tsumeb**	**31.39**	**118**	P		**P**	**23 20 05.7**	**+0.4**
	comp=Z,4.7nm,0.8s,baz=293,slow=12,SNR=6.5							
TSUM					LR	LR	23 30 04.0	
	comp=Z,6μm,21.8s,baz=286,slow=31							
	comp=Z,4.7nm,0.8s							
TSUM	**Tsumeb**	**31.39**	**118**	P		**P**	**23 20 05.5**	**+0.3**
BSFB	**Barra de Sao F**	**31.45**	**243**	*e*P		**P**	**23 20 06.0**	**+0.3**
SJMB	**Sao Joao De Ma**	**31.71**	**243**	*e*P		**P**	**23 20 08.4**	**+0.6**
ROSB	**Rosrio**	**32.62**	**273**	*e*P		**P**	**23 20 15.7**	**-0.3**
JANB	**Januaria**	**33.55**	**251**	*e*P		**P**	**23 20 24.0**	**-0.1**
SDBA	**SAO DESIDERIO**	**33.63**	**256**	*e*P		**P**	**23 20 24.6**	**-0.2**
MACI	**Morro de la Ar**	**34.02**	**352**	P		**P**	**23 20 28.2**	**+0.1**
BSCB	**Bom Sucesso**	**35.67**	**241**	*e*P		**P**	**23 20 42.3**	**-0.2**
SMTB	**Santa Maria do**	**35.91**	**263**	*e*P		**P**	**23 20 45.0**	**+0.4**
ZGR	**Zagora**	**35.98**	**9**	P		**P**	**23 20 48.0**	**+3.0**
ESAR	**Angra dos Reis**	**36.15**	**238**	*e*P		**P**	**23 20 47.7**	**+1.3**
PMNB	**Patos De Minas**	**36.39**	**246**	*e*P		**P**	**23 20 48.9**	**+0.2**
OUZM	**OUZ**	**36.61**	**7**	P		**P**	**23 20 52.0**	**+1.6**
TMAB	**Tom-Au,PA,Br**	**36.62**	**274**	*e*P		**P**	**23 20 51.3**	**+0.7**
TZRR	**Tazzarine**	**36.65**	**9**	P		**P**	**23 20 53.1**	**+2.4**
PEXB	**Peixe**	**36.88**	**257**	*e*P		**P**	**23 20 52.8**	**-0.1**
BDFB	**Brasilia**	**37.16**	**252**	P		**P**	**23 20 55.4**	**+0.1**
	comp=Z,49nm,1.1s,baz=128,slow=5.4							
BDFB					LR	LR	23 33 36.8	
	comp=Z,4μm,20.1s,slow=32							
	comp=Z,49nm,1.1s							
BDFB	**Brasilia**	**37.16**	**252**	P		**P**	**23 20 55.0**	**-0.3**
BDFB					IAmb	IAmb	23 20 58.6	
	comp=Z,66nm,1.2s							
BDFB	**Brasilia**	**37.16**	**252**	P		**P**	**23 20 55.0**	**-0.3**
BDFB					pmax	pmax		
	comp=Z,66nm,1.2s							
PARB	**Paraibuna**	**37.27**	**238**	*e*P		**P**	**23 20 57.5**	**+1.4**
ARF	**Arif**	**37.50**	**10**	P		**P**	**23 20 60.0**	**+2.1**
IPMB	**Ipameri, GO**	**37.87**	**248**	*e*P		**P**	**23 21 01.5**	**+0.2**
PRPB	**Parauapebas**	**38.09**	**267**	*e*P		**P**	**23 21 03.2**	**+0.1**
KEIM	**Keimoes**	**38.37**	**131**	*e*P		**P**	**23 21 05.3**	**-0.1**
UPI	**Upington**	**38.42**	**130**	*e*P		**P**	**23 21 05.0**	**-0.7**
UPI					IAmb	IAmb	23 21 13.8	
	comp=Z,18nm,0.9s							
RCLB	**Rio Claro- Sao**	**38.57**	**241**	*e*P		**P**	**23 21 08.2**	**+1.1**
PMOZ	**Porto Moniz, M**	**38.61**	**352**	*e*P		P	23 21 14.0	+6.7
PMOZ	**Porto Moniz, M**	**38.61**	**352**	eLR		LR	23 32 15.7	
	comp=Z,768nm,20.0s							
PMOZ	**Porto Moniz, M**	**38.61**	**352**	P		**P**	**23 21 07.3**	**+0.1**
PMPST	**Porto Santo, M**	**38.76**	**354**	*e*P		**P**	**23 21 10.3**	**+1.9**
MDT	**Midelt**	**38.78**	**9**	LR		LR	23 36 47.1	
	comp=Z,2μm,18.5s,baz=193,slow=36							
MDT	**Midelt**	**38.78**	**9**	P		**P**	**23 21 10.8**	**+2.1**
FIGM	**Figuig**	**38.80**	**14**	P		**P**	**23 21 11.0**	**+2.1**
AVE	**Averroes**	**38.90**	**5**	P		**P**	**23 21 10.9**	**+1.4**
CZD	**Col de Zad**	**38.93**	**9**	P		**P**	**23 21 13.0**	**+2.8**
BB19B	**Bebedouro**	**39.01**	**243**	*e*P		**P**	**23 21 11.5**	**+0.7**
TDRA	**Tendrara**	**39.49**	**13**	P		**P**	**23 21 17.0**	**+2.2**
SNDB	**Serra Nova Dou**	**39.78**	**258**	*e*P		**P**	**23 21 17.7**	**+0.5**
LSZ	**Lusaka**	**40.14**	**107**	P		**P**	**23 21 20.6**	**+0.2**
	comp=Z,22nm,1.0s,baz=285,slow=6.6,SNR=30							
LSZ					LR	LR	23 35 31.6	
	comp=Z,3μm,20.2s,baz=290,slow=33							
	comp=Z,22nm,1.0s							
LSZ	**Lusaka**	**40.14**	**107**	IAmb		IAmb	23 21 28.8	
	comp=Z,61nm,1.1s							
LSZ	**Lusaka**	**40.14**	**107**	P		**P**	**23 21 20.6**	**+0.2**
LSZ					pmax	pmax		
	comp=Z,61nm,1.2s							
SUR	**Sutherland**	**40.23**	**136**	P		**P**	**23 21 21.1**	**+0.1**
	comp=Z,8.8nm,1.0s,baz=310,slow=9.1,SNR=2.0							
SUR					LR	LR	23 35 01.3	
	comp=Z,2μm,19.4s,baz=298,slow=32							
	comp=Z,8.8nm,1.0s							
SUR	**Sutherland**	**40.23**	**136**	P		P	23 21 27.6	+6.6
ITRB	**Iturama**	**40.27**	**246**	*e*P		**P**	**23 21 22.3**	**+1.0**
LBTB	**Lobatse**	**40.45**	**122**	*e*P		**P**	**23 21 22.8**	**0.0**
LBTB					IAmb	IAmb	23 21 35.5	
	comp=Z,126nm,1.2s							
LBTB	**Lobatse**	**40.45**	**122**	P		**P**	**23 21 23.0**	**+0.2**
	comp=Z,18nm,0.9s,baz=292,slow=9.7,SNR=14							
LBTB					LR	LR	23 35 43.7	
	comp=Z,2μm,20.2s,baz=285,slow=33							
	comp=Z,18nm,0.9s							
LBTB	**Lobatse**	**40.45**	**122**	P		**P**	**23 21 22.6**	**-0.2**
LBTB					IAmb	IAmb	23 21 35.8	
	comp=Z,121nm,1.2s							
LBTB	**Lobatse**	**40.45**	**122**	P		**P**	**23 21 22.6**	**-0.2**
LBTB					pmax	pmax		
	comp=Z,121nm,1.3s							
AKLM	**AKL**	**40.56**	**10**	P		**P**	**23 21 28.0**	**+4.5**
JBK	**JBK**	**40.63**	**11**	P		**P**	**23 21 26.0**	**+1.8**
FRTB	**Fartura**	**40.65**	**240**	*e*P		**P**	**23 21 25.8**	**+1.4**
MCPB	**Macapa, AP**	**40.80**	**276**	*e*P		**P**	**23 21 26.0**	**+0.3**
CHEFC	**Chefchaouen**	**40.93**	**8**	P		**P**	**23 21 29.0**	**+2.5**
GRAN	**Grantham**	**41.15**	**134**	*e*P		**P**	**23 21 31.1**	**+2.7**
MATP	**Matopo**	**41.53**	**115**	*e*P		**P**	**23 21 31.7**	**-0.1**
MATP	**Matopo**	**41.53**	**115**	P		**P**	**23 21 31.6**	**-0.2**
	comp=Z,31nm,1.1s,baz=282,slow=7.9,SNR=26							
MATP					LR	LR	23 37 06.4	
	comp=Z,3μm,18.7s,baz=269,slow=34							
	comp=Z,31nm,1.1s							
BLWY	**Bulawayo**	**41.56**	**114**	*e*P		**P**	**23 21 31.4**	**-0.6**
BLWY					IAmb	IAmb	23 21 44.0	
	comp=Z,247nm,1.1s							
PCMB	**Pacaembu**	**41.60**	**244**	*e*P		**P**	**23 21 33.9**	**+1.7**
BOSA	**Boshof**	**41.65**	**128**	*e*P		**P**	**23 21 32.6**	**0.0**
BOSA					IAmb	IAmb	23 21 44.7	
	comp=Z,63nm,1.1s							
BOSA	**Boshof**	**41.65**	**128**	P		**P**	**23 21 32.5**	**-0.1**
	comp=Z,27nm,1.1s,baz=305,slow=6.6,SNR=11							
BOSA					LR	LR	23 36 26.6	
	comp=Z,2μm,20.2s,baz=298,slow=33							
	comp=Z,27nm,1.1s							
BOSA	**Boshof**	**41.65**	**128**	P		**P**	**23 21 32.8**	**+0.1**
BOSA	**Boshof**	**41.65**	**128**	P		**P**	**23 21 32.8**	**+0.1**
BOSA					pmax	pmax		
	comp=Z,64nm,1.2s							
SFS	**San Fernando**	**42.16**	**6**	P		**P**	**23 21 36.5**	**+0.1**
SFS	**San Fernando**	**42.16**	**6**	P		**P**	**23 21 36.5**	**+0.1**
SFS					pmax	pmax		
	comp=Z,340nm,1.3s							
MDP	**Montagnes des**	**42.42**	**284**	LR		LR	23 37 29.1	
	comp=Z,619nm,18.5s,baz=82,slow=34							
MBAR	**Mbarara**	**42.47**	**85**	LR		LR	23 37 39.2	
	comp=Z,9μm,19.9s,baz=252,slow=34							
MBAR	**Mbarara**	**42.47**	**85**	P		**P**	**23 21 40.1**	**+0.5**
MBAR	**Mbarara**	**42.47**	**85**	*c iP*		**P**	**23 21 40.0**	**+0.4**
MBAR	**Mbarara**	**42.47**	**85**	*e*P		**P**	**23 21 40.2**	**+0.9**
MBAR	**Mbarara**	**42.47**	**85**	*e*P		**P**	**23 21 36.5**	**-3.2**
MBAR	**Mbarara**	**42.47**	**85**	*e*P		P	23 21 27.1	-13
HRAO	**HartRAO**	**42.53**	**123**	*e*P		**P**	**23 21 39.6**	**-0.3**
HRAO					IAmb	IAmb	23 21 47.4	
	comp=Z,234nm,1.9s							
PFVI	**Vila Bisbo**	**42.61**	**3**	*e*S		**S**	**23 28 10.2**	**+6.9**
PFVI					*e*SS	**SS**	**23 31 08.1**	**-5.4**
PFVI	**Vila Bisbo**	**42.61**	**3**	P		**P**	**23 21 41.9**	**+1.8**
PFVI					IAmb	IAmb	23 21 48.6	
	comp=Z,134nm,1.2s							
HVD	**Gariep Dam**	**42.74**	**130**	*e*P		**P**	**23 21 42.3**	**+0.7**
PBDV	**Barranco-do-Ve**	**42.77**	**4**	*e*P		**P**	**23 21 42.0**	**+0.5**
	comp=Z,120nm,1.3s							
PBDV					*e*S	**S**	**23 28 12.8**	**+7.0**
PBDV					*e*SS	**SS**	**23 31 11.2**	**-5.7**
MORF	**Marmelete**	**42.79**	**3**	*e*P		**P**	**23 21 42.3**	**+0.7**
MORF					IAmb	IAmb	23 21 49.8	
	comp=Z,112nm,1.2s							
MORF					*e*S	**S**	**23 28 07.1**	**+0.9**
MORF	**Marmelete**	**42.79**	**3**	*e*P		**P**	**23 21 42.6**	**+0.9**
	comp=Z,142nm,1.4s							
MORF					*e*S	**S**	**23 28 11.7**	**+5.6**
MORF					*e*SS	**SS**	**23 31 16.1**	**-1.1**
MORF	**Marmelete**	**42.79**	**3**	*e*P		**P**	**23 21 42.3**	**+0.7**
MORF					*e*S	**S**	**23 28 07.0**	**+0.9**
MALB	**Monte Alegre**	**42.81**	**273**	*e*P		**P**	**23 21 42.2**	**0.0**
PVAQ	**Vaqueiros**	**42.95**	**4**	*e*P		**P**	**23 21 44.1**	**+1.2**
	comp=Z,65nm,1.4s							
PVAQ	**Vaqueiros**	**42.95**	**4**	*e*PP		**PP**	**23 23 25.3**	**+2.6**
PVAQ					*e*S	**S**	**23 28 16.7**	**+8.4**
PVAQ					*e*SS	**SS**	**23 31 12.5**	**-7.8**
PVAQ					eLR	LR	23 36 55.0	
	comp=Z,1μm,20.0s							
PVAQ	**Vaqueiros**	**42.95**	**4**	P		**P**	**23 21 43.6**	**+0.7**
SLR	**Silverton**	**42.97**	**122**	*e*P		**P**	**23 21 42.7**	**-0.8**
SLR					IAmb	IAmb	23 21 51.1	
	comp=Z,116nm,1.2s							
PTEO	**Sao Teotonio**	**43.02**	**3**	*e*P		**P**	**23 21 45.7**	**+2.2**
	comp=Z,240nm,1.5s							
PCVE	**Castro Verde**	**43.15**	**4**	*e*P		**P**	**23 21 45.9**	**+1.4**
	comp=Z,61nm,1.3s							
TRCB	**Terra Rica**	**43.16**	**243**	*e*P		**P**	**23 21 46.8**	**+1.8**
MUSN	**Musina, Limpop**	**43.25**	**117**	*e*P		**P**	**23 21 45.5**	**-0.2**
MUSN					IAmb	IAmb	23 21 52.7	
	comp=Z,54nm,1.1s							
PTGB	**Pitanga**	**43.26**	**240**	*e*P		**P**	**23 21 47.2**	**+1.4**
MESJ	**Messejana**	**43.35**	**4**	*e*P		**P**	**23 21 46.7**	**+0.6**
MESJ					IAmb	IAmb	23 21 53.8	
	comp=Z,46nm,1.4s							
MESJ					*e*S	**S**	**23 28 15.2**	**+1.0**
MESJ	**Messejana**	**43.35**	**4**	*e*P		**P**	**23 21 46.3**	**+0.2**
	comp=Z,48nm,1.4s							
MESJ	**Messejana**	**43.35**	**4**	*e*P		**P**	**23 21 46.7**	**+0.6**
MESJ					*e*S	**S**	**23 28 15.1**	**+1.0**
SNKL	**Senekal, Frees**	**43.51**	**126**	*e*P		**P**	**23 21 46.3**	**-1.6**
SNKL					IAmb	IAmb	23 21 55.1	
	comp=Z,142nm,1.3s							
PBEJ	**Beja**	**43.56**	**4**	*e*P		**P**	**23 21 48.4**	**+0.6**
	comp=Z,50nm,1.6s							
PBEJ	**Beja**	**43.56**	**4**	*e*PP		**PP**	**23 23 30.9**	**+1.7**
NPGB	**Novo Progresso**	**43.58**	**266**	*e*P		**P**	**23 21 48.2**	**-0.2**
PNCL	**Nicolau / Gran**	**43.60**	**3**	*e*P		**P**	**23 21 50.3**	**+2.2**
	comp=Z,56nm,1.4s							
PNCL					*e*S	**S**	**23 28 26.4**	**+8.6**
PNCL					*e*SS	**SS**	**23 31 29.7**	**-3.2**
PBAR	**Barrancos**	**43.77**	**5**	*e*S		S	23 28 30.7	+10
PBAR					*e*SS	**SS**	**23 31 33.0**	**-3.3**
CNLB	**Canela**	**43.97**	**233**	*e*P		**P**	**23 21 53.2**	**+1.8**
EVO	**Evora**	**44.05**	**4**	*e*P		**P**	**23 21 52.6**	**+0.9**
	comp=Z,59nm,1.3s							
EVO	**Evora**	**44.05**	**4**	*e*PP		**PP**	**23 23 36.6**	**+2.1**
ITTB	**Itaituba**	**44.06**	**270**	*e*P		**P**	**23 21 52.1**	**-0.1**
CART	**Cartagena**	**44.09**	**12**	P		**P**	**23 21 52.3**	**+0.3**
CLDB	**Colider**	**44.09**	**260**	*e*P		**P**	**23 21 52.6**	**0.0**
LIS	**Lisbon**	**44.17**	**3**	*e*P		**P**	**23 21 53.3**	**+0.6**
LIS					IAmb	IAmb	23 21 57.5	
	comp=Z,212nm,1.6s							
LIS					*e*S	**S**	**23 28 26.9**	**+0.8**
LIS	**Lisbon**	**44.17**	**3**	*e*P		**P**	**23 21 53.3**	**+0.6**
LIS					*e*S	**S**	**23 28 26.9**	**+0.8**
PMST	**Lisbon--Monsan**	**44.19**	**3**	*e*P		**P**	**23 21 54.1**	**+1.3**
	comp=Z,117nm,1.6s							
ITAB	**Concordia**	**44.19**	**236**	*e*P		**P**	**23 21 55.5**	**+2.3**
PSMN	**Pico do Norte,**	**44.25**	**344**	*e*pP		pP	23 21 59.6	+4.9
PMAFR	**Mafra**	**44.40**	**2**	*e*P		**P**	**23 21 56.0**	**+1.4**
	comp=Z,169nm,1.3s							
PMAFR					*e*S	S	23 28 38.6	+9.1
PMAFR					*e*SS	**ScS**	**23 31 55.2**	**+1.6**
PESTR	**Estremoz**	**44.41**	**4**	*e*P		**P**	**23 21 55.8**	**+1.1**
	comp=Z,40nm,1.4s							
PESTR	**Estremoz**	**44.41**	**4**	*e*PP		**PP**	**23 23 40.0**	**+1.6**
PESTR					*e*S	S	23 28 40.5	+11
PESTR					*e*SS	**SS**	**23 31 48.6**	**-0.4**
PESTR	**Estremoz**	**44.41**	**4**	P		**P**	**23 21 54.6**	**0.0**
SALV	**Santo Antonio**	**44.49**	**253**	*e*P		**P**	**23 21 56.3**	**+0.6**
FRBT	**Francisco Belt**	**44.53**	**238**	*e*P		**P**	**23 21 57.8**	**+1.8**
CRLN	**Carolina, Mapu**	**44.53**	**122**	*e*P		**P**	**23 21 56.2**	**+0.1**
MOPA	**Mopani**	**44.96**	**118**	*e*P		**P**	**23 21 58.0**	**-1.4**
MOPA					IAmb	IAmb	23 22 06.0	
	comp=Z,610nm,3.3s							
PSBE	**So Bento**	**44.98**	**3**	*e*S		**S**	**23 28 46.6**	**+8.6**
PSBE					*e*SS	**SS**	**23 32 06.3**	**+6.4**
PMRV	**Marv??o**	**44.99**	**5**	*e*P		**P**	**23 22 00.0**	**+0.8**
	comp=Z,106nm,1.4s							
PMRV					*e*S	**S**	**23 28 43.6**	**+5.5**
PMRV					*e*SS	**SS**	**23 32 02.7**	**+2.7**
PMRV					eLR	LR	23 36 22.8	
	comp=Z,1μm,20.0s							
NWCL	**Newcastle**	**45.04**	**124**	*e*P		**P**	**23 21 59.9**	**-0.2**
NWCL					IAmb	IAmb	23 22 12.1	
	comp=Z,99nm,1.2s							
PDRB	**Porto dos Gac**	**45.05**	**259**	*e*P		**P**	**23 22 00.9**	**+0.7**
CMLA	**Cha da Macela**	**45.09**	**344**	*e*pP		pP	23 22 04.5	+3.1
CMLA	**Cha da Macela**	**45.09**	**344**	P		**P**	**23 22 00.6**	**+0.5**
CMLA					IAmb	IAmb	23 22 08.3	
	comp=Z,48nm,1.1s							
CMLA	**Cha da Macela**	**45.09**	**344**	P		**P**	**23 22 00.6**	**+0.5**
CMLA					pmax	pmax		
	comp=Z,48nm,1.1s							
PSET	**Sete Cidades**	**45.20**	**344**	*e*pP		pP	23 22 03.4	+1.1
PCBR	**Castelo Branco**	**45.39**	**4**	*e*P		**P**	**23 22 03.7**	**+1.3**
	comp=Z,55nm,2.3s							
PAB	**San Pablo**	**45.43**	**8**	P		**P**	**23 22 03.6**	**+0.8**
PAB	**San Pablo**	**45.43**	**8**	P		**P**	**23 22 03.6**	**+0.8**
PAB					pmax	pmax		
	comp=Z,45nm,1.3s							
PCAS	**Casmilo, Conde**	**45.53**	**3**	*e*P		**P**	**23 22 04.2**	**+0.6**
	comp=Z,93nm,1.4s							
PCAS					*e*S	**S**	**23 28 52.4**	**+6.5**
PCAS					*e*SS	**SS**	**23 32 17.6**	**+7.7**
KEST	**Kesra**	**45.57**	**24**	P		**P**	**23 22 03.8**	**-0.2**
	comp=Z,32nm,1.1s,baz=169,slow=3.0,SNR=11							
KEST					LR	LR	23 41 35.7	
	comp=Z,4μm,20.5s,baz=158,slow=37							
	comp=Z,32nm,1.1s							
KEST	**Kesra**	**45.57**	**24**	P		**P**	**23 22 04.8**	**+0.8**
KEST	**Kesra**	**45.57**	**24**	P		**P**	**23 22 04.5**	**+0.5**
	SNR=11							
ESDC	**Sonseca Array**	**45.61**	**8**	P		**P**	**23 22 04.3**	**+0.1**
	comp=Z,5.6nm,1.1s,baz=190,slow=7.4,SNR=29							
ESDC					LR	LR	23 41 07.5	
	comp=Z,798nm,18.2s,baz=180,slow=36							
	comp=Z,5.6nm,1.1s							
ESDC	**Sonseca Array**	**45.61**	**8**	P		**P**	**23 22 04.4**	**+0.1**
ESDC					IAmb	IAmb	23 22 11.8	
	comp=Z,50nm,1.4s							
ESBB	**Sonseca Array**	**45.61**	**8**	P		**P**	**23 22 04.5**	**+0.2**
ESBB					IAmb	IAmb	23 22 11.8	
	comp=Z,62nm,1.4s							
COI	**Coimbra**	**45.69**	**3**	*e*P		**P**	**23 22 06.2**	**+1.4**
	comp=Z,73nm,1.6s							
COI					*e*S	**S**	**23 28 56.0**	**+7.8**
COI					*e*SS	**SS**	**23 32 19.4**	**+6.8**
MTE	**Manteigas**	**45.94**	**4**	*e*P		**P**	**23 22 07.5**	**+0.7**
	comp=Z,118nm,1.5s							
MTE	**Manteigas**	**45.94**	**4**	*e*PP		**PP**	**23 23 55.3**	**+0.7**
MTE					*e*S	**S**	**23 29 00.7**	**+8.8**
MTE					eLR	LR	23 36 47.0	
	comp=Z,983nm,20.0s							
MTE	**Manteigas**	**45.94**	**4**	P		**P**	**23 22 07.5**	**+0.7**
PVIS	**Viseu**	**46.23**	**4**	*e*P		**P**	**23 22 09.8**	**+0.7**
	comp=Z,71nm,1.4s							
PVIS	**Viseu**	**46.23**	**4**	*e*PP		**PP**	**23 24 00.0**	**+2.3**
POGA	**Pongola**	**46.41**	**123**	*e*P		**P**	**23 22 10.1**	**-0.7**
POGA					IAmb	IAmb	23 22 18.1	
	comp=Z,56nm,1.1s							
CPSB	**Cacapava Do Su**	**46.47**	**233**	*e*P		**P**	**23 22 12.7**	**+1.5**
CNG	**Changalane**	**46.47**	**121**	*e*P		**P**	**23 22 11.0**	**-0.2**
PAGU	**Agualva, Azore**	**46.49

LMR pmax pmax
comp=Z,63nm,1.4s
TIP Timpagrande 51.68 28 ⇓P **P 23 22 51.0 0.0**
TIP Timpagrande 51.68 28 P **P 23 22 51.4 +0.3**
TIP IAmb IAmb 23 22 59.4
comp=Z,59nm,1.3s
CAF Calviac 51.77 12 *e*P **P 23 22 51.1 -0.5**
CAF pmax pmax
comp=Z,78nm,1.4s
RJF Les Rejaudoux 52.02 12 *e*P **P 23 22 52.9 -0.5**
RJF pmax pmax
comp=Z,76nm,1.3s
FURI Furi 52.08 74 *e*P **P 23 22 51.9 -2.8**
FURI Furi 52.08 74 *e*P **P 23 22 53.6 -1.2**
FURI Furi 52.08 74 *e*Pdif **P 23 22 55.5 +0.7**
FURI Furi 52.08 74 *e*P P 23 22 44.7 -10
AAE Adis Abeba 52.19 74 *e*P **P 23 22 55.5 -0.1**
AAE Adis Abeba 52.19 74 *e*P P 23 22 45.0 -11
PAOL Paolisi 52.22 25 IAmb IAmb 23 23 03.1
comp=Z,80nm,1.4s
CASP Castiglione de 52.30 21 IAmb IAmb 23 23 03.8
comp=Z,86nm,1.2s
SSB Saint Sauveur 52.67 14 IAmb IAmb 23 23 07.1
comp=Z,106nm,1.5s
ORIF Oris-en-Rattie 52.68 15 *e*P **P 23 22 58.7 +0.3**
ORIF pmax pmax
comp=Z,90nm,1.6s
KTHR Kythira 52.74 35 P **P 23 22 58.5 -0.4**
MBDF Montbardon 52.75 16 *e*P **P 23 22 59.4 +0.5**
MBDF pmax pmax
comp=Z,87nm,1.4s
ITM Ithomi 52.79 34 P **P 23 22 59.4 +0.1**
ITM Ithomi 52.79 34 IAmb IAmb 23 23 07.3
comp=Z,51nm,1.0s
AQU L'Aquila 52.86 23 P **P 23 23 01.0 +1.3**
AQU L'Aquila 52.86 23 P **P 23 23 01.0 +1.3**
AQU pmax pmax
comp=Z,119nm,1.4s
BNI Bardonecchia 53.02 16 IAmb IAmb 23 23 09.5
comp=Z,70nm,1.4s
BNI Bardonecchia 53.02 16 P **P 23 23 02.7 +1.8**
VLI Velìai 53.02 35 P **P 23 23 01.6 +0.6**
OSSC Osservatorio P 53.08 21 P **P 23 23 01.5 +0.3**
OSSC IAmb IAmb 23 23 15.3
comp=Z,67nm,1.5s
TCF Toulx Ste Croi 53.11 12 *e*P **P 23 23 01.4 0.0**
TCF pmax pmax
comp=Z,110nm,1.4s
NRCA Norcia 53.16 23 P **P 23 23 04.3 +2.3**
NRCA IAmb IAmb 23 23 10.2
comp=Z,63nm,1.5s
IDI Anoyia 53.18 37 ⇑P **P 23 23 01.2 -1.0**
IDI Anoyia 53.18 37 LR LR 23 47 39.2
comp=Z,2µm,19.4s,baz=226,slow=38
IDI Anoyia 53.18 37 P **P 23 23 02.6 +0.4**
RLS Riolos of Patr 53.18 32 P **P 23 23 02.2 +0.1**
FDF Fort de France 53.19 293 P **P 23 23 03.7 +1.1**
FDF Fort de France 53.19 293 P **P 23 23 03.7 +1.1**
FDF pmax pmax
comp=Z,156nm,1.3s
SCTE Santa Cesarea 53.20 29 P **P 23 23 03.2 +1.0**
SCTE IAmb IAmb 23 23 10.8
comp=Z,51nm,1.1s
MSSA Maissana 53.20 19 P **P 23 23 01.9 -0.3**
MSSA IAmb IAmb 23 23 11.8
comp=Z,70nm,1.4s
ANKE Ethiopia-Afar 53.26 74 ⇓*e*P **P 23 23 05.5 +1.9**
ANKE Ethiopia-Afar 53.26 74 *e*Pdif P 23 22 55.5 -8.0
MURB Monte Urbino 53.31 22 P **P 23 23 03.5 +0.5**
LPG La Plagne 53.45 16 *e*P **P 23 23 04.6 +0.3**
LPG pmax pmax
comp=Z,90nm,1.4s
LPL La Plagne 53.46 16 *e*P **P 23 23 04.6 +0.3**
LPL pmax pmax
comp=Z,69nm,1.3s
KLV Kalavryta, Ach 53.54 33 P **P 23 23 00.8 -4.0**
DESE Dese 53.56 72 *e*P P 23 22 55.5 -10
DESE Dese 53.56 72 *e*P **P 23 23 01.6 -4.1**
DESE Dese 53.56 72 *e*P P 23 22 58.3 -7.4
GUR Goura 53.57 33 P **P 23 23 05.0 -0.1**
LAKA Lakka 53.59 33 P **P 23 23 04.9 -0.2**
NPS Neapolis 53.60 38 P **P 23 23 02.9 -2.4**
KRND KRANIDI 53.62 34 P **P 23 23 05.1 -0.2**
EFP Efpalio 53.69 32 P **P 23 23 09.9 +4.1**
ZCCA Zocca 53.71 20 IAmb IAmb 23 23 21.1
comp=Z,94nm,1.4s
EPID Epidavros 53.76 34 P **P 23 23 05.7 -0.7**
SMF Signal de Mont 53.80 13 *e*P **P 23 23 06.0 -0.5**
SMF pmax pmax
comp=Z,77nm,1.5s
THAL Thalero 53.81 33 P **P 23 23 06.9 +0.2**
AVF Avril sur Loir 53.83 13 *e*P **P 23 23 06.3 -0.3**
AVF pmax pmax
comp=Z,56nm,1.4s
LTK Loutraki 53.97 34 P **P 23 23 03.7 -4.2**
EVR Evrytania 54.00 32 P **P 23 23 09.1 +0.9**
SSF Saint Saulge 54.12 13 *e*P **P 23 23 08.5 -0.3**
SSF pmax pmax
comp=Z,112nm,1.4s
ROSF Rostrenen 54.22 7 *e*P **P 23 23 12.5 +3.0**
ROSF pmax pmax
comp=Z,112nm,1.5s
SANT Santorini 54.25 37 ⇑P **P 23 23 09.8 -0.2**
SANT Santorini 54.25 37 P **P 23 23 09.8 -0.2**
GDHS Morne Mazeau, 54.25 295 P **P 23 23 11.1 +0.7**
VILL Villia 54.26 34 P **P 23 23 09.8 -0.3**
LSK Leskovik 54.30 30 P **P 23 23 10.6 +0.3**
CABF La Chapelle 54.30 15 *e*P **P 23 23 09.6 -0.7**
CABF pmax pmax
comp=Z,100nm,1.4s
ETMB Extrema 54.31 262 *e*P **P 23 23 11.4 +0.6**
MQOL MQOL 54.37 60 *i*P **P 23 23 11.8 +0.8**
MQOL MQOL 54.37 60 *i* P 23 23 18.4 +7.3
baz=215,slow=18
MQOL MQOL 54.37 60 AMP 23 23 19.3
comp=N,95nm,1.0s
SENIN Lac Senin/Sane 54.40 16 P **P 23 23 10.8 -0.3**
ATAL Atalanti 54.48 33 P **P 23 23 11.1 -0.5**
PTL Penteli 54.49 34 P **P 23 23 10.8 -0.9**
GRR Gorron 54.59 9 *e*P **P 23 23 11.8 -0.4**
GRR pmax pmax
comp=Z,165nm,1.4s
SALO Salr 54.68 19 P **P 23 23 13.7 +0.8**
SALO IAmb IAmb 23 23 19.4
comp=Z,84nm,1.4s
KARP Karpathos 54.74 39 P **P 23 23 13.7 +0.1**
KBN Korca 54.75 30 P **P 23 23 14.1 +0.5**
KBN Korca 54.75 30 P **P 23 23 14.8 +1.2**
KBN IAmb IAmb 23 23 25.3
comp=Z,62nm,1.2s
KBN Korca 54.75 30 P **P 23 23 14.8 +1.2**
KBN pmax pmax
comp=Z,62nm,1.2s
APE Apeiranthos 54.77 36 ⇑P **P 23 23 13.3 -0.4**
APE Apeiranthos 54.77 36 *d*P **P 23 23 13.7 -0.1**
APE pmax pmax
comp=Z,40nm,1.0s
CLF Chambon-Foret 54.78 11 P **P 23 23 14.0 +0.4**
TEOL Teolo 54.83 20 P **P 23 23 13.8 -0.2**
TIR Tirane 54.85 29 ⇑P **P 23 23 15.0 +0.8**
TIR Tirane 54.85 29 P **P 23 23 15.1 +0.8**
TIR IAmb IAmb 23 23 33.7
comp=Z,43nm,1.0s
TIR Tirane 54.85 29 P **P 23 23 15.1 +0.8**
TIR pmax pmax
comp=Z,43nm,1.0s
FLN La Foliniere 55.01 9 *e*P **P 23 23 17.0 +1.8**
FLN pmax pmax
comp=Z,96nm,1.8s
TEND Ethiopian Broa 55.03 71 *e*P **P 23 23 15.2 -0.9**
OHR Ohrid 55.12 29 *i*P **P 23 23 19.0 +2.7**
FNA Florina 55.16 30 P **P 23 23 15.7 -0.9**
FNA Florina 55.16 30 P **P 23 23 17.2 +0.6**
FNA Florina 55.16 30 P **P 23 23 17.2 +0.6**
FNA pmax pmax
comp=Z,112nm,1.5s
DRME Dracevica, Mon 55.19 28 ⇓*i*P **P 23 23 16.6 -0.1**
LIT Litokhoron 55.22 31 P **P 23 23 15.7 -1.3**
LIT Litokhoron 55.22 31 P **P 23 23 17.3 +0.3**
PDG Podgorica 55.41 27 ⇑P **P 23 23 19.2 +0.9**
PDG Podgorica 55.41 27 *e*P **P 23 23 18.8 +0.6**
BRY Bratogost 55.46 27 *e*P **P 23 23 19.3 +0.5**
DAVOX Davos/Dischmat 55.52 18 LR LR 23 47 34.9
comp=Z,2µm,20.6s,baz=250,slow=37
HAU Haudompre 55.67 14 *e*P **P 23 23 19.2 -0.8**
HAU pmax pmax
comp=Z,83nm,1.4s
PAIG Paliouri 55.72 32 *e*P **P 23 23 21.0 +0.5**
DAT Datca 55.77 38 P **P 23 23 19.7 -1.4**
ARG Arkhangelos 55.77 39 P **P 23 23 20.7 -0.3**
ARG Arkhangelos 55.77 39 P **P 23 23 21.5 +0.5**
ARG Arkhangelos 55.77 39 P **P 23 23 21.5 +0.5**
ARG pmax pmax
comp=Z,164nm,1.1s
GRG Griva 55.81 31 P **P 23 23 18.6 -2.6**
SRKY Kupres RS 55.81 25 *e*P **P 23 23 21.0 -0.2**
SKDS Skadanscina 55.82 21 ⇓*i*P **P 23 23 21.2 0.0**
TRI Trieste 55.87 21 P **P 23 23 21.6 +0.1**
TRI IAmb IAmb 23 23 29.1
comp=Z,81nm,1.3s
TRI Trieste 55.87 21 P **P 23 23 21.6 +0.1**
TRI pmax pmax
comp=Z,81nm,1.3s
STAL STALIGIAL 55.97 20 P **P 23 23 22.5 +0.3**
DAVA Damueis 55.97 17 *e*P **P 23 23 21.2 -1.2**
comp=Z,23nm,1.1s,SNR=7.5
FETA Feichten 55.99 18 *e*P **P 23 23 21.8 -0.8**
comp=Z,24nm,1.1s,SNR=12
SLE Schleitheim 56.01 16 P **P 23 23 21.7 -0.8**
MGRS Mrkonjic Grad 56.06 24 *e*P **P 23 23 22.2 -0.7**
ECH Echery 56.07 15 P **P 23 23 22.6 -0.3**
ECH IAmb IAmb 23 23 30.6
comp=Z,64nm,1.4s
ECH Echery 56.07 15 P **P 23 23 22.6 -0.3**
ECH pmax pmax
comp=Z,64nm,1.4s
SKO Skopje 56.09 29 *i*P **P 23 23 23.8 +0.6**
CEY Cerknica 56.13 22 ⇓*i*P **P 23 23 23.7 +0.3**
VAY Valandovo 56.16 31 *i*P **P 23 23 23.9 +0.2**
SOH Sokhos 56.20 31 P **P 23 23 23.4 -0.6**
KNT Kendrikon 56.21 31 P **P 23 23 21.8 -2.3**
SQTA Sankt Quirin 56.32 18 *e*P **P 23 23 24.2 -0.7**
comp=Z,31nm,1.0s,SNR=12
ABTA Abfaltersbach 56.33 20 *e*P **P 23 23 25.1 +0.2**
comp=Z,39nm,2.0s,SNR=6.0
BLY Banja Luka 56.38 24 ⇓*i*P **P 23 23 25.4 +0.3**
SJES Sjenica 56.39 27 ⇓*i*P **P 23 23 26.1 +0.7**
RUDO Rudo 56.40 27 *e*P **P 23 23 22.8 -2.6**
MOTA Moosalm 56.40 18 *e*P **P 23 23 24.5 -1.0**
comp=Z,27nm,1.2s,SNR=11
LPAZ La Paz 56.42 254 P **P 23 23 26.1 -0.6**
comp=Z,4.2nm,0.9s,baz=78,slow=4.9,SNR=14
LPAZ PcP **PcP 23 24 24.8 +1.0**
comp=Z,8.7nm,0.8s,baz=105,slow=2.9,SNR=9.2
LPAZ LR LR 23 46 25.8
comp=Z,2µm,20.2s,baz=80,slow=35
comp=Z,4.2nm,0.9s
LPAZ La Paz 56.42 254 P **P 23 23 25.3 -1.4**
LPAZ La Paz 56.42 254 P **P 23 23 25.3 -1.4**
LPAZ 23 24 24.8
LPAZ pmax pmax
comp=Z,18nm,1.2s
LPAZ La Paz 56.42 254 *e*P **P 23 23 26.6 -0.1**
RETA Reutte 56.42 18 *i*P **P 23 23 24.3 -1.2**
comp=Z,111nm,1.0s
LJU Ljubljana 56.43 22 ⇓*i*P **P 23 23 25.8 +0.3**
BFO Black Forest 56.48 16 P **P 23 23 25.7 -0.1**
BFO IAmb IAmb 23 23 33.5
comp=Z,66nm,1.3s
BFO Black Forest 56.48 16 P **P 23 23 25.7 -0.1**
BFO pmax pmax
comp=Z,65nm,1.3s
WTTA Wattenberg 56.50 19 *e*P **P 23 23 25.6 -0.6**
comp=Z,39nm,1.1s,SNR=15
KOKK Kokkinochori, 56.53 32 P **P 23 23 24.5 -1.8**
SRS Serrai 56.54 31 P **P 23 23 25.5 -0.9**
WATA Walderalm 56.54 19 *e*P **P 23 23 25.5 -0.9**
comp=Z,27nm,1.2s,SNR=13
CRES Cresnjev 56.59 22 ⇓*i*P **P 23 23 26.7 0.0**
BBLS Lazići 56.61 26 ⇓*i*P **P 23 23 27.4 +0.5**
MYKA Terra Mystica 56.61 21 *e*P **P 23 23 27.2 +0.3**
comp=Z,14nm,1.6s
PRK Paraskevi 56.67 35 P **P 23 23 28.4 +1.1**
ATD Arta Tunnel 56.70 72 LR LR 23 46 54.5
comp=Z,2µm,18.4s,baz=246,slow=35
ATD Arta Tunnel 56.70 72 P **P 23 23 28.4 +0.3**
ATD IAmb IAmb 23 23 37.4
comp=Z,55nm,1.2s
ATD Arta Tunnel 56.70 72 P **P 23 23 32.7 +4.6**
SNR=6.2
ATD Arta Tunnel 56.70 72 *e*P **P 23 23 25.6 -2.5**
AKAS Kas 56.71 40 P **P 23 23 28.3 +0.5**
EIL Elat 56.73 49 LR LR 23 46 42.0
comp=Z,2µm,21.7s,baz=235,slow=35
BIRV Birongo 56.81 286 P **P 23 23 27.2 -1.6**
BIRV IAmb IAmb 23 23 31.3
comp=Z,80nm,1.4s
KKB Krupnik 56.83 30 *i*P **P 23 23 30.2 +1.8**
OBKA Obir 56.83 21 *i*P **P 23 23 28.9 +0.4**
comp=Z,29nm,1.7s
NVR Nevrokopi 56.85 31 P **P 23 23 28.5 -0.1**
KBA Koelnbreinsper 56.90 20 *e*P **P 23 23 29.0 -0.1**
comp=Z,7.2nm,1.0s
KAVA Kavala 56.93 32 P **P 23 23 25.2 -4.0**
MMB Musomiste 56.95 31 *i*P **P 23 23 30.9 +1.5**
DIVS Divibare 57.05 27 P **P 23 23 31.0 +0.9**
DIVS IAmb IAmb 23 23 39.0
comp=Z,49nm,1.1s
DIVS Divibare 57.05 27 ⇓*i*P **P 23 23 30.6 +0.5**
EZN Ezine 57.10 34 P **P 23 23 31.2 +0.8**
BAIF Baives 57.11 12 *e*P **P 23 23 29.2 -1.0**
BAIF pmax pmax
comp=Z,77nm,1.3s
STU Stuttgart 57.12 16 P **P 23 23 30.1 -0.2**
STU Stuttgart 57.12 16 P **P 23 23 30.1 -0.2**
STU pmax pmax
comp=Z,24nm,1.1s
SOKA Soboth 57.15 21 *e*P **P 23 23 31.1 +0.4**
comp=Z,19nm,1.0s,SNR=7.0
WLF Walferdange 57.16 14 IAmb IAmb 23 23 38.7
comp=Z,72nm,1.4s
WLF Walferdange 57.16 14 *d*P **P 23 23 29.9 -0.7**
comp=Z,15nm,1.5s
TEKS Tekeris 57.21 26 *e*P **P 23 23 31.1 0.0**
ELL Elmali 57.22 39 P **P 23 23 31.9 +0.4**
ELL Elmali 57.22 39 P **P 23 23 31.9 +0.4**
ELL pmax pmax
comp=Z,298nm,1.4s
DOU Dourbes 57.22 12 *d*P **P 23 23 30.6 -0.4**
comp=Z,23nm,1.5s
GIVF Givet 57.28 12 *e*P **P 23 23 30.3 -1.1**
GIVF pmax pmax
comp=Z,77nm,1.3s
RCHB Rochefort 57.42 13 *d*P **P 23 23 32.1 -0.3**
comp=Z,8.9nm,1.4s
BMRD Maredsous 57.46 12 *d*P **P 23 23 32.8 +0.1**
comp=Z,10nm,1.3s
VTS Vitosha 57.46 30 *i*P **P 23 23 34.1 +1.1**
BOVS Bovan 57.48 28 ⇓P **P 23 23 33.1 +0.1**
BIOA Bad Ischl, Aus 57.53 20 *e*P **P 23 23 32.0 -1.3**
comp=Z,12nm,1.4s
RZN Rozhen 57.53 32 *i*P **P 23 23 34.5 +0.8**
RDO Rodhopi 57.59 33 P **P 23 23 33.0 -0.8**
RDO Rodhopi 57.59 33 IAmb IAmb 23 23 42.3
comp=Z,63nm,1.2s
BEHE Becsehely 57.63 23 ⇓*i*P **P 23 23 34.9 +0.9**
BEHE Becsehely 57.63 23 P **P 23 23 35.5 +1.5**
ALN Alexandroupoli 57.69 33 P **P 23 23 32.9 -1.6**
ALN Alexandroupoli 57.69 33 P **P 23 23 35.1 +0.7**
ALN IAmb IAmb 23 23 43.1
comp=Z,80nm,1.3s
ALN Alexandroupoli 57.69 33 P **P 23 23 35.2 +0.7**
ALN pmax pmax
comp=Z,80nm,1.3s
GO01 Chusmiza 57.72 250 P **P 23 23 34.8 -0.9**
PB08 IPOC Station P 57.73 250 P **P 23 23 34.5 -1.2**
BHOU Houvegnez 57.78 13 *bP* **P 23 23 35.5 +0.5**
comp=Z,14nm,1.2s
PB18 Visviri 57.80 253 P **P 23 23 36.1 -0.3**
PB18 IAmb IAmb 23 23 42.5
comp=Z,57nm,1.5s
LVC Limon Verde 57.80 247 LR LR 23 46 53.3
comp=Z,1µm,21.8s,baz=96,slow=34
LVC Limon Verde 57.80 247 P **P 23 23 35.1 -1.1**
LVC Limon Verde 57.80 247 P **P 23 23 35.1 -1.1**
LVC pmax pmax
comp=Z,11nm,1.2s
LVC Limon Verde 57.80 247 *e*P **P 23 23 36.7 +0.6**
FRGS Fruska Gora 57.81 26 ⇓P **P 23 23 36.1 +0.8**
FRGS Fruska Gora 57.81 26 ⇓*i*P **P 23 23 35.8 +0.5**
STVI Saint Thomas 57.81 296 P **P 23 23 36.5 +0.7**
PLD Plovdiv 57.83 31 *i*P **P 23 23 36.8 +1.3**
KOVH Kovagotottos 57.84 24 P **P 23 23 35.8 +0.3**
KDZ Kurdzhali 57.88 32 *i*P **P 23 23 36.7 +0.8**
MOA Mollin 57.88 20 *e*P **P 23 23 34.7 -1.1**
comp=Z,14nm,1.1s,SNR=8.5
PB16 IPOC Station P 57.89 252 P **P 23 23 36.5 -0.5**
BSTI Sart Tilman 57.89 13 *d*P **P 23 23 35.9 +0.2**
comp=Z,3.2nm,1.4s
PB09 IPOC Station P 58.00 248 IAmb IAmb 23 23 56.9
comp=Z,88nm,1.5s
GHAJ Ghor Haditha 58.01 48 P **P 23 23 38.2 +1.3**
MEM Membach 58.02 13 *d*P **P 23 23 37.2 +0.6**
comp=Z,15nm,1.3s
BTNL Ternell 58.02 13 *d*P **P 23 23 36.9 +0.2**
comp=Z,30nm,1.5s
BCK Bucak 58.09 39 P **P 23 23 38.7 +1.2**
CUPR Culebra, Puert 58.09 295 P **P 23 23 37.9 +0.1**
CUPR IAmb IAmb 23 23 40.4
comp=Z,33nm,0.9s
PB01 IPOC Station P 58.14 249 P **P 23 23 37.5 -0.8**
PB11 IPOC Station P 58.16 250 P **P 23 23 37.2 -1.3**
PB11 IAmb IAmb 23 23 50.6
comp=Z,34nm,1.0s
MORH Mrgy, Hungar 58.16 24 ⇓P **P 23 23 38.2 +0.5**
MORH Mrgy, Hungar 58.16 24 ⇓*i*P **P 23 23 38.0 +0.3**
MORH Mrgy, Hungar 58.16 24 P **P 23 23 38.1 +0.3**
BAUV El Baul 58.17 284 P **P 23 23 38.2 -0.2**
EDC Edincik 58.32 35 P **P 23 23 39.6 +0.6**
MDVR Moldovita 58.36 27 ⇓P **P 23 23 40.0 +0.7**
CSS Mathiatis 58.40 43 P **P 23 23 39.9 +0.2**
CSS IAmb IAmb 23 23 52.3
comp=Z,37nm,1.0s
PB15 IPOC Station P 58.40 246 IAmb IAmb 23 23 43.1
comp=Z,36nm,1.0s
TIH Tihany 58.42 23 P **P 23 23 40.6 +1.1**
PB06 IPOC Station P 58.42 247 P **P 23 23 39.8 -0.4**
PB06 IAmb IAmb 23 23 45.2
comp=Z,38nm,1.0s
RONA Rosalia, Austr 58.48 22 *e*P **P 23 23 40.5 +0.6**
comp=Z,40nm,1.2s,SNR=14
MPLH Magyarpolny 58.51 23 P **P 23 23 41.4 +1.2**
CONA Conrad Observa 58.51 21 *e*P **P 23 23 40.4 +0.1**
comp=Z,22nm,1.2s,SNR=14
GRFO Grafenberg 58.53 17 P **P 23 23 40.1 -0.1**
GRFO IAmb IAmb 23 23 52.3
comp=Z,36nm,1.3s
GRFO Grafenberg 58.53 17 P **P 23 23 40.1 -0.1**
GRFO pmax pmax
comp=Z,36nm,1.3s
GRA1 Grafenberg Arr 58.53 17 P **P 23 23 39.5 -0.7**
GRA1 IAmb IAmb 23 23 52.3
comp=Z,42nm,1.4s
GRF Grafenberg Arr 58.53 17 P **P 23 23 39.5 -0.7**
GRF pmax pmax
comp=Z,42nm,1.4s
PUNG Punghina 58.55 28 ⇓P **P 23 23 41.3 +0.9**
GERES GERESS Array B 58.55 19 P **P 23 23 40.1 -0.5**
comp=Z,12nm,1.0s,baz=198,slow=7.0,SNR=64
GERES PP **PP 23 25 48.4 -1.9**
comp=Z,3.4nm,1.0s,baz=210,slow=9.1,SNR=3.6
GERES LR LR 23 49 26.6
comp=Z,1µm,20.0s,baz=212,slow=37
comp=Z,12nm,1.0s
HUMP Col San Antoni 58.55 295 P **P 23 23 41.4 +0.4**
PB02 IPOC Station P 58.55 249 P **P 23 23 41.0 -0.1**
SOP Sopron 58.56 22 P **P 23 23 41.1 +0.7**
VOI Vohitsoka 58.56 112 P **P 23 23 40.3 -0.9**
VOI IAmb IAmb 23 23 43.5
comp=Z,78nm,1.5s
VOI Vohitsoka 58.56 112 P **P 23 23 43.2 +2.0**
BANR Banloc 58.57 26 ⇑P **P 23 23 41.5 +1.0**
PB07 IPOC Station P 58.59 248 IAmb IAmb 23 23 44.3
comp=Z,38nm,0.9s
CBYP Canovanas 58.60 295 P **P 23 23 41.4 0.0**
CBYP IAmb IAmb 23 23 54.9
comp=Z,64nm,1.4s
EGYH Egyhazaskeszo 58.63 23 P **P 23 23 41.8 +0.9**
DJES Djerdap 58.65 28 ⇓P **P 23 23 41.1 0.0**
TA02 Huaiquique 58.66 250 P **P 23 23 41.2 -0.5**
TA02 IAmb IAmb 23 23 49.4
comp=Z,54nm,1.1s
AC02 Maricunga 58.66 242 P **P 23 23 42.8 +0.5**
AC02 IAmb IAmb 23 23 46.2
comp=Z,47nm,1.2s
ABPO Ambohimpanom 58.66 109 P **P 23 23 42.5 +0.5**
ABPO Ambohimpanom 58.66 109 P **P 23 23 42.5 +0.5**
ABPO pmax pmax
comp=Z,29nm,1.3s
PDPR Patillas Dam, 58.67 295 P **P 23 23 41.9 +0.1**
PDPR IAmb IAmb 23 23 49.7
comp=Z,56nm,1.1s
EDRB Edirne 58.72 33 P **P 23 23 40.5 -1.2**
CKRC Cesky Krumlov 58.73 20 *e*P **P 23 23 41.1 -0.6**
CKRC *ex* x 23 23 47.3
CKRC *e*PP **PP 23 25 46.4 -5.3**
CKRC *e*S **S 23 31 43.6 -3.3**
TA01 Diego Aracena 58.73 249 P **P 23 23 41.1 -1.1**
TA01 IAmb IAmb 23 23 50.0
comp=Z,35nm,1.2s
PATCX Punta Patache 58.73 249 P **P 23 23 41.9 -0.4**
KHC Kasperske Hory 58.76 19 *i*P **P 23 23 41.4 -0.5**
KHC pmax pmax
comp=Z,80nm,1.8s
KHC Kasperske Hory 58.76 19 *e*P **P 23 23 40.8 -1.1**
KHC *e*pP **pwP 23 23 47.1 +0.1**
KHC *e*PP **PP 23 25 50.7 -1.3**
KHC *e*S **S 23 31 48.7 +1.4**
KHC AMS AMS 23 48 50.0
comp=Z,2µm,21.1s
HERR Herculane 58.76 28 ⇓P **P 23 23 42.5 +0.6**
MMAI Mount Meron Ar 58.78 46 LR LR 23 50 31.3
comp=Z,1µm,18.8s,baz=70,slow=38
GO02 Mina Guanaco 58.79 244 P **P 23 23 43.3 +0.3**
SJG San Juan 58.81 295 LR LR 23 43 11.5
comp=Z,2µm,21.4s,baz=102,slow=30
SJG San Juan 58.81 295 P **P 23 23 43.0 +0.2**
SJG IAmb IAmb 23 23 50.7
comp=Z,52nm,1.3s
SJG San Juan 58.81 295 P **P 23 23 43.0 +0.2**
SJG pmax pmax
comp=Z,52nm,1.3s
SJG San Juan 58.81 295 *e*P **P 23 23 41.8 -1.0**
GCPR Guaynabo City 58.81 295 P **P 23 23 42.9 +0.1**
PB04 IPOC Station P 58.91 247 P **P 23 23 42.1 -1.5**
PB04 IAmb IAmb 23 23 46.5
comp=Z,52nm,1.1s
CSKK Cskako 58.94 23 P **P 23 23 43.9 +0.8**
BZS Buzias 58.96 27 ⇓P **P 23 23 44.0 +0.7**
SRE Strehaia 58.96 28 ⇓P **P 23 23 44.0 +0.6**
SRE Strehaia 58.96 28 P **P 23 23 44.0 +0.6**
VLAD Vladila 59.05 30 ⇑P **P 23 23 44.3 +0.4**
ICMP Isla Caja de M 59.08 295 P **P 23 23 44.3 -0.3**
FOMA Nahampoana Res 59.15 116 P **P 23 23 45.3 +0.2**
ELOV Elorza 59.19 282 *e*P **P 23 23 45.7 +0.2**
CELP Cerrillos 59.19 295 IAmb IAmb 23 23 47.5
comp=Z,48nm,1.0s
ZST Bratislava 59.19 22 *e*P **P 23 23 45.5 +0.7**
ZST pmax pmax
comp=Z,284nm,1.8s
ZST Bratislava 59.19 22 *e*P **P 23 23 45.5 +0.7**
ZST *e*PP **PP 23 26 00.4 +4.6**
OBIP Obispado Ponce 59.20 295 P **P 23 23 45.4 -0.1**
EMPR Esperanza - Ma 59.27 295 P **P 23 23 45.9 0.0**
SRO2 Moca 59.32 23 *e*P **P 23 23 45.5 -0.3**
SRO2 *e* 23 23 52.0
SRO2 pmax pmax
comp=Z,21nm,1.0s
SRO2 Moca 59.32 23 *e*P **P 23 23 45.5 -0.3**
SRO2 *e* 23 23 52.0
SRO Srobarova 59.33 23 *e*P **P 23 23 46.6 +0.7**
SRO pmax pmax
comp=Z,50nm,1.3s
SRO Srobarova 59.33 23 *e*P **P 23 23 46.5 +0.7**
BUD Budapest 59.34 24 P **P 23 23 45.9 0.0**
NKC Novy Kostel 59.37 18 *e*P **P 23 23 45.5 -0.6**
NKC *e* 23 25 53.3
NKC *e*S **S 23 31 56.2 +1.0**
NKC MLR MLR
comp=Z,2µm,19.6s
NKC Novy Kostel 59.37 18 *e*P **P 23 23 45.5 -0.6**
NKC *e*pP **pwP 23 23 51.0 -0.2**

NKC ePP PP 23 25 53.3 -4.1
NKC eS S 23 31 56.2 +1.0
NKC AMS AMS 23 50 00.0
comp=Z,2µm,19.6s
MODS Modra-Piesok 59.40 22 eP P 23 23 46.7 +0.3
MODS e 23 23 53.0
MODS e 23 26 01.2
MODS Modra-Piesok 59.40 22 eP P 23 23 46.7 +0.3
MODS e 23 23 53.0
MODS ePP PP 23 26 01.2 +3.5
BHL Bhannes 59.42 45 eP P 23 23 47.4 +0.5
ASF Jabal al Asfar 59.43 47 LR LR 23 50 52.2
comp=Z,2µm,18.1s,baz=260,slow=38
AOPR Arecibo Observ 59.43 295 P P 23 23 46.9 -0.2
PB14 IPOC Station P 59.44 245 P P 23 23 46.8 -0.7
BORA Eskisehir 59.52 37 P P 23 23 47.9 +0.5
BORA IAmb IAmb 23 23 55.4
comp=Z,61nm,1.3s
TREC Trest 59.54 20 eP P 23 23 46.4 -0.9
TREC e 23 23 53.0
TREC eS S 23 32 03.4 +6.0
TREC MLR MLR
comp=Z,1µm,16.5s
TREC Trest 59.54 20 eP P 23 23 46.4 -0.9
TREC epP pwP 23 23 53.0 +0.6
TREC eS S 23 32 03.4 +6.0
TREC AMS AMS 23 48 00.0
comp=Z,1µm,16.5s
COPA Copaceanca 59.55 30 ⇑P P 23 23 47.9 +0.5
SMOL Smolenice 59.58 22 eP P 23 23 48.4 +0.9
SMOL e 23 23 54.3
SMOL pmax pmax
comp=Z,54nm,2.2s
SMOL Smolenice 59.58 22 eP P 23 23 48.4 +0.9
SMOL e 23 23 54.3
MLPR Magueyes Islan 59.58 295 P P 23 23 47.7 -0.3
CRPR Cabo Rojo, PR 59.65 295 P P 23 23 47.8 -0.8
CRPR IAmb IAmb 23 24 03.6
comp=Z,33nm,0.9s
KRUC Moravsky 59.66 21 eP P 23 23 47.2 -0.9
KRUC e 23 23 53.9
KRUC ePP PP 23 26 01.1 +1.2
BSZH Besenyszg 59.70 25 ⇑P P 23 23 49.1 +0.7
BSZH Besenyszg 59.70 25 P P 23 23 49.1 +0.7
HUMR Humele 59.72 30 ⇑P P 23 23 48.8 +0.2
PRSN Puerto Rico Se 59.74 295 P P 23 23 49.9 +0.6
DEV Deva 59.74 27 ⇓P P 23 23 49.2 +0.4
DEV Deva 59.74 27 P P 23 23 49.1 +0.4
GO03 Copiap 59.77 241 P P 23 23 48.9 -0.5
RAZG Razgrad 59.80 31 ⇑P P 23 23 48.6 -0.5
PRU Pruhonice 59.82 19 eP P 23 23 48.2 -0.9
PRU e 23 23 55.0
PRU e 23 26 10.2
PRU eS S 23 32 01.5 +0.6
PRU MLR MLR
comp=Z,1µm,17.8s
PRU Pruhonice 59.82 19 eP P 23 23 48.2 -0.9
PRU epP pwP 23 23 55.0 +0.7
PRU ePP PP 23 26 10.2 +8.9
PRU eS S 23 32 01.5 +0.6
PRU AMS AMS 23 48 20.0
comp=Z,1µm,17.8s
LOT Lotru 59.82 28 ⇑P P 23 23 49.8 +0.4
HWQ Hawqa 59.83 45 eP P 23 23 50.1 +0.4
AC01 Pan de Azucar 59.85 243 P P 23 23 48.4 -1.5
AC01 IAmb IAmb 23 23 52.9
comp=Z,59nm,1.5s
VRAC Vranov 59.94 21 ⇓P P 23 23 49.5 -0.6
VRAC Vranov 59.94 21 LR LR 23 51 51.6
comp=Z,1µm,18.2s,baz=204,slow=38
VRAC Vranov 59.94 21 eP P 23 23 49.4 -0.6
VRAC e 23 23 55.7
VRAC ePP PP 23 26 00.1 -2.3
JAVC Velka Javorina 59.95 22 eP P 23 23 50.9 +0.7
KOLL Kolacno 59.99 22 eP P 23 23 51.0 +0.6
KOLL e 23 23 57.1
PSZ Piszkesteto 60.04 24 ⇑P P 23 23 50.9 +0.1
PSZ Piszkesteto 60.04 24 P P 23 23 50.8 -0.1
PSZ Piszkesteto 60.04 24 P P 23 23 50.8 -0.1
PSZ pmax pmax
comp=Z,75nm,1.1s
PSZ Piszkesteto 60.04 24 P P 23 23 50.3 -0.6
CO01 Juntas del Tor 60.09 239 P P 23 23 50.9 -0.9
CO01 IAmb IAmb 23 23 56.1
comp=Z,33nm,1.2s
VYHS Vyhne 60.09 23 eP P 23 23 51.5 +0.4
VYHS e 23 23 57.8
VYHS pmax pmax
comp=Z,27nm,1.3s
VYHS Vyhne 60.09 23 eP P 23 23 51.5 +0.4
VYHS e 23 23 57.8
ARR Arges 60.17 29 ⇑P P 23 23 52.0 +0.2
BORR Bors 60.18 26 ⇑P P 23 23 52.6 +0.9
PVCC Panska Ves 60.29 19 eP P 23 23 51.6 -0.8
PVCC e 23 23 58.5
PVCC MLR MLR
comp=Z,900nm,16.8s
PVCC Panska Ves 60.29 19 eP P 23 23 51.6 -0.8
PVCC epP pwP 23 23 58.5 +1.0
PVCC AMS AMS 23 48 30.0
comp=Z,900nm,16.8s
MDUB Mudurnu 60.34 37 P P 23 23 53.5 +0.4
DRGR 60.35 26 ⇑P P 23 23 53.2 +0.2
BRG Berggiesshubel 60.39 18 eP P 23 23 53.0 -0.2
BRG Amp 23 23 54.9
comp=Z,17nm,1.4s
BRG ex x 23 23 59.7
BRG Amp 23 24 02.1
comp=Z,35nm,1.5s
BRG ePP PP 23 26 10.2 +3.8
BRG Amp 23 26 17.6
comp=Z,122nm,2.0s
BRG Berggiesshubel 60.39 18 SS SS 23 35 58.0 -8.3
BRG Amp 23 49 41.0
comp=N,1.0nm,20.8s
BRG Amp 23 49 46.0
comp=Z,1.3nm,19.3s
BRG Amp 23 49 48.0
comp=E,0.4nm,12.8s
BRG Berggiesshubel 60.39 18 eP P 23 23 52.9 -0.2
BRG e 23 23 59.7
BRG e 23 26 10.1
BRG SS SS 23 35 58.0 -8.3
BRG pmax pmax
comp=Z,17nm,1.4s
BRG pmax pmax
comp=Z,35nm,1.5s
BRG MLR MLR
comp=Z,1µm,19.3s
BRG MLR MLR
comp=E,430nm,12.8s
ORCD Orcadas 60.41 198 P P 23 23 52.7 -0.3
VOIR 60.42 29 ⇓P P 23 23 53.2 -0.2
LCO Las Campanas 60.42 240 P P 23 23 51.5 -2.7
LCO Las Campanas 60.42 240 P P 23 23 51.5 -2.7
LCO pmax pmax
comp=Z,29nm,1.3s
MAUC Maruska 60.43 22 eP P 23 23 53.4 0.0
MAUC epP pwP 23 24 00.7 +2.2
MAUC eS S 23 32 22.8 +14
MAUC AMS AMS 23 50 10.0
comp=Z,2µm,19.6s
LTVH Ltavrtes, Hu 60.46 25 ⇓P P 23 23 54.5 +1.0
LTVH Ltavrtes, Hu 60.46 25 P P 23 23 54.9 +1.3
SULR 60.46 30 ⇑P P 23 23 53.6 -0.1
CLL Collm 60.49 17 *i* P P 23 23 52.8 -0.9
CLL eSS SS 23 32 12.0 +2.6
CLL pmax pmax
comp=Z,53nm,1.7s
CLL MLR MLR
comp=Z,1µm,23.6s
CLL Collm 60.49 17 *i* P P 23 23 52.8 -0.9
comp=Z,53nm,1.7s
CLL ePIp 23 24 06.0
CLL ePP PP 23 26 04.0 -3.2
CLL eS S 23 32 12.0 +2.6
CLL ePS PnS 23 32 18.0 -4.1
CLL eSS SS 23 36 01.0 -6.7
CLL eSSS SSS 23 38 54.0
LEHL Lehliu 60.60 31 ⇓P P 23 23 54.6 0.0
AC04 Llanos de Chal 60.60 241 P P 23 23 53.8 -1.2
AC04 IAmb IAmb 23 24 06.2
comp=Z,39nm,1.4s

SECR 60.62 30 ⇑P P 23 23 54.0 -0.8
KRLC Kraliky 60.65 21 eP P 23 23 54.8 -0.1
KRLC e 23 24 00.7
KRLC eS S 23 32 10.2 -1.5
KRLC MLR MLR
comp=Z,1µm,21.1s
KRLC Kraliky 60.65 21 eP P 23 23 54.8 -0.1
KRLC epP pwP 23 24 00.7 +0.7
KRLC ePP PP 23 26 01.4 -7.3
KRLC eS S 23 32 10.2 -1.5
KRLC AMS AMS 23 48 30.0
comp=Z,1µm,21.1s
SDV Santo Domingo 60.66 283 LR LR 23 48 14.1
comp=Z,1µm,20.2s,baz=122,slow=34
SDV Santo Domingo 60.66 283 P P 23 23 55.4 -0.5
SDV Santo Domingo 60.66 283 eP P 23 23 56.3 +0.3
SDV Santo Domingo 60.66 283 eP P 23 23 56.2 +0.3
MORC Moravsky Berou 60.67 21 ⇓P P 23 23 54.8 -0.2
MORC Moravsky Berou 60.67 21 AmbIAmb 23 24 02.4
comp=Z,46nm,1.2s
MORC Moravsky Berou 60.67 21 P P 23 23 54.8 -0.2
MORC Moravsky Berou 60.67 21 eP P 23 23 54.9 -0.2
CJR Cluj-Napoca 60.69 27 ⇓P P 23 23 55.7 +0.4
CJR Cluj-Napoca 60.69 27 P P 23 23 55.8 +0.4
DPC Dobruska-Polom 60.72 20 eP P 23 23 54.8 -0.6
DPC e 23 24 01.0
DPC e 23 26 15.9
DPC eS S 23 32 06.9 -5.7
DPC MLR MLR
comp=Z,1µm,19.1s
DPC Dobruska-Polom 60.72 20 eP P 23 23 54.8 -0.6
DPC epP pwP 23 24 01.0 +0.5
DPC ePP PP 23 26 15.9 +6.6
DPC eS S 23 32 06.9 -5.7
DPC AMS AMS 23 49 50.0
comp=Z,1µm,19.1s
GO04 Tololo Observa 60.73 239 P P 23 23 55.6 -0.5
GO04 IAmb IAmb 23 24 08.9
comp=Z,51nm,1.2s
UPC Upice 60.75 20 eP P 23 23 55.0 -0.5
UPC eS S 23 32 17.6 +4.7
UPC MLR MLR
comp=Z,1µm,19.7s
UPC Upice 60.75 20 eP P 23 23 55.0 -0.5
UPC epP pwP 23 24 01.2 +0.5
UPC eS S 23 32 17.6 +4.7
UPC AMS AMS 23 49 40.0
comp=Z,1µm,19.7s
SOCV Socops 60.76 283 eP P 23 23 54.3 -2.0
CZSB Cruzeiro do Su 60.77 264 eP P 23 23 56.1 -0.3
CO03 El Pedregal 60.77 238 P P 23 23 55.5 -0.8
CO03 IAmb IAmb 23 23 59.3
comp=Z,52nm,1.3s
CHVC Chvalec 60.83 20 eP P 23 23 55.5 -0.6
CHVC ex x 23 24 01.7
CHVC AMS AMS 23 49 40.0
comp=Z,1µm,23.4s
ICOR Ion Corvin 60.85 32 ⇑P P 23 23 55.8 -0.5
OSTC Ostas 60.86 20 eP P 23 23 55.8 -0.5
OSTC epP pwP 23 24 02.5 +1.1
OSTC eS S 23 32 24.7 +10
OSTC AMS AMS 23 49 50.0
comp=Z,1µm,20.2s
LANS Liptovska Anna 60.87 23 eP P 23 23 57.5 +1.1
LANS e 23 24 03.8
LANS pmax pmax
comp=Z,16nm,1.2s
LANS Liptovska Anna 60.87 23 eP P 23 23 57.5 +1.1
LANS e 23 24 03.8
MLR Muntele Rosu 60.89 29 ⇓P P 23 23 56.5 -0.3
MLR Muntele Rosu 60.89 29 LR LR 23 50 56.0
comp=Z,2µm,21.4s,baz=216,slow=37
MLR Muntele Rosu 60.89 29 P P 23 23 56.4 -0.3
BR231 Keskin MP Arra 60.90 38 P P 23 23 57.0 +0.1
ISR Istrita 60.92 30 ⇑P P 23 23 56.7 -0.2
ISR Istrita 60.92 30 P P 23 23 56.6 -0.2
ANTO Ankara 60.92 38 P P 23 23 57.9 +0.8
ANTO Ankara 60.92 38 P P 23 23 57.9 +0.8
ANTO pmax pmax
comp=Z,133nm,1.4s
OKC Ostrava-Krasne 60.94 22 eP P 23 23 56.6 -0.2
OKC e 23 24 01.9
OKC eS S 23 32 20.8 +5.6
OKC MLR MLR
comp=Z,1µm,19.0s
OKC Ostrava-Krasne 60.94 22 eP P 23 23 56.6 -0.2
OKC epP pwP 23 24 01.9 0.0
OKC eS S 23 32 20.8 +5.6
OKC AMS AMS 23 50 30.0
comp=Z,1µm,19.0s
AMRR Amara 60.96 31 ⇑P P 23 23 56.4 -0.6
DOPR Dopca 60.97 29 ⇑P P 23 23 56.9 -0.3
KDZE Karadeniz Ereo 61.01 36 ⇓P P 23 23 56.5 -1.0
LMEL Las Melosas 61.02 234 P P 23 23 57.4 -0.6
LMEL IAmb IAmb 23 24 24.5
comp=Z,43nm,1.2s
VA03 San Esteban 61.06 236 P P 23 23 57.2 -1.0
VA03 IAmb IAmb 23 24 07.8
comp=Z,54nm,1.4s
CO02 Combarbal 61.10 237 P P 23 23 58.8 +0.2
ESK Eskdalemuir 61.11 5 P P 23 23 59.5 +1.6
ESK Eskdalemuir 61.11 5 P P 23 23 59.5 +1.6
ESK pmax pmax
comp=Z,134nm,1.5s
KSP Ksiaz 61.13 20 eP P 23 23 57.5 -0.6
MT03 Universidad Ad 61.19 235 P P 23 23 59.3 +0.2
OZUR 61.25 29 ⇓P P 23 23 59.2 +0.2
PEL Peldehue 61.25 235 P P 23 23 59.3 -0.2
PEL IAmb IAmb 23 24 02.0
comp=Z,49nm,1.3s
PEL Peldehue 61.25 235 P P 23 23 59.3 -0.2
PEL pmax pmax
comp=Z,49nm,1.3s
EFOR EFORIE 61.26 32 ⇑P P 23 23 59.0 -0.2
COVR Voineasa-Covas 61.27 29 ⇓P P 23 23 58.4 -0.9
ARCR ARCALIA 61.31 27 ⇓P P 23 23 59.5 0.0
HARR Harsova 61.32 31 ⇑P P 23 23 58.8 -0.7
HARR Harsova 61.32 31 P P 23 23 58.8 -0.7
MT05 Renca 61.35 235 P P 23 23 59.7 -0.4
BR131 Keskin Array S 61.36 39 *d* iP P 23 24 00.7 +0.6
BR131 Keskin Array S 61.36 39 P P 23 24 00.9 +0.9
SNR=51
BRTR Keskin Array B 61.36 39 P P 23 24 00.9 +0.9
comp=Z,16nm,0.9s,baz=209,slow=7.1,SNR=81
BRTR LR LR 23 53 01.7
comp=Z,331nm,20.6s,baz=218,slow=38
comp=Z,16nm,0.9s
BRTR Keskin Array B 61.36 39 *i* P P 23 24 01.0 +0.9
BRTR pmax pmax
comp=Z,15nm,0.9s
BMR Baia Mare 61.37 26 ⇑P P 23 24 00.0 +0.2
BMR Baia Mare 61.37 26 P P 23 24 00.0 +0.2
PLOR La Punta 61.38 234 P P 23 24 00.1 -0.2
BO04 IAmb IAmb 23 24 03.9
comp=Z,43nm,1.1s
NIE Niedzica 61.41 23 eP P 23 24 00.6 +0.5
TIRR Tirgusor 61.41 32 ⇓P P 23 23 59.5 -0.6
TIRR Tirgusor 61.41 32 ⇓P P 23 23 59.5 -0.6
CRVS Cervenica-Dubn 61.46 24 eP P 23 24 01.0 +0.6
CRVS pmax pmax
comp=Z,212nm,1.3s
CRVS Cervenica-Dubn 61.46 24 eP P 23 24 01.0 +0.6
CRVS ePP PP 23 26 18.8 +2.9
ROC1 El Roble 61.49 236 P P 23 24 00.9 -0.4
PLOR Plostina 61.49 29 ⇓P P 23 23 59.8 -1.0
PLOR Plostina 61.49 29 P P 23 23 59.7 -1.0
CO06 Fray Jorge 61.53 238 P P 23 24 00.8 -0.5
VRI Vrincioaia 61.54 29 ⇓P P 23 24 00.1 -0.9
VRI Vrincioaia 61.54 29 P P 23 24 00.1 -0.9
UZH Uzhgorod 61.59 25 ⇑ *i* P P 23 24 01.0 -0.3
UZH *i* 23 24 06.5
UZH e 23 24 41.4
UZH e 23 26 19.4
UZH *i* 23 27 42.6
UZH *i* S S 23 32 21.0 -2.6
UZH e 23 32 35.9
UZH *i* 23 39 04.9
UZH MLR MLR
comp=N,200nm,16.0s
UZH MLR MLR
comp=E,200nm,16.0s
UZH MLR MLR
comp=Z,100nm,16.0s

MT09 Talagante 61.64 235 P P 23 24 01.7 -0.5
MT09 IAmb IAmb 23 24 04.8
comp=Z,56nm,1.2s
MT02 Curacav 61.65 235 P P 23 24 01.5 -0.6
MT02 IAmb IAmb 23 24 20.4
comp=Z,30nm,1.1s
TPGR Topolog 61.68 31 ⇓P P 23 24 01.2 -0.8
CFR Carcaliu 61.76 31 ⇓P P 23 24 01.8 -0.6
CFR Carcaliu 61.76 31 P P 23 24 01.8 -0.6
KOLS Kolonicke sedl 61.82 25 eP P 23 24 03.5 +0.7
KOLS e 23 24 09.6
KOLS pmax pmax
comp=Z,43nm,1.3s
KOLS Kolonicke sedl 61.82 25 eP P 23 24 03.5 +0.7
KOLS e 23 24 09.6
IZVR Izvoarele 61.83 30 ⇑P P 23 24 02.1 -0.8
SCHL Schela 61.83 30 ⇑P P 23 24 02.5 -0.4
BO01 Tunca 61.86 234 P P 23 24 02.9 -0.6
BO01 IAmb IAmb 23 24 06.2
comp=Z,47nm,1.2s
OJC Ojcow 61.86 22 eP P 23 24 02.8 -0.3
DR12 Loma Pena Alta 61.94 295 P P 23 24 03.8 -0.4
TESR Tescani 61.96 29 ⇓P P 23 24 03.2 -0.6
BIZ Bicaz 62.01 28 ⇓P P 23 24 04.3 +0.1
GHRR 62.01 30 ⇓P P 23 24 03.0 -1.2
VA01 Torpederas 62.02 236 P P 23 24 02.5 -2.0
SCTR Scanteiesti 62.03 30 ⇓P P 23 24 03.7 -0.7
BURAR Bucovina Array 62.10 27 ⇓P P 23 24 04.9 +0.1
BURAR Bucovina Array 62.10 27 P P 23 24 04.9 +0.1
BUR08 Bucovina Ar. S 62.11 27 IAmb IAmb 23 24 12.6
comp=Z,27nm,1.3s
VLDR Vladesti 62.20 30 ⇓P P 23 24 04.2 -1.2
ILGA Ilgaz 62.20 37 P P 23 24 06.2 +0.4
PAMC Pamplona, Colo 62.38 281 eP P 23 24 05.9 -2.0
ML02 Panimavida 62.45 233 P P 23 24 07.0 -0.4
RUSC La Rusia 62.51 280 eP P 23 24 09.7 +1.0
URIC Uribia, Colomb 62.56 286 P P 23 24 08.2 -0.2
VASR Vaslui 62.61 29 ⇓P P 23 24 07.1 -1.1
GO05 Huala 62.68 233 P P 23 24 08.4 -0.6
RAYN Ar Rayn 62.70 60 P P 23 24 09.6 +0.3
RAYN Ar Rayn 62.70 60 P P 23 24 09.6 +0.3
RAYN pmax pmax
comp=Z,24nm,1.3s
RAYN Ar Rayn 62.70 60 *i* P P 23 24 09.3 0.0
SNR=9.6
BANI BANI 62.71 294 P P 23 24 08.1 -1.5
MACC Macarena, Meta 62.73 275 eP P 23 24 08.8 -0.9
BARC Barichara 62.73 280 eP P 23 24 10.7 +0.8
VILC Villavicencio, 62.84 278 eP P 23 24 08.8 -1.8
IAS Iasi 62.89 29 P P 23 24 11.5 +1.5
BZK Bozkurt 62.92 37 ⇓P P 23 24 09.2 -1.1
BBSR BB Station 63.07 311 P P 23 24 10.8 -0.7
PLCA Paso Flores 63.10 227 P P 23 24 11.9 +0.2
comp=Z,4.0nm,0.8s,baz=77,slow=7.8,SNR=8.8
PLCA LR LR 23 48 16.9
comp=Z,849nm,19.5s,baz=84,slow=33
comp=Z,4.0nm,0.8s
PLCA Paso Flores 63.10 227 P P 23 24 11.4 -0.3
PLCA Paso Flores 63.10 227 P P 23 24 11.5 -0.3
PLCA pmax pmax
comp=Z,10.0nm,1.0s
PLCA Paso Flores 63.10 227 eP P 23 24 12.2 +0.4
OCAC Ocana 63.15 282 P P 23 24 10.9 -1.7
OCAC Ocana 63.15 282 eP P 23 24 09.7 -2.8
LVV L'vov 63.23 25 eP P 23 24 12.0 -0.3
LVV e 23 24 53.6
LVV eS S 23 32 39.4 -4.9
LVV ePS PnS 23 33 07.0 +7.1
LVV pmax pmax
comp=Z,300nm,1.4s
LVV MLR MLR
comp=E,700nm,18.0s
LVV MLR MLR
comp=N,600nm,17.0s
LVV MLR MLR
comp=Z,900nm,17.0s
CRJC Cerrejon, Guaj 63.27 285 eP P 23 24 11.7 -1.6
MILM Milestii Mici 63.31 30 ⇓ *i* P P 23 24 11.5 -1.3
comp=Z,350nm,2.8s
MILM Milestii Mici 63.31 30 ePP PP 23 26 31.0 -1.1
MILM eS S 23 32 41.0 -4.3
MILM eL L 23 49 07.0
MILM LRM MLR 23 54 24.0
comp=Z,700nm,19.0s
MILM Milestii Mici 63.31 30 ⇓P P 23 24 11.8 -1.0
MILM Milestii Mici 63.31 30 *d* iP P 23 24 11.5 -1.3
MILM e 23 26 31.0
MILM eS S 23 32 41.0 -4.3
MILM pmax pmax
comp=Z,530nm,4.2s
BRRC Barranca, Sant 63.33 281 eP P 23 24 10.7 -2.9
SC01 Santiago de lo 63.34 295 P P 23 24 14.2 +0.6
KIS Kishinev 63.36 30 ⇓ *i* P P 23 24 12.0 -1.2
comp=Z,240nm,4.1s
KIS Kishinev 63.36 30 ePcP PcP 23 24 41.0 -9.1
KIS Kishinev 63.36 30 ePP PP 23 26 28.0 -4.7
KIS Kishinev 63.36 30 ⇑P P 23 24 12.9 -0.3
KIS Kishinev 63.36 30 *d* iP P 23 24 12.0 -1.2
KIS e 23 24 18.0
KIS e 23 26 28.0
KIS pmax pmax
comp=Z,240nm,4.1s
PTLC Puerto Leguiza 63.43 273 eP P 23 24 11.7 -2.7
TOKA Tokat 63.48 39 P P 23 24 14.2 0.0
TOKA IAmb IAmb 23 24 22.0
comp=Z,33nm,1.0s
DIKM Dikmen 63.49 38 ⇑P P 23 24 14.0 -0.1
GKP Gorka Klasztor 63.50 19 eP P 23 24 14.0 +0.2
GKP Gorka Klasztor 63.50 19 eP P 23 24 14.1 +0.2
BEL Belsk 63.54 22 eP P 23 24 14.2 0.0
ROSC El Rosal 63.57 278 P P 23 24 16.1 +0.5
comp=Z,25nm,0.8s,baz=66,slow=2.6,SNR=20
ROSC LR LR 23 50 14.1
comp=Z,1µm,21.1s,baz=130,slow=34
comp=Z,25nm,0.8s
ROSC El Rosal 63.57 278 P P 23 24 15.4 -0.2
ROSC El Rosal 63.57 278 P P 23 24 15.4 -0.2
ROSC pmax pmax
comp=Z,62nm,1.2s
ROSC El Rosal 63.57 278 eP P 23 24 13.6 -2.1
PURM Purcari 63.57 31 ⇓P P 23 24 13.9 -0.6
SDDR Presa de Saban 63.72 294 P P 23 24 16.3 +0.1
SDDR IAmb IAmb 23 24 24.4
comp=Z,53nm,1.2s
SORM Soroca 63.93 29 ⇑P P 23 24 16.0 -0.9
SORM Soroca 63.93 29 P P 23 24 16.0 -0.9
PRAC Prado 63.96 277 ⇓ eP P 23 24 18.4 +0.5
LR03 Panguipulli 64.12 229 P P 23 24 18.9 +0.5
NORC Norcasia 64.22 279 eP P 23 24 17.4 -2.1
GRTK Grand Turk 64.32 297 P P 23 24 20.4 +0.4
ORTC Ortega, Tolima 64.34 277 eP P 23 24 18.4 -2.0
GARC Garzon, Huila 64.36 275 eP P 23 24 15.5 -5.2
FLOC Florencia 64.44 274 eP P 23 24 21.3 +0.3
LL04 Puerto Octay 64.50 227 IAmb IAmb 23 24 33.4
comp=Z,39nm,1.1s
ZARC Zaragoza, Cauc 64.52 281 eP P 23 24 19.4 -2.1
ANIL Santa Ana 64.58 278 eP P 23 24 19.4 -2.9
GUY2C Guyana, Caldas 64.65 278 eP P 23 24 19.4 -3.5
GUY2C eP pP 23 24 21.3 -3.0
LL02 Futaleuf 64.74 225 P P 23 24 22.8 +0.4
NNA Nana 64.74 259 LR LR 23 51 08.6
comp=Z,4µm,20.9s,baz=62,slow=35
NNA Nana 64.74 259 P P 23 24 22.2 -0.7
NNA Nana 64.74 259 ce P P 23 24 22.5 -0.5
NNA pmax pmax
comp=Z,30nm,1.2s
MARD Mardin 64.75 44 P P 23 24 22.9 +0.2
MARD IAmb IAmb 23 24 30.3
comp=Z,32nm,1.0s
SIM Simferopol' 64.81 34 eP P 23 24 21.3 -1.4
SIM e 23 26 48.0
SIM eS S 23 33 04.0 0.0
SIM pmax pmax
comp=Z,88nm,1.4s
SIM MLR MLR
comp=Z,300nm,17.0s
MARP Paez Belalcaza 64.90 276 eP P 23 24 22.2 -2.1
VNA1 Neumayer--Stat 64.98 179 P P 23 24 25.5 +2.1
SJCC San Jacinto, C 65.26 284 eP P 23 24 25.1 -1.2
PCON Cinco Dias 65.28 275 eP P 23 24 25.1 -1.9
DEL Delary 65.29 15 eP P 23 24 26.2 +0.6
CBOC Ciudad Bolivar 65.39 279 eP P 23 24 23.2 -4.1
LL05 Los Muermos 65.41 227 P P 23 24 25.8 -1.0

YOTC	Yotoco, Valle	65.44	277	*e*P		P		23 24 21.3	-6.3
SOTA	Rioblanco	65.46	275	*e*P		**P**		**23 24 28.0**	**-0.2**
PLMC	San Jos del P	65.51	278	*e*P		**P**		**23 24 26.1**	**-1.9**
VNA3	Neumayer Olymp	65.55	179	P		**P**		**23 24 29.0**	**+1.9**
POPC	Popayan, Colom	65.58	275	*e*P		**P**		**23 24 28.0**	**-0.6**
KLNR	Kaliningrad	65.58	20	*i* P		**P**		**23 24 28.0**	**+0.5**
KLNR				pmax	pmax				
	comp=Z,36nm,0.7s								
KLNR				MLR	MLR				
	comp=Z,1µm,19.0s								
KOPT	Kop Dagi	65.92	42	P		**P**		**23 24 31.3**	**+0.9**
KTUT	Trabzon	65.94	40	⇑P		**P**		**23 24 28.9**	**-1.3**
GCUF	Volcan Galeras	66.08	274	*e*P		**P**		**23 24 32.8**	**+0.6**
AKASG	Malin Array Be	66.15	27	P		**P**		**23 24 30.0**	**-1.2**
	comp=Z,24nm,0.8s,baz=226,slow=6.6,SNR=55								
AKASG				LR	LR			23 55 00.4	
	comp=Z,696nm,21.2s,baz=218,slow=38								
	comp=Z,24nm,0.8s								
AKBB	Malin Array Si	66.15	27	*de*P		**P**		**23 24 29.8**	**-1.4**
SUW	Suwalki	66.15	22	*e*P		**P**		**23 24 30.4**	**-0.8**
SUW	Suwalki	66.15	22	*e*P		**P**		**23 24 30.1**	**-1.1**
SNAA	Sanae	66.20	177	P		**P**		**23 24 32.8**	**+1.4**
SNAA	Sanae	66.20	177	*e*P		**P**		**23 24 31.8**	**+0.4**
SNAA	Sanae	66.20	177	P		**P**		**23 24 31.8**	**+0.4**
	comp=Z,9.2nm,0.9s,baz=341,slow=8.1,SNR=26								
SNAA				LR	LR			23 46 31.0	
	comp=Z,1µm,21.1s,baz=346,slow=30								
	comp=Z,9.2nm,0.9s								
SNAA	Sanae	66.20	177	P		**P**		**23 24 31.8**	**+0.4**
SNAA				IAmb	IAmb			23 24 41.1	
	comp=Z,30nm,1.1s								
SNAA	Sanae	66.20	177	*ce*P		**P**		**23 24 32.8**	**+1.4**
SNAA				pmax	pmax				
	comp=Z,12nm,1.0s								
GURO	Guroymak-BITLI	66.22	44	P		**P**		**23 24 32.2**	**0.0**
GURO				IAmb	IAmb			23 24 40.2	
	comp=Z,41nm,1.1s								
DSPA	Despedida	66.36	213	P		**P**		**23 24 33.3**	**+0.7**
ATAH	Atahualpa	66.43	265	LR	LR			23 53 23.3	
	comp=Z,6µm,18.8s,baz=99,slow=36								
TULM	Tulcn-Chalpat	66.46	273	P		**P**		**23 24 34.2**	**-0.4**
TULM				IAmb	IAmb			23 24 43.5	
	comp=Z,32nm,1.2s								
ANN	Anapa	66.61	36	*c* P		**P**		**23 24 33.4**	**-0.9**
ANN				*e*				23 26 55.7	
ANN				*e*S		**S**		**23 33 27.1**	**+1.1**
ANN				pmax	pmax				
	comp=E,15nm,1.1s								
ANN				pmax	pmax				
	comp=Z,125nm,1.2s								
ANN				pmax	pmax				
	comp=N,27nm,1.0s								
ANN				pmax	pmax				
	comp=Z,464nm,2.8s								
ANN				MLR	MLR				
	comp=Z,260nm,10.0s								
NVL	N'lazarevskaya	66.76	172	*e*P		**P**		**23 24 35.9**	**+1.0**
NVL				*e*S		**S**		**23 33 23.0**	**-4.0**
NVL				pmax	pmax				
	comp=Z,7.0nm,1.1s								
BOSC	San Juan Bosco	66.80	269	P		**P**		**23 24 35.7**	**-0.7**
BOSC				IAmb	IAmb			23 24 38.8	
	comp=Z,32nm,0.9s								
GEVA	Gevas	66.81	44	P		**P**		**23 24 36.2**	**+0.2**
GEVA				IAmb	IAmb			23 24 44.3	
	comp=Z,41nm,1.1s								
USHA	Ushuaia	66.81	212	LR	LR			23 46 54.0	
	comp=Z,838nm,21.9s,baz=74,slow=30								
TROLL	Troll, Antarti	66.89	175	P		**P**		**23 24 36.5**	**+0.6**
SLOR	San Lorenzo -	67.02	272	P		**P**		**23 24 38.3**	**+0.2**
OTAV	Otavalo	67.07	273	P		**P**		**23 24 38.6**	**+0.1**
OTAV	Otavalo	67.07	273	P		**P**		**23 24 38.6**	**+0.1**
OTAV				pmax	pmax				
	comp=Z,23nm,1.3s								
OTAV	Otavalo	67.07	273	*e*P		**P**		**23 24 38.6**	**+0.1**
OTAV	Otavalo	67.07	273	*e*P		**P**		**23 24 38.5**	**0.0**
KONO	Kongsberg	67.19	11	P		**P**		**23 24 38.6**	**+0.9**
KONO				IAmb	IAmb			23 24 46.3	
	comp=Z,44nm,1.4s								
KONO	Kongsberg	67.19	11	*ce*P		**P**		**23 24 37.7**	**0.0**
KONO				pmax	pmax				
	comp=Z,26nm,1.3s								
PORT	Chimborazo Vol	67.22	271	P		**P**		**23 24 39.2**	**-0.4**
PORT				IAmb	IAmb			23 24 48.9	
	comp=Z,38nm,1.2s								
SOC	Sochi	67.30	38	*e*P		**P**		**23 24 37.4**	**-1.3**
SOC				*e*				23 27 06.8	
SOC				*e*PPP	PPP			23 28 41.3	
SOC				*e*S		**S**		**23 33 33.7**	**-0.7**
SOC				*e*SS		**SS**		**23 37 48.6**	**-5.7**
SOC				pmax	pmax				
	comp=Z,59nm,1.2s								
BATM	Batumi	67.50	41	⇓P		**P**		**23 24 39.5**	**-0.7**
BATM	Batumi	67.50	41	P		**P**		**23 24 39.4**	**-0.7**
GBN	Guysborough	67.56	324	P		**P**		**23 24 40.9**	**+0.5**
GO10	Punta Arenas	67.57	214	P		**P**		**23 24 40.5**	**+0.1**
PABE	Paberze	67.60	21	*e*P		**P**		**23 24 38.6**	**-1.8**
COHC	Cochancay	67.61	270	P		**P**		**23 24 41.3**	**-0.1**
DRLN	Deer Lake	67.69	329	P		**P**		**23 24 41.0**	**-0.1**
DRLN				IAmb	IAmb			23 24 47.5	
	comp=Z,43nm,1.3s								
MG05	Puerto Natales	67.87	216	P		**P**		**23 24 42.0**	**-0.2**
KARS	Kars	67.93	42	P		**P**		**23 24 43.7**	**+0.7**
VSVD	Vaisvydziai	67.96	21	*e*P		**P**		**23 24 41.7**	**-1.0**
NACGM	Naroch	68.18	23	⇓*e*P		**P**		**23 24 43.9**	**-0.1**
	baz=221								
IIGN	Ignalina	68.31	22	*e*P		**P**		**23 24 44.6**	**-0.3**
MNK	Minsk	68.31	23	*i* P		**P**		**23 24 43.8**	**-1.1**
MNK				*i*				23 25 09.4	
MNK				*i*				23 27 12.9	
MNK				*i* PPP	PPP			23 28 51.5	
MNK				*i* S		**S**		**23 33 45.3**	**-0.8**
MNK				*i* SS		**SS**		**23 38 07.2**	**-2.4**
MNK				pmax	pmax				
	comp=Z,24nm,0.8s								
MNK				pmax	pmax				
	comp=E,2.0nm,1.1s								
MNK				pmax	pmax				
	comp=N,26nm,0.8s								
MNK				MLR	MLR				
	comp=N,1µm,21.0s								
MNK				MLR	MLR				
	comp=E,118nm,23.0s								
MNK				MLR	MLR				
	comp=Z,4µm,20.0s								
MNK	Minsk	68.31	23	*i* P		**P**		**23 24 43.8**	**-1.1**
	comp=E,2.0nm,1.1s								
MNK				*i* P		**P**		**23 24 43.8**	**-1.1**
	comp=N,26nm,0.8s								
MNK				*i* P		**P**		**23 24 43.8**	**-1.1**
	comp=Z,24nm,0.8s								
MNK				*i* PcP		**PcP**		**23 25 09.5**	**-1.0**
MNK				*i* PP		**PP**		**23 27 12.9**	**-2.8**
MNK				*i* PPP	PPP			23 28 51.6	
MNK				*i* S		**S**		**23 33 45.4**	**-0.8**
MNK				*i* SS		**SS**		**23 38 07.3**	**-2.4**
MNK				*i* SSS	SSS			23 41 23.5	
MNK				*i* LQ	LR			23 49 49.0	
MNK				*i* LR	LR			23 53 18.0	
MNK				*i* LRM	MLR			23 56 01.4	
	comp=N,1µm,20.6s								
MNK				*i* LRM	MLR			23 56 14.9	
	comp=E,118nm,22.6s								
MNK				*i* LRM	MLR			23 56 24.9	
	comp=Z,4µm,20.0s								
ARNL	Arenillas	68.33	268	P		**P**		**23 24 46.0**	**+0.2**
ARNL				IAmb	IAmb			23 24 49.1	
	comp=Z,29nm,0.9s								
HAL	Halifax	68.37	323	P		**P**		**23 24 45.1**	**-0.4**
HAL				IAmb	IAmb			23 24 47.6	
	comp=Z,44nm,1.1s								
HAL	Halifax	68.37	323	P		**P**		**23 24 45.1**	**-0.4**
HAL				pmax	pmax				
	comp=Z,45nm,1.1s								
ISAL	Salakas	68.44	22	*e*P		**P**		**23 24 44.6**	**-1.1**
IDID	Didziasalis	68.47	22	*e*P		**P**		**23 24 45.0**	**-0.9**
HFS	Hagfors	68.50	13	LR	LR			23 56 38.4	
	comp=Z,626nm,18.7s,baz=198,slow=38								
NC602	NORSAR Array S	68.58	12	P		**P**		**23 24 47.6**	**+1.1**
NC602				IAmb	IAmb			23 24 58.8	
	comp=Z,54nm,1.5s								
AKH	Akhalkalaki	68.58	41	⇓P		**P**		**23 24 46.4**	**-0.7**
AKH	Akhalkalaki	68.58	41	P		**P**		**23 24 46.4**	**-0.7**
BGD	Bogdanovka	68.58	42	P		**P**		**23 24 43.8**	**-3.4**
NBO00	NORSAR Array S	68.70	11	P		**P**		**23 24 48.6**	**+1.4**
NB2	NORSAR Subarra	68.79	12	P		**P**		**23 24 47.0**	**-0.9**
	baz=207,slow=6.9								
NB2	NORSAR Subarra	68.79	12	P		**P**		**23 24 47.0**	**-0.9**
	comp=Z,105nm,2.0s,baz=207,slow=6.9								
NOA	NORSAR Array B	68.79	12	P		**P**		**23 24 47.6**	**-0.2**
	comp=Z,2.8nm,1.0s,baz=205,slow=6.3,SNR=9.2								
NOA				LR	LR			23 55 43.2	
	comp=Z,452nm,20.4s,baz=205,slow=37								
	comp=Z,2.8nm,1.0s								
NB201	NORSAR Array S	68.82	12	P		**P**		**23 24 49.5**	**+1.5**
NB201				IAmb	IAmb			23 25 01.1	
	comp=Z,43nm,1.4s								
GNI	Garni	68.83	43	LR	LR			23 56 42.8	
	comp=Z,591nm,21.6s,baz=252,slow=38								
GNI	Garni	68.83	43	P		**P**		**23 24 49.7**	**+1.0**
GNI	Garni	68.83	43	*de*P		**P**		**23 24 49.1**	**+0.4**
GNI				pmax	pmax				
	comp=Z,79nm,2.5s								
GNI	Garni	68.83	43	P		**P**		**23 24 49.2**	**+0.6**
GNI	Garni	68.83	43	P		**P**		**23 24 49.3**	**+0.7**
NC204	NORSAR Array S	68.92	11	P		**P**		**23 24 49.2**	**+0.5**
NC405	NORSAR Array S	68.96	12	P		**P**		**23 24 48.0**	**-0.8**
NC303	NORSAR Array S	68.99	12	P		**P**		**23 24 49.2**	**+0.2**
NC303				IAmb	IAmb			23 25 02.6	
	comp=Z,37nm,1.4s								
ONI	Oni	69.13	40	P		**P**		**23 24 49.8**	**-0.6**
ONI	Oni	69.13	40	P		**P**		**23 24 49.8**	**-0.6**
ONI				pmax	pmax				
	comp=Z,22nm,1.2s								
KIV	Kislovodsk	69.32	39	⇓P		**P**		**23 24 50.2**	**-1.3**
KIV	Kislovodsk	69.32	39	P		**P**		**23 24 51.6**	**0.0**
KIV	Kislovodsk	69.32	39	*e*P		**P**		**23 24 51.4**	**-0.2**
KIV				*e*				23 27 24.5	
KIV				*e*PPP	PPP			23 29 03.7	
KIV				*e*S		**S**		**23 33 58.3**	**-0.5**
KIV				*e*SS		**SS**		**23 38 26.0**	**+0.1**
KIV				pmax	pmax				
	comp=Z,92nm,3.7s								
KIV				pmax	pmax				
	comp=Z,45nm,1.0s								
KIV	Kislovodsk	69.32	39	P		**P**		**23 24 51.9**	**+0.3**
KIV	Kislovodsk	69.32	39	*i* P		**P**		**23 24 51.6**	**0.0**
	SNR=15								
KVAR	Kislovodsk Arr	69.33	39	LR	LR			23 58 03.8	
	comp=Z,291nm,19.7s,baz=72,slow=38								
KBZ	Khabaz	69.34	39	P		**P**		**23 24 52.0**	**+0.5**
	comp=Z,20nm,0.9s,baz=232,slow=4.6,SNR=26								
KBZ				LR	LR			23 59 17.9	
	comp=Z,322nm,18.0s,baz=230,slow=40								
	comp=Z,20nm,0.9s								
KBZ	Khabaz	69.34	39	*ce*P		**P**		**23 24 52.0**	**+0.5**
KBZ				pmax	pmax				
	comp=Z,19nm,0.9s								
ZEI	Tsey	69.52	40	*e*P		**P**		**23 24 52.3**	**-0.7**
ZEI				pmax	pmax				
	comp=Z,24nm,1.8s								
MZR	Muzera	69.53	63	P		**P**		**23 24 53.5**	**+0.3**
MZR	Muzera	69.53	63	*i* P		**P**		**23 24 53.5**	**+0.3**
	SNR=6.0								
PMSA	Palmer Station	69.67	201	LR	LR			23 47 16.3	
	comp=Z,1µm,21.9s,baz=47,slow=29								
PMSA	Palmer Station	69.67	201	P		**P**		**23 24 54.7**	**+1.5**
LMN	Caledonia Moun	69.74	323	P		**P**		**23 24 54.5**	**+0.4**
LMN				IAmb	IAmb			23 25 02.9	
	comp=Z,69nm,1.4s								
MTSE	Matsula	70.08	19	*e*P		**P**		**23 24 55.3**	**-0.5**
GOF	Gofitskoye	70.10	38	⇑*e*P		**P**		**23 24 55.8**	**-0.4**
GOF				pmax	pmax				
	comp=Z,57nm,1.2s								
DDFL	Dedoflistskaro	70.35	42	P		**P**		**23 25 00.8**	**+2.9**
BORG	Borgarnes	70.56	356	LR	LR			23 50 31.5	
	comp=Z,373nm,21.6s,baz=171,slow=31								
GGN	Saint George	70.60	322	P		**P**		**23 24 59.3**	**0.0**
GGN				IAmb	IAmb			23 25 03.1	
	comp=Z,44nm,1.2s								
LGD	Lagodekhi	70.61	42	P		**P**		**23 24 59.6**	**+0.2**
EMMW	East Machias	70.78	321	P		**P**		**23 25 00.5**	**+0.2**
EMMW				IAmb	IAmb			23 25 23.1	
	comp=Z,34nm,1.3s								
VSU	Vasula	70.85	20	*i* P		**P**		**23 24 59.5**	**-1.0**
VSU				pmax	pmax				
	comp=Z,77nm,1.0s								
VSU				MLR	MLR				
	comp=Z,2µm,23.0s								
VSU	Vasula	70.85	20	*e*P		**P**		**23 24 59.3**	**-1.2**
GROC	Groznyy	70.94	41	*e*P		**P**		**23 25 01.5**	**+0.1**
GROC				*e*				23 27 39.3	
GROC				pmax	pmax				
	comp=Z,11nm,0.7s								
G65A	Princeton	71.08	322	P		**P**		**23 25 02.6**	**+0.4**
G65A				IAmb	IAmb			23 25 10.5	
	comp=Z,49nm,1.4s								
BATG	Bathurst New B	71.22	324	IAmb	IAmb			23 25 07.0	
	comp=Z,38nm,1.1s								
VSR	Storozhevoye	71.28	31	*e*P		**P**		**23 25 02.2**	**-1.1**
VSR				pmax	pmax				
	comp=Z,50nm,0.7s								
RAF	Rauma	71.33	16	*e*P		**P**		**23 25 02.8**	**-0.5**
MEF	Metsahovi	71.45	18	*e*P		**P**		**23 25 03.7**	**-0.4**
VORR	Voronezh	71.57	31	*e*P		**P**		**23 25 04.2**	**-0.8**
VORR				pmax	pmax				
	comp=Z,142nm,1.7s								
ASUD	Al Ashush, Dub	71.59	62	P		**P**		**23 25 05.8**	**+0.1**
L64A	Middleborough	71.69	317	P		**P**		**23 25 05.3**	**-0.6**
L64A				IAmb	IAmb			23 25 08.2	
	comp=Z,43nm,1.2s								
ALNE	Al Ain	71.81	63	P		**P**		**23 25 07.0**	**-0.1**
	SNR=6.0								
FAQ	Al Faqa, Dubai	71.85	62	P		**P**		**23 25 07.5**	**+0.1**
FAQ	Al Faqa, Dubai	71.85	62	P		**P**		**23 25 07.4**	**+0.1**
F64A	Sherman	71.89	322	P		**P**		**23 25 07.9**	**+0.8**
F64A				IAmb	IAmb			23 25 09.5	
	comp=Z,52nm,1.1s								
F64A	Sherman	71.89	322	P		**P**		**23 25 08.0**	**+0.9**
	baz=119,SNR=8.1								
F64A				P		**P**		**23 25 08.0**	**+0.9**
	baz=119,SNR=8.1								
MAK	Makhachkala	71.94	41	*e*P		P		23 25 01.9	-5.5
MAK				*e*S		**S**		**23 34 20.8**	**-8.3**
MAK				*e*SSS	SSS			23 42 18.9	
MAK				pmax	pmax				
	comp=Z,111nm,1.5s								
MAK				MLR	MLR				
	comp=Z,454nm,18.0s								
LPSR	Galich'ya Gora	71.97	30	*e*P		**P**		**23 25 06.3**	**-1.1**
LPSR				pmax	pmax				
	comp=Z,40nm,0.9s								
NAZ	Nazwa, Dubai	71.98	62	P		**P**		**23 25 08.2**	**+0.1**
	SNR=7.4								
NAZ	Nazwa, Dubai	71.98	62	*i* P		**P**		**23 25 07.4**	**-0.6**
	SNR=7.0								
PQI	Presque Isle	72.08	323	P		**P**		**23 25 08.6**	**+0.5**
PQI				IAmb	IAmb			23 25 16.5	
	comp=Z,41nm,1.4s								
BRYW	Bryant College	72.16	317	P		**P**		**23 25 09.2**	**+0.4**
BRYW				IAmb	IAmb			23 25 16.1	
	comp=Z,54nm,1.4s								
PKME	Peaks-Kenny Pk	72.19	321	P		**P**		**23 25 09.4**	**+0.6**
WES	Weston	72.21	318	P		**P**		**23 25 09.8**	**+0.8**
WES	Weston	72.21	318	P		**P**		**23 25 09.8**	**+0.8**
WES				pmax	pmax				
	comp=Z,30nm,1.2s								
ASHO	Ashiyiah	72.25	62	P		**P**		**23 25 09.6**	**-0.1**
	SNR=7.5								
ASHO	Ashiyiah	72.25	62	*i* P		**P**		**23 25 10.0**	**+0.2**
	SNR=7.0								
F63A	Nahmakanta, Br	72.27	322	P		**P**		**23 25 09.0**	**-0.4**
F63A				IAmb	IAmb			23 25 13.6	
	comp=Z,33nm,1.1s								
F63A	Nahmakanta, Br	72.27	322	P		**P**		**23 25 10.3**	**+0.9**
	baz=118,SNR=7.5								
F63A				P		**P**		**23 25 10.3**	**+0.9**
	baz=118,SNR=7.5								
M63A	Gales Ferry	72.29	317	P		**P**		**23 25 10.1**	**+0.6**
M63A				IAmb	IAmb			23 25 17.8	
	comp=Z,40nm,1.0s								
HATD	Hatta, Dubai	72.35	62	P		**P**		**23 25 10.3**	**-0.1**
	SNR=6.7								
HATD	Hatta, Dubai	72.35	62	*i* P		**P**		**23 25 10.2**	**-0.1**
	SNR=8.1								
OBN	Obninsk	72.40	27	LR	LR			23 58 53.4	
	comp=Z,219nm,19.2s,baz=214,slow=38								
OBN	Obninsk	72.40	27	P		**P**		**23 25 09.7**	**-0.2**
OBN	Obninsk	72.40	27	*i* P		**P**		**23 25 08.8**	**-1.1**
OBN				*i*				23 25 13.6	
OBN				*i*				23 25 23.5	
OBN				*i*				23 27 49.7	
OBN				*i* S		**S**		**23 34 28.4**	**-5.5**
OBN				pmax	pmax				
	comp=Z,13nm,1.0s								
OBN				MLR	MLR				
	comp=Z,904nm,19.0s								
HRV	Adam Dziewonsk	72.42	318	P		**P**		**23 25 11.6**	**+1.3**
HRV				IAmb	IAmb			23 25 14.5	
	comp=Z,76nm,1.4s								
HRV	Adam Dziewonsk	72.42	318	P		**P**		**23 25 11.6**	**+1.3**
HRV				pmax	pmax				
	comp=Z,76nm,1.5s								
UOSS	Minazif	72.44	62	P		**P**		**23 25 10.6**	**-0.2**
UOSS				IAmb	IAmb			23 25 17.8	
	comp=Z,46nm,0.9s								
UOSS	Minazif	72.44	62	*i* P		**P**		**23 25 10.0**	**-0.8**
	SNR=7.7								
I63A	Otisfield	72.45	320	P		**P**		**23 25 11.1**	**+0.7**
I63A				IAmb	IAmb			23 25 18.9	
	comp=Z,40nm,1.3s								
IVI	Ivigtut	72.46	342	P		**P**		**23 25 09.9**	**-0.2**
SMAI	San Martin Ant	72.48	199	P		**P**		**23 25 10.5**	**+0.3**
MSFE	Esma-Masafi	72.51	61	P		**P**		**23 25 10.8**	**-0.5**
UCCT	U. Connecticut	72.57	317	P		**P**		**23 25 11.4**	**+0.2**
UCCT				IAmb	IAmb			23 25 13.6	
	comp=Z,41nm,1.3s								
VRH	Novokhopyorsk	72.60	32	*e*P		**P**		**23 25 10.1**	**-1.1**
VRH				pmax	pmax				
	comp=Z,40nm,1.0s								
SHME	Shamm	72.67	61	P		**P**		**23 25 10.0**	**-2.2**
BANOM	Banah	72.78	61	P		**P**		**23 25 12.1**	**-0.8**
BANOM	Banah	72.78	61	P		**P**		**23 25 11.7**	**-1.2**
QUA2	Belchertown	72.86	317	IAmb	IAmb			23 25 17.1	
	comp=Z,37nm,1.1s								
FFD	Franklin Falls	72.89	319	P		**P**		**23 25 13.1**	**-0.1**
FFD				IAmb	IAmb			23 25 21.9	
	comp=Z,61nm,1.4s								
D62A	Allapoint, Alt	72.90	323	IAmb	IAmb			23 25 15.0	
	comp=Z,30nm,1.1s								
D62A	Allapoint, All	72.90	323	P		**P**		**23 25 13.6**	**+0.5**
	baz=119,SNR=7.0								
D62A				P		**P**		**23 25 13.6**	**+0.5**
	baz=119,SNR=7.0								
F62A	Pittston Farm,	72.90	321	P		**P**		**23 25 13.7**	**+0.6**
	baz=118								
F62A				P		**P**		**23 25 13.7**	**+0.6**
	baz=118								
FIA0	FINESS Array S	72.93	18	P		**P**		**23 25 12.7**	**-0.2**
FIA0	FINESS Array S	72.93	18	P		**P**		**23 25 12.7**	**-0.2**
FINES	FINESS Array B	72.93	18	P		**P**		**23 25 12.2**	**-0.7**
	comp=Z,13nm,0.9s,baz=187,slow=4.8,SNR=22								
FINES				LR	LR			23 59 50.1	
	comp=Z,603nm,19.0s,baz=214,slow=38								
	comp=Z,13nm,0.9s								
FIA1	FINESS Array S	72.93	18	IAmb	IAmb			23 25 20.4	
	comp=Z,64nm,1.2s								
K62A	Royalston	72.94	318	P		**P**		**23 25 14.2**	**+0.7**
K62A				IAmb	IAmb			23 25 15.9	
	comp=Z,38nm,1.1s								
G62A	West of Eustis	72.94	321	P		**P**		**23 25 12.1**	**-1.3**
E62A	Clayton Lake	72.96	322	P		**P**		**23 25 13.6**	**+0.1**
	baz=118								
E62A				P		**P**		**23 25 13.6**	**+0.1**
	baz=118								
DRK0	Durika	72.99	281	P		**P**		**23 25 14.7**	**+0.2**
DRK0				IAmb	IAmb			23 25 22.9	
	comp=Z,59nm,1.2s								
MHTO	MHTO	73.07	66	P		**P**		**23 25 13.9**	**-0.7**
WSPT	Westport, CT	73.08	316	IAmb	IAmb			23 25 22.6	
	comp=Z,43nm,0.9s								
HOQ	Hoqain	73.08	63	P		**P**		**23 25 14.7**	**0.0**
	SNR=7.5								
L61B	Northampton	73.15	317	P		**P**		**23 25 15.3**	**+0.6**
L61B				IAmb	IAmb			23 25 34.7	
	comp=Z,44nm,1.4s								
BELA	Belgrano 2	73.22	185	P		**P**		**23 25 15.7**	**+1.2**
BELA				IAmb	IAmb			23 25 24.7	
	comp=Z,48nm,1.3s								
MOS	Moscow	73.26	27	*e*P		**P**		**23 25 11.8**	**-3.2**
MOS				*e*				23 27 53.7	
MOS				*e*S		**S**		**23 34 42.7**	**-1.0**
MOS				pmax	pmax				
	comp=Z,94nm,1.4s								
MOS				pmax	pmax				
	comp=Z,500nm,2.7s								
MOS				MLR	MLR				
	comp=Z,1µm,21.0s								
MOS				MLR	MLR				
	comp=E,600nm,18.0s								
CPNY	Central Park	73.36	315	P		**P**		**23 25 15.6**	**-0.4**
CPNY				IAmb	IAmb			23 25 18.2	
	comp=Z,35nm,1.1s								
KSCT	Kent School, K	73.40	316	P		**P**		**23 25 16.9**	**+0.7**
LBNH	Lisbon	73.40	319	P		**P**		**23 25 16.9**	**+0.8**
LBNH	Lisbon	73.40	319	P		**P**		**23 25 16.9**	**+0.8**
LBNH				pmax	pmax				
	comp=Z,27nm,1.2s								
HNH	Hanover	73.41	319	P		**P**		**23 25 16.6**	**+0.4**
HNH				IAmb	IAmb			23 25 30.3	
	comp=Z,38nm,1.2s								
HNH	Hanover	73.41	319	P		**P**		**23 25 17.1**	**+0.9**
	baz=115,SNR=6.0								
PAL	Palisades	73.41	316	P		**P**		**23 25 17.4**	**+1.2**
PAL				IAmb	IAmb			23 25 18.4	
	comp=Z,26nm,0.9s								
PAL	Palisades	73.41	316	P		**P**		**23 25 17.4**	**+1.2**
PAL				pmax	pmax				
	comp=Z,26nm,1.0s								
J61A	Chester	73.44	318	P		**P**		**23 25 16.8**	**+

baz=113,SNR=9.8
Y59A Loris 74.68 307 P **P** 23 25 23.8 0.0
Y59A IAmb IAmb 23 25 28.2
comp=Z,49nm,1.1s
FRNY Flat Rock 74.73 319 P **P** 23 25 24.0 +0.1
FRNY Flat Rock 74.73 319 P **P** 23 25 24.1 +0.3
baz=114
MVL Millersville 74.76 314 P **P** 23 25 24.4 +0.3
J59A Piesco 74.78 318 IAmb IAmb 23 25 32.6
comp=Z,56nm,1.4s
J59A Piesco 74.78 318 P **P** 23 25 24.7 +0.4
baz=113,SNR=10
J59A P **P** 23 25 24.7 +0.4
baz=113,SNR=10
NCB Newcomb 74.80 318 P **P** 23 25 24.6 +0.3
baz=114,SNR=5.8
JTS Las Juntas de 74.81 282 LR LR 23 57 26.4
comp=Z,954nm,21.9s,baz=234,slow=35
CBN Corbin Frederi 74.88 312 P **P** 23 25 26.5 +1.6
CBN IAmb IAmb 23 25 33.4
comp=Z,29nm,0.8s
SDMD Soldier's Deli 74.91 313 P **P** 23 25 25.0 -0.1
SDMD Soldier's Deli 74.91 313 P **P** 23 25 26.0 +1.0
baz=111
KSPA Keystone Colle 74.92 316 IAmb IAmb 23 25 27.4
comp=Z,42nm,1.2s
KSPA Keystone Colle 74.92 316 P **P** 23 25 25.4 +0.4
baz=112,SNR=7.4
MNTQ Montreal, Queb 75.03 320 P **P** 23 25 25.6 0.0
JSRW J. Sargeant Re 75.09 311 P **P** 23 25 25.2 -0.9
PAGS Pennsylvania G 75.11 314 P **P** 23 25 26.4 +0.3
PAGS IAmb IAmb 23 25 28.9
comp=Z,39nm,1.2s
DWPF Disney Wildern 75.15 301 P **P** 23 25 26.0 -0.6
R58B Mineral 75.18 311 P **P** 23 25 26.7 +0.1
X58A Rowland 75.22 308 P **P** 23 25 27.1 +0.3
X58A IAmb IAmb 23 25 35.4
comp=Z,46nm,1.1s
J58A Remsen 75.27 317 P **P** 23 25 27.2 +0.2
J58A Remsen 75.27 317 P **P** 23 25 28.0 +0.9
baz=113,SNR=9.3
J58A P **P** 23 25 28.0 +0.9
baz=113,SNR=9.3
SOR Soroa 75.28 295 P **P** 23 25 26.9 -0.6
SOR IAmb IAmb 23 25 36.1
comp=Z,45nm,1.3s
SOR Soroa 75.28 295 P **P** 23 25 26.9 -0.6
SOR pmax pmax
comp=Z,45nm,1.3s
ACON Acoyapa 75.28 284 P **P** 23 25 27.0 -0.7
ACON IAmb IAmb 23 25 30.1
comp=Z,65nm,1.2s
LATQ La Tuque 75.30 322 P **P** 23 25 26.6 -0.5
LATQ IAmb IAmb 23 25 30.9
comp=Z,34nm,1.0s
DUNO Dulce Nombre, 75.31 282 P **P** 23 25 27.5 -0.3
DUNO IAmb IAmb 23 25 42.2
comp=Z,43nm,1.3s
BINY Binghamton 75.31 316 IAmb IAmb 23 25 29.9
comp=Z,36nm,1.1s
BINY Binghamton 75.31 316 P **P** 23 25 28.4 +1.1
baz=112,SNR=7.2
N58A Sunbury 75.32 315 IAmb IAmb 23 25 29.5
comp=Z,37nm,1.1s
N58A Sunbury 75.32 315 P **P** 23 25 27.9 +0.5
baz=111,SNR=5.9
N58A P **P** 23 25 27.9 +0.5
baz=111,SNR=5.9
BMNY Brushton-Moira 75.33 319 P **P** 23 25 27.8 +0.5
baz=114,SNR=9.8
CSU Charleston Sou 75.34 306 P **P** 23 25 27.7 +0.1
V58A Windy Hill, Pi 75.42 309 P **P** 23 25 27.9 -0.1
V58A IAmb IAmb 23 25 36.6
comp=Z,45nm,1.2s
SCHQ Schefferville 75.62 331 P **P** 23 25 28.9 +0.1
comp=Z,5.8nm,0.8s,baz=120,slow=4.9,SNR=7.8
SCHQ LR LR 23 53 09.9
comp=Z,406nm,20.6s,baz=154,slow=31
comp=Z,5.8nm,0.8s
SCHQ Schefferville 75.62 331 P **P** 23 25 29.5 +0.7
WCNY West Carthage 75.75 318 P **P** 23 25 30.0 +0.2
baz=113,SNR=13
J57A Williamstown 75.77 317 P **P** 23 25 30.4 +0.5
P57A Homestead Farm 75.78 313 P **P** 23 25 30.8 +0.8
P57A IAmb IAmb 23 25 38.9
comp=Z,42nm,1.1s
P57A Homestead Farm 75.78 313 P **P** 23 25 30.5 +0.4
baz=110,SNR=7.2
P57A P **P** 23 25 30.5 +0.4
baz=110,SNR=7.2
M57A Sunshine Farm, 75.79 315 P **P** 23 25 30.6 +0.5
M57A IAmb IAmb 23 25 45.5
comp=Z,43nm,1.4s
BOAB BOACO BROADBAN 76.83 284 P **P** 23 25 29.9 -0.9
K57A Scipio Center 75.87 316 P **P** 23 25 30.5 0.0
Y57A Sumter 75.89 307 P **P** 23 25 31.3 +0.5
Y57A IAmb IAmb 23 25 33.0
comp=Z,25nm,0.9s
T57A Hurt 75.90 310 P **P** 23 25 29.8 -1.0
W57A Gilead 75.91 308 P **P** 23 25 30.6 -0.3
W57A IAmb IAmb 23 25 39.1
comp=Z,42nm,1.4s
S57A Dark Hollow, R 75.92 311 P **P** 23 25 31.9 +1.0
S57A IAmb IAmb 23 25 39.5
comp=Z,53nm,1.5s
TRQ Mont Tremblant 75.92 320 P **P** 23 25 31.1 +0.3
TRQ IAmb IAmb 23 25 34.5
comp=Z,39nm,1.1s
SSPA Standing Stone 76.08 314 P **P** 23 25 32.1 +0.4
SSPA IAmb IAmb 23 25 33.9
comp=Z,32nm,1.1s
SSPA Standing Stone 76.08 314 P **P** 23 25 33.3 +1.5
baz=110,SNR=7.1
BIRD Birdtown, Kers 76.13 308 P **P** 23 25 32.4 +0.2
BIRD IAmb IAmb 23 25 40.7
comp=Z,47nm,1.3s
MATN Matagalpa 76.16 285 P **P** 23 25 31.1 -1.8
DY2G Dye2 76.16 346 *i* P **P** 23 25 31.4 -0.5
DY2G IAmb IAmb 23 25 40.0
comp=Z,301nm,1.7s
SCO Scoresbysund 76.27 356 **P** 23 25 32.7 +0.5
SCO Scoresbysund 76.27 356 P **P** 23 25 32.7 +0.5
SCO pmax pmax
comp=Z,33nm,1.5s
J56A Wolcott 76.30 317 IAmb IAmb 23 25 35.8
comp=Z,70nm,1.2s
J56A Wolcott 76.30 317 P **P** 23 25 33.1 +0.2
baz=112,SNR=13
J56A P **P** 23 25 33.1 +0.2
baz=112,SNR=13
456A Hilliard 76.31 303 P **P** 23 25 33.5 +0.3
BELG Belogornoye 76.36 33 P **P** 23 25 32.8 -0.2
comp=Z,41nm,1.0s,baz=259,slow=3.0,SNR=22
BELG LR LR 00 02 41.6
comp=Z,342nm,18.6s,baz=272,slow=38
comp=Z,41nm,1.0s
BELG Belogornoye 76.36 33 *d i* P **P** 23 25 32.1 -0.9
BELG pmax pmax
comp=Z,13nm,1.1s
BELG MLR MLR
comp=Z,59nm,21.0s
L56A Greenwood 76.37 316 IAmb IAmb 23 25 35.4
comp=Z,40nm,1.1s
L56A Greenwood 76.37 316 P **P** 23 25 34.0 +0.6
baz=111,SNR=9.4
L56A P **P** 23 25 34.0 +0.6
baz=111,SNR=9.4
JMIC Jan Mayen 76.48 1 LR LR 00 00 28.7
comp=Z,97nm,18.2s,baz=194,slow=37
Q56A Snyder Ridge, 76.50 312 IAmb IAmb 23 25 38.6
comp=Z,62nm,1.3s
U56A King 76.57 309 P **P** 23 25 34.6 0.0
U56A IAmb IAmb 23 25 43.5
comp=Z,56nm,1.5s
JSC Jenkinsville 76.66 307 P **P** 23 25 35.5 +0.4
JSC IAmb IAmb 23 25 43.9
comp=Z,43nm,1.3s
JSC Jenkinsville 76.66 307 P **P** 23 25 35.5 +0.4
JSC pmax pmax
comp=Z,43nm,1.3s
MMNY Mt. Morris Dam 76.82 316 P **P** 23 25 36.2 +0.3
MMNY IAmb IAmb 23 25 37.8
comp=Z,37nm,1.1s
CNGN Cerro Negro 76.84 284 P **P** 23 25 34.5 -2.1
CNGN IAmb IAmb 23 26 01.4
comp=Z,35nm,1.1s

BLA Blacksburg 76.85 310 P **P** 23 25 36.2 -0.1
BLA IAmb IAmb 23 25 45.1
comp=Z,43nm,1.1s
BLA Blacksburg 76.85 310 P **P** 23 25 36.2 -0.1
BLA pmax pmax
comp=Z,43nm,1.2s
J55A Hilton 76.95 317 IAmb IAmb 23 25 40.4
comp=Z,38nm,1.2s
R55A Marlinton 76.95 311 P **P** 23 25 37.5 +0.6
R55A IAmb IAmb 23 25 56.0
comp=Z,56nm,1.5s
KMSC Kings Mountain 76.96 308 P **P** 23 25 37.0 +0.2
KMSC IAmb IAmb 23 25 45.5
comp=Z,46nm,1.4s
M55A Ridgway 76.99 315 P **P** 23 25 37.4 +0.5
M55A IAmb IAmb 23 25 38.8
comp=Z,34nm,1.2s
M55A Ridgway 76.99 315 P **P** 23 25 37.2 +0.3
baz=110,SNR=7.3
M55A P **P** 23 25 37.2 +0.3
baz=110,SNR=7.3
255A Hazlehurst 77.00 304 P **P** 23 25 37.4 +0.3
255A IAmb IAmb 23 25 51.9
comp=Z,56nm,1.1s
ICESG Greenland Ices 77.04 350 *i* P **P** 23 25 36.5 -0.5
ICESG IAmb IAmb 23 25 44.3
comp=Z,88nm,1.7s
V55A Taylorsville 77.07 309 P **P** 23 25 37.7 +0.2
V55A IAmb IAmb 23 25 46.5
comp=Z,51nm,1.3s
V55A Taylorsville 77.07 309 P **P** 23 25 39.3 +1.9
baz=107
V55A P **P** 23 25 39.3 +1.9
baz=107
MCWV Mont Chateau 77.18 313 P **P** 23 25 39.2 +1.2
WVNY West Valley, N 77.19 316 IAmb IAmb 23 25 40.2
comp=Z,37nm,1.0s
WVNY West Valley, N 77.19 316 P **P** 23 25 38.7 +0.7
baz=110,SNR=9.1
KLMR Klimovskoe 77.20 23 *e* P **P** 23 25 34.8 -2.8
KLMR *e* 23 28 28.4
KLMR pmax pmax
comp=Z,90nm,1.5s
KLMR Klimovskoe 77.20 23 *e* P **P** 23 25 34.9 -2.7
KLMR AMP 23 25 44.6
comp=Z,90nm,1.5s
KLMR *e* PP **PP** 23 28 28.5 -3.1
KLMR LQ LQ 23 54 40.6
KLMR LQ LQ 23 54 40.6
KLMR LR LR 23 58 15.8
PAULI Pauline 77.25 307 P **P** 23 25 38.5 +0.1
PAULI IAmb IAmb 23 25 40.9
comp=Z,43nm,1.4s
PAULI Pauline 77.25 307 P **P** 23 25 39.7 +1.3
baz=106
DELO Deloro Mine 77.26 318 IAmb IAmb 23 25 40.2
comp=Z,33nm,1.1s
MEDO Medina 77.35 316 P **P** 23 25 38.9 0.0
HODGE Hodges 77.44 307 P **P** 23 25 40.2 +0.6
HODGE IAmb IAmb 23 25 48.4
comp=Z,64nm,1.4s
J54A Appleton 77.52 316 P **P** 23 25 40.2 +0.5
GEYT Alibeck 77.63 49 P **P** 23 25 40.2 -0.4
comp=Z,14nm,1.0s,baz=242,slow=11,SNR=14
GEYT LR LR 00 01 23.3
comp=Z,832nm,19.2s,baz=262,slow=37
comp=Z,14nm,1.0s
TGUH Tegucigalpa,Un 77.63 286 P **P** 23 25 40.7 -0.4
TGUH IAmb IAmb 23 25 42.8
comp=Z,70nm,1.4s
SFJD Kangerlussuaq 77.64 345 LR LR 23 55 53.3
comp=Z,178nm,18.0s,baz=137,slow=33
SFJD Kangerlussuaq 77.64 345 P **P** 23 25 40.5 +0.6
SFJD IAmb IAmb 23 25 54.3
comp=Z,43nm,1.2s
SFJD Kangerlussuaq 77.64 345 P **P** 23 25 40.5 +0.6
SFJD pmax pmax
comp=Z,43nm,1.3s
SFJD Kangerlussuaq 77.64 345 *i* P **P** 23 25 40.4 +0.6
154A Montrose 77.69 305 P **P** 23 25 41.0 0.0
154A IAmb IAmb 23 25 51.2
comp=Z,68nm,1.3s
Q54A Coxs Mills 77.70 312 IAmb IAmb 23 25 49.5
comp=Z,50nm,1.4s
Q54A Coxs Mills 77.70 312 P **P** 23 25 41.4 +0.5
baz=108
Q54A P **P** 23 25 41.4 +0.5
baz=108
S54A Dingess, Beckl 77.70 310 P **P** 23 25 41.1 +0.1
U54A Nelsons Funny 77.73 309 P **P** 23 25 41.0 -0.3
U54A IAmb IAmb 23 25 50.0
comp=Z,49nm,1.1s
O54A Avella 77.73 313 P **P** 23 25 40.2 -0.9
O54A IAmb IAmb 23 25 49.6
comp=Z,35nm,1.2s
TIGA Tifton 77.80 304 P **P** 23 25 42.6 +1.0
ALLY Alegheny Colle 78.03 314 IAmb IAmb 23 25 46.6
comp=Z,50nm,1.1s
ERPA Erie 78.07 315 P **P** 23 25 42.3 -0.6
ERPA IAmb IAmb 23 25 45.4
comp=Z,28nm,0.9s
ERPA Erie 78.07 315 P **P** 23 25 44.6 +1.7
baz=109
BG3 Lake Jocassee 78.18 307 IAmb IAmb 23 25 52.6
comp=Z,52nm,1.2s
CASEE Lake Jocassee 78.18 307 P **P** 23 25 44.5 +0.8
baz=106
GOGA Godfrey 78.19 306 P **P** 23 25 44.9 +1.2
GOGA Godfrey 78.19 306 P **P** 23 25 44.9 +1.2
GOGA pmax pmax
comp=Z,24nm,1.4s
553A Crawfordville 78.20 302 P **P** 23 25 45.4 +1.5
N53A Lisbon 78.26 314 P **P** 23 25 44.1 +0.1
N53A IAmb IAmb 23 25 52.5
comp=Z,60nm,1.3s
N53A Lisbon 78.26 314 P **P** 23 25 44.8 +0.8
baz=108,SNR=6.3
N53A P **P** 23 25 44.8 +0.8
baz=108,SNR=6.3
P53A Whipple 78.26 312 P **P** 23 25 44.4 +0.3
P53A IAmb IAmb 23 25 46.6
comp=Z,43nm,1.4s
V53A Saluda 78.26 308 IAmb IAmb 23 25 52.7
comp=Z,58nm,1.4s
V53A Saluda 78.26 308 P **P** 23 25 44.9 +0.7
baz=106,SNR=6.4
V53A P **P** 23 25 44.9 +0.7
baz=106,SNR=6.4
M53A WI Miller and 78.34 314 IAmb IAmb 23 25 48.3
comp=Z,54nm,1.1s
R53A Hurricane 78.34 311 P **P** 23 25 44.4 -0.1
R53A IAmb IAmb 23 25 48.5
comp=Z,43nm,1.2s
SADO Sadowa 78.37 318 LR LR 23 53 17.2
comp=Z,1µm,21.6s,baz=138,slow=30
SADO Sadowa 78.37 318 IAmb IAmb 23 25 48.1
comp=Z,41nm,1.4s
Q52A Bidwell 78.76 311 IAmb IAmb 23 25 55.1
comp=Z,79nm,1.2s
Q52A Bidwell 78.76 311 P **P** 23 25 47.0 +0.2
baz=107,SNR=6.2
Q52A P **P** 23 25 47.0 +0.2
baz=107,SNR=6.2
O52A Adamsville 78.78 313 P **P** 23 25 47.5 +0.6
O52A Adamsville 78.78 313 P **P** 23 25 48.1 +1.2
baz=107,SNR=10
O52A P **P** 23 25 48.1 +1.2
baz=107,SNR=10
Y52A Lilburn 78.79 306 P **P** 23 25 47.2 +0.2
Y52A IAmb IAmb 23 25 55.9
comp=Z,67nm,1.4s
Y52A Lilburn 78.79 306 P **P** 23 25 48.1 +1.0
baz=105,SNR=5.5
Y52A P **P** 23 25 48.1 +1.0
baz=105,SNR=5.5
P52A Corning 78.85 312 IAmb IAmb 23 25 55.5
comp=Z,69nm,1.3s
M52A Chesterland 78.86 314 P **P** 23 25 48.2 +0.9
M52A IAmb IAmb 23 25 55.5
comp=Z,65nm,1.4s
MAW Mawson 78.90 158 P **P** 23 25 47.8 +0.9
comp=Z,3.9nm,0.7s,baz=275,slow=7.6,SNR=7.2
MAW LR LR 23 52 55.2
comp=Z,466nm,22.0s,baz=298,slow=30
comp=Z,3.9nm,0.7s
MAW Mawson 78.90 158 P **P** 23 25 48.5 +1.5

MAW Mawson 78.90 158 P **P** 23 25 48.5 +1.5
MAW pmax pmax
comp=Z,5.0nm,1.2s
352A Blakely 78.92 303 P **P** 23 25 47.5 -0.3
352A IAmb IAmb 23 26 02.6
comp=Z,60nm,1.2s
352A Blakely 78.92 303 P **P** 23 25 47.7 -0.1
baz=104,SNR=5.1
V52A Sevierville 78.92 308 P **P** 23 25 47.7 -0.1
V52A IAmb IAmb 23 25 56.1
comp=Z,53nm,1.4s
W52A Murphy 78.99 307 P **P** 23 25 47.5 -0.7
W52A IAmb IAmb 23 25 56.8
comp=Z,59nm,1.3s
W52A Murphy 78.99 307 P **P** 23 25 49.0 +0.8
baz=105,SNR=5.9
TKL Tuckaleechee C 79.02 308 LR LR 23 53 12.1
comp=Z,1µm,21.6s,baz=112,slow=30
TKL Tuckaleechee C 79.02 308 P **P** 23 25 48.5 +0.2
TKL IAmb IAmb 23 25 57.2
comp=Z,59nm,1.4s
TKL Tuckaleechee C 79.02 308 P **P** 23 25 48.5 +0.2
TKL pmax pmax
comp=Z,59nm,1.4s
152A Waverly Hall 79.03 305 P **P** 23 25 48.8 +0.4
152A IAmb IAmb 23 25 57.0
comp=Z,47nm,1.4s
TZTN Tazewell 79.07 309 P **P** 23 25 48.8 +0.2
TZTN IAmb IAmb 23 25 57.2
comp=Z,50nm,1.4s
ARCES ARCESS Array B 79.14 12 P **P** 23 25 47.3 -1.0
comp=Z,3.4nm,0.9s,baz=216,slow=6.0,SNR=4.6
ARCES LR LR 00 02 37.6
comp=Z,503nm,20.2s,baz=222,slow=37
comp=Z,3.4nm,0.9s
ARCES ARCESS Array B 79.14 12 P **P** 23 25 49.7 +1.5
ARCES ARCESS Array B 79.14 12 P **P** 23 25 49.7 +1.5
ARCES pmax pmax
comp=Z,34nm,1.4s
S51A Beattyville 79.40 310 P **P** 23 25 50.7 +0.4
S51A IAmb IAmb 23 25 52.6
comp=Z,34nm,1.1s
S51A Beattyville 79.40 310 P **P** 23 25 50.2 -0.2
baz=106,SNR=7.8
S51A P **P** 23 25 50.2 -0.2
baz=106,SNR=7.8
N51A Ashland 79.41 313 IAmb IAmb 23 25 53.0
comp=Z,58nm,1.1s
N51A Ashland 79.41 313 P **P** 23 25 50.7 +0.4
baz=107,SNR=5.4
N51A P **P** 23 25 50.7 +0.4
baz=107,SNR=5.4
ILULI Ilulissat 79.46 347 P **P** 23 25 50.5 +0.6
ILULI Ilulissat 79.46 347 P **P** 23 25 50.5 +0.6
ILULI pmax pmax
comp=Z,38nm,1.3s
ILULI Ilulissat 79.46 347 *i* P **P** 23 25 51.4 +1.5
P51A Williamsport 79.50 312 P **P** 23 25 50.7 -0.1
V51A Loudon 79.51 308 P **P** 23 25 51.3 +0.4
V51A IAmb IAmb 23 25 59.4
comp=Z,48nm,1.1s
V51A Loudon 79.51 308 P **P** 23 25 49.8 -1.2
baz=105,SNR=6.2
CPCT Cooper Cave 79.55 307 P **P** 23 25 51.1 -0.1
Z51A Franklin 79.55 305 P **P** 23 25 51.6 +0.3
Q51A Peebles 79.58 311 P **P** 23 25 51.2 -0.2
baz=106
Q51A P **P** 23 25 51.2 -0.2
baz=106
APA Apatity 79.60 16 ⇓ *i* P **P** 23 25 52.0 +1.3
APA pmax pmax
comp=Z,6.0nm,1.2s
X51A Calhoun 79.60 307 P **P** 23 25 51.4 -0.1
X51A IAmb IAmb 23 25 60.0
comp=Z,63nm,1.2s
ACSO Alum Creek Sta 79.65 312 P **P** 23 25 50.9 -0.8
ACSO Alum Creek Sta 79.65 312 P **P** 23 25 51.9 +0.3
baz=106
HRA Herat 79.90 54 P **P** 23 25 52.9 -0.5
SUMG Summit 79.95 352 *i* P **P** 23 25 52.0 -1.1
M50A Fremont 80.03 314 P **P** 23 25 54.2 +0.5
PRGR Permogore 80.08 24 *e* P **P** 23 25 51.2 -2.2
PRGR *e* 23 25 59.0
W50A Signal Mountai 80.12 307 P **P** 23 25 53.9 -0.4
K50A Casco 80.13 315 IAmb IAmb 23 25 55.6
comp=Z,61nm,1.1s
R50A Paris 80.13 310 P **P** 23 25 55.0 +0.7
250A Grady 80.14 304 P **P** 23 25 55.2 +0.7
250A IAmb IAmb 23 26 03.0
comp=Z,103nm,1.4s
LVZ Lovozero 80.17 16 P **P** 23 25 54.8 +0.8
LVZ Lovozero 80.17 16 *i* P **P** 23 25 54.7 +0.8
LVZ pmax pmax
comp=Z,49nm,1.2s
LVZ MLR MLR
comp=Z,785nm,22.0s
KIRV Kirov 80.19 28 P **P** 23 25 53.3 -0.8
comp=Z,10nm,0.7s,baz=234,slow=4.0,SNR=9.7
KIRV LR LR 00 04 51.5
comp=Z,809nm,18.7s,baz=244,slow=38
comp=Z,10nm,0.7s
KIRV Kirov 80.19 28 *de* P **P** 23 25 53.2 -0.9
T50A Nancy 80.19 309 IAmb IAmb 23 26 02.9
comp=Z,46nm,1.2s
T50A Nancy 80.19 309 P **P** 23 25 54.8 +0.1
baz=105
T50A P **P** 23 25 54.8 +0.1
baz=105
FPAL Fort Paine 80.20 306 P **P** 23 25 54.9 +0.1
I49A Point Hope 80.61 316 P **P** 23 25 56.5 -0.2
SWET Sewanee 80.61 307 IAmb IAmb 23 26 04.6
comp=Z,45nm,1.4s
BRAL Brewton 80.62 303 P **P** 23 25 57.0 0.0
O49A Covington 80.64 312 IAmb IAmb 23 25 58.3
comp=Z,40nm,1.2s
Y49A Blount Mountai 80.68 305 P **P** 23 25 56.8 -0.6
N49A Columbus Grove 80.72 313 P **P** 23 25 57.1 -0.3
AAM Ann Arbor 80.72 314 P **P** 23 25 56.5 -0.8
AAM Ann Arbor 80.72 314 P **P** 23 25 56.5 -0.8
AAM pmax pmax
comp=Z,29nm,1.3s
P49A Miami Univ. Ec 80.75 311 P **P** 23 25 57.5 -0.1
R49A Shelbyville 80.77 310 P **P** 23 25 57.9 +0.2
R49A IAmb IAmb 23 26 05.5
comp=Z,55nm,1.4s
R49A Shelbyville 80.77 310 P **P** 23 25 58.0 +0.3
baz=105
R49A P **P** 23 25 58.0 +0.3
baz=105
U49A Red Boiling Sp 80.80 308 IAmb IAmb 23 26 05.8
comp=Z,40nm,1.3s
U49A Red Boiling Sp 80.80 308 P **P** 23 25 57.7 -0.2
baz=104
LRAL Lakeview Retre 80.98 305 P **P** 23 25 58.7 -0.3
LRAL Lakeview Retre 80.98 305 P **P** 23 25 58.6 -0.3
baz=103
FRB Frobisher Bay 81.16 338 LR LR 23 55 47.0
comp=Z,155nm,19.4s,baz=172,slow=31
L48A N Adams 81.18 314 P **P** 23 25 59.8 0.0
P48A Milroy 81.26 311 P **P** 23 26 00.2 -0.1
O48B Farmland 81.26 312 P **P** 23 25 59.7 -0.6
baz=105,SNR=6.2
X48A Hartselle 81.33 306 P **P** 23 25 59.9 -0.9
X48A Hartselle 81.33 306 P **P** 23 26 00.6 -0.2
baz=103,SNR=5.4
V48A Smith Brothers 81.44 307 IAmb IAmb 23 26 08.9
comp=Z,35nm,1.2s
V48A Smith Brothers 81.44 307 P **P** 23 26 01.1 -0.3
baz=103,SNR=6.7
AKTO Aktyubinsk 81.51 37 P **P** 23 26 01.3 0.0
comp=Z,14nm,0.9s,baz=235,slow=5.0,SNR=38
AKTO LR LR 00 07 21.9
comp=Z,351nm,18.1s,baz=232,slow=40
comp=Z,14nm,0.9s
J47A Sunmer 81.80 315 P **P** 23 26 03.0 -0.1
N47A Urbana 81.82 313 IAmb IAmb 23 26 04.8
comp=Z,35nm,1.0s
N47A Urbana 81.82 313 P **P** 23 26 02.4 -0.8
baz=105,SNR=8.6
N47A P **P** 23 26 02.4 -0.8
baz=105,SNR=8.6
Z47A Carrollton 81.89 305 IAmb IAmb 23 26 05.8
comp=Z,41nm,1.1s
T47A Sharon Grove 81.95 308 P **P** 23 26 03.8 -0.2
T47A IAmb IAmb 23 26 11.3
comp=Z,45nm,1.4s

T47A Sharon Grove 81.95 308 P **P** **23 26 04.8 +0.7**
baz=103
BLO Bloomington 82.01 311 P **P** **23 26 03.8 -0.5**
BLO Bloomington 82.01 311 P **P** **23 26 03.8 -0.5**
BLO pmax pmax
comp=Z,29nm,1.3s
PLAL Pickwick Lake 82.27 306 P **P** **23 26 05.7 -0.1**
E46A Sault Ste Mari 82.31 318 P **P** **23 26 06.1 +0.4**
WVT Waverly 82.33 307 P **P** **23 26 05.3 -0.7**
WVT IAmb IAmb 23 26 13.1
comp=Z,47nm,1.2s
WVT Waverly 82.33 307 P **P** **23 26 05.3 -0.7**
WVT pmax pmax
comp=Z,47nm,1.3s
WVT Waverly 82.33 307 P **P** **23 26 05.2 -0.7**
baz=103
L46A Eue Claire 82.54 314 P **P** **23 26 06.4 -0.6**
L46A IAmb IAmb 23 26 08.5
comp=Z,30nm,1.1s
146A Union 82.59 304 P **P** **23 26 08.0 +0.6**
146A Union 82.59 304 P **P** **23 26 08.9 +1.5**
baz=102
P46A Rosedale 82.63 311 P **P** **23 26 07.4 -0.1**
P46A IAmb IAmb 23 26 08.7
comp=Z,66nm,1.4s
346A Big Creek Wild 82.69 303 P **P** **23 26 07.5 -0.4**
SFIN Lafayette 82.73 312 P **P** **23 26 07.2 -0.8**
G45A Suttons Bay 82.86 317 P **P** **23 26 08.4 -0.2**
I45A Fountain 83.00 315 P **P** **23 26 08.3 -1.1**
T45A Paducah 83.16 308 P **P** **23 26 08.8 -1.5**
W45A Hickory Valley 83.20 306 P **P** **23 26 09.7 -0.8**
baz=102
UPNV Upernavik 83.22 348 *i* P **P** **23 26 11.3 +1.5**
Y45A Yeager Farm, C 83.23 305 P **P** **23 26 10.4 -0.4**
OXF Oxford 83.25 306 P **P** **23 26 09.8 -1.0**
OXF IAmb IAmb 23 26 11.8
comp=Z,24nm,0.9s
OXF Oxford 83.25 306 P **P** **23 26 09.8 -1.0**
OXF pmax pmax
comp=Z,24nm,0.9s
HALT Halls 83.47 307 P **P** **23 26 11.2 -0.7**
HICK Hickman 83.52 308 P **P** **23 26 12.0 -0.2**
LNXT Lenox 83.63 307 P **P** **23 26 12.6 -0.2**
M44A Midewin, Midew 83.66 313 P **P** **23 26 12.1 -0.7**
O44A Mansfield 83.70 311 P **P** **23 26 12.8 -0.3**
O44A IAmb IAmb 23 26 19.4
comp=Z,27nm,1.2s
L44A Lake County Fo 83.75 313 P **P** **23 26 13.0 -0.2**
L44A IAmb IAmb 23 26 13.9
comp=Z,35nm,1.1s
SIUC Southern Illin 83.75 309 P **P** **23 26 12.7 -0.7**
SIUC IAmb IAmb 23 26 20.1
comp=Z,36nm,1.1s
344A Westbrook Farm 83.76 302 P **P** **23 26 14.3 +0.8**
S44A Carbondale 83.77 309 P **P** **23 26 12.6 -0.9**
S44A IAmb IAmb 23 26 20.2
comp=Z,31nm,1.1s
S44A Carbondale 83.77 309 P **P** **23 26 12.5 -0.9**
baz=102
ARU Arti 83.83 32 P **P** **23 26 13.3 -0.1**
comp=Z,14nm,1.0s,baz=243,slow=5.4,SNR=25
ARU LR LR 00 06 05.2
comp=Z,318nm,19.8s,baz=245,slow=38
comp=Z,14nm,1.0s
ARU Arti 83.83 32 *d* P **P** **23 26 13.3 -0.1**
ARU Arti 83.83 32 *d i* P **P** **23 26 13.2 -0.1**
ARU 23 29 25.0
ARU PPP PPP 23 31 16.9
ARU S **S** **23 36 34.3 -2.6**
ARU pmax pmax
comp=Z,38nm,1.3s
Q44A Meyer Farm, Va 83.84 310 P **P** **23 26 13.5 -0.3**
Q44A IAmb IAmb 23 26 14.3
comp=Z,37nm,1.4s
GNAR Gosnell 84.03 307 P **P** **23 26 14.8 +0.1**
E43A Lone Tree Farm 84.11 318 P **P** **23 26 14.5 -0.5**
K43A Burlington 84.17 314 P **P** **23 26 13.8 -1.6**
K43A IAmb IAmb 23 26 16.1
comp=Z,33nm,1.1s
H43A Windswept, Lux 84.18 316 P **P** **23 26 15.7 +0.3**
H43A IAmb IAmb 23 26 17.1
comp=Z,29nm,1.1s
P43A Skaggs, Pawnee 84.38 311 P **P** **23 26 15.3 -1.3**
HDIL Hopedale 84.40 312 P **P** **23 26 16.3 -0.3**
HDIL IAmb IAmb 23 26 17.5
comp=Z,20nm,1.0s
HBAR Harrisburg 84.46 306 P **P** **23 26 17.9 +0.9**
QSPA South Pole Qui 84.48 180 LR LR 23 59 50.1
comp=Z,623nm,18.6s,baz=199,slow=33
QSPA South Pole Qui 84.48 180 P **P** **23 26 18.4 +1.7**
143A Socs Landing, 84.55 304 P **P** **23 26 17.9 +0.5**
baz=100,SNR=7.3
SLM Saint Louis 84.72 310 P **P** **23 26 18.1 -0.2**
SLM IAmb IAmb 23 26 19.3
comp=Z,30nm,1.1s
SLM Saint Louis 84.72 310 P **P** **23 26 18.1 -0.2**
SLM pmax pmax
comp=Z,30nm,1.1s
F42A Maple Grove Fa 84.73 317 P **P** **23 26 18.2 0.0**
F42A IAmb IAmb 23 26 24.7
comp=Z,38nm,1.4s
FVM French Village 84.74 309 IAmb IAmb 23 26 25.5
comp=Z,34nm,1.1s
FVM French Village 84.74 309 P **P** **23 26 17.3 -1.1**
baz=101,SNR=11
I42A Draeger Farm, 84.85 315 P **P** **23 26 18.3 -0.4**
I42A Draeger Farm, 84.85 315 P **P** **23 26 18.4 -0.4**
baz=103
LCAR Lake Charles 84.95 307 P **P** **23 26 19.6 +0.2**
LCAR IAmb IAmb 23 26 26.7
comp=Z,35nm,1.2s
L42A Oliver, Polo 84.98 313 IAmb IAmb 23 26 20.1
comp=Z,32nm,1.2s
L42A Oliver, Polo 84.98 313 P **P** **23 26 18.7 -0.8**
baz=102
SVE Sverdlovsk 85.05 32 *e* P **P** **23 26 19.8 +0.3**
SVE pmax pmax
comp=Z,38nm,2.0s
SPITS Spitsbergen Ar 85.06 6 P **P** **23 26 18.8 -0.3**
comp=Z,5.0nm,1.0s,baz=284,slow=5.8,SNR=1.7
SPITS LR LR 00 02 59.3
comp=Z,281nm,20.6s,baz=168,slow=35
comp=Z,5.0nm,1.0s
D41A Chassel 85.32 318 P **P** **23 26 21.3 +0.2**
CCM Cathedral Cave 85.39 309 P **P** **23 26 21.0 -0.6**
CCM IAmb IAmb 23 26 24.5
comp=Z,40nm,1.3s
CCM Cathedral Cave 85.39 309 P **P** **23 26 21.0 -0.6**
CCM pmax pmax
comp=Z,40nm,1.3s
CCM Cathedral Cave 85.39 309 P **P** **23 26 20.8 -0.9**
baz=101,SNR=12
KBL Kabul 85.42 55 P **P** **23 26 21.8 -0.4**
KBL Kabul 85.42 55 P **P** **23 26 21.8 -0.4**
KBL pmax pmax
comp=Z,21nm,1.3s
KBL Kabul 85.42 55 P **P** **23 26 22.2 0.0**
SNR=6.9
JFWS Jewell Farm 85.59 314 P **P** **23 26 21.9 -0.6**
JFWS Jewell Farm 85.59 314 P **P** **23 26 21.9 -0.6**
JFWS pmax pmax
comp=Z,22nm,1.1s
W41B Gary Mavity, V 85.67 306 IAmb IAmb 23 26 30.3
comp=Z,26nm,1.2s
W41B Gary Mavity, V 85.67 306 P **P** **23 26 22.5 -0.6**
baz=100
UALR University of 85.67 305 IAmb IAmb 23 26 30.7
comp=Z,29nm,1.2s
FCAR Ozark Folk Cen 85.69 307 P **P** **23 26 22.5 -0.7**
WHAR Wooly Hollow 85.72 306 P **P** **23 26 23.1 -0.3**
WHAR IAmb IAmb 23 26 30.6
comp=Z,42nm,1.4s
MGMO Mountain Grove 86.03 308 IAmb IAmb 23 26 27.0
comp=Z,62nm,1.5s
X40A Basin Creek Fa 86.03 305 P **P** **23 26 24.8 0.0**
X40A Basin Creek Fa 86.03 305 P **P** **23 26 24.9 0.0**
baz=100,SNR=7.5
X40A P **P** **23 26 24.9 0.0**
baz=100,SNR=7.5
I40A Norwalk 86.05 315 P **P** **23 26 24.7 -0.1**
I40A IAmb IAmb 23 26 32.1
comp=Z,33nm,1.4s
WLAR White Oak Lake 86.12 304 P **P** **23 26 25.2 -0.2**
L40A Anamosa 86.13 313 IAmb IAmb 23 26 25.8
comp=Z,31nm,1.4s

R40A Maddies Statio 86.22 309 P **P** **23 26 25.7 -0.1**
R40A IAmb IAmb 23 26 34.2
comp=Z,57nm,1.5s
R40A Maddies Statio 86.22 309 P **P** **23 26 26.2 +0.4**
baz=100,SNR=11
CHGR Chuyangaron 86.23 51 IAmb IAmb 23 26 33.4
comp=Z,46nm,1.0s
U40A Yellville 86.35 307 P **P** **23 26 25.8 -0.7**
baz=100,SNR=9.7
U40A P **P** **23 26 25.8 -0.7**
baz=100,SNR=9.7
MIAR Mount Ida 86.64 305 P **P** **23 26 27.6 -0.3**
MIAR Mount Ida 86.64 305 P **P** **23 26 27.6 -0.3**
MIAR pmax pmax
comp=Z,17nm,1.3s
W39A Magazine 86.91 306 IAmb IAmb 23 26 30.9
comp=Z,38nm,1.2s
W39A Magazine 86.91 306 P **P** **23 26 29.3 +0.1**
baz=99,SNR=10
S39A Bolivar 86.94 308 IAmb IAmb 23 26 30.7
comp=Z,32nm,1.0s
S39A Bolivar 86.94 308 P **P** **23 26 28.4 -1.0**
baz=100,SNR=22
GAR Garm 87.18 51 P **P** **23 26 31.1 +0.5**
HHAR Hobbs 87.21 307 IAmb IAmb 23 26 32.2
comp=Z,25nm,1.1s
HHAR Hobbs 87.21 307 P **P** **23 26 29.9 -0.8**
baz=99
K38A Parkersburg 87.36 313 IAmb IAmb 23 26 31.7
comp=Z,22nm,0.9s
P38A Dawn 87.42 310 IAmb IAmb 23 26 33.2
comp=Z,40nm,1.1s
P38A Dawn 87.42 310 P **P** **23 26 31.2 -0.4**
baz=100,SNR=10
EYMN Ely 87.45 318 IAmb IAmb 23 26 32.2
comp=Z,28nm,1.5s
IUG Iuzhnay 87.50 47 *d i* P **P** **23 26 30.6 -1.4**
IUG *e* 23 29 52.6
IUG Iuzhnay 87.50 47 ⇓ *i* P **P** **23 26 30.6 -1.4**
baz=48
IUG *e* PP **PP** **23 29 52.7 -4.2**
baz=48
U38A Gravette 87.59 307 IAmb IAmb 23 26 39.7
comp=Z,30nm,1.1s
U38A Gravette 87.59 307 P **P** **23 26 31.8 -0.7**
baz=99,SNR=8.1
BTK Batken 87.74 50 IAmb IAmb 23 26 40.8
comp=Z,33nm,1.2s
HKT Hockley 87.86 300 P **P** **23 26 34.2 +0.3**
HKT IAmb IAmb 23 26 41.9
comp=Z,20nm,1.2s
HKT Hockley 87.86 300 *i* P **P** **23 26 33.7 -0.1**
HKT pmax pmax
comp=Z,13nm,1.2s
HKT Hockley 87.86 300 P **P** **23 26 34.5 +0.6**
baz=98
KKAR Karatay Array 88.00 47 IAmb IAmb 23 26 41.5
comp=Z,24nm,1.4s
I37A Lemond, Waseca 88.05 314 IAmb IAmb 23 26 35.4
comp=Z,32nm,1.1s
X37A Clayton 88.11 305 IAmb IAmb 23 26 43.1
comp=Z,34nm,1.2s
X37A Clayton 88.11 305 P **P** **23 26 35.3 +0.3**
baz=98,SNR=6.7
DRK Karamyk 88.40 50 P **P** **23 26 37.5 +0.8**
F36A Milaca 88.44 316 P **P** **23 26 35.2 -1.1**
baz=100,SNR=6.0
DZA Taraz 88.56 47 *e* P **P** **23 26 35.9 -1.1**
DZA Taraz 88.56 47 *e* P **P** **23 26 35.9 -1.1**
baz=47
TUL1 Leonard 88.64 306 IAmb IAmb 23 26 39.2
comp=Z,30nm,1.1s
TUL1 Leonard 88.64 306 P **P** **23 26 37.1 -0.4**
baz=98,SNR=7.0
B35A Bob, Littlefor 89.00 319 P **P** **23 26 38.6 -0.2**
B35A IAmb IAmb 23 26 45.4
comp=Z,29nm,1.4s
T35A Sooner Cattle 89.34 307 IAmb IAmb 23 26 50.1
comp=Z,43nm,1.1s
T35B Sooner Cattle 89.34 307 P **P** **23 26 40.6 -0.2**
baz=98,SNR=9.8
435B Jarrell 89.47 301 P **P** **23 26 42.5 +0.9**
BRVK Borovoye 89.54 37 P **P** **23 26 41.8 +0.5**
BRVK IAmb IAmb 23 26 48.8
comp=Z,32nm,1.4s
BRVK Borovoye 89.54 37 P **P** **23 26 41.8 +0.5**
BRVK pmax pmax
comp=Z,32nm,1.5s
BVAR Borovoye Array 89.59 37 LR LR 00 12 49.5
comp=Z,290nm,18.4s,baz=134,slow=40
X34A Smith Ranch, M 90.13 305 **P** **23 26 43.2 -1.3**
X34A IAmb IAmb 23 26 46.0
comp=Z,23nm,1.0s
AML Almayashu 90.19 48 *i* P **P** **23 26 44.5 -0.6**
SNR=7.6
ECSD EROS Data Cent 90.31 314 IAmb IAmb 23 26 48.3
comp=Z,37nm,1.4s
ECSD EROS Data Cent 90.31 314 P **P** **23 26 44.6 -0.6**
baz=98,SNR=11
F33A 5 Mile Ranch, 90.36 316 P **P** **23 26 45.3 0.0**
F33A IAmb IAmb 23 27 03.0
comp=Z,23nm,1.4s
BRZS Berezniki 90.54 40 *d i* P **P** **23 26 43.9 -2.2**
BRZS *e* 23 30 19.9
BRZS *e* S **SKSac** **23 37 20.6 +2.5**
BRZS pmax pmax
comp=Z,27nm,2.5s
BRZS Berezniki 90.54 40 ⇓ *i* P **P** **23 26 43.9 -2.2**
comp=Z,28nm,2.5s,baz=40
BRZS *e* PP **PP** **23 30 19.9 -0.9**
baz=40
BRZS *e* S **SKSac** **23 37 20.6 +2.5**
baz=40
ULM Lac du Bonnet 90.67 320 LR LR 00 03 22.7
comp=Z,698nm,19.1s,baz=98,slow=33
833A Chaparral WMA, 90.77 298 P **P** **23 26 48.0 +0.3**
833A IAmb IAmb 23 26 55.8
comp=Z,34nm,1.2s
BTLS Baital 90.81 45 *d i* P **P** **23 26 46.2 -1.2**
BTLS *e* 23 30 22.0
BTLS *e* S **SKSac** **23 37 22.9 +3.1**
BTLS pmax pmax
comp=Z,28nm,2.7s
BTLS Baital 90.81 45 ⇓ *i* P **P** **23 26 46.3 -1.2**
comp=Z,28nm,2.7s,baz=45
BTLS *e* PP **PP** **23 30 22.0 -1.1**
baz=45
BTLS *e* S **SKSac** **23 37 22.9 +3.1**
baz=45
AAK Ala-Archa 90.84 47 P **P** **23 26 48.5 +0.7**
comp=Z,7.0nm,0.7s,baz=260,slow=5.8,SNR=16
AAK LR LR 00 10 39.0
comp=Z,715nm,18.6s,baz=264,slow=38
comp=Z,7.0nm,0.7s
AAK Ala-Archa 90.84 47 P **P** **23 26 48.9 +1.0**
AAK IAmb IAmb 23 26 55.7
comp=Z,33nm,1.2s
AAK Ala-Archa 90.84 47 *de* P **P** **23 26 48.4 +0.6**
AAK pmax pmax
comp=Z,17nm,1.0s
AAK MLR MLR
comp=Z,675nm,18.0s
AAK Ala-Archa 90.84 47 *i* P **P** **23 26 48.4 +0.6**
SNR=11
WMOK Wichita Mounta 90.92 305 P **P** **23 26 48.3 +0.1**
baz=96
SGDS Sogindy 91.03 47 *d i* P **P** **23 26 47.9 -0.7**
SGDS pmax pmax
comp=Z,24nm,2.7s
SGDS Sogindy 91.03 47 ⇓ *i* P **P** **23 26 48.0 -0.7**
comp=Z,24nm,2.7s,baz=47
JCT Junction City 91.34 300 P **P** **23 26 50.8 +0.5**
JCT IAmb IAmb 23 26 59.0
comp=Z,26nm,1.2s
JCT Junction City 91.34 300 P **P** **23 26 50.8 +0.5**
JCT pmax pmax
comp=Z,26nm,1.2s
ABTX Abilene, Hawle 91.42 302 P **P** **23 26 50.6 0.0**
ABTX Abilene, Hawle 91.42 302 P **P** **23 26 50.8 +0.2**
baz=96,SNR=5.8
KSH Kashi 91.60 51 P **P** **23 26 50.0 -1.4**
KSH sP pwP 23 26 56.6 0.0
KSH PP **PP** **23 30 28.0 -1.8**
KSH SKS **SKSac** **23 37 19.1 -5.8**
KSH SS **SS** **23 44 00.0 +0.9**
KSH pmax pmax
comp=Z,19nm,1.0s
KSH LR LR
comp=Z,340nm,18.9s
KSH LR LR
KSH comp=Z,770nm,21.0s LR LR
comp=Z,1μm,21.0s
HYBB Hyderabad (bro 91.73 73 *e* P **P** **23 26 52.8 +0.5**
HYBB *e* sP **pwP** **23 26 57.2 -0.3**
KUU Kurty 92.31 46 *e* P **P** **23 26 53.0 -1.5**
KUU Kurty 92.31 46 *e* P **P** **23 26 53.0 -1.5**
baz=46
TNSS Tian-Shan 92.67 47 *e* P **P** **23 26 55.7 -0.9**
TNSS Tian-Shan 92.67 47 *e* P **P** **23 26 55.7 -0.9**
baz=47
CHKK Chushkaly 92.78 46 *e* P **P** **23 26 54.9 -1.7**
CHKK Chushkaly 92.78 46 *e* P **P** **23 26 54.9 -1.7**
baz=46
PALK Pallekele 92.89 83 LR LR 00 05 58.6
comp=Z,2μm,19.6s,baz=6.7,slow=34
RES Resolute Bay 93.63 345 P **P** **23 27 00.4 +0.6**
comp=Z,6.0nm,0.9s,baz=88,slow=2.8,SNR=6.0
comp=Z,6.0nm,0.9s
RES Resolute Bay 93.63 345 IAmb IAmb 23 27 13.3
comp=Z,30nm,1.4s
SATY Saty 93.74 47 *e* P **P** **23 26 59.0 -2.2**
SATY Saty 93.74 47 *e* P **P** **23 26 59.0 -2.2**
baz=47
TDK Taldyqorghan 93.88 45 *e* P **P** **23 26 59.0 -2.7**
TDK Taldyqorghan 93.88 45 *e* P **P** **23 26 59.0 -2.7**
baz=45
KPKS Kokpek 93.97 47 *e* P **P** **23 27 00.5 -1.7**
KPKS *e* S **SKSac** **23 37 38.8 +1.0**
KPKS pmax pmax
comp=Z,14nm,2.1s
KPKS Kokpek 93.97 47 *e* P **P** **23 27 00.6 -1.7**
comp=Z,14nm,2.1s,baz=47
KPKS *e* S **SKSac** **23 37 38.8 +1.0**
baz=47
MSTX Muleshoe 94.14 304 P **P** **23 27 03.9 +0.6**
baz=94
KURBB Kurchatov Arra 94.33 40 P **P** **23 27 03.3 -0.3**
comp=Z,7.0nm,1.1s,baz=272,slow=5.5,SNR=29
KURBB PP **PP** **23 30 50.8 +0.1**
comp=Z,2.1nm,1.1s,baz=271,slow=7.4,SNR=3.8
KURBB LR LR 00 14 42.8
comp=Z,308nm,18.2s,baz=223,slow=39
comp=Z,7.0nm,1.1s
RPN Rapa Nui 94.39 242 LR LR 00 05 04.7
comp=Z,1μm,18.5s,baz=56,slow=33
KURK Kurchatov 94.40 40 P **P** **23 27 03.9 +0.1**
KURK IAmb IAmb 23 27 11.6
comp=Z,25nm,1.4s
KURK Kurchatov 94.40 40 *de* P **P** **23 27 03.4 -0.4**
KURK pmax pmax
comp=Z,15nm,1.6s
KURK MLR MLR
comp=Z,175nm,13.0s
SHLS Shalkode 94.52 47 *e* P **P** **23 27 06.0 +1.2**
SHLS *e* S **SKSac** **23 37 42.2 +1.3**
SHLS pmax pmax
comp=Z,23nm,2.3s
SHLS Shalkode 94.52 47 *e* P **P** **23 27 06.1 +1.2**
comp=Z,23nm,2.3s,baz=47
SHLS *e* S **SKSac** **23 37 42.2 +1.3**
baz=47
TXAR Lajitas Array 94.59 299 P **P** **23 27 05.4 0.0**
comp=Z,1.8nm,0.9s,baz=122,slow=6.4,SNR=9.7
TXAR LR LR 00 05 10.2
comp=Z,362nm,22.0s,baz=85,slow=33
comp=Z,1.8nm,0.9s
TX31 Lajitas Ar. Si 94.59 299 IAmb IAmb 23 27 07.2
comp=Z,28nm,1.2s
TX31 Lajitas Ar. Si 94.59 299 P **P** **23 27 05.4 +0.1**
baz=94
TX32 Lajitas Array 94.59 299 P **P** **23 27 05.0 -0.4**
SEM Semipalatinsk 95.42 40 *e* P **P** **23 27 08.0 -0.8**
SEM Semipalatinsk 95.42 40 *e* P **P** **23 27 08.0 -0.8**
baz=40
MAKZ Makanchi 96.45 44 P **P** **23 27 12.3 -1.1**
MAKZ Makanchi 96.45 44 P **P** **23 27 12.3 -1.1**
MAKZ pmax pmax
comp=Z,9.0nm,1.2s
SDCO Great Sand Dun 96.55 307 P **P** **23 27 14.3 -0.1**
SDCO Great Sand Dun 96.55 307 P **P** **23 27 14.7 +0.3**
baz=92
SBA Scott Base 96.64 180 P **P** **23 27 14.8 +1.2**
SBA IAmb IAmb 23 27 23.7
comp=Z,15nm,1.2s
SBA Scott Base 96.64 180 P **P** **23 27 14.8 +1.2**
SBA pmax pmax
comp=Z,15nm,1.2s
MK31 Makanchi Array 96.67 44 *i* P **P** **23 27 11.1 -3.3**
MK31 pmax pmax
comp=Z,7.0nm,1.1s
MKAR Makanchi Array 96.67 44 P **P** **23 27 13.6 -0.8**
comp=Z,1.9nm,0.8s,baz=274,slow=4.2,SNR=11
MKAR PP **PP** **23 31 10.3 +1.3**
comp=Z,2.1nm,1.1s,baz=255,slow=5.7,SNR=3.6
MKAR LR LR 00 16 38.7
comp=Z,274nm,20.3s,baz=252,slow=39
comp=Z,1.9nm,0.8s
VNDA Vanda 96.90 179 P **P** **23 27 15.5 +0.6**
comp=Z,1.6nm,0.9s,baz=235,slow=6.6,SNR=10.0
VNDA LR LR 00 04 44.9
comp=Z,546nm,21.3s,baz=181,slow=32
comp=Z,1.6nm,0.9s
VNDA Vanda 96.90 179 P **P** **23 27 15.4 +0.6**
VNDA Vanda 96.90 179 P **P** **23 27 15.4 +0.6**
VNDA pmax pmax
comp=Z,4.0nm,1.1s
CASY Casey 97.16 160 P Pdif 23 27 16.8 +0.5
ANMO Albuquerque 97.23 304 LR LR 00 09 52.1
comp=Z,284nm,18.3s,baz=98,slow=35
BNM Barren Site 97.35 304 P Pdif 23 27 18.6 +0.5
ZALV Zalesovo Beam 98.25 36 PP **PP** **23 31 13.8 -7.0**
comp=Z,0.7nm,0.4s,baz=292,slow=7.6,SNR=4.1
ZALV LR LR 00 16 10.3
comp=Z,293nm,20.5s,baz=270,slow=38
ZALV Zalesovo Beam 98.25 36 P Pdif 23 27 22.6 +1.3
ZALV Zalesovo Beam 98.25 36 P Pdif 23 27 22.6 +1.3
ZSN Zaisan 98.43 43 *e* P **P** **23 27 21.2 -1.1**
ZSN *e* 23 31 22.8
ZSN Zaisan 98.43 43 *e* P **P** **23 27 21.2 -1.1**
baz=43
ZSN *e* PP **PP** **23 31 22.8 +0.3**
baz=43
PDAR Pinedale Array 99.69 312 P **Pdif** **23 27 27.0 -1.4**
comp=Z,0.5nm,1.0s,baz=82,slow=6.5,SNR=1.9
PDAR PP **PP** **23 31 28.8 -3.8**
comp=Z,0.5nm,0.8s,baz=119,slow=7.3,SNR=4.5
PDAR LR LR 00 06 25.9
comp=Z,701nm,21.7s,baz=106,slow=32
comp=Z,0.5nm,1.0s
WMQ Urumqi 100.52 47 *e* P **Pdif** **23 27 33.8 +2.0**
WMQ pP pwP 23 27 37.8 +0.8
WMQ pmax pmax
comp=Z,14nm,0.9s
WMQ LR LR
comp=Z,520nm,20.7s
WMQ LR LR
comp=Z,420nm,19.7s
WMQ LR LR
comp=Z,400nm,20.1s
PZH PanZhiHua 113.29 64 PKP **PKiKP** **23 32 22.3 -0.4**
PZH PP **PP** **23 33 18.6 +5.6**
PZH SKS **SKSdf** **23 39 36.8 +1.0**
PZH SS **SS** **23 48 59.8 +0.2**
PZH AMB AMB
comp=Z,130nm,6.1s
PZH LR LR
comp=Z,330nm,19.0s
PZH LR LR
comp=Z,210nm,18.8s
PZH LR LR
comp=Z,270nm,18.6s
CD2 Chengdu 114.52 59 PKP PKPdf 23 32 24.3 -0.5
YAK Yakutsk 116.84 19 *i* PKIKP **PKPdf** **23 32 28.0 -0.3**
YAK pmax pmax
comp=Z,6.0nm,0.7s
BTO Baotou 117.35 47 *e* PKP **PKPdf** **23 32 29.9 -0.2**
BTO LR LR
comp=Z,960nm,22.0s
BTO LR LR
comp=Z,1μm,20.0s
BILL Bilibino 117.66 1 *i* PKIKP **PKPdf** **23 32 28.0 -1.7**
BILL pmax pmax
comp=Z,8.0nm,1.5s

XAN	**Xi'an**	**118.22**	**54**	PKP	**PKPdf**	23 32 31.8	-0.1
XAN				PP	**PP**	23 33 50.6	+3.3
XAN				AMB	AMB		
	comp=Z,160nm,5.5s						
XAN				LR	LR		
	comp=Z,330nm,19.9s						
XAN				LR	LR		
	comp=Z,200nm,19.2s						
XAN				LR	LR		
	comp=Z,560nm,26.1s						
HHC	**Hu-ho-hao-te**	**118.39**	**46**	*e*PKP	**PKPdf**	23 32 28.6	-3.5
HHC				PP	**PP**	23 33 51.8	+3.6
HHC				LR	LR		
	comp=Z,580nm,16.9s						
HHC				LR	LR		
	comp=Z,590nm,18.4s						
HHC				LR	LR		
	comp=Z,1μm,16.9s						
XLT	**XiLinHaoTe**	**120.41**	**42**	*e*PKP	**PKiKP**	23 32 36.1	+0.2
XLT				PP	**PP**	23 34 06.4	+4.5
XLT				AMB	AMB		
	comp=Z,160nm,5.5s						
XLT				LR	LR		
	comp=Z,630nm,19.8s						
XLT				LR	LR		
	comp=Z,450nm,18.4s						
LYN	**LuoYang**	**120.94**	**53**	*e*PKP	**PKiKP**	23 32 40.0	+2.9
LYN				PP	**PP**	23 34 12.8	+7.0
LYN				SS	SS	23 50 39.5	+1.1
LYN				AMB	AMB		
	comp=Z,190nm,4.5s						
LYN				LR	LR		
	comp=Z,460nm,19.8s						
LYN				LR	LR		
	comp=Z,320nm,19.6s						
LYN				LR	LR		
	comp=Z,450nm,19.2s						
QIZ	**Qiongzhong**	**121.44**	**71**	PKP	**PKPdf**	23 32 37.6	-0.8
QIZ				PP	**PP**	23 34 08.8	-1.0
QIZ				AMB	AMB		
	comp=Z,190nm,6.5s						
QIZ				LR	LR		
	comp=Z,280nm,21.6s						
QIZ				LR	LR		
	comp=Z,310nm,26.5s						
QIZ				LR	LR		
	comp=Z,470nm,17.5s						
SEY	**Seymchan**	**121.60**	**9**	PKP	**PKPdf**	23 32 36.9	-0.6
	comp=Z,1.1nm,0.2s,baz=242,slow=3.4,SNR=4.5						
HNS	**HongShan**	**121.82**	**49**	*e*PKP	**PKiKP**	23 32 43.4	+4.7
HNS				PP	**PP**	23 34 16.8	+5.1
HNS				AMB	AMB		
	comp=Z,230nm,6.9s						
HNS				LR	LR		
	comp=Z,240nm,18.4s						
HNS				LR	LR		
	comp=Z,360nm,17.8s						
WHN	**Wuhan**	**123.53**	**57**	⇑PKP	**PKiKP**	23 32 45.9	+3.6
TIA	**Tai'an**	**124.05**	**50**	⇑PKP	**PKPdf**	23 32 42.9	-0.1
CN2	**Changchun**	**126.43**	**38**	*e*PKP	**PKPdf**	23 32 43.5	-3.8
CN2				PP	**PP**	23 34 41.8	-0.4
CN2				SKS	**SKSdf**	23 39 53.9	-5.8
CN2				SKKS	**SKKSac**	23 41 33.9	-7.4
CN2				AMB	AMB		
	comp=Z,110nm,7.0s						
CN2				LR	LR		
	comp=Z,370nm,18.0s						
CN2				LR	LR		
	comp=Z,280nm,18.0s						
CN2				LR	LR		
	comp=Z,290nm,18.0s						
BNX	**BinXian**	**126.50**	**35**	⇑PKP	**PKPdf**	23 32 46.3	-1.0
KLR	**Kul'dur**	**126.61**	**29**	PKP	**PKPdf**	23 32 46.8	-0.6
	comp=Z,3.0nm,0.9s,baz=314,slow=2.4,SNR=8.0						
KLR	**Kul'dur**	**126.61**	**29**	*c i*PKIKP	**PKPdf**	23 32 47.1	-0.3
KLR				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KLR				MLR	MLR		
	comp=Z,524nm,22.0s						
NJ2	**Nanjing**	**126.79**	**54**	*e*PKP	**PKPdf**	23 32 48.3	0.0
TAOE	**Nuku Hiva Isla**	**126.81**	**255**	*e*LR	LR	00 13 14.0	
	comp=Z,1μm,23.0s						
TBI	**Tubuai**	**129.85**	**233**	*e*LR	LR	00 14 32.7	
	comp=Z,1μm,29.5s						
KSAR	**Wonju Array Be**	**131.33**	**44**	PKPdf	**PKPdf**	23 32 56.5	-0.3
KSAR	**Wonju Array Be**	**131.33**	**44**	PKIKP	**PKPdf**	23 32 56.5	-0.3
KSRS	**Korea Array**	**131.35**	**44**	PKP	**PKPdf**	23 32 56.1	-0.7
	comp=Z,0.4nm,0.3s,baz=301,slow=3.6,SNR=4.3						
KSRS				PP	**PP**	23 35 15.2	+0.6
	comp=Z,0.8nm,0.4s,baz=303,slow=5.6,SNR=2.1						
PETK	**Petropavlovsk-**	**131.84**	**9**	PKP	**PKPdf**	23 32 56.4	-0.9
	comp=Z,0.5nm,0.4s,baz=215,slow=1.8,SNR=2.1						
PET	**Petropavlovsk**	**132.06**	**8**	*i* PKIKP	**PKPdf**	23 32 58.1	+0.4
PET				*e*		23 35 24.4	
PET				*e*SS	SS	23 52 52.7	-1.9
PET				*e*SSS	SSS	23 57 51.0	
PET				pmax	pmax		
	comp=Z,22nm,1.1s						
PPT2	**Papeete2**	**132.60**	**240**	*e*LR	LR	00 15 50.6	
	comp=Z,797nm,29.5s						
YSS	**Yuzh-Sakhalins**	**133.24**	**24**	*i* PKIKP	**PKPdf**	23 32 59.7	-0.4
YSS				pmax	pmax		
	comp=Z,24nm,1.9s						
ASAR	**Alice Springs**	**135.44**	**132**	PKPdf	**PKPdf**	23 33 02.8	-2.2
ASAR	**Alice Springs**	**135.44**	**132**	PKIKP	**PKPdf**	23 33 02.8	-2.2
MJAR	**Matsushiro Arr**	**138.58**	**38**	PKP	**PKPdf**	23 33 10.5	+0.1
	comp=Z,0.8nm,0.4s,baz=356,slow=0.6,SNR=2.5						
EIDS	**Eidsvold**	**144.86**	**152**	PKPdf	PKPbc	23 33 21.2	+0.3
CTA	**Charters Tower**	**146.38**	**140**	PKPbc	**PKPdf**	23 33 25.3	+0.6
	comp=Z,9.0nm,0.8s,baz=231,slow=4.3,SNR=7.1						
COEN	**Coen**	**148.23**	**128**		**PKPbc**	23 33 31.5	+0.3

*ATH **19** 23:30:45.6,36.98N×20.88E,h6km±2km,ML3.4/18 Error ellipse: s-maj=3.6km s-min=1.3km az=51.0*
*THE **19** 23:30:48.6,37.15N×20.88E,h0km±1km,ML3.2/9,Error ellipse: s-maj=1.8km s-min=0.4km az=229.0*
*IDC **19** 23:30:50.3±1.8,37.73N×21.40E,h0km,mb3.6/5, mbtmp3.7/7,ML3.0/2,Error ellipse: s-maj=37.2km s-min=22.3km az=42.0*

ISC 19 23:30:48.7±1.2,37.17N±0.04×20.92E±0.04,h11km±8km, n63,σ1s51/82,mb3.8/5,Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LTHK	**Lithakia**	**0.54**	**353**	P	**Pg**	**23 30 59.1**	**-0.2**
LTHK	**Lithakia**	**0.54**	**353**	P	**Pg**	**23 30 59.4**	**+0.1**
LTHK				S	**Sb**	**23 31 07.7**	**-0.3**
PYL	**PYLOS**	**0.71**	**113**	P	**Pg**	**23 30 59.3**	**-3.2**
PYL				AML	AML	23 31 18.7	
	comp=N,2104μm,0.5s						
PYL				AML	AML	23 31 24.9	
	comp=E,4938μm,0.5s						
PYL	**PYLOS**	**0.71**	**113**	P	**Pg**	**23 31 02.3**	**-0.2**
PYL				S	**Sg**	**23 31 13.2**	**+1.4**
	comp=E,2μm,0.5s						
ITM	**Ithomi**	**0.80**	**89**	P	**Pg**	**23 31 01.0**	**-3.2**
ITM				AML	AML	23 31 23.2	
	comp=N,2797μm,0.4s						
ITM				AML	AML	23 31 40.7	
	comp=E,2635μm,0.6s						
ITM	**Ithomi**	**0.80**	**89**	P	**Pg**	**23 31 03.7**	**-0.5**
ITM				S	**Sg**	**23 31 16.1**	**+1.4**
	comp=E,1μm,0.3s						
PSDA	**Pessada-Kefalo**	**0.98**	**344**	P	**Pg**	**23 31 06.7**	**-0.8**
PSDA	**Pessada-Kefalo**	**0.98**	**344**	P	**Pg**	**23 31 06.8**	**-0.8**
PSDA				S	**Sn**	**23 31 21.8**	**-0.5**
RLS	**Riolos of Patr**	**0.98**	**26**	P	**Pg**	**23 31 07.1**	**-0.5**
RLS				S	**Sn**	**23 31 23.3**	**+0.9**
RLS				AML	AML	23 31 27.9	
	comp=N,2664μm,0.9s						
RLS				AML	AML	23 31 31.7	
	comp=E,2549μm,0.8s						
RLS	**Riolos of Patr**	**0.98**	**26**	P	**Pg**	**23 31 07.3**	**-0.4**
RLS				S	**Sn**	**23 31 22.8**	**+0.4**
	comp=E,1μm,0.8s						
VLS	**Valsamata**	**1.04**	**345**	P	**Pg**	**23 31 07.5**	**-1.3**
VLS				S	**Sn**	**23 31 23.9**	**+0.1**
VLS				AML	AML	23 31 29.5	
	comp=N,3743μm,0.4s						
VLS				AML	AML	23 31 31.2	
	comp=E,2778μm,0.4s						
VLS	**Valsamata**	**1.04**	**345**	P	**Pg**	**23 31 07.8**	**-0.9**
VLS				S	**Sn**	**23 31 23.6**	**-0.2**
	comp=E,2μm,0.4s						

LXRA	**Lixouri, Kepha**	**1.10**	**340**	P	**Pb**	**23 31 09.5**	**-0.2**
LXRA				S	**Sn**	**23 31 26.6**	**+1.4**
KEF3	**Kipouria, Keph**	**1.12**	**336**	P	**Pg**	**23 31 09.7**	**-0.7**
KEF3				S	**Sn**	**23 31 26.0**	**+0.1**
DMLN	**Damoulianata-K**	**1.15**	**338**	P	**Pg**	**23 31 10.1**	**-0.8**
KEF4	**Livadi, Kephal**	**1.15**	**340**	P	**Pg**	**23 31 10.2**	**-0.7**
KEF4				S	**Sn**	**23 31 27.4**	**+0.8**
KLV	**Kalavryta, Ach**	**1.31**	**48**	P	**Pg**	**23 31 12.7**	**-1.1**
KLV				AML	AML	23 31 46.9	
	comp=E,1471μm,1.1s						
KLV				AML	AML	23 31 49.9	
	comp=N,1298μm,1.1s						
KLV	**Kalavryta, Ach**	**1.31**	**48**	P	**Pg**	**23 31 13.0**	**-0.8**
KLV				S	**Sn**	**23 31 33.0**	**+2.5**
	comp=N,692nm,1.1s						
FSK	**Fiskardo**	**1.32**	**348**	P	**Pg**	**23 31 13.3**	**-0.7**
FSK				AML	AML	23 31 43.3	
	comp=E,1846μm,0.6s						
FSK				AML	AML	23 31 44.1	
	comp=N,1647μm,0.4s						
FSK	**Fiskardo**	**1.32**	**348**	P	**Pb**	**23 31 13.5**	**0.0**
FSK				S	**Sn**	**23 31 33.4**	**+2.8**
	comp=N,915nm,0.5s						
LAKA	**Lakka**	**1.35**	**38**	P	**Pn**	**23 31 13.5**	**-0.2**
LAKA				AML	AML	23 31 53.2	
	comp=N,6140μm,0.9s						
LAKA				AML	AML	23 31 53.5	
	comp=E,4978μm,0.7s						
LAKA	**Lakka**	**1.35**	**38**	P	**Pn**	**23 31 14.3**	**+0.7**
LAKA				S	**Sn**	**23 31 34.6**	**+3.0**
	comp=E,2μm,0.6s						
GUR	**Goura**	**1.36**	**56**	P	**Pn**	**23 31 12.5**	**-1.3**
GUR				AML	AML	23 31 50.2	
	comp=E,2096μm,0.9s						
GUR				AML	AML	23 31 53.4	
	comp=N,3099μm,0.5s						
ALIK	**Aliki, Aigiali**	**1.44**	**41**	P	**Pb**	**23 31 15.9**	**+0.4**
EVGI	**Lefkada island**	**1.46**	**352**	P	**Pn**	**23 31 15.3**	**+0.2**
EVGI	**Lefkada island**	**1.46**	**352**	P	**Pn**	**23 31 15.6**	**+0.5**
EFP	**Efpalio**	**1.47**	**32**	P	**Pn**	**23 31 16.2**	**+0.9**
EFP				AML	AML	23 31 43.4	
	comp=E,1903μm,0.5s						
EFP				AML	AML	23 31 43.8	
	comp=N,1495μm,0.6s						
PVO	**Paravola**	**1.52**	**18**	P	**Pn**	**23 31 16.8**	**+0.9**
PVO	**Paravola**	**1.52**	**18**	P	**Pn**	**23 31 16.8**	**+0.9**
NYDR	**Nydri-Lefkada**	**1.55**	**353**	P	**Pb**	**23 31 17.3**	**-0.1**
LKD2	**Lefkada island**	**1.63**	**353**	P	**Pn**	**23 31 18.3**	**+0.9**
LKD2				S	**Sg**	**23 31 43.4**	**+2.3**
LKD2				AML	AML	23 31 44.3	
	comp=E,3301μm,0.6s						
LKD2				AML	AML	23 31 44.9	
	comp=N,3299μm,0.6s						
LKD2	**Lefkada island**	**1.63**	**353**	P	**Pb**	**23 31 18.4**	**-0.4**
THAL	**Thalero**	**1.63**	**57**	P	**Pn**	**23 31 18.0**	**+0.6**
THAL				AML	AML	23 32 01.6	
	comp=E,4799μm,1.5s						
THAL				AML	AML	23 32 04.3	
	comp=N,3851μm,0.9s						
THAL	**Thalero**	**1.63**	**57**	P	**Pn**	**23 31 18.7**	**+1.3**
TSLK	**Tsoukalades, L**	**1.66**	**353**	P	**Pb**	**23 31 19.5**	**+0.1**
TSLK				S	**Sg**	**23 31 43.4**	**+1.2**
TSLK				AML	AML	23 31 45.4	
	comp=E,3698μm,0.6s						
TSLK				AML	AML	23 31 47.6	
	comp=N,4198μm,0.5s						
VLI	**Veliai**	**1.68**	**105**	P	**Pn**	**23 31 15.3**	**-2.7**
VLI				AML	AML	23 32 07.5	
	comp=N,790μm,0.9s						
VLI				AML	AML	23 32 08.5	
	comp=E,666μm,0.6s						
VLI	**Veliai**	**1.68**	**105**	P	**Pn**	**23 31 19.4**	**+1.4**
VLI				S	**Sn**	**23 31 42.0**	**+2.5**
	comp=E,338nm,0.7s						
KRND	**KRANIDI**	**1.79**	**83**	P	**Pn**	**23 31 20.6**	**+1.0**
KRND				AML	AML	23 32 05.6	
	comp=E,770μm,0.8s						
KRND				AML	AML	23 32 11.1	
	comp=N,628μm,0.6s						
KRND	**KRANIDI**	**1.79**	**83**	P	**Pn**	**23 31 20.7**	**+1.1**
EPID	**Epidavros**	**1.80**	**75**	P	**Pn**	**23 31 20.6**	**+0.8**
LTK	**Loutraki**	**1.83**	**62**	P	**Pn**	**23 31 21.5**	**+1.3**
LTK	**Loutraki**	**1.83**	**62**	P	**Pn**	**23 31 21.4**	**+1.2**
EVR	**Evrytania**	**1.88**	**22**	P	**Pn**	**23 31 22.2**	**+1.3**
EVR				AML	AML	23 31 58.4	
	comp=E,1248μm,0.6s						
EVR				AML	AML	23 32 05.5	
	comp=N,1184μm,1.0s						
KTHR	**Kythira**	**1.90**	**118**	P	**Pn**	**23 31 22.4**	**+1.2**
KTHR				S	**Sn**	**23 31 47.5**	**+2.4**
	comp=N,325nm,0.5s						
KTHA	**Kythira Island**	**1.95**	**117**	P	**Pn**	**23 31 22.8**	**+1.0**
VIL2	**Platees**	**2.13**	**60**	P	**Pn**	**23 31 25.2**	**+0.9**
VIL2				AML	AML	23 32 12.5	
	comp=E,1330μm,1.0s						
VIL2				AML	AML	23 32 23.3	
	comp=N,708μm,0.7s						
VILL	**Villia**	**2.14**	**62**	P	**Pn**	**23 31 25.3**	**+0.9**
ATAL	**Atalanti**	**2.25**	**47**	P	**Pn**	**23 31 27.8**	**+1.9**
ATAL				AML	AML	23 32 15.0	
	comp=E,396μm,1.0s						
ATAL				AML	AML	23 32 19.5	
	comp=N,411μm,0.9s						
ANKY	**Antikythira Is**	**2.32**	**124**	P	**Pn**	**23 31 27.6**	**+0.8**
VLY	**Voula,Athens**	**2.38**	**73**	P	**Pn**	**23 31 28.5**	**+0.7**
VLY	**Voula,Athens**	**2.38**	**73**	P	**Pn**	**23 31 28.3**	**+0.6**
ATHU	**Athens Univers**	**2.41**	**70**	P	**Pn**	**23 31 29.0**	**+0.9**
ATHU				AML	AML	23 32 22.4	
	comp=E,86μm,0.9s						
ATHU				AML	AML	23 32 32.3	
	comp=N,183μm,1.2s						
IMMV	**Iera Moni Meta**	**3.00**	**124**	P	**Pn**	**23 31 37.9**	**+1.7**
IMMV	**Iera Moni Meta**	**3.00**	**124**	P	**Pn**	**23 31 37.3**	**+1.0**
IDI	**Anoyia**	**3.72**	**119**	Pn	**Pn**	**23 31 48.9**	**+2.7**
	comp=N,0.8nm,0.3s,baz=317,slow=16,SNR=11						
IDI				Sn	**Sn**	**23 32 34.0**	**+4.0**
	comp=N,1.9nm,0.3s,baz=65,slow=21,SNR=5.9						
	comp=N,2.5nm,0.5s						
OHR	**Ohrid**	**3.93**	**359**	*e*Pn	**Pn**	**23 31 52.2**	**+3.1**
VAY	**Valandovo**	**4.33**	**17**	*e*Pn	**Pb**	**23 31 55.2**	**+0.6**
VAE	**Valguarnera**	**5.20**	**275**	Pn	Pb	23 32 14.4	-5.3
	comp=N,3.7nm,0.3s,baz=207,slow=13,SNR=2.8						
VAE				Sn	**Sn**	**23 33 09.2**	**+2.7**
	comp=N,0.7nm,0.3s,baz=227,slow=12,SNR=1.6						
	comp=N,12nm,0.4s						
HFS	**Hagfors**	**23.44**	**351**	P	**P**	**23 35 54.6**	**-3.2**
	comp=N,0.9nm,0.6s,baz=148,slow=8.7,SNR=6.6						
	comp=N,0.9nm,0.6s						
EKA	**Eskdalemuir Ar**	**24.43**	**326**	P	**P**	**23 36 08.2**	**+1.0**
	comp=N,1.8nm,0.8s,baz=121,slow=9.4,SNR=4.2						
	comp=N,1.8nm,0.8s						
FINES	**FINESS Array B**	**24.51**	**6**	P	**P**	**23 36 06.8**	**-1.1**
	comp=N,1.6nm,0.6s,baz=178,slow=11,SNR=8.0						
	comp=N,1.6nm,0.6s						
ARCES	**ARCESS Array B**	**32.52**	**3**	P	**P**	**23 37 17.9**	**-1.2**
	comp=N,1.0nm,0.6s,baz=194,slow=8.7,SNR=7.3						
	comp=N,1.0nm,0.6s						
MKAR	**Makanchi Array**	**45.56**	**58**	P	**P**	**23 39 06.4**	**-2.2**
	comp=N,0.4nm,0.8s,baz=291,slow=6.0,SNR=2.6						
	comp=N,0.4nm,0.8s						

*IDC **19** 23:33:51.8±2.7,4.90S×152.01E,h52km±12km,mb3.5/5, mbtmp3.8/5,MS4.0/1,Error ellipse: s-maj=68.9km s-min=23.0km az=110.0*
*NEIC **19** 23:33:51.6±0.9,4.88S±0.10×152.3E±0.1,h57km±6km, mb4.6/13,Error ellipse: s-maj=19.5km s-min=13.5km az=69.0*

ISC 19 23:33:50.9±0.7,4.96S±0.09×152.3E±0.1,h55km,n23, σ0s82/23,mb4.3/12,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**0.71**	**337**	P	**Pn**	**23 34 05.1**	**+0.1**
	70μm,0.6s,baz=108,slow=0.1,SNR=5952						
KRVT				S	**Sn**	**23 34 15.2**	**0.0**
	43μm,0.3s,baz=328,slow=0.1,SNR=8.0						
RABL	**Rabaul**	**0.78**	**350**		**Pn**	**23 34 05.9**	**0.0**
MTN	**Manton Dam**	**22.31**	**248**	P	**P**	**23 38 43.7**	**-0.3**
MTN				IAmb	IAmb	23 38 58.9	
	comp=Z,20nm,1.2s						
MARNC	**Mare, Loyalty**	**22.41**	**139**	P	**P**	**23 38 46.0**	**+1.0**
WB0	**Warramunga Arr**	**22.82**	**228**	P	**P**	**23 38 48.9**	**-0.4**
WB0				IAmb	IAmb	23 38 59.4	
	comp=Z,16nm,1.4s						
WR0	**Warramunga Arr**	**22.82**	**228**	P	**P**	**23 38 49.5**	**0.0**
WB2	**Warramunga Arr**	**22.95**	**228**	P	**P**	**23 38 50.8**	**0.0**
WRA	**Warramunga Arr**	**22.96**	**228**	P	**P**	**23 38 50.9**	**0.0**
	comp=Z,1.7nm,0.5s,baz=52,slow=10,SNR=26						
	comp=Z,1.7nm,0.5s						
WRA	**Warramunga Arr**	**22.96**	**228**	P	**P**	**23 38 51.3**	**+0.4**
KNRA	**Kununurra**	**25.45**	**244**	P	**P**	**23 39 15.2**	**+1.4**
KNRA				IAmb	IAmb	23 39 26.5	
	comp=Z,32nm,1.4s						
MBWA	**Marble Bar**	**35.46**	**240**	P	**P**	**23 40 41.7**	**-0.5**
MBWA				IAmb	IAmb	23 40 55.5	
	comp=Z,7.5nm,1.1s						
KNTN	**Kanton**	**35.96**	**88**	P	**P**	**23 40 45.4**	**-1.3**
JOW	**Kunigami**	**39.24**	**325**	LR	LR	23 55 05.5	
	comp=Z,222nm,21.4s,baz=168,slow=33						
GIRL	**Giralia**	**40.75**	**241**	P	**P**	**23 41 26.8**	**0.0**
LTZ	**Lake Taylor**	**41.62**	**158**	P	**P**	**23 41 34.0**	**+0.3**
LTZ				IAmb	IAmb	23 41 34.3	
	comp=Z,5.8nm,1.0s						
SONM	**Songino Array**	**66.20**	**328**	P	**P**	**23 44 33.0**	**-0.1**
	comp=Z,0.6nm,0.9s,baz=140,slow=5.4,SNR=3.5						
	comp=Z,0.6nm,0.9s						
SVW2	**Sparrevohn**	**77.17**	**23**	P	**P**	**23 45 38.9**	**+0.3**
SVW2				IAmb	IAmb	23 45 41.3	
	comp=Z,15nm,1.3s						
MKAR	**Makanchi Array**	**80.12**	**319**	P	**P**	**23 45 56.3**	**+1.2**
	comp=Z,0.3nm,0.5s,baz=90,slow=7.1,SNR=5.6						
	comp=Z,0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**81.01**	**326**	P	**P**	**23 45 60.0**	**+0.3**
	comp=Z,1.0nm,0.4s,baz=113,slow=5.9,SNR=4.2						
	comp=Z,1.0nm,0.4s						
KDJ	**Kajisay**	**82.36**	**314**	P	**P**	**23 46 05.3**	**-2.0**
KDJ				IAmb	IAmb	23 46 10.3	
	comp=Z,17nm,1.2s						
TGL	**Tana Glacier**	**82.36**	**27**	P	**P**	**23 46 07.9**	**+1.1**
KURBB	**Kurchatov Arra**	**83.62**	**322**	P	**P**	**23 46 13.9**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=102,slow=4.1,SNR=3.3						
	comp=Z,0.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**149.88**	**288**	PKPbc	**PKPbc**	**23 53 34.9**	**-1.1**
	comp=Z,1.7nm,0.7s,baz=54,slow=2.0,SNR=13						

*JMA **19** 23:36:37.8±0.2,36.2N±0.5×14.2E±°,h68km,MV2.8/22, FAR E OFF KANTO*
*IDC **19** 23:36:40.1±2.2,36.75N×142.14E,h0km,mb3.5/4, mbtmp3.4/5,ML2.1/1,Error ellipse: s-maj=49.8km s-min=30.3km az=53.0*

ISC 19 23:36:37.8±1.9,36.28N±0.09×142.4E±0.1,h15km,n17, σ1s02/17,mb3.6/4,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**1.36**	**246**	*e*P	**Pn**	**23 37 01.9**	**-0.2**
JHYU	**Hitachinakayam**	**1.45**	**273**	*e*P	**Pn**	**23 37 03.4**	**-0.1**
JHO	**Hitachi**	**1.50**	**283**	P	**Pn**	**23 37 03.8**	**-0.3**
JHO				*e*S	**Sn**	**23 37 23.7**	**+0.3**
JFK	**Kawauchi**	**1.62**	**313**	*e*S	**Sn**	**23 37 26.1**	**-0.5**
BSO1	**Boso 1**	**1.98**	**216**	*e*P	**Pn**	**23 37 09.8**	**-0.5**
JFT	**Otama**	**2.05**	**308**	*e*P	**Pb**	**23 37 12.4**	**-2.4**
JFT				*e*S	**Sn**	**23 37 38.5**	**+1.4**
JAG	**Ashikaga**	**2.37**	**274**	P	**Pn**	**23 37 16.6**	**+0.5**
JAG				*e*S	**Sn**	**23 37 45.0**	**+0.1**
JRY	**Ryogami san**	**2.83**	**266**	*e*P	**Pn**	**23 37 22.7**	**+0.3**
JOD2	**Odawara 2**	**2.86**	**250**	*e*P	**Pn**	**23 37 23.3**	**+0.4**
MJAR	**Matsushiro Arr**	**3.37**	**276**	Pn	**Pn**	**23 37 30.9**	**+1.0**
	0.2nm,0.3s,baz=98,slow=8.8,SNR=11						
MJAR				Sn	**Sn**	**23 38 10.1**	**+0.4**
	0.1nm,0.3s,baz=93,slow=27,SNR=2.3						
	3.2nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**27.09**	**121**	T	T	00 10 43.0	
	baz=311						
H11N1	**WAKE ISLAND Hy**	**27.10**	**121**	T	T	00 10 35.0	
	baz=311						
H11N3	**WAKE ISLAND Hy**	**27.11**	**121**	T	T	00 10 33.2	
	baz=311						
SONM	**Songino Array**	**28.85**	**305**	P	**P**	**23 42 35.9**	**+0.2**
	0.4nm,0.6s,baz=109,slow=10.0,SNR=2.6						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**45.18**	**303**	P	**P**	**23 44 56.1**	**+2.2**
	0.6nm,0.6s,baz=86,slow=9.0,SNR=5.5						
	0.6nm,0.6s						
KURBB	**Kurchatov Arra**	**47.08**	**309**	P	**P**	**23 45 09.0**	**+0.2**
	0.3nm,0.6s,baz=83,slow=7.8,SNR=2.5						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**56.43**	**189**	P	P	23 46 26.5	+7.7
	0.7nm,0.9s,baz=5.3,slow=7.7,SNR=5.4						
	0.7nm,0.9s						

IDC 19 23:43:46.1±550.0,60.23N×58.73E,h0km,Error ellipse: s-maj=177.3km s-min=117.2km az=134.0,Ural Mountains region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I31KZ	**AKTYUBINSK INF**	**9.86**	**183**	*i*		00 46 40.0	
	baz=3.5,slow=317,SNR=4.4						
I43RU	**DUBNA INFRASON**	**11.78**	**262**	*i*		00 57 40.0	
	baz=63,slow=308,SNR=0.9						
I37NO	**I37NO**	**18.94**	**315**	*i*		01 41 00.0	
	baz=98,slow=314,SNR=1.6						

*VAO **19** 23:51:56.5±0.7,21.49S×69.10W,h158km±6km,mb4.3*
*NEIC **19** 23:51:57.8±1.6,21.34S±0.04×68.76W±0.07,h113km±7km, mb4.2/7,ML4.1(GUC),Error ellipse: s-maj=9.3km s-min=5.5km az=81.0*
*IDC **19** 23:51:58.1±1.1,21.38S×68.21W,h101km±12km,mb4.2/3, mbtmp4.2/7,Error ellipse: s-maj=33.1km s-min=13.3km az=121.0*
*GUC **19** 23:51:58.0±0.6,21.32S×68.73W,h115km±3km,ML4.1*

ISC 19 23:51:56.8±0.6,21.33S±0.03×68.80W±0.05,h125km±6km, n98,σ1s39/121,mb4.3/3,12C-3D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.63**	**222**		**Pn**	**23 52 16.9**	**+0.5**
PB09				Sn	**Sn**	**23 52 30.7**	**-0.5**
PB09	**IPOC Station P**	**0.63**	**222**	⇑*i* P	**Pn**	**23 52 16.7**	**+0.3**
PB09				*i* S	**Sn**	**23 52 31.1**	**0.0**
PB09

HMBC				IAML			23 52 46.8		
	comp=N,6μm,0.5s								
TA01	**Diego Aracena**	**1.50 300**			**Pn**		**23 52 25.2**	**+0.6**	
TA01	**Diego Aracena**	**1.50 300**	⇑	*iP*	**Pn**		**23 52 25.0**	**+0.4**	
TA01				*eS*	**Sn**		**23 52 45.7**	**0.0**	
TA01				IAML			23 52 47.3		
	comp=E,4μm,0.2s								
PB06	**IPOC Station P**	**1.55 208**			**Pn**		**23 52 26.0**	**+0.7**	
PB06	**IPOC Station P**	**1.55 208**	⇓	*iP*	**Pn**		**23 52 26.1**	**+0.7**	
PB06				*eS*	**Sn**		**23 52 47.5**	**+0.4**	
PB06				IAML			23 52 48.7		
	comp=E,4μm,0.4s								
PB04	**IPOC Station P**	**1.61 231**			**Pn**		**23 52 26.4**	**+0.3**	
PB04	**IPOC Station P**	**1.61 231**	⇑	*eP*	**Pn**		**23 52 26.4**	**+0.3**	
PB04				*eS*	**Sn**		**23 52 49.0**	**+0.7**	
PB04				IAML			23 52 51.3		
	comp=E,2μm,0.4s								
TA02	**Huaiquique**	**1.63 310**			**Pn**		**23 52 26.5**	**+0.3**	
TA02	**Huaiquique**	**1.63 310**	⇑	*iP*	**Pn**		**23 52 26.4**	**+0.3**	
TA02				*eS*	**Sn**		**23 52 48.0**	**-0.4**	
TA02				IAML			23 52 49.6		
	comp=N,3μm,0.2s								
GO01	**Chusmiza**	**1.69 347**			**Pn**		**23 52 27.2**	**-0.1**	
GO01	**Chusmiza**	**1.69 347**	⇑	*iP*	**Pn**		**23 52 27.8**	**+0.4**	
GO01				*eS*	**Sn**		**23 52 50.7**	**+0.1**	
GO01				IAML			23 52 55.5		
	comp=E,2μm,0.1s								
AF01	**San Pedro de A**	**1.72 161**			**Pn**		**23 52 27.7**	**+0.3**	
AF01	**San Pedro de A**	**1.72 161**		*eP*	**Pn**		**23 52 28.6**	**+1.2**	
AF01				*eS*	**Sn**		**23 52 52.7**	**+1.9**	
AF01				IAML			23 53 06.6		
	comp=E,1μm,0.6s								
PB11	**IPOC Station P**	**1.75 332**		Pn	**Pn**		**23 52 28.3**	**+0.5**	
PB11	**IPOC Station P**	**1.75 332**	⇑	*iP*	**Pn**		**23 52 27.9**	**+0.1**	
PB15	**IPOC Station P**	**1.98 198**			**Pn**		**23 52 30.8**	**+0.3**	
PB15	**IPOC Station P**	**1.98 198**	⇓	*eP*	**Pn**		**23 52 31.1**	**+0.7**	
PB15				*eS*	**Sn**		**23 52 56.5**	**+0.3**	
PB10	**IPOC Station P**	**2.72 216**		Pn	**Pn**		**23 52 40.4**	**+0.8**	
PB10	**IPOC Station P**	**2.72 216**		*eP*	**Pn**		**23 52 40.1**	**+0.5**	
PB10				*eS*	**Sn**		**23 53 07.2**	**-5.4**	
PB16	**IPOC Station P**	**3.05 347**			**Pn**		**23 52 45.2**	**+0.6**	
PB16	**IPOC Station P**	**3.05 347**		*eP*	**Pn**		**23 52 45.5**	**+0.9**	
PB16				*i* S	**Sn**		**23 53 22.1**	**+0.8**	
PB12	**IPOC Station P**	**3.06 332**		Pn	**Pn**		**23 52 43.9**	**-0.3**	
PB12	**IPOC Station P**	**3.06 332**		*eP*	**Pn**		**23 52 43.2**	**-1.0**	
PB12				*eS*	**Sn**		**23 53 13.1**	**-7.6**	
PB14	**IPOC Station P**	**3.60 204**		Pn	**Pn**		**23 52 51.3**	**-0.2**	
PB18	**Visviri**	**3.77 350**		Pn	**Pn**		**23 52 55.2**	**+1.2**	
GO02	**Mina Guanaco**	**3.89 191**		Pn	**Pn**		**23 52 55.1**	**-0.2**	
GO02	**Mina Guanaco**	**3.89 191**		*eP*	**Pn**		**23 52 54.9**	**-0.4**	
LPAZ	**La Paz**	**5.05 7**		P	**Pn**		**23 53 13.0**	**+1.9**	
	comp=E,8.0nm,0.5s,baz=200,slow=5.5,SNR=66								
LPAZ	**La Paz**	**5.05 7**		Pn	**Pn**		**23 53 12.0**	**+0.9**	
LPAZ	**La Paz**	**5.05 7**		*eP*	**Pn**		**23 53 12.9**	**+1.7**	
AC01	**Pan de Azucar**	**5.08 199**			**Pn**		**23 53 09.8**	**-1.1**	
AC02	**Maricunga**	**5.49 183**			**Pn**		**23 53 17.1**	**+0.2**	
GO03	**Copiap**	**6.38 192**		Pn	**Pn**		**23 53 26.6**	**-1.8**	
AC04	**Llanos de Chal**	**7.15 196**		Pn	**Pn**		**23 53 36.3**	**-2.5**	
LCO	**Las Campanas**	**7.84 192**		Pn	**Pn**		**23 53 45.6**	**-2.9**	
CO01	**Juntas del Tor**	**8.69 187**		Pn	**Pn**		**23 53 58.9**	**-1.0**	
GO04	**Tololo Observa**	**8.99 191**		Pn	**Pn**		**23 54 02.4**	**-1.5**	
SIV	**San Ignacio**	**9.04 55**		P	**Pn**		**23 54 01.1**	**-3.3**	
	comp=E,7.5nm,0.4s,baz=248,slow=9.3,SNR=71								
SIV				S	Sn		23 55 34.0	-11	
	comp=E,1.2nm,0.6s,baz=273,slow=14,SNR=4.7								
CO03	**El Pedregal**	**9.62 190**		Pn	**Pn**		**23 54 10.2**	**-2.1**	
CO02	**Combarbal**	**10.03 191**		Pn	**Pn**		**23 54 13.7**	**-4.1**	
VA03	**San Esteban**	**11.50 187**		Pn	**Pn**		**23 54 38.6**	**+1.2**	
CPUP	**Villa Florida**	**11.62 118**		P	**Pn**		**23 54 35.8**	**-3.1**	
	comp=E,1.4nm,0.5s,baz=287,slow=12,SNR=5.2								
CPUP	**Villa Florida**	**11.62 118**			**Pn**		**23 54 38.4**	**-0.4**	
SALV	**Santo Antonio**	**13.54 69**		*eP*	**P**		**23 55 07.7**	**-1.0**	
TRCB	**Terra Rica**	**15.06 99**		*eP*	**P**		**23 55 25.7**	**+0.2**	
PDRB	**Porto dos Gac**	**15.06 52**		*eP*	**P**		**23 55 25.1**	**-0.5**	
FRBT	**Francisco Belt**	**15.14 111**		*eP*	**P**		**23 55 26.6**	**+0.2**	
RODS	**Rosario do Sul**	**15.17 129**		*eP*	**Pn**		**23 55 24.1**	**-0.5**	
PTGB	**Pitanga**	**15.77 106**		*eP*	**P**		**23 55 34.5**	**+1.0**	
ALGR	**Alto Alegre (B**	**16.10 121**		*eP*	**Pn**		**23 55 34.9**	**-1.2**	
CLDB	**Colider**	**16.23 52**		*eP*	**P**		**23 55 38.5**	**-0.1**	
ITAB	**Concordia**	**16.29 114**		*eP*	**P**		**23 55 39.0**	**-0.1**	
PCMB	**Pacaembu**	**16.33 94**		*eP*	**P**		**23 55 39.7**	**+0.1**	
ARAG	**Araguaiana, MT**	**17.04 74**		*eP*	**P**		**23 55 49.0**	**+1.5**	
PLTB	**Pedras Altas**	**17.09 131**		*eP*	**P**		**23 55 46.8**	**-1.2**	
FRTB	**Fartura**	**17.91 100**		*eP*	**Pn**		**23 55 56.8**	**-1.3**	
CNLB	**Canela**	**18.05 120**		*eP*	**P**		**23 55 57.5**	**-1.0**	
BB19B	**Bebedouro**	**18.90 93**		*eP*	**P**		**23 56 07.4**	**-0.5**	
TER01	**Tubaro-SC**	**19.21 116**		*eP*	**P**		**23 56 11.1**	**0.0**	
PLCA	**Paso Flores**	**19.40 184**		P	**Pn**		**23 56 16.4**	**+0.7**	
	comp=E,1.7nm,0.8s,baz=49,slow=14,SNR=4.2								
PLCA	**Paso Flores**	**19.40 184**		P	**Pn**		**23 56 15.3**	**-0.3**	
IPMB	**Ipameri, GO**	**19.67 84**		*eP*	**P**		**23 56 15.4**	**-0.8**	
LL04	**Puerto Octay**	**19.76 188**		P	**Pn**		**23 56 18.9**	**-0.8**	
LL04				IAmb	IAmb		23 56 19.6		
	comp=Z,7.7nm,0.6s								
RCLB	**Rio Claro- Sao**	**19.77 97**		*eP*	**P**		**23 56 16.7**	**-0.6**	
PET01	**Itanhaem-SP**	**20.05 103**		*eP*	**P**		**23 56 20.2**	**-0.1**	
VAO	**Valinhos**	**20.29 99**		*eP*	**P**		**23 56 21.1**	**-1.8**	
PMNB	**Patos De Minas**	**21.20 86**		*eP*	**P**		**23 56 31.7**	**-1.0**	
TULM	**Tulcn-Chalpat**	**23.60 337**		P	**P**		**23 57 01.1**	**+4.1**	
TULM					**PcP**		**00 00 40.5**	**+1.7**	
SMTB	**Santa Maria do**	**23.89 62**		*eP*	**P**		**23 56 59.5**	**+0.3**	
MALB	**Monte Alegre**	**23.98 38**		*eP*	**P**		**23 57 00.3**	**+0.3**	
JANB	**Januaria**	**24.06 79**		*eP*	**P**		**23 56 59.1**	**-1.7**	
SDBA	**SAO DESIDERIO**	**24.50 73**		*eP*	**P**		**23 57 04.5**	**-0.2**	
BOAV	**Boa Vista**	**24.93 20**		*eP*	**P**		**23 57 08.2**	**-0.4**	
NBMA	**Muriti-CE**	**32.15 69**		*eP*	**P**		**23 58 13.0**	**+0.1**	
U56A	**King**	**58.40 349**				pP	00 02 08.0	-2.3	
DBIC	**Dimbokro**	**68.58 73**		P	**P**		**00 02 47.6**	**+0.9**	
	comp=E,5.7nm,0.8s,baz=244,slow=6.1,SNR=5.8								
	comp=Z,5.7nm,0.8s								
DBIC	**Dimbokro**	**68.58 73**		IAmb	IAmb		00 02 48.3		
	comp=Z,7.8nm,0.9s								
TORD	**Torodi Ar. Bea**	**77.20 70**		P	**P**		**00 03 38.6**	**+1.1**	
	comp=E,3.9nm,0.7s,baz=256,slow=5.7,SNR=50								
	comp=Z,3.9nm,0.7s								
TORD	**Torodi Ar. Bea**	**77.20 70**		IAmb	IAmb		00 03 39.1		
	comp=Z,3.8nm,0.7s								
BOSA	**Boshof**	**83.43 118**		P	**P**		**00 04 12.0**	**+1.1**	
	comp=Z,2.4nm,1.0s,baz=252,slow=9.6,SNR=1.6								
	comp=Z,2.4nm,1.0s								
BOSA	**Boshof**	**83.43 118**		IAmb	IAmb		00 04 23.9		
	comp=Z,2.7nm,0.9s								
MKAR	**Makanchi Array**	**145.43 36**		PKPbc	**PKiKP**		**00 11 23.0**	**-1.1**	
	comp=Z,1.2nm,0.7s,baz=323,slow=3.3,SNR=10								

*IPEC **19** 23:54:23.8±0.2,51.59N×16.21E,h0km,ML2.0/4, Error ellipse: s-maj=1.8km s-min=1.1km az=30.0*
*PRU **19** 23:54:24.8±0.0,51.54N×16.11E,h0km*
*VIE **19** 23:54:25.0±0.9,51.49N×15.97E,h0km,mb2.4/4,ml2.7/3, Error ellipse: s-maj=10.6km s-min=3.9km az=43.0 85 km WNW of Wroclaw Suspected Mining induced.*

ISC 19 23:54:22.4±0.8,**51.66N**±0.03×**16.14E**±0.02,**h0km**,**n33**, σ1**9**06/69,**Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.82**	**173**	*e*Pg	**Pg**	**23 54 38.4**	**+0.4**
KSP				*e*Sg	**Sg**	**23 54 48.0**	**-0.6**
CHVC	**Chvalec**	**1.07**	**183**	*e*PG	**Pg**	**23 54 43.0**	**+0.2**
CHVC				*e*SG	**Sg**	**23 54 55.8**	**-0.9**
	comp=Z,22nm,0.3s						
OSTC	**Ostas**	**1.10**	**178**	*e*PG	**Pg**	**23 54 43.5**	**+0.1**
OSTC				*e*SG	**Sg**	**23 54 57.0**	**-0.7**
	comp=Z,26nm,0.5s						
UPC	**Upice**	**1.15**	**184**	*e*PG	**Pg**	**23 54 44.4**	**0.0**
UPC				*e*SG	**Sg**	**23 54 58.5**	**-0.8**
	comp=Z,47nm,0.3s						
DPC	**Dobruska-Polom**	**1.31**	**175**	*e*PG	**Pg**	**23 54 47.2**	**-0.3**
DPC				*e*SG	**Sg**	**23 55 03.0**	**-1.4**
	comp=Z,13nm,0.3s						
PVCC	**Panska Ves**	**1.50**	**222**	*e*PG	**Pg**	**23 54 51.6**	**+0.5**
PVCC				*e*SG	**Sg**	**23 55 10.2**	**-0.4**
	comp=Z,125nm,0.2s						
BRG	**Berggiesshubel**	**1.59**	**241**	Pg	**Pg**	**23 54 53.4**	**+0.6**
BRG				Sg	**Sg**	**23 55 13.8**	**+0.5**
BRG				Amp		23 55 14.4	
	comp=Z,51nm,0.4s						
BRG				Amp		00 03 10.0	
	comp=E,0.2nm,14.6s						
BRG				Amp		00 03 21.0	
	comp=Z,0.3nm,15.2s						
BRG				Amp		00 03 25.0	
	comp=N,0.2nm,15.8s						
KRLC	**Kraliky**	**1.63**	**165**	*e*PG	**Pn**	**23 54 52.3**	**-0.1**
KRLC				*e*SG	**Sn**	**23 55 12.8**	**-1.3**
	comp=N,15nm,0.3s						
PRU	**Pruhonice**	**1.95**	**212**	*e*PG	**Pb**	**23 54 58.0**	**-0.8**
PRU				*e*SG	**Sb**	**23 55 23.2**	**-0.5**
	comp=N,18nm,0.6s						
CLL	**Collm**	**2.00**	**261**	*i* Pn	**Pn**	**23 54 57.8**	**+0.5**
CLL				*i* Pg	**Pg**	**23 55 00.7**	**+0.1**
CLL				*ex*	x	23 55 05.0	
CLL				*i* Sg	**Sg**	**23 55 27.4**	**+1.0**
	comp=Z,14nm,0.4s						
MORC	**Moravsky Berou** baz=336	**2.08**	**154**	*e*Pn	**Pn**	**23 54 58.6**	**+0.1**
MORC				*e*Sg	**Sb**	**23 55 26.7**	**-0.6**
	comp=Z,10.0nm,0.3s,baz=336						
MORC	**Moravsky Berou**	**2.08**	**154**	*e*PN	**Pn**	**23 54 58.6**	**+0.1**
MORC				*e*SG	**Sb**	**23 55 26.8**	**-0.6**
OKC	**Ostrava-Krasne**	**2.22**	**144**	*e*PG	**Pg**	**23 55 04.6**	**-0.3**
OKC				*e*SG	**Sb**	**23 55 31.9**	**+0.5**
VRAC	**Vranov** baz=354	**2.37**	**173**	*e*Pn	**Pn**	**23 55 02.9**	**+0.5**
VRAC				*e*Sg	**Sb**	**23 55 35.7**	**+0.1**
	comp=Z,7.6nm,0.3s,baz=354						
VRAC	**Vranov**	**2.37**	**173**	*e*PN	**Pn**	**23 55 03.0**	**+0.5**
VRAC				*e*SG	**Sb**	**23 55 35.7**	**+0.1**
TREC	**Trest**	**2.40**	**190**	*e*PG	**Pb**	**23 55 06.6**	**+0.2**
TREC				*e*SG	**Sb**	**23 55 36.9**	**+0.3**
	comp=Z,10nm,0.2s						
MAUC	**Maruska**	**2.53**	**154**	*e*PG	**Pb**	**23 55 09.6**	**+0.9**
MAUC				*e*SG	**Sg**	**23 55 42.4**	**-1.2**
	comp=Z,21nm,0.8s						
KRUC	**Moravsky** baz=357	**2.60**	**176**	*e*Pn	**Pn**	**23 55 06.2**	**+0.6**
KRUC				*e*Sg	**Sb**	**23 55 43.1**	**+0.8**
	comp=Z,4.6nm,0.3s,baz=357						
KRUC	**Moravsky**	**2.60**	**176**	*e*PN	**Pn**	**23 55 06.3**	**+0.6**
KRUC				*e*SG	**Sb**	**23 55 43.2**	**+0.9**
OJC	**Ojcow**	**2.72**	**120**	*e*Pg	**Pg**	**23 55 14.7**	**+0.2**
OJC				*e*Sg	**Sg**	**23 55 50.5**	**+0.7**
NKC	**Novy Kostel**	**2.74**	**240**	*e*PN	**Pn**	**23 55 08.8**	**+1.3**
NKC				*e*PG	**Pg**	**23 55 13.8**	**-1.0**
NKC				*e*SG	**Sg**	**23 55 50.6**	**+0.4**
	comp=Z,30nm,0.8s						
KHC	**Kasperske Hory**	**3.01**	**214**	*e*PN	**Pn**	**23 55 12.0**	**+0.6**
KHC				*e*PG	**Pb**	**23 55 16.9**	**0.0**
KHC				*e*SN	**Sn**	**23 55 47.2**	**-1.0**
KHC				*e*SG	**Sb**	**23 55 56.7**	**+2.5**
	comp=Z,4.4nm,0.4s						
CKRC	**Cesky Krumlov**	**3.07**	**203**	*e*PN	**Pn**	**23 55 13.0**	**+0.8**
CKRC				*e*PG	**Pb**	**23 55 19.0**	**+1.1**
CKRC				*e*SG	**Sg**	**23 55 59.4**	**-1.6**
LANS	**Liptovska Anna**	**3.29**	**138**	*e*PN	**Pn**	**23 55 17.2**	**+2.1**
LANS				*e*PG	**Pg**	**23 55 25.0**	**-0.3**
LANS				*e*SG	**Sg**	**23 56 08.2**	**+0.3**
MODS	**Modra-Piesok**	**3.37**	**167**	*e*PG	**Pg**	**23 55 27.0**	**+0.2**
MODS				*e*SG	**Sg**	**23 56 12.1**	**+1.7**
NIE	**Niedzica**	**3.47**	**129**	*e*P	**Pg**	**23 55 29.1**	**+0.3**
NIE				*e*S	**Sg**	**23 56 14.2**	**+0.5**
BSD	**Bornholm Skovb**	**3.54**	**348**	*i* P	**Pn**	**23 55 19.0**	**+0.5**
BSD				*e*S	**Sn**	**23 55 58.7**	**-2.4**
BSD				IAML		23 56 03.7	
	comp=Z,15nm,1.9s						
CONA	**Conrad Observa**	**3.74**	**183**	*e*Pn	**Pn**	**23 55 22.0**	**+0.7**
	comp=Z,0.4nm,0.2s						
MOA	**Molln**	**4.00**	**198**	*e*Pn	**Pn**	**23 55 25.5**	**+0.6**
	comp=Z,0.6nm,0.2s						
BIOA	**Bad Ischl, Aus**	**4.29**	**203**	*e*Pn	**Pn**	**23 55 30.1**	**+1.3**
	comp=Z,1.5nm,0.4s						
BLEU	**Blekinge**	**4.66**	**358**	*e*P	**Pn**	**23 55 35.5**	**+1.6**
BLEU				*e*S	**Sn**	**23 56 27.9**	**-0.8**
BJUU	**Bjuv**	**4.80**	**339**	*e*P	**Pn**	**23 55 37.8**	**+2.0**
BJUU				*e*S	**Sn**	**23 56 29.7**	**-2.3**
DEL	**Delary**	**5.01**	**345**	*e*P	**Pn**	**23 55 39.2**	**+0.5**
DEL				*e*S	**Sn**	**23 56 33.3**	**-3.8**

*IDC **19** 23:56:55.2±0.6,30.68S×177.62W,h0km,mb4.3/12, mbtmp4.3/12,MS3.7/2, Error ellipse: s-maj=24.2km s-min=19.1km az=91.0*
*NEIC **19** 23:56:55.7±2.2,30.72S±0.05×177.4W±0.1,h10km±1km, mb4.7/30, Error ellipse: s-maj=19.8km s-min=8.5km az=91.0*

ISC 19 23:56:56.4±0.5,**30.81S**±0.05×**177.59W**±0.09,**h10**km,**n97**, σ1**9**71/99,**mb4.7**/21,**Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**1.57**	**349**	P	**Pn**	**23 57 22.9**	**-1.4**
GLKZ				S	**Sn**	**23 57 41.9**	**-2.7**
RAO	**Raoul Island**	**1.58**	**349**	Pn	**Pn**	**23 57 22.9**	**-1.5**
	2μm,0.3s,baz=134,slow=3.1,SNR=76						
RAO				Sn	**Sn**	**23 57 40.5**	**-4.3**
	2μm,0.3s,baz=65,slow=17,SNR=6.3						
RAO				LR	LR	23 58 03.8	
	comp=Z,1μm,18.2s,baz=127,slow=48						
RAO	**Raoul Island**	**1.58**	**349**	Pn	**Pn**	**23 57 22.6**	**-1.8**
RAO					**Sn**	**23 57 43.0**	**-1.9**
RIZ	**Raoul Island**	**1.59**	**349**	P	**Pn**	**23 57 23.3**	**-1.2**
RIZ				S	**Sn**	**23 57 43.2**	**-1.9**
MXZ	**Matakaoa Point**	**7.55**	**206**	Pn	**Pn**	**23 58 48.5**	**+2.1**
MXZ	**Matakaoa Point**	**7.55**	**206**	P	**Pn**	23 58 40.8	-5.6
MXZ				S	**Sn**	**00 00 08.0**	**-4.0**
WMGZ	**Waiomatatini S**	**7.74**	**204**	P	**Pn**	23 58 45.0	-4.0
WMGZ				S	**Sn**	**00 00 15.6**	**-1.1**
HAZ	**Te Kaha**	**7.92**	**208**	P	**Pn**	**23 58 49.5**	**-2.0**
HAZ				S	**Sn**	**00 00 21.7**	**+0.6**
PKGZ	**Pakihiroa**	**7.92**	**206**	P	**Pn**	**23 58 49.9**	**-1.7**
PKGZ				S	**Sn**	**00 00 17.1**	**-4.2**
PUZ	**Puketiti**	**8.02**	**204**	P	**Pn**	**23 58 49.8**	**-3.1**
PUZ				S	**Sn**	**00 00 22.0**	**-1.6**
WCZ	**Waipu Caves**	**8.47**	**231**	P	Pn	23 59 05.2	+6.1
OUZ	**Omahuta**	**8.61**	**237**	Pn	**Pn**	**23 59 03.8**	**+2.7**
OUZ	**Omahuta**	**8.61**	**237**	P	Pn	23 59 09.4	+8.4
URZ	**Urewera**	**8.62**	**209**	Pn	Pn	23 58 57.1	-4.1
	0.1nm,0.3s,baz=301,slow=24,SNR=19						
URZ				Sn	**Sn**	**00 00 36.8**	**-1.7**
	7.4nm,0.3s,baz=121,slow=24,SNR=5.4						
URZ	**Urewera**	**8.62**	**209**		**Pn**	**23 59 01.0**	**-0.2**
URZ					**Sn**	**00 00 38.2**	**-0.2**
BKZ	**Black Stump Fm**	**9.65**	**209**	Pn	**Pn**	**23 59 15.9**	**+0.6**
MCHZ	**McNeill Hill**	**9.80**	**207**	P	**Pn**	**23 59 15.5**	**-1.9**
MCHZ				S	**Sn**	**00 01 05.6**	**-1.9**
CKHZ	**Cape Kidnapper**	**9.85**	**205**	S	**Sn**	**00 01 06.5**	**-2.1**
HIZ	**Hauiti**	**9.89**	**217**	Pn	**Pn**	**23 59 21.2**	**+2.7**
KAHZ	**Kahuranaki**	**10.04**	**205**	P	Pn	23 59 16.4	-4.3
KAHZ				S	**Sn**	**00 01 10.6**	**-2.7**
PNHZ	**Pukenui**	**10.40**	**207**	P	Pn	23 59 17.1	-8.5
PNHZ				S	Sn	00 01 14.8	-7.4
TSZ	**Takapari Road**	**10.62**	**208**	P	**Pn**	**23 59 25.5**	**-3.1**
TSZ				S	Sn	00 01 18.1	-9.4
DVHZ	**Dannevirke**	**10.74**	**207**	P	**Pn**	**23 59 31.5**	**+1.2**
DVHZ				S	Sn	00 01 23.1	-7.5
ANWZ	**Angora Road**	**10.77**	**205**	P	**Pn**	**23 59 32.2**	**+1.6**
ANWZ				S	Sn	00 01 20.5	-11
POWZ	**Post Office Ro**	**10.98**	**208**	S	**Sn**	**00 01 31.9**	**-4.5**
PRWZ	**Pori Road**	**11.04**	**207**	P	**Pn**	**23 59 34.7**	**+0.3**
PRWZ				S	Sn	00 01 24.3	-14
BFZ	**Birch Farm**	**11.05**	**205**	P	Pn	23 59 26.3	-8.1
BFZ				S	Sn	00 01 29.0	-9.0
MRZ	**Mangatainoka R**	**11.29**	**208**	S	Sn	00 01 33.2	-11
HOWZ	**Holdsworth Sta**	**11.51**	**207**	P	Pn	23 59 35.5	-5.3
HOWZ				S	Sn	00 01 39.0	-10
SNZO	**South Karori**	**12.19**	**209**	Pn	**Pn**	**23 59 50.2**	**+0.2**
PLWZ	**Palliser**	**12.19**	**206**	Pn	**Pn**	**23 59 48.4**	**-1.7**
TUWZ	**Tuamarina**	**12.61**	**210**	Pn	**Pn**	**23 59 55.3**	**-0.4**
NNZ	**Nelson**	**12.69**	**213**	Pn	**Pn**	**23 59 57.5**	**+0.6**
QRZ	**Quartz Range**	**12.80**	**216**	Pn	**Pn**	**23 59 59.6**	**+1.2**
BSWZ	**Blackbirch Sta**	**12.87**	**210**	Pn	**Pn**	**00 00 00.7**	**+1.4**
THZ	**Tophouse**	**13.34**	**212**	Pn	**Pn**	**00 00 05.9**	**+0.1**
KHZ	**Kahutara**	**13.59**	**209**	Pn	**Pn**	**00 00 06.8**	**-2.3**
MSVF	**Nonsavu**	**13.61**	**342**	LR	LR	00 04 38.6	
	comp=Z,355nm,19.2s,baz=186,slow=34						
LTZ	**Lake Taylor**	**14.44**	**211**	Pn	**Pn**	**00 00 19.6**	**-1.2**
OXZ	**Oxford**	**14.97**	**211**		**Pn**	**00 00 24.8**	**-3.3**
OXZ				IAmb	IAmb	00 00 37.5	
	comp=Z,27nm,0.5s						
MQZ	**McQueen's Vall**	**15.02**	**208**	Pn	**Pn**	**00 00 29.6**	**+1.0**
MQZ				IAmb	IAmb	00 00 46.2	
	comp=Z,59nm,1.5s						
RPZ	**Rata Peaks**	**15.72**	**212**	Pn	**Pn**	**00 00 34.3**	**-3.5**
	comp=Z,0.7nm,0.3s,baz=56,slow=17,SNR=1.6						
RPZ				Sn	Sn	00 03 19.1	-13
	comp=Z,0.7nm,0.3s,baz=249,slow=21,SNR=1.8						
RPZ	**Rata Peaks**	**15.72**	**212**		**Pn**	**00 00 38.1**	**+0.2**
FOZ	**Fox Glacier**	**16.16**	**215**	Pn	**Pn**	**00 00 44.9**	**+1.3**
FOZ				IAmb	IAmb	00 00 46.7	
	comp=Z,88nm,1.5s						
LBZ	**Lake Benmore**	**16.63**	**212**	Pn	**Pn**	**00 00 50.3**	**+0.8**
ODZ	**Otahua Downs**	**16.95**	**210**		**P**	**00 00 56.0**	**+0.5**
ODZ				IAmb	IAmb	00 00 59.1	
	comp=Z,20nm,0.8s						
WKZ	**Wanaka**	**17.51**	**213**		**Pn**	**00 01 01.2**	**+0.6**
WKZ				IAmb	IAmb	00 01 09.0	
	comp=Z,51nm,1.5s						
MLZ	**Mavora Lakes**	**18.34**	**214**		**P**	**00 01 10.0**	**-0.8**
MLZ				IAmb	IAmb	00 01 13.6	
	comp=Z,34nm,1.5s						
WHZ	**Wether Hill Ro**	**18.81**	**213**	P	**P**	**00 01 14.9**	**-1.1**
WHZ				IAmb	IAmb	00 01 28.6	
	comp=Z,42nm,1.4s						
DCZ	**Deep Cove**	**18.88**	**215**	P	**P**	**00 01 17.3**	**+0.6**
ARMA	**Armidale**	**26.46**	**263**	P	**P**	**00 02 36.1**	**+2.3**
ARMA				IAmb	IAmb	00 02 48.6	
	comp=Z,22nm,1.2s						
EIDS	**Eidsvold**	**28.11**	**273**	P	**P**	**00 02 50.3**	**+1.8**
EIDS				IAmb	IAmb	00 02 59.6	
	comp=Z,21nm,1.4s						
CTAO	**Charters Tower**	**34.22**	**280**	P	**P**	**00 03 44.1**	**+1.7**
CTAO				IAmb	IAmb	00 03 46.3	
	comp=Z,20nm,1.3s						
STKA	**Stephens Creek**	**34.73**	**257**	P	**P**	**00 03 48.6**	**+1.9**
	comp=Z,12nm,0.7s,baz=91,slow=9.6,SNR=22						
	comp=Z,12nm,0.7s						
STKA	**Stephens Creek**	**34.73**	**257**	P	**P**	**00 03 49.4**	**+2.6**
BBOO	**Buckleboo**	**39.20**	**255**	P	**P**	**00 04 25.8**	**+1.0**
BBOO				IAmb	IAmb	00 04 33.0	
	comp=Z,17nm,1.1s						
COEN	**Coen**	**39.73**	**286**	P	**P**	**00 04 27.9**	**-1.4**
COEN				IAmb	IAmb	00 04 46.0	
	comp=Z,24nm,1.4s						
AS31	**Alice Springs**	**43.44**	**267**	P	**P**	**00 05 00.4**	**+0.6**
ASAR	**Alice Springs**	**43.44**	**267**	P	**P**	**00 04 59.5**	**-0.2**
WR0	**Warramunga Arr**	**44.29**	**272**	P	**P**	**00 05 06.7**	**+0.2**
WR0				IAmb	IAmb	00 05 07.9	
	comp=Z,13nm,1.2s						
WB2	**Warramunga Arr**	**44.46**	**272**	P	**P**	**00 05 07.4**	**-0.6**
WB2				IAmb	IAmb	00 05 09.3	
	comp=Z,10nm,0.7s						
WRAB	**Tennant Creek**	**44.46**	**272**	P	**P**	**00 05 07.8**	**-0.1**
WRAB				IAmb	IAmb	00 05 09.3	
	comp=Z,10nm,0.8s						
WRA	**Warramunga Arr**	**44.47**	**272**	P	**P**	**00 05 07.8**	**-0.2**
	comp=Z,7.5nm,0.6s,baz=

KSRS	**Korea Array**	**4.75**	**302**	Pn		**Pn**	**00 09 45.5**	**-1.5**
	0.9nm,0.3s,baz=116,slow=14,SNR=13							
KSRS				Sn		**Sn**	**00 10 40.5**	**-2.2**
	4.0nm,0.3s,baz=102,slow=17,SNR=6.5							
KSRS				LR		LR	00 11 43.5	
	comp=Z,74nm,21.4s,baz=305,slow=40							
	3.1nm,0.5s							
USRK	**Ussuriysk Ar.**	**9.18**	**355**	Pn		**Pn**	**00 10 48.5**	**+0.8**
	0.8nm,0.3s,baz=174,slow=15,SNR=5.9							
	1.1nm,0.4s							
KLR	**Kul'dur**	**14.21**	**357**	Pn		**Pn**	**00 11 59.1**	**+2.6**
	0.1nm,0.3s,baz=158,slow=12,SNR=3.7							
	0.9nm,0.5s							
SONM	**Songino Array**	**23.55**	**311**	P		**P**	**00 13 46.0**	**-0.2**
	1.1nm,0.9s,baz=130,slow=8.3,SNR=5.9							
	1.1nm,0.9s							
WMQ	**Urumqi**	**35.69**	**298**	*e*P		**P**	**00 15 35.1**	**+0.9**
WMQ				LR		LR		
	comp=N,190nm,14.1s							
WMQ				LR		LR		
	comp=E,260nm,15.1s							
WMQ				LR		LR		
	comp=Z,190nm,17.3s							
MKAR	**Makanchi Array**	**39.43**	**303**	P		**P**	**00 16 05.3**	**-0.5**
	comp=Z,0.6nm,0.9s,baz=99,slow=7.4,SNR=2.7							
	comp=Z,0.6nm,0.9s							
WRA	**Warramunga Arr**	**54.70**	**178**	P		**P**	**00 18 02.9**	**-2.2**
	comp=Z,1.1nm,0.8s,baz=355,slow=8.4,SNR=7.6							
	comp=Z,1.1nm,0.8s							
ILAR	**Eielson Array**	**54.78**	**31**	P		**P**	**00 18 06.7**	**+1.5**
	comp=Z,0.3nm,0.7s,baz=289,slow=10,SNR=5.3							
	comp=Z,0.3nm,0.7s							

MOS ***20*** *00:14:27.1±0.0,42.47N×43.37E,h3km,MPVA3.3*
TIF ***20*** *00:14:27.6,42.54N×43.49E,h13km*
NORS ***20*** *00:14:27.5±0.0,42.57N×43.51E,h10km,MPVA3.4*
IASPEI ***20*** *00:14:28.0±0.8,42.51N±0.02×43.46E±0.03,h10km±5km, Error ellipse: s-maj=3.8km s-min=2.8km az=104.0,GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
DDA ***20*** *00:14:31.3±0.0,42.37N×43.23E,h7km±2km,ML2.3*

ISC 20 00:14:28.0±0.8, 42.51N±0.02×43.46E±0.02, h9km±5km, n38,σ1§09/75, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ONI	**Oni**	**0.08**	**354**	P			**Pg**	**00 14 30.5**	**+0.2**
ONI				S			**Sg**	**00 14 32.2**	**+0.2**
ONI	**Oni**	**0.08**	**354**	*i* Pg			**Pg**	**00 14 30.6**	**+0.2**
ONI				*e*Sg			**Sg**	**00 14 32.3**	**+0.3**
TKB	**Tkibuli**	**0.38**	**245**	P			**Pb**	**00 14 36.7**	**-0.3**
TKB				S			**Sb**	**00 14 42.6**	**-0.5**
DIGR	**Digorskoe uzhe**	**0.40**	**13**	*i* Pg			**Pg**	**00 14 35.4**	**-0.5**
DIGR				*e*Sg			**Sb**	**00 14 42.0**	**-1.5**
ZEI	**Tsey**	**0.42**	**49**	*e*Pg			**Pg**	**00 14 36.0**	**-0.4**
ZEI				*e*Sg			**Sb**	**00 14 43.9**	**-0.5**
LACR	**Lac**	**0.69**	**63**	*e*Pg			**Pb**	**00 14 41.8**	**-0.5**
LACR				*e*Sg			**Sb**	**00 14 52.1**	**+0.1**
KORR	**Kora**	**0.72**	**38**	*i* Pg			**Pg**	**00 14 42.0**	**0.0**
KORR				*e*Sg			**Sb**	**00 14 53.2**	**+0.3**
BKRG	**Bakuriani**	**0.75**	**177**	P			**Pb**	**00 14 43.2**	**-0.2**
BKRG				S			**Sb**	**00 14 54.5**	**+0.7**
MTEO	**Meteo**	**0.81**	**78**	P			**Pg**	**00 14 43.2**	**-0.4**
MTEO				S			**Sg**	**00 14 53.6**	**-0.7**
LSNR	**Lesken**	**0.81**	**19**	*e*Pg			**Pg**	**00 14 43.6**	**0.0**
LSNR				*e*Sg			**Sb**	**00 14 55.4**	**+0.1**
PNSH	**Pansheti**	**0.86**	**81**	P			**Pg**	**00 14 44.0**	**-0.6**
PNSH				S			**Sg**	**00 14 54.9**	**-1.0**
ABS	**Abastumani**	**0.90**	**213**	P			**Pg**	**00 14 45.6**	**+0.3**
ABS				S			**Sn**	**00 14 59.5**	**-0.6**
ARNR	**Ardon**	**0.90**	**42**	*i* Pg			**Pb**	**00 14 45.9**	**+0.1**
ARNR				*e*Sg			**Sn**	**00 14 59.5**	**-0.4**
BRNG	**Burnasheti**	**0.93**	**163**	P			**Pn**	**00 14 47.3**	**-0.1**
BRNG				S			**Sn**	**00 15 00.9**	**0.0**
STDR	**Stavd-Durt**	**0.96**	**27**	*e*Pg			**Pn**	**00 14 47.6**	**-0.1**
STDR				*e*Sg			**Sn**	**00 15 01.3**	**-0.2**
NCK	**Nalchik**	**0.99**	**6**	*e*Pg			**Pg**	**00 14 46.2**	**-0.9**
NCK				*i* Sg			**Sn**	**00 15 01.7**	**-0.4**
CHVG	**Ch'k'valeri**	**1.04**	**282**	P			**Pn**	**00 14 48.4**	**-0.4**
CHVG				S			**Sn**	**00 15 03.1**	**-0.2**
TRLG	**Trialeti**	**1.08**	**154**	P			**Pb**	**00 14 49.0**	**0.0**
TRLG				S			**Sn**	**00 15 04.6**	**-0.1**
AKH	**Akhalkalaki**	**1.10**	**179**	P			**Pg**	**00 14 49.5**	**+0.2**
AKH				S			**Sn**	**00 15 05.2**	**0.0**
EPOS	**Posof**	**1.15**	**209**	P			**Pb**	**00 14 49.9**	**-0.3**
EPOS				S			**Sn**	**00 15 06.2**	**0.0**
KMGR	**Komgaron**	**1.17**	**62**	*e*Pg			**Pg**	**00 14 51.0**	**+0.6**
KMGR				*e*Sg			**Sn**	**00 15 08.5**	**+1.9**
BTKR	**Batakoyurt**	**1.17**	**42**	*e*Pg			**Pg**	**00 14 50.8**	**+0.3**
BTKR				*e*Sg			**Sn**	**00 15 08.1**	**+1.4**
BGD	**Bogdanovka**	**1.25**	**175**	P			**Pb**	**00 14 52.0**	**+0.1**
BGD				S			**Sn**	**00 15 10.4**	**+1.5**
KBZ	**Khabaz**	**1.28**	**341**	*e*Pg			**Sg**	**00 14 51.8**	**-0.3**
KBZ				*e*Sg			**Sg**	**00 15 10.2**	**+0.9**
BTNK	**Botanikuri**	**1.29**	**129**	P			**Pn**	**00 14 49.0**	**-3.2**
BTNK				S			**Sb**	**00 15 07.3**	**-1.9**
DMNI	**Dmanisi**	**1.30**	**155**	P			**Pn**	**00 14 52.3**	**-0.1**
DMNI				S			**Sg**	**00 15 10.0**	**+0.1**
SHA1	**Shidzhatmaz**	**1.36**	**335**	*e*Pg			**Pb**	**00 14 53.6**	**-0.1**
SHA1				*e*Sg			**Sg**	**00 15 11.6**	**-0.2**
PRTR	**Priterechnaya**	**1.38**	**26**	*e*Pg			**Pg**	**00 14 56.3**	**+1.8**
PRTR				*e*Sg			**Sg**	**00 15 16.1**	**+3.8**
DGRG	**David-gareji**	**1.78**	**126**	P			**Pg**	**00 15 01.8**	**-0.3**
DGRG				S			**Sg**	**00 15 26.6**	**+1.5**
DBOC	**Borcka**	**1.78**	**230**	P			**Pb**	**00 15 00.4**	**-0.3**
DBOC				S			**Sb**	**00 15 23.2**	**0.0**
DBOC				*i* AML		AML	AML	00 15 25.0	
	comp=E,38nm,0.3s								
DAGI	**Agillar**	**1.84**	**219**	P			**Pb**	**00 15 02.2**	**+0.2**
DAGI				S			**Sb**	**00 15 25.1**	**-0.1**
DAGI				*i* AML		AML	AML	00 15 29.0	
	comp=E,18nm,0.6s								
GROC	**Groznyy**	**1.85**	**67**	*e*Pg			**Pb**	**00 15 02.3**	**+0.4**
GROC				*e*Sg			**Sg**	**00 15 28.2**	**+0.8**
DBAD	**Bademkaya**	**2.00**	**222**	P			**Pb**	**00 15 04.0**	**-0.5**
DBAD				S			**Sb**	**00 15 29.9**	**+0.4**
DBAD				*i* AML		AML	AML	00 15 32.0	
	comp=N,45nm,0.8s								
DBAD				*i* AML		AML	AML	00 15 32.0	
	comp=E,42nm,0.4s								
DVE	**Vedeno**	**2.01**	**76**	*e*Pg			**Pb**	**00 15 04.3**	**-0.4**
DVE				*e*Sg			**Sg**	**00 15 33.4**	**+0.7**
BTLR	**Botlikh**	**2.04**	**85**	*e*Pg			**Pb**	**00 15 04.4**	**-0.9**
BTLR				*e*Sg			**Sg**	**00 15 32.7**	**-0.9**
DDEM	**Demirkent**	**2.07**	**219**	P			**Pb**	**00 15 05.0**	**-0.7**
LGD	**Lagodekhi**	**2.17**	**107**	P			**Pb**	**00 15 07.8**	**+0.3**
LGD				S			**Sg**	**00 15 36.8**	**-1.1**
DDFL	**Dedoflistskaro**	**2.25**	**117**	P			**Pg**	**00 15 12.5**	**+1.4**
DDFL				S			**Sg**	**00 15 45.4**	**+5.1**

MAN 20 00:21:52.1, 13.76N×120.40E, h11km, mb3.7, ML2.4, MS1.9, Mindoro

IDC ***20*** *00:27:09.7±2.1,36.81N×142.12E,h0km,mb3.8/5, mbtmp3.8/7,ML3.3/2, Error ellipse: s-maj=50.8km s-min=26.9km az=79.0*
JMA ***20*** *00:27:13.5±0.4,36.7N±0.6×14.2E±, h21km±4km, MV3.7/30,E OFF FUKUSHIMA PREF*
NEIC ***20*** *00:27:17.9±2.5,36.81N±0.06×141.7E±0.1, h40km±12km, mb4.1/3,Error ellipse: s-maj=13.5km s-min=8.5km az=108.0*

ISC 20 00:27:13.8±0.9, 36.74N±0.05×141.80E±0.07, h19km, n42, σ1§44/39, mb3.8/7, 7D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.88**	**295**	⇓P			**Pb**	**00 27 29.9**	**-0.5**
JFK	**Kawauchi**	**0.97**	**311**	P			**Pb**	**00 27 31.2**	**-0.8**
JHO	**Hitachi**	**0.99**	**263**	⇓P			**Pb**	**00 27 31.5**	**-0.9**
JHYU	**Hitachinakayam**	**1.05**	**248**	⇓P			**Pn**	**00 27 32.9**	**-0.6**
JHYU				⇓eS			**Sb**	**00 27 47.3**	**+0.6**
JMM	**Marumori**	**1.38**	**325**	Pn			**Pn**	**00 27 37.5**	**-0.5**
JMM	**Marumori**	**1.38**	**325**	⇓P			**Pn**	**00 27 37.4**	**-0.7**
JYT	**Yasato**	**1.39**	**249**	Pn			**Pn**	**00 27 37.8**	**-0.3**
JFT	**Otama**	**1.40**	**304**	⇓P			**Pn**	**00 27 38.6**	**+0.2**
JFT				⇓*e*S			**Sn**	**00 27 56.3**	**0.0**
JIO	**Ouri**	**1.75**	**348**	*i* P			**Pn**	**00 27 42.8**	**-0.4**
JFY	**Yanaizu**	**1.80**	**292**	P			**Pn**	**00 27 44.8**	**+0.9**
JOU	**Okura**	**1.86**	**331**	P			**Pn**	**00 27 45.5**	**+0.8**
JAG	**Ashikaga**	**1.91**	**261**	P			**Pn**	**00 27 45.2**	**-0.1**
JYS	**Shirataka**	**2.02**	**318**	P			**Pn**	**00 27 48.3**	**+1.4**
MJAR	**Matsushiro Arr**	**2.89**	**267**	Pn			**Pn**	**00 27 59.0**	**+0.1**
	2.4nm,0.3s,baz=98,slow=11,SNR=44								
	19nm,0.4s								
MJAR	**Matsushiro Arr**	**2.89**	**267**	Pn			**Pn**	**00 27 59.7**	**+0.9**
MAJO	**Matsushiro**	**2.89**	**267**				**Pn**	**00 28 00.5**	**+1.6**
MJB9	**Matsu-Tunnel**	**2.90**	**267**	Pn			**Pn**	**00 28 00.4**	**+1.5**
JSD	**Sado**	**3.10**	**296**	Pn			**Pn**	**00 28 02.8**	**+1.1**
JGF	**Kuroka**	**3.77**	**254**	Pn			**Pn**	**00 28 14.7**	**+3.8**
JHJ2	**Mitsune**	**3.96**	**205**	Pn			**Pn**	**00 28 16.4**	**+2.8**
JHJ	**Hachijo jima 2**	**3.97**	**205**	Pn			**Pn**	**00 28 15.6**	**+1.9**
	6.6nm,0.3s,baz=138,slow=23,SNR=6.7								
JHJ				Sn			**Sn**	**00 28 56.5**	**-3.2**
	9.8nm,0.3s,baz=90,slow=20,SNR=1.4								
	46nm,0.4s								
JTM	**Tenmabayashi**	**4.08**	**352**	Pn			**Pn**	**00 28 17.5**	**+2.3**
INU	**Inuyama**	**4.11**	**252**	Pn			**Pn**	**00 28 18.2**	**+2.6**
ERM	**Erimo**	**5.38**	**11**	Pn			**Pn**	**00 28 33.4**	**+0.5**
JHS	**Saijyo**	**7.26**	**259**	Pn			**Pn**	**00 29 01.4**	**+2.5**
H11N2	**WAKE ISLAND Hy**	**27.73**	**121**	T			T	01 02 15.7	
	baz=313,slow=75,SNR=18								
H11N1	**WAKE ISLAND Hy**	**27.74**	**121**	T			T	01 02 19.5	
	baz=313,slow=75,SNR=24								
H11N3	**WAKE ISLAND Hy**	**27.75**	**121**	T			T	01 02 20.9	
	baz=313,slow=75,SNR=23								
SONM	**Songino Array**	**28.20**	**304**	P			**P**	**00 33 06.1**	**+0.8**
	1.2nm,0.6s,baz=110,slow=8.8,SNR=8.7								
	1.2nm,0.6s								
SONM	**Songino Array**	**28.20**	**304**	P			**P**	**00 33 06.0**	**+0.8**
SONM				IAmb		IAmb	IAmb	00 33 06.4	
	comp=Z,1.3nm,0.8s								
H11S1	**WAKE ISLAND Hy**	**28.44**	**123**	T			T	01 03 14.8	
	baz=315,slow=75,SNR=11								
H11S3	**WAKE ISLAND Hy**	**28.44**	**123**	T			T	01 03 16.7	
	baz=315,slow=75,SNR=8.4								
H11S2	**WAKE ISLAND Hy**	**28.46**	**123**	T			T	01 03 12.0	
	baz=315,slow=75,SNR=7.3								
ZALV	**Zalesovo Beam**	**42.34**	**313**	P			**P**	**00 35 06.5**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=89,slow=6.1,SNR=4.4								
	comp=Z,0.7nm,0.5s								
ZALV	**Zalesovo Beam**	**42.34**	**313**	P			**P**	**00 35 05.8**	**-0.5**
MKAR	**Makanchi Array**	**44.54**	**302**	P			**P**	**00 35 24.6**	**+0.4**
	comp=Z,1.1nm,0.9s,baz=89,slow=9.8,SNR=5.8								
	comp=Z,1.1nm,0.9s								
MKAR	**Makanchi Array**	**44.54**	**302**	P			**P**	**00 35 24.1**	**-0.1**
KURK	**Kurchatov**	**46.36**	**308**	P			**P**	**00 35 38.3**	**-0.2**
KURK				IAmb		IAmb	IAmb	00 35 38.9	
	comp=Z,4.8nm,1.2s								
WRA	**Warramunga Arr**	**56.81**	**188**	P			**P**	**00 36 56.2**	**-0.7**
	comp=Z,0.7nm,1.0s,baz=5.0,slow=7.3,SNR=2.4								
	comp=Z,0.7nm,1.0s								
ABKAR	**Akbulak array**	**58.36**	**310**	P			**P**	**00 37 06.7**	**-0.9**
HOLB	**Holberg**	**62.70**	**46**	P			**P**	**00 37 38.5**	**+1.2**
HOLB				IAmb		IAmb	IAmb	00 37 40.4	
	comp=Z,2.0nm,1.2s								
AKASG	**Malin Array Be**	**74.72**	**323**	P			**P**	**00 38 51.4**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=46,slow=6.7,SNR=4.0								
	comp=Z,0.3nm,0.3s								

BJI ***20*** *00:39:44.4±0.0,23.14N×121.67E,h16km,mb4.4/44, mB4.5/30,ML4.4/8,Ms4.2/48,Ms7 4.0/43*
NEIC ***20*** *00:39:44,23.13N×121.58E,h20km,Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr=2.87; Mθθ0.55; Mφφ2.32; Mrθ 1.96; Mrφ1.24; Mθφ0.49; Fault plane solution: M0 3.55000×10¹⁵ NP1:φs8.36000°,δ35.96000°, λ-125.80000°. NP2:φs230.06000°,δ61.56000°, λ-67.01000°. Principal axes: T 3.2862, Plg14.0000°, Azm304.0000°; N 0.4735, Plg20.0000°, Azm39.0000°; P -3.7598, Plg65.0000°, Azm182.0000°;*
NEIC ***20*** *00:39:44.0±1.6,23.15N±0.04×121.56E±0.06,h10km±1km, mb4.7/104,Mwr4.3/26 Error ellipse: s-maj=8.6km s-min=7.0km az=271.0*
ASIES ***20*** *00:39:45.6,23.14N×121.71E,h26km,MW4.3*
JMA ***20*** *00:39:47.1±0.3,23.1N±1.1×12.2E±, h15km±4km,MD4.5/15, MV4.7/15,TAIWAN REGION*
TAP ***20*** *00:39:47.5,23.16N×121.53E,h39km,ML5.1,B*
NIED ***20*** *00:39:47.1,23.28N×121.70E,h15km,MW4.6,Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁵Nm; Mrr=2.79; Mθθ0.06; Mφφ2.73; Mrθ3.97; Mθφ-0.61; Mrφ7.60; Fault plane solution: M0 8.98000×10¹⁵ NP1: φs334.00000°,δ12.00000°,λ-141.00000°. NP2: φs205.00000°,δ82.00000°,λ-81.00000°.*
IDC ***20*** *00:39:49.6±3.2,23.17N×121.72E,h66km±29km,mb4.2/18, mbtmp4.4/21,ML3.9/3,MS3.9/21 Error ellipse: s-maj=16.9km s-min=14.6km az=64.0*

ISC 20 00:39:46.2±0.9, 23.17N±0.02×121.66E±0.02, h31km±6km, n434, σ1§27/578, mb4.6/75, MS4.0/26, 34C-90D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ECBN	**Changbin**	**0.24**	**307**	⇑*i*P			**Pn**	**00 39 54.4**	**+0.7**
	baz=334								
ECBN				*i* S			**Sn**	**00 39 59.5**	**+1.0**
	baz=334								
CHKT	**Chengkung**	**0.28**	**256**	⇑*i*P			**Pn**	**00 39 54.2**	**-0.1**
	baz=246								
CHKT				*i* S			**Sn**	**00 39 59.3**	**-0.1**
	baz=246								
FULB	**Fuli**	**0.34**	**275**	⇑*i*P			**Pn**	**00 39 54.8**	**-0.3**
	baz=279								
FULB				*e*S			**Sn**	**00 40 00.7**	**-0.3**
	baz=279								
EYUL	**Yuli**	**0.36**	**299**	⇑*i*P			**Pn**	**00 39 55.5**	**+0.2**
	baz=313								
EYUL				*e*S			**Sn**	**00 40 01.7**	**+0.3**
	baz=313								
TWF1	**Yuli**	**0.38**	**298**	⇓*i*P			**Pn**	**00 39 55.6**	**0.0**
	baz=312								
EDH	**Donghe**	**0.39**	**239**	⇑*i*P			**Pn**	**00 39 55.4**	**-0.2**
	baz=228								
EDH				S			**Sn**	**00 40 01.5**	**-0.4**
	baz=228								
HGSD	**Ruisui**	**0.39**	**325**	⇑*i*P			**Pn**	**00 39 55.5**	**-0.2**
	baz=343								
HGSD				*e*S			**Sn**	**00 40 05.1**	**+3.1**
	baz=343								
YULB	**Yu-li**	**0.40**	**303**				**Pb**	**00 39 55.0**	**-0.3**
YULB	**Yu-li**	**0.40**	**303**	⇓*i*P			**Pn**	**00 39 55.7**	**-0.2**
	baz=316								
YULB				*e*S			**Sn**	**00 40 02.4**	**0.0**
	baz=316								
ECS	**Chishang**	**0.42**	**260**	⇑*e*P			**Pn**	**00 39 56.1**	**0.0**
	baz=257								
ECS				*e*S			**Sn**	**00 40 02.9**	**+0.1**
	baz=257								
EHY	**Hungye**	**0.46**	**317**	⇓*i*P			**Pn**	**00 39 56.4**	**-0.3**
	baz=331								
EHY				*e*S			**Sn**	**00 40 03.2**	**-0.6**
	baz=331								
LDUT	**Ludao**	**0.53**	**200**	P			**Pn**	**00 39 57.6**	**0.0**
	baz=187								
LDUT				S			**Sn**	**00 40 05.1**	**-0.3**
	baz=187								
EGFH	**Guangfu**	**0.54**	**336**	⇓*i*P			**Pn**	**00 39 57.8**	**0.0**
	baz=349								
EGFH				*e*S			**Sn**	**00 40 06.9**	**+1.1**
	baz=349								
TEGC	**Jichi Village**	**0.55**	**348**	P			**Pn**	**00 39 58.2**	**+0.3**
	baz=1.0								
TEGC				*e*S			**Sn**	**00 40 06.5**	**+0.6**
	baz=1.0								
LONT	**Longtian**	**0.56**	**242**	⇓*i*P			**Pn**	**00 39 57.6**	**-0.4**
	baz=235								
LONT				*e*S			**Sb**	**00 40 05.5**	**-0.1**
	baz=235								
ELDTW	**Lidau**	**0.59**	**272**	⇓*i*P			**Pb**	**00 39 57.7**	**-0.7**
	baz=273								
ELDTW				S			**Sb**	**00 40 04.7**	**-2.0**
	baz=273								
TTN	**Taitung**	**0.63**	**229**	⇑P			**Pn**	**00 39 59.0**	**0.0**
	baz=220								
TTN				*e*S			**Sn**	**00 40 08.1**	**+0.1**
	baz=220								
TWGBT	**Beinan**	**0.64**	**237**	⇓*i*P			**Pb**	**00 39 58.6**	**-0.5**
	baz=231								
TWGBT				*e*S			**Sb**	**00 40 06.9**	**-0.9**
	baz=231								
TWG	**Pinlang**	**0.65**	**238**	Pg			**Pb**	**00 39 58.1**	**-1.1**
TWG	**Pinlang**	**0.65**	**238**	⇓*i*P			**Pb**	**00 39 58.6**	**-0.6**
	baz=231								
TWG				S			**Sb**	**00 40 06.9**	**-1.1**
	baz=231								
ESL	**Shilin**	**0.68**	**342**	*i* P			**Pn**	**00 39 59.4**	**-0.3**
	baz=353								
ESL				*e*S			**Sn**	**00 40 08.6**	**-0.5**
	baz=353								
TEYL	**Yanliau Villag**	**0.70**	**355**	P			**Pn**	**00 40 00.8**	**+0.9**
	baz=5.0								
TEYL				*e*S			**Sn**	**00 40 11.0**	**+1.4**
	baz=5.0								
YUS	**Yu-Shan**	**0.73**	**296**	⇓*i*P			**Pn**	**00 40 00.5**	**-0.3**
	baz=301								
YUS				*e*S			**Sb**	**00 40 08.3**	**-2.4**
	baz=301								
VWDT	**VWDT**	**0.75**	**321**	⇓*i*P			**Pn**	**00 40 00.8**	**+0.1**
	baz=329								
VWDT				*e*S			**Sb**	**00 40 10.0**	**-0.9**
	baz=329								
HWA	**Hwalien**	**0.81**	**356**	*e*P			**Pn**	**00 40 01.8**	**+0.4**
	baz=5.0								
HWA				*e*S			**Sn**	**00 40 13.9**	**+1.6**
	baz=5.0								
ETM	**Tongmen**	**0.81**	**349**	P			**Pn**	**00 40 01.4**	**-0.1**
	baz=357								
ETM				*e*S			**Sb**	**00 40 11.8**	**-0.7**
	baz=357								
STYH	**Taoyuan**	**0.82**	**270**	⇓*i*P			**Pb**	**00 40 01.3**	**-0.7**
	baz=271								
STYH				*e*S			**Sb**	**00 40 11.0**	**-1.7**
	baz=271								
STYT	**Tauyuan**	**0.83**	**270**	⇓P			**Pb**	**00 40 01.6**	**-0.7**
	baz=270								
STYT				*e*S			**Sb**	**00 40 11.6**	**-1.7**
	baz=270								
ALS	**Alishan**	**0.86**	**293**	⇓*i*P			**Pn**	**00 40 02.7**	**+0.3**
	baz=297								
ALS				*e*S			**Sb**	**00 40 13.4**	**-0.8**
	baz=297								
ECL	**Taimali**	**0.87**	**229**	*e*P			**Pn**	**00 40 01.1**	**-1.1**
	baz=223								
ECL				*e*S			**Sb**	**00 40 12.0**	**-2.2**
	baz=223								
SSLB	**Suanglung**	**0.90**	**313**	Pg			**Pn**	**00 40 00.8**	**-1.9**
SSLB	**Suanglung**	**0.90**	**313**	P			**Pn**	**00 40 02.6**	**-0.1**
SSLB	**Suanglung**	**0.90**	**313**	⇓*i*P			**Pn**	**00 40 02.7**	**-0.1**
	baz=319								
SSLB				S			**Sb**	**00 40 12.8**	**-2.2**
	baz=319								
OWD	**Renai**	**0.90**	**330**	⇓P			**Pn**	**00 40 02.7**	**-0.2**
	baz=337								
OWD				*e*S			**Sb**	**00 40 12.9**	**-2.3**
	baz=337								
TWD	**Chiawan**	**0.91**	**356**	⇑*e*P			**Pb**	**00 40 03.0**	**-0.5**
	baz=4.0								
TWD				*e*S			**Sb**	**00 40 14.6**	**-0.7**
	baz=4.0								
SLGT	**Liugui**	**0.95**	**260**	*e*P			**Pb**	**00 40 04.1**	**-0.2**
	baz=258								
SLGT				*e*S			**Sb**	**00 40 15.6**	**-1.0**
	baz=258								
WUSB	**Renai**	**0.96**	**329**	⇓P			**Pb**	**00 40 03.8**	**-0.6**
	baz=335								
WUSB				*e*S			**Sb**	**00 40 14.9**	**-2.0**
	baz=335								
TPUB	**Ta-pu**	**0.96**	**278**				**Pn**	**00 40 02.8**	**-0.8**
TPUB	**Ta-pu**	**0.96**	**278**	P			**Pb**	**00 40 04.2**	**-0.2**
TPUB	**Ta-pu**	**0.96**	**278**	⇓*e*P			**Pb**	**00 40 03.9**	**-0.5**
	baz=279								
TPUB				*e*S			**Sb**	**00 40 15.9**	**-0.9**
	baz=279								
WTP	**Ta-pu**	**0.97**	**275**	⇓*e*P			**Pb**	**00 40 04.0**	**-0.6**
	baz=275								
WTP				*e*S			**Sb**	**00 40 16.5**	**-0.6**
	baz=275								
ETL	**Fush Village**	**0.98**	**358**	*e*P			**Pb**	**00 40 04.3**	**-0.6**
	baz=5.0								
ETL				*e*S			**Sb**	**00 40 16.8**	**-0.8**
	baz=5.0								
CHGB	**Renai**	**0.99**	**333**	⇓*e*P			**Pb**	**00 40 04.5**	**-0.6**
	baz=340								
CHGB				*e*S			**Sb**	**00 40 16.8**	**-1.2**
	baz=340								
SMLT	**Sun Moon Lake**	**1.00**	**315**	*e*P			**Pn**	**00 40 04.1**	**-0.1**
	baz=321								
SMLT				*e*S			**Sb**	**00 40 16.7**	**-1.3**
	baz=321								
SGST	**Jiashian**	**1.00**	**265**	⇓*e*P			**Pn**	**00 40 04.0**	**-0.1**
	baz=265								
SGST				*e*S			**Sb**	**00 40 16.6**	**-1.2**
	baz=265								
CHN5	**Tsauling**	**1.00**	**295**	*e*P			**Pb**	**00 40 05.1**	**0.0**
	baz=299								
CHN5				*e*S			**Sn**	**00 40 18.8**	**+1.6**
	baz=299								
**CHN4

	baz=327						
WCS				eS	Sb	00 40 20.8	-0.5
	baz=327						
LAY	**Lan-yu**	**1.13**	**185**	P	**Pn**	**00 40 05.9**	**-0.1**
	baz=179						
LAY				eS	Sn	00 40 19.8	-0.6
	baz=179						
WGK	**Gukeng**	**1.14**	**297**⇓	eP	**Pb**	**00 40 07.0**	**-0.3**
	baz=300						
WGK				eS	Sb	00 40 22.0	+0.2
	baz=300						
EHP	**Heping Village**	**1.14**	**4**	eP	**Pb**	**00 40 06.8**	**-0.5**
	baz=10.0						
EHP				eS	Sb	00 40 21.3	-0.5
	baz=10.0						
FUSS	**Fushou**	**1.14**	**340**⇓	eP	**Pb**	**00 40 06.8**	**-0.7**
	baz=346						
FUSS				eS	Sn	00 40 20.1	-0.9
	baz=346						
WNT	**Mingjian**	**1.14**	**308**⇓	eP	**Pb**	**00 40 07.3**	**-0.2**
	baz=313						
WNT				eS	Sb	00 40 21.8	-0.1
	baz=313						
CHN2	**Minshiung**	**1.15**	**288**⇓	eP	**Pb**	**00 40 07.5**	**-0.1**
	baz=291						
CHN2				eS	Sb	00 40 22.9	+0.7
	baz=291						
WDLH	**Douliu**	**1.16**	**297**⇓	eP	**Pb**	**00 40 07.3**	**-0.4**
	baz=300						
WDLH				eS	Sb	00 40 22.3	0.0
	baz=300						
WNT1	**Nantou City**	**1.16**	**309**	eP	**Pb**	**00 40 07.8**	**0.0**
	baz=313						
WNT1				eS	Sb	00 40 22.6	+0.1
	baz=313						
LYUB	**Lan-yu**	**1.17**	**184**	P	**Pn**	**00 40 05.7**	**-0.7**
	baz=178						
LYUB				eS	Sn	00 40 18.9	-2.3
	baz=178						
TWT	**Tachien**	**1.17**	**338**⇓	eP	**Pb**	**00 40 07.5**	**-0.5**
	baz=343						
TWT				eS	Sn	00 40 20.8	-0.7
	baz=343						
SGLT	**Jiouru**	**1.17**	**248**	eP	**Pb**	**00 40 08.3**	**+0.4**
	baz=245						
SGLT				eS	Sb	00 40 26.3	+3.6
	baz=245						
TDCB	**Techi**	**1.17**	**337**⇓	eP	**Pb**	**00 40 07.5**	**-0.6**
	baz=342						
TDCB				eS	Sn	00 40 21.0	-0.6
	baz=342						
TSPT	**Pingtung City**	**1.18**	**246**	eP	**Pb**	**00 40 08.9**	**+0.8**
	baz=243						
CHY	**Chiayi**	**1.19**	**286**⇓	eP	**Pb**	**00 40 07.5**	**-0.6**
	baz=288						
CHY				eS	Sb	00 40 22.5	-0.7
	baz=288						
TWM1	**Shoushan**	**1.20**	**253**⇓	eP	**Pb**	**00 40 08.9**	**+0.5**
	baz=251						
TWM1				eS	Sb	00 40 24.8	+1.3
	baz=251						
CHN3	**Shinhua**	**1.20**	**266**	eP	**Pb**	**00 40 07.7**	**-0.7**
	baz=265						
CHN3				eS	Sb	00 40 26.2	+2.6
	baz=265						
SSPT	**Xinbi**	**1.22**	**236**	eP	**Pb**	**00 40 08.0**	**-0.7**
	baz=233						
SHHT	**Tainan City**	**1.22**	**263**⇓	eP	**Pb**	**00 40 09.3**	**+0.6**
	baz=263						
SHHT				eS	Sb	00 40 25.7	+1.5
	baz=263						
WWF	**Wufeng**	**1.24**	**315**⇓	eP	**Pb**	**00 40 09.0**	**-0.1**
	baz=319						
WWF				eS	Sb	00 40 25.0	+0.3
	baz=319						
SLIU	**Shizi**	**1.24**	**220**	eP	**Pn**	**00 40 06.9**	**-0.5**
	baz=216						
SLIU				eS	Sn	00 40 22.9	-0.2
	baz=216						
SCZT	**Fangliau**	**1.25**	**231**	eP	**Pb**	**00 40 08.2**	**-1.1**
	baz=227						
SCZT				eS	Sb	00 40 26.4	+1.5
	baz=227						
ENA	**Nanau**	**1.25**	**3**⇑	eP	**Pb**	**00 40 08.2**	**-1.1**
	baz=9.0						
ENA				eS	Sb	00 40 23.9	-1.2
	baz=9.0						
WYL	**Yuanlin Townsh**	**1.27**	**309**	eP	**Pb**	**00 40 08.9**	**-0.7**
	baz=312						
EWUT	**Wuta**	**1.27**	**5**⇑	eP	**Pb**	**00 40 08.5**	**-1.1**
	baz=10.0						
EWUT				eS	Sn	00 40 24.3	+0.4
	baz=10.0						
NNSB	**Datong**	**1.28**	**348**	eP	**Pn**	**00 40 08.5**	**+0.4**
	baz=354						
NNSB				eS	Sn	00 40 23.6	-0.6
	baz=354						
NNSH	**Datong**	**1.28**	**348**⇑	eP	**Pn**	**00 40 08.4**	**+0.3**
	baz=354						
NNSH				eS	Sn	00 40 23.3	-0.9
	baz=354						
WTK	**Tuku**	**1.28**	**294**⇓	eP	**Pb**	**00 40 08.7**	**-1.1**
	baz=296						
WTK				eS	Sn	00 40 24.2	+0.2
	baz=296						
WHP	**Taichung City**	**1.28**	**329**⇓	eP	**Pb**	**00 40 09.3**	**-0.6**
	baz=334						
WHP				eS	Sb	00 40 26.6	+0.5
	baz=334						
ICHU	**Yijhu**	**1.29**	**279**⇓	eP	**Pb**	**00 40 08.8**	**-1.0**
	baz=280						
ICHU				eS	Sn	00 40 24.7	+0.5
	baz=280						
NNS	**Nan Shan**	**1.29**	**348**	eP	**Pb**	**00 40 08.8**	**-1.2**
	baz=354						
NNS				eS	Sn	00 40 24.3	-0.3
	baz=354						
TAI1	**Yung-k'ang**	**1.33**	**265**	eP	**Pb**	**00 40 10.3**	**-0.2**
	baz=264						
TCU	**Taichung**	**1.33**	**317**⇓	eP	**Pb**	**00 40 10.3**	**-0.3**
	baz=321						
TCU				eS	Sb	00 40 27.2	-0.1
	baz=321						
CHN8	**Yiju**	**1.35**	**278**⇓	eP	**Pb**	**00 40 09.7**	**-1.2**
	baz=279						
CHN8				eS	Sb	00 40 27.3	-0.5
	baz=279						
SCLT	**Jiali**	**1.35**	**270**	eP	**Pb**	**00 40 10.2**	**-0.8**
	baz=270						
SCLT				eS	Sb	00 40 27.5	-0.4
	baz=270						
WCHH	**Zhanghua**	**1.36**	**312**⇓	eP	**Pb**	**00 40 10.4**	**-0.7**
	baz=316						
WCHH				eS	Sb	00 40 27.1	-1.1
	baz=316						
LATG	**Datong**	**1.36**	**355**	eP	**Pn**	**00 40 09.6**	**+0.3**
	baz=360						
LATG				eS	Sn	00 40 26.4	+0.1
	baz=360						
WSL	**Shuilin Townsh**	**1.36**	**285**⇓	eP	**Pb**	**00 40 09.9**	**-1.3**
	baz=287						
WSL				eS	Sn	00 40 26.5	+0.4
	baz=287						
SMST	**Manzhou Townsh**	**1.38**	**214**	eP	**Pn**	**00 40 09.5**	**+0.3**
	baz=210						
SMST				eS	Sn	00 40 25.4	-1.0
	baz=210						
WRL	**Guolierlin Hig**	**1.39**	**302**⇓	eP	**Pb**	**00 40 10.2**	**-1.4**
	baz=305						
WRL				eS	Sn	00 40 26.8	+0.1
	baz=305						
WSSB	**Gushan**	**1.40**	**248**	eP	**Pb**	**00 40 12.3**	**+0.6**
	baz=246						
WSF	**Szhu**	**1.40**	**290**	eP	**Pn**	**00 40 10.1**	**+0.5**
	baz=291						
WSF				eS	Sn	00 40 27.5	+0.4
	baz=291						
TWQ1	**Liyutan**	**1.43**	**325**⇓	eP	**Pb**	**00 40 11.8**	**-0.5**
	baz=329						
TWQ1				eS	Sb	00 40 30.0	-0.1
	baz=329						
NDT	**Datong Townshi**	**1.43**	**354**⇓	eP	**Pb**	**00 40 10.9**	**-1.4**
	baz=359						
NDT				eS	Sn	00 40 28.3	+0.5
	baz=359						
WLCH	**Liuqiu**	**1.44**	**236**	eP	**Pb**	**00 40 13.8**	**+1.4**
	baz=233						
HEN	**Hengchun**	**1.44**	**217**	eP	**Pb**	**00 40 11.4**	**-1.0**
	baz=212						
HEN				eS	Sn	00 40 28.4	+0.4
	baz=212						
TWC	**Suao**	**1.44**	**7**⇑	eP	**Pb**	**00 40 11.4**	**-1.1**
	baz=12						
TWC				eS	Sb	00 40 29.2	-1.3
	baz=12						
WTCT	**Ta-ch'eng**	**1.45**	**299**	eP	**Pn**	**00 40 11.0**	**+0.7**
	baz=301						
WTCT				eS	Sn	00 40 28.8	+0.7
	baz=301						
TSEB	**Hengchuen, Pin**	**1.45**	**209**	eP	**Pb**	**00 40 11.3**	**-1.3**
	baz=207						
TSEB				eS	Sb	00 40 29.1	-1.5
	baz=207						
TWKBT	**Hengchun**	**1.46**	**213**	eP	**Pn**	**00 40 10.8**	**+0.4**
	baz=209						
TWKBT				eS	Sn	00 40 28.6	+0.2
	baz=209						
TWP	**Hsiaoliuchiu**	**1.46**	**236**	eP	**Pb**	**00 40 14.1**	**+1.4**
	baz=233						
NDS	**Dongshan**	**1.46**	**2**	eP	**Pb**	**00 40 11.1**	**-1.7**
	baz=7.0						
NDS				eS	Sb	00 40 29.4	-1.6
	baz=7.0						
TWK1	**Hengchun**	**1.46**	**213**	eP	**Pn**	**00 40 10.8**	**+0.4**
	baz=209						
TWK1				eS	Sn	00 40 28.3	-0.1
	baz=209						
WMLT	**Mailiao**	**1.47**	**296**	eP	**Pb**	**00 40 11.5**	**-1.4**
	baz=298						
SNW	**Nanwan**	**1.47**	**215**	eP	**Pb**	**00 40 12.2**	**-0.8**
	baz=211						
NSY	**Sanyi**	**1.49**	**326**⇓	eP	**Pb**	**00 40 12.9**	**-0.4**
	baz=331						
NSY				eS	Sb	00 40 32.2	+0.3
	baz=331						
WDJ	**Dajia District**	**1.50**	**322**⇓	eP	**Pb**	**00 40 12.9**	**-0.6**
	baz=325						
WDJ				eS	Sb	00 40 32.1	-0.1
	baz=325						
YHNB	**Yeheng**	**1.52**	**350**		**Pn**	**00 40 11.6**	**+0.4**
YHNB	**Yeheng**	**1.52**	**350**	P	**Pb**	**00 40 12.5**	**-1.3**
YHNB	**Yeheng**	**1.52**	**350**⇑	eP	**Pb**	**00 40 12.4**	**-1.4**
	baz=355						
YHNB				eS	Sn	00 40 30.6	+0.6
	baz=355						
NSK	**Sanguang**	**1.52**	**349**	eP	**Pb**	**00 40 12.6**	**-1.4**
	baz=354						
NSK				eS	Sn	00 40 30.7	+0.5
	baz=354						
NFF	**Wufeng Townshi**	**1.54**	**341**⇓	eP	**Pb**	**00 40 13.2**	**-0.9**
	baz=345						
TWE	**Neicheng**	**1.54**	**0**	eP	**Pb**	**00 40 12.5**	**-1.7**
	baz=5.0						
TWE				eS	Sb	00 40 32.0	-1.4
	baz=5.0						
NSTT	**Nanjuang**	**1.57**	**337**⇓	eP	**Pb**	**00 40 13.9**	**-0.8**
	baz=342						
NSTT				eS	Sb	00 40 33.4	-0.9
	baz=342						
NMLH	**Miaoli**	**1.58**	**330**⇓	eP	**Pb**	**00 40 13.8**	**-1.0**
	baz=334						
NMLH				eS	Sb	00 40 33.1	-1.3
	baz=334						
FUSB	**Fushanzhiwuyua**	**1.58**	**357**	eP	**Pn**	**00 40 12.9**	**+0.7**
	baz=2.0						
FUSB				eS	Sn	00 40 32.2	+0.5
	baz=2.0						
LIOB	**Emei**	**1.58**	**338**⇓	eP	**Pb**	**00 40 14.2**	**-0.7**
	baz=342						
LIOB				eS	Sb	00 40 33.6	-1.0
	baz=342						
ILA	**Ilan**	**1.59**	**3**	eP	**Pb**	**00 40 14.7**	**-0.3**
	baz=7.0						
NWLT	**Wulai**	**1.61**	**355**⇓	eP	**Pb**	**00 40 13.5**	**-1.8**
	baz=359						
NWLT				eS	Sn	00 40 32.6	+0.4
	baz=359						
NJD	**Zhudong**	**1.65**	**341**	eP	**Pb**	**00 40 15.7**	**-0.2**
	baz=345						
NJN	**Zhunan**	**1.67**	**334**	eP	**Pb**	**00 40 15.1**	**-1.3**
	baz=338						
NJN				eS	Sb	00 40 36.2	-0.9
	baz=338						
NTC	**Toucheng**	**1.68**	**5**	eP	**Pb**	**00 40 15.5**	**-1.1**
	baz=9.0						
NTC				eS	Sn	00 40 34.9	+0.9
	baz=9.0						
EGS		**1.69**	**8**	eP	**Pb**	**00 40 16.0**	**-0.6**
	baz=13						
HSN1	**Hsinchu**	**1.71**	**340**	eP	**Pb**	**00 40 15.6**	**-1.4**
	baz=344						
HSN1				eS	Sb	00 40 37.7	-0.4
	baz=344						
SBCB	**Hsinchu**	**1.73**	**339**	eP	**Pb**	**00 40 16.1**	**-1.3**
	baz=343						
SBCB				eS	Sb	00 40 37.5	-1.2
	baz=343						
JYNG	**Yonagunijimaku**	**1.73**	**42**	eP	**Pb**	**00 40 16.2**	**-1.2**
JYNG				eS	**Sb**	**00 40 37.0**	**-1.9**
JYNG	**Yonagunijimaku**	**1.73**	**42**	A	A	00 40 16.2	
	comp=E,11nm,1.2s,comp=E,14nm,2.9s						
HSN	**Hsinchu**	**1.74**	**339**	eP	**Pb**	**00 40 16.7**	**-1.0**
	baz=344						
YOJ	**Yonaguni jima**	**1.78**	**44**		**Pb**	**00 40 16.9**	**-1.3**
YOJ				Sn	**Sb**	**00 40 38.7**	**-1.5**
YOJ	**Yonaguni jima**	**1.78**	**44**	P	**Pb**	**00 40 17.3**	**-1.0**
YOJ	**Yonaguni jima**	**1.78**	**44**	P	**Pb**	**00 40 17.2**	**-1.0**
	baz=46						
YOJ				eS	Sb	00 40 38.7	-1.5
	baz=46						
YOJ	**Yonaguni jima**	**1.78**	**44**	P	**Pb**	**00 40 17.2**	**-1.1**
YOJ				eS	**Sb**	**00 40 38.0**	**-2.2**
YOJ	**Yonaguni jima**	**1.78**	**44**	A	A	00 40 17.2	
	comp=E,8.0nm,3.5s,comp=E,10.0nm,2.2s						
NHDH	**Xindian Distri**	**1.79**	**356**	eP	**Pb**	**00 40 16.7**	**-1.7**
	baz=360						
NHDH				eS	Sb	00 40 38.2	-2.2
	baz=360						
TIPB	**Shuangxi**	**1.80**	**5**⇓	eP	**Pb**	**00 40 16.8**	**-1.8**
	baz=8.0						
TIPB				eS	Sb	00 40 39.0	-1.8
	baz=8.0						
TWA	**Mucha**	**1.80**	**358**⇓	eP	**Pb**	**00 40 16.9**	**-1.7**
	baz=2.0						
TWA				eS	Sb	00 40 38.7	-2.2
	baz=2.0						
TATO	**Taipei**	**1.80**	**355**		**Pb**	**00 40 16.6**	**-2.1**
TATO	**Taipei**	**1.80**	**355**	eP	**Pb**	**00 40 16.6**	**-2.1**
	baz=359						
TATO				eS	Sn	00 40 38.6	+1.6
	baz=359						
NCUH	**Zhongli**	**1.84**	**346**	eP	**Pb**	**00 40 17.7**	**-1.6**
	baz=350						
NCUH				eS	Sb	00 40 40.7	-1.2
	baz=350						
NCU	**National Centr**	**1.84**	**346**	eP	**Pb**	**00 40 17.9**	**-1.5**
	baz=350						
WDGT	**Dungji**	**1.85**	**273**⇓	eP	**Pn**	**00 40 15.8**	**0.0**
	baz=273						
WDGT				eS	Sn	00 40 36.5	-1.5
	baz=273						
NTY	**Taoyuan**	**1.85**	**350**	eP	**Pb**	**00 40 17.9**	**-1.5**
	baz=353						
TWB1	**Santiao Chiao**	**1.85**	**9**	eP	**Pb**	**00 40 17.9**	**-1.5**
	baz=13						
TWB1				eS	Sn	00 40 39.7	+1.5
	baz=13						
TAP1	**Taipei**	**1.86**	**356**	eP	**Pb**	**00 40 19.1**	**-0.6**
	baz=359						
TAP	**Taipei**	**1.87**	**356**	eP	**Pb**	**00 40 19.3**	**-0.4**
	baz=359						
WFSB	**Wu-fen Shan**	**1.90**	**3**⇓	eP	**Pb**	**00 40 18.5**	**-1.7**
	baz=7.0						
WFSB				eS	Sb	00 40 41.4	-2.1
	baz=7.0						
NHW	**Xinwu Township**	**1.91**	**343**	eP	**Pn**	**00 40 18.0**	**+1.3**
	baz=346						
NHW				eS	Sb	00 40 41.8	-2.2
	baz=346						
SXI1	**Grass Mountain**	**1.93**	**6**	eP	**Pb**	**00 40 18.9**	**-1.9**
	baz=9.0						
SXI1				eS	Sb	00 40 42.8	-1.6
	baz=9.0						
TWS1	**Kuangyinshan**	**1.94**	**353**	eP	**Pb**	**00 40 19.0**	**-1.9**
	baz=357						
PHUB	**P'eng-hu**	**1.95**	**280**⇓	eP	**Pn**	**00 40 17.2**	**0.0**
	baz=281						
PHUB				eS	Sn	00 40 38.7	-1.9
	baz=281						
YM01	**YM01**	**1.97**	**358**	eP	**Pn**	**00 40 18.8**	**+1.3**
	baz=1.0						
YM01				eS	Sn	00 40 42.7	+1.6
	baz=1.0						
TNOU	**National Taiwa**	**1.97**	**3**	eP	**Pb**	**00 40 19.1**	**-2.4**
	baz=6.0						
TNOU				eS	Sn	00 40 42.0	+0.9
	baz=6.0						
PNG	**Penghu**	**1.98**	**282**⇓	eP	**Pn**	**00 40 17.7**	**+0.1**
	baz=282						
PNG				eS	Sn	00 40 39.8	-1.5
	baz=282						
NTST	**Danshui**	**2.00**	**354**	eP	**Pb**	**00 40 19.6**	**-2.3**
	baz=358						
NTST				eS	Sn	00 40 43.3	+1.7
	baz=358						
YM08	**YM08**	**2.01**	**358**	eP	**Pn**	**00 40 18.9**	**+0.9**
	baz=1.0						
VCHM	**Qimei**	**2.06**	**271**	eP	**Pn**	**00 40 18.7**	**+0.1**
	baz=271						
VCHM				eS	Sn	00 40 40.9	-2.3
	baz=271						
TWY	**Chenhua**	**2.10**	**358**	eP	**Pn**	**00 40 20.8**	**+1.6**
	baz=2.0						
HATJ	**Hateruma jima**	**2.15**	**65**	P	**Pb**	**00 40 22.1**	**-2.5**
HATJ				eS	**Sn**	**00 40 47.4**	**+1.8**
HATJ	**Hateruma jima**	**2.15**	**65**	A	A	00 40 22.1	
	comp=E,10.0nm,0.9s,comp=E,9.0nm,0.7s						
IRIF	**Iriomote-Funau**	**2.22**	**58**	P	**Pb**	**00 40 23.4**	**-2.3**
IRIF				eS	**Sb**	**00 40 49.6**	**-3.2**
IRIF	**Iriomote-Funau**	**2.22**	**58**	A	A	00 40 23.4	
	comp=E,10.0nm,1.1s,comp=E,14nm,1.3s						
JKRS	**Kuro-shima**	**2.40**	**63**	P	**Pb**	**00 40 25.8**	**-2.9**
JKRS				eS	**Sb**	**00 40 54.4**	**-3.5**
JKRS	**Kuro-shima**	**2.40**	**63**	A	A	00 40 25.8	
	comp=E,6.0nm,3.3s,comp=E,9.0nm,6.6s						
PCYT	**Pengchaiyu**	**2.48**	**9**	eP	**Pn**	**00 40 26.3**	**+1.8**
	baz=11						
JIJ	**Ishigaki jima**	**2.56**	**62**	P	**Pn**	**00 40 27.3**	**+1.7**
JIJ				S	**Sn**	**00 40 56.8**	**+1.1**
VWUC	**VWUC**	**2.72**	**312**⇓	eP	**Pn**	**00 40 27.4**	**-0.3**
	baz=314						
VWUC				eS	Sn	00 40 56.9	-2.6
	baz=314						
JISG	**Ishigakijimahi**	**2.80**	**59**	P	**Pn**	**00 40 30.7**	**+1.8**
JISG				S	**Sn**	**00 41 02.9**	**+1.3**
JISG	**Ishigakijimahi**	**2.80**	**59**	A	A	00 40 30.7	
	comp=E,4.0nm,0.5s,comp=E,7.0nm,0.5s						
PTMZ	**Houxiangcun**	**2.98**	**309**⇓	eP	**Pn**	**00 40 31.1**	**-0.2**
	baz=310						
PTMZ				eS	Sn	00 41 02.9	-3.1
	baz=310						
JTJ	**Tarama**	**3.14**	**62**	P	**Pn**	**00 40 35.6**	**+2.0**
JTJ				eS	**Sn**	**00 41 11.3**	**+1.3**
KNM	**Kinmen**	**3.21**	**293**⇓	eP	**Pn**	**00 40 35.6**	**+1.1**
	baz=293						
KNM				eS	Sn	00 41 10.9	-0.7
	baz=293						
KNMB	**Chin-men Tao**	**3.26**	**294**	Pn	**Pn**	**00 40 34.4**	**-0.9**
KNMB	**Chin-men Tao**	**3.26**	**294**⇓	eP	**Pn**	**00 40 34.7**	**-0.6**
	baz=294						
KNMB				eS	Sn	00 41 09.4	-3.6
	baz=294						
QZH	**Quanzhou**	**3.32**	**303**⇓	iPn	**Pn**	**00 40 35.4**	**-0.6**
QZH				Sn	**Sn**	**00 41 11.0**	**-3.3**
QZH				smax	smax		
	comp=N,410nm,0.3s						
QZH				smax	smax		
	comp=E,390nm,0.5s						
QZH				LR	LR		
	comp=N,2µm,7.7s						
QZH				LR	LR		
	comp=E,2µm,10.4s						
QZH				LR	LR		
	comp=Z,1µm,7.4s						
MATB	**Ma-tsu**	**3.35**	**333**⇓	eP	**Pn**	**00 40 36.5**	**0.0**
	baz=334						
MATB				eS	Sn	00 41 13.6	-1.6
	baz=334						
MSUT	**Lienchiang**	**3.38**	**332**	eP	**Pn**	**00 40 37.1**	**+0.2**
	baz=334						
MSUT				eS	Sn	00 41 14.6	-1.3
	baz=334						
JIRB	**Irabujima**	**3.61**	**62**	eP	**Pn**	**00 40 41.9**	**+1.9**
JIRB				eS	**Sn**	**00 41 22.6**	**+1.1**
ZPLA	**Ao Xicun**	**3.67**	**283**⇓	eP	**Pn**	**00 40 40.6**	**-0.2**
	baz=282						
ZPLA				eS	Sn	00 41 20.0	-3.0
	baz=282						
JMJ2	**Miyako jima3**	**3.70**	**64**	P	**Pn**	**00 40 43.4**	**+2.2**
JMJ2				S	**Sn**	**00 41 24.6**	**+0.8**
JMJ	**Miyako jima 2**	**3.70**	**63**	P	**Pn**	**00 40 44.1**	**+2.8**
JMJ	**Miyako jima 2**	**3.70**	**63**	eP	**Pn**	**00 40 43.4**	**+2.1**
	baz=64						
JMJ				eS	Sn	00 41 24.6	+0.7
	baz=64						
JIKM	**Ikemajima**	**3.71**	**61**	eP	**Pn**	**00 40 43.4**	**+2.0**
JIKM				S	**Sn**	**00 41 25.1**	**+1.0**
JOGS	**Gusukube**	**3.77**	**64**	P	**Pn**	**00 40 44.7**	**+2.4**
JOGS				eS	**Sn**	**00 41 27.5**	**+1.9**
MHZQ	**Yeshan**	**3.77**	**321**⇓	eP	**Pn**	**00 40 42.1**	**-0.1**
	baz=322						
MHZQ				eS	Sn	00 41 22.3	-3.3
	baz=322						
LYJJ	**Jianjiangzhen**	**3.78**	**333**⇓	eP	**Pn**	**00 40 42.4**	**0.0**
	baz=335						
LYJJ				eS	Sn	00 41 24.3	-1.5
	baz=335						
AXDP	**Jialang**	**3.79**	**298**⇓	eP	**Pn**	**00 40 42.1**	**-0.3**
	baz=298						
AXDP				eS	Sn	00 41 22.4	-3.6
	baz=298						
DSXP	**Dongshan**	**3.93**	**279**⇓	eP	**Pn**	**00 40 44.3**	**-0.1**
	baz=278						
DSXP				eS	Sn	00 41 25.5	-3.9
	baz=278						
XPSS	**Dashiqiu**	**3.98**	**341**⇓	eP	**Pn**	**00 40 45.1**	**+0.1**
	baz=342						
XPSS				eS	Sn	00 41 28.2	-2.4
	baz=342						
HKPS	**Hong Kong Po S**	**7.00**	**264**	Pn	**Pn**	**00 41 24.5**	**-2.1**
JOW	**Kunigami**	**7.02**	**57**	P	**Pn**	**00 41 27.8**	**+0.9**
	9.7nm,0.3s,baz=215,slow=13,SNR=8.8						
JOW				S	Sn	00 42 44.4	-1.2
	11nm,0.3s,baz=143,slow=20,SNR=1.6						
	23nm,0.4s						
JOW	**Kunigami**	**7.02**	**57**		**Pn**	**00 41 27.4**	**+0.6**
JOW	**Kunigami**	**7.02**	**57**	P	**Pn**	**00 41 28.2**	**+1.3**
SSE	**Sheshan**	**7.91**	**357**	P	**Pn**	**00 41 41.3**	**+2.3**
SSE				S	**Sn**	**00 43 13.5**	**+6.1**
SSE				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SSE				pmax	pmax		
	comp=Z,86nm,11.9s						
SSE				LR	LR		
	comp=N,270nm,16.5s						
SSE				LR	LR		
	comp=E,160nm,16.5s						
NJ2	**Nanjing**	**9.19**	**345**	eP	**Pn**	**00 41 56.5**	**-0.1**
NJ2				S	**Sn**	**00 43 35.8**	**-3.2**
NJ2				pmax	pmax		
	comp=Z,29nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,75nm,3.5s						
NJ2				LR	LR		
	comp=N,610nm,9.4s						
NJ2				LR	LR		
	comp=E,350nm,9.3s						
NJ2				LR	LR		
	comp=Z,770nm,10.6s						
WHN	**Wuhan**	**9.82**	**320**	⇑P	**Pn**	**00 42 05.3**	**0.0**
WHN				pmax	pmax		
	comp=Z,74nm,0.7s						
WHN				LR	LR		
	comp=E,1µm,4.2s						
WHN				LR	LR		
	comp=Z,2µm,18.6s						
GULI	**GuiLin**	**10.52**	**284**	P	Pn	00 42 06.3	-8.7
GULI				S	Sn	00 43 54.3	-18
GULI				LR	LR		
	comp=N,430nm,12.5s						
GULI				LR	LR		
	comp=E,720nm,16.0s						
GULI				LR	LR		
	comp=Z,1µm,16.4s						

QIZ Qiongzhong 11.78 252 P **Pn** **00 42 29.5 -2.6**
QIZ S **Sn** **00 44 42.1 -0.4**
QIZ LR LR
comp=N,580nm,16.4s
QIZ LR LR
comp=E,340nm,17.4s
QIZ LR LR
comp=Z,540nm,19.7s
TIA Tai'an 13.58 344 *e*P **P** **00 43 07.0 +1.7**
TIA S **S** **00 45 43.9 -5.0**
TIA pmax pmax
comp=Z,9.0nm,0.8s
TIA pmax pmax
comp=Z,53nm,3.5s
TIA LR LR
comp=N,360nm,10.7s
TIA LR LR
comp=E,220nm,7.5s
TIA LR LR
comp=Z,470nm,9.3s
LYN LuoYang 13.90 327 ⇑P **P** **00 43 11.3 +2.4**
LYN sP Pn 00 43 18.1 +17
LYN PP PnPn 00 43 23.0 +14
LYN S **S** **00 45 50.5 -5.0**
LYN pmax pmax
comp=Z,30nm,0.9s
LYN pmax pmax
comp=Z,210nm,11.9s
LYN LR LR
comp=N,950nm,13.7s
LYN LR LR
comp=E,650nm,11.6s
LYN LR LR
comp=Z,920nm,12.7s
GYA Guiyang 14.01 287 ⇑P **Pn** **00 43 03.6 +0.9**
GYA S **Sn** **00 45 37.8 +0.6**
GYA PcP **PcP** **00 48 24.3 +1.7**
GYA pmax pmax
comp=Z,14nm,0.7s
GYA pmax pmax
comp=Z,110nm,5.6s
GYA LR LR
comp=Z,400nm,9.5s
GYA LR LR
comp=Z,750nm,10.9s
GYA LR LR
comp=Z,1μm,15.8s
KSAR Wonju Array Be 15.20 19 **Pn** **00 43 20.4 +1.8**
KSRS Korea Array 15.22 19 P **Pn** **00 43 20.7 +1.8**
comp=Z,0.5nm,0.3s,baz=198,slow=12,SNR=13
KSRS LR LR 00 49 01.8
comp=Z,159nm,21.8s,baz=205,slow=36
comp=Z,3.5nm,0.7s
KS19 Wonju Array Si 15.25 19 P **P** **00 43 23.6 -0.2**
HNS HongShan 15.39 339 ⇑P **P** **00 43 24.3 -1.1**
HNS pmax pmax
comp=Z,26nm,1.3s
HNS LR LR
comp=Z,530nm,13.5s
HNS LR LR
comp=Z,430nm,13.5s
HNS LR LR
comp=Z,590nm,13.5s
XAN Xi'an 15.56 317 ⇑P **Pn** **00 43 24.3 +1.0**
XAN sP P 00 43 30.3 +3.0
XAN S **Sn** **00 46 21.4 +6.7**
XAN pmax pmax
comp=Z,10.0nm,1.4s
XAN LR LR
comp=Z,650nm,14.4s
XAN LR LR
comp=Z,950nm,16.5s
XAN LR LR
comp=Z,2μm,17.2s
SEHB SEOHWA 16.07 19 P **P** **00 43 34.6 +1.6**
BJT Baijiatuau 17.43 346 Pn **Pn** **00 43 46.4 -0.6**
BJI Beijing 17.45 346 P **P** **00 43 49.8 +1.6**
BJI S **Sn** **00 47 01.3 +0.8**
BJI pmax pmax
comp=Z,9.0nm,1.0s
BJI LR LR
comp=Z,58nm,17.7s
BJI LR LR
comp=Z,170nm,17.5s
BJI LR LR
comp=Z,360nm,17.1s
INU Inuyama 18.05 44 **P** **00 43 57.3 +2.5**
PZH PanZhiHua 18.38 284 P **Pn** **00 44 01.5 +2.6**
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,100nm,5.3s
JGF Kuroka 18.42 44 P **Pn** **00 44 00.1 +0.8**
JCJ Chichijima 18.98 74 P **Pn** **00 44 06.1 +0.1**
JCJ IAmb IAmb 00 44 13.2
comp=Z,31nm,0.8s
MAJO Matsushiro 19.54 43 P **Pn** **00 44 12.8 +0.1**
MJB9 Matsu-Tunnel 19.54 43 P **Pn** **00 44 12.1 -0.6**
MJAR Matsushiro Arr 19.54 43 P **Pn** **00 44 13.0 +0.3**
comp=Z,0.1nm,0.3s,baz=234,slow=8.7,SNR=6.4
comp=Z,3.4nm,0.9s
MJAR Matsushiro Arr 19.54 43 **Pn** **00 44 12.4 -0.4**
HHC Hu-ho-hao-te 19.57 337 *e*P Pn 00 44 21.8 +8.7
HHC pmax pmax
comp=Z,36nm,1.0s
HHC pmax pmax
comp=Z,280nm,6.0s
HHC LR LR
comp=N,710nm,14.0s
HHC LR LR
comp=E,370nm,13.0s
HHC LR LR
comp=Z,770nm,14.6s
SGSI Sangihe 19.73 169 P **P** **00 44 12.5 -0.9**
comp=Z,18μmcomp=Z,207nm,0.6s
LZH Lanzhou 20.10 314 *e*P Pn 00 44 23.8 +4.3
LZH pP sP 00 44 27.8 -1.7
LZH pmax pmax
comp=Z,19nm,1.4s
XLT XiLinHaoTe 21.18 349 *e*P **P** **00 44 28.9 -0.2**
XLT sP pwP 00 44 37.0 -2.2
XLT S Sn 00 48 31.5 +0.9
XLT pmax pmax
comp=Z,9.0nm,1.0s
XLT pmax pmax
comp=Z,96nm,5.7s
XLT LR LR
comp=Z,410nm,21.0s
XLT LR LR
comp=Z,230nm,18.9s
CHTO Chiang Mai 21.64 263 P **P** **00 44 34.9 +0.8**
CM31 Chiang Mai Arr 21.74 262 P **P** **00 44 35.7 +0.5**
CMAR Chiang Mai Arr 21.74 262 P **P** **00 44 37.0 +1.8**
comp=Z,3.8nm,0.8s,baz=64,slow=7.7,SNR=24
CMAR PcP **PcP** **00 48 35.4 0.0**
comp=Z,1.0nm,0.3s,baz=89,slow=0.4,SNR=6.5
CMAR LR LR 00 53 51.2
comp=Z,301nm,18.9s,baz=60,slow=39
comp=Z,3.8nm,0.8s
CMAR Chiang Mai Arr 21.74 262 P **P** **00 44 35.3 +0.1**
TOLI2 Tolitoli 21.95 182 P **P** **00 44 36.0 -1.3**
MDJ Mudanjiang 22.36 15 P **P** **00 44 41.9 +0.3**
MDJ IAmb IAmb 00 44 44.6
comp=Z,30nm,1.1s
MDJ Mudanjiang 22.36 15 P **P** **00 44 42.6 +1.0**
MDJ pmax pmax
comp=Z,14nm,0.8s
MDJ pmax pmax
comp=Z,76nm,3.8s
SBUM Sibu 22.54 205 P **P** **00 44 42.2 -1.6**
SBUM IAmb IAmb 00 44 46.3
comp=Z,24nm,1.0s
USRK Ussuriysk Ar. 22.63 20 P **P** **00 44 47.0 +2.6**
comp=Z,3.5nm,0.6s,baz=208,slow=12,SNR=8.5
USRK Ussuriysk Ar. 22.63 20 P **P** **00 44 45.1 +0.7**
KSM Kuching 24.22 209 P **P** **00 44 58.2 -2.1**
KSM IAmb IAmb 00 45 02.0
comp=Z,18nm,0.8s
GTA Gaotai 24.61 316 *e*P **P** **00 45 04.5 +0.6**
GTA pP pP 00 45 11.9 -0.8
GTA sP sP 00 45 16.8 +0.1
GTA pmax pmax
comp=Z,5.0nm,0.8s
GTA pmax pmax
comp=Z,50nm,5.8s
GTA LR LR
comp=Z,230nm,15.6s
GTA LR LR
comp=Z,510nm,14.2s
GTA LR LR
comp=Z,580nm,14.9s
MTKI Muara Teweh, K 24.86 196 P **P** **00 45 07.6 +1.5**
GOMU GeErMu 26.60 305 P **P** **00 45 23.3 +1.1**
GOMU sP pP 00 45 31.1 +0.2
GOMU S **S** **00 49 58.0 +2.8**
GOMU pmax pmax
comp=Z,3.0nm,0.6s
GOMU pmax pmax
comp=Z,75nm,5.4s
GOMU LR LR
comp=Z,150nm,16.1s
GOMU LR LR
comp=Z,350nm,16.7s
GOMU LR LR
comp=Z,350nm,16.9s
KLR Kul'dur 27.20 15 P **P** **00 45 27.6 +0.6**
comp=Z,4.6nm,0.6s,baz=210,slow=6.8,SNR=18
KLR LR LR 00 56 18.6
comp=Z,193nm,21.6s,baz=178,slow=36
comp=Z,4.6nm,0.6s
SHL Shillong 27.21 281 P **P** **00 45 26.9 -0.6**
SHL IAmb IAmb 00 45 31.8
comp=Z,13nm,0.7s
ULN Ulaanbaatar 27.27 338 P **P** **00 45 26.7 -1.1**
MYKOM Kota Tinggi 27.39 222 P **P** **00 45 28.5 -0.5**
SONM Songino Array 27.47 337 P **P** **00 45 29.0 -0.6**
comp=Z,3.3nm,0.7s,baz=152,slow=9.7,SNR=22
SONM LR LR 00 57 07.2
comp=Z,282nm,20.1s,baz=154,slow=38
comp=Z,3.3nm,0.7s
SONM Songino Array 27.47 337 P **P** **00 45 29.1 -0.5**
LSA Lhasa 28.03 290 P **P** **00 45 35.4 +0.1**
KAPI Kappang 28.07 184 LR LR 00 57 13.5
comp=Z,104nm,20.6s,baz=29,slow=37
YSS Yuzh-Sakhalins 29.16 30 P **P** **00 45 44.9 +0.3**
YSS IAmb IAmb 00 45 48.7
comp=Z,27nm,1.1s
PPBI Pangkal Pinang 29.38 213 P **P** **00 45 47.8 +1.1**
WOJI Wonogiri, Jawa 32.56 200 P **P** **00 46 15.7 +1.0**
comp=Z,28nm,1.2s
LWLI Liwa 32.87 214 P **P** **00 46 18.5 +0.8**
comp=Z,82nm,0.7s
KASI Kota Agung 33.09 213 P **P** **00 46 20.1 +0.7**
comp=Z,32nm,0.5s
WMQ Urumqi 34.67 315 *e*P P 00 46 37.8 +4.7
WMQ LR LR
comp=Z,200nm,14.9s
WMQ LR LR
comp=Z,260nm,15.5s
WMQ LR LR
comp=Z,190nm,17.1s
MK31 Makanchi Array 39.37 317 P **P** **00 47 13.2 +0.3**
MK31 IAmb IAmb 00 47 14.1
comp=Z,13nm,0.8s
MKAR Makanchi Array 39.37 317 P **P** **00 47 13.4 +0.6**
comp=Z,15nm,0.7s,baz=110,slow=9.9,SNR=133
MKAR PcP **PcP** **00 49 20.1 -0.7**
comp=Z,0.5nm,0.9s,baz=104,slow=4.6,SNR=5.5
MKAR LR LR 01 04 46.3
comp=Z,205nm,21.1s,baz=76,slow=38
comp=Z,15nm,0.7s
MKAR Makanchi Array 39.37 317 P **P** **00 47 13.0 +0.1**
MAKZ Makanchi 39.58 316 P **P** **00 47 14.7 +0.1**
MAKZ IAmb IAmb 00 47 15.8
comp=Z,19nm,0.8s
PEA0B Petropavlovsk- 40.47 33 P **P** **00 47 22.7 +0.9**
PEA0B IAmb IAmb 00 47 31.6
comp=Z,8.9nm,0.8s
PETK Petropavlovsk- 40.47 33 P **P** **00 47 22.6 +0.7**
comp=Z,6.7nm,0.9s,baz=218,slow=9.4,SNR=9.1
PETK LR LR 01 05 29.9
comp=Z,148nm,20.1s,baz=180,slow=38
comp=Z,6.7nm,0.9s
TARG Taragay, Kyrgy 40.88 308 P **P** **00 47 25.3 -0.6**
PET Petropavlovsk 40.90 34 P **P** **00 47 26.3 +0.9**
ZALV Zalesovo Beam 41.33 328 P **P** **00 47 28.6 -0.3**
comp=Z,25nm,0.5s,baz=111,slow=7.9,SNR=122
ZALV LR LR 01 05 58.8
comp=Z,156nm,19.5s,baz=124,slow=38
comp=Z,25nm,0.5s
KSH Kashi 41.82 304 P **P** **00 47 36.6 +3.3**
KSH pmax pmax
comp=Z,7.0nm,1.1s
KSH LR LR
comp=Z,150nm,14.4s
KSH LR LR
comp=Z,170nm,14.8s
KSH LR LR
comp=Z,290nm,15.5s
H11N1 WAKE ISLAND Hy 42.11 86 T T 01 32 48.1
baz=283,slow=75,SNR=176
H11N2 WAKE ISLAND Hy 42.12 86 T T 01 32 54.0
baz=283,slow=75,SNR=201
H11N3 WAKE ISLAND Hy 42.13 86 T T 01 32 55.1
baz=283,slow=75,SNR=212
H11S3 WAKE ISLAND Hy 42.21 88 T T 01 32 58.3
baz=284,slow=75,SNR=268
H11S1 WAKE ISLAND Hy 42.22 88 T T 01 32 57.5
baz=284,slow=75,SNR=190
H11S2 WAKE ISLAND Hy 42.23 88 T T 01 33 05.8
baz=284,slow=75,SNR=284
PALK Palkekele 42.38 255 LR LR 01 06 43.3
comp=Z,114nm,18.5s,baz=173,slow=38
COEN Coen 42.48 148 P **P** **00 47 39.0 +0.2**
COEN IAmb IAmb 00 47 41.0
comp=Z,16nm,1.0s
KURK Kurchatov 43.15 321 P **P** **00 47 43.6 -0.2**
KURK IAmb IAmb 00 47 44.6
comp=Z,28nm,1.1s
AAK Ala-Archa 43.47 308 LR LR 01 08 43.3
comp=Z,160nm,19.8s,baz=80,slow=40
AAK Ala-Archa 43.47 308 P **P** **00 47 45.5 -1.3**
WRA Warramunga Arr 44.60 163 P **P** **00 47 54.2 -1.5**
comp=Z,2.6nm,0.8s,baz=345,slow=8.6,SNR=13
comp=Z,2.6nm,0.8s
DRK Karamyk 45.02 303 P **P** **00 47 59.5 +0.1**
DRK IAmb IAmb 00 48 16.5
comp=Z,12nm,1.0s
BTK Batken 45.83 304 P **P** **00 48 05.7 +0.2**
GAR Garm 46.12 302 P **P** **00 48 07.8 -0.1**
KK31 Karatay Array 46.44 308 P **P** **00 48 09.8 -0.4**
KK31 IAmb IAmb 00 48 13.2
comp=Z,6.0nm,1.0s
KKAR Karatay Array 46.44 308 P **P** **00 48 10.5 +0.3**
KKAR IAmb IAmb 00 48 13.2
comp=Z,6.0nm,1.0s
KKAR Karatay Array 46.44 308 P **P** **00 48 10.1 -0.1**
KBL Kabul 47.00 296 P **P** **00 48 14.7 -0.2**
CHGR Chuyangaron 47.00 302 P **P** **00 48 14.1 -0.6**
ASAR Alice Springs 48.05 165 P **P** **00 48 21.5 -1.3**
TIXI Tiksi 48.68 3 P **P** **00 48 25.6 -1.5**
BVAR Borovoye Array 48.73 321 LR LR 01 10 28.3
comp=Z,89nm,18.5s,baz=252,slow=38
BRVK Borovoye 48.80 321 P **P** **00 48 27.6 -0.8**
BILL Bilibino 52.49 19 P **P** **00 48 56.3 +0.5**
BILL IAmb IAmb 00 48 57.5
comp=Z,6.5nm,0.8s
FORT Forrest 53.99 173 P **P** **00 49 07.8 +0.5**
ABKAR Akbulak array 54.46 315 P **P** **00 49 10.4 -0.2**
ABKAR IAmb IAmb 00 49 11.7
comp=Z,9.7nm,0.8s
ABKAR Akbulak array 54.46 315 P **P** **00 49 10.3 -0.4**
GEYT Alibeck 55.69 301 P **P** **00 49 20.9 +1.1**
comp=Z,9.1nm,1.0s,baz=198,slow=8.7,SNR=8.7
GEYT LR LR 01 17 17.4
comp=Z,162nm,18.9s,baz=99,slow=40
comp=Z,9.1nm,1.0s
GEYT Alibeck 55.69 301 P **P** **00 49 19.7 -0.1**
GYA0B ALIBECK ARRAY 55.69 301 P **P** **00 49 20.3 +0.5**
GYA0B IAmb IAmb 00 49 21.9
comp=Z,11nm,1.0s
ARU Arti 56.18 323 P **P** **00 49 22.3 -0.6**
BBOO Buckleboo 57.34 166 P **P** **00 49 31.0 -0.4**
STKA Stephens Creek 57.97 160 P **P** **00 49 35.5 -0.2**
comp=Z,3.9nm,0.2s,baz=350,slow=11,SNR=9.0
comp=Z,3.9nm,0.2s
KIRV Kirov 61.30 325 LR LR 01 17 03.1
comp=Z,139nm,20.6s,baz=79,slow=36
RDOG Red Dog Mine 63.28 24 P **P** **00 50 13.5 +1.9**
GNI Garni 65.74 305 P **P** **00 50 28.9 +0.5**
GNI IAmb IAmb 00 50 46.0
comp=Z,6.2nm,0.8s
KLMR Klimovskoe 66.25 328 *e*P **P** **00 50 28.9 -2.1**
KLMR AMP 00 50 30.7
comp=Z,20nm,0.9s
ONI Oni 66.26 308 P **P** **00 50 31.8 +0.3**
ONI IAmb IAmb 00 50 33.5
comp=Z,8.8nm,0.8s
KBZ Khabaz 66.45 309 P **P** **00 50 32.5 -0.2**
comp=Z,6.1nm,0.8s,baz=109,slow=3.6,SNR=13
comp=Z,6.1nm,0.8s
KIV Kislovodsk 66.57 309 P **P** **00 50 33.2 -0.3**
L19K White Mountain 66.76 30 P **P** **00 50 35.9 +1.5**
L19K IAmb IAmb 00 50 40.0
comp=Z,9.7nm,1.1s
P18K Big Mountain, 66.88 34 P **P** **00 50 35.1 -0.1**
J20K Nowinta River 66.89 28 P **P** **00 50 35.9 +0.9**
J20K IAmb IAmb 00 50 55.0
comp=Z,4.2nm,1.1s
IMAR Indian Mountai 66.89 26 P **P** **00 50 35.7 +0.6**
KARS Kars 66.90 306 P **P** **00 50 35.5 -0.2**
H21K Melozitna Rive 67.31 27 P **P** **00 50 39.3 +1.6**
H21K IAmb IAmb 00 50 40.6
comp=Z,5.4nm,0.7s
GEVA Gevas 67.38 303 P **P** **00 50 38.4 -0.6**
GEVA IAmb IAmb 00 50 40.0
comp=Z,7.3nm,0.8s
I21K Tanana 67.70 27 P **P** **00 50 41.8 +1.6**
I21K IAmb IAmb 00 50 43.1
comp=Z,3.9nm,0.8s
GURO Guroymak-BITLI 68.12 304 P **P** **00 50 43.6 +0.1**
GURO IAmb IAmb 00 50 44.9
comp=Z,3.1nm,0.7s
TOLK Toolik Lake Re 68.20 23 **P** **00 50 44.8 +1.3**
TOLK Toolik Lake Re 68.20 23 P **P** **00 50 44.6 +1.3**
TOLK IAmb IAmb 00 50 48.0
comp=Z,3.0nm,0.8s
MLY Manley 68.25 27 P **P** **00 50 45.3 +1.6**
MLY IAmb IAmb 00 51 03.3
comp=Z,4.7nm,1.0s
MSVF Nonsavu 68.46 121 P **P** **00 50 47.2 +1.4**
H23K Yukon River 68.62 26 P **P** **00 50 47.7 +1.7**
H23K IAmb IAmb 00 50 49.1
comp=Z,4.9nm,0.7s
KOPT Kop Dagi 68.95 306 P **P** **00 50 49.1 +0.2**
KOPT IAmb IAmb 00 50 54.1
comp=Z,5.3nm,0.9s
NEA2 Nenana 69.02 28 P **P** **00 50 49.8 +1.3**
NEA2 IAmb IAmb 00 50 53.2
comp=Z,8.8nm,1.2s
RAYN Ar Rayn 69.06 287 P **P** **00 50 49.2 -0.3**
RAYN IAmb IAmb 00 50 50.3
comp=Z,8.1nm,1.1s
MCK McKinley 69.23 28 P **P** **00 50 51.6 +1.8**
MCK IAmb IAmb 00 50 55.2
comp=Z,5.7nm,1.1s
H24K Noodor Dome 69.30 26 P **P** **00 50 51.5 +1.2**
H24K IAmb IAmb 00 51 10.0
comp=Z,5.2nm,1.1s
MDM Murphy Dome 69.31 27 P **P** **00 50 51.1 +0.8**
MDM IAmb IAmb 00 51 09.6
comp=Z,11nm,1.2s
MARD Mardin 69.37 303 P **P** **00 50 50.9 -0.4**
PMR Palmer 69.53 31 P **P** **00 50 53.9 +2.3**
PMR IAmb IAmb 00 51 02.5
comp=Z,7.5nm,1.0s
POKR Poker Plat Res 69.61 27 P **P** **00 50 53.7 +1.5**
POKR IAmb IAmb 00 51 11.6
comp=Z,6.9nm,0.9s
TAU Tasmania Unive 69.88 160 P **P** **00 50 55.2 +1.4**
ILAR Eielson Array 69.91 27 P **P** **00 50 52.8 -1.2**
comp=Z,0.7nm,0.6s,baz=288,slow=8.3,SNR=11
comp=Z,0.7nm,0.6s
ILAR Eielson Array 69.91 27 P **P** **00 50 55.2 +1.3**
HDA Harding Lake 69.96 28 P **P** **00 50 55.8 +1.5**
HDA IAmb IAmb 00 51 02.5
comp=Z,5.0nm,1.1s
BMAR Burnt Mountain 70.27 24 P **P** **00 50 57.7 +1.5**
SPITS Spitsbergen Ar 70.56 348 LR LR 01 26 40.2
comp=Z,72nm,18.2s,baz=22,slow=40
ARCES ARCESS Array B 70.64 338 P **P** **00 50 57.1 -1.3**
comp=Z,4.3nm,0.7s,baz=65,slow=6.3,SNR=14
comp=Z,4.3nm,0.7s
PAX Paxson 70.91 29 P **P** **00 51 00.9 +0.7**
PAX IAmb IAmb 00 51 01.6
comp=Z,4.6nm,1.1s
J26L Joseph Creek 71.36 27 P **P** **00 51 04.5 +1.6**
J26L IAmb IAmb 00 51 20.7
comp=Z,4.0nm,1.0s
K27K Chicken 72.12 27 P **P** **00 51 08.4 +1.0**
L27K Beaver Creek, 72.50 28 P **P** **00 51 10.3 +0.7**
BCAR Beaver Creek A 72.51 28 P **P** **00 51 10.2 +0.4**
FINES FINESS Array B 72.54 330 P **P** **00 51 09.2 -0.7**
comp=Z,2.7nm,0.4s,baz=54,slow=6.2,SNR=57
FINES LR LR 01 25 58.3
comp=Z,113nm,18.3s,baz=66,slow=38
comp=Z,2.7nm,0.4s
FINES FINESS Array B 72.54 330 P **P** **00 51 09.3 -0.6**
BNN Bunyan 72.73 305 P **P** **00 51 10.9 -0.7**
BNN IAmb IAmb 00 51 13.6
comp=Z,8.9nm,0.9s
VSU Vasula 73.07 327 *e*P **P** **00 51 13.5 +0.4**
AKASG Malin Array Be 73.92 319 P **P** **00 51 16.9 -1.4**
comp=Z,1.3nm,0.6s,baz=59,slow=5.8,SNR=14
comp=Z,1.3nm,0.6s
IDID Didziasalis 73.99 324 *e*P **P** **00 51 18.8 +0.2**
INK Inuvik 73.99 22 P **P** **00 51 20.6 +2.3**
NACGM Naroch 74.09 323 ⇓*e*P **P** **00 51 18.3 -0.9**
baz=72
BR131 Keskin Array S 74.13 307 P **P** **00 51 19.9 +0.1**
BR131 IAmb IAmb 00 51 20.2
comp=Z,4.9nm,0.8s
BRTR Keskin Array B 74.13 307 P **P** **00 51 19.8 -0.1**
comp=Z,2.3nm,0.7s,baz=110,slow=5.5,SNR=23
comp=Z,2.3nm,0.7s
IIGN Ignalina 74.26 324 *e*P **P** **00 51 20.6 +0.5**
MTSE Matsula 74.44 328 *e*P **P** **00 51 21.0 -0.2**
RAF Rauma 74.65 330 *e*P **P** **00 51 22.1 -0.2**
M30M Minto, Yukon 74.84 28 P **P** **00 51 24.8 +1.4**
SORM Soroca 75.23 316 ⇓P **P** **00 51 24.5 -1.5**
VSVD Vaisvydziai 75.29 325 *e*P **P** **00 51 25.3 -0.8**
PABE Paberze 75.42 324 *e*P **P** **00 51 26.6 -0.2**
SLIT Slitere, Latvi 75.57 327 *e*P **P** **00 51 27.9 +0.3**
TLCR 75.86 313 ⇓P **P** **00 51 28.7 -0.9**
VASR Vaslui 76.07 315 ⇓P **P** **00 51 30.4 -0.4**
VLDR Vladesti 76.14 314 ⇓P **P** **00 51 30.9 -0.2**
TPGR Topolog 76.23 313 ⇓P **P** **00 51 31.4 -0.3**
SCTR Scanteiesti 76.25 314 ⇑P **P** **00 51 31.0 -0.8**
CFR Carcaliu 76.32 313 ⇑P **P** **00 51 31.1 -1.0**
SUW Suwalki 76.37 323 *e*P **P** **00 51 30.9 -1.4**
SUW Suwalki 76.37 323 *e*P **P** **00 51 31.4 -0.9**
HARR Harsova 76.62 313 ⇓P **P** **00 51 33.6 -0.3**
ODBI Odobesti 76.84 314 ⇑P **P** **00 51 36.1 +1.0**
TESR Tescani 76.86 315 ⇓P **P** **00 51 34.8 -0.4**
VRI Vrincioaia 77.02 314 ⇑P **P** **00 51 36.4 +0.2**
BIZ Bicaz 77.06 316 ⇑P **P** **00 51 35.8 -0.6**
PLOR Plostina 77.08 314 ⇑P **P** **00 51 36.6 +0.1**
BUR08 Bucovina Ar. S 77.40 316 P **P** **00 51 38.2 -0.2**
BURAR Bucovina Array 77.40 316 ⇓P **P** **00 51 38.1 -0.2**
OZUR 77.56 315 ⇑P **P** **00 51 39.0 -0.2**
SIT Sitka 77.62 33 P **P** **00 51 38.4 -0.8**
MLR Muntele Rosu 77.67 314 ⇓P **P** **00 51 40.1 +0.1**
MLR Muntele Rosu 77.67 314 LR LR 01 30 38.8
comp=Z,101nm,19.1s,baz=60,slow=39
MLR Muntele Rosu 77.67 314 IAmb IAmb 00 51 40.8
comp=Z,6.3nm,0.9s
ELL Elmali 77.85 305 P **P** **00 51 40.5 -0.6**
ARCR ARCALIA 78.13 316 ⇑P **P** **00 51 43.0 +0.7**
ARR Arges 78.58 314 ⇓P **P** **00 51 44.6 -0.3**
HUMR Humele 78.65 314 ⇓P **P** **00 51 44.0 -1.3**
HFS Hagfors 78.66 331 LR LR 01 29 46.8
comp=Z,200nm,19.6s,baz=58,slow=38
CBBR Cluj-Babes-Bol 78.76 316 ⇓P **P** **00 51 45.8 0.0**
NC405 NORSAR Array S 79.07 332 P **P** **00 51 46.4 -0.9**
LOT Lotru 79.11 315 ⇓P **P** **00 51 47.5 -0.5**
NC303 NORSAR Array S 79.17 332 P **P** **00 51 47.0 -0.8**
NC303 IAmb IAmb 00 51 53.0
comp=Z,4.1nm,0.8s
CRVS Cervenica-Dubn 79.26 319 *e*P **P** **00 51 50.7 +2.2**
NB201 NORSAR Array S 79.28 332 P **P** **00 51 47.6 -0.9**
NB201 IAmb IAmb 00 51 55.1
comp=Z,9.4nm,1.0s
DRGR 79.29 316 ⇑P **P** **00 51 47.6 -1.2**
NB2 NORSAR Subarra 79.32 332 P **P** **00 51 47.3 -1.4**
comp=Z,2.7nm,1.0s,baz=55,slow=6.2
NOA NORSAR Array B 79.32 332 P **P** **00 51 47.2 -1.4**

comp=Z,1.6nm,0.7s,baz=61,slow=5.3,SNR=9.6
NOA LR LR 01 31 00.3
comp=Z,114nm,18.6s,baz=60,slow=39
comp=Z,1.6nm,0.7s
NC602 NORSAR Array S 79.33 332 P **P** **00 51 47.4 -1.3**
NC204 NORSAR Array S 79.40 333 P **P** **00 51 48.4 -0.7**
NC204 IAmb IAmb 00 51 57.5
comp=Z,6.0nm,0.9s
DEV Deva 79.51 315 ⇑P **P** **00 51 50.3 +0.4**
OJC Ojcow 79.73 320 *e*P **P** **00 51 50.2 -0.8**
OJC Ojcow 79.73 320 P **P** **00 51 50.7 -0.3**
OJC IAmb IAmb 00 51 51.6
comp=Z,7.4nm,0.8s
JMIC Jan Mayen 79.92 345 LR LR 01 32 21.6
comp=Z,29nm,18.1s,baz=63,slow=39
HERR Herculane 80.21 315 ⇓P **P** **00 51 53.2 -0.6**
KARP Karpathos 80.36 304 P **P** **00 51 54.1 -0.7**
KARP IAmb IAmb 00 51 59.5
comp=Z,6.7nm,0.7s
LANS Liptovska Anna 80.36 319 *e*P **P** **00 51 54.9 +0.4**
MDVR Moldovita 80.71 315 ⇑P **P** **00 51 55.8 -0.7**
VYHS Vyhne 81.01 319 *e*P **P** **00 51 58.0 0.0**
KOLL Kolacno 81.24 319 *e*P **P** **00 51 59.3 +0.1**
KSP Ksiaz 81.49 322 *e*P **P** **00 51 59.9 -0.6**
KRLC Kraliky 81.55 321 *e*P **P** **00 52 00.8 -0.1**
JAVC Velka Javorina 81.56 320 *e*P **P** **00 52 01.2 +0.3**
DPC Dobruska-Polom 81.70 321 *e*P **P** **00 52 01.8 +0.2**
VRAC Vranov 82.00 320 *e*P **P** **00 52 02.6 -0.6**
LIT Litokhoron 82.04 310 P **P** **00 52 02.1 -1.5**
LIT IAmb IAmb 00 52 03.0
comp=Z,3.9nm,0.8s
MORH Mrgy, Hungar 82.09 317 ⇑P **P** **00 52 02.6 -1.1**
IDI Anoyia 82.17 305 P **P** **00 52 03.9 -0.6**
FNA Florina 82.54 311 P **P** **00 52 04.7 -1.6**
FNA IAmb IAmb 00 52 05.0
comp=Z,4.0nm,0.8s
CLL Collm 83.12 323 *i* P **P** **00 52 08.1 -0.9**
comp=Z,4.0nm,1.1s
CLL L L 01 33 00.0
comp=Z,100nm,18.9s
SUMG Summit 83.55 354 P **P** **00 52 11.9 +0.6**
SUMG IAmb IAmb 00 52 12.3
comp=Z,3.2nm,0.8s
CKRC Cesky Krumlov 83.56 321 *e*P **P** **00 52 11.1 -0.2**
ITM Ithomi 83.62 308 P **P** **00 52 10.1 -1.7**
YKA Yellowknife Ar 83.73 23 P **P** **00 52 11.1 -0.7**
comp=Z,1.4nm,0.8s,baz=314,slow=5.3,SNR=6.2
comp=Z,1.4nm,0.8s
ABPO Ambohimpanom 83.86 246 P **P** **00 52 13.4 -0.1**
GERES GERESS Array B 83.90 321 P **P** **00 52 12.5 -0.7**
comp=Z,1.4nm,0.7s,baz=72,slow=4.3,SNR=12
comp=Z,1.4nm,0.7s
GERES GERESS Array B 83.90 321 P **P** **00 52 11.9 -1.2**
BORG Borgarnes 87.81 345 LR LR 01 35 18.5
comp=Z,16nm,18.7s,baz=359,slow=38
EKA Eskdalemuir Ar 88.81 332 LR LR 01 36 56.9
comp=Z,175nm,18.0s,baz=16,slow=39
LPAZ La Paz 168.52 55 PKP **PKPdf** **00 59 51.3 -0.2**
comp=Z,0.9nm,0.7s,baz=289,slow=0.8,SNR=5.0

*NEIC **20** 01:00:17.1±1.4, 1°.4N±0°.1×127°.16E±0°.09, h134km±7km, mb4.4/30, Error ellipse: s-maj=17.2km s-min=12.4km az=208.0*
*DJA **20** 01:00:20.2±0.4, 1°.N±.3°×12°.7E±°, h89km±7km, M4.6/13, mb4.8/12, mB5.2/6, MLv4.6/13, Mw(mB)4.6/6*
ISC 20 01:00:12.7±1.0, 1°.6N±0°.1×127°.35E±0°.09, h100km, n64, σ1§69/57, mb4.5/14, 1D, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.82**	**179**	Pn	Pn	01 00 37.7	+6.4
TNTI	**Ternate**	**0.82**	**179**	P	**Pn**	**01 00 34.9**	**+3.6**
TNTI	**Ternate**	**0.82**	**179**	P	Pn	01 00 39.4	+8.1
LBMI	**Labuha**	**2.23**	**176**	P	**Pn**	**01 00 52.1**	**+3.9**
SGSI	**Sangihe**	**2.76**	**319**	P	Pn	01 01 03.1	+7.9
KMSI	**Cibinong**	**3.52**	**253**	P	**Pn**	**01 01 08.1**	**+2.7**
SANI	**Sanana**	**3.87**	**201**	P	**Pn**	**01 01 10.1**	**0.0**
SANI	**Sanana**	**3.87**	**201**	P	**Pn**	**01 01 09.9**	**-0.2**
NLAI	**Namlea**	**4.81**	**183**	P	**Pn**	**01 01 24.3**	**+1.4**
LUWI	**Luwuk**	**5.27**	**240**	Pn	**Pn**	**01 01 30.4**	**+1.2**
LUWI	**Luwuk**	**5.27**	**240**	P	**Pn**	**01 01 30.2**	**+1.1**
LUWI	**Luwuk**	**5.27**	**240**	P	**Pn**	**01 01 31.7**	**+2.6**
MRSI	**Marisa** 0.5nm2µm118nm,0.6s	**5.52**	**258**	P	**Pn**	**01 01 34.8**	**+2.3**
KCP	**Kidapawan**	**5.83**	**337**	⇓*i*P	Pn	01 01 45.5	+8.8
KCP				*i* S	Sn	01 02 30.2	-12
APSI	**Ampana** 0.8nm3µm192nm,0.6s	**6.22**	**246**	P	**Pn**	**01 01 43.1**	**+1.1**
TOLI2	**Tolitoli**	**6.58**	**266**	Pn	**Pn**	**01 01 49.6**	**+2.7**
TOLI2	**Tolitoli**	**6.58**	**266**	P	**Pn**	**01 01 50.0**	**+3.1**
FAKI	**Fak Fak**	**6.64**	**132**	Pn	Pn	01 01 53.5	+5.8
FAKI	**Fak Fak** 0.2nm46nm,1.6s	**6.64**	**132**	P	Pn	01 01 54.0	+6.2
FAKI	**Fak Fak**	**6.64**	**132**	P	Pn	01 01 54.2	+6.4
MPSI	**Mapaga** 0.1nm26nm,1.0s	**7.55**	**261**	P	**Pn**	**01 02 02.8**	**+2.6**
TTSI	**Tana Toraja** 2µm223nm,0.7s	**8.83**	**239**	P	**Pn**	**01 02 17.7**	**+0.2**
BNSI	**Bone** 1µm125nm,0.7s	**9.37**	**231**	P	**Pn**	**01 02 25.5**	**+0.6**
SPSI	**Sidrap Palu** 4µm164nm,0.4s	**9.38**	**234**	P	**Pn**	**01 02 26.3**	**+1.4**
BKSI	**Bulukumba** 1µm91nm,0.5s	**9.97**	**226**	P	**Pn**	**01 02 35.6**	**+2.6**
KAPI	**Kappang**	**10.04**	**229**	Pn	**Pn**	**01 02 35.2**	**+1.3**
KAPI	**Kappang**	**10.04**	**229**	P	**Pn**	**01 02 35.2**	**+1.3**
BSSI	**Bau Bau, Buton** 18nm,0.5s	**10.30**	**222**	P	**Pn**	**01 02 40.2**	**+2.7**
EDFI	**Ende, Flores** 19nm,0.8s	**11.72**	**209**	P	**Pn**	**01 03 00.7**	**+3.8**
MTN	**Manton Dam**	**14.83**	**165**	Pn	**Pn**	**01 03 36.2**	**-1.2**
KDU	**Kakadu**	**15.07**	**160**	P	**P**	**01 03 44.0**	**+0.7**
KNRA	**Kununurra**	**17.22**	**175**	P	**Pn**	**01 04 06.2**	**-0.9**
KNRA					IAmb	IAmb	01 04 07.8
comp=Z,13nm,0.7s							
PCJI	**Pacitan**	**18.83**	**239**	P	**Pn**	**01 04 28.8**	**+2.3**
UGM	**Wanagama**	**19.26**	**240**	P	**P**	**01 04 27.1**	**-2.4**
UGM					IAmb	IAmb	01 04 46.7
comp=Z,21nm,1.0s							
COEN	**Coen**	**22.02**	**135**	P	**P**	**01 05 00.4**	**+1.3**
WB0	**Warramunga Arr**	**22.33**	**162**	P	**P**	**01 05 01.8**	**-0.6**
WB0					IAmb	IAmb	01 05 08.6
comp=Z,19nm,0.7s							
WRAB	**Tennant Creek**	**22.47**	**163**	P	**P**	**01 05 03.2**	**-0.6**
WRAB					IAmb	IAmb	01 05 10.3
comp=Z,18nm,0.9s							
WRA	**Warramunga Arr**	**22.48**	**163**	P	**P**	**01 05 02.0**	**-1.9**
WB2	**Warramunga Arr**	**22.48**	**163**	P	**P**	**01 05 03.4**	**-0.6**
WB2					IAmb	IAmb	01 05 10.3
comp=Z,23nm,0.9s							
WR0	**Warramunga Arr**	**22.55**	**162**	P	**P**	**01 05 03.9**	**-0.8**
WR0					IAmb	IAmb	01 05 04.2
comp=Z,9.8nm,0.5s							
MBWA	**Marble Bar**	**23.81**	**198**	P	**P**	**01 05 15.3**	**-1.3**
PSA00	**Pilbara Seismi**	**24.17**	**197**	P	**P**	**01 05 19.1**	**-0.7**
PSA00					IAmb	IAmb	01 05 19.5
comp=Z,5.7nm,0.7s							
AS31	**Alice Springs**	**25.91**	**166**	P	**P**	**01 05 34.8**	**-0.8**
GIRL	**Giralia**	**27.28**	**207**	P	**P**	**01 05 46.5**	**-1.4**
FORT	**Forrest**	**32.20**	**179**	P	**P**	**01 06 30.2**	**-1.1**
MORW	**Morawa**	**32.36**	**199**	P	**P**	**01 06 31.3**	**-1.4**
MORW					IAmb	IAmb	01 06 32.1
comp=Z,4.7nm,0.7s							
BBOO	**Buckleboo**	**35.20**	**167**	P	**P**	**01 06 56.5**	**-0.8**
BBOO					IAmb	IAmb	01 07 09.4
comp=Z,7.8nm,1.1s							
EIDS	**Eidsvold**	**35.31**	**141**	P	**P**	**01 06 59.3**	**+1.0**
EIDS					IAmb	IAmb	01 07 00.0
comp=Z,8.9nm,1.1s							
NWAO	**Narrogin (SRO)**	**35.64**	**195**	P	**P**	**01 07 00.2**	**-0.8**
STKA	**Stephens Creek**	**35.93**	**159**	P	**P**	**01 07 03.6**	**0.0**
ARMA	**Armidale**	**39.36**	**146**	P	**P**	**01 07 34.1**	**+1.5**
ARMA					IAmb	IAmb	01 07 42.8
comp=Z,5.2nm,1.0s							
CAN	**Canberra**	**41.94**	**153**	P	**P**	**01 07 55.2**	**+1.4**
CAN					IAmb	IAmb	01 07 56.0
comp=Z,10nm,0.8s							
QRZ	**Quartz Range**	**58.89**	**141**	P	**P**	**01 10 02.3**	**+1.1**
LBZ	**Lake Benmore**	**59.58**	**146**	P	**P**	**01 10 06.1**	**+0.1**
LBZ					IAmb	IAmb	01 10 10.9
comp=Z,4.1nm,0.9s							
THZ	**Tophouse**	**59.65**	**142**	P	**P**	**01 10 06.5**	**0.0**
THZ					IAmb	IAmb	01 10 20.2
comp=Z,6.4nm,1.0s							
LTZ	**Lake Taylor**	**59.84**	**143**	P	**P**	**01 10 07.6**	**-0.2**
KHZ	**Kahutara**	**60.41**	**142**	P	**P**	**01 10 11.8**	**+0.2**
URZ	**Urewera**	**60.58**	**136**	P	**P**	**01 10 10.6**	**-2.2**
BKZ	**Black Stump Fm**	**60.60**	**138**	P	**P**	**01 10 13.7**	**+0.7**
BKZ					IAmb	IAmb	01 10 22.3
comp=Z,5.4nm,1.1s							
MSWZ	**Moikau Station**	**60.94**	**140**	P	**P**	**01 10 15.2**	**-0.1**
PLWZ	**Palliser**	**61.02**	**140**	P	**P**	**01 10 15.3**	**-0.6**
CASY	**Casey**	**68.79**	**187**	P	**P**	**01 11 04.8**	**-0.9**
CASY					IAmb	IAmb	01 11 05.9
comp=Z,2.5nm,0.6s							
ARU	**Arti**	**77.06**	**328**	P	**P**	**01 11 54.8**	**+0.1**
VNDA	**Vanda**	**81.25**	**173**	P	**P**	**01 12 17.1**	**0.0**

*IDC **20** 01:23:44.8±1.4, 52°.60N×169°.35W, h0km, mb3.8/10, mbtmp3.9/12, ML3.5/2, Error ellipse: s-maj=39.4km s-min=18.0km az=173.0*
*AEIC **20** 01:23:47±3.0, 52°.19N±0°.07×169°.28W±0°.08, h16km±7km, Error ellipse: s-maj=11.8km s-min=3.4km az=146.0*
*NEIC **20** 01:23:48.1±2.9, 52°.21N±0°.10×169°.3W±0°.1, h34km±12km, mb3.8/23, MLv3.7/6, ML3.3(AEIC), Error ellipse: s-maj=15.2km s-min=7.7km az=157.0*
ISC 20 01:23:48.7±0.9, 52°.2N±0°.1×169°.27W±0°.07, h35km, n62, σ1§29/61, mb3.9/11, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIKH	**Nikolski Hkg**	**0.78**	**19**		**Pn**	**01 24 02.4**	**-0.8**
OKSO	**Okmok South**	**1.31**	**31**		**Pn**	**01 24 10.8**	**+0.2**
OKFG	**Magazine Ridge**	**1.44**	**35**		**Pn**	**01 24 12.4**	**+0.1**
MSW	**Makushin Switc**	**2.26**	**41**		**Pn**	**01 24 24.6**	**+1.1**
UNV	**Unalaska Valle**	**2.32**	**45**		**Pn**	**01 24 25.0**	**+0.6**
MTBL	**Makushin Table**	**2.34**	**41**		**Pn**	**01 24 26.2**	**+1.5**
AKBBA	**Akutan Broad B**	**2.75**	**46**		**Pn**	**01 24 32.2**	**+2.0**
AKUT	**Akutan**	**2.84**	**47**	Pn	**Pn**	**01 24 32.5**	**+1.0**
AKUT					IAML		01 25 19.9
comp=N,176nm,0.8s							
KOFP	**Korovin Flat P**	**2.96**	**273**		**Pn**	**01 24 33.4**	**+0.1**
GSTR	**Great Sitkin T**	**4.18**	**271**	Pn	**Pn**	**01 24 49.8**	**-0.2**
ADK	**Adak**	**4.59**	**269**	Pn	**Pn**	**01 24 54.9**	**-0.6**
ADK	**Adak**	**4.59**	**269**		IAML		01 27 58.4
comp=N,164nm,0.9s							
KIWB	**Kanaga Island**	**4.88**	**269**	Pn	**Pn**	**01 24 59.6**	**+0.1**
SPIA	**Saint Paul Isl**	**4.99**	**354**	Pn	**Pn**	**01 25 03.5**	**+2.5**
SDPT	**Sand Point**	**6.08**	**56**	Pn	**Pn**	**01 25 17.0**	**+1.1**
CNBA	**Chernabura Isl**	**6.33**	**62**	Pn	**Pn**	**01 25 19.7**	**+0.3**
AMKA	**Amchitka**	**7.14**	**268**	Pn	**Pn**	**01 25 30.1**	**-0.4**
OHAK	**Old Harbor**	**10.50**	**55**	Pn	**Pn**	**01 26 15.5**	**-1.0**
O18K	**Koktuh Hills**	**10.94**	**40**	Pn	**Pn**	**01 26 25.8**	**+3.1**
KDAK	**Kodiak Island**	**11.06**	**53**	Pn	**Pn**	**01 26 23.2**	**-1.1**
comp=N,0.4nm,0.3s,baz=253,slow=9.2,SNR=7.5							
comp=N,6.6nm,1.0s							
KDAK	**Kodiak Island**	**11.06**	**53**	Pn	**Pn**	**01 26 23.0**	**-1.3**
Q19K	**Cape Douglas,**	**11.08**	**47**	Pn	**Pn**	**01 26 26.0**	**+1.4**
GAMB	**Gambell**	**11.64**	**355**	Pn	**Pn**	**01 26 34.9**	**+2.8**
PPLA	**Purkeypile**	**14.02**	**34**	Pn	**Pn**	**01 27 05.5**	**+0.8**
BPAW	**Bear Paw Mtn.**	**15.23**	**32**	P	**P**	**01 27 24.9**	**-0.6**
BPAW					IAmb	IAmb	01 27 26.6
comp=Z,3.8nm,1.0s							
SCM	**Sheep Creek Mo**	**15.25**	**42**	Pn	**Pn**	**01 27 19.3**	**-1.9**
KLU	**Klutina**	**15.69**	**45**		**Pn**	**01 27 24.6**	**-2.3**
I21K	**Tanana**	**15.70**	**28**	P	**P**	**01 27 33.1**	**+2.6**
I21K					IAmb	IAmb	01 27 44.3
comp=Z,6.9nm,1.4s							
MLY	**Manley**	**15.96**	**29**	P	**P**	**01 27 32.3**	**-1.2**
BMRM	**Bremner River**	**16.06**	**47**		**P**	**01 27 33.9**	**-0.9**
N25K	**Chitina, Valde**	**16.31**	**45**	Pn	**Pn**	**01 27 33.9**	**-1.0**
N25K					IAmb	IAmb	01 28 02.7
comp=Z,20nm,1.4s							
WRH	**Wood River Hil**	**16.44**	**34**		**P**	**01 27 37.5**	**-1.3**
I23K	**Minto, Yukon-K**	**16.46**	**31**		**P**	**01 27 38.4**	**-0.6**
I23K					IAmb	IAmb	01 27 58.4
comp=Z,7.5nm,1.4s							
GLB	**Gilahina Butte**	**16.60**	**46**	Pn	**Pn**	**01 27 36.4**	**-2.0**
GLB					IAmb	IAmb	01 28 02.4
comp=Z,8.8nm,1.3s							
VRDI	**Verde Repeater**	**16.68**	**47**	Pn	**Pn**	**01 27 38.3**	**-1.3**
VRDI					IAmb	IAmb	01 27 54.6
comp=Z,23nm,1.4s							
WAX	**Waxell Ridge**	**16.70**	**50**		**P**	**01 27 40.5**	**-1.2**
ILAR	**Eielson Array** baz=245,slow=11,SNR=3.1	**17.03**	**34**	Pn	**Pn**	**01 27 43.2**	**-0.6**
GRNC	**Granite Creek**	**17.30**	**50**		**P**	**01 27 47.6**	**-1.0**
GRNC					IAmb	IAmb	01 28 15.0
comp=Z,14nm,1.2s							
M26K	**Nabesna, AK**	**17.33**	**44**	Pn	**Pn**	**01 27 45.7**	**-1.9**
M26K					IAmb	IAmb	01 28 02.5
comp=Z,8.2nm,1.4s							
H24K	**Noodor Dome**	**17.38**	**30**	Pn	**Pn**	**01 27 47.0**	**-1.2**
BARN	**Barnard Glacie**	**17.44**	**49**		**P**	**01 27 49.2**	**-0.9**
BARN					IAmb	IAmb	01 27 58.8
comp=Z,8.9nm,1.2s							
DOT	**Dot Lake**	**17.45**	**39**		**P**	**01 27 49.2**	**-0.8**
J25K	**Salcha River,**	**17.47**	**36**		**P**	**01 27 48.9**	**-1.4**
J26L	**Joseph Creek**	**18.07**	**37**		**P**	**01 27 56.3**	**-0.6**
HYT	**Haines Junctio**	**19.34**	**51**	Pn	**Pn**	**01 28 13.6**	**+1.4**
HYT					IAmb	IAmb	01 28 16.1
comp=Z,5.0nm,0.7s							
BMAR	**Burnt Mountain**	**19.42**	**29**	P	**Pn**	**01 28 12.3**	**-0.7**
PEA0B	**Petropavlovsk-**	**19.95**	**286**	P	**P**	**01 28 17.0**	**-0.5**
PEA0B					IAmb	IAmb	01 28 43.5
comp=Z,11nm,1.1s							
PETK	**Petropavlovsk-**	**19.95**	**286**	P	**P**	**01 28 17.2**	**-0.3**
comp=Z,0.5nm,0.3s,baz=86,slow=16,SNR=6.1							
comp=Z,2.2nm,0.4s							
PETK	**Petropavlovsk-**	**19.95**	**286**	P	**P**	**01 28 16.5**	**-1.0**
EPYK	**Eagle Plains**	**21.48**	**36**	P	**P**	**01 28 32.6**	**-1.2**
EPYK					IAmb	IAmb	01 28 47.5
comp=Z,8.9nm,1.4s							
INK	**Inuvik**	**23.43**	**33**	P	**P**	**01 28 53.3**	**-0.9**
comp=Z,1.5nm,0.6s,baz=225,slow=4.3,SNR=4.0							
comp=Z,1.5nm,0.6s							
INK	**Inuvik**	**23.43**	**33**	P	**P**	**01 28 54.1**	**-0.1**
INK					IAmb	IAmb	01 29 17.2
comp=Z,2.9nm,1.1s							
YKA	**Yellowknife Ar**	**30.29**	**49**	P	**P**	**01 29 56.1**	**0.0**
comp=Z,0.7nm,0.6s,baz=276,slow=7.9,SNR=3.4							
comp=Z,0.7nm,0.6s							
PDAR	**Pinedale Array**	**40.37**	**79**	P	**P**	**01 31 25.0**	**+1.8**
comp=Z,0.4nm,0.6s,baz=295,slow=4.6,SNR=4.2							
comp=Z,0.4nm,0.6s							
KSRS	**Korea Array**	**45.48**	**277**	P	**P**	**01 32 04.7**	**+0.4**
comp=Z,0.5nm,0.4s,baz=60,slow=7.6,SNR=4.7							
comp=Z,0.5nm,0.4s							
TXAR	**Lajitas Array**	**52.69**	**89**	P	**P**	**01 33 00.8**	**+1.1**
comp=Z,0.2nm,0.7s,baz=292,slow=5.7,SNR=5.0							
comp=Z,0.2nm,0.7s							
ARCES	**ARCESS Array B**	**58.06**	**354**	P	**P**	**01 33 36.4**	**-1.3**
comp=Z,2.4nm,0.8s,baz=19,slow=9.5,SNR=1.9							
comp=Z,2.4nm,0.8s							
FINES	**FINESS Array B**	**66.01**	**352**	P	**P**	**01 34 30.1**	**-0.9**
comp=Z,2.2nm,0.9s,baz=20,slow=6.1,SNR=5.2							
comp=Z,2.2nm,0.9s							
NB2	**NORSAR Subarra**	**67.08**	**360**	P	**P**	**01 34 37.5**	**-0.4**
comp=Z,1.9nm,0.8s,baz=1.3,slow=6.9							
NOA	**NORSAR Array B**	**67.08**	**360**	P	**P**	**01 34 37.2**	**-0.8**
comp=Z,0.8nm,0.8s,baz=336,slow=5.4,SNR=3.6							
comp=Z,0.8nm,0.8s							
AKASG	**Malin Array Be**	**76.25**	**348**	P	**P**	**01 35 32.4**	**-0.8**
comp=Z,0.8nm,0.6s,baz=19,slow=6.5,SNR=3.7							
comp=Z,0.8nm,0.6s							
CMAR	**Chiang Mai Arr**	**76.70**	**283**	P	**P**	**01 35 36.9**	**+0.6**
comp=Z,1.1nm,0.3s,baz=22,slow=5.5,SNR=4.9							
comp=Z,1.1nm,0.3s							

*IDC **20** 01:25:33.2±1.1, 52°.38N×169°.43W, h0km, mb4.2/20, mbtmp4.2/22, ML3.9/2, MS3.4/11, Error ellipse: s-maj=30.3km s-min=14.1km az=173.0*
*AEIC **20** 01:25:35±2.7, 52°.15N±0°.07×169°.29W±0°.08, h22km±5km, Error ellipse: s-maj=9.9km s-min=6.7km az=171.0*
*NEIC **20** 01:25:38.2±2.1, 52°.31N±0°.07×169°.37W±0°.05, h35km±6km, mb4.2/90, ML4.1/6, ML3.9(AEIC), Error ellipse: s-maj=10.3km s-min=4.0km az=179.0*
ISC 20 01:25:37.8±0.6, 52°.24N±0°.09×169°.31W±0°.05, h35km, n223, σ1§27/210, mb4.3/57, MS3.4/9, 2D, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIKH	**Nikolski Hkg**	**0.79**	**20**	Pn	**Pn**	**01 25 51.8**	**-0.7**
NIKH				Sn	**Sn**	**01 26 03.6**	**+0.7**

MGOD	**Makushin Gods**	**2.15**	**42**		**Pn**	**01 26 12.0**	**+0.9**
MSW	**Makushin Switc**	**2.27**	**41**		**Pn**	**01 26 13.4**	**+0.6**
UNV	**Unalaska Valle**	**2.34**	**45**	Pn	**Pn**	**01 26 13.7**	**0.0**
UNV	**Unalaska Valle**	**2.34**	**45**		**Sn**	**01 26 42.6**	**+1.5**
MTBL	**Makushin Table**	**2.35**	**41**		**Pn**	**01 26 15.1**	**+1.1**
AKBBA	**Akutan Broad B**	**2.76**	**46**		**Pn**	**01 26 20.6**	**+1.1**
AKBBA					**Sn**	**01 26 55.3**	**+3.7**
AKGG	**Akutan Green G**	**2.80**	**44**		**Pn**	**01 26 22.2**	**+2.1**
AKGG					**Sn**	**01 26 55.9**	**+3.3**
AKUT	**Akutan**	**2.85**	**47**	Pn	**Pn**	**01 26 21.9**	**+1.2**
AKUT					IAML		01 27 09.2
comp=N,582nm,0.8s							
KOFP	**Korovin Flat P**	**2.94**	**273**		**Pn**	**01 26 22.4**	**+0.3**
ATKA	**Atka Island**	**3.01**	**271**		**Pn**	**01 26 22.5**	**-0.4**
KOKL	**Mount Kliuchef**	**3.01**	**274**		**Pn**	**01 26 24.6**	**+1.6**
WESP	**Westdahl Peak**	**3.56**	**49**		**Pn**	**01 26 32.6**	**+2.1**
GSTR	**Great Sitkin T**	**4.16**	**271**	Pn	**Pn**	**01 26 38.3**	**-0.5**
GSMY	**Great Sitkin M**	**4.16**	**270**		**Pn**	**01 26 39.0**	**+0.2**
GSTD	**Great Sitkin T**	**4.21**	**270**		**Pn**	**01 26 39.7**	**+0.1**
GSCK	**Great Sitkin C**	**4.23**	**270**		**Pn**	**01 26 40.1**	**+0.3**
FALS	**False Pass**	**4.38**	**51**	Pn	**Pn**	**01 26 43.8**	**+2.0**
ADK	**Adak**	**4.57**	**268**	Pn	**Pn**	**01 26 44.3**	**0.0**
ADK					IAML		01 27 59.7
comp=N,214nm,0.9s							
KIWB	**Kanaga Island**	**4.86**	**269**	Pn	**Pn**	**01 26 48.5**	**+0.1**
SPIA	**Saint Paul Isl**	**4.98**	**354**	Pn	**Pn**	**01 26 52.2**	**+2.2**
TAFP	**Tanaga Falls P**	**5.36**	**270**		**Pn**	**01 26 55.8**	**+0.5**
TASE	**Tanaga Southea**	**5.40**	**269**		**Pn**	**01 26 56.7**	**+0.8**
SDPT	**Sand Point**	**6.09**	**56**	Pn	**Pn**	**01 27 07.1**	**+1.9**
CNBA	**Chernabura Isl**	**6.35**	**62**	Pn	**Pn**	**01 27 08.7**	**-0.1**
AMKA	**Amchitka**	**7.12**	**268**	Pn	**Pn**	**01 27 19.2**	**-0.1**
SII	**Sitkinak Islan**	**9.82**	**58**	Pn	**Pn**	**01 27 56.9**	**+0.5**
SHEM	**Shemya Is, Ala** comp=N,160nm,20.1s,baz=100,slow=38	**10.14**	**279**	LR	LR	01 31 50.0	
OHAK	**Old Harbor**	**10.52**	**55**	Pn	**Pn**	**01 28 04.5**	**-1.3**
O18K	**Koktuh Hills**	**10.95**	**40**		**Pn**	**01 28 15.3**	**+3.4**
KDAK	**Kodiak Island**	**11.08**	**53**	Pn	**Pn**	**01 28 12.1**	**-1.5**
comp=N,1.4nm,0.3s,baz=235,slow=5.2,SNR=10							
KDAK					Sn	**Sn**	**01 30 10.8**	**-5.2**
comp=N,0.8nm,0.3s,baz=177,slow=23,SNR=6.5							
KDAK	**Kodiak Island**	**11.08**	**53**	Pn	**Pn**	**01 28 12.6**	**-0.9**
KDAK					**Sn**	**01 30 14.3**	**-1.7**
Q19K	**Cape Douglas,**	**11.10**	**47**	Pn	**Pn**	**01 28 14.3**	**+0.5**
SVW2	**Sparrevohn**	**11.63**	**35**	Pn	**Pn**	**01 28 24.2**	**+3.1**
GAMB	**Gambell**	**11.64**	**355**	Pn	**Pn**	**01 28 23.7**	**+2.5**
N19K	**Bonanza Creek**	**11.84**	**38**	Pn	**Pn**	**01 28 26.0**	**+1.9**
CNPM	**China Poot**	**12.47**	**47**	Pn	**Pn**	**01 28 32.5**	**-0.1**
M19K	**Big River Lodg**	**12.60**	**34**	Pn	**Pn**	**01 28 35.7**	**+1.4**
L19K	**White Mountain**	**12.64**	**32**		**Pn**	**01 28 37.8**	**+2.8**
SEW	**Seward**	**13.54**	**47**	Pn	**Pn**	**01 28 46.2**	**-0.8**
O22K	**Cooper Landing**	**13.59**	**45**	Pn	**Pn**	**01 28 47.2**	**-0.6**
SKT	**Skwentna**	**13.68**	**38**	Pn	**Pn**	**01 28 52.3**	**+3.2**
SUA	**Susitna One**	**13.68**	**40**	Pn	**Pn**	**01 28 49.7**	**+0.5**
K20K	**Telida**	**13.74**	**30**	Pn	**Pn**	**01 28 52.8**	**+2.8**
RC01	**Rabbit Creek A**	**13.89**	**43**	Pn	**Pn**	**01 28 50.6**	**-1.3**
J20K	**Nowinta River**	**14.34**	**28**		**P**	**01 29 01.2**	**-3.4**
PMR	**Palmer**	**14.40**	**42**	Pn	**Pn**	**01 29 00.2**	**+1.3**
CAST	**Castle Rocks**	**14.42**	**32**	Pn	**Pn**	**01 29 01.0**	**+1.8**
GHO	**Glory Hole Cre**	**14.58**	**41**	Pn	**Pn**	**01 29 01.6**	**+0.3**
SML	**Sawmill**	**14.84**	**42**	Pn	**Pn**	**01 29 04.3**	**-0.5**
HIN	**Hinchinbrook I**	**14.99**	**48**	Pn	**Pn**	**01 29 05.1**	**-1.8**
FID	**Port Fidalgo**	**15.15**	**47**	Pn	**Pn**	**01 29 06.3**	**-2.6**
BPAW	**Bear Paw Mtn.**	**15.24**	**32**	Pn	**Pn**	**01 29 10.7**	**+0.6**
BPAW					IAmb	IAmb	01 29 15.8
comp=Z,9.5nm,0.8s							
SCM	**Sheep Creek Mo**	**15.27**	**42**		**Pn**	**01 29 08.5**	**-2.0**
SCM					IAmb	IAmb	01 29 26.1
comp=Z,20nm,1.1s							
DIV	**Divide**	**15.62**	**46**	Pn	**Pn**	**01 29 13.2**	**-1.9**
DIV					IAmb	IAmb	01 29 13.9
comp=Z,16nm,1.2s							
KLU	**Klutina**	**15.70**	**45**	Pn	**Pn**	**01 29 14.1**	**-2.1**
KLU					IAmb

EPYK IAmb IAmb 01 30 38.8
comp=Z,10nm,0.9s
P33M Teslin, Yukon 21.55 54 P **P** **01 30 24.9 +1.0**
P33M IAmb IAmb 01 30 30.6
comp=Z,6.2nm,0.8s
SEY Seymchan 22.79 313 P **P** **01 30 35.9 -1.0**
comp=Z,3.4nm,0.9s,baz=118,slow=10,SNR=4.4
comp=Z,3.4nm,0.9s
DLBC Dease Lake 22.92 59 LR LR 01 40 01.4
comp=Z,130nm,19.0s,baz=255,slow=38
INK Inuvik 23.44 33 P **P** **01 30 42.0 -1.4**
comp=Z,3.7nm,0.6s,baz=230,slow=8.8,SNR=8.5
comp=Z,3.7nm,0.6s
INK Inuvik 23.44 33 P **P** **01 30 41.9 -1.4**
INK IAmb IAmb 01 30 44.1
comp=Z,3.7nm,0.7s
C36M Paulatuk 27.02 34 P **P** **01 31 15.8 -0.3**
C36M IAmb IAmb 01 31 43.7
comp=Z,7.1nm,1.1s
YKA Yellowknife Ar 30.30 49 P **P** **01 31 46.3 +1.0**
comp=Z,1.2nm,0.5s,baz=274,slow=8.1,SNR=13
comp=Z,1.2nm,0.5s
YKA Yellowknife Ar 30.30 49 P **P** **01 31 45.0 -0.4**
ASAJ Asahikawa 32.56 275 LR LR 01 43 28.0
comp=Z,60nm,21.6s,baz=56,slow=33
TIXI Tiksi 32.87 329 P **P** **01 32 07.7 -0.1**
TIXI IAmb IAmb 01 32 08.4
comp=Z,3.7nm,1.1s
YAK Yakutsk 33.29 311 LR LR 01 45 50.5
comp=Z,68nm,19.1s,baz=299,slow=37
RES Resolute Bay 36.47 26 LR LR 01 52 17.0
comp=Z,42nm,18.0s,baz=24,slow=44
KLR Kul'dur 36.54 289 LR LR 01 48 05.7
comp=Z,65nm,19.3s,baz=85,slow=37
MCMT McKenzie Canyo 37.27 78 P **P** **01 32 46.1 -0.2**
H11N2 WAKE ISLAND Hy 37.37 219 T T 02 12 35.4
baz=24,slow=74,SNR=24
H11N3 WAKE ISLAND Hy 37.38 219 T T 02 12 33.7
baz=24,slow=74,SNR=48
H11N1 WAKE ISLAND Hy 37.39 219 T T 02 12 38.0
baz=24,SNR=6.8
BOZ Bozeman (W) 37.59 77 P **P** **01 32 49.9 +0.9**
BOZ IAmb IAmb 01 33 07.0
comp=Z,4.0nm,1.3s
ELK Elko 38.10 86 LR LR 01 46 58.0
comp=Z,147nm,18.3s,baz=256,slow=34
H11S1 WAKE ISLAND Hy 38.56 218 T T 02 14 09.5
baz=23,slow=76,SNR=106
H11S2 WAKE ISLAND Hy 38.58 218 T T 02 14 15.3
baz=23,slow=76,SNR=73
H11S3 WAKE ISLAND Hy 38.58 218 T T 02 14 07.8
baz=23,slow=76,SNR=11
PD31 Pinedale Array 40.39 79 P **P** **01 33 13.6 +1.1**
PD31 IAmb IAmb 01 33 39.6
comp=Z,2.7nm,0.9s
PDAR Pinedale Array 40.39 79 P **P** **01 33 13.5 +1.1**
comp=Z,1.2nm,0.7s,baz=320,slow=3.9,SNR=9.4
comp=Z,1.2nm,0.7s
PDAR Pinedale Array 40.39 79 P **P** **01 33 13.2 +0.8**
O20A White River Ci 42.74 81 P **P** **01 33 32.4 +0.7**
O20A IAmb IAmb 01 33 41.5
comp=Z,4.7nm,0.9s
PV13 Radium Mtn., P 43.62 84 P **P** **01 33 40.4 +1.6**
PV13 IAmb IAmb 01 34 02.6
comp=Z,4.3nm,0.9s
KSRS Korea Array 45.46 277 P **P** **01 33 53.6 +0.4**
comp=Z,4.1nm,0.9s,baz=54,slow=7.7,SNR=13
KSRS LR LR 01 51 58.1
comp=Z,16nm,20.6s,baz=100,slow=35
comp=Z,4.1nm,0.9s
ANMO Albuquerque 47.14 86 LR LR 01 52 49.8
comp=Z,79nm,19.1s,baz=270,slow=35
ECSD EROS Data Cent 47.48 70 P **P** **01 34 08.5 -0.5**
ECSD IAmb IAmb 01 34 09.3
comp=Z,3.3nm,1.1s
SPB2 Spitsbergen Ar 49.81 358 P **P** **01 34 26.2 -0.2**
G40A Rib Lake 50.18 65 P **P** **01 34 29.8 +0.1**
SUMG Summit 50.90 17 P **P** **01 34 36.1 +0.9**
SUMG IAmb IAmb 01 34 37.2
comp=Z,6.8nm,1.2s
ULN Ulaanbaatar 51.03 301 P **P** **01 34 35.8 -0.5**
ULN IAmb IAmb 01 34 36.5
comp=Z,3.3nm,0.8s
SONM Songino Array 51.40 301 P **P** **01 34 39.1 +0.1**
comp=Z,1.5nm,0.7s,baz=51,slow=6.7,SNR=11
SONM PcP **PcP** **01 35 53.4 +0.3**
comp=Z,0.7nm,0.5s,baz=64,slow=1.1,SNR=3.7
comp=Z,1.5nm,0.7s
SONM Songino Array 51.40 301 P **P** **01 34 39.1 +0.1**
SONM IAmb IAmb 01 34 40.1
comp=Z,4.3nm,1.2s
TX31 Lajitas Ar. Si 52.71 89 P **P** **01 34 49.6 +0.7**
TX32 Lajitas Array 52.71 89 P **P** **01 34 49.5 +0.6**
TX32 IAmb IAmb 01 35 13.3
comp=Z,4.8nm,1.2s
TXAR Lajitas Array 52.71 89 P **P** **01 34 49.4 +0.4**
comp=Z,0.7nm,0.8s,baz=304,slow=5.9,SNR=8.0
comp=Z,0.7nm,0.8s
P40A Paris 52.79 71 P **P** **01 34 48.3 -1.0**
P40A IAmb IAmb 01 35 03.4
comp=Z,6.9nm,0.8s
TIA Tai'an 52.81 283 ⇓P **P** **01 34 49.5 0.0**
TIA pmax pmax
comp=Z,6.0nm,0.6s
HHC Hu-ho-hao-te 53.00 291 *eP* **P** **01 34 50.4 -0.6**
HHC pmax pmax
comp=Z,51nm,1.0s
HHC pmax pmax
comp=Z,79nm,5.2s
HNS HongShan 53.45 286 ⇓P **P** **01 34 54.8 +0.7**
HNS pmax pmax
comp=Z,8.0nm,0.7s
SCO Scoresbysund 55.34 13 P **P** **01 35 07.8 +0.4**
SCHQ Schefferville 55.51 43 P **P** **01 35 09.4 +0.6**
comp=Z,4.3nm,0.9s,baz=320,slow=7.7,SNR=4.8
comp=Z,4.3nm,0.9s
SCHQ Schefferville 55.51 43 P **P** **01 35 09.9 +1.0**
SCHQ IAmb IAmb 01 35 29.9
comp=Z,6.4nm,1.1s
N47A Urbana 55.53 66 P **P** **01 35 08.1 -1.1**
ACSO Alum Creek Sta 57.49 65 P **P** **01 35 22.9 -0.2**
ZALV Zalesovo Beam 57.55 318 P **P** **01 35 22.7 -0.6**
comp=Z,0.7nm,0.3s,baz=41,slow=3.5,SNR=4.6
ZALV LR LR 02 01 00.9
comp=Z,34nm,19.9s,baz=78,slow=37
comp=Z,0.7nm,0.3s
ARCES ARCESS Array B 58.06 354 P **P** **01 35 25.8 -1.0**
comp=Z,5.8nm,0.9s,baz=21,slow=7.1,SNR=12
comp=Z,5.8nm,0.9s
ARCES ARCESS Array B 58.06 354 P **P** **01 35 26.1 -0.7**
ARCES IAmb IAmb 01 35 38.8
comp=Z,5.1nm,1.1s
YHNB Yeheng 58.34 270 P **P** **01 35 29.2 -0.2**
L56A Greenwood 59.13 60 P **P** **01 35 34.7 0.0**
XAN Xi'an 59.17 287 P **P** **01 35 34.8 -0.3**
XAN sP sP 01 35 51.8 +2.8
XAN pmax pmax
comp=Z,8.0nm,1.4s
SSPA Standing Stone 60.00 61 P **P** **01 35 40.6 0.0**
S54A Dingess, Beckl 60.11 66 P **P** **01 35 41.5 0.0**
L59A Walton 60.42 58 P **P** **01 35 44.3 +0.8**
T57A Hurt 61.83 65 P **P** **01 35 54.2 +1.1**
KURK Kurchatov 62.50 318 P **P** **01 35 57.1 -0.2**
LMN Caledonia Moun 62.85 50 P **P** **01 36 00.3 +0.6**
WMQ Urumqi 63.64 308 *eP* **P** **01 36 06.6 +1.4**
BRVK Borovoye 63.84 325 P **P** **01 36 06.0 -0.2**
BRVK IAmb IAmb 01 36 07.0
comp=Z,4.8nm,1.2s
MK31 Makanchi Array 63.92 313 P **P** **01 36 05.2 -1.7**
MK31 IAmb IAmb 01 36 06.5
comp=Z,1.9nm,0.8s
MKAR Makanchi Array 63.92 313 P **P** **01 36 05.9 -1.0**
comp=Z,1.4nm,0.7s,baz=54,slow=6.2,SNR=11
comp=Z,1.4nm,0.7s
MAKZ Makanchi 64.05 314 P **P** **01 36 06.8 -0.9**
MAKZ IAmb IAmb 01 36 07.5
comp=Z,2.9nm,1.1s
ARU Arti 64.75 333 P **P** **01 36 11.7 -0.4**
ARU IAmb IAmb 01 36 12.5
comp=Z,8.3nm,1.3s
GOMU GeErMu 65.62 298 P **P** **01 36 16.6 -2.0**
GOMU pP pP 01 36 20.4 -8.2
GOMU sP sP 01 36 23.6 -8.8
GOMU pmax pmax
comp=Z,3.0nm,0.5s
GOMU pmax pmax
comp=Z,73nm,6.2s
FIA1 FINESS Array S 66.00 352 P **P** **01 36 19.8 -0.3**
FINES FINESS Array B 66.01 352 P **P** **01 36 19.6 -0.5**
comp=Z,3.5nm,0.7s,baz=14,slow=7.9,SNR=16
comp=Z,3.5nm,0.7s
FINES FINESS Array B 66.01 352 P **P** **01 36 19.8 -0.4**
RAF Rauma 66.74 354 *eP* **P** **01 36 23.7 -1.1**
NC204 NORSAR Array S 66.84 360 P **P** **01 36 25.2 -0.3**
NB2 NORSAR Subarra 67.07 360 P **P** **01 36 26.6 -0.4**
comp=Z,1.3nm,0.6s,baz=0.1,slow=6.5
NOA NORSAR Array B 67.07 360 P **P** **01 36 26.3 -0.7**
comp=Z,2.4nm,0.7s,baz=0.3,slow=6.3,SNR=14
comp=Z,2.4nm,0.7s
VSU Vasula 68.89 351 *eP* **P** **01 36 38.3 -0.1**
PZH PanZhiHua 68.89 286 P P 01 36 34.1 -5.0
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,100nm,5.1s
BOOM Boomskoye usch 70.11 314 P **P** **01 36 46.6 +0.1**
ABKAR Akbulak array 70.57 328 P **P** **01 36 48.6 -0.2**
KKAR Karatay Array 71.91 318 P **P** **01 36 56.9 -0.2**
IDID Didziasalis 71.99 350 *eP* **P** **01 36 57.4 0.0**
IIGN Ignalina 72.01 351 *eP* **P** **01 36 57.4 -0.1**
PABE Paberze 72.06 352 P **P** **01 36 57.9 +0.2**
PABE Paberze 72.06 352 *eP* **P** **01 36 57.5 -0.3**
KSH Kashi 72.49 313 P **P** **01 37 03.8 +3.0**
KSH sP PcP 01 37 20.3 +1.9
KSH pmax pmax
comp=Z,10.0nm,0.8s
SUW Suwalki 73.61 352 *eP* **P** **01 37 06.7 -0.3**
CHGR Chuyangaron 76.19 317 P **P** **01 37 22.5 +0.2**
AKASG Malin Array Be 76.24 348 P **P** **01 37 21.4 -0.9**
comp=Z,3.4nm,0.6s,baz=17,slow=6.1,SNR=14
comp=Z,3.4nm,0.6s
CMAR Chiang Mai Arr 76.68 283 P **P** **01 37 25.2 -0.1**
comp=Z,4.3nm,0.8s,baz=26,slow=6.9,SNR=19
comp=Z,4.3nm,0.8s
OSTC Ostas 77.47 356 *eP* **P** **01 37 30.5 +1.2**
DPC Dobruska-Polom 77.68 356 *eP* **P** **01 37 31.4 +1.0**
NKC Novy Kostel 77.89 359 *eP* **P** **01 37 32.4 +0.8**
KRLC Kralíky 77.93 356 *eP* **P** **01 37 32.6 +0.8**
VRAC Vranov 78.71 356 *eP* **P** **01 37 36.3 +0.2**
LANS Liptovska Anna 78.71 354 *eP* **P** **01 37 37.7 +1.5**
KRUC Moravsky 78.96 356 *eP* **P** **01 37 37.9 +0.4**
KHC Kasperske Hory 78.98 358 *eP* **P** **01 37 38.7 +1.1**
JAVC Velka Javorina 79.11 355 *eP* **P** **01 37 39.7 +1.4**
GERES GERESS Array B 79.26 358 P **P** **01 37 39.4 +0.2**
comp=Z,0.5nm,0.5s,baz=15,slow=5.5,SNR=5.4
comp=Z,0.5nm,0.5s
KOLL Kolacno 79.35 355 *eP* **P** **01 37 40.7 +1.1**
VYHS Vyhne 79.41 354 *eP* **P** **01 37 40.9 +1.0**
MODS Modra-Piesok 79.61 356 *eP* **P** **01 37 42.5 +1.5**
BUR08 Bucovina Ar. S 79.73 350 P **P** **01 37 41.7 -0.1**
BUR08 IAmb IAmb 01 37 42.6
comp=Z,1.5nm,0.9s
BURAR Bucovina Array 79.75 350 P **P** **01 37 42.1 +0.2**
BURAR IAmb IAmb 01 37 42.5
comp=Z,1.4nm,0.8s
CONA Conrad Observa 80.11 356 *eP* **P** **01 37 43.7 -0.2**
comp=Z,1.0nm,0.6s
MOA Molln 80.25 358 *eP* **P** **01 37 44.9 +0.4**
comp=Z,0.5nm,0.4s
RONA Rosalia, Austr 80.33 356 *eP* **P** **01 37 46.8 +1.8**
comp=Z,1.7nm,0.4s
KBZ Khabaz 80.45 337 P **P** **01 37 46.9 +1.3**
comp=Z,4.9nm,0.8s,baz=132,slow=1.5,SNR=8.7
comp=Z,4.9nm,0.8s
RETA Reutte 80.66 360 *eP* **P** **01 37 47.5 +0.8**
comp=Z,0.5nm,0.3s
MOTA Moosalm 80.80 360 *eP* **P** **01 37 48.3 +0.6**
comp=Z,1.7nm,0.5s
DAVA Damuels 80.85 1 *eP* **P** **01 37 46.5 -1.5**
comp=Z,0.8nm,0.4s
KBA Koelnbreinsper 81.04 358 *eP* **P** **01 37 49.0 0.0**
comp=Z,3.4nm,0.5s
FETA Feichten 81.12 360 *eP* **P** **01 37 46.2 -3.2**
comp=Z,1.2nm,0.5s
GEYT Alibeck 81.16 324 P **P** **01 37 50.0 +0.4**
comp=Z,3.4nm,0.8s,baz=221,slow=11,SNR=4.0
comp=Z,3.4nm,0.8s
GEYT Alibeck 81.16 324 IAmb IAmb 01 37 51.2
comp=Z,2.7nm,0.8s
ABTA Abfaltersbach 81.38 359 *eP* **P** **01 37 46.9 -3.8**
comp=Z,0.5nm,0.2s
SOKA Soboth 81.39 357 *eP* **P** **01 37 51.7 +1.0**
comp=Z,2.7nm,0.8s
OBKA Obir 81.58 357 *eP* **P** **01 37 52.3 +0.6**
comp=Z,1.9nm,0.6s
TEOL Teolo 82.78 359 P **P** **01 37 58.6 +0.7**
BRTR Keskin Array B 86.26 342 P **P** **01 38 15.9 +0.1**
comp=Z,0.6nm,0.7s,baz=43,slow=3.6,SNR=4.7
comp=Z,0.6nm,0.7s
ESDC Sonseca Array 87.58 11 P **P** **01 38 22.4 +0.3**
comp=Z,1.4nm,0.9s,baz=345,slow=5.6,SNR=9.7
comp=Z,1.4nm,0.9s

*IDC **20** 01:31:20.3±1.1, 30.°30S×71.°94W, h0km, mb4.1/6, mbtmp4.0/9, ML3.8/3, MS3.5/5, Error ellipse: s-maj=33.7km s-min=22.4km az=85.0*
*GUC **20** 01:31:21.4±0.5, 30.°31S×72.°19W, h31km±5km, ML4.3*
*NEIC **20** 01:31:21.1±2.1, 30.°22S±0.°03×72.°06W±0.°07, h10km±4km, mb4.5/14, Mwr4.2/44, ML4.3(GUC), Error ellipse: s-maj=8.9km s-min=3.8km az=71.0*
*NEIC **20** 01:31:21.4, 30.°23S×72.°08W, h12km, Moment Tensor Solution. Moment tensor: Scale 10^15^Nm; Mrr 1.62; Mθθ 0.55; Mφφ -2.17; Mrθ 0.06; Mrφ -0.34; Mθφ -1.47; Fault plane solution: M0 2.47000×10^15^ NP1: φ 18.03000°, δ 27.22000°, λ 106.61000°. NP2: φ 179.48000°, δ 64.00000°, λ 81.64000°. Principal axes: T 2.1408, Plg70.0000°, Azm72.0000°; N 0.5583, Plg8.0000°, Azm183.0000°; P -2.6990, Plg19.0000°, Azm276.0000°;*
*VAO **20** 01:31:48.3±2.8, 29.°41S×70.°91W, h176km±13km, mb4.1*
ISC 20 01:31:21.6±2.1, 30.°26S±0.°03×72.°07W±0.°06, h13km±13km, n113, σ1$24/114, mb4.5/9, 2C-7D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.56**	**137**			**Pb**	**01 31 33.2**	**0.0**
CO06	**Fray Jorge**	**0.56**	**137**	⇓*i*	P	**Pb**	**01 31 32.9**	**-0.3**
CO06				*i*	S	**Sb**	**01 31 41.4**	**+0.3**
CO05	**La Serena**	**0.80**	**65**			**Pb**	**01 31 37.4**	**0.0**
CO05	**La Serena**	**0.80**	**65**	⇓*i*	P	**Pn**	**01 31 37.9**	**-0.6**
CO05				*i*	S	**Sn**	**01 31 50.2**	**-0.1**
CO05				IAML			01 31 54.9	
comp=E,30µm,0.8s								
GO04	**Tololo Observa**	**1.10**	**86**			**Pb**	**01 31 42.7**	**0.0**
GO04	**Tololo Observa**	**1.10**	**86**	⇓*i*	P	**Pn**	**01 31 42.9**	**-0.1**
GO04				*i*	S	**Sn**	**01 31 59.2**	**+1.0**
CO02	**Combarbal**	**1.31**	**136**			**Pn**	**01 31 45.6**	**-0.1**
CO02	**Combarbal**	**1.31**	**136**	⇓*i*	P	**Pn**	**01 31 45.4**	**-0.4**
CO02				*i*	S	**Sg**	**01 32 04.0**	**0.0**
CO02				IAML			01 32 09.2	
comp=N,11µm,0.6s								
CO03	**El Pedregal**	**1.32**	**116**	Pn		**Pn**	**01 31 45.5**	**-0.3**
CO03	**El Pedregal**	**1.32**	**116**	⇓*i*	P	**Pn**	**01 31 45.6**	**-0.3**
CO03				*i*	S	**Sg**	**01 32 04.3**	**0.0**
CO03				IAML			01 32 06.7	
comp=N,4µm,0.6s								
LCO	**Las Campanas**	**1.73**	**44**			**Pn**	**01 31 51.7**	**+0.1**
LCO	**Las Campanas**	**1.73**	**44**	⇓*i*	P	**Pn**	**01 31 51.2**	**-0.3**
LCO				*i*	S	**Sb**	**01 32 15.3**	**+0.3**
CO01	**Juntas del Tor**	**1.74**	**81**			**Pb**	**01 31 52.9**	**-0.6**
CO01	**Juntas del Tor**	**1.74**	**81**	⇑*i*	P	**Pb**	**01 31 52.9**	**-0.6**
CO01				*i*	S	**Sg**	**01 32 17.1**	**-0.4**
CO01				IAML			01 32 26.4	
comp=N,2µm,0.5s								
AC04	**Llanos de Chal**	**2.23**	**23**	Pn		**Pn**	**01 31 57.3**	**-1.0**
AC04	**Llanos de Chal**	**2.23**	**23**	⇓*i*	P	**Pn**	**01 31 57.1**	**-1.1**
AC04				IAML			01 32 44.0	
comp=E,2µm,0.5s								
VA06	**Catapilco**	**2.38**	**164**			**Pn**	**01 31 59.7**	**-0.7**
VA06	**Catapilco**	**2.38**	**164**	*i*	P	**Pn**	**01 31 59.3**	**-1.0**
VA06				IAML			01 32 49.0	
comp=N,2µm,0.6s								
VA01	**Torpederas**	**2.77**	**173**			**Pn**	**01 32 08.1**	**+2.4**
VA03	**San Esteban**	**2.81**	**153**			**Pn**	**01 32 05.3**	**-1.0**
VA03	**San Esteban**	**2.81**	**153**	*eP*		**Pn**	**01 32 06.9**	**+0.6**
VA03				*i*	S	**Sn**	**01 32 39.6**	**-0.5**
VA03				IAML			01 32 56.7	
comp=N,1µm,0.4s								
ROCH El Roble 2.85 162 *eP* **Pn** **01 32 06.5 -0.5**
ROCH IAML 01 33 03.1
comp=N,1µm,0.5s
ROC1 El Roble 2.85 162 **Pn** **01 32 06.6 -0.4**
MT02 Curacav 3.09 165 **Pn** **01 32 11.2 +1.1**
MT02 Curacav 3.09 165 *eP* **Pn** **01 32 09.0 -1.1**
PEL Peldehue 3.10 158 **Pn** **01 32 10.3 -0.1**
PEL Peldehue 3.10 158 ⇑*eP* **Pn** **01 32 10.5 +0.1**
PEL IAML 01 33 13.9
comp=E,1µm,0.8s
GO03 Copiap 3.11 32 Pn **Pn** **01 32 09.8 -0.7**
GO03 Copiap 3.11 32 *eP* **Pn** **01 32 10.3 -0.2**
GO03 IAML 01 33 14.9
comp=N,1µm,0.4s
MT05 Renca 3.32 160 Pn **Pn** **01 32 13.0 -0.3**
MT05 Renca 3.32 160 *eP* **Pn** **01 32 13.2 0.0**
MT05 IAML 01 33 17.0
comp=E,805nm,0.6s
VA05 Santo Domingo 3.41 174 Pn **Pn** **01 32 16.9 +2.5**
VA05 Santo Domingo 3.41 174 *eP* **Pn** **01 32 12.7 -1.7**
FCH Farellones 3.41 154 *eP* **Pn** **01 32 15.3 +0.5**
FCH IAML 01 33 18.2
comp=N,233nm,0.6s
MT03 Universidad Ad 3.48 158 **Pn** **01 32 14.2 -1.3**
MT03 Universidad Ad 3.48 158 *eP* **Pn** **01 32 15.5 -0.1**
MT03 *eS* **Sn** **01 32 55.5 -1.3**
MT03 IAML 01 33 21.6
comp=N,748nm,0.6s
MT09 Talagante 3.62 166 **Pn** **01 32 17.3 -0.2**
MT09 Talagante 3.62 166 *eP* **Pn** **01 32 17.5 0.0**
MT09 IAML 01 33 28.2
comp=N,440nm,0.6s
MT01 Popeta 3.66 169 **Pn** **01 32 17.7 -0.2**
MT01 Popeta 3.66 169 *eP* **Pn** **01 32 16.7 -1.2**
MT01 IAML 01 33 23.4
comp=E,220nm,0.5s
LMEL Las Melosas 3.91 157 **Pn** **01 32 21.7 +0.2**
BO04 La Punta 3.92 162 **Pn** **01 32 21.4 0.0**
BO04 La Punta 3.92 162 *eP* **Pn** **01 32 21.3 -0.2**
BO01 Tunca 4.20 169 Pn **Pn** **01 32 26.2 +0.9**
BO01 Tunca 4.20 169 *eP* **Pn** **01 32 24.3 -1.0**
AC02 Maricunga 4.29 38 Pn **Pn** **01 32 27.7 +0.7**
AC02 Maricunga 4.29 38 *eP* **Pn** **01 32 27.8 +0.7**
AC02 *eS* **Sn** **01 33 18.3 +1.2**
AC01 Pan de Azucar 4.30 18 **Pn** **01 32 24.4 -2.3**
AC01 Pan de Azucar 4.30 18 *eP* **Pn** **01 32 24.7 -2.1**
GO02 Mina Guanaco 5.54 24 Pn **Pn** **01 32 42.2 -1.8**
PB14 IPOC Station P 5.81 15 Pn **Pn** **01 32 44.9 -2.8**
H03N1 Juan Fernandez 6.63 240 T T 01 40 07.1
baz=70,slow=72,SNR=510
H03N2 Juan Fernandez 6.64 240 T T 01 40 06.5
baz=70,slow=72,SNR=527
H03N3 Juan Fernandez 6.64 240 T T 01 40 05.1
baz=70,slow=72,SNR=554
PB15 IPOC Station P 7.40 19 **Pn** **01 33 09.1 -0.5**
PB06 IPOC Station P 7.85 17 Pn **Pn** **01 33 13.3 -2.4**
AF01 San Pedro de A 8.07 26 Pn **Pn** **01 33 17.4 -1.4**
LVC Limon Verde 8.13 21 Pn **Pn** **01 33 17.7 -2.0**
comp=E,0.6nm,0.3s,baz=49,slow=19,SNR=2.7
LVC Sn **Sn** **01 34 48.3 -3.4**
comp=E,1.7nm,0.3s,baz=299,slow=19,SNR=1.5
comp=E,1.5nm,0.3s
LVC Limon Verde 8.13 21 **Pn** **01 33 16.8 -2.9**
LVC Limon Verde 8.13 21 *eP* Pn 01 33 29.9 +10
PB09 IPOC Station P 8.81 17 Pn **Pn** **01 33 26.6 -2.2**
PLCA Paso Flores 10.52 174 Pn **Pn** **01 33 51.0 -1.1**
comp=E,0.2nm,0.3s,baz=204,slow=6.4,SNR=3.0
PLCA LR LR 01 38 05.2
comp=E,292nm,21.5s,baz=357,slow=39
comp=E,1.2nm,0.6s
PLCA Paso Flores 10.52 174 Pn **Pn** **01 33 52.1 0.0**
ITQB Itaqui 13.41 91 Pn **Pn** **01 34 29.7 -1.8**
CPUP Villa Florida 13.56 77 Pn **Pn** **01 34 35.0 +1.3**
baz=261,slow=11
CPUP LR LR 01 40 10.7
comp=E,226nm,20.1s,baz=248,slow=39
LPAZ La Paz 14.37 15 Pn **Pn** **01 34 47.5 +2.1**
comp=E,0.3nm,0.3s,baz=186,slow=8.2,SNR=27
comp=E,5.5nm,0.8s
LPAZ La Paz 14.37 15 Pn **Pn** **01 34 45.5 0.0**
LPAZ La Paz 14.37 15 *eP* **Pn** **01 34 48.0 +2.6**
SIV San Ignacio 17.42 38 LR LR 01 43 02.7
comp=E,120nm,19.3s,baz=269,slow=40
ITAB Concordia 17.74 85 **Pn** **01 35 28.8 +0.4**
ITAB IAmb IAmb 01 35 43.5
comp=Z,38nm,1.3s
VILB Vilhena 20.43 35 *eP* **P** **01 35 58.8 +0.1**
PCMB Pacaembu 20.58 70 *eP* **P** **01 36 00.8 +0.4**
SALV Santo Antonio 20.73 50 *eP* **P** **01 36 01.8 -0.1**
ETMB Extrema 21.07 16 *eP* **P** **01 36 06.3 +0.8**
ITRB Iturama 22.27 67 *eP* **P** **01 36 18.0 -0.6**
CZSB Cruzeiro do Su 22.43 358 *eP* **P** **01 36 25.7 +5.5**
SAML Samuel 22.78 23 P **P** **01 36 22.8 -1.1**
BB19B Bebedouro 23.08 72 *eP* **P** **01 36 27.4 +0.3**
PDRB Porto dos Gac 23.39 41 *eP* **P** **01 36 29.0 -1.3**
VAO Valinhos 23.55 78 *eP* **P** **01 36 30.5 -1.3**
CLDB Colider 24.52 42 *eP* **P** **01 36 40.0 -1.0**
IPMB Ipameri, GO 24.91 66 *eP* **P** **01 36 43.7 -0.9**
PMNB Patos De Minas 26.03 69 *eP* **P** **01 36 54.3 -0.5**
BDFB Brasilia 26.43 62 P **P** **01 36 58.5 +0.2**
comp=Z,3.8nm,0.6s,baz=231,slow=9.7,SNR=11
comp=Z,3.8nm,0.6s
BDFB Brasilia 26.43 62 P **P** **01 36 57.8 -0.6**
BDFB IAmb IAmb 01 36 59.1
comp=Z,7.6nm,1.0s
SNDB Serra Nova Dou 26.50 51 *eP* **P** **01 36 57.9 -1.0**
NPGB Novo Progresso 27.93 38 *eP* **P** **01 37 10.7 -1.0**
JANB Januaria 29.64 65 *eP* **P** **01 37 27.1 +0.1**
RPN Rapa Nui 32.74 266 LR LR 01 48 13.0
comp=Z,111nm,19.6s,baz=274,slow=31
RCBR Riachuelo 41.80 62 LR LR 01 56 57.7
comp=Z,55nm,20.8s,baz=28,slow=37
VNA3 Neumayer Olymp 52.83 159 P **P** **01 40 36.5 +0.1**
VNA1 Neumayer--Stat 53.12 158 P **P** **01 40 39.7 +1.2**
SNAA Sanae 55.06 159 P **P** **01 40 52.9 +0.2**
SNAA Sanae 55.06 159 P **P** **01 40 53.0 +0.3**
comp=Z,3.7nm,0.8s,baz=280,slow=8.5,SNR=24
comp=Z,3.7nm,0.8s
SNAA Sanae 55.06 159 P **P** **01 40 52.9 +0.2**
SNAA IAmb IAmb 01 41 04.5
comp=Z,9.8nm,1.2s
TROLL Troll, Antarti 56.77 159 P **P** **01 41 05.4 +0.4**
TXAR Lajitas Array 66.48 330 P **P** **01 42 12.2 +1.2**
comp=Z,0.3nm,0.7s,baz=147,slow=7.5,SNR=4.1
comp=Z,0.3nm,0.7s
TXAR Lajitas Array 66.48 330 P **P** **01 42 11.0 0.0**
AMTX Amarillo 70.56 334 P **P** **01 42 35.4 -1.0**
R40A Maddies Statio 70.76 343 P **P** **01 42 37.5 +0.1**
R40A IAmb IAmb 01 42 47.4
comp=Z,4.3nm,0.8s
DBIC Dimbokro 74.04 72 P **P** **01 42 57.9 +0.3**
comp=Z,4.7nm,0.8s,baz=264,slow=8.7,SNR=3.5
comp=Z,4.7nm,0.8s
DBIC Dimbokro 74.04 72 P **P** **01 42 56.3 -1.3**
ECSD EROS Data Cent 77.00 342 P **P** **01 43 15.0 +1.2**
ECSD IAmb IAmb 01 43 23.6
comp=Z,2.7nm,0.8s
PDAR Pinedale Array 80.43 333 P **P** **01 43 35.0 +2.0**
comp=Z,0.2nm,0.4s,baz=163,slow=3.7,SNR=1.5
comp=Z,0.2nm,0.4s
TOA0 Torodi Ar. Sit 82.98 70 P **P** **01 43 47.0 +0.1**
TOA0 IAmb IAmb 01 43 48.3
comp=Z,4.2nm,0.8s
TORD Torodi Ar. Bea 82.98 70 P **P** **01 43 47.4 +0.6**
comp=Z,3.6nm,0.8s,baz=260,slow=4.8,SNR=21
comp=Z,3.6nm,0.8s
TORD Torodi Ar. Bea 82.98 70 P **P** **01 43 47.0 +0.1**
TORD IAmb IAmb 01 43 48.3
comp=Z,3.8nm,0.8s
MOD Modoc Plateau 84.46 326 P **P** **01 43 51.8 -2.2**
H11S2 WAKE ISLAND Hy 125.71 272 T T 04 09 11.2
baz=114,slow=75,SNR=17
H11S1 WAKE ISLAND Hy 125.72 272 T T 04 09 05.8
baz=114,slow=75,SNR=28
H11S3 WAKE ISLAND Hy 125.73 272 T T 04 09 13.0
baz=114,slow=75,SNR=19
ZALV Zalesovo Beam 151.03 29 PKPbc **PKiKP** **01 51 14.1 -0.3**
comp=Z,5.5nm,0.8s,baz=300,slow=3.3,SNR=14
ZALV Zalesovo Beam 151.03 29 **PKPbc** **01 51 13.3 -0.4**

*NAM **20** 01:33:21.1±14.0, 24.°97S×18.°03E, h454km±151km, MD5.6*
*PRE **20** 01:33:22.3±1.5, 24.°97S×17.°36E, h5km, ML2.6*
ISC 20 01:33:24.9±0.9, 25.°02S±0.°04×17.°59E±0.°06, h10km, n16,

σ2932/31, **Namibia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOCHN	**Hochfeld**	**3.52**	**4**	*i* P	**Pb**	**01 34 28.5**	**+1.0**
HOCHN				*i* S	**Sb**	**01 35 14.2**	**+3.7**
WEWE	**WEWE**	**3.86**	**349**	*i* P	**Pb**	**01 34 35.5**	**+2.3**
WEWE				*i* S	**Sg**	**01 35 29.1**	**+0.1**
WP01	**e3381**	**4.15**	**331**	*i* P	**Pb**	**01 34 34.8**	**-3.4**
WP01				*i* S	**Sb**	**01 35 31.6**	**+3.1**
AUGR	**Augrabies**	**4.33**	**146**	*e*P	**Pn**	**01 34 32.1**	**+1.3**
AUGR				*e*S	**Sn**	**01 35 23.1**	**+1.8**
AUGR				IAML		01 35 44.4	
	comp=Z,20nm,0.2s						
UPI	**Upington**	**4.67**	**136**	*e*P	**Pn**	**01 34 37.6**	**+2.0**
UPI				*e*S	**Sn**	**01 35 30.9**	**+1.0**
UPI				IAML		01 36 00.4	
	comp=Z,5.0nm,0.3s						
KEIM	**Keimoes**	**4.75**	**141**	*e*P	**Pn**	**01 34 37.1**	**+0.4**
KEIM				*e*S	**Sn**	**01 35 32.9**	**+1.0**
KEIM				IAML		01 36 01.7	
	comp=Z,11nm,0.7s						
KOMG	**Komaggas**	**4.76**	**181**	*e*P	**Pn**	**01 34 35.6**	**-1.1**
KOMG				*e*S	**Sn**	**01 35 30.3**	**-1.6**
KOMG				IAML		01 35 52.2	
	comp=Z,26nm,0.4s						
OTJO	**Outjo**	**5.20**	**343**	*i* P	**Pb**	**01 34 57.2**	**+1.2**
OTJO				*i* S	**Sb**	**01 36 00.5**	**+2.0**
GAMM	**Gam**	**5.61**	**33**	*i* P	Pb	01 34 57.3	-5.8
GAMM				*i* S	**Sb**	**01 36 04.7**	**-5.8**
TSUM	**Tsumeb**	**5.79**	**360**	*e*P	**Pn**	**01 34 51.1**	**0.0**
TSUM				*e*S	**Sn**	**01 35 52.0**	**-5.6**
TSUM				IAML		01 36 39.1	
	comp=Z,34nm,0.5s						
CVNA	**Calvinia**	**6.72**	**164**	*e*P	**Pn**	**01 35 03.9**	**+0.2**
CVNA				*e*S	**Sn**	**01 36 20.4**	**+0.1**
CVNA				IAML		01 37 00.5	
	comp=Z,9.1nm,0.4s						
LBTB	**Lobatse**	**7.27**	**92**	*e*P	**Pn**	**01 35 12.5**	**+1.2**
LBTB				*e*S	**Sn**	**01 36 34.3**	**+0.3**
LBTB				IAML		01 37 33.6	
	comp=Z,2.2nm,0.8s						
BOSA	**Boshof**	**7.73**	**119**	*e*P	**Pn**	**01 35 20.0**	**+2.3**
BOSA				*e*S	**Sn**	**01 36 46.5**	**+1.1**
BOSA				IAML		01 37 35.5	
	comp=Z,2.9nm,0.4s						
GRAN	**Grantham**	**8.30**	**152**	*e*P	**Pn**	**01 35 24.8**	**-0.6**
GRAN				*e*S	**Sn**	**01 36 57.7**	**-1.5**
GRAN				IAML		01 37 46.3	
	comp=Z,5.7nm,0.5s						
PRYS	**Parys**	**9.00**	**104**	*e*P	**Pn**	**01 35 36.6**	**+1.5**
PRYS				*e*S	**Sn**	**01 37 15.2**	**-1.5**
PRYS				IAML		01 38 19.8	
	comp=Z,2.0nm,0.5s						
SNKL	**Senekal, Frees**	**9.67**	**112**	*e*P	**Pn**	**01 35 46.9**	**+2.6**
SNKL				*e*S	**Sn**	**01 37 32.1**	**-1.1**
SNKL				IAML		01 38 36.8	
	comp=Z,5.8nm,0.5s						

*AEIC **20** 01:48:11±1.3, 52.°28N±0.°09×169.°4W±0.°1, h44km±9km, ML3.1, ML3.4/6(NEIC), Error ellipse: s-maj=14.0km s-min=9.1km az=163.0*
*NEIC **20** 01:48:12.3±1.2, 52.°3N±0.°1×169.°41W±0.°10, h33km±20km, Error ellipse: s-maj=16.4km s-min=8.0km az=170.0*
*IDC **20** 01:48:29.7±20.0, 52.°68N×170.°37W, h176km±76km, mb3.4/3, mbtmp3.7/5, Error ellipse: s-maj=449.9km s-min=35.0km az=159.0*

ISC 20 01:48:10.8±1.8, 52.°1N±0.°2×169.°3W±0.°1, h35km, n24,
σ0991/17, **mb4.0/3, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**0.88**	**16**	Pn	**Pn**	**01 48 25.4**	**-1.3**
OKSO	**Okmok South**	**1.40**	**28**		**Pn**	**01 48 34.0**	**+0.1**
OKFG	**Magazine Ridge**	**1.52**	**32**		**Pn**	**01 48 35.4**	**-0.2**
MSW	**Makushin Switc**	**2.33**	**39**		**Pn**	**01 48 47.5**	**+0.8**
UNV	**Unalaska Valle**	**2.39**	**43**	Pn	**Pn**	**01 48 47.6**	**+0.1**
AKUT	**Akutan**	**2.91**	**45**	Pn	**Pn**	**01 48 56.8**	**+2.2**
AKUT				IAML		01 49 50.2	
	comp=N,74nm,2.4s						
GSTR	**Great Sitkin T**	**4.19**	**272**	Pn	**Pn**	**01 49 12.7**	**+0.4**
GSTD	**Great Sitkin T**	**4.25**	**272**		**Pn**	**01 49 13.3**	**+0.3**
GSCK	**Great Sitkin C**	**4.26**	**271**		**Pn**	**01 49 14.0**	**+0.8**
ADK	**Adak**	**4.59**	**270**		**Pn**	**01 49 17.9**	**+0.2**
ADK				IAML		01 50 29.6	
	comp=N,33nm,0.8s						
ADK				IAML		01 50 29.9	
	comp=N,34nm,1.2s						
KIWB	**Kanaga Island**	**4.89**	**270**	Pn	**Pn**	**01 49 22.4**	**+0.7**
SPIA	**Saint Paul Isl**	**5.09**	**354**	Pn	**Pn**	**01 49 26.0**	**+1.5**
AMKA	**Amchitka**	**7.14**	**268**	Pn	**Pn**	**01 49 52.3**	**-0.4**
ILAR	**Eielson Array**	**17.11**	**34**	P	P	01 52 16.4	+8.0
	comp=N,0.3nm,0.6s,baz=236,slow=7.7,SNR=5.4						
PETK	**Petropavlovsk-**	**19.99**	**286**	P	**P**	**01 52 39.9**	**-0.2**
	comp=N,2.4nm,0.6s,baz=91,slow=13,SNR=12						
H11N2	**WAKE ISLAND Hy**	**37.31**	**219**	T	T	02 35 09.3	
	baz=24,slow=76,SNR=4.7						
H11N3	**WAKE ISLAND Hy**	**37.31**	**219**	T	T	02 35 14.4	
	baz=24,slow=76,SNR=5.2						
H11N1	**WAKE ISLAND Hy**	**37.33**	**219**	T	T	02 35 18.7	
	baz=24,slow=76,SNR=4.0						
H11S1	**WAKE ISLAND Hy**	**38.49**	**218**	T	T	02 36 47.4	
	baz=23,slow=76,SNR=13						
H11S2	**WAKE ISLAND Hy**	**38.51**	**218**	T	T	02 36 40.0	
	baz=23,slow=76,SNR=10						
H11S3	**WAKE ISLAND Hy**	**38.51**	**218**	T	T	02 36 45.6	
	baz=23,slow=76,SNR=11						
ARCES	**ARCESS Array B**	**58.17**	**354**	P	**P**	**01 58 00.1**	**-0.4**
	comp=N,2.3nm,0.8s,baz=19,slow=8.8,SNR=1.6						
	comp=N,2.3nm,0.8s						
FINES	**FINESS Array B**	**66.12**	**352**	P	**P**	**01 58 53.3**	**-0.6**
	comp=N,1.2nm,0.8s,baz=338,slow=6.0,SNR=3.9						
	comp=N,1.2nm,0.8s						
NOA	**NORSAR Array B**	**67.18**	**360**	P	**P**	**01 59 00.7**	**0.0**
	comp=N,0.5nm,0.9s,baz=2.6,slow=7.3,SNR=1.4						
	comp=N,0.5nm,0.9s						

*IDC **20** 02:10:30.8±1.2, 2.°06N×93.°69E, h0km, mb4.4/7, mbtmp4.4/9, ML4.4/2, MS3.4/12, Error ellipse: s-maj=44.5km s-min=18.8km az=54.0*
*DJA **20** 02:10:32.3±2.4, 2.°N±4.°×9.°3E±.°, h13km±17km, M5.2/18, mb5.5/9, mb5.2/18, MLv5.4/9, Mw(mB)5.0/9*
*NEIC **20** 02:10:35.4±1.0, 2.°07N±0.°08×93.°6E±0.°1, h30km±4km, mb4.6/24, Error ellipse: s-maj=18.3km s-min=9.5km az=61.0*

ISC 20 02:10:35.6±0.6, 2.°10N±0.°09×93.°59E±0.°09, h35km, n75,
σ0998/64, **mb4.6**/20, **MS3.5**/11, **1C-1D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**4.07**	**101**	Pn	**Pn**	**02 11 35.7**	**+0.4**
GSI	**Gunungsitoli**	**4.07**	**101**	P	**Pn**	**02 11 35.9**	**+0.6**
KCSI	**Kotacane, Aceh**	**4.42**	**71**	P	**Pn**	**02 11 41.3**	**+1.1**
LHMI	**Lhok Sumawe**	**4.58**	**47**	Pn	**Pn**	**02 11 43.6**	**+1.3**
LHMI	**Lhok Sumawe**	**4.58**	**47**	P	**Pn**	**02 11 43.8**	**+1.4**
TSI	**Tuntungan**	**5.17**	**74**	P	**Pn**	**02 11 51.8**	**+1.3**
	2.5nm8µm694nm,0.7s						
SISI	**Saibi**	**6.47**	**122**	P	**Pn**	**02 12 08.0**	**-0.4**
	1.1nm57nm,0.8s						
BKNI	**Bangkinang**	**7.66**	**103**	Pn	**Pn**	**02 12 23.5**	**-1.2**
BKNI	**Bangkinang**	**7.66**	**103**	P	**Pn**	**02 12 25.6**	**+0.9**
	1.0nm3µm110nm,0.9s						
KULM	**Kulim**	**7.73**	**66**	Pn	**Pn**	**02 12 25.5**	**-0.2**
IPM	**Ipoh**	**7.80**	**72**	Pn	**Pn**	**02 12 26.7**	**0.0**
SRIT	**Nakonsritamara**	**8.81**	**43**	Pn	**Pn**	**02 12 40.3**	**-0.2**
KRJI	**Kerinci**	**8.91**	**118**	P	**Pn**	**02 12 43.4**	**+1.4**
	582nm,0.6s						
MASI	**Maura Aman, Be**	**10.09**	**121**	P	**Pn**	**02 12 58.8**	**+0.6**
	150nm,0.6s						
MNAI	**Manna**	**11.35**	**124**	Pn	**Pn**	**02 13 15.2**	**-0.2**
MNAI	**Manna**	**11.35**	**124**	P	**Pn**	**02 13 15.3**	**-0.1**
	305nm,0.5s						
LWLI	**Liwa**	**12.63**	**124**	P	**Pn**	**02 13 33.6**	**+0.7**
	7µm105nm,0.7s						
KASI	**Kota Agung**	**13.27**	**125**	P	**Pn**	**02 13 42.6**	**+1.0**
	34nm,0.7s						
PALK	**Pallekele**	**13.83**	**292**	Pn	**Pn**	**02 13 49.1**	**-0.2**
	1.2nm,0.3s,baz=212,slow=12,SNR=4.8						
PALK				Sn	Sn	02 16 07.3	-14
	9.7nm,0.3s,baz=332,slow=17,SNR=15						
PALK				LR	LR	02 18 35.2	
	comp=Z,187nm,19.2s,baz=217,slow=35						
	5.5nm,0.4s						
KSM	**Kuching**	**16.73**	**92**	P	**P**	**02 14 29.1**	**-0.3**
CM31	**Chiang Mai Arr**	**17.09**	**18**	Pn	**Pn**	**02 14 31.0**	**-0.9**
CM31				IAmb	IAmb	02 14 43.8	
	comp=Z,27nm,1.0s						
CMAR	**Chiang Mai Arr**	**17.09**	**18**	Pn	**Pn**	**02 14 32.1**	**+0.2**
	comp=Z,0.7nm,0.3s,baz=215,slow=12,SNR=21						
CMAR				LR	LR	02 22 13.2	
	comp=Z,49nm,18.7s,baz=210,slow=41						
	comp=Z,1.4nm,0.3s						
CMAR	**Chiang Mai Arr**	**17.09**	**18**	Pn	**Pn**	**02 14 30.4**	**-1.5**
CHTO	**Chiang Mai**	**17.43**	**17**	Pn	**Pn**	**02 14 34.3**	**-1.8**
STKI	**Sintang**	**18.00**	**96**	P	**P**	**02 14 45.9**	**+2.4**
H08S2	**Diego Garcia H**	**23.16**	**245**	T	T	02 41 17.5	
	baz=63,slow=76,SNR=57						
H08S3	**Diego Garcia H**	**23.16**	**245**	T	T	02 41 18.7	
	baz=63,slow=76,SNR=45						
H08S1	**Diego Garcia H**	**23.18**	**245**	T	T	02 41 22.6	
	baz=63,slow=76,SNR=55						
SHL	**Shillong**	**23.39**	**356**	P	**P**	**02 15 40.7**	**-0.9**
SHL				IAmb	IAmb	02 16 19.3	
	comp=Z,22nm,0.8s						
KAPI	**Kappang**	**27.08**	**105**	LR	LR	02 26 42.0	
	comp=Z,122nm,18.2s,baz=288,slow=36						
LSA	**Lhasa**	**27.55**	**355**	P	**P**	**02 16 21.7**	**+1.9**
LSA				IAmb	IAmb	02 16 36.8	
	comp=Z,17nm,0.9s						
LSA	**Lhasa**	**27.55**	**355**	P	**P**	**02 16 21.9**	**+2.1**
DAV	**Davao City (W)**	**32.26**	**80**	LR	LR	02 32 15.3	
	comp=Z,38nm,18.2s,baz=282,slow=41						
XAN	**Xi'an**	**34.86**	**23**	⇑P	**P**	**02 17 22.8**	**-0.9**
XAN				pP	pP	02 17 32.6	+0.2
XAN				sP	pwP	02 17 37.8	-0.6
XAN				pmax	pmax		
	comp=Z,6.0nm,1.4s						
XAN				LR	LR		
	comp=N,150nm,22.0s						
XAN				LR	LR		
	comp=E,190nm,22.7s						
XAN				LR	LR		
	comp=Z,130nm,17.2s						
HNS	**HongShan**	**40.15**	**26**	⇓P	P	02 18 18.8	+10
HNS				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KSH	**Kashi**	**40.55**	**339**	P	**P**	**02 18 13.0**	**+1.2**
KSH				sP	pwP	02 18 27.8	+1.3
KSH				pmax	pmax		
	comp=Z,4.0nm,0.7s						
DRK	**Karamyk**	**42.17**	**335**	P	**P**	**02 18 25.2**	**0.0**
DRK				IAmb	IAmb	02 18 41.3	
	comp=Z,24nm,0.9s						
BTK	**Batken**	**43.07**	**334**	P	**P**	**02 18 33.0**	**+0.7**
BTK				IAmb	IAmb	02 18 50.0	
	comp=Z,11nm,0.9s						
AAK	**Ala-Archa**	**43.83**	**340**	LR	LR	02 38 28.5	
	comp=Z,52nm,19.5s,baz=161,slow=38						
WB0	**Warramunga Arr**	**45.56**	**120**	P	**P**	**02 18 51.4**	**-1.0**
WB0				IAmb	IAmb	02 18 52.5	
	comp=Z,12nm,0.7s						
WRA	**Warramunga Arr**	**45.58**	**121**	P	**P**	**02 18 52.3**	**-0.3**
	comp=Z,9.6nm,0.7s,baz=303,slow=8.6,SNR=78						
	comp=Z,9.6nm,0.7s						
WRA	**Warramunga Arr**	**45.58**	**121**	P	**P**	**02 18 51.9**	**-0.8**
WRAB	**Tennant Creek**	**45.59**	**121**	P	**P**	**02 18 52.3**	**-0.4**
WB2	**Warramunga Arr**	**45.59**	**121**	P	**P**	**02 18 52.0**	**-0.7**
MK31	**Makanchi Array**	**45.60**	**349**	P	**P**	**02 18 52.4**	**0.0**
MK31				IAmb	IAmb	02 19 08.2	
	comp=Z,4.6nm,0.8s						
MKAR	**Makanchi Array**	**45.60**	**349**	P	**P**	**02 18 52.9**	**+0.6**
	comp=Z,3.1nm,0.4s,baz=166,slow=8.6,SNR=35						
	comp=Z,3.1nm,0.4s						
MKAR	**Makanchi Array**	**45.60**	**349**	P	**P**	**02 18 52.2**	**-0.1**
MAKZ	**Makanchi**	**45.67**	**349**	P	**P**	**02 18 52.5**	**-0.4**
KK31	**Karatay Array**	**45.73**	**336**	P	**P**	**02 18 52.3**	**-1.2**
KK31				pP	**pP**	**02 19 00.6**	**-1.9**
KK31				pwP	**pwP**	**02 19 08.0**	**-0.3**
KK31				IAmb	IAmb	02 19 08.8	
	comp=Z,4.5nm,0.8s						
KKAR	**Karatay Array**	**45.73**	**336**	P	**P**	**02 18 53.4**	**-0.1**
WR0	**Warramunga Ar**	**45.76**	**121**	P	**P**	**02 18 53.5**	**-0.6**
AS31	**Alice Springs**	**46.83**	**126**		**P**	**02 19 01.1**	**-1.4**
ASAR	**Alice Springs**	**46.83**	**126**	P	**P**	**02 19 02.0**	**-0.4**
SONM	**Songino Array**	**46.89**	**12**	P	**P**	**02 19 03.0**	**+0.3**
	comp=Z,2.7nm,0.6s,baz=191,slow=9.4,SNR=15						
	comp=Z,2.7nm,0.6s						
SONM	**Songino Array**	**46.89**	**12**	P	**P**	**02 19 02.9**	**+0.3**
GEYT	**Alibeck**	**48.25**	**322**	P	**P**	**02 19 14.2**	**+0.9**
	comp=Z,2.2nm,0.5s,baz=206,slow=9.6,SNR=2.9						
GEYT				LR	LR	02 40 07.9	
	comp=Z,30nm,19.1s,baz=148,slow=37						
	comp=Z,2.2nm,0.5s						
GEYT	**Alibeck**	**48.25**	**322**	P	**P**	**02 19 13.6**	**+0.3**
GEYT				IAmb	IAmb	02 19 29.5	
	comp=Z,5.7nm,0.7s						
KURK	**Kurchatov**	**50.08**	**348**	P	**P**	**02 19 27.1**	**+0.2**
KURK				IAmb	IAmb	02 19 43.0	
	comp=Z,7.3nm,1.2s						
ZAA0	**Zalesovo Array**	**52.19**	**353**	P	**P**	**02 19 42.5**	**-0.2**
ZAA0				IAmb	IAmb	02 19 58.6	
	comp=Z,4.7nm,0.7s						
ZALV	**Zalesovo Beam**	**52.19**	**353**	P	**P**	**02 19 43.1**	**+0.4**
	comp=Z,1.8nm,0.3s,baz=171,slow=6.9,SNR=9.0						
	comp=Z,1.8nm,0.3s						
ZALV	**Zalesovo Beam**	**52.19**	**353**	P	**P**	**02 19 42.7**	**0.0**
BBOO	**Buckleboo**	**53.05**	**135**	P	**P**	**02 19 48.7**	**-0.8**
BBOO				IAmb	IAmb	02 20 22.6	
	comp=Z,16nm,1.4s						
MJAR	**Matsushiro Arr**	**53.53**	**45**	LR	LR	02 44 53.9	
	comp=Z,30nm,18.5s,baz=256,slow=39						
ABKAR	**Akbulak array**	**55.07**	**334**	P	**P**	**02 20 02.8**	**-1.1**
STKA	**Stephens Creek**	**56.65**	**131**	P	**P**	**02 20 15.3**	**-0.3**
	comp=Z,4.0nm,0.2s,baz=306,slow=7.3,SNR=11						
	comp=Z,4.0nm,0.2s						
KLR	**Kul'dur**	**57.15**	**29**	LR	LR	02 47 48.1	
	comp=Z,47nm,18.1s,baz=211,slow=39						
ARU	**Arti**	**61.00**	**339**	LR	LR	02 47 50.7	
	comp=Z,36nm,19.8s,baz=35,slow=37						
BELG	**Belogornoye**	**62.97**	**330**	LR	LR	02 50 50.4	
	comp=Z,40nm,18.9s,baz=144,slow=38						
ELL	**Elmali**	**67.82**	**309**	P	**P**	**02 21 30.7**	**+0.1**
KARP	**Karpathos**	**69.70**	**307**	P	**P**	**02 21 41.7**	**-0.5**
GERES	**GERESS Array B**	**81.77**	**319**	P	**P**	**02 22 53.6**	**+2.6**
	comp=Z,0.2nm,0.5s,baz=162,slow=4.0,SNR=2.1						
	comp=Z,0.2nm,0.5s						
NOA	**NORSAR Array B**	**84.47**	**331**	LR	LR	03 04 11.4	
	comp=Z,10.0nm,18.6s,baz=250,slow=38						
SPITS	**Spitsbergen Ar**	**85.35**	**348**	LR	LR	03 10 26.2	
	comp=Z,27nm,18.0s,baz=346,slow=42						
TXAR	**Lajitas Array**	**144.65**	**27**	PKP	**PKPab**	**02 30 08.0**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=63,slow=0.6,SNR=11						
TXAR	**Lajitas Array**	**144.65**	**27**		**PKPab**	**02 30 07.7**	**-0.4**

*NEIC **20** 02:57:00.9±1.3, 30.°2S±0.°1×13.°5W±0.°1, h10km±2km, mb4.2/8, Error ellipse: s-maj=19.9km s-min=12.1km az=220.0*
*IDC **20** 02:57:04.7±52.0, 29.°55S×14.°10W, h0km, mb3.7/3, mbtmp3.7/3, MS3.9/30, Error ellipse: s-maj=1382.0km s-min=40.8km az=157.0*
*GCMT **20** 02:57:06.9±0.4, 29.°96S±0.°04×13.°98W±0.°03, h23km±1km, MW4.9/68, Moment Tensor Solution. s19,c21; s68,c87; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=2.78±.26; Mθθ=0.22±.15; Mϕϕ=2.56±.17; Mrθ=1.01±.26; Mϕϕ-0.34±.10; Mϕr=1.27±.20; Best double couple: M0=3.11600×10^16 NP1:ϕs=337.00000°, δ36.00000°, λ-119.00000°. NP2: ϕs=191.00000°, δ59.00000°, λ-71.00000°. Principal axes: T 2.8520, Plg12.0000°, Azm267.0000°; N 0.5280, Plg17.0000°, Azm1.0000°; P -3.3800, Plg69.0000°, Azm143.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 02:56:59.7±0.9, 30.°2S±0.°1×13.°4W±0.°1, h10km, n38,
σ1905/9, **mb4.2**/5, **MS3.9**/30, **Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRIS	**Tristan da Cun**	**6.90**	**173**	Pn	**Pn**	**02 58 40.2**	**-0.7**
SHEL	**Horse Pasture**	**15.84**	**28**	Pn	**Pn**	**03 00 41.0**	**-1.9**
SUR	**Sutherland**	**29.27**	**103**	LR	LR	03 13 29.8	
	comp=Z,230nm,18.3s,baz=268,slow=33						
TSUM	**Tsumeb**	**30.14**	**76**	LR	LR	03 13 16.0	
	comp=Z,314nm,20.1s,baz=269,slow=32						
TSUM	**Tsumeb**	**30.14**	**76**	P	**P**	**03 03 11.3**	**+1.3**
RCBR	**Riachuelo**	**32.19**	**314**	LR	LR	03 12 52.4	
	comp=Z,165nm,18.9s,baz=301,slow=30						
BOSA	**Boshof**	**33.63**	**97**	LR	LR	03 15 41.5	
	comp=Z,273nm,18.1s,baz=232,slow=33						
BDFB	**Brasilia**	**34.84**	**287**	P	**P**	**03 03 51.3**	**+0.1**
	5.4nm,1.1s,baz=123,slow=8.9,SNR=6.0						
BDFB				LR	LR	03 15 21.6	
	comp=Z,240nm,20.4s,baz=86,slow=32						
	5.4nm,1.1s						
BDFB	**Brasilia**	**34.84**	**287**	P	**P**	**03 03 51.0**	**-0.2**
LBTB	**Lobatse**	**34.84**	**91**	LR	LR	03 15 53.1	
	comp=Z,298nm,20.2s,baz=235,slow=32						
DBIC	**Dimbokro**	**37.58**	**14**	LR	LR	03 15 52.2	
	comp=Z,49nm,20.6s,baz=184,slow=30						
CPUP	**Villa Florida**	**38.68**	**265**	LR	LR	03 17 41.3	
	comp=Z,411nm,18.4s,baz=116,slow=32						
LSZ	**Lusaka**	**40.91**	**78**	LR	LR	03 20 19.3	
	comp=Z,695nm,18.5s,baz=246,slow=34						
SNAA	**Sanae**	**41.91**	**175**	LR	LR	03 18 16.1	
	comp=Z,73nm,21.3s,baz=248,slow=30						
TOA0	**Torodi Ar. Sit**	**45.50**	**21**	P	**P**	**03 05 19.4**	**-0.1**
TOA0				IAmb	IAmb	03 05 34.9	
	comp=Z,3.9nm,1.2s						
TORD	**Torodi Ar. Bea**	**45.50**	**21**	P	P	03 05 22.9	+3.5
	comp=Z,0.4nm,0.6s,baz=203,slow=8.5,SNR=2.4						
TORD				LR	LR	03 20 38.2	
	comp=Z,124nm,20.9s,baz=222,slow=31						
	comp=Z,0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**45.50**	**21**	P	**P**	**03 05 20.2**	**+0.7**
TORD				IAmb	IAmb	03 05 32.0	
	comp=Z,6.6nm,1.5s						
SIV	**San Ignacio**	**45.73**	**277**	LR	LR	03 22 18.0	
	comp=Z,252nm,18.1s,baz=114,slow=34						
PLCA	**Paso Flores**	**46.96**	**241**	LR	LR	03 24 02.8	
	comp=Z,146nm,19.6s,baz=88,slow=35						
LVC	**Limon Verde**	**49.86**	**265**	LR	LR	03 26 35.4	
	comp=Z,159nm,18.4s,baz=160,slow=36						
SAML	**Samuel**	**50.96**	**284**	P	**P**	**03 06 01.9**	**+0.2**
MBAR	**Mbarara**	**51.23**	**63**	LR	LR	03 27 34.1	
	comp=Z,90nm,18.1s,baz=218,slow=36						
MDP	**Montagnes des**	**51.40**	**306**	LR	LR	03 25 47.1	
	comp=Z,142nm,19.9s,baz=56,slow=34						
LPAZ	**La Paz**	**51.69**	**273**	LR	LR	03 26 17.4	
	comp=Z,154nm,19.8s,baz=109,slow=34						
LPAZ	**La Paz**	**51.69**	**273**	P	**P**	**03 06 08.4**	**+0.5**
LPAZ				IAmb	IAmb	03 06 29.7	
	comp=Z,4.4nm,1.4s						
OPO	**Ambohidratompo**	**55.85**	**93**	LR	LR	03 27 41.1	
	comp=Z,56nm,20.5s,baz=48,slow=32						
MAW	**Mawson**	**57.25**	**154**	LR	LR	03 25 58.3	
	comp=Z,101nm,20.7s,baz=229,slow=30						
NNA	**Nana**	**61.16**	**273**	LR	LR	03 32 36.3	
	comp=Z,151nm,20.6s,baz=146,slow=35						
MDT	**Midelt**	**63.24**	**8**	LR	LR	03 31 50.6	
	comp=Z,54nm,18.1s,baz=197,slow=33						
ATAH	**Atahualpa**	**64.83**	**277**	LR	LR	03 34 05.4	
	comp=Z,160nm,20.7s,baz=148,slow=35						
SDV	**Santo Domingo**	**67.27**	**296**	LR	LR	03 34 58.2	
	comp=Z,181nm,21.0s,baz=100,slow=34						
ROSC	**El Rosal**	**67.81**	**290**	LR	LR	03 35 21.9	
	comp=Z,116nm,19.6s,baz=169,slow=34						
ATD	**Arta Tunnel**	**68.18**	**61**	LR	LR	03 35 51.9	
	comp=Z,77nm,20.7s,baz=340,slow=34						
SJG	**San Juan**	**69.88**	**306**	LR	LR	03 37 57.8	
	comp=Z,43nm,19.7s,baz=105,slow=36						
ESDC	**Sonseca Array**	**70.08**	**8**	P	P	03 08 14.8	+2.9
	comp=Z,0.1nm,0.5s,baz=201,slow=6.6,SNR=1.4						
ESDC				LR	LR	03 36 57.5	
	comp=Z,49nm,18.8s,baz=183,slow=34						
	comp=Z,0.1nm,0.5s						
IDI	**Anoyia**	**74.47**	**32**	LR	LR	03 39 54.3	
	comp=Z,22nm,19.0s,baz=250,slow=35						
EIL	**Elat**	**75.30**	**42**	LR	LR	03 39 07.2	
	comp=Z,21nm,19.5s,baz=264,slow=34						
JTS	**Las Juntas de**	**79.57**	**288**	LR	LR	03 42 34.7	
	comp=Z,140nm,20.3s,baz=187,slow=35						

*NEIC **20** 03:22:33.4±1.4, 20.°66S±0.°09×168.°6E±0.°1, h10km±2km, mb4.4/12, Error ellipse: s-maj=18.3km s-min=15.2km az=65.0*
*IDC **20** 03:22:41.3±3.2, 20.°14S×167.°16E, h0km, mb3.9/2, mbtmp3.9/2, MS3.2/2, Error ellipse: s-maj=124.7km s-min=48.5km az=143.0*

ISC 20 03:22:38.1±1.3, 20.°8S±0.°1×168.°4E±0.°2, h35km, n21,
σ1947/20, **mb4.3/7, Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**0.76**	**205**	Pn	**Pn**	**03 22 52.9**	**+0.5**
PINNC	**Pines Island,**	**2.01**	**205**	Pn	**Pn**	**03 23 10.5**	**+0.9**
KOUNC	**Koumac, New Ca**	**3.84**	**273**		**Pn**	**03 23 34.9**	**+0.1**
CTAO	**Charters Tower**	**20.75**	**268**	Pn	Pn	03 27 18.5	0.0
CTAO				IAmb	IAmb	03 27 28.3	
	comp=Z,18nm,1.4s						
CAN	**Canberra**	**22.35**	**226**	P	**P**	**03 27 32.9**	**-0.2**
CAN				IAmb	IAmb	03 27 49.4	
	comp=Z,20nm,1.3

baz=77
KALU Kalix 4.53 252 SG Sg 03 47 27.6 -2.9
LANU Lannavaara 4.54 281 PB Pb 03 46 21.0 -4.5
LANU SG Sg 03 47 26.8 -3.9
ERTU Ertsjaerv 4.70 263 PG Pb 03 46 27.9 -0.3

HEL 20 03:45:59.8±0.1, 67.86N×20.23E, h0km, ML1.1, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LANU	Lannavaara	0.69	73	PG	Pg	03 46 12.1	-0.9
SALU	Saltoluokta	0.82	235	eP	Pg	03 46 13.7	-1.8
KIF	Kilpisjarvi	1.17	10	eP	Pg	03 46 21.5	-0.6
KIF	Kilpisjarvi	1.17	10	PG	Pg	03 46 21.5	-0.6
KIF				MSG		03 46 36.4	
	comp=Z,1.2nm,0.2s						
KIF				SB	Sg	03 46 37.2	0.0
PAJU	Pajala	1.39	126	PN	Pg	03 46 26.3	-0.2
	baz=311						
PAJU				SG	Sg	03 46 43.2	-1.3
HEF	Hetta	1.40	65	MSG		03 46 41.8	
	comp=Z,1.3nm,0.2s						
HEF				SN	Sn	03 46 46.8	+1.2
ERTU	Ertsjaerv	1.52	149	PG	Pn	03 46 26.9	-1.3
ERTU				SN	Sn	03 46 48.9	+0.2
TRO	Tromso	1.84	346	SN	Sb	03 46 58.3	+0.5
ARA0	ARCESS Array S	2.56	46	PG	Pn	03 46 44.2	+1.8
RNF	Rovaniemi	2.58	117	PN	Pn	03 46 42.5	-0.2
KEV	Kevo	3.11	49	PB	Pn	03 46 51.9	+1.9
KEV				MSG		03 47 31.0	
	comp=Z,0.4nm,0.2s						
VRF	Varrio	3.56	88	PG	Pb	03 47 05.2	+1.6
MSF	Maaselka	3.99	115	PN	Pn	03 47 01.3	-0.7

*DNK **20** 03:50:06.5±0.8, 81.71N×4.53W, h36km±16km, ML2.5*
*BER **20** 03:50:06.2±2.3, 81.70N×4.91W, h20km±21km, ML2.0, Confirmed Earthquake*
*IEPN **20** 03:50:07.0, 81.69N×4.03W, h10km*
ISC 20 03:50:02.2±1.5, 81.70N±0.09×3.77W±0.07, h10km, n17, σ2.54/30, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NOR	Nord	1.89	273	*i* P	Pn	03 50 33.5	-1.0
NOR				IAML		03 51 02.0	
	comp=Z,43nm,0.4s						
NOR	Nord	1.89	273	eP	Pn	03 50 33.4	-1.0
NOR				eS	Sn	03 50 53.9	-4.4
KBS	Kingsbay	3.83	128	eP	Pn	03 51 03.3	+2.2
KBS				eS	Sn	03 51 44.4	-1.7
KBS	Kingsbay	3.83	128	eP	Pn	03 51 03.1	+2.0
KBS				eS	Sn	03 51 45.4	-0.6
KBS				IAML		03 51 47.6	
	comp=Z,3.5nm,0.2s						
KBS	Kingsbay	3.83	128	P	Pn	03 51 02.9	+1.8
KBS				eS	Sn	03 51 44.5	-1.7
BRBA	Barentsburg A	4.81	130	eP	Pn	03 51 17.9	+3.4
BRBA				eS	Sn	03 52 11.0	+0.9
BRBA				IAML		03 52 15.0	
	comp=Z,4.5nm,0.3s						
SPA0	Spitsbergen Ar	4.96	125	eP	Pn	03 51 19.1	+2.5
SPA0				eS	Sn	03 52 13.6	-0.3
SPA0				IAML		03 52 28.9	
	comp=Z,2.7nm,0.7s						
SPA0	Spitsbergen Ar	4.96	125	eP	Pn	03 51 18.8	+2.2
SPA0				eS	Sn	03 52 12.6	-1.3
HSPB	Hornsund (broa	5.87	133	eP	Pn	03 51 31.9	+2.9
HSPB				eS	Sn	03 52 36.6	+0.3
HSPB				IAML		03 52 42.2	
	comp=Z,2.2nm,0.5s						
HSPB	Hornsund (broa	5.87	133	eP	Pn	03 51 31.2	+2.1
HSPB				eS	Sn	03 52 32.8	-3.5
HOPEN	Hopen	7.41	119	eP	Pn	03 51 52.9	+2.6
HOPEN				IAML		03 53 08.8	
	comp=Z,8.8nm,0.9s						
HOPEN				eS	Sn	03 53 10.2	-4.0
HOPEN	Hopen	7.41	119	eP	Pn	03 51 52.1	+1.9
HOPEN				eS	Sn	03 53 11.2	-3.0
ZFI2	Zemlya Franca-	7.66	71	eP	Pn	03 51 55.8	+2.2
ZFI2				eS	Sn	03 53 16.1	-4.1
	comp=Z,38nm,1.5s						
ZFI	Zemlya Franca-	7.66	71	eP	Pn	03 51 55.8	+2.2
ZFI				eS	Sn	03 53 16.1	-4.1
	comp=Z,27nm,1.4s						
DBG	Daneborg	8.12	213	*i* P	Pn	03 51 58.5	-1.5
DBG				eS	Sn	03 53 20.6	-11
DBG				IAML		03 53 31.1	
	comp=Z,19nm,0.9s						
DBG	Daneborg	8.12	213	eP	Pn	03 51 58.4	-1.5
DBG				eS	Sn	03 53 20.8	-11
JMIC	Jan Mayen	10.82	188	eP	Pn	03 52 37.7	+0.7

*BJI **20** 03:50:51.7±0.0, 19.80S×169.43E, h13km, mb5.1/70, mB5.8/75, Ms5.6/87, Ms7 5.4/81*
*NEIC **20** 03:50:54.5, 20.22S×168.73E, h16km, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr=5.70; Mθθ=0.55; Mϕϕ=-5.15; Mrθ=0.82; Mϕϕ=2.04; Mϕr=-2.88; Fault plane solution: M0=6.54000×10^17 NP1:ϕs=161.58000°, δ=58.62000°, λ=92.49000°. NP2:ϕs=336.81000°, δ=31.47000°, λ=85.93000°. Principal axes: T 6.4348, Plg=76.0000°, Azm=79.0000°; N 0.2122, Plg=2.0000°, Azm=340.0000°; P -6.6471, Plg=14.0000°, Azm=250.0000°;*
*NEIC **20** 03:50:55.2±2.5, 20.21S±0.06×168.76E±0.08, h15km±1km, mb5.4/273, Ms_20 5.8/406, Mwb5.8/64, Mwc6.0/37, Mww6.0 Error ellipse: s-maj=13.5km s-min=10.4km az=104.0*
*MOS **20** 03:50:56.4±1.3, 20.08S×168.75E, h37km, mb5.6/44, MS5.6/37, Error ellipse: s-maj=8.0km s-min=7.0km az=114.4*
*NOU **20** 03:50:56.0, 20.07S×168.65E, h0km, ML5.4/89, Loyalty Islands*
*IDC **20** 03:50:58.5±2.1, 20.02S×168.93E, h40km±17km, mb4.8/26, mbtmp5.0/28, ML5.1/2, MS5.5/50, Error ellipse: s-maj=13.3km s-min=11.4km az=84.0*
*GCMT **20** 03:51:02.2±0.1, 20.04S±0.01×168.55E, h30km, MW5.9/158, Moment Tensor Solution. s158,c357; s156,c489; Duration: 23 Moment tensor: Scale 10^18 Nm; Mrr=0.83±.01; Mθθ-0.07±.01; Mϕϕ-0.75±.01; Mrθ=0.23±.01; Mθϕ=0.34±.00; Mϕr=0.54±.01; Best double couple: M0=1.04000×10^18 NP1:ϕs=337.00000°, δ=28.00000°, λ=90.00000°. NP2:ϕs=157.00000°, δ=62.00000°, λ=90.00000°. Principal axes: T 1.0050, Plg=73.0000°, Azm=67.0000°; N 0.0700, Plg=0.0000°, Azm=157.0000°; P -1.0750, Plg=17.0000°, Azm=247.0000°; nsta=1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*NEIC **20** 03:51:04, 20.12S×168.62E, h22km, Moment Tensor Solution. Duration: 20s0 Moment tensor: Scale 10^18 Nm; Mrr=0.91; Mθθ=0.16; Mϕϕ=-0.75; Mrθ=0.23; Mθϕ=0.36; Mϕr=-0.63; Fault plane solution: M0=1.13000×10^18 NP1: ϕs=331.00000°, δ=27.00000°, λ=84.00000°. NP2: ϕs=158.00000°, δ=63.00000°, λ=93.00000°. Principal axes: T 1.1305, Plg=72.0000°, Azm=75.0000°; N 0.0069, Plg=3.0000°, Azm=337.0000°; P -1.1373, Plg=18.0000°, Azm=246.0000°;*
*NEIC **20** 03:51:19.1, 19.95S×168.41E, h35km, Moment Tensor Solution. Moment tensor: Scale 10^18 Nm; Mrr=1.00; Mθθ=0.07; Mϕϕ=-1.07; Mrθ=-0.17; Mθϕ=0.33; Mϕr=0.04; Fault plane solution: M0=1.10000×10^18 NP1:ϕs=174.62000°, δ=43.71000°, λ=104.31000°. NP2:ϕs=335.18000°, δ=47.97000°, λ=76.71000°. Principal axes: T 1.0307, Plg=80.0000°, Azm=177.0000°; N 0.1345, Plg=10.0000°, Azm=344.0000°; P -1.1652, Plg=2.0000°, Azm=75.0000°;*
ISC 20 03:50:55.4±0.5, 20.12S±0.03×168.87E±0.04, h19km±1km, h21km:pP-P, n1340, σ1.97/1145, mb5.4/217, MS5.7/290, 106C-50D, Fault plane solution: NP1:ϕs=160.33128°, δ=56.51510°, λ=118.15694°. NP2:ϕs=296.20041°, δ=42.66484°, λ=54.49770°. Principal axes: T Plg=65.5164°, Azm=123.9550°; N Plg=23.1768°, Azm=323.8797°; P Plg=7.4600°, Azm=230.6661°; Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	Mare, Loyalty	1.57	210		Pn	03 51 19.5	-2.8
MARNC	Mare, Loyalty	1.57	210	⇓P	Pn	03 51 19.5	-2.8
RTV	Rentapao	2.35	350	P	Pn	03 51 35.3	+2.2
DVP	Devils Point	2.47	345	P	Pn	03 51 34.1	-0.6
PINNC	Pines Island,	2.82	208	Pn	Pn	03 51 37.4	-2.1
PINNC	Pines Island,	2.82	208	P	Pn	03 51 38.6	-0.9
NOUC	Port Laguerre	3.11	230	P	Pn	03 51 42.4	-1.1
KOUNC	Koumac, New Ca	4.33	264	Pn	Pn	03 51 57.7	-2.6
KOUNC	Koumac, New Ca	4.33	264	P	Pn	03 51 59.5	-0.7
KOUNC	Koumac, New Ca	4.33	264	⇓P	Pn	03 51 58.4	-1.8
NFK	Norfolk Island	8.93	185	P	Pn	03 53 07.3	+3.9
	baz=9.0,SNR=3.5						
NFK	Norfolk Island	8.93	185	⇓P	Pn	03 53 08.8	+5.3
MSVF	Nonsavu	9.00	76	Pn	Pn	03 53 12.0	+7.4
	6.5nm,0.3s,baz=247,slow=10,SNR=46						
MSVF				Sn	Sn	03 55 04.6	+19
	baz=206,slow=15						
MSVF				LR	LR	03 55 58.3	
	comp=Z,108μm,18.7s,baz=213,slow=34						
MSVF	Nonsavu	9.00	76	Pn	Pn	03 53 11.7	+7.1
MSVF	Nonsavu	9.00	76	P	Pn	03 53 08.9	+4.3
MSVF	Nonsavu	9.00	76	P	Pn	03 53 12.5	+7.9
MSVF	Nonsavu	9.00	76	⇑P	Pn	03 53 12.6	+8.0
DGTI	Dogotuki	11.00	72	P	Pn	03 53 37.6	+5.7
TAVE	Taveuni	11.18	74	P	Pn	03 53 40.0	+5.7
HNR	Honiara	13.68	320	Pn	Pn	03 54 11.4	+2.9
	34nm,0.3s,baz=225,slow=5.7,SNR=1.9						
HNR				Sn	Sn	03 56 37.7	-2.5
	18nm,0.3s,baz=280,slow=11,SNR=1.7						
HNR				LR	LR	03 58 34.4	
	comp=Z,13μm,19.7s,baz=138,slow=33						
	78nm,0.3s						
HNR	Honiara	13.68	320	Pn	Pn	03 54 08.5	-0.1
HNR	Honiara	13.68	320	P	Pn	03 54 08.5	-0.1
RAO	Raoul Island	15.05	130	LR	LR	03 59 03.8	
	comp=Z,25μm,21.2s,baz=298,slow=32						
FUNA	Funafuti	15.25	42	Pn	Pn	03 54 31.5	+1.6
FUNA				IAmb	IAmb	03 54 38.9	
	comp=Z,358nm,1.1s						
FUNA	Funafuti	15.25	42	P	P	03 54 34.5	-0.2
OUZ	Omahuta	15.61	165	P	P	03 54 38.3	-0.3
OUZ	Omahuta	15.61	165	P	P	03 54 40.3	+1.8
OUZ	Omahuta	15.61	165	⇑P	P	03 54 38.6	+0.1
EIDS	Eidsvold	17.22	249	P	P	03 54 57.5	+1.0
	baz=17,SNR=11						
EIDS	Eidsvold	17.22	249	P	Pn	03 54 54.3	-0.7
EIDS	Eidsvold	17.22	249	P	P	03 54 57.5	+1.0
EIDS	Eidsvold	17.22	249	⇓P	P	03 54 55.9	-0.6
RK1H	Rockhampton Ha	17.38	256	P	P	03 54 59.8	+1.5
	comp=Z,61nm,1.3s						
ARMA	Armidale	18.64	233	P	Pn	03 55 14.4	+1.8
	baz=19,SNR=17						
ARMA	Armidale	18.64	233	P	P	03 55 11.0	-1.3
ARMA	Armidale	18.64	233	P	Pn	03 55 14.9	+2.3
ARMA	Armidale	18.64	233	⇓P	Pn	03 55 14.7	+2.1
HIZ	Hauiti	19.05	165	P	Pn	03 55 17.1	-0.2
MXZ	Matakaoa Point	19.22	157	P	P	03 55 16.7	-1.7
MXZ				IAmb	IAmb	03 55 45.8	
	comp=Z,334nm,1.8s						
RUGZ	Raukumara Rang	19.36	159	P	Pn	03 55 27.8	+6.6
URZ	Urewera	19.44	160	P	Pn	03 55 24.0	+2.0
	comp=Z,1.4nm,0.3s,baz=301,slow=23,SNR=29						
URZ				S	S	03 59 05.4	+5.5
	comp=Z,8.7nm,0.9s,baz=307,slow=20,SNR=1.5						
URZ				LR	LR	04 02 04.1	
	comp=Z,30μm,19.1s,baz=31,slow=34						
	comp=Z,72nm,0.8s						
URZ	Urewera	19.44	160		Pn	03 55 21.8	-0.2
URZ				IAmb	IAmb	03 55 54.4	
	comp=Z,494nm,1.6s						
URZ	Urewera	19.44	160	P	Pn	03 55 26.2	+4.2
URZ	Urewera	19.44	160	⇑P	Pn	03 55 23.5	+1.4
AFI	Afiamalu	19.50	75	P	Pn	03 55 24.2	+1.2
	comp=Z,148nm,1.1s,baz=68,slow=12,SNR=6.3						
AFI				LR	LR	04 01 22.6	
	comp=Z,28μm,19.4s,baz=258,slow=32						
AFI	Afiamalu	19.50	75	P	Pn	03 55 23.4	+0.4
AFI				IAmb	IAmb	03 55 36.1	
	comp=Z,163nm,0.8s						
AFI	Afiamalu	19.50	75	P	Pn	03 55 23.4	+0.4
AFI				pmax	pmax		
	comp=Z,163nm,0.9s						
AFI	Afiamalu	19.50	75	P	Pn	03 55 25.9	+2.9
AFI	Afiamalu	19.50	75	⇓P	Pn	03 55 24.6	+1.6
RMQ	Roma	19.52	247	P	Pn	03 55 23.4	+0.2
	baz=19,SNR=34						
RMQ	Roma	19.52	247	P	Pn	03 55 23.0	-0.2
MUGZ	Murupara	19.53	161	P	Pn	03 55 31.3	+8.1
TWGZ	Tauwhareparae	19.65	158	P	Pn	03 55 27.4	+2.7
PUZ	Puketiti	19.66	158	P	Pn	03 55 27.5	+2.8
RTZ	Ruatahuna	19.72	161	P	Pn	03 55 27.8	+2.3
ETVZ	East Tongariro	19.85	164	P	Pn	03 55 30.1	+3.0
NGZ	Ngauruhoe	19.86	164	P	Pn	03 55 40.3	+13
OTVZ	Oturere	19.86	164	P	Pn	03 55 33.3	+6.0
SNVZ	South Ngauruho	19.88	164	P	Pn	03 55 36.3	+8.8
MTHZ	Maungataniwha	19.90	161	P	Pn	03 55 30.0	+2.5
NTLH	Newcastle Hard	19.92	227	P	Pn	03 55 30.6	+2.8
	comp=Z,174nm,1.2s						
SNGZ	Shannon Statio	19.99	160	P	Pn	03 55 30.2	+1.6
NIUE	Niue	20.00	91	P	Pn	03 55 30.1	+1.2
NIUE				IAmb	IAmb	03 55 30.9	
	comp=Z,205nm,0.9s						
CNGZ	Carnagh Statio	20.01	158	P	Pn	03 55 31.4	+2.6
RAHZ	Arahi	20.03	161	P	Pn	03 55 31.6	+2.4
RIGZ	Rimuhau	20.05	159	P	Pn	03 55 31.0	+1.6
BKZ	Black Stump Fm	20.09	163		Pn	03 55 28.8	-1.0
BKZ				IAmb	IAmb	03 55 34.3	
	comp=Z,186nm,0.8s						
BKZ	Black Stump Fm	20.09	163	P	Pn	03 55 30.5	+0.7
BKZ				S	Sn	03 59 35.8	+20
BKZ	Black Stump Fm	20.09	163	P	Pn	03 55 32.2	+2.4
NMHZ	Naumai	20.11	162	P	Pn	03 55 34.1	+3.9
NMHZ				S	Sn	03 59 36.8	+21
MOVZ	Moawhango	20.12	164	P	Pn	03 55 34.7	+4.6
BHHZ	Black Hill Sta	20.27	164	P	Pn	03 55 35.7	+3.6
BHHZ				S	Sn	03 59 40.9	+21
KNZ	Kokohu	20.31	160	P	Pn	03 55 33.0	+0.6
MCHZ	McNeill Hill	20.40	162	P	Pn	03 55 35.7	+2.2
KRHZ	Kereru	20.50	163	P	Pn	03 55 36.7	+2.1
MGCD	Mangrove Creek	20.50	227	P	Pn	03 55 34.5	-0.2
	baz=20,SNR=4.4						
MGCD	Mangrove Creek	20.50	227	P	Pn	03 55 35.9	+1.2
PNHZ	Pukenui	20.71	164	P	Pn	03 55 39.6	+2.5
KAHZ	Kahuranaki	20.78	162	P	Pn	03 55 38.9	+1.0
KAHZ				S	Sn	03 59 49.2	+17
TSZ	Takapari Road	20.78	165	P	Pn	03 55 40.3	+2.4
QRZ	Quartz Range	20.88	172	P	P	03 55 37.5	+1.0
QRZ				IAmb	IAmb	03 55 50.7	
	comp=Z,190nm,1.3s						
POWZ	Post Office Ro	21.05	165	P	P	03 55 41.7	+3.4
DVHZ	Dannevirke	21.06	164	P	P	03 55 42.8	+4.3
SYDH	Sydney Hard Ro	21.07	226	P	P	03 55 42.1	+3.5
	comp=Z,71nm,1.4s						
CTA	Charters Tower	21.24	266	P	P	03 55 42.1	+1.5
	comp=Z,55nm,0.8s,baz=94,slow=11,SNR=24						
CTA				S	S	03 59 37.0	+0.9
	comp=Z,1.1nm,0.3s,baz=156,slow=20,SNR=1.4						
CTA				LR	LR	04 03 13.7	
	comp=Z,14μm,20.0s,baz=86,slow=34						
	comp=Z,55nm,0.8s						
CTA	Charters Tower	21.24	266	P	P	03 55 42.1	+1.5
CTA				S	S	03 59 37.0	+0.9
CTA	Charters Tower	21.24	266	P	P	03 55 43.8	+3.2
CTAO	Charters Tower	21.24	266	P	P	03 55 39.7	-0.9
CTAO				IAmb	IAmb	03 56 01.8	
	comp=Z,174nm,1.1s						
CTAO	Charters Tower	21.24	266	P	P	03 55 39.7	-0.9
CTAO				pmax	pmax		
	comp=Z,173nm,1.1s						
CTAO	Charters Tower	21.24	266	P	P	03 55 43.6	+3.0
CTAO	Charters Tower	21.24	266	⇓P	P	03 55 41.6	+1.0
PRWZ	Pori Road	21.25	165	P	P	03 55 43.9	+3.4
ANWZ	Angora Road	21.29	164	P	P	03 55 45.4	+4.5
OGWZ	Otaki Gorge	21.32	167	P	P	03 55 45.7	+4.5
NNZ	Nelson	21.38	171	P	P	03 55 41.7	-0.1
NNZ				IAmb	IAmb	03 56 06.1	
	comp=Z,149nm,1.1s						
BFZ	Birch Farm	21.44	165	P	P	03 55 40.9	-1.6
BFZ				IAmb	IAmb	03 55 47.0	
	comp=Z,117nm,0.9s						
BFZ				IAMs_20	IAMs_20	04 03 47.6	
	comp=Z,34μm,19.0s						
BFZ	Birch Farm	21.44	165	P	P	03 55 44.1	+1.5
BFZ	Birch Farm	21.44	165	P	P	03 55 45.1	+2.6
HOWZ	Holdsworth Sta	21.47	166	P	P	03 55 46.6	+3.7
TCW	Tory Channel	21.52	169	P	P	03 55 48.2	+4.8
TUWZ	Tuamarina	21.68	170	P	P	03 55 45.9	+0.9
SNZO	South Karori	21.70	168	P	P	03 55 43.0	-2.3
SNZO				IAmb	IAmb	03 56 17.8	
	comp=Z,160nm,1.2s						
SNZO	South Karori	21.70	168	IAMs_20	IAMs_20	04 03 44.2	
	comp=Z,28μm,19.0s						
SNZO	South Karori	21.70	168	P	P	03 55 49.4	+4.2
TARA	Tarawa	21.71	11	P	P	03 55 47.1	+1.6
TARA				IAmb	IAmb	03 56 20.2	
	comp=Z,232nm,1.1s						
TARA	Tarawa	21.71	11	P	P	03 55 51.1	+5.6
BHW	Baring Head	21.83	168	P	P	03 55 46.9	+0.3
THZ	Tophouse	21.85	172	P	P	03 55 47.6	+0.6
MSWZ	Moikau Station	21.91	167	P	P	03 55 48.3	+0.7
MSWZ	Moikau Station	21.91	167	P	P	03 55 52.9	+5.3
BSWZ	Blackbirch Sta	21.94	170	P	P	03 55 47.7	-0.2
CMWZ	Cape Campbell	22.03	169	P	P	03 55 49.7	+0.8
PLWZ	Palliser	22.06	167	P	P	03 55 47.4	-1.8
KHZ	Kahutara	22.58	171	P	P	03 55 53.9	-0.8
KHZ				IAmb	IAmb	03 56 32.5	
	comp=Z,193nm,1.5s						
KHZ				IAMs_20	IAMs_20	04 04 24.2	
	comp=Z,29μm,19.0s						
KHZ	Kahutara	22.58	171	⇓P	P	03 55 58.6	+3.9
KRVT	Keravat (AS076	22.72	312	S	S	04 00 00.6	-3.7
	baz=321,slow=2.0						
LTZ	Lake Taylor	22.78	174	P	P	03 55 58.9	+2.1
LTZ				IAmb	IAmb	03 56 25.6	
	comp=Z,196nm,1.4s						
LTZ				IAMs_20	IAMs_20	04 05 02.3	
	comp=Z,25μm,18.0s						
CNB	Canberra Magne	22.90	225	P	P	03 56 01.6	+3.3
	baz=23,SNR=10						
CNB	Canberra Magne	22.90	225	P	P	03 56 00.0	+1.7
CAN	Canberra	23.15	225	P	P	03 56 00.8	0.0
CAN				IAmb	IAmb	03 56 12.5	
	comp=Z,219nm,1.5s						
CAN	Canberra	23.15	225	P	P	03 56 00.8	0.0
CAN				pmax	pmax		
	comp=Z,219nm,1.5s						
CAN	Canberra	23.15	225	P	P	03 56 02.5	+1.7
CAN	Canberra	23.15	225	⇑P	P	03 56 02.4	+1.6
MTSU	Mount Surprise	23.28	271	P	P	03 56 02.8	+0.5
	baz=23,SNR=24						
MTSU	Mount Surprise	23.28	271	P	P	03 56 03.4	+1.1
OXZ	Oxford	23.29	174	P	P	03 56 01.6	-0.5
OXZ				IAmb	IAmb	03 56 13.6	
	comp=Z,157nm,1.4s						
OXZ				IAMs_20	IAMs_20	04 04 50.9	
	comp=Z,25μm,18.0s						
FOZ	Fox Glacier	23.36	178	P	P	03 56 01.2	-1.5
QLP	Quilpie	23.50	249	P	P	03 56 04.2	-0.1
	baz=23,SNR=21						
QLP	Quilpie	23.50	249	P	P	03 56 05.6	+1.3
QLP	Quilpie	23.50	249	⇓P	P	03 56 04.2	-0.1
PMG	Port Moresby	23.51	294	P	P	03 56 04.8	+0.3
	comp=Z,116nm,1.1s,baz=165,slow=2.1,SNR=15						
PMG				S	S	04 00 24.7	+7.1
	comp=Z,4.5nm,0.3s,baz=324,slow=19,SNR=1.6						
PMG				LR	LR	04 04 38.8	
	comp=Z,17μm,18.5s,baz=138,slow=35						
	comp=Z,116nm,1.1s						
PMG	Port Moresby	23.51	294	P	P	03 56 04.0	-0.5
PMG				IAmb	IAmb	03 56 08.5	
	comp=Z,158nm,1.2s						
PMG	Port Moresby	23.51	294	P	P	03 56 04.0	-0.5
PMG				pmax	pmax		
	comp=Z,158nm,1.2s						
PMG				MLR	MLR		
	comp=Z,20μm,18.0s						
PMG	Port Moresby	23.51	294	P	P	03 56 06.0	+1.5
RPZ	Rata Peaks	23.60	176	P	P	03 56 07.3	+2.1
	comp=Z,22nm,0.9s,baz=8.1,slow=7.1,SNR=4.9						
RPZ				LR	LR	04 05 18.0	
	comp=Z,33μm,18.1s,baz=351,slow=36						
	comp=Z,22nm,0.9s						
RPZ	Rata Peaks	23.60	176	P	P	03 56 06.0	+0.9
RPZ				IAMs_20	IAMs_20	04 05 15.9	
	comp=Z,33μm,18.0s						
CMSA	Cobar Meteorol	23.71	237	P	P	03 56 06.7	+0.4
	baz=24,SNR=34						
CMSA	Cobar Meteorol	23.71	237	P	P	03 56 08.2	+1.9
MQZ	McQueen's Vall	23.73	173	P	P	03 56 07.3	+1.0
MQZ				IAmb	IAmb	03 56 23.0	
	comp=Z,114nm,1.3s						
LBZ	Lake Benmore	24.22	178	P	P	03 56 11.7	+0.7
WKZ	Wanaka	24.64	180	IAMs_20	IAMs_20	04 05 47.8	
	comp=Z,23μm,18.0s						
ODZ	Otahua Downs	24.90	177	P	P	03 56 20.2	+3.1
MLZ	Mavora Lakes	25.19	181	P	P	03 56 20.5	+0.8
MLZ				IAmb	IAmb	03 56 49.8	
	comp=Z,76nm,1.1s						
MLZ				IAMs_20	IAMs_20	04 05 10.2	
	comp=Z,25μm,20.0s						
COEN	Coen	25.30	280	P	P	03 56 21.8	+0.7
	baz=25,SNR=16						
COEN	Coen	25.30	280	P	P	03 56 21.7	+0.6
COEN				IAmb	IAmb	03 56 40.7	
	comp=Z,160nm,1.2s						
COEN	Coen	25.30	280	P	P	03 56 22.4	+1.3
COEN	Coen	25.30	280	⇓P	P	03 56 22.5	+1.3
DCZ	Deep Cove	25.32	183	P	P	03 56 20.7	-0.2
DCZ				IAmb	IAmb	03 56 50.4	
	comp=Z,226nm,1.6s						
WHZ	Wether Hill Ro	25.72	181	P	P	03 56 25.2	+0.7
TOO	Toolangi	26.75	224	P	P	03 56 36.6	+2.5
	baz=27,SNR=4.0						
TOO	Toolangi	26.75	224	P	P	03 56 32.9	-1.2
TOO				IAmb	IAmb	03 56 44.4	
	comp=Z,121nm,1.4s						
TOO	Toolangi	26.75	224	P	P	03 56 32.9	-1.2
TOO				pmax	pmax		
	comp=Z,121nm,1.5s						
TOO	Toolangi	26.75	224	P	P	03 56 36.4	+2.3
INKA	Innaminka	26.76	248	P	P	03 56 35.8	+1.6
STKA	Stephens Creek	27.09	239	P	P	03 56 37.6	+0.5
	comp=Z,30nm,1.1s,baz=72,slow=9.8,SNR=15						
STKA				S	S	04 01 09.7	-4.8
	comp=Z,2.6nm,0.9s,baz=108,slow=20,SNR=0.9						
STKA				LR	LR	04 07 05.5	
	comp=Z,15μm,19.3s,baz=102,slow=36						
	comp=Z,30nm,1.1s				

comp=Z,58nm,0.9s
WB2 Warramunga Arr 32.40 264 P P 03 57 21.9 -2.5
WB2 IAmb IAmb 03 57 40.7
comp=Z,83nm,1.1s
WRAB Tennant Creek 32.40 264 P P 03 57 21.7 -2.7
WRAB IAmb IAmb 03 57 40.0
comp=Z,50nm,1.1s
WRAB Tennant Creek 32.40 264 *ce*P **P 03 57 23.1 -1.3**
WRAB pmax pmax
comp=Z,58nm,1.3s
WRAB Tennant Creek 32.40 264 P P 03 57 24.2 -0.2
WRAB Tennant Creek 32.40 264 ⇓P **P 03 57 22.5 -1.9**
WRA Warramunga Arr 32.41 264 P P 03 57 22.8 -1.7
comp=Z,21nm,0.9s,baz=95,slow=8.1,SNR=86
WRA S **S 04 02 36.7 -1.6**
comp=Z,4.9nm,1.2s,baz=91,slow=15,SNR=5.3
WRA LR LR 04 11 01.3
comp=Z,10μm,18.5s,baz=86,slow=37
WRA Warramunga Arr 32.41 264 P P 03 57 22.4 -2.1
WRA Warramunga Arr 32.41 264 P P 03 57 22.4 -2.1
WRA pmax pmax
comp=Z,6.0nm,1.3s
AS31 Alice Springs 32.59 257 P P 03 57 24.3 -1.7
AS31 IAmb IAmb 03 57 39.3
comp=Z,34nm,0.8s
ASAR Alice Springs 32.59 257 P P 03 57 24.7 -1.3
ASAR Alice Springs 32.59 257 P P 03 57 24.7 -1.3
MULG Mulgathing 32.97 245 P P 03 57 30.7 +1.5
GENI Genyem 32.99 298 P P 03 57 30.2 +0.7
comp=Z,4μmcomp=Z,2μmcomp=Z,147nm,1.2s
GENI Genyem 32.99 298 P P 03 57 32.9 +3.4
SMPI Sarmi 34.53 298 P P 03 57 45.1 +2.1
KDU Kakadu 35.63 276 ⇓P P 03 57 45.0 -7.4
SRPI Serui, Papua 36.67 296 P P 03 58 01.6 +0.2
MTN Manton Dam 36.84 275 P P 03 58 03.7 +0.9
MTN Manton Dam 36.84 275 P P 03 58 04.2 +1.4
BAKI Biak 37.15 296 P P 03 58 08.2 +2.8
comp=Z,1μmcomp=Z,107nm,1.1s
WRKA Warakurna 37.69 255 P P 03 58 09.0 -1.0
baz=38,SNR=23
WRKA Warakurna 37.69 255 P P 03 58 11.3 +1.3
WRKA Warakurna 37.69 255 ⇑P **P 03 58 09.1 -0.9**
FORT Forrest 38.17 246 P P 03 58 12.4 -1.5
FORT Forrest 38.17 246 P P 03 58 15.4 +1.5
KNRA Kununurra 38.36 270 P P 03 58 15.3 -0.3
baz=38,SNR=4.4
KNRA Kununurra 38.36 270 IAmb IAmb 03 58 32.5
comp=Z,65nm,1.1s
KNRA Kununurra 38.36 270 P P 03 58 15.9 +0.3
TBI Tubuai 38.74 103 *e*LR LR 04 08 46.6
comp=Z,9μm,26.0s
PPT2 Papeete2 39.33 93 *e*S **S 04 04 22.5 -1.9**
comp=Z,5μm,26.0s
PPT2 *e*LR LR 04 09 04.6
comp=Z,13μm,23.8s
PPT Papeete 39.34 93 LR LR 04 10 53.5
comp=Z,6μm,20.5s,baz=264,slow=30
GUMO Guam 40.98 323 LR LR 04 15 00.8
comp=Z,5μm,19.8s,baz=138,slow=35
SWI Sorong 41.46 293 P P 03 58 41.7 +0.3
comp=Z,1μmcomp=Z,72nm,0.9s
NLAI Namlea 44.03 287 P P 03 59 03.3 +0.9
comp=Z,2μmcomp=Z,96nm,1.9s
LBMI Labuha 44.85 290 P P 03 59 10.1 +1.2
comp=Z,3μmcomp=Z,1μmcomp=Z,43nm,1.2s
SANI Sanana 45.55 288 P P 03 59 15.0 +0.5
comp=Z,4μmcomp=Z,2μmcomp=Z,75nm,0.8s
SANI Sanana 45.55 288 P P 03 59 15.2 +0.7
PSA00 Pilbara Seismi 45.69 259 IAmb IAmb 03 59 24.5
comp=Z,69nm,1.4s
PSA00 Pilbara Seismi 45.69 259 P P 03 59 16.4 +0.9
MBWA Marble Bar 45.85 260 P P 03 59 16.2 -0.6
MBWA IAmb IAmb 03 59 25.8
comp=Z,84nm,1.1s
MBWA Marble Bar 45.85 260 P P 03 59 17.6 +0.8
MBWA Marble Bar 45.85 260 ⇓P **P 03 59 16.9 +0.1**
EDFI Ende, Flores 46.92 277 P P 03 59 25.6 +0.2
comp=Z,445nmcomp=Z,18nm,1.2s
KLBR Kellerberrin 47.03 245 P P 03 59 26.0 0.0
baz=47,SNR=11
KLBR Kellerberrin 47.03 245 P P 03 59 25.9 0.0
comp=Z,167nm,1.0s
NWAO Narrogin (SRO) 47.51 243 P P 03 59 28.7 -0.9
NWAO Narrogin (SRO) 47.51 243 P P 03 59 28.7 -0.9
NWAO pmax pmax
comp=Z,68nm,1.0s
NWAO MLR MLR
comp=Z,17μm,19.0s
NWAO Narrogin (SRO) 47.51 243 P P 03 59 30.0 +0.4
RKGY Rocky Gully 47.81 241 P P 03 59 32.3 +0.4
baz=48,SNR=5.5
BLDU Ballidu 47.92 247 P P 03 59 35.0 +2.2
MORW Morawa 48.53 249 P P 03 59 37.4 -0.2
baz=48,SNR=4.4
MORW Morawa 48.53 249 P P 03 59 36.9 -0.7
MORW IAmb IAmb 03 59 49.5
comp=Z,60nm,1.1s
MORW Morawa 48.53 249 P P 03 59 38.7 +1.1
comp=Z,47nm,1.3s
MORW Morawa 48.53 249 ⇓P **P 03 59 37.5 0.0**
WBSI Waikabubak, Su 48.78 275 P P 03 59 41.8 +2.1
comp=Z,1μmcomp=Z,87nm,0.8s
BKSI Bulukumba 49.58 280 P P 03 59 47.3 +1.6
comp=Z,791nmcomp=Z,24nm,1.6s
BNSI Bone 49.94 282 P P 03 59 49.8 +1.3
comp=Z,4μmcomp=Z,1μmcomp=Z,49nm,1.5s
APSI Ampana 49.95 286 P P 03 59 49.9 +1.3
comp=Z,1μmcomp=Z,62nm,1.6s
KAPI Kappang 50.03 281 LR LR 04 23 03.7
comp=Z,2μm,19.4s,baz=130,slow=38
KAPI Kappang 50.03 281 *i*P **P 03 59 47.4 -1.8**
KAPI pmax pmax
comp=Z,91nm,1.6s
KAPI MLR MLR
comp=Z,2μm,17.0s
DAV Davao City (W) 50.43 298 LR LR 04 21 06.0
comp=Z,2μm,20.9s,baz=107,slow=36
TAOE Nuku Hiva Isla 50.43 85 *e*LR LR 04 14 10.8
comp=Z,7μm,26.1s
TTSI Tana Toraja 50.73 283 P P 03 59 57.2 +2.7
comp=Z,2μmcomp=Z,52nm,1.3s
TOLI2 Tolitoli 51.61 288 P P 04 00 00.5 -0.6
TOLI2 IAmb IAmb 04 00 06.4
comp=Z,39nm,0.9s
TOLI2 Tolitoli 51.61 288 P P 04 00 02.8 +1.7
comp=Z,51nm,0.8s
MPSI Mapaga 52.06 287 P P 04 00 05.1 +0.6
comp=Z,3μmcomp=Z,1μmcomp=Z,54nm,1.0s
KIP Kipapa 52.47 40 IAMs_20 IAMs_20 04 17 43.0
comp=Z,7μm,21.0s
JCJ Chichijima 53.59 330 P P 04 00 15.1 -0.4
comp=Z,106nm,0.8s,baz=291,slow=12
JCJ LR LR 04 24 24.1
comp=Z,1μm,18.4s,baz=141,slow=38
comp=Z,106nm,0.8s
JCJ Chichijima 53.59 330 P P 04 00 14.7 -0.8
JCJ Chichijima 53.59 330 P P 04 00 15.9 +0.4
comp=Z,149nm,0.8s
JCJ Chichijima 53.59 330 ⇑P **P 04 00 15.3 -0.2**
BBKI Banjar Baru 55.15 280 P P 04 00 29.8 +2.6
comp=Z,45nm,1.1s
PCJI Pacitan 56.94 273 P P 04 00 42.1 +2.1
comp=Z,54nm,1.7s
WOJI Wonogiri, Jawa 57.29 274 P P 04 00 43.1 +0.7
comp=Z,55nm,1.3s
VNDA Vanda 57.55 182 P P 04 00 43.9 +0.6
comp=Z,3.8nm,0.8s,baz=0.5,slow=5.9,SNR=14
VNDA LR LR 04 21 20.3
comp=Z,4μm,21.4s,baz=25,slow=32
comp=Z,3.8nm,0.8s
VNDA Vanda 57.55 182 P P 04 00 43.4 +0.1
VNDA IAmb IAmb 04 01 12.9
comp=Z,65nm,1.7s
VNDA Vanda 57.55 182 P P 04 00 43.4 +0.1
VNDA pmax pmax
comp=Z,65nm,1.7s
SBA Scott Base 57.78 181 P P 04 00 45.5 +0.5
SBA IAmb IAmb 04 01 10.4
comp=Z,50nm,1.1s
SBA Scott Base 57.78 181 P P 04 00 45.5 +0.5
SBA pmax pmax
comp=Z,50nm,1.1s
KKM Kota Kinabalu 57.92 291 P P 04 00 46.6 -0.3
KKM Kota Kinabalu 57.92 291 P P 04 00 49.9 +2.9
CASY Casey 59.19 204 P P 04 00 54.1 -0.8
CASY IAmb IAmb 04 01 14.1
comp=Z,43nm,1.2s
CASY Casey 59.19 204 ⇑P **P 04 00 53.9 -1.0**
STKI Sintang 59.60 282 P P 04 00 59.4 +0.8
comp=Z,7μmcomp=Z,56nm,1.2s
JHJ Hachijo jima 2 59.79 332 LR LR 04 26 56.4
comp=Z,2μm,19.2s,baz=105,slow=36
JOW Kunigami 61.05 318 LR LR 04 27 50.7
comp=Z,3μm,18.7s,baz=134,slow=36
JOW Kunigami 61.05 318 P P 04 01 12.1 +3.9
comp=Z,58nm,1.5s
KSM Kuching 61.24 283 P P 04 01 10.1 +0.3
KSM Kuching 61.24 283 P P 04 01 12.3 +2.5
comp=Z,54nm,1.4s
DBJI Dramaga 61.62 273 P P 04 01 13.0 +0.6
comp=Z,14μmcomp=Z,114nm,1.0s
JYT Yasato 62.26 334 P P 04 01 16.7 +0.5
INU Inuyama 62.90 331 P P 04 01 20.9 +0.5
INU Inuyama 62.90 331 P P 04 01 23.5 +3.0
comp=Z,17nm,1.0s
JGF Kuroka 62.95 331 ⇑P **P 04 01 20.6 -0.2**
MJAR Matsushiro Arr 63.37 333 P P 04 01 23.7 +0.1
comp=Z,15nm,0.9s,baz=165,slow=6.5,SNR=19
MJAR LR LR 04 27 39.8
comp=Z,2μm,20.3s,baz=136,slow=35
comp=Z,15nm,0.9s
MJAR Matsushiro Arr 63.37 333 P P 04 01 23.7 +0.1
MAJO Matsushiro 63.37 333 P P 04 01 23.8 +0.2
MAJO IAmb IAmb 04 01 42.5
comp=Z,33nm,1.0s
MAJO Matsushiro 63.37 333 *i*P **P 04 01 23.5 -0.1**
MAJO pmax pmax
comp=Z,43nm,1.1s
MAJO Matsushiro 63.37 333 P P 04 01 24.1 +0.5
MAJO Matsushiro 63.37 333 ⇑P **P 04 01 22.7 -0.9**
MJB9 Matsu-Tunnel 63.37 333 IAmb IAmb 04 01 42.5
comp=Z,36nm,1.1s
BLSI Bandar Lampung 63.42 274 P P 04 01 23.6 -0.9
NACB Ninganchiao 63.70 312 P P 04 01 25.6 -0.5
PPBI Pangkal Pinang 63.71 278 P P 04 01 26.6 +0.3
TPUB Ta-pu 63.84 310 P P 04 01 25.7 -1.2
TPUB Ta-pu 63.84 310 P P 04 01 29.0 +2.0
SSLB Suanglung 63.91 311 P P 04 01 27.2 -0.3
SSLB IAmb IAmb 04 01 58.0
comp=Z,33nm,0.9s
SSLB Suanglung 63.91 311 P P 04 01 29.5 +2.0
KASI Kota Agung 64.07 274 P P 04 01 28.3 -0.4
comp=Z,63nm,0.8s
YHNB Yeheng 64.17 312 P P 04 01 31.4 +2.2
TATO Taipei 64.29 312 P P 04 01 30.9 +1.0
JHS Saijyo 64.48 328 IAmb IAmb 04 01 44.2
comp=Z,33nm,0.9s
JHS Saijyo 64.48 328 ⇑P **P 04 01 30.8 -0.2**
LWLI Liwa 64.65 274 P P 04 01 35.0 +2.3
comp=Z,55nm,1.3s
DSRI Dabo 65.77 279 P P 04 01 41.8 +2.0
comp=Z,14nm,0.6s
ERM Erimo 66.24 339 IAMs_20 IAMs_20 04 25 50.9
comp=Z,7μm,21.0s
QZH Quanzhou 66.31 310 ⇑*i*P **P 04 01 42.9 -0.1**
QZH S **S 04 10 32.3 +0.4**
QZH SS **SS 04 14 51.0 +2.2**
QZH pmax pmax
comp=Z,910nm,7.3s
QZH LR LR
comp=Z,840nm,18.2s
QZH LR LR
comp=Z,980nm,18.1s
QZH LR LR
comp=Z,1μm,17.0s
KUR Kuril'sk 67.80 344 *e*P **P 04 01 50.3 -1.6**
KUR S **S 04 10 48.9 -0.1**
KUR *e*SS **SS 04 15 14.2 +3.1**
KUR pmax pmax
comp=Z,1μm,7.9s
KUR MLR MLR
comp=Z,3μm,18.0s
RGRI Rengat 67.90 278 P P 04 01 54.8 +1.4
ASAJ Asahikawa 68.30 340 LR LR 04 28 10.7
comp=Z,6μm,21.0s,baz=168,slow=33
SSE Sheshan 68.47 317 P P 04 01 59.8 +3.3
SSE S **S 04 11 01.8 +4.1**
SSE pmax pmax
comp=Z,16nm,0.7s
SSE pmax pmax
comp=Z,450nm,9.3s
SSE LR LR
comp=Z,370nm,20.3s
SSE LR LR
comp=Z,710nm,18.5s
TJN Taejon 68.53 325 *ce*P **P 04 01 56.6 -0.2**
TJN Taejon 68.53 325 P P 04 01 58.4 +1.6
comp=Z,104nm,1.3s
KSRS Korea Array 69.04 326 P P 04 01 59.9 0.0
comp=Z,1.9nm,0.7s,baz=144,slow=6.0,SNR=12
comp=Z,1.9nm,0.7s
KSRS Korea Array 69.04 326 P P 04 01 59.9 0.0
COCO West Island 69.20 264 IAMs_20 IAMs_20 04 32 26.2
comp=Z,6μm,19.0s
BKNI Bangkinang 69.35 278 P P 04 02 03.3 +0.9
BKNI IAMs_20 IAMs_20 04 35 19.0
comp=Z,4μm,19.0s
BKNI Bangkinang 69.35 278 P P 04 02 03.7 +1.3
comp=Z,4μmcomp=Z,105nm,1.4s
BKNI Bangkinang 69.35 278 P P 04 02 07.0 +4.6
comp=Z,105nm,1.4s
QIZ Qiongzhong 69.72 300 P P 04 02 05.0 +0.5
QIZ S **S 04 11 15.0 +2.1**
QIZ ScS **ScS 04 12 07.4 +1.5**
QIZ SS **SS 04 15 44.3 +2.6**
QIZ pmax pmax
comp=Z,940nm,9.6s
QIZ LR LR
comp=Z,910nm,17.2s
QIZ LR LR
comp=Z,680nm,19.4s
QIZ LR LR
comp=Z,1μm,18.9s
INCN Inchon 69.74 325 P P 04 02 07.2 +2.9
comp=Z,29nm,1.2s
QSPA South Pole Qui 69.94 180 P P 04 02 05.9 +0.6
comp=Z,42nm,1.0s,baz=26,slow=1.6,SNR=36
QSPA LR LR 04 31 31.4
comp=Z,6μm,18.0s,baz=37,slow=35
comp=Z,42nm,1.0s
QSPA South Pole Qui 69.94 180 P P 04 02 04.7 -0.7
QSPA South Pole Qui 69.94 180 IAMs_20 IAMs_20 04 31 56.2
comp=Z,6μm,18.0s
NJ2 Nanjing 70.60 316 *e*P **P 04 02 08.8 -0.9**
NJ2 S **S 04 11 23.4 +0.7**
NJ2 sS **sS 04 11 33.4 +1.7**
NJ2 pmax pmax
comp=Z,29nm,1.2s
NJ2 pmax pmax
comp=Z,1μm,9.5s
NJ2 LR LR
comp=Z,2μm,18.9s
NJ2 LR LR
comp=Z,1μm,19.9s
NJ2 LR LR
comp=Z,2μm,19.9s
HJU Haeju 70.64 325 P P 04 02 10.0 +0.2
HJU pP **pP 04 02 12.6 -2.2**
HJU S **S 04 11 23.8 +0.8**
HJU AmB
comp=Z,161nm,1.2s
HJU AMS AMS
comp=N,301nm,13.7s
HJU AMS AMS
comp=E,292nm,13.3s
HJU AMS AMS
comp=Z,49nm,2.2s
YSS Yuzh-Sakhalins 70.80 341 P P 04 02 10.4 -0.1
YSS Yuzh-Sakhalins 70.80 341 *ce*P **P 04 02 10.7 +0.2**
YSS *e* 04 02 22.5
YSS *e* 04 04 46.0
YSS *e*PPP PPP 04 06 30.1
YSS *e*S **S 04 11 21.7 -2.7**
YSS *e*PS **PnS 04 11 54.0 +0.6**
YSS *e*SS **SS 04 15 50.8 -6.6**
YSS *e*SSS SSS 04 19 04.2
YSS pmax pmax
comp=Z,1μm,7.5s
YSS pmax pmax
comp=N,400nm,7.4s
YSS pmax pmax
comp=Z,70nm,0.9s
YSS smax smax
comp=N,1μm,14.4s
YSS Yuzh-Sakhalins 70.80 341 P P 04 02 12.4 +1.9
comp=N,75nm,1.0s
IPM Ipoh 70.93 282 IAmb IAmb 04 02 30.3
comp=Z,56nm,1.4s
IPM Ipoh 70.93 282 P P 04 02 14.6 +2.5
HHU Hamhung 71.10 328 P P 04 02 12.9 +0.4
HHU pP **sP 04 02 18.6 -0.5**
HHU S **S 04 11 31.0 +2.9**
HHU AmB
comp=Z,1μm,5.5s
HHU AMS AMS
comp=N,23nm,2.8s
HHU AMS AMS
comp=E,42nm,5.0s
HHU AMS AMS
comp=Z,9.7nm,1.2s
TEY Ternei 71.20 336 *ce*P **P 04 02 10.9 -2.1**
TEY *e* 04 11 25.6
PYAG Pyongyang 71.36 326 P P 04 02 14.7 +0.6
PYAG pP **pP 04 02 18.3 -0.9**
PYAG S **S 04 11 34.5 +3.3**
PYAG AmB
comp=Z,40nm,0.8s
PYAG AMS AMS
comp=N,669nm,11.2s
PYAG AMS AMS
comp=E,122nm,2.0s
PYAG AMS AMS
comp=Z,76nm,1.3s
SKR Severo-Kuril's 71.38 351 *e*P **P 04 02 09.6 -4.4**
SKR *i* 04 02 28.7
SKR *i*S S 04 11 19.8 -11
SKR *e* 04 12 00.4
SKR pmax pmax
comp=Z,600nm,8.5s
SKR pmax pmax
comp=Z,56nm,0.9s
VLA Vladivostok 71.53 332 *ci*P **P 04 02 15.2 +0.1**
VLA pmax pmax
comp=Z,26nm,0.6s
CNSH ChangSha 72.31 310 ⇑P **P 04 02 20.1 0.0**
CNSH S **S 04 11 43.6 +1.0**
CNSH pmax pmax
comp=Z,870nm,9.5s
CNSH LR LR
comp=Z,900nm,22.0s
CNSH LR LR
comp=Z,920nm,22.3s
CNSH LR LR
comp=Z,2μm,24.4s
USA0B Ussuriysk Arra 72.36 333 P P 04 02 19.2 -0.7
USA0B IAmb IAmb 04 02 23.2
comp=Z,68nm,1.3s
USA0B Ussuriysk Arra 72.36 333 P P 04 02 19.3 -0.7
USA0B pmax pmax
comp=Z,68nm,1.3s
USRK Ussuriysk Ar. 72.36 333 P P 04 02 19.8 -0.2
comp=Z,35nm,1.0s,baz=137,slow=4.2,SNR=32
comp=Z,35nm,1.0s
USRK Ussuriysk Ar. 72.36 333 P P 04 02 19.8 -0.2
GULI GuiLin 72.60 306 P P 04 02 13.4 -8.5
GULI S S 04 11 36.8 -9.3
GULI pmax pmax
comp=Z,1μm,9.1s
GULI LR LR
comp=N,720nm,20.6s
GULI LR LR
comp=E,910nm,19.5s
GULI LR LR
comp=Z,2μm,19.5s
SHEM Shemya Is, Ala 72.68 3 P P 04 02 20.7 -1.0
comp=Z,24nm,0.8s,baz=10,slow=3.5,SNR=5.8
SHEM LR LR 04 28 02.1
comp=Z,3μm,21.6s,baz=192,slow=31
comp=Z,24nm,0.8s
WHN Wuhan 72.69 313 ⇑P **P 04 02 19.8 -2.5**
WHN S **S 04 11 45.8 -1.0**
WHN pmax pmax
comp=Z,62nm,1.0s
WHN LR LR
comp=Z,3μm,16.7s
WHN LR LR
comp=Z,3μm,20.1s
WHN LR LR
comp=Z,4μm,21.1s
SUJ Sinuiju 72.80 326 P P 04 02 23.0 +0.3
SUJ pP **pP 04 02 26.4 -1.3**
SUJ S **S 04 11 49.4 +1.8**
SUJ AmB
comp=Z,263nm,1.9s
SUJ AMS AMS
comp=N,781nm,8.7s
SUJ AMS AMS
comp=E,779nm,8.7s
SUJ AMS AMS
comp=Z,506nm,5.7s
ADK Adak 72.80 9 P P 04 02 22.1 -0.3
ADK IAmb IAmb 04 02 39.1
comp=Z,27nm,0.9s
ADK Adak 72.80 9 P P 04 02 22.1 -0.3
ADK pmax pmax
comp=Z,27nm,0.9s
ADK Adak 72.80 9 P P 04 02 26.9 +4.5
UGL Uglegorsk 72.91 342 *e*P **P 04 02 22.4 -0.7**
UGL *e*S **S 04 11 48.9 +0.3**
UGL pmax pmax
comp=Z,2μm,9.0s
UGL smax smax
comp=E,2μm,15.0s
UGL smax smax
comp=N,2μm,11.0s
PET Petropavlovsk 73.37 354 *ci*P **P 04 02 25.4 -0.4**
PET *i*S **S 04 11 53.7 0.0**
PET pmax pmax
comp=Z,85nm,0.8s
PET pmax pmax
comp=Z,2μm,12.3s
PET MLR MLR
comp=Z,2μm,19.0s
DL2 Dalian 73.51 323 ⇑*i*P **P 04 02 23.6 -3.3**
DL2 PP **PP 04 05 12.6 +1.4**
DL2 S **S 04 11 55.3 -0.5**
DL2 pmax pmax
comp=Z,57nm,1.0s
DL2 pmax pmax
comp=Z,900nm,7.2s
DL2 LR LR
comp=Z,1μm,20.0s
DL2 LR LR
comp=Z,900nm,17.9s
DL2 LR LR
comp=Z,2μm,23.2s
PEA0B Petropavlovsk- 73.56 353 *de*P **P 04 02 25.3 -1.6**
PETK Petropavlovsk- 73.56 353 P P 04 02 26.4 -0.5
comp=Z,41nm,1.0s,baz=141,slow=7.3,SNR=42
PETK LR LR 04 30 05.2
comp=Z,3μm,20.7s,baz=177,slow=32
comp=Z,41nm,1.0s
PETK Petropavlovsk- 73.56 353 P P 04 02 26.4 -0.5
MDJ Mudanjiang 73.73 332 IAmb IAmb 04 02 30.7
comp=Z,37nm,0.9s
MDJ Mudanjiang 73.73 332 P P 04 02 28.3 +0.2
MDJ sP pP 04 02 33.3 +0.1
MDJ S **S 04 12 00.9 +2.7**
MDJ pmax pmax
comp=Z,39nm,1.0s
MDJ pmax pmax
comp=Z,2μm,10.2s
MDJ LR LR
comp=Z,1μm,21.7s
MDJ LR LR
comp=Z,1μm,21.7s
MDJ LR LR
comp=Z,2μm,23.7s
MDJ Mudanjiang 73.73 332 P P 04 02 31.7 +3.6
RPN Rapa Nui 74.06 113 LR LR 04 27 45.0
comp=Z,2μm,21.8s,baz=256,slow=30
TYV Tymovskoe 74.35 343 *eP* **P 04 02 33.6 +2.0**
TYV pmax pmax
comp=Z,19nm,1.3s
TYV pmax pmax
comp=Z,400nm,3.4s
TIA Tai'an 74.37 319 P P 04 02 31.3 -0.8
TIA PP **PP 04 05 18.4 -0.3**

TIA S **S** **04 12 04.8 -1.0**
TIA SS **SS** **04 16 54.4 +1.8**
TIA pmax pmax
comp=Z,2.0nm,0.4s
TIA pmax pmax
comp=Z,280nm,3.5s
TIA LR LR
comp=Z,730nm,16.4s
TIA LR LR
comp=Z,980nm,17.1s
TIA LR LR
comp=Z,1µm,17.8s
SNY Shenyang 74.52 327 ⇓P **P** **04 02 32.9 +0.1**
SNY S **S** **04 12 09.1 +2.0**
SNY SS **SS** **04 16 57.3 +2.7**
SNY pmax pmax
comp=Z,12nm,0.8s
SNY pmax pmax
comp=Z,1µm,9.0s
SNY LR LR
comp=Z,2µm,18.2s
SNY LR LR
comp=Z,900nm,23.1s
SNY LR LR
comp=Z,2µm,20.1s
CN2 Changchun 75.03 329 *e*P **P** **04 02 34.8 -0.9**
CN2 *e*S **S** **04 12 11.4 -1.3**
CN2 *e*SS **SS** **04 17 03.1 +0.8**
CN2 pmax pmax
comp=Z,20nm,1.3s
CN2 pmax pmax
comp=Z,640nm,9.0s
CN2 LR LR
comp=Z,2µm,19.0s
CN2 LR LR
comp=Z,1µm,19.0s
CN2 LR LR
comp=Z,820nm,20.0s
NIKH Nikolski High 75.31 14 P **P** **04 02 36.8 -0.3**
NIKH Nikolski High 75.31 14 P **P** **04 02 35.0 -2.1**
baz=202
BNX BinXian 75.58 331 ⇓P **P** **04 02 37.1 -1.7**
BNX PcP **PcP** **04 02 51.9 +0.2**
BNX PP **PP** **04 05 27.4 -1.3**
BNX pmax pmax
comp=Z,44nm,0.9s
BNX pmax pmax
comp=Z,990nm,9.1s
BNX LR LR
comp=Z,1µm,19.2s
BNX LR LR
comp=Z,2µm,19.5s
BNX LR LR
comp=Z,2µm,21.6s
ENH Enshi 75.97 310 P **P** **04 02 40.1 -1.4**
ENH IAmb IAmb 04 03 10.5
comp=Z,41nm,1.2s
GYA Guiyang 76.04 305 ⇑P **P** **04 02 44.4 +2.3**
GYA PP **PP** **04 05 31.3 -1.8**
GYA S **S** **04 12 23.5 -1.4**
GYA pmax pmax
comp=Z,13nm,1.0s
GYA pmax pmax
comp=Z,1µm,9.4s
GYA LR LR
comp=Z,950nm,21.7s
GYA LR LR
comp=Z,960nm,19.7s
GYA LR LR
comp=Z,2µm,21.6s
GRNR Gornyy 76.15 339 ⇑*i*P **P** **04 02 42.4 +0.4**
GRNR pmax pmax
comp=Z,10.0nm,1.1s
LYN LuoYang 76.34 315 *e*P **P** **04 02 43.4 0.0**
LYN pP pP 04 02 48.0 -0.6
LYN S **S** **04 12 27.9 +0.2**
LYN SKS **SKSac** **04 12 52.9 -1.1**
LYN pmax pmax
comp=Z,50nm,0.8s
LYN pmax pmax
comp=Z,1µm,9.1s
LYN LR LR
comp=Z,1µm,17.5s
LYN LR LR
comp=Z,2µm,18.2s
LYN LR LR
comp=Z,3µm,18.8s
KLR Kul'dur 76.53 336 P **P** **04 02 44.2 0.0**
comp=Z,15nm,1.1s,baz=113,slow=2.3,SNR=20
KLR LR LR 04 33 09.5
comp=Z,3µm,21.0s,baz=142,slow=33
comp=Z,15nm,1.1s
KLR Kul'dur 76.53 336*ce*P **P** **04 02 43.8 -0.4**
KLR pmax pmax
comp=Z,32nm,1.3s
KLR MLR MLR
comp=Z,2µm,18.0s
HNS HongShan 76.62 318 ⇑P **P** **04 02 45.4 +0.4**
HNS S **S** **04 12 30.6 0.0**
HNS SKS **SKSac** **04 12 52.6 -3.3**
HNS pmax pmax
comp=Z,44nm,1.3s
HNS pmax pmax
comp=Z,1µm,8.2s
HNS LR LR
comp=Z,1µm,21.5s
HNS LR LR
comp=Z,1µm,19.5s
HNS LR LR
comp=Z,2µm,20.4s
UNV Unalaska Valle 76.66 15 P **P** **04 02 42.8 -1.9**
baz=204
NKL Nikolayevsk 76.94 343 *e*P **P** **04 02 45.2 -1.2**
NKL *e* 04 05 40.8
NKL *e*S **S** **04 12 33.1 -0.3**
NKL pmax pmax
comp=E,5.0nm,0.9s
NKL pmax pmax
comp=N,171nm,1.1s
NKL pmax pmax
comp=Z,68nm,1.4s
NKL smax smax
comp=N,288nm,2.2s
NKL smax smax
comp=E,4.0nm,2.1s
BJT Baijiatuau 77.39 321 IAmb IAmb 04 03 04.7
comp=Z,34nm,1.1s
BJI Beijing 77.40 321 P **P** **04 02 49.3 0.0**
BJI pP **pP** **04 02 54.8 +0.4**
BJI PcP **PcP** **04 03 02.0 +2.3**
BJI S **S** **04 12 41.3 +2.3**
BJI pmax pmax
comp=Z,24nm,1.4s
BJI pmax pmax
comp=Z,1µm,9.2s
BJI LR LR
comp=Z,380nm,19.4s
BJI LR LR
comp=Z,2µm,19.4s
BJI LR LR
comp=Z,2µm,19.8s
MAW Mawson 77.49 202 P **P** **04 02 50.9 +1.5**
comp=Z,14nm,1.1s,baz=112,slow=8.1,SNR=12
MAW LR LR 04 34 05.2
comp=Z,4µm,18.8s,baz=101,slow=33
comp=Z,14nm,1.1s
MAW Mawson 77.49 202 P **P** **04 02 50.2 +0.8**
baz=77,SNR=7.8
MAW Mawson 77.49 202 P **P** **04 02 49.8 +0.4**
MAW Mawson 77.49 202 P **P** **04 02 49.8 +0.4**
TIY Taiyuan 78.25 318 *e*P **P** **04 02 56.4 +2.2**
TIY S **S** **04 12 50.3 +1.9**
TIY ScS **ScS** **04 13 13.6 0.0**
TIY pmax pmax
comp=Z,31nm,1.4s
TIY pmax pmax
comp=Z,1µm,8.3s
TIY LR LR
comp=Z,720nm,17.2s
TIY LR LR
comp=Z,740nm,17.9s
TIY LR LR
comp=Z,1µm,22.7s
KMI Kunming 78.45 302 ⇑P **P** **04 02 56.6 +0.9**
KMI pP pP 04 03 00.6 +0.3
KMI sP pwP 04 03 06.0 -0.8
KMI S **S** **04 12 52.9 +1.5**
KMI SS **SS** **04 17 54.0 -1.1**
KMI pmax pmax
comp=Z,28nm,1.1s
KMI pmax pmax
comp=Z,940nm,9.0s
KMI LR LR
comp=Z,680nm,21.9s
KMI LR LR
comp=Z,1µm,20.8s
KMI LR LR
comp=Z,1µm,20.2s
XAN Xi'an 78.45 313 ⇑P **P** **04 02 55.0 -0.4**
XAN pP sP 04 03 03.1 +1.2
XAN sP pwP 04 03 06.8 +1.7
XAN PP **PP** **04 05 52.9 -0.3**
XAN S **S** **04 12 49.6 -1.1**
XAN ScS **SKKSac** **04 13 12.5 +1.9**
XAN SS **SS** **04 17 57.3 +2.8**
XAN pmax pmax
comp=Z,26nm,1.0s
XAN pmax pmax
comp=Z,2µm,10.6s
XAN LR LR
comp=Z,1µm,19.6s
XAN LR LR
comp=Z,820nm,21.6s
XAN LR LR
comp=Z,2µm,18.5s
CMAR Chiang Mai Arr 78.55 295 P **P** **04 02 57.6 +1.5**
comp=Z,3.0nm,0.5s,baz=128,slow=4.2,SNR=29
CMAR PKKPbc **PKKPbc** **04 21 52.2 -0.1**
comp=Z,0.8nm,0.3s,baz=301,slow=3.7,SNR=5.6
comp=Z,3.0nm,0.5s
CMAR Chiang Mai Arr 78.55 295 P **P** **04 02 56.7 +0.5**
CMAR Chiang Mai Arr 78.55 295 *i* P **P** **04 02 57.7 +1.5**
CMAR pmax pmax
comp=Z,3.0nm,0.4s
CHTO Chiang Mai 78.70 295 P **P** **04 02 56.8 -0.2**
CHTO Chiang Mai 78.70 295 P **P** **04 02 56.8 -0.2**
CHTO pmax pmax
comp=Z,14nm,0.8s
CHTO Chiang Mai 78.70 295 P **P** **04 02 59.4 +2.4**
comp=Z,11nm,0.9s
CNBA Chernabura Isl 79.36 18 IAMs_20 IAMs_20 04 33 18.5
comp=Z,4µm,20.0s
CHNA Chernabura Isl 79.37 18 P **P** **04 02 57.6 -2.2**
baz=210
SDPT Sand Point 79.57 17 P **P** **04 02 58.3 -2.6**
baz=209
PZH PanZhiHua 79.89 303 P **P** **04 03 03.1 -0.4**
PZH pP **pP** **04 03 05.8 -2.2**
PZH S **S** **04 13 05.1 -1.4**
PZH sS **sS** **04 13 17.0 +1.4**
PZH SS **SS** **04 18 20.6 +4.0**
PZH pmax pmax
comp=Z,20nm,1.3s
PZH pmax pmax
comp=Z,600nm,8.2s
PZH LR LR
comp=Z,630nm,19.6s
PZH LR LR
comp=Z,1µm,19.0s
PZH LR LR
comp=Z,960nm,19.4s
XLT XiLinHaoTe 79.95 324 ⇓*i*P **P** **04 03 04.0 +0.6**
XLT pP pP 04 03 08.6 +0.1
XLT sP PcP 04 03 11.8 +1.0
XLT S **S** **04 13 08.1 +1.8**
XLT sS sS 04 13 15.3 +0.5
XLT pmax pmax
comp=Z,17nm,1.3s
XLT pmax pmax
comp=Z,1µm,9.5s
XLT LR LR
comp=Z,2µm,21.4s
XLT LR LR
comp=Z,2µm,22.2s
CD2 Chengdu 80.50 308 P **P** **04 03 07.8 +1.2**
HHC Hu-ho-hao-te 80.66 320 *e*P **P** **04 03 07.6 +0.3**
HHC S **S** **04 13 13.9 -0.1**
HHC pmax pmax
comp=Z,49nm,1.0s
HHC pmax pmax
comp=Z,2µm,9.3s
HHC LR LR
comp=Z,2µm,19.0s
HHC LR LR
comp=Z,3µm,19.7s
HHC LR LR
comp=Z,4µm,19.7s
MA2 Magadan 80.78 351 LR LR 04 33 56.5
comp=Z,4µm,21.6s,baz=175,slow=32
MA2 Magadan 80.78 351 IAMs_20 IAMs_20 04 32 38.1
comp=Z,5µm,22.0s
BELA Belgrano 2 81.26 175 P **P** **04 03 09.0 -0.8**
CHIR Chirikof Isln 81.41 19 P **P** **04 03 09.7 -1.0**
baz=214
BTO Baotou 81.47 319 *e*P **P** **04 03 10.4 -1.2**
BTO S **S** **04 13 15.9 -6.5**
BTO LR LR
comp=Z,6µm,20.2s
BTO LR LR
comp=Z,4µm,19.0s
HIA Hailar 81.70 330 P **P** **04 03 12.0 -0.5**
HIA IAmb IAmb 04 03 14.9
comp=Z,35nm,1.2s
HIA Hailar 81.70 330 P **P** **04 03 12.0 -0.5**
HIA pmax pmax
comp=Z,35nm,1.2s
ZEA Zeya 81.82 337 *e*P **P** **04 03 13.0 0.0**
ZEA *e*S **S** **04 13 29.6 +4.4**
ZEA pmax pmax
comp=E,200nm,8.8s
ZEA pmax pmax
comp=N,200nm,12.4s
ZEA pmax pmax
comp=Z,700nm,11.5s
ZEA pmax pmax
comp=Z,20nm,1.2s
ZEA smax smax
comp=E,700nm,9.6s
ZEA smax smax
comp=N,800nm,15.6s
SII Sitkinak Islan 82.47 20 P **P** **04 03 17.5 +1.1**
SII Sitkinak Islan 82.47 20 P **P** **04 03 15.3 -1.1**
baz=215
R17K Ugashik Creek 82.70 18 P **P** **04 03 16.6 -0.9**
baz=213
LZH Lanzhou 83.06 312 *e*P **P** **04 03 21.1 +1.0**
LZH sP sP 04 03 27.3 +0.6
LZH PP **PP** **04 06 30.3 -1.2**
LZH *e*S **S** **04 13 39.4 +0.4**
LZH SS **SS** **04 19 06.0 +2.4**
LZH pmax pmax
comp=N,25nm,1.1s
LZH pmax pmax
comp=N,1µm,5.4s
LZH LR LR
comp=N,1µm,13.8s
LZH LR LR
comp=N,1µm,15.2s
LZH LR LR
comp=N,2µm,19.5s
SMAI San Martin Ant 83.11 162 P **P** **04 03 20.2 +0.5**
OHAK Old Harbor 83.30 20 P **P** **04 03 20.0 -0.6**
OHAK Old Harbor 83.30 20 P **P** **04 03 19.7 -0.9**
baz=216
P16K Nushagak River 83.44 17 P **P** **04 03 18.9 -2.3**
baz=211
SEY Seymchan 83.79 352 P **P** **04 03 23.1 +0.1**
comp=N,5.0nm,0.6s,baz=149,slow=4.4,SNR=8.9
SEY LR LR 04 37 19.3
comp=N,3µm,20.9s,baz=162,slow=33
comp=N,5.0nm,0.6s
SEY Seymchan 83.79 352*ce*P **P** **04 03 22.0 -1.0**
SEY pmax pmax
comp=Z,18nm,1.3s
SEY MLR MLR
comp=Z,2µm,18.0s
O16K Kokwok River B 83.90 16 P **P** **04 03 21.6 -2.0**
baz=211
Q18K Katmai Hardscr 83.95 18 P **P** **04 03 22.3 -1.8**
baz=214
KDAK Kodiak Island 83.97 20 P **P** **04 03 24.1 +0.1**
comp=Z,37nm,1.1s,baz=201,slow=3.9,SNR=6.9
KDAK LR LR 04 37 39.8
comp=Z,6µm,18.6s,baz=233,slow=33
comp=Z,37nm,1.1s
KDAK Kodiak Island 83.97 20 *i* P **P** **04 03 25.2 +1.2**
KDAK pmax pmax
comp=Z,35nm,0.8s
KDAK Kodiak Island 83.97 20 P **P** **04 03 23.1 -0.9**
baz=216
P17K Kvichak River 84.00 17 P **P** **04 03 20.7 -3.5**
baz=213
O17K Koliganek Bris 84.31 17 P **P** **04 03 23.7 -2.0**
baz=212
N16K Nishlik Lake 84.48 15 P **P** **04 03 26.6 -0.1**
baz=210
P18K Big Mountain, 84.51 18 P **P** **04 03 24.7 -2.1**
baz=214
Q19K Cape Douglas, 84.58 18 P **P** **04 03 26.8 -0.4**
Q19K Cape Douglas, 84.58 18 P **P** **04 03 24.9 -2.3**
baz=215
Q20K Shuyak Island 84.70 19 P **P** **04 03 27.0 -0.8**
baz=216
O18K Koktuh Hills 84.90 17 P **P** **04 03 27.4 -1.4**
baz=214
GAMB Gambell 84.99 9 P **P** **04 03 27.3 -1.7**
baz=198
GAMB Gambell 84.99 9 ⇑P **P** **04 03 28.4 -0.6**
N18K Kilae Creek 85.40 17 IAmb IAmb 04 03 33.9
comp=Z,31nm,1.1s
N18K IAMs_20 IAMs_20 04 38 03.0
comp=Z,4µm,20.0s
N18K Kilae Creek 85.40 17 P **P** **04 03 30.2 -1.0**
baz=213
O19K Port Alsworth 85.43 17 P **P** **04 03 29.8 -1.5**
baz=214
HOM Homer 85.78 19 P **P** **04 03 31.2 -1.9**
baz=217
O20K Slope Mountain 85.83 18 P **P** **04 03 32.5 -0.9**
baz=216
SVW2 Sparrevohn 85.84 16 P **P** **04 03 33.7 +0.3**
SVW2 IAmb IAmb 04 03 56.6
comp=Z,40nm,1.2s
N19K Bonanza Creek 85.90 17 IAMs_20 IAMs_20 04 34 48.1
comp=Z,3µm,22.0s
N19K Bonanza Creek 85.90 17 P **P** **04 03 32.1 -1.7**
baz=214
BRSE Bradley Lake S 86.12 19 P **P** **04 03 33.4 -1.4**
baz=218
PMSA Palmer Station 86.21 160 LR LR 04 39 26.5
comp=Z,3µm,18.5s,baz=225,slow=34
MCCM Marconi Confer 86.31 47 IAMs_20 IAMs_20 04 36 43.5
comp=Z,3µm,19.0s
SNCC San Nicolas Is 86.45 53 P **P** **04 03 36.5 -0.6**
baz=243
KCPM Cahto Peak 86.59 46 P **P** **04 03 38.3 +0.5**
KMPM Mount Pierce 86.59 45 P **P** **04 03 38.0 +0.3**
HOPS Hopland Field 86.59 46 IAMs_20 IAMs_20 04 37 17.8
comp=Z,3µm,19.0s
SAO San Andreas Ge 86.66 49 IAmb IAmb 04 03 40.4
comp=Z,40nm,1.1s
GDXM Geysers 86.69 47 IAmb IAmb 04 03 42.0
comp=Z,42nm,1.2s
SCZ2 Santa Cruz Isl 86.70 52 P **P** **04 03 36.1 -2.2**
baz=243
ANM Nome 86.73 11 P **P** **04 03 37.4 -0.3**
baz=204
SEW Seward 86.81 19 P **P** **04 03 36.6 -1.6**
baz=219
CAPN Captain Cook N 86.81 18 P **P** **04 03 34.8 -3.4**
baz=217
M19K Big River Lodg 86.83 16 IAMs_20 IAMs_20 04 39 16.6
comp=Z,3µm,20.0s
M19K Big River Lodg 86.83 16 P **P** **04 03 36.6 -1.6**
baz=214
SBC Santa Barbara 86.84 52 P **P** **04 03 38.3 -0.7**
baz=243
JCC Jacoby Creek, 86.85 44 IAMs_20 IAMs_20 04 33 56.6
comp=Z,4µm,21.0s
N20K Mount Spurr 86.85 18 P **P** **04 03 36.6 -1.9**
baz=216
PMPB Monarch Peak 86.86 50 P **P** **04 03 41.4 +2.2**
L19K White Mountain 86.94 16 IAmb IAmb 04 03 43.6
comp=Z,38nm,1.2s
L19K IAMs_20 IAMs_20 04 36 03.5
comp=Z,3µm,20.0s
L19K White Mountain 86.94 16 P **P** **04 03 38.6 -0.2**
baz=214
PKM Mcpherson Peak 86.97 51 P **P** **04 03 38.9 -1.0**
baz=243
O22K Cooper Landing 87.02 19 IAMs_20 IAMs_20 04 37 06.9
comp=Z,4µm,20.0s
O22K Cooper Landing 87.02 19 P **P** **04 03 37.6 -1.6**
baz=218
PAGB Antelope Grade 87.04 50 P **P** **04 03 41.0 +1.1**
PAGB IAmb IAmb 04 03 53.1
comp=Z,15nm,0.9s
SCI2 San Clemente I 87.06 53 P **P** **04 03 38.6 -1.5**
baz=244
M20K Styx River 87.15 17 P **P** **04 03 39.1 -0.8**
baz=215
TNA Tin City 87.23 9 P **P** **04 03 39.7 -0.3**
baz=202
TTA Tatalina 87.27 15 P **P** **04 03 38.9 -1.5**
baz=213
Q23K Middleton Isla 87.30 21 P **P** **04 03 40.8 +0.2**
baz=222
CIS Catalina Islan 87.35 53 P **P** **04 03 40.5 -1.0**
baz=244
ULN Ulaanbaatar 87.36 324 P **P** **04 03 40.7 -0.7**
ULN Ulaanbaatar 87.36 324*ce*P **P** **04 03 41.3 -0.1**
ULN pmax pmax
comp=Z,102nm,1.3s
ULN Ulaanbaatar 87.36 324 ⇑P **P** **04 03 41.3 -0.1**
L20K Farewell, AK 87.44 16 P **P** **04 03 40.7 -0.6**
baz=215
SHL Shillong 87.46 298 IAmb IAmb 04 03 47.2
comp=Z,20nm,0.9s
GTA Gaotai 87.48 314 ⇓P **P** **04 03 42.8 +0.7**
GTA sP pwP 04 03 53.8 +1.9
GTA PP **PP** **04 07 06.4 -0.9**
GTA SKS **SKSac** **04 14 06.4 -2.8**
GTA S **S** **04 14 24.3 +1.8**
GTA sS sS 04 14 34.0 +3.0
GTA SS **SS** **04 20 09.4 +0.9**
GTA pmax pmax
comp=Z,10.0nm,1.2s
GTA pmax pmax
comp=Z,670nm,6.6s
GTA LR LR
comp=Z,680nm,19.3s
GTA LR LR
comp=Z,1µm,21.1s
GTA LR LR
comp=Z,1µm,18.5s
SUA Susitna One 87.49 18 IAmb IAmb 04 03 46.5
comp=Z,28nm,1.2s
SUA IAMs_20 IAMs_20 04 38 18.2
comp=Z,4µm,20.0s
SUA Susitna One 87.49 18 P **P** **04 03 39.4 -2.2**
baz=218
RC01 Rabbit Creek A 87.49 19 P **P** **04 03 40.0 -1.5**
baz=218
YAK Yakutsk 87.60 343 P **P** **04 03 42.2 +0.3**
comp=Z,13nm,0.6s,baz=128,slow=0.6,SNR=5.3
YAK LR LR 04 38 17.0
comp=Z,4µm,21.9s,baz=124,slow=32
comp=Z,13nm,0.6s
YAK Yakutsk 87.60 343 IAMs_20 IAMs_20 04 37 21.1
comp=Z,4µm,22.0s
YAK Yakutsk 87.60 343*c i*P **P** **04 03 41.0 -0.9**
YAK *e* 04 07 02.3
YAK *e*S **SKSac** **04 14 08.5 0.0**
YAK pmax pmax
comp=Z,50nm,0.9s
YAK pmax pmax
comp=N,5.0nm,1.0s
YAK pmax pmax
comp=E,3.0nm,1.1s
YAK pmax pmax
comp=Z,336nm,6.5s
YAK smax smax
comp=N,942nm,12.7s
YAK smax smax
comp=E,659nm,12.1s
YAK MLR MLR
comp=Z,3µm,19.0s
YAK MLR MLR

	comp=N,2µm,19.0s								
YAK					MLR	MLR			
	comp=E,1µm,19.0s								
TROLL	**Troll, Antarti**	**87.64**	**184**		P	**P**	**04 03 41.6**	**-0.9**	
OSI	**Osito Audit: C**	**87.65**	**52**		P	**P**	**04 03 41.9**	**-1.0**	
	baz=244								
SKT	**Skwentna**	**87.68**	**18**		IAMs_20	IAMs_20	04 35 54.1		
	comp=Z,3µm,21.0s								
SKT	**Skwentna**	**87.68**	**18**		P	**P**	**04 03 39.6**	**-2.8**	
	baz=217								
SONM	**Songino Array**	**87.71**	**323**		P	**P**	**04 03 42.6**	**-0.5**	
	comp=Z,35nm,1.0s,baz=142,slow=4.6,SNR=90								
SONM					PKKP	**PKKPbc**	**04 21 30.5**	**-2.1**	
	comp=Z,0.7nm,0.7s,baz=262,slow=3.0,SNR=4.2								
SONM					PKPPKP	**P'P'df**	**04 29 36.7**	**+1.3**	
	comp=Z,0.8nm,0.8s,baz=196,slow=2.7,SNR=4.3								
SONM					LR	LR	04 44 54.6		
	comp=Z,1µm,18.1s,baz=123,slow=37								
	comp=Z,35nm,1.0s								
SONM	**Songino Array**	**87.71**	**323**		P	**P**	**04 03 42.6**	**-0.5**	
DECC	**Green Verdugo**	**87.78**	**52**		P	**P**	**04 03 42.0**	**-1.6**	
	baz=244								
L02F	**Cave Junction**	**87.80**	**43**		P	**P**	**04 03 43.2**	**-0.2**	
	baz=240								
ARVC	**Arvin**	**87.80**	**51**		P	**P**	**04 03 43.2**	**-0.4**	
	baz=244,SNR=5.8								
PASC	**Pasadena Art C**	**87.86**	**52**		IAMs_20	IAMs_20	04 34 27.5		
	comp=Z,3µm,21.0s								
M22K	**Willow**	**87.90**	**18**		P	**P**	**04 03 41.2**	**-2.2**	
	baz=218								
BILL	**Bilibino**	**87.92**	**359**		P	**P**	**04 03 42.5**	**-0.9**	
BILL					IAmb	IAmb	04 03 58.6		
	comp=Z,16nm,0.9s								
BILL	**Bilibino**	**87.92**	**359**	*d*	*i*P	**P**	**04 03 42.1**	**-1.3**	
BILL					*e*		04 03 56.7		
BILL					*e*S	**SKSac**	**04 14 11.5**	**+1.2**	
BILL					*e*PPS	PPS	04 15 49.0		
BILL					pmax	pmax			
	comp=Z,41nm,2.5s								
BILL					MLR	MLR			
	comp=Z,955nm,18.0s								
VOG	**Valley Oaks Go**	**87.93**	**50**		P	**P**	**04 03 43.3**	**-0.9**	
	baz=243								
VES	**Vestal, Richgr**	**87.93**	**51**		P	**P**	**04 03 43.2**	**-0.9**	
	baz=243,SNR=8.8								
ORV	**Oroville**	**87.93**	**46**		IAmb	IAmb	04 03 47.3		
	comp=Z,35nm,1.2s								
NVL	**N'lazarevskaya**	**87.94**	**187**	*e*	P	**P**	**04 03 42.3**	**-1.4**	
NVL				*e*			04 07 08.6		
NVL				*e*S		**SKSac**	**04 14 09.3**	**-1.6**	
NVL					pmax	pmax			
	comp=Z,23nm,0.9s								
NVL					MLR	MLR			
	comp=Z,2µm,17.0s								
HIN	**Hinchinbrook I**	**87.98**	**20**		IAMs_20	IAMs_20	04 40 00.3		
	comp=Z,4µm,20.0s								
CMB	**Columbia Colle**	**88.00**	**48**		IAmb	IAmb	04 03 47.6		
	comp=Z,41nm,1.2s								
CMB					IAMs_20	IAMs_20	04 35 35.0		
	comp=Z,4µm,20.0s								
K02D	**Willamette Mer**	**88.02**	**43**		P	**P**	**04 03 44.0**	**-0.6**	
	baz=240,SNR=6.7								
PMR	**Palmer**	**88.07**	**19**		P	**P**	**04 03 43.3**	**-0.9**	
	baz=219								
J01E	**Myrtle Point**	**88.08**	**42**		P	**P**	**04 03 44.4**	**-0.4**	
	baz=240								
K20K	**Telida**	**88.11**	**16**		IAMs_20	IAMs_20	04 39 00.6		
	comp=Z,3µm,20.0s								
K20K	**Telida**	**88.11**	**16**		P	**P**	**04 03 43.3**	**-1.2**	
	baz=215								
109C	**Camp Elliot, M**	**88.12**	**54**		P	**P**	**04 03 44.1**	**-1.0**	
	baz=245								
KNK	**Knik Glacier**	**88.14**	**19**		IAMs_20	IAMs_20	04 37 42.4		
	comp=Z,3µm,20.0s								
KNK	**Knik Glacier**	**88.14**	**19**		P	**P**	**04 03 42.9**	**-1.7**	
	baz=220								
GLI	**Glacier Island**	**88.15**	**20**		IAMs_20	IAMs_20	04 37 19.9		
	comp=Z,4µm,20.0s								
GLI	**Glacier Island**	**88.15**	**20**		P	**P**	**04 03 42.8**	**-1.9**	
	baz=221								
YBH	**Yreka Blue Hor**	**88.17**	**44**		LR	LR	04 35 12.5		
	comp=Z,5µm,20.9s,baz=234,slow=30								
YBH	**Yreka Blue Hor**	**88.17**	**44**		IAMs_20	IAMs_20	04 35 22.4		
	comp=Z,5µm,20.0s								
PPLA	**Purkeypile**	**88.23**	**17**		P	**P**	**04 03 42.6**	**-2.6**	
	baz=216								
FID	**Port Fidalgo**	**88.25**	**20**		IAMs_20	IAMs_20	04 40 29.1		
	comp=Z,4µm,20.0s								
SNAA	**Sanae**	**88.27**	**183**		P	**P**	**04 03 44.8**	**-0.6**	
SNAA	**Sanae**	**88.27**	**183**		LR	LR	04 43 23.4		
	comp=Z,3µm,18.0s,baz=179,slow=36								
SNAA	**Sanae**	**88.27**	**183**		P	**P**	**04 03 43.9**	**-1.5**	
SNAA					IAmb	IAmb	04 04 02.0		
	comp=Z,29nm,1.1s								
SNAA					IAMs_20	IAMs_20	04 43 48.3		
	comp=Z,3µm,18.0s								
SNAA	**Sanae**	**88.27**	**183**	*ce*	P	**P**	**04 03 44.2**	**-1.2**	
SNAA					pmax	pmax			
	comp=Z,36nm,1.3s								
SNAA	**Sanae**	**88.27**	**183**	⇑	P	**P**	**04 03 44.2**	**-1.2**	
SNAA				⇓	P	**P**	**04 03 44.7**	**-0.6**	
BFSC	**Mount Baldy Ra**	**88.28**	**53**		P	**P**	**04 03 44.0**	**-2.1**	
	baz=244								
ISA	**Isabella, Lake**	**88.30**	**51**		P	**P**	**04 03 45.9**	**-0.2**	
	baz=244,SNR=21								
EDW2	**Edwards Air Fo**	**88.31**	**52**		P	**P**	**04 03 45.7**	**-0.4**	
	baz=244,SNR=9.4								
EYAK	**Cordova Ski Ar**	**88.34**	**21**		P	**P**	**04 03 46.4**	**+0.9**	
	baz=222								
MURC	**Murrieta**	**88.35**	**53**		P	**P**	**04 03 46.3**	**0.0**	
	baz=244								
CUT	**Chulitna**	**88.37**	**18**		IAMs_20	IAMs_20	04 39 07.7		
	comp=Z,3µm,20.0s								
CUT	**Chulitna**	**88.37**	**18**		P	**P**	**04 03 45.4**	**-0.2**	
	baz=218								
HUMO	**Hull Mountain**	**88.43**	**43**		IAmb	IAmb	04 03 49.6		
	comp=Z,35nm,1.1s								
SML	**Sawmill**	**88.48**	**19**		P	**P**	**04 03 47.2**	**+0.9**	
SML					IAmb	IAmb	04 03 49.6		
	comp=Z,34nm,1.3s								
SML					IAMs_20	IAMs_20	04 37 55.4		
	comp=Z,4µm,20.0s								
SML	**Sawmill**	**88.48**	**19**		P	**P**	**04 03 48.7**	**+2.5**	
SML					pmax	pmax			
	comp=Z,34nm,1.3s								
SML	**Sawmill**	**88.48**	**19**		P	**P**	**04 03 45.9**	**-0.3**	
	baz=220								
GCSA	**Galena City Sc**	**88.61**	**14**		P	**P**	**04 03 45.9**	**-0.7**	
	baz=212								
I02E	**Swisshome, OR**	**88.61**	**42**		IAMs_20	IAMs_20	04 35 20.9		
	comp=Z,4µm,20.0s								
I02E	**Swisshome, OR**	**88.61**	**42**		P	**P**	**04 03 46.5**	**-0.7**	
	baz=240								
MONP2	**Monument Peak**	**88.64**	**54**		P	**P**	**04 03 47.3**	**-0.6**	
	baz=245								
M23K	**Glacier View**	**88.65**	**19**		P	**P**	**04 03 45.3**	**-1.7**	
	baz=220								
L04D	**Klamath Falls**	**88.67**	**44**		IAMs_20	IAMs_20	04 35 37.6		
	comp=Z,4µm,20.0s								
L04D	**Klamath Falls**	**88.67**	**44**		P	**P**	**04 03 46.5**	**-1.2**	
	baz=241								
CAST	**Castle Rocks**	**88.68**	**16**		P	**P**	**04 03 44.3**	**-2.8**	
	baz=216								
I03D	**Drain, OR**	**88.72**	**42**		P	**P**	**04 03 47.3**	**-0.4**	
	baz=240								
MDPB	**Devils Postpil**	**88.74**	**49**		IAmb	IAmb	04 03 51.7		
	comp=Z,35nm,1.2s								
J20K	**Nowinta River**	**88.77**	**15**		P	**P**	**04 03 46.0**	**-1.5**	
	baz=214								
IKP	**In-Ko-Pah, Jac**	**88.78**	**55**		P	**P**	**04 03 48.0**	**-0.4**	
	baz=245								
OMMB	**Old Mammoth Mi**	**88.78**	**49**		IAmb	IAmb	04 03 52.1		
	comp=Z,31nm,1.2s								
LRMC	**Laurel Mtn Rad**	**88.80**	**51**		P	**P**	**04 03 48.0**	**-0.5**	
	baz=244,SNR=5.9								
SCM	**Sheep Creek Mo**	**88.81**	**19**		P	**P**	**04 03 47.5**	**-0.4**	
	baz=221								
MPK	**Martis Peak**	**88.82**	**47**		P	**P**	**04 03 48.9**	**+0.2**	
BBRC	**Big Bear Solar**	**88.84**	**53**		P	**P**	**04 03 48.1**	**-0.8**	
	baz=245								
BEKR	**Beckworth**	**88.86**	**47**		IAmb	IAmb	04 03 52.0		
	comp=Z,33nm,1.3s								
VNA3	**Neumayer Olymp**	**88.87**	**180**		P	**P**	**04 03 47.5**	**-0.7**	
MLAC	**Mammoth, Mammo**	**88.91**	**49**		P	**P**	**04 03 49.0**	**-0.1**	
	baz=244								
PFO	**Pinyon Flats O**	**88.91**	**54**		LR	LR	04 34 50.3		
	comp=Z,3µm,21.6s,baz=255,slow=30								
PFO	**Pinyon Flats O**	**88.91**	**54**		P	**P**	**04 03 48.7**	**-0.4**	
PFO					IAmb	IAmb	04 03 52.4		
	comp=Z,26nm,1.2s								
PFO	**Pinyon Flats O**	**88.91**	**54**		IAMs_20	IAMs_20	04 34 26.5		
	comp=Z,3µm,21.0s								
PFO	**Pinyon Flats O**	**88.91**	**54**	*c*	*i*P	**P**	**04 03 47.8**	**-1.3**	
PFO					pmax	pmax			
	comp=Z,36nm,1.3s								
PFO	**Pinyon Flats O**	**88.91**	**54**		P	**P**	**04 03 48.7**	**-0.4**	
	baz=245,SNR=6.9								
TPFO	**Pinon Flats**	**88.92**	**54**		P	**P**	**04 03 48.6**	**-0.5**	
	baz=245,SNR=7.9								
YUH	**Yuha Desert**	**88.92**	**55**		IAmb	IAmb	04 04 15.4		
	comp=Z,34nm,1.4s								
CWC	**Cottonwood Cre**	**88.93**	**50**		P	**P**	**04 03 47.8**	**-1.4**	
	baz=244								
KLU	**Klutina**	**88.99**	**20**		IAMs_20	IAMs_20	04 41 15.0		
	comp=Z,3µm,20.0s								
KLU	**Klutina**	**88.99**	**20**		P	**P**	**04 03 46.9**	**-1.8**	
	baz=222								
CHUM	**Lake Minchumin**	**89.00**	**16**		P	**P**	**04 03 47.2**	**-1.3**	
	baz=216								
BMRM	**Bremner River**	**89.03**	**21**		IAMs_20	IAMs_20	04 39 25.2		
	comp=Z,4µm,20.0s								
BMRM	**Bremner River**	**89.03**	**21**		P	**P**	**04 03 47.6**	**-1.3**	
	baz=223								
RRX	**Edison Barstow**	**89.05**	**52**		P	**P**	**04 03 48.3**	**-1.2**	
	baz=245								
SNH	**Sunshine Point**	**89.06**	**22**		IAMs_20	IAMs_20	04 39 47.1		
	comp=Z,4µm,20.0s								
TIN	**Tinemaha, Big**	**89.09**	**50**		P	**P**	**04 03 49.3**	**-0.5**	
	baz=244,SNR=7.5								
KTH	**Kantishna Hill**	**89.10**	**17**		IAmb	IAmb	04 04 22.3		
	comp=Z,11nm,0.5s								
KTH					IAMs_20	IAMs_20	04 39 59.9		
	comp=Z,3µm,20.0s								
SWSC	**Sam W. Stewart**	**89.14**	**54**		P	**P**	**04 03 49.1**	**-0.9**	
	baz=245								
COR	**Corvallis**	**89.18**	**41**		IAMs_20	IAMs_20	04 36 56.1		
	comp=Z,4µm,20.0s								
MPMC	**Manual Prospec**	**89.19**	**51**		P	**P**	**04 03 49.7**	**-0.7**	
	baz=244,SNR=26								
TRF	**Thorofare Moun**	**89.20**	**17**		IAMs_20	IAMs_20	04 37 05.3		
	comp=Z,3µm,21.0s								
TRF	**Thorofare Moun**	**89.20**	**17**		P	**P**	**04 03 47.4**	**-2.3**	
	baz=218								
WAT1	**Susitna Watana**	**89.20**	**18**		P	**P**	**04 03 47.7**	**-2.0**	
	baz=220								
K04D	**Chiloquin, OR**	**89.22**	**44**		P	**P**	**04 03 49.9**	**-0.4**	
	baz=242								
YERR	**Yerington**	**89.23**	**48**		IAmb	IAmb	04 04 16.7		
	comp=Z,43nm,1.5s								
WAT6	**Susitna Watana**	**89.25**	**19**		P	**P**	**04 03 47.7**	**-2.3**	
	baz=220								
J04D	**Umpqua Nationa**	**89.28**	**43**		P	**P**	**04 03 50.1**	**-0.6**	
	baz=241,SNR=14								
I04A	**Tendick Farm,**	**89.36**	**42**		P	**P**	**04 03 49.7**	**-1.1**	
	baz=241,SNR=9.1								
GSC	**Goldstone, Bar**	**89.37**	**52**		IAmb	IAmb	04 04 18.1		
	comp=Z,61nm,1.7s								
GSC	**Goldstone, Bar**	**89.37**	**52**		P	**P**	**04 03 50.5**	**-0.6**	
	baz=245								
MESA	**MESA**	**89.38**	**22**		IAMs_20	IAMs_20	04 43 03.4		
	comp=Z,3µm,18.0s								
MESA	**MESA**	**89.38**	**22**		P	**P**	**04 03 48.7**	**-2.0**	
	baz=225								
BELC	**Belle Mtn. Jos**	**89.42**	**53**		P	**P**	**04 03 51.3**	**-0.2**	
	baz=245,SNR=13								
PAHR	**Pah Rah Range**	**89.45**	**47**		P	**P**	**04 03 50.9**	**-0.6**	
PAHR					IAmb	IAmb	04 03 54.9		
	comp=Z,45nm,1.2s								
VNA1	**Neumayer--Stat**	**89.45**	**181**		P	**P**	**04 03 50.0**	**-0.8**	
TGL	**Tana Glacier**	**89.48**	**22**		IAMs_20	IAMs_20	04 40 47.1		
	comp=Z,3µm,19.0s								
N25K	**Chitina, Valde**	**89.50**	**20**		IAMs_20	IAMs_20	04 41 08.6		
	comp=Z,3µm,20.0s								
N25K	**Chitina, Valde**	**89.50**	**20**		P	**P**	**04 03 49.2**	**-1.9**	
	baz=223								
H04D	**Lebanon**	**89.50**	**42**		IAMs_20	IAMs_20	04 44 04.7		
	comp=Z,4µm,18.0s								
H04D	**Lebanon**	**89.50**	**42**		P	**P**	**04 03 51.1**	**-0.3**	
	baz=241,SNR=7.0								
G03D	**McMinnville, O**	**89.52**	**41**		IAMs_20	IAMs_20	04 37 13.9		
	comp=Z,4µm,20.0s								
G03D	**McMinnville, O**	**89.52**	**41**		P	**P**	**04 03 51.8**	**+0.4**	
	baz=240								
HEC	**Hector,Ludlow**	**89.52**	**53**		P	**P**	**04 03 51.2**	**-0.6**	
	baz=245								
BPAW	**Bear Paw Mtn.**	**89.52**	**16**		IAMs_20	IAMs_20	04 41 19.9		
	comp=Z,3µm,19.0s								
BPAW	**Bear Paw Mtn.**	**89.52**	**16**		P	**P**	**04 03 49.1**	**-1.9**	
	baz=217								
ISLE	**Juper Island**	**89.54**	**22**		IAMs_20	IAMs_20	04 40 10.7		
	comp=Z,4µm,20.0s								
GOMU	**GeErMu**	**89.56**	**309**		P	**P**	**04 03 51.8**	**-0.5**	
GOMU					pP	PcP	04 03 55.0	+1.3	
GOMU					sP	sP	04 03 58.9	0.0	
GOMU					pmax	pmax			
	comp=Z,4.0nm,1.3s								
GOMU					pmax	pmax			
	comp=Z,620nm,9.1s								
GOMU					LR	LR			
	comp=Z,780nm,20.4s								
GOMU					LR	LR			
	comp=Z,800nm,20.3s								
GOMU					LR	LR			
	comp=Z,820nm,20.2s								
RND	**Reindeer**	**89.56**	**18**		IAmb	IAmb	04 04 10.2		
	comp=Z,28nm,1.5s								
RYN	**Ryan**	**89.57**	**48**		IAmb	IAmb	04 03 55.3		
	comp=Z,29nm,1.2s								
YAH	**Yahtse**	**89.58**	**22**		IAMs_20	IAMs_20	04 42 31.6		
	comp=Z,3µm,18.0s								
QSM	**Queen of Sheba**	**89.61**	**51**		IAmb	IAmb	04 03 55.3		
	comp=Z,38nm,1.2s								
VRDI	**Verde Repeater**	**89.61**	**21**		IAMs_20	IAMs_20	04 38 03.4		
	comp=Z,2µm,19.0s								
NVAR	**Mina Array Bea**	**89.64**	**49**		P	**P**	**04 03 51.8**	**-0.7**	
	comp=Z,26nm,1.1s,baz=229,slow=6.7,SNR=52								
NVAR					LR	LR	04 35 53.6		
	comp=Z,5µm,20.9s,baz=258,slow=30								
	comp=Z,26nm,1.1s								
NVAR	**Mina Array Bea**	**89.64**	**49**		P	**P**	**04 03 51.6**	**-0.8**	
GLB	**Gilahina Butte**	**89.64**	**21**		IAMs_20	IAMs_20	04 39 44.3		
	comp=Z,3µm,20.0s								
GRAC	**Grapevine Rang**	**89.68**	**50**		IAmb	IAmb	04 04 18.8		
	comp=Z,30nm,0.9s								
GRAC	**Grapevine Rang**	**89.68**	**50**		P	**P**	**04 03 52.3**	**-0.2**	
	baz=244,SNR=14								
BC3	**Big Chuckawall**	**89.69**	**54**		P	**P**	**04 03 52.5**	**-0.2**	
	baz=246,SNR=14								
SRIG	**Santa Rosalia**	**89.71**	**61**		IAmb	IAmb	04 03 55.4		
	comp=Z,19nm,0.9s								
DHY	**Denali Highway**	**89.74**	**18**		P	**P**	**04 03 51.6**	**-0.6**	
	baz=221								
NV11	**Mina Array Sit**	**89.74**	**49**		IAmb	IAmb	04 03 55.6		
	comp=Z,36nm,1.2s								
MCK	**McKinley**	**89.80**	**17**		P	**P**	**04 03 50.4**	**-1.9**	
	baz=219								
FURC	**Furnace Creek,**	**89.82**	**51**		P	**P**	**04 03 52.8**	**-0.3**	
	baz=245,SNR=21								
K05A	**Summer Lake**	**89.83**	**44**		IAmb	IAmb	04 03 56.8		
	comp=Z,45nm,1.1s								
MOD	**Modoc Plateau**	**89.83**	**45**		IAmb	IAmb	04 03 55.9		
	comp=Z,41nm,1.2s								
MOD					IAMs_20	IAMs_20	04 36 28.5		
	comp=Z,4µm,20.0s								
GRNC	**Granite Creek**	**89.83**	**22**		IAMs_20	IAMs_20	04 40 50.5		
	comp=Z,3µm,19.0s								
GWY	**Greenwater Val**	**89.84**	**51**		P	**P**	**04 03 52.1**	**-1.4**	
GWY					IAmb	IAmb	04 03 55.8		
	comp=Z,26nm,1.1s								
TABL	**Table Mountain**	**89.85**	**22**		IAMs_20	IAMs_20	04 43 08.9		
	comp=Z,3µm,19.0s								
CRAG	**Craig**	**89.86**	**29**		P	**P**	**04 03 52.6**	**-0.1**	
	baz=233								
MCARA	**McCarthy VSAT**	**89.86**	**21**		P	**P**	**04 03 52.2**	**-0.5**	
	baz=224								
J05D	**Fort Rock, OR**	**89.87**	**43**		P	**P**	**04 03 53.2**	**-0.1**	
	baz=242,SNR=41								
SIT	**Sitka**	**89.87**	**27**		P	**P**	**04 03 51.8**	**-1.0**	
	baz=231								
GLA	**Glamis**	**89.92**	**55**		P	**P**	**04 03 53.5**	**-0.1**	
GLA					IAmb	IAmb	04 04 21.3		
	comp=Z,44nm,1.1s								
GLA	**Glamis**	**89.92**	**55**		P	**P**	**04 03 53.6**	**-0.1**	
GLA					pmax	pmax			
	comp=Z,44nm,1.2s								
GLA	**Glamis**	**89.92**	**55**		P	**P**	**04 03 53.7**	**0.0**	
	baz=246,SNR=11								
H04A	**Detroit Lake**	**89.93**	**42**		IAmb	IAmb	04 03 56.4		
	comp=Z,34nm,1.1s								
PNL	**Peninsula**	**89.95**	**23**		P	**P**	**04 03 52.3**	**-0.9**	
	baz=228								
BOD	**Bodaibo**	**89.97**	**334**	*e*	P	**P**	**04 03 52.5**	**-0.7**	
BOD					pmax	pmax			
	comp=Z,44nm,1.3s								
BWN	**Browne**	**89.99**	**17**		IAMs_20	IAMs_20	04 41 31.6		
	comp=Z,3µm,20.0s								
GMRC	**Granite Mounta**	**90.00**	**53**		P	**P**	**04 03 53.7**	**-0.4**	
	baz=245,SNR=7.9								
SHOC	**Shoshone, Teco**	**90.01**	**52**		P	**P**	**04 03 53.4**	**-0.7**	
	baz=245								
KVN	**Kaiserville**	**90.05**	**48**		IAmb	IAmb	04 03 57.5		
	comp=Z,30nm,1.1s								
BCPM	**Bancas Point**	**90.06**	**23**		IAMs_20	IAMs_20	04 36 40.6		
	comp=Z,3µm,21.0s								
TUQ	**Turquoise Moun**	**90.08**	**52**		P	**P**	**04 03 53.9**	**-0.6**	
	baz=245,SNR=16								
BARN	**Barnard Glacie**	**90.10**	**22**		IAMs_20	IAMs_20	04 41 07.5		
	comp=Z,3µm,19.0s								
F04D	**Rainier, OR**	**90.10**	**40**		P	**P**	**04 03 54.1**	**0.0**	
	baz=241								
LPIG	**La Paz**	**90.11**	**64**		LR	LR	04 36 00.6		
	comp=Z,4µm,20.0s,baz=246,slow=30								
IRM	**Iron Mountain**	**90.13**	**54**		P	**P**	**04 03 54.6**	**-0.1**	
	baz=246,SNR=18								
I21K	**Tanana**	**90.14**	**15**		IAmb	IAmb	04 04 03.3		
	comp=Z,19nm,0.9s								
I21K	**Tanana**	**90.14**	**15**		P	**P**	**04 03 52.1**	**-1.7**	
	baz=216								
CTG	**Chitna Glacier**	**90.14**	**22**		P	**P**	**04 03 51.9**	**-2.3**	
	baz=226								
CTGM	**Chitina Glacie**	**90.15**	**22**		IAMs_20	IAMs_20	04 41 08.7		
	comp=Z,3µm,19.0s								
WISH	**Wishkah**	**90.15**	**39**		P	**P**	**04 03 55.4**	**+1.0**	
LOGN	**Logan Glacier**	**90.16**	**22**		IAMs_20	IAMs_20	04 40 41.2		
	comp=Z,3µm,20.0s								
TLCB	**Telegraph Cove**	**90.19**	**35**		IAmb	IAmb	04 04 05.1		
	comp=Z,20nm,1.1s								
NLWA	**Neilton Lookou**	**90.23**	**39**		IAmb	IAmb	04 03 57.3		
	comp=Z,25nm,1.1s								
NLWA					IAMs_20	IAMs_20	04 37 08.8		
	comp=Z,4µm,20.0s								
PAX	**Paxson**	**90.23**	**19**		P	**P**	**04 03 52.4**	**-2.1**	
	baz=222								
TPH	**Tonopah**	**90.25**	**49**		P	**P**	**04 03 54.8**	**-0.5**	
TPH	**Tonopah**	**90.25**	**49**		P	**P**	**04 03 54.8**	**-0.5**	
TPH					pmax	pmax			
	comp=Z,156nm,1.2s								
SLBS	**Sierra La Lagu**	**90.26**	**65**		P	**P**	**04 03 56.2**	**+0.7**	
SLBS					IAmb	IAmb	04 03 59.1		
	comp=Z,24nm,1.1s								
PINE	**Pine Mountain**	**90.29**	**43**		IAmb	IAmb	04 03 57.8		
	comp=Z,36nm,1.1s								
I05D	**Terrebonne, OR**	**90.30**	**42**		P	**P**	**04 03 54.9**	**-0.3**	
	baz=242,SNR=7.9								
H21K	**Melozitna Rive**	**90.32**	**15**		P	**P**	**04 03 53.2**	**-1.6**	
	baz=216								
RDOG	**Red Dog Mine**	**90.32**	**10**		P	P	04 03 48.5	-6.1	
	baz=206								
MLY	**Manley**	**90.33**	**16**		IAMs_20	IAMs_20	04 41 22.2		
	comp=Z,2µm,20.0s								
MLY	**Manley**	**90.33**	**16**		P	**P**	**04 03 52.9**	**-2.0**	
	baz=218								
BBB	**Bella Bella**	**90.39**	**33**		LR	LR	04 39 04.5		
	comp=Z,3µm,18.9s,baz=251,slow=32								
BBB	**Bella Bella**	**90.39**	**33**		P	**P**	**04 03 55.6**	**+0.3**	
BBB					IAmb	IAmb	04 04 05.9		
	comp=Z,29nm,1.1s								
GRNB	**Grenville Isla**	**90.40**	**31**		IAmb	IAmb	04 04 06.3		
	comp=Z,21nm,1.1s								
NEA2	**Nenana**	**90.43**	**17**		P	**P**	**04 03 52.2**	**-3.0**	
	baz=219								
BLYC	**Blythe**	**90.44**	**54**		IAmb	IAmb	04 03 58.5		
	comp=Z,28nm,1.1s								
TPNV	**Topopah Spring**	**90.47**	**51**		IAmb	IAmb	04 04 24.1		
	comp=Z,27nm,1.1s								
TPNV					IAMs_20	IAMs_20	04 36 54.7		
	comp=Z,4µm,20.0s								
TPNV	**Topopah Spring**	**90.47**	**51**		P	**P**	**04 03 56.0**	**-0.3**	
	baz=245,SNR=29								
HOOD	**Mount Hood Mea**	**90.56**	**41**		IAmb	IAmb	04 04 19.7		
	comp=Z,28nm,0.8s								
M26K	**Nabesna, AK**	**90.60**	**20**		P	**P**	**04 03 54.5**	**-1.7**	
	baz=224								
WRH	**Wood River Hil**	**90.60**	**17**		IAMs_20	IAMs_20	04 40 58.5		
	comp=Z,5µm,20.0s								
GO10	**Punta Arenas**	**90.61**	**149**		P	**P**	**04 03 57.2**	**+0.6**	
113A	**Mohawk Valley,**	**90.63**	**55**		IAmb	IAmb	04 04 24.2		
	comp=Z,30nm,1.5s								
CBB	**Campbell River**	**90.72**	**36**		IAmb	IAmb	04 03 59.9		
	comp=Z,38nm,1.2s								
G05D	**Wamic, OR**	**90.74**	**42**		P	**P**	**04 03 56.4**	**-0.8**	
	baz=242								
PALK	**Pallekele**	**90.76**	**277**		LR	LR	04 47 52.0		
	comp=Z,1µm,19.0s,baz=217,slow=38								
K24K	**Donnelly Dome**	**90.76**	**18**		P	**P**	**04 03 56.3**	**-0.5**	
	baz=222								

comp=Z,32nm,1.1s
S11A Rachel 91.13 50 P P 04 03 58.9 -0.5
S11A IAmb IAmb 04 04 25.4
comp=Z,31nm,1.1s
ILAR Eielson Array 91.17 17 P P 04 03 56.6 -2.0
comp=Z,2.3nm,0.8s,baz=238,slow=4.7,SNR=15
ILAR LR LR 04 39 28.4
comp=Z,5µm,20.1s,baz=219,slow=32
comp=Z,2.3nm,0.8s
ILAR Eielson Array 91.17 17 P P 04 03 56.7 -2.0
WVOR Wild Horse Val 91.18 45 IAmb IAmb 04 04 02.8
comp=Z,25nm,1.1s
WVOR IAMs_20 IAMs_20 04 37 23.1
comp=Z,4µm,20.0s
WVOR Wild Horse Val 91.18 45 P P 04 03 59.4 0.0
YUK6 Outpost Mounta 91.19 23 P P 04 03 58.4 -0.8
baz=228
BMN Battle Mountai 91.26 47 IAmb IAmb 04 04 03.3
comp=Z,25nm,1.1s
H23K Yukon River 91.27 16 P P 04 04 01.4 +2.2
H23K IAMs_20 IAMs_20 04 41 10.0
comp=Z,4µm,20.0s
H23K Yukon River 91.27 16 P P 04 03 57.4 -1.8
baz=219
POKR Poker Flat Res 91.28 17 IAMs_20 IAMs_20 04 42 26.4
comp=Z,4µm,20.0s
POKR Poker Flat Res 91.28 17 P P 04 03 56.5 -2.7
baz=220
BVCY Beaver Creek 91.32 21 P P 04 03 57.3 -2.2
baz=226
I07A Izee 91.35 43 IAmb IAmb 04 04 03.0
comp=Z,29nm,1.2s
YUK4 Talbot Arm 91.36 22 P P 04 03 59.0 -0.9
baz=228
SKAG Skagway 91.39 25 IAmb IAmb 04 04 17.4
comp=Z,14nm,0.8s
SKAG Skagway 91.39 25 P P 04 03 58.0 -1.8
baz=231
HSIG 91.41 60 IAmb IAmb 04 04 03.2
comp=Z,18nm,1.0s
SCRK Sand Creek 91.43 19 P P 04 03 57.6 -2.5
baz=224
HYT Haines Junctio 91.43 23 P P 04 03 58.2 -2.0
baz=229
L27K Beaver Creek, 91.45 20 IAMs_20 IAMs_20 04 41 04.1
comp=Z,3µm,20.0s
L27K Beaver Creek, 91.45 20 P P 04 03 58.1 -2.0
baz=226
W13A Hualapai Mount 91.46 53 P P 04 04 00.4 -0.6
W13A IAmb IAmb 04 04 04.6
comp=Z,18nm,1.2s
J25K Salcha River, 91.48 18 P P 04 03 58.9 -1.3
baz=222
R11A Troy Canyon, C 91.53 50 P P 04 04 01.1 -0.2
baz=246,SNR=9.5
Y14A Wickenburg 91.67 54 P P 04 04 02.4 +0.5
J08A Circle Bar Ran 91.69 44 IAmb IAmb 04 04 34.1
comp=Z,15nm,0.9s
H24K Noodor Dome 91.71 16 IAMs_20 IAMs_20 04 42 37.8
comp=Z,2µm,20.0s
H24K Noodor Dome 91.71 16 P P 04 03 59.6 -1.7
baz=220
F07A Phinny Hill Vi 91.90 41 P P 04 04 02.5 0.0
F07A IAmb IAmb 04 04 05.9
comp=Z,26nm,1.3s
O30N Mendenhall 91.93 24 P P 04 04 01.2 -1.2
baz=230
J26L Joseph Creek 91.94 19 IAMs_20 IAMs_20 04 40 23.8
comp=Z,3µm,21.0s
J26L Joseph Creek 91.94 19 P P 04 04 01.6 -0.8
baz=224
N30M Aishikik Lake 92.00 23 P P 04 04 00.8 -1.9
baz=230
T35M Bob Quinn 92.05 29 P P 04 04 02.2 -0.8
baz=235
K27K Chicken 92.05 19 IAMs_20 IAMs_20 04 41 58.0
comp=Z,4µm,20.0s
K27K Chicken 92.05 19 P P 04 04 01.9 -0.9
baz=225
LTY Liberty 92.08 40 P P 04 04 02.6 -0.8
LTY IAmb IAmb 04 04 28.9
comp=Z,14nm,0.9s
P32M Atlin 92.11 25 P P 04 04 01.5 -1.7
baz=232
COLD Coldfoot 92.21 15 P P 04 04 02.4 -1.1
baz=218
G08A Pilot Rock 92.24 42 IAmb IAmb 04 04 30.1
comp=Z,16nm,1.0s
E07A Sunnyside 92.25 41 IAmb IAmb 04 04 07.6
comp=Z,28nm,1.3s
WHY Whitehorse 92.32 24 P P 04 04 04.5 +0.2
baz=232
HAWA Hanford 92.37 41 P P 04 04 04.2 -0.6
HAWA IAmb IAmb 04 04 08.2
comp=Z,31nm,1.2s
HAWA IAMs_20 IAMs_20 04 40 39.6
comp=Z,4µm,19.0s
N31M Braeburn, Yuko 92.50 23 IAMs_20 IAMs_20 04 46 22.1
comp=Z,3µm,18.0s
N31M Braeburn, Yuko 92.50 23 P P 04 04 03.3 -1.7
baz=231
I26K Coal Creek Min 92.64 18 IAMs_20 IAMs_20 04 43 17.2
comp=Z,4µm,20.0s
LCMT Little Creek M 92.70 52 IAmb IAmb 04 04 33.5
comp=Z,19nm,1.2s
MOY Mondy 92.70 325 *e*P **P 04 04 05.8 -0.4**
MOY pmax pmax
comp=Z,38nm,1.6s
E08A Dider Farm, El 92.71 41 P P 04 04 05.7 -0.5
E08A IAmb IAmb 04 04 09.7
comp=Z,30nm,1.4s
ELK Elko 92.76 48 LR LR 04 40 23.3
comp=Z,3µm,18.9s,baz=236,slow=32
ELK Elko 92.76 48 IAMs_20 IAMs_20 04 43 38.2
comp=Z,3µm,18.0s
TUC Tucson 92.77 57 P P 04 04 06.6 -0.4
TUC IAmb IAmb 04 04 09.5
comp=Z,15nm,1.1s
TUC Tucson 92.77 57 IAMs_20 IAMs_20 04 43 41.8
comp=Z,3µm,18.0s
TUC Tucson 92.77 57 P P 04 04 06.6 -0.4
TUC pmax pmax
comp=Z,15nm,1.1s
TUC Tucson 92.77 57 P P 04 04 07.0 0.0
baz=248
CCUT Cedar City 92.82 51 IAmb IAmb 04 04 34.5
comp=Z,17nm,1.3s
M30M Minto, Yukon 92.83 22 IAmb IAmb 04 04 16.4
comp=Z,13nm,1.1s
M30M IAMs_20 IAMs_20 04 42 06.7
comp=Z,4µm,20.0s
M30M Minto, Yukon 92.83 22 P P 04 04 04.4 -2.1
baz=230
P33M Teslin, Yukon 92.85 25 IAMs_20 IAMs_20 04 37 53.5
comp=Z,4µm,21.0s
P33M Teslin, Yukon 92.85 25 P P 04 04 05.8 -0.9
baz=233
DAWY Dawson 92.94 20 P P 04 04 04.7 -2.3
baz=228
LLLB Lillooet 92.94 37 P P 04 04 06.5 -0.8
LLLB IAmb IAmb 04 04 09.6
comp=Z,21nm,1.4s
DLBC Dease Lake 92.98 27 LR LR 04 38 19.1
comp=Z,6µm,20.5s,baz=258,slow=31
DLBC Dease Lake 92.98 27 IAmb IAmb 04 04 26.6
comp=Z,14nm,1.1s
DLBC Dease Lake 92.98 27 P P 04 04 06.4 -0.9
baz=236
SZCU Shurtz Canyon 93.04 51 IAmb IAmb 04 04 35.5
comp=Z,42nm,1.8s
X16A Lo Mia Camp, P 93.05 55 IAmb IAmb 04 04 25.9
comp=Z,18nm,1.1s
BMO Blue Mountains 93.10 43 P P 04 04 07.6 -0.6
U15A North Rim 93.18 52 IAmb IAmb 04 04 33.5
comp=Z,37nm,1.6s
B08A Colville Reser 93.38 39 P P 04 04 08.0 -1.4
M31M Drury Creek, Y 93.46 23 IAMs_20 IAMs_20 04 38 00.5
comp=Z,3µm,20.0s
M31M Drury Creek, Y 93.46 23 P P 04 04 07.3 -2.1
baz=232
MFID Camas Ranch 93.46 45 IAMs_20 IAMs_20 04 38 45.5
comp=Z,4µm,20.0s
TOLK Toolik Lake Re 93.47 14 P P 04 04 08.5 -0.8
baz=219
WUAZ Wupatki 93.52 54 IAmb IAmb 04 04 28.4
comp=Z,12nm,1.0s
WUAZ IAMs_20 IAMs_20 04 37 13.4
comp=Z,3µm,22.0s
baz=248
PKCU Pink Cliffs 93.55 51 P P 04 04 10.2 -0.6
PKCU IAmb IAmb 04 04 35.0
comp=Z,22nm,1.3s
J29M Klondike Camp 93.58 20 P P 04 04 08.9 -1.0
baz=229
PLID Pearl Lake 94.04 43 IAmb IAmb 04 04 16.9
comp=Z,22nm,1.8s
I29M Ogilvie Camp, 94.15 20 IAMs_20 IAMs_20 04 41 37.4
comp=Z,3µm,20.0s
I29M Ogilvie Camp, 94.15 20 P P 04 04 10.0 -2.5
baz=229
X18A Snowflake 94.24 55 P P 04 04 14.2 +0.3
DUG Dugway, Tooele 94.24 49 P P 04 04 13.6 -0.1
baz=247
A21K Barrow 94.26 11 IAMs_20 IAMs_20 04 43 25.6
comp=Z,3µm,20.0s
A21K Barrow 94.26 11 P P 04 04 11.1 -1.6
baz=212
BGU Big Grassy Mou 94.37 48 P P 04 04 13.8 -0.5
HLID Hailey 94.46 45 P P 04 04 14.2 -0.5
baz=246
W18A Petrified Fore 94.62 54 P P 04 04 14.5 -1.1
baz=249
NEW Newport 94.67 40 P P 04 04 15.8 +0.5
comp=Z,2.8nm,0.9s,baz=216,slow=1.8,SNR=5.3
NEW LR LR 04 41 30.8
comp=Z,2µm,19.0s,baz=257,slow=32
comp=Z,2.8nm,0.9s
NEW Newport 94.67 40 IAMs_20 IAMs_20 04 50 31.2
comp=Z,2µm,18.0s
NEW Newport 94.67 40 P P 04 04 15.8 +0.5
NEW Newport 94.67 40 P P 04 04 14.9 -0.4
baz=245
HVU Hansel Valley 94.88 47 IAmb IAmb 04 04 42.3
comp=Z,29nm,1.8s
MMPY Sheldon Lake, 94.88 24 P P 04 04 14.1 -1.8
baz=235
MPU Maple Canyon 95.01 49 P P 04 04 17.0 -0.3
121A Cookes Peak, D 95.22 57 P P 04 04 19.0 +0.7
baz=250
121A Cookes Peak, D 95.22 57 P P 04 04 14.3 -4.1
baz=250
EPYK Eagle Plains 95.31 19 IAMs_20 IAMs_20 04 45 04.9
comp=Z,4µm,19.0s
EPYK Eagle Plains 95.31 19 P P 04 04 15.8 -2.0
baz=230
TGTN Hyland Airport 95.43 25 P P 04 04 17.3 -1.1
baz=237
P17A Butcher Ranch, 95.45 50 P P 04 04 18.6 -0.7
TIXI Tiksi 95.53 348 LR LR 04 42 29.9
comp=Z,2µm,22.0s,baz=180,slow=32
TIXI Tiksi 95.53 348 IAMs_20 IAMs_20 04 42 08.5
comp=Z,3µm,21.0s
TIXI Tiksi 95.53 348*ce*P **P 04 04 16.4 -2.2**
TIXI pmax pmax
comp=Z,2.0nm,0.6s
TIXI MLR MLR
comp=Z,2µm,18.0s
HWUT Hardware Ranch 95.65 48 IAMs_20 IAMs_20 04 47 30.7
comp=Z,3µm,18.0s
LL02 Futaleuf 95.91 140 P P 04 04 20.0 -1.3
EPT El Paso 95.98 58 IAMs_20 IAMs_20 04 41 21.7
comp=Z,2µm,19.0s
KIDD KID Seismic O 95.98 58 P P 04 04 23.3 +1.5
baz=250
MSO Missoula 96.06 42 IAMs_20 IAMs_20 04 41 53.0
comp=Z,3µm,19.0s
MSO Missoula 96.06 42 P P 04 04 19.7 -2.0
baz=247
HYBB Hyderabad (bro 96.13 286 *e*P **P 04 04 23.4 +0.7**
MVCO Mesa Verde 96.29 53 IAMs_20 IAMs_20 04 41 15.9
comp=Z,3µm,20.0s
MVCO Mesa Verde 96.29 53 P P 04 04 22.5 -0.8
baz=250
Y22D IRIS PASSCAL I 96.43 56 IAMs_20 IAMs_20 04 42 32.5
comp=Z,3µm,19.0s
Y22D IRIS PASSCAL I 96.43 56 P P 04 04 22.1 -1.7
baz=250
TPAW Teton Pass 96.77 46 IAMs_20 IAMs_20 04 45 35.0
comp=Z,2µm,19.0s
FXWY Fox Creek 96.77 46 IAMs_20 IAMs_20 04 40 48.1
comp=Z,4µm,22.0s
REDW Red Top Meadow 96.79 46 IAMs_20 IAMs_20 04 43 47.1
comp=Z,3µm,20.0s
MNTX Cornudas Mount 96.86 59 IAMs_20 IAMs_20 04 41 40.9
comp=Z,2µm,19.0s
MNTX Cornudas Mount 96.86 59 P P 04 04 25.6 0.0
baz=251
MNTX Cornudas Mount 96.86 59 P P 04 04 24.4 -1.2
baz=251
SNOW Snow King Moun 96.89 46 IAMs_20 IAMs_20 04 43 51.3
comp=Z,2µm,19.0s
MOOW Moose Ponds 97.00 46 IAMs_20 IAMs_20 04 40 50.2
comp=Z,2µm,21.0s
LOHW Long Hollow 97.04 46 IAMs_20 IAMs_20 04 44 15.4
comp=Z,2µm,19.0s
BOZ Bozeman (W) 97.08 44 P P 04 04 25.8 -0.7
baz=249
ANMO Albuquerque 97.08 56 LR LR 04 43 52.7
comp=Z,2µm,18.3s,baz=264,slow=33
ANMO Albuquerque 97.08 56 P P 04 04 25.9 -1.0
ANMO Albuquerque 97.08 56*ce*P **P 04 04 25.7 -1.1**
ANMO pmax pmax
comp=Z,2.0nm,1.0s
ANMO Albuquerque 97.08 56 P Pdif 04 04 27.1 +0.2
baz=250
ANMO Albuquerque 97.08 56 P P 04 04 25.8 -1.0
baz=250
FLWY Flagg Ranch 97.15 46 IAMs_20 IAMs_20 04 40 35.1
comp=Z,2µm,20.0s
H17A Grant Village 97.34 45 P Pdif 04 04 29.3 +1.4
baz=249
BW06 Boulder Array 97.46 47 P P 04 04 26.9 -1.5
baz=250
PD31 Pinedale Array 97.46 47 P P 04 04 26.9 -1.5
PDAR Pinedale Array 97.46 47 P P 04 04 28.1 -0.3
comp=Z,0.4nm,0.6s,baz=228,slow=3.8,SNR=8.5
PDAR LR LR 04 41 33.3
comp=Z,1µm,20.4s,baz=263,slow=31
comp=Z,0.4nm,0.6s
INK Inuvik 97.48 18 P P 04 04 26.8 -0.7
comp=Z,5.0nm,1.0s,baz=243,slow=6.6,SNR=6.7
INK LR LR 04 45 39.4
comp=Z,2µm,19.0s,baz=223,slow=34
comp=Z,5.0nm,1.0s
INK Inuvik 97.48 18 IAmb IAmb 04 04 29.1
comp=Z,10nm,1.2s
INK Inuvik 97.48 18 P P 04 04 26.8 -0.7
INK Inuvik 97.48 18 P P 04 04 25.5 -2.0
baz=233
TX31 Lajitas Ar. Si 97.49 62 IAmb IAmb 04 04 49.6
comp=Z,24nm,1.4s
TX31 Lajitas Ar. Si 97.49 62 P P 04 04 28.5 -0.1
baz=251
TXAR Lajitas Array 97.49 62 P P 04 04 28.6 0.0
comp=Z,3.0nm,1.1s,baz=235,slow=4.4,SNR=15
TXAR PKKP **PKKPdf 04 21 08.1 -0.9**
comp=Z,0.4nm,0.7s,baz=95,slow=4.3,SNR=5.3
TXAR LR LR 04 39 39.9
comp=Z,3µm,21.4s,baz=250,slow=30
comp=Z,3.0nm,1.1s
TXAR Lajitas Array 97.49 62 P P 04 04 28.6 0.0
O20A White River Ci 97.49 50 P P 04 04 27.4 -1.1
baz=250
WMQ Urumqi 97.56 314 *e*P Pdif 04 04 31.3 +2.6
WMQ PP **PP 04 08 26.5 0.0**
WMQ SKS **SKSac 04 15 04.0 -1.2**
WMQ S **S 04 15 51.6 -1.2**
WMQ SS **SS 04 22 33.3 +0.3**
WMQ pmax pmax
comp=Z,19nm,1.5s
WMQ pmax pmax
comp=Z,250nm,6.5s
WMQ LR LR
comp=Z,940nm,16.3s
WMQ LR LR
comp=Z,1µm,17.3s
WMQ LR LR
comp=Z,1µm,17.7s
S22A 4UR Ranch, Cre 97.72 53 P P 04 04 26.6 -3.1
baz=251
PLCA Paso Flores 98.11 139 P P 04 04 30.6 -0.7
comp=Z,1.3nm,0.9s,baz=251,slow=19,SNR=3.3
PLCA LR LR 04 39 05.1
comp=Z,1µm,21.9s,baz=232,slow=29
comp=Z,1.3nm,0.9s
PLCA Paso Flores 98.11 139 P P 04 04 30.6 -0.7
RLMT Red Lodge 98.47 45 P P 04 04 31.9 -0.9
baz=250
SDCO Great Sand Dun 98.72 53 P Pdif 04 04 35.4 +1.1
baz=251
SDCO Great Sand Dun 98.72 53 P P 04 04 33.3 -1.0
baz=251
EGMT Eagleton 99.14 42 IAMs_20 IAMs_20 04 52 22.6
comp=Z,3µm,18.0s
EGMT Eagleton 99.14 42 P Pdif 04 04 34.3 -1.3
baz=250
ISCO Idaho Springs 99.29 51 P Pdif 04 04 36.1 -0.6
baz=252
T25A Trinidad 99.35 54 P Pdif 04 04 35.3 -1.7
baz=252
Q24A Divide 99.37 52 P Pdif 04 04 37.4 +0.3
baz=252
N23A Red Feather La 99.39 50 P Pdif 04 04 36.6 -0.6
baz=252
K22A Casper 99.53 48 P Pdif 04 04 34.8 -2.8
baz=252
MSTX Muleshoe 99.66 57 P Pdif 04 04 38.0 -0.3
baz=252
833A Chaparral WMA, 100.75 64 P Pdif 04 04 42.0 -1.1
baz=253
AMTX Amarillo 100.79 57 IAMs_20 IAMs_20 04 49 18.0
comp=Z,2µm,18.0s
AMTX Amarillo 100.79 57 P Pdif 04 04 41.5 -1.8
baz=253
C36M Paulatuk 100.94 19 P Pdif 04 04 40.8 -2.1
baz=242
LAO LASA Array 100.98 44 P Pdif 04 04 43.4 -0.4
baz=252
JCT Junction City 101.03 62 IAMs_20 IAMs_20 04 41 42.6
comp=Z,3µm,21.0s
KSCO Kaye Shedlock' 101.26 53 P Pdif 04 04 45.4 +0.1
baz=253
YKA Yellowknife Ar 101.60 27 P Pdif 04 04 45.4 -0.7
comp=Z,2.5nm,0.9s,baz=254,slow=4.7,SNR=11
YKA PKiKP **PKiKP 04 09 10.0 +0.4**
comp=Z,0.7nm,0.8s,baz=254,slow=1.4,SNR=6.1
YKA Yellowknife Ar 101.60 27 Pdif **Pdif 04 04 45.0 -1.1**
YKA Yellowknife Ar 101.60 27 *i* P **Pdif 04 04 45.0 -1.1**
A36M Sachs Harbour 101.86 17 IAMs_20 IAMs_20 04 47 12.9
comp=Z,2µm,21.0s
MK31 Makanchi Array 102.12 315 *i* P **Pdif 04 04 48.3 -0.5**
MKAR Makanchi Array 102.12 315 P **Pdif 04 04 50.0 +1.1**
comp=Z,1.0nm,0.6s,baz=105,slow=5.6,SNR=7.7
MKAR PP **PP 04 08 54.8 -6.2**
comp=Z,1.4nm,1.0s,baz=118,slow=10,SNR=3.0
MKAR PKiKP **PKiKP 04 09 12.8 +1.7**
comp=Z,3.3nm,1.1s,baz=125,slow=3.3,SNR=5.0
MKAR Makanchi Array 102.12 315 Pdif **Pdif 04 04 47.7 -1.1**
MKAR Makanchi Array 102.12 315 *i* P **Pdif 04 04 49.2 +0.4**
MKAR pmax pmax
comp=Z,1.0nm,0.6s
OGNE Ogallala 102.24 51 IAMs_20 IAMs_20 04 43 10.1
comp=Z,2µm,21.0s
ZALV Zalesovo Beam 102.61 323 P Pdif 04 04 50.3 -0.4
comp=Z,2.7nm,0.7s,baz=108,slow=4.8,SNR=11
ZALV Zalesovo Beam 102.61 323 *i* P **Pdif 04 04 49.9 -0.8**
ZALV pmax pmax
comp=Z,3.0nm,0.7s
HOPE Hope Point 102.76 165 IAMs_20 IAMs_20 04 50 08.3
comp=Z,3µm,19.0s
DGMT Dagmar 102.81 43 IAMs_20 IAMs_20 04 53 17.8
comp=Z,3µm,18.0s
435B Jarrell 102.95 62 IAMs_20 IAMs_20 04 46 22.4
comp=Z,3µm,19.0s
WMOK Wichita Mounta 103.04 58 IAMs_20 IAMs_20 04 45 38.7
comp=Z,3µm,20.0s
WMOK Wichita Mounta 103.04 58 P Pdif 04 04 53.1 -0.1
baz=254
CBKS Cedar Bluff 103.37 53 IAMs_20 IAMs_20 04 46 37.2
comp=Z,2µm,20.0s
CBKS Cedar Bluff 103.37 53 P Pdif 04 04 52.8 -1.8
baz=255
HKT Hockley 104.19 63 IAMs_20 IAMs_20 04 44 43.2
comp=Z,4µm,20.0s
KURBB Kurchatov Arra 105.50 319 Pdiff **Pdif 04 05 05.8 +2.2**
comp=Z,1.0nm,0.8s,baz=105,slow=3.8,SNR=5.4
KURBB PKiKP **PKiKP 04 09 13.6 -3.6**
comp=Z,0.3nm,0.3s,baz=108,slow=3.0,SNR=2.2
KURBB PKKP **PKKPdf 04 20 54.9 +0.2**
comp=Z,0.6nm,0.6s,baz=286,slow=3.1,SNR=4.4
SNET Serv Nac Est T 105.58 81 IAMs_20 IAMs_20 04 43 27.2
comp=Z,3µm,20.0s
TUL1 Leonard 105.70 57 IAMs_20 IAMs_20 04 52 22.0
comp=Z,3µm,18.0s
KSU1 Kansas State U 105.81 54 IAMs_20 IAMs_20 04 49 56.7
comp=Z,3µm,19.0s
ECSD EROS Data Cent 106.81 49 IAMs_20 IAMs_20 04 45 39.9
comp=Z,3µm,21.0s
W39A Magazine 107.13 58 IAMs_20 IAMs_20 04 47 51.0
comp=Z,3µm,19.0s
MIAR Mount Ida 107.15 59 IAMs_20 IAMs_20 04 47 02.6
comp=Z,3µm,20.0s
TGUH Tegucigalpa,Un 107.51 81 IAMs_20 IAMs_20 04 44 57.3
comp=Z,2µm,20.0s
X40A Basin Creek Fa 107.74 59 P PKiKP 04 09 21.0 -0.7
baz=257
U40A Yellville 108.12 57 IAMs_20 IAMs_20 04 53 45.1
comp=Z,4µm,18.0s
JTS Las Juntas de 108.56 86 IAMs_20 IAMs_20 04 44 55.9
comp=Z,2µm,20.0s
SCIA State Center 108.91 51 IAMs_20 IAMs_20 04 54 36.7
comp=Z,3µm,18.0s
VBMS Vicksburg 109.15 62 IAMs_20 IAMs_20 04 49 33.6
comp=Z,2µm,20.0s
HDC Heredia 109.26 86 IAMs_20 IAMs_20 04 45 01.5
comp=Z,2µm,20.0s
CCM Cathedral Cave 109.71 56 IAMs_20 IAMs_20 04 53 04.1
comp=Z,2µm,18.0s
MSEY Mahe Island 110.13 257 IAMs_20 IAMs_20 04 51 20.7
comp=Z,3µm,20.0s
OXF Oxford 110.51 60 IAMs_20 IAMs_20 04 55 14.6
comp=Z,3µm,18.0s
RES Resolute Bay 110.90 16 PKiKP **PKiKP 04 09 24.3 -2.3**
comp=Z,1.7nm,0.7s,baz=314,slow=2.8,SNR=4.9
RES Resolute Bay 110.90 16 *i* PKiKP **PKiKP 04 09 24.3 -2.3**
BRVK Borovoye 110.94 320 *ic* PKiKP **PKiKP 04 09 26.8 -0.4**
BRVK pmax pmax
comp=Z,5.0nm,1.3s
BRVK MLR MLR
comp=Z,1µm,18.0s
HDIL Hopedale 111.61 53 IAMs_20 IAMs_20 04 52 34.3
comp=Z,3µm,19.0s
PLAL Pickwick Lake 111.68 59 IAMs_20 IAMs_20 04 54 51.4
comp=Z,3µm,18.0s
BRAL Brewton 111.84 64 IAMs_20 IAMs_20 04 51 20.9
comp=Z,2µm,20.0s
WVT Waverly 112.07 58 IAMs_20 IAMs_20 04 56 24.7
comp=Z,2µm,18.0s
LRAL Lakeview Retre 112.22 62 IAMs_20 IAMs_20 04 52 37.0
comp=Z,2µm,19.0s
LPAZ La Paz 113.34 119 PKiKP **PKiKP 04 09 32.8 -0.9**
comp=Z,0.9nm,0.7s,baz=90,slow=1.0,SNR=4.2
LPAZ La Paz 113.34 119 *i* PKiKP **PKiKP 04 09 32.8 -0.9**
P49A Miami Univ. Ec 114.97 55 IAMs_20 IAMs_20 04 56 20.2
comp=Z,3µm,19.0s
GOGA Godfrey 115.20 62 IAMs_20 IAMs_20 04 53 41.9
comp=Z,2µm,20.0s
TZTN Tazewell 115.55 58 IAMs_20 IAMs_20 04 55 45.8
comp=Z,2µm,19.0s
ORTC Ortega, Tolima 115.62 95 *e*P **PKPdf 04 09 35.6 -1.8**
GUY2C Guyana, Caldas 115.96 94 *e*P **PKPdf 04 09 37.1 -1.5**
DWPF Disney Wildern 116.10 68 IAMs_20 IAMs_20 04 54 09.0
comp=Z,2µm,20.0s
ACSO Alum Creek Sta 116.36 54 IAMs_20 IAMs_20 04 53 21.1
comp=Z,2µm,19.0s
ZARC Zaragoza, Cauc 117.17 92 *e*P **PKPdf 04 09 38.1 -2.3**
KMSC Kings Mountain 117.18 60 P **PKPdf 04 09 37.9 -1.9**
baz=264
PTBC PUERTO BERRIO 117.24 93 *e*P **PKPdf 04 09 36.4 -4.1**
ABKAR Akbulak array 117.26 316 PKPdf **PKPdf 04 09 38.5 -1.0**
SOCY Socotra 117.28 274 IAMs_20 IAMs_20 04 59 30.5
comp=Z,2µm,19.0s
SPBC San Pablo de B 117.31 94 *e*P **PKPdf 04 09 38.5 -2.2**
O53A New Philadelph 117.71 54 IAMs_20 IAMs_20 04 56 02.9
comp=Z,2µm,18.0s
O53A New Philadelph 117.71 54 P PKPdf 04 09 39.2 -1.4
baz=266
ARU Arti 117.75 324 PKPdf **PKPdf 04 09 38.8 -1.4**
ARU Arti 117.75 324 *i* PKiKP **PKPdf 04 09 38.6 -1.5**
ARU 04 10 50.4
ARU PPP PPP 04 13 20.1
ARU 04 16 51.6

ARU				SP	SP	04 20 32.1	-3.5	
ARU				SS	**SS**	**04 26 56.5**	**-8.7**	
ARU				SSS	SSS	04 31 27.3		
ARU				MLR	MLR			
	comp=Z,1μm,20.0s							
NHSC	**New Hope**	**117.90**	**62**	IAMs_20	IAMs_20	04 52 42.2		
	comp=Z,2μm,21.0s							
BLA	**Blacksburg**	**118.11**	**58**	P	**PKPdf**	**04 09 40.4**	**-1.2**	
	baz=265							
M53A	**WI Miller and**	**118.19**	**53**	IAMs_20	IAMs_20	04 55 24.3		
	comp=Z,2μm,19.0s							
M53A	**WI Miller and**	**118.19**	**53**	P	**PKPdf**	**04 09 41.0**	**-0.5**	
	baz=267							
RUSC	**La Rusia**	**118.32**	**94**	*e*P	**PKPdf**	**04 09 40.3**	**-2.9**	
ERPA	**Erie**	**118.72**	**52**	IAMs_20	IAMs_20	05 02 19.5		
	comp=Z,2μm,18.0s							
OCAC	**Ocana**	**118.86**	**92**	*e*P	**PKPdf**	**04 09 36.6**	**-7.1**	
SSPA	**Standing Stone**	**120.27**	**54**	P	**PKPdf**	**04 09 45.0**	**-0.5**	
	baz=269							
SPA0	**Spitsbergen Ar**	**120.43**	**354**	*e*PKPdf	**PKiKP**	**04 09 45.1**	**+0.1**	
SPA0				*e*PP	**PP**	**04 11 10.2**	**-1.3**	
SPITS	**Spitsbergen Ar**	**120.43**	**354**	PKP	**PKPdf**	**04 09 44.7**	**-0.1**	
	baz=72,slow=6.2							
SPITS	**Spitsbergen Ar**	**120.43**	**354**	PKIKP	**PKPdf**	**04 09 44.7**	**-0.1**	
SAML	**Samuel**	**121.20**	**114**	PKPdf	**PKPdf**	**04 09 46.4**	**-1.7**	
SAML	**Samuel**	**121.20**	**114**	PKIKP	**PKPdf**	**04 09 46.4**	**-1.7**	
BINY	**Binghamton**	**121.70**	**52**	IAMs_20	IAMs_20	05 10 30.3		
	comp=Z,2μm,18.0s							
BINY	**Binghamton**	**121.70**	**52**	P	**PKPdf**	**04 09 47.0**	**-1.3**	
	baz=271							
KIRV	**Kirov**	**122.23**	**327**	*c i*PKIKP	**PKPdf**	**04 09 48.2**	**-0.5**	
LONY	**Lake Ozonia**	**122.63**	**49**	P	**PKPdf**	**04 09 48.8**	**-1.2**	
	baz=273							
PRGR	**Permogore**	**123.12**	**332**	*e*PKIKP	**PKPdf**	**04 09 47.9**	**-2.4**	
PRGR				*e*		04 09 59.0		
BJO1	**Bjornoya**	**123.22**	**351**	*e*PKPdf	**PKiKP**	**04 09 52.0**	**+1.6**	
BJO1				*e*PP	**PP**	**04 11 29.3**	**-1.1**	
PAL	**Palisades**	**123.28**	**54**	IAMs_20	IAMs_20	05 05 07.3		
	comp=Z,2μm,18.0s							
PAL	**Palisades**	**123.28**	**54**	P	**PKPdf**	**04 09 49.7**	**-1.6**	
	baz=272							
TRY	**Troy**	**123.40**	**52**	PKPdf	**PKPdf**	**04 09 50.1**	**-1.3**	
SDDR	**Presa de Saban**	**123.57**	**80**	IAMs_20	IAMs_20	04 54 44.9		
	comp=Z,3μm,19.0s							
WSPT	**Westport, CT**	**123.72**	**53**	IAMs_20	IAMs_20	04 56 54.7		
	comp=Z,2μm,20.0s							
YLE	**Yale**	**124.01**	**53**	IAMs_20	IAMs_20	04 57 11.7		
	comp=Z,2μm,21.0s							
MATP	**Matopo**	**124.07**	**226**	PKP	**PKPdf**	**04 09 53.6**	**0.0**	
	comp=Z,7.2nm,1.0s,baz=280,slow=1.2,SNR=7.0							
MATP	**Matopo**	**124.07**	**226**		**PKPdf**	**04 09 53.6**	**0.0**	
HATO	**Hato, Curacao**	**124.12**	**89**	IAMs_20	IAMs_20	04 54 39.0		
	comp=Z,2μm,22.0s							
L61B	**Northampton**	**124.14**	**52**	P	**PKPdf**	**04 09 51.3**	**-1.6**	
	baz=273							
GRTK	**Grand Turk**	**124.20**	**77**	IAMs_20	IAMs_20	04 56 26.6		
	comp=Z,2μm,20.0s							
LVZ	**Lovozero**	**124.37**	**341**	IAMs_20	IAMs_20	05 11 11.6		
	comp=Z,2μm,18.0s							
LBNH	**Lisbon**	**124.56**	**50**	P	**PKPdf**	**04 09 52.6**	**-1.1**	
	baz=275							
APA	**Apatity**	**124.95**	**341**	⇓ *i*PKIKP	**PKPdf**	**04 09 51.5**	**-2.2**	
APA				pmax	pmax			
	comp=Z,14nm,0.9s							
ILULI	**Ilulissat**	**125.20**	**16**	IAMs_20	IAMs_20	05 00 44.7		
	comp=Z,2μm,20.0s							
ILULI	**Ilulissat**	**125.20**	**16**	*e*P	**PKPdf**	**04 09 51.0**	**-3.1**	
SUMG	**Summit**	**125.28**	**10**	PKPdf	**PKPdf**	**04 09 53.0**	**-1.7**	
SUMG				IAMs_20	IAMs_20	05 04 30.2		
	comp=Z,2μm,21.0s							
SUMG	**Summit**	**125.28**	**10**	PKIKP	**PKPdf**	**04 09 53.0**	**-1.7**	
SUMG				MLR	MLR			
	comp=Z,2μm,21.0s							
SUMG	**Summit**	**125.28**	**10**	*e*P	**PKPdf**	**04 09 52.4**	**-2.3**	
KEV	**Kevo**	**125.30**	**345**	IAMs_20	IAMs_20	05 02 38.3		
	comp=Z,2μm,22.0s							
HAMF	**Hammerfest**	**125.42**	**346**	*e*PKPdf	**PKPdf**	**04 09 54.0**	**-0.5**	
HAMF				*e*PP	**PP**	**04 11 44.0**	**-1.2**	
HAMF				*e*SP	SP	04 21 44.7	+1.9	
HAMF				*e*SS	**SS**	**04 28 45.2**	**+3.1**	
DBG	**Daneborg**	**125.56**	**3**	*e*P	**PKPdf**	**04 09 53.0**	**-1.7**	
SCHQ	**Schefferville**	**125.82**	**36**	PKP	**PKPdf**	**04 09 53.9**	**-1.9**	
	comp=Z,5.9nm,0.9s,baz=347,slow=5.6,SNR=6.1							
ARA0	**ARCESS Array S**	**125.83**	**345**	*e*PKPdf	**PKPdf**	**04 09 55.2**	**-0.2**	
ARA0				*e*PP	**PP**	**04 11 45.9**	**-2.0**	
ARCES	**ARCESS Array B**	**125.83**	**345**	PKP	**PKPdf**	**04 09 54.1**	**-1.3**	
	comp=Z,13nm,0.7s,baz=48,slow=1.8,SNR=18							
ARCES	**ARCESS Array B**	**125.83**	**345**	PKIKP	**PKPdf**	**04 09 54.1**	**-1.3**	
KLMR	**Klimovskoe**	**126.15**	**332**	*e*PKIKP	**PKPdf**	**04 09 54.0**	**-2.1**	
KLMR				*e*SS	SS	04 28 49.5	-2.3	
KLMR				*e*SSS	SSS	04 33 28.3		
KLMR				pmax	pmax			
	comp=Z,36nm,1.0s							
KLMR	**Klimovskoe**	**126.15**	**332**	*e*PKPdf	**PKPdf**	**04 09 54.0**	**-2.1**	
KLMR				AMP		04 09 58.4		
	comp=Z,36nm,1.0s							
KLMR				*e*SS	**SS**	**04 28 49.5**	**-2.3**	
KLMR				*e*SS	**SS**	**04 28 49.5**	**-2.3**	
KLMR				*e*SSS	SSS	04 33 28.3		
KLMR				*e*SSS	SSS	04 33 28.3		
KLMR				LQ	LQ	04 51 59.4		
KLMR				LQ	LQ	04 51 59.4		
KLMR				LR	LR	05 00 37.4		
KLMR				AMP		05 10 55.6		
	comp=Z,2μm,18.4s							
PKME	**Peaks-Kenny Pk**	**126.31**	**48**	PKPdf	**PKPdf**	**04 09 55.3**	**-1.7**	
PKME	**Peaks-Kenny Pk**	**126.31**	**48**	P	**PKPdf**	**04 09 55.2**	**-1.8**	
	baz=278							
KTK1	**Kautokeino**	**126.76**	**345**	*e*PKPdf	**PKPdf**	**04 09 57.3**	**+0.2**	
KTK1				*e*PP	**PP**	**04 11 50.5**	**-3.6**	
SFJD	**Kangerlussuaq**	**126.83**	**18**	IAMs_20	IAMs_20	05 02 49.9		
	comp=Z,2μm,20.0s							
KIBK	**Kibwezi**	**126.87**	**251**	IAMs_20	IAMs_20	05 02 24.5		
	comp=Z,2μm,20.0s							
PQI	**Presque Isle**	**126.97**	**46**	PKPdf	**PKPdf**	**04 09 56.1**	**-2.1**	
JETT	**Jettan, Norway**	**126.98**	**347**	*e*PKPdf	**PKiKP**	**04 09 58.9**	**+0.8**	
JETT				*e*PP	**PP**	**04 11 54.7**	**-0.9**	
TRO	**Tromso**	**127.23**	**347**	*e*PKPdf	**PKiKP**	**04 09 58.4**	**-0.1**	
TRO				*e*PP	**PP**	**04 11 57.5**	**+0.4**	
GROC	**Groznyy**	**127.47**	**309**	*i* PKIKP	**PKiKP**	**04 10 01.1**	**+1.3**	
GROC				*e*		04 11 59.1		
GROC				pmax	pmax			
	comp=Z,13nm,0.4s							
RAYN	**Ar Rayn**	**127.60**	**285**	IAMs_20	IAMs_20	05 09 05.8		
	comp=Z,2μm,19.0s							
LSZ	**Lusaka**	**127.75**	**231**	IAMs_20	IAMs_20	05 00 44.8		
	comp=Z,2μm,19.0s							
ICESG	**Greenland Ices**	**127.99**	**13**	*e*P	**PKPdf**	**04 09 56.3**	**-3.7**	
KMBO	**Kilima Mbogo**	**128.12**	**252**	PKP	**PKiKP**	**04 10 02.5**	**+0.3**	
	comp=Z,2.1nm,0.8s,baz=4.3,slow=4.8,SNR=3.8							
KMBO	**Kilima Mbogo**	**128.12**	**252**	IAMs_20	IAMs_20	05 00 02.0		
	comp=Z,2μm,21.0s							
KMBO	**Kilima Mbogo**	**128.12**	**252**	PKIKP	**PKiKP**	**04 10 02.6**	**+0.3**	
SJG	**San Juan**	**128.17**	**82**	PKPdf	**PKPdf**	**04 09 58.8**	**-2.5**	
SJG	**San Juan**	**128.17**	**82**	PKIKP	**PKPdf**	**04 09 58.8**	**-2.5**	
DY2G	**Dye2**	**128.44**	**17**	*e*P	**PKPdf**	**04 09 57.0**	**-3.7**	
VRH	**Novokhopyorsk**	**128.52**	**320**	*e*PKIKP	**PKPdf**	**04 09 59.5**	**-1.5**	
VRH				pmax	pmax			
	comp=Z,30nm,1.5s							
VRH				MLR	MLR			
	comp=Z,2μm,22.0s							
ZEI	**Tsey**	**128.90**	**309**	*i* PKIKP	**PKPdf**	**04 10 02.4**	**+0.1**	
ZEI				pmax	pmax			
	comp=Z,13nm,1.3s							
SCO	**Scoresbysund**	**129.22**	**5**	IAMs_20	IAMs_20	05 03 07.8		
	comp=Z,2μm,21.0s							
MOS	**Moscow**	**129.23**	**327**	*i* PKIKP	**PKPdf**	**04 10 01.9**	**-0.3**	
MOS				*e*		04 12 09.7		
MOS				pmax	pmax			
	comp=Z,38nm,1.4s							
BDFB	**Brasilia**	**129.24**	**132**	PKP	**PKPdf**	**04 10 02.5**	**-1.1**	
	comp=Z,8.4nm,0.8s,baz=258,slow=1.1,SNR=12							
BDFB	**Brasilia**	**129.24**	**132**	PKIKP	**PKPdf**	**04 10 02.5**	**-1.1**	
STEI	**Steigen**	**129.40**	**347**	*e*PKPdf	**PKPdf**	**04 10 01.8**	**-0.4**	
STEI				*e*PP	**PP**	**04 12 11.6**	**+0.2**	
KBZ	**Khabaz**	**129.47**	**311**	PKP	**PKiKP**	**04 10 04.7**	**+0.9**	
	comp=Z,2.2nm,0.8s,baz=325,slow=2.3,SNR=5.3							
KBZ	**Khabaz**	**129.47**	**311**	*i* PKIKP	**PKPdf**	**04 10 02.5**	**-0.5**	
KBZ				pmax	pmax			
	comp=Z,6.0nm,1.3s							
LOF	**Lofoten**	**129.57**	**348**	*e*PKPdf	**PKPdf**	**04 10 02.0**	**-0.5**	
LOF				*e*PP	**PP**	**04 12 11.3**	**-1.1**	
KIV	**Kislovodsk**	**129.58**	**311**	*i* PKIKP	**PKPdf**	**04 10 03.0**	**-0.4**	
KIV				*e*		04 12 12.6		
KIV				*e*PS	**PS**	**04 22 22.0**	**-2.4**	
KIV				*e*SS	SS	04 29 36.5	+0.5	
KIV				*e*SSS	SSS	04 34 23.6		
KIV				pmax	pmax			
	comp=Z,7.0nm,1.0s							
KIV				MLR	MLR			
	comp=Z,949nm,23.0s							
LPSR	**Galich'ya Gora**	**129.72**	**323**	*e*PKIKP	**PKPdf**	**04 10 02.7**	**-0.5**	
LPSR				pmax	pmax			
	comp=Z,30nm,1.2s							
LPSR				MLR	MLR			
	comp=Z,1μm,20.0s							
FAUS	**Fauske**	**129.85**	**347**	*e*PKPdf	**PKPdf**	**04 10 02.4**	**-0.6**	
FAUS				*e*PP	**PP**	**04 12 13.7**	**-0.7**	
VORR	**Voronezh**	**129.87**	**321**	*e*PKIKP	**PKiKP**	**04 10 04.2**	**-0.1**	
VORR				pmax	pmax			
	comp=Z,50nm,0.4s							
OBN	**Obninsk**	**130.03**	**326**	IAMs_20	IAMs_20	05 09 33.4		
	comp=Z,2μm,20.0s							
OBN	**Obninsk**	**130.03**	**326**	⇑ *i*PKIKP	**PKiKP**	**04 10 04.1**	**-0.4**	
OBN				*i*		04 10 13.0		
OBN				*i*		04 12 11.2		
OBN				*e*		04 23 56.7		
OBN				*i* SS	SS	04 29 41.2	+0.9	
OBN				pmax	pmax			
	comp=Z,44nm,1.2s							
OBN				MLR	MLR			
	comp=Z,2μm,22.0s							
VSR	**Storozhevoye**	**130.05**	**321**	*e*PKIKP	**PKPdf**	**04 10 03.4**	**-0.5**	
VSR				pmax	pmax			
	comp=Z,9.0nm,0.6s							
VSR				MLR	MLR			
	comp=Z,2μm,21.0s							
FURI	**Furi**	**130.68**	**264**	IAMs_20	IAMs_20	05 03 38.5		
	comp=Z,2μm,20.0s							
SEUS	**St. Eustatius**	**131.00**	**84**	IAMs_20	IAMs_20	05 04 41.6		
	comp=Z,1μm,18.0s							
MOR8	**Moi Rana**	**131.06**	**347**	*e*PKPdf	**PKPdf**	**04 10 05.4**	**0.0**	
MOR8				*e*PP	**PP**	**04 12 21.2**	**-1.0**	
FINES	**FINESS Array B**	**131.26**	**337**	PKhKP	PKPpre	04 09 59.9		
	comp=Z,0.8nm,0.7s,baz=5.7,slow=1.4,SNR=4.5							
FINES				PKP	**PKPdf**	**04 10 05.7**	**-0.2**	
	comp=Z,4.2nm,0.8s,baz=259,slow=2.1,SNR=10.0							
FINES				SKP		04 13 28.7		
	comp=Z,9.4nm,0.9s,baz=111,slow=6.1,SNR=10.0							
FINES	**FINESS Array B**	**131.26**	**337**	PKIKP	**PKPdf**	**04 10 05.7**	**-0.2**	
LODK	**Lodwar**	**131.77**	**256**	IAMs_20	IAMs_20	05 03 09.1		
	comp=Z,2μm,21.0s							
GDHS	**Morne Mazeau,**	**131.88**	**86**	IAMs_20	IAMs_20	05 03 41.0		
	comp=Z,2μm,22.0s							
TDBA	**Terre de Bas,**	**131.91**	**86**	IAMs_20	IAMs_20	05 07 54.8		
	comp=Z,2μm,19.0s							
MPOM	**Morne Pois Mar**	**132.31**	**89**	IAMs_20	IAMs_20	05 03 46.3		
	comp=Z,1μm,20.0s							
VSU	**Vasula**	**132.91**	**334**	*e*P	**PKiKP**	**04 10 11.9**	**+1.6**	
NSS	**Namsos**	**133.01**	**347**	*e*PKPdf	**PKiKP**	**04 10 09.9**	**-0.3**	
ANN	**Anapa**	**133.07**	**313**	*i* PKIKP	**PKPdf**	**04 10 08.6**	**-1.2**	
ANN				*e*		04 12 36.2		
ANN				*e*SP	SP	04 22 53.0	+2.1	
ANN				*e*SS	**SS**	**04 30 18.7**	**+0.5**	
ANN				pmax	pmax			
	comp=Z,10.0nm,0.7s							
ANN				MLR	MLR			
	comp=N,890nm,24.0s							
ANN				MLR	MLR			
	comp=E,500nm,23.0s							
ANN				MLR	MLR			
	comp=Z,1μm,23.0s							
RAF	**Rauma**	**133.07**	**339**	*e*P	**PKiKP**	**04 10 09.9**	**-0.5**	
MNK	**Minsk**	**134.72**	**329**	*i* PKIKP	**PKPdf**	**04 10 09.4**	**-3.2**	
MNK				*i* SP	SP	04 23 11.4	+7.4	
MNK				*i* SS	**SS**	**04 30 28.3**	**-8.8**	
MNK				*i* SSS	SSS	04 35 36.4		
MNK				pmax	pmax			
	comp=E,2.0nm,1.0s							
MNK				pmax	pmax			
	comp=Z,16nm,1.0s							
MNK				pmax	pmax			
	comp=N,32nm,0.9s							
MNK				MLR	MLR			
	comp=E,267nm,21.0s							
MNK				MLR	MLR			
	comp=N,935nm,21.0s							
MNK	**Minsk**	**134.72**	**329**	*i* PKP	**PKPdf**	**04 10 09.4**	**-3.2**	
	comp=E,2.0nm,1.0s							
MNK				*i* PKP	**PKPdf**	**04 10 09.4**	**-3.2**	
	comp=N,32nm,0.9s							
MNK				*i* PKP	**PKPdf**	**04 10 09.4**	**-3.2**	
	comp=Z,16nm,1.0s,baz=56							
MNK				*i* PP	PP	04 12 36.3	-10	
MNK				*i* PPP	PPP	04 16 08.3		
MNK				*i* SKS	SKSdf	04 17 49.5	+27	
MNK				*i* SKKS		04 20 47.1		
MNK				*i* PS	**PS**	**04 23 14.7**	**+7.0**	
MNK				*i* SS	**SS**	**04 30 28.3**	**-8.8**	
MNK				*i* SSS	SSS	04 35 36.5		
MNK				*i* LR	LR	04 55 40.2		
MNK				*i* LRM	MLR	05 10 42.2		
	comp=E,267nm,20.6s							
MNK				*i* LRM	MLR	05 11 10.6		
	comp=N,935nm,20.6s							
MNK				*i* LRM	MLR	05 12 51.1		
	comp=Z,7μm,20.4s							
IDID	**Didziasalis**	**134.80**	**330**	*e*P	**PKiKP**	**04 10 14.3**	**+0.1**	
ISAL	**Salakas**	**134.93**	**331**	*e*P	**PKiKP**	**04 10 15.4**	**+1.0**	
IIGN	**Ignalina**	**135.02**	**331**	*e*P	**PKiKP**	**04 10 14.8**	**+0.2**	
NACGM	**Naroch**	**135.02**	**330**	⇑ *e*PKP	**PKPdf**	**04 10 12.8**	**-0.4**	
	baz=55							
ASF	**Jabal al Asfar**	**135.58**	**296**	PKP	**PKPdf**	**04 10 15.8**	**+0.7**	
	comp=Z,2.6nm,0.9s,baz=15,slow=3.7,SNR=4.2							
ASF	**Jabal al Asfar**	**135.58**	**296**	PKIKP	**PKPdf**	**04 10 15.8**	**+0.7**	
MOL	**Molde**	**135.67**	**348**	*e*PKPdf	**PKPdf**	**04 10 14.7**	**+0.6**	
DOMB	**Dombas**	**135.83**	**347**	*e*PKPdf	**PKPdf**	**04 10 12.0**	**-2.5**	
PABE	**Paberze**	**135.94**	**332**	*e*P	**PKiKP**	**04 10 16.0**	**-0.5**	
AKASG	**Malin Array Be**	**136.00**	**324**	PKP	**PKPdf**	**04 10 15.2**	**+0.1**	
	comp=Z,3.3nm,0.7s,baz=58,slow=2.7,SNR=15							
AKASG				PP	**PP**	**04 12 52.3**	**-2.0**	
	comp=Z,0.9nm,0.8s,baz=50,slow=8.6,SNR=5.3							
AKASG				SKPab	**SKPbc**	**04 13 45.2**	**-0.9**	
	comp=Z,3.9nm,0.9s,baz=44,slow=4.1,SNR=7.1							
AKASG	**Malin Array Be**	**136.00**	**324**	PKIKP	**PKPdf**	**04 10 15.2**	**+0.1**	
AKBB	**Malin Array Si**	**136.00**	**324**	*c i*PKIKP	**PKPdf**	**04 10 15.8**	**+0.7**	
NC303	**NORSAR Array S**	**136.00**	**345**	PKPdf	**PKPdf**	**04 10 14.9**	**+0.1**	
AKN	**Aaknes**	**136.14**	**348**	*e*PKPdf	**PKPdf**	**04 10 15.3**	**+0.2**	
NB2	**NORSAR Subarra1**	**136.20**	**344**	PKIKP	**PKPdf**	**04 10 14.5**	**-0.7**	
NB2	**NORSAR Subarra1**	**136.20**	**344**	*e*	PKPpre	04 10 03.8		
	baz=31,slow=1.9							
NB2	**NORSAR Subarra1**	**136.20**	**344**	PKPdf	PKPpre	04 10 03.8		
	comp=Z,22nm,1.4s,baz=31,slow=1.9							
NOA	**NORSAR Array B**	**136.20**	**344**	PKP	**PKPdf**	**04 10 14.3**	**-1.0**	
	comp=Z,7.4nm,1.0s,baz=39,slow=2.0,SNR=11							
NOA				SKP		04 13 47.0		
	comp=Z,3.6nm,1.1s,baz=32,slow=2.6,SNR=6.8							
NOA	**NORSAR Array B**	**136.20**	**344**	PKIKP	**PKPdf**	**04 10 14.3**	**-1.0**	
HFS	**Hagfors**	**136.29**	**342**	SKP		04 13 44.3		
	comp=Z,6.0nm,1.0s,baz=90,slow=3.3,SNR=4.3							
NC602	**NORSAR Array S**	**136.38**	**344**	*e*PKPdf	**PKPdf**	**04 10 15.6**	**+0.1**	
NORES	**NORESS Array B**	**136.38**	**344**	PKIKP	**PKiKP**	**04 10 21.5**	**+4.3**	
NORES				pmax	pmax			
	comp=Z,1.0nm,0.7s							
GHAJ	**Ghor Haditha**	**136.76**	**295**	IAMs_20	IAMs_20	05 14 18.9		
	comp=Z,2μm,20.0s							
MMAI	**Mount Meron Ar**	**136.77**	**297**	PKP	**PKPdf**	**04 10 16.1**	**-1.1**	
	comp=Z,0.6nm,0.2s,baz=24,slow=3.9,SNR=5.9							
FOO	**Floro**	**137.04**	**349**	*e*PKPdf	**PKPdf**	**04 10 13.7**	**-3.0**	
BRTR	**Keskin Array B**	**137.07**	**307**	PKP	**PKPdf**	**04 10 16.2**	**-1.5**	
	comp=Z,3.3nm,1.1s,baz=56,slow=5.4,SNR=3.9							
BRTR				PP	**PP**	**04 12 56.0**	**-5.8**	
	comp=Z,0.6nm,0.9s,baz=86,slow=5.9,SNR=2.3							
BRTR	**Keskin Array B**	**137.07**	**307**	*i* PKIKP	**PKPdf**	**04 10 16.2**	**-1.5**	
BRTR				pmax	pmax			
	comp=Z,3.0nm,1.1s							
SKAR	**Skarslia**	**137.21**	**346**	*e*PKPdf	**PKPdf**	**04 10 16.5**	**-0.7**	
HYA	**Hoyanger**	**137.22**	**348**	*e*PKPdf	**PKiKP**	**04 10 18.4**	**-0.5**	
SUW	**Suwalki**	**137.24**	**331**	*e*PKPdf	**PKPdf**	**04 10 17.0**	**-0.3**	
SUW	**Suwalki**	**137.24**	**331**	*e*P	**PKiKP**	**04 10 19.3**	**+0.1**	
EIL	**Elat**	**137.37**	**292**	PKP	**PKPdf**	**04 10 18.2**	**-0.2**	
	comp=Z,3.2nm,0.6s,baz=159,slow=5.4,SNR=4.0							
SORM	**Soroca**	**137.71**	**321**	⇑P	**PKiKP**	**04 10 20.4**	**+0.1**	
SORM	**Soroca**	**137.71**	**321**	⇑PKIKP	**PKiKP**	**04 10 20.4**	**+0.1**	
KONO	**Kongsberg**	**137.81**	**344**	IAMs_20	IAMs_20	05 12 00.9		
	comp=Z,2μm,21.0s							
KONO	**Kongsberg**	**137.81**	**344**	*e*PKPdf	**PKPdf**	**04 10 12.9**	**-5.3**	
KONO				*e*PP	**PP**	**04 13 06.7**	**+1.7**	
KONO				*e*SS	SS	04 31 16.0	+2.9	
KIS	**Kishinev**	**137.94**	**319**	*e*PKP	**PKPdf**	**04 10 17.0**	**-1.8**	
KIS	**Kishinev**	**137.94**	**319**	*e*PP	PP	04 13 06.0	-0.6	
KIS				*e*SKP		04 13 22.0		
KIS				*e*L	L	05 04 27.0		
KIS				LRM	MLR	05 14 21.0		
	comp=Z,500nm,21.5s							
KIS	**Kishinev**	**137.94**	**319**	*e*PKIKP	**PKPdf**	**04 10 17.0**	**-1.8**	
KIS				*e*		04 13 06.0		
MILM	**Milestii Mici**	**137.97**	**319**	*e*PKHKP	PKPpre	04 10 07.0		
MILM	**Milestii Mici**	**137.97**	**319**	*i* PKIKP	**PKPdf**	**04 10 17.0**	**-1.9**	
MILM	**Milestii Mici**	**137.97**	**319**	PKPM		04 10 20.0		
	comp=Z,330nm,9.3s							
MILM	**Milestii Mici**	**137.97**	**319**	*e*PP	PP	04 13 04.0	-2.8	
MILM				*e*SKP		04 13 21.0		
MILM				*e*L	L	05 04 28.0		
MILM				LRM	MLR	05 14 57.0		
	comp=Z,1μm,20.5s							
MILM	**Milestii Mici**	**137.97**	**319**	*e*PKHKP	PKPpre	04 10 07.0		
MILM				*i*		04 10 17.0		
MILM				*e*		04 13 04.0		
MILM				pmax	pmax			
	comp=Z,330nm,9.3s							
CSS	**Mathiatis**	**138.24**	**300**	PKPdf	**PKPdf**	**04 10 18.8**	**-1.0**	
CSS				IAMs_20	IAMs_20	05 15 45.1		
	comp=Z,2μm,20.0s							
ODD1	**Odda**	**138.27**	**347**	*e*PKPdf	**PKPdf**	**04 10 20.0**	**+0.9**	
BLS5	**Blasjo**	**138.75**	**346**	*e*PKPdf	**PKPdf**	**04 10 19.6**	**-0.4**	
CFR	**Carcaliu**	**139.14**	**317**	⇑P	**PKPdf**	**04 10 20.1**	**-1.0**	
CFR	**Carcaliu**	**139.14**	**317**	⇑PKIKP	**PKPdf**	**04 10 20.1**	**-1.0**	
HOMB	**Homborsund**	**139.29**	**344**	*e*PKPdf	**PKPdf**	**04 10 14.8**	**-6.1**	
HOMB				*e*PP	**PP**	**04 13 15.4**	**+1.3**	
HOMB				*e*SS	SS	04 31 33.6	+3.0	
LVV	**L'vov**	**139.30**	**325**	*e*PKHKP	PKPpre	04 10 12.8		
LVV				*e*		04 13 10.5		
LVV				*e*SS	SS	04 32 01.4	+30	
SNART	**Snartemo**	**139.55**	**345**	*e*PKPdf	**PKPdf**	**04 10 21.8**	**+0.3**	
BIZ	**Bicaz**	**139.62**	**320**	⇑P	**PKPdf**	**04 10 17.3**	**-4.7**	
VRI	**Vrincioaia**	**139.74**	**318**	⇑P	**PKPdf**	**04 10 17.5**	**-4.7**	
VRI	**Vrincioaia**	**139.74**	**318**	⇑PKIKP	**PKPdf**	**04 10 17.5**	**-4.7**	
BEL	**Belsk**	**139.74**	**329**	*e*PKPdf	**PKPdf**	**04 10 20.9**	**-1.0**	
BURAR	**Bucovina Array**	**139.81**	**322**	⇑P	**PKiKP**	**04 10 26.1**	**+1.3**	
BURAR	**Bucovina Array**	**139.81**	**322**	⇑PKIKP	**PKiKP**	**04 10 26.1**	**+1.3**	
MLR	**Muntele Rosu**	**140.40**	**318**	⇑P	**PKPdf**	**04 10 24.6**	**+1.0**	
MLR	**Muntele Rosu**	**140.40**	**318**	PKP	**PKPdf**	**04 10 21.6**	**-1.9**	
	comp=Z,3.4nm,0.8s,baz=315,slow=4.3,SNR=3.1							
MLR	**Muntele Rosu**	**140.40**	**318**	IAMs_20	IAMs_20	05 19 02.6		
	comp=Z,2μm,20.0s							
MLR	**Muntele Rosu**	**140.40**	**318**	PKIKP	**PKPdf**	**04 10 21.6**	**-1.9**	
KOLS	**Kolonicke sedl**	**140.75**	**325**	*e*PKIKP	**PKPdf**	**04 10 22.2**	**-1.7**	
KOLS	**Kolonicke sedl**	**140.75**	**325**	*e*PKP	**PKPdf**	**04 10 22.2**	**-1.7**	
UZH	**Uzhgorod**	**140.91**	**325**	*e*PKIKP	**PKPdf**	**04 10 20.4**	**-3.8**	
UZH				*e*

comp=Z,1μm,19.0s
CLL Collm 143.56 334 *i* PKIKP PKPab 04 10 25.3 0.0
CLL pmax pmax
comp=Z,63nm,1.8s
CLL MLR MLR
comp=Z,1μm,19.0s
CLL Collm 143.56 334 *i* PKPdf PKPab 04 10 25.3 0.0
comp=Z,63nm,1.8s
CLL *e*PP **PP 04 13 42.0 +1.6**
comp=Z,600nm,11.5s
CLL *e*SKPdf **SKPdf 04 14 02.0 -0.5**
CLL *e*PKSbc **PKSbc 04 14 12.0 +3.6**
CLL *i* (pSKPbc) 04 14 19.3
comp=Z,14nm,1.3s
CLL *e*x x 04 22 06.0
CLL *e*PSKS 04 23 54.0
CLL *e*PPPrev 04 25 12.0
CLL *e*PPS PPS 04 26 11.0
CLL *e*x x 04 27 18.0
CLL *e*SS **SS 04 32 30.0 +9.1**
CLL *e*SKSSKSac **S'S'ac 04 33 48.0 +0.1**
CLL *e*SSS SSS 04 37 30.0
CLL LmV 05 21 00.0
comp=Z,1μm,19.0s
CLL Lm MLR 11 14 00.0
comp=Z,100nm,19.0s
CLL Lm MLR 11 38 00.0
comp=Z,100nm,21.6s
CLL Lm MLR 12 23 00.0
comp=Z,200nm,19.0s
MMB Musomiste 143.57 314 *i* P PKPab 04 10 25.1 -0.6
KRUC Moravsky 143.68 329 *e*PKP PKPbc 04 10 26.6 0.0
MODS Modra-Piesok 143.71 328 *e*PKIKP **PKPdf 04 10 28.1 -1.1**
MODS Modra-Piesok 143.71 328 *e*PKP **PKPdf 04 10 28.1 -1.1**
PRU Pruhonice 143.89 332 *e*PKIKP PKPbc 04 10 27.7 +0.5
PRU *e* 04 13 41.7
PRU MLR MLR
comp=Z,3μm,22.4s
PRU Pruhonice 143.89 332 *e*PKP PKPbc 04 10 27.7 +0.5
PRU *e*PP **PP 04 13 41.7 -0.8**
PRU *e*S 04 32 31.1
PRU AMS AMS 05 12 50.0
comp=Z,3μm,22.4s
BOVS Bovan 143.94 318 ⇑P PKPab 04 10 27.1 +0.1
TREC Trest 143.95 330 *e*PKIKP PKPab 04 10 26.1 -0.8
TREC *e* 04 13 40.3
TREC MLR MLR
comp=Z,3μm,22.0s
TREC Trest 143.95 330 *e*PKP PKPab 04 10 26.1 -0.8
TREC *e*PP **PP 04 13 40.3 -2.7**
TREC AMS AMS 05 14 50.0
comp=Z,3μm,22.0s
FRGS Fruska Gora 144.28 321 ⇑P **PKPab 04 10 28.3 0.0**
FRGS Fruska Gora 144.28 321 ⇑*i*P **PKPab 04 10 27.5 -0.8**
EKA Eskdalemuir Ar 144.33 352 PKP **PKPab 04 10 27.4 -0.6**
comp=Z,15nm,0.7s,baz=350,slow=2.4,SNR=23
EKA Eskdalemuir Ar 144.33 352 PKIKP **PKPab 04 10 27.5 -0.6**
MORH Mrgy, Hungar 144.34 324 ⇑P **PKPab 04 10 28.0 -0.4**
MORH Mrgy, Hungar 144.34 324 ⇑*i*P **PKPab 04 10 28.1 -0.3**
VAY Valandovo 144.47 314 *i* P **PKPab 04 10 28.1 -0.9**
RCBR Riachuelo 144.53 134 PKPdf **PKPab 04 10 28.6 -1.5**
RCBR Riachuelo 144.53 134 IAMs_20 IAMs_20 05 21 35.5
comp=Z,2μm,18.0s
RCBR Riachuelo 144.53 134 PKIKP **PKPab 04 10 28.6 -1.5**
NKC Novy Kostel 144.61 334 *e*PKIKP PKPbc 04 10 29.5 0.0
NKC *e* 04 13 44.4
NKC MLR MLR
comp=Z,2μm,18.4s
NKC Novy Kostel 144.61 334 *e*PKP PKPbc 04 10 29.5 0.0
NKC *e*PP **PP 04 13 44.4 -2.4**
NKC *e*S 04 32 52.6
NKC AMS AMS 05 18 50.0
comp=Z,2μm,18.4s
RONA Rosalia, Austr 144.64 327 *i* P PKPbc 04 10 30.1 +0.4
comp=Z,84nm,1.1s,SNR=36
CONA Conrad Observa 144.71 328 *i* P PKPbc 04 10 30.3 +0.3
comp=Z,62nm,1.0s,SNR=36
DIVS Divibare 144.76 320 IAMs_20 IAMs_20 05 16 39.1
comp=Z,2μm,22.0s
DIVS Divibare 144.76 320 ⇑*i*P **PKPab 04 10 30.0 -0.1**
TEKS Tekeris 144.79 321 *e*P **PKPab 04 10 28.2 -2.0**
BLJ Bijeljina 144.81 321 *e*P **PKPab 04 10 29.6 -0.6**
CKRC Cesky Krumlov 144.83 330 *e*PKP **PKPab 04 10 30.2 0.0**
CKRC *e*PP **PP 04 13 43.4 -4.8**
CKRC *e*S 04 32 40.8
CKRC AMS AMS 05 12 30.0
comp=Z,2μm,22.7s
SKO Skopje 144.93 316 *i* P **PKPab 04 10 30.4 -0.3**
IDI Anoyia 144.93 303 ⇑P **PKPab 04 10 31.0 0.0**
IDI Anoyia 144.93 303 PKP **PKPab 04 10 30.4 -0.6**
comp=Z,86nm,1.2s,baz=85,slow=4.7,SNR=23
IDI Anoyia 144.93 303 PKPdf **PKPab 04 10 30.5 -0.6**
KHC Kasperske Hory 144.94 331 *e*PKIKP **PKPab 04 10 30.6 0.0**
KHC MLR MLR
comp=Z,3μm,23.2s
KHC Kasperske Hory 144.94 331 *e*PKP **PKPab 04 10 30.6 0.0**
KHC *e*PP **PP 04 13 41.8 -7.1**
KHC *e*S 04 32 46.7
KHC AMS AMS 05 13 40.0
comp=Z,3μm,23.2s
GERES GERESS Array B 145.10 331 PKIKP **PKPbc 04 10 31.0 -0.2**
comp=Z,18nm,0.8s,baz=48,slow=4.3,SNR=80
GERES GERESS Array B 145.10 331 PKIKP **PKPbc 04 10 31.0 -0.2**
BEHE Becsehely 145.20 325 ⇑*i*P **PKPbc 04 10 31.3 -0.1**
SJES Sjenica 145.22 319 ⇑*i*P **PKPbc 04 10 31.1 -0.7**
BBLS Lazići 145.24 320 ⇑*i*P **PKPbc 04 10 31.3 -0.5**
RUDO Rudo 145.40 320 *e*P **PKPbc 04 10 31.8 -0.4**
KOGS Kog 145.49 326 *e*PKPbc **PKPdf 04 10 31.5 -0.8**
KOGS *e*PP **PP 04 13 58.1 +5.9**
GRA1 Grafenberg Arr 145.53 334 **PKPdf 04 10 31.9 -0.5**
GRA1 IAMs_20 IAMs_20 05 23 46.2
comp=Z,2μm,19.0s
GRF Grafenberg Arr 145.53 334 PKIKP **PKPdf 04 10 31.9 -0.5**
GRFO Grafenberg 145.53 334 PKPdf **PKPdf 04 10 31.6 -0.7**
GRFO IAMs_20 IAMs_20 05 23 38.2
comp=Z,2μm,19.0s
GRFO Grafenberg 145.53 334 PKIKP **PKPdf 04 10 31.6 -0.7**
MOA Molln 145.54 329 *i* P **PKPdf 04 10 32.1 -0.3**
comp=Z,100nm,0.9s,SNR=56
OHR Ohrid 145.75 315 *i* P **PKPdf 04 10 33.2 +0.1**
GROS Grobnik 145.87 326 *e*PKPbc **PKPdf 04 10 32.1 -1.0**
BIOA Bad Ischl, Aus 145.95 330 *i* P **PKPbc 04 10 34.0 +0.1**
comp=Z,40nm,0.9s,SNR=17
PERS Pernice 145.95 327 *e*PKPbc **PKPdf 04 10 33.2 -0.1**
SOKA Soboth 145.97 327 *i* P **PKPdf 04 10 33.4 +0.1**
comp=Z,41nm,1.0s,SNR=26
BLY Banja Luka 146.04 323 ⇑*i*P **PKPbc 04 10 33.8 -0.4**
PDG Podgorica 146.10 318 ⇑P **PKPbc 04 10 34.0 -0.4**
PDG Podgorica 146.10 318 *e*P **PKPdf 04 10 33.5 0.0**
TIR Tirane 146.26 316 ⇑P **PKPbc 04 10 35.1 +0.2**
TIR Tirane 146.26 316 IAMs_20 IAMs_20 05 19 17.9
comp=Z,2μm,22.0s
TIR Tirane 146.26 316 ⇑PKP2 **PKPbc 04 10 35.1 +0.2**
DRME Dracevica, Mon 146.28 318 *e*P **PKPdf 04 10 34.3 +0.5**
MGRS Mrkonjic Grad 146.30 322 *e*P **PKPdf 04 10 33.8 0.0**
BRY Bratogost 146.30 319 *e*P **PKPdf 04 10 34.1 +0.1**
CRES Cresnjev 146.31 326 ⇑*i*P **PKPdf 04 10 33.6 -0.2**
OBKA Obir 146.33 327 *i* P **PKPbc 04 10 34.8 -0.3**
comp=Z,29nm,0.9s,SNR=5.3
SRKY Kupres RS 146.46 322 *e*P **PKPab 04 10 36.4 -0.1**
TREB Trebinje 146.51 319 *e*P **PKPbc 04 10 35.8 +0.1**
KBA Koelnbreinsper 146.53 329 *i* P **PKPdf 04 10 34.4 +0.1**
comp=Z,32nm,1.1s,SNR=19
HCY Herceg Novi 146.57 318 *e*P **PKPbc 04 10 36.0 +0.2**
BEBN Eben Emael 146.63 341 *d*PKPbc **PKPbc 04 10 35.2 -0.4**
LJU Ljubljana 146.65 327 *e*P **PKPdf 04 10 34.3 -0.1**
BTNL Ternell 146.67 340 *d*PKPbc **PKPdf 04 10 34.8 +0.5**
MEM Membach 146.69 340 *d*PKPbc **PKPbc 04 10 35.1 -0.8**
MYKA Terra Mystica 146.70 328 *i* P **PKPdf 04 10 35.3 +0.7**
comp=Z,23nm,0.7s,SNR=6.0
DSB Dublin 146.73 355 IAMs_20 IAMs_20 05 14 53.2
comp=Z,2μm,20.0s
STON Ston 146.83 320 ⇑*i*P **PKPdf 04 10 34.9 +0.2**
BSTI Sart Tilman 146.85 340 *d*PKPbc **PKPbc 04 10 35.6 -0.7**
CEY Cerknica 146.91 326 *e*P **PKPdf 04 10 35.3 +0.5**
BHOU Houvegnez 146.91 340 *d*PKPbc **PKPbc 04 10 36.4 -0.2**
STU Stuttgart 147.08 335 IAMs_20 IAMs_20 05 18 55.0
comp=Z,1μm,19.0s
ABTA Abfaltersbach 147.17 329 *i* P **PKPdf 04 10 34.9 -0.4**
comp=Z,51nm,0.9s,SNR=17
WATA Walderalm 147.17 331 *i* P **PKPdf 04 10 35.1 -0.2**
comp=Z,73nm,1.1s,SNR=18
WTTA Wattenberg 147.20 331 *i* P **PKPdf 04 10 34.9 -0.5**
comp=Z,68nm,1.1s,SNR=21
SKDS Skadanscina 147.25 326 *e*P **PKPdf 04 10 35.9 +0.5**
TRI Trieste 147.27 327 **PKPdf 04 10 36.0 +0.6**
TRI Trieste 147.27 327 PKP2 **PKPdf 04 10 36.0 +0.6**
SNF Seneffe 147.31 342 *d*PKPbc **PKPbc 04 10 37.8 +0.2**
RCHB Rochefort 147.33 340 *d*PKPbc **PKPbc 04 10 37.2 -0.5**
BMRD Maredsous 147.35 341 *d*PKPbc **PKPbc 04 10 37.7 -0.1**
MOTA Moosalm 147.38 331 *i* P **PKPbc 04 10 37.7 -0.5**
comp=Z,42nm,1.2s,SNR=26
RETA Reutte 147.42 332 *i* P **PKPdf 04 10 36.8 +1.1**
comp=Z,28nm,1.1s,SNR=15
SQTA Sankt Quirin 147.42 331 *i* P **PKPdf 04 10 35.8 0.0**
comp=Z,66nm,1.1s,SNR=26
WLF Walferdange 147.46 339 IAMs_20 IAMs_20 05 17 42.0
comp=Z,2μm,21.0s
WLF Walferdange 147.46 339 *d*PKPbc **PKPbc 04 10 38.2 +0.1**
DOU Dourbes 147.58 341 *d*PKPbc **PKPbc 04 10 37.9 -0.5**
BFO Black Forest 147.77 335 **PKPbc 04 10 37.8 -1.3**
BFO IAMs_20 IAMs_20 05 24 25.5
comp=Z,1μm,19.0s
BFO Black Forest 147.77 335 PKP2 **PKPbc 04 10 37.8 -1.3**
FETA Feichten 147.79 331 *i* P **PKPdf 04 10 36.6 +0.1**
comp=Z,80nm,1.0s,SNR=48
DAVA Damuels 147.96 333 *i* P **PKPbc 04 10 39.6 -0.2**
comp=Z,45nm,1.0s,SNR=19
CTI Castel Tesino 148.08 329 PKPdf **PKPdf 04 10 37.3 +0.4**
CTI Castel Tesino 148.08 329 PKIKP **PKPdf 04 10 37.3 +0.4**
ECH Echery 148.32 336 IAMs_20 IAMs_20 05 19 41.8
comp=Z,1μm,20.0s
DAVOX Davos/Dischmat 148.35 332 PKPbc **PKPbc 04 10 39.8 -1.1**
comp=Z,44nm,0.6s,baz=181,slow=0.7,SNR=49
DAVOX Davos/Dischmat 148.35 332 PKP2 **PKPbc 04 10 39.8 -1.1**
MATE Matera 148.67 317 ⇓P **PKPbc 04 10 39.9 -1.7**
SALO Salr 148.93 330 **PKPbc 04 10 41.5 -1.1**
TIP Timpagrande 149.40 314 ⇑P **PKPbc 04 10 42.8 -0.8**
TIP Timpagrande 149.40 314 PKPbc **PKPbc 04 10 42.4 -1.2**
TIP IAMs_20 IAMs_20 05 21 24.0
comp=Z,1μm,22.0s
SENIN Lac Senin/Sane 149.78 334 PKPbc **PKPbc 04 10 44.2 -0.3**
SENIN IAMs_20 IAMs_20 05 24 42.5
comp=Z,2μm,19.0s
CEL Celeste 150.44 314 IAMs_20 IAMs_20 05 25 32.7
comp=Z,1μm,21.0s
BNI Bardonecchia 151.09 333 PKPbc **PKPbc 04 10 46.7 -0.9**
BNI Bardonecchia 151.09 333 PKIKP **PKPbc 04 10 46.7 -0.9**
SSB Saint Sauveur 151.76 336 IAMs_20 IAMs_20 05 25 03.9
comp=Z,1μm,19.0s
VSL Villasalto 153.85 322 IAMs_20 IAMs_20 05 35 54.6
comp=Z,1μm,20.0s
PICO Pico 156.34 36 *e*PKP **PKPdf 04 10 51.7 +2.4**
PAGU Agualva, Azore 156.81 33 *e*PKP **PKPdf 04 10 52.6 +2.8**
PBRG Braganca 158.06 351 *e*PKPdf **PKPdf 04 10 51.8 +0.4**
PBRG Braganca 158.06 351 *e*PKPab **PKPab 04 11 25.5 +0.8**
PBRG Braganca 158.06 351 *e*PP **PP 04 15 05.7 +2.3**
PGAV Gavieira, Arco 158.09 354 *e*PKPdf **PKPdf 04 10 52.4 +0.9**
PGAV Gavieira, Arco 158.09 354 *e*PKPab **PKPab 04 11 25.8 +0.9**
PGAV Gavieira, Arco 158.09 354 *e*PP **PP 04 15 06.5 +2.9**
PGAV Gavieira, Arco 158.09 354 *e*LR LR 05 14 29.4
comp=Z,1μm,20.0s
PSET Sete Cidades 158.27 33 *e*PKP **PKPdf 04 10 52.9 +1.2**
PCAB Cabril 158.31 354 *e*PKP **PKPdf 04 10 52.4 +0.7**
PCAB Cabril 158.31 354 *e*PP **PP 04 15 06.9 +2.1**
CMLA Cha da Macela 158.42 32 *e*PKP **PKPdf 04 10 55.5 +3.6**
POLO Lamas de Olo 158.62 353 *e*PKPdf **PKPdf 04 10 52.7 +0.6**
POLO Lamas de Olo 158.62 353 *e*PKPab **PKPab 04 11 28.0 +0.8**
POLO Lamas de Olo 158.62 353 *e*PP **PP 04 15 09.1 +2.6**
PVRL Vila Real 158.71 353 *e*PKPdf **PKPdf 04 10 52.4 +0.2**
PVRL Vila Real 158.71 353 *e*PKPab **PKPab 04 11 29.3 +1.8**
PVRL Vila Real 158.71 353 *e*PP **PP 04 15 12.2 +5.2**
MVO Moncorvo 158.73 351 *e*PKPdf **PKPdf 04 10 53.2 +1.0**
MVO Moncorvo 158.73 351 *e*PKPab **PKPab 04 11 28.3 +0.7**
MVO Moncorvo 158.73 351 *e*PP **PP 04 15 09.7 +2.6**
MVO Moncorvo 158.73 351 *e*LR LR 05 10 26.1
comp=Z,3μm,20.0s
PSMN Pico do Norte, 159.24 33 *e*PKP **PKPdf 04 10 52.9 0.0**
MTE Manteigas 159.55 352 *e*PKPdf **PKPdf 04 10 53.9 +0.7**
MTE Manteigas 159.55 352 *e*PKPab **PKPab 04 11 32.4 +1.2**
MTE Manteigas 159.55 352 *e*PP **PP 04 15 15.5 +3.9**
MTE Manteigas 159.55 352 *e*SS SS 04 35 29.1 +12
MTE Manteigas 159.55 352 *e*LR LR 05 13 58.8
comp=Z,2μm,20.0s
ESBB Sonseca Array 159.56 344 PKPab **PKPab 04 11 29.2 -2.1**
ESDC Sonseca Array 159.56 344 PKPab **PKPab 04 11 30.1 -1.2**
comp=Z,5.1nm,0.9s,baz=20,slow=2.6,SNR=13
PAB San Pablo 159.78 345 PKPab **PKPab 04 11 31.5 -0.8**
PAB San Pablo 159.78 345 PKP2 **PKPab 04 11 31.5 -0.8**
COI Coimbra 159.84 354 *e*PKPdf **PKPdf 04 10 53.7 +0.3**
COI Coimbra 159.84 354 *e*PP **PP 04 15 11.5 +2.5**
PCAS Casmilo, Conde 160.00 354 *e*PKPdf **PKPdf 04 10 54.3 +0.6**
PCAS Casmilo, Conde 160.00 354 *e*PP **PP 04 15 15.8 +1.9**
PCAS Casmilo, Conde 160.00 354 *e*SS SS 04 35 29.5 +8.0
PCBR Castelo Branco 160.09 352 *e*PKPdf **PKPdf 04 10 54.9 +1.2**
PMRV Marv??o 160.49 351 *e*PKPdf **PKPdf 04 10 54.6 +0.4**
PMRV Marv??o 160.49 351 *e*PKPab **PKPab 04 11 36.6 +1.4**
PMRV Marv??o 160.49 351 *e*PP **PP 04 15 19.4 +2.8**
PMRV Marv??o 160.49 351 *e*LR LR 05 14 00.5
comp=Z,2μm,22.0s
PSBE So Bento 160.56 355 *e*PKPdf **PKPdf 04 10 55.0 +0.7**
PSBE So Bento 160.56 355 *e*SS SS 04 35 37.2 +10
PMTG Montargil 160.95 353 *e*PKPdf **PKPdf 04 10 55.5 +0.8**
PMTG Montargil 160.95 353 *e*PP **PP 04 15 24.6 +5.6**
PESTR Estremoz 161.07 351 *e*PKPdf **PKPdf 04 10 55.6 +0.7**
PESTR Estremoz 161.07 351 *e*PP **PP 04 15 22.2 +2.5**
PMAFR Mafra 161.16 356 *e*PKPdf **PKPdf 04 10 56.4 +1.4**
PMAFR Mafra 161.16 356 *e*PP **PP 04 15 25.9 +5.8**
PACT Alcochete 161.31 354 *e*PKPdf **PKPdf 04 10 55.1 0.0**
PMST Lisbon--Monsan 161.37 355 *e*PKPdf **PKPdf 04 10 55.8 +0.6**
PMST Lisbon--Monsan 161.37 355 *e*PP **PP 04 15 28.1 +6.9**
LIS Lisbon 161.39 355 *e*PKPdf **PKPdf 04 10 55.9 +0.7**
LIS *e*PP **PP 04 15 24.2 +2.9**
LIS IAMs_20 IAMs_20 05 25 21.1
comp=Z,2μm,13.4s
LIS Lisbon 161.39 355 *e*PKIKP **PKPdf 04 10 55.8 +0.7**
LIS *e* 04 15 24.2
EVO Evora 161.45 352 *e*PKPdf **PKPdf 04 10 55.7 +0.4**
EVO Evora 161.45 352 *e*PP **PP 04 15 24.3 +2.6**
PNCL Nicolau / Gran 161.93 353 *e*PKPdf **PKPdf 04 10 56.7 +1.0**
PNCL Nicolau / Gran 161.93 353 *e*PP **PP 04 15 30.5 +6.3**
PNCL Nicolau / Gran 161.93 353 *e*SS SS 04 35 53.0 +11
PBEJ Beja 161.93 352 *e*PKPdf **PKPdf 04 10 57.4 +1.6**
MESJ Messejana 162.16 352 *e*PKPdf **PKPdf 04 10 56.7 +0.6**
MESJ *e*PP **PP 04 15 28.3 +2.8**
MESJ IAMs_20 IAMs_20 05 26 18.1
comp=Z,3μm,20.5s
MESJ Messejana 162.16 352 *e*PKPdf **PKPdf 04 10 56.9 +0.9**
MESJ Messejana 162.16 352 *e*PP **PP 04 15 31.1 +5.6**
MESJ Messejana 162.16 352 *e*PKIKP **PKPdf 04 10 56.6 +0.6**
MESJ *e* 04 15 28.3
PCVE Castro Verde 162.34 352 *e*PKPdf **PKPdf 04 10 56.2 0.0**
PCVE Castro Verde 162.34 352 *e*PKPab **PKPab 04 11 44.6 +1.2**
PCVE Castro Verde 162.34 352 *e*PP **PP 04 15 31.1 +4.6**
PTEO Sao Teotonio 162.51 354 *e*PKPdf **PKPdf 04 10 57.0 +0.6**
PVAQ Vaqueiros 162.52 351 *e*PKPdf **PKPdf 04 10 57.6 +1.2**
PVAQ Vaqueiros 162.52 351 *e*PP **PP 04 15 31.8 +4.4**
PVAQ Vaqueiros 162.52 351 *e*LR LR 05 15 04.9
comp=Z,3μm,20.0s
PBDV Barranco-do-Ve 162.71 351 *e*PKPdf **PKPdf 04 10 57.5 +0.9**
PBDV Barranco-do-Ve 162.71 351 *e*PP **PP 04 15 32.4 +3.9**
PBDV Barranco-do-Ve 162.71 351 *e*SS SS 04 35 58.6 +8.7
MORF Marmelete 162.74 353 *e*PKPdf **PKPdf 04 10 57.3 +0.6**
MORF *e*PP **PP 04 15 31.4 +2.8**
MORF IAMs_20 IAMs_20 05 35 17.3
comp=Z,2μm,21.6s
MORF Marmelete 162.74 353 *e*PKPdf **PKPdf 04 10 57.1 +0.4**
MORF Marmelete 162.74 353 *e*PP **PP 04 15 34.7 +6.1**
MORF Marmelete 162.74 353 *e*PKIKP **PKPdf 04 10 57.2 +0.6**
MORF *e* 04 15 31.4
PFVI Vila Bisbo 162.93 354 *e*PKPdf **PKPdf 04 10 57.3 +0.5**
PFVI Vila Bisbo 162.93 354 *e*PP **PP 04 15 32.5 +3.0**
LIC Lamto 164.97 204 ⇑*i*PKP1 **PKPab 04 11 57.0 +1.5**
comp=Z,13nm,1.0s
KIC Kosan Boka 164.98 205 ⇑*i*PKP1 **PKPab 04 11 57.4 +1.8**
comp=Z,6.5nm,0.6s
TIC Toumodi 165.35 205 ⇑*e*PKP1 **PKPab 04 11 58.4 +1.2**
comp=Z,1.3nm,0.2s
TORD Torodi Ar. Bea 165.90 243 PKP **PKPdf 04 10 59.5 -0.6**
comp=Z,2.9nm,1.0s,baz=303,slow=3.0,SNR=5.5
TORD PKPab **PKPab 04 11 58.1 -1.7**
comp=Z,5.1nm,1.2s,baz=116,slow=2.7,SNR=5.2
TORD Torodi Ar. Bea 165.90 243 **PKPdf 04 10 57.4 -2.6**
PMOZ Porto Moniz, M 166.23 22 *e*PKPdf **PKPdf 04 11 02.1 +2.1**
PMOZ Porto Moniz, M 166.23 22 *e*PP **PP 04 15 53.6 +6.3**
PMOZ Porto Moniz, M 166.23 22 *e*LR LR 05 12 29.3
comp=Z,963nm,20.0s
PMPST Porto Santo, M 166.28 19 *e*PKPdf **PKPdf 04 11 00.7 +0.8**
PMPST Porto Santo, M 166.28 19 *e*PP **PP 04 15 50.4 +3.1**
PMPS Porto Santo 166.30 19 *e*PKPdf **PKPdf 04 11 04.3 +4.4**
PMAR Madeira 166.42 21 *e*PKPdf **PKPdf 04 11 00.7 +0.5**
PMAR Madeira 166.42 21 *e*PP **PP 04 15 54.5 +6.2**
FUL Funchal 166.50 21 *e*PP **PP 04 15 55.1 +6.6**

MAN 20 04:03:22.1, 11°.17N×126°.52E, h35km, mb4.4, ML3.2, MS3.0, Philippine Islands region

ANF ***20*** *04:21:13.9±0.1, 34°.30N×116°.92W, h8km±1km, ML3.1/29, Error ellipse: s-maj=0.9km s-min=0.8km az=76.0*
IASPEI ***20*** *04:21:14.2±0.9, 34°.30N±0°.02×116°.93W±0°.02, h8km±6km, Error ellipse: s-maj=3.4km s-min=3.1km az=98.3, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
NEIC ***20*** *04:21:14.7±1.3, 34°.30N±0°.02×116°.92W±0°.02, h11km±5km, Error ellipse: s-maj=2.7km s-min=2.3km az=152.0*
PAS ***20*** *04:21:14.7±1.5, 34°.31N±0°.01×116°.92W±0°.02, h1km±7km, ML3.1/207, ML2.8/64(NEIC), Error ellipse: s-maj=2.2km s-min=1.9km az=58.0*
ISC 20 04:21:14.4±0.8, 34°.30N±0°.02×116°.92W±0°.02, h7km±6km, n67, σ0°64/100, Southern California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BBRC	**Big Bear Solar**	**0.04**	**180**	P	**Pg**	**04 21 15.9**	**-0.2**
	baz=1.6,SNR=1000						
BBRC				S	**Sg**	**04 21 17.1**	**-0.3**
	baz=1.6						
RSBC	**Riverside Bore**	**0.47**	**226**		**Pg**	**04 21 23.9**	**+0.5**
RSBC					**Sg**	**04 21 30.4**	**+0.9**
RRX	**Edison Barstow**	**0.58**	**354**	P	**Pg**	**04 21 25.8**	**+0.3**
	baz=174,SNR=18						
RRX				S	**Sg**	**04 21 33.6**	**+0.5**
	baz=174						
BFSC	**Mount Baldy Ra**	**0.61**	**265**	P	**Pg**	**04 21 26.4**	**+0.2**
	baz=84,SNR=54						
BFSC				S	**Sg**	**04 21 34.9**	**+0.6**
	baz=84						
GVDA	**Garner Valley**	**0.66**	**162**		**Pg**	**04 21 27.3**	**+0.2**
GVDA					**Sg**	**04 21 36.3**	**+0.5**
HEC	**Hector,Ludlow**	**0.72**	**42**	P	**Pg**	**04 21 28.4**	**+0.2**
	baz=223,SNR=120						
HEC				S	**Sg**	**04 21 38.2**	**+0.7**
	baz=223						
MURC	**Murrieta**	**0.73**	**198**	P	**Pg**	**04 21 28.5**	**0.0**
	baz=18,SNR=25						
MURC				S	**Sg**	**04 21 38.9**	**+0.9**
	baz=18						
ELS	**Elsinore Mount**	**0.77**	**213**		**Pg**	**04 21 29.2**	**-0.1**
ELS				Sg	**Sg**	**04 21 39.4**	**+0.1**
ELS				IAML		04 21 40.3	
	comp=E,254nm,0.2s						
PFO	**Pinyon Flats O**	**0.79**	**151**		**Pg**	**04 21 29.6**	**+0.1**
PFO				Sg	**Sg**	**04 21 39.9**	**+0.1**
PFO				IAML		04 21 40.3	
	comp=E,303nm,0.4s						
PFO	**Pinyon Flats O**	**0.79**	**151**	P	**Pg**	**04 21 29.4**	**0.0**
	baz=331,SNR=30						
PFO				S	**Sg**	**04 21 39.8**	**+0.1**
	baz=331						
BELC	**Belle Mtn. Jos**	**0.82**	**111**	P	**Pg**	**04 21 30.4**	**+0.2**
	baz=292,SNR=198						
BELC				S	**Sg**	**04 21 41.3**	**+0.5**
	baz=292						
GSC	**Goldstone, Bar**	**1.00**	**5**		**Pg**	**04 21 33.5**	**-0.1**
GSC				Sg	**Sg**	**04 21 46.9**	**+0.2**
GSC				IAML		04 21 53.1	
	comp=N,254nm,0.7s						
GSC				IAML		04 21 53.5	
	comp=E,308nm,0.5s						
GSC	**Goldstone, Bar**	**1.00**	**5**	P	**Pg**	**04 21 33.6**	**-0.1**
	baz=185,SNR=170						
GSC				S	**Sg**	**04 21 46.9**	**+0.2**
	baz=185						
PASC	**Pasadena Art C**	**1.05**	**263**		**Pb**	**04 21 34.0**	**-0.9**
PASC				Sg	**Sg**	**04 21 48.4**	**+0.1**
PASC				IAML		04 21 54.4	
	comp=E,260nm,0.3s						
EDW2	**Edwards Air Fo**	**1.06**	**304**	P	**Pb**	**04 21 34.4**	**-0.7**
	baz=123,SNR=49						
EDW2				S	**Sg**	**04 21 48.4**	**0.0**
	baz=123						
GMRC	**Granite Mounta**	**1.15**	**65**	P	**Pb**	**04 21 35.8**	**-0.8**
	baz=246,SNR=100						
GMRC				S	**Sb**	**04 21 51.5**	**-0.3**
	baz=246						
DECC	**Green Verdugo**	**1.17**	**268**	P	**Pb**	**04 21 36.5**	**-0.4**
	baz=87,SNR=35						
DECC				S	**Sn**	**04 21 52.9**	**-0.5**
	baz=87						
CCAC	**Calif City Air**	**1.24**	**314**		**Pn**	**04 21 37.6**	**-0.5**
CCAC				Sg	**Sb**	**04 21 53.9**	**-0.5**
LRMC	**Laurel Mtn Rad**	**1.33**	**332**	P	**Pn**	**04 21 38.9**	**-0.6**
	baz=152,SNR=96						
LRMC				S	**Sg**	**04 21 57.9**	**+0.6**
	baz=152						
BC3	**Big Chuckawall**	**1.38**	**117**	P	**Pn**	**04 21 39.7**	**-0.4**
	baz=299,SNR=75						
BC3				S	**Sg**	**04 21 58.9**	**+0.2**
	baz=299						
TUQ	**Turquoise Moun**	**1.40**	**36**	P	**Pn**	**04 21 39.8**	**-0.7**
	baz=216,SNR=54						
TUQ				S	**Sn**	**04 21 59.0**	**-0.2**
	baz=216						
109C	**Camp Elliot, M**	**1.42**	**186**		**Pn**	**04 21 39.9**	**-0.5**
109C	**Camp Elliot, M**	**1.42**	**186**	P	**Pn**	**04 21 40.0**	**-0.5**
	baz=6.2						
109C				S	**Sn**	**04 21 58.4**	**-0.9**
	baz=6.2						
MONP2	**Monument Peak**	**1.46**	**163**	Pg	**Pb**	**04 21 41.9**	**-0.2**
	baz=344						
MONP2				S	**Sn**	**04 22 00.7**	**-0.2**
	baz=344						
IRM	**Iron Mountain**	**1.48**	**95**	P	**Pn**	**04 21 40.6**	**-0.8**
	baz=276,SNR=104						
IRM				S	**Sn**	**04 22 00.4**	**-0.6**
	baz=276						
OSI	**Osito Audit: C**	**1.52**	**282**	Pb	**Pn**	**04 21 42.5**	**+0.4**
	baz=101						
OSI				S	**Sb**	**04 22 02.9**	**+0.4**
	baz=101						
CIS	**Catalina Islan**	**1.53**	**235**	Pg	**Pb**	**04 21 43.2**	**+0.2**
	baz=54						
CIS				S	**Sb**	**04 22 03.0**	**+0.3**
	baz=54						
BAR	**Barrett**	**1.63**	**173**	Pn	**Pn**	**04 21 43.6**	**+0.1**
BAR				IAML		04 22 06.9	
	comp=N,126nm,0.2s						
SWSC	**Sam W. Stewart**	**1.64**	**145**	P	**Pn**	**04 21 42.9**	**-0.7**
	baz=326,SNR=17						
SWSC				S	**Sb**	**04 22 06.8**	**-0.4**
	baz=326						
QSM	**Queen of Sheba**	**1.66**	**1**	Pn	**Pn**	**04 21 43.7**	**-0.2**
SHOC	**Shoshone, Teco**	**1.68**	**18**	Pg	**Pb**	**04 21 46.2**	**+0.6**
	baz=198						
SHOC				S	**Sb**	**04 22 08.8**	**+0.3**
	baz=198						
ARVC	**Arvin**	**1.78**	**298**	P	**Pn**	**04 21 45.2**	**-0.2**
	baz=117						
ARVC				S	**Sb**	**04 22 10.9**	**-0.6**
	baz=117						
IKP	**In-Ko-Pah, Jac**	**1.78**	**157**	Pg	**Pb**	**04 21 47.7**	**+0.4**
	baz=338						
IKP				S	**S

ISA				IAML		04 22 15.5	
	comp=E,91nm,0.3s						
ISA				IAML		04 22 18.3	
	comp=N,90nm,0.5s						
ISA	**Isabella, Lake**	**1.86**	**317**	Pb	**Pb**	**04 21 48.8**	**0.0**
	baz=136						
ISA				Sb	**Sg**	**04 22 13.6**	**-0.7**
	baz=136						
GWY	**Greenwater Val**	**1.89**	**6**	Pn	**Pn**	**04 21 46.8**	**-0.5**
GWY				IAML		04 22 19.6	
	comp=N,96nm,0.3s						
GWY				IAML		04 22 26.7	
	comp=E,96nm,0.7s						
NEE2	**Needles Airpor**	**1.96**	**76**	Pg	**Pb**	**04 21 50.9**	**+0.6**
	baz=257						
NEE2				Sb	**Sg**	**04 22 16.3**	**-0.9**
	baz=257						
BLYC	**Blythe**	**2.06**	**105**	Pn	**Pn**	**04 21 48.6**	**-0.9**
BLYC				IAML		04 22 24.7	
	comp=N,48nm,0.6s						
BLYC				IAML		04 22 27.1	
	comp=E,48nm,0.4s						
GLA	**Glamis**	**2.14**	**125**	Pn	**Pn**	**04 21 50.0**	**-0.6**
GLA				IAML		04 22 30.3	
	comp=E,73nm,0.7s						
GLA				IAML		04 22 33.0	
	comp=N,74nm,0.7s						
GLA	**Glamis**	**2.14**	**125**	P	**Pn**	**04 21 50.0**	**-0.6**
	baz=306,SNR=10						
BCW	**Bitter Crk WRg**	**2.15**	**288**	Pn	**Pn**	**04 21 51.3**	**+0.5**
CCX	**Cicese**	**2.44**	**175**	Pn	**Pn**	**04 21 54.5**	**0.0**
CCX				IAML		04 22 31.7	
	comp=N,47nm,0.4s						
CCX				IAML		04 22 35.0	
	comp=E,45nm,0.4s						
W13A	**Hualapai Mount**	**2.62**	**71**	Pn	**Pn**	**04 21 57.0**	**-0.3**
W13A				IAML		04 22 42.0	
	comp=N,34nm,0.4s						
SHPR	**Sheep Range**	**2.63**	**33**	Pn	**Pn**	**04 21 57.7**	**+0.3**
TPNV	**Topopah Spring**	**2.70**	**12**	Pn	**Pn**	**04 21 59.4**	**+1.0**
TPNV	**Topopah Spring**	**2.70**	**12**	Pg	**Pg**	**04 22 05.0**	**-1.1**
	baz=192,SNR=17						
GRAC	**Grapevine Rang**	**2.71**	**352**	Pn	**Pn**	**04 21 59.6**	**+1.1**
GRAC				IAML		04 22 46.0	
	comp=E,54nm,0.8s						
GRAC	**Grapevine Rang**	**2.71**	**352**	Pg	**Pg**	**04 22 05.7**	**-0.6**
	baz=172,SNR=11						
LCH	**Last Change Ra**	**2.99**	**349**	Pn	**Pn**	**04 22 03.2**	**+1.0**
113A	**Mohawk Valley,**	**3.04**	**119**	Pn	**Pn**	**04 22 01.7**	**-1.2**
Y14A	**Wickenburg**	**3.27**	**95**	Pn	**Pn**	**04 22 06.2**	**+0.1**
Y14A				IAML		04 23 07.4	
	comp=N,18nm,0.6s						
PRN	**Pahroc Range**	**3.45**	**26**	Pn	**Pn**	**04 22 09.7**	**+1.1**
PRN				IAML		04 23 14.0	
	comp=E,23nm,0.7s						
PRN				IAML		04 23 16.1	
	comp=N,25nm,0.7s						
OMMB	**Old Mammoth Mi**	**3.71**	**334**	Pn	**Pn**	**04 22 13.1**	**+0.7**
OMMB				IAML		04 23 15.1	
	comp=N,11nm,0.4s						
OMMB				IAML		04 23 16.9	
	comp=E,15nm,0.8s						
LCMT	**Little Creek M**	**4.04**	**47**	Pn	**Pn**	**04 22 17.6**	**+0.9**
214A	**Organ Pipe Nat**	**4.17**	**123**	Pn	**Pn**	**04 22 17.9**	**-0.4**
214A				IAML		04 23 37.1	
	comp=E,7.9nm,2.4s						
214A				IAML		04 23 37.3	
	comp=N,8.1nm,2.0s						
U15A	**North Rim**	**4.34**	**59**	Pn	**Pn**	**04 22 20.4**	**-0.5**
CCUT	**Cedar City**	**4.34**	**41**	Pn	**Pn**	**04 22 22.2**	**+1.2**
X16A	**Lo Mia Camp, P**	**4.53**	**87**	Pn	**Pn**	**04 22 24.5**	**+0.9**
CMB	**Columbia Colle**	**4.66**	**324**	Pn	**Pn**	**04 22 25.4**	**+0.2**
CMB				IAML		04 23 46.9	
	comp=N,7.8nm,0.9s						
CMB				IAML		04 23 48.5	
	comp=E,7.3nm,1.6s						
KVN	**Kaiserville**	**4.84**	**349**	Pn	**Pn**	**04 22 28.4**	**+0.7**
PKCU	**Pink Cliffs**	**4.88**	**49**	Pn	**Pn**	**04 22 29.2**	**+0.7**
PSUT	**Pine Spring**	**4.89**	**29**	Pn	**Pn**	**04 22 29.5**	**+0.9**
MTPU	**Mount Pierson**	**5.35**	**44**	Pn	**Pn**	**04 22 35.8**	**+0.9**
X18A	**Snowflake**	**5.77**	**86**	Pn	**Pn**	**04 22 43.0**	**+2.5**

*ISK **20** 04:55:48.5, 39.51N×26.07E, h10km, ML2.2/11*
*DDA **20** 04:55:48.0±0.0, 39.53N×26.06E, h19km, ML1.9*
*ATH **20** 04:55:50.0, 39.52N×25.96E, h16km±4km, ML1.9/2, Error ellipse: s-maj=4.9km s-min=0.9km az=164.0*
ISC 20 04:55:49.0±0.8, **39.53N**±0.02×**26.03E**±0.03, **h15**km±6km, **n34**, σ0=**62**/52, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOCA	**Canakkale, Ayv**	**0.09**	**109**	P	**Pg**	**04 55 51.7**	**-0.5**
KOCA				S	**Sg**	**04 55 54.5**	**+0.1**
KOCA				*i* AML	AML	04 55 55.0	
	comp=E,268nm,0.3s						
KOCA	**Canakkale, Ayv**	**0.09**	**109**	P	**Pg**	**04 55 52.2**	**0.0**
KOCA				S	**Sg**	**04 55 54.6**	**+0.3**
KOCA				*i* AML	AML	04 55 55.0	
	comp=E,287nm,0.4s						
KOCA				*i* AML	AML	04 55 55.0	
	comp=N,308nm,0.2s						
BOZC	**Bozcaada**	**0.31**	**4**	PG	**Pg**	**04 55 55.6**	**+0.1**
BOZC				SG	**Sb**	**04 56 00.8**	**-0.3**
BOZC	**Bozcaada**	**0.31**	**4**	P	**Pg**	**04 55 54.8**	**-0.7**
BOZC				P	**Pb**	**04 55 55.1**	**-1.2**
BOZC				S	**Sg**	**04 55 59.8**	**-0.2**
BOZC				*i* AML	AML	04 56 00.0	
	comp=E,142nm,0.2s						
BOZC				*i* AML	AML	04 56 00.0	
	comp=E,139nm,0.2s						
BOZC				*i* AML	AML	04 56 03.0	
	comp=N,131nm,1.0s						
BOZC	**Bozcaada**	**0.31**	**4**	P	**Pg**	**04 55 55.5**	**+0.1**
BOZC				*i* AML	AML	04 56 00.0	
	comp=E,142nm,0.2s						
BOZC				*i* AML	AML	04 56 00.0	
	comp=N,89nm,0.2s						
BOZC				S	**Sg**	**04 56 00.2**	**+0.3**
PRK	**Paraskevi**	**0.34**	**146**	P	**Pb**	**04 55 57.5**	**+0.7**
PRK				S	**Sb**	**04 56 02.8**	**+0.8**
PRK				AML	AML	04 56 02.9	
	comp=E,948μm,0.2s						
PRK				AML	AML	04 56 03.4	
	comp=N,582μm,0.3s						
SIGR	**SIGRI**	**0.35**	**202**	P	**Pg**	**04 55 56.2**	**+0.1**
SIGR				S	**Sg**	**04 56 01.5**	**+0.5**
SIGR				AML	AML	04 56 01.8	
	comp=N,416μm,0.3s						
SIGR				AML	AML	04 56 02.9	
	comp=E,378μm,0.2s						
EZN	**Ezine**	**0.37**	**38**	PG	**Pg**	**04 55 56.6**	**0.0**
EZN				SG	**Sg**	**04 56 02.0**	**+0.2**
BAYC	**CANAKKALE_Bayr**	**0.45**	**62**	P	**Pg**	**04 55 57.7**	**-0.3**
BAYC				S	**Sg**	**04 56 03.3**	**-0.9**
BAYC				*i* AML	AML	04 56 04.0	
	comp=E,78nm,0.3s						
BAYC				*i* AML	AML	04 56 04.0	
	comp=E,76nm,0.1s						
BAYC	**CANAKKALE_Bayr**	**0.45**	**62**	P	**Pg**	**04 55 58.0**	**-0.1**
BAYC				*i* AML	AML	04 56 04.0	
	comp=E,76nm,0.1s						
BAYC				S	**Sg**	**04 56 04.1**	**-0.1**
BAYC				*i* AML	AML	04 56 05.0	
	comp=E,49nm,0.4s						
AYVA	**Ayvalik**	**0.56**	**113**	P	**Pb**	**04 56 01.3**	**+0.8**
GADA	**Gvkgeada**	**0.67**	**352**	PG	**Pb**	**04 56 02.4**	**+0.1**
LIA	**Limnos Island**	**0.75**	**300**	P	**Pg**	**04 56 03.7**	**+0.2**
LIA				S	**Sb**	**04 56 13.9**	**+0.3**
BUHA	**Balikesir, Bur**	**0.81**	**92**	P	**Pb**	**04 56 05.3**	**+0.6**
BUHA				S	**Sg**	**04 56 14.4**	**-1.1**
BUHA	**Balikesir, Bur**	**0.81**	**92**	P	**Pb**	**04 56 05.2**	**+0.4**
BUHA				S	**Sb**	**04 56 16.4**	**+0.8**
BUHA				*i* AML	AML	04 56 18.0	
	comp=E,24nm,0.5s						
BUHA				*i* AML	AML	04 56 19.0	
	comp=E,29nm,0.2s						
GELI	**Tayfur-Gelibol**	**0.93**	**22**	PG	**Pb**	**04 56 06.8**	**0.0**
SMTH	**Samothraki Isl**	**1.01**	**338**	P	**Pb**	**04 56 08.4**	**+0.2**
SMTH				S	**Sg**	**04 56 22.0**	**+0.2**
CHOS	**Chios island**	**1.15**	**179**	P	**Pb**	**04 56 10.5**	**0.0**
CHOS	**Chios island**	**1.15**	**179**	PN	**Pn**	**04 56 10.7**	**+0.2**
ERIK	**Erikli-Kesan**	**1.20**	**18**	PN	**Pn**	**04 56 11.0**	**-0.1**
ENEZ	**Enez**	**1.21**	**5**	PN	**Pg**	**04 56 12.1**	**-0.1**
BALY	**Balya**	**1.25**	**80**	P	**Pn**	**04 56 12.2**	**+0.3**
BALY				S	**Sb**	**04 56 27.9**	**-0.2**
BALY				*i* AML	AML	04 56 30.0	
	comp=E,25nm,0.7s						
URLA	**Izmir**	**1.25**	**159**	PN	**Pn**	**04 56 11.7**	**-0.2**
URLA	**Izmir**	**1.25**	**159**	P	**Pn**	**04 56 10.1**	**-1.9**
URLA				S	**Sb**	**04 56 26.4**	**-1.8**
KRBG	**Karabiga-Canak**	**1.30**	**48**	PN	**Pn**	**04 56 12.9**	**+0.3**
ZEYE	**Izmir, Ürla-Ze**	**1.34**	**164**	P	**Pn**	**04 56 12.2**	**-1.0**
ZEYE				S	**Sb**	**04 56 31.3**	**+0.5**
ZEYE				*i* AML	AML	04 56 35.0	
	comp=E,17nm,0.2s						
ZEYE				*i* AML	AML	04 56 36.0	
	comp=E,21nm,0.5s						
ZEYE				*i* AML	AML	04 56 38.0	
	comp=E,17nm,0.6s						
ALN	**Alexandroupoli**	**1.36**	**1**	P	**Pn**	**04 56 13.9**	**+0.5**
ALN	**Alexandroupoli**	**1.36**	**1**	PN	**Pb**	**04 56 14.4**	**+0.2**
RKY	**Sarkoy-Tekirda**	**1.45**	**37**	PN	**Pn**	**04 56 15.3**	**+0.6**
MAR6	**Marsite Statio**	**1.51**	**39**	PN	**Pn**	**04 56 16.0**	**+0.6**
MAR3	**Marsite Statio**	**1.55**	**38**	PN	**Pn**	**04 56 16.7**	**+0.7**
GZKV	**Gazikoy-Tekird**	**1.57**	**39**	PN	**Pn**	**04 56 16.9**	**+0.6**
EDC	**Edincik**	**1.63**	**59**	PN	**Pn**	**04 56 17.5**	**+0.4**
RDO	**Rodhopi**	**1.65**	**347**	PN	**Pb**	**04 56 18.7**	**-0.4**

MAN 20 05:07:44.8, 5.35N×127.30E, h125km, mb4.6, ML3.4, MS3.3, Philippine Islands region

*IDC **20** 05:16:21.4±1.8, 0.94N×126.64E, h0km, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=169.5km s-min=25.5km az=64.0*
*NEIC **20** 05:16:27.6±2.0, 0.8N±0.1×126.3E±0.1, h35km±2km, mb4.1/11, Error ellipse: s-maj=19.4km s-min=18.7km az=31.0*
*DJA **20** 05:16:29.2±1.0, 1.1N±4.4×12.7E±.4, h25km±10km, M4.0/7, mb4.3/1, MLv3.8/7*
ISC 20 05:16:27.7±0.9, **0.91N**±0.09×**126.58E**±0.06, **h39**km, **n23**, σ1=**96**/24, **mb4.1**/7, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.80**	**100**		**Pn**	**05 16 45.0**	**+2.4**
TNTI	**Ternate**	**0.80**	**100**	P	**Pn**	**05 16 44.9**	**+2.4**
TNTI				S	**Sn**	**05 16 56.0**	**+2.8**
LBMI	**Labuha**	**1.79**	**149**	P	**Pn**	**05 16 58.7**	**+2.6**
KMSI	**Cibinong**	**2.62**	**263**	P	**Pn**	**05 17 10.1**	**+2.6**
NLAI	**Namlea**	**4.15**	**173**	P	**Pn**	**05 17 31.7**	**+3.1**
APSI	**Ampana**	**5.25**	**250**	P	**Pn**	**05 17 47.5**	**+3.8**
FAKI	**Fak Fak**	**6.83**	**124**	Pn	**Pn**	**05 18 06.5**	**+1.1**
KNRA	**Kununurra**	**16.62**	**173**	Pn	**Pn**	**05 20 14.9**	**-3.0**
KNRA					**P**	**05 20 19.0**	**-0.9**
KNRA				IAmb	IAmb	05 20 19.2	
	comp=Z,26nm,1.3s						
WB0	**Warramunga Arr**	**21.93**	**160**	P	**P**	**05 21 17.8**	**-0.1**
WRAB	**Tennant Creek**	**22.07**	**160**	P	**P**	**05 21 19.4**	**-0.1**
WRAB				IAmb	IAmb	05 21 20.8	
	comp=Z,5.8nm,0.7s						
WRA	**Warramunga Arr**	**22.07**	**160**	P	**P**	**05 21 19.0**	**-0.5**
	comp=Z,3.9nm,0.4s,baz=339,slow=11,SNR=87						
	comp=Z,3.9nm,0.4s						
WRA	**Warramunga Arr**	**22.07**	**160**	P	**P**	**05 21 17.9**	**-1.6**
WB2	**Warramunga Arr**	**22.08**	**160**	P	**P**	**05 21 19.3**	**-0.3**
WB2				IAmb	IAmb	05 21 21.2	
	comp=Z,5.3nm,0.7s						
WR0	**Warramunga Arr**	**22.16**	**160**	P	**P**	**05 21 19.9**	**-0.5**
WR0				IAmb	IAmb	05 21 21.4	
	comp=Z,4.2nm,0.5s						
AS31	**Alice Springs**	**25.44**	**164**	P	**P**	**05 21 50.8**	**-1.3**
ASAR	**Alice Springs**	**25.44**	**164**	P	**P**	**05 21 51.7**	**-0.4**
STKA	**Stephens Creek**	**35.58**	**158**	P	**P**	**05 23 20.0**	**-1.5**
	comp=Z,1.0nm,0.5s,baz=349,slow=16,SNR=3.3						
	comp=Z,1.0nm,0.5s						
STKA	**Stephens Creek**	**35.58**	**158**	IAmb	IAmb	05 23 39.3	
	comp=Z,2.2nm,1.5s						
MK31	**Makanchi Array**	**59.79**	**326**	P	**P**	**05 26 26.7**	**-2.3**
MK31				IAmb	IAmb	05 26 31.7	
	comp=Z,2.1nm,1.2s						
MKAR	**Makanchi Array**	**59.79**	**326**	P	**P**	**05 26 28.6**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=116,slow=8.1,SNR=8.1						
	comp=Z,0.4nm,0.4s						
MKAR	**Makanchi Array**	**59.79**	**326**	P	**P**	**05 26 28.3**	**-0.7**
KURK	**Kurchatov**	**64.03**	**328**	P	**P**	**05 26 57.3**	**-0.1**
ABKAR	**Akbulak array**	**74.23**	**321**	P	**P**	**05 28 00.5**	**-0.2**

MAN 20 05:26:29.0, 8.95N×126.55E, h1km, mb4.0, ML2.7, MS2.3, Mindanao

*IDC **20** 05:43:29.8±2.7, 54.41N×87.03E, h0km, mbtmp3.3/2, ML3.0/2, Error ellipse: s-maj=22.3km s-min=16.4km az=58.0*
*NNC **20** 05:43:34.6±2.2, 54.18N×86.68E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=15.6km s-min=14.2km az=32.0, Suspected Mining explosion.*
ISC 20 05:43:32.6±4.5, **54.3N**±0.2×**86.7E**±0.2, **h0**km, **n8**, σ0=**79**/12, **8C-3D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.18**	**253**	*i*		05 51 10.0	
	baz=71,slow=312,SNR=2.8						
ZALV	**Zalesovo Beam**	**1.18**	**252**	Pg	**Pg**	**05 43 54.0**	**-1.3**
	3.5nm,0.3s,baz=67,slow=17,SNR=34						
ZALV				Lg	Lg	05 44 14.9	
	4.1nm,0.3s,baz=67,slow=27,SNR=10						
KURK	**Kurchatov**	**6.12**	**237**	⇑Pn	**Pn**	**05 45 04.7**	**+0.5**
	4.3nm,1.1s						
KURK				⇑Sn	**Sn**	**05 46 15.6**	**+0.7**
	2.2nm,0.7s						
KURK				⇓Lg	Lg	05 46 48.4	
	6.3nm,0.7s						
KURBB	**Kurchatov Arra**	**6.22**	**237**	Pn	**Pn**	**05 45 06.3**	**+0.7**
	0.2nm,0.3s,baz=54,slow=14,SNR=18						
KURBB				Sn	**Sn**	**05 46 18.4**	**+1.0**
	0.1nm,0.3s,baz=31,slow=17,SNR=1.9						
KURBB				Lg	Lg	05 46 52.6	
	0.1nm,0.3s,baz=53,slow=33,SNR=6.5						
	1.9nm,0.3s						
KURBB	**Kurchatov Arra**	**6.22**	**237**	⇑Pn	**Pn**	**05 45 06.3**	**+0.7**
	2.9nm,0.5s						
KURBB				⇑Sn	**Sn**	**05 46 18.1**	**+0.6**
	6.5nm,0.7s						
KURBB				⇓Lg	Lg	05 46 48.8	
	8.5nm,0.7s						
MK31	**Makanchi Array**	**8.04**	**202**	⇑Pn	**Pn**	**05 45 31.3**	**+0.7**
	0.8nm,0.7s,baz=27,slow=14,SNR=9.2						
MK31				⇑Sn	**Sn**	**05 47 01.6**	**-0.7**
	1.4nm,0.7s						
MK31				⇑Lg	Lg	05 47 45.2	
	2.4nm,0.8s,baz=34,slow=27,SNR=4.0						
MKAR	**Makanchi Array**	**8.04**	**202**	Pn	**Pn**	**05 45 31.1**	**+0.5**
	0.3nm,0.3s,baz=26,slow=13,SNR=10						
MKAR				Sn	**Sn**	**05 47 02.4**	**+0.2**
	0.1nm,0.3s,baz=23,slow=27,SNR=4.3						
MKAR				Lg	Lg	05 47 46.9	
	baz=15,slow=31,SNR=2.9						
	0.3nm,0.3s						
MAKZ	**Makanchi**	**8.10**	**204**	⇓Sn	**Sn**	**05 47 03.6**	**-0.1**
	1.6nm,0.9s						
MAKZ				⇑Lg	Lg	05 47 50.2	
	6.3nm,1.2s						

*INET **20** 05:53:08.9±0.6, 12.87N×87.09W, h5km±2km, MW2.9*
*SNET **20** 05:53:10.2±0.6, 12.88N×87.16W, h3km, ML2.5*
ISC 20 05:53:08.9±1.1, **12.91N**±0.05×**87.05W**±0.04, **h10**km±13km, **n9**, σ0=**52**/13, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.20**	**181**	*e*P	**Pg**	**05 53 13.5**	**+0.2**
CRIN				*e*S	**Sg**	**05 53 15.8**	**-0.4**
TEL3	**Telica 3**	**0.39**	**149**	*e*P	**Pg**	**05 53 17.0**	**+0.5**
MOMN	**Momotombo**	**0.70**	**135**	*e*P	**Pg**	**05 53 22.8**	**+0.4**
CNCH	**Conchagua**	**0.85**	**296**	*e*P	**Pb**	**05 53 25.7**	**-0.2**
CNCH				*e*S	**Sb**	**05 53 37.3**	**-0.2**
CNCH				IAML		05 53 41.7	
	comp=Z,208nm,0.2s						
LCND	**La Caada**	**0.91**	**296**	*e*P	**Pg**	**05 53 26.3**	**-0.2**
LCND				*e*S	**Sb**	**05 53 39.1**	**0.0**
LCND				*e*S	**Sb**	**05 53 39.1**	**0.0**
RCON	**San Juan de Ri**	**1.04**	**56**	*e*P	**Pg**	**05 53 29.5**	**+0.5**
MATN	**Matagalpa**	**1.09**	**89**	*e*P	**Pg**	**05 53 28.9**	**-1.1**
TGUH	**Tegucigalpa,Un**	**1.16**	**349**	*e*P	**Pg**	**05 53 31.9**	**+0.6**
BOAB	**BOACO BROADBAN**	**1.42**	**108**	*e*P	**Pn**	**05 53 35.1**	**+0.3**

*JMA **20** 06:15:45.1±0.2, 24.2N±0.9×121.9E±0.7, h56km±2km, MV2.7/11, TAIWAN REGION*
*TAP **20** 06:15:46.1, 24.38N×121.97E, h24km, ML3.5, B*
ISC 20 06:15:46.5±0.9, **24.37N**±0.02×**121.96E**±0.02, **h30**km±6km, **n65**, σ0=**70**/114, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EWUT	**Wuta**	**0.18**	**294**	*i* P	**Pb**	**06 15 52.0**	**-0.5**
	baz=291						
EWUT				S	**Sb**	**06 15 56.6**	**+0.2**
	baz=291						
EHP	**Heping Village**	**0.21**	**252**	P	**Pb**	**06 15 52.5**	**-0.2**
	baz=251						
EHP				*e*S	**Sb**	**06 15 58.0**	**+1.0**
	baz=251						
TWC	**Suao**	**0.26**	**337**	*i* P	**Pb**	**06 15 52.8**	**-0.5**
	baz=335						
TWC				*e*S	**Sb**	**06 15 57.4**	**-0.6**
	baz=335						
NDS	**Dongshan**	**0.34**	**320**	P	**Pb**	**06 15 54.2**	**-0.3**
	baz=317						
NDS				S	**Sn**	**06 16 00.2**	**-1.1**
	baz=317						
ETL	**Fush Village**	**0.37**	**235**	P	**Pb**	**06 15 54.7**	**-0.3**
	baz=235						
ETL				*e*S	**Sn**	**06 16 02.9**	**+0.8**
	baz=235						
NACB	**Ninganchiao**	**0.39**	**239**	P	**Pb**	**06 15 55.0**	**-0.2**
	baz=239						
NACB				S	**Sn**	**06 16 02.4**	**-0.1**
	baz=239						
LATG	**Datong**	**0.42**	**292**	*e*P	**Pb**	**06 15 55.5**	**-0.3**
	baz=291						
LATG				S	**Sn**	**06 16 02.7**	**-0.8**
	baz=291						
ILA	**Ilan**	**0.43**	**334**	P	**Pb**	**06 15 55.5**	**-0.3**
	baz=332						
ILA				S	**Sn**	**06 16 03.2**	**-0.4**
	baz=332						
TWE	**Neicheng**	**0.44**	**323**	*e*P	**Pn**	**06 15 55.9**	**-0.8**
	baz=322						
TWE				*i* S	**Sn**	**06 16 02.8**	**-0.8**
	baz=322						
TWD	**Chiawan**	**0.44**	**229**	*e*P	**Pb**	**06 15 55.5**	**-0.5**
	baz=228						
TWD				S	**Sn**	**06 16 03.6**	**-0.1**
	baz=228						
ETLH	**Xiulin Townshi**	**0.47**	**249**	*e*P	**Pb**	**06 15 55.9**	**-0.5**
	baz=249						
ETLH				*i* S	**Sn**	**06 16 04.1**	**-0.4**
	baz=249						
EGS		**0.47**	**357**	P	**Pn**	**06 15 56.9**	**-0.3**
	baz=356						
EGS				*i* S	**Sb**	**06 16 03.2**	**0.0**
	baz=356						
NTC	**Toucheng**	**0.49**	**346**	P	**Pn**	**06 15 56.9**	**-0.6**
	baz=344						
NTC				S	**Sn**	**06 16 04.3**	**-0.8**
	baz=344						
HWA	**Hwalien**	**0.51**	**219**	P	**Pn**	**06 15 57.3**	**-0.4**
	baz=219						
HWA				*e*S	**Sn**	**06 16 07.8**	**+2.4**
	baz=219						
FUSB	**Fushanzhiwuyua**	**0.51**	**319**	P	**Pb**	**06 15 57.0**	**-0.1**
	baz=317						
FUSB				S	**Sn**	**06 16 04.8**	**-0.9**
	baz=317						
NNSB	**Datong**	**0.53**	**276**	*e*P	**Pb**	**06 15 57.0**	**-0.4**
	baz=275						
NNSB				*i* S	**Sn**	**06 16 05.9**	**-0.2**
	baz=275						
NNSH	**Datong**	**0.53**	**276**	P	**Pb**	**06 15 57.1**	**-0.3**
	baz=275						
NNSH				S	**Sn**	**06 16 05.5**	**-0.5**
	baz=275						
NNS	**Nan Shan**	**0.54**	**277**	P	**Pb**	**06 15 57.1**	**-0.5**
	baz=276						
NNS				S	**Sn**	**06 16 06.4**	**+0.1**
	baz=276						
ETM	**Tongmen**	**0.59**	**226**	*e*P	**Pb**	**06 15 57.6**	**-0.8**
	baz=226						
ETM				*e*S	**Sn**	**06 16 06.9**	**-0.5**
	baz=226						
TEYL	**Yanliau Villag**	**0.60**	**213**	P	**Pb**	**06 15 58.5**	**0.0**
	baz=215						
TEYL				*e*S	**Sn**	**06 16 09.1**	**+1.4**
	baz=215						
YHNB	**Yeheng**	**0.61**	**299**	P	**Pb**	**06 15 58.3**	**-0.4**
YHNB	**Yeheng**	**0.61**	**299**	P	**Pb**	**06 15 58.5**	**-0.2**
	baz=298						
YHNB				S	**Sn**	**06 16 07.5**	**-0.5**
	baz=298						
TIPB	**Shuangxi**	**0.61**	**349**	*i* P	**Pn**	**06 15 58.7**	**-0.5**
	baz=347						
TIPB				S	**Sn**	**06 16 07.7**	**-0.2**
	baz=347						
NSK	**Sanguang**	**0.62**	**299**	*e*P	**Pb**	**06 15 58.6**	**-0.4**
	baz=298						
NSK				*e*S	**Sn**	**06 16 07.6**	**-0.8**
	baz=298						
TWB1	**Santiao Chiao**	**0.63**	**2**	*e*P	**Pn**	**06 15 59.2**	**-0.2**
	baz=2.0						
TWB1				S	**Sn**	**06 16 08.0**	**-0.5**
	baz=2.0						
FUSS	**Fushou**	**0.66**	**259**	P	**Pb**	**06 15 59.4**	**-0.3**
	baz=259						
FUSS				S	**Sn**	**06 16 09.3**	**-0.3**
	baz=259						
WHF	**Hehuan Shan**	**0.67**	**250**	*e*P	**Pb**	**06 15 59.5**	**-0.5**
	baz=250						
WHF				S	**Sn**	**06 16 09.9**	**-0.2**
	baz=250						
TWA	**Mucha**	**0.69**	**331**	*e*P	**Pn**	**06 16 01.0**	**+0.7**
	baz=329						
TWA				S	**Sn**	**06 16 10.7**	**+0.6**
	baz=329						
NHDH	**Xindian Distri**	**0.71**	**326**	*e*P	**Pn**	**06 16 00.9**	**+0.5**
	baz=325						
NWF	**Wu-fen Shan**	**0.71**	**347**	P	**Pn**	**06 16 00.8**	**+0.2**
	baz=345						
NWF				S	**Sn**	**06 16 11.2**	**+0.6**
	baz=345						
WFSB	**Wu-fen Shan**	**0.71**	**347**	P	**Pn**	**06 16 00.6**	**+0.1**
	baz=345						
WFSB				S	**Sn**	**06 16 11.3**	**+0.8**
	baz=345						
SXI1	**Grass Mountain**	**0.72**	**354**	*e*P	**Pn**	**06 16 00.8**	**0.0**
	baz=352						
SXI1				S	**Sn**	**06 16 11.6**	**+0.7**
	baz=352						
TDCB	**Techi**	**0.74**	**261**	*e*P	**Pn**	**06 16 00.8**	**-0.3**
	baz=260						
TAP1	**Taipei**	**0.77**	**329**	*e*S	**Sn**	**06 16 13.6**	**+1.7**
	baz=327						
TAP	**Taipei**	**0.78**

JYNG				*e*S		**Sn**	**06 16 15.8**	**+0.6**
NSTT	**Nanjuang**	**0.91**	**287**	*e*P		**Pb**	**06 16 04.3**	**+0.6**
	baz=286							
NSTT				*e*S		**Sn**	**06 16 16.4**	**+1.1**
	baz=286							
WHP	**Taichung City**	**0.93**	**264**	P		**Pb**	**06 16 04.1**	**0.0**
	baz=264							
WHP				S		**Sn**	**06 16 16.9**	**+0.9**
	baz=264							
YOJ	**Yonaguni jima**	**0.96**	**85**	P		**Pn**	**06 16 03.7**	**-0.2**
YOJ	**Yonaguni jima**	**0.96**	**85**	P		**Pn**	**06 16 03.7**	**-0.2**
	baz=84							
YOJ				S		**Sb**	**06 16 17.0**	**+0.1**
	baz=84							
YOJ	**Yonaguni jima**	**0.96**	**85**	P		**Pn**	**06 16 03.8**	**-0.2**
YOJ				S		**Sb**	**06 16 17.2**	**+0.2**
VWDT	**VWDT**	**0.97**	**231**	P		**Pn**	**06 16 04.0**	**0.0**
	baz=230							
VWDT				S		**Sb**	**06 16 18.4**	**+1.3**
	baz=230							
HGSD	**Ruisui**	**1.00**	**209**	P		**Pn**	**06 16 04.3**	**-0.2**
	baz=209							
HGSD				S		**Sb**	**06 16 19.5**	**+1.3**
	baz=209							
SMLT	**Sun Moon Lake**	**1.08**	**243**	P		**Pb**	**06 16 06.2**	**-0.4**
	baz=243							
SSLB	**Suanglung**	**1.09**	**238**	P		**Pn**	**06 16 05.8**	**+0.1**
SSLB	**Suanglung**	**1.09**	**238**	P		**Pn**	**06 16 05.8**	**+0.1**
	baz=237							
SSLB				S		**Sb**	**06 16 21.4**	**+0.8**
	baz=237							
TYC	**Yuchr**	**1.11**	**245**	P		**Pb**	**06 16 06.4**	**-0.6**
	baz=245							
YUS	**Yu-Shan**	**1.27**	**226**	P		**Pn**	**06 16 08.9**	**+0.2**
	baz=226							
YUS				S		**Sb**	**06 16 26.1**	**-0.2**
	baz=226							
ELDTW	**Lidau**	**1.46**	**216**	P		**Pn**	**06 16 11.0**	**+0.1**
	baz=216							
STYH	**Taoyuan**	**1.61**	**222**	P		**Pb**	**06 16 14.3**	**-1.3**
	baz=222							
STYH				S		**Sb**	**06 16 34.5**	**-1.1**
	baz=222							
IRIF	**Iriomote-Funau**	**1.62**	**91**	P		**Pn**	**06 16 13.3**	**+0.3**
IRIF				*e*S		**Sn**	**06 16 33.2**	**+0.5**
TPUB	**Ta-pu**	**1.62**	**229**	P		**Pb**	**06 16 14.9**	**-0.8**
HATJ	**Hateruma jima**	**1.71**	**100**	P		**Pn**	**06 16 13.7**	**-0.6**
HATJ				S		**Sn**	**06 16 35.0**	**-0.2**
WSF	**Szhu**	**1.75**	**246**	*e*P		**Pb**	**06 16 16.3**	**-1.5**
	baz=245							
JKRS	**Kuro-shima**	**1.88**	**94**	P		**Pn**	**06 16 16.6**	**+0.1**
JKRS				S		**Sn**	**06 16 39.9**	**+0.8**
JIJ	**Ishigaki jima**	**1.99**	**90**	*e*P		**Pn**	**06 16 18.0**	**-0.1**
JIJ				*e*S		**Sn**	**06 16 42.2**	**+0.2**
JISG	**Ishigakijimahi**	**2.15**	**84**	*e*P		**Pn**	**06 16 20.0**	**-0.3**
JISG				S		**Sn**	**06 16 46.4**	**+0.3**
JTJ	**Tarama**	**2.51**	**83**	S		**Sn**	**06 16 55.2**	**+0.3**

*IDC **20** 06:24:15.5±2.5,53.93N×86.57E, h0km, mbtmp3.2/2, ML2.9/2, Error ellipse: s-maj=21.0km s-min=13.0km az=60.0*
*NNC **20** 06:24:15.1±9.9,53.82N×86.75E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=109.1km s-min=84.3km az=177.0, Suspected Mining explosion.*
ISC 20 06:24:22.5±3.5, 53.9N±0.4×84.0E±0.2, h0km, n7, σ0s70/6, 3C-2D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.52**	**81**	*i*			
	baz=89,slow=312,SNR=7.8						
ZALV	**Zalesovo Beam**	**0.52**	**81**	Pg	**Pb**	**06 24 34.5**	**0.0**
	1.6nm,0.3s,baz=88,slow=16,SNR=19						
ZALV				Lg	Lg	06 24 49.7	
	5.0nm,0.3s,baz=93,slow=28,SNR=19						
KURK	**Kurchatov**	**4.55**	**228**	⇓Pn	**Pb**	**06 25 42.4**	**-0.8**
	3.1nm,0.9s						
KURK				⇓Lg	Lg	06 27 20.1	
	11nm,1.0s						
KURBB	**Kurchatov Arra**	**4.66**	**228**	Pn	**Pb**	**06 25 45.9**	**+0.9**
	0.2nm,0.3s,baz=56,slow=13,SNR=16						
KURBB				Lg	Lg	06 27 23.7	
	baz=49,slow=33,SNR=10						
	2.4nm,0.4s						
KURBB	**Kurchatov Arra**	**4.66**	**228**	⇑Pn	**Pb**	**06 25 45.0**	**0.0**
	3.2nm,0.6s						
KURBB				⇑Lg	Lg	06 27 24.2	
	14nm,0.9s						
MK31	**Makanchi Array**	**7.16**	**189**	⇑Pn	**Pn**	**06 26 08.3**	**-0.2**
	0.6nm,0.5s,baz=28,slow=16,SNR=5.6						
MK31				Lg	Lg	06 28 17.2	
	6.5nm,1.1s,baz=4.3,slow=29,SNR=3.8						
MKAR	**Makanchi Array**	**7.16**	**189**	Pn	**Pn**	**06 26 08.6**	**+0.1**
	0.2nm,0.3s,baz=22,slow=12,SNR=7.5						
MKAR				Lg	Lg	06 28 18.5	
	0.1nm,0.3s,baz=20,slow=29,SNR=2.7						
	0.5nm,0.4s						

*IDC **20** 06:31:22.6±1.1,26.27N×140.59E, h420km±11km, mb3.2/12, mbtmp4.0/16, Error ellipse: s-maj=21.4km s-min=11.8km az=79.0*
*JMA **20** 06:31:24.9±0.1,27.2N±2.2×14.1E±.1, h421km, MV3.8/16, NEAR CHICHIJIMA ISLAND*
ISC 20 06:31:21.4±0.7, 26.31N±0.08×140.5E±0.1, h400km, n26, σ1s99/31, mb3.6/13, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHH2	**Haha-jima-NKT2**	**1.51**	**77**	P	**Pn**	**06 32 17.7**	**+3.1**
JHH2				S	**S**	**06 32 59.1**	**+1.6**
JCJ	**Chichijima**	**1.67**	**62**	P	**Pn**	**06 32 17.2**	**+1.7**
	75nm,0.4s,baz=116,slow=8.5,SNR=17						
JCJ				S	**S**	**06 32 59.7**	**+0.6**
	154nm,0.3s,baz=118,slow=23,SNR=17						
CBIJ	**Chichi jima**	**1.67**	**62**	*e*P	**Pn**	**06 32 17.8**	**+2.3**
CBIJ				S	**S**	**06 32 59.4**	**+0.3**
JHJ	**Hachijo jima 2**	**6.82**	**355**	P	**P**	**06 33 06.3**	**+2.7**
	116nm,0.3s,baz=267,slow=23,SNR=17						
JHJ				S	**S**	**06 34 25.3**	**-0.6**
	32nm,0.3s,baz=279,slow=17,SNR=1.7						
BSO3	**Boso 3**	**8.46**	**360**	*e*P	**Pn**	**06 33 22.2**	**+0.9**
JIE	**Ise**	**8.71**	**339**	P	**P**	**06 33 28.0**	**+3.5**
JKN2	**Miekihoku**	**8.72**	**336**	*e*P	**P**	**06 33 27.4**	**+2.8**
JNY	**Yasuok**	**9.31**	**346**	*e*P	**Pn**	**06 33 33.6**	**+2.2**
JHU	**Hanno**	**9.57**	**354**	*e*P	**P**	**06 33 35.0**	**+0.8**
JHU				*e*S	**S**	**06 35 17.2**	**-6.2**
JAG	**Ashikaga**	**10.13**	**355**	*e*P	**P**	**06 33 40.1**	**-0.2**
MJAR	**Matsushiro Arr**	**10.39**	**350**	P	**Pn**	**06 33 45.5**	**+1.6**
	1.7nm,0.3s,baz=174,slow=11,SNR=5.7						
KSRS	**Korea Array**	**15.42**	**319**	P	**P**	**06 34 40.0**	**+1.7**
	0.8nm,0.5s,baz=129,slow=9.9,SNR=4.7						
USRK	**Uusuriysk Ar.**	**19.14**	**341**	P	**P**	**06 35 18.6**	**+0.9**
	4.3nm,0.7s,baz=147,slow=9.5,SNR=6.8						
KLR	**Kul'dur**	**23.88**	**346**	P	**P**	**06 36 01.4**	**+0.6**
	1.3nm,0.3s,baz=152,slow=13,SNR=7.2						
	1.3nm,0.3s						
SONM	**Songino Array**	**34.28**	**318**	P	**P**	**06 37 32.4**	**+0.5**
	0.5nm,0.6s,baz=133,slow=10.0,SNR=2.8						
	0.5nm,0.6s						
SEY	**Seymchan**	**37.45**	**9**	P	**P**	**06 37 58.8**	**+0.7**
	2.9nm,0.6s,baz=166,slow=18,SNR=3.8						
	2.9nm,0.6s						
WRA	**Warramunga Arr**	**46.37**	**188**	P	**P**	**06 39 09.2**	**-0.6**
	3.1nm,0.3s,baz=6.4,slow=7.7,SNR=60						
	3.1nm,0.3s						
STKA	**Stephens Creek**	**57.87**	**179**	P	**P**	**06 40 32.0**	**-1.1**
	0.7nm,0.5s,baz=349,slow=7.9,SNR=3.6						
	0.7nm,0.5s						
ILAR	**Eielson Array**	**59.10**	**28**	P	**P**	**06 40 40.0**	**-1.2**
	0.6nm,0.6s,baz=252,slow=5.6,SNR=9.4						
	0.6nm,0.6s						
YKA	**Yellowknife Ar**	**73.53**	**28**	P	**P**	**06 42 10.8**	**-0.7**
	1.0nm,0.7s,baz=296,slow=5.3,SNR=11						
	1.0nm,0.7s						
ARCES	**ARCESS Array B**	**73.79**	**341**	P	**P**	**06 42 12.8**	**-0.1**
	0.8nm,0.5s,baz=72,slow=8.2,SNR=11						
	0.8nm,0.5s						
RAR	**Rarotonga**	**74.69**	**123**	P	**P**	**06 42 19.1**	**+0.3**
	21nm,0.6s,baz=239,slow=5.9,SNR=5.1						
FINES	**FINESS Array B**	**77.99**	**333**	P	**P**	**06 42 35.8**	**-0.7**
	0.6nm,0.3s,baz=78,slow=4.2,SNR=8.1						
	0.6nm,0.3s						
NVAR	**Mina Array Bea**	**82.16**	**51**	P	**P**	**06 42 58.1**	**-1.2**
	0.2nm,0.4s,baz=294,slow=7.0,SNR=4.0						
	0.2nm,0.4s						
AKASG	**Malin Array Be**	**82.37**	**323**	P	**P**	**06 42 58.1**	**-1.7**
	0.4nm,0.5s,baz=50,slow=5.7,SNR=3.0						
	0.4nm,0.5s						
NOA	**NORSAR Array B**	**83.78**	**338**	P	**P**	**06 43 05.5**	**-1.3**
	0.7nm,0.6s,baz=50,slow=4.1,SNR=1.5						
	0.7nm,0.6s						

*IDC **20** 06:39:33.4±9.1,20.66S×176.06W, h143km±66km, mb3.3/5, mbtmp3.8/6, MS3.6/2, Error ellipse: s-maj=124.6km s-min=31.6km az=156.0*
ISC 20 06:39:40.6±2.4, 20.6S±0.9×176.2W±0.4, h211km, n10, σ0s35/7, mb3.4/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**6.14**	**297**	P	**Pn**	**06 41 04.0**	**-5.9**
	19nm,0.8s,baz=147,slow=14,SNR=5.9						
RAO	**Raoul Island**	**8.72**	**190**	LR	LR	06 44 41.8	
	comp=Z,164nm,19.0s,baz=127,slow=35						
RPZ	**Rata Peaks**	**25.35**	**202**	LR	LR	06 54 26.4	
	comp=Z,305nm,18.1s,baz=216,slow=35						
WRA	**Warramunga Arr**	**46.24**	**262**	P	**P**	**06 47 45.2**	**+0.1**
	0.8nm,1.0s,baz=98,slow=8.2,SNR=2.1						
	0.8nm,1.0s						
NVAR	**Mina Array Bea**	**79.98**	**43**	P	**P**	**06 51 26.6**	**0.0**
	0.5nm,0.7s,baz=226,slow=8.1,SNR=5.7						
	0.5nm,0.7s						
TXAR	**Lajitas Array**	**85.73**	**57**	P	**P**	**06 51 56.5**	**+0.3**
	0.6nm,0.8s,baz=215,slow=5.5,SNR=7.5						
	0.6nm,0.8s						
PDAR	**Pinedale Array**	**87.92**	**43**	P	**P**	**06 52 06.4**	**-0.3**
	0.3nm,0.6s,baz=228,slow=1.8,SNR=3.6						
	0.3nm,0.6s						
ILAR	**Eielson Array**	**88.08**	**12**	P	**P**	**06 52 06.7**	**+0.1**
	0.4nm,0.6s,baz=211,slow=5.5,SNR=4.3						
	0.4nm,0.6s						
AKASG	**Malin Array Be**	**143.92**	**332**	PKP	**PKPdf**	**06 58 50.0**	**-0.5**
	1.4nm,0.7s,baz=42,slow=3.8,SNR=7.9						
BRTR	**Keskin Array B**	**148.15**	**313**	PKPbc	**PKiKP**	**06 59 03.5**	**+0.1**
	0.9nm,0.7s,baz=73,slow=4.3,SNR=4.6						

DJA 20 06:52:53.2±0.6, 2.7N±5.5×12.5E±.1, h267km±6km, M4.1/13, mb3.9/3, mB5.1/2, MLv4.2/13, Mw(mB)4.4/2, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**1.86**	**198**	P	Pn	06 53 35.4	-0.6
MRSI	**Marisa**	**3.21**	**234**	P	Pn	06 53 50.0	+1.0
TNTI	**Ternate**	**3.23**	**119**	P	Pn	06 53 49.8	+0.6
LUWI	**Luwuk**	**3.82**	**208**	P	Pn	06 53 55.8	+0.1
LBMI	**Labuha**	**4.19**	**135**	P	Pn	06 54 00.0	0.0
APSI	**Ampana**	**4.36**	**222**	P	Pn	06 54 02.2	+0.3
SANI	**Sanana**	**4.61**	**162**	P	Pn	06 54 02.8	-2.1
MPSI	**Mapaga**	**5.07**	**247**	P	Pn	06 54 09.4	-1.0
	0.1nm11nm,0.9s						
NLAI	**Namlea**	**6.12**	**155**	P	Pn	06 54 23.0	-0.2
	0.2nm2µm29nm,0.8s						

*NEIC **20** 06:58:52.1±1.4,4.70S±0.07×153.07E±0.08, h10km±1km, mb4.6/16, Error ellipse: s-maj=16.1km s-min=7.1km az=232.0*
*DJA **20** 06:58:55.4±1.0,5.5S±7.1×15.3E±.1, h35km±12km, M4.8/9, mB5.1/2, mb4.6/9, MLv4.9/3, Mw(mB)4.5/2*
*IDC **20** 06:58:57.1±4.6,4.73S×152.94E, h59km±32km, mb3.7/5, mbtmp4.1/6, ML2.7/1, MS3.5/3, Error ellipse: s-maj=56.8km s-min=21.0km az=81.0*
ISC 20 06:58:56.2±0.8, 4.62S±0.08×153.06E±0.09, h55km, n33, σ1s05/32, mb4.6/12, MS3.6/3, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**0.98**	**295**	Pg	**Pn**	**06 59 12.0**	**-1.9**
KRVT	**Keravat (AS076**	**1.07**	**287**	P	**Pn**	**06 59 15.2**	**+0.2**
	baz=143,slow=20						
KRVT				S	**Sn**	**06 59 28.9**	**0.0**
	baz=90,slow=20						
MANU	**Manus Island**	**6.23**	**294**	Pn	**Pn**	**07 00 25.4**	**-0.1**
PMG	**Port Moresby**	**7.54**	**231**	P	**Pn**	**07 00 41.6**	**-1.9**
	6.4nm,0.3s,baz=35,slow=10,SNR=14						
	10nm,0.3s						
PMG	**Port Moresby**	**7.54**	**231**	P	**Pn**	**07 00 42.3**	**-1.3**
	0.2nm51nm,0.9s						
PATS	**Pohnpei**	**12.53**	**25**	Pn	**Pn**	**07 01 50.0**	**-1.8**
GENI	**Genyem**	**13.02**	**278**	P	**P**	**07 02 08.7**	**+1.4**
MTN	**Manton Dam**	**23.14**	**248**	P	**P**	**07 03 58.2**	**+0.2**
MTN				IAmb	IAmb	07 04 05.8	
	comp=Z,22nm,1.1s						
WB0	**Warramunga Arr**	**23.61**	**229**	P	**P**	**07 04 02.1**	**-0.3**
WB0				IAmb	IAmb	07 04 03.8	
	comp=Z,21nm,0.8s						
WR0	**Warramunga Arr**	**23.61**	**228**	P	**P**	**07 04 02.1**	**-0.4**
WRAB	**Tennant Creek**	**23.74**	**229**	P	**P**	**07 04 03.4**	**-0.2**
WRAB				IAmb	IAmb	07 04 05.0	
	comp=Z,22nm,0.8s						
WB2	**Warramunga Arr**	**23.75**	**229**	P	**P**	**07 04 03.5**	**-0.2**
WB2				IAmb	IAmb	07 04 05.1	
	comp=Z,20nm,0.8s						
WRA	**Warramunga Arr**	**23.75**	**229**	P	**P**	**07 04 03.1**	**-0.7**
	comp=Z,19nm,0.7s,baz=53,slow=9.9,SNR=217						
	comp=Z,19nm,0.7s						
WRA	**Warramunga Arr**	**23.75**	**229**	P	**P**	**07 04 02.9**	**-0.8**
ARMA	**Armidale**	**25.70**	**183**	P	**P**	**07 04 22.1**	**+0.6**
KNRA	**Kununurra**	**26.28**	**244**	P	**P**	**07 04 26.9**	**+0.2**
KNRA				IAmb	IAmb	07 04 28.3	
	comp=Z,13nm,0.7s						
AS31	**Alice Springs**	**26.45**	**222**	P	**P**	**07 04 28.0**	**-0.3**
ASAR	**Alice Springs**	**26.45**	**222**	P	**P**	**07 04 27.8**	**-0.5**
STKA	**Stephens Creek**	**29.17**	**200**	P	**P**	**07 04 51.9**	**-0.5**
	comp=Z,1.9nm,0.6s,baz=19,slow=11,SNR=6.2						
	comp=Z,1.9nm,0.6s						
STKA	**Stephens Creek**	**29.17**	**200**	P	**P**	**07 04 52.5**	**+0.1**
MBWA	**Marble Bar**	**36.28**	**240**	P	**P**	**07 05 54.1**	**-0.6**
PSA00	**Pilbara Seismi**	**36.34**	**239**	P	**P**	**07 05 54.1**	**-1.0**
PSA00				IAmb	IAmb	07 06 22.9	
	comp=Z,1.5nm,1.3s						
BKZ	**Black Stump Fm**	**40.42**	**152**	P	**P**	**07 06 30.4**	**+1.1**
BKZ				IAmb	IAmb	07 07 06.2	
	comp=Z,19nm,1.3s						
MORW	**Morawa**	**42.66**	**231**	P	**P**	**07 06 46.7**	**-1.0**
CMAR	**Chiang Mai Arr**	**58.03**	**295**	LR	LR	07 34 45.4	
	comp=Z,15nm,18.0s,baz=70,slow=37						
SONM	**Songino Array**	**66.31**	**328**	P	**P**	**07 09 41.0**	**+1.9**
	comp=Z,0.4nm,0.5s,baz=148,slow=6.1,SNR=2.9						
	comp=Z,0.4nm,0.5s						
VNDA	**Vanda**	**73.00**	**178**	P	**P**	**07 10 19.3**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=327,slow=9.6,SNR=3.6						
	comp=Z,0.7nm,0.7s						
VNDA	**Vanda**	**73.00**	**178**	P	**P**	**07 10 22.4**	**+2.7**
VNDA				IAmb	IAmb	07 10 45.7	
	comp=Z,1.5nm,1.2s						
PALK	**Pallekele**	**73.16**	**279**	LR	LR	07 44 56.5	
	comp=Z,30nm,18.6s,baz=247,slow=38						
MKAR	**Makanchi Array**	**80.36**	**319**	P	**P**	**07 11 01.3**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=78,slow=4.9,SNR=2.5						
	comp=Z,0.2nm,0.5s						
YBH	**Yreka Blue Hor**	**88.74**	**48**	LR	LR	07 45 58.9	
	comp=Z,56nm,20.5s,baz=222,slow=32						
TORD	**Torodi Ar. Bea**	**150.49**	**289**	PKPbc	**PKPbc**	**07 18 42.3**	**-0.6**
	comp=Z,2.2nm,0.9s,baz=72,slow=2.6,SNR=14						
TORD	**Torodi Ar. Bea**	**150.49**	**289**		**PKPbc**	**07 18 42.3**	**-0.6**
TORD				PKPab	**PKPab**	**07 18 49.4**	**-0.2**

KRSC 20 07:26:18.4±1.8, 48.79N×159.28E, h16km±63km, ML3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.79**	**314**	*e*P	Pn	07 27 02.7	+0.4
SKR				*e*S	Sn	07 27 36.9	+1.3
PAU	**Pauzhetka**	**3.11**	**330**	*e*P	Pn	07 27 08.8	+2.0
PAU				*e*S	Sb	07 27 48.8	-2.2
KDTR	**Khodutka, Kamc**	**3.12**	**346**	*e*P	Pn	07 27 09.6	+2.8
KDTR				*e*S	Sn	07 27 47.4	+3.7
RUS	**Russkaya**	**3.68**	**353**	*e*P	Pn	07 27 17.9	+3.3
RUS				*e*S	Sn	07 28 01.4	+3.8
ASAK	**Asacha**	**3.70**	**347**	*e*P	Pn	07 27 18.7	+3.7
MTVR	**Mutnovka**	**3.76**	**350**	*e*P	Pn	07 27 19.2	+3.4
MTVR				*e*S	Sn	07 28 04.0	+4.2
GRL	**Gorelyy**	**3.84**	**349**	*e*P	Pn	07 27 20.9	+4.0
GRL				*e*S	Sn	07 28 06.4	+4.6
DALK	**Dalny**	**4.26**	**356**	*e*P	Pn	07 27 26.2	+3.7
SPN	**Mys Shipunski**	**4.34**	**6**	*e*P	Pn	07 27 27.3	+3.7
SPN				*e*S	Sn	07 28 19.3	+5.5
UGLR	**Uglovaya**	**4.43**	**356**	*e*P	Pn	07 27 30.1	+5.1
SMAR	**Somma**	**4.49**	**356**	*e*P	Pn	07 27 29.8	+3.9
AVH	**Avacha**	**4.49**	**356**	*e*P	Pn	07 27 29.7	+3.9
SDLR	**Sedlovina**	**4.50**	**357**	*e*P	Pn	07 27 30.5	+4.5
KOK	**Koryaka**	**4.53**	**355**	*e*P	Pn	07 27 31.3	+5.0
KRER	**Koryakskii**	**4.53**	**356**	*e*P	Pn	07 27 31.2	+4.7
KRX	**Arik**	**4.59**	**355**	*e*P	Pn	07 27 31.4	+4.2
GNL	**Ganaly**	**4.98**	**351**	*e*P	Pn	07 27 37.1	+4.5
KII	**Karymskiy**	**5.25**	**1**	*e*P	Pn	07 27 41.6	+5.3
MKZ	**Mys Koziova**	**5.97**	**14**	*e*P	Pn	07 27 49.9	+3.9
TUMR	**Tumrok**	**6.53**	**4**	*e*P	Pn	07 27 59.9	+6.2

*TUL **20** 07:37:26.1±1.4,36.30N±0.01×97.09W±0.01, h5km±7km, ML2.7, mb_Lg2.5/47(NEIC), Error ellipse: s-maj=1.8km s-min=1.4km az=225.0*
NEIC 20 07:37:26.3±1.2, 36.30N±0.01×97.10W±0.01, h6km±5km, Error ellipse: s-maj=1.8km s-min=1.3km az=212.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK005	**Luther M Schoo**	**0.65**	**187**	Pg	Pg	07 37 38.8	+0.1
T35A	**Sooner Cattle**	**0.78**	**37**		Pg	07 37 41.3	+0.1
T35A				Sg	Sg	07 37 51.0	-0.3
OKCFA	**Oklahoma City**	**0.93**	**198**	Pg	Pg	07 37 43.4	-0.6
OKCSW	**OKLAHOMA CITY**	**0.93**	**197**		Pg	07 37 43.8	-0.4
FNO	**Franklin**	**1.07**	**194**	Pg	Pg	07 37 46.1	-0.7
TUL1	**Leonard**	**1.12**	**110**		Pg	07 37 47.1	-0.8
X34A	**Smith Ranch, M**	**1.80**	**200**	Pn	Pn	07 37 58.4	+0.6
X34A				IAmb_Lg		07 38 26.8	
	comp=Z,29nm,0.8s						
WMOK	**Wichita Mounta**	**2.08**	**222**		Pn	07 38 00.4	-1.3
WMOK				IAmb_Lg		07 38 33.8	
	comp=Z,20nm,0.9s						
U38A	**Gravette**	**2.19**	**86**		Pn	07 38 04.1	+0.8
X37A	**Clayton**	**2.21**	**140**	Pn	Pn	07 38 04.3	+0.8
R32A	**Long Quarter,**	**2.48**	**329**	Pn	Pn	07 38 07.0	-0.2
HHAR	**Hobbs**	**2.55**	**89**		Pn	07 38 09.4	+1.2
W39A	**Magazine**	**2.91**	**111**	Pn	Pn	07 38 14.6	+1.5
CBKS	**Cedar Bluff**	**3.27**	**321**	IAmb_Lg		07 39 17.7	
	comp=Z,22nm,1.0s						
S39A	**Bolivar**	**3.33**	**64**	Pn	Pn	07 38 19.6	+0.8
S39A				IAmb_Lg		07 39 17.6	
	comp=Z,9.9nm,0.7s						
MIAR	**Mount Ida**	**3.36**	**120**		Pn	07 38 18.4	-0.9
Z38A	**Mt. Pleasant**	**3.49**	**150**	Pn	Pn	07 38 18.9	-2.2
Z38A				IAmb_Lg		07 39 22.7	
	comp=Z,16nm,0.8s						
X40A	**Basin Creek Fa**	**3.92**	**116**	Pn	Pn	07 38 26.5	-0.5
MGMO	**Mountain Grove**	**3.97**	**76**	Pn	Pn	07 38 26.8	-1.0
MGMO				IAmb_Lg		07 39 38.8	
	comp=Z,9.7nm,0.8s						
AMTX	**Amarillo**	**3.99**	**251**	Pn	Pn	07 38 28.2	0.0
AMTX				IAmb_Lg		07 39 41.5	
	comp=Z,8.5nm,0.8s						
WHAR	**Wooly Hollow**	**4.04**	**103**	IAmb_Lg		07 39 33.2	
	comp=Z,9.5nm,0.8s						
UALR	**University of**	**4.16**	**110**	Pn	Pn	07 38 29.7	-0.7
WLAR	**White Oak Lake**	**4.18**	**127**	IAmb_Lg		07 39 39.8	
	comp=Z,8.8nm,0.8s						
P38A	**Dawn**	**4.35**	**39**	IAmb_Lg		07 39 49.8	
	comp=Z,14nm,1.1s						
LCAR	**Lake Charles**	**4.81**	**91**	IAmb_Lg		07 40 02.8	
	comp=Z,6.3nm,0.9s						
CCM	**Cathedral Cave**	**4.99**	**68**	IAmb_Lg		07 40 02.2	
	comp=Z,10nm,0.7s						
KSCO	**Kaye Shedlock'**	**5.16**	**303**	IAmb_Lg		07 40 13.8	
	comp=Z,7.4nm,0.8s						
MSTX	**Muleshoe**	**5.20**	**245**	IAmb_Lg		07 40 16.6	
	comp=Z,7.3nm,1.1s						
PBMO	**Poplar Bluff**	**5.39**	**83**	IAmb_Lg		07 40 23.3	
	comp=Z,8.6nm,0.9s						
N38A	**Joes South For**	**5.41**	**33**	IAmb_Lg		07 40 28.1	
	comp=Z,12nm,0.8s						
FVM	**French Village**	**5.59**	**70**	IAmb_Lg		07 40 31.1	
	comp=Z,8.7nm,0.9s						
L34A	**Svendsen Farm,**	**5.69**	**5**	IAmb_Lg		07 40 25.4	
	comp=Z,6.3nm,0.9s						
JCT	**Junction City**	**6.23**	**202**	IAmb_Lg		07 40 53.6	
	comp=Z,4.9nm,0.8s						
SIUC	**Southern Illin**	**6.46**	**75**	IAmb_Lg		07 40 50.7	
	comp=Z,11nm,0.7s						
Q24A	**Divide**	**6.92**	**295**	IAmb_Lg		07 41 21.4	
	comp=Z,3.9nm,0.7s						
O44A	**Mansfield**	**7.80**	**58**	IAmb_Lg		07 41 35.7	
	comp=Z,7.4nm,0.8s						

*NEIC **20** 07:53:29.8±1.8,24.93N±0.05×121.90E±0.05, h110km±4km, mb4.4/66, Error ellipse: s-maj=7.9km s-min=6.9km az=180.0*
*NIED **20** 07:53:29.9, 24.83N×121.87E, h109km, MW4.2, Moment Tensor Solution. s2 Moment tensor: Scale 10^15^Nm; Mrr-0.66; Mθθ2.05; Mϕϕ-1.38; Mrθ0.20; Mθϕ

NDS				S		Sn	07 53 58.2	0.0
	baz=206							
NHDH	**Xindian Distri**	**0.33**	**281**	P		Pn	07 53 46.4	+0.3
	baz=282							
NHDH				S		Sn	07 53 57.5	-1.0
	baz=282							
TATO	**Taipei**	**0.37**	**282**			Pn	07 53 46.5	+0.1
TATO					Sn	Sn	07 53 58.5	-0.2
TATO	**Taipei**	**0.37**	**282**	P		Pn	07 53 46.4	0.0
	baz=283							
TATO				*e*S		Sn	07 53 57.8	-1.0
	baz=283							
TAP	**Taipei**	**0.37**	**292**	⇑*i*P		Pn	07 53 46.6	+0.3
	baz=294							
TAP				S		Sn	07 53 58.2	-0.5
	baz=294							
YM01	**YM01**	**0.38**	**310**	⇑*i*P		Pn	07 53 46.3	-0.1
	baz=321							
YM01				S		Sn	07 53 58.6	-0.3
	baz=321							
YM08	**YM08**	**0.39**	**317**	*e*P		Pn	07 53 46.3	-0.2
	baz=317							
BACT	**New Taipei Cit**	**0.41**	**283**	P		Pn	07 53 47.0	+0.4
	baz=285							
BACT				*e*S		Sn	07 53 59.0	-0.1
	baz=285							
ANP	**Anpu**	**0.44**	**311**	P		Pn	07 53 46.8	0.0
	baz=320							
TWY	**Chenhua**	**0.46**	**325**	⇑*i*P		Pn	07 53 46.9	+0.1
	baz=328							
TWY				S		Sn	07 53 59.2	-0.4
	baz=328							
EWUT	**Wuta**	**0.46**	**192**	P		Pn	07 53 47.2	+0.4
	baz=185							
EWUT				S		Sn	07 54 00.1	+0.5
	baz=185							
TWS1	**Kuangyinshan**	**0.47**	**295**	⇑*i*P		Pn	07 53 47.4	+0.5
	baz=286							
TWS1				*i* S		Sn	07 53 59.9	+0.2
	baz=286							
NTST	**Danshui**	**0.48**	**304**	P		Pn	07 53 47.1	+0.3
	baz=305							
NTST				S		Sn	07 53 59.8	0.0
	baz=305							
ENA	**Nanau**	**0.49**	**196**	P		Pn	07 53 47.2	+0.1
	baz=188							
ENA				S		Sn	07 53 60.0	0.0
	baz=188							
LATG	**Datong**	**0.49**	**222**	⇑*i*P		Pn	07 53 47.3	+0.2
	baz=231							
LATG				S		Sn	07 54 00.9	+0.7
	baz=231							
YHNB	**Yeheng**	**0.52**	**244**			Pn	07 53 46.6	-0.7
YHNB					Sn	Sn	07 53 59.1	-1.3
YHNB	**Yeheng**	**0.52**	**244**	P		Pn	07 53 47.1	-0.2
YHNB	**Yeheng**	**0.52**	**244**	⇑*i*P		Pn	07 53 47.1	-0.2
	baz=234							
YHNB				S		Sn	07 53 59.1	-1.3
	baz=234							
NTY	**Taoyuan**	**0.54**	**281**	P		Pn	07 53 47.7	+0.4
	baz=281							
NTY				*e*S		Sn	07 54 00.4	-0.1
	baz=281							
NCU	**National Centr**	**0.64**	**276**	⇑*i*P		Pn	07 53 48.4	+0.4
	baz=267							
NCU				S		Sn	07 54 01.8	0.0
	baz=267							
NCUH	**Zhongli**	**0.64**	**276**	P		Pn	07 53 48.3	+0.3
	baz=269							
NCUH				S		Sn	07 54 01.6	-0.2
	baz=269							
NNS	**Nan Shan**	**0.66**	**226**	⇑*i*P		Pn	07 53 48.4	+0.1
	baz=229							
NNS				S		Sn	07 54 02.4	+0.2
	baz=229							
NNSB	**Datong**	**0.66**	**224**	⇑*i*P		Pn	07 53 48.5	+0.1
	baz=222							
NNSB				S		Sn	07 54 01.5	-0.8
	baz=222							
NNSH	**Datong**	**0.66**	**224**	*i* P		Pn	07 53 48.4	+0.1
	baz=227							
NNSH				S		Sn	07 54 02.0	-0.3
	baz=227							
PCYT	**Pengchaiyu**	**0.74**	**13**	⇓*i*P		Pn	07 53 49.2	+0.3
	baz=9.0							
PCYT				S		Sn	07 54 02.9	-0.4
	baz=9.0							
NFF	**Wufeng Townshi**	**0.75**	**249**	P		Pn	07 53 48.9	-0.1
	baz=248							
NFF				*e*S		Sn	07 54 02.4	-1.1
	baz=248							
NACB	**Ninganchiao**	**0.77**	**200**			Pn	07 53 48.3	-0.8
NACB					Sn	Sn	07 54 03.5	-0.3
NACB	**Ninganchiao**	**0.77**	**200**	⇑*i*P		Pn	07 53 48.4	-0.8
	baz=206							
NACB				*e*S		Sn	07 54 02.6	-1.2
	baz=206							
ETL	**Fush Village**	**0.78**	**198**	*e*P		Pn	07 53 48.6	-0.7
	baz=208							
ETLH	**Xiulin Townshi**	**0.78**	**208**	P		Pn	07 53 49.2	-0.2
	baz=206							
ETLH				*e*S		Sn	07 54 03.2	-0.8
	baz=206							
HSN1	**Hsinchu**	**0.80**	**261**	P		Pn	07 53 49.4	+0.1
	baz=261							
HSN1				*e*S		Sn	07 54 04.2	+0.1
	baz=261							
SBCB	**Hsinchu**	**0.83**	**263**	P		Pn	07 53 50.0	+0.3
	baz=262							
SBCB				S		Sn	07 54 04.5	0.0
	baz=262							
LIOB	**Emei**	**0.83**	**252**	⇑*i*P		Pn	07 53 49.9	+0.2
	baz=245							
LIOB				S		Sn	07 54 04.2	-0.5
	baz=245							
HSN	**Hsinchu**	**0.84**	**263**	⇑*i*P		Pn	07 53 49.8	0.0
	baz=265							
HSN				*i* S		Sn	07 54 04.0	-0.7
	baz=265							
NSTT	**Nanjuang**	**0.85**	**252**	⇑*i*P		Pn	07 53 50.0	+0.2
	baz=244							
NSTT				*i* S		Sn	07 54 04.5	-0.5
	baz=244							
TWD	**Chiawan**	**0.86**	**198**	⇑*i*P		Pn	07 53 49.1	-0.8
	baz=202							
TWD				S		Sn	07 54 04.1	-1.0
	baz=202							
FUSS	**Fushou**	**0.88**	**222**	P		Pn	07 53 51.0	+0.6
	baz=220							
FUSS				*e*S		Sn	07 54 05.4	-0.5
	baz=220							
TWT	**Tachien**	**0.91**	**225**	⇑P		Pn	07 53 51.4	+0.7
	baz=217							
TWT				S		Sn	07 54 06.6	+0.2
	baz=217							
TDCB	**Techi**	**0.93**	**226**	⇑*i*P		Pn	07 53 51.3	+0.6
	baz=224							
TDCB				S		Sn	07 54 06.1	-0.4
	baz=224							
WHF	**Hehuan Shan**	**0.94**	**217**	⇑*i*P		Pn	07 53 51.5	+0.2
	baz=208							
WHF				*i* S		Sn	07 54 06.6	-0.8
	baz=208							
HWA	**Hwalien**	**0.95**	**196**	P		Pn	07 53 50.7	-0.2
	baz=201							
HWA				S		Sn	07 54 07.2	+0.4
	baz=201							
WHP	**Taichung City**	**1.06**	**234**	⇑*i*P		Pn	07 53 52.6	+0.6
	baz=232							
WHP				S		Sn	07 54 08.6	-0.1
	baz=232							
CHGB	**Renai**	**1.06**	**218**	⇑*i*P		Pn	07 53 52.9	+0.7
	baz=215							
CHGB				S		Sn	07 54 08.6	-0.5
	baz=215							
NMLH	**Miaoli**	**1.06**	**250**	⇑P		Pn	07 53 52.3	+0.4
	baz=249							
NMLH				S		Sn	07 54 08.2	-0.4
	baz=249							
JYNG	**Yonagunijimaku**	**1.06**	**115**	*i* P		Pn	07 53 51.9	-0.1
JYNG				S		Sn	07 54 07.9	-0.7
YOJ	**Yonaguni jima**	**1.11**	**113**	Pn		Pn	07 53 52.3	-0.1
YOJ				Sn		Sn	07 54 08.9	-0.6
YOJ	**Yonaguni jima**	**1.11**	**113**	P		Pn	07 53 52.5	+0.1
YOJ	**Yonaguni jima**	**1.11**	**113**	⇓P		Pn	07 53 52.3	-0.1
	baz=116							
YOJ				S		Sn	07 54 08.3	-1.3
	baz=116							
YOJ	**Yonaguni jima**	**1.11**	**113**	*i* P		Pn	07 53 52.4	-0.1
YOJ				S		Sn	07 54 09.0	-0.6
NSY	**Sanyi**	**1.13**	**245**	⇑*i*P		Pn	07 53 53.3	+0.6
	baz=243							
NSY				S		Sn	07 54 10.2	+0.2
	baz=243							
OWD	**Renai**	**1.14**	**215**	P		Pn	07 53 53.3	+0.3
	baz=218							
OWD				S		Sn	07 54 10.0	-0.5
	baz=218							
WUSB	**Renai**	**1.15**	**218**	⇑*i*P		Pn	07 53 53.7	+0.7
	baz=215							
WUSB				S		Sn	07 54 10.4	-0.1
	baz=215							
TWQ1	**Liyutan**	**1.15**	**242**	⇑*i*P		Pn	07 53 53.2	+0.3
	baz=231							
TWQ1				S		Sn	07 54 09.9	-0.5
	baz=231							
ESL	**Shilin**	**1.16**	**201**	P		Pn	07 53 51.6	-1.4
	baz=193							
ESL				*e*S		Sn	07 54 09.0	-1.5
	baz=193							
WCS	**Beigang Elemen**	**1.22**	**227**	P		Pn	07 53 54.2	+0.6
	baz=230							
WCS				S		Sn	07 54 11.4	-0.3
	baz=230							
WDJ	**Dajia District**	**1.26**	**244**	P		Pn	07 53 54.7	+0.6
	baz=243							
WDJ				S		Sn	07 54 12.7	+0.2
	baz=243							
EGFH	**Guangfu**	**1.30**	**199**	*e*P		Pn	07 53 53.3	-1.3
	baz=198							
EGFH				*e*S		Sn	07 54 11.1	-2.1
	baz=198							
VWDT	**VWDT**	**1.33**	**211**	⇑*i*P		Pn	07 53 55.5	+0.7
	baz=203							
VWDT				S		Sn	07 54 14.6	+0.8
	baz=203							
TCU	**Taichung**	**1.33**	**236**	⇑P		Pn	07 53 55.4	+0.5
	baz=233							
TCU				S		Sn	07 54 13.2	-0.8
	baz=233							
SMLT	**Sun Moon Lake**	**1.35**	**222**	⇑*i*P		Pn	07 53 55.8	+0.5
	baz=226							
SMLT				S		Sn	07 54 14.8	+0.2
	baz=226							
TYC	**Yuchr**	**1.37**	**224**	⇑*i*P		Pn	07 53 55.8	+0.5
	baz=229							
TYC				*e*S		Sn	07 54 14.6	+0.1
	baz=229							
SSLB	**Suanglung**	**1.40**	**218**			Pn	07 53 55.7	0.0
SSLB					Sn	Sn	07 54 15.7	+0.4
SSLB	**Suanglung**	**1.40**	**218**	P		Pn	07 53 56.4	+0.7
SSLB	**Suanglung**	**1.40**	**218**	⇑P		Pn	07 53 56.2	+0.5
	baz=224							
SSLB				S		Sn	07 54 15.3	0.0
	baz=224							
WCHH	**Zhanghua**	**1.46**	**236**	P		Pn	07 53 56.6	+0.3
	baz=233							
WCHH				*e*S		Sn	07 54 15.8	-0.7
	baz=233							
HGSD	**Ruisui**	**1.47**	**197**	P		Pn	07 53 56.6	+0.2
	baz=193							
HGSD				S		Sn	07 54 16.3	-0.4
	baz=193							
EHY	**Hungye**	**1.48**	**200**	P		Pn	07 53 55.4	-1.3
	baz=191							
EHY				*e*S		Sn	07 54 14.9	-2.1
	baz=191							
WNT	**Mingjian**	**1.50**	**227**	⇑P		Pn	07 53 57.4	+0.6
	baz=224							
WNT				S		Sn	07 54 17.4	+0.1
	baz=224							
WJS	**Zhushan**	**1.51**	**225**	P		Pn	07 53 57.5	+0.5
	baz=230							
WJS				*e*S		Sn	07 54 17.5	0.0
	baz=230							
YULB	**Yu-li**	**1.60**	**200**			Pn	07 53 56.6	-1.4
YULB					Sn	Sn	07 54 19.5	+0.1
YULB	**Yu-li**	**1.60**	**200**	*e*P		Pn	07 53 57.0	-1.1
	baz=192							
YULB				*e*S		Sn	07 54 18.9	-0.6
	baz=192							
EYUL	**Yuli**	**1.63**	**199**	*e*P		Pn	07 53 58.3	-0.1
	baz=201							
TWF1	**Yuli**	**1.63**	**199**	*e*P		Pn	07 53 59.0	+0.5
	baz=195							
TWF1				*e*S		Sn	07 54 20.3	0.0
	baz=195							
YUS	**Yu-Shan**	**1.64**	**211**	⇑*i*P		Pn	07 53 60.0	+0.9
	baz=200							
YUS				S		Sn	07 54 21.6	+0.4
	baz=200							
WRL	**Guolierlin Hig**	**1.70**	**234**	*e*P		Pn	07 53 59.1	-0.2
	baz=231							
WRL				*e*S		Sn	07 54 20.1	-1.5
	baz=231							
ALS	**Alishan**	**1.70**	**216**	⇑*i*P		Pn	07 54 00.2	+0.7
	baz=211							
ALS				S		Sn	07 54 21.6	-0.6
	baz=211							
CHN5	**Tsauling**	**1.70**	**221**	*e*P		Pn	07 54 00.3	+0.9
	baz=217							
CHN5				*e*S		Sn	07 54 22.4	+0.5
	baz=217							
WDLH	**Douliu**	**1.72**	**226**	*e*P		Pn	07 53 59.8	+0.3
	baz=230							
WDLH				*e*S		Sn	07 54 22.2	+0.1
	baz=230							
IRIF	**Iriomote-Funau**	**1.77**	**108**	*i* P		Pn	07 53 59.8	-0.2
IRIF				*e*S		Sn	07 54 22.8	-0.3
FULB	**Fuli**	**1.78**	**198**	*e*P		Pn	07 54 00.5	+0.2
	baz=200							
FULB				*e*S		Sn	07 54 23.9	+0.4
	baz=200							
WTK	**Tuku**	**1.82**	**229**	*e*P		Pn	07 54 00.9	+0.2
	baz=225							
WTK				*e*S		Sn	07 54 24.1	-0.3
	baz=225							
CHN2	**Minshiung**	**1.88**	**224**	*e*P		Pn	07 54 02.3	+0.9
	baz=227							
CHN2				*e*S		Sn	07 54 26.0	+0.5
	baz=227							
ELDTW	**Lidau**	**1.88**	**205**	P		Pn	07 54 01.3	-0.3
	baz=192							
ELDTW				S		Sn	07 54 26.0	+0.1
	baz=192							
CHY	**Chiayi**	**1.93**	**224**	P		Pn	07 54 02.5	+0.4
	baz=227							
CHY				S		Sn	07 54 26.6	-0.2
	baz=227							
HATJ	**Hateruma jima**	**1.94**	**115**	P		Pn	07 54 02.6	+0.4
HATJ				*e*S		Sn	07 54 27.1	+0.2
TPUB	**Ta-pu**	**1.96**	**216**			Pn	07 54 02.7	+0.2
TPUB	**Ta-pu**	**1.96**	**216**	P		Pn	07 54 03.2	+0.6
TPUB	**Ta-pu**	**1.96**	**216**	P		Pn	07 54 02.8	+0.2
	baz=211							
TPUB				S		Sn	07 54 26.9	-0.7
	baz=211							
WSF	**Szhu**	**1.97**	**231**	*e*P		Pn	07 54 02.5	-0.1
	baz=220							
WSF				*e*S		Sn	07 54 27.5	-0.2
	baz=220							
EDH	**Donghe**	**1.99**	**196**	*e*P		Pn	07 54 02.2	-0.7
	baz=187							
EDH				*e*S		Sn	07 54 27.0	-1.2
	baz=187							
STYH	**Taoyuan**	**2.00**	**211**	*e*P		Pn	07 54 04.0	+1.0
	baz=206							
STYH				*e*S		Sn	07 54 29.1	+0.8
	baz=206							
WTP	**Ta-pu**	**2.02**	**215**	P		Pn	07 54 03.6	+0.4
	baz=211							
WTP				*e*S		Sn	07 54 28.7	-0.1
	baz=211							
JKRS	**Kuro-shima**	**2.04**	**108**	P		Pn	07 54 04.0	+0.5
JKRS				*e*S		Sn	07 54 29.3	+0.1
WSL	**Shuilin Townsh**	**2.04**	**228**	*e*P		Pn	07 54 02.8	-0.7
	baz=224							
WSL				*e*S		Sn	07 54 28.9	-0.4
	baz=224							
TWK	**Hsinying**	**2.07**	**218**	⇑*i*P		Pn	07 54 04.2	+0.3
	baz=213							
TWK				S		Sn	07 54 29.9	-0.1
	baz=213							
SNST	**Tainan City**	**2.10**	**217**	*e*P		Pn	07 54 04.7	+0.4
	baz=213							
SNST				*e*S		Sn	07 54 30.2	-0.4
	baz=213							
LONT	**Longtian**	**2.10**	**199**	*e*P		Pn	07 54 03.8	-0.5
	baz=188							
LONT				*e*S		Sn	07 54 29.6	-1.0
	baz=188							
CHN1	**Nanshi**	**2.11**	**216**	P		Pn	07 54 04.7	+0.3
	baz=211							
CHN1				S		Sn	07 54 30.3	-0.6
	baz=211							
JIJ	**Ishigaki jima**	**2.12**	**104**	*i* P		Pn	07 54 04.2	-0.3
JIJ				S		Sn	07 54 29.7	-1.3
ICHU	**Yijhu**	**2.12**	**224**	*e*P		Pn	07 54 04.4	-0.1
	baz=211							
ICHU				*e*S		Sn	07 54 30.0	-1.1
	baz=211							
SGST	**Jiashian**	**2.17**	**214**	P		Pn	07 54 04.6	-0.5
	baz=216							
SGST				S		Sn	07 54 31.1	-1.1
	baz=216							
CHN8	**Yiju**	**2.18**	**225**	*e*P		Pn	07 54 05.5	+0.3
	baz=228							
CHN8				*e*S		Sn	07 54 32.6	+0.3
	baz=228							
TWG	**Pinlang**	**2.20**	**200**			Pn	07 54 04.4	-1.1
TWG	**Pinlang**	**2.20**	**200**	*e*P		Pn	07 54 04.5	-1.1
	baz=188							
TWG				*e*S		Sn	07 54 30.9	-2.0
	baz=188							
TWGBT	**Beinan**	**2.20**	**200**	*e*P		Pn	07 54 04.7	-0.8
	baz=188							
TWGBT				*e*S		Sn	07 54 31.2	-1.7
	baz=188							
VWUC	**VWUC**	**2.21**	**273**	P		Pn	07 54 05.3	-0.4
	baz=272							
VWUC				S		Sn	07 54 30.8	-2.4
	baz=272							
LDUT	**Ludao**	**2.25**	**190**	*e*P		Pn	07 54 05.6	-0.5
	baz=183							
LDUT				*e*S		Sn	07 54 31.9	-2.1
	baz=183							
CHN3	**Shinhua**	**2.29**	**218**	*e*P		Pn	07 54 08.2	+1.5
	baz=213							
CHN3				*e*S		Sn	07 54 36.5	+1.6
	baz=213							
SHHT	**Tainan City**	**2.34**	**217**	*e*P		Pn	07 54 08.9	+1.6
	baz=212							
SHHT				*e*S		Sn	07 54 37.8	+1.7
	baz=212							
SCST	**Cishan**	**2.38**	**213**	*e*P		Pn	07 54 08.6	+0.8
	baz=207							
SCST				*e*S		Sn	07 54 35.8	-1.2
	baz=207							
TSMG	**Majia**	**2.46**	**208**	*e*P		Pn	07 54 09.9	+1.0
	baz=217							
PNG	**Penghu**	**2.51**	**239**	*e*P		Pn	07 54 08.8	-0.7
	baz=235							
PNG				*e*S		Sn	07 54 37.3	-2.6
	baz=235							
PTMZ	**Houxiangcun**	**2.52**	**274**	*e*P		Pn	07 54 09.4	-0.1
	baz=273							
PTMZ				*e*S		Sn	07 54 37.6	-2.4
	baz=273							
LYJJ	**Jianjiangzhen**	**2.52**	**311**	*e*P		Pn	07 54 09.8	+0.1
	baz=311							
XPSS	**Dashiqiu**	**2.53**	**323**	P		Pn	07 54 09.6	-0.2
	baz=325							
XPSS				*e*S		Sn	07 54 38.5	-2.0
	baz=325							
MASBT	**Mashibuluo**	**2.55**	**207**	*e*P		Pn	07 54 10.9	+0.8
	baz=201							
MASBT				*e*S		Sn	07 54 39.3	-1.7
	baz=201							
JTJ	**Tarama**	**2.57**	**95**	P		Pn	07 54 11.2	+0.9
JTJ				S		Sn	07 54 41.7	+0.3
WDGT	**Dungji**	**2.61**	**232**	⇑P		Pn	07 54 10.4	-0.4
	baz=227							
WDGT				S		Sn	07 54 40.7	-1.6
	baz=227							
EAST	**Anshuo**	**2.68**	**201**	*e*P		Pn	07 54 12.8	+1.0
	baz=193							
SSPT	**Xinbi**	**2.69**	**207**	*e*P		Pn	07 54 13.8	+1.9
	baz=206							
TAWH	**Dawu Township**	**2.71**	**200**	*e*P		Pn	07 54 13.6	+1.5
	baz=193							
SCZT	**Fangliau**	**2.77**	**205**	*e*P		Pn	07 54 12.9	0.0
	baz=204							
VCHM	**Qimei**	**2.81**	**234**	*e*P		Pn	07 54 12.5	-0.8
	baz=226							
MHZQ	**Yeshan**	**2.84**	**295**	*e*P		Pn	07 54 13.7	-0.1
	baz=296							
SLIU	**Shizi**	**2.85**	**201**	*e*P		Pn	07 54 14.5	+0.5
	baz=199							
LAY	**Lan-yu**	**2.87**	**186**	*e*P		Pn	07 54 11.9	-2.3
	baz=183							
LYUB	**Lan-yu**	**2.90**	**186**	*e*P		Pn	07 54 13.2	-1.4
	baz=183							
JIRB	**Irabujima**	**2.99**	**91**	*e*S		Sn	07 54 50.6	-0.5
QZH	**Quanzhou**	**2.99**	**271**	⇓*i*P		Pn	07 54 15.8	0.0
QZH				S		Sn	07 54 48.8	-2.4
QZH				smax		smax		
	comp=N,530nm,0.6s							
QZH				smax		smax		
	comp=E,230nm,0.7s							
JIKM	**Ikemajima**	**3.05**	**89**	S		Sn	07 54 52.3	-0.4
JMJ	**Miyako jima 2**	**3.10**	**91**	P		Pn	07 54 19.0	+1.9
TWK1	**Hengchun**	**3.11**	**199**	*e*P		Pn	07 54 17.5	+0.2
	baz=197							
TWKBT	**Hengchun**	**3.11**	**199**	*e*P		Pn	07 54 17.9	+0.5
	baz=197							
TSEB	**Hengchuen, Pin**	**3.12**	**197**	*e*P		Pn	07 54 18.6	+1.1
	baz=196							
JMJ2	**Miyako jima3**	**3.13**	**92**	*e*S		Sn	07 54 54.5	-0.1
KNM	**Kinmen**	**3.18**	**262**	P		Pn	07 54 19.8	+1.6
	baz=263							
JOGS	**Gusukube**	**3.20**	**92**	S		Sn	07 54 56.5	+0.3
KNMB	**Chin-men Tao**	**3.21**	**263**			Pn	07 54 18.2	-0.5
KNMB	**Chin-men Tao**	**3.21**	**263**	*e*P		Pn	07 54 18.3	-0.4
	baz=264							
AXDP	**Jialang**	**3.56**	**271**	*e*P		Pn	07 54 23.5	+0.2
	baz=270							
AXDP				*e*S		Sn	07 55 02.4	-2.2
	baz=270							
ZPLA	**Ao Xicun**	**3.89**	**256**	*e*P		Pn	07 54 27.7	-0.1
	baz=257							
SXFK	**Yanhouchang**	**4.11**	**292**	*e*P		Pn	07 54 31.1	+0.4
	baz=293							
JOW	**Kunigami**	**6.07**	**70**	P		Pn	07 54 56.6	-0.4
	19nm,0.4s,baz=121,slow=23,SNR=11							
JOW				S		Sn	07 56 02.6	-2.5
	31nm,0.3s,baz=108,slow=25,SNR=11							
JOW	**Kunigami**	**6.07**	**70**			Pn	07 54 56.4	-0.7
JOW	**Kunigami**	**6.07**	**70**	P		Pn	07 54 56.8	-0.3
CNSH	**ChangSha**	**8.66**	**294**	⇓P		Pn	07 55 32.8	+0.6
CNSH				S		Sn	07 57 08.0	-0.1
LYN	**LuoYang**	**12.62**	**322**	*e*P		P	07 56 35.4	+3.4
KSCHJ	**Chungju**	**13.02**	**22**	Pn		Pn	07 56 28.2	-2.2
KSAR	**Wonju Array Be**	**13.51**	**21**	Pn		Pn	07 56 35.6	-1.2
KSRS	**Korea Array**	**13.53**	**21**	P		Pn	07 56 39.4	+2.3
	32nm,0.8s,baz=200,slow=12,SNR=85							
KSRS				LR		LR	08 02 07.1	
	comp=Z,26nm,21.7s,baz=190,slow=38							
HNS	**HongShan**	**13.88**	**335**	⇓P		P	07 56 49.1	+3.1
JHS	**Saijyo**	**13.99**	**41**	Pn		Pn	07 56 42.2	-0.8
SEHB	**SEOHWA**	**14.38**	**21**	Pn		Pn	07 56 46.4	-1.6
XAN	**Xi'an**	**14.49**	**312**	P		Pn	07 56 50.1	+0.6
XAN				pmax		pmax		
	comp=Z,6.0nm,0.9s							
BJT	**Baijiatuau**	**15.82**	**344**	Pn		Pn	07 57 05.5	-0.6
JGF	**Kuroka**	**17.08**	**48**			Pn	07 57 21.4	-0.1
JGF				lAmb		lAmb	07 57 25.1	
	comp=Z,17nm,1.3s							
HHC	**Hu-ho-hao-te**	**18.09**	**334**	*e*P		Pn	07 57 35.3	+1.5
HHC				pmax		pmax		
	comp=Z,22nm,0.9s							
HHC				pmax		pmax		
	comp=Z,130nm,6.3s							
MAJO	**Matsushiro**	**18.18**	**47**	P		P	07 57 31.5	-2.1
MJB9	**Matsu-Tunnel**	**18.18**	**46**	P		P	07 57 31.6	-1.9
MJAR	**Matsushiro Arr**	**18.18**	**47**	P		P	07 57 33.9	+0.

comp=Z,34nm,0.8s,baz=223,slow=1.3,SNR=5.0
JCJ Chichijima 18.38 79 P P 07 57 35.4 -0.4
LZH Lanzhou 19.10 310 *e*P **Pn 07 57 47.5 +1.7**
LZH pmax pmax
comp=Z,21nm,1.0s
JMM Marumori 20.63 47 P P
JMM IAmb IAmb 07 58 19.0
comp=Z,23nm,1.1s
USA0B Ussuriysk Arra 20.94 21 P P 07 58 02.2 -1.2
USRK Ussuriysk Ar. 20.94 21 P P 07 58 04.4 +1.0
comp=Z,4.9nm,0.7s,baz=204,slow=11,SNR=8.9
comp=Z,4.9nm,0.7s
USRK Ussuriysk Ar. 20.94 21 P P 07 58 02.2 -1.2
CHTO Chiang Mai 22.12 259 P P 07 58 14.9 -1.4
CMAR Chiang Mai Arr 22.25 258 P P 07 58 19.2 +1.7
comp=Z,2.4nm,0.4s,baz=61,slow=8.7,SNR=14
comp=Z,2.4nm,0.4s
GTA Gaotai 23.55 313 *e*P **P 07 58 31.5 +1.5**
GTA pmax pmax
comp=Z,3.0nm,0.8s
SBUM Sibu 24.19 204 P P 07 58 35.7 -0.1
SBUM IAmb IAmb 07 58 45.0
comp=Z,16nm,1.4s
KLR Kul'dur 25.48 15 P P 07 58 47.7 +0.5
comp=Z,5.9nm,0.5s,baz=202,slow=7.9,SNR=32
comp=Z,5.9nm,0.5s
GOMU GeErMu 25.81 302 P P 07 58 51.8 +1.0
GOMU pmax pmax
comp=Z,2.0nm,0.8s
GOMU pmax pmax
comp=Z,48nm,5.9s
SONM Songino Array 25.97 336 P P 07 58 52.6 +0.8
comp=Z,1.6nm,0.5s,baz=156,slow=11,SNR=11
comp=Z,1.6nm,0.5s
SONM Songino Array 25.97 336 P P 07 58 52.2 +0.5
SHL Shillong 27.12 278 P P 07 59 01.7 -0.8
SHL IAmb IAmb 07 59 07.7
comp=Z,9.9nm,0.7s
KAPI Kappang 29.81 184 LR LR 08 11 59.4
comp=Z,35nm,19.5s,baz=210,slow=37
WMQ Urumqi 33.63 313 *e*P **P 08 00 02.3 +2.8**
MK31 Makanchi Array 38.28 315 P P 08 00 39.7 +0.6
MKAR Makanchi Array 38.28 315 P P 08 00 39.8 +0.8
comp=Z,1.4nm,0.5s,baz=99,slow=10,SNR=16
comp=Z,1.4nm,0.5s
MKAR Makanchi Array 38.28 315 P P 08 00 39.6 +0.6
MTN Manton Dam 38.59 165 P P 08 00 41.0 -0.8
PETK Petropavlovsk- 38.92 34 P P 08 00 43.0 -1.3
ZALV Zalesovo Beam 40.00 326 P P 08 00 52.5 -0.6
comp=Z,1.2nm,0.3s,baz=101,slow=8.8,SNR=4.0
comp=Z,1.2nm,0.3s
ZALV Zalesovo Beam 40.00 326 P P 08 00 52.9 -0.3
KURBB Kurchatov Arra 41.98 319 P P 08 01 10.3 +0.9
comp=Z,0.4nm,0.4s,baz=112,slow=9.8,SNR=7.5
comp=Z,0.4nm,0.4s
AAK Ala-Archa 42.59 307 LR LR 08 21 25.2
comp=Z,883nm,21.7s,baz=291,slow=39
COEN Coen 43.85 149 P P 08 01 24.8 -0.1
COEN IAmb IAmb 08 01 26.2
comp=Z,6.6nm,0.7s
GAR Garm 45.39 301 P P 08 01 37.0 -0.1
GAR IAmb IAmb 08 01 39.3
comp=Z,5.7nm,0.9s
KK31 Karatay Array 45.55 307 P P 08 01 38.1 -0.1
KKAR Karatay Array 45.55 307 P P 08 01 37.2 -1.0
MBWA Marble Bar 45.83 183 P P 08 01 39.5 -1.0
WB0 Warramunga Arr 46.04 164 P P 08 01 40.5 -1.7
WB0 IAmb IAmb 08 01 52.4
comp=Z,13nm,1.4s
WRAB Tennant Creek 46.19 164 P P 08 01 42.2 -1.1
WRAB IAmb IAmb 08 01 45.3
comp=Z,4.1nm,0.8s
WRA Warramunga Arr 46.19 164 P P 08 01 43.2 -0.1
comp=Z,2.9nm,0.8s,baz=347,slow=8.7,SNR=15
WRA PcP **PcP 08 03 17.2 -0.1**
comp=Z,0.7nm,0.6s,baz=351,slow=3.4,SNR=4.7
comp=Z,2.9nm,0.8s
WRA Warramunga Arr 46.19 164 P P 08 01 42.6 -0.7
WB2 Warramunga Arr 46.20 164 P P 08 01 42.8 -0.6
WB2 IAmb IAmb 08 01 44.7
comp=Z,7.9nm,1.0s
WR0 Warramunga Arr 46.26 163 P P 08 01 44.0 +0.1
WR0 IAmb IAmb 08 01 44.6
comp=Z,6.7nm,1.0s
KBL Kabul 46.44 295 P P 08 01 44.3 -1.2
TIXI Tiksi 46.95 3 P P 08 01 47.8 -0.9
TIXI IAmb IAmb 08 01 49.0
comp=Z,8.8nm,1.1s
ABKAR Akbulak array 53.40 314 P P 08 02 38.6 +1.0
ABKAR IAmb IAmb 08 02 41.7
comp=Z,1.3nm,0.5s
BBOO Buckleboo 58.96 166 P P 08 03 17.7 +0.5
STKA Stephens Creek 59.52 161 P P 08 03 21.1 -0.1
comp=Z,2.3nm,0.6s,baz=326,slow=11,SNR=5.2
comp=Z,2.3nm,0.6s
STKA Stephens Creek 59.52 161 P P 08 03 21.4 +0.3
A21K Barrow 63.92 21 P P 08 03 49.6 -0.5
A21K IAmb IAmb 08 03 51.4
comp=Z,5.0nm,0.8s
SOCY Socotra 65.05 272 P P 08 03 58.2 -0.4
L19K White Mountain 65.18 31 P P 08 03 59.0 +0.5
L19K IAmb IAmb 08 04 09.1
comp=Z,6.6nm,1.3s
IMAR Indian Mountai 65.26 27 P P 08 03 59.4 +0.4
J20K Nowinta River 65.28 29 P P 08 03 59.9 +0.8
J20K IAmb IAmb 08 04 16.0
comp=Z,4.2nm,1.2s
K20K Telida 65.40 30 P P 08 04 00.6 +0.6
K20K IAmb IAmb 08 04 05.8
comp=Z,3.5nm,1.1s
H21K Melozitna Rive 65.68 27 P P 08 04 02.8 +1.1
H21K IAmb IAmb 08 04 04.4
comp=Z,3.3nm,0.7s
I21K Tanana 66.08 27 P P 08 04 05.3 +1.1
I21K IAmb IAmb 08 04 06.8
comp=Z,4.0nm,0.9s
TOLK Toolik Lake Re 66.54 24 P P 08 04 08.0 +0.8
TOLK IAmb IAmb 08 04 08.5
comp=Z,3.3nm,0.8s
MLY Manley 66.62 28 P P 08 04 08.7 +0.9
MLY IAmb IAmb 08 04 10.0
comp=Z,1.9nm,0.6s
BPAW Bear Paw Mtn. 66.66 29 P P 08 04 08.5 +0.5
BPAW IAmb IAmb 08 04 08.9
comp=Z,2.5nm,0.8s
OHAK Old Harbor 66.68 36 P P 08 04 08.1 -0.1
KTH Kantishna Hill 66.78 29 P P 08 04 08.4 -0.4
KDAK Kodiak Island 66.95 35 P P 08 04 08.5 -1.4
comp=Z,20nm,1.2s,baz=73,slow=19,SNR=6.9
comp=Z,20nm,1.2s
KDAK Kodiak Island 66.95 35 P P 08 04 09.8 -0.1
H23K Yukon River 66.99 27 P P 08 04 11.4 +1.4
H23K IAmb IAmb 08 04 13.6
comp=Z,7.7nm,1.2s
I23K Minto, Yukon-K 67.18 27 P P 08 04 11.7 +0.5
I23K IAmb IAmb 08 04 30.0
comp=Z,7.5nm,1.4s
CNPM China Poot 67.33 33 P P 08 04 13.5 +1.2
NEA2 Nenana 67.40 28 P P 08 04 13.1 +0.4
NEA2 IAmb IAmb 08 04 15.4
comp=Z,8.7nm,1.4s
H24K Noodor Dome 67.66 26 P P 08 04 15.1 +0.7
H24K IAmb IAmb 08 04 23.9
comp=Z,4.7nm,1.1s
MDM Murphy Dome 67.69 27 P P 08 04 15.1 +0.6
MDM IAmb IAmb 08 04 15.9
comp=Z,7.4nm,1.2s
WRH Wood River Hil 67.84 28 P P 08 04 15.7 +0.3
WRH IAmb IAmb 08 04 43.7
comp=Z,5.3nm,1.2s
CCB Clear Creek Bu 67.92 28 P P 08 04 15.8 -0.1
IL31 68.28 27 P P 08 04 18.9 +0.8
ILAR Eielson Array 68.28 27 P P 08 04 16.9 -1.2
comp=Z,0.5nm,0.5s,baz=288,slow=6.0,SNR=12
comp=Z,0.5nm,0.5s
BMAR Burnt Mountain 68.61 24 P P 08 04 21.5 +1.2
ARCES ARCESS Array B 69.12 338 P P 08 04 23.2 -0.1
comp=Z,3.0nm,1.0s,baz=68,slow=5.0,SNR=4.4
comp=Z,3.0nm,1.0s
M24K Tolsona, Glenn 69.20 30 P P 08 04 24.8 +0.8
KLU Klutina 69.47 31 P P 08 04 26.1 +0.4
I26K Coal Creek Min 69.69 27 P P 08 04 27.0 +0.2
J26L Joseph Creek 69.74 27 P P 08 04 27.0 -0.3
GLB Gilahina Butte 70.46 31 P P 08 04 31.9 +0.3
K27K Chicken 70.49 28 P P 08 04 32.7 +1.0
K27K IAmb IAmb 08 04 35.0
comp=Z,5.7nm,1.1s
M26K Nabesna, AK 70.56 29 P P 08 04 33.0 +0.7
M26K IAmb IAmb 08 04 33.5
comp=Z,10nm,1.4s
L27K Beaver Creek, 70.88 29 P P 08 04 35.4 +1.2
L27K IAmb IAmb 08 04 49.9
comp=Z,5.1nm,1.4s
BCAR Beaver Creek A 70.90 29 P P 08 04 35.6 +1.3
FIA1 FINESS Array S 71.15 330 P P 08 04 36.0 +0.2
FINES FINESS Array B 71.15 330 P P 08 04 36.0 +0.2
comp=Z,1.4nm,0.4s,baz=63,slow=5.1,SNR=16
comp=Z,1.4nm,0.4s
FINES FINESS Array B 71.15 330 P P 08 04 36.1 +0.3
DAWY Dawson 71.61 27 P P 08 04 38.7 +0.1
DAWY IAmb IAmb 08 04 40.3
comp=Z,2.9nm,0.6s
EPYK Eagle Plains 71.89 25 P P 08 04 39.6 -0.6
EPYK IAmb IAmb 08 04 41.5
comp=Z,4.2nm,0.7s
INK Inuvik 72.32 22 P P 08 04 42.3 -0.3
comp=Z,2.6nm,0.7s,baz=299,slow=4.8,SNR=9.0
comp=Z,2.6nm,0.7s
INK Inuvik 72.32 22 P P 08 04 42.3 -0.3
AKASG Malin Array Be 72.76 318 P P 08 04 45.0 -0.6
comp=Z,0.3nm,0.4s,baz=61,slow=7.6,SNR=3.6
comp=Z,0.3nm,0.4s
M30M Minto, Yukon 73.22 28 P P 08 04 48.0 -0.2
BRTR Keskin Array B 73.26 306 P P 08 04 49.3 +0.3
comp=Z,1.3nm,0.8s,baz=109,slow=6.7,SNR=6.4
comp=Z,1.3nm,0.8s
C36M Paulatuk 74.92 20 P P 08 04 56.9 -0.9
C36M IAmb IAmb 08 04 58.2
comp=Z,11nm,1.4s
DLBC Dease Lake 78.00 31 P P 08 05 16.1 +0.5
comp=Z,1.2nm,0.5s,baz=207,slow=2.3,SNR=4.6
comp=Z,1.2nm,0.5s
DLBC Dease Lake 78.00 31 IAmb IAmb 08 05 26.8
comp=Z,8.8nm,1.5s
YKA Yellowknife Ar 82.06 23 P P 08 05 36.5 -0.6
comp=Z,1.1nm,0.7s,baz=345,slow=3.6,SNR=16
comp=Z,1.1nm,0.7s

AEIC ***20*** *07:56:04±2.1, 51.9°N±0.1°×171.2°W±0.06, h35km±7km, ML3.4/17, mb3.7/17(NEIC), Error ellipse: s-maj=17.8km s-min=1.1km az=161.0*
NEIC ***20*** *07:56:04.5±2.0, 52.0°N±0.1°×171.2°W±0.08, h45km±10km, Error ellipse: s-maj=22.1km s-min=5.6km az=167.0*
IDC ***20*** *07:56:10.2±6.4, 52.14N×171.69W, h97km±55km, mb3.3/7, mbtmp3.6/10, Error ellipse: s-maj=50.8km s-min=18.4km az=13.0*

ISC 20 07:56:04.5±1.0, **52.0N**±0.2×**171.74W**±0.05, **h44**km, **n49,** σ1§**07**/43, **mb3.7**/8, **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOFP	**Korovin Flat P**	**1.47**	**280**		**Pn**	**07 56 28.2**	**-0.4**
ATKA	**Atka Island**	**1.52**	**277**		**Pn**	**07 56 28.1**	**-1.1**
ATKA					**Sn**	**07 56 47.4**	**-0.4**
KOKL	**Mount Kliuchef**	**1.54**	**282**		**Pn**	**07 56 29.7**	**+0.2**
NIKH	**Nikolski High**	**2.00**	**61**		**Pn**	**07 56 35.2**	**-0.5**
GSMY	**Great Sitkin M**	**2.67**	**272**		**Pn**	**07 56 45.6**	**+0.6**
GSTR	**Great Sitkin T**	**2.67**	**273**		**Pn**	**07 56 44.5**	**-0.4**
GSTD	**Great Sitkin T**	**2.72**	**272**		**Pn**	**07 56 46.0**	**+0.3**
GSTD					**Sn**	**07 57 18.1**	**+0.7**
GSCK	**Great Sitkin C**	**2.73**	**271**		**Pn**	**07 56 46.0**	**+0.2**
ADK	**Adak**	**3.06**	**269**		**Pn**	**07 56 49.0**	**-1.3**
KIWB	**Kanaga Island**	**3.35**	**269**		**Pn**	**07 56 53.2**	**-1.2**
KIKV	**Kanaga Island**	**3.36**	**269**		**Pn**	**07 56 54.1**	**-0.4**
KIMD	**Kanaga Island**	**3.42**	**267**		**Pn**	**07 56 55.5**	**+0.3**
UNV	**Unalaska Valle**	**3.65**	**58**		**Pn**	**07 56 56.0**	**-2.4**
AMKA	**Amchitka**	**5.61**	**267**		**Pn**	**07 57 24.4**	**-0.9**
KDAK	**Kodiak Island**	**12.41**	**55**	P	**Pn**	**07 59 02.1**	**+3.8**
	3.1nm,0.9s,baz=66,slow=18,SNR=0.8						
CAST	**Castle Rocks**	**15.41**	**35**	Pn	**Pn**	**07 59 38.4**	**-0.3**
CAST				IAmb	IAmb	07 59 59.6	
	comp=Z,2.8nm,1.0s						
MLY	**Manley**	**16.89**	**32**	Pn	**Pn**	**07 59 57.5**	**0.0**
KLU	**Klutina**	**16.91**	**46**	Pn	**P**	**07 59 58.9**	**-0.3**
I23K	**Minto, Yukon-K**	**17.42**	**33**		**P**	**08 00 06.3**	**+1.6**
I23K				IAmb	IAmb	08 00 21.9	
	comp=Z,8.9nm,1.5s						
CCB	**Clear Creek Bu**	**17.66**	**35**		**P**	**08 00 07.7**	**+0.4**
IL31		**18.06**	**36**	P	**P**	**08 00 11.6**	**-0.1**
IL31				IAmb	IAmb	08 00 16.4	
	comp=Z,5.8nm,1.4s						
ILAR	**Eielson Array**	**18.06**	**36**	P	**Pn**	**08 00 12.3**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=225,slow=11,SNR=5.3						
H24K	**Noodor Dome**	**18.33**	**32**	P	**P**	**08 00 15.1**	**+0.2**
H24K				IAmb	IAmb	08 00 39.8	
	comp=Z,6.4nm,1.4s						
J25K	**Salcha River,**	**18.53**	**37**	P	**P**	**08 00 17.2**	**+0.2**
PETK	**Petropavlovsk-**	**18.54**	**285**	P	**Pn**	**08 00 18.9**	**+1.1**
	comp=Z,0.9nm,0.6s,baz=89,slow=14,SNR=4.2						
J26L	**Joseph Creek**	**19.16**	**39**	P	**P**	**08 00 23.4**	**-0.5**
I26K	**Coal Creek Min**	**19.69**	**37**	P	**Pn**	**08 00 31.4**	**0.0**
I26K				IAmb	IAmb	08 00 38.6	
	comp=Z,6.7nm,1.5s						
TOLK	**Toolik Lake Re**	**19.73**	**24**	P	**Pn**	**08 00 31.4**	**-0.4**
TOLK				IAmb	IAmb	08 00 45.4	
	comp=Z,4.6nm,1.1s						
BMAR	**Burnt Mountain**	**20.34**	**30**	P	Pn	08 00 39.0	-0.1
DAWY	**Dawson**	**20.65**	**42**	P	**P**	**08 00 41.1**	**+1.0**
DAWY				IAmb	IAmb	08 00 50.9	
	comp=Z,5.2nm,1.4s						
HYT	**Haines Junctio**	**20.65**	**51**	P	**P**	**08 00 41.2**	**+1.0**
HYT				IAmb	IAmb	08 00 52.0	
	comp=Z,4.9nm,0.9s						
DLBC	**Dease Lake**	**24.30**	**58**	P	**P**	**08 01 20.4**	**+2.9**
	comp=Z,1.6nm,0.6s,baz=203,slow=7.1,SNR=4.2						
INK	**Inuvik**	**24.43**	**34**	P	**P**	**08 01 18.2**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=242,slow=7.5,SNR=4.8						
	comp=Z,0.9nm,0.5s						
INK	**Inuvik**	**24.43**	**34**	IAmb	IAmb	08 01 29.7	
	comp=Z,4.9nm,1.4s						
H11N2	**WAKE ISLAND Hy**	**36.31**	**215**	T	T	08 41 31.8	
	baz=21,slow=75,SNR=8.9						
H11N3	**WAKE ISLAND Hy**	**36.32**	**215**	T	T	08 41 36.7	
	baz=21,slow=75,SNR=7.5						
H11N1	**WAKE ISLAND Hy**	**36.33**	**215**	T	T	08 41 26.9	
	baz=21,slow=75,SNR=8.9						
H11S1	**WAKE ISLAND Hy**	**37.51**	**215**	T	T	08 43 00.8	
	baz=22,slow=76,SNR=9.1						
H11S2	**WAKE ISLAND Hy**	**37.52**	**215**	T	T	08 43 02.4	
	baz=22,slow=76,SNR=9.3						
H11S3	**WAKE ISLAND Hy**	**37.53**	**215**	T	T	08 43 06.4	
	baz=22,slow=76,SNR=6.6						
NVAR	**Mina Array Bea**	**39.12**	**89**	P	**P**	**08 03 28.4**	**+0.6**
	comp=Z,0.6nm,0.9s,baz=289,slow=8.4,SNR=3.9						
	comp=Z,0.6nm,0.9s						
PDAR	**Pinedale Array**	**41.90**	**77**	P	**P**	**08 03 50.1**	**-0.5**
	comp=Z,0.4nm,0.8s,baz=316,slow=4.1,SNR=4.0						
	comp=Z,0.4nm,0.8s						
TXAR	**Lajitas Array**	**54.22**	**87**	P	**P**	**08 05 25.2**	**-0.5**
	comp=Z,0.4nm,0.8s,baz=297,slow=4.0,SNR=5.4						
	comp=Z,0.4nm,0.8s						
KURK	**Kurchatov**	**61.63**	**317**	P	**P**	**08 06 17.8**	**+0.6**
KURBB	**Kurchatov Arra**	**61.74**	**317**	P	**P**	**08 06 17.8**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=47,slow=6.9,SNR=4.2						
	comp=Z,0.5nm,0.6s						
MKAR	**Makanchi Array**	**62.96**	**312**	P	**P**	**08 06 25.2**	**-1.0**
	comp=Z,0.5nm,0.8s,baz=78,slow=9.0,SNR=2.4						
	comp=Z,0.5nm,0.8s						
AKTO	**Aktyubinsk**	**69.55**	**329**	P	**P**	**08 07 07.9**	**-0.4**
	comp=Z,2.3nm,0.5s,baz=56,slow=9.4,SNR=7.8						
	comp=Z,2.3nm,0.5s						
ABKAR	**Akbulak array**	**69.93**	**327**	P	**P**	**08 07 10.3**	**-0.3**
KKAR	**Karatay Array**	**71.05**	**317**	P	**P**	**08 07 17.1**	**-0.6**

CNRM ***20*** *08:03:35.7, 36.68N×2.89W, h42km, ml2.0*
SFS ***20*** *08:03:36.0, 36.67N×2.66W, h11km, ML2.6, LA MOJONERA (ALMERIA)*
MDD ***20*** *08:03:36.9±0.5, 36.67N×2.66W, h11km, mb_Lg2.6/13, Error ellipse: s-maj=4.2km s-min=2.6km az=160.0*

ISC 20 08:03:34.5±1.0, **36.61N**±0.03×**2.65W**±0.03, **h16**km±8km, **n23,** σ1§**64**/43, **Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EBER	**Berja**	**0.34**	**326**	Pg	**Pg**	**08 03 41.5**	**-0.3**
EBER				Sg	**Sg**	**08 03 45.7**	**-1.1**
EBER				*i* Vmb_Lg		08 03 46.0	
ENIJ	**Nijar**	**0.50**	**45**	Pg	**Pg**	**08 03 44.5**	**-0.1**
ENIJ				Sg	**Sg**	**08 03 50.5**	**-0.8**
ENIJ				*i* Vmb_Lg		08 03 53.0	
EALB	**Alboran**	**0.74**	**205**	Pg	**Pn**	**08 03 51.4**	**+1.1**
EALB				Sg	**Sn**	**08 04 02.2**	**+1.0**
EALB				*i* Vmb_Lg		08 04 04.0	
ELGU	**Los Guajares,**	**0.83**	**288**	Pg	**Pb**	**08 03 50.7**	**+0.2**
ELGU				Sg	**Sb**	**08 04 02.0**	**+0.6**
ELGU				*i* Vmb_Lg		08 04 04.2	
EQUE	**Quentar**	**0.87**	**313**	Pg	**Pb**	**08 03 51.1**	**-0.2**
EQUE				Sg	**Sb**	**08 04 01.2**	**-1.4**
EQUE				*i* Vmb_Lg		08 04 04.3	
EQES	**Quesada**	**1.23**	**344**	Pg	**Pn**	**08 03 57.1**	**-0.1**
EQES				Sg	**Sg**	**08 04 16.3**	**+1.9**
EQES				*i* Vmb_Lg		08 04 19.4	
EGOR	**Sierra Gorda,**	**1.27**	**293**	Pg	**Pb**	**08 03 58.9**	**+0.7**
EGOR				Sg	**Sg**	**08 04 16.7**	**+1.0**
EGOR				*i* Vmb_Lg		08 04 23.2	
GOG	**Mont Gurugu**	**1.42**	**192**	P	**Pn**	**08 03 59.3**	**-0.4**
GOG				S	**Sb**	**08 04 18.6**	**+0.1**
EZAR	**Zarzadilla de**	**1.47**	**31**	Pn	**Pg**	**08 04 03.4**	**+0.5**
EZAR				Sn	**Sg**	**08 04 21.3**	**-0.7**
CART	**Cartagena**	**1.64**	**53**	P	**Pn**	**08 04 01.8**	**-0.8**
CART				S	**Sn**	**08 04 19.1**	**-4.2**
CART	**Cartagena**	**1.64**	**53**	P	**Pn**	**08 04 02.3**	**-0.2**
CART				S	**Sb**	**08 04 25.8**	**+1.1**
EMIJ	**Mijas**	**1.71**	**269**	Pn	**Pn**	**08 04 02.6**	**-1.1**
EMIJ				Sn	**Sn**	**08 04 22.9**	**-2.3**
EMIJ				*i* Vmb_Lg		08 04 25.5	
PALE	**Palemas**	**1.75**	**217**	P	**Pn**	**08 04 03.4**	**-0.8**
PALE				S	**Sn**	**08 04 25.6**	**-0.5**
TAF	**Taforalt**	**1.81**	**174**	P	**Pn**	**08 04 06.4**	**+1.3**
PVLZ	**Peæn de**	**1.97**	**224**	P	**Pg**	**08 04 12.3**	**0.0**
PVLZ				S	**Sn**	**08 04 31.3**	**-0.2**
EADA	**Adamuz**	**2.18**	**316**	Pg	**Pg**	**08 04 15.7**	**-0.7**
EADA				Sn	**Sb**	**08 04 40.4**	**-0.1**
EADA				*i* Vmb_Lg		08 04 47.7	
ETOB	**Tobarra**	**2.21**	**23**	Pn	**Pn**	**08 04 11.8**	**+1.3**
ETOB				Sn	**Sn**	**08 04 38.5**	**+1.0**
ETOB				*i* Vmb_Lg		08 04 39.0	
JBK	**JBK**	**2.27**	**178**	P	**Pn**	**08 04 13.0**	**+1.4**
JBK				S	**Sn**	**08 04 39.2**	**-0.2**
SMIR	**Smir Dam**	**2.40**	**248**	P	**Pn**	**08 04 11.6**	**-1.6**
SMIR				S	**Sn**	**08 04 36.1**	**-6.1**
ECAB	**El Cabril**	**2.65**	**304**	Pn	**Pn**	**08 04 19.3**	**+2.7**
ECAB				Sn	**Sn**	**08 04 49.5**	**+1.2**
ECAB				*i* Vmb_Lg		08 05 00.3	
MDT	**Midelt**	**4.12**	**204**	P	**Pn**	**08 04 36.6**	**-0.3**
MD31	**MD31**	**4.12**	**206**	P	**Pn**	**08 04 38.5**	**+1.6**
PVAQ	**Vaqueiros**	**4.13**	**282**	*e*Pn	**Pn**	**08 04 39.6**	**+2.6**
PVAQ				*e*Sn	**Sn**	**08 05 25.4**	**+0.4**

IDC ***20*** *08:05:15.3±0.8, 20.50N×93.78E, h0km, mb4.2/18, mbtmp4.2/19, ML4.3/1, MS3.4/4, Error ellipse: s-maj=27.1km s-min=18.1km az=52.0*
NEIC ***20*** *08:05:22.1±1.9, 20.5N±0.1°×94.0E±0.1, h49km±6km, mb4.5/35, Error ellipse: s-maj=21.5km s-min=9.9km az=51.0*

ISC 20 08:05:22.1±0.6, **20.55N**±0.09×**93.78E**±0.08, **h52**km, **n65,** σ1§**50**/68, **mb4.4**/33, **MS3.8**/3, **Myanmar**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHTO	**Chiang Mai**	**5.17**	**109**		**Pn**	**08 06 35.0**	**-2.0**
CMAR	**Chiang Mai Arr**	**5.30**	**112**		**Pn**	**08 06 37.3**	**-1.4**
	2.7nm,0.3s,baz=286,slow=15,SNR=21						
CMAR				Lg	Lg	08 07 52.3	
	4.2nm,0.3s,baz=245,slow=22,SNR=4.5						
CMAR				LR	LR	08 09 14.7	
	comp=Z,100nm,19.7s,baz=290,slow=45						
	4.0nm,0.3s						
CMAR	**Chiang Mai Arr**	**5.30**	**112**		**Pn**	**08 06 35.3**	**-3.4**
LSA	**Lhasa**	**9.41**	**346**		**Pn**	**08 07 35.9**	**+0.5**
LSA	**Lhasa**	**9.41**	**346**	Pn	**Pn**	**08 07 35.9**	**+0.5**
LSA				Sn	**Sn**	**08 09 20.3**	**+0.2**
LSA				*s*max	*s*max		
	comp=N,20nm,0.9s						
LSA				*s*max	*s*max		
	comp=E,19nm,0.8s						
PKIN	**Phulchoki**	**10.36**	**314**	*e*Pn	**Pn**	**08 07 48.0**	**-0.3**
PKIN				*e*Sn	**Sn**	**08 09 38.5**	**-4.7**
	comp=E,15nm,0.2s						
GKN	**Gorkha**	**11.15**	**313**	*e*Pn	**Pn**	**08 07 58.7**	**-0.3**
GKN				*e*Sn	**Sn**	**08 09 58.1**	**-4.2**
	comp=E,22nm,0.3s						
KOLN	**Koldanda**	**11.74**	**310**	*e*Pn	**Pn**	**08 08 07.3**	**+0.2**
DANN	**Dangsing**	**11.97**	**312**	*e*Pn	**Pn**	**08 08 10.9**	**+0.6**
DANN				*e*Sn	**Sn**	**08 10 17.6**	**-4.9**
	comp=E,9.2nm,0.3s						
PYUN	**Piuthan**	**12.37**	**309**	*e*Pn	**Pn**	**08 08 16.3**	**+0.6**
PYUN				*e*Sn	**Sn**	**08 10 28.3**	**-3.8**
	comp=E,27nm,0.4s						
KSH	**Kashi**	**24.30**	**325**	P	**P**	**08 10 35.5**	**+0.7**
KSH				pP	sP	08 10 52.0	-2.7
KSH				pmax	pmax		
	comp=Z,13nm,0.8s						
TARG	**Taragay, Kyrgy**	**25.07**	**331**	P	**P**	**08 10 44.7**	**+2.6**
KDJ	**Kajisay**	**25.67**	**331**	P	**P**	**08 10 46.9**	**-0.4**
KBL	**Kabul**	**25.89**	**308**	P	**P**	**08 10 49.7**	**+0.3**
KBL				IAmb	IAmb	08 10 53.8	
	comp=Z,15nm,1.5s						
GAR	**Garm**	**27.30**	**317**	P	**P**	**08 11 02.1**	**+0.2**
GAR				IAmb	IAmb	08 11 05.0	
	comp=Z,8.6nm,0.9s						
BTK	**Batken**	**27.62**	**320**	P	**P**	**08 11 05.9**	**+1.1**
BTK				IAmb	IAmb	08 11 22.9	
	comp=Z,4.0nm,0.5s						
MK31	**Makanchi Array**	**27.80**	**343**	P	**P**	**08 11 06.8**	**+0.5**
MKAR	**Makanchi Array**	**27.80**	**343**	P	**P**	**08 11 07.1**	**+0.9**
	comp=Z,2.0nm,0.8s,baz=157,slow=8.6,SNR=15						
	comp=Z,2.0nm,0.8s						
MKAR	**Makanchi Array**	**27.80**	**343**	P	**P**	**08 11 06.6**	**+0.4**
SONM	**Songino Array**	**29.07**	**18**	P	**P**	**08 11 17.8**	**+0.2**
	comp=Z,1.3nm,0.4s,baz=202,slow=8.2,SNR=9.9						
	comp=Z,1.3nm,0.4s						
ULN	**Ulaanbaatar**	**29.29**	**18**	P	**P**	**08 11 17.6**	**-2.0**
ULN				IAmb	IAmb	08 11 46.9	
	comp=Z,9.8nm,0.7s						
KURBB	**Kurchatov Arra**	**32.33**	**342**	P	**P**	**08 11 46.9**	**+0.7**
	comp=Z,3.2nm,0.8s,baz=154,slow=8.4,SNR=21						
	comp=Z,3.2nm,0.8s						
KURK	**Kurchatov**	**32.39**	**342**	P	**P**	**08 11 46.8**	**+0.1**
KURK				IAmb	IAmb	08 11 48.4	
	comp=Z,4.2nm,0.8s						
ZALV	**Zalesovo Beam**	**34.03**	**351**	P	**P**	**08 12 01.5**	**+0.5**
	comp=Z,2.6nm,0.6s,baz=167,slow=8.7,SNR=5.3						
	comp=Z,2.6nm,0.6s						
ABKAR	**Akbulak array**	**39.31**	**325**	P	**P**	**08 12 47.8**	**+1.8**
AKTO	**Aktyubinsk**	**41.01**	**325**	P	**P**	**08 13 01.2**	**+1.2**
	comp=Z,4.3nm,0.8s,baz=128,slow=8.1,SNR=14						
AKTO				LR	LR	08 33 39.8	
	comp=Z,44nm,18.5s,baz=95,slow=42						
	comp=Z,4.3nm,0.8s						
ARU	**Arti**	**44.31**	**333**	P	**P**	**08 13 27.6**	**+0.9**
	comp=Z,5.1nm,0.3s,baz=156,slow=5.7,SNR=6.6						
	comp=Z,5.1nm,0.3s						
KNRA	**Kununurra**	**49.77**	**134**	P	**P**	**08 14 09.5**	**-0.2**
ILGA	**Ilgaz**	**54.40**	**306**	P	**P**	**08 14 45.2**	**+1.0**
BR131	**Keskin Array S**	**

OPO	**Ambohidratompo**	**59.97**	**233**	LR		LR	08 39 11.7	
	comp=Z,66nm,18.2s,baz=42,slow=34							
MLR	**Muntele Rosu**	**60.21**	**311**	P		**P**	**08 15 26.7**	**+1.7**
BURAR	**Bucovina Array**	**60.74**	**314**	P		**P**	**08 15 29.5**	**+1.0**
BURAR				IAmb		IAmb	08 15 30.3	
	comp=Z,2.7nm,0.7s							
BUR08	**Bucovina Ar. S**	**60.75**	**314**	P		**P**	**08 15 29.6**	**+1.0**
BUR08				IAmb		IAmb	08 15 30.5	
	comp=Z,3.4nm,0.8s							
FINES	**FINESS Array B**	**61.51**	**330**	P		**P**	**08 15 33.6**	**+0.3**
	comp=Z,2.2nm,0.5s,baz=97,slow=5.8,SNR=11							
	comp=Z,2.2nm,0.5s							
IDI	**Anoyia**	**61.52**	**300**	P		**P**	**08 15 34.7**	**+0.8**
IDI				IAmb		IAmb	08 15 35.6	
	comp=Z,4.6nm,0.7s							
LIT	**Litokhoron**	**62.96**	**305**	P		**P**	**08 15 43.7**	**+0.2**
LIT				IAmb		IAmb	08 16 07.0	
	comp=Z,7.1nm,1.0s							
ARCES	**ARCESS Array B**	**63.34**	**339**	P		**P**	**08 15 45.8**	**+0.3**
	comp=Z,1.2nm,0.6s,baz=91,slow=6.1,SNR=7.1							
	comp=Z,1.2nm,0.6s							
ITM	**Ithomi**	**63.69**	**302**	P		**P**	**08 15 48.4**	**0.0**
FNA	**Florina**	**63.75**	**306**	P		**P**	**08 15 49.1**	**+0.4**
FNA				IAmb		IAmb	08 15 49.6	
	comp=Z,7.6nm,0.8s							
GEC2	**GERESS Array S**	**68.36**	**316**	P		**P**	**08 16 19.2**	**+1.0**
GEC2				IAmb		IAmb	08 16 19.9	
	comp=Z,3.1nm,0.7s							
GERES	**GERESS Array B**	**68.36**	**316**	P		**P**	**08 16 19.2**	**+1.0**
	comp=Z,2.5nm,0.6s,baz=79,slow=9.7,SNR=16							
	comp=Z,2.5nm,0.6s							
NC405	**NORSAR Array S**	**68.41**	**329**	P		**P**	**08 16 18.8**	**+0.6**
NC602	**NORSAR Array S**	**68.52**	**328**	P		**P**	**08 16 18.9**	**0.0**
NC303	**NORSAR Array S**	**68.57**	**329**	P		**P**	**08 16 19.1**	**-0.1**
NB2	**NORSAR Subarra**	**68.66**	**329**	P		**P**	**08 16 19.4**	**-0.4**
	comp=Z,1.9nm,0.6s,baz=86,slow=6.2							
NOA	**NORSAR Array B**	**68.66**	**329**	P		**P**	**08 16 19.7**	**-0.1**
	comp=Z,1.6nm,0.7s,baz=86,slow=6.2,SNR=8.1							
	comp=Z,1.6nm,0.7s							
NC204	**NORSAR Array S**	**68.86**	**329**	P		**P**	**08 16 20.2**	**-0.8**
NC204				IAmb		IAmb	08 16 20.3	
	comp=Z,11nm,1.1s							
KEST	**Kesra**	**73.92**	**303**	P		**P**	**08 16 53.3**	**+1.2**
	comp=Z,5.4nm,0.8s,baz=349,slow=3.2,SNR=3.9							
	comp=Z,5.4nm,0.8s							
BOSA	**Boshof**	**82.22**	**236**	P		**P**	**08 17 38.6**	**+0.5**
	comp=Z,3.1nm,0.8s,baz=71,slow=4.6,SNR=3.9							
	comp=Z,3.1nm,0.8s							
BOSA	**Boshof**	**82.22**	**236**	IAmb		IAmb	08 17 41.4	
	comp=Z,12nm,1.2s							
ESDC	**Sonseca Array**	**82.84**	**310**	P		**P**	**08 17 42.3**	**+1.0**
	comp=Z,0.5nm,0.6s,baz=69,slow=6.4,SNR=5.4							
	comp=Z,0.5nm,0.6s							
ILAR	**Eielson Array**	**83.19**	**22**	P		**P**	**08 17 42.7**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=293,slow=5.0,SNR=2.0							
ILAR				LR		LR	08 58 44.9	
	comp=Z,52nm,19.6s,baz=146,slow=39							
	comp=Z,0.2nm,0.6s							
TORD	**Torodi Ar. Bea**	**87.38**	**283**	P		**P**	**08 18 05.3**	**+1.0**
	comp=Z,0.9nm,0.6s,baz=80,slow=4.8,SNR=6.2							
	comp=Z,0.9nm,0.6s							

NEIC ***20*** *08:06:26.9±1.7, 32.51N±0.08×137.86E±0.04, h345km±5km, mb4.3/155, Error ellipse: s-maj=12.7km s-min=4.7km az=165.0*

JMA ***20*** *08:06:26.4±0.3, 32.2N±1.1×13.18E±0.1, h357km±2km, MV3.9/33, FAR S OFF TOKAI DISTRICT*

NIED ***20*** *08:06:26.4, 32.249N×137.190E, h357km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 1015Nm; Mrr0.93; Mθθ0.47; Mφφ-1.40; Mrθ0.30; Mθφ-1.54; Mφr-2.16; Fault plane solution: Mo2.92000×1015 NP1:φs69.00000°, δ36.00000°, λ160.00000°. NP2:φs175.00000°, δ78.00000°, λ55.00000°.*

IDC ***20*** *08:06:27.1±0.5, 32.51N×137.183E, h349km±4km, mb3.7/24, mbtmp4.5/30 Error ellipse: s-maj=10.1km s-min=9.5km az=43.0*

ISC 20 08:06:26.9±0.6, 32.50N±0.06×137.86E±0.04, h350km±5km, n427, σθ86/443, mb4.3/102, 3C-5D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
					Op	ISC	h	m	s	ISC
TK01	**Tokai 1**	**1.28**	**350**	*eS*		**S**	**08**	**07**	**52.5**	**+1.6**
TTO3	**TONANKAI O.B.S**	**1.42**	**344**	P		**Pn**	**08**	**07**	**15.6**	**+1.4**
TTO2	**TONANKAI O.B.S**	**1.42**	**331**	P		**Pn**	**08**	**07**	**15.6**	**+1.5**
TTO1	**TONANKAI O.B.S**	**1.44**	**322**	P		**Pn**	**08**	**07**	**15.5**	**+1.2**
TK02	**Tokai 2**	**1.45**	**357**	P		**Pn**	**08**	**07**	**15.3**	**+1.0**
TTO4	**TONANKAI O.B.S**	**1.53**	**350**	P		**Pn**	**08**	**07**	**15.8**	**+1.0**
TTO4				S		**S**	**08**	**07**	**54.5**	**+1.2**
JAOM	**Aogashimamukai**	**1.61**	**91**	⇓P		**Pn**	**08**	**07**	**15.9**	**+0.2**
JHJ	**Hachijo jima 2**	**1.74**	**69**	P		**Pn**	**08**	**07**	**16.3**	**0.0**
	444nm,0.3s,baz=148,slow=23,SNR=90									
JHJ				S		**S**	**08**	**07**	**56.9**	**+0.8**
	237nm,0.3s,baz=70,slow=22,SNR=11									
JHJ2	**Mitsune**	**1.76**	**69**	Pn		**Pn**	**08**	**07**	**16.5**	**0.0**
JHJ2	**Mitsune**	**1.76**	**69**	P		**Pn**	**08**	**07**	**16.3**	**-0.2**
JIE	**Ise**	**2.12**	**333**	P		**Pn**	**08**	**07**	**19.6**	**+0.7**
JIE				S		**S**	**08**	**08**	**00.6**	**-1.2**
JTNC	**Tanabenakahech**	**2.30**	**306**	P		**Pn**	**08**	**07**	**20.8**	**+0.5**
JTNC				*eS*		**S**	**08**	**08**	**02.8**	**-0.4**
JWY	**Kouya**	**2.56**	**313**	P		**Pn**	**08**	**07**	**23.2**	**+0.8**
JWY				*eS*		**S**	**08**	**08**	**07.0**	**-0.1**
INU	**Inuyama**	**2.93**	**346**	Pn		**Pn**	**08**	**07**	**25.1**	**-0.4**
JOD2	**Odawara 2**	**2.94**	**20**	P		**Pn**	**08**	**07**	**25.1**	**-0.5**
JOD2				*eS*		**S**	**08**	**08**	**11.1**	**-1.9**
JYN	**Shimob**	**3.05**	**11**	P		**Pn**	**08**	**07**	**27.4**	**+0.8**
JGF	**Kuroka**	**3.12**	**353**	Pn		**Pn**	**08**	**07**	**27.1**	**-0.2**
JAI	**Aioi**	**3.13**	**295**	P		**Pn**	**08**	**07**	**27.8**	**+0.4**
JAI				*eS*		**S**	**08**	**08**	**15.7**	**-0.4**
JWT	**Wachi**	**3.45**	**324**	⇓P		**Pn**	**08**	**07**	**31.0**	**+0.7**
JWT				⇓*eS*		**S**	**08**	**08**	**20.2**	**-1.2**
JMN	**Monobe**	**3.56**	**291**	Pn		**Pn**	**08**	**07**	**31.0**	**-0.5**
JMN	**Monobe**	**3.56**	**291**	P		**Pn**	**08**	**07**	**32.3**	**+0.9**
JMN				S		**S**	**08**	**08**	**23.7**	**+0.3**
JRY	**Ryogami san**	**3.62**	**14**	P		**Pn**	**08**	**07**	**31.9**	**-0.1**
JRY				S		**S**	**08**	**08**	**23.6**	**-0.8**
MJAR	**Matsushiro Arr**	**4.05**	**4**	P		**Pn**	**08**	**07**	**35.5**	**-0.7**
	11nm,0.8s,baz=173,slow=10,SNR=25									
MJAR				S		**S**	**08**	**08**	**32.3**	**+0.1**
	7.1nm,0.7s,baz=261,slow=18,SNR=6.0									
MJAR	**Matsushiro Arr**	**4.05**	**4**	Pn		**Pn**	**08**	**07**	**35.3**	**-1.0**
MAJO	**Matsushiro**	**4.05**	**4**			**Pn**	**08**	**07**	**35.5**	**-0.7**
MJB9	**Matsu-Tunnel**	**4.05**	**4**	Pn		**Pn**	**08**	**07**	**35.7**	**-0.6**
JYT	**Yasato**	**4.19**	**27**	Pn		**Pn**	**08**	**07**	**35.3**	**-2.4**
JHS	**Saijyo**	**4.67**	**304**	Pn		**Pn**	**08**	**07**	**43.5**	**+0.7**
JHS	**Saijyo**	**4.67**	**304**	P		**Pn**	**08**	**07**	**43.6**	**+0.7**
JHS				S		**S**	**08**	**08**	**45.0**	**+0.7**
JOI	**OKI**	**5.37**	**316**	P		**Pn**	**08**	**07**	**50.7**	**+0.2**
JSD	**Sado**	**5.54**	**3**	Pn		**Pn**	**08**	**07**	**51.3**	**-1.0**
JMM	**Marumori**	**5.87**	**23**			**Pn**	**08**	**07**	**54.7**	**-1.4**
JNU	**Nakatsue**	**5.91**	**278**	P		**Pn**	**08**	**07**	**57.0**	**+0.3**
	32nm,0.4s,baz=183,slow=1.4,SNR=13									
JNU	**Nakatsue**	**5.91**	**278**			**Pn**	**08**	**07**	**56.1**	**-0.5**
JCJ	**Chichijima**	**6.57**	**144**	P		**Pn**	**08**	**08**	**00.1**	**-4.2**
	123nm,0.4s,baz=128,slow=11,SNR=36									
JCJ				S		S	08	09	14.2	-9.1
	180nm,0.3s,baz=273,slow=23,SNR=12									
JTU	**Tsushima**	**7.35**	**288**	Pn		**Pn**	**08**	**08**	**13.9**	**+0.6**
JTM	**Tenmabayashi**	**8.67**	**16**	Pn		**Pn**	**08**	**08**	**29.0**	**+0.3**
NAWB	**Namwon**	**9.16**	**291**			**P**	**08**	**08**	**36.0**	**-0.9**
KSCHJ	**Chungju**	**9.23**	**301**			**Pn**	**08**	**08**	**36.3**	**+0.7**
TJN	**Taejon**	**9.49**	**297**			**P**	**08**	**08**	**40.0**	**-0.5**
KSRS	**Korea Array**	**9.53**	**304**	P		**P**	**08**	**08**	**40.5**	**-0.4**
	44nm,0.8s,baz=118,slow=12,SNR=98									
KSAR	**Wonju Array Be**	**9.55**	**304**			**P**	**08**	**08**	**40.4**	**-0.8**
KS19	**Wonju Array Si**	**9.59**	**304**			**Pn**	**08**	**08**	**40.5**	**+0.6**
SEHB	**SEOHWA**	**9.72**	**309**			**P**	**08**	**08**	**42.7**	**-0.5**
JOW	**Kunigami**	**10.06**	**238**	P		**Pn**	**08**	**08**	**46.2**	**+0.5**
	18nm,0.6s,baz=97,slow=8.1,SNR=9.0									
JOW	**Kunigami**	**10.06**	**238**			**Pn**	**08**	**08**	**45.5**	**-0.1**
ERM	**Erimo**	**10.39**	**22**			**Pn**	**08**	**08**	**48.6**	**-0.7**
JEW	**Eniwo**	**10.71**	**14**	P		**P**	**08**	**08**	**54.2**	**+0.2**
JKA	**Kamikawa-asahi**	**12.18**	**16**			**P**	**08**	**09**	**10.1**	**-0.3**
USA0B	**Ussuriysk Arra**	**12.55**	**340**			**P**	**08**	**09**	**14.0**	**-0.4**
USRK	**Ussuriysk Ar.**	**12.55**	**340**	P		**P**	**08**	**09**	**14.6**	**+0.1**
	44nm,0.6s,baz=163,slow=12,SNR=74									
USRK	**Ussuriysk Ar.**	**12.55**	**340**			**P**	**08**	**09**	**14.3**	**-0.1**
YSS	**Yuzh-Sakhalins**	**14.92**	**13**	P		**P**	**08**	**09**	**40.5**	**+0.1**
YOJ	**Yonaguni jima**	**15.30**	**242**	P		**P**	**08**	**09**	**44.6**	**-0.2**
BNX	**BinXian**	**15.49**	**332**	⇓P		**P**	**08**	**09**	**45.8**	**-0.9**
BNX					pmax	pmax				
	comp=Z,18nm,0.7s									
BNX					pmax	pmax				
	comp=Z,33nm,2.4s									
NJ2	**Nanjing**	**16.08**	**274**	*eP*		**P**	**08**	**09**	**53.4**	**+0.2**
NJ2					pmax	pmax				
	comp=Z,13nm,0.5s									
YHNB	**Yeheng**	**16.43**	**246**	P		**P**	**08**	**09**	**56.9**	**-0.3**
YHNB					IAmb	IAmb	08	10	15.6	
	comp=Z,32nm,1.5s									
SSLB	**Suanglung**	**17.23**	**244**	P		**P**	**08**	**10**	**05.5**	**-0.2**
SSLB					IAmb	IAmb	08	10	05.9	
	comp=Z,13nm,0.7s									
KLR	**Kul'dur**	**17.33**	**346**	P		**P**	**08**	**10**	**05.6**	**-0.9**
	comp=Z,6.1nm,0.5s,baz=170,slow=10,SNR=26									
BJT	**Baijiatuau**	**19.00**	**299**	P		**P**	**08**	**10**	**22.9**	**-1.5**
BJT					IAmb	IAmb	08	10	25.0	
	comp=Z,9.6nm,0.8s									
HNS	**HongShan**	**19.58**	**291**	⇑P		**P**	**08**	**10**	**28.5**	**-2.0**
WHN	**Wuhan**	**20.13**	**271**	⇑P		**P**	**08**	**10**	**35.1**	**-1.0**
XLT	**XiLinHaoTe**	**20.49**	**310**	*eP*		**P**	**08**	**10**	**37.8**	**-1.6**
XLT					pmax	pmax				
	comp=Z,8.0nm,0.9s									
XLT					pmax	pmax				
	comp=Z,85nm,4.1s									
HIA	**Hailar**	**21.55**	**326**	P		**P**	**08**	**10**	**48.5**	**-0.3**
HIA					IAmb	IAmb	08	10	50.1	
	comp=Z,13nm,0.6s									
HHC	**Hu-ho-hao-te**	**22.61**	**299**	*eP*		**P**	**08**	**10**	**58.4**	**-0.3**
HHC					pmax	pmax				
	comp=Z,37nm,0.7s									
HHC					pmax	pmax				
	comp=Z,150nm,5.2s									
XAN	**Xi'an**	**24.21**	**282**	⇓P		**P**	**08**	**11**	**12.3**	**-0.8**
XAN					pmax	pmax				
	comp=Z,23nm,0.7s									
PETK	**Petropavlovsk-**	**25.07**	**29**	P		**P**	**08**	**11**	**21.6**	**+1.1**
	comp=Z,2.2nm,0.6s,baz=220,slow=11,SNR=4.1									
	comp=Z,2.2nm,0.6s									
PETK	**Petropavlovsk-**	**25.07**	**29**	P		**P**	**08**	**11**	**20.5**	**-0.1**
ULN	**Ulaanbaatar**	**27.86**	**312**	P		**P**	**08**	**11**	**44.4**	**-1.3**
ULN					IAmb	IAmb	08	11	51.3	
	comp=Z,12nm,0.7s									
SONM	**Songino Array**	**28.27**	**312**	P		**P**	**08**	**11**	**49.6**	**+0.5**
	comp=Z,14nm,0.9s,baz=110,slow=8.2,SNR=23									
	comp=Z,14nm,0.9s									
SONM	**Songino Array**	**28.27**	**312**	P		**P**	**08**	**11**	**48.3**	**-0.8**
SONM					IAmb	IAmb	08	11	54.9	
	comp=Z,14nm,0.9s									
GTA	**Gaotai**	**31.39**	**294**	*eP*		**P**	**08**	**12**	**16.0**	**-0.5**
GTA					pmax	pmax				
	comp=Z,6.0nm,1.0s									
SEY	**Seymchan**	**31.82**	**13**	P		**P**	**08**	**12**	**20.3**	**+0.5**
	comp=Z,1.3nm,0.4s,baz=198,slow=20,SNR=1.9									
	comp=Z,1.3nm,0.4s									
PZH	**PanZhiHua**	**31.89**	**269**	P		**P**	**08**	**12**	**22.4**	**+1.3**
PZH					pmax	pmax				
	comp=Z,10.0nm,1.0s									
PZH					pmax	pmax				
	comp=Z,100nm,4.7s									
GOMU	**GeErMu**	**35.52**	**288**	P		**P**	**08**	**12**	**51.8**	**-0.4**
GOMU					pmax	pmax				
	comp=Z,15nm,1.0s									
GOMU					pmax	pmax				
	comp=Z,59nm,4.1s									
AMKA	**Amchitka**	**35.55**	**46**	P		**P**	**08**	**12**	**52.4**	**+0.7**
KIWB	**Kanaga Island**	**37.81**	**46**	P		**P**	**08**	**13**	**10.0**	**-0.7**
ADK	**Adak**	**38.10**	**46**	P		**P**	**08**	**13**	**12.8**	**-0.3**
ADK					IAmb	IAmb	08	13	38.8	
	comp=Z,12nm,1.1s									
GSTR	**Great Sitkin T**	**38.52**	**46**	P		**P**	**08**	**13**	**16.1**	**-0.5**
BILL	**Bilibino**	**39.20**	**16**	P		**P**	**08**	**13**	**22.4**	**+0.5**
BILL					IAmb	IAmb	08	13	23.7	
	comp=Z,13nm,0.8s									
TIXI	**Tiksi**	**39.51**	**356**	P		**P**	**08**	**13**	**24.1**	**-0.2**
	comp=Z,1.9nm,0.5s,baz=273,slow=23,SNR=5.7									
	comp=Z,1.9nm,0.5s									
TIXI	**Tiksi**	**39.51**	**356**	P		**P**	**08**	**13**	**23.8**	**-0.5**
TIXI					IAmb	IAmb	08	13	41.4	
	comp=Z,4.0nm,0.3s									
WMQ	**Urumqi**	**40.47**	**301**	*eP*		**P**	**08**	**13**	**34.6**	**+1.9**
ZALV	**Zalesovo Beam**	**42.98**	**316**	P		**P**	**08**	**13**	**52.1**	**-0.4**
	comp=Z,5.8nm,0.3s,baz=79,slow=7.5,SNR=13									
ZALV					PcP	**PcP**	**08**	**15**	**36.1**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=131,slow=4.0,SNR=1.7									
ZALV					ScP	**ScP**	**08**	**18**	**52.3**	**-0.4**
	comp=Z,0.9nm,0.6s,baz=104,slow=6.1,SNR=3.6									
	comp=Z,5.8nm,0.3s									
ZALV	**Zalesovo Beam**	**42.98**	**316**	P		**P**	**08**	**13**	**51.8**	**-0.7**
NIKH	**Nikolski High**	**43.00**	**45**	P		**P**	**08**	**13**	**53.5**	**+0.7**
NIKH	**Nikolski High**	**43.00**	**45**	P		**P**	**08**	**13**	**53.0**	**+0.2**
	baz=263									
MK31	**Makanchi Array**	**44.21**	**306**	P		**P**	**08**	**14**	**02.5**	**0.0**
MKAR	**Makanchi Array**	**44.21**	**306**	P		**P**	**08**	**14**	**02.5**	**0.0**
	comp=Z,8.1nm,0.5s,baz=85,slow=10.0,SNR=83									
MKAR					ScP	**ScP**	**08**	**18**	**57.2**	**-0.8**
	comp=Z,1.0nm,0.7s,baz=77,slow=4.6,SNR=4.9									
	comp=Z,8.1nm,0.5s									
MAKZ	**Makanchi**	**44.42**	**306**	P		**P**	**08**	**14**	**04.0**	**-0.2**
MAKZ					IAmb	IAmb	08	14	04.6	
	comp=Z,12nm,0.5s									
UNV	**Unalaska Valle**	**44.49**	**44**	P		**P**	**08**	**14**	**04.0**	**-0.5**
	baz=264									
PKIN	**Phulchoki**	**45.31**	**278**	*eP*		**P**	**08**	**14**	**11.3**	**-0.3**
	comp=Z,21nm,0.6s									
KKN	**Kakani**	**45.34**	**278**	*eP*		**P**	**08**	**14**	**11.5**	**-0.2**
GKN	**Gorkha**	**45.80**	**279**	*eP*		**P**	**08**	**14**	**14.8**	**-0.5**
FALS	**False Pass**	**46.38**	**43**	P		**P**	**08**	**14**	**19.2**	**+0.1**
	baz=266									
DANN	**Dangsing**	**46.42**	**280**	*eP*		**P**	**08**	**14**	**20.5**	**+0.3**
	comp=Z,30nm,0.3s									
KURK	**Kurchatov**	**46.57**	**311**	P		**P**	**08**	**14**	**20.3**	**-0.3**
KURK					IAmb	IAmb	08	14	21.5	
	comp=Z,20nm,0.7s									
KOLN	**Koldanda**	**46.74**	**279**	*eP*		**P**	**08**	**14**	**22.5**	**-0.1**
KOLN	**Koldanda**	**46.74**	**279**	*eP*		**P**	**08**	**14**	**22.6**	**-0.1**
KOLN	**Koldanda**	**46.74**	**279**	*eP*		**P**	**08**	**14**	**23.1**	**+0.5**
PYUN	**Piuthan**	**47.14**	**280**	*eP*		**P**	**08**	**14**	**25.7**	**0.0**
	comp=Z,106nm,0.4s									
TARG	**Taragay, Kyrgy**	**47.91**	**299**	P		**P**	**08**	**14**	**31.1**	**-0.4**
TARG					IAmb	IAmb	08	14	33.0	
	comp=Z,11nm,0.7s									
SDPT	**Sand Point**	**48.09**	**42**	P		**P**	**08**	**14**	**31.6**	**-0.6**
SDPT	**Sand Point**	**48.09**	**42**	P		**P**	**08**	**14**	**31.5**	**-0.6**
	baz=268									
KDJ	**Kajisay**	**48.30**	**300**	P		**P**	**08**	**14**	**34.2**	**0.0**
KDJ					IAmb	IAmb	08	14	34.9	
	comp=Z,8.4nm,0.5s									
CHNA	**Chernabura Isl**	**48.59**	**43**	P		**P**	**08**	**14**	**35.6**	**-0.3**
	baz=269									
CNBA	**Chernabura Isl**	**48.59**	**43**	P		**P**	**08**	**14**	**35.5**	**-0.4**
CNBA					IAmb	IAmb	08	14	36.3	
	comp=Z,24nm,0.9s									
ULHL	**Ulahol**	**48.97**	**300**	P		**P**	**08**	**14**	**39.9**	**+0.6**
	SNR=5.8									
BOOM	**Boomskoye usch**	**49.15**	**300**	P		**P**	**08**	**14**	**40.9**	**+0.3**
BOOM					IAmb	IAmb	08	14	42.4	
	comp=Z,5.7nm,0.6s									
N16K	**Nishlik Lake**	**49.30**	**36**	P		**P**	**08**	**14**	**42.1**	**+0.9**
	baz=265									
TKM2	**Tokmak 2**	**49.33**	**301**	P		**P**	**08**	**14**	**42.5**	**+0.6**
	SNR=13									
O16K	**Kokwok River B**	**49.58**	**37**	P		**P**	**08**	**14**	**43.7**	**+0.4**
	baz=266									
KSH	**Kashi**	**49.69**	**297**	P		**P**	**08**	**14**	**48.0**	**+3.4**
KSH					pmax	pmax				
	comp=Z,17nm,0.7s									
KSH	**Kashi**	**49.69**	**297**	S		**P**	**08**	**14**	**48.1**	**+3.4**
USP	**Ospenovka**	**50.06**	**302**	P		**P**	**08**	**14**	**47.2**	**0.0**
	SNR=5.0									
O17K	**Koliganek Bris**	**50.09**	**37**	P		**P**	**08**	**14**	**47.2**	**+0.1**
	baz=267									
AAK	**Ala-Archa**	**50.17**	**301**	P		**P**	**08**	**14**	**48.3**	**+0.1**
	comp=Z,5.1nm,0.6s,baz=128,slow=5.3,SNR=7.6									
	comp=Z,5.1nm,0.6s									
AAK	**Ala-Archa**	**50.17**	**301**	P		**P**	**08**	**14**	**48.3**	**+0.1**
AAK					IAmb	IAmb	08	14	49.0	
	comp=Z,7.0nm,0.6s									
UCH	**Uchtor**	**50.24**	**300**	P		**P**	**08**	**14**	**49.6**	**+0.5**
	SNR=6.0									
R17K	**Ugashik Creek**	**50.40**	**40**	P		**P**	**08**	**14**	**49.3**	**-0.1**
	baz=270									
P17K	**Kvichak River**	**50.40**	**37**	P		**P**	**08**	**14**	**48.6**	**-0.8**
	baz=268									
GCSA	**Galena City Sc**	**50.60**	**30**	P		**P**	**08**	**14**	**51.5**	**+0.7**
	baz=263									
N18K	**Kilae Creek**	**50.73**	**36**	P		**P**	**08**	**14**	**52.8**	**+0.9**
N18K	**Kilae Creek**	**50.73**	**36**	P		**P**	**08**	**14**	**53.0**	**+1.1**
	baz=267									
CHIR	**Chirikof Islan**	**50.85**	**42**	P		**P**	**08**	**14**	**53.4**	**+0.7**
AML	**Almayashu**	**50.85**	**300**	P		**P**	**08**	**14**	**54.4**	**+0.9**
	SNR=6.2									
SVW2	**Sparrevohn**	**50.90**	**35**	P		**P**	**08**	**14**	**54.8**	**+1.7**
SVW2					IAmb	IAmb	08	14	55.5	
	comp=Z,14nm,1.3s									
P18K	**Big Mountain,**	**51.03**	**37**	P		**P**	**08**	**14**	**55.0**	**+0.9**
P18K					IAmb	IAmb	08	14	55.5	
	comp=Z,7.5nm,0.7s									
P18K	**Big Mountain,**	**51.03**	**37**	P		**P**	**08**	**14**	**53.6**	**-0.5**
	baz=269									
O18K	**Koktuh Hills**	**51.05**	**37**	P		**P**	**08**	**14**	**55.7**	**+1.4**
O18K	**Koktuh Hills**	**51.05**	**37**	P		**P**	**08**	**14**	**55.8**	**+1.6**
	baz=269									
L19K	**White Mountain**	**51.30**	**34**	P		**P**	**08**	**14**	**57.4**	**+1.3**
	baz=267									
N19K	**Bonanza Creek**	**51.43**	**35**	P		**P**	**08**	**14**	**55.7**	**-1.4**
N19K	**Bonanza Creek**	**51.43**	**35**	P		**P**	**08**	**14**	**57.7**	**+0.6**
	baz=269									
O19K	**Port Alsworth**	**51.50**	**36**	P		**P**	**08**	**14**	**58.2**	**+0.8**
O19K					IAmb	IAmb	08	14	59.5	
	comp=Z,9.3nm,0.8s									
O19K	**Port Alsworth**	**51.50**	**36**	P		**P**	**08**	**14**	**58.7**	**+1.2**
	baz=269									
M19K	**Big River Lodg**	**51.51**	**34**	P		**P**	**08**	**14**	**58.7**	**+1.2**
M19K	**Big River Lodg**	**51.51**	**34**	P		**P**	**08**	**14**	**59.0**	**+1.4**
	baz=268									
BRVK	**Borovoye**	**51.62**	**315**	P		**P**	**08**	**14**	**58.4**	**-0.1**
BRVK					IAmb	IAmb	08	14	59.2	
	comp=Z,7.6nm,0.5s									
SII	**Sitkinak Islan**	**51.62**	**41**	P		**P**	**08**	**15**	**00.2**	**+1.7**
	baz=272									
K20K	**Telida**	**51.72**	**32**	P		**P**	**08**	**15**	**00.8**	**+1.7**
K20K					IAmb	IAmb	08	15	01.5	
	comp=Z,15nm,1.1s									
K20K	**Telida**	**51.72**	**32**	P		**P**	**08**	**15**	**00.2**	**+1.1**
	baz=267,SNR=8.4									
J20K	**Nowinta River**	**51.73**	**31**	P		**P**	**08**	**15**	**00.2**	**+1.1**
J20K					IAmb	IAmb	08	15	01.5	
	comp=Z,8.8nm,0.8s									
J20K	**Nowinta River**	**51.73**	**31**	P		**P**	**08**	**15**	**00.3**	**+1.1**
	baz=266,SNR=7.5									
A21K	**Barrow**	**51.76**	**22**	P		**P**	**08**	**15**	**00.8**	**+1.6**
A21K	**Barrow**	**51.76**	**22**	P		**P**	**08**	**15**	**00.2**	**+1.0**
	baz=258,SNR=7.3									
L20K	**Farewell, AK**	**51.77**	**33**	P		**P**	**08**	**15**	**00.8**	**+1.3**
	baz=268				

baz=273
SCM Sheep Creek Mo 54.85 34 P P 08 15 22.4 +0.6
baz=274
HDA Harding Lake 54.87 31 P P
HDA IAmb IAmb 08 15 22.5
comp=Z,11nm,1.1s
HDA Harding Lake 54.87 31 P P 08 15 21.4 -0.4
baz=272,SNR=6.4
IL31 54.88 30 P P 08 15 21.5 -0.2
ILAR Eielson Array 54.88 30 P P 08 15 21.6 -0.3
comp=Z,3.0nm,0.7s,baz=279,slow=5.6,SNR=36
comp=Z,3.0nm,0.7s
CHGR Chuyangaron 55.04 297 P P 08 15 23.2 -0.3
J25K Salcha River, 55.54 31 P P 08 15 25.7 -0.8
J25K Salcha River, 55.54 31 P P 08 15 25.8 -0.8
baz=274
PAX Paxson 55.62 33 P P 08 15 27.3 0.0
baz=275
BMAR Burnt Mountain 55.70 27 P P 08 15 27.9 +0.3
HARP HAARP 55.82 33 P P 08 15 29.3 +0.8
baz=276
RIDG Independent Ri 55.84 32 P P 08 15 28.9 +0.2
baz=275
AS31 Alice Springs 55.97 184 P P 08 15 28.2 -1.8
DOT Dot Lake 56.20 32 P P 08 15 31.1 -0.1
DOT IAmb IAmb 08 15 32.2
comp=Z,8.2nm,0.9s
SCRK Sand Creek 56.20 31 P P 08 15 31.6 +0.3
SCRK IAmb IAmb 08 15 32.4
comp=Z,11nm,1.0s
SCRK Sand Creek 56.20 31 P P 08 15 31.4 +0.1
baz=275,SNR=9.8
BMRM Bremner River 56.24 35 P P 08 15 32.2 +0.7
baz=277
J26L Joseph Creek 56.33 31 P P 08 15 32.4 +0.2
J26L IAmb IAmb 08 15 33.3
comp=Z,8.0nm,0.8s
J26L Joseph Creek 56.33 31 P P 08 15 32.0 -0.1
baz=275,SNR=10
KBL Kabul 56.37 292 P P 08 15 32.2 -0.9
KBL IAmb IAmb 08 15 33.5
comp=Z,10nm,0.7s
MENT Mentasta 56.42 33 P P 08 15 32.7 -0.1
MENT IAmb IAmb 08 15 34.7
comp=Z,16nm,1.1s
L26K Log Cabin Wild 56.58 32 P P 08 15 33.1 -0.7
L26K IAmb IAmb 08 15 36.0
comp=Z,9.7nm,1.1s
L26K Log Cabin Wild 56.58 32 P P 08 15 34.7 +0.8
baz=277,SNR=5.2
M26K Nabesna, AK 56.82 33 P P 08 15 36.4 +0.8
baz=277
MCARA McCarthy VSAT 56.95 34 P P 08 15 36.6 +0.2
MCARA IAmb IAmb 08 15 38.4
comp=Z,16nm,1.1s
MCARA McCarthy VSAT 56.95 34 P P 08 15 37.1 +0.8
baz=278
K27K Chicken 57.03 31 P P 08 15 37.5 +0.6
K27K Chicken 57.03 31 P P 08 15 37.7 +0.8
baz=277
L27K Beaver Creek, 57.27 32 P P 08 15 38.6 -0.1
L27K Beaver Creek, 57.27 32 P P 08 15 39.5 +0.9
baz=278
BCAR Beaver Creek A 57.28 32 P P 08 15 38.7 -0.1
M27K Edge Creek, AK 57.34 33 P P 08 15 40.2 +0.9
baz=278
ARU Arti 57.87 320 P P 08 15 42.5 -0.3
comp=Z,11nm,0.4s,baz=84,slow=4.0,SNR=15
comp=Z,11nm,0.4s
ARU Arti 57.87 320 P P 08 15 42.7 -0.2
DAWY Dawson 58.19 31 P P 08 15 45.3 +0.3
baz=279
I29M Ogilvie Camp, 58.44 29 P P 08 15 47.0 +0.4
I29M Ogilvie Camp, 58.44 29 P P 08 15 47.3 +0.7
baz=280
PALK Pallekele 58.54 258 P P 08 15 48.5 +0.3
comp=Z,11nm,0.7s,baz=160,slow=8.8,SNR=5.9
comp=Z,11nm,0.7s
ABKAR Akbulak array 58.68 311 P P 08 15 48.4 -0.1
EPYK Eagle Plains 58.90 28 P P 08 15 50.6 +0.8
EPYK Eagle Plains 58.90 28 P P 08 15 51.0 +1.2
baz=280,SNR=24
AKTO Aktyubinsk 59.58 313 P P 08 15 54.6 0.0
comp=Z,10nm,0.6s,baz=75,slow=7.9,SNR=22
comp=Z,10nm,0.6s
M30M Minto, Yukon 59.63 32 P P 08 15 55.7 +0.9
baz=282
HYT Haines Junctio 59.68 34 P P 08 15 56.3 +1.0
baz=283
INK Inuvik 59.74 25 P P 08 15 55.6 +0.3
INK Inuvik 59.74 25 P P 08 15 55.3 -0.1
baz=282
N31M Braeburn, Yuko 60.34 33 P P 08 16 00.7 +1.1
baz=284
PLBC Pleasant Camp 60.56 36 P P 08 16 02.2 +1.1
baz=284
M31M Drury Creek, Y 60.80 32 P P 08 16 03.5 +0.8
baz=285
WHY Whitehorse 60.97 34 P P 08 16 04.9 +1.0
baz=285
A36M Sachs Harbour 61.54 21 P P 08 16 08.8 +1.5
A36M Sachs Harbour 61.54 21 P P 08 16 08.2 +0.9
baz=287
P32M Atlin 61.83 35 P P 08 16 09.1 -0.4
baz=286
P33M Teslin, Yukon 62.08 34 P P 08 16 12.0 +0.8
baz=287
MMPY Sheldon Lake, 62.09 32 P P 08 16 12.2 +1.0
baz=287
C36M Paulatuk 62.76 23 P P 08 16 15.8 +0.5
C36M Paulatuk 62.76 23 P P 08 16 15.6 +0.3
baz=290
FORT Forrest 63.61 189 P P 08 16 22.0 +0.6
TGTN Hyland Airport 63.77 32 P P 08 16 23.2 +1.0
baz=290
DLBC Dease Lake 64.00 36 P P 08 16 25.3 +1.5
DLBC Dease Lake 64.00 36 P P 08 16 25.1 +1.3
baz=290
STKA Stephens Creek 64.12 176 P P 08 16 25.0 +0.3
comp=Z,2.1nm,0.8s,baz=3.2,slow=11,SNR=4.6
comp=Z,2.1nm,0.8s
STKA Stephens Creek 64.12 176 P P 08 16 25.1 +0.4
T35M Bob Quinn 64.40 37 P P 08 16 27.9 +1.6
baz=290
BBOO Buckleboo 64.98 182 P P 08 16 30.7 +0.6
EUNU Eureka 65.08 8 P P 08 16 30.6 +0.3
EUNU IAmb IAmb 08 16 31.4
comp=Z,3.8nm,0.7s
ARCES ARCESS Array B 67.20 339 P P 08 16 44.0 +0.2
comp=Z,0.9nm,0.5s,baz=65,slow=7.1,SNR=1.3
comp=Z,0.9nm,0.5s
RES Resolute Bay 67.69 13 P P 08 16 47.2 +0.5
RES IAmb IAmb 08 17 13.8
comp=Z,5.4nm,1.1s
NWAO Narrogin (SRO) 67.92 199 P P 08 16 47.1 -1.5
YKA Yellowknife Ar 69.19 28 P P 08 16 56.1 +0.1
comp=Z,2.6nm,0.6s,baz=303,slow=6.1,SNR=23
comp=Z,2.6nm,0.6s
CBB Campbell River 69.86 43 P P 08 16 58.8 -1.6
FINES FINESS Array B 71.44 332 P P 08 17 09.5 -0.1
comp=Z,1.1nm,0.4s,baz=68,slow=5.8,SNR=11
comp=Z,1.1nm,0.4s
FINES FINESS Array B 71.44 332 P P 08 17 09.0 -0.6
PGC Sidney 71.61 44 P P 08 17 11.7 +0.9
PGC IAmb IAmb 08 17 12.9
comp=Z,6.8nm,0.7s
KBZ Khabaz 71.62 310 P P 08 17 11.3 +0.3
comp=Z,5.1nm,0.8s,baz=92,slow=5.6,SNR=7.5
comp=Z,5.1nm,0.8s
B04A Port Angeles 71.86 44 P P 08 17 14.1 +1.8
NLWA Neilton Lookou 71.96 45 P P 08 17 15.0 +1.9
LTY Liberty 73.92 44 P P 08 17 25.1 +0.6
H04D Lebanon 74.05 47 P P 08 17 26.8 +1.7
baz=300
GEVA Gevas 74.07 305 P P 08 17 26.7 +1.1
GEVA IAmb IAmb 08 17 27.7
comp=Z,9.1nm,1.3s
I03D Drain, OR 74.08 48 P P 08 17 26.6 +1.2
baz=300
B08A Colville Reser 74.13 43 P P 08 17 25.1 -0.5
H04A Detroit Lake 74.31 47 P P 08 17 27.8 +1.1
H04A IAmb IAmb 08 17 28.6
comp=Z,5.4nm,0.7s
HOOD Mount Hood Mea 74.31 46 P P 08 17 25.4 -1.5
K02D Willamette Mer 74.37 49 P P 08 17 28.5 +1.3
baz=300
G05D Wamic, OR 74.56 46 P P 08 17 29.4 +1.3
baz=300
I04A Tendick Farm, 74.62 48 P P 08 17 29.3 +0.8
baz=300
NACGM Naroch 74.87 326 i e P P 08 17 29.9 +0.3
baz=55
I05D Terrebonne, OR 75.00 47 P P 08 17 31.9 +1.1
baz=301
D08A Wollman Farm, 75.05 44 P P 08 17 30.9 +0.1
D08A IAmb IAmb 08 17 32.5
comp=Z,5.1nm,0.8s
F07A Phinny Hill Vi 75.06 45 P P 08 17 31.9 +1.0
J04D Umpqua Nationa 75.08 48 P P 08 17 32.2 +0.8
baz=300
SUMG Summit 75.18 359 i P P 08 17 32.0 +0.4
NEW Newport 75.44 42 P P 08 17 32.8 -0.2
NEW Newport 75.44 42 P P 08 17 33.9 +0.9
baz=302
L04D Klamath Falls 75.48 49 P P 08 17 34.3 +0.8
baz=301
PINE Pine Mountain 75.53 47 P P 08 17 34.1 +0.2
J05D Fort Rock, OR 75.61 48 P P 08 17 35.3 +1.0
baz=301
K04D Chiloquin, OR 75.62 49 P P 08 17 34.2 -0.1
baz=301
AKASG Malin Array Be 76.06 322 P P 08 17 36.1 -0.3
comp=Z,0.7nm,0.3s,baz=50,slow=5.9,SNR=10
comp=Z,0.7nm,0.3s
K05A Summer Lake 76.11 48 P P 08 17 38.8 +1.6
K05A IAmb IAmb 08 17 40.6
comp=Z,11nm,1.2s
F10A Beach Ranch, E 76.61 44 P P 08 17 40.8 +1.0
MOD Modoc Plateau 76.92 49 P P 08 17 40.8 -0.8
MOD IAmb IAmb 08 17 43.4
comp=Z,3.9nm,0.8s
BMO Blue Mountains 77.18 45 P P 08 17 42.4 -0.5
BMO IAmb IAmb 08 17 44.3
comp=Z,3.2nm,0.8s
NOA NORSAR Array B 77.19 336 P P 08 17 42.5 -0.1
comp=Z,0.5nm,0.7s,baz=43,slow=5.5,SNR=3.5
comp=Z,0.5nm,0.7s
J08A Circle Bar Ran 77.28 47 P P 08 17 45.2 +1.7
WVOR Wild Horse Val 77.68 47 P P 08 17 46.9 +1.2
WVOR IAmb IAmb 08 17 47.2
comp=Z,3.5nm,0.6s
BEKR Beckworth 77.96 50 P P 08 17 48.0 +0.6
MSO Missoula 78.03 42 P P 08 17 47.7 +0.2
baz=305
PAHR Pah Rah Range 78.68 50 P P 08 17 51.8 +0.5
PAHR IAmb IAmb 08 17 52.8
comp=Z,3.3nm,0.8s
VCNR Virginia City 78.73 51 P P 08 17 51.3 -0.3
VCNR IAmb IAmb 08 17 53.4
comp=Z,3.6nm,0.8s
MFID Camas Ranch 78.86 45 P P 08 17 52.8 +0.7
MFID IAmb IAmb 08 17 54.0
comp=Z,4.2nm,0.8s
HRY Holter Researc 79.27 41 P P 08 17 55.2 +0.9
LRM Limekiln Ridge 79.45 42 P P 08 17 55.2 -0.3
RAYN Ar Rayn 79.61 291 P P 08 17 56.5 +0.1
BRTR Keskin Array B 79.61 311 P P 08 17 57.0 +0.7
comp=Z,2.4nm,0.7s,baz=114,slow=4.0,SNR=10
comp=Z,2.4nm,0.7s
EGMT Eagleton 79.62 39 P P 08 17 56.0 0.0
EGMT IAmb IAmb 08 17 57.5
comp=Z,5.5nm,0.8s
EGMT Eagleton 79.62 39 P P 08 17 56.4 +0.3
baz=307
HLID Hailey 79.62 45 P P 08 17 57.3 +1.0
HLID Hailey 79.62 45 P P 08 17 57.0 +0.7
baz=305
BMN Battle Mountai 79.67 49 P P 08 17 57.4 +0.8
BMN IAmb IAmb 08 17 58.7
comp=Z,4.1nm,0.9s
RYN Ryan 79.83 51 P P 08 17 58.3 +0.8
KVN Kaiserville 79.87 50 P P 08 17 58.5 +0.8
KVN IAmb IAmb 08 17 59.4
comp=Z,4.7nm,0.7s
BUR08 Bucovina Ar. S 79.99 321 P P 08 17 58.4 +0.3
BOZ Bozeman (W) 80.05 42 P P 08 17 58.9 +0.4
BOZ IAmb IAmb 08 17 59.7
comp=Z,2.6nm,0.8s
BOZ Bozeman (W) 80.05 42 P P 08 17 59.0 +0.6
baz=306
NVAR Mina Array Bea 80.08 51 P P 08 17 60.0 +1.1
comp=Z,1.8nm,0.7s,baz=289,slow=5.4,SNR=13
comp=Z,1.8nm,0.7s
ELK Elko 80.74 47 P P 08 18 02.2 -0.1
TPH Tonopah 80.99 51 P P 08 18 04.2 +0.6
VES Vestal, Richgr 80.99 53 P P 08 18 04.0 +0.6
baz=304
GCMT Greycliff 81.03 41 P P 08 18 03.2 -0.5
LCH Last Change Ra 81.18 51 P P 08 18 04.0 -0.6
LCH IAmb IAmb 08 18 06.1
comp=Z,3.9nm,1.1s
CWC Cottonwood Cre 81.34 52 P P 08 18 06.2 +0.8
baz=304
H17A Grant Village 81.37 42 P P 08 18 07.8 +2.2
baz=307
FLWY Flagg Ranch 81.49 43 P P 08 18 05.4 -0.7
FLWY IAmb IAmb 08 18 09.1
comp=Z,7.3nm,1.1s
GRAC Grapevine Rang 81.50 52 P P 08 18 07.0 +0.8
baz=304
ISA Isabella, Lake 81.50 53 P P 08 18 06.0 -0.2
baz=304
ARVC Arvin 81.56 54 P P 08 18 07.1 +0.7
baz=304
HVU Hansel Valley 81.65 45 P P 08 18 07.7 +0.7
HVU IAmb IAmb 08 18 09.0
comp=Z,4.2nm,0.7s
RLMT Red Lodge 81.66 41 P P 08 18 07.8 +0.8
baz=308
SNOW Snow King Moun 81.83 43 P P 08 18 08.8 +0.8
SNOW IAmb IAmb 08 18 10.3
comp=Z,2.5nm,0.8s
R11A Troy Canyon, C 81.89 50 P P 08 18 08.5 +0.5
R11A IAmb IAmb 08 18 10.0
comp=Z,9.4nm,1.5s
R11A Troy Canyon, C 81.89 50 P P 08 18 08.6 +0.3
baz=305
MPMC Manual Prospec 81.95 52 P P 08 18 08.7 +0.1
baz=304
FURC Furnace Creek, 82.13 52 P P 08 18 10.4 +1.2
baz=305
LRMC Laurel Mtn Rad 82.14 53 P P 08 18 10.2 +0.6
baz=304
TPNV Topopah Spring 82.26 51 P P 08 18 10.8 +0.6
TPNV IAmb IAmb 08 18 11.4
comp=Z,4.1nm,0.7s
TPNV Topopah Spring 82.26 51 P P 08 18 10.8 +0.6
baz=305
EDW2 Edwards Air Fo 82.27 54 P P 08 18 10.5 +0.3
baz=304
LAO LASA Array 82.33 39 P P 08 18 10.1 -0.2
LAO IAmb IAmb 08 18 12.4
comp=Z,6.0nm,1.0s
LAO LASA Array 82.33 39 P P 08 18 10.0 -0.2
baz=310
GWY Greenwater Val 82.42 52 P P 08 18 11.3 +0.3
GWY IAmb IAmb 08 18 12.4
comp=Z,5.8nm,1.0s
HWUT Hardware Ranch 82.47 45 P P 08 18 11.9 +0.7
HWUT IAmb IAmb 08 18 13.4
comp=Z,5.5nm,1.1s
DUG Dugway, Tooele 82.56 47 P P 08 18 12.3 +0.7
DUG IAmb IAmb 08 18 13.7
comp=Z,4.6nm,0.8s
DUG Dugway, Tooele 82.56 47 P P 08 18 12.7 +1.1
baz=306
PRN Pahroc Range 82.78 50 P P 08 18 13.3 +0.5
PRN IAmb IAmb 08 18 14.8
comp=Z,3.5nm,0.8s
GSC Goldstone, Bar 82.83 53 P P 08 18 13.6 +0.5
baz=305
SHOC Shoshone, Teco 82.85 52 P P 08 18 12.6 -0.4
baz=305
PSUT Pine Spring 82.89 49 P P 08 18 13.2 -0.2
PSUT IAmb IAmb 08 18 14.7
comp=Z,2.4nm,0.6s
BW06 Boulder Array 82.95 43 P P 08 18 13.0 -0.7
BW06 Boulder Array 82.95 43 P P 08 18 14.3 +0.6
baz=308
PD31 Pinedale Array 82.95 43 P P 08 18 13.5 -0.2
PDAR Pinedale Array 82.95 43 P P 08 18 14.2 +0.5
comp=Z,1.3nm,0.6s,baz=287,slow=1.7,SNR=15
comp=Z,1.3nm,0.6s
PDAR Pinedale Array 82.95 43 P P 08 18 12.0 -1.7
SCI2 San Clemente I 82.95 55 P P 08 18 13.0 -0.6
baz=304
JLU Jordanelle 83.15 46 P P 08 18 14.0 -0.8
NLU North Lily Min 83.16 47 P P 08 18 14.4 -0.4
NLU IAmb IAmb 08 18 16.7
comp=Z,3.7nm,0.9s
TUQ Turquoise Moun 83.35 52 P P 08 18 16.0 +0.2
baz=305
BBRC Big Bear Solar 83.35 54 P P 08 18 16.2 +0.3
baz=305
MPU Maple Canyon 83.39 46 P P 08 18 16.6 +0.6
MPU IAmb IAmb 08 18 17.9
comp=Z,4.6nm,0.7s
HEC Hector,Ludlow 83.42 53 P P 08 18 16.5 +0.4
baz=305
MURC Murrieta 83.54 54 P P 08 18 16.5 -0.1
baz=305
TCRU Three Creeks R 83.73 48 P P 08 18 17.1 -0.7
TCRU IAmb IAmb 08 18 20.9
comp=Z,3.0nm,0.7s
GMRC Granite Mounta 83.90 53 P P 08 18 19.1 +0.6
baz=305
MSU Marysvale 83.96 48 P P 08 18 18.5 -0.4
PFO Pinyon Flats O 84.03 54 P P 08 18 18.6 -0.6
PFO Pinyon Flats O 84.03 54 P P 08 18 19.4 +0.2
baz=305
TPFO Pinon Flats 84.04 54 P P 08 18 19.4 +0.1
baz=305
TMUT Trail Mountain 84.09 47 P P 08 18 18.7 -0.9
BELC Belle Mtn. Jos 84.12 53 P P 08 18 19.8 +0.1
baz=305
LCMT Little Creek M 84.18 50 P P 08 18 20.5 +0.6
LCMT IAmb IAmb 08 18 21.8
comp=Z,4.3nm,0.9s
P17A Butcher Ranch, 84.27 46 P P 08 18 21.1 +0.8
Q16A Castle Valley 84.34 47 P P 08 18 19.7 -1.0
Q16A IAmb IAmb 08 18 23.7
comp=Z,3.8nm,0.8s
MONP2 Monument Peak 84.47 54 P P 08 18 21.7 +0.2
baz=305
P18A Preston Nutter 84.48 46 P P 08 18 20.9 -0.6
IRM Iron Mountain 84.61 53 P P 08 18 22.4 +0.5
baz=306
SRU San Rafael Swe 84.62 47 P P 08 18 23.1 +0.9
BC3 Big Chuckawall 84.69 53 P P 08 18 22.6 +0.1
baz=306
GERES GERESS Array B 84.95 327 P P 08 18 24.5 +1.1
comp=Z,0.7nm,0.6s,baz=40,slow=4.4,SNR=4.9
comp=Z,0.7nm,0.6s
U15A North Rim 85.14 50 P P 08 18 26.0 +1.1
U15A IAmb IAmb 08 18 27.3
comp=Z,2.3nm,0.7s
PDMCI Parker Dam,Lak 85.20 52 P P 08 18 25.4 +0.6
baz=306
O20A White River Ci 85.37 45 P P 08 18 26.1 +0.3
baz=309
GLA Glamis 85.47 54 P P 08 18 26.9 +0.7
baz=306
PV23 Carpenter Ridg 85.96 46 P P 08 18 30.0 +1.2
PV23 IAmb IAmb 08 18 30.7
comp=Z,5.2nm,0.9s
N23A Red Feather La 86.22 43 P P 08 18 30.0 0.0
baz=310
WUAZ Wupatki 86.29 50 P P 08 18 30.7 +0.4
baz=308
AGMN Agassiz Nation 86.33 33 P P 08 18 30.0 0.0
baz=317
ISCO Idaho Springs 87.13 44 P P 08 18 34.2 -0.2
baz=311
S22A 4UR Ranch, Cre 87.74 46 P P 08 18 38.0 +0.7
baz=310
F33A 5 Mile Ranch, 87.92 35 P P 08 18 37.9 +0.3
EYMN Ely 88.53 31 P P 08 18 40.3 -0.1
baz=320
SDCO Great Sand Dun 88.54 45 P P 08 18 40.8 -0.2
baz=311
TUC Tucson 88.64 52 P P 08 18 40.9 -0.4
baz=308
ECSD EROS Data Cent 89.29 36 P P 08 18 44.2 +0.1
baz=316
T25A Trinidad 89.59 45 P P 08 18 46.1 +0.2
baz=312
ANMO Albuquerque 89.77 48 P P 08 18 47.2 +0.4
baz=310
SPMN Marine on St. 90.02 33 P P 08 18 47.5 +0.1
baz=319
MNTX Cornudas Mount 92.57 50 P P 08 18 59.5 0.0
baz=311
AMTX Amarillo 92.74 45 P P 08 19 00.7 +0.4
baz=313
JFWS Jewell Farm 92.97 33 P P 08 19 00.6 -0.4
baz=321
TX31 Lajitas Ar. Si 95.23 50 P P 08 19 11.5 -0.3
TX32 Lajitas Array 95.23 50 P P 08 19 11.8 0.0
TX32 IAmb IAmb 08 19 13.5
comp=Z,1.9nm,0.7s
TXAR Lajitas Array 95.23 50 P P 08 19 12.6 +0.8
comp=Z,1.2nm,0.6s,baz=300,slow=2.5,SNR=24
comp=Z,1.2nm,0.6s
CCM Cathedral Cave 96.23 37 P P 08 19 15.3 -0.7
baz=320
U40A Yellville 96.68 39 P P 08 19 17.5 -0.6
baz=319
O53A New Philadelph 99.09 29 P Pdif 08 19 27.9 -0.9
baz=327
WVT Waverly 99.44 36 P Pdif 08 19 29.4 -1.0
baz=320
BELA Belgrano 2 134.40 182 PKPdf 08 25 02.4 -0.1
LPAZ La Paz 151.47 62 PKPbc PKiKP 08 25 41.4 -0.1
comp=Z,0.7nm,0.4s,baz=30,slow=1.6,SNR=5.8

SFS ***20*** *08:20:21.0, 35°.43N×3°.77W, h34km, ML2.5, ALBORAN SUR*
MDD ***20*** *08:20:21.0±0.8, 35°.44N×3°.78W, h34km±3km, mb_Lg2.5/3, Error ellipse: s-maj=8.5km s-min=4.7km az=1.0*
CNRM ***20*** *08:20:22.9, 35°.33N×3°.72W, h18km, ml1.7*

ISC 20 08:20:20.2±1.3**, 35°.50N**±0°.04×**3°.76W**±0°.03**, h21**km±3km, **n14**, σ1s**11**/24, **Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALE	**Palemas**	**0.32**	**207**	P	**Pb**	**08 20 27.2**	**0.0**
PALE				S	**Sb**	**08 20 31.8**	**-0.2**
PVLZ	**Peæn de**	**0.55**	**233**	P	**Pb**	**08 20 31.3**	**+0.1**
PVLZ				S	**Sb**	**08 20 38.1**	**-0.6**
GOG	**Mont Gurugu**	**0.69**	**114**	P	**Pn**	**08 20 34.7**	**-0.1**
GOG				S	**Sn**	**08 20 43.7**	**-1.1**
WMELI	**Melilla**	**0.69**	**105**	S	**Sb**	**08 20 43.3**	**+0.7**
EMEL	**Melilla**	**0.69**	**107**	Pg	**Pb**	**08 20 34.0**	**+0.5**
EMEL				Sg	**Sb**	**08 20 43.2**	**+0.6**
EMEL				*i* Vmb_Lg		08 20 46.3	
EALB	**Alboran**	**0.73**	**53**	Pg	**Pn**	**08 20 35.4**	**0.0**
EALB				Sg	**Sn**	**08 20 45.4**	**-0.5**
EALB				*i* Vmb_Lg		08 20 47.1	
CHAS	**Isla Isabel II**	**1.13**	**106**	P	**Pn**	**08 20 40.7**	**-0.1**
CHAS				S	**Sb**	**08 20 54.2**	**-1.2**
TAF	**Taforalt**	**1.30**	**122**	P	**Pb**	**08 20 46.0**	**+2.0**
EMIJ	**Mijas**	**1.34**	**323**	Sg	**Sb**	**08 21 02.4**	**+1.0**
CHEFC	**Chefchaouen**	**1.35**	**253**	P	**Pb**	**08 20 45.4**	**+0.5**
ELGU	**Los Guajares,**	**1.37**	**4**	Pg	**Pn**	**08 20 43.7**	**-0.5**
ELGU				Sg	**Sn**	**08 21 00.6**	**-1.1**
ELGU				*i* Vmb_Lg		08 21 12.1	
JBK	**JBK**	**1.52**	**140**	P	**Pn**	**08 20 46.1**	**-0.3**
JBK				S	**Sn**	**08 21 03.8**	**-1.9**
MD31	**MD31**	**2.76**	**198**	P	**Pn**	**08 21 05.6**	**+2.3**
MD31				S	**Sn**	**08 21 36.7**	**+0.7**
MDT	**Midelt**	**2.77**	**195**	P	**Pb**	**08 21 07.3**	**-1.9**
MDT				S	**Sn**	**08 21 35.7**	**-0.7**

MDD ***20*** *08:24:34.7±0.8, 35°.42N×3°.61W, h34km±2km, mb_Lg1.7/3, Error ellipse: s-maj=8.6km s-min=4.9km az=174.0*
CNRM ***20*** *08:24:35.1, 35°.47N×3°.57W, h4km, ml1.4*
SFS ***20*** *08:24:36.0, 35°.41N×3°.61W, h34km, ML2.5, ALBORAN SUR*

ISC 20 08:24:34.3±1.3**, 35°.44N**±0°.06×**3°.64W**±0°.04**, h34**km±3km, **n10**, σ0s**85**/16, **Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALE	**Palemas**	**0.33**	**228**	P	**Pb**	**08 24 42.3**	**-0.2**
PALE				S	**Sb**	**08 24 48.4**	**+0.3**

GOG	**Mont Gurugu**	**0.57**	**112**	P	**Pn**	**08 24 46.1 +0.1**
GOG				S	**Sb**	**08 24 52.7 -1.5**
EMEL	**Melilla**	**0.58**	**104**	Pg	**Pn**	**08 24 45.0 -0.9**
EMEL				Sg	**Sb**	**08 24 53.1 -1.1**
PVLZ	**Peæn de**	**0.60**	**244**	P	**Pb**	**08 24 46.7 +0.2**
PVLZ				S	**Sn**	**08 24 55.2 +0.3**
EALB	**Alboran**	**0.70**	**45**	Pg	**Pn**	**08 24 47.6 -0.1**
EALB				Sg	**Sb**	**08 24 57.5 -0.2**
EALB				*i* Vmb_Lg		08 24 58.4
CHAS	**Isla Isabel II**	**1.02**	**104**	P	**Pb**	**08 24 54.6 +1.1**
CHAS				S	**Sn**	**08 25 04.9 -0.5**
TAF	**Taforalt**	**1.18**	**121**	P	**Pb**	**08 24 57.1 +0.8**
JBK	**JBK**	**1.41**	**141**	P	**Pb**	**08 25 01.5 +1.3**
ELGU	**Los Guajares,**	**1.43**	**0**	Sg	**Sn**	**08 25 15.1 -0.3**
ELGU				*i* Vmb_Lg		08 25 16.9
EMIJ	**Mijas**	**1.45**	**321**	Sg	**Sn**	**08 25 16.3 +0.4**
EMIJ				*i* Vmb_Lg		08 25 20.7

MAN 20 08:26:41.2, 9″.48N×123″.73E, h32km, mb4.0, ML2.8, MS2.4, Negros

IDC ***20*** *08:28:09.8±3.0, 14″.60N×144″.26E, h0km, mb3.9/6, mbtmp3.9/6, MS2.8/4, Error ellipse: s-maj=93.7km s-min=27.5km az=82.0*
NEIC ***20*** *08:28:10.3±1.6, 14″.68N±0″.05×144″.66E±0″.06, h10km±1km, mb4.5/8, Error ellipse: s-maj=10.6km s-min=7.7km az=247.0*
ISC 20 08:28:12.8±1.6, 14″.6N±0″.2×144″.5E±0″.3, h27km, n22, σ0s72/14, mb4.2/10, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.07**	**159**		**Pn**	**08 28 31.6**	**-0.4**
JOW	**Kunigami**	**19.41**	**311**	LR	LR	08 38 30.3	
	comp=Z,68nm,19.5s,baz=135,slow=32						
DAV	**Davao City (W)**	**20.00**	**250**	LR	LR	08 42 02.1	
	comp=Z,21nm,18.5s,baz=335,slow=42						
H11S3	**WAKE ISLAND Hy**	**21.64**	**77**	T	T	08 55 59.5	
	baz=262,slow=75,SNR=21						
H11S1	**WAKE ISLAND Hy**	**21.65**	**77**	T	T	08 56 00.6	
	baz=262,slow=75,SNR=9.6						
H11S2	**WAKE ISLAND Hy**	**21.65**	**77**	T	T	08 55 56.6	
	baz=262,slow=75,SNR=13						
MJAR	**Matsushiro Arr**	**22.56**	**347**	LR	LR	08 41 13.5	
	comp=Z,33nm,18.2s,baz=176,slow=35						
NACB	**Ninganchiao**	**23.56**	**297**	P	**P**	**08 33 20.4**	**-0.8**
YHNB	**Yeheng**	**23.92**	**298**	P	**P**	**08 33 25.6**	**+0.8**
YHNB				IAmb	IAmb	08 33 54.1	
	comp=Z,20nm,1.2s						
ENH	**Enshi**	**35.73**	**302**	P	**P**	**08 35 07.8**	**-1.6**
WRAB	**Tennant Creek**	**35.73**	**196**	P	**P**	**08 35 09.6**	**+0.2**
WRAB				IAmb	IAmb	08 35 27.5	
	comp=Z,9.7nm,1.4s						
WB2	**Warramunga Arr**	**35.74**	**196**	P	**P**	**08 35 09.2**	**-0.3**
WB2				IAmb	IAmb	08 35 31.9	
	comp=Z,10.0nm,1.3s						
WRA	**Warramunga Arr**	**35.74**	**196**	P	**P**	**08 35 09.7**	**+0.2**
	comp=Z,1.4nm,0.8s,baz=11,slow=9.5,SNR=9.1						
	comp=Z,1.4nm,0.8s						
WRA	**Warramunga Arr**	**35.74**	**196**	IAmb	IAmb	08 35 10.1	
	comp=Z,0.3nm,1.1s						
CMAR	**Chiang Mai Arr**	**43.74**	**282**	P	**P**	**08 36 16.9**	**+0.8**
	comp=Z,1.3nm,0.3s,baz=82,slow=6.9,SNR=4.8						
CMAR				LR	LR	08 55 32.7	
	comp=Z,5.6nm,18.2s,baz=205,slow=38						
	comp=Z,1.3nm,0.3s						
SONM	**Songino Array**	**45.69**	**324**	P	**P**	**08 36 32.3**	**+0.8**
	comp=Z,0.5nm,0.4s,baz=123,slow=10,SNR=1.7						
	comp=Z,0.5nm,0.4s						
STKA	**Stephens Creek**	**46.29**	**183**	P	**P**	**08 36 36.7**	**+0.5**
MKAR	**Makanchi Array**	**60.51**	**316**	P	**P**	**08 38 20.7**	**+0.2**
	comp=Z,0.6nm,0.8s,baz=101,slow=7.8,SNR=4.4						
	comp=Z,0.6nm,0.8s						
ZALV	**Zalesovo Beam**	**60.59**	**324**	P	**P**	**08 38 20.8**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=98,slow=6.0,SNR=2.1						
	comp=Z,0.8nm,0.5s						
KURK	**Kurchatov**	**63.57**	**320**	P	**P**	**08 38 41.0**	**0.0**
KURK	**Kurchatov**	**63.57**	**320**	IAmb	IAmb	08 38 42.0	
	comp=Z,3.9nm,1.2s						
KURBB	**Kurchatov Arra**	**63.61**	**320**	P	**P**	**08 38 41.0**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=106,slow=7.2,SNR=7.2						
	comp=Z,0.8nm,0.6s						

IDC ***20*** *08:34:21.7±1.1, 23″.95S×66″.58W, h201km±9km, mb3.9/9, mbtmp4.4/16, Error ellipse: s-maj=15.7km s-min=10.8km az=17.0*
VAO ***20*** *08:34:21.8±0.3, 23″.99S×66″.77W, h224km±4km, mb4.5*
SJA ***20*** *08:34:21.3±0.8, 23″.91S×66″.63W, h200km, ML4.8, MW4.4*
NEIC ***20*** *08:34:21.7±1.8, 23″.94S±0″.06×66″.69W±0″.09, h204km±6km, mb4.5/101, Md4.6(SJA), Error ellipse: s-maj=11.4km s-min=9.0km az=83.0*
GUC ***20*** *08:34:22.9±0.7, 23″.99S×66″.82W, h217km±7km, ML4.8*
ISC 20 08:34:21.7±0.6, 23″.93S±0″.04×66″.74W±0″.04, h209km±5km, n241, σ1s19/266, mb4.4/47, 14C-1D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SLA	**San Lorenzo**	**1.37**	**125**	⇓ *i*P	**Pn**	**08 34 57.0**	**+1.7**
SLA				*i* S	**S**	**08 35 23.1**	**+1.9**
SLA	**San Lorenzo**	**1.37**	**125**	*e*P	**Pn**	**08 34 57.3**	**+2.0**
AF01	**San Pedro de A**	**1.64**	**306**		**Pn**	**08 35 00.4**	**+2.6**
AF01	**San Pedro de A**	**1.64**	**306**	⇑ *i*P	**Pn**	**08 35 00.5**	**+2.6**
AF01				IAML		08 35 42.7	
	comp=N,2μm,0.3s						
LVC	**Limon Verde**	**2.39**	**303**	P	**Pn**	**08 35 07.2**	**+1.9**
	comp=N,522nm,0.3s,baz=132,slow=6.7,SNR=4534						
LVC				S	**S**	**08 35 40.6**	**+1.7**
	comp=N,526nm,0.5s,baz=235,slow=5.6,SNR=3.9						
LVC	**Limon Verde**	**2.39**	**303**	*e*P	**Pn**	**08 35 07.2**	**+1.9**
LVC				*e*S	**S**	**08 35 40.3**	**+1.4**
LVC	**Limon Verde**	**2.39**	**303**	*e*P	**Pn**	**08 35 07.2**	**+1.9**
LVC				*e*S	**S**	**08 35 41.5**	**+2.6**
LVC	**Limon Verde**	**2.39**	**303**	*e*P	**Pn**	**08 35 07.2**	**+1.9**
LVC				*e*S	**S**	**08 35 41.0**	**+2.1**
PB15	**IPOC Station P**	**2.61**	**285**		**Pn**	**08 35 08.2**	**+0.6**
PB15	**IPOC Station P**	**2.61**	**285**	⇑ *i*P	**Pn**	**08 35 09.2**	**+1.7**
PB15				*i* S	**S**	**08 35 43.7**	**+0.8**
PB15	**IPOC Station P**	**2.61**	**285**	*e*P	**Pn**	**08 35 09.3**	**+1.7**
PB15				*e*S	**S**	**08 35 43.7**	**+0.8**
GO02	**Mina Guanaco**	**2.88**	**244**		**Pn**	**08 35 11.8**	**+1.1**
GO02	**Mina Guanaco**	**2.88**	**244**	⇑ *i*P	**Pn**	**08 35 11.8**	**+1.1**
GO02				*i* S	**S**	**08 35 49.2**	**+0.7**
GO02				IAML		08 35 50.4	
	comp=E,4μm,0.2s						
GO02	**Mina Guanaco**	**2.88**	**244**	*e*P	**Pn**	**08 35 11.6**	**+1.0**
GO02				*e*S	**S**	**08 35 49.5**	**+1.1**
PB06	**IPOC Station P**	**2.88**	**294**		**Pn**	**08 35 12.1**	**+1.6**
PB06	**IPOC Station P**	**2.88**	**294**	⇑ *i*P	**Pn**	**08 35 12.1**	**+1.6**
PB06				*i* S	**S**	**08 35 48.7**	**+0.5**
PB09	**IPOC Station P**	**3.14**	**312**		**Pn**	**08 35 15.5**	**+1.9**
PB09	**IPOC Station P**	**3.14**	**312**	⇑ *i*P	**Pn**	**08 35 15.5**	**+1.9**
PB09				*i* S	**S**	**08 35 55.2**	**+1.4**
PB09				IAML		08 35 56.6	
	comp=N,1μm,0.6s						
PB14	**IPOC Station P**	**3.42**	**258**	Pn	**Pn**	**08 35 17.2**	**+0.2**
PB14	**IPOC Station P**	**3.42**	**258**	⇑ *i*P	**Pn**	**08 35 17.6**	**+0.6**
PB14				*i* S	**S**	**08 35 59.0**	**-0.9**
PB14	**IPOC Station P**	**3.42**	**258**	*e*P	**Pn**	**08 35 17.6**	**+0.6**
PB14				*e*S	**S**	**08 35 59.9**	**0.0**
PB14				IAML		08 36 01.2	
	comp=Z,748nm,0.2s						
PB04	**IPOC Station P**	**3.52**	**296**		**Pn**	**08 35 18.9**	**+0.8**
PB04	**IPOC Station P**	**3.52**	**296**	⇑ *i*P	**Pn**	**08 35 19.1**	**+0.9**
PB04				*i* S	**S**	**08 36 01.2**	**-0.7**
AC02	**Maricunga**	**3.61**	**216**		**Pn**	**08 35 20.4**	**+0.9**
AC02	**Maricunga**	**3.61**	**216**	⇑ *i*P	**Pn**	**08 35 20.5**	**+0.9**
AC02	**Maricunga**	**3.61**	**216**	*i* P	**Pn**	**08 35 20.5**	**+0.9**
PB07	**IPOC Station P**	**3.64**	**306**		**Pn**	**08 35 19.9**	**+0.3**
PB07	**IPOC Station P**	**3.64**	**306**	⇑ *i*P	**Pn**	**08 35 20.5**	**+0.9**
PB07				*i* S	**S**	**08 36 03.7**	**-0.9**
PB07	**IPOC Station P**	**3.64**	**306**	*e*P	**Pn**	**08 35 20.5**	**+0.9**
PB07				*e*S	**S**	**08 36 04.4**	**-0.1**
PB07				IAML		08 36 08.9	
	comp=Z,2μm,0.2s						
PB01	**IPOC Station P**	**3.84**	**318**		**Pn**	**08 35 22.6**	**+0.7**
PB01	**IPOC Station P**	**3.84**	**318**	⇑ *i*P	**Pn**	**08 35 22.8**	**+0.8**
PB01				*i* S	**S**	**08 36 08.3**	**-0.4**
PB01	**IPOC Station P**	**3.84**	**318**	*e*P	**Pn**	**08 35 22.7**	**+0.8**
PB01				*e*S	**S**	**08 36 08.3**	**-0.4**
PB01				IAML		08 36 15.2	
	comp=Z,981nm,0.2s						
PB02	**IPOC Station P**	**3.91**	**311**		**Pn**	**08 35 23.3**	**+0.6**
PB02	**IPOC Station P**	**3.91**	**311**	⇑ *i*P	**Pn**	**08 35 23.3**	**+0.6**
PB02				*i* S	**S**	**08 36 08.6**	**-1.7**
PB02	**IPOC Station P**	**3.91**	**311**	*e*P	**Pn**	**08 35 23.5**	**+0.8**
PB02				*e*S	**S**	**08 36 09.1**	**-1.2**
PB02				IAML		08 36 16.5	
	comp=Z,3μm,0.4s						
AC01	**Pan de Azucar**	**4.14**	**237**		**Pn**	**08 35 25.0**	**-0.5**
AC01	**Pan de Azucar**	**4.14**	**237**	⇑ *i*P	**Pn**	**08 35 25.0**	**-0.5**
AC01				*i* S	**S**	**08 36 12.8**	**-2.5**
AC01	**Pan de Azucar**	**4.14**	**237**	*e*P	**Pn**	**08 35 24.9**	**-0.5**
PB08	**IPOC Station P**	**4.38**	**329**	Pn	**Pn**	**08 35 30.4**	**+1.4**
PB08	**IPOC Station P**	**4.38**	**329**	*e*P	**Pn**	**08 35 30.5**	**+1.5**
PB08				*i* S	**S**	**08 36 22.1**	**+0.5**
PATCX	**Punta Patache**	**4.42**	**314**		**Pn**	**08 35 29.0**	**-0.1**
PATCX	**Punta Patache**	**4.42**	**314**	*e*P	**Pn**	**08 35 29.6**	**+0.4**
PATCX				IAML		08 36 26.2	
	comp=Z,454nm,0.5s						
TA01	**Diego Aracena**	**4.62**	**316**		**Pn**	**08 35 31.9**	**+0.4**
TA01	**Diego Aracena**	**4.62**	**316**	*e*P	**Pn**	**08 35 32.0**	**+0.4**
TA01				IAML		08 36 42.8	
	comp=Z,258nm,0.4s						
TA02	**Huaiquique**	**4.81**	**318**	Pn	**Pn**	**08 35 34.1**	**+0.1**
GO01	**Chusmiza**	**4.81**	**331**		**Pn**	**08 35 34.1**	**-0.3**
GO01	**Chusmiza**	**4.81**	**331**	*e*P	**Pn**	**08 35 35.7**	**+1.2**
GO01				*i* S	**S**	**08 36 31.0**	**-0.4**
GO03	**Copiap**	**4.82**	**220**	Pn	**Pn**	**08 35 33.1**	**-1.0**
GO03	**Copiap**	**4.82**	**220**	⇑ *i*P	**Pn**	**08 35 33.1**	**-1.0**
GO03				*i* S	**S**	**08 36 28.1**	**-2.8**
PB11	**IPOC Station P**	**4.95**	**326**	Pn	**Pn**	**08 35 35.8**	**-0.1**
PB11	**IPOC Station P**	**4.95**	**326**	⇑ *i*P	**Pn**	**08 35 35.8**	**-0.1**
PB11				*i* S	**S**	**08 36 32.0**	**-2.2**
AC04	**Llanos de Chal**	**5.77**	**222**	Pn	**Pn**	**08 35 44.7**	**-1.4**
AC04	**Llanos de Chal**	**5.77**	**222**	*e*P	**Pn**	**08 35 44.7**	**-1.4**
PB16	**IPOC Station P**	**6.14**	**335**		**Pn**	**08 35 52.2**	**+0.7**
LCO	**Las Campanas**	**6.18**	**214**	Pn	**Pn**	**08 35 50.2**	**-1.4**
PB12	**IPOC Station P**	**6.26**	**327**	Pn	**Pn**	**08 35 51.7**	**-0.8**
CO01	**Juntas del Tor**	**6.73**	**206**		**Pn**	**08 35 58.9**	**+0.2**
PB18	**Visviri**	**6.81**	**337**		**Pn**	**08 35 59.2**	**-0.9**
CO05	**La Serena**	**7.19**	**213**	Pn	**Pn**	**08 36 02.2**	**-2.2**
GO04	**Tololo Observa**	**7.20**	**209**		**Pn**	**08 36 02.8**	**-1.9**
LPAZ	**La Paz**	**7.71**	**350**	P	**Pn**	**08 36 13.1**	**+1.2**
	comp=Z,10.0nm,0.4s,baz=152,slow=4.5,SNR=77						
LPAZ				S	**S**	**08 37 38.6**	**-0.9**
	comp=Z,4.0nm,0.6s,baz=155,slow=13,SNR=1.6						
LPAZ	**La Paz**	**7.71**	**350**	Pn	**Pn**	**08 36 12.7**	**+0.9**
LPAZ	**La Paz**	**7.71**	**350**	*e*P	**Pn**	**08 36 13.0**	**+1.2**
CO03	**El Pedregal**	**7.73**	**206**		**Pn**	**08 36 09.6**	**-1.8**
CO02	**Combarbal**	**8.17**	**207**		**Pn**	**08 36 15.4**	**-1.9**
CPUP	**Villa Florida**	**8.85**	**108**	P	**Pn**	**08 36 24.4**	**-1.5**
	comp=Z,6.0nm,0.8s,baz=283,slow=9.9,SNR=10						
CPUP	**Villa Florida**	**8.85**	**108**		**Pn**	**08 36 23.6**	**-2.4**
CPUP	**Villa Florida**	**8.85**	**108**	*e*P	**Pn**	**08 36 25.6**	**-0.4**
VA03	**San Esteban**	**9.42**	**200**	Pn	**Pn**	**08 36 32.2**	**-1.1**
VA06	**Catapilco**	**9.49**	**204**	Pn	**Pn**	**08 36 31.8**	**-2.3**
SIV	**San Ignacio**	**9.52**	**35**	P	**Pn**	**08 36 33.9**	**-0.9**
	comp=Z,9.6nm,0.6s,baz=212,slow=11,SNR=75						
SIV				S	**S**	**08 38 19.5**	**-2.2**
	comp=Z,4.4nm,0.8s,baz=207,slow=14,SNR=1.6						
ROC1	**El Roble**	**9.77**	**202**	Pn	**Pn**	**08 36 36.4**	**-1.6**
MT05	**Renca**	**10.06**	**200**	Pn	**Pn**	**08 36 40.9**	**-0.7**
MT02	**Curacav**	**10.07**	**202**	Pn	**Pn**	**08 36 39.3**	**-2.3**
MT03	**Universidad Ad**	**10.09**	**198**	Pn	**Pn**	**08 36 41.3**	**-0.6**
LMEL	**Las Melosas**	**10.34**	**196**	Pn	**Pn**	**08 36 43.5**	**-1.7**
MT09	**Talagante**	**10.49**	**200**	Pn	**Pn**	**08 36 45.2**	**-2.0**
BO04	**La Punta**	**10.58**	**198**	Pn	**Pn**	**08 36 48.0**	**-0.2**
MT01	**Pomaire**	**10.66**	**201**	Pn	**Pn**	**08 36 47.8**	**-1.4**
ITQB	**Itaqui**	**10.69**	**125**	*e*P	**Pn**	**08 36 49.5**	**-0.1**
PTLB	**Pontes e Lacer**	**11.06**	**42**	*e*P	**Pn**	**08 36 54.3**	**-0.2**
BO01	**Tunca**	**11.10**	**199**	Pn	**Pn**	**08 36 52.8**	**-2.0**
GO05	**Huala**	**11.93**	**201**	Pn	**Pn**	**08 37 03.9**	**-1.5**
ML02	**Panimavida**	**12.47**	**198**	Pn	**Pn**	**08 37 10.8**	**-1.3**
VILB	**Vilhena**	**12.55**	**31**	*e*P	**Pn**	**08 37 13.4**	**0.0**
TRCB	**Terra Rica**	**13.00**	**88**	*e*P	**Pn**	**08 37 19.7**	**+0.7**
SALV	**Santo Antonio**	**13.09**	**54**	*e*P	**Pn**	**08 37 19.7**	**-0.4**
PTGB	**Pitanga**	**13.40**	**96**	*e*P	**Pn**	**08 37 24.5**	**+0.5**
CPSB	**Cacapava Do Su**	**13.47**	**121**	*e*P	**Pn**	**08 37 24.0**	**-0.7**
ITAB	**Concordia**	**13.59**	**107**		**Pn**	**08 37 24.5**	**-1.7**
ITAB	**Concordia**	**13.59**	**107**	*e*P	**Pn**	**08 37 26.1**	**0.0**
PLTB	**Pedras Altas**	**13.99**	**127**	*e*P	**Pn**	**08 37 29.0**	**-2.1**
ETMB	**Extrema**	**14.04**	**2**	*e*P	**Pn**	**08 37 31.9**	**0.0**
PCMB	**Pacaembu**	**14.46**	**84**	*e*P	**Pn**	**08 37 37.1**	**0.0**
TRQA	**Tornquist**	**14.66**	**165**	Pn	**Pn**	**08 37 38.0**	**-1.3**
CNLB	**Canela**	**15.18**	**114**	*e*P	**Pn**	**08 37 45.8**	**0.0**
NNA	**Nana**	**15.27**	**319**	P	**P**	**08 37 49.8**	**+2.6**
	comp=Z,13nm,0.7s,baz=164,slow=11,SNR=5.8						
NNA	**Nana**	**15.27**	**319**		**P**	**08 37 47.4**	**+0.3**
NNA				IAmb	IAmb	08 37 50.5	
	comp=Z,20nm,0.9s						
SAML	**Samuel**	**15.28**	**13**	P	**Pn**	**08 37 46.7**	**-0.3**
PDRB	**Porto dos Gac**	**15.51**	**40**	*e*P	**P**	**08 37 49.5**	**-0.3**
FRTB	**Fartura**	**15.75**	**91**	*e*P	**P**	**08 37 51.9**	**-0.5**
ITRB	**Iturama**	**15.78**	**78**	*e*P	**Pn**	**08 37 53.0**	**0.0**
CLDB	**Colider**	**16.64**	**41**	*e*P	**P**	**08 38 02.3**	**+0.1**
PLCA	**Paso Flores**	**17.06**	**190**	P	**P**	**08 38 07.0**	**+0.3**
	comp=Z,1.7nm,0.7s,baz=11,slow=11,SNR=11						
PLCA	**Paso Flores**	**17.06**	**190**	*e*P	**P**	**08 38 06.0**	**-0.6**
PLCA	**Paso Flores**	**17.06**	**190**	*e*P	**P**	**08 38 04.5**	**-2.1**
BB19B	**Bebedouro**	**17.07**	**84**	*e*P	**P**	**08 38 07.2**	**+0.4**
CZSB	**Cruzeiro do Su**	**17.09**	**339**	*e*P	**P**	**08 38 07.5**	**+0.4**
LL04	**Puerto Octay**	**17.59**	**194**	P	**P**	**08 38 10.8**	**-1.5**
RCLB	**Rio Claro- Sao**	**17.73**	**89**	*e*P	**P**	**08 38 13.7**	**-0.4**
VAO	**Valinhos**	**18.16**	**91**	*e*P	**P**	**08 38 18.6**	**-0.2**
IPMB	**Ipameri, GO**	**18.28**	**75**	*e*P	**P**	**08 38 19.9**	**-0.2**
SNDB	**Serra Nova Dou**	**18.88**	**54**	*e*P	**P**	**08 38 26.4**	**-0.2**
PARB	**Paraibuna**	**19.36**	**93**	*e*P	**P**	**08 38 32.1**	**+0.4**
BDFB	**Brasilia**	**19.44**	**68**	P	**P**	**08 38 32.7**	**+0.1**
	comp=Z,81nm,0.6s,baz=241,slow=12,SNR=133						
BDFB	**Brasilia**	**19.44**	**68**	P	**P**	**08 38 32.5**	**-0.2**
BDFB	**Brasilia**	**19.44**	**68**	*e*P	**P**	**08 38 32.8**	**+0.1**
PMNB	**Patos De Minas**	**19.66**	**78**	*e*P	**P**	**08 38 34.6**	**-0.5**
LL02	**Futaleuf**	**19.67**	**191**	P	**P**	**08 38 34.1**	**-0.7**
LL02				IAmb	IAmb	08 38 38.4	
	comp=Z,22nm,0.8s						
GO07	**Milladeo Hill,**	**19.97**	**195**	P	**P**	**08 38 36.1**	**-1.9**
ATAH	**Atahualpa**	**20.10**	**324**	P	Pn	08 38 43.1	-1.7
	comp=Z,4.1nm,0.6s,baz=180,slow=21,SNR=4.3						
	comp=Z,4.1nm,0.6s						
ESAR	**Angra dos Reis**	**20.47**	**92**	*e*P	**P**	**08 38 42.4**	**-1.2**
BSCB	**Bom Sucesso**	**20.50**	**86**	*e*P	**P**	**08 38 43.4**	**-0.6**
AY01	**Puyuhuapi**	**21.01**	**192**	P	**P**	**08 38 48.5**	**-0.4**
PEXB	**Peixe**	**21.08**	**59**	*e*P	**P**	**08 38 49.0**	**-1.0**
MACA	**Manacapuru-AM**	**21.46**	**17**	*e*P	**P**	**08 38 54.0**	**+0.1**
ITTB	**Itaituba**	**22.15**	**30**	*e*P	**P**	**08 38 59.5**	**-1.2**
JANB	**Januaria**	**22.88**	**71**	*e*P	**P**	**08 39 06.6**	**-0.8**
BOSC	**San Juan Bosco**	**23.57**	**329**	P	**P**	**08 39 13.9**	**+0.1**
SMTB	**Santa Maria do**	**23.66**	**54**	*e*P	**P**	**08 39 13.8**	**-0.6**
SDBA	**SAO DESIDERIO**	**23.66**	**65**	*e*P	**P**	**08 39 13.8**	**-0.7**
PRPB	**Parauapebas**	**24.00**	**45**	*e*P	**P**	**08 39 15.6**	**-2.0**
SJMB	**Sao Joao De Ma**	**24.35**	**83**	*e*P	**P**	**08 39 19.8**	**-0.9**
MALB	**Monte Alegre**	**25.05**	**31**	*e*P	**P**	**08 39 26.2**	**-0.7**
BOAV	**Boa Vista**	**26.86**	**14**	*e*P	**P**	**08 39 43.8**	**+0.7**
MCPB	**Macapa, AP**	**27.42**	**33**	*e*P	**P**	**08 39 47.5**	**-0.7**
MG05	**Puerto Natales**	**28.06**	**188**	P	**P**	**08 39 54.2**	**+0.8**
DSPA	**Despedida**	**30.01**	**182**	P	**P**	**08 40 12.2**	**+1.5**
ROSB	**Rosario**	**30.24**	**50**	*e*P	**P**	**08 40 12.8**	**-0.3**
NBLA	**Lagarto - SE**	**30.39**	**70**	*e*P	**P**	**08 40 12.8**	**-1.6**
NBMA	**Muriti-CE**	**31.47**	**63**	*e*P	**P**	**08 40 23.4**	**-0.5**
NBPB	**Pedra_Branca-C**	**31.88**	**59**	*e*P	**P**	**08 40 26.6**	**-1.0**
ZARC	**Zaragoza, Cauc**	**32.22**	**345**	P	**P**	**08 40 28.9**	**-1.5**
NBAN	**Anadia - AL**	**32.33**	**69**	*e*P	**P**	**08 40 29.8**	**-1.7**
PAYG	**Puerto Ayora**	**32.49**	**312**	P	**P**	**08 40 32.1**	**-0.8**
BAUV	**El Baul**	**32.70**	**358**	P	**P**	**08 40 34.0**	**-0.6**
BAUV				IAmb	IAmb	08 40 35.1	
	comp=Z,9.4nm,0.8s						
NBMO	**Morrinhos-CE**	**32.93**	**56**	*e*P	**P**	**08 40 35.6**	**-1.1**
NBRF	**Rio Formoso -**	**33.80**	**69**	*e*P	**P**	**08 40 42.7**	**-1.5**
SJCC	**San Jacinto, C**	**34.62**	**345**	P	**P**	**08 40 50.0**	**-1.2**
SJCC				IAmb	IAmb	08 41 03.6	
	comp=Z,12nm,1.0s						
RCBR	**Riachuelo**	**34.68**	**64**	P	**P**	**08 40 50.2**	**-1.6**
CRPR	**Cabo Rojo, PR**	**41.68**	**359**	P	**P**	**08 41 50.4**	**+0.5**
CRPR				IAmb	IAmb	08 42 01.9	
	comp=Z,22nm,1.1s						
CELP	**Cerrillos**	**41.75**	**0**	P	**P**	**08 41 50.3**	**-0.3**
CCIG	**Comitan**	**47.04**	**326**	P	**P**	**08 42 32.9**	**+0.3**
CCIG				pP	**pP**	**08 43 16.6**	**-2.9**
SOR	**Soroa**	**49.06**	**340**	P	**P**	**08 42 47.8**	**0.0**
SOR				IAmb	IAmb	08 43 05.0	
	comp=Z,24nm,1.5s						
VNA3	**Neumayer Olymp**	**57.14**	**161**	P	**P**	**08 43 48.7**	**+2.6**
VNA1	**Neumayer--Stat**	**57.33**	**160**	P	**P**	**08 43 50.2**	**+2.8**
VNA2	**Neumayer--Watz**	**57.70**	**160**	P	**P**	**08 43 52.7**	**+2.7**
	baz=260,slow=7.0						
ZAIG	**Zacatecas**	**58.02**	**320**	P	**P**	**08 43 54.3**	**+1.0**
ZAIG				IAmb	IAmb	08 43 57.0	
	comp=Z,5.5nm,0.8s						
SNAA	**Sanae**	**59.34**	**161**	P	**P**	**08 44 04.1**	**+2.7**
LRAL	**Lakeview Retre**	**59.85**	**340**	P	**P**	**08 44 05.4**	**+0.2**
LRAL				IAmb	IAmb	08 44 06.8	
	comp=Z,5.6nm,0.8s						
Y49A	**Blount Mountai**	**60.44**	**341**	P	**P**	**08 44 09.4**	**+0.2**
Y49A				IAmb	IAmb	08 44 28.0	
	comp=Z,13nm,1.3s						
833A	**Chaparral WMA,**	**60.74**	**327**	P	**P**	**08 44 13.0**	**+1.6**
TROLL	**Troll, Antarti**	**61.05**	**161**	P	**P**	**08 44 14.7**	**+1.6**
X48A	**Hartselle**	**61.18**	**341**	P	**P**	**08 44 13.4**	**-0.8**
X48A				IAmb	IAmb	08 44 15.5	
	comp=Z,13nm,0.9s						
OXF	**Oxford**	**61.98**	**339**	P	**P**	**08 44 19.5**	**-0.1**
PLAL	**Pickwick Lake**	**61.99**	**340**	P	**P**	**08 44 19.8**	**+0.2**
W45A	**Hickory Valley**	**62.50**	**339**	P	**P**	**08 44 23.2**	**+0.2**
WLAR	**White Oak Lake**	**62.56**	**335**	P	**P**	**08 44 24.8**	**+1.4**
JCT	**Junction City**	**62.71**	**328**	P	**P**	**08 44 26.1**	**+1.5**
JCT				IAmb	IAmb	08 44 26.6	
	comp=Z,9.2nm,0.7s						
WVT	**Waverly**	**62.97**	**341**	P	**P**	**08 44 26.4**	**+0.3**
MIAR	**Mount Ida**	**63.49**	**335**	P	**P**	**08 44 30.5**	**+0.9**
MIAR				IAmb	IAmb	08 44 31.2	
	comp=Z,8.0nm,1.1s						
T47A	**Sharon Grove**	**63.56**	**342**	P	**P**	**08 44 30.4**	**+0.5**
T47A				IAmb	IAmb	08 44 31.3	
	comp=Z,8.7nm,1.0s						
W41B	**Gary Mavity, V**	**63.56**	**337**	P	**P**	**08 44 30.4**	**+0.5**
W41B				IAmb	IAmb	08 44 58.1	
	comp=Z,9.2nm,1.4s						
WHAR	**Wooly Hollow**	**63.68**	**337**	P	**P**	**08 44 31.7**	**+1.0**
WHAR				IAmb	IAmb	08 44 52.0	
	comp=Z,11nm,1.5s						
TXAR	**Lajitas Array**	**63.76**	**324**	P	**P**	**08 44 32.8**	**+1.2**
	comp=Z,1.4nm,0.7s,baz=146,slow=8.3,SNR=18						
	comp=Z,1.4nm,0.7s		

RLMT	**Red Lodge**	**78.90**	**331**		**P**	**P**	**08 46 01.8**	**-0.1**
RLMT				IAmb	IAmb		08 46 04.4	
	comp=Z,5.4nm,0.6s							
DGMT	**Dagmar**	**79.49**	**336**	P	**P**	**P**	**08 46 05.0**	**+0.2**
J08A	**Circle Bar Ran**	**82.10**	**325**	P	**P**	**P**	**08 46 18.1**	**-0.8**
J08A				IAmb	IAmb	IAmb	08 46 21.6	
	comp=Z,4.7nm,0.7s							
BMO	**Blue Mountains**	**82.54**	**326**	P	**P**	**P**	**08 46 20.5**	**-0.5**
YKA	**Yellowknife Ar**	**94.14**	**340**	P	**P**	**P**	**08 47 17.1**	**+1.1**
	comp=Z,1.6nm,0.6s,baz=137,slow=4.6,SNR=20							
	comp=Z,1.6nm,0.6s							
WRA	**Warramunga Arr**	**131.80**	**207**	PKP	**PKiKP**		**08 53 11.5**	**-0.2**
	comp=Z,0.9nm,0.4s,baz=153,slow=1.8,SNR=24							
MKAR	**Makanchi Array**	**146.32**	**40**	PKPbc	**PKPbc**		**08 53 37.6**	**0.0**
	comp=Z,1.1nm,0.5s,baz=313,slow=2.9,SNR=11							
MKAR	**Makanchi Array**	**146.32**	**40**		**PKPbc**		**08 53 37.9**	**+0.2**

*NEIC **20** 08:49:19.4±1.7,5.25S±0.10×151.94E±0.07,h55km±10km, mb4.1/8,Error ellipse: s-maj=15.6km s-min=7.2km az=151.0*

*IDC **20** 08:49:20.2±2.6,4.99S×151.80E,h81km±13km,mb3.4/2, mbtmp3.8/3,MS3.0/4,Error ellipse: s-maj=120.3km s-min=13.8km az=128.0*

ISC 20 08:49:19.1±1.0,5.17S±0.09×152.0E±0.1,h70km,n21, σ1§07/20,mb4.1/6,New Britain region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**0.86**	**0**	P		**Pn**	**08 49 36.6**	**+0.7**
	baz=323,slow=20							
KRVT				S		**Sn**	**08 49 49.2**	**+0.9**
	baz=180,slow=20							
RABL	**Rabaul**	**0.98**	**8**	Pn		**Pn**	**08 49 37.3**	**-0.1**
PMG	**Port Moresby**	**6.40**	**229**	P		**Pn**	**08 50 52.9**	**+2.0**
	5.8nm,0.5s,baz=296,slow=4.3,SNR=1.9							
PMG				S		**Sn**	**08 52 03.6**	**+1.1**
	24nm,0.6s,baz=128,slow=21,SNR=7.0							
PMG				LR		LR	08 53 24.2	
	comp=Z,61nm,20.7s,baz=264,slow=38							
PMG	**Port Moresby**	**6.40**	**229**	Pn		**Pn**	**08 50 49.3**	**-1.6**
CTA	**Charters Tower**	**15.86**	**200**	LR		LR	08 57 33.1	
	comp=Z,47nm,20.7s,baz=78,slow=31							
MTN	**Manton Dam**	**21.98**	**248**	P		**P**	**08 54 08.1**	**+0.5**
MARNC	**Mare, Loyalty**	**22.44**	**138**	P		**P**	**08 54 13.3**	**+0.9**
WB0	**Warramunga Arr**	**22.48**	**228**	P		**P**	**08 54 12.2**	**-0.6**
WB0				IAmb		IAmb	08 54 30.0	
	comp=Z,5.9nm,0.9s							
WR0	**Warramunga Arr**	**22.48**	**228**	P		**P**	**08 54 12.8**	**-0.1**
WR0				IAmb		IAmb	08 54 30.5	
	comp=Z,8.5nm,1.1s							
WRAB	**Tennant Creek**	**22.61**	**228**	P		**P**	**08 54 13.2**	**-1.1**
WRAB				IAmb		IAmb	08 54 31.1	
	comp=Z,6.7nm,0.7s							
WB2	**Warramunga Arr**	**22.61**	**228**	P		**P**	**08 54 13.4**	**-1.0**
WB2				IAmb		IAmb	08 54 31.2	
	comp=Z,6.2nm,0.7s							
WRA	**Warramunga Arr**	**22.62**	**228**	P		**P**	**08 54 13.3**	**-1.2**
	comp=Z,3.5nm,0.8s,baz=54,slow=10,SNR=21							
	comp=Z,3.5nm,0.8s							
WRA	**Warramunga Arr**	**22.62**	**228**	P		**P**	**08 54 12.7**	**-1.8**
KNRA	**Kununurra**	**25.12**	**244**	P		**P**	**08 54 37.1**	**-0.5**
AS31	**Alice Springs**	**25.36**	**222**	P		**P**	**08 54 40.3**	**+0.4**
ASAR	**Alice Springs**	**25.36**	**222**	P		**P**	**08 54 40.7**	**+0.8**
JCJ	**Chichijima**	**33.46**	**344**	LR		LR	09 09 34.7	
	comp=Z,25nm,19.2s,baz=108,slow=37							
PETK	**Petropavlovsk-**	**58.26**	**4**	LR		LR	09 24 37.3	
	comp=Z,20nm,18.3s,baz=124,slow=36							
ILAR	**Eielson Array**	**82.79**	**22**	P		**P**	**09 01 34.9**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=238,slow=5.9,SNR=6.7							
	comp=Z,0.2nm,0.4s							
TORD	**Torodi Ar. Bea**	**149.68**	**287**	PKPbc		**PKPbc**	**09 09 01.0**	**-1.0**
	comp=Z,0.3nm,0.4s,baz=97,slow=2.7,SNR=5.4							
TORD	**Torodi Ar. Bea**	**149.68**	**287**			**PKPbc**	**09 09 01.5**	**-0.4**

*NEIC **20** 08:50:46.0±1.6,36.448N±0.004×98.74W±0.02,h5km±2km, Error ellipse: s-maj=3.4km s-min=2.8km az=264.0*

*TUL **20** 08:50:46.1±1.6,36.45N±0.04×98.77W±0.03,h7km±5km, ML3.8,mb4.2/4(NEIC),mb_Lg3.7/104(NEIC), Mwr3.4/15(SLM),Error ellipse: s-maj=5.8km s-min=2.9km az=153.0*

*ANF **20** 08:50:46.2±0.2,36.42N×98.74W,h4km,ML4.5/19,Error ellipse: s-maj=2.5km s-min=2.0km az=105.0*

*NEIC **20** 08:50:46.1,36.44N×98.73W,h8km,Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr=0.36; Mθθ=1.61; Mφφ=-1.25; Mrθ=-0.09; Mrφ=-0.43; Mθφ=0.73; Fault plane solution: M₀1.70000×10¹⁴ NP1:φ₁=237.00000°, δ66.00000°, λ=-164.00000°. NP2:φ₂=140.00000°, δ75.00000°, λ=-25.00000°. Principal axes: T 1.6957, Plg6.0000°, Azm190.0000°; N 0.0001, Plg61.0000°, Azm291.0000°; P -1.6958, Plg28.0000°, Azm97.0000°;*

ISC 20 08:50:45.2±2.4,36.44N±0.03×98.74W±0.03,h0km±18km, n204,σ1§21/211,Oklahoma

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ADOK	**Arcadia Dam**	**1.36**	**125**	Pn		**Pn**	**08 51 11.6**	**+0.3**
OK009	**Oakdale Elemen**	**1.37**	**128**	Pn		**Pn**	**08 51 11.8**	**+0.4**
OKCFA	**Oklahoma City**	**1.46**	**134**			**Pn**	**08 51 13.2**	**+0.5**
OKCFA	**Oklahoma City**	**1.46**	**134**	P		**Pn**	**08 51 13.3**	**+0.5**
	baz=315,SNR=55							
OKCFA				S		**Sg**	**08 51 33.3**	**+1.2**
	baz=315							
OKCSW	**OKLAHOMA CITY**	**1.47**	**134**			**Pn**	**08 51 13.6**	**+0.6**
OK005	**Luther M Schoo**	**1.48**	**121**	Pn		**Pn**	**08 51 13.7**	**+0.7**
FNO	**Franklin**	**1.60**	**137**			**Pn**	**08 51 15.2**	**+0.5**
WMOK	**Wichita Mounta**	**1.70**	**181**			**Pn**	**08 51 16.0**	**0.0**
WMOK	**Wichita Mounta**	**1.70**	**181**	P		**Pn**	**08 51 16.1**	**+0.1**
	baz=1.4,SNR=409							
WMOK				S		**Sb**	**08 51 39.5**	**+0.4**
	baz=1.4							
WMOK	**Wichita Mounta**	**1.70**	**181**	P		**Pn**	**08 51 16.0**	**0.0**
	baz=1.4,SNR=104							
WMOK				S		**Sb**	**08 51 39.5**	**+0.4**
	baz=1.4							
T35A	**Sooner Cattle**	**1.85**	**74**			**Pn**	**08 51 18.9**	**+0.8**
T35B	**Sooner Cattle**	**1.85**	**74**	P		**Pn**	**08 51 19.0**	**+0.9**
	baz=256,SNR=286							
T35B				S		**Sb**	**08 51 44.6**	**+1.0**
	baz=256							
X34A	**Smith Ranch, M**	**1.98**	**158**			**Pb**	**08 51 21.7**	**-0.3**
R32A	**Long Quarter,**	**1.98**	**1**			**Pn**	**08 51 20.8**	**+0.8**
R32A	**Long Quarter,**	**1.98**	**1**	P		**Pn**	**08 51 21.2**	**+1.2**
	baz=180,SNR=184							
R32A				S		**Sn**	**08 51 47.0**	**+1.5**
	baz=180							
TUL1	**Leonard**	**2.44**	**102**	Pn		**Pn**	**08 51 27.0**	**+0.8**
TUL1				IAmb_Lg			08 52 05.0	
	comp=Z,171nm,0.7s							
TUL1	**Leonard**	**2.44**	**102**	P		**Pn**	**08 51 27.0**	**+0.8**
	baz=283,SNR=171							
TUL1	**Leonard**	**2.44**	**102**	P		**Pn**	**08 51 26.8**	**+0.6**
	baz=283,SNR=119							
TUL1				S		**Sn**	**08 51 58.1**	**+1.3**
	baz=283							
CBKS	**Cedar Bluff**	**2.50**	**342**			**Pn**	**08 51 28.4**	**+1.3**
CBKS	**Cedar Bluff**	**2.50**	**342**	S		**Sb**	**08 52 02.2**	**-0.1**
	baz=161							
CBKS	**Cedar Bluff**	**2.50**	**342**	P		**Pn**	**08 51 28.2**	**+1.1**
	baz=161,SNR=25							
AMTX	**Amarillo**	**2.85**	**238**	Pn		**Pn**	**08 51 32.0**	**0.0**
AMTX	**Amarillo**	**2.85**	**238**	P		**Pn**	**08 51 33.6**	**+1.6**
	baz=56,SNR=24							
AMTX	**Amarillo**	**2.85**	**238**	P		**Pn**	**08 51 33.5**	**+1.5**
	baz=56							
AMTX				Sb		**Sb**	**08 52 14.7**	**+2.2**
	baz=56							
KSU1	**Kansas State U**	**3.15**	**32**	Pn		**Pn**	**08 51 35.6**	**-0.4**
KSU1	**Kansas State U**	**3.15**	**32**	P		**Pn**	**08 51 36.9**	**+0.9**
	baz=213,SNR=26							
KSU1	**Kansas State U**	**3.15**	**32**	P		**Pn**	**08 51 36.9**	**+0.9**
	baz=213,SNR=6.6							
KSU1				Sb		**Sb**	**08 52 23.5**	**+2.6**
	baz=213							
X37A	**Clayton**	**3.31**	**123**	Pn		**Pn**	**08 51 39.1**	**+0.9**
X37A	**Clayton**	**3.31**	**123**	P		**Pn**	**08 51 38.9**	**+0.7**
	baz=305,SNR=70							
Z35A	**Perchaven, San**	**3.33**	**158**			**Pn**	**08 51 39.3**	**+0.8**
Z35A	**Perchaven, San**	**3.33**	**158**	P		**Pn**	**08 51 39.8**	**+1.3**
	baz=339,SNR=17							
U38A	**Gravette**	**3.51**	**89**			**Pn**	**08 51 41.0**	**0.0**
U38A				IAmb_Lg			08 52 45.0	
	comp=Z,146nm,0.7s							
U38A	**Gravette**	**3.51**	**89**	P		**Pn**	**08 51 41.3**	**+0.4**
	baz=271							
HHAR	**Hobbs**	**3.88**	**91**			**Pn**	**08 51 46.6**	**+0.6**
HHAR				IAmb_Lg			08 52 54.6	
	comp=Z,126nm,0.7s							
HHAR	**Hobbs**	**3.88**	**91**	P		**Pn**	**08 51 46.3**	**+0.4**
	baz=274							
ABTX	**Abilene, Hawle**	**3.88**	**191**			**Pn**	**08 51 46.5**	**+0.6**
ABTX	**Abilene, Hawle**	**3.88**	**191**	P		**Pn**	**08 51 46.6**	**+0.6**
	baz=11,SNR=38							
ABTX	**Abilene, Hawle**	**3.88**	**191**	P		**Pn**	**08 51 46.6**	**+0.6**
	baz=11,SNR=24							
ABTX				S		**Sn**	**08 52 33.1**	**+0.8**
	baz=11							
KSCO	**Kaye Shedlock'**	**4.01**	**311**			**Pn**	**08 51 47.5**	**-0.5**
KSCO				IAmb_Lg			08 53 02.9	
	comp=Z,247nm,0.8s							
KSCO	**Kaye Shedlock'**	**4.01**	**311**	P		**Pn**	**08 51 48.7**	**+0.7**
	baz=129							
KSCO	**Kaye Shedlock'**	**4.01**	**311**	P		**Pn**	**08 51 48.4**	**+0.5**
	baz=129,SNR=26							
KSCO				S		**Sn**	**08 52 37.3**	**+1.6**
	baz=129							
MSTX	**Muleshoe**	**4.12**	**234**	Pn		**Pn**	**08 51 50.6**	**+1.1**
MSTX				IAmb_Lg			08 53 01.8	
	comp=Z,263nm,0.8s							
MSTX	**Muleshoe**	**4.12**	**234**	P		**Pn**	**08 51 50.3**	**+0.9**
	baz=52							
MSTX				Sb		**Sb**	**08 52 52.4**	**+3.4**
	baz=52							
W39A	**Magazine**	**4.21**	**106**			**Pn**	**08 51 51.4**	**+0.8**
W39A				IAmb_Lg			08 53 09.2	
	comp=Z,164nm,0.8s							
W39A	**Magazine**	**4.21**	**106**	P		**Pn**	**08 51 51.1**	**+0.5**
	baz=289,SNR=18							
W39A	**Magazine**	**4.21**	**106**	P		**Pn**	**08 51 51.0**	**+0.5**
	baz=289,SNR=31							
N33B	**J Bar K, Exete**	**4.41**	**13**	P		**Pn**	**08 51 53.2**	**-0.1**
	baz=194,SNR=21							
N33A	**J Bar K, Exete**	**4.41**	**13**			**Pn**	**08 51 53.2**	**-0.2**
N33A				IAmb_Lg			08 53 14.0	
	comp=Z,139nm,0.8s							
Z38A	**Mt. Pleasant**	**4.42**	**135**			**Pn**	**08 51 53.6**	**+0.2**
Z38A				IAmb_Lg			08 53 08.5	
	comp=Z,168nm,0.7s							
S39A	**Bolivar**	**4.51**	**72**			**Pn**	**08 51 55.1**	**+0.4**
S39A				IAmb_Lg			08 53 18.8	
	comp=Z,128nm,0.7s							
S39A	**Bolivar**	**4.51**	**72**	P		**Pn**	**08 51 54.9**	**+0.3**
	baz=255,SNR=35							
WHTX	**Lake Whitney,**	**4.56**	**166**			**Pn**	**08 51 55.9**	**+0.6**
WHTX	**Lake Whitney,**	**4.56**	**166**	P		**Pn**	**08 51 56.0**	**+0.6**
	baz=347							
WHTX				Sb		**Sb**	**08 53 06.1**	**+4.6**
	baz=347							
T25A	**Trinidad**	**4.61**	**280**			**Pn**	**08 51 56.8**	**+0.6**
T25A				IAmb_Lg			08 53 19.3	
	comp=Z,190nm,0.9s							
T25A	**Trinidad**	**4.61**	**280**	P		**Pn**	**08 51 56.5**	**+0.3**
	baz=97,SNR=18							
MIAR	**Mount Ida**	**4.62**	**113**			**Pn**	**08 51 57.3**	**+1.2**
MIAR				IAmb_Lg			08 53 24.1	
	comp=Z,89nm,0.8s							
MIAR	**Mount Ida**	**4.62**	**113**	P		**Pn**	**08 51 57.1**	**+1.0**
	baz=296,SNR=59							
MIAR	**Mount Ida**	**4.62**	**113**	P		**Pn**	**08 51 56.7**	**+0.5**
	baz=296,SNR=10							
MIAR				S		**Sn**	**08 52 50.9**	**+0.5**
	baz=296							
U40A	**Yellville**	**4.75**	**89**			**Pn**	**08 51 58.9**	**+0.9**
U40A				IAmb_Lg			08 53 27.4	
	comp=Z,232nm,1.0s							
U40A	**Yellville**	**4.75**	**89**	P		**Pn**	**08 51 58.2**	**+0.2**
	baz=273,SNR=31							
U40A				P		**Pn**	**08 51 58.2**	**+0.2**
	baz=273,SNR=31							
U40A	**Yellville**	**4.75**	**89**	P		**Pn**	**08 51 58.5**	**+0.5**
	baz=273,SNR=22							
U40A				Sb		**Sb**	**08 53 13.0**	**+6.0**
	baz=273							
BGNE	**Belgrade**	**4.99**	**5**			**Pn**	**08 52 01.4**	**+0.1**
BGNE				IAmb_Lg			08 53 28.7	
	comp=Z,179nm,0.8s							
BGNE	**Belgrade**	**4.99**	**5**	P		**Pn**	**08 52 01.3**	**+0.1**
	baz=185,SNR=6.0							
BGNE				S		**Sn**	**08 53 00.0**	**+0.4**
	baz=185							
N35A	**Tabor**	**5.04**	**28**			**Pn**	**08 52 01.9**	**0.0**
237A	**Washetta, Mont**	**5.05**	**150**			**Pn**	**08 52 01.8**	**-0.2**
237A				IAmb_Lg			08 53 39.6	
	comp=Z,104nm,0.8s							
237A	**Washetta, Mont**	**5.05**	**150**	P		**Pn**	**08 52 01.9**	**-0.2**
	baz=332,SNR=8.4							
OGNE	**Ogallala**	**5.19**	**331**			**Pn**	**08 52 04.7**	**+0.6**
OGNE	**Ogallala**	**5.19**	**331**	P		**Pn**	**08 52 04.2**	**+0.2**
	baz=149,SNR=7.9							
OGNE				Sb		**Sb**	**08 53 25.0**	**+5.4**
	baz=149							
X40A	**Basin Creek Fa**	**5.20**	**110**			**Pn**	**08 52 04.9**	**+0.8**
X40A	**Basin Creek Fa**	**5.20**	**110**	P		**Pn**	**08 52 04.7**	**+0.6**
	baz=294							
P38A	**Dawn**	**5.20**	**51**	Pn		**Pn**	**08 52 04.0**	**-0.2**
P38A	**Dawn**	**5.20**	**51**	P		**Pn**	**08 52 04.6**	**+0.5**
	baz=234,SNR=7.8							
MGMO	**Mountain Grove**	**5.24**	**80**	Pn		**Pn**	**08 52 05.3**	**+0.6**
MGMO				IAmb_Lg			08 53 33.9	
	comp=Z,132nm,0.8s							
WHAR	**Wooly Hollow**	**5.36**	**100**	Pn		**Pn**	**08 52 06.3**	**-0.1**
WLAR	**White Oak Lake**	**5.37**	**119**	Pn		**Pn**	**08 52 06.6**	**+0.2**
WLAR				IAmb_Lg			08 53 42.6	
	comp=Z,83nm,0.7s							
FCAR	**Ozark Folk Cen**	**5.38**	**94**	Pn		**Pn**	**08 52 08.2**	**+1.5**
FCAR				IAmb_Lg			08 53 40.7	
	comp=Z,104nm,0.8s							
W41B	**Gary Mavity, V**	**5.42**	**102**			**Pn**	**08 52 07.2**	**0.0**
W41B				IAmb_Lg			08 53 39.0	
	comp=Z,121nm,0.8s							
W41B	**Gary Mavity, V**	**5.42**	**102**	P		**Pn**	**08 52 07.5**	**+0.3**
	baz=285,SNR=7.3							
W41B				S		**Sn**	**08 53 07.9**	**-2.4**
	baz=285							
UALR	**University of**	**5.47**	**106**	Pn		**Pn**	**08 52 07.9**	**+0.1**
UALR				IAmb_Lg			08 53 46.3	
	comp=Z,100nm,0.9s							
R40A	**Maddies Statio**	**5.47**	**68**			**Pn**	**08 52 08.2**	**+0.3**
R40A				IAmb_Lg			08 53 48.4	
	comp=Z,133nm,0.9s							
R40A	**Maddies Statio**	**5.47**	**68**	P		**Pn**	**08 52 08.8**	**+0.9**
	baz=252,SNR=27							
SDCO	**Great Sand Dun**	**5.56**	**286**			**Pn**	**08 52 10.4**	**+1.0**
SDCO	**Great Sand Dun**	**5.56**	**286**	P		**Pn**	**08 52 10.0**	**+0.6**
	baz=102,SNR=32							
Q24A	**Divide**	**5.67**	**298**	Pn		**Pn**	**08 52 11.1**	**+0.1**
Q24A				IAmb_Lg			08 53 55.5	
	comp=Z,76nm,0.7s							
Q24A	**Divide**	**5.67**	**298**	P		**Pn**	**08 52 11.0**	**0.0**
	baz=114							
435B	**Jarrell**	**5.72**	**170**	Pn		**Pn**	**08 52 11.4**	**+0.1**
435B				IAmb_Lg			08 54 00.7	
	comp=Z,159nm,0.8s							
435B	**Jarrell**	**5.72**	**170**	P		**Pn**	**08 52 11.7**	**+0.3**
	baz=351,SNR=5.1							
435B	**Jarrell**	**5.72**	**170**	P		**Pn**	**08 52 11.7**	**+0.3**
	baz=351							
NATX	**Nacogdoches**	**5.76**	**143**	Pn		**Pn**	**08 52 13.4**	**+1.5**
NATX				IAmb_Lg			08 54 02.3	
	comp=Z,96nm,0.8s							
L34A	**Svendsen Farm,**	**5.82**	**18**	Pn		**Pn**	**08 52 11.7**	**-1.0**
Z41A	**Richland Creek**	**5.82**	**121**	Pn		**Pn**	**08 52 12.3**	**-0.4**
Z41A				IAmb_Lg			08 54 07.3	
	comp=Z,88nm,0.8s							
Z41A	**Richland Creek**	**5.82**	**121**	P		**Pn**	**08 52 12.9**	**+0.2**
	baz=305							
JCT	**Junction City**	**6.01**	**189**	Pn		**Pn**	**08 52 14.4**	**-0.9**
JCT				IAmb_Lg			08 54 14.6	
	comp=Z,147nm,0.7s							
JCT	**Junction City**	**6.01**	**189**	P		**Pn**	**08 52 15.5**	**+0.2**
	baz=8.2							
P40A	**Paris**	**6.12**	**58**			**Pn**	**08 52 16.6**	**-0.2**
N38A	**Joes South For**	**6.12**	**43**			**Pn**	**08 52 15.8**	**-1.0**
LCAR	**Lake Charles**	**6.14**	**91**	Pn		**Pn**	**08 52 17.0**	**0.0**
LCAR				IAmb_Lg			08 53 58.5	
	comp=Z,87nm,1.0s							
K31A	**O'Neill**	**6.18**	**360**	Pn		**Pn**	**08 52 18.1**	**+0.5**
K31A				IAmb_Lg			08 54 06.6	
	comp=Z,145nm,0.9s							
CCM	**Cathedral Cave**	**6.19**	**73**	Pn		**Pn**	**08 52 16.9**	**-0.9**
CCM	**Cathedral Cave**	**6.19**	**73**	P		**Pn**	**08 52 17.7**	**-0.1**
	baz=257							
CCAR	**Cane Creek**	**6.23**	**112**	Pn		**Pn**	**08 52 19.1**	**+0.7**
CCAR				IAmb_Lg			08 54 17.4	
	comp=Z,107nm,0.9s							
ISCO	**Idaho Springs**	**6.38**	**304**			**Pn**	**08 52 20.5**	**-0.1**
ISCO	**Idaho Springs**	**6.38**	**304**	P		**Pn**	**08 52 21.1**	**+0.5**
	baz=120,SNR=6.2							
ANMO	**Albuquerque**	**6.46**	**259**	Pn		**Pn**	**08 52 21.2**	**-0.4**
ANMO	**Albuquerque**	**6.46**	**259**	P		**Pn**	**08 52 22.4**	**+0.8**
	baz=74							
S22A	**4UR Ranch, Cre**	**6.60**	**284**	Pn		**Pn**	**08 52 25.5**	**+1.8**
PBMO	**Poplar Bluff**	**6.69**	**85**	IAmb_Lg			08 54 29.4	
	comp=Z,116nm,0.7s							
FVM	**French Village**	**6.81**	**74**	Pn		**Pn**	**08 52 27.1**	**+0.8**
FVM				IAmb_Lg			08 54 23.5	
	comp=Z,112nm,0.8s							
BNM	**Barren Site**	**6.84**	**253**	Pn		**Pn**	**08 52 25.7**	**-1.3**
HKT	**Hockley**	**6.91**	**159**	Pn		**Pn**	**08 52 25.7**	**-2.0**
SCIA	**State Center**	**6.94**	**36**	IAmb_Lg			08 54 40.3	
	comp=Z,127nm,0.7s							
SCIA	**State Center**	**6.94**	**36**	P		**Pn**	**08 52 29.0**	**+0.8**
	baz=220							
143A	**Socs Landing,**	**7.10**	**119**	IAmb_Lg			08 54 51.8	
	comp=Z,80nm,1.1s							
LENM	**Lemitar**	**7.11**	**254**	Pn		**Pn**	**08 52 30.0**	**-0.6**
PHWY	**Pilot Hill**	**7.14**	**315**	Pn		**Pn**	**08 52 31.1**	**-0.1**
PHWY				IAmb_Lg			08 54 37.0	
	comp=Z,74nm,0.8s							
N23A	**Red Feather La**	**7.18**	**310**			**Pn**	**08 52 32.2**	**+0.6**
N23A				IAmb_Lg			08 54 37.4	
	comp=Z,113nm,0.8s							
N23A	**Red Feather La**	**7.18**	**310**	P		**Pn**	**08 52 31.6**	**-0.1**
	baz=126,SNR=6.5							
MNTX	**Cornudas Mount**	**7.26**	**231**	Pn		**Pn**	**08 52 33.0**	**+0.5**
MNTX				IAmb_Lg			08 54 45.8	
	comp=Z,74nm,1.0s							
MNTX	**Cornudas Mount**	**7.26**	**231**	P		**Pn**	**08 52 32.9**	**+0.4**
	baz=48,SNR=10							
MNTX	**Cornudas Mount**	**7.26**	**231**	P		**Pn**	**08 52 32.7**	**+0.2**
	baz=48							
MET	**Memphis--Engin**	**7.28**	**98**	IAmb_Lg			08 54 58.0	
	comp=Z,112nm,0.9s							
342A	**Flagon Creek P**	**7.34**	**132**	Pn		**Pn**	**08 52 33.2**	**-0.4**
ECSD	**EROS Data Cent**	**7.47**	**12**	Pn		**Pn**	**08 52 33.8**	**-1.5**
ECSD	**EROS Data Cent**	**7.47**	**12**	P		**Pn**	**08 52 33.8**	**-1.5**
	baz=193,SNR=16							
LNXT	**Lenox**	**7.48**	**90**	IAmb_Lg			08 54 55.2	
	comp=Z,126nm,0.7s							
N41A	**Harden Midland**	**7.50**	**53**	Pn		**Pn**	**08 52 35.7**	**-0.1**
735A	**Kenedy**	**7.60**	**174**	IAmb_Lg			08 54 57.4	
	comp=Z,66nm,0.8s							
GLAT	**Glass**	**7.63**	**88**	Pn		**Pn**	**08 52 36.5**	**-1.0**
S44A	**Carbondale**	**7.69**	**78**	Pn		**Pn**	**08 52 37.4**	**-0.9**
S44A				IAmb_Lg			08 55 07.2	
	comp=Z,95nm,0.7s							
SIUC	**Southern Illin**	**7.72**	**78**	Pn		**Pn**	**08 52 37.3**	**-1.4**
SIUC				IAmb_Lg			08 54 55.8	
	comp=Z,112nm,0.8s							
K38A	**Parkersburg**	**7.72**	**35**	Pn		**Pn**	**08 52 37.3**	**-1.6**
OXF	**Oxford**	**7.85**	**101**	Pn		**Pn**	**08 52 40.0**	**-0.6**
OXF				IAmb_Lg			08 55 02.3	
	comp=Z,49nm,1.0s							
OXF	**Oxford**	**7.85**	**101**	P		**Pn**	**08 52 40.5**	**0.0**
	baz=287							
W45A	**Hickory Valley**	**7.87**	**97**	Pn		**Pn**	**08 52 39.1**	**-1.7**
W45A				IAmb_Lg			08 54 58.5	
	comp=Z,103nm,0.8s							
P43A	**Skaggs, Pawnee**	**7.94**	**63**	Pn		**Pn**	**08 52 41.1**	**-0.7**
Y45A	**Yeager Farm, C**	**7.96**	**106**	IAmb_Lg			08 55 15.7	
	comp=Z,45nm,0.8s							
SUSD	**Miller**	**8.00**	**359**	IAmb_Lg			08 55 06.8	
	comp=Z,62nm,0.8s							
SUSD	**Miller**	**8.00**	**359**	P		**Pn**	**08 52 41.5**	**-1.1**
	baz=179							
Q44A	**Meyer Farm, Va**	**8.09**	**69**	Pn		**Pn**	**08 52 43.2**	**-0.7**
L40A	**Anamosa**	**8.09**	**44**	Pn		**Pn**	**08 52 43.5**	**-0.4**
833A	**Chaparral WMA,**	**8.11**	**184**	Pn		**Pn**	**08 52 42.8**	**-1.3**
833A				IAmb_Lg			08 55 10.9	
	comp=Z,42nm,0.8s							
833A	**Chaparral WMA,**	**8.11**	**184**	P		**Pn**	**08 52 44.6**	**+0.4**
	baz=3.8							
TX31	**Lajitas Ar. Si**	**8.21**	**212**	Pn		**Pn**	**08 52 44.5**	**-1.1**
TX31	**Lajitas Ar. Si**	**8.21**	**212**	P		**Pn**	**08 52 45.7**	**+0.2**
	baz=29,SNR=24							
TXAR	**Lajitas Array**	**8.21**	**212**	Pn		**Pn**	**08 52 45.4**	**-0.2**
TX32	**Lajitas Array**	**8

BBGB IAmb IAmb 08 55 11.9
comp=Z,23nm,1.0s

NNC ***20*** *08:55:42.2±2.8, 44.08N×83.28E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=24.4km s-min=8.0km az=122.0*
SOME ***20*** *08:55:44.1, 44.23N×83.10E, h10km*
ISC 20 08:55:44.7±1.5, 44.40N±0.07×83.05E±0.07, h10km, n23, σ2§04/33, 5C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**2.17**	**245**	*eP*	**Pb**	**08 56 23.9**	**-0.2**
	2.7nm,0.2s						
KTMS				*eS*	**Sg**	**08 56 52.9**	**-1.4**
	33nm,0.2s						
KTMS	**Ketmen**	**2.17**	**245**	Pg	**Pb**	**08 56 23.8**	**-0.2**
	2.0nm,0.1s						
KTMS				Lg	Lg	08 56 53.3	
	33nm,0.2s						
DJR	**Jarkent**	**2.34**	**270**	*eP*	**Pg**	**08 56 29.1**	**-0.4**
	4.1nm,0.3s						
DJR				*eS*	**Sg**	**08 57 00.9**	**+1.1**
	34nm,0.4s						
MK31	**Makanchi Array**	**2.46**	**348**	⇑Pn	**Pb**	**08 56 27.7**	**-1.3**
	1.2nm,0.3s,baz=161,slow=16,SNR=59						
MK31				⇑Sn	**Sg**	**08 57 03.4**	**-0.3**
	2.5nm,0.2s,baz=156,slow=26,SNR=14						
MK31				⇑Lg	Lg	08 57 09.6	
	44nm,0.6s						
MAKZ	**Makanchi**	**2.53**	**343**	⇓Pn	**Pg**	**08 56 31.5**	**-1.7**
	1.2nm,0.3s						
MAKZ				⇑Sn	**Sg**	**08 57 05.9**	**0.0**
	17nm,0.6s						
SHLS	**Shalkode**	**2.88**	**246**	*eP*	**Pn**	**08 56 31.9**	**+1.2**
	5.4nm,0.2s						
SHLS				*eS*	**Sn**	**08 57 06.2**	**+0.7**
	70nm,0.6s						
SHLS	**Shalkode**	**2.88**	**246**	Pg	**Pn**	**08 56 31.5**	**+0.8**
	7.6nm,0.3s						
SHLS				Lg	Lg	08 57 05.8	
	70nm,0.6s						
UZB	**Uzynbulak**	**3.17**	**248**	*eP*	**Pb**	**08 56 41.4**	**+0.2**
	1.4nm,0.1s						
UZB				*eS*	**Sb**	**08 57 22.6**	**+2.6**
	11nm,0.2s						
UZB	**Uzynbulak**	**3.17**	**248**	Pg	**Pb**	**08 56 41.4**	**+0.2**
	1.4nm,0.1s						
UZB				Lg	Lg	08 57 22.6	
	11nm,0.2s						
KPKS	**Kokpek**	**3.29**	**255**	*eP*	**Pb**	**08 56 43.4**	**+0.3**
	3.0nm,0.4s						
KPKS				*eS*	**Sb**	**08 57 26.2**	**+3.0**
	31nm,0.5s						
KPKS	**Kokpek**	**3.29**	**255**	Pg	**Pb**	**08 56 43.4**	**+0.3**
	3.0nm,0.4s						
KPKS				Lg	Lg	08 57 26.2	
	31nm,0.5s						
ZSN	**Zaisan**	**3.31**	**22**	*eP*	**Pg**	**08 56 46.8**	**-1.3**
	3.1nm,0.4s						
ZSN				*eS*	**Sg**	**08 57 31.2**	**+0.3**
	9.9nm,0.3s						
SATY	**Saty**	**3.62**	**250**	*eP*	**Pb**	**08 56 49.0**	**+0.1**
	2.1nm,0.1s						
SATY				*eS*	**Sb**	**08 57 36.1**	**+3.2**
	16nm,0.2s						
SATY	**Saty**	**3.62**	**250**	Pg	**Pb**	**08 56 48.9**	**+0.1**
	2.1nm,0.1s						
SATY				Lg	Lg	08 57 36.1	
	16nm,0.2s						
ARXS	**Arharly**	**3.75**	**269**	*eP*	**Pg**	**08 56 53.6**	**-2.9**
	2.9nm,0.4s						
ARXS				*eS*	**Sg**	**08 57 43.3**	**-1.9**
	14nm,0.3s						
ARXS	**Arharly**	**3.75**	**269**	Pg	**Pg**	**08 56 53.6**	**-2.9**
	2.9nm,0.4s						
ARXS				Lg	Lg	08 57 43.3	
	14nm,0.3s						
KTBS	**Karatobe**	**4.64**	**264**	*eP*	**Pg**	**08 57 11.2**	**-2.3**
	0.7nm,0.4s						
KTBS				*eS*	**Sg**	**08 58 13.7**	**+0.1**
	17nm,0.5s						
KTBS	**Karatobe**	**4.64**	**264**	Pg	**Pg**	**08 57 09.3**	**-4.2**
	2.1nm,0.4s						
KTBS				Lg	Lg	08 58 10.5	
	16nm,0.7s						
KRBS	**Karabastau**	**5.36**	**265**	Pg	**Pb**	**08 57 21.4**	**+3.0**
	0.5nm,0.2s						
KRBS				Lg	Lg	08 58 31.4	
	3.6nm,0.5s						
DGS	**Degeres**	**5.39**	**260**	*eP*	**Pg**	**08 57 23.9**	**-4.0**
	4.2nm,0.4s						
DGS				*eS*	**Sg**	**08 58 36.5**	**-1.2**
	7.4nm,0.6s						
DGS	**Degeres**	**5.39**	**260**	Pg	**Pg**	**08 57 23.9**	**-4.0**
	4.2nm,0.4s						
DGS				Lg	Lg	08 58 36.5	
	7.4nm,0.6s						
KURBB	**Kurchatov Arra**	**6.94**	**335**	⇑Lg	Lg	08 59 36.3	
	9.4nm,0.7s						
KURK	**Kurchatov**	**7.00**	**336**	⇓Lg	Lg	08 59 36.1	
	4.0nm,0.6s						

HEL 20 08:57:44.7±0.4, 68.11N×33.67E, h0km, ML1.2,
Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVZ	**Lovozero**	**0.43**	**119**	Pg	**Pg**	**08 57 52.8**	**0.0**
LVZ				SG	Sg	08 57 57.7	-0.6
VRF	**Varrio**	**1.58**	**259**	PG	Pn	08 58 13.4	-0.5
VRF				MSG		08 58 31.9	
	comp=Z,1.7nm,0.2s						
VRF				SG	Sn	08 58 33.0	-2.0
OLKF	**Oulanka, Finla**	**2.45**	**225**	PN	Pn	08 58 24.0	-1.8
OLKF				SN	Sn	08 58 53.7	-2.7
SGF	**Sodankyl**	**2.80**	**259**	SG	Sb	08 59 09.8	-0.3
MSF	**Maaselka**	**2.86**	**222**	SN	Sn	08 59 05.6	-0.9
ARA0	**ARCESS Array S**	**3.29**	**300**	PB	Pn	08 58 40.5	+3.1
ARA0				SB	Sb	08 59 21.0	-3.4
HEF	**Hetta**	**3.74**	**279**	PG	Pb	08 58 51.3	-0.2
HEF				SB	Sb	08 59 33.4	-3.9

KRSZO 20 09:03:07.0, 47.90N×20.09E, h0km, ML2.1/3, Explosion.
GT info : GT2 explosion locality : Recsk, Hungary

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSZ	**Piszkesteto**	**0.13**	**279**	Pg	Pg	09 03 10.0	+0.5
PSZ				Lg	Lg	09 03 13.2	
PSZ	**Piszkesteto**	**0.13**	**279**	P	Pg	09 03 10.0	+0.5
PSZ				S	Sg	09 03 13.2	+2.0
KECS	**Kecovo**	**0.64**	**24**	Pg	Pb	09 03 20.6	-0.5
KECS				Lg	Lg	09 03 31.8	
KECS	**Kecovo**	**0.64**	**24**	*e*PG	Pg	09 03 20.1	+0.8
KECS				*e*SG	Sb	09 03 30.5	-0.1
VYHS	**Vyhne**	**1.03**	**306**	Pg	Pb	09 03 27.3	-0.3
VYHS				Lg	Lg	09 03 41.2	
VYHS	**Vyhne**	**1.03**	**306**	*e*PG	Pg	09 03 27.0	+0.3
VYHS				*e*SG	Sb	09 03 41.2	-0.5
KOLL	**Kolacno**	**1.32**	**302**	*e*PG	Pg	09 03 32.3	+0.1
KOLL				*e*SG	Sb	09 03 50.1	+0.1
LANS	**Liptovska Anna**	**1.32**	**342**	*e*PG	Pn	09 03 33.4	+0.7
LANS				*e*SG	Sn	09 03 51.1	+0.1

NEIC ***20*** *09:25:38.2±0.9, 20.32S±0.06×168.9E±0.1, h10km±2km, mb4.4/11, Error ellipse: s-maj=20.8km s-min=12.4km az=57.0*
NOU ***20*** *09:25:38.7, 20.29S×168.90E, h20km, MLv4.4/10, Loyalty Islands*
IDC ***20*** *09:25:45.6±1.6, 18.82S×167.48E, h0km, mb4.2/3, mbtmp4.2/3, MS3.4/4, Error ellipse: s-maj=51.3km s-min=38.1km az=69.0*
ISC 20 09:25:41.2±0.9, 20.32S±0.06×168.9E±0.1, h31km, n32,
σ1§86/26, mb4.4/8, MS3.3/4, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**1.40**	**214**	Pn	**Pn**	**09 26 02.7**	**-1.9**
MARNC	**Mare, Loyalty**	**1.40**	**214**	P	**Pn**	**09 26 02.6**	**-2.0**
RTV	**Rentapao**	**2.55**	**350**	P	Pn	**09 26 19.2**	**-1.2**
PINNC	**Pines Island,**	**2.64**	**210**	Pn	**Pn**	**09 26 21.1**	**-0.6**
PINNC	**Pines Island,**	**2.64**	**210**	P	**Pn**	**09 26 21.0**	**-0.6**
DVP	**Devils Point**	**2.66**	**346**	P	**Pn**	**09 26 20.0**	**-1.9**
NOUC	**Port Laguerre**	**2.98**	**233**	P	**Pn**	**09 26 26.1**	**-0.2**
KOUNC	**Koumac, New Ca**	**4.30**	**266**		**Pn**	**09 26 43.6**	**-0.9**
KOUNC	**Koumac, New Ca**	**4.30**	**266**	P	**Pn**	**09 26 43.6**	**-0.9**
BKZ	**Black Stump Fm**	**19.90**	**162**	P	**Pn**	**09 30 12.1**	**+0.2**
BKZ				IAmb	IAmb	09 30 22.6	
	comp=Z,16nm,1.1s						
CTA	**Charters Tower**	**21.23**	**267**	P	**P**	**09 30 28.2**	**+3.6**
	comp=Z,7.3nm,0.6s,baz=89,slow=11,SNR=16						
CTAO	**Charters Tower**	**21.23**	**267**	P	**P**	**09 30 27.1**	**+2.5**
CTAO				IAmb	IAmb	09 30 29.0	
	comp=Z,9.5nm,0.8s						
PMG	**Port Moresby**	**23.59**	**294**	LR	LR	09 37 33.3	
	comp=Z,86nm,21.3s,baz=252,slow=32						
STKA	**Stephens Creek**	**26.99**	**239**	LR	LR	09 41 30.2	
	comp=Z,79nm,18.5s,baz=26,slow=35						
STKA	**Stephens Creek**	**26.99**	**239**	P	**P**	**09 31 19.4**	**-0.9**
WR0	**Warramunga Arr**	**32.20**	**265**	P	**P**	**09 32 05.3**	**-1.4**
WR0				IAmb	IAmb	09 32 06.4	
	comp=Z,7.0nm,1.1s						
WB0	**Warramunga Arr**	**32.36**	**265**	P	**P**	**09 32 07.0**	**-1.2**
WB0				IAmb	IAmb	09 32 07.7	
	comp=Z,5.9nm,0.8s						
WB2	**Warramunga Arr**	**32.38**	**265**	P	**P**	**09 32 06.8**	**-1.5**
WRAB	**Tennant Creek**	**32.38**	**265**	P	**P**	**09 32 07.1**	**-1.2**
WRAB				IAmb	IAmb	09 32 11.6	
	comp=Z,7.6nm,1.2s						
WRA	**Warramunga Arr**	**32.39**	**265**	P	**P**	**09 32 07.2**	**-1.1**
	comp=Z,3.0nm,0.6s,baz=91,slow=8.4,SNR=47						
WRA				LR	LR	09 43 42.8	
	comp=Z,110nm,21.7s,baz=44,slow=34						
	comp=Z,3.0nm,0.6s						
WRA	**Warramunga Arr**	**32.39**	**265**	P	**P**	**09 32 06.2**	**-2.2**
AS31	**Alice Springs**	**32.54**	**258**	P	**P**	**09 32 09.1**	**-0.7**
AS31				IAmb	IAmb	09 32 10.3	
	comp=Z,4.1nm,0.8s						
ASAR	**Alice Springs**	**32.54**	**258**		**P**	**09 32 08.5**	**-1.3**
GUMO	**Guam**	**41.14**	**323**	LR	LR	09 50 38.5	
	comp=Z,37nm,18.1s,baz=132,slow=38						
NWAO	**Narrogin (SRO)**	**47.42**	**244**	P	**P**	**09 34 12.2**	**-0.7**
VNDA	**Vanda**	**57.35**	**182**	P	P	09 35 45.2	+19
	comp=Z,0.7nm,0.4s,baz=26,slow=2.2,SNR=6.9						
	comp=Z,0.7nm,0.4s						
TROLL	**Troll, Antarti**	**87.44**	**184**	P	**P**	**09 38 24.5**	**-0.9**
SONM	**Songino Array**	**87.87**	**323**	P	**P**	**09 38 27.8**	**+0.1**
	comp=Z,1.7nm,0.9s,baz=138,slow=5.2,SNR=6.5						
	comp=Z,1.7nm,0.9s						
SONM	**Songino Array**	**87.87**	**323**	IAmb	IAmb	09 38 28.8	
	comp=Z,2.2nm,1.0s						
VNA3	**Neumayer Olymp**	**88.67**	**180**	P	**P**	**09 38 30.6**	**-0.6**
ARCES	**ARCESS Array B**	**126.02**	**345**	PKP	**PKiKP**	**09 44 45.3**	**+5.3**
	comp=Z,1.8nm,0.8s,baz=31,slow=2.1,SNR=5.1						
GERES	**GERESS Array B**	**145.27**	**331**	PKhKP	PKPpre	09 45 14.6	
	comp=Z,0.4nm,0.5s,baz=60,slow=7.9,SNR=4.4						

IDC ***20*** *09:51:53.7±0.8, 52.20N×169.39W, h0km, mb4.0/21, mbtmp4.0/23, ML3.5/2, MS3.5/17, Error ellipse: s-maj=24.1km s-min=12.9km az=174.0*
AEIC ***20*** *09:51:57±2.2, 52.12N±0.04×169.32W±0.02, h31km±4km, Error ellipse: s-maj=5.7km s-min=2.2km az=182.0*
NEIC ***20*** *09:51:59.7±1.9, 52.22N±0.06×169.39W±0.06, h39km±5km, mb3.9/19, ML4.1/6, ML3.8/29(AEIC), Error ellipse: s-maj=8.7km s-min=5.5km az=172.0*
ISC 20 09:51:58.0±0.6, 52.14N±0.09×169.29W±0.06, h30km, n92,
σ1§08/71, mb4.1/25, MS3.5/15, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIKH	**Nikolski High**	**0.87**	**18**		**Pn**	**09 52 13.2**	**-1.0**
NIKH					Sn	**09 52 27.2**	**+1.3**
OKSO	**Okmok South**	**1.40**	**29**		**Pn**	**09 52 21.6**	**+0.2**
OKSO					**Sb**	**09 52 40.7**	**-0.3**
OKFG	**Magazine Ridge**	**1.52**	**33**		**Pn**	**09 52 23.6**	**+0.4**
MSW	**Makushin Switc**	**2.33**	**40**		**Pn**	**09 52 35.0**	**+0.6**
UNV	**Unalaska Valle**	**2.40**	**44**		**Pn**	**09 52 35.7**	**+0.5**
MTBL	**Makushin Table**	**2.42**	**40**		**Pn**	**09 52 36.6**	**+1.1**
AKBBA	**Akutan Broad B**	**2.82**	**45**		**Pn**	**09 52 42.5**	**+1.6**
AKUT	**Akutan**	**2.91**	**45**	Pn	**Pn**	**09 52 42.8**	**+0.6**
AKUT				IAML		09 53 36.0	
	comp=N,266nm,1.3s						
KOFP	**Korovin Flat P**	**2.96**	**274**		**Pn**	**09 52 44.2**	**+1.3**
ATKA	**Atka Island**	**3.02**	**273**		**Pn**	**09 52 44.2**	**+0.5**
GSTR	**Great Sitkin T**	**4.17**	**272**		**Pn**	**09 53 01.0**	**+1.4**
GSMY	**Great Sitkin M**	**4.17**	**271**		**Pn**	**09 53 00.6**	**+1.0**
GSTD	**Great Sitkin T**	**4.22**	**272**		**Pn**	**09 53 01.4**	**+1.0**
GSCK	**Great Sitkin C**	**4.24**	**271**		**Pn**	**09 53 01.6**	**+1.1**
FALS	**False Pass**	**4.44**	**50**	Pn	**Pn**	**09 53 04.2**	**+1.0**
ADK	**Adak**	**4.57**	**270**	Pn	**Pn**	**09 53 05.4**	**+0.3**
ADK	**Adak**	**4.57**	**270**	IAML		09 54 18.9	
	comp=N,166nm,0.8s						
ADK				IAML		09 54 25.4	
	comp=N,214nm,0.9s						
KIWB	**Kanaga Island**	**4.86**	**270**		**Pn**	**09 53 10.7**	**+1.6**
KIKV	**Kanaga Island**	**4.87**	**270**		**Pn**	**09 53 10.7**	**+1.5**
KIMD	**Kanaga Island**	**4.93**	**269**		**Pn**	**09 53 11.0**	**+1.1**
SPIA	**Saint Paul Isl**	**5.07**	**354**		**Pn**	**09 53 14.6**	**+2.6**
TAPA	**Tanaga Point A**	**5.28**	**270**		**Pn**	**09 53 15.9**	**+1.2**
TAFP	**Tanaga Falls P**	**5.37**	**271**		**Pn**	**09 53 17.2**	**+1.2**
TASE	**Tanaga Southea**	**5.41**	**270**		**Pn**	**09 53 18.3**	**+1.7**
AMKA	**Amchitka**	**7.12**	**268**		**Pn**	**09 53 41.3**	**+1.2**
SHEM	**Shemya Is, Ala**	**10.16**	**280**	Pn	**Pn**	**09 54 23.4**	**+1.8**
	comp=N,2.2nm,0.3s,baz=65,slow=1.8,SNR=7.5						
SHEM				LR	LR	09 58 11.7	
	comp=N,214nm,20.4s,baz=102,slow=38						
KDAK	**Kodiak Island**	**11.13**	**53**	Pn	**Pn**	**09 54 33.3**	**-1.5**
	comp=N,0.6nm,0.3s,baz=236,slow=6.5,SNR=15						
L19K	**White Mountain**	**12.71**	**32**		**Pn**	**09 54 58.9**	**+2.3**
BPAW	**Bear Paw Mtn.**	**15.32**	**31**	P	**Pn**	**09 55 33.9**	**+2.1**
BPAW				IAmb	IAmb	09 55 47.0	
	comp=Z,8.2nm,0.8s						
SCM	**Sheep Creek Mo**	**15.33**	**42**	Pn	**Pn**	**09 55 30.6**	**-1.4**
I21K	**Tanana**	**15.79**	**27**	P	**P**	**09 55 41.2**	**-0.2**
I21K				IAmb	IAmb	09 56 09.6	
	comp=Z,8.0nm,1.1s						
H21K	**Melozitna Rive**	**15.92**	**25**	P	**P**	**09 55 45.0**	**+2.1**
H21K				IAmb	IAmb	09 55 56.5	
	comp=Z,6.8nm,1.1s						
MLY	**Manley**	**16.04**	**29**	P	**P**	**09 55 44.1**	**-0.2**
MLY				IAmb	IAmb	09 56 09.4	
	comp=Z,9.7nm,1.1s						
I23K	**Minto, Yukon-K**	**16.55**	**30**	Pn	**Pn**	**09 55 47.1**	**-0.4**
GLB	**Gilahina Butte**	**16.67**	**46**	Pn	**Pn**	**09 55 48.1**	**-1.0**
GLB				IAmb	IAmb	09 55 54.1	
	comp=Z,21nm,1.4s						
ILAR	**Eielson Array**	**17.11**	**34**	Pn	**Pn**	**09 55 52.9**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=242,slow=11,SNR=7.0						
	comp=Z,0.2nm,0.3s						
H24K	**Noodor Dome**	**17.47**	**30**	IAmb	IAmb	09 56 19.4	
	comp=Z,11nm,1.4s						
J26L	**Joseph Creek**	**18.15**	**37**	IAmb	IAmb	09 56 28.1	
	comp=Z,5.2nm,0.6s						
TOLK	**Toolik Lake Re**	**19.04**	**22**	IAmb	IAmb	09 56 21.8	
	comp=Z,11nm,1.5s						
HYT	**Haines Junctio**	**19.41**	**51**		**Pn**	**09 56 24.2**	**+1.4**
BMAR	**Burnt Mountain**	**19.51**	**29**		**P**	**09 56 23.1**	**+0.6**
DAWY	**Dawson**	**19.57**	**41**		**P**	**09 56 24.5**	**+1.3**
PEA0B	**Petropavlovsk-**	**19.97**	**286**	P	**P**	**09 56 26.6**	**-0.9**
PEA0B				IAmb	IAmb	09 56 29.6	
	comp=Z,17nm,1.0s						
PETK	**Petropavlovsk-**	**19.97**	**286**	P	**P**	**09 56 27.0**	**-0.6**
	comp=Z,1.4nm,0.3s,baz=88,slow=13,SNR=20						
PETK				LR	LR	10 03 23.1	
	comp=Z,108nm,21.8s,baz=95,slow=35						
	comp=Z,7.2nm,0.6s						
PETK	**Petropavlovsk-**	**19.97**	**286**	P	**P**	**09 56 26.9**	**-0.6**
EPYK	**Eagle Plains**	**21.55**	**36**	P	**P**	**09 56 43.2**	**-1.4**
EPYK				IAmb	IAmb	09 56 55.4	
	comp=Z,7.2nm,0.7s						
SEY	**Seymchan**	**22.86**	**313**	P	**P**	**09 56 57.2**	**-1.3**
	comp=Z,1.4nm,0.6s,baz=16,slow=0.7,SNR=18						
SEY				LR	LR	10 06 07.3	
	comp=Z,159nm,18.8s,baz=162,slow=38						
	comp=Z,1.4nm,0.6s						
DLBC	**Dease Lake**	**22.96**	**59**	P	P	09 57 07.9	+8.2
	comp=Z,1.4nm,0.5s,baz=300,slow=8.1,SNR=5.5						
DLBC	**Dease Lake**	**22.96**	**59**	IAmb	IAmb	09 57 12.8	
	comp=Z,4.9nm,1.0s						
INK	**Inuvik**	**23.51**	**33**	P	**P**	**09 57 04.2**	**-0.8**
	comp=Z,1.1nm,0.5s,baz=350,slow=17,SNR=12						
	comp=Z,1.1nm,0.5s						
YKA	**Yellowknife Ar**	**30.36**	**49**	P	**P**	**09 58 07.3**	**+0.6**
	comp=Z,0.4nm,0.4s,baz=275,slow=8.4,SNR=11						
YKA				LR	LR	10 12 38.3	
	comp=Z,95nm,18.0s,baz=222,slow=41						
	comp=Z,0.4nm,0.4s						
ASAJ	**Asahikawa**	**32.57**	**275**	LR	LR	10 10 22.6	
	comp=Z,41nm,21.1s,baz=87,slow=34						
TIXI	**Tiksi**	**32.95**	**329**	LR	LR	10 12 31.0	
	comp=Z,54nm,19.3s,baz=180,slow=38						
YAK	**Yakutsk**	**33.35**	**311**	LR	LR	10 12 49.0	
	comp=Z,73nm,18.0s,baz=89,slow=38						
RES	**Resolute Bay**	**36.55**	**25**	LR	LR	10 18 10.5	
	comp=Z,119nm,18.1s,baz=2.5,slow=43						
KLR	**Kul'dur**	**36.58**	**290**	P	**P**	**09 58 59.6**	**-1.3**
	comp=Z,1.1nm,0.5s,baz=79,slow=7.7,SNR=5.2						
KLR				LR	LR	10 15 58.7	
	comp=Z,86nm,18.1s,baz=65,slow=40						
	comp=Z,1.1nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**37.31**	**219**	T	T	10 39 43.7	
	baz=24,slow=75,SNR=27						
H11N3	**WAKE ISLAND Hy**	**37.31**	**219**	T	T	10 39 44.2	
	baz=24,slow=75,SNR=37						
H11N1	**WAKE ISLAND Hy**	**37.32**	**219**	T	T	10 39 46.2	
	baz=24,slow=75,SNR=16						
NVAR	**Mina Array Bea**	**37.61**	**91**	P	**P**	**09 59 10.5**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=305,slow=8.3,SNR=1.1						
ELK	**Elko**	**38.10**	**85**	LR	LR	10 13 29.1	
	comp=Z,107nm,18.1s,baz=264,slow=34						
H11S1	**WAKE ISLAND Hy**	**38.49**	**218**	T	T	10 40 23.7	
	baz=23,slow=76,SNR=116						
H11S2	**WAKE ISLAND Hy**	**38.51**	**218**	T	T	10 40 41.9	
	baz=23,slow=76,SNR=66						
H11S3	**WAKE ISLAND Hy**	**38.51**	**218**	T	T	10 40 26.9	
	baz=23,slow=76,SNR=3.2						
PDAR	**Pinedale Array**	**40.40**	**79**	P	**P**	**09 59 33.8**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=298,slow=4.1,SNR=7.6						
PDAR				LR	LR	10 14 56.8	
	comp=Z,65nm,18.9s,baz=252,slow=34						
	comp=Z,0.6nm,0.6s						
PFO	**Pinyon Flats O**	**41.88**	**95**	LR	LR	10 13 16.9	
	comp=Z,80nm,20.4s,baz=266,slow=31						
KSRS	**Korea Array**	**45.48**	**277**	P	**P**	**10 00 14.8**	**+0.6**
	comp=Z,3.6nm,0.9s,baz=52,slow=8.1,SNR=14						
	comp=Z,3.6nm,0.9s						
JNU	**Nakatsue**	**46.51**	**270**	P	**P**	**10 00 22.1**	**-0.4**
	comp=Z,155nm,0.4s,baz=155,slow=0.4,SNR=5.5						
JNU	**Nakatsue**	**46.51**	**270**	IAmb	IAmb	10 00 23.4	
	comp=Z,29nm,0.7s						
ANMO	**Albuquerque**	**47.14**	**86**	LR	LR	10 17 18.0	
	comp=Z,91nm,19.7s,baz=252,slow=32						
SPITS	**Spitsbergen Ar**	**49.90**	**358**	P	**P**	**10 00 47.4**	**-0.6**
	comp=Z,1.1nm,0.4s,baz=57,slow=3.1,SNR=6.3						
	comp=Z,1.1nm,0.4s						
SUMG	**Summit**	**50.98**	**17**	*i* P	**P**	**10 00 57.0**	**+0.3**
SONM	**Songino Array**	**51.45**	**301**	P	**P**	**10 01 00.0**	**-0.3**
	comp=Z,0.7nm,0.4s,baz=52,slow=7.0,SNR=10						
	comp=Z,0.7nm,0.4s						
SFJD	**Kangerlussuaq**	**52.56**	**26**	LR	LR	10 27 37.7	
	comp=Z,66nm,18.7s,baz=287,slow=41						
TXAR	**Lajitas Array**	**52.71**	**89**	P	**P**	**10 01 10.5**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=308,slow=5.7,SNR=10						
	comp=Z,0.5nm,0.6s						
ARCES	**ARCESS Array B**	**58.15**	**354**	LR	LR	10 28 42.2	
	comp=Z,22nm,19.1s,baz=26,slow=38						
TKL	**Tuckaleechee C**	**60.25**	**69**	LR	LR	10 27 37.1	
	comp=Z,27nm,19.0s,baz=320,slow=36						
KURK	**Kurchatov**	**62.57**	**318**	P	**P**	**10 02 18.8**	**0.0**
KURBB	**Kurchatov Arra**	**62.68**	**318**	P	**P**	**10 02 19.3**	**-0.2**
	comp=Z,0.8nm,0.3s,baz=42,slow=6.7,SNR=14						
	comp=Z,0.8nm,0.3s						
MKAR	**Makanchi Array**	**63.99**	**314**	P	**P**	**10 02 27.5**	**-0.8**
	comp=Z,2.0nm,0.7s,baz=36,slow=11,SNR=5.5						
	comp=Z,0.8nm,0.7s						
FINES	**FINESS Array B**	**66.10**	**352**	P	**P**	**10 02 41.2**	**-0.4**
	comp=Z,1.0nm,0.5s,baz=25,slow=6.7,SNR=8.3						
FINES				LR	LR	10 31 31.1	
	comp=Z,25nm,21.6s,baz=122,slow=36						
	comp=Z,1.0nm,0.5s						
NB2	**NORSAR Subarra**	**67.17**	**360**	P	**P**	**10 02 48.3**	**-0.2**
	comp=Z,2.2nm,0.7s,baz=1.2,slow=6.9						
NOA	**NORSAR Array B**	**67.17**	**360**	P	**P**	**10 02 48.1**	**-0.4**
	comp=Z,1.1nm,0.8s,baz=359,slow=6.2,SNR=4.3						
	comp=Z,1.1nm,0.8s						
AKTO	**Aktyubinsk**	**70.23**	**330**	P	**P**	**10 03 07.7**	**-0.1**
	comp=Z,1.9nm,0.8s,baz=63,slow=3.2,SNR=6.6						
	comp=Z,1.9nm,0.8s						
AAK	**Ala-Archa**	**70.69**	**315**	P	**P**	**10 03 10.8**	**-0.1**
	comp=Z,2.2nm,0.3s,baz=29,slow=2.3,SNR=2.3						
	comp=Z,2.2nm,0.3s						
BELG	**Belogornoye**	**71.31**	**337**	P	**P**	**10 03 14.4**	**+0.2**
	comp=Z,6.7nm,0.6s,baz=317,slow=7.5,SNR=4.2						
	comp=Z,6.7nm,0.6s						
AKASG	**Malin Array Be**	**76.34**	**348**	P	**P**	**10 03 42.7**	**-1.0**
	comp=Z,0.7nm,0.5s,baz=16,slow=5.2,SNR=5.6						
	comp=Z,0.7nm,0.5s						
CMAR	**Chiang Mai Arr**	**76.71**	**283**	P	**P**	**10 03 46.5**	**+0.2**
	comp=Z,2.2nm,0.9s,baz=29,slow=6.0

M_{ww}0.61±.06; M_{W}0.91±.23; Best double couple: M_{o}3.26400×10^{16} NP1,ϕ_{s}0.00000°, δ36.00000°, λ-108.00000°. NP2,ϕ_{s}202.00000°, δ56.00000°, λ-77.00000°. Principal axes: T 3.2610, Plg10.0000°, Azm283.0000°; N 0.0080, Plg11.0000°, Azm15.0000°; P -3.2660, Plg76.0000°, Azm151.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 20 10:11:38.6±0.6, **14°.50N**±0°.09×**144°.3E**±0°.2, **h27**km, **n48, σ0s55/29, mb4.2/21, MS3.8/16, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.05**	**149**	Pn	**Pn**	**10 11 57.4**	**-0.2**
	84nm,0.3s,baz=304,slow=4.9,SNR=37						
GUMO				Sn	**Sn**	**10 12 12.1**	**+0.6**
	160nm,0.3s,baz=149,slow=13,SNR=8.0						
JCJ	**Chichijima**	**12.69**	**351**	LR	LR	10 18 16.6	
	comp=Z,324nm,21.4s,baz=174,slow=32						
JOW	**Kunigami**	**19.36**	**312**	LR	LR	10 21 47.3	
	comp=Z,885nm,21.1s,baz=115,slow=32						
DAV	**Davao City (W)**	**19.82**	**250**	LR	LR	10 21 55.8	
	comp=Z,510nm,21.2s,baz=83,slow=31						
H11S3	**WAKE ISLAND Hy**	**21.81**	**76**	T	T	10 39 27.0	
	baz=262						
H11S1	**WAKE ISLAND Hy**	**21.83**	**76**	T	T	10 39 28.7	
	baz=262						
H11S2	**WAKE ISLAND Hy**	**21.83**	**76**	T	T	10 39 27.8	
	baz=262						
MJAR	**Matsushiro Arr**	**22.62**	**347**	P	**P**	**10 16 37.6**	**+0.2**
	5.3nm,1.1s,baz=171,slow=9.1,SNR=9.1						
	5.3nm,1.1s						
MJAR	**Matsushiro Arr**	**22.62**	**347**	IAmb	IAmb	10 16 40.0	
	comp=Z,6nm,1.4s						
MAJO	**Matsushiro**	**22.62**	**347**	P	**P**	**10 16 37.4**	**0.0**
MAJO				IAmb	IAmb	10 16 48.7	
	comp=Z,34nm,1.4s						
MJB9	**Matsu-Tunnel**	**22.62**	**347**	P	**P**	**10 16 37.2**	**-0.3**
MJB9				IAmb	IAmb	10 16 48.7	
	comp=Z,35nm,1.4s						
PMG	**Port Moresby**	**23.92**	**173**	LR	LR	10 26 28.7	
	comp=Z,113nm,18.2s,baz=316,slow=37						
KSRS	**Korea Array**	**27.11**	**330**	P	**P**	**10 17 19.4**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=149,slow=10,SNR=2.7						
KSRS				LR	LR	10 27 34.3	
	comp=Z,198nm,18.5s,baz=145,slow=35						
	comp=Z,0.6nm,0.6s						
HNR	**Honiara**	**28.39**	**146**	LR	LR	10 28 51.3	
	comp=Z,173nm,19.9s,baz=334,slow=36						
ASAJ	**Asahikawa**	**29.55**	**357**	LR	LR	10 28 44.1	
	comp=Z,115nm,21.8s,baz=202,slow=35						
KAPI	**Kappang**	**31.13**	**233**	LR	LR	10 28 50.9	
	comp=Z,116nm,20.6s,baz=18,slow=33						
USRK	**Ussuriysk Ar.**	**31.41**	**343**	LR	LR	10 29 08.7	
	comp=Z,78nm,19.9s,baz=144,slow=34						
WB0	**Warramunga Arr**	**35.42**	**196**	P	**P**	**10 18 32.0**	**-0.6**
WB0				IAmb	IAmb	10 18 42.6	
	comp=Z,5.7nm,1.2s						
WR0	**Warramunga Arr**	**35.57**	**196**	P	**P**	**10 18 33.7**	**-0.2**
WR0				IAmb	IAmb	10 18 49.0	
	comp=Z,19nm,1.5s						
WRAB	**Tennant Creek**	**35.59**	**196**	P	**P**	**10 18 34.8**	**+0.7**
WRAB				IAmb	IAmb	10 18 44.3	
	comp=Z,7.4nm,1.1s						
WB2	**Warramunga Arr**	**35.60**	**196**	P	**P**	**10 18 33.8**	**-0.3**
WB2				IAmb	IAmb	10 18 53.1	
	comp=Z,9.1nm,1.1s						
WRA	**Warramunga Arr**	**35.61**	**196**	P	**P**	**10 18 34.9**	**+0.7**
	comp=Z,2.4nm,0.9s,baz=12,slow=9.7,SNR=15						
WRA				LR	LR	10 33 46.3	
	comp=Z,140nm,19.2s,baz=22,slow=37						
	comp=Z,2.4nm,0.9s						
KLR	**Kul'dur**	**36.14**	**346**	LR	LR	10 32 31.4	
	comp=Z,264nm,19.3s,baz=160,slow=35						
PETK	**Petropavlovsk-**	**39.95**	**13**	LR	LR	10 33 09.9	
	comp=Z,141nm,21.9s,baz=190,slow=32						
CMAR	**Chiang Mai Arr**	**43.60**	**282**	P	**P**	**10 19 41.8**	**+0.8**
	comp=Z,1.0nm,0.4s,baz=82,slow=5.9,SNR=8.7						
CMAR				LR	LR	10 38 48.0	
	comp=Z,144nm,18.1s,baz=90,slow=37						
	comp=Z,1.0nm,0.4s						
SONM	**Songino Array**	**45.68**	**325**	P	**P**	**10 19 57.4**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=143,slow=8.3,SNR=5.3						
SONM				LR	LR	10 39 07.0	
	comp=Z,300nm,19.4s,baz=117,slow=36						
	comp=Z,0.6nm,0.6s						
MSVF	**Nonsavu**	**46.19**	**133**	LR	LR	10 35 48.9	
	comp=Z,112nm,18.6s,baz=168,slow=32						
STKA	**Stephens Creek**	**46.19**	**183**	P	**P**	**10 20 02.0**	**+0.8**
	comp=Z,2.4nm,0.8s,baz=347,slow=15,SNR=4.1						
STKA				LR	LR	10 41 53.3	
	comp=Z,112nm,18.3s,baz=22,slow=39						
	comp=Z,2.4nm,0.8s						
STKA	**Stephens Creek**	**46.19**	**183**	P	**P**	**10 20 00.8**	**-0.4**
BBOO	**Buckleboo**	**47.70**	**189**	P	**P**	**10 20 11.9**	**-1.1**
YAK	**Yakutsk**	**48.60**	**351**	LR	LR	10 39 54.4	
	comp=Z,135nm,19.9s,baz=89,slow=35						
SEY	**Seymchan**	**48.70**	**5**	LR	LR	10 40 19.3	
	comp=Z,54nm,20.9s,baz=168,slow=35						
MORW	**Morawa**	**51.21**	**212**	P	**P**	**10 20 39.8**	**-0.1**
AFI	**Afiamalu**	**51.82**	**121**	LR	LR	10 38 07.8	
	comp=Z,181nm,20.9s,baz=244,slow=31						
MKAR	**Makanchi Array**	**60.46**	**316**	P	**P**	**10 21 46.2**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=96,slow=8.8,SNR=6.3						
	comp=Z,0.7nm,0.6s						
ZALV	**Zalesovo Beam**	**60.57**	**324**	P	**P**	**10 21 45.6**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=90,slow=5.8,SNR=1.6						
	comp=Z,0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**60.57**	**324**	P	**P**	**10 21 47.0**	**+0.4**
MAKZ	**Makanchi**	**60.68**	**316**	P	**P**	**10 21 48.5**	**+0.9**
MAKZ				IAmb	IAmb	10 21 58.6	
	comp=Z,3.6nm,0.7s						
KURK	**Kurchatov**	**63.54**	**320**	P	**P**	**10 22 06.1**	**-0.6**
KURBB	**Kurchatov Arra**	**63.58**	**320**	P	**P**	**10 22 07.0**	**+0.1**
	comp=Z,1.4nm,0.6s,baz=100,slow=7.1,SNR=4.6						
	comp=Z,1.4nm,0.6s						
ILAR	**Eielson Array**	**67.98**	**26**	P	**P**	**10 22 35.4**	**+0.3**
	comp=Z,0.7nm,1.1s,baz=279,slow=5.6,SNR=5.6						
	comp=Z,0.7nm,1.1s						
INK	**Inuvik**	**73.73**	**23**	P	**P**	**10 23 09.9**	**+0.1**
	comp=Z,1.4nm,1.0s,baz=289,slow=6.8,SNR=3.5						
	comp=Z,1.4nm,1.0s						
INK	**Inuvik**	**73.73**	**23**	IAmb	IAmb	10 23 14.0	
	comp=Z,8.6nm,1.5s						
ABKAR	**Akbulak array**	**75.51**	**318**	P	**P**	**10 23 20.1**	**-0.5**
BELG	**Belogornoye**	**82.67**	**322**	P	**P**	**10 23 59.5**	**-0.1**
	comp=Z,3.0nm,0.5s,baz=307,slow=6.8,SNR=3.6						
	comp=Z,3.0nm,0.5s						
RES	**Resolute Bay**	**83.79**	**13**	P	**P**	**10 24 05.3**	**+0.2**
	comp=Z,2.8nm,1.0s,baz=321,slow=4.8,SNR=3.6						
	comp=Z,2.8nm,1.0s						
RES	**Resolute Bay**	**83.79**	**13**	IAmb	IAmb	10 24 11.6	
	comp=Z,11nm,1.4s						
FINES	**FINESS Array B**	**90.11**	**335**	P	**P**	**10 24 35.5**	**-0.6**
	comp=Z,0.9nm,0.6s,baz=90,slow=5.6,SNR=1.8						
	comp=Z,0.9nm,0.6s						

*IDC **20** 10:13:33.2±4.8, 52°.52N×169°.29W, h0km, mb3.4/3, mbtmp3.6/6, ML3.2/3, Error ellipse: s-maj=116.8km s-min=24.5km az=165.0*

*AEIC **20** 10:13:35±3.0, 52°.12N±0°.06×169°.34W±0°.07, h35km±8km, ML3.1/13, ML3.4/6(NEIC), Error ellipse: s-maj=9.2km s-min=6.2km az=179.0*

*NEIC **20** 10:13:38.2±2.9, 52°.26N±0°.08×169°.38W±0°.09, h49km±13km, Error ellipse: s-maj=12.1km s-min=7.0km az=160.0*

ISC 20 10:13:36.9±1.4, **52°.1N**±0°.1×**169°.20W**±0°.10, **h50**km, **n17, σ1s48/20, mb3.3/3, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**0.89**	**13**		**Pn**	**10 13 51.5**	**-1.6**
NIKH					**Sn**	**10 14 05.2**	**+0.2**
OKSO	**Okmok South**	**1.40**	**26**		**Pn**	**10 13 59.3**	**-0.8**
OKSO					**Sn**	**10 14 18.1**	**+0.7**
OKFG	**Magazine Ridge**	**1.52**	**30**		**Pn**	**10 14 01.1**	**-0.5**
MSW	**Makushin Switc**	**2.32**	**38**		**Pn**	**10 14 12.8**	**+0.2**
MSW					**Sn**	**10 14 41.4**	**+1.4**
UNV	**Unalaska Valle**	**2.38**	**42**		**Pn**	**10 14 13.9**	**+0.5**
AKUT	**Akutan**	**2.89**	**44**	Pn	**Pn**	**10 14 22.2**	**+1.8**
AKUT				IAML		10 14 50.1	
	comp=N,78nm,3.4s						
GSTR	**Great Sitkin T**	**4.23**	**273**	Pn	**Pn**	**10 14 39.0**	**+0.2**
ADK	**Adak**	**4.63**	**270**		**Pn**	**10 14 44.0**	**-0.3**
ADK				IAML		10 15 54.3	
	comp=N,37nm,2.0s						
ADK				IAML		10 15 59.8	
	comp=N,29nm,2.2s						
KIWB	**Kanaga Island**	**4.92**	**270**	Pn	**Pn**	**10 14 48.1**	**-0.2**
SPIA	**Saint Paul Isl**	**5.12**	**354**	Pn	**Pn**	**10 14 52.5**	**+1.6**
AMKA	**Amchitka**	**7.18**	**269**	Pn	**Pn**	**10 15 18.8**	**-0.4**
KDAK	**Kodiak Island**	**11.10**	**53**	Pn	**Pn**	**10 16 12.4**	**-0.3**
	comp=N,0.2nm,0.3s,baz=249,slow=8.6,SNR=1.6						
	comp=N,23nm,1.3s						
ILAR	**Eielson Array**	**17.11**	**34**	Pn	**Pn**	**10 17 27.6**	**-4.6**
	baz=218,slow=16,SNR=1.9						
	comp=N,0.1nm,0.6s						
PETK	**Petropavlovsk-**	**20.04**	**286**	P	**P**	**10 18 05.5**	**0.0**
	comp=N,0.5nm,0.3s,baz=88,slow=13,SNR=6.7						
	comp=N,1.4nm,0.4s						
INK	**Inuvik**	**23.51**	**33**	P	**P**	**10 18 41.3**	**-0.6**
	comp=N,0.6nm,0.6s,baz=229,slow=8.9,SNR=3.9						
	comp=N,0.6nm,0.6s						
YKA	**Yellowknife Ar**	**30.33**	**49**	P	**P**	**10 19 44.8**	**+1.6**
	comp=N,0.2nm,0.6s,baz=275,slow=8.6,SNR=4.6						
	comp=N,0.2nm,0.6s						
KURBB	**Kurchatov Arra**	**62.75**	**318**	P	**P**	**10 23 57.3**	**+0.8**
	comp=N,0.6nm,0.8s,baz=46,slow=7.2,SNR=2.7						
	comp=N,0.6nm,0.8s						

*NIC **20** 10:13:41.9±0.0, 35°.80N×30°.75E, h46km±19km, MI3.2/6*
*DDA **20** 10:13:51.4±0.0, 35°.53N×31°.70E, h25km±2km, ML2.4*
*ISK **20** 10:13:51.9, 35°.55N×31°.74E, h17km, ML2.6/15*

ISC 20 10:13:47.4±1.5, **35°.46N**±0°.04×**31°.30E**±0°.07, **h11**km±12km, **n37, σ2s25/49, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKMS	**Akamas**	**0.96**	**117**	P	**Pn**	**10 14 06.8**	**0.0**
AKMS				AML	AML	10 14 25.4	
	1.4nm,0.3s						
AKMS				AML	AML	10 14 25.4	
	1.4nm,0.3s						
AKMS				S	**Sn**	**10 14 25.9**	**+5.4**
AKMS				AML	AML	10 14 26.2	
	1.2nm,0.7s						
AKMS				AML	AML	10 14 26.2	
	1.2nm,0.7s						
ALFC	**Alefka**	**1.11**	**106**	P	**Pb**	**10 14 08.3**	**-0.2**
ALFC				S	**Sn**	**10 14 28.5**	**+4.3**
ALFC				AML	AML	10 14 28.9	
	0.9nm,0.5s						
ALFC				AML	AML	10 14 28.9	
	0.9nm,0.5s						
ALFC				AML	AML	10 14 29.3	
	0.8nm,0.4s						
ALFC				AML	AML	10 14 29.3	
	0.8nm,0.4s						
GAZI	**Gazipasa**	**1.13**	**47**	PG	**Pn**	**10 14 08.5**	**-0.7**
GAZI				SG	**Sb**	**10 14 20.3**	**-3.4**
GAZI	**Gazipasa**	**1.13**	**47**	P	**Pn**	**10 14 08.7**	**-0.5**
GAZI				S	**Sb**	**10 14 20.3**	**-3.4**
GAZI				*i* AML	AML	10 14 23.0	
	comp=N,89nm,0.6s						
GAZI				*i* AML	AML	10 14 24.0	
	comp=E,162nm,0.5s						
AKUM	**Antalya-Kumluc**	**1.16**	**318**	P	Pg	10 14 16.2	+6.6
AKUM				S	Sn	10 14 36.0	+11
AKUM				*i* AML	AML	10 14 40.0	
	comp=N,54nm,0.5s						
NATA	**Nata**	**1.25**	**123**	S	**Sn**	**10 14 33.1**	**+5.5**
NATA				AML	AML	10 14 40.2	
	2.0nm,0.5s						
NATA				AML	AML	10 14 40.4	
	1.6nm,0.5s						
LEF	**Lefka**	**1.35**	**104**	PG	**Pn**	**10 14 11.6**	**-0.5**
LEF	**Lefka**	**1.35**	**104**	P	**Pn**	**10 14 11.9**	**-0.3**
LEF				S	**Sn**	**10 14 24.7**	**-5.4**
KEPZ	**Antalya-Kepez**	**1.46**	**10**	P	**Pb**	**10 14 15.5**	**+0.9**
KEPZ				*i* AML	AML	10 14 33.0	
	comp=N,120nm,0.6s						
KEPZ				*i* AML	AML	10 14 33.0	
	comp=E,76nm,0.3s						
SZAC	**Souni**	**1.48**	**118**	S	**Sg**	**10 14 39.2**	**+4.3**
SZAC				AML	AML	10 14 46.7	
	0.4nm,0.4s						
SZAC				AML	AML	10 14 48.8	
	0.4nm,0.7s						
TEKE	**Tekeli-Mersin**	**1.62**	**65**	PN	**Pn**	**10 14 15.3**	**-0.7**
ASGA	**Asgata**	**1.73**	**112**	S	**Sg**	**10 14 44.9**	**+1.8**
ASGA				AML	AML	10 14 52.6	
	0.3nm,0.9s						
ASGA				AML	AML	10 14 53.9	
	0.3nm,0.8s						
CSS	**Mathiatis**	**1.74**	**106**	PN	**Pn**	**10 14 17.8**	**+0.3**
CSS	**Mathiatis**	**1.74**	**106**	P	**Pn**	**10 14 16.8**	**-0.7**
CSS				S	**Sg**	**10 14 45.2**	**+2.0**
ERMK	**Ermenek**	**1.76**	**48**	P	**Pb**	**10 14 20.5**	**+0.7**
ERMK				S	**Sn**	**10 14 40.2**	**-0.3**
ERMK				*i* AML	AML	10 14 43.0	
	comp=N,46nm,0.3s						
HDMB	**Hadim**	**1.78**	**32**	PN	**Pn**	**10 14 19.1**	**+0.8**
BERE	**Bereket-Mersin**	**1.80**	**60**	PN	**Pn**	**10 14 17.8**	**-0.7**
LFK	**Lefkose**	**1.83**	**95**	PN	**Pn**	**10 14 18.6**	**-0.3**
GULN	**MERSIN_Gulnar**	**1.96**	**68**	P	**Pn**	**10 14 22.2**	**+1.5**
GULN				S	**Sn**	**10 14 42.5**	**-2.7**
MVOU	**Mavrovouni**	**1.96**	**102**	P	**Pn**	**10 14 20.6**	**+0.1**
MVOU				AML	AML	10 14 42.2	
	0.2nm,0.4s						
MVOU				AML	AML	10 14 48.3	
	0.1nm,0.6s						
SEYD	**Seydisehir-KON**	**1.99**	**12**	PN	**Pb**	**10 14 23.6**	**-0.1**
TEVE	**Tevekalti-Mers**	**1.99**	**60**	PN	**Pn**	**10 14 20.6**	**-0.5**
SEDI	**Konya, Seydise**	**2.02**	**10**	P	**Pb**	**10 14 25.1**	**+0.8**
SEDI				S	**Sn**	**10 14 48.2**	**+1.4**
SEDI				*i* AML	AML	10 14 51.0	
	comp=E,50nm,0.4s						
SEDI				*i* AML	AML	10 14 57.0	
	comp=N,48nm,0.5s						
SUTC	**Sutluce-Ispart**	**2.03**	**353**	PN	**Pg**	**10 14 25.9**	**-0.3**
IKL	**Isikli**	**2.09**	**68**	PN	**Pn**	**10 14 21.8**	**-0.6**
KKBE	**Karaman, Kazim**	**2.20**	**37**	P	**Pb**	**10 14 27.0**	**-0.2**
KKBE				S	**Sn**	**10 14 50.8**	**-0.4**
KKBE				*i* AML	AML	10 14 55.0	
	comp=N,26nm,0.4s						
KKBE				*i* AML	AML	10 14 55.0	
	comp=E,29nm,0.6s						
EREN	**Erenkoy**	**2.34**	**87**	PN	**Pn**	**10 14 25.7**	**-0.2**
KMER	**Konya-Meram**	**2.46**	**20**	P	**Pb**	**10 14 32.2**	**+0.5**
KMER				S	**Sn**	**10 15 00.0**	**+2.3**
OSC2	**CSNet OBS 4**	**2.51**	**161**	S	**Sg**	**10 15 03.0**	**-5.1**
KIZK	**Mersin**	**2.52**	**65**	PN	**Pn**	**10 14 28.1**	**-0.2**
KIZK	**Mersin**	**2.52**	**65**	P	**Pn**	**10 14 26.1**	**-2.2**
DOGA	**KONYA_Doganhis**	**2.66**	**6**	P	**Pb**	**10 14 33.6**	**-1.5**
DOGA				S	**Sn**	**10 15 04.6**	**+2.0**
DOGA				*i* AML	AML	10 15 06.0	
	comp=N,20nm,0.4s						
LADK	**Ladik-KONYA**	**2.86**	**17**	PN	**Pn**	**10 14 35.6**	**+2.5**
MERS	**Mersin**	**2.96**	**61**	PN	**Pn**	**10 14 34.4**	**0.0**
KERG	**Konya-Eregli**	**3.00**	**49**	P	**Pn**	**10 14 37.1**	**+2.1**
KERG				S	**Sn**	**10 15 11.6**	**+0.5**
KERG				*i* AML	AML	10 15 13.0	
	comp=N,14nm,0.3s						
KERG				*i* AML	AML	10 15 20.0	
	comp=E,13nm,0.4s						
YESY	**Yesilyurt**	**3.04**	**40**	PN	**Pn**	**10 14 36.5**	**+1.0**
CMRD	**Camardi-Nigde**	**3.70**	**52**	PN	**Pn**	**10 14 45.2**	**+0.6**

MAN 20 10:17:07.3, 12°.54N×120°.88E, h29km, mb4.1, ML2.8, MS2.5, 5C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJMP	**San Jose**	**0.24**	**109**	*e*P	Pn	10 17 17.2	+1.6
SJMP				*e*S		10 17 23.6	
PGP	**Puerto Galera**	**0.96**	**4**	*e*P	Pn	10 17 22.7	+0.2
PGP				*i* S		10 17 31.9	
BOAC	**Boac**	**1.31**	**46**	*e*P	Pb	10 17 31.1	+7.3
LUBP	**Lubang**	**1.34**	**332**	*e*P	Pb	10 17 32.3	+1.0
LUBP				*e*S		10 17 49.0	
MACP	**Maragondon, Ca**	**1.72**	**355**	*e*P	Pn	10 17 31.4	+2.0
MACP				*e*S		10 17 58.1	

*IDC **20** 10:18:12.2±1.3, 2°.37N×90°.34E, h0km, mb3.9/8, mbtmp3.9/10, ML4.3/2, MS3.6/4, Error ellipse: s-maj=36.9km s-min=24.5km az=36.0*

ISC 20 10:18:17.3±1.3, **2°.4N**±0°.2×**90°.3E**±0°.1, **h35**km, **n19, σ0s46/11, mb3.9/8, MS3.9/3, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	**Pallekele**	**10.76**	**297**	Pn	**Pn**	**10 20 48.9**	**-0.2**
	2.0nm,0.3s,baz=223,slow=13,SNR=9.2						
PALK				Sn	Sn	10 22 39.4	-9.1
	2.8nm,0.3s,baz=305,slow=10,SNR=5.0						
PALK				LR	LR	10 24 19.7	
	comp=Z,59nm,19.8s,baz=217,slow=34						
	13nm,0.7s						
CMAR	**Chiang Mai Arr**	**18.07**	**27**	P	**Pn**	**10 22 25.8**	**0.0**
	0.5nm,0.3s,baz=220,slow=14,SNR=1.6						
	0.5nm,0.3s						
H08S2	**Diego Garcia H**	**20.40**	**241**	T	T	10 43 59.3	
	baz=61,slow=75,SNR=158						
H08S3	**Diego Garcia H**	**20.40**	**241**	T	T	10 43 59.3	
	baz=61,slow=75,SNR=138						
H08S1	**Diego Carcia H**	**20.41**	**241**	T	T	10 43 51.7	
	baz=61,slow=75,SNR=128						
H01W3	**Cape Leeuwin H**	**43.27**	**151**	T	T	11 12 21.2	
	baz=326,slow=75,SNR=9.9						
H01W2	**Cape Leeuwin H**	**43.28**	**151**	T	T	11 12 31.1	
	baz=326,slow=75,SNR=11						
H01W1	**Cape Leeuwin H**	**43.29**	**151**	T	T	11 12 27.5	
	baz=326,slow=75,SNR=10						
MKAR	**Makanchi Array**	**44.80**	**352**	P	**P**	**10 26 27.4**	**-0.3**
	0.9nm,0.6s,baz=169,slow=10,SNR=6.7						
MKAR				LR	LR	10 48 07.7	
	comp=Z,130nm,19.0s,baz=86,slow=40						
	0.9nm,0.6s						
SONM	**Songino Array**	**47.36**	**15**	P	**P**	**10 26 48.6**	**+0.6**
	0.8nm,0.4s,baz=189,slow=9.8,SNR=6.9						
	0.8nm,0.4s						
WRA	**Warramunga Arr**	**48.53**	**119**	P	**P**	**10 26 57.2**	**-0.2**
	0.7nm,0.7s,baz=296,slow=8.5,SNR=8.4						
	0.7nm,0.7s						
KURBB	**Kurchatov Arra**	**49.10**	**350**	P	**P**	**10 27 00.7**	**-0.6**
	1.0nm,0.7s,baz=168,slow=7.7,SNR=8.2						
	1.0nm,0.7s						
ZALV	**Zalesovo Beam**	**51.61**	**356**	P	**P**	**10 27 19.6**	**-0.5**
	0.8nm,0.4s,baz=173,slow=8.0,SNR=4.3						
	0.8nm,0.4s						
BRTR	**Keskin Array B**	**63.30**	**314**	P	**P**	**10 28 42.9**	**-0.2**
	0.4nm,0.5s,baz=126,slow=7.3,SNR=3.0						
	0.4nm,0.5s						
IDI	**Anoyia**	**68.70**	**307**	P	**P**	**10 29 18.4**	**+0.7**
	1.6nm,0.6s,baz=75,slow=7.2,SNR=5.2						
	1.6nm,0.6s						
MA2	**Magadan**	**73.36**	**28**	LR	LR	11 03 52.5	
	comp=Z,52nm,19.7s,baz=156,slow=37						
SEY	**Seymchan**	**75.47**	**25**	LR	LR	11 06 24.7	
	comp=Z,81nm,18.0s,baz=188,slow=38						
GERES	**GERESS Array B**	**79.43**	**319**	P	**P**	**10 30 20.5**	**+0.3**
	0.7nm,0.5s,baz=108,slow=7.2,SNR=7.2						
	0.7nm,0.5s						
TXAR	**Lajitas Array**	**145.74**	**22**	PKPbc	**PKPbc**	**10 37 53.5**	**0.0**
	0.4nm,0.7s,baz=306,slow=3.1,SNR=6.0						

*CRAAG **20** 10:19:34.9, 36°.08N×4°.90E, MI3.4, Hypocentre not reviewed by the ISC*
*IDC **20** 10:19:37.1±1.5, 36°.37N×5°.06E, h0km, mb3.6/2, mbtmp3.5/6, ML3.2/4, Error ellipse: s-maj=34.6km s-min=19.3km az=168.0*

ISC 20 10:19:38.8±1.0, **36°.4N**±0°.2×**5°.05E**±0°.08, **h13**km, **n6, σ1s65/7, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SET	**Setif**	**0.36**	**128**	P		10 19 45.0	
DFRA	**Djebel Bou Aff**	**0.68**	**79**	P		10 19 54.6	
CTEI	**Djebel Teioual**	**1.15**	**108**	P		10 19 59.4	
CASM	**Ain Smara**	**1.17**	**97**	P		10 20 01.8	
CKFL	**Kef-Lekhel**	**1.35**	**90**	P		10 20 03.4	
CMAH	**Djebel Manchou**	**1.92**	**83**	P		10 20 11.3	
ABSA	**Djebel Ababsia**	**1.96**	**94**	P		10 20 10.2	
KEST	**Kesra**	**3.55**	**100**	Pn	**Pn**	**10 20 33.1**	**-0.5**
	3.1nm,0.3s,baz=199,slow=6.4,SNR=18						
KEST				Sn	**Sn**	**10 21 17.9**	**+2.5**
	3.1nm,0.3s,baz=115,slow=11,SNR=2.2						
	19nm,0.6s						
ESDC	**Sonseca Array**	**7.82**	**297**	Pn	**Pn**	**10 21 33.0**	**+0.7**
	0.2nm,0.3s,baz=111,slow=13,SNR=6.0						
	0.9nm,0.6s						
MDT	**Midelt**	**8.73**	**248**	Pn	**Pn**	**10 21 45.6**	**+0.7**
	0.1nm,0.3s,baz=76,slow=8.3,SNR=1.7						
MDT				Lg	Lg	10 24 13.9	
	0.3nm,0.3s,baz=250,slow=19,SNR=2.2						
	0.9nm,0.6s						
IDI	**Anoyia**	**16.13**	**88**	Pn	**P**	**10 23 26.7**	**-1.8**
	0.1nm,0.3s,baz=302,slow=13,SNR=3.0						
	2.2nm,0.9s						
TORD	**Torodi Ar. Bea**	**23.37**	**188**	P	**P**	**10 24 46.5**	**-0.7**
	2.4nm,1.1s,baz=8.7,slow=10,SNR=5.1						
	2.4nm,1.1s						
MKAR	**Makanchi Array**	**56.50**	**53**	P	**P**	**10 29 20.6**	**0.0**
	0.3nm,0.4s,baz=282,slow=6.4,SNR=4.2						
	0.3nm,0.4s						

*IDC **20** 10:32:20.9±1.5, 14°.57N×144°.36E, h0km, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=61.1km s-min=15.7km az=60.0*

ISC 20 10:32:24.8±1.5, **14°.6N**±0°.2×**144°.4E**±0°.3, **h27**km, **n9, σ0s35/7, mb3.8/5, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.08**	**155**	Pn	**Pn**	**10 32 44.0**	**-0.2**
	49nm,0.3s,baz=342,slow=6.4,SNR=19						
GUMO				Sn	**Sb**	**10 32 58.8**	**+0.3**
	32nm,0

λ-107.00000°. NP2:φ$_b$194.00000°,δ56.00000°, λ-78.00000°. Principal axes: T 3.6420, Plg10.0000°, Azm276.0000°; N 0.1070, Plg10.0000°, Azm7.0000°; P -3.7550, Plg76.0000°, Azm141.0000°; nsta1 refers to body waves, cutoff=50s. Triangular moment-rate function

ISC 20 10:36:40.3±0.5, 14°54N±0.08×144°3E±0.1, h27km, n100, σ0.96/43, mb4.5/26, MS4.1/60, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
GUMO	**Guam**	**1.11**	**148**	Pn		**10 36 59.1**	**-1.0**
	160nm,0.3s,baz=308,slow=3.7,SNR=40						
GUMO				Sn		**10 37 14.1**	**-0.3**
	165nm,0.3s,baz=122,slow=22,SNR=25						
JCJ	**Chichijima**	**12.65**	**352**	LR	LR	10 42 45.8	
	comp=Z,133nm,18.6s,baz=142,slow=29						
JHJ	**Hachijo jima 2**	**18.94**	**348**	LR	LR	10 47 08.0	
	comp=Z,377nm,18.9s,baz=58,slow=33						
JOW	**Kunigami**	**19.30**	**312**	LR	LR	10 46 47.7	
	comp=Z,968nm,21.0s,baz=135,slow=32						
DAV	**Davao City (W)**	**19.79**	**250**	LR	LR	10 46 56.5	
	comp=Z,651nm,21.3s,baz=82,slow=31						
RABL	**Rabaul**	**20.19**	**157**	P	**P**	**10 41 12.8**	**-0.2**
H11S3	**WAKE ISLAND Hy**	**21.85**	**77**	T	T	11 04 27.2	
	baz=262,slow=75,SNR=63						
H11S1	**WAKE ISLAND Hy**	**21.86**	**77**	T	T	11 04 29.4	
	baz=262,slow=75,SNR=43						
H11S2	**WAKE ISLAND Hy**	**21.87**	**77**	T	T	11 04 31.9	
	baz=262,slow=75,SNR=36						
H11N1	**WAKE ISLAND Hy**	**22.22**	**73**	T	T	11 04 57.0	
	baz=265,slow=74						
H11N2	**WAKE ISLAND Hy**	**22.23**	**73**	T	T	11 05 41.1	
	baz=265,slow=74						
H11N3	**WAKE ISLAND Hy**	**22.24**	**73**	T	T	11 05 06.8	
	baz=265						
MJAR	**Matsushiro Arr**	**22.57**	**347**	P	**P**	**10 41 38.9**	**+0.3**
	3.2nm,0.8s,baz=110,slow=14,SNR=7.0 3.2nm,0.8s						
MAJO	**Matsushiro**	**22.57**	**347**	P	**P**	**10 41 39.8**	**+1.2**
MAJO				IAmb	IAmb	10 42 05.9	
	comp=Z,24nm,1.2s						
JSD	**Sado**	**24.00**	**348**	P	**P**	**10 41 53.4**	**+0.6**
JSD				IAmb	IAmb	10 42 22.5	
	comp=Z,36nm,1.3s						
KSRS	**Korea Array**	**27.06**	**331**	P	**P**	**10 42 20.9**	**+0.4**
	comp=Z,2.1nm,0.7s,baz=145,slow=9.9,SNR=11						
KSRS				LR	LR	10 52 35.0	
	comp=Z,194nm,18.7s,baz=140,slow=35 comp=Z,2.1nm,0.7s						
HNR	**Honiara**	**28.44**	**146**	LR	LR	10 53 43.0	
	comp=Z,178nm,19.7s,baz=322,slow=36						
KAPI	**Kappang**	**31.11**	**233**	LR	LR	10 54 01.9	
	comp=Z,140nm,20.1s,baz=11,slow=33						
USRK	**Ussuriysk Ar.**	**31.36**	**343**	LR	LR	10 52 49.7	
	comp=Z,106nm,21.2s,baz=144,slow=31						
CTA	**Charters Tower**	**34.46**	**177**	LR	LR	10 58 58.5	
	comp=Z,60nm,18.0s,baz=4.5,slow=39						
CTAO	**Charters Tower**	**34.46**	**177**	P	**P**	**10 43 27.4**	**+1.4**
CTAO				IAmb	IAmb	10 43 29.3	
	comp=Z,12nm,1.2s						
WB0	**Warramunga Arr**	**35.45**	**196**	P	**P**	**10 43 33.7**	**-0.8**
WB0				IAmb	IAmb	10 43 44.1	
	comp=Z,12nm,1.1s						
ENH	**Enshi**	**35.59**	**302**	P	**P**	**10 43 35.3**	**-0.5**
ENH				IAmb	IAmb	10 43 57.2	
	comp=Z,12nm,1.0s						
WRAB	**Tennant Creek**	**35.62**	**196**	P	**P**	**10 43 34.4**	**-1.6**
WRAB				IAmb	IAmb	10 43 46.6	
	comp=Z,9.9nm,1.0s						
WB2	**Warramunga Arr**	**35.62**	**196**	P	**P**	**10 43 36.2**	**+0.2**
WB2				IAmb	IAmb	10 43 39.5	
	comp=Z,10nm,0.9s						
WRA	**Warramunga Arr**	**35.63**	**196**	P	**P**	**10 43 37.1**	**+1.0**
	comp=Z,6.7nm,0.9s,baz=16,slow=9.2,SNR=26						
WRA				LR	LR	10 58 36.3	
	comp=Z,164nm,19.1s,baz=180,slow=37 comp=Z,6.7nm,0.9s						
WRA	**Warramunga Arr**	**35.63**	**196**	P	**P**	**10 43 35.3**	**-0.8**
KLR	**Kul'dur**	**36.09**	**346**	P	**P**	**10 43 39.0**	**-0.8**
	comp=Z,0.9nm,0.6s,baz=139,slow=3.8,SNR=6.2						
KLR				LR	LR	10 57 22.0	
	comp=Z,288nm,19.8s,baz=158,slow=34 comp=Z,0.9nm,0.6s						
PETK	**Petropavlovsk-**	**39.93**	**13**	LR	LR	11 00 34.6	
	comp=Z,82nm,18.8s,baz=191,slow=36						
PSA00	**Pilbara Seismi**	**43.15**	**214**	P	**P**	**10 44 37.8**	**-1.0**
PSA00				IAmb	IAmb	10 44 41.7	
	comp=Z,13nm,1.0s						
CM31	**Chiang Mai Arr**	**43.55**	**282**	P	**P**	**10 44 43.9**	**+1.7**
CM31				IAmb	IAmb	10 44 52.8	
	comp=Z,14nm,1.1s						
CMAR	**Chiang Mai Arr**	**43.55**	**282**	P	**P**	**10 44 43.7**	**+1.5**
	comp=Z,4.9nm,1.0s,baz=83,slow=6.6,SNR=23						
CMAR				LR	LR	11 03 48.5	
	comp=Z,169nm,18.1s,baz=90,slow=37 comp=Z,4.9nm,1.0s						
CMAR	**Chiang Mai Arr**	**43.55**	**282**	P	**P**	**10 44 42.3**	**+0.1**
ULN	**Ulaanbaatar**	**45.27**	**325**	P	**P**	**10 44 55.1**	**-0.7**
SONM	**Songino Array**	**45.62**	**325**	P	**P**	**10 44 59.5**	**+1.0**
	comp=Z,2.1nm,0.7s,baz=136,slow=9.5,SNR=9.0						
SONM				PcP	**PcP**	**10 46 37.5**	**+1.0**
	comp=Z,1.0nm,0.7s,baz=136,slow=2.3,SNR=2.9						
SONM				LR	LR	11 04 07.2	
	comp=Z,293nm,19.5s,baz=119,slow=36 comp=Z,2.1nm,0.7s						
SONM	**Songino Array**	**45.62**	**325**	IAmb	IAmb	10 45 00.6	
	comp=Z,4.1nm,1.1s						
STKA	**Stephens Creek**	**46.22**	**183**	P	**P**	**10 45 04.8**	**+1.7**
	comp=Z,3.8nm,0.9s,baz=247,slow=2.7,SNR=3.1						
STKA				LR	LR	11 06 44.9	
	comp=Z,144nm,18.4s,baz=24,slow=39 comp=Z,3.8nm,0.9s						
MSVF	**Nonsavu**	**46.24**	**133**	LR	LR	11 03 47.1	
	comp=Z,215nm,18.2s,baz=146,slow=35						
YAK	**Yakutsk**	**48.56**	**351**	LR	LR	11 04 55.4	
	comp=Z,153nm,19.7s,baz=89,slow=35						
SHL	**Shillong**	**50.14**	**291**	P	**P**	**10 45 33.4**	**-0.5**
AFI	**Afiamalu**	**51.88**	**121**	LR	LR	11 03 50.8	
	comp=Z,167nm,20.9s,baz=242,slow=32						
RAO	**Raoul Island**	**56.82**	**140**	LR	LR	11 06 33.8	
	comp=Z,213nm,21.9s,baz=126,slow=32						
MK31	**Makanchi Array**	**60.41**	**316**	P	**P**	**10 46 47.2**	**-0.2**
MK31				IAmb	IAmb	10 46 50.5	
	comp=Z,6.1nm,1.1s						
MKAR	**Makanchi Array**	**60.41**	**316**	P	**P**	**10 46 48.3**	**+0.9**
	comp=Z,3.6nm,0.9s,baz=94,slow=8.3,SNR=15						
MKAR				LR	LR	11 14 03.9	
	comp=Z,144nm,18.5s,baz=88,slow=37 comp=Z,3.6nm,0.9s						
MKAR	**Makanchi Array**	**60.41**	**316**	P	**P**	**10 46 47.3**	**-0.1**
ZALV	**Zalesovo Beam**	**60.52**	**324**	P	**P**	**10 46 48.2**	**+0.3**
	comp=Z,2.1nm,0.7s,baz=109,slow=6.6,SNR=7.4						
ZALV				LR	LR	11 13 38.5	
	comp=Z,168nm,18.9s,baz=126,slow=37 comp=Z,2.1nm,0.7s						
ZALV	**Zalesovo Beam**	**60.52**	**324**	P	**P**	**10 46 46.7**	**-1.2**
MAKZ	**Makanchi**	**60.62**	**316**	P	**P**	**10 46 48.1**	**-0.8**
URZ	**Urewera**	**60.88**	**151**	LR	LR	11 10 32.6	
	comp=Z,92nm,21.4s,baz=31,slow=34						
PALK	**Pallekele**	**62.67**	**271**	LR	LR	11 12 17.4	
	comp=Z,110nm,21.2s,baz=180,slow=34						
RPZ	**Rata Peaks**	**62.93**	**158**	LR	LR	11 10 58.6	
	comp=Z,132nm,22.0s,baz=315,slow=33						
KURK	**Kurchatov**	**63.49**	**320**	P	**P**	**10 47 07.1**	**-0.8**
KURBB	**Kurchatov Arra**	**63.53**	**320**	P	**P**	**10 47 09.0**	**+0.7**
	baz=101,slow=6.9						
KURBB				LR	LR	11 15 10.0	
	comp=Z,258nm,19.8s,baz=68,slow=36						
KDAK	**Kodiak Island**	**63.58**	**32**	LR	LR	11 16 43.7	
	comp=Z,44nm,18.1s,baz=259,slow=38						
RAR	**Rarotonga**	**65.42**	**122**	LR	LR	11 12 04.7	
	comp=Z,207nm,19.9s,baz=294,slow=33						
AAK	**Ala-Archa**	**65.45**	**310**	LR	LR	11 17 21.9	
	comp=Z,183nm,19.9s,baz=79,slow=37						
ILAR	**Eielson Array**	**67.97**	**26**	P	**P**	**10 47 36.1**	**-0.5**
	comp=Z,0.3nm,0.8s,baz=238,slow=5.2,SNR=3.3						
ILAR				LR	LR	11 14 01.7	
	comp=Z,60nm,22.0s,baz=238,slow=33 comp=Z,0.3nm,0.8s						
KKAR	**Karatay Array**	**68.39**	**311**	P	**P**	**10 47 39.2**	**-0.5**
BVAR	**Borovoye Array**	**68.83**	**322**	LR	LR	11 19 11.5	
	comp=Z,137nm,18.4s,baz=336,slow=37						
BRVK	**Borovoye**	**68.89**	**322**	P	**P**	**10 47 41.4**	**-1.2**
BRVK				IAmb	IAmb	10 47 44.0	
	comp=Z,3.7nm,0.8s						
PPT	**Papeete**	**72.63**	**114**	LR	LR	11 13 02.7	
	comp=Z,226nm,19.2s,baz=323,slow=30						
INK	**Inuvik**	**73.72**	**23**	P	**P**	**10 48 12.8**	**+1.3**
	comp=Z,1.1nm,0.9s,baz=289,slow=10,SNR=3.6						
INK				LR	LR	11 18 32.5	
	comp=Z,51nm,21.5s,baz=231,slow=34 comp=Z,1.1nm,0.9s						
INK	**Inuvik**	**73.72**	**23**	IAmb	IAmb	10 48 33.4	
	comp=Z,6.6nm,1.4s						
ABKAR	**Akbulak array**	**75.45**	**318**	P	**P**	**10 48 21.1**	**-0.8**
DLBC	**Dease Lake**	**75.51**	**33**	LR	LR	11 16 31.9	
	comp=Z,57nm,21.7s,baz=252,slow=32						
ARU	**Arti**	**75.66**	**325**	P	**P**	**10 48 24.3**	**+1.3**
	comp=Z,1.2nm,0.3s,baz=166,slow=3.0,SNR=5.5						
ARU				LR	LR	11 23 53.9	
	comp=Z,156nm,18.2s,baz=94,slow=38 comp=Z,1.2nm,0.3s						
AKTO	**Aktyubinsk**	**76.57**	**319**	LR	LR	11 23 05.1	
	comp=Z,194nm,20.0s,baz=86,slow=36						
BBB	**Bella Bella**	**77.22**	**39**	LR	LR	11 17 23.3	
	comp=Z,119nm,20.0s,baz=274,slow=32						
GEYT	**Alibeck**	**78.22**	**306**	LR	LR	11 26 46.1	
	comp=Z,93nm,18.8s,baz=84,slow=38						
WSAR	**Wadi Sarin**	**80.46**	**292**	LR	LR	11 27 07.2	
	comp=Z,57nm,20.0s,baz=84,slow=38						
YKA	**Yellowknife Ar**	**82.29**	**27**	P	**P**	**10 48 59.7**	**+0.5**
	comp=Z,1.0nm,0.8s,baz=289,slow=5.2,SNR=4.7 comp=Z,1.0nm,0.8s						
BELG	**Belogornoye**	**82.62**	**322**	LR	LR	11 27 33.9	
	comp=Z,114nm,18.6s,baz=186,slow=37						
YBH	**Yreka Blue Hor**	**82.69**	**49**	LR	LR	11 17 45.1	
	comp=Z,138nm,22.0s,baz=268,slow=30						
SPITS	**Spitsbergen Ar**	**83.03**	**351**	LR	LR	11 25 49.4	
	comp=Z,23nm,21.7s,baz=19,slow=36						
KLMR	**Klimovskoe**	**84.44**	**332**	*eP*	**P**	**10 49 08.3**	**-2.0**
KLMR				AMP		10 49 12.3	
	comp=Z,11nm,1.2s						
NEW	**Newport**	**84.91**	**42**	LR	LR	11 20 12.5	
	comp=Z,92nm,21.4s,baz=274,slow=31						
ARCES	**ARCESS Array B**	**86.01**	**342**	P	**P**	**10 49 18.3**	**+0.3**
	comp=Z,6.2nm,1.0s,baz=19,slow=7.7,SNR=5.2						
ARCES				LR	LR	11 30 30.7	
	comp=Z,34nm,19.7s,baz=64,slow=38 comp=Z,6.2nm,1.0s						
ARCES	**ARCESS Array B**	**86.01**	**342**	IAmb	IAmb	10 49 26.0	
	comp=Z,26nm,1.4s						
NVAR	**Mina Array Bea**	**86.79**	**51**	LR	LR	11 21 56.9	
	comp=Z,92nm,20.9s,baz=261,slow=31						
GNI	**Garni**	**87.86**	**311**	LR	LR	11 32 20.6	
	comp=Z,96nm,19.6s,baz=56,slow=38						
OBN	**Obninsk**	**87.99**	**327**	LR	LR	11 30 45.5	
	comp=Z,22nm,19.9s,baz=139,slow=37						
KBZ	**Khabaz**	**88.08**	**315**	LR	LR	11 30 31.6	
	comp=Z,87nm,21.3s,baz=56,slow=37						
ELK	**Elko**	**88.39**	**48**	LR	LR	11 22 02.0	
	comp=Z,171nm,21.6s,baz=266,slow=31						
PFO	**Pinyon Flats O**	**89.59**	**55**	LR	LR	11 27 45.0	
	comp=Z,65nm,18.1s,baz=244,slow=34						
FINES	**FINESS Array B**	**90.06**	**335**	P	**P**	**10 49 36.9**	**-0.6**
	comp=Z,2.0nm,0.7s,baz=66,slow=11,SNR=6.0						
FINES				LR	LR	11 32 17.9	
	comp=Z,88nm,20.0s,baz=68,slow=37 comp=Z,2.0nm,0.7s						
PDAR	**Pinedale Array**	**91.72**	**45**	LR	LR	11 24 22.4	
	comp=Z,55nm,21.9s,baz=281,slow=31						
AKASG	**Malin Array Be**	**93.91**	**325**	LR	LR	11 34 16.7	
	comp=Z,196nm,19.2s,baz=63,slow=37						
HFS	**Hagfors**	**95.70**	**338**	LR	LR	11 35 20.3	
	comp=Z,49nm,20.2s,baz=44,slow=37						
NOA	**NORSAR Array B**	**95.96**	**339**	LR	LR	11 36 37.9	
	comp=Z,46nm,19.1s,baz=55,slow=38						
BRTR	**Keskin Array B**	**95.99**	**313**	LR	LR	11 37 27.4	
	comp=Z,78nm,20.2s,baz=49,slow=38						
ULM	**Lac du Bonnet**	**96.79**	**34**	LR	LR	11 29 41.2	
	comp=Z,59nm,20.0s,baz=316,slow=33						
ANMO	**Albuquerque**	**96.92**	**51**	LR	LR	11 32 31.0	
	comp=Z,55nm,18.0s,baz=264,slow=35						
MMAI	**Mount Meron Ar**	**97.34**	**307**	LR	LR	11 38 21.6	
	comp=Z,26nm,20.2s,baz=224,slow=38						
LPIG	**La Paz**	**97.71**	**63**	LR	LR	11 28 39.0	
	comp=Z,69nm,18.6s,baz=254,slow=32						
ATD	**Arta Tunnel**	**97.95**	**284**	LR	LR	11 28 05.7	
	comp=Z,24nm,22.0s,baz=176,slow=32						
SFJD	**Kangerlussuaq**	**97.96**	**6**	LR	LR	11 36 07.8	
	comp=Z,28nm,19.0s,baz=318,slow=36						
FRB	**Frobisher Bay**	**97.97**	**14**	LR	LR	11 36 48.1	
	comp=Z,45nm,19.7s,baz=284,slow=37						
MLR	**Muntele Rosu**	**98.39**	**321**	LR	LR	11 38 11.4	
	comp=Z,121nm,18.8s,baz=60,slow=38						
EIL	**Elat**	**98.97**	**304**	LR	LR	11 38 60.0	
	comp=Z,55nm,20.5s,baz=89,slow=38						
LPAZ	**La Paz**	**148.74**	**97**	PKPbc	**PKPbc**	**10 56 27.1**	**+0.2**
	comp=Z,1.0nm,0.7s,baz=236,slow=6.6,SNR=3.8						

*NEIC **20** 11:08:10.8±1.0, 31°57S±0.04×72°0W±0.1, h20km±4km, mb4.0/3, ML3.7(GUC), Error ellipse: s-maj=16.9km s-min=5.7km az=86.0*
*GUC **20** 11:08:12.0±0.9, 31°59S×71°80W, h39km±3km, ML3.7*
*IDC **20** 11:08:17.3±3.3, 31°88S×71°97W, h73km±30km, mb3.3/2, mbtmp3.6/4, Error ellipse: s-maj=57.1km s-min=30.8km az=85.0*

ISC 20 11:08:13.3±1.2, 31°59S±0.03×71°88W±0.09, h36km±3km, n52, σ1§18/52, mb4.1/3, 7C-7D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
CO02	**Combarbal**	**0.84**	**63**			**Pn**	**11 08 26.7**	**-2.0**
CO02	**Combarbal**	**0.84**	**63**	⇓	*iP*	**Pn**	**11 08 26.8**	**-2.0**
CO02					*i* S	**Sn**	**11 08 37.4**	**-2.6**
CO02					IAML		11 08 42.1	
	comp=E,11μm,0.2s							
CO06	**Fray Jorge**	**0.94**	**13**			**Pn**	**11 08 28.4**	**-1.5**
CO06	**Fray Jorge**	**0.94**	**13**	⇓	*iP*	**Pn**	**11 08 28.4**	**-1.5**
CO06					*i* S	**Sn**	**11 08 41.6**	**-0.5**
CO06					IAML		11 08 45.8	
	comp=E,2μm,0.2s							
VA06	**Catapilco**	**1.09**	**153**			**Pn**	**11 08 30.9**	**-1.1**
VA06	**Catapilco**	**1.09**	**153**	⇓	*iP*	**Pn**	**11 08 31.0**	**-1.1**
VA06					*i* S	**Sn**	**11 08 45.1**	**-0.7**
CO03	**El Pedregal**	**1.26**	**54**	⇓	*iP*	**Pn**	**11 08 49.3**	**-1.1**
CO03					*i* S	**Sn**	**11 08 49.6**	**-0.6**
CO03					IAML		11 08 55.0	
	comp=E,3μm,0.6s							
VA01	**Torpederas**	**1.44**	**172**	*eP*		**Pn**	**11 08 36.0**	**-1.0**
VA01					IAML		11 09 03.4	
	comp=E,659nm,0.2s							
ROCH	**El Roble**	**1.56**	**152**	⇓	*iP*	**Pn**	**11 08 38.9**	**+0.1**
ROCH					*i* S	**Sn**	**11 08 59.1**	**+1.2**
ROCH					IAML		11 09 03.5	
	comp=N,4μm,0.4s							
ROC1	**El Roble**	**1.56**	**152**			**Pn**	**11 08 38.4**	**-0.5**
VA03	**San Esteban**	**1.62**	**137**	⇑	*iP*	**Pn**	**11 08 39.8**	**+0.3**
VA03					*i* S	**Sn**	**11 09 00.7**	**+1.5**
VA03					IAML		11 09 02.5	
	comp=E,3μm,0.2s							
GO04	**Tololo Observa**	**1.69**	**34**			**Pn**	**11 08 40.2**	**-0.3**
GO04	**Tololo Observa**	**1.69**	**34**	⇑	*iP*	**Pn**	**11 08 39.9**	**-0.6**
GO04					*i* S	**Sn**	**11 09 02.5**	**+1.5**
CO05	**La Serena**	**1.75**	**18**	⇓	*iP*	**Pn**	**11 08 40.9**	**-0.3**
CO05					*i* S	**Sn**	**11 09 04.4**	**+2.1**
CO05					IAML		11 09 10.9	
	comp=E,1μm,0.5s							
MT02	**Curacav**	**1.78**	**160**			**Pn**	**11 08 41.9**	**+0.3**
MT02	**Curacav**	**1.78**	**160**	*eP*		**Pn**	**11 08 40.9**	**-0.7**
MT02					*i* S	**Sn**	**11 09 02.5**	**-0.4**
PEL	**Peldehue**	**1.85**	**147**			**Pn**	**11 08 42.5**	**-0.1**
PEL	**Peldehue**	**1.85**	**147**	⇑	*iP*	**Pn**	**11 08 42.8**	**+0.2**
PEL					*i* S	**Sn**	**11 09 05.3**	**+0.6**
PEL					IAML		11 09 09.8	
	comp=E,2μm,0.2s							
MT05	**Renca**	**2.04**	**152**			**Pn**	**11 08 45.1**	**0.0**
MT05	**Renca**	**2.04**	**152**	⇑	*iP*	**Pn**	**11 08 45.2**	**0.0**
MT05					*i* S	**Sn**	**11 09 11.3**	**+1.8**
MT05					IAML		11 09 15.8	
	comp=E,2μm,0.3s							
VA05	**Santo Domingo**	**2.08**	**174**			**Pn**	**11 08 45.2**	**-0.4**
FCH	**Farellones**	**2.19**	**143**	⇑	*iP*	**Pn**	**11 08 48.0**	**+0.4**
FCH					*i* S	**Sn**	**11 09 15.0**	**+1.4**
FCH					IAML		11 09 19.4	
	comp=E,599nm,0.2s							
MT09	**Talagante**	**2.31**	**161**	⇑	*iP*	**Pn**	**11 08 49.4**	**+0.5**
MT09					IAML		11 09 27.3	
	comp=N,746nm,0.3s							
MT01	**Popeta**	**2.33**	**167**	⇓	*iP*	**Pn**	**11 08 48.7**	**-0.4**
MT01					IAML		11 09 26.4	
	comp=E,509nm,0.3s							
BO04	**La Punta**	**2.62**	**156**			**Pn**	**11 08 54.1**	**+0.9**
LCO	**Las Campanas**	**2.76**	**22**	Pn		**Pn**	**11 08 54.5**	**-0.9**
LCO	**Las Campanas**	**2.76**	**22**	⇑	*iP*	**Pn**	**11 08 54.6**	**-0.7**
LCO					*i* S	**Sn**	**11 09 30.6**	**+3.0**
BO01	**Tunca**	**2.87**	**167**	Pn		**Pn**	**11 08 56.3**	**-0.3**
GO05	**Huala**	**3.41**	**181**			**Pn**	**11 09 02.7**	**-1.4**
AC04	**Llanos de Chal**	**3.44**	**12**	Pn		**Pn**	**11 09 03.7**	**-0.8**
AC02	**Maricunga**	**5.31**	**28**	Pn		**Pn**	**11 09 30.8**	**+0.3**
H03N1	**Juan Fernandez**	**6.22**	**251**	T	T	11 16 25.1	
	baz=80,slow=72,SNR=1521							
H03N3	**Juan Fernandez**	**6.24**	**251**	T	T	11 16 24.6	
	baz=80,slow=72,SNR=1451							
H03N2	**Juan Fernandez**	**6.24**	**251**	T	T	11 16 24.8	
	baz=80,slow=72,SNR=1417							
H03S3	**Juan Fernandez**	**6.33**	**248**	T	T	11 16 41.3	
	baz=77							
H03S1	**Juan Fernandez**	**6.34**	**247**	T	T	11 16 34.8	
	baz=77							
H03S2	**Juan Fernandez**	**6.35**	**247**	T	T	11 16 35.2	
	baz=77							
PLCA	**Paso Flores**	**9.19**	**174**	P	**Pn**	**11 10 23.2**	**-0.1**
	comp=E,0.5nm,0.3s,baz=339,slow=12,SNR=15							
PLCA	**Paso Flores**	**9.19**	**174**	Pn	**Pn**	**11 10 22.8**	**-0.5**
LVC	**Limon Verde**	**9.32**	**17**	P	Pn	11 10 33.4	+7.8
	comp=E,2.1nm,0.4s,baz=207,slow=9.0,SNR=2.4							
PATCX	**Punta Patache**	**10.83**	**9**		**Pn**	**11 10 43.2**	**-2.8**
QSPA	**South Pole Qui**	**58.64**	**180**	P	**P**	**11 18 06.3**	**-0.5**
QSPA				IAmb	IAmb	11 18 24.7	
	comp=Z,2.2nm,1.3s							
TXAR	**Lajitas Array**	**67.71**	**330**	P	**P**	**11 19 08.1**	**+0.9**
	comp=Z,0.2nm,0.8s,baz=150,slow=7.3,SNR=2.1 comp=Z,0.2nm,0.8s							
TORD	**Torodi Ar. Bea**	**83.26**	**70**	P	**P**	**11 20 36.6**	**+0.1**
	comp=Z,1.1nm,0.7s,baz=252,slow=3.9,SNR=5.9 comp=Z,1.1nm,0.7s							
TORD	**Torodi Ar. Bea**	**83.26**	**70**	P	**P**	**11 20 35.9**	**-0.7**
TORD				IAmb	IAmb	11 20 37.1	
	comp=Z,2.3nm,0.9s							
H11S2	**WAKE ISLAND Hy**	**25.91**	**271**	T	T	13 46 05.6	
	baz=117,slow=75,SNR=20							
H11S1	**WAKE ISLAND Hy**	**25.92**	**271**	T	T	13 46 04.7	
	baz=117,slow=75,SNR=19							
H11S3	**WAKE ISLAND Hy**	**25.92**	**271**	T	T	13 46 03.3	
	baz=117,slow=75,SNR=19							
H11N3	**WAKE ISLAND Hy**	**26.26**	**272**	T	T	13 46 27.2	
	baz=116,slow=75,SNR=12							
H11N1	**WAKE ISLAND Hy**	**26.28**	**272**	T	T	13 46 31.3	
	baz=116,slow=75,SNR=4.1							
H11N2	**WAKE ISLAND Hy**	**26.28**	**272**	T	T	13 46 28.6	
	baz=116,slow=75,SNR=18							
ZALV	**Zalesovo Beam**	**152.10**	**30**	PKPbc	**PKiKP**	**11 28 04.7**	**0.0**
	comp=Z,2.4nm,0.5s,baz=294,slow=2.6,SNR=10							

*BJI **20** 11:18:35.7±0.0, 11°12N×142°43E, h10km, mb4.5/48, mB4.8/24, Ms4.3/25, Ms7 4.1/28*
*IDC **20** 11:18:40.9±0.6, 11°54N×141°88E, h0km, mb4.4/19, mbtmp4.4/21, ML4.4/2, MS3.9/47, Error ellipse: s-maj=19.4km s-min=13.2km az=73.0*
*NEIC **20** 11:18:45.9±1.6, 11°52N±0.08×141°8E±0.1, h31km±4km, mb4.9/69, Error ellipse: s-maj=14.3km s-min=12.3km az=93.0*

ISC 20 11:18:42.8±0.5, 11°50N±0.05×141°87E±0.06, h13km±3km, h13km:pP-P, n286, σ0.99/269, mb4.8/62, MS4.0/54, 3D, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
GUMO	**Guam**	**3.59**	**54**	Pn		**11 19 39.6**	**+1.4**
	29nm,0.3s,baz=202,slow=8.3,SNR=19						
GUMO				Sn		**11 20 21.0**	**+0.6**
	43nm,0.3s,baz=53,slow=19,SNR=3.8 348nm,0.7s						
GUMO	**Guam**	**3.59**	**54**			**Pn**	**11 19 40.4**	**+2.3**
JCJ	**Chichijima**	**15.52**	**1**	Pn		**P**	**11 22 27.4**	**+1.7**
	2.5nm,0.3s,baz=288,slow=23,SNR=3.9							
JCJ				LR	LR	11 27 01.9	
	comp=Z,264nm,21.3s,baz=158,slow=32							
JCJ	**Chichijima**	**15.52**	**1**	P		**P**	**11 22 26.3**	**+0.5**
JCJ				IAmb	IAmb	11 22 43.2	
	comp=Z,64nm,1.0s							
DAV	**Davao City (W)**	**16.67**	**256**	LR	LR	11 28 34.2	
	comp=Z,203nm,20.1s,baz=68,slow=36							
PATS	**Pohnpei**	**16.87**	**105**	Pn	**Pn**	**11 22 39.1**	**+0.3**
PATS				IAmb	IAmb	11 22 47.6	
	comp=Z,112nm,1.2s							
RABL	**Rabaul**	**18.65**	**146**	P	**Pn**	**11 23 01.4**	**+0.6**
RABL				IAmb	IAmb	11 23 15.9	
	comp=Z,50nm,0.7s							
JOW	**Kunigami**	**19.91**	**322**	P	**Pn**	**11 23 15.8**	**-0.2**
	comp=Z,1.7nm,0.3s,baz=89,slow=16,SNR=4.

USA0B IAmb IAmb 11 25 36.6
comp=Z,16nm,0.8s
USRK Ussuriysk Ar. 33.68 347 P **P** **11 25 23.5 +0.1**
comp=Z,15nm,0.8s,baz=172,slow=9.0,SNR=30
USRK LR LR 11 38 09.3
comp=Z,226nm,18.5s,baz=148,slow=35
comp=Z,15nm,0.8s
USRK Ussuriysk Ar. 33.68 347 P **P** **11 25 23.3 -0.1**
MDJ Mudanjiang 34.65 345 P **P** **11 25 33.8 +1.9**
MDJ pmax pmax
comp=Z,8.0nm,1.2s
MDJ pmax pmax
comp=Z,53nm,5.9s
CN2 Changchun 35.18 339 *e*P **P** **11 25 39.0 +2.6**
CN2 *e*PP **PP** **11 26 58.1 +1.8**
CN2 *e*S **S** **11 31 11.1 +1.8**
CN2 *es*S pS 11 31 18.4 +6.8
CN2 pmax pmax
comp=Z,10.0nm,1.6s
CN2 LR LR
comp=Z,250nm,15.0s
CN2 LR LR
comp=Z,150nm,15.0s
CN2 LR LR
comp=Z,150nm,16.0s
LYN LuoYang 35.25 315 *e*P **P** **11 25 35.1 -2.1**
LYN S **S** **11 31 12.3 +1.6**
LYN pmax pmax
comp=Z,10.0nm,0.5s
LYN pmax pmax
comp=Z,120nm,4.4s
LYN LR LR
comp=Z,500nm,17.3s
LYN LR LR
comp=Z,250nm,14.3s
LYN LR LR
comp=Z,540nm,17.7s
HNS HongShan 35.48 321 ⇓P **P** **11 25 39.9 +0.8**
AS31 Alice Springs 35.80 193 P **P** **11 25 42.1 +0.1**
ASAR Alice Springs 35.81 193 P **P** **11 25 41.3 -0.8**
BNX BinXian 36.29 343 ⇓P **P** **11 25 45.9 0.0**
BNX pP **sP** **11 25 49.8 +1.3**
BNX pmax pmax
comp=Z,38nm,1.1s
BJI Beijing 36.39 326 P **P** **11 25 46.5 -0.4**
BJI pmax pmax
comp=Z,11nm,0.8s
BJI pmax pmax
comp=Z,81nm,3.5s
BJI LR LR
comp=Z,40nm,16.3s
BJI LR LR
comp=Z,130nm,15.7s
BJI LR LR
comp=Z,200nm,16.7s
XAN Xi'an 37.50 312 P **P** **11 26 00.4 +3.9**
XAN S **S** **11 31 40.6 -4.6**
XAN pmax pmax
comp=Z,6.0nm,1.1s
XAN LR LR
comp=Z,140nm,21.3s
XAN LR LR
comp=Z,220nm,16.5s
XAN LR LR
comp=Z,290nm,20.6s
KLR Kul'dur 38.55 349 LR LR 11 39 53.0
comp=Z,245nm,20.8s,baz=168,slow=33
XLT XiLinHaoTe 39.21 330 ⇓*i*P **P** **11 26 10.8 0.0**
XLT pP pwP 11 26 22.3 +0.2
XLT sP sP 11 26 24.9 +11
XLT S **S** **11 32 10.8 -0.1**
XLT sS pS 11 32 23.8 +11
XLT pmax pmax
comp=Z,12nm,1.3s
XLT pmax pmax
comp=Z,130nm,3.6s
XLT LR LR
comp=Z,17nm,14.9s
XLT LR LR
comp=Z,150nm,16.7s
XLT LR LR
comp=Z,250nm,18.6s
HHC Hu-ho-hao-te 39.56 323 *e*P **P** **11 26 15.8 +2.0**
HHC pmax pmax
comp=Z,30nm,1.0s
HHC pmax pmax
comp=Z,140nm,6.0s
HHC LR LR
comp=Z,340nm,15.9s
HHC LR LR
comp=Z,320nm,15.9s
HHC LR LR
comp=Z,520nm,15.9s
PZH PanZhiHua 40.58 297 P **P** **11 26 24.6 +2.1**
PZH pmax pmax
comp=Z,7.0nm,0.9s
PZH pmax pmax
comp=Z,100nm,5.5s
CMAR Chiang Mai Arr 41.97 285 P **P** **11 26 34.4 +0.6**
comp=Z,0.6nm,0.4s,baz=87,slow=6.7,SNR=6.4
CMAR LR LR 11 42 55.3
comp=Z,115nm,20.2s,baz=100,slow=35
comp=Z,0.6nm,0.4s
CMAR Chiang Mai Arr 41.97 285 P **P** **11 26 32.7 -1.2**
LZH Lanzhou 42.14 312 *e*P **P** **11 26 35.3 +0.1**
LZH pP sP 11 26 39.6 +1.7
LZH sP pwP 11 26 44.3 -2.0
LZH *e*S **S** **11 32 59.8 +4.9**
LZH sS pS 11 33 13.8 +16
LZH pmax pmax
comp=Z,13nm,1.1s
LZH pmax pmax
comp=Z,84nm,4.1s
LZH LR LR
comp=Z,160nm,15.2s
LZH LR LR
comp=Z,220nm,13.8s
LZH LR LR
comp=Z,300nm,16.3s
ARMA Armidale 42.72 168 P **P** **11 26 42.0 +2.2**
STKA Stephens Creek 43.13 180 LR LR 11 45 19.0
comp=Z,138nm,18.4s,baz=25,slow=37
PETK Petropavlovsk- 43.40 14 P **P** **11 26 44.9 -0.1**
comp=Z,1.3nm,0.7s,baz=161,slow=5.7,SNR=3.0
PETK LR LR 11 42 15.8
comp=Z,112nm,21.6s,baz=184,slow=33
comp=Z,1.3nm,0.7s
PETK Petropavlovsk- 43.40 14 P **P** **11 26 44.6 -0.4**
GIRL Giralia 43.41 219 P **P** **11 26 46.0 +0.6**
FORT Forrest 44.08 197 P **P** **11 26 51.2 +0.5**
BBOO Buckleboo 44.41 187 P **P** **11 26 52.8 -0.5**
BBOO IAmb IAmb 11 27 05.6
comp=Z,21nm,1.1s
MSVF Nonsavu 46.04 129 P **P** **11 27 07.8 +1.1**
comp=Z,21nm,0.9s,baz=268,slow=8.6,SNR=6.6
MSVF LR LR 11 45 15.9
comp=Z,316nm,20.4s,baz=255,slow=35
comp=Z,21nm,0.9s
MSVF Nonsavu 46.04 129 P **P** **11 27 07.2 +0.6**
GTA Gaotai 46.45 314 *e*P **P** **11 27 09.8 +0.1**
GTA sP pwP 11 27 20.9 +0.1
GTA pmax pmax
comp=Z,6.0nm,0.7s
GTA pmax pmax
comp=Z,56nm,5.8s
GTA LR LR
comp=Z,120nm,16.4s
GTA LR LR
comp=Z,170nm,17.8s
GTA LR LR
comp=Z,170nm,17.5s
ULN Ulaanbaatar 46.51 328 P **P** **11 27 10.3 +0.3**
SONM Songino Array 46.83 328 P **P** **11 27 13.0 +0.5**
comp=Z,2.0nm,0.7s,baz=152,slow=7.3,SNR=8.8
SONM LR LR 11 47 25.5
comp=Z,95nm,18.5s,baz=124,slow=37
comp=Z,2.0nm,0.7s
SONM Songino Array 46.83 328 P **P** **11 27 12.4 -0.1**
SHEM Shemya Is, Ala 48.59 26 LR LR 11 44 54.6
comp=Z,89nm,21.5s,baz=231,slow=32
SMY Shemya 48.59 26 P **P** **11 27 26.4 +0.5**
TOO Toolangi 48.93 176 P **P** **11 27 30.1 +1.4**
GOMU GeErMu 48.96 308 P P 11 27 23.0 -6.5
GOMU pP pP 11 27 26.5 -4.9
GOMU sP sP 11 27 30.0 -2.2
GOMU S S 11 34 10.0 -24
GOMU pmax pmax
comp=Z,2.0nm,0.7s
GOMU pmax pmax
comp=Z,55nm,7.3s
GOMU LR LR
comp=N,82nm,15.3s
GOMU LR LR
comp=E,63nm,15.0s
GOMU LR LR
comp=Z,98nm,15.6s
AMKA Amchitka 50.05 30 P **P** **11 27 37.8 +0.8**
YAK Yakutsk 51.22 353 LR LR 11 47 36.6
comp=Z,149nm,20.8s,baz=106,slow=34
YAK Yakutsk 51.22 353 P **P** **11 27 45.2 -0.5**
YAK x x 11 27 49.6
YAK pP **pwP** **11 27 57.0 -0.1**
SEY Seymchan 51.90 6 LR LR 11 48 48.8
comp=Z,93nm,20.1s,baz=212,slow=35
KIWB Kanaga Island 52.09 31 P **P** **11 27 53.5 +1.0**
ADK Adak 52.35 31 P **P** **11 27 54.2 -0.1**
ADK Adak 52.35 31 P **P** **11 27 54.9 +0.5**
ADK pP **pwP** **11 28 06.8 +1.1**
ADK sP sP 11 28 11.3 +14
AFI Afiamalu 52.43 118 LR LR 11 47 29.0
comp=Z,153nm,19.7s,baz=166,slow=33
WMQ Urumqi 56.50 315 *e*P **P** **11 28 25.4 +0.6**
WMQ pP pwP 11 28 36.8 +0.8
WMQ pmax pmax
comp=Z,31nm,0.9s
WMQ LR LR
comp=Z,320nm,22.7s
WMQ LR LR
comp=Z,140nm,19.9s
NIKH Nikolski High 57.01 33 P **P** **11 28 26.9 -1.3**
baz=242
SPIA Saint Paul Isl 58.39 28 P **P** **11 28 37.0 -0.7**
baz=239
UNV Unalaska Valle 58.66 33 P **P** **11 28 39.4 -0.3**
UNV Unalaska Valle 58.66 33 P **P** **11 28 39.1 -0.6**
baz=244
URZ Urewera 59.46 148 LR LR 11 52 31.9
comp=Z,119nm,18.5s,baz=31,slow=34
BKZ Black Stump Fm 59.83 149 P **P** **11 28 48.1 0.0**
BKZ IAmb IAmb 11 28 51.8
comp=Z,12nm,1.1s
NNZ Nelson 59.97 153 P **P** **11 28 48.8 -0.1**
PALK Pallekele 60.41 272 LR LR 11 55 26.0
comp=Z,28nm,19.1s,baz=165,slow=36
TIXI Tiksi 60.64 355 LR LR 11 54 56.0
comp=Z,40nm,20.5s,baz=180,slow=36
TIXI Tiksi 60.64 355 P **P** **11 28 52.2 -0.9**
TIXI Tiksi 60.64 355 P **P** **11 28 51.7 -1.3**
TIXI pP **pwP** **11 29 01.9 -2.5**
FALS False Pass 60.72 33 P **P** **11 28 53.1 -0.8**
baz=247
MK31 Makanchi Array 61.00 317 P **P** **11 28 55.7 -0.3**
MKAR Makanchi Array 61.00 317 P **P** **11 28 56.0 -0.1**
comp=Z,2.0nm,0.9s,baz=99,slow=7.5,SNR=8.8
MKAR LR LR 11 55 35.6
comp=Z,129nm,20.4s,baz=75,slow=36
comp=Z,2.0nm,0.9s
RPZ Rata Peaks 61.04 156 P **P** **11 28 56.9 +0.7**
comp=Z,9.2nm,0.8s,baz=88,slow=2.9,SNR=4.0
comp=Z,9.2nm,0.8s
MAKZ Makanchi 61.21 317 P **P** **11 28 58.4 +0.9**
MAKZ Makanchi 61.21 317 P **P** **11 29 00.1 +2.7**
GAMB Gambell 61.47 21 P **P** **11 28 58.0 -0.8**
baz=234
ZALV Zalesovo Beam 61.65 326 P **P** **11 29 00.3 +0.1**
comp=Z,0.6nm,0.4s,baz=101,slow=6.2,SNR=4.2
ZALV LR LR 11 57 44.1
comp=Z,108nm,18.2s,baz=124,slow=38
comp=Z,0.6nm,0.4s
ZALV Zalesovo Beam 61.65 326 P **P** **11 28 59.8 -0.5**
SDPT Sand Point 62.48 33 P **P** **11 29 05.8 +0.1**
SDPT Sand Point 62.48 33 P **P** **11 29 05.0 -0.7**
baz=249
TNA Tin City 63.83 21 P **P** **11 29 14.1 -0.4**
baz=237
ANM Nome 64.23 22 P **P** **11 29 17.1 -0.1**
ANM Nome 64.23 22 P **P** **11 29 16.5 -0.7**
baz=240
KURK Kurchatov 64.32 321 P **P** **11 29 16.7 -1.3**
KURK IAmb IAmb 11 29 32.1
comp=Z,9.4nm,0.8s
KURBB Kurchatov Arra 64.36 321 LR LR 11 59 13.1
comp=Z,114nm,18.4s,baz=81,slow=38
P16K Nushagak River 65.05 30 P **P** **11 29 22.4 -0.2**
baz=250
O16K Kokwok River B 65.19 29 P **P** **11 29 23.0 -0.6**
baz=249
N16K Nishlik Lake 65.20 28 P **P** **11 29 23.1 -0.5**
baz=248
CHIR Chirikof Islan 65.24 33 P **P** **11 29 22.8 -1.1**
baz=253
R17K Ugashik Creek 65.38 31 P **P** **11 29 23.9 -1.0**
baz=252
AAK Ala-Archa 65.68 312 LR LR 12 01 03.5
comp=Z,81nm,18.0s,baz=80,slow=39
O17K Koliganek Bris 65.73 29 P **P** **11 29 26.7 -0.4**
baz=250
P17K Kvichak River 65.85 30 P **P** **11 29 27.9 +0.1**
baz=251
SII Sitkinak Islan 66.22 33 P **P** **11 29 30.3 0.0**
SII Sitkinak Islan 66.22 33 P **P** **11 29 29.3 -1.0**
baz=254
P18K Big Mountain, 66.51 30 P **P** **11 29 31.3 -0.8**
baz=252
N18K Kilae Creek 66.60 28 P **P** **11 29 32.5 -0.2**
baz=251
O18K Koktuh Hills 66.66 29 P **P** **11 29 32.8 -0.2**
baz=252
OHAK Old Harbor 66.87 32 P **P** **11 29 33.7 -0.7**
baz=255
Q19K Cape Douglas, 67.15 31 P **P** **11 29 35.4 -0.9**
Q19K Cape Douglas, 67.15 31 P **P** **11 29 35.1 -1.1**
baz=254
N19K Bonanza Creek 67.30 28 P **P** **11 29 37.7 +0.5**
N19K IAmb IAmb 11 29 38.1
comp=Z,14nm,1.1s
N19K Bonanza Creek 67.30 28 P **P** **11 29 36.3 -0.9**
baz=252
KDAK Kodiak Island 67.38 32 P **P** **11 29 36.9 -0.7**
comp=Z,6.3nm,0.9s,baz=248,slow=5.4,SNR=5.7
comp=Z,6.3nm,0.9s
KDAK Kodiak Island 67.38 32 P **P** **11 29 37.1 -0.5**
KDAK Kodiak Island 67.38 32 P **P** **11 29 37.1 -0.5**
baz=255
L19K White Mountain 67.56 27 P **P** **11 29 39.2 +0.5**
L19K IAmb IAmb 11 29 42.9
comp=Z,12nm,1.2s
L19K White Mountain 67.56 27 P **P** **11 29 38.5 -0.2**
baz=251
GCSA Galena City Sc 67.59 24 P **P** **11 29 38.3 -0.5**
baz=248
M19K Big River Lodg 67.68 27 P **P** **11 29 39.2 -0.3**
baz=252
Q20K Shuyak Island 67.69 31 P **P** **11 29 39.1 -0.5**
baz=255
O20K Slope Mountain 67.97 29 P **P** **11 29 41.3 -0.1**
baz=254
L20K Farewell, AK 68.09 27 P **P** **11 29 41.8 -0.3**
baz=252
M20K Styx River 68.24 28 P **P** **11 29 42.9 -0.2**
baz=253
K20K Telida 68.28 26 P **P** **11 29 44.4 +1.1**
K20K IAmb IAmb 11 29 47.9
comp=Z,18nm,1.4s
K20K Telida 68.28 26 P **P** **11 29 43.5 +0.2**
baz=252
HOM Homer 68.33 30 P **P** **11 29 42.9 -0.7**
baz=255
J20K Nowinta River 68.51 25 P **P** **11 29 45.2 +0.6**
J20K IAmb IAmb 11 29 49.3
comp=Z,18nm,1.1s
J20K Nowinta River 68.51 25 P **P** **11 29 43.1 -1.5**
baz=251,SNR=9.2
KK31 Karatay Array 68.64 312 P **P** **11 29 45.0 -0.9**
KKAR Karatay Array 68.64 312 P **P** **11 29 45.6 -0.3**
PPLA Purkeypile 68.95 27 P **P** **11 29 47.5 -0.1**
PPLA IAmb IAmb 11 30 00.6
comp=Z,9.1nm,1.0s
PPLA Purkeypile 68.95 27 P **P** **11 29 47.2 -0.4**
baz=254
SKT Skwentna 69.00 28 P **P** **11 29 46.7 -1.1**
baz=254
CHUM Lake Minchumin 69.19 26 P **P** **11 29 48.9 0.0**
baz=253
SUA Susitna One 69.22 28 P **P** **11 29 48.8 -0.5**
baz=256
IMAR Indian Mountai 69.26 23 P **P** **11 29 49.4 +0.1**
O22K Cooper Landing 69.47 29 P **P** **11 29 50.2 -0.5**
baz=257
H21K Melozitna Rive 69.52 24 P **P** **11 29 51.5 +0.5**
H21K IAmb IAmb 11 29 55.9
comp=Z,5.9nm,0.9s
H21K Melozitna Rive 69.52 24 P **P** **11 29 50.6 -0.3**
baz=252,SNR=8.1
M22K Willow 69.58 28 P **P** **11 29 50.2 -1.1**
baz=256
RC01 Rabbit Creek A 69.60 29 P **P** **11 29 50.5 -1.0**
baz=256
I21K Tanana 69.70 24 P **P** **11 29 52.7 +0.7**
I21K IAmb IAmb 11 29 56.5
comp=Z,18nm,1.4s
I21K Tanana 69.70 24 P **P** **11 29 51.5 -0.5**
baz=253,SNR=6.4
BVAR Borovoye Array 69.77 322 LR LR 12 02 17.6
comp=Z,88nm,18.1s,baz=326,slow=38
BPAW Bear Paw Mtn. 69.81 26 P **P** **11 29 52.2 -0.5**
baz=254,SNR=5.4
TRF Thorofare Moun 69.94 26 P **P** **11 29 52.8 -0.9**
baz=255
PMR Palmer 70.00 28 P **P** **11 29 53.0 -0.9**
baz=257
MLY Manley 70.17 25 P **P** **11 29 54.6 -0.3**
baz=254,SNR=11
A21K Barrow 70.24 18 P **P** **11 29 54.9 -0.3**
baz=246
KNK Knik Glacier 70.28 29 P **P** **11 29 55.2 -0.5**
baz=258
SML Sawmill 70.42 28 P **P** **11 29 55.9 -0.7**
baz=258
WAT1 Susitna Watana 70.55 27 P **P** **11 29 56.7 -0.7**
baz=257
MCK McKinley 70.59 26 P **P** **11 29 56.6 -1.0**
baz=256
M23K Glacier View 70.70 28 P **P** **11 29 57.5 -0.8**
baz=258
I23K Minto, Yukon-K 70.76 25 P **P** **11 29 58.7 +0.2**
I23K Minto, Yukon-K 70.76 25 P **P** **11 29 58.2 -0.3**
baz=256,SNR=11
GLI Glacier Island 70.82 29 P **P** **11 29 58.8 -0.1**
baz=259
H23K Yukon River 70.86 24 P **P** **11 29 59.2 +0.1**
baz=255,SNR=8.3
WAT6 Susitna Watana 70.86 27 P **P** **11 29 58.6 -0.8**
baz=258
SCM Sheep Creek Mo 70.89 28 P **P** **11 29 58.8 -0.7**
baz=258
COLD Coldfoot 70.98 22 P **P** **11 29 59.7 -0.1**
baz=254
DHY Denali Highway 71.13 27 P **P** **11 30 00.3 -0.7**
baz=258
TCOL CIGO, UAF Yank 71.31 25 P **P** **11 30 01.3 -0.6**
baz=257
COLA College 71.32 25 P **P** **11 30 01.3 -0.6**
baz=257
COLA College 71.32 25 P **P** **11 30 01.0 -0.9**
EYAK Cordova Ski Ar 71.41 30 P **P** **11 30 02.4 -0.1**
baz=260
M24K Tolsona, Glenn 71.48 28 P **P** **11 30 03.1 0.0**
baz=259
KLU Klutina 71.49 29 P **P** **11 30 02.5 -0.6**
baz=260
H24K Noodor Dome 71.53 24 P **P** **11 30 02.8 -0.5**
baz=257
POKR Poker Plat Res 71.55 25 P **P** **11 30 02.7 -0.7**
baz=257
HDA Harding Lake 71.59 26 P **P** **11 30 03.3 -0.3**
baz=258
TOLK Toolik Lake Re 71.61 21 P **P** **11 30 04.4 +0.8**
TOLK IAmb IAmb 11 30 17.4
comp=Z,21nm,1.4s
TOLK Toolik Lake Re 71.61 21 P **P** **11 30 03.8 +0.2**
baz=254
IL31 71.70 25 P **P** **11 30 03.0 -1.1**
IL31 IAmb IAmb 11 30 05.7
comp=Z,7.7nm,1.1s
ILAR Eielson Array 71.70 25 P **P** **11 30 02.8 -1.5**
comp=Z,3.9nm,0.6s,baz=249,slow=5.9,SNR=63
ILAR LR LR 12 00 52.7
comp=Z,117nm,19.7s,baz=246,slow=35
comp=Z,3.9nm,0.6s
ILAR Eielson Array 71.70 25 P **P** **11 30 03.0 -1.2**
PAX Paxson 71.96 27 P **P** **11 30 05.9 -0.1**
PAX IAmb IAmb 11 30 12.6
comp=Z,11nm,1.2s
PAX Paxson 71.96 27 P **P** **11 30 05.5 -0.5**
baz=260,SNR=5.8
K24K Donnelly Dome 71.98 26 P **P** **11 30 05.9 0.0**
baz=259
HARP HAARP 72.00 28 P **P** **11 30 06.1 -0.1**
baz=260
N25K Chitina, Valde 72.13 29 P **P** **11 30 06.7 -0.3**
baz=261
J25K Salcha River, 72.31 26 P **P** **11 30 07.6 -0.3**
baz=259
RIDG Independent Ri 72.37 27 P **P** **11 30 08.5 +0.1**
baz=260
SCRK Sand Creek 72.79 26 P **P** **11 30 10.5 -0.4**
baz=261
MCARA McCarthy VSAT 72.85 29 P **P** **11 30 10.9 -0.3**
baz=262
L26K Log Cabin Wild 72.93 27 P **P** **11 30 11.2 -0.4**
baz=262,SNR=5.5
M26K Nabesna, AK 73.00 28 P **P** **11 30 11.6 -0.5**
baz=262
J26L Joseph Creek 73.05 26 P **P** **11 30 11.5 -0.9**
baz=261,SNR=6.5
BMAR Burnt Mountain 73.15 23 P **P** **11 30 13.7 +0.8**
M27K Edge Creek, AK 73.51 28 P **P** **11 30 15.2 0.0**
baz=263
PPT Papeete 73.59 112 LR LR 11 57 24.7
comp=Z,209nm,18.5s,baz=120,slow=32
CTG Chitna Glacier 73.61 30 P **P** **11 30 15.3 -0.5**
baz=264
L27K Beaver Creek, 73.62 27 P **P** **11 30 15.9 +0.2**
baz=263
K27K Chicken 73.63 26 P **P** **11 30 15.7 -0.1**
baz=263
BCAR Beaver Creek A 73.64 27 P **P** **11 30 15.6 -0.2**
BVCY Beaver Creek 73.99 28 P **P** **11 30 17.8 -0.1**
baz=264
PINM Pinnacle 74.06 31 P **P** **11 30 18.1 -0.4**
baz=265
YUK3 Moose Creek 74.11 29 P **P** **11 30 19.0 +0.2**
baz=265
YUK8 Steele Glacier 74.40 29 P **P** **11 30 20.1 -0.5**
baz=265
PNL Peninsula 74.46 31 P **P** **11 30 20.7 0.0**
baz=266
DAWY Dawson 74.81 27 P **P** **11 30 22.4 -0.3**
DAWY IAmb IAmb 11 30 37.1
comp=Z,11nm,1.1s
DAWY Dawson 74.81 27 P **P** **11 30 22.6 0.0**
baz=265,SNR=7.0
YUK4 Talbot Arm 74.94 29 P **P** **11 30 24.2 +0.5**
baz=266
YUK6 Outpost Mounta 75.06 30 P **P** **11 30 25.1 +0.7**
baz=267
I29M Ogilvie Camp, 75.38 25 P **P** **11 30 26.1 +0.2**
baz=266
HYT Haines Junctio 75.47 30 P **P** **11 30 27.6 +0.9**
HYT IAmb IAmb 11 30 31.4
comp=Z,14nm,1.0s
HYT Haines Junctio 75.47 30 P **P** **11 30 26.3 -0.3**
baz=268
N30M Aishikik Lake 75.70 29 P **P** **11 30 27.4 -0.5**
baz=268
M30M Minto, Yukon 75.88 28 P **P** **11 30 29.1 +0.2**
baz=268
PLBC Pleasant Camp 76.00 31 P **P** **11 30 29.3 -0.2**
baz=269
EPYK Eagle Plains 76.10 24 P **P** **11 30 29.6 -0.4**
EPYK IAmb IAmb 11 30 35.0
comp=Z,17nm,1.4s
EPYK Eagle Plains 76.10 24 P **P** **11 30 30.1 +0.1**
baz=267
ABKAR Akbulak array 76.13 318 P **P** **11 30 28.9 -1.6**
O30N Mendenhall 76.16 30 P **P** **11 30 30.1 -0.4**
baz=269
N31M Braeburn, Yuko 76.33 29 P **P** **11 30 31.6 +0.2**
baz=269
SKAG Skagway 76.53 31 P **P** **11 30 32.4 -0.1**

baz=270
SIT Sitka 76.53 34 P **P 11 30 32.0 -0.6**
baz=270
WHY Whitehorse 76.75 30 P **P 11 30 34.0 +0.1**
WHY IAmb IAmb 11 30 35.5
comp=Z,6.8nm,0.8s
WHY Whitehorse 76.75 30 P **P 11 30 33.8 -0.1**
baz=270
ARU Arti 76.81 325 LR LR 12 07 10.3
comp=Z,168nm,18.3s,baz=84,slow=38
M31M Drury Creek, Y 76.99 29 P **P 11 30 34.2 -0.9**
baz=270
AKTO Aktyubinsk 77.33 319 LR LR 12 07 19.0
comp=Z,86nm,18.1s,baz=81,slow=38
P32M Atlin 77.35 31 P **P 11 30 36.3 -0.9**
baz=271
INK Inuvik 77.40 22 P **P 11 30 36.8 -0.4**
INK Inuvik 77.40 22 P **P 11 30 36.3 -1.0**
baz=269
P33M Teslin, Yukon 77.78 31 P **P 11 30 38.6 -1.1**
baz=272
CRAG Craig 77.80 35 P **P 11 30 38.6 -1.1**
baz=273
GEYT Alibeck 78.14 307 LR LR 12 10 44.2
comp=Z,86nm,18.0s,baz=141,slow=40
T35M Bob Quinn 79.30 34 P **P 11 30 47.9 -0.2**
baz=275
DLBC Dease Lake 79.31 32 P **P 11 30 48.8 +0.7**
DLBC IAmb IAmb 11 30 52.8
comp=Z,11nm,1.2s
DLBC Dease Lake 79.31 32 P **P 11 30 48.0 -0.1**
baz=275
TGTN Hyland Airport 79.92 29 P **P 11 30 51.5 +0.2**
baz=276
C36M Paulatuk 80.76 21 P **P 11 30 54.8 -0.8**
C36M Paulatuk 80.76 21 P **P 11 30 55.2 -0.4**
baz=278
BBB Bella Bella 81.03 39 LR LR 12 00 30.1
comp=Z,106nm,21.2s,baz=275,slow=31
BELG Belogornoye 83.57 322 LR LR 12 11 07.0
comp=Z,154nm,18.2s,baz=145,slow=38
I02E Swisshome, OR 85.14 46 P **P 11 31 18.1 -0.8**
baz=281
G03D McMinnville, O 85.33 45 P **P 11 31 18.5 -1.4**
baz=282
SPITS Spitsbogen Ar 85.62 350 LR LR 12 10 57.8
comp=Z,55nm,18.8s,baz=0.5,slow=37
YKA Yellowknife Ar 86.04 27 P **P 11 31 23.2 +0.2**
comp=Z,2.6nm,0.7s,baz=292,slow=5.1,SNR=13
YKA LR LR 12 11 11.9
comp=Z,75nm,19.0s,baz=274,slow=37
comp=Z,2.6nm,0.7s
L04D Klamath Falls 86.63 48 P **P 11 31 25.0 -1.5**
baz=282
J05D Fort Rock, OR 87.17 47 P **P 11 31 28.8 -0.3**
baz=283
RES Resolute Bay 87.24 13 P **P 11 31 28.5 -0.1**
RES IAmb IAmb 11 31 31.7
comp=Z,4.6nm,0.8s
PINE Pine Mountain 87.26 46 P **P 11 31 30.8 +1.2**
GNI Garni 88.06 310 LR LR 12 15 56.0
comp=Z,54nm,18.1s,baz=68,slow=39
ARCES ARCESS Array B 88.15 342 P **P 11 31 32.4 -0.7**
comp=Z,3.8nm,1.1s,baz=69,slow=6.6,SNR=3.8
ARCES LR LR 12 14 21.0
comp=Z,76nm,20.1s,baz=60,slow=38
comp=Z,3.8nm,1.1s
ARCES ARCESS Array B 88.15 342 P **P 11 31 31.8 -1.3**
ARCES IAmb IAmb 11 31 36.9
comp=Z,9.4nm,1.3s
KBZ Khabaz 88.53 314 LR LR 12 13 36.1
comp=Z,68nm,19.7s,baz=52,slow=37
VNDA Vanda 89.59 176 P **P 11 31 40.5 +0.9**
comp=Z,0.7nm,0.4s,baz=14,slow=3.3,SNR=6.9
comp=Z,0.7nm,0.4s
VNDA Vanda 89.59 176 P **P 11 31 40.4 +0.8**
PKM Mcpherson Peak 90.21 54 P **P 11 31 42.9 -0.9**
baz=284
NVAR Mina Array Bea 90.50 51 P **P 11 31 46.1 +1.0**
comp=Z,1.6nm,0.8s,baz=266,slow=5.8,SNR=11
comp=Z,1.6nm,0.8s
NV11 Mina Array Sit 90.61 51 P **P 11 31 45.7 +0.2**
NV11 IAmb IAmb 11 31 58.9
comp=Z,8.3nm,1.4s
CIS Catalina Islan 91.71 56 P **P 11 31 49.1 -1.4**
baz=285
FINES FINESS Array B 91.79 334 P **P 11 31 50.1 -0.1**
comp=Z,2.0nm,0.7s,baz=110,slow=11,SNR=4.0
FINES LR LR 12 16 42.5
comp=Z,114nm,18.5s,baz=68,slow=38
comp=Z,2.0nm,0.7s
FINES FINESS Array B 91.79 334 P **P 11 31 49.6 -0.6**
HEC Hector,Ludlow 92.99 54 P **P 11 31 55.5 -0.9**
baz=286
BOZ Bozeman (W) 93.12 42 P **P 11 31 55.8 -1.1**
baz=290
PFO Pinyon Flats O 93.23 55 LR LR 12 07 09.0
comp=Z,89nm,21.7s,baz=251,slow=31
TPFO Pinon Flats 93.23 55 P **P 11 31 56.1 -1.6**
baz=286
AKASG Malin Array Be 95.00 324 LR LR 12 18 16.2
comp=Z,149nm,18.5s,baz=62,slow=38
BRTR Keskin Array B 96.34 313 LR LR 12 21 09.8
comp=Z,41nm,19.0s,baz=54,slow=39
HFS Hagfors 97.57 337 LR LR 12 20 14.2
comp=Z,128nm,18.5s,baz=31,slow=38
NOA NORSAR Array B 97.92 338 LR LR 12 20 51.9
comp=Z,40nm,18.6s,baz=45,slow=38
Z41A Richland Creek 111.52 47 P **PKiKP 11 37 16.6 -0.9**
baz=301
ERPA Erie 114.25 33 P **PKiKP 11 37 21.6 -0.8**
baz=314
BRAL Brewton 116.75 46 P **PKPdf 11 37 26.2 -1.4**
baz=304
KMSC Kings Mountain 118.17 40 P **PKPdf 11 37 29.2 -1.0**
baz=311
M65A Busby, Falmout 119.30 28 P **PKPdf 11 37 31.4 -0.8**
baz=323
NHSC New Hope 120.21 41 P **PKPdf 11 37 33.2 -1.0**
baz=311
LPAZ La Paz 150.51 103 PKPbc **PKiKP 11 38 36.8 0.0**
comp=Z,2.4nm,0.8s,baz=301,slow=3.3,SNR=7.7
LPAZ La Paz 150.51 103 PKPdf **PKPdf 11 38 28.6 -2.1**
LPAZ **pPKPbc 11 38 36.3 -1.5**
LPAZ PKPab **PKPab 11 38 40.6 -2.1**

MAN 20 11:27:12.0, 13.11°N×120.26°E, h2km, mb3.8, ML2.5, MS2.0, Mindoro

MAN 20 11:36:15.7, 12.77°N×121.04°E, h35km, mb3.7, ML2.4, MS1.9, Mindoro

*IDC **20** 11:38:54.0±2.3, 51.05°N×179.71°W, h0km, mb3.8/6, mbtmp3.9/8, ML3.5/2, Error ellipse: s-maj=63.2km s-min=16.2km az=174.0*
*AEIC **20** 11:38:57.1±1.6, 51.10°N±0.1°×179.87°W±0.09, h26km±9km, Error ellipse: s-maj=18.4km s-min=7.8km az=180.0*
*NEIC **20** 11:39:00.9±1.2, 51.32°N±0.2°×179.84°W±0.04, h31km±22km, ML3.3(AEIC), Error ellipse: s-maj=26.5km s-min=3.9km az=177.0*
ISC 20 11:38:59.9±1.1, 51.2°N±0.1°×179.80°W±0.04, h39km, n35, σ1§66/34, mb3.8/7, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.60**	**291**		**Pn**	**11 39 10.3**	**-1.8**
CERAA	**Semis' Rag'd T**	**0.81**	**337**		**Pn**	**11 39 15.7**	**+0.9**
GASW	**Gareloi Southw**	**0.85**	**43**		**Pn**	**11 39 15.9**	**+0.4**
GALAA	**Gareloi Lava P**	**0.88**	**47**		**Pn**	**11 39 16.5**	**+0.7**
GAEA	**Gareloi East**	**0.90**	**46**		**Pn**	**11 39 16.7**	**+0.6**
CEAP	**Semis' Anvil P**	**0.93**	**335**		**Pn**	**11 39 17.8**	**+1.3**
TASE	**Tanaga Southea**	**1.29**	**58**		**Pn**	**11 39 22.0**	**+0.5**
TAFP	**Tanaga Falls P**	**1.35**	**56**		**Pn**	**11 39 22.8**	**+0.5**
TAPA	**Tanaga Point A**	**1.40**	**62**		**Pn**	**11 39 23.5**	**+0.5**
KIMD	**Kanaga Island**	**1.71**	**69**		**Pn**	**11 39 27.6**	**+0.4**
KIKV	**Kanaga Island**	**1.79**	**65**		**Pn**	**11 39 29.2**	**+0.9**
KICM	**Kanaga Island**	**1.79**	**64**		**Pn**	**11 39 30.2**	**+1.9**
KIWB	**Kanaga Island**	**1.79**	**66**		**Pn**	**11 39 29.4**	**+1.1**
ADK	**Adak**	**2.07**	**68**		**Pn**	**11 39 32.8**	**+0.7**
GSCK	**Great Sitkin C**	**2.42**	**68**		**Pn**	**11 39 38.0**	**+1.1**
GSTD	**Great Sitkin T**	**2.45**	**67**		**Pn**	**11 39 39.0**	**+1.6**
GSMY	**Great Sitkin M**	**2.49**	**68**		**Pn**	**11 39 39.1**	**+1.2**
GSTR	**Great Sitkin T**	**2.51**	**67**		**Pn**	**11 39 39.4**	**+1.2**
ATKA	**Atka Island**	**3.64**	**71**		**Pn**	**11 39 54.4**	**+0.8**
SHEM	**Shemya Is, Ala**	**4.09**	**295**	Pn	**Pn**	**11 40 01.0**	**+1.2**
	1.1nm,0.3s,baz=299,slow=22,SNR=3.7						
SHEM				Sn	**Sn**	**11 40 50.5**	**+4.2**
	2.2nm,0.3s,baz=279,slow=21,SNR=1.4						
	11nm,0.4s						
SMY	**Shemya**	**4.09**	**295**	Pn	**Pn**	**11 39 59.2**	**-0.7**
NIKH	**Nikolski High**	**6.99**	**71**	Pn	**Pn**	**11 40 41.9**	**+2.3**
SPIA	**Saint Paul Isl**	**8.22**	**39**	Pn	**Pn**	**11 40 57.5**	**+1.1**
UNV	**Unalaska Valle**	**8.54**	**67**	Pn	**Pn**	**11 41 03.3**	**+2.4**
KDAK	**Kodiak Island**	**17.07**	**57**	Pn	**Pn**	**11 42 52.9**	**-2.3**
	0.4nm,0.3s,baz=290,slow=3.5,SNR=14						
KDAK				Sn	**Sn**	**11 45 58.6**	**-5.0**
	0.1nm,0.3s,baz=170,slow=2.4,SNR=2.1						
	4.4nm,0.7s						
ILAR	**Eielson Array**	**21.80**	**39**	P	**P**	**11 43 47.9**	**-0.3**
	0.3nm,0.7s,baz=237,slow=7.0,SNR=5.1						
KLR	**Kul'dur**	**30.64**	**286**	P	**P**	**11 45 10.4**	**+0.2**
	2.3nm,0.6s,baz=74,slow=4.7,SNR=10						
	2.3nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**33.08**	**203**	T	T	12 20 55.5	
	baz=18						
H11N3	**WAKE ISLAND Hy**	**33.09**	**203**	T	T	12 21 07.4	
	baz=18						
H11N1	**WAKE ISLAND Hy**	**33.10**	**203**	T	T	12 21 05.9	
	baz=18						
YKA	**Yellowknife Ar**	**35.83**	**46**	P	**P**	**11 45 54.7**	**-0.5**
	0.6nm,0.6s,baz=282,slow=7.4,SNR=5.2						
	0.6nm,0.6s						
SONM	**Songino Array**	**46.18**	**296**	P	**P**	**11 47 21.8**	**+1.1**
	0.3nm,0.4s,baz=46,slow=8.3,SNR=1.8						
	0.3nm,0.4s						
PDAR	**Pinedale Array**	**46.97**	**71**	P	**P**	**11 47 27.3**	**+0.2**
	0.6nm,0.6s,baz=314,slow=3.9,SNR=7.5						
	0.6nm,0.6s						
KURBB	**Kurchatov Arra**	**58.82**	**313**	P	**P**	**11 48 54.4**	**+0.4**
	1.0nm,0.5s,baz=43,slow=6.5,SNR=10						
	1.0nm,0.5s						
MKAR	**Makanchi Array**	**59.67**	**308**	P	**P**	**11 48 59.6**	**-0.4**
	0.8nm,0.6s,baz=51,slow=6.4,SNR=6.5						
	0.8nm,0.6s						

*IDC **20** 11:43:35.9±2.2, 30.76°N×142.28°E, h0km, mb3.6/5, mbtmp3.7/7, ML4.4/2, Error ellipse: s-maj=70.7km s-min=19.8km az=72.0*
*NEIC **20** 11:43:40.9±0.6, 30.70°N±0.05°×142.1°E±0.2, h31km±7km, mb4.3/7, Error ellipse: s-maj=19.4km s-min=7.5km az=88.0*
*JMA **20** 11:43:44.1±0.9, 31°N±3'×14°3'E±', h120km, MV3.2/17, FAR E OFF IZU ISLANDS*
ISC 20 11:43:40.8±0.9, 30.73N±0.07°×142.2E±0.2, h35km, n30, σ0§91/32, mb3.9/9, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**3.62**	**180**	Pn	**Pn**	**11 44 34.9**	**+0.4**
	3.3nm,0.3s,baz=5.3,slow=20,SNR=10						
JCJ				Sn	**Sn**	**11 45 14.3**	**-1.6**
	15nm,0.3s,baz=277,slow=20,SNR=6.2						
	11nm,0.3s						
JCJ	**Chichijima**	**3.62**	**180**		**Pn**	**11 44 33.6**	**-0.8**
JHU	**Hanno**	**5.65**	**336**	P	**Pn**	**11 45 02.5**	**+0.2**
JHU				S	**Sn**	**11 46 03.2**	**-2.7**
JYT	**Yasato**	**5.72**	**344**	Pn	**Pn**	**11 45 05.3**	**+2.0**
JRY	**Ryogami san**	**5.94**	**334**	P	**Pn**	**11 45 06.5**	**+0.3**
JHO	**Hitachi**	**6.01**	**348**	P	**Pn**	**11 45 05.6**	**-1.7**
JAG	**Ashikaga**	**6.11**	**339**	P	**Pn**	**11 45 07.9**	**-0.7**
MJAR	**Matsushiro Arr**	**6.67**	**331**	Pn	**Pn**	**11 45 15.5**	**-0.8**
	4.6nm,0.6s,baz=159,slow=11,SNR=18						
MJAR	**Matsushiro Arr**	**6.67**	**331**		**Pn**	**11 45 16.3**	**0.0**
MAJO	**Matsushiro**	**6.67**	**331**		**Pn**	**11 45 16.9**	**+0.6**
MJB9	**Matsu-Tunnel**	**6.67**	**331**		**Pn**	**11 45 16.5**	**+0.2**
JMM	**Marumori**	**7.21**	**351**	Pn	**Pn**	**11 45 22.8**	**-0.9**
JSD	**Sado**	**7.97**	**337**	Pn	**Pn**	**11 45 34.0**	**-0.1**
JNU	**Nakatsue**	**9.88**	**287**	Pn	**Pn**	**11 46 00.2**	**-0.1**
	6.4nm,0.3s,baz=80,slow=0.3,SNR=9.9						
KLR	**Kul'dur**	**20.09**	**340**	P	**P**	**11 48 10.9**	**-0.3**
	0.6nm,0.6s,baz=144,slow=15,SNR=2.3						
	0.6nm,0.6s						
SONM	**Songino Array**	**32.17**	**312**	P	**P**	**11 50 06.4**	**+1.1**
	0.5nm,0.6s,baz=101,slow=7.5,SNR=1.8						
	0.5nm,0.6s						
MKAR	**Makanchi Array**	**48.21**	**307**	P	**P**	**11 52 18.7**	**+0.8**
	0.6nm,0.6s,baz=96,slow=9.9,SNR=4.6						
	0.6nm,0.6s						
MKAR	**Makanchi Array**	**48.21**	**307**	P	**P**	**11 52 17.8**	**-0.1**
KURK	**Kurchatov**	**50.48**	**312**	P	**P**	**11 52 35.1**	**0.0**
KURK				IAmb	IAmb	11 52 36.1	
	comp=Z,2.0nm,0.8s						
KURBB	**Kurchatov Arra**	**50.54**	**312**	P	**P**	**11 52 35.9**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=87,slow=7.4,SNR=9.1						
	comp=Z,0.8nm,0.6s						
WB0	**Warramunga Arr**	**50.76**	**189**	P	**P**	**11 52 37.1**	**-0.4**
WR0	**Warramunga Arr**	**50.93**	**189**	P	**P**	**11 52 38.6**	**-0.1**
WR0				IAmb	IAmb	11 52 58.4	
	comp=Z,9.3nm,1.4s						
WRAB	**Tennant Creek**	**50.93**	**189**	P	**P**	**11 52 38.4**	**-0.4**
WRAB				IAmb	IAmb	11 52 40.3	
	comp=Z,6.5nm,1.3s						
WB2	**Warramunga Arr**	**50.94**	**189**	P	**P**	**11 52 38.7**	**-0.1**
WB2				IAmb	IAmb	11 52 50.6	
	comp=Z,9.2nm,1.2s						
WRA	**Warramunga Arr**	**50.94**	**189**	P	**P**	**11 52 39.0**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=5.7,slow=7.4,SNR=25						
	comp=Z,0.5nm,0.3s						
WRA	**Warramunga Arr**	**50.94**	**189**	P	**P**	**11 52 38.5**	**-0.4**
AS31	**Alice Springs**	**54.66**	**189**	P	**P**	**11 53 07.1**	**+0.7**
AS31				IAmb	IAmb	11 53 34.8	
	comp=Z,0.6nm,0.9s						
ASAR	**Alice Springs**	**54.66**	**189**	P	**P**	**11 53 06.9**	**+0.5**
BMAR	**Burnt Mountain**	**55.61**	**27**	P	**P**	**11 53 13.6**	**+0.8**
ABKAR	**Akbulak array**	**62.58**	**313**	P	**P**	**11 54 01.6**	**+0.4**

DJA 20 11:44:01.1±0.8, 2°N±4°×12°8E±', h28km±8km, M3.8/6, mb4.1/1, MLv3.6/6, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.59**	**224**	P	Pn	11 44 27.3	-0.2
TNTI				S	Sn	11 44 47.8	+0.7
LBMI	**Labuha**	**2.72**	**201**	P	Pn	11 44 42.8	-0.2
SGSI	**Sangihe**	**3.43**	**301**	P	Pn	11 44 52.8	+0.1
SWI	**Sorong**	**3.92**	**135**	P	Pn	11 44 59.8	+0.3
FAKI	**Fak Fak**	**6.11**	**142**	P	Pn	11 45 29.6	0.0

*IDC **20** 11:47:44.0±1.6, 21.73S×175.69W, h0km, mb4.1/3, mbtmp4.1/4, ML3.8/1, Error ellipse: s-maj=46.7km s-min=34.8km az=101.0*
*NEIC **20** 11:47:52.0±1.8, 21.66S±0.09×175.82W±0.09, h52km±6km, mb4.6/29, Error ellipse: s-maj=15.0km s-min=9.3km az=215.0*
ISC 20 11:47:51.2±0.6, 21.7S±0.1°×175.79W±0.09, h50km, n40, σ1§36/42, mb4.6/18, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**6.06**	**66**	Pn	**Pn**	**11 49 19.7**	**+1.4**
NIUE				Sn	**Sn**	**11 50 24.5**	**-1.9**
URZ	**Urewera**	**17.65**	**199**	P	**Pn**	**11 51 52.7**	**-0.8**
	0.4nm,0.3s,baz=122,slow=24,SNR=1.6						
	2.0nm,0.5s						
URZ	**Urewera**	**17.65**	**199**	P	**Pn**	**11 51 52.0**	**-1.5**
QRZ	**Quartz Range**	**21.53**	**205**	P	**P**	**11 52 39.0**	**+2.8**
QRZ				IAmb	IAmb	11 52 56.1	
	comp=Z,45nm,1.4s						
NNZ	**Nelson**	**21.55**	**203**	P	**P**	**11 52 36.0**	**-0.4**
NNZ				IAmb	IAmb	11 52 50.7	
	comp=Z,27nm,1.4s						
THZ	**Tophouse**	**22.20**	**203**	P	**P**	**11 52 45.3**	**+1.9**
THZ				IAmb	IAmb	11 53 11.7	
	comp=Z,40nm,1.5s						
WHZ	**Wether Hill Ro**	**27.60**	**205**	P	**P**	**11 53 34.5**	**+0.7**
WHZ				IAmb	IAmb	11 53 49.9	
	comp=Z,41nm,1.4s						
CTAO	**Charters Tower**	**35.45**	**265**		**P**	**11 54 44.4**	**+1.4**
STKA	**Stephens Creek**	**39.18**	**246**	P	**P**	**11 55 14.8**	**+0.3**
	comp=Z,3.3nm,0.6s,baz=94,slow=8.4,SNR=9.9						
	comp=Z,3.3nm,0.6s						
STKA	**Stephens Creek**	**39.18**	**246**	P	**P**	**11 55 15.1**	**+0.7**
COEN	**Coen**	**39.72**	**274**	P	**P**	**11 55 20.3**	**+1.1**
COEN				IAmb	IAmb	11 55 48.1	
	comp=Z,22nm,1.4s						
BBOO	**Buckleboo**	**43.91**	**245**	P	**P**	**11 55 51.5**	**-1.7**
AS31	**Alice Springs**	**46.28**	**257**	P	**P**	**11 56 11.5**	**-0.7**
ASAR	**Alice Springs**	**46.28**	**257**	P	**P**	**11 56 11.4**	**-0.7**
WR0	**Warramunga Arr**	**46.31**	**263**	P	**P**	**11 56 11.2**	**-1.1**
WR0				IAmb	IAmb	11 56 15.0	
	comp=Z,9.0nm,1.4s						
WB0	**Warramunga Arr**	**46.48**	**263**	P	**P**	**11 56 13.1**	**-0.7**
WB0				IAmb	IAmb	11 56 25.2	
	comp=Z,11nm,1.4s						
WB2	**Warramunga Arr**	**46.49**	**263**	P	**P**	**11 56 12.9**	**-0.9**
WRAB	**Tennant Creek**	**46.49**	**263**	P	**P**	**11 56 12.6**	**-1.2**
WRAB				IAmb	IAmb	11 56 14.5	
	comp=Z,16nm,1.5s						
WRA	**Warramunga Arr**	**46.50**	**263**	P	**P**	**11 56 13.0**	**-0.9**
	comp=Z,1.7nm,0.5s,baz=94,slow=6.2,SNR=61						
	comp=Z,1.7nm,0.5s						
WRA	**Warramunga Arr**	**46.50**	**263**	P	**P**	**11 56 12.7**	**-1.2**
FORT	**Forrest**	**50.75**	**247**	P	**P**	**11 56 45.2**	**-1.2**
MTN	**Manton Dam**	**51.24**	**271**	P	**P**	**11 56 48.9**	**-1.4**
KNRA	**Kununurra**	**52.65**	**266**	P	**P**	**11 57 00.5**	**-0.3**
KNRA				IAmb	IAmb	11 57 20.3	
	comp=Z,13nm,1.2s						
SBA	**Scott Base**	**56.88**	**184**	P	**P**	**11 57 33.3**	**+2.9**
SBA				IAmb	IAmb	11 57 34.8	
	comp=Z,2.7nm,0.9s						
VNDA	**Vanda**	**56.97**	**186**	P	**P**	**11 57 29.2**	**-1.9**
	comp=Z,1.1nm,0.8s,baz=13,slow=2.3,SNR=5.1						
	comp=Z,1.1nm,0.8s						
VNDA	**Vanda**	**56.97**	**186**	P	**P**	**11 57 31.4**	**+0.4**
PSA00	**Pilbara Seismi**	**59.42**	**257**	P	**P**	**11 57 47.8**	**-1.3**
MBWA	**Marble Bar**	**59.62**	**258**	P	**P**	**11 57 49.0**	**-1.5**
MBWA				IAmb	IAmb	11 57 57.8	
	comp=Z,11nm,1.2s						
MORW	**Morawa**	**61.31**	**248**	P	**P**	**11 58 00.9**	**-1.0**
CASY	**Casey**	**63.82**	**206**	P	**P**	**11 58 18.1**	**+0.2**
CASY				IAmb	IAmb	11 58 39.8	
	comp=Z,9.2nm,1.2s						
QSPA	**South Pole Qui**	**68.43**	**180**		**P**	**11 58 48.4**	**+0.7**
QSPA				IAmb	IAmb	11 58 50.4	
	comp=Z,3.5nm,0.9s						
PEA0B	**Petropavlovsk-**	**77.92**	**344**	P	**P**	**11 59 45.4**	**+1.8**
PEA0B				IAmb	IAmb	11 59 53.0	
	comp=Z,9.2nm,1.2s						
PETK	**Petropavlovsk-**	**77.92**	**344**	P	**P**	**11 59 44.9**	**+1.4**
BELA	**Belgrano 2**	**78.15**	**172**	P	**P**	**11 59 44.8**	**+0.1**
SNAA	**Sanae**	**86.80**	**178**	P	**P**	**12 00 30.7**	**+0.8**
SNAA				IAmb	IAmb	12 00 45.9	
	comp=Z,4.6nm,1.4s						
ORCD	**Orcadas**	**88.90**	**158**	P	**P**	**12 00 38.0**	**-2.0**
AKASG	**Malin Array Be**	**145.00**	**332**	PKPbc	PKPbc	12 07 22.4	+0.3
	comp=Z,2.3nm,0.6s,baz=37,slow=3.5,SNR=11						
BRTR	**Keskin Array B**	**149.14**	**312**	PKPbc	**PKPbc**	**12 07 34.9**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=135,slow=3.5,SNR=4.1						
BRTR	**Keskin Array B**	**149.14**	**312**		**PKPdf**	**12 07 28.9**	**-1.3**
BRTR				PKPbc	**PKPbc**	**12 07 32.4**	**-2.1**
BRTR				PKPab	**PKPab**	**12 07 38.6**	**-0.3**
MMAI	**Mount Meron Ar**	**150.18**	**299**	PKPbc	**PKPbc**	**12 07 37.8**	**+0.7**
	comp=Z,0.7nm,0.3s,baz=82,slow=6.0,SNR=4.5						

*IGQ **20** 11:59:45±0.2, 1°S±2°×81°W±', h4km*
*NEIC **20** 11:59:53.5±2.2, 1.16S±0.06°×80.18W±0.08, h59km±7km, mb4.3/20, Error ellipse: s-maj=10.9km s-min=8.3km az=86.0*
*IDC **20** 11:59:56.2±2.4, 1.18S×79.99W, h89km±22km, mb3.6/7, mbtmp4.1/10, MS3.7/11, Error ellipse: s-maj=24.6km s-min=14.0km az=89.0*
*VAO **20** 11:59:57.3±0.6, 1.06S×79.50W, h10km, mb4.4*
ISC 20 11:59:44.9±1.2, 0.99S±0.03°×80.51W±0.03, h3km±8km, n144, σ1§68/142, mb4.4/14, MS3.6/8, 5C-1D, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIS	**Cerro-Chispas-**	**0.23**	**255**	P	**Pg**	**11 59 50.0**	**+0.6**
AMNT	**Manta-Manabi**	**0.23**	**282**	P	**Pg**	**11 59 50.0**	**+0.5**
AMNT				S	**Sg**	**11 59 53.0**	**+0.4**
CABP	**Cabo Pasado**	**0.60**	**7**	P	**Pg**	**11 59 57.0**	**+0.4**
CABP				S	**Sb**	**12 00 06.0**	**-1.2**
PPLP	**Puerto Lpez**	**0.61**	**206**	P	**Pg**	**11 59 56.0**	**-0.7**
ISPT	**Isla de la Pla**	**0.63**	**245**	P	**Pg**	**11 59 56.0**	**-1.0**
ISPT				S	**Sg**	**12 00 06.0**	**+0.8**
JAMA	**Jama**	**0.78**	**22**	P	**Pg**	**11 59 59.0**	**-1.0**
JAMA				S	**Sg**	**12 00 08.0**	**-2.2**
MAG1	**Magdalena**	**1.17**	**39**	P	Pg	12 00 16.0	+8.6
AGUAY	**Guayaquil**	**1.19**	**152**	P	**Pg**	**12 00 09.0**	**+1.2**
AMIL	**Milagro (Trans**	**1.46**	**141**	P	**Pn**	**12 00 12.0**	**-0.2**
AV18	**Acelerografo,**	**1.65**	**38**	P	**Pn**	**12 00 15.0**	**+0.1**
CHSH	**Refugio Sur-Vo**	**1.71**	**107**	P	**Pn**	**12 00 16.0**	**-0.2**
BV15	**Puerto Quito-O**	**1.72**	**48**	P	**Pn**	**12 00 14.0**	**-1.8**
PORT	**Chimborazo Vol**	**1.79**	**105**	Pn	**Pn**	**12 00 17.4**	**0.0**
PORT	**Chimborazo Vol**	**1.79**	**105**	P	**Pn**	**12 00 17.0**	**-0.4**
ILLI	**Illinizas Sur-O**	**1.80**	**81**	P	**Pn**	**12 00 16.4**	**-1.4**
TAMH	**Tambohuasha Ch**	**1.81**	**108**	P	**Pn**	**12 00 17.0**	**-0.5**
APR2	**Miler**	**1.87**	**55**	P	**Pn**	**12 00 17.0**	**-1.0**
PAST	**Pastocalle**	**1.89**	**81**	P	**Pn**	**12 00 18.0**	**-0.5**
AV21	**Acelerografo,**	**1.90**	**30**	P	**Pn**	**12 00 19.0**	**+0.7**
COHC	**Cochancay**	**1.93**	**140**	Pn	**Pn**	**12 00 18.2**	**-0.4**
IGUA	**Igualata**	**1.93**	**105**	P	**Pn**	**12 00 19.0**	**-0.3**
SRAM	**San Ramn-Vol**	**1.95**	**83**	P	**Pb**	**12 00 21.0**	**-0.4**
CAMI	**Rancho Maria**	**2.02**	**81**	P	**Pn**	**12 00 21.0**	**+0.5**
SLOR	**San Lorenzo -**	**2.02**	**83**	Pn	**Pn**	**12 00 21.2**	**+0.7**
SLOR	**San Lorenzo -**	**2.02**	**83**	P	**Pn**	**12 00 21.0**	**+0.5**
SUCR	**Mariscal Sucre**	**2.04**	**80**	P	**Pn**	**12 00 21.0**	**+0.3**
BNAS	**Cotopaxi Volca**	**2.05**	**81**	P	**Pn**	**12 00 21.0**	**+0.2**
BIL2	**Estacion Bilba**	**2.05**	**103**	P	**Pb**	**12 00 23.0**	**-0.1**
NAS2	**Nasa**	**2.06**	**80**	P	**Pn**	**12 00 22.0**	**+0.9**
TERV	**Terraza Guagua**	**2.07**	**67**	P	**Pn**	**12 00 20.0**	**-1.1**
BBIL	**Ulba Tungurahu**	**2.07**	**103**	P	**Pn**	**12 00 22.0**	**+1.1**
PINO	**Pino**	**2.07**	**66**	P	**Pn**	**12 00 20.0**	**-1.2**
GGPC	**Guagua Pichinc**	**2.07**	**67**	P	**Pn**	**12 00 20.0**	**-1.2**
JUI6	**Juive**	**2.08**	**102**	P	**Pn**	**12 00 22.0**	**+0.9**
BMAS	**Trigal station**	**2.09**	**104**	P	**Pn**	**12 00 22.0**	**+0.7**
BREF	**Cotopaxi Volca**	**2.09**	**81**	P	**Pn**	**12 00 22.0**	**+0.5**
POND	**Pondoa**	**2.10**	**102**	P	**Pn**	**12 00 22.0**	**+0.7**
RETU	**Refugio**	**2.11**	**103**	P	**Pn**	**12 00 22.0**	**+0.3**
APR1	**Acelerografo,**	**2.11**	**64**	P	**Pn**	**12 00 22.0**	**+0.4**
ARRY	**Arrayan**	**2.11**	**104**	P	**Pn**	**12 00 22.0**	**+0.4**
BVC2	**Cotopaxi Volca**	**2.12**	**81**	P	**Pn**	**12 00 22.0**	**+0.1**
VCES	**Cot

comp=Z,239nm,0.4s
GR1C Gorgona, Isla 4.60 30 *e*P **Pn 12 00 57.7 +2.2**
SOTA Rioblanco 4.98 51 *e*P **Pn 12 01 00.6 -0.6**
PCON Cinco Dias 5.27 51 *e*P **Pn 12 01 07.4 +2.2**
FLOC Florencia 5.48 62 *e*P **Pn 12 01 10.1 +2.4**
FLOC *e*S **Sn 12 02 16.3 +4.9**
PTLC Puerto Leguiza 5.82 79 *e*P **Pn 12 01 12.2 -0.2**
MALC Bahia Malaga 5.89 32 *e*P **Pn 12 01 15.1 +1.8**
GARC Garzon, Huila 5.92 58 *e*P **Pn 12 01 16.5 +2.6**
MARP Paez Belalcaza 5.93 50 *e*P **Pn 12 01 14.1 0.0**
BETC Betania 6.24 54‖ *e*P **Pn 12 01 21.8 +3.7**
ATAH Atahualpa 6.46 161 P **Pn 12 01 24.0 +2.6**
comp=Z,3.8nm,0.4s,baz=32,slow=8.5,SNR=11
ATAH S **Sn 12 02 33.7 -2.2**
comp=Z,21nm,0.6s,baz=294,slow=8.0,SNR=2.3
ATAH LR LR 12 04 04.3
comp=Z,478nm,20.2s,baz=344,slow=40
YOTC Yotoco, Valle 6.46 40 *e*P **Pn 12 01 20.8 -0.3**
ROSC El Rosal 8.47 47 P **Pn 12 01 52.4 +3.4**
comp=Z,38nm,0.5s,baz=282,slow=23,SNR=12
ROSC S **Sn 12 03 26.8 +1.4**
comp=Z,6.2nm,0.4s,baz=79,slow=21,SNR=1.1
ROSC El Rosal 8.47 47 Pn Pn 12 01 54.7 +5.7
ZARC Zaragoza, Cauc 10.14 34 Pn 12 02 16.1 +4.6
CZSB Cruzeiro do Su 10.26 131 *e*P **Pn 12 02 13.1 -0.1**
NNA Nana 11.51 162 P **Pn 12 02 30.5 0.0**
comp=Z,9.3nm,0.4s,baz=22,slow=11,SNR=3.2
NNA S **Sn 12 04 36.3 -3.5**
comp=Z,15nm,0.5s,baz=57,slow=22,SNR=9.0
OCAC Ocana 11.63 38 Pn 12 02 35.6 +3.4
JTS Las Juntas de 12.05 339 LR LR 12 06 08.4
comp=Z,154nm,18.8s,baz=204,slow=30
SDV Santo Domingo 13.89 45 P **Pn 12 03 06.2 +3.1**
comp=Z,6.4nm,0.3s,baz=22,slow=4.1,SNR=2.5
SDV LR LR 12 09 32.7
comp=Z,216nm,19.8s,baz=238,slow=42
SDV Santo Domingo 13.89 45 P **P 12 03 11.5 -0.1**
SDV Santo Domingo 13.89 45 *e*P **Pn 12 03 04.8 +1.6**
BOAB BOACO BROADBAN 13.30 339 Pn **P 12 03 14.4 -1.6**
BIRV Birongo 18.18 51 P **Pn 12 03 58.4 -0.2**
SAML Samuel 18.97 115 P **P 12 04 05.5 -2.2**
SAML IAmb IAmb 12 04 10.1
comp=Z,11nm,0.7s
LPAZ La Paz 19.49 142 P **Pn 12 04 15.4 +0.2**
comp=Z,3.0nm,0.8s,baz=327,slow=7.8,SNR=9.8
LPAZ La Paz 19.49 142 Pn 12 04 14.9 -0.2
LPAZ La Paz 19.49 142 *e*P **Pn 12 04 15.8 +0.6**
BOAV Boa Vista 20.26 80 *e*P **P 12 04 22.0 +0.2**
PB16 IPOC Station P 20.34 149 P **P 12 04 24.0 +0.8**
PB16 IAmb IAmb 12 04 41.8
comp=Z,8.2nm,0.8s
GO01 Chusmiza 21.62 150 P **P 12 04 36.1 -0.8**
GO01 IAmb IAmb 12 04 51.9
comp=Z,29nm,1.2s
VILB Vilhena 23.36 121 *e*P **P 12 04 54.1 -0.9**
LVC Limon Verde 24.27 153 LR LR 12 14 00.7
comp=Z,130nm,19.9s,baz=286,slow=35
SIV San Ignacio 24.28 129 P **P 12 05 01.8 -2.0**
comp=Z,1.8nm,0.6s,baz=312,slow=11,SNR=6.8
SIV LR LR 12 15 38.3
comp=Z,368nm,19.3s,baz=294,slow=40
comp=Z,1.8nm,0.6s
ITTB Itaituba 24.97 98 *e*P **P 12 05 10.2 +0.1**
PDRB Porto dos Gac 25.85 115 *e*P **P 12 05 20.3 +2.2**
MALB Monte Alegre 26.25 92 *e*P **P 12 05 22.1 +0.4**
MDP Montagnes des 28.48 77 LR LR 12 17 29.0
comp=Z,158nm,19.6s,baz=248,slow=38
PEXB Peixe 33.80 110 *e*P **P 12 06 31.1 +2.5**
IPMB Ipameri, GO 35.93 120 P **P 12 06 50.5 +3.3**
SDBA SÃO DESIDERIO 37.07 109 *e*P **P 12 06 59.7 +2.8**
TXAR Lajitas Array 37.41 326 P **P 12 07 04.7 +5.1**
comp=Z,0.3nm,0.8s,baz=141,slow=8.1,SNR=4.2
TXAR PcP **PcP 12 09 16.9 -1.8**
comp=Z,0.2nm,0.7s,baz=164,slow=4.5,SNR=2.8
comp=Z,0.3nm,0.8s
TXAR Lajitas Array 37.41 326 P P 12 07 04.1 +4.5
PLCA Paso Flores 40.58 168 P **P 12 07 24.9 -1.1**
comp=Z,3.1nm,1.1s,baz=331,slow=9.8,SNR=3.8
comp=Z,3.1nm,1.1s
PLCA Paso Flores 40.58 168 P **P 12 07 25.2 -0.8**
PLCA IAmb IAmb 12 07 27.8
comp=Z,7.2nm,1.2s
PLCA Paso Flores 40.58 168 *e*P P 12 07 34.2 +8.3
NBMA Muriti-CE 42.08 100 *e*P **P 12 07 41.8 +3.0**
ANMO Albuquerque 43.22 328 P **P 12 07 50.2 +2.4**
ANMO IAmb IAmb 12 07 55.6
comp=Z,4.5nm,1.1s
NBLA Lagarto - SE 43.57 105 *e*P **P 12 07 53.6 +2.9**
RCBR Riachuelo 44.77 97 LR LR 12 27 47.4
comp=Z,362nm,18.9s,baz=66,slow=38
WUAZ Wupatki 46.35 325 P P 12 08 17.9 +5.1
WUAZ IAmb IAmb 12 08 22.6
comp=Z,4.9nm,1.1s
PFO Pinyon Flats O 48.24 319 LR LR 12 26 28.5
comp=Z,52nm,18.3s,baz=212,slow=33
NVAR Mina Array Bea 52.42 323 P P 12 09 04.5 +5.3
comp=Z,0.4nm,0.6s,baz=187,slow=19,SNR=4.1
comp=Z,0.4nm,0.6s
ULM Lac du Bonnet 52.72 348 LR LR 12 31 50.9
comp=Z,58nm,19.2s,baz=126,slow=36
LIC Lamto 75.67 83⇑ *e*PKP2 **P 12 11 31.1 -1.4**
comp=Z,3.8nm,0.5s
TIC Toumodi 75.70 83 ⇓ *i*PKP2 **P 12 11 30.6 -2.0**
comp=Z,3.8nm,0.2s
DBIC Dimbokro 75.87 83 P **P 12 11 31.2 -2.3**
comp=Z,5.3nm,0.7s,baz=257,slow=4.8,SNR=5.4
DBIC LR LR 12 42 49.8
comp=Z,51nm,19.0s,baz=274,slow=34
comp=Z,5.3nm,0.7s
DBIC Dimbokro 75.87 83 P **P 12 11 30.6 -2.9**
KIC Kosan Boka 75.97 83⇑ *i*PKP2 **P 12 11 32.1 -2.0**
comp=Z,17nm,0.6s
BORG Borgarnes 78.22 22 LR LR 12 45 42.0
comp=Z,26nm,18.6s,baz=306,slow=35
BORG Borgarnes 78.22 22 P **P 12 11 46.7 +1.0**
BMAR Burnt Mountain 81.20 339 P **P 12 12 04.4 +2.4**
TOA0 Torodi Ar. Sit 82.63 77 P **P 12 12 07.8 -2.7**
TOA0 IAmb IAmb 12 12 19.9
comp=Z,7.5nm,1.4s
TORD Torodi Ar. Bea 82.63 77 P **P 12 12 06.8 -3.7**
comp=Z,1.0nm,1.0s,baz=262,slow=5.2,SNR=3.7
comp=Z,1.0nm,1.0s
TORD Torodi Ar. Bea 82.63 77 P **P 12 12 08.0 -2.5**
IMAR Indian Mountai 84.13 337 P **P 12 12 19.0 +1.8**
SNAA Sanae 85.19 162 P **P 12 12 20.2 -2.4**
QSPA South Pole Qui 89.07 180 P **P 12 12 40.4 -1.1**
comp=Z,1.8nm,0.8s,baz=159,slow=1.5,SNR=12
comp=Z,1.8nm,0.8s
QSPA South Pole Qui 89.07 180 P **P 12 12 40.6 -0.9**
QSPA IAmb IAmb 12 12 48.0
comp=Z,1.7nm,0.9s
VNDA Vanda 94.83 191 P **P 12 13 07.2 -0.6**

DJA 20 12:09:28.4±1.8,**3°S**±13″×**13°8E**±″,**h25**km±15km,**M4.0**/5,
mb4.4/2,**mB4.8**/1,**MLv3.9**/5,**Mw(mB)4.1**/1,**Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SMPI	**Sarmi**	**0.65**	**25**	P		Pb	12 09 41.5	+0.4
SMPI				S		Sn	12 09 52.1	+0.7
GENI	**Genyem**	**1.73**	**90**	P		Pn	12 09 56.8	-0.1
GENI				S		Sn	12 10 18.9	+0.8
SRPI	**Serui, Papua**	**2.31**	**288**	P		Pn	12 10 05.0	+0.1
BAKI	**Biak**	**2.71**	**301**	P		Pn	12 10 09.6	-0.8
FAKI	**Fak Fak**	**6.19**	**267**	P		Pn	12 10 58.1	-0.2
	0.2nm18nm,1.1s							
SWI	**Sorong**	**7.38**	**283**	P		Pn	12 11 15.3	+0.7

*IDC **20** 12:10:52.6±0.7,1°.15S×123°.48E,h0km,mb4.0/14,*
mbtmp4.0/15,ML4.5/1,MS3.2/10,Error ellipse:
s-maj=24.2km s-min=14.8km az=76.0
*DJA **20** 12:10:57.2±0.5,1°.S±2°×12°.3E±°,h10km±4km,M4.7/30,*
mb4.9/23,mB5.3/14,MLv4.8/30,Mw(mB)4.7/14
*NEIC **20** 12:10:59.5±0.9,1°.30S±0°.06×123°.37E±0°.04,h39km±7km,*
mb4.7/32,Error ellipse: s-maj=8.9km s-min=5.5km
az=156.0
ISC 20 12:10:59.4±0.4,**1°29S**±0°.05×**123°39E**±0°.05,**h49**km,**n95,**
σ1§**14**/94,**mb4.5**/29,**MS3.2**/7,**Sulawesi**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LUWI	**Luwuk**	**0.67**	**292**	Pn		**Pn**	**12 11 10.1**	**-2.5**
LUWI	**Luwuk**	**0.67**	**292**	P		**Pn**	**12 11 10.3**	**-2.3**
LUWI				S		**Sn**	**12 11 19.2**	**-3.0**
APSI	**Ampana**	**1.78**	**282**	P		**Pn**	**12 11 27.1**	**-0.6**
APSI				S		**Sn**	**12 11 50.6**	**+1.4**
KMSI	**Cibinong**	**1.95**	**18**	P		**Pn**	**12 11 32.0**	**+2.0**
MRSI	**Marisa**	**2.28**	**320**	P		**Pn**	**12 11 34.5**	**0.0**
MRSI				S		**Sn**	**12 12 02.5**	**+1.1**
SANI	**Sanana**	**2.71**	**106**	P		**Pn**	**12 11 38.9**	**-1.5**
TOLI2	**Tolitoli**	**3.54**	**312**	Pn		**Pn**	**12 11 53.4**	**+1.6**
MPSI	**Mapaga**	**3.85**	**295**	P		**Pn**	**12 11 56.9**	**+0.8**
TTSI	**Tana Toraja**	**3.97**	**244**	P		**Pn**	**12 11 57.5**	**-0.3**
LBMI	**Labuha**	**4.16**	**81**	P		**Pn**	**12 12 00.5**	**+0.1**
NLAI	**Namlea**	**4.18**	**118**	P		**Pn**	**12 12 01.8**	**+1.1**
BBSI	**Bau Bau**	**4.25**	**191**	P		**Pn**	**12 12 01.0**	**-0.6**
TNTI	**Ternate**	**4.47**	**63**	Pn		**Pn**	**12 12 05.3**	**+0.6**
TNTI	**Ternate**	**4.47**	**63**	P		**Pn**	**12 12 05.1**	**+0.4**
SPSI	**Sidrap Palu**	**4.49**	**234**	P		**Pn**	**12 12 04.8**	**-0.1**
BNSI	**Bone**	**4.50**	**227**	P		**Pn**	**12 12 04.5**	**-0.6**
BKSI	**Bulukumba**	**5.16**	**219**	P		**Pn**	**12 12 14.1**	**-0.1**
	0.7nm2µm144nm,0.6s							
KAPI	**Kappang**	**5.18**	**224**	Pn		**Pn**	**12 12 14.1**	**-0.3**
	17nm,0.3s,baz=58,slow=6.0,SNR=20							
KAPI				Sn		**Sn**	**12 13 09.6**	**-3.3**
	9.8nm,0.3s,baz=203,slow=15,SNR=3.7							
KAPI				LR		LR	12 14 40.3	
	comp=Z,566nm,19.8s,baz=62,slow=43							
	39nm,0.3s							
KAPI	**Kappang**	**5.18**	**224**	Pn		**Pn**	**12 12 14.3**	**-0.1**
AAI	**Ambon**	**5.36**	**116**	P		**Pn**	**12 12 18.5**	**+1.6**
	1.2nm4µm449nm,0.8s							
BSSI	**Bau Bau, Buton**	**5.62**	**211**	P		**Pn**	**12 12 20.1**	**-0.4**
	1.0nm3µm266nm,0.6s							
MSAI	**Masohi**	**5.90**	**110**	P		**Pn**	**12 12 26.5**	**+2.2**
	0.1nm722nm27nm,0.7s							
BKB	**Balikpapan**	**6.49**	**270**			**Pn**	**12 12 32.1**	**-0.3**
BKB	**Balikpapan**	**6.49**	**270**	P		**Pn**	**12 12 33.2**	**+0.8**
	1.3nm4µm274nm,0.9s							
MMRI	**Maumere**	**7.38**	**189**			**Pn**	**12 12 43.9**	**-0.7**
MMRI	**Maumere**	**7.38**	**189**	P		**Pn**	**12 12 44.2**	**-0.5**
	0.4nm131nm,0.9s							
EDFI	**Ende, Flores**	**7.60**	**193**	P		**Pn**	**12 12 46.8**	**-0.9**
	0.1nm474nm34nm,0.6s							
SWI	**Sorong**	**7.88**	**87**	P		**Pn**	**12 12 52.8**	**+1.3**
	0.3nm1µm82nm,0.7s							
MTKI	**Muara Teweh, K**	**8.50**	**272**	P		**Pn**	**12 12 59.5**	**-0.5**
	28nm,0.7s							
DAV	**Davao City (W)**	**8.59**	**15**	LR		LR	12 16 51.1	
	comp=Z,66nm,19.7s,baz=188,slow=42							
BATI	**Baumata**	**8.86**	**178**	LR		LR	12 17 06.9	
	comp=Z,150nm,21.6s,slow=42							
FAKI	**Fak Fak**	**9.00**	**100**	Pn		**Pn**	**12 13 05.6**	**-1.2**
FAKI	**Fak Fak**	**9.00**	**100**	P		**Pn**	**12 13 06.0**	**-0.8**
	39nm,1.5s							
WBSI	**Waikabubak, Su**	**9.20**	**205**	P		**Pn**	**12 13 10.3**	**+0.7**
	60nm,1.0s							
BASI	**Baing, Sumba**	**9.30**	**197**	P		**Pn**	**12 13 11.6**	**+0.7**
	68nm,1.0s							
PLAI	**Plampang**	**9.34**	**217**	P		**Pn**	**12 13 11.7**	**+0.2**
	833nm22nm,0.8s							
KNRA	**Kununurra**	**15.24**	**160**	Pn		**Pn**	**12 14 31.2**	**-0.3**
KPJI	**Karang Pucung**	**15.61**	**247**	P		**P**	**12 14 43.0**	**+3.3**
PPBI	**Pangkal Pinang**	**17.27**	**267**	P		**P**	**12 14 58.9**	**+0.8**
	6µm19nm,0.5s							
KASI	**Kota Agung**	**19.32**	**257**	P		Pn	12 15 34.8	+13
MBWA	**Marble Bar**	**20.07**	**190**	P		**P**	**12 15 28.8**	**0.0**
MBWA					IAmb	IAmb	12 15 30.1	
	comp=Z,18nm,0.7s							
PSA00	**Pilbara Seismi**	**20.45**	**189**	P		**P**	**12 15 33.3**	**+0.3**
PSA00					IAmb	IAmb	12 15 34.7	
	comp=Z,24nm,0.9s							
PSA00	**Pilbara Seismi**	**20.45**	**189**	P		**P**	**12 15 33.2**	**+0.3**
PSA00					IAmb	IAmb	12 15 36.8	
	comp=Z,7.7nm,0.9s							
WB0	**Warramunga Arr**	**21.29**	**150**	P		**P**	**12 15 42.0**	**0.0**
WB0					IAmb	IAmb	12 15 42.9	
	comp=Z,43nm,0.9s							
WRAB	**Tennant Creek**	**21.41**	**151**	P		**P**	**12 15 43.2**	**-0.1**
WRAB					IAmb	IAmb	12 15 44.3	
	comp=Z,18nm,0.8s							
WRA	**Warramunga Arr**	**21.41**	**151**	P		**P**	**12 15 43.5**	**+0.2**
	comp=Z,18nm,0.7s,baz=325,slow=11,SNR=67							
	comp=Z,18nm,0.7s							
WRA	**Warramunga Arr**	**21.41**	**151**	P		**P**	**12 15 42.3**	**-1.0**
WB2	**Warramunga Arr**	**21.41**	**151**	P		**P**	**12 15 43.8**	**+0.5**
WB2					IAmb	IAmb	12 15 44.3	
	comp=Z,20nm,0.7s							
WR0	**Warramunga Arr**	**21.52**	**150**	P		**P**	**12 15 44.8**	**+0.2**
WR0					IAmb	IAmb	12 15 55.5	
	comp=Z,29nm,0.9s							
GIRL	**Giralia**	**23.01**	**202**	P		**P**	**12 16 01.9**	**+1.6**
AS31	**Alice Springs**	**24.47**	**156**	P		**P**	**12 16 14.7**	**+0.7**
ASAR	**Alice Springs**	**24.47**	**156**	P		**P**	**12 16 14.8**	**+0.8**
TPUB	**Ta-pu**	**24.59**	**354**	P		**P**	**12 16 15.3**	**+0.2**
TPUB					IAmb	IAmb	12 16 35.7	
	comp=Z,20nm,0.8s							
JOW	**Kunigami**	**28.35**	**9**	LR		LR	12 27 21.0	
	comp=Z,47nm,21.1s,baz=92,slow=35							
MORW	**Morawa**	**28.50**	**194**	P		**P**	**12 16 49.5**	**-0.7**
MORW					IAmb	IAmb	12 17 14.6	
	comp=Z,17nm,1.4s							
FORT	**Forrest**	**29.66**	**172**	P		**P**	**12 17 00.8**	**+0.3**
CMAR	**Chiang Mai Arr**	**31.04**	**310**	P		**P**	**12 17 12.5**	**-0.4**
	comp=Z,0.8nm,0.5s,baz=131,slow=7.1,SNR=6.0							
CMAR					PcP	**PcP**	**12 20 09.9**	**+2.0**
	comp=Z,0.6nm,0.5s,baz=151,slow=2.1,SNR=1.6							
CMAR					LR	LR	12 30 46.7	
	comp=Z,58nm,20.2s,baz=115,slow=38							
	comp=Z,0.8nm,0.5s							
JCJ	**Chichijima**	**33.53**	**31**	P		**P**	**12 17 33.0**	**-1.6**
	comp=Z,6.4nm,0.3s,baz=77,slow=20,SNR=6.2							
JCJ					LR	LR	12 29 18.0	
	comp=Z,20nm,21.8s,baz=172,slow=33							
	comp=Z,6.4nm,0.3s							
JCJ	**Chichijima**	**33.53**	**31**	P		**P**	**12 17 34.3**	**-0.2**
BBOO	**Buckleboo**	**33.54**	**160**	P		**P**	**12 17 34.2**	**-0.4**
STKA	**Stephens Creek**	**34.94**	**152**	P		**P**	**12 17 47.3**	**+0.5**
	comp=Z,5.2nm,0.8s,baz=333,slow=8.8,SNR=8.8							
	comp=Z,5.2nm,0.8s							
STKA	**Stephens Creek**	**34.94**	**152**	P		**P**	**12 17 47.3**	**+0.5**
HNR	**Honiara**	**37.25**	**104**	P		**P**	**12 18 06.2**	**-0.6**
	comp=Z,52nm,0.3s,baz=195,slow=5.8,SNR=3.8							
HNR	**Honiara**	**37.25**	**104**	P		**P**	**12 18 06.8**	**0.0**
KSRS	**Korea Array**	**38.78**	**6**	P		**P**	**12 18 18.1**	**-1.2**
	comp=Z,0.7nm,0.6s,baz=186,slow=8.2,SNR=3.1							
	comp=Z,0.7nm,0.6s							
ARMA	**Armidale**	**39.46**	**140**	P		**P**	**12 18 25.4**	**+0.1**
MJAR	**Matsushiro Arr**	**40.09**	**19**	P		**P**	**12 18 28.7**	**-1.5**
	comp=Z,1.8nm,0.8s,baz=186,slow=9.3,SNR=5.5							
MJAR					LR	LR	12 33 24.8	
	comp=Z,34nm,20.8s,baz=182,slow=34							
	comp=Z,1.8nm,0.8s							
MJAR	**Matsushiro Arr**	**40.09**	**19**	P		**P**	**12 18 30.9**	**+0.7**
CAN	**Canberra**	**41.40**	**148**	P		**P**	**12 18 43.0**	**+1.9**
TOO	**Toolangi**	**41.45**	**153**	P		**P**	**12 18 42.7**	**+1.3**
TOO					IAmb	IAmb	12 19 03.0	
	comp=Z,27nm,1.3s							
PALK	**Pallekele**	**43.43**	**282**	LR		LR	12 37 29.4	
	comp=Z,58nm,18.5s,baz=216,slow=37							
USRK	**Usuriysk Ar.**	**45.94**	**9**	P		**P**	**12 19 14.9**	**-2.5**
	comp=Z,0.9nm,0.6s,baz=198,slow=6.3,SNR=1.5							
	comp=Z,0.9nm,0.6s							
KLR	**Kul'dur**	**50.84**	**7**	P		**P**	**12 19 54.0**	**-1.1**
	comp=Z,0.2nm,0.4s,baz=188,slow=19,SNR=1.7							
	comp=Z,0.2nm,0.4s							
SONM	**Songino Array**	**51.12**	**345**	P		**P**	**12 19 57.2**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=154,slow=6.7,SNR=6.0							
SONM					LR	LR	12 42 11.9	
	comp=Z,25nm,18.5s,baz=73,slow=37							
	comp=Z,0.7nm,0.5s							
SONM	**Songino Array**	**51.12**	**345**	P		**P**	**12 19 57.9**	**+0.5**
MK31	**Makanchi Array**	**59.91**	**329**	P		**P**	**12 21 00.9**	**+0.5**
MK31					IAmb	IAmb	12 21 09.1	
	comp=Z,5.0nm,1.4s							
MKAR	**Makanchi Array**	**59.91**	**329**	P		**P**	**12 20 59.7**	**-0.7**
	comp=Z,0.6nm,0.4s,baz=129,slow=8.5,SNR=9.8							
	comp=Z,0.6nm,0.4s							
MKAR	**Makanchi Array**	**59.91**	**329**	P		**P**	**12 21 00.5**	**+0.1**
MAKZ	**Makanchi**	**60.08**	**328**	P		**P**	**12 21 03.0**	**+1.4**
MAKZ					IAmb	IAmb	12 21 10.1	
	comp=Z,2.9nm,0.5s							
TUWZ	**Tuamarina**	**60.50**	**138**	P		**P**	**12 21 05.3**	**+0.8**
MQZ	**McQueen's Vall**	**60.76**	**141**	P		**P**	**12 21 06.8**	**+0.6**
BKZ	**Black Stump Fm**	**61.27**	**135**	P		**P**	**12 21 11.2**	**+1.4**
BKZ					IAmb	IAmb	12 21 24.2	
	comp=Z,6.7nm,0.8s							
PETK	**Petropavlovsk-**	**61.31**	**23**	P		**P**	**12 21 08.2**	**-1.6**
	comp=Z,0.7nm,0.4s,baz=207,slow=9.1,SNR=2.3							
	comp=Z,0.7nm,0.4s							
ZALV	**Zalesovo Beam**	**63.64**	**336**	P		**P**	**12 21 24.1**	**-1.2**
	comp=Z,0.4nm,0.3s,baz=144,slow=3.4,SNR=1.3							
	comp=Z,0.4nm,0.3s							
KURK	**Kurchatov**	**64.28**	**330**	P		**P**	**12 21 29.4**	**-0.2**
KURK					IAmb	IAmb	12 21 38.3	
	comp=Z,3.6nm,0.7s							
ABKAR	**Akbulak array**	**73.98**	**322**	P		**P**	**12 22 30.8**	**+1.0**
AKTO	**Aktyubinsk**	**75.57**	**323**	LR		LR	13 01 13.4	
	comp=Z,27nm,18.4s,baz=51,slow=40							
VOI	**Vohitsoka**	**77.08**	**248**	P		**P**	**12 22 48.6**	**+0.3**
VOI					IAmb	IAmb	12 22 49.6	
	comp=Z,8.1nm,0.9s							
VNDA	**Vanda**	**78.92**	**172**	P		**P**	**12 22 57.5**	**+0.2**
	comp=Z,1.2nm,0.7s,baz=308,slow=7.3,SNR=6.4							
	comp=Z,1.2nm,0.7s							
VNDA	**Vanda**	**78.92**	**172**	P		**P**	**12 22 57.7**	**+0.5**
QSPA	**South Pole Qui**	**88.65**	**180**	P		**P**	**12 23 47.2**	**0.0**
QSPA					IAmb	IAmb	12 23 49.9	
	comp=Z,2.3nm,0.9s							
ILAR	**Eielson Array**	**91.04**	**25**	P		**P**	**12 23 58.2**	**0.0**
	comp=Z,0.1nm,0.6s,baz=253,slow=5.4,SNR=1.4							
	comp=Z,0.1nm,0.6s							
SNAA	**Sanae**	**99.54**	**195**	P		**Pdif**	**12 24 38.0**	**+1.0**
SNAA					IAmb	IAmb	12 24 57.0	
	comp=Z,6.0nm,1.5s							
TORD	**Torodi Ar. Bea**	**121.11**	**285**	PKP		**PKiKP**	**12 29 48.5**	**+0.6**
	comp=Z,0.6nm,0.8s,baz=48,slow=2.1,SNR=2.6							
TXAR	**Lajitas Array**	**127.28**	**53**	PKP		**PKPdf**	**12 29 58.5**	**-1.0**
	comp=Z,0.1nm,0.6s,baz=316,slow=2.5,SNR=1.9							

*MEX **20** 12:21:49.2±0.6,14°.31N×93°.13W,h11km±18km,MD4.0*
*GCG **20** 12:21:52.3±0.3,14°.72N×92°.85W,h66km±18km,MD3.7*
ISC 20 12:21:45.0±2.2,**14°30N**±0°.09×**93°14W**±0°.05,**h10**km±12km,
n13,σ1§**71**/25,**Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
THIG		**1.04**	**55**	*e*P		**Pg**	**12 22 05.5**	**+0.5**
THIG				*e*S		**Sb**	**12 22 18.1**	**-0.7**
PATR	**El Naranjo**	**1.20**	**47**	*e*P		**Pg**	**12 22 07.8**	**-0.2**
PATR				*i* S		**Sb**	**12 22 22.1**	**-1.4**
CHUJ	**Union Juarez**	**1.27**	**52**	*e*P		**Pg**	**12 22 09.0**	**-0.5**
CHUJ				*e*S		**Sb**	**12 22 24.9**	**-0.9**
PAVE	**Pavencul**	**1.29**	**46**	*e*P		**Pg**	**12 22 09.3**	**-0.4**
PAVE				*i* S		**Sb**	**12 22 25.1**	**-1.0**
PCIG		**1.40**	**357**	*e*P		**Pg**	**12 22 10.9**	**-0.9**
PCIG				*e*S		**Sb**	**12 22 27.8**	**-1.3**
STG3	**Santiaguito 3,**	**1.58**	**75**	*e*P		**Pn**	**12 22 14.3**	**+1.1**
CCIG	**Comitan**	**2.19**	**26**	*e*P		**Pb**	**12 22 25.0**	**0.0**
CCIG				*e*S		**Sb**	**12 22 49.0**	**-3.2**
FUG	**Fuego 3**	**2.23**	**86**	*e*P		**Pn**	**12 22 23.9**	**+1.7**
FUG				*e*S		**Sn**	**12 22 48.9**	**-1.1**
TGIG		**2.46**	**0**	*e*P		**Sn**	**12 22 28.0**	**+2.7**
TGIG				*e*S		**Sn**	**12 22 55.0**	**-0.5**
UXUV	**UXUV**	**3.15**	**342**	*e*P		**Pn**	**12 22 37.9**	**+3.2**
UXUV				*e*S		**Sn**	**12 23 13.3**	**+0.9**
HUIG	**Huatulco**	**3.21**	**297**	*e*P		**Pn**	**12 22 36.8**	**+1.2**
HUIG				*e*S		**Sn**	**12 23 10.9**	**-3.1**
CMIG	**Matias Romero**	**3.24**	**329**	*e*P		**Pn**	**12 22 37.6**	**+1.6**
CMIG				*e*S		**Sn**	**12 23 13.8**	**-0.9**
NEUV	**Arroyo Zacate**	**4.25**	**323**	*e*P		**Pn**	**12 22 50.9**	**+1.1**
NEUV				*e*S		**Sn**	**12 23 41.3**	**+1.9**

*IDC **20** 12:37:09.6±2.2,8°.24S×126°.74E,h0km,mb3.8/4,*
mbtmp3.8/5,ML4.1/1,MS3.8/2,Error ellipse:
s-maj=138.4km s-min=26.1km az=52.0
*NEIC **20** 12:37:17.1±2.1,7°.82S±0°.08×127°.34E±0°.08,h50km±9km,*
mb4.4/11,Error ellipse: s-maj=14.5km s-min=7.5km
az=140.0
ISC 20 12:37:15.5±0.7,**7°97S**±0°.08×**127°3E**±0°.1,**h35**km,**n29,**
σ1§**72**/28,**mb4.3**/8,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MTN	**Manton Dam**	**6.13**	**143**	Pn		**Pn**	**12 38 48.1**	**+4.5**
FAKI	**Fak Fak**	**7.02**	**45**	Pn		**Pn**	**12 38 55.3**	**-0.6**
KNRA	**Kununurra**	**7.79**	**170**			**Pn**	**12 39 08.9**	**+2.4**
KAPI	**Kappang**	**8.07**	**291**	LR		LR	12 42 00.7	
	comp=Z,134nm,19.7s,baz=110,slow=38							
WB0	**Warramunga Arr**	**13.59**	**150**			**Pn**	**12 40 25.9**	**+0.1**
WRAB	**Tennant Creek**	**13.71**	**151**	Pn		**Pn**	**12 40 27.1**	**-0.4**
WRA	**Warramunga Arr**	**13.71**	**151**	Pn		**Pn**	**12 40 26.6**	**-0.9**
	1.1nm,0.3s,baz=325,slow=13,SNR=34							
WRA				Sn		**Sn**	**12 42 54.5**	**-4.2**
	1.9nm,0.3s,baz=324,slow=21,SNR=8.4							
	1.8nm,0.3s							
WRA	**Warramunga Arr**	**13.71**	**151**			**Pn**	**12 40 27.3**	**-0.3**
WB2	**Warramunga Arr**	**13.72**	**151**			**Pn**	**12 40 27.4**	**-0.3**
WR0	**Warramunga Arr

GO02 IAML 12 46 45.8
comp=E,169nm,0.6s
GO02 Mina Guanaco 2.92 316 *e*P **Pn 12 46 09.0 +1.1**
GO02 *e*S **Sn 12 46 46.5 +3.0**
SLA San Lorenzo 3.05 34⇑*i*P **Pn 12 46 11.2 +1.6**
SLA *i* S **Sn 12 46 48.3 +1.9**
SLA IAML 12 46 51.1
comp=E,163nm,0.7s
SLA San Lorenzo 3.05 34 *e*P **Pn 12 46 11.4 +1.9**
SLA *e*S **Sn 12 46 47.5 +1.1**
AC01 Pan de Azucar 3.11 291 *e*P **Pn 12 46 09.4 -0.7**
AC01 IAML 12 46 52.9
comp=E,116nm,0.4s
APLL PUNTA DE LOS L 3.18 167 *e*P **Pn 12 46 11.1 +0.1**
APLL *e*S **Sn 12 46 48.5 -0.7**
ACDV Cuesta del Vie 3.26 208 *e*P **Pn 12 46 13.1 +0.9**
ACDV *e*S **Sn 12 46 50.5 -0.8**
ACDV IAML 12 46 53.4
comp=Z,486nm,0.6s
LCO Las Campanas 3.41 239 Pn **Pn 12 46 13.5 -0.7**
AROD Rodeo 3.42 212 *e*P **Pn 12 46 15.0 +0.7**
AROD *e*S **Sn 12 46 55.4 +0.3**
ACCO Cerro Coronel 3.61 204 *e*P **Pn 12 46 17.5 +0.6**
ACCO *e*S **Sn 12 46 56.6 -3.0**
PB14 IPOC Station P 3.81 313 Pn **Pn 12 46 19.7 +0.2**
ACHE Chepes 3.91 171 *e*P **Pn 12 46 20.8 +0.2**
ACHE *e*S **Sn 12 47 04.9 -1.4**
RTLL Cerro Villicun 4.14 193 *e*P **Pn 12 46 23.6 0.0**
RTLL *e*S **Sn 12 47 10.1 -1.6**
CO05 La Serena 4.30 232 Pn 12 46 23.5 -2.1
HJA Humahuaca 4.43 24 *e*P **Pn 12 46 30.0 +2.2**
PB15 IPOC Station P 4.49 334 Pn 12 46 28.6 +0.2
PB15 IPOC Station P 4.49 334⇓*i*P **Pn 12 46 29.1 +0.6**
PB15 *e*S **Sn 12 47 20.5 +0.3**
CO03 El Pedregal 4.58 219 Pn **Pn 12 46 28.4 -1.1**
PB10 IPOC Station P 4.74 322 *e*P **Pn 12 46 31.2 -0.3**
LVC Limon Verde 4.87 343 P **Pn 12 46 34.1 +0.6**
comp=Z,82nm,0.5s,baz=168,slow=10.0,SNR=116
LVC S **Sn 12 47 29.2 -0.2**
comp=Z,38nm,0.6s,baz=77,slow=23,SNR=17
LVC Limon Verde 4.87 343 Pn 12 46 34.4 +0.8
LVC Limon Verde 4.87 343⇓*i*P **Pn 12 46 34.4 +0.8**
LVC *i* S **Sn 12 47 28.6 -0.9**
LVC Limon Verde 4.87 343 *e*P **Pn 12 46 34.8 +1.2**
LVC *e*S **Sn 12 47 30.0 +0.6**
LVC Limon Verde 4.87 343 *e*P **Pn 12 46 34.2 +0.7**
LVC *e*S **Sn 12 47 28.9 -0.5**
PB06 IPOC Station P 4.99 336⇓*i*P **Pn 12 46 35.1 +0.1**
PB06 *e*S **Sn 12 47 29.9 -2.1**
PB04 IPOC Station P 5.55 332⇓*i*P **Pn 12 46 41.5 -0.9**
PB04 *e*S **Sn 12 47 43.4 -2.0**
PB09 IPOC Station P 5.73 342⇑*i*P **Pn 12 46 44.9 0.0**
PB09 *e*S **Sn 12 47 47.6 -2.2**
PB07 IPOC Station P 6.00 337⇑*i*P **Pn 12 46 47.1 -1.4**
VA03 San Esteban 6.12 206 Pn **Pn 12 46 49.0 -1.0**
PB02 IPOC Station P 6.38 338⇓*i*P **Pn 12 46 52.3 -1.2**
ROC1 El Roble 6.49 208 Pn 12 46 52.8 -2.3
PB01 IPOC Station P 6.51 342⇓*i*P **Pn 12 46 54.1 -1.2**
PATCX Punta Patache 6.93 338 Pn 12 46 59.1 -1.8
TA01 Diego Aracena 7.17 338 Pn 12 47 01.9 -2.2
CPUP Villa Florida 9.01 86 P **Pn 12 47 26.0 -2.8**
comp=Z,8.6nm,1.0s,baz=275,slow=11,SNR=11
CPUP Villa Florida 9.01 86 Pn **Pn 12 47 26.4 -2.4**
ITQB Itaqui 9.74 107 Pn 12 47 35.9 -2.6
LPAZ La Paz 10.97 356 P **Pn 12 47 54.1 -1.4**
comp=Z,4.4nm,0.5s,baz=159,slow=6.0,SNR=14
LPAZ S **Sn 12 49 51.6 -5.3**
comp=Z,1.5nm,0.7s,baz=54,slow=4.1,SNR=1.5
LPAZ La Paz 10.97 356 Pn **Pn 12 47 54.3 -1.2**
LPAZ La Paz 10.97 356 *e*P **Pn 12 47 54.3 -1.2**
TRQA Tornquist 11.65 158 Pn 12 48 00.7 -3.1
SIV San Ignacio 12.67 29 P **Pn 12 48 14.8 -2.4**
comp=Z,2.5nm,0.5s,baz=216,slow=11,SNR=15
SIV S **Sn 12 50 33.3 -3.8**
comp=Z,0.8nm,0.3s,baz=305,slow=22,SNR=1.9
PLTB Pedras Altas 12.78 114 Pn **Pn 12 48 16.3 -2.2**
PLTB Pedras Altas 12.78 114 *e*P **Pn 12 48 18.5 0.0**
FRBT Francisco Belt 12.86 87 *e*P **Pn 12 48 21.3 +1.7**
ITAB Concordia 13.55 93 P **P 12 48 32.9 +0.3**
ITAB Concordia 13.55 93 *e*P **Pn 12 48 30.5 +2.2**
PLCA Paso Flores 13.67 190 P **Pn 12 48 28.0 -1.8**
comp=Z,1.9nm,1.0s,baz=9.0,slow=6.1,SNR=3.9
PLCA Paso Flores 13.67 190 Pn 12 48 27.5 -2.3
PLCA Paso Flores 13.67 190 *e*P **Pn 12 48 30.1 +0.2**
PTGB Pitanga 13.99 83 *e*P **Pn 12 48 34.7 +0.6**
PTLB Pontes e Lacer 14.04 35 *e*P **Pn 12 48 35.4 +0.6**
LL04 Puerto Octay 14.21 196 Pn **Pn 12 48 32.9 -3.7**
POCN Pocone 14.48 45 *e*P **P 12 48 43.7 +0.8**
CNLB Canela 14.68 102 *e*P **Pn 12 48 44.5 +1.7**
PP1B Ponte de Pedra 15.03 53 *e*P **Pn 12 48 46.3 -0.8**
PTET Porto Estrela 15.18 41 *e*P **Pn 12 48 49.3 +0.4**
SALV Santo Antonio 15.67 46 *e*P **Pn 12 48 53.8 -1.3**
PCMB Pacaembu 15.71 72 *e*P **P 12 48 56.9 +0.3**
FRTB Fartura 16.56 80 *e*P **Pn 12 49 06.0 0.0**
NBRS Nobres 16.83 42 *e*P **Pn 12 49 09.9 +0.7**
ITRB Iturama 17.31 68 *e*P **P 12 49 15.0 +0.6**
ETMB Extrema 17.41 4 *e*P **P 12 49 15.5 +0.1**
DVLD Doverlandia 17.62 56 *e*P **P 12 49 17.4 +0.2**
BB19B Bebedouro 18.26 74 *e*P **P 12 49 24.5 -0.3**
PET01 Itanhaem-SP 18.33 85 *e*P **P 12 49 25.2 -0.3**
ARAG Araguaiana, MT 18.47 55 *e*P **P 12 49 27.0 -0.1**
PDRB Porto dos Gac 18.52 35 *e*P **P 12 49 27.5 -0.1**
RCLB Rio Claro- Sao 18.63 79 *e*P **P 12 49 28.7 -0.1**
SAML Samuel 18.66 13 **P 12 49 30.2 +1.0**
SAML IAML 12 49 31.1
comp=Z,7.8nm,0.6s
VAO Valinhos 18.95 81 *e*P **P 12 49 32.7 +0.5**
CLDB Colider 19.62 36 *e*P **P 12 49 38.5 -1.1**
IPMB Ipameri, GO 19.93 66 *e*P **P 12 49 42.3 -0.6**
PARB Paraibuna 20.04 83 *e*P **P 12 49 43.9 -0.1**
CZSB Cruzeiro do Su 20.10 344 *e*P **P 12 49 44.3 -0.4**
PMNB Patos De Minas 21.12 70 *e*P **P 12 49 54.8 -1.0**
ESAR Angra dos Reis 21.17 83 *e*P **P 12 49 56.9 +0.8**
ESAR *e*pP **pP 12 50 24.0 +2.6**
BDFB Brasilia 21.38 61 P **P 12 49 56.9 -1.6**
comp=Z,2.7nm,0.4s,baz=243,slow=11,SNR=4.6
comp=Z,2.7nm,0.4s
BDFB Brasilia 21.38 61 P **P 12 49 57.0 -1.6**
BDFB IAmb IAmb 12 49 58.0
comp=Z,13nm,1.2s
SNDB Serra Nova Dou 21.43 48 *e*pP pP 12 50 27.9 +2.7
ATAH Atahualpa 22.62 330 P **P 12 50 11.9 +0.5**
comp=Z,2.0nm,0.6s,baz=72,slow=15,SNR=1.8
comp=Z,2.0nm,0.6s
NPGB Novo Progresso 23.14 32 *e*P **P 12 50 14.7 -1.2**
PEXB Peixe 23.40 54 *e*P **P 12 50 17.9 -0.4**
DIAM Diamantina, MG 23.57 73 *e*P **P 12 50 20.6 +0.6**
JANB Januaria 24.65 65 *e*P **P 12 50 29.1 -0.6**
MACA Manacapuru-AM 24.83 16 *e*P **P 12 50 30.9 -0.3**
ALF01 Guarapari-ES 25.20 80 *e*P **P 12 50 34.4 -0.2**
ITTB Itaituba 25.35 28 *e*P **P 12 50 36.5 +0.5**
SDBA SAO DESIDERIO 25.73 59 *e*P **P 12 50 39.0 -0.4**
SMTB Santa Maria do 26.18 49 *e*P **P 12 50 43.2 -0.2**
NBLA Lagarto - SE 32.18 65 *e*P **P 12 51 35.8 -0.8**
ZARC Zaragoza, Cauc 35.33 347 P **P 12 52 03.0 -0.8**
ZARC IAmb IAmb 12 52 03.8
comp=Z,3.8nm,0.8s
SJCC San Jacinto, C 37.73 347 P **P 12 52 23.8 -0.4**
SNAA Sanae 56.38 160 P **P 12 54 48.6 +0.5**
comp=Z,0.5nm,0.6s,baz=280,slow=9.3,SNR=7.2
comp=Z,0.5nm,0.6s
SNAA Sanae 56.38 160 P **P 12 54 48.1 0.0**
SNAA IAmb IAmb 12 54 55.3
comp=Z,5.5nm,1.5s
QSPA South Pole Qui 62.93 180 P **P 12 55 34.5 +1.4**
comp=Z,2.5nm,0.5s,baz=3.5,slow=0.7,SNR=37
comp=Z,2.5nm,0.5s
QSPA South Pole Qui 62.93 180 P **P 12 55 34.7 +1.6**
QSPA IAmb IAmb 12 55 35.3
comp=Z,2.6nm,0.7s
TXAR Lajitas Array 66.17 326 P **P 12 55 56.0 +1.4**
comp=Z,0.5nm,0.7s,baz=170,slow=8.7,SNR=6.9
comp=Z,0.5nm,0.7s
TXAR Lajitas Array 66.17 326 P **P 12 55 55.1 +0.5**
SSPA Standing Stone 68.28 351 P **P 12 56 08.3 +0.8**
SSPA IAmb IAmb 12 56 09.4
comp=Z,9.9nm,1.1s
DBIC Dimbokro 69.17 71 P **P 12 56 13.5 -0.2**
M55A Ridgway 69.22 351 P **P 12 56 13.9 +0.6**
VNDA Vanda 71.42 190 P **P 12 56 28.1 +1.8**
comp=Z,0.4nm,0.5s,baz=22,slow=9.1,SNR=2.0
comp=Z,0.4nm,0.5s

VNDA Vanda 71.42 190 P **P 12 56 28.3 +2.1**
PECO Prince Edward 71.42 353 P **P 12 56 27.8 +1.2**
PECO IAmb IAmb 12 56 39.9
comp=Z,10nm,1.1s
TOA0 Torodi Ar. Sit 78.06 68 P **P 12 57 05.7 +0.1**
TOA0 IAmb IAmb 12 57 08.3
comp=Z,9.4nm,1.2s
TORD Torodi Ar. Bea 78.06 68 P **P 12 57 05.5 0.0**
comp=Z,1.3nm,0.5s,baz=270,slow=5.9,SNR=12
comp=Z,1.3nm,0.5s
TORD Torodi Ar. Bea 78.06 68 P **P 12 57 06.4 +0.9**
PDAR Pinedale Array 79.81 330 P **P 12 57 15.7 +1.0**
comp=Z,0.8nm,0.7s,baz=121,slow=6.5,SNR=7.5
comp=Z,0.8nm,0.7s
PDAR Pinedale Array 79.81 330 P **P 12 57 15.6 +0.8**
NVAR Mina Array Bea 80.90 322 P **P 12 57 21.4 +0.8**
comp=Z,0.7nm,0.9s,baz=168,slow=5.7,SNR=4.3
comp=Z,0.7nm,0.9s
YKA Yellowknife Ar 97.09 340 P **P 12 58 37.0 -0.4**
comp=Z,0.7nm,0.8s,baz=136,slow=5.4,SNR=3.1
comp=Z,0.7nm,0.8s
WRA Warramunga Arr 128.56 206 PKP **PKPdf 13 04 13.2 +0.2**
comp=Z,0.1nm,0.3s,baz=155,slow=2.0,SNR=8.9
ZALV Zalesovo Beam 146.42 30 PKPbc **PKPbc 13 04 45.7 -0.3**
comp=Z,5.9nm,0.4s,baz=302,slow=3.6,SNR=21
ZALV Zalesovo Beam 146.42 30 PKPbc PKPbc 13 04 46.7 +0.7
MKAR Makanchi Array 149.21 43 PKPbc **PKiKP 13 04 54.7 -0.2**
comp=Z,2.4nm,0.6s,baz=297,slow=2.7,SNR=16

NOU ***20*** *12:49:34.6,20˚.44S×168˚.69E,h0km,mb5.0/42,Loyalty Islands*
NEIC ***20*** *12:49:35.5±2.9,20˚.63S±0˚.05×168˚.65E±0˚.07,h10km±1km, mb5.2/66,Error ellipse: s-maj=12.8km s-min=6.7km az=125.0*
MOS ***20*** *12:49:36.2±1.0,20˚.53S×168˚.83E,h37km,mb5.3/38, MS4.8/7,Error ellipse: s-maj=9.9km s-min=8.7km az=114.4*
IDC ***20*** *12:49:39.0±2.6,20˚.33S×168˚.87E,h59km±22km,mb4.3/19, mbtmp4.6/20,ML3.6/1,MS4.5/46,Error ellipse: s-maj=15.1km s-min=13.7km az=89.0*
GCMT ***20*** *12:49:39.5±0.1,20˚.44S±0˚.01×168˚.60E±0˚.01,h20km, MW5.3/122,Moment Tensor Solution. s100,c153; s122,c201; Duration: 1§1 Moment tensor: Scale 10^17 Nm; Mrr0.71±.02; Mθθ-0.03±.01; Mϕϕ-0.67±.01; Mrθ0.26±.03; Mθϕ0.29±.01; Mϕr-0.63±.03; Best double couple: M₀1.01600×10^17 NP1:ϕs340.00000°,δ24.00000°, λ91.00000°. NP2:ϕs158.00000°,δ66.00000°,λ89.00000°. Principal axes: T 0.9760, Plg69.0000°, Azm67.0000°; N 0.0800, Plg0.0000°, Azm159.0000°; P -1.0550, Plg21.0000°, Azm249.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 20 12:49:34.7±0.6,20˚.60S±0˚.04×168˚.88E±0˚.05,h15km±3km, h16km:pP-P,n593,σ1§72/565,mb5.1/114,MS4.6/77, 33C-28D,Fault plane solution: NP1:ϕs142.31731°, δ60.58727°,λ73.22784°. **NP2:ϕs353.85486°,δ33.48319°,** λ117.10597°. **Principal axes:** T Plg69.5568°, Azm16.5710°; N Plg14.5587°, Azm150.7366°; P Plg14.0343°, Azm244.4587°; **Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**1.19**	**222**			**Pg**		**12 49 54.8**	**-2.8**
MARNC				Sg		**Sb**		**12 50 09.5**	**-2.6**
MARNC	**Mare, Loyalty**	**1.19**	**222**	P		**Pg**		**12 49 54.9**	**-2.8**
MARNC	**Mare, Loyalty**	**1.19**	**222**	P		**Pg**		**12 49 54.8**	**-2.8**
PINNC	**Pines Island,**	**2.41**	**213**	Pn		**Pn**		**12 50 13.3**	**-0.3**
PINNC	**Pines Island,**	**2.41**	**213**	P		**Pn**		**12 50 14.7**	**+1.1**
PINNC	**Pines Island,**	**2.41**	**213**	P		**Pn**		**12 50 12.0**	**-1.6**
RTV	**Rentapao**	**2.82**	**351**	P		**Pn**		**12 50 20.5**	**+1.3**
RTV	**Rentapao**	**2.82**	**351**	P		**Pn**		**12 50 19.2**	**0.0**
NOUC	**Port Laguerre**	**2.83**	**238**	P		**Pn**		**12 50 19.0**	**-0.4**
NOUC	**Port Laguerre**	**2.83**	**238**	P		**Pn**		**12 50 18.8**	**-0.6**
DVP	**Devils Point**	**2.93**	**347**	P		**Pn**		**12 50 19.1**	**-1.6**
DVP	**Devils Point**	**2.93**	**347**	P		**Pn**		**12 50 18.2**	**-2.5**
KOUNC	**Koumac, New Ca**	**4.31**	**270**	Pn		**Pn**		**12 50 38.4**	**-1.3**
KOUNC	**Koumac, New Ca**	**4.31**	**270**	P		**Pn**		**12 50 38.7**	**-1.0**
KOUNC	**Koumac, New Ca**	**4.31**	**270**	P		**Pn**		**12 50 38.6**	**-1.1**
NFK	**Norfolk Island**	**8.46**	**186**	P		**Pn**		**12 51 40.0**	**+3.4**
baz=8.5,SNR=4.2									
MSVF	**Nonsavu**	**9.12**	**73**	P		Pn		12 51 52.0	+6.2
79nm,1.0s,baz=248,slow=11,SNR=13									
MSVF				LR		LR		12 54 40.3	
comp=Z,14µm,18.2s,baz=238,slow=33									
MSVF	**Nonsavu**	**9.12**	**73**	Pn		Pn		12 51 52.9	+7.0
DGTI	**Dogotuki**	**11.15**	**69**	P		Pn		12 52 18.6	+5.0
TAVE	**Taveuni**	**11.31**	**72**	P		**Pn**		**12 52 19.4**	**+3.6**
RAO	**Raoul Island**	**14.74**	**128**	LR		LR		12 57 54.2	
comp=Z,2µm,18.2s,baz=276,slow=33									
OUZ	**Omahuta**	**15.15**	**165**			**P**		**12 53 15.8**	**+2.6**
EIDS	**Eidsvold**	**17.06**	**250**	P		**P**		**12 53 35.2**	**+0.7**
baz=17,SNR=5.2									
EIDS	**Eidsvold**	**17.06**	**250**			**Pn**		**12 53 32.5**	**-0.3**
EIDS	**Eidsvold**	**17.06**	**250**	P		**P**		**12 53 33.6**	**-0.9**
RK1H	**Rockhampton Ha**	**17.28**	**257**	P		**P**		**12 53 36.5**	**-0.4**
ARMA	**Armidale**	**18.37**	**234**	P		**P**		**12 53 51.2**	**+2.2**
baz=18,SNR=5.3									
ARMA	**Armidale**	**18.37**	**234**			**P**		**12 53 51.0**	**+2.0**
ARMA	**Armidale**	**18.37**	**234**	P		**P**		**12 53 50.7**	**+1.7**
URZ	**Urewera**	**18.99**	**160**	P		**Pn**		**12 53 58.7**	**+2.4**
0.2nm,0.3s,baz=121,slow=24,SNR=30									
URZ				LR		LR		13 00 40.3	
comp=Z,2µm,18.4s,baz=31,slow=34									
38nm,1.1s									
URZ	**Urewera**	**18.99**	**160**	P		**Pn**		**12 54 00.5**	**+4.1**
RMQ	**Roma**	**19.35**	**249**	P		**Pn**		**12 54 02.6**	**+1.7**
baz=19,SNR=29									
RMQ	**Roma**	**19.35**	**249**	P		**Pn**		**12 54 02.1**	**+1.2**
AFI	**Afiamalu**	**19.62**	**73**	LR		LR		13 00 05.2	
comp=Z,2µm,19.2s,baz=254,slow=32									
BKZ	**Black Stump Fm**	**19.63**	**162**	P		**Pn**		**12 54 06.4**	**+2.2**
BKZ	**Black Stump Fm**	**19.63**	**162**	P		**Pn**		**12 54 06.5**	**+2.3**
SYDH	**Sydney Hard Ro**	**20.75**	**227**	P		Pn		12 54 18.2	+0.9
CTA	**Charters Tower**	**21.22**	**267**	P		**P**		**12 54 20.1**	**0.0**
28nm,1.1s,baz=93,slow=10,SNR=24									
CTA				LR		LR		13 02 00.6	
comp=Z,2µm,20.3s,baz=86,slow=35									
28nm,1.1s									
CTA	**Charters Tower**	**21.22**	**267**	P		**P**		**12 54 21.9**	**+1.8**
CTA				pmax		pmax			
comp=Z,96nm,1.0s									
CTA	**Charters Tower**	**21.22**	**267**	P		**P**		**12 54 21.4**	**+1.3**
CTAO	**Charters Tower**	**21.22**	**267**	P		**P**		**12 54 21.3**	**+1.1**
CTAO	**Charters Tower**	**21.22**	**267**	P		**P**		**12 54 21.3**	**+1.1**
CTAO				pmax		pmax			
comp=Z,67nm,1.0s									
CTAO	**Charters Tower**	**21.22**	**267**	P		**P**		**12 54 21.3**	**+1.1**
CNB	**Canberra Magne**	**22.57**	**225**	P		**P**		**12 54 37.2**	**+2.6**
baz=22,SNR=12									
CNB	**Canberra Magne**	**22.57**	**225**	P		**P**		**12 54 36.9**	**+2.3**
OXZ	**Oxford**	**22.82**	**174**	P		**P**		**12 54 38.4**	**+1.5**
OXZ				IAmb		IAmb		12 55 29.7	
comp=Z,146nm,1.8s									
CAN	**Canberra**	**22.82**	**226**	P		**P**		**12 54 35.7**	**-1.5**
CAN	**Canberra**	**22.82**	**226**	P		**P**		**12 54 35.7**	**-1.5**
CAN				pmax		pmax			
comp=Z,52nm,1.0s									
CAN	**Canberra**	**22.82**	**226**	P		**P**		**12 54 39.4**	**+2.2**
RPZ	**Rata Peaks**	**23.12**	**176**	P		**P**		**12 54 43.3**	**+3.1**
comp=Z,3.5nm,0.4s,baz=45,slow=5.7,SNR=2.1									
RPZ				LR		LR		13 03 16.1	
comp=Z,1µm,18.1s,baz=343,slow=35									
comp=Z,3.5nm,0.4s									
MTSU	**Mount Surprise**	**23.30**	**272**	P		**P**		**12 54 42.6**	**+0.4**
baz=23,SNR=15									
MTSU	**Mount Surprise**	**23.30**	**272**	P		**P**		**12 54 43.3**	**+1.1**
QLP	**Quilpie**	**23.34**	**250**	P		**P**		**12 54 43.2**	**+0.7**
baz=23,SNR=19									
QLP	**Quilpie**	**23.34**	**250**	P		**P**		**12 54 43.2**	**+0.7**
CMSA	**Cobar Meteorol**	**23.46**	**238**	P		**P**		**12 54 44.6**	**+0.9**
baz=23,SNR=17									
CMSA	**Cobar Meteorol**	**23.46**	**238**	P		**P**		**12 54 44.8**	**+1.1**
PMG	**Port Moresby**	**23.71**	**295**	P		**P**		**12 54 45.5**	**-0.8**
comp=Z,53nm,1.0s,baz=115,slow=3.3,SNR=11									
comp=Z,53nm,1.0s									
PMG	**Port Moresby**	**23.71**	**295**	P		**P**		**12 54 45.3**	**-1.0**
PMG	**Port Moresby**	**23.71**	**295**	*d*P		**P**		**12 54 45.9**	**-0.4**
PMG				pmax		pmax			
comp=Z,101nm,1.2s									
PMG	**Port Moresby**	**23.71**	**295**	P		**P**		**12 54 46.5**	**+0.2**

LBZ Lake Benmore 23.75 178 P **P 12 54 50.2 +3.8**
WKZ Wanaka 24.17 180 P **P 12 54 52.8 +2.5**
COEN Coen 25.40 281 P **P 12 55 02.6 +0.8**
baz=25,SNR=12
COEN Coen 25.40 281 P **P 12 55 02.4 +0.7**
COEN IAmb IAmb 12 55 06.8
comp=Z,67nm,1.1s
COEN Coen 25.40 281 P **P 12 55 02.5 +0.8**
TOO Toolangi 26.42 225 P **P 12 55 13.2 +2.4**
baz=26,SNR=5.8
TOO Toolangi 26.42 225 P **P 12 55 11.3 +0.5**
TOO Toolangi 26.42 225 P **P 12 55 11.4 +0.5**
TOO pmax pmax
comp=Z,148nm,1.8s
INKA Innaminka 26.60 249 P **P 12 55 13.3 +0.8**
STKA Stephens Creek 26.86 240 P **P 12 55 15.3 +0.6**
comp=Z,19nm,0.8s,baz=62,slow=8.6,SNR=16
STKA LR LR 13 05 55.3
comp=Z,1µm,18.6s,baz=75,slow=36
comp=Z,19nm,0.8s
STKA Stephens Creek 26.86 240 P **P 12 55 15.9 +1.1**
baz=27,SNR=19
STKA Stephens Creek 26.86 240 P **P 12 55 15.4 +0.6**
STKA Stephens Creek 26.86 240*d*iP **P 12 55 15.7 +0.9**
STKA Stephens Creek 26.86 240 P **P 12 55 16.0 +1.1**
QIS Mount Isa 27.39 265 P **P 12 55 22.5 +2.8**
baz=27,SNR=4.0
QIS Mount Isa 27.39 265 P **P 12 55 21.4 +1.6**
BRAT Ballarat 27.46 227 P **P 12 55 22.8 +2.7**
ARPS Mount Arapiles 28.55 230 P **P 12 55 31.7 +1.9**
baz=28,SNR=7.9
ARPS Mount Arapiles 28.55 230 P **P 12 55 31.0 +1.1**
RAR Rarotonga 29.27 97 LR LR 13 04 42.3
comp=Z,503nm,21.7s,baz=270,slow=31
HTT Hallett 29.48 238 P **P 12 55 39.7 +1.4**
baz=29,SNR=6.0
NAPP Napperby 30.03 239 P **P 12 55 44.7 +1.7**
WHYH Whyalla 30.45 239 P **P 12 55 49.0 +2.3**
OOD Oodnadatta 31.05 250 P **P 12 55 52.9 +0.8**
BBOO Buckleboo 31.62 241 P **P 12 55 57.9 +0.8**
baz=31,SNR=6.0
WR0 Warramunga Arr 32.19 265 P **P 12 56 01.0 -1.2**
WB0 Warramunga Arr 32.35 265 P **P 12 56 02.3 -1.4**
WB0 IAmb IAmb 12 56 14.5
comp=Z,31nm,1.2s
WB2 Warramunga Arr 32.37 265 P **P 12 56 02.5 -1.3**
WB2 IAmb IAmb 12 56 14.7
comp=Z,39nm,1.3s
WRAB Tennant Creek 32.37 265 P **P 12 56 02.4 -1.5**
WRAB IAmb IAmb 12 56 14.6
comp=Z,44nm,1.3s
WRAB Tennant Creek 32.37 265⇑*i*P **P 12 56 02.5 -1.4**
WRAB pmax pmax
comp=Z,10.0nm,1.0s
WRAB Tennant Creek 32.37 265 P **P 12 56 02.2 -1.7**
WRA Warramunga Ar 32.38 265 P **P 12 56 01.9 -2.0**
comp=Z,6.2nm,0.9s,baz=92,slow=8.6,SNR=39
WRA PcP **PcP 12 58 50.7 -0.9**
comp=Z,2.7nm,1.0s,baz=105,slow=2.1,SNR=3.6
WRA S **S 13 01 13.6 -4.2**
comp=Z,2.1nm,1.3s,baz=100,slow=17,SNR=2.2
WRA ScP **ScP 13 02 29.2 -5.7**
comp=Z,0.4nm,1.0s,baz=86,slow=2.6,SNR=1.2
WRA LR LR 13 09 29.8
comp=Z,2µm,18.0s,baz=102,slow=37
comp=Z,6.2nm,0.9s
WRA Warramunga Ar 32.38 265 P **P 12 56 02.5 -1.5**
WRA Warramunga Ar 32.38 265 P **P 12 56 02.5 -1.5**
WRA pmax pmax
comp=Z,3.0nm,1.3s
AS31 Alice Springs 32.50 258 P **P 12 56 04.5 -0.5**
ASAR Alice Springs 32.50 258 P **P 12 56 04.1 -0.9**
ASAR Alice Springs 32.50 258 P **P 12 56 04.1 -0.9**
MULG Mulgathing 32.78 246 P **P 12 56 07.7 +0.3**
GENI Genyem 33.22 299 P **P 12 56 10.7 -0.7**
comp=Z,114nm,1.0s
GENI Genyem 33.22 299 P **P 12 56 13.0 +1.6**
MTN Manton Dam 36.90 276 P **P 12 56 43.1 +0.1**
baz=37,SNR=6.7
MTN Manton Dam 36.90 276 P **P 12 56 42.2 -0.9**
MTN Manton Dam 36.90 276 P **P 12 56 42.8 -0.3**
BAKI Baki 37.37 297 P **P 12 56 49.9 +2.9**
comp=Z,795nmcomp=Z,46nm,1.1s
WRKA Warakurna 37.57 255 P **P 12 56 48.2 -0.5**
baz=37,SNR=8.6
WRKA Warakurna 37.57 255 P **P 12 56 48.4 -0.4**
FORT Forrest 37.98 246 P **P 12 56 51.5 -0.6**
FORT IAmb IAmb 12 57 08.0
comp=Z,39nm,0.8s
KNRA Kununurra 38.37 271 P **P 12 56 54.7 -0.8**
baz=38,SNR=10
KNRA Kununurra 38.37 271 P **P 12 56 54.7 -0.8**
KNRA IAmb IAmb 12 57 05.8
comp=Z,43nm,0.9s
KNRA Kununurra 38.37 271 P **P 12 56 54.7 -0.8**
TBI Tubuai 38.63 102 *e*LR LR 13 06 55.0
comp=Z,834nm,28.5s
PPT2 Papeete2 39.30 93 *e*LR LR 13 07 15.2
comp=Z,1µm,25.2s
PPT Papeete 39.30 93 LR LR 13 11 31.1
comp=Z,336nm,19.5s,baz=300,slow=33
FAKI Fak Fak 39.78 291 P **P 12 57 09.2 +1.9**
comp=Z,43nm,0.9s
GUMO Guam 41.37 323 LR LR 13 14 16.3
comp=Z,401nm,18.2s,baz=142,slow=36
SWI Sorong 41.65 293 P **P 12 57 24.2 +1.4**
SWI pmax pmax
comp=Z,49nm,0.9s
SWI Sorong 41.65 293 P **P 12 57 23.1 +0.3**
comp=Z,49nm,0.9s
NLAI Namlea 44.18 287 P **P 12 57 46.9 +3.6**
comp=Z,1µmcomp=Z,46nm,1.0s
PSA00 Pilbara Seismi 45.61 260 P **P 12 57 54.6 -0.2**
PSA00 IAmb IAmb 12 58 05.8
comp=Z,47nm,1.1s
PSA00 Pilbara Seismi 45.61 260 P **P 12 57 54.5 -0.2**
PSA00 IAmb IAmb 12 58 05.9
comp=Z,27nm,1.1s
SANI Sanana 45.71 288 P **P 12 57 55.8 +0.3**
comp=Z,709nmcomp=Z,65nm,0.9s
MBWA Marble Bar 45.78 260 P **P 12 57 55.5 -0.4**
MMRI Maumere 46.52 278 P **P 12 58 03.6 +1.7**
comp=Z,64nm,1.1s
KLBR Kellerberrin 46.84 246 P **P 12 58 03.6 -0.6**
baz=47,SNR=12
EDFI Ende, Flores 46.99 277 P **P 12 58 04.7 -1.0**
comp=Z,13nm,1.6s
NWAO Narrogin (SRO) 47.31 244 P **P 12 58 07.6 -0.3**
NWAO Narrogin (SRO) 47.31 244 P **P 12 58 07.6 -0.3**
NWAO pmax pmax
comp=Z,41nm,1.0s
BBSI Bau Bau 47.36 282 P **P 12 58 12.4 +3.9**
comp=Z,4.5nm,1.2s
MORW Morawa 48.36 249 P **P 12 58 15.3 -0.8**
baz=48,SNR=4.4
MORW Morawa 48.36 249 P **P 12 58 15.8 -0.3**
MORW IAmb IAmb 12 58 27.0
comp=Z,38nm,1.1s
WBSI Waikabubak, Su 48.83 275 P **P 12 58 22.7 +2.8**
comp=Z,52nm,0.9s
LUWI Luwuk 49.03 287 P **P 12 58 23.5 +2.2**
comp=Z,1µmcomp=Z,46nm,1.1s
BKSI Bulukumba 49.67 281 P **P 12 58 28.9 +2.6**
comp=Z,727nmcomp=Z,16nm,1.2s
BNSI Bone 50.04 282 P **P 12 58 32.9 +3.8**
comp=Z,681nmcomp=Z,28nm,1.4s
APSI Ampana 50.09 287 P **P 12 58 32.0 +2.5**
comp=Z,356nmcomp=Z,27nm,1.0s
KAPI Kappang 50.13 281 LR LR 13 22 20.6
comp=Z,244nm,18.7s,baz=122,slow=39
KAPI Kappang 50.13 281 P **P 12 58 29.7 0.0**
KAPI IAmb IAmb 12 58 41.4
comp=Z,47nm,1.1s
KAPI Kappang 50.13 281 P **P 12 58 29.7 0.0**
KAPI pmax pmax
comp=Z,47nm,1

SRBI Singaraja 53.24 275 P **P** **12 58 52.0 -1.0**
comp=Z,33nm,1.0s
JCJ Chichijima 54.00 330 LR LR 13 22 46.7
comp=Z,151nm,18.6s,baz=134,slow=37
ABJI Asem Bagus 54.25 275 P **P** **12 59 01.6 +1.2**
comp=Z,24nm,1.0s
KMMI Kalianget 54.75 276 P **P** **12 59 02.4 -1.7**
comp=Z,23nm,0.9s
GMJI Gumukmas 54.83 274 P **P** **12 59 06.7 +2.1**
comp=Z,21nm,1.3s
BLJI Banyuglugur 54.86 275 P **P** **12 59 07.1 +2.2**
comp=Z,1µmcomp=Z,14nm,1.1s
BBKI Banjar Baru 55.24 280 P **P** **12 59 10.1 +2.5**
comp=Z,22nm,1.1s
PWJI Pagerwojo 56.45 274 P **P** **12 59 18.7 +2.4**
comp=Z,28nm,1.1s
PCJI Pacitan 56.97 274 P **P** **12 59 22.3 +2.3**
comp=Z,43nm,1.3s
VNDA Vanda 57.07 182 P **P** **12 59 20.6 +0.8**
comp=Z,1.7nm,0.8s,baz=17,slow=8.3,SNR=4.9
VNDA LR LR 13 21 38.1
comp=Z,223nm,18.0s,baz=22,slow=34
comp=Z,1.7nm,0.8s
VNDA Vanda 57.07 182 P **P** **12 59 21.2 +1.4**
VNDA Vanda 57.07 182 P **P** **12 59 21.2 +1.4**
VNDA pmax pmax
comp=Z,7.0nm,1.1s
SBA Scott Base 57.31 181 P **P** **12 59 23.0 +1.6**
SBA IAmb IAmb 12 59 35.4
comp=Z,35nm,1.4s
SBA Scott Base 57.31 181 P **P** **12 59 23.0 +1.6**
SBA pmax pmax
comp=Z,35nm,1.5s
WOJI Wonogiri, Jawa 57.33 274 P **P** **12 59 25.4 +2.9**
comp=Z,37nm,1.0s
KPJI Karang Pucung 59.36 274 P **P** **12 59 39.3 +2.6**
comp=Z,36nm,1.0s
STKI Sintang 59.72 283 P **P** **12 59 39.3 +0.1**
comp=Z,8µmcomp=Z,17nm,0.8s
KSM Kuching 61.35 284 P **P** **12 59 50.3 -0.1**
JOW Kunigami 61.41 319 LR LR 13 26 56.3
comp=Z,224nm,18.0s,baz=138,slow=37
DBJI Dramaga 61.66 274 P **P** **12 59 55.1 +2.6**
comp=Z,53nm,1.3s
MJAR Matsushiro Arr 63.79 333 P **P** **13 00 02.7 -3.5**
comp=Z,3.8nm,0.9s,baz=170,slow=5.7,SNR=7.9
MJAR LR LR 13 27 19.4
comp=Z,127nm,19.3s,baz=135,slow=36
comp=Z,3.8nm,0.9s
MJAR Matsushiro Arr 63.79 333 P **P** **13 00 05.6 -0.6**
MJAR Matsushiro Arr 63.79 333 P **P** **13 00 05.6 -0.6**
MJAR pmax pmax
comp=Z,4.0nm,1.1s
MAJO Matsushiro 63.80 333*d i*P **P** **13 00 04.4 -1.8**
MAJO pmax pmax
comp=Z,7.0nm,1.0s
KASI Kota Agung 64.11 274 P **P** **13 00 08.5 -0.3**
comp=Z,43nm,0.9s
LWLI Liwa 64.70 274 P **P** **13 00 12.8 0.0**
comp=Z,61nm,1.0s
JSD Sado 65.04 334 P **P** **13 00 14.3 0.0**
DSRI Dabo 65.85 279 P **P** **13 00 22.6 +2.5**
ERM Erimo 66.69 339 *e*P **P** **13 00 24.6 -0.2**
ERM pmax pmax
comp=Z,69nm,1.5s
KUR Kuril'sk 68.25 344 *e*P **P** **13 00 37.1 +2.5**
KUR *e* 13 01 02.6
KUR *e* 13 03 08.0
KUR *e*PPP PPP 13 04 44.9
KUR S **S** **13 09 39.5 +4.9**
KUR MLR MLR
comp=Z,400nm,13.0s
KUR MLR MLR
comp=N,700nm,18.0s
JKA Kamikawa-asahi 68.75 340 P **P** **13 00 38.6 +0.8**
ASAJ Asahikawa 68.75 340 LR LR 13 27 42.3
comp=N,442nm,20.0s,baz=164,slow=33
ASAJ Asahikawa 68.75 340 P **P** **13 00 38.6 +0.8**
ASAJ pmax pmax
comp=Z,31nm,1.0s
TJN Taejon 68.92 325 *e*P **P** **13 00 38.2 -0.8**
KSRS Korea Array 69.44 326 P **P** **13 00 39.1 -3.0**
comp=Z,3.0nm,0.9s,baz=146,slow=5.8,SNR=11
KSRS LR LR 13 29 28.2
comp=Z,114nm,19.8s,baz=130,slow=34
comp=Z,3.0nm,0.9s
KSAR Wonju Array Be 69.45 326 P **P** **13 00 41.8 -0.5**
KSAR Wonju Array Be 69.45 326 P **P** **13 00 41.8 -0.5**
QSPA South Pole Qui 69.47 180 P **P** **13 00 41.9 -0.3**
comp=Z,5.6nm,0.9s,baz=350,slow=5.8,SNR=3.1
QSPA LR LR 13 29 29.2
comp=Z,270nm,18.1s,baz=40,slow=34
comp=Z,5.6nm,0.9s
QSPA South Pole Qui 69.47 180 P **P** **13 00 42.7 +0.4**
QSPA IAmb IAmb 13 00 54.8
comp=Z,20nm,1.1s
QIZ Qiongzhong 69.96 300 P **P** **13 00 47.3 +1.4**
QIZ S **S** **13 09 57.4 +1.5**
QIZ ScS **ScS** **13 10 49.5 +1.5**
QIZ LR LR
comp=Z,180nm,17.6s
NJ2 Nanjing 70.95 316 *e*P **P** **13 00 54.4 +2.8**
NJ2 pmax pmax
comp=Z,11nm,0.5s
IPM Ipoh 71.04 282 P **P** **13 00 54.1 +1.5**
YSS Yuzh-Sakhalins 71.25 341 P **P** **13 00 53.0 -0.1**
YSS Yuzh-Sakhalins 71.25 341*ae*P **P** **13 00 53.5 +0.4**
YSS *e**SP **pwP** **13 01 03.2 +0.4**
YSS *e*S **S** **13 10 11.9 +2.1**
YSS pmax pmax
comp=Z,30nm,0.9s
YSS pmax pmax
comp=Z,200nm,6.2s
YSS smax smax
comp=N,100nm,5.8s
YSS MLR MLR
comp=Z,400nm,16.0s
MSHR Mys Shultsa 71.85 332⇑ *e*P **P** **13 00 56.7 -0.1**
MSHR pmax pmax
comp=Z,8.0nm,1.2s
USA0B Ussuriysk Arra 72.79 333 P **P** **13 01 02.8 +0.4**
USA0B IAmb IAmb 13 01 03.5
comp=Z,27nm,1.1s
USA0B Ussuriysk Arra 72.79 333 P **P** **13 01 02.8 +0.4**
USA0B pmax pmax
comp=Z,27nm,1.1s
USRK Ussuriysk Ar. 72.79 333 P **P** **13 00 59.8 -2.6**
comp=Z,19nm,1.0s,baz=150,slow=4.4,SNR=26
USRK LR LR 13 31 16.3
comp=Z,172nm,19.7s,baz=146,slow=34
comp=Z,19nm,1.0s
USRK Ussuriysk Ar. 72.79 333 P **P** **13 01 02.4 0.0**
USRK Ussuriysk Ar. 72.79 333 P **P** **13 01 02.4 0.0**
GSI Gunungsitoli 73.01 278 P **P** **13 01 05.5 +1.1**
comp=Z,3µmcomp=Z,47nm,1.1s
WHN Wuhan 73.01 313 ⇓P **P** **13 01 07.3 +3.3**
WHN S **S** **13 10 30.3 -0.4**
WHN LR LR
comp=Z,780nm,20.4s
WHN LR LR
comp=Z,820nm,21.5s
WHN LR LR
comp=Z,620nm,20.7s
SHEM Shemya Is, Ala 73.15 3 LR LR 13 28 21.2
comp=Z,273nm,19.8s,baz=154,slow=32
KCSI Kotacane, Aceh 73.66 280 P **P** **13 01 08.3 0.0**
comp=Z,10nm,1.3s
PET Petropavlovsk 73.84 354 P **P** **13 01 07.6 -0.8**
PET IAmb IAmb 13 01 08.7
comp=Z,41nm,1.3s
PET Petropavlovsk 73.84 354 *e*P **P** **13 01 06.6 -1.8**
PET *e*S **SKiKP** **13 10 37.7 +0.6**
PET *e*SSS SSS 13 18 32.7
PET pmax pmax
comp=Z,200nm,8.4s
PET pmax pmax
comp=Z,34nm,1.2s
PET pmax pmax
comp=Z,100nm,11.7s
PET MLR MLR
comp=Z,300nm,19.0s
RPN Rapa Nui 73.86 113 LR LR 13 26 49.1
comp=Z,177nm,18.6s,baz=279,slow=30
PEA0B Petropavlovsk- 74.03 353 P **P** **13 01 08.9 -0.7**
PEA0B Petropavlovsk- 74.03 353*c i*P **P** **13 01 08.7 -0.8**
PETK Petropavlovsk- 74.03 353 P P 13 01 06.0 -3.5
comp=Z,22nm,1.0s,baz=168,slow=7.6,SNR=41
PETK LR LR 13 30 09.1
comp=Z,405nm,19.7s,baz=160,slow=33
comp=Z,22nm,1.0s
PETK Petropavlovsk- 74.03 353 P **P** **13 01 08.7 -0.8**
PETK Petropavlovsk- 74.03 353 P **P** **13 01 08.7 -0.8**
MDJ Mudanjiang 74.15 332 P **P** **13 01 10.3 -0.1**
MDJ IAmb IAmb 13 01 11.6
comp=Z,34nm,1.3s
MDJ Mudanjiang 74.15 332 P **P** **13 01 10.8 +0.4**
MDJ PcP **pwP** **13 01 23.0 +2.8**
MDJ S **S** **13 10 46.1 +3.1**
MDJ sS sS 13 10 53.8 +4.8
MDJ pmax pmax
comp=Z,23nm,1.1s
MDJ pmax pmax
comp=Z,150nm,6.4s
MDJ LR LR
comp=Z,200nm,24.9s
MDJ LR LR
comp=Z,170nm,23.9s
MDJ LR LR
comp=Z,330nm,21.7s
TIA Tai'an 74.73 319 P **P** **13 01 13.3 -0.7**
TIA S **S** **13 10 51.8 +1.9**
TIA pmax pmax
comp=Z,4.0nm,0.6s
TIA pmax pmax
comp=Z,21nm,3.9s
TIA LR LR
comp=Z,120nm,10.7s
TIA LR LR
comp=Z,170nm,12.8s
TIA LR LR
comp=Z,280nm,15.0s
TYV Tymovskoe 74.81 343 *e*P **P** **13 01 14.6 +0.6**
TYV *e*S **S** **13 10 52.0 +1.9**
TYV pmax pmax
comp=Z,23nm,1.3s
TYV pmax pmax
comp=Z,100nm,3.0s
TYV smax smax
comp=N,100nm,6.5s
TYV smax smax
comp=E,300nm,6.5s
CN2 Changchun 75.44 329 *e*P **P** **13 01 17.0 -0.9**
CN2 *e*S **S** **13 10 55.8 -1.6**
CN2 *e*SS **SS** **13 15 49.5 +0.9**
CN2 pmax pmax
comp=E,10.0nm,1.1s
CN2 pmax pmax
comp=E,50nm,4.0s
CN2 LR LR
comp=E,110nm,14.0s
CN2 LR LR
comp=E,160nm,14.0s
CN2 LR LR
comp=E,120nm,15.0s
NIKH Nikolski High 75.77 14 P **P** **13 01 17.0 -2.5**
baz=202
BNX BinXian 76.00 331 ⇓P **P** **13 01 20.3 -0.7**
BNX PP **PP** **13 04 13.5 +1.5**
BNX S **S** **13 11 04.1 +0.6**
BNX sS **sS** **13 11 12.5 +3.0**
BNX SS **SS** **13 15 59.3 +2.3**
BNX pmax pmax
comp=E,16nm,1.0s
BNX pmax pmax
comp=E,130nm,6.3s
BNX LR LR
comp=E,140nm,16.8s
BNX LR LR
comp=E,150nm,16.8s
BNX LR LR
comp=E,140nm,15.5s
GRNR Gornyy 76.60 339⇑ *i*P **P** **13 01 24.8 +0.5**
GRNR *e*S **S** **13 11 14.3 +4.4**
GRNR pmax pmax
comp=N,5.0nm,1.0s
GRNR pmax pmax
comp=Z,20nm,1.0s
GRNR smax smax
comp=N,2.0nm,0.8s
LYN LuoYang 76.68 315 *e*P **P** **13 01 24.6 -0.6**
LYN pP sP 13 01 29.5 -0.6
LYN S **S** **13 11 13.9 +2.4**
LYN sS sS 13 11 20.1 +3.1
LYN pmax pmax
comp=N,10.0nm,0.6s
LYN pmax pmax
comp=N,120nm,4.6s
LYN LR LR
comp=N,220nm,17.5s
LYN LR LR
comp=N,260nm,19.8s
LYN LR LR
comp=N,300nm,20.4s
KLR Kul'dur 76.97 336 LR LR 13 33 29.2
comp=N,278nm,19.5s,baz=146,slow=34
KLR Kul'dur 76.97 336*c i*P **P** **13 01 26.2 -0.2**
KLR pmax pmax
comp=Z,27nm,1.9s
HNS HongShan 76.98 318⇑ P **P** **13 01 27.0 +0.2**
HNS S **S** **13 11 13.8 -0.9**
HNS pmax pmax
comp=Z,10.0nm,1.0s
HNS LR LR
comp=Z,150nm,15.4s
HNS LR LR
comp=Z,210nm,16.9s
HNS LR LR
comp=Z,280nm,16.5s
MAW Mawson 77.06 202 P **P** **13 01 26.7 0.0**
comp=Z,2.2nm,0.7s,baz=88,slow=7.2,SNR=3.9
MAW LR LR 13 30 50.7
comp=Z,344nm,21.1s,baz=104,slow=32
comp=Z,2.2nm,0.7s
MAW Mawson 77.06 202 P **P** **13 01 26.8 0.0**
UNV Unalaska Valle 77.11 15 P P 13 01 24.3 -2.8
baz=204
BJI Beijing 77.78 321 P **P** **13 01 31.3 +0.1**
BJI S **S** **13 11 26.0 +2.8**
BJI pmax pmax
comp=Z,8.0nm,0.8s
BJI pmax pmax
comp=Z,130nm,6.6s
KMI Kunming 78.71 302⇑ P **P** **13 01 37.9 +0.9**
KMI pP sP 13 01 40.9 -1.0
KMI S **S** **13 11 35.0 +0.7**
KMI pmax pmax
comp=Z,15nm,1.3s
KMI pmax pmax
comp=Z,120nm,4.9s
KMI LR LR
comp=Z,150nm,19.0s
KMI LR LR
comp=Z,100nm,26.0s
KMI LR LR
comp=Z,190nm,16.9s
CM31 Chiang Mai Arr 78.76 295 P **P** **13 01 37.8 +0.6**
CM31 IAmb IAmb 13 01 55.0
comp=Z,23nm,1.0s
CMAR Chiang Mai Arr 78.76 295 P **P** **13 01 35.5 -1.7**
comp=Z,2.7nm,0.7s,baz=135,slow=4.4,SNR=19
comp=Z,2.7nm,0.7s
CMAR Chiang Mai Arr 78.76 295 P **P** **13 01 38.0 +0.9**
CMAR Chiang Mai Arr 78.76 295 P **P** **13 01 38.0 +0.9**
XAN Xi'an 78.78 313 ⇓P **P** **13 01 37.0 0.0**
XAN pP PcP 13 01 43.8 -1.9
XAN S **S** **13 11 33.8 -0.6**
XAN ScS **ScS** **13 11 58.8 +0.6**
XAN SS **SS** **13 16 42.3 +2.7**
XAN pmax pmax
comp=Z,8.0nm,2.0s
XAN pmax pmax
comp=Z,170nm,5.5s
XAN LR LR
comp=Z,140nm,17.9s
XAN LR LR
comp=Z,240nm,17.2s
XAN LR LR
comp=Z,310nm,20.6s
FALS False Pass 78.80 16 P P 13 01 33.4 -3.0
baz=206
CHTO Chiang Mai 78.91 295 P **P** **13 01 38.6 +0.6**
CHTO IAmb IAmb 13 01 54.9
comp=Z,28nm,1.2s
CHTO Chiang Mai 78.91 295 P **P** **13 01 38.6 +0.6**
CHTO pmax pmax
comp=Z,28nm,1.2s
CHNA Chernabura Isl 79.82 18 P **P** **13 01 39.6 -2.4**
baz=210
SDPT Sand Point 80.02 17 P P 13 01 40.3 -2.8
baz=209
PZH PanZhiHua 80.16 303 P P 13 01 58.1 +13
PZH S **S** **13 11 50.8 +1.4**
PZH pmax pmax
comp=Z,10.0nm,1.3s
PZH pmax pmax
comp=Z,130nm,5.7s
PZH LR LR
comp=N,310nm,19.4s
PZH LR LR
comp=E,400nm,17.3s
PZH LR LR
comp=Z,420nm,18.6s
XLT XiLinHaoTe 80.34 324⇑ *i*P **P** **13 01 45.0 -0.3**
XLT pP sP 13 01 49.3 -0.9
XLT sP PcP 13 01 51.8 -0.6
XLT S **S** **13 11 51.6 +1.0**
XLT pmax pmax
comp=Z,7.0nm,0.8s
XLT pmax pmax
comp=Z,110nm,5.0s
XLT LR LR
comp=Z,180nm,19.7s
XLT LR LR
comp=Z,240nm,16.7s
BELA Belgrano 2 80.78 175 P **P** **13 01 46.8 -0.3**
BELA IAmb IAmb 13 01 59.4
comp=Z,28nm,1.1s
HHC Hu-ho-hao-te 81.03 320 *e*P P 13 01 54.4 +5.3
HHC S **S** **13 12 00.6 +2.6**
HHC pmax pmax
comp=Z,24nm,0.9s
HHC pmax pmax
comp=Z,200nm,6.3s
HHC LR LR
comp=Z,370nm,15.9s
HHC LR LR
comp=Z,240nm,15.9s
HHC LR LR
comp=Z,330nm,15.9s
MA2 Magadan 81.25 351 LR LR 13 32 44.0
comp=Z,403nm,21.4s,baz=160,slow=32
CHIR Chirikof Islan 81.85 19 P **P** **13 01 50.5 -2.4**
baz=214
ZEA Zeya 82.26 337 *e*P **P** **13 01 54.9 -0.2**
ZEA pmax pmax
comp=Z,100nm,6.6s
ZEA pmax pmax
comp=N,10.0nm,1.6s
ZEA pmax pmax
comp=Z,10.0nm,1.3s
SMAI San Martin Ant 82.65 162 P **P** **13 01 56.4 -0.7**
SII Sitkinak Islan 82.91 20 P P 13 01 55.7 -2.7
baz=215
R17K Ugashik Creek 83.15 18 P **P** **13 01 57.3 -2.3**
baz=213
LZH Lanzhou 83.39 312 *e*P **P** **13 02 02.8 +1.2**
LZH *e*S **S** **13 12 26.0 +3.5**
LZH pmax pmax
comp=Z,17nm,0.9s
LZH pmax pmax
comp=Z,180nm,4.9s
LZH LR LR
comp=Z,92nm,13.8s
LZH LR LR
comp=Z,200nm,14.1s
LZH LR LR
comp=Z,270nm,16.0s
OHAK Old Harbor 83.74 20 P **P** **13 02 00.3 -2.4**
baz=215
Q16K King Salmon 83.95 17 P **P** **13 02 01.4 -2.3**
baz=212
SEY Seymchan 84.26 352 LR LR 13 37 03.3
comp=Z,416nm,19.5s,baz=170,slow=34
SEY Seymchan 84.26 352⇑ *i*P **P** **13 02 04.0 -1.2**
SEY pmax pmax
comp=Z,10.0nm,1.0s
O16K Kokwok River B 84.35 16 P P 13 02 03.1 -2.6
baz=211
Q18K Katmai Hardscr 84.40 18 P **P** **13 02 04.3 -1.9**
baz=214
KDAK Kodiak Island 84.42 20 LR LR 13 39 01.4
comp=Z,386nm,18.0s,baz=232,slow=35
KDAK Kodiak Island 84.42 20 *e*P **P** **13 02 04.5 -1.6**
KDAK pmax pmax
comp=Z,14nm,0.9s
KDAK Kodiak Island 84.42 20 P P 13 02 03.2 -2.9
baz=216
P17K Kvichak River 84.45 17 P **P** **13 02 03.9 -2.3**
baz=212
O17K Koliganek Bris 84.77 17 P **P** **13 02 06.0 -1.9**
baz=212
N16K Nishlik Lake 84.94 15 P **P** **13 02 08.3 -0.5**
baz=210
P18K Big Mountain, 84.95 18 P **P** **13 02 06.6 -2.3**
baz=214
Q19K Cape Douglas, 85.03 18 P **P** **13 02 07.2 -2.1**
baz=215
Q20K Shuyak Island 85.15 19 P **P** **13 02 08.4 -1.4**
baz=216
O18K Koktuh Hills 85.35 17 P **P** **13 02 09.2 -1.6**
baz=214
GAMB Gambell 85.45 9 P **P** **13 02 10.1 -1.0**
baz=198
N18K Kilae Creek 85.86 17 P **P** **13 02 11.4 -1.9**
baz=213
O19K Port Alsworth 85.88 17 P **P** **13 02 11.9 -1.5**
O19K Port Alsworth 85.88 17 P **P** **13 02 11.7 -1.7**
baz=214
N19K Bonanza Creek 86.35 17 P **P** **13 02 14.1 -1.8**
baz=214
SNCC San Nicolas Is 86.73 53 P P 13 02 14.7 -3.5
baz=243
SCZ2 Santa Cruz Isl 86.99 52 P P 13 02 16.2 -3.3
baz=243
SBC Santa Barbara 87.13 52 P P 13 02 17.5 -2.7
baz=243
TROLL Troll, Antarti 87.17 184 P **P** **13 02 19.6 -0.4**
SEW Seward 87.25 19 P **P** **13 02 18.5 -1.6**
baz=219
CAPN Captain Cook N 87.26 18 P **P** **13 02 19.0 -1.2**
baz=217
PKM Mcpherson Peak 87.26 51 P **P** **13 02 19.3 -1.7**
baz=243
M19K Big River Lodg 87.28 16 P **P** **13 02 18.5 -1.7**
baz=214
L19K White Mountain 87.39 16 P **P** **13 02 21.2 +0.4**
L19K IAmb IAmb 13 02 22.6
comp=Z,16nm,1.1s
L19K White Mountain 87.39 16 P **P** **13 02 19.3 -1.5**
baz=214
NVL N'lazarevskaya 87.48 187 *e*P **P** **13 02 24.3 +3.0**
NVL *e*S **SKSac** **13 12 49.9 +1.7**
NVL pmax pmax
comp=Z,11nm,1.0s
CIS Catalina Islan 87.63 53 P **P** **13 02 21.4 -1.3**
baz=244
SHL Shillong 87.69 298 P **P** **13 02 23.1 -0.2**
SHL IAmb IAmb 13 02 39.6
comp=Z,15nm,0.9s
SHL Shillong 87.69 298 P **P** **13 02 23.1 -0.2**
SHL pmax pmax
comp=Z,15nm,0.9s
TNA Tin City 87.69 9 P **P** **13 02 21.3 -0.8**
baz=202
Q23K Middleton Isla 87.74 21 P **P** **13 02 21.6 -0.8**
baz=222
ULN Ulaanbaatar 87.75 324 P **P** **13 02 23.0 -0.1**
ULN IAmb IAmb 13 02 36.2
comp=Z,15nm,0.9s
ULN Ulaanbaatar 87.75 324*c i*P **P** **13 02 22.7 -0.4**
ULN pmax pmax
comp=Z,36nm,2.3s
SNAA Sanae 87.80 183 P **P** **13 02 22.3 -0.7**
SNAA Sanae 87.80 183 P **P** **13 02 22.5 -0.4**
comp=Z,6.7nm,0.9s,baz=167,slow=2.7,SNR=18
SNAA LR LR 13 41 20.7
comp=Z,173nm,18.4s,baz=183,slow=35
comp=Z,6.7nm,0.9s
SNAA Sanae 87.80 183 P **P** **13 02 22.2 -0.7**

SNAA IAmb IAmb 13 02 42.4
comp=Z,10.0nm,0.9s
SNAA Sanae 87.80 183 *c iP* **P 13 02 22.6 -0.4**
SNAA pmax pmax
comp=Z,11nm,1.1s
GTA Gaotai 87.81 314 ⇓P **P 13 02 23.9 +0.4**
GTA sP pwP 13 02 34.8 +1.4
GTA SKS **SKSac 13 12 49.4 -2.0**
GTA S **S 13 13 06.4 +0.5**
GTA SS **SS 13 18 59.1 +5.6**
GTA pmax pmax
comp=Z,8.0nm,0.9s
GTA pmax pmax
comp=Z,130nm,5.5s
GTA LR LR
comp=Z,130nm,17.8s
GTA LR LR
comp=Z,120nm,18.9s
GTA LR LR
comp=Z,160nm,18.9s
FMP Fort Macarthur 87.86 53 P **P 13 02 22.2 -1.4**
baz=244
L20K Farewell, AK 87.89 16 P **P 13 02 22.2 -1.0**
baz=215
RC01 Rabbit Creek A 87.94 19 P **P 13 02 22.2 -1.3**
baz=218
YAK Yakutsk 88.06 343 LR LR 13 42 02.6
comp=Z,334nm,18.4s,baz=89,slow=36
YAK Yakutsk 88.06 343 P **P 13 02 23.0 -0.9**
YAK Yakutsk 88.06 343 *c iP* **P 13 02 22.6 -1.3**
YAK *e**PP **pwP 13 02 33.5 -0.3**
YAK *e* 13 05 54.7
YAK *e*S **SKSac 13 12 47.2 -4.3**
YAK *e**SS **S 13 13 09.1 +2.3**
YAK *e*SS **SS 13 18 58.5 +2.8**
YAK pmax pmax
comp=Z,32nm,1.1s
YAK pmax pmax
comp=N,5.0nm,1.0s
YAK pmax pmax
comp=E,2.0nm,1.0s
YAK pmax pmax
comp=Z,103nm,3.8s
YAK smax smax
comp=E,69nm,3.5s
YAK smax smax
comp=N,68nm,2.9s
YAK MLR MLR
comp=Z,577nm,22.0s
YAK MLR MLR
comp=N,522nm,16.0s
YAK MLR MLR
comp=E,149nm,18.0s
ARVC Arvin 88.09 51 P **P 13 02 23.1 -1.7**
baz=243
SONM Songino Array 88.10 323 P **P 13 02 23.6 -1.1**
comp=E,6.7nm,0.8s,baz=140,slow=5.5,SNR=30
SONM LR LR 13 42 56.2
comp=E,167nm,18.9s,baz=111,slow=36
comp=E,6.7nm,0.8s
SONM Songino Array 88.10 323 P **P 13 02 24.2 -0.5**
SONM IAmb IAmb 13 02 37.0
comp=Z,16nm,1.2s
SONM Songino Array 88.10 323 P **P 13 02 24.2 -0.5**
SONM pmax pmax
comp=Z,16nm,1.2s
SKT Skwentna 88.12 18 P **P 13 02 22.7 -1.7**
baz=217
L02F Cave Junction 88.14 43 P **P 13 02 23.4 -1.5**
baz=240
ORV Oroville 88.25 46 P **P 13 02 25.1 -0.4**
ORV IAmb IAmb 13 02 26.1
comp=Z,23nm,1.5s
ORV Oroville 88.25 46 P **P 13 02 25.1 -0.4**
ORV pmax pmax
comp=Z,23nm,1.5s
K02D Willamette Mer 88.36 43 P **P 13 02 23.8 -2.2**
baz=240
BILL Bilibino 88.39 359 *d iP* **P 13 02 24.0 -1.4**
BILL *e* 13 02 30.6
BILL *e*S **SKSac 13 12 52.7 -0.6**
BILL *e*PS **PnS 13 14 06.4 -7.6**
BILL pmax pmax
comp=Z,15nm,0.9s
VNA3 Neumayer Olymp 88.40 180 P **P 13 02 25.0 -0.8**
J01E Myrtle Point 88.43 42 P **P 13 02 24.7 -1.4**
baz=240
YBH Yreka Blue Hor 88.50 44 LR LR 13 34 01.1
comp=Z,311nm,20.5s,baz=239,slow=30
YBH Yreka Blue Hor 88.50 44 P **P 13 02 26.4 -0.2**
YBH IAmb IAmb 13 02 27.6
comp=Z,11nm,1.1s
YBH Yreka Blue Hor 88.50 44 P **P 13 02 26.5 -0.2**
YBH pmax pmax
comp=Z,11nm,1.1s
PMR Palmer 88.52 19 P **P 13 02 24.3 -1.8**
baz=219
BFSC Mount Baldy Ra 88.56 53 P **P 13 02 25.6 -1.7**
baz=244
K20K Telida 88.57 16 P **P 13 02 24.3 -2.1**
baz=214
KNK Knik Glacier 88.58 19 P **P 13 02 25.6 -0.9**
baz=220
ISA Isabella, Lake 88.59 51 P **P 13 02 26.9 -0.3**
ISA IAmb IAmb 13 02 27.9
comp=Z,9.2nm,0.9s
ISA Isabella, Lake 88.59 51 P **P 13 02 26.9 -0.3**
ISA pmax pmax
comp=Z,9.0nm,0.9s
ISA Isabella, Lake 88.59 51 P **P 13 02 26.4 -0.9**
baz=243,SNR=7.8
EDW2 Edwards Air Fo 88.59 52 P **P 13 02 26.5 -0.7**
baz=244
GLI Glacier Island 88.59 20 P **P 13 02 25.9 -0.6**
baz=221
MURC Murrieta 88.63 53 P **P 13 02 26.1 -1.3**
baz=244
PPLA Purkeypile 88.68 17 P **P 13 02 25.3 -1.8**
baz=216
HUMO Hull Mountain 88.77 43 P **P 13 02 28.1 +0.2**
HUMO IAmb IAmb 13 02 28.9
comp=Z,15nm,1.0s
EYAK Cordova Ski Ar 88.78 21 P **P 13 02 26.5 -0.9**
baz=222
CUT Chulitna 88.82 18 P **P 13 02 26.4 -1.1**
baz=218
MONP2 Monument Peak 88.91 54 P **P 13 02 27.5 -1.5**
baz=245,SNR=5.3
SML Sawmill 88.92 19 P **P 13 02 26.9 -1.3**
baz=220
VNA1 Neumayer--Stat 88.98 181 P **P 13 02 28.3 -0.1**
L04D Klamath Falls 89.00 44 P **P 13 02 28.1 -1.0**
baz=241
MDPB Devils Postpil 89.04 49 P **P 13 02 29.4 -0.2**
MDPB IAmb IAmb 13 02 40.9
comp=Z,14nm,1.3s
IKP In-Ko-Pah, Jac 89.04 55 P **P 13 02 28.8 -0.6**
baz=245
GCSA Galena City Sc 89.06 14 P **P 13 02 27.2 -1.4**
baz=212
I03D Drain, OR 89.06 42 P **P 13 02 28.2 -1.0**
baz=240
LRMC Laurel Mtn Rad 89.09 51 P **P 13 02 28.8 -0.8**
baz=244
OMMB Old Mammoth Mi 89.09 49 P **P 13 02 30.1 +0.3**
OMMB IAmb IAmb 13 02 30.5
comp=Z,15nm,1.4s
M23K Glacier View 89.10 19 P **P 13 02 28.9 0.0**
baz=220
CAST Castle Rocks 89.14 16 P **P 13 02 27.6 -1.5**
baz=216
PFO Pinyon Flats O 89.19 54 LR LR 13 35 45.9
comp=Z,236nm,19.7s,baz=255,slow=31
PFO Pinyon Flats O 89.19 54 P **P 13 02 28.9 -1.2**
baz=245
TPFO Pinon Flats 89.19 54 P **P 13 02 29.0 -1.2**
baz=245
MLAC Mammoth, Mammo 89.21 49 P **P 13 02 29.5 -0.9**
baz=243
CWC Cottonwood Cre 89.22 50 P **P 13 02 29.1 -1.2**
baz=244
J20K Nowinta River 89.23 15 P **P 13 02 27.5 -2.0**
baz=214
TIN Tinemaha, Big 89.39 50 P **P 13 02 29.9 -1.1**
baz=244
SWSC Sam W. Stewart 89.41 54 P **P 13 02 30.3 -0.7**
baz=245

CHUM Lake Minchumin 89.45 16 P **P 13 02 30.0 -0.5**
baz=216
BMRM Bremner River 89.47 21 P **P 13 02 30.1 -0.6**
baz=223
MPMC Manual Prospec 89.48 51 P **P 13 02 30.3 -1.3**
baz=244,SNR=9.0
K04D Chiloquin, OR 89.56 44 P **P 13 02 30.7 -1.0**
baz=241
J04D Umpqua Nationa 89.62 43 P **P 13 02 30.9 -1.2**
baz=241
TRF Thorofare Moun 89.65 17 P **P 13 02 30.9 -0.8**
baz=218
WAT1 Susitna Watana 89.65 18 P **P 13 02 30.8 -0.7**
baz=220
GSC Goldstone, Bar 89.65 52 P **P 13 02 31.7 -0.6**
baz=244
WAT6 Susitna Watana 89.70 19 P **P 13 02 31.5 -0.4**
baz=220
BELC Belle Mtn. Jos 89.70 53 P **P 13 02 31.3 -1.3**
baz=245,SNR=5.1
I04A Tendick Farm, 89.70 42 P **P 13 02 30.8 -1.4**
baz=241
HEC Hector,Ludlow 89.80 53 P **P 13 02 31.6 -1.4**
baz=245
MESA MESA 89.81 22 P **P 13 02 31.4 -1.1**
baz=225
H04D Lebanon 89.85 42 P **P 13 02 31.9 -1.0**
baz=241
GOMU GeErMu 89.86 309 P **P 13 02 34.8 +1.2**
GOMU pP sP 13 02 38.1 -0.4
GOMU sP pwP 13 02 42.3 -1.1
GOMU pmax pmax
comp=Z,4.0nm,0.8s
GOMU pmax pmax
comp=Z,71nm,5.7s
GOMU LR LR
comp=Z,84nm,13.3s
GOMU LR LR
comp=Z,57nm,13.6s
GOMU LR LR
comp=Z,71nm,13.6s
G03D McMinnville, O 89.87 41 P **P 13 02 32.1 -0.7**
baz=240
N25K Chitina, Valde 89.94 20 P **P 13 02 32.2 -0.8**
baz=223
NVAR Mina Array Bea 89.94 49 P **P 13 02 32.6 -1.1**
comp=Z,6.8nm,0.9s,baz=225,slow=8.2,SNR=45
NVAR LR LR 13 34 51.9
comp=Z,440nm,20.9s,baz=258,slow=30
comp=Z,6.8nm,0.9s
NVAR Mina Array Bea 89.94 49 P **P 13 02 32.9 -0.8**
BC3 Big Chuckawall 89.97 54 P **P 13 02 33.4 -0.4**
baz=245
BPAW Bear Paw Mtn. 89.98 16 P **P 13 02 32.2 -0.8**
baz=217
GRAC Grapevine Rang 89.98 50 P **P 13 02 33.0 -0.7**
baz=244
NV11 Mina Array Sit 90.05 49 P **P 13 02 33.1 -1.0**
NV11 IAmb IAmb 13 02 34.6
comp=Z,10nm,0.9s
FURC Furnace Creek, 90.11 51 P **P 13 02 33.3 -1.0**
baz=244,SNR=7.2
GLA Glamis 90.19 55 P **P 13 02 33.9 -0.9**
baz=246
J05D Fort Rock, OR 90.21 43 P **P 13 02 33.9 -0.8**
baz=242,SNR=20
CRAG Craig 90.27 29 P **P 13 02 33.5 -1.0**
baz=233
GMRC Granite Mounta 90.28 53 P **P 13 02 34.1 -1.2**
baz=245
SIT Sitka 90.29 27 P **P 13 02 32.9 -1.6**
baz=231
MCARA McCarthy VSAT 90.30 21 P **P 13 02 32.7 -1.8**
baz=224
LPIG La Paz 90.30 64 LR LR 13 34 27.4
comp=Z,342nm,19.8s,baz=226,slow=30
HARP HAARP 90.35 20 P **P 13 02 33.4 -1.4**
baz=222
TUQ Turquoise Moun 90.36 52 P **P 13 02 34.1 -1.6**
baz=245,SNR=5.7
PINM Pinnacle 90.36 23 P **P 13 02 33.3 -1.7**
baz=227
PNL Peninsula 90.39 23 P **P 13 02 33.4 -1.7**
baz=228
BOD Bodaibo 90.40 334 *e*P **P 13 02 33.7 -1.4**
BOD pmax pmax
comp=Z,26nm,1.6s
IRM Iron Mountain 90.41 54 P **P 13 02 34.4 -1.4**
baz=245,SNR=6.3
F04D Rainier, OR 90.45 40 P P 13 02 32.7 -2.9
baz=240
I21K Tanana 90.59 15 P **P 13 02 33.6 -2.2**
baz=216
PINE Pine Mountain 90.64 43 P **P 13 02 36.4 -0.4**
I05D Terrebonne, OR 90.64 42 P **P 13 02 34.7 -1.9**
baz=242,SNR=5.0
PAX Paxson 90.68 19 P **P 13 02 34.0 -2.4**
baz=222
TPNV Topopah Spring 90.77 51 P **P 13 02 36.5 -1.0**
baz=245,SNR=14
H21K Melozitna Rive 90.78 15 P **P 13 02 34.8 -1.9**
baz=216
MLY Manley 90.78 16 P P 13 02 34.1 -2.7
baz=218
BBB Bella Bella 90.79 33 LR LR 13 39 31.5
comp=Z,179nm,18.1s,baz=266,slow=33
PALK Pallekele 90.83 277 LR LR 13 44 28.9
comp=Z,146nm,19.7s,baz=224,slow=36
NEA2 Nenana 90.88 17 P **P 13 02 35.0 -2.2**
baz=219
G05D Wamic, OR 91.09 42 P **P 13 02 36.9 -1.7**
baz=242
WRAK Wrangell Islan 91.19 28 P **P 13 02 37.4 -1.4**
baz=233
K24K Donnelly Dome 91.21 18 P **P 13 02 37.1 -1.6**
baz=222
PDMCI Parker Dam,Lak 91.23 54 P **P 13 02 38.1 -1.4**
baz=246,SNR=5.4
I23K Minto, Yukon-K 91.24 16 P **P 13 02 37.2 -1.6**
baz=219
214A Organ Pipe Nat 91.31 56 P **P 13 02 38.3 -1.7**
baz=247
H22K Ishtalitna Cre 91.32 15 P **P 13 02 37.7 -1.5**
baz=217
HDA Harding Lake 91.33 18 P **P 13 02 37.7 -1.5**
baz=221
YUK8 Steele Glacier 91.36 22 P **P 13 02 37.6 -2.2**
baz=227
M27K Edge Creek, AK 91.38 21 P **P 13 02 37.4 -2.4**
baz=225
L26K Log Cabin Wild 91.38 20 P **P 13 02 38.3 -1.3**
baz=224
PLBC Pleasant Camp 91.41 25 P **P 13 02 37.4 -2.3**
baz=230
RIDG Independent Ri 91.44 19 P **P 13 02 37.6 -2.2**
baz=223
YUK3 Moose Creek 91.45 22 P **P 13 02 37.8 -2.3**
baz=227
WVOR Wild Horse Val 91.51 45 P **P 13 02 40.3 -0.5**
WVOR IAmb IAmb 13 02 41.3
comp=Z,12nm,1.1s
WVOR Wild Horse Val 91.51 45 P **P 13 02 40.3 -0.5**
WVOR pmax pmax
comp=Z,12nm,1.1s
BMN Battle Mountai 91.58 47 P **P 13 02 40.6 -0.6**
BMN IAmb IAmb 13 02 41.6
comp=Z,9.0nm,1.0s
BMN Battle Mountai 91.58 47 P **P 13 02 40.6 -0.6**
BMN pmax pmax
comp=Z,9.0nm,1.0s
P30M Million Dollar 91.61 24 P **P 13 02 38.8 -1.9**
baz=230
ILAR Eielson Array 91.62 17 P P 13 02 37.6 -3.0
comp=Z,2.2nm,0.9s,baz=234,slow=5.5,SNR=23
ILAR LR LR 13 43 16.1
comp=Z,361nm,18.2s,baz=226,slow=35
comp=Z,2.2nm,0.9s
ILAR Eielson Array 91.62 17 P **P 13 02 38.0 -2.6**
ILAR Eielson Array 91.62 17 P P 13 02 38.0 -2.6
YUK6 Outpost Mounta 91.63 23 P P 13 02 37.9 -3.2
baz=228
H23K Yukon River 91.72 16 P **P 13 02 38.9 -2.2**
baz=219
POKR Poker Plat Res 91.73 17 P **P 13 02 38.7 -2.5**
baz=220
W13A Hualapai Mount 91.74 53 P **P 13 02 42.0 -0.1**
BVCY Beaver Creek 91.76 21 P P 13 02 38.6 -2.7
baz=226

YUK4 Talbot Arm 91.79 22 P **P 13 02 39.9 -1.9**
baz=228
SKAG Skagway 91.81 25 P **P 13 02 39.8 -1.8**
baz=231
R11A Troy Canyon, C 91.84 50 P **P 13 02 40.9 -1.6**
baz=245,SNR=7.0
HYT Haines Junctio 91.86 23 P **P 13 02 39.5 -2.5**
baz=229
SCRK Sand Creek 91.87 19 P **P 13 02 39.8 -2.1**
baz=224
L27K Beaver Creek, 91.89 20 P **P 13 02 40.3 -1.7**
baz=225
J25K Salcha River, 91.93 18 P **P 13 02 40.3 -1.8**
baz=222
H24K Noodor Dome 92.16 16 P **P 13 02 41.3 -1.8**
baz=220
O30N Mendenhall 92.36 24 P **P 13 02 42.3 -1.8**
baz=230
J26L Joseph Creek 92.38 19 P **P 13 02 42.4 -1.9**
baz=224
N30M Aishikik Lake 92.43 23 P **P 13 02 42.3 -2.2**
baz=230
T35M Bob Quinn 92.46 29 P **P 13 02 42.9 -1.8**
baz=235
K27K Chicken 92.50 19 P **P 13 02 43.2 -1.5**
baz=225
P32M Atlin 92.54 25 P **P 13 02 43.3 -1.8**
baz=232
COLD Coldfoot 92.67 15 P **P 13 02 43.8 -1.5**
baz=218
N31M Braeburn, Yuko 92.93 23 P **P 13 02 45.1 -1.7**
baz=231
TUC Tucson 93.03 57 P **P 13 02 47.3 -0.7**
baz=248
ELK Elko 93.08 48 LR LR 13 40 58.5
comp=Z,215nm,18.1s,baz=233,slow=33
I26K Coal Creek Min 93.08 18 P **P 13 02 46.3 -1.1**
baz=224
M30M Minto, Yukon 93.27 22 P **P 13 02 46.2 -2.2**
baz=230
P33M Teslin, Yukon 93.28 25 P P 13 02 46.0 -2.5
baz=233
DAWY Dawson 93.38 20 P P 13 02 46.2 -2.6
baz=228
DLBC Dease Lake 93.39 27 LR LR 13 39 54.0
comp=Z,352nm,18.5s,baz=248,slow=32
DLBC Dease Lake 93.39 27 P **P 13 02 47.3 -1.7**
baz=235
WUAZ Wupatki 93.79 54 P **P 13 02 50.1 -1.5**
baz=248
TOLK Toolik Lake Re 93.93 14 P **P 13 02 49.2 -2.1**
baz=219
D24K Happy Valley 94.50 14 P **P 13 02 52.5 -1.3**
baz=219
DUG Dugway, Tooele 94.55 49 P **P 13 02 53.0 -1.9**
baz=247
A21K Barrow 94.72 11 P **P 13 02 52.8 -1.9**
baz=212
HLID Hailey 94.79 45 P **P 13 02 54.5 -1.5**
baz=246
NEW Newport 95.02 40 LR LR 13 41 50.1
comp=Z,227nm,18.1s,baz=252,slow=33
MMPY Sheldon Lake, 95.31 24 P **P 13 02 55.8 -1.9**
baz=235
EPYK Eagle Plains 95.75 19 P **P 13 02 57.6 -2.1**
baz=230
TIXI Tiksi 95.99 348 LR LR 13 41 18.8
comp=Z,106nm,21.3s,baz=180,slow=32
TIXI Tiksi 95.99 348 ⇑ *iP* **P 13 02 58.0 -2.5**
TIXI pmax pmax
comp=Z,3.0nm,1.1s
ANMO Albuquerque 97.34 56 LR LR 13 42 21.1
comp=Z,164nm,18.3s,baz=240,slow=32
TXAR Lajitas Array 97.70 62 P P 13 03 05.6 -3.9
comp=Z,0.8nm,0.9s,baz=135,slow=57,SNR=2.1
TXAR LR LR 13 39 56.1
comp=Z,366nm,19.0s,baz=240,slow=31
comp=Z,0.8nm,0.9s
BW06 Boulder Array 97.78 47 P **P 13 03 10.1 +0.4**
baz=249
PDAR Pinedale Array 97.78 47 P P 13 03 05.2 -4.4
comp=Z,0.6nm,1.0s,baz=58,slow=42,SNR=2.0
PDAR LR LR 13 39 51.2
comp=Z,113nm,21.4s,baz=249,slow=31
comp=Z,0.6nm,1.0s
WMQ Urumqi 97.90 314 *e*P Pdif 13 03 13.3 +3.3
WMQ LR LR
comp=Z,120nm,22.1s
INK Inuvik 97.93 18 LR LR 13 50 24.0
comp=Z,220nm,18.0s,baz=216,slow=37
INK Inuvik 97.93 18 P **P 13 03 07.0 -2.3**
baz=233
C36M Paulatuk 101.38 19 P **Pdif 13 03 22.3 -2.4**
baz=242
YKA Yellowknife Ar 102.02 27 P **Pdif 13 03 23.5 -4.2**
comp=Z,0.3nm,0.7s,baz=265,slow=9.8,SNR=2.0
MKAR Makanchi Array 102.46 315 P **Pdif 13 03 26.9 -3.2**
comp=Z,1.0nm,0.8s,baz=104,slow=6.1,SNR=7.4
ZALV Zalesovo Beam 102.99 323 Pdiff **Pdif 13 03 28.1 -4.2**
comp=Z,0.3nm,0.3s,baz=323,slow=41,SNR=1.3
MIAR Mount Ida 107.39 59 P **PKiKP 13 07 57.0 -4.0**
baz=257
BELG Belogornoye 125.05 320 *i* PKiKP **PKPdf 13 08 33.6 -0.5**
ARCES ARCESS Array B 126.28 345 PKP **PKPdf 13 08 31.6 -4.4**
comp=Z,2.0nm,0.9s,baz=10,slow=14,SNR=2.2
HUMP Col San Antoni 128.51 83 **PKPdf 13 08 40.6 -1.1**
BDFB Brasilia 128.91 132 PKP **PKPdf 13 08 41.0 -1.8**
comp=Z,1.5nm,0.5s,baz=120,slow=3.0,SNR=4.4
BDFB Brasilia 128.91 132 **PKPdf 13 08 44.3 +1.5**
BDFB Brasilia 128.91 132 PKiKP **PKPdf 13 08 44.3 +1.5**
OBN Obninsk 130.43 326 ⇑ *i* PKiKP **PKiKP 13 08 47.4 +2.3**
OBN pmax pmax
comp=Z,8.0nm,0.4s
OBN MLR MLR
comp=Z,167nm,18.0s
AKASG Malin Array Be 136.38 323 PKP **PKPdf 13 08 51.3 -4.4**
comp=Z,0.2nm,0.3s,baz=37,slow=16,SNR=1.2
NOA NORSAR Array B 136.66 344 PKP **PKPdf 13 08 51.4 -4.6**
comp=Z,0.6nm,0.7s,baz=28,slow=1.9,SNR=1.7
BRTR Keskin Array B 137.37 307 PKP **PKPdf 13 08 53.4 -4.6**
comp=Z,0.2nm,0.4s,baz=150,slow=1.2,SNR=2.3
OKC Ostrava-Krasne 142.72 328 AMS AMS 14 14 10.0
comp=Z,200nm,22.1s
PSZ Piszkesteto 143.02 325 PKP **PKPdf 13 09 09.1 +1.2**
MORC Moravsky Berou 143.05 329 *e*PKP **PKPdf 13 09 05.4 -2.5**
OSTC Ostas 143.15 331 AMS AMS 14 12 30.0
comp=Z,300nm,24.2s
MAUC Maruska 143.19 328 *e*PKP PKPbc 13 09 07.6 +2.5
CHVC Chvalec 143.20 331 AMS AMS 14 13 40.0
comp=Z,300nm,22.8s
KRLC Kraliky 143.22 330 *e*PKiKP PKPab 13 09 05.8 +1.9
KRLC MLR MLR
comp=Z,200nm,17.4s
KRLC Kraliky 143.22 330 *e*PKP PKPab 13 09 05.8 +1.9
KRLC AMS AMS 14 15 50.0
comp=Z,200nm,17.4s
DPC Dobruska-Polom 143.24 330 *e*PKiKP PKPab 13 09 04.5 +0.5
DPC MLR MLR
comp=Z,200nm,18.1s
DPC Dobruska-Polom 143.24 330 *e*PKP PKPab 13 09 04.5 +0.5
DPC AMS AMS 14 12 40.0
comp=Z,200nm,18.1s
UPC Upice 143.28 331 AMS AMS 14 14 10.0
comp=Z,200nm,18.7s
JAVC Velka Javorina 143.59 328 *e*PKP PKPbc 13 09 08.4 +2.1
VRAC Vranov 143.83 329 *e*PKP PKPab 13 09 07.6 +1.4
PVCC Panska Ves 143.91 332 AMS AMS 14 19 00.0
comp=Z,200nm,17.2s
BRG Berggiesshubel 143.93 333 *e*PKP PKPab 13 09 06.8 +0.3
BRG Amp 13 09 08.6
comp=Z,12nm,1.5s
BRG *ex* x 13 09 18.5
BRG Amp 13 09 21.4
comp=Z,47nm,1.7s
BRG Berggiesshubel 143.93 333 *e*PKiKP PKPab 13 09 06.7 +0.2
BRG *e* 13 09 18.4
BRG pmax pmax
comp=Z,13nm,1.5s
CLL Collm 143.99 334 *i* PKiKP PKPab 13 09 07.7 +1.0
CLL pmax pmax
comp=Z,19nm,1.6s
CLL Collm 143.99 334 *i* PKPdf PKPab 13 09 07.7 +1.0
comp=Z,19nm,1.6s
CLL *i* PKPmax 13 09 17.6
comp=Z,72nm,2.1s
CLL Lm MLR 14 20 00.0
comp=N,100nm,20.3s

CLL				Lm	MLR	14 20 00.0	
	comp=E,100nm,20.0s						
CLL				Lm	MLR	14 20 00.0	
	comp=Z,200nm,18.4s						
KRUC	**Moravsky**	**144.09**	**329**	*e*PKP	**PKPab**	**13 09 07.9**	**+0.7**
MODS	**Modra-Piesok**	**144.11**	**327**	*e*PKIKP	**PKiKP**	**13 09 15.8**	**+2.5**
MODS	**Modra-Piesok**	**144.11**	**327**	*e*PKP	**PKiKP**	**13 09 15.8**	**+2.5**
SRS	**Serrai**	**144.19**	**313**	P	**PKPab**	**13 09 06.3**	**-1.6**
CSKK	**Cskako**	**144.24**	**325**	PKP	**PKiKP**	**13 09 14.5**	**+0.9**
PRU	**Pruhonice**	**144.31**	**331**	AMS	AMS	14 13 20.0	
	comp=Z,200nm,24.9s						
TREC	**Trest**	**144.37**	**330**	AMS	AMS	14 15 20.0	
	comp=Z,200nm,16.4s						
KNT	**Kendrikon**	**144.65**	**313**	P	**PKPab**	**13 09 08.2**	**-1.4**
MORH	**Mrgy, Hungar**	**144.72**	**323**	PKP	**PKPab**	**13 09 09.6**	**0.0**
MPLH	**Magyarpolny**	**144.74**	**325**	PKP	**PKPab**	**13 09 10.2**	**+0.6**
VAY	**Valandovo**	**144.80**	**314**	*i* P	**PKPab**	**13 09 08.9**	**-1.2**
NKC	**Novy Kostel**	**145.04**	**333**	*e*PKIKP	**PKPab**	**13 09 10.8**	**+0.1**
NKC	**Novy Kostel**	**145.04**	**333**	*e*PKP	**PKPab**	**13 09 10.8**	**+0.1**
NKC				AMS	AMS	14 16 40.0	
RONA	**Rosalia, Austr**	**145.05**	**327**	*i* P	**PKPab**	**13 09 10.9**	**0.0**
	comp=Z,24nm,1.0s,SNR=11						
KOVH	**Kovagotottos**	**145.10**	**324**	PKP	**PKPbc**	**13 09 10.8**	**-0.2**
CONA	**Conrad Observa**	**145.12**	**328**	*i* P	**PKPbc**	**13 09 11.4**	**+0.3**
	comp=Z,14nm,1.0s,SNR=9.0						
DIVS	**Divibare**	**145.13**	**319**		**PKPbc**	**13 09 11.0**	**-0.3**
IDI	**Anoyia**	**145.20**	**303**	P	**PKPbc**	**13 09 10.6**	**-1.1**
IDI	**Anoyia**	**145.20**	**303**		**PKPbc**	**13 09 11.1**	**-0.6**
ATHU	**Athens Univers**	**145.24**	**308**	P	**PKPbc**	**13 09 10.0**	**-1.7**
CKRC	**Cesky Krumlov**	**145.25**	**330**	*e*PKP	**PKPbc**	**13 09 11.1**	**-0.3**
VLY	**Voula,Athens**	**145.27**	**307**	P	**PKPbc**	**13 09 09.9**	**-1.9**
SKO	**Skopje**	**145.27**	**315**	*i* P	**PKPbc**	**13 09 11.4**	**-0.3**
KHC	**Kasperske Hory**	**145.36**	**331**		**PKPbc**	**13 09 11.5**	**-0.3**
KHC	**Kasperske Hory**	**145.36**	**331**	PKIKP	**PKPbc**	**13 09 11.5**	**-0.3**
KHC	**Kasperske Hory**	**145.36**	**331**	*e*PKP	**PKPbc**	**13 09 11.5**	**-0.3**
KHC				x	x	13 09 21.5	
KHC				AMS	AMS	14 20 40.0	
	comp=Z,300nm,22.0s						
LIT	**Litokhoron**	**145.37**	**312**	P	**PKPbc**	**13 09 09.4**	**-2.7**
LIT	**Litokhoron**	**145.37**	**312**		**PKPbc**	**13 09 11.3**	**-0.8**
LIT	**Litokhoron**	**145.37**	**312**	PKIKP	**PKPbc**	**13 09 11.3**	**-0.8**
GEC2	**GERESS Array S**	**145.51**	**331**		**PKPbc**	**13 09 12.1**	**-0.2**
GERES	**GERESS Array B**	**145.51**	**331**	PKPbc	**PKPbc**	**13 09 11.0**	**-1.4**
	comp=Z,9.9nm,0.9s,baz=45,slow=4.0,SNR=48						
GERES	**GERESS Array B**	**145.51**	**331**		**PKPbc**	**13 09 11.6**	**-0.8**
GERES	**GERESS Array B**	**145.51**	**331**	PKIKP	**PKPbc**	**13 09 11.6**	**-0.8**
ATAL	**Atalanti**	**145.54**	**309**	P	**PKPbc**	**13 09 10.2**	**-2.4**
FNA	**Florina**	**145.85**	**313**	P	**PKPdf**	**13 09 12.1**	**-1.0**
FNA	**Florina**	**145.85**	**313**		**PKPdf**	**13 09 12.7**	**-0.4**
FNA	**Florina**	**145.85**	**313**	PKP2	**PKPdf**	**13 09 12.7**	**-0.4**
IMMV	**Iera Moni Meta**	**145.86**	**303**	P	**PKPdf**	**13 09 13.5**	**+0.3**
KRND	**KRANIDI**	**145.91**	**307**	P	**PKPdf**	**13 09 11.6**	**-1.6**
GVDS	**Gavdos**	**145.95**	**302**	P	**PKPdf**	**13 09 13.3**	**0.0**
GVD	**Gavdhos**	**145.95**	**302**	P	**PKPdf**	**13 09 13.1**	**-0.2**
MOA	**Molln**	**145.95**	**329**	*i* P	**PKPdf**	**13 09 13.4**	**+0.4**
	comp=Z,21nm,1.2s,SNR=7.9						
THAL	**Thalero**	**146.04**	**308**	P	**PKPdf**	**13 09 12.6**	**-0.8**
PHP	**Peshkopia**	**146.06**	**315**	P	**PKPdf**	**13 09 13.3**	**-0.1**
OHR	**Ohrid**	**146.09**	**314**	*i* P	**PKPdf**	**13 09 14.0**	**+0.5**
ANKY	**Antikythira Is**	**146.28**	**304**	P	**PKPdf**	**13 09 14.2**	**+0.4**
VLI	**Veliai**	**146.29**	**306**	P	**PKPdf**	**13 09 13.3**	**-0.6**
GUR	**Goura**	**146.31**	**308**	P	**PKPdf**	**13 09 13.9**	**-0.1**
EVR	**Evrytania**	**146.33**	**310**	P	**PKPdf**	**13 09 14.0**	**0.0**
KTHA	**Kythira Island**	**146.34**	**305**	P	**PKPdf**	**13 09 14.2**	**+0.2**
BIOA	**Bad Ischl, Aus**	**146.37**	**329**	*e*P	**PKiKP**	**13 09 22.3**	**+4.3**
	comp=Z,3.5nm,0.5s						
SOKA	**Soboth**	**146.37**	**327**	*e*P	**PKPdf**	**13 09 14.0**	**+0.2**
	comp=Z,9.3nm,1.1s						
KTHR	**Kythira**	**146.38**	**305**	P	**PKPdf**	**13 09 14.6**	**+0.6**
KLV	**Kalavryta, Ach**	**146.42**	**308**	P	**PKPdf**	**13 09 14.0**	**-0.1**
EFP	**Efpalio**	**146.45**	**309**	P	**PKPdf**	**13 09 16.0**	**+1.9**
PDG	**Podgorica**	**146.46**	**317**		**PKPdf**	**13 09 14.4**	**+0.5**
LAKA	**Lakka**	**146.47**	**309**	P	**PKPdf**	**13 09 14.9**	**+0.7**
OBKA	**Obir**	**146.73**	**327**	*e*P	**PKPdf**	**13 09 14.8**	**+0.4**
	comp=Z,8.3nm,1.1s						
ITM	**Ithomi**	**146.89**	**307**	P	**PKPdf**	**13 09 17.2**	**+2.3**
ITM	**Ithomi**	**146.89**	**307**		**PKPdf**	**13 09 17.0**	**+2.1**
KBA	**Koelnbreinsper**	**146.94**	**329**	*e*P	**PKPdf**	**13 09 15.3**	**+0.5**
	comp=Z,9.6nm,1.0s						
MYKA	**Terra Mystica**	**147.11**	**328**	*e*P	**PKPdf**	**13 09 15.9**	**+0.9**
	comp=Z,5.6nm,0.9s						
IGT	**Igoumenitsa**	**147.12**	**312**	P	**PKPdf**	**13 09 16.5**	**+1.3**
BTNL	**Ternell**	**147.12**	**340**	*d*PKPdf	**PKPdf**	**13 09 16.6**	**+1.7**
BSTI	**Sart Tilman**	**147.30**	**340**	*d*PKPdf	**PKPdf**	**13 09 17.2**	**+2.1**
BHOU	**Houvegnez**	**147.36**	**340**	*d*PKPdf	**PKPdf**	**13 09 17.4**	**+2.1**
BHOU				*d*PKPbc	**pPKPbc**	**13 09 20.0**	**-1.4**
ABTA	**Abfaltersbach**	**147.58**	**329**	*e*P	**PKPdf**	**13 09 17.2**	**+1.3**
	comp=Z,14nm,1.0s						
WATA	**Walderalm**	**147.59**	**331**	*e*P	**PKPdf**	**13 09 17.7**	**+1.8**
	comp=Z,10nm,1.3s						
WTTA	**Wattenberg**	**147.62**	**331**	*e*P	**PKPdf**	**13 09 18.2**	**+2.2**
	comp=Z,7.7nm,0.8s						
RCHB	**Rochefort**	**147.78**	**340**	*d*PKPdf	**PKPdf**	**13 09 18.9**	**+3.0**
BMRD	**Maredsous**	**147.80**	**341**	*d*PKPdf	**PKPdf**	**13 09 18.7**	**+2.8**
MOTA	**Moosalm**	**147.80**	**331**	*i* P	**PKPdf**	**13 09 18.3**	**+2.1**
	comp=Z,18nm,1.0s,SNR=5.6						
STAL	**STALIGIAL**	**147.83**	**328**		**PKPdf**	**13 09 18.2**	**+2.0**
SQTA	**Sankt Quirin**	**147.84**	**331**	*e*P	**PKPdf**	**13 09 18.6**	**+2.3**
	comp=Z,14nm,0.9s						
RETA	**Reutte**	**147.84**	**332**	*e*P	**PKPdf**	**13 09 18.7**	**+2.5**
	comp=Z,3.9nm,0.7s						
WLF	**Walferdange**	**147.90**	**339**		**PKPdf**	**13 09 19.1**	**+3.0**
WLF	**Walferdange**	**147.90**	**339**	PKP2	**PKPdf**	**13 09 19.1**	**+3.0**
WLF	**Walferdange**	**147.90**	**339**	*d*PKPdf	**PKPdf**	**13 09 19.1**	**+3.0**
DOU	**Dourbes**	**148.03**	**341**	*d*PKPdf	**PKPdf**	**13 09 18.7**	**+2.3**
BFO	**Black Forest**	**148.21**	**335**		**PKPdf**	**13 09 18.7**	**+2.0**
BFO				PKPab	**PKiKP**	**13 09 23.7**	**+1.9**
BFO	**Black Forest**	**148.21**	**335**	PKP2	**PKiKP**	**13 09 23.7**	**+1.9**
FETA	**Feichten**	**148.21**	**331**	*i* P	**PKPdf**	**13 09 19.6**	**+2.7**
	comp=Z,12nm,0.9s,SNR=9.0						
DAVA	**Damuels**	**148.39**	**332**	*e*P	**PKPdf**	**13 09 20.2**	**+2.9**
	comp=Z,8.4nm,0.8s						
CTI	**Castel Tesino**	**148.50**	**329**		**PKPbc**	**13 09 21.1**	**+0.1**
CTI	**Castel Tesino**	**148.50**	**329**	PKP2	**PKPbc**	**13 09 21.1**	**+0.1**
ECH	**Echery**	**148.75**	**336**		**PKPbc**	**13 09 22.2**	**+0.8**
ECH	**Echery**	**148.75**	**336**	PKP2	**PKPbc**	**13 09 22.2**	**+0.8**
TIP	**Timpagrande**	**149.74**	**314**		**PKPbc**	**13 09 24.3**	**0.0**
NRCA	**Norcia**	**149.92**	**323**		**PKPbc**	**13 09 24.0**	**-0.6**
KEST	**Kesra**	**156.56**	**314**	PKPab	**PKPab**	**13 09 56.5**	**-1.9**
	comp=Z,5.3nm,0.9s,baz=0.0,slow=2.0,SNR=3.1						
PGAV	**Gavieira, Arco**	**158.56**	**354**	*e*PKPdf	**PKPdf**	**13 09 31.9**	**0.0**
POLO	**Lamas de Olo**	**159.09**	**353**	*e*PKPab	**PKPab**	**13 10 08.4**	**-0.7**
PVRL	**Vila Real**	**159.18**	**353**	*e*PKPab	**PKPab**	**13 10 09.0**	**-0.4**
MVO	**Moncorvo**	**159.20**	**351**	*e*PKPab	**PKPab**	**13 10 08.9**	**-0.6**
PVIS	**Viseu**	**159.76**	**353**	*e*PKPab	**PKPab**	**13 10 11.6**	**-0.3**
ESDC	**Sonseca Array**	**160.02**	**344**	PKPab	**PKPab**	**13 10 11.2**	**-1.9**
	comp=Z,2.9nm,0.9s,baz=4.4,slow=3.7,SNR=15						
ESDC	**Sonseca Array**	**160.02**	**344**	PKPdf	**PKPdf**	**13 09 33.4**	**-0.2**
ESDC				PKPab	**PKPab**	**13 10 12.6**	**-0.5**
MTE	**Manteigas**	**160.02**	**352**	*e*PKPab	**PKPab**	**13 10 12.5**	**-0.6**
PCBR	**Castelo Branco**	**160.57**	**352**	*e*PKPab	**PKPab**	**13 10 14.6**	**-0.7**
PBEJ	**Beja**	**162.40**	**351**	*e*PKPab	**PKPab**	**13 10 23.3**	**-0.1**
TORD	**Torodi Ar. Bea**	**165.68**	**241**	PKP	**PKPdf**	**13 09 37.2**	**-2.6**
	comp=Z,0.5nm,0.9s,baz=357,slow=2.9,SNR=2.6						
TORD				PKPab	**PKPab**	**13 10 37.7**	**-0.9**
	comp=Z,1.2nm,1.0s,baz=116,slow=3.4,SNR=2.1						

MAN 20 12:56:34.0, 13.45N×120.31E, h32km, mb3.8, ML2.5, MS2.0, 6C-1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.29**	**348**	⇑*e*P	Pn	12 56 43.3	+1.3
PGP	**Puerto Galera**	**0.63**	**86**	⇑*e*P	Pn	12 56 46.3	+0.1
PGP				*i* S		12 56 54.9	
TGY	**Tagaytay City**	**0.89**	**43**	⇑*e*P	Pb	12 56 50.9	+0.5
TGY				*i* S		12 57 03.9	
MACP	**Maragondon, Ca**	**0.90**	**26**	⇑*e*P	Pn	12 56 50.2	+0.1
MACP				*e*S		12 57 02.4	
SJMP	**San Jose**	**1.26**	**141**	⇑*e*P	Pb	12 56 56.5	+0.6
SJMP				*e*S		12 57 11.9	
PCPH	**Palayan**	**2.23**	**20**	⇓*e*P	Pn	12 57 08.7	+0.2
ENPP	**El Nido**	**2.39**	**201**	⇑*e*P	Pn	12 57 12.2	+0.7

*NEIC **20** 13:20:17.9±0.9, 17.5S±0.1×178.7OW±0.10, h539km±7km, mb4.2/68, Error ellipse: s-maj=15.6km s-min=13.7km az=175.0*
*IDC **20** 13:20:19.0±1.8, 17.35S×178.88W, h544km±18km, mb3.3/11, mbtmp4.1/12, Error ellipse: s-maj=35.9km s-min=16.7km az=146.0*

ISC 20 13:20:18.4±0.4, 17.52S±0.08×178.71W±0.08, h550km, n119, σ0.82/116, mb4.1/44, 6C-2D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.10**	**266**	P	**P**	**13 21 33.4**	**-0.7**
	7.1nm,0.6s,baz=38,slow=6.0,SNR=6.8						
NIUE	**Niue**	**8.49**	**102**	P	**P**	**13 22 18.6**	**-2.4**
FUNA	**Funafuti**	**9.17**	**347**	P	**P**	**13 22 27.0**	**-1.0**
RAR	**Rarotonga**	**18.24**	**105**	P	**P**	**13 23 58.7**	**+0.3**
TARA	**Tarawa**	**20.49**	**335**	P	**P**	**13 24 18.3**	**-0.8**
URZ	**Urewera**	**20.98**	**189**	P	**P**	**13 24 20.1**	**-3.0**
	4.3nm,0.9s,baz=301,slow=23,SNR=1.5						
URZ	**Urewera**	**20.98**	**189**	IAmb	IAmb	13 24 32.6	
	comp=Z,13nm,1.0s						
NNZ	**Nelson**	**24.57**	**194**	P	**P**	**13 24 54.6**	**-0.5**
ARMA	**Armidale**	**29.89**	**239**	P	**P**	**13 25 43.0**	**+1.0**
ARMA				IAmb	IAmb	13 26 26.5	
	comp=Z,7.5nm,1.1s						
CAN	**Canberra**	**33.71**	**232**	P	**P**	**13 26 15.3**	**+0.9**
COEN	**Coen**	**36.81**	**270**	P	**P**	**13 26 40.1**	**-0.3**
TOO	**Toolangi**	**37.19**	**230**	P	**P**	**13 26 43.4**	**+0.1**
STKA	**Stephens Creek**	**38.56**	**241**	P	**P**	**13 26 55.1**	**+0.7**
	comp=Z,3.0nm,0.5s,baz=84,slow=9.8,SNR=15						
	comp=Z,3.0nm,0.5s						
STKA	**Stephens Creek**	**38.56**	**241**	P	**P**	**13 26 54.5**	**+0.1**
BBOO	**Buckleboo**	**43.34**	**241**	P	**P**	**13 27 32.9**	**+0.5**
WR0	**Warramunga Arr**	**44.23**	**259**	P	**P**	**13 27 38.9**	**-0.5**
WR0				IAmb	IAmb	13 27 54.4	
	comp=Z,10nm,1.5s						
WB0	**Warramunga Arr**	**44.38**	**259**	P	**P**	**13 27 40.1**	**-0.6**
WB0				IAmb	IAmb	13 27 41.6	
	comp=Z,9.9nm,1.4s						
WRAB	**Tennant Creek**	**44.41**	**259**	P	**P**	**13 27 39.5**	**-1.4**
WRAB				IAmb	IAmb	13 28 21.7	
	comp=Z,8.1nm,1.2s						
WRA	**Warramunga Arr**	**44.42**	**259**	P	**P**	**13 27 40.2**	**-0.7**
	comp=Z,1.1nm,0.7s,baz=96,slow=7.7,SNR=7.5						
	comp=Z,1.1nm,0.7s						
WRA	**Warramunga Arr**	**44.42**	**259**	IAmb	IAmb	13 27 44.2	
	comp=Z,0.2nm,1.1s						
AS31	**Alice Springs**	**44.62**	**254**	P	**P**	**13 27 42.2**	**-0.2**
AS31				IAmb	IAmb	13 27 43.3	
	comp=Z,4.0nm,0.6s						
ASAR	**Alice Springs**	**44.62**	**254**	P	**P**	**13 27 42.0**	**-0.5**
FORT	**Forrest**	**49.91**	**244**	P	**P**	**13 28 21.9**	**-0.1**
PSA00	**Pilbara Seismi**	**57.73**	**255**	P	**P**	**13 29 17.2**	**-0.2**
PSA00				IAmb	IAmb	13 29 59.3	
	comp=Z,21nm,1.4s						
MBWA	**Marble Bar**	**57.89**	**256**	P	**P**	**13 29 18.5**	**+0.1**
MBWA				IAmb	IAmb	13 29 59.2	
	comp=Z,18nm,1.4s						
MORW	**Morawa**	**60.37**	**246**	P	**P**	**13 29 34.8**	**-0.1**
MORW				IAmb	IAmb	13 29 49.1	
	comp=Z,20nm,1.4s						
SBA	**Scott Base**	**60.78**	**183**	P	**P**	**13 29 38.3**	**+1.5**
GIRL	**Giralia**	**62.73**	**253**	P	**P**	**13 29 51.8**	**+1.4**
CASY	**Casey**	**66.36**	**205**	P	**P**	**13 30 13.1**	**+0.5**
CASY				IAmb	IAmb	13 30 14.5	
	comp=Z,4.8nm,0.9s						
MJAR	**Matsushiro Arr**	**67.43**	**323**	P	**P**	**13 30 19.3**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=169,slow=6.5,SNR=3.7						
	comp=Z,0.8nm,0.5s						
MAJO	**Matsushiro**	**67.43**	**323**	P	**P**	**13 30 19.6**	**0.0**
MAJO				IAmb	IAmb	13 30 19.8	
	comp=Z,8.2nm,1.2s						
MJB9	**Matsu-Tunnel**	**67.43**	**323**	P	**P**	**13 30 19.4**	**-0.2**
MJB9				IAmb	IAmb	13 30 23.3	
	comp=Z,12nm,1.3s						
JHS	**Saijyo**	**69.42**	**319**	P	**P**	**13 30 32.9**	**+1.2**
JHS				IAmb	IAmb	13 30 49.5	
	comp=Z,21nm,1.4s						
TPUB	**Ta-pu**	**71.81**	**302**	P	**P**	**13 30 45.5**	**-0.6**
QSPA	**South Pole Qui**	**72.53**	**180**	P	**P**	**13 30 50.3**	**+0.7**
PET	**Petropavlovsk**	**72.93**	**346**	P	**P**	**13 30 52.1**	**+0.3**
PET				IAmb	IAmb	13 30 52.5	
	comp=Z,14nm,1.4s						
PEA0B	**Petropavlovsk-**	**73.24**	**345**	P	**P**	**13 30 54.0**	**+0.5**
PEA0B				IAmb	IAmb	13 30 55.6	
	comp=Z,22nm,1.5s						
PETK	**Petropavlovsk-**	**73.24**	**345**	P	**P**	**13 30 53.8**	**+0.2**
	comp=Z,17nm,0.8s,baz=124,slow=5.8,SNR=5.7						
	comp=Z,1.7nm,0.8s						
SPIA	**Saint Paul Isl**	**74.75**	**5**	P	**P**	**13 31 02.6**	**+0.6**
OHAK	**Old Harbor**	**77.43**	**14**	P	**P**	**13 31 17.0**	**+0.3**
LCH	**Last Change Ra**	**79.16**	**45**	P	**P**	**13 31 27.6**	**+0.9**
GRAC	**Grapevine Rang**	**79.22**	**46**	P	**P**	**13 31 28.1**	**+1.2**
NVAR	**Mina Array Bea**	**79.35**	**44**	P	**P**	**13 31 29.0**	**+1.2**
	comp=Z,1.0nm,0.7s,baz=226,slow=9.3,SNR=12						
	comp=Z,1.0nm,0.7s						
O18K	**Koktuh Hills**	**79.44**	**12**	P	**P**	**13 31 27.8**	**+0.3**
O18K				IAmb	IAmb	13 31 28.6	
	comp=Z,7.7nm,0.9s						
KVN	**Kaiserville**	**79.81**	**44**	P	**P**	**13 31 31.5**	**+1.3**
N18K	**Kilae Creek**	**80.08**	**11**	P	**P**	**13 31 30.7**	**-0.1**
N18K				IAmb	IAmb	13 32 12.2	
	comp=Z,6.8nm,1.1s						
N19K	**Bonanza Creek**	**80.47**	**12**	P	**P**	**13 31 32.5**	**-0.4**
N19K				IAmb	IAmb	13 32 07.3	
	comp=Z,10nm,1.4s						
SVW2	**Sparrevohn**	**80.52**	**11**	P	**P**	**13 31 33.4**	**+0.3**
M19K	**Big River Lodg**	**81.49**	**11**	P	**P**	**13 31 38.0**	**-0.1**
I07A	**Izee**	**81.69**	**39**	P	**P**	**13 31 40.5**	**+0.8**
SUA	**Susitna One**	**81.83**	**13**	P	**P**	**13 31 40.2**	**+0.3**
SUA				IAmb	IAmb	13 32 06.1	
	comp=Z,17nm,1.4s						
U15A	**North Rim**	**82.48**	**48**	P	**P**	**13 31 45.7**	**+1.7**
GHO	**Glory Hole Cre**	**82.50**	**14**	P	**P**	**13 31 43.4**	**+0.1**
BELA	**Belgrano 2**	**82.58**	**173**	P	**P**	**13 31 43.8**	**+0.3**
BELA				IAmb	IAmb	13 32 26.6	
	comp=Z,5.0nm,0.8s						
K20K	**Telida**	**82.88**	**11**	P	**P**	**13 31 45.5**	**+0.4**
SCM	**Sheep Creek Mo**	**82.93**	**14**	P	**P**	**13 31 45.8**	**+0.4**
TNA	**Tin City**	**83.23**	**4**	P	**P**	**13 31 46.6**	**-0.1**
SEY	**Seymchan**	**83.34**	**347**	P	**P**	**13 31 47.6**	**+0.3**
	comp=Z,3.0nm,0.6s,baz=136,slow=7.9,SNR=12						
	comp=Z,3.0nm,0.6s						
VRDI	**Verde Repeater**	**83.39**	**16**	P	**P**	**13 31 48.2**	**+0.3**
VRDI				IAmb	IAmb	13 32 28.7	
	comp=Z,15nm,1.3s						
N25K	**Chitina, Valde**	**83.41**	**16**	P	**P**	**13 31 48.5**	**+0.6**
N25K				IAmb	IAmb	13 32 06.7	
	comp=Z,18nm,1.4s						
GRNC	**Granite Creek**	**83.45**	**17**	P	**P**	**13 31 48.9**	**+0.7**
GLB	**Gilahina Butte**	**83.48**	**16**	P	**P**	**13 31 48.5**	**+0.3**
GLB				IAmb	IAmb	13 32 18.0	
	comp=Z,17nm,1.5s						
J20K	**Nowinta River**	**83.62**	**11**	P	**P**	**13 31 49.5**	**+0.8**
TRF	**Thorofare Moun**	**83.70**	**12**	P	**P**	**13 31 48.9**	**-0.5**
TRF				IAmb	IAmb	13 31 49.7	
	comp=Z,6.8nm,0.8s						
RND	**Reindeer**	**83.96**	**13**	P	**P**	**13 31 50.7**	**+0.2**
RND				IAmb	IAmb	13 31 51.4	
	comp=Z,6.0nm,0.8s						
DHY	**Denali Highway**	**84.00**	**14**	P	**P**	**13 31 50.5**	**-0.3**
DHY				IAmb	IAmb	13 31 55.5	
	comp=Z,8.9nm,1.4s						
M27K	**Edge Creek, AK**	**84.75**	**16**	P	**P**	**13 31 55.6**	**+1.1**
M27K				IAmb	IAmb	13 32 17.4	
	comp=Z,7.9nm,1.4s						
RIDG	**Independent Ri**	**85.16**	**14**	P	**P**	**13 31 56.7**	**+0.4**
RIDG				IAmb	IAmb	13 31 56.9	
	comp=Z,4.1nm,1.0s						
HDA	**Harding Lake**	**85.25**	**13**	P	**P**	**13 31 57.0**	**+0.3**
HDA				IAmb	IAmb	13 32 16.8	
	comp=Z,4.5nm,1.3s						
DOT	**Dot Lake**	**85.27**	**15**	P	**P**	**13 31 57.1**	**+0.2**
DOT				IAmb	IAmb	13 31 58.1	
	comp=Z,2.5nm,0.7s						
CCB	**Clear Creek Bu**	**85.27**	**13**	P	**P**	**13 31 56.1**	**-0.7**
IMAR	**Indian Mountai**	**85.35**	**10**	P	**P**	**13 31 56.9**	**-0.2**
BCAR	**Beaver Creek A**	**85.36**	**16**	P	**P**	**13 31 56.8**	**-0.5**
SCRK	**Sand Creek**	**85.56**	**15**	P	**P**	**13 31 59.1**	**+0.8**
SCRK				IAmb	IAmb	13 32 00.3	
	comp=Z,5.0nm,1.3s						
ILAR	**Eielson Array**	**85.58**	**13**	P	**P**	**13 31 57.8**	**-0.5**
	comp=Z,1.0nm,0.7s,baz=229,slow=5.7,SNR=8.9						
	comp=Z,1.0nm,0.7s						
ILAR	**Eielson Array**	**85.58**	**13**	P	**P**	**13 31 58.6**	**+0.3**
J25K	**Salcha River,**	**85.78**	**14**	P	**P**	**13 31 59.7**	**+0.4**
J25K				IAmb	IAmb	13 32 00.4	
	comp=Z,6.2nm,1.4s						
TXAR	**Lajitas Array**	**86.03**	**58**	P	**P**	**13 32 03.5**	**+2.1**
	comp=Z,1.0nm,0.8s,baz=216,slow=6.3,SNR=14						
	comp=Z,1.0nm,0.8s						
TXAR	**Lajitas Array**	**86.03**	**58**	P	**P**	**13 32 02.4**	**+1.0**
J26L	**Joseph Creek**	**86.10**	**14**	P	**P**	**13 32 01.7**	**+0.8**
M30M	**Minto, Yukon**	**86.36**	**18**	P	**P**	**13 32 02.5**	**+0.5**
M30M				IAmb	IAmb	13 32 03.4	
	comp=Z,3.6nm,0.9s						
I26K	**Coal Creek Min**	**86.88**	**14**	P	**P**	**13 32 05.2**	**+0.8**
I26K				IAmb	IAmb	13 32 19.0	
	comp=Z,6.5nm,1.4s						
BW06	**Boulder Array**	**87.27**	**44**	P	**P**	**13 32 07.4**	**+0.3**
PD31	**Pinedale Array**	**87.27**	**44**	P	**P**	**13 32 07.5**	**+0.4**
PDAR	**Pinedale Array**	**87.27**	**44**	P	**P**	**13 32 07.6**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=211,slow=2.9,SNR=7.4						
	comp=Z,0.6nm,0.5s						
BMAR	**Burnt Mountain**	**88.35**	**13**	P	**P**	**13 32 11.8**	**+0.5**
CMAR	**Chiang Mai Arr**	**88.48**	**290**	P	**P**	**13 32 13.6**	**+0.6**
	comp=Z,1.4nm,0.9s,baz=120,slow=3.6,SNR=7.1						
	comp=Z,1.4nm,0.9s						
YAK	**Yakutsk**	**89.11**	**338**	P	**P**	**13 32 14.8**	**0.0**
TROLL	**Troll, Antarti**	**90.69**	**180**	P	**P**	**13 32 22.3**	**-0.1**
SNAA	**Sanae**	**90.99**	**179**	P	**P**	**13 32 23.0**	**-0.7**
VNA3	**Neumayer Olymp**	**91.14**	**176**	P	**P**	**13 32 24.6**	**+0.2**
YKA	**Yellowknife Ar**	**94.11**	**25**	P	**P**	**13 32 37.4**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=236,slow=4.0,SNR=4.5						
	comp=Z,0.9nm,0.7s						
MKAR	**Makanchi Array**	**108.66**	**314**	PKiKP	**PKiKP**	**13 37 45.0**	**0.0**
	comp=Z,0.4nm,0.5s,baz=232,slow=1.6,SNR=4.6						
BNN	**Bunyan**	**143.18**	**312**		**PKPdf**	**13 38 50.0**	**-0.5**
BURAR	**Bucovina Array**	**144.14**	**332**	⇓P	**PKiKP**	**13 38 53.5**	**-2.2**
BIZ	**Bicaz**	**144.23**	**331**	⇑P	**PKiKP**	**13 38 53.4**	**-2.3**
TESR	**Tescani**	**144.28**	**330**	⇑P	**PKPab**	**13 38 53.0**	**+0.8**
BRTR	**Keskin Array B**	**144.31**	**315**	PKP	**PKPab**	**13 38 53.2**	**+0.5**
	comp=Z,1.8nm,0.6s,baz=132,slow=3.7,SNR=9.8						
TPGR	**Topolog**	**144.52**	**326**	⇓P	**PKiKP**	**13 38 54.5**	**-1.9**
CLL	**Collm**	**145.03**	**347**		PKPbc	13 38 53.6	-0.3
CLL	**Collm**	**145.03**	**347**	*i* PKPbc	**PKPab**	**13 38 54.7**	**-0.1**
	comp=Z,8.0nm,0.7s						
DRGR		**145.87**	**333**	⇑P	**PKPab**	**13 38 57.8**	**-0.6**
ARR	**Arges**	**146.08**	**330**	⇑P	**PKiKP**	**13 38 59.3**	**-0.4**
SIRR	**Siria**	**146.73**	**334**	⇑P	**PKiKP**	**13 39 00.3**	**-0.7**

MINR Sg **Sg** **13 23 00.8 +3.4**
KEM Kemerovo 4.58 331 Pg **Pg** **13 22 04.3 -2.5**
KEM Sg **Sg** **13 23 04.1 -2.0**
KNGR Kungurtug, Tuv 4.81 97 *e*PN **Pn** **13 21 52.8 +0.6**
KNGR Kungurtug, Tuv 4.81 97 Pn **Pn** **13 21 53.7 +1.5**
KNGR Pg Pg 13 22 07.1 -4.3
KNGR Sg **Sg** **13 23 11.8 -1.9**
KHAR Kharino, NSO, 5.03 312 Sg **Sg** **13 23 22.2 +1.8**
ZSN Zaisan 5.19 222 *e*P **Pn** **13 21 58.1 +0.8**
40nm,0.7s
ZSN *e*S **Sb** **13 23 20.0 +7.1**
290nm,0.8s
ASR1 Anjero-Sudjens 5.24 335 Pg **Pg** **13 22 15.9 -3.4**
ASR1 Sg **Sg** **13 23 28.8 +1.8**
GZL Zheleznogorsk 5.29 22 Pg **Pg** **13 22 17.3 -3.2**
GZL Sg **Sg** **13 23 32.0 +3.0**
NVSII Novosibirsk 5.33 313 Pn **Pn** **13 22 01.1 +2.0**
NVSII Pg **Pg** **13 22 18.9 -2.2**
NVSII Sg **Sg** **13 23 28.5 -1.5**
NVS Novosibirsk 5.33 313 Pn **Pn** **13 22 01.1 +2.0**
NVS Pg **Pg** **13 22 20.8 -0.3**
NVS Sg **Sg** **13 23 28.7 -1.4**
GZLN Zheleznogorsk 5.45 23 Pn **Pn** **13 22 03.0 +2.2**
GZLN Pg **Pg** **13 22 19.9 -3.6**
GZLN Sg **Sg** **13 23 37.3 +3.3**
SEM Semipalatinsk 6.25 265 *e*P **Pn** **13 22 16.2 +4.2**
215nm,0.5s
SEM *e*S Sb 13 23 52.9 +9.4
246nm,1.6s
MK31 Makanchi Array 6.85 231 Pn **Pn** **13 22 21.0 +0.9**
MK31 Makanchi Array 6.85 231 *c i*PN **Pn** **13 22 20.7 +0.6**
MK31 Makanchi Array 6.85 231 ⇓Pn **Pn** **13 22 20.5 +0.3**
55nm,0.7s,baz=61,slow=11,SNR=289
MK31 ⇓Pg **Pb** **13 22 42.0 +3.4**
41nm,0.7s,baz=53,slow=15,SNR=7.6
MK31 ⇓Lg Lg 13 24 12.1
32nm,0.5s,baz=55,slow=28,SNR=4.9
MKAR Makanchi Array 6.85 231 Pn **Pn** **13 22 20.8 +0.6**
40nm,0.6s,baz=57,slow=12,SNR=87
MKAR Pg Pb 13 22 44.5 +5.9
6.3nm,0.3s,baz=42,slow=14,SNR=5.3
MKAR Sn **Sn** **13 23 39.9 +1.5**
5.0nm,0.3s,baz=48,slow=24,SNR=5.1
MKAR Lg Lg 13 24 11.7
9.1nm,0.3s,baz=44,slow=32,SNR=6.5
MKAR LR LR 13 25 06.0
comp=Z,165nm,18.3s,baz=56,slow=39
MKAR Makanchi Array 6.85 231 Pn **Pn** **13 22 21.0 +0.8**
MOY Mondy 6.86 84 *e*PN Pn 13 22 27.8 +7.5
MOY *e*S **Sn** **13 23 40.9 +2.2**
MAKZ Makanchi 7.00 232 **Pn** **13 22 22.8 +0.7**
MAKZ Makanchi 7.00 232 PN **Pn** **13 22 22.8 +0.7**
MAKZ Makanchi 7.00 232 ⇓Pn **Pn** **13 22 22.6 +0.5**
29nm,0.8s
MAKZ ⇓Lg Lg 13 24 18.3
119nm,0.9s
KURK Kurchatov 7.21 269 Pn **Pn** **13 22 25.5 +0.5**
KURK Kurchatov 7.21 269 *c i*P **Pn** **13 22 25.8 +0.9**
KURK pmax pmax
comp=Z,19nm,1.3s
KURK MLR MLR
comp=Z,99nm,10.0s
KURK Kurchatov 7.21 269 ⇑Pn **Pn** **13 22 25.7 +0.8**
comp=Z,19nm,0.6s
KURK ⇑Sn **Sn** **13 23 49.5 +2.5**
comp=Z,45nm,0.7s
KURK ⇑Lg Lg 13 24 26.0
comp=Z,183nm,0.9s
KURBB Kurchatov Arra 7.28 268 Pn **Pn** **13 22 26.9 +1.0**
comp=Z,0.7nm,0.3s,baz=83,slow=15,SNR=22
KURBB Pg Pb 13 22 41.1 -4.7
comp=Z,2.5nm,0.3s,baz=82,slow=15,SNR=15
KURBB Sn **Sn** **13 23 49.7 +0.9**
comp=Z,1.8nm,0.3s,baz=82,slow=25,SNR=7.3
KURBB Lg Lg 13 24 25.5
comp=Z,1.2nm,0.3s,baz=90,slow=32,SNR=7.3
comp=Z,7.7nm,0.7s
KURBB Kurchatov Arra 7.28 268 P **Pn** **13 22 26.7 +0.8**
KURBB 13 23 48.6
KURBB pmax pmax
comp=Z,6.0nm,0.4s
KURBB smax smax
comp=N,127nm,1.0s
KURBB Kurchatov Arra 7.28 268 ⇓Pn **Pn** **13 22 26.8 +0.8**
comp=N,47nm,0.6s
KURBB ⇑Sn **Sn** **13 23 48.6 -0.2**
comp=N,89nm,0.6s
KURBB ⇑Lg Lg 13 24 30.2
comp=N,216nm,0.7s
SONM Songino Array 11.22 102 Pn **Pn** **13 23 23.0 +3.0**
comp=N,0.2nm,0.3s,baz=290,slow=9.0,SNR=3.6
SONM Pg 13 23 59.5
comp=N,0.3nm,0.3s,baz=294,slow=18,SNR=5.5
SONM Sn **Sn** **13 25 25.1 -0.6**
comp=N,0.5nm,0.3s,baz=302,slow=22,SNR=1.4
SONM Lg Lg 13 26 24.7
comp=N,0.3nm,0.3s,baz=290,slow=32,SNR=8.6
ULN Ulaanbaatar 11.61 101 *e*P **Pn** **13 23 25.6 +0.2**
ULN MLR MLR
comp=Z,92nm,10.0s
BRVK Borovoye 12.20 285 Pn **Pn** **13 23 32.6 -0.6**
BRVK Borovoye 12.20 285 *c i*P **Pn** **13 23 32.6 -0.6**
BRVK pmax pmax
comp=Z,6.0nm,0.7s
BRVK MLR MLR
comp=Z,68nm,10.0s
BRVK Borovoye 12.20 285 ⇑Pn **Pn** **13 23 31.9 -1.4**
comp=Z,7.9nm,0.8s
BRVK ⇑Sn **Sn** **13 25 52.4 +3.0**
comp=Z,6.1nm,0.6s
TARG Taragay, Kyrgy 12.80 226 Pn **Pn** **13 23 41.5 -0.4**
TARG Taragay, Kyrgy 12.80 226 P **Pn** **13 23 41.5 -0.4**
BOOM Boomskoye usch 13.09 232 Pn **Pn** **13 23 45.8 +0.1**
BOOM Boomskoye usch 13.09 232 P **Pn** **13 23 45.8 +0.1**
AAK Ala-Archa 13.72 236 Pn **Pn** **13 23 58.6 +4.4**
comp=Z,0.4nm,0.3s,baz=221,slow=6.0,SNR=1.3
AAK Sn **Sn** **13 26 22.3 -4.7**
comp=Z,0.5nm,0.3s,baz=275,slow=14,SNR=1.4
AAK Lg Lg 13 27 45.9
comp=Z,0.6nm,0.3s,baz=192,slow=21,SNR=1.5
AAK Ala-Archa 13.72 236 *e*P **Pn** **13 23 55.1 +0.9**
AAK MLR MLR
comp=Z,62nm,11.0s
BOD Bodaibo 15.26 56 *e*P **P** **13 24 17.4 -2.4**
BOD pmax pmax
comp=Z,8.0nm,1.1s
KK31 Karatay Array 15.59 245 P **P** **13 24 23.2 -0.4**
KK31 IAmb IAmb 13 24 27.4
comp=Z,22nm,0.9s
KK31 Karatay Array 15.59 245 P **P** **13 24 23.3 -0.4**
KK31 pmax pmax
comp=Z,22nm,0.9s
KKAR Karatay Array 15.59 245 Pn **Pn** **13 24 19.6 +0.3**
KKAR Karatay Array 15.59 245 Pn **Pn** **13 24 18.3 -1.1**
KKAR IAmb IAmb 13 24 27.4
comp=Z,22nm,0.9s
KKAR Karatay Array 15.59 245 P **Pn** **13 24 19.6 +0.3**
GOMU GeErMu 15.60 165 P **Pn** **13 24 21.3 +1.5**
GOMU pP P 13 24 25.3 +1.2
GOMU sP pP 13 24 28.6 +2.2
GOMU pmax pmax
comp=Z,2.0nm,0.9s
GOMU pmax pmax
comp=Z,45nm,5.9s
GOMU LR LR
comp=Z,77nm,9.1s
GOMU LR LR
comp=Z,94nm,9.0s
GOMU LR LR
comp=Z,51nm,8.4s
GAR Garm 18.54 236 **P** **13 24 56.0 -0.4**
GAR IAmb IAmb 13 25 02.9
comp=Z,33nm,1.2s
ARU Arti 19.08 298 P **Pn** **13 25 02.3 -0.5**
baz=55,slow=9.1,SNR=3.6
ARU Sn **Sn** **13 28 30.0 -6.5**
baz=272,slow=22,SNR=1.8
comp=Z,1.7nm,0.3s
ARU Arti 19.08 298 P **P** **13 25 00.3 -1.7**
ARU Arti 19.08 298 *c i*P **Pn** **13 25 02.4 -0.4**
ARU S **S** **13 28 42.4 +3.9**
ARU pmax pmax
comp=Z,4.0nm,0.9s
ABKAR Akbulak array 19.25 275 **P** **13 25 02.2 -1.8**
ABKAR Akbulak array 19.25 275 P **P** **13 25 01.8 -2.2**
ABKAR IAmb IAmb 13 25 23.8
comp=Z,2.6nm,0.8s
CHGR Chuyangaron 19.40 237 P **Pn** **13 25 06.6 -0.3**
CHGR IAmb IAmb 13 25 10.0
comp=Z,30nm,0.9s
CHGR Chuyangaron 19.40 237 P **Pn** **13 25 06.6 -0.3**
CHGR pmax pmax
comp=Z,30nm,0.9s
AKTO Aktyubinsk 20.11 280 P **P** **13 25 13.1 -0.3**
comp=Z,4.7nm,0.6s,baz=83,slow=11,SNR=24
comp=Z,4.7nm,0.6s
AKTO Aktyubinsk 20.11 280 ⇑Pn Pn 13 25 13.9 -1.3
comp=Z,5.2nm,0.7s
ZEA Zeya 22.59 69 *e*P **P** **13 25 41.5 +1.5**
YAK Yakutsk 23.83 48 ⇓*i*P **P** **13 25 51.9 -0.6**
YAK pmax pmax
comp=Z,6.0nm,0.6s
KIRV Kirov 24.04 303 *c i*P **P** **13 25 55.2 +0.6**
SHL Shillong 25.85 176 P **P** **13 26 09.1 -2.4**
SHL Shillong 25.85 176 P **P** **13 26 09.1 -2.4**
SHL pmax pmax
comp=Z,31nm,1.4s
BELG Belogornoye 25.90 289 *i*P **P** **13 26 11.3 -0.2**
BELG pmax pmax
comp=Z,2.0nm,0.9s
GEYT Alibeck 26.14 251 P **P** **13 26 12.8 -1.1**
comp=Z,1.4nm,0.5s,baz=45,slow=57,SNR=1.5
comp=Z,1.4nm,0.5s
GEYT Alibeck 26.14 251 IAmb IAmb 13 26 18.3
comp=Z,4.9nm,1.1s
HRA Herat 26.28 240 P **P** **13 26 13.8 -1.6**
HRA IAmb IAmb 13 26 21.8
comp=Z,5.1nm,0.9s
KLR Kul'dur 26.49 78 P **P** **13 26 16.4 -0.5**
comp=Z,0.3nm,0.3s,baz=288,slow=13,SNR=2.3
comp=Z,0.3nm,0.3s
KLR Kul'dur 26.49 78 *ce*P **P** **13 26 18.2 +1.3**
KLR pmax pmax
comp=Z,3.0nm,1.6s
TIXI Tiksi 26.63 26 P **P** **13 26 19.2 +1.3**
comp=Z,0.5nm,0.5s,baz=90,slow=23,SNR=1.5
comp=Z,0.5nm,0.5s
TIXI Tiksi 26.63 26 P **P** **13 26 13.9 -4.1**
TIXI Tiksi 26.63 26 *e*P **P** **13 26 17.4 -0.5**
TIXI pmax pmax
comp=Z,2.0nm,1.0s
KSRS Korea Array 30.09 103 P **P** **13 26 47.9 -1.2**
comp=Z,1.1nm,1.0s,baz=309,slow=8.0,SNR=2.1
comp=Z,1.1nm,1.0s
NKL Nikolayevsk 30.53 67 *e*P **P** **13 26 53.4 +0.6**
NKL *e*S **S** **13 31 57.1 +2.7**
NKL pmax pmax
comp=E,4.0nm,0.8s
NKL pmax pmax
comp=N,209nm,0.6s
NKL pmax pmax
comp=Z,12nm,1.3s
NKL smax smax
comp=E,3.0nm,0.9s
NKL smax smax
comp=N,454nm,1.2s
NKL MLR MLR
comp=E,68nm,15.0s
NKL MLR MLR
comp=N,4μm,13.0s
NKL MLR MLR
comp=Z,97nm,13.0s
OBN Obninsk 31.52 298 ⇑*e*P **P** **13 27 01.9 +0.4**
OBN pmax pmax
comp=Z,4.0nm,0.7s
KIV Kislovodsk 32.23 276 *e*P **P** **13 27 08.5 +0.4**
KIV pmax pmax
comp=Z,5.0nm,0.9s
CMAR Chiang Mai Arr 33.64 165 P **P** **13 27 18.9 -1.5**
comp=Z,0.4nm,0.6s,baz=326,slow=11,SNR=1.8
comp=Z,0.4nm,0.6s
FINES FINESS Array B 35.31 312 P **P** **13 27 35.7 +1.2**
comp=Z,1.0nm,0.7s,baz=61,slow=7.4,SNR=1.9
comp=Z,1.0nm,0.7s
AKASG Malin Array Be 37.24 293 P **P** **13 27 50.7 -0.4**
comp=Z,0.3nm,0.3s,baz=60,slow=8.8,SNR=2.6
comp=Z,0.3nm,0.3s
BRTR Keskin Array B 40.20 276 P **P** **13 28 17.1 +0.9**
comp=Z,2.1nm,0.8s,baz=71,slow=4.9,SNR=11
comp=Z,2.1nm,0.8s
BRTR Keskin Array B 40.20 276 *ce*P **P** **13 28 17.8 +1.6**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
HFS Hagfors 41.48 313 P **P** **13 28 27.8 +1.4**
comp=Z,1.6nm,0.6s,baz=62,slow=11,SNR=2.5
comp=Z,1.6nm,0.6s
CLL Collm 45.95 302 *e*P **P** **13 29 03.0 +0.6**
ITM Ithomi 49.01 281 P **P** **13 29 25.4 -1.1**
IMAR Indian Mountai 53.27 27 P **P** **13 29 57.6 -0.5**
BMAR Burnt Mountain 54.61 23 P **P** **13 30 04.5 -3.4**
ATD Arta Tunnel 55.10 241 LR LR 13 58 55.5
comp=Z,174nm,18.8s,baz=144,slow=42
BPAW Bear Paw Mtn. 55.46 28 P **P** **13 30 12.1 -1.9**
BPAW IAmb IAmb 13 30 41.7
comp=Z,8.5nm,1.5s
ILAR Eielson Array 56.10 26 P **P** **13 30 17.9 -0.7**
comp=Z,0.5nm,0.8s,baz=321,slow=4.9,SNR=6.2
comp=Z,0.5nm,0.8s
SFJD Kangerlussuaq 58.22 343 LR LR 14 01 50.8
comp=Z,197nm,18.4s,baz=316,slow=42
ESDC Sonseca Array 62.46 300 P **P** **13 31 03.5 +0.5**
comp=Z,1.4nm,0.8s,baz=48,slow=6.4,SNR=12
comp=Z,1.4nm,0.8s
ESDC Sonseca Array 62.46 300 IAmb IAmb 13 31 04.7
comp=Z,1.8nm,1.1s
YKA Yellowknife Ar 64.78 12 P **P** **13 31 17.9 +0.1**
comp=Z,1.0nm,0.7s,baz=348,slow=7.3,SNR=3.9
comp=Z,1.0nm,0.7s
YKA Yellowknife Ar 64.78 12 *ce*P **P** **13 31 17.7 -0.1**
YKA pmax pmax
comp=Z,1.0nm,0.8s

*JMA **20** 13:23:46.9±0.1,34°N±2°×13°8E±°, h318km, MV2.6/20, FAR S OFF TOKAI DISTRICT*
*IDC **20** 13:23:50.2±1.1,33.67N×138.39E, h297km±18km, mb3.1/3, mbtmp3.5/5, Error ellipse: s-maj=70.2km s-min=17.1km az=69.0*
ISC 20 13:23:50.0±1.0,**33.62N**±0.08×**138.30E**±0.07,**h296**km±8km, **n19**,σ0**61**/25,**mb3.2**/3,**Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TTO1	**TONANKAI O.B.S**	**1.27**	**270**	P	**Pn**		**13 24 30.6**	**-0.3**
JHJ	**Hachijo jima 2**	**1.34**	**112**	P	**Pn**		**13 24 31.1**	**-0.7**
	58nm,0.5s,baz=284,slow=19,SNR=5.1							
JHJ				S	**S**		**13 25 05.6**	**+0.7**
	27nm,0.3s,baz=97,slow=24,SNR=1.7							
JHJ2	**Mitsune**	**1.37**	**112**	P	**Pn**		**13 24 31.1**	**-0.8**
JIE	**Ise**	**1.53**	**300**	P	**Pn**		**13 24 32.6**	**-0.2**
JOD2	**Odawara 2**	**1.76**	**21**	P	**Pn**		**13 24 34.1**	**-0.3**
JOD2				S	**S**		**13 25 10.7**	**+0.8**
JNY	**Yasuok**	**1.77**	**348**	*e*P	**Pn**		**13 24 35.0**	**+0.4**
JYN	**Shimob**	**1.88**	**6**	*e*P	**Pn**		**13 24 36.0**	**+0.6**
JTNC	**Tanabenakahech**	**2.25**	**276**	P	**Pn**		**13 24 37.7**	**-0.8**
JRY	**Ryogami san**	**2.44**	**11**	P	**Pn**		**13 24 39.2**	**-0.8**
JRY				S	**S**		**13 25 20.0**	**+0.1**
BSO1	**Boso 1**	**2.44**	**64**	P	**Pn**		**13 24 38.8**	**-0.7**
BSO1				S	**S**		**13 25 19.1**	**+0.1**
MJAR	**Matsushiro Arr**	**2.91**	**359**	P	**Pn**		**13 24 43.5**	**-1.0**
	0.8nm,0.5s,baz=163,slow=8.3,SNR=5.2							
MJAR				S	**S**		**13 25 27.8**	**-0.3**
	0.9nm,0.5s,baz=236,slow=46,SNR=1.1							
JWT	**Wachi**	**2.91**	**305**	P	**Pn**		**13 24 43.9**	**-0.6**
JWT				S	**S**		**13 25 27.8**	**-0.3**
MAT	**Matsushiro**	**2.91**	**358**	P	**Pn**		**13 24 43.9**	**-0.6**
MAT				S	**S**		**13 25 28.1**	**0.0**
JAG	**Ashikaga**	**2.95**	**18**	P	**Pn**		**13 24 44.0**	**-0.9**
JCJ	**Chichijima**	**7.32**	**152**	P	Pn		13 25 27.7	-7.6
	9.7nm,0.4s,baz=24,slow=23,SNR=18							
JCJ				S	S		13 26 48.6	-12
	11nm,0.3s,baz=282,slow=22,SNR=1.9							
KLR	**Kul'dur**	**16.34**	**345**	P	**P**		**13 27 22.1**	**+0.4**
	0.7nm,0.4s,baz=154,slow=8.3,SNR=5.7							
MKAR	**Makanchi Array**	**43.87**	**305**	P	**P**		**13 31 27.9**	**+0.2**
	0.6nm,0.4s,baz=83,slow=9.3,SNR=5.9							
	0.6nm,0.4s							
FINES	**FINESS Array B**	**70.63**	**332**	P	**P**		**13 34 33.8**	**+0.5**
	0.5nm,0.4s,baz=38,slow=7.2,SNR=7.4							
	0.5nm,0.4s							
AKASG	**Malin Array Be**	**75.41**	**322**	P	**P**		**13 35 01.1**	**-0.2**
	0.1nm,0.3s,baz=52,slow=5.9,SNR=2.1							
	0.1nm,0.3s							

*IDC **20** 13:41:49.6±2.1,15°82S×167°62E,h35km±15km,mb4.5/22, mbtmp4.7/23,ML5.2/1,MS3.9/43,Error ellipse: s-maj=16.2km s-min=13.1km az=84.0*
*MOS **20** 13:41:49.5±0.9,15°89S×167°50E,h46km,mb5.3/36,Error ellipse: s-maj=9.1km s-min=7.9km az=114.2*
*GCMT **20** 13:41:50.8±0.3,15°95S±0°02×167°28E±0°02,h41km±1km, MW5.0/62,Moment Tensor Solution. s52,c58; s62,c80; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr3.26±.19; Mθθ-0.13±.15; Mϕϕ-3.13±.13; Mrθ-0.71±.13; Mϕθ1.64±.08; Mϕr0.46±.12; Best double couple: Mo3.66400×10¹⁶ NP1:ϕs166.00000°,δ40.00000°,λ105.00000°. NP2: ϕs327.00000°,δ51.00000°,λ78.00000°. Principal axes: T 3.4060, Plg79.0000°, Azm187.0000°; N 0.5190, Plg9.0000°, Azm335.0000°; P -3.9220, Plg6.0000°, Azm66.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BJI **20** 13:41:51.2±0.0,15°48S×167°58E,h50km,mb5.0/53, mB4.9/26,Ms4.6/10,Ms7 4.3/11*
*NEIC **20** 13:41:52.8±2.1,15°96S±0°07×167°55E±0°08,h61km±4km, mb5.0/104,Error ellipse: s-maj=11.6km s-min=10.4km az=74.0*
ISC 20 13:41:51.1±0.3,**15°95S**±0°05×**167°56E**±0°06,**h50**km±2km, **h50km:pP-P,n359,**σ1**913**/357,**mb5.0**/114,**MS4.0**/46, **27C-5D,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**5.52**	**175**	Pn	**Pn**		**13 43 09.0**	**-1.8**
KOUNC	**Koumac, New Ca**	**5.53**	**214**	Pn	**Pn**		**13 43 10.0**	**-1.0**
PINNC	**Pines Island,**	**6.63**	**181**	Pn	**Pn**		**13 43 25.2**	**-0.8**
HNR	**Honiara**	**9.85**	**310**	Pn	**Pn**		**13 44 10.2**	**0.0**
	20nm,0.3s,baz=148,slow=7.0,SNR=5.3							
HNR				Sn	**Sn**		**13 45 59.5**	**+0.1**
	6.4nm,0.3s,baz=20,slow=20,SNR=1.1							
HNR				LR	LR		13 47 36.4	
	comp=Z,799nm,21.8s,baz=179,slow=35							
	50nm,0.4s							
HNR	**Honiara**	**9.85**	**310**	Pn	**Pn**		**13 44 09.6**	**-0.6**
MSVF	**Nonsavu**	**10.20**	**102**	Pn	Pn		13 44 20.8	+5.8
	1.3nm,0.3s,baz=267,slow=9.5,SNR=21							
MSVF				LR	LR		13 47 30.1	
	comp=Z,2μm,18.4s,baz=295,slow=34							
MSVF	**Nonsavu**	**10.20**	**102**	Pn	Pn		13 44 21.0	+6.0
MSVF	**Nonsavu**	**10.20**	**102**	*i*P	Pn		13 44 20.4	+5.3
FUNA	**Funafuti**	**13.55**	**58**	Pn	**Pn**		**13 45 02.0**	**+1.3**
EIDS	**Eidsvold**	**18.03**	**236**	P	**Pn**		**13 46 00.5**	**+2.4**
	baz=18,SNR=7.1							
EIDS	**Eidsvold**	**18.03**	**236**	P	**Pn**		**13 45 59.5**	**+1.4**
AFI	**Afiamalu**	**20.07**	**87**	P	**P**		**13 46 20.3**	**-0.4**
	57nm,1.1s,baz=318,slow=23,SNR=3.7							
AFI				LR	LR		13 52 16.3	
	comp=Z,328nm,19.9s,baz=266,slow=31							
	57nm,1.1s							
AFI	**Afiamalu**	**20.07**	**87**	P	**P**		**13 46 21.2**	**+0.6**
AFI				IAmb	IAmb		13 46 29.7	
	comp=Z,81nm,1.2s							
AFI	**Afiamalu**	**20.07**	**87**	P	**P**		**13 46 21.2**	**+0.6**
AFI				pmax	pmax			
	comp=Z,81nm,1.2s							
RMQ	**Roma**	**20.40**	**236**	P	Pn		13 46 26.7	+0.2
	baz=20,SNR=9.6							
CTA	**Charters Tower**	**20.67**	**255**	P	**P**		**13 46 27.8**	**+0.8**
	comp=Z,15nm,0.8s,baz=82,slow=12,SNR=20							
CTA				LR	LR		13 53 12.7	
	comp=Z,405nm,21.0s,baz=84,slow=33							
	comp=Z,15nm,0.8s							
CTAO	**Charters Tower**	**20.67**	**255**	P	**P**		**13 46 26.5**	**-0.5**
CTAO	**Charters Tower**	**20.67**	**255**	P	**P**		**13 46 26.5**	**-0.5**
CTAO				pmax	pmax			
	comp=Z,30nm,1.0s							
PMG	**Port Moresby**	**20.93**	**286**	P	**P**		**13 46 30.1**	**+0.4**
	comp=Z,8.6nm,0.8s,baz=171,slow=4.1,SNR=4.2							
PMG				LR	LR		13 53 54.2	
	comp=Z,520nm,19.2s,baz=101,slow=35							
	comp=Z,8.6nm,0.8s							
PMG	**Port Moresby**	**20.93**	**286**	⇑*e*P	Pn		13 46 31.8	-1.0
PMG				pmax	pmax			
	comp=Z,22nm,1.0s							
MTSU	**Mount Surprise**	**22.32**	**261**	P	**P**		**13 46 46.4**	**+1.6**
	baz=22,SNR=6.7							
HIZ	**Hauiti**	**23.38**	**165**	P	**P**		**13 46 55.6**	**+0.2**
HIZ				IAmb	IAmb		13 47 15.5	
	comp=Z,119nm,1.4s							
COEN	**Coen**	**23.64**	**272**	P	**P**		**13 46 57.7**	**-0.4**
COEN				IAmb	IAmb		13 47 11.1	
	comp=Z,50nm,1.5s							
URZ	**Urewera**	**23.77**	**161**	P	**P**		**13 47 00.8**	**+1.8**
	comp=Z,15nm,0.9s,baz=121,slow=24,SNR=9.4							
URZ				LR	LR		13 55 22.3	
	comp=Z,619nm,20.1s,baz=31,slow=34							
	comp=Z,15nm,0.9s							
URZ	**Urewera**	**23.77**	**161**	P	**P**		**13 46 59.0**	**0.0**
QLP	**Quilpie**	**24.13**	**240**	P	**P**		**13 47 03.6**	**+1.0**
	baz=24,SNR=9.1							
PATS	**Pohnpei**	**24.42**	**337**	P	**P**		**13 47 05.2**	**+0.1**
BKZ	**Black Stump Fm**	**24.42**	**163**	P	**P**		**13 47 05.4**	**+0.3**
BKZ				IAmb	IAmb		13 47 09.6	
	comp=Z,23nm,0.7s							
CNB	**Canberra Magne**	**25.24**	**217**	P	**P**		**13 47 14.4**	**+1.8**
	baz=25,SNR=14							
CMSA	**Cobar Meteorol**	**25.25**	**228**	P	**P**		**13 47 14.2**	**+1.5**
	baz=25,SNR=20							
CAN	**Canberra**	**25.45**	**217**	P	**P**		**13 47 14.4**	**-0.1**
CAN				IAmb	IAmb		13 47 37.8	
	comp=Z,41nm,1.4s							
CAN	**Canberra**	**25.45**	**217**	P	**P**		**13 47 14.4**	**-0.1**
CAN				pmax	pmax			
	comp=Z,41nm,1.4s							
NNZ	**Nelson**	**25.68**	**170**	P	**P**		**13 47 16.9**	**+0.5**
NNZ				IAmb	IAmb		13 47 35.2	
	comp=Z,49nm,1.2s							
TUWZ	**Tuamarina**	**25.99**	**169**	P	**P**		**13 47 19.9**	**+0.7**
QIS	**Mount Isa**	**26.92**	**256**	P	**P**		**13 47 28.7**	**+0.8**
	baz=27,SNR=3.5							
RPZ	**Rata Peaks**	**27.84**	**175**	P	**P**		**13 47 37.1**	**+1.3**
	comp=Z,12nm,0.7s,baz=326,slow=2.2,SNR=5.7							
RPZ				LR	LR		13 57 37.1	
	comp=Z,508nm,21.1s,baz=350,slow=34							
	comp=Z,12nm,0.7s							
RPZ	**Rata Peaks**	**27.84**	**175**	IAmb	IAmb		13 47 38.0	
	comp=Z,13nm,0.7s							
MQZ	**McQueen's Vall**	**28.01**	**172**	P	**P**		**13 47 37.3**	**0.0**
LBZ	**Lake Benmore**	**28.43**	**176**	P	**P**		**13 47 41.7**	**+0.5**
LBZ				IAmb	IAmb		13 47 43.1	
	comp=Z,21nm,0.8s							
STKA	**Stephens Creek**	**28.44**	**231**	P	**P**		**13 47 42.5**	**+1.2**
	comp=Z,5.0nm,0.7s,baz=25,slow=8.2,SNR=11							
STKA				PcP	**PcP**		**13 50 53.1**	**+0.4**
	comp=Z,5.0nm,0.6s,baz=86,slow=2.5,SNR=11							
STKA				ScP	**ScP**		**13 54 30.7**	**+0.9**
	comp=Z,6.5nm,1.0s,baz=332,slow=11,SNR=2.4							
STKA				LR	LR		13 58 08.4	
	comp=Z,460nm,20.0s,baz=87,slow=34							
	comp=Z,5.0nm,0.7s							
STKA	**Stephens Creek**	**28.44**	**231**	P	**P**		**13 47 42.7**	**+1.4**
	baz=28,SNR=9.1							
STKA	**Stephens Creek**	**28.44**	**231**	P	**P**		**13 47 42.3**	**+1.0**
STKA	**Stephens Creek**	**28.44**	**231**	*i*P	**P**		**13 47 42.1**	**+0.8**
TOO	**Toolangi**	**29.05**	**218**	P	**P**		**13 47 48.2**	**+1.4**
	baz=29,SNR=4.6							
TOO	**Toolangi**	**29.05**	**218**	P	**P**		**13 47 46.2**	**-0.6**
TOO	**Toolangi**	**29.05**	**218**	P	**P**		**13 47 46.2**	**-0.6**
TOO				pmax	pmax			
	comp=Z,18nm,1.0s							
WR0	**Warramunga Arr**	**31.63**	**258**	P	**P**		**13 48 08.7**	**-1.0**
WB2	**Warramunga Arr**	**31.81**	**258**	P	**P**		**13 48 10.2**	**-1.1**
WB2				IAmb	IAmb		13 48 23.9	
	comp=Z,19nm,1.4s							
WRAB	**Tennant Creek**	**31.81**	**258**	P	**P**		**13 48 10.5**	**-0.8**
WRAB	**Tennant Creek**	**31.81**	**258**	*c i*P	**P**		**13 48 11.2**	**-0.1**
WRAB				pmax	pmax			
	comp=Z,6.0nm,0.9s							
WRAB	**Tennant Creek**	**31.81**	**258**	P	**P**		**13 48 10.7**	**-0.6**
WRAB				PP	**PnPn**		**13 49 18.3**	**+1.1**
WRAB				ScP	**ScP**		**13 54 46.5**	**+5.5**
WRA	**Warramunga Arr**	**31.82**	**258**	P	**P**		**13 48 10.3**	**-1.1**
	comp=Z,2.6nm,0.7s,baz=88,slow=9.0,SNR=24							
WRA				PcP	**PcP**		**13 51 02.6**	**+0.9**

comp=Z,2.1nm,0.7s,baz=92,slow=3.5,SNR=6.2
WRA ScP **ScP** **13 54 42.1 +1.1**
comp=Z,4.0nm,1.0s,baz=82,slow=3.9,SNR=11
WRA PKiKP **PKiKP** **13 58 28.7 -1.7**
comp=Z,0.3nm,0.8s,baz=321,slow=0.5,SNR=5.9
WRA LR LR 14 00 01.1
comp=Z,340nm,20.1s,baz=32,slow=34
comp=Z,2.6nm,0.7s
WRA Warramunga Arr 31.82 258 P **P** **13 48 10.0 -1.4**
WRA **PcP** **13 51 01.6 -0.1**
AS31 Alice Springs 32.52 251 P **P** **13 48 17.1 -0.4**
AS31 IAmb IAmb 13 48 34.5
comp=Z,9.7nm,0.8s
ASAR Alice Springs 32.52 251 P **P** **13 48 17.4 -0.1**
ASAR Alice Springs 32.52 251 P **P** **13 48 17.4 -0.1**
BBOO Buckleboo 33.07 234 P **P** **13 48 23.4 +1.2**
baz=33,SNR=8.8
BBOO Buckleboo 33.07 234 P **P** **13 48 22.5 +0.3**
BBOO IAmb IAmb 13 48 23.7
comp=Z,19nm,1.1s
SRPI Serui, Papua 33.88 291 P **P** **13 48 29.8 +0.4**
comp=Z,50nm,0.4s
GUMO Guam 36.94 321 LR LR 14 02 38.5
comp=Z,159nm,21.7s,baz=142,slow=34
KNRA Kununurra 37.29 265 P **P** **13 48 58.5 -0.2**
baz=37,SNR=6.0
KNRA Kununurra 37.29 265 P **P** **13 48 57.1 -1.5**
KNRA IAmb IAmb 13 49 10.8
comp=Z,21nm,0.9s
WRKA Warakurna 37.76 250 P **P** **13 49 02.6 0.0**
baz=38,SNR=18
SWI Sorong 38.80 289 P **P** **13 49 11.5 +0.1**
comp=Z,21nm,0.7s
FORT Forrest 38.93 241 P **P** **13 49 13.3 +1.0**
baz=39,SNR=33
FORT Forrest 38.93 241 P **P** **13 49 12.7 +0.4**
LBMI Labuha 42.33 287 P P 13 49 50.8 +10
SANI Sanana 43.20 284 P **P** **13 49 47.7 +0.1**
comp=Z,19nm,1.3s
EDFI Ende, Flores 45.30 273 P **P** **13 50 03.5 -1.1**
comp=Z,5.0nm,1.2s
PSA00 Pilbara Seismi 45.39 255 P **P** **13 50 04.7 -0.4**
PSA00 IAmb IAmb 13 50 06.2
comp=Z,17nm,1.1s
MBWA Marble Bar 45.51 256 P **P** **13 50 05.2 -0.8**
MBWA IAmb IAmb 13 50 07.1
comp=Z,17nm,0.8s
MBWA Marble Bar 45.51 256 P **P** **13 50 06.4 +0.4**
MBWA pP **sP** **13 50 22.0 -3.3**
MBWA sP pP 13 50 30.6 +11
BSSI Bau Bau, Buton 47.11 276 P **P** **13 50 19.1 +0.4**
comp=Z,2µmcomp=Z,3µmcomp=Z,19nm,0.6s
APSI Ampana 47.66 284 P **P** **13 50 22.9 0.0**
comp=Z,14nm,1.3s
BKSI Bulukumba 47.69 277 P **P** **13 50 23.0 -0.2**
comp=Z,8.5nm,1.3s
KLBR Kellerberrin 47.76 242 P **P** **13 50 23.4 -0.1**
baz=48,SNR=4.7
BNSI Bone 47.98 279 P **P** **13 50 25.8 +0.4**
comp=Z,18nm,1.3s
KAPI Kappang 48.13 278 P **P** **13 50 26.5 -0.1**
comp=Z,8.5nm,0.8s,baz=142,slow=3.5,SNR=7.0
KAPI LR LR 14 10 04.3
comp=Z,131nm,20.6s,baz=75,slow=35
comp=Z,8.5nm,0.8s
KAPI Kappang 48.13 278 P **P** **13 50 26.4 -0.3**
KAPI IAmb IAmb 13 50 38.8
comp=Z,21nm,1.2s
KAPI Kappang 48.13 278 P **P** **13 50 27.1 +0.5**
NWAO Narrogin (SRO) 48.37 240 P **P** **13 50 27.9 -0.4**
NWAO Narrogin (SRO) 48.37 240 P **P** **13 50 27.9 -0.4**
NWAO pmax pmax
comp=Z,60nm,1.1s
NWAO Narrogin (SRO) 48.37 240 P **P** **13 50 28.3 +0.1**
NWAO sP **sP** **13 50 46.6 -0.9**
SPSI Sidrap Palu 48.43 279 P **P** **13 50 27.6 -1.3**
comp=Z,12nm,1.1s
BLDU Ballidu 48.55 243 P **P** **13 50 29.7 0.0**
baz=49,SNR=6.0
TTSI Tana Toraja 48.66 280 P **P** **13 50 29.1 -1.6**
comp=Z,8.7nm,0.9s
MORW Morawa 49.00 245 P **P** **13 50 33.3 +0.2**
baz=49,SNR=7.6
MORW Morawa 49.00 245 P **P** **13 50 33.2 +0.1**
PLAI Plampang 49.04 272 P **P** **13 50 36.5 +2.9**
comp=Z,34nm,0.9s
JCJ Chichijima 49.37 330 LR LR 14 09 41.1
comp=Z,78nm,21.4s,baz=142,slow=34
JCJ Chichijima 49.37 330 P **P** **13 50 35.5 -0.3**
MPSI Mapaga 49.73 284 P **P** **13 50 38.5 -0.4**
comp=Z,24nm,0.8s
SRBI Singaraja 51.68 272 P **P** **13 50 53.2 -0.3**
ABJI Asem Bagus 52.69 272 P **P** **13 51 00.2 -0.8**
comp=Z,41nm,1.3s
DRV Dumont d'Urvil 53.83 193 P **P** **13 51 08.9 +0.3**
DRV pP **pP** **13 51 19.9 -2.4**
DRV sP **sP** **13 51 25.0 -3.0**
PCJI Pacitan 55.53 271 P **P** **13 51 21.5 -0.3**
comp=Z,59nm,1.2s
UGM Wanagama 56.23 271 P **P** **13 51 25.7 -1.1**
JOW Kunigami 57.13 318 P **P** **13 51 34.4 +1.5**
comp=Z,14nm,0.6s,baz=164,slow=5.6,SNR=2.7
JOW LR LR 14 14 21.5
comp=Z,63nm,21.9s,baz=284,slow=34
comp=Z,14nm,0.6s
JYT Yasato 57.98 334 P **P** **13 51 38.7 0.0**
INU Inuyama 58.66 331 P **P** **13 51 43.7 +0.2**
INU IAmb IAmb 13 51 48.9
comp=Z,5.9nm,0.8s
JGF Kuroka 58.71 331 P **P** **13 51 43.9 0.0**
JGF IAmb IAmb 13 51 46.1
comp=Z,8.2nm,0.7s
JMN Monobe 58.92 327 P **P** **13 51 44.9 -0.5**
MJAR Matsushiro Arr 59.11 333 P **P** **13 51 44.8 -1.7**
comp=Z,5.4nm,0.6s,baz=161,slow=9.3,SNR=22
MJAR LR LR 14 18 12.7
comp=Z,18nm,18.6s,baz=152,slow=37
comp=Z,5.4nm,0.6s
MJAR Matsushiro Arr 59.11 333 P **P** **13 51 45.1 -1.5**
MJAR Matsushiro Arr 59.11 333 P **P** **13 51 45.1 -1.5**
MJAR pmax pmax
comp=Z,5.0nm,0.9s
MAJO Matsushiro 59.11 333 P **P** **13 51 46.3 -0.3**
MAJO IAmb IAmb 13 51 47.6
comp=Z,20nm,1.1s
MAJO Matsushiro 59.11 333*c i*P **P** **13 51 46.8 +0.2**
MAJO pmax pmax
comp=Z,12nm,0.5s
MAJO Matsushiro 59.11 333 P **P** **13 51 46.8 +0.2**
MAJO x x 13 51 55.0
MJB9 Matsu-Tunnel 59.11 333 P **P** **13 51 46.2 -0.4**
MJB9 IAmb IAmb 13 51 47.6
comp=Z,19nm,1.1s
KSM Kuching 59.12 282 P **P** **13 51 46.2 -0.8**
KSM IAmb IAmb 13 51 48.0
comp=Z,12nm,0.8s
JMM Marumori 59.14 335 P **P** **13 51 46.9 +0.2**
YULB Yu-li 59.78 310 P **P** **13 51 50.5 -1.0**
DBJI Dramaga 60.19 272 P **P** **13 51 54.5 0.0**
TPUB Ta-pu 60.22 309 P **P** **13 51 53.5 -1.0**
SSLB Suanglung 60.27 310 P **P** **13 51 53.8 -1.0**
JHS Saijyo 60.30 328 P **P** **13 51 55.1 +0.2**
JSD Sado 60.34 334 P **P** **13 51 55.6 +0.7**
YHNB Yeheng 60.49 311 P **P** **13 51 55.9 -0.5**
JTM Tenmabayashi 61.57 337 P **P** **13 52 03.7 +0.4**
VNDA Vanda 61.66 181 P **P** **13 52 04.6 +1.2**
comp=Z,1.9nm,0.7s,baz=11,slow=6.5,SNR=7.9
VNDA LR LR 14 16 12.8
comp=Z,66nm,19.3s,baz=7.5,slow=33
comp=Z,1.9nm,0.7s
VNDA Vanda 61.66 181 P **P** **13 52 03.7 +0.3**
VNDA Vanda 61.66 181 P **P** **13 52 04.3 +0.9**
VNDA pP **pP** **13 52 18.3 +1.1**
SBA Scott Base 61.93 180 P **P** **13 52 06.7 +1.5**
SBA IAmb IAmb 13 52 08.2
comp=Z,16nm,1.0s
SBA Scott Base 61.93 180 P **P** **13 52 06.7 +1.5**
SBA pmax pmax
comp=Z,16nm,1.0s
SBA Scott Base 61.93 180 P **P** **13 52 07.0 +1.8**
SBA x x 13 52 21.8
SBA sP **sP** **13 52 30.5 +5.8**
JTU Tsushima 61.93 325 P **P** **13 52 06.7 +0.9**
PPBI Pangkal Pinang 61.96 276 P **P** **13 52 06.6 +0.1**
CASY Casey 62.51 202 P **P** **13 52 09.5 +0.2**
CASY IAmb IAmb 13 52 10.2
comp=Z,15nm,0.8s
CASY Casey 62.51 202 P **P** **13 52 09.7 +0.4**
CASY pP **pP** **13 52 22.9 -0.4**
KASI Kota Agung 62.62 272 P **P** **13 52 07.0 -3.9**
NAWB Namwon 63.71 324 P **P** **13 52 18.5 +0.9**
NAWB IAmb IAmb 13 52 38.8
comp=Z,23nm,1.5s
CCD Concordia, Ant 63.77 192 P **P** **13 52 18.3 +0.3**
CCD pP **pP** **13 52 31.4 -0.4**
CCD sP **sP** **13 52 38.4 +1.0**
JKA Kamikawa-asahi 63.97 340 P **P** **13 52 20.0 +0.8**
ASAJ Asahikawa 63.98 340 LR LR 14 14 53.6
comp=Z,91nm,22.0s,baz=159,slow=31
ASAJ Asahikawa 63.98 340 P **P** **13 52 20.0 +0.8**
ASAJ pmax pmax
comp=Z,22nm,0.7s
MNAI Manna 64.40 273 P P 13 52 17.5 -5.2
KSCHJ Chungju 64.44 326 P **P** **13 52 23.3 +0.8**
KSCHJ IAmb IAmb 13 52 23.8
comp=Z,14nm,0.7s
KSRS Korea Array 64.90 326 LR LR 14 18 46.5
comp=Z,37nm,20.4s,baz=150,slow=34
YSS Yuzh-Sakhalins 66.47 342 P **P** **13 52 35.8 +0.5**
YSS Yuzh-Sakhalins 66.47 342 *e*P **P** **13 52 36.1 +0.8**
YSS pmax pmax
comp=Z,30nm,0.9s
YSS Yuzh-Sakhalins 66.47 342 P **P** **13 52 36.3 +1.0**
YSS sP **sP** **13 52 57.2 +2.6**
QIZ Qiongzhong 66.57 299 P **P** **13 52 37.5 +1.0**
NJ2 Nanjing 66.74 316 *e*P **P** **13 52 37.8 +0.5**
NJ2 pmax pmax
comp=Z,10.0nm,0.8s
MSHR Mys Shultsa 67.18 332⇑*i*P **P** **13 52 40.1 +0.2**
MSHR pmax pmax
comp=Z,9.0nm,1.2s
USA0B Ussuriysk Arra 68.09 333 P **P** **13 52 46.4 +0.8**
USA0B IAmb IAmb 13 52 48.4
comp=Z,37nm,1.4s
USA0B Ussuriysk Arra 68.09 333⇑*i*P **P** **13 52 46.0 +0.4**
USRK Ussuriysk Ar. 68.09 333 P **P** **13 52 46.3 +0.7**
comp=Z,9.9nm,0.7s,baz=150,slow=5.7,SNR=22
comp=Z,9.9nm,0.7s
USRK Ussuriysk Ar. 68.09 333 P **P** **13 52 45.9 +0.2**
SHEM Shemya Is, Ala 68.62 4 P **P** **13 52 48.7 0.0**
comp=Z,13nm,0.8s,baz=13,slow=2.7,SNR=6.7
SHEM LR LR 14 17 04.1
comp=Z,105nm,19.7s,baz=208,slow=31
comp=Z,13nm,0.8s
SMY Shemya 68.62 4 P **P** **13 52 49.4 +0.7**
SMY IAmb IAmb 13 52 51.3
comp=Z,32nm,1.3s
SMY Shemya 68.62 4 P **P** **13 52 49.4 +0.7**
SMY pmax pmax
comp=Z,32nm,1.3s
KIWB Kanaga Island 68.82 10 P **P** **13 52 50.5 +0.6**
ADK Adak 68.92 10 P **P** **13 52 51.4 +0.7**
ADK Adak 68.92 10 P **P** **13 52 51.4 +0.7**
ADK pmax pmax
comp=Z,10.0nm,1.1s
WHN Wuhan 68.96 312⇑P **P** **13 52 51.3 -0.1**
PET Petropavlovsk 69.11 354 P **P** **13 52 51.2 -0.5**
PET IAmb IAmb 13 52 52.7
comp=Z,34nm,1.3s
PET Petropavlovsk 69.11 354 *e*P **P** **13 52 52.0 +0.2**
PET pmax pmax
comp=Z,29nm,1.4s
PET Petropavlovsk 69.11 354 P **P** **13 52 51.6 -0.1**
PET pP **pP** **13 53 05.0 -0.5**
PEA0B Petropavlovsk- 69.30 354 P **P** **13 52 53.3 +0.3**
PEA0B IAmb IAmb 13 52 54.4
comp=Z,23nm,0.9s
PEA0B Petropavlovsk- 69.30 354⇑*i*P **P** **13 52 52.6 -0.4**
PETK Petropavlovsk- 69.30 354 P **P** **13 52 52.7 -0.3**
comp=Z,13nm,0.8s,baz=179,slow=12,SNR=42
PETK LR LR 14 18 37.1
comp=Z,60nm,20.9s,baz=157,slow=32
comp=Z,13nm,0.8s
PETK Petropavlovsk- 69.30 354 P **P** **13 52 52.8 -0.2**
PETK Petropavlovsk- 69.30 354 P **P** **13 52 52.8 -0.2**
MDJ Mudanjiang 69.48 332 P **P** **13 52 54.2 -0.1**
MDJ IAmb IAmb 13 52 56.8
comp=Z,23nm,0.8s
MDJ Mudanjiang 69.48 332 P **P** **13 52 55.1 +0.8**
MDJ pP sP 13 53 11.4 -2.2
MDJ pmax pmax
comp=Z,32nm,1.0s
MDJ Mudanjiang 69.48 332 P **P** **13 52 56.0 +1.7**
CN2 Changchun 70.83 329 *e*P **P** **13 53 02.5 0.0**
CN2 *e*PP **PP** **13 55 42.8 +2.5**
CN2 *e*S **S** **14 02 12.6 -1.3**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 LR LR
comp=Z,90nm,14.0s
CN2 LR LR
comp=Z,90nm,14.0s
CN2 LR LR
comp=Z,80nm,16.0s
GSI Gunungsitoli 71.15 277 P **P** **13 53 04.5 -0.7**
comp=Z,28nm,1.2s
GRNR Gornyy 71.82 340⇓*i*P **P** **13 53 09.8 +1.4**
GRNR pmax pmax
comp=N,6.0nm,0.7s
GRNR pmax pmax
comp=Z,20nm,0.7s
KLR Kul'dur 72.23 336 LR LR 14 21 49.7
comp=Z,55nm,21.3s,baz=148,slow=33
KLR Kul'dur 72.23 336*c i*P **P** **13 53 11.3 +0.4**
KLR *i* *PP **sP** **13 53 29.4 -0.8**
KLR pmax pmax
comp=Z,13nm,0.8s
ENH Enshi 72.35 310 P **P** **13 53 10.4 -1.7**
ENH IAmb IAmb 13 53 26.1
comp=Z,17nm,0.9s
LYN LuoYang 72.53 315⇓P **P** **13 53 13.3 +0.3**
LYN pP pP 13 53 26.8 0.0
LYN pmax pmax
comp=Z,20nm,0.5s
GYA Guiyang 72.63 305⇓P **P** **13 53 14.8 +0.8**
GYA pmax pmax
comp=Z,21nm,0.9s
HNS HongShan 72.69 318⇑P **P** **13 53 14.5 +0.6**
HNS pmax pmax
comp=Z,22nm,0.9s
LHMI Lhok Sumawe 72.94 281 P **P** **13 53 17.4 +1.5**
comp=Z,150nm,0.9s
UNV Unalaska Valle 72.98 16 P **P** **13 53 14.6 -0.6**
UNV IAmb IAmb 13 53 19.1
comp=Z,36nm,1.2s
BJT Baijiatuau 73.37 321 P **P** **13 53 17.0 -0.9**
BJT IAmb IAmb 13 53 20.0
comp=Z,12nm,0.7s
BJT Baijiatuau 73.37 321 P **P** **13 53 17.0 -0.9**
BJT pmax pmax
comp=Z,12nm,0.7s
BJI Beijing 73.38 321 P **P** **13 53 19.6 +1.7**
BJI pmax pmax
comp=Z,17nm,0.7s
BJI pmax pmax
comp=Z,50nm,4.7s
QSPA South Pole Qui 74.09 180 LR LR 14 23 24.3
comp=Z,104nm,19.1s,baz=38,slow=34
XAN Xi'an 74.71 313⇑*i*P **P** **13 53 26.3 +0.4**
XAN pP pP 13 53 37.8 -2.0
XAN sP sP 13 53 44.3 -0.9
XAN pmax pmax
comp=Z,20nm,0.7s
XAN LR LR
comp=Z,130nm,16.5s
XAN LR LR
comp=Z,180nm,15.1s
KMI Kunming 75.18 302⇑P **P** **13 53 30.4 +1.4**
KMI PcP **PcP** **13 53 43.1 +0.8**
KMI pmax pmax
comp=Z,29nm,0.9s
KMI pmax pmax
comp=Z,110nm,3.5s
CM31 Chiang Mai Arr 75.70 294 P **P** **13 53 32.5 +0.7**
CM31 IAmb IAmb 13 53 33.9
comp=Z,8.2nm,0.8s
CMAR Chiang Mai Arr 75.70 294 P **P** **13 53 32.9 +1.0**
comp=Z,4.6nm,0.7s,baz=131,slow=4.8,SNR=46
CMAR LR LR 14 27 28.9
comp=Z,23nm,19.5s,baz=130,slow=36
comp=Z,4.6nm,0.7s
CMAR Chiang Mai Arr 75.70 294 P **P** **13 53 32.1 +0.3**
CHTO Chiang Mai 75.83 295 P **P** **13 53 32.7 +0.1**
CHTO Chiang Mai 75.83 295 P **P** **13 53 32.7 +0.1**
CHTO pmax pmax
comp=Z,8.0nm,0.8s
XLT XiLinHaoTe 75.85 324⇑*i*P **P** **13 53 32.8 +0.5**
XLT pP sP 13 53 50.0 -1.7
XLT sP pP 13 53 56.6 +10
XLT sS sS 14 03 35.8 +1.0
XLT pmax pmax
comp=Z,28nm,0.7s
XLT pmax pmax
comp=Z,130nm,5.9s
XLT LR LR
comp=Z,100nm,14.5s
XLT LR LR
comp=Z,130nm,19.7s
MA2 Magadan 76.49 351 LR LR 14 21 55.4
comp=Z,115nm,21.9s,baz=136,slow=32
MA2 Magadan 76.49 351 P **P** **13 53 34.9 -0.5**
MA2 IAmb IAmb 13 53 42.1
comp=Z,41nm,1.5s
MA2 Magadan 76.49 351 P **P** **13 53 34.9 -0.5**
MA2 pmax pmax
comp=Z,41nm,1.5s
PZH PanZhiHua 76.59 303 P **P** **13 53 39.1 +2.2**
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,100nm,5.8s
HHC Hu-ho-hao-te 76.69 320 *e*P **P** **13 53 38.9 +1.8**
HHC pmax pmax
comp=Z,43nm,0.9s
HHC pmax pmax
comp=Z,90nm,5.5s
HIA Hailar 77.48 330 P **P** **13 53 41.2 0.0**
HIA IAmb IAmb 13 53 42.8
comp=Z,11nm,0.6s
HIA Hailar 77.48 330 *e*P **P** **13 53 40.8 -0.4**
HIA pmax pmax
comp=Z,11nm,0.7s
ZEA Zeya 77.52 337 *e*P **P** **13 53 42.3 +1.0**
ZEA pmax pmax
comp=E,10.0nm,0.5s
ZEA pmax pmax
comp=N,10.0nm,0.7s
ZEA pmax pmax
comp=Z,30nm,0.7s
BTO Baotou 77.52 319 *e*P **P** **13 53 43.0 +1.2**
LZH Lanzhou 79.34 312 *e*P **P** **13 53 53.1 +1.1**
LZH pmax pmax
comp=Z,24nm,1.1s
SEY Seymchan 79.52 353 LR LR 14 24 20.1
comp=Z,74nm,21.8s,baz=162,slow=32
SEY Seymchan 79.52 353⇑*i*P **P** **13 53 52.2 +0.1**
SEY pmax pmax
comp=Z,10.0nm,0.9s
KDAK Kodiak Island 80.50 20 LR LR 14 27 54.3
comp=Z,65nm,18.3s,baz=215,slow=34
MAW Mawson 80.87 202 P **P** **13 54 00.2 +0.7**
comp=Z,5.6nm,0.9s,baz=103,slow=4.3,SNR=6.4
MAW LR LR 14 25 47.4
comp=Z,115nm,19.7s,baz=114,slow=33
comp=Z,5.6nm,0.9s
MAW Mawson 80.87 202 P **P** **13 53 59.7 +0.2**
CNPM China Poot 82.30 20 P **P** **13 54 07.4 +0.3**
CNPM IAmb IAmb 13 54 35.3
comp=Z,19nm,1.3s
M19K Big River Lodg 83.22 17 P **P** **13 54 12.7 +0.9**
M19K IAmb IAmb 13 54 34.6
comp=Z,11nm,1.2s
YAK Yakutsk 83.27 343 LR LR 14 26 59.1
comp=Z,52nm,20.5s,baz=89,slow=33
YAK Yakutsk 83.27 343 P **P** **13 54 12.1 +0.1**
YAK Yakutsk 83.27 343 *e*P **P** **13 54 11.3 -0.7**
YAK *e**PP **pP** **13 54 26.7 +0.8**
YAK *e* 13 57 23.7
YAK *e*S **S** **14 04 28.5 +0.1**
YAK *e*SS **SS** **14 09 56.3 +1.7**
YAK pmax pmax
comp=Z,47nm,0.9s
YAK pmax pmax
comp=N,4.0nm,0.9s
YAK pmax pmax
comp=E,2.0nm,0.8s
YAK pmax pmax
comp=Z,56nm,2.9s
YAK pmax pmax
comp=N,35nm,3.7s
YAK smax smax
comp=E,38nm,2.8s
YAK smax smax
comp=N,27nm,1.7s
ULN Ulaanbaatar 83.28 324 P **P** **13 54 12.5 -0.1**
ULN Ulaanbaatar 83.28 324*ce*P **P** **13 54 12.7 +0.1**
ULN pmax pmax
comp=Z,37nm,0.8s
L19K White Mountain 83.31 17 P **P** **13 54 12.5 +0.2**
SONM Songino Array 83.64 324 P **P** **13 54 14.5 +0.1**
comp=Z,15nm,0.8s,baz=146,slow=5.9,SNR=50
comp=Z,15nm,0.8s
SONM Songino Array 83.64 324 P **P** **13 54 14.2 -0.3**
SONM IAmb IAmb 13 54 16.9
comp=Z,17nm,1.0s
GTA Gaotai 83.71 314⇑P **P** **13 54 15.0 0.0**
GTA pP pP 13 54 29.8 +0.6
GTA sP sP 13 54 37.3 +2.7
GTA pmax pmax
comp=Z,8.0nm,1.2s
BILL Bilibino 83.76 360*ce*P **P** **13 54 14.9 +0.5**
BILL *i* *PP **pP** **13 54 27.5 -0.9**
BILL *e**SP **sP** **13 54 37.5 +3.7**
BILL pmax pmax
comp=Z,7.0nm,0.8s
BILL MLR MLR
comp=Z,48nm,20.0s
RC01 Rabbit Creek A 83.98 19 P **P** **13 54 15.0 -0.7**
RC01 IAmb IAmb 13 54 15.8
comp=Z,19nm,1.0s
SHL Shillong 84.39 298 P **P** **13 54 18.1 -0.7**
SHL Shillong 84.39 298 P **P** **13 54 18.1 -0.7**
SHL pmax pmax
comp=Z,28nm,0.7s
PMR Palmer 84.55 19 P **P** **13 54 18.4 -0.1**
PMR IAmb IAmb 13 54 43.1
comp=Z,18nm,1.5s
PMR Palmer 84.55 19 P **P** **13 54 18.4 -0.1**
PMR pmax pmax
comp=Z,18nm,1.5s
PPLA Purkeypile 84.63 17 P **P** **13 54 19.2 +0.1**
PPLA IAmb IAmb 13 54 44.2
comp=Z,18nm,1.4s
GHO Glory Hole Cre 84.75 19 P **P** **13 54 19.6 -0.1**
GHO IAmb IAmb 13 54 38.4
comp=Z,18nm,1.2s
J20K Nowinta River 85.11 16 P **P** **13 54 20.8 -0.5**
SCM Sheep Creek Mo 85.31 20 P **P** **13 54 22.1 -0.4**
SCM IAmb IAmb 13 54 51.0
comp=Z,12nm,1.0s
SCM Sheep Creek Mo 85.31 20 P **P** **13 54 22.1 -0.4**
SCM pmax pmax
comp=Z,12nm,1.0s
BELA Belgrano 2 85.49 175 P **P** **13 54 22.2 -1.0**
TRF Thorofare Moun 85.61 18 P **P** **13 54 23.4 -0.7**
BOD Bodaibo 85.69 334 *e*P **P** **13 54 23.5 -0.8**
BOD pmax pmax
comp=Z,10.0nm,1.0s
WAX Waxell Ridge 85.87 22 P **P** **13 54 25.2 -0.1**
BPAW Bear Paw Mtn. 85.91 17 P **P** **13 54 24.8 -0.5**
RND Reindeer 86.00 18 P **P** **13 54 24.8 -1.1**
RND IAmb IAmb 13 54 45.3
comp=Z,8.8nm,1.0s
RND Reindeer 86.00 18 P **P** **13 54 24.8 -1.1**
RND pmax pmax
comp=Z,9.0nm,1.0s
YBH Yreka Blue Hor 86.08 45 LR LR 14 24 22.1
comp=Z,68nm,22.0s,baz=223,slow=30
GLB Gilahina Butte 86.21 21 P **P** **13 54 27.2 +0.3**
GLB IAmb IAmb 13 54 46.8
comp=Z,14nm,1.3s
I21K Tanana 86.48 16 P **P** **13 54 27.8 -0.3**
I21K IAmb IAmb 13 54 44.7
comp=Z,6.5nm,1.1s
H21K Melozitna Rive 86.64 15 P **P** **13 54 28.4 -0.5**

IMAR Indian Mountai 86.67 15 P **P** 13 54 28.2 -0.8
WRH Wood River Hil 87.02 18 P **P** 13 54 29.1 -1.6
CCB Clear Creek Bu 87.23 18 P **P** 13 54 29.9 -1.8
HDA Harding Lake 87.31 18 P **P** 13 54 30.6 -1.6
HDA IAmb IAmb 13 54 52.3
comp=Z,8.3nm,0.9s
MDM Murphy Dome 87.34 17 P **P** 13 54 30.5 -1.8
COLA College 87.39 17⇑*i*P **P** 13 54 30.2 -2.3
COLA pmax pmax
comp=Z,1.0nm,0.4s
SMAI San Martin Ant 87.44 162 P **P** 13 54 34.1 +1.3
SMAI IAmb IAmb 13 54 35.6
comp=Z,15nm,1.0s
PFO Pinyon Flats O 87.48 54 LR LR 14 25 17.8
comp=Z,145nm,20.7s,baz=242,slow=30
IL31 87.59 18 P **P** 13 54 31.1 -2.4
IL31 IAmb IAmb 13 54 53.7
comp=Z,5.9nm,1.0s
ILAR Eielson Array 87.59 18 P **P** 13 54 31.5 -2.0
comp=Z,1.8nm,0.6s,baz=239,slow=5.0,SNR=43
ILAR LR LR 14 27 16.5
comp=Z,116nm,22.0s,baz=237,slow=31
comp=Z,1.8nm,0.6s
ILAR Eielson Array 87.59 18 P **P** 13 54 30.9 -2.6
BBB Bella Bella 87.63 34 LR LR 14 24 52.4
comp=Z,75nm,21.9s,baz=270,slow=30
DOT Dot Lake 87.66 20 P **P** 13 54 32.7 -1.3
NVAR Mina Array Bea 87.85 49 P **P** 13 54 35.9 +0.2
comp=Z,0.4nm,0.7s,baz=217,slow=5.7,SNR=3.2
NVAR PKKPbc **PKKPbc** 14 12 24.4 +1.0
comp=Z,0.3nm,0.6s,baz=72,slow=2.9,SNR=3.8
NVAR LR LR 14 29 24.3
comp=Z,58nm,18.4s,baz=244,slow=32
comp=Z,0.4nm,0.7s
SCRK Sand Creek 87.92 19 P **P** 13 54 34.5 -0.8
J25K Salcha River, 87.93 18 P **P** 13 54 34.5 -0.7
J25K IAmb IAmb 13 54 55.6
comp=Z,7.0nm,1.1s
PALK Pallekele 88.97 278 LR LR 14 36 24.7
comp=Z,74nm,18.4s,baz=223,slow=37
LPIG La Paz 89.46 65 LR LR 14 29 40.8
comp=Z,67nm,18.2s,baz=216,slow=32
ELK Elko 90.90 48 LR LR 14 27 56.2
comp=Z,81nm,21.2s,baz=235,slow=30
TIXI Tiksi 91.21 349 LR LR 14 33 33.8
comp=Z,57nm,19.9s,baz=180,slow=34
TIXI Tiksi 91.21 349 P **P** 13 54 49.2 -1.1
TIXI IAmb IAmb 13 54 50.4
comp=Z,4.9nm,1.0s
TIXI Tiksi 91.21 349⇑*i*P **P** 13 54 49.4 -0.9
TIXI pmax pmax
comp=Z,4.0nm,0.8s
TROLL Troll, Antarti 91.68 185 P **P** 13 54 52.7 -0.3
SNAA Sanae 92.35 183 P **P** 13 54 55.3 -0.7
SNAA Sanae 92.35 183 LR LR 14 36 29.8
comp=Z,90nm,18.1s,baz=48,slow=36
SNAA Sanae 92.35 183 P **P** 13 54 55.1 -0.9
SNAA IAmb IAmb 13 55 21.9
comp=Z,4.2nm,1.0s
SNAA Sanae 92.35 183 P **P** 13 54 55.1 -0.9
SNAA pmax pmax
comp=Z,4.0nm,1.0s
VNA3 Neumayer Olymp 93.01 181 P **P** 13 54 58.0 -0.9
WMQ Urumqi 93.78 314 *e*P **P** 13 55 04.4 +1.5
WMQ pP sP 13 55 19.3 -3.4
WMQ pmax pmax
comp=Z,25nm,0.8s
WMQ LR LR
comp=Z,120nm,21.9s
INK Inuvik 93.95 19 LR LR 14 31 15.5
comp=Z,94nm,20.9s,baz=209,slow=32
PDAR Pinedale Array 95.57 47 LR LR 14 30 57.9
comp=Z,46nm,21.5s,baz=254,slow=31
ANMO Albuquerque 95.76 55 LR LR 14 30 17.0
comp=Z,108nm,21.3s,baz=250,slow=30
TXAR Lajitas Array 96.61 62 LR LR 14 29 31.3
comp=Z,58nm,21.6s,baz=228,slow=30
MK31 Makanchi Array 98.27 316 P **P** 13 55 23.0 -0.2
MK31 Makanchi Array 98.27 316⇓*i*P **P** 13 55 23.1 -0.2
MKAR Makanchi Array 98.27 316 P **P** 13 55 22.4 -0.8
comp=Z,1.3nm,0.5s,baz=99,slow=7.7,SNR=10
comp=Z,1.3nm,0.5s
MKAR Makanchi Array 98.27 316 P **P** 13 55 22.6 -0.6
MKAR Makanchi Array 98.27 316 P **P** 13 55 22.7 -0.6
YKA Yellowknife Ar 98.50 27 P **P** 13 55 22.3 -1.5
comp=Z,0.7nm,0.8s,baz=254,slow=4.3,SNR=4.6
YKA LR LR 14 32 06.6
comp=Z,40nm,19.6s,baz=214,slow=31
comp=Z,0.7nm,0.8s
ZAA0 Zalesovo Array 98.53 324 P **P** 13 55 23.4 -0.8
ZAA0 IAmb IAmb 13 55 25.0
comp=Z,5.2nm,0.8s
ZALV Zalesovo Beam 98.53 324 P **P** 13 55 23.1 -1.1
comp=Z,3.7nm,0.7s,baz=116,slow=5.2,SNR=19
ZALV LR LR 14 42 49.3
comp=Z,26nm,18.1s,baz=174,slow=37
comp=Z,3.7nm,0.7s
ZALV Zalesovo Beam 98.53 324 P **P** 13 55 23.3 -0.9
ZALV Zalesovo Beam 98.53 324 P **P** 13 55 23.3 -0.9
ARU Arti 113.64 325 *i* PKIKP **PKiKP** 14 00 23.1 -0.6
ARU 14 01 15.9
ARU 14 07 27.8
KIRV Kirov 118.05 328*c i*PKIKP **PKPdf** 14 00 31.6 -0.5
BELG Belogornoye 120.66 322*c i*PKIKP **PKPdf** 14 00 36.9 -0.4
ARCES ARCESS Array B 121.49 345 PKP **PKPdf** 14 00 37.8 -0.7
comp=Z,4.9nm,0.6s,baz=84,slow=2.4,SNR=33
ARCES PKKPbc **PKKPab** 14 10 39.0 +0.3
comp=Z,1.0nm,0.7s,baz=219,slow=1.6,SNR=3.7
ARCES ARCESS Array B 121.49 345 **PKPdf** 14 00 37.5 -1.0
KLMR Klimovskoe 121.89 333 *e*PKIKP **PKPdf** 14 00 37.6 -1.8
KLMR pmax pmax
comp=Z,9.0nm,0.8s
KLMR Klimovskoe 121.89 333 *e*PKPdf **PKPdf** 14 00 37.7 -1.7
KLMR AMP 14 00 39.5
comp=Z,9.0nm,0.8s
BOSA Boshof 122.62 220 PKP **PKiKP** 14 00 42.8 +0.5
comp=Z,5.1nm,0.8s,baz=254,slow=4.5,SNR=4.5
VRH Novokhopyorsk 124.51 322 *e*PKIKP **PKPdf** 14 00 43.1 -1.6
VRH pmax pmax
comp=Z,10.0nm,0.5s
RAYN Ar Rayn 125.24 288 **PKPdf** 14 00 46.6 -0.4
RAYN Ar Rayn 125.24 288 PKIKP **PKPdf** 14 00 46.7 -0.4
ZEI Tsey 125.26 311 *i* PKIKP **PKPdf** 14 00 46.0 -0.8
ZEI pmax pmax
comp=Z,7.0nm,1.0s
ONI Oni 125.62 311 **PKPdf** 14 00 47.5 +0.2
ONI Oni 125.62 311 PKIKP **PKPdf** 14 00 47.5 +0.2
LPSR Galich'ya Gora 125.64 324 *e*PKIKP **PKPdf** 14 00 45.2 -1.7
LPSR pmax pmax
comp=Z,10.0nm,0.9s
KBZ Khabaz 125.78 313 PKP **PKiKP** 14 00 47.7 -0.1
comp=Z,3.3nm,0.7s,baz=124,slow=2.9,SNR=5.2
KBZ Khabaz 125.78 313⇑*i*PKIKP **PKiKP** 14 00 48.2 +0.4
VORR Voronezh 125.83 323 *e*PKIKP **PKPdf** 14 00 47.4 +0.1
VORR pmax pmax
comp=Z,50nm,0.4s
OBN Obninsk 125.87 328⇓*i*PKIKP **PKPdf** 14 00 47.0 -0.2
OBN *e* 14 01 01.2
OBN 14 07 51.0
OBN SSS SSS 14 24 13.0
OBN pmax pmax
comp=Z,10.0nm,0.5s
KIV Kislovodsk 125.88 313 *e*PKIKP **PKPdf** 14 00 46.6 -1.2
KIV pmax pmax
comp=Z,6.0nm,1.1s
VSR Storozhevoye 126.02 322 *e*PKIKP **PKPdf** 14 00 46.2 -1.4
VSR pmax pmax
comp=Z,10.0nm,0.6s
FINES FINESS Array B 126.95 338 PKP **PKPdf** 14 00 48.9 -0.2
comp=Z,5.0nm,0.9s,baz=90,slow=4.2,SNR=12
FINES FINESS Array B 126.95 338*c i*PKIKP **PKPdf** 14 00 48.7 -0.4
FINES pmax pmax
comp=Z,5.0nm,0.9s
NB2 NORSAR Subarra131.87 345 PKPdf **PKPdf** 14 00 58.4 -0.2
baz=31,slow=1.9
NB2 NORSAR Subarra131.87 345 PKPdf **PKPdf** 14 00 58.4 -0.2
comp=Z,9.3nm,1.4s,baz=31,slow=1.9
NOA NORSAR Array B 131.87 345 PKP **PKPdf** 14 00 58.4 -0.2
comp=Z,1.5nm,0.7s,baz=35,slow=2.0,SNR=8.4
AKASG Malin Array Be 131.89 325 PKP **PKPdf** 14 00 58.5 -0.3
comp=Z,4.5nm,0.8s,baz=55,slow=2.7,SNR=13
AKASG Malin Array Be 131.89 325*c i*PKIKP **PKPdf** 14 00 59.2 +0.4
AKASG pmax pmax
comp=Z,5.0nm,0.8s
AKBB Malin Array Si 131.89 325⇑*i*PKIKP **PKPdf** 14 00 57.9 -0.9
BR131 Keskin Array S 133.51 310 **PKPdf** 14 01 02.1 -0.3
BR131 Keskin Array S 133.51 310 PKIKP **PKPdf** 14 01 02.2 -0.3
BRTR Keskin Array B 133.51 310 PKP **PKPdf** 14 01 02.2 -0.3
comp=Z,2.6nm,0.9s,baz=117,slow=1.9,SNR=11
BRTR Keskin Array B 133.51 310 **PKPdf** 14 01 01.9 -0.6
BRTR Keskin Array B 133.51 310*c i*PKIKP **PKPdf** 14 01 03.0 +0.5
BRTR pmax pmax
comp=Z,3.0nm,0.9s
BURAR Bucovina Array 135.75 324 **PKPdf** 14 01 06.6 +0.2
BURAR Bucovina Array 135.75 324 PKIKP **PKPdf** 14 01 06.6 +0.2
KOLS Kolonicke sedl 136.61 327 *e*PKIKP **PKPdf** 14 01 07.9 +0.1
KOLS Kolonicke sedl 136.61 327 *e*PKP **PKPdf** 14 01 07.9 +0.1
CRVS Cervenica-Dubn 137.06 327 *e*PKIKP **PKPdf** 14 01 09.5 +0.9
CRVS Cervenica-Dubn 137.06 327 *e*PKP **PKPdf** 14 01 09.5 +0.9
MORC Moravsky Berou 138.42 331 *e*PKP **PKPdf** 14 01 11.4 +0.2
JAVC Velka Javorina 138.99 330 *e*PKP **PKiKP** 14 01 13.4 -1.1
BRG Berggiesshubel 139.22 334 *e*PKP **PKPdf** 14 01 12.9 +0.3
BRG Amp 14 01 15.9
comp=Z,9.1nm,1.3s
BRG *ex* x 14 01 28.9
BRG Amp 14 01 29.9
comp=Z,11nm,1.4s
BRG Berggiesshubel 139.22 334 *e*PKIKP **PKPdf** 14 01 12.8 +0.3
BRG *e* 14 01 28.9
BRG pmax pmax
comp=Z,9.0nm,1.3s
CLL Collm 139.27 336 *i* PKHKP PKPpre 14 01 01.9
CLL pmax pmax
comp=Z,4.0nm,0.8s
CLL Collm 139.27 336 *e*PKPdf **PKiKP** 14 01 14.0 -0.9
comp=Z,4.0nm,0.8s
CLL *ex* x 14 01 23.0
CLL *e*pPKPdf **pPKPdf** 14 01 28.0 +0.7
KRUC Moravsky 139.46 331 *e*PKP **PKPdf** 14 01 12.6 -0.4
MODS Modra-Piesok 139.51 329 *e*PKIKP **PKPdf** 14 01 12.0 -1.2
MODS Modra-Piesok 139.51 329 *e*PKP **PKPdf** 14 01 12.0 -1.2
RONA Rosalia, Austr 140.45 329 *e*P **PKPdf** 14 01 15.4 +0.5
comp=Z,6.5nm,1.0s
CONA Conrad Observa 140.51 330 *i* P **PKPdf** 14 01 14.8 -0.2
comp=Z,2.8nm,0.6s
KHC Kasperske Hory 140.69 333 **PKPdf** 14 01 15.2 -0.1
KHC Kasperske Hory 140.69 333 *e*PKIKP **PKPdf** 14 01 15.5 +0.2
KHC Kasperske Hory 140.69 333 *e*PKP **PKPdf** 14 01 15.5 +0.2
DIVS Divibare 140.75 322 **PKPdf** 14 01 15.2 -0.5
GERES GERESS Array B 140.85 333 PKhKP PKPpre 14 01 09.7
comp=Z,0.3nm,0.5s,baz=60,slow=5.4,SNR=3.7
GERES PKP **PKPdf** 14 01 15.2 -0.5
comp=Z,2.5nm,0.8s,baz=39,slow=3.8,SNR=14
GERES SKPbc **SKiKP** 14 04 50.8 +0.3
comp=Z,0.5nm,0.6s,baz=72,slow=4.3,SNR=4.4
SOKA Soboth 141.78 329 *e*P **PKPdf** 14 01 16.5 -0.9
comp=Z,6.1nm,1.1s
KBA Koelnbreinsper 142.31 331 *e*P **PKPdf** 14 01 17.0 -1.5
comp=Z,4.6nm,1.2s
ABTA Abfaltersbach 142.94 331 *i* P **PKPdf** 14 01 16.5 -3.0
comp=Z,9.1nm,0.8s
WTTA Wattenberg 142.95 333 *i* P **PKPdf** 14 01 16.8 -2.8
comp=Z,5.2nm,0.8s
MOTA Moosalm 143.12 333 *i* P PKPbc 14 01 16.7 -0.1
comp=Z,7.0nm,0.9s
RETA Reutte 143.16 334 *i* P PKPbc 14 01 17.0 +0.2
comp=Z,2.3nm,0.6s
SQTA Sankt Quirin 143.17 333 *e*P PKPbc 14 01 17.3 +0.4
comp=Z,6.6nm,0.9s
FETA Feichten 143.53 333 *e*P PKPbc 14 01 17.9 -0.1
comp=Z,7.5nm,0.7s
DAVA Damuels 143.69 334 *i* P PKPbc 14 01 19.3 +0.8
comp=Z,6.2nm,0.8s
TUE Stuetta 144.56 334 PKPbc 14 01 21.7 +0.5
SALO Salr 144.70 332 **PKPdf** 14 01 22.2 -0.3
NRCA Norcia 145.42 326 **PKPbc** 14 01 23.5 -0.5
MURB Monte Urbino 145.44 327 **PKPbc** 14 01 23.8 -0.1
SENIN Lac Senin/Sane 145.49 336 **PKPbc** 14 01 23.7 -0.4
TIP Timpagrande 145.54 318 PKPdf **PKPdf** 14 01 23.9 -0.3
OSSC Osservatorio P 145.91 329 PKPdf **PKPdf** 14 01 24.5 -0.2
BNI Bardonecchia 146.81 335 PKPdf **PKPdf** 14 01 26.2 -0.1
BNI Bardonecchia 146.81 335 PKP2 **PKPdf** 14 01 26.2 -0.1
RAFF Raffo Rosso 148.20 317 PKPbc **PKPbc** 14 01 32.2 +0.3
KEST Kesra 152.32 319 PKPbc **PKiKP** 14 01 42.4 +0.1
comp=Z,15nm,0.8s,baz=174,slow=0.9,SNR=14
ESDC Sonseca Array 155.23 344 PKP **PKPdf** 14 01 37.3 -2.0
comp=Z,0.2nm,0.3s,baz=346,slow=3.0,SNR=2.3
ESDC PKPbc **pPKPdf** 14 01 47.3 -6.7
comp=Z,0.9nm,0.8s,baz=9.0,slow=3.9,SNR=6.2
ESDC PKPab pPKPbc 14 02 01.9 -1.0
comp=Z,1.3nm,0.5s,baz=0.5,slow=4.0,SNR=9.4
TORD Torodi Ar. Bea 166.03 260 PKP **PKPdf** 14 01 50.5 -1.1
comp=Z,1.6nm,0.6s,baz=36,slow=1.1,SNR=9.1
TORD PKPab **PKPab** 14 02 51.2 -0.9
comp=Z,2.8nm,0.9s,baz=111,slow=4.3,SNR=5.9
TORD Torodi Ar. Bea 166.03 260 **PKPdf** 14 01 50.7 -0.9

MAN 20 13:57:19.1,8.62N×123.35E,h24km,mb4.2,ML3.0,MS2.6, 6C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DCPH	**Dipolog City**	**0.03**	**176**⇑	*e*P		Pb 13 57 23.9	+1.6
DCPH				*i* S		13 57 28.5	
SNPH	**Sibulan**	**0.73**	**351**⇑	*i*P		Pn 13 57 34.0	+1.1
SNPH				*i* S		13 57 45.0	
PAGZ	**Pagadian**	**0.76**	**178**⇑	*e*P		Pn 13 57 33.6	+0.5
PAGZ				*e*S		13 57 44.7	
TBP	**Tagbilaran**	**1.18**	**25**⇑	*i*P		Pb 13 57 40.3	+0.3
TBP				*i* S		13 57 56.4	
CGP	**Cagayan de Oro**	**1.34**	**97**⇑	*e*P		Pn 13 57 41.3	0.0
CGP				*e*S		13 57 56.8	
CTBH	**Cotabato--PC H**	**1.65**	**147**⇓	*i*P		Pb 13 57 47.1	+0.6
CTBH				*i* S		13 58 08.3	
LLP	**Lapu-Lapu**	**1.80**	**20**⇑	*e*P		Pn 13 57 48.4	+0.8
LLP				*i* S		13 58 11.4	

*IDC **20** 14:02:49.8±0.9,20.°70S×168.°92E,h0km,mb4.1/11, mbtmp4.1/12,ML3.4/1,MS3.7/14,Error ellipse: s-maj=26.7km s-min=23.2km az=100.0*
*NOU **20** 14:02:51.6,20.°50S×168.°59E,h0km,MLv4.9/9,Loyalty Islands*
*NEIC **20** 14:02:52.6±1.7,20.°73S±0.°07×168.°77E±0.°08,h10km±1km, mb4.7/25,Error ellipse: s-maj=15.7km s-min=7.0km az=129.0*

ISC 20 14:02:51.7±0.5,20.°65S±0.°06×168.°83E±0.°08,h10km,n58, σ1§17/49,**mb4.5**/22,**MS3.6**/11,**Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**1.12**	**222**		**Pg**	**14 03 11.6**	**-1.7**
MARNC				Sg	**Sg**	**14 03 25.1**	**-2.7**
MARNC	**Mare, Loyalty**	**1.12**	**222**	P	**Pg**	**14 03 11.9**	**-1.4**
PINNC	**Pines Island,**	**2.34**	**213**		**Pn**	**14 03 29.8**	**-0.5**
PINNC	**Pines Island,**	**2.34**	**213**	P	**Pn**	**14 03 31.2**	**+0.9**
NOUC	**Port Laguerre**	**2.77**	**238**	P	**Pn**	**14 03 36.7**	**+0.6**
DVP	**Devils Point**	**2.97**	**348**	P	**Pn**	**14 03 37.1**	**-1.8**
KOUNC	**Koumac, New Ca**	**4.26**	**270**		**Pn**	**14 03 56.2**	**-0.5**
MSVF	**Nonsavu**	**9.18**	**73**	Pn	Pn	14 05 11.1	+6.8
	0.5nm,0.3s,baz=279,slow=9.8,SNR=2.1						
MSVF				LR	LR	14 08 00.3	
	comp=Z,1μm,18.3s,baz=207,slow=34						
URZ	**Urewera**	**18.96**	**160**	P	**P**	**14 07 12.8**	**-0.3**
	0.1nm,0.3s,baz=300,slow=24,SNR=1.7						
URZ				LR	LR	14 13 16.2	
	comp=Z,191nm,18.3s,baz=31,slow=33						
	6.7nm,0.8s						
BKZ	**Black Stump Fm**	**19.60**	**162**	P	**P**	**14 07 19.8**	**-0.3**
AFI	**Afiamalu**	**19.68**	**73**	LR	LR	14 13 03.5	
	comp=Z,180nm,20.1s,baz=220,slow=31						
BFZ	**Birch Farm**	**20.95**	**164**		**P**	**14 07 35.9**	**+1.2**
BFZ				IAmb	IAmb	14 08 10.5	
	comp=Z,51nm,1.1s						
CTA	**Charters Tower**	**21.18**	**268**	P	**P**	**14 07 41.8**	**+4.3**
	comp=Z,7.8nm,0.9s,baz=86,slow=13,SNR=5.2						
CTA				LR	LR	14 14 55.8	
	comp=Z,162nm,21.0s,baz=86,slow=34						
THZ	**Tophouse**	**21.33**	**172**	P	**P**	**14 07 39.6**	**+0.7**
PMG	**Port Moresby**	**23.70**	**295**	P	**P**	**14 08 05.1**	**+1.2**
	comp=Z,10nm,1.0s,baz=20,slow=11,SNR=4.1						
	comp=Z,10nm,1.0s						
PMG	**Port Moresby**	**23.70**	**295**	IAmb	IAmb	14 08 13.5	
	comp=Z,21nm,1.1s						
TOO	**Toolangi**	**26.35**	**225**	P	**P**	**14 08 28.9**	**+0.9**
TOO				IAmb	IAmb	14 08 58.9	
	comp=Z,17nm,1.4s						
STKA	**Stephens Creek**	**26.79**	**240**	P	**P**	**14 08 33.0**	**+0.9**
	comp=Z,2.5nm,0.7s,baz=54,slow=8.9,SNR=4.4						
STKA				LR	LR	14 17 50.9	
	comp=Z,196nm,21.8s,baz=29,slow=34						
	comp=Z,2.5nm,0.7s						
RAR	**Rarotonga**	**29.30**	**97**	LR	LR	14 19 37.1	
	comp=Z,111nm,19.5s,baz=294,slow=34						
WR0	**Warramunga Arr**	**32.14**	**265**	P	**P**	**14 09 18.7**	**-1.0**
WB0	**Warramunga Arr**	**32.30**	**265**	P	**P**	**14 09 19.7**	**-1.4**
WB0				IAmb	IAmb	14 09 53.3	
	comp=Z,8.5nm,1.2s						
WRA	**Warramunga Arr**	**32.33**	**265**	P	**P**	**14 09 19.6**	**-1.8**
	comp=Z,0.7nm,0.6s,baz=91,slow=8.6,SNR=12						
WRA				LR	LR	14 23 31.8	
	comp=Z,255nm,18.1s,baz=21,slow=38						
	comp=Z,0.7nm,0.6s						
AS31	**Alice Springs**	**32.44**	**258**	P	**P**	**14 09 22.4**	**0.0**
ASAR	**Alice Springs**	**32.44**	**258**	P	**P**	**14 09 22.0**	**-0.4**
MTN	**Manton Dam**	**36.86**	**276**	P	**P**	**14 10 00.2**	**-0.4**
KNRA	**Kununurra**	**38.33**	**271**	P	**P**	**14 10 12.4**	**-0.6**
KNRA				IAmb	IAmb	14 10 23.4	
	comp=Z,22nm,1.1s						
GUMO	**Guam**	**41.38**	**323**	LR	LR	14 27 34.0	
	comp=Z,57nm,18.7s,baz=108,slow=36						
PSA00	**Pilbara Seismi**	**45.56**	**260**	P	**P**	**14 11 11.5**	**-0.7**
PSA00				IAmb	IAmb	14 11 52.7	
	comp=Z,10nm,1.4s						
MBWA	**Marble Bar**	**45.72**	**260**	P	**P**	**14 11 14.0**	**+0.6**
MBWA				IAmb	IAmb	14 11 51.7	
	comp=Z,18nm,1.4s						
KAPI	**Kappang**	**50.09**	**281**	LR	LR	14 34 55.5	
	comp=Z,32nm,19.0s,baz=132,slow=38						
DAV	**Davao City (W)**	**50.65**	**298**	LR	LR	14 35 16.2	
	comp=Z,33nm,18.1s,baz=160,slow=38						
VNDA	**Vanda**	**57.02**	**182**	P	**P**	**14 12 35.5**	**-1.7**
	comp=Z,0.4nm,0.8s,baz=165,slow=2.0,SNR=1.5						
	comp=Z,0.4nm,0.8s						
JHS	**Saijyo**	**64.91**	**328**	P	**P**	**14 13 32.2**	**+0.7**
JSD	**Sado**	**65.06**	**334**	P	**P**	**14 13 32.6**	**+0.3**
ASAJ	**Asahikawa**	**68.78**	**340**	LR	LR	14 41 02.5	
	comp=Z,44nm,19.2s,baz=166,slow=33						
QSPA	**South Pole Qui**	**69.41**	**180**	P	**P**	**14 14 00.1**	**+0.3**
KSRS	**Korea Array**	**69.45**	**326**	P	**P**	**14 14 00.8**	**+0.6**
	comp=Z,1.2nm,0.9s,baz=341,slow=24,SNR=4.7						
	comp=Z,1.2nm,0.9s						
USRK	**Ussuriysk Ar.**	**72.81**	**333**	P	**P**	**14 14 20.2**	**-0.2**
	comp=Z,2.1nm,0.8s,baz=166,slow=6.7,SNR=2.6						
	comp=Z,2.1nm,0.8s						
SHEM	**Shemya Is, Ala**	**73.21**	**3**	LR	LR	14 44 15.0	
	comp=Z,40nm,18.4s,baz=127,slow=34						
PEA0B	**Petropavlovsk-**	**74.08**	**353**	P	**P**	**14 14 28.1**	**+0.4**
PETK	**Petropavlovsk-**	**74.08**	**353**	P	**P**	**14 14 27.5**	**-0.2**
	comp=Z,4.9nm,0.9s,baz=186,slow=12,SNR=9.6						
PETK				LR	LR	14 41 37.8	
	comp=Z,52nm,20.6s,baz=136,slow=31						
	comp=Z,4.9nm,0.9s						
PETK	**Petropavlovsk-**	**74.08**	**353**	P	**P**	**14 14 28.6**	**+0.9**
CMAR	**Chiang Mai Arr**	**78.74**	**295**	P	**P**	**14 14 56.1**	**+1.2**
	comp=Z,1.3nm,0.8s,baz=132,slow=4.3,SNR=9.8						
	comp=Z,1.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**78.74**	**295**	P	**P**	**14 14 55.9**	**+1.0**
BELA	**Belgrano 2**	**80.73**	**175**	P	**P**	**14 15 04.6**	**-0.2**
BELA				IAmb	IAmb	14 15 06.0	
	comp=Z,9.8nm,1.2s						
SMAI	**San Martin Ant**	**82.62**	**162**	P	**P**	**14 15 15.9**	**+1.1**
SMAI				IAmb	IAmb	14 15 46.6	
	comp=Z,4.6nm,1.1s						
SEY	**Seymchan**	**84.31**	**353**	LR	LR	14 51 01.2	
	comp=Z,45nm,18.1s,baz=172,slow=34						
KHMM	**Horse Mountain**	**87.48**	**45**	P	**P**	**14 15 40.6**	**+0.8**
SNAA	**Sanae**	**87.75**	**183**	P	**P**	**14 15 40.4**	**-0.2**
SNAA				IAmb	IAmb	14 15 57.3	
	comp=Z,3.5nm,1.1s						
ULN	**Ulaanbaatar**	**87.76**	**324**	P	**P**	**14 15 41.1**	**+0.1**
ULN				IAmb	IAmb	14 15 42.6	
	comp=Z,2.9nm,0.7s						
SONM	**Songino Array**	**88.11**	**323**	P	**P**	**14 15 42.7**	**0.0**
	comp=Z,1.8nm,0.8s,baz=136,slow=5.2,SNR=8.6						
	comp=Z,1.8nm,0.8s						
NVAR	**Mina Array Bea**	**90.01**	**49**	P	**P**	**14 15 52.1**	**+0.1**
	comp=Z,1.1nm,0.8s,baz=217,slow=8.5,SNR=5.8						
	comp=Z,1.1nm,0.8s						
NVAR	**Mina Array Bea**	**90.01**	**49**	P	**P**	**14 15 51.5**	**-0.5**
ILAR	**Eielson Array**	**91.68**	**17**	P	**P**	**14 15 56.8**	**-2.1**
	comp=Z,0.4nm,0.7s,baz=244,slow=4.6,SNR=4.5						
	comp=Z,0.4nm,0.7s						
PRN	**Pahroc Range**	**91.90**	**51**	P	**P**	**14 16 00.6**	**-0.1**
PRN				IAmb	IAmb	14 16 02.0	
	comp=Z,5.4nm,1.1s						
KHC	**Kasperske Hory**	**145.39**	**331**	*e*PKP	**PKPbc**	**14 22 30.5**	**+0.7**
GERES	**GERESS Array B**	**145.54**	**331**	PKPbc	**PKPdf**	**14 22 30.6**	**+0.4**
	comp=Z,1.3nm,0.7s,baz=357,slow=2.7,SNR=10.0						
GERES	**GERESS Array B**	**145.54**	**331**		**PKPdf**	**14 22 30.1**	**-0.2**

RSNC 20 14:04:29.8±1.0,6.82N×73.15W,h146km±4km,ML3.1, Mw3.6,1C-3D,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.23**	**187**⇓	*i*P		Pn 14 04 49.7	-0.3
BARC				*e*S		Sn 14 05 04.4	-0.9
BARC				*i*		14 05 05.9	
	comp=Z,297nm,0.2s						
BRRC	**Barranca, Sant**	**0.62**	**297**⇑	*i*P		Pn 14 04 51.5	+0.1
BRRC				*e*S		Sn 14 05 08.2	+0.4
BRRC				*i*		14 05 11.6	
	comp=Z,181nm,0.3s						
PAMC	**Pamplona, Colo**	**0.69**	**41**⇓	*e*P		Pn 14 04 52.5	+0.2
PAMC				*e*S		Sn 14 05 09.5	0.0
PAMC				*i*		14 05 12.4	
	comp=Z,123nm,0.8s						
RUSC	**La Rusia**	**0.92**	**176**⇓	*e*P		Pn 14 04 53.6	-0.5
RUSC				*e*S		Sn 14 05 12.2	-0.4
RUSC				*i*		14 05 14.6	
	comp=Z,88nm,0.7s						
PTBC	**PUERTO BERRIO,**	**1.32**	**258**	*e*P		Pn 14 04 56.0	-1.3
PTBC				*e*S		Sn 14 05 17.4	-0.8
PTBC				*i*		14 05 22.5	
	comp=Z,118nm,0.5s						
TAMC	**Tame, Arauca**	**1.41**	**106**	*e*P		Pn 14 04 57.9	-0.2
TAMC				*e*S		Sn 14 05 19.1	-0.6
TAMC				*i*		14 05 20.3	
	comp=Z,68nm,0.3s						
OCAC	**Ocana**	**1.42**	**353**	*e*P		Pn 14 04 58.1	-0.4
OCAC				*e*S		Sn 14 05 19.5	-0.8
OCAC				*i*		14 05 28.7	
	comp=Z,182nm,0.3s						
SPBC	**San Pablo de B**	**1.48**	**218**	*e*P		Pn 14 04 58.4	-0.5
SPBC				*e*S		Sn 14 05 20.9	-0.3
SPBC				*i*		14 05 29.1	
	comp=Z,166nm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.82**	**292**	*e*P		Pn 14 05 02.2	-0.4
ZARC				*e*S		Sn 14 05 27.2	-0.6
ZARC				*i*		14 05 33.7	
	comp=Z,127nm,0.3s						
NORC	**Norcasia**	**2.11**	**234**	*e*P		Pn 14 05 05.4	-0.7
NORC				*e*S		Sn 14 05 33.5	-0.4
NORC				*i*		14 05 38.5	
	comp=Z,68nm,0.2s						
CHIC	**Chingaza**	**2.25**	**195**	*e*P		Pn 14 05 07.8	-0.3
CHIC				*e*S		Sn 14 05 37.4	-0.1
CHIC				*i*		14 05 42.2	
	comp=Z,70nm,0.4s						
ROSC	**El Rosal**	**2.28**	**211**	*e*P		Pn 14 05 09.8	+1.4
ROSC				*e*S		Sn 14 05 40.4	+2.2

	comp=Z,145nm,0.2s							
ANIL	**Santa Ana**	**3.22**	**224**	*e*P		Pn	14 05 20.3	+0.2
ANIL				*e*S		Sn	14 06 00.6	+1.7
ANIL				*i*			14 06 05.1	
	comp=Z,115nm,0.3s							
SDV	**Santo Domingo**	**3.23**	**50**	*e*P		Pn	14 05 19.2	-1.0
SDV				*e*S		Sn	14 05 56.2	-3.0
SDV				*i*			14 05 59.7	
	comp=Z,18nm,0.3s							
PRAC	**Prado**	**3.53**	**209**	*e*P		Pn	14 05 23.2	-0.7
PRAC				*e*S		Sn	14 06 05.3	-0.6
PRAC				*i*			14 06 09.7	
	comp=Z,50nm,0.3s							
ORTC	**Ortega, Tolima**	**3.56**	**216**	*e*P		Pn	14 05 24.1	-0.2
ORTC				*e*S		Sn	14 06 07.5	+0.9
ORTC				*i*			14 06 13.5	
	comp=Z,30nm,0.6s							
PLMC	**San Jos del P**	**3.65**	**239**	*e*P		Pn	14 05 25.1	-0.4
PLMC				*e*S		Sn	14 06 08.3	-0.3
PLMC				*i*			14 06 13.4	
	comp=Z,12nm,0.4s							
CRJC	**Cerrejon, Guaj**	**4.18**	**4**	*e*P		Pn	14 05 29.9	-2.5
CRJC				*e*S		Sn	14 06 17.2	-4.0
CRJC				*i*			14 06 20.7	
	comp=Z,21nm,0.2s							
GARC	**Garzon, Huila**	**5.16**	**207**	*e*P		Pn	14 05 43.2	-2.4
GARC				*e*S		Sn	14 06 40.8	-3.8
GARC				*i*			14 06 45.5	
	comp=Z,16nm,0.3s							
POPC	**Popayan, Colom**	**5.51**	**220**	*e*P		Pn	14 05 46.5	-3.8
POPC				*e*S		Sn	14 06 56.1	+3.1

*SKHL **20** 14:14:59.7±0.2, 44°.40N×149°.10E, h35km±4km, mb4.5/2*
*JMA **20** 14:15:00.1±0.6, 45°.N±2°×14°.9E±°, h30km, MV3.6/11, SE OFF ETOROFU*

ISC 20 14:14:56.8±3.8, 44°.29N±0°.08×148°.9E±0°.2, h3km±26km, n16, σ2ˢ51/26, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KUR	**Kuril'sk**	**1.22**	**321**	*e*P		**Pb**	**14 15 19.4**	**-1.0**
KUR				AMB		AMB	14 15 21.0	
	220nm,0.4s							
KUR				*e*S		**Sb**	**14 15 34.3**	**-2.2**
KUR				A		A	14 15 35.8	
	2μm,2.0s							
KUR				A		A	14 15 35.8	
	1μm,2.0s							
KUR				A		A	14 15 35.9	
	940nm,0.3s							
KUR				A		A	14 15 35.9	
	690nm,0.3s							
SHO	**Shikotan**	**1.58**	**255**	*i* P		**Pb**	**14 15 26.7**	**+0.2**
SHO				AMB		AMB	14 15 31.8	
	70nm,0.4s							
SHO				*i* S		**Sb**	**14 15 46.8**	**-0.1**
SHO				A		A	14 15 52.3	
	200nm,0.3s							
SHO				A		A	14 15 52.3	
	180nm,0.3s							
YUK	**Yuzh-Kuril'sk**	**2.23**	**265**	*i* P		**Pb**	**14 15 36.6**	**-1.1**
YUK				AMB		AMB	14 15 41.6	
	60nm,0.3s							
YUK				*e*S		**Sb**	**14 16 03.9**	**-1.8**
YUK				A		A	14 16 09.1	
	150nm,0.4s							
YUK				A		A	14 16 09.1	
	340nm,0.4s							
NEM2	**Nemuro 2**	**2.49**	**249**	*e*P		**Pn**	**14 15 40.0**	**+1.8**
NEM2				*e*S		**Sn**	**14 16 09.6**	**+0.6**
NMR	**Nemuro--Hokkai**	**2.50**	**250**	*e*P		**Pn**	**14 15 40.5**	**+2.2**
NMR				*e*S		**Sn**	**14 16 10.9**	**+1.7**
GLVR	**Golovnino**	**2.53**	**259**	*e*P		**Pb**	**14 15 41.3**	**-1.5**
GLVR				*e*S		**Sb**	**14 16 12.5**	**-1.7**
GLVR				A		A	14 16 18.6	
	170nm,0.3s							
GLVR				A		A	14 16 18.6	
	150nm,0.3s							
JRA	**Rausu**	**2.77**	**264**	*e*P		**Pb**	**14 15 45.1**	**-1.8**
JNK	**Nakash**	**3.13**	**259**	*e*P		**Pn**	**14 15 49.5**	**+2.5**
JNK				*e*S		**Sn**	**14 16 26.7**	**+1.9**
AKK	**Akkeshi**	**3.24**	**248**	*e*P		**Pn**	**14 15 51.0**	**+2.6**
AKK				*e*S		**Sn**	**14 16 28.9**	**+1.5**
JAK	**Akkeshi**	**3.34**	**249**	*e*P		**Pn**	**14 15 52.0**	**+2.2**
JAK				*e*S		**Sn**	**14 16 29.6**	**-0.4**
JTKR	**Abashiri--Toko**	**3.64**	**267**	*e*P		**Pn**	**14 15 57.4**	**+3.5**
JAR	**Ashorobuto**	**3.88**	**257**	*e*P		**Pn**	**14 16 00.8**	**+3.6**
JAR				*e*S		**Sn**	**14 16 44.7**	**+1.6**
JNBK	**Urakawa-nobuka**	**4.94**	**248**	*e*S		**Sn**	**14 17 10.1**	**+0.7**
YSS	**Yuzh-Sakhalins**	**5.09**	**304**	*e*P		**Pn**	**14 16 15.1**	**+1.2**
YSS				AMB		AMB	14 16 16.2	
	10.0nm,0.5s							
JANG	**Nango**	**6.75**	**237**	*e*S		**Sn**	**14 17 49.3**	**-4.8**
JTH	**Tanohata**	**6.82**	**233**	*e*S		**Sn**	**14 17 50.2**	**-5.6**

TAP 20 14:37:47.2, 23°.18N×120°.99E, h3km, ML0.6, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ELDTW	**Lidau**	**0.03**	**66**	*i* P		Pg	14 37 48.5	+0.5
	baz=73							
ELDTW				*i* S		Sg	14 37 49.4	+0.8
	baz=73							
STYH	**Taoyuan**	**0.20**	**268**	*i* P		Pg	14 37 51.8	+0.8
	baz=268							
STYH				*i* S		Sg	14 37 54.8	+1.3
	baz=268							
FULB	**Fuli**	**0.28**	**86**	*i* P		Pg	14 37 53.3	+0.7
	baz=86							
FULB				*i* S		Sg	14 37 57.7	+1.4
	baz=86							
YUS	**Yu-Shan**	**0.31**	**354**	S		Sg	14 37 58.8	+1.3
	baz=356							
TPUB	**Ta-pu**	**0.35**	**291**	P		Pg	14 37 54.8	+0.9
	baz=304							
TPUB				S		Sg	14 37 59.3	+0.7
	baz=304							
TPUB	**Ta-pu**	**0.35**	**291**	S		Sg	14 37 59.3	+0.7
	baz=338							
YULB	**Yu-li**	**0.36**	**53**	P		Pg	14 37 54.1	+0.1
	baz=53							

TAP 20 14:37:53.8, 23°.24N×120°.66E, h14km, ML0.4, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WTP	**Ta-pu**	**0.04**	**279**	*e*P		Pg	14 37 56.9	+0.4
	baz=276							
WTP				*i* S		Sg	14 37 59.0	+0.6
	baz=276							
CHN1	**Nanshi**	**0.13**	**245**	*i* S		Sb	14 38 01.1	+0.2
	baz=245							
SNST	**Tainan City**	**0.15**	**262**	S		Sb	14 38 01.0	-0.4
	baz=262							
TWK	**Hsinying**	**0.16**	**280**	P		Pb	14 37 58.2	-0.3
	baz=279							
TWK				S		Sb	14 38 01.4	-0.3
	baz=279							
SGST	**Jiashian**	**0.17**	**203**	*e*P		Pg	14 37 57.8	-0.2
	baz=201							
SGST				*e*S		Sg	14 38 01.2	+0.5
	baz=201							

*IDC **20** 14:45:08.9±0.8, 59°.99S×26°.94W, h0km, mb4.1/7, mbtmp4.1/7, MS3.5/2, Error ellipse: s-maj=31.6km s-min=19.2km az=60.0*
*NEIC **20** 14:45:10.7±1.1, 60°.1S±0°.1×26°.7W±0°.3, h13km±3km, mb4.5/21, Error ellipse: s-maj=23.5km s-min=14.8km az=46.0*

ISC 20 14:45:13.6±0.6, 60°.2S±0°.1×26°.8W±0°.1, h34km, n38, σ1ˢ65/35, mb4.3/13, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**12.97**	**152**	P		**Pn**	**14 48 12.5**	**-2.6**
VNA3	**Neumayer Olymp**	**13.09**	**155**	P		**Pn**	**14 48 13.8**	**-3.1**
SNAA	**Sanae**	**14.97**	**150**	P		**Pn**	**14 48 38.8**	**-3.5**
SNAA	**Sanae**	**14.97**	**150**	Pn		**Pn**	**14 48 38.0**	**-4.3**
	0.7nm,0.3s,baz=315,slow=16,SNR=47							
SNAA				Sn		Sn	14 51 12.5	-14
	0.1nm,0.3s,baz=15,slow=5.4,SNR=1.7							
SNAA				LR		LR	14 53 25.2	
	comp=Z,76nm,19.6s,baz=23,slow=33							
SNAA	**Sanae**	**14.97**	**150**			**Pn**	**14 48 39.0**	**-3.4**
SNAA				IAmb		IAmb	14 48 49.0	
	comp=Z,5.9nm,0.6s							
TROLL	**Troll, Antarti**	**16.55**	**148**	P		**Pn**	**14 49 01.4**	**-1.3**
BELA	**Belgrano 2**	**17.99**	**185**			**Pn**	**14 49 20.7**	**+0.3**
GO09	**Cerro Castillo**	**26.64**	**269**	P		**P**	**14 50 49.1**	**+0.4**
QSPA	**South Pole Qui**	**30.08**	**180**	P		**P**	**14 51 20.6**	**+1.2**
	comp=Z,6.6nm,0.5s,baz=246,slow=0.4,SNR=9.6							
	comp=Z,0.6nm,0.5s							
QSPA	**South Pole Qui**	**30.08**	**180**	P		**P**	**14 51 20.4**	**+1.0**
PLCA	**Paso Flores**	**33.13**	**286**	P		**P**	**14 51 45.6**	**-0.8**
	comp=Z,1.6nm,0.8s,baz=63,slow=1.4,SNR=3.7							
	comp=Z,1.6nm,0.8s							
PLCA	**Paso Flores**	**33.13**	**286**	IAmb		IAmb	14 51 46.9	
	comp=Z,4.9nm,1.1s							
PLTB	**Pedras Altas**	**33.50**	**316**	P		**P**	**14 51 49.5**	**-0.1**
MAW	**Mawson**	**36.78**	**140**	P		**P**	**14 52 20.1**	**+2.8**
	comp=Z,2.3nm,0.5s,baz=52,slow=4.1,SNR=7.4							
	comp=Z,2.3nm,0.5s							
MAW	**Mawson**	**36.78**	**140**	P		**P**	**14 52 19.6**	**+2.3**
CPUP	**Villa Florida**	**39.77**	**315**	P		**P**	**14 52 41.9**	**-1.0**
	comp=Z,2.6nm,0.6s,baz=120,slow=7.1,SNR=4.9							
	comp=Z,2.6nm,0.6s							
CPUP	**Villa Florida**	**39.77**	**315**	P		**P**	**14 52 42.4**	**-0.5**
CPUP				IAmb		IAmb	14 53 19.8	
	comp=Z,11nm,1.5s							
VA06	**Catapilco**	**40.09**	**293**	P		**P**	**14 52 45.6**	**+0.1**
VA06				IAmb		IAmb	14 52 46.5	
	comp=Z,12nm,0.8s							
CO02	**Combarbal**	**41.09**	**295**	P		**P**	**14 52 53.7**	**-0.3**
CO02				IAmb		IAmb	14 53 27.2	
	comp=Z,31nm,1.4s							
CO01	**Juntas del Tor**	**41.73**	**297**	P		**P**	**14 52 59.7**	**+0.3**
CO01				IAmb		IAmb	14 53 01.4	
	comp=Z,18nm,1.5s							
VNDA	**Vanda**	**42.47**	**183**	P		**P**	**14 53 06.4**	**+1.8**
	comp=Z,0.5nm,0.6s,baz=182,slow=7.8,SNR=3.0							
	comp=Z,0.5nm,0.6s							
VNDA	**Vanda**	**42.47**	**183**	P		**P**	**14 53 05.3**	**+0.8**
AC04	**Llanos de Chal**	**43.68**	**297**	P		**P**	**14 53 15.1**	**+0.2**
AC02	**Maricunga**	**44.01**	**300**	P		**P**	**14 53 18.4**	**+0.3**
AC02				IAmb		IAmb	14 53 31.3	
	comp=Z,6.7nm,1.2s							
GO02	**Mina Guanaco**	**45.67**	**301**	P		**P**	**14 53 29.9**	**-1.3**
GO01	**Chusmiza**	**50.37**	**304**	P		**P**	**14 54 06.6**	**-1.1**
GO01				IAmb		IAmb	14 54 31.4	
	comp=Z,7.3nm,1.4s							
PB12	**IPOC Station P**	**51.79**	**304**	P		**P**	**14 54 17.8**	**-0.1**
LPAZ	**La Paz**	**52.98**	**307**	P		**P**	**14 54 27.0**	**-0.5**
	comp=Z,1.4nm,0.5s,baz=152,slow=5.0,SNR=8.1							
	comp=Z,1.4nm,0.5s							
LPAZ	**La Paz**	**52.98**	**307**	P		**P**	**14 54 26.9**	**-0.6**
DBIC	**Dimbokro**	**68.85**	**23**	LR		LR	15 19 23.0	
	comp=Z,76nm,19.7s,baz=306,slow=30							
TOA0	**Torodi Ar. Sit**	**76.56**	**29**	P		**P**	**14 56 60.0**	**-0.2**
TOA0				IAmb		IAmb	14 57 11.9	
	comp=Z,15nm,1.5s							
TORD	**Torodi Ar. Bea**	**76.56**	**29**	P		**P**	**14 57 00.3**	**+0.1**
	comp=Z,2.2nm,0.4s,baz=200,slow=6.2,SNR=37							
	comp=Z,2.2nm,0.4s							
TORD	**Torodi Ar. Bea**	**76.56**	**29**	P		**P**	**14 57 00.3**	**+0.1**
TORD				IAmb		IAmb	14 57 04.8	
	comp=Z,7.2nm,1.5s							
KHC	**Kasperske Hory**	**113.75**	**28**	*e*PKP		**PP**	**15 04 42.0**	**+0.6**
ARCES	**ARCESS Array B**	**134.68**	**23**	PKP		**PKPdf**	**15 04 27.1**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=5.7,slow=1.2,SNR=4.6							
ZALV	**Zalesovo Beam**	**143.84**	**69**	PKhKP		PKPpre	15 04 39.8	
	comp=Z,0.9nm,0.4s,baz=239,slow=2.7,SNR=4.1							
SONM	**Songino Array**	**150.52**	**93**	PKPbc		**PKPbc**	**15 04 60.0**	**-0.7**
	comp=Z,0.7nm,0.5s,baz=227,slow=2.5,SNR=6.0							
ILAR	**Eielson Array**	**152.85**	**306**	PKPbc		**PKPbc**	**15 05 05.2**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=148,slow=2.0,SNR=8.6							

*NEIC **20** 14:45:44.2±1.9, 20°.3S±0°.1×177°.4W±0°.1, h459km±7km, mb4.2/38, Error ellipse: s-maj=22.6km s-min=16.7km az=129.0*
*IDC **20** 14:45:47.6±2.3, 20°.29S×177°.80W, h487km±22km, mb3.1/6, mbtmp3.9/8, Error ellipse: s-maj=29.6km s-min=20.7km az=97.0*

ISC 20 14:45:43.6±0.6, 20°.3S±0°.1×177°.4W±0°.1, h450km, n66, σ1ˢ28/64, mb4.1/25, 1C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**5.03**	**300**	P		**P**	**14 47 11.9**	**+3.4**
	5.5nm,0.4s,baz=101,slow=23,SNR=11							
MSVF	**Nonsavu**	**5.03**	**300**	P		**P**	**14 47 11.4**	**+3.0**
AFI	**Afiamalu**	**8.33**	**41**	P		**P**	**14 47 44.6**	**+1.8**
	13nm,0.3s,baz=177,slow=3.3,SNR=11							
AFI				S		**S**	**14 49 18.7**	**-1.9**
	5.9nm,0.3s,baz=53,slow=23,SNR=1.2							
AFI	**Afiamalu**	**8.33**	**41**	P		**P**	**14 47 44.5**	**+1.6**
PINNC	**Pines Island,**	**14.30**	**258**	P		**P**	**14 48 48.6**	**+1.2**
URZ	**Urewera**	**18.50**	**194**	P		**P**	**14 49 31.3**	**+0.3**
	2.0nm,0.4s,baz=121,slow=24,SNR=5.7							
URZ	**Urewera**	**18.50**	**194**	P		**P**	**14 49 30.7**	**-0.3**
NNZ	**Nelson**	**22.26**	**199**	P		**P**	**14 50 05.8**	**+0.5**
CTAO	**Charters Tower**	**34.08**	**264**	P		**P**	**14 51 48.0**	**-1.2**
CTAO				IAmb		IAmb	14 52 26.8	
	comp=Z,15nm,1.3s							
TOO	**Toolangi**	**36.46**	**234**	P		**P**	**14 52 08.4**	**-0.6**
WR0	**Warramunga Arr**	**45.01**	**262**	P		**P**	**14 53 16.3**	**-1.5**
AS31	**Alice Springs**	**45.12**	**256**	P		**P**	**14 53 17.1**	**-1.6**
ASAR	**Alice Springs**	**45.12**	**256**	P		**P**	**14 53 17.0**	**-1.6**
WB0	**Warramunga Arr**	**45.17**	**262**	P		**P**	**14 53 17.0**	**-2.1**
WB0				IAmb		IAmb	14 53 38.4	
	comp=Z,9.2nm,1.4s							
WB2	**Warramunga Arr**	**45.18**	**262**	P		**P**	**14 53 17.0**	**-2.2**
WRAB	**Tennant Creek**	**45.19**	**262**	P		**P**	**14 53 16.9**	**-2.3**
WRAB				IAmb		IAmb	14 53 20.1	
	comp=Z,10.0nm,1.4s							
WRA	**Warramunga Arr**	**45.20**	**262**	P		**P**	**14 53 17.2**	**-2.1**
	comp=Z,0.4nm,0.3s,baz=95,slow=7.7,SNR=25							
	comp=Z,0.4nm,0.3s							
WRA	**Warramunga Arr**	**45.20**	**262**	IAmb		IAmb	14 53 21.9	
	comp=Z,0.5nm,1.4s							
QSPA	**South Pole Qui**	**69.74**	**180**	P		**P**	**14 56 08.9**	**+1.8**
	comp=Z,2.0nm,1.1s,baz=173,slow=11,SNR=3.5							
	comp=Z,2.0nm,1.1s							
QSPA	**South Pole Qui**	**69.74**	**180**	P		**P**	**14 56 08.2**	**+1.1**
QSPA				IAmb		IAmb	14 56 12.7	
	comp=Z,7.5nm,1.4s							
MJAR	**Matsushiro Arr**	**70.41**	**323**	P		**P**	**14 56 10.4**	**-0.9**
	comp=Z,0.8nm,0.5s,baz=147,slow=6.9,SNR=2.3							
	comp=Z,0.8nm,0.5s							
KIWB	**Kanga Island**	**71.87**	**0**	P		**P**	**14 56 19.7**	**+0.2**
ADK	**Adak**	**71.90**	**0**	P		**P**	**14 56 19.5**	**-0.2**
PETK	**Petropavlovsk-**	**76.25**	**345**	P		**P**	**14 56 44.1**	**-0.4**
	comp=Z,1.0nm,0.6s,baz=127,slow=9.2,SNR=4.1							
	comp=Z,1.0nm,0.6s							
PETK	**Petropavlovsk-**	**76.25**	**345**	P		**P**	**14 56 45.0**	**+0.6**
KSAR	**Wonju Array Be**	**77.16**	**318**	P		**P**	**14 56 47.2**	**-2.6**
NVAR	**Mina Array Bea**	**80.50**	**43**	P		**P**	**14 57 06.9**	**-1.2**
PAHR	**Pah Rah Range**	**80.57**	**42**	P		**P**	**14 57 06.8**	**-1.4**
O18K	**Koktuh Hills**	**81.92**	**11**	P		**P**	**14 57 15.2**	**+0.6**
N19K	**Bonanza Creek**	**82.95**	**11**	P		**P**	**14 57 19.6**	**-0.3**
N19K				IAmb		IAmb	14 58 01.5	
	comp=Z,9.1nm,1.3s							
L19K	**White Mountain**	**84.16**	**10**	P		**P**	**14 57 26.8**	**+0.9**
L19K				IAmb		IAmb	14 57 35.5	
	comp=Z,9.1nm,1.5s							
SUA	**Susitna One**	**84.27**	**12**	P		**P**	**14 57 27.0**	**+0.5**
GHO	**Glory Hole Cre**	**84.92**	**13**	P		**P**	**14 57 29.9**	**+0.2**
DIV	**Divide**	**85.07**	**15**	P		**P**	**14 57 30.2**	**-0.2**
J20K	**Nowinta River**	**86.14**	**10**	P		**P**	**14 57 35.2**	**-0.2**
J20K				IAmb		IAmb	14 57 51.2	
	comp=Z,5.6nm,1.4s							
TRF	**Thorofare Moun**	**86.16**	**12**	P		**P**	**14 57 35.3**	**-0.4**
TRF				IAmb		IAmb	14 57 36.6	
	comp=Z,6.9nm,1.0s							
RND	**Reindeer**	**86.40**	**12**	P		**P**	**14 57 37.3**	**+0.5**
MVCO	**Mesa Verde**	**86.45**	**48**	P		**P**	**14 57 36.0**	**-1.9**
MVCO				IAmb		IAmb	14 57 42.0	
	comp=Z,5.2nm,1.4s							
TXAR	**Lajitas Array**	**86.48**	**57**	P		**P**	**14 57 40.3**	**+2.3**
	comp=Z,0.1nm,0.3s,baz=224,slow=5.0,SNR=2.9							
	comp=Z,0.1nm,0.3s							
BWN	**Browne**	**86.97**	**12**	P		**P**	**14 57 41.2**	**+1.9**
I21K	**Tanana**	**87.43**	**10**	P		**P**	**14 57 42.1**	**+0.6**
I21K				IAmb		IAmb	14 57 42.5	
	comp=Z,2.5nm,0.8s							
WRH	**Wood River Hil**	**87.51**	**12**	P		**P**	**14 57 41.8**	**-0.1**
WRH				IAmb		IAmb	14 57 42.6	
	comp=Z,4.7nm,0.9s							
MLY	**Manley**	**87.51**	**11**	P		**P**	**14 57 41.7**	**-0.3**
RIDG	**Independent Ri**	**87.56**	**14**	P		**P**	**14 57 42.6**	**+0.4**
RIDG				IAmb		IAmb	14 57 43.2	
	comp=Z,4.9nm,1.2s							
HDA	**Harding Lake**	**87.69**	**13**	P		**P**	**14 57 42.6**	**-0.1**
HDA				IAmb		IAmb	14 57 43.4	
	comp=Z,3.0nm,0.6s							
CCB	**Clear Creek Bu**	**87.72**	**12**	P		**P**	**14 57 42.6**	**-0.2**
CCB				IAmb		IAmb	14 57 43.3	
	comp=Z,3.2nm,0.6s							
H21K	**Melozitna Rive**	**87.74**	**10**	P		**P**	**14 57 42.3**	**-0.6**
I23K	**Minto, Yukon-K**	**87.87**	**11**	P		**P**	**14 57 43.0**	**-0.5**
I23K				IAmb		IAmb	14 58 26.6	
	comp=Z,5.1nm,1.4s							
IMAR	**Indian Mountai**	**87.89**	**9**	P		**P**	**14 57 44.0**	**+0.3**
MDM	**Murphy Dome**	**87.92**	**12**	P		**P**	**14 57 43.4**	**-0.5**
MDM				IAmb		IAmb	14 58 22.9	
	comp=Z,3.1nm,1.4s							
IL31		**88.02**	**13**	P		**P**	**14 57 44.1**	**-0.1**
ILAR	**Eielson Array**	**88.02**	**13**	P		**P**	**14 57 44.0**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=219,slow=5.5,SNR=13							
	comp=Z,0.6nm,0.5s							
ILAR	**Eielson Array**	**88.02**	**13**	P		**P**	**14 57 44.3**	**0.0**
J25K	**Salcha River,**	**88.20**	**13**	P		**P**	**14 57 45.2**	**0.0**
J25K				IAmb		IAmb	14 58 02.1	
	comp=Z,6.2nm,1.5s							
J26L	**Joseph Creek**	**88.50**	**14**	P		**P**	**14 57 48.0**	**+1.4**
J26L				IAmb		IAmb	14 57 48.5	
	comp=Z,3.5nm,1.1s							
M30M	**Minto, Yukon**	**88.63**	**18**	P		**P**	**14 57 48.2**	**+1.0**
M30M				IAmb		IAmb	14 58 19.6	
	comp=Z,6.7nm,1.4s							
I26K	**Coal Creek Min**	**89.28**	**14**	P		**P**	**14 57 51.2**	**+1.1**
I26K				IAmb		IAmb	14 57 55.5	
	comp=Z,2.4nm,1.1s							
MKAR	**Makanchi Array**	**111.50**	**313**	PKiKP		**PKiKP**	**15 03 24.2**	**-1.6**
	comp=Z,0.3nm,0.6s,baz=282,slow=1.1,SNR=4.2							
HFS	**Hagfors**	**139.46**	**351**	PKhKP	PKPpre		15 04 09.4	
	comp=Z,1.5nm,0.8s,baz=270,slow=1.4,SNR=1.6							
AKASG	**Malin Array Be**	**143.14**	**332**	PKhKP	PKPpre		15 04 21.5	
	comp=Z,1.6nm,0.4s,baz=42,slow=4.5,SNR=14							
EKA	**Eskdalemuir Ar**	**144.78**	**6**	PKP		**PKPdf**	**15 04 27.5**	**-0.5**
	comp=Z,0.5nm,0.4s,baz=328,slow=3.0,SNR=4.2							
BRTR	**Keskin Array B**	**147.15**	**313**	PKPbc		**PKPdf**	**15 04 33.7**	**+1.0**
	comp=Z,1.9nm,0.4s,baz=116,slow=3.4,SNR=6.2							
CLL	**Collm**	**148.02**	**348**	*i* PKPbc		**PKPbc**	**15 04 37.6**	**+0.3**
	comp=Z,7.0nm,0.7s							
MMAI	**Mount Meron Ar**	**148.23**	**300**	PKPbc		**PKPbc**	**15 04 38.8**	**+0.2**
	comp=Z,2.0nm,0.5s,baz=86,slow=4.5,SNR=6.6							
MLR	**Muntele Rosu**	**148.39**	**328**	PKPbc		**PKPbc**	**15 04 38.6**	**0.0**
	comp=Z,1.7nm,0.5s,baz=214,slow=8.6,SNR=3.7							
GERES	**GERESS Array B**	**150.19**	**345**	PKPbc		**PKPbc**	**15 04 42.6**	**-0.2**
	comp=Z,1.2nm,0.7s,baz=29,slow=3.0,SNR=9.3							

*IDC **20** 14:59:32.7±1.2, 36°.51N×30°.29E, h0km, mb3.6/5, mbtmp3.5/8, ML3.2/3, MS3.0/2, Error ellipse: s-maj=37.7km s-min=18.7km az=139.0*
*DDA **20** 14:59:34.6±0.0, 36°.61N×30°.14E, h25km±2km, ML3.1*
*ISK **20** 14:59:34.8, 36°.63N×30°.09E, h3km, ML3.2/24*
*NIC **20** 14:59:34.4±0.0, 36°.60N×30°.14E, h0km±3km, Ml3.4/5*

ISC 20 14:59:34.8±1.0, 36°.58N±0°.02×30°.16E±0°.02, h13km±7km, n84, σ1ˢ41/107, mb3.6/5, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ELL	**Elmali**	**0.26**	**310**	PG		**Pg**	**14 59 39.5**	**-0.8**
ELL	**Elmali**	**0.26**	**310**	P		**Pg**	**14 59 39.6**	**-0.8**
ELL				S		**Sg**	**14 59 44.2**	**+0.2**
AKUM	**Antalya-Kumluc**	**0.30**	**150**	P		**Pb**	**14 59 42.3**	**+0.3**
AKUM				S		**Sb**	**14 59 48.7**	**+1.8**
AKUM				*i* AML		AML	14 59 50.0	
	comp=N,2μm,0.3s							
AKUM				*i* AML		AML	14 59 54.0	
	comp=E,2μm,0.4s							
KEMT	**Kemer-ANTALYA**	**0.32**	**86**	PG		**Pb**	**14 59 42.5**	**+0.1**
KEMT				SG		**Sb**	**14 59 49.5**	**+1.9**
DEMR	**Demre-Antalya**	**0.40**	**210**	PG		**Pb**	**14 59 43.9**	**+0.2**
KORT	**Korkueli**	**0.45**	**20**	PG		**Pg**	**14 59 42.9**	**-0.8**
KORT	**Korkueli**	**0.45**	**20**	P		**Pg**	**14 59 42.9**	**-0.8**
KORT				S		**Sb**	**14 59 51.2**	**-0.1**
KORT				*i* AML		AML	14 59 54.0	
	comp=N,3μm,0.3s							
KORT				*i* AML		AML	14 59 55.0	
	comp=E,3μm,0.6s							
ANTB	**Antalya**	**0.51**	**51**	PG		**Pb**	**14 59 45.8**	**+0.2**
AKAS	**Kas**	**0.56**	**232**	PG		**Pb**	**14 59 46.5**	**-0.1**
AKAS	**Kas**	**0.56**	**232**	P		**Pg**	**14 59 46.0**	**+0.2**
AKAS

SHUT	**Suhut-Afyon**	**1.99**	**9**	PN	**Pn**	**15 00 09.8**	**+1.5**
MLSB	**Milas**	**2.03**	**291**	PN	**Pn**	**15 00 10.2**	**+1.4**
AYDN	**Tasoluk**	**2.11**	**301**	P	**Pn**	**15 00 11.4**	**+1.5**
AYDN				S	**Sn**	**15 00 38.4**	**+2.2**
AYDN				*i* AML	AML	15 00 48.0	
	comp=N,108nm,0.6s						
KMER	**Konya-Meram**	**2.13**	**56**	P	**Pn**	**15 00 11.6**	**+1.4**
AFYO	**Afyonkarahisar**	**2.21**	**3**	P	**Pb**	**15 00 14.7**	**+0.1**
AFYO				*i* AML	AML	15 00 58.0	
	comp=E,148nm,0.8s						
AFYO				*i* AML	AML	15 00 59.0	
	comp=N,142nm,0.7s						
KONT	**Konya--Tatoy**	**2.23**	**52**	PN	**Pb**	**15 00 14.1**	**-0.8**
KONT	**Konya--Tatoy**	**2.23**	**52**	P	**Pb**	**15 00 14.8**	**-0.1**
BDRM	**Kayabasi**	**2.23**	**283**	P	**Pn**	**15 00 13.2**	**+1.7**
KULA	**Kula-Manisa**	**2.27**	**329**	PN	**Pn**	**15 00 12.9**	**+0.9**
USAK	**Uak-Merkez**	**2.31**	**337**	P	**Pn**	**15 00 14.1**	**+1.5**
USAK				S	**Sn**	**15 00 41.8**	**+0.8**
USAK				*i* AML	AML	15 00 45.0	
	comp=E,140nm,0.6s						
USAK				*i* AML	AML	15 00 45.0	
	comp=N,120nm,0.7s						
KKBE	**Karaman, Kazim**	**2.32**	**73**	P	**Pn**	**15 00 15.6**	**+2.7**
BODT	**Bodrum**	**2.33**	**283**	PN	**Pn**	**15 00 14.4**	**+1.5**
AKMS	**Akamas**	**2.36**	**131**	P	**Pn**	**15 00 15.5**	**+2.3**
AKMS				AML	AML	15 00 59.7	
	0.6nm,0.6s						
AKMS				AML	AML	15 01 04.6	
	0.7nm,0.8s						
LADK	**Ladik-KONYA**	**2.39**	**47**	PN	**Pn**	**15 00 16.3**	**+2.5**
NIS1	**Nisyros Isl.**	**2.40**	**271**	PN	**Pn**	**15 00 15.4**	**+1.6**
TEKE	**Tekeli-Mersin**	**2.43**	**100**	PN	**Pb**	**15 00 17.6**	**-0.7**
ALFC	**Alefka**	**2.44**	**125**	P	**Pn**	**15 00 15.8**	**+1.3**
ALFC				AML	AML	15 00 55.6	
	0.4nm,0.5s						
ALFC				AML	AML	15 01 16.9	
	0.5nm,0.8s						
BERE	**Bereket-Mersin**	**2.48**	**94**	PN	**Pb**	**15 00 18.4**	**-1.0**
KDHN	**Kadinhani**	**2.48**	**38**	P	**Pn**	**15 00 16.4**	**+1.4**
DDIM	**Aydin, Didim**	**2.49**	**291**	P	**Pg**	**15 00 20.8**	**-1.7**
DDIM				*i* AML	AML	15 00 58.0	
	comp=N,80nm,0.6s						
GDZ	**Gediz**	**2.56**	**348**	P	**Pn**	**15 00 16.4**	**+0.2**
GDZ				S	**Sn**	**15 00 45.7**	**-1.6**
KARP	**Karpathos**	**2.64**	**248**	PN	**Pn**	**15 00 18.8**	**+1.7**
KARP	**Karpathos**	**2.64**	**248**	P	**Pn**	**15 00 18.3**	**+1.2**
KARP				AML	AML	15 00 51.7	
	0.3nm,0.8s						
KARP				AML	AML	15 00 51.7	
	0.3nm,0.8s						
KARP				S	**Sn**	**15 00 52.0**	**+3.0**
KARP				AML	AML	15 00 55.5	
	0.3nm,0.9s						
KARP				AML	AML	15 00 55.5	
	0.3nm,0.9s						
SIMA	**Simav-Kutahya**	**2.66**	**340**	PN	**Pn**	**15 00 19.0**	**+1.5**
KIZT	**Kizilcal**	**2.67**	**30**	PN	**Pn**	**15 00 19.9**	**+2.2**
DEMI	**Demirci**	**2.71**	**336**	P	**Pn**	**15 00 18.6**	**+0.5**
SZAC	**Souni**	**2.87**	**129**	P	**Pn**	**15 00 22.1**	**+1.7**
SZAC				AML	AML	15 01 20.6	
	0.8nm,0.8s						
SZAC				AML	AML	15 01 20.9	
	0.5nm,0.9s						
ANDZ	**Kutahya, Merke**	**2.93**	**356**	P	**Pn**	**15 00 22.4**	**+1.2**
SGAZ	**Eskisehir, Sey**	**2.99**	**10**	P	**Pn**	**15 00 23.2**	**+1.1**
CSS	**Mathiatis**	**3.05**	**121**	P	**Pn**	**15 00 23.5**	**+0.8**
ASGA	**Asgata**	**3.09**	**125**	P	**Pn**	**15 00 25.9**	**+2.6**
OSC1	**CSNet OBS 1**	**3.21**	**163**	P	**Pn**	**15 00 27.0**	**+2.1**
MVOU	**Mavrovouni**	**3.23**	**118**	P	**Pn**	**15 00 26.2**	**+1.0**
BRTR	**Keskin Array B**	**4.17**	**40**	Pn	**Pn**	**15 00 40.2**	**+1.9**
	0.9nm,0.3s,baz=221,slow=15,SNR=16						
BRTR				Sn	**Sn**	**15 01 29.1**	**+2.1**
	0.6nm,0.3s,baz=215,slow=25,SNR=5.3						
	2.4nm,0.4s						
IDI	**Anoyia**	**4.46**	**255**	Pn	**Pn**	**15 00 42.8**	**+0.6**
	1.5nm,0.3s,baz=73,slow=16,SNR=16						
IDI				Sn	**Sn**	**15 01 32.4**	**-1.7**
	1.1nm,0.3s,baz=92,slow=22,SNR=1.9						
	3.4nm,0.3s						
MMAI	**Mount Meron Ar**	**5.59**	**128**	Pn	**Pn**	**15 00 58.6**	**+0.8**
	2.6nm,0.3s,baz=310,slow=12,SNR=10.0						
MMAI				Sn	**Sn**	**15 02 00.3**	**-1.7**
	1.1nm,0.3s,baz=307,slow=27,SNR=1.6						
ASF	**Jabal al Asfar**	**7.10**	**126**	Pn	Pn	15 01 24.8	+6.3
	0.2nm,0.3s,baz=167,slow=23,SNR=1.2						
ASF				Sn	**Sn**	**15 02 38.5**	**-0.6**
	0.1nm,0.3s,baz=175,slow=20,SNR=1.5						
EIL	**Elat**	**7.98**	**148**	Pn	**Pn**	**15 01 30.1**	**-0.3**
	0.4nm,0.3s,baz=325,slow=2.4,SNR=8.4						
EIL				Sn	**Sn**	**15 02 54.9**	**-5.8**
	0.2nm,0.3s,baz=24,slow=21,SNR=1.1						
	2.1nm,0.4s						
AKASG	**Malin Array Be**	**14.13**	**358**	LR	LR	15 09 51.5	
	comp=Z,46nm,18.6s,baz=247,slow=44						
KEST	**Kesra**	**16.83**	**273**	LR	LR	15 11 07.3	
	comp=Z,62nm,19.2s,baz=226,slow=41						
TORD	**Torodi Ar. Bea**	**34.57**	**235**	P	**P**	**15 06 23.9**	**+0.5**
	0.7nm,0.9s,baz=27,slow=9.8,SNR=2.6						
	0.7nm,0.9s						
MKAR	**Makanchi Array**	**39.59**	**58**	P	**P**	**15 07 05.1**	**-0.8**
	0.7nm,0.6s,baz=282,slow=6.9,SNR=7.5						
	0.7nm,0.6s						
ZALV	**Zalesovo Beam**	**41.08**	**47**	P	**P**	**15 07 17.2**	**-0.7**
	0.9nm,0.6s,baz=262,slow=7.6,SNR=3.3						
	0.9nm,0.6s						
SONM	**Songino Array**	**55.42**	**53**	P	**P**	**15 09 08.4**	**-0.6**
	0.2nm,0.4s,baz=302,slow=6.6,SNR=1.9						
	0.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**62.41**	**87**	P	**P**	**15 09 56.0**	**-1.8**
	0.3nm,0.6s,baz=288,slow=7.6,SNR=4.4						
	0.3nm,0.6s						

DJA 20 15:08:35.2±0.7, 9°S±3°×117°4E±°, h29km±7km, M3.8/20, mb4.0/6, MLv3.8/20, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAGI	**Jajag, Banyuwa**	**0.93**	**9**	P	Pn	15 08 51.3	-1.0
JAGI				S	Sn	15 09 03.4	-1.2
GMJI	**Gumukmas**	**1.24**	**334**	P	Pn	15 08 56.4	-0.2
GMJI				S	Sn	15 09 11.9	-0.4
IGBI	**Denpasar**	**1.27**	**63**	P	Pn	15 08 56.1	-0.8
IGBI				S	Sn	15 09 11.0	-2.0
DNP	**Denpasar**	**1.39**	**59**	P	Pb	15 09 01.1	+0.6
ABJI	**Asem Bagus**	**1.60**	**8**	P	Pb	15 09 03.4	-0.7
ABJI				S	Sb	15 09 23.1	-0.9
BLJI	**Banyuglugur**	**1.68**	**346**	P	Pb	15 09 04.3	-1.2
BLJI				S	Sn	15 09 24.3	+1.0
SRBI	**Singaraja**	**1.77**	**43**	P	Pn	15 09 04.3	+0.5
SRBI				S	Sn	15 09 25.8	+0.5
KMMI	**Kalianget**	**2.33**	**359**	P	Pn	15 09 12.4	+0.9
PWJI	**Pagerwojo**	**2.56**	**302**	P	Pn	15 09 14.5	-0.3
PWJI				S	Sn	15 09 43.3	-1.7
GRJI	**Gresik**	**2.88**	**328**	P	Pn	15 09 22.0	+2.8
GRJI				S	Sn	15 09 53.8	+0.8
PCJI	**Pacitan**	**3.03**	**293**	P	Pn	15 09 20.8	-0.5
PCJI				S	Sn	15 09 58.5	+1.9
TBJI	**Tambak Boyo**	**3.33**	**320**	P	Pn	15 09 23.2	-2.1
WOJI	**Wonogiri, Jawa**	**3.41**	**297**	P	Pn	15 09 25.5	-1.0
UGM	**Wanagama**	**3.74**	**293**	P	Pn	15 09 30.8	-0.2
UGM				S	Sn	15 10 12.6	-1.5
BWJI	**Bawean**	**3.76**	**339**	P	Pn	15 09 31.3	0.0
BWJI				S	Sn	15 10 15.4	+0.8
PLAI	**Plampang**	**3.77**	**82**	P	Pn	15 09 31.9	+0.5
PLAI				S	Sn	15 10 16.7	+1.8
WBSI	**Waikabubak, Su**	**5.32**	**93**	P	Pn	15 09 52.3	-0.5
	0.2nm39nm,1.3s						
CMJI	**Cimerak**	**5.72**	**286**	P	Pn	15 09 59.2	+1.0
	0.1nm20nm,0.9s						
BSSI	**Bau Bau, Buton**	**7.20**	**64**	P	Pn	15 10 18.2	-0.3
	0.0nm5.4nm,1.7s						
BKSI	**Bulukumba**	**7.29**	**57**	P	Pn	15 10 20.3	+0.4
	0.0nm5.7nm,0.6s						
EDFI	**Ende, Flores**	**7.62**	**86**	P	Pn	15 10 22.8	-1.7

*NIED **20** 15:10:08.6, 41°.93N×140°.99E, h10km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.24; $M_{\theta\theta}$0.08; $M_{\phi\phi}$-1.32; $M_{r\theta}$0.09; $M_{\theta\phi}$0.34; $M_{\phi r}$-0.15; Fault plane solution: $M_0$1.33000×10^{15} NP1: ϕ_s350.00000°, δ42.00000°, λ94.00000°. NP2: ϕ_s164.00000°, δ49.00000°, λ86.00000°.*
*NEIC **20** 15:10:09.0±1.9, 41°.99N±0°.04×141°.05E±0°.08, h13km±3km, mb4.6/37 Error ellipse: s-maj=8.9km s-min=5.1km az=108.0*
*JMA **20** 15:10:08.6±0.0, 41°.9N±0°.1×141°.0E±0°.3, h10km, MD4.2/40, MV4.0/40, UCHIURA BAY REGION*
JMA Felt IV J1 at UCHIURA BAY REGION .
*MOS **20** 15:10:11.0±1.4, 41°.95N×140°.96E, h48km, mb4.6/17, Error ellipse: s-maj=7.6km s-min=5.8km az=80.3*
*IDC **20** 15:10:14.1±2.9, 41°.92N×140°.83E, h57km±26km, mb3.7/16, mbtmp3.9/19, ML2.9/3, MS3.2/14, Error ellipse: s-maj=19.6km s-min=14.7km az=74.0*
ISC 20 15:10:07.5±1.1, 42°.01N±0°.04×141°.01E±0°.02, h5km±7km, n187, σ1§68/174, mb4.4/50, MS3.1/10, 10C-14D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKB	**Kayabe**	**0.13**	**171**	P	**Pg**	**15 10 10.5**	**+0.4**
JKB				S	**Sg**	**15 10 11.6**	**-0.2**
JKB	**Kayabe**	**0.13**	**171**	A	A	15 10 10.5	
	comp=E,745nm,0.6s,comp=E,472nm,0.4s						
JNB	**Noboribetsu**	**0.46**	**3**	⇓P	**Pn**	**15 10 19.1**	**-1.6**
JNB				⇓S	**Sb**	**15 10 26.2**	**+1.1**
JYM2	**Yakumo 2**	**0.48**	**283**	⇓P	**Pb**	**15 10 18.2**	**-0.3**
JYM2				⇓S	**Sb**	**15 10 25.4**	**-0.5**
JYM2	**Yakumo 2**	**0.48**	**283**	A	A	15 10 18.2	
	comp=E,15nm,4.0s,comp=E,11nm,2.3s						
JOT	**Ohata**	**0.63**	**177**	P	**Pg**	**15 10 19.0**	**-0.6**
JOT				S	**Sg**	**15 10 25.9**	**-1.9**
JOT	**Ohata**	**0.63**	**177**	A	A	15 10 19.0	
	comp=E,7.0nm,0.9s,comp=E,5.0nm,0.6s						
JSR	**Shiriuchi**	**0.65**	**222**	⇓P	**Pg**	**15 10 19.9**	**-0.1**
JSR				⇓S	**Sg**	**15 10 27.6**	**-0.8**
JSR	**Shiriuchi**	**0.65**	**222**	A	A	15 10 19.9	
	comp=E,15nm,0.3s,comp=E,11nm,0.8s						
JAHD	**Aomorihigashid**	**0.79**	**161**	P	**Pg**	**15 10 22.1**	**-0.5**
JAHD				S	**Sg**	**15 10 31.7**	**-1.1**
JAHD	**Aomorihigashid**	**0.79**	**161**	A	A	15 10 22.1	
	comp=E,16nm,0.5s,comp=E,12nm,1.0s						
JEW	**Eniwo**	**0.89**	**22**		**Pn**	**15 10 26.6**	**-0.1**
JEW	**Eniwo**	**0.89**	**22**	P	**Pn**	**15 10 27.6**	**+0.9**
JOMM	**Oshimamatsumae**	**0.89**	**237**	⇓P	**Pg**	**15 10 24.0**	**-0.6**
JOMM				⇓S	**Sg**	**15 10 35.2**	**-1.0**
JOMM	**Oshimamatsumae**	**0.89**	**237**	A	A	15 10 24.0	
	comp=E,5.0nm,0.8s,comp=E,4.0nm,1.1s						
JIAM	**Iburiatsuma**	**0.91**	**48**	P	**Pn**	**15 10 27.7**	**+0.7**
JIAM	**Iburiatsuma**	**0.91**	**48**	A	A	15 10 27.7	
	comp=E,17nm,0.8s,comp=E,19nm,1.4s						
JHST	**Hiyamasetana**	**0.93**	**296**	⇓P	**Pn**	**15 10 26.8**	**-0.5**
JHST				⇓S	**Sn**	**15 10 40.2**	**-0.8**
JHST	**Hiyamasetana**	**0.93**	**296**	A	A	15 10 26.8	
	comp=N,8.0nm,0.6s						
JSH	**Shimam**	**0.95**	**312**	P	**Pn**	**15 10 27.1**	**-0.4**
JSH				S	**Sn**	**15 10 40.7**	**-0.8**
JSH	**Shimam**	**0.95**	**312**	A	A	15 10 27.1	
	comp=N,3.0nm,0.6s						
JARK	**Aomorirokkasho**	**1.04**	**165**	P	**Pg**	**15 10 26.5**	**-0.9**
JARK				S	**Sg**	**15 10 39.0**	**-1.9**
JSHD	**Hidakashinhida**	**1.16**	**69**	A	A	15 10 30.8	
	comp=E,21nm,1.0s,comp=E,23nm,1.6s						
JTM	**Tenmabayashi**	**1.23**	**178**	Pn	**Pg**	**15 10 29.5**	**-1.5**
JBT2	**Biratori 2**	**1.26**	**52**	A	A	15 10 32.9	
	comp=N,10.0nm,0.7s						
JHHS	**Hirosakihyakuz**	**1.45**	**200**	A	A	15 10 33.4	
	comp=E,17nm,0.9s,comp=E,16nm,0.9s						
ERM	**Erimo**	**1.60**	**89**	Pn	**Pb**	**15 10 36.8**	**-0.8**
ERM	**Erimo**	**1.60**	**89**	P	**Pb**	**15 10 36.8**	**-0.8**
JIW	**Iwasaki**	**1.61**	**208**	A	A	15 10 36.0	
	comp=E,9.0nm,0.5s,comp=E,8.0nm,0.8s						
ASAJ	**Asahikawa**	**2.40**	**28**	P	**Pb**	**15 10 49.3**	**-1.9**
JKA	**Kamikawa-asahi**	**2.40**	**29**		**Pb**	**15 10 49.3**	**-2.0**
NMR	**Nemuro--Hokkai**	**3.74**	**67**	*e*P	**Pn**	**15 11 06.9**	**+1.1**
NMR				*i* S	**Sn**	**15 11 51.3**	**+1.2**
RUSJ	**Misakicho**	**3.75**	**55**	*e*P	**Pb**	**15 11 12.6**	**-1.5**
RUSJ				*e*S	**Sb**	**15 12 00.1**	**+0.3**
YUK	**Yuzh-Kuril'sk**	**4.09**	**59**	*d* iP	**Pb**	**15 11 15.4**	**-4.6**
YUK				*e*S	**Sb**	**15 12 05.0**	**-4.8**
YUK				pmax	pmax		
	comp=N,19nm,0.2s						
YUK				pmax	pmax		
	comp=Z,70nm,0.2s						
YUK				smax	smax		
	comp=N,513nm,0.6s						
YUK				smax	smax		
	comp=E,365nm,0.6s						
JMM	**Marumori**	**4.15**	**182**		**Pn**	**15 11 13.3**	**+1.9**
JSD	**Sado**	**4.50**	**209**	Pn	**Pn**	**15 11 16.7**	**+0.4**
SHO	**Shikotan**	**4.66**	**65**	*c* iP	**Pn**	**15 11 20.7**	**+2.2**
SHO				*i* S	**Sn**	**15 12 13.1**	**+0.1**
SHO				pmax	pmax		
	comp=Z,48nm,0.5s						
SHO				pmax	pmax		
	comp=N,22nm,0.3s						
SHO				pmax	pmax		
	comp=E,18nm,0.2s						
SHO				smax	smax		
	comp=N,218nm,0.6s						
SHO				smax	smax		
	comp=E,298nm,0.6s						
YSS	**Yuzh-Sakhalins**	**5.09**	**14**		**Pn**	**15 11 28.3**	**+3.8**
YSS	**Yuzh-Sakhalins**	**5.09**	**14**	*e*P	Pb	15 11 30.5	-6.6
YSS				*e*S	**Sn**	**15 12 28.3**	**+4.6**
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
YSS				smax	smax		
	comp=E,10.0nm,0.8s						
YSS				MLR	MLR		
	comp=Z,200nm,13.0s						
JYT	**Yasato**	**5.81**	**186**	Pn	**Pn**	**15 11 34.3**	**0.0**
MJB9	**Matsu-Tunnel**	**5.88**	**203**	Pn	**Pn**	**15 11 36.0**	**+0.8**
MAJO	**Matsushiro**	**5.88**	**203**		**Pn**	**15 11 36.1**	**+0.8**
MAJO	**Matsushiro**	**5.88**	**203**	*i* P	**Pn**	**15 11 38.4**	**+3.1**
MJAR	**Matsushiro Arr**	**5.88**	**203**	P	**Pn**	**15 11 37.4**	**+2.1**
	comp=Z,0.4nm,0.3s,baz=34,slow=16,SNR=15						
MJAR				LR	LR	15 13 58.3	
	comp=Z,101nm,19.1s,baz=12,slow=39						
	comp=Z,3.1nm,0.5s						
MJAR	**Matsushiro Arr**	**5.88**	**203**	Pn	**Pn**	**15 11 35.7**	**+0.4**
KUR	**Kuril'sk**	**5.93**	**55**	*e*P	Pn	15 11 41.2	+5.3
KUR				*e*S	**Sn**	**15 12 52.4**	**+8.2**
KUR				pmax	pmax		
	comp=Z,57nm,0.7s						
KUR				pmax	pmax		
	comp=E,34nm,0.6s						
KUR				pmax	pmax		
	comp=N,27nm,1.0s						
KUR				smax	smax		
	comp=N,57nm,0.6s						
KUR				smax	smax		
	comp=E,17nm,1.0s						
KUR				MLR	MLR		
	comp=Z,400nm,8.0s						
USA0B	**Ussuriysk Arra**	**6.95**	**291**	Pn	**Pn**	**15 11 51.6**	**+1.6**
USA0B	**Ussuriysk Arra**	**6.95**	**291**	*i* P	**Pn**	**15 11 52.0**	**+2.0**
USRK	**Ussuriysk Ar.**	**6.95**	**291**	P	**Pn**	**15 11 51.6**	**+1.7**
	comp=Z,1.2nm,0.3s,baz=94,slow=14,SNR=12						
	comp=Z,4.0nm,0.5s						
USRK	**Ussuriysk Ar.**	**6.95**	**291**	Pn	**Pn**	**15 11 52.0**	**+2.1**
USRK	**Ussuriysk Ar.**	**6.95**	**291**	P	**Pn**	**15 11 52.0**	**+2.1**
JGF	**Kuroka**	**7.01**	**205**	Pn	**Pn**	**15 11 53.1**	**+2.3**
INU	**Inuyama**	**7.35**	**206**	Pn	**Pn**	**15 11 57.4**	**+2.0**
MDJ	**Mudanjiang**	**8.72**	**291**	P	**Pn**	**15 12 14.8**	**+0.6**
MDJ				pP		15 12 18.9	
MDJ				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,51nm,4.2s						
MDJ				LR	LR		
	comp=N,210nm,17.3s						
MDJ				LR	LR		
	comp=E,67nm,16.3s						
JHJ2	**Mitsune**	**8.94**	**186**	Pn	**Pn**	**15 12 18.7**	**+1.5**
JHS	**Saijyo**	**9.34**	**224**	Pn	**Pn**	**15 12 25.3**	**+2.5**
KLR	**Kul'dur**	**9.70**	**321**	P	**Pn**	**15 12 30.8**	**+3.2**
	comp=E,0.2nm,0.3s,baz=125,slow=16,SNR=2.6						
KLR				LR	LR	15 16 25.1	
	comp=E,76nm,18.1s,baz=133,slow=38						
	comp=E,0.5nm,0.3s						
KLR	**Kul'dur**	**9.70**	**321**	*c*eP	**Pn**	**15 12 32.1**	**+4.5**
KLR				pmax	pmax		
	comp=Z,5.0nm,1.3s						
SEHB	**SEOHWA**	**10.46**	**253**	Pn	**Pn**	**15 12 41.3**	**+3.2**
KSRS	**Korea Array**	**11.05**	**250**	P	**Pn**	**15 12 50.8**	**+4.6**
	comp=Z,6.5nm,0.5s,baz=64,slow=14,SNR=29						
KSRS				S	**Sn**	**15 14 52.9**	**+2.7**
	comp=Z,5.1nm,0.6s,baz=58,slow=24,SNR=12						
KSRS				LR	LR	15 16 33.6	
	comp=Z,76nm,20.5s,baz=60,slow=35						
KS19	**Wonju Array Si**	**11.07**	**250**		**Pn**	**15 12 47.8**	**+1.3**
KSAR	**Wonju Array Be**	**11.09**	**250**		**Pn**	**15 12 48.0**	**+1.4**
KSAR	**Wonju Array Be**	**11.09**	**250**	P	**Pn**	**15 12 48.0**	**+1.4**
KSCHJ	**Chungju**	**11.30**	**247**		**Pn**	**15 12 51.4**	**+1.7**
TJN	**Taejon**	**11.98**	**246**		**Pn**	**15 13 01.1**	**+2.2**
TJN	**Taejon**	**11.98**	**246**	P	**Pn**	**15 13 01.1**	**+2.2**
NAWB	**Namwon**	**12.49**	**243**	Pn	**Pn**	**15 13 07.6**	**+1.7**
ZEA	**Zeya**	**14.89**	**327**	*e*P	**P**	**15 13 41.9**	**-2.5**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ZEA				MLR	MLR		
	comp=Z,100nm,9.0s						
PEA0B	**Petropavlovsk-**	**15.77**	**40**	Pn	**Pn**	**15 13 50.6**	**+0.5**
PEA0B	**Petropavlovsk-**	**15.77**	**40**	P	**Pn**	**15 13 50.7**	**+0.5**
PEA0B				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PETK	**Petropavlovsk-**	**15.77**	**40**	P	**Pn**	**15 13 50.1**	**-0.1**
	comp=Z,1.6nm,0.6s,baz=207,slow=9.5,SNR=11						
PETK				LR	LR	15 20 15.1	
	comp=Z,75nm,18.2s,baz=216,slow=38						
TIA	**Tai'an**	**19.39**	**261**	*e*P	**P**	**15 14 33.8**	**-0.4**
TIA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HNS	**HongShan**	**20.72**	**266**	⇓P	Pn	15 14 54.3	+3.3
HNS				pmax	pmax		
	comp=Z,8.0nm,1.1s						
YAK	**Yakutsk**	**21.16**	**345**	*ce*P	**P**	**15 14 51.9**	**-1.3**
YAK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
SEY	**Seymchan**	**22.00**	**14**	P	**P**	**15 15 01.6**	**-0.7**
	comp=Z,2.6nm,0.7s,baz=188,slow=8.2,SNR=9.9						
SEY				LR	LR	15 25 58.7	
	comp=Z,40nm,18.2s,baz=226,slow=43						
SEY	**Seymchan**	**22.00**	**14**	⇑ *i* P	**P**	**15 15 02.2**	**-0.1**
SEY				pmax	pmax		
	comp=Z,10.0nm,2.0s						
HHC	**Hu-ho-hao-te**	**22.06**	**277**	*e*P	**P**	**15 15 03.0**	**-0.2**
HHC				pmax	pmax		
	comp=Z,37nm,1.1s						
HHC				pmax	pmax		
	comp=Z,100nm,4.5s						
ULN	**Ulaanbaatar**	**24.60**	**295**	*ce*P	**P**	**15 15 26.3**	**-2.4**
ULN				pmax	pmax		
	comp=Z,2.0nm,1.1s						
SHEM	**Shemya Is, Ala**	**24.63**	**53**	LR	LR	15 25 40.8	
	comp=Z,32nm,20.6s,baz=105,slow=37						
SONM	**Songino Array**	**25.04**	**295**	P	**P**	**15 15 32.4**	**-0.2**
	comp=Z,1.4nm,0.8s,baz=94,slow=8.7,SNR=9.0						
SONM				LR	LR	15 24 49.8	
	comp=Z,50nm,18.9s,baz=56,slow=35						
	comp=Z,1.4nm,0.8s						
TIXI	**Tiksi**	**30.32**	**352**	P	**P**	**15 16 17.3**	**-2.1**
TIXI	**Tiksi**	**30.32**	**352**	⇓ *i* P	**P**	**15 16 17.6**	**-1.8**
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**31.20**	**127**	T	T	15 48 44.5	
	baz=322,slow=75,SNR=89						
H11N1	**WAKE ISLAND Hy**	**31.21**	**127**	T	T	15 48 48.5	
	baz=322,slow=75,SNR=98						
H11N3	**WAKE ISLAND Hy**	**31.22**	**127**	T	T	15 48 49.1	
	baz=322,slow=75,SNR=75						
H11S1	**WAKE ISLAND Hy**	**32.05**	**129**	T	T	15 49 52.7	
	baz=323,slow=76,SNR=145						
H11S3	**WAKE ISLAND Hy**	**32.05**	**129**	T	T	15 49 53.8	
	baz=323,slow=76,SNR=130						
H11S2	**WAKE ISLAND Hy**	**32.06**	**129**	T	T	15 49 52.2	
	baz=323,slow=76,SNR=106						
PZH	**PanZhiHua**	**35.61**	**257**	P	**P**	**15 17 07.6**	**+1.3**
PZH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
PZH				pmax	pmax		
	comp=Z,100nm,4.9s						
GOMU	**GeErMu**	**35.97**	**276**	P	**P**	**15 17 10.3**	**+0.8**
GOMU				pP	sP	15 17 13.6	+2.0
GOMU				sP	pP	15 17 17.3	+6.3
GOMU				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GOMU				pmax	pmax		
	comp=Z,37nm,7.6s						
ZAA0	**Zalesovo Array**	**38.47**	**308**	P	**P**	**15 17 29.8**	**-0.3**
ZALV	**Zalesovo Beam**	**38.47**	**308**	P	**P**	**15 17 29.8**	**-0.3**
	comp=Z,1.4nm,0.7s,baz=90,slow=8.9,SNR=6.1						
	comp=Z,1.4nm,0.7s						
ZALV	**Zalesovo Beam**	**38.47**	**308**	P	**P**	**15 17 29.6**	**-0.5**
ZALV	**Zalesovo Beam**	**38.47**	**308**	P	**P**	**15 17 29.6**	**-0.5**
WMQ	**Urumqi**	**38.52**	**291**	*e*P	**P**	**15 17 32.9**	**+2.1**
WMQ				pmax	pmax		
	comp=Z,19nm,0.8s						
MK31	**Makanchi Array**	**41.38**	**297**	P	**P**	**15 17 53.7**	**-0.8**
MK31	**Makanchi Array**	**41.38**	**297**	*i* P	**P**	**15 17 54.0**	**-0.4**
MKAR	**Makanchi Array**	**41.38**	**297**	P	**P**	**15 17 54.3**

comp=Z,6.7nm,21.2s,baz=116,slow=36
SVE Sverdlovsk 51.28 316 *e*P **P** 15 19 13.0 +0.9
SVE pmax pmax
comp=Z,10.0nm,0.9s
ARU Arti 52.49 316 P **P** 15 19 21.0 -0.1
ARU IAmb IAmb 15 19 22.4
comp=Z,8.2nm,1.2s
ARU Arti 52.49 316 *d i*P **P** 15 19 21.7 +0.6
ARU *PP sP 15 19 36.2 +13
ARU 15 21 15.7
ARU S **S** 15 26 46.1 -1.7
ARU SS **SS** 15 30 18.8 -6.4
ARU pmax pmax
comp=Z,13nm,1.8s
C36M Paulatuk 53.08 26 P **P** 15 19 25.6 +0.4
C36M IAmb IAmb 15 19 26.8
comp=Z,5.1nm,1.1s
CHGR Chuyangaron 53.37 292 P **P** 15 19 27.6 -0.4
CHGR Chuyangaron 53.37 292 P **P** 15 19 27.6 -0.4
CHGR pmax pmax
comp=Z,20nm,1.0s
ABKAR Akbulak array 54.58 307 P **P** 15 19 36.4 -0.2
SPB2 Spitsbergen Ar 55.59 348 P **P** 15 19 44.0 +0.5
SPITS Spitsbergen Ar 55.59 348 P **P** 15 19 44.0 +0.5
SPITS pmax pmax
comp=Z,28nm,1.4s
KIRV Kirov 56.14 321 *e*P **P** 15 19 46.6 -1.0
RES Resolute Bay 57.87 15 P **P** 15 19 59.4 -0.3
RES IAmb IAmb 15 20 00.8
comp=Z,5.5nm,0.9s
RES Resolute Bay 57.87 15 P **P** 15 19 59.4 -0.3
RES pmax pmax
comp=Z,6.0nm,0.9s
KNRA Kununurra 58.50 194 P **P** 15 20 04.1 -0.6
KEV Kevo 58.69 338 P **P** 15 20 05.7 +0.2
KEV Kevo 58.69 338 P **P** 15 20 05.7 +0.2
KEV pmax pmax
comp=Z,15nm,1.3s
ARCES ARCESS Array B 59.24 338 P **P** 15 20 09.1 -0.2
comp=Z,1.4nm,0.6s,baz=61,slow=13,SNR=11
comp=Z,1.4nm,0.6s
ARCES ARCESS Array B 59.24 338 P **P** 15 20 09.5 +0.1
ARCES IAmb IAmb 15 20 14.1
comp=Z,8.8nm,1.3s
YKA Yellowknife Ar 59.70 31 P **P** 15 20 14.0 +1.5
comp=Z,0.9nm,0.7s,baz=302,slow=6.3,SNR=2.6
comp=Z,0.9nm,0.7s
WB0 Warramunga Arr 61.77 187 P **P** 15 20 25.8 -1.3
WRAB Tennant Creek 61.94 187 P **P** 15 20 26.9 -1.3
WRAB IAmb IAmb 15 20 32.1
comp=Z,9.9nm,1.4s
WRAB Tennant Creek 61.94 187 P **P** 15 20 26.9 -1.3
WRAB pmax pmax
comp=Z,10.0nm,1.4s
WB2 Warramunga Ar 61.95 187 P **P** 15 20 26.9 -1.4
WB2 IAmb IAmb 15 20 27.8
comp=Z,4.7nm,0.8s
WR0 Warramunga Arr 61.95 187 P **P** 15 20 26.7 -1.6
WR0 IAmb IAmb 15 20 27.8
comp=Z,4.5nm,0.7s
WRA Warramunga Arr 61.95 187 P **P** 15 20 26.8 -1.5
comp=Z,3.8nm,0.7s,baz=3.7,slow=7.0,SNR=41
comp=Z,3.8nm,0.7s
WRA Warramunga Arr 61.95 187 P **P** 15 20 26.6 -1.7
CTA Charters Tower 61.98 174 P **P** 15 20 27.8 -0.7
comp=Z,1.3nm,0.7s,baz=328,slow=9.5,SNR=1.1
comp=Z,1.3nm,0.7s
FIA1 FINESS Array S 64.28 331 P **P** 15 20 43.4 0.0
FIA1 IAmb IAmb 15 20 47.5
comp=Z,6.5nm,0.8s
FINES FINESS Array B 64.29 331 P **P** 15 20 42.6 -0.7
comp=Z,4.6nm,0.8s,baz=61,slow=9.0,SNR=14
comp=Z,4.6nm,0.8s
FINES FINESS Array B 64.29 331 P **P** 15 20 43.1 -0.2
FINES FINESS Array B 64.29 331 *c e*P **P** 15 20 43.4 0.0
FINES pmax pmax
comp=Z,5.0nm,0.8s
AS31 Alice Springs 65.68 187 P **P** 15 20 52.8 -0.1
ASAR Alice Springs 65.68 187 P **P** 15 20 52.3 -0.5
ASAR Alice Springs 65.68 187 P **P** 15 20 52.3 -0.5
KIV Kislovodsk 67.46 309 *e*P **P** 15 21 05.1 +0.8
KIV pmax pmax
comp=Z,7.0nm,1.1s
EIDS Eidsvold 67.69 170 P **P** 15 21 06.5 +0.9
EIDS IAmb IAmb 15 21 25.9
comp=Z,9.4nm,1.2s
NC405 NORSAR Array S 69.28 336 P **P** 15 21 15.1 -0.2
NC303 NORSAR Array S 69.30 337 P **P** 15 21 16.5 +1.2
NC204 NORSAR Array S 69.43 337 P **P** 15 21 16.4 +0.1
NB2 NORSAR Subarra 69.49 336 P **P** 15 21 16.1 -0.5
comp=Z,1.0nm,0.6s,baz=36,slow=6.5
NOA NORSAR Array B 69.49 336 P **P** 15 21 16.1 -0.5
comp=Z,1.6nm,0.7s,baz=38,slow=6.3,SNR=6.2
NOA LR LR 15 56 55.7
comp=Z,9.2nm,21.1s,baz=250,slow=40
comp=Z,1.6nm,0.7s
AKASG Malin Array Be 70.20 321 P **P** 15 21 20.6 -0.4
comp=Z,0.4nm,0.5s,baz=52,slow=6.8,SNR=5.9
comp=Z,0.4nm,0.5s
AKASG Malin Array Be 70.20 321 *i*P **P** 15 21 22.2 +1.1
AKASG pmax pmax
comp=Z,1.0nm,0.6s
LRM Limekiln Ridge 70.83 45 P **P** 15 21 26.6 +1.2
NVAR Mina Array Bea 72.29 54 P **P** 15 21 35.5 +1.2
comp=Z,0.4nm,0.6s,baz=306,slow=7.5,SNR=4.5
comp=Z,0.4nm,0.6s
STKA Stephens Creek 73.53 179 P **P** 15 21 39.6 -1.5
comp=Z,2.6nm,0.8s,baz=313,slow=18,SNR=2.9
comp=Z,2.6nm,0.8s
STKA Stephens Creek 73.53 179 IAmb IAmb 15 21 45.2
comp=Z,3.1nm,1.4s
MORW Morawa 74.39 203 P **P** 15 21 46.3 +0.1
PDAR Pinedale Array 74.42 46 P **P** 15 21 46.6 -0.2
comp=Z,0.5nm,0.3s,baz=281,slow=6.3,SNR=3.9
comp=Z,0.5nm,0.3s
BRTR Keskin Array B 75.35 310 P **P** 15 21 51.9 -0.2
comp=Z,0.4nm,0.7s,baz=42,slow=4.5,SNR=1.8
comp=Z,0.4nm,0.7s
ULM Lac du Bonnet 75.53 34 LR LR 15 58 07.2
comp=Z,44nm,18.5s,baz=303,slow=38
ANMO Albuquerque 81.63 50 *e*P **P** 15 22 24.6 -2.3
ANMO pmax pmax
comp=Z,3.0nm,1.7s
LPIG La Paz 86.98 60 LR LR 15 57 30.2
comp=Z,48nm,19.2s,baz=212,slow=32
TX32 Lajitas Array 87.33 52 P **P** 15 22 56.5 +0.8
TX32 IAmb IAmb 15 23 04.7
comp=Z,3.7nm,1.4s
TXAR Lajitas Array 87.33 52 P **P** 15 22 56.7 +0.9
comp=Z,0.2nm,0.5s,baz=293,slow=3.0,SNR=6.3
TXAR LR LR 16 01 50.9
comp=Z,25nm,19.3s,baz=182,slow=35
comp=Z,0.2nm,0.5s
TXAR Lajitas Array 87.33 52 P **P** 15 22 56.5 +0.8
TXAR Lajitas Array 87.33 52 P **P** 15 22 56.5 +0.8
H03N2 Juan Fernandez 147.51 88 T T 18 14 36.4
baz=300,slow=76,SNR=22
H03N3 Juan Fernandez 147.53 88 T T 18 14 42.2
baz=300,slow=76,SNR=25
H03N1 Juan Fernandez 147.53 88 T T 18 14 38.7
baz=300,slow=76,SNR=33

NOU 20 15:11:10.1,16°11S×167°29E,h0km,mB3.5/11,Vanuatu Islands,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**1.82**	**152**	P			Pn	15 11 42.9	+0.2
RTV	**Rentapao**	**2.00**	**147**	P			Pn	15 11 45.7	+0.6
KOUNC	**Koumac, New Ca**	**5.26**	**212**	P			Pn	15 12 30.4	+0.4
MARNC	**Mare, Loyalty**	**5.39**	**173**	P			Pn	15 12 31.0	-0.8
NOUC	**Port Laguerre**	**6.03**	**189**	P			Pn	15 12 40.6	0.0
PINNC	**Pines Island,**	**6.47**	**179**	P			Pn	15 12 45.7	-1.0

*ASRS **20** 15:22:34.8±0.2,51°N±1°×9°0E±°,h10km,MLh3.0/14,Error ellipse: s-maj=3.4km s-min=2.0km az=142.0,confirmed*
*NNC **20** 15:22:42.3±2.9,51°34N×89°65E,h0km,mb3.3,mpv2.9, Error ellipse: s-maj=26.0km s-min=17.5km az=98.0*
ISC 20 15:22:36.9±0.9,51°32N±0°03×89°99E±0°03,h10km,n25,σ1§73/40,11C-2D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ULGR	**Ulagan, Altay**	**1.46**	**242**	Pg			**Pg**	**15 23 04.2**	**-0.6**
ULGR							Sg		
CUR	**Chagan-Uzun**	**1.60**	**221**	Pg			**Pb**	**15 23 05.6**	**-1.0**
CUR							Sg	**15 23 29.3**	**+0.9**
DJO	**Djoy, Khakassi**	**1.65**	**27**	⇓Pg			**Pg**	**15 23 06.8**	**-1.7**
DJO							Sg	**15 23 28.5**	**-1.4**
DJOS	**Djoyskaya Sosn**	**1.71**	**30**	Pg			**Pg**	**15 23 08.8**	**-0.9**
DJOS							Sg	**15 23 31.4**	**-0.5**
ARTR	**Artybash**	**1.76**	**287**	⇑Pg			**Pg**	**15 23 09.2**	**-1.4**
ARTR							Sg	**15 23 32.2**	**-1.1**
CERR	**Cheremushki**	**1.77**	**29**	Pg			**Pg**	**15 23 10.2**	**-0.6**
CERR							Sg	**15 23 35.4**	**+1.6**
CHBI	**Chibit, Altay**	**1.87**	**238**	Pg			**Pg**	**15 23 11.5**	**-1.3**
CHBI							Sg	**15 23 38.5**	**+1.6**
TASR	**Tashtagol**	**1.94**	**319**	Pg			**Pg**	**15 23 14.2**	**+0.1**
TASR							Sg	**15 23 41.2**	**+1.8**
DGZ	**Jazzator, Alta**	**2.30**	**226**	Pg			**Pb**	**15 23 18.0**	**-0.5**
DGZ							Sg	**15 23 49.8**	**-0.9**
LUZB	**Luzhba, Kemero**	**2.44**	**345**	Pg			**Pg**	**15 23 20.9**	**-2.6**
LUZB							Sg	**15 23 53.6**	**-1.6**
ARDR	**Aradan**	**2.48**	**58**	Pg			**Pb**	**15 23 21.1**	**-0.3**
ARDR							Sg	**15 23 53.4**	**-2.9**
KZLR	**Kyzyl**	**2.82**	**80**	Pg			**Pg**	**15 23 29.9**	**-0.9**
KZLR							Sg	**15 24 06.6**	**-0.7**
ELT	**Eltsovka**	**3.01**	**312**	Pn			**Pn**	**15 23 25.4**	**+0.8**
ELT							Pg	**15 23 30.5**	**-0.1**
ELT							Sg	**15 24 11.9**	**-1.7**
UKR	**Ust'-Kan**	**3.31**	**265**	Pg			**Pg**	**15 23 37.1**	**-3.1**
UKR							Sg	**15 24 21.7**	**-1.4**
SALR	**Pechorkino, Sa**	**4.05**	**322**	Sg			**Sg**	**15 24 46.7**	**0.0**
ZAA0	**Zalesovo Array**	**4.11**	**312**	⇑Pn			Pb	15 23 43.7	-5.5
	0.1nm,0.4s								
ZAA0				⇑Lg			Lg	15 24 44.3	
	1.4nm,0.8s								
MINR	**Mina**	**4.39**	**34**	Pg			**Pb**	**15 23 55.3**	**+1.2**
MINR							Sg	**15 24 57.3**	**-0.5**
KNGR	**Kungurtug, Tuv**	**4.81**	**96**	Pg			**Pg**	**15 24 06.9**	**-2.1**
KNGR							Sg	**15 25 09.6**	**-1.7**
NVSII	**Novosibirsk**	**5.38**	**314**	Sg			**Sg**	**15 25 27.8**	**-1.8**
NVS	**Novosibirsk**	**5.39**	**314**	Sg			**Sg**	**15 25 28.5**	**-1.1**
GZLN	**Zheleznogorsk**	**5.54**	**22**	Sg			**Sg**	**15 25 36.6**	**+2.0**
MK31	**Makanchi Array**	**6.79**	**231**	⇑Pn			**Pn**	**15 24 19.0**	**+2.5**
	0.7nm,0.5s,baz=52,slow=11,SNR=15								
MK31				⇑Pg			**Pg**	**15 24 42.7**	**-4.1**
	0.5nm,0.5s,baz=50,slow=14,SNR=4.4								
MK31				⇑Lg			Lg	15 26 12.1	
	0.7nm,0.5s,baz=50,slow=28,SNR=4.3								
MAKZ	**Makanchi**	**6.93**	**232**	⇑Lg			Lg	15 26 18.2	
	2.2nm,0.8s								
KURK	**Kurchatov**	**7.20**	**270**	⇑Pn			Pn	15 24 28.0	+6.0
	4.1nm,1.3s								
KURK				⇓Lg			Lg	15 26 23.3	
	4.7nm,0.9s								
KURBB	**Kurchatov Arra**	**7.27**	**269**	⇑Pn			Pn	15 24 28.6	+5.5
	1.8nm,0.7s								
KURBB				⇑Sn			**Sn**	**15 25 49.3**	**+3.7**
	2.8nm,0.6s								
KURBB				⇑Lg			Lg	15 26 25.7	
	4.0nm,0.6s								

*JMA **20** 15:36:50.0±0.1,24°.0N±0°.5×121°.7E±0°.4,h45km,MV2.9/10, TAIWAN REGION*
*TAP **20** 15:36:50.6,24°.03N×121°.67E,h45km,ML3.5,C*
ISC 20 15:36:51.1±1.2,24°01N±0°.02×121°72E±0°.02,h50km,n106,σ1§10/190,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.11**	**251**	*i* P			**Pn**	**15 36 58.2**	**-0.8**
	baz=224								
HWA				S			**Sn**	**15 37 04.3**	**-0.2**
	baz=224								
TWD	**Chiawan**	**0.13**	**300**	*i* P			**Pn**	**15 36 57.8**	**-1.3**
	baz=295								
TWD				*i* S			**Sn**	**15 37 02.9**	**-1.9**
	baz=295								
ETL	**Fush Village**	**0.17**	**328**	P			**Pn**	**15 36 58.0**	**-1.3**
	baz=330								
ETL				S			**Sn**	**15 37 04.1**	**-1.1**
	baz=330								
TEYL	**Yanliau Villag**	**0.18**	**218**	*i* P			**Pn**	**15 36 58.5**	**-0.8**
	baz=197								
NACB	**Ninganchiao**	**0.20**	**324**	*i* P			**Pn**	**15 36 58.0**	**-1.4**
	baz=323								
NACB				S			**Sn**	**15 37 03.7**	**-1.7**
	baz=323								
ETM	**Tongmen**	**0.21**	**257**	*i* P			**Pn**	**15 36 58.0**	**-1.5**
	baz=258								
ETM				S			**Sn**	**15 37 03.4**	**-2.1**
	baz=258								
ETLH	**Xiulin Townshi**	**0.29**	**311**	*i* P			**Pn**	**15 36 58.7**	**-1.6**
	baz=310								
ETLH				*i* S			**Sn**	**15 37 04.6**	**-2.2**
	baz=310								
ESL	**Shilin**	**0.33**	**233**	*i* P			**Pn**	**15 36 58.8**	**-1.7**
	baz=231								
ESL				*i* S			**Sn**	**15 37 05.1**	**-2.1**
	baz=231								
TEGC	**Jichi Village**	**0.34**	**209**	*i* P			**Pn**	**15 37 00.3**	**-0.4**
	baz=194								
TEGC				*e*S			**Sn**	**15 37 08.3**	**+0.8**
	baz=194								
ENA	**Nanau**	**0.41**	**2**	*i* P			**Pn**	**15 37 00.3**	**-1.1**
	baz=4.0								
ENA				*i* S			**Sn**	**15 37 07.9**	**-0.9**
	baz=4.0								
EWUT	**Wuta**	**0.43**	**7**	P			**Pn**	**15 37 00.9**	**-0.7**
	baz=17								
EWUT				S			**Sn**	**15 37 08.5**	**-0.6**
	baz=17								
EGFH	**Guangfu**	**0.44**	**218**	*i* P			**Pn**	**15 37 00.1**	**-1.6**
	baz=220								
EGFH				*i* S			**Sn**	**15 37 07.2**	**-1.9**
	baz=220								
WHF	**Hehuan Shan**	**0.44**	**288**	*i* P			**Pn**	**15 37 00.6**	**-1.5**
	baz=283								
WHF				*i* S			**Sn**	**15 37 08.2**	**-1.8**
	baz=283								
FUSS	**Fushou**	**0.49**	**298**	*i* P			**Pn**	**15 37 01.5**	**-1.1**
	baz=302								
FUSS				*i* S			**Sn**	**15 37 09.2**	**-1.6**
	baz=302								
CHGB	**Renai**	**0.50**	**275**	*i* P			**Pn**	**15 37 01.5**	**-1.1**
	baz=270								
CHGB				S			**Sn**	**15 37 09.6**	**-1.3**
	baz=270								
OWD	**Renai**	**0.50**	**263**	*i* P			**Pn**	**15 37 01.3**	**-1.2**
	baz=264								
OWD				S			**Sn**	**15 37 08.5**	**-2.3**
	baz=264								
NNSB	**Datong**	**0.52**	**323**	*i* P			**Pn**	**15 37 01.6**	**-1.1**
	baz=332								
NNSB				*e*S			**Sn**	**15 37 09.2**	**-1.8**
	baz=332								
NNSH	**Datong**	**0.52**	**323**	*i* P			**Pn**	**15 37 01.6**	**-1.1**
	baz=332								
NNSH				*e*S			**Sn**	**15 37 09.3**	**-1.7**
	baz=332								
NNS	**Nan Shan**	**0.53**	**323**	*i* P			**Pn**	**15 37 01.6**	**-1.2**
	baz=333								
NNS				*i* S			**Sn**	**15 37 10.2**	**-1.2**
	baz=333								
LATG	**Datong**	**0.55**	**341**	*i* P			**Pn**	**15 37 01.9**	**-1.2**
	baz=345								
LATG				*e*S			**Sn**	**15 37 10.0**	**-1.7**
	baz=345								
TWT	**Tachien**	**0.55**	**296**	*i* P			**Pn**	**15 37 02.5**	**-0.7**
	baz=292								
TWT				S			**Sn**	**15 37 10.6**	**-1.3**
	baz=292								
WUSB	**Renai**	**0.55**	**268**	*i* P			**Pn**	**15 37 02.2**	**-0.9**
	baz=266								
WUSB				*e*S			**Sn**	**15 37 10.2**	**-1.6**
	baz=266								
TDCB	**Techi**	**0.57**	**295**	*i* P			**Pn**	**15 37 02.5**	**-0.8**
	baz=292								
TDCB				S			**Sn**	**15 37 10.7**	**-1.4**
	baz=292								
HGSD	**Ruisui**	**0.59**	**208**	P			**Pn**	**15 37 02.5**	**-0.9**
	baz=214								
HGSD				S			**Sn**	**15 37 13.0**	**+0.7**
	baz=214								
VWDT	**VWDT**	**0.59**	**244**	*i* P			**Pn**	**15 37 02.7**	**-0.7**
	baz=235								
VWDT				S			**Sn**	**15 37 11.1**	**-1.3**
	baz=235								
TWC	**Suao**	**0.60**	**11**	*i* P			**Pn**	**15 37 03.5**	**-0.1**
	baz=24								
TWC				*i* S			**Sn**	**15 37 12.7**	**0.0**
	baz=24								
NDS	**Dongshan**	**0.62**	**360**	P			**Pn**	**15 37 03.0**	**-0.9**
	baz=355								
NDS				S			**Sn**	**15 37 10.6**	**-2.4**
	baz=355								
EHY	**Hungye**	**0.62**	**216**	*i* P			**Pn**	**15 37 01.8**	**-2.1**
	baz=211								
EHY				S			**Sn**	**15 37 10.5**	**-2.6**
	baz=211								
WPL	**Puli Township**	**0.70**	**270**	*i* P			**Pn**	**15 37 04.0**	**-0.8**
	baz=266								
TWE	**Neicheng**	**0.71**	**356**	*i* P			**Pn**	**15 37 04.3**	**-0.7**
	baz=354								
TWE				S			**Sn**	**15 37 14.7**	**-0.3**
	baz=354								
YHNB	**Yeheng**	**0.73**	**334**	*i* P			**Pn**	**15 37 04.6**	**-0.7**
	baz=337								
YHNB				S			**Sn**	**15 37 13.9**	**-1.6**
	baz=337								
DPDB	**Guoxing**	**0.73**	**272**	*i* P			**Pn**	**15 37 04.7**	**-0.6**
	baz=270								
YULB	**Yu-li**	**0.73**	**212**	P			**Pn**	**15 37 03.3**	**-2.0**
	baz=208								
SSLB	**Suanglung**	**0.74**	**252**	P			**Pn**	**15 37 04.3**	**-1.1**
	baz=252								
SSLB				*e*S			**Sn**	**15 37 15.3**	**-0.4**
	baz=252								
WCS	**Beigang Elemen**	**0.74**	**274**	P			**Pn**	**15 37 04.8**	**-0.6**
	baz=272								
WCS				S			**Sn**	**15 37 16.1**	**+0.3**
	baz=272								
ILA	**Ilan**	**0.75**	**2**	*i* S			**Sn**	**15 37 16.8**	**+0.9**
	baz=358								
FUSB	**Fushanzhiwuyua**	**0.75**	**351**	P			**Pn**	**15 37 04.7**	**-1.0**
	baz=354								
FUSB				S			**Sn**	**15 37 15.1**	**-1.1**
	baz=354								
WHP	**Taichung City**	**0.76**	**291**	*i* P			**Pn**	**15 37 05.1**	**-0.6**
	baz=293								
WHP				S			**Sn**	**15 37 17.0**	**+0.7**
	baz=293								
EYUL	**Yuli**	**0.76**	**209**	*i* P			**Pn**	**15 37 05.2**	**-0.5**
	baz=214								
SMLT	**Sun Moon Lake**	**0.76**	**260**	*i* P			**Pn**	**15 37 04.8**	**-1.0**
	baz=256								
SMLT				S			**Sn**	**15 37 15.9**	**-0.5**
	baz=256								
TWF1	**Yuli**	**0.76**	**211**	*e*P			**Pn**	**15 37 03.8**	**-1.9**
	baz=215								
NWLT	**Wulai**	**0.79**	**345**	*i* P			**Pn**	**15 37 05.1**	**-0.9**
	baz=348								
NWLT				*i* S			**Sn**	**15 37 15.6**	**-1.3**
	baz=348								
TYC	**Yuchr**	**0.80**	**262**	*i* P			**Pn**	**15 37 05.4**	**-0.8**
	baz=257								
TYC				*e*S			**Sn**	**15 37 17.6**	**+0.5**
	baz=257								
NFF	**Wufeng Townshi**	**0.83**	**318**	P			**Pn**	**15 37 06.1**	**-0.5**
	baz=324								
NTC	**Toucheng**	**0.84**	**7**	*i* P			**Pn**	**15 37 07.1**	**+0.4**
	baz=359								
NTC				S			**Sn**	**15 37 19.7**	**+1.6**
	baz=359								
EGS		**0.85**	**13**	*i* P			**Pn**	**15 37 07.6**	**+0.7**
	baz=23								
EGS				*i* S			**Sn**	**15 37 21.0**	**+2.7**
	baz=23								
YUS	**Yu-Shan**	**0.88**	**234**	*i* P			**Pn**	**15 37 06.9**	**-0.8**
	baz=225								
YUS				*i* S			**Sn**	**15 37 18.9**	**-0.8**
	baz=225								
NSTT	**Nanjuang**	**0.90**	**313**	*i* P			**Pn**	**15 37 07.6**	**+0.1**
	baz=318								
NSTT				*i* S			**Sn**	**15 37 19.0**	**-0.6**
	baz=318								
FULB	**Fuli**	**0.90**	**206**	*i* P			**Pn**	**15 37 06.6**	**-0.9**
	baz=211								
LIOB	**Emei**	**0.90**	**314**	*i* P			**Pn**	**15 37 08.0**	**+0.4**
	baz=319								
LIOB				*i* S			**Sn**	**15 37 20.2**	**+0.7**
	baz=319								
TWQ1	**Liyutan**	**0.93**	**291**	*i* P			**Pn**	**15 37 07.7**	**-0.2**
	baz=291								
TWQ1				*i* S			**Sn**	**15 37 20.3**	**+0.1**
	baz=291								
WJS	**Zhushan**	**0.93**	**258**	*i* P			**Pn**	**15 37 08.1**	**+0.2**
	baz=257								
WJS				*i* S			**Sn**	**15 37 21.6**	**+1.4**
	baz=257								
WWF	**Wufeng**	**0.94**	**272**	*i* P			**Pn**	**15 37 08.7**	**+0.7**
	baz=271								
WWF				*e*S			**Sn**	**15 37 22.1**	**+1.8**
	baz=271								
TIPB	**Shuangxi**	**0.96**	**6**	*i* P			**Pn**	**15 37 08.5**	**+0.2**
TIPB							*i* S	**Sn**	**15 37 22.2**	**+1.2**
WNT	**Mingjian**	**0.96**	**262**	*i* P			**Pn**	**15 37 08.8**	**+0.5**
	baz=252								
WNT				*i* S			**Sn**	**15 37 21.7**	**+0.8**
	baz=252								
WNT1	**Nantou City**	**0.96**	**264**	*e*P			**Pn**	**15 37 09.0**	**+0.8**
	baz=262								
WNT1				S			**Sn**	**15 37 22.2**	**+1.2**
	baz=262								
NHDH	**Xindian Distri**	**0.96**	**349**	*i* P			**Pn**	**15 37 07.8**	**-0.5**
	baz=352								
NHDH				*i* S			**Sn**	**15 37 20.3**	**-0.7**
	baz=352								
NSY	**Sanyi**	**0.96**	**295**	*i* P			**Pn**	**15 37 08.3**	**0.0**
	baz=295								
TCU	**Taichung**	**0.96**	**278**	P			**Pn**	**15 37 08.3**	**0.0**
	baz=277								
TCU				*i* S			**Sn**	**15 37 22.2**	**+1.1**
	baz=277								
TWA	**Mucha**	**0.97**	**353**	*i* P			**Pn**	**15 37 08.3**	**-0.2**
	baz=355								
TWA				*i* S			**Sn**	**15 37 20.9**	**-0.3**
	baz=355								
ALS	**Alishan**	**0.98**	**239**	*i* P			**Pn**	**15 37 08.6**	**-0.2**
	baz=230								
ALS				S			**Sn**	**15 37 22.2**	**+0.4**
	baz=230								
NMLH	**Miaoli**	**1.00**	**302**	*i* P			**Pn**	**15 37 08.6**	**-0.2**
	baz=302								
NMLH				S			**Sn**	**15 37 22.7**	**+0.9**
	baz=302								
TWB1	**Santiao Chiao**	**1.02**	**14**	*i* P			**Pn**	**15 37 09.5**	**+0.4**
	baz=26								
TWB1				*i* S			**Sn**	**15 37 23.0**	**+0.6**
	baz=26								
SBCB	**Hsinchu**	**1.03**	**319**	P			**Pn**	**15 37 09.2**	**0.0**
	baz=334								
CHN5	**Tsauling**	**1.04**	**247**	*i* P			**Pn**	**15 37 09.5**	**+0.1**
	baz=237								
CHN5				*i* S			**Sn**	**15 37 23.5**	**+0.4**
	baz=237								
WDJ	**Dajia District**	**1.04**	**289**	*i* P			**Pn**	**15 37 09.3**	**-0.1**
	baz=288								
WDJ				*i* S			**Sn**	**15 37 22.9**	**0.0**
	baz=288								
HSN	**Hsinchu**	**1.04**	**319**	S			**Sn**	**15 37 24.7**	**+1.8**
	baz=336								
ELDTW	**Lidau**	**1.04**	**218**	*i* P			**Pn**	**15 37 08.3**	**-1.2**
	baz=211								
ELDTW				*i* S			**Sn**	**15 37 22.4**	**-0.8**
	baz=211								
WYL	**Yuanlin Townsh**	**1.05**	**267**	*e*P			**Pn**	**15 37 10.4**	**+0.9**
	baz=266								
WYL				*e*S			**Sn**	**15 37 24.6**	**+1.6**
	baz=266								
NWF	**Wu-fen Shan**	**1.05**	**3**	*i* P			**Pn**	**15 37 09.6**	**-0.1**
	baz=354								
NWF				S			**Sn**	**15 37 24.8**	**+1.4**
	baz=354								
WCHH	**Zhanghua**	**1.07**	**274**	*i* P			**Pn**	**15 37 09.6**	**-0.1**
	baz=273								
WCHH				*i* S			**Sn**	**15 37 24.7**	**+1.2**
	baz=273								
NCUH	**Zhongli**	**1.07**	**333**	P			**Pn**	**15 37 09.1**	**-0.7**
	baz=334								
SXI1	**Grass Mountain**	**1.08**	**7**	P			**Pn**	**15 37 10.2**	**+0.1**
	baz=355								
SXI1				*e*S			**Sn**	**15 37 24.5**	**+0.4**
	baz=355					

EDH					S		Sn	15 37 23.7	-0.7
	baz=210								
TWS1	**Kuangyinshan**	**1.12**	**346**	*i*	P		**Pn**	15 37 10.1	-0.4
	baz=347								
TWS1				*i*	S		**Sn**	15 37 24.8	+0.1
	baz=347								
WDLH	**Douliu**	**1.13**	**254**	*i*	P		**Pn**	15 37 10.9	+0.3
	baz=252								
WDLH				*i*	S		**Sn**	15 37 25.9	+0.9
	baz=252								
YM01	**YM01**	**1.14**	**353**		P		**Pn**	15 37 10.2	-0.5
	baz=354								
YM01					S		**Sn**	15 37 25.5	+0.2
	baz=354								
NTST	**Danshui**	**1.17**	**348**		S		**Sn**	15 37 25.9	-0.1
	baz=349								
ANP	**Anpu**	**1.18**	**351**		P		**Pn**	15 37 11.0	-0.4
	baz=353								
JYNG	**Yonagunijimaku**	**1.20**	**68**		P		**Pn**	15 37 11.4	-0.1
JYNG					S		**Sn**	15 37 26.8	+0.1
STYH	**Taoyuan**	**1.21**	**226**		P		**Pn**	15 37 11.8	+0.2
	baz=225								
STYH					S		**Sn**	15 37 27.6	+0.7
	baz=225								
TPUB	**Ta-pu**	**1.23**	**235**		P		**Pn**	15 37 12.2	+0.3
	baz=224								
TPUB					S		**Sn**	15 37 28.7	+1.3
	baz=224								
LONT	**Longtian**	**1.23**	**206**	*i*	P		**Pn**	15 37 10.8	-1.1
	baz=194								
WRL	**Guolierlin Hig**	**1.23**	**265**		P		**Pn**	15 37 12.0	0.0
	baz=274								
WRL					S		**Sn**	15 37 28.1	+0.6
	baz=274								
YOJ	**Yonaguni jima**	**1.26**	**69**		P		**Pn**	15 37 12.3	-0.1
	baz=68								
YOJ					S		**Sn**	15 37 28.6	+0.4
	baz=68								
YOJ	**Yonaguni jima**	**1.26**	**69**		P		**Pn**	15 37 12.2	-0.1
YOJ					S		**Sn**	15 37 28.2	+0.1
WTK	**Tuku**	**1.26**	**255**	*i*	P		**Pn**	15 37 12.7	+0.3
	baz=254								
WTK				*i*	S		**Sn**	15 37 29.3	+1.0
	baz=254								
WTP	**Ta-pu**	**1.27**	**233**	*i*	P		**Pn**	15 37 12.8	+0.3
	baz=223								
WTP				*i*	S		**Sn**	15 37 29.9	+1.3
	baz=223								
CHY	**Chiayi**	**1.29**	**247**	*i*	P		**Pn**	15 37 13.4	+0.6
	baz=236								
CHY					S		**Sn**	15 37 30.0	+1.0
	baz=236								
TWGBT	**Beinan**	**1.33**	**206**		P		**Pn**	15 37 12.0	-1.3
	baz=195								
TWG	**Pinlang**	**1.33**	**207**	*i*	P		**Pn**	15 37 13.2	-0.1
	baz=195								
LDUT	**Ludao**	**1.35**	**190**	*i*	P		**Pn**	15 37 12.6	-1.0
	baz=183								
LDUT					S		**Sn**	15 37 30.1	-0.4
	baz=183								
TWK	**Hsinying**	**1.35**	**237**	*i*	P		**Pn**	15 37 14.1	+0.4
	baz=236								
TWK				*i*	S		**Sn**	15 37 31.4	+0.9
	baz=236								
CHN1	**Nanshi**	**1.37**	**233**	*i*	P		**Pn**	15 37 14.7	+0.8
	baz=232								
CHN1				*i*	S		**Sn**	15 37 31.6	+0.7
	baz=232								
SNST	**Tainan City**	**1.37**	**235**	*i*	P		**Pn**	15 37 14.3	+0.4
	baz=234								
SNST				*i*	S		**Sn**	15 37 32.7	+1.8
	baz=234								
SGST	**Jiashian**	**1.40**	**229**	*i*	P		**Pn**	15 37 13.8	-0.4
	baz=220								
SGST				*i*	S		**Sn**	15 37 32.2	+0.7
	baz=220								
SLGT	**Liugui**	**1.42**	**224**	*e*	S		**Sn**	15 37 34.4	+2.3
	baz=224								
WSF	**Szhu**	**1.42**	**255**		S		**Sn**	15 37 33.1	+0.9
	baz=243								
WSL	**Shuilin Townsh**	**1.45**	**251**		P		**Pn**	15 37 15.3	+0.3
	baz=249								
WSL					S		**Sn**	15 37 33.9	+1.0
	baz=249								
CHN3	**Shinhua**	**1.56**	**233**	*e*	S		**Sn**	15 37 38.3	+2.9
	baz=244								
SHHT	**Tainan City**	**1.60**	**232**		P		**Pn**	15 37 18.3	+1.3
	baz=243								
SHHT					S		**Sn**	15 37 39.7	+3.2
	baz=243								
IRIF	**Iriomote-Funau**	**1.86**	**80**		P		**Pn**	15 37 20.5	-0.1
IRIF					S		**Sn**	15 37 43.3	+0.4
HATJ	**Hateruma jima**	**1.91**	**88**		P		**Pn**	15 37 21.4	+0.2
HATJ					S		**Sn**	15 37 44.6	+0.6
JKRS	**Kuro-shima**	**2.10**	**83**		P		**Pn**	15 37 24.6	+0.7
JKRS					S		**Sn**	15 37 49.9	+1.1
JIJ	**Ishigaki jima**	**2.24**	**81**		P		**Pn**	15 37 25.5	-0.2
JIJ					S		**Sn**	15 37 51.2	-0.9
JISG	**Ishigakijimahi**	**2.43**	**76**		S		**Sn**	15 37 56.0	-0.9

*IDC **20** 16:19:21.2±1.6,24.°07S×66.°81W,h177km±18km,mb3.3/3, mbtmp3.7/8,Error ellipse: s-maj=23.5km s-min=17.2km az=124.0*

*NEIC **20** 16:19:22.2±1.6,24.°18S±0.°08×67.°2W±0.°1,h211km±9km, Error ellipse: s-maj=17.7km s-min=10.7km az=100.0*

*VAO **20** 16:19:22.7±0.8,24.°07S×67.°36W,h231km±10km,mb4.0*

*GUC **20** 16:19:23.2±0.6,24.°19S×67.°30W,h212km±8km,ML4.0*

ISC 20 16:19:22.2±0.7,24.°17S±0.°04×67.°21W±0.°07,h208km±8km, n75,σ1°27/91,mb3.8/5,8C,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AF01	**San Pedro de A**	**1.50**	**323**			**Pn**	**16 19 57.5**	**+0.5**
AF01	**San Pedro de A**	**1.50**	**323**	*e*	P	**Pn**	**16 19 57.5**	**+0.5**
LVC	**Limon Verde**	**2.20**	**314**		P	**Pn**	**16 20 04.2**	**+0.5**
	73nm,0.5s,baz=149,slow=5.5,SNR=105							
LVC					S	**S**	**16 20 35.5**	**-0.2**
	64nm,0.4s,baz=351,slow=18,SNR=16							
LVC	**Limon Verde**	**2.20**	**314**	⇑	*i*P	**Pn**	**16 20 04.6**	**+0.7**
LVC					*i* S	**S**	**16 20 35.7**	**0.0**
LVC	**Limon Verde**	**2.20**	**314**	*e*	P	**Pn**	**16 20 04.3**	**+0.5**
LVC					*e*S	**S**	**16 20 36.1**	**+0.4**
PB15	**IPOC Station P**	**2.28**	**294**			**Pn**	**16 20 05.3**	**+0.8**
PB15	**IPOC Station P**	**2.28**	**294**	⇑	*i*P	**Pn**	**16 20 05.5**	**+1.0**
PB15					*i* S	**S**	**16 20 37.1**	**+0.2**
GO02	**Mina Guanaco**	**2.38**	**245**			**Pn**	**16 20 05.8**	**+0.2**
GO02	**Mina Guanaco**	**2.38**	**245**	⇑	*i*P	**Pn**	**16 20 06.0**	**+0.4**
GO02					*i* S	**S**	**16 20 39.1**	**+0.1**
GO02					IAML		16 20 40.6	
	comp=N,472nm,0.4s							
PB06	**IPOC Station P**	**2.61**	**303**			**Pn**	**16 20 08.7**	**+0.7**
PB06	**IPOC Station P**	**2.61**	**303**	⇑	*i*P	**Pn**	**16 20 09.0**	**+0.9**
PB06					*i* S	**S**	**16 20 43.1**	**-0.2**
PB06					IAML		16 20 46.3	
	comp=N,303nm,0.1s							
PB14	**IPOC Station P**	**2.95**	**260**			**Pn**	**16 20 12.0**	**+0.1**
PB14	**IPOC Station P**	**2.95**	**260**	*e*	P	**Pn**	**16 20 12.3**	**+0.3**
PB14					*i* S	**S**	**16 20 49.0**	**-1.4**
PB09	**IPOC Station P**	**3.01**	**321**			**Pn**	**16 20 13.6**	**+0.9**
PB09	**IPOC Station P**	**3.01**	**321**	⇑	*i*P	**Pn**	**16 20 13.7**	**+1.1**
PB09					*i* S	**S**	**16 20 52.1**	**+0.6**
PB09					IAML		16 20 54.1	
	comp=N,172nm,0.6s							
PB10	**IPOC Station P**	**3.13**	**281**			**Pn**	**16 20 14.4**	**+0.6**
PB10	**IPOC Station P**	**3.13**	**281**	*e*	P	**Pn**	**16 20 14.7**	**+0.9**
AC02	**Maricunga**	**3.17**	**213**			**Pn**	**16 20 14.7**	**-0.1**
AC02	**Maricunga**	**3.17**	**213**	⇑	*i*P	**Pn**	**16 20 14.8**	**+0.1**
AC02					*i* S	**S**	**16 20 55.1**	**-0.4**
PB04	**IPOC Station P**	**3.26**	**303**			**Pn**	**16 20 15.9**	**+0.3**
PB04	**IPOC Station P**	**3.26**	**303**	*e*	P	**Pn**	**16 20 16.5**	**+0.9**
PB04					*i* S	**S**	**16 20 56.3**	**-0.5**
PB07	**IPOC Station P**	**3.46**	**314**			**Pn**	**16 20 18.2**	**+0.3**
PB07	**IPOC Station P**	**3.46**	**314**	⇑	*i*P	**Pn**	**16 20 18.5**	**+0.5**
PB07					*i* S	**S**	**16 20 59.6**	**-1.5**
AC01	**Pan de Azucar**	**3.65**	**237**			**Pn**	**16 20 19.2**	**-0.8**
PB01	**IPOC Station P**	**3.75**	**325**			**Pn**	**16 20 21.1**	**-0.3**
PB01	**IPOC Station P**	**3.75**	**325**	⇓	*e*P	**Pn**	**16 20 21.5**	**0.0**
PB01					*i* S	**S**	**16 21 05.7**	**-1.8**
PB02	**IPOC Station P**	**3.77**	**318**			**Pn**	**16 20 21.5**	**-0.1**
PB02	**IPOC Station P**	**3.77**	**318**	*e*	P	**Pn**	**16 20 21.8**	**+0.2**
PB02					*i* S	**S**	**16 21 05.8**	**-1.8**
PATCX	**Punta Patache**	**4.30**	**320**		Pn	**Pn**	**16 20 28.2**	**0.0**
GO03	**Copiap**	**4.37**	**218**		Pn	**Pn**	**16 20 27.7**	**-1.2**
GO03	**Copiap**	**4.37**	**218**	*e*	P	**Pn**	**16 20 27.6**	**-1.2**
GO03					*i* S	**S**	**16 21 18.2**	**-2.8**
PB08	**IPOC Station P**	**4.39**	**335**			**Pn**	**16 20 30.1**	**+0.5**
PB08	**IPOC Station P**	**4.39**	**335**	*e*	P	**Pn**	**16 20 30.3**	**+0.7**
PB08					*i* S	**S**	**16 21 21.6**	**-0.6**
GO01	**Chusmiza**	**4.84**	**337**			**Pn**	**16 20 35.0**	**-0.4**
GO01	**Chusmiza**	**4.84**	**337**	*e*	P	**Pn**	**16 20 35.8**	**+0.4**
GO01					*i* S	**S**	**16 21 31.2**	**-1.4**
PB11	**IPOC Station P**	**4.94**	**332**			**Pn**	**16 20 35.5**	**-0.8**
AC04	**Llanos de Chal**	**5.31**	**220**		Pn	**Pn**	**16 20 37.6**	**-3.2**
LCO	**Las Campanas**	**5.75**	**212**		Pn	**Pn**	**16 20 43.4**	**-3.2**
CO01	**Juntas del Tor**	**6.33**	**203**		Pn	**Pn**	**16 20 52.5**	**-1.5**
GO04	**Tololo Observa**	**6.78**	**207**		Pn	**Pn**	**16 20 57.3**	**-2.5**
CO03	**El Pedregal**	**7.33**	**204**		Pn	**Pn**	**16 21 04.2**	**-2.6**
LPAZ	**La Paz**	**7.89**	**354**		P	**Pn**	**16 21 14.2**	**-0.5**
	comp=N,1.2nm,0.4s,baz=136,slow=6.6,SNR=8.5							
LPAZ					S	**S**	**16 22 42.1**	**-2.1**
	comp=N,1.2nm,0.6s,baz=312,slow=17,SNR=2.7							
LPAZ	**La Paz**	**7.89**	**354**		Pn	**Pn**	**16 21 15.1**	**+0.4**
LPAZ	**La Paz**	**7.89**	**354**	*e*	P	**Pn**	**16 21 13.9**	**-0.8**
SIV	**San Ignacio**	**9.97**	**36**		P	Pn	16 21 36.2	-4.9
	comp=N,0.4nm,0.4s,baz=211,slow=14,SNR=3.8							
UNIS	**Unistalda (Bra**	**11.90**	**117**	*e*	P	**P**	**16 22 08.7**	**-1.5**
MCR1	**Marechal Candi**	**12.02**	**94**	*e*	P	**Pn**	**16 22 08.6**	**+1.5**
RODS	**Rosario do Sul**	**12.33**	**123**	*e*	P	**P**	**16 22 14.2**	**-0.8**
FRBT	**Francisco Belt**	**12.95**	**101**	*e*	P	**P**	**16 22 21.7**	**-0.3**
ALGR	**Alto Alegre (B**	**13.51**	**113**	*e*	P	**P**	**16 22 27.6**	**-0.5**
CPSB	**Cacapava Do Su**	**13.72**	**120**	*e*	P	**Pn**	**16 22 28.9**	**+0.4**
PTGB	**Pitanga**	**13.81**	**95**	*e*	P	**P**	**16 22 31.2**	**-0.4**
ITAB	**Concordia**	**13.93**	**106**		Pn	**Pn**	**16 22 30.8**	**-0.2**
ITAB	**Concordia**	**13.93**	**106**	*e*	P	**P**	**16 22 31.6**	**-1.2**
ARAG	**Araguaiana, MT**	**16.73**	**63**	*e*	P	**Pn**	**16 23 04.7**	**-0.4**
PLCA	**Paso Flores**	**16.75**	**189**		P	**Pn**	**16 23 06.8**	**+1.7**
	comp=N,0.7nm,0.7s,baz=49,slow=16,SNR=1.6							
CLDB	**Colider**	**17.11**	**41**	*e*	P	**P**	**16 23 07.5**	**-0.5**
VAO	**Valinhos**	**18.59**	**91**	*e*	P	**P**	**16 23 22.9**	**-1.2**
IPMB	**Ipameri, GO**	**18.76**	**74**	*e*	P	**P**	**16 23 25.2**	**-0.7**
SNDB	**Serra Nova Dou**	**19.36**	**54**	*e*	P	**P**	**16 23 31.3**	**-1.1**
BDFB	**Brasilia**	**19.93**	**68**		P	**P**	**16 23 35.5**	**-3.0**
	comp=N,10nm,0.8s,baz=239,slow=10,SNR=9.8							
BDFB	**Brasília**	**19.93**	**68**		P	**P**	**16 23 37.8**	**-0.8**
BDFB					IAmb	IAmb	16 23 38.9	
	comp=Z,11nm,1.0s							
BDFB	**Brasilia**	**19.93**	**68**	*e*	P	**P**	**16 23 38.0**	**-0.6**
PMNB	**Patos De Minas**	**20.13**	**78**	*e*	P	**P**	**16 23 40.0**	**-0.7**
PEXB	**Peixe**	**21.57**	**60**	*e*	P	**P**	**16 23 54.9**	**-0.9**
JANB	**Januaria**	**23.37**	**71**	*e*	P	**P**	**16 24 10.7**	**-1.7**
SMTB	**Santa Maria do**	**24.14**	**54**	*e*	P	**P**	**16 24 20.1**	**+0.6**
SDBA	**SAO DESIDERIO**	**24.15**	**65**	*e*	P	**P**	**16 24 18.7**	**-0.9**
SNAA	**Sanae**	**59.26**	**161**		P	**P**	**16 29 03.3**	**+1.7**
SNAA					IAmb	IAmb	16 29 06.8	
	comp=Z,6.4nm,1.5s							
WVT	**Waverly**	**63.06**	**341**		P	**P**	**16 29 25.1**	**-2.3**
WVT					IAmb	IAmb	16 29 30.1	
	comp=Z,3.4nm,0.7s							
TXAR	**Lajitas Array**	**63.70**	**325**		P	**P**	**16 29 34.9**	**+3.0**
	comp=Z,0.2nm,0.5s,baz=158,slow=7.6,SNR=2.8							
	comp=Z,0.2nm,0.5s							
QSPA	**South Pole Qui**	**66.04**	**180**		P	**P**	**16 29 49.4**	**+2.9**
	comp=Z,1.0nm,0.5s,baz=180,slow=1.0,SNR=12							
	comp=Z,1.0nm,0.5s							
TORD	**Torodi Ar. Bea**	**76.81**	**69**		P	**P**	**16 30 51.7**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=258,slow=5.7,SNR=6.6							
	comp=Z,0.5nm,0.4s							
ZALV	**Zalesovo Beam**	**143.63**	**28**		PKP	**PKiKP**	**16 38 32.9**	**-2.4**
	comp=Z,0.4nm,0.3s,baz=299,slow=3.0,SNR=2.7							
MKAR	**Makanchi Array**	**146.78**	**40**		PKPbc	**PKiKP**	**16 38 40.8**	**-1.3**
	comp=Z,0.6nm,0.5s,baz=325,slow=2.4,SNR=7.5							

*IDC **20** 16:30:05.8±1.1,22.°06S×66.°85W,h163km±14km,mb3.4/4, mbtmp3.8/7,Error ellipse: s-maj=23.6km s-min=10.7km az=118.0*

*NEIC **20** 16:30:07.8±1.6,22.°09S±0.°07×67.°2W±0.°1,h190km±8km, mb4.1/7,ML4.1(GUC),Error ellipse: s-maj=14.6km s-min=9.9km az=87.0*

*GUC **20** 16:30:08.1±0.6,22.°05S×67.°55W,h232km±7km,ML4.1*

*SCB **20** 16:30:09.8±1.5,22.°04S×67.°24W,h152km±19km,ML3.8/3, MW3.5,Error ellipse: s-maj=6.7km s-min=4.2km az=0.0*

ISC 20 16:30:07.5±0.7,22.°05S±0.°04×67.°21W±0.°04,h189km±6km, n82,σ1°36/105,mb3.9/5,9C-1D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AF01	**San Pedro de A**	**1.27**	**225**			**Pn**	**16 30 35.2**	**-3.4**
AF01					Sn	**Sn**	**16 31 02.4**	**-0.3**
AF01	**San Pedro de A**	**1.27**	**225**	*e*	P	**Pn**	**16 30 40.1**	**+1.6**
AF01					*i* S	**Sn**	**16 31 05.2**	**+2.5**
YJA	**Yavi**	**1.57**	**95**		P	**Pn**	**16 30 41.9**	**+0.4**
MOCB	**Mochara**	**1.66**	**62**		P	**Pn**	**16 30 42.6**	**+0.3**
MOCB					S	**Sn**	**16 31 06.9**	**-2.3**
MOCB					IAML		16 31 08.9	
	397nm,0.4s							
LVC	**Limon Verde**	**1.67**	**250**		P	**Pn**	**16 30 43.0**	**+0.7**
	51nm,0.6s,baz=60,slow=7.9,SNR=41							
LVC					S	**Sn**	**16 31 09.8**	**+0.5**
	87nm,0.5s,baz=301,slow=21,SNR=85							
LVC	**Limon Verde**	**1.67**	**250**			**Pn**	**16 30 42.8**	**+0.5**
LVC	**Limon Verde**	**1.67**	**250**	*e*	P	**Pn**	**16 30 43.1**	**+0.8**
LVC					*e*S	**Sn**	**16 31 09.7**	**+0.5**
LVC	**Limon Verde**	**1.67**	**250**		P	**Pn**	**16 30 43.2**	**+0.9**
PB09	**IPOC Station P**	**1.91**	**277**			**Pn**	**16 30 45.2**	**+0.8**
PB09	**IPOC Station P**	**1.91**	**277**	⇑	*i*P	**Pn**	**16 30 45.5**	**+1.0**
PB09					*e*S	**Sn**	**16 31 13.6**	**+0.5**
PB09	**IPOC Station P**	**1.91**	**277**		P	**Pn**	**16 30 45.5**	**+1.0**
PB06	**IPOC Station P**	**2.28**	**253**			**Pn**	**16 30 48.5**	**0.0**
PB06	**IPOC Station P**	**2.28**	**253**	*e*	P	**Pn**	**16 30 49.1**	**+0.6**
PB06					*i* S	**Sn**	**16 31 19.8**	**-0.6**
PB06					IAML		16 31 22.3	
	comp=E,377nm,0.1s							
PB06	**IPOC Station P**	**2.28**	**253**		P	**Pn**	**16 30 49.4**	**+0.9**
PB01	**IPOC Station P**	**2.35**	**295**			**Pn**	**16 30 49.3**	**+0.2**
PB01	**IPOC Station P**	**2.35**	**295**	⇑	*i*P	**Pn**	**16 30 49.5**	**+0.3**
PB01					*e*S	**Sn**	**16 31 21.2**	**-0.3**
PB01					IAML		16 31 22.6	
	comp=N,692nm,0.4s							
PB01	**IPOC Station P**	**2.35**	**295**		P	**Pn**	**16 30 49.8**	**+0.7**
PB15	**IPOC Station P**	**2.39**	**241**			**Pn**	**16 30 50.1**	**+0.5**
PB15	**IPOC Station P**	**2.39**	**241**	*e*	P	**Pn**	**16 30 50.5**	**+0.8**
PB15					*e*S	**Sn**	**16 31 22.5**	**-0.1**
PB15	**IPOC Station P**	**2.39**	**241**		P	**Pn**	**16 30 50.6**	**+0.9**
PB07	**IPOC Station P**	**2.51**	**277**			**Pn**	**16 30 50.9**	**-0.1**
PB07	**IPOC Station P**	**2.51**	**277**	⇓	*e*P	**Pn**	**16 30 51.2**	**+0.2**
PB07					*e*S	**Sn**	**16 31 23.7**	**-1.1**
PB07					IAML		16 31 25.4	
	comp=N,415nm,0.1s							
PB07	**IPOC Station P**	**2.51**	**277**		P	**Pn**	**16 30 51.8**	**+0.8**
PB02	**IPOC Station P**	**2.60**	**286**			**Pn**	**16 30 51.8**	**-0.2**
PB02	**IPOC Station P**	**2.60**	**286**	⇑	*i*P	**Pn**	**16 30 52.2**	**+0.1**
PB02					*e*S	**Sn**	**16 31 25.4**	**-1.4**
PB02					IAML		16 31 26.4	
	comp=N,660nm,0.4s							
PB02	**IPOC Station P**	**2.60**	**286**		P	**Pn**	**16 30 52.5**	**+0.4**
PB02					S	**Sn**	**16 31 24.6**	**-2.1**
PB02					IAML		16 31 26.6	
	comp=N,535nm,0.3s							
PB08	**IPOC Station P**	**2.63**	**316**			**Pn**	**16 30 53.4**	**+0.8**
PB08	**IPOC Station P**	**2.63**	**316**	⇑	*i*P	**Pn**	**16 30 53.9**	**+1.2**
PB08					*e*S	**Sn**	**16 31 27.8**	**0.0**
PB08					IAML		16 31 31.3	
	comp=N,154nm,0.4s							
PB08	**IPOC Station P**	**2.63**	**316**		P	**Pn**	**16 30 53.9**	**+1.2**
PB04	**IPOC Station P**	**2.74**	**264**			**Pn**	**16 30 53.5**	**-0.2**
PB04	**IPOC Station P**	**2.74**	**264**	*e*	P	**Pn**	**16 30 53.7**	**-0.1**
PB04					*e*S	**Sn**	**16 31 27.8**	**-1.9**
PB04					IAML		16 31 29.6	
	comp=N,273nm,0.1s							
PB04	**IPOC Station P**	**2.74**	**264**		P	**Pn**	**16 30 54.5**	**+0.8**
PATCX	**Punta Patache**	**3.00**	**293**			**Pn**	**16 30 56.3**	**-0.4**
PATCX	**Punta Patache**	**3.00**	**293**	*e*	P	**Pn**	**16 30 56.5**	**-0.3**
PATCX					*e*S	**Sn**	**16 31 33.1**	**-2.1**
PATCX					IAML		16 31 35.5	
	comp=E,362nm,0.5s							
GO01	**Chusmiza**	**3.01**	**322**			**Pn**	**16 30 57.8**	**+0.5**
GO01	**Chusmiza**	**3.01**	**322**	⇑	*i*P	**Pn**	**16 30 58.0**	**+0.8**
GO01					*e*S	**Sn**	**16 31 37.0**	**+0.9**
GO01					IAML		16 31 40.8	
	comp=E,440nm,0.1s							
HMBC	**Humberstone**	**3.06**	**305**	⇑	*i*P	**Pn**	**16 30 57.1**	**-0.4**
HMBC					*e*S	**Sn**	**16 31 33.7**	**-2.8**
HMBC					IAML		16 31 38.7	
	comp=E,358nm,0.5s							
SLA	**San Lorenzo**	**3.08**	**150**	⇓	*e*P	**Pn**	**16 30 58.8**	**+1.1**
SLA					*e*S	**Sn**	**16 31 36.6**	**-0.6**
TA01	**Diego Aracena**	**3.14**	**298**			**Pn**	**16 30 57.5**	**-0.8**
TA01	**Diego Aracena**	**3.14**	**298**	⇑	*e*P	**Pn**	**16 30 57.8**	**-0.5**
TA01					*e*S	**Sn**	**16 31 35.3**	**-2.7**
PB11	**IPOC Station P**	**3.23**	**314**			**Pn**	**16 30 59.1**	**-0.5**
TA02	**Huaiquique**	**3.25**	**302**			**Pn**	**16 30 58.8**	**-0.9**
TA02	**Huaiquique**	**3.25**	**302**	*e*	P	**Pn**	**16 30 59.0**	**-0.7**
TA02					*e*S	**Sn**	**16 31 37.7**	**-2.7**
PB10	**IPOC Station P**	**3.41**	**244**		P	**Pn**	**16 31 02.5**	**+0.9**
PB10					S	**Sn**	**16 31 41.2**	**-2.8**
PB10					IAML		16 31 47.9	
	comp=E,114nm,0.3s							
GO02	**Mina Guanaco**	**3.79**	**215**			**Pn**	**16 31 06.6**	**0.0**
GO02	**Mina Guanaco**	**3.79**	**215**	*e*	P	**Pn**	**16 31 07.0**	**+0.4**
GO02					*e*S	**Sn**	**16 31 51.9**	**-1.0**
PB14	**IPOC Station P**	**3.90**	**228**		Pn	**Pn**	**16 31 07.9**	**0.0**
PB14	**IPOC Station P**	**3.90**	**228**	*e*	P	**Pn**	**16 31 08.0**	**0.0**
PB14					*e*S	**Sn**	**16 31 52.7**	**-2.6**
PB16	**IPOC Station P**	**4.28**	**329**			**Pn**	**16 31 13.5**	**+0.4**
PB16	**IPOC Station P**	**4.28**	**329**	⇓	*e*P	**Pn**	**16 31 13.9**	**+0.9**
PB16	**IPOC Station P**	**4.28**	**329**		P	**Pn**	**16 31 14.1**	**+1.0**
PB12	**IPOC Station P**	**4.50**	**319**			**Pn**	**16 31 14.3**	**-1.2**
PB12	**IPOC Station P**	**4.50**	**319**	*e*	P	**Pn**	**16 31 13.8**	**-1.6**
AC02	**Maricunga**	**5.08**	**200**			**Pn**	**16 31 22.9**	**-0.2**
AC01	**Pan de Azucar**	**5.12**	**217**		Pn	**Pn**	**16 31 21.8**	**-1.4**
BBOE	**La Paz, Chanca**	**5.26**	**352**		P	**Pn**	**16 31 27.3**	**+1.7**
LPAZ	**La Paz**	**5.80**	**351**		P	**Pn**	**16 31 33.2**	**+0.5**
	comp=E,2.8nm,0.4s,baz=151,slow=4.8,SNR=16							
LPAZ					S	**Sn**	**16 32 38.1**	**-1.6**
	comp=E,3.9nm,0.6s,baz=303,slow=19,SNR=6.5							
LPAZ	**La Paz**	**5.80**	**351**			**Pn**	**16 31 33.0**	**+0.4**
LPAZ	**La Paz**	**5.80**	**351**		P	**Pn**	**16 31 33.8**	**+1.1**
GO03	**Copiap**	**6.17**	**206**		Pn	**Pn**	**16 31 34.7**	**-2.2**
AC04	**Llanos de Chal**	**7.06**	**209**		Pn	**Pn**	**16 31 44.8**	**-3.6**
LCO	**Las Campanas**	**7.62**	**204**		Pn	**Pn**	**16 31 52.8**	**-3.2**
CO01	**Juntas del Tor**	**8.31**	**198**		Pn	**Pn**	**16 32 05.2**	**+0.1**
SIV	**San Ignacio**	**8.37**	**45**		P	**Pn**	**16 32 02.4**	**-3.3**
	comp=E,2.8nm,0.3s,baz=230,slow=9.2,SNR=17							
SIV					S	Sn	16 33 30.2	-9.5
	comp=E,1.5nm,0.4s,baz=119,slow=22,SNR=5.9							
GO04	**Tololo Observa**	**8.71**	**201**		Pn	**Pn**	**16 32 06.6**	**-3.7**
CO03	**El Pedregal**	**9.29**	**199**		Pn	**Pn**	**16 32 15.8**	**-2.0**
CO02	**Combarbal**	**9.73**	**200**		Pn	**Pn**	**16 32 21.6**	**-1.8**
CPUP	**Villa Florida**	**9.97**	**117**		Pn	**Pn**	**16 32 27.7**	**+1.2**
ITAB	**Concordia**	**14.64**	**114**			**P**	**16 33 27.3**	**+0.2**
PLCA	**Paso Flores**	**18.84**	**188**		P	**P**	**16 34 13.3**	**+0.1**
	comp=E,1.8nm,0.8s,baz=349,slow=7.9,SNR=4.7							
PLCA	**Paso Flores**	**18.84**	**188**		P	**P**	**16 34 13.9**	**+0.8**
PLCA					IAmb	IAmb	16 34 14.8	
	comp=Z,3.7nm,0.9s							
LL04	**Puerto Octay**	**19.31**	**192**		P	**P**	**16 34 18.3**	**+0.1**
LL04					IAmb	IAmb	16 34 28.2	
	comp=Z,9.6nm,1

FAKI Fak Fak 8.81 108 P Pn 16 32 41.2 -0.7
EDFI Ende, Flores 8.85 194 P Pn 16 32 43.2 +0.6
217nm10nm,0.9s
MTKI Muara Teweh, K 9.03 265 P Pn 16 32 45.7 +0.8
21nm,0.5s
BBKI Banjar Baru 9.63 250 P Pn 16 32 55.2 +2.1
KKM Kota Kinabalu 9.80 309 Pn 16 32 57.1 +1.6
KKM Kota Kinabalu 9.80 309 P Pn 16 33 00.8 +5.3
SRBI Singaraja 11.72 227 P Pn 16 33 22.8 +1.6
38nm,1.2s
SBUM Sibu 11.94 282 Pn Pn 16 33 21.5 -2.6
KMMI Kalianget 12.05 235 P Pn 16 33 28.4 +2.8
55nm,1.2s
ABJI Asem Bagus 12.28 231 P Pn 16 33 29.1 +0.5
33nm,0.9s
STKI Sintang 12.41 271 P Pn 16 33 31.8 +1.4
PBKI Pangkalan Bun 12.48 258 P Pn 16 33 32.4 +1.1
7µm90nm,0.4s
GMJI Gumukmas 13.19 232 P Pn 16 33 42.9 +2.4
32nm,1.3s
KSM Kuching 13.67 277 Pn Pn 16 33 48.0 +1.2
PWJI Pagerwojo 14.38 237 P Pn 16 33 57.5 +1.6
54nm,1.1s
MTN Manton Dam 14.54 151 P Pn 16 33 56.6 -1.3
baz=14,SNR=10
MTN Manton Dam 14.54 151 Pn Pn 16 33 57.9 -0.1
MTN Manton Dam 14.54 151 P P 16 34 00.1 -1.3
KDU Kakadu 15.12 146 P Pn 16 34 05.2 0.0
baz=15,SNR=4.7
UGM Wanagama 15.41 240 Pn Pn 16 34 07.5 -1.4
UGM IAmb IAmb 16 34 35.3
comp=Z,125nm,1.3s
KNRA Kununurra 16.19 163 P P 16 34 20.8 +1.1
baz=16,SNR=19
KNRA Kununurra 16.19 163 P 16 34 19.6 -0.1
KNRA IAmb IAmb 16 34 24.9
comp=Z,36nm,0.8s
DSRI Dabo 19.31 269 P P 16 34 54.4 +0.3
comp=Z,12nm,0.8s
MYKOM Kota Tinggi 20.12 275 P P 16 35 03.2 +0.4
XMIS Christmas Isla 20.85 240 P P 16 35 08.8 -1.8
XMIS IAmb IAmb 16 35 34.6
comp=Z,75nm,1.3s
MBWA Marble Bar 21.30 191 P P 16 35 15.6 +0.1
PSA00 Pilbara Seismi 21.68 190 P P 16 35 19.7 +0.2
WB0 Warramunga Arr 22.07 153 P P 16 35 23.2 -0.5
WB0 IAmb IAmb 16 35 26.6
comp=Z,38nm,1.0s
WRAB Tennant Creek 22.20 153 P P 16 35 24.5 -0.4
WRAB IAmb IAmb 16 35 27.9
comp=Z,32nm,0.7s
WRAB Tennant Creek 22.20 153 P P 16 35 24.8 -0.1
WRA Warramunga Arr 22.20 153 P P 16 35 24.7 -0.3
comp=Z,22nm,0.6s,baz=333,slow=10.0,SNR=84
WRA PcP PcP 16 39 18.1 +0.4
comp=Z,1.0nm,0.6s,baz=339,slow=2.2,SNR=4.2
comp=Z,22nm,0.6s
WB2 Warramunga Arr 22.21 153 P P 16 35 24.9 -0.2
baz=22
WB2 Warramunga Arr 22.21 153 P P 16 35 24.6 -0.4
WB2 IAmb IAmb 16 35 27.9
comp=Z,32nm,0.7s
WR0 Warramunga Arr 22.31 153 P P 16 35 25.8 -0.3
WR0 IAmb IAmb 16 35 28.8
comp=Z,26nm,0.8s
TPUB Ta-pu 23.49 352 P P 16 35 37.8 +0.3
TPUB IAmb IAmb 16 35 40.5
comp=Z,21nm,0.9s
COEN Coen 23.53 127 P P 16 35 39.6 +1.8
baz=23,SNR=25
COEN Coen 23.53 127 P P 16 35 37.2 -0.7
COEN IAmb IAmb 16 35 40.7
comp=Z,16nm,0.6s
COEN Coen 23.53 127 P P 16 35 39.7 +1.8
PMG Port Moresby 24.94 112 P P 16 35 52.0 +1.3
comp=Z,20nm,0.8s,baz=293,slow=6.1,SNR=7.5
comp=Z,20nm,0.8s
PMG Port Moresby 24.94 112 P P 16 35 49.4 -1.3
PMG IAmb IAmb 16 35 55.7
comp=Z,18nm,0.8s
PMG Port Moresby 24.94 112 P P 16 35 52.4 +1.7
PMG Port Moresby 24.94 112 P P 16 35 52.3 +1.6
WRKA Warakurna 25.14 171 P P 16 35 53.2 +0.8
baz=25,SNR=40
WRKA Warakurna 25.14 171 P P 16 35 53.5 +1.1
AS31 Alice Springs 25.35 158 P P 16 35 54.7 +0.4
ASAR Alice Springs 25.35 158 P P 16 35 54.7 +0.4
QIS Mount Isa 25.48 144 P P 16 35 56.9 +1.4
baz=25,SNR=59
QIS Mount Isa 25.48 144 P P 16 35 57.3 +1.8
MTSU Mount Surprise 26.91 133 P P 16 36 10.1 +1.7
JOW Kunigami 27.13 9 LR LR 16 47 38.8
comp=Z,18nm,21.3s,baz=60,slow=38
CTA Charters Tower 29.55 134 P P 16 36 33.0 +1.0
comp=Z,10nm,1.2s,baz=322,slow=6.2,SNR=4.0
comp=Z,10nm,1.2s
CTA Charters Tower 29.55 134 P P 16 36 33.3 +1.4
baz=29
OOD Oodnadatta 29.76 159 P P 16 36 35.1 +1.5
CMAR Chiang Mai Arr 30.68 308 P P 16 36 41.2 -0.7
comp=Z,2.3nm,0.9s,baz=138,slow=7.3,SNR=18
CMAR PcP PcP 16 39 38.0 +0.4
comp=Z,0.9nm,0.6s,baz=168,slow=1.7,SNR=7.3
CMAR ScP ScP 16 43 09.3 -1.0
comp=Z,0.9nm,0.9s,baz=177,slow=3.2,SNR=7.8
CMAR LR LR 16 49 11.2
comp=Z,21nm,21.9s,baz=120,slow=36
comp=Z,2.3nm,0.9s
CMAR Chiang Mai Arr 30.68 308 P P 16 36 42.2 +0.3
FORT Forrest 30.75 173 P P 16 36 43.2 +0.9
baz=31,SNR=14
FORT Forrest 30.75 173 P P 16 36 42.2 -0.2
FORT Forrest 30.75 173 P P 16 36 44.1 +1.8
CHTO Chiang Mai 30.88 309 P P 16 36 44.1 +0.5
BLDU Ballidu 31.09 192 P P 16 36 46.4 +1.1
MULG Mulgathing 31.52 163 P P 16 36 50.6 +1.5
WHN Wuhan 31.81 344 ⇑P P 16 36 47.8 -3.9
INKA Innaminka 31.88 151 P P 16 36 54.6 +2.3
JCJ Chichijima 32.28 32 P P 16 36 54.7 -1.1
JCJ Chichijima 32.28 32 P P 16 36 57.0 +1.2
NJ2 Nanjing 32.35 352 eP P 16 37 02.4 +6.1
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
QLP Quilpie 32.80 145 P P 16 37 03.0 +2.6
baz=33,SNR=3.4
PBA Port Blair 33.07 292 P P 16 37 03.6 +0.8
LCRK Leigh Creek 33.10 157 P P 16 37 04.2 +1.3
PZH PanZhiHua 33.99 323 P P 16 37 11.9 +1.0
PZH pmax pmax
comp=Z,7.0nm,0.9s
PZH pmax pmax
comp=Z,100nm,5.6s
BBOO Buckleboo 34.48 162 P P 16 37 15.4 +0.5
BBOO IAmb IAmb 16 37 41.4
comp=Z,18nm,1.1s
BBOO Buckleboo 34.48 162 P P 16 37 16.5 +1.6
RK1H Rockhampton Ha 34.68 134 P P 16 37 18.4 +1.7
STKA Stephens Creek 35.75 154 P P 16 37 27.2 +1.4
comp=Z,19nm,0.5s,baz=330,slow=8.5,SNR=90
STKA PcP PcP 16 39 52.1 +0.5
comp=Z,2.9nm,0.5s,baz=343,slow=4.7,SNR=4.5
comp=Z,19nm,0.5s
STKA Stephens Creek 35.75 154 P P 16 37 27.1 +1.3
baz=36,SNR=33
STKA Stephens Creek 35.75 154 P P 16 37 26.7 +0.8
STKA IAmb IAmb 16 37 28.2
comp=Z,4.3nm,0.6s
STKA Stephens Creek 35.75 154 P P 16 37 27.3 +1.4
JHS Saijyo 35.99 13 P P 16 37 28.5 +0.7
HTT Hallett 36.03 158 P P 16 37 29.7 +1.5
baz=36,SNR=5.5
HTT Hallett 36.03 158 P P 16 37 31.1 +2.9
INU Inuyama 37.35 18 P P 16 37 39.1 -0.2
INU IAmb IAmb 16 37 40.3
comp=Z,14nm,1.0s
CMSA Cobar Meteorol 37.45 149 P P 16 37 42.3 +2.1
baz=37,SNR=70
CMSA Cobar Meteorol 37.45 149 P P 16 37 42.8 +2.5
KSRS Korea Array 37.57 5 P P 16 37 40.3 -0.8
comp=Z,1.7nm,0.8s,baz=181,slow=9.1,SNR=6.4
KSRS LR LR 16 53 21.5
comp=Z,15nm,20.4s,baz=235,slow=36
comp=Z,1.7nm,0.8s
KS19 Wonju Array Si 37.61 5 PcP 16 39 56.2 -0.8
JGF Kuroka 37.69 18 P P 16 37 41.7 -0.6
JGF IAmb IAmb 16 37 43.8
comp=Z,11nm,0.7s
MAJO Matsushiro 38.82 19 P P 16 37 50.4 -1.3
MAJO IAmb IAmb 16 37 51.8
comp=Z,11nm,0.7s
MJAR Matsushiro Arr 38.82 19 P P 16 37 50.6 -1.1
comp=Z,8.3nm,0.7s,baz=187,slow=9.1,SNR=26
comp=Z,8.3nm,0.7s
MJAR Matsushiro Arr 38.82 19 P P 16 37 50.3 -1.4
MJB9 Matsu-Tunnel 38.83 19 P P 16 37 50.3 -1.4
MJB9 IAmb IAmb 16 37 51.8
comp=Z,11nm,0.8s
ARMA Armidale 40.04 141 P P 16 38 04.6 +2.5
baz=40,SNR=12
ARMA Armidale 40.04 141 P P 16 38 04.5 +2.4
ARMA IAmb IAmb 16 38 05.2
comp=Z,12nm,0.6s
ARMA Armidale 40.04 141 P P 16 38 05.0 +2.9
ARPS Mount Arapiles 40.09 157 P P 16 38 03.7 +1.5
baz=40,SNR=14
ARPS Mount Arapiles 40.09 157 P P 16 38 04.1 +2.0
JSD Sado 40.21 18 P P 16 38 03.0 -0.2
JSD IAmb IAmb 16 38 05.7
comp=Z,13nm,0.7s
LZH Lanzhou 40.56 335 eP P 16 38 07.0 +0.7
LZH pmax pmax
comp=Z,15nm,1.4s
JMM Marumori 40.89 21 P P 16 38 08.9 +0.2
CAN Canberra 42.13 149 P P 16 38 21.7 +2.7
CAN Canberra 42.13 149 P P 16 38 21.8 +2.8
TOO Toolangi 42.27 154 P P 16 38 22.9 +2.8
baz=42,SNR=6.5
TOO Toolangi 42.27 154 P P 16 38 22.4 +2.4
TOO IAmb IAmb 16 38 23.6
comp=Z,17nm,0.9s
TOO Toolangi 42.27 154 P P 16 38 22.5 +2.4
CNB Canberra Magne 42.31 148 P P 16 38 23.4 +2.9
baz=42,SNR=9.6
CNB Canberra Magne 42.31 148 P P 16 38 24.0 +3.5
JTM Tenmabayashi 43.61 19 P P 16 38 31.4 +0.7
PALK Pallekele 43.69 281 LR LR 16 56 32.7
comp=Z,21nm,19.0s,baz=286,slow=36
USA0B Ussuriysk Arra 44.71 8 P P 16 38 38.8 -0.7
USA0B IAmb IAmb 16 38 40.5
comp=Z,8.5nm,0.7s
USRK Ussuriysk Ar. 44.71 8 P P 16 38 39.6 +0.1
comp=Z,6.8nm,0.5s,baz=190,slow=7.1,SNR=30
comp=Z,6.8nm,0.5s
USRK Ussuriysk Ar. 44.71 8 P P 16 38 39.2 -0.3
GTA Gaotai 45.09 334 eP P 16 38 43.8 +1.1
GTA pP sP 16 39 15.8 -5.4
GTA pmax pmax
comp=Z,3.0nm,0.7s
ASAJ Asahikawa 47.10 18 LR LR 17 01 52.8
comp=Z,19nm,18.5s,baz=178,slow=40
JKA Kamikawa-asahi 47.10 18 P P 16 38 58.5 +0.2
JKA IAmb IAmb 16 38 59.9
comp=Z,12nm,0.8s
YSS Yuzh-Sakhalins 49.70 17 P P 16 39 17.9 -0.3
YSS IAmb IAmb 16 39 20.8
comp=Z,9.3nm,1.1s
ULN Ulaanbaatar 49.98 345 P P 16 39 19.6 -0.9
SONM Songino Array 50.13 345 P P 16 39 20.7 -0.9
comp=Z,2.2nm,0.7s,baz=158,slow=8.2,SNR=17
comp=Z,2.2nm,0.7s
SONM Songino Array 50.13 345 P P 16 39 20.8 -0.9
WMQ Urumqi 54.36 328 eP P 16 39 55.5 +2.6
MK31 Makanchi Array 59.18 328 P P 16 40 25.9 -1.0
MK31 IAmb IAmb 16 40 27.8
comp=Z,2.0nm,0.6s
MKAR Makanchi Array 59.18 328 P P 16 40 26.1 -0.7
comp=Z,3.3nm,0.6s,baz=124,slow=8.3,SNR=38
MKAR PcP PcP 16 41 12.4 -1.8
comp=Z,2.5nm,0.6s,baz=142,slow=4.4,SNR=9.0
comp=Z,3.3nm,0.6s
MKAR Makanchi Array 59.18 328 P P 16 40 25.7 -1.1
MAKZ Makanchi 59.36 328 P P 16 40 26.7 -1.3
MLZ Mavora Lakes 59.56 145 P P 16 40 29.6 +0.1
QRZ Quartz Range 59.82 139 P P 16 40 33.9 +2.6
PEA0B Petropavlovsk- 60.05 23 P P 16 40 33.1 +0.5
PEA0B IAmb IAmb 16 40 51.1
comp=Z,12nm,1.2s
PETK Petropavlovsk- 60.05 23 P P 16 40 32.4 -0.2
comp=Z,4.3nm,0.7s,baz=236,slow=19,SNR=4.6
comp=Z,4.3nm,0.7s
PETK Petropavlovsk- 60.05 23 P P 16 40 33.1 +0.5
PET Petropavlovsk 60.36 23 P P 16 40 35.3 +0.6
PET IAmb IAmb 16 40 37.3
comp=Z,12nm,1.2s
RPZ Rata Peaks 60.37 142 P P 16 40 36.7 +1.7
comp=Z,9.6nm,0.5s,baz=305,slow=6.3,SNR=5.3
comp=Z,9.6nm,0.5s
RPZ Rata Peaks 60.37 142 IAmb IAmb 16 40 39.4
comp=Z,39nm,1.3s
KHZ Kahutara 61.26 140 P P 16 40 43.0 +1.9
BKZ Black Stump Fm 61.75 135 P P 16 40 45.4 +0.9
BKZ Black Stump Fm 61.75 135 P P 16 40 46.6 +2.1
URZ Urewera 61.80 134 P P 16 40 45.5 +0.7
comp=Z,5.2nm,0.4s,baz=120,slow=24,SNR=8.2
comp=Z,5.2nm,0.4s
URZ Urewera 61.80 134 P P 16 40 45.5 +0.7
URZ IAmb IAmb 16 40 47.9
comp=Z,11nm,1.0s
URZ Urewera 61.80 134 P P 16 40 46.1 +1.3
YAK Yakutsk 62.15 3 P P 16 40 45.9 -0.7
GAR Garm 62.52 315 P P 16 40 48.0 -1.8
GAR IAmb IAmb 16 40 50.1
comp=Z,3.9nm,0.6s
ZAA0 Zalesovo Array 62.79 335 P P 16 40 49.2 -1.9
ZALV Zalesovo Beam 62.79 335 P P 16 40 49.0 -2.1
comp=Z,0.9nm,0.5s,baz=116,slow=6.8,SNR=5.8
comp=Z,0.9nm,0.5s
ZALV Zalesovo Beam 62.79 335 P P 16 40 49.1 -2.0
MA2 Magadan 63.12 15 P P 16 40 53.1 0.0
comp=Z,14nm,0.7s,baz=189,slow=21,SNR=6.2
comp=Z,14nm,0.7s
MA2 Magadan 63.12 15 P P 16 40 53.8 +0.7
KURK Kurchatov 63.52 330 P P 16 40 54.6 -1.3
KURK IAmb IAmb 16 40 57.0
comp=Z,9.3nm,0.8s
KKAR Karatay Array 64.18 319 P P 16 40 59.5 -1.0
SEY Seymchan 66.41 14 P P 16 41 15.2 +0.8
comp=Z,4.2nm,0.8s,baz=197,slow=4.8,SNR=8.4
SEY LR LR 17 11 38.5
comp=Z,19nm,19.6s,baz=212,slow=37
comp=Z,4.2nm,0.8s
ADK Adak 71.72 34 P P 16 41 49.5 +2.0
TIXI Tiksi 71.72 2 P P 16 41 46.1 -1.0
ABKAR Akbulak array 73.37 322 P P 16 41 55.1 -2.2
BILL Bilibino 73.98 15 P P 16 42 00.3 -0.2
VOI Vohitsoka 77.98 248 P P 16 42 24.7 +0.4
VOI IAmb IAmb 16 42 37.4
comp=Z,9.1nm,1.2s
RAYN Ar Rayn 79.40 294 P P 16 42 31.5 -0.5
VNDA Vanda 80.01 172 P P 16 42 34.8 +0.6
comp=Z,1.8nm,0.7s,baz=306,slow=6.3,SNR=11
comp=Z,1.8nm,0.7s
VNDA Vanda 80.01 172 P P 16 42 34.7 +0.6
SBA Scott Base 80.95 172 P P 16 42 40.0 +0.8
SDPT Sand Point 81.95 34 P P 16 42 46.1 +1.2
SVW2 Sparrevohn 85.52 29 P P 16 43 04.2 +1.3
SVW2 IAmb IAmb 16 43 14.1
comp=Z,12nm,1.4s
L19K White Mountain 86.02 28 P P 16 43 06.1 +0.7
L19K IAmb IAmb 16 43 08.5
comp=Z,7.1nm,1.2s
K20K Telida 86.53 27 P P 16 43 08.8 +1.0
J20K Nowinta River 86.60 26 P P 16 43 08.5 +0.3
J20K IAmb IAmb 16 43 17.8
comp=Z,6.5nm,1.4s
KDAK Kodiak Island 86.64 32 P P 16 43 09.0 +0.5
comp=Z,4.2nm,0.8s,baz=291,slow=5.3,SNR=5.2
comp=Z,4.2nm,0.8s
KDAK Kodiak Island 86.64 32 P P 16 43 09.0 +0.5
KDAK IAmb IAmb 16 43 16.8
comp=Z,12nm,1.2s
IMAR Indian Mountai 86.99 24 P P 16 43 10.3 +0.3
KLMR Klimovskoe 87.35 331 eP P 16 43 09.2 -2.6
KLMR AMP 16 43 11.4
comp=Z,8.0nm,0.6s
CNPM China Poot 87.49 31 P P 16 43 12.7 0.0
I23K Minto, Yukon-K 88.73 25 P P 16 43 19.4 +1.1
I23K IAmb IAmb 16 43 19.9
comp=Z,6.1nm,1.1s
CCB Clear Creek Bu 89.38 25 P P 16 43 20.7 -0.7

DHY Denali Highway 89.53 27 P P 16 43 22.7 +0.3
DHY IAmb IAmb 16 43 45.8
comp=Z,11nm,1.4s
ILAR Eielson Array 89.78 25 P P 16 43 21.6 -1.7
comp=Z,0.4nm,0.8s,baz=245,slow=4.5,SNR=4.4
comp=Z,0.4nm,0.8s
QSPA South Pole Qui 89.81 180 P P 16 43 24.5 +1.0
comp=Z,2.6nm,0.7s,baz=274,slow=0.3,SNR=21
comp=Z,2.6nm,0.7s
ARCES ARCESS Array B 93.05 340 P P 16 43 36.6 -1.8
comp=Z,1.3nm,0.7s,baz=79,slow=6.3,SNR=8.2
comp=Z,1.3nm,0.7s
I29M Ogilvie Camp, 93.37 25 P P 16 43 40.1 +0.2
I29M IAmb IAmb 16 43 41.4
comp=Z,5.0nm,0.9s
FINES FINESS Array B 93.85 332 P P 16 43 39.3 -2.8
comp=Z,1.0nm,0.7s,baz=60,slow=7.7,SNR=6.0
TORD Torodi Ar. Bea 121.29 285 PKP PKPdf 16 49 18.4 -0.3
comp=Z,0.8nm,0.6s,baz=62,slow=1.1,SNR=6.6
TXAR Lajitas Array 126.18 53 PKP PKPdf 16 49 27.9 +0.1
comp=Z,0.6nm,0.8s,baz=267,slow=0.7,SNR=8.1
CPUP Villa Florida 153.68 178 PKPbc PKiKP 16 50 24.7 +0.4
comp=Z,1.7nm,0.7s,baz=242,slow=14,SNR=2.6
LPAZ La Paz 159.84 145 PKPab PKPab 16 51 04.9 +0.2
comp=Z,2.5nm,0.7s,baz=56,slow=3.8,SNR=8.0

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*IDC **20** 16:42:29.7±0.8,3°.34S×139°.97E,h0km,mb4.1/6, mbtmp4.2/9,ML4.3/2,MS2.9/9,Error ellipse: s-maj=31.4km s-min=19.2km az=62.0*
*NEIC **20** 16:42:36.7±1.4,3°.47S±0°.07×139°.87E±0°.09,h46km±6km, mb5.0/63,Error ellipse: s-maj=13.8km s-min=9.3km az=114.0*
*DJA **20** 16:42:39.0±0.6,4°S±2°×14°0E±°,h37km±8km,M4.8/18, mB5.2/2,mb4.6/18,MLv4.9/6,Mw(mB)4.6/2*
ISC 20 16:42:38.0±0.4,3°.52S±0°.05×140°.16E±0°.05,h56km,n130,
σ1s58/120,mb4.9/38,MS2.8/5,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GENI	Genyem	0.92	1	P	Pn	16 42 55.4	+0.5
GENI				S	Sn	16 43 09.0	+1.6
GENI	Genyem	0.92	1	P	Pn	16 42 55.8	+0.9
WAMI	Wamena	1.49	256	P	Pn	16 43 02.4	0.0
WAMI				S	Sn	16 43 25.8	+5.0
SMPI	Sarmi	2.10	316	P	Pn	16 43 12.7	+1.9
SMPI				S	Sn	16 43 39.4	+3.6
SRPI	Serui, Papua	4.25	293	P	Pn	16 43 41.2	+1.0
SRPI				S	Sn	16 44 26.3	-2.2
BAKI	Biak	4.66	300	P	Pn	16 43 46.1	+0.2
MANU	Manus Island	7.35	79		Pn	16 44 25.5	+2.7
FAKI	Fak Fak	7.92	274	Pn	Pn	16 44 31.1	+0.5
FAKI	Fak Fak	7.92	274	P	Pn	16 44 34.0	+3.4
	0.2nm34nm,0.9s						
FAKI	Fak Fak	7.92	274	P	Pn	16 44 29.9	-0.7
PMG	Port Moresby	9.08	130	Pn	Pn	16 44 47.4	+0.9
	7.6nm,0.6s,baz=316,slow=9.8,SNR=8.3						
PMG				Sn	Sn	16 46 28.2	+0.8
	0.4nm,0.3s,baz=213,slow=15,SNR=1.5						
PMG				LR	LR	16 48 28.4	
	comp=Z,119nm,18.8s,baz=314,slow=38						
PMG	Port Moresby	9.08	130		Pn	16 44 46.8	+0.3
PMG	Port Moresby	9.08	130	P	Pn	16 44 50.0	+3.5
SWI	Sorong	9.28	286	P	Pn	16 44 51.5	+2.4
	28nm,0.6s						
COEN	Coen	10.79	164	Pn	Pn	16 45 10.9	+1.1
COEN	Coen	10.79	164	P	Pn	16 45 11.0	+1.1
KDU	Kakadu	11.86	219	P	Pn	16 45 23.2	-1.3
MTN	Manton Dam	12.86	223		Pn	16 45 36.0	-2.2
MTN	Manton Dam	12.86	223	P	Pn	16 45 36.4	-1.8
LBMI	Labuha	12.97	282	P	Pn	16 45 42.0	+2.4
	23nm,0.8s						
MTSU	Mount Surprise	15.08	165	P	P	16 46 10.4	-1.6
KNRA	Kununurra	16.48	222	Pn	Pn	16 46 22.2	-3.4
KNRA	Kununurra	16.48	222	P	Pn	16 46 24.4	-1.2
KMSI	Cibinong	16.67	284	P	P	16 46 31.5	+1.9
	99nm,0.9s						
QIS	Mount Isa	16.94	182	P	Pn	16 46 29.7	-1.7
WB0	Warramunga Arr	17.10	199		Pn	16 46 31.1	-2.2
WR0	Warramunga Arr	17.23	198		Pn	16 46 33.1	-1.9
WRAB	Tennant Creek	17.27	199		Pn	16 46 33.4	-2.0
WRAB	Tennant Creek	17.27	199	P	Pn	16 46 34.1	-1.3
WB2	Warramunga Arr	17.28	199		Pn	16 46 33.6	-1.9
WRA	Warramunga Arr	17.28	199	P	Pn	16 46 34.1	-1.4
	2.6nm,0.3s,baz=18,slow=13,SNR=50						
WRA				S	Sn	16 49 33.3	-14
	0.8nm,0.5s,baz=14,slow=21,SNR=1.6						
	9.9nm,0.6s						
CTA	Charters Tower	17.50	161	P	P	16 46 38.2	-0.6
	0.2nm,0.3s,baz=337,slow=9.0,SNR=1.9						
CTA				LR	LR	16 53 06.6	
	comp=Z,52nm,20.6s,baz=276,slow=36						
	0.6nm,0.3s						
LUWI	Luwuk	17.55	278	P	P	16 46 41.8	+2.5
	2µm36nm,0.9s						
GUMO	Guam	17.63	15	LR	LR	16 52 43.2	
	comp=Z,33nm,18.6s,baz=208,slow=35						
DAV	Davao City (W)	17.96	306	LR	LR	16 53 11.5	
	comp=Z,24nm,21.5s,baz=347,slow=36						
APSI	Ampana	18.68	278	P	Pn	16 46 53.8	+1.2
	26nm,0.9s						
EDFI	Ende, Flores	19.08	253	P	Pn	16 46 59.0	+1.5
	4.5nm,1.6s						
BNSI	Bone	20.02	267	P	Pn	16 47 10.1	+1.5
	24nm,0.9s						
BKSI	Bulukumba	20.06	264	P	Pn	16 47 11.2	+2.2
	9.3nm,0.7s						
TTSI	Tana Toraja	20.31	271	P	Pn	16 47 12.8	+0.8
	28nm,0.9s						
PCI	Palu	20.47	277	P	Pn	16 47 15.1	+1.2
	274nm,1.1s						
HNR	Honiara	20.51	108	P	P	16 47 13.0	+1.3
	41nm,0.3,baz=128,slow=4.4,SNR=1.7						
	41nm,0.7s						
HNR	Honiara	20.51	108	IAmb	IAmb	16 47 25.9	
	comp=Z,65nm,0.9s						
AS31	Alice Springs	20.92	196	P	P	16 47 15.1	-1.0
ASAR	Alice Springs	20.92	196	P	P	16 47 15.1	-1.0
WBSI	Waikabubak, Su	21.50	253	P	P	16 47 26.7	+4.3
	comp=Z,50nm,1.0s						
INKA	Innaminka	24.09	179	P	P	16 47 48.7	+0.3
EIDS	Eidsvold	24.13	155	P	P	16 47 49.5	+0.7
EIDS	Eidsvold	24.13	155	P	P	16 47 50.8	+2.0
WRKA	Warakurna	24.25	207	P	P	16 47 48.2	-1.3
OOD	Oodnadatta	24.51	190	P	P	16 47 50.6	-1.6
MBWA	Marble Bar	26.50	227	P	P	16 48 06.6	-3.7
PSA00	Pilbara Seismi	26.67	226	P	P	16 48 07.8	-4.1
STKA	Stephens Creek	28.24	177	LR	LR	17 00 32.4	
	comp=Z,99nm,18.3s,baz=28,slow=38						
STKA	Stephens Creek	28.24	177	P	P	16 48 25.4	-0.4
BBOO	Buckleboo	29.39	187	P	P	16 48 35.5	-0.6
BBOO				IAmb	IAmb	16 49 29.8	
	comp=Z,85nm,1.8s						
FORT	Forrest	29.42	202	P	P	16 48 35.0	-1.3
FORT				IAmb	IAmb	16 49 25.5	
	comp=Z,22nm,0.8s						
JCJ	Chichijima	30.50	4	LR	LR	16 59 10.8	
	comp=Z,25nm,18.3s,baz=156,slow=33						
JOW	Kunigami	32.29	340	LR	LR	17 00 55.4	
	comp=Z,20nm,20.3s,baz=209,slow=34						
H11S3	WAKE ISLAND Hy	34.08	49	T	T	17 23 58.2	
	baz=232,slow=75,SNR=42						
H11S2	WAKE ISLAND Hy	34.09	49	T	T	17 23 58.9	
	baz=232,slow=75,SNR=23						
H11S1	WAKE ISLAND Hy	34.10	49	T	T	17 23 60.0	
	baz=232,slow=75,SNR=23						
MORW	Morawa	34.21	220	P	P	16 49 17.1	-1.2
MORW				IAmb	IAmb	16 50 26.9	
	comp=Z,35nm,1.4s						
TOO	Toolangi	34.24	172	P	P	16 49 19.0	+0.4
TOO				IAmb	IAmb	16 49 44.2	
	comp=Z,52nm,1.6s						
H11N1	WAKE ISLAND Hy	34.98	48	T	T	17 25 02.1	
	baz=229						
H11N2	WAKE ISLAND Hy	34.99	48	T	T	17 25 15.6	
	baz=229						
H11N3	WAKE ISLAND Hy	34.99	48	T	T	17 25 15.3	
	baz=229						
KSRS	Korea Array	42.33	345	LR	LR	17 06 00.4	
	comp=Z,11nm,21.1s,baz=160,slow=34						
ERM	Erimo	45.41	3	P	P	16 50 50.1	-1.0
CMAR	Chiang Mai Arr	46.09	300	P	P	16 50 54.3	-2.7
	comp=Z,0.6nm,0.7s,baz=125,slow=5.9,SNR=7.2						
CMAR				LR	LR	17 10 23.7	
	comp=Z,6.5nm,18.7s,baz=110,slow=36						

	comp=Z,0.6nm,0.7s								
MLZ	**Mavora Lakes**	**48.33**	**154**	P	**P**	**16 51 15.3**	**+1.3**		
TUWZ	**Tuamarina**	**48.39**	**146**	P	**P**	**16 51 15.0**	**+0.5**		
BKZ	**Black Stump Fm**	**48.43**	**142**	P	**P**	**16 51 15.9**	**+1.0**		
BKZ				IAmb	IAmb	16 52 08.4			
	comp=Z,26nm,1.5s								
LBZ	**Lake Benmore**	**48.53**	**151**	P	**P**	**16 51 16.1**	**+0.6**		
CMWZ	**Cape Campbell**	**48.75**	**146**	P	**P**	**16 51 18.5**	**+1.2**		
KHZ	**Kahutara**	**48.84**	**147**	P	**P**	**16 51 18.3**	**+0.4**		
YSS	**Yuzh-Sakhalins**	**50.31**	**2**	P	**P**	**16 51 28.8**	**-0.1**		
YSS				IAmb	IAmb	16 51 29.4			
	comp=Z,14nm,1.3s								
PETK	**Petropavlovsk-**	**58.33**	**12**	P	**P**	**16 52 25.6**	**-1.5**		
	comp=Z,0.7nm,0.7s,baz=172,slow=5.3,SNR=1.3								
	comp=Z,0.7nm,0.7s								
CASY	**Casey**	**65.99**	**193**	P	**P**	**16 53 18.0**	**-0.2**		
CASY				IAmb	IAmb	16 53 25.0			
	comp=Z,36nm,1.9s								
ADK	**Adak**	**66.21**	**28**	P	**P**	**16 53 20.2**	**+0.4**		
ADK				IAmb	IAmb	16 55 23.7			
	comp=Z,18nm,1.1s								
MKAR	**Makanchi Array**	**71.31**	**322**	P	**P**	**16 53 50.4**	**-1.4**		
	comp=Z,0.8nm,0.7s,baz=99,slow=7.5,SNR=8.8								
	comp=Z,0.8nm,0.7s								
MAKZ	**Makanchi**	**71.51**	**322**	P	**P**	**16 53 52.2**	**-0.8**		
ZALV	**Zalesovo Beam**	**73.36**	**330**	P	**P**	**16 54 01.5**	**-2.3**		
VNDA	**Vanda**	**74.85**	**175**	P	**P**	**16 54 12.4**	**+0.3**		
	comp=Z,3.1nm,0.7s,baz=321,slow=6.6,SNR=19								
	comp=Z,3.1nm,0.7s								
VNDA	**Vanda**	**74.85**	**175**	P	**P**	**16 54 12.3**	**+0.3**		
TIXI	**Tiksi**	**75.40**	**356**	P	**P**	**16 54 15.2**	**-0.1**		
SBA	**Scott Base**	**75.60**	**174**	P	**P**	**16 54 17.8**	**+1.4**		
SBA				IAmb	IAmb	16 55 44.7			
	comp=Z,26nm,1.9s								
OHAK	**Old Harbor**	**80.51**	**30**	P	**P**	**16 54 44.3**	**+0.4**		
O18K	**Koktuh Hills**	**80.61**	**28**	P	**P**	**16 54 44.5**	**0.0**		
O18K				IAmb	IAmb	16 55 20.8			
	comp=Z,48nm,1.7s								
KDAK	**Kodiak Island**	**81.07**	**30**	P	**P**	**16 54 46.7**	**-0.2**		
KDAK				IAmb	IAmb	16 57 05.6			
	comp=Z,58nm,1.6s								
N19K	**Bonanza Creek**	**81.33**	**27**	P	**P**	**16 54 48.6**	**+0.3**		
N19K				IAmb	IAmb	16 57 53.2			
	comp=Z,16nm,1.4s								
L19K	**White Mountain**	**81.72**	**25**	P	**P**	**16 54 50.5**	**+0.1**		
L19K				IAmb	IAmb	16 57 54.3			
	comp=Z,24nm,1.9s								
CNPM	**China Poot**	**82.35**	**29**	P	**P**	**16 54 53.6**	**-0.1**		
K20K	**Telida**	**82.52**	**24**	P	**P**	**16 54 55.0**	**+0.6**		
K20K				IAmb	IAmb	16 56 51.8			
	comp=Z,20nm,1.8s								
J20K	**Nowinta River**	**82.82**	**24**	P	**P**	**16 54 56.9**	**+0.9**		
PPLA	**Purkeypile**	**83.13**	**25**	P	**P**	**16 54 57.5**	**-0.3**		
PPLA				IAmb	IAmb	16 57 36.8			
	comp=Z,31nm,1.7s								
RC01	**Rabbit Creek A**	**83.59**	**27**	P	**P**	**16 54 59.5**	**-0.5**		
RC01				IAmb	IAmb	16 55 17.4			
	comp=Z,23nm,1.3s								
IMAR	**Indian Mountai**	**83.69**	**22**	P	**P**	**16 55 00.2**	**-0.2**		
SML	**Sawmill**	**84.45**	**27**	P	**P**	**16 55 04.5**	**0.0**		
SML				IAmb	IAmb	16 56 25.3			
	comp=Z,56nm,1.8s								
MLY	**Manley**	**84.50**	**23**	P	**P**	**16 55 04.7**	**+0.1**		
MLY				IAmb	IAmb	16 55 23.4			
	comp=Z,9.3nm,1.6s								
GLI	**Glacier Island**	**84.75**	**28**	P	**P**	**16 55 05.6**	**-0.3**		
SCM	**Sheep Creek Mo**	**84.92**	**27**	P	**P**	**16 55 06.7**	**-0.1**		
I23K	**Minto, Yukon-K**	**85.09**	**24**	P	**P**	**16 55 07.2**	**-0.3**		
I23K				IAmb	IAmb	16 58 11.2			
	comp=Z,19nm,1.9s								
H23K	**Yukon River**	**85.24**	**23**	P	**P**	**16 55 08.2**	**-0.2**		
H23K				IAmb	IAmb	16 57 10.2			
	comp=Z,17nm,1.8s								
M24K	**Tolsona, Glenn**	**85.52**	**27**	P	**P**	**16 55 09.5**	**-0.4**		
H24K	**Noodor Dome**	**85.89**	**23**	P	**P**	**16 55 11.5**	**-0.1**		
H24K				IAmb	IAmb	16 55 43.0			
	comp=Z,18nm,2.0s								
HMT	**Hamilton**	**85.95**	**29**	P	**P**	**16 55 09.8**	**-2.1**		
IL31		**85.97**	**24**	P	**P**	**16 55 10.5**	**-1.4**		
IL31				IAmb	IAmb	16 55 46.1			
	comp=Z,7.3nm,1.4s								
ILAR	**Eielson Array**	**85.97**	**24**	P	**P**	**16 55 10.3**	**-1.6**		
	comp=Z,1.3nm,0.7s,baz=265,slow=4.5,SNR=13								
	comp=Z,1.3nm,0.7s								
ILAR	**Eielson Array**	**85.97**	**24**	P	**P**	**16 55 10.2**	**-1.8**		
PAX	**Paxson**	**86.07**	**26**	P	**P**	**16 55 12.2**	**-0.3**		
PAX				IAmb	IAmb	16 57 35.1			
	comp=Z,19nm,1.8s								
N25K	**Chitina, Valde**	**86.11**	**28**	P	**P**	**16 55 10.7**	**-2.1**		
TOLK	**Toolik Lake Re**	**86.18**	**20**	P	**P**	**16 55 13.3**	**+0.4**		
TOLK				IAmb	IAmb	16 57 24.3			
	comp=Z,12nm,1.6s								
ABKAR	**Akbulak array**	**86.27**	**320**	P	**P**	**16 55 11.4**	**-2.3**		
QSPA	**South Pole Qui**	**86.43**	**180**	P	**P**	**16 55 14.3**	**-0.1**		
QSPA				IAmb	IAmb	16 55 15.4			
	comp=Z,10nm,0.8s								
RIDG	**Independent Ri**	**86.54**	**25**	P	**P**	**16 55 13.8**	**-1.1**		
RIDG				IAmb	IAmb	16 57 27.7			
	comp=Z,22nm,1.7s								
J25K	**Salcha River,**	**86.55**	**25**	P	**P**	**16 55 14.1**	**-0.8**		
J25K				IAmb	IAmb	16 55 33.9			
	comp=Z,6.2nm,1.3s								
J26L	**Joseph Creek**	**87.28**	**25**	P	**P**	**16 55 18.6**	**+0.2**		
J26L				IAmb	IAmb	16 55 20.2			
	comp=Z,10nm,1.7s								
BARN	**Barnard Glacie**	**87.36**	**28**	P	**P**	**16 55 19.6**	**+0.6**		
CTGM	**Chitina Glacie**	**87.49**	**29**	P	**P**	**16 55 20.2**	**+0.6**		
M27K	**Edge Creek, AK**	**87.53**	**27**	P	**P**	**16 55 19.9**	**+0.1**		
M27K				IAmb	IAmb	16 56 46.7			
	comp=Z,31nm,1.9s								
BMAR	**Burnt Mountain**	**87.61**	**22**	P	**P**	**16 55 20.7**	**+0.8**		
LOGN	**Logan Glacier**	**87.62**	**29**	P	**P**	**16 55 20.2**	**-0.1**		
L27K	**Beaver Creek,**	**87.70**	**26**	P	**P**	**16 55 20.7**	**+0.3**		
L27K				IAmb	IAmb	16 55 44.6			
	comp=Z,20nm,1.7s								
BCAR	**Beaver Creek A**	**87.72**	**26**	P	**P**	**16 55 21.4**	**+0.8**		
K27K	**Chicken**	**87.80**	**26**	P	**P**	**16 55 22.1**	**+1.3**		
K27K				IAmb	IAmb	16 56 14.7			
	comp=Z,17nm,1.9s								
BCPM	**Bancas Point**	**88.13**	**30**	P	**P**	**16 55 22.1**	**-0.4**		
M30M	**Minto, Yukon**	**89.89**	**27**	P	**P**	**16 55 30.5**	**-0.3**		
M30M				IAmb	IAmb	16 55 56.5			
	comp=Z,26nm,1.8s								
ARCES	**ARCESS Array B**	**101.75**	**341**	P	**Pdif**	**16 56 22.3**	**-2.2**		
	comp=Z,0.7nm,0.8s,baz=72,slow=6.0,SNR=3.8								
LPAZ	**La Paz**	**145.80**	**126**	PKPbc	**PKPbc**	**17 02 12.7**	**0.0**		
	comp=Z,1.2nm,0.7s,baz=6.4,slow=5.4,SNR=4.3								

*IDC **20** 17:16:31.9±1.1,53.1°N×35.2°W,h0km,mb3.5/11, mbtmp3.5/12,ML3.8/1,MS3.4/20,Error ellipse: s-maj=33.1km s-min=19.3km az=11.0*

ISC 20 17:16:33.3±0.9,53.1°N±0.2°×35.3°W±0.1,h10km,n30, σ0.58/13,mb3.7/11,MS3.3/19,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCHQ	**Schefferville**	**18.53**	**288**	LR	LR	17 26 36.0	
	comp=Z,100nm,18.6s,baz=94,slow=33						
EKA	**Eskdalemuir Ar**	**18.84**	**70**	P	**Pn**	**17 20 53.8**	**+0.2**
	baz=289,slow=13						
	2.7nm,1.0s						
JMIC	**Jan Mayen**	**21.53**	**24**	LR	LR	17 27 30.9	
	comp=Z,64nm,20.5s,baz=266,slow=31						
ESDC	**Sonseca Array**	**25.23**	**110**	P	**P**	**17 21 59.8**	**+0.5**
	0.7nm,0.8s,baz=316,slow=9.3,SNR=6.4						
ESDC				LR	LR	17 30 04.6	
	comp=Z,75nm,18.1s,baz=312,slow=32						
	0.7nm,0.8s						
NOA	**NORSAR Array B**	**25.99**	**54**	LR	LR	17 31 07.3	
	comp=Z,36nm,18.8s,baz=285,slow=34						
HFS	**Hagfors**	**27.29**	**56**	LR	LR	17 31 08.1	
	comp=Z,38nm,20.5s,baz=265,slow=32						
DAVOX	**Davos/Dischmat**	**29.37**	**84**	LR	LR	17 33 09.4	
	comp=Z,73nm,20.1s,baz=263,slow=34						
VRAC	**Vranov**	**32.15**	**75**	LR	LR	17 35 19.8	
	comp=Z,53nm,19.6s,baz=304,slow=35						
FINES	**FINESS Array B**	**33.02**	**51**	LR	LR	17 35 08.6	
	comp=Z,50nm,18.3s,baz=242,slow=34						
TKL	**Tuckaleechee C**	**37.94**	**262**	LR	LR	17 39 45.3	
	comp=Z,51nm,18.1s,baz=93,slow=37						
AKASG	**Malin Array Be**	**38.69**	**67**	P	**P**	**17 23 56.7**	**-0.2**
	0.1nm,0.3s,baz=292,slow=9.7,SNR=1.5						
AKASG				LR	LR	17 38 42.1	
	comp=Z,30nm,20.7s,baz=346,slow=34						
	0.1nm,0.3s						
SJG	**San Juan**	**42.38**	**226**	LR	LR	17 40 41.8	
	comp=Z,28nm,19.2s,baz=281,slow=34						
BELG	**Belogornoye**	**47.47**	**56**	LR	LR	17 42 41.2	
	comp=Z,26nm,18.8s,baz=152,slow=33						
BRTR	**Keskin Array B**	**47.56**	**77**	P	**P**	**17 25 09.2**	**+0.2**
	1.2nm,0.7s,baz=304,slow=5.7,SNR=8.4						
BRTR				LR	LR	17 46 47.1	
	comp=Z,42nm,18.7s,baz=281,slow=38						
	1.2nm,0.7s						
PDAR	**Pinedale Array**	**48.66**	**289**	P	**P**	**17 25 16.7**	**-0.9**
	0.3nm,0.6s,baz=72,slow=9.5,SNR=3.6						
	0.3nm,0.6s						
NEW	**Newport**	**49.37**	**299**	LR	LR	17 45 17.4	
	comp=Z,37nm,18.4s,baz=188,slow=35						
TORD	**Torodi Ar. Bea**	**49.53**	**130**	P	**P**	**17 25 24.0**	**-0.2**
	0.6nm,0.8s,baz=323,slow=10.0,SNR=2.8						
	0.6nm,0.8s						
ILAR	**Eielson Array**	**51.23**	**329**	P	**P**	**17 25 37.3**	**+0.8**
	0.3nm,0.7s,baz=39,slow=6.0,SNR=4.8						
	0.3nm,0.7s						
ANMO	**Albuquerque**	**52.03**	**280**	LR	LR	17 46 48.0	
	comp=Z,99nm,19.3s,baz=154,slow=35						
SDV	**Santo Domingo**	**52.53**	**226**	LR	LR	17 46 16.4	
	comp=Z,35nm,21.4s,baz=252,slow=34						
GNI	**Garni**	**53.69**	**70**	LR	LR	17 49 02.7	
	comp=Z,29nm,19.9s,baz=350,slow=36						
AKTO	**Aktyubinsk**	**53.77**	**52**	LR	LR	17 46 55.1	
	comp=Z,42nm,20.4s,baz=333,slow=34						
TXAR	**Lajitas Array**	**54.33**	**273**	P	**P**	**17 26 00.4**	**+0.4**
	0.2nm,0.7s,baz=55,slow=7.8,SNR=2.5						
	0.2nm,0.7s						
CMIG	**Matias Romero**	**58.33**	**256**	LR	LR	17 51 35.5	
	comp=Z,52nm,18.5s,baz=196,slow=36						
ZALV	**Zalesovo Beam**	**62.30**	**35**	P	**P**	**17 26 55.1**	**0.0**
	0.3nm,0.4s,baz=290,slow=11,SNR=3.6						
	0.3nm,0.4s						
KURBB	**Kurchatov Arra**	**62.61**	**41**	P	**P**	**17 26 56.2**	**-1.2**
	0.6nm,0.8s,baz=325,slow=7.0,SNR=6.1						
	0.6nm,0.8s						
MKAR	**Makanchi Array**	**67.17**	**41**	P	**P**	**17 27 27.0**	**-0.1**
	0.7nm,0.7s,baz=340,slow=6.4,SNR=7.0						
	0.7nm,0.7s						
AAK	**Ala-Archa**	**67.18**	**49**	LR	LR	17 56 04.6	
	comp=Z,34nm,19.1s,baz=280,slow=35						
SONM	**Songino Array**	**74.27**	**26**	P	**P**	**17 28 10.5**	**0.0**
	0.6nm,0.7s,baz=327,slow=6.9,SNR=2.7						
	0.6nm,0.7s						
WRA	**Warramunga Arr**	**145.92**	**18**	PKPbc	**PKPdf**	**17 36 12.3**	**0.0**
	0.7nm,0.8s,baz=340,slow=3.3,SNR=5.1						

MAN 20 17:45:03.6,13.69N×120.62E,h124km,mb4.1,ML2.9, MS2.6,3C-1D,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.37**	**120**	⇓*e*P	Pn	17 45 21.8	+1.5
PGP				*i* S		17 45 36.6	
LUBP	**Lubang**	**0.37**	**277**	⇑*e*P	Pn	17 45 22.8	+2.3
LUBP				*e*S		17 45 37.1	
MACP	**Maragondon, Ca**	**0.58**	**9**	⇑*e*P	Pn	17 45 23.7	+2.2
MACP				*e*S		17 45 38.8	
SJMP	**San Jose**	**1.31**	**158**	⇑*e*P	Pn	17 45 30.0	+1.7
SJMP				*e*S		17 45 50.5	

MAN 20 17:52:22.3,9.99N×123.87E,h33km,mb4.0,ML2.7,MS2.3, Negros

NNC 20 18:30:51.9±4.0,38.14N×73.98E,h0km,mb4.0,mpv3.6, 2C-2D,Error ellipse: s-maj=28.4km s-min=16.8km az=169.0,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TKM2	**Tokmak 2**	**4.93**	**14**	⇑Pg	Pb	18 32 22.1	+2.9
	6.3nm,1.1s						
TKM2				⇓Lg	Lg	18 33 27.1	
	7.6nm,0.8s						
IUG	**Iuzhnay**	**5.02**	**324**	Pg	Pb	18 32 23.9	+3.3
	302nm,0.7s						
IUG				Lg	Lg	18 33 30.7	
	34nm,1.2s						
KST	**Kastek**	**5.12**	**16**	Pg	Pb	18 32 26.3	+3.8
	1.7nm,0.5s						
KST				Lg	Lg	18 33 35.0	
	11nm,1.3s						
DGS	**Degeres**	**5.28**	**14**	Pg	Pg	18 32 29.8	-3.2
	4.1nm,0.7s						
DGS				Lg	Lg	18 33 40.7	
	6.6nm,1.0s						
TNSS	**Tian-Shan**	**5.39**	**24**	Pg	Pb	18 32 30.9	+3.8
	1.2nm,0.5s						
TNSS				Lg	Lg	18 33 42.8	
	5.0nm,1.7s						
KK31	**Karatay Array**	**5.62**	**333**	Pn	Pn	18 32 13.6	-3.0
	baz=142,slow=14,SNR=12						
KK31				⇑Sn	Sn	18 33 21.9	0.0
	2.0nm,0.6s,baz=146,slow=22						
KK31				⇓Lg	Lg	18 33 52.2	
	3.3nm,0.6s						
KRBS	**Karabastau**	**5.70**	**12**	Pg	Pg	18 32 37.9	-3.1
	0.2nm,0.1s						
KRBS				Lg	Lg	18 33 55.1	
	5.6nm,1.0s						
BRLS	**Borolday**	**5.81**	**328**	Pg	Pb	18 32 38.4	+4.3
	8.7nm,0.2s						
BRLS				Lg	Lg	18 33 55.8	
	4.3nm,0.9s						
KTBS	**Karatobe**	**5.93**	**19**	Pg	Pb	18 32 39.8	+3.7
	2.0nm,1.2s						
KTBS				Lg	Lg	18 33 58.5	
	7.2nm,0.7s						

*CNRM **20** 18:40:32.6,35.61N×3.62W,h19km,ml3.0*
*SFS **20** 18:40:34.0,35.42N×3.56W,h12km,ML2.6,ALBORAN SUR*
*MDD **20** 18:40:35.0±0.4,35.43N×3.56W,h12km±1km,mb_Lg2.6/13, Error ellipse: s-maj=3.5km s-min=2.3km az=6.0*
*IGIL **20** 18:40:35.1,35.43N×3.56W,h12km*
*INMG **20** 18:40:35.2±1.3,35.45N×3.61W,h14km±5km,ML2.1, Error ellipse: s-maj=3.6km s-min=3.6km az=133.0*

ISC 20 18:40:34.8±1.0,35.45N±0.02×3.60W±0.02,h24km±10km, n42,σ1.34/82,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.36**	**230**	P	**Pb**	**18 40 42.1**	**-0.5**
PALE				S	**Sb**	**18 40 48.8**	**+0.8**
GOG	**Mont Gurugu**	**0.55**	**114**	P	**Pb**	**18 40 45.8**	**0.0**
GOG				S	**Sb**	**18 40 52.8**	**-0.4**
WMELI	**Melilla**	**0.55**	**104**	P	**Pb**	**18 40 45.4**	**-0.3**
WMELI				S	**Sb**	**18 40 52.9**	**-0.3**
EMEL	**Melilla**	**0.55**	**105**	Pg	**Pb**	**18 40 45.6**	**-0.2**
EMEL				Sg	**Sb**	**18 40 53.1**	**-0.2**
PVLZ	**Peæn de**	**0.63**	**245**	P	**Pb**	**18 40 47.1**	**-0.1**
PVLZ				S	**Sb**	**18 40 55.4**	**-0.2**
EALB	**Alboran**	**0.68**	**43**	Pg	**Pb**	**18 40 48.0**	**+0.1**
EALB				Sg	**Sb**	**18 40 56.3**	**-0.5**
EALB				*i* Vmb_Lg		18 40 59.0	
AKLM	**AKL**	**0.96**	**193**	P	**Pb**	**18 40 52.9**	**+0.1**
AKLM				S	**Sb**	**18 41 05.1**	**+0.1**
CHAS	**Isla Isabel II**	**0.99**	**105**	P	**Pb**	**18 40 51.8**	**-1.5**
CHAS				S	**Sb**	**18 41 04.5**	**-1.5**
TAF	**Taforalt**	**1.16**	**123**	P	**Pn**	**18 40 55.1**	**-0.5**
TAF				S	**Sn**	**18 41 12.5**	**+1.7**
JBK	**JBK**	**1.40**	**142**	P	**Pn**	**18 40 58.6**	**-0.3**
JBK				S	**Sb**	**18 41 19.5**	**+1.7**
ELGU	**Los Guajares,**	**1.42**	**359**	Pn	**Pn**	**18 40 58.5**	**-0.6**
ELGU				Pg	**Pb**	**18 41 00.1**	**-0.5**
ELGU				Sn	**Sn**	**18 41 15.6**	**-1.5**
ELGU				Sg	**Sb**	**18 41 17.4**	**-0.9**
ELGU				*i* Vmb_Lg		18 41 17.7	
CHEFC	**Chefchaouen**	**1.46**	**257**	P	**Pn**	**18 41 00.3**	**+0.6**
CHEFC				S	**Sn**	**18 41 19.2**	**+1.1**
EMIJ	**Mijas**	**1.46**	**320**	Pn	**Pn**	**18 40 59.1**	**-0.6**
EMIJ				Sn	**Sn**	**18 41 17.9**	**-0.2**
EMIJ				*i* Vmb_Lg		18 41 21.4	
EMIJ				Sg	**Sb**	**18 41 22.1**	**+2.6**
SMIR	**Smir Dam**	**1.47**	**280**	P	**Pn**	**18 40 58.0**	**-1.7**
SMIR				S	**Sn**	**18 41 15.4**	**-2.8**
CEU	**Ceuta**	**1.51**	**288**	P	**Pn**	**18 40 58.6**	**-1.7**
CEU				S	**Sn**	**18 41 13.9**	**-5.3**
EBER	**Berja**	**1.56**	**22**	Pn	**Pn**	**18 41 00.8**	**-0.3**
EBER				Sn	**Sn**	**18 41 20.7**	**0.0**
EBER				Sg	**Sb**	**18 41 23.7**	**+1.3**
EBER				*i* Vmb_Lg		18 41 24.0	
EGOR	**Sierra Gorda,**	**1.71**	**346**	Pn	**Pn**	**18 41 03.4**	**+0.3**
EGOR				Sg	**Sb**	**18 41 29.2**	**+2.5**
EGOR				*i* Vmb_Lg		18 41 39.0	
EQUE	**Quentar**	**1.76**	**4**	Pn	**Pn**	**18 41 04.8**	**+1.0**
EQUE				Sn	**Sn**	**18 41 25.9**	**+0.4**
EQUE				*i* Vmb_Lg		18 41 28.8	
LCRM	**LCR**	**2.04**	**211**	P	**Pn**	**18 41 09.4**	**+1.6**
LCRM				S	**Sb**	**18 41 38.3**	**+2.1**
IFR	**Ifrane**	**2.30**	**214**	P	**Pn**	**18 41 14.1**	**-1.6**
IFR				S	**Sn**	**18 41 38.6**	**-0.4**
EQES	**Quesada**	**2.39**	**10**	Pn	**Pn**	**18 41 13.1**	**+0.6**
EQES				Sn	**Sn**	**18 41 42.3**	**+1.3**
EQES				*i* Vmb_Lg		18 41 46.4	
CZD	**Col de Zad**	**2.69**	**207**	P	**Pn**	**18 41 17.6**	**+0.8**
CZD				S	**Sn**	**18 41 50.1**	**+1.4**
TDRA	**Tendrara**	**2.73**	**151**	P	**Pn**	**18 41 18.3**	**+1.0**
TDRA				S	**Sb**	**18 41 53.1**	**-3.1**
MD31	**MD31**	**2.75**	**201**	P	**Pn**	**18 41 18.6**	**+1.2**
MD31				S	**Sb**	**18 41 55.0**	**-1.5**
MDT	**Midelt**	**2.76**	**198**	P	**Pn**	**18 41 19.0**	**+1.4**
MDT				S	**Sb**	**18 41 54.7**	**-2.1**
EADA	**Adamuz**	**2.83**	**344**	Pn	**Pn**	**18 41 18.9**	**+0.5**
EADA				Sn	**Sn**	**18 41 51.9**	**+0.1**
EADA				*i* Vmb_Lg		18 42 00.0	
ECAB	**El Cabril**	**3.00**	**331**	*i* Vmb_Lg		18 41 19.0	
ECAB				Pn	**Pn**	**18 41 21.6**	**+0.8**
ECAB				Sn	**Sn**	**18 41 57.2**	**+1.1**
EMUR	**La Murta**	**3.05**	**38**	Sn	**Sn**	**18 41 56.7**	**-0.6**
ZHG	**ZHG**	**3.21**	**232**	P	**Pn**	**18 41 25.1**	**+1.3**
ZHG				S	**Sn**	**18 42 04.7**	**+3.4**
EMIN	**Mina Concepcio**	**3.38**	**314**	Pn	**Pn**	**18 41 26.6**	**+0.5**
EMIN				*i* Vmb_Lg		18 42 02.1	
EMIN				Sn	**Sn**	**18 42 04.8**	**-0.7**
ETOB	**Tobarra**	**3.59**	**27**	Pn	**Pn**	**18 41 29.7**	**+0.7**
ETOB				Sn	**Sn**	**18 42 10.2**	**-0.5**
ETOB				*i* Vmb_Lg		18 42 56.9	
EGRO	**El Granado**	**3.76**	**305**	Pn	**Pn**	**18 41 31.5**	**+0.3**
EGRO				Sn	**Sn**	**18 42 13.7**	**-1.0**
PVAQ	**Vaqueiros**	**3.85**	**302**	*e*Pn	**Pn**	**18 41 33.0**	**+0.5**
PVAQ				*e*Sn	**Sn**	**18 42 15.5**	**-1.4**
PVAQ				A	A	18 42 20.0	
	3.7nm,0.5s						
PBAR	**Barrancos**	**3.87**	**316**	*e*Sn	**Sn**	**18 42 17.7**	**+0.2**
PBDV	**Barranco-do-Ve**	**3.93**	**298**	*e*Pn	**Pn**	**18 41 34.6**	**+1.0**
PBDV				*e*Sn	**Sn**	**18 42 18.2**	**-0.7**
PBDV				A	A	18 42 23.1	
	3.3nm,0.7s						
PCVE	**Castro Verde**	**4.18**	**303**	*e*Sn	**Sn**	**18 42 24.8**	**-0.4**
PCVE				A	A	18 42 28.0	
	3.1nm,0.4s						
EBAD	**Badajoz**	**4.28**	**321**	Pn	**Pn**	**18 41 39.3**	**+0.9**
EBAD				Sn	**Sn**	**18 42 27.1**	**-0.4**
EBAD				*i* Vmb_Lg		18 42 31.9	
MESJ	**Messejana**	**4.41**	**304**	*e*P	**Pn**	**18 41 40.6**	**+0.4**
MESJ	**Messejana**	**4.41**	**304**	*e*Pn	**Pn**	**18 41 41.0**	**+0.8**
MESJ				*e*Sn	**Sn**	**18 42 30.0**	**-0.8**
MESJ				A	A	18 42 34.1	
	2.8nm,0.6s						
PNCL	**Nicolau / Gran**	**4.76**	**305**	*e*Pn	**Pn**	**18 41 45.3**	**+0.3**
PNCL				*e*Sn	**Sn**	**18 42 38.3**	**-1.2**
PMRV	**Marv??o**	**4.99**	**324**	*e*Pn	**Pn**	**18 41 49.7**	**+1.6**
PMTG	**Montargil**	**5.16**	**316**	*e*Pn	**Pn**	**18 41 51.6**	**+1.1**

*IDC **20** 19:14:35.0±1.0,6.65S×105.65E,h0km,mb3.8/12, mbtmp3.8/12,MS2.9/1,Error ellipse: s-maj=47.4km s-min=18.4km az=50.0*
*NEIC **20** 19:14:39.7±2.2,6.99S±0.08×105.33E±0.08,h29km±5km, mb4.4/15,Error ellipse: s-maj=13.7km s-min=8.9km az=51.0*
*DJA **20** 19:14:42.9±0.3,7.°S±3.°×10.°6E±.°,h48km±9km,M4.1/18, mb4.1/6,MLv4.1/18*

ISC 20 19:14:42.6±1.1,7.01S±0.05×105.59E±0.05,h64km±9km, n61,σ1.33/62,mb4.1/19,Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.96**	**90**	P	**Pn**	**19 15 00.3**	**0.0**
SKJI				S	**Sn**	**19 15 12.6**	**-0.9**
SBJI	**Serang**	**1.04**	**31**	P	**Pn**	**19 15 00.5**	**-0.8**
SBJI				S	**Sn**	**19 15 14.2**	**-1.0**
DBJI	**Dramaga**	**1.24**	**68**	P	**Pn**	**19 15 04.1**	**+0.1**
DBJI				S	**Sn**	**19 15 20.0**	**0.0**
TNG	**Tangerang**	**1.34**	**52**	P	**Pn**	**19 15 07.0**	**+1.7**
CBJI	**Citeko**	**1.39**	**65**	P	**Pn**	**19 15 06.0**	**+0.1**
CBJI				S	**Sn**	**19 15 22.2**	**-1.1**
CNJI	**Cibinong**	**1.56**	**101**	P	**Pn**	**19 15 08.1**	**-0.1**
CNJI				S	**Sn**	**19 15 26.8**	**-0.7**
BLSI	**Bandar

	comp=Z,0.4nm,0.5s							
SONM	**Songino Array**	**54.61**	**1**	IAmb	IAmb	19 24 15.7		
	comp=Z,1.7nm,1.4s							
MK31	**Makanchi Array**	**57.44**	**341**	P	**P**	**19 24 23.0**	**-1.8**
MKAR	**Makanchi Array**	**57.44**	**341**	P	**P**	**19 24 23.0**	**-1.7**
	comp=Z,0.5nm,0.6s,baz=155,slow=8.2,SNR=7.1							
	comp=Z,0.5nm,0.6s							
KURBB	**Kurchatov Arra**	**61.99**	**341**	P	**P**	**19 24 53.8**	**-2.2**
	comp=Z,0.2nm,0.4s,baz=154,slow=6.3,SNR=2.3							
	comp=Z,0.2nm,0.4s							
KURK	**Kurchatov**	**62.05**	**341**	P	**P**	**19 24 55.5**	**-0.8**
KURK				IAmb	IAmb	19 24 56.7		
	comp=Z,1.9nm,1.1s							
ZALV	**Zalesovo Beam**	**63.21**	**346**	P	**P**	**19 25 01.7**	**-2.3**
	comp=Z,0.9nm,0.4s,baz=164,slow=5.6,SNR=5.5							
	comp=Z,0.9nm,0.4s							
ZALV	**Zalesovo Beam**	**63.21**	**346**	P	**P**	**19 25 01.5**	**-2.5**
ABKAR	**Akbulak array**	**68.71**	**330**	P	**P**	**19 25 39.2**	**-0.2**
ABKAR	**Akbulak array**	**68.71**	**330**	P	**P**	**19 25 39.1**	**-0.3**
ABKAR				IAmb	IAmb	19 25 40.2		
	comp=Z,11nm,0.6s							
CMWZ	**Cape Campbell**	**69.44**	**132**	P	**P**	**19 25 46.2**	**+2.0**
AKTO	**Aktyubinsk**	**70.43**	**330**	P	**P**	**19 25 49.9**	**-0.1**
	comp=Z,1.3nm,0.5s,baz=119,slow=3.6,SNR=6.6							
	comp=Z,1.3nm,0.5s							
ARU	**Arti**	**74.04**	**335**	P	**P**	**19 26 11.3**	**0.0**
ARU				IAmb	IAmb	19 26 12.4		
	comp=Z,5.8nm,1.1s							
MBAR	**Mbarara**	**74.89**	**271**	P	**P**	**19 26 16.2**	**-1.3**
MBAR				IAmb	IAmb	19 26 18.1		
	comp=Z,14nm,1.4s							
BR131	**Keskin Array S**	**80.79**	**312**	P	**P**	**19 26 49.9**	**+0.2**
BR131				IAmb	IAmb	19 26 51.1		
	comp=Z,1.5nm,0.8s							
BRTR	**Keskin Array B**	**80.79**	**312**	P	**P**	**19 26 50.4**	**+0.6**
	comp=Z,0.9nm,0.8s,baz=131,slow=6.2,SNR=6.3							
	comp=Z,0.9nm,0.8s							
AKASG	**Malin Array Be**	**86.84**	**322**	P	**P**	**19 27 20.1**	**0.0**
	comp=Z,0.1nm,0.2s,baz=98,slow=3.3,SNR=2.4							
	comp=Z,0.1nm,0.2s							
BURAR	**Bucovina Array**	**88.68**	**318**	P	**P**	**19 27 31.5**	**+2.3**
BURAR				IAmb	IAmb	19 27 32.2		
	comp=Z,0.7nm,0.7s							
LIT	**Litokhoron**	**89.22**	**310**	P	**P**	**19 27 31.1**	**-0.6**
LIT				IAmb	IAmb	19 27 33.3		
	comp=Z,4.5nm,0.5s							
FINES	**FINESS Array B**	**91.12**	**332**	P	**P**	**19 27 39.4**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=132,slow=5.4,SNR=9.5							
	comp=Z,0.6nm,0.5s							
ARCES	**ARCESS Array B**	**93.06**	**340**	P	**P**	**19 27 48.9**	**0.0**
	comp=Z,1.3nm,0.8s,baz=104,slow=5.1,SNR=7.5							
	comp=Z,1.3nm,0.8s							
TXAR	**Lajitas Array**	**144.62**	**47**	PKP	**PKPdf**	**19 34 13.0**	**+0.2**	
	comp=Z,0.8nm,0.5s,baz=281,slow=1.0,SNR=11							

*JMA **20** 19:18:57.5±0.3, 34.6°N±0.9×14.1°E±°, h40km±1km, MV3.6/39, SE OFF BOSO PENINSULA*
*NIED **20** 19:18:57.5, 34.64°N×141.01°E, h40km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr=1.32; Mθθ=4.23; Mφφ=-2.91; Mrθ=1.06; Mθφ=2.59; Mφr=-1.07; Fault plane solution: M₀=4.75000×10¹⁴ NP1:φ=29.00000°, δ=68.00000°, λ=-167.00000°. NP2:φ=294.00000°, δ=78.00000°, λ=-22.00000°.*
*IDC **20** 19:19:02.2±1.2, 34.07°N×138.76°E, h0km, mb3.5/3, mbtmp3.4/4, ML2.1/1, MS3.2/1 Error ellipse: s-maj=46.1km s-min=17.7km az=63.0*
ISC 20 19:18:59.0±1.1, 34.66°N±0.04×140.90°E±0.06, h31km±8km, n24, σ0=89/27, mb3.6/3, 6D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**0.07**	**95**	P	**Pb**	**19 19 03.7**	**0.0**
BSO3	**Boso 3**	**0.35**	**294**	⇓*i* P	**Pb**	**19 19 07.5**	**+0.4**
BSO4	**Boso 4**	**0.57**	**306**	*i* P	**Pb**	**19 19 11.1**	**+0.5**
KTR	**Katsuura**	**0.68**	**316**	P	**Pb**	**19 19 12.1**	**-0.4**
KTR				S	**Sb**	**19 19 21.3**	**-0.4**
JKUC	**kamogawauchiur**	**0.76**	**311**	*i* P	**Pn**	**19 19 13.3**	**-0.3**
JKUC				S	**Sb**	**19 19 23.6**	**-0.3**
TATJ	**Tateyama 2**	**0.91**	**294**	⇓*i* P	**Pn**	**19 19 16.1**	**+0.5**
JCN	**Nagara**	**0.95**	**323**	*i* P	**Pn**	**19 19 16.3**	**+0.2**
JCN				S	**Sn**	**19 19 28.9**	**+0.3**
JSMT	**Sammumatsuo**	**1.05**	**340**	P	**Pn**	**19 19 17.2**	**-0.4**
JSMT				S	**Sn**	**19 19 30.5**	**-0.6**
JIM2	**Oshima 3**	**1.21**	**273**	⇓*i* P	**Pn**	**19 19 19.4**	**-0.4**
JIM2				⇓S	**Sn**	**19 19 33.5**	**-1.7**
JMKN	**Mikurajimanish**	**1.33**	**235**	⇓*i* P	**Pn**	**19 19 21.4**	**+0.1**
JMKN				⇓S	**Sn**	**19 19 37.4**	**-0.5**
JTHY	**Toshimahigashi**	**1.34**	**265**	P	**Pn**	**19 19 21.6**	**+0.1**
JTHY				S	**Sn**	**19 19 37.4**	**-0.8**
JHJ	**Hachijo jima 2**	**1.79**	**211**	Pn	**Pn**	**19 19 28.3**	**+0.5**
	57nm,0.3s,baz=68,slow=22,SNR=51						
JHJ				Sn	**Sn**	**19 19 49.0**	**-0.5**
	174nm,0.3s,baz=96,slow=23,SNR=29						
MJAR	**Matsushiro Arr**	**2.89**	**311**	Pn	**Pn**	**19 19 42.8**	**0.0**
	0.4nm,0.3s,baz=151,slow=13,SNR=13						
MJAR				Sn	**Sn**	**19 20 15.9**	**-0.6**
	1.8nm,0.3s,baz=30,slow=28,SNR=3.6						
	3.5nm,0.5s						
JCJ	**Chichijima**	**7.62**	**171**	Pn	**Pn**	**19 20 48.6**	**+0.8**
	3.9nm,0.3s,baz=270,slow=23,SNR=7.6						
JCJ				Sn	**Sn**	**19 22 10.1**	**-3.0**
	0.8nm,0.3s,baz=295,slow=23,SNR=2.0						
H11N2	**WAKE ISLAND Hy**	**27.39**	**116**	T	T	19 54 37.3	
	baz=308,slow=75,SNR=58						
H11N1	**WAKE ISLAND Hy**	**27.39**	**116**	T	T	19 54 38.5	
	baz=308,slow=75,SNR=51						
H11N3	**WAKE ISLAND Hy**	**27.40**	**116**	T	T	19 54 38.4	
	baz=308,slow=75,SNR=48						
H11S3	**WAKE ISLAND Hy**	**28.01**	**118**	T	T	19 54 43.0	
	baz=305						
H11S1	**WAKE ISLAND Hy**	**28.01**	**118**	T	T	19 54 53.5	
	baz=305,slow=74						
H11S2	**WAKE ISLAND Hy**	**28.02**	**118**	T	T	19 54 55.3	
	baz=305,slow=74						
MKAR	**Makanchi Array**	**45.06**	**304**	P	**P**	**19 27 11.7**	**-0.2**
	0.3nm,0.7s,baz=77,slow=6.4,SNR=2.2						
	0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**47.16**	**310**	P	**P**	**19 27 28.6**	**+0.3**
	0.4nm,0.6s,baz=80,slow=7.4,SNR=2.9						
	0.4nm,0.6s						
AAK	**Ala-Archa**	**51.28**	**300**	LR	LR	19 48 40.6	
	comp=Z,22nm,18.4s,baz=316,slow=36						
WRA	**Warramunga Arr**	**54.66**	**188**	P	**P**	**19 28 26.4**	**+1.5**
	0.8nm,0.5s,baz=4.0,slow=7.8,SNR=15						
	0.8nm,0.5s						

*IDC **20** 19:34:12.7±1.2, 55.78°S×27.94°W, h0km, mb3.7/3, mbtmp3.7/3, MS3.5/2, Error ellipse: s-maj=50.7km s-min=37.0km az=87.0*
ISC 20 19:34:26.7±1.0, 56.0°S±0.2×28.0°W±0.3, h121km, n11, σ1=20/9, mb3.4/3, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**17.02**	**157**	P	**Pn**	**19 38 16.3**	**-0.6**
VNA3	**Neumayer Olymp**	**17.20**	**160**	P	**P**	**19 38 17.6**	**-1.2**
SNAA	**Sanae**	**18.98**	**156**	P	**P**	**19 38 37.6**	**-0.7**
TROLL	**Troll, Antarti**	**20.50**	**153**	P	**P**	**19 38 53.8**	**-0.9**
PLCA	**Paso Flores**	**31.55**	**281**	LR	LR	19 51 35.9	
	comp=Z,50nm,20.8s,baz=209,slow=33						
LVC	**Limon Verde**	**44.89**	**301**	LR	LR	20 02 22.6	
	comp=Z,77nm,19.4s,baz=228,slow=38						
VNDA	**Vanda**	**46.61**	**183**	P	**P**	**19 42 43.6**	**+1.7**
	0.3nm,0.5s,baz=157,slow=7.7,SNR=2.0						
	0.3nm,0.5s						
LPAZ	**La Paz**	**49.98**	**306**	P	**P**	**19 43 08.0**	**-1.2**
	1.0nm,0.4s,baz=180,slow=8.1,SNR=2.0						
	1.0nm,0.4s						
TORD	**Torodi Ar. Bea**	**73.23**	**30**	P	**P**	**19 45 44.5**	**+0.2**
	0.4nm,0.6s,baz=200,slow=5.2,SNR=5.1						
	0.4nm,0.6s						
ILAR	**Eielson Array**	**149.75**	**312**	PKPbc	**PKiKP**	**19 54 02.5**	**+0.9**
	0.4nm,0.5s,baz=92,slow=1.3,SNR=4.8						
SONM	**Songino Array**	**151.17**	**87**	PKPbc	**PKiKP**	**19 54 05.7**	**+0.5**
	0.2nm,0.5s,baz=222,slow=1.9,SNR=2.1						

MAN 20 19:37:24.7, 8.07°N×122.21°E, h48km, mb3.9, ML2.6, MS2.2, Mindanao

TAP 20 19:45:39.8, 24.76°N×122.29°E, h21km±1km, ML1.7, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.37**	**312**	*e*P	Pb	19 45 47.7	+0.2
	baz=313						
TWC	**Suao**	**0.43**	**249**	*e*P	Pb	19 45 48.2	-0.3
	baz=249						
TWC				S	Sb	19 45 54.2	-0.2
	baz=249						
TIPB	**Shuangxi**	**0.47**	**297**	*e*P	Pb	19 45 49.6	+0.3
	baz=300						
TIPB				S	Sb	19 45 56.2	+0.5
	baz=300						
SXI1	**Grass Mountain**	**0.50**	**312**	*e*P	Pb	19 45 50.0	+0.1
	baz=314						
SXI1				*e*S	Sb	19 45 56.6	-0.2
	baz=314						
NDS	**Dongshan**	**0.54**	**256**	*e*P	Pb	19 45 51.0	+0.5
	baz=251						
NDS				*e*S	Sb	19 45 57.4	-0.5
	baz=251						
WFSB	**Wu-fen Shan**	**0.55**	**304**	*e*P	Pb	19 45 51.4	+0.5
	baz=304						
EWUT	**Wuta**	**0.56**	**236**	*e*P	Pb	19 45 51.0	+0.1
	baz=236						
EWUT				*e*S	Sb	19 45 59.4	+0.8
	baz=236						
TWE	**Neicheng**	**0.56**	**266**	*e*P	Pb	19 45 51.2	+0.2
	baz=265						
ENA	**Nanau**	**0.60**	**236**	*e*P	Pb	19 45 51.7	+0.1
	baz=236						
ENA				*e*S	Sb	19 45 59.8	+0.1
	baz=236						
FUSB	**Fushanzhiwuyua**	**0.64**	**270**	*e*P	Pb	19 45 52.8	+0.4
	baz=270						
FUSB				*e*S	Sb	19 46 00.7	-0.2
	baz=270						
NWLT	**Wulai**	**0.71**	**271**	*e*P	Pb	19 45 53.6	+0.1
	baz=282						
NWLT				*e*S	Sb	19 46 03.5	+0.6
	baz=282						
NWRT	**Kuosheng**	**0.72**	**308**	*e*P	Pb	19 45 53.2	-0.4
	baz=307						
NDT	**Datong Townshi**	**0.72**	**257**	*e*P	Pb	19 45 53.9	+0.2
	baz=257						
YOJ	**Yonaguni jima**	**0.72**	**114**	P	Pb	19 45 53.5	-0.1
	baz=114						
YOJ				*e*S	Sb	19 46 03.0	-0.1
	baz=114						
LATG	**Datong**	**0.73**	**252**	P	Pb	19 45 53.7	-0.1
	baz=241						
LATG				*e*S	Sb	19 46 04.0	+0.6
	baz=241						
YM01	**YM01**	**0.76**	**301**	*e*P	Pb	19 45 54.4	+0.2
	baz=301						
YM01				*e*S	Sb	19 46 03.9	-0.2
	baz=301						
YHNB	**Yeheng**	**0.83**	**264**	P	Pb	19 45 56.0	+0.4
	baz=264						
YHNB				*e*S	Sb	19 46 06.9	+0.4
	baz=264						
NACB	**Ninganchiao**	**0.86**	**227**	P	Pb	19 45 56.1	+0.1
	baz=236						
NACB				S	Sb	19 46 07.5	+0.4
	baz=236						
NNSB	**Datong**	**0.89**	**248**	*e*P	Pb	19 45 56.7	+0.2
	baz=240						
NNSB				*e*S	Sb	19 46 08.3	+0.3
	baz=240						
NNSH	**Datong**	**0.89**	**248**	*e*P	Pn	19 45 57.1	+0.1
	baz=248						
NNS	**Nan Shan**	**0.89**	**249**	*e*P	Pb	19 45 56.5	-0.2
	baz=239						
ETLH	**Xiulin Townshi**	**0.92**	**233**	*e*P	Pn	19 45 57.9	+0.4
	baz=242						
ETLH				*e*S	Sn	19 46 10.0	-0.1
	baz=242						
HWA	**Hwalien**	**1.00**	**219**	*e*P	Pn	19 45 59.8	+1.3
	baz=218						
FUSS	**Fushou**	**1.08**	**242**	*e*P	Pn	19 45 59.6	-0.2
	baz=242						
WHF	**Hehuan Shan**	**1.12**	**237**	*e*P	Pb	19 46 01.2	+0.6
	baz=236						
NSTT	**Nanjuang**	**1.18**	**264**	*e*P	Pn	19 46 00.2	-0.7
	baz=280						
WUSB	**Renai**	**1.31**	**235**	*e*P	Pb	19 46 04.5	+0.7
	baz=220						

TAP 20 19:45:54.0, 22.88°N×121.55°E, h21km, ML1.6, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LDUT	**Ludao**	**0.21**	**200**	P	Pb	19 45 59.5	-0.3
	baz=200						
LDUT				S	Sb	19 46 03.5	-0.5
	baz=200						
EDH	**Donghe**	**0.24**	**293**	P	Pb	19 45 59.8	-0.3
	baz=293						
EDH				*e*S	Sb	19 46 03.8	-0.5
	baz=293						
CHKT	**Chengkung**	**0.28**	**323**	*e*P	Pb	19 46 00.2	-0.2
	baz=329						
CHKT				*e*S	Sb	19 46 04.6	-0.3
	baz=329						
ECS	**Chishang**	**0.37**	**306**	*e*P	Pb	19 46 02.4	+0.6
	baz=306						
ECS				*e*S	Sb	19 46 08.8	+1.6
	baz=306						
LONT	**Longtian**	**0.39**	**275**	P	Pb	19 46 02.7	+0.7
	baz=275						
LONT				*e*S	Sb	19 46 09.3	+1.8
	baz=275						
FULB	**Fuli**	**0.40**	**324**	P	Pb	19 46 02.1	-0.2
	baz=324						
FULB				S	Sb	19 46 08.1	+0.3
	baz=324						
TWGBT	**Beinan**	**0.43**	**262**	*e*P	Pb	19 46 03.4	+0.5
	baz=262						
TWGBT				*e*S	Sb	19 46 09.4	+0.5
	baz=262						
TWG	**Pinlang**	**0.44**	**263**	*e*P	Pb	19 46 03.5	+0.4
	baz=262						
TWG				*e*S	Sb	19 46 09.7	+0.6
	baz=262						
EYUL	**Yuli**	**0.51**	**336**	*e*P	Pb	19 46 04.6	+0.2
	baz=336						
EYUL				*e*S	Sb	19 46 11.5	0.0
	baz=336						
YULB	**Yu-li**	**0.56**	**336**	*e*P	Pb	19 46 05.3	0.0
	baz=344						
YULB				*e*S	Sb	19 46 13.3	+0.3
	baz=344						
ELDTW	**Lidau**	**0.58**	**303**	P	Pb	19 46 04.8	-0.9
	baz=303						
ELDTW				*e*S	Sb	19 46 12.4	-1.2
	baz=303						
ECL	**Taimali**	**0.61**	**243**	P	Pb	19 46 05.3	-0.8
	baz=256						
ECL				*e*S	Sb	19 46 13.4	-1.0
	baz=256						
HGSD	**Ruisui**	**0.62**	**350**	*e*P	Pb	19 46 05.6	-0.7
	baz=200						
HGSD	**Ruisui**	**0.62**	**350**	*e*P	Pb	19 46 05.6	-0.8
	baz=359						
HGSD				*e*S	Sb	19 46 13.9	-0.8
	baz=359						
EHY	**Hungye**	**0.66**	**342**	*e*P	Pb	19 46 07.2	+0.2
	baz=349						
EHY				*e*S	Sb	19 46 15.8	0.0
	baz=349						
STYH	**Taoyuan**	**0.77**	**293**	*e*P	Pb	19 46 08.5	-0.2
	baz=293						
EGFH	**Guangfu**	**0.80**	**352**	*e*S	Sb	19 46 20.3	+0.7
	baz=3.0						
LAY	**Lan-yu**	**0.83**	**180**	*e*P	Pb	19 46 08.3	-1.5
	baz=169						
LAY				*e*S	Sb	19 46 18.2	-2.4
	baz=169						
TSMG	**Majia**	**0.85**	**259**	*e*P	Pb	19 46 09.3	-0.7
	baz=264						
TSMG				*e*S	Sb	19 46 18.5	-2.5
	baz=264						
SSD	**Sandimen**	**0.85**	**261**	*e*P	Pb	19 46 09.4	-0.8
	baz=267						
SSD				*e*S	Sb	19 46 19.1	-2.1
	baz=267						
MASBT	**Mashibuluo**	**0.88**	**253**	*e*P	Pb	19 46 10.0	-0.6
	baz=244						
MASBT				*e*S	Sb	19 46 20.9	-1.2
	baz=244						
ALS	**Alishan**	**0.93**	**313**	*e*P	Pb	19 46 11.5	-0.2
	baz=313						
WTP	**Ta-pu**	**0.94**	**293**	*e*P	Pn	19 46 12.9	+0.9
	baz=297						
WTP				*e*S	Sn	19 46 25.8	+1.0
	baz=297						
ESL	**Shilin**	**0.94**	**354**	*e*P	Pb	19 46 11.2	-0.5
	baz=3.0						
ESL				*e*S	Sb	19 46 22.4	-1.2
	baz=3.0						
TPUB	**Ta-pu**	**0.94**	**297**	*e*P	Pb	19 46 11.7	0.0
	baz=302						
TPUB				*e*S	Sn	19 46 25.5	+0.4
	baz=302						
VWDT	**VWDT**	**0.95**	**337**	*e*P	Pb	19 46 11.4	-0.4
	baz=337						
VWDT				*e*S	Sb	19 46 23.6	-0.4
	baz=337						
CHN1	**Nanshi**	**0.99**	**288**	*e*S	Sn	19 46 27.6	+1.5
	baz=292						
SNST	**Tainan City**	**1.03**	**290**	*e*S	Sn	19 46 28.0	+1.0
	baz=290						
TWK	**Hsinying**	**1.05**	**292**	*e*P	Pn	19 46 14.9	+1.3
	baz=292						
TWK				*e*S	Sn	19 46 28.9	+1.2
	baz=292						
WUSB	**Renai**	**1.18**	**341**	*e*S	Sb	19 46 28.2	-2.4
	baz=340						

JMA 20 19:53:32.1±0.3, 37.2°N±0.9×14.4°E±°, h53km, MV3.6/24, FAR E OFF NORTH HONSHU, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**2.59**	**297**	*i* P	Pn	19 54 12.9	+1.4
JIKH				S	Sn	19 54 43.4	+1.5
JIO	**Ouri**	**2.74**	**298**	P	Pn	19 54 15.0	+1.5
JIO				S	Sn	19 54 47.3	+1.9
JFK	**Kawauchi**	**2.83**	**275**	*e*P	Pn	19 54 16.0	+1.2
JFK				S	Sn	19 54 49.3	+1.6
JKMT	**Kesennumamotoy**	**2.83**	**306**	P	Pn	19 54 16.2	+1.4
JKMT				S	Sn	19 54 48.9	+1.2
JMST	**Minamisoumatoc**	**2.86**	**282**	P	Pn	19 54 16.3	+1.1
JMST				S	Sn	19 54 49.8	+1.5
OFUJ	**Ofunato**	**2.88**	**312**	P	Pn	19 54 16.5	+1.1
OFUJ				S	Sn	19 54 49.4	+0.6
JMK	**Ichinoseki**	**3.08**	**306**	P	Pn	19 54 19.6	+1.4
JMK				S	Sn	19 54 55.4	+1.7
JFT	**Otama**	**3.27**	**277**	P	Pn	19 54 23.4	+2.6
JFT				S	Sn	19 55 01.4	+3.0
JRY	**Ryogami san**	**4.59**	**257**	*e*P	Pn	19 54 39.9	+1.0
JRY				*e*S	Sn	19 55 30.6	-0.3
JOT	**Ohata**	**4.94**	**329**	*e*S	Sn	19 55 39.2	-0.3
JCH	**Churui**	**5.48**	**352**	*e*P	Pn	19 54 50.3	-0.9
JCH				*e*S	Sn	19 55 49.7	-3.1
NEM2	**Nemuro 2**	**6.25**	**9**	*e*P	Pn	19 54 59.0	-2.7
NEM2				*e*S	Sn	19 56 04.2	-7.6
JTKR	**Abashiri--Toko**	**6.79**	**357**	*e*P	Pn	19 55 08.1	-0.9
JTKR				*e*S	Sn	19 56 19.9	-5.0

MAN 20 19:56:41.3, 13.29°N×122.17°E, h7km, mb3.8, ML2.5, MS2.1, Luzon

DJA 20 20:04:46.7±1.0, 4.7°N±13.5°×12.7°E±°, h17km±19km, M3.7/7, mb3.9/2, MLv3.5/7, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.27**	**278**	P	Pn	20 05 08.9	-0.8
SGSI				S	Sn	20 05 26.5	+0.1
TNTI	**Ternate**	**2.78**	**168**	P	Pn	20 05 30.3	-0.2
MRSI	**Marisa**	**5.71**	**238**	P	Pn	20 06 12.1	+1.4
	0.1nm8.3nm,0.6s						
APSI	**Ampana**	**6.76**	**230**	P	Pn	20 06 24.6	-0.6

*NOU **20** 20:09:02.0, 18.90°S×177.48°W, h518km, mb4.5/20, Fiji Islands Region*
*NEIC **20** 20:09:03.4±1.9, 18.9°S±0.1×177.8°W±0.1, h510km±7km, mb4.3/69, Error ellipse: s-maj=18.5km s-min=15.1km az=161.0*
*IDC **20** 20:09:04.6±1.6, 18.83°S×177.90°W, h518km±14km, mb3.4/10, mbtmp4.3/11, Error ellipse: s-maj=26.1km s-min=16.2km az=141.0*
ISC 20 20:09:02.5±0.5, 18.90°S±0.10×177.74°W±0.07, h500km, n126, σ0=96/125, mb4.2/45, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LKBA	**Tubou, Lakemba**	**1.21**	**303**	P	**P**	**20 10 06.8**	**+2.4**
DGTI	**Dogotuki**	**3.53**	**317**	P	**P**	**20 10 19.5**	**+2.2**
MSVF	**Nonsavu**	**4.16**	**286**	P	**P**	**20 10 24.7**	**+2.3**
	58nm,0.4s,baz=129,slow=4.5,SNR=91						
MSVF				S	**S**	**20 11 29.7**	**+2.4**
	13nm,0.9s,baz=191,slow=20,SNR=0.9						
MSVF	**Nonsavu**	**4.16**	**286**	P	**P**	**20 10 25.0**	**+2.7**
NIUE	**Niue**	**7.40**	**93**	P	**P**	**20 10 53.2**	**+0.5**
PINNC	**Pines Island,**	**14.34**	**253**	P	**P**	**20 12 05.8**	**0.0**
KOUNC	**Koumac, New Ca**	**17.00**	**261**	P	**P**	**20 12 33.0**	**-0.5**
KNTN	**Kanton**	**17.08**	**21**	P	**P**	**20 12 33.3**	**-1.1**
URZ	**Urewera**	**19.80**	**192**	P	**P**	**20 12 58.1**	**-1.0**
EIDS	**Eidsvold**	**29.54**	**252**	P	**P**	**20 14 25.7**	**-0.2**
EIDS				IAmb	IAmb	20 14 26.6	
	comp=Z,12nm,0.9s						
EIDS	**Eidsvold**	**29.54**	**252**	P	**P**	**20 14 25.7**	**-0.2**
ARMA	**Armidale**	**30.01**	**242**	P	**P**	**20 14 30.7**	**+0.6**
ARMA				IAmb	IAmb	20 14 39.9	
	comp=Z,12nm,1.1s						
ARMA	**Armidale**	**30.01**	**242**	P	**P**	**20 14 30.9**	**+0.8**
RMQ	**Roma**	**31.74**	**250**	P	**P**	**20 14 45.8**	**+0.8**
CTA	**Charters Tower**	**33.92**	**262**	P	**P**	**20 15 03.5**	**0.0**
CTAO	**Charters Tower**	**33.92**	**262**	P	**P**	**20 15 03.4**	**-0.1**
CTAO	**Charters Tower**	**33.92**	**262**	P	**P**	**20 15 03.5**	**0.0**
CMSA	**Cobar Meteorol**	**35.23**	**242**	P	**P**	**20 15 14.5**	**+0.2**
PMG	**Port Moresby**	**35.25**	**281**	P	**P**	**20 15 15.3**	**+0.6**
QLP	**Quilpie**	**35.79**	**251**	P	**P**	**20 15 18.9**	**-0.2**
COEN	**Coen**	**37.75**	**271**	P	**P**	**20 15 35.6**	**+0.1**
COEN	**Coen**	**37.75**	**271**	P	**P**	**20 15 35.5**	**+0.1**
STKA	**Stephens Creek**	**38.72**	**242**	P	**P**	**20 15 43.6**	**+0.5**
	comp=Z,4.5nm,0.5s,baz=86,slow=9.5,SNR=24						
	comp=Z,4.5nm,0.5s						
STKA	**Stephens Creek**	**38.72**	**242**	IAmb	IAmb	20 15 44.3	
	comp=Z,4.1nm,1.2s						
STKA	**Stephens Creek**	**38.72**	**242**	P	**P**	**20 15 43.6**	**+0.5**
INKA	**Innaminka**	**38.97**	**249**	P	**P**	**20 15 45.8**	**+0.6**
QIS	**Mount Isa**	**40.10**	**260**	P	**P**	**20 15 53.7**	**-0.7**
BBOO	**Buckleboo**	**43.49**	**242**	P	**P**	**20 16 21.1**	**0.0**
WR0	**Warramunga Arr**	**44.89**	**260**	P	**P**	**20 16 31.2**	**-1.0**

MORW Morawa 60.67 247 P P 20 18 24.2 -0.8
MORW IAmb IAmb 20 18 44.3
comp=Z,19nm,1.1s

GIRL Giralia 63.22 254 P P 20 18 41.9 +0.2
JGF Kuroka 68.91 322 P P 20 19 17.2 +0.3
JGF IAmb IAmb 20 19 34.7
comp=Z,4.2nm,1.1s

MJAR Matsushiro Arr 69.08 323 P P 20 19 16.4 -1.4
comp=Z,2.4nm,0.7s,baz=153,slow=6.4,SNR=7.7
comp=Z,2.4nm,0.7s

MAJO Matsushiro 69.08 323 P P 20 19 16.4 -1.5
MAJO IAmb IAmb 20 19 17.6
comp=Z,4.0nm,0.9s

MJB9 Matsu-Tunnel 69.08 323 P P 20 19 16.4 -1.5
MJB9 IAmb IAmb 20 19 17.5
comp=Z,4.2nm,1.0s

JHS Saijyo 71.06 319 P P 20 19 30.0 +0.3
JHS IAmb IAmb 20 19 31.1
comp=Z,14nm,0.9s

QSPA South Pole Qui 71.16 180 P P 20 19 30.3 +0.4
QSPA IAmb IAmb 20 19 32.0
comp=Z,11nm,1.4s

SBUM Sibu 71.98 279 P P 20 19 34.4 -1.2
UNV Unalaska Valle 73.09 7 P P 20 19 40.0 -1.0
SSLB Suanglung 73.30 303 P P 20 19 41.9 -1.1
SSLB IAmb IAmb 20 19 57.6
comp=Z,11nm,1.3s

TPUB Ta-pu 73.32 302 P P 20 19 40.9 -2.2
KSM Kuching 73.44 277 P P 20 19 44.5 +0.5
KSM IAmb IAmb 20 19 45.3
comp=Z,9.0nm,0.7s

KSRS Korea Array 75.86 318 P P 20 19 57.0 0.0
comp=Z,0.6nm,0.6s,baz=120,slow=7.0,SNR=2.4
comp=Z,0.6nm,0.6s

KMRM Mail Ridge 77.37 39 P P 20 20 07.3 +1.9
KMRM IAmb IAmb 20 20 09.6
comp=Z,31nm,1.3s

YBH Yreka Blue Hor 78.90 39 P P 20 20 14.8 +1.1
KDAK Kodiak Island 79.21 13 P P 20 20 14.5 -0.3
KDAK IAmb IAmb 20 20 38.1
comp=Z,35nm,1.5s

NVAR Mina Array Bea 79.70 43 P P 20 20 19.2 +1.1
comp=Z,1.3nm,0.7s,baz=225,slow=8.3,SNR=8.4
comp=Z,1.3nm,0.7s

SMAI San Martin Ant 80.01 159 P P 20 20 20.1 +1.1
KVN Kaiserville 80.18 43 P P 20 20 20.9 +0.3
O18K Koktuh Hills 80.60 11 P P 20 20 22.0 -0.1
O18K IAmb IAmb 20 20 22.6
comp=Z,10nm,1.0s

PINE Pine Mountain 81.18 38 P P 20 20 27.1 +1.4
PINE IAmb IAmb 20 20 27.9
comp=Z,4.9nm,0.8s

I07A Izee 82.19 38 P P 20 20 32.0 +1.2
U15A North Rim 82.71 48 P P 20 20 35.5 +1.7
ELK Elko 82.95 43 P P 20 20 34.7 -0.2
SUA Susitna One 82.95 13 P P 20 20 33.5 -0.7
SUA IAmb IAmb 20 20 34.8
comp=Z,4.7nm,0.8s

IPM Ipoh 83.17 277 P P 20 20 35.5 -0.8
IPM IAmb IAmb 20 20 37.5
comp=Z,8.1nm,0.8s

G08A Pilot Rock 83.21 37 P P 20 20 36.9 +1.0
G08A IAmb IAmb 20 20 37.7
comp=Z,6.4nm,1.4s

TTA Tatalina 83.34 10 P P 20 20 36.8 +0.7
TTA IAmb IAmb 20 20 37.8
comp=Z,5.9nm,1.0s

MTPU Mount Pierson 83.59 46 P P 20 20 39.2 +0.9
GHO Glory Hole Cre 83.62 13 P P 20 20 37.1 -0.4
GHO IAmb IAmb 20 20 37.6
comp=Z,8.6nm,0.5s

K20K Telida 84.06 10 P P 20 20 39.0 -0.6
K20K IAmb IAmb 20 20 40.0
comp=Z,4.9nm,0.9s

F10A Beach Ranch, E 84.59 38 P P 20 20 42.8 0.0
TRF Thorofare Moun 84.84 12 P P 20 20 42.7 -0.9
TRF IAmb IAmb 20 20 43.5
comp=Z,7.3nm,0.8s

RND Reindeer 85.09 13 P P 20 20 45.0 +0.3
RND IAmb IAmb 20 20 45.7
comp=Z,12nm,1.1s

M27K Edge Creek, AK 85.81 16 P P 20 20 49.0 +0.7
M27K IAmb IAmb 20 21 15.9
comp=Z,11nm,1.4s

TX31 Lajitas Ar. Si 85.99 57 P P 20 20 49.2 -0.7
TX31 IAmb IAmb 20 20 52.8
comp=Z,7.1nm,0.9s

TX32 Lajitas Array 85.99 57 P P 20 20 49.7 -0.2
TXAR Lajitas Array 85.99 57 P P 20 20 51.5 +1.6
comp=Z,1.9nm,0.7s,baz=219,slow=6.3,SNR=23
comp=Z,1.9nm,0.7s

TXAR Lajitas Array 85.99 57 P P 20 20 49.2 -0.6
MLY Manley 86.19 11 P P 20 20 49.1 -0.8
MLY IAmb IAmb 20 20 50.5
comp=Z,4.4nm,1.2s

WRH Wood River Hil 86.20 12 P P 20 20 49.8 -0.1
WRH IAmb IAmb 20 20 50.8
comp=Z,8.1nm,1.0s

CCB Clear Creek Bu 86.41 12 P P 20 20 50.3 -0.5
CCB IAmb IAmb 20 20 51.0
comp=Z,11nm,1.2s

IMAR Indian Mountai 86.55 10 P P 20 20 50.4 -1.1
MCMT McKenzie Canyo 86.58 40 P P 20 20 52.0 -0.5
MDM Murphy Dome 86.60 12 P P 20 20 51.1 -0.7
MDM IAmb IAmb 20 20 51.9
comp=Z,5.9nm,1.0s

IL31 86.71 13 P P 20 20 50.6 -1.7
IL31 IAmb IAmb 20 20 52.4
comp=Z,8.5nm,1.3s

ILAR Eielson Array 86.71 13 P P 20 20 51.5 -0.8
comp=Z,1.1nm,0.4s,baz=215,slow=5.1,SNR=18
comp=Z,1.1nm,0.4s

J25K Salcha River, 86.90 13 P P 20 20 53.2 -0.1
POKR Poker Plat Res 86.90 12 P P 20 20 52.6 -0.6
POKR IAmb IAmb 20 20 53.8
comp=Z,2.9nm,0.7s

J26L Joseph Creek 87.21 14 P P 20 20 55.2 +0.4
J26L IAmb IAmb 20 20 56.4
comp=Z,8.3nm,1.5s

PD31 Pinedale Array 87.64 43 P P 20 20 57.0 -0.6
PDAR Pinedale Array 87.64 43 P P 20 20 58.2 +0.7
comp=Z,0.5nm,0.6s,baz=206,slow=6.4,SNR=6.2
comp=Z,0.5nm,0.6s

PDAR Pinedale Array 87.64 43 P P 20 20 57.1 -0.4
BOZ Bozeman (W) 87.72 40 P P 20 20 58.4 +0.7
BMAR Burnt Mountain 89.49 12 P P 20 21 05.7 +0.4
CMAR Chiang Mai Arr 89.81 289 P P 20 21 09.2 +1.3
comp=Z,1.3nm,0.8s,baz=120,slow=2.5,SNR=13
comp=Z,1.3nm,0.8s

CMAR Chiang Mai Arr 89.81 289 P P 20 21 08.8 +0.9
MKAR Makanchi Array 110.28 314 PKiKP **PKiKP** 20 26 36.0 -1.3
comp=Z,0.3nm,0.5s,baz=220,slow=0.8,SNR=8.6
MKAR Makanchi Array 110.28 314 **PKiKP** 20 26 35.7 -1.6
KURK Kurchatov 112.98 318 **PKiKP** 20 26 40.6 -1.6
KURBB Kurchatov Arra 113.04 318 PKiKP **PKiKP** 20 26 40.6 -1.7
comp=Z,0.2nm,0.5s,baz=89,slow=2.3,SNR=2.9
ARCES ARCESS Array B 127.40 350 PKP **PKPdf** 20 27 09.1 -0.2
comp=Z,0.4nm,0.4s,baz=3.2,slow=1.2,SNR=14
FINES FINESS Array B 134.31 344 PKhKP PKPpre 20 27 20.0
baz=123,slow=5.1,SNR=4.5
FINES PKP **PKPdf** 20 27 23.4 +0.8
comp=Z,0.3nm,0.5s,baz=20,slow=4.4,SNR=1.2
AKASG Malin Array Be 141.73 332 PKhKP PKPpre 20 27 31.5
comp=Z,0.9nm,0.4s,baz=42,slow=4.2,SNR=7.4
BRTR Keskin Array B 145.93 314 PKPbc **PKPdf** 20 27 45.9 +1.5
comp=Z,1.4nm,0.6s,baz=133,slow=4.0,SNR=10.0
CLL Collm 146.56 348 **PKPbc** 20 27 47.4 +0.1
MMAI Mount Meron Ar 147.21 302 PKPbc **PKPbc** 20 27 50.2 +0.5
comp=Z,1.3nm,0.4s,baz=74,slow=6.2,SNR=6.4
JAVC Velka Javorina 147.62 341 *e*PKP **PKiKP** 20 27 52.0 +0.1
KRUC Moravsky 147.82 342 *e*PKP **PKPbc** 20 27 50.9 +0.2
KHC Kasperske Hory 148.49 346 *e*PKP **PKPbc** 20 27 52.0 -0.4
GERES GERESS Array B 148.73 345 PKPbc **PKPbc** 20 27 52.6 -0.5
comp=Z,0.7nm,0.7s,baz=55,slow=5.1,SNR=6.7
CONA Conrad Observa 149.00 342 *i* P **PKPbc** 20 27 54.1 +0.3
comp=Z,2.3nm,0.6s
RONA Rosalia, Austr 149.07 341 *e*P **PKPbc** 20 27 54.2 +0.3
comp=Z,4.0nm,1.2s
SOKA Soboth 150.37 342 *e*P **PKPbc** 20 27 56.7 -0.4
comp=Z,1.6nm,0.7s
KBA Koelnbreinsper 150.46 345 *i* P **PKPbc** 20 27 56.8 -0.6
comp=Z,1.7nm,0.5s
WATA Walderalm 150.63 347 *i* P **PKPbc** 20 27 57.7 -0.1
comp=Z,2.6nm,0.5s
WTTA Wattenberg 150.69 347 *i* P **PKPbc** 20 27 58.1 +0.2
comp=Z,3.6nm,0.4s
MOTA Moosalm 150.72 348 *i* P **PKPbc** 20 27 57.8 -0.2
comp=Z,4.3nm,1.6s
SQTA Sankt Quirin 150.82 347 *i* P **PKPbc** 20 27 58.2 +0.1
comp=Z,1.7nm,0.5s
ABTA Abfaltersbach 150.97 345 *i* P **PKPbc** 20 27 58.1 -0.4
comp=Z,3.9nm,0.5s
FETA Feichten 151.10 348 *e*P **PKPbc** 20 27 59.5 +0.7
comp=Z,1.2nm,0.5s

DJA 20 20:14:49.1±0.3,1°S±2°×12°0E±°,h10km,M3.3/8,mb4.1/3, MLv2.9/8,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPSI	**Mapaga**	**1.20**	**360**	P	Pb	20 15 10.4	-1.5
MPSI				S	Sn	20 15 28.3	0.0
APSI	**Ampana**	**1.75**	**91**	P	Pn	20 15 19.6	+0.1
APSI				S	Sb	20 15 43.4	+0.1
TTSI	**Tana Toraja**	**2.16**	**182**	P	Pn	20 15 25.7	+0.5
MRSI	**Marisa**	**2.44**	**57**	P	Pn	20 15 28.7	-0.3
MRSI				S	Sn	20 15 58.9	-0.1
LUWI	**Luwuk**	**2.88**	**93**	P	Pn	20 15 34.9	-0.1
BNSI	**Bone**	**3.51**	**177**	P	Pn	20 15 42.1	-1.7
LBMI	**Labuha**	**7.60**	**88**	P	Pn	20 16 39.9	-0.2
	0.1nm16nm,2.0s						
MMRI	**Maumere**	**8.06**	**163**	P	Pn	20 16 46.4	+0.1

IDC ***20*** *20:27:12.0±0.9, 35°.67N×68°.56E, h0km, mb3.9/15, mbtmp4.1/20, ML4.0/5, MS3.3/28, Error ellipse: s-maj=16.3km s-min=13.1km az=165.0*
MOS ***20*** *20:27:12.5±1.4, 35°.85N×68°.44E, h15km, mb4.3/9, Error ellipse: s-maj=6.9km s-min=3.7km az=69.6*
NEIC ***20*** *20:27:14.6±1.7, 35°.73N±0°.04×68°.45E±0°.09, h17km±5km, mb4.3/25, Error ellipse: s-maj=11.4km s-min=5.8km az=73.0*
BJI ***20*** *20:27:14.2±0.0, 35°.96N×68°.65E, h10km, mb4.1/22, mB4.5/10, ML3.9/1, Ms3.7/8, Ms7 3.5/10*
NNC ***20*** *20:27:17.6±2.0, 36°.29N×68°.18E, h0km, mb4.7, mpv4.6, Error ellipse: s-maj=21.1km s-min=8.4km az=156.0*

ISC 20 20:27:15.7±0.4,35°.84N±0°.04×68°.44E±0°.04,h30km,n207, σ2s**67**/215**,mb4.1**/33**,MS3.3**/24**,16C-5D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**1.38**	**159**	Pn	**Pn**	**20 27 37.7**	**-1.4**
KBL					**Sn**	**20 27 54.7**	**-1.8**
KBL	**Kabul**	**1.38**	**159**	PG	**Pn**	**20 27 37.7**	**-1.4**
KBL						20 27 54.7	
CHGR	**Chuyangaron**	**2.88**	**11**		**Pn**	**20 28 01.3**	**+1.8**
CHGR	**Chuyangaron**	**2.88**	**11**	PN	**Pn**	**20 28 01.3**	**+1.8**
GAR	**Garm**	**3.50**	**25**	Pn	**Pn**	**20 28 10.8**	**+2.8**
THW	**Thamme Wali**	**4.08**	**137**	P	**Pn**	**20 28 17.7**	**+1.6**
CHCP	**Chirah Chowk**	**4.53**	**117**	P	**Pn**	**20 28 24.7**	**+2.5**
BTK	**Batken**	**4.62**	**23**	Pn	**Pn**	**20 28 26.9**	**+3.5**
BTK	**Batken**	**4.62**	**23**	PN	**Pn**	**20 28 26.9**	**+3.5**
HRA	**Herat**	**5.28**	**256**	Pn	**Pn**	**20 28 34.3**	**+1.6**
IUG	**luzhnay**	**6.42**	**11**	*e*PN	**Pn**	**20 28 49.9**	**+1.6**
IUG	**luzhnay**	**6.42**	**11**	*e*P	**Pn**	**20 28 50.0**	**+1.6**
	baz=9.8						
THN	**Thein Dam**	**6.92**	**117**	*e*P	**Pn**	**20 28 57.9**	**+2.8**
THN				*e*S	**Sn**	**20 30 17.9**	**+5.1**
KSH	**Kashi**	**7.01**	**56**	Pn	**Pn**	**20 28 54.8**	**-1.6**
KSH				sP	Pb	20 29 03.1	-14
KSH				Sn	**Sn**	**20 30 09.4**	**-5.8**
KSH				pmax	pmax		
	comp=Z,48nm,0.9s						
KSH				smax	smax		
	comp=N,230nm,1.1s						
KSH				smax	smax		
	comp=E,110nm,1.0s						
BRLS	**Borolday**	**7.27**	**8**	*e*P	**Pn**	**20 28 56.8**	**-3.0**
BRLS	**Borolday**	**7.27**	**8**	*e*P	**Pn**	**20 28 56.9**	**-2.9**
	baz=6.4						
DZA	**Taraz**	**7.39**	**17**	*e*P	**Pn**	**20 29 03.3**	**+1.8**
DZA	**Taraz**	**7.39**	**17**	*e*P	**Pn**	**20 29 03.4**	**+1.8**
	baz=17						
KK31	**Karatay Array**	**7.43**	**12**	Pn	**Pn**	**20 29 03.4**	**+1.3**
KK31	**Karatay Array**	**7.43**	**12**	P	**Pn**	**20 29 03.4**	**+1.3**
KK31	**Karatay Array**	**7.43**	**12**	⇓P	**Pn**	**20 29 03.3**	**+1.2**
	comp=E,4.7nm,0.3s,baz=202,slow=16,SNR=114						
KK31				⇑S	**Sn**	**20 30 23.9**	**-1.5**
	comp=E,14nm,0.4s,baz=201,slow=24,SNR=5.9						
KKAR	**Karatay Array**	**7.43**	**12**	Pn	**Pn**	**20 29 03.4**	**+1.3**
KKAR	**Karatay Array**	**7.43**	**12**		**Pn**	**20 29 03.3**	**+1.3**
KKAR	**Karatay Array**	**7.43**	**12**	P	**Pn**	**20 29 03.4**	**+1.3**
AML	**Almayashu**	**7.50**	**31**	P	**Pn**	**20 29 04.9**	**+1.5**
	SNR=33						
UCH	**Uchtor**	**7.94**	**35**	P	**Pn**	**20 29 10.9**	**+1.5**
	SNR=99						
EKS2	**Erkin-Say**	**7.97**	**30**	P	**Pn**	**20 29 12.9**	**+3.3**
	SNR=12						
BHK	**Bhakra**	**7.98**	**121**	*e*S	**Sn**	**20 30 40.9**	**+2.0**
AAK	**Ala-Archa**	**8.26**	**33**	P	**Pn**	**20 29 15.2**	**+1.7**
	SNR=26						
AAK	**Ala-Archa**	**8.26**	**33**	Pn	**Pn**	**20 29 15.6**	**+2.0**
	comp=E,7.0nm,0.3s,baz=207,slow=8.1,SNR=49						
AAK				Sn	**Sn**	**20 30 47.2**	**+1.4**
	comp=E,3.3nm,0.3s,baz=129,slow=22,SNR=8.1						
AAK				Lg	Lg	20 31 38.6	
	comp=E,1.8nm,0.3s,baz=38,slow=18,SNR=1.0						
AAK				LR	LR	20 32 49.9	
	comp=E,193nm,21.3s,baz=225,slow=40						
	comp=E,54nm,0.6s						
AAK	**Ala-Archa**	**8.26**	**33**	Pn	**Pn**	**20 29 15.0**	**+1.5**
AAK	**Ala-Archa**	**8.26**	**33**	*c i*P	**Pn**	**20 29 15.5**	**+2.0**
AAK				pmax	pmax		
	comp=Z,42nm,0.6s						
FRU1	**Bishkek**	**8.46**	**33**	Pn	**Pn**	**20 29 17.0**	**+0.9**
FRU1	**Bishkek**	**8.46**	**33**	P	**Pn**	**20 29 17.0**	**+0.9**
KBK	**Karagaybulak**	**8.48**	**35**	P	**Pn**	**20 29 19.6**	**+3.1**
	SNR=12						
GEYT	**Alibeck**	**8.53**	**287**	Pn	**Pn**	**20 29 17.9**	**+0.8**
	comp=Z,8.3nm,0.3s,baz=115,slow=13,SNR=41						
GEYT				Sn	**Sn**	**20 30 51.0**	**-1.4**
	comp=Z,6.0nm,0.3s,baz=114,slow=21,SNR=1.8						
GEYT				Lg	Lg	20 31 51.0	
	baz=138,slow=21						
GEYT				LR	LR	20 33 45.3	
	comp=Z,87nm,18.9s,baz=115,slow=45						
	comp=Z,19nm,0.4s						
GEYT	**Alibeck**	**8.53**	**287**	Pn	**Pn**	**20 29 16.0**	**-1.2**
GYA0	**ALIBECK ARRAY**	**8.53**	**287**	P	**Pn**	**20 29 17.6**	**+0.5**
GYA0				S	**Sn**	**20 30 52.5**	**+0.1**
GYA0B	**ALIBECK ARRAY**	**8.53**	**287**	Pn	**Pn**	**20 29 15.9**	**-1.2**
GYA0B	**ALIBECK ARRAY**	**8.53**	**287**	⇑P	**Pn**	**20 29 17.7**	**+0.5**
GYA0B				⇓S	**Sn**	**20 30 52.5**	**+0.2**
CHMS	**Chumysh**	**8.66**	**32**	P	**Pn**	**20 29 20.1**	**+1.2**
	SNR=40						
CHMS	**Chumysh**	**8.66**	**32**	P	**Pn**	**20 29 20.5**	**+1.6**
CHMS				S	**Sn**	**20 30 56.8**	**+1.3**
CHMS	**Chumysh**	**8.66**	**32**	⇓P	**Pn**	**20 29 20.1**	**+1.2**
	comp=Z,37nm,0.7s						
CHMS				⇑S	**Sn**	**20 30 56.9**	**+1.3**
	comp=Z,45nm,0.7s						
SMLA	**Simla**	**8.67**	**120**	*e*P	**Pn**	**20 29 20.0**	**+1.0**
SMLA				*e*S	**Sn**	**20 30 56.6**	**+0.8**
SMLA				IAML		20 31 04.4	
	comp=N,133nm,0.6s						
SMLA				IAML		20 31 05.7	
	comp=E,99nm,0.6s						
USP	**Ospenovka**	**8.77**	**30**	P	**Pn**	**20 29 22.9**	**+2.4**
	SNR=5.3						
ULHL	**Ulahol**	**8.82**	**41**	P	**Pn**	**20 29 23.7**	**+2.5**
	SNR=9.5						
BOOM	**Boomskoye usch**	**8.84**	**39**		**Pn**	**20 29 23.0**	**+1.5**
BOOM	**Boomskoye usch**	**8.84**	**39**	P	**Pn**	**20 29 23.0**	**+1.5**
SGDS	**Sogindy**	**8.98**	**30**	*e*P	**Pn**	**20 29 23.3**	**0.0**
SGDS	**Sogindy**	**8.98**	**30**	*e*P	**Pn**	**20 29 23.4**	**0.0**
	baz=32						
TKM2	**Tokmak 2**	**8.98**	**36**	P	**Pn**	**20 29 24.5**	**+1.0**
	SNR=37						
TKM2	**Tokmak 2**	**8.98**	**36**	P	**Pn**	**20 29 24.3**	**+0.8**
TKM2				S	**Sn**	**20 31 07.6**	**+3.8**
TKM2	**Tokmak 2**	**8.98**	**36**	⇑P	**Pn**	**20 29 24.3**	**+0.8**
	comp=E,28nm,0.8s						
TKM2				⇑S	**Sn**	**20 31 07.6**	**+3.8**
	comp=E,27nm,0.8s						
KDJ	**Kajisay**	**9.26**	**45**	Pn	**Pn**	**20 29 28.3**	**+1.0**
KDJ	**Kajisay**	**9.26**	**45**	P	**Pn**	**20 29 28.3**	**+1.0**
TARG	**Taragay, Kyrgy**	**9.38**	**48**	Pn	**Pn**	**20 29 29.9**	**+0.7**
TARG	**Taragay, Kyrgy**	**9.38**	**48**	P	**Pn**	**20 29 29.9**	**+0.7**
TNSS	**Tian-Shan**	**9.74**	**40**	*e*P	**Pn**	**20 29 36.3**	**+2.2**
TNSS	**Tian-Shan**	**9.74**	**40**	*e*P	**Pn**	**20 29 36.4**	**+2.2**
	baz=42						
AAA	**Alma-Ata**	**9.85**	**39**	*e*P	**Pn**	**20 29 36.6**	**+1.4**
AAA	**Alma-Ata**	**9.85**	**39**	*e*P	**Pn**	**20 29 36.7**	**+1.4**
	baz=41						
KUU	**Kurty**	**10.08**	**35**	*e*P	**Pn**	**20 29 38.5**	**+0.2**
KUU	**Kurty**	**10.08**	**35**	*e*P	**Pn**	**20 29 38.6**	**+0.2**
	baz=36						
BTLS	**Baital**	**10.14**	**23**	*e*P	**Pn**	**20 29 40.5**	**+1.4**
BTLS	**Baital**	**10.14**	**23**	*e*P	**Pn**	**20 29 40.6**	**+1.4**
	baz=24						
CHKK	**Chushkaly**	**10.36**	**37**	*e*P	**Pn**	**20 29 42.9**	**+0.8**
CHKK	**Chushkaly**	**10.36**	**37**	*e*P	**Pn**	**20 29 42.9**	**+0.8**
	baz=39						
SONA	**Sohna**	**10.53**	**133**	*e*P	**Pn**	**20 29 45.7**	**+1.1**
SATY	**Saty**	**10.55**	**44**	*e*P	**Pn**	**20 29 45.7**	**+0.8**
SATY	**Saty**	**10.55**	**44**	*e*P	**Pn**	**20 29 45.8**	**+0.8**
	baz=46						
ZHN	**Zhinishke**	**10.64**	**43**	*e*P	**Pn**	**20 29 47.6**	**+1.5**
ZHN	**Zhinishke**	**10.64**	**43**	*e*P	**Pn**	**20 29 47.7**	**+1.6**
	baz=46						
AJM	**Ajmer**	**10.73**	**149**	*e*P	**Pn**	**20 29 46.7**	**-0.7**
AJM				*e*S	**Sn**	**20 31 43.1**	**-3.4**
UZB	**Uzynbulak**	**10.96**	**45**	*e*P	**Pn**	**20 29 52.2**	**+1.7**
UZB	**Uzynbulak**	**10.96**	**45**	*e*P	**Pn**	**20 29 52.2**	**+1.7**
	baz=47						
KPKS	**Kokpek**	**10.97**	**43**	*e*P	**Pn**	**20 29 51.8**	**+1.2**
KPKS	**Kokpek**	**10.97**	**43**	*e*P	**Pn**	**20 29 51.9**	**+1.2**
	baz=45						
ARXS	**Arharly**	**11.03**	**38**	*e*P	**Pn**	**20 29 51.6**	**+0.2**
SHLS	**Shalkode**	**11.22**	**46**	*e*P	**Pn**	**20 29 58.2**	**+4.2**
SHLS	**Shalkode**	**11.22**	**46**	*e*P	**Pn**	**20 29 58.2**	**+4.2**
	baz=49						
PTH	**Pithoragarh**	**11.73**	**119**	*e*P	**Pn**	**20 29 59.8**	**-1.4**
PTH				*e*S	**Sn**	**20 32 05.6**	**-5.6**
LGTI	**Lohaghat**	**11.81**	**119**	*e*P	**Pn**	**20 30 00.5**	**-1.6**
LGTI				*e*S	**Sn**	**20 32 07.1**	**-5.7**
TDK	**Taldyqorghan**	**11.89**	**37**	*e*P	**Pn**	**20 30 03.5**	**+0.4**
TDK	**Taldyqorghan**	**11.89**	**37**	*e*P	**Pn**	**20 30 03.5**	**+0.4**
	baz=38						
JHNI	**Jhansi**	**13.50**	**137**	*e*P	**Pn**	**20 30 23.8**	**-1.4**
JHNI				*e*S	**Sn**	**20 32 48.7**	**-5.4**
BRZS	**Berezniki**	**14.47**	**11**	*e*P	**Pn**	**20 30 37.0**	**-1.3**
BRZS	**Berezniki**	**14.47**	**11**	*e*P	**Pn**	**20 30 37.0**	**-1.3**
	baz=11						
BRZS				*e*S	**Sn**	**20 33 09.4**	**-8.3**
	baz=11						
PYUN	**Piuthan**	**14.55**	**118**	*e*P	**Pn**	**20 30 36.4**	**-3.3**
	comp=E,40nm,0.5s						
BHPL	**Bhopal**	**14.78**	**146**	*e*P	Pn	20 30 37.7	-4.9
BHPL				*e*S	**Sn**	**20 33 18.5**	**-6.9**
AB31	**Akbulak array**	**14.79**	**338**	P	**Pn**	**20 30 40.7**	**-1.8**
AB31				S	**Sn**	**20 33 21.0**	**-4.3**
AB31	**Akbulak array**	**14.79**	**338**	P	**Pn**	**20 30 40.7**	**-1.8**
	comp=E,4.9nm,0.5s,baz=160,slow=12,SNR=173						
AB31				⇓S	**Sn**	**20 33 21.0**	**-4.3**
	comp=E,4.0nm,0.6s,baz=157,slow=22,SNR=4.2						
ABKAR	**Akbulak array**	**14.79**	**338**	Pn	**Pn**	**20 30 40.5**	**-2.1**
MAKZ	**Makanchi**	**14.93**	**39**		**Pn**	**20 30 43.6**	**-0.9**
MAKZ				IAmb	IAmb	20 30 56.4	
	comp=Z,12nm,0.8s						
MAKZ	**Makanchi**	**14.93**	**39**	P	**Pn**	**20 30 43.6**	**-0.9**
MAKZ				pmax	pmax		
	comp=Z,13nm,0.9s						
DANN	**Dangsing**	**14.97**	**116**	*e*P	**Pn**	**20 30 43.1**	**-2.3**
	comp=Z,42nm,0.6s						
MK31	**Makanchi Array**	**15.08**	**39**	Pn	**Pn**	**20 30 44.7**	**-1.8**
MK31				IAmb	IAmb	20 30 47.8	
	comp=Z,7.3nm,0.9s						
MK31	**Makanchi Array**	**15.08**	**39**	*c i*P	**Pn**	**20 30 46.6**	**+0.1**
MKAR	**Makanchi Array**	**15.08**	**39**	Pn	**Pn**	**20 30 45.3**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=229,slow=13,SNR=45						
MKAR				Lg	Lg	20 35 17.4	
	baz=238,slow=24,SNR=1.9						
MKAR				LR	LR	20 37 13.4	
	comp=Z,90nm,18.7s,baz=230,slow=40						
	comp=Z,7.5nm,0.8s						
MKAR	**Makanchi Array**	**15.08**	**39**	Pn	**Pn**	**20 30 45.6**	**-0.9**
MKAR	**Makanchi Array**	**15.08**	**39**	*i* P	**Pn**	**20 30 47.0**	**+0.5**
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
UOSS	**Minazif**	**15.12**	**227**	P	**P**	**20 30 52.4**	**+0.3**
UOSS				IAmb	IAmb	20 30 54.4	
	comp=Z,11nm,0.9s						
WSAR	**Wadi Sarin**	**15.16**	**217**	LR	LR	20 37 50.8	
	comp=Z,82nm,20.4s,baz=95,slow=42						
GKN	**Gorkha**	**15.80**	**115**	*e*P	**Pn**	**20 30 55.1**	**-1.1**
	comp=Z,46nm,0.5s						
LKRN	**Lenkeran, Azer**	**15.91**	**286**	P	**Pn**	**20 30 54.5**	**-2.8**
DMN	**Daman**	**16.37**	**115**	*e*P	**Pn**	**20 30 59.7**	**-3.8**
	comp=Z,27nm,0.5s						
AKTO	**Aktyubinsk**	**16.43**	**336**	Pn	**Pn**	**20 31 03.6**	**-0.3**
	comp=Z,0.8nm,0.3s,baz=140,slow=17,SNR=10.0						
AKTO				Sn	**Sn**	**20 34 01.1**	**-4.1**
	comp=Z,0.5nm,0.3s,baz=27,slow=22,SNR=3.3						
AKTO				LR	LR	20 38 54.8	
	comp=Z,58nm,18.4s,baz=139,slow=42						
	comp=Z,4.0nm,0.5s						
AKTO	**Aktyubinsk**	**16.43**	**336**	⇑P	**P**	**20 31 05.8**	**-0.6**
	comp=Z,5.9nm,0.8s						
KURBB	**Kurchatov Arra**	**16.48**	**23**	Pn	**Pn**	**20 31 01.7**	**-2.9**
	comp=Z,0.1nm,0.3s,baz=211,slow=12,SNR=21						
	comp=Z,4.7nm,0.9s						
KURK	**Kurchatov**	**16.59**	**23**	Pn	**Pn**	**20 31 02.8**	**-3.2**
KURK	**Kurchatov**	**16.59**	**23**	*c i*P	**Pn**	**20 31 03.5**	**-2.4**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
PKIN	**Phulchoki**	**16.60**	**115**	*e*P	**Pn**	**20 31 03.3**	**-3.2**
	comp=Z,39nm,0.4s						
PKI	**Pulchoki**	**16.61**	**115**	*e*P	**Pn**	**20 31 03.3**	**-3.4**
	comp=Z,32nm,0.5s						
WMQ	**Urumqi**	**16.78**	**56**	*e*P	**P**	**20 31 11.3**	**+0.9**
WMQ				pmax	pmax		
	comp=Z,14nm,0.6s						
ZSN	**Zaisan**	**16.86**	**41**	*e*P	**P**	**20 31 13.3**	**+2.2**
ZSN	**Zaisan**	**16.86**	**41**	*e*P	**P**	**20 31 13.4**	**+2.2**
	baz=43						
SEM	**Semipalatinsk**	**16.89**	**27**	*e*P	**Pn**	**20 31 08.0**	**-1.9**
SEM	**Semipalatinsk**	**16.89**	**27**	*e*P	**Pn**	**20 31 08.1**	**-1.9**
	baz=27						
JIRN	**Jiri**	**17.14**	**113

GOMU	**GeErMu**	**21.32**	**81**	P	**P**	**20 32 03.4**	**+2.9**		
GOMU				pP	pP	20 32 06.4	-2.4		
GOMU				sP	sP	20 32 10.6	-2.2		
GOMU				S	**S**	**20 35 48.5**	**-7.5**		
GOMU				pmax	pmax				
	comp=Z,3.0nm,0.9s								
GOMU				pmax	pmax				
	comp=Z,33nm,4.9s								
GOMU				LR	LR				
	comp=Z,36nm,9.2s								
GOMU				LR	LR				
	comp=Z,71nm,9.8s								
GOMU				LR	LR				
	comp=Z,78nm,9.8s								
GOF	**Gofitskoye**	**21.34**	**303**⇑	*e*P	**P**	**20 31 54.3**	**-5.9**		
ZAA0	**Zalesovo Array**	**21.42**	**27**	P	**P**	**20 32 01.1**	**+0.2**		
ZALV	**Zalesovo Beam**	**21.42**	**27**	P	**P**	**20 32 01.3**	**+0.4**		
	comp=Z,19nm,0.5s,baz=220,slow=9.9,SNR=103								
	comp=Z,19nm,0.5s								
ZALV	**Zalesovo Beam**	**21.42**	**27**	P	**P**	**20 32 00.8**	**-0.1**		
ZALV	**Zalesovo Beam**	**21.42**	**27**	*i* P	**P**	**20 32 01.2**	**+0.3**		
ZALV				pmax	pmax				
	comp=Z,19nm,0.5s								
SVE	**Sverdlovsk**	**21.65**	**348**	*e*P	**P**	**20 32 06.9**	**+3.5**		
SVE				*e*S	**S**	**20 36 03.3**	**+1.9**		
ARU	**Arti**	**21.66**	**345**	P	**P**	**20 32 04.9**	**+1.4**		
	comp=Z,6.6nm,0.6s,baz=161,slow=10.0,SNR=13								
ARU				LR	LR	20 40 55.9			
	comp=Z,32nm,18.6s,baz=132,slow=38								
	comp=Z,6.6nm,0.6s								
ARU	**Arti**	**21.66**	**345**	P	**P**	**20 32 04.4**	**+0.9**		
ARU				IAmb	IAmb	20 32 21.4			
	comp=Z,8.1nm,0.6s								
ARU	**Arti**	**21.66**	**345**	*c i* P	**P**	**20 32 05.6**	**+2.1**		
ARU						20 32 26.2			
ARU				S	**S**	**20 35 54.5**	**-7.1**		
ARU				pmax	pmax				
	comp=Z,15nm,1.6s								
BELG	**Belogornoye**	**22.17**	**325**	P	**P**	**20 32 10.3**	**+1.3**		
	comp=Z,11nm,0.7s,baz=146,slow=11,SNR=6.1								
BELG				LR	LR	20 42 42.6			
	comp=Z,54nm,18.9s,baz=153,slow=42								
	comp=Z,11nm,0.7s								
BELG	**Belogornoye**	**22.17**	**325**	*e*P	**P**	**20 32 13.2**	**+4.2**		
BELG				pmax	pmax				
	comp=Z,2.0nm,0.8s								
MARD	**Mardin**	**22.23**	**282**	P	**P**	**20 32 11.0**	**+1.0**		
MARD				IAmb	IAmb	20 32 18.8			
	comp=Z,13nm,0.8s								
SHL	**Shillong**	**22.56**	**110**	P	**P**	**20 32 12.0**	**-1.6**		
SHL	**Shillong**	**22.56**	**110**	P	**P**	**20 32 12.0**	**-1.6**		
SHL				pmax	pmax				
	comp=Z,18nm,0.8s								
GTA	**Gaotai**	**25.04**	**72**	*e*P	**P**	**20 32 38.3**	**+1.0**		
GTA				pP	pP	20 32 47.8	+1.6		
GTA				sP	sP	20 32 51.8	+1.8		
GTA				pmax	pmax				
	comp=Z,3.0nm,0.6s								
KNGR	**Kungurtug, Tuv**	**25.61**	**46**	*ce*P	**P**	**20 32 46.4**	**+4.0**		
KNGR				pmax	pmax				
	comp=Z,10.0nm,0.9s								
VORR	**Voronezh**	**26.15**	**316**	*e*P	**P**	**20 32 49.6**	**+2.6**		
VORR				pmax	pmax				
	comp=Z,20nm,0.4s								
ASF	**Jabal al Asfar**	**26.34**	**271**	P	**P**	**20 32 52.0**	**+2.9**		
	comp=Z,1.6nm,0.7s,baz=66,slow=6.9,SNR=2.3								
	comp=Z,1.6nm,0.7s								
ASF	**Jabal al Asfar**	**26.34**	**271**	P	**P**	**20 32 52.0**	**+2.9**		
MMAI	**Mount Meron Ar**	**27.32**	**274**	LR	LR	20 45 39.6			
	comp=Z,61nm,21.6s,baz=213,slow=40								
BR131	**Keskin Array S**	**27.67**	**289**	P	**P**	**20 33 02.8**	**+1.8**		
BR131	**Keskin Array S**	**27.67**	**289**	P	**P**	**20 33 02.8**	**+1.8**		
BR131				pmax	pmax				
	comp=Z,2.0nm,0.7s								
BRTR	**Keskin Array B**	**27.67**	**289**	P	**P**	**20 33 04.1**	**+3.0**		
	comp=Z,1.3nm,0.7s,baz=87,slow=8.8,SNR=8.7								
BRTR				LR	LR	20 47 26.5			
	comp=Z,27nm,19.1s,baz=128,slow=44								
	comp=Z,1.3nm,0.7s								
BRTR	**Keskin Array B**	**27.67**	**289**	P	**P**	**20 33 02.4**	**+1.3**		
BRTR	**Keskin Array B**	**27.67**	**289**	P	**P**	**20 33 02.4**	**+1.3**		
EIL	**Elat**	**28.73**	**267**	LR	LR	20 45 55.2			
	comp=Z,43nm,19.1s,baz=78,slow=39								
SONM	**Songino Array**	**30.42**	**55**	P	**P**	**20 33 26.5**	**+1.2**		
	comp=Z,1.2nm,0.8s,baz=256,slow=9.7,SNR=10								
SONM				LR	LR	20 47 14.8			
	comp=Z,67nm,21.0s,baz=264,slow=40								
	comp=Z,1.2nm,0.8s								
SONM	**Songino Array**	**30.42**	**55**	IAmb	IAmb	20 33 34.3			
	comp=Z,3.2nm,1.4s								
SONM	**Songino Array**	**30.42**	**55**	P	**P**	**20 33 26.5**	**+1.2**		
SONM				pmax	pmax				
	comp=Z,3.0nm,1.4s								
PALK	**Pallekele**	**30.57**	**156**	LR	LR	20 46 45.5			
	comp=Z,57nm,20.1s,baz=78,slow=39								
ULN	**Ulaanbaatar**	**30.86**	**55**⇑	*i* P	**P**	**20 33 32.7**	**+3.4**		
ULN				pmax	pmax				
	comp=Z,4.0nm,1.7s								
ELL	**Elmali**	**30.93**	**283**	P	**P**	**20 33 31.4**	**+1.4**		
ELL	**Elmali**	**30.93**	**283**	P	**P**	**20 33 31.4**	**+1.4**		
ELL				pmax	pmax				
	comp=Z,20nm,0.9s								
AKASG	**Malin Array Be**	**31.77**	**310**	P	**P**	**20 33 39.3**	**+2.3**		
	comp=Z,0.4nm,0.4s,baz=91,slow=6.7,SNR=5.4								
AKASG				LR	LR	20 49 09.6			
	comp=Z,55nm,21.1s,baz=60,slow=41								
	comp=Z,0.4nm,0.4s								
AKBB	**Malin Array Si**	**31.77**	**310**	*e*P	P	20 33 42.0	+5.0		
AKBB				pmax	pmax				
	comp=Z,2.0nm,1.0s								
CMAR	**Chiang Mai Arr**	**32.01**	**115**	P	**P**	**20 33 39.4**	**-0.1**		
	comp=Z,0.6nm,0.6s,baz=298,slow=7.6,SNR=6.3								
CMAR				LR	LR	20 50 26.5			
	comp=Z,29nm,18.8s,baz=300,slow=44								
	comp=Z,0.6nm,0.6s								
ARG	**Arkhangelos**	**32.44**	**283**	P	**P**	**20 33 44.1**	**+1.0**		
ARG	**Arkhangelos**	**32.44**	**283**	P	**P**	**20 33 44.1**	**+1.0**		
ARG				pmax	pmax				
	comp=Z,17nm,1.1s								
MLR	**Muntele Rosu**	**33.30**	**300**	LR	LR	20 49 46.9			
	comp=Z,70nm,20.6s,baz=42,slow=40								
MLR	**Muntele Rosu**	**33.30**	**300**	P	**P**	**20 33 54.6**	**+3.9**		
MLR	**Muntele Rosu**	**33.30**	**300**	P	**P**	**20 33 54.6**	**+3.9**		
MLR				pmax	pmax				
	comp=Z,6.0nm,0.7s								
HHC	**Hu-ho-hao-te**	**33.94**	**68**	*e*P	**P**	**20 33 56.6**	**+0.3**		
HHC				pmax	pmax				
	comp=Z,19nm,1.0s								
HHC				pmax	pmax				
	comp=Z,160nm,6.7s								
HHC				LR	LR				
	comp=Z,220nm,15.9s								
HHC				LR	LR				
	comp=Z,290nm,15.2s								
HHC				LR	LR				
	comp=Z,250nm,16.5s								
FINES	**FINESS Array B**	**36.90**	**327**	P	**P**	**20 34 23.6**	**+2.3**		
	comp=Z,1.1nm,0.6s,baz=130,slow=10,SNR=6.9								
FINES				LR	LR	20 51 04.4			
	comp=Z,43nm,18.9s,baz=74,slow=39								
	comp=Z,1.1nm,0.6s								
FINES	**FINESS Array B**	**36.90**	**327**	P	**P**	**20 34 21.9**	**+0.5**		
FINES	**FINESS Array B**	**36.90**	**327**	*i* P	**P**	**20 34 23.1**	**+1.8**		
FINES				pmax	pmax				
	comp=Z,1.0nm,0.6s								
DIVS	**Divibare**	**37.58**	**298**	P	**P**	**20 34 30.0**	**+2.6**		
DIVS				IAmb	IAmb	20 34 31.6			
	comp=Z,2.9nm,0.8s								
VRAC	**Vranov**	**39.71**	**306**	LR	LR	20 55 15.8			
	comp=Z,37nm,18.5s,baz=9.5,slow=42								
ARCES	**ARCESS Array B**	**40.99**	**339**	P	**P**	**20 34 59.5**	**+4.1**		
	comp=Z,0.8nm,0.7s,baz=124,slow=6.5,SNR=5.3								
ARCES				LR	LR	20 52 35.2			
	comp=Z,40nm,20.1s,baz=56,slow=37								
	comp=Z,0.8nm,0.7s								
HFS	**Hagfors**	**42.32**	**323**	LR	LR	20 55 49.7			
	comp=Z,82nm,18.6s,baz=98,slow=40								
NB2	**NORSAR Subarra**	**43.67**	**324**	P	**P**	**20 35 20.5**	**+3.0**		
	comp=Z,2.1nm,0.8s,baz=97,slow=8.6								
NOA	**NORSAR Array B**	**43.67**	**324**	P	**P**	**20 35 20.4**	**+2.9**		
	comp=Z,0.9nm,0.7s,baz=99,slow=8.1,SNR=4.9								
NOA				LR	LR	20 56 44.0			
	comp=Z,44nm,18.9s,baz=105,slow=40								
	comp=Z,0.9nm,0.7s								
YAK	**Yakutsk**	**45.71**	**35**	P	**P**	**20 35 35.7**	**+2.1**		
YAK				IAmb	IAmb	20 35 37.3			
	comp=Z,5.9nm,0.9s								
YAK	**Yakutsk**	**45.71**	**35**⇑	*e* P	**P**	**20 35 35.4**	**+1.9**		
YAK				pmax	pmax				
	comp=Z,5.0nm,0.8s								
KSRS	**Korea Array**	**47.06**	**69**	LR	LR	20 57 46.2			
	comp=Z,44nm,18.9s,baz=295,slow=39								
TIXI	**Tiksi**	**47.17**	**22**	P	**P**	**20 35 46.1**	**+1.3**		
TIXI				IAmb	IAmb	20 36 08.0			
	comp=Z,2.9nm,0.8s								
TIXI	**Tiksi**	**47.17**	**22**⇑	*i* P	**P**	**20 35 47.7**	**+2.8**		
TIXI				pmax	pmax				
	comp=Z,3.0nm,1.0s								
KLR	**Kul'dur**	**47.20**	**53**	LR	LR	20 57 13.6			
	comp=Z,49nm,18.2s,baz=198,slow=38								
MJAR	**Matsushiro Arr**	**55.12**	**67**	P	**P**	**20 36 45.2**	**0.0**		
MJAR				IAmb	IAmb	20 36 47.6			
	comp=Z,2.1nm,1.1s								
MJAR	**Matsushiro Arr**	**55.12**	**67**	P	**P**	**20 36 45.2**	**0.0**		
MJAR				pmax	pmax				
	comp=Z,2.0nm,1.1s								
ASAJ	**Asahikawa**	**55.66**	**57**	LR	LR	21 02 22.8			
	comp=Z,31nm,19.8s,baz=176,slow=38								
BORG	**Borgarnes**	**58.13**	**330**	LR	LR	21 05 33.9			
	comp=Z,42nm,18.2s,baz=302,slow=40								
TORD	**Torodi Ar. Bea**	**63.62**	**267**	P	**P**	**20 37 43.8**	**-0.3**		
	comp=Z,1.3nm,0.7s,baz=52,slow=5.3,SNR=8.3								
	comp=Z,1.3nm,0.7s								
TORD	**Torodi Ar. Bea**	**63.62**	**267**	IAmb	IAmb	20 37 53.2			
	comp=Z,4.4nm,1.4s								
TOLK	**Toolik Lake Re**	**72.07**	**14**	P	**P**	**20 38 38.3**	**+1.8**		
TOLK				IAmb	IAmb	20 38 41.3			
	comp=Z,2.5nm,0.8s								
TSUM	**Tsumeb**	**72.89**	**230**	LR	LR	21 14 51.2			
	comp=Z,59nm,18.6s,baz=272,slow=39								
C36M	**Paulatuk**	**74.72**	**5**	P	**P**	**20 38 54.7**	**+2.7**		
C36M				IAmb	IAmb	20 38 55.8			
	comp=Z,3.0nm,0.7s								
ILAR	**Eielson Array**	**75.97**	**15**	P	**P**	**20 39 02.4**	**+3.1**		
	comp=Z,0.4nm,0.8s,baz=335,slow=7.1,SNR=4.6								
	comp=Z,0.4nm,0.8s								
ILAR	**Eielson Array**	**75.97**	**15**	P	**P**	**20 38 59.5**	**+0.2**		
ILAR	**Eielson Array**	**75.97**	**15**	P	**P**	**20 38 59.5**	**+0.2**		
WRA	**Warramunga Arr**	**83.43**	**120**	P	**P**	**20 39 40.2**	**-0.2**		
	comp=Z,1.0nm,0.6s,baz=329,slow=4.8,SNR=12								
	comp=Z,1.0nm,0.6s								
WRA	**Warramunga Arr**	**83.43**	**120**	IAmb	IAmb	20 39 46.1			
	comp=Z,0.3nm,1.2s								
ULM	**Lac du Bonnet**	**93.17**	**350**	LR	LR	21 28 59.3			
	comp=Z,29nm,18.5s,baz=277,slow=40								

IDC 20 20:52:29.6±12.0, 47.85N×153.61E, h0km, mb3.5/3, mbtmp3.6/3, Error ellipse: s-maj=238.7km s-min=75.2km az=108.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**21.46**	**250**	P	P	20 57 19.8	+0.3
	1.3nm,0.7s,baz=57,slow=11,SNR=7.2						
	1.3nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**30.05**	**154**	T	T	21 30 37.3	
	baz=341,slow=76,SNR=12						
H11N1	**WAKE ISLAND Hy**	**30.07**	**154**	T	T	21 30 46.9	
	baz=341,slow=76,SNR=10						
H11N3	**WAKE ISLAND Hy**	**30.07**	**154**	T	T	21 30 41.7	
	baz=341,slow=76,SNR=9.5						
H11S1	**WAKE ISLAND Hy**	**31.15**	**155**	T	T	21 32 05.2	
	baz=342,slow=76,SNR=17						
H11S3	**WAKE ISLAND Hy**	**31.16**	**155**	T	T	21 32 05.6	
	baz=342,slow=76,SNR=9.5						
H11S2	**WAKE ISLAND Hy**	**31.17**	**155**	T	T	21 31 57.5	
	baz=342,slow=76,SNR=14						
MKAR	**Makanchi Array**	**46.74**	**297**	P	P	21 01 00.1	-0.2
	1.0nm,1.1s,baz=57,slow=9.0,SNR=3.0						
	1.0nm,1.1s						
CMAR	**Chiang Mai Arr**	**52.96**	**256**	P	P	21 01 47.9	0.0
	0.4nm,0.6s,baz=36,slow=6.7,SNR=5.2						
	0.4nm,0.6s						

*NEIC **20** 21:25:29.6±2.3, 35.40S±0.02×73.28W±0.07, h10km±1km, Error ellipse: s-maj=9.7km s-min=2.9km az=284.0*
*GUC **20** 21:25:30.4±0.7, 35.37S×73.32W, h30km±4km, ML4.1*

ISC 20 21:25:30.0±1.8, 35.42S±0.04×73.28W±0.06, h14km±12km, n58, σ1824/77, mb4.4/3, 3C-1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO05	**Huala**	**1.17**	**70**		**Pb**	**21 25 50.9**	**-1.2**
GO05					**Sb**	**21 26 05.5**	**-1.7**
GO05	**Huala**	**1.17**	**70**⇑	*i* P	**Pb**	**21 25 50.8**	**-1.2**
GO05				*i* S	**Sb**	**21 26 05.9**	**-1.2**
GO05				IAML		21 26 11.4	
	comp=N,4μm,0.3s						
BI05	**Punta Hualpn**	**1.33**	**177**	Pn	**Pn**	**21 25 53.1**	**-1.0**
BI05				Sn	**Sb**	**21 26 09.2**	**-2.4**
BI05	**Punta Hualpn**	**1.33**	**177**⇓	*i* P	**Pn**	**21 25 53.1**	**-1.0**
BI05				*i* S	**Sb**	**21 26 09.2**	**-2.4**
BI05				IAML		21 26 18.5	
	comp=N,2μm,0.3s						
BO03	**Pichilemu**	**1.42**	**50**⇑	*i* P	**Pn**	**21 25 54.0**	**-1.3**
BO03				*i* S	**Sn**	**21 26 11.9**	**-1.9**
BO03				IAML		21 26 20.0	
	comp=E,2μm,0.4s						
CCSP	**San Pedro de C**	**1.43**	**175**	*e*P	**Pg**	**21 25 58.4**	**+0.9**
CCSP				*e*S	**Sn**	**21 26 10.8**	**-3.4**
ML02	**Panimavida**	**1.55**	**103**	Pn	**Pn**	**21 25 57.2**	**+0.1**
ML02					**Sb**	**21 26 18.4**	**+0.4**
ML02	**Panimavida**	**1.55**	**103**⇑	*e*P	**Pn**	**21 25 57.3**	**+0.1**
ML02				*e*S	**Sn**	**21 26 16.8**	**-0.4**
ML02				IAML		21 26 30.2	
	comp=E,6μm,0.6s						
BO01	**Tunca**	**2.07**	**61**	Pn	**Pn**	**21 26 03.4**	**-0.9**
BO01	**Tunca**	**2.07**	**61**	*e*P	**Pn**	**21 26 04.2**	**-0.2**
BO01				*e*S	**Sn**	**21 26 29.8**	**-0.2**
VA05	**Santo Domingo**	**2.23**	**38**	Pn	**Pn**	**21 26 05.8**	**-0.7**
VA05	**Santo Domingo**	**2.23**	**38**	*e*P	**Pn**	**21 26 05.8**	**-0.7**
VA05				*e*S	**Sn**	**21 26 31.7**	**-2.1**
VA05				IAML		21 26 48.2	
	comp=E,1μm,0.5s						
MT01	**Popeta**	**2.28**	**48**		**Pn**	**21 26 06.5**	**-0.7**
MT01	**Popeta**	**2.28**	**48**	*e*P	**Pn**	**21 26 06.0**	**-1.2**
MT01				*e*S	**Sn**	**21 26 34.0**	**-1.1**
MT01				IAML		21 27 00.1	
	comp=E,691nm,0.5s						
MT09	**Talagante**	**2.50**	**50**	Pn	**Pn**	**21 26 09.8**	**-0.6**
MT09	**Talagante**	**2.50**	**50**	*e*P	**Pn**	**21 26 09.8**	**-0.6**
MT09				*e*S	**Sn**	**21 26 39.5**	**-1.2**
MT09				IAML		21 27 03.7	
	comp=N,1μm,0.6s						
BO04	**La Punta**	**2.62**	**58**		**Pn**	**21 26 11.2**	**-0.7**
BO04	**La Punta**	**2.62**	**58**	*e*P	**Pn**	**21 26 11.9**	**0.0**
BO04				*e*S	**Sn**	**21 26 43.1**	**-0.5**
BO04				IAML		21 27 01.6	
	comp=E,1μm,0.7s						
VA01	**Torpederas**	**2.74**	**30**	Pn	**Pn**	**21 26 12.3**	**-1.3**
MT02	**Curacav**	**2.79**	**40**		**Pn**	**21 26 14.0**	**-0.2**
MT02	**Curacav**	**2.79**	**40**	*e*P	**Pn**	**21 26 13.1**	**-1.1**
MT02				*e*S	**Sn**	**21 26 44.5**	**-3.1**
MT05	**Renca**	**2.91**	**47**	Pn	**Pn**	**21 26 16.5**	**+0.5**
MT05	**Renca**	**2.91**	**47**	*e*P	**Pn**	**21 26 16.0**	**0.0**
MT05				*e*S	**Sb**	**21 26 55.0**	**-2.3**
MT05				IAML		21 27 15.0	
	comp=E,800nm,0.6s						
MT03	**Universidad Ad**	**2.98**	**51**	Pn	**Pn**	**21 26 17.4**	**+0.5**
MT03	**Universidad Ad**	**2.98**	**51**	*e*P	**Pn**	**21 26 17.8**	**+0.8**
MT03				*e*S	**Sn**	**21 26 52.5**	**-0.2**
MT03				IAML		21 27 10.2	
	comp=E,823nm,0.4s						
ROC1	**El Roble**	**3.07**	**38**	Pn	**Pn**	**21 26 18.2**	**-0.2**
ROCH	**El Roble**	**3.08**	**38**	*e*P	**Pn**	**21 26 18.3**	**-0.1**
ROCH				*i* S	**Sn**	**21 26 54.0**	**-1.2**
ROCH				IAML		21 27 21.8	
	comp=N,944nm,0.5s						
PEL	**Peldehue**	**3.12**	**44**		**Pn**	**21 26 19.2**	**+0.4**
PEL	**Peldehue**	**3.12**	**44**	*e*P	**Pn**	**21 26 19.3**	**+0.5**
PEL				*e*S	**Sn**	**21 26 54.6**	**-1.4**
PEL				IAML		21 27 22.9	
	comp=N,616nm,0.5s						
VA06	**Catapilco**	**3.29**	**31**	Pn	**Pn**	**21 26 20.2**	**-0.9**
LC02	**Puerto Saavedr**	**3.37**	**181**	Pn	**Pn**	**21 26 22.0**	**-0.2**
VA03	**San Esteban**	**3.48**	**41**	Pn	**Pn**	**21 26 23.6**	**-0.3**
VA03	**San Esteban**	**3.48**	**41**	*e*P	**Pn**	**21 26 23.9**	**+0.1**
VA03				*i* S	**Sn**	**21 27 03.5**	**-1.4**
VA03				IAML		21 27 27.0	
	comp=N,466nm,0.6s						
LR03	**Panguipulli**	**4.27**	**170**	Pn	**Pn**	**21 26 35.3**	**+0.7**
LR04	**Corral**	**4.46**	**181**	Pn	**Pn**	**21 26 35.9**	**-1.2**
CO02	**Combarbal**	**4.61**	**25**		**Pn**	**21 26 38.6**	**-0.8**
VA04	**Juan Fernndez**	**4.92**	**290**	Pn	**Pn**	**21 26 43.2**	**-0.2**
CO06	**Fray Jorge**	**4.93**	**17**	Pn	**Pn**	**21 26 41.6**	**-2.1**
CO03	**El Pedregal**	**5.05**	**26**	Pn	**Pn**	**21 26 44.9**	**-0.6**
GO04	**Tololo Observa**	**5.63**	**22**	Pn	**Pn**	**21 26 52.1**	**-1.4**
PLCA	**Paso Flores**	**5.72**	**159**	Pn	**Pn**	**21 26 56.1**	**+1.5**
LL03	**Petrohue**	**5.75**	**173**	Pn	**Pn**	**21 26 54.9**	**0.0**
LL05	**Los Muermos**	**5.98**	**181**	Pn	**Pn**	**21 26 56.8**	**-1.3**
CO01	**Juntas del Tor**	**6.05**	**27**		**Pn**	**21 26 59.2**	**-0.1**
LCO	**Las Campanas**	**6.75**	**20**	Pn	**Pn**	**21 27 07.6**	**-1.3**
GO03	**Copiap**	**8.22**	**19**	Pn	**Pn**	**21 27 28.8**	**-0.1**
AC02	**Maricunga**	**9.26**	**24**	Pn	**Pn**	**21 27 41.9**	**-1.7**
PB11	**IPOC Station P**	**15.92**	**13**	P	**P**	**21 29 19.1**	**+1.7**
PB11				IAmb	IAmb	21 29 28.8	
	comp=Z,21nm,1.0s						
GO01	**Chusmiza**	**16.10**	**14**	P	**P**	**21 29 21.9**	**+2.1**
ITAB	**Concordia**	**19.79**	**72**	P	**Pn**	**21 30 00.9**	**-0.6**
ITAB				IAmb	IAmb	21 30 11.5	
	comp=Z,13nm,1.0s						
ZARC	**Zaragoza, Cauc**	**42.70**	**358**	P	**P**	**21 33 27.3**	**+0.7**
ZARC				IAmb	IAmb	21 33 35.8	
	comp=Z,2.8nm,0.7s						
BAUV	**El Baul**	**44.40**	**7**	P	**P**	**21 33 40.4**	**+0.1**
SNAA	**Sanae**	**50.67**	**157**	P	**P**	**21 34 29.7**	**+1.2**
SNAA	**Sanae**	**50.67**	**157**	P	**P**	**21 34 30.0**	**+1.5**
SNAA				IAmb	IAmb	21 34 38.0	
	comp=Z,5.5nm,1.1s						
TROLL	**Troll, Antarti**	**52.37**	**158**	P	**P**	**21 34 42.7**	**+1.4**
QSPA	**South Pole Qui**	**54.82**	**180**	P	**P**	**21 35 00.2**	**+0.8**
QSPA				IAmb	IAmb	21 35 09.0	
	comp=Z,4.8nm,1.2s						
TXAR	**Lajitas Array**	**70.49**	**332**	P	**P**	**21 36 45.4**	**+1.2**
TX31	**Lajitas Ar. Si**	**70.49**	**332**	P	**P**	**21 36 45.3**	**+1.1**

MAN 20 21:26:27.8, 4.89N×125.09E, h114km, mb5.0, ML3.9, MS3.9, Talaud Islands

*IDC **20** 22:09:01.7±8.3, 15.60S×168.02E, h144km±70km, mb3.9/12, mbtmp4.3/12, Error ellipse: s-maj=32.1km s-min=19.9km az=82.0*
*NEIC **20** 22:09:02±2.1, 15.6S±0.1×168.0E±0.1, h140km±6km, mb4.6/36, Error ellipse: s-maj=20.6km s-min=14.9km az=78.0*
*NOU **20** 22:09:03.6, 15.56S×167.96E, h162km, mb4.7/41, Vanuatu Islands*

ISC 20 22:09:03.0±2.2, 15.6S±0.1×167.96E±0.1, h158km±18km, n133, σ0984/140, mb4.6/36, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LIFNC	**LIFOU**	**5.24**	**187**			**22 10 18.5**	**-1.2**
LIFNC	**LIFOU**	**5.24**	**187**	P	**Pn**	**22 10 18.9**	**-0.8**
MARNC	**Mare, Loyalty**	**5.89**	**179**	Pn	**Pn**	**22 10 27.7**	**-0.7**
MARNC	**Mare, Loyalty**	**5.89**	**179**	P	**Pn**	**22 10 27.9**	**-0.5**
KOUNC	**Koumac, New Ca**	**6.07**	**215**	Pn	**Pn**	**22 10 30.6**	**-0.2**
KOUNC	**Koumac, New Ca**	**6.07**	**215**	P	**Pn**	**22 10 32.1**	**+1.3**
NOUC	**Port Laguerre**	**6.70**	**193**	P	**Pn**	**22 10 39.3**	**+0.2**
PINNC	**Pines Island,**	**7.04**	**184**	Pn	**Pn**	**22 10 43.9**	**+0.3**
PINNC	**Pines Island,**	**7.04**	**184**	P	**Pn**	**22 10 44.4**	**+0.8**
EIDS	**Eidsvold**	**18.57**	**236**	P	**Pn**	**22 13 09.8**	**-0.3**
	baz=18,SNR=7.5						
EIDS	**Eidsvold**	**18.57**	**236**	P	**Pn**	**22 13 09.7**	**-0.5**
EIDS				IAmb	IAmb	22 13 10.1	
	comp=Z,18nm,0.6s						
RMQ	**Roma**	**20.94**	**236**	P	**P**	**22 13 34.5**	**+1.0**
	baz=21,SNR=4.8						
RMQ	**Roma**	**20.94**	**236**	P	**P**	**22 13 34.5**	**+1.0**
ARMA	**Armidale**	**21.05**	**223**	P	**P**	**22 13 37.2**	**+2.4**
	baz=21,SNR=6.9						
ARMA	**Armidale**	**21.05**	**223**	P	**P**	**22 13 37.4**	**+2.6**
ARMA				IAmb	IAmb	22 13 38.6	
	comp=Z,30nm,0.8s						
CTA	**Charters Tower**	**21.15**	**255**	P	**P**	**22 13 36.5**	**+0.6**
	comp=Z,18nm,0.6s,baz=87,slow=10,SNR=17						
	comp=Z,18nm,0.6s						
CTA	**Charters Tower**	**21.15**	**255**	P	**P**	**22 13 35.9**	**+0.1**
CTAO	**Charters Tower**	**21.15**	**255**	P	**P**	**22 13 35.9**	**+0.1**
CTAO				IAmb	IAmb	22 13 38.8	
	comp=Z,18nm,0.7s						
CTAO	**Charters Tower**	**21.15**	**255**	P	**P**	**22 13 35.8**	**0.0**
MTSU	**Mount Surprise**	**22.77**	**260**	P	**P**	**22 13 52.7**	**+0.5**
	baz=23,SNR=23						
MTSU	**Mount Surprise**	**22.77**

AS31	**Alice Springs**	**33.01 250**	P	**P**	**22 15 22.8**	**-0.7**
AS31			IAmb	IAmb	22 15 23.4	
	comp=Z,6.7nm,0.6s					
ASAR	**Alice Springs**	**33.02 250**	P	**P**	**22 15 22.6**	**-0.9**
ASAR			PcP	**PcP**	**22 18 03.4**	**-0.3**
BBOO	**Buckleboo**	**33.61 234**	P	**P**	**22 15 28.6**	**+0.1**
	baz=34,SNR=43					
BBOO	**Buckleboo**	**33.61 234**	P	**P**	**22 15 28.6**	**+0.1**
BBOO	**Buckleboo**	**33.61 234**	P	**P**	**22 15 29.0**	**+0.5**
MULG	**Mulgathing**	**34.34 239**	P	**P**	**22 15 34.7**	**-0.1**
KDU	**Kakadu**	**34.51 270**	P	**P**	**22 15 35.5**	**-0.9**
	baz=34,SNR=5.5					
FAKI	**Fak Fak**	**37.34 286**	P	**P**	**22 16 00.3**	**-0.2**
FAKI	**Fak Fak**	**37.34 286**	P	**P**	**22 16 00.8**	**+0.3**
KNRA	**Kununurra**	**37.72 264**	P	**P**	**22 16 02.7**	**-0.9**
	baz=38,SNR=6.9					
KNRA	**Kununurra**	**37.72 264**	P	**P**	**22 16 02.8**	**-0.9**
WRKA	**Warakurna**	**38.26 249**	P	**P**	**22 16 07.3**	**-0.9**
	baz=38,SNR=31					
WRKA	**Warakurna**	**38.26 249**	P	**P**	**22 16 07.5**	**-0.7**
SWI	**Sorong**	**39.05 288**	P	**P**	**22 16 14.4**	**-0.4**
	comp=Z,12nm,0.7s					
FORT	**Forrest**	**39.46 240**	P	**P**	**22 16 17.9**	**-0.2**
	baz=39,SNR=19					
FORT	**Forrest**	**39.46 240**	P	**P**	**22 16 17.9**	**-0.2**
FORT	**Forrest**	**39.46 240**	P	**P**	**22 16 17.9**	**-0.2**
MMRI	**Maumere**	**45.16 273**	P	**P**	**22 17 03.4**	**-1.0**
	comp=Z,3μmcomp=Z,27nm,0.7s					
EDFI	**Ende, Flores**	**45.66 273**	P	**P**	**22 17 07.6**	**-0.8**
	comp=Z,12nm,0.9s					
PSA00	**Pilbara Seismi**	**45.86 255**	P	**P**	**22 17 09.4**	**-0.4**
PSA00	**Pilbara Seismi**	**45.86 255**	P	**P**	**22 17 09.4**	**-0.4**
MBWA	**Marble Bar**	**45.98 255**	P	**P**	**22 17 10.4**	**-0.3**
MBWA			IAmb	IAmb	22 17 10.8	
	comp=Z,14nm,0.7s					
MBWA	**Marble Bar**	**45.98 255**	P	**P**	**22 17 10.5**	**-0.2**
BKSI	**Bulukumba**	**48.03 277**	P	**P**	**22 17 26.1**	**-0.6**
	comp=Z,12nm,0.9s					
KLBR	**Kellerberrin**	**48.29 241**	P	**P**	**22 17 27.4**	**-1.1**
TTSI	**Tana Toraja**	**48.98 280**	P	**P**	**22 17 33.1**	**-0.9**
	comp=Z,800nmcomp=Z,6.1nm,0.8s					
PLAI	**Plampang**	**49.42 272**	P	**P**	**22 17 37.4**	**+0.1**
TOLI2	**Tolitoli**	**49.47 285**	P	**P**	**22 17 36.8**	**-0.8**
TOLI2			IAmb	IAmb	22 18 00.1	
	comp=Z,7.8nm,0.9s					
TOLI2			PcP	**PcP**	**22 18 58.0**	**+0.5**
TOLI2	**Tolitoli**	**49.47 285**	P	**P**	**22 17 36.6**	**-1.1**
	comp=Z,10nm,1.0s					
MORW	**Morawa**	**49.52 245**	P	**P**	**22 17 37.2**	**-0.6**
	baz=49,SNR=5.1					
MORW	**Morawa**	**49.52 245**	P	**P**	**22 17 37.1**	**-0.8**
MORW			IAmb	IAmb	22 17 44.9	
	comp=Z,18nm,1.2s					
MORW			PcP	**PcP**	**22 18 56.8**	**-0.7**
MORW	**Morawa**	**49.52 245**	P	**P**	**22 17 37.5**	**-0.4**
MPSI	**Mapaga**	**50.02 284**	P	**P**	**22 17 41.0**	**-0.8**
	comp=Z,24nm,0.9s					
GIRL	**Giralia**	**51.04 253**	P	**P**	**22 17 50.0**	**+0.7**
IGBI	**Denpasar**	**51.95 271**	P	**P**	**22 17 56.3**	**0.0**
	comp=Z,66nm,1.2s					
PCJI	**Pacitan**	**55.92 271**	P	**P**	**22 18 24.5**	**-0.5**
	comp=Z,39nm,0.7s					
WOJI	**Wonogiri, Jawa**	**56.24 271**	P	**P**	**22 18 26.7**	**-0.6**
	comp=Z,22nm,0.9s					
UGM	**Wanagama**	**56.61 271**	P	**P**	**22 18 29.8**	**-0.2**
CNJI	**Cibinong**	**60.02 270**	P	**P**	**22 18 52.7**	**-0.9**
	comp=Z,52nm,1.0s					
SSLB	**Suanglung**	**60.32 310**	P	**P**	**22 18 55.5**	**0.0**
SSLB			IAmb	IAmb	22 18 56.5	
	comp=Z,6.8nm,0.9s					
YHNB	**Yeheng**	**60.53 311**	P	**P**	**22 18 57.6**	**+0.7**
DBJI	**Dramaga**	**60.57 271**	P	**P**	**22 18 57.2**	**-0.2**
VNDA	**Vanda**	**62.05 182**	P	**P**	**22 19 06.5**	**+0.2**
	comp=Z,1.5nm,0.5s,baz=351,slow=8.5,SNR=11					
	comp=Z,1.5nm,0.5s					
VNDA	**Vanda**	**62.05 182**	P	**P**	**22 19 06.2**	**0.0**
SBA	**Scott Base**	**62.31 180**	P	**P**	**22 19 09.6**	**+1.6**
SBA			IAmb	IAmb	22 19 10.2	
	comp=Z,8.4nm,0.9s					
CASY	**Casey**	**63.02 202**	P	**P**	**22 19 13.3**	**+0.5**
USRK	**Ussuriysk Ar.**	**67.92 333**	P	**P**	**22 19 46.3**	**+1.7**
	comp=Z,0.8nm,0.5s,baz=146,slow=6.6,SNR=4.8					
	comp=Z,0.8nm,0.5s					
QSPA	**South Pole Qui**	**74.47 180**	P	**P**	**22 20 24.1**	**+0.2**
QSPA			IAmb	IAmb	22 20 24.8	
	comp=Z,7.5nm,0.9s					
CMAR	**Chiang Mai Arr**	**75.90 294**	P	**P**	**22 20 34.2**	**+1.5**
	comp=Z,1.7nm,0.3s,baz=133,slow=4.7,SNR=10					
	comp=Z,1.7nm,0.3s					
CMAR	**Chiang Mai Arr**	**75.90 294**	P	**P**	**22 20 33.1**	**+0.4**
CHTO	**Chiang Mai**	**76.03 294**	P	**P**	**22 20 34.8**	**+1.3**
MAW	**Mawson**	**81.37 202**	P	**P**	**22 21 02.2**	**+0.5**
	comp=Z,2.0nm,0.5s,baz=121,slow=6.5,SNR=8.0					
	comp=Z,2.0nm,0.5s					
MAW	**Mawson**	**81.37 202**	P	**P**	**22 21 01.7**	**0.0**
ULN	**Ulaanbaatar**	**83.20 324**	P	**P**	**22 21 13.2**	**+1.5**
ULN			IAmb	IAmb	22 21 13.6	
	comp=Z,6.2nm,0.9s					
PAF	**Port-aux-Franc**	**83.30 221**	P	**P**	**22 21 12.7**	**+0.6**
SONM	**Songino Array**	**83.56 323**	P	**P**	**22 21 14.4**	**+0.9**
	comp=Z,1.6nm,0.7s,baz=141,slow=6.1,SNR=13					
	comp=Z,1.6nm,0.7s					
SONM	**Songino Array**	**83.56 323**	P	**P**	**22 21 14.4**	**+0.9**
ILAR	**Eielson Array**	**87.11 18**	P	**P**	**22 21 29.6**	**-0.9**
	comp=Z,0.4nm,0.6s,baz=231,slow=4.8,SNR=6.2					
	comp=Z,0.4nm,0.6s					
TROLL	**Troll, Antarti**	**92.09 184**	P	**P**	**22 21 53.3**	**-0.8**
SNAA	**Sanae**	**92.76 183**	P	**P**	**22 21 55.8**	**-1.3**
VNA3	**Neumayer Olymp**	**93.40 181**	P	**P**	**22 21 58.5**	**-1.5**
TXAR	**Lajitas Array**	**96.08 61**	P	**P**	**22 22 13.5**	**+0.4**
	comp=Z,0.1nm,0.4s,baz=235,slow=3.2,SNR=1.6					
	comp=Z,0.1nm,0.4s					
YKA	**Yellowknife Ar**	**97.97 27**	P	Pdif	22 22 21.4	+0.7
	comp=Z,1.1nm,0.8s,baz=297,slow=8.2,SNR=2.5					
	comp=Z,1.1nm,0.8s					
MKAR	**Makanchi Array**	**98.26 316**	P	Pdif	22 22 23.2	+0.8
	comp=Z,0.3nm,0.6s,baz=98,slow=6.0,SNR=2.8					
	comp=Z,0.3nm,0.6s					
MKAR	**Makanchi Array**	**98.26 316**	P	Pdif	22 22 23.5	+1.0
ARCES	**ARCESS Array B**	**121.22 345**	PKP	**PKPdf**	**22 27 35.7**	**-0.9**
	comp=Z,0.3nm,0.4s,baz=61,slow=1.6,SNR=7.9					
FINES	**FINESS Array B**	**126.74 338**	PKP	**PKiKP**	**22 27 47.8**	**0.0**
	comp=Z,0.4nm,0.5s,baz=80,slow=1.6,SNR=4.3					
BUR08	**Bucovina Ar. S**	**135.66 324**	PKPdf	**PKiKP**	**22 28 06.6**	**+0.2**
BURAR	**Bucovina Array**	**135.67 324**	PKPdf	**PKiKP**	**22 28 06.9**	**+0.5**
TIP	**Timpagrande**	**145.51 319**	PKPdf	**PKPab**	**22 28 23.1**	**-0.4**
RAFF	**Raffo Rosso**	**148.18 318**	PKPbc	**PKiKP**	**22 28 31.2**	**-1.1**
TOA0	**Torodi Ar. Sit**	**166.48 262**	PKPab	**PKPab**	**22 29 52.2**	**-1.0**
TORD	**Torodi Ar. Bea**	**166.48 262**	PKP	**PKPdf**	**22 28 49.4**	**-1.0**
	comp=Z,0.3nm,0.7s,baz=48,slow=2.1,SNR=1.5					
TORD			PKPab	**PKPab**	**22 29 52.5**	**-0.7**
	comp=Z,1.4nm,0.7s,baz=97,slow=4.3,SNR=6.8					
TORD	**Torodi Ar. Bea**	**166.48 262**		**PKPab**	**22 29 52.3**	**-0.9**

*KRNET **20** 22:21:35.7±0.1,39.°15N×79.°99E,mb2.8*
SOME 20 22:21:41.0,42.°23N×80.°88E,h5km,10C-2D,
Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.27 342**		*e*P	Pg	22 22 05.1	-0.3
	0.4nm,0.0s						
KTMS				*e*S	Sb	22 22 22.5	+0.1
	2.3nm,0.3s						
SHLS	**Shalkode**	**1.40 312**		*e*P	Pn	22 22 03.6	-3.7
	1.7nm,0.2s						
SHLS				*e*S	Sb	22 22 19.9	-5.9
	3.1nm,0.2s						
UZB	**Uzynbulak**	**1.65 304**		*e*P	Pb	22 22 12.2	+0.2
	1.3nm,0.0s						
UZB				*e*S	Sg	22 22 34.8	+0.9
	2.7nm,0.2s						
PRZ	**Przheval'sk**	**1.86 279**	⇑	*e*P	Pg	22 22 31.4	+15
	baz=41						
PRZ			⇑	*e*S	Sg	22 23 12.3	+32
	baz=41						
SATY	**Saty**	**2.00 295**		*e*P	Pg	22 22 18.9	-0.6
	1.0nm,0.3s						
SATY				*e*S	Sg	22 22 46.0	+0.6
	4.8nm,0.1s						
ZHN	**Zhinishke**	**2.03 298**		*e*P	Pb	22 22 18.9	+0.4
	3.3nm,0.1s						
ZHN				*e*S	Sg	22 22 46.0	-0.3
	6.5nm,0.2s						
KPKS	**Kokpek**	**2.03 308**		*e*P	Pb	22 22 18.7	+0.2
	3.1nm,0.3s						
KPKS				*e*S	Sg	22 22 46.0	-0.3
	5.1nm,0.5s						
DJR	**Jarkent**	**2.25 340**		*e*P	Pg	22 22 23.3	-0.7
	0.7nm,0.1s						
DJR				*e*S	Sg	22 22 53.7	+0.6
	1.6nm,0.2s						
TARG	**Taragay, Kyrgy**	**2.35 259**	⇓	*e*P	Pb	22 22 24.8	+0.7
	baz=28						
TARG			⇓	*e*S	Sg	22 23 00.6	+4.1
	baz=28						
ANVS	**Anan'yevo**	**2.44 284**	⇑	*i*P	Pg	22 22 38.6	+11
	baz=35						
ANVS			⇑	*i*S	Sg	22 23 23.8	+24
	baz=35						
KDJ	**Kajisay**	**2.75 269**	⇑	*e*P	Pg	22 22 32.7	-1.1
	baz=25						
KDJ			⇑	*e*S	Sg	22 23 14.6	+5.1
	baz=25						
ARXS	**Arharly**	**2.98 313**		*e*P	Pb	22 22 36.3	+1.6
	1.0nm,0.4s						
ARXS				*e*S	Sg	22 23 16.3	-0.6
	3.4nm,0.3s						
ULHL	**Ulahol**	**3.45 272**	⇑	*e*P	Pb	22 22 40.3	-2.3
	baz=19						
ULHL			⇑	*e*S	Sb	22 23 28.0	+3.1
	baz=19						
BOOM	**Boomskoye usch**	**3.67 276**	⇑	*i*P	Pb	22 22 45.2	-1.3
	baz=19						
BOOM			⇑	*i*S	Sg	22 23 35.8	-3.1
	baz=19						

*NOU **20** 22:29:02.6,16.°44S×176.°14W,h346km,mb4.8/20,Fiji Islands Region*
*NEIC **20** 22:29:37.9±2.2,17.°6S±0.°1×178.°9W±0.°1,h521km±6km, mb4.4/72,Error ellipse: s-maj=18.0km s-min=14.2km az=144.0*
*IDC **20** 22:29:42.5±0.8,17.°67S×179.°04W,h578km±8km,mb3.5/12, mbtmp4.4/14,Error ellipse: s-maj=16.3km s-min=13.1km az=138.0*
ISC 20 22:29:39.1±0.4,17.°65S±0.°08×178.°80W±0.°08,h539km, n204,σ1°09/199,mb4.4/51,16C-5D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.00 268**		P	**P**	**22 30 57.0**	**+3.7**
	69nm,0.7s,baz=103,slow=2.8,SNR=39						
MSVF				S	**S**	**22 32 01.2**	**+7.4**
	18nm,1.0s,baz=197,slow=23,SNR=6.8						
MSVF	**Nonsavu**	**3.00 268**		P	**P**	**22 30 56.7**	**+3.3**
AFI	**Afiamalu**	**7.72 62**		P	**P**	**22 31 32.3**	**-1.5**
	17nm,1.7s,baz=50,slow=7.4,SNR=8.6						
AFI	**Afiamalu**	**7.72 62**		P	**P**	**22 31 31.4**	**-2.4**
MARNC	**Mare, Loyalty**	**12.98 251**		P	**P**	**22 32 26.8**	**-1.0**
LIFNC	**LIFOU**	**13.55 255**		P	**P**	**22 32 32.0**	**-1.7**
PINNC	**Pines Island,**	**13.82 247**		P	**P**	**22 32 34.6**	**-1.9**
DZM	**Mont Dzumac**	**14.56 250**		P	**P**	**22 32 43.4**	**-0.9**
	15nm,0.6s,baz=163,slow=23,SNR=6.9						
NOUC	**Port Laguerre**	**14.69 250**		P	**P**	**22 32 45.1**	**-0.5**
KOUNC	**Koumac, New Ca**	**16.24 257**		P	**P**	**22 32 59.9**	**-1.4**
KOUNC	**Koumac, New Ca**	**16.24 257**		P	**P**	**22 33 01.1**	**-0.2**
OUZ	**Omahuta**	**18.76 200**		P	**P**	**22 33 26.5**	**+2.3**
OUZ				IAmb	IAmb	22 33 27.0	
	comp=Z,24nm,1.1s						
URZ	**Urewera**	**20.84 189**		P	**P**	**22 33 41.0**	**-2.1**
	comp=Z,2.0nm,0.3s,baz=301,slow=24,SNR=2.0						
URZ				S	**S**	**22 37 00.7**	**0.0**
	comp=Z,6.3nm,0.7s,baz=121,slow=24,SNR=2.5						
URZ	**Urewera**	**20.84 189**		P	**P**	**22 33 41.0**	**-2.1**
BFZ	**Birch Farm**	**23.34 190**		P	**P**	**22 34 05.2**	**-0.3**
QRZ	**Quartz Range**	**24.27 196**		P	**P**	**22 34 15.0**	**+1.2**
QRZ	**Quartz Range**	**24.27 196**		P	P	22 34 06.5	-7.3
NNZ	**Nelson**	**24.43 194**		P	**P**	**22 34 14.3**	**-0.9**
KHZ	**Kahutara**	**25.53 193**		P	P	22 34 16.9	-8.0
LTZ	**Lake Taylor**	**26.18 195**		P	**P**	**22 34 28.4**	**-2.2**
LTZ				IAmb	IAmb	22 34 37.5	
	comp=Z,29nm,1.2s						
RPZ	**Rata Peaks**	**27.36 196**		P	**P**	**22 34 39.6**	**-1.4**
	comp=Z,3.2nm,0.4s,baz=12,slow=23,SNR=1.6						
	comp=Z,3.2nm,0.4s						
PPT	**Papeete**	**27.84 94**		P	**P**	**22 34 49.7**	**+4.1**
	comp=Z,64nm,0.6s,baz=252,slow=22,SNR=5.2						
EIDS	**Eidsvold**	**29.00 249**		P	**P**	**22 34 54.9**	**-0.7**
	baz=29,SNR=10						
EIDS	**Eidsvold**	**29.00 249**		P	**P**	**22 34 55.0**	**-0.7**
EIDS	**Eidsvold**	**29.00 249**		P	**P**	**22 34 54.8**	**-0.8**
MLZ	**Mavora Lakes**	**29.71 199**		P	**P**	**22 35 01.6**	**0.0**
ARMA	**Armidale**	**29.75 239**		P	**P**	**22 35 02.6**	**+0.4**
	baz=30,SNR=31						
ARMA	**Armidale**	**29.75 239**		P	**P**	**22 35 02.5**	**+0.4**
ARMA	**Armidale**	**29.75 239**		P	**P**	**22 35 02.5**	**+0.4**
RMQ	**Roma**	**31.25 248**		P	**P**	**22 35 15.2**	**+0.2**
	baz=31,SNR=15						
RMQ	**Roma**	**31.25 248**		P	**P**	**22 35 15.3**	**+0.2**
CTAO	**Charters Tower**	**33.12 260**		P	**P**	**22 35 29.6**	**-1.4**
CTAO				IAmb	IAmb	22 35 30.8	
	comp=Z,13nm,0.8s						
CNB	**Canberra Magne**	**33.29 232**		P	**P**	**22 35 32.6**	**+0.3**
	baz=33,SNR=29						
CNB	**Canberra Magne**	**33.29 232**		P	**P**	**22 35 32.7**	**+0.4**
CAN	**Canberra**	**33.56 232**		P	**P**	**22 35 34.2**	**-0.3**
CAN				IAmb	IAmb	22 35 35.3	
	comp=Z,12nm,0.7s						
CAN	**Canberra**	**33.56 232**		P	**P**	**22 35 34.7**	**+0.1**
CMSA	**Cobar Meteorol**	**34.95 240**		P	**P**	**22 35 46.0**	**-0.2**
	baz=35,SNR=23						
CMSA	**Cobar Meteorol**	**34.95 240**		P	**P**	**22 35 45.9**	**-0.3**
MTSU	**Mount Surprise**	**35.07 263**		P	**P**	**22 35 46.6**	**-0.7**
	baz=35,SNR=7.2						
QLP	**Quilpie**	**35.28 249**		P	**P**	**22 35 48.4**	**-0.6**
	baz=35,SNR=18						
QLP	**Quilpie**	**35.28 249**		P	**P**	**22 35 48.4**	**-0.6**
COEN	**Coen**	**36.73 270**		P	**P**	**22 36 00.8**	**-0.3**
	baz=37,SNR=9.8						
COEN	**Coen**	**36.73 270**		P	**P**	**22 36 01.0**	**-0.1**
COEN				IAmb	IAmb	22 36 02.4	
	comp=Z,20nm,1.1s						
COEN	**Coen**	**36.73 270**		P	**P**	**22 36 01.0**	**-0.1**
GLAD	**Gladstone**	**36.77 224**		P	**P**	**22 36 01.0**	**-0.1**
TOO	**Toolangi**	**37.04 230**		P	**P**	**22 36 03.6**	**+0.2**
	baz=37,SNR=6.3						
TOO	**Toolangi**	**37.04 230**		P	**P**	**22 36 03.8**	**+0.4**
TOO	**Toolangi**	**37.04 230**		P	**P**	**22 36 03.1**	**-0.3**
TAU	**Tasmania Unive**	**38.18 221**		P	**P**	**22 36 13.2**	**+0.6**
STKA	**Stephens Creek**	**38.43 241**		P	**P**	**22 36 14.9**	**+0.2**
	comp=Z,14nm,0.5s,baz=91,slow=10,SNR=39						
	comp=Z,14nm,0.5s						
STKA	**Stephens Creek**	**38.43 241**		P	**P**	**22 36 14.7**	**-0.1**
	baz=38,SNR=7.2						
STKA	**Stephens Creek**	**38.43 241**		P	**P**	**22 36 15.1**	**+0.4**
STKA				IAmb	IAmb	22 36 15.7	
	comp=Z,7.0nm,1.1s						
STKA	**Stephens Creek**	**38.43 241**		P	**P**	**22 36 15.0**	**+0.2**
INKA	**Innaminka**	**38.50 248**		P	**P**	**22 36 15.7**	**+0.3**
ARPS	**Mount Arapiles**	**39.50 233**		P	**P**	**22 36 22.6**	**-0.8**
	comp=Z,21nm,0.9s						
HTT	**Hallett**	**40.95 239**		P	**P**	**22 36 35.1**	**0.0**
	baz=41,SNR=16						
BBOO	**Buckleboo**	**43.20 241**		P	**P**	**22 36 52.4**	**-0.4**
	baz=43,SNR=32						
BBOO	**Buckleboo**	**43.20 241**		P	**P**	**22 36 52.2**	**-0.6**
WB0	**Warramunga Arr**	**44.28 260**		P	**P**	**22 36 59.6**	**-1.6**
WB0				IAmb	IAmb	22 37 00.7	
	comp=Z,11nm,1.1s						
WB2	**Warramunga Arr**	**44.30 259**		P	**P**	**22 36 60.0**	**-1.5**
	baz=44						
WB2	**Warramunga Arr**	**44.30 259**		P	**P**	**22 37 00.1**	**-1.4**
WB2				IAmb	IAmb	22 37 00.9	
	comp=Z,10nm,0.7s						
WRAB	**Tennant Creek**	**44.30 259**		P	**P**	**22 36 59.8**	**-1.7**
WRAB				IAmb	IAmb	22 37 00.8	
	comp=Z,6.5nm,0.8s						
WRA	**Warramunga Arr**	**44.31 259**		P	**P**	**22 36 60.0**	**-1.6**
	comp=Z,7.1nm,0.7s,baz=94,slow=7.3,SNR=66						
	comp=Z,7.1nm,0.7s						
WRA	**Warramunga Arr**	**44.31 259**			**P**	**22 36 59.5**	**-2.0**
AS31	**Alice Springs**	**44.50 254**		P	**P**	**22 37 02.4**	**-0.6**
ASAR	**Alice Springs**	**44.50 254**		P	**P**	**22 37 02.4**	**-0.6**
KDU	**Kakadu**	**47.19 269**		P	**P**	**22 37 22.7**	**-0.8**
	baz=47,SNR=27						
MTN	**Manton Dam**	**48.43 268**		P	**P**	**22 37 31.8**	**-1.0**
	baz=48,SNR=6.3						
MTN	**Manton Dam**	**48.43 268**		P	**P**	**22 37 32.0**	**-0.8**
WRKA	**Warakurna**	**49.57 252**		P	**P**	**22 37 40.5**	**-0.6**
	baz=50,SNR=63						
FORT	**Forrest**	**49.78 244**		P	**P**	**22 37 41.5**	**-1.1**
	baz=50,SNR=26						
FORT	**Forrest**	**49.78 244**		P	**P**	**22 37 41.4**	**-1.1**
KNRA	**Kununurra**	**50.14 264**		P	**P**	**22 37 44.6**	**-0.8**
	baz=50,SNR=6.6						
KNRA	**Kununurra**	**50.14 264**		P	**P**	**22 37 44.5**	**-0.9**
KNRA				IAmb	IAmb	22 37 45.2	
	comp=Z,20nm,0.7s						
PSA00	**Pilbara Seismi**	**57.61 255**		P	**P**	**22 38 37.2**	**-1.0**
MBWA	**Marble Bar**	**57.77 256**		P	**P**	**22 38 38.2**	**-1.0**
KLBR	**Kellerberrin**	**58.61 243**		P	**P**	**22 38 43.7**	**-1.0**
	baz=59,SNR=9.7						
MORW	**Morawa**	**60.24 246**		P	**P**	**22 38 54.6**	**-1.1**
	baz=60,SNR=4.6						
MORW	**Morawa**	**60.24 246**		P	**P**	**22 38 54.4**	**-1.2**
MORW				IAmb	IAmb	22 39 11.2	
	comp=Z,16nm,1.1s						
VNDA	**Vanda**	**60.67 185**		P	**P**	**22 38 58.0**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=357,slow=4.8,SNR=4.9						
	comp=Z,0.9nm,0.7s						
VNDA	**Vanda**	**60.67 185**		P	**P**	**22 38 58.3**	**+0.8**
GIRL	**Giralia**	**62.61 253**		P	**P**	**22 39 11.3**	**+0.1**
JGF	**Kuroka**	**67.31 322**		P	**P**	**22 39 40.3**	**-0.2**
JGF				IAmb	IAmb	22 39 55.4	
	comp=Z,12nm,1.3s						
MJAR	**Matsushiro Arr**	**67.48 324**		P	**P**	**22 39 41.0**	**-0.5**
	comp=Z,5.0nm,0.6s,baz=148,slow=6.9,SNR=15						
	comp=Z,5.0nm,0.6s						
MJAR	**Matsushiro Arr**	**67.48 324**		P	**P**	**22 39 41.1**	**-0.5**
MJB9	**Matsu-Tunnel**	**67.49 324**		P	**P**	**22 39 40.2**	**-1.3**
MJB9				IAmb	IAmb	22 39 41.9	
	comp=Z,10nm,0.9s						
JSD	**Sado**	**68.52 325**		P	**P**	**22 39 47.6**	**-0.1**
JSD				IAmb	IAmb	22 39 55.3	
	comp=Z,11nm,1.0s						
UGM	**Wanagama**	**69.28 268**		P	**P**	**22 39 52.1**	**-0.8**
JHS	**Saijyo**	**69.46 319**		P	**P**	**22 39 53.8**	**+0.3**
JHS				IAmb	IAmb	22 40 02.6	
	comp=Z,25nm,1.3s						
GSTR	**Great Sitkin T**	**69.49 2**		P	**P**	**22 39 52.8**	**-0.5**
NIKH	**Nikolski High**	**70.86 6**		P	**P**	**22 40 00.6**	**-0.7**
UNV	**Unalaska Valle**	**71.99 8**		P	**P**	**22 40 06.9**	**-1.0**
UNV				IAmb	IAmb	22 40 35.5	
	comp=Z,19nm,1.1s						
QSPA	**South Pole Qui**	**72.40 180**		P	**P**	**22 40 10.6**	**+0.1**
PEA0B	**Petropavlovsk-**	**73.34 345**		P	**P**	**22 40 16.3**	**+0.6**
PEA0B				IAmb	IAmb	22 40 25.7	
	comp=Z,16nm,1.4s						
PETK	**Petropavlovsk-**	**73.34 345**		P	**P**	**22 40 15.5**	**-0.3**
	comp=Z,5.1nm,0.6s,baz=145,slow=9.0,SNR=9.1						
	comp=Z,5.1nm,0.6s						
USRK	**Ussuriysk Ar.**	**76.19 326**		P	**P**	**22 40 32.7**	**+0.7**
	comp=Z,1.7nm,0.7s,baz=83,slow=6.6,SNR=9.2						
	comp=Z,1.7nm,0.7s						
USRK	**Ussuriysk Ar.**	**76.19 326**		P	**P**	**22 40 31.9**	**-0.1**
SII	**Sitkinak Islan**	**76.77 14**		P	**P**	**22 40 34.5**	**-0.3**
P18K	**Big Mountain,**	**79.15 12**		P	**P**	**22 40 46.5**	**-1.1**
P18K				IAmb	IAmb	22 40 47.7	
	comp=Z,11nm,0.7s						
LCH	**Last Change Ra**	**79.31 45**		P	**P**	**22 40 49.8**	**+0.6**
NVAR	**Mina Array Bea**	**79.50 44**		P	**P**	**22 40 51.1**	**+0.8**
	comp=Z,1.6nm,0.7s,baz=231,slow=8.7,SNR=12						
	comp=Z,1.6nm,0.7s						
NVAR	**Mina Array Bea**	**79.50 44**		P	**P**	**22 40 51.3**	**+1.1**
O18K	**Koktuh Hills**	**79.58 12**		P	**P**	**22 40 49.2**	**-0.7**
O18K				IAmb	IAmb	22 40 50.2	
	comp=Z,18nm,0.9s						
KVN	**Kaiserville**	**79.97 44**		P	**P**	**22 40 53.4**	**+0.8**
N18K	**Kilae Creek**	**80.22 11**		P	**P**	**22 40 52.6**	**-0.6**
N18K				IAmb	IAmb	22 41 02.9	
	comp=Z,14nm,1.5s						
K05A	**Summer Lake**	**80.24 39**		P	**P**	**22 40 54.8**	**+0.8**
PINE	**Pine Mountain**	**80.82 38**		P	**P**	**22 40 58.0**	**+1.0**
L19K	**White Mountain**	**81.80 11**		P	**P**	**22 41 01.8**	**+0.4**
I07A	**Izee**	**81.84 39**		P	**P**	**22 41 03.1**	**+1.0**
SUA	**Susitna One**	**81.97 13**		P	**P**	**22 41 02.0**	**-0.4**
SUA				IAmb	IAmb	22 41 02.3	
	comp=Z,12nm,1.0s						
U15A	**North Rim**	**82.63 48**		P	**P**	**22 41 07.7**	**+1.2**
GHO	**Glory Hole Cre**	**82.65 14**		P	**P**	**22 41 05.0**	**-0.8**
GHO				IAmb	IAmb	22 41 06.0	
	comp=Z,10nm,0.7s						
**BMR

SCTR	Scanteiesti	144.26	327	⇑P		PKPab	22 48 13.9	+0.1			
GHRR		144.29	328	⇑P		PKPab	22 48 14.3	+0.4			
BIZ	Bicaz	144.30	330	⇑P		PKPab	22 48 14.3	+0.3			
BRTR	Keskin Array B	144.34	315	PKP		PKPbc	22 48 13.6	-0.6			
	comp=Z,1.6nm,0.6s,baz=105,slow=3.8,SNR=11										
BRTR	Keskin Array B	144.34	315			PKPbc	22 48 13.7	-0.5			
TESR	Tescani	144.35	329	⇓P		PKPdf	22 48 13.9	0.0			
KOLS	Kolonicke sedl	144.42	336	*e*PKP		PKPab	22 48 14.4	0.0			
TPGR	Topolog	144.58	326	⇓P		PKPab	22 48 15.0	-0.2			
ODBI	Odobesti	144.68	328	⇑P		PKPab	22 48 15.7	+0.3			
CRVS	Cervenica-Dubn	144.76	337	*e*PKP		PKPab	22 48 16.2	+0.5			
VRI	Vrincioaia	144.77	329	⇑P		PKPdf	22 48 14.8	+0.1			
PLOR	Plostina	144.82	329	⇑P		PKPbc	22 48 15.3	0.0			
HARR	Harsova	144.95	326	⇓P		PKPbc	22 48 16.0	+0.3			
OSTC	Ostas	145.04	343	*e*PKP		PKPab	22 48 16.6	-0.1			
CHVC	Chvalec	145.06	343	*e*PKP		PKPbc	22 48 16.1	+0.2			
CLL	Collm	145.13	347			PKPdf	22 48 15.6	+0.4			
CLL	Collm	145.13	347	*i* PKPbc		PKPdf	22 48 15.5	+0.4			
	comp=Z,9.0nm,0.6s										
UPC	Upice	145.14	343	*e*PKP		PKPbc	22 48 16.3	+0.2			
DPC	Dobruska-Polom	145.20	343	*e*PKP		PKPbc	22 48 16.4	+0.1			
LANS	Liptovska Anna	145.27	339	*e*PKP		PKPab	22 48 17.2	-0.5			
KRLC	Kraliky	145.31	342	*e*PKP		PKPbc	22 48 16.5	-0.2			
BRG	Berggiesshubel	145.33	346	*e*PKP		PKPbc	22 48 16.8	+0.2			
BRG					Amp		22 48 17.9				
	comp=Z,5.9nm,1.0s										
DOPR	Dopca	145.35	330	⇓P		PKPab	22 48 17.5	-0.5			
MORC	Moravsky Berou	145.35	341	*e*PKP		PKPbc	22 48 16.3	-0.5			
MLR	Muntele Rosu	145.42	329	⇑P		PKPbc	22 48 17.7	+0.5			
PVCC	Panska Ves	145.50	345	*e*PKP		PKPbc	22 48 17.4	+0.3			
DRGR		145.94	333	⇓P		PKPbc	22 48 18.6	0.0			
PRU	Pruhonice	146.00	345	*e*PKP		PKPab	22 48 20.5	0.0			
VYHS	Vyhne	146.05	339	*e*PKP		PKPbc	22 48 18.7	-0.1			
JAVC	Velka Javorina	146.12	340	*e*PKP		PKPbc	22 48 19.9	+0.9			
KOLL	Kolacno	146.12	339	*e*PKP		PKPbc	22 48 19.5	+0.6			
ARR	Arges	146.15	330	⇑P		PKPbc	22 48 19.8	+0.6			
KRUC	Moravsky	146.33	342	*e*PKP		PKPbc	22 48 19.2	-0.3			
MODS	Modra-Piesok	146.67	340	*e*PKP		PKPbc	22 48 21.2	+0.7			
SIRR	Siria	146.81	334	⇑P		PKPbc	22 48 21.0	0.0			
KHC	Kasperske Hory	147.03	345			PKPbc	22 48 21.7	+0.2			
KHC	Kasperske Hory	147.03	345	*e*PKP		PKPbc	22 48 21.6	+0.1			
CKRC	Cesky Krumlov	147.14	344	*e*PKP		PKPbc	22 48 21.6	-0.1			
GERES	GERESS Array B	147.27	345	PKPbc		PKPbc	22 48 21.9	-0.3			
	comp=Z,2.2nm,0.5s,baz=34,slow=3.3,SNR=26										
BZS	Buzias	147.34	333	⇑P		PKPbc	22 48 22.0	-0.3			
CONA	Conrad Observa	147.50	342	*e*P		PKPbc	22 48 22.9	+0.1			
	comp=Z,3.2nm,0.7s										
HERR	Herculane	147.55	331	⇑P		PKPbc	22 48 22.5	-0.3			
RONA	Rosalia, Austr	147.57	341	*e*P		PKPbc	22 48 22.9	0.0			
	comp=Z,2.9nm,0.6s										
MORH	Mrgy, Hungar	148.05	337	⇑P		PKPbc	22 48 23.7	-0.4			
SOKA	Soboth	148.88	341	*i* P		PKPbc	22 48 25.2	-1.0			
	comp=Z,1.6nm,0.5s										
KBA	Koelnbreinsper	148.99	344	*i* P		PKPbc	22 48 25.4	-1.3			
	comp=Z,2.3nm,0.5s										
WATA	Walderalm	149.19	346	*i* P		PKPbc	22 48 26.1	-1.0			
	comp=Z,2.6nm,0.5s										
RETA	Reutte	149.22	347	*i* P		PKPbc	22 48 26.5	-0.6			
	comp=Z,1.7nm,0.4s										
WTTA	Wattenberg	149.24	346	*e*P		PKPbc	22 48 26.8	-0.4			
	comp=Z,4.7nm,0.5s										
MOTA	Moosalm	149.29	347	*i* P		PKPbc	22 48 26.7	-0.7			
	comp=Z,3.8nm,1.1s										
MYKA	Terra Mystica	149.32	343	*i* P		PKPbc	22 48 26.2	-1.2			
	comp=Z,2.7nm,0.4s										
SQTA	Sankt Quirin	149.38	347	*i* P		PKPbc	22 48 26.4	-1.1			
	comp=Z,3.9nm,0.5s										
ABTA	Abfaltersbach	149.52	345	*i* P		PKPbc	22 48 26.7	-1.1			
	comp=Z,4.3nm,0.5s										
DAVA	Damuels	149.59	348	*i* P		PKPbc	22 48 27.2	-0.9			
	comp=Z,2.2nm,0.7s										
FETA	Feichten	149.68	347	*i* P		PKPbc	22 48 27.6	-0.7			
	comp=Z,2.7nm,0.7s										
FNA	Florina	151.13	327			PKPbc	22 48 30.8	-0.9			
ESDC	Sonseca Array	157.60	11	PKPab		PKPab	22 49 08.4	-1.2			
	comp=Z,0.3nm,0.3s,baz=337,slow=4.2,SNR=3.7										
ESDC	Sonseca Array	157.60	11	PKPdf		PKPdf	22 48 33.9	-0.3			
ESDC						PKPab	22 49 08.9	-0.7			

*MEX **20** 22:36:38.3±1.2, 14°.22N×94°.38W, h16km±72km, MD4.0*
*GCG **20** 22:36:44.5±0.3, 15°.33N×93°.80W, h76km±65km, MD4.1*
ISC 20 22:36:32.9±3.2, 14°.20N±0°.09×94°.29W±0°.05, h8km±24km, n17, σ2s19/27, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PCIG		1.82	35	*i* P		Pb	22 37 06.3	-0.2
PCIG				*i* S		Sb	22 37 28.1	-1.3
PATR	El Naranjo	2.19	65	*i* P		Pb	22 37 12.2	-0.8
PATR				*e*S		Sn	22 37 37.4	+0.1
PAVE	Pavencul	2.27	64	*e*P		Pb	22 37 13.8	-0.6
PAVE				*e*S		Sb	22 37 40.5	-2.3
CHUJ	Union Juarez	2.29	67	*e*P		Pb	22 37 13.7	-1.0
CHUJ				*e*S		Sn	22 37 39.9	0.0
HUIG	Huatulco	2.35	312	*e*P		Pn	22 37 11.6	-0.2
HUIG				*e*			22 37 34.3	
STG3	Santiaguito 3,	2.69	79	*e*P		Pb	22 37 20.5	-0.9
TGIG		2.80	24	*e*P		Pn	22 37 21.0	+2.9
TGIG				*e*S		Sn	22 37 53.1	+0.9
CMIG	Matias Romero	2.93	349	*e*P		Pn	22 37 21.2	+1.4
CMIG				*e*S		Sn	22 37 52.6	-2.6
CCIG	Comitan	2.94	45	*i* P		Pb	22 37 24.8	-0.8
CCIG				*e*S		Sb	22 37 59.7	-2.1
UXUV	UXUV	3.11	3	*e*P		Pn	22 37 25.3	+3.1
UXUV				*e*S		Sn	22 37 59.9	+0.4
FUG	Fuego 3	3.35	85	*e*P		Pb	22 37 30.7	-2.1
FUG				*e*S		Sn	22 38 06.7	+0.7
VHO	Vista Hermosa	3.70	321	*e*P		Pn	22 37 33.1	+2.5
VHO				*e*S		Sn	22 38 11.5	-3.0
NEUV	Arroyo Zacate	3.78	338	*e*P		Pn	22 37 33.4	+1.9
NEUV				*e*			22 38 12.6	
YOIG	Yosondua	4.10	311	*e*		Pn	22 37 39.8	+3.6
YOIG				*e*			22 38 20.6	
PNIG	Pinotepa	4.29	301	*e*		Pn	22 37 39.6	+1.0
PNIG				*e*			22 38 20.9	
TOIG	Toxpalan	4.70	326	*e*		Pn	22 37 46.9	+2.6
TOIG				*e*			22 38 35.9	
FTIG	Fresnillo de T	5.22	315	*e*		Pn	22 37 56.1	+4.7
FTIG				*e*			22 38 46.8	

*IDC **20** 23:24:27.8±0.9, 0°.90S×79°.75W, h0km, mb3.8/9, mbtmp3.9/10, ML4.2/1, MS3.6/6, Error ellipse: s-maj=50.1km s-min=17.1km az=58.0*
*IGQ **20** 23:24:28±0.2, 1°.5±2°×81°.1W±°, h4km*
*NEIC **20** 23:24:36.6±2.4, 1°.13S±0°.04×80°.12W±0°.06, h64km±14km, mb4.1/11, Error ellipse: s-maj=9.7km s-min=3.8km az=117.0*
*VAO **20** 23:24:38.2±1.6, 0°.95S×79°.56W, h10km, mb4.4*
ISC 20 23:24:29.7±0.5, 1°.01S±0°.03×80°.50W±0°.03, h10km, n142, σ2s91/147, mb3.9/12, MS3.8/4, 1C, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CHIS	Cerro-Chispas-	0.23	261	P		Pg	23 24 32.0	-2.4
PPLP	Puerto Lpez	0.59	207	P		Pg	23 24 38.0	-3.3
PPLP				S		Sg	23 24 47.0	-2.1
ISPT	Isla de la Pla	0.62	247	P		Pg	23 24 38.0	-3.8
ISPT				S		Sg	23 24 48.0	-1.9
CABP	Cabo Pasado	0.63	7	P		Pg	23 24 39.0	-2.9
CABP				S		Sg	23 24 48.0	-2.1
JAMA	Jama	0.80	22	P		Pg	23 24 41.0	-4.2
AMIL	Milagro (Trans	1.44	141	P		Pn	23 24 54.0	-1.8
AMIL				S		Sg	23 25 21.0	+5.0
AV18	Acelerografo,	1.67	38	P		Pn	23 24 56.0	-3.0
CHSH	Refugio Sur-Vo	1.70	106	P		Pn	23 24 59.0	-1.0
CHSH				S		Sg	23 25 25.0	+0.4
PORT	Chimborazo Vol	1.79	105			Pn	23 24 59.5	-1.6
PORT					Sn	Sn	23 25 21.7	-2.5
PORT	Chimborazo Vol	1.79	105	P		Pn	23 24 59.0	-2.2
PORT				S		Sg	23 25 26.0	-1.3
ILLI	Illinizas Sur	1.80	81	P		Pn	23 24 59.0	-2.3
ILLI				S		Sn	23 25 24.0	-0.5
TAMH	Tambohuasha Ch	1.80	107	P		Pn	23 24 59.0	-2.3
PAST	Pastocalle	1.89	80	P		Pn	23 25 00.0	-2.4
COHC	Cochancay	1.91	139	Pn		Pn	23 24 59.8	-2.5
COHC				S		Sn	23 25 25.8	-0.6
AV21	Acelerografo,	1.92	30	P		Pn	23 25 01.0	-1.5
IGUA	Igualata	1.92	104	P		Pn	23 25 02.0	-1.1
HPAL	Hacienda Las P	2.01	67	P		Pn	23 25 05.0	+0.9
CAMI	Rancho Maria	2.03	81	P		Pn	23 25 03.0	-1.4
SLOR	San Lorenzo -	2.03	82	Pn		Pn	23 25 03.4	-1.0
SLOR	San Lorenzo -	2.03	82	P		Pn	23 25 03.0	-1.4
SUCR	Mariscal Sucre	2.04	80	P		Pn	23 25 03.0	-1.6
BNAS	Cotopaxi Volca	2.05	80	P		Pn	23 25 03.0	-1.7
JUA2	San Juan 2	2.06	67	P		Pn	23 25 02.0	-2.8
BBIL	Ulba Tungurahu	2.06	102	P		Pn	23 25 04.0	-0.7
BMOR	Cotopaxi Volca	2.06	82	P		Pn	23 25 03.0	-2.0
NAS2	Nasa	2.07	80	P		Pn	23 25 04.0	-1.0
TERV	Terraza Guagua	2.07	66	P		Pn	23 25 03.0	-2.1
JUI6	Juive	2.08	101	P		Pn	23 25 05.0	+0.1
PINO	Pino	2.08	66	P		Pn	23 25 02.0	-3.2
GGPC	Guagua Pichinc	2.08	67	P		Pn	23 25 02.0	-3.2
BMAS	Trigal station	2.08	104	P		Pn	23 25 04.0	-1.0
AMA1	Acelerografo,	2.09	22	P		Pn	23 25 03.0	-1.8
BREF	Cotopaxi Volca	2.09	81	P		Pn	23 25 05.0	-0.4
POND	Pondoa	2.09	101	P		Pn	23 25 05.0	-0.1
RETU	Refugio	2.10	102	P		Pn	23 25 06.0	+0.5
ARRY	Arrayan	2.11	103	P		Pn	23 25 04.0	-1.4
VCES	Cotopaxi	2.12	84	P		Pn	23 25 06.0	+0.3
BVC2	Cotopaxi Volca	2.12	80	P		Pn	23 25 04.0	-1.8
BPAT	Tungurahua Vol	2.13	103	P		Pn	23 25 06.0	+0.2
YANA	Yana	2.13	65	P		Pn	23 25 03.0	-2.8
BRUN	Tungurahua Vol	2.13	101	P		Pn	23 25 05.0	-0.7
TOMA	Boca Toma-Volc	2.13	76	P		Pn	23 25 05.0	-0.8
BTAM	Cotopaxi Volca	2.13	81	P		Pn	23 25 05.0	-0.9
VC1	Cotopaxi 1	2.13	80	P		Pn	23 25 05.0	-0.9
TAMB	Tambo	2.16	82	P		Pn	23 25 06.0	-0.3
PIAT	Ana Tenorio	2.24	90	P		Pn	23 25 07.0	-0.3
ANTG	Antisana-Guama	2.31	77	P		Pn	23 25 07.0	-1.3
AV11	Acelerografo,	2.33	66	P		Pn	23 25 08.0	-0.3
ANTM	Antisana-La Mi	2.33	78	P		Pn	23 25 08.0	-0.6
SANGA	Volcan Sangay	2.37	116	P		Pn	23 25 08.0	-1.1
ANTS	Antisana-Sarah	2.39	78	P		Pb	23 25 11.0	-2.2
OTAV	Otavalo	2.40	59	P		Pn	23 25 07.1	-2.4
OTAV					Sn	Sn	23 25 38.7	-0.5
OTAV	Otavalo	2.40	59	*e*P		Pn	23 25 08.1	-1.3
OTAV	Otavalo	2.40	59	*e*P		Pn	23 25 06.6	-2.9
ANTI	Antisana	2.41	77	P		Pn	23 25 09.0	-0.7
CUSE	Cuicocha Este	2.48	58	*e*P		Pn	23 25 08.1	-2.4
CUSE	Cuicocha Este	2.48	58	P		Pn	23 25 09.0	-1.6
CUSW	Cuicocha Oeste	2.51	59	P		Pn	23 25 09.0	-2.0
PUYO	Puyo, Santa Ro	2.52	101	P		Pb	23 25 14.0	-1.2
ARNL	Arenillas	2.56	170	Pn		Pn	23 25 10.7	-0.5
ARNL	Arenillas	2.56	170	P		Pn	23 25 09.0	-2.2
URCU	Urcuqui	2.67	57	P		Pn	23 25 12.0	-1.2
CAYR	Refugio Cayamb	2.70	68	P		Pn	23 25 15.0	+1.2
ANGU	Angureal	2.71	67	P		Pb	23 25 16.0	-2.7
YAHU	Yahuarcocha	2.79	61	P		Pn	23 25 16.0	+1.1
BOSC	San Juan Bosco	2.92	137			Pn	23 25 16.6	+0.2
BOSC	San Juan Bosco	2.92	137	P		Pn	23 25 18.0	+1.6
LNGL	El Angel-Carch	3.05	55	P		Pn	23 25 19.0	+0.5
CHMA	Chilma	3.07	53	P		Pn	23 25 17.0	-1.6
ECEN	Cerro Negro	3.12	54	P		Pn	23 25 19.0	-0.5
CHL1	Volcn Chiles	3.12	55	P		Pn	23 25 20.0	+0.5
CHL2	Volcn Chiles	3.15	55	P		Pn	23 25 19.0	-0.9
TULM	Tulcn-Chalpat	3.21	58	Pn		Pn	23 25 22.0	+1.3
TULM	Tulcn-Chalpat	3.21	58	*e*P		Pn	23 25 22.6	+1.9
TULM	Tulcn-Chalpat	3.21	58	P		Pn	23 25 19.0	-1.7
CMBC	Cumbal	3.31	54	*e*P		Pn	23 25 24.5	+2.6
TUMC	Tumaco	3.33	32	Pn		Pb	23 25 25.6	-3.3
TUMC	Tumaco	3.33	32	P		Pn	23 25 23.0	+1.1
GCUF	Volcan Galeras	3.86	55	*e*P		Pn	23 25 30.3	+0.6
ZUMB	Zumba	4.06	160	P		Pn	23 25 33.0	+0.9
CRUC	La Cruz	4.38	54	*e*P		Pn	23 25 40.0	+3.3
BBAC	Balboa, Cauca	4.44	47	*e*P		Pn	23 25 37.1	-0.3
GR1C	Gorgona, Isla	4.62	30	*e*P		Pn	23 25 42.9	+3.2
SOTA	Sotara	5.00	51	*e*P		Pn	23 25 44.8	-0.5
POPC	Popayan, Colom	5.21	47	*e*P		Pn	23 25 46.7	-1.2
PCON	Cinco Dias	5.28	51	*e*P		Pn	23 25 51.5	+2.3
FLOC	Florencia	5.49	62	⇑*e*P		Pn	23 25 56.4	+4.7
PTLC	Puerto Leguiza	5.83	78	*e*P		Pn	23 25 56.4	+0.1
GARC	Garzon, Huila	5.93	58	*e*P		Pn	23 25 58.3	+0.4
ATAH	Atahualpa	6.43	161	Pn		Pn	23 26 06.9	+1.9
	1.6nm,0.3s,baz=15,slow=10,SNR=7.9							
ATAH					Sn	Sn	23 27 18.9	+0.2
	1.6nm,0.3s,baz=3.4,slow=16,SNR=2.2							
ATAH					LR	LR	23 29 08.3	
	comp=Z,178nm,20.7s,baz=347,slow=44							
YOTC	Yotoco, Valle	6.47	40	*e*P		Pn	23 26 04.1	-1.2
ORTC	Ortega, Tolima	7.18	47	*e*P		Pn	23 26 14.7	-0.2
PRAC	Prado	7.32	50	*e*P		Pn	23 26 18.5	+1.7
GUY2C	Guyana, Caldas	8.04	40	*e*P		Pn	23 26 28.2	+1.0
CBOC	Ciudad Bolivar	8.17	33	*e*P		Pn	23 26 30.1	+1.5
ROSC	El Rosal	8.48	47	Pn		Pn	23 26 36.5	+3.5
	3.6nm,0.3s,baz=99,slow=18,SNR=6.2							
ROSC	El Rosal	8.48	47			Pn	23 26 33.7	+0.6
VILC	Villavicencio,	8.50	53	*e*P		Pn	23 26 36.9	+3.8
CHIC	Chingaza	8.79	50	*e*P		Pn	23 26 39.8	+2.5
CDITO	Canoas	9.81	346	Pn		Pn	23 26 57.4	+6.4
ZARC	Zaragoza, Cauc	10.15	34	Pn		Pn	23 26 58.0	+2.3
ZARC	Zaragoza, Cauc	10.15	34	*e*P		Pn	23 27 01.0	+5.3
CZSB	Cruzeiro do Su	10.24	131	*e*P		Pn	23 26 57.0	+0.1
NNA	Nana	11.49	162	Pn		Pn	23 27 13.5	-0.6
	2.3nm,0.3s,baz=296,slow=13,SNR=1.6							
NNA					Sn	Sn	23 29 20.9	-1.7
	5.3nm,0.3s,baz=220,slow=20,SNR=6.5							
	11nm,0.5s							
JTS	Las Juntas de	12.07	339	LR		LR	23 30 51.3	
	comp=Z,119nm,18.5s,baz=183,slow=31							
BAUV	El Baul	15.88	51	Pn		Pn	23 28 13.5	0.0
BAUV					IAmb	IAmb	23 28 15.6	
	comp=Z,13nm,1.1s							
TGUH	Tegucigalpa,Un	16.41	336	Pn		P	23 28 25.6	+2.4
TGUH					IAmb	IAmb	23 28 31.1	
	comp=Z,31nm,1.3s							
SAML	Samuel	18.96	115	P		P	23 28 47.6	-3.7
SAML					IAmb	IAmb	23 28 52.3	
	comp=Z,6.6nm,0.8s							
LPAZ	La Paz	19.47	142	P		P	23 28 57.0	-0.5
	comp=Z,1.9nm,0.7s,baz=323,slow=12,SNR=9.1							
LPAZ	La Paz	19.47	142	P		P	23 28 53.9	-3.7
PB18	Visviri	19.72	147	P		P	23 28 57.6	-2.6
MACA	Manacapuru-AM	19.92	96	*e*P		P	23 29 01.1	-0.7
PB12	IPOC Station P	20.14	151	P		P	23 29 01.5	-2.8
PB16	IPOC Station P	20.32	149	P		P	23 29 05.2	-1.6
PB16					IAmb	IAmb	23 29 07.1	
	comp=Z,8.1nm,1.0s							
GO01	Chusmiza	21.60	150	P		P	23 29 19.6	-0.9
GO01					IAmb	IAmb	23 29 34.7	
	comp=Z,16nm,1.2s							
PB08	IPOC Station P	22.02	150	P		P	23 29 23.9	-0.9
PB08					IAmb	IAmb	23 29 42.2	
	comp=Z,4.8nm,0.8s							
VILB	Vilhena	23.35	121	*e*P		P	23 29 37.9	-0.7
LVC	Limon Verde	24.25	153	*e*P		P	23 29 52.6	+5.2
SIV	San Ignacio	24.26	129	P		P	23 29 42.0	-5.3
	comp=Z,1.1nm,0.6s,baz=304,slow=8.1,SNR=6.6							
SIV					LR	LR	23 40 20.6	
	comp=Z,227nm,19.6s,baz=301,slow=40							
	comp=Z,1.1nm,0.6s							
ITTB	Itaituba	24.96	98	*e*P		P	23 29 52.9	-0.8
NPGB	Novo Progresso	25.78	104	*e*P		P	23 29 60.0	-1.1
PDRB	Porto dos Gac	25.84	115	*e*P		P	23 30 01.5	-0.1
MALB	Monte Alegre	26.24	92	*e*P		P	23 30 06.2	+0.9
MDP	Montagnes des	28.49	77	LR		LR	23 41 44.2	
	comp=Z,170nm,18.2s,baz=236,slow=37							
SNDB	Serra Nova Dou	30.95	112	*e*P		P	23 30 47.9	+0.6
CPUP	Vila Florida	33.63	140	*e*P		P	23 31 14.7	+4.1
PEXB	Peixe	33.79	110	*e*P		P	23 31 14.2	+2.0
SDBA	SAO DESIDERIO	37.06	109	*e*P		P	23 31 41.5	+1.1
FRTB	Fartura	37.33	129	*e*P		P	23 31 44.6	+2.0
TXAR	Lajitas Array	37.43	326	P		P	23 31 44.1	+0.7
	comp=Z,0.2nm,0.8s,baz=139,slow=8.4,SNR=3.1							
	comp=Z,0.2nm,0.8s							
TXAR	Lajitas Array	37.43	326	P		P	23 31 44.9	+1.5
PLCA	Paso Flores	40.55	168	P		P	23 32 08.2	-1.2
	comp=Z,2.3nm,1.0s,baz=339,slow=9.2,SNR=3.3							
	comp=Z,2.3nm,1.0s							
ANMO	Albuquerque	43.24	328	P		P	23 32 33.3	+1.7
	comp=Z,0.9nm,0.5s,baz=157,slow=11,SNR=4.4							
	comp=Z,0.9nm,0.5s							
RCBR	Riachuelo	44.76	97	LR		LR	23 52 56.1	
	comp=Z,173nm,20.9s,baz=46,slow=39							
NVAR	Mina Array Bea	52.44	323	P		P	23 33 45.9	+3.0
	comp=Z,0.5nm,0.6s,baz=146,slow=8.2,SNR=4.6							
	comp=Z,0.5nm,0.6s							
YBH	Yreka Blue Hor	57.13	323	P		P	23 34 18.8	+2.1
	comp=Z,1.1nm,0.6s,baz=87,slow=7.3,SNR=2.3							
	comp=Z,1.1nm,0.6s							
YKA	Yellowknife Ar	68.36	344	P		P	23 35 34.0	+2.9
	comp=Z,0.7nm,0.6s,baz=126,slow=6.3,SNR=2.9							
DLBC	Dease Lake	70.95	335	P		P	23 35 49.9	+2.6
	comp=Z,2.2nm,0.7s,baz=116,slow=18,SNR=3.5							
	comp=Z,2.2nm,0.7s							
ILAR	Eielson Array	81.04	337	P		P	23 36 45.5	+0.9
	comp=Z,0.6nm,1.0s,baz=136,slow=3.3,SNR=4.3							
	comp=Z,0.6nm,1.0s							
TORD	Torodi Ar. Bea	82.63	77	P		P	23 36 49.7	-4.4
	comp=Z,1.0nm,1.1s,baz=280,slow=6.4,SNR=4.7							
	comp=Z,1.0nm,1.1s							
URZ	Urewera	99.09	231	LR		LR	00 11 16.4	
	comp=Z,48nm,19.9s,baz=211,slow=28							
WRA	Warramunga Arr	140.00	237	PKP		PKPdf	23 44 00.3	+0.8
	comp=Z,0.5nm,0.9s,baz=105,slow=2.2,SNR=2.6							

*NEIC **20** 23:27:23.0±1.2, 17°.17S±0°.08×168°.47E±0°.10, h214km±4km, mb4.7/45, Error ellipse: s-maj=14.3km s-min=10.7km az=124.0*
*NOU **20** 23:27:23.9, 17°.23S×168°.40E, h220km, mb5.0/43, Vanuatu Islands*
*IDC **20** 23:27:25.3±2.0, 17°.27S×168°.40E, h239km±18km, mb4.0/12, mbtmp4.6/14, Error ellipse: s-maj=18.0km s-min=14.0km az=24.0*
ISC 20 23:27:21.6±0.5, 17°.11S±0°.06×168°.38E±0°.07, h200km, n150, σ1s19/146, mb4.7/47, 1D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DVP	Devils Point	0.64	197	P		Pn	23 27 53.9	+4.6
RTV	Rentapao	0.68	176	P		Pn	23 27 54.0	+4.5
LIFNC	LIFOU	3.81	196			Pn	23 28 22.0	+1.1
LIFNC					Sn	Sn	23 29 08.0	+0.3
LIFNC	LIFOU	3.81	196	P		Pn	23 28 22.3	+1.4
MARNC	Mare, Loyalty	4.36	184			Pn	23 28 28.3	+0.4
MARNC	Mare, Loyalty	4.36	184	P		Pn	23 28 28.3	+0.4
KOUNC	Koumac, New Ca	5.17	228			Pn	23 28 40.3	+2.1
DZM	Mont Dzumac	5.26	200	P		Pn	23 28 41.5	+2.1
	84nm,0.7s,baz=168,slow=18,SNR=72							
DZM				S		Sn	23 29 44.7	+3.7
	23nm,0.4s,baz=296,slow=18,SNR=4.7							
NOUC	Port Laguerre	5.34	201	P		Pn	23 28 42.8	+2.5
PINNC	Pines Island,	5.55	189			Pn	23 28 44.4	+1.4
MSVF	Nonsavu	9.25	95	P		Pn	23 29 33.9	+2.6
	49nm,0.8s,baz=266,slow=12,SNR=20							
MSVF	Nonsavu	9.

PSA00				IAmb	IAmb	23 35 25.3	
	comp=Z,8.9nm,0.8s						
MBWA	**Marble Bar**	**46.00**	**257**	P	**P**	**23 35 24.8**	**-0.4**
MBWA				IAmb	IAmb	23 35 25.7	
	comp=Z,15nm,0.8s						
EDFI	**Ende, Flores**	**46.16**	**274**	P	**P**	**23 35 26.8**	**+0.1**
	comp=Z,18nm,0.8s						
KLBR	**Kellerberrin**	**47.92**	**243**	P	**P**	**23 35 38.6**	**-1.4**
WBSI	**Waikabubak, Su**	**48.13**	**272**	P	**P**	**23 35 41.7**	**-0.2**
	comp=Z,50nm,0.9s						
NWAO	**Narrogin (SRO)**	**48.49**	**241**	P	**P**	**23 35 43.0**	**-1.4**
NWAO				IAmb	IAmb	23 35 43.8	
	comp=Z,30nm,0.8s						
NWAO	**Narrogin (SRO)**	**48.49**	**241**	P	**P**	**23 35 43.3**	**-1.1**
BKSI	**Bulukumba**	**48.63**	**278**	P	**P**	**23 35 45.2**	**-0.4**
	comp=Z,7.0nm,0.7s						
BLDU	**Ballidu**	**48.74**	**244**	P	**P**	**23 35 45.4**	**-0.9**
BNSI	**Bone**	**48.93**	**279**	P	**P**	**23 35 48.3**	**+0.4**
	comp=Z,11nm,1.0s						
KAPI	**Kappang**	**49.07**	**278**	P	**P**	**23 35 49.4**	**+0.4**
	comp=Z,13nm,0.6s,baz=143,slow=7.4,SNR=8.4						
	comp=Z,13nm,0.6s						
MORW	**Morawa**	**49.24**	**246**	P	**P**	**23 35 48.8**	**-1.4**
MORW	**Morawa**	**49.24**	**246**	P	**P**	**23 35 49.2**	**-0.9**
SPSI	**Sidrap Palu**	**49.39**	**280**	P	**P**	**23 35 50.8**	**-0.6**
	comp=Z,9.3nm,0.9s						
PLAI	**Plampang**	**49.88**	**273**	P	**P**	**23 35 54.4**	**-0.7**
	comp=Z,669nmcomp=Z,38nm,0.8s						
PLAI	**Plampang**	**49.88**	**273**	P	**P**	**23 35 54.9**	**-0.2**
MPSI	**Mapaga**	**50.79**	**285**	P	**P**	**23 36 01.1**	**-0.8**
	comp=Z,602nmcomp=Z,16nm,0.8s						
SRBI	**Singaraja**	**52.52**	**273**	P	**P**	**23 36 14.2**	**-0.5**
	comp=Z,14nm,1.1s						
PCJI	**Pacitan**	**56.34**	**271**	P	**P**	**23 36 41.7**	**-0.6**
	comp=Z,52nm,0.8s						
WOJI	**Wonogiri, Jawa**	**56.68**	**272**	P	**P**	**23 36 44.3**	**-0.3**
	comp=Z,31nm,0.9s						
UGM	**Wanagama**	**57.04**	**272**	P	**P**	**23 36 46.8**	**-0.4**
UGM	**Wanagama**	**57.04**	**272**	P	**P**	**23 36 47.3**	**+0.1**
STKI	**Sintang**	**58.54**	**281**	P	**P**	**23 36 58.1**	**+0.5**
YOJ	**Yonaguni jima**	**60.54**	**312**	P	**P**	**23 37 11.0**	**0.0**
DBJI	**Dramaga**	**61.01**	**272**	P	**P**	**23 37 14.3**	**-0.2**
	comp=Z,77nm,0.6s						
NACB	**Ninganchiao**	**61.38**	**311**	P	**P**	**23 37 16.5**	**-0.2**
NACB				IAmb	IAmb	23 37 16.9	
	comp=Z,18nm,0.8s						
YHNB	**Yeheng**	**61.84**	**311**	P	**P**	**23 37 20.6**	**+0.8**
IPM	**Ipoh**	**69.85**	**281**	P	**P**	**23 38 10.7**	**-0.5**
IPM				IAmb	IAmb	23 38 11.4	
	comp=Z,9.9nm,0.7s						
GSI	**Gunungsitoli**	**72.08**	**277**	P	**P**	**23 38 23.7**	**-0.9**
GSI				IAmb	IAmb	23 38 25.4	
	comp=Z,18nm,0.9s						
GSI	**Gunungsitoli**	**72.08**	**277**	P	**P**	**23 38 24.0**	**-0.6**
	comp=Z,3µmcomp=Z,22nm,0.9s						
QSPA	**South Pole Qui**	**72.93**	**180**	P	**P**	**23 38 27.5**	**-1.4**
	comp=Z,1.8nm,0.8s,baz=280,slow=1.5,SNR=6.5						
	comp=Z,1.8nm,0.8s						
QSPA	**South Pole Qui**	**72.93**	**180**	P	**P**	**23 38 27.3**	**-1.5**
KMI	**Kunming**	**76.46**	**302**	⇓P	**P**	**23 38 51.0**	**+1.1**
KMI				pP	PcP	23 39 03.8	+3.1
KMI				pmax	pmax		
	comp=Z,17nm,1.2s						
CM31	**Chiang Mai Arr**	**76.89**	**294**	P	**P**	**23 38 52.0**	**-0.1**
CM31				IAmb	IAmb	23 38 53.8	
	comp=Z,9.9nm,0.9s						
CMAR	**Chiang Mai Arr**	**76.89**	**294**	P	**P**	**23 38 53.2**	**+1.0**
	comp=Z,7.1nm,0.8s,baz=130,slow=4.2,SNR=34						
	comp=Z,7.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**76.89**	**294**	P	**P**	**23 38 52.2**	**0.0**
CHTO	**Chiang Mai**	**77.03**	**294**	P	**P**	**23 38 53.0**	**0.0**
CHTO				IAmb	IAmb	23 38 54.2	
	comp=Z,11nm,0.8s						
MAW	**Mawson**	**80.09**	**202**	P	**P**	**23 39 07.9**	**-0.9**
	comp=Z,3.2nm,0.8s,baz=51,slow=4.7,SNR=4.5						
	comp=Z,3.2nm,0.8s						
MAW	**Mawson**	**80.09**	**202**	IAmb	IAmb	23 39 08.7	
	comp=Z,1.3nm,1.1s						
LZH	**Lanzhou**	**80.70**	**312**	*e*P	P	23 39 22.8	+10
LZH				pP	PcP	23 39 28.1	+9.2
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
PAF	**Port-aux-Franc**	**82.39**	**221**	P	**P**	**23 39 20.7**	**-0.5**
TNA	**Tin City**	**84.35**	**10**	P	**P**	**23 39 29.9**	**-0.8**
TNA				IAmb	IAmb	23 39 40.1	
	comp=Z,9.0nm,1.0s						
ULN	**Ulaanbaatar**	**84.67**	**324**		**P**	**23 39 32.9**	**-0.1**
SONM	**Songino Array**	**85.03**	**323**	P	**P**	**23 39 34.4**	**-0.3**
	comp=Z,1.9nm,0.8s,baz=157,slow=6.6,SNR=13						
	comp=Z,1.9nm,0.8s						
SONM	**Songino Array**	**85.03**	**323**	P	**P**	**23 39 34.5**	**-0.3**
GTA	**Gaotai**	**85.07**	**314**	*e*P	**P**	**23 39 36.0**	**+0.9**
ILAR	**Eielson Array**	**86.45**	**18**	P	**P**	**23 39 51.0**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=240,slow=15,SNR=2.8						
	comp=Z,0.3nm,0.6s						
WMQ	**Urumqi**	**95.14**	**314**	*e*P	**P**	**23 40 23.8**	**+1.6**
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
MKAR	**Makanchi Array**	**99.65**	**316**	P	**Pdif**	**23 40 41.8**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=88,slow=6.1,SNR=9.7						
	comp=Z,0.3nm,0.4s						
FINES	**FINESS Array B**	**128.31**	**338**	PKP	**PKPdf**	**23 46 02.2**	**-1.5**
	comp=Z,0.3nm,0.4s,baz=94,slow=5.6,SNR=4.5						
SOKA	**Soboth**	**143.18**	**329**	*i* P	PKPab	23 46 27.8	-0.2
	comp=Z,1.8nm,0.5s						
OBKA	**Obir**	**143.53**	**329**	*i* P	PKPab	23 46 29.3	-0.1
	comp=Z,2.8nm,0.9s						
KBA	**Koelnbreinsper**	**143.70**	**331**	*e*P	PKPab	23 46 29.1	-1.0
	comp=Z,2.4nm,0.6s						
LJU	**Ljubljana**	**143.87**	**329**	*i* PKPbc	PKPab	23 46 30.0	-0.6
MYKA	**Terra Mystica**	**143.89**	**330**	*i* P	PKPab	23 46 29.5	-1.3
	comp=Z,2.8nm,0.5s						
CRNS	**Crni Vrh**	**143.98**	**329**	*i* PKPbc	**PKPab**	**23 46 30.0**	**-1.1**
KNDS	**Knezji Dol**	**144.30**	**328**	*e*PKPbc	**PKPab**	**23 46 31.3**	**-1.2**
WATA	**Walderalm**	**144.31**	**333**	*i* P	**PKPab**	**23 46 31.4**	**-1.0**
	comp=Z,4.0nm,0.7s						
ABTA	**Abfaltersbach**	**144.33**	**331**	*i* P	**PKPab**	**23 46 31.0**	**-1.5**
	comp=Z,8.7nm,0.6s						
WTTA	**Wattenberg**	**144.34**	**333**	*i* P	**PKPab**	**23 46 31.7**	**-0.9**
	comp=Z,7.4nm,1.0s						
MOTA	**Moosalm**	**144.51**	**333**	*e*P	**PKPab**	**23 46 32.1**	**-1.1**
	comp=Z,12nm,0.9s,SNR=11						
RETA	**Reutte**	**144.54**	**334**	*e*P	**PKPab**	**23 46 32.3**	**-1.0**
	comp=Z,4.8nm,0.6s,SNR=6.8						
SQTA	**Sankt Quirin**	**144.56**	**333**	*e*P	**PKPab**	**23 46 32.5**	**-0.9**
	comp=Z,12nm,0.8s,SNR=8.3						
FETA	**Feichten**	**144.92**	**333**	*i* P	**PKPbc**	**23 46 33.8**	**-0.9**
	comp=Z,11nm,0.8s						
DAVA	**Damuels**	**145.07**	**334**	*i* P	**PKPdf**	**23 46 34.1**	**-1.2**
	comp=Z,8.4nm,0.8s,SNR=5.9						
DAVOX	**Davos/Dischmat**	**145.47**	**334**	PKPbc	**PKPdf**	**23 46 35.6**	**-0.4**
	comp=Z,4.2nm,0.6s,baz=81,slow=2.4,SNR=11						
TORD	**Torodi Ar. Bea**	**166.56**	**255**	PKPab	**PKPab**	**23 48 04.9**	**-2.3**
	comp=Z,1.9nm,0.7s,baz=102,slow=4.6,SNR=8.9						
TORD	**Torodi Ar. Bea**	**166.56**	**255**		**PKPab**	**23 48 05.7**	**-1.6**

*GUC **21** 00:01:43.5±0.7,22.01S×67.46W,h198km±9km, ML4.2*
*SCB **21** 00:01:46.1±3.0,21.85S×67.43W,h57km±27km, ML3.5/5, MW3.4, Error ellipse: s-maj=12.0km s-min=6.5km az=0.0*
ISC 21 00:01:41.0±1.8,**21.96S**±0.04×**67.34W**±0.05,
h195km±14km,**n34,**σ1**65**/53,**8C-1D,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LVC	**Limon Verde**	**1.59**	**246**	*e*P		**Pn**	**00 02 16.7**	**+1.2**
LVC				*i* S		**Sn**	**00 02 41.9**	**-0.3**
LVC	**Limon Verde**	**1.59**	**246**	P		**Pn**	**00 02 16.8**	**+1.3**
YJA	**Yavi**	**1.71**	**98**	P		**Pn**	**00 02 17.7**	**+0.9**
MOCB	**Mochara**	**1.74**	**66**	P		**Pn**	**00 02 18.0**	**+0.9**
MOCB				S		**Sn**	**00 02 41.7**	**-3.2**
MOCB				IAML			00 03 05.9	
	172nm,0.6s							
PB09	**IPOC Station P**	**1.77**	**275**	⇑*i*P		**Pn**	**00 02 18.6**	**+1.5**
PB09				*i* S		**Sn**	**00 02 45.9**	**+0.9**
PB09	**IPOC Station P**	**1.77**	**275**	P		**Pn**	**00 02 18.6**	**+1.5**
PB06	**IPOC Station P**	**2.19**	**250**	*e*P		**Pn**	**00 02 22.3**	**+0.9**
PB06				*i* S		**Sn**	**00 02 52.1**	**-0.7**
PB06				IAML			00 02 54.6	
	comp=E,940nm,0.3s							
PB06	**IPOC Station P**	**2.19**	**250**	P		**Pn**	**00 02 22.3**	**+0.9**
PB01	**IPOC Station P**	**2.19**	**294**	⇑*i*P		**Pn**	**00 02 22.3**	**+1.0**
PB01				*i* S		**Sn**	**00 02 52.5**	**-0.2**
PB01				IAML			00 02 53.7	
	comp=N,665nm,0.3s							
PB01	**IPOC Station P**	**2.19**	**294**	P		**Pn**	**00 02 22.5**	**+1.1**
PB15	**IPOC Station P**	**2.33**	**237**	*e*P		**Pn**	**00 02 24.2**	**+1.4**
PB15				*i* S		**Sn**	**00 02 56.0**	**+0.5**
PB15	**IPOC Station P**	**2.33**	**237**	P		**Pn**	**00 02 24.4**	**+1.5**
PB15				IAML			00 03 19.3	
	comp=N,265nm,0.2s							
PB07	**IPOC Station P**	**2.37**	**275**	*e*P		**Pn**	**00 02 24.4**	**+0.9**
PB07				*i* S		**Sn**	**00 02 55.4**	**-1.0**
PB07				IAML			00 02 57.0	
	comp=E,832nm,0.4s							
PB07	**IPOC Station P**	**2.37**	**275**	P		**Pn**	**00 02 24.6**	**+1.2**
PB07				S		**Sn**	**00 02 53.1**	**-3.2**
PB07				IAML			00 02 56.4	
	comp=E,768nm,0.2s							
PB07				IAML			00 03 16.8	
	comp=E,101nm,0.6s							
PB02	**IPOC Station P**	**2.46**	**285**	⇑*i*P		**Pn**	**00 02 25.0**	**+0.7**
PB02				*i* S		**Sn**	**00 02 56.5**	**-1.4**
PB02				IAML			00 02 57.7	
	comp=E,913nm,0.5s							
PB02	**IPOC Station P**	**2.46**	**285**	P		**Pn**	**00 02 25.5**	**+1.2**
PB02				S		**Sn**	**00 02 54.8**	**-3.1**
PB02				IAML			00 02 57.8	
	comp=E,640nm,0.3s							
PB08	**IPOC Station P**	**2.48**	**317**	⇑*i*P		**Pn**	**00 02 26.8**	**+2.0**
PB08				*i* S		**Sn**	**00 02 58.7**	**-0.1**
PB08	**IPOC Station P**	**2.48**	**317**	P		**Pn**	**00 02 26.9**	**+2.1**
PB04	**IPOC Station P**	**2.63**	**261**	⇑*i*P		**Pn**	**00 02 26.7**	**+0.5**
PB04				*i* S		**Sn**	**00 02 60.0**	**-1.5**
PB04				IAML			00 03 01.9	
	comp=N,546nm,0.2s							
PB04	**IPOC Station P**	**2.63**	**261**	P		**Pn**	**00 02 27.0**	**+0.8**
PATCX	**Punta Patache**	**2.85**	**293**	*e*P		**Pn**	**00 02 29.6**	**+0.8**
PATCX				*i* S		**Sn**	**00 03 04.5**	**-1.5**
PATCX				IAML			00 03 06.3	
	comp=N,491nm,0.3s							
GO01	**Chusmiza**	**2.86**	**322**	*i* P		**Pn**	**00 02 30.9**	**+1.6**
HMBC	**Humberstone**	**2.91**	**305**	⇑*i*P		**Pn**	**00 02 29.9**	**+0.4**
HMBC				*i* S		**Sn**	**00 03 05.5**	**-1.8**
HMBC				IAML			00 03 06.9	
	comp=N,349nm,0.2s							
TA01	**Diego Aracena**	**2.99**	**297**	⇑*i*P		**Pn**	**00 02 30.7**	**+0.4**
TA01				*i* S		**Sn**	**00 03 06.5**	**-2.3**
TA01				IAML			00 03 10.0	
	comp=N,226nm,0.3s							
PB10	**IPOC Station P**	**3.34**	**242**	P		**Pn**	**00 02 36.4**	**+1.9**
GO02	**Mina Guanaco**	**3.79**	**212**	⇓*i*P		**Pn**	**00 02 41.6**	**+1.2**
GO02				*i* S		**Sn**	**00 03 25.4**	**-1.5**
PB14	**IPOC Station P**	**3.87**	**226**	*e*P		**Pn**	**00 02 42.4**	**+1.1**
PB14				*i* S		**Sn**	**00 03 26.0**	**-2.6**
PB16	**IPOC Station P**	**4.14**	**330**	⇑*i*P		**Pn**	**00 02 46.9**	**+1.8**
PB16				*i* S		**Sn**	**00 03 34.6**	**-0.5**
PB16	**IPOC Station P**	**4.14**	**330**	P		**Pn**	**00 02 46.9**	**+1.8**
PB12	**IPOC Station P**	**4.35**	**319**	*e*P		**Pn**	**00 02 46.8**	**-0.4**
PB12				*i* S		**Sn**	**00 03 36.1**	**-3.1**
AC02	**Maricunga**	**5.12**	**198**	*e*P		**Pn**	**00 02 58.6**	**+1.3**
BBOE	**La Paz, Chanca**	**5.16**	**353**	P		**Pn**	**00 03 00.6**	**+2.7**
BBOD	**La Paz, Gloria**	**5.43**	**347**	P		**Pn**	**00 03 03.9**	**+2.5**
LPAZ	**La Paz**	**5.69**	**352**	P		**Pn**	**00 03 07.2**	**+2.3**

*TUL **21** 00:10:30.4±1.3,36.45N±0.02×98.77W±0.02,h7km±3km, ML3.3,mb_Lg2.9/73(NEIC), Error ellipse: s-maj=2.6km s-min=2.0km az=121.0*
NEIC 21 00:10:30.9±1.4,**36.46N**±0.01×**98.73W**±0.01,**h5**km±1km,
Error ellipse: s-maj=2.7km s-min=2.5km az=348.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
OK009	**Oakdale Elemen**	**1.38**	**129**	Pn		Pn	00 10 56.0	-0.8
OKCFA	**Oklahoma City**	**1.47**	**135**	Pn		Pn	00 10 56.9	-1.2
OKCSW	**OKLAHOMA CITY**	**1.49**	**135**			Pn	00 10 57.8	-0.5
WMOK	**Wichita Mounta**	**1.72**	**181**			Pn	00 11 00.4	-1.2
T35A	**Sooner Cattle**	**1.84**	**75**	Pn		Pn	00 11 02.8	-0.4
R32A	**Long Quarter,**	**1.96**	**0**	Pn		Pn	00 11 05.5	+0.8
X34A	**Smith Ranch, M**	**2.00**	**158**			Pn	00 11 06.1	+0.8
X34A				IAmb_Lg			00 11 34.3	
	comp=Z,92nm,0.9s							
TUL1	**Leonard**	**2.44**	**102**			Pn	00 11 12.0	+0.6
CBKS	**Cedar Bluff**	**2.48**	**342**	Pn		Pn	00 11 12.2	+0.2
AMTX	**Amarillo**	**2.87**	**238**			Pn	00 11 18.7	+1.2
KSU1	**Kansas State U**	**3.12**	**32**			Pn	00 11 20.7	-0.1
KSU1	**Kansas State U**	**3.12**	**32**	IAmb_Lg			00 12 15.0	
	comp=Z,29nm,0.9s							
X37A	**Clayton**	**3.32**	**123**			Pn	00 11 24.0	+0.6
X37A				IAmb_Lg			00 12 20.6	
	comp=Z,53nm,0.7s							
Z35A	**Perchaven, San**	**3.35**	**158**	Pn		Pn	00 11 23.6	-0.4
U38A	**Gravette**	**3.50**	**89**			Pn	00 11 26.9	+0.9
U38A				IAmb_Lg			00 12 29.1	
	comp=Z,34nm,0.8s							
HHAR	**Hobbs**	**3.87**	**91**			Pb	00 11 39.6	0.0
ABTX	**Abilene, Hawle**	**3.90**	**191**	Pn		Pn	00 11 30.9	-0.6
ABTX						Pb	00 11 40.7	+0.5
KSCO	**Kaye Shedlock'**	**4.00**	**311**			Pb	00 11 43.2	+1.3
KSCO				IAmb_Lg			00 12 44.2	
	comp=Z,38nm,0.8s							
MSTX	**Muleshoe**	**4.14**	**234**	Pg		Pb	00 11 44.5	+0.2
MSTX				IAmb_Lg			00 12 45.4	
	comp=Z,34nm,0.9s							
W39A	**Magazine**	**4.21**	**106**			Pg	00 11 49.6	-2.0
W39A				IAmb_Lg			00 12 53.3	
	comp=Z,24nm,0.8s							
Z38A	**Mt. Pleasant**	**4.44**	**135**	IAmb_Lg			00 12 54.5	
	comp=Z,26nm,0.7s							
S39A	**Bolivar**	**4.50**	**73**			Pg	00 11 54.2	-2.8
S39A				IAmb_Lg			00 12 54.9	
	comp=Z,31nm,0.8s							
T25A	**Trinidad**	**4.61**	**280**	IAmb_Lg			00 13 03.6	
	comp=Z,27nm,0.8s							
MIAR	**Mount Ida**	**4.62**	**113**			Pn	00 11 41.8	+0.4
U40A	**Yellville**	**4.74**	**90**	IAmb_Lg			00 13 02.2	
	comp=Z,37nm,0.8s							
BGNE	**Belgrade**	**4.96**	**5**	IAmb_Lg			00 13 21.7	
	comp=Z,30nm,0.7s							
237A	**Washetta, Mont**	**5.07**	**151**	IAmb_Lg			00 13 25.6	
	comp=Z,18nm,0.8s							
P38A	**Dawn**	**5.18**	**51**	IAmb_Lg			00 13 19.0	
	comp=Z,16nm,0.8s							
MGMO	**Mountain Grove**	**5.23**	**81**	IAmb_Lg			00 13 17.1	
	comp=Z,20nm,0.8s							
FCAR	**Ozark Folk Cen**	**5.38**	**94**	IAmb_Lg			00 13 26.7	
	comp=Z,18nm,0.7s							
WLAR	**White Oak Lake**	**5.38**	**119**	IAmb_Lg			00 13 27.1	
	comp=Z,15nm,0.7s							
R40A	**Maddies Statio**	**5.46**	**69**	IAmb_Lg			00 13 31.9	
	comp=Z,17nm,0.8s							
UALR	**University of**	**5.47**	**106**	IAmb_Lg			00 13 36.6	
	comp=Z,16nm,0.9s							
435B	**Jarrell**	**5.75**	**170**	IAmb_Lg			00 13 44.8	
	comp=Z,16nm,0.8s							
JCT	**Junction City**	**6.03**	**189**	IAmb_Lg			00 13 53.0	
	comp=Z,18nm,0.8s							
K31A	**O'Neill**	**6.15**	**360**	IAmb_Lg			00 13 52.0	
	comp=Z,22nm,0.7s							
CCM	**Cathedral Cave**	**6.18**	**73**	IAmb_Lg			00 13 53.9	
	comp=Z,25nm,0.8s							
PBMO	**Poplar Bluff**	**6.69**	**85**	IAmb_Lg			00 14 15.0	
	comp=Z,23nm,0.8s							
FVM	**French Village**	**6.80**	**75**	IAmb_Lg			00 14 10.6	
	comp=Z,18nm,0.8s							
SCIA	**State Center**	**6.92**	**37**	IAmb_Lg			00 14 17.8	
	comp=Z,22nm,0.8s							
N23A	**Red Feather La**	**7.17**	**310**	IAmb_Lg			00 14 32.2	
	comp=Z,15nm,0.9s							
S44A	**Carbondale**	**7.67**	**78**	IAmb_Lg			00 14 36.2	
	comp=Z,22nm,0.8s							
K38A	**Parkersburg**	**7.70**	**35**	IAmb_Lg			00 14 54.0	
	comp=Z,19nm,0.8s							
I37A	**Lemond, Waseca**	**8.57**	**27**	IAmb_Lg			00 15 14.9	
	comp=Z,12nm,0.9s							
K22A	**Casper**	**8.62**	**318**	IAmb_Lg			00 15 12.9	
	comp=Z,12nm,0.9s							
RSSD	**Black Hills**	**8.65**	**334**	IAmb_Lg			00 15 10.9	
	comp=Z,14nm,1.1s							
JFWS	**Jewell Farm**	**9.18**	**43**	IAmb_Lg			00 15 47.1	
	comp=Z,13nm,0.8s							
F33A	**5 Mile Ranch,**	**9.55**	**10**	IAmb_Lg			00 15 43.8	
	comp=Z,6.9nm,1.2s							
SPMN	**Marine on St.**	**9.83**	**25**	IAmb_Lg			00 15 52.6	
	comp=Z,7.2nm,0.9s							

*IDC **21** 00:21:58.5±1.8,24.52S×69.13W,h0km, mb4.0/2, mbtmp4.1/3,ML4.3/1,MS3.4/1,Error ellipse: s-maj=40.1km s-min=38.9km az=93.0*
*GUC **21** 00:22:00.3±0.6,23.76S×70.34W,h50km±1km,ML4.1*
*NEIC **21** 00:22:01.6±2.0,23.73S±0.03×70.39W±0.08,h33km±3km, Error ellipse: s-maj=10.9km s-min=3.8km az=105.0*
ISC 21 00:22:00.8±0.8,**23.71S**±0.03×**70.46W**±0.05,**h44**km±8km,
n65,σ1**66/78,8C-1D,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PB10	**IPOC Station P**	**0.21**	**337**			**Pn**	**00 22 09.6**	**+0.9**
PB10				Sg		**Sn**	**00 22 15.3**	**+1.2**
PB10	**IPOC Station P**	**0.21**	**337**	⇑*i*P		**Pn**	**00 22 09.7**	**+1.0**
PB10				*i* S		**Sn**	**00 22 15.5**	**+1.4**
PB10				IAML			00 22 16.0	
	comp=E,14µm,0.2s							
PB14	**IPOC Station P**	**0.91**	**177**			**Pn**	**00 22 17.7**	**+0.1**
PB14						**Sn**	**00 22 29.6**	**-0.1**
PB14	**IPOC Station P**	**0.91**	**177**	⇑*i*P		**Pn**	**00 22 17.7**	**+0.1**
PB14				*e*S		**Sn**	**00 22 29.5**	**-0.2**
PB15	**IPOC Station P**	**1.04**	**61**			**Pn**	**00 22 18.9**	**-0.3**
PB15				Sg		**Sn**	**00 22 31.3**	**-1.4**
PB15	**IPOC Station P**	**1.04**	**61**	⇓*i*P		**Pn**	**00 22 18.8**	**-0.3**
PB15				*e*S		**Sn**	**00 22 31.3**	**-1.4**
PB06	**IPOC Station P**	**1.29**	**40**			**Pn**	**00 22 22.9**	**+0.3**
PB06				Sn		**Sn**	**00 22 38.9**	**+0.1**
PB06	**IPOC Station P**	**1.29**	**40**	*e*P		**Pn**	**00 22 22.1**	**-0.5**
PB06				*e*S		**Sn**	**00 22 38.3**	**-0.5**
PB06				IAML			00 22 41.8	
	comp=E,5µm,0.3s							
PB04	**IPOC Station P**	**1.40**	**12**			**Pn**	**00 22 25.0**	**+0.9**
PB04				Sn		**Sn**	**00 22 43.3**	**+1.8**
PB04	**IPOC Station P**	**1.40**	**12**	⇑*i*P		**Pn**	**00 22 25.0**	**+0.9**
PB04				*i* S		**Sn**	**00 22 43.3**	**+1.8**
PB04				IAML			00 22 47.4	
	comp=E,4µm,0.3s							
GO02	**Mina Guanaco**	**1.65**	**151**	Pn		**Pn**	**00 22 29.4**	**+1.8**
GO02	**Mina Guanaco**	**1.65**	**151**	*e*P		**Pn**	**00 22 29.3**	**+1.7**
GO02				*e*S		**Sn**	**00 22 49.8**	**+2.1**
GO02				IAML			00 22 53.3	
	comp=E,2µm,0.2s							
LVC	**Limon Verde**	**1.80**	**53**	Pn		**Pn**	**00 22 31.9**	**+2.2**
	comp=E,325nm,0.3s,baz=223,slow=9.8,SNR=1349							
LVC				Sn		**Sn**	**00 22 53.5**	**+1.9**
	comp=E,822nm,0.3s,baz=313,slow=6.1,SNR=27							
LVC	**Limon Verde**	**1.80**	**53**	Pn		**Pn**	**00 22 31.2**	**+1.4**
LVC	**Limon Verde**	**1.80**	**53**	⇑*i*P		**Pn**	**00 22 31.4**	**+1.7**
LVC				*e*S		**Sn**	**00 22 53.5**	**+1.9**
PB07	**IPOC Station P**	**2.05**	**15**			**Pn**	**00 22 33.2**	**+0.2**
PB07	**IPOC Station P**	**2.05**	**15**	⇑*e*P		**Pn**	**00 22 33.8**	**+0.9**
PB07				*e*S		**Sn**	**00 22 59.2**	**+1.9**
PB07				IAML			00 23 10.8	
	comp=E,2µm,0.2s							
PB09	**IPOC Station P**	**2.21**	**31**			**Pn**	**00 22 36.3**	**+1.0**
PB09	**IPOC Station P**	**2.21**	**31**	⇑*e*P		**Pn**	**00 22 37.0**	**+1.7**
PB09				*e*S		**Sn**	**00 23 03.4**	**+1.9**
PB09				IAML			00 23 12.0	
	comp=E,2µm,0.3s							
AF01	**San Pedro de A**	**2.23**	**71**			**Pn**	**00 22 38.5**	**+2.9**
AF01	**San Pedro de A**	**2.23**	**71**	⇑*i*P		**Pn**	**00 22 38.3**	**+2.8**
AF01				*e*S		**Sn**	**00 23 01.5**	**-0.6**
AF01				IAML			00 23 25.9	
	comp=E,4µm,0.5s							
AC01	**Pan de Azucar**	**2.43**	**183**			**Pn**	**00 22 38.4**	**+0.3**
AC01	**Pan de Azucar**	**2.43**	**183**	*e*P		**Pn**	**00 22 38.3**	**+0.3**
AC01				*e*S		**Sn**	**00 23 06.6**	**0.0**
AC01				IAML			00 23 16.9	
	comp=N,700nm,0.3s							
PB02	**IPOC Station P**	**2.44**	**13**			**Pn**	**00 22 38.9**	**+0.6**
PB02	**IPOC Station P**	**2.44**	**13

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.84**	**57**	*e*P	**Pn**	**00 34 53.8**	**-0.6**
THIG				*e*S	**Sn**	**00 35 06.2**	**-0.9**
PATR	**El Naranjo**	**0.99**	**48**	*e*P	**Pn**	**00 34 56.2**	**-0.5**
PATR				*i* S	**Sn**	**00 35 09.8**	**-1.3**
CHUJ	**Union Juarez**	**1.07**	**53**	*e*P	**Pn**	**00 34 57.4**	**-0.4**
CHUJ				*i* S	**Sn**	**00 35 12.9**	**-0.2**
PAVE	**Pavencul**	**1.08**	**47**	*i* P	**Pn**	**00 34 57.9**	**-0.1**
PAVE				*e*S	**Sn**	**00 35 12.3**	**-1.1**
PCIG		**1.27**	**350**	*e*P	**Pn**	**00 34 59.7**	**-0.5**
PCIG				*i* S	**Sb**	**00 35 15.0**	**-1.8**
STG3	**Santiaguito 3,**	**1.41**	**79**	*e*P	**Pg**	**00 35 02.7**	**-0.4**
CCIG	**Comitan**	**2.00**	**24**	*e*P	**Pb**	**00 35 13.6**	**+0.7**
CCIG				*e*S	**Sn**	**00 35 33.3**	**-2.7**
FUG	**Fuego 3**	**2.09**	**90**	*e*P	**Pn**	**00 35 12.4**	**+0.6**
TGIG		**2.32**	**357**	*e*P	**Pn**	**00 35 16.8**	**+2.0**
TGIG				*e*S	**Sn**	**00 35 43.3**	**-0.3**
NBG	**Las Nubes**	**2.57**	**87**	*e*P	**Pb**	**00 35 21.2**	**-1.6**
UXUV	**UXUV**	**3.06**	**339**	*e*P	**Pn**	**00 35 27.1**	**+2.2**
UXUV				*e*S	**Sn**	**00 35 58.6**	**-3.1**
CMIG	**Matias Romero**	**3.19**	**326**	Pn	**Pn**	**00 35 27.5**	**+0.8**
	6.7nm,0.3s,baz=141,slow=13,SNR=42						
CMIG				Sn	**Sn**	**00 36 05.6**	**+0.5**
	16nm,0.3s,baz=253,slow=22,SNR=6.8 21nm,0.3s						
CMIG	**Matias Romero**	**3.19**	**326**	*e*P	**Pn**	**00 35 27.3**	**+0.5**
CMIG				*e*S	**Sn**	**00 36 01.9**	**-3.3**
MRL	**Marmol**	**3.27**	**79**	*e*P	**Pn**	**00 35 29.5**	**+1.5**
HUIG	**Huatulco**	**3.28**	**294**	*e*P	**Pn**	**00 35 28.0**	**+0.1**
HUIG				*e*S	**Sn**	**00 36 03.3**	**-3.9**
NEUV	**Arroyo Zacate**	**4.22**	**321**	*e*P	**Pn**	**00 35 40.6**	**-0.2**
NEUV				*e*S	**Sn**	**00 36 28.8**	**-1.6**
TXAR	**Lajitas Array**	**17.80**	**328**	P	**P**	**00 38 48.1**	**+2.8**
	0.1nm,0.3s,baz=156,slow=14,SNR=15 1.8nm,0.8s						
ANMO	**Albuquerque**	**23.74**	**332**	P	**P**	**00 39 50.9**	**+1.6**
	1.5nm,0.7s,baz=145,slow=15,SNR=6.6 1.5nm,0.7s						
PDAR	**Pinedale Array**	**31.62**	**336**	P	**P**	**00 41 01.3**	**+1.3**
	0.2nm,0.3s,baz=136,slow=11,SNR=2.1 0.2nm,0.3s						
NVAR	**Mina Array Bea**	**32.72**	**322**	P	**P**	**00 41 11.9**	**+2.2**
	1.3nm,0.7s,baz=137,slow=8.4,SNR=12						
NVAR				PcP	**PcP**	**00 43 55.9**	**+0.5**
	0.1nm,0.3s,baz=121,slow=6.4,SNR=1.6 1.3nm,0.7s						
YKA	**Yellowknife Ar**	**50.37**	**347**	P	**P**	**00 43 33.0**	**-0.6**
	1.5nm,0.7s,baz=154,slow=7.0,SNR=4.1 1.5nm,0.7s						
RCBR	**Riachuelo**	**60.09**	**106**	LR	LR	01 10 36.5	
	comp=Z,31nm,21.5s,baz=52,slow=36						
ILAR	**Eielson Array**	**62.05**	**337**	P	**P**	**00 44 56.4**	**-0.7**
	0.5nm,0.7s,baz=107,slow=6.0,SNR=4.7 0.5nm,0.7s						

JMA ***21*** *00:45:10.7±0.3,33˚N±3˚×13˚8E±˚, h364km, MV3.5/41, FAR S OFF TOKAI DISTRICT*
IDC ***21*** *00:45:13.3±1.0,33.31N×137.76E, h339km±17km, mb2.2/9, mbtmp3.6/8, Error ellipse: s-maj=49.1km s-min=15.2km az=72.0*
ISC 21 00:45:13.9±0.9,33˚46N±0˚.09×137˚96E±0˚.10, h350km, n20, σ0s82/25, mb3.2/7, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTO2	**TONANKAI O.B.S**	**0.82**	**290**	*e*P	**Pn**	**00 45 57.9**	**-0.7**
JHJ	**Hachijo jima 2**	**1.57**	**102**	P	**Pn**	**00 46 03.1**	**+0.6**
	52nm,0.7s,baz=270,slon=20,SNR=1.8						
JHJ				S	**S**	**00 46 40.8**	**-0.6**
	27nm,0.3s,baz=322,slow=19,SNR=2.0						
JNY	**Yasuok**	**1.90**	**358**	*e*P	**Pn**	**00 46 04.7**	**+0.2**
JOD2	**Odawara 2**	**2.03**	**27**	P	**Pn**	**00 46 05.9**	**+0.6**
JYN	**Shimob**	**2.09**	**13**	*e*P	**Pn**	**00 46 06.3**	**+0.5**
BSO4	**Boso 4**	**2.50**	**52**	P	**Pn**	**00 46 09.3**	**+0.6**
BSO3	**Boso 3**	**2.51**	**57**	*e*P	**Pn**	**00 46 08.3**	**-0.4**
BSO3				S	**S**	**00 46 53.5**	**+0.7**
JHU	**Hanno**	**2.62**	**24**	P	**Pn**	**00 46 10.3**	**+0.3**
JHU				*e*S	**S**	**00 46 54.9**	**-0.2**
BSO1	**Boso 1**	**2.78**	**64**	*e*P	**Pn**	**00 46 09.8**	**-0.8**
BSO1				*e*S	**S**	**00 46 55.9**	**-0.5**
MJAR	**Matsushiro Arr**	**3.08**	**4**	P	**Pn**	**00 46 12.9**	**-1.0**
	15nm,0.7s,baz=186,slow=10,SNR=34						
MAT	**Matsushiro**	**3.08**	**4**	*e*P	**Pn**	**00 46 13.9**	**0.0**
JAG	**Ashikaga**	**3.20**	**22**	*e*P	**Pn**	**00 46 14.5**	**-0.6**
JAG				*e*S	**S**	**00 47 02.3**	**-2.0**
JHO	**Hitachi**	**3.81**	**34**	*e*P	**Pn**	**00 46 20.6**	**-0.3**
SONM	**Songino Array**	**27.69**	**311**	P	**P**	**00 50 32.0**	**+0.9**
	0.3nm,0.5s,baz=108,slow=9.5,SNR=2.5 0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**42.35**	**315**	P	**P**	**00 52 34.2**	**-0.3**
	0.2nm,0.3s,baz=124,slow=12,SNR=1.6 0.2nm,0.3s						
MKAR	**Makanchi Array**	**43.72**	**305**	P	**P**	**00 52 45.4**	**-0.3**
	0.2nm,0.4s,baz=92,slow=8.0,SNR=4.5 0.2nm,0.4s						
WRA	**Warramunga Arr**	**53.21**	**184**	P	**P**	**00 53 56.5**	**-1.0**
	0.4nm,0.3s,baz=1.8,slow=7.6,SNR=21 0.4nm,0.3s						
ARCES	**ARCESS Array B**	**66.33**	**339**	P	**P**	**00 55 26.9**	**+1.5**
	3.0nm,1.1s,baz=67,slow=9.1,SNR=6.6 3.0nm,1.1s						
FINES	**FINESS Array B**	**70.64**	**332**	P	**P**	**00 55 52.3**	**+0.4**
	0.4nm,0.4s,baz=69,slow=7.6,SNR=9.6 0.4nm,0.4s						
NOA	**NORSAR Array B**	**76.35**	**336**	P	**P**	**00 56 25.8**	**+0.9**
	0.2nm,0.5s,baz=45,slow=5.5,SNR=2.1 0.2nm,0.5s						

IDC ***21*** *00:54:37.9±1.0,36˚70N×140˚63E, h0km, mb3.6/8, mbtmp3.6/9, ML3.2/1, Error ellipse: s-maj=22.3km s-min=19.6km az=110.0*
JMA ***21*** *00:54:39.0±0.0,36˚9N±0˚.1×140˚6E±0˚.2, h8km, MV3.8/20, NORTHERN IBARAKI PREF*
JMA Felt II J1 at NORTHERN IBARAKI PREF .
NIED ***21*** *00:54:39.0, 36˚89N×140˚56E, h8km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr-1.62; Mθθ-0.16; Mϕϕ1.78; Mrθ0.15; Mθϕ-0.19; Mϕr1.71; Fault plane solution: M₀2.43000×10¹⁴ NP1: ϕs345.00000°, δ23.00000°, λ-106.00000°. NP2: ϕs182.00000°, δ68.00000°, λ-83.00000°.*
ISC 21 00:54:39.0±1.1,36˚87N±0˚.03×140˚56E±0˚.04, h5km±8km, n31, σ1s17/28, mb3.6/10, 3C-2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFFD	**Fukushimafurud**	**0.22**	**1**	⇓*i*P	**Pg**	**00 54 43.3**	**-0.1**
JFFD				⇓S	**Sg**	**00 54 46.2**	**-0.1**
JHO	**Hitachi**	**0.26**	**178**	*i* P	**Pg**	**00 54 44.5**	**+0.6**
JHO				S	**Sg**	**00 54 48.5**	**+1.2**
ONAJ	**Iwakimizuishiy**	**0.30**	**39**	*i* P	**Pg**	**00 54 44.8**	**-0.2**
ONAJ				S	**Sg**	**00 54 48.9**	**0.0**
JSB	**Shiboa**	**0.52**	**281**	*i* P	**Pg**	**00 54 49.8**	**+0.8**
JSB				S	**Sb**	**00 54 57.6**	**-1.0**
JFT	**Otama**	**0.67**	**345**	*i* P	**Pg**	**00 54 51.7**	**-0.2**
JFT				S	**Sg**	**00 55 00.5**	**-0.2**
JYT	**Yasato**	**0.70**	**205**	*i* P	**Pg**	**00 54 52.5**	**+0.1**
JFY	**Yanaizu**	**0.87**	**309**	*i* P	**Pg**	**00 54 55.2**	**-0.5**
JFY				S	**Sg**	**00 55 06.6**	**-0.4**
JAG	**Ashikaga**	**0.99**	**244**	*i* P	**Pg**	**00 54 57.3**	**-0.7**
MJAR	**Matsushiro Arr**	**1.92**	**261**	Pn	**Pn**	**00 55 11.5**	**-0.9**
	7.8nm,0.3s,baz=79,slow=16,SNR=157						
MJAR				Sn	**Sn**	**00 55 37.4**	**+0.5**
	11nm,0.3s,baz=79,slow=32,SNR=13						
MJAR				LR	LR	00 56 16.7	
	comp=Z,88nm,19.8s,baz=14,slow=50						
JHJ	**Hachijo jima 2**	**3.79**	**190**	Pn	**Pn**	**00 55 36.5**	**-1.6**
	5.3nm,0.3s,baz=229,slow=19,SNR=1.4						
JHJ				Sn	**Sn**	**00 56 21.0**	**-2.1**
	5.3nm,0.3s,baz=64,slow=20,SNR=1.5 19nm,0.4s						
USRK	**Ussuriysk Ar.**	**9.80**	**321**	Pn	Pn	00 57 07.5	+6.9
	0.2nm,0.3s,baz=122,slow=14,SNR=5.8						
KSRS	**Korea Array**	**10.10**	**277**	Pn	Pn	00 57 11.9	+7.2
	0.2nm,0.3s,baz=100,slow=15,SNR=2.1						
SONM	**Songino Array**	**27.31**	**304**	P	**P**	**01 00 25.4**	**+0.6**
	0.7nm,0.6s,baz=111,slow=8.2,SNR=6.0 0.7nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**28.66**	**119**	T	T	01 30 23.2	
	baz=313,slow=75,SNR=272						
H11N1	**WAKE ISLAND Hy**	**28.66**	**119**	T	T	01 30 23.7	
	baz=313,slow=75,SNR=227						
H11N3	**WAKE ISLAND Hy**	**28.68**	**119**	T	T	01 30 24.5	
	baz=313,slow=75,SNR=195						
H11S1	**WAKE ISLAND Hy**	**29.35**	**121**	T	T	01 31 14.3	
	baz=314,slow=76,SNR=538						
H11S3	**WAKE ISLAND Hy**	**29.35**	**121**	T	T	01 31 14.9	
	baz=314,slow=76,SNR=337						
H11S2	**WAKE ISLAND Hy**	**29.37**	**121**	T	T	01 31 14.7	
	baz=314,slow=76,SNR=239						
MK31	**Makanchi Array**	**43.63**	**302**	⇑Pn	**P**	**01 02 47.9**	**+3.5**
	0.4nm,0.7s,baz=30,slow=12,SNR=6.0						
MKAR	**Makanchi Array**	**43.63**	**302**	P	**P**	**01 02 46.0**	**+1.7**
	0.2nm,0.5s,baz=77,slow=9.6,SNR=6.4 0.2nm,0.5s						
KURBB	**Kurchatov Arra**	**45.56**	**308**	⇑Pn	**P**	**01 02 59.9**	**+0.2**
	1.1nm,0.7s,baz=82,slow=8.7						
KURBB				⇑Lg	Lg	01 04 54.8	
	1.1nm,0.5s						
ILAR	**Eielson Array**	**50.00**	**32**	P	**P**	**01 03 34.3**	**+0.3**
	0.2nm,0.4s,baz=281,slow=6.3,SNR=2.7 0.2nm,0.4s						
WRA	**Warramunga Arr**	**56.81**	**187**	P	**P**	**01 04 22.5**	**-1.9**
	0.6nm,0.6s,baz=2.8,slow=7.4,SNR=9.4 0.6nm,0.6s						
ARCES	**ARCESS Array B**	**63.91**	**339**	P	**P**	**01 05 13.3**	**+0.8**
	1.1nm,0.9s,baz=54,slow=6.1,SNR=5.4 1.1nm,0.9s						
FINES	**FINESS Array B**	**68.64**	**332**	P	**P**	**01 05 43.4**	**+0.6**
	0.8nm,0.7s,baz=46,slow=8.5,SNR=6.2 0.8nm,0.7s						
NVAR	**Mina Array Bea**	**75.64**	**53**	P	**P**	**01 06 25.4**	**-0.1**
	0.2nm,0.4s,baz=297,slow=6.0,SNR=4.1 0.2nm,0.4s						
GERES	**GERESS Array B**	**82.49**	**328**	P	**P**	**01 07 03.4**	**+0.7**
	0.2nm,0.4s,baz=19,slow=6.2,SNR=2.1 0.2nm,0.4s						
H03N2	**Juan Fernandez**	**147.69**	**96**	T	T	03 59 13.3	
	baz=291,slow=76,SNR=15						
H03N3	**Juan Fernandez**	**147.70**	**96**	T	T	03 59 14.4	
	baz=291,slow=76,SNR=19						
H03N1	**Juan Fernandez**	**147.71**	**96**	T	T	03 59 14.6	
	baz=291,slow=76,SNR=14						

ROM ***21*** *00:55:46.9±0.1,45˚972N±0˚.008×12˚249E±0˚.009, h10km, ML2.4/48, Error ellipse: s-maj=0.9km s-min=0.3km az=334.0*
VIE ***21*** *00:55:46.8±0.1,45˚96N×12˚23E, h6km±1km, mb2.2/19, ml2.9/19, Error ellipse: s-maj=1.3km s-min=0.8km az=6.0 20 km S of Belluno*
LDG ***21*** *00:55:47.3±0.1,46˚03N×12˚37E, h2km, Ml2.3/15, Error ellipse: s-maj=2.6km s-min=1.4km az=2.0*
PRU ***21*** *00:55:48.2±0.0,45˚93N×12˚44E, h12km*
ISC 21 00:55:47.1±0.7, 45˚97N±0˚.01×12˚24E±0˚.01, h14km±4km, n172, σ0s88/241, 9C-7D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FRE8	**Fregona**	**0.09**	**59**	⇑P	**Pg**	**00 55 49.8**	**-0.4**
FRE8				S	**Sg**	**00 55 52.0**	**-0.2**
VARN	**Col Varnada, M**	**0.10**	**285**	⇓*e*Pg	**Pg**	**00 55 49.7**	**-0.6**
VARN				*e*Sg	**Sg**	**00 55 51.7**	**-0.8**
VARN	**Col Varnada, M**	**0.10**	**285**	P	**Pg**	**00 55 49.6**	**-0.6**
VARN				S	**Sg**	**00 55 51.6**	**-0.8**
VARN				AML	AML		
	comp=N,20450μm,1.5s						
VARN				AML	AML		
	comp=N,21600μm,0.1s						
VARN				AML	AML		
	comp=E,27200μm,0.8s						
VARN				AML	AML		
	comp=E,25950μm,0.8s						
VARN				AML	AML		
	comp=N,20400μm,1.5s						
ED06	**Collalto TV**	**0.11**	**192**	⇑*e*Pg	**Pg**	**00 55 50.2**	**-0.2**
CAE	**Caneva**	**0.14**	**74**	⇓*e*Pg	**Pg**	**00 55 50.5**	**-0.3**
CAE				*e*Sg	**Sg**	**00 55 53.2**	**-0.1**
CAE	**Caneva**	**0.14**	**74**	⇑P	**Pg**	**00 55 50.5**	**-0.3**
CAE				S	**Sg**	**00 55 53.2**	**-0.1**
CRND	**Cornuda**	**0.17**	**221**	P	**Pg**	**00 55 51.7**	**+0.5**
CRND				S	**Sg**	**00 55 54.4**	**+1.5**
MTLO	**Montello**	**0.18**	**213**	⇑*e*Pg	**Pg**	**00 55 51.4**	**0.0**
MTLO				*e*Sg	**Sg**	**00 55 54.8**	**+0.6**
ASOL	**Asolo**	**0.29**	**235**	P	**Pg**	**00 55 53.1**	**-0.1**
ASOL				S	**Sb**	**00 55 58.1**	**-0.7**
CSO	**Casso**	**0.31**	**11**	⇓*e*Pg	**Pg**	**00 55 52.5**	**-1.0**
MLNI	**Malnisio**	**0.32**	**54**	⇓*e*Pg	**Pg**	**00 55 53.3**	**-0.3**
FAU	**Forcella Aurin**	**0.32**	**325**	⇓*e*Pg	**Pg**	**00 55 52.9**	**-0.9**
CGRP	**Cima Grappa**	**0.32**	**254**	⇓*e*Pg	**Pg**	**00 55 52.9**	**-0.8**
CGRP				*e*Sg	**Sg**	**00 55 58.3**	**0.0**
CGRP	**Cima Grappa**	**0.32**	**254**	P	**Pg**	**00 55 53.0**	**-0.8**
CGRP				S	**Sg**	**00 55 57.9**	**-0.4**
CGRP				AML	AML		
	comp=N,396μm,0.3s						
CGRP				AML	AML		
	comp=E,594μm,0.4s						
CGRP				AML	AML		
	comp=E,592μm,0.4s						
CGRP				AML	AML		
	comp=E,594μm,0.4s						
CGRP				AML	AML		
	comp=N,406μm,1.2s						
AGOR	**Agordo**	**0.34**	**337**	⇓*e*Pg	**Pg**	**00 55 53.1**	**-1.0**
AGOR				*e*Sg	**Sg**	**00 55 58.2**	**-0.7**
AGOR	**Agordo**	**0.34**	**337**	⇓P	**Pg**	**00 55 53.1**	**-1.0**
AGOR				S	**Sg**	**00 55 58.2**	**-0.7**
AGOR				AML	AML		
	comp=E,514μm,0.2s						
AGOR				AML	AML		
	comp=N,662μm,0.3s						
AGOR				AML	AML		
	comp=E,514μm,0.2s						
AGOR				AML	AML		
	comp=N,663μm,0.3s						
AGOR				AML	AML		
	comp=N,554μm,0.3s						
AGOR				AML	AML		
	comp=E,514μm,0.2s						
AGOR				AML	AML		
	comp=E,442μm,0.5s						
AGOR				AML	AML		
	comp=N,663μm,0.3s						
CIMO	**Cimolais**	**0.37**	**22**	⇓*e*Pg	**Pg**	**00 55 53.5**	**-1.1**
CIMO				*e*Sg	**Sg**	**00 55 59.0**	**-0.6**
CIMO	**Cimolais**	**0.37**	**22**	P	**Pg**	**00 55 53.5**	**-1.1**
CIMO				S	**Sg**	**00 55 59.1**	**-0.6**
CIMO				AML	AML		
	comp=E,409μm,0.5s						
CIMO				AML	AML		
	comp=N,304μm,0.9s						
CIMO				AML	AML		
CIMO				AML	AML		
A302A	**Resana (TV)**	**0.38**	**210**	P	**Pg**	**00 55 55.2**	**+0.4**
CTI	**Castel Tesino**	**0.42**	**281**	P	**Pg**	**00 55 54.4**	**-1.1**
CTI				AML	AML		
	comp=N,970μm,0.2s						
CTI				AML	AML		
	comp=E,822μm,1.5s						
CTI				AML	AML		
	comp=N,970μm,0.2s						
CTI				AML	AML		
	comp=E,822μm,1.5s						
CTI				AML	AML		
	comp=N,974μm,0.2s						
A301A	**Isiata (VE)**	**0.44**	**143**	P	**Pb**	**00 55 56.4**	**-0.2**
A301A				S	**Sb**	**00 56 04.2**	**+1.2**
STAL	**STALIGIAL**	**0.44**	**48**	P	**Pg**	**00 55 55.0**	**-0.8**
STAL				AML	AML		
	comp=E,583μm,1.6s						
STAL				AML	AML		
	comp=N,813μm,0.4s						
STAL				AML	AML		
	comp=N,735μm,0.3s						
STAL				AML	AML		
	comp=E,704μm,0.9s						
IESO	**Jesolo**	**0.50**	**154**	*e*Pg	**Pb**	**00 55 57.3**	**-0.4**
VENL	**Venezia Lido**	**0.56**	**170**	P	**Pg**	**00 55 57.9**	**-0.2**
AFL	**Alpe Faloria**	**0.56**	**356**	*e*Pg	**Pg**	**00 55 57.6**	**-0.7**
ZIAN	**Ziano**	**0.56**	**303**	*e*Pg	**Pg**	**00 55 57.1**	**-1.1**
MPRI	**Monte Prat**	**0.59**	**62**	*e*Pg	**Pg**	**00 55 58.3**	**-0.3**
MPRI	**Monte Prat**	**0.59**	**62**	P	**Pg**	**00 55 58.3**	**-0.3**
MPRI				AML	AML		
	comp=N,247μm,0.8s						
MPRI				AML	AML		
	comp=E,190μm,1.3s						
TLI	**Talmassons**	**0.60**	**94**	*e*Pg	**Pg**	**00 55 58.5**	**-0.4**
CSMI	**Casera Mimoias**	**0.61**	**27**	*e*Pg	**Pg**	**00 55 58.0**	**-1.1**
PANI	**Panarotta**	**0.64**	**278**	*e*Pg	**Pg**	**00 55 59.5**	**-0.2**
CLUD	**Cludinico**	**0.66**	**42**	*e*Pg	**Pg**	**00 55 59.7**	**-0.3**
CLUD	**Cludinico**	**0.66**	**42**	P	**Pg**	**00 55 59.3**	**-0.7**
BUA	**Buia**	**0.66**	**67**	*e*Pg	**Pb**	**00 56 00.1**	**-0.4**
FUSE	**Fusea**	**0.69**	**49**	*e*Pg	**Pg**	**00 56 00.2**	**-0.4**
BOO	**Bordano**	**0.69**	**59**	*e*Pg	**Pg**	**00 56 00.4**	**-0.2**
TEOL	**Teolo**	**0.73**	**214**	*e*Pg	**Pb**	**00 56 01.5**	**-0.1**
TEOL	**Teolo**	**0.73**	**214**	P	**Pb**	**00 56 01.6**	**0.0**
TEOL				AML	AML		
	comp=E,1225μm,0.5s						
TEOL				AML	AML		
	comp=N,810μm,0.8s						
FVI	**Forni Avoltri**	**0.73**	**31**	P	**Pb**	**00 56 01.6**	**-0.1**
FVI				AML	AML		
	comp=E,124μm,0.7s						
FVI				AML	AML		
	comp=N,100μm,1.2s						
ZOVE	**Zovencedo**	**0.74**	**226**	P	**Pb**	**00 56 01.8**	**+0.1**
DOSS	**Dosso del Somm**	**0.74**	**264**	*e*Pg	**Pg**	**00 56 01.1**	**-0.5**
DOSS	**Dosso del Somm**	**0.74**	**264**	P	**Pg**	**00 56 01.2**	**-0.3**
DOSS				AML	AML		
	comp=N,423μm,0.9s						
DOSS				AML	AML		
	comp=E,448μm,0.1s						
DOSS				AML	AML		
	comp=E,404μm,0.3s						
DOSS				AML	AML		
	comp=N,434μm,0.3s						
BAD	**Bernadia**	**0.75**	**69**	*e*Pg	**Pg**	**00 56 01.5**	**-0.1**
ZOU	**Zoufplan**	**0.78**	**40**	*e*Pg	**Pb**	**00 56 02.2**	**-0.4**
ZOU	**Zoufplan**	**0.78**	**40**	P	**Pb**	**00 56 02.1**	**-0.4**
ZOU				AML	AML		
	comp=E,128μm,1.3s						
ZOU				AML	AML		
	comp=N,121μm,1.1s						
KOSI	**Kohlern**	**0.78**	**310**	P	**Pg**	**00 56 01.6**	**-0.6**
KOSI				AML	AML		
	comp=E,215μm,0.6s						
KOSI				AML	AML		
	comp=N,137μm,0.4s						
VINO	**Villanova**	**0.78**	**68**	*e*Pg	**Pb**	**00 56 02.2**	**-0.3**
MARN	**Marana (Italy)**	**0.79**	**246**	*e*Pg	**Pg**	**00 56 02.3**	**-0.2**
ABTA	**Abfaltersbach**	**0.80**	**13**	*e*Pg	**Pg**	**00 56 02.2**	**-0.4**
	comp=N,4.6nm,0.1s,SNR=28						
ABTA				*e*Sg	**Sb**	**00 56 14.0**	**+0.4**
	comp=N,14nm,0.1s						
COLI	**Coloredo**	**0.81**	**78**	*e*Pg	**Pb**	**00 56 03.2**	**+0.3**
BOSI	**Bolzano**	**0.83**	**310**	AML	AML		
	comp=N,386μm,0.4s						
BOSI				AML	AML		
	comp=E,348μm,0.4s						
PLRO	**Paularo**	**0.86**	**47**	*e*Pg	**Pg**	**00 56 03.3**	**-0.5**
APPI	**Appiano**	**0.87**	**306**	P	**Pg**	**00 56 03.0**	**-1.0**
APPI				AML	AML		
	comp=E,214μm,0.3s						
APPI				AML	AML		
	comp=N,258μm,0.2s						
ROVR	**Rover Verones**	**0.88**	**249**	P	**Pb**	**00 56 04.4**	**+0.2**
ROVR				AML	AML		
	comp=N,454μm,0.9s						
ROVR				AML	AML		
	comp=E,145μm,0.5s						
PTCC	**Patocco-Chiusa**	**0.89**	**60**	P	**Pg**	**00 56 03.5**	**-0.7**
PTCC				AML	AML		
	comp=E,172μm,0.4s						
PTCC				AML	AML		
	comp=N,168μm,0.6s						
GAGG	**Gaggia**	**0.90**	**278**	*e*Pg	**Pg**	**00 56 04.2**	**-0.4**
GAGG	**Gaggia**	**0.90**	**278**	P	**Pg**	**00 56 04.0**	**-0.5**
GAGG				AML	AML		
	comp=E,279μm,1.4s						
GAGG				AML	AML		
	comp=N,276μm,0.5s						
GAGG				AML	AML		
	comp=E,419μm,0.5s						
GAGG				AML	AML		
	comp=E,278μm,1.4s						
GAGG				AML	AML		
	comp=N,406μm,0.5s						
LUSI	**Trento, Gardas**	**0.91**	**270**	P	**Pg**	**00 56 04.3**	**-0.3**
LUSI				AML	AML		
	comp=E,362μm,1.0s						
LUSI				AML	AML		
	comp=N,600μm,1.2s						
ROBS	**Robic**	**0.92**	**72**	*i* Pg	**Pg**	**00 56 04.3**	**-0.6**
SABO	**M.te Sabotino**	**0.95**	**89**	P	**Pn**	**00 56 06.0**	**0.0**
SABO				AML	AML		
	comp=E,2130μm,0.3s						
SABO				AML	AML		
	comp=N,596μm,0.3s						
SABO				AML	AML		
	comp=E,465μm,0.3s						
SABO				AML	AML		
	comp=N,2070μm,0.3s						
RISI	**Rein**	**0.99**	**353**	P	**Pg**	**00 56 06.0**	**-0.2**
RISI				AML	AML		
	comp=E,292μm,0.4s						
RISI				AML	AML		
	comp=N,448μm,0.3s						
ABSI	**Aberstueckl**	**0.99**	**320**	P	**Pg**	**00 56 05.3**	**-1.0**
ABSI				AML	AML		
	comp=E,332μm,0.7s						
ABSI				AML	AML		
	comp=N,285μm,0.6s						
OPPE	**Oppeano**	**1.00**	**229**	P	**Pn**	**00 56 06.9**	**+0.2**
ACOM	**Acomizza, Ital**	**1.06**	**56**	P	**Pn**	**00 56 07.9**	**+0.2**
ACOM				AML	AML		
	comp=E,448μm,0.3s						
ACOM				AML	AML		
	comp=N,183μm,1.0s						
ACOM				AML	AML		
	comp=N,210μm,1.0s						
ACOM				AML	AML		
	comp=E,446μm,0.3s						
CADS	**Cadrg**	**1.07**	**75**	*i* Pg	**Pg**	**00 56 07.4**	**-0.4**
CADS				*e*Sg	**Sn**	**00 56 22.9**	**+0.4**
CADS				IAML		00 56 24.8	
	comp=Z,56nm,0.3s						
MAGA	**Magasa**	**1.14**	**261**	P	**Pb**	**00 56 08.9**	**+0.1**
MAGA				AML	AML		
	comp=N,329μm,1.1s						
MAGA				AML	AML		
	comp=E,520μm,0.3s						
VOJS	**Vojsko**	**1.15**	**86**	*i* Pg	**Pn**	**00 56 09.0**	**+0.2**
VOJS				*e*Sg	**Sn**	**00 56 25.8**	**+1.4**
VOJS				IAML		00 56 27.2	
	comp=Z,34nm,0.1s						
SERM	**Sermide**	**1.17**	**215**	P	**Pn**	**00 56 09.3**	**+0.3**
SERM				AML	AML		
	comp=E,360μm,1.2s						
SERM				AML	AML		
	comp=N,388μm,0.3s						
SERM				AML	AML		
	comp=E,354μm,1.2s						
SERM				AML	AML		

KBA eSg Sg 00 56 31.9 +1.3
comp=E,26nm,0.4s
WTTA Wattenberg 1.36 342 ePg Pg 00 56 13.1 -0.2
comp=E,10nm,0.1s,SNR=28
WTTA eSg Sg 00 56 32.3 +1.2
comp=E,140nm,0.3s
WTTA Wattenberg 1.36 342 P Pg 00 56 13.1 -0.2
WTTA AML AML
comp=E,277µm,0.4s
WTTA AML AML
comp=N,502µm,0.4s
BRMO Bormio 1.39 292 P Pb 00 56 13.4 +0.4
BRMO AML AML
comp=E,102µm,0.5s
BRMO AML AML
comp=N,82µm,1.6s
BRMO AML AML
comp=E,101µm,0.5s
SQTA Sankt Quirin 1.44 331 ePn Pb 00 56 14.1 +0.3
comp=E,19nm,0.2s,SNR=32
SQTA eSn Sg 00 56 34.1 +0.6
comp=E,32nm,0.2s
WATA Walderalm 1.44 342 ePn Pg 00 56 14.5 -0.3
comp=E,12nm,0.1s,SNR=33
WATA eSn Sg 00 56 34.2 +0.6
comp=E,57nm,0.4s
RAVA Ravarino 1.45 214 AML AML
comp=N,251µm,0.9s
RAVA AML AML
comp=E,237µm,1.2s
FETA Feichten 1.48 316 ePn Pb 00 56 14.6 0.0
comp=E,2.8nm,0.1s,SNR=22
FETA eSn Sg 00 56 34.4 -0.5
comp=E,3.7nm,0.1s
ZONE Zone 1.50 263 P Pb 00 56 14.8 +0.1
ZONE AML AML
comp=E,101µm,1.5s
ZONE AML AML
comp=N,149µm,0.2s
BRJN Brijuni 1.50 134 ePg Pn 00 56 13.4 -0.2
BRJN Sg Sn 00 56 32.6 -0.4
BRJN Brijuni 1.50 134 P Pn 00 56 13.6 0.0
MOTA Moosalm 1.58 331 ePg Pb 00 56 16.8 +0.5
comp=N,7.3nm,0.3s,SNR=24
MOTA eSg Sg 00 56 39.3 +1.1
comp=N,25nm,0.2s
LJU Ljubljana 1.59 86 P Pb 00 56 16.6 +0.2
LJU AML AML
comp=N,1050µm,0.4s
LJU AML AML
comp=E,961µm,0.4s
BERNI Berninapass 1.60 287 P Pb 00 56 17.1 +0.5
BERNI AML AML
comp=N,51µm,1.3s
BERNI AML AML
comp=E,63µm,0.4s
BERNI AML AML
comp=N,51µm,1.3s
SMRN Sveta Marina 1.64 124 ePn Pn 00 56 15.8 +0.4
SMRN Sg Sn 00 56 37.3 +1.0
OBKA Obir 1.69 70 ePn Pb 00 56 17.6 -0.5
comp=N,0.7nm,0.1s,SNR=8.8
OBKA eSn Sb 00 56 39.8 +0.6
comp=N,12nm,0.3s
RIY Rijeka 1.70 111 ePn Pn 00 56 17.1 +0.7
RIY Sg Sb 00 56 39.2 -0.1
DAVOX Davos/Dischmat 1.83 297 P Pb 00 56 20.9 +0.4
DAVOX AML AML
comp=E,69µm,0.5s
DAVOX AML AML
comp=N,71µm,0.4s
RETA Reutte 1.83 327 Pg Pg 00 56 21.6 -0.6
comp=N,4.3nm,0.2s
RETA Sg Sg 00 56 47.0 +1.0
comp=N,23nm,0.3s,SNR=6.9
BRIS BRISIGHELLA 1.89 196 P Pn 00 56 17.9 -1.1
BRIS AML AML
comp=E,42µm,1.5s
BRIS AML AML
comp=N,62µm,1.3s
LMD Lutirano 1.93 192 P Pn 00 56 19.3 -0.2
LMD AML AML
comp=E,33µm,1.6s
LMD AML AML
comp=N,53µm,0.4s
BIOA Bad Ischl, Aus 1.97 29 eSn Sg 00 56 49.4 -1.1
comp=N,11nm,0.2s
SOKA Soboth 2.06 69 Pn Pn 00 56 22.6 +1.2
comp=N,0.3nm,0.3s
SOKA Sg Sg 00 56 53.5 +0.2
comp=N,3.2nm,0.3s
A250A Rusevo Krmpots 2.07 114 ePn Pn 00 56 22.1 +0.5
A250A Sn Sn 00 56 48.1 +0.8
DAVA Damuels 2.10 310 Pg Pb 00 56 25.3 +0.3
comp=N,6.8nm,0.2s
DAVA Sg Sg 00 56 53.9 -0.6
comp=N,46nm,0.7s
BOJS Bojanci 2.16 101 P Pn 00 56 23.6 +0.9
BOJS AML AML
comp=N,192µm,0.9s
BOJS AML AML
comp=E,125µm,1.1s
RABC Rab 2.17 123 ePn Pn 00 56 23.2 +0.5
RABC Sn Sn 00 56 49.5 +0.1
MPPT Montemurlo 2.17 203 P Pn 00 56 24.4 +1.5
MPPT AML AML
comp=E,28µm,1.6s
MPPT AML AML
comp=N,24µm,0.9s
OZLJ Ozalj 2.28 98 ePn Pn 00 56 26.2 +1.8
OZLJ Sn Sn 00 56 52.9 +0.6
FSSB Fossombrone 2.31 170 P Pn 00 56 24.7 0.0
FSSB AML AML
comp=N,95µm,0.6s
FSSB AML AML
comp=E,77µm,0.6s
NVLJ Novalja 2.33 126 ePn Pn 00 56 25.4 +0.4
NVLJ Sn Sn 00 56 52.7 -0.7
MOA Molln 2.34 36 Pn Pn 00 56 27.1 +1.9
comp=E,0.3nm,0.1s
MOA eSn Sb 00 56 57.3 -0.5
comp=E,4.0nm,0.2s
CRE Caprese Michel 2.36 185 P Pn 00 56 26.0 +0.5
CRE AML AML
comp=E,30µm,0.7s
CRE AML AML
comp=N,33µm,0.4s
PIEI Pieia 2.44 175 P Pn 00 56 26.4 -0.2
PIEI AML AML
comp=E,30µm,0.4s
PIEI AML AML
comp=N,15µm,0.4s
FRON Frontone 2.47 172 P Pn 00 56 26.9 -0.1
FRON AML AML
comp=N,41µm,0.6s
FRON AML AML
comp=E,30µm,0.7s
ARVD Arcevia 2.52 168 P Pn 00 56 27.8 +0.1
OSSC Osservatorio P 2.54 197 P Pn 00 56 28.0 0.0
OSSC AML AML
comp=E,20µm,0.5s
OSSC AML AML
comp=N,13µm,1.6s
PII Pisa 2.56 209 AML AML
comp=N,27µm,1.0s
PII AML AML
comp=E,30µm,0.4s
SSFR Montelago di S 2.56 171 P Pn 00 56 28.1 -0.1
SSFR AML AML
comp=E,41µm,1.0s
SSFR AML AML
comp=N,41µm,0.3s
PTJ Puntijarka 2.60 90 ePn Pn 00 56 30.3 +1.5
PTJ Sn Sn 00 57 01.7 +1.4
VIRC Vir 2.60 129 ePn Pn 00 56 29.5 +0.8
VIRC Sn Sn 00 56 59.3 -0.8
CING Cingoli 2.68 165 P Pn 00 56 30.2 +0.4
DUGI Dugi Otok 2.81 134 ePn Pn 00 56 32.4 +0.8
DUGI Sn Sn 00 57 05.2 -0.1
UDBI Udbina 2.88 119 ePn Pn 00 56 33.3 +0.7
UDBI Sn Sn 00 57 07.8 +0.8
KALN Kalnik 2.94 85 ePn Pn 00 56 35.3 +1.9
KALN Sn Sn 00 57 09.9 +1.3
FDMO Fiordimonte 2.99 168 P Pn 00 56 34.2 +0.1
FDMO AML AML
comp=E,15µm,1.5s
FDMO AML AML
comp=N,18µm,0.9s
CESI CESI - Serrava 3.00 171 P Pn 00 56 34.5 +0.2
CESI AML AML
comp=N,21µm,1.2s
CESI AML AML
comp=E,19µm,0.7s
MOSL Moslavina 3.18 95 ePn Pn 00 56 37.9 +1.2
MOSL Sn Sn 00 57 15.5 +1.1
CKRC Cesky Krumlov 3.18 25 ePN Pn 00 56 37.7 +1.0
CKRC eSN Sn 00 57 16.0 +1.5
CKRC eSG Sg 00 57 28.0 -1.2
MORI Morici 3.24 129 ePn Pn 00 56 37.6 +0.1
MORI Sn Sn 00 57 15.4 -0.4
KHC Kasperske Hory 3.29 15 ePN Pn 00 56 38.9 +0.6
KHC ePG Pb 00 56 47.5 +2.2
KHC eSN Sn 00 57 18.2 +0.9
KHC eSG Sg 00 57 32.3 -0.5
comp=E,3.7nm,0.2s
ZIRJ Zirje 3.35 132 ePn Pn 00 56 39.6 +0.6
ZIRJ Sn Sn 00 57 17.9 -0.7
SMA1 SAN MARTINO 3.43 166 P Pn 00 56 40.3 0.0
SMA1 AML AML
comp=N,24µm,0.7s
SMA1 AML AML
comp=E,22µm,1.0s
TERO Teramo 3.48 163 P Pn 00 56 40.5 -0.4
TERO AML AML
comp=E,174µm,1.5s
TERO AML AML
comp=N,20µm,1.4s
TERO AML AML
comp=E,16µm,1.3s
TERO AML AML
comp=N,55µm,1.6s
RM33 Pellescritta (3.53 168 P Pn 00 56 42.1 +0.5
KIJV Kijevo 3.55 122 ePn Pn 00 56 42.3 +0.5
KIJV Sn Sn 00 57 23.2 -0.3
LPG La Plagne 3.87 265 ePg Pg 00 57 01.3 0.0
LPG eSn Sn 00 57 32.3 +0.3
comp=N,1.1nm,0.3s
LPL La Plagne 3.88 265 ePn Pn 00 56 47.8 +1.2
LPL La Plagne 3.88 265 ePg Pg 00 57 01.4 -0.1
LPL eSn Sn 00 57 32.0 -0.1
comp=N,1.4nm,0.3s
SBF Sospel 4.01 240 ePn Pn 00 56 49.5 +1.3
SBF eSn Sn 00 57 34.3 -0.7
comp=N,2.5nm,0.3s
MBDF Montbardon 4.05 254 ePn Pn 00 56 49.5 +0.7
MBDF Montbardon 4.05 254 ePg Pg 00 57 04.4 -0.3
MBDF eSn Sn 00 57 36.6 +0.4
comp=N,1.2nm,0.5s
HVAR Hvar 4.10 131 ePn Pn 00 56 49.1 -0.2
HVAR Sn Sn 00 57 35.4 -1.7
HINF Hinteralfeld 4.13 299 ePn Pn 00 56 50.9 +1.1
HINF eSn Sn 00 57 36.9 -1.1
comp=N,3.1nm,0.3s
PGF Pioggiola 4.14 215 ePn Pn 00 56 51.9 +1.9
PGF eSn Sn 00 57 37.9 -0.3
comp=N,0.6nm,0.2s
ROM9 Roma 4.14 177 ⇓P Pg 00 57 04.4 -2.0
CDF Champ du Feu 4.18 308 ePn Pn 00 56 51.9 +1.4
CDF eSn Sn 00 57 37.5 -1.6
comp=N,3.8nm,0.6s
NKC Novy Kostel 4.27 2 eSG Sg 00 58 05.7 +1.6
comp=N,4.6nm,0.5s
RICI Ricice 4.27 124 ePn Pn 00 56 52.3 +0.5
RICI Sn Sn 00 57 40.7 -0.7
PRU Pruhonice 4.31 20 eSN Sn 00 57 41.6 -0.7
PRU eSG Sg 00 58 04.3 -1.1
comp=N,2.3nm,0.6s
CABF La Chapelle 4.32 281 eP Pn 00 56 55.4 +3.0
CABF eSn Sn 00 57 41.0 -1.6
comp=N,0.8nm,0.2s
MAKA Makarska 4.34 126 ePn Pn 00 56 53.0 +0.4
MAKA Sn Sn 00 57 42.5 -0.4
HAU Haudompre 4.52 299 ePn Pn 00 56 55.4 +0.3
HAU eSn Sn 00 57 43.6 -3.9
comp=N,1.7nm,0.2s
ORIF Oris-en-Rattie 4.60 259 ePn Pn 00 56 57.2 +0.9
LSTV Lastovo 4.62 132 ePn Pn 00 56 56.1 -0.4
LSTV Sn Sn 00 57 48.6 -1.3
LMR La Mourre 4.86 239 ePn Pn 00 57 00.6 +0.8
LMR eSn Sn 00 57 54.9 -1.1
comp=N,1.8nm,0.8s
SGRT San Giovanni R 4.91 148 ⇑P Pn 00 56 59.5 -1.1
STON Ston 4.99 126 ePn Pn 00 57 01.5 0.0
STON Sn Sn 00 57 57.2 -1.7
STON Ston 4.99 126 ⇑P Pn 00 57 02.1 +0.6
KRLC Kraliky 5.12 35 eSG Sg 00 58 29.0 -2.2
comp=N,2.6nm,1.0s
SMRF Simiane la Rot 5.13 250 ePn Pn 00 57 04.8 +1.2
SMRF eSn Sn 00 58 03.5 +0.9
comp=N,1.3nm,0.5s
PAGF Fort de Pagny 5.14 303 ePn Pn 00 57 03.8 +0.2
DPC Dobruska-Polom 5.17 30 eSG Sg 00 58 30.7 -2.1
CHVC Chvalec 5.28 27 eSG Sg 00 58 35.3 -1.1
OSTC Ostas 5.30 29 eSG Sg 00 58 36.1 -1.1
CLL Collm 5.37 5 eSg Sg 00 58 40.0 +0.7
SMF Signal de Mont 5.86 280 ePn Pn 00 57 14.2 +0.7
LOR Lormes 5.92 286 ePn Pn 00 57 14.5 +0.1
baz=117
LOR eSn Sn 00 58 19.7 -2.3
comp=N,0.8nm,0.3s
SSF Saint Saulge 6.13 283 ePn Pn 00 57 17.6 +0.4
SSF eSn Sn 00 58 24.9 -2.2
comp=N,0.6nm,0.4s
AVF Avril sur Loir 6.21 281 ePn Pn 00 57 18.9 +0.6
AVF eSn Sn 00 58 26.8 -2.2
comp=N,0.4nm,0.3s
LASF Ste Croix 6.24 255 ePn Pn 00 57 19.9 +1.2
GIVF Givet 6.47 312 ePn Pn 00 57 21.3 -0.6
BGF Bois d'Agland 6.54 279 ePn Pn 00 57 23.3 +0.4
TCF Toulx Ste Croi 6.98 276 ePn Pn 00 57 29.4 +0.5
CAF Calviac 7.24 265 ePn Pn 00 57 32.6 +0.2
USI Ustica 7.29 174 P Pn 00 57 33.5 +0.4
RJF Les Rejaudoux 7.55 269 ePn Pn 00 57 37.1 +0.4

*IDC **21** 01:01:21.9±0.7,20˚.00N×121˚.49E,h0km,mb4.2/27, mbtmp4.2/28,ML3.9/1,MS3.7/31,Error ellipse: s-maj=17.1km s-min=16.0km az=84.0*
*BJI **21** 01:01:24.4±0.0,20˚.15N×121˚.21E,h6km,mb4.3/22, mB4.6/11,ML4.1/1,Ms4.0/19,Ms7 4.0/19*
*NEIC **21** 01:01:26.7±1.5,20˚.10N±0˚.08×121˚.4E±0˚.1,h25km±5km, mb4.6/48,Error ellipse: s-maj=14.0km s-min=11.3km az=106.0*
*MAN **21** 01:01:28.7,19˚.98N×121˚.34E,h10km,mb5.0,ML3.9, MS3.9*
*JMA **21** 01:01:28.3±0.3,20˚.0N±1˚×12˚1E±˚,h112km,MV4.2/16, PHILIPPINE ISL REGION*
*NIED **21** 01:01:28.3,20˚.23N×121˚.42E,h112km,MW4.3,Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}1.35; $M_{\theta\theta}$0.80; $M_{\phi\phi}$-2.16; $M_{r\theta}$2.24; $M_{\theta\phi}$1.18; $M_{\phi r}$-0.21; Fault plane solution: $M_0$3.13000×10^{15} NP1:φs13.00000°, δ45.00000°,λ153.00000°. NP2:φs123.00000°,δ72.00000°, λ49.00000°.*

ISC 21 01:01:29.4±0.8,20˚.20N±0˚.03×121˚.36E±0˚.05,h49km±7km, n171,σ1°64/174,mb4.4/53,MS3.7/33,3C-8D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
APYP	**Conner**		**2.32 183**	⇓*i*P		**Pn**	**01 02 04.2**	**-1.0**
APYP				*i* S		**Sn**	**01 02 31.4**	**-1.1**
SIPP	**Brgy, Tapao**		**2.41 201**	⇓*i*P		**Pn**	**01 02 06.9**	**+0.4**
SIPP				*i* S		Sn	01 03 04.3	+30
TWG	**Pinlang**		**2.63 354**			**Pn**	**01 02 07.2**	**-2.2**
TWG					Sn	**Sn**	**01 02 40.1**	**+0.1**
SAMP	**Sagada Mountai**		**3.13 188**	⇓*e*P		**Pn**	**01 02 15.5**	**-0.8**
SAMP				*e*S		**Sn**	**01 02 49.7**	**-2.7**
TPUB	**Ta-pu**		**3.16 348**			**Pn**	**01 02 15.0**	**-1.8**
TPUB					Sn	**Sn**	**01 02 50.3**	**-3.0**
YULB	**Yu-li**		**3.18 359**			**Pn**	**01 02 16.8**	**-0.2**
CAUP	**Cauayan**		**3.26 172**	⇓*e*P		**Pn**	**01 02 19.1**	**+0.9**
CAUP				*e*S		**Sn**	**01 03 04.7**	**+9.0**
PALP	**Palanan**		**3.27 162**	⇓*e*P		**Pn**	**01 02 18.1**	**-0.2**
SSLB	**Suanglung**		**3.59 354**	Pn		**Pn**	**01 02 23.1**	**+0.4**
NACB	**Ninganchiao**		**3.97 3**			**Pn**	**01 02 27.3**	**-0.4**
SMPP	**San Manuel, Pa**		**4.07 189**	⇓*e*P		**Pn**	**01 02 28.6**	**-0.7**
BALP	**Baler**		**4.43 177**	⇓*e*P		**Pn**	**01 02 33.8**	**-0.4**
BALP					eS	**Sn**	**01 03 23.1**	**-1.4**
YHNB	**Yeheng**		**4.45 0**			**Pn**	**01 02 34.8**	**+0.2**
HATJ	**Hateruma jima**		**4.46 30**	P		**Pn**	**01 02 34.2**	**-0.3**
HATJ					S	**Sn**	**01 03 25.2**	**0.0**
JYNG	**Yonagunijimaku**		**4.48 19**	P		**Pn**	**01 02 34.8**	**0.0**
JYNG					S	**Sn**	**01 03 25.4**	**-0.4**
YOJ	**Yonaguni jima**		**4.51 20**	Pn		**Pn**	**01 02 34.6**	**-0.7**
YOJ	**Yonaguni jima**		**4.51 20**	*e*P		**Pn**	**01 02 34.9**	**-0.4**
YOJ					S	**Sn**	**01 03 26.6**	**+0.2**
PCPH	**Palayan**		**4.61 183**	⇓*e*P		**Pn**	**01 02 39.1**	**+2.5**
IRIF	**Iriomote-Funau**		**4.67 28**	P		**Pn**	**01 02 37.3**	**-0.1**
IRIF					S	**Sn**	**01 03 29.9**	**-0.4**
JKRS	**Kuro-shima**		**4.71 31**	P		**Pn**	**01 02 37.9**	**-0.1**
JKRS					S	**Sn**	**01 03 31.7**	**+0.3**
JIJ	**Ishigaki jima**		**4.88 31**	P		**Pn**	**01 02 39.7**	**-0.6**
JIJ					S	**Sn**	**01 03 34.1**	**-1.5**
KNMB	**Chin-men Tao**		**5.06 328**	Pn		**Pn**	**01 02 41.0**	**-1.7**
JISG	**Ishigakijimahi**		**5.16 31**	S		**Sn**	**01 03 41.0**	**-1.3**
QZH	**Quanzhou**		**5.37 332**	⇑*i*Pn		**Pn**	**01 02 44.6**	**-2.4**
QZH					Sn	**Sn**	**01 03 41.6**	**-6.0**
QZH					LR	LR		
	comp=N,670nm,11.8s							
QZH					LR	LR		
	comp=E,500nm,14.7s							
QZH					LR	LR		
	comp=Z,700nm,12.3s							
JTJ	**Tarama**		**5.40 34**	*e*P		**Pn**	**01 02 46.9**	**-0.5**
JTJ					S	**Sn**	**01 03 47.6**	**-0.6**
JMJ2	**Miyako jima3**		**5.83 38**	S		**Sn**	**01 03 58.1**	**-0.7**
JNTH	**Nagotoyohara**		**8.78 43**	P		**Pn**	**01 03 33.0**	**-0.8**
JYRO	**Yoronjima**		**9.41 42**	P		**Pn**	**01 03 41.2**	**-1.2**
JKDJ	**Kitadaitoujima**		**10.79 56**	P		**Pn**	**01 03 59.8**	**-1.5**
QIZ	**Qiongzhong**		**10.91 266**	Pn		**Pn**	**01 04 00.8**	**-2.2**
NJ2	**Nanjing**		**12.02 350**	*e*P		**Pn**	**01 04 18.0**	**0.0**
NJ2					pmax	pmax		
	comp=Z,6.0nm,0.5s							
LYN	**LuoYang**		**16.32 333**	*e*P		**P**	**01 05 19.9**	**+2.4**
LYN					S	**Sn**	**01 08 18.8**	**+3.4**
LYN					SS	**SnSn**	**01 08 34.4**	**+5.3**
LYN					pmax	pmax		
	comp=Z,10.0nm,1.0s							
LYN					pmax	pmax		
	comp=Z,140nm,5.5s							
LYN					LR	LR		
	comp=N,340nm,17.3s							
LYN					LR	LR		
	comp=E,300nm,17.8s							
LYN					LR	LR		
	comp=Z,360nm,17.3s							
TIA	**Tai'an**		**16.38 348**	*e*P		**P**	**01 05 19.5**	**+1.3**
TIA					pmax	pmax		
	comp=Z,15nm,1.0s							
TIA					LR	LR		
	comp=N,240nm,19.1s							
TIA					LR	LR		
	comp=E,260nm,18.6s							
TIA					LR	LR		
	comp=Z,380nm,18.6s							
KSCHJ	**Chungju**		**17.60 18**	P		**Pn**	**01 05 30.5**	**-0.6**
XAN	**Xi'an**		**17.66 324**	P		**Pn**	**01 05 32.0**	**+0.1**
XAN					pP	pP	01 05 39.8	-2.9
XAN					sP	pwP	01 05 45.9	-1.2
XAN					S	**S**	**01 08 52.3**	**-0.9**
XAN					pmax	pmax		
	comp=Z,6.0nm,0.9s							
XAN					LR	LR		
	comp=N,440nm,16.5s							
XAN					LR	LR		
	comp=E,360nm,17.9s							
XAN					LR	LR		
	comp=Z,540nm,11.0s							
HNS	**HongShan**		**18.10 343**	⇑P		**Pn**	**01 05 38.8**	**+1.6**
HNS					S	**S**	**01 09 05.5**	**+3.6**
HNS					pmax	pmax		
	comp=Z,19nm,0.9s							
HNS					LR	LR		
	comp=N,290nm,16.5s							
HNS					LR	LR		
	comp=E,310nm,16.9s							
HNS					LR	LR		
	comp=Z,400nm,18.2s							
KSRS	**Korea Array**		**18.12 17**	P		**Pn**	**01 05 38.0**	**+0.4**
	0.4nm,0.3s,baz=197,slow=11,SNR=17							
KSRS					LR	LR	01 13 36.7	
	comp=Z,133nm,18.2s,baz=200,slow=40 4.1nm,0.6s							
BJT	**Baijiatuan**		**20.25 348**	P		**P**	**01 06 01.1**	**+0.4**
BJT					IAmb	IAmb	01 06 03.0	
	comp=Z,26nm,0.9s							
JCJ	**Chichijima**		**20.26 66**	LR		LR	01 12 28.5	
	comp=Z,144nm,20.8s,baz=248,slow=33							
INU	**Inuyama**		**20.45 39**	P		**P**	**01 06 01.2**	**-1.6**
INU					IAmb	IAmb	01 06 14.2	
	comp=Z,46nm,1.3s							
CHTO	**Chiang Mai**		**21.17 270**	P		**P**	**01 06 09.0**	**-1.7**
CMAR	**Chiang Mai Arr**		**21.22 269**	P		**P**	**01 06 12.6**	**+1.3**
	comp=Z,1.6nm,0.5s,baz=70,slow=9.0,SNR=12							
CMAR					LR	LR	01 14 33.7	
	comp=Z,221nm,20.6s,baz=80,slow=37 comp=Z,1.6nm,0.5s							
CMAR	**Chiang Mai Arr**		**21.22 269**	P		**P**	**01 06 11.1**	**-0.2**
MJAR	**Matsushiro Arr**		**21.97 39**	P		**P**	**01 06 20.3**	**+1.1**
	comp=Z,1.1nm,0.3s,baz=220,slow=7.2,SNR=7.2 comp=Z,1.1nm,0.3s							
MJAR	**Matsushiro Arr**		**21.97 39**	P		**P**	**01 06 18.0**	**-1.2**
LZH	**Lanzhou**		**22.06 320**	*e*P		**P**	**01 06 25.8**	**+5.5**
LZH					sP	pwP	01 06 34.8	-0.7
LZH					*e*S	**S**	**01 10 26.5**	**+5.6**
LZH					SS	**SnSn**	**01 10 53.5**	**+3.5**
LZH					pmax	pmax		
	comp=Z,16nm,1.1s							
LZH					LR	LR		
	comp=Z,270nm,13.0s							
LZH					LR	LR		
	comp=Z,330nm,12.5s							
LZH					LR	LR		
	comp=Z,410nm,14.4s							
GUMO	**Guam**		**23.42 103**	LR		LR	01 15 29.4	
	comp=Z,192nm,19.1s,baz=271,slow=36							
CN2	**Changchun**		**23.79 7**	*e*P		**P**	**01 06 38.3**	**+0.8**
CN2					pmax	pmax		
	comp=Z,10.0nm,0.5s							
CN2					LR	LR		
	comp=Z,200nm,15.0s							
CN2					LR	LR		
	comp=Z,200nm,15.0s							
CN2					LR	LR		
	comp=Z,200nm,17.0s							
XLT	**XiLinHaoTe**		**24.05 351**	*e*P		**P**	**01 06 39.6**	**-0.4**
KAPI	**Kappang**		**25.10 184**	LR		LR	01 16 58.9	
	comp=Z,98nm,20.4s,baz=358,slow=38							
USRK	**Ussuriysk Ar.**		**25.53 18**	P		**P**	**01 06 53.9**	**+0.6**
	comp=Z,6.4nm,0.8s,baz=218,slow=7.3,SNR=11 comp=Z,6.4nm,0.8s							
GOMU	**GeErMu**		**28.18 310**	P		**P**	**01 07 15.9**	**-1.9**
GOMU					sP	pP	01 07 23.5	-6.0
GOMU					pmax	pmax		
	comp=Z,2.0nm,0.7s							
GOMU					pmax	pmax		
	comp=Z,78nm,5.8s							
GOMU					LR	LR		
	comp=Z,140nm,13.8s							
GOMU					LR	LR		
	comp=Z,240nm,13.0s							
GOMU					LR	LR		
	comp=Z,270nm,13.8s							
ULN	**Ulaanbaatar**		**29.94 341**	P		**P**	**01 07 33.9**	**+0.9**
SONM	**Songino Array**		**30.12 340**	P		**P**	**01 07 35.8**	**+1.3**
	comp=Z,1.1nm,0.5s,baz=161,slow=9.4,SNR=7.7							
SONM					PcP	**PcP**	**01 10 36.0**	**+0.9**
	comp=Z,1.3nm,1.1s,baz=144,slow=3.4,SNR=2.9							
SONM					LR	LR	01 21 16.8	
	comp=Z,150nm,19.8s,baz=146,slow=39 comp=Z,1.1nm,0.5s							
SONM	**Songino Array**		**30.12 340**	P		**P**	**01 07 35.6**	**+1.0**
SONM						**PcP**	**01 10 34.5**	**-0.6**
KLR	**Kul'dur**		**30.14 14**	P		**P**	**01 07 35.1**	**+0.5**
	comp=Z,3.3nm,0.7s,baz=215,slow=6.7,SNR=13							
KLR					LR	LR	01 21 47.7	
	comp=Z,148nm,18.3s,baz=198,slow=40 comp=Z,3.3nm,0.7s							
MK31	**Makanchi Array**		**41.38 319**	P		**P**	**01 09 11.7**	**+1.0**
MKAR	**Makanchi Array**		**41.38 319**	P		**P**	**01 09 12.4**	**+1.6**
	comp=Z,2.2nm,0.7s,baz=115,slow=9.5,SNR=20							
MKAR					PcP	**PcP**	**01 11 08.4**	**+0.2**
	comp=Z,1.8nm,0.9s,baz=102,slow=6.1,SNR=3.3							

comp=Z,2.2nm,0.7s
MKAR **Makanchi Array** 41.38 319 P **P** **01 09 12.0 +1.3**
PALK **Pallekele** 41.40 258 LR LR 01 28 01.6
comp=Z,65nm,18.3s,baz=169,slow=39
MAKZ **Makanchi** 41.57 319 P **P** **01 09 12.6 +0.3**
WB0 **Warramunga Arr** 41.72 161 P **P** **01 09 11.3 -2.5**
WB0 IAmb IAmb 01 09 12.4
comp=Z,6.9nm,0.9s
WRAB **Tennant Creek** 41.86 162 P **P** **01 09 13.1 -1.9**
WRAB IAmb IAmb 01 09 30.4
comp=Z,16nm,1.1s
WRA **Warramunga Arr** 41.87 162 P **P** **01 09 12.8 -2.1**
comp=Z,4.9nm,0.8s,baz=333,slow=10,SNR=43
WRA PcP **PcP** **01 11 10.3 +0.1**
comp=Z,1.2nm,0.9s,baz=327,slow=3.8,SNR=3.6
comp=Z,4.9nm,0.8s
WRA **Warramunga Arr** 41.87 162 P **P** **01 09 12.8 -2.1**
WB2 **Warramunga Arr** 41.87 162 P **P** **01 09 13.0 -2.0**
WB2 IAmb IAmb 01 09 30.4
comp=Z,11nm,0.9s
WR0 **Warramunga Arr** 41.94 161 P **P** **01 09 13.3 -2.3**
WR0 IAmb IAmb 01 09 14.3
comp=Z,9.1nm,0.8s
YAK **Yakutsk** 42.20 6 LR LR 01 28 51.3
comp=Z,92nm,18.3s,baz=260,slow=39
H11N1 **WAKE ISLAND Hy** 42.70 83 T T 01 54 44.4
baz=278,slow=75,SNR=23
H11N2 **WAKE ISLAND Hy** 42.70 82 T T 01 54 44.4
baz=278,slow=75,SNR=15
H11S3 **WAKE ISLAND Hy** 42.71 84 T T 01 54 40.4
baz=281,slow=74,SNR=27
H11N3 **WAKE ISLAND Hy** 42.72 82 T T 01 54 44.4
baz=278,slow=75,SNR=14
H11S1 **WAKE ISLAND Hy** 42.72 84 T T 01 54 39.7
baz=281,slow=74,SNR=28
H11S2 **WAKE ISLAND Hy** 42.72 84 T T 01 54 40.6
baz=281,slow=74,SNR=34
PETK **Petropavlovsk-** 43.12 32 P **P** **01 09 24.8 0.0**
comp=Z,1.9nm,0.5s,baz=218,slow=9.4,SNR=4.7
PETK LR LR 01 27 47.3
comp=Z,50nm,20.8s,baz=171,slow=37
comp=Z,1.9nm,0.5s
ZAA0 **Zalesovo Array** 43.71 329 P **P** **01 09 30.3 +0.8**
ZAA0 IAmb IAmb 01 09 31.2
comp=Z,6.4nm,0.8s
ZALV **Zalesovo Beam** 43.71 329 P **P** **01 09 30.6 +1.1**
comp=Z,6.1nm,0.8s,baz=117,slow=7.5,SNR=28
ZALV LR LR 01 29 09.8
comp=Z,127nm,18.3s,baz=130,slow=38
comp=Z,6.1nm,0.8s
MA2 **Magadan** 44.62 21 P **P** **01 09 36.8 +0.1**
comp=Z,2.4nm,0.3s,baz=202,slow=19,SNR=1.6
MA2 LR LR 01 30 53.8
comp=Z,82nm,18.0s,baz=231,slow=40
comp=Z,2.4nm,0.3s
AAK **Ala-Archa** 45.13 311 LR LR 01 31 17.7
comp=Z,206nm,19.1s,baz=96,slow=40
AS31 **Alice Springs** 45.28 164 P **P** **01 09 41.0 -1.4**
KURK **Kurchatov** 45.29 323 P **P** **01 09 43.4 +1.2**
KURK IAmb IAmb 01 10 00.3
comp=Z,3.6nm,0.8s
KURBB **Kurchatov Arra** 45.30 322 P **P** **01 09 43.4 +1.0**
comp=Z,2.7nm,0.8s,baz=122,slow=7.5,SNR=26
KURBB PcP **PcP** **01 11 20.7 -0.7**
comp=Z,0.8nm,0.8s,baz=118,slow=3.3,SNR=2.5
comp=Z,2.7nm,0.8s
CTA **Charters Tower** 46.87 147 LR LR 01 27 56.4
comp=Z,56nm,21.6s,baz=280,slow=34
SEY **Seymchan** 47.67 19 P **P** **01 09 59.9 -0.8**
comp=Z,0.8nm,0.2s,baz=213,slow=23,SNR=2.1
SEY LR LR 01 32 56.6
comp=Z,42nm,18.0s,baz=228,slow=40
comp=Z,0.8nm,0.2s
BRVK **Borovoye** 50.96 323 P **P** **01 10 27.2 +1.2**
FORT **Forrest** 51.09 173 P **P** **01 10 26.4 -0.7**
TIXI **Tiksi** 51.65 3 LR LR 01 35 21.8
comp=Z,114nm,19.1s,baz=180,slow=39
TIXI **Tiksi** 51.65 3 P **P** **01 10 30.1 -0.7**
TIXI IAmb IAmb 01 10 46.1
comp=Z,17nm,1.5s
SHEM **Shemya Is, Ala** 51.81 38 P **P** **01 10 30.8 -1.5**
comp=Z,15nm,0.4s,baz=275,slow=20,SNR=2.3
STKA **Stephens Creek** 55.29 159 P **P** **01 10 54.4 -3.6**
comp=Z,2.5nm,0.7s,baz=316,slow=9.8,SNR=2.8
comp=Z,2.5nm,0.7s
BILL **Bilibino** 55.38 19 P **P** **01 10 57.7 -0.5**
BILL IAmb IAmb 01 10 58.9
comp=Z,7.4nm,0.9s
AKTO **Aktyubinsk** 57.77 317 P **P** **01 11 16.6 +1.1**
comp=Z,0.6nm,0.5s,baz=193,slow=7.7,SNR=2.1
AKTO LR LR 01 37 34.6
comp=Z,47nm,18.6s,baz=93,slow=38
comp=Z,0.6nm,0.5s
ARU **Arti** 58.41 325 LR LR 01 38 10.6
comp=Z,55nm,18.1s,baz=92,slow=38
ARU **Arti** 58.41 325 P **P** **01 11 19.9 +0.2**
ARU IAmb IAmb 01 11 36.2
comp=Z,6.1nm,0.8s
KIRV **Kirov** 63.59 326 P **P** **01 11 55.6 +0.8**
comp=Z,7.1nm,0.9s,baz=73,slow=3.6,SNR=2.0
comp=Z,7.1nm,0.9s
BELG **Belogornoye** 64.38 319 P **P** **01 12 01.4 +1.2**
comp=Z,6.5nm,0.9s,baz=52,slow=23,SNR=2.6
comp=Z,6.5nm,0.9s
GNI **Garni** 67.23 306 LR LR 01 46 19.4
comp=Z,44nm,21.2s,baz=88,slow=40
KBZ **Khabaz** 68.12 310 P **P** **01 12 25.9 +1.5**
comp=Z,2.5nm,0.8s,baz=134,slow=3.0,SNR=4.5
KBZ LR LR 01 46 45.4
comp=Z,53nm,18.8s,baz=66,slow=40
comp=Z,2.5nm,0.8s
KIV **Kislovodsk** 68.25 310 P **P** **01 12 25.0 -0.3**
KIV IAmb IAmb 01 12 40.1
comp=Z,5.3nm,0.9s
KLMR **Klimovskoe** 68.62 329 *eP* **P** **01 12 25.8 -1.3**
KLMR AMP 01 12 42.1
comp=Z,11nm,1.5s
TTA **Tatalina** 68.88 29 P **P** **01 12 28.9 +0.1**
TTA IAmb IAmb 01 12 30.5
comp=Z,4.7nm,0.8s
SVW2 **Sparrevohn** 69.20 31 P **P** **01 12 31.4 +0.6**
L19K **White Mountain** 69.47 30 P **P** **01 12 33.4 +0.9**
Q18K **Koktuh Hills** 69.48 32 P **P** **01 12 33.2 +0.7**
J20K **Nowinta River** 69.64 28 P **P** **01 12 34.2 +0.8**
RAYN **Ar Rayn** 69.70 288 P **P** **01 12 35.4 +0.7**
RAYN IAmb IAmb 01 12 51.1
comp=Z,6.1nm,1.1s
M19K **Big River Lodg** 69.71 30 P **P** **01 12 34.8 +0.9**
M19K IAmb IAmb 01 12 36.0
comp=Z,5.8nm,0.8s
K20K **Telida** 69.73 29 P **P** **01 12 35.0 +1.0**
K20K IAmb IAmb 01 12 36.2
comp=Z,5.2nm,0.8s
H21K **Melozitna Rive** 70.09 26 P **P** **01 12 37.4 +1.3**
MLY **Manley** 71.02 27 P **P** **01 12 42.7 +0.8**
TOLK **Toolik Lake Re** 71.04 23 P **P** **01 12 42.4 +0.4**
TOLK IAmb IAmb 01 12 43.7
comp=Z,4.0nm,0.9s
H23K **Yukon River** 71.41 26 P **P** **01 12 45.0 +0.7**
NEA2 **Nenana** 71.78 27 P **P** **01 12 47.4 +0.9**
NEA2 IAmb IAmb 01 12 47.8
comp=Z,6.4nm,1.0s
RND **Reindeer** 72.06 28 P **P** **01 12 47.7 -0.6**
MDM **Murphy Dome** 72.08 27 P **P** **01 12 48.6 +0.3**
MDM IAmb IAmb 01 12 50.3
comp=Z,7.6nm,1.0s
H24K **Noodor Dome** 72.09 26 P **P** **01 12 49.2 +0.9**
H24K IAmb IAmb 01 13 01.7
comp=Z,4.5nm,1.0s
ILAR **Eielson Array** 72.68 27 P **P** **01 12 52.1 +0.3**
comp=Z,0.8nm,0.8s,baz=282,slow=6.8,SNR=10
ILAR LR LR 01 45 22.7
comp=Z,25nm,20.8s,baz=182,slow=36
comp=Z,0.8nm,0.8s
BMAR **Burnt Mountain** 73.09 24 P **P** **01 12 55.0 +0.8**
ARCES **ARCESS Array B** 73.29 339 P **P** **01 12 56.4 +1.1**
comp=Z,2.8nm,0.8s,baz=81,slow=7.5,SNR=6.6
ARCES LR LR 01 46 42.4
comp=Z,44nm,18.2s,baz=116,slow=37
comp=Z,2.8nm,0.8s
ARCES **ARCESS Array B** 73.29 339 P **P** **01 12 54.4 -1.0**
SPITS **Spitsbergen Ar** 73.40 348 LR LR 01 49 57.6
comp=Z,78nm,19.2s,baz=34,slow=40
J26L **Joseph Creek** 74.14 27 P **P** **01 13 00.5 0.0**
K27K **Chicken** 74.88 27 P **P** **01 13 05.1 +0.4**
K27K IAmb IAmb 01 13 06.6
comp=Z,4.0nm,0.9s

M26K **Nabesna, AK** 74.89 29 P **P** **01 13 05.7 +0.8**
M26K IAmb IAmb 01 13 10.4
comp=Z,6.8nm,0.9s
FINES **FINESS Array B** 74.96 330 P **P** **01 13 05.9 +0.7**
comp=Z,3.6nm,0.8s,baz=96,slow=9.6,SNR=14
comp=Z,3.6nm,0.8s
ASF **Jabal al Asfar** 75.00 299 P **P** **01 13 05.7 -0.5**
comp=Z,1.2nm,0.7s,baz=48,slow=4.5,SNR=1.6
comp=Z,1.2nm,0.7s
L27K **Beaver Creek,** 75.24 28 P **P** **01 13 07.2 +0.3**
L27K IAmb IAmb 01 13 12.1
comp=Z,4.9nm,1.1s
BCAR **Beaver Creek A** 75.26 28 P **P** **01 13 07.1 +0.1**
BRTR **Keskin Array B** 75.68 307 P **P** **01 13 10.2 +0.2**
comp=Z,0.6nm,0.9s,baz=100,slow=16,SNR=2.8
comp=Z,0.6nm,0.9s
AKASG **Malin Array Be** 75.96 319 P **P** **01 13 11.4 +0.3**
comp=Z,1.0nm,0.7s,baz=63,slow=6.0,SNR=7.7
AKASG LR LR 01 49 30.2
comp=Z,74nm,18.0s,baz=26,slow=38
comp=Z,1.0nm,0.7s
CTGM **Chitina Glacie** 76.04 30 P **P** **01 13 09.3 -2.3**
IDID **Didziasalis** 76.21 324 *eP* **P** **01 13 13.6 +1.1**
NACGM **Naroch** 76.30 324 *eP* **P** **01 13 14.7 +1.7**
baz=75
ISAL **Salakas** 76.48 324 *eP* **P** **01 13 15.2 +1.2**
IIGN **Ignalina** 76.49 324 *eP* **P** **01 13 15.2 +1.1**
INK **Inuvik** 76.85 22 LR LR 01 50 32.4
comp=Z,26nm,18.5s,baz=164,slow=38
PABE **Paberze** 77.67 325 *eP* **P** **01 13 22.1 +1.5**
SUW **Suwalki** 78.57 323 *eP* **P** **01 13 25.8 +0.1**
SUW **Suwalki** 78.57 323 P **P** **01 13 25.4 -0.2**
SUW **Suwalki** 78.57 323 *eP* **P** **01 13 26.4 +0.7**
BUR08 **Bucovina Ar. S** 79.36 317 P **P** **01 13 30.6 +0.3**
HFS **Hagfors** 81.11 331 LR LR 01 53 42.5
comp=Z,82nm,18.0s,baz=60,slow=39
NB2 **NORSAR Subarra** 81.81 333 P **P** **01 13 42.9 -0.1**
comp=Z,0.7nm,0.7s,baz=62,slow=5.6
NOA **NORSAR Array B** 81.81 333 P **P** **01 13 43.0 -0.1**
comp=Z,1.5nm,0.8s,baz=68,slow=5.1,SNR=5.2
NOA LR LR 01 53 32.4
comp=Z,77nm,18.8s,baz=65,slow=38
comp=Z,1.5nm,0.8s
NIE **Niedzica** 81.82 320 *eP* **P** **01 13 44.6 +1.3**
OJC **Ojcow** 81.83 321 *eP* **P** **01 13 43.9 +0.6**
RES **Resolute Bay** 82.56 9 LR LR 01 55 11.0
comp=Z,23nm,18.2s,baz=18,slow=39
MORC **Moravsky Berou** 83.34 321 *eP* **P** **01 13 52.0 +0.7**
JAVC **Velka Javorina** 83.63 320 *eP* **P** **01 13 54.9 +2.1**
KSP **Ksiaz** 83.65 322 *eP* **P** **01 13 53.9 +1.1**
KRLC **Kraliky** 83.68 321 *eP* **P** **01 13 53.0 0.0**
KRLC *es*P **pP** **01 14 06.4 +0.3**
OSTC **Ostas** 83.81 322 *eP* **P** **01 13 54.4 +0.8**
OSTC *ex* x 01 14 10.5
DPC **Dobruska-Polom** 83.83 322 *eP* **P** **01 13 54.8 +1.0**
CHVC **Chvalec** 83.89 322 *eP* **P** **01 13 54.8 +0.7**
CHVC *ex* x 01 14 12.6
DIVS **Divibare** 83.99 315 P **P** **01 13 54.7 -0.1**
DIVS IAmb IAmb 01 13 56.3
comp=Z,5.4nm,1.2s
VRAC **Vranov** 84.10 320 *eP* **P** **01 13 56.1 +1.0**
KRUC **Moravsky** 84.32 320 *eP* **P** **01 13 57.0 +0.8**
TREC **Trest** 84.76 321 *eP* **P** **01 13 59.1 +0.6**
TREC *ex* x 01 14 14.7
BRG **Berggiesshubel** 84.99 323 *eP* **P** **01 13 57.4 -2.2**
BRG Amp 01 14 02.0
comp=Z,5.4nm,1.0s
PRU **Pruhonice** 85.03 322 *eP* **P** **01 14 00.9 +1.1**
CLL **Collm** 85.33 323 *i* P **P** **01 14 01.6 +0.4**
comp=Z,7.0nm,1.2s
CKRC **Cesky Krumlov** 85.67 321 *eP* **P** **01 14 03.3 +0.3**
CKRC *ex* x 01 14 18.0
KHC **Kasperske Hory** 85.96 321 *eP* **P** **01 14 03.0 -1.5**
KHC *ex* x 01 14 20.1
GERES **GERESS Array B** 86.02 321 P **P** **01 14 05.2 +0.3**
comp=Z,0.6nm,0.8s,baz=46,slow=9.5,SNR=6.0
comp=Z,0.6nm,0.8s
GERES **GERESS Array B** 86.02 321 P **P** **01 14 04.0 -0.9**
SUMG **Summit** 86.47 354 *i* P **P** **01 14 06.0 -1.0**
YKA **Yellowknife Ar** 86.57 23 P **P** **01 14 06.4 -0.8**
comp=Z,1.7nm,0.7s,baz=306,slow=4.1,SNR=5.7
comp=Z,1.7nm,0.7s
MBAR **Mbarara** 90.79 270 LR LR 01 54 41.3
comp=Z,24nm,19.9s,baz=77,slow=35
EKA **Eskdalemuir Ar** 91.29 332 LR LR 02 00 29.1
comp=Z,91nm,19.1s,baz=44,slow=39
LSZ **Lusaka** 98.05 257 LR LR 01 55 03.4
comp=Z,50nm,19.6s,baz=130,slow=33
NVAR **Mina Array Bea** 99.22 43 P **Pdif** **01 15 07.2 +0.8**
comp=Z,0.4nm,0.6s,baz=263,slow=6.3,SNR=4.4
comp=Z,0.4nm,0.6s

TUL ***21*** *01:13:53.5±0.9, 36.45N±0.02×98.77W±0.04, h8km±4km, ML3.1,mb_Lg2.6/44(NEIC), Error ellipse: s-maj=4.6km s-min=2.5km az=73.0*

NEIC 21 01:13:53.6±0.9, 36.45N±0.02×98.76W±0.04, h9km±5km, Error ellipse: s-maj=5.8km s-min=2.6km az=61.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKCSW	**OKLAHOMA CITY**	1.50	134	Pn	Pn	01 14 20.5	-0.3
FNO	**Franklin**	1.62	137		Pn	01 14 22.7	+0.2
WMOK	**Wichita Mounta**	1.71	181		Pn	01 14 23.3	-0.5
T35A	**Sooner Cattle**	1.86	75		Pn	01 14 26.3	+0.5
R32A	**Long Quarter,**	1.97	1		Pn	01 14 26.9	-0.4
X34A	**Smith Ranch, M**	2.00	158		Pn	01 14 27.7	+0.1
X34A				IAmb_Lg		01 14 58.8	
comp=Z,33nm,0.8s							
TUL1	**Leonard**	2.46	102	Pn	Pn	01 14 34.4	+0.4
AMTX	**Amarillo**	2.85	238	IAmb_Lg		01 15 23.8	
comp=Z,25nm,0.9s							
X37A	**Clayton**	3.33	123	Pn	Pn	01 14 45.8	-0.1
X37A				IAmb_Lg		01 15 44.1	
comp=Z,22nm,0.7s							
U38A	**Gravette**	3.52	89	Pn	Pn	01 14 48.9	+0.2
U38A				IAmb_Lg		01 15 52.6	
comp=Z,14nm,0.8s							
ABTX	**Abilene, Hawle**	3.89	191	Pn	Pn	01 14 53.9	+0.2
HHAR	**Hobbs**	3.89	91	Pn	Pn	01 14 53.8	+0.1
KSCO	**Kaye Shedlock'**	3.99	311	IAmb_Lg		01 16 08.8	
comp=Z,16nm,0.8s							
MSTX	**Muleshoe**	4.12	234	IAmb_Lg		01 16 12.2	
comp=Z,9.3nm,0.8s							
W39A	**Magazine**	4.23	106	IAmb_Lg		01 16 16.3	
comp=Z,8.0nm,0.8s							
S39A	**Bolivar**	4.52	73	IAmb_Lg		01 16 19.3	
comp=Z,10nm,0.7s							
T25A	**Trinidad**	4.59	280	Pn	Pn	01 15 02.6	-0.8
T25A				IAmb_Lg		01 16 26.7	
comp=Z,10nm,0.8s							
MIAR	**Mount Ida**	4.63	113	IAmb_Lg		01 16 27.1	
comp=Z,13nm,1.2s							
U40A	**Yellville**	4.76	89	IAmb_Lg		01 16 25.3	
comp=Z,13nm,0.8s							
MGMO	**Mountain Grove**	5.25	80	IAmb_Lg		01 16 49.3	
comp=Z,6.8nm,0.8s							
FCAR	**Ozark Folk Cen**	5.39	94	Pn	Pn	01 15 14.4	+0.1
FCAR				IAmb_Lg		01 16 43.7	
comp=Z,9.8nm,1.1s							
W41B	**Gary Mavity, V**	5.44	102	IAmb_Lg		01 16 50.7	
comp=Z,9.2nm,1.0s							
R40A	**Maddies Statio**	5.48	69	IAmb_Lg		01 16 55.3	
comp=Z,6.7nm,0.8s							
SDCO	**Great Sand Dun**	5.54	285	Pn	Pn	01 15 16.1	-0.5
JCT	**Junction City**	6.02	189	IAmb_Lg		01 17 10.1	
comp=Z,8.0nm,1.1s							
PBMO	**Poplar Bluff**	6.71	85	IAmb_Lg		01 17 30.5	
comp=Z,7.5nm,0.7s							
FVM	**French Village**	6.82	75	IAmb_Lg		01 17 42.3	
comp=Z,9.5nm,1.1s							
N23A	**Red Feather La**	7.16	310	IAmb_Lg		01 17 43.8	
comp=Z,9.4nm,1.2s							
SIUC	**Southern Illin**	7.73	78	IAmb_Lg		01 18 00.5	
comp=Z,7.7nm,0.8s							
RSSD	**Black Hills**	8.65	334	IAmb_Lg		01 18 34.0	
comp=Z,6.4nm,1.1s							

SOME ***21*** *02:16:57.7, 42.90N×71.85E, h10km*
KRNET ***21*** *02:16:57.5±0.1, 42.77N×71.77E, h14km, mb3.0*
NNC ***21*** *02:16:58.1±0.3, 42.89N×71.80E, h7km±8km, mb3.9, mpv3.5, Error ellipse: s-maj=9.0km s-min=1.3km az=5.0*

KNET ***21*** *02:17:00.6±0.6, 42.66N×71.95E, h26km±2km, ml2.5, Error ellipse: s-maj=6.8km s-min=4.4km az=4.0*

ISC 21 02:16:58.8±1.2, 42.74N±0.03×71.76E±0.02, h3km±11km, n55, σ1.46/94, 35C-11D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZA	**Taraz**	0.35	296	*e*P	Pg	02 17 05.2	-0.3
113nm,0.1s							
DZA				*e*S	Sg	02 17 10.8	+0.7
1μm,0.2s							
DZA	**Taraz**	0.35	296	P	Pg	02 17 05.2	-0.3
113nm,0.1s							
DZA				S	Sg	02 17 10.9	+0.7
1μm,0.2s							
ARK	**Arkit**	0.95	171	⇑*i*P	Pb	02 17 15.6	-2.4
baz=71							
ARK				⇑*i*S	Sb	02 17 28.8	-2.2
baz=71							
KK31	**Karatay Array**	0.99	292	⇓P	Pb	02 17 16.3	-2.3
1.7nm,0.2s,baz=114,slow=17,SNR=185							
KK31				⇑S	Sg	02 17 30.6	+0.1
9.9nm,0.2s,baz=128,slow=14,SNR=30							
KKAR	**Karatay Array**	0.99	292	⇑*i*P	Pb	02 17 16.0	-2.5
baz=90							
KKAR				⇑*i*S	Sb	02 17 29.7	-2.2
baz=90							
MRKS	**Merke**	1.08	89	*e*P	Pb	02 17 18.6	-1.6
13nm,0.1s							
MRKS				*e*S	Sb	02 17 33.7	-1.0
49nm,0.3s							
MRKS	**Merke**	1.08	89	P	Pb	02 17 18.6	-1.6
13nm,0.1s							
MRKS				S	Sb	02 17 33.7	-1.0
49nm,0.3s							
TRKS	**Terek-Say**	1.29	201	⇑*i*P	Pn	02 17 23.2	-0.6
baz=99							
TRKS				⇑*i*S	Sb	02 17 41.6	+0.8
baz=99							
IUG	**Iuzhnay**	1.41	246	*e*P	Pn	02 17 25.4	0.0
628nm,0.4s							
IUG				*e*S	Sg	02 17 45.4	+1.4
255nm,0.4s							
IUG	**Iuzhnay**	1.41	246	P	Pn	02 17 25.4	0.0
628nm,0.4s							
IUG				S	Sg	02 17 45.4	+1.4
255nm,0.4s							
BRLS	**Borolday**	1.44	282	*e*P	Pb	02 17 26.2	-0.1
3.2nm,0.2s							
BRLS				*e*S	Sg	02 17 46.8	+1.7
64nm,0.2s							
BRLS	**Borolday**	1.44	282	P	Pb	02 17 26.2	-0.1
3.9nm,0.2s							
BRLS				S	Sg	02 17 46.8	+1.7
64nm,0.2s							
EKS2	**Erkin-Say**	1.49	92	P	Pn	02 17 25.5	-1.1
9.6nm,0.1s,SNR=29							
EKS2				⇑S	Sn	02 17 44.9	-1.7
45nm,0.2s							
EKS2	**Erkin-Say**	1.49	92	⇑*i*P	Pn	02 17 24.8	-1.8
baz=93							
EKS2				⇑*i*S	Sn	02 17 44.8	-1.7
baz=93							
AML	**Almayashu**	1.56	112	⇓P	Pn	02 17 26.3	-1.4
12nm,0.1s,SNR=15							
AML				⇓S	Sn	02 17 46.9	-1.7
46nm,0.4s							
AAK	**Ala-Archa**	2.02	92	⇑P	Pn	02 17 34.2	+0.3
12nm,0.2s,SNR=5.6							
AAK				⇓S	Sn	02 18 00.2	+0.5
20nm,0.2s							
AAK	**Ala-Archa**	2.02	92	⇑*i*P	Pn	02 17 33.6	-0.3
baz=93							
AAK				⇑*i*S	Sn	02 17 59.9	+0.2
baz=93							
USP	**Ospenovka**	2.08	74	⇑*i*P	Pn	02 17 34.2	-0.4
baz=75							
USP				⇑*i*S	Sn	02 18 01.0	0.0
baz=75							
ARLS	**Aral**	2.10	114	⇑*i*P	Pn	02 17 34.8	-0.1
baz=15							
ARLS				⇑*i*S	Sn	02 18 02.0	+0.5
baz=15							
UCH	**Uchtor**	2.10	103	⇓P	Pn	02 17 35.7	+0.4
3.7nm,0.1s,SNR=23							
UCH				⇓S	Sn	02 18 01.9	-0.2
26nm,0.3s							
UCH	**Uchtor**	2.10	103	⇑*i*P	Pn	02 17 35.0	-0.3
baz=4.0							
UCH				⇑*i*S	Sn	02 18 02.5	+0.4
baz=4.0							
CHMS	**Chumysh**	2.22	82	⇑P	Pn	02 17 36.2	-0.2
4.7nm,0.1s,SNR=6.9							
CHMS				⇑S	Sn	02 18 05.0	+0.6
12nm,0.1s							
CHMS	**Chumysh**	2.22	82	⇓*i*P	Pn	02 17 36.2	-0.2
baz=83							
CHMS				⇓*i*S	Sn	02 18 04.4	0.0
baz=83							
CHMS	**Chumysh**	2.22	82	⇑Pg	Pn	02 17 36.9	+0.4
2.1nm,0.2s							
CHMS				⇑Lg	Lg	02 18 06.8	
8.9nm,0.4s							
SGDS	**Sogindy**	2.22	70	*e*P	Pn	02 17 37.4	+0.8
6.6nm,0.2s							
SGDS				*e*S	Sn	02 18 05.8	+1.3
23nm,0.2s							
SGDS	**Sogindy**	2.22	70	Pg	Pn	02 17 37.4	+0.8
6.6nm,0.2s							
SGDS				Lg	Lg	02 18 05.9	
23nm,0.2s							
OHH	**Osh**	2.34	160	⇑*i*P	Pn	02 17 38.6	+0.4
baz=61							
OHH				⇑*i*S	Sn	02 18 08.9	+1.4
baz=61							
KBK	**Karagaybulak**	2.35	91	⇑P	Pn	02 17 39.3	+0.8
5.4nm,0.1s,SNR=5.8							
KBK				⇓del		02 18 11.2	
37nm,0.2s							
KBK	**Karagaybulak**	2.35	91	⇑*i*P	Pn	02 17 38.4	-0.1
baz=92							
KBK				⇑*i*S	Sn	02 18 08.0	+0.1
baz=92							
BTK	**Batken**	2.77	195	⇑*i*P	Pn	02 17 44.7	+0.6
baz=95							
BTK				⇑*i*S	Sn	02 18 19.0	+1.0
baz=95							
TKM2	**Tokmak 2**	2.83	85	⇑*i*P	Pn	02 17 44.9	-0.2
baz=86							
TKM2				⇑*i*S	Sn	02 18 19.4	-0.3
baz=86							
TKM2	**Tokmak 2**	2.83	85	⇑Pg	Pb	02 17 48.3	-1.7
1.5nm,0.3s							
TKM2				⇑Lg	Lg	02 18 25.6	
7.7nm,0.3s							
BTLS	**Baital**	2.84	35	*e*P	Pn	02 17 44.5	-0.4
1.0nm,0.1s							
BTLS				*e*S	Sn	02 18 17.7	-1.9
8.0nm,0.3s							
DGS	**Degeres**	2.99	79	*e*P	Pb	02 17 51.9	-0.8
6.0nm,0.2s							
DGS				*e*S	Sb	02 18 30.9	+1.3
11nm,0.4s							
DGS	**Degeres**	2.99	79	Pg	Pb	02 17 51.9	-0.8
6.0nm,0.2s							
DGS				Lg	Lg	02 18 30.9	
11nm,0.4s							
KRBS	**Karabastau**	3.02	70	*e*P	Pb	02 17 52.2	-1.0
3.1nm,0.2s							
KRBS				*e*S	Sb	02 18 31.0	+0.5
10nm,0.3s							
KRBS	**Karabastau**	3.02	70	Pg	Pb	02 17 52.2	-1.0
3.1nm,0.2s							
KRBS				Lg	Lg	02 18 31.0	
10nm,0.3s							
BOOM	**Boomskoye usch**	3.10	93	⇓*i*P	Pn	02 17 48.7	0.0
baz=94							
BOOM				⇓*i*S	Sn	02 18 25.7	-0.6
baz=94							
KST	**Kastek**	3.11	83	*e*P	Pb	02 17 54.2	-0.5
5.5nm,0.3s							
KST				*e*S	Sb	02 18 34.6	+1.5
22nm,0.8s							
KST	**Kastek**	3.11	83	Pg	Pb	02 17 54.3	-0.5
5.5nm,0.3s							
KST				Lg	Lg	02 18 34.6	
22nm,0.8s							
MTBS	**Maitube**	3.45	82	*e*P	Pb	02 18 00.1	-0.5
4.1nm,0.3s							

MTBS					*e*S		**Sb**	**02 18 44.9**	**+1.9**
	10nm,0.3s								
MTBS	**Maitube**	**3.45**	**82**		Pg		**Pb**	**02 18 00.1**	**-0.5**
	4.1nm,0.3s								
MTBS					Lg		Lg	02 18 44.9	
	10nm,0.3s								
KUU	**Kurty**	**3.54**	**69**		*e*P		**Pb**	**02 18 01.1**	**-1.0**
	2.9nm,0.2s								
KUU					*e*S		**Sb**	**02 18 46.3**	**+1.0**
	12nm,0.2s								
KUU	**Kurty**	**3.54**	**69**		Pg		**Pb**	**02 18 01.1**	**-1.0**
	2.9nm,0.2s								
KUU					Lg		Lg	02 18 46.3	
	12nm,0.2s								
KTBS	**Karatobe**	**3.73**	**73**		*e*P		**Pb**	**02 18 04.8**	**-0.5**
	3.2nm,0.5s								
KTBS					*e*S		**Sb**	**02 18 52.6**	**+1.7**
	17nm,0.4s								
KTBS	**Karatobe**	**3.73**	**73**		Pg		**Pb**	**02 18 04.8**	**-0.5**
	3.2nm,0.5s								
KTBS					Lg		Lg	02 18 52.6	
	17nm,0.4s								
TNSS	**Tian-Shan**	**3.83**	**84**		*e*P		**Pb**	**02 18 07.7**	**+0.5**
	5.0nm,0.2s								
TNSS					*e*S		**Sb**	**02 18 57.5**	**+3.5**
	6.6nm,0.5s								
TNSS	**Tian-Shan**	**3.83**	**84**		Pg		**Pb**	**02 18 07.7**	**+0.5**
	5.0nm,0.2s								
TNSS					Lg		Lg	02 18 57.5	
	6.6nm,0.5s								
CHKK	**Chushkaly**	**3.98**	**72**		*e*P		**Pb**	**02 18 09.5**	**0.0**
	1.6nm,0.2s								
CHKK					*e*S		**Sb**	**02 19 01.4**	**+3.4**
	12nm,0.5s								
CHKK	**Chushkaly**	**3.98**	**72**		Pg		**Pb**	**02 18 09.5**	**0.0**
	1.6nm,0.2s								
CHKK					Lg		Lg	02 19 01.4	
	12nm,0.5s								
KPKS	**Kokpek**	**5.12**	**79**		*e*P		**Pb**	**02 18 31.4**	**+2.3**
	2.8nm,0.3s								
KPKS					*e*S		**Sg**	**02 19 39.0**	**-4.3**
	7.3nm,0.3s								
KPKS	**Kokpek**	**5.12**	**79**		Pg		**Pb**	**02 18 31.4**	**+2.3**
	2.8nm,0.3s								
KPKS					Lg		Lg	02 19 39.0	
	7.3nm,0.3s								
UZB	**Uzynbulak**	**5.35**	**83**		*e*P		**Pb**	**02 18 37.4**	**+4.5**
	1.7nm,0.2s								
UZB					*e*S		**Sg**	**02 19 49.0**	**-1.6**
	4.0nm,0.5s								
UZB	**Uzynbulak**	**5.35**	**83**		Pg		**Pb**	**02 18 37.4**	**+4.5**
	1.7nm,0.2s								
UZB					Lg		Lg	02 19 49.0	
	4.0nm,0.5s								
OTUK	**Ortayu**	**5.52**	**4**	⇑	Lg		Lg	02 19 51.1	
	6.6nm,0.8s								

IDC 21 02:30:24.8±14.0,**7°.85S**×**129°.16E**,**h250**km±181km,
mb2.9/2,mbtmp3.4/3,MS3.4/1,Error ellipse:
s-maj=109.9km s-min=81.3km az=82.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.03**	**158**	P	Pn	02 33 21.7	+0.5
	0.3nm,0.6s,baz=342,slow=13,SNR=23						
WRA				S	S	02 35 45.6	-0.4
	0.5nm,0.3s,baz=335,slow=22,SNR=9.5						
JOW	**Kunigami**	**34.48**	**359**	LR	LR	02 48 49.2	
	comp=Z,59nm,20.9s,baz=50,slow=32						
SONM	**Songino Array**	**58.98**	**342**	P	P	02 39 59.0	+0.6
	0.4nm,0.6s,baz=167,slow=7.1,SNR=2.5						
	0.4nm,0.6s						
MKAR	**Makanchi Array**	**68.48**	**327**	P	P	02 40 59.5	-0.7
	0.3nm,0.6s,baz=119,slow=8.1,SNR=2.6						
	0.3nm,0.6s						

*INET **21** 02:46:09.3±0.4, 12°.93N×87°.04W, h6km±6km, ML3.2*
*SNET **21** 02:46:12.3±0.7, 13°.04N×87°.19W, h3km±21km, ML2.6*
ISC 21 02:46:08.4±1.0,**12°.94N**±0°.05×**87°.06W**±0°.05,**h13km**,**n8,**
σ0§78/12,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**0.24**	**177**	*e*P	**Pb**	**02 46 15.2**	**+0.5**
CRIN				*e*S	**Sb**	**02 46 18.9**	**+0.1**
CRIN				IAML		02 46 23.9	
	comp=N,5μm,0.3s						
TEL3	**Telica 3**	**0.42**	**150**	*e*P	**Pb**	**02 46 17.7**	**-0.1**
CNCH	**Conchagua**	**0.82**	**294**	*e*P	**Pn**	**02 46 26.0**	**+0.2**
CNCH				*e*S	**Sn**	**02 46 36.7**	**-1.1**
CNCH				IAML		02 46 43.2	
	comp=Z,509nm,0.3s						
LCND	**La Caada**	**0.88**	**295**	*e*P	**Pn**	**02 46 26.5**	**0.0**
LCND				*e*S	**Sn**	**02 46 38.4**	**-0.8**
LCND				IAML		02 46 44.5	
	comp=Z,149nm,0.3s						
RCON	**San Juan de Ri**	**1.04**	**58**	*e*P	**Pn**	**02 46 28.8**	**0.0**
MATN	**Matagalpa**	**1.11**	**90**	*e*P	**Pb**	**02 46 28.4**	**-1.1**
TGUH	**Tegucigalpa,Un**	**1.13**	**350**	*e*P	**Pg**	**02 46 31.4**	**+1.2**
TGUH				*e*S	**Sn**	**02 46 46.1**	**+0.6**
SCLA	**Alcaldia de Sa**	**1.79**	**295**	*e*P	**Pg**	**02 46 42.5**	**-0.2**

*STR **21** 02:47:11.0±0.5, 43°.N±3°×°±°, h0km, MLv1.6/9, Error*
ellipse: s-maj=0.0km s-min=0.0km az=6.8, preliminary
*LDG **21** 02:47:11.0±0.0, 43°.06N×0°.38W, h6km, Md2.5/3, Ml2.2/17,*
Error ellipse: s-maj=0.9km s-min=0.7km az=129.0
*MDD **21** 02:47:12.2±0.4, 43°.09N×0°.40W, h11km, mb_Lg2.1/9,*
Error ellipse: s-maj=2.5km s-min=1.9km az=176.0
ISC 21 02:47:09.5±0.9,**43°.11N**±0°.02×**0°.40W**±0°.02,**h13**km±8km,
n46,σ1§10/90,Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATE	**Arette**	**0.22**	**265**	Pg	**Pb**	**02 47 15.4**	**0.0**
ATE				Sg	**Sb**	**02 47 19.0**	**-0.5**
ETSF	**Etsaut**	**0.24**	**210**	*e*Pg	**Pg**	**02 47 14.5**	**-0.1**
ETSF				*e*Sg	**Sg**	**02 47 16.9**	**-1.2**
	21nm,0.2s						
PYLO	**Lourdes**	**0.26**	**91**	Pg	**Pb**	**02 47 15.7**	**-0.4**
PYLO				Sg	**Sb**	**02 47 19.7**	**-0.8**
CANF	**Canfranc**	**0.35**	**194**	Pg	**Pb**	**02 47 17.3**	**-0.4**
CANF				Sg	**Sg**	**02 47 20.7**	**-0.8**
VIEF	**Viey**	**0.38**	**125**	Pg	**Pg**	**02 47 17.8**	**-0.5**
VIEF				Sg	**Sg**	**02 47 22.4**	**0.0**
EPF	**Esparros**	**0.55**	**98**	*e*Pg	**Pb**	**02 47 20.8**	**-0.2**
EPF				*e*Sg	**Sg**	**02 47 27.8**	**+0.3**
	13nm,0.2s						
SJPF	**Ste Jean**	**0.60**	**271**	*e*Pg	**Pb**	**02 47 22.6**	**+0.6**
SJPF	**Ste Jean**	**0.60**	**271**	*e*P	**Pn**	**02 47 23.9**	**0.0**
SJPF				*e*Sg	**Sb**	**02 47 30.9**	**+0.4**
	6.2nm,0.3s						
ECHI	**Chisagues Biel**	**0.62**	**135**	Pg	**Pb**	**02 47 22.1**	**-0.2**
ECHI				Sg	**Sg**	**02 47 29.7**	**-0.1**
ECHI				*i* Vmb_Lg		02 47 31.2	
ECHI	**Chisagues Biel**	**0.62**	**135**	Pg	**Pb**	**02 47 22.1**	**-0.2**
ECHI				Sg	**Sg**	**02 47 29.7**	**-0.1**
OSSF	**Osses**	**0.65**	**284**	Pg	**Pn**	**02 47 23.9**	**-0.6**
EORO	**Oroz-Betelu**	**0.70**	**253**	Pg	**Pn**	**02 47 24.9**	**-0.4**
EORO				Sg	**Sb**	**02 47 33.4**	**+0.1**
EORO				*i* Vmb_Lg		02 47 37.4	
EALK	**Alkurruntz**	**0.82**	**278**	Pg	**Pn**	**02 47 27.1**	**+0.2**
EALK				Sg	**Sn**	**02 47 39.1**	**+0.1**
ESAC	**San Caprasio**	**1.38**	**182**	Pg	**Pg**	**02 47 37.8**	**+1.7**
ESAC				Sg	**Sg**	**02 47 55.8**	**+1.7**
PAND	**Andorre**	**1.55**	**111**	Pg	**Pg**	**02 47 39.9**	**+0.7**
PAND				Sn	**Sg**	**02 48 00.0**	**+0.7**
MONQ	**Montcuq**	**1.71**	**42**	Pn	**Pg**	**02 47 43.1**	**+0.8**
MONQ				Sn	**Sg**	**02 48 05.9**	**+1.3**
LRVF	**chteau la Riv**	**1.84**	**2**	Pg	**Pg**	**02 47 45.4**	**+0.6**
FNEB	**Nbias**	**1.85**	**95**	Pg	**Pg**	**02 47 45.9**	**+0.9**
MTLF	**Montolieu**	**1.93**	**82**	*e*Pn	**Pn**	**02 47 42.2**	**+0.1**
MTLF	**Montolieu**	**1.93**	**82**	*e*Pg	**Pg**	**02 47 46.5**	**0.0**
MTLF				*e*Sn	**Sn**	**02 48 05.3**	**-0.9**
MTLF				*e*Sg	**Sg**	**02 48 11.4**	**-0.1**
	4.3nm,0.3s						
MTLF	**Montolieu**	**1.93**	**82**	Pg	**Pg**	**02 47 47.6**	**+1.1**
LFF	**La Frestale**	**2.01**	**24**	*e*Pn	**Pn**	**02 47 44.2**	**+1.0**
LFF	**La Frestale**	**2.01**	**24**	*e*Pg	**Pg**	**02 47 49.1**	**+1.0**
LFF				*e*Sn	**Sn**	**02 48 08.7**	**+0.5**
LFF				*e*Sg	**Sg**	**02 48 16.2**	**+2.1**
	7.8nm,0.3s						
EPOB	**Poblet**	**2.07**	**147**	Pg	**Pg**	**02 47 48.9**	**-0.2**
EPOB				Sg	**Sg**	**02 48 15.9**	**-0.1**
EPOB				*i* Vmb_Lg		02 48 19.3	
ERTA	**Horta de San J**	**2.21**	**165**	Pg	**Pg**	**02 47 51.5**	**-0.5**
ERTA				Sg	**Sg**	**02 48 19.9**	**-0.8**
ERTA				*i* Vmb_Lg		02 48 22.2	
CAF	**Calviac**	**2.54**	**43**	*e*Pn	**Pn**	**02 47 51.4**	**+0.8**
CAF	**Calviac**	**2.54**	**43**	*e*Pg	**Pg**	**02 47 58.7**	**+0.4**
CAF				*e*Sn	**Sn**	**02 48 21.1**	**-0.4**
CAF				*e*Sg	**Sg**	**02 48 32.1**	**+0.9**
	1.7nm,0.4s						
RJF	**Les Rejaudoux**	**2.59**	**31**	*e*Pn	**Pn**	**02 47 52.2**	**+0.9**
RJF	**Les Rejaudoux**	**2.59**	**31**	*e*Pg	**Pg**	**02 47 59.8**	**+0.6**
RJF				*e*Sn	**Sn**	**02 48 22.2**	**-0.5**
	1.4nm,0.3s						
RJF				*e*Sg	**Sg**	**02 48 33.9**	**+1.0**
	6.5nm,0.4s						
ETOR	**Torete**	**2.60**	**209**	Pn	**Pb**	**02 47 54.1**	**-1.9**
ETOR				Sn	**Sn**	**02 48 24.1**	**+1.3**
ETOR				*i* Vmb_Lg		02 48 28.7	
ETOR				Sg	**Sg**	**02 48 33.1**	**+0.2**
EMOS	**Mosqueruela**	**2.74**	**181**	Pg	**Pb**	**02 47 59.9**	**+1.4**
EMOS				Sn	**Sn**	**02 48 27.2**	**+0.7**
EMOS				Sg	**Sg**	**02 48 36.2**	**-1.3**
EMOS				*i* Vmb_Lg		02 48 38.1	
LASF	**Ste Croix**	**3.24**	**71**	*e*Pn	**Pn**	**02 48 00.4**	**+0.3**
LASF	**Ste Croix**	**3.24**	**71**	*e*Pg	**Pg**	**02 48 10.8**	**-0.8**
LASF				*e*Sn	**Sn**	**02 48 37.3**	**-1.3**
LASF				*e*Sg	**Sg**	**02 48 52.9**	**-0.7**
	0.9nm,0.3s						
MFF	**Saint Martin d**	**3.50**	**3**	*e*Pn	**Pn**	**02 48 04.5**	**+0.8**
MFF	**Saint Martin d**	**3.50**	**3**	*e*Pg	**Pg**	**02 48 16.0**	**-0.6**
MFF				*e*Sn	**Sn**	**02 48 44.3**	**-0.7**
	0.6nm,0.2s						
MFF				*e*Sg	**Sg**	**02 49 02.7**	**+0.8**
	0.9nm,0.2s						
TCF	**Toulx Ste Croi**	**3.69**	**29**	*e*Pg	**Pg**	**02 48 20.1**	**0.0**
TCF				*e*Sn	**Sn**	**02 48 48.3**	**-1.3**
TCF				*e*Sg	**Sg**	**02 49 08.0**	**+0.1**
	3.1nm,0.5s						
VIVF	**Saint-Julien-l**	**4.06**	**63**	*e*P	**Pn**	**02 48 15.1**	**+3.7**
VIVF				*e*Sg	**Sg**	**02 49 18.7**	**-1.1**
	0.7nm,0.2s						
BGF	**Bois d'Agland**	**4.15**	**33**	*e*Pn	**Pn**	**02 48 13.5**	**+0.8**
BGF	**Bois d'Agland**	**4.15**	**33**	*e*Pg	**Pg**	**02 48 28.4**	**-0.6**
BGF				*e*Sn	**Sn**	**02 48 59.3**	**-1.8**
BGF				*e*Sg	**Sg**	**02 49 22.7**	**-0.1**
	4.4nm,0.3s						
AVF	**Avril sur Loir**	**4.55**	**35**	*e*Pn	**Pn**	**02 48 19.0**	**+1.0**
AVF				*e*Sn	**Sn**	**02 49 08.9**	**-1.8**
AVF				*e*Sg	**Sg**	**02 49 34.7**	**-0.7**
	0.1nm,0.1s						
SMF	**Signal de Mont**	**4.65**	**39**	*e*Pn	**Pn**	**02 48 20.6**	**+1.1**
SMF				*e*Sg	**Sg**	**02 49 37.6**	**-1.1**
	0.4nm,0.2s						
SSF	**Saint Saulge**	**4.83**	**34**	*e*Pn	**Pn**	**02 48 22.2**	**+0.3**
SSF	**Saint Saulge**	**4.83**	**34**	*e*Pg	**Pg**	**02 48 40.9**	**-1.0**
SSF				*e*Sg	**Sg**	**02 49 43.2**	**-1.2**
	0.7nm,0.2s						
LOR	**Lormes**	**5.14**	**34**	*e*Pn	**Pn**	**02 48 26.5**	**+0.3**
LOR	**Lormes**	**5.14**	**34**	*e*Pg	**Pg**	**02 48 46.6**	**-1.2**
LOR				*e*Sg	**Sg**	**02 49 52.3**	**-2.0**
	1.0nm,0.2s						
GRR	**Gorron**	**5.29**	**357**	*e*P	**Pn**	**02 48 32.5**	**+4.2**
GRR				*e*Sn	**Sn**	**02 49 26.9**	**-2.3**
GRR				*e*Sg	**Sg**	**02 49 57.8**	**-1.6**
	1.0nm,0.3s						

*MAN **21** 03:27:52.8, 7°.97N×126°.95E, h11km, mb4.8, ML3.7, MS3.7*
*NEIC **21** 03:28:00.8±1.7, 7°.9N±0°.1×126°.65E±0°.07, h89km±10km,*
mb4.4/12, Error ellipse: s-maj=15.4km s-min=10.2km
az=168.0
*IDC **21** 03:28:00.8±1.9, 7°.81N×126°.56E, h94km±20km, mb3.7/9,*
mbtmp4.1/10, MS3.1/8, Error ellipse: s-maj=34.8km
s-min=15.0km az=81.0
ISC 21 03:27:53.4±0.6,**7°.95N**±0°.03×**126°.98E**±0°.08,**h21km**±5km,
n53,σ1§64/58,mb4.2/14,MS3.0/7,3C-10D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BIPH	**Bislig**	**0.66**	**291**	⇓*i*P	**Pb**	**03 28 04.8**	**-1.5**
BIPH				*i* S	**Sb**	**03 28 11.5**	**-3.5**
MATI	**Mati**	**1.23**	**216**	⇓*e*P	**Pn**	**03 28 14.3**	**-1.1**
MATI				*e*S	**Sn**	**03 28 28.7**	**-2.7**
DAV	**Davao City (W)**	**1.64**	**238**	P	**Pb**	**03 28 23.2**	**+0.2**
	643nm,0.4s,baz=70,slow=3.5,SNR=14						
DAV				S	**Sb**	**03 28 45.2**	**+1.9**
	2μm,0.7s,baz=144,slow=20,SNR=6.8						
DAV	**Davao City (W)**	**1.64**	**238**		**Pb**	**03 28 23.6**	**+0.6**
DAV				Sn	**Sb**	**03 28 42.8**	**-0.5**
BUTP	**Butuan**	**1.69**	**307**	⇓*e*P	**Pn**	**03 28 22.3**	**+0.6**
BUTP				*e*S	**Sb**	**03 28 44.2**	**-0.4**
BUKP	**Musuan**	**1.90**	**268**	⇓*i*P	**Pn**	**03 28 25.8**	**+1.1**
BUKP				*i* S	**Sn**	**03 28 49.2**	**+1.2**
GLSP	**General Luna,**	**2.01**	**335**	⇓*e*P	**Pn**	**03 28 26.2**	**+0.1**
GLSP				*e*S	**Sn**	**03 28 51.6**	**+1.0**
KCP	**Kidapawan**	**2.10**	**244**	⇓*e*P	**Pn**	**03 28 28.1**	**+0.7**
KCP				*i* S	**Sn**	**03 28 54.7**	**+1.8**
DDMP	**Don Marcelino,**	**2.23**	**215**	⇓*e*P	**Pn**	**03 28 30.4**	**+1.3**
DDMP				*e*S	**Sn**	**03 28 57.5**	**+1.6**
SCPH	**Surigao**	**2.34**	**321**	⇑*e*P	**Pn**	**03 28 32.4**	**+1.7**
SCPH				*e*S	**Sb**	**03 29 03.2**	**-0.3**
SKMP	**Bagumbayan, Su**	**2.81**	**240**	⇓*e*P	**Pn**	**03 28 38.4**	**+1.3**
CTBH	**Cotabato--PC H**	**2.81**	**255**	⇑*i*P	**Pn**	**03 28 37.9**	**+0.8**
CTBH				*i* S	**Sn**	**03 29 09.0**	**-1.3**
MSLP	**Maasin**	**3.02**	**316**	⇓*i*P	**Pn**	**03 28 42.1**	**+2.1**
MSLP				*i* S	**Sn**	**03 29 16.9**	**+1.4**
TBP	**Tagbilaran**	**3.54**	**300**	*e*P	**Pn**	**03 28 48.4**	**+1.2**
TBP				*i* S	**Sn**	**03 29 29.6**	**+1.2**
PAGZ	**Pagadian**	**3.57**	**269**	⇓*e*P	**Pn**	**03 28 48.9**	**+1.3**
LLP	**Lapu-Lapu**	**3.80**	**309**	*e*P	**Pn**	**03 28 51.6**	**+0.9**
LLP				*e*S	**Sn**	**03 29 36.3**	**+1.5**
RCP	**Roxas**	**5.51**	**311**	⇑*e*P	**Pn**	**03 29 16.5**	**+2.3**
TNTI	**Ternate**	**7.14**	**177**	Pn	**Pn**	**03 29 40.5**	**+3.8**
JOW	**Kunigami**	**18.82**	**4**	P	**Pn**	**03 32 15.0**	**+2.6**
	17nm,0.6s,baz=186,slow=11,SNR=8.5						
JOW				LR	LR	03 41 11.8	
	comp=Z,29nm,18.6s,baz=263,slow=42						
JOW	**Kunigami**	**18.82**	**4**	P	**Pn**	**03 32 14.4**	**+2.0**
JOW				IAmb	IAmb	03 32 16.6	
	comp=Z,20nm,0.7s						
MTN	**Manton Dam**	**21.06**	**169**	P	**P**	**03 32 37.7**	**+1.3**
KNRA	**Kununurra**	**23.54**	**176**	P	**P**	**03 33 02.6**	**+0.2**
JCJ	**Chichijima**	**23.88**	**35**	LR	LR	03 41 14.8	
	comp=Z,16nm,19.8s,baz=325,slow=33						
WRA	**Warramunga Arr**	**28.65**	**165**	P	**P**	**03 33 48.0**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=349,slow=9.7,SNR=15						
	comp=Z,0.5nm,0.5s						
WRA	**Warramunga Arr**	**28.65**	**165**	P	**P**	**03 33 48.8**	**0.0**
WB2	**Warramunga Arr**	**28.65**	**165**	P	**P**	**03 33 48.3**	**-0.5**
WB2				IAmb	IAmb	03 34 25.7	
	comp=Z,15nm,1.4s						
WR0	**Warramunga Arr**	**28.71**	**165**	P	**P**	**03 33 49.0**	**-0.4**
WR0				IAmb	IAmb	03 34 28.2	
	comp=Z,7.1nm,1.1s						
KSCHJ	**Chungju**	**28.81**	**2**	P	**P**	**03 33 53.3**	**+3.2**
KSCHJ				IAmb	IAmb	03 34 21.7	
	comp=Z,20nm,1.5s						
CMAR	**Chiang Mai Arr**	**29.18**	**294**	LR	LR	03 47 27.3	
	comp=Z,30nm,18.1s,baz=120,slow=40						
KSRS	**Korea Array**	**29.38**	**2**	P	**P**	**03 33 55.8**	**+0.7**
	comp=Z,0.5nm,0.3s,baz=178,slow=11,SNR=4.4						
KSRS				LR	LR	03 48 19.9	
	comp=Z,29nm,18.1s,baz=180,slow=41						
	comp=Z,0.5nm,0.3s						
MJAR	**Matsushiro Arr**	**30.25**	**18**	LR	LR	03 46 15.6	
	comp=Z,18nm,20.7s,baz=164,slow=36						
USA0B	**Ussuriysk Arra**	**36.38**	**6**	P	**P**	**03 34 55.1**	**-1.0**
USRK	**Ussuriysk Ar.**	**36.38**	**6**	P	**P**	**03 34 57.2**	**+1.1**
	comp=Z,7.6nm,0.7s,baz=195,slow=8.1,SNR=19						
	comp=Z,7.6nm,0.7s						
USRK	**Ussuriysk Ar.**	**36.38**	**6**	P	**P**	**03 34 55.7**	**-0.4**
H11N1	**WAKE ISLAND Hy**	**40.37**	**69**	T	T	04 19 17.8	
	baz=265,slow=75,SNR=18						
H11N2	**WAKE ISLAND Hy**	**40.38**	**69**	T	T	04 19 21.7	
	baz=265,slow=75,SNR=10						
H11N3	**WAKE ISLAND Hy**	**40.39**	**69**	T	T	04 19 06.3	
	baz=265,slow=75,SNR=16						
STKA	**Stephens Creek**	**41.99**	**161**	P	**P**	**03 35 43.0**	**-0.2**
	comp=Z,2.7nm,0.5s,baz=350,slow=8.3,SNR=6.6						
	comp=Z,2.7nm,0.5s						
STKA	**Stephens Creek**	**41.99**	**161**	P	**P**	**03 35 42.9**	**-0.3**
PETK	**Petropavlovsk-**	**51.47**	**23**	P	**P**	**03 36 59.3**	**+2.2**
	comp=Z,1.5nm,0.6s,baz=204,slow=6.2,SNR=4.6						
	comp=Z,1.5nm,0.6s						
PETK	**Petropavlovsk-**	**51.47**	**23**	P	**P**	**03 36 58.9**	**+1.7**
MK31	**Makanchi Array**	**54.29**	**323**	P	**P**	**03 37 16.2**	**-2.0**
MKAR	**Makanchi Array**	**54.29**	**323**	P	**P**	**03 37 16.3**	**-1.9**
	comp=Z,1.3nm,0.6s,baz=121,slow=8.2,SNR=14						
	comp=Z,1.3nm,0.6s						
ZALV	**Zalesovo Beam**	**56.99**	**332**	P	**P**	**03 37 35.6**	**-1.8**
	comp=Z,0.5nm,0.3s,baz=108,slow=7.7,SNR=2.6						
	comp=Z,0.5nm,0.3s						
AAK	**Ala-Archa**	**57.47**	**316**	LR	LR	04 06 17.3	
	comp=Z,31nm,18.6s,baz=77,slow=40						
KURK	**Kurchatov**	**58.37**	**326**	P	**P**	**03 37 45.4**	**-1.7**
KURK				IAmb	IAmb	03 37 55.9	
	comp=Z,2.1nm,0.9s						
TIXI	**Tiksi**	**63.65**	**1**	P	**P**	**03 38 22.1**	**-0.5**
TIXI				IAmb	IAmb	03 38 23.2	
	comp=Z,2.8nm,0.8s						
ILAR	**Eielson Array**	**81.21**	**26**	P	**P**	**03 40 07.2**	**-0.3**
	comp=Z,0.3nm,0.7s,baz=251,slow=5.6,SNR=3.4						
	comp=Z,0.3nm,0.7s						
FINES	**FINESS Array B**	**88.26**	**332**	P	**P**	**03 40 40.7**	**-2.3**
	comp=Z,0.7nm,0.5s,baz=83,slow=4.4,SNR=9.6						
	comp=Z,0.7nm,0.5s						
FINES	**FINESS Array B**	**88.26**	**332**	P	**P**	**03 40 40.4**	**-2.6**
HFS	**Hagfors**	**94.42**	**333**	LR	LR	04 25 55.1	
	comp=Z,27nm,18.6s,baz=352,slow=37						
NOA	**NORSAR Array B**	**95.14**	**334**	LR	LR	04 27 28.4	
	comp=Z,10nm,18.9s,baz=280,slow=38						
TORD	**Torodi Ar. Bea**	**121.76**	**291**	PKP	**PKPdf**	**03 46 45.1**	**-1.8**
	comp=Z,0.6nm,0.9s,baz=81,slow=4.0,SNR=1.8						

IDC 21 03:42:30.6±2.9,**7°.40S**×**154°.75E**,**h0km**,**mb3.7/5,**
mbtmp3.7/5,Error ellipse: s-maj=93.9km s-min=36.1km
az=129.0,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.39**	**236**	P	P	03 47 40.6	-0.6
	1.1nm,1.0s,baz=57,slow=9.4,SNR=4.5						
	1.1nm,1.0s						
SONM	**Songino Array**	**69.54**	**327**	P	P	03 53 42.2	+0.8
	0.4nm,0.5s,baz=141,slow=9.3,SNR=1.6						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**83.54**	**319**	P	P	03 55 01.0	+0.3
	0.4nm,0.7s,baz=108,slow=4.7,SNR=2.9						
	0.4nm,0.7s						
ILAR	**Eielson Array**	**83.84**	**22**	P	P	03 55 01.5	-0.2
	0.3nm,0.7s,baz=238,slow=5.2,SNR=4.7						
	0.3nm,0.7s						
ZALV	**Zalesovo Beam**	**84.38**	**326**	P	P	03 55 04.4	-0.3
	0.8nm,0.5s,baz=123,slow=5.3,SNR=3.7						
	0.8nm,0.5s						

*DNK **21** 03:53:42.6±0.5, 51°.61N×15°.95E, h0km±183km*
*IPEC **21** 03:53:43.9±0.2, 51°.56N×16°.17E, h1km, ML2.7/5, Error*
ellipse: s-maj=2.0km s-min=1.1km az=36.0
*IDC **21** 03:53:44.4±0.8, 51°.53N×16°.05E, h0km, mbtmp3.1/7,*
ML2.7/7, Error ellipse: s-maj=12.8km s-min=7.3km
az=104.0
*PRU **21** 03:53:44.0±0.0, 51°.57N×16°.10E, h0km*
*VIE **21** 03:53:45.5±0.8, 51°.47N×16°.03E, h0km, mb2.8/7, ml2.9/6,*
Error ellipse: s-maj=8.1km s-min=3.4km az=50.0 80 km
WNW of Wroclaw Suspected Mining induced.
ISC 21 03:53:42.0±0.7,**51°.63N**±0°.03×**16°.13E**±0°.02,**h0km**,**n47,**
σ1§47/98,Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.80**	**173**	*i* Pg	**Pg**	**03 53 58.1**	**+0.9**
KSP				*e*Sg	**Sg**	**03 54 08.0**	**+0.5**
CHVC	**Chvalec**	**1.05**	**183**	*e*PG	**Pg**	**03 54 02.4**	**+0.4**
CHVC				*e*SG	**Sg**	**03 54 14.9**	**-0.6**
	comp=Z,71nm,0.4s						
OSTC	**Ostas**	**1.08**	**177**	*e*PG	**Pg**	**03 54 03.2**	**+0.6**
OSTC				*e*SG	**Sg**	**03 54 16.5**	**0.0**
	comp=Z,122nm,1.0s						
UPC	**Upice**	**1.13**	**184**	*e*PG	**Pg**	**03 54 04.0**	**+0.4**
UPC				*e*SG	**Sg**	**03 54 17.4**	**-0.8**
	comp=Z,93nm,0.4s						
DPC	**Dobruska-Polom**	**1.29**	**175**	*e*PG	**Pg**	**03 54 06.6**	**0.0**
DPC				*e*SG	**Sg**	**03 54 22.2**	**-1.1**

	comp=Z,2.9nm,0.3s								
SMOL	**Smolenice**	**3.23**	**165**	*e*PG		**Pg**	**03 54 43.9**	**0.0**
SMOL				*e*SG		**Sg**	**03 55 27.4**	**+1.7**
LANS	**Liptovska Anna**	**3.27**	**138**	*e*PN		**Pn**	**03 54 35.6**	**+1.0**
LANS				*e*PG		**Pg**	**03 54 44.7**	**0.0**
LANS				*e*SG		**Sg**	**03 55 28.2**	**+1.1**
MODS	**Modra-Piesok**	**3.34**	**167**	*e*PN		**Pn**	**03 54 36.7**	**+1.2**
MODS				*e*PG		**Pg**	**03 54 46.2**	**+0.2**
MODS				*e*SG		**Sg**	**03 55 31.9**	**+2.6**
NIE	**Niedzica**	**3.46**	**128**	*e*P		**Pg**	**03 54 49.1**	**+0.8**
NIE				*e*S		**Sg**	**03 55 33.4**	**+0.3**
ZST	**Bratislava**	**3.50**	**169**	*e*SG		**Sg**	**03 55 34.3**	**+0.1**
BSD	**Bornholm Skovb**	**3.56**	**349**	*i* P		**Pn**	**03 54 39.2**	**+0.7**
BSD				*e*S		**Sn**	**03 55 20.7**	**-0.5**
VYHS	**Vyhne**	**3.59**	**150**	*e*PN		**Pn**	**03 54 39.2**	**+0.3**
VYHS				*e*PG		**Pg**	**03 54 52.5**	**+1.7**
VYHS				*e*SG		**Sg**	**03 55 40.9**	**+3.6**
CONA	**Conrad Observa**	**3.71**	**183**	*i* Pn		**Pn**	**03 54 41.5**	**+0.9**
	comp=Z,1.5nm,0.2s,SNR=9.4							
CONA				Sg		**Sg**	**03 55 39.2**	**-1.9**
	comp=Z,17nm,0.4s							
MOA	**Molln**	**3.98**	**198**	*e*Pn		**Pn**	**03 54 45.1**	**+0.9**
	comp=Z,7.7nm,0.3s,SNR=8.8							
MOA				Sg		**Sg**	**03 55 48.5**	**-1.1**
	comp=Z,24nm,0.6s							
BLEU	**Blekinge**	**4.69**	**358**	*i* P		**Pn**	**03 54 55.4**	**+1.5**
BLEU				*e*S		**Sn**	**03 55 47.9**	**-0.9**
KOLS	**Kolonicke sedl**	**4.77**	**122**	*e*PN		**Pn**	**03 54 56.2**	**+1.1**
KOLS				*e*PG		**Pg**	**03 55 16.7**	**+3.3**
BJUU	**Bjuv**	**4.82**	**339**	*i* P		**Pn**	**03 54 56.3**	**+0.6**
BJUU				*e*S		**Sn**	**03 55 50.4**	**-1.7**
KBA	**Koelnbreinsper**	**4.91**	**203**	*i* Pn		**Pn**	**03 54 58.3**	**+1.2**
	comp=Z,4.4nm,0.3s,SNR=9.4							
KBA				Sg		**Sg**	**03 56 18.8**	**-0.7**
	comp=Z,18nm,0.8s							
WATA	**Walderalm**	**5.22**	**216**	*i* Pn		**Pn**	**03 55 03.0**	**+1.6**
	comp=Z,1.8nm,0.2s							
WATA				Sg		**Sg**	**03 56 32.1**	**+2.4**
	comp=Z,4.3nm,0.3s							
SQTA	**Sankt Quirin**	**5.46**	**218**	*i* Pn		**Pn**	**03 55 06.8**	**+2.1**
	comp=Z,2.6nm,0.2s							
DAVOX	**Davos/Dischmat**	**6.35**	**223**	Pn		**Pn**	**03 55 18.7**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=45,slow=16,SNR=1.8							
DAVOX				Sn		**Sn**	**03 56 27.1**	**-3.1**
	comp=Z,0.2nm,0.3s,baz=36,slow=17,SNR=1.5							
DAVOX				Lg		Lg	03 57 04.0	
	comp=Z,0.6nm,0.3s,baz=66,slow=6.7,SNR=4.7							
	comp=Z,0.8nm,0.4s							
AKASG	**Malin Array Be**	**8.28**	**91**	Pn		**Pn**	**03 55 42.9**	**-0.4**
	comp=Z,0.7nm,0.3s,baz=281,slow=12,SNR=5.6							
AKASG				Sn		**Sn**	**03 57 10.2**	**-7.3**
	comp=Z,0.7nm,0.3s,baz=225,slow=18,SNR=5.0							
	comp=Z,0.2nm,0.3s							
HFS	**Hagfors**	**8.63**	**352**	Pn		**Pn**	**03 55 48.9**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=164,slow=16,SNR=1.7							
	comp=Z,2.2nm,1.0s							
NOA	**NORSAR Array B**	**9.81**	**346**	Pn		**Pn**	**03 56 04.8**	**+0.6**
	baz=198,slow=19,SNR=2.1							
	comp=Z,0.3nm,0.7s							
FINES	**FINESS Array B**	**11.25**	**25**	Pn		**Pn**	**03 56 23.2**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=209,slow=11,SNR=5.1							
	comp=Z,0.5nm,0.6s							

*IDC **21** 04:11:46.8±0.9,14°.96S×166°.94E,h0km,mb3.9/7, mbtmp3.9/8,ML3.9/1,MS3.3/2,Error ellipse: s-maj=36.1km s-min=23.5km az=118.0*
*NEIC **21** 04:11:50.2±1.3,14°.96S±0°.09×167°.0E±0°.1,h32km±4km, mb4.5/7,Error ellipse: s-maj=22.2km s-min=9.4km az=114.0*
ISC 21 04:11:53.4±0.6,15°.09S±0°.08×166°.9E±0°.1,h57km,n23,
σ1°39/24,mb4.3/9,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m	s ISC
LIFNC	**LIFOU**	**5.66**	**177**	Pn		**Pn**	**04 13 13.6**		**-1.4**
KOUNC	**Koumac, New Ca**	**5.99**	**205**			**Pn**	**04 13 18.6**		**-0.8**
KOUNC				Sn		**Sn**	**04 14 26.3**		**-0.4**
DZM	**Mont Dzumac**	**6.96**	**184**	Pn		**Pn**	**04 13 32.7**		**-0.1**
	2.2nm,0.3s,baz=329,slow=9.5,SNR=30								
DZM				Sn		**Sn**	**04 14 50.3**		**-0.3**
	0.3nm,0.3s,baz=308,slow=20,SNR=1.0								
DZM				LR		LR	04 16 10.1		
	comp=Z,180nm,18.5s,baz=36,slow=37								
	4.4nm,0.3s								
PINNC	**Pines Island,**	**7.50**	**176**	Pn		**Pn**	**04 13 38.3**		**-1.8**
PMG	**Port Moresby**	**20.13**	**284**	P		**P**	**04 16 20.5**		**-2.3**
PMG				IAmb		IAmb	04 16 30.4		
	comp=Z,29nm,1.2s								
CTA	**Charters Tower**	**20.32**	**253**	P		**P**	**04 16 25.9**		**+0.9**
	comp=Z,3.8nm,0.6s,baz=83,slow=12,SNR=5.4								
CTA				LR		LR	04 23 28.6		
	comp=Z,84nm,18.5s,baz=82,slow=34								
	comp=Z,3.8nm,0.6s								
WB0	**Warramunga Arr**	**31.36**	**257**	P		**P**	**04 18 09.1**		**+0.1**
WB0				IAmb		IAmb	04 18 09.4		
	comp=Z,11nm,1.5s								
WB2	**Warramunga Arr**	**31.41**	**256**	P		**P**	**04 18 09.1**		**-0.3**
WB2				IAmb		IAmb	04 18 48.9		
	comp=Z,7.5nm,1.2s								
WRA	**Warramunga Arr**	**31.43**	**256**	P		**P**	**04 18 09.2**		**-0.3**
	comp=Z,0.4nm,0.7s,baz=81,slow=6.4,SNR=6.4								
	comp=Z,0.4nm,0.7s								
WRA	**Warramunga Arr**	**31.43**	**256**	P		**P**	**04 18 08.2**		**-1.3**
KIP	**Kipapa**	**50.00**	**44**	P		**P**	**04 20 39.5**		**-2.7**
VNDA	**Vanda**	**62.50**	**181**	P		**P**	**04 22 12.0**		**+1.5**
	comp=Z,0.6nm,0.7s,baz=360,slow=6.8,SNR=2.2								
	comp=Z,0.6nm,0.7s								
PETK	**Petropavlovsk-**	**68.38**	**354**	P		**P**	**04 22 50.0**		**+1.3**
	comp=Z,3.2nm,0.8s,baz=171,slow=10,SNR=5.7								
	comp=Z,3.2nm,0.8s								
PETK	**Petropavlovsk-**	**68.38**	**354**	P		**P**	**04 22 48.6**		**-0.1**
QSPA	**South Pole Qui**	**74.94**	**180**	P		**P**	**04 23 29.2**		**+1.0**
QSPA				IAmb		IAmb	04 23 34.9		
	comp=Z,5.0nm,1.1s								
ILAR	**Eielson Array**	**86.97**	**18**	P		**P**	**04 24 30.9**		**-1.0**
	comp=Z,0.4nm,0.4s,baz=236,slow=4.8,SNR=9.5								
	comp=Z,0.4nm,0.4s								
ILAR	**Eielson Array**	**86.97**	**18**	P		**P**	**04 24 30.6**		**-1.3**
NVAR	**Mina Array Bea**	**87.75**	**49**	P		**P**	**04 24 38.0**		**+1.4**
	comp=Z,0.4nm,0.7s,baz=232,slow=5.6,SNR=3.2								
	comp=Z,0.4nm,0.7s								
SNAA	**Sanae**	**93.17**	**183**	P		**P**	**04 25 01.4**		**+0.3**
SNAA				IAmb		IAmb	04 25 38.0		
	comp=Z,6.9nm,1.5s								
MKAR	**Makanchi Array**	**97.24**	**316**	P		Pdif	04 25 21.3		+1.2
	comp=Z,0.3nm,0.6s,baz=82,slow=6.6,SNR=1.7								
	comp=Z,0.3nm,0.6s								
ARCES	**ARCESS Array B**	**120.52**	**345**	PKP		**PKiKP**	**04 30 39.5**		**+1.4**
	comp=Z,0.7nm,0.5s,baz=88,slow=1.7,SNR=13								
ARCES	**ARCESS Array B**	**120.52**	**345**			**PKPdf**	**04 30 37.8**		**-0.2**
NOA	**NORSAR Array B**	**130.88**	**345**	PKP		**PKiKP**	**04 31 01.8**		**+2.8**
	comp=Z,0.5nm,0.8s,baz=17,slow=1.2,SNR=2.9								

*NEIC **21** 04:26:42.8±1.7,24°.7S±0°.1×177°.1W±0°.2,h141km±5km, mb4.4/9,Error ellipse: s-maj=23.5km s-min=13.4km az=126.0*
*IDC **21** 04:26:45.2±2.2,24°.79S×177°.19W,h165km±21km,mb3.7/4, mbtmp4.3/8,Error ellipse: s-maj=22.6km s-min=19.8km az=60.0*
ISC 21 04:26:39.2±0.6,24°.45S±0°.07×176°.8W±0°.1,h132km,n29,
σ2°18/33,mb4.3/6,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m	s ISC
RAO	**Raoul Island**	**4.88**	**191**	P		**Pn**	**04 27 50.3**		**-0.4**
	112nm,0.3s,baz=18,slow=22,SNR=2.1								
RAO				S		**Sn**	**04 28 46.2**		**-0.2**
	247nm,0.3s,baz=356,slow=23,SNR=5.4								
RAO	**Raoul Island**	**4.88**	**191**			**Pn**	**04 27 50.1**		**-0.6**
RAO				Sn		**Sn**	**04 28 45.7**		**-0.7**
MSVF	**Nonsavu**	**8.22**	**323**	P		Pn	04 28 42.5		+6.9
	13nm,0.7s,baz=134,slow=17,SNR=9.5								
NIUE	**Niue**	**8.35**	**51**	Pn		**Pn**	**04 28 36.7**		**-0.6**
AFI	**Afiamalu**	**11.52**	**25**	P		**Pn**	**04 29 19.9**		**+0.1**
	22nm,0.2s,baz=2.2,slow=12,SNR=4.2								
AFI				S		**Sn**	**04 31 20.1**		**-6.7**
	27nm,0.2s,baz=129,slow=7.1,SNR=2.4								
AFI	**Afiamalu**	**11.52**	**25**			**Pn**	**04 29 19.6**		**-0.2**
URZ	**Urewera**	**14.70**	**199**	P		**Pn**	**04 29 58.4**		**-2.2**
	2.6nm,0.3s,baz=269,slow=4.3,SNR=12								
URZ	**Urewera**	**14.70**	**199**	Pn		**Pn**	**04 29 59.0**		**-1.6**
DZM	**Mont Dzumac**	**15.56**	**275**	P		**P**	**04 30 13.3**		**+0.3**
	5.7nm,0.8s,baz=35,slow=17,SNR=2.7								

KHZ	**Kahutara**	**19.62**	**202**	P		**P**	**04 30 55.1**		**-2.0**
WHZ	**Wether Hill Ro**	**24.67**	**206**	P		**P**	**04 31 46.5**		**-1.1**
CTA	**Charters Tower**	**34.38**	**270**	P		**P**	**04 33 14.7**		**+0.9**
	4.4nm,0.4s,baz=92,slow=11,SNR=16								
	4.4nm,0.4s								
CTAO	**Charters Tower**	**34.38**	**270**	P		**P**	**04 33 14.7**		**+0.9**
CTAO				IAmb		IAmb	04 33 15.5		
	comp=Z,6.3nm,0.7s								
AS31	**Alice Springs**	**44.80**	**260**	P		**P**	**04 34 41.0**		**+0.8**
ASAR	**Alice Springs**	**44.80**	**260**	P		**P**	**04 34 40.6**		**+0.5**
WR0	**Warramunga Arr**	**45.07**	**266**	P		**P**	**04 34 42.2**		**-0.1**
WR0				IAmb		IAmb	04 35 22.4		
	comp=Z,9.8nm,1.3s								
WB2	**Warramunga Arr**	**45.25**	**266**	P		**P**	**04 34 42.8**		**-0.9**
WRAB	**Tennant Creek**	**45.25**	**266**	P		**P**	**04 34 43.5**		**-0.2**
WB0	**Warramunga Arr**	**45.26**	**266**	P		**P**	**04 34 43.1**		**-0.6**
WB0				IAmb		IAmb	04 34 44.5		
	comp=Z,5.6nm,0.7s								
WRA	**Warramunga Arr**	**45.26**	**266**	P		**P**	**04 34 42.6**		**-1.2**
	comp=Z,3.8nm,0.6s,baz=100,slow=6.2,SNR=45								
	comp=Z,3.8nm,0.6s								
WRA	**Warramunga Arr**	**45.26**	**266**	P		**P**	**04 34 42.8**		**-1.0**
NVAR	**Mina Array Bea**	**83.17**	**42**	P		**P**	**04 38 55.5**		**+4.7**
	comp=Z,0.4nm,0.6s,baz=222,slow=8.8,SNR=4.5								
	comp=Z,0.4nm,0.6s								
TXAR	**Lajitas Array**	**88.28**	**57**	P		**P**	**04 39 20.6**		**+4.5**
	comp=Z,0.4nm,0.8s,baz=212,slow=6.8,SNR=4.4								
	comp=Z,0.4nm,0.8s								
TXAR	**Lajitas Array**	**88.28**	**57**	P		**P**	**04 39 19.1**		**+3.0**
ARCES	**ARCESS Array B**	**132.98**	**349**	PKP		**PKiKP**	**04 45 40.2**		**+0.9**
	comp=Z,1.0nm,0.8s,baz=48,slow=1.3,SNR=5.8								
ARCES	**ARCESS Array B**	**132.98**	**349**			**PKiKP**	**04 45 40.5**		**+1.1**
AKASG	**Malin Array Be**	**146.96**	**329**	PKPbc		**PKPab**	**04 46 07.7**		**-0.1**
	comp=Z,0.5nm,0.3s,baz=46,slow=4.1,SNR=6.2								
BRTR	**Keskin Array B**	**150.21**	**308**	PKPbc		**PKiKP**	**04 46 16.2**		**+0.5**
	comp=Z,0.8nm,0.5s,baz=150,slow=5.4,SNR=5.3								
BRTR				PKPab		**PKPab**	**04 46 23.1**		**+1.7**
	comp=Z,1.0nm,0.7s,baz=106,slow=3.4,SNR=5.3								
CLL	**Collm**	**152.14**	**347**	*i* PKPbc		**PKPbc**	**04 46 17.4**		**-1.4**
CLL				*i* PKPab		**PKPab**	**04 46 24.6**		**-4.2**

*INET **21** 04:26:51.6±1.1,12°.95N×87°.15W,h15km±4km,ML3.4*
*SNET **21** 04:26:52.7±0.5,12°.96N×87°.22W,h15km±999km,ML2.7*
ISC 21 04:26:50.7±0.9,12°.97N±0°.05×87°.09W±0°.04,h13km,n13,
σ0°61/17,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m	s ISC
CRIN	**San Cristobal**	**0.27**	**171**	*e*P		**Pb**	**04 26 57.9**		**+0.4**
CRIN				*e*S		**Sb**	**04 27 03.4**		**+1.3**
CRIN				IAML			04 27 05.4		
	comp=E,6µm,0.3s								
CSGN	**Cosiguina Volc**	**0.45**	**271**	*e*P		**Pg**	**04 26 59.9**		**+0.2**
TEL3	**Telica 3**	**0.46**	**148**	*e*P		**Pb**	**04 27 01.3**		**+0.5**
CNGN	**Cerro Negro**	**0.61**	**140**	*e*P		**Pn**	**04 27 04.1**		**-1.0**
MOMN	**Momotombo**	**0.78**	**136**	*e*P		**Pn**	**04 27 06.8**		**-0.6**
CNCH	**Conchagua**	**0.78**	**293**	*e*P		**Pg**	**04 27 05.5**		**-0.4**
CNCH				*e*S		**Sg**	**04 27 15.8**		**-0.4**
CNCH				IAML			04 27 17.9		
	comp=Z,657nm,0.3s								
LCND	**La Ceada**	**0.85**	**294**	*e*P		**Pg**	**04 27 06.7**		**-0.4**
LCND				*e*S		**Sg**	**04 27 17.2**		**-1.0**
LCND				IAML			04 27 19.3		
	comp=Z,201nm,0.3s								
COPN	**Copaltepe**	**0.93**	**148**	*e*P		**Pn**	**04 27 09.3**		**-0.1**
RCON	**San Juan de Ri**	**1.05**	**61**	*e*P		**Pn**	**04 27 11.7**		**+0.5**
TGUH	**Tegucigalpa,Un**	**1.09**	**351**	*e*P		**Pn**	**04 27 12.0**		**+0.1**
TGUH				*e*S		**Sn**	**04 27 27.2**		**+0.2**
TGUH	**Tegucigalpa,Un**	**1.09**	**351**	*e*P		**Pn**	**04 27 12.0**		**+0.1**
MATN	**Matagalpa**	**1.14**	**92**	*e*P		**Pg**	**04 27 12.4**		**-0.3**
BOAB	**BOACO BROADBAN**	**1.49**	**110**	*e*P		**Pb**	**04 27 18.0**		**-0.2**

*IDC **21** 04:26:55.2±3.4,22°.89N×142°.78E,h52km±27km,mb3.8/18, mbtmp4.1/21,ML3.6/3,MS3.2/11,Error ellipse: s-maj=24.3km s-min=18.2km az=95.0*
*NEIC **21** 04:26:56.8±0.8,23°.1N±0°.1×142°.8E±0°.2,h61km±8km, mb4.6/12,Error ellipse: s-maj=28.1km s-min=14.3km az=67.0*
ISC 21 04:26:57.4±0.6,23°.00N±0°.08×142°.8E±0°.1,h71km,n55,
σ0°91/45,mb4.2/21,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m	s ISC
JCJ	**Chichijima**	**4.12**	**353**	P		**Pn**	**04 27 56.5**		**-1.3**
	7.1nm,0.3s,baz=156,slow=20,SNR=11								
JCJ				S		**Sn**	**04 28 46.0**		**+1.3**
	56nm,0.8s,baz=237,slow=22,SNR=1.6								
	16nm,0.4s								
JGF	**Kuroka**	**13.41**	**341**	Pn		**Pn**	**04 30 02.0**		**-2.7**
JOW	**Kunigami**	**13.70**	**289**	LR		LR	04 34 31.8		
	comp=Z,169nm,19.8s,baz=128,slow=33								
MJAR	**Matsushiro Arr**	**14.06**	**345**	P		**Pn**	**04 30 11.5**		**-1.7**
	0.1nm,0.3s,baz=182,slow=13,SNR=4.4								
MJAR				LR		LR	04 35 18.3		
	comp=Z,113nm,18.6s,baz=152,slow=36								
	0.9nm,0.3s								
KSRS	**Korea Array**	**19.26**	**322**	P		**P**	**04 31 16.5**		**+0.4**
	0.3nm,0.3s,baz=133,slow=12,SNR=2.3								
KSRS				LR		LR	04 38 15.0		
	comp=Z,61nm,19.1s,baz=120,slow=35								
	0.8nm,0.5s								
SSLB	**Suanglung**	**20.05**	**277**	P		**P**	**04 31 25.4**		**+0.6**
SSLB				IAmb		IAmb	04 31 37.1		
	comp=Z,20nm,1.0s								
ASAJ	**Asahikawa**	**21.07**	**360**	LR		LR	04 42 19.5		
	comp=Z,12nm,19.9s,baz=170,slow=44								
H11N1	**WAKE ISLAND Hy**	**22.69**	**94**	T		T	04 55 27.3		
	baz=281,slow=74								
H11N2	**WAKE ISLAND Hy**	**22.69**	**94**	T		T	04 55 27.4		
	baz=281								
H11N3	**WAKE ISLAND Hy**	**22.71**	**94**	T		T	04 55 28.5		
	baz=281,slow=74								
H11S3	**WAKE ISLAND Hy**	**22.80**	**97**	T		T	04 55 51.7		
	baz=285,slow=75,SNR=21								
H11S1	**WAKE ISLAND Hy**	**22.80**	**97**	T		T	04 55 54.7		
	baz=285,slow=75,SNR=15								
H11S2	**WAKE ISLAND Hy**	**22.81**	**97**	T		T	04 55 46.5		
	baz=285,slow=75,SNR=16								
DAV	**Davao City (W)**	**22.90**	**229**	LR		LR	04 38 44.1		
	comp=Z,83nm,20.9s,baz=162,slow=31								
KLR	**Kul'dur**	**27.59**	**344**	P		**P**	**04 32 38.5**		**+0.7**
	comp=Z,0.6nm,0.6s,baz=175,slow=12,SNR=1.7								
KLR				LR		LR	04 44 00.7		
	comp=Z,21nm,19.0s,baz=177,slow=37								
	comp=Z,0.6nm,0.6s								
PETK	**Petropavlovsk-**	**32.14**	**17**	LR		LR	04 44 24.9		
	comp=Z,37nm,21.9s,baz=179,slow=33								
TARA	**Tarawa**	**36.32**	**122**	P		**P**	**04 33 54.0**		**-0.5**
SHEM	**Shemya Is, Ala**	**38.09**	**31**	LR		LR	04 47 36.8		
	comp=Z,47nm,20.1s,baz=266,slow=32								
SONM	**Songino Array**	**38.10**	**320**	PcP		**PcP**	**04 36 21.4**		**-1.8**
	comp=Z,0.3nm,0.4s,baz=151,slow=3.3,SNR=2.7								
SEY	**Seymchan**	**40.44**	**7**	P		**P**	**04 34 29.3**		**+0.8**
	comp=Z,1.8nm,0.2s,baz=281,slow=16,SNR=1.5								
	comp=Z,1.8nm,0.2s								
CMAR	**Chiang Mai Arr**	**41.13**	**272**	P		**P**	**04 34 35.3**		**+0.5**
	comp=Z,1.4nm,0.3s,baz=110,slow=7.3,SNR=1.8								
	comp=Z,1.4nm,0.3s								
WRAB	**Tennant Creek**	**43.45**	**192**	P		**P**	**04 34 53.4**		**-0.1**
WRAB				IAmb		IAmb	04 34 53.7		
	comp=Z,9.7nm,1.0s								
WB2	**Warramunga Arr**	**43.46**	**192**	P		**P**	**04 34 53.2**		**-0.5**
WB2				IAmb		IAmb	04 34 55.7		
	comp=Z,11nm,0.9s								
WRA	**Warramunga Arr**	**43.47**	**192**	P		**P**	**04 34 52.7**		**-1.0**
	comp=Z,5.1nm,0.8s,baz=14,slow=8.6,SNR=18								
	comp=Z,5.1nm,0.8s								
WRA	**Warramunga Arr**	**43.47**	**192**	P		**P**	**04 34 53.3**		**-0.3**
ZALV	**Zalesovo Beam**	**52.96**	**321**	P		**P**	**04 36 06.9**		**+0.4**
	comp=Z,0.4nm,0.3s,baz=168,slow=9.1,SNR=1.3								
ZALV				PcP		**PcP**	**04 37 15.1**		**+0.7**
	comp=Z,0.4nm,0.3s,baz=104,slow=6.1,SNR=1.7								
	comp=Z,0.4nm,0.3s								
MKAR	**Makanchi Array**	**53.55**	**312**	P		**P**	**04 36 10.5**		**-0.4**
	comp=Z,0.3nm,0.5s,baz=96,slow=7.5,SNR=3.9								
MKAR				PcP		**PcP**	**04 37 18.1**		**+1.3**
	comp=Z,0.5nm,0.7s,baz=96,slow=4.9,SNR=3.6								
	comp=Z,0.3nm,0.5s								
MKAR	**Makanchi Array**	**53.55**	**312**	P		**P**	**04 36 11.1**		**+0.2**
KURK	**Kurchatov**	**56.27**	**317**	P		**P**	**04 36 29.4**		**-1.1**
KURBB	**Kurchatov Arra**	**56.32**	**316**	P		**P**	**04 36 30.7**		**-0.1**
	comp=Z,1.3nm,0.6s,baz=94,slow=7.9,SNR=11								
	comp=Z,1.3nm,0.6s								
KDAK	**Kodiak Island**	**57.35**	**35**	LR		LR	04 59 32.4		

	comp=Z,61nm,19.9s,baz=234,slow=34								
ILAR	**Eielson Array**	**61.06**	**27**	P		**P**	**04 37 04.2**		**+0.7**
	comp=Z,0.6nm,0.8s,baz=262,slow=5.9,SNR=8.2								
	comp=Z,0.6nm,0.8s								
BRVK	**Borovoye**	**61.51**	**319**	P		**P**	**04 37 06.7**		**0.0**
BRVK				IAmb		IAmb	04 37 08.3		
	comp=Z,4.8nm,0.9s								
KKAR	**Karatay Array**	**61.96**	**308**	P		**P**	**04 37 10.0**		**0.0**
CHGR	**Chuyangaron**	**63.57**	**303**	P		**P**	**04 37 21.2**		**+0.4**
KBL	**Kabul**	**64.38**	**298**	P		**P**	**04 37 26.4**		**0.0**
ARU	**Arti**	**68.00**	**323**	P		**P**	**04 37 49.2**		**+0.3**
	comp=Z,3.0nm,0.3s,baz=130,slow=0.8,SNR=6.7								
	comp=Z,3.0nm,0.3s								
ARU	**Arti**	**68.00**	**323**	P		**P**	**04 37 49.0**		**+0.1**
ARU				IAmb		IAmb	04 37 50.3		
	comp=Z,6.2nm,0.7s								
ABKAR	**Akbulak array**	**68.36**	**316**	P		**P**	**04 37 51.3**		**0.0**
ABKAR	**Akbulak array**	**68.36**	**316**	P		**P**	**04 37 49.5**		**-1.8**
DLBC	**Dease Lake**	**69.26**	**34**	LR		LR	05 08 24.9		
	comp=Z,32nm,19.3s,baz=270,slow=36								
AKTO	**Aktyubinsk**	**69.36**	**317**	P		**P**	**04 37 57.8**		**+0.3**
	comp=Z,0.8nm,0.5s,baz=62,slow=10,SNR=3.6								
	comp=Z,0.8nm,0.5s								
KIRV	**Kirov**	**72.38**	**327**	P		**P**	**04 38 16.8**		**+1.2**
	comp=Z,9.2nm,0.8s,baz=53,slow=1.4,SNR=3.8								
	comp=Z,9.2nm,0.8s								
YKA	**Yellowknife Ar**	**75.49**	**28**	P		**P**	**04 38 35.0**		**+1.4**
	comp=Z,0.9nm,0.6s,baz=324,slow=3.1,SNR=5.3								
	comp=Z,0.9nm,0.6s								
ARCES	**ARCESS Array B**	**77.58**	**341**	P		**P**	**04 38 46.5**		**+1.2**
	comp=Z,2.0nm,0.7s,baz=83,slow=9.9,SNR=6.7								
	comp=Z,2.0nm,0.7s								
ARCES	**ARCESS Array B**	**77.58**	**341**	P		**P**	**04 38 45.8**		**+0.4**
ARCES				IAmb		IAmb	04 39 13.3		
	comp=Z,9.5nm,1.4s								
KBZ	**Khabaz**	**81.20**	**314**	P		**P**	**04 39 05.5**		**0.0**
	comp=Z,1.0nm,0.6s,baz=58,slow=15,SNR=1.6								
	comp=Z,1.0nm,0.6s								
FINES	**FINESS Array B**	**81.85**	**334**	P		**P**	**04 39 09.0**		**+0.4**
	comp=Z,2.4nm,0.6s,baz=72,slow=6.2,SNR=11								
	comp=Z,2.4nm,0.6s								
PDAR	**Pinedale Array**	**86.74**	**45**	P		**P**	**04 39 33.2**		**-0.9**
	comp=Z,0.1nm,0.4s,baz=290,slow=2.7,SNR=2.1								
	comp=Z,0.1nm,0.4s								
NB2	**NORSAR Subarra**	**87.60**	**339**	P		**P**	**04 39 37.4**		**-0.2**
	comp=Z,0.8nm,0.7s,baz=42,slow=5.1								
NOA	**NORSAR Array B**	**87.60**	**339**	P		**P**	**04 39 37.5**		**-0.1**
	comp=Z,1.3nm,0.9s,baz=43,slow=5.8,SNR=3.3								
	comp=Z,1.3nm,0.9s								
BRTR	**Keskin Array B**	**89.18**	**313**	P		**P**	**04 39 46.0**		**+0.3**
	comp=Z,0.4nm,0.7s,baz=24,slow=7.9,SNR=2.2								
	comp=Z,0.4nm,0.7s

GTA pP pwP 04 47 15.8 -0.3
GTA sP sP 04 47 19.4 +8.0
GTA pmax pmax
comp=Z,7.0nm,0.9s
NJ2 Nanjing 37.30 36 *eP* **P 04 47 10.5 +1.4**
NJ2 pmax pmax
comp=Z,12nm,0.5s
H01W3 Cape Leeuwin H 41.77 155 T T 05 32 41.8
baz=332,slow=76,SNR=50
H01W2 Cape Leeuwin H 41.78 155 T T 05 32 51.4
baz=332,slow=76,SNR=57
H01W1 Cape Leeuwin H 41.79 155 T T 05 32 51.0
baz=332,slow=76,SNR=28
BTK Batken 42.84 333 P **P 04 47 55.9 +0.8**
MK31 Makanchi Array 45.16 348 P **P 04 48 13.7 +0.1**
MK31 IAmb IAmb 04 48 25.3
comp=Z,7.0nm,0.8s
MKAR Makanchi Array 45.16 348 P **P 04 48 13.3 -0.3**
comp=Z,7.3nm,0.8s,baz=165,slow=8.3,SNR=52
comp=Z,7.3nm,0.8s
MKAR Makanchi Array 45.16 348 P **P 04 48 14.2 +0.6**
MAKZ Makanchi 45.24 348 P **P 04 48 13.8 -0.3**
WB0 Warramunga Arr 45.31 121 P **P 04 48 15.1 -0.1**
WB0 IAmb IAmb 04 48 18.5
comp=Z,14nm,1.3s
WRA Warramunga Arr 45.33 122 P **P 04 48 14.3 -1.0**
comp=Z,3.2nm,1.0s,baz=298,slow=8.7,SNR=11
comp=Z,3.2nm,1.0s
WRA Warramunga Arr 45.33 122 P **P 04 48 16.8 +1.4**
WB2 Warramunga Arr 45.34 122 P **P 04 48 15.4 0.0**
WB2 IAmb IAmb 04 48 17.4
comp=Z,12nm,1.1s
KKAR Karatay Array 45.47 336 P **P 04 48 15.1 -1.0**
KKAR Karatay Array 45.47 336 P **P 04 48 16.2 +0.2**
SONM Songino Array 46.21 11 P **P 04 48 21.6 -0.4**
comp=Z,2.8nm,0.8s,baz=192,slow=8.5,SNR=11
SONM PcP **PcP 04 49 57.8 +0.3**
comp=Z,0.6nm,0.6s,baz=149,slow=3.0,SNR=2.3
comp=Z,2.8nm,0.8s
SONM Songino Array 46.21 11 P **P 04 48 21.5 -0.4**
SONM IAmb IAmb 04 48 33.0
comp=Z,9.8nm,1.2s
ULN Ulaanbaatar 46.37 12 P **P 04 48 22.9 -0.4**
KSAR Wonju Array Be 46.39 38 P **P 04 48 22.5 -0.9**
KSRS Korea Array 46.42 38 P **P 04 48 23.2 -0.4**
comp=Z,1.0nm,0.3s,baz=212,slow=9.9,SNR=2.1
comp=Z,1.0nm,0.3s
GEYT Alibeck 48.20 321 P **P 04 48 37.8 +0.2**
comp=Z,4.7nm,0.7s,baz=190,slow=14,SNR=4.1
comp=Z,4.7nm,0.7s
KURBB Kurchatov Arra 49.59 347 LR LR 05 12 53.8
comp=Z,42nm,18.6s,baz=164,slow=40
KURK Kurchatov 49.66 347 P **P 04 48 47.3 -1.2**
RAYN Ar Rayn 51.44 298 P **P 04 49 03.2 +0.7**
RAYN IAmb IAmb 04 49 04.9
comp=Z,7.7nm,0.9s
ZAA0 Zalesovo Array 51.70 353 P **P 04 49 04.3 +0.6**
ZAA0 IAmb IAmb 04 49 15.0
comp=Z,10nm,0.9s
ZALV Zalesovo Beam 51.70 353 P **P 04 49 04.2 +0.5**
comp=Z,6.1nm,0.8s,baz=180,slow=6.3,SNR=18
comp=Z,6.1nm,0.8s
BNX BinXian 51.80 29 ⇑P P 04 49 14.9 +10
BNX pmax pmax
comp=Z,7.0nm,0.4s
BNX pmax pmax
comp=Z,140nm,5.5s
MDJ Mudanjiang 52.12 32 P P 04 49 18.4 +11
MDJ pmax pmax
comp=Z,16nm,1.1s
MDJ pmax pmax
comp=Z,75nm,3.7s
USRK Ussuriysk Ar. 53.12 33 P **P 04 49 14.5 0.0**
comp=Z,2.6nm,0.8s,baz=223,slow=7.8,SNR=5.0
comp=Z,2.6nm,0.8s
USRK Ussuriysk Ar. 53.12 33 P **P 04 49 14.3 -0.2**
BRVK Borovoye 53.99 342 P **P 04 49 20.6 -0.2**
BRVK IAmb IAmb 04 49 31.8
comp=Z,7.8nm,0.8s
ABKAR Akbulak array 54.85 333 P **P 04 49 26.7 -0.4**
ABKAR Akbulak array 54.85 333 P **P 04 49 26.6 -0.4**
ABKAR IAmb IAmb 04 49 38.2
comp=Z,5.9nm,0.8s
KLR Kul'dur 56.34 29 P **P 04 49 38.6 +0.8**
comp=Z,3.2nm,0.8s,baz=248,slow=6.8,SNR=7.1
comp=Z,3.2nm,0.8s
KMBO Kilima Mbogo 57.08 267 P **P 04 49 43.9 -0.1**
comp=Z,3.6nm,0.9s,baz=54,slow=7.1,SNR=6.6
comp=Z,3.6nm,0.9s
KMBO Kilima Mbogo 57.08 267 P **P 04 49 43.6 -0.3**
KMBO IAmb IAmb 04 49 47.5
comp=Z,8.6nm,1.2s
KBZ Khabaz 61.03 320 P **P 04 50 09.2 -1.4**
comp=Z,2.8nm,0.9s,baz=101,slow=4.4,SNR=5.1
comp=Z,2.8nm,0.9s
BRTR Keskin Array B 65.93 313 P **P 04 50 42.1 -1.2**
comp=Z,1.8nm,0.8s,baz=140,slow=7.7,SNR=10
comp=Z,1.8nm,0.8s
BRTR Keskin Array B 65.93 313 P **P 04 50 42.0 -1.3**
BR131 Keskin Array S 65.93 313 P **P 04 50 42.5 -0.8**
BR131 IAmb IAmb 04 50 54.6
comp=Z,6.0nm,0.9s
BZK Bozkurt 66.37 315 P **P 04 50 44.5 -1.3**
KARP Karpathos 69.86 307 P **P 04 51 07.0 -1.0**
KLMR Klimovskoe 71.16 335 *eP* **P 04 51 14.1 -1.2**
KLMR AMP 04 51 16.0
comp=Z,9.0nm,1.4s
AKASG Malin Array Be 72.29 323 P **P 04 51 20.4 -1.9**
comp=Z,0.1nm,0.3s,baz=85,slow=5.5,SNR=5.2
comp=Z,0.1nm,0.3s
TIXI Tiksi 72.29 11 P **P 04 51 21.0 -1.0**
TIXI IAmb IAmb 04 51 32.5
comp=Z,10nm,1.0s
BURAR Bucovina Array 73.97 319 P **P 04 51 32.9 +0.5**
BUR08 Bucovina Ar. S 73.98 319 P **P 04 51 32.5 0.0**
NACGM Naroch 74.98 326 ⇓ *eP* **P 04 51 38.6 +0.6**
baz=108
FINES FINESS Array B 77.34 333 P **P 04 51 50.3 -1.0**
comp=Z,2.1nm,0.8s,baz=101,slow=9.9,SNR=6.6
comp=Z,2.1nm,0.8s
JAVC Velka Javorina 79.16 319 *eP* **P 04 52 03.1 +1.3**
MORC Moravsky Berou 79.37 320 *eP* **P 04 52 03.7 +0.8**
ARCES ARCESS Array B 80.17 341 P **P 04 52 06.0 -0.8**
comp=Z,1.7nm,0.8s,baz=142,slow=4.1,SNR=5.0
comp=Z,1.7nm,0.8s
SHEM Shemya Is, Ala 81.75 37 P **P 04 52 13.4 -2.1**
comp=Z,38nm,0.7s,baz=262,slow=7.1,SNR=2.6
GEC2 GERESS Array S 81.76 319 P **P 04 52 15.7 -0.1**
GEC2 IAmb IAmb 04 52 28.0
comp=Z,6.7nm,0.9s
GERES GERESS Array B 81.76 319 P **P 04 52 14.4 -1.4**
comp=Z,2.2nm,0.8s,baz=94,slow=7.2,SNR=16
comp=Z,2.2nm,0.8s
GERES GERESS Array B 81.76 319 P **P 04 52 15.4 -0.4**
NB2 NORSAR Subarra 84.28 331 P **P 04 52 27.8 -0.8**
comp=Z,0.5nm,0.7s,baz=93,slow=5.6
NOA NORSAR Array B 84.28 331 P **P 04 52 26.3 -2.2**
comp=Z,1.2nm,0.8s,baz=94,slow=5.4,SNR=4.1
comp=Z,1.2nm,0.8s
TORD Torodi Ar. Bea 91.86 283 P **P 04 53 05.7 -0.1**
comp=Z,0.8nm,0.9s,baz=50,slow=1.9,SNR=3.2
comp=Z,0.8nm,0.9s
CAST Castle Rocks 98.01 25 P **P 04 53 32.9 -0.1**
BWN Browne 98.77 23 P **P 04 53 37.5 +1.2**
TXAR Lajitas Array 143.86 27 PKP PKPab 04 59 30.5 +0.5
comp=Z,0.9nm,0.9s,baz=298,slow=2.5,SNR=8.0
CPUP Villa Florida 143.96 227 PKP PKPab 04 59 30.9 +0.5
comp=Z,3.1nm,0.8s,baz=141,slow=4.2,SNR=7.8

*VAO **21** 04:40:15.8±5.0,25°.51S×72°.08W,h173km±39km,mb3.9*
*IDC **21** 04:41:07.2±1.1,23°.91S×66°.70W,h200km±12km,mb3.2/4, mbtmp3.8/10,Error ellipse: s-maj=18.3km s-min=16.5km az=14.0*
*GUC **21** 04:41:07.9±0.7,23°.96S×66°.86W,h209km±6km,ML3.9*
*NEIC **21** 04:41:08±0.9,23°.89S±0°.08×67°.0W±0°.2,h225km±10km, mb4.1/5,Md3.8(SJA),ML3.9(GUC),Error ellipse: s-maj=20.1km s-min=11.0km az=93.0*
ISC 21 04:41:07.5±0.7,**23°.93S**±0°.05×**66°.81W**±0°.06,**h210**km±7km, **n58,**σ1°**00**/69,**mb3.5/4,10C-1D,Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SLA	**San Lorenzo**		**1.43 124**	⇓*i*	**Pn**	**04 41 42.0**	**+0.3**
SLA				*i*	**S**	**04 42 07.4**	**-0.6**
AF01	**San Pedro de A**		**1.59 307**		**Pn**	**04 41 43.5**	**+0.1**
AF01				Sn	**S**	**04 42 14.5**	**+3.7**
LVC	**Limon Verde**		**2.34 304**	P	**Pn**	**04 41 51.0**	**+0.3**
	59nm,0.4s,baz=135,slow=6.4,SNR=172						
LVC				S	**S**	**04 42 24.3**	**+0.3**
	50nm,0.3s,baz=72,slow=20,SNR=22						
LVC	**Limon Verde**		**2.34 304**		**Pn**	**04 41 51.2**	**+0.5**
LVC				Sn	**S**	**04 42 24.1**	**+0.2**
LVC	**Limon Verde**		**2.34 304**	⇑*i*	**Pn**	**04 41 51.2**	**+0.5**
LVC				*i*	**S**	**04 42 24.2**	**+0.3**
PB15	**IPOC Station P**		**2.55 286**		**Pn**	**04 41 52.5**	**-0.4**
PB15	**IPOC Station P**		**2.55 286**	⇑*i*	**Pn**	**04 41 53.3**	**+0.4**
PB15				*i*	**S**	**04 42 27.1**	**-0.7**
GO02	**Mina Guanaco**		**2.82 244**		**Pn**	**04 41 55.8**	**-0.1**
GO02	**Mina Guanaco**		**2.82 244**	⇑*i*	**Pn**	**04 41 55.9**	**-0.1**
GO02				*i*	**S**	**04 42 32.8**	**-0.6**
PB06	**IPOC Station P**		**2.82 295**		**Pn**	**04 41 55.8**	**0.0**
PB06	**IPOC Station P**		**2.82 295**	⇑*i*	**Pn**	**04 41 56.1**	**+0.3**
PB06				*i*	**S**	**04 42 32.0**	**-1.1**
PB06				IAML		04 42 33.9	
	comp=N,289nm,0.2s						
PB09	**IPOC Station P**		**3.09 313**		**Pn**	**04 41 59.5**	**+0.5**
PB09	**IPOC Station P**		**3.09 313**	⇑*i*	**Pn**	**04 41 59.7**	**+0.7**
PB09				*i*	**S**	**04 42 38.4**	**-0.3**
PB09				IAML		04 42 44.2	
	comp=E,96nm,0.7s						
PB14	**IPOC Station P**		**3.36 257**		**Pn**	**04 42 01.8**	**-0.4**
PB14	**IPOC Station P**		**3.36 257**	⇑*i*	**Pn**	**04 42 01.8**	**-0.4**
PB10	**IPOC Station P**		**3.46 276**		**Pn**	**04 42 02.7**	**-0.4**
PB10	**IPOC Station P**		**3.46 276**	⇑*i*	**Pn**	**04 42 03.0**	**-0.2**
PB04	**IPOC Station P**		**3.46 297**		**Pn**	**04 42 02.6**	**-0.8**
PB04	**IPOC Station P**		**3.46 297**	⇑*i*	**Pn**	**04 42 03.2**	**-0.2**
PB04				*i*	**S**	**04 42 44.9**	**-1.8**
AC02	**Maricunga**		**3.58 215**		**Pn**	**04 42 05.0**	**-0.1**
PB07	**IPOC Station P**		**3.59 307**		**Pn**	**04 42 04.3**	**-0.6**
PB07	**IPOC Station P**		**3.59 307**	⇑*i*	**Pn**	**04 42 04.7**	**-0.2**
PB01	**IPOC Station P**		**3.79 319**		**Pn**	**04 42 06.5**	**-0.8**
PB01	**IPOC Station P**		**3.79 319**	⇑*i*	**Pn**	**04 42 07.0**	**-0.3**
PB01				*i*	**S**	**04 42 52.4**	**-1.5**
PB02	**IPOC Station P**		**3.86 312**		**Pn**	**04 42 07.4**	**-0.7**
AC01	**Pan de Azucar**		**4.09 236**	Pn	**Pn**	**04 42 09.3**	**-1.5**
PB08	**IPOC Station P**		**4.35 330**	Pn	**Pn**	**04 42 14.6**	**+0.1**
PATCX	**Punta Patache**		**4.38 314**	Pn	**Pn**	**04 42 13.6**	**-0.9**
TAO1	**Diego Aracena**		**4.58 316**	Pn	**Pn**	**04 42 16.7**	**-0.2**
GO01	**Chusmiza**		**4.79 332**		**Pn**	**04 42 19.3**	**-0.7**
PB11	**IPOC Station P**		**4.92 327**	Pn	**Pn**	**04 42 20.0**	**-1.4**
AC04	**Llanos de Chal**		**5.73 221**	Pn	**Pn**	**04 42 29.2**	**-2.3**
PB16	**IPOC Station P**		**6.11 335**	Pn	**Pn**	**04 42 36.3**	**-0.7**
LCO	**Las Campanas**		**6.15 214**	Pn	**Pn**	**04 42 34.9**	**-2.2**
LPAZ	**La Paz**		**7.70 350**	P	**Pn**	**04 42 57.6**	**0.0**
	comp=E,1.4nm,0.3s,baz=170,slow=7.4,SNR=19						
LPAZ				S	**S**	**04 44 23.5**	**-1.7**
	comp=E,1.3nm,0.6s,baz=268,slow=24,SNR=2.5						
LPAZ	**La Paz**		**7.70 350**	Pn	**Pn**	**04 42 57.2**	**-0.4**
CPUP	**Villa Florida**		**8.91 108**	P	**Pn**	**04 43 10.7**	**-1.9**
	comp=E,3.9nm,0.7s,baz=296,slow=11,SNR=9.4						
SIV	**San Ignacio**		**9.56 35**	P	**Pn**	**04 43 20.3**	**-0.8**
	comp=E,1.0nm,0.5s,baz=236,slow=14,SNR=3.5						
FRBT	**Francisco Belt**		**12.63 102**	*eP*	**P**	**04 44 04.1**	**+0.5**
TRQA	**Tornquist**		**14.68 165**		**P**	**04 44 26.3**	**+0.1**
CLDB	**Colider**		**16.68 41**	*eP*	**P**	**04 44 48.3**	**-0.2**
PLCA	**Paso Flores**		**17.05 190**	P	**P**	**04 44 52.4**	**0.0**
	comp=E,1.1nm,0.8s,baz=15,slow=8.8,SNR=4.0						
PLCA	**Paso Flores**		**17.05 190**	P	**P**	**04 44 51.5**	**-0.8**
PLCA				IAmb	IAmb	04 45 00.8	
	comp=Z,7.8nm,1.2s						
LL04	**Puerto Octay**		**17.57 194**	P	**P**	**04 44 57.6**	**-0.4**
LL04				IAmb	IAmb	04 45 13.5	
	comp=Z,12nm,1.4s						
SNDB	**Serra Nova Dou**		**18.93 54**	*eP*	**P**	**04 45 11.9**	**-1.0**
BDFB	**Brasilia**		**19.49 68**	P	**P**	**04 45 18.7**	**-0.4**
	comp=Z,5.6nm,0.6s,baz=243,slow=10,SNR=12						
BDFB	**Brasilia**		**19.49 68**	P	**P**	**04 45 19.0**	**-0.1**
BDFB				IAmb	IAmb	04 45 19.9	
	comp=Z,5.3nm,0.6s						
BDFB	**Brasilia**		**19.49 68**	*eP*	**P**	**04 45 18.7**	**-0.4**
PMNB	**Patos De Minas**		**19.72 78**	*eP*	**P**	**04 45 20.6**	**-0.9**
JANB	**Januaria**		**22.94 71**	*eP*	**P**	**04 45 52.4**	**-1.4**
NBPB	**Pedra_Branca-C**		**31.93 59**	*eP*	**P**	04 47 08.4	-5.5
SNAA	**Sanae**		**59.36 161**	P	**P**	**04 50 48.2**	**+0.8**
TXAR	**Lajitas Array**		**63.72 324**	P	**P**	**04 51 18.0**	**+1.0**
	comp=Z,0.2nm,0.6s,baz=140,slow=9.9,SNR=2.6						
	comp=Z,0.2nm,0.6s						
QSPA	**South Pole Qui**		**66.28 180**	P	**P**	**04 51 34.3**	**+1.2**
	comp=Z,1.0nm,0.5s,baz=65,slow=1.2,SNR=2.7						
	comp=Z,1.0nm,0.5s						
TORD	**Torodi Ar. Bea**		**76.38 69**	P	**P**	**04 52 34.0**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=256,slow=6.1,SNR=8.8						
	comp=Z,0.5nm,0.4s						
ESDC	**Sonseca Array**		**86.22 43**	P	**P**	**04 53 27.1**	**+1.7**
	comp=Z,0.4nm,0.7s,baz=298,slow=5.5,SNR=2.6						
	comp=Z,0.4nm,0.7s						
MKAR	**Makanchi Array**		**146.35 40**	PKPbc	**PKPdf**	**05 00 22.8**	**+0.8**
	comp=Z,1.0nm,0.6s,baz=295,slow=3.5,SNR=9.7						
MKAR	**Makanchi Array**		**146.35 40**		**PKPdf**	**05 00 20.1**	**-1.9**

*IDC **21** 04:41:22.6±3.9,22°.81N×142°.51E,h41km±32km,mb3.7/9, mbtmp3.9/10,ML4.2/1,Error ellipse: s-maj=36.9km s-min=20.3km az=94.0*
*NEIC **21** 04:41:24.5±1.6,22°.93N±0°.07×142°.4E±0°.3,h51km±11km, mb4.3/4,Error ellipse: s-maj=34.4km s-min=8.5km az=78.0*
ISC 21 04:41:22.2±0.9,**22°.82N**±0°.09×**142°.5E**±0°.2,**h35**km,**n28,** σ0**s76/24,mb4.1/11,Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**		**4.27 357**	P	**Pn**	**04 42 25.1**	**+0.5**
	12nm,0.3s,baz=78,slow=24,SNR=13						
JCJ				S	**Sn**	**04 43 14.3**	**+1.1**
	24nm,0.4s,baz=263,slow=22,SNR=1.7						
	26nm,0.4s						
JCJ	**Chichijima**		**4.27 357**		**Pn**	**04 42 25.1**	**+0.5**
JCJ				Sn	**Sn**	**04 43 13.4**	**+0.1**
JGF	**Kuroka**		**13.49 342**	Pn	**Pn**	**04 44 30.6**	**-0.5**
JNU	**Nakatsue**		**14.48 318**	Pn	**Pn**	**04 44 44.6**	**0.0**
JHS	**Saijyo**		**14.62 328**	Pn	**Pn**	**04 44 45.8**	**-0.8**
H11N1	**WAKE ISLAND Hy**		**22.97 93**	T	T	05 10 27.7	
	baz=282,slow=74,SNR=62						
H11N2	**WAKE ISLAND Hy**		**22.97 93**	T	T	05 10 27.6	
	baz=282,slow=74,SNR=61						
H11N3	**WAKE ISLAND Hy**		**22.99 93**	T	T	05 10 29.0	
	baz=282,slow=74,SNR=50						
H11S3	**WAKE ISLAND Hy**		**23.07 96**	T	T	05 10 01.2	
	baz=285,slow=75,SNR=7.8						
H11S1	**WAKE ISLAND Hy**		**23.07 96**	T	T	05 10 30.5	
	baz=285,slow=75,SNR=6.8						
H11S2	**WAKE ISLAND Hy**		**23.08 96**	T	T	05 09 59.8	
	baz=285,slow=75,SNR=6.5						
WB2	**Warramunga Arr**		**43.23 191**	P	**P**	**04 49 21.5**	**+1.3**
WB2				IAmb	IAmb	04 49 23.8	
	comp=Z,15nm,1.4s						
WRA	**Warramunga Arr**		**43.23 191**	P	**P**	**04 49 19.8**	**-0.4**
	comp=Z,2.5nm,0.7s,baz=13,slow=8.6,SNR=14						
	comp=Z,2.5nm,0.7s						
WRA	**Warramunga Arr**		**43.23 191**	P	**P**	**04 49 20.7**	**+0.5**
ZALV	**Zalesovo Beam**		**52.92 321**	P	**P**	**04 50 35.2**	**+0.5**
	comp=Z,0.7nm,0.3s,baz=134,slow=6.2,SNR=1.3						
	comp=Z,0.7nm,0.3s						
ZALV	**Zalesovo Beam**		**52.92 321**	P	**P**	**04 50 34.3**	**-0.4**
MKAR	**Makanchi Array**		**53.45 312**	P	**P**	**04 50 39.6**	**+0.8**
	comp=Z,1.1nm,1.0s,baz=91,slow=8.6,SNR=1.2						
	comp=Z,1.1nm,1.0s						
ILAR	**Eielson Array**		**61.35 27**	P	**P**	**04 51 33.4**	**-0.8**
	comp=Z,0.6nm,0.9s,baz=270,slow=5.5,SNR=5.7						
	comp=Z,0.6nm,0.9s						
ILAR	**Eielson Array**		**61.35 27**	P	**P**	**04 51 34.1**	**-0.1**
ABKAR	**Akbulak array**		**68.28 316**	P	**P**	**04 52 19.2**	**-0.3**
ABKAR	**Akbulak array**		**68.28 316**	P	**P**	**04 52 20.2**	**+0.7**
ABKAR				IAmb	IAmb	04 52 26.2	
	comp=Z,1.6nm,0.8s						
YKA	**Yellowknife Ar**		**75.78 28**	P	**P**	**04 53 04.5**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=287,slow=5.6,SNR=4.1						
	comp=Z,0.4nm,0.5s						
ARCES	**ARCESS Array B**		**77.65 341**	P	**P**	**04 53 14.2**	**-0.4**
	comp=Z,1.7nm,0.8s,baz=35,slow=4.4,SNR=5.5						
	comp=Z,1.7nm,0.8s						
ARCES	**ARCESS Array B**		**77.65 341**	P	**P**	**04 53 13.3**	**-1.3**
FINES	**FINESS Array B**		**81.88 334**	P	**P**	**04 53 37.1**	**-0.6**
	comp=Z,1.9nm,0.6s,baz=68,slow=6.8,SNR=6.8						
	comp=Z,1.9nm,0.6s						
FINES	**FINESS Array B**		**81.88 334**	P	**P**	**04 53 36.3**	**-1.4**
NVAR	**Mina Array Bea**		**82.97 51**	P	**P**	**04 53 44.5**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=318,slow=5.3,SNR=2.0						
	comp=Z,0.2nm,0.5s						
NOA	**NORSAR Array B**		**87.66 339**	P	**P**	**04 54 06.1**	**-0.8**
	comp=Z,1.0nm,1.0s,baz=60,slow=6.2,SNR=2.9						
	comp=Z,1.0nm,1.0s						

*IDC **21** 04:41:43.8±0.7,57°.03S×25°.15W,h0km,mb4.3/8, mbtmp4.3/9,ML4.5/1,Error ellipse: s-maj=25.2km s-min=18.1km az=63.0*
*NEIC **21** 04:41:50.0±1.0,57°.14S±0°.10×24°.9W±0°.3,h43km±7km, mb4.6/15,Error ellipse: s-maj=22.7km s-min=13.9km az=78.0*
ISC 21 04:41:46.9±0.5,**57°.10S**±0°.09×**25°.1W**±0°.1,**h22**km,**n38,** σ1°**05**/34,**mb4.5/11,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**		**15.38 159**	P	**Pn**	**04 45 22.3**	**+0.1**
VNA3	**Neumayer Olymp**		**15.61 161**	P	**Pn**	**04 45 24.6**	**-0.6**
SNAA	**Sanae**		**17.31 156**	P	**Pn**	**04 45 47.5**	**+0.7**
SNAA	**Sanae**		**17.31 156**	P	**Pn**	**04 45 47.1**	**+0.3**
	1.5nm,0.3s,baz=322,slow=14,SNR=56						
SNAA				S	Sn	04 48 46.7	-12
	0.5nm,0.4s,baz=275,slow=2.6,SNR=1.6						
	3.6nm,0.4s						
SNAA	**Sanae**		**17.31 156**		**P**	**04 45 47.8**	**-0.3**
SNAA					**Sn**	**04 48 55.8**	**-2.6**
TROLL	**Troll, Antarti**		**18.78 153**	P	**Pn**	**04 46 04.9**	**0.0**
EFI	**East Falkland**		**19.82 272**	P	**Pn**	**04 46 17.0**	**-0.4**
EFI				IAmb	IAmb	04 46 39.3	
	comp=Z,98nm,1.4s						
QSPA	**South Pole Qui**		**33.15 180**	P	**P**	**04 48 21.8**	**+0.6**
	comp=Z,3.5nm,0.5s,baz=213,slow=1.3,SNR=46						
	comp=Z,3.5nm,0.5s						
QSPA	**South Pole Qui**		**33.15 180**	P	**P**	**04 48 22.4**	**+1.1**
QSPA				IAmb	IAmb	04 48 23.5	
	comp=Z,4.3nm,0.6s						
PLCA	**Paso Flores**		**33.33 280**	P	**P**	**04 48 21.5**	**-1.5**
	comp=Z,0.8nm,0.8s,baz=173,slow=10,SNR=3.1						
	comp=Z,0.8nm,0.8s						
CPUP	**Villa Florida**		**38.38 310**	P	**P**	**04 49 04.1**	**-2.2**
	comp=Z,3.8nm,0.6s,baz=148,slow=7.2,SNR=11						
	comp=Z,3.8nm,0.6s						
BDFB	**Brasilia**		**44.87 328**	P	**P**	**04 49 59.9**	**+0.3**
	comp=Z,0.8nm,0.4s,baz=85,slow=4.6,SNR=3.6						
	comp=Z,0.8nm,0.4s						
BDFB	**Brasilia**		**44.87 328**	P	**P**	**04 50 00.1**	**+0.5**
BDFB				IAmb	IAmb	04 50 17.5	
	comp=Z,6.9nm,1.3s						
BOSA	**Boshof**		**45.13 73**	P	**P**	**04 50 01.1**	**-0.5**
	comp=Z,2.6nm,0.9s,baz=282,slow=7.9,SNR=1.5						
	comp=Z,2.6nm,0.9s						
VNDA	**Vanda**		**45.57 182**	P	**P**	**04 50 05.7**	**+1.3**
	comp=Z,1.4nm,0.6s,baz=190,slow=6.7,SNR=9.2						
	comp=Z,1.4nm,0.6s						
VNDA	**Vanda**		**45.57 182**	P	**P**	**04 50 06.1**	**+1.7**
H10S2	**ASCENSION HYDR**		**48.71 14**	T	T	05 43 27.8	
	baz=188						
H10S3	**ASCENSION HYDR**		**48.71 14**	T	T	05 43 27.8	
	baz=32						
H10N1	**ASCENSION HYDR**		**49.83 14**	T	T	05 44 58.9	
	baz=187						
H10N3	**ASCENSION HYDR**		**49.83 14**	T	T	05 44 51.7	
	baz=187,slow=74						
H10N2	**ASCENSION HYDR**		**49.84 14**	T	T	05 44 55.0	
	baz=187,slow=74						
LPAZ	**La Paz**		**51.94 304**	P	**P**	**04 50 55.4**	**+0.7**
	comp=Z,11nm,0.5s,baz=126,slow=4.8,SNR=95						
	comp=Z,11nm,0.5s						
LPAZ	**La Paz**		**51.94 304**	P	**P**	**04 50 55.4**	**+0.7**
SAML	**Samuel**		**56.37 313**	P	**P**	**04 51 26.8**	**+0.5**
SAML				IAmb	IAmb	04 51 28.4	
	comp=Z,3.3nm,0.6s						
DBIC	**Dimbokro**		**65.67 22**	P	**P**	**04 52 29.5**	**+0.1**
OTAV	**Otavalo**		**71.21 302**	P	**P**	**04 53 05.6**	**+1.0**
OTAV				IAmb	IAmb	04 53 30.0	
	comp=Z,11nm,1.5s						
TOA0	**Torodi Ar. Sit**		**73.43 27**	P	**P**	**04 53 17.3**	**+0.1**
TOA0				IAmb	IAmb	04 53 18.2	
	comp=Z,3.3nm,0.6s						
TORD	**Torodi Ar. Bea**		**73.43 27**	P	**P**	**04 53 17.7**	**+0.5**
	comp=Z,2.6nm,0.5s,baz=198,slow=6.4,SNR=37						
	comp=Z,2.6nm,0.5s						
TORD	**Torodi Ar. Bea**		**73.43 27**	P	**P**	**04 53 17.2**	**0.0**
NVAR	**Mina Array Bea**		**122.87 291**	PKP	**PKiKP**	**05 00 43.2**	**+2.2**
	comp=Z,0.2nm,0.4s,baz=150,slow=9.4,SNR=2.6						
FINES	**FINESS Array B**		**124.78 27**	PKP	**PKiKP**	**05 00 43.7**	**+0.1**
	comp=Z,0.8nm,0.3s,baz=242,slow=6.0,SNR=2.1						
FINES	**FINESS Array B**		**124.78 27**		**PKiKP**	**05 00 43.9**	**+0.3**
YKA	**Yellowknife Ar**		**137.74 316**	PKP	**PKPdf**	**05 01 06.9**	**-0.8**
	comp=Z,1.6nm,0.8s,baz=117,slow=2.9,SNR=4.6						
INK	**Inuvik**		**147.36 319**	PKPbc	**PKPbc**	**05 01 27.8**	**+0.7**
	comp=Z,2.2nm,0.6s,baz=41,slow=1.5,SNR=5.8						
INK	**Inuvik**		**147.36 319**	PKPbc	**PKPab**	**05 01 29.0**	**-0.1**
SONM	**Songino Array**		**149.63 87**	PKPbc	**PKPbc**	**05 01 33.0**	**-0.8**
	comp=Z,1.0nm,0.4s,baz=231,slow=3.0,SNR=6.5						
SONM	**Songino Array**		**149.63 87**		**PKPbc**	**05 01 32.1**	**-1.6**
ILAR	**Eielson Array**		**151.69 310**	PKPbc	**PKPbc**	**05 01 37.5**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=137,slow=1.5,SNR=12						

*IDC **21** 04:46:33.6±1.0,27°.13N×141°.76E,h48km±8km,mb3.8/17, mbtmp4.1/21,MS2.7/1,Error ellipse: s-maj=20.4km s-min=14.0km az=42.0*
*NEIC **21** 04:46:34.9±1.4,27°.18N±0°.10×141°.70E±0°.09,h53km±7km, mb4.8/22,Error ellipse: s-maj=14.6km s-min=10.5km az=208.0*
*JMA **21** 04:46:36.8±0.1,27°.2N±0°.5×14°.2E±°,h62km,MV4.9/23, NEAR CHICHIJIMA ISLAND*
JMA Felt I J1 at NEAR CHICHIJIMA ISLAND .
**ISC 21 04:46:34.0

H11S3	**WAKE ISLAND Hy**	**24.59**	**105**	T		T	05 17 05.8	
	baz=294,slow=75,SNR=7.3							
H11S1	**WAKE ISLAND Hy**	**24.59**	**105**	T		T	05 16 59.2	
	baz=294,slow=75,SNR=5.4							
H11S2	**WAKE ISLAND Hy**	**24.61**	**105**	T		T	05 17 00.1	
	baz=294,slow=75,SNR=6.3							
SONM	**Songino Array**	**34.33**	**316**	P		**P**	**04 53 16.5 +0.6**	
	0.3nm,0.3s,baz=128,slow=9.9,SNR=3.0							
SONM				ScP		**ScP**	**04 59 29.8 -2.2**	
	0.5nm,0.5s,baz=132,slow=2.1,SNR=3.6							
	0.3nm,0.3s							
TIXI	**Tiksi**	**45.07**	**354**	P		**P**	**04 54 45.3 +0.7**	
WB2	**Warramunga Arr**	**47.39**	**189**	P		**P**	**04 55 03.5 +0.1**	
WRA	**Warramunga Arr**	**47.39**	**189**	P		**P**	**04 55 02.8 -0.6**	
	2.1nm,0.6s,baz=12,slow=8.6,SNR=38							
	2.1nm,0.6s							
WRA	**Warramunga Arr**	**47.39**	**189**	P		**P**	**04 55 03.2 -0.2**	
PBA	**Port Blair**	**48.35**	**261**	P		**P**	**04 55 10.4 -0.6**	
ZALV	**Zalesovo Beam**	**49.12**	**319**	P		**P**	**04 55 15.7 -0.7**	
	0.8nm,0.3s,baz=107,slow=12,SNR=1.8							
	0.8nm,0.3s							
MKAR	**Makanchi Array**	**50.06**	**310**	P		**P**	**04 55 22.8 -1.0**	
	0.3nm,0.3s,baz=83,slow=12,SNR=1.6							
	0.3nm,0.3s							
SVW2	**Sparrevohn**	**53.46**	**33**	P		**P**	**04 55 49.1 +0.3**	
SVW2				lAmb		lAmb	04 56 15.8	
	comp=Z,18nm,1.6s							
OHAK	**Old Harbor**	**54.14**	**37**	P		**P**	**04 55 53.9 +0.1**	
K20K	**Telida**	**54.54**	**30**	P		**P**	**04 55 57.8 +1.1**	
K20K				lAmb		lAmb	04 56 10.8	
	comp=Z,19nm,1.9s							
KDAK	**Kodiak Island**	**54.56**	**37**	P		**P**	**04 55 56.7 -0.2**	
	comp=Z,1.9nm,0.3s,baz=290,slow=2.7,SNR=7.3							
	comp=Z,1.9nm,0.3s							
KDAK	**Kodiak Island**	**54.56**	**37**	P		**P**	**04 55 56.6 -0.2**	
J20K	**Nowinta River**	**54.65**	**29**	P		**P**	**04 55 58.3 +0.8**	
J20K				lAmb		lAmb	04 56 27.1	
	comp=Z,13nm,1.8s							
IMAR	**Indian Mountai**	**55.16**	**27**	P		**P**	**04 56 02.5 +1.4**	
RND	**Reindeer**	**56.88**	**30**	P		**P**	**04 56 13.2 -0.4**	
RND				lAmb		lAmb	04 56 28.4	
	comp=Z,12nm,1.5s							
TOLK	**Toolik Lake Re**	**57.24**	**24**	P		**P**	**04 56 17.8 +1.9**	
TOLK				lAmb		lAmb	04 57 47.1	
	comp=Z,10.0nm,1.8s							
ILAR	**Eielson Array**	**57.85**	**29**	P		**P**	**04 56 20.4 +0.1**	
	comp=Z,1.1nm,0.9s,baz=270,slow=6.0,SNR=12							
	comp=Z,1.1nm,0.9s							
KKAR	**Karatay Array**	**58.66**	**306**	P		**P**	**04 56 26.2 -0.1**	
BMAR	**Burnt Mountain**	**58.97**	**26**	P		**P**	**04 56 28.2 +0.1**	
SCRK	**Sand Creek**	**59.07**	**30**	P		**P**	**04 56 29.1 +0.1**	
SCRK				lAmb		lAmb	04 57 59.0	
	comp=Z,15nm,1.8s							
J26L	**Joseph Creek**	**59.27**	**29**	P		**P**	**04 56 30.8 +0.6**	
GAR	**Garm**	**59.55**	**301**	P		**P**	**04 56 32.9 +0.2**	
GAR				lAmb		lAmb	04 56 33.5	
	comp=Z,5.0nm,0.5s							
EPYK	**Eagle Plains**	**62.07**	**27**	P		**P**	**04 56 50.1 +0.9**	
EPYK				lAmb		lAmb	04 56 52.1	
	comp=Z,8.0nm,1.2s							
M30M	**Minto, Yukon**	**62.38**	**31**	P		**P**	**04 56 51.2 -0.2**	
M30M				lAmb		lAmb	04 58 38.1	
	comp=Z,16nm,1.6s							
INK	**Inuvik**	**63.13**	**25**	P		**P**	**04 56 55.8 -0.4**	
	comp=Z,0.8nm,0.5s,baz=316,slow=12,SNR=5.8							
	comp=Z,0.8nm,0.5s							
INK	**Inuvik**	**63.13**	**25**	P		**P**	**04 56 56.8 +0.6**	
INK				lAmb		lAmb	04 58 01.5	
	comp=Z,11nm,1.9s							
ABKAR	**Akbulak array**	**64.70**	**314**	P		**P**	**04 57 06.2 -0.6**	
ABKAR	**Akbulak array**	**64.70**	**314**	P		**P**	**04 57 06.2 -0.6**	
ABKAR				lAmb		lAmb	04 57 06.5	
	comp=Z,1.8nm,0.6s							
YKA	**Yellowknife Ar**	**72.27**	**28**	P		**P**	**04 57 53.6 -0.2**	
	comp=Z,0.5nm,0.5s,baz=310,slow=4.3,SNR=2.7							
	comp=Z,0.5nm,0.5s							
ARCES	**ARCESS Array B**	**73.30**	**341**	P		**P**	**04 58 00.8 +1.0**	
	comp=Z,1.5nm,0.6s,baz=63,slow=7.5,SNR=11							
	comp=Z,1.5nm,0.6s							
ARCES	**ARCESS Array B**	**73.30**	**341**	P		**P**	**04 58 00.9 +1.0**	
ARCES				lAmb		lAmb	04 59 39.3	
	comp=Z,29nm,1.6s							
KBZ	**Khabaz**	**77.61**	**313**	P		**P**	**04 58 24.9 0.0**	
	comp=Z,1.2nm,0.5s,baz=72,slow=4.0,SNR=2.2							
	comp=Z,1.2nm,0.5s							
FIA1	**FINESS Array S**	**77.66**	**334**	P		**P**	**04 58 25.2 +0.4**	
FIA1				lAmb		lAmb	04 58 26.1	
	comp=Z,30nm,1.6s							
FINES	**FINESS Array B**	**77.66**	**334**	P		**P**	**04 58 25.3 +0.4**	
	comp=Z,4.9nm,0.4s,baz=67,slow=5.5,SNR=40							
	comp=Z,4.9nm,0.4s							
FINES	**FINESS Array B**	**77.66**	**334**	P		**P**	**04 58 25.2 +0.3**	
WALA	**Waterton Lakes**	**78.67**	**41**	P		**P**	**04 58 31.1 +0.2**	
BEKR	**Beckworth**	**78.75**	**51**	P		**P**	**04 58 31.3 -0.3**	
NVAR	**Mina Array Bea**	**80.82**	**52**	P		**P**	**04 58 43.2 +0.3**	
	comp=Z,0.7nm,0.6s,baz=287,slow=5.4,SNR=7.7							
	comp=Z,0.7nm,0.6s							
AKASG	**Malin Array Be**	**82.27**	**324**	P		**P**	**04 58 49.5 -0.6**	
	comp=Z,0.2nm,0.3s,baz=46,slow=6.0,SNR=5.2							
	comp=Z,0.2nm,0.3s							
NB2	**NORSAR Subarra**	**83.35**	**338**	P		**P**	**04 58 55.3 -0.2**	
	comp=Z,0.4nm,0.6s,baz=45,slow=5.1							
NOA	**NORSAR Array B**	**83.35**	**338**	P		**P**	**04 58 55.1 -0.4**	
	comp=Z,0.7nm,0.6s,baz=44,slow=5.2,SNR=4.2							
	comp=Z,0.7nm,0.6s							
PDAR	**Pinedale Array**	**84.47**	**44**	P		**P**	**04 59 01.8 0.0**	
	comp=Z,0.5nm,0.5s,baz=232,slow=1.2,SNR=5.7							
	comp=Z,0.5nm,0.5s							
GERES	**GERESS Array B**	**91.19**	**329**	P		**P**	**04 59 33.2 -0.6**	
	comp=Z,0.7nm,0.5s,baz=46,slow=5.8,SNR=5.7							
	comp=Z,0.7nm,0.5s							
BELA	**Belgrano 2**	**129.21**	**181**			**PKPdf**	**05 05 35.5 -0.1**	
PLCA	**Paso Flores**	**150.24**	**125**	PKPbc		**PKPbc**	**05 06 19.2 -0.5**	
	comp=Z,2.8nm,1.1s,baz=216,slow=8.7,SNR=3.4							
SAML	**Samuel**	**150.31**	**57**	PKPdf		**PKPdf**	**05 06 15.1 -0.2**	
LPAZ	**La Paz**	**150.34**	**75**	PKPbc		**PKPbc**	**05 06 21.4 +0.1**	
	comp=Z,1.4nm,0.6s,baz=348,slow=3.2,SNR=10							
LPAZ	**La Paz**	**150.34**	**75**	PKPdf		**PKPdf**	**05 06 14.9 -1.2**	

BJI ***21*** *04:53:12.9±0.0,6˚.78S×130˚.63E,h153km,mb5.0/71, mB4.9/46*

NEIC ***21*** *04:53:16.6±1.8,6˚.30S±0˚.06×130˚.31E±0˚.07,h132km±4km, mb5.2/110,Error ellipse: s-maj=10.5km s-min=7.9km az=68.0*

MOS ***21*** *04:53:17.1±1.0,6˚.31S×130˚.24E,h153km,mb5.2/51,Error ellipse: s-maj=9.3km s-min=5.0km az=113.8*

GCMT ***21*** *04:53:17.6±0.2,6˚.30S±0˚.01×130˚.22E±0˚.01,h148km±1km, MW5.2/131,Moment Tensor Solution. s99,c114; s131,c212; Duration: 0 Moment tensor: Scale 1016Nm; Mrr5.08±.14; Mθθ-5.36±.17; Mϕϕ0.28±.20; Mrθ-1.43±.13; Mθϕ-0.23±.17; Mϕr5.14±.12; Best double couple: M07.04700×1016 NP1:ϕs65.00000°,δ43.00000°, λ42.00000°. NP2:ϕs302.00000°,δ63.00000°,λ125.00000°. Principal axes: T 8.4810, Plg57.0000°, Azm260.0000°; N -2.8680, Plg30.0000°, Azm104.0000°; P -5.6130, Plg11.0000°, Azm8.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***21*** *04:53:17.5±0.2,6˚S±2˚×13˚0E±˚,h144km±2km,M5.1/96, mb5.2/96,mB5.5/63,MLv5.8/14,Mw(mB)5.0/63, MwMwp4.8/10,Mwp5.2/10*

IDC ***21*** *04:53:18.4±1.5,6˚.28S×130˚.29E,h146km±13km,mb4.7/25, mbtmp5.1/27,MS3.9/22,Error ellipse: s-maj=13.9km s-min=8.6km az=76.0*

ISC 21 04:53:17.5±0.3,6˚.31S±0˚.03×130˚.38E±0˚.04,h146km±2km, h146km:pP-P,n897,σ1s43/957,mb5.1/144,29C-15D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.84**	**345**	P		**Pn**	**04 53 51.6**	**+1.1**
SAUI	**Saumlaki**	**1.90**	**151**			**Pn**	**04 53 50.9**	**-0.3**
SAUI					Sn	**Sn**	04 54 16.4	-0.7
SAUI	**Saumlaki**	**1.90**	**151**	P		**Pn**	**04 53 51.6**	**+0.4**
MSAI	**Masohi**	**3.28**	**334**	P		**Pn**	**04 54 09.2**	**+0.9**
AAI	**Ambon**	**3.39**	**320**	P		**Pn**	**04 54 10.9**	**+1.2**
FAKI	**Fak Fak**	**3.85**	**29**	Pn		**Pn**	**04 54 14.4**	**-1.3**
FAKI	**Fak Fak**	**3.85**	**29**	P		**Pn**	**04 54 14.9**	**-0.8**
NLAI	**Namlea**	**4.47**	**313**	P		**Pn**	**04 54 25.4**	**+1.6**
SWI	**Sorong**	**5.48**	**9**	P		**Pn**	**04 54 35.8**	**-1.5**
	35nm4μm45μm661nm,0.6s							
SANI	**Sanana**	**6.09**	**314**	P		**Pn**	**04 54 46.1**	**+0.8**
	2.1nm5μm7μm660nm,0.7s							
SANI	**Sanana**	**6.09**	**314**	P		**Pn**	**04 54 46.7**	**+1.4**
LBMI	**Labuha**	**6.32**	**333**	P		**Pn**	**04 54 48.8**	**+0.3**
	7.6nm2μm22μm2μm,1.0s							
MTN	**Manton Dam**	**6.54**	**173**	P		**Pn**	**04 54 49.4**	**-2.0**
	baz=6.5							
MTN	**Manton Dam**	**6.54**	**173**	Pn		**Pn**	**04 54 49.1**	**-2.2**
MTN	**Manton Dam**	**6.54**	**173**	P		**Pn**	**04 54 50.1**	**-1.2**
KDU	**Kakadu**	**6.67**	**162**	P		**Pn**	**04 54 51.0**	**-2.1**
	baz=6.6							
KDU	**Kakadu**	**6.67**	**162**	P		**Pn**	**04 54 51.5**	**-1.6**
SRPI	**Serui, Papua**	**7.33**	**53**	P		**Pn**	**04 55 01.7**	**-0.2**
	4.9nm8μm576nm,0.9s							
TNTI	**Ternate**	**7.65**	**337**	Pn		**Pn**	**04 55 06.4**	**+0.2**
TNTI	**Ternate**	**7.65**	**337**	P		**Pn**	**04 55 06.5**	**+0.2**
	4.4nm11μm1μm,0.7s							
TNTI	**Ternate**	**7.65**	**337**	P		**Pn**	**04 55 06.9**	**+0.7**
BAKI	**Biak**	**7.65**	**49**	P		**Pn**	**04 55 07.4**	**+1.1**
BBSI	**Bau Bau**	**7.81**	**276**	P		**Pn**	**04 55 09.9**	**+1.6**
	0.3nm89nm,1.0s							
MMRI	**Maumere**	**8.39**	**254**	Pn		**Pn**	**04 55 16.5**	**+0.3**
MMRI	**Maumere**	**8.39**	**254**	P		**Pn**	**04 55 16.9**	**+0.7**
	3μm4μm139nm,0.5s							
MMRI	**Maumere**	**8.39**	**254**	P		**Pn**	**04 55 16.5**	**+0.3**
EDFI	**Ende, Flores**	**8.94**	**254**	P		**Pn**	**04 55 24.3**	**+0.6**
	982nm67nm,1.2s							
LUWI	**Luwuk**	**9.21**	**304**	Pn		**Pn**	**04 55 28.9**	**+1.7**
LUWI	**Luwuk**	**9.21**	**304**	P		**Pn**	**04 55 28.8**	**+1.7**
	9μm817nm,0.8s							
KMSI	**Cibinong**	**9.35**	**317**	P		**Pn**	**04 55 29.6**	**+0.6**
	264nm,1.1s							
SMPI	**Sarmi**	**9.35**	**63**	P		**Pn**	**04 55 28.7**	**-0.3**
	1μm134nm,1.2s							
KNRA	**Kununurra**	**9.44**	**190**	P		**Pn**	**04 55 26.7**	**-3.5**
	baz=9.4							
KNRA	**Kununurra**	**9.44**	**190**	Pn		**Pn**	**04 55 26.5**	**-3.7**
KNRA	**Kununurra**	**9.44**	**190**	P		**Pn**	**04 55 27.3**	**-2.9**
BSSI	**Bau Bau, Buton**	**9.83**	**270**	P		**Pn**	**04 55 35.6**	**+0.3**
	2μm3μm389nm,0.9s							
APSI	**Ampana**	**10.22**	**301**	P		**Pn**	**04 55 42.5**	**+1.9**
	7μm882nm,0.9s							
BKSI	**Bulukumba**	**10.25**	**275**	P		**Pn**	**04 55 40.7**	**-0.2**
	1μm137nm,0.9s							
BNSI	**Bone**	**10.40**	**280**	P		**Pn**	**04 55 45.0**	**+2.1**
	1μm95nm,0.9s							
GENI	**Genyem**	**10.44**	**70**	P		**Pn**	**04 55 42.5**	**-0.9**
	231nm,1.0s							
BASI	**Baing, Sumba**	**10.44**	**248**	P		**Pn**	**04 55 43.8**	**+0.3**
	3μm198nm,0.8s							
KAPI	**Kappang**	**10.65**	**276**	P		**Pn**	**04 55 45.7**	**-0.5**
	11nm,0.8s,baz=96,slow=7.8,SNR=5.2							
KAPI	**Kappang**	**10.65**	**276**	Pn		**Pn**	**04 55 44.9**	**-1.3**
KAPI	**Kappang**	**10.65**	**276**	P		**Pn**	**04 55 44.9**	**-1.3**
KAPI	**Kappang**	**10.65**	**276**	P		**Pn**	**04 55 50.3**	**+4.1**
MRSI	**Marisa**	**10.79**	**308**	P		**Pn**	**04 55 49.5**	**+1.5**
	7μm826nm,1.0s							
SPSI	**Sidrap Palu**	**10.82**	**282**	P		**Pn**	**04 55 49.8**	**+1.4**
	2μm156nm,0.7s							
TTSI	**Tana Toraja**	**11.01**	**287**	P		**Pn**	**04 55 53.1**	**+2.1**
	2μm206nm,1.0s							
SGSI	**Sengkang**	**11.04**	**334**	P		**Pn**	**04 55 50.9**	**-0.6**
	6μm691nm,0.6s							
WBSI	**Waikabubak, Su**	**11.37**	**252**	P		**Pn**	**04 55 54.8**	**-1.0**
	2μm225nm,0.7s							
TOLI2	**Tolitoli**	**12.09**	**307**	Pn		**Pn**	**04 56 05.0**	**0.0**
TOLI2	**Tolitoli**	**12.09**	**307**	P		**Pn**	**04 56 05.8**	**+0.7**
MPSI	**Mapaga**	**12.37**	**302**	P		**Pn**	**04 56 10.4**	**+1.7**
	2μm904nm87nm,0.8s							
PLAI	**Plampang**	**12.74**	**258**	P		**Pn**	**04 56 11.2**	**-2.3**
	2μm118nm,0.5s							
PLAI	**Plampang**	**12.74**	**258**	P		**Pn**	**04 56 12.1**	**-1.4**
GSPH	**General Santos**	**13.45**	**336**	P	*e*	**Pn**	**04 56 21.0**	**-1.8**
WB0	**Warramunga Arr**	**13.94**	**164**			**Pn**	**04 56 24.5**	**-4.3**
WRAB	**Tennant Creek**	**14.08**	**164**	Pn		**Pn**	**04 56 26.0**	**-4.6**
WRAB	**Tennant Creek**	**14.08**	**164**	*c*	*i* P	**Pn**	**04 56 28.0**	**-2.7**
WRAB					pmax	pmax		
	comp=Z,260nm,1.0s							
WRA	**Warramunga Arr**	**14.09**	**165**	P		Pn	04 56 25.4	-5.3
	comp=Z,110nm,0.4s,baz=347,slow=13,SNR=128							
WRA				S		Sn	04 58 54.6	-12
	comp=Z,225nm,0.9s,baz=335,slow=23,SNR=9.2							
WRA				LR		LR	05 02 47.9	
	comp=Z,802nm,18.2s,baz=20,slow=40							
WRA				PKiKP		**PKiKP**	**05 09 35.8**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=317,slow=1.2,SNR=7.0							
WB2	**Warramunga Arr**	**14.09**	**164**	P		**Pn**	**04 56 26.1**	**-4.7**
	baz=14							
WB2	**Warramunga Arr**	**14.09**	**164**	Pn		**Pn**	**04 56 26.7**	**-4.1**
DAV	**Davao City (W)**	**14.12**	**340**	S		**S**	**04 59 16.2**	**-1.6**
	comp=Z,122nm,0.3s,baz=79,slow=11,SNR=1.4							
DAV				LR		LR	05 02 46.4	
	comp=Z,282nm,18.6s,baz=158,slow=40							
DAV	**Davao City (W)**	**14.12**	**340**	Pn		**Pn**	**04 56 29.2**	**-2.0**
WR0	**Warramunga Arr**	**14.16**	**164**			**Pn**	**04 56 27.1**	**-4.6**
KCP	**Kidapawan**	**14.24**	**338**	P	*e*	**Pn**	**04 56 32.4**	**-0.4**
KCP					*e*	**S**	**04 59 21.8**	**+1.4**
BKB	**Balikpapan**	**14.35**	**290**	Pn		**Pn**	**04 56 32.4**	**-1.7**
BKB	**Balikpapan**	**14.35**	**290**	P		**P**	**04 56 36.7**	**-0.2**
	comp=Z,4μmcomp=Z,250nm,1.3s							
SMKI	**Samarinda**	**14.37**	**293**	P		**Pn**	**04 56 34.4**	**0.0**
	comp=Z,7μmcomp=Z,264nm,0.7s							
COEN	**Coen**	**14.71**	**122**	P		**Pn**	**04 56 37.1**	**-1.5**
	baz=15							
COEN	**Coen**	**14.71**	**122**			**Pn**	**04 56 36.2**	**-2.4**
BIPH	**Bislig**	**14.94**	**344**	P	*e*	**Pn**	**04 56 40.8**	**-0.7**
BUKP	**Musuan**	**15.06**	**339**	P	*i*	**Pn**	**04 56 43.6**	**+0.7**
SRBI	**Singaraja**	**15.15**	**262**	P		**Pn**	**04 56 43.6**	**-0.4**
	comp=Z,1μmcomp=Z,89nm,1.1s							
IGBI	**Denpasar**	**15.30**	**260**	P		**Pn**	**04 56 44.7**	**-1.2**
BBKI	**Banjar Baru**	**15.73**	**280**	P		**P**	**04 56 53.3**	**+1.1**
	comp=Z,11μmcomp=Z,1μm,1.3s							
ABJI	**Asem Bagus**	**16.09**	**264**	P		**Pn**	**04 56 55.1**	**-0.5**
	comp=Z,2μmcomp=Z,105nm,1.4s							
JAGI	**Jajag, Banyuwa**	**16.23**	**261**			**Pn**	**04 56 53.6**	**-3.8**
JAGI	**Jajag, Banyuwa**	**16.23**	**261**	P		**Pn**	**04 56 54.8**	**-2.6**
	comp=Z,2μmcomp=Z,88nm,1.1s							
JAGI	**Jajag, Banyuwa**	**16.23**	**261**	P		**Pn**	**04 56 55.2**	**-2.2**
KMMI	**Kalianget**	**16.31**	**266**	P		**P**	**04 56 59.0**	**+0.4**
	comp=Z,2μmcomp=Z,290nm,1.1s							
MTKI	**Muara Teweh, K**	**16.34**	**288**	P		**P**	**04 57 00.4**	**+1.5**
	comp=Z,166nm,0.8s							
MYLDM	**Lahad Datu**	**16.45**	**314**	Pn		**Pn**	**04 56 56.3**	**-3.8**
BLJI	**Banyuglugur**	**16.71**	**264**	P		**P**	**04 57 02.7**	**-0.4**
	comp=Z,186nm,1.1s							
QIS	**Mount Isa**	**16.76**	**149**	P		**P**	**04 57 02.3**	**-1.2**
	baz=17							
QIS	**Mount Isa**	**16.76**	**149**	P		**P**	**04 57 02.8**	**-0.7**
GMJI	**Gumukmas**	**16.91**	**262**	P		**P**	**04 57 03.5**	**-1.7**
	comp=Z,59nm,0.9s							
PMG	**Port Moresby**	**16.91**	**102**	P		**Pn**	**04 57 06.6**	**+1.0**
	comp=Z,274nm,0.9s,baz=304,slow=8.0,SNR=45							
PMG				S		**S**	**05 00 06.8**	**-7.2**
	comp=Z,30nm,0.4s,baz=201,slow=23,SNR=7.8							
PMG				LR		LR	05 04 45.5	
	comp=Z,505nm,20.4s,baz=262,slow=40							
PMG	**Port Moresby**	**16.91**	**102**	P		**P**	**04 57 04.8**	**-0.4**
PMG	**Port Moresby**	**16.91**	**102**	*d*	*i* P	**Pn**	**04 57 08.2**	**+2.6**
PMG					pmax	pmax		
	comp=Z,360nm,0.9s							
PMG	**Port Moresby**	**16.91**	**102**	P		**Pn**	**04 57 08.8**	**+3.2**
PMG	**Port Moresby**	**16.91**	**102**	P		**Pn**	**04 57 08.9**	**+3.3**
TBP	**Tagbilaran**	**17.17**	**338**	*e*	P	**Pn**	**04 57 08.7**	**0.0**
TBP					*i* S	**S**	**05 00 18.1**	**-1.6**
MANU	**Manus Island**	**17.46**	**77**	P		**Pn**	**04 57 13.3**	**+1.0**
AS31	**Alice Springs**	**17.59**	**169**	P		**P**	**04 57 12.1**	**-0.5**
ASAR	**Alice Springs**	**17.59**	**169**	P		**P**	**04 57 12.2**	**-0.4**
ASAR	**Alice Springs**	**17.59**	**169**	P		**P**	**04 57 12.2**	**-0.4**
BWJI	**Bawean**	**17.62**	**271**	P		**Pn**	**04 57 13.9**	**-0.3**
	comp=Z,213nm,1.3s							
GRJI	**Grosik**	**17.79**	**267**	P		**P**	**04 57 15.3**	**+0.4**
	comp=Z,109nm,0.8s							
MTSU	**Mount Surprise**	**17.98**	**132**	P		**Pn**	**04 57 19.2**	**+0.8**
	baz=18							
MTSU	**Mount Surprise**	**17.98**	**132**	P		**Pn**	**04 57 20.1**	**+1.7**
MBWA	**Marble Bar**	**18.00**	**214**	P		**P**	**04 57 16.4**	**-0.7**
MBWA	**Marble Bar**	**18.00**	**214**	P		**P**	**04 57 17.5**	**+0.3**
MBWA	**Marble Bar**	**18.00**	**214**	P		**P**	**04 57 17.1**	**-0.1**
PSA00	**Pilbara Seismi**	**18.28**	**213**	P		**P**	**04 57 19.0**	**-1.1**
PSA00	**Pilbara Seismi**	**18.28**	**213**	P		**P**	**04 57 20.3**	**+0.2**
TBJI	**Tambak Boyo**	**18.41**	**267**	P		**P**	**04 57 21.9**	**+0.2**
	comp=Z,2μmcomp=Z,121nm,1.2s							
PWJI	**Pagerwojo**	**18.50**	**264**	P		**P**	**04 57 19.3**	**-3.4**
	comp=Z,67nm,1.3s							
KKM	**Kota Kinabalu**	**18.72**	**311**	P		**P**	**04 57 25.5**	**+0.3**
KKM	**Kota Kinabalu**	**18.72**	**311**	P		**Pn**	**04 57 26.9**	**-0.3**
WRKA	**Warakurna**	**18.73**	**186**	P		**P**	**04 57 25.5**	**+0.4**
	baz=19							
WRKA	**Warakurna**	**18.73**	**186**	P		**P**	**04 57 25.7**	**+0.6**
PBKI	**Pangkalan Bun**	**18.98**	**280**	P		**P**	**04 57 27.8**	**-0.1**
	comp=Z,11μmcomp=Z,251nm,1.1s							
PCJI	**Pacitan**	**19.14**	**263**	P		**P**	**04 57 27.1**	**-2.5**
	comp=Z,1μmcomp=Z,76nm,0.8s							
RCP	**Roxas**	**19.31**	**337**	P	*e*	**Pn**	**04 57 33.2**	**-0.8**
UWJI	**Ujung Watu**	**19.31**	**269**	P		**P**	**04 57 31.9**	**+0.5**
	comp=Z,9μmcomp=Z,101nm,1.3s							
WOJI	**Wonogiri, Jawa**	**19.36**	**264**	P		**P**	**04 57 30.4**	**-1.6**
	comp=Z,36nm,1.1s							
PPR	**Puerto Princes**	**19.75**	**324**	P	*i*	**Pn**	**04 57 39.0**	**-0.2**
UGM	**Wanagama**	**19.76**	**264**	P		**P**	**04 57 37.0**	**+0.6**
	comp=Z,106nm,0.9s							
UGM	**Wanagama**	**19.76**	**264**	P		**P**	**04 57 36.5**	**+0.1**
SMRI	**Semarang**	**19.81**	**267**	P		**P**	**04 57 35.7**	**-1.3**
SMRI	**Semarang**	**19.81**	**267**	P		**P**	**04 57 35.6**	**-1.3**
	comp=Z,85nm,1.2s							
STKI	**Sintang**	**19.89**	**288**	P		**P**	**04 57 38.7**	**+0.9**
SBUM	**Sibu**	**20.11**	**295**	P		**P**	**04 57 39.6**	**-0.4**
CTA	**Charters Tower**	**20.62**	**133**	P		**P**	**04 57 46.9**	**+1.4**
	comp=Z,79nm,1.0s,baz=312,slow=11,SNR=35							
CTA				S		**S**	**05 01 22.1**	**-6.2**
	comp=Z,6.9nm,0.4s,baz=251,slow=18,SNR=6.9							
CTA				LR		LR	05 06 05.9	
	comp=Z,416nm,18.8s,baz=316,slow=37							
	comp=Z,79nm,1.0s							
CTA	**Charters Tower**	**20.62**	**133**	P		**P**	**04 57 47.4**	**+1.8**
	baz=21							
CTA	**Charters Tower**	**20.62**	**133**	P		Pn	04 57 48.5	-1.0
CTAO	**Charters Tower**	**20.62**	**133**	P		**P**	**04 57 46.6**	**+1.0**
CTAO	**Charters Tower**	**20.62**	**133**	P		**P**	**04 57 46.6**	**+1.0**
CTAO	**Charters Tower**	**20.62**	**133**	P		Pn	04 57 48.5	-1.0
KPJI	**Karang Pucung**	**21.32**	**266**	P		**P**	**04 57 50.4**	**-2.6**
	comp=Z,2μmcomp=Z,119nm,0.7s							
KSM	**Kuching**	**21.47**	**290**	P		**P**	**04 57 52.1**	**-2.6**
PGP	**Puerto Galera**	**21.79**	**335**	P	*e*	**P**	**04 57 59.6**	**+1.5**
CMJI	**Cimerak**	**21.81**	**265**	P		**P**	**04 57 55.6**	**-2.7**
	comp=Z,2μmcomp=Z,193nm,1.3s							
JCNP	**Jose Panganiba**	**21.84**	**340**	P	*i*	**P**	**04 58 00.6**	**+2.1**
OOD	**Oodnadatta**	**21.96**	**167**	P		**P**	**04 57 59.7**	**+0.1**
JCJI	**Jatiwangi**	**21.97**	**268**	P		**P**	**04 58 00.2**	**+0.3**
	comp=Z,10μmcomp=Z,434nm,1.6s							
LUBP	**Lubang**	**22.31**	**333**	P	*i*	**P**	**04 58 03.9**	**+0.7**
TGY	**Tagaytay City**	**22.34**	**335**	P		**P**	**04 58 04.7**	**+1.1**
	comp=Z,278nm,0.5s,baz=202,slow=19,SNR=12							
	comp=Z,278nm,0.5s							
GIRL	**Giralia**	**22.50**	**222**	P		**P**	**04 58 06.3**	**+1.3**
CNJI	**Cibinong**	**23.10**	**266**	P		**P**	**04 58 09.1**	**-1.7**
	comp=Z,11μmcomp=Z,1μm,1.2s							
CBJI	**Citeko**	**23.38**

comp=Z,83nm,0.8s
GSI Gunungsitoli 33.60 282 P P 04 59 45.7 +1.4
CNB Canberra Magne 33.75 151 P P 04 59 47.6 +2.3
baz=34
CNB Canberra Magne 33.75 151 P P 04 59 46.4 +1.1
SRIT Nakonsritamara 34.07 295 P P 04 59 45.8 -2.4
SRIT IAmb IAmb 04 59 48.9
comp=Z,30nm,1.0s
JCJ Chichijima 35.12 18 S S 05 05 14.4 -4.7
comp=Z,7.4nm,0.5s,baz=287,slow=19,SNR=1.9
JCJ LR LR 05 11 42.3
comp=Z,119nm,21.9s,baz=200,slow=31
JCJ Chichijima 35.12 18 P P 04 59 56.0 -1.1
CM31 Chiang Mai Arr 39.58 309 P P 05 00 34.7 -0.1
CM31 IAmb IAmb 05 00 36.5
comp=Z,45nm,0.8s
CM31 Chiang Mai Arr 39.58 309 P P 05 00 36.7 +1.9
SNR=15
CMAR Chiang Mai Arr 39.58 309 P P 05 00 35.0 +0.2
comp=Z,24nm,0.6s,baz=133,slow=7.0,SNR=4.3
CMAR PcP PcP 05 02 41.3 +2.0
comp=Z,4.8nm,0.7s,baz=160,slow=3.1,SNR=5.5
comp=Z,24nm,0.6s
CMAR Chiang Mai Arr 39.58 309 P P 05 00 34.6 -0.2
CMAR Chiang Mai Arr 39.58 309 *i* P **P 05 00 33.2 -1.6**
CMAR pmax pmax
comp=Z,26nm,0.6s
NJ2 Nanjing 39.70 345 ⇓P **P 05 00 37.3 +1.8**
NJ2 pP **pP 05 01 07.1 +0.5**
NJ2 pmax pmax
comp=Z,22nm,0.8s
WHN Wuhan 39.73 338 ⇓*i*P **P 05 00 37.6 +1.8**
WHN pP **pP 05 01 07.5 +0.6**
WHN S **S 05 06 28.8 0.0**
WHN pmax pmax
comp=Z,100nm,1.0s
WHN pmax pmax
comp=Z,480nm,3.8s
CHTO Chiang Mai 39.79 309 P P 05 00 36.4 -0.1
CHTO Chiang Mai 39.79 309 P P 05 00 36.4 -0.1
CHTO pmax pmax
comp=Z,65nm,0.9s
CHTO Chiang Mai 39.79 309 P P 05 00 37.8 +1.2
CHTO Chiang Mai 39.79 309 P P 05 00 37.0 +0.5
CHTO pP **pP 05 01 08.4 +1.2**
GYA Guiyang 39.87 326 ⇓P **P 05 00 38.1 +0.9**
GYA pmax pmax
comp=Z,31nm,0.9s
JHS Saijyo 41.17 3 P P 05 00 46.8 -0.8
JHS IAmb IAmb 05 01 48.8
comp=Z,36nm,1.1s
KMI Kunming 41.22 320 ⇑P **P 05 00 49.3 +0.8**
KMI pP pP 05 01 20.8 +1.4
KMI pmax pmax
comp=Z,35nm,1.1s
KMI pmax pmax
comp=Z,160nm,4.1s
KMI Kunming 41.22 320 P P 05 00 50.1 +1.7
ENH Enshi 41.52 332 P P 05 00 49.0 -1.7
TJN Taejon 42.55 356*c i*P **P 05 01 00.2 +1.4**
PZH PanZhiHua 42.83 321 P P 05 01 01.8 +0.4
PZH pmax pmax
comp=Z,30nm,0.9s
PZH pmax pmax
comp=Z,180nm,6.8s
MAJO Matsushiro 43.25 9 P P 05 01 03.6 -0.9
MAJO Matsushiro 43.25 9*c i*P **P 05 01 04.7 +0.2**
MAJO pmax pmax
comp=Z,21nm,0.7s
MAJO Matsushiro 43.25 9 P P 05 01 04.8 +0.3
MJAR Matsushiro Arr 43.25 9 P P 05 01 03.7 -0.8
comp=Z,9.8nm,0.7s,baz=180,slow=10.0,SNR=23
MJAR ScP **ScP 05 06 29.4 +0.5**
comp=Z,0.7nm,0.3s,baz=192,slow=5.7,SNR=3.1
MJAR LR LR 05 18 08.9
comp=Z,153nm,19.4s,baz=220,slow=34
comp=Z,9.8nm,0.7s
MJAR Matsushiro Arr 43.25 9 P P 05 01 03.9 -0.6
MJAR Matsushiro Arr 43.25 9 P P 05 01 03.9 -0.6
MJAR pmax pmax
comp=Z,10.0nm,1.3s
MJB9 Matsu-Tunnel 43.26 9 P P 05 01 04.0 -0.5
KSAR Wonju Array Be 43.59 357 P P 05 01 06.7 -0.4
KSAR Wonju Array Be 43.59 357 P P 05 01 06.7 -0.4
KSRS Korea Array 43.60 357 P P 05 01 07.6 +0.5
comp=Z,4.8nm,0.6s,baz=175,slow=9.2,SNR=25
KSRS PcP **PcP 05 02 53.6 +1.5**
comp=Z,5.5nm,0.7s,baz=182,slow=3.8,SNR=9.0
KSRS ScP **ScP 05 06 31.2 +1.0**
comp=Z,1.0nm,0.4s,baz=151,slow=2.8,SNR=2.1
KSRS LR LR 05 18 40.2
comp=Z,83nm,20.4s,baz=175,slow=35
comp=Z,4.8nm,0.6s
LYN LuoYang 44.02 339 ⇓P **P 05 01 11.5 +0.9**
LYN pP pP 05 01 41.5 -0.6
LYN S **S 05 07 28.5 -3.4**
LYN SS **ScS 05 10 46.9 -7.3**
LYN pmax pmax
comp=Z,20nm,1.0s
TIA Tai'an 44.09 345 ⇓P **P 05 01 11.8 +0.7**
TIA pmax pmax
comp=Z,11nm,1.0s
TIA LR LR
comp=Z,210nm,10.4s
TIA LR LR
comp=Z,230nm,9.6s
TIA LR LR
comp=Z,220nm,11.3s
SEHB SEOHWA 44.39 358 P P 05 01 14.4 +0.9
CD2 Chengdu 44.93 327 P P 05 01 18.1 +0.1
CD2 pmax pmax
comp=Z,30nm,1.0s
XAN Xi'an 44.98 335 P P 05 01 18.3 0.0
XAN pP pP 05 01 49.0 -0.7
XAN sP sP 05 02 15.3 +10
XAN S **S 05 07 40.4 -5.4**
XAN pmax pmax
comp=Z,51nm,1.2s
XAN Xi'an 44.98 335 P P 05 01 18.4 +0.2
XAN pP **pP 05 01 49.0 -0.7**
XAN sP **pwP 05 01 58.9 +3.6**
JMM Marumori 45.01 12 P P 05 01 18.3 0.0
JMM IAmb IAmb 05 02 06.1
comp=Z,48nm,1.0s
HNS HongShan 45.88 343 ⇑P **P 05 01 25.6 +0.4**
HNS pP **pP 05 01 56.3 -0.8**
HNS PcP **PcP 05 03 02.1 +2.1**
HNS S **S 05 07 53.9 -4.6**
HNS pmax pmax
comp=Z,48nm,0.9s
MSVF Nonsavu 47.86 108 *eP* **P 05 01 42.0 +0.9**
MSVF pmax pmax
comp=Z,47nm,1.8s
BJT Baijiatuau 47.92 345 P P 05 01 41.3 +0.2
BJT IAmb IAmb 05 01 43.0
comp=Z,39nm,0.7s
BJT Baijiatuau 47.92 345 P P 05 01 41.3 +0.2
BJT pmax pmax
comp=Z,39nm,0.7s
BJT Baijiatuau 47.92 345 P P 05 01 42.2 +1.1
BJT pP **pP 05 02 12.2 -0.9**
BJI Beijing 47.94 345 P P 05 01 42.3 +1.1
BJI pP **pP 05 02 12.4 -0.8**
BJI PcP **PcP 05 03 09.3 +2.0**
BJI S **S 05 08 29.4 +1.7**
BJI ScS **ScS 05 11 17.4 -2.1**
BJI pmax pmax
comp=Z,52nm,0.6s
BJI LR LR
comp=Z,31nm,14.5s
BJI LR LR
comp=Z,87nm,14.5s
SNY Shenyang 48.31 353 ⇓P **P 05 01 45.1 +1.1**
SNY pP **pP 05 02 16.0 -0.5**
SNY sP **sP 05 02 36.1 +3.6**
SNY S **S 05 08 35.6 +2.8**
SNY pmax pmax
comp=Z,30nm,0.8s
SNY pmax pmax
comp=Z,93nm,3.7s
SNY LR LR
comp=Z,190nm,12.9s
SNY LR LR
comp=Z,190nm,12.6s
SNY LR LR
comp=Z,190nm,18.1s
MSHR Mys Shultsa 48.66 1*d i*P **P 05 01 48.6 +1.9**
MSHR pmax pmax
comp=Z,13nm,0.9s
LZH Lanzhou 48.98 331 ⇓P **P 05 01 51.0 +1.5**
LZH pP pP 05 02 22.0 +0.5
LZH sP sP 05 02 40.8 +3.6
LZH *e*S **S 05 08 40.1 -2.7**
LZH sS sS 05 09 42.8 +5.2
LZH SS **SS 05 12 20.0 +4.1**
LZH pmax pmax
comp=Z,51nm,1.1s
LZH pmax pmax
comp=Z,160nm,5.4s
SHL Shillong 49.02 312 P P 05 01 48.9 -1.0
SHL Shillong 49.02 312 P P 05 01 48.9 -1.0
SHL pmax pmax
comp=Z,70nm,0.9s
SHL Shillong 49.02 312 P P 05 01 50.5 +0.5
SNR=16
HHC Hu-ho-hao-te 50.01 341 *eP* **P 05 01 58.9 +1.8**
HHC pP pP 05 02 28.8 -0.8
HHC S **S 05 08 57.4 +0.5**
HHC pmax pmax
comp=Z,43nm,1.0s
HHC pmax pmax
comp=Z,240nm,5.6s
USA0B Ussuriysk Arra 50.30 2 P P 05 01 59.8 +0.7
USA0B Ussuriysk Arra 50.30 2 P P 05 01 59.8 +0.7
USA0B pmax pmax
comp=Z,13nm,0.6s
USRK Ussuriysk Ar. 50.30 2 P P 05 01 59.4 +0.4
comp=Z,10nm,0.6s,baz=182,slow=6.8,SNR=23
comp=Z,10nm,0.6s
USRK Ussuriysk Ar. 50.30 2 P P 05 01 59.7 +0.7
USRK Ussuriysk Ar. 50.30 2 P P 05 01 59.7 +0.7
BTO Baotou 50.30 340 *eP* **P 05 02 00.0 +0.7**
PALK Pallekele 51.36 284 P P 05 02 06.8 -0.8
comp=Z,15nm,0.7s,baz=204,slow=9.0,SNR=9.5
PALK LR LR 05 26 23.9
comp=Z,84nm,19.2s,baz=204,slow=39
comp=Z,15nm,0.7s
PALK Pallekele 51.36 284 P P 05 02 07.0 -0.7
PALK Pallekele 51.36 284 P P 05 02 07.0 -0.7
PALK pmax pmax
comp=Z,108nm,1.6s
PALK Pallekele 51.36 284 P P 05 02 07.2 -0.4
ASAJ Asahikawa 51.39 11 LR LR 05 21 15.1
comp=Z,98nm,22.0s,baz=193,slow=33
ASAJ Asahikawa 51.39 11 P P 05 02 07.4 +0.1
ASAJ pmax pmax
comp=Z,21nm,1.0s
JKA Kamikawa-asahi 51.39 11 P P 05 02 07.3 +0.1
XLT XiLinHaoTe 51.62 347 *eP* **P 05 02 09.8 +0.7**
XLT pP pP 05 02 40.5 -1.6
XLT S **S 05 09 16.5 -2.5**
XLT pmax pmax
comp=Z,37nm,0.5s
XLT pmax pmax
comp=Z,74nm,4.0s
BNX BinXian 51.88 357 ⇓P **P 05 02 11.8 +0.9**
BNX sP **sP 05 03 00.0 +0.8**
BNX PP **PP 05 04 11.1 +0.7**
BNX S **S 05 09 21.8 -0.5**
BNX pmax pmax
comp=Z,7.0nm,0.7s
BNX pmax pmax
comp=Z,100nm,4.7s
BNX LR LR
comp=Z,160nm,13.7s
BNX LR LR
comp=Z,190nm,10.3s
BNX LR LR
comp=Z,170nm,12.0s
LSA Lhasa 51.96 316 P P 05 02 11.7 -0.7
LSA Lhasa 51.96 316 P P 05 02 13.3 +0.9
LSA pmax pmax
comp=Z,69nm,0.8s
LSA Lhasa 51.96 316 P P 05 02 11.7 -0.7
LSA pmax pmax
comp=Z,41nm,0.7s
LSA Lhasa 51.96 316 P P 05 02 13.3 +0.9
LSA Lhasa 51.96 316 *i* P **P 05 02 13.6 +1.2**
SNR=11
LSA Lhasa 51.96 316 P P 05 02 13.5 +1.2
LSA pP **pP 05 02 45.0 +0.3**
TUWZ Tuamarina 52.15 139 P P 05 02 13.2 +0.2
GTA Gaotai 53.55 331 ⇑P **P 05 02 24.3 +0.8**
GTA pP pP 05 02 56.3 +0.3
GTA sP sP 05 03 12.9 +1.3
GTA ScP **ScP 05 07 13.0 +0.4**
GTA S **S 05 09 43.3 -2.2**
GTA pmax pmax
comp=Z,33nm,0.9s
RAMN Ramite 53.74 310 *eP* **P 05 02 25.5 +0.3**
comp=Z,469nm,0.7s
GOMU GeErMu 53.85 324 P P 05 02 26.4 +0.4
GOMU S **S 05 09 51.3 +1.2**
GOMU pmax pmax
comp=Z,5.0nm,0.9s
GOMU pmax pmax
comp=Z,83nm,5.3s
GOMU LR LR
comp=Z,62nm,9.0s
GOMU LR LR
comp=Z,50nm,9.3s
GOMU LR LR
comp=Z,55nm,9.4s
YSS Yuzh-Sakhalins 54.16 10 *eP* **P 05 02 28.7 +1.2**
YSS pmax pmax
comp=Z,20nm,0.9s
JIRN Jiri 54.42 311 *eP* **P 05 02 30.8 +0.5**
GUN Gumba 54.78 311 *eP* **P 05 02 33.5 +0.6**
comp=Z,326nm,0.8s
PKI Pulchoki 54.97 310 *eP* **P 05 02 34.2 0.0**
PKIN Phulchoki 54.98 310 *eP* **P 05 02 34.3 +0.1**
DMN Daman 55.22 310 *eP* **P 05 02 36.5 +0.6**
comp=Z,195nm,0.9s
KLR Kul'dur 55.32 1 P P 05 02 36.8 +0.9
comp=Z,8.9nm,0.9s,baz=217,slow=4.0,SNR=28
KLR LR LR 05 23 23.6
comp=Z,73nm,21.8s,baz=203,slow=33
comp=Z,8.9nm,0.9s
KLR Kul'dur 55.32 1*c i*P **P 05 02 36.9 +1.0**
KLR pmax pmax
comp=Z,14nm,1.0s
GKN Gorkha 55.77 310 *eP* **P 05 02 40.4 +0.7**
UGL Uglegorsk 56.10 9 *eP* **P 05 02 42.3 +0.9**
UGL pmax pmax
comp=Z,200nm,2.0s
UGL pmax pmax
comp=Z,80nm,1.1s
HIA Hailar 56.12 352 ⇑*eP* **P 05 02 41.2 -0.4**
HIA pmax pmax
comp=Z,5.0nm,0.9s
KOLN Koldanda 56.45 309 *eP* **P 05 02 43.6 -1.0**
DANN Dangsing 56.62 310 *eP* **P 05 02 46.3 +0.4**
PYUN Piuthan 57.08 309 *eP* **P 05 02 49.8 +0.7**
AFI Afiamalu 57.33 102 LR LR 05 27 37.9
comp=Z,106nm,18.4s,baz=201,slow=36
ULN Ulaanbaatar 57.73 342 P P 05 02 53.3 +0.2
ULN Ulaanbaatar 57.73 342*c i*P **P 05 02 54.6 +1.5**
ULN pmax pmax
comp=Z,59nm,0.7s
ULN Ulaanbaatar 57.73 342 P P 05 02 54.6 +1.5
ULN pP **pP 05 03 25.8 -0.5**
ULN sP **sP 05 03 40.5 -1.4**
SONM Songino Array 57.91 341 P P 05 02 55.2 +0.8
comp=Z,17nm,0.6s,baz=161,slow=6.5,SNR=69
SONM PcP **PcP 05 03 46.7 +1.6**
comp=Z,3.8nm,0.6s,baz=152,slow=5.8,SNR=1.4
SONM S **S 05 10 43.9 +1.0**
comp=Z,0.3nm,0.5s,baz=77,slow=11,SNR=0.9
SONM PKP2bc 05 32 49.1
comp=Z,0.5nm,0.6s,baz=64,slow=3.4,SNR=3.8
comp=Z,17nm,0.6s
SONM Songino Array 57.91 341 P P 05 02 54.5 +0.1
SONM IAmb IAmb 05 02 57.0
comp=Z,50nm,1.4s
SONM **PcP 05 03 45.9 +0.8**
ZEA Zeya 59.88 358 *eP* **P 05 03 09.3 +1.6**
ZEA pmax pmax
comp=N,10.0nm,0.8s
ZEA pmax pmax
comp=Z,20nm,0.8s
ZAK Zakamensk 61.14 341 *eP* **P 05 03 17.6 +1.2**
ZAK *e* 05 03 55.9
ZAK pmax pmax
comp=Z,14nm,1.3s
CASY Casey 61.44 189 P P 05 03 19.0 +0.9
CASY Casey 61.44 189 P P 05 03 19.7 +1.6
CASY sP **PcP 05 04 00.3 +1.6**
IRK Irkutsk 62.43 342 *eP* P 05 03 12.8 -12
IRK *e* 05 03 56.5
IRK pmax pmax
comp=Z,54nm,1.7s
MOY Mondy 63.00 340 *eP* **P 05 03 31.2 +2.4**
MOY pmax pmax
comp=Z,63nm,1.8s
WMQ Urumqi 63.02 327 *eP* **P 05 03 30.6 +1.5**
WMQ pP pP 05 04 03.5 +0.9
WMQ pmax pmax
comp=Z,75nm,0.9s
WMQ pmax pmax
comp=Z,280nm,3.8s
WMQ Urumqi 63.02 327 P P 05 03 30.9 +1.8
PEA0B Petropavlovsk- 63.56 18 P P 05 03 33.4 +1.1
PEA0B IAmb IAmb 05 03 35.3
comp=Z,34nm,0.8s
PEA0B Petropavlovsk- 63.56 18 P P 05 03 33.4 +1.1
PEA0B pmax pmax
comp=Z,34nm,0.8s
PETK Petropavlovsk- 63.56 18 P P 05 03 33.7 +1.4
comp=Z,24nm,0.7s,baz=191,slow=6.0,SNR=37
PETK PcP **PcP 05 04 08.3 +0.8**
comp=Z,3.1nm,0.6s,baz=172,slow=1.0,SNR=1.8
comp=Z,24nm,0.7s
PETK Petropavlovsk- 63.56 18 P P 05 03 33.4 +1.1
PET Petropavlovsk 63.78 19⇑*i*P **P 05 03 35.4 +1.7**
PET pmax pmax
comp=Z,54nm,1.0s
BOD Bodaibo 65.28 350 *eP* **P 05 03 44.5 +1.1**
BOD pmax pmax
comp=Z,35nm,1.0s
SHLS Shalkode 67.40 322 *eP* **P 05 03 54.9 -2.5**
SHLS pmax pmax
comp=Z,114nm,0.8s
MA2 Magadan 67.65 11 P P 05 03 59.9 +1.5
comp=Z,13nm,0.5s,baz=184,slow=8.0,SNR=6.7
comp=Z,13nm,0.5s
MA2 Magadan 67.65 11 P P 05 03 58.2 -0.2
MA2 IAmb IAmb 05 04 01.4
comp=Z,23nm,0.9s
MA2 Magadan 67.65 11⇑*i*P **P 05 03 58.4 -0.1**
MA2 pmax pmax
comp=Z,29nm,1.0s
UZB Uzynbulak 67.67 322 *eP* **P 05 03 58.2 -0.9**
TARG Taragay, Kyrgy 67.68 320 P P 05 03 59.0 -0.5
TARG IAmb IAmb 05 04 11.7
comp=Z,54nm,1.6s
TARG Taragay, Kyrgy 67.68 320 P P 05 03 59.1 -0.5
TARG pmax pmax
comp=Z,54nm,1.6s
KSH Kashi 67.77 317 P P 05 04 01.3 +1.5
KSH pP pP 05 04 34.3 +0.4
KSH S **S 05 12 46.0 -0.2**
KSH pmax pmax
comp=Z,28nm,1.0s
MK31 Makanchi Array 67.86 326 P P 05 04 01.0 +0.9
MK31 Makanchi Array 67.86 326 P P 05 04 01.0 +0.9
MK31 pmax pmax
comp=Z,51nm,0.7s
MKAR Makanchi Array 67.86 326 P P 05 04 01.1 +1.1
comp=Z,75nm,0.6s,baz=120,slow=8.0,SNR=498
MKAR S **S 05 12 47.4 +0.7**
comp=Z,0.4nm,0.7s,baz=106,slow=9.1,SNR=5.3
comp=Z,75nm,0.6s
MKAR Makanchi Array 67.86 326 P P 05 04 01.0 +0.9
MAKZ Makanchi 68.04 326 P P 05 04 02.1 +0.9
MAKZ Makanchi 68.04 326 P P 05 04 02.1 +0.9
MAKZ pmax pmax
comp=Z,59nm,0.7s
MAKZ Makanchi 68.04 326 P P 05 04 02.2 +1.1
MAKZ pP **pP 05 04 34.7 -0.6**
MAKZ sP **sP 05 04 45.6 -4.9**
YAK Yakutsk 68.14 360 P P 05 04 02.7 +1.3
baz=212,slow=0.2
YAK Yakutsk 68.14 360 P P 05 04 02.6 +1.2
YAK Yakutsk 68.14 360 *eP* **P 05 04 02.0 +0.6**
YAK *e* 05 04 25.0
YAK *e**PP **pwP 05 04 39.2 +3.0**
YAK *e* 05 06 33.2
YAK *e*PPP PPP 05 08 14.8
YAK *e*S **S 05 12 50.0 +0.6**
YAK *e* 05 13 43.4
YAK *e*SS **SS 05 17 15.4 +0.2**
YAK *e*SSS SSS 05 20 22.2
YAK pmax pmax
comp=Z,117nm,0.9s
YAK pmax pmax
comp=N,28nm,1.0s
YAK pmax pmax
comp=E,9.0nm,1.1s
YAK pmax pmax
comp=Z,12nm,0.4s
YAK pmax pmax
comp=N,10.0nm,0.9s
YAK pmax pmax
comp=E,31nm,2.2s
YAK smax smax
comp=E,43nm,2.3s
YAK smax smax
comp=N,39nm,1.6s
YAK Yakutsk 68.14 360 P P 05 04 03.2 +1.8
KDJ Kajisay 68.28 320 P P 05 04 02.8 -0.2
KDJ IAmb IAmb 05 04 05.7
comp=Z,31nm,0.8s
KDJ Kajisay 68.28 320 P P 05 04 02.8 -0.2
KDJ pmax pmax
comp=Z,31nm,0.8s
CCD Concordia, Ant 68.86 182 P P 05 04 07.2 +0.9
CCD x x 05 04 30.6
ARXS Arharly 68.97 322 *eP* **P 05 04 06.6 -0.5**
BOOM Boomskoye usch 69.26 320 P P 05 04 09.6 +0.5
BOOM IAmb IAmb 05 04 11.6
comp=Z,43nm,0.9s
BOOM Boomskoye usch 69.26 320 P P 05 04 09.6 +0.5
BOOM pmax pmax
comp=Z,43nm,0.9s
SHEM Shemya Is, Ala 69.50 27 LR LR 05 33 55.0
comp=Z,46nm,18.6s,baz=302,slow=35
TKM2 Tokmak 2 69.69 320 P P 05 04 13.1 +1.4
SNR=35
TKM2 Tokmak 2 69.69 320 P P 05 04 11.8 0.0
KBK Karagaybulak 69.98 320 P P 05 04 15.6 +2.1
SNR=13
UCH Uchtor 70.05 319 P P 05 04 16.1 +1.9
SNR=41
AAK Ala-Archa 70.26 320 P P 05 04 17.2 +2.0
SNR=14
AAK Ala-Archa 70.26 320 P P 05 04 15.3 +0.2
AAK IAmb IAmb 05 04 18.0
comp=Z,34nm,0.8s
AAK Ala-Archa 70.26 320*c i*P **P 05 04 16.5 +1.3**
AAK pmax pmax
comp=Z,44nm,0.9s
AAK Ala-Archa 70.26 320 P P 05 04 16.8 +1.6
AAK Ala-Archa 70.26 320 *i* P **P 05 04 16.5 +1.3**
SNR=16
AAK Ala-Archa 70.26 320 P P 05 04 17.0 +1.9
CHMS Chumysh 70.27 320 P P 05 04 16.5 +1.5
SNR=7.0
CHMS Chumysh 70.27 320 *i* P **P 05 04 16.1 +1.0**
CHMS pmax pmax
comp=Z,18nm,0.7s
AML Almayashu 70.54 319 P P 05 04 18.6 +1.4
SNR=20
AML Almayashu 70.54 319 P P 05 04 18.2 +1.0
AML Almayashu 70.54 319 *i* P **P 05 04 18.4 +1.3**
SNR=21
USP Ospenovka 70.56 320 P P 05 04 17.8 +0.9
SNR=36
SGDS Sogindy 70.57 320 *eP* **P 05 04 16.4 -0.5**
SGDS pmax pmax
comp=Z,10.0nm,1.0s
KBL Kabul 70.61 310 P P 05 04 17.7 +0.2
KBL IAmb IAmb 05 04 19.3
comp=Z,47nm,1.1s
KBL Kabul 70.61 310 P P 05 04 17.7 +0.2
KBL pmax pmax

comp=Z,47nm,1.1s
KBL Kabul 70.61 310 P P 05 04 18.0 +0.5
SNR=17
EKS2 Erkin-Say 70.73 319 P P 05 04 19.6 +1.6
SNR=33
SEY Seymchan 71.06 10 P P 05 04 20.0 +0.7
comp=Z,48nm,0.8s,baz=197,slow=4.7,SNR=87
comp=Z,48nm,0.8s
SEY Seymchan 71.06 10 *ce* P P 05 04 21.4 +2.1
SEY pmax pmax
comp=Z,63nm,0.9s
ZAA0 Zalesovo Array 71.13 334 P P 05 04 19.9 0.0
ZAA0 IAmb IAmb 05 04 21.2
comp=Z,29nm,0.8s
ZALV Zalesovo Beam 71.13 334 P P 05 04 20.1 +0.2
comp=Z,23nm,0.6s,baz=127,slow=5.4,SNR=89
ZALV S S 05 13 22.9 -1.9
comp=Z,0.5nm,0.4s,baz=164,slow=5.9,SNR=4.2
comp=Z,23nm,0.6s
ZALV Zalesovo Beam 71.13 334 P P 05 04 19.8 -0.1
GAR Garm 71.45 315 P P 05 04 22.9 +0.5
BTK Batken 71.54 316 P P 05 04 23.3 +0.4
BTK Batken 71.54 316 P P 05 04 23.3 +0.4
BTK pmax pmax
comp=Z,193nm,1.9s
BTLS Baital 71.72 322 *e* P P 05 04 22.5 -1.2
KURBB Kurchatov Arra 72.12 328 S S 05 13 32.2 -4.0
comp=Z,0.3nm,0.9s,baz=116,slow=14,SNR=4.8
KURK Kurchatov 72.13 328 P P 05 04 26.5 +0.5
KURK IAmb IAmb 05 04 27.9
comp=Z,36nm,0.8s
KURK Kurchatov 72.13 328 *c i* P P 05 04 26.5 +0.5
KURK pmax pmax
comp=Z,44nm,0.9s
KURK Kurchatov 72.13 328 P P 05 04 26.4 +0.5
CHGR Chuyangaron 72.13 314 P P 05 04 26.7 +0.3
CHGR Chuyangaron 72.13 314 P P 05 04 26.7 +0.3
CHGR pmax pmax
comp=Z,148nm,1.1s
IUG Iuzhnay 72.98 317 *e* P P 05 04 30.3 -1.1
KK31 Karatay Array 73.07 319 P P 05 04 32.2 +0.4
KK31 IAmb IAmb 05 04 33.9
comp=Z,37nm,1.1s
KK31 Karatay Array 73.07 319 P P 05 04 32.2 +0.4
KK31 pmax pmax
comp=Z,37nm,1.1s
KKAR Karatay Array 73.07 319 P P 05 04 32.4 +0.6
KKAR Karatay Array 73.07 319 P P 05 04 32.5 +0.7
KKAR IAmb IAmb 05 04 33.9
comp=Z,37nm,1.1s
KKAR Karatay Array 73.07 319 P P 05 04 32.4 +0.6
KKAR pmax pmax
comp=Z,37nm,1.1s
VNDA Vanda 73.08 173 P P 05 04 32.0 +0.8
comp=Z,10.0nm,0.5s,baz=319,slow=7.9,SNR=60
VNDA LR LR 05 34 43.5
comp=Z,130nm,20.5s,baz=356,slow=34
comp=Z,10.0nm,0.5s
VNDA Vanda 73.08 173 P P 05 04 32.2 +1.0
VNDA Vanda 73.08 173 P P 05 04 32.2 +1.0
VNDA pmax pmax
comp=Z,15nm,0.7s
SBA Scott Base 73.97 172 P P 05 04 37.1 +0.7
SBA Scott Base 73.97 172 P P 05 04 37.1 +0.7
SBA pmax pmax
comp=Z,17nm,1.0s
NGCH Negor - Chabah 74.20 298 P P 05 04 40.3 +1.6
OTUK Ortayu 74.30 324 P P 05 04 39.6 +0.7
JLN Jalan Bani Buh 74.95 295 P P 05 04 44.4 +1.3
BRZS Berezniki 74.96 326 *e* P P 05 04 41.5 -1.1
WBK Wadi Bani Khal 75.45 295 P P 05 04 48.0 +2.0
SNR=5.2
MAW Mawson 75.72 201 P P 05 04 48.0 +1.4
comp=Z,15nm,0.4s,baz=65,slow=5.9,SNR=41
MAW LR LR 05 35 51.1
comp=Z,111nm,19.5s,baz=70,slow=34
comp=Z,15nm,0.4s
MAW Mawson 75.72 201 P P 05 04 47.4 +0.8
MAW Mawson 75.72 201 P P 05 04 47.4 +0.8
MAW pmax pmax
comp=Z,6.0nm,0.9s
HRA Herat 75.83 308 P P 05 04 47.9 -0.3
HRA IAmb IAmb 05 04 50.8
comp=Z,40nm,1.2s
WSAR Wadi Sarin 75.90 296 P P 05 04 50.2 +1.6
SNR=8.6
MHTO MHTO 76.00 293 P P 05 04 50.1 +1.0
SNR=7.1
DQM DQM 76.17 292 P P 05 04 51.5 +1.4
JMDO Jabal Madar 76.18 295 P P 05 04 51.5 +1.4
SMDO Samad 76.38 295 P P 05 04 52.9 +1.5
BIDO Bidbid 76.42 296 P P 05 04 53.0 +1.6
SNR=19
HOQ Hoqain 77.16 296 P P 05 04 56.8 +1.2
SNR=12
JASK Jask - Hormozg 77.19 298 P P 05 04 57.1 +1.5
SHAO Shalim 77.57 290 P P 05 04 58.3 +0.3
BRVK Borovoye 77.75 328 P P 05 04 58.5 +0.3
BRVK IAmb IAmb 05 05 00.0
comp=Z,26nm,0.8s
BRVK Borovoye 77.75 328 *c i* P P 05 04 58.7 +0.5
BRVK pmax pmax
comp=Z,32nm,0.9s
BRVK Borovoye 77.75 328 P P 05 04 58.9 +0.6
TIXI Tiksi 77.81 360 P P 05 04 58.4 +0.2
comp=Z,14nm,0.5s,baz=113,slow=13,SNR=6.3
TIXI S S 05 14 35.2 -3.2
comp=Z,1.4nm,0.8s,baz=273,slow=23,SNR=8.7
TIXI LR LR 05 37 42.8
comp=Z,37nm,21.8s,baz=181,slow=34
comp=Z,14nm,0.5s
TIXI Tiksi 77.81 360 P P 05 04 58.2 +0.2
TIXI Tiksi 77.81 360 *i* P P 05 04 58.3 +0.2
TIXI pmax pmax
comp=Z,21nm,0.9s
SOHO SOHO 77.97 296 P P 05 05 01.5 +1.4
SOHO SOHO 77.97 296 *i* P P 05 05 00.2 +0.1
SNR=16
DMTO DMTO 78.15 290 P P 05 05 02.3 +1.1
BILL Bilibino 78.36 13 *e* P P 05 05 02.2 +0.9
BILL *e* 05 05 11.1
BILL *e* PPP PPP 05 09 50.9
BILL pmax pmax
comp=Z,3.0nm,0.6s
UOSS Minazif 78.44 297 P P 05 05 02.5 -0.2
UOSS Minazif 78.44 297 P P 05 05 03.5 +0.8
UOSS Minazif 78.44 297 *i* P P 05 05 02.3 -0.4
SNR=7.2
HATD Hatta, Dubai 78.48 297 P P 05 05 04.1 +1.2
SNR=7.1
HATD Hatta, Dubai 78.48 297 *i* P P 05 05 03.5 +0.6
SNR=5.9
ASHO Ashiyiah 78.52 297 P P 05 05 04.2 +1.0
SNR=5.9
ASHO Ashiyiah 78.52 297 *i* P P 05 05 03.2 +0.1
SNR=9.1
BANOM Banah 78.57 298 P P 05 05 04.6 +1.2
SNR=6.6
BANOM Banah 78.57 298 *i* P P 05 05 03.6 +0.2
SNR=16
MSFE Esma-Masafi 78.57 297 *i* P P 05 05 03.9 +0.5
SNR=7.1
MASF Masafi 78.57 297 P P 05 05 04.8 +1.3
SNR=8.9
ALNE Al Ain 78.66 296 P P 05 05 05.2 +1.3
SNR=5.6
SHME Shamm 78.74 298 P P 05 05 05.9 +1.6
SNR=5.5
SHME Shamm 78.74 298 *i* P P 05 05 04.7 +0.5
SNR=8.2
NAZ Nazwa, Dubai 78.93 297 P P 05 05 06.4 +1.1
SNR=6.2
NAZ Nazwa, Dubai 78.93 297 *i* P P 05 05 05.6 +0.3
SNR=8.5
FAQ Al Faqa, Dubai 78.94 297 P P 05 05 06.5 +1.1
SNR=6.0
FAQ Al Faqa, Dubai 78.94 297 *i* P P 05 05 05.6 +0.1
SNR=10
DOK Doka 79.08 290 P P 05 05 06.7 +0.5
ASUD Al Ashush, Dub 79.15 296 P P 05 05 07.5 +1.0
ASUD Al Ashush, Dub 79.15 296 *i* P P 05 05 06.8 +0.3
SNR=6.1
WHFO Wadi Hawf 79.29 290 P P 05 05 07.8 +0.3
SPIA Saint Paul Isl 79.39 28 P P 05 05 08.3 +1.3
baz=240
UNV Unalaska Valle 79.73 32 P P 05 05 10.2 +1.2
baz=244
GEYT Alibeck 80.05 310 P P 05 05 12.2 +0.9
comp=Z,9.2nm,0.7s,baz=108,slow=4.8,SNR=10
comp=Z,9.2nm,0.7s
GEYT Alibeck 80.05 310 P P 05 05 10.4 -0.8
GEYT IAmb IAmb 05 05 13.5
comp=Z,57nm,1.8s
GYA0 ALIBECK ARRAY 80.05 310 P P 05 05 12.5 +1.3
MZR Muzera 80.49 295 P P 05 05 15.3 +1.5
SNR=5.1
MZR Muzera 80.49 295 *i* P P 05 05 14.3 +0.5
SNR=7.1
VOI Vohitsoka 81.74 249 P P 05 05 20.5 -0.2
VOI IAmb IAmb 05 05 22.2
comp=Z,32nm,1.0s
VOI Vohitsoka 81.74 249 P P 05 05 21.9 +1.3
FALS False Pass 81.79 32 P P 05 05 21.6 +1.7
baz=247
GAMB Gambell 82.14 22 P P 05 05 23.3 +1.8
baz=238
AB31 Akbulak array 82.20 321 *i* P P 05 05 22.0 -0.2
ABKAR Akbulak array 82.20 321 P P 05 05 22.4 +0.1
ABKAR Akbulak array 82.20 321 P P 05 05 22.2 0.0
ABKAR IAmb IAmb 05 05 25.0
comp=Z,15nm,1.0s
SDPT Sand Point 83.54 32 P P 05 05 29.8 +0.8
SDPT Sand Point 83.54 32 P P 05 05 29.5 +0.6
baz=249
QSPA South Pole Qui 83.66 180 P P 05 05 29.7 0.0
QSPA IAmb IAmb 05 05 31.2
comp=Z,25nm,0.9s
AKTO Aktyubinsk 83.76 322 S S 05 15 39.1 -1.9
comp=Z,1.0nm,0.8s,baz=209,slow=13,SNR=6.1
AKTO LR LR 05 46 45.7
comp=Z,35nm,20.0s,baz=112,slow=38
AKTO Aktyubinsk 83.76 322 P P 05 05 30.1 -0.1
CHNA Chernabura Isl 83.84 33 P P 05 05 31.6 +1.1
baz=250
S14K Fog Glacier 84.36 32 P P 05 05 34.1 +0.8
baz=250
SVE Sverdlovsk 84.37 329 *e* P P 05 05 34.0 +0.8
SVE pmax pmax
comp=Z,58nm,1.1s
TNA Tin City 84.45 22 P P 05 05 34.9 +1.6
baz=242
ANM Nome 84.95 23 P P 05 05 37.6 +1.7
baz=244
ARU Arti 85.32 328 P P 05 05 37.3 -0.6
ARU IAmb IAmb 05 05 39.2
comp=Z,28nm,0.9s
ARU Arti 85.32 328 *c i* P P 05 05 38.3 +0.4
ARU 05 08 54.0
ARU S S 05 15 49.7 -6.5
ARU SS SS 05 21 34.0 -0.3
ARU pmax pmax
comp=Z,34nm,0.9s
R16K Pilot Point 85.81 31 P P 05 05 41.3 +1.0
baz=252
P16K Nushagak River 86.07 29 P P 05 05 42.6 +1.0
baz=251
N16K Nishlik Lake 86.18 28 P P 05 05 44.1 +2.0
baz=250,SNR=17
O16K Kokwok River B 86.21 29 P P 05 05 43.8 +1.6
baz=251,SNR=9.9
CHIR Chirikof Islan 86.30 33 P P 05 05 43.4 +0.7
baz=253
R17K Ugashik Creek 86.44 31 P P 05 05 43.8 +0.4
baz=252
O17K Koliganek Bris 86.74 29 P P 05 05 46.3 +1.5
baz=252,SNR=6.8
P17K Kvichak River 86.88 30 P P 05 05 45.9 +0.4
baz=252
SII Sitkinak Islan 87.28 32 P P 05 05 47.8 +0.2
baz=254
P18K Big Mountain, 87.53 30 P P 05 05 49.8 +1.1
baz=253
N18K Kilae Creek 87.59 28 P P 05 05 50.9 +1.9
baz=253
O18K Koktuh Hills 87.68 29 P P 05 05 50.2 +0.9
baz=253
RAYN Ar Rayn 87.81 294 P P 05 05 50.9 0.0
RAYN Ar Rayn 87.81 294 P P 05 05 50.9 0.0
RAYN pmax pmax
comp=Z,34nm,0.9s
RAYN Ar Rayn 87.81 294 P P 05 05 51.6 +0.8
RAYN Ar Rayn 87.81 294 P P 05 05 51.3 +0.5
SVW2 Sparrevohn 87.86 28 P P 05 05 51.5 +1.3
OHAK Old Harbor 87.93 32 P P 05 05 51.9 +1.3
baz=255
Q19K Cape Douglas, 88.19 30 P P 05 05 52.5 +0.7
baz=255
TTA Tatalina 88.21 26 P P 05 05 53.1 +1.3
TTA Tatalina 88.21 26 P P 05 05 53.1 +1.3
TTA pmax pmax
comp=Z,12nm,0.9s
TTA Tatalina 88.21 26 P P 05 05 53.2 +1.3
baz=253,SNR=11
N19K Bonanza Creek 88.29 28 P P 05 05 53.5 +1.2
N19K Bonanza Creek 88.29 28 P P 05 05 53.8 +1.5
baz=254,SNR=6.3
GCSA Galena City Sc 88.40 24 P P 05 05 53.5 +0.9
baz=252
KDAK Kodiak Island 88.44 31 P P 05 05 54.1 +1.2
comp=Z,8.2nm,0.7s,baz=297,slow=4.2,SNR=11
comp=Z,8.2nm,0.7s
KDAK Kodiak Island 88.44 31 P P 05 05 54.2 +1.2
baz=256
L19K White Mountain 88.50 27 P P 05 05 54.5 +1.2
L19K IAmb IAmb 05 06 40.6
comp=Z,19nm,0.9s
L19K White Mountain 88.50 27 P P 05 05 54.7 +1.4
baz=254,SNR=11
M19K Big River Lodg 88.64 27 P P 05 05 55.1 +1.3
M19K Big River Lodg 88.64 27 P P 05 05 55.6 +1.8
baz=254
L20K Farewell, AK 89.03 27 P P 05 05 57.0 +1.3
baz=254,SNR=5.2
MAK Makhachkala 89.06 313 *e* P P 05 05 53.5 -2.7
MAK *e**PP pP 05 06 31.6 -0.6
MAK *e**SP sP 05 06 47.3 +0.2
MAK *e* 05 09 22.6
MAK *e* 05 16 07.7
MAK pmax pmax
comp=Z,28nm,0.4s
K20K Telida 89.18 26 P P 05 05 56.6 +0.3
K20K Telida 89.18 26 P P 05 05 57.6 +1.2
baz=254,SNR=6.7
M20K Styx River 89.21 27 P P 05 05 57.7 +1.1
baz=255
J20K Nowinta River 89.37 25 P P 05 05 58.2 +1.0
J20K IAmb IAmb 05 05 59.6
comp=Z,49nm,1.9s
J20K Nowinta River 89.37 25 P P 05 05 58.6 +1.4
baz=254,SNR=13
N20K Mount Spurr 89.46 28 P P 05 05 59.5 +1.7
baz=256
PPLA Purkeypile 89.89 27 P P 05 06 00.3 +0.5
baz=256
SKT Skwentna 89.97 28 P P 05 05 59.8 -0.3
SKT IAmb IAmb 05 07 17.7
comp=Z,42nm,2.0s
SKT Skwentna 89.97 28 P P 05 05 60.0 -0.1
baz=257
IMAR Indian Mountai 90.02 23 P P 05 06 00.8 +0.6
CHUM Lake Minchumin 90.07 26 P P 05 06 01.8 +1.3
baz=256,SNR=5.6
SUA Susitna One 90.21 28 P P 05 06 02.2 +0.8
baz=257
H21K Melozitna Rive 90.31 24 P P 05 06 02.5 +0.9
baz=255
BELG Belogornoye 90.54 323 LR LR 05 52 51.8
comp=Z,28nm,18.2s,baz=188,slow=40
BELG Belogornoye 90.54 323 *c i* P P 05 06 01.4 -1.5
BELG pmax pmax
comp=Z,3.0nm,1.0s
RC01 Rabbit Creek A 90.61 29 P P 05 06 03.9 +0.8
baz=258
KIRV Kirov 90.64 329 *c i* P P 05 06 02.2 -1.0
H22K Ishtalitna Cre 90.94 24 P P 05 06 05.8 +1.3
baz=257
MLY Manley 91.00 25 P P 05 06 05.9 +1.0
MLY Manley 91.00 25 P P 05 06 05.7 +0.8
baz=257,SNR=19
KNK Knik Glacier 91.28 28 P P 05 06 07.1 +0.9
baz=259
SML Sawmill 91.41 28 P P 05 06 07.3 +0.5
baz=259
RND Reindeer 91.47 26 P P 05 06 07.4 +0.3
RND IAmb IAmb 05 06 08.0
comp=Z,12nm,0.8s
RND Reindeer 91.47 26 P P 05 06 07.4 +0.3
RND pmax pmax
comp=Z,12nm,0.8s
WAT1 Susitna Watana 91.50 27 P P 05 06 07.9 +0.7
baz=259
MCK McKinley 91.50 26 P P 05 06 07.4 +0.2
baz=259
I23K Minto, Yukon-K 91.60 25 P P 05 06 08.1 +0.5
I23K IAmb IAmb 05 06 09.4
comp=Z,15nm,0.8s
I23K Minto, Yukon-K 91.60 25 P P 05 06 08.4 +0.9
baz=259,SNR=15
NEA2 Nenana 91.61 25 P P 05 06 08.6 +1.0
NEA2 Nenana 91.61 25 P P 05 06 08.5 +0.8
baz=259
ZEI Tsey 91.66 313 *e* P P 05 06 08.8 +0.2
ZEI pmax pmax
comp=Z,9.0nm,1.3s
H23K Yukon River 91.66 24 P P 05 06 08.2 +0.3
H23K IAmb IAmb 05 06 09.9
comp=Z,8.6nm,0.8s
H23K Yukon River 91.66 24 P P 05 06 08.1 +0.3
baz=258,SNR=8.7
M23K Glacier View 91.69 28 P P 05 06 08.7 +0.7
baz=260
COLD Coldfoot 91.69 23 P P 05 06 09.2 +1.3
COLD IAmb IAmb 05 06 10.2
comp=Z,9.0nm,0.7s
COLD Coldfoot 91.69 23 P P 05 06 09.1 +1.1
baz=258
GEVA Gevas 91.76 308 P P 05 06 08.7 -0.5
GEVA IAmb IAmb 05 06 11.4
comp=Z,18nm,1.0s
WAT6 Susitna Watana 91.82 27 P P 05 06 09.5 +0.6
baz=260
GLI Glacier Island 91.83 29 P P 05 06 09.5 +0.8
baz=260
SCM Sheep Creek Mo 91.88 28 P P 05 06 11.0 +1.9
baz=260
Q23K Middleton Isla 91.97 31 P P 05 06 10.6 +1.3
baz=261
WRH Wood River Hil 92.00 25 P P 05 06 09.4 -0.1
WRH IAmb IAmb 05 06 10.3
comp=Z,12nm,0.9s
MDM Murphy Dome 92.03 25 P P 05 06 09.7 +0.1
KIBK Kibwezi 92.06 267 P P 05 06 09.8 -1.1
KIBK IAmb IAmb 05 06 13.0
comp=Z,16nm,1.2s
DHY Denali Highway 92.07 27 P P 05 06 10.4 +0.4
DHY IAmb IAmb 05 06 11.7
comp=Z,12nm,1.2s
DHY Denali Highway 92.07 27 P P 05 06 10.8 +0.8
baz=260
CCB Clear Creek Bu 92.16 25 P P 05 06 09.3 -0.9
CCB IAmb IAmb 05 06 10.8
comp=Z,14nm,0.9s
TOLK Toolik Lake Re 92.22 21 P P 05 06 11.2 +0.7
TOLK Toolik Lake Re 92.22 21 P P 05 06 11.6 +1.2
baz=258,SNR=7.9
H24K Noodor Dome 92.34 24 P P 05 06 10.7 -0.3
H24K IAmb IAmb 05 06 13.0
comp=Z,11nm,0.8s
H24K Noodor Dome 92.34 24 P P 05 06 12.0 +1.0
baz=260,SNR=15
M24K Tolsona, Glenn 92.47 28 P P 05 06 13.3 +1.6
baz=261
HDA Harding Lake 92.48 26 P P 05 06 11.1 -0.5
HDA IAmb IAmb 05 06 13.0
comp=Z,8.9nm,0.8s
HDA Harding Lake 92.48 26 P P 05 06 11.3 -0.4
baz=261,SNR=7.9
KLU Klutina 92.49 29 P P 05 06 12.6 +0.8
baz=262
IL31 92.57 25 P P 05 06 10.2 -1.8
ILAR Eielson Array 92.57 25 P P 05 06 10.9 -1.1
comp=Z,4.9nm,0.8s,baz=272,slow=4.2,SNR=48
comp=Z,4.9nm,0.8s
ILAR Eielson Array 92.57 25 P P 05 06 10.5 -1.5
ILAR Eielson Array 92.57 25 P P 05 06 11.0 -1.1
D24K Happy Valley 92.58 21 P P 05 06 13.4 +1.4
baz=259,SNR=5.9
C24K Franklin Bluff 92.73 20 P P 05 06 13.9 +1.3
baz=259
K24K Donnelly Dome 92.90 26 P P 05 06 14.6 +1.0
baz=262
PAX Paxson 92.92 27 P P 05 06 14.3 +0.5
PAX Paxson 92.92 27 P P 05 06 14.3 +0.5
PAX pmax pmax
comp=Z,7.0nm,1.0s
PAX Paxson 92.92 27 P P 05 06 15.2 +1.4
baz=262
KMBO Kilima Mbogo 92.98 269 P P 05 06 15.7 +0.3
comp=Z,6.5nm,1.0s,baz=62,slow=5.2,SNR=8.5
KMBO LR LR 05 44 27.9
comp=Z,46nm,18.2s,baz=98,slow=33
comp=Z,6.5nm,1.0s
KMBO Kilima Mbogo 92.98 269 P P 05 06 14.2 -1.2
KMBO IAmb IAmb 05 06 17.4
comp=Z,16nm,1.1s
KMBO Kilima Mbogo 92.98 269 P P 05 06 14.2 -1.2
KMBO pmax pmax
comp=Z,16nm,1.2s
PRGR Permogore 93.01 332 *e* P P 05 06 11.7 -2.4
BMRM Bremner River 93.05 29 P P 05 06 15.9 +1.4
baz=263
N25K Chitina, Valde 93.14 28 P P 05 06 15.8 +1.0
baz=263
J25K Salcha River, 93.19 25 P P 05 06 12.6 -2.4
J25K Salcha River, 93.19 25 P P 05 06 14.8 -0.2
baz=262,SNR=6.7
RIDG Independent Ri 93.30 26 P P 05 06 15.4 -0.1
RIDG IAmb IAmb 05 06 17.0
comp=Z,9.4nm,1.0s
RIDG Independent Ri 93.30 26 P P 05 06 16.0 +0.5
baz=263
SCRK Sand Creek 93.71 26 P P 05 06 17.0 -0.5
SCRK Sand Creek 93.71 26 P P 05 06 17.6 +0.1
baz=263,SNR=5.8
BMAR Burnt Mountain 93.87 23 P P 05 06 19.0 +0.9
L26K Log Cabin Wild 93.88 27 P P 05 06 19.0 +0.8
baz=264
J26L Joseph Creek 93.95 26 P P 05 06 19.3 +0.8
J26L IAmb IAmb 05 06 20.3
comp=Z,13nm,0.8s
J26L Joseph Creek 93.95 26 P P 05 06 19.3 +0.8
baz=264,SNR=23
I26K Coal Creek Min 94.21 25 P P 05 06 20.6 +1.0
baz=264
M27K Edge Creek, AK 94.49 28 P P 05 06 22.4 +1.3
baz=265
K27K Chicken 94.55 26 P P 05 06 21.4 +0.2
K27K Chicken 94.55 26 P P 05 06 23.1 +2.0
baz=265
L27K Beaver Creek, 94.58 27 P P 05 06 22.2 +0.8
L27K IAmb IAmb 05 06 23.7
comp=Z,6.2nm,0.8s
L27K Beaver Creek, 94.58 27 P P 05 06 22.5 +1.1
baz=265,SNR=5.8
BCAR Beaver Creek A 94.60 27 P P 05 06 22.4 +0.9
SOC Sochi 94.78 313 *e* P P 05 06 21.2 -1.5
SOC *e* 05 10 10.9
SOC *e* PPP PPP 05 12 16.3
SOC *e*S SKSac 05 16 42.9 -1.7
SOC *e*SS SS 05 23 50.2 -1.3
SOC *e*SSS SSS 05 27 30.3
TROLL Troll, Antarti 94.92 194 P P 05 06 24.5 +1.6
BVCY Beaver Creek 94.97 28 P P 05 06 24.8 +1.6
baz=266
BELA Belgrano 2 95.53 183 P P 05 06 25.8 +0.3
BELA IAmb IAmb 05 06 26.8
comp=Z,12nm,1.0s
DAWY Dawson 95.73 26 P P 05 06 26.4 -0.3
DAWY IAmb IAmb 05 06 29.3
comp=Z,11nm,0.9s
DAWY Dawson 95.73 26 P P 05 06 28.0 +1.4
baz=268
KLMR Klimovskoe 95.88 331 *e* P P 05 06 22.5 -4.8
KLMR *e**PP pP 05 06 57.9 -5.5
KLMR pmax pmax
comp=Z,15nm,0.8s
KLMR Klimovskoe 95.88 331 *e* P P 05 06 22.5 -4.8

KLMR AMP 05 06 26.8
comp=Z,15nm,0.8s
KLMR *ep*P **pP** **05 06 57.9 -5.5**
KLMR *e*PP PP 05 10 12.5 -8.7
I29M Ogilvie Camp, 96.24 25 P **P** **05 06 29.6 +0.7**
I29M Ogilvie Camp, 96.24 25 P **P** **05 06 30.3 +1.4**
baz=269
SNAA Sanae 96.42 193 P **P** **05 06 30.6 +0.9**
SNAA Sanae 96.42 193 P **P** **05 06 29.5 -0.2**
SNAA IAmb IAmb 05 06 31.8
comp=Z,7.7nm,0.9s
SNAA Sanae 96.42 193 *d* iP **P** **05 06 30.9 +1.2**
SNAA pmax pmax
comp=Z,9.0nm,0.9s
P30M Million Dollar 96.76 30 P **P** **05 06 32.0 +0.7**
baz=269
M30M Minto, Yukon 96.86 28 P **P** **05 06 32.9 +1.2**
baz=270
EPYK Eagle Plains 96.91 24 P **P** **05 06 32.5 +0.6**
EPYK IAmb IAmb 05 07 16.9
comp=Z,11nm,1.3s
EPYK Eagle Plains 96.91 24 P **P** **05 06 32.1 +0.2**
baz=270
OBN Obninsk 97.31 325 *e*P **P** **05 06 33.0 -0.8**
OBN *e**PP **pP** **05 07 09.7 -0.3**
OBN *e**SP **sP** **05 07 24.7 -0.1**
OBN *e* 05 10 37.2
OBN *e*PPP PPP 05 12 37.9
OBN pmax pmax
comp=Z,9.0nm,0.9s
INK Inuvik 98.08 22 P **P** **05 06 36.6 -0.4**
comp=Z,2.4nm,0.8s,baz=273,slow=5.9,SNR=5.1
comp=Z,2.4nm,0.8s
INK Inuvik 98.08 22 P Pdif 05 06 37.7 +0.6
INK IAmb IAmb 05 06 38.8
comp=Z,11nm,1.4s
INK Inuvik 98.08 22 P Pdif 05 06 37.7 +0.6
INK pmax pmax
comp=Z,11nm,1.5s
INK Inuvik 98.08 22 P Pdif 05 06 37.3 +0.3
baz=273
APA Apatity 98.46 337 ⇓ *i*P Pdif 05 06 43.0 +4.2
APA pmax pmax
comp=Z,8.0nm,0.8s
APA MLR MLR
comp=Z,200nm,13.0s
BRTR Keskin Array B 99.17 309 P **Pdif** **05 06 41.8 -1.0**
comp=Z,0.8nm,0.7s,baz=127,slow=3.3,SNR=4.8
comp=Z,0.8nm,0.7s
BRTR Keskin Array B 99.17 309 P **Pdif** **05 06 41.3 -1.5**
MBAR Mbarara 99.51 268 LR LR 05 48 56.4
comp=Z,29nm,19.6s,baz=92,slow=34
BOSA Boshof 100.13 240 P **Pdif** **05 06 47.0 -0.4**
comp=Z,6.5nm,1.1s,baz=73,slow=9.0,SNR=3.1
BOSA Boshof 100.13 240 P **Pdif** **05 06 47.0 -0.4**
ARCES ARCESS Array B 101.06 340 P **Pdif** **05 06 49.7 -0.6**
comp=Z,3.2nm,0.6s,baz=76,slow=6.4,SNR=15
ARCES PKiKP **PKiKP** **05 11 15.3 +0.7**
comp=Z,0.3nm,0.3s,baz=143,slow=1.2,SNR=7.0
ARCES PKKPbc **PKKPbc** **05 23 03.4 -0.7**
comp=Z,1.2nm,0.8s,baz=300,slow=5.5,SNR=3.8
ARCES ARCESS Array B 101.06 340 **Pdif** **05 06 49.9 -0.5**
C36M Paulatuk 101.34 20 P **Pdif** **05 06 52.2 +0.7**
baz=282
AKASG Malin Array Be 101.92 320 P **Pdif** **05 06 53.9 -0.6**
comp=Z,0.3nm,0.5s,baz=67,slow=4.2,SNR=1.9
FINES FINESS Array B 102.34 332 P **Pdif** **05 06 55.0 -1.2**
comp=Z,1.9nm,0.7s,baz=109,slow=8.7,SNR=8.1
FINES FINESS Array B 102.34 332 *i* P **Pdif** **05 06 55.5 -0.7**
FINES pmax pmax
comp=Z,2.0nm,0.7s
NACGM Naroch 102.95 325 ⇓ *e*P **Pdif** **05 06 58.0 -1.0**
RES Resolute Bay 106.93 11 Pdiff **Pdif** **05 07 17.8 +1.5**
comp=Z,1.3nm,0.6s,baz=321,slow=9.0,SNR=2.2
RES PKiKP **PKiKP** **05 11 26.0 +0.8**
comp=Z,2.0nm,0.8s,baz=341,slow=1.3,SNR=4.9
YKA Yellowknife Ar 106.97 26 PKiKP **PKiKP** **05 11 26.2 +0.6**
comp=Z,1.0nm,0.5s,baz=279,slow=4.1,SNR=10.0
HFS Hagfors 108.54 332 PKKPbc PKKPbc 05 22 39.6 -1.6
comp=Z,1.2nm,0.6s,baz=134,slow=6.4,SNR=5.7
NOA NORSAR Array B 109.33 333 Pdiff **Pdif** **05 07 26.4 -0.9**
comp=Z,0.4nm,0.6s,baz=76,slow=4.2,SNR=3.6
SNCC San Nicolas Is 110.23 57 P **PKiKP** **05 11 33.2 +0.6**
baz=276
VES Vestal, Richgr 110.31 54 P **PKiKP** **05 11 33.4 +0.7**
baz=277
NVAR Mina Array Bea 110.58 51 PKiKP **PKiKP** **05 11 35.3 +1.9**
comp=Z,0.6nm,0.6s,baz=246,slow=1.2,SNR=4.5
NVAR PKKPbc **PKKPbc** **05 22 34.4 +0.2**
comp=Z,0.3nm,0.6s,baz=111,slow=3.9,SNR=4.4
NVAR PKKP **PKKPab** **05 22 45.2 +1.3**
comp=Z,0.9nm,1.0s,baz=87,slow=3.8,SNR=4.9
FMP Fort Macarthur 111.20 56 P **PKiKP** **05 11 35.0 +0.5**
baz=277
MSO Missoula 112.04 42 P **PKiKP** **05 11 36.8 +1.0**
baz=285
GERES GERESS Array B 112.13 320 PKiKP **PKiKP** **05 11 36.1 +0.2**
comp=Z,1.4nm,0.6s,baz=73,slow=4.5,SNR=10
GERES PP **PP** **05 12 20.7 -1.5**
comp=Z,0.3nm,0.4s,baz=74,slow=4.7,SNR=3.5
GSC Goldstone, Bar 112.22 55 P **PKiKP** **05 11 36.8 +0.3**
baz=278
HLID Hailey 112.50 45 P **PKiKP** **05 11 38.2 +1.3**
baz=283
SUMG Summit 113.45 356 *i* P **PKiKP** **05 11 38.0 -0.1**
BC3 Big Chuckawall 113.56 56 P **PKiKP** **05 11 40.7 +1.6**
baz=278
IRM Iron Mountain 113.74 56 P **PKiKP** **05 11 40.8 +1.5**
baz=279
BOZ Bozeman (W) 113.91 43 P **PKiKP** **05 11 40.5 +1.0**
baz=286
WTTA Wattenberg 113.92 319 *i* P **PKiKP** **05 11 40.6 +1.1**
comp=Z,9.5nm,0.5s
WATA Walderalm 113.94 319 *i* P **PKiKP** **05 11 40.2 +0.8**
comp=Z,4.0nm,0.5s
MOTA Moosalm 114.24 319 *i* P **PKiKP** **05 11 40.3 +0.3**
comp=Z,3.2nm,0.5s
EGMT Eagleton 114.41 40 P **PKiKP** **05 11 41.3 +1.1**
baz=285
RETA Reutte 114.42 320 *i* P **PKiKP** **05 11 41.8 +1.5**
comp=Z,1.2nm,0.3s
DUG Dugway, Tooele 114.43 49 P **PKiKP** **05 11 41.9 +1.2**
baz=283
DAVA Damuels 115.05 320 *i* P **PKPdf** **05 11 42.7 +1.1**
comp=Z,4.0nm,0.4s
SNOW Snow King Moun 115.11 45 **PKiKP** **05 11 41.3 -0.7**
LOHW Long Hollow 115.17 45 **PKiKP** **05 11 41.1 -0.9**
U15A North Rim 115.64 53 **PKiKP** **05 11 43.5 +0.2**
RLMT Red Lodge 115.64 43 P **PKPdf** **05 11 44.4 +1.5**
baz=288
TMUT Trail Mountain 115.84 49 **PKiKP** **05 11 43.7 +0.1**
214A Organ Pipe Nat 116.02 58 P **PKiKP** **05 11 45.0 +1.3**
baz=279
BW06 Boulder Array 116.14 45 **PKiKP** **05 11 44.1 +0.1**
BW06 Boulder Array 116.14 45 P **PKiKP** **05 11 44.8 +0.8**
baz=287
PD31 Pinedale Array 116.14 45 **PKPdf** **05 11 43.9 -0.1**
PDAR Pinedale Array 116.14 45 PKP **PKiKP** **05 11 45.0 +1.1**
comp=Z,1.2nm,0.7s,baz=247,slow=1.9,SNR=14
PDAR PKKPbc **PKKPbc** **05 22 13.9 -1.7**
comp=Z,0.8nm,0.9s,baz=108,slow=9.5,SNR=4.5
PDAR Pinedale Array 116.14 45 **PKiKP** **05 11 44.1 +0.1**
WUAZ Wupatki 116.55 53 PKPdf **PKPdf** **05 11 44.4 -0.5**
WUAZ Wupatki 116.55 53 P **PKiKP** **05 11 45.7 +0.8**
baz=282
RDMU Red Mountain 116.74 48 **PKPdf** **05 11 43.0 -2.2**
LAO LASA Array 117.12 40 P **PKiKP** **05 11 47.4 +1.9**
baz=291
TUC Tucson 117.65 57 **PKPdf** **05 11 45.8 -1.2**
TUC Tucson 117.65 57 PKIKP **PKPdf** **05 11 45.8 -1.2**
TUC Tucson 117.65 57 P **PKiKP** **05 11 48.5 +1.5**
baz=281
DGMT Dagmar 117.71 38 P **PKiKP** **05 11 48.3 +1.7**
baz=294
O20A White River Ci 117.84 48 PKPdf **PKPdf** **05 11 47.2 0.0**
O20A White River Ci 117.84 48 P **PKiKP** **05 11 48.7 +1.4**
baz=286
PV11 David Mesa, Pa 117.86 50 **PKiKP** **05 11 48.0 +0.6**
PV13 Radium Mtn., P 117.94 50 **PKiKP** **05 11 47.8 +0.2**
W18A Petrified Fore 117.94 54 P **PKiKP** **05 11 48.5 +0.8**
baz=283
RWWY Rawlins 118.13 46 **PKPdf** **05 11 47.7 -0.2**
MVCO Mesa Verde 118.42 51 PKPdf **PKPdf** **05 11 47.9 -0.6**
MVCO Mesa Verde 118.42 51 P **PKiKP** **05 11 49.3 +0.7**
baz=285
N23A Red Feather La 119.28 46 P **PKiKP** **05 11 51.0 +0.8**
baz=289
RSSD Black Hills 119.50 42 PKPdf **PKPdf** **05 11 49.4 -1.0**
RSSD Black Hills 119.50 42 PKIKP **PKPdf** **05 11 49.4 -1.0**
RSSD Black Hills 119.50 42 P **PKiKP** **05 11 51.0 +0.5**
baz=292
RSSD Black Hills 119.50 42 P **PKiKP** **05 11 51.5 +1.1**
baz=292
S22A 4UR Ranch, Cre 119.56 50 PKPdf **PKiKP** **05 11 51.1 +0.2**
S22A 4UR Ranch, Cre 119.56 50 P **PKiKP** **05 11 52.0 +1.1**
baz=286,SNR=7.4
ISCO Idaho Springs 119.86 47 P **PKiKP** **05 11 53.4 +2.0**
baz=288
ISCO Idaho Springs 119.86 47 P **PKiKP** **05 11 52.6 +1.2**
baz=288
DY2G Dye2 119.89 358 *i* P **PKiKP** **05 11 50.6 +0.1**
121A Cookes Peak, D 120.09 56 P **PKiKP** **05 11 54.1 +2.2**
baz=283
121A Cookes Peak, D 120.09 56 P **PKiKP** **05 11 53.5 +1.6**
baz=283
Y22A Socorro 120.44 54 P **PKiKP** **05 11 53.9 +1.4**
baz=284
Q24A Divide 120.47 48 P **PKPdf** **05 11 51.9 -0.6**
baz=288
SDCO Great Sand Dun 120.57 50 P **PKiKP** **05 11 54.1 +1.3**
baz=287
SDCO Great Sand Dun 120.57 50 P **PKiKP** **05 11 53.5 +0.7**
baz=287,SNR=6.5
ANMO Albuquerque 120.60 53 *i* PKiKP **PKiKP** **05 11 54.4 +1.6**
ANMO pmax pmax
comp=Z,5.0nm,1.0s
ANMO Albuquerque 120.60 53 P **PKiKP** **05 11 54.5 +1.6**
baz=285
ANMO Albuquerque 120.60 53 P **PKiKP** **05 11 54.2 +1.4**
baz=285
E28A Huff 120.66 39 **PKPdf** **05 11 51.3 -1.0**
T25A Trinidad 121.58 50 PKPdf **PKPdf** **05 11 54.1 -0.5**
T25A Trinidad 121.58 50 P **PKiKP** **05 11 56.0 +1.2**
baz=288
ULM Lac du Bonnet 121.67 33 PKP **PKiKP** **05 11 54.2 0.0**
comp=Z,4.4nm,0.7s,baz=309,slow=4.4,SNR=6.2
ULM Lac du Bonnet 121.67 33 PKPdf **PKPdf** **05 11 53.9 -0.2**
NUUK Nuuk 122.22 1 *i* P **PKiKP** **05 11 55.2 +0.4**
MNTX Cornudas Mount 122.27 56 PKPdf **PKPdf** **05 11 55.3 -0.5**
MNTX Cornudas Mount 122.27 56 P **PKiKP** **05 11 57.6 +1.6**
baz=284
MNTX Cornudas Mount 122.27 56 P **PKiKP** **05 11 57.3 +1.3**
baz=284
KSCO Kaye Shedlock' 122.31 47 P **PKiKP** **05 11 57.2 +1.2**
baz=290
AGMN Agassiz Nation 122.71 35 P **PKPdf** **05 11 56.1 0.0**
baz=302
K31A O'Neill 123.62 42 **PKPdf** **05 11 56.7 -1.4**
F33A 5 Mile Ranch, 123.70 38 **PKPdf** **05 11 58.0 0.0**
MSTX Muleshoe 123.79 53 PKPdf **PKiKP** **05 11 59.1 0.0**
MSTX Muleshoe 123.79 53 P **PKiKP** **05 12 00.2 +1.1**
baz=287
MSTX Muleshoe 123.79 53 P **PKiKP** **05 11 59.9 +0.8**
baz=287
TX31 Lajitas Ar. Si 124.25 59 PKPdf **PKPdf** **05 11 57.5 -2.3**
TX31 Lajitas Ar. Si 124.25 59 P **PKiKP** **05 12 01.1 +1.0**
baz=283
TX32 Lajitas Array 124.25 59 **PKPdf** **05 11 58.5 -1.3**
TXAR Lajitas Array 124.25 59 PKP **PKiKP** **05 12 00.8 +0.8**
comp=Z,3.1nm,0.9s,baz=251,slow=1.7,SNR=20
TXAR Lajitas Array 124.25 59 PKPdf **PKPdf** **05 11 57.7 -2.1**
ECSD EROS Data Cent 124.52 40 PKPdf **PKPdf** **05 11 57.3 -2.4**
ECSD EROS Data Cent 124.52 40 P **PKiKP** **05 12 00.4 +0.3**
baz=298
ECSD EROS Data Cent 124.52 40 P **PKiKP** **05 12 00.6 +0.5**
baz=298,SNR=12
BGNE Belgrade 124.55 43 P **PKiKP** **05 12 00.6 +0.3**
baz=295
NRS Narsarsuaq 125.18 358 **PKiKP** **05 12 00.6 -0.1**
NRS Narsarsuaq 125.18 358 PKIKP **PKiKP** **05 12 00.6 -0.1**
NRS Narsarsuaq 125.18 358 *i* P **PKiKP** **05 12 00.6 -0.1**
IVI Ivigtut 125.21 359 PKPdf **PKPdf** **05 11 59.1 -1.4**
IVI Ivigtut 125.21 359 *i* P **PKiKP** **05 12 00.7 -0.1**
EYMN Ely 125.34 33 P **PKiKP** **05 12 01.8 +0.2**
baz=306
F36A Milaca 125.35 36 **PKPdf** **05 11 59.2 -2.1**
F36A Milaca 125.35 36 P **PKiKP** **05 12 01.8 +0.1**
baz=302
R32A Long Quarter, 125.38 47 PKPdf **PKPdf** **05 12 00.1 -1.5**
R32A Long Quarter, 125.38 47 P **PKiKP** **05 12 02.8 +0.8**
baz=293
E38A The Farm, Brul 126.08 35 **PKPdf** **05 12 01.4 -1.3**
E38A The Farm, Brul 126.08 35 P **PKiKP** **05 12 03.2 +0.2**
baz=305
SPMN Marine on St. 126.12 37 **PKPdf** **05 12 01.7 -1.0**
SPMN Marine on St. 126.12 37 P **PKiKP** **05 12 03.7 +0.6**
baz=303
I37A Lemond, Waseca 126.40 38 **PKPdf** **05 12 03.4 0.0**
I37B Waseca 126.40 38 P **PKiKP** **05 12 04.6 +0.8**
baz=301
KSU1 Kansas State U 126.60 45 P **PKiKP** **05 12 05.0 +0.7**
baz=295
WMOK Wichita Mounta 126.68 51 **PKPdf** **05 12 04.3 +0.1**
WMOK Wichita Mounta 126.68 51 PKIKP **PKPdf** **05 12 04.3 +0.1**
WMOK Wichita Mounta 126.68 51 P **PKPdf** **05 12 04.1 -0.1**
baz=290
ABTX Abilene, Hawle 126.69 54 P **PKiKP** **05 12 04.8 0.0**
baz=288
JCT Junction City 127.20 56 PKPdf **PKPdf** **05 12 05.3 0.0**
JCT Junction City 127.20 56 PKIKP **PKPdf** **05 12 05.3 0.0**
JCT Junction City 127.20 56 P **PKiKP** **05 12 07.3 +1.4**
baz=287
JCT Junction City 127.20 56 P **PKiKP** **05 12 07.0 +1.2**
baz=287,SNR=11
ESDC Sonseca Array 127.27 316 PKP **PKiKP** **05 12 06.2 +0.5**
comp=Z,0.9nm,0.8s,baz=57,slow=2.1,SNR=6.7
ESDC PP **PP** **05 14 07.5 +1.4**
comp=Z,2.6nm,1.0s,baz=54,slow=6.6,SNR=11
ESDC Sonseca Array 127.27 316 PKPdf **PKPdf** **05 12 02.4 -2.8**
T35A Sooner Cattle 127.57 48 PKPdf **PKPdf** **05 12 03.7 -2.1**
P38A Dawn 128.50 43 PKPdf **PKPdf** **05 12 05.2 -2.3**
P38A Dawn 128.50 43 P **PKiKP** **05 12 08.6 +0.5**
baz=298
TUL1 Leonard 128.51 48 PKPdf **PKPdf** **05 12 05.5 -2.1**
TUL1 Leonard 128.51 48 P **PKPdf** **05 12 07.9 +0.3**
baz=294
JFWS Jewell Farm 128.93 38 **PKPdf** **05 12 06.3 -1.9**
JFWS Jewell Farm 128.93 38 PKIKP **PKPdf** **05 12 06.3 -1.9**
JFWS Jewell Farm 128.93 38 P **PKiKP** **05 12 08.7 -0.2**
baz=304
TORD Torodi Ar. Bea 129.04 282 PKP **PKiKP** **05 12 09.6 -0.3**
comp=Z,3.4nm,0.5s,baz=71,slow=2.1,SNR=46
TORD SKPbc SKPbc 05 15 17.2 +0.1
comp=Z,2.3nm,0.8s,baz=68,slow=3.0,SNR=5.0
TORD Torodi Ar. Bea 129.04 282 **PKPdf** **05 12 08.0 -1.1**
U38A Gravette 129.32 47 **PKPdf** **05 12 07.7 -1.4**
U38A Gravette 129.32 47 P **PKiKP** **05 12 10.3 +0.4**
baz=295
X37A Clayton 129.34 50 **PKPdf** **05 12 07.5 -1.7**
PLCA Paso Flores 129.39 159 PKP **PKPdf** **05 12 09.5 +0.2**
comp=Z,5.1nm,0.9s,baz=237,slow=0.4,SNR=13
S39A Bolivar 129.54 45 **PKPdf** **05 12 09.2 -0.3**
S39A Bolivar 129.54 45 P **PKiKP** **05 12 09.8 +0.3**
baz=297
SCHQ Schefferville 129.67 13 PKP **PKiKP** **05 12 10.1 +0.1**
comp=Z,3.1nm,0.5s,baz=352,slow=3.5,SNR=7.7
SCHQ SKPbc SKPbc 05 15 18.7 +0.6
comp=Z,12nm,0.9s,baz=338,slow=3.3,SNR=9.9
HHAR Hobbs 129.72 47 **PKPdf** **05 12 08.2 -1.7**
L42A Oliver, Polo 129.79 39 **PKPdf** **05 12 08.5 -1.4**
R40A Maddies Statio 130.00 44 **PKPdf** **05 12 08.7 -1.6**
R40A Maddies Statio 130.00 44 P **PKiKP** **05 12 11.3 +0.2**
baz=299
W39A Magazine 130.29 48 P **PKiKP** **05 12 11.4 -0.4**
baz=295
U40A Yellville 130.47 47 PKPdf **PKPdf** **05 12 09.2 -2.1**
U40A Yellville 130.47 47 P **PKiKP** **05 12 12.4 +0.2**
baz=297
U40A P **PKiKP** **05 12 12.4 +0.2**
baz=297
U40A Yellville 130.47 47 P **PKPdf** **05 12 11.7 +0.3**
baz=297
MGMO Mountain Grove 130.53 45 **PKPdf** **05 12 11.2 -0.2**
MIAR Mount Ida 130.72 49 P **PKiKP** **05 12 12.4 -0.4**
baz=295
CCM Cathedral Cave 130.82 44 PKPdf **PKPdf** **05 12 09.6 -2.3**
CCM Cathedral Cave 130.82 44 PKIKP **PKPdf** **05 12 09.6 -2.3**
CCM Cathedral Cave 130.82 44 P **PKPdf** **05 12 12.3 +0.4**
baz=299
CCM Cathedral Cave 130.82 44 P **PKiKP** **05 12 12.7 -0.1**
baz=299
HDIL Hopedale 130.82 40 P **PKiKP** **05 12 12.8 +0.1**
baz=303
W41B Gary Mavity, V 131.44 48 P **PKiKP** **05 12 13.8 -0.3**
baz=296
J47A Sunmer 131.92 34 **PKPdf** **05 12 11.7 -2.2**
J47A Sunmer 131.92 34 P **PKiKP** **05 12 15.2 +0.3**
baz=310
J47A P **PKiKP** **05 12 15.2 +0.3**
baz=310
PBMO Poplar Bluff 132.00 45 **PKPdf** **05 12 12.5 -1.7**
SFIN Lafayette 132.31 39 P **PKiKP** **05 12 15.5 -0.2**
baz=305
L48A N Adams 132.97 36 **PKPdf** **05 12 14.5 -1.4**
O48B Farmland 133.58 38 P **PKiKP** **05 12 18.0 -0.4**
baz=307
WVT Waverly 134.14 44 PKPdf **PKPdf** **05 12 17.4 -0.9**
WVT Waverly 134.14 44 PKIKP **PKPdf** **05 12 17.4 -0.9**
WVT Waverly 134.14 44 P **PKiKP** **05 12 19.3 -0.3**
baz=301
P49A Miami Univ. Ec 134.28 38 P **PKiKP** **05 12 20.2 +0.4**
baz=307
P49A Miami Univ. Ec 134.28 38 P **PKiKP** **05 12 19.9 +0.1**
baz=307
ACSO Alum Creek Sta 134.90 36 P **PKiKP** **05 12 20.4 -0.6**
baz=310
CLTN Cedars of Leba 135.19 43 **PKPdf** **05 12 19.4 -0.8**
ERPA Erie 135.32 32 P **PKPdf** **05 12 20.9 +0.7**
baz=314
KIC Kosan Boka 135.40 273 ⇑ *i* PKP2 **PKiKP** **05 12 23.3 +0.5**
comp=Z,4.3nm,0.3s
M53A WI Miller and 135.42 34 P **PKiKP** **05 12 21.4 -0.7**
baz=313
DBIC Dimbokro 135.53 273 PKP **PKPdf** **05 12 21.8 +0.4**
comp=Z,5.4nm,0.4s,baz=94,slow=4.2,SNR=18
DBIC Dimbokro 135.53 273 **PKPdf** **05 12 16.0 -5.5**
LIC Lamto 135.68 272 ⇑ *i* PKP2 **PKiKP** **05 12 24.6 +1.3**
comp=Z,8.6nm,0.3s
TIC Toumodi 135.69 273 ⇑ *i* PKP2 **PKiKP** **05 12 24.0 +0.6**
comp=Z,10.0nm,0.3s
P52A Corning 135.78 37 P **PKPdf** **05 12 21.8 +0.6**
baz=310
O53A New Philadelph 135.92 35 P **PKiKP** **05 12 22.6 -0.5**
baz=312
LONY Lake Ozonia 136.06 26 P **PKiKP** **05 12 22.7 -0.5**
baz=323
LRAL Lakeview Retre 136.29 48 PKPdf **PKPdf** **05 12 21.0 -1.4**
LRAL Lakeview Retre 136.29 48 P **PKiKP** **05 12 23.3 -0.8**
baz=299
P53A Whipple 136.32 36 PKPdf **PKPdf** **05 12 21.9 -0.3**
TZTN Tazewell 136.80 41 P **PKiKP** **05 12 24.7 -0.3**
baz=306
TKL Tuckaleechee C 137.16 42 **PKPdf** **05 12 20.8 -3.1**
TKL Tuckaleechee C 137.16 42 PKIKP **PKPdf** **05 12 20.8 -3.1**
V52A Sevierville 137.18 42 **PKPdf** **05 12 23.3 -0.6**
BINY Binghamton 137.30 29 P **PKiKP** **05 12 25.4 -0.5**
baz=320
LBNH Lisbon 137.47 24 P **PKiKP** **05 12 26.1 0.0**
baz=326
SSPA Standing Stone 137.49 32 P **PKiKP** **05 12 25.8 -0.4**
baz=316
PKME Peaks-Kenny Pk 137.59 21 P **PKiKP** **05 12 26.1 -0.2**
baz=330
BLA Blacksburg 138.37 38 P **PKiKP** **05 12 27.9 -0.3**
baz=310
L61B Northampton 138.62 26 P **PKiKP** **05 12 28.0 -0.6**
baz=324
GOGA Godfrey 138.63 45 P **PKiKP** **05 12 28.3 -0.5**
baz=303
HRV Adam Dziewonsk 139.05 25 P **PKiKP** **05 12 28.9 -0.5**
baz=326
TIGA Tifton 139.58 47 P **PKiKP** **05 12 30.4 -0.4**
baz=301
PLTB Pedras Altas 141.95 174 *e*P **PKPdf** **05 12 31.3 -1.4**
AC02 Maricunga 142.02 151 PKPdf **PKPdf** **05 12 28.3 -5.3**
GO02 Mina Guanaco 143.18 149 PKPdf PKPbc 05 12 33.1 +0.3
ITQB Itaqui 143.60 170 PKPdf PKPbc 05 12 33.1 -0.3
MATN Matagalpa 143.64 77 PKPdf PKPbc 05 12 33.8 -0.3
GPS2 Hotel Rincn d 144.41 80 *e*P **PKPdf** **05 12 38.3 +0.7**
PLVR Palo Verde 144.44 81 *e*P **PKPdf** **05 12 38.0 +0.3**
ACON Acoyapa 144.48 78 *e*P **PKPdf** **05 12 38.6 +1.1**
GUAB Guayabo de Bag 144.53 80 *e*P **PKPdf** **05 12 38.4 +0.6**
COLC Colonia 144.56 81 *e*P **PKPdf** **05 12 38.9 +1.1**
HORNC Hornillas 144.58 80 *e*P **PKPdf** **05 12 38.8 +0.9**
CUI Cuipilapa 144.60 81 *e*P **PKPdf** **05 12 38.5 +0.6**
JTS Las Juntas de 144.83 81 *e*P **PKPdf** **05 12 39.9 +1.6**
JTS Las Juntas de 144.83 81 *e*P **PKPdf** **05 12 39.9 +1.6**
ARE1 Arenal 1 145.05 81 *e*P **PKiKP** **05 12 40.9 -1.7**
CEDE Laguna Cedeo 145.07 81 *e*P **PKiKP** **05 12 40.8 -1.9**
FORC Fortuna 145.10 81 *e*P **PKiKP** **05 12 40.9 -1.8**
ESPN Las Esperanzas 145.30 78 *e*P **PKPab** **05 12 41.0 +1.6**
HDC Heredia 145.68 82 *e*P **PKiKP** **05 12 43.8 -0.2**
PATCX Punta Patache 146.33 144 **PKPdf** **05 12 38.8 -1.9**
ITAB Concordia 146.57 176 PKPdf **PKPdf** **05 12 40.8 -0.1**
DRK0 Durika 146.57 83 *e*P **PKiKP** **05 12 46.5 +0.6**
CPUP Villa Florida 146.71 167 PKPbc **PKPbc** **05 12 42.9 -0.1**
comp=Z,29nm,0.9s,baz=183,slow=1.9,SNR=42
CPUP Villa Florida 146.71 167 **PKPdf** **05 12 41.4 +0.3**
CPUP Villa Florida 146.71 167 PKIKP **PKPdf** **05 12 41.4 +0.3**
NNA Nana 147.40 124 PKPdf **PKPdf** **05 12 42.2 -0.4**
NNA Nana 147.40 124 PKIKP **PKPdf** **05 12 42.2 -0.4**
PB08 IPOC Station P 147.45 144 **PKPdf** **05 12 43.4 +0.3**
PB11 IPOC Station P 147.45 143 **PKPdf** **05 12 43.8 +1.0**
LCCY Blossom Villag 147.57 63 **PKPdf** **05 12 42.6 -0.1**
GO01 Chusmiza 147.79 144 **PKPdf** **05 12 45.0 +1.3**
ARNL Arenillas 148.07 107 **PKPdf** **05 12 44.5 +0.8**
PB16 IPOC Station P 148.62 142 **PKiKP** **05 12 51.2 +0.8**
CACAO El Cacao, Vera 148.97 86 *e*P **PKiKP** **05 12 50.9 +0.3**
COHC Cochancay 149.16 106 **PKiKP** **05 12 51.6 +0.6**
PB18 Visviri 149.20 141 **PKiKP** **05 12 53.4 +1.7**
AZU Azuero 149.55 85 *e*P **PKiKP** **05 12 52.3 +0.5**
PORT Chimborazo Vol 149.89 104 PKPab **PKPab** **05 12 56.1 -2.3**
BCIP Isla Barro Col 149.94 83 *e*P **PKPbc** **05 12 51.8 +0.1**
UPA Univ. de Panam 150.24 83 *e*P **PKPbc** **05 12 52.6 +0.1**
MTDJ Mount Denham 150.32 64 *e*P **PKiKP** **05 12 53.5 +0.2**
SLOR San Lorenzo - 150.34 103 **PKiKP** **05 12 56.5 +2.5**
OTAV Otavalo 150.61 101 PKPbc **PKiKP** **05 12 55.2 +0.6**
OTAV Otavalo 150.61 101 PKIKP **PKiKP** **05 12 55.2 +0.6**
OTAV Otavalo 150.61 101 *e*P **PKPbc** **05 12 52.3 -1.7**
LPAZ La Paz 151.03 141 PKP **PKPdf** **05 12 50.0 +0.9**
comp=Z,3.0nm,0.8s,baz=179,slow=0.4,SNR=10
LPAZ PKPbc **PKiKP** **05 12 56.5 +0.9**
comp=Z,14nm,0.4s,baz=284,slow=0.5,SNR=61
LPAZ La Paz 151.03 141 **PKPdf** **05 12 50.4 +1.3**
LPAZ La Paz 151.03 141 PKIKP **PKPdf** **05 12 50.4 +1.3**
LPAZ La Paz 151.03 141 *e*P **PKiKP** **05 12 56.2 +0.7**
GR1C Gorgona, Isla 151.37 95 *e*P **PKiKP** **05 12 57.0 +1.4**
UPD2 Meteti 151.76 84 *e*P **PKiKP** **05 12 57.0 +0.6**
CCUFI Cufio, Nario 151.89 99 *e*P **PKiKP** **05 12 59.1 +1.9**
GCUF Volcan Galeras 151.89 99 *e*P **PKiKP** **05 12 59.0 +1.7**
BBAC Balboa, Cauca 152.13 98 *e*P **PKiKP** **05 12 58.1 +0.7**
MAC Bahia Malaga 152.31 93 *e*P **PKiKP** **05 12 59.7 +2.2**
CRUC La Cruz 152.34 99 *e*P **PKiKP** **05 13 00.7 +2.7**
POPC Popayan, Colom 152.78 97 *e*P **PKiKP** **05 12 59.2 +0.4**
SOTA Rioblanco 152.78 98 *e*P **PKiKP** **05 12 59.5 +0.4**
YOTC Yotoco, Valle 153.29 94 *e*P **PKiKP** **05 13 00.8 +1.2**
PLMC San Jos del P 153.44 92 *e*P **PKPdf** **05 12 54.5 +2.4**
DBBC Dabeiba 153.59 87 *e*P **PKiKP** **05 13 03.7 +3.5**
FLOC Florencia 153.62 99 *e*P **PKiKP** **05 13 01.7 +1.4**
CBOC Ciudad Bolivar 153.76 90 *e*P **PKPdf** **05 12 55.7 +3.1**
GARC Garzon, Huila 153.89 98 *e*P **PKiKP** **05 13 03.2 +2.1**
PTLC Puerto Leguiza 154.15 103 *e*P **PKiKP** **05 13 02.2 +0.9**
UREC San Jos de Ur 154.25 85 *e*P **PKiKP** **05 13 02.0 +0.4**
HELC Santa Helena 154.25 89 *e*P **PKiKP** **05 13 03.5 +1.5**
GUY2C Guyana, Caldas 154.37 91 *e*P **PKiKP** **05 13 04.4 +2.1**
ORTC Ortega, Tolima 154.37 94 *e*P **PKPdf** **05 12 55.5 +2.1**
PRAC Prado 154.71 95 *e*P **PKiKP** **05 13 03.5 +0.9**
ZARC Zaragoza, Cauc 154.92 86 *e*P **PKiKP** **05 12 54.8 +0.7**
GUA01 Guaratinga, BA 155.27 203 *e*P **PKPdf** **05 12 52.8 -1.7**
ROSC El Rosal 155.38 92 PKP **PKPdf** **05 12 57.2 +2.0**
comp=Z,4.8nm,0.4s,baz=288,slow=20,SNR=3.6
MACC Macarena, Meta 155.50 99 *e*P **PKPdf** **05 12 56.2 +1.3**
SPBC San Pablo de B 155.68 90 *e*P **PKPdf** **05 12 56.7 +1.5**
RUSC La Rusia 156.67 90 *e*P **PKPdf** **05 12 57.5 +0.5**
BDFB Brasilia 158.13 184 PKP **PKPdf** **05 12 59.9 +1.6**
comp=Z,2.5nm,0.6s,baz=90,slow=2.0,SNR=6.0
NPGB Novo Progresso 165.55 157 *e*P **PKPdf** **05 13 05.4 -0.5**
ITTB Itaituba 167.77 150 *e*P **PKPdf** **05 13 06.5 -1.0**
BOAV Boa Vista 168.46 109 *e*P **PKPdf** **05 13 07.4 -0.6**
TMAB Tom-Au,PA,Br 171.24 190 *e*P **PKPdf** **05 13 08.8 -0.8**
MCPB Macapa, AP 172.94 160 *e*P **PKPdf** **05 13 10.2 -0.2**

INET ***21*** *04:53:48.8±0.6, 12°.98N×87°.12W, h6km±3km, ML3.3*
SNET ***21*** *04:53:49.2±0.7, 13°.00N×87°.21W, h4km±14km, ML2.9*

ISC 21 04:53:48.8±0.9, 12°.99N±0°.05×87°.15W±0°.06, h13km, n11, σ0s76/15, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**0.30**	**161**	*eP*	**Pg**	**04 53 55.1**	**+0.1**
CRIN				*eS*	**Sg**	**04 54 00.4**	**+1.1**
CRIN				IAML		04 54 02.8	
	comp=N,5μm,0.2s						
TEL3	**Telica 3**	**0.51**	**144**	*eP*	**Pg**	**04 53 58.4**	**-0.4**
CNCH	**Conchagua**	**0.73**	**294**	*eP*	**Pg**	**04 54 02.6**	**-0.4**
CNCH				*eS*	**Sg**	**04 54 13.4**	**+0.8**
CNCH				IAML		04 54 16.3	
	comp=Z,1μm,0.2s						
LCND	**La Caada**	**0.79**	**294**	*eP*	**Pg**	**04 54 03.7**	**-0.4**
LCND				*eS*	**Sg**	**04 54 14.2**	**-0.3**
LCND				IAML		04 54 18.1	
	comp=Z,277nm,0.3s						
COPN	**Copaltepe**	**0.97**	**146**	*eP*	**Pb**	**04 54 06.4**	**-1.1**
TGUH	**Tegucigalpa,Un**	**1.07**	**354**	*eP*	**Pb**	**04 54 08.3**	**-1.0**
TGUH				*eS*	**Sb**	**04 54 24.0**	**+0.7**
TGUH	**Tegucigalpa,Un**	**1.07**	**354**	*eP*	**Pb**	**04 54 09.1**	**-0.2**
RCON	**San Juan de Ri**	**1.09**	**63**	*eP*	**Pb**	**04 54 09.0**	**-0.6**
SCLA	**Alcaldia de Sa**	**1.69**	**295**	*eP*	**Pn**	**04 54 19.2**	**+1.1**
COEG	**Centro de Oper**	**1.80**	**291**	*eP*	**Pn**	**04 54 20.0**	**+0.4**
SJTE	**Alcalda de S**	**1.91**	**289**	*eP*	**Pn**	**04 54 21.2**	**0.0**

*IDC **21** 04:57:05.4±1.0, 20°.09S×168°.72E, h0km, mb4.2/7, mbtmp4.2/7, MS3.9/7, Error ellipse: s-maj=52.5km s-min=33.4km az=83.0*
*NEIC **21** 04:57:06.1±1.6, 20°.19S±0°.05×168°.49E±0°.05, h10km±1km, mb4.7/14, Error ellipse: s-maj=9.9km s-min=7.8km az=39.0*

ISC 21 04:57:08.4±0.5, 20°.22S±0°.07×168°.45E±0°.07, h25km, n39, σ1s02/34, mb4.5/11, MS3.6/5, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LIFNC	**LIFOU**	**1.27**	**244**		**Pb**	**04 57 31.0**	**-0.6**
LIFNC					**Sb**	**04 57 47.4**	**0.0**
MARNC	**Mare, Loyalty**	**1.32**	**197**		**Pn**	**04 57 31.2**	**0.0**
MARNC					**Sb**	**04 57 48.3**	**-0.7**
PINNC	**Pines Island,**	**2.56**	**201**		**Pn**	**04 57 47.8**	**-0.5**
KOUNC	**Koumac, New Ca**	**3.92**	**264**		**Pn**	**04 58 06.8**	**-0.2**
MSVF	**Nonsavu**	**9.41**	**76**	LR	LR	05 02 15.3	
	comp=Z,2μm,19.1s,baz=220,slow=34						
MSVF	**Nonsavu**	**9.41**	**76**	Pn	**Pn**	**04 59 21.3**	**-1.2**
URZ	**Urewera**	**19.49**	**159**	P	**P**	**05 01 33.6**	**+0.1**
AFI	**Afiamalu**	**19.91**	**75**	LR	LR	05 07 39.6	
	comp=Z,546nm,19.6s,baz=207,slow=32						
RAR	**Rarotonga**	**29.71**	**98**	LR	LR	05 12 52.2	
	comp=Z,122nm,18.7s,baz=278,slow=32						
WB2	**Warramunga Arr**	**32.00**	**264**	P	**P**	**05 03 30.9**	**-2.0**
WRAB	**Tennant Creek**	**32.00**	**265**	P	**P**	**05 03 31.5**	**-1.4**
WRA	**Warramunga Arr**	**32.01**	**264**	LR	LR	05 16 07.8	
	comp=Z,187nm,20.0s,baz=114,slow=35						
GUMO	**Guam**	**40.82**	**323**	LR	LR	05 20 59.7	
	comp=Z,75nm,18.1s,baz=108,slow=35						
TNTI	**Ternate**	**45.31**	**292**	P	**P**	**05 05 24.9**	**+0.3**
DAV	**Davao City (W)**	**50.12**	**298**	LR	LR	05 28 48.7	
	comp=Z,344nm,18.3s,baz=168,slow=38						
VNDA	**Vanda**	**57.44**	**182**	P	**P**	**05 06 57.1**	**+2.5**
	2.1nm,0.9s,baz=3.4,slow=9.5,SNR=1.2						
	2.1nm,0.9s						
VNDA	**Vanda**	**57.44**	**182**	P	**P**	**05 06 56.0**	**+1.5**
VNDA				IAmb	IAmb	05 07 02.9	
	comp=Z,8.7nm,1.4s						
PETK	**Petropavlovsk-**	**73.61**	**353**	P	**P**	**05 08 38.9**	**-0.4**
	comp=Z,9.2nm,0.9s,baz=171,slow=10,SNR=10.0						
	comp=Z,9.2nm,0.9s						
PETK	**Petropavlovsk-**	**73.61**	**353**	P	**P**	**05 08 37.9**	**-1.3**
KLR	**Kul'dur**	**76.45**	**336**	P	**P**	**05 08 56.7**	**+0.9**
	comp=Z,1.3nm,1.0s,baz=112,slow=5.4,SNR=2.4						
	comp=Z,1.3nm,1.0s						
BELA	**Belgrano 2**	**81.19**	**175**	P	**P**	**05 09 21.7**	**+0.2**
SONM	**Songino Array**	**87.55**	**323**	P	**P**	**05 09 55.6**	**+1.3**
	comp=Z,2.6nm,0.9s,baz=144,slow=5.8,SNR=8.7						
	comp=Z,2.6nm,0.9s						
SONM	**Songino Array**	**87.55**	**323**	P	**P**	**05 09 55.1**	**+0.8**
SONM				IAmb	IAmb	05 09 56.5	
	comp=Z,3.5nm,1.0s						
BEKR	**Beckworth**	**89.21**	**47**	P	**P**	**05 10 01.7**	**-0.7**
BEKR				IAmb	IAmb	05 10 02.7	
	comp=Z,7.1nm,1.4s						
NVAR	**Mina Array Bea**	**90.00**	**49**	P	**P**	**05 10 05.7**	**-0.5**
	comp=Z,1.9nm,1.0s,baz=230,slow=7.5,SNR=8.1						
	comp=Z,1.9nm,1.0s						
PINE	**Pine Mountain**	**90.64**	**43**	P	**P**	**05 10 08.3**	**-0.7**
PINE				IAmb	IAmb	05 10 09.6	
	comp=Z,5.6nm,1.0s						
BBB	**Bella Bella**	**90.69**	**33**	LR	LR	05 48 26.1	
	comp=Z,65nm,18.1s,baz=274,slow=34						
TPNV	**Topopah Spring**	**90.84**	**51**	P	**P**	**05 10 09.2**	**-0.9**
ILAR	**Eielson Array**	**91.38**	**18**	P	**P**	**05 10 12.2**	**+0.6**
	comp=Z,0.8nm,0.9s,baz=242,slow=6.2,SNR=4.6						
	comp=Z,0.8nm,0.9s						
ILAR	**Eielson Array**	**91.38**	**18**	P	**P**	**05 10 10.0**	**-1.6**
PRN	**Pahroc Range**	**91.90**	**51**	P	**P**	**05 10 14.5**	**-0.4**
PRN				IAmb	IAmb	05 10 30.0	
	comp=Z,5.5nm,1.0s						
LENM	**Lemitar**	**96.80**	**56**	P	**P**	**05 10 38.2**	**+0.7**
PV07	**Paradox Valley**	**96.98**	**52**	P	**P**	**05 10 38.1**	**-0.2**
PV07				IAmb	IAmb	05 10 41.7	
	comp=Z,2.8nm,0.7s						
TXAR	**Lajitas Array**	**97.88**	**62**	P	**P**	**05 10 42.1**	**-0.3**
	comp=Z,0.2nm,0.8s,baz=249,slow=6.6,SNR=2.5						
	comp=Z,0.2nm,0.8s						
ARCES	**ARCESS Array B**	**125.81**	**345**	PKP	**PKiKP**	**05 16 09.6**	**+1.9**
	comp=Z,0.8nm,0.6s,baz=46,slow=3.5,SNR=6.0						
IDI	**Anoyia**	**144.65**	**303**	PKP	**PKPdf**	**05 16 43.5**	**+0.2**
	comp=Z,5.9nm,0.8s,baz=273,slow=3.8,SNR=3.7						
GERES	**GERESS Array B**	**144.99**	**331**	PKPbc	**PKPdf**	**05 16 44.1**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=47,slow=2.7,SNR=6.9						
DAVOX	**Davos/Dischmat**	**148.25**	**332**	PKPbc	**PKPbc**	**05 16 53.0**	**+0.5**
	comp=Z,1.6nm,0.5s,baz=328,slow=4.2,SNR=5.6						
ESDC	**Sonseca Array**	**159.54**	**343**	PKPab	**PKPab**	**05 17 43.1**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=19,slow=4.3,SNR=4.2						

*IDC **21** 05:24:17.8±0.9, 56°.29S×27°.61W, h0km, mb4.2/5, mbtmp4.1/6, ML3.3/1, Error ellipse: s-maj=35.2km s-min=21.0km az=73.0*
*NEIC **21** 05:24:23.7±1.5, 56°.3S±0°.1×27°.8W±0°.1, h35km±9km, mb4.5/10, Error ellipse: s-maj=19.4km s-min=10.0km az=162.0*

ISC 21 05:24:23.1±0.7, 56°.4S±0°.1×27°.9W±0°.1, h35km, n27, σ0s80/21, mb4.4/6, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.35**	**289**	Pn	**Pn**	**05 25 39.0**	**-1.3**
VNA3	**Neumayer Olymp**	**16.83**	**160**	P	**Pn**	**05 28 15.1**	**-0.6**
SNAA	**Sanae**	**18.62**	**155**	P	**P**	**05 28 36.4**	**-0.8**
SNAA	**Sanae**	**18.62**	**155**	P	**P**	**05 28 36.5**	**-0.7**
	0.1nm,0.3s,baz=319,slow=9.4,SNR=8.2						
	3.1nm,0.8s						
SNAA	**Sanae**	**18.62**	**155**	P	**P**	**05 28 36.8**	**-0.4**
TROLL	**Troll, Antarti**	**20.14**	**153**	P	**P**	**05 28 53.3**	**-0.6**
BELA	**Belgrano 2**	**21.75**	**184**	P	**P**	**05 29 11.4**	**+0.3**
DSPA	**Despedida**	**22.98**	**259**	P	**P**	**05 29 25.1**	**+0.8**
QSPA	**South Pole Qui**	**33.90**	**180**	P	**P**	**05 31 03.1**	**+0.8**
	2.4nm,0.6s,baz=205,slow=3.4,SNR=34						
	2.4nm,0.6s						
QSPA	**South Pole Qui**	**33.90**	**180**	P	**P**	**05 31 03.7**	**+1.4**
QSPA				IAmb	IAmb	05 31 08.0	
	comp=Z,8.5nm,1.4s						
LVC	**Limon Verde**	**45.13**	**301**	P	**P**	**05 32 37.1**	**+0.7**
	comp=Z,6.2nm,0.9s,baz=162,slow=5.0,SNR=4.9						
	comp=Z,6.2nm,0.9s						
LVC	**Limon Verde**	**45.13**	**301**	P	**P**	**05 32 37.9**	**+1.5**
LVC				IAmb	IAmb	05 32 40.5	
	comp=Z,8.3nm,1.0s						
VNDA	**Vanda**	**46.25**	**183**	P	**P**	**05 32 43.9**	**-0.3**
	comp=Z,1.0nm,0.9s,baz=159,slow=9.1,SNR=2.6						
	comp=Z,1.0nm,0.9s						
PB01	**IPOC Station P**	**46.75**	**302**	P	**P**	**05 32 49.3**	**+0.4**
H10S2	**ASCENSION HYDR**	**48.40**	**18**	T	T	06 25 01.4	
	baz=189,slow=74,SNR=207						
H10S3	**ASCENSION HYDR**	**48.40**	**18**	T	T	06 25 01.7	
	baz=31,slow=74,SNR=636						
LBTB	**Lobatse**	**49.45**	**74**	P	**P**	**05 33 10.0**	**+0.3**
LBTB				IAmb	IAmb	05 33 16.0	
	comp=Z,14nm,1.4s						
H10N1	**ASCENSION HYDR**	**49.52**	**18**	T	T	06 26 25.6	
	baz=190,slow=75,SNR=304						
H10N3	**ASCENSION HYDR**	**49.52**	**18**	T	T	06 26 25.6	
	baz=190,slow=75,SNR=271						
H10N2	**ASCENSION HYDR**	**49.53**	**18**	T	T	06 26 26.7	
	baz=190,slow=75,SNR=346						
LPAZ	**La Paz**	**50.25**	**306**	P	**P**	**05 33 16.7**	**+0.2**
	comp=Z,1.6nm,0.7s,baz=145,slow=7.8,SNR=8.5						
	comp=Z,1.6nm,0.7s						
LPAZ	**La Paz**	**50.25**	**306**	IAmb	IAmb	05 33 20.8	
	comp=Z,4.5nm,1.1s						
TOA0	**Torodi Ar. Sit**	**73.50**	**30**	P	**P**	**05 35 52.4**	**+0.5**
TORD	**Torodi Ar. Bea**	**73.50**	**30**	P	**P**	**05 35 51.7**	**-0.2**
	comp=Z,3.5nm,0.8s,baz=199,slow=4.8,SNR=21						
	comp=Z,3.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**73.50**	**30**	P	**P**	**05 35 52.3**	**+0.3**
TORD				IAmb	IAmb	05 35 53.5	
	comp=Z,4.1nm,0.9s						
ILAR	**Eielson Array**	**150.04**	**311**	PKPbc	**PKPbc**	**05 44 08.0**	**-0.4**
	comp=Z,8.0nm,1.0s,baz=121,slow=1.2,SNR=43						
SONM	**Songino Array**	**151.11**	**88**	PKPbc	**PKPbc**	**05 44 10.6**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=270,slow=1.5,SNR=3.9						

NNC 21 05:31:23.0±2.6, 44°.94N×90°.21E, h0km, mb4.0, mpv3.7, 3C-3D, Error ellipse: s-maj=16.3km s-min=15.2km az=39.0, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZSN	**Zaisan**	**4.48**	**306**	Pg	Pn	05 32 37.2	+5.1
	6.5nm,0.2s						
ZSN				Lg	Lg	05 33 53.2	
	11nm,0.7s						
MK31	**Makanchi Array**	**5.83**	**291**	⇓Pg	Pb	05 33 09.3	+3.8
	1.3nm,0.7s,baz=99,slow=18,SNR=4.3						
MK31				⇑Lg	Lg	05 34 27.8	
	4.7nm,0.8s,baz=103,slow=27,SNR=4.0						
MAKZ	**Makanchi**	**6.04**	**291**	⇑Pg	Pb	05 33 13.0	+3.9
	2.2nm,1.0s						
MAKZ				⇓Lg	Lg	05 34 35.6	
	7.0nm,0.9s						
DJR	**Jarkent**	**7.46**	**269**	Pg	Pb	05 33 27.7	-5.5
	0.9nm,0.1s						
DJR				Lg	Lg	05 35 19.7	
	3.0nm,0.4s						
KPKS	**Kokpek**	**8.41**	**264**	Pg	Pb	05 33 45.9	-3.6
	2.8nm,0.4s						
KPKS				Lg	Lg	05 35 51.7	
	4.1nm,0.7s						
ARXS	**Arharly**	**8.87**	**270**	Pg	Pg	05 33 54.3	-18
	2.9nm,0.5s						
ARXS				Lg	Lg	05 36 05.6	
	4.1nm,0.7s						
KURBB	**Kurchatov Arra**	**9.70**	**310**	⇑Lg	Lg	05 36 33.0	
	14nm,1.0s						
KURK	**Kurchatov**	**9.70**	**311**	⇓Lg	Lg	05 36 32.5	
	8.9nm,1.1s						

*NEIC **21** 05:49:46.4±1.4, 27°.7N±0°.2×84°.94E±0°.05, h10km±2km, mb3.5/6, Error ellipse: s-maj=41.5km s-min=3.5km az=189.0*
*IDC **21** 05:49:47.3±2.6, 27°.97N×84°.97E, h0km, mb3.6/4, mbtmp3.7/5, ML3.8/1, MS3.7/1, Error ellipse: s-maj=88.4km s-min=24.6km az=70.0*
*NDI **21** 05:49:50.3±2.5, 28°.29N×85°.34E, h10km, ML3.6, mb3.5(NEIC)*

ISC 21 05:49:48.3±0.7, 27°.86N±0°.07×85°.20E±0°.06, h12km, n23, σ1s98/23, mb3.7/5, 1D, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOK	**Bokaro**	**4.09**	**171**	*eP*	**Pb**	**05 51 00.6**	**+0.3**
BOK				*eS*	**Sg**	**05 51 58.3**	**-1.4**
LGTI	**Lohaghat**	**4.63**	**291**	*eP*	Pn	05 50 38.4	-20
LGTI				*eS*	**Sn**	**05 51 54.0**	**+2.1**
PTH	**Pithoragarh**	**4.69**	**292**	*eP*	**Pn**	**05 51 01.4**	**+2.3**
PTH				*eS*	**Sb**	**05 52 09.1**	**+1.9**
LSA	**Lhasa**	**5.54**	**69**	Pn	**Pn**	**05 51 11.3**	**+0.4**
SHL	**Shillong**	**6.40**	**109**	Pn	**Pn**	**05 51 23.0**	**+0.4**
SHL	**Shillong**	**6.40**	**109**	*eP*	**Pn**	**05 51 23.4**	**+0.8**
SHL				*eS*	**Sn**	**05 52 33.6**	**-2.1**
SHL				IAML		05 52 38.6	
	comp=N,80nm,0.1s						
KUDL	**Kundal**	**7.71**	**274**	*eS*	**Sn**	**05 53 04.1**	**-3.5**
SMLA	**Simla**	**7.72**	**297**	*eP*	**Pn**	**05 51 41.9**	**+1.3**
SMLA				*eS*	**Sn**	**05 53 04.1**	**-3.9**
SMLA				IAML		05 53 07.0	
	comp=E,29nm,0.7s						
BHPL	**Bhopal**	**8.39**	**239**	*eP*	Pn	05 51 55.6	+5.7
MK31	**Makanchi Array**	**19.04**	**354**	P	**P**	**05 54 09.4**	**-0.9**
MKAR	**Makanchi Array**	**19.04**	**354**	P	**P**	**05 54 09.5**	**-0.8**
	comp=E,0.3nm,0.3s,baz=171,slow=12,SNR=16						
	comp=E,2.2nm,0.6s						
MKAR	**Makanchi Array**	**19.04**	**354**	P	**P**	**05 54 08.9**	**-1.4**
KK31	**Karatay Array**	**19.31**	**326**	P	**P**	**05 54 10.6**	**-2.6**
KK31				IAmb	IAmb	05 54 33.7	
	comp=Z,2.4nm,1.2s						
KKAR	**Karatay Array**	**19.31**	**326**	P	**P**	**05 54 10.3**	**-2.9**
KKAR				IAmb	IAmb	05 54 33.7	
	comp=Z,2.4nm,1.2s						
KURBB	**Kurchatov Arra**	**23.30**	**349**	P	**P**	**05 54 54.8**	**-1.0**
	comp=Z,0.4nm,0.5s,baz=173,slow=10.0,SNR=4.5						
	comp=Z,0.4nm,0.5s						
KURK	**Kurchatov**	**23.37**	**349**	P	**P**	**05 54 54.8**	**-1.8**
KURK	**Kurchatov**	**23.37**	**349**	IAmb	IAmb	05 54 58.0	
	comp=Z,2.1nm,1.0s						
SONM	**Songino Array**	**25.89**	**34**	P	**P**	**05 55 21.2**	**+1.1**
	comp=Z,1.2nm,0.8s,baz=234,slow=8.7,SNR=5.3						
	comp=Z,1.2nm,0.8s						
SONM	**Songino Array**	**25.89**	**34**	IAmb	IAmb	05 55 35.1	
	comp=Z,2.8nm,1.4s						
ZALV	**Zalesovo Beam**	**26.07**	**359**	P	**P**	**05 55 21.7**	**+0.2**
	comp=Z,0.8nm,0.4s,baz=185,slow=8.9,SNR=3.7						
	comp=Z,0.8nm,0.4s						
NACGM	**Naroch**	**49.66**	**320**	⇓*eP*	**P**	**05 58 39.9**	**+0.1**
	baz=98						
GERES	**GERESS Array B**	**57.69**	**312**	LR	LR	06 30 04.4	
	comp=Z,61nm,18.1s,baz=58,slow=42						
WRA	**Warramunga Arr**	**67.21**	**129**	P	**P**	**06 00 45.0**	**+2.3**
	comp=Z,0.5nm,0.8s,baz=322,slow=6.4,SNR=11						
	comp=Z,0.5nm,0.8s						

*IDC **21** 06:06:43.7±3.6, 20°.05S×168°.66E, h0km, mb3.7/2, mbtmp3.7/3, ML3.2/1, Error ellipse: s-maj=106.9km s-min=32.9km az=126.0*
*NOU **21** 06:06:50.7, 20°.48S×168°.41E, h0km, MLv3.5/8, Loyalty Islands*

ISC 21 06:06:48.1±1.6, 20°.2S±0°.1×168°.8E±0°.1, h35km, n12, σ1s00/13, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**1.46**	**210**	P	**Pn**	**06 07 11.1**	**-0.8**
LIFNC	**LIFOU**	**1.58**	**249**	P	**Pn**	**06 07 12.0**	**-1.7**
YATNC	**Mamie plateau,**	**2.57**	**224**	P	**Pn**	**06 07 26.0**	**-1.3**
PINNC	**Pines Island,**	**2.70**	**208**	P	**Pn**	**06 07 29.7**	**+0.6**
OUENC	**Ouen Island, N**	**2.86**	**220**	P	**Pn**	**06 07 31.6**	**+0.3**
DZM	**Mont Dzumac**	**2.88**	**230**	Pn	**Pn**	**06 07 31.3**	**-0.4**
	3.7nm,0.3s,baz=81,slow=19,SNR=93						
DZM				Sn	**Sn**	**06 08 05.9**	**+0.7**
	16nm,0.3s,baz=318,slow=22,SNR=7.5						
	12nm,0.3s						
NOUC	**Port Laguerre**	**3.00**	**231**	P	**Pn**	**06 07 33.9**	**+0.6**
ONTNC	**Ouen Toro**	**3.03**	**226**	P	**Pn**	**06 07 34.2**	**+0.6**
KOUNC	**Koumac, New Ca**	**4.27**	**265**	P	**Pn**	**06 07 51.5**	**+0.9**
WRA	**Warramunga Arr**	**32.35**	**264**	P	**P**	**06 13 14.0**	**-0.5**
	0.9nm,1.1s,baz=90,slow=8.4,SNR=6.1						
	0.9nm,1.1s						
SONM	**Songino Array**	**87.77**	**323**	P	**P**	**06 19 34.5**	**+1.0**
	0.5nm,0.7s,baz=128,slow=4.2,SNR=2.9						
	0.5nm,0.7s						
GERES	**GERESS Array B**	**145.16**	**331**	PKP	**PKPdf**	**06 26 21.1**	**-1.0**
	0.3nm,0.4s,baz=73,slow=4.5,SNR=4.5						

TAP 21 06:14:13.7, 24°.05N×121°.44E, h59km, ML1.8, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETM	**Tongmen**	**0.10**	**147**	P	Pn	06 14 23.1	+0.4
	baz=147						
ETM				S	Sn	06 14 29.8	+0.7
	baz=147						
ETLH	**Xiulin Townshi**	**0.16**	**15**	P	Pn	06 14 23.2	+0.2
	baz=15						
ETLH				S	Sn	06 14 30.0	+0.3
	baz=15						
HWA	**Hwalien**	**0.17**	**114**	*e*P	Pn	06 14 23.5	+0.6
	baz=113						
HWA				*e*S	Sn	06 14 30.1	+0.6
	baz=113						
WHF	**Hehuan Shan**	**0.18**	**302**	*i* P	Pn	06 14 23.6	+0.1
	baz=302						
WHF				S	Sn	06 14 30.1	-0.5
	baz=302						
NACB	**Ninganchiao**	**0.19**	**49**	P	Pn	06 14 23.4	+0.4
	baz=49						
NACB				*e*S	Sn	06 14 30.4	+0.6
	baz=49						
ETL	**Fush Village**	**0.20**	**57**	*e*S	Sn	06 14 30.2	+0.3
	baz=57						
CHGB	**Renai**	**0.24**	**273**	*e*P	Pn	06 14 23.7	+0.1
	baz=273						
CHGB				S	Sn	06 14 30.3	-0.4
	baz=273						
OWD	**Renai**	**0.26**	**249**	P	Pn	06 14 23.8	+0.2
	baz=248						
OWD				*e*S	Sn	06 14 31.0	+0.3
	baz=248						
FUSS	**Fushou**	**0.27**	**319**	*e*P	Pn	06 14 23.8	+0.1
	baz=318						
FUSS				*e*S	Sn	06 14 31.4	+0.4
	baz=318						
WUSB	**Renai**	**0.30**	**259**	*e*P	Pn	06 14 23.8	0.0
	baz=259						
WUSB				*e*S	Sn	06 14 31.6	+0.5
	baz=259						
TWT	**Tachien**	**0.31**	**311**	*e*P	Pn	06 14 24.6	+0.5
	baz=308						
TWT				S	Sn	06 14 32.0	+0.5
	baz=308						
TEGC	**Jichi Village**	**0.35**	**164**	*e*S	Sn	06 14 32.5	+0.9
	baz=163						
EGFH	**Guangfu**	**0.38**	**181**	*e*P	Pn	06 14 24.2	-0.2
	baz=181						
EGFH				*e*S	Sn	06 14 32.2	+0.1
	baz=181						
NNSB	**Datong**	**0.38**	**353**	P	Pn	06 14 24.7	+0.1
	baz=352						
NNSB				S	Sn	06 14 33.0	+0.6
	baz=352						
WCS	**Beigang Elemen**	**0.48**	**271**	*e*P	Pn	06 14 25.4	0.0
	baz=271						
WCS				*e*S	Sn	06 14 34.5	+0.7
	baz=271						
LATG	**Datong**	**0.49**	**10**	*e*P	Pn	06 14 26.0	+0.3
	baz=9.0						
LATG				*e*S	Sn	06 14 35.0	+0.7
	baz=9.0						
WHP	**Taichung City**	**0.50**	**297**	*e*P	Pn	06 14 26.0	+0.3
	baz=297						
WHP				*e*S	Sn	06 14 35.2	+0.8
	baz=297						
SSLB	**Suanglung**	**0.51**	**240**	*e*P	Pn	06 14 26.3	+0.5
	baz=239						
SSLB				*e*S	Sn	06 14 35.8	+1.3
	baz=239						
TYC	**Yuchr**	**0.55**	**255**	*e*P	Pn	06 14 26.3	+0.2
	baz=254						
EHY	**Hungye**	**0.55**	**191**	*e*P	Pn	06 14 26.6	+0.4
	baz=190						
EHY				*e*S	Sn	06 14 36.4	+1.1
	baz=190						
YHNB	**Yeheng**	**0.62**	**355**	*e*P	Pn	06 14 27.5	+0.4
	baz=354						
YHNB				S	Sn	06 14 37.3	+0.5
	baz=354						
YULB	**Yu-li**	**0.67**	**191**	*e*S	Sn	06 14 37.9	+0.3
	baz=190						
NSY	**Sanyi**	**0.72**	**301**	*e*P	Pn	06 14 28.6	+0.5
	baz=300						
NSY				*e*S	Sn	06 14 39.8	+1.1
	baz=300						

TAP 21 06:14:17.4, 23°.41N×121°.03E, h9km, ML0.9, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YUS	**Yu-Shan**	**0.10**	**319**	*i* P	Pg	06 14 20.6	+0.3
	baz=320						
YUS				*i* S	Sg	06 14 22.6	+0.2
	baz=320						
ELDTW	**Lidau**	**0.22**	**182**	P	Pg	06 14 23.1	+1.1
	baz=180						
ELDTW				*e*S	Sg	06 14 26.6	+1.5
	baz=180						
ALS	**Alishan**	**0.23**	**296**	P	Pg	06 14 22.8	+0.6
	baz=296						
ALS				S	Sg	06 14 26.9	+1.5
	baz=296						
YULB	**Yu-li**	**0.25**	**94**	*e*P	Pg	06 14 22.9	+0.5
	baz=94						
YULB				*e*S	Sb	06 14 27.8	-0.8
	baz=94						
YULB	**Yu-li**	**0.25**	**94**	*e*P	Pn	06 14 27.9	+0.5
	baz=190						
EYUL	**Yuli**	**0.28**	**103**	*e*S	Sb	06 14 28.8	-0.7
	baz=103						
EHY	**Hungye**	**0.29**	**71**	*e*P	Pb	06 14 24.1	-0.7
	baz=71						
EHY				*e*S	Sb	06 14 28.9	-0.9
	baz=71						
FULB	**Fuli**	**0.33**	**131**	*e*S	Sb	06 14 30.7	-0.2
	baz=130						
STYH	**Taoyuan**	**0.33**	**224**	*e*P	Pg	06 14 24.7	+0.6
	baz=224						
STYH				*e*S	Sb	06 14 30.2	-0.8
	baz=224						
VWDT	**VWDT**	**0.36**	**17**	*e*P	Pb	06 14 25.4	-0.6
	baz=17						
SSLB	**Suanglung**	**0.38**	**350**	*e*P	Pg	06 14 25.6	+0.6
	baz=350						
TPUB	**Ta-pu**	**0.38**	**253**	*e*P	Pb	06 14 26.2	-0.2
	baz=253						
TPUB				*e*S	Sb	06 14 32.5	0.0
	baz

VRTB	**Varto-Mus**	**0.62**	**113**	P	**Pb**	**06 25 34.4**	**-1.1**
VRTB				S	**Sn**	**06 25 45.3**	**-3.1**
VRTB				*i* AML	AML	06 25 52.0	
	comp=E,10μm,1.1s						
VRTB				*i* AML	AML	06 25 53.0	
	comp=N,1μm,0.8s						
ERZM	**Erzurum**	**0.71**	**45**	PG	**Pb**	**06 25 35.8**	**-1.3**
ERZM				SG	**Sg**	**06 25 46.8**	**+2.1**
ERZM	**Erzurum**	**0.71**	**45**	P	**Pb**	**06 25 35.7**	**-1.4**
ERZM				S	**Sg**	**06 25 47.1**	**+2.4**
ERZN	**Erzincan**	**0.79**	**284**	PG	**Pg**	**06 25 37.4**	**+0.4**
EUZM	**Uzumlu**	**0.84**	**292**	P	**Pg**	**06 25 38.0**	**0.0**
EUZM				S	**Sg**	**06 25 49.4**	**+0.4**
EUZM				*i* AML	AML	06 25 51.0	
	comp=N,3μm,0.7s						
EUZM				*i* AML	AML	06 25 51.0	
	comp=E,3μm,0.5s						
MUSM	**Mu-Merkez**	**0.92**	**137**	P	**Pb**	**06 25 39.1**	**-1.4**
MUSM				S	**Sg**	**06 25 52.6**	**+1.4**
MUSM				*i* AML	AML	06 25 53.0	
	comp=E,3μm,0.7s						
MUSM				*i* AML	AML	06 25 53.0	
	comp=N,4μm,0.5s						
BAYB	**BAYBURT**	**0.93**	**338**	P	**Pg**	**06 25 39.8**	**+0.2**
BAYB				S	**Sn**	**06 25 53.2**	**-2.8**
BAYB				*i* AML	AML	06 26 02.0	
	comp=N,2μm,0.4s						
BAYB				*i* AML	AML	06 26 02.0	
	comp=E,4μm,0.6s						
KRIK	**Erzurum-spir**	**0.95**	**10**	P	**Pg**	**06 25 40.7**	**+0.6**
KRIK				S	**Sn**	**06 25 53.9**	**-2.7**
KRIK				*i* AML	AML	06 26 00.0	
	comp=E,3μm,0.5s						
KRIK				*i* AML	AML	06 26 01.0	
	comp=N,2μm,0.9s						
TNCL	**Tunceli-Merkez**	**0.96**	**253**	P	**Pg**	**06 25 39.8**	**-0.3**
TNCL				S	**Sn**	**06 25 56.2**	**-0.4**
KOVA	**Elazig, Kovanc**	**0.99**	**226**	P	**Pn**	**06 25 40.7**	**-2.1**
KOVA				S	**Sn**	**06 25 56.0**	**-1.3**
KOVA				*i* AML	AML	06 25 58.0	
	comp=E,2μm,0.4s						
KOVA				*i* AML	AML	06 25 58.0	
	comp=N,3μm,0.4s						
HANI	**Diyarbakir_Han**	**1.02**	**194**	P	**Pg**	**06 25 41.9**	**+0.7**
HANI				S	**Sn**	**06 25 56.6**	**-1.4**
HANI				*i* AML	AML	06 26 04.0	
	comp=N,2μm,0.5s						
HANI				*i* AML	AML	06 26 08.0	
	comp=E,2μm,0.7s						
EKAR	**Karacoban**	**1.05**	**97**	P	**Pg**	**06 25 43.1**	**+1.1**
EKAR				S	**Sg**	**06 26 01.5**	**+5.8**
KOPR	**Koprukoy-ERZUR**	**1.06**	**56**	PG	**Pb**	**06 25 41.9**	**-1.0**
KOPR				SG	**Sg**	**06 25 58.2**	**+2.4**
HOMI	**Horasan**	**1.12**	**55**	P	**Pn**	**06 25 42.7**	**-2.0**
HOMI				S	**Sg**	**06 26 02.1**	**+4.3**
SVAN	**Silvan-Diyarba**	**1.30**	**163**	PN	**Pg**	**06 25 47.4**	**+0.6**
SVAN				SN	**Sg**	**06 26 06.8**	**+3.1**
SVAN	**Silvan-Diyarba**	**1.30**	**163**	P	**Pg**	**06 25 47.0**	**+0.2**
SVAN				S	**Sg**	**06 26 06.5**	**+2.8**
SVAN				*i* AML	AML	06 26 10.0	
	comp=E,2μm,0.7s						
SVAN				*i* AML	AML	06 26 13.0	
	comp=N,896nm,0.6s						
GURO	**Guroymak-BITLI**	**1.33**	**129**	PN	**Pb**	**06 25 46.8**	**-0.8**
GURO	**Guroymak-BITLI**	**1.33**	**129**	Pn	**Pb**	**06 25 46.7**	**-0.8**
KELT	**Kelkit**	**1.35**	**304**	P	**Pb**	**06 25 47.0**	**-0.9**
KELT				S	**Sg**	**06 26 07.3**	**+2.1**
GUMT	**Gumushane**	**1.42**	**318**	PN	**Pg**	**06 25 48.7**	**-0.4**
GUMT				SN	**Sg**	**06 26 10.5**	**+3.0**
EATA	**Eleskirt**	**1.45**	**71**	P	**Pb**	**06 25 48.8**	**-0.9**
EATA				S	**Sg**	**06 26 11.1**	**+2.9**
EATA				*i* AML	AML	06 26 15.0	
	comp=E,2μm,0.5s						
EATA				*i* AML	AML	06 26 19.0	
	comp=N,2μm,0.6s						
MLAZ	**Malazgirt-MUS**	**1.45**	**100**	PN	**Pb**	**06 25 49.6**	**+0.1**
MLAZ				SN	**Sg**	**06 26 10.5**	**+2.2**
BLIS	**Bitlis-Merkez**	**1.47**	**132**	P	**Pb**	**06 25 49.0**	**-1.0**
BLIS				S	**Sg**	**06 26 09.6**	**+0.5**
BLIS				*i* AML	AML	06 26 14.0	
	comp=E,1μm,0.4s						
BLIS				*i* AML	AML	06 26 15.0	
	comp=N,1μm,0.7s						
SVRC	**Sivrice-ELAZID**	**1.50**	**228**	PN	**Pg**	**06 25 50.4**	**-0.2**
DYBB	**Diyarbakir**	**1.52**	**198**	PN	**Pg**	**06 25 50.8**	**0.0**
DIYA	**Diyarbakir**	**1.55**	**198**	P	**Pg**	**06 25 51.5**	**+0.1**
DIYA				S	**Sg**	**06 26 15.2**	**+3.7**
BTMN	**Batman**	**1.57**	**164**	P	**Pg**	**06 25 52.3**	**+0.4**
BTMN				S	**Sg**	**06 26 14.6**	**+2.4**
REFA	**Refahiye_ERZN**	**1.59**	**289**	P	**Pb**	**06 25 51.0**	**-0.9**
REFA				S	**Sg**	**06 26 15.4**	**+2.5**
ELZG	**Elazig**	**1.62**	**237**	P	**Pg**	**06 25 52.6**	**-0.3**
ELZG				S	**Sg**	**06 26 20.5**	**+6.5**
ILIC	**ilic-Erzincan**	**1.67**	**272**	PN	**Pg**	**06 25 53.3**	**-0.4**
ADCV	**BITLIS_Adilcev**	**1.67**	**110**	P	**Pg**	**06 25 53.9**	**0.0**
ADCV				S	**Sg**	**06 26 18.6**	**+3.1**
ADCV				*i* AML	AML	06 26 24.0	
	comp=N,485nm,1.2s						
ADCV				*i* AML	AML	06 26 27.0	
	comp=E,570nm,1.6s						
CHAY	**Cayeli-Rize**	**1.68**	**0**	PN	**Pg**	**06 25 53.5**	**-0.6**
DDEM	**Demirkent**	**1.69**	**28**	P	**Pb**	**06 25 52.7**	**-0.9**
DDEM				S	**Sg**	**06 26 16.2**	**+0.2**
CHOM	**Cayeli-Rize**	**1.69**	**1**	PN	**Pg**	**06 25 54.5**	**+0.2**
MACK	**Trabzon**	**1.70**	**335**	P	**Pb**	**06 25 53.4**	**-0.5**
MACK				S	**Sg**	**06 26 18.6**	**+2.1**
KEMA	**Kemaliye**	**1.73**	**266**	P	**Pb**	**06 25 53.5**	**-0.8**
KEMA				S	**Sg**	**06 26 19.3**	**+1.9**
KTUT	**Trabzon**	**1.74**	**336**	PN	**Pb**	**06 25 54.1**	**-0.4**
AGRB	**Hanur-Agry**	**1.77**	**84**	PN	**Pb**	**06 25 54.4**	**-0.7**
ALUC	**Giresun/Alucra**	**1.77**	**303**	P	**Pb**	**06 25 54.5**	**-0.5**
ALUC				S	**Sg**	**06 26 20.0**	**+1.3**
DBAD	**Bademkaya**	**1.78**	**25**	P	**Pb**	**06 25 54.6**	**-0.6**
DBAD				S	**Sg**	**06 26 18.5**	**-0.5**
ARPR	**Arapgir-MALATY**	**1.87**	**261**	PN	**Pb**	**06 25 56.2**	**-0.6**
DAGI	**Agillar**	**1.91**	**28**	P	**Pb**	**06 25 56.5**	**-0.8**
DAGI				S	**Sb**	**06 26 22.1**	**+0.4**
MAZI	**Mazidag**	**1.95**	**186**	PN	**Pb**	**06 25 56.9**	**-1.2**
KOTA	**Agri, Merkez-K**	**1.96**	**77**	P	**Pb**	**06 25 57.2**	**-1.2**
KOTA				S	**Sg**	**06 26 26.4**	**+1.5**
PERV	**Siirt/Pervari-**	**2.04**	**135**	P	**Pb**	**06 25 59.2**	**-0.4**
PERV				*i* AML	AML	06 26 30.0	
	comp=E,2μm,0.7s						
PERV				S	**Sg**	**06 26 30.3**	**+3.0**
PERV				*i* AML	AML	06 26 34.0	
	comp=N,2μm,1.0s						
HOPA	**Hopa-Artvin**	**2.06**	**15**	PN	**Pb**	**06 25 58.6**	**-1.3**
MIDY	**Mardin/Midyat-**	**2.06**	**165**	P	**Pb**	**06 26 00.4**	**+0.4**
MIDY				S	**Sg**	**06 26 28.2**	**+0.1**
MIDY				*i* AML	AML	06 26 29.0	
	comp=E,1μm,1.0s						
MIDY				*i* AML	AML	06 26 36.0	
	comp=N,1μm,0.4s						
AKDM	**Akdamar-Van**	**2.07**	**121**	PN	**Pb**	**06 25 58.8**	**-1.3**
DBOC	**Borcka**	**2.07**	**20**	P	**Pb**	**06 25 58.1**	**-2.0**
DBOC				S	**Sb**	**06 26 26.1**	**-0.2**
MARD	**Mardin**	**2.08**	**179**	P	**Pb**	**06 25 58.6**	**-1.8**
MARD				S	**Sg**	**06 26 29.4**	**+0.7**
SUSE	**Susehri**	**2.10**	**293**	P	**Pb**	**06 25 59.8**	**-0.8**
SUSE				S	**Sg**	**06 26 30.9**	**+1.7**
GEVA	**Gevas**	**2.13**	**120**	P	**Pb**	**06 25 59.7**	**-1.4**
GEVA				S	**Sb**	**06 26 28.4**	**+0.4**
ESPY	**Espiye-Giresun**	**2.15**	**315**	PN	**Pb**	**06 26 00.1**	**-1.3**
KARS	**Kars**	**2.19**	**55**	PN	**Pb**	**06 26 00.7**	**-1.5**
KARS	**Kars**	**2.19**	**55**		**Pb**	**06 26 00.6**	**-1.6**
VANB	**Van**	**2.23**	**110**	PN	**Pb**	**06 26 01.6**	**-1.3**
BATM	**Batumi**	**2.32**	**18**	PN	**Pb**	**06 26 02.4**	**-2.0**
CUZAR	**Zara_SIVAS**	**2.33**	**283**	P	**Pb**	**06 26 03.6**	**-0.9**
CUZAR				S	**Sg**	**06 26 40.1**	**+3.6**
AKCD	**Akcadag**	**2.44**	**244**	P	**Pb**	**06 26 04.2**	**-2.3**
AKCD				S	**Sg**	**06 26 42.2**	**+1.8**
CLDR	**Caldiran**	**2.50**	**95**	PN	**Pb**	**06 26 04.7**	**-2.8**
CUKAN	**kangal_SIVAS**	**2.52**	**269**	P	**Pb**	**06 26 06.1**	**-1.8**
CUKAN				S	**Sg**	**06 26 44.6**	**+1.8**
DARE	**Darende-Malaty**	**2.65**	**253**	PN	**Pb**	**06 26 07.3**	**-2.8**
TASB	**TASBURUN-IGDIR**	**2.78**	**77**	PN	**Pn**	**06 26 08.7**	**+1.3**
RSDY	**Resadiye-TOKAT**	**2.79**	**292**	PN	**Pb**	**06 26 09.3**	**-3.1**
SVSK	**Karacayir**	**2.92**	**281**	PN	**Pb**	**06 26 11.2**	**-3.3**
AKH	**Akhalkalaki**	**2.92**	**46**	PN	**Pn**	**06 26 10.8**	**+1.4**
CUKT	**Cukurca**	**3.13**	**133**	PN	**Pn**	**06 26 13.8**	**+1.6**
GNI	**Garni**	**3.19**	**75**	Pn	**Pn**	**06 26 14.2**	**+1.1**
	17nm,0.5s,baz=236,slow=2.9,SNR=6.6						
GNI				Pg	**Pb**	**06 26 21.1**	**+1.8**
	22nm,0.3s,baz=311,slow=2.9,SNR=25						
GNI				LR	LR	06 27 45.2	
	comp=Z,191nm,18.2s,baz=269,slow=46						
GNI	**Garni**	**3.19**	**75**	PN	**Pn**	**06 26 14.6**	**+1.5**
GNI	**Garni**	**3.19**	**75**		**Pn**	**06 26 14.5**	**+1.4**
HYR	**Heyderabad**	**3.21**	**83**	P	**Pg**	**06 26 23.1**	**-0.2**
HYR				S	**Sg**	**06 27 07.6**	**+2.6**
TOKT	**Tokat**	**3.34**	**287**	PN	Pb	06 26 17.1	-4.6
SARI	**SarD1z-Kayseri**	**3.50**	**255**	PN	Pb	06 26 19.5	-5.0
NAX	**Nakhchivan**	**3.71**	**92**	P	**Pb**	**06 26 30.3**	**+2.1**
	SNR=16						
NAX				S	**Sg**	**06 27 18.9**	**-2.2**
SBZ	**Shahbuz**	**3.75**	**89**	P	**Pb**	**06 26 31.0**	**+2.2**
	SNR=20						
SBZ				S	**Sg**	**06 27 19.2**	**-3.0**
ONI	**Oni**	**3.80**	**32**		**Pn**	**06 26 23.0**	**+1.6**
BNN	**Bunyan**	**3.83**	**263**	PN	Pb	06 26 24.4	-5.7
QZX	**Qazax, Azerbai**	**3.93**	**64**	P	**Pb**	**06 26 33.5**	**+1.7**
	SNR=2.9						
QZX				S	**Sg**	**06 27 26.4**	**-1.6**
GDB	**GEDABAY**	**4.08**	**70**	P	**Pb**	**06 26 36.5**	**+2.0**
	SNR=6.1						
GDB				S	**Sg**	**06 27 32.6**	**-0.4**
ORD	**Ordubad**	**4.13**	**95**	P	**Pb**	**06 26 36.9**	**+1.6**
	SNR=8.4						
ORD				S	**Sg**	**06 27 30.8**	**-3.6**
KOZT	**Kozan**	**4.29**	**245**	PN	**Pn**	**06 26 30.6**	**+2.5**
GANJ	**Ganja**	**4.48**	**72**	P	**Pb**	**06 26 41.6**	**+0.4**
GANJ				S	**Sg**	**06 27 43.4**	**-2.2**
KBZ	**Khabaz**	**4.62**	**20**	Pn	**Pn**	**06 26 32.6**	**0.0**
	0.1nm,0.3s,baz=192,slow=19,SNR=1.8						
KBZ				Pg		06 26 47.5	-2.9
	0.7nm,0.3s,baz=164,slow=11,SNR=7.0						
KBZ				LR	LR	06 28 32.7	
	comp=Z,205nm,18.1s,baz=189,slow=42						
	1.5nm,0.6s						
AGDM	**Agdam**	**4.98**	**80**	P	**Pb**	**06 26 48.4**	**-1.2**
	SNR=10						
AGDM				S	**Sb**	**06 27 52.5**	**+2.6**
ZKTA	**Zakatala**	**5.02**	**62**	P	**Pb**	**06 26 50.1**	**-0.4**
	SNR=10						
ZKTA				S	**Sg**	**06 27 57.2**	**-5.9**
BRDA	**Brd**	**5.05**	**78**	S	**Sb**	**06 27 54.9**	**+3.0**
MNGR	**Mingechevir, A**	**5.07**	**72**	P	**Pb**	**06 26 50.1**	**-1.1**
MNGR				S	**Sb**	**06 27 57.3**	**+4.7**
QRD	**Qoradiz**	**5.11**	**87**	P	**Pb**	**06 26 49.8**	**-2.1**
QRD				S	**Sb**	**06 27 59.0**	**+5.2**
SEKA	**Sheki**	**5.27**	**68**	P	**Pb**	**06 26 54.3**	**-0.4**
	SNR=5.9						
BLQ	**Beylaqan**	**5.30**	**84**	S	**Sb**	**06 28 03.6**	**+4.5**
BR131	**Keskin Array S**	**5.48**	**276**		**Pn**	**06 26 45.0**	**+0.5**
BRTR	**Keskin Array B**	**5.48**	**276**	Pn	Pn	06 26 48.5	+4.0
	0.8nm,0.3s,baz=109,slow=14,SNR=15						
BRTR				LR	LR	06 28 38.8	
	comp=Z,48nm,19.8s,baz=108,slow=35						
	2.4nm,0.7s						
BRTR	**Keskin Array B**	**5.48**	**276**		Pn	06 26 47.5	+2.9
MMAI	**Mount Meron Ar**	**7.68**	**216**	Pn	Pn	06 27 19.3	+4.6
	1.0nm,0.3s,baz=65,slow=12,SNR=4.7						
	1.4nm,0.5s						
ASF	**Jabal al Asfar**	**7.85**	**204**	Pn	Pn	06 27 22.1	+5.0
	0.4nm,0.3s,baz=33,slow=4.6,SNR=3.9						
ASF				Lg	Lg	06 29 36.5	
	0.9nm,0.3s,baz=23,slow=19,SNR=6.4						
	2.6nm,0.6s						
EIL	**Elat**	**10.81**	**208**	LR	LR	06 32 52.8	
	comp=Z,96nm,19.7s,baz=99,slow=41						
GEYT	**Alibeck**	**13.68**	**91**	LR	LR	06 35 10.6	
	comp=Z,35nm,20.9s,baz=322,slow=43						
BELG	**Belogornoye**	**13.85**	**18**	LR	LR	06 34 43.4	
	comp=Z,60nm,18.1s,baz=283,slow=41						
AKASG	**Malin Array Be**	**13.89**	**328**	Pn	**Pn**	**06 28 39.5**	**-0.1**
	0.5nm,0.3s,baz=133,slow=14,SNR=11						
AKASG				LR	LR	06 35 03.9	
	comp=Z,45nm,21.4s,baz=226,slow=42						
	0.9nm,0.6s						
AKTO	**Aktyubinsk**	**16.44**	**42**	Pn	**Pn**	**06 29 11.9**	**-1.6**
	0.1nm,0.3s,baz=223,slow=18,SNR=3.9						
AKTO				LR	LR	06 37 22.2	
	comp=Z,45nm,18.3s,baz=246,slow=44						
	1.4nm,0.8s						
NACGM	**Naroch**	**18.12**	**333**	*e*P	**P**	**06 29 38.6**	**+3.8**
	baz=143						
VRAC	**Vranov**	**19.81**	**308**	LR	LR	06 39 37.7	
	comp=Z,32nm,18.4s,baz=82,slow=43						
VAE	**Valguarnera**	**20.67**	**273**	LR	LR	06 38 42.9	
	comp=Z,92nm,18.5s,baz=149,slow=38						
ARU	**Arti**	**20.71**	**29**	P	Pn	06 30 03.9	-1.5
	5.2nm,0.2s,baz=209,slow=9.8,SNR=3.8						
ARU				LR	LR	06 39 52.2	
	comp=Z,55nm,18.1s,baz=226,slow=42						
	5.2nm,0.2s						
GERES	**GERESS Array B**	**21.47**	**305**	P	**P**	**06 30 15.3**	**+3.8**
	0.4nm,0.3s,baz=101,slow=14,SNR=4.8						
	0.4nm,0.3s						
WSAR	**Wadi Sarin**	**22.16**	**131**	LR	LR	06 40 58.7	
	comp=Z,66nm,20.8s,baz=348,slow=42						
KKAR	**Karatay Array**	**22.65**	**71**	P	**P**	**06 30 23.7**	**-0.4**
KKAR				IAmb	IAmb	06 30 32.7	
	comp=Z,4.4nm,1.0s						
KKAR	**Karatay Array**	**22.65**	**71**	P	**P**	**06 30 23.2**	**-0.8**
FINES	**FINESS Array B**	**23.84**	**343**	P	**P**	**06 30 36.9**	**+0.9**
	comp=Z,0.9nm,0.6s,baz=142,slow=9.6,SNR=12						
FINES				LR	LR	06 39 34.8	
	comp=Z,47nm,20.2s,baz=156,slow=36						
	comp=Z,0.9nm,0.6s						
KEST	**Kesra**	**25.07**	**272**	P	**P**	**06 30 51.4**	**+3.8**
	comp=Z,14nm,1.0s,baz=117,slow=4.5,SNR=7.7						
	comp=Z,14nm,1.0s						
HFS	**Hagfors**	**26.78**	**330**	LR	LR	06 42 44.2	
	comp=Z,44nm,18.5s,baz=164,slow=39						
NOA	**NORSAR Array B**	**28.30**	**330**	LR	LR	06 44 00.5	
	comp=Z,27nm,19.7s,baz=130,slow=40						
KURBB	**Kurchatov Arra**	**28.69**	**54**	P	**P**	**06 31 20.6**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=263,slow=9.0,SNR=2.0						
	comp=Z,0.2nm,0.3s						
KURK	**Kurchatov**	**28.76**	**54**	P	**P**	**06 31 20.6**	**0.0**
KURK	**Kurchatov**	**28.76**	**54**	IAmb	IAmb	06 31 26.4	
	comp=Z,4.0nm,1.5s						
MKAR	**Makanchi Array**	**30.95**	**62**	P	**P**	**06 31 40.7**	**+0.6**
	comp=Z,0.6nm,0.9s,baz=272,slow=4.6,SNR=4.8						
	comp=Z,0.6nm,0.9s						
ARCES	**ARCESS Array B**	**31.27**	**350**	P	**P**	**06 31 43.6**	**+1.0**
	comp=Z,1.7nm,0.8s,baz=161,slow=7.7,SNR=5.1						
ARCES				LR	LR	06 46 52.2	
	comp=Z,37nm,19.6s,baz=124,slow=41						
	comp=Z,1.7nm,0.8s						
ARCES	**ARCESS Array B**	**31.27**	**350**	IAmb	IAmb	06 31 45.7	
	comp=Z,6.5nm,1.2s						
ESDC	**Sonseca Array**	**34.19**	**285**	P	P	06 32 11.7	+3.1
	comp=Z,0.4nm,0.6s,baz=78,slow=7.1,SNR=2.9						
	comp=Z,0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**43.18**	**244**	P	**P**	**06 33 26.3**	**+2.2**
	comp=Z,0.8nm,0.9s,baz=10,slow=8.8,SNR=3.7						
	comp=Z,0.8nm,0.9s						
SONM	**Songino Array**	**46.99**	**57**	LR	LR	06 56 03.5	
	comp=Z,99nm,20.9s,baz=347,slow=39						
YAK	**Yakutsk**	**55.66**	**35**	LR	LR	07 00 44.0	
	comp=Z,28nm,19.2s,baz=265,slow=38						
KLR	**Kul'dur**	**62.08**	**48**	LR	LR	07 08 16.4	
	comp=Z,32nm,20.5s,baz=18,slow=42						
TSUM	**Tsumeb**	**62.18**	**205**	LR	LR	07 04 27.5	
	comp=Z,60nm,18.8s,baz=167,slow=38						
FRB	**Frobisher Bay**	**63.09**	**332**	LR	LR	07 03 42.5	
	comp=Z,65nm,19.1s,baz=174,slow=36						
SEY	**Seymchan**	**64.45**	**28**	LR	LR	07 07 26.9	
	comp=Z,29nm,18.4s,baz=230,slow=39						
KSRS	**Korea Array**	**65.61**	**61**	LR	LR	07 08 11.1	
	comp=Z,23nm,18.6s,baz=290,slow=39						
MA2	**Magadan**	**65.86**	**32**	LR	LR	07 08 42.5	
	comp=Z,43nm,18.4s,baz=300,slow=40						

MAN 21 06:27:55.0, 12.90N×121.09E, h5km, mb3.8, ML2.5, MS2.1, 1C-3D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SJMP	**San Jose**	**0.44**	**176**	*e*P	Pn	06 28 01.6	+0.4
SJMP				*e*S		06 28 08.2	
PGP	**Puerto Galera**	**0.61**	**348**	*e*P	Pb	06 28 07.2	+3.1
PGP				*i* S		06 28 16.8	
BOAC	**Boac**	**0.92**	**53**	*e*P	Pn	06 28 13.7	+0.1
LUBP	**Lubang**	**1.16**	**315**	*e*P	Pn	06 28 17.0	+0.1
LUBP				*i* S		06 28 30.6	

*MDD **21** 06:39:34.6±0.3, 35.64N×3.63W, h0km, mb_Lg2.7/16, Error ellipse: s-maj=3.4km s-min=2.4km az=21.0*
*SFS **21** 06:39:34.0, 35.64N×3.62W, ML2.7, ALBORAN SUR*
*INMG **21** 06:39:34.5±1.3, 35.66N×3.62W, h0km, ML2.3, Error ellipse: s-maj=3.0km s-min=2.6km az=52.0*
*CNRM **21** 06:39:37.3, 35.63N×3.58W, h38km, ml2.6*

ISC 21 06:39:36.0±1.1, 35.67N±0.02×3.59W±0.02, h23km±13km, n50, σ1.918/90, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EALB	**Alboran**	**0.52**	**59**	Pg	**Pb**	**06 39 46.7**	**+0.1**
EALB				Sg	**Sn**	**06 39 55.3**	**-0.9**
EALB				*i* Vmb_Lg		06 39 56.1	
PALE	**Palemas**	**0.54**	**212**	P	**Pb**	**06 39 46.6**	**-0.2**
PALE				S	**Sb**	**06 39 55.1**	**+1.0**
WMELI	**Melilla**	**0.63**	**124**	P	**Pb**	**06 39 47.9**	**-0.4**
WMELI				S	**Sb**	**06 39 56.3**	**-0.4**
EMEL	**Melilla**	**0.63**	**126**	Pg	**Pb**	**06 39 47.8**	**-0.7**
EMEL				Sg	**Sb**	**06 39 55.4**	**-1.5**
GOG	**Mont Gurugu**	**0.66**	**133**	P	**Pb**	**06 39 49.0**	**0.0**
GOG	**Mont Gurugu**	**0.66**	**133**	P	**Pb**	**06 39 48.8**	**-0.1**
GOG				S	**Sb**	**06 39 58.0**	**+0.3**
CHAS	**Isla Isabel II**	**1.06**	**117**	P	**Pn**	**06 39 54.0**	**-1.5**
CHAS				S	**Sb**	**06 40 07.8**	**-1.4**
AKLM	**AKL**	**1.18**	**191**	P	**Pb**	**06 39 60.0**	**+2.2**
AKLM	**AKL**	**1.18**	**191**	P	**Pb**	**06 39 57.8**	**0.0**
AKLM				S	**Sb**	**06 40 13.2**	**+0.5**
ELGU	**Los Guajares,**	**1.20**	**358**	Pg	**Pn**	**06 39 56.5**	**-0.9**
ELGU				Sg	**Sn**	**06 40 12.4**	**-0.5**
ELGU				*i* Vmb_Lg		06 40 16.5	
TAF	**Taforalt**	**1.29**	**131**	P	**Pn**	**06 39 58.5**	**-0.1**
TAF				S	**Sn**	**06 40 15.4**	**+0.2**
EMIJ	**Mijas**	**1.31**	**313**	Pg	**Pn**	**06 39 57.8**	**-1.1**
EMIJ				Sg	**Sn**	**06 40 14.4**	**-1.3**
EMIJ				*i* Vmb_Lg		06 40 15.6	
EBER	**Berja**	**1.35**	**25**	Pg	**Pn**	**06 39 59.0**	**-0.6**
EBER				Sg	**Sb**	**06 40 17.9**	**+0.3**
EBER				*i* Vmb_Lg		06 40 22.4	
SMIR	**Smir Dam**	**1.46**	**271**	P	**Pn**	**06 39 59.1**	**-1.8**
SMIR	**Smir Dam**	**1.46**	**271**	P	**Pn**	**06 40 00.9**	**0.0**
SMIR				S	**Sb**	**06 40 21.2**	**+0.5**
CEU	**Ceuta**	**1.47**	**279**	P	**Pn**	**06 39 59.1**	**-2.0**
CEU				S	**Sn**	**06 40 16.4**	**-3.1**
EGOR	**Sierra Gorda,**	**1.50**	**344**	Pg	**Pb**	**06 40 02.7**	**-0.5**
EGOR				Sg	**Sn**	**06 40 20.6**	**+0.1**
EGOR				*i* Vmb_Lg		06 40 30.5	
EQUE	**Quentar**	**1.54**	**4**	Pn	**Pn**	**06 40 02.0**	**-0.1**
EQUE				Pg	**Pb**	**06 40 03.3**	**-0.6**
EQUE				Sn	**Sn**	**06 40 20.4**	**-1.0**
EQUE				*i* Vmb_Lg		06 40 29.1	
CHEFC	**Chefchaouen**	**1.54**	**249**	P	**Pb**	**06 40 03.2**	**-0.7**
CHEFC	**Chefchaouen**	**1.54**	**249**	P	**Pn**	**06 40 02.8**	**+0.7**
CHEFC				S	**Sb**	**06 40 23.4**	**+0.4**
JBK	**JBK**	**1.57**	**148**	P	**Pn**	**06 40 02.0**	**-0.7**
JBK	**JBK**	**1.57**	**148**	P	**Pn**	**06 40 02.1**	**-0.7**
JBK				S	**Sn**	**06 40 21.4**	**-1.0**
ENIJ	**Nijar**	**1.71**	**40**	Pn	**Pn**	**06 40 04.5**	**+0.1**
ENIJ				Sn	**Sn**	**06 40 26.8**	**+1.2**
ENIJ				*i* Vmb_Lg		06 40 28.8	
EJIF	**Jimena Fronter**	**1.71**	**298**	Pn	**Pn**	**06 40 02.6**	**-1.8**
EJIF				Sn	**Sn**	**06 40 25.9**	**+0.4**
EQES	**Quesada**	**2.17**	**11**	Pn	**Pn**	**06 40 11.8**	**+1.0**
EQES				Sn	**Sb**	**06 40 41.1**	**-0.1**
EQES				*i* Vmb_Lg		06 40 42.2	
EADA	**Adamuz**	**2.62**	**343**	Pn	**Pn**	**06 40 16.5**	**-0.4**
EADA				Sn	**Sn**	**06 40 50.9**	**+3.0**
EADA				*i* Vmb_Lg		06 41 02.6	
ECAB	**El Cabril**	**2.81**	**329**	Pn	**Pn**	**06 40 18.9**	**-0.7**
ECAB				Sn	**Sn**	**06 40 52.9**	**+0.1**
ECAB				*i* Vmb_Lg		06 41 03.0	
CZD	**Col de Zad**	**2.89**	**205**	P	**Pn**	**06 40 23.6**	**+2.6**
CZD				S	**Sn**	**06 40 55.0**	**-0.2**
MD31	**MD31**	**2.96**	**199**	P	**Pn**	**06

JMA 21 06:46:45.8±0.0, 32°.5N±0°.1×130°.6E±0°.2, h10km, MV3.5/20, 2D, SOUTHERN KUMAMOTO PREF, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIU3	**Izumi3**	**0.17**	**62**	⇓P	Pg	06 46 49.3	-0.1
JIU3				⇓S	Sg	06 46 52.2	+0.2
JZO	**Okuchi**	**0.33**	**185**	*i* P	Pg	06 46 52.3	-0.1
JZO				S	Sg	06 46 56.8	0.0
JTA	**Tamana**	**0.50**	**350**	*i* P	Pg	06 46 55.6	+0.1

*TUL **21** 07:07:33.6±1.2, 35°.86N±0°.01×97°.23W±0°.01, h6km±6km, ML2.7, mb_Lg2.4/45(NEIC), Error ellipse: s-maj=1.8km s-min=1.4km az=140.0*

NEIC 21 07:07:33.8±1.2, 35°.86N±0°.01×97°.23W±0°.02, h8km±5km, Error ellipse: s-maj=1.8km s-min=1.8km az=111.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OK005	**Luther M Schoo**	**0.21**	**171**	Pg	Pg	07 07 38.0	-0.1
OK005				Sg	Sg	07 07 40.5	-0.5
OKCFA	**Oklahoma City**	**0.48**	**202**	Pg	Pg	07 07 43.1	0.0
OKCFA				Sg	Sg	07 07 48.7	-0.8
OKCSW	**OKLAHOMA CITY**	**0.49**	**200**		Pg	07 07 43.1	-0.1
OKCSW				Sg	Sg	07 07 49.0	-0.6
FNO	**Franklin**	**0.62**	**193**	Pg	Pg	07 07 45.5	-0.3
FNO				Sg	Sg	07 07 53.6	-0.4
TUL1	**Leonard**	**1.17**	**87**	Pg	Pg	07 07 54.7	-1.6
TUL1				Sg	Sg	07 08 10.3	-1.3
T35A	**Sooner Cattle**	**1.20**	**29**	Pg	Pb	07 07 56.0	-0.8
T35A				Sg	Sg	07 08 11.8	-0.6
X34A	**Smith Ranch, M**	**1.35**	**201**	Pn	Pn	07 07 58.9	-0.1
WMOK	**Wichita Mounta**	**1.69**	**229**		Pn	07 08 04.3	+0.6
X37A	**Clayton**	**1.99**	**129**	Pn	Pn	07 08 08.8	+1.1
X37A				lAmb_Lg		07 08 38.4	
	comp=Z,20nm,0.9s						
U38A	**Gravette**	**2.38**	**75**		Pn	07 08 14.1	+1.0
Z35A	**Perchaven, San**	**2.53**	**180**	Pn	Pn	07 08 15.4	+0.2
HHAR	**Hobbs**	**2.70**	**80**		Pn	07 08 18.2	+0.6
R32A	**Long Quarter,**	**2.81**	**336**		Pn	07 08 19.4	+0.3
W39A	**Magazine**	**2.89**	**102**		Pn	07 08 20.8	+0.6
W39A				lAmb_Lg		07 09 12.9	
	comp=Z,10nm,0.8s						
Z38A	**Mt. Pleasant**	**3.19**	**144**	lAmb_Lg		07 09 13.5	
	comp=Z,9.0nm,0.9s						
KSU1	**Kansas State U**	**3.27**	**9**		Pn	07 08 26.0	+0.6
KSU1				lAmb_Lg		07 09 22.0	
	comp=Z,8.9nm,0.7s						
MIAR	**Mount Ida**	**3.27**	**113**	Pn	Pn	07 08 26.4	+1.0
MIAR				lAmb_Lg		07 09 22.3	
	comp=Z,14nm,1.1s						
U40A	**Yellville**	**3.58**	**81**		Pn	07 08 30.3	+0.6
S39A	**Bolivar**	**3.63**	**59**		Pn	07 08 32.2	+1.8
S39A				lAmb_Lg		07 09 38.3	
	comp=Z,9.3nm,0.8s						
AMTX	**Amarillo**	**3.76**	**256**	lAmb_Lg		07 09 41.7	
	comp=Z,9.2nm,0.7s						
ABTX	**Abilene, Hawle**	**3.80**	**212**		Pn	07 08 33.4	+0.7
X40A	**Basin Creek Fa**	**3.86**	**110**		Pn	07 08 34.7	+1.2
X40A				lAmb_Lg		07 09 40.7	
	comp=Z,12nm,0.9s						
WLAR	**White Oak Lake**	**4.03**	**121**	lAmb_Lg		07 09 39.4	
	comp=Z,8.7nm,1.1s						
WHAR	**Wooly Hollow**	**4.07**	**97**		Pn	07 08 37.0	+0.6
W41B	**Gary Mavity, V**	**4.12**	**98**		Pn	07 08 36.9	-0.2
W41B				lAmb_Lg		07 09 52.7	
	comp=Z,6.9nm,0.9s						
UALR	**University of**	**4.14**	**104**	Pn	Pn	07 08 37.9	+0.4
FCAR	**Ozark Folk Cen**	**4.15**	**88**		Pn	07 08 37.4	-0.1
FCAR				lAmb_Lg		07 09 49.9	
	comp=Z,5.8nm,0.7s						
MGMO	**Mountain Grove**	**4.20**	**71**	lAmb_Lg		07 09 45.8	
	comp=Z,12nm,0.8s						
R40A	**Maddies Statio**	**4.65**	**57**		Pn	07 08 44.4	0.0
R40A				lAmb_Lg		07 10 12.6	
	comp=Z,7.5nm,0.7s						
P38A	**Dawn**	**4.76**	**37**	Pn	Pn	07 08 45.3	-0.7
P38A				lAmb_Lg		07 10 08.6	
	comp=Z,6.5nm,0.7s						
MSTX	**Muleshoe**	**4.93**	**249**	Pn	Pn	07 08 48.8	+0.5
MSTX				lAmb_Lg		07 10 17.4	
	comp=Z,4.9nm,1.0s						
LCAR	**Lake Charles**	**4.94**	**86**	Pn	Pn	07 08 48.4	+0.1
N35A	**Tabor**	**5.14**	**14**	lAmb_Lg		07 10 29.5	
	comp=Z,12nm,0.8s						
CCM	**Cathedral Cave**	**5.27**	**64**	lAmb_Lg		07 10 21.5	
	comp=Z,9.2nm,0.8s						
KSCO	**Kaye Shedlock'**	**5.32**	**308**	lAmb_Lg		07 10 34.0	
	comp=Z,8.0nm,0.7s						
P40A	**Paris**	**5.50**	**47**	Pn	Pn	07 08 55.7	-0.4
JCT	**Junction City**	**5.79**	**203**	Pn	Pn	07 09 00.2	+0.2
JCT				lAmb_Lg		07 10 48.4	
	comp=Z,4.8nm,0.9s						
FVM	**French Village**	**5.85**	**67**	Pn	Pn	07 09 00.9	0.0
FVM				lAmb_Lg		07 10 46.0	
	comp=Z,8.6nm,1.0s						
T25A	**Trinidad**	**5.92**	**285**	Pn	Pn	07 09 01.6	-0.4
L34A	**Svendsen Farm,**	**6.13**	**6**	lAmb_Lg		07 10 56.1	
	comp=Z,6.7nm,0.8s						
SDCO	**Great Sand Dun**	**6.89**	**288**	Pn	Pn	07 09 15.4	-0.1
ECSD	**EROS Data Cent**	**7.87**	**3**	Pn	Pn	07 09 28.9	+0.2

*IDC **21** 07:19:47.3±3.4, 4°.72S×101°.87E, h0km, mb3.8/5, mbtmp3.8/5, Error ellipse: s-maj=136.0km s-min=25.1km az=54.0*

*NEIC **21** 07:19:54.3±1.4, 4°.7S±0°.1×101°.99E±0°.06, h42km±7km, mb4.5/12, Error ellipse: s-maj=14.7km s-min=8.9km az=190.0*

*DJA **21** 07:19:54.8±0.8, 5°.S±10°×10°.2E±°, h43km±29km, M4.2/6, mb4.5/3, MLv4.0/6*

ISC 21 07:19:52.9±0.7, 4°.66S±0°.09×101°.97E±0°.08, h37km, n40, σ1°.35/37, mb4.2/11, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNAI	**Manna**	**1.03**	**73**		**Pn**	**07 20 11.8**	**+0.9**
MNAI				Sn	**Sn**	**07 20 24.9**	**+0.9**
MNAI	**Manna**	**1.03**	**73**	P	**Pn**	**07 20 11.7**	**+0.9**
MNAI				S	**Sn**	**07 20 24.6**	**+0.6**
MASI	**Maura Aman, Be**	**1.53**	**10**	P	**Pn**	**07 20 19.9**	**+2.1**
LWLI	**Liwa**	**2.12**	**100**	P	**Pn**	**07 20 25.4**	**-0.5**
KASI	**Kota Agung**	**2.66**	**109**	P	**Pn**	**07 20 34.1**	**+0.8**
KASI				S	**Sn**	**07 21 03.8**	**-0.5**
SISI	**Saibi**	**4.38**	**319**	P	**Pn**	**07 20 59.4**	**+2.4**
CMJI	**Cimerak**	**7.15**	**116**	P	**Pn**	**07 21 35.1**	**+0.1**
	0.1nm21nm,0.8s						
GSI	**Gunungsitoli**	**7.37**	**323**	Pn	**Pn**	**07 21 39.2**	**+1.2**
UGM	**Wanagama**	**9.10**	**111**	Pn	**Pn**	**07 22 02.3**	**+0.5**
UGM	**Wanagama**	**9.10**	**111**	P	**Pn**	**07 22 02.8**	**+1.0**
	62nm,1.7s						
PCJI	**Pacitan**	**9.80**	**111**	P	**Pn**	**07 22 12.2**	**+0.8**
CMAR	**Chiang Mai Arr**	**23.16**	**353**	P	**P**	**07 24 57.1**	**+0.8**
	0.9nm,0.3s,baz=173,slow=9.8,SNR=5.9						
	0.9nm,0.3s						
KNRA	**Kununurra**	**28.51**	**115**	P	**P**	**07 25 45.7**	**+0.5**
H08S2	**Diego Garcia H**	**29.45**	**263**	T	T	07 56 21.7	
	baz=85,slow=74,SNR=8.9						
H08S3	**Diego Garcia H**	**29.46**	**263**	T	T	07 56 22.4	
	baz=85,slow=74,SNR=11						
H08S1	**Diego Carcia H**	**29.47**	**263**	T	T	07 56 23.2	
	baz=85						
H01W3	**Cape Leeuwin H**	**32.12**	**161**	T	T	08 00 18.2	
	baz=339,slow=76,SNR=8.4						
H01W2	**Cape Leeuwin H**	**32.13**	**161**	T	T	08 00 14.1	
	baz=339,slow=76,SNR=8.8						
H01W1	**Cape Leeuwin H**	**32.13**	**161**	T	T	08 00 19.2	
	baz=339,slow=76,SNR=7.7						
WB0	**Warramunga Arr**	**34.97**	**118**	P	**P**	**07 26 41.5**	**-0.3**
WB0				lAmb	lAmb	07 27 08.2	
	comp=Z,3.5nm,1.2s						
WRA	**Warramunga Arr**	**34.98**	**119**	P	**P**	**07 26 42.0**	**+0.1**
	comp=Z,0.6nm,1.0s,baz=311,slow=8.7,SNR=10						
	comp=Z,0.6nm,1.0s						
WRAB	**Tennant Creek**	**34.99**	**119**	P	**P**	**07 26 42.3**	**+0.2**
WRAB				lAmb	lAmb	07 26 48.0	
	comp=Z,9.3nm,1.4s						
WB2	**Warramunga Arr**	**34.99**	**119**	P	**P**	**07 26 42.0**	**-0.1**
WB2				lAmb	lAmb	07 26 48.6	
	comp=Z,10nm,1.4s						
WR0	**Warramunga Arr**	**35.16**	**118**	P	**P**	**07 26 44.1**	**+0.6**
WR0				lAmb	lAmb	07 27 11.5	
	comp=Z,6.6nm,1.2s						
AS31	**Alice Springs**	**36.12**	**125**	P	**P**	**07 26 53.3**	**+1.5**
SONM	**Songino Array**	**52.42**	**4**	P	**P**	**07 29 02.0**	**+0.2**
	comp=Z,1.5nm,0.6s,baz=184,slow=8.7,SNR=7.0						
	comp=Z,1.5nm,0.6s						
SONM	**Songino Array**	**52.42**	**4**	P	**P**	**07 29 01.6**	**-0.2**
MK31	**Makanchi Array**	**54.11**	**343**	P	**P**	**07 29 14.0**	**-0.1**
MKAR	**Makanchi Array**	**54.11**	**343**	P	**P**	**07 29 14.1**	**0.0**
	comp=Z,1.7nm,0.6s,baz=152,slow=8.3,SNR=7.2						
	comp=Z,1.7nm,0.6s						
MKAR	**Makanchi Array**	**54.11**	**343**	P	**P**	**07 29 13.8**	**-0.4**
USRK	**Ussuriysk Ar.**	**55.62**	**26**	P	**P**	**07 29 24.2**	**-0.9**
KURBB	**Kurchatov Arra**	**58.65**	**343**	P	**P**	**07 29 45.5**	**-0.8**
	comp=Z,0.7nm,0.8s,baz=160,slow=7.2,SNR=3.9						
	comp=Z,0.7nm,0.8s						
ZAA0	**Zalesovo Array**	**60.14**	**348**	P	**P**	**07 29 52.1**	**-4.5**
ZALV	**Zalesovo Beam**	**60.14**	**348**	P	**P**	**07 29 52.7**	**-3.9**
ABKAR	**Akbulak array**	**64.90**	**331**	P	**P**	**07 30 27.3**	**-1.2**
BKZ	**Black Stump Fm**	**75.08**	**129**	P	**P**	**07 31 31.1**	**+0.4**
QSPA	**South Pole Qui**	**85.32**	**180**	P	**P**	**07 32 25.1**	**-0.9**
QSPA				lAmb	lAmb	07 32 25.6	
	comp=Z,6.4nm,1.4s						
SNAA	**Sanae**	**90.23**	**198**	P	**P**	**07 32 50.6**	**+1.2**
SNAA				lAmb	lAmb	07 32 56.6	
	comp=Z,3.2nm,1.2s						
TXAR	**Lajitas Array**	**145.49**	**42**	PKPbc	**PKPab**	**07 39 28.3**	**+0.1**
	comp=Z,1.4nm,0.8s,baz=301,slow=0.9,SNR=18						
TXAR	**Lajitas Array**	**145.49**	**42**		**PKPdf**	**07 39 27.9**	**0.0**

IDC 21 07:22:04.3±2.9, 54°.03N×86°.54E, h0km, mbtmp2.8/2, ML2.6/2, Error ellipse: s-maj=23.4km s-min=13.9km az=59.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.02**	**266**	*i*		07 28 20.0	
	baz=85,slow=307,SNR=3.4						
ZALV	**Zalesovo Beam**	**1.02**	**266**	Pg	Pg	07 22 23.0	-0.8
	1.5nm,0.3s,baz=82,slow=17,SNR=16						
ZALV				Lg	Lg	07 22 38.5	
	2.2nm,0.3s,baz=87,slow=31,SNR=11						
ZALV				Rg	Rg	07 22 43.2	
	100nm,1.3s,baz=79,slow=39,SNR=11						
KURBB	**Kurchatov Arra**	**5.98**	**238**	Pn	Pn	07 23 34.6	+0.6
	0.1nm,0.3s,baz=55,slow=14,SNR=4.6						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**7.74**	**202**	Pn	Pn	07 23 59.3	+1.2
	0.1nm,0.3s,baz=23,slow=14,SNR=4.5						
	0.2nm,0.3s						

*INET **21** 07:23:44.1±1.1, 12°.98N×87°.12W, h1km±2km, ML4.2*
*UCR **21** 07:23:46.1±1.7, 13°.02N×87°.18W, h12km±9km, ML3.8*
*SNET **21** 07:23:47.4±1.0, 13°.07N×87°.24W, h11km±10km, ML3.7*

ISC 21 07:23:44.2±1.2, 13°.04N±0°.04×87°.14W±0°.03, h8km±10km, n50, σ1°.04/62, Honduras

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**0.35**	**165**	*e*P	**Pg**	**07 23 51.1**	**+0.1**
CRIN				*e*S	**Sg**	**07 23 57.7**	**+2.1**
CRIN				IAML		07 23 57.8	
	comp=E,33μm,0.3s						
TEL3	**Telica 3**	**0.55**	**148**	*e*P	**Pg**	**07 23 54.7**	**-0.1**
CNGN	**Cerro Negro**	**0.69**	**141**	*e*P	**Pg**	**07 23 56.9**	**-0.6**
CNCH	**Conchagua**	**0.71**	**290**	*e*P	**Pb**	**07 23 59.1**	**+0.2**
CNCH				*e*S	**Sb**	**07 24 08.9**	**-0.1**
CNCH				IAML		07 24 14.9	
	comp=Z,4μm,0.3s						
CNCH	**Conchagua**	**0.71**	**290**	*e*P	**Pb**	**07 23 59.1**	**+0.2**
CNCH				*e*S	**Sb**	**07 24 08.9**	**-0.1**
CNCH				IAML		07 24 14.9	
	comp=Z,4μm,0.3s						
LCND	**La Caada**	**0.78**	**291**	*e*P	**Pb**	**07 24 00.1**	**+0.1**
LCND				*e*S	**Sb**	**07 24 10.3**	**-0.4**
LCND	**La Caada**	**0.78**	**291**	*e*P	**Pb**	**07 24 00.1**	**+0.1**
LCND				*e*S	**Sb**	**07 24 10.3**	**-0.4**
MOMN	**Momotombo**	**0.86**	**137**	*e*P	**Pg**	**07 23 60.0**	**-0.8**
COPN	**Copaltepe**	**1.01**	**148**	*e*P	**Pg**	**07 24 02.3**	**-1.3**
TGUH	**Tegucigalpa,Un**	**1.02**	**353**	*e*P	**Pn**	**07 24 05.4**	**+0.4**
TGUH				*e*S	**Sb**	**07 24 18.8**	**+0.9**
TGUH	**Tegucigalpa,Un**	**1.02**	**353**	*e*P	**Pn**	**07 24 05.4**	**+0.4**
TGUH				*e*S	**Sb**	**07 24 18.8**	**+0.9**
TGUH	**Tegucigalpa,Un**	**1.02**	**353**	*e*P	**Pn**	**07 24 05.5**	**+0.5**
RCON	**San Juan de Ri**	**1.06**	**65**	*e*P	**Pg**	**07 24 05.1**	**+0.5**
CNRM	**Centro Naciona**	**1.09**	**294**	*e*P	**Pn**	**07 24 05.6**	**-0.2**
CNRM				*e*S	**Sn**	**07 24 20.0**	**-1.1**
CNRM	**Centro Naciona**	**1.09**	**294**	*e*P	**Pn**	**07 24 05.6**	**-0.2**
CNRM				*e*S	**Sn**	**07 24 20.1**	**-1.1**
HUEN		**1.18**	**126**	*e*P	**Pb**	**07 24 05.5**	**-1.3**
RANC	**El Ranchito**	**1.18**	**290**	*e*P	**Pg**	**07 24 07.1**	**+0.1**
RANC	**El Ranchito**	**1.18**	**290**	*e*P	**Pg**	**07 24 07.1**	**+0.1**
MATN	**Matagalpa**	**1.19**	**95**	*e*P	**Pn**	**07 24 05.4**	**-1.9**
TISN	**Laguna Tiscapa**	**1.23**	**136**	*e*P	**Pn**	**07 24 05.4**	**-2.3**
MGAN	**Managua**	**1.24**	**135**	*e*P	**Pn**	**07 24 06.3**	**-1.6**
WILN	**Americas 2**	**1.28**	**133**	*e*P	**Pn**	**07 24 07.0**	**-1.3**
COEB	**Comit de Eme**	**1.43**	**289**	*e*P	**Pb**	**07 24 11.2**	**+0.1**
COEB	**Comit de Eme**	**1.43**	**289**	*e*P	**Pb**	**07 24 11.2**	**+0.1**
PQSS	**Presa 15 de Se**	**1.50**	**293**	*e*P	**Pb**	**07 24 12.1**	**-0.2**
PQSS	**Presa 15 de Se**	**1.50**	**293**	*e*P	**Pb**	**07 24 12.1**	**-0.2**
BOAB	**BOACO BROADBAN**	**1.56**	**112**	*e*P	**Pn**	**07 24 11.3**	**-0.9**
SCLA	**Alcaldia de Sa**	**1.68**	**293**	*e*P	**Pb**	**07 24 15.1**	**-0.3**
SCLA				*e*S	**Sg**	**07 24 37.2**	**-1.0**
SCLA	**Alcaldia de Sa**	**1.68**	**293**	*e*P	**Pb**	**07 24 15.1**	**-0.3**
SCLA				*e*S	**Sg**	**07 24 37.2**	**-1.0**
COEG	**Centro de Oper**	**1.79**	**289**	*e*P	**Pb**	**07 24 16.9**	**-0.4**
COEG	**Centro de Oper**	**1.79**	**289**	*e*P	**Pb**	**07 24 16.9**	**-0.4**
PAVA	**Las Pavas**	**1.87**	**291**	*e*P	**Pb**	**07 24 18.9**	**+0.2**
PAVA	**Las Pavas**	**1.87**	**291**	*e*P	**Pb**	**07 24 18.9**	**+0.2**
SJTE	**Alcalda de S**	**1.90**	**288**	*e*P	**Pb**	**07 24 18.4**	**-0.8**
SJTE	**Alcalda de S**	**1.90**	**288**	*e*P	**Pb**	**07 24 18.4**	**-0.8**
ACON	**Acoyapa**	**2.20**	**119**	*e*P	**Pn**	**07 24 22.0**	**+0.9**
ACON	**Acoyapa**	**2.20**	**119**	*e*P	**Pn**	**07 24 19.5**	**-1.5**
HZTE	**Horizontes, Gu**	**2.76**	**147**	*e*P	**Pn**	**07 24 29.6**	**+0.8**
ESPN	**Las Esperanzas**	**2.90**	**106**	*e*P	**Pn**	**07 24 30.3**	**-0.4**
VMAR	**Armenia, Volca**	**2.97**	**138**	*e*P	**Pn**	**07 24 33.2**	**+1.5**
COLC	**Colonia**	**3.03**	**141**	*e*P	**Pn**	**07 24 33.6**	**+1.1**
CUI	**Cuipilapa**	**3.06**	**140**	*e*P	**Pn**	**07 24 34.2**	**+1.2**
ORTG	**Ortega, Santa**	**3.13**	**148**	*e*P	**Pn**	**07 24 34.4**	**+0.5**
PLVR	**Palo Verde**	**3.20**	**146**	*e*P	**Pn**	**07 24 35.4**	**+0.4**
SAJU	**San Juanillo,**	**3.27**	**154**	*e*P	**Pn**	**07 24 36.1**	**+0.4**
NICO	**Nicoya**	**3.33**	**150**	*e*P	**Pn**	**07 24 37.5**	**+0.8**
DUNO	**Dulce Nombre,**	**3.35**	**151**	*e*P	**Pn**	**07 24 38.1**	**+1.1**
DUNO				*e*S	**Sn**	**07 25 19.4**	**+2.3**
JTS	**Las Juntas de**	**3.47**	**142**	*e*P	**Pn**	**07 24 38.8**	**+0.1**
ARE1	**Arenal 1**	**3.49**	**137**	*e*P	**Pn**	**07 24 42.2**	**+3.3**
RIMA	**Rio Macho**	**4.57**	**135**	*e*P	**Pn**	**07 24 55.7**	**+1.8**

NNC 21 07:24:02.4±0.4, 50°.01N×78°.71E, h0km, mb3.6, mpv3.2, 20C-7D, Error ellipse: s-maj=4.0km s-min=1.8km az=68.0, Suspected Mining explosion., Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR07	**Kurchatov Arra**	**0.59**	**348**	⇑P	Pg	07 24 13.7	+0.1
KUR07				⇓S	Sb	07 24 22.9	-1.5
KUR06	**Kurchatov Arra**	**0.60**	**349**	⇑P	Pg	07 24 14.2	+0.2
KUR06				⇓S	Sg	07 24 22.9	+1.1
KUR14	**Kurchatov Arra**	**0.61**	**353**	⇑P	Pg	07 24 14.2	+0.2
KUR14				⇓S	Sg	07 24 22.9	+0.9
KUR15	**Kurchatov Arra**	**0.62**	**351**	⇑P	Pg	07 24 14.4	+0.2
KUR15				⇑S	Sg	07 24 23.1	+0.9
KURBB	**Kurchatov Arra**	**0.62**	**349**	⇑P	Pg	07 24 14.5	+0.2
	20nm,0.4s						
KURBB				⇑S	Sb	07 24 24.0	-1.5
	136nm,0.6s						
KUR16	**Kurchatov Arra**	**0.63**	**348**	⇓P	Pg	07 24 14.6	+0.1
KUR16				⇓S	Sg	07 24 23.1	+0.4
KUR17	**Kurchatov Arra**	**0.64**	**346**	⇑P	Pg	07 24 14.8	+0.1
KUR17				⇑S	Sg	07 24 23.8	+0.8
KUR05	**Kurchatov Arra**	**0.64**	**350**	⇑P	Pg	07 24 14.6	-0.1
KUR05				⇑S	Sg	07 24 23.8	+0.8
KUR04	**Kurchatov Arra**	**0.66**	**351**	⇑P	Pg	07 24 15.1	+0.1
KUR04				⇑S	Sg	07 24 24.4	+0.8
KURK	**Kurchatov**	**0.71**	**355**	⇑P	Pg	07 24 15.8	-0.1
	9.7nm,0.5s						
KURK				⇓S	Sg	07 24 25.8	+0.7
	27nm,0.7s						
SEM	**Semipalatinsk**	**1.07**	**68**	P	Pg	07 24 22.8	0.0
	6.9nm,0.1s						
SEM				S	Sb	07 24 37.6	-0.8
	24nm,0.2s						
MAKZ	**Makanchi**	**3.87**	**145**	⇑Pn	Pn	07 25 03.8	+0.6
	0.3nm,0.5s						
MAKZ				⇓Pg	Pb	07 25 12.5	+0.9
	4.0nm,0.9s						
MAKZ				⇑Lg	Lg	07 26 04.2	
	5.5nm,0.5s						
BRZS	**Berezniki**	**3.89**	**272**	Pg	Pb	07 25 11.8	-0.1
	3.0nm,0.3s						
BRZS				Lg	Lg	07 26 01.7	
	10nm,0.3s						
MK31	**Makanchi Array**	**4.01**	**142**	⇑Pn	Pn	07 25 06.1	+1.1
	0.1nm,0.1s,baz=124,slow=20,SNR=15						
MK31				⇑Pg	Pb	07 25 16.1	+2.3
	0.4nm,0.3s,baz=319,slow=11,SNR=15						
MK31				Lg	Lg	07 26 09.0	
	5.5nm,0.6s,baz=328,slow=26,SNR=10						
OTUK	**Ortayu**	**4.54**	**250**	⇑Pn	Pn	07 25 13.8	+1.4
	1.2nm,0.3s						
OTUK				⇑Lg	Lg	07 26 28.6	
	3.7nm,0.5s						
ZSN	**Zaisan**	**4.81**	**120**	Pg	Pb	07 25 27.1	-0.5
	2.7nm,0.2s						
ZSN				Lg	Lg	07 26 28.0	
	7.6nm,0.3s						
ARXS	**Arharly**	**5.83**	**186**	Pg	Pb	07 25 48.9	+4.0
	2.4nm,0.5s						
ARXS				Lg	Lg	07 27 05.2	
	7.2nm,0.6s						
KUU	**Kurty**	**6.33**	**196**	Pg	Pg	07 25 58.7	-4.9
	2.3nm,0.1s						
KUU				Lg	Lg	07 27 22.4	
	6.6nm,0.3s						
KPKS	**Kokpek**	**6.55**	**180**	Pg	Pg	07 26 04.2	-3.6
	2.0nm,0.2s						
KPKS				Lg	Lg	07 27 32.1	
	7.0nm,0.8s						

IDC 21 07:50:51.9±30.0, 45°.14N×149°.92E, h0km, mb3.7/4, mbtmp3.7/4, MS3.3/1, Error ellipse: s-maj=679.6km s-min=81.4km az=152.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**45.70**	**297**	P	P	07 59 14.4	0.0
	0.3nm,0.5s,baz=74,slow=7.4,SNR=4.4						
MKAR				LR	LR	08 20 08.5	
	comp=Z,36nm,19.6s,baz=35,slow=38						
	0.3nm,0.5s						
ARCES	**ARCESS Array B**	**58.63**	**340**	P	P	08 00 50.7	+0.5
	0.2nm,0.4s,baz=42,slow=7.3,SNR=1.1						
	0.2nm,0.4s						
FINES	**FINESS Array B**	**64.52**	**334**	P	P	08 01 29.3	-0.8
	1.2nm,0.5s,baz=36,slow=7.4,SNR=9.3						
	1.2nm,0.5s						
NOA	**NORSAR Array B**	**69.00**	**340**	P	P	08 01 59.3	+0.6
	0.5nm,0.4s,baz=29,slow=6.3,SNR=2.1						
	0.5nm,0.4s						

*MOS **21** 07:51:43.5±1.1, 31°.74S×179°.17E, h497km, mb5.0/17, Error ellipse: s-maj=12.7km s-min=10.1km az=85.4*

*BJI **21** 07:51:43.0±0.0, 31°.76S×179°.26E, h503km, mb4.8/18, mB4.9/10*

*NEIC **21** 07:51:44.1±2.3, 31°.74S±0°.08×179°.2E±0°.1, h488km±5km, mb5.2/61, Error ellipse: s-maj=15.0km s-min=12.3km az=96.0*

*NOU **21** 07:51:44.8, 31°.85S×179°.46E, h510km, mb5.1/73, Kermadec Islands Region*

*IDC **21** 07:51:45.4±1.0, 31°.69S×179°.17E, h508km±10km, mb4.1/18, mbtmp4.9/21, Error ellipse: s-maj=12.7km s-min=10.1km az=95.0*

*WEL **21** 07:51:46.4±0.6, 32°.S±8°×18°.0W±1°.8, h490km±9km, M4.9/61, mB5.4/57, MLv6.1/61, Mw(mB)4.8/57, Error ellipse: s-maj=0.0km s-min=0.0km az=110.6*

*GCMT **21** 07:51:49.1±0.4, 31°.60S±0°.04×179°.18E±0°.04, h509km±2km, MW5.3/66, Moment Tensor Solution. s66,c77; Duration: 1s1 Moment tensor: Scale 10^17Nm; Mrr0.17±.03; Mθθ0.11±.05; Mθφ-0.27±.05; Mrθ-0.99±.04; Mθφ-0.55±.05; Mφr-0.15±.06; Best double couple: M○1.16700×10^17 NP1:φs355.00000°, δ30.00000°, λ9.00000°. NP2: φs257.00000°, δ85.00000°, λ120.00000°. Principal axes: T 1.1860, Plg42.0000°, Azm195.0000°; N -0.0360, Plg30.0000°, Azm75.0000°; P -1.1490, Plg34.0000°, Azm322.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 21 07:51:44.6±0.4, 31°.79S±0°.04×179°.26E±0°.05, h504km±4km, h505km: pP-P, n504, σ1°62/545, mb5.0/75, 42C-41D, Fault plane solution: NP1: φs97.93636°, δ76.80775°, λ-108.08875°. **NP2:** φs332.99429°, δ22.25753°, λ-37.05109°. **Principal axes:** T Plg29.5409

	HRRZ	**Handcock Road**	**7.02 200**	P		**P**	**07 53 31.0**	**0.0**
	GRRZ	**Galatos Road**	**7.04 201**	P		**P**	**07 53 33.1**	**+1.9**
	SNGZ	**Shannon Statio**	**7.15 192**	P		**P**	**07 53 31.0**	**-1.3**
	ALRZ	**Allen Road**	**7.17 199**	P		**P**	**07 53 31.6**	**-0.9**
	TLZ	**Tolley Road**	**7.20 204**	P		**P**	**07 53 34.4**	**+1.5**
	PRGZ	**Paritu Road**	**7.21 189**	P		**P**	**07 53 33.1**	**+0.2**
	KUTZ	**Kaahu Road**	**7.25 202**	P		**P**	**07 53 34.3**	**+1.0**
	MTHZ	**Maungataniwha**	**7.32 195**	P		**P**	**07 53 33.7**	**-0.4**
	WHTZ	**Whakaora**	**7.37 201**	P		**P**	**07 53 36.4**	**+1.8**
	MRHZ	**Matea Rd**	**7.40 198**	P		**P**	**07 53 33.3**	**-1.6**
	WATZ	**Wairara**	**7.48 202**	P		**P**	**07 53 36.1**	**+0.4**
	HATZ	**Hinemaiaia**	**7.54 199**	P		**P**	**07 53 35.9**	**-0.4**
	HIZ	**Hauiti**	**7.62 207**	P		**P**	**07 53 39.4**	**+2.4**
	HIZ	**Hauiti**	**7.62 207**	P		**P**	**07 53 39.1**	**+2.1**
	HIZ	**Hauiti**	**7.62 207**	P		**P**	**07 53 39.9**	**+2.9**
	ARHZ	**Aropaoanui**	**7.68 193**	P		**P**	**07 53 36.7**	**-1.0**
	RITZ	**Rihia Road**	**7.69 200**	P		**P**	**07 53 37.9**	**+0.1**
	BKZ	**Black Stump Fm**	**7.70 196**			**P**	**07 53 36.7**	**-1.2**
	BKZ	**Black Stump Fm**	**7.70 196**	P		**P**	**07 53 37.4**	**-0.5**
	KATZ	**Kakaramea**	**7.74 201**	P		**P**	**07 53 39.7**	**+1.3**
	NTVZ	**North Tongarir**	**7.86 201**	P		**P**	**07 53 38.9**	**-0.6**
	KRVZ	**Karewarewa**	**7.86 201**	P		**P**	**07 53 39.8**	**+0.1**
	TMVZ	**Te Maari**	**7.86 201**	P		**P**	**07 53 38.3**	**-1.4**
	ETVZ	**East Tongariro**	**7.88 201**	P		**P**	**07 53 38.8**	**-1.0**
	WTVZ	**West Tongariro**	**7.90 201**	P		**P**	**07 53 39.3**	**-0.7**
	NNVZ	**North Ngauruho**	**7.91 201**	P		**P**	**07 53 40.3**	**+0.2**
	TWVZ	**Taurewa**	**7.91 202**	P		**P**	**07 53 40.4**	**+0.3**
	MCHZ	**McNeill Hill**	**7.92 195**	P		**P**	**07 53 38.5**	**-1.6**
	OTVZ	**Oturere**	**7.92 201**	P		**P**	**07 53 39.7**	**-0.6**
	SNVZ	**South Ngauruho**	**7.95 201**	P		**P**	**07 53 39.9**	**-0.6**
	NGZ	**Ngauruhoe**	**7.95 201**	P		**P**	**07 53 40.8**	**+0.2**
	KWHZ	**Kaweka Forest**	**7.96 198**	P		**P**	**07 53 38.6**	**-2.0**
	TUVZ	**Tukino**	**8.02 200**	P		**P**	**07 53 41.2**	**-0.1**
	FWVZ	**Far West T-bar**	**8.04 201**	P		**P**	**07 53 40.9**	**-0.7**
	CKHZ	**Cape Kidnapper**	**8.05 192**	P		**P**	**07 53 40.7**	**-0.7**
	WHVZ	**Whangaehu Hut**	**8.05 201**	P		**P**	**07 53 41.2**	**-0.5**
	TRVZ	**Turoa**	**8.08 201**	P		**P**	**07 53 42.2**	**+0.2**
	WNVZ	**Wahianoa**	**8.09 201**	P		**P**	**07 53 40.4**	**-1.7**
	BHHZ	**Black Hill Sta**	**8.11 198**	P		**P**	**07 53 39.5**	**-2.7**
	MOVZ	**Moawhango**	**8.12 200**	P		**P**	**07 53 40.9**	**-1.3**
	PKVZ	**Pokaka**	**8.13 202**	P		**P**	**07 53 42.1**	**-0.3**
	KRHZ	**Kereru**	**8.18 196**	P		**P**	**07 53 40.3**	**-2.5**
	MTVZ	**Mangateitei**	**8.18 201**	P		**P**	**07 53 42.3**	**-0.5**
	VRZ	**Vera Road**	**8.19 205**	P		**P**	**07 53 43.4**	**+0.5**
	KAHZ	**Kahuranaki**	**8.22 193**	P		**P**	**07 53 41.7**	**-1.5**
	PXZ	**Pawanui**	**8.45 193**	P		**P**	**07 53 43.7**	**-1.8**
	DREZ	**Durham Road**	**8.46 208**	P		**P**	**07 53 48.7**	**+3.0**
	PNHZ	**Pukenui**	**8.48 196**	P		**P**	**07 53 43.2**	**-2.8**
	PKE	**Pukeiti**	**8.55 209**	P		**P**	**07 53 49.7**	**+3.1**
	NEZ	**North Egmont**	**8.57 208**	P		**P**	**07 53 49.5**	**+2.6**
	WPHZ	**Waipukurau**	**8.57 195**	P		**P**	**07 53 44.6**	**-2.2**
	PREZ	**Palmer Road**	**8.60 207**	P		**P**	**07 53 50.4**	**+3.2**
	LREZ	**Lake Rotokare**	**8.61 206**	P		**P**	**07 53 48.7**	**+1.4**
	KHEZ	**Kahui Hut**	**8.62 208**	P		**P**	**07 53 50.1**	**+2.6**
	NBEZ	**Newall Road No**	**8.66 209**	P		**P**	**07 53 51.0**	**+3.3**
	WAZ	**Wanganui**	**8.67 202**	P		**P**	**07 53 47.4**	**-0.5**
	TSZ	**Takapari Road**	**8.67 197**	P		**P**	**07 53 46.7**	**-1.2**
	PRHZ	**Porangahau**	**8.72 193**	P		**P**	**07 53 46.9**	**-1.5**
	NMEZ	**Namu Road**	**8.78 208**	P		**P**	**07 53 51.4**	**+2.5**
	DVHZ	**Dannevirke**	**8.85 196**	P		**P**	**07 53 49.0**	**-0.7**
	ANWZ	**Angora Road**	**8.94 194**	P		**P**	**07 53 50.0**	**-0.6**
	OHWZ	**Ohakea**	**8.98 200**	P		**P**	**07 53 50.2**	**-1.0**
	POWZ	**Post Office Ro**	**9.04 197**	P		**P**	**07 53 50.2**	**-1.5**
	PRWZ	**Pori Road**	**9.14 196**	P		**P**	**07 53 52.1**	**-0.7**
	BFZ	**Birch Farm**	**9.20 194**	P		**P**	**07 53 52.9**	**-0.5**
	BFZ	**Birch Farm**	**9.20 194**	P		**P**	**07 53 51.6**	**-1.8**
	BFZ	**Birch Farm**	**9.20 194**	P		**P**	**07 53 52.9**	**-0.5**
	MRZ	**Mangatainoka R**	**9.34 198**	P		**P**	**07 53 53.1**	**-1.7**
	TIWZ	**Tintock**	**9.37 196**	P		**P**	**07 53 55.9**	**+0.6**
	CPWZ	**Castlepoint**	**9.43 194**	P		**P**	**07 53 56.6**	**+0.8**
	HOWZ	**Holdsworth Sta**	**9.58 197**	P		**P**	**07 53 55.4**	**-1.9**
	OGWZ	**Otaki Gorge**	**9.59 199**	P		**P**	**07 53 54.8**	**-2.7**
	TMWZ	**Te Maipa**	**9.69 195**	P		**P**	**07 53 57.8**	**-0.8**
	KIW	**Kapiti Island**	**9.71 200**	P		**P**	**07 53 56.7**	**-2.0**
	MTW	**Mount Morrison**	**9.83 197**	P		**P**	**07 53 57.9**	**-2.1**
	CAW	**Cannon Point**	**9.89 199**	P		**P**	**07 53 58.2**	**-2.5**
	MSWZ	**Moikau Station**	**10.13 197**	P		**P**	**07 54 02.4**	**-0.8**
	WEL	**Wellington**	**10.14 200**	P		**P**	**07 54 02.2**	**-1.1**
	WEL	**Wellington**	**10.14 200**	P		**P**	**07 54 02.2**	**-1.1**
	SNZO	**South Karori**	**10.18 200**	P		**P**	**07 54 03.5**	**-0.2**
	TCW	**Tory Channel**	**10.22 202**	P		**P**	**07 54 01.7**	**-2.4**
	BHW	**Baring Head**	**10.22 199**	P		**P**	**07 54 03.0**	**-1.1**
	QRZ	**Quartz Range**	**10.52 209**	P		**P**	**07 54 06.6**	**-0.7**
	NNZ	**Nelson**	**10.53 205**	P		**P**	**07 54 05.6**	**-1.7**
	BSWZ	**Blackbirch Sta**	**10.80 202**	P		**P**	**07 54 08.6**	**-1.4**
	KHZ	**Kahutara**	**11.54 202**	P		**P**	**07 54 17.0**	**-1.1**
	KHZ	**Kahutara**	**11.54 202**	P		**P**	**07 54 17.4**	**-0.7**
	LTZ	**Lake Taylor**	**12.30 205**	P		**P**	**07 54 24.0**	**-2.1**
	RPZ	**Rata Peaks**	**13.55 206**	P		**P**	**07 54 36.9**	**-2.4**
		118nm,0.5s,baz=258,slow=2.3,SNR=50						
	RPZ			S		**S**	**07 56 56.2**	**-7.2**
		133nm,0.6s,baz=11,slow=23,SNR=9.5						
	RPZ	**Rata Peaks**	**13.55 206**	P		**P**	**07 54 38.4**	**-0.9**
	PINNC	**Pines Island,**	**13.92 308**	P		**P**	**07 54 44.8**	**+1.3**
	PINNC	**Pines Island,**	**13.92 308**	P		**P**	**07 54 45.4**	**+1.9**
	MSVF	**Nonsavu**	**14.04 355**	P		**P**	**07 54 43.6**	**-1.3**
		23nm,0.5s,baz=244,slow=9.7,SNR=33						
	MSVF	**Nonsavu**	**14.04 355**	P		**P**	**07 54 43.8**	**-1.1**
	MSVF	**Nonsavu**	**14.04 355**	*i* P		**P**	**07 54 43.9**	**-1.0**
	MSVF			pmax	pmax			
		comp=Z,26nm,0.6s						
	MSVF	**Nonsavu**	**14.04 355**	P		**P**	**07 54 44.3**	**-0.6**
	MARNC	**Mare, Loyalty**	**14.35 313**	P		**P**	**07 54 48.5**	**+0.4**
	MARNC	**Mare, Loyalty**	**14.35 313**	P		**P**	**07 54 49.0**	**+1.0**
	LBZ	**Lake Benmore**	**14.45 207**	P		**P**	**07 54 45.8**	**-3.0**
	OUENC	**Ouen Island, N**	**14.46 307**	P		**P**	**07 54 50.2**	**+1.0**
	OUENC	**Ouen Island, N**	**14.46 307**	P		**P**	**07 54 51.1**	**+1.9**
	YATNC	**Mamie plateau,**	**14.67 308**	P		**P**	**07 54 53.8**	**+2.3**
	ONTNC	**Ouen Toro**	**14.80 307**	P		**P**	**07 54 53.6**	**+0.8**
	ONTNC	**Ouen Toro**	**14.80 307**	P		**P**	**07 54 54.4**	**+1.6**
	ODZ	**Otahua Downs**	**14.84 204**	P		**P**	**07 54 51.4**	**-1.5**
	ODZ	**Otahua Downs**	**14.84 204**	P		**P**	**07 54 51.8**	**-1.1**
	DZM	**Mont Dzumac**	**14.97 307**	P		**P**	**07 54 55.2**	**+0.6**
		comp=Z,36nm,0.5s,baz=129,slow=8.1,SNR=45						
	DZM			ScP		**ScP**	**08 02 14.6**	**+1.1**
		comp=Z,3.9nm,0.5s,baz=244,slow=9.5,SNR=8.2						
	TAVE	**Taveuni**	**15.03 3**	P		**P**	**07 54 54.9**	**-0.4**
	NOUC	**Port Laguerre**	**15.04 307**	P		**P**	**07 54 56.4**	**+1.1**
	LIFNC	**LIFOU**	**15.36 313**	P		**P**	**07 54 58.7**	**0.0**
	LIFNC	**LIFOU**	**15.36 313**	P		**P**	**07 55 02.1**	**+3.5**
	WHZ	**Wether Hill Ro**	**16.59 209**	P		**P**	**07 55 08.4**	**-2.6**
	DVP	**Devils Point**	**17.22 322**	P		**P**	**07 55 18.8**	**+1.1**
	KOUNC	**Koumac, New Ca**	**17.47 306**	P		**P**	**07 55 20.9**	**+0.9**
	KOUNC	**Koumac, New Ca**	**17.47 306**	P		**P**	**07 55 21.6**	**+1.6**
	AFI	**Afiamalu**	**19.60 27**	P		**P**	**07 55 40.0**	**+0.3**
		comp=Z,62nm,0.6s,baz=174,slow=2.3,SNR=13						
	AFI	**Afiamalu**	**19.60 27**	P		**P**	**07 55 39.9**	**+0.3**
	AFI			IAmb	IAmb		07 55 44.5	
		comp=Z,69nm,0.7s						
	AFI	**Afiamalu**	**19.60 27**	P		**P**	**07 55 39.9**	**+0.3**
	AFI			pmax	pmax			
		comp=Z,69nm,0.7s						
	AFI	**Afiamalu**	**19.60 27**	P		**P**	**07 55 40.1**	**+0.5**
	ARMA	**Armidale**	**23.68 266**	P		**P**	**07 56 19.0**	**+2.7**
		baz=24,SNR=11						
	ARMA	**Armidale**	**23.68 266**	P		**P**	**07 56 19.0**	**+2.7**
	ARMA			IAmb	IAmb		07 56 29.8	
		comp=Z,61nm,1.6s						
	ARMA	**Armidale**	**23.68 266**	P		**P**	**07 56 19.0**	**+2.7**
	MGCD	**Mangrove Creek**	**23.76 259**	P		**P**	**07 56 19.4**	**+2.6**
		baz=24,SNR=25						
	MGCD	**Mangrove Creek**	**23.76 259**	P		**P**	**07 56 19.5**	**+2.6**
	CNB	**Canberra Magne**	**25.12 254**	P		**P**	**07 56 31.2**	**+2.3**
		baz=25,SNR=17						
	CNB	**Canberra Magne**	**25.12 254**	P		**P**	**07 56 30.7**	**+1.7**
		comp=Z,52nm,2.1s						
	CAN	**Canberra**	**25.42 254**	P		**P**	**07 56 33.1**	**+1.5**
	CAN			IAmb	IAmb		07 56 34.8	
		comp=Z,107nm,1.2s						
	CAN	**Canberra**	**25.42 254**	P		**P**	**07 56 33.1**	**+1.5**
	CAN			pmax	pmax			
		comp=Z,107nm,1.2s						
	CAN	**Canberra**	**25.42 254**	P		**P**	**07 56 33.7**	**+2.1**
	EIDS	**Eidsvold**	**25.52 277**	P		**P**	**07 56 32.8**	**+0.3**
		baz=26,SNR=4.3						
	EIDS	**Eidsvold**	**25.52 277**	P		**P**	**07 56 32.5**	**0.0**
	GLAD	**Gladstone**	**26.66 241**	P		**P**	**07 56 44.0**	**+1.6**
		comp=Z,248nm,0.9s						
	RK1H	**Rockhampton Ha**	**26.77 281**	P		**P**	**07 56 44.4**	**+0.8**
		comp=Z,28nm,0.7s						
	RMQ	**Roma**	**27.11 273**	P		**P**	**07 56 48.2**	**+1.6**
		baz=28,SNR=12						
	MOO	**Moorlands**	**27.55 238**	P		**P**	**07 56 52.1**	**+1.9**
		baz=28,SNR=13						
	MOO	**Moorlands**	**27.55 238**	P		**P**	**07 56 52.3**	**+2.1**
	TAU	**Tasmania Unive**	**27.55 237**	P		**P**	**07 56 52.0**	**+1.8**
	TAU	**Tasmania Unive**	**27.55 237**	P		**P**	**07 56 52.0**	**+1.8**
	TAU			pmax	pmax			
		comp=Z,202nm,1.1s						
	TAU	**Tasmania Unive**	**27.55 237**	P		**P**	**07 56 51.7**	**+1.5**
	TOO	**Toolangi**	**28.26 249**	P		**P**	**07 56 58.2**	**+1.6**
		baz=28,SNR=28						
	TOO	**Toolangi**	**28.26 249**	P		**P**	**07 56 58.4**	**+1.8**
	TOO			IAmb	IAmb		07 56 59.4	
		comp=Z,114nm,1.0s						
	TOO	**Toolangi**	**28.26 249**	P		**P**	**07 56 58.4**	**+1.8**
	TOO			pmax	pmax			
		comp=Z,114nm,1.0s						
	TOO	**Toolangi**	**28.26 249**	P		**P**	**07 56 58.4**	**+1.8**
	CMSA	**Cobar Meteorol**	**28.51 262**	P		**P**	**07 57 00.3**	**+1.5**
		baz=29,SNR=240						
	CMSA	**Cobar Meteorol**	**28.51 262**	P		**P**	**07 57 00.9**	**+2.1**
	KNTN	**Kanton**	**30.09 18**	P		**P**	**07 57 11.8**	**-0.8**
	KNTN			IAmb	IAmb		07 57 14.1	
		comp=Z,122nm,1.6s						
	QLP	**Quilpie**	**30.93 271**	P		**P**	**07 57 20.3**	**+0.5**
		baz=31,SNR=5.8						
	ARPS	**Mount Arapiles**	**31.18 250**	P		**P**	**07 57 23.2**	**+1.3**
		baz=32,SNR=29						
	ARPS	**Mount Arapiles**	**31.18 250**	P		**P**	**07 57 24.3**	**+2.4**
	CTA	**Charters Tower**	**31.77 283**	P		**P**	**07 57 27.7**	**+0.6**
		comp=Z,40nm,0.5s,baz=111,slow=9.8,SNR=134						
	CTA			S		**S**	**08 02 01.1**	**-0.1**
		comp=Z,30nm,1.2s,baz=226,slow=21,SNR=26						
		comp=Z,40nm,0.5s						
	CTA	**Charters Tower**	**31.77 283**	P		**P**	**07 57 27.9**	**+0.9**
	CTAO	**Charters Tower**	**31.77 283**	P		**P**	**07 57 27.7**	**+0.6**
	CTAO			IAmb	IAmb		07 57 29.4	
		comp=Z,94nm,1.1s						
	CTAO	**Charters Tower**	**31.77 283**	P		**P**	**07 57 27.7**	**+0.6**
	CTAO			pmax	pmax			
		comp=Z,94nm,1.1s						
	CTAO	**Charters Tower**	**31.77 283**	P		**P**	**07 57 28.0**	**+0.9**
	CTAO	**Charters Tower**	**31.77 283**	‖P		**P**	**07 57 27.6**	**+0.6**
	CTAO			pP		**pwP**	**07 58 58.4**	**+2.2**
	CTAO			ScP		**ScP**	**08 02 59.1**	**+0.4**
	STKA	**Stephens Creek**	**31.90 260**	P		**P**	**07 57 29.5**	**+1.5**
		comp=Z,47nm,0.4s,baz=101,slow=11,SNR=120						
	STKA			S		**S**	**08 02 02.9**	**-0.1**
		comp=Z,13nm,1.2s,baz=206,slow=20,SNR=4.6						
		comp=Z,47nm,0.4s						
	STKA	**Stephens Creek**	**31.90 260**	P		**P**	**07 57 29.2**	**+1.2**
		baz=32,SNR=75						
	STKA	**Stephens Creek**	**31.90 260**	P		**P**	**07 57 29.1**	**+1.0**
	STKA	**Stephens Creek**	**31.90 260**	P		**P**	**07 57 29.1**	**+1.0**
	STKA			pmax	pmax			
		comp=Z,21nm,0.9s						
	STKA	**Stephens Creek**	**31.90 260**	P		**P**	**07 57 29.5**	**+1.5**
	INKA	**Innaminka**	**33.56 267**	P		**P**	**07 57 44.1**	**+1.9**
	HTT	**Hallett**	**33.87 256**	P		**P**	**07 57 45.5**	**+0.6**
		baz=34,SNR=79						
	HTT	**Hallett**	**33.87 256**	P		**P**	**07 57 45.9**	**+1.0**
	TWOA	**Tennyson Woods**	**33.95 253**	P		**P**	**07 57 46.4**	**+1.0**
		comp=Z,40nm,0.6s						
	MTSU	**Mount Surprise**	**34.31 285**	P		**P**	**07 57 49.3**	**+0.6**
		baz=35,SNR=114						
	MTSU	**Mount Surprise**	**34.31 285**	P		**P**	**07 57 49.6**	**+0.9**
	PTPS	**Port Pirie**	**34.68 256**	P		**P**	**07 57 53.2**	**+1.6**
		comp=Z,364nm,0.6s						
	LCRK	**Leigh Creek**	**35.02 261**	P		**P**	**07 57 55.9**	**+1.5**
	WHYH	**Whyalla**	**35.05 257**	P		**P**	**07 57 55.7**	**+1.0**
		comp=Z,205nm,0.8s						
	BBOO	**Buckleboo**	**36.34 257**	P		**P**	**07 58 05.3**	**-0.1**
		baz=37,SNR=134						
	BBOO	**Buckleboo**	**36.34 257**	P		**P**	**07 58 05.4**	**-0.1**
	BBOO	**Buckleboo**	**36.34 257**	P		**P**	**07 58 06.8**	**+1.3**
	QIS	**Mount Isa**	**37.12 278**	P		**P**	**07 58 11.5**	**-0.5**
		baz=38,SNR=14						
	QIS	**Mount Isa**	**37.12 278**	P		**P**	**07 58 11.7**	**-0.3**
	PMG	**Port Moresby**	**37.16 300**	*i* P		**P**	**07 58 11.5**	**-0.9**
	PMG			pmax	pmax			
		comp=Z,58nm,1.6s						
	RABL	**Rabaul**	**37.42 312**	P		**P**	**07 58 14.1**	**-0.5**
	RABL	**Rabaul**	**37.42 312**	P		**P**	**07 58 15.5**	**+0.9**
	COEN	**Coen**	**37.46 290**	P		**P**	**07 58 14.9**	**+0.1**
		baz=38,SNR=30						
	COEN	**Coen**	**37.46 290**	P		**P**	**07 58 14.9**	**+0.1**
	COEN	**Coen**	**37.46 290**	P		**P**	**07 58 15.4**	**+0.6**
	OOD	**Oodnadatta**	**37.84 265**	P		**P**	**07 58 19.4**	**+1.6**
	MULG	**Mulgathing**	**38.55 260**	P		**P**	**07 58 23.8**	**+0.2**
	XMAS	**Kiritimati**	**40.26 38**	P		**P**	**07 58 37.3**	**-0.2**
	XMAS			IAmb	IAmb		07 58 55.1	
		comp=Z,190nm,1.4s						
	AS31	**Alice Springs**	**40.72 270**	P		**P**	**07 58 40.6**	**-0.6**
	ASAR	**Alice Springs**	**40.72 270**	P		**P**	**07 58 40.6**	**-0.6**
	ASAR	**Alice Springs**	**40.72 270**	P		**P**	**07 58 40.6**	**-0.6**
	WR0	**Warramunga Arr**	**41.66 275**	P		**P**	**07 58 48.2**	**-0.5**
	WR0			IAmb	IAmb		07 58 48.8	
		comp=Z,45nm,1.1s						
	WB2	**Warramunga Arr**	**41.83 275**	P		**P**	**07 58 49.0**	**-1.0**
		baz=42						
	WB2	**Warramunga Arr**	**41.83 275**	P		**P**	**07 58 49.3**	**-0.7**
	WB2			IAmb	IAmb		07 58 50.1	
		comp=Z,54nm,0.5s						
	WRAB	**Tennant Creek**	**41.84 275**	P		**P**	**07 58 49.3**	**-0.8**
	WRAB			IAmb	IAmb		07 58 50.0	
		comp=Z,40nm,0.6s						
	WRAB	**Tennant Creek**	**41.84 275**	P		**P**	**07 58 49.3**	**-0.8**
	WRAB			pmax	pmax			
		comp=Z,41nm,0.6s						
	WRAB	**Tennant Creek**	**41.84 275**	P		**P**	**07 58 49.5**	**-0.6**
	WRAB	**Tennant Creek**	**41.84 275**	P		**P**	**07 58 49.3**	**-0.8**
	WRA	**Warramunga Arr**	**41.84 275**	P		**P**	**07 58 49.1**	**-1.0**
		comp=Z,38nm,0.6s,baz=113,slow=7.6,SNR=704						
	WRA			ScP		**ScP**	**08 03 34.9**	**-1.7**
		comp=Z,1.8nm,0.8s,baz=107,slow=4.5,SNR=4.8						
	WRA			S		**S**	**08 04 27.1**	**-4.2**
		comp=Z,18nm,1.1s,baz=114,slow=14,SNR=15						
		comp=Z,38nm,0.6s						
	WRA	**Warramunga Arr**	**41.84 275**	P		**P**	**07 58 48.1**	**-2.0**
	WRA	**Warramunga Arr**	**41.84 275**	P		**P**	**07 58 48.1**	**-2.0**
	WB0	**Warramunga Arr**	**41.87 275**	P		**P**	**07 58 49.8**	**-0.5**
	WB0			IAmb	IAmb		07 58 50.4	
		comp=Z,55nm,0.6s						
	DRV	**Dumont d'Urvil**	**41.97 202**	P		**P**	**07 58 50.7**	**+0.4**
	PATS	**Pohnpei**	**43.31 329**	P		**P**	**07 59 00.3**	**-1.3**
	FORT	**Forrest**	**43.43 257**	P		**P**	**07 59 01.5**	**-0.9**
		baz=44,SNR=17						
	FORT	**Forrest**	**43.43 257**	P		**P**	**07 59 02.2**	**-0.3**
	FORT			IAmb	IAmb		07 59 02.7	
		comp=Z,168nm,1.1s						
	FORT	**Forrest**	**43.43 257**	P		**P**	**07 59 02.6**	**+0.1**
	WRKA	**Warakurna**	**45.00 265**	P		**P**	**07 59 14.0**	**-0.7**
		baz=45,SNR=8.6						
	SBA	**Scott Base**	**46.49 184**	P		**P**	**07 59 27.4**	**+2.1**
	SBA			IAmb	IAmb		07 59 29.1	
		comp=Z,108nm,1.1s						
	SBA	**Scott Base**	**46.49 184**	P		**P**	**07 59 27.4**	**+2.1**
	SBA			pmax	pmax			
		comp=Z,108nm,1.1s						
	SBA	**Scott Base**	**46.49 184**	P		**P**	**07 59 27.9**	**+2.7**
	SBA			pP		**pP**	**08 00 58.4**	**-0.3**
	SBA			ScP		**ScP**	**08 03 54.8**	**+0.2**
	SBA			x		x	08 04 02.4	
	VNDA	**Vanda**	**46.49 185**	P		**P**	**07 59 26.6**	**+1.3**
		comp=Z,7.2nm,0.9s,baz=4.4,slow=7.8,SNR=28						
	VNDA			ScP		**ScP**	**08 03 54.2**	**-0.4**
		comp=Z,8.1nm,1.0s,baz=349,slow=3.9,SNR=7.2						
		comp=Z,7.2nm,0.9s						
	VNDA	**Vanda**	**46.49 185**	P		**P**	**07 59 26.8**	**+1.5**
	VNDA	**Vanda**	**46.49 185**	P		**P**	**07 59 26.8**	**+1.5**
	VNDA			pmax	pmax			
		comp=Z,24nm,1.3s						
	VNDA	**Vanda**	**46.49 185**	P		**P**	**07 59 26.6**	**+1.3**
	VNDA			pP		**pwP**	**08 01 03.7**	**+1.6**
	VNDA			ScP		**ScP**	**08 03 54.6**	**-0.1**
	GENI	**Genyem**	**46.86 300**	P		**P**	**07 59 28.3**	**-0.7**
		comp=Z,4µmcomp=Z,65nm,0.7s						
	GENI	**Genyem**	**46.86 300**	P		**P**	**07 59 29.4**	**+0.5**
		comp=Z,56nm,0.4s						
	KDU	**Kakadu**	**46.89 283**	P		**P**	**07 59 28.0**	**-1.2**
		baz=47,SNR=20						
	KDU	**Kakadu**	**46.89 283**	P		**P**	**07 59 28.9**	**-0.3**
	MTN	**Manton Dam**	**47.92 282**	P		**P**	**07 59 35.9**	**-1.0**
		baz=48,SNR=3.2						
	MTN	**Manton Dam**	**47.92 282**	P		**P**	**07 59 36.0**	**-1.0**
	MTN			IAmb	IAmb		07 59 36.8	
		comp=Z,27nm,0.4s						
	SMPI	**Sarmi**	**48.34 300**	P		**P**	**07 59 38.5**	**-1.6**
		comp=Z,22nm,1.9s						
	KNRA	**Kununurra**	**48.50 277**	P		**P**	**07 59 40.7**	**-0.5**
		baz=49,SNR=8.6						
	KNRA	**Kununurra**	**48.50 277**	P		**P**	**07 59 40.5**	**-0.8**
	KNRA	**Kununurra**	**48.50 277**	P		**P**	**07 59 42.6**	**+1.3**
	CCD	**Concordia, Ant**	**50.97 196**	⇑P		**P**	**07 59 59.4**	**+0.3**
	CCD			ScP		**ScP**	**08 04 13.1**	**-1.3**
	KLBR	**Kellerberrin**	**51.69 253**	P		**P**	**08 00 03.7**	**-0.8**
		baz=52,SNR=31						
	NWAO	**Narrogin (SRO)**	**51.72 251**	P		**P**	**08 00 03.8**	**-0.9**
	NWAO			IAmb	IAmb		08 00 58.3	
		comp=Z,87nm,1.6s						
	NWAO	**Narrogin (SRO)**	**51.72 251**	P		**P**	**08 00 03.8**	**-0.9**
	NWAO			pmax	pmax			
		comp=Z,87nm,1.6s						
	NWAO	**Narrogin (SRO)**	**51.72 251**	P		**P**	**08 00 04.9**	**+0.2**
	FAKI	**Fak Fak**	**52.67 293**	P		**P**	**08 00 10.8**	**-1.0**
	FAKI			IAmb	IAmb		08 00 11.5	
		comp=Z,97nm,1.4s						
	FAKI	**Fak Fak**	**52.67 293**	P		**P**	**08 00 10.6**	**-1.2**
		comp=Z,53nm,1.7s						
	FAKI	**Fak Fak**	**52.67 293**	P		**P**	**08 00 11.4**	**-0.4**
	CASY	**Casey**	**52.81 208**	P		**P**	**08 00 12.3**	**+0.3**
	CASY	**Casey**	**52.81 208**	⇑P		**P**	**08 00 12.2**	**+0.3**
	CASY			ScP		**ScP**	**08 04 20.0**	**-2.0**
	MUN	**Mundaring**	**52.83 252**	P		**P**	**08 00 11.8**	**-0.9**
		baz=53,SNR=8.8						
	MUN	**Mundaring**	**52.83 252**	P		**P**	**08 00 12.6**	**-0.1**
	BLDU	**Ballidu**	**52.84 254**	P		**P**	**08 00 11.5**	**-1.3**
		baz=53,SNR=14						
	BLDU	**Ballidu**	**52.84 254**	P		**P**	**08 00 12.9**	**+0.1**
	PSA00	**Pilbara Seismi**	**53.49 266**	P		**P**	**08 00 16.1**	**-1.4**
	PSA00	**Pilbara Seismi**	**53.49 266**	P		**P**	**08 00 17.0**	**-0.6**
	MBWA	**Marble Bar**	**53.76 266**	P		**P**	**08 00 18.3**	**-1.2**
	MBWA	**Marble Bar**	**53.76 266**	P		**P**	**08 00 19.1**	**-0.4**
	MBWA	**Marble Bar**	**53.76 266**	P		**P**	**08 00 18.7**	**-0.8**
	MBWA			x	x		08 01 16.8	
	MORW	**Morawa**	**53.89 255**	P		**P**	**08 00 19.6**	**-0.8**
		baz=54,SNR=31						
	MORW	**Morawa**	**53.89

PLCA Paso Flores 83.25 134 P P 08 03 19.4 +1.4
comp=Z,4.2nm,0.6s,baz=240,slow=5.0,SNR=36
comp=Z,4.2nm,0.6s
PLCA Paso Flores 83.25 134 P P 08 03 20.1 +2.1
PLCA Paso Flores 83.25 134 P P 08 03 20.1 +2.1
PLCA pmax pmax
comp=Z,12nm,0.9s
ADK Adak 83.39 3 P P 08 03 18.2 +0.2
ADK lAmb lAmb 08 05 04.0
comp=Z,132nm,1.6s
ADK Adak 83.39 3 P P 08 03 18.2 +0.2
ADK pmax pmax
comp=Z,133nm,1.6s
TJN Taejon 83.42 320 *ce*P P 08 03 18.4 -0.2
KSRS Korea Array 83.92 321 P P 08 03 21.6 +0.7
comp=Z,6.4nm,0.6s,baz=137,slow=5.7,SNR=36
comp=Z,6.4nm,0.6s
KSAR Wonju Array Be 83.93 321 P P 08 03 20.7 -0.3
KSAR Wonju Array Be 83.93 321 P P 08 03 20.7 -0.3
SKR Severo-Kuril's 84.63 345 *ce*P P 08 03 23.9 -0.2
YSS Yuzh-Sakhalins 85.01 336 *e*P P 08 03 26.5 +0.4
YSS pmax pmax
comp=Z,30nm,0.9s
YSS pmax pmax
comp=Z,300nm,2.7s
NJ2 Nanjing 85.40 312 *e*P P 08 03 27.9 -0.5
NJ2 pmax pmax
comp=Z,17nm,0.5s
PET Petropavlovsk 86.35 348 *e*P P 08 03 32.5 +0.1
PET pmax pmax
comp=Z,40nm,0.9s
PEA0B Petropavlovsk- 86.61 347 P P 08 03 34.1 +0.5
PEA0B Petropavlovsk- 86.61 347 P P 08 03 34.1 +0.5
PEA0B pmax pmax
comp=Z,227nm,1.7s
PETK Petropavlovsk- 86.61 347 P P 08 03 34.0 +0.3
comp=Z,16nm,0.6s,baz=118,slow=7.4,SNR=56
comp=Z,16nm,0.6s
PETK Petropavlovsk- 86.61 347 P P 08 03 33.7 +0.1
PETK Petropavlovsk- 86.61 347 P P 08 03 33.7 +0.1
USA0B Ussuriysk Arra 87.06 328 *i*P P 08 03 35.7 -0.2
USRK Ussuriysk Ar. 87.06 328 P P 08 03 35.7 -0.2
comp=Z,3.2nm,0.5s,baz=123,slow=3.2,SNR=16
comp=Z,3.2nm,0.5s
USRK Ussuriysk Ar. 87.06 328 P P 08 03 36.7 +0.8
USRK Ussuriysk Ar. 87.06 328 P P 08 03 36.7 +0.8
PEL Peldehue 87.69 128 P P 08 03 39.8 +0.3
PEL lAmb lAmb 08 05 42.7
comp=Z,54nm,1.6s
PEL Peldehue 87.69 128 P P 08 03 39.8 +0.3
PEL pmax pmax
comp=Z,54nm,1.6s
CHNA Chernabura Isl 88.17 12 P P 08 03 41.4 +0.5
baz=198
MONP2 Monument Peak 88.44 49 P P 08 03 44.8 +1.8
baz=230
IKP In-Ko-Pah, Jac 88.49 50 P P 08 03 44.6 +1.5
baz=230
SDPT Sand Point 88.51 11 P P 08 03 42.7 +0.2
baz=197
BFSC Mount Baldy Ra 88.52 48 P P 08 03 44.5 +1.2
baz=229
VES Vestal, Richgr 88.69 46 P P 08 03 44.7 +0.9
baz=228
EDW2 Edwards Air Fo 88.73 47 P P 08 03 45.4 +1.2
baz=229
TPFO Pinon Flats 88.88 49 P P 08 03 45.5 +0.5
baz=230
PFO Pinyon Flats O 88.88 49 P P 08 03 45.5 +0.6
baz=230
SWSC Sam W. Stewart 88.88 50 P P 08 03 46.5 +1.8
baz=230
ISA Isabella, Lake 88.94 46 P P 08 03 46.6 +1.5
baz=229
LRMC Laurel Mtn Rad 89.31 47 P P 08 03 48.7 +1.8
baz=229
BELC Belle Mtn. Jos 89.42 49 P P 08 03 49.3 +1.9
baz=230
BC3 Big Chuckawall 89.55 49 P P 08 03 51.3 +3.2
baz=231
GLA Glamis 89.58 50 P P 08 03 50.8 +2.7
baz=231
GSC Goldstone, Bar 89.74 47 P P 08 03 50.2 +1.3
baz=230
CN2 Changchun 89.86 324 *e*P P 08 03 49.0 0.0
CN2 pmax pmax
comp=Z,10.0nm,1.2s
GMRC Granite Mounta 90.14 48 P P 08 03 52.2 +1.5
baz=230
214A Organ Pipe Nat 90.23 52 P P 08 03 53.7 +2.5
baz=232
GRAC Grapevine Rang 90.49 46 P P 08 03 54.3 +2.1
baz=230
YBH Yreka Blue Hor 90.58 39 P P 08 03 53.9 +1.3
comp=Z,2.3nm,0.6s,baz=249,slow=6.5,SNR=11
comp=Z,2.3nm,0.6s
PDMCI Parker Dam,Lak 90.81 49 P P 08 03 55.7 +2.0
baz=231
NVAR Mina Array Bea 90.86 44 P P 08 03 55.2 +1.1
comp=Z,2.5nm,0.6s,baz=223,slow=7.9,SNR=33
NVAR pP pwP 08 05 50.9 +2.3
comp=Z,0.6nm,0.6s,baz=223,slow=6.8,SNR=2.9
NVAR PKKPbc PKKPbc 08 21 18.2 +1.5
comp=Z,0.2nm,0.4s,baz=50,slow=5.4,SNR=4.0
comp=Z,2.5nm,0.6s
NVAR Mina Array Bea 90.86 44 P P 08 03 55.4 +1.3
HUMO Hull Mountain 91.06 39 P P 08 03 56.2 +1.6
KLR Kul'dur 91.08 331 *ce*P P 08 03 54.3 -0.3
KLR pmax pmax
comp=Z,11nm,1.7s
LYN LuoYang 91.09 311 *e*P P 08 03 55.4 +0.4
LYN SKS SKSac 08 13 37.1 -1.3
LYN S ScS 08 14 10.6 -0.7
HNS HongShan 91.47 314 ⇑P P 08 03 58.0 +1.4
HNS pmax pmax
comp=Z,10.0nm,0.9s
I03D Drain, OR 91.61 38 P P 08 03 59.0 +1.9
baz=226
CMAR Chiang Mai Arr 91.66 291 P P 08 03 58.7 +0.7
comp=Z,1.1nm,0.3s,baz=134,slow=5.2,SNR=1.1
CMAR PP PP 08 07 44.5 -1.1
comp=Z,1.2nm,0.3s,baz=152,slow=5.7,SNR=4.3
comp=Z,1.1nm,0.3s
CMAR Chiang Mai Arr 91.66 291 *i*P P 08 04 05.5 +7.5
CMAR pmax pmax
comp=Z,1.0nm,0.3s
J04D Umpqua Nationa 91.94 39 P P 08 04 00.4 +1.4
baz=227
J05D Fort Rock, OR 92.44 39 P P 08 04 02.5 +1.3
baz=227
R11A Troy Canyon, C 92.44 46 P P 08 04 02.6 +1.2
baz=231
I05D Terrebonne, OR 93.10 38 P P 08 04 05.3 +1.2
baz=227
PZH PanZhiHua 93.89 299 P P 08 04 09.3 +1.1
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,80nm,5.7s
TXAR Lajitas Array 95.11 59 P P 08 04 14.3 +0.6
comp=Z,0.2nm,0.7s,baz=201,slow=6.7,SNR=4.2
comp=Z,0.2nm,0.7s
HHC Hu-ho-hao-te 95.53 315 *e*P P 08 04 15.3 0.0
HHC S S 08 14 53.0 +4.9
HHC pmax pmax
comp=Z,43nm,1.0s
HHC pmax pmax
comp=Z,100nm,7.3s
SEY Seymchan 96.82 348 P P 08 04 20.4 +0.1
comp=Z,1.3nm,0.6s,baz=174,slow=23,SNR=2.4
comp=Z,1.3nm,0.6s
PDAR Pinedale Array 98.77 45 P P 08 04 31.1 +1.1
comp=Z,0.5nm,0.7s,baz=212,slow=2.4,SNR=6.9
PDAR PKKPbc PKKPbc 08 20 55.1 -0.8
comp=Z,0.4nm,0.4s,baz=94,slow=5.3,SNR=7.9
comp=Z,0.5nm,0.7s
ILAR Eielson Array 99.82 14 P Pdif 08 04 34.2 +0.5
comp=Z,0.5nm,0.7s,baz=227,slow=5.7,SNR=5.4
ILAR PKKPbc PKKPbc 08 20 51.6 -1.8
comp=Z,0.5nm,0.4s,baz=32,slow=2.2,SNR=11
comp=Z,0.5nm,0.7s
BILL Bilibino 100.00 355 *e*P Pdif 08 04 31.0 -3.4
BILL pmax pmax
comp=Z,2.0nm,1.0s
SONM Songino Array 102.61 319 PKKPbc PKKPbc 08 20 45.5 +0.5
comp=Z,0.5nm,0.4s,baz=228,slow=1.8,SNR=4.5
WMQ Urumqi 112.25 309 *e*PKP PKiKP 08 09 23.1 +0.5

BOSA Boshof 115.04 205 PKP PKPdf 08 09 28.2 -0.4
comp=Z,5.7nm,1.1s,baz=186,slow=2.9,SNR=4.5
BOSA PKKPbc PKKPbc 08 20 06.0 -0.1
comp=Z,3.5nm,1.0s,baz=218,slow=15,SNR=3.6
BOSA Boshof 115.04 205 PKPdf 08 09 27.4 -1.2
BOSA Boshof 115.04 205 PKIKP PKPdf 08 09 27.4 -1.2
MK31 Makanchi Array 116.87 310 PKPdf PKPdf 08 09 30.2 -1.1
MK31 Makanchi Array 116.87 310 PKIKP PKPdf 08 09 30.2 -1.1
MKAR Makanchi Array 116.87 310 PKP PKPdf 08 09 29.9 -1.4
comp=Z,0.8nm,0.6s,baz=196,slow=1.2,SNR=8.8
MKAR PKKPbc PKKPbc 08 20 00.2 +1.0
comp=Z,2.2nm,0.4s,baz=282,slow=3.1,SNR=44
MKAR Makanchi Array 116.87 310 PKPdf PKPdf 08 09 30.1 -1.2
MKAR Makanchi Array 116.87 310 PKIKP PKPdf 08 09 30.1 -1.2
ZALV Zalesovo Beam 117.51 318 PKP PKPdf 08 09 30.8 -1.5
comp=Z,1.1nm,0.4s,baz=144,slow=3.5,SNR=5.7
KURK Kurchatov 120.31 314 PKPdf PKPdf 08 09 36.8 -0.9
KURK Kurchatov 120.31 314 PKIKP PKPdf 08 09 36.8 -0.9
KKAR Karatay Array 123.88 303 PKPdf PKPdf 08 09 44.4 -0.5
KKAR Karatay Array 123.88 303 PKIKP PKPdf 08 09 44.4 -0.5
BRVK Borovoye 125.81 315 *i* PKIKP PKPdf 08 09 44.0 -4.2
SCHQ Schefferville 128.85 43 SKPbc SKiKP 08 12 26.0 -17
comp=Z,10nm,0.5s,baz=266,slow=3.5,SNR=25
KMBO Kilima Mbogo 131.36 235 SKPbc SKPbc 08 12 37.7 -0.5
comp=Z,1.3nm,0.3s,baz=332,slow=1.7,SNR=4.5
GEYT Alibeck 132.00 294 SKPbc SKPbc 08 12 38.6 -0.9
comp=Z,15nm,0.8s,baz=217,slow=7.2,SNR=14
ARU Arti 132.64 320 *i* PKIKP PKPdf 08 09 59.1 -2.0
ARU 08 12 40.5
ARU 08 12 49.3
ARCES ARCESS Array B 139.41 346 PKhKP PKPpre 08 10 05.0
comp=Z,1.5nm,0.4s,baz=30,slow=3.6,SNR=17
ARCES SKPbc SKPbc 08 13 01.1 +0.1
comp=Z,3.3nm,0.6s,baz=29,slow=2.8,SNR=6.2
ARCES ARCESS Array B 139.41 346 PKPdf 08 10 13.5 +0.2
ARCES ARCESS Array B 139.41 346 PKIKP PKPdf 08 10 13.5 +0.2
KLMR Klimovskoe 140.83 330 *e*PKHKP PKPpre 08 10 09.4
KLMR pmax pmax
comp=Z,4.0nm,0.8s
KLMR Klimovskoe 140.83 330 *e*PKPdf PKPdf 08 10 09.4 -6.6
KLMR AMP 08 10 12.7
comp=Z,4.0nm,0.8s
KLMR *e*SKP 08 12 59.9
KLMR *e*PP PP 08 13 14.8 -8.6
FAUS Fauske 143.13 350 *e*PKPdf PKPab 08 10 17.2 -0.4
ZEI Tsey 143.21 300 *i* PKHKP PKPpre 08 10 17.7
ZEI pmax pmax
comp=Z,10.0nm,1.2s
ONI Oni 143.55 300 PKPbc 08 10 20.6 +0.4
ONI Oni 143.55 300 PKIKP PKPbc 08 10 20.6 +0.4
KBZ Khabaz 143.89 302 PKP PKPbc 08 10 21.0 -0.1
comp=Z,15nm,1.0s,baz=98,slow=1.0,SNR=18
KBZ SKPbc SKPbc 08 13 13.1 +0.2
comp=Z,5.5nm,1.1s,baz=84,slow=2.6,SNR=5.1
KBZ Khabaz 143.89 302 *i* PKHKP PKPpre 08 10 18.1
VALR Valaam 143.97 335 *i* PKHKP PKPpre 08 10 18.9
KIV Kislovodsk 144.03 302 *e*PKIKP PKPdf 08 10 23.9 +1.5
KIV pmax pmax
comp=Z,12nm,1.1s
MOS Moscow 144.09 323 *i* PKIKP PKPbc 08 10 19.7 -1.6
MOS pmax pmax
comp=Z,85nm,0.8s
KONS Konsvik 144.27 351 *e*PKPbc PKPbc 08 10 21.2 -0.4
MOR8 Moi Rana 144.38 349 *e*PKPbc PKPbc 08 10 20.6 -1.4
GURO Guroymak-BITLI 144.64 293 PKPbc 08 10 23.9 +0.1
VORR Voronezh 144.76 316 *e*PKIKP PKPdf 08 10 23.3 +0.1
VORR pmax pmax
comp=Z,120nm,0.6s
OBN Obninsk 144.91 323 *d i* PKIKP PKPdf 08 10 23.2 -0.1
OBN pmax pmax
comp=Z,48nm,1.2s
FIA1 FINESS Array S 145.58 337 PKPdf PKPdf 08 10 25.0 +0.7
FINES FINESS Array B 145.58 337 PKPbc PKPdf 08 10 24.9 +0.5
comp=Z,41nm,0.5s,baz=46,slow=4.0,SNR=378
SOC Sochi 146.20 302 *e*PKIKP PKPdf 08 10 24.5 -1.4
SOC *i* 08 10 28.9
SOC *e* 08 13 55.7
SOC *e*SSS SSS 08 37 45.7
SOC pmax pmax
comp=Z,10.0nm,0.6s
NSS Namsos 146.29 350 *e*PKPdf PKPdf 08 10 26.3 +0.9
RAF Rauma 147.25 340 *e*P PKPbc 08 10 30.2 0.0
VSU Vasula 147.47 333 *e*P PKPbc 08 10 30.7 -0.2
MTSE Matsula 148.37 336 *e*P PKPbc 08 10 32.9 -0.3
MOL Molde 148.75 353 *e*PKPbc PKPbc 08 10 33.4 -0.6
AKN Aaknes 149.19 353 *e*PKPdf PKPdf 08 10 30.0 -0.3
NC405 NORSAR Array S 149.55 348 PKPbc 08 10 35.8 -0.3
NC405 PKPab PKPab 08 10 42.6 -0.6
NB201 NORSAR Array S 149.68 348 PKPbc 08 10 35.9 -0.5
NB201 PKPab PKPab 08 10 43.1 -0.7
NB2 NORSAR Subarra1 149.70 348 *e* PKPbc 08 10 35.5 -1.0
baz=17,slow=2.6
NB2 NORSAR Subarra1 149.70 348 PKP PKPbc 08 10 35.5 -1.0
comp=Z,9.9nm,0.6s,baz=17,slow=2.6
NOA NORSAR Array B 149.70 348 PKPbc PKPbc 08 10 35.8 -0.7
comp=Z,5.6nm,0.5s,baz=17,slow=4.2,SNR=53
IIGN Ignalina 149.75 329 *e*P PKPbc 08 10 36.4 -0.3
NACGM Naroch 149.78 328 ⇑ *e*PKP PKPbc 08 10 37.0 +0.2
baz=52
SIM Simferopol' 149.92 306 *e*PKP2 PKPab 08 10 44.4 -0.9
SIM pmax pmax
comp=Z,42nm,1.2s
NC602 NORSAR Array S 149.93 348 *e*PKPbc PKPbc 08 10 36.1 -0.8
FOO Floro 149.94 354 *e*PKPbc PKPbc 08 10 36.8 -0.1
SKAR Skarslia 150.49 351 *e*PKPbc PKPbc 08 10 38.5 +0.2
PABE Paberze 150.60 331 PKPbc 08 10 38.7 +0.1
PABE Paberze 150.60 331 *e*P PKPbc 08 10 38.7 +0.1
AKASG Malin Array Be 150.90 319 PKPbc PKPbc 08 10 38.7 -0.8
comp=Z,5.1nm,0.6s,baz=47,slow=3.3,SNR=27
AKASG PKPab PKPab 08 10 48.0 -1.1
comp=Z,2.0nm,0.4s,baz=52,slow=4.9,SNR=9.9
BR131 Keskin Array S 151.13 296 PKPbc 08 10 39.7 -1.0
BR131 Keskin Array S 151.13 296 PKIKP PKPbc 08 10 39.7 -0.9
BRTR Keskin Array B 151.13 296 PKPbc PKPbc 08 10 39.6 -1.0
comp=Z,4.6nm,0.7s,baz=127,slow=3.8,SNR=21
BRTR PKPab PKPab 08 10 49.7 -1.1
comp=Z,3.5nm,0.9s,baz=104,slow=5.2,SNR=8.9
BRTR Keskin Array B 151.13 296 PKPbc 08 10 39.7 -1.0
BRTR PKPab PKPab 08 10 50.6 -0.2
BRTR Keskin Array B 151.13 296 PKIKP PKPbc 08 10 39.7 -0.9
BRTR PKP PKPab 08 10 50.6 -0.2
KONO Kongsberg 151.29 349 *e*PKPbc PKPbc 08 10 40.0 -0.1
SUW Suwalki 151.96 329 *e*P PKiKP 08 10 41.9 -0.1
KMY Karmoy 152.28 353 *e*PKPbc PKiKP 08 10 42.5 0.0
BUR08 Bucovina Ar. S 154.69 316 PKPbc PKPbc 08 10 49.1 +1.0
BUR08 PKPab 08 11 05.8 +0.2
BURAR Bucovina Array 154.70 316 PKPbc PKPbc 08 10 49.5 +1.5
BURAR PKPab PKPab 08 11 05.6 0.0
DBIC Dimbokro 154.71 170 PKPbc PKPbc 08 10 50.4 +1.5
comp=Z,5.3nm,0.3s,baz=169,slow=2.7,SNR=16
DBIC PKPab PKPab 08 11 06.7 +0.5
comp=Z,5.1nm,0.3s,baz=194,slow=4.3,SNR=6.9
DBIC Dimbokro 154.71 170 PKPdf PKPdf 08 10 38.1 -1.8
DBIC PKPab PKPab 08 11 05.9 -0.3
DBIC Dimbokro 154.71 170 PKP2 PKPab 08 11 05.9 -0.3
DBIC 09 10 38.1
KOLS Kolonicke sedl 155.64 321 *e*PKIKP PKPdf 08 10 45.1 +5.0
KOLS Kolonicke sedl 155.64 321 *e*PKP PKPdf 08 10 45.1 +5.0
UZH Uzhgorod 155.81 321 *e*PKIKP PKPdf 08 10 41.0 +0.7
UZH *e* 08 10 46.5
UZH *i* 08 11 10.3
CRVS Cervenica-Dubn 156.09 322 *e*PKIKP PKPdf 08 10 44.9 +4.2
CRVS Cervenica-Dubn 156.09 322 *e*PKP PKPdf 08 10 44.9 +4.2
DPC Dobruska-Polom 157.53 331 *e*PKP2 PKPab 08 11 17.1 -0.6
DPC Dobruska-Polom 157.53 331 *e*PKPAB PKPab 08 11 17.1 -0.6
VYHS Vyhne 157.69 324 *e*PKIKP PKPdf 08 10 43.7 +1.0
VYHS Vyhne 157.69 324 *e*PKP PKPdf 08 10 43.7 +1.0
CLL Collm 158.02 337 ⇑ *i*PKP2 PKPab 08 11 19.0 -0.7
CLL pmax pmax
comp=Z,34nm,1.5s
CLL Collm 158.02 337 ⇑ *i*PKPab PKPab 08 11 19.0 -0.7
comp=Z,34nm,1.5s
BRG Berggiesshubel 158.05 335 *e*PKP2 PKPab 08 11 19.3 -0.5
BRG pmax pmax
comp=Z,7.0nm,0.7s
CKRC Cesky Krumlov 159.54 331 *e*PKPAB PKPab 08 11 21.2 -5.2
KHC Kasperske Hory 159.60 332 *e*PKP2 PKPab 08 11 26.0 -0.7
KHC Kasperske Hory 159.60 332 *e*PKPAB PKPab 08 11 26.0 -0.7
GERES GERESS Array B 159.78 332 PKPab PKPab 08 11 26.6 -0.9
comp=Z,0.7nm,0.5s,baz=42,slow=6.3,SNR=7.2
TOA0 Torodi Ar. Sit 161.31 187 PKPdf PKPdf 08 10 47.7 -0.1
TOA0 PKPab PKPab 08 11 34.6 -0.2
TORD Torodi Ar. Bea 161.31 187 PKP PKPdf 08 10 48.0 +0.3
comp=Z,1.3nm,0.6s,baz=313,slow=0.4,SNR=10
TORD PKPab PKPab 08 11 34.5 -0.3
comp=Z,10nm,0.5s,baz=163,slow=5.2,SNR=34
TORD PP PP 08 15 19.3 +0.9
comp=Z,2.0nm,1.0s,baz=184,slow=5.7,SNR=3.9
TORD Torodi Ar. Bea 161.31 187 PKPdf 08 10 47.7 -0.1
TORD PKPab 08 11 34.5 -0.3
TUE Stuetta 163.40 335 PKPdf PKPdf 08 10 49.3 +0.1
TUE PKPab PKPab 08 11 43.2 -0.4
ESDC Sonseca Array 171.71 18 PKPab PKPab 08 12 20.8 +0.4
comp=Z,0.2nm,0.3s,baz=2.3,slow=6.4,SNR=2.8
ESDC Sonseca Array 171.71 18 PKPdf PKPdf 08 10 55.3 +0.3
ESDC PKPab 08 12 19.1 -1.2

IDC 21 08:12:49.1±11.0, 2°25N×94°45E, h0km, mb3.8/4, mbtmp3.9/5, ML4.9/1, MS3.2/1 Error ellipse: s-maj=229.9km s-min=101.0km az=151.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	16.70	15	Pn	Pn	08 16 44.8	+0.1
	1.5nm,0.3s,baz=206,slow=12,SNR=6.4						
	2.8nm,0.3s						
H08S2	Diego Garcia H	24.01	246	T	T	08 43 25.7	
	baz=67						
H08S3	Diego Garcia H	24.01	246	T	T	08 43 16.7	
	baz=67						
H08S1	Diego Carcia H	24.03	246	T	T	08 43 18.9	
	baz=67,SNR=18						
MKAR	Makanchi Array	45.61	348	P	P	08 21 11.1	-0.1
	1.2nm,0.6s,baz=169,slow=8.6,SNR=11						
	1.2nm,0.6s						
SONM	Songino Array	46.57	11	P	P	08 21 18.4	-0.4
	0.3nm,0.4s,baz=203,slow=11,SNR=2.2						
	0.3nm,0.4s						
KURBB	Kurchatov Arra	50.05	347	P	P	08 21 45.4	0.0
	0.6nm,0.6s,baz=169,slow=6.8,SNR=4.6						
	0.6nm,0.6s						
ZALV	Zalesovo Beam	52.14	353	P	P	08 22 01.0	-0.1
	0.7nm,0.3s,baz=169,slow=8.3,SNR=3.5						
ZALV				LR	LR	08 48 05.2	
	comp=Z,22nm,18.1s,baz=51,slow=41						
	0.7nm,0.3s						

WEL 21 08:13:32.5±1.7, 33°S±40'×18°0E±4°2, h559km±56km, M4.1/4, ML4.2/11, MLv4.1/4, Error ellipse: s-maj=0.1km s-min=0.0km az=129.1, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMGZ	Waiomatatini S	5.33	191	P	P	08 15 05.6	+0.1
HAZ	Te Kaha	5.39	196	P	P	08 15 05.3	-0.7
HAZ				S	S	08 15 23.1	+0.5
PKGZ	Pakihiroa	5.46	193	P	P	08 15 06.0	-0.7
PUZ	Puketiti	5.60	191	P	P	08 15 09.2	+1.3
PUZ				S	S	08 16 27.2	+1.2
RUGZ	Raukumara Rang	5.62	196	P	P	08 15 07.7	-0.4
TWGZ	Tauwhareparae	5.76	193	P	P	08 15 09.9	+0.6
TWGZ				S	S	08 16 28.1	-0.4
MKAZ	Moumakai	5.83	218	P	P	08 15 10.7	+0.8
MWZ	Matawai	6.00	196	P	P	08 15 11.9	+0.4
TKGZ	Te Karaka	6.04	194	P	P	08 15 10.6	-1.0
URZ	Urewera	6.04	199	P	P	08 15 09.9	-1.9
RIGZ	Rimuhau	6.31	194	P	P	08 15 15.8	+1.5
BKZ	Black Stump Fm	7.06	200	P	P	08 15 21.0	-0.2
SNVZ	South Ngauruho	7.36	205	P	P	08 15 24.4	+0.1

MAN 21 08:18:09.2, 13°09N×121°75E, h31km, mb3.6, ML2.3, MS1.8, Mindoro

WEL 21 08:28:10.6±1.3, 32°S±13°×18°0E±2°9, h430km±29km, M4.3/3, mB3.9/1, ML4.3/8, MLv4.3/3, Mw(mB)2.9/1, Error ellipse: s-maj=0.0km s-min=0.0km az=110.3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.52	36	P	P	08 29 20.1	-0.2
MXZ	Matakaoa Point	5.54	192	P	P	08 29 39.6	+0.4
KUZ	Kuaotunu	5.66	215	P	P	08 29 41.9	+1.5
HAZ	Te Kaha	5.83	195	P	P	08 29 40.6	-1.5
HAZ				S	S	08 30 56.3	-0.9
PKGZ	Pakihiroa	5.90	193	P	P	08 29 44.6	+1.6
PKGZ				S	S	08 30 59.4	+0.7
PUZ	Puketiti	6.04	191	P	P	08 29 44.5	0.0
PUZ				S	S	08 31 03.1	+1.7
RUGZ	Raukumara Rang	6.05	195	P	P	08 29 45.0	+0.3
TWGZ	Tauwhareparae	6.19	193	P	P	08 29 46.4	+0.3
TWGZ				S	S	08 31 05.2	+0.8
MKAZ	Moumakai	6.22	216	P	P	08 29 46.9	+0.6
MWZ	Matawai	6.44	195	P	P	08 29 48.5	-0.1
URZ	Urewera	6.47	198	P	P	08 29 47.5	-1.4
URZ				S	S	08 31 08.5	-1.1
RIGZ	Rimuhau	6.75	193	P	P	08 29 52.4	+0.2

ISK 21 08:34:28.3, 40°72N×35°88E, h9km, ML2.5/6
DDA 21 08:34:29.5±0.0, 40°78N×36°00E, h15km±1km, ML2.0
ISC 21 08:34:29.5±0.8, 40°77N±0°02×35°94E±0°03, h14km±6km, n19, σ1s21/36, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KIZO	Buyukkizoglu-L	0.13	358	PG	Pg	08 34 32.4	-0.6
KIZO				SG	Sg	08 34 35.8	+0.4
AMSY	Amasya-Merkez	0.16	210	P	Pb	08 34 34.4	+0.2
AMSY				S	Sg	08 34 38.0	+1.9
AMSY				*i* AML	AML	08 34 38.0	
	comp=N,1μm,0.2s						
AMSY				*i* AML	AML	08 34 38.0	
	comp=E,1μm,0.3s						
YARM	Yarimca-Ladik(	0.17	330	PG	Pg	08 34 33.6	0.0
YARM				SG	Sg	08 34 36.6	+0.2
HAVZ	Havza	0.34	331	P	Pg	08 34 36.8	+0.3
HAVZ				*i* AML	AML	08 34 42.0	
	comp=E,308nm,0.3s						
HAVZ				S	Sg	08 34 42.1	+0.8
HAVZ				*i* AML	AML	08 34 43.0	
	comp=N,598nm,0.4s						
TOKA	Tokat	0.61	137	P	Pg	08 34 40.3	-1.0
TOKA				S	Sb	08 34 49.8	-0.6
TOKA				*i* AML	AML	08 34 52.0	
	comp=N,119nm,0.5s						
SAMS	Samsun-Alacam	0.62	18	P	Pg	08 34 41.4	-0.1
SAMS				*i* AML	AML	08 34 50.0	
	comp=N,109nm,0.1s						
SAMS				*i* AML	AML	08 34 50.0	
	comp=E,224nm,0.2s						
SAMS				S	Sg	08 34 50.0	+0.3
TOKT	Tokat	0.65	134	PG	Pg	08 34 41.2	-0.9
TOKT				SG	Sb	08 34 50.7	-0.8
CKRK	Yozgat, Cekere	0.78	206	P	Pn	08 34 45.0	-1.1
CKRK				S	Sn	08 34 57.3	-0.3
CKRK				*i* AML	AML	08 34 58.0	
	comp=E,26nm,0.6s						
CKRK				*i* AML	AML	08 34 59.0	
	comp=N,26nm,0.3s						
COAL	Corum-Alaca	0.89	235	P	Pn	08 34 47.0	-0.7
COAL				S	Sn	08 35 01.6	+1.1
COAL				*i* AML	AML	08 35 04.0	
	comp=N,20nm,0.7s						
COAL				*i* AML	AML	08 35 04.0	
	comp=E,25nm,0.6s						
DIKM	Dikmen	1.01	330	PG	Pb	08 34 48.7	-0.1
DIKM				SG	Sn	08 35 03.9	+0.5
HACI	Hacifakili, Ak	1.08	189	P	Pn	08 34 50.9	+0.5
HACI				S	Sn	08 35 07.8	+2.6
HACI				*i* AML	AML	08 35 11.0	
	comp=N,27nm,0.4s						
HACI				*i* AML	AML	08 35 11.0	
	comp=E,19nm,0.3s						
CORM	Corum	1.16	240	PN	Pb	08 34 49.5	-1.9
KAGI	orum-Kargı	1.16	289	P	Pb	08 34 49.1	-2.3
KAGI				S	Sn	08 35 10.0	+2.8
KAGI				*i* AML	AML	08 35 10.0	
	comp=N,22nm,0.3s						
SVSK	Karacayir	1.18	136	PN	Pn	08 34 51.0	-0.5
SVSK				SN	Sn	08 35 07.7	+0.3
BOYA	Sinop/Boyabat-	1.22	309	P	Pg	08 34 53.1	+0.2

BOYA				S	Sg	08 35 09.1	+0.4
BOYA				*i* AML	AML	08 35 12.0	
	comp=N,17nm,0.3s						
SINO	SINOP_Merkez	1.36	336	P	Pb	08 34 55.1	+0.3
SINO				S	Sg	08 35 13.7	+0.3
SINO				*i* AML	AML	08 35 17.0	
	comp=E,164nm,0.7s						
SINO				*i* AML	AML	08 35 18.0	
	comp=N,60nm,0.5s						
CUSAR	Sarkisla-SIVAS	1.37	170	P	Pg	08 34 56.7	+0.9
CUSAR				S	Sg	08 35 16.3	+2.5
CUSAR				*i* AML	AML	08 35 19.0	
	comp=Z,28nm,0.6s						
CUSAR				*i* AML	AML	08 35 19.0	
	comp=N,34nm,0.6s						
SIRC	Yozgat	1.56	203	P	Pg	08 34 58.4	-1.0
ESPY	Espiye-Giresun	2.12	85	PN	Pn	08 35 05.3	+0.8
ESPY				SN	Sb	08 35 32.7	-1.2

BJI ***21*** *08:38:28.1±0.0,5.70S×151.81E,h69km,mb4.9/50, mB4.9/28,Ms4.4/10,Ms7 4.1/11*
IDC ***21*** *08:38:32.2±0.7,5.78S×151.05E,h66km±6km,mb4.4/17, mbtmp4.8/18,MS3.7/37,Error ellipse: s-maj=14.4km s-min=8.3km az=115.0*
NEIC ***21*** *08:38:33.4±1.7,5.71S±0.07×151.24E±0.08,h74km±5km, mb4.9/65,Error ellipse: s-maj=11.9km s-min=9.4km az=115.0*
DJA ***21*** *08:38:33.3±0.4,6.6S±4.4×151.1E±°,h83km±5km,M5.2/32, mb5.3/32,mB5.5/16,MLv5.6/2,Mw(mB)5.0/16, MwMwp6.3/1,Mwp6.3/1*
GCMT ***21*** *08:38:34.4±0.3,5.84S±0.02×151.29E±0.02,h74km±3km, MW4.9/81,Moment Tensor Solution. s33,c35; s81,c105; Duration: 0 Moment tensor: Scale 10[16]Nm; Mrr1.82±.15; Mθθ-0.37±.12; Mφφ-1.45±.12; Mrθ0.50±.07; Mrφ1.29±.13; Mθφ1.72±.07; Best double couple: Mo2.76000×10[16] NP1:φs355.00000°,δ66.00000°,λ119.00000°. Principal axes: T 2.8680, Plg58.0000°, Azm305.0000°; N -0.2190, Plg26.0000°, Azm162.0000°; P -2.6520, Plg16.0000°, Azm64.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 21 08:38:33.4±0.4,5.72S±0.04×151.18E±0.05,h78km±3km, h79km:pP-P,n399,σ1§07/394,mb5.0/77,10D,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.64**	**31**	P	**Pn**	**08 39 00.2**	**-0.2**
	baz=17,slow=19						
KRVT				S	**Sn**	**08 39 23.0**	**+2.1**
	baz=343,slow=20						
RABL	**Rabaul**	**1.81**	**33**		**Pn**	**08 39 02.2**	**-0.5**
RABL	**Rabaul**	**1.81**	**33**	P	**Pn**	**08 39 02.2**	**-0.5**
MANU	**Manus Island**	**5.27**	**314**		**Pn**	**08 39 53.9**	**+4.2**
PMG	**Port Moresby**	**5.42**	**227**	P	**Pn**	**08 39 51.9**	**+0.3**
	2µm,0.7s,baz=48,slow=5.1,SNR=237						
PMG				S	**Sn**	**08 40 53.6**	**+0.9**
	1µm,0.6s,baz=277,slow=21,SNR=13						
PMG	**Port Moresby**	**5.42**	**227**	Pn	**Pn**	**08 39 52.4**	**+0.7**
PMG	**Port Moresby**	**5.42**	**227**	P	**Pn**	**08 39 52.9**	**+1.2**
HNR	**Honiara**	**9.44**	**114**	P	**Pn**	**08 40 47.1**	**+0.4**
	223nm,0.7s,baz=219,slow=2.3,SNR=6.1						
HNR				LR	LR	08 44 13.1	
	comp=Z,450nm,19.3s,baz=280,slow=36						
HNR	**Honiara**	**9.44**	**114**	Pn	**Pn**	**08 40 48.2**	**+1.5**
COEN	**Coen**	**11.37**	**223**	P	**Pn**	**08 41 12.2**	**-0.7**
	baz=11,SNR=20						
COEN	**Coen**	**11.37**	**223**	Pn	**Pn**	**08 41 13.4**	**+0.5**
COEN	**Coen**	**11.37**	**223**	P	**Pn**	**08 41 13.0**	**0.0**
SMPI	**Sarmi**	**12.98**	**286**	P	**Pn**	**08 41 34.3**	**-0.5**
	1µm43nm,1.3s						
MTSU	**Mount Surprise**	**14.04**	**208**	P	**Pn**	**08 41 48.9**	**0.0**
	baz=14,SNR=14						
CTA	**Charters Tower**	**15.07**	**198**	P	**Pn**	**08 42 03.6**	**+1.6**
	3.2nm,0.6s,baz=13,slow=15,SNR=8.0						
CTA				LR	LR	08 47 04.2	
	comp=Z,243nm,21.3s,baz=9.0,slow=34						
CTAO	**Charters Tower**	**15.07**	**198**	P	**Pn**	**08 42 04.1**	**+2.0**
QIS	**Mount Isa**	**18.55**	**216**	P	**P**	**08 42 44.6**	**+0.5**
	baz=19,SNR=24						
QIS	**Mount Isa**	**18.55**	**216**	P	**Pn**	**08 42 45.4**	**+0.3**
FAKI	**Fak Fak**	**19.08**	**278**	P	**P**	**08 42 51.1**	**+1.1**
FAKI	**Fak Fak**	**19.08**	**278**	P	**P**	**08 42 50.7**	**+0.8**
	677nm19nm,0.7s						
FAKI	**Fak Fak**	**19.08**	**278**	P	**Pn**	**08 42 51.4**	**-0.1**
EIDS	**Eidsvold**	**19.54**	**180**	P	**Pn**	**08 42 57.1**	**+0.2**
KDU	**Kakadu**	**19.71**	**248**	P	**P**	**08 42 56.9**	**+0.1**
	baz=20,SNR=57						
KDU	**Kakadu**	**19.71**	**248**	P	**P**	**08 42 56.9**	**+0.1**
SAUI	**Saumlaki**	**19.86**	**262**	P	**P**	**08 42 58.7**	**+0.2**
GUMO	**Guam**	**20.18**	**342**	P	**P**	**08 43 02.3**	**+0.5**
	170nm,1.1s,baz=165,slow=12,SNR=4.1						
GUMO				LR	LR	08 49 23.4	
	comp=Z,115nm,21.6s,baz=138,slow=32						
	170nm,1.1s						
GUMO	**Guam**	**20.18**	**342**	P	**P**	**08 43 01.5**	**-0.3**
RMQ	**Roma**	**20.78**	**186**	P	**P**	**08 43 09.6**	**+1.3**
	baz=21,SNR=6.5						
MTN	**Manton Dam**	**21.00**	**249**	P	**P**	**08 43 10.8**	**0.0**
	baz=21,SNR=77						
MTN	**Manton Dam**	**21.00**	**249**	P	**P**	**08 43 10.9**	**+0.2**
MTN	**Manton Dam**	**21.00**	**249**	P	**P**	**08 43 12.0**	**+1.2**
WB0	**Warramunga Arr**	**21.49**	**228**	P	**P**	**08 43 16.1**	**+0.2**
WB0				IAmb	IAmb	08 43 19.9	
	comp=Z,53nm,0.9s						
WR0	**Warramunga Arr**	**21.50**	**227**	P	**P**	**08 43 15.6**	**-0.4**
WR0				IAmb	IAmb	08 43 38.3	
	comp=Z,61nm,0.9s						
WRAB	**Tennant Creek**	**21.62**	**228**	P	**P**	**08 43 17.0**	**-0.3**
WRAB				IAmb	IAmb	08 43 20.5	
	comp=Z,48nm,0.7s						
WRAB	**Tennant Creek**	**21.62**	**228**	P	**P**	**08 43 17.0**	**-0.3**
WB2	**Warramunga Arr**	**21.63**	**228**	P	**P**	**08 43 17.0**	**-0.4**
WB2				IAmb	IAmb	08 43 20.6	
	comp=Z,132nm,1.4s						
WRA	**Warramunga Arr**	**21.64**	**228**	P	**P**	**08 43 17.1**	**-0.3**
	comp=Z,30nm,0.6s,baz=51,slow=10,SNR=61						
WRA				S	**S**	**08 47 11.1**	**-1.9**
	comp=Z,21nm,1.2s,baz=55,slow=17,SNR=15						
WRA				LR	LR	08 51 33.4	
	comp=Z,207nm,21.6s,baz=58,slow=36						
	comp=Z,30nm,0.6s						
QLP	**Quilpie**	**21.78**	**197**	P	**P**	**08 43 19.4**	**+0.5**
	baz=22,SNR=14						
QLP	**Quilpie**	**21.78**	**197**	P	**P**	**08 43 19.7**	**+0.7**
DZM	**Mont Dzumac**	**21.96**	**139**	P	**P**	**08 43 19.6**	**-1.5**
	comp=Z,17nm,0.9s,baz=288,slow=8.9,SNR=18						
DZM				LR	LR	08 50 59.3	
	comp=Z,414nm,19.2s,baz=348,slow=34						
	comp=Z,17nm,0.9s						
INKA	**Innaminka**	**24.05**	**203**	P	**P**	**08 43 41.5**	**+0.1**
KNRA	**Kununurra**	**24.12**	**244**	P	**P**	**08 43 41.7**	**-0.4**
	baz=24,SNR=132						
KNRA	**Kununurra**	**24.12**	**244**	P	**P**	**08 43 42.4**	**+0.2**
KNRA	**Kununurra**	**24.12**	**244**	P	**P**	**08 43 42.6**	**+0.4**
AS31	**Alice Springs**	**24.39**	**221**	P	**P**	**08 43 45.3**	**+0.6**
ASAR	**Alice Springs**	**24.39**	**221**	P	**P**	**08 43 44.8**	**+0.2**
ARMA	**Armidale**	**24.58**	**179**	P	**P**	**08 43 45.8**	**-0.5**
CMSA	**Cobar Meteorol**	**26.20**	**191**	P	**P**	**08 44 01.2**	**+0.3**
OOD	**Oodnadatta**	**26.44**	**212**	P	**P**	**08 44 03.0**	**-0.1**
LCRK	**Leigh Creek**	**27.46**	**205**	P	**P**	**08 44 12.4**	**+0.2**
STKA	**Stephens Creek**	**27.53**	**198**	P	**P**	**08 44 12.4**	**-0.4**
	comp=Z,7.4nm,0.9s,baz=20,slow=11,SNR=5.0						
STKA				LR	LR	08 54 45.0	
	comp=Z,166nm,18.8s,baz=14,slow=36						
	comp=Z,7.4nm,0.9s						
STKA	**Stephens Creek**	**27.53**	**198**	P	**P**	**08 44 11.9**	**-0.9**
DAV	**Davao City (W)**	**28.53**	**296**	LR	LR	08 56 43.2	
	comp=Z,58nm,18.2s,baz=128,slow=38						
MMRI	**Maumere**	**28.86**	**263**	P	**P**	**08 44 24.0**	**-0.9**
MMRI	**Maumere**	**28.86**	**263**	P	**P**	**08 44 24.0**	**-0.9**
	comp=Z,98nm,0.8s						
WRKA	**Warakurna**	**29.16**	**226**	P	**P**	**08 44 27.3**	**-0.1**
	baz=29,SNR=70						
WRKA	**Warakurna**	**29.16**	**226**	P	**P**	**08 44 27.4**	**-0.1**
MULG	**Mulgathing**	**29.28**	**211**	P	**P**	**08 44 28.0**	**-0.4**
EDFI	**Ende, Flores**	**29.40**	**262**	P	**P**	**08 44 28.9**	**-0.9**
	comp=Z,371nmcomp=Z,41nm,1.0s						
HTT	**Hallett**	**29.84**	**201**	P	**P**	**08 44 33.5**	**+0.2**
	baz=30,SNR=6.4						
HTT	**Hallett**	**29.84**	**201**	P	**P**	**08 44 33.6**	**+0.2**
BBOO	**Buckleboo**	**30.42**	**206**	P	**P**	**08 44 37.9**	**-0.6**
BBOO				IAmb	IAmb	08 44 40.9	
	comp=Z,46nm,1.4s						
BBOO	**Buckleboo**	**30.42**	**206**	P	**P**	**08 44 38.1**	**-0.4**
	comp=Z,33nm,1.7s						
BSSI	**Bau Bau, Buton**	**30.53**	**268**	P	**P**	**08 44 39.4**	**-0.3**
	comp=Z,14nm,0.8s						
BASI	**Baing, Sumba**	**30.62**	**260**	P	**P**	**08 44 41.2**	**+0.7**
	comp=Z,2µmcomp=Z,141nm,0.9s						
TOLI2	**Tolitoli**	**31.10**	**282**	P	**P**	**08 44 44.0**	**-0.8**
TOLI2				IAmb	IAmb	08 44 47.8	
	comp=Z,11nm,0.7s						
TOLI2	**Tolitoli**	**31.10**	**282**	P	**P**	**08 44 45.0**	**+0.3**
KAPI	**Kappang**	**31.30**	**270**	LR	LR	09 00 20.3	
	comp=Z,54nm,20.8s,baz=95,slow=42						
WBSI	**Waikabubak, Su**	**31.73**	**261**	P	**P**	**08 44 50.1**	**-0.2**
	comp=Z,2µmcomp=Z,157nm,0.8s						
MPSI	**Mapaga**	**31.80**	**280**	P	**P**	**08 44 50.0**	**-0.9**
	comp=Z,886nmcomp=Z,20nm,1.2s						
FORT	**Forrest**	**33.07**	**218**	P	**P**	**08 45 01.2**	**-0.5**
FORT				IAmb	IAmb	08 45 02.2	
	comp=Z,36nm,0.8s						
PLAI	**Plampang**	**33.27**	**263**	P	**P**	**08 45 02.0**	**-1.7**
	comp=Z,74nm,0.7s						
PLAI	**Plampang**	**33.27**	**263**	P	**P**	**08 45 02.3**	**-1.4**
JCJ	**Chichijima**	**33.76**	**345**	LR	LR	08 59 45.4	
	comp=Z,31nm,18.1s,baz=180,slow=38						
MBWA	**Marble Bar**	**34.12**	**240**	P	**P**	**08 45 10.8**	**-0.2**
MBWA	**Marble Bar**	**34.12**	**240**	P	**P**	**08 45 11.2**	**+0.2**
MBWA	**Marble Bar**	**34.12**	**240**	P	**P**	**08 45 10.6**	**-0.4**
MBWA				x	x	08 45 13.8	
MBWA				pP	**pP**	**08 45 27.6**	**-1.9**
PSA00	**Pilbara Seismi**	**34.18**	**240**	P	**P**	**08 45 11.2**	**-0.4**
PSA00	**Pilbara Seismi**	**34.18**	**240**	P	**P**	**08 45 11.5**	**0.0**
PSA00				IAmb	IAmb	08 45 16.0	
	comp=Z,32nm,0.9s						
PSA00	**Pilbara Seismi**	**34.18**	**240**	P	**P**	**08 45 11.5**	**0.0**
IGBI	**Denpasar**	**35.87**	**263**	P	**P**	**08 45 25.2**	**-0.9**
JAGI	**Jajag, Banyuwa**	**36.84**	**264**	P	**P**	**08 45 33.1**	**-1.4**
JAGI	**Jajag, Banyuwa**	**36.84**	**264**	P	**P**	**08 45 32.5**	**-1.9**
	comp=Z,1µmcomp=Z,90nm,1.1s						
JAGI	**Jajag, Banyuwa**	**36.84**	**264**	P	**P**	**08 45 32.9**	**-1.5**
AFI	**Afiamalu**	**37.35**	**105**	LR	LR	08 58 32.9	
	comp=Z,148nm,19.5s,baz=186,slow=32						
PWJI	**Pagerwojo**	**39.15**	**264**	P	**P**	**08 45 53.4**	**-0.5**
	comp=Z,35µmcomp=Z,54nm,1.0s						
JOW	**Kunigami**	**39.23**	**327**	P	**P**	**08 45 55.0**	**+0.7**
	comp=Z,36nm,0.7s,baz=142,slow=12,SNR=9.8						
JOW				LR	LR	08 59 11.5	
	comp=Z,106nm,20.8s,baz=147,slow=32						
	comp=Z,36nm,0.7s						
JOW	**Kunigami**	**39.23**	**327**	P	**P**	**08 45 55.6**	**+1.3**
JOW	**Kunigami**	**39.23**	**327**	P	**P**	**08 45 54.4**	**+0.1**
GIRL	**Giralia**	**39.41**	**241**	P	**P**	**08 45 56.1**	**+0.2**
	baz=40,SNR=10.0						
GIRL	**Giralia**	**39.41**	**241**	P	**P**	**08 45 57.4**	**+1.4**
GIRL	**Giralia**	**39.41**	**241**	P	**P**	**08 45 56.4**	**+0.4**
PCJI	**Pacitan**	**39.77**	**264**	P	**P**	**08 45 58.5**	**-0.6**
	comp=Z,168nm,0.8s						
WOJI	**Wonogiri, Jawa**	**40.02**	**265**	P	**P**	**08 46 00.2**	**-0.9**
	comp=Z,52nm,1.0s						
JHJ	**Hachijo jima 2**	**40.11**	**345**	LR	LR	09 00 11.4	
	comp=Z,89nm,21.7s,baz=134,slow=32						
UGM	**Wanagama**	**40.42**	**265**	P	**P**	**08 46 04.4**	**0.0**
UGM				IAmb	IAmb	08 46 32.6	
	comp=Z,46nm,1.0s						
UGM	**Wanagama**	**40.42**	**265**	P	**P**	**08 46 04.6**	**+0.1**
KLBR	**Kellerberrin**	**40.51**	**226**	P	**P**	**08 46 04.3**	**-0.6**
	baz=41,SNR=24						
KLBR	**Kellerberrin**	**40.51**	**226**	P	**P**	**08 46 04.3**	**-0.6**
MORW	**Morawa**	**40.52**	**231**	P	**P**	**08 46 04.9**	**-0.2**
	baz=41,SNR=8.1						
MORW	**Morawa**	**40.52**	**231**	P	**P**	**08 46 05.2**	**+0.1**
MORW	**Morawa**	**40.52**	**231**	P	**P**	**08 46 04.8**	**-0.2**
BLDU	**Ballidu**	**40.77**	**228**	P	**P**	**08 46 06.6**	**-0.5**
	baz=41,SNR=19						
BLDU	**Ballidu**	**40.77**	**228**	P	**P**	**08 46 06.6**	**-0.5**
YULB	**Yu-li**	**41.09**	**316**	P	**P**	**08 46 10.8**	**+0.9**
YULB				IAmb	IAmb	08 46 13.0	
	comp=Z,36nm,0.7s						
LTZ	**Lake Taylor**	**41.37**	**156**	P	**P**	**08 46 12.1**	**+0.2**
LTZ				IAmb	IAmb	08 46 34.5	
	comp=Z,44nm,1.3s						
NACB	**Ninganchiao**	**41.40**	**317**	P	**P**	**08 46 13.4**	**+1.1**
TPUB	**Ta-pu**	**41.50**	**315**	P	**P**	**08 46 12.5**	**-0.6**
SSLB	**Suanglung**	**41.59**	**316**	P	**P**	**08 46 14.3**	**+0.3**
SSLB				IAmb	IAmb	08 46 22.2	
	comp=Z,22nm,0.7s						
SSLB	**Suanglung**	**41.59**	**316**	P	**P**	**08 46 14.2**	**+0.3**
RPZ	**Rata Peaks**	**41.69**	**158**	LR	LR	09 01 05.1	
	comp=Z,211nm,21.3s,baz=256,slow=32						
MUN	**Mundaring**	**41.83**	**227**	P	**P**	**08 46 15.5**	**-0.2**
	baz=42,SNR=9.7						
MUN	**Mundaring**	**41.83**	**227**	P	**P**	**08 46 15.7**	**-0.1**
YHNB	**Yeheng**	**41.88**	**317**	P	**P**	**08 46 16.8**	**+0.5**
KPJI	**Karang Pucung**	**41.99**	**265**	P	**P**	**08 46 17.5**	**+0.1**
	comp=Z,88nm,0.8s						
CMJI	**Cimerak**	**42.47**	**265**	P	**P**	**08 46 20.6**	**-0.6**
	comp=Z,1µmcomp=Z,154nm,0.8s						
RKGY	**Rocky Gully**	**42.71**	**223**	P	**P**	**08 46 22.9**	**0.0**
	baz=43,SNR=6.5						
MJAR	**Matsushiro Arr**	**43.76**	**345**	LR	LR	09 05 18.5	
	comp=Z,30nm,18.4s,baz=174,slow=37						
CNJI	**Cibinong**	**43.78**	**265**	P	**P**	**08 46 30.9**	**-0.9**
	comp=Z,3µmcomp=Z,285nm,1.0s						
XMIS	**Christmas Isla**	**45.29**	**261**	P	**P**	**08 46 44.0**	**+0.1**
KSAR	**Wonju Array Be**	**48.12**	**335**	P	**P**	**08 47 03.3**	**-2.2**
KS19	**Wonju Array Si**	**48.18**	**335**	P	**P**	**08 47 01.6**	**-4.4**
KS19				IAmb	IAmb	08 47 05.8	
	comp=Z,9.3nm,0.8s						
NJ2	**Nanjing**	**48.56**	**323**	*e*P	**P**	**08 47 11.3**	**+2.3**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
RAR	**Rarotonga**	**49.90**	**113**	LR	LR	09 07 29.9	
	comp=Z,73nm,18.1s,baz=269,slow=35						
WHN	**Wuhan**	**50.42**	**318**	⇓P	**P**	**08 47 25.4**	**+2.2**
WHN				pmax	pmax		
	comp=Z,38nm,0.9s						
USA0B	**Ussuriysk Arra**	**52.61**	**343**	P	**P**	**08 47 38.7**	**-0.6**
USA0B				IAmb	IAmb	08 47 40.2	
	comp=Z,7.2nm,1.1s						
USRK	**Ussuriysk Ar.**	**52.61**	**343**	P	**P**	**08 47 39.2**	**0.0**
	comp=Z,4.0nm,0.8s,baz=166,slow=7.6,SNR=9.8						
	comp=Z,4.0nm,0.8s						
ENH	**Enshi**	**53.62**	**314**	P	**P**	**08 47 47.6**	**+0.6**
GSI	**Gunungsitoli**	**53.98**	**276**	P	**P**	**08 47 48.2**	**-1.7**
LYN	**LuoYang**	**54.19**	**320**	*e*P	**P**	**08 47 51.3**	**+0.2**
LYN				S	**S**	**08 55 30.1**	**+7.6**
LYN				LR	LR		
	comp=Z,140nm,17.5s						
LYN				LR	LR		
	comp=Z,140nm,15.3s						
LYN				LR	LR		
	comp=Z,180nm,21.6s						
CN2	**Changchun**	**54.49**	**337**	*e*P	**P**	**08 47 52.8**	**-0.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HNS	**HongShan**	**54.73**	**325**	⇓P	**P**	**08 47 55.9**	**+1.0**
HNS				pmax	pmax		
	comp=Z,12nm,1.2s						
XAN	**Xi'an**	**56.19**	**318**	P	**P**	**08 48 05.7**	**+0.1**
CMAR	**Chiang Mai Arr**	**56.82**	**296**	P	**P**	**08 48 10.6**	**+0.4**
	comp=Z,4.7nm,0.2s,baz=126,slow=6.1,SNR=4.3						
CMAR				LR	LR	09 09 06.9	
	comp=Z,37nm,21.9s,baz=115,slow=32						
	comp=Z,4.7nm,0.2s						
CMAR	**Chiang Mai Arr**	**56.82**	**296**	P	**P**	**08 48 10.1**	**-0.1**
KLR	**Kul'dur**	**57.28**	**345**	P	**P**	**08 48 12.1**	**-0.8**
	comp=Z,5.5nm,0.9s,baz=183,slow=3.6,SNR=15						
KLR				LR	LR	09 09 51.5	
	comp=Z,57nm,21.2s,baz=184,slow=33						
	comp=Z,5.5nm,0.9s						
PZH	**PanZhiHua**	**57.59**	**306**	P	**P**	**08 48 17.9**	**+2.2**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PZH				pmax	pmax		
	comp=Z,80nm,6.5s						
XLT	**XiLinHaoTe**	**58.66**	**331**	⇓*i*P	**P**	**08 48 23.0**	**+0.2**
XLT				pmax	pmax		
	comp=Z,18nm,1.1s						
XLT				pmax	pmax		
	comp=Z,100nm,6.7s						
PEA0B	**Petropavlovsk-**	**58.86**	**5**	P	**P**	**08 48 23.4**	**-0.4**
PEA0B				IAmb	IAmb	08 48 24.2	
	comp=Z,9.3nm,0.7s						
PETK	**Petropavlovsk-**	**58.86**	**5**	P	**P**	**08 48 22.7**	**-1.2**
	comp=Z,5.0nm,0.6s,baz=163,slow=6.0,SNR=11						
PETK				LR	LR	09 10 34.4	
	comp=Z,36nm,21.2s,baz=175,slow=33						
	comp=Z,5.0nm,0.6s						
HHC	**Hu-ho-hao-te**	**58.87**	**326**	*e*P	**P**	**08 48 24.5**	**+0.2**
HHC				pmax	pmax		
	comp=Z,18nm,0.9s						
HHC				pmax	pmax		
	comp=Z,150nm,4.4s						
LZH	**Lanzhou**	**60.78**	**317**	*e*P	**P**	**08 48 38.8**	**+1.2**
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
DRV	**Dumont d'Urvil**	**61.34**	**185**	P	**P**	**08 48 41.0**	**+0.5**
SHEM	**Shemya Is, Ala**	**61.39**	**16**	LR	LR	09 10 42.2	
	comp=Z,85nm,20.8s,baz=314,slow=31						
MA2	**Magadan**	**65.09**	**360**	LR	LR	09 13 35.4	
	comp=Z,32nm,21.4s,baz=130,slow=32						
GTA	**Gaotai**	**65.24**	**318**	⇓P	**P**	**08 49 08.1**	**+1.0**
GTA				pP	pP	08 49 27.1	-0.3
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,62nm,3.6s						
GTA				LR	LR		
	comp=Z,62nm,17.1s						
GTA				LR	LR		
	comp=Z,120nm,19.3s						
GTA				LR	LR		
	comp=Z,68nm,18.9s						
ULN	**Ulaanbaatar**	**65.93**	**329**	P	**P**	**08 49 11.5**	**+0.1**
ULN				IAmb	IAmb	08 49 13.2	
	comp=Z,10nm,1.1s						
ULN	**Ulaanbaatar**	**65.93**	**329**	P	**P**	**08 49 12.2**	**+0.9**
SONM	**Songino Array**	**66.25**	**329**	P	**P**	**08 49 13.9**	**+0.5**
	comp=Z,5.4nm,0.6s,baz=137,slow=5.6,SNR=31						
SONM				LR	LR	09 17 56.3	
	comp=Z,42nm,21.6s,baz=99,slow=36						
	comp=Z,5.4nm,0.6s						
SONM	**Songino Array**	**66.25**	**329**	P	**P**	**08 49 13.9**	**+0.5**
SONM				IAmb	IAmb	08 49 15.1	
	comp=Z,16nm,1.3s						
GOMU	**GeErMu**	**67.19**	**313**	P	**P**	**08 49 20.4**	**+0.5**
GOMU				S	S	08 58 00.3	-8.7
GOMU				pmax	pmax		
	comp=Z,5.0nm,0.6s						
GOMU				pmax	pmax		
	comp=Z,62nm,9.2s						
GOMU				LR	LR		
	comp=Z,38nm,17.3s						
GOMU				LR	LR		
	comp=Z,78nm,16.8s						
GOMU				LR	LR		
	comp=Z,75nm,16.7s						
YAK	**Yakutsk**	**69.56**	**349**	LR	LR	09 19 24.5	
	comp=Z,19nm,20.8s,baz=100,slow=35						
AKUT	**Akutan**	**69.64**	**25**	P	**P**	**08 49 34.4**	**+0.1**
AKUT				IAmb	IAmb	08 49 34.5	
	comp=Z,32nm,1.0s						
CCD	**Concordia, Ant**	**71.15**	**187**	P	**P**	**08 49 44.2**	**+0.4**
CCD				pP	**pP**	**08 50 06.6**	**+3.0**
CCD				sP	**sP**	**08 50 16.4**	**+4.5**
PALK	**Pallekele**	**71.49**	**280**	LR	LR	09 26 02.9	
	comp=Z,30nm,18.2s,baz=224,slow=40						
PKIN	**Phulchoki**	**71.53**	**301**	*e*P	**P**	**08 49 46.5**	**-0.3**
DMN	**Daman**	**71.79**	**301**	*e*P	**P**	**08 49 48.2**	**-0.1**
VNDA	**Vanda**	**71.98**	**178**	P	**P**	**08 49 48.8**	**+0.7**
	comp=Z,3.1nm,0.9s,baz=332,slow=6.1,SNR=16						
	comp=Z,3.1nm,0.9s						
VNDA	**Vanda**	**71.98**	**178**	P	**P**	**08 49 48.6**	**+0.4**
VNDA	**Vanda**	**71.98**	**178**	P	**P**	**08 49 48.9**	**+0.7**
VNDA				pP	**pwP**	**08 50 10.4**	**-2.0**
VNDA				sP	**sP**	**08 50 19.0**	**+3.2**
GKN	**Gorkha**	**72.30**	**302**	*e*P	**P**	**08 49 51.0**	**-0.2**
SDPT	**Sand Point**	**72.75**	**27**	P	**P**	**08 49 51.2**	**-1.9**
	baz=231						
KOLN	**Koldanda**	**73.11**	**301**	*e*P	**P**	**08 49 54.8**	**-1.3**
	comp=Z,4.3nm,0.9s						
DANN	**Dangsing**	**73.14**	**302**	*e*P	**P**	**08 49 55.0**	**-1.4**
PYUN	**Piuthan**	**73.72**	**301**	*e*P	**P**	**08 49 58.7**	**-1.0**
	comp=Z,37nm,0.8s						
CHIR	**Chirikof Islan**	**75.24**	**28**	P	**P**	**08 50 05.7**	**-1.9**
	baz=235						
WMQ	**Urumqi**	**75.33**	**318**	*e*P	**P**	**08 50 12.1**	**+3.6**
WMQ				PcP	**PcP**	**08 50 16.4**	**-5.0**
WMQ				pmax	pmax		
	comp=Z,68nm,0.9s						
R17K	**Ugashik Creek**	**75.94**	**26**	P	**P**	**08 50 10.2**	**-1.3**
	baz=234						
SII	**Sitkinak Islan**	**76.32**	**28**	P	**P**	**08 50 12.6**	**-1.2**
	baz=236						
O16K	**Kokuna River B**	**76.39**	**24**	P	**P**	**08 50 13.4**	**-0.7**
	baz=232						
N16K	**Nishlik Lake**	**76.67**	**23**	P	**P**	**08 50 15.8**	**+0.1**
	baz=232						
O17K	**Koliganek Bris**	**76.91**	**24**	P	**P**	**08 50 17.0**	**+0.1**
	baz=233						
OHAK	**Old Harbor**	**77.10**	**27**	P	**P**	**08 50 17.4**	**-0.7**
OHAK	**Old Harbor**	**77.10**	**27**	P	**P**	**08 50 17.5**	**-0.6**
	baz=237						
P18K	**Big Mountain,**	**77.45**	**25**	P	**P**

IMAR	Indian Mountai	81.78	20	P		P	08 50 42.9	-0.5
H21K	Melozitna Rive	81.92	20	P		P	08 50 44.0	-0.2
	baz=236							
SCM	Sheep Creek Mo	82.05	25	P		P	08 50 44.4	-0.6
	baz=242							
KDJ	Kajisay	82.07	314	P		P	08 50 44.7	-1.0
KDJ				IAmb		IAmb	08 50 47.0	
	comp=Z,10nm,1.0s							
RND	Reindeer	82.19	23	P		P	08 50 44.9	-0.8
RND				IAmb		IAmb	08 50 45.4	
	comp=Z,6.1nm,0.6s							
WAT6	Susitna Watana	82.24	24	P		P	08 50 45.0	-1.1
	baz=241							
KSH	Kashi	82.31	311	P		P	08 50 48.3	+1.4
KSH				pmax		pmax		
	comp=Z,8.0nm,0.8s							
MLY	Manley	82.31	21	P		P	08 50 45.6	-0.7
	baz=238,SNR=18							
MCK	McKinley	82.33	23	P		P	08 50 44.8	-1.5
	baz=240							
H22K	Ishtalitna Cre	82.55	20	P		P	08 50 46.8	-0.7
	baz=238							
DHY	Denali Highway	82.62	24	P		P	08 50 47.3	-0.8
	baz=242							
M24K	Tolsona, Glenn	82.66	25	P		P	08 50 47.3	-0.9
	baz=243							
NEA2	Nenana	82.70	22	P		P	08 50 46.9	-1.3
	baz=240,SNR=5.2							
I23K	Minto, Yukon-K	82.88	22	P		P	08 50 48.2	-0.9
I23K	Minto, Yukon-K	82.88	22	P		P	08 50 48.1	-0.9
	baz=240							
N25K	Chitina, Valde	83.11	26	P		P	08 50 49.6	-1.0
	baz=244							
H23K	Yukon River	83.15	21	P		P	08 50 49.7	-0.9
	baz=239							
TCOL	CIGO, UAF Yank	83.29	22	P		P	08 50 49.7	-1.5
	baz=241							
COLA	College	83.30	22	P		P	08 50 49.6	-1.7
	baz=241							
HDA	Harding Lake	83.42	23	P		P	08 50 50.9	-1.0
	baz=242							
KURK	Kurchatov	83.50	322	P		P	08 50 52.2	-0.4
KURK				IAmb		IAmb	08 50 53.0	
	comp=Z,13nm,1.2s							
KURBB	Kurchatov Arra	83.53	322	P		P	08 50 51.5	-1.2
	comp=Z,3.8nm,0.9s,baz=106,slow=4.1,SNR=4.2							
KURBB				PKiKP		PKiKP	08 56 09.0	-0.5
	comp=Z,0.5nm,0.6s,baz=127,slow=1.3,SNR=4.3							
	comp=Z,3.8nm,0.9s							
IL31		83.61	22	P		P	08 50 51.4	-1.5
IL31				IAmb		IAmb	08 50 53.2	
	comp=Z,4.7nm,0.6s							
ILAR	Eielson Array	83.61	22	P		P	08 50 51.0	-1.9
	comp=Z,3.8nm,0.6s,baz=246,slow=5.2,SNR=73							
ILAR	Eielson Array	83.61	22	P		P	08 50 50.7	-2.3
H24K	Noodor Dome	83.76	21	P		P	08 50 53.3	-0.4
	baz=241,SNR=6.2							
RIDG	Independent Ri	83.94	24	P		P	08 50 53.9	-0.8
	baz=244							
MAW	Mawson	84.11	203	P		P	08 50 55.5	+0.1
	comp=Z,6.7nm,0.6s,baz=93,slow=7.1,SNR=26							
MAW				LR		LR	09 24 56.2	
	comp=Z,65nm,21.3s,baz=122,slow=33							
	comp=Z,6.7nm,0.6s							
MAW	Mawson	84.11	203	P		P	08 50 55.9	+0.4
	baz=84,SNR=17							
J25K	Salcha River,	84.12	23	P		P	08 50 55.6	0.0
J25K				IAmb		IAmb	08 50 55.7	
	comp=Z,9.6nm,0.6s							
J25K	Salcha River,	84.12	23	P		P	08 50 54.7	-0.9
	baz=243,SNR=22							
AAK	Ala-Archa	84.13	314	LR		LR	09 27 57.0	
	comp=Z,54nm,21.8s,baz=96,slow=35							
M26K	Nabesna, AK	84.13	25	P		P	08 50 55.8	+0.1
	baz=246							
L26K	Log Cabin Wild	84.24	25	P		P	08 50 55.8	-0.5
	baz=245,SNR=6.9							
QSPA	South Pole Qui	84.25	180	P		P	08 50 56.4	+0.1
QSPA				IAmb		IAmb	08 50 56.9	
	comp=Z,6.4nm,0.8s							
CTG	Chitna Glacier	84.29	27	P		P	08 50 56.3	-0.3
	baz=247							
SCRK	Sand Creek	84.38	24	P		P	08 50 56.7	-0.3
	baz=245,SNR=5.8							
TOLK	Toolik Lake Re	84.59	18	P		P	08 50 57.7	-0.2
	baz=239							
M27K	Edge Creek, AK	84.59	26	P		P	08 50 58.4	+0.3
	baz=247,SNR=10							
J26L	Joseph Creek	84.77	23	P		P	08 50 59.0	0.0
	baz=245,SNR=7.7							
L27K	Beaver Creek,	84.89	25	P		P	08 50 59.8	+0.3
	baz=247							
BCAR	Beaver Creek A	84.91	25	P		P	08 50 58.7	-0.9
YUK3	Moose Creek	84.99	26	P		P	08 51 00.3	0.0
	baz=248							
BVCY	Beaver Creek	85.05	26	P		P	08 51 00.6	+0.3
	baz=248,SNR=5.4							
YUK8	Steele Glacier	85.12	27	P		P	08 51 00.7	-0.3
	baz=249							
K27K	Chicken	85.17	24	P		P	08 51 01.7	+0.9
K27K	Chicken	85.17	24	P		P	08 51 01.1	+0.3
	baz=246							
I26K	Coal Creek Min	85.27	23	P		P	08 51 01.3	+0.1
	baz=245							
YUK6	Outpost Mounta	85.63	27	P		P	08 51 03.5	0.0
	baz=250							
YUK4	Talbot Arm	85.64	27	P		P	08 51 03.5	+0.1
	baz=250							
BMAR	Burnt Mountain	85.66	20	P		P	08 51 03.6	+0.4
HYT	Haines Junctio	85.99	28	P		P	08 51 06.3	+1.2
HYT				IAmb		IAmb	08 51 08.4	
	comp=Z,12nm,0.9s							
HYT	Haines Junctio	85.99	28	P		P	08 51 05.1	0.0
	baz=251							
P30M	Million Dollar	86.02	28	P		P	08 51 05.5	+0.3
	baz=251							
DAWY	Dawson	86.28	24	P		P	08 51 05.7	-0.7
DAWY	Dawson	86.28	24	P		P	08 51 06.4	0.0
	baz=249							
N30M	Aishikik Lake	86.39	27	P		P	08 51 07.2	+0.2
	baz=251							
SKAG	Skagway	86.60	29	P		P	08 51 08.2	+0.3
	baz=253							
O30N	Mendenhall	86.63	28	P		P	08 51 08.4	+0.3
	baz=252							
CRAG	Craig	86.64	34	P		P	08 51 08.5	+0.3
	baz=255							
M30M	Minto, Yukon	86.88	26	P		P	08 51 09.6	+0.3
	baz=251							
N31M	Braeburn, Yuko	86.99	27	P		P	08 51 10.7	+0.8
	baz=252							
KK31	Karatay Array	87.09	314	P		P	08 51 10.0	-0.8
KK31				IAmb		IAmb	08 51 12.4	
	comp=Z,6.4nm,0.9s							
KKAR	Karatay Array	87.09	314	P		P	08 51 10.0	-0.8
KKAR	Karatay Array	87.09	314	P		P	08 51 10.6	-0.2
KKAR				IAmb		IAmb	08 51 12.4	
	comp=Z,6.4nm,0.9s							
WHY	Whitehorse	87.17	28	P		P	08 51 11.0	+0.2
	baz=253							
I29M	Ogilvie Camp,	87.17	23	P		P	08 51 11.2	+0.5
	baz=250							
P32M	Atlin	87.42	29	P		P	08 51 12.4	+0.4
	baz=254							
M31M	Drury Creek, Y	87.83	27	P		P	08 51 13.6	-0.3
	baz=254							
P33M	Teslin, Yukon	88.03	29	P		P	08 51 15.1	+0.2
	baz=255							
EPYK	Eagle Plains	88.12	23	P		P	08 51 15.1	-0.1
	baz=251							
BBB	Bella Bella	88.80	37	LR		LR	09 25 31.0	
	comp=Z,40nm,19.7s,baz=270,slow=32							
DLBC	Dease Lake	88.99	31	LR		LR	09 26 35.6	
	comp=Z,87nm,18.6s,baz=272,slow=32							
DLBC	Dease Lake	88.99	31	P		P	08 51 20.0	+0.5
	baz=257							
MMPY	Sheldon Lake,	89.35	27	P		P	08 51 20.8	-0.2
	baz=256							
INK	Inuvik	89.88	21	P		P	08 51 23.4	+0.1
	baz=254							
J01E	Myrtle Point	90.15	47	P		P	08 51 25.0	-0.1
	baz=262							
L02F	Cave Junction	90.28	48	P		P	08 51 26.2	+0.4
	baz=262							
K02D	Willamette Mer	90.28	47	P		P	08 51 26.1	+0.2
	baz=262							
I03D	Drain, OR	90.64	46	P		P	08 51 28.0	+0.6
	baz=263							
YBH	Yreka Blue Hor	90.86	48	LR		LR	09 27 42.0	
	comp=Z,54nm,18.9s,baz=267,slow=32							
H04D	Lebanon	91.18	46	P		P	08 51 30.7	+0.8
	baz=263							
L04D	Klamath Falls	91.22	48	P		P	08 51 30.9	+0.5
	baz=263							
I04A	Tendick Farm,	91.32	46	P		P	08 51 31.0	+0.3
	baz=263							
J04D	Umpqua Nationa	91.48	47	P		P	08 51 32.5	+0.9
	baz=264							
J05D	Fort Rock, OR	92.12	47	P		P	08 51 35.5	+0.9
	baz=264							
I05D	Terrebonne, OR	92.15	46	P		P	08 51 35.4	+0.9
	baz=264							
MOD	Modoc Plateau	92.67	48	P		P	08 51 37.0	-0.1
MOD				IAmb		IAmb	08 51 39.6	
	comp=Z,16nm,1.4s							
CIS	Catalina Islan	93.45	57	P		P	08 51 41.3	+0.6
	baz=265							
ISA	Isabella, Lake	93.57	55	P		P	08 51 42.3	+1.0
	baz=266							
EDW2	Edwards Air Fo	93.91	55	P		P	08 51 44.1	+1.3
	baz=266							
NVAR	Mina Array Bea	93.92	52	P		P	08 51 44.4	+1.4
	comp=Z,5.7nm,0.7s,baz=253,slow=6.1,SNR=55							
NVAR				pP		pP	08 52 00.9	-3.8
	comp=Z,5.8nm,1.0s,baz=257,slow=6.3,SNR=7.8							
NVAR				LR		LR	09 29 36.8	
	comp=Z,62nm,18.9s,baz=268,slow=32							
	comp=Z,5.7nm,0.7s							
NVAR	Mina Array Bea	93.92	52	P		P	08 51 44.0	+1.0
CWC	Cottonwood Cre	93.95	54	P		P	08 51 44.0	+0.8
	baz=266							
BFSC	Mount Baldy Ra	94.14	56	P		P	08 51 44.8	+0.8
	baz=266							
LRMC	Laurel Mtn Rad	94.20	55	P		P	08 51 45.4	+1.1
	baz=266							
MPMC	Manual Prospec	94.40	54	P		P	08 51 46.4	+1.1
	baz=266							
GRAC	Grapevine Rang	94.56	53	P		P	08 51 47.2	+1.4
	baz=266							
GSC	Goldstone, Bar	94.91	55	P		P	08 51 48.5	+1.0
	baz=266							
MONP2	Monument Peak	95.08	58	P		P	08 51 49.1	+0.7
	baz=266							
PFO	Pinyon Flats O	95.09	57	LR		LR	09 26 14.2	
	comp=Z,101nm,21.7s,baz=233,slow=30							
PFO	Pinyon Flats O	95.09	57	P		P	08 51 49.4	+1.0
	baz=266							
NEW	Newport	95.35	42	LR		LR	09 31 17.6	
	comp=Z,90nm,18.5s,baz=246,slow=33							
NEW	Newport	95.35	42	P		P	08 51 49.5	+0.4
	baz=267							
SHOC	Shoshone, Teco	95.37	55	P		P	08 51 50.1	+0.6
	baz=267							
TPNV	Topopah Spring	95.45	54	P		P	08 51 50.5	+0.4
	baz=267							
GMRC	Granite Mounta	95.82	56	P		P	08 51 52.1	+0.4
	baz=267							
GEYT	Alibeck	95.89	307	LR		LR	09 37 23.7	
	comp=Z,40nm,19.9s,baz=112,slow=37							
BC3	Big Chuckawall	95.93	57	P		P	08 51 52.5	+0.3
	baz=267							
R11A	Troy Canyon, C	96.04	52	P		P	08 51 53.1	+0.4
	baz=268							
ARU	Arti	96.17	326	LR		LR	09 35 06.1	
	comp=Z,62nm,21.4s,baz=94,slow=35							
IRM	Iron Mountain	96.21	56	P		P	08 51 54.0	+0.6
	baz=267							
ELK	Elko	96.41	50	LR		LR	09 28 19.8	
	comp=Z,62nm,21.0s,baz=246,slow=31							
YKA	Yellowknife Ar	96.98	28	P		P	08 51 56.5	+0.3
	comp=Z,1.1nm,0.7s,baz=269,slow=5.0,SNR=4.4							
YKA				LR		LR	09 32 15.7	
	comp=Z,46nm,19.4s,baz=272,slow=33							
	comp=Z,1.1nm,0.7s							
HLID	Hailey	97.10	47	P		Pdif	08 51 57.7	+0.3
	baz=269							
BOZ	Bozeman (W)	99.09	45	P		Pdif	08 52 06.6	+0.4
	baz=271							
WUAZ	Wupatki	99.35	55	P		Pdif	08 52 07.9	+0.2
	baz=270							
TROLL	Troll, Antarti	99.79	189	Pdiff		Pdif	08 52 08.4	-0.4
BW06	Boulder Array	100.66	48	P		Pdif	08 52 13.5	+0.1
	baz=272							
PDAR	Pinedale Array	100.66	48	P		Pdif	08 52 13.4	+0.1
	comp=Z,1.0nm,0.5s,baz=215,slow=1.5,SNR=14							
O20A	White River Ci	101.75	50	P		Pdif	08 52 18.7	+0.4
	baz=272							
S22A	4UR Ranch, Cre	102.96	53	P		Pdif	08 52 24.0	+0.3
	baz=273							
N23A	Red Feather La	103.45	49	P		Pdif	08 52 26.3	+0.4
	baz=274							
SDCO	Great Sand Dun	104.01	53	P		Pdif	08 52 29.0	+0.6
	baz=274							
RSSD	Black Hills	104.57	46	P		Pdif	08 52 30.9	+0.2
	baz=276							
ARCES	ARCESS Array B	107.26	343	PKiKP		PKiKP	08 56 50.6	+0.4
	comp=Z,1.3nm,0.5s,baz=67,slow=1.7,SNR=15							
ARCES	ARCESS Array B	107.26	343			PKiKP	08 56 49.9	-0.4
ECSD	EROS Data Cent	109.92	46	P		PKiKP	08 56 56.2	+0.1
	baz=282							
FINES	FINESS Array B	111.21	335	PKiKP		PKiKP	08 56 57.7	-0.2
	comp=Z,1.4nm,0.6s,baz=85,slow=4.5,SNR=5.8							
EYMN	Ely	112.36	40	P		PKiKP	08 57 01.0	+0.4
	baz=287							
U40A	Yellville	114.21	53	P		PKiKP	08 57 04.7	+0.3
	baz=281							
AKASG	Malin Array Be	114.28	324	PKP		PKPdf	08 57 03.6	-0.4
	comp=Z,0.8nm,0.4s,baz=52,slow=2.4,SNR=5.9							
BRTR	Keskin Array B	114.70	311	PKP		PKPdf	08 57 05.0	-0.4
	comp=Z,1.3nm,0.7s,baz=116,slow=2.9,SNR=7.7							
W41B	Gary Mavity, V	114.92	54	P		PKiKP	08 57 05.9	+0.1
	baz=281							
NB2	NORSAR Subarra	117.21	339	PKPdf		PKPdf	08 57 08.2	-1.3
	comp=Z,1.8nm,0.8s,baz=44,slow=1.9							
NOA	NORSAR Array B	117.21	339	PKP		PKPdf	08 57 08.9	-0.6
	comp=Z,1.5nm,0.6s,baz=48,slow=1.9,SNR=9.3							
OXF	Oxford	117.34	54	P		PKiKP	08 57 10.3	-0.2
	baz=283							
SFIN	Lafayette	117.62	47	P		PKiKP	08 57 10.9	+0.1
	baz=287							
WVT	Waverly	118.22	52	P		PKiKP	08 57 12.0	-0.2
	baz=284							
O48B	Farmland	119.07	47	P		PKiKP	08 57 13.7	0.0
	baz=289							
P49A	Miami Univ. Ec	119.62	47	P		PKiKP	08 57 14.7	0.0
	baz=289							
LRAL	Lakeview Retre	119.63	55	P		PKPdf	08 57 14.6	-0.3
	baz=283							
BRAL	Brewton	120.00	57	P		PKPdf	08 57 15.3	-0.4
	baz=282							
ACSO	Alum Creek Sta	120.64	46	P		PKPdf	08 57 16.5	-0.2
	baz=290							
TZTN	Tazewell	121.43	50	P		PKPdf	08 57 17.5	-0.8
	baz=288							
P52A	Corning	121.47	47	P		PKPdf	08 57 17.9	-0.3
	baz=291							
KRLC	Kraliky	121.62	327	*e*PKPDF		PKPdf	08 57 18.1	-0.2
DPC	Dobruska-Polom	121.71	328	*e*PKPDF		PKiKP	08 57 18.5	-0.1
O53A	New Philadelph	121.90	46	P		PKPdf	08 57 18.7	-0.3
	baz=292							
GOGA	Godfrey	122.40	54	P		PKPdf	08 57 19.6	-0.6
	baz=286							
BRG	Berggiesshubel	122.64	329	*e*PKP		PKPdf	08 57 19.4	-0.7
BRG				Amp			08 57 21.3	
	comp=Z,8.9nm,1.0s							
CLL	Collm	122.85	330	*i* PKPdf		PKPdf	08 57 20.4	-0.1
	comp=Z,9.0nm,0.9s							
RONA	Rosalia, Austr	123.18	325	*e*P		PKPdf	08 57 21.3	0.0
	comp=Z,2.0nm,0.7s							
CONA	Conrad Observa	123.30	326	*e*P		PKPdf	08 57 21.6	-0.1
	comp=Z,4.2nm,0.7s							
KMSC	Kings Mountain	123.57	51	P		PKPdf	08 57 22.1	-0.4
	baz=289							
BLA	Blacksburg	123.58	49	P		PKPdf	08 57 22.2	-0.3
	baz=291							
CKRC	Cesky Krumlov	123.66	327	*e*PKPDF		PKiKP	08 57 22.8	+0.3
KHC	Kasperske Hory	123.87	328	*e*PKPDF		PKPdf	08 57 22.3	-0.3
GERES	GERESS Array B	123.97	327	PKP		PKiKP	08 57 23.1	-0.1
	comp=Z,3.7nm,0.6s,baz=64,slow=3.1,SNR=31							
GERES	GERESS Array B	123.97	327			PKiKP	08 57 23.3	+0.1
SSPA	Standing Stone	124.08	44	P		PKPdf	08 57 23.1	-0.1
	baz=295							
GROS	Grobnik	124.31	324	*e*PKPbc		PKPdf	08 57 23.1	-0.5
LONY	Lake Ozonia	124.40	38	P		PKPdf	08 57 23.7	-0.1
	baz=300							
SOKA	Soboth	124.46	325	*i* P		PKPdf	08 57 23.2	-0.7
	comp=Z,5.8nm,1.2s							
SOKA				*e*P		pPKPdf	08 57 42.3	-4.1
	comp=Z,1.8nm,0.6s							
VISS	Visnje	125.05	324	*e*PKPbc		PKiKP	08 57 25.1	-0.2
KBA	Koelnbreinsper	125.19	326	*e*P		PKPdf	08 57 24.3	-1.1
	comp=Z,2.7nm,0.6s							
CEY	Cerknica	125.33	324	*e*PKPbc		PKPdf	08 57 25.5	0.0
ABTA	Abfaltersbach	125.85	326	*i* P		PKPdf	08 57 25.6	-1.0
	comp=Z,13nm,1.4s							
WATA	Walderalm	126.01	327	*e*P		PKPdf	08 57 26.5	-0.4
	comp=Z,4.8nm,0.6s							
WTTA	Wattenberg	126.02	327	*e*P		PKPdf	08 57 26.9	-0.1
	comp=Z,20nm,1.5s							
LBNH	Lisbon	126.23	38	P		PKiKP	08 57 27.4	-0.3
	baz=303							
MOTA	Moosalm	126.26	327	*e*P		PKPdf	08 57 26.8	-0.7
	comp=Z,7.6nm,0.7s							
SQTA	Sankt Quirin	126.28	327	*e*P		PKPdf	08 57 27.0	-0.4
	comp=Z,7.9nm,0.9s							
RETA	Reutte	126.36	328	*e*P		PKPdf	08 57 27.1	-0.4
	comp=Z,6.4nm,1.2s							
BTNL	Ternell	126.59	333	*d*PKiKP		PKiKP	08 57 28.3	0.0
MEM	Membach	126.64	333	*d*PKiKP		PKiKP	08 57 28.4	+0.2
FETA	Feichten	126.66	327	*i* P		PKPdf	08 57 28.1	-0.2
	comp=Z,9.5nm,1.2s							
FETA				*e*P		pPKPdf	08 57 46.0	-4.8
	comp=Z,5.5nm,1.0s							
L61B	Northampton	126.70	40	P		PKiKP	08 57 28.4	-0.3
	baz=301							
BHOU	Houvegnez	126.82	333	*d*PKiKP		PKiKP	08 57 29.4	+0.7
DAVA	Damuels	126.95	328	*e*P		PKPdf	08 57 28.6	-0.2
	comp=Z,6.7nm,0.8s							
BCLA	Clavier	127.09	333	*d*PKiKP		PKiKP	08 57 28.9	-0.3
BMRD	Maredsous	127.41	333	*d*PKiKP		PKiKP	08 57 30.1	+0.3
DOU	Dourbes	127.64	333	*d*PKiKP		PKiKP	08 57 30.7	+0.4
KEST	Kesra	133.95	316	PKP		PKiKP	08 57 43.6	0.0
	comp=Z,7.7nm,1.0s,baz=255,slow=2.2,SNR=4.5							
KEST	Kesra	133.95	316			PKiKP	08 57 43.4	-0.3
LPAZ	La Paz	135.38	120	PKP		PKPdf	08 57 46.3	+0.1
	comp=Z,1.5nm,0.6s,baz=201,slow=1.4,SNR=6.7							
LPAZ	La Paz	135.38	120			PKPdf	08 57 45.8	-0.4
CPUP	Villa Florida	137.82	140	SKPbc		SKPbc	09 01 18.2	+1.4
	comp=Z,2.3nm,0.9s,baz=213,slow=2.4,SNR=2.9							
ESDC	Sonseca Array	139.44	330	SKPbc		SKPbc	09 01 22.2	+1.2
	comp=Z,0.2nm,0.5s,baz=43,slow=2.4,SNR=4.5							
TORD	Torodi Ar. Bea	149.03	286	PKP		PKPdf	08 58 09.1	-0.4
	comp=Z,52nm,0.9s,baz=33,slow=2.4,SNR=39							
TORD				PKPbc		PKPbc	08 58 13.4	-0.2
	comp=Z,58nm,0.7s,baz=24,slow=1.4,SNR=211							
TORD				pPKPbc		pPKPdf	08 58 31.4	-0.5
	comp=Z,11nm,0.7s,baz=73,slow=2.5,SNR=4.1							
TORD	Torodi Ar. Bea	149.03	286			PKPbc	08 58 13.6	-0.1
TORD				PKPab		PKPab	08 58 18.8	+0.8
BDFB	Brasilia	151.51	138	PKPbc		PKPbc	08 58 19.6	-0.1
	comp=Z,3.7nm,0.6s,baz=283,slow=4.6,SNR=5.8							
BDFB	Brasilia	151.51	138	PKPdf		PKPdf	08 58 13.1	-0.4
BDFB						PKPbc	08 58 19.8	0.0
DBIC	Dimbokro	156.16	274	PKP		PKPdf	08 58 21.2	+1.2
	comp=Z,8.7nm,0.9s,baz=88,slow=5.5,SNR=3.0							
DBIC				PKPab		PKPab	08 58 47.5	-0.5
	comp=Z,14nm,0.9s,baz=101,slow=4.6,SNR=5.0							

NIED ***21*** *08:45:23.1,32.70N×130.60E,h10km,MW3.7,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-3.53; $M_{\theta\theta}$3.49; $M_{\phi\phi}$0.04; $M_{r\theta}$1.51; $M_{\theta\phi}$0.61; $M_{\phi r}$-0.49; Fault plane solution: $M_0$3.90000×10^{14} NP1:ϕ_s70.00000°, δ35.00000°,λ-108.00000°. NP2:ϕ_s271.00000°, δ57.00000°,λ-78.00000°.*

JMA 21 08:45:23.1±0.0,32.70N±0.09×130.6E±0.1,h10km, MV3.5/20,NW KUMAMOTO PREF,Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIU3	Izumi3	0.23	130	*e*P	Pg	08 45 27.9	0.0
JIU3				*e*S	Sg	08 45 31.2	+0.1
JTA	Tamana	0.27	348	*e*P	Pg	08 45 28.8	+0.2
JTA				*e*S	Sg	08 45 32.7	+0.4
JZO	Okuchi	0.56	180	*i* P	Pg	08 45 34.0	0.0
JZO				S	Sg	08 45 41.7	+0.3
JTZ	Takazaki	0.90	153	*i* P	Pb	08 45 40.7	0.0
JTZ				S	Sb	08 45 52.8	0.0

KRSC 21 08:57:11.1±2.0,50.25N×157.23E,h48km±23km,ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	0.83	302	*e*P	Pn	08 57 25.4	-1.1
SKR				*e*S	Sn	08 57 35.5	-2.2
PAU	Pauzhetka	1.25	348	*e*P	Pn	08 57 33.3	+1.2
PAU				*e*S	Sn	08 57 49.2	+1.4
KDTR	Khodutka, Kamc	1.65	19	*e*P	Pn	08 57 39.5	+1.9
KDTR				*e*S	Sn	08 57 59.7	+2.1
ASAK	Asacha	2.18	11	*e*P	Pn	08 57 48.4	+3.5
ASAK				S	Sn	08 58 14.5	+3.8
MTVR	Mutnovka	2.32	15	*e*P	Pn	08 57 49.6	+2.8
MTVR				S	Sn	08 58 18.0	+3.8
RUS	Russkaya	2.33	20	*e*P	Pn	08 57 49.7	+2.8
RUS				*e*S	Sn	08 58 16.4	+2.1
GRL	Gorelyy	2.37	13	*e*P	Pn	08 57 51.3	+3.8
KRMR	Karymshinskiy	2.65	12	*e*P	Pn	08 57 55.0	+3.8
KRMR				S	Sn	08 58 27.2	+5.2
PET	Petropavlovsk	2.92	17	*e*P	Pn	08 57 58.6	+3.7
PET				S	Sn	08 58 32.4	+3.7
UGLR	Uglovaya	3.13	18	*e*P	Pn	08 58 02.2	+4.3
AVH	Avacha	3.16	17	*e*P	Pn	08 58 02.5	+4.1

MSVF Nonsavu 4.32 314 P **P** 09 05 51.1 +2.4
294nm,0.6s,baz=174,slow=21,SNR=229
MSVF Nonsavu 4.32 314 P **P** 09 05 51.3 +2.6
MSVF Nonsavu 4.32 314 P **P** 09 05 51.3 +2.6
DGTI Dogotuki 4.70 341 P **P** 09 05 53.5 +2.1
NIUE Niue 8.40 80 P **P** 09 06 25.1 +1.1
baz=8.3,SNR=3.9
NIUE Niue 8.40 80 P **P** 09 06 24.8 +0.9
RAO Raoul Island 8.47 175 P **P** 09 06 24.0 -0.4
177nm,0.3s,baz=41,slow=15,SNR=7.1
RAO S **S** 09 08 03.4 -2.4
213nm,0.3s,baz=73,slow=20,SNR=3.0
RAO Raoul Island 8.47 175 P **P** 09 06 24.0 -0.4
AFI Afiamalu 9.48 45 P **P** 09 06 33.4 -1.1
105nm,0.5s,baz=300,slow=8.1,SNR=23
AFI S **S** 09 08 19.2 -5.1
94nm,0.6s,baz=233,slow=20,SNR=3.7
AFI Afiamalu 9.48 45 P **P** 09 06 33.3 -1.3
AFI Afiamalu 9.48 45 P **P** 09 06 33.5 -1.1
FUNA Funafuti 12.35 350 P **P** 09 06 60.0 -3.1
MARNC Mare, Loyalty 12.43 264 P **P** 09 07 04.2 +0.4
PINNC Pines Island, 13.03 259 P **P** 09 07 09.8 0.0
LIFNC LIFOU 13.18 267 P **P** 09 07 10.8 -0.6
OUENC Ouen Island, N 13.57 260 P **P** 09 07 15.2 -0.2
DZM Mont Dzumac 13.92 262 P **P** 09 07 18.9 -0.1
12nm,0.6s,baz=84,slow=19,SNR=22
DZM S **S** 09 09 40.5 -4.3
3.9nm,0.8s,baz=77,slow=21,SNR=1.2
ONTNC Ouen Toro 13.92 261 P **P** 09 07 18.5 -0.4
NOUC Port Laguerre 14.05 262 P **P** 09 07 21.2 +1.1
OUZ Omahuta 15.92 204 P **P** 09 07 38.5 +1.4
KOUNC Koumac, New Ca 15.95 268 P **P** 09 07 38.1 +0.4
KOUNC Koumac, New Ca 15.95 268 P **P** 09 07 40.9 +3.2
RAR Rarotonga 17.66 95 P **P** 09 07 53.9 +0.6
24nm,0.9s,baz=255,slow=7.0,SNR=5.0
RAR Rarotonga 17.66 95 IAmb IAmb 09 07 55.6
comp=Z,43nm,1.1s
URZ Urewera 17.80 191 S **S** 09 10 41.2 -6.6
comp=Z,5.8nm,0.5s,baz=18,slow=20,SNR=1.5
URZ Urewera 17.80 191 P **P** 09 07 54.2 -0.1
URZ Urewera 17.80 191 P **P** 09 07 54.9 +0.5
KNTN Kanton 19.13 22 P **P** 09 08 06.6 -0.2
QRZ Quartz Range 21.35 199 P **P** 09 08 27.5 +1.2
TUWZ Tuamarina 21.52 195 P **P** 09 08 27.6 -0.3
THZ Tophouse 22.11 197 P **P** 09 08 33.7 +0.5
LTZ Lake Taylor 23.23 197 P **P** 09 08 42.9 -0.2
LTZ IAmb IAmb 09 08 49.4
comp=Z,28nm,1.0s
TARA Tarawa 23.48 338 P **P** 09 08 45.3 -0.3
OXZ Oxford 23.79 197 P **P** 09 08 47.3 -0.8
MQZ McQueen's Vall 23.99 196 P **P** 09 08 49.4 -0.3
MQZ IAmb IAmb 09 08 49.5
comp=Z,37nm,1.1s
FOZ Fox Glacier 24.65 200 P **P** 09 08 56.5 +0.9
MLZ Mavora Lakes 26.84 201 P **P** 09 09 16.2 +1.3
MLZ IAmb IAmb 09 09 17.6
comp=Z,28nm,0.7s
WHZ Wether Hill Ro 27.36 201 P **P** 09 09 21.2 +1.9
EIDS Eidsvold 28.16 255 P **P** 09 09 26.8 +0.1
baz=28,SNR=6.5
EIDS Eidsvold 28.16 255 P **P** 09 09 27.6 +0.9
EIDS IAmb IAmb 09 09 28.3
comp=Z,9.6nm,0.7s
EIDS Eidsvold 28.16 255 P **P** 09 09 28.4 +1.7
ARMA Armidale 28.38 244 P **P** 09 09 28.8 +0.1
baz=28,SNR=5.9
ARMA Armidale 28.38 244 P **P** 09 09 28.8 +0.1
ARMA IAmb IAmb 09 09 31.2
comp=Z,20nm,1.0s
RMQ Roma 30.32 253 P **P** 09 09 45.8 +0.5
baz=30,SNR=10
RMQ Roma 30.32 253 P **P** 09 09 46.8 +1.5
CTA Charters Tower 32.83 265 P **P** 09 10 07.6 +0.9
CTAO Charters Tower 32.83 265 P **P** 09 10 07.2 +0.5
CTAO Charters Tower 32.83 265 P **P** 09 10 07.6 +0.9
CMSA Cobar Meteorol 33.60 244 P **P** 09 10 13.9 +0.9
baz=34,SNR=18
CMSA Cobar Meteorol 33.60 244 P **P** 09 10 14.1 +1.1
QLP Quilpie 34.37 253 P **P** 09 10 20.1 +0.6
baz=34,SNR=8.7
QLP Quilpie 34.37 253 P **P** 09 10 20.5 +1.0
PMG Port Moresby 34.79 284 P **P** 09 10 22.9 -0.2
PMG Port Moresby 34.79 284 P **P** 09 10 23.7 +0.6
PMG Port Moresby 34.79 284 P **P** 09 10 23.9 +0.8
MTSU Mount Surprise 34.95 268 P **P** 09 10 23.9 -0.5
baz=35,SNR=84
MTSU Mount Surprise 34.95 268 P **P** 09 10 25.6 +1.2
TOO Toolangi 35.23 234 P **P** 09 10 26.8 +0.3
TOO IAmb IAmb 09 10 35.0
comp=Z,35nm,1.4s
PATS Pohnpei 35.55 318 P **P** 09 10 29.7 +0.3
TAU Tasmania Unive 35.99 224 P **P** 09 10 31.6 -1.0
COEN Coen 36.97 274 P **P** 09 10 40.8 -0.3
baz=37,SNR=21
COEN Coen 36.97 274 P **P** 09 10 40.1 -0.9
COEN Coen 36.97 274 P **P** 09 10 42.2 +1.2
STKA Stephens Creek 37.10 244 P **P** 09 10 43.0 +1.2
comp=Z,7.3nm,0.5s,baz=87,slow=11,SNR=26
comp=Z,7.3nm,0.5s
STKA Stephens Creek 37.10 244 P **P** 09 10 41.8 -0.1
baz=37,SNR=19
STKA Stephens Creek 37.10 244 P **P** 09 10 42.4 +0.5
STKA Stephens Creek 37.10 244 P **P** 09 10 43.1 +1.2
INKA Innaminka 37.51 251 P **P** 09 10 46.4 +1.1
MANU Manus Island 37.98 295 P **P** 09 10 50.1 +0.8
QIS Mount Isa 38.96 263 P **P** 09 10 56.9 -0.2
baz=39,SNR=8.4
QIS Mount Isa 38.96 263 P **P** 09 10 57.1 0.0
HTT Hallett 39.54 242 P **P** 09 11 02.4 +0.8
baz=40,SNR=9.2
LCRK Leigh Creek 39.85 247 P **P** 09 11 04.9 +0.9
BBOO Buckleboo 41.86 244 P **P** 09 11 20.4 +0.5
baz=42,SNR=34
BBOO Buckleboo 41.86 244 P **P** 09 11 19.9 0.0
BBOO IAmb IAmb 09 11 21.3
comp=Z,18nm,0.7s
OOD Oodnadatta 41.99 251 P **P** 09 11 22.5 +1.5
WAKE Wake Island 42.32 339 P **P** 09 11 23.5 0.0
MULG Mulgathing 43.43 248 P **P** 09 11 32.8 +0.6
WR0 Warramunga Arr 43.75 262 P **P** 09 11 34.7 -0.1
WR0 IAmb IAmb 09 11 36.3
comp=Z,70nm,1.4s
AS31 Alice Springs 43.84 257 P **P** 09 11 35.9 +0.4
AS31 IAmb IAmb 09 11 37.1
comp=Z,25nm,1.1s
ASAR Alice Springs 43.84 257 P **P** 09 11 35.8 +0.3
WB0 Warramunga Arr 43.91 263 P **P** 09 11 35.8 -0.3
WB2 Warramunga Arr 43.92 262 P **P** 09 11 35.4 -0.7
WRAB Tennant Creek 43.93 262 P **P** 09 11 35.8 -0.4
WRAB Tennant Creek 43.93 262 P **P** 09 11 36.3 +0.1
WRA Warramunga Arr 43.94 262 P **P** 09 11 35.9 -0.3
comp=Z,27nm,0.3s,baz=98,slow=7.9,SNR=1001
WRA ScP **ScP** 09 16 03.9 0.0
comp=Z,0.7nm,0.6s,baz=91,slow=3.7,SNR=3.3
WRA S **S** 09 17 21.6 -4.0
comp=Z,7.0nm,0.9s,baz=101,slow=12,SNR=16
comp=Z,27nm,0.3s
WRA Warramunga Arr 43.94 262 P **P** 09 11 35.0 -1.3
GENI Genyem 43.97 289 P **P** 09 11 37.5 +1.0
comp=Z,140nm,1.2s
GENI Genyem 43.97 289 P **P** 09 11 37.7 +1.2
SMPI Sarmi 45.54 289 P **P** 09 11 48.7 +0.2
comp=Z,2µmcomp=Z,38nm,1.3s
MLH Mauna Loa 46.06 31 P **P** 09 11 53.5 +0.9
HMH Humu'ula Sheep 46.11 31 P **P** 09 11 53.9 +0.9
HPAH Hawaii Prepara 46.37 30 P **P** 09 11 55.9 +1.2
HON Honolulu 46.46 27 P **P** 09 11 55.2 -0.1
KIP Kipapa 46.54 27 P **P** 09 11 56.4 +0.5
KIP IAmb IAmb 09 12 21.7
comp=Z,46nm,1.1s
KDU Kakadu 47.32 272 P **P** 09 12 01.8 -0.2
baz=47,SNR=47
KDU Kakadu 47.32 272 P **P** 09 12 02.0 +0.1
BAKI Biak 48.22 288 P **P** 09 12 09.2 +0.6
comp=Z,77nm,1.4s
MTN Manton Dam 48.53 271 P **P** 09 12 10.6 -0.4
baz=48,SNR=32
MTN Manton Dam 48.53 271 P **P** 09 12 10.7 -0.3
MTN Manton Dam 48.53 271 P **P** 09 12 11.1 +0.2
FORT Forrest 48.60 247 P **P** 09 12 11.3 0.0
baz=49,SNR=11
FORT Forrest 48.60 247 P **P** 09 12 11.1 -0.2
WRKA Warakurna 48.78 254 P **P** 09 12 12.9 +0.2
baz=49,SNR=132
WRKA Warakurna 48.78 254 P **P** 09 12 12.9 +0.2
baz=50,SNR=17
KNRA Kununurra 50.01 267 P **P** 09 12 21.8 +0.1
KNRA IAmb IAmb 09 12 22.9
comp=Z,39nm,0.8s
KNRA Kununurra 50.01 267 P **P** 09 12 22.2 +0.5
FAKI Fak Fak 50.95 284 P **P** 09 12 28.6 +0.1
FAKI IAmb IAmb 09 12 29.6
comp=Z,57nm,1.2s
FAKI Fak Fak 50.95 284 P **P** 09 12 28.7 +0.1
comp=Z,41nm,1.3s
FAKI Fak Fak 50.95 284 P **P** 09 12 29.3 +0.7
SWI Sorong 52.70 285 P **P** 09 12 41.7 +0.5
comp=Z,2µmcomp=Z,190nm,1.0s
AAI Ambon 54.35 281 P **P** 09 12 52.2 -0.6
comp=Z,84nm,0.8s
NLAI Namlea 55.53 281 P **P** 09 13 01.4 +0.4
comp=Z,1µmcomp=Z,79nm,1.0s
LBMI Labuha 56.20 284 P **P** 09 13 06.3 +0.7
comp=Z,64nm,0.7s
TNTI Ternate 56.92 285 P **P** 09 13 10.3 -0.2
TNTI IAmb IAmb 09 13 11.3
comp=Z,112nm,1.3s
PSA00 Pilbara Seismi 56.99 257 P **P** 09 13 10.8 -0.1
PSA00 IAmb IAmb 09 13 12.2
comp=Z,30nm,0.8s
PSA00 Pilbara Seismi 56.99 257 P **P** 09 13 11.0 +0.1
SANI Sanana 57.01 281 P **P** 09 13 10.9 -0.3
comp=Z,48nm,1.0s
SANI Sanana 57.01 281 P **P** 09 13 13.0 +1.8
MBWA Marble Bar 57.18 258 P **P** 09 13 11.9 -0.3
MBWA IAmb IAmb 09 13 13.0
comp=Z,28nm,0.8s
MBWA Marble Bar 57.18 258 P **P** 09 13 12.3 +0.1
KLBR Kellerberrin 57.37 245 P **P** 09 13 13.5 +0.2
baz=57,SNR=8.4
KLBR Kellerberrin 57.37 245 P **P** 09 13 14.3 +1.0
SBA Scott Base 57.56 184 P **P** 09 13 16.2 +2.4
SBA IAmb IAmb 09 13 18.0
comp=Z,48nm,1.1s
VNDA Vanda 57.59 185 P **P** 09 13 15.8 +1.9
comp=Z,4.0nm,0.4s,baz=7.7,slow=8.1,SNR=34
VNDA ScP **ScP** 09 17 02.1 +0.4
comp=Z,3.2nm,1.1s,baz=6.9,slow=7.2,SNR=4.5
comp=Z,4.0nm,0.4s
VNDA Vanda 57.59 185 P **P** 09 13 16.0 +2.0
NWAO Narrogin (SRO) 57.68 244 P **P** 09 13 15.6 +0.2
NWAO IAmb IAmb 09 13 31.3
comp=Z,49nm,1.4s
MMRI Maumere 58.13 273 P **P** 09 13 18.8 0.0
MMRI IAmb IAmb 09 13 19.5
comp=Z,40nm,0.8s
BLDU Ballidu 58.36 246 P **P** 09 13 19.9 -0.2
baz=58,SNR=5.8
EDFI Ende, Flores 58.61 272 P **P** 09 13 21.7 -0.3
comp=Z,293nmcomp=Z,25nm,1.0s
MUN Mundaring 58.64 245 P **P** 09 13 22.5 +0.7
baz=59,SNR=5.8
MORW Morawa 59.14 248 P **P** 09 13 25.6 +0.3
baz=59,SNR=11
MORW Morawa 59.14 248 P **P** 09 13 25.3 0.0
LUWI Luwuk 60.36 281 P **P** 09 13 33.8 +0.2
LUWI IAmb IAmb 09 13 35.4
comp=Z,80nm,1.0s
LUWI Luwuk 60.36 281 P **P** 09 13 34.1 +0.5
BSSI Bau Bau, Buton 60.60 275 P **P** 09 13 35.6 +0.5
comp=Z,24nm,1.4s
JCJ Chichijima 60.84 320 P **P** 09 13 36.5 +0.1
JCJ IAmb IAmb 09 13 36.6
comp=Z,25nm,0.5s
APSI Ampana 61.45 281 P **P** 09 13 41.5 +0.8
comp=Z,510nmcomp=Z,51nm,1.0s
BNSI Bone 61.57 276 P **P** 09 13 42.1 +0.7
comp=Z,38nm,1.2s
GIRL Giralia 61.87 255 P **P** 09 13 44.0 +0.7
PLAI Plampang 62.24 271 P **P** 09 13 45.4 -0.4
comp=Z,844nmcomp=Z,88nm,1.0s
PLAI Plampang 62.24 271 P **P** 09 13 46.1 +0.3
TOLI2 Tolitoli 63.04 282 P **P** 09 13 49.8 -1.2
TOLI2 IAmb IAmb 09 13 53.7
comp=Z,23nm,0.5s
TOLI2 Tolitoli 63.04 282 P **P** 09 13 52.3 +1.3
CASY Casey 63.45 205 P **P** 09 13 53.1 +0.5
CASY IAmb IAmb 09 13 54.8
comp=Z,23nm,1.1s
MPSI Mapaga 63.54 281 P **P** 09 13 54.0 -0.2
comp=Z,2µmcomp=Z,44nm,0.8s
JAGI Jajag, Banyuwa 65.75 270 P **P** 09 14 06.5 -1.5
JAGI IAmb IAmb 09 14 08.0
comp=Z,40nm,1.0s
JAGI Jajag, Banyuwa 65.75 270 P **P** 09 14 06.7 -1.3
comp=Z,42nm,1.0s
JHJ2 Mitune 66.64 323 P **P** 09 14 13.6 +0.5
MYLDM Lahad Datu 66.79 285 P **P** 09 14 12.5 -2.0
MYLDM IAmb IAmb 09 14 21.7
comp=Z,44nm,1.3s
PCJI Pacitan 68.62 269 P **P** 09 14 25.8 +0.2
comp=Z,2µmcomp=Z,121nm,0.5s
JYT Yasato 68.75 325 P **P** 09 14 25.6 -0.2
JYT IAmb IAmb 09 14 27.5
comp=Z,21nm,0.8s
KKM Kota Kinabalu 69.22 285 P **P** 09 14 29.5 +0.3
KKM IAmb IAmb 09 14 31.0
comp=Z,29nm,0.9s
KKM Kota Kinabalu 69.22 285 P **P** 09 14 29.9 +0.6
QSPA South Pole Qui 69.30 180 P **P** 09 14 29.6 +0.8
QSPA IAmb IAmb 09 14 31.2
comp=Z,48nm,1.1s
UGM Wanagama 69.33 269 P **P** 09 14 29.6 -0.3
UGM Wanagama 69.33 269 P **P** 09 14 29.8 0.0
comp=Z,41nm,0.6s
JMM Marumori 69.67 327 P **P** 09 14 31.4 +0.1
JMM IAmb IAmb 09 14 33.0
comp=Z,42nm,1.2s
SMRI Semarang 69.69 270 P **P** 09 14 31.9 0.0
JGF Kuroka 69.85 323 P **P** 09 14 31.9 -0.6
JGF IAmb IAmb 09 14 33.4
comp=Z,11nm,0.7s
MJAR Matsushiro Arr 70.06 324 P **P** 09 14 32.5 -1.2
comp=Z,8.4nm,0.6s,baz=105,slow=11,SNR=32
comp=Z,8.4nm,0.6s
MJAR Matsushiro Arr 70.06 324 P **P** 09 14 33.9 +0.2
MAJO Matsushiro 70.06 324 P **P** 09 14 33.6 0.0
MAJO IAmb IAmb 09 14 35.0
comp=Z,15nm,0.7s
MAJO Matsushiro 70.06 324 P **P** 09 14 34.5 +0.8
MJB9 Matsu-Tunnel 70.06 324 P **P** 09 14 34.0 +0.3
MJB9 IAmb IAmb 09 14 35.0
comp=Z,15nm,0.7s
KPJI Karang Pucung 71.00 269 P **P** 09 14 39.7 0.0
comp=Z,32nm,0.6s
JSD Sado 71.12 325 P **P** 09 14 40.1 +0.3
JSD IAmb IAmb 09 14 42.4
comp=Z,18nm,0.6s
JSU Suzuyama 71.27 316 P **P** 09 14 41.2 +0.3
JSU IAmb IAmb 09 14 42.6
comp=Z,20nm,0.8s
SBUM Sibu 71.43 280 P **P** 09 14 41.0 -1.2
SBUM IAmb IAmb 09 14 44.4
comp=Z,17nm,1.1s
AMKA Amchitka 71.86 359 P **P** 09 14 43.6 -0.1
JHS Saijyo 71.90 320 P **P** 09 14 45.3 +0.8
JNU Nakatsue 72.04 317 P **P** 09 14 45.2 -0.1
JNU IAmb IAmb 09 14 45.5
comp=Z,22nm,0.7s
KIWB Kanaga Island 72.32 1 P **P** 09 14 46.8 +0.3
ADK Adak 72.36 1 P **P** 09 14 46.7 +0.1
YOJ Yonaguni jima 72.38 306 P **P** 09 14 47.6 +0.2
KSM Kuching 72.82 278 P **P** 09 14 50.9 +0.7
KSM IAmb IAmb 09 14 52.1
comp=Z,29nm,0.7s
KSM Kuching 72.82 278 P **P** 09 14 51.4 +1.2
TWG Pinlang 73.00 303 P **P** 09 14 49.7 -1.3
YULB Yu-li 73.12 304 P **P** 09 14 50.9 -0.8
YULB IAmb IAmb 09 14 52.0
comp=Z,16nm,0.6s
NACB Ninganchiao 73.31 305 P **P** 09 14 52.4 -0.3
NACB IAmb IAmb 09 14 53.5
comp=Z,31nm,0.7s
SMY Shemya 73.46 355 P **P** 09 14 52.9 0.0
TPUB Ta-pu 73.59 303 P **P** 09 14 53.6 -0.7
TPUB Ta-pu 73.59 303 P **P** 09 14 53.7 -0.7
SSLB Suanglung 73.60 304 P **P** 09 14 53.6 -0.8
SSLB Suanglung 73.60 304 P **P** 09 14 54.5 +0.1
JKA Kamikawa-asahi 73.66 332 P **P** 09 14 56.0 +1.7
JKA IAmb IAmb 09 14 57.6
comp=Z,32nm,1.1s
NIKH Nikolski High 73.93 6 P **P** 09 14 55.2 -0.3
UNV Unalaska Valle 75.05 7 P **P** 09 15 00.7 -1.1
UNV IAmb IAmb 09 15 01.9
comp=Z,26nm,0.6s
UNV Unalaska Valle 75.05 7 P **P** 09 15 00.3 -1.5
baz=192,SNR=5.5
YSS Yuzh-Sakhalins 75.86 334 P **P** 09 15 08.0 +1.6
PEA0B Petropavlovsk- 76.37 346 P **P** 09 15 09.1 -0.1
PEA0B IAmb IAmb 09 15 10.8
comp=Z,25nm,0.7s
PETK Petropavlovsk- 76.37 346 P **P** 09 15 08.0 -1.2
comp=Z,13nm,0.6s,baz=123,slow=7.3,SNR=27
comp=Z,13nm,0.6s
PETK Petropavlovsk- 76.37 346 P **P** 09 15 08.8 -0.4
FALS False Pass 76.45 9 P **P** 09 15 08.1 -1.3
baz=195
FALS False Pass 76.45 9 P **P** 09 15 09.2 -0.3
KSRS Korea Array 76.67 319 P **P** 09 15 12.1 +1.0
comp=Z,4.4nm,0.7s,baz=128,slow=6.0,SNR=23
comp=Z,4.4nm,0.7s
KSAR Wonju Array Be 76.69 319 P **P** 09 15 12.1 +0.8
SEHB SEOHWA 76.99 320 P **P** 09 15 13.6 +0.7
CHNA Chernabura Isl 77.05 11 P **P** 09 15 12.2 -0.6
baz=198
SDPT Sand Point 77.39 11 P **P** 09 15 14.1 -0.5
SDPT Sand Point 77.39 11 P **P** 09 15 13.6 -1.0
baz=197
S14K Fog Glacier 78.44 11 P **P** 09 15 19.9 -0.4
baz=198
CHIR Chirikof Islan 78.76 13 P **P** 09 15 21.8 -0.1
baz=202
USRK Ussuriysk Ar. 78.83 326 P **P** 09 15 24.1 +1.5
comp=Z,10nm,0.8s,baz=138,slow=3.4,SNR=25
comp=Z,10nm,0.8s
USA0B Ussuriysk Arra 78.83 326 P **P** 09 15 23.9 +1.3
USA0B IAmb IAmb 09 15 25.9
comp=Z,24nm,1.1s
BELA Belgrano 2 79.37 173 P **P** 09 15 25.1 +0.1
BELA IAmb IAmb 09 15 26.4
comp=Z,25nm,1.1s
NJ2 Nanjing 79.57 310 ⇓P **P** 09 15 27.6 +0.9
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
SII Sitkinak Islan 79.75 13 P **P** 09 15 27.3 +0.1
baz=203
R17K Ugashik Creek 80.30 12 P **P** 09 15 29.4 -0.5
baz=201
MDJ Mudanjiang 80.38 325 P **P** 09 15 31.8 +1.1
MDJ pmax pmax
comp=Z,17nm,0.7s
MDJ pmax pmax
comp=Z,160nm,3.9s
MDJ Mudanjiang 80.38 325 P **P** 09 15 32.0 +1.3
OHAK Old Harbor 80.56 14 P **P** 09 15 31.2 -0.1
baz=204
CWC Cottonwood Cre 80.68 45 P **P** 09 15 33.1 +0.5
baz=236
MPMC Manual Prospec 80.86 46 P **P** 09 15 34.0 +0.3
baz=236
YBH Yreka Blue Hor 80.90 39 P **P** 09 15 34.8 +1.2
J01E Myrtle Point 81.09 37 P **P** 09 15 36.0 +1.7
baz=231
MAW Mawson 81.09 200 P **P** 09 15 34.6 +0.5
comp=Z,4.3nm,0.5s,baz=148,slow=3.1,SNR=22
comp=Z,4.3nm,0.5s
MAW Mawson 81.09 200 P **P** 09 15 34.8 +0.7
baz=81,SNR=16
MAW Mawson 81.09 200 P **P** 09 15 34.4 +0.3
BEKR Beckworth 81.19 42 P **P** 09 15 35.6 +0.3
PNTR Pine Nut 81.21 42 P **P** 09 15 36.1 +0.7
Q16K King Salmon 81.22 11 P **P** 09 15 34.7 +0.1
baz=201,SNR=10
KDAK Kodiak Island 81.23 14 P **P** 09 15 34.9 +0.1
baz=205
L04D Klamath Falls 81.44 39 P **P** 09 15 37.0 +0.7
baz=232
GRAC Grapevine Rang 81.47 45 P **P** 09 15 37.1 +0.5
baz=236
FURC Furnace Creek, 81.51 46 P **P** 09 15 37.5 +0.8
baz=236
NVAR Mina Array Bea 81.66 44 P **P** 09 15 39.1 +1.4
comp=Z,1.2nm,0.6s,baz=228,slow=7.9,SNR=14
comp=Z,1.2nm,0.6s
NVAR Mina Array Bea 81.66 44 P **P** 09 15 38.5 +0.8
P17K Kvichak River 81.75 11 P **P** 09 15 37.1 -0.3
baz=201,SNR=13
NV11 Mina Array Sit 81.75 44 P **P** 09 15 39.6 +1.5
I03D Drain, OR 81.75 37 P **P** 09 15 38.3 +0.6
baz=231
O16K Kokwok River B 81.83 10 P **P** 09 15 36.7 -1.0
baz=199,SNR=9.4
Q19K Cape Douglas, 82.05 13 P **P** 09 15 38.6 -0.4
baz=204
WHN Wuhan 82.10 307 ⇓P **P** 09 15 40.6 +0.8
WHN pmax pmax
comp=Z,100nm,1.6s
CN2 Changchun 82.13 323 eP **P** 09 15 40.5 +0.8
CN2 pmax pmax
comp=Z,10.0nm,1.2s
P18K Big Mountain, 82.16 12 P **P** 09 15 39.3 -0.2
P18K IAmb IAmb 09 15 40.8
comp=Z,23nm,1.1s
P18K Big Mountain, 82.16 12 P **P** 09 15 38.7 -0.8
baz=202,SNR=5.5
O17K Koliganek Bris 82.17 11 P **P** 09 15 39.0 -0.5
baz=200
J04D Umpqua Nationa 82.18 38 P **P** 09 15 40.9 +0.7
J04D IAmb IAmb 09 15 42.8
comp=Z,14nm,0.7s
J04D Umpqua Nationa 82.18 38 P **P** 09 15 40.1 -0.1
baz=232
TPNV Topopah Spring 82.18 46 P **P** 09 15 41.2 +0.9
baz=237
I04A Tendick Farm, 82.35 37 P **P** 09 15 41.3 +0.5
baz=232
KLR Kul'dur 82.44 330 P **P** 09 15 41.6 +0.5
comp=Z,4.9nm,0.9s,baz=97,slow=6.4,SNR=12
comp=Z,4.9nm,0.9s
IPM Ipoh 82.54 278 P **P** 09 15 42.5 0.0
IPM IAmb IAmb 09 15 44.4
comp=Z,21nm,0.7s
IPM Ipoh 82.54 278 P **P** 09 15 43.4 +0.9
N16K Nishlik Lake 82.56 10 P **P** 09 15 42.0 +0.5
baz=199,SNR=15
K05A Summer Lake 82.57 39 P **P** 09 15 43.6 +1.5
K05A IAmb IAmb 09 15 45.7
comp=Z,14nm,1.0s
O18K Koktuh Hills 82.59 12 P **P** 09 15 41.7 0.0
baz=202
H04D Lebanon 82.61 37 P **P** 09 15 43.1 +1.0
baz=231
J05D Fort Rock, OR 82.71 38 P **P** 09 15 43.5 +0.7
baz=233,SNR=15
G03D McMinnville, O 82.75 36 P **P** 09 15 43.8 +1.0
baz=231
O19K Port Alsworth 83.08 12 P **P** 09 15 43.8 -0.2
baz=203
CNPM China Poot 83.11 14 P **P** 09 15 44.5 +0.2
CNPM IAmb IAmb 09 15 45.7
comp=Z,15nm,0.7s
KULM Kulim 83.18 278 P **P** 09 15 44.4 -1.3
KULM IAmb IAmb 09 15 47.8
comp=Z,17nm,0.9s
PINE Pine Mountain 83.19 38 P **P** 09 15 45.9 +0.7
PINE IAmb IAmb 09 15 48.8
comp=Z,16nm,1.1s
PRN Pahroc Range 83.24 46 P **P** 09 15 46.5 +0.9
N18K Kilae Creek 83.24 11 P **P** 09 15 44.9 +0.1
N18K Kilae Creek 83.24 11 P **P** 09 15 44.7 -0.1
baz=201
I05D Terrebonne, OR 83.29 37 P **P** 09 15 46.1 +0.6
baz=232
R11A Troy Canyon, C 83.39 45 P **P** 09 15 47.0 +0.6
baz=237
BRLK Bradley Lake 83.40 14 P **P** 09 15 45.9 +0.2
BRLK IAmb IAmb 09 15 47.4
comp=Z,15nm,0.6s
BRSE Bradley Lake S 83.42 14 P **P** 09 15 46.0 +0.2
baz=206
N19K Bonanza Creek 83.62 12 P **P** 09 15 46.3 -0.6
N19K Bonanza Creek 83.62 12 P **P** 09 15 46.3 -0.6
baz=203
TUC Tucson 83.64 52 P **P** 09 15 48.3 +0.7
TUC Tucson 83.64 52 P **P** 09 15 49.0 +1.4

baz=241
SVW2 Sparrevohn 83.68 11 P **P** **09 15 47.1 0.0**
SEW Seward 84.03 14 P **P** **09 15 49.1 +0.4**
baz=207
I07A Izee 84.19 38 P **P** **09 15 50.3 +0.2**
CCUT Cedar City 84.45 47 P **P** **09 15 51.4 -0.3**
U15A North Rim 84.61 48 P **P** **09 15 52.8 +0.3**
M19K Big River Lodg 84.65 11 P **P** **09 15 51.2 -0.6**
baz=203
L19K White Mountain 84.82 11 P **P** **09 15 53.3 +0.7**
L19K White Mountain 84.82 11 P **P** **09 15 51.8 -0.8**
baz=202,SNR=6.6
RC01 Rabbit Creek A 84.85 14 P **P** **09 15 51.4 -1.3**
baz=207
M20K Styx River 84.86 12 P **P** **09 15 52.5 -0.4**
baz=204
SUA Susitna One 84.97 13 P **P** **09 15 53.3 -0.1**
SUA IAmb IAmb 09 15 54.7
comp=Z,15nm,0.8s
SUA Susitna One 84.97 13 P **P** **09 15 52.9 -0.5**
baz=206,SNR=7.0
G08A Pilot Rock 85.22 38 P **P** **09 15 56.3 +1.2**
HNS HongShan 85.27 313 ⇓P **P** **09 15 56.1 +0.8**
HNS pmax pmax
comp=Z,14nm,1.0s
SKT Skwentna 85.27 12 P **P** **09 15 54.0 -0.8**
baz=205
GLI Glacier Island 85.27 15 P **P** **09 15 55.0 +0.3**
GLI IAmb IAmb 09 15 56.2
comp=Z,21nm,0.7s
GLI Glacier Island 85.27 15 P **P** **09 15 54.1 -0.6**
baz=209,SNR=6.9
L20K Farewell, AK 85.27 11 P **P** **09 15 54.5 -0.2**
baz=203
EYAK Cordova Ski Ar 85.32 16 P **P** **09 15 55.5 +0.6**
baz=211
TTA Tatalina 85.32 10 P **P** **09 15 55.1 +0.1**
TTA Tatalina 85.32 10 P **P** **09 15 55.2 +0.2**
baz=201
M22K Willow 85.36 13 P **P** **09 15 53.4 -1.7**
baz=207
SRIT Nakonsritamara 85.36 281 P **P** **09 15 56.2 0.0**
KNK Knik Glacier 85.42 14 P **P** **09 15 55.3 -0.1**
KNK IAmb IAmb 09 15 57.1
comp=Z,10nm,0.8s
KNK Knik Glacier 85.42 14 P **P** **09 15 55.0 -0.5**
baz=208
PMR Palmer 85.43 14 P **P** **09 15 54.7 -0.7**
baz=208
HAWA Hanford 85.54 37 P **P** **09 15 57.2 +0.8**
GHO Glory Hole Cre 85.64 14 P **P** **09 15 56.7 +0.2**
GHO IAmb IAmb 09 15 58.2
comp=Z,24nm,0.8s
BJI Beijing 85.64 316 P **P** **09 15 57.8 +0.8**
BJI pmax pmax
comp=Z,7.0nm,0.5s
SML Sawmill 85.80 14 P **P** **09 15 57.0 -0.3**
baz=208
CUT Chulitna 85.91 13 P **P** **09 15 56.9 -0.8**
baz=206
BMO Blue Mountains 85.92 39 P **P** **09 15 59.7 +1.3**
M23K Glacier View 85.92 14 P **P** **09 15 57.7 -0.1**
baz=209
BMRM Bremner River 85.97 16 P **P** **09 15 58.3 +0.1**
baz=212
PPLA Purkeypile 85.97 12 P **P** **09 15 57.9 -0.4**
baz=205
MFID Camas Ranch 86.00 41 P **P** **09 16 00.3 +1.5**
MESA MESA 86.01 17 P **P** **09 15 58.8 +0.3**
baz=214
K20K Telida 86.05 11 P **P** **09 15 58.8 +0.4**
K20K Telida 86.05 11 P **P** **09 15 58.4 0.0**
baz=203
SCM Sheep Creek Mo 86.05 14 P **P** **09 15 59.1 +0.6**
SCM Sheep Creek Mo 86.05 14 P **P** **09 15 58.3 -0.2**
baz=209,SNR=8.4
KLU Klutina 86.09 15 P **P** **09 15 58.8 0.0**
baz=210
WRAK Wrangell Islan 86.22 24 P **P** **09 15 59.5 +0.2**
baz=223
D08A Wollman Farm, 86.27 36 P **P** **09 16 00.7 +0.9**
D08A IAmb IAmb 09 16 02.9
comp=Z,6.9nm,0.8s
PNL Peninsula 86.34 19 P **P** **09 16 00.5 +0.6**
baz=216
COYC Coyhaique 86.38 138 P **P** **09 16 01.3 +0.8**
COYC IAmb IAmb 09 16 04.5
comp=Z,13nm,0.8s
N25K Chitina, Valde 86.51 16 P **P** **09 16 01.2 +0.4**
N25K IAmb IAmb 09 16 02.5
comp=Z,12nm,0.7s
N25K Chitina, Valde 86.51 16 P **P** **09 16 00.0 -0.7**
baz=212,SNR=8.5
M24K Tolsona, Glenn 86.56 15 P **P** **09 16 00.9 0.0**
baz=210
GLB Gilahina Butte 86.57 16 P **P** **09 16 01.3 +0.3**
GLB IAmb IAmb 09 16 02.0
comp=Z,7.9nm,0.6s
F10A Beach Ranch, E 86.60 38 P **P** **09 16 01.9 +0.3**
F10A IAmb IAmb 09 16 04.0
comp=Z,10nm,0.8s
WAT6 Susitna Watana 86.61 14 P **P** **09 16 00.9 -0.4**
baz=209,SNR=13
WAT1 Susitna Watana 86.66 13 P **P** **09 16 00.9 -0.4**
baz=208
J20K Nowinta River 86.80 10 P **P** **09 16 01.4 -0.5**
J20K Nowinta River 86.80 10 P **P** **09 16 01.6 -0.2**
baz=203
B08A Colville Reser 86.82 35 P **P** **09 16 03.0 +0.6**
B08A IAmb IAmb 09 16 03.9
comp=Z,5.9nm,0.7s
BARN Barnard Glacie 86.83 17 P **P** **09 16 02.5 +0.1**
BARN IAmb IAmb 09 16 04.5
comp=Z,13nm,0.8s
CTG Chitna Glacier 86.84 17 P **P** **09 16 01.8 -0.6**
baz=215
CTGM Chitina Glacie 86.84 17 P **P** **09 16 02.6 +0.2**
CTGM IAmb IAmb 09 16 03.4
comp=Z,9.6nm,0.7s
TRF Thorofare Moun 86.85 12 P **P** **09 16 02.1 -0.3**
TRF Thorofare Moun 86.85 12 P **P** **09 16 01.2 -1.1**
baz=206,SNR=12
CHUM Lake Minchumin 86.85 11 P **P** **09 16 01.6 -0.5**
baz=205
HLID Hailey 86.95 41 P **P** **09 16 03.9 +0.5**
HLID Hailey 86.95 41 P **P** **09 16 04.3 +1.0**
baz=238
HARP HAARP 87.06 15 P **P** **09 16 03.8 +0.7**
baz=211
C09A Chrisman Ranch 87.06 36 P **P** **09 16 04.7 +1.2**
RND Reindeer 87.10 13 P **P** **09 16 03.5 +0.1**
RND IAmb IAmb 09 16 04.3
comp=Z,22nm,0.7s
PLBC Pleasant Camp 87.12 20 P **P** **09 16 03.8 +0.3**
baz=219
SRU San Rafael Swe 87.17 46 P **P** **09 16 05.6 +1.1**
MCK McKinley 87.38 13 P **P** **09 16 04.4 -0.3**
MCK IAmb IAmb 09 16 06.5
comp=Z,13nm,0.8s
MCK McKinley 87.38 13 P **P** **09 16 04.6 0.0**
baz=208
T35M Bob Quinn 87.42 24 P **P** **09 16 06.5 +1.4**
baz=224
MNTX Cornudas Mount 87.42 55 P **P** **09 16 06.7 +1.0**
MNTX Cornudas Mount 87.42 55 P **P** **09 16 05.9 +0.2**
baz=244
P30M Million Dollar 87.45 19 P **P** **09 16 06.3 +1.2**
baz=218
SKAG Skagway 87.46 21 P **P** **09 16 06.3 +1.3**
baz=220
PAX Paxson 87.47 15 P **P** **09 16 05.1 -0.2**
baz=211
YUK8 Steele Glacier 87.54 18 P **P** **09 16 05.0 -0.8**
baz=216,SNR=9.9
M26K Nabesna, AK 87.59 16 P **P** **09 16 06.3 +0.6**
M26K IAmb IAmb 09 16 08.5
comp=Z,8.7nm,0.9s
M26K Nabesna, AK 87.59 16 P **P** **09 16 05.8 0.0**
baz=213,SNR=6.3
YUK6 Outpost Mounta 87.67 18 P **P** **09 16 06.5 +0.2**
baz=217
TX31 Lajitas Ar. Si 87.73 58 P **P** **09 16 08.8 +1.5**
TX31 IAmb IAmb 09 16 11.1
comp=Z,9.9nm,0.9s
TX32 Lajitas Array 87.73 58 P **P** **09 16 08.1 +0.8**
TXAR Lajitas Array 87.73 58 P **P** **09 16 09.2 +2.0**
comp=Z,2.3nm,0.8s,baz=217,slow=5.9,SNR=28
TXAR PKKPbc **PKKPbc** **09 33 52.1 +0.9**
comp=Z,0.1nm,0.5s,baz=134,slow=3.6,SNR=3.6
comp=Z,2.3nm,0.8s
TXAR Lajitas Array 87.73 58 P **P** **09 16 07.7 +0.5**
YUK3 Moose Creek 87.75 17 P **P** **09 16 07.2 +0.5**
baz=215,SNR=15
HYT Haines Junctio 87.83 19 P **P** **09 16 08.2 +1.2**
HYT Haines Junctio 87.83 19 P **P** **09 16 07.2 +0.2**
baz=218
M27K Edge Creek, AK 87.84 16 P **P** **09 16 08.2 +1.2**
M27K IAmb IAmb 09 16 10.1
comp=Z,14nm,1.1s
M27K Edge Creek, AK 87.84 16 P **P** **09 16 07.7 +0.7**
baz=214,SNR=6.2
MENT Mentasta 87.86 15 P **P** **09 16 07.7 +0.7**
MENT IAmb IAmb 09 16 09.0
comp=Z,7.7nm,0.7s
YUK4 Talbot Arm 87.91 18 P **P** **09 16 07.3 -0.1**
baz=217
VNA3 Neumayer Olymp 87.91 176 P **P** **09 16 06.8 -0.5**
NEW Newport 87.96 36 P **P** **09 16 08.4 +0.6**
baz=235
L26K Log Cabin Wild 88.03 15 P **P** **09 16 08.2 +0.5**
baz=213
ANMO Albuquerque 88.07 52 P **P** **09 16 09.0 +0.2**
baz=243
P32M Atlin 88.09 21 P **P** **09 16 09.1 +1.0**
baz=221
I21K Tanana 88.09 11 P **P** **09 16 07.7 -0.2**
baz=205
NEA2 Nenana 88.11 12 P **P** **09 16 07.4 -0.7**
NEA2 Nenana 88.11 12 P **P** **09 16 06.8 -1.3**
baz=208,SNR=7.6
K24K Donnelly Dome 88.12 14 P **P** **09 16 08.1 0.0**
baz=211,SNR=10
BVCY Beaver Creek 88.16 17 P **P** **09 16 09.0 +0.7**
baz=215
MLY Manley 88.18 11 P **P** **09 16 07.3 -1.1**
MLY IAmb IAmb 09 16 08.1
comp=Z,5.8nm,0.6s
MLY Manley 88.18 11 P **P** **09 16 07.2 -1.3**
baz=206,SNR=9.8
O30N Mendenhall 88.22 19 P **P** **09 16 09.1 +0.4**
baz=219
RIDG Independent Ri 88.28 14 P **P** **09 16 08.7 -0.2**
baz=211
DOT Dot Lake 88.39 15 P **P** **09 16 08.9 -0.4**
DOT IAmb IAmb 09 16 10.4
comp=Z,6.5nm,0.6s
H21K Melozitna Rive 88.39 10 P **P** **09 16 09.5 +0.2**
H21K IAmb IAmb 09 16 11.1
comp=Z,7.5nm,0.8s
H21K Melozitna Rive 88.39 10 P **P** **09 16 09.0 -0.3**
baz=204,SNR=15
HDA Harding Lake 88.39 13 P **P** **09 16 09.1 -0.3**
HDA IAmb IAmb 09 16 10.1
comp=Z,13nm,0.6s
HDA Harding Lake 88.39 13 P **P** **09 16 08.7 -0.7**
baz=210,SNR=15
L27K Beaver Creek, 88.44 16 P **P** **09 16 09.9 +0.2**
L27K Beaver Creek, 88.44 16 P **P** **09 16 09.2 -0.4**
baz=214
N30M Aishikik Lake 88.46 19 P **P** **09 16 10.5 +0.7**
baz=218
WHY Whitehorse 88.52 20 P **P** **09 16 11.2 +1.1**
baz=220
IMAR Ian Mountai 88.53 10 P **P** **09 16 10.2 +0.2**
DLBC Dease Lake 88.55 23 P **P** **09 16 10.9 +0.6**
baz=225
I23K Minto, Yukon-K 88.55 12 P **P** **09 16 09.5 -0.6**
I23K Minto, Yukon-K 88.55 12 P **P** **09 16 09.4 -0.6**
baz=207,SNR=6.6
VNA1 Neumayer--Stat 88.58 177 P **P** **09 16 10.0 -0.2**
TCOL CIGO, UAF Yank 88.61 13 P **P** **09 16 10.2 -0.1**
TCOL IAmb IAmb 09 16 10.6
comp=Z,15nm,0.7s
TCOL CIGO, UAF Yank 88.61 13 P **P** **09 16 09.6 -0.7**
baz=209,SNR=7.9
COLA College 88.61 13 P **P** **09 16 09.9 -0.4**
baz=209
SCRK Sand Creek 88.68 15 P **P** **09 16 10.3 -0.5**
baz=212,SNR=9.4
IL31 88.72 13 P **P** **09 16 10.7 -0.1**
IL31 IAmb IAmb 09 16 10.8
comp=Z,5.0nm,0.7s
ILAR Eielson Array 88.72 13 P **P** **09 16 10.0 -0.9**
comp=Z,8.8nm,0.3s,baz=223,slow=5.7,SNR=17
comp=Z,8.8nm,0.3s
H22K Ishtalitna Cre 88.85 11 P **P** **09 16 11.1 -0.4**
baz=205,SNR=12
P33M Teslin, Yukon 88.86 21 P **P** **09 16 12.1 +0.4**
baz=222
N31M Braeburn, Yuko 88.88 19 P **P** **09 16 12.7 +0.9**
N31M IAmb IAmb 09 16 14.7
comp=Z,7.7nm,0.9s
N31M Braeburn, Yuko 88.88 19 P **P** **09 16 11.4 -0.3**
baz=220
POKR Poker Plat Res 88.91 13 P **P** **09 16 11.2 -0.6**
baz=209
J25K Salcha River, 88.91 14 P **P** **09 16 11.7 -0.2**
J25K IAmb IAmb 09 16 12.7
comp=Z,5.8nm,0.6s
J25K Salcha River, 88.91 14 P **P** **09 16 11.0 -0.9**
baz=211,SNR=10
REDW Red Top Meadow 89.06 42 P **P** **09 16 12.2 -1.0**
S22A 4UR Ranch, Cre 89.07 49 P **P** **09 16 13.6 +0.1**
baz=243
HHC Hu-ho-hao-te 89.09 315 *e*P **P** **09 16 14.6 +1.3**
HHC pmax pmax
comp=Z,20nm,1.3s
HHC pmax pmax
comp=Z,100nm,6.6s
H23K Yukon River 89.12 12 P **P** **09 16 12.2 -0.6**
baz=207
SNOW Snow King Moun 89.17 42 P **P** **09 16 12.6 -1.2**
K27K Chicken 89.19 15 P **P** **09 16 12.6 -0.4**
baz=214
O20A White River Ci 89.20 46 P **P** **09 16 14.3 +0.3**
baz=242
J26L Joseph Creek 89.23 14 P **P** **09 16 14.0 +0.6**
J26L IAmb IAmb 09 16 15.7
comp=Z,10nm,0.8s
J26L Joseph Creek 89.23 14 P **P** **09 16 13.4 0.0**
baz=213,SNR=15
M30M Minto, Yukon 89.42 18 P **P** **09 16 13.9 -0.3**
M30M IAmb IAmb 09 16 16.9
comp=Z,9.8nm,0.9s
M30M Minto, Yukon 89.42 18 P **P** **09 16 14.4 +0.2**
baz=219,SNR=11
H24K Noodor Dome 89.45 12 P **P** **09 16 14.1 -0.2**
baz=209
N32M Quiet Lake 89.47 20 P **P** **09 16 15.0 +0.5**
baz=222
PLCA Paso Flores 89.55 134 P **P** **09 16 17.1 +1.5**
comp=Z,3.8nm,0.7s,baz=226,slow=5.1,SNR=20
comp=Z,3.8nm,0.7s
PLCA Paso Flores 89.55 134 P **P** **09 16 15.5 0.0**
BW06 Boulder Array 89.59 43 P **P** **09 16 15.8 0.0**
BW06 Boulder Array 89.59 43 P **P** **09 16 16.2 +0.4**
baz=241
PD31 Pinedale Array 89.59 43 P **P** **09 16 16.6 +0.9**
PDAR Pinedale Array 89.59 43 P **P** **09 16 16.3 +0.5**
comp=Z,1.2nm,0.6s,baz=214,slow=3.4,SNR=16
comp=Z,1.2nm,0.6s
CMAR Chiang Mai Arr 89.61 290 P **P** **09 16 17.1 +1.1**
comp=Z,5.4nm,0.7s,baz=121,slow=2.9,SNR=34
comp=Z,5.4nm,0.7s
CMAR Chiang Mai Arr 89.61 290 P **P** **09 16 16.4 +0.4**
BOZ Bozeman (W) 89.70 40 P **P** **09 16 16.6 +0.5**
BOZ Bozeman (W) 89.70 40 P **P** **09 16 16.0 -0.1**
baz=239
CHTO Chiang Mai 89.74 290 P **P** **09 16 18.0 +1.3**
H17A Grant Village 89.75 42 P **P** **09 16 17.4 +0.9**
baz=240
M31M Drury Creek, Y 89.85 19 P **P** **09 16 15.8 -0.4**
baz=221
DAWY Dawson 89.89 16 P **P** **09 16 17.0 +0.6**
DAWY IAmb IAmb 09 16 19.0
comp=Z,6.4nm,0.8s
DAWY Dawson 89.89 16 P **P** **09 16 16.1 -0.3**
baz=216,SNR=9.8
I26K Coal Creek Min 90.00 14 P **P** **09 16 17.2 +0.4**
baz=213
SDCO Great Sand Dun 90.01 49 P **P** **09 16 18.6 +0.7**
baz=244
COLD Coldfoot 90.26 11 P **P** **09 16 17.6 -0.3**
baz=206
PZH PanZhiHua 90.28 298 P **P** **09 16 20.6 +1.4**
PZH pmax pmax
comp=Z,20nm,0.5s
PZH pmax pmax
comp=Z,90nm,4.0s
MMPY Sheldon Lake, 91.14 20 P **P** **09 16 23.1 +1.0**
baz=224
I29M Ogilvie Camp, 91.22 16 P **P** **09 16 22.7 +0.3**
baz=217
TOLK Toolik Lake Re 91.64 10 P **P** **09 16 23.9 -0.4**
baz=207
EPYK Eagle Plains 92.42 16 P **P** **09 16 28.0 0.0**
EPYK IAmb IAmb 09 16 29.4
comp=Z,3.8nm,0.8s
EPYK Eagle Plains 92.42 16 P **P** **09 16 28.0 0.0**
baz=219
LZH Lanzhou 92.43 308 *e*P **P** **09 16 29.8 +0.9**
LZH pP pwP 09 18 40.8 -1.4
LZH pmax pmax
comp=Z,19nm,1.0s
SONM Songino Array 95.54 319 P **P** **09 16 42.0 -0.8**
comp=Z,0.4nm,0.5s,baz=115,slow=2.8,SNR=2.8
comp=Z,0.4nm,0.5s
SONM Songino Array 95.54 319 IAmb IAmb 09 16 46.5
comp=Z,0.7nm,0.8s
GTA Gaotai 96.66 310 *e*P **P** **09 16 49.1 +1.2**
GTA pP pwP 09 19 07.0 +6.2
GTA pmax pmax
comp=Z,4.0nm,0.7s
YKA Yellowknife Ar 97.02 25 P **P** **09 16 49.6 +0.8**
comp=Z,1.2nm,0.8s,baz=220,slow=5.9,SNR=3.1
comp=Z,1.2nm,0.8s
ZALV Zalesovo Beam 110.31 321 PKiKP **PKiKP** **09 21 44.0 -1.2**
comp=Z,1.8nm,0.5s,baz=84,slow=0.6,SNR=9.7
ZALV Zalesovo Beam 110.31 321 **PKiKP** **09 21 43.9 -1.2**
MKAR Makanchi Array 110.92 313 Pdiff **Pdif** **09 17 54.6 +3.6**
comp=Z,0.4nm,0.6s,baz=100,slow=6.3,SNR=3.0
MKAR PKiKP **PKiKP** **09 21 45.6 -1.1**
comp=Z,1.1nm,0.5s,baz=71,slow=2.2,SNR=12
MKAR SKP 09 24 24.3
comp=Z,0.2nm,0.4s,baz=118,slow=2.8,SNR=3.9
MKAR PKKPbc **PKKPbc** **09 32 46.2 -0.6**
comp=Z,0.6nm,0.7s,baz=282,slow=4.0,SNR=5.2
MKAR PKKPab **PKKPab** **09 32 58.5 +1.1**
comp=Z,0.3nm,0.6s,baz=286,slow=4.9,SNR=2.8
KURK Kurchatov 113.76 317 **PKiKP** **09 21 50.8 -1.1**
KURBB Kurchatov Arra 113.81 317 PKiKP **PKiKP** **09 21 50.6 -1.4**
comp=Z,1.8nm,0.7s,baz=92,slow=2.1,SNR=18
KSH Kashi 114.52 305 PKP **PKiKP** **09 21 54.6 +0.7**
KKAR Karatay Array 118.92 309 **PKPdf** **09 22 01.3 -0.8**
ARU Arti 125.06 325 PKPdf **PKPdf** **09 22 13.3 -0.2**
ARCES ARCESS Array B 129.07 349 PKP **PKPdf** **09 22 20.2 -0.6**
comp=Z,2.5nm,0.6s,baz=41,slow=0.9,SNR=19
ARCES SKPbc SKPab 09 24 43.9 -2.5
comp=Z,1.6nm,0.7s,baz=33,slow=2.2,SNR=2.6
KLMR Klimovskoe 131.87 336 *e*PKPdf **PKPdf** **09 22 23.9 -2.3**
KLMR AMP 09 22 27.8
comp=Z,5.0nm,0.8s
KLMR *e*PP **PP** **09 24 54.4 -1.9**
FINES FINESS Array B 135.85 343 PKhKP PKPpre 09 22 23.7
comp=Z,0.5nm,0.4s,baz=51,slow=3.7,SNR=5.4
FINES PKP **PKPdf** **09 22 32.0 -1.7**
comp=Z,1.5nm,0.4s,baz=56,slow=3.2,SNR=8.7
FINES SKPbc **SKPbc** **09 25 09.8 -0.1**
comp=Z,6.1nm,0.7s,baz=45,slow=3.0,SNR=23
FINES FINESS Array B 135.85 343 PKPdf **PKPdf** **09 22 32.2 -1.5**
NOA NORSAR Array B 139.17 353 PKiKP PKPpre 09 22 31.1
comp=Z,1.9nm,0.8s,baz=14,slow=4.4,SNR=9.1
NOA PKP **PKPdf** **09 22 40.5 +0.6**
comp=Z,0.7nm,0.6s,baz=14,slow=4.0,SNR=5.5
NOA SKPbc **SKPbc** **09 25 19.5 +0.1**
comp=Z,2.2nm,0.7s,baz=14,slow=4.4,SNR=9.5
NACGM Naroch 140.88 337⇑*e*PKP **PKPdf** **09 22 39.4 -3.7**
baz=39
AKASG Malin Array Be 142.94 330 PKP **PKPdf** **09 22 44.0 -2.8**
comp=Z,19nm,0.4s,baz=37,slow=3.5,SNR=154
AKASG SKPbc **SKPbc** **09 25 27.4 -1.8**
comp=Z,0.4nm,0.3s,baz=45,slow=3.2,SNR=15
DEL Delary 143.15 348 *i* P PKPab 09 22 44.0 -1.1
BJUU Bjuv 143.68 349 *i* P PKPbc 09 22 45.6 -1.4
MUD Monsted U'grnd 143.89 353 *i* P PKPbc 09 22 46.7 -1.0
BSD Bornholm Skovb 144.21 347 *i* P PKPbc 09 22 47.5 -1.2
SORM Soroca 145.10 328 ⇓P **PKPdf** **09 22 51.4 +0.7**
BZK Bozkurt 145.32 315 ⇑P **PKPdf** **09 22 51.2 0.0**
BZK Bozkurt 145.32 315 PKPbc **PKPbc** **09 22 52.5 -0.1**
BEL Belsk 145.48 339 *e*PKP **PKPab** **09 22 54.0 -0.2**
MILM Milestii Mici 145.66 326 *e*PKP **PKPbc** **09 22 53.0 -0.3**
comp=Z,90nm,1.2s
BR131 Keskin Array S 146.55 312 **PKPbc** **09 22 55.9 -0.4**
BRTR Keskin Array B 146.55 312 PKPbc **PKPdf** **09 22 55.2 +1.6**
comp=Z,6.8nm,0.6s,baz=138,slow=4.4,SNR=34
BRTR pPKPbc pPKPbc 09 25 12.0 +0.5
comp=Z,2.4nm,0.8s,baz=107,slow=1.5,SNR=6.9
BRTR Keskin Array B 146.55 312 PKPdf **PKPdf** **09 22 52.9 -0.7**
BRTR PKPbc **PKPbc** **09 22 55.9 -0.4**
BRTR PKPab **PKiKP** **09 22 58.9 +0.6**
TLCR 146.75 323 ⇑P **PKPdf** **09 22 55.1 +1.5**
GHRR 146.96 326 ⇑P **PKPbc** **09 22 57.5 +0.5**
JURR Jurilovca 146.98 323 ⇑P **PKPbc** **09 22 57.0 0.0**
BURAR Bucovina Array 146.98 330 ⇑P **PKPbc** **09 22 57.7 +0.6**
BURAR Bucovina Array 146.98 330 PKPbc **PKPbc** **09 22 57.4 +0.3**
BIZ Bicaz 147.03 328 ⇑P **PKPbc** **09 22 57.7 +0.6**
TESR Tescani 147.05 327 ⇑P **PKPbc** **09 22 56.5 -0.6**
CFR Carcaliu 147.13 324 ⇑P **PKPbc** **09 22 57.6 +0.2**
OJC Ojcow 147.18 338 *e*PKP **PKPbc** **09 22 56.6 -0.8**
OJC Ojcow 147.18 338 PKPdf **PKPdf** **09 22 53.6 -0.5**
OJC **PKPbc** **09 22 57.1 -0.3**
OJC PKPab **PKPab** **09 23 01.4 +0.3**
TPGR Topolog 147.18 323 ⇑P **PKPbc** **09 22 56.9 -0.7**
KOLS Kolonicke sedl 147.28 334 *e*PKP **PKPbc** **09 22 58.8 +1.1**
KOLS *e* 09 23 02.1
VRI Vrincioaia 147.44 326 ⇑P **PKPbc** **09 22 57.9 -0.3**
PLOR Plostina 147.50 326 ⇑P **PKPdf** **09 22 55.9 +1.1**
HARR Harsova 147.55 323 ⇑P **PKPbc** **09 22 58.2 -0.3**
CRVS Cervenica-Dubn 147.63 335 *e*PKP **PKPab** **09 23 03.8 +0.7**
MANR Mangalia 147.71 322 ⇑P **PKPbc** **09 22 59.2 +0.3**
COVR Voineasa-Covas 147.73 327 ⇑P **PKPbc** **09 22 58.7 -0.2**
KSP Ksiaz 147.76 342 *e*PKP **PKPbc** **09 22 58.0 -0.9**
OZUR 147.77 327 ⇑P **PKPbc** **09 22 59.4 +0.3**
MDUB Mudurnu 147.88 314 **PKPbc** **09 22 59.2 -0.5**
ISR Istrita 148.04 325 ⇑P **PKPbc** **09 22 59.3 -0.5**
OSTC Ostas 148.04 342⇑*e*PKP **PKPbc** **09 23 00.2 +0.6**
OSTC *e*PKPAB **PKPab** **09 23 05.8 +1.2**
CHVC Chvalec 148.05 342⇑*e*PKP **PKPbc** **09 22 59.2 -0.4**
CHVC *e*PKPAB **PKPab** **09 23 04.5 -0.2**
DOPR Dopca 148.06 327 ⇓P **PKiKP** **09 23 01.0 -0.1**
MLR Muntele Rosu 148.10 326 ⇑P **PKPbc** **09 23 00.3 +0.3**
MLR Muntele Rosu 148.10 326 **PKPbc** **09 23 00.1 0.0**
CLL Collm 148.18 346 **PKPbc** **09 22 60.0 +0.1**
CLL PKPab **PKPab** **09 23 05.1 0.0**
CLL Collm 148.18 346 *i* PKPbc **PKPbc** **09 23 00.0 +0.1**
comp=Z,23nm,0.8s
CLL *i* PKPab **PKPab** **09 23 05.0 -0.1**
comp=Z,46nm,1.9s
CLL *ep*PKPbc **pPKPab** **09 25 20.0 +2.3**
DPC Dobruska-Polom 148.19 342⇑*e*PKP **PKPbc** **09 23 00.5 +0.5**
DPC *e*PKPAB **PKPab** **09 23 05.6 +0.3**
KRLC Kraliky 148.29 341⇑*e*PKP **PKPbc** **09 23 00.6 +0.3**
KRLC *e*PKPAB **PKPab** **09 23 05.8 0.0**
MORC Moravsky Berou 148.32 340 ⇑P **PKPab** **09 23 06.8 +0.9**
MORC Moravsky Berou 148.32 340 PKPdf **PKPdf** **09 22 55.4 -0.7**
MORC PKPbc **PKPbc** **09 23 00.1 -0.2**
MORC PKPab **PKPab** **09 23 06.6 +0.7**
MORC Moravsky Berou 148.32 340 *e*PKP **PKPbc** **09 23 00.8 +0.5**
MORC *e* 09 23 06.2
BRG Berggiesshubel 148.36 345 *e*PKP **PKPbc** **09 23 00.8 +0.5**
BRG Amp 09 23 03.6
comp=Z,16nm,1.2s
CSS Mathiatis 148.53 304 PKPdf **PKPdf** **09 22 55.4 -1.4**
CSS **PKPbc** **09 23 01.1 -0.2**
CSS PKPab **PKPab** **09 23 06.2 -1.0**
MAUC Maruska 148.58 339⇑*e*PKP **PKPbc** **09 22 59.4 -1.6**
VOIR 148.60 327 ⇑P **PKPbc** **09 23 01.4 +0.1**
ARR Arges 148.86 327 ⇑P **PKiKP** **09 23 02.8 0.0**
VYHS Vyhne 148.97 337 *e*PKP **PKPbc** **09 23 02.3 +0.4**
VYHS *e* 09 23 09.2
PRU Pruhonice 149.02 343⇑*e*PKP **PKPbc** **09 23 02.2 +0.2**
PRU *e*PKPAB **PKPab** **09 23 07.1 -1.6**
VRAC Vranov 149.03 340 *e*PKP **PKPbc** **09 23 02.5 +0.4**
VRAC *e* 09 23 09.4
PSZ Piszkesteto 149.05 335 ⇑P **PKPbc** **09 23 02.0 -0.2**
PSZ Piszkesteto 149.05 335 PKPdf **PKPdf** **09 22 56.0 -1.3**
PSZ **PKPbc** **09 23 01.5 -0.7**

PSZ			PKPab	**PKPab**	**09 23 10.1**	**+1.2**
JAVC	**Velka Javorina**	**149.07 339**	*e*PKP	**PKiKP**	**09 23 03.4**	**+0.3**
LOT	**Lotru**	**149.23 328**	⇑P	**PKPbc**	**09 23 02.0**	**-0.8**
KRUC	**Moravsky**	**149.31 340**	*e*PKP	**PKPbc**	**09 23 03.0**	**+0.3**
KRUC			*e*		09 23 10.3	
NKC	**Novy Kostel**	**149.31 346**	⇑*e*PKP	**PKPbc**	**09 23 03.0**	**+0.3**
NKC			*e*PKPAB	**PKPab**	**09 23 09.8**	**-0.1**
SIRR	**Siria**	**149.62 332**	⇓P	**PKiKP**	**09 23 04.4**	**+0.1**
MODS	**Modra-Piesok**	**149.62 339**	*e*PKP	**PKPbc**	**09 23 03.9**	**+0.4**
MODS			*e*		09 23 11.9	
MEM	**Membach**	**150.00 354**	*d*PKiKP	**PKPbc**	**09 23 04.7**	**+0.5**
MEM			*d*PKPab	**PKPab**	**09 23 12.4**	**-0.3**
BTNL	**Ternell**	**150.01 354**	*d*PKiKP	**PKPbc**	**09 23 04.6**	**+0.2**
KHC	**Kasperske Hory**	**150.06 344**	PKPdf	**PKPdf**	**09 22 57.7**	**-1.2**
KHC				**PKPbc**	**09 23 04.6**	**+0.1**
KHC			PKPab	**PKPab**	**09 23 13.6**	**+0.6**
KHC	**Kasperske Hory**	**150.06 344**	⇑*e*PKP	**PKPbc**	**09 23 04.7**	**+0.1**
KHC			*e*PKPAB	**PKPab**	**09 23 13.5**	**+0.4**
BZS	**Buzias**	**150.13 331**	⇑P	**PKPbc**	**09 23 03.2**	**-1.6**
CKRC	**Cesky Krumlov**	**150.14 343**	⇑*e*PKP	**PKPbc**	**09 23 04.8**	**+0.1**
BCLA	**Clavier**	**150.25 355**	*d*PKPab	**PKPab**	**09 23 13.4**	**-0.4**
BHOU	**Houvegnez**	**150.25 354**	*d*PKiKP	**PKPbc**	**09 23 05.2**	**+0.3**
BHOU			*d*PKP	**PKPab**	**09 23 14.0**	**+0.2**
GEC2	**GERESS Array S**	**150.28 343**		**PKPbc**	**09 23 05.1**	**0.0**
GEC2			PKPab	**PKPab**	**09 23 14.4**	**+0.3**
GERES	**GERESS Array B**	**150.28 343**	PKPbc	**PKPbc**	**09 23 05.0**	**-0.2**
	comp=Z,3.0nm,0.6s,baz=46,slow=3.9,SNR=18					
GERES			pPKPbc	**pPKPab**	**09 25 24.8**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=5.7,slow=1.0,SNR=1.7					
HERR	**Herculane**	**150.30 329**	⇓P	**PKPbc**	**09 23 05.0**	**-0.2**
BMRD	**Maredsous**	**150.41 356**	*d*PKP	**PKPbc**	**09 23 05.2**	**0.0**
CONA	**Conrad Observa**	**150.47 340**	*e*P	**PKPbc**	**09 23 05.8**	**+0.2**
	comp=Z,5.6nm,0.6s					
CONA			*i* P	**PKPab**	**09 23 15.9**	**+1.0**
	comp=Z,8.6nm,0.7s					
RCHB	**Rochefort**	**150.51 355**	*d*PKiKP	**PKPbc**	**09 23 05.9**	**+0.5**
RCHB			*d*PKPab	**PKPab**	**09 23 14.3**	**-0.5**
RONA	**Rosalia, Austr**	**150.53 339**	*i* P	**PKPbc**	**09 23 05.9**	**+0.2**
	comp=Z,9.7nm,0.5s					
RONA			*e*P	**PKPab**	**09 23 16.1**	**+1.0**
	comp=Z,18nm,1.4s					
DOU	**Dourbes**	**150.62 356**	*d*PKiKP	**PKPbc**	**09 23 06.1**	**+0.4**
MDVR	**Moldovita**	**150.71 330**	⇑P	**PKPbc**	**09 23 06.1**	**-0.1**
MORH	**Mrgy, Hungar**	**150.93 335**	⇑P	**PKPbc**	**09 23 06.2**	**-0.4**
MOA	**Molln**	**151.03 342**	*i* P	**PKPbc**	**09 23 06.7**	**-0.1**
	comp=Z,2.5nm,0.6s					
MOA			*i* P	**PKPab**	**09 23 18.0**	**+0.8**
	comp=Z,2.6nm,0.5s					
FRGS	**Fruska Gora**	**151.29 332**	⇑P	**PKPbc**	**09 23 07.4**	**0.0**
BOVS	**Bovan**	**151.56 328**	⇑P	**PKPbc**	**09 23 06.3**	**-1.8**
SOKA	**Soboth**	**151.84 340**	*e*P	**PKPbc**	**09 23 08.3**	**-0.4**
	comp=Z,3.3nm,0.7s					
SOKA			*i* P	**PKPab**	**09 23 21.1**	**+0.3**
	comp=Z,7.9nm,1.3s					
KBA	**Koelnbreinsper**	**152.00 342**	*i* P	**PKPbc**	**09 23 09.3**	**+0.1**
	comp=Z,2.2nm,0.5s					
KBA			*i* P	**PKPab**	**09 23 22.0**	**+0.5**
	comp=Z,8.6nm,0.4s					
DIVS	**Divibare**	**152.04 331**		**PKPbc**	**09 23 08.8**	**-0.4**
DIVS			PKPab	**PKPab**	**09 23 21.9**	**+0.3**
WATA	**Walderalm**	**152.22 345**	*e*P	**PKPbc**	**09 23 09.3**	**-0.3**
	comp=Z,3.4nm,0.5s					
WATA			*e*P	**PKPab**	**09 23 22.6**	**+0.2**
	comp=Z,7.1nm,0.8s					
RETA	**Reutte**	**152.27 346**	*i* P	**PKPbc**	**09 23 09.5**	**-0.2**
	comp=Z,2.8nm,0.8s					
RETA			*i* P	**PKPab**	**09 23 22.8**	**+0.3**
	comp=Z,6.4nm,0.6s					
WTTA	**Wattenberg**	**152.28 345**	*i* P	**PKPbc**	**09 23 09.8**	**0.0**
	comp=Z,5.6nm,0.4s					
WTTA			*i* P	**PKPab**	**09 23 23.2**	**+0.5**
	comp=Z,9.6nm,0.6s					
MYKA	**Terra Mystica**	**152.32 342**	*i* P	**PKPbc**	**09 23 09.0**	**-0.7**
	comp=Z,3.4nm,0.5s					
MYKA			*e*P	**PKPab**	**09 23 22.4**	**-0.3**
	comp=Z,3.9nm,0.5s					
MOTA	**Moosalm**	**152.33 346**	*e*P	**PKPbc**	**09 23 09.6**	**-0.3**
	comp=Z,6.3nm,0.8s					
MOTA			*e*P	**PKPab**	**09 23 23.1**	**+0.2**
	comp=Z,4.9nm,0.5s					
SQTA	**Sankt Quirin**	**152.42 345**	*i* P	**PKPbc**	**09 23 10.0**	**0.0**
	comp=Z,3.2nm,0.5s					
SQTA			*i* P	**PKPab**	**09 23 23.6**	**+0.4**
	comp=Z,4.9nm,0.4s					
ABTA	**Abfaltersbach**	**152.53 343**	*e*P	**PKPbc**	**09 23 09.6**	**-0.6**
	comp=Z,6.7nm,0.9s					
ABTA			*i* P	**PKPab**	**09 23 23.3**	**-0.3**
	comp=Z,3.2nm,0.5s					
DAVA	**Damuels**	**152.65 347**	*i* P	**PKPbc**	**09 23 10.9**	**+0.4**
	comp=Z,2.3nm,0.5s					
DAVA			*e*P	**PKPab**	**09 23 24.4**	**+0.2**
	comp=Z,9.0nm,1.0s					
FETA	**Feichten**	**152.72 346**	*i* P	**PKPbc**	**09 23 10.8**	**+0.1**
	comp=Z,2.4nm,0.6s					
FETA			*i* P	**PKPab**	**09 23 24.9**	**+0.3**
	comp=Z,2.9nm,0.6s					
STAL	**STALIGIAL**	**152.92 342**		**PKPbc**	**09 23 10.1**	**-0.9**
STAL				**PKPab**	**09 23 23.8**	**-1.5**
CTI	**Castel Tesino**	**153.40 344**	PKPdf	**PKPdf**	**09 23 03.1**	**-0.9**
CTI			PKPbc	**PKPbc**	**09 23 10.9**	**-1.3**
CTI				**PKPab**	**09 23 27.2**	**-0.2**
TUE	**Stuetta**	**153.54 347**	PKPdf	**PKPdf**	**09 23 02.0**	**-2.3**
TUE			PKPbc	**PKPbc**	**09 23 11.3**	**-1.3**
TUE			PKPab	**PKPab**	**09 23 27.6**	**-0.6**
FNA	**Florina**	**153.76 324**		**PKPbc**	**09 23 12.3**	**-0.7**
FNA			PKPab	**PKPab**	**09 23 28.0**	**-1.1**
BNI	**Bardonecchia**	**155.38 351**	PKPdf	**PKPdf**	**09 23 04.2**	**-2.6**
BNI				**PKPab**	**09 23 36.4**	**+0.4**
ESDC	**Sonseca Array**	**160.62 12**	PKPab	**PKPab**	**09 23 58.6**	**-0.2**
	comp=Z,1.2nm,0.8s,baz=350,slow=4.1,SNR=7.3					
KEST	**Kesra**	**163.52 336**	PKPab	**PKPab**	**09 24 11.3**	**-0.4**
	comp=Z,3.0nm,0.6s,baz=338,slow=6.1,SNR=2.2					
KEST	**Kesra**	**163.52 336**	PKPdf	**PKPdf**	**09 23 13.6**	**-2.5**
KEST				**PKPab**	**09 24 09.6**	**-2.1**
DBIC	**Dimbokro**	**164.76 156**	PKPab	**PKPab**	**09 24 18.1**	**+0.5**
	comp=Z,4.3nm,0.6s,baz=149,slow=5.9,SNR=4.7					
TORD	**Torodi Ar. Bea**	**172.41 183**	PKP	**PKPdf**	**09 23 21.5**	**-1.0**
	comp=Z,1.6nm,1.0s,baz=169,slow=1.5,SNR=4.7					
TORD			PKPab	**PKPab**	**09 24 50.1**	**-1.2**
	comp=Z,1.1nm,0.6s,baz=167,slow=4.5,SNR=10.0					
TORD	**Torodi Ar. Bea**	**172.41 183**	PKPab	**PKPab**	**09 24 51.3**	**0.0**

*WEL **21** 09:05:00,41˚.41S×174˚.97E,h34km,ML4.3,Mw4.3, Moment Tensor Solution. s4 Moment tensor: Scale 10¹⁵ Nm; Mrr-1.82; Mθθ0.70; Mϕϕ1.11; Mrθ2.43; Mθϕ 1.59; Mϕr0.71; Fault plane solution: M0 3.38000×10¹⁵ NP1: ϕs=14.00000°, δ28.00000°, λ-139.00000°. NP2: ϕs=246.00000°, δ72.00000°, λ-68.00000°. Principal axes: T 345.8500, Plg24.0000°, Azm319.0000°; N -331.0800, Plg21.0000°, Azm59.0000°; P -14.7700, Plg58.0000°, Azm186.0000°;*

*NOU **21** 09:05:15.3,41˚.57S×175˚.10E,h16km,MLv4.7/10,North Island, New Zealand*

*NEIC **21** 09:05:17.2±1.7,41˚.45S±0˚.04×174˚.97E±0˚.04,h32km±7km, Error ellipse: s-maj=7.0km s-min=3.6km az=147.0*

*WEL **21** 09:05:17.2±0.3,41˚.3×17˚.5E±˚,h23km±2km,M4.3/27, ML4.7/27,MLv4.3/27,Error ellipse: s-maj=0.0km s-min=0.0km az=174.6*

ISC 21 09:05:17.0±0.8,41˚.47S±0˚.03×175˚.00E±0˚.02,h32km±5km, n179,σ1§06/196,mb4.5/3,Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHW	**Baring Head**	**0.11**	**303**		**Pn**	**09 05 22.7**	**+0.2**
BHW				Sg	**Sb**	**09 05 26.1**	**-0.4**
BHW	**Baring Head**	**0.11**	**303**	P	**Pn**	**09 05 22.8**	**+0.2**
BHW				S	**Sb**	**09 05 26.3**	**-0.2**
MSWZ	**Moikau Station**	**0.20**	**74**		**Pn**	**09 05 24.3**	**+0.6**
MSWZ	**Moikau Station**	**0.20**	**74**	P	**Pn**	**09 05 24.3**	**+0.6**
MSWZ				S	**Sn**	**09 05 29.2**	**+1.3**
PLWZ	**Palliser**	**0.22**	**117**		**Pn**	**09 05 24.9**	**+0.9**
PLWZ	**Palliser**	**0.22**	**117**	P	**Pn**	**09 05 24.9**	**+0.9**
PLWZ				S	**Sn**	**09 05 30.6**	**+2.1**
WEL	**Wellington**	**0.25**	**317**	P	**Pb**	**09 05 24.0**	**0.0**
WEL				S	**Sb**	**09 05 28.5**	**-0.3**
SNZO	**South Karori**	**0.27**	**306**		**Pb**	**09 05 24.2**	**0.0**
SNZO				Sg	**Sb**	**09 05 28.7**	**-0.4**
SNZO	**South Karori**	**0.27**	**306**	P	**Pb**	**09 05 24.2**	**0.0**
PAWZ	**Paruwai Farm**	**0.33**	**75**	P	**Pn**	**09 05 26.1**	**+0.5**
PAWZ				S	**Sn**	**09 05 32.6**	**+1.2**
CAW	**Cannon Point**	**0.37**	**8**	P	**Pn**	**09 05 25.7**	**-0.4**
CAW				S	**Sb**	**09 05 31.4**	**+0.2**
MTW	**Mount Morrison**	**0.49**	**51**	P	**Pn**	**09 05 28.2**	**+0.4**
MTW				S	**Sn**	**09 05 35.9**	**+0.7**
TRWZ	**Traveller**	**0.52**	**82**	P	**Pn**	**09 05 29.0**	**+0.8**
TRWZ				S	**Sn**	**09 05 37.9**	**+1.8**
TCW	**Tory Channel**	**0.60**	**295**	P	**Pn**	**09 05 29.2**	**-0.1**
TCW				S	**Sb**	**09 05 37.1**	**-0.3**
KIW	**Kapiti Island**	**0.61**	**354**	P	**Pn**	**09 05 29.3**	**-0.2**
KIW				S	**Sb**	**09 05 37.5**	**-0.2**
CMWZ	**Cape Campbell**	**0.65**	**244**		**Pn**	**09 05 31.3**	**+1.3**
CMWZ				Sn	**Sn**	**09 05 42.2**	**+3.0**
CMWZ	**Cape Campbell**	**0.65**	**244**	P	**Pn**	**09 05 31.2**	**+1.3**
OGWZ	**Otaki Gorge**	**0.67**	**11**	P	**Pn**	**09 05 30.2**	**0.0**
OGWZ				S	**Sb**	**09 05 39.0**	**-0.1**
HOWZ	**Holdsworth Sta**	**0.69**	**34**	P	**Pb**	**09 05 30.9**	**+0.3**
HOWZ				S	**Sn**	**09 05 40.9**	**+0.7**
TMWZ	**Te Maipa**	**0.76**	**62**	P	**Pb**	**09 05 32.1**	**+0.3**
TUWZ	**Tuamarina**	**0.79**	**273**		**Pn**	**09 05 31.9**	**0.0**
TUWZ					**Sb**	**09 05 42.3**	**-0.5**
TUWZ	**Tuamarina**	**0.79**	**273**	P	**Pn**	**09 05 31.9**	**0.0**
BSWZ	**Blackbirch Sta**	**0.88**	**253**		**Pb**	**09 05 33.9**	**+0.2**
BSWZ				Sn	**Sb**	**09 05 45.8**	**+0.7**
BSWZ	**Blackbirch Sta**	**0.88**	**253**	P	**Pb**	**09 05 33.9**	**+0.2**
MRZ	**Mangatainoka R**	**0.92**	**29**	P	**Pb**	**09 05 34.1**	**-0.3**
TIWZ	**Tintock**	**0.96**	**44**	P	**Pb**	**09 05 34.9**	**-0.3**
DUWZ	**D'Urville Isla**	**1.05**	**309**	P	**Pb**	**09 05 36.3**	**-0.4**
CPWZ	**Castlepoint**	**1.07**	**59**	P	**Pb**	**09 05 36.4**	**-0.4**
PRWZ	**Pori Road**	**1.17**	**39**	P	**Pn**	**09 05 37.6**	**+0.4**
POWZ	**Post Office Ro**	**1.23**	**29**	P	**Pn**	**09 05 38.3**	**+0.4**
BFZ	**Birch Farm**	**1.23**	**51**	Pn	**Pn**	**09 05 38.3**	**+0.3**
BFZ	**Birch Farm**	**1.23**	**51**	P	**Pn**	**09 05 37.8**	**-0.1**
BFZ	**Birch Farm**	**1.23**	**51**	P	**Pn**	**09 05 38.6**	**+0.7**
NNZ	**Nelson**	**1.25**	**281**	Pn	**Pn**	**09 05 38.5**	**+0.4**
NNZ	**Nelson**	**1.25**	**281**	P	**Pn**	**09 05 38.6**	**+0.4**
OHWZ	**Ohakea**	**1.28**	**11**	P	**Pb**	**09 05 40.4**	**-0.1**
KHZ	**Kahutara**	**1.44**	**229**	Pn	**Pn**	**09 05 41.2**	**+0.4**
KHZ	**Kahutara**	**1.44**	**229**	P	**Pn**	**09 05 41.2**	**+0.4**
KHZ	**Kahutara**	**1.44**	**229**	P	**Pn**	**09 05 41.3**	**+0.4**
DVHZ	**Dannevirke**	**1.47**	**38**	P	**Pn**	**09 05 41.1**	**-0.1**
ANWZ	**Angora Road**	**1.51**	**48**	P	**Pn**	**09 05 41.6**	**-0.1**
TSZ	**Takapari Road**	**1.59**	**28**	P	**Pn**	**09 05 43.2**	**+0.3**
THZ	**Tophouse**	**1.60**	**259**	Pn	**Pn**	**09 05 43.3**	**+0.3**
THZ	**Tophouse**	**1.60**	**259**	P	**Pn**	**09 05 43.3**	**+0.3**
MRNZ	**Matariki Terra**	**1.69**	**272**	P	**Pn**	**09 05 45.1**	**+0.9**
WAZ	**Wanganui**	**1.71**	**360**	P	**Pb**	**09 05 46.9**	**-0.9**
PRHZ	**Porangahau**	**1.73**	**46**	P	**Pn**	**09 05 44.5**	**-0.3**
WPHZ	**Waipukurau**	**1.78**	**38**	P	**Pn**	**09 05 45.5**	**0.0**
PNHZ	**Pukenui**	**1.80**	**31**	P	**Pn**	**09 05 45.9**	**0.0**
QRZ	**Quartz Range**	**1.97**	**288**		**Pn**	**09 05 49.4**	**+1.2**
QRZ	**Quartz Range**	**1.97**	**288**	P	**Pn**	**09 05 49.4**	**+1.2**
QRZ	**Quartz Range**	**1.97**	**288**	P	**Pn**	**09 05 49.8**	**+1.2**
PXZ	**Pawanui**	**2.02**	**45**	P	**Pn**	**09 05 48.2**	**-0.5**
LREZ	**Lake Rotokare**	**2.06**	**347**	P	**Pb**	**09 05 51.7**	**-1.9**
GVZ	**Greta Valley S**	**2.09**	**224**	P	**Pn**	**09 05 49.8**	**+0.1**
KRHZ	**Kereru**	**2.10**	**30**	P	**Pn**	**09 05 49.8**	**-0.2**
MTVZ	**Mangateitei**	**2.11**	**10**	P	**Pb**	**09 05 54.7**	**0.0**
BHHZ	**Black Hill Sta**	**2.14**	**23**	P	**Pn**	**09 05 50.9**	**+0.4**
MOVZ	**Moawhango**	**2.14**	**16**	P	**Pn**	**09 05 51.3**	**+0.7**
WNVZ	**Wahianoa**	**2.19**	**12**	P	**Pn**	**09 05 52.5**	**+1.2**
PKVZ	**Pokaka**	**2.19**	**7**	P	**Pn**	**09 05 53.3**	**+2.0**
KAHZ	**Kahuranaki**	**2.20**	**41**	P	**Pn**	**09 05 50.7**	**-0.7**
TRVZ	**Turoa**	**2.21**	**11**	P	**Pn**	**09 05 53.0**	**+1.4**
NMEZ	**Namu Road**	**2.23**	**337**	P	**Pb**	**09 05 54.9**	**-1.6**
WHVZ	**Whangaehu Hut**	**2.23**	**12**	P	**Pn**	**09 05 53.3**	**+1.3**
DRZ	**Dome Shelter**	**2.23**	**11**	P	**Pn**	**09 05 53.5**	**+1.5**
FWVZ	**Far West T-bar**	**2.25**	**11**	P	**Pn**	**09 05 53.6**	**+1.3**
TUVZ	**Tur West**	**2.26**	**13**	P	**Pn**	**09 05 53.6**	**+1.4**
KHEZ	**Kahui Hut**	**2.30**	**341**	P	**Pb**	**09 05 56.2**	**-1.6**
NEZ	**North Egmont**	**2.30**	**342**	P	**Pb**	**09 05 56.4**	**-1.5**
KWHZ	**Kaweka Forest**	**2.31**	**28**	P	**Pn**	**09 05 52.6**	**-0.3**
SNVZ	**South Ngauruho**	**2.33**	**12**	P	**Pn**	**09 05 54.5**	**+1.2**
NGZ	**Ngauruhoe**	**2.34**	**12**	P	**Pn**	**09 05 54.8**	**+1.5**
VRZ	**Vera Road**	**2.35**	**355**	P	**Pn**	**09 05 55.1**	**+1.8**
DREZ	**Durham Road**	**2.36**	**345**	P	**Pb**	**09 05 56.7**	**-2.1**
OTVZ	**Oturere**	**2.36**	**13**	P	**Pn**	**09 05 55.0**	**+1.4**
NBEZ	**Newall Road No**	**2.36**	**338**	P	**Pn**	**09 05 56.2**	**-2.6**
NNVZ	**North Ngauruho**	**2.38**	**12**	P	**Pn**	**09 05 55.3**	**+1.4**
ETVZ	**East Tongariro**	**2.39**	**13**	P	**Pn**	**09 05 55.1**	**+1.0**
WTVZ	**West Tongariro**	**2.40**	**11**	P	**Pn**	**09 05 55.5**	**+1.4**
PKE	**Pukeiti**	**2.40**	**341**	P	**Pb**	**09 05 58.0**	**-1.5**
MCHZ	**McNeill Hill**	**2.40**	**33**	P	**Pn**	**09 05 53.7**	**-0.3**
DSZ	**Denniston Nort**	**2.41**	**262**	P	**Pn**	**09 05 54.8**	**+0.5**
TMVZ	**Te Maari**	**2.41**	**13**	P	**Pn**	**09 05 55.3**	**+1.0**
LTZ	**Lake Taylor**	**2.42**	**236**	Pn	**Pn**	**09 05 54.2**	**-0.1**
LTZ	**Lake Taylor**	**2.42**	**236**	P	**Pn**	**09 05 54.2**	**-0.1**
TWVZ	**Tarawa**	**2.42**	**8**	P	**Pn**	**09 05 55.6**	**+1.2**
KRVZ	**Karewarewa**	**2.42**	**12**	P	**Pn**	**09 05 55.8**	**+1.3**
NTVZ	**North Tongarir**	**2.42**	**13**	P	**Pn**	**09 05 55.5**	**+1.0**
AMCZ	**Amberley**	**2.44**	**225**	P	**Pn**	**09 05 54.2**	**-0.3**
KATZ	**Kakaramea**	**2.55**	**12**	P	**Pn**	**09 05 57.9**	**+1.7**
BKZ	**Black Stump Fm**	**2.57**	**27**	Pn	**Pn**	**09 05 55.9**	**-0.6**
BKZ	**Black Stump Fm**	**2.57**	**27**	P	**Pn**	**09 05 55.8**	**-0.6**
BKZ	**Black Stump Fm**	**2.57**	**27**	P	**Pn**	**09 05 56.5**	**+0.1**
RITZ	**Rihia Road**	**2.58**	**15**	P	**Pn**	**09 05 57.3**	**+0.8**
RATZ	**Rangitukua**	**2.67**	**13**	P	**Pn**	**09 05 59.8**	**+2.0**
OKCZ	**Okains Bay**	**2.67**	**212**	P	**Pn**	**09 05 57.1**	**-0.6**
ARHZ	**Aropaoanui**	**2.68**	**35**	P	**Pn**	**09 05 57.2**	**-0.7**
HATZ	**Hinemaiaia**	**2.71**	**18**	P	**Pb**	**09 06 05.5**	**+0.8**
NMHZ	**Naumai**	**2.74**	**31**	P	**Pn**	**09 05 58.5**	**-0.4**
WATZ	**Wairara**	**2.81**	**12**	P	**Pn**	**09 06 01.1**	**+1.3**
MQZ	**McQueen's Vall**	**2.83**	**217**	P	**Pn**	**09 05 58.6**	**-1.3**
MRHZ	**Matea Rd**	**2.85**	**23**	P	**Pn**	**09 06 00.1**	**-0.2**
AKCZ	**Akaroa Harbour**	**2.85**	**212**	P	**Pn**	**09 05 59.5**	**-0.8**
OXZ	**Oxford**	**2.87**	**229**	P	**Pn**	**09 05 59.3**	**-1.2**
INZ	**Inchbonnie**	**2.93**	**243**	P	**Pn**	**09 06 01.7**	**+0.4**
HIZ	**Hauiti**	**2.96**	**358**	Pn	**Pn**	**09 06 02.9**	**+1.2**
HIZ	**Hauiti**	**2.96**	**358**	P	**Pn**	**09 06 03.2**	**+1.6**
HIZ	**Hauiti**	**2.96**	**358**	P	**Pn**	**09 06 03.7**	**+2.0**
MTHZ	**Maungataniwha**	**2.97**	**29**	P	**Pn**	**09 06 01.4**	**-0.5**
RAHZ	**Arahi**	**3.01**	**33**	P	**Pn**	**09 06 01.4**	**-1.1**
KUTZ	**Kaahu Road**	**3.04**	**12**	P	**Pn**	**09 06 05.0**	**+2.1**
WPRZ	**Whakapapatarin**	**3.08**	**17**	P	**Pn**	**09 06 03.6**	**+0.2**
ALRZ	**Allen Road**	**3.08**	**20**	P	**Pn**	**09 06 04.3**	**+0.8**
RACZ	**Rakaia**	**3.09**	**222**	P	**Pn**	**09 06 02.3**	**-1.2**
PRRZ	**Plateau Road**	**3.15**	**20**	P	**Pn**	**09 06 05.2**	**+0.8**
TLZ	**Tolley Road**	**3.16**	**8**	P	**Pn**	**09 06 05.4**	**+0.8**
MHGZ	**Mahia Peninsul**	**3.21**	**45**	P	**Pn**	**09 06 04.4**	**-0.7**
SNGZ	**Shannon Statio**	**3.23**	**35**	P	**Pn**	**09 06 04.3**	**-1.1**
HRRZ	**Handcock Road**	**3.23**	**18**	P	**Pn**	**09 06 06.5**	**+1.0**
MUGZ	**Murupara**	**3.28**	**25**	P	**Pn**	**09 06 05.9**	**-0.3**
PRGZ	**Paritu Road**	**3.37**	**42**	P	**Pn**	**09 06 05.8**	**-1.6**
HLRZ	**Highlands Stat**	**3.38**	**18**	P	**Pn**	**09 06 10.0**	**+2.4**
WACZ	**Wakanui South**	**3.40**	**222**	P	**Pn**	**09 06 06.5**	**-1.2**
RIGZ	**Rimuhau**	**3.48**	**38**	P	**Pn**	**09 06 07.2**	**-1.7**
WVZ	**Waitaha Valley**	**3.54**	**242**	P	**Pn**	**09 06 09.3**	**-0.4**
URZ	**Urewera**	**3.59**	**28**	Pn	**Pn**	**09 06 08.4**	**-2.0**
URZ	**Urewera**	**3.59**	**28**	P	**Pn**	**09 06 10.4**	**0.0**
RPZ	**Rata Peaks**	**3.68**	**231**	Pn	**Pn**	**09 06 10.7**	**-0.9**
RPZ	**Rata Peaks**	**3.68**	**231**	P	**Pn**	**09 06 10.6**	**-0.9**
RPZ	**Rata Peaks**	**3.68**	**231**	P	**Pn**	**09 06 11.2**	**-0.4**
TKGZ	**Te Karaka**	**3.74**	**37**	P	**Pn**	**09 06 10.3**	**-2.1**
ARCZ	**Arundel**	**3.75**	**227**	P	**Pn**	**09 06 11.6**	**-1.0**
TOZ	**Tahuroa Road**	**3.75**	**6**	P	**Pn**	**09 06 13.2**	**+0.6**
OPRZ	**Ohinepanea**	**3.81**	**19**	P	**Pn**	**09 06 13.7**	**+0.2**
TGRZ	**Tauranga**	**3.86**	**15**	P	**Pn**	**09 06 15.0**	**+0.9**
CNGZ	**Carnagh Statio**	**3.87**	**41**	P	**Pn**	**09 06 14.2**	**0.0**
GCSZ	**Gaunt Creek Bo**	**3.92**	**240**	P	**Pn**	**09 06 15.5**	**+0.6**
TWZ	**Tauwhareparae**	**4.01**	**36**	P	**Pn**	**09 06 14.7**	**-1.5**
RUGZ	**Raukumara Rang**	**4.06**	**31**	P	**Pn**	**09 06 15.3**	**-1.7**
TMZ	**Timaru**	**4.13**	**224**	P	**Pn**	**09 06 16.8**	**-1.1**
HAZ	**Te Kaha**	**4.29**	**31**	P	**Pn**	**09 06 18.4**	**-1.5**
PKGZ	**Pakihiroa**	**4.29**	**35**	P	**Pn**	**09 06 18.3**	**-1.8**
FOZ	**Fox Glacier**	**4.35**	**240**	Pn	**Pn**	**09 06 20.2**	**-0.6**
FOZ	**Fox Glacier**	**4.35**	**240**	P	**Pn**	**09 06 20.3**	**-0.5**
AWAZ	**Awhitu Peninsu**	**4.41**	**356**	P	**Pn**	**09 06 23.3**	**+1.6**
ETAZ	**East Tamaki Re**	**4.51**	**359**	P	**Pn**	**09 06 24.2**	**+1.2**
WTAZ	**Waiatarua**	**4.54**	**356**	P	**Pn**	**09 06 25.3**	**+1.8**
LBZ	**Lake Benmore**	**4.58**	**229**	Pn	**Pn**	**09 06 23.6**	**-0.4**
LBZ	**Lake Benmore**	**4.58**	**229**	P	**Pn**	**09 06 23.6**	**-0.4**
MXZ	**Matakaoa Point**	**4.67**	**34**	Pn	**Pn**	**09 06 23.8**	**-1.4**
KUZ	**Kuaotunu**	**4.75**	**7**	P	**Pn**	**09 06 26.9**	**+0.5**
ODZ	**Otahua Downs**	**4.78**	**220**	P	**Pn**	**09 06 25.4**	**-1.3**
ODZ	**Otahua Downs**	**4.78**	**220**	P	**Pn**	**09 06 25.7**	**-1.1**
HHSZ	**Highcliff Hill**	**5.45**	**214**	P	**Pn**	**09 06 35.4**	**-0.5**
WKZ	**Wanaka**	**5.51**	**231**	Pn	**Pn**	**09 06 36.1**	**-0.7**
WKZ	**Wanaka**	**5.51**	**231**	P	**Pn**	**09 06 35.5**	**-1.3**
WCZ	**Waipu Caves**	**5.55**	**355**	P	**Pn**	**09 06 38.6**	**+1.3**
EAZ	**Earnscleugh**	**5.60**	**226**	P	**Pn**	**09 06 36.8**	**-1.2**
TUZ	**Tuapeka**	**5.93**	**219**	P	**Pn**	**09 06 41.5**	**-1.0**
OUZ	**Omahuta**	**6.34**	**350**	Pn	**Pn**	**09 06 48.3**	**+0.2**
OUZ	**Omahuta**	**6.34**	**350**	P	**Pn**	**09 06 50.5**	**+2.4**
OUZ	**Omahuta**	**6.34**	**350**	P	**Pn**	**09 06 49.4**	**+1.3**
MLZ	**Mavora Lakes**	**6.34**	**230**	Pn	**Pn**	**09 06 47.5**	**-0.7**
MLZ	**Mavora Lakes**	**6.34**	**230**	P	**Pn**	**09 06 47.3**	**-1.0**
CTZ	**Chatham Island**	**6.59**	**113**	P	**Pn**	**09 06 52.6**	**+1.1**
SYZ	**Scrubby Hill**	**6.59**	**218**	P	**Pn**	**09 06 51.0**	**-0.6**
WHZ	**Wether Hill Ro**	**6.76**	**227**	Pn	**Pn**	**09 06 53.3**	**-0.5**
WHZ	**Wether Hill Ro**	**6.76**	**227**	P	**Pn**	**09 06 52.6**	**-1.3**
DCZ	**Deep Cove**	**6.96**	**232**		**Pn**	**09 06 56.5**	**-0.2**
APZ	**The Paps**	**7.36**	**221**	P	**Pn**	**09 07 01.6**	**-0.6**
WB2	**Warramunga Arr**	**40.53**	**289**	P	**P**	**09 12 52.1**	**-1.1**
WB2				IAmb	IAmb	09 12 55.7	
	comp=Z,9.3nm,1.1s						
WRA	**Warramunga Arr**	**40.53**	**289**	P	**P**	**09 12 52.1**	**-1.2**
WB0	**Warramunga Arr**	**40.61**	**290**	P	**P**	**09 12 53.3**	**-0.6**
WB0				IAmb	IAmb	09 13 01.6	
	comp=Z,16nm,1.4s						
QSPA	**South Pole Qui**	**48.66**	**180**	P

AP01	**Chacalluta**	**1.38**	**125**			**Pn**	**10 26 14.7**	**+1.6**
AP01	**Chacalluta**	**1.38**	**125**	*i*	P	**Pn**	**10 26 14.4**	**+1.4**
AP01				*i*	S	**Sn**	**10 26 31.1**	**+0.6**
AP01					IAML		10 26 32.8	
	comp=N,22μm,0.3s							
PB12	**IPOC Station P**	**1.54**	**132**		Pn	**Pn**	**10 26 17.3**	**+1.9**
PB12	**IPOC Station P**	**1.54**	**132**	⇓*i*	P	**Pn**	**10 26 17.3**	**+1.9**
PB12				*i*	S	**Sn**	**10 26 36.1**	**+1.4**
PB12					IAML		10 26 37.5	
	comp=N,4μm,0.3s							
PB18	**Visviri**	**1.95**	**91**			**Pb**	**10 26 24.4**	**-0.3**
PB16	**IPOC Station P**	**2.07**	**112**			**Pn**	**10 26 24.1**	**+1.1**
PB16	**IPOC Station P**	**2.07**	**112**	*i*	P	**Pn**	**10 26 23.8**	**+0.8**
PB16				*i*	S	**Sn**	**10 26 47.5**	**-0.8**
PB11	**IPOC Station P**	**2.81**	**141**		Pn	**Pn**	**10 26 34.5**	**+1.6**
PB11	**IPOC Station P**	**2.81**	**141**	⇓*i*	P	**Pn**	**10 26 34.6**	**+1.7**
TA02	**Huaiquique**	**2.99**	**154**			**Pn**	**10 26 37.4**	**+2.1**
TA02	**Huaiquique**	**2.99**	**154**	*eP*		**Pn**	**10 26 37.4**	**+2.1**
GO01	**Chusmiza**	**3.04**	**134**			**Pn**	**10 26 38.6**	**+2.3**
GO01	**Chusmiza**	**3.04**	**134**	*i*	P	**Pn**	**10 26 38.6**	**+2.3**
GO01					IAML		10 27 27.8	
TA01	**Diego Aracena**	**3.24**	**157**			**Pn**	**10 26 39.8**	**+1.2**
TA01	**Diego Aracena**	**3.24**	**157**	*i*	P	**Pn**	**10 26 40.5**	**+1.8**
TA01				*i*	S	**Sn**	**10 27 14.6**	**-1.8**
TA01					IAML		10 27 35.0	
	comp=E,480nm,0.4s							
PB08	**IPOC Station P**	**3.41**	**139**		Pn	**Pn**	**10 26 43.3**	**+2.0**
PB08	**IPOC Station P**	**3.41**	**139**	⇓*i*	P	**Pn**	**10 26 43.3**	**+2.0**
PB08					IAML		10 27 36.1	
	comp=N,414nm,0.3s							
PATCX	**Punta Patache**	**3.48**	**158**			**Pn**	**10 26 43.8**	**+1.7**
LPAZ	**La Paz**	**3.49**	**69**		P	**Pn**	**10 26 46.1**	**+3.4**
	comp=N,178nm,0.5s,baz=251,slow=8.8,SNR=319							
LPAZ	**La Paz**	**3.49**	**69**	*eP*		**Pn**	**10 26 46.0**	**+3.3**
PB01	**IPOC Station P**	**3.96**	**151**			**Pn**	**10 26 49.5**	**+0.9**
PB02	**IPOC Station P**	**4.04**	**158**		Pn	**Pn**	**10 26 51.1**	**+1.4**
PB07	**IPOC Station P**	**4.41**	**160**			**Pn**	**10 26 56.3**	**+1.3**
PB09	**IPOC Station P**	**4.72**	**153**			**Pn**	**10 27 01.6**	**+2.3**
PB09	**IPOC Station P**	**4.72**	**153**	*i*	P	**Pn**	**10 27 01.5**	**+2.3**
PB04	**IPOC Station P**	**4.91**	**165**			**Pn**	**10 27 03.1**	**+1.3**
PB06	**IPOC Station P**	**5.43**	**161**			**Pn**	**10 27 10.0**	**+1.1**
LVC	**Limon Verde**	**5.58**	**154**		P	**Pn**	**10 27 13.3**	**+2.1**
	comp=N,18nm,0.3s,baz=17,slow=6.0,SNR=124							
LVC					S	**Sn**	**10 28 14.2**	**-0.6**
	comp=N,89nm,0.6s,baz=120,slow=16,SNR=13							
LVC	**Limon Verde**	**5.58**	**154**		Pn	**Pn**	**10 27 12.8**	**+1.6**
PB15	**IPOC Station P**	**5.93**	**161**			**Pn**	**10 27 16.7**	**+0.8**
PB14	**IPOC Station P**	**7.10**	**172**		Pn	**Pn**	**10 27 30.9**	**-1.1**
GO02	**Mina Guanaco**	**7.77**	**167**		Pn	**Pn**	**10 27 42.3**	**+1.2**
ETMB	**Extrema**	**9.28**	**34**	*eP*		**Pn**	**10 27 59.0**	**-2.6**
AC02	**Maricunga**	**9.48**	**167**		Pn	**Pn**	**10 28 05.9**	**+1.0**
CZSB	**Cruzeiro do Su**	**9.85**	**353**	*eP*		**Pn**	**10 28 12.8**	**+3.3**
SIV	**San Ignacio**	**10.14**	**83**		P	**Pn**	**10 28 12.9**	**-0.5**
	comp=N,12nm,0.5s,baz=261,slow=11,SNR=64							
VILB	**Vilhena**	**11.85**	**69**	*eP*		**Pn**	**10 28 37.0**	**+0.1**
BOSC	**San Juan Bosco**	**15.88**	**334**		Pn	**Pn**	**10 29 31.8**	**+0.3**
BOSC					IAmb	IAmb	10 29 50.4	
	comp=Z,13nm,0.6s							
CLDB	**Colider**	**16.63**	**69**	*eP*		**Pn**	**10 29 40.9**	**-0.1**
H03N1	**Juan Fernandez**	**17.14**	**201**		T	T	10 47 25.2	
	baz=26,slow=73,SNR=2509							
H03N2	**Juan Fernandez**	**17.15**	**201**		T	T	10 47 31.3	
	baz=26,slow=73,SNR=3389							
H03N3	**Juan Fernandez**	**17.16**	**201**		T	T	10 47 24.0	
	baz=26,slow=73,SNR=2337							
H03S3	**Juan Fernandez**	**17.49**	**201**		T	T	10 47 51.0	
	baz=5.5,SNR=21							
H03S1	**Juan Fernandez**	**17.50**	**201**		T	T	10 47 50.1	
	baz=5.5,SNR=20							
H03S2	**Juan Fernandez**	**17.51**	**201**		T	T	10 47 51.8	
	baz=5.5,SNR=19							
MACA	**Manacapuru-AM**	**17.84**	**38**	*eP*		**Pn**	**10 29 54.8**	**-1.2**
GARC	**Garzon, Huila**	**20.02**	**348**	*eP*		**P**	**10 30 20.7**	**0.0**
SOTA	**Rioblanco**	**20.21**	**345**	*eP*		Pn	10 30 28.6	+3.6
BBAC	**Balboa, Cauca**	**20.27**	**343**	*eP*		Pn	10 30 25.9	+0.5
ITAB	**Concordia**	**20.32**	**122**		P	**P**	**10 30 21.3**	**-2.4**
ITAB					IAmb	IAmb	10 30 26.1	
	comp=Z,17nm,1.2s							
PCON	**Cinco Dias**	**20.35**	**346**	*eP*		Pn	10 30 31.0	+4.3
POPC	**Popayan, Colom**	**20.62**	**345**	*eP*		**P**	**10 30 28.8**	**+1.5**
PLTB	**Pedras Altas**	**21.52**	**134**		P	**P**	**10 30 35.2**	**-1.4**
ORTC	**Ortega, Tolima**	**21.66**	**350**	*eP*		**P**	**10 30 38.1**	**0.0**
YOTC	**Yotoco, Valle**	**21.94**	**347**	*eP*		**P**	**10 30 44.5**	**+3.2**
TRQA	**Tornquist**	**22.06**	**160**		P	**P**	**10 30 42.5**	**+0.1**
PLMC	**San Jos del P**	**22.82**	**348**	*eP*		**P**	**10 30 51.6**	**+0.9**
GUY2C	**Guyana, Caldas**	**22.96**	**350**	*eP*		**P**	**10 30 55.6**	**+3.0**
PLCA	**Paso Flores**	**23.10**	**178**		P	**P**	**10 30 55.4**	**+2.0**
	comp=Z,11nm,1.0s,baz=357,slow=12,SNR=18							
	comp=Z,11nm,1.0s							
PLCA	**Paso Flores**	**23.10**	**178**		P	**P**	**10 30 55.4**	**+2.0**
PAYG	**Puerto Ayora**	**24.95**	**310**		P	**P**	**10 31 08.9**	**-2.0**
ZARC	**Zaragoza, Cauc**	**25.12**	**352**		P	**P**	**10 31 11.4**	**-1.1**
ZARC	**Zaragoza, Cauc**	**25.12**	**352**	*eP*		**P**	**10 31 11.7**	**-0.7**
SJG	**San Juan**	**35.85**	**9**		LR	LR	10 47 14.5	
	comp=Z,49nm,21.5s,baz=114,slow=35							
TKL	**Tuckaleechee C**	**54.20**	**348**		LR	LR	11 01 53.7	
	comp=Z,30nm,18.2s,baz=162,slow=39							
TXAR	**Lajitas Array**	**56.01**	**326**		P	P	10 35 39.1	+13
	comp=Z,0.5nm,0.8s,baz=143,slow=8.7,SNR=5.3							
	comp=Z,0.5nm,0.8s							
SNAA	**Sanae**	**66.78**	**161**		P	**P**	**10 36 39.5**	**+1.1**
SNAA					IAmb	IAmb	10 36 40.0	
	comp=Z,2.7nm,0.9s							
NVAR	**Mina Array Bea**	**70.89**	**323**		P	P	10 37 18.2	+14
	comp=Z,0.7nm,0.9s,baz=133,slow=5.6,SNR=4.8							
	comp=Z,0.7nm,0.9s							
TORD	**Torodi Ar. Bea**	**78.44**	**72**		P	**P**	**10 37 46.8**	**-1.8**
	comp=Z,2.1nm,0.8s,baz=253,slow=5.0,SNR=7.4							
	comp=Z,2.1nm,0.8s							
ESDC	**Sonseca Array**	**84.83**	**46**		P	**P**	**10 38 21.6**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=249,slow=6.3,SNR=2.9							
	comp=Z,0.4nm,0.6s							
YKA	**Yellowknife Ar**	**86.69**	**341**		P	P	10 38 40.8	+10
	comp=Z,1.2nm,0.6s,baz=130,slow=4.6,SNR=5.1							
	comp=Z,1.2nm,0.6s							
H11N3	**WAKE ISLAND Hyd**	**24.82**	**282**		T	T	13 02 17.0	
	baz=99,slow=75,SNR=73							
H11S2	**WAKE ISLAND Hyd**	**24.83**	**281**		T	T	13 02 09.8	
	baz=100,slow=75,SNR=168							
H11N2	**WAKE ISLAND Hyd**	**24.84**	**282**		T	T	13 02 16.4	
	baz=99,slow=75,SNR=92							
H11N1	**WAKE ISLAND Hyd**	**24.84**	**282**		T	T	13 02 17.0	
	baz=99,slow=75,SNR=89							
H11S1	**WAKE ISLAND Hyd**	**24.84**	**281**		T	T	13 02 10.4	
	baz=100,slow=75,SNR=169							
H11S3	**WAKE ISLAND Hyd**	**24.85**	**281**		T	T	13 02 18.1	
	baz=100,slow=75,SNR=169							

*NNC **21** 10:29:42.8±0.7,43.°09N×79.°54E,h1km±3km,mb3.1, mpv3.5,Error ellipse: s-maj=6.9km s-min=2.1km az=168.0*
*KRNET **21** 10:29:42.5±0.1,43.°01N×79.°68E,h17km,mb2.9*
*SOME **21** 10:29:42.1,43.°08N×79.°53E,h5km*
ISC 21 10:29:44.0±1.0,**43.°11N**±0.°04×**79.°51E**±0.°03,**h19**km±3km, **n33**,σ1°**01**/61,**15C-4D**,**Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SHLS	**Shalkode**	**0.06**	**327**	*eP*		**Pg**	**10 29 47.7**	**-0.1**
	313nm,0.1s							
SHLS				*eS*		**Sg**	**10 29 51.5**	**+1.2**
	644nm,0.1s							
SHLS	**Shalkode**	**0.06**	**327**	P		**Pg**	**10 29 47.7**	**-0.1**
	313nm,0.1s							
SHLS				S		**Sg**	**10 29 51.5**	**+1.2**
	644nm,0.1s							
UZB	**Uzynbulak**	**0.36**	**277**	*eP*		**Pg**	**10 29 50.7**	**-1.0**
	76nm,0.1s							
UZB				*eS*		**Sg**	**10 29 56.8**	**-0.1**
	867nm,0.3s							
UZB	**Uzynbulak**	**0.36**	**277**	P		**Pg**	**10 29 50.7**	**-1.0**
	76nm,0.1s							
UZB				S		**Sg**	**10 29 56.8**	**-0.1**
	867nm,0.3s							
KPKS	**Kokpek**	**0.70**	**301**	*eP*		**Pb**	**10 29 56.4**	**-1.1**
	63nm,0.1s							
KPKS				*eS*		**Sb**	**10 30 06.6**	**-0.2**
	214nm,0.2s							
KPKS	**Kokpek**	**0.70**	**301**	P		**Pb**	**10 29 56.4**	**-1.1**
	63nm,0.1s							
KPKS				S		**Sb**	**10 30 06.6**	**-0.2**
	214nm,0.2s							
KTMS	**Ketmen**	**0.70**	**61**	*eP*		**Pb**	**10 29 57.0**	**-0.7**
	24nm,0.1s							
KTMS				*eS*		**Sg**	**10 30 07.4**	**+0.1**
	17nm,0.2s							
KTMS	**Ketmen**	**0.70**	**61**	P		**Pb**	**10 29 57.0**	**-0.7**
	24nm,0.1s							
KTMS				S		**Sg**	**10 30 07.4**	**+0.1**
	17nm,0.2s							
ZHN	**Zhinishke**	**0.79**	**275**	*eP*		**Pb**	**10 29 58.0**	**-1.1**
	16nm,0.3s							
ZHN				*eS*		**Sb**	**10 30 09.4**	**0.0**
	282nm,0.2s							
SATY	**Saty**	**0.81**	**267**	*eP*		**Pb**	**10 29 58.6**	**-0.9**
	10nm,0.2s							
SATY				*eS*		**Sb**	**10 30 10.7**	**+0.7**
	248nm,0.2s							
SATY	**Saty**	**0.81**	**267**	P		**Pb**	**10 29 58.6**	**-0.9**
	10nm,0.2s							
SATY				S		**Sb**	**10 30 10.7**	**+0.7**
	248nm,0.2s							
PRZ	**Przheval'sk**	**1.03**	**233**	⇑*i*	P	**Pb**	**10 30 02.9**	**-0.3**
	baz=42							
PRZ				⇑*i*	S	**Sn**	**10 30 17.3**	**-0.1**
	baz=42							
DJR	**Jarkent**	**1.24**	**9**	*eP*		**Pn**	**10 30 06.2**	**-0.1**
	5.3nm,0.1s							
DJR				*eS*		**Sg**	**10 30 23.9**	**-0.4**
	56nm,0.2s							
DJR	**Jarkent**	**1.24**	**9**	P		**Pn**	**10 30 06.2**	**-0.1**
	5.3nm,0.1s							
DJR				S		**Sg**	**10 30 23.9**	**-0.4**
	56nm,0.2s							
ANVS	**Anan'yevo**	**1.39**	**257**	⇑*i*	P	**Pb**	**10 30 09.9**	**+0.5**
	baz=62							
ANVS				⇑*i*	S	**Sg**	**10 30 30.7**	**+1.7**
	baz=62							
ARXS	**Arharly**	**1.65**	**313**	*eP*		**Pb**	**10 30 14.2**	**+0.5**
	5.2nm,0.2s							
ARXS				*eS*		**Sg**	**10 30 37.7**	**+0.5**
	19nm,0.2s							
ARXS	**Arharly**	**1.65**	**313**	P		**Pb**	**10 30 14.2**	**+0.5**
	5.2nm,0.2s							
ARXS				S		**Sg**	**10 30 37.7**	**+0.5**
	19nm,0.2s							
TARG	**Taragay, Kyrgy**	**1.87**	**223**	⇑*i*	P	**Pb**	**10 30 17.4**	**-0.2**
	baz=28							
TARG				⇑*i*	S	**Sb**	**10 30 42.7**	**+2.0**
	baz=28							
TNSS	**Tian-Shan**	**1.88**	**269**	*eP*		**Pb**	**10 30 17.3**	**-0.5**
	5.1nm,0.3s							
TNSS				*eS*		**Sb**	**10 30 42.7**	**+1.6**
	7.4nm,0.2s							
TNSS	**Tian-Shan**	**1.88**	**269**	Pg		**Pb**	**10 30 18.4**	**+0.6**
	4.1nm,0.2s							
TNSS				Lg		Lg	10 30 44.4	
	7.4nm,0.2s							
KDJ	**Kajisay**	**1.98**	**241**	⇑*i*	P	**Pb**	**10 30 19.2**	**-0.2**
	baz=45							
KDJ				⇑*i*	S	**Sg**	**10 30 46.1**	**-1.5**
	baz=45							
CHKK	**Chushkaly**	**1.98**	**293**	*eP*		**Pb**	**10 30 18.8**	**-0.6**
	1.9nm,0.1s							
CHKK				*eS*		**Sb**	**10 30 44.9**	**+1.3**
	26nm,0.3s							
IZV	**Izvestkoviy**	**2.12**	**269**	*eP*		**Pb**	**10 30 23.4**	**+1.6**
	20nm,0.1s							
IZV				*eS*		**Sg**	**10 30 53.7**	**+1.4**
	43nm,0.5s							
KTBS	**Karatobe**	**2.15**	**287**	*eP*		**Pb**	**10 30 21.6**	**-0.6**
	1.3nm,0.2s							
KTBS				*eS*		**Sb**	**10 30 49.8**	**+1.4**
	95nm,0.5s							
MTBS	**Maitube**	**2.25**	**272**	*eP*		**Pb**	**10 30 24.6**	**+0.5**
	2.4nm,0.1s							
MTBS				*eS*		**Sg**	**10 30 54.9**	**-1.6**
	28nm,0.4s							
KUU	**Kurty**	**2.44**	**290**	*eP*		**Pb**	**10 30 26.5**	**-0.6**
	0.6nm,0.2s							
KUU				*eS*		**Sb**	**10 30 58.2**	**+1.5**
	21nm,0.3s							
ULHL	**Ulahol**	**2.56**	**251**	⇑*i*	P	**Pb**	**10 30 27.7**	**-1.6**
	baz=54							
ULHL				⇑*i*	S	**Sb**	**10 31 01.0**	**+0.6**
	baz=54							
BOOM	**Boomskoye usch**	**2.70**	**258**	⇑*eP*		**Pb**	**10 30 29.7**	**-2.0**
	baz=61							
BOOM				⇑*i*	S	**Sb**	**10 31 04.5**	**+0.1**
	baz=61							
KRBS	**Karabastau**	**2.85**	**283**	*eP*		**Pb**	**10 30 34.1**	**-0.2**
	0.1nm,0.1s							
KRBS				*eS*		**Sb**	**10 31 11.2**	**+2.4**
	9.2nm,0.3s							
TKM2	**Tokmak 2**	**2.87**	**268**	⇑*i*	P	**Pb**	**10 30 32.5**	**-2.2**
	baz=70							
TKM2				⇑*i*	S	**Sb**	**10 31 09.0**	**-0.5**
	baz=70							
TKM2	**Tokmak 2**	**2.87**	**268**	⇑Pg		**Pb**	**10 30 35.1**	**+0.4**
	1.9nm,0.6s							
TKM2				⇓Lg		Lg	10 31 14.1	
	8.8nm,0.5s							
MK31	**Makanchi Array**	**4.18**	**27**	⇓Pn		**Pn**	**10 30 46.9**	**+0.2**
	0.2nm,0.4s,baz=110,slow=13,SNR=3.3							
MK31				⇓Lg		Lg	10 31 51.4	
	0.9nm,0.5s,baz=205,slow=29,SNR=7.7							
KURK	**Kurchatov**	**7.64**	**356**	⇓Lg		Lg	10 33 44.9	
	1.3nm,0.7s							

*IDC **21** 10:30:09.5±2.1,17.°82S×178.°50W,h624km±20km,mb2.8/6, mbtmp3.8/8,Error ellipse: s-maj=68.6km s-min=24.3km az=154.0*
ISC 21 10:30:05.8±1.5,**17.°8S**±0.°4×**178.°4W**±0.°3,**h579**km,**n11**, σ0°**73**/10,**mb3.3/6**,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**3.38**	**270**	P		P	10 31 32.9	+7.3
	16nm,0.7s,baz=114,slow=4.3,SNR=12							
DZM	**Mont Dzumac**	**14.88**	**251**	P		**P**	**10 33 13.8**	**+0.3**
	4.4nm,0.8s,baz=328,slow=19,SNR=1.8							
WRA	**Warramunga Arr**	**44.66**	**259**	P		**P**	**10 37 28.1**	**-0.2**
	0.9nm,0.3s,baz=95,slow=7.5,SNR=7.8							
	0.9nm,0.3s							
PETK	**Petropavlovsk-**	**73.55**	**345**	P		**P**	**10 40 41.2**	**+0.9**
	0.8nm,0.6s,baz=128,slow=9.3,SNR=2.2							
	0.8nm,0.6s							
NVAR	**Mina Array Bea**	**79.32**	**44**	P		**P**	**10 41 12.1**	**-0.5**
	0.2nm,0.6s,baz=238,slow=9.5,SNR=2.5							
	0.2nm,0.6s							
ILAR	**Eielson Array**	**85.75**	**13**	P		**P**	**10 41 43.1**	**-0.8**
	0.3nm,0.4s,baz=217,slow=4.8,SNR=13							
	0.3nm,0.4s							
TXAR	**Lajitas Array**	**85.92**	**58**	P		**P**	**10 41 46.6**	**+0.9**
	0.4nm,0.7s,baz=215,slow=6.3,SNR=6.0							
	0.4nm,0.7s							
PDAR	**Pinedale Array**	**87.25**	**43**	P		**P**	**10 41 52.0**	**+0.1**
	0.3nm,0.6s,baz=239,slow=4.9,SNR=2.7							
	0.3nm,0.6s							
BRTR	**Keskin Array B**	**144.69**	**315**	PKP		**PKPdf**	**10 48 37.5**	**-0.2**
	1.0nm,0.5s,baz=243,slow=0.8,SNR=3.7							
GERES	**GERESS Array B**	**147.48**	**345**	PKPbc		**PKPbc**	**10 48 45.0**	**-0.5**
	0.9nm,0.6s,baz=29,slow=3.0,SNR=8.1							
DAVOX	**Davos/Dischmat**	**150.27**	**348**	PKPbc		**PKPbc**	**10 48 51.6**	**-0.9**
	1.1nm,0.3s,baz=297,slow=6.8,SNR=4.1							

RSNC 21 10:30:45.4±0.7,**6.°01N**×**73.°74W**,**h0**km±4km,**ML1.0, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SPBC	**San Pablo de B**	**0.48**	**224**	*eP*		Pg	10 30 54.8	+0.1
SPBC				*eS*		Sg	10 31 02.2	+1.2
SPBC				*i*			10 31 06.6	
	comp=Z,4.1nm,0.4s							
RUSC	**La Rusia**	**0.66**	**100**	*eP*		Pg	10 30 57.6	-0.5
RUSC				*eS*		Sg	10 31 08.3	+1.6
RUSC				*i*			10 31 16.5	
	comp=Z,7.7nm,0.5s							
BARC	**Barichara**	**0.80**	**43**	*eP*		Pg	10 31 00.5	-0.3
BARC				*eS*		Sg	10 31 11.8	+0.6
BARC				*i*			10 31 15.3	
	comp=Z,5.7nm,0.5s							
PTBC	**PUERTO BERRIO,**	**0.89**	**307**	*eP*		Pg	10 31 01.6	-0.9
PTBC				*eS*		Sg	10 31 14.0	-0.1
PTBC				*i*			10 31 14.8	
	comp=Z,6.8nm,0.6s							
BRRC	**Barranca, Sant**	**1.09**	**1**	*eP*		Pg	10 31 05.3	-1.1
ZARC	**Zaragoza, Cauc**	**1.85**	**323**	*eS*		Sn	10 31 22.8	-20

*IDC **21** 10:32:10.2±2.1,6.°28S×129.°55E,h0km,mb3.7/3, mbtmp3.7/4,ML4.0/1,Error ellipse: s-maj=132.6km s-min=42.1km az=69.0*
*NEIC **21** 10:32:24.6±2.4,6.°54S±0.°09×129.°3E±0.°1,h134km±14km, mb4.0/6,Error ellipse: s-maj=16.4km s-min=12.4km az=104.0*
ISC 21 10:32:24.8±0.7,**6.°57S**±0.°08×**129.°43E**±0.°09,**h150**km,**n28**, σ1°**95**/27,**mb3.6/5**,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SAUI	**Saumlaki**	**2.33**	**127**			**Pn**	**10 33 04.6**	**+0.8**
SAUI	**Saumlaki**	**2.33**	**127**	P		**Pn**	**10 33 04.8**	**+1.0**
FAKI	**Fak Fak**	**4.59**	**38**			**Pn**	**10 33 31.5**	**-1.3**
FAKI	**Fak Fak**	**4.59**	**38**	P		**Pn**	**10 33 31.4**	**-1.4**
MTN	**Manton Dam**	**6.45**	**165**			**Pn**	**10 33 57.5**	**-0.1**
MTN	**Manton Dam**	**6.45**	**165**	P		**Pn**	**10 33 57.5**	**-0.1**
KDU	**Kakadu**	**6.78**	**154**	P		**Pn**	**10 34 00.8**	**-1.1**
LUWI	**Luwuk**	**8.62**	**309**	Pn		**Pn**	**10 34 25.1**	**-1.4**
KNRA	**Kununurra**	**9.07**	**184**			**Pn**	**10 34 32.2**	**-0.2**
KNRA	**Kununurra**	**9.07**	**184**	P		**Pn**	**10 34 32.3**	**-0.2**
WB0	**Warramunga Arr**	**13.97**	**160**			**Pn**	**10 35 32.9**	**-3.6**
WRAB	**Tennant Creek**	**14.12**	**161**	Pn		**Pn**	**10 35 34.7**	**-3.5**
WRA	**Warramunga Arr**	**14.12**	**161**	Pn		**Pn**	**10 35 35.1**	**-3.1**
	0.7nm,0.3s,baz=346,slow=12,SNR=33							
WRA				Sn		Sn	10 37 59.1	-16
	0.5nm,0.3s,baz=337,slow=23,SNR=2.8							
	0.8nm,0.3s							
WRA	**Warramunga Arr**	**14.12**	**161**	Pn		**Pn**	**10 35 35.0**	**-3.3**
WB2	**Warramunga Arr**	**14.12**	**161**			**Pn**	**10 35 35.9**	**-2.5**
WR0	**Warramunga Arr**	**14.20**	**160**	Pn		**Pn**	**10 35 39.0**	**-0.4**
JAGI	**Jajag, Banyuwa**	**15.26**	**262**	Pn		**Pn**	**10 35 51.1**	**-1.4**
COEN	**Coen**	**15.38**	**120**			**P**	**10 35 55.9**	**+0.5**
COEN				IAmb		IAmb	10 36 03.9	
	comp=Z,23nm,1.4s							
COEN	**Coen**	**15.38**	**120**	P		**Pn**	**10 35 54.4**	**+0.3**
AS31	**Alice Springs**	**17.53**	**166**	P		**Pn**	**10 36 20.1**	**0.0**
ASAR	**Alice Springs**	**17.53**	**166**			**P**	**10 36 20.0**	**+0.9**
PSA00	**Pilbara Seismi**	**17.55**	**211**	P		**P**	**10 36 17.4**	**-1.8**
PSA00				IAmb		IAmb	10 36 35.8	
	comp=Z,12nm,1.4s							
SONM	**Songino Array**	**57.86**	**342**	P		**P**	**10 42 03.5**	**+2.6**
	comp=Z,0.2nm,0.5s,baz=142,slow=6.1,SNR=2.1							
	comp=Z,0.2nm,0.5s							
MK31	**Makanchi Array**	**67.56**	**327**	P		**P**	**10 43 07.2**	**+2.2**
MK31				IAmb		IAmb	10 43 21.7	
	comp=Z,1.5nm,0.9s							
MKAR	**Makanchi Array**	**67.56**	**327**	P		**P**	**10 43 07.2**	**+2.2**
	comp=Z,0.3nm,0.3s,baz=112,slow=7.8,SNR=7.5							
	comp=Z,0.3nm,0.3s							
KURBB	**Kurchatov Arra**	**71.85**	**329**	P		**P**	**10 43 33.1**	**+2.0**
	comp=Z,0.8nm,0.6s,baz=130,slow=4.8,SNR=6.4							
	comp=Z,0.8nm,0.6s							
KURK	**Kurchatov**	**71.86**	**329**	P		**P**	**10 43 33.1**	**+1.9**
KURK	**Kurchatov**	**71.86**	**329**	IAmb		IAmb	10 43 33.9	
	comp=Z,3.5nm,1.4s							

*IDC **21** 10:35:50.7±1.1,35.°59N×31.°50E,h0km,mb3.7/6, mbtmp3.7/11,ML3.6/5,MS2.8/1,Error ellipse: s-maj=20.0km s-min=18.0km az=89.0*
*ISK **21** 10:35:50.7,35.°36N×31.°64E,h7km,ML3.6/29*
*GII **21** 10:35:51.9±0.0,35.°52N×31.°32E,h20km,MD3.5/1, Mm3.6/4*
*NIC **21** 10:35:51.5±0.0,35.°72N×31.°66E,h13km±3km,MI3.7/8*
*DDA **21** 10:35:53.0±0.0,35.°64N×31.°60E,h24km±1km,MW3.8*
ISC 21 10:35:52.3±1.3,**35.°53N**±0.°02×**31.°59E**±0.°02,**h8**km±9km, **n89**,σ1°**34**/122,**mb3.6/6**,**3D**,**Cyprus region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AKMS	**Akamas**	**0.80**	**130**	S		**Sn**	**10 36 22.2**	**+0.3**
AKMS				AML		AML	10 36 25.0	
	7.2nm,0.7s							
AKMS				AML		AML	10 36 29.0	
	9.1nm,0.5s							
ALFC	**Alefka**	**0.91**	**114**	⇓*i*	P	**Pg**	**10 36 08.7**	**-1.1**
ALFC				AML		AML	10 36 29.5	
	8.3nm,0.6s							
ALFC				AML		AML	10 36 30.2	
	7.8nm,0.6s							
NATA	**

ELL	**Elmali**	**1.82**	**312**	PN		**Pb**	**10 36 25.5**	**-0.4**
IKL	**Isikli**	**1.84**	**67**	PN		**Pn**	**10 36 23.9**	**-0.3**
KARG	**Kargicak-Mersi**	**1.85**	**68**	PN		**Pn**	**10 36 23.8**	**-0.5**
SEDI	**Konya, Seydise**	**1.92**	**4**	P		**Pn**	**10 36 25.4**	**0.0**
SEDI				S		**Sn**	**10 36 49.2**	**-0.5**
SEDI				*i* AML		AML	10 36 59.0	
	comp=N,296nm,0.5s							
KEBE	**Keben-Mersin**	**1.95**	**61**	PN		**Pn**	**10 36 25.7**	**0.0**
SUTC	**Sutluce-Ispart**	**2.00**	**346**	PN		**Pb**	**10 36 28.4**	**-0.5**
KKBE	**Karaman, Kazim**	**2.01**	**33**	P		**Pn**	**10 36 27.5**	**+0.9**
KKBE				S		**Sn**	**10 36 53.2**	**+1.4**
OSC1	**CSNet OBS 1**	**2.04**	**187**	P		**Pn**	**10 36 27.5**	**+0.6**
OSC1				S		**Sb**	**10 36 56.1**	**+1.0**
BCK	**Bucak**	**2.09**	**338**	PN		**Pb**	**10 36 29.9**	**-0.5**
KRMN	**Karaman**	**2.12**	**39**	PN		**Pn**	**10 36 29.3**	**+1.1**
FETY	**Fethiye**	**2.31**	**299**	PN		**Pn**	**10 36 31.1**	**+0.5**
FETY	**Fethiye**	**2.31**	**299**	P		**Pn**	**10 36 31.9**	**+1.3**
FETY				S		**Sn**	**10 36 58.9**	**-0.2**
KMER	**Konya-Meram**	**2.32**	**15**	P		**Pn**	**10 36 32.2**	**+1.4**
CAME	**Cameli-Denizli**	**2.32**	**308**	PN		**Pn**	**10 36 32.8**	**+1.9**
ISP	**Isparta**	**2.44**	**340**	PN		**Pn**	**10 36 34.4**	**+1.9**
ISP				SN		**Sb**	**10 37 06.6**	**-0.2**
BRDR	**BURDUR-Merkez**	**2.48**	**331**	P		**Pb**	**10 36 36.1**	**-1.1**
BRDR				S		**Sn**	**10 37 04.5**	**+0.8**
KONT	**Konya--Tatoy**	**2.49**	**14**	PN		**Pn**	**10 36 34.7**	**+1.6**
KONT	**Konya--Tatoy**	**2.49**	**14**	P		**Pn**	**10 36 34.6**	**+1.6**
OSC2	**CSNet OBS 4**	**2.52**	**167**	P		**Pn**	**10 36 33.1**	**-0.2**
DOGA	**KONYA_Doganhis**	**2.57**	**1**	P		**Pn**	**10 36 36.4**	**+2.1**
DOGA				S		**Sn**	**10 37 03.2**	**-2.6**
DOGA				*i* AML		AML	10 37 14.0	
	comp=N,102nm,0.5s							
APMY	**Acipayam-Deniz**	**2.67**	**317**	PN		**Pn**	**10 36 37.6**	**+1.9**
BASM	**Basmaki-Afyon**	**2.68**	**333**	PN		**Pn**	**10 36 38.1**	**+2.3**
MERS	**Mersin**	**2.72**	**60**	PN		**Pn**	**10 36 37.3**	**+1.0**
MERS				SN		**Sn**	**10 37 10.4**	**+0.9**
LADK	**Ladik-KONYA**	**2.73**	**13**	PN		**Pn**	**10 36 38.2**	**+1.6**
YESY	**Yesilyurt**	**2.84**	**37**	PN		**Pn**	**10 36 39.5**	**+1.5**
TAVA	**DENİZLİ_Tavas**	**2.89**	**313**	P		**Pn**	**10 36 40.4**	**+1.7**
TAVA				S		**Sn**	**10 37 12.0**	**-1.7**
KZIL	**AFYON_Kizioren**	**2.96**	**337**	P		**Pn**	**10 36 42.1**	**+2.5**
GULE	**Gulek**	**3.11**	**55**	P		**Pn**	**10 36 44.6**	**+2.8**
GULE				S		**Sb**	**10 37 23.7**	**-2.4**
GULE				*i* AML		AML	10 37 40.0	
	comp=N,154nm,0.5s							
SHUT	**Suhut-Afyon**	**3.13**	**345**	PN		**Pn**	**10 36 44.3**	**+2.3**
KARA	**Karaisali**	**3.29**	**57**	PN		**Pn**	**10 36 45.1**	**+1.1**
KIZT	**Kizilcal**	**3.35**	**4**	PN		**Pn**	**10 36 47.4**	**+2.4**
CMRD	**Camardi-Nigde**	**3.47**	**51**	PN		**Pn**	**10 36 48.2**	**+1.6**
KARP	**Karpathos**	**3.61**	**272**	P		**Pn**	**10 36 48.4**	**-0.1**
BODT	**Bodrum**	**3.78**	**295**	P		**Pn**	**10 36 50.5**	**-0.3**
BODT				S		**Sn**	**10 37 31.8**	**-3.6**
TAHT	**Tahtakopru-Hat**	**3.82**	**76**	PN		**Pn**	**10 36 51.9**	**+0.5**
KOZT	**Kozan**	**3.93**	**59**	PN		**Pn**	**10 36 54.3**	**+1.4**
MMA0B	**Mount Meron ar**	**4.04**	**127**	Pn		**Pn**	**10 36 54.6**	**+0.2**
MMA0B				Sn		**Sn**	**10 37 44.1**	**+2.2**
MMAI	**Mount Meron Ar**	**4.04**	**127**	Pn		**Pn**	**10 36 54.6**	**+0.2**
	12nm,0.3s,baz=308,slow=14,SNR=30							
MMAI				Sn		**Sn**	**10 37 43.2**	**+1.4**
	9.0nm,0.3s,baz=309,slow=28,SNR=2.4							
	9.4nm,0.3s							
GEM	**Giv'at Ha'Em**	**4.09**	**123**	Pn		**Pn**	**10 36 55.8**	**+0.7**
GEM				Sn		**Sn**	**10 37 44.6**	**+1.5**
NATI	**Neve Ativ**	**4.11**	**122**	Pn		**Pn**	**10 36 55.9**	**+0.6**
NATI				Sn		**Sn**	**10 37 46.1**	**+2.5**
MMLI	**Mount Malkishu**	**4.43**	**133**	Pn		**Pn**	**10 37 00.8**	**+0.9**
MMLI				Sn		**Sn**	**10 37 53.9**	**+2.2**
BRTR	**Keskin Array B**	**4.49**	**21**	Pn		**Pn**	**10 37 01.6**	**+0.9**
	0.5nm,0.3s,baz=187,slow=16,SNR=6.9							
BRTR				Sn		**Sn**	**10 37 54.4**	**+1.1**
	0.5nm,0.3s,baz=198,slow=17,SNR=2.2							
	1.1nm,0.4s							
HMDT	**Nahal Hemdat**	**4.63**	**134**	Pn		**Pn**	**10 37 03.8**	**+1.3**
HMDT				Sn		**Sn**	**10 37 58.1**	**+1.7**
DSI	**Dead Sea**	**5.06**	**140**	Pn		**Pn**	**10 37 08.7**	**+0.2**
DSI				Sn		**Sn**	**10 38 09.4**	**+2.3**
KZIT	**Kziot**	**5.18**	**152**	Pn		**Pn**	**10 37 10.5**	**+0.4**
KZIT				Sn		**Sn**	**10 38 09.6**	**-0.4**
MSBI	**Mazada**	**5.26**	**142**	Pn		**Pn**	**10 37 12.0**	**+0.9**
IDI	**Anoyia**	**5.47**	**269**	Pn		**Pn**	**10 37 12.8**	**-1.3**
	1.6nm,0.3s,baz=332,slow=6.5,SNR=16							
	4.2nm,0.2s							
ASF	**Jabal al Asfar**	**5.54**	**126**	Pn		**Pn**	**10 37 16.6**	**+1.5**
	1.1nm,0.3s,baz=353,slow=2.0,SNR=6.9							
	2.4nm,0.3s							
PRNI	**Paran**	**5.91**	**150**	Pn		**Pn**	**10 37 20.4**	**+0.3**
PRNI				Sn		**Sn**	**10 38 28.2**	**+0.2**
KRMI	**Paran Flat**	**6.01**	**153**	Pn		**Pn**	**10 37 20.8**	**-0.7**
KRMI				Sn		**Sn**	**10 38 31.7**	**+1.2**
HRFI	**Mount Harif**	**6.20**	**151**	Pn		**Pn**	**10 37 24.2**	**+0.1**
HRFI				Sn		**Sn**	**10 38 34.9**	**-0.3**
EIL	**Elat**	**6.50**	**153**	Pn		**Pn**	**10 37 28.1**	**0.0**
	5.0nm,0.3s,baz=322,slow=7.7,SNR=31							
	35nm,0.6s							
EIL	**Elat**	**6.50**	**153**	Pn		**Pn**	**10 37 27.7**	**-0.5**
EIL				Sn		**Sn**	**10 38 42.2**	**-0.3**
GERES	**GERESS Array B**	**18.72**	**321**	P		**Pn**	**10 40 12.7**	**+1.2**
	0.6nm,0.6s,baz=156,slow=7.0,SNR=4.1							
DAVOX	**Davos/Dischmat**	**19.77**	**311**	LR		LR	10 48 05.2	
	comp=Z,28nm,20.4s,baz=262,slow=37							
FINES	**FINESS Array B**	**26.17**	**354**	P		**P**	**10 41 24.6**	**-2.2**
	0.4nm,0.4s,baz=149,slow=15,SNR=1.7							
	0.4nm,0.4s							
ARCES	**ARCESS Array B**	**34.22**	**356**	P		**P**	**10 42 37.2**	**-0.8**
	0.7nm,0.7s,baz=168,slow=6.2,SNR=5.2							
	0.7nm,0.7s							
TORD	**Torodi Ar. Bea**	**34.96**	**238**	P		**P**	**10 42 44.6**	**-0.3**
	0.8nm,0.7s,baz=33,slow=7.6,SNR=4.5							
	0.8nm,0.7s							
KURBB	**Kurchatov Arra**	**36.80**	**51**	P		**P**	**10 43 00.7**	**+0.3**
	0.3nm,0.4s,baz=168,slow=22,SNR=4.1							
	0.3nm,0.4s							
MKAR	**Makanchi Array**	**39.17**	**57**	P		**P**	**10 43 20.2**	**-0.3**
	1.0nm,0.7s,baz=269,slow=7.3,SNR=10.0							
	1.0nm,0.7s							
SONM	**Songino Array**	**55.14**	**52**	P		**P**	**10 45 25.5**	**+0.4**
	0.7nm,0.5s,baz=289,slow=7.7,SNR=5.4							
	0.7nm,0.5s							

*IDC **21** 10:41:06.7±2.2,23˚.64S×68˚.16W, h0km, mb3.7/1, mbtmp3.7/2, ML3.8/1, Error ellipse: s-maj=81.8km s-min=50.1km az=90.0*

*GUC **21** 10:41:20.6±0.8,22˚.87S×68˚.56W, h117km±4km, ML3.9*

ISC 21 10:41:20.1±1.0,**22˚.89S**±0˚.05×**68˚.53W**±0˚.07,**h112**km±7km, **n21**,σ0°**88**/28,**3C-2D**,**Northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AF01	**San Pedro de A**	**0.33**	**101**	↓*i*	P	**Pn**	**10 41 36.9**	**+0.3**
AF01				*i*	S	**Sn**	**10 41 49.5**	**+0.5**
AF01				IAML			10 41 51.8	
	comp=E,5µm,0.4s							
LVC	**Limon Verde**	**0.45**	**308**	*i*	P	**Pn**	**10 41 36.7**	**-0.6**
LVC				*i*	S	**Sn**	**10 41 49.0**	**-1.2**
PB15	**IPOC Station P**	**0.92**	**250**	↑*i*	P	**Pn**	**10 41 41.6**	**+0.7**
PB15				*i*	S	**Sn**	**10 41 57.8**	**+1.2**
PB06	**IPOC Station P**	**0.98**	**281**	↑*i*	P	**Pn**	**10 41 41.8**	**+0.4**
PB06				*i*	S	**Sn**	**10 41 57.7**	**+0.2**
PB06				IAML			10 41 58.3	
	comp=N,4µm,0.4s							
PB09	**IPOC Station P**	**1.27**	**329**	↓*i*	P	**Pn**	**10 41 45.5**	**+0.9**
PB09				*i*	S	**Sn**	**10 42 03.8**	**+0.7**
PB04	**IPOC Station P**	**1.59**	**290**	*i*	P	**Pn**	**10 41 48.4**	**0.0**
PB04				*i*	S	**Sn**	**10 42 09.4**	**-0.4**
PB04				IAML			10 42 14.4	
	comp=N,980nm,0.4s							
PB07	**IPOC Station P**	**1.71**	**312**	*i*	P	**Pn**	**10 41 50.2**	**+0.5**
PB07				*i*	S	**Sn**	**10 42 12.0**	**-0.3**
PB07				IAML			10 42 13.3	
	comp=E,1µm,0.4s							
PB02	**IPOC Station P**	**2.01**	**321**	*i*	P	**Pn**	**10 41 53.9**	**+0.5**
PB02				*i*	S	**Sn**	**10 42 18.4**	**-0.5**
PB02				IAML			10 42 24.5	
	comp=E,1µm,0.2s							
PB01	**IPOC Station P**	**2.04**	**334**	*i*	P	**Pn**	**10 41 54.1**	**+0.3**
PB01				*i*	S	**Sn**	**10 42 19.6**	**+0.1**
PB01				IAML			10 42 21.8	
	comp=E,1µm,0.5s							
PB14	**IPOC Station P**	**2.44**	**224**	*eP*		**Pn**	**10 41 59.9**	**+0.8**
GO02	**Mina Guanaco**	**2.46**	**203**	↑*iP*		**Pn**	**10 42 00.1**	**+0.7**
PATCX	**Punta Patache**	**2.55**	**324**	IAML			10 42 36.2	
	comp=E,384nm,0.2s							
TA01	**Diego Aracena**	**2.77**	**326**	*eP*		**Pn**	**10 42 04.5**	**+1.3**
TA01				*i* S		**Sn**	**10 42 36.5**	**+0.1**
TA01				IAML			10 42 42.9	
	comp=E,167nm,0.4s							
PB08	**IPOC Station P**	**2.79**	**348**	*eP*		**Pn**	**10 42 05.1**	**+1.3**
TA02	**Huaiquique**	**3.00**	**330**	IAML			10 42 52.0	
	comp=N,349nm,0.1s							
GO01	**Chusmiza**	**3.26**	**349**	*eP*		**Pn**	**10 42 10.9**	**+0.8**
PB11	**IPOC Station P**	**3.28**	**341**	IAML			10 43 17.6	
	comp=N,155nm,0.5s							
LPAZ	**La Paz**	**6.58**	**3**	Pn		**Pn**	**10 42 55.7**	**+0.8**
	comp=N,0.7nm,0.3s,baz=196,slow=5.8,SNR=11							
	comp=N,2.2nm,0.4s							
TORD	**Torodi Ar. Bea**	**77.50**	**70**	P		**P**	**10 53 04.4**	**+0.5**
	comp=N,0.2nm,0.3s,baz=231,slow=4.4,SNR=4.3							
	comp=N,0.2nm,0.3s							
WRA	**Warramunga Arr**	**131.93**	**209**	PKP		**PKiKP**	**11 00 21.9**	**-0.2**
	comp=N,0.2nm,0.7s,baz=143,slow=1.5,SNR=4.7							
ZALV	**Zalesovo Beam**	**143.05**	**26**	PKP		**PKiKP**	**11 00 41.2**	**-2.5**
	comp=N,0.7nm,0.5s,baz=321,slow=2.0,SNR=1.6							

*REN **21** 10:44:10.6±1.2,38˚.58N±0˚.02×118˚.50W±0˚.03, h10km±6km, ML2.6/8, ML2.4/52(NEIC), Error ellipse: s-maj=2.9km s-min=2.1km az=84.0*

NEIC 21 10:44:10.7±1.2,**38˚.57N**±0˚.03×**118˚.50W**±0˚.04,**h12**km±4km, **Error ellipse: s-maj=5.4km s-min=3.9km az=59.0, California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RYN	**Ryan**	**0.06**	**341**	Pg		Pg	10 44 12.9	-0.5
RYN						Sg	10 44 14.4	-0.9
NVAR	**Mina Array Bea**	**0.21**	**133**			Pg	10 44 14.0	-1.3
NV11	**Mina Array Sit**	**0.30**	**117**			Pg	10 44 16.9	0.0
NV11				Sg		Sg	10 44 21.4	+0.3
NV11				IAML			10 44 22.0	
	comp=E,783nm,0.6s							
NV11				IAML			10 44 22.1	
	comp=N,666nm,0.6s							
LHV	**Little Huntoon**	**0.32**	**181**			Pg	10 44 17.3	+0.2
LHV				Sg		Sg	10 44 22.3	+0.9
LHV				IAML			10 44 22.8	
	comp=E,688nm,0.5s							
LHV				IAML			10 44 22.9	
	comp=N,570nm,0.4s							
KVN	**Kaiserville**	**0.57**	**33**			Pg	10 44 21.5	-0.4
KVN				Sg		Sg	10 44 29.4	-0.2
KVN				IAML			10 44 35.4	
	comp=N,167nm,0.4s							
YERR	**Yerington**	**0.71**	**306**			Pg	10 44 24.1	-0.5
YERR				Sg		Sg	10 44 34.1	+0.1
YERR				IAML			10 44 39.7	
	comp=N,250nm,0.3s							
YERR				IAML			10 44 40.5	
	comp=E,307nm,0.4s							
PNTR	**Pine Nut**	**1.01**	**301**			Pg	10 44 29.3	-0.8
PNTR				Sg		Sb	10 44 43.5	+0.1
OMMB	**Old Mammoth Mi**	**1.03**	**203**			Pg	10 44 30.2	-0.4
OMMB				Sg		Sb	10 44 44.2	0.0
MDPB	**Devils Postpil**	**1.04**	**206**			Pg	10 44 30.4	-0.4
Q09A	**Carvers**	**1.06**	**75**			Pb	10 44 30.9	-0.2
TPH	**Tonopah**	**1.12**	**116**			Pb	10 44 31.7	-0.3
VCNR	**Virginia City**	**1.16**	**309**			Pb	10 44 31.9	-0.8
EMB	**Emerald Bay**	**1.32**	**288**			Pn	10 44 35.0	0.0
PAHR	**Pah Rah Range**	**1.33**	**329**			Pn	10 44 35.0	-0.2
MPK	**Martis Peak**	**1.40**	**302**			Pb	10 44 36.6	-0.2
MPK				IAML			10 44 58.1	
	comp=E,95nm,0.6s							
MPK				IAML			10 44 59.1	
	comp=N,96nm,0.3s							
LCH	**Last Change Ra**	**1.49**	**153**			Pb	10 44 38.5	+0.1
LCH				IAML			10 45 01.0	
	comp=E,59nm,0.2s							
LCH				IAML			10 45 01.2	
	comp=N,50nm,0.7s							
CMB	**Columbia Colle**	**1.58**	**251**	Pn		Pn	10 44 38.8	+0.3
CMB				IAML			10 45 00.7	
	comp=E,36nm,0.2s							
CMB				IAML			10 45 01.1	
	comp=N,40nm,0.4s							
BEKR	**Beckworth**	**1.94**	**312**	Pn		Pn	10 44 43.7	+0.1
BMN	**Battle Mountai**	**2.10**	**28**			Pn	10 44 45.3	-0.6
BMN	**Battle Mountai**	**2.10**	**28**	IAML			10 45 18.9	
	comp=N,21nm,0.3s							
R11A	**Troy Canyon, C**	**2.30**	**95**	Pn		Pn	10 44 47.9	-0.5
R11A				IAML			10 45 24.4	
	comp=E,26nm,0.4s							
R11A				IAML			10 45 26.8	
	comp=N,21nm,0.4s							
TPNV	**Topopah Spring**	**2.41**	**132**	Pn		Pn	10 44 49.5	-0.5
TPNV				IAML			10 45 32.6	
	comp=N,15nm,0.5s							
ORV	**Oroville**	**2.54**	**294**	Pn		Pn	10 44 51.4	-0.3
ORV				IAML			10 45 31.2	
	comp=E,15nm,1.1s							
GWY	**Greenwater Val**	**2.79**	**148**	Pn		Pn	10 44 55.6	+0.3
BBGB	**Big Mountain B**	**2.83**	**226**	Pn		Pn	10 44 55.9	+0.1
PRN	**Pahroc Range**	**2.96**	**112**			Pn	10 44 57.9	+0.3
PRN				IAML			10 45 53.3	
	comp=E,17nm,0.5s							
ELK	**Elko**	**3.32**	**48**			Pn	10 45 02.8	+0.1
ELK				IAML			10 45 57.2	
	comp=E,6.2nm,0.3s							
SHPR	**Sheep Range**	**3.36**	**127**	Pn		Pn	10 45 02.7	-0.4
GSC	**Goldstone, Bar**	**3.53**	**157**	Pn		Pn	10 45 06.1	+0.7
GSC				IAML			10 46 14.7	
	comp=E,6.7nm,0.6s							
GSC				IAML			10 46 26.3	
	comp=N,5.1nm,0.7s							
K05A	**Summer Lake**	**4.54**	**337**	Pn		Pn	10 45 17.8	-1.5

*IDC **21** 10:47:08.4±2.1,22˚.19S×178˚.73W, h475km±23km, mb3.3/8, mbtmp4.1/10, Error ellipse: s-maj=24.6km s-min=18.6km az=125.0*

*NEIC **21** 10:47:08.9±2.4,22˚.2S±0˚.1×178˚.65W±0˚.08, h474km±9km, mb4.2/24, Error ellipse: s-maj=18.0km s-min=9.8km az=163.0*

ISC 21 10:47:10.1±0.6,**22˚.21S**±0˚.09×**178˚.68W**±0˚.09,**h500**km, **n43**,σ1°**36**/40,**mb4.1**/20,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**5.41**	**325**	P		**P**	**10 48 38.1**	**-3.0**
	48nm,0.6s,baz=158,slow=9.4,SNR=53							
MSVF	**Nonsavu**	**5.41**	**325**	P		**P**	**10 48 37.8**	**-3.2**
RAO	**Raoul Island**	**7.05**	**175**	P		**P**	**10 48 52.7**	**-4.0**
NIUE	**Niue**	**8.77**	**71**	P		**P**	**10 49 14.2**	**-0.5**
MARNC	**Mare, Loyalty**	**12.36**	**271**	P		**P**	**10 49 51.8**	**-0.7**
PINNC	**Pines Island,**	**12.84**	**266**	P		**P**	**10 49 57.2**	**-0.3**
DZM	**Mont Dzumac**	**13.78**	**268**	P		**P**	**10 50 09.2**	**+1.5**
	11nm,0.7s,baz=93,slow=20,SNR=12							
URZ	**Urewera**	**16.40**	**192**	P		**P**	**10 50 33.7**	**-1.1**
	4.4nm,0.7s,baz=282,slow=4.2,SNR=8.8							
URZ	**Urewera**	**16.40**	**192**	P		**P**	**10 50 34.1**	**-0.6**
EIDS	**Eidsvold**	**27.82**	**257**	P		**P**	**10 52 19.2**	**+0.7**
EIDS				IAmb		IAmb	10 52 26.7	
	comp=Z,10nm,1.4s							
CAN	**Canberra**	**31.05**	**238**	P		**P**	**10 52 47.8**	**+1.3**
CTAO	**Charters Tower**	**32.73**	**267**	P		**P**	**10 53 00.8**	**-0.2**
CTAO				IAmb		IAmb	10 53 01.7	
	comp=Z,8.0nm,0.7s							
TOO	**Toolangi**	**34.39**	**235**	P		**P**	**10 53 16.1**	**+1.2**
TOO				IAmb		IAmb	10 53 22.8	
	comp=Z,19nm,1.2s							
STKA	**Stephens Creek**	**36.49**	**246**	P		**P**	**10 53 32.9**	**+0.5**
	comp=Z,3.0nm,0.6s,baz=88,slow=14,SNR=3.8							
	comp=Z,3.0nm,0.6s							
COEN	**Coen**	**37.09**	**276**	P		**P**	**10 53 37.6**	**0.0**
COEN				IAmb		IAmb	10 54 09.9	
	comp=Z,28nm,1.5s							
BBOO	**Buckleboo**	**41.23**	**245**	P		**P**	**10 54 10.8**	**-0.1**
AS31	**Alice Springs**	**43.53**	**259**	P		**P**	**10 54 29.1**	**-0.1**
ASAR	**Alice Springs**	**43.53**	**259**	P		**P**	**10 54 27.9**	**-1.2**
WB0	**Warramunga Arr**	**43.74**	**264**	P		**P**	**10 54 29.8**	**-1.0**
WB0				IAmb		IAmb	10 54 38.0	
	comp=Z,6.7nm,1.1s							
WB2	**Warramunga Arr**	**43.75**	**264**	P		**P**	**10 54 29.9**	**-1.0**
WB2				IAmb		IAmb	10 54 30.7	
	comp=Z,4.4nm,0.8s							
WRAB	**Tennant Creek**	**43.75**	**264**	P		**P**	**10 54 29.5**	**-1.4**
WRAB				IAmb		IAmb	10 54 32.2	
	comp=Z,12nm,1.4s							
WRA	**Warramunga Arr**	**43.76**	**264**	P		**P**	**10 54 29.9**	**-1.1**
	comp=Z,2.6nm,0.6s,baz=95,slow=7.7,SNR=81							
	comp=Z,2.6nm,0.6s							
WRA	**Warramunga Arr**	**43.76**	**264**	P		**P**	**10 54 29.9**	**-1.1**
FORT	**Forrest**	**48.05**	**248**	P		**P**	**10 55 03.8**	**+0.3**
MTN	**Manton Dam**	**48.57**	**272**	P		**P**	**10 55 06.7**	**-1.0**
MTN				IAmb		IAmb	10 55 23.8	
	comp=Z,21nm,1.4s							
KNRA	**Kununurra**	**49.93**	**268**	P		**P**	**10 55 17.5**	**-0.2**
KNRA				IAmb		IAmb	10 55 17.9	
	comp=Z,6.6nm,0.6s							
VNDA	**Vanda**	**56.16**	**185**	P		**P**	**10 56 01.4**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=23,slow=9.0,SNR=2.8							
	comp=Z,0.5nm,0.6s							
VNDA	**Vanda**	**56.16**	**185**	IAmb		IAmb	10 56 07.8	
	comp=Z,2.3nm,1.1s							
PSA00	**Pilbara Seismi**	**56.68**	**258**	P		**P**	**10 56 06.0**	**+0.3**
PSA00				IAmb		IAmb	10 56 06.1	
	comp=Z,11nm,1.1s							
NWAO	**Narrogin (SRO)**	**57.05**	**244**	P		**P**	**10 56 08.7**	**+0.6**
MORW	**Morawa**	**58.60**	**249**	P		**P**	**10 56 19.1**	**+0.3**
MORW				IAmb		IAmb	10 56 35.4	
	comp=Z,26nm,1.4s							
QSPA	**South Pole Qui**	**67.87**	**180**	P		**P**	**10 57 20.5**	**+2.6**
MJAR	**Matsushiro Arr**	**71.21**	**324**	P		**P**	**10 57 37.8**	**-0.3**
	comp=Z,1.7nm,0.7s,baz=151,slow=6.9,SNR=7.5							
	comp=Z,1.7nm,0.7s							
MJAR	**Matsushiro Arr**	**71.21**	**324**	IAmb		IAmb	10 57 38.3	
	comp=Z,4.3nm,1.4s							
JHS	**Saijyo**	**72.99**	**320**	P		**P**	**10 57 49.6**	**+1.1**
KSM	**Kuching**	**73.03**	**279**	P		**P**	**10 57 54.9**	**+5.6**
KSM				IAmb		IAmb	10 58 08.0	
	comp=Z,7.2nm,1.0s							
NVAR	**Mina Array Bea**	**82.70**	**44**	P		**P**	**10 58 41.6**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=226,slow=8.9,SNR=5.7							
	comp=Z,0.5nm,0.6s							
TROLL	**Troll, Antarti**	**86.03**	**180**	P		**P**	**10 58 57.2**	**+0.2**
VNA3	**Neumayer Olymp**	**86.48**	**176**	P		**P**	**10 58 59.3**	**+0.3**
TXAR	**Lajitas Array**	**88.51**	**58**	P		**P**	**10 59 10.7**	**+1.4**
	comp=Z,6.6nm,0.9s,baz=212,slow=4.4,SNR=6.7							
	comp=Z,0.6nm,0.9s							
CMAR	**Chiang Mai Arr**	**90.09**	**290**	P		**P**	**10 59 18.9**	**+2.2**
	comp=Z,1.4nm,0.3s,baz=134,slow=3.0,SNR=13							
	comp=Z,1.4nm,0.3s							
ILAR	**Eielson Array**	**90.11**	**13**	P		**P**	**10 59 16.1**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=218,slow=5.3,SNR=7.7							
	comp=Z,0.3nm,0.5s							
AKASG	**Malin Array Be**	**144.17**	**329**	PKP		**PKPdf**	**11 05 47.8**	**-0.6**
	comp=Z,1.0nm,0.4s,baz=43,slow=4.3,SNR=8.5							

*IPEC **21** 11:09:25.3±0.1,50˚.23N×18˚.98E, h1km, ML2.6/4, Error ellipse: s-maj=2.4km s-min=0.7km az=169.0*

*PRU **21** 11:09:25.6±0.0,50˚.20N×18˚.94E, h0km*

*IDC **21** 11:09:25.2±1.6,50˚.12N×19˚.14E, h0km, mb3.4/1, mbtmp3.4, ML2.7/3, Error ellipse: s-maj=32.5km s-min=11.2km az=139.0*

ISC 21 11:09:24.7±0.8,**50˚.23N**±0˚.04×**18˚.98E**±0˚.02,**h0**km,**n32**, σ0°**89**/54,**Poland**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OJC	**Ojcow**	**0.53**	**90**	*e*Pg		**Pg**	**11 09 35.0**	**+0.2**
OJC				*e*Sg		**Sg**	**11 09 42.3**	**+0.7**
OKC	**Ostrava-Krasne**	**0.66**	**234**	*e*PG		**Pg**	**11 09 38.0**	**+0.6**
OKC				*e*SG		**Sg**	**11 09 46.4**	**+0.4**
	comp=Z,70nm,0.4s							
MORC	**Moravsky Berou**	**1.03**	**245**	*e*Pg		**Pg**	**11 09 44.9**	**+0.4**
	baz=64							
MORC				*e*Sg		**Sg**	**11 09 57.6**	**-0.2**
	85nm,0.6s,baz=64							
MORC	**Moravsky Berou**	**1.03**	**245**	*e*PG		**Pg**	**11 09 44.9**	**+0.4**
MORC				*e*SG		**Sg**	**11 09 57.6**	**-0.2**
MAUC	**Maruska**	**1.14**	**221**	*e*PG		**Pg**	**11 09 46.4**	**-0.2**

*NOU **21** 11:40:39.1,23˙48S×179˙29E,h562km,ML4.9/123,South of Fiji Islands*

*GCMT **21** 11:40:42.3±0.3,23˙34S±0˙02×179˙16E±0˙04,h577km±2km, MW5.3/81,Moment Tensor Solution. s81,c119; Duration: 1↑1 Moment tensor: Scale 10^{17}Nm; Mrr-0.75±.03; Mθθ0.80±.05; Mϕϕ-0.04±.05; Mrθ-0.68±.05; Mθϕ0.09±.04; Mϕr0.21±.06; Best double couple: M₀1.05500×10^{17} NP1:ϕs249.00000°,δ27.00000°, λ-118.00000°. NP2:ϕs99.00000°,δ67.00000°, λ-77.00000°. Principal axes: T 1.0530, Plg21.0000°, Azm179.0000°; N 0.0040, Plg12.0000°, Azm274.0000°; P -1.0570, Plg66.0000°, Azm32.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 21 11:40:39.7±0.3,23˙47S±0˙03×179˙18E±0˙04,h568km±3km, h569km:pP-P,n1641,σ1§20/1683,mb5.3/339,143C-250D,
Fault plane solution: NP1:ϕs275.96240°,δ15.08270°, λ-67.93655°. **NP2:**ϕs73.19093°,δ76.04516°,λ-95.78046°.
Principal axes: T Plg30.8121°, Azm167.9475°; N Plg5.6093°, Azm74.5894°; P Plg58.5693°, Azm335.3414°;
South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**5.54**	**20**	P	**P**	**11 42 15.9**	**+0.7**
MSVF	**Nonsavu**	**5.80**	**349**	P	**P**	**11 42 17.0**	**-0.6**
	289nm,0.3s,baz=215,slow=12,SNR=521						
MSVF	**Nonsavu**	**5.80**	**349**	P	**P**	**11 42 17.0**	**-0.6**
MSVF	**Nonsavu**	**5.80**	**349**	P	**P**	**11 42 17.0**	**-0.6**
RIZ	**Raoul Island**	**6.31**	**156**	P	**P**	**11 42 23.2**	**+1.3**
RIZ				S	**S**	**11 43 44.7**	**-0.8**
RAO	**Raoul Island**	**6.32**	**156**	P	**P**	**11 42 23.4**	**+1.5**
	614nm,0.3s,baz=51,slow=3.8,SNR=22						
RAO				S	**S**	**11 43 43.9**	**-1.7**
	600nm,0.5s,baz=66,slow=23,SNR=8.2						
RAO	**Raoul Island**	**6.32**	**156**		**P**	**11 42 22.6**	**+0.7**
GLKZ	**Green Lake**	**6.33**	**156**	P	**P**	**11 42 22.3**	**+0.4**
GLKZ				S	**S**	**11 43 45.5**	**-0.3**
TAVE	**Taveuni**	**6.78**	**7**	P	**P**	**11 42 27.4**	**+1.0**
MARNC	**Mare, Loyalty**	**10.50**	**279**		**P**	**11 43 03.1**	**+0.2**
MARNC	**Mare, Loyalty**	**10.50**	**279**	P	**P**	**11 43 03.6**	**+0.7**
PINNC	**Pines Island,**	**10.84**	**272**		**P**	**11 43 06.1**	**-0.3**
PINNC	**Pines Island,**	**10.84**	**272**	P	**P**	**11 43 07.4**	**+1.0**
NIUE	**Niue**	**11.05**	**69**	P	**P**	**11 43 08.4**	**-0.3**
	baz=11,SNR=16						
NIUE				S	**S**	**11 45 12.4**	**+1.3**
	baz=11						
NIUE	**Niue**	**11.05**	**69**	P	**P**	**11 43 07.5**	**-1.1**
NIUE	**Niue**	**11.05**	**69**	P	**P**	**11 43 08.0**	**-0.6**
LIFNC	**LIFOU**	**11.39**	**281**	P	**P**	**11 43 11.0**	**-1.0**
LIFNC	**LIFOU**	**11.39**	**281**	P	**P**	**11 43 11.5**	**-0.5**
OUENC	**Ouen Island, N**	**11.42**	**273**	P	**P**	**11 43 10.9**	**-1.5**
OUENC	**Ouen Island, N**	**11.42**	**273**	P	**P**	**11 43 13.0**	**+0.7**
	50nm,1.0s						
YATNC	**Mamie plateau,**	**11.43**	**275**	P	**P**	**11 43 13.5**	**+1.1**
DVP	**Devils Point**	**11.77**	**297**	P	**P**	**11 43 15.8**	**-0.2**
ONTNC	**Ouen Toro**	**11.79**	**273**	P	**P**	**11 43 13.8**	**-2.4**
DZM	**Mont Dzumac**	**11.84**	**274**	*eP*	**P**	**11 43 15.1**	**-1.6**
	77nm,1s						
DZM	**Mont Dzumac**	**11.84**	**274**	P	**P**	**11 43 16.8**	**0.0**
	19nm,0.7s,baz=68,slow=19,SNR=16						
NOUC	**Port Laguerre**	**11.96**	**274**	P	**P**	**11 43 18.2**	**+0.3**
OUZ	**Omahuta**	**12.68**	**201**	P	**P**	**11 43 26.9**	**+1.9**
OUZ	**Omahuta**	**12.68**	**201**	P	**P**	**11 43 25.3**	**+0.3**
OUZ	**Omahuta**	**12.68**	**201**	P	**P**	**11 43 26.9**	**+1.9**
AFI	**Afiamalu**	**12.79**	**44**	P	**P**	**11 43 23.3**	**-3.3**
	216nm,0.6s,baz=29,slow=2.0,SNR=29						
AFI				S	S	11 45 34.7	-9.3
	197nm,1.0s,baz=191,slow=21,SNR=7.7						
AFI	**Afiamalu**	**12.79**	**44**	P	**P**	**11 43 23.1**	**-3.5**
AFI	**Afiamalu**	**12.79**	**44**	P	**P**	**11 43 23.1**	**-3.5**
AFI	**Afiamalu**	**12.79**	**44**	P	**P**	**11 43 23.9**	**-2.7**
WCZ	**Waipu Caves**	**13.12**	**198**	P	**P**	**11 43 29.5**	**0.0**
KUZ	**Kuaotunu**	**13.57**	**192**	P	**P**	**11 43 34.6**	**+0.4**
MXZ	**Matakaoa Point**	**14.07**	**183**	P	**P**	**11 43 37.1**	**-2.2**
KOUNC	**Koumac, New Ca**	**14.12**	**279**	P	**P**	**11 43 37.7**	**-2.4**
KOUNC	**Koumac, New Ca**	**14.12**	**279**	P	**P**	**11 43 40.2**	**+0.1**
OPRZ	**Ohinepanea**	**14.51**	**188**	P	**P**	**11 43 43.1**	**-0.5**
MARZ	**Manawahe**	**14.63**	**188**	P	**P**	**11 43 44.3**	**-0.6**
LIRZ	**Lichensteins R**	**14.69**	**189**	P	**P**	**11 43 45.1**	**-0.4**
TWGZ	**Tauwhareparae**	**14.70**	**184**	P	**P**	**11 43 42.5**	**-3.1**
KARZ	**Kaharoa**	**14.72**	**189**	P	**P**	**11 43 46.4**	**+0.6**
EDRZ	**Edgecumbe**	**14.74**	**188**	P	**P**	**11 43 44.2**	**-1.9**
OMRZ	**Omania**	**14.79**	**189**	P	**P**	**11 43 46.5**	**0.0**
URZ	**Urewera**	**14.85**	**186**	P	**P**	**11 43 43.8**	**-3.2**
	461nm,0.7s,baz=18,slow=2.0,SNR=110						
URZ				S	**S**	**11 46 16.4**	**-4.6**
	159nm,0.8s,baz=240,slow=22,SNR=14						
URZ	**Urewera**	**14.85**	**186**	P	**P**	**11 43 42.8**	**-4.2**
URZ				S	**S**	**11 46 17.4**	**-3.5**
FUNA	**Funafuti**	**14.86**	**0**	P	**P**	**11 43 45.2**	**-2.3**
FUNA	**Funafuti**	**14.86**	**0**	P	**P**	**11 43 45.9**	**-1.6**
MWZ	**Matawai**	**14.89**	**185**	P	**P**	**11 43 44.2**	**-3.3**
MWZ				S	**S**	**11 46 19.7**	**-2.1**
HLRZ	**Highlands Stat**	**14.94**	**189**	P	**P**	**11 43 47.8**	**-0.2**
TKGZ	**Te Karaka**	**14.97**	**184**	P	**P**	**11 43 45.9**	**-2.3**
TKGZ				S	**S**	**11 46 18.0**	**-5.0**
RRRZ	**Republican Roa**	**15.00**	**188**	P	**P**	**11 43 47.2**	**-1.3**
GRRZ	**Galatos Road**	**15.06**	**189**	P	**P**	**11 43 49.4**	**+0.2**
MUGZ	**Murupara**	**15.10**	**187**	P	**P**	**11 43 48.1**	**-1.5**
TLZ	**Tolley Road**	**15.14**	**191**	P	**P**	**11 43 50.3**	**+0.3**
PRRZ	**Plateau Road**	**15.17**	**188**	P	**P**	**11 43 48.6**	**-1.7**
RTZ	**Ruatahuna**	**15.22**	**187**	P	**P**	**11 43 50.0**	**-0.7**
WPRZ	**Whakapapatarin**	**15.22**	**189**	P	**P**	**11 43 50.3**	**-0.5**
RIGZ	**Rimuhau**	**15.24**	**184**	P	**P**	**11 43 47.6**	**-3.3**
RIGZ				S	**S**	**11 46 24.8**	**-3.0**
ALRZ	**Allen Road**	**15.24**	**188**	P	**P**	**11 43 49.2**	**-1.7**
KUTZ	**Kaahu Road**	**15.25**	**190**	P	**P**	**11 43 51.2**	**+0.2**
SNGZ	**Shannon Statio**	**15.35**	**185**	P	**P**	**11 43 49.4**	**-2.7**
SNGZ				S	**S**	**11 46 26.5**	**-3.1**
HIZ	**Hauiti**	**15.45**	**193**	P	**P**	**11 43 53.7**	**+0.8**
HIZ	**Hauiti**	**15.45**	**193**	P	**P**	**11 43 53.7**	**+0.8**
PRGZ	**Paritu Road**	**15.45**	**184**	P	**P**	**11 43 51.5**	**-1.5**
PRGZ				S	**S**	**11 46 28.6**	**-2.6**
MTHZ	**Maungataniwha**	**15.47**	**187**	P	**P**	**11 43 52.6**	**-0.6**
MTHZ				S	**S**	**11 46 28.1**	**-3.5**
MRHZ	**Matea Rd**	**15.50**	**188**	P	**P**	**11 43 50.7**	**-2.8**
MRHZ				S	**S**	**11 46 30.4**	**-1.8**
KNZ	**Kokohu**	**15.56**	**184**	P	**P**	**11 43 52.4**	**-1.6**
KNZ				S	**S**	**11 46 27.0**	**-6.0**
RATZ	**Rangitukua**	**15.62**	**190**	P	**P**	**11 43 53.3**	**-1.5**
MHGZ	**Mahia Peninsul**	**15.67**	**184**	P	**P**	**11 43 53.0**	**-2.2**
MHGZ				S	**S**	**11 46 30.1**	**-4.8**
NMHZ	**Naumai**	**15.71**	**187**	P	**P**	**11 43 54.8**	**-0.9**
NMHZ				S	**S**	**11 46 31.9**	**-3.8**
RITZ	**Rihia Road**	**15.72**	**190**	P	**P**	**11 43 54.1**	**-1.6**
KATZ	**Kakaramea**	**15.74**	**190**	P	**P**	**11 43 55.6**	**-0.3**
BKZ	**Black Stump Fm**	**15.82**	**188**	P	**P**	**11 43 54.0**	**-2.6**
NTVZ	**North Tongarir**	**15.87**	**190**	P	**P**	**11 43 55.5**	**-1.7**
KRVZ	**Karewarewa**	**15.87**	**190**	P	**P**	**11 43 55.8**	**-1.4**
TMVZ	**Te Maari**	**15.88**	**190**	P	**P**	**11 43 55.3**	**-2.0**
TWVZ	**Taurewa**	**15.88**	**191**	P	**P**	**11 43 57.1**	**-0.2**
ETVZ	**East Tongariro**	**15.90**	**190**	P	**P**	**11 43 55.6**	**-1.9**
WTVZ	**West Tongariro**	**15.90**	**190**	P	**P**	**11 43 56.2**	**-1.3**
NNVZ	**North Ngauruho**	**15.91**	**190**	P	**P**	**11 43 57.4**	**-0.3**
OTVZ	**Oturere**	**15.93**	**190**	P	**P**	**11 43 55.3**	**-2.5**
NGZ	**Ngauruhoe**	**15.95**	**190**	P	**P**	**11 43 57.3**	**-0.7**
SNVZ	**South Ngauruho**	**15.96**	**190**	P	**P**	**11 43 56.4**	**-1.7**
TUVZ	**Tukino**	**16.03**	**190**	P	**P**	**11 43 57.2**	**-1.6**
FWVZ	**Far West T-bar**	**16.04**	**190**	P	**P**	**11 43 57.7**	**-1.2**
DRZ	**Dome Shelter**	**16.06**	**190**	P	**P**	**11 43 58.6**	**-0.6**
WHVZ	**Whangaehu Hut**	**16.06**	**190**	P	**P**	**11 43 57.9**	**-1.2**
MCHZ	**McNeill Hill**	**16.07**	**187**	P	**P**	**11 43 56.5**	**-2.4**
KWHZ	**Kaweka Forest**	**16.08**	**188**	P	**P**	**11 43 55.9**	**-3.2**
TRVZ	**Turoa**	**16.08**	**190**	P	**P**	**11 43 58.5**	**-0.9**
WNVZ	**Wahianoa**	**16.10**	**190**	P	**P**	**11 43 57.7**	**-1.7**
PKVZ	**Pokaka**	**16.11**	**191**	P	**P**	**11 43 58.9**	**-0.4**
MOVZ	**Moawhango**	**16.16**	**190**	P	**P**	**11 43 58.3**	**-1.5**
BHHZ	**Black Hill Sta**	**16.19**	**189**	P	**P**	**11 43 56.0**	**-4.1**
CKHZ	**Cape Kidnapper**	**16.24**	**186**	P	**P**	**11 43 58.8**	**-1.7**
KRHZ	**Kereru**	**16.30**	**188**	P	**P**	**11 43 57.8**	**-3.3**
NEZ	**North Egmont**	**16.34**	**194**	P	**P**	**11 44 04.4**	**+2.9**
KHEZ	**Kahui Hut**	**16.38**	**194**	P	**P**	**11 44 05.6**	**+3.7**
NBEZ	**Newall Road No**	**16.39**	**195**	P	**P**	**11 44 03.9**	**+2.1**
KAHZ	**Kahuranaki**	**16.39**	**186**	P	**P**	**11 43 59.6**	**-2.4**
LREZ	**Lake Rotokare**	**16.45**	**193**	P	**P**	**11 44 03.7**	**+1.3**
PNHZ	**Pukenui**	**16.59**	**188**	P	**P**	**11 44 00.5**	**-3.2**
WAZ	**Wanganui**	**16.62**	**191**	P	**P**	**11 44 03.3**	**-0.7**
PXZ	**Pawanui**	**16.63**	**186**	P	**P**	**11 44 01.6**	**-2.4**
WPHZ	**Waipukurau**	**16.71**	**187**	P	**P**	**11 44 02.4**	**-2.3**
TSZ	**Takapari Road**	**16.76**	**189**	P	**P**	**11 44 02.4**	**-2.9**
PRHZ	**Porangahau**	**16.89**	**187**	P	**P**	**11 44 04.4**	**-1.9**
BFZ	**Birch Farm**	**17.34**	**188**	P	**P**	**11 44 08.2**	**-2.3**
SNZO	**South Karori**	**18.18**	**191**	P	**P**	**11 44 17.3**	**-0.8**
QRZ	**Quartz Range**	**18.19**	**196**	P	**P**	**11 44 19.1**	**+0.9**
THZ	**Tophouse**	**18.98**	**195**	P	**P**	**11 44 24.7**	**-0.8**
KHZ	**Kahutara**	**19.47**	**193**	P	**P**	**11 44 28.4**	**-1.4**
RAR	**Rarotonga**	**19.59**	**88**	P	**P**	**11 44 30.1**	**-1.2**
RPZ	**Rata Peaks**	**21.28**	**196**	P	**P**	**11 44 44.9**	**-1.2**
	122nm,0.6s,baz=339,slow=1.2,SNR=48						
	122nm,0.6s						
RPZ	**Rata Peaks**	**21.28**	**196**	P	**P**	**11 44 45.5**	**-0.7**
KNTN	**Kanton**	**22.38**	**25**	P	**P**	**11 44 56.0**	**-0.4**
ODZ	**Otahua Downs**	**22.62**	**196**	P	**P**	**11 44 56.9**	**-1.3**
HNR	**Honiara**	**23.09**	**304**	P	**P**	**11 45 02.5**	**-0.2**
	78nm,0.6s,baz=172,slow=7.1,SNR=2.5						
	78nm,0.6s						
HNR	**Honiara**	**23.09**	**304**	P	**P**	**11 45 01.6**	**-1.1**
MLZ	**Mavora Lakes**	**23.63**	**200**	P	**P**	**11 45 06.9**	**-0.3**
ARMA	**Armidale**	**25.48**	**248**	P	**P**	**11 45 24.5**	**+0.7**
	baz=26,SNR=34						
ARMA	**Armidale**	**25.48**	**248**	P	**P**	**11 45 25.3**	**+1.5**
ARMA	**Armidale**	**25.48**	**248**	P	**P**	**11 45 25.2**	**+1.4**
EIDS	**Eidsvold**	**25.64**	**260**	P	**P**	**11 45 25.9**	**+0.8**
	baz=26,SNR=7.4						
EIDS	**Eidsvold**	**25.64**	**260**	P	**P**	**11 45 25.5**	**+0.3**
EIDS	**Eidsvold**	**25.64**	**260**	P	**P**	**11 45 26.0**	**+0.8**
MGCD	**Mangrove Creek**	**26.48**	**242**	P	**P**	**11 45 34.2**	**+1.7**
	baz=26,SNR=49						
MGCD	**Mangrove Creek**	**26.48**	**242**	P	**P**	**11 45 34.3**	**+1.8**
SYDH	**Sydney Hard Ro**	**26.91**	**241**	P	**P**	**11 45 37.6**	**+1.4**
	178nm,0.8s						
RMQ	**Roma**	**27.71**	**257**	P	**P**	**11 45 44.1**	**+0.7**
	baz=28,SNR=13						
RMQ	**Roma**	**27.71**	**257**	P	**P**	**11 45 43.4**	**0.0**
CNB	**Canberra Magne**	**28.43**	**239**	P	**P**	**11 45 50.9**	**+1.4**
	baz=28,SNR=68						
CNB	**Canberra Magne**	**28.43**	**239**	P	**P**	**11 45 51.1**	**+1.5**
CAN	**Canberra**	**28.71**	**239**	P	**P**	**11 45 52.7**	**+0.7**
CAN	**Canberra**	**28.71**	**239**	P	**P**	**11 45 52.7**	**+0.7**
CAN	**Canberra**	**28.71**	**239**	P	**P**	**11 45 53.2**	**+1.2**
CAN	**Canberra**	**28.71**	**239**	P	**P**	**11 45 53.2**	**+1.2**
CAN				pP	**pwP**	**11 47 25.8**	**-1.9**
CAN				ScP	**ScP**	**11 51 34.5**	**+2.6**
PAE	**Paea**	**29.77**	**85**	*eP*	**P**	**11 46 02.2**	**+0.9**
	15nm,0.8s						
PPT2	**Papeete2**	**29.80**	**85**	*eP*	**P**	**11 46 02.4**	**+0.8**
	120nm,1.1s						
PPT	**Papeete**	**29.80**	**85**	P	**P**	**11 46 03.1**	**+1.5**
	90nm,0.8s,baz=252,slow=0.8,SNR=7.8						
	90nm,0.8s						
PPTF	**Pamatai, Papee**	**29.81**	**85**	P	**P**	**11 46 03.1**	**+1.3**
PPTF				IAmb	IAmb	11 46 04.0	
	comp=Z,96nm,0.8s						
PPTF	**Pamatai, Papee**	**29.81**	**85**	P	**P**	**11 46 00.9**	**-0.8**
PPTF	**Pamatai, Papee**	**29.81**	**85**	P	**P**	**11 46 02.8**	**+1.0**
TIAR	**Tiarei**	**30.02**	**85**	*eP*	**P**	**11 46 04.4**	**+0.9**
	comp=Z,31nm,1.0s						
TVO	**Taravao**	**30.04**	**85**	*eP*	**P**	**11 46 04.5**	**+0.8**
	comp=Z,55nm,0.8s						
CMSA	**Cobar Meteorol**	**30.68**	**247**	P	**P**	**11 46 09.7**	**+0.7**
	baz=31,SNR=56						
CMSA	**Cobar Meteorol**	**30.68**	**247**	P	**P**	**11 46 09.7**	**+0.7**
CTA	**Charters Tower**	**30.73**	**270**	PcP	**PcP**	**11 48 49.9**	**+0.5**
	comp=Z,17nm,0.6s,baz=67,slow=3.4,SNR=7.2						
CTA				ScP	**ScP**	**11 51 42.7**	**+4.1**
	comp=Z,13nm,0.8s,baz=147,slow=2.3,SNR=8.4						
CTA	**Charters Tower**	**30.73**	**270**	P	**P**	**11 46 10.4**	**+0.9**
CTAO	**Charters Tower**	**30.73**	**270**	P	**P**	**11 46 10.1**	**+0.6**
CTAO	**Charters Tower**	**30.73**	**270**	P	**P**	**11 46 10.1**	**+0.6**
CTAO				pmax	pmax		
	comp=Z,155nm,0.6s						
CTAO	**Charters Tower**	**30.73**	**270**	P	**P**	**11 46 10.3**	**+0.7**
CTAO	**Charters Tower**	**30.73**	**270**	⇓P	**P**	**11 46 10.2**	**+0.7**
CTAO				x	x	11 47 16.8	
CTAO				sP	**PcP**	**11 48 50.0**	**+0.7**
CTAO				ScP	**ScP**	**11 51 42.5**	**+3.8**
GLAD	**Gladstone**	**31.40**	**229**	P	**P**	**11 46 15.5**	**+0.5**
	comp=Z,24nm,0.7s						
QLP	**Quilpie**	**31.76**	**257**	P	**P**	**11 46 18.8**	**+0.5**
	baz=32,SNR=41						
QLP	**Quilpie**	**31.76**	**257**	P	**P**	**11 46 19.6**	**+1.3**
TOO	**Toolangi**	**32.06**	**236**	P	**P**	**11 46 20.9**	**+0.2**
	baz=32,SNR=4.4						
TOO	**Toolangi**	**32.06**	**236**	P	**P**	**11 46 21.1**	**+0.4**
TOO				IAmb	IAmb	11 46 22.5	
	comp=Z,74nm,0.8s						
TOO	**Toolangi**	**32.06**	**236**	P	**P**	**11 46 21.1**	**+0.4**
TOO				pmax	pmax		
	comp=Z,73nm,0.9s						
TOO	**Toolangi**	**32.06**	**236**	P	**P**	**11 46 21.6**	**+0.9**
PMOR	**Pomariorio Ree**	**32.15**	**81**	*eP*	**P**	**11 46 22.4**	**+0.8**
	comp=Z,263nm,1.1s						
VAH	**Vaihoa**	**32.31**	**81**	*eP*	**P**	**11 46 23.5**	**+0.5**
	comp=Z,121nm,0.8s						
RABL	**Rabaul**	**32.37**	**302**	P	**P**	**11 46 23.9**	**+0.3**
	comp=Z,110nm,0.5s						
MOO	**Moorlands**	**32.57**	**227**	P	**P**	**11 46 25.8**	**+0.9**
	baz=33,SNR=7.7						
MOO	**Moorlands**	**32.57**	**227**	P	**P**	**11 46 26.1**	**+1.2**
TAU	**Tasmania Unive**	**32.69**	**226**	P	**P**	**11 46 26.4**	**+0.5**
TAU				IAmb	IAmb	11 46 27.5	
	comp=Z,77nm,0.6s						
TAU	**Tasmania Unive**	**32.69**	**226**	P	**P**	**11 46 26.4**	**+0.5**
TAU				pmax	pmax		
	comp=Z,77nm,0.6s						
TAU	**Tasmania Unive**	**32.69**	**226**	P	**P**	**11 46 27.0**	**+1.2**
TAU	**Tasmania Unive**	**32.69**	**226**	P	**P**	**11 46 26.7**	**+0.9**
MTSU	**Mount Surprise**	**32.97**	**273**	P	**P**	**11 46 29.2**	**+0.6**
	baz=33,SNR=148						
MTSU	**Mount Surprise**	**32.97**	**273**	P	**P**	**11 46 29.4**	**+0.8**
GEXS	**Deakin Univers**	**33.15**	**236**	P	**P**	**11 46 30.9**	**+1.1**
	comp=Z,214nm,0.8s						
BRAT	**Ballarat**	**33.25**	**237**	P	**P**	**11 46 31.7**	**+1.1**
	comp=Z,85nm,1.2s						
PMG	**Port Moresby**	**33.64**	**289**	P	**P**	**11 46 34.7**	**+0.4**
	comp=Z,280nm,0.7s,baz=117,slow=6.5						
	comp=Z,280nm,0.7s						
PMG	**Port Moresby**	**33.64**	**289**	P	**P**	**11 46 34.1**	**-0.2**
PMG	**Port Moresby**	**33.64**	**289**	P	**P**	**11 46 34.1**	**-0.2**
PMG				pmax	pmax		
	comp=Z,285nm,0.7s						
PMG	**Port Moresby**	**33.64**	**289**	P	**P**	**11 46 34.5**	**+0.2**
PMG	**Port Moresby**	**33.64**	**289**	P	**P**	**11 46 34.4**	**+0.2**
XMAS	**Kiritimati**	**34.07**	**45**	P	**P**	**11 46 38.8**	**+0.9**
XMAS	**Kiritimati**	**34.07**	**45**	P	**P**	**11 46 39.0**	**+1.1**
XMAS	**Kiritimati**	**34.07**	**45**	P	**P**	**11 46 38.9**	**+0.9**
STKA	**Stephens Creek**	**34.19**	**247**	P	**P**	**11 46 39.5**	**+0.8**
	comp=Z,25nm,0.7s,baz=103,slow=6.1,SNR=48						
STKA				PcP	**PcP**	**11 48 60.0**	**+1.0**
	comp=Z,9.4nm,0.5s,baz=90,slow=5.3,SNR=5.0						
STKA				ScP	**ScP**	**11 51 53.4**	**+2.9**
	comp=Z,13nm,0.9s,baz=48,slow=4.9,SNR=7.5						
STKA				PKiKP	**PKiKP**	**11 56 20.1**	**-1.0**
	comp=Z,2.5nm,0.7s,baz=45,slow=8.6,SNR=3.1						
	comp=Z,25nm,0.7s						
STKA	**Stephens Creek**	**34.19**	**247**	P	**P**	**11 46 39.5**	**+0.8**
	baz=34,SNR=28						
STKA	**Stephens Creek**	**34.19**	**247**	P	**P**	**11 46 39.5**	**+0.8**
STKA	**Stephens Creek**	**34.19**	**247**	P	**P**	**11 46 39.6**	**+0.8**
MCQ	**Macquarie Isla**	**34.49**	**201**	P	**P**	**11 46 41.9**	**+1.1**
	baz=35,SNR=4.9						
MCQ	**Macquarie Isla**	**34.49**	**201**	P	**P**	**11 46 41.4**	**+0.7**
MCQ	**Macquarie Isla**	**34.49**	**201**	P	**P**	**11 46 41.4**	**+0.7**
MCQ				pmax	pmax		
	comp=Z,709nm,2.0s						
MCQ	**Macquarie Isla**	**34.49**	**201**	P	**P**	**11 46 40.9**	**+0.2**
ARPS	**Mount Arapiles**	**34.69**	**239**	P	**P**	**11 46 43.2**	**+0.4**
	baz=35,SNR=16						
ARPS	**Mount Arapiles**	**34.69**	**239**	P	**P**	**11 46 42.6**	**-0.2**
INKA	**Innaminka**	**34.83**	**255**	P	**P**	**11 46 45.5**	**+1.5**
COEN	**Coen**	**35.31**	**279**	P	**P**	**11 46 48.5**	**+0.4**
	baz=35,SNR=40						
COEN	**Coen**	**35.31**	**279**	P	**P**	**11 46 48.3**	**+0.1**
COEN				IAmb	IAmb	11 46 49.8	
	comp=Z,89nm,1.4s						
COEN	**Coen**	**35.31**	**279**	P	**P**	**11 46 48.9**	**+0.7**
PATS	**Pohnpei**	**36.37**	**323**	P	**P**	**11 46 56.1**	**-0.8**
PATS				IAmb	IAmb	11 47 06.6	
	comp=Z,139nm,1.2s						
HTT	**Hallett**	**36.57**	**245**	P	**P**	**11 46 58.7**	**+0.3**
	baz=36,SNR=12						
HTT	**Hallett**	**36.57**	**245**	P	**P**	**11 46 58.5**	**+0.1**
QIS	**Mount Isa**	**36.73**	**267**	P	**P**	**11 46 59.6**	**-0.3**
	baz=37,SNR=10						
QIS	**Mount Isa**	**36.73**	**267**	P	**P**	**11 46 59.8**	**-0.1**
LCRK	**Leigh Creek**	**37.02**	**250**	P	**P**	**11 47 02.7**	**+0.6**
TWOA	**Tennyson Woods**	**37.02**	**242**	P	**P**	**11 47 01.7**	**-0.3**
	comp=Z,57nm,0.9s						
MANU	**Manus Island**	**37.46**	**300**	P	**P**	**11 47 05.5**	**-0.4**
BBOO	**Buckleboo**	**38.93**	**246**	P	**P**	**11 47 17.3**	**-0.3**
	baz=39,SNR=24						
BBOO	**Buckleboo**	**38.93**	**246**	P	**P**	**11 47 17.2**	**-0.3**
BBOO				IAmb	IAmb	11 47 17.7	
	comp=Z,32nm,0.6s						
BBOO	**Buckleboo**	**38.93**	**246**	P	**P**	**11 47 17.5**	**0.0**
OOD	**Oodnadatta**	**39.30**	**254**	P	**P**	**11 47 22.0**	**+1.4**
MULG	**Mulgathing**	**40.61**	**250**	P	**P**	**11 47 31.2**	**+0.1**
AS31	**Alice Springs**	**41.37**	**260**	P	**P**	**11 47 37.2**	**0.0**
ASAR	**Alice Springs**	**41.37**	**260**	P	**P**	**11 47 37.2**	**0.0**
ASAR	**Alice Springs**	**41.37**	**260**	P	**P**	**11 47 37.2**	**0.0**
WR0	**Warramunga Arr**	**41.50**	**266**	P	**P**	**11 47 37.4**	**-0.8**
TAOE	**Nuku Hiva Isla**	**41.51**	**76**	P	**P**	**11 47 38.1**	**-0.4**
TAOE	**Nuku Hiva Isla**	**41.51**	**76**	P	**P**	**11 47 39.9**	**+1.4**
WB2	**Warramunga Arr**	**41.68**	**266**	P	**P**	**11 47 39.0**	**-0.6**
WB2				IAmb	IAmb	11 47 39.8	
	comp=Z,58nm,0.9s						
WB0	**Warramunga Arr**	**41.68**	**266**	P	**P**	**11 47 38.9**	**-0.7**
WB0				IAmb	IAmb	11 47 39.8	
	comp=Z,64nm,0.7s						
WRAB	**Tennant Creek**	**41.68**	**266**	P	**P**	**11 47 39.0**	**-0.6**
WRAB	**Tennant Creek**	**41.68**	**266**	P	**P**	**11 47 39.0**	**-0.6**
WRAB				pmax	pmax		
	comp=Z,45nm,0.9s						
WRAB	**Tennant Creek**	**41.68**	**266**	P	**P**	**11 47 39.1**	**-0.6**
WRAB	**Tennant Creek**	**41.68**	**266**	⇓P	**P**	**11 47 39.0**	**-0.6**
WRAB				pP	**PcP**	**11 49 23.0**	**+0.2**
WRAB				sP	**sP**	**11 50 20.7**	**-0.6**
WRAB				ScP	**ScP**	**11 52 23.0**	**+3.5**
WRA	**Warramunga Arr**	**41.69**	**266**	P	**P**	**11 47 39.1**	**-0.6**
	comp=Z,38nm,0.6s,baz=90,slow=5.9,SNR=2000						
WRA				PcP	**pwP**	**11 49 23.4**	**-0.3**
	comp=Z,11nm,0.8s,baz=98,slow=3.3,SNR=9.6						
WRA				ScP	**ScP**	**11 52 23.0**	**+3.6**
	comp=Z,9.8nm,1.0s,baz=102,slow=4.2,SNR=12						
WRA				S	**S**	**11 53 12.2**	**-4.1**
	comp=Z,6.7nm,0.7s,baz=99,slow=12,SNR=11						
WRA				PKiKP	**PKiKP**	**11 56 26.6**	**-1.1**
	comp=Z,1.0nm,0.4s,baz=70,slow=0.2,SNR=13						
	comp=Z,38nm,0.6s						
WRA	**Warramunga Arr**	**41.69**	**266**	P	**P**	**11 47 37.9**	**-1.8**
WRA	**Warramunga Arr**	**41.69**	**266**	*ceP*	**P**	**11 47 39.0**	**-0.7**
WRA				pmax	pmax		
	comp=Z,15nm,0.3s						
GENI	**Genyem**	**43.07**	**293**	P	**P**	**

SBA	Scott Base	54.76	183	P		P	11 49 18.7	+2.7	
LBMI	Labuha	54.99	287	P		P	11 49 18.4	-0.1	
	comp=Z,97nm,0.8s								
BLDU	Ballidu	55.49	248	P		P	11 49 21.5	-0.3	
	baz=55,SNR=25								
BLDU	Ballidu	55.49	248	P		P	11 49 21.7	-0.1	
SANI	Sanana	55.68	284	P		P	11 49 22.4	-0.9	
	comp=Z,87nm,0.9s								
SANI	Sanana	55.68	284	P		P	11 49 23.4	+0.1	
MUN	Mundaring	55.72	246	P		P	11 49 23.4	+0.1	
	baz=56,SNR=8.1								
MUN	Mundaring	55.72	246	P		P	11 49 23.9	+0.6	
TNTI	Ternate	55.78	288	P		P	11 49 23.8	-0.2	
	comp=Z,2µmcomp=Z,128nm,1.7s								
MORW	Morawa	56.32	250	P		P	11 49 27.3	-0.2	
	baz=56,SNR=11								
MORW	Morawa	56.32	250	P		P	11 49 27.0	-0.5	
MORW	Morawa	56.32	250	P		P	11 49 27.2	-0.3	
MMRI	Maumere	56.34	275	P		P	11 49 27.1	-0.7	
MMRI				IAmb		IAmb	11 49 28.1		
	comp=Z,103nm,1.0s								
MMRI	Maumere	56.34	275	P		P	11 49 27.5	-0.3	
	comp=Z,108nm,0.7s								
EDFI	Ende, Flores	56.79	275	P		P	11 49 30.3	-0.8	
	comp=Z,868nmcomp=Z,98nm,0.7s								
BASI	Baing, Sumba	57.27	273	P		P	11 49 34.4	+0.2	
	comp=Z,914nmcomp=Z,101nm,1.1s								
BBSI	Bau Bau	57.27	279	P		P	11 49 34.7	+0.5	
	comp=Z,271nmcomp=Z,8.9nm,0.8s								
WBSI	Waikabubak, Su	58.57	273	P		P	11 49 42.6	-0.4	
	comp=Z,91nm,1.2s								
BSSI	Bau Bau, Buton	58.90	277	P		P	11 49 44.4	-0.8	
	comp=Z,25nm,1.0s								
CCD	Concordia, Ant	58.95	194	P		P	11 49 45.6	+0.6	
CCD				pP		pwP	11 51 40.7	+1.0	
CCD				ScP		ScP	11 53 33.1	+0.2	
LUWI	Luwuk	59.00	284	P		P	11 49 45.6	-0.2	
LUWI				IAmb		IAmb	11 49 46.7		
	comp=Z,101nm,1.0s								
GIRL	Giralia	59.28	257	P		P	11 49 47.2	-0.4	
	baz=59,SNR=5.9								
GIRL	Giralia	59.28	257	P		P	11 49 48.2	+0.5	
	comp=Z,302nm,2.4s								
BKSI	Bulukumba	59.56	278	P		P	11 49 48.2	-1.4	
	comp=Z,815nmcomp=Z,107nm,0.7s								
BNSI	Bone	59.95	279	P		P	11 49 52.1	-0.1	
	comp=Z,757nmcomp=Z,67nm,0.8s								
KAPI	Kappang	60.02	278	P		P	11 49 52.6	-0.1	
	comp=Z,12nm,0.5s,baz=160,slow=6.1,SNR=11								
	comp=Z,12nm,0.5s								
KAPI	Kappang	60.02	278	P		P	11 49 51.5	-1.2	
KAPI	Kappang	60.02	278	P		P	11 49 51.5	-1.2	
KAPI				pmax		pmax			
	comp=Z,17nm,0.7s								
KAPI	Kappang	60.02	278	P		P	11 49 53.1	+0.4	
KAPI	Kappang	60.02	278	P		P	11 49 52.4	-0.3	
APSI	Ampana	60.06	283	P		P	11 49 53.0	+0.1	
	comp=Z,513nmcomp=Z,63nm,0.9s								
CASY	Casey	60.17	206	P		P	11 49 52.8	0.0	
CASY				IAmb		IAmb	11 49 53.7		
	comp=Z,135nm,1.1s								
CASY	Casey	60.17	206	⇑P		P	11 49 52.8	0.0	
CASY				pP		pP	11 51 43.1	+0.6	
CASY				pwP		pwP	11 51 49.9	+1.7	
PLAI	Plampang	60.35	273	P		P	11 49 54.3	-0.6	
	comp=Z,2µmcomp=Z,224nm,0.8s								
PLAI	Plampang	60.35	273	P		P	11 49 54.5	-0.4	
MRSI	Marisa	60.42	285	P		P	11 49 53.9	-1.4	
	comp=Z,28nm,0.6s								
SPSI	Sidrap Palu	60.44	279	P		P	11 49 54.0	-1.4	
	comp=Z,50nm,0.9s								
TTSI	Tana Toraja	60.78	280	P		P	11 49 57.2	-0.5	
	comp=Z,27nm,0.9s								
JCJ	Chichijima	61.68	322	P		P	11 50 03.1	-0.1	
	comp=Z,132nm,0.5s,baz=249,slow=3.9,SNR=49								
	comp=Z,132nm,0.5s								
JCJ	Chichijima	61.68	322	P		P	11 50 02.9	-0.4	
JCJ	Chichijima	61.68	322	P		P	11 50 03.4	+0.2	
TOLI2	Tolitoli	61.74	285	P		P	11 50 02.6	-1.4	
TOLI2	Tolitoli	61.74	285	P		P	11 50 03.8	-0.2	
MPSI	Mapaga	62.18	284	P		P	11 50 05.7	-1.1	
	comp=Z,795nmcomp=Z,98nm,0.9s								
IGBI	Denpasar	62.77	272	P		P	11 50 10.6	0.0	
	comp=Z,123nm,1.0s								
SRBI	Singaraja	62.98	273	P		P	11 50 11.2	-0.7	
	comp=Z,83nm,0.8s								
JAGI	Jajag, Banyuwa	63.81	272	P		P	11 50 15.6	-1.7	
JAGI				IAmb		IAmb	11 50 16.9		
	comp=Z,168nm,1.5s								
JAGI	Jajag, Banyuwa	63.81	272	P		P	11 50 16.0	-1.2	
	comp=Z,78nm,1.0s								
JAGI	Jajag, Banyuwa	63.81	272	P		P	11 50 16.1	-1.2	
BKB	Balikpapan	64.18	281	P		P	11 50 19.0	-0.6	
KMMI	Kalianget	64.51	273	P		P	11 50 21.1	-0.6	
	comp=Z,94nm,1.1s								
GMJI	Gumukmas	64.53	272	P		P	11 50 20.8	-1.0	
	comp=Z,39nm,0.9s								
BLJI	Banyuglugur	64.59	272	P		P	11 50 21.9	-0.3	
	comp=Z,43nm,0.8s								
BBKI	Banjar Baru	65.12	277	P		P	11 50 25.4	-0.2	
	comp=Z,32nm,0.8s								
MYLDM	Lahad Datu	65.65	288	P		P	11 50 30.0	+1.2	
GRJI	Gresik	65.93	273	P		P	11 50 31.0	+0.4	
	comp=Z,1µmcomp=Z,197nm,0.8s								
MTKI	Muara Teweh, K	66.12	280	P		P	11 50 31.6	-0.2	
PWJI	Pagerwojo	66.13	271	P		P	11 50 31.2	-0.6	
	comp=Z,67nm,0.7s								
QSPA	South Pole Qui	66.61	180	P		P	11 50 35.7	+1.6	
QSPA				IAmb		IAmb	11 50 36.6		
	comp=Z,190nm,1.2s								
QSPA	South Pole Qui	66.61	180	⇑P		P	11 50 35.7	+1.6	
QSPA				pP		pwP	11 52 33.7	+2.3	
PCJI	Pacitan	66.64	271	P		P	11 50 34.9	-0.1	
	comp=Z,3µmcomp=Z,308nm,0.6s								
WOJI	Wonogiri, Jawa	67.00	271	P		P	11 50 37.1	-0.1	
	comp=Z,80nm,1.1s								
UGM	Wanagama	67.34	271	P		P	11 50 38.9	-0.5	
UGM				IAmb		IAmb	11 50 39.7		
	comp=Z,66nm,0.8s								
UGM	Wanagama	67.34	271	P		P	11 50 38.5	-0.9	
	comp=Z,97nm,0.7s								
UGM	Wanagama	67.34	271	P		P	11 50 39.3	-0.1	
JHJ2	Mitsune	67.63	325	P		P	11 50 41.1	+0.4	
JHJ2	Mitsune	67.63	325	P		P	11 50 41.3	+0.7	
JHJ	Hachijo jima 2	67.66	325	P		P	11 50 41.0	+0.2	
	comp=Z,142nm,0.6s,baz=189,slow=12,SNR=13								
	comp=Z,142nm,0.6s								
KKM	Kota Kinabalu	68.06	287	P		P	11 50 43.6	-0.2	
KKM				IAmb		IAmb	11 50 44.2		
	comp=Z,44nm,0.6s								
KKM	Kota Kinabalu	68.06	287	P		P	11 50 43.8	0.0	
TGY	Tagaytay City	68.10	297	P		P	11 50 43.3	-0.6	
	comp=Z,78nm,0.3s,baz=68,slow=4.7,SNR=7.2								
	comp=Z,78nm,0.3s								
PBKI	Pangkalan Bun	68.32	277	P		P	11 50 45.7	+0.4	
	comp=Z,324µmcomp=Z,7µmcomp=Z,206nm,1.0s								
STKI	Sintang	69.64	279	P		P	11 50 53.5	+0.3	
	comp=Z,5µmcomp=Z,50nm,0.8s								
JYT	Yasato	69.87	327	P		P	11 50 54.6	+0.6	
JYT				IAmb		IAmb	11 50 55.9		
	comp=Z,95nm,0.9s								
SBUM	Sibu	69.99	282	P		P	11 50 55.5	+0.3	
JOW	Kunigami	70.15	312	P		P	11 50 56.5	+0.6	
	comp=Z,136nm,0.7s,baz=151,slow=6.6,SNR=46								
	comp=Z,136nm,0.7s								
JOW	Kunigami	70.15	312	P		P	11 50 56.5	+0.6	
JOW	Kunigami	70.15	312	P		P	11 50 56.8	+0.9	
CNJI	Cibinong	70.69	270	P		P	11 50 58.1	-1.3	
	comp=Z,2µmcomp=Z,148nm,0.9s								
INU	Inuyama	70.83	324	P		P	11 50 60.0	+0.3	
INU	Inuyama	70.83	324	P		P	11 51 00.4	+0.7	
	comp=Z,53nm,1.2s								
INU	Inuyama	70.83	324	P		P	11 51 00.0	+0.3	
JGF	Kuroka	70.84	325	P		P	11 50 59.8	-0.1	
MJAR	Matsushiro Arr	71.12	326	P		P	11 51 01.6	+0.1	
	comp=Z,49nm,0.8s,baz=153,slow=6.2,SNR=116								
	comp=Z,49nm,0.8s								
MAJO	Matsushiro	71.12	326	P		P	11 51 01.2	-0.2	
MAJO				IAmb		IAmb	11 51 02.5		
	comp=Z,82nm,0.9s								
MAJO	Matsushiro	71.12	326	P		P	11 51 01.2	-0.2	
MAJO				pmax		pmax			
	comp=Z,82nm,0.9s								
MAJO	Matsushiro	71.12	326	P		P	11 51 01.9	+0.5	
MAJO	Matsushiro	71.12	326	P		P	11 51 01.6	+0.2	
MJB9	Matsu-Tunnel	71.13	326	IAmb		IAmb	11 51 02.5		
	comp=Z,78nm,0.9s								
CBJI	Citeko	71.28	271	P		P	11 51 01.6	-1.3	
	comp=Z,102nm,0.9s								
KSM	Kuching	71.29	280	IAmb		IAmb	11 51 03.8		
	comp=Z,64nm,0.8s								
KSM	Kuching	71.29	280	P		P	11 51 02.8	-0.1	
	comp=Z,91nm,0.9s								
DBJI	Dramaga	71.32	271	P		P	11 51 03.0	-0.1	
	comp=Z,114nm,1.0s								
JSU	Suzuyama	71.85	318	P		P	11 51 06.1	+0.3	
JSU				IAmb		IAmb	11 51 07.0		
	comp=Z,101nm,0.7s								
JSD	Sado	72.25	327	P		P	11 51 08.1	+0.2	
JSD				IAmb		IAmb	11 51 10.0		
	comp=Z,188nm,1.6s								
YOJ	Yonaguni jima	72.38	307	P		P	11 51 08.6	-0.3	
YOJ				IAmb		IAmb	11 51 10.3		
	comp=Z,183nm,1.1s								
YOJ	Yonaguni jima	72.38	307	P		P	11 51 08.6	-0.3	
YOJ				pmax		pmax			
	comp=Z,183nm,1.1s								
YOJ	Yonaguni jima	72.38	307	P		P	11 51 09.3	+0.4	
JNU	Nakatsue	72.71	319	P		P	11 51 10.7	0.0	
	comp=Z,41nm,0.7s,baz=170,slow=2.3,SNR=11								
	comp=Z,41nm,0.7s								
JNU	Nakatsue	72.71	319	P		P	11 51 10.8	+0.1	
JNU				IAmb		IAmb	11 51 11.8		
	comp=Z,50nm,0.7s								
JNU	Nakatsue	72.71	319	P		P	11 51 12.4	+1.7	
JHS	Saijyo	72.72	322	P		P	11 51 11.0	+0.3	
JHS				IAmb		IAmb	11 51 12.5		
	comp=Z,122nm,1.0s								
TWG	Pinlang	72.85	305	P		P	11 51 09.9	-1.8	
TWG				IAmb		IAmb	11 51 10.4		
	comp=Z,52nm,0.6s								
YULB	Yu-li	73.01	306	P		P	11 51 10.9	-1.8	
JTM	Tenmabayashi	73.09	331	P		P	11 51 12.3	-0.4	
JTM				IAmb		IAmb	11 51 14.5		
	comp=Z,112nm,1.0s								
ERM	Erimo	73.18	333	*c*eP		P	11 51 15.8	+2.7	
ERM				pmax		pmax			
	comp=Z,24nm,0.7s								
ERM	Erimo	73.18	333	P		P	11 51 13.6	+0.5	
NACB	Ninganchiao	73.25	306	P		P	11 51 13.1	-0.8	
NACB				IAmb		IAmb	11 51 14.1		
	comp=Z,103nm,0.9s								
TPUB	Ta-pu	73.46	305	P		P	11 51 13.7	-1.6	
TPUB				IAmb		IAmb	11 51 14.6		
	comp=Z,100nm,0.8s								
TPUB	Ta-pu	73.46	305	P		P	11 51 13.8	-1.4	
SSLB	Suanglung	73.50	306	P		P	11 51 13.8	-1.6	
SSLB				IAmb		IAmb	11 51 15.3		
	comp=Z,75nm,0.8s								
SSLB	Suanglung	73.50	306	P		P	11 51 14.5	-0.9	
PPBI	Pangkal Pinang	73.59	275	P		P	11 51 16.2	0.0	
YHNB	Yeheng	73.70	307	P		P	11 51 16.2	-0.4	
YHNB				IAmb		IAmb	11 51 17.5		
	comp=Z,53nm,0.7s								
YHNB	Yeheng	73.70	307	P		P	11 51 18.9	+2.3	
KASI	Kota Agung	73.78	271	P		P	11 51 15.8	-1.5	
	comp=Z,81nm,0.8s								
TATO	Taipei	73.79	307	P		P	11 51 16.8	-0.2	
KUR	Kuril'sk	74.09	338	*d*	*i*P	P	11 51 19.3	+1.1	
KUR					*e*		11 51 30.8		
KUR					S		S	12 00 09.0	+3.3
KUR					pmax		pmax		
	comp=Z,127nm,1.6s								
LWLI	Liwa	74.38	271	P		P	11 51 19.9	-0.9	
	comp=Z,74nm,0.7s								
AMKA	Amchitka	74.52	0	P		P	11 51 20.8	+0.4	
JEW	Eniwo	74.58	332	P		P	11 51 22.1	+1.1	
KIWB	Kanaga Island	75.06	2	P		P	11 51 24.0	+0.5	
ADK	Adak	75.11	3	P		P	11 51 23.9	+0.1	
ADK	Adak	75.11	3	P		P	11 51 23.9	+0.1	
ADK				pmax		pmax			
	comp=Z,184nm,0.8s								
ADK	Adak	75.11	3	P		P	11 51 24.3	+0.5	
JKA	Kamikawa-asahi	75.14	334	P		P	11 51 25.8	+1.7	
JKA				IAmb		IAmb	11 51 27.5		
	comp=Z,128nm,1.1s								
ASAJ	Asahikawa	75.14	334	P		P	11 51 25.8	+1.6	
ASAJ				pmax		pmax			
	comp=Z,128nm,1.1s								
ATKA	Atka Island	75.57	4	P		P	11 51 26.5	+0.2	
DSRI	Dabo	75.70	276	P		P	11 51 27.4	-0.6	
	comp=Z,26nm,1.2s								
NAWB	Namwon	76.38	319	P		P	11 51 32.1	+0.8	
SKR	Severo-Kuril's	76.59	345	*e*P		P	11 51 32.3	+0.3	
SKR				*e*S		S	12 00 36.5	+4.2	
SKR				pmax		pmax			
	comp=Z,41nm,0.4s								
SMAI	San Martin Ant	76.77	159	P		P	11 51 34.7	+1.8	
NIKH	Nikolski High	76.83	7	P		P	11 51 33.4	+0.2	
NIKH	Nikolski High	76.83	7	P		P	11 51 33.4	+0.2	
	baz=191,SNR=14								
BELA	Belgrano 2	76.95	173	P		P	11 51 34.2	+0.4	
BELA				IAmb		IAmb	11 51 35.1		
	comp=Z,63nm,0.7s								
KSCHJ	Chungju	77.01	320	P		P	11 51 35.2	+0.6	
TJN	Taejon	77.04	319	P		P	11 51 35.0	+0.2	
TJN	Taejon	77.04	319	P		P	11 51 35.0	+0.2	
TJN				pmax		pmax			
	comp=Z,198nm,0.7s								
TJN	Taejon	77.04	319	P		P	11 51 35.6	+0.8	
	comp=Z,290nm,0.7s								
YSS	Yuzh-Sakhalins	77.43	335	*k*	*i*P	P	11 51 38.4	+1.8	
YSS					*e**SP	sP	11 54 35.3	+2.8	
YSS					*e*S	S	12 00 47.3	+5.9	
YSS				pmax		pmax			
	comp=Z,300nm,2.3s								
YSS				pmax		pmax			
	comp=Z,180nm,0.6s								
YSS				smax		smax			
	comp=N,200nm,6.1s								
YSS	Yuzh-Sakhalins	77.43	335	P		P	11 51 39.1	+2.5	
KSRS	Korea Array	77.44	321	P		P	11 51 37.9	+1.0	
	comp=N,26nm,0.8s,baz=136,slow=5.7,SNR=159								
	comp=N,26nm,0.8s								
KSAR	Wonju Array Be	77.45	320	P		P	11 51 37.5	+0.5	
KSAR	Wonju Array Be	77.45	320	P		P	11 51 37.5	+0.5	
KS19	Wonju Array Si	77.50	321	P		P	11 51 37.9	+0.6	
SEHB	SEOHWA	77.80	321	P		P	11 51 39.6	+0.7	
MAW	Mawson	77.89	201	P		P	11 51 40.1	+1.1	
	comp=N,62nm,0.6s,baz=131,slow=5.5,SNR=203								
MAW				pP		pP	11 53 37.5	+0.7	
	comp=N,11nm,1.0s,baz=84,slow=8.9,SNR=4.1								
	comp=N,62nm,0.6s								
MAW	Mawson	77.89	201	P		P	11 51 40.1	+1.1	
	baz=78,SNR=54								
MAW	Mawson	77.89	201	P		P	11 51 40.0	+1.1	
MAW	Mawson	77.89	201	P		P	11 51 40.0	+1.1	
MAW				pmax		pmax			
	comp=Z,14nm,0.6s								
UNV	Unalaska Valle	77.98	9	IAmb		IAmb	11 51 40.0		
	comp=Z,105nm,0.7s								
UNV	Unalaska Valle	77.98	9	P		P	11 51 39.3	-0.2	
	baz=194,SNR=27								
UNV	Unalaska Valle	77.98	9	P		P	11 51 39.4	0.0	
INCN	Inchon	78.22	320	P		P	11 51 42.3	+1.2	
INCN	Inchon	78.22	320	P		P	11 51 42.3	+1.2	
INCN				pmax		pmax			
	comp=Z,36nm,0.9s								
PET	Petropavlovsk	78.24	348	P		P	11 51 40.8	0.0	
PET				IAmb		IAmb	11 51 41.8		
	comp=Z,87nm,0.7s								
PET	Petropavlovsk	78.24	348	*e*P		P	11 51 40.8	0.0	
PET				pmax		pmax			
	comp=Z,170nm,0.6s								
PET	Petropavlovsk	78.24	348	P		P	11 51 40.5	-0.3	
	comp=Z,524nm,0.7s								
AKUT	Akutan	78.37	9	IAmb		IAmb	11 51 42.9		
	comp=Z,80nm,0.9s								
PEA0B	Petropavlovsk-	78.51	347	P		P	11 51 43.0	+0.7	
PEA0B				IAmb		IAmb	11 51 43.9		
	comp=Z,122nm,0.7s								
PEA0B	Petropavlovsk-	78.51	347	P		P	11 51 43.0	+0.7	
PEA0B				pmax		pmax			
	comp=Z,122nm,0.7s								
PETK	Petropavlovsk-	78.51	347	P		P	11 51 42.4	0.0	
	comp=Z,83nm,0.6s,baz=136,slow=6.9,SNR=224								
	comp=Z,83nm,0.6s								
MSHR	Mys Shultsa	79.24	326	*c*eP		P	11 51 46.9	+0.5	
MSHR				pmax		pmax			
	comp=Z,36nm,1.3s								
VLA	Vladivostok	79.26	327	*i*	P	P	11 51 46.4	-0.1	
VLA				pmax		pmax			
	comp=Z,33nm,0.8s								
FALS	False Pass	79.42	10	IAmb		IAmb	11 51 49.8		
	comp=Z,76nm,0.6s								
FALS	False Pass	79.42	10	P		P	11 51 46.8	-0.3	
	baz=196,SNR=13								
FALS	False Pass	79.42	10	P		P	11 51 47.6	+0.5	
UGL	Uglegorsk	79.45	336	*e*P		P	11 51 48.6	+1.3	
UGL				pmax		pmax			
	comp=Z,130nm,0.7s								
PMSA	Palmer Station	79.60	157	*e*P		P	11 51 46.9	-1.2	
NJ2	Nanjing	79.81	311	⇓P		P	11 51 50.3	+0.6	
NJ2				pmax		pmax			
	comp=Z,44nm,0.7s								
USA0B	Ussuriysk Arra	80.00	328	P		P	11 51 51.4	+1.1	
USA0B				IAmb		IAmb	11 51 52.7		
	comp=Z,84nm,1.1s								
USA0B	Ussuriysk Arra	80.00	328	P		P	11 51 51.4	+1.1	
USA0B				pmax		pmax			
	comp=Z,84nm,1.1s								
USRK	Ussuriysk Ar.	80.00	328	P		P	11 51 51.8	+1.5	
	comp=Z,54nm,0.8s,baz=132,slow=3.8,SNR=72								
	comp=Z,54nm,0.8s								
USRK	Ussuriysk Ar.	80.00	328	P		P	11 51 50.7	+0.3	
CNBA	Chernabura Isl	80.07	12	IAmb		IAmb	11 51 51.9		
	comp=Z,250nm,1.4s								
CHNA	Chernabura Isl	80.08	12	P		P	11 51 50.7	+0.2	
	baz=200,SNR=18								
SDPT	Sand Point	80.40	12	IAmb		IAmb	11 51 52.7		
	comp=Z,96nm,0.6s								
SDPT	Sand Point	80.40	12	P		P	11 51 52.2	0.0	
	baz=199,SNR=10								
TYV	Tymovskoe	80.72	338	*e*P		P	11 51 55.5	+1.6	
TYV				*e*S		S	12 01 13.5	-1.6	
TYV				pmax		pmax			
	comp=Z,83nm,0.8s								
TYV				pmax		pmax			
	comp=Z,200nm,1.8s								
TYV				smax		smax			
	comp=N,300nm,7.8s								
TYV				smax		smax			
	comp=E,400nm,7.8s								
SPIA	Saint Paul Isl	80.82	6	P		P	11 51 55.5	+1.2	
SPIA	Saint Paul Isl	80.82	6	P		P	11 51 55.0	+0.7	
	baz=190								
IPM	Ipoh	80.96	279	P		P	11 51 55.9	-0.2	
IPM				IAmb		IAmb	11 51 56.9		
	comp=Z,57nm,0.6s								
IPM	Ipoh	80.96	279	P		P	11 51 56.3	+0.2	
SNCC	San Nicolas Is	81.17	48	P		P	11 51 56.7	-0.1	
	baz=235								
S14K	Fog Glacier	81.46	12	P		P	11 51 58.5	+0.8	
	baz=200,SNR=22								
MDJ	Mudanjiang	81.49	327	IAmb		IAmb	11 52 00.3		
	comp=Z,86nm,1.0s								
MDJ	Mudanjiang	81.49	327	P		P	11 51 59.1	+1.0	
MDJ				pmax		pmax			
	comp=Z,85nm,0.8s								
MDJ				pmax		pmax			
	comp=Z,340nm,3.5s								
MDJ	Mudanjiang	81.49	327	P		P	11 51 59.2	+1.1	
	comp=Z,101nm,0.9s								
SCZ2	Santa Cruz Isl	81.53	47	P		P	11 52 00.1	+1.5	
	baz=234								
KULM	Kulim	81.63	279	P		P	11 51 59.0	-0.6	
SCI2	San Clemente I	81.69	49	P		P	11 52 00.7	+1.3	
	baz=235								
SBC	Santa Barbara	81.73	47	P		P	11 52 00.9	+1.4	
	baz=234								
CHIR	Chirikof Islan	81.83	14	P		P	11 52 00.4	+0.8	
	baz=203								
PKM	Mcpherson Peak	81.93	47	P		P	11 52 02.5	+1.7	
	baz=234								
SAO	San Andreas Ge	81.97	44	P		P	11 52 02.1	+1.3	
SAO				IAmb		IAmb	11 52 03.5		
	comp=Z,54nm,0.8s								
SAO	San Andreas Ge	81.97	44	P		P	11 52 02.1	+1.3	
SAO				pmax		pmax			
	comp=Z,54nm,0.9s								
CIS	Catalina Islan	82.02	48	P		P	11 52 02.3	+1.2	
	baz=235								
PMPB	Monarch Peak	82.06	45	IAmb		IAmb	11 52 03.8		
	comp=Z,51nm,0.7s								
BBGB	Big Mountain B	82.12	45	IAmb		IAmb	11 52 09.3		
	comp=Z,46nm,0.7s								
PAGB	Antelope Grade	82.13	46	P		P	11 52 02.9	+1.3	
WHN	Wuhan	82.14	308	⇓*i*P		P	11 52 02.5	+0.8	
WHN				pmax		pmax			
	comp=Z,90nm,0.7s								
BCW	Bitter Crk WRg	82.22	47	IAmb		IAmb	11 52 05.2		
	comp=Z,88nm,0.8s								
FMP	Fort Macarthur	82.28	48	P		P	11 52 03.1	+0.7	
	baz=235								
HOPS	Hopland Field	82.31	42	P		P	11 52 04.3	+1.8	
HOPS				IAmb		IAmb	11 52 05.4		
	comp=Z,96nm,1.1s								
KCPM	Cahto Peak	82.44	41	P		P	11 52 04.2	+1.0	
KCPM				IAmb		IAmb	11 52 06.3		
	comp=Z,65nm,0.9s								
OSI	Osito Audit: C	82.50	47	P		P	11 52 05.0	+1.5	
	baz=235								
DECC	Green Verdugo	82.56	48	P		P	11 52 04.7	+0.9	
	baz=235								
109C	Camp Elliot, M	82.64	50	IAmb		IAmb	11 52 06.7		
	comp=Z,120nm,1.4s								
109C	Camp Elliot,

baz=203,SNR=25
BNX BinXian 83.38 326 ⇓P P **11 52 07.6 0.0**
BNX pmax pmax
comp=Z,37nm,0.9s
BNX pmax pmax
comp=Z,83nm,5.3s
TIA Tai'an 83.39 314 ⇓P P **11 52 08.8 +0.9**
TIA pmax pmax
comp=Z,130nm,0.7s
CMB Columbia Colle 83.41 44 P P **11 52 09.2 +1.2**
CMB IAmb IAmb 11 52 10.3
comp=Z,68nm,0.9s
CMB Columbia Colle 83.41 44 P P **11 52 09.2 +1.2**
CMB pmax pmax
comp=Z,68nm,0.9s
PFO Pinyon Flats O 83.49 49 P P **11 52 09.7 +1.1**
PFO Pinyon Flats O 83.49 49 P P **11 52 09.7 +1.1**
PFO pmax pmax
comp=Z,23nm,1.0s
PFO Pinyon Flats O 83.49 49 P P **11 52 10.1 +1.5**
baz=236,SNR=12
TPFO Pinon Flats 83.49 49 P P **11 52 10.1 +1.5**
baz=236,SNR=11
BBRC Big Bear Solar 83.53 48 P P **11 52 10.3 +1.4**
baz=236,SNR=6.0
SWSC Sam W. Stewart 83.58 50 P P **11 52 10.6 +1.7**
baz=237,SNR=25
KSXB Camp Six Broad 83.61 39 IAmb IAmb 11 52 12.2
comp=Z,81nm,1.0s
ORV Oroville 83.62 42 P P **11 52 10.4 +1.5**
ORV IAmb IAmb 11 52 11.5
comp=Z,53nm,0.9s
ORV Oroville 83.62 42 P P **11 52 10.4 +1.5**
ORV pmax pmax
comp=Z,53nm,1.0s
OHAK Old Harbor 83.65 15 P P **11 52 09.1 +0.5**
OHAK IAmb IAmb 11 52 10.4
comp=Z,84nm,0.8s
OHAK Old Harbor 83.65 15 P P **11 52 09.4 +0.8**
baz=205,SNR=16
KBO Bosley Butte 83.65 39 IAmb IAmb 11 52 12.6
comp=Z,79nm,1.2s
LRMC Laurel Mtn Rad 83.69 47 P P **11 52 11.2 +1.6**
baz=236,SNR=22
KLR Kul'dur 83.79 331 P P **11 52 11.0 +1.5**
comp=Z,15nm,0.6s,baz=115,slow=4.1,SNR=58
KLR PKiKP **PKiKP 11 57 20.3 -0.3**
comp=Z,0.8nm,0.6s,baz=60,slow=2.8,SNR=4.1
comp=Z,15nm,0.6s
KLR Kul'dur 83.79 331 *ce*P P **11 52 10.6 +1.1**
KLR pmax pmax
comp=Z,43nm,1.3s
RRX Edison Barstow 83.82 48 P P **11 52 11.7 +1.6**
baz=236
SRIT Nakonsritamara 83.95 282 IAmb IAmb 11 52 13.3
comp=Z,42nm,0.8s
CWC Cottonwood Cre 83.97 46 P P **11 52 12.3 +1.4**
baz=235
L02F Cave Junction 83.97 39 P P **11 52 12.8 +2.2**
baz=231,SNR=10
MDPB Devils Postpil 84.01 45 P P **11 52 12.8 +1.6**
MDPB IAmb IAmb 11 52 13.8
comp=Z,41nm,0.9s
KEBM Edson Butte 84.01 38 IAmb IAmb 11 52 14.1
comp=Z,82nm,1.1s
BELC Belle Mtn. Jos 84.02 49 P P **11 52 13.0 +1.7**
baz=237,SNR=50
EMB Emerald Bay 84.14 43 IAmb IAmb 11 52 14.3
comp=Z,128nm,1.6s
MPMC Manual Prospec 84.15 47 P P **11 52 13.2 +1.3**
baz=236,SNR=46
MLAC Mammoth, Mammo 84.16 45 P P **11 52 13.4 +1.4**
baz=235
GSC Goldstone, Bar 84.19 48 IAmb IAmb 11 52 14.5
comp=Z,43nm,0.9s
GSC Goldstone, Bar 84.19 48 P P **11 52 13.3 +1.3**
baz=236,SNR=30
BC3 Big Chuckawall 84.21 50 P P **11 52 14.0 +1.8**
baz=237,SNR=24
TIN Tinemaha, Big 84.22 46 P P **11 52 13.6 +1.5**
baz=235
YBH Yreka Blue Hor 84.23 40 IAmb IAmb 11 52 15.2
comp=Z,61nm,1.1s
HEC Hector,Ludlow 84.25 48 P P **11 52 13.7 +1.4**
baz=236,SNR=44
Q16K King Salmon 84.26 12 P P **11 52 12.1 +0.6**
baz=202,SNR=44
K02D Willamette Mer 84.28 38 P P **11 52 14.1 +1.9**
baz=231,SNR=17
KDAK Kodiak Island 84.32 15 P P **11 52 12.9 +1.0**
KDAK IAmb IAmb 11 52 13.6
comp=Z,55nm,0.9s
KDAK Kodiak Island 84.32 15 *i*P P **11 52 11.7 -0.2**
KDAK pmax pmax
comp=Z,88nm,0.9s
KDAK Kodiak Island 84.32 15 P P **11 52 12.6 +0.7**
baz=206
GLA Glamis 84.33 50 IAmb IAmb 11 52 15.9
comp=Z,106nm,0.9s
GLA Glamis 84.33 50 P P **11 52 14.9 +2.2**
baz=237,SNR=25
P16K Nushagak River 84.33 12 P P **11 52 12.1 +0.2**
baz=201
MPK Martis Peak 84.38 43 IAmb IAmb 11 52 15.9
comp=Z,125nm,1.3s
J01E Myrtle Point 84.42 38 IAmb IAmb 11 52 15.8
comp=Z,97nm,0.8s
J01E Myrtle Point 84.42 38 P P **11 52 14.7 +1.9**
baz=231,SNR=16
QSM Queen of Sheba 84.51 47 P P **11 52 14.5 +1.1**
PNTR Pine Nut 84.53 43 IAmb IAmb 11 52 16.3
comp=Z,81nm,0.8s
VCNR Virginia City 84.61 43 IAmb IAmb 11 52 16.6
comp=Z,142nm,2.0s
HUMO Hull Mountain 84.63 39 IAmb IAmb 11 52 17.2
comp=Z,104nm,1.2s
GMRC Granite Mounta 84.68 49 P P **11 52 15.9 +1.5**
baz=237,SNR=29
YERR Yerington 84.69 44 IAmb IAmb 11 52 17.0
comp=Z,111nm,1.4s
IRM Iron Mountain 84.70 49 P P **11 52 16.2 +1.8**
baz=237,SNR=62
LCH Last Change Ra 84.71 46 P P **11 52 15.5 +1.0**
LHV Little Huntoon 84.73 44 P P **11 52 15.8 +1.5**
TROLL Troll, Antarti 84.75 181 P P **11 52 14.3 +0.1**
TROLL Troll, Antarti 84.75 181 pP pP 11 54 14.4 -0.7
GRAC Grapevine Rang 84.76 46 IAmb IAmb 11 52 17.5
comp=Z,70nm,1.2s
GRAC Grapevine Rang 84.76 46 P P **11 52 16.3 +1.6**
baz=236,SNR=13
L04D Klamath Falls 84.77 40 IAmb IAmb 11 52 17.4
comp=Z,115nm,1.1s
L04D Klamath Falls 84.77 40 P P **11 52 16.3 +1.6**
baz=232,SNR=26
P17K Kvichak River 84.78 12 P P **11 52 14.2 +0.1**
baz=202,SNR=34
FURC Furnace Creek, 84.80 47 P P **11 52 15.9 +1.1**
baz=236,SNR=16
O16K Kokwok River B 84.84 11 P P **11 52 14.0 -0.4**
baz=201,SNR=17
TUQ Turquoise Moun 84.86 48 P P **11 52 16.6 +1.3**
baz=237
SHOC Shoshone, Teco 84.88 47 P P **11 52 16.4 +1.2**
baz=236
BLYC Blythe 84.92 50 IAmb IAmb 11 52 18.4
comp=Z,58nm,1.0s
113A Mohawk Valley, 84.93 51 IAmb IAmb 11 52 18.5
comp=Z,68nm,1.3s
RYN Ryan 84.94 44 P P **11 52 16.9 +1.2**
NVAR Mina Array Bea 84.97 44 P P **11 52 17.1 +1.3**
comp=Z,22nm,0.7s,baz=224,slow=8.7,SNR=203
comp=Z,22nm,0.7s
NVAR Mina Array Bea 84.97 44 P P **11 52 16.8 +0.9**
I02E Swisshome, OR 85.07 37 P P **11 52 18.0 +2.1**
baz=231
I03D Drain, OR 85.09 38 P P **11 52 17.9 +1.8**
baz=231,SNR=24
SNAA Sanae 85.11 179 P P **11 52 15.5 -0.3**
SNAA Sanae 85.11 179 PKKPbc PKKPbc 12 10 17.2 -3.3
SNAA Sanae 85.11 179 pP pP 11 54 14.1 -3.0
SNAA Sanae 85.11 179 P P **11 52 15.6 -0.3**
SNAA Sanae 85.11 179 P P **11 52 15.6 -0.3**
SNAA pmax pmax
comp=Z,13nm,1.1s
Q20K Shuyak Island 85.11 14 P P **11 52 16.3 +0.6**
baz=206
Q19K Cape Douglas, 85.12 14 P P **11 52 16.0 +0.2**
baz=205,SNR=8.3
O17K Koliganek Bris 85.19 12 P P **11 52 16.0 -0.1**
baz=202,SNR=11
214A Organ Pipe Nat 85.20 52 IAmb IAmb 11 52 20.1
comp=Z,49nm,1.1s
214A Organ Pipe Nat 85.20 52 P P **11 52 19.0 +2.1**
baz=239,SNR=24
P18K Big Mountain, 85.21 13 P P **11 52 16.2 -0.1**
P18K IAmb IAmb 11 52 17.1
comp=Z,54nm,0.7s
P18K Big Mountain, 85.21 13 P P **11 52 16.1 -0.1**
baz=204,SNR=14
K04D Chiloquin, OR 85.34 39 P P **11 52 19.1 +1.7**
baz=232,SNR=8.4
VNA3 Neumayer Olymp 85.34 177 P P **11 52 16.5 -0.5**
VNA3 Neumayer Olymp 85.34 177 PKKPbc PKKPbc 12 10 16.3 -3.6
VNA3 Neumayer Olymp 85.34 177 pP pP 11 54 18.1 -0.3
NEE2 Needles Airpor 85.39 49 P P **11 52 19.5 +1.8**
baz=237,SNR=7.2
KVN Kaiserville 85.45 44 P P **11 52 19.4 +1.2**
KVN IAmb IAmb 11 52 20.2
comp=Z,48nm,0.6s
KVN Kaiserville 85.45 44 P P **11 52 19.4 +1.2**
KVN pmax pmax
comp=Z,48nm,0.6s
TPNV Topopah Spring 85.47 47 P P **11 52 19.7 +1.4**
TPNV IAmb IAmb 11 52 20.6
comp=Z,34nm,0.8s
TPNV Topopah Spring 85.47 47 P P **11 52 19.7 +1.4**
TPNV pmax pmax
comp=Z,34nm,0.8s
TPNV Topopah Spring 85.47 47 P P **11 52 19.6 +1.4**
baz=236,SNR=48
PDMCI Parker Dam,Lak 85.48 50 P P **11 52 19.9 +1.8**
baz=238,SNR=30
J04D Umpqua Nationa 85.51 39 P P **11 52 20.2 +1.9**
baz=232,SNR=56
N16K Nishlik Lake 85.55 11 P P **11 52 19.1 +1.2**
baz=200,SNR=51
ENH Enshi 85.58 306 P P **11 52 19.1 +0.4**
ENH IAmb IAmb 11 52 20.4
comp=Z,55nm,0.9s
NVL N'lazarevskaya 85.60 184 *eP* P **11 52 17.3 -0.8**
NVL *eS* **SKSac 12 01 45.2 -4.0**
NVL pmax pmax
comp=Z,25nm,0.9s
BUCK Buck Mountain 85.61 38 P P **11 52 19.8 +1.2**
BUCK IAmb IAmb 11 52 21.7
comp=Z,119nm,1.2s
O18K Koktuh Hills 85.64 13 P P **11 52 18.4 +0.1**
baz=204,SNR=36
LYN LuoYang 85.64 311 ⇓*i*P P **11 52 19.9 +1.0**
LYN S **S 12 02 06.4 +2.2**
LYN pmax pmax
comp=Z,50nm,1.3s
HNS HongShan 85.66 314 ⇓P P **11 52 20.0 +1.1**
HNS pmax pmax
comp=Z,59nm,1.0s
COR Corvallis 85.68 37 P P **11 52 19.5 +0.7**
COR IAmb IAmb 11 52 36.9
comp=Z,146nm,1.8s
COR Corvallis 85.68 37 P P **11 52 19.5 +0.7**
COR pmax pmax
comp=Z,147nm,1.8s
I04A Tendick Farm, 85.68 38 P P **11 52 20.2 +1.3**
baz=232,SNR=20
COYC Coyhaique 85.72 138 P P **11 52 20.9 +1.8**
MOD Modoc Plateau 85.76 41 P P **11 52 20.9 +1.4**
MOD IAmb IAmb 11 52 22.1
comp=Z,56nm,0.8s
HEBO Mount Hebo 85.83 36 IAmb IAmb 11 52 22.2
comp=Z,54nm,0.9s
GYA Guiyang 85.88 301 ⇓P P **11 52 20.8 +0.4**
GYA pmax pmax
comp=Z,20nm,0.7s
K05A Summer Lake 85.91 40 IAmb IAmb 11 52 22.7
comp=Z,60nm,0.7s
Q09A Carvers 85.92 45 IAmb IAmb 11 52 22.7
comp=Z,54nm,0.8s
H04D Lebanon 85.95 37 P P **11 52 21.9 +1.8**
baz=231,SNR=14
MA2 Magadan 85.98 346 P P **11 52 20.3 +0.5**
comp=Z,90nm,0.8s,baz=147,slow=4.9,SNR=44
comp=Z,90nm,0.8s
MA2 Magadan 85.98 346 P P **11 52 20.1 +0.2**
MA2 Magadan 85.98 346 *ce*P P **11 52 19.7 -0.2**
MA2 pmax pmax
comp=Z,135nm,0.8s
MA2 Magadan 85.98 346 P P **11 52 19.5 -0.4**
comp=Z,183nm,0.9s
VNA1 Neumayer--Stat 86.00 178 P P **11 52 20.0 +0.1**
VNA1 Neumayer--Stat 86.00 178 pP pP 11 54 21.7 0.0
J05D Fort Rock, OR 86.05 39 P P **11 52 22.8 +2.0**
baz=233,SNR=86
W13A Hualapai Mount 86.08 49 IAmb IAmb 11 52 23.5
comp=Z,26nm,0.6s
Y14A Wickenburg 86.09 50 P P **11 52 22.6 +1.4**
G03D McMinnville, O 86.09 37 P P **11 52 22.1 +1.4**
G03D IAmb IAmb 11 52 23.8
comp=Z,85nm,1.2s
G03D McMinnville, O 86.09 37 P P **11 52 22.5 +1.7**
baz=231,SNR=6.7
O19K Port Alsworth 86.13 13 P P **11 52 20.6 +0.1**
O19K Port Alsworth 86.13 13 P P **11 52 20.6 +0.1**
baz=204,SNR=26
S11A Rachel 86.19 46 IAmb IAmb 11 52 23.9
comp=Z,65nm,1.4s
CNPM China Poot 86.20 15 P P **11 52 21.5 +0.5**
BJI Beijing 86.20 317 P P **11 52 22.3 +0.9**
BJI pmax pmax
comp=Z,37nm,0.8s
HOM Homer 86.22 14 P P **11 52 21.9 +0.9**
baz=207,SNR=6.9
N18K Kilae Creek 86.27 12 P P **11 52 21.2 0.0**
baz=203,SNR=7.9
H04A Detroit Lake 86.36 38 P P **11 52 23.2 +1.1**
H04A IAmb IAmb 11 52 24.5
comp=Z,104nm,1.3s
O20K Slope Mountain 86.39 14 P P **11 52 21.9 0.0**
baz=206,SNR=6.0
BRLK Bradley Lake 86.49 15 P P **11 52 22.7 +0.4**
BRSE Bradley Lake S 86.50 15 P P **11 52 22.8 +0.4**
baz=208,SNR=21
PRN Pahrock Range 86.53 47 IAmb IAmb 11 52 26.2
comp=Z,59nm,1.1s
I05D Terrebonne, OR 86.63 38 P P **11 52 25.0 +1.6**
baz=232,SNR=34
N19K Bonanza Creek 86.66 13 P P **11 52 22.8 -0.4**
N19K IAmb IAmb 11 52 23.8
comp=Z,44nm,0.9s
N19K Bonanza Creek 86.66 13 P P **11 52 22.8 -0.4**
baz=204,SNR=22
R11A Troy Canyon, C 86.69 46 P P **11 52 24.9 +0.9**
baz=237,SNR=14
RSO Redoubt South 86.70 14 P P **11 52 23.0 -0.5**
F04D Rainier, OR 86.78 36 P P **11 52 26.0 +2.0**
baz=231
BMN Battle Mountai 86.80 43 IAmb IAmb 11 52 26.9
comp=Z,52nm,0.9s
TUC Tucson 86.85 53 P P **11 52 26.2 +1.4**
TUC IAmb IAmb 11 52 28.3
comp=Z,55nm,1.2s
TUC Tucson 86.85 53 P P **11 52 26.2 +1.4**
TUC pmax pmax
comp=Z,55nm,1.2s
TUC Tucson 86.85 53 P P **11 52 27.0 +2.2**
baz=240
HG4B Hotspring 86.97 28 P P **11 52 26.2 +1.4**
WISH Wishkah 87.03 35 P P **11 52 26.9 +1.8**
WISH IAmb IAmb 11 52 28.5
comp=Z,78nm,1.1s
LL02 Futaleuf 87.03 136 P P **11 52 27.3 +1.8**
HOOD Mount Hood Mea 87.05 37 IAmb IAmb 11 52 27.9
comp=Z,92nm,1.4s
WVOR Wild Horse Val 87.08 41 P P **11 52 27.3 +1.6**
WVOR IAmb IAmb 11 52 28.4
comp=Z,118nm,1.2s
WVOR Wild Horse Val 87.08 41 P P **11 52 27.3 +1.6**
WVOR pmax pmax
comp=Z,118nm,1.2s
SEW Seward 87.13 15 IAmb IAmb 11 52 26.4
comp=Z,57nm,0.9s
SEW Seward 87.13 15 P P **11 52 25.3 0.0**
baz=209,SNR=12
NLWA Neilton Lookou 87.15 35 P P **11 52 26.7 +0.9**
NLWA IAmb IAmb 11 52 28.8
comp=Z,67nm,1.1s
G05D Wamic, OR 87.19 38 P P **11 52 27.3 +1.3**
baz=232,SNR=14
GAMB Gambell 87.25 4 P P **11 52 26.5 +0.8**
baz=188
Q23K Middleton Isla 87.33 17 P P **11 52 26.5 +0.3**
baz=211
TIY Taiyuan 87.35 313 ⇓P P **11 52 28.4 +1.4**
TIY S **S 12 02 22.1 +1.7**
TIY pmax pmax
comp=Z,49nm,0.5s
O22K Cooper Landing 87.40 15 P P **11 52 27.2 +0.7**
O22K Cooper Landing 87.40 15 P P **11 52 26.9 +0.4**
baz=208,SNR=6.6
X16A Lo Mia Camp, P 87.44 51 IAmb IAmb 11 52 30.8
comp=Z,33nm,0.9s
SPU Mount Spurr 87.50 13 P P **11 52 26.8 -0.3**
LCMT Little Creek M 87.53 48 P P **11 52 28.2 +0.3**
M19K Big River Lodg 87.68 12 P P **11 52 28.1 +0.2**
M19K IAmb IAmb 11 52 28.9
comp=Z,30nm,0.7s
TLCB Telegraph Cove 87.73 31 P P **11 52 29.6 +1.3**
TLCB IAmb IAmb 11 52 30.8
comp=Z,46nm,1.0s
CCUT Cedar City 87.74 47 IAmb IAmb 11 52 32.0
comp=Z,95nm,1.7s
B04A Port Angeles 87.76 34 IAmb IAmb 11 52 31.6
comp=Z,80nm,0.9s
L19K White Mountain 87.85 12 P P **11 52 29.4 +0.7**
L19K White Mountain 87.85 12 P P **11 52 29.3 +0.7**
baz=204,SNR=69
XAN Xi'an 87.89 309 P P **11 52 30.5 +1.0**
XAN S **S 12 02 26.3 +0.9**
XAN pmax pmax
comp=Z,82nm,1.1s
XAN pmax pmax
comp=Z,180nm,4.1s
M20K Styx River 87.91 13 P P **11 52 28.3 -0.7**
baz=205,SNR=12
PSUT Pine Spring 87.93 46 P P **11 52 31.2 +1.4**
RC01 Rabbit Creek A 87.93 15 P P **11 52 29.3 +0.3**
baz=208,SNR=39
SZCU Shurtz Canyon 87.95 47 IAmb IAmb 11 52 32.9
comp=Z,106nm,1.7s
SUA Susitna One 88.04 14 P P **11 52 29.7 0.0**
baz=208
WUAZ Wupatki 88.05 50 P P **11 52 31.4 +1.0**
WUAZ IAmb IAmb 11 52 33.3
comp=Z,52nm,1.2s
WUAZ Wupatki 88.05 50 P P **11 52 32.0 +1.6**
baz=239,SNR=34
CBB Campbell River 88.10 32 P P **11 52 30.9 +0.8**
HIN Hinchinbrook I 88.12 16 IAmb IAmb 11 52 30.8
comp=Z,55nm,0.8s
PGC Sidney 88.17 34 P P **11 52 31.7 +1.3**
ELK Elko 88.22 44 P P **11 52 32.4 +1.2**
ELK IAmb IAmb 11 52 33.5
comp=Z,45nm,0.9s
ELK Elko 88.22 44 P P **11 52 32.4 +1.2**
ELK pmax pmax
comp=Z,45nm,1.0s
BBB Bella Bella 88.25 29 IAmb IAmb 11 52 33.3
comp=Z,59nm,0.8s
L20K Farewell, AK 88.30 12 P P **11 52 30.9 +0.2**
baz=205,SNR=33
TTA Tatalina 88.33 11 IAmb IAmb 11 52 32.6
comp=Z,49nm,1.0s
TTA Tatalina 88.33 11 P P **11 52 31.5 +0.6**
baz=203,SNR=30
SKT Skwentna 88.33 13 IAmb IAmb 11 52 30.9
comp=Z,24nm,0.8s
SKT Skwentna 88.33 13 P P **11 52 29.7 -1.2**
baz=207,SNR=19
F07A Phinny Hill Vi 88.36 38 IAmb IAmb 11 52 34.0
comp=Z,51nm,0.9s
GLI Glacier Island 88.38 16 P P **11 52 31.4 +0.2**
baz=211,SNR=62
KMI Kunming 88.40 298 ⇓P P **11 52 33.6 +1.2**
KMI pmax pmax
comp=Z,22nm,0.7s
KMI pmax pmax
comp=Z,100nm,3.8s
FID Port Fidalgo 88.43 16 P P **11 52 31.6 +0.3**
M22K Willow 88.43 14 P P **11 52 31.5 +0.2**
M22K Willow 88.43 14 P P **11 52 31.3 0.0**
baz=208,SNR=22
EYAK Cordova Ski Ar 88.44 17 P P **11 52 31.8 +0.4**
baz=212,SNR=22
XLT XiLinHaoTe 88.47 320 ⇑*i*P P **11 52 32.9 +0.8**
XLT pP pP 11 54 34.8 +0.5
XLT pmax pmax
comp=Z,43nm,1.0s
XLT pmax pmax
comp=Z,120nm,5.4s
CRAG Craig 88.48 25 P P **11 52 32.3 +0.6**
baz=223
KNK Knik Glacier 88.52 15 P P **11 52 32.4 +0.6**
KNK Knik Glacier 88.52 15 P P **11 52 32.2 +0.4**
baz=210,SNR=30
PMR Palmer 88.52 15 P P **11 52 32.0 +0.3**
PMR Palmer 88.52 15 P P **11 52 32.0 +0.3**
PMR pmax pmax
comp=Z,74nm,0.9s
PMR Palmer 88.52 15 P P **11 52 32.0 +0.3**
baz=209,SNR=50
G08A Pilot Rock 88.55 39 P P **11 52 33.4 +0.9**
G08A IAmb IAmb 11 52 35.0
comp=Z,50nm,0.8s
ANM Nome 88.56 7 P P **11 52 32.3 +0.4**
baz=194
X18A Snowflake 88.56 51 P P **11 52 34.1 +1.2**
X18A IAmb IAmb 11 52 35.7
comp=Z,29nm,1.0s
CM31 Chiang Mai Arr 88.67 291 IAmb IAmb 11 52 36.2
comp=Z,27nm,0.9s
CMAR Chiang Mai Arr 88.67 291 P P **11 52 35.1 +1.6**
comp=Z,19nm,0.9s,baz=136,slow=3.3,SNR=85
CMAR pP **pwP 11 54 39.4 -1.9**
comp=Z,1.3nm,0.3s,baz=135,slow=3.4,SNR=3.0
CMAR PKiKP **PKiKP 11 57 29.5 -0.1**
comp=Z,1.1nm,0.3s,baz=216,slow=0.7,SNR=4.6
CMAR PKKPbc **PKKPbc 12 10 11.5 +1.2**
comp=Z,2.9nm,0.5s,baz=288,slow=4.2,SNR=12
comp=Z,19nm,0.9s
CMAR Chiang Mai Arr 88.67 291 *ce*P P **11 52 35.0 +1.6**
CMAR pmax pmax
comp=Z,17nm,0.9s
SEY Seymchan 88.69 348 P P **11 52 33.4 +0.9**
comp=Z,70nm,0.8s,baz=149,slow=5.3,SNR=146
comp=Z,70nm,0.8s
SEY Seymchan 88.69 348 *ce*P P **11 52 33.0 +0.5**
SEY pmax pmax
comp=Z,99nm,0.9s
GHO Glory Hole Cre 88.72 15 P P **11 52 33.2 +0.4**
BGLC Bering Glacier 88.75 18 P P **11 52 33.5 +0.7**
baz=214
LTY Liberty 88.77 36 IAmb IAmb 11 52 35.5
comp=Z,64nm,0.9s
E07A Sunnyside 88.80 37 P P **11 52 35.1 +1.6**
CHTO Chiang Mai 88.82 291 P P **11 52 34.0 -0.2**
CHTO IAmb IAmb 11 52 36.5
comp=Z,52nm,1.2s
CHTO Chiang Mai 88.82 291 P P **11 52 34.0 -0.2**
CHTO pmax pmax
comp=Z,52nm,1.2s
ZAIG Zacatecas 88.84 65 IAmb IAmb 11 52 37.9
comp=Z,42nm,1.0s
SIT Sitka 88.85 23 P P **11 52 33.6 +0.3**
baz=221
HAWA Hanford 88.88 37 P P **11 52 35.3 +1.5**
SML Sawmill 88.89 15 IAmb IAmb 11 52 41.0
comp=Z,28nm,0.8s
SML Sawmill 88.89 15 P P **11 52 33.6 +0.1**
baz=210,SNR=12
CUT Chulitna 88.98 14 P P **11 52 33.7 -0.1**
baz=208,SNR=18
ZEA Zeya 88.98 332 *eP* P **11 52 35.1 +1.0**
ZEA pmax pmax
comp=N,20nm,0.8s
ZEA pmax pmax
comp=Z,40nm,0.8s
W18A Petrified Fore 89.01 51 P P **11 52 36.2 +1.3**
W18A IAmb IAmb 11 52 37.6
comp=Z,42nm,1.1s
W18A Petrified Fore 89.01 51 P P **11 52 36.3 +1.4**
baz=240,SNR=5.6
PPLA Purkeypile 89.02 13 P P **11 52 34.3 0.0**

PPLA IAmb IAmb 11 52 34.8
comp=Z,68nm,1.7s
PPLA Purkeypile 89.02 13 P **P** **11 52 32.9 -1.3**
baz=206,SNR=8.2
M23K Glacier View 89.02 15 P **P** **11 52 34.1 0.0**
baz=210,SNR=13
K20K Telida 89.07 12 IAmb IAmb 11 52 35.6
comp=Z,49nm,0.9s
K20K Telida 89.07 12 P **P** **11 52 34.5 +0.2**
baz=204,SNR=46
BMRM Bremner River 89.10 17 P **P** **11 52 35.0 +0.5**
BMRM Bremner River 89.10 17 P **P** **11 52 35.0 +0.5**
baz=213,SNR=22
PLCA Paso Flores 89.10 135 P **P** **11 52 37.0 +1.7**
comp=Z,3.0nm,0.8s,baz=246,slow=5.0,SNR=12
PLCA PKKPbc **PKKPbc 12 10 09.6 -0.4**
comp=Z,1.2nm,0.6s,baz=2.6,slow=2.8,SNR=6.7
comp=Z,3.0nm,0.8s
PLCA Paso Flores 89.10 135 P **P** **11 52 37.0 +1.7**
PLCA Paso Flores 89.10 135 *e*P **P** **11 52 34.1 -1.1**
B06A Marblemount 89.11 35 P **P** **11 52 35.8 +1.1**
B06A IAmb IAmb 11 52 36.6
comp=Z,71nm,1.1s
SCM Sheep Creek Mo 89.15 15 P **P** **11 52 35.2 +0.4**
baz=210,SNR=54
121A Cookes Peak, D 89.17 54 P **P** **11 52 37.9 +2.1**
baz=241
121A Cookes Peak, D 89.17 54 P **P** **11 52 37.8 +2.1**
baz=241,SNR=26
MESA MESA 89.18 18 P **P** **11 52 36.2 +1.2**
MESA MESA 89.18 18 P **P** **11 52 36.3 +1.2**
baz=215,SNR=13
E08A Dider Farm, El 89.20 37 P **P** **11 52 36.5 +1.2**
E08A IAmb IAmb 11 52 37.8
comp=Z,69nm,1.2s
KLU Klutina 89.20 16 IAmb IAmb 11 52 36.5
comp=Z,44nm,1.1s
KLU Klutina 89.20 16 P **P** **11 52 35.3 +0.3**
baz=212,SNR=16
BMO Blue Mountains 89.26 40 IAmb IAmb 11 52 38.1
comp=Z,64nm,1.6s
TNA Tin City 89.30 5 IAmb IAmb 11 52 37.1
comp=Z,56nm,0.9s
TNA Tin City 89.30 5 P **P** **11 52 35.9 +0.6**
baz=192
MFID Camas Ranch 89.33 41 P **P** **11 52 37.0 +0.9**
MFID IAmb IAmb 11 52 38.6
comp=Z,52nm,0.9s
YAH Yahtse 89.39 18 P **P** **11 52 36.8 +0.7**
TGL Tana Glacier 89.40 18 P **P** **11 52 37.0 +1.0**
WRAK Wrangell Islan 89.48 25 P **P** **11 52 37.8 +1.6**
baz=224,SNR=17
DUG Dugway, Tooele 89.49 45 IAmb IAmb 11 52 39.3
comp=Z,28nm,1.1s
DUG Dugway, Tooele 89.49 45 P **P** **11 52 38.1 +1.1**
baz=238,SNR=24
CAST Castle Rocks 89.51 12 P **P** **11 52 35.3 -1.0**
baz=206,SNR=7.1
PNL Peninsula 89.53 20 P **P** **11 52 37.5 +1.0**
baz=218,SNR=11
HHC Hu-ho-hao-te 89.58 315 *e*P **P** **11 52 38.6 +1.2**
HHC S **S** **12 02 48.1 +7.3**
HHC pmax pmax
comp=Z,66nm,0.9s
HHC pmax pmax
comp=Z,210nm,8.0s
PCA Pinnacle 89.61 19 IAmb IAmb 11 52 38.6
comp=Z,48nm,0.9s
PINM Pinnacle 89.61 19 P **P** **11 52 37.7 +0.8**
baz=217,SNR=6.7
D08A Wollman Farm, 89.61 37 IAmb IAmb 11 52 39.7
comp=Z,67nm,1.2s
HIA Hailar 89.62 326 *i* P **P** **11 52 37.2 0.0**
HIA pmax pmax
comp=Z,20nm,1.3s
TABL Table Mountain 89.62 18 P **P** **11 52 38.1 +0.9**
VRDI Verde Repeater 89.63 17 IAmb IAmb 11 52 38.9
comp=Z,48nm,1.0s
N25K Chitina, Valde 89.64 16 P **P** **11 52 37.8 +0.7**
N25K Chitina, Valde 89.64 16 P **P** **11 52 37.5 +0.4**
baz=213,SNR=28
M24K Tolsona, Glenn 89.67 16 IAmb IAmb 11 52 39.8
comp=Z,58nm,1.1s
M24K Tolsona, Glenn 89.67 16 P **P** **11 52 37.9 +0.8**
baz=212,SNR=8.3
WAT6 Susitna Watana 89.70 15 P **P** **11 52 37.5 0.0**
baz=210,SNR=33
GLB Gilahina Butte 89.71 17 P **P** **11 52 38.3 +0.9**
GLB IAmb IAmb 11 52 39.0
comp=Z,70nm,1.2s
E09A Wood Farm, Sta 89.73 38 P **P** **11 52 39.1 +1.4**
E09A IAmb IAmb 11 52 39.9
comp=Z,33nm,0.9s
WAT1 Susitna Watana 89.73 14 P **P** **11 52 37.4 0.0**
baz=209
BGU Big Grassy Mou 89.73 45 IAmb IAmb 11 52 40.5
comp=Z,47nm,1.4s
KIDD KIDD Seismic O 89.77 55 P **P** **11 52 40.4 +1.9**
baz=242
J20K Nowinta River 89.81 11 P **P** **11 52 37.9 +0.2**
baz=204,SNR=28
PZH PanZhiHua 89.82 299 P **P** **11 52 39.3 +0.5**
PZH pmax pmax
comp=Z,20nm,0.7s
PZH pmax pmax
comp=Z,110nm,3.7s
NLU North Lily Min 89.85 46 P **P** **11 52 39.7 +0.9**
NLU IAmb IAmb 11 52 41.3
comp=Z,26nm,0.9s
KTH Kantishna Hill 89.86 13 IAmb IAmb 11 52 38.7
comp=Z,44nm,0.9s
GCSA Galena City Sc 89.87 10 P **P** **11 52 38.5 +0.6**
baz=202
MCARA McCarthy VSAT 89.87 17 P **P** **11 52 38.5 +0.5**
baz=214,SNR=16
CHUM Lake Minchumin 89.88 12 P **P** **11 52 37.4 -0.6**
baz=206,SNR=12
TRF Thorofare Moun 89.90 13 P **P** **11 52 37.9 -0.4**
baz=208,SNR=24
LOGN Logan Glacier 89.98 18 P **P** **11 52 39.7 +1.0**
LOGN IAmb IAmb 11 52 40.5
comp=Z,84nm,1.2s
BARN Barnard Glacie 89.98 18 P **P** **11 52 39.7 +0.9**
CTG Chitna Glacier 89.99 18 P **P** **11 52 39.5 +0.8**
baz=216,SNR=18
CTGM Chitina Glacie 90.00 18 IAmb IAmb 11 52 40.6
comp=Z,73nm,1.2s
TLIG Tlapa 90.04 71 P **P** **11 52 41.0 +1.0**
TLIG IAmb IAmb 11 52 43.1
comp=Z,43nm,0.8s
B08A Colville Reser 90.15 36 P **P** **11 52 40.4 +0.7**
B08A IAmb IAmb 11 52 41.3
comp=Z,33nm,0.9s
BESE Bessie Mountai 90.17 22 IAmb IAmb 11 52 41.9
comp=Z,27nm,1.2s
HARP HAARP 90.17 16 P **P** **11 52 39.8 +0.4**
baz=212,SNR=5.4
MPU Maple Canyon 90.17 46 P **P** **11 52 41.6 +1.4**
MPU IAmb IAmb 11 52 42.8
comp=Z,46nm,0.8s
RND Reindeer 90.17 14 P **P** **11 52 39.6 +0.1**
RND Reindeer 90.17 14 P **P** **11 52 39.6 +0.1**
RND pmax pmax
comp=Z,69nm,0.9s
LLLB Lillooet 90.19 33 P **P** **11 52 40.9 +1.0**
LLLB IAmb IAmb 11 52 41.9
comp=Z,32nm,1.1s
DHY Denali Highway 90.22 15 P **P** **11 52 40.0 +0.2**
DHY IAmb IAmb 11 52 41.0
comp=Z,66nm,1.6s
DHY Denali Highway 90.22 15 P **P** **11 52 39.7 -0.1**
baz=210,SNR=19
CD2 Chengdu 90.22 304 P **P** **11 52 41.8 +1.4**
CD2 pmax pmax
comp=Z,80nm,1.0s
HLID Hailey 90.27 42 P **P** **11 52 42.1 +1.5**
HLID IAmb IAmb 11 52 43.1
comp=Z,34nm,1.4s
HLID Hailey 90.27 42 P **P** **11 52 42.1 +1.5**
baz=237,SNR=29
PLBC Pleasant Camp 90.33 21 P **P** **11 52 41.3 +1.1**
baz=220,SNR=8.9
BPAW Bear Paw Mtn. 90.34 13 P **P** **11 52 38.9 -1.2**
baz=207
HVU Hansel Valley 90.35 44 P **P** **11 52 42.3 +1.4**
HVU Hansel Valley 90.35 44 P **P** **11 52 42.3 +1.4**
HVU pmax pmax
comp=Z,66nm,0.7s
C09A Chrisman Ranch 90.40 37 IAmb IAmb 11 52 42.8
comp=Z,54nm,1.4s
MCK McKinley 90.44 14 IAmb IAmb 11 52 43.0
comp=Z,32nm,0.8s
MCK McKinley 90.44 14 P **P** **11 52 40.2 -0.5**
baz=209,SNR=16
Y22A Socorro 90.44 53 P **P** **11 52 43.1 +1.5**
baz=242
P17A Butcher Ranch, 90.49 47 P **P** **11 52 43.0 +1.4**
P17A IAmb IAmb 11 52 45.0
comp=Z,70nm,1.2s
Y22D IRIS PASSCAL I 90.54 53 P **P** **11 52 43.7 +1.7**
baz=242
PAX Paxson 90.58 15 P **P** **11 52 41.1 -0.3**
baz=212,SNR=10
MNTX Cornudas Mount 90.59 56 IAmb IAmb 11 52 44.8
comp=Z,33nm,0.8s
MNTX Cornudas Mount 90.59 56 P **P** **11 52 43.8 +1.7**
baz=243
MNTX Cornudas Mount 90.59 56 P **P** **11 52 43.7 +1.6**
baz=243
JLU Jordanelle 90.59 45 P **P** **11 52 43.3 +1.0**
P30M Million Dollar 90.65 20 P **P** **11 52 43.1 +1.3**
baz=220,SNR=17
SKAG Skagway 90.67 21 IAmb IAmb 11 52 44.6
comp=Z,29nm,1.3s
SKAG Skagway 90.67 21 P **P** **11 52 43.3 +1.6**
baz=221,SNR=5.2
T35M Bob Quinn 90.69 25 P **P** **11 52 43.7 +1.7**
baz=225,SNR=5.3
YUK8 Steele Glacier 90.71 18 P **P** **11 52 43.1 +0.9**
baz=217,SNR=35
M26K Nabesna, AK 90.72 17 P **P** **11 52 42.6 +0.5**
M26K IAmb IAmb 11 52 43.7
comp=Z,30nm,1.1s
M26K Nabesna, AK 90.72 17 P **P** **11 52 42.6 +0.5**
baz=214,SNR=14
TX31 Lajitas Ar. Si 90.84 58 P **P** **11 52 45.0 +1.5**
TX31 Lajitas Ar. Si 90.84 58 P **P** **11 52 45.3 +1.9**
baz=244
TX32 Lajitas Array 90.84 58 P **P** **11 52 44.2 +0.7**
TX32 IAmb IAmb 11 52 46.5
comp=Z,37nm,1.1s
TXAR Lajitas Array 90.84 58 P **P** **11 52 45.7 +2.3**
comp=Z,21nm,0.8s,baz=212,slow=6.7,SNR=172
TXAR pP **pP** **11 54 50.8 +3.7**
comp=Z,1.5nm,0.9s,baz=216,slow=8.5,SNR=3.7
TXAR PKKP **PKKPbc 12 10 06.2 +0.8**
comp=Z,0.8nm,0.5s,baz=146,slow=2.8,SNR=14
comp=Z,21nm,0.8s
TXAR Lajitas Array 90.84 58 P **P** **11 52 45.2 +1.7**
YUK6 Outpost Mounta 90.85 19 P **P** **11 52 43.6 +0.7**
baz=218,SNR=5.6
P18A Preston Nutter 90.90 47 IAmb IAmb 11 52 46.0
comp=Z,34nm,0.8s
YUK3 Moose Creek 90.90 18 P **P** **11 52 43.8 +0.8**
baz=217,SNR=43
MVCO Mesa Verde 90.91 50 P **P** **11 52 44.6 +0.8**
baz=241
MENT Mentasta 90.98 16 P **P** **11 52 43.8 +0.6**
MENT IAmb IAmb 11 52 44.7
comp=Z,22nm,0.7s
M27K Edge Creek, AK 90.98 17 IAmb IAmb 11 52 45.3
comp=Z,42nm,0.8s
M27K Edge Creek, AK 90.98 17 P **P** **11 52 44.2 +0.9**
baz=215,SNR=36
HYT Haines Junctio 91.02 20 IAmb IAmb 11 52 45.5
comp=Z,22nm,1.0s
HYT Haines Junctio 91.02 20 P **P** **11 52 44.4 +0.9**
baz=219,SNR=9.9
HWUT Hardware Ranch 91.03 45 P **P** **11 52 45.0 +0.9**
HWUT IAmb IAmb 11 52 46.0
comp=Z,22nm,0.8s
YUK4 Talbot Arm 91.08 19 P **P** **11 52 45.0 +1.1**
baz=218,SNR=10
PV10 Paradox Valley 91.10 48 IAmb IAmb 11 52 47.7
comp=Z,29nm,0.9s
I21K Tanana 91.11 12 IAmb IAmb 11 52 44.9
comp=Z,37nm,1.1s
I21K Tanana 91.11 12 P **P** **11 52 43.7 0.0**
baz=206,SNR=13
PV13 Radium Mtn., P 91.14 49 P **P** **11 52 45.7 +0.9**
PV13 IAmb IAmb 11 52 46.8
comp=Z,39nm,1.6s
L26K Log Cabin Wild 91.15 16 P **P** **11 52 44.6 +0.6**
L26K Log Cabin Wild 91.15 16 P **P** **11 52 44.5 +0.5**
baz=214,SNR=13
PV11 David Mesa, Pa 91.17 48 IAmb IAmb 11 52 47.0
comp=Z,34nm,1.3s
K24K Donnelly Dome 91.21 15 P **P** **11 52 44.6 +0.4**
baz=212,SNR=21
MLY Manley 91.22 12 P **P** **11 52 43.4 -0.9**
baz=208,SNR=16
ANMO Albuquerque 91.29 52 P **P** **11 52 46.1 +0.6**
ANMO IAmb IAmb 11 52 47.8
comp=Z,22nm,1.0s
ANMO Albuquerque 91.29 52 *d i* P **P** **11 52 46.3 +0.8**
ANMO pmax pmax
comp=Z,24nm,1.0s
ANMO Albuquerque 91.29 52 P **P** **11 52 46.8 +1.3**
baz=242
ANMO Albuquerque 91.29 52 P **P** **11 52 46.7 +1.3**
baz=242
BCYI Bear Canyon 91.29 42 P **P** **11 52 46.2 +0.9**
NEW Newport 91.30 37 P **P** **11 52 45.4 +0.4**
baz=235,SNR=8.5
BVCY Beaver Creek 91.31 17 P **P** **11 52 45.4 +0.7**
baz=216,SNR=37
P32M Atlin 91.31 22 P **P** **11 52 45.8 +1.0**
baz=222,SNR=7.0
RIDG Independent Ri 91.38 15 P **P** **11 52 45.2 +0.2**
baz=213,SNR=16
H21K Melozitna Rive 91.39 11 P **P** **11 52 45.6 +0.6**
H21K IAmb IAmb 11 52 46.5
comp=Z,16nm,0.8s
H21K Melozitna Rive 91.39 11 P **P** **11 52 45.2 +0.2**
baz=206,SNR=22
O30N Mendenhall 91.42 20 P **P** **11 52 46.2 +0.9**
baz=220,SNR=6.4
PV15 Paradox Valley 91.46 49 IAmb IAmb 11 52 48.2
comp=Z,20nm,0.8s
HDA Harding Lake 91.47 14 IAmb IAmb 11 52 47.0
comp=Z,23nm,0.5s
HDA Harding Lake 91.47 14 P **P** **11 52 45.0 -0.3**
baz=211,SNR=35
L27K Beaver Creek, 91.57 17 P **P** **11 52 46.6 +0.6**
L27K Beaver Creek, 91.57 17 P **P** **11 52 46.0 +0.1**
baz=215,SNR=24
BCAR Beaver Creek A 91.59 17 P **P** **11 52 46.5 +0.5**
I23K Minto, Yukon-K 91.60 13 IAmb IAmb 11 52 46.5
comp=Z,46nm,1.8s
I23K Minto, Yukon-K 91.60 13 P **P** **11 52 45.1 -0.7**
baz=209,SNR=11
N30M Aishikik Lake 91.64 19 P **P** **11 52 46.8 +0.5**
baz=220,SNR=7.0
MDM Murphy Dome 91.66 13 IAmb IAmb 11 52 46.7
comp=Z,30nm,1.1s
TCOL CIGO, UAF Yank 91.67 13 P **P** **11 52 46.2 0.0**
TCOL IAmb IAmb 11 52 46.8
comp=Z,25nm,0.9s
TCOL CIGO, UAF Yank 91.67 13 P **P** **11 52 45.7 -0.5**
baz=210,SNR=10
COLA College 91.67 13 P **P** **11 52 45.8 -0.5**
COLA IAmb IAmb 11 52 46.8
comp=Z,27nm,0.9s
COLA College 91.67 13 P **P** **11 52 45.8 -0.5**
COLA pmax pmax
comp=Z,27nm,1.0s
COLA College 91.67 13 P **P** **11 52 45.7 -0.5**
baz=210
WHY Whitehorse 91.73 21 P **P** **11 52 47.6 +0.8**
WHY IAmb IAmb 11 52 48.7
comp=Z,13nm,0.7s
WHY Whitehorse 91.73 21 P **P** **11 52 47.6 +0.8**
baz=221,SNR=11
BILL Bilibino 91.73 355 P **P** **11 52 47.1 +0.6**
BILL Bilibino 91.73 355 *ce* P **P** **11 52 46.9 +0.4**
BILL *e**PP **pP** **11 54 49.5 +0.2**
BILL *e* 11 56 36.2
BILL pmax pmax
comp=Z,52nm,0.8s
SCRK Sand Creek 91.79 15 P **P** **11 52 47.3 +0.3**
SCRK Sand Creek 91.79 15 P **P** **11 52 47.3 +0.3**
baz=214,SNR=22
IL31 91.79 14 P **P** **11 52 46.3 -0.5**
IL31 IAmb IAmb 11 52 49.2
comp=Z,12nm,0.6s
ILAR Eielson Array 91.79 14 P **P** **11 52 46.4 -0.4**
comp=Z,7.8nm,0.6s,baz=230,slow=5.2,SNR=88
ILAR pP **pP** **11 54 50.0 +0.2**
comp=Z,1.0nm,0.8s,baz=228,slow=5.1,SNR=2.2
ILAR PKiKP **PKiKP 11 57 32.8 -0.7**
comp=Z,0.6nm,0.3s,baz=268,slow=2.9,SNR=9.5
comp=Z,7.8nm,0.6s
ILAR Eielson Array 91.79 14 P **P** **11 52 46.2 -0.7**
DLBC Dease Lake 91.80 24 P **P** **11 52 48.0 +0.9**
DLBC Dease Lake 91.80 24 P **P** **11 52 48.1 +0.9**
baz=225,SNR=6.2
RDMU Red Mountain 91.82 46 P **P** **11 52 48.6 +0.8**
RDMU IAmb IAmb 11 52 49.4
comp=Z,25nm,0.6s
H22K Ishtalitna Cre 91.87 12 P **P** **11 52 47.3 +0.1**
baz=207,SNR=20
MCMT McKenzie Canyo 91.90 41 P **P** **11 52 49.0 +0.9**
AHID Auburn Hatcher 91.92 44 IAmb IAmb 11 52 50.7
comp=Z,14nm,0.8s
POKR Poker Plat Res 91.97 13 P **P** **11 52 47.3 -0.4**
POKR Poker Plat Res 91.97 13 P **P** **11 52 46.8 -0.8**
baz=210,SNR=11
J25K Salcha River, 92.00 14 P **P** **11 52 47.8 -0.1**
J25K Salcha River, 92.00 14 P **P** **11 52 47.8 -0.1**
baz=212,SNR=22
N31M Braeburn, Yuko 92.07 20 P **P** **11 52 49.1 +0.9**
N31M IAmb IAmb 11 52 49.6
comp=Z,16nm,0.8s
N31M Braeburn, Yuko 92.07 20 P **P** **11 52 49.0 +0.8**
baz=221,SNR=7.1
P33M Teslin, Yukon 92.08 22 P **P** **11 52 49.0 +0.6**
baz=223,SNR=7.9
H23K Yukon River 92.16 12 P **P** **11 52 48.8 +0.3**
baz=209
RDOG Red Dog Mine 92.21 7 P **P** **11 52 44.0 -4.7**
baz=196
K27K Chicken 92.30 16 P **P** **11 52 50.0 +0.8**
K27K IAmb IAmb 11 52 51.1
comp=Z,24nm,0.8s
K27K Chicken 92.30 16 P **P** **11 52 50.1 +0.9**
baz=215
MSO Missoula 92.31 39 P **P** **11 52 49.6 -0.1**
baz=238,SNR=12
J26L Joseph Creek 92.33 15 P **P** **11 52 50.2 +0.7**
J26L IAmb IAmb 11 52 51.2
comp=Z,34nm,0.8s
J26L Joseph Creek 92.33 15 P **P** **11 52 50.1 +0.7**
baz=214,SNR=50
S22A 4UR Ranch, Cre 92.33 50 IAmb IAmb 11 52 52.9
comp=Z,32nm,1.1s
S22A 4UR Ranch, Cre 92.33 50 P **P** **11 52 51.5 +1.2**
baz=242,SNR=23
REDW Red Top Meadow 92.38 43 P **P** **11 52 51.2 +0.9**
O20A White River Ci 92.49 47 P **P** **11 52 51.9 +1.0**
O20A IAmb IAmb 11 52 54.3
comp=Z,22nm,0.7s
O20A White River Ci 92.49 47 P **P** **11 52 51.8 +0.9**
baz=241,SNR=29
H24K Noodor Dome 92.50 13 P **P** **11 52 51.2 +1.1**
baz=210
LZH Lanzhou 92.52 308 ⇑P **P** **11 52 52.8 +1.7**
LZH pmax pmax
comp=Z,77nm,1.0s
M30M Minto, Yukon 92.59 19 P **P** **11 52 51.2 +0.6**
baz=220,SNR=55
MOOW Moose Ponds 92.64 43 P **P** **11 52 52.5 +1.0**
LOHW Long Hollow 92.66 43 P **P** **11 52 52.7 +1.0**
N32M Quiet Lake 92.68 21 P **P** **11 52 51.1 +0.1**
baz=223
FLWY Flagg Ranch 92.84 43 P **P** **11 52 52.6 +0.2**
FLWY IAmb IAmb 11 52 54.9
comp=Z,12nm,0.8s
BW06 Boulder Array 92.90 44 P **P** **11 52 53.3 +0.5**
BW06 Boulder Array 92.90 44 P **P** **11 52 53.1 +0.3**
baz=241,SNR=23
PD31 Pinedale Array 92.90 44 P **P** **11 52 53.4 +0.5**
PDAR Pinedale Array 92.90 44 P **P** **11 52 53.2 +0.5**
comp=Z,9.2nm,0.7s,baz=206,slow=3.2,SNR=94
PDAR PP **PP** **11 56 38.5 -7.3**
comp=Z,1.2nm,0.9s,baz=230,slow=6.8,SNR=3.8
PDAR PKKP **PKKPdf 12 09 58.8 -0.3**
comp=Z,0.3nm,0.6s,baz=90,slow=4.4,SNR=3.7
comp=Z,9.2nm,0.7s
DAWY Dawson 93.03 17 P **P** **11 52 53.1 +0.5**
DAWY IAmb IAmb 11 52 54.1
comp=Z,32nm,0.8s
DAWY Dawson 93.03 17 P **P** **11 52 53.2 +0.6**
baz=218,SNR=55
BOZ Bozeman (W) 93.03 41 P **P** **11 52 54.2 +1.0**
BOZ Bozeman (W) 93.03 41 P **P** **11 52 54.2 +1.0**
BOZ pmax pmax
comp=Z,10.0nm,0.8s
BOZ Bozeman (W) 93.03 41 P **P** **11 52 54.1 +1.0**
baz=239,SNR=16
M31M Drury Creek, Y 93.04 20 P **P** **11 52 52.8 +0.2**
baz=222,SNR=8.7
H17A Grant Village 93.07 43 P **P** **11 52 55.6 +2.0**
baz=240,SNR=7.8
I26K Coal Creek Min 93.09 15 P **P** **11 52 53.1 +0.3**
baz=214
SDCO Great Sand Dun 93.26 50 P **P** **11 52 55.5 +0.9**
SDCO IAmb IAmb 11 52 56.5
comp=Z,16nm,0.8s
SDCO Great Sand Dun 93.26 50 P **P** **11 52 55.4 +0.8**
baz=243
SDCO Great Sand Dun 93.26 50 P **P** **11 52 55.4 +0.8**
baz=243,SNR=32
COLD Coldfoot 93.27 11 P **P** **11 52 54.2 +0.7**
baz=208
MSTX Muleshoe 93.56 55 P **P** **11 52 57.1 +1.3**
MSTX IAmb IAmb 11 52 57.7
comp=Z,16nm,1.0s
MSTX Muleshoe 93.56 55 P **P** **11 52 56.4 +0.5**
baz=244
MSTX Muleshoe 93.56 55 P **P** **11 52 56.5 +0.6**
baz=244
T25A Trinidad 93.76 51 IAmb IAmb 11 52 58.5
comp=Z,14nm,0.8s
T25A Trinidad 93.76 51 P **P** **11 52 57.3 +0.5**
baz=243,SNR=13
833A Chaparral WMA, 93.80 61 P **P** **11 52 58.1 +1.3**
833A IAmb IAmb 11 52 59.1
comp=Z,47nm,1.3s
833A Chaparral WMA, 93.80 61 P **P** **11 52 58.1 +1.3**
baz=246
833A Chaparral WMA, 93.80 61 P **P** **11 52 57.2 +0.3**
baz=246
YAK Yakutsk 93.90 339 P **P** **11 52 56.4 -0.1**
comp=Z,6.9nm,0.5s,baz=114,slow=0.6,SNR=4.6
comp=Z,6.9nm,0.5s
YAK Yakutsk 93.90 339 P **P** **11 52 56.4 -0.1**
YAK IAmb IAmb 11 52 58.0
comp=Z,22nm,0.7s
YAK Yakutsk 93.90 339 *ce* P **P** **11 52 55.8 -0.7**
YAK pmax pmax
comp=Z,24nm,0.7s
RWWY Rawlins 93.92 46 P **P** **11 52 58.0 +0.5**
Q24A Divide 94.06 49 IAmb IAmb 11 53 00.3
comp=Z,14nm,0.8s
Q24A Divide 94.06 49 P **P** **11 52 58.9 +0.6**
baz=243,SNR=6.2
ISCO Idaho Springs 94.12 48 P **P** **11 52 59.6 +1.1**
ISCO Idaho Springs 94.12 48 P **P** **11 52 59.6 +1.1**
ISCO pmax pmax
comp=Z,5.0nm,0.7s
ISCO Idaho Springs 94.12 48 P **P** **11 52 59.4 +0.9**
baz=243
ISCO Idaho Springs 94.12 48 P **P** **11 52 59.4 +0.9**
baz=243,SNR=11
RLMT Red Lodge 94.24 42 P **P** **11 52 59.7 +0.9**
baz=241,SNR=8.4
GCMT Greycliff 94.32 42 P **P** **11 53 00.2 +1.2**
MMPY Sheldon Lake, 94.34 21 P **P** **11 52 59.3 +0.7**
baz=225,SNR=16
I29M Ogilvie Camp, 94.34 17 IAmb IAmb 11 52 59.0
comp=Z,14nm,0.6s
I29M Ogilvie Camp, 94.34 17 P **P** **11 52 58.5 0.0**
baz=219,SNR=23
JCT Junction City 94.36 59 IAmb IAmb 11 53 01.0
comp=Z,52nm,1.9s
JCT Junction City 94.36 59 P **P** **11 53 00.3 +0.8**
baz=245
JCT Junction City 94.36 59 P **P** **11 53 00.0 +0.6**
baz=245
N23A Red Feather La 94.39 47 P **P** **11 53 00.6 +1.0**
baz=243,SNR=6.1

BMAR Burnt Mountain 94.55 13 P P 11 53 00.3 +0.9
TGTN Hyland Airport 94.58 22 P P 11 53 00.6 +0.9
baz=227
TOLK Toolik Lake Re 94.64 11 P P 11 53 00.5 +0.7
TOLK Toolik Lake Re 94.64 11 P P 11 53 00.2 +0.4
baz=209
K22A Casper 94.81 45 P P 11 53 02.1 +0.8
baz=242
K22A Casper 94.81 45 P P 11 53 01.9 +0.6
baz=242
EGMT Eagleton 95.36 40 IAmb IAmb 11 57 03.7
comp=Z,15nm,1.1s
EGMT Eagleton 95.36 40 P P 11 53 04.2 +0.5
baz=241
ABTX Abilene, Hawle 95.37 57 P P 11 53 04.8 +0.7
ABTX IAmb IAmb 11 53 05.7
comp=Z,13nm,0.9s
ABTX Abilene, Hawle 95.37 57 P P 11 53 04.7 +0.7
baz=246
ABTX Abilene, Hawle 95.37 57 P P 11 53 04.6 +0.6
baz=246
EPYK Eagle Plains 95.54 16 P P 11 53 04.2 +0.3
EPYK IAmb IAmb 11 53 05.1
comp=Z,22nm,0.8s
EPYK Eagle Plains 95.54 16 P P 11 53 04.4 +0.4
baz=220
C24K Franklin Bluff 95.74 11 P P 11 53 05.3 +0.7
baz=210
KSCO Kaye Shedlock' 95.84 50 IAmb IAmb 11 53 08.2
comp=Z,29nm,0.8s
KSCO Kaye Shedlock' 95.84 50 P P 11 53 07.3 +1.2
baz=245
KSCO Kaye Shedlock' 95.84 50 P P 11 53 07.1 +1.0
baz=245
ULN Ulaanbaatar 95.91 320 P P 11 53 06.3 +0.1
ULN IAmb IAmb 11 53 07.3
comp=Z,15nm,1.1s
ULN Ulaanbaatar 95.91 320 P P 11 53 06.3 +0.1
ULN pmax pmax
comp=Z,15nm,1.1s
A21K Barrow 96.03 8 P P 11 53 06.3 +0.4
A21K IAmb IAmb 11 53 07.4
comp=Z,50nm,1.6s
A21K Barrow 96.03 8 P P 11 53 06.3 +0.4
baz=202
TRQA Tornquist 96.12 136 *e*P P 11 53 05.8 -1.5
435B Jarrell 96.23 59 P P 11 53 08.6 +0.7
baz=246
SONM Songino Array 96.29 320 P P 11 53 07.9 +0.1
comp=Z,7.1nm,1.0s,baz=136,slow=4.4,SNR=29
SONM PP PP 11 57 07.6 -3.9
comp=Z,0.3nm,0.3s,baz=142,slow=7.5,SNR=4.1
SONM PKKPbc PKKPbc 12 09 51.7 -0.4
comp=Z,1.3nm,0.6s,baz=271,slow=2.8,SNR=6.1
comp=Z,7.1nm,1.0s
SONM Songino Array 96.29 320 P P 11 53 07.5 -0.3
SONM Songino Array 96.29 320 P P 11 53 07.5 -0.3
SONM pmax pmax
comp=Z,11nm,1.2s
GTA Gaotai 96.84 310 ⇑P P 11 53 11.5 +0.9
GTA pP pP 11 55 10.4 -3.4
GTA pmax pmax
comp=Z,11nm,1.2s
LAO LASA Array 96.85 42 IAmb IAmb 11 53 12.3
comp=Z,10nm,0.8s
LAO LASA Array 96.85 42 P P 11 53 12.0 +1.6
baz=243
LAO LASA Array 96.85 42 P P 11 53 11.4 +1.1
baz=243
WMOK Wichita Mounta 96.88 55 P P 11 53 11.6 +0.9
baz=246
OGNE Ogallala 97.08 48 P Pdif 11 53 12.2 +0.6
baz=245
RSSD Black Hills 97.09 45 P P 11 53 12.1 +0.5
RSSD IAmb IAmb 11 53 14.1
comp=Z,14nm,1.1s
RSSD Black Hills 97.09 45 P P 11 53 12.1 +0.5
RSSD pmax pmax
comp=Z,14nm,1.1s
RSSD Black Hills 97.09 45 P P 11 53 12.2 +0.5
baz=244
RSSD Black Hills 97.09 45 P P 11 53 12.1 +0.5
baz=244
HKT Hockley 97.30 61 *i* P Pdif 11 53 08.6 -3.9
HKT pmax pmax
comp=Z,9.0nm,1.5s
CBKS Cedar Bluff 97.81 51 P P 11 53 15.6 +0.8
baz=246
INK Inuvik 97.82 16 P P 11 53 14.3 +0.2
comp=Z,8.6nm,0.7s,baz=227,slow=4.8,SNR=13
INK PP PP 11 57 18.8 -3.5
comp=Z,3.3nm,0.9s,baz=228,slow=4.7,SNR=3.7
INK PKiKP PKiKP 11 57 42.4 -1.5
comp=Z,1.8nm,0.6s,baz=44,slow=2.3,SNR=5.4
comp=Z,8.6nm,0.7s
INK Inuvik 97.82 16 P 11 53 14.2 +0.2
INK IAmb IAmb 11 53 14.9
comp=Z,11nm,0.8s
INK Inuvik 97.82 16 P P 11 53 14.2 +0.2
INK pmax pmax
comp=Z,11nm,0.9s
INK Inuvik 97.82 16 P Pdif 11 53 13.8 -0.2
baz=223
DGMT Dagmar 98.87 41 P P 11 53 20.7 +1.4
baz=245
DGMT Dagmar 98.87 41 P P 11 53 20.1 +0.8
baz=245
GOMU GeErMu 99.20 305 P Pdif 11 53 20.3 -1.1
GOMU pmax pmax
comp=Z,1.0nm,0.7s
GOMU pmax pmax
comp=Z,71nm,4.6s
ZAK Zakamensk 99.27 321 *e*P Pdif 11 53 20.4 -0.6
ZAK pmax pmax
comp=Z,3.0nm,1.4s
YKA Yellowknife Ar 100.30 26 P Pdif 11 53 25.6 +0.4
comp=Z,1.9nm,0.6s,baz=243,slow=4.4,SNR=6.4
YKA PKiKP PKiKP 11 57 47.9 -0.6
comp=Z,0.8nm,0.5s,baz=244,slow=1.2,SNR=7.4
W39A Magazine 100.85 56 P Pdif 11 53 29.2 +0.9
baz=249
TIXI Tiksi 100.94 346 P Pdif 11 53 27.2 -0.6
comp=Z,2.7nm,0.9s,baz=268,slow=23,SNR=7.7
TIXI PKiKP PKiKP 11 57 48.5 -0.9
comp=Z,1.5nm,0.3s,baz=254,slow=1.8,SNR=6.5
TIXI Tiksi 100.94 346 Pdif Pdif 11 53 28.4 +0.6
C36M Paulatuk 101.05 18 P Pdif 11 53 28.4 +0.1
baz=232
ECSD EROS Data Cent 101.86 47 Pdif Pdif 11 53 33.8 +1.2
ECSD EROS Data Cent 101.86 47 P Pdif 11 53 33.5 +0.9
baz=249
U40A Yellville 101.97 56 P Pdif 11 53 34.0 +0.7
baz=250
ULM Lac du Bonnet 104.58 41 PKiKP PKiKP 11 57 56.9 +0.3
comp=Z,3.1nm,0.5s,baz=217,slow=2.4,SNR=4.8
JFWS Jewell Farm 105.98 50 P PKiKP 11 57 58.3 -1.2
baz=253
EYMN Ely 106.61 45 P PKiKP 11 57 59.3 -1.2
baz=253
GOGA Godfrey 108.38 61 P PKiKP 11 58 02.8 -1.5
baz=254
P49A Miami Univ. Ec 109.06 54 P PKiKP 11 58 04.0 -1.4
baz=255
ACSO Alum Creek Sta 110.52 54 P PKiKP 11 58 07.0 -1.2
baz=256
P52A Corning 111.02 55 P PKiKP 11 58 07.9 -1.2
baz=257
ZALV Zalesovo Beam 111.14 321 PKiKP PKiKP 11 58 07.9 -0.9
comp=Z,2.9nm,0.5s,baz=146,slow=0.6,SNR=17
MK31 Makanchi Array 111.31 313 *i* PKiKP PKiKP 11 58 08.4 -1.1
MKAR Makanchi Array 111.31 313 Pdiff Pdif 11 54 16.1 +1.6
comp=Z,1.7nm,0.8s,baz=98,slow=6.1,SNR=8.8
MKAR PKiKP PKiKP 11 58 08.7 -0.7
comp=Z,6.0nm,0.8s,baz=188,slow=0.9,SNR=38
MKAR PKKPbc PKKPbc 12 09 07.4 0.0
comp=Z,1.0nm,0.6s,baz=282,slow=3.3,SNR=8.0
MKAR PKKPab PKKPab 12 09 19.1 +1.8
comp=Z,1.6nm,0.6s,baz=283,slow=4.4,SNR=11
MKAR Makanchi Array 111.31 313 Pdif Pdif 11 54 15.1 +0.5
MKAR Makanchi Array 111.31 313 *c i* PKiKP PKiKP 11 58 08.6 -0.9
MKAR pmax pmax
comp=Z,6.0nm,0.8s
RES Resolute Bay 111.37 17 PKiKP PKiKP 11 58 08.2 -0.5
comp=Z,4.0nm,0.6s,baz=248,slow=3.0,SNR=16
MAKZ Makanchi 111.52 313 ⇓PKiKP PKiKP 11 58 08.9 -1.0
BLA Blacksburg 111.76 58 P PKiKP 11 58 09.4 -1.2
baz=257

O53A New Philadelph 111.85 54 P PKiKP 11 58 09.6 -1.0
baz=257
M53A WI Miller and 112.50 53 P PKiKP 11 58 10.7 -1.1
baz=258
ERPA Erie 113.14 53 P PKiKP 11 58 12.1 -0.9
baz=259
KURK Kurchatov 114.37 317 PKiKP PKPdf 11 58 14.6 -0.5
KURK Kurchatov 114.37 317 PKiKP PKPdf 11 58 14.8 -0.3
KSH Kashi 114.41 304 PKP PKiKP 11 58 16.3 +0.5
SSPA Standing Stone 114.41 55 P PKPdf 11 58 14.6 -1.0
baz=259
KURBB Kurchatov Arra 114.42 317 PKP PKPdf 11 58 14.8 -0.4
comp=Z,12nm,0.7s,baz=96,slow=1.9,SNR=94
KURBB PP PP 11 59 16.1 -6.7
comp=Z,1.9nm,0.9s,baz=100,slow=6.9,SNR=5.0
TKM2 Tokmak 2 115.29 308 P PKPdf 11 58 17.1 -0.3
SNR=7.3
N58A Sunbury 115.32 54 PKPdf 11 58 16.8 -0.5
KBK Karagaybulak 115.72 307 P PKPdf 11 58 18.1 -0.1
SNR=6.0
CHMS Chumysh 115.91 308 P PKPdf 11 58 18.2 -0.2
SNR=8.6
UCH Uchtor 115.97 307 P PKiKP 11 58 19.4 +0.3
SNR=19
AAK Ala-Archa 116.04 307 PKP PKiKP 11 58 18.9 0.0
comp=Z,4.4nm,0.4s,baz=145,slow=3.2,SNR=8.5
AAK Ala-Archa 116.04 307 PKPdf PKiKP 11 58 19.0 +0.1
AAK Ala-Archa 116.04 307 *c i* PKiKP PKPdf 11 58 17.8 -1.0
AAK pmax pmax
comp=Z,13nm,1.7s
AAK Ala-Archa 116.04 307 PKPdf PKPdf 11 58 18.5 -0.3
BINY Binghamton 116.08 53 P PKPdf 11 58 17.8 -0.9
baz=261
USP Ospenovka 116.13 308 P PKPdf 11 58 18.4 -0.4
SNR=13
AML Almayashu 116.56 307 PKiKP PKiKP 11 58 20.2 +0.1
EKS2 Erkin-Say 116.57 307 P PKiKP 11 58 20.1 +0.3
SNR=5.6
OPO Ambohidratompo 117.22 232 PKP PKiKP 11 58 22.0 +0.1
SNR=270,slow=4.0
LONY Lake Ozonia 117.42 51 P PKPdf 11 58 20.4 -0.8
baz=263
PAL Palisades 117.45 55 P PKPdf 11 58 20.6 -0.7
baz=262
DRK Karamyk 117.58 304 PKiKP 11 58 22.4 +0.3
L61B Northampton 118.55 53 P PKPdf 11 58 23.0 -0.4
baz=264
GAR Garm 118.66 303 PKPdf PKiKP 11 58 24.3 +0.3
KBL Kabul 118.98 298 PKPdf PKiKP 11 58 25.2 +0.3
KBL Kabul 118.98 298 PKiKP PKiKP 11 58 25.2 +0.3
KK31 Karatay Array 119.01 307 PKPdf PKPdf 11 58 24.1 -0.2
KK31 Karatay Array 119.01 307 PKiKP PKPdf 11 58 24.1 -0.2
KKAR Karatay Array 119.01 307 PKPdf PKPdf 11 58 24.1 -0.2
KKAR Karatay Array 119.01 307 PKiKP PKPdf 11 58 24.1 -0.2
LBNH Lisbon 119.28 51 P PKPdf 11 58 24.4 -0.4
baz=265
HRV Adam Dziewonsk 119.38 53 P PKPdf 11 58 24.4 -0.6
baz=264
HUMP Col San Antoni 119.42 82 PKPdf 11 58 25.6 -0.2
CHGR Chuyangaron 119.51 302 PKiKP 11 58 25.7 +0.1
CHGR Chuyangaron 119.51 302 PKiKP PKiKP 11 58 25.7 +0.1
BDFB Brasilia 119.67 126 PKP PKPdf 11 58 26.5 0.0
comp=Z,5.5nm,0.6s,baz=72,slow=3.2,SNR=4.7
BDFB PKKPbc PKKPbc 12 08 39.1 +0.2
comp=Z,2.5nm,0.4s,baz=72,slow=5.0,SNR=4.4
BRVK Borovoye 119.69 319 PKPdf PKPdf 11 58 25.3 0.0
BRVK Borovoye 119.69 319 *c i* PKiKP PKPdf 11 58 24.1 -1.2
BRVK pmax pmax
comp=Z,25nm,1.3s
SUR Sutherland 120.75 201 PKP PKiKP 11 58 29.1 +0.6
comp=Z,19nm,0.7s,baz=129,slow=8.8,SNR=5.6
SUR PKKPab PKKPab 12 08 38.2 -1.5
comp=Z,8.6nm,0.6s,baz=347,slow=4.6,SNR=14
SUR Sutherland 120.75 201 PKPdf PKiKP 11 58 29.0 +0.5
PKME Peaks-Kenny Pk 121.22 50 PKiKP 11 58 28.6 0.0
PKME Peaks-Kenny Pk 121.22 50 P PKPdf 11 58 28.1 -0.3
baz=267
F63A Nahmakanta, Br 121.37 50 PKPdf 11 58 28.8 0.0
NOR Nord 121.44 3 *i* P PKPdf 11 58 26.6 -1.4
D62A Allapoint, All 121.45 48 PKPdf 11 58 28.4 -0.4
PQI Presque Isle 122.15 49 PKPdf PKPdf 11 58 29.7 -0.5
UPNV Upernavik 122.25 17 *i* P PKPdf 11 58 28.8 -0.9
BOSA Boshof 122.45 207 PKP PKiKP 11 58 32.4 +0.5
comp=Z,7.2nm,0.7s,baz=30,slow=1.0,SNR=7.5
BOSA PKKPbc PKKPbc 12 08 26.1 -3.2
comp=Z,6.2nm,0.7s,baz=336,slow=5.3,SNR=14
SJMB Sao Joao De Ma 122.47 133 *e*P PKPdf 11 58 31.1 -0.7
RIB01 Linhares ES 122.56 134 *e*P PKPdf 11 58 30.8 -1.1
BSFB Barra de Sao F 122.61 134 *e*P PKPdf 11 58 31.1 -0.8
SCHQ Schefferville 122.61 39 PKP PKPdf 11 58 30.5 -0.4
comp=Z,9.9nm,0.6s,baz=282,slow=2.7,SNR=16
JANB Januaria 122.78 128 *e*P PKPdf 11 58 31.1 -1.3
BATG Bathurst New B 123.49 48 PKPdf 11 58 32.7 -0.1
NUUG Nuugaatsiaq 123.64 18 *i* P PKPdf 11 58 31.6 -0.7
NAN01 Guarapari, ES 123.79 133 *e*P PKPdf 11 58 33.4 -0.9
PRPB Parauapebas 123.83 115 *e*P PKPdf 11 58 33.7 -0.8
SDBA SAO DESIDERIO 124.04 125 *e*P PKPdf 11 58 33.7 -1.2
KBS Kingsbay 124.17 357 *i* P PKPdf 11 58 33.0 -0.2
KBS Kingsbay 124.17 357 *e*P PKiKP 11 58 33.5 -0.1
LMN Caledonia Moun 124.38 50 PKPdf PKPdf 11 58 34.4 -0.2
SPA0 Spitsbergen Ar 124.64 356 *e*P PKPdf 11 58 34.3 +0.1
SPITS Spitsbergen Ar 124.64 356 PKP PKPdf 11 58 34.2 +0.1
comp=Z,38nm,0.6s,baz=96,slow=4.3,SNR=44
SVE Sverdlovsk 124.89 324 *e* PKiKP PKPdf 11 58 35.1 0.0
SVE pmax pmax
comp=Z,41nm,0.9s
GUA01 Guaratinga, BA 124.90 133 *e*P PKPdf 11 58 35.3 -1.1
ILULI Ilulissat 125.41 20 *i* P PKPdf 11 58 35.0 -0.8
LBTB Lobatse 125.42 210 PKhKP PKPpre 11 58 33.2
comp=Z,4.9nm,0.4s,baz=107,slow=16,SNR=12
DAG Danmarks Havn 125.92 5 *i* P PKPdf 11 58 35.0 -1.6
ARU Arti 126.09 324 PKP PKiKP 11 58 38.0 +0.1
comp=Z,39nm,0.4s,baz=56,slow=0.6,SNR=49
ARU Arti 126.09 324 PKPdf PKiKP 11 58 37.9 -0.1
ARU Arti 126.09 324 *i* PKiKP PKPdf 11 58 37.1 -0.4
ARU 12 00 42.6
ARU PPP PPP 12 03 34.5
ARU 12 04 55.0
ARU SS SS 12 16 58.3 -1.5
ABKAR Akbulak array 126.37 315 PKPdf PKPdf 11 58 37.2 -1.0
SUMG Summit 126.63 13 *i* P PKPdf 11 58 38.3 -0.3
SFJD Kangerlussuaq 126.66 22 PKPdf 11 58 38.0 -0.2
SFJD Kangerlussuaq 126.66 22 PKiKP PKPdf 11 58 38.0 -0.2
SFJD Kangerlussuaq 126.66 22 *i* P PKPdf 11 58 37.1 -1.1
GBN Guysborough 126.70 50 PKPdf PKiKP 11 58 39.4 -0.1
AKTO Aktyubinsk 127.47 316 PKP PKPdf 11 58 40.5 +0.2
comp=Z,20nm,0.6s,baz=90,slow=3.0,SNR=66
NUUK Nuuk 127.56 25 *i* P PKPdf 11 58 39.9 -0.1
MATP Matopo 127.84 216 PKP PKiKP 11 58 43.0 +0.1
comp=Z,6.4nm,0.6s,baz=141,slow=2.1,SNR=14
SOHO SOHO 127.85 283 *i* PKPdf PKPdf 11 58 41.6 -0.2
SNR=24
DBG Daneborg 128.08 7 *i* P PKPdf 11 58 39.7 -1.1
GEYT Alibeck 128.10 301 PKP PKiKP 11 58 43.1 +0.4
comp=Z,22nm,0.7s,baz=215,slow=4.9,SNR=20
UOSS Minazif 128.30 284 PKPdf PKPdf 11 58 41.8 -0.8
UOSS Minazif 128.30 284 *i* PKPdf PKPdf 11 58 42.6 -0.1
SNR=9.5
HATD Hatta, Dubai 128.34 284 *i* PKiKP PKPdf 11 58 43.0 +0.2
SNR=9.9
ASHO Ashiyiah 128.38 284 *i* PKPdf PKPdf 11 58 42.3 -0.6
SNR=11
BANOM Banah 128.40 285 PKiKP PKPdf 11 58 43.2 +0.3
DY2G Dye2 128.41 21 *i* P PKPdf 11 58 41.7 -0.2
MSFE Esma-Masafi 128.42 284 *i* PKiKP PKPdf 11 58 43.2 +0.2
SNR=6.9
ICESG Greenland Ices 128.78 17 *i* P PKPdf 11 58 41.5 -1.2
NAZ Nazwa, Dubai 128.79 284 PKPdf PKPdf 11 58 43.5 -0.1
FAQ Al Faqa, Dubai 128.81 284 *i* PKiKP PKiKP 11 58 44.0 -0.4
SNR=6.5
ASUD Al Ashush, Dub 129.02 283 PKiKP PKPdf 11 58 44.2 +0.2
KIRV Kirov 130.16 328 PKP PKiKP 11 58 45.8 -0.2
comp=Z,50nm,0.5s,baz=190,slow=0.3,SNR=15
KIRV Kirov 130.16 328 *c i* PKiKP PKPdf 11 58 45.0 -0.1
NBLA Lagarto - SE 130.19 129 *e*P PKPdf 11 58 45.3 -1.3
ROSB Rosrio 130.35 116 *e*P PKPdf 11 58 46.0 -1.0
MZR Muzera 130.36 281 *i* PKiKP PKiKP 11 58 47.3 -0.2
SNR=23
IVI Ivigtut 130.37 28 *i* P PKPdf 11 58 44.8 -0.6
PRGR Permogore 130.55 333 *e*PKiKP PKPdf 11 58 44.5 -1.3
PRGR *e* 12 01 15.1
HAMF Hammerfest 130.69 349 *e*P PKPdf 11 58 45.0 -0.8
KEV Kevo 130.84 348 PKPdf PKPdf 11 58 46.2 +0.1
KEV Kevo 130.84 348 PKiKP PKPdf 11 58 46.2 +0.1

APA Apatity 131.07 343 ⇓*i* PKiKP PKPdf 11 58 45.4 -1.2
APA pmax pmax
comp=Z,10.0nm,0.6s
ARCES ARCESS Array B 131.31 348 PKhKP PKPpre 11 58 34.2
comp=Z,1.2nm,0.3s,baz=350,slow=1.2,SNR=13
ARCES PKP PKPdf 11 58 46.7 -0.4
comp=Z,19nm,0.6s,baz=14,slow=1.1,SNR=37
ARCES SKPbc SKPab 12 01 20.7 +0.1
comp=Z,16nm,0.9s,baz=35,slow=4.4,SNR=12
SCO Scoresbysund 131.36 9 PKPdf PKPdf 11 58 47.4 +0.3
SCO Scoresbysund 131.36 9 PKiKP PKPdf 11 58 47.4 +0.3
SCO Scoresbysund 131.36 9 *i* P PKPdf 11 58 46.7 -0.3
LSZ Lusaka 132.17 219 PKP PKiKP 11 58 52.1 +0.5
comp=Z,7.0nm,0.5s,baz=145,slow=2.9,SNR=12
LSZ SKPbc SKPab 12 01 26.2 +0.1
comp=Z,11nm,0.6s,baz=164,slow=3.1,SNR=14
KTK1 Kautokeino 132.18 349 *e*P PKPdf 11 58 48.3 -0.4
TRO Tromso 132.34 351 *e*P PKPdf 11 58 47.9 -1.0
BELG Belogornoye 133.33 321 PKP PKPdf 11 58 51.5 +0.2
comp=Z,113nm,0.9s,baz=342,slow=0.3,SNR=24
BELG SKPbc SKPbc 12 01 26.7 -0.1
comp=Z,27nm,0.7s,baz=34,slow=2.2,SNR=5.5
NBMO Morrinhos-CE 133.43 120 *e*P PKPdf 11 58 51.6 -1.1
KLMR Klimovskoe 133.47 334 *e* PKiKP PKPdf 11 58 50.0 -1.2
KLMR *e* 12 01 26.3
KLMR pmax pmax
comp=Z,8.0nm,0.5s
KLMR Klimovskoe 133.47 334 *e* PKPdf PKPdf 11 58 50.1 -1.2
KLMR AMP 11 58 52.7
comp=Z,8.0nm,0.5s
KLMR *e* PP PP 12 01 26.4 -1.4
TSUM Tsumeb 133.94 204 PKP PKiKP 11 58 55.8 +0.6
comp=Z,1.3nm,0.4s,baz=161,slow=2.0,SNR=7.0
TSUM SKPbc SKPbc 12 01 31.4 +1.2
comp=Z,21nm,1.0s,baz=134,slow=3.8,SNR=13
STEI Steigen 134.44 352 *e*P PKiKP 11 58 53.8 -0.6
RCBR Riachuelo 135.04 126 SKPbc SKPbc 12 01 33.4 -0.3
baz=346,slow=3.7
KMBO Kilima Mbogo 135.65 242 PKP PKiKP 11 59 00.4 +1.4
comp=Z,3.7nm,0.5s,baz=256,slow=3.0,SNR=7.4
KMBO SKP 12 01 38.3
comp=Z,11nm,1.0s,baz=58,slow=2.4,SNR=16
KMBO Kilima Mbogo 135.65 242 PKiKP PKiKP 11 59 00.3 +1.4
GROC Groznyy 137.00 309 *i* PKiKP PKPdf 11 58 58.9 +0.5
GROC pmax pmax
comp=Z,27nm,0.4s
FINES FINESS Array B 137.80 341 PKhKP PKPpre 11 58 47.7
comp=Z,6.3nm,0.5s,baz=79,slow=4.1,SNR=23
FINES PKP PKPdf 11 58 59.4 0.0
comp=Z,15nm,0.5s,baz=86,slow=4.3,SNR=17
FINES SKP 12 01 41.1
comp=Z,16nm,0.8s,baz=64,slow=5.3,SNR=11
OBN Obninsk 138.01 329 *e* PKiKP PKPdf 11 58 59.5 -0.4
OBN *e* 12 01 01.6
OBN pmax pmax
comp=Z,23nm,0.9s
GNI Garni 138.34 305 PKP PKPdf 11 59 01.9 +0.7
comp=Z,13nm,0.7s,baz=284,slow=2.6,SNR=5.1
VORR Voronezh 138.39 323 *e* PKHKP PKPpre 11 58 52.2
VORR pmax pmax
comp=Z,100nm,0.5s
ZEI Tsey 138.45 309 *i* PKiKP PKPdf 11 58 58.9 -2.5
ZEI pmax pmax
comp=Z,15nm,0.9s
KBZ Khabaz 138.93 310 PKhKP PKPpre 11 58 53.9
comp=Z,1.3nm,0.4s,baz=148,slow=4.3,SNR=4.2
KBZ PKP PKPdf 11 59 02.2 +0.3
comp=Z,4.9nm,0.8s,baz=117,slow=5.8,SNR=5.0
KIV Kislovodsk 139.02 311 *e* PKiKP PKPdf 11 59 02.7 +0.4
KIV pmax pmax
comp=Z,10.0nm,1.1s
MTSE Matsula 140.66 340 *e*P PKPdf 11 58 59.2 -5.3
MBAR Mbarara 141.10 236 PKhKP PKPpre 11 59 04.0
comp=Z,5.1nm,0.5s,baz=187,slow=16,SNR=7.5
SOC Sochi 141.19 311 *i* PKiKP PKPdf 11 59 06.2 +0.2
SOC *e* 12 02 09.3
SOC *e* SSS SSS 12 25 28.2
NB2 NORSAR Subarra1 141.54 351 PKPab PKPdf 11 59 01.4 -4.8
baz=16,slow=3.2
NB2 NORSAR Subarra1 141.54 351 PKP PKPdf 11 59 01.4 -4.8
comp=Z,6.8nm,0.4s,baz=16,slow=3.2
NOA NORSAR Array B 141.54 351 PKhKP PKPpre 11 59 01.9
comp=Z,29nm,0.7s,baz=16,slow=4.7,SNR=145
NOA SKPbc SKPbc 12 01 50.9 +0.6
comp=Z,5.9nm,0.9s,baz=14,slow=4.2,SNR=4.4
BNGB Bingl 141.64 304 *e*P PKPdf 11 59 03.9 -3.3
FOO Floro 141.68 355 *e*P PKPdf 11 59 02.0 -4.3
NAO01 NORSAR Array S 141.77 351 *e*P PKPdf 11 59 02.6 -4.0
NC602 NORSAR Array S 141.78 350 *e*P PKPdf 11 59 02.4 -4.2
HFS Hagfors 141.97 348 PKhKP PKPpre 11 59 02.9
comp=Z,88nm,0.5s,baz=56,slow=2.7,SNR=562
HFS SKPbc SKiKP 12 01 52.6 -0.1
comp=Z,10nm,0.9s,baz=90,slow=1.5,SNR=3.9
HYA Hoyanger 142.01 354 *e*P PKPdf 11 59 03.2 -3.7
SUE Sulen 142.24 356 *e*P PKPdf 11 59 04.1 -3.2
ISAL Salakas 142.26 335 *e*P PKPdf 11 59 05.1 -2.4
MNK Minsk 142.32 333 *i* PKHKP PKPpre 11 59 03.6
MNK *i* 12 02 18.8
MNK *i* 12 05 16.8
MNK *i* PPP PPP 12 05 34.0
MNK *i* SS SS 12 20 07.7 -4.0
MNK *i* SSS SSS 12 25 39.1
MNK pmax pmax
comp=Z,95nm,0.9s
MNK pmax pmax
comp=E,2.0nm,0.7s
MNK pmax pmax
comp=N,54nm,0.9s
MNK Minsk 142.32 333 *i* PKP PKPdf 11 59 03.6 -4.1
comp=Z,95nm,0.9s
MNK *i* PKP PKiKP 11 59 04.3 -6.7
comp=E,2.0nm,0.7s,baz=226
MNK *i* PKP PKiKP 11 59 04.3 -6.7
comp=N,54nm,0.9s
MNK *i* pPKP pPKPdf 12 01 16.6 -2.2
MNK *i* PP PP 12 02 18.8 -3.1
MNK *i* SKS SKSdf 12 05 16.9 -6.9
MNK *i* PPP PPP 12 05 34.0
MNK *i* SS SS 12 20 07.8 -3.9
MNK *i* SSS SSS 12 25 39.2
ANN Anapa 142.32 314 *i* PKHKP PKPpre 11 59 04.8
ANN pmax pmax
comp=Z,52nm,0.9s
IIGN Ignalina 142.39 335 *e*P PKPdf 11 59 05.5 -2.3
NACGM Naroch 142.49 334 ⇑*e* PKP PKPdf 11 59 06.5 -1.4
baz=45
OSL Oslo 142.66 350 *e*P PKPdf 11 59 05.6 -2.5
ASK Askoy 142.77 355 *e*P PKPdf 11 59 06.1 -2.2
ASK IAmb IAmb 11 59 06.6
comp=Z,272nm,0.7s
SVRC Sivrice-ELAZID 142.81 303 *e*P PKPdf 11 59 07.4 -1.9
BER Bergen 142.86 355 *e*P PKPdf 11 59 06.4 -2.1
BER IAmb IAmb 11 59 06.9
comp=Z,217nm,0.7s
KONO Kongsberg 143.11 351 ⇓PKiKP PKPab 11 59 06.8 +0.1
KONO Kongsberg 143.11 351 *e*P PKPab 11 59 07.0 +0.2
ODD1 Odda 143.21 354 *e*P PKPbc 11 59 07.6 0.0
URFA Urfa 143.38 302 *e*P PKPab 11 59 06.2 -2.5
ARPR Arapgir-MALATY 143.40 305 *e*P PKPdf 11 59 09.8 -0.5
BLS5 Blasjo 143.71 354 *e*P PKPab 11 59 09.3 +0.2
BLS5 IAmb IAmb 11 59 10.0
comp=Z,160nm,0.9s
RSDY Resadiye-TOKAT 143.82 307 *e*P PKPdf 11 59 10.8 0.0
KMY Karmoy 144.03 355 *e*P PKPdf 11 59 10.4 -0.1
DARE Darende-Malaty 144.17 304 *e*P PKPab 11 59 12.3 +0.6
SVSK Karacayir 144.19 306 *e*P PKPab 11 59 12.4 +0.9
AKASG Malin Array Be 144.20 327 PKP PKPbc 11 59 10.7 -0.1
comp=Z,103nm,0.6s,baz=45,slow=4.4,SNR=474
AKASG SKPbc SKiKP 12 01 58.8 +1.3
comp=Z,4.6nm,0.7s,baz=40,slow=2.6,SNR=4.9
TOKT Tokat 144.41 307 *e*P PKPbc 11 59 12.2 +0.3
SIM Simferopol' 144.43 316 *d* PKiKP PKPdf 11 59 11.7 0.0
SIM pmax pmax
comp=Z,68nm,0.5s
SUW Suwalki 144.56 336 *e*PKP PKPbc 11 59 12.0 +0.1
SUW Suwalki 144.56 336 *e*P PKPbc 11 59 11.9 +0.1
HOMB Homborsund 144.59 352 *e*P PKPbc 11 59 12.0 +0.2
SNART Snartemo 144.69 353 *e*P PKPbc 11 59 12.3 +0.2
DIKM Dikmen 144.92 310 ⇑P PKPab 11 59 13.9 -0.4
SARI SarD1z-Kayseri 145.02 304 *e*P PKPbc 11 59 14.4 +0.4
BNN Bunyan 145.34 305 *e*P PKPbc 11 59 15.3 +0.4
TAHT Tahtakopru-Hat 145.65 301 *e*P PKPbc 11 59 16.1 +0.4
ASF Jabal al Asfar 145.68 293 PKP PKPdf 11 59 14.2 -0.1
comp=Z,45nm,0.9s,baz=113,slow=0.6,SNR=21

ASF PKPbc **PKPab** 11 59 17.3 -0.4
comp=Z,34nm,0.7s,baz=124,slow=1.7,SNR=22
GOET G??ttrup 145.68 350 *i* P **PKPbc** 11 59 15.3 +0.3
BZK Bozkurt 145.69 311 ⇑P **PKPbc** 11 59 15.6 0.0
BZK Bozkurt 145.69 311 *e*P **PKPbc** 11 59 15.1 -0.5
BZK Bozkurt 145.69 311 **PKPbc** 11 59 15.9 +0.3
KOZT Kozan 145.69 303 *e*P **PKPbc** 11 59 16.0 +0.2
CORM Corum 145.85 308 *e*P **PKPbc** 11 59 17.0 +0.7
SORM Soroca 146.21 324 ⇓P **PKPbc** 11 59 16.8 0.0
SORM Soroca 146.21 324 ⇓PKIKP **PKPbc** 11 59 16.8 0.0
HWQ Hawqa 146.22 297 *e*P **PKPbc** 11 59 17.8 +0.3
MUD Monsted U'grnd 146.24 355 *i* P **PKPbc** 11 59 16.4 -0.2
PURM Purcari 146.27 321 ⇑P **PKPbc** 11 59 17.5 +0.5
BSD Bornholm Skovb 146.30 344 *e*P **PKPbc** 11 59 16.9 +0.1
BSD Bornholm Skovb 146.30 344 *i* P **PKPbc** 11 59 16.2 -0.6
CMRD Camardi-Nigde 146.30 303 *e*P **PKPbc** 11 59 17.7 +0.1
KARA Karaisali 146.34 302 *e*P **PKPbc** 11 59 18.1 +0.5
COP Copenhagen 146.36 346 *i* P **PKPbc** 11 59 16.6 -0.4
CANT Cankiri 146.44 309 *e*P **PKPbc** 11 59 18.3 +0.5
BHL Bhannes 146.51 296 *e*P **PKPbc** 11 59 18.8 +0.5
SHBL Chebaa 146.51 295 *e*P **PKPbc** 11 59 19.4 +1.0
KURC Kurucasile-Bar 146.61 311 *e*P **PKPdf** 11 59 14.4 -1.1
KIS Kishinev 146.62 322 *e*PKIKP **PKPbc** 11 59 17.5 -0.5
KIS pmax pmax
comp=Z,120nm,0.9s
MILM Milestii Mici 146.66 322 *e*PKHKP PKPpre 11 59 17.0
MILM Milestii Mici 146.66 322 *e*PKIKP **PKPbc** 11 59 18.0 -0.1
MILM Milestii Mici 146.66 322 PKPM 11 59 18.5
comp=Z,90nm,0.6s
MILM Milestii Mici 146.66 322 ⇓P **PKPbc** 11 59 18.0 -0.1
MILM Milestii Mici 146.66 322 *i* PKIKP **PKPbc** 11 59 17.0 -1.1
MILM pmax pmax
comp=Z,400nm,1.2s
BR131 Keskin Array S 146.72 307 PKPbc **PKPbc** 11 59 18.8 +0.1
BR131 Keskin Array S 146.72 307 PKP2 **PKPbc** 11 59 18.8 +0.1
BRTR Keskin Array B 146.72 307 PKPbc **PKPbc** 11 59 18.6 -0.1
comp=Z,31nm,0.7s,baz=136,slow=4.3,SNR=74
BRTR Keskin Array B 146.72 307 *e*P **PKPbc** 11 59 18.4 -0.3
LLD Lille Linde 146.74 346 *i* P **PKPbc** 11 59 17.4 -0.6
MMAI Mount Meron Ar 146.84 295 PKPbc **PKiKP** 11 59 20.3 -0.8
comp=Z,83nm,0.5s,baz=72,slow=5.4,SNR=105
MMAI pPKPbc **pPKPdf** 12 01 27.2 -0.3
comp=Z,7.5nm,0.7s,baz=69,slow=4.6,SNR=2.6
MERS Mersin 146.85 302 *e*P **PKPbc** 11 59 18.1 -1.0
GHAJ Ghor Haditha 146.88 292 PKPbc **PKPbc** 11 59 19.9 +0.8
MMLI Mount Malkishu 146.89 294 *e*P **PKPbc** 11 59 20.2 +0.9
UJAP Al Uja 146.91 293 *e*P **PKPbc** 11 59 19.7 +0.5
BEL Belsk 147.17 335 *e*PKP **PKPbc** 11 59 20.0 +0.8
AFSR Afar-Bala (An 147.23 307 *e*P **PKPbc** 11 59 20.3 +0.3
GKP Gorka Klasztor 147.24 340 *e*PKP **PKPbc** 11 59 19.9 +0.4
GKP Gorka Klasztor 147.24 340 *e*P **PKPbc** 11 59 20.0 +0.6
ANTO Ankara 147.29 308 *e*P **PKPbc** 11 59 20.4 +0.3
ANTO Ankara 147.29 308 PKPbc **PKPbc** 11 59 20.8 +0.7
ANTO Ankara 147.29 308 PKP2 **PKPbc** 11 59 20.8 +0.7
LVV L'vov 147.29 330 *e*PKIKP **PKPbc** 11 59 19.3 -0.4
LOD Lodumlu 147.30 308 *e*P **PKPbc** 11 59 20.4 +0.2
VASR Vaslui 147.40 322 ⇑P **PKiKP** 11 59 21.0 -0.7
KULU Kulu 147.41 306 *e*P **PKPbc** 11 59 20.5 0.0
EIL Elat 147.51 289 PKPbc **PKiKP** 11 59 22.2 -0.3
comp=Z,58nm,0.8s,baz=23,slow=1.4,SNR=26
EIL Elat 147.51 289 *e*P **PKPbc** 11 59 21.5 +0.6
TLCR 147.61 319 ⇑P **PKPbc** 11 59 21.2 +0.6
TLCR 147.61 319 ⇑PKP2 **PKPbc** 11 59 21.2 +0.6
IKL Isikli 147.66 301 *e*P **PKPbc** 11 59 20.9 -0.1
VLDR Vladesti 147.69 321 ⇑P **PKiKP** 11 59 21.7 -0.6
VARL Varlezi 147.79 321 ⇑P **PKiKP** 11 59 22.1 -0.4
JURR Jurilovca 147.79 319 ⇑P **PKPbc** 11 59 21.3 +0.2
SCTR Scanteiesti 147.83 321 ⇑P **PKiKP** 11 59 22.1 -0.5
YUVA Yuva-Kibriscik 147.90 309 *e*P **PKPbc** 11 59 21.8 +0.1
GHRR 147.95 322 ⇓P **PKiKP** 11 59 22.8 0.0
LFK Lefkose 147.99 299 *e*P **PKPbc** 11 59 22.2 +0.2
BERE Bereket-Mersin 147.99 302 *e*P **PKPbc** 11 59 22.1 0.0
CFR Carcaliu 148.02 320 ⇓P **PKPbc** 11 59 22.0 +0.3
CFR Carcaliu 148.02 320 ⇓PKP2 **PKPbc** 11 59 22.0 +0.3
SCHL Schela 148.02 320 ⇑P **PKiKP** 11 59 22.5 -0.5
TPGR Topolog 148.02 319 ⇑P **PKPbc** 11 59 22.3 +0.6
IZVR Izvoarele 148.03 321 ⇑P **PKiKP** 11 59 22.4 -0.6
TESR Tescani 148.11 323 ⇓P **PKPbc** 11 59 22.2 +0.3
EKA Eskdalemuir Ar 148.13 3 PKP **PKPdf** 11 59 16.9 -0.6
comp=Z,18nm,0.4s,baz=309,slow=1.5,SNR=49
EKA PKPbc **PKPbc** 11 59 21.2 -0.4
comp=Z,18nm,0.4s,baz=330,slow=2.2,SNR=70
TEKE Tekeli-Mersin 148.13 301 *e*P **PKPbc** 11 59 21.8 -0.5
ESK Eskdalemuir 148.14 3 **PKPbc** 11 59 21.8 +0.1
ESK Eskdalemuir 148.14 3 PKHKP PKPpre 11 59 21.8
LADK Ladik-KONYA 148.14 305 *e*P **PKPbc** 11 59 21.8 -0.6
BIZ Bicaz 148.15 324 ⇓P **PKiKP** 11 59 23.1 -0.2
BURAR Bucovina Array 148.19 326 ⇑P **PKiKP** 11 59 23.4 0.0
BURAR Bucovina Array 148.19 326 ⇑PKP2 **PKiKP** 11 59 23.4 0.0
PANC Panciu 148.21 322 ⇑P **PKiKP** 11 59 23.0 -0.3
MDUB Mudurnu 148.21 310 *e*P **PKPbc** 11 59 22.3 -0.2
CSS Mathiatis 148.22 299 *e*P **PKPbc** 11 59 22.2 -0.4
KONT Konya--Tatoy 148.22 305 *e*P **PKPbc** 11 59 21.8 -0.7
TIRR Tirgusor 148.24 318 ⇓P **PKPbc** 11 59 22.6 +0.4
TIRR Tirgusor 148.24 318 ⇓P **PKPbc** 11 59 22.6 +0.4
TIRR Tirgusor 148.24 318 ⇓PKP2 **PKPbc** 11 59 22.6 +0.4
KIZT Kizilcal 148.29 307 *e*P **PKPbc** 11 59 22.5 -0.2
EFOR EFORIE 148.30 318 ⇓P **PKiKP** 11 59 23.1 -0.4
SVRH Sivrihisar-ESK 148.35 308 *e*P **PKPbc** 11 59 22.4 -0.4
MFTR Murfatlar 148.38 318 ⇑P **PKiKP** 11 59 23.4 -0.4
HARR Harsova 148.41 319 ⇓P **PKiKP** 11 59 23.3 -0.5
HARR Harsova 148.41 319 ⇓PKP2 **PKiKP** 11 59 23.3 -0.5
HDMB Hadim 148.41 303 *e*P **PKPbc** 11 59 22.9 -0.3
TLBR Topalu 148.41 319 ⇑P **PKiKP** 11 59 23.6 -0.2
VRI Vrincioaia 148.45 322 ⇑P **PKPbc** 11 59 23.1 +0.4
VRI Vrincioaia 148.45 322 ⇑PKHKP PKPpre 11 59 23.1
MANR Mangalia 148.46 317 ⇑P **PKiKP** 11 59 23.7 -0.2
PLOR Plostina 148.50 322 ⇑P **PKPbc** 11 59 23.3 +0.4
PLOR Plostina 148.50 322 ⇑PKHKP PKPpre 11 59 23.3
LEF Lefka 148.54 299 *e*P **PKPbc** 11 59 23.5 +0.2
BISRR Bisoca 148.64 321 ⇑P **PKiKP** 11 59 24.3 -0.1
GULT Gulveren 148.71 310 *e*P **PKPbc** 11 59 23.4 -0.3
CIFT Cifteler, Eski 148.72 308 *e*P **PKPbc** 11 59 23.7 0.0
KOLS Kolonicke sedl 148.73 330 *e*PKP2 **PKiKP** 11 59 24.4 0.0
KOLS Kolonicke sedl 148.73 330 *e*PKP **PKiKP** 11 59 24.4 0.0
COVR Voineasa-Covas 148.76 322 ⇑P **PKPbc** 11 59 23.8 +0.2
SEYD Seydisehir-KON 148.78 304 *e*P **PKPbc** 11 59 24.1 +0.1
SRCK Saricakaya, Es 148.78 309 *e*P **PKPbc** 11 59 23.5 -0.3
PSN Preselentsi 148.78 317 ⇑P **PKPbc** 11 59 24.0 +0.4
IOR Ion Corvin 148.79 318 ⇓P **PKiKP** 11 59 24.5 -0.1
OJC Ojcow 148.82 334 *e*PKP **PKPbc** 11 59 23.7 +0.2
OJC Ojcow 148.82 334 PKPbc **PKPbc** 11 59 23.5 -0.1
OJC Ojcow 148.82 334 PKHKP PKPpre 11 59 23.5
OZUR 148.84 323 ⇑P **PKiKP** 11 59 24.5 -0.2
UZH Uzhgorod 148.94 330 ⇑*i*PKHKP PKPpre 11 59 23.4
UZH *i* 11 59 31.7
NEHR Nehoiu 148.95 322 ⇑P **PKPbc** 11 59 24.2 +0.1
ARCR ARCALIA 148.98 326 ⇑P **PKiKP** 11 59 24.6 -0.3
ISR Istrita 148.99 321 ⇑P **PKiKP** 11 59 24.7 -0.4
ISR Istrita 148.99 321 ⇑PKHKP PKPpre 11 59 24.7
SILT Sile 149.01 312 *e*P **PKPbc** 11 59 24.2 -0.1
BMR Baia Mare 149.03 327 ⇑P **PKiKP** 11 59 24.6 -0.4
BMR Baia Mare 149.03 327 ⇑PKHKP PKPpre 11 59 24.6
MLR Muntele Rosu 149.11 322 ⇓P **PKPbc** 11 59 24.6 0.0
MLR Muntele Rosu 149.11 322 PKP **PKPdf** 11 59 19.3 -0.3
comp=Z,31nm,1.1s,baz=12,slow=1.2,SNR=6.0
MLR PKPbc **PKPbc** 11 59 24.6 0.0
comp=Z,38nm,0.6s,baz=318,slow=5.5,SNR=39
CRVS Cervenica-Dubn 149.12 331 *e*PKP2 **PKiKP** 11 59 25.4 +0.2
CRVS Cervenica-Dubn 149.12 331 *e*PKP **PKiKP** 11 59 25.4 +0.2
DOPR Dopca 149.14 323 ⇑P **PKiKP** 11 59 25.3 -0.1
LEHL Lehliu 149.19 320 ⇑P **PKiKP** 11 59 25.4 0.0
NIE Niedzica 149.24 333 *e*PKP **PKiKP** 11 59 25.8 +0.4
ADVT Abdulvahap 149.25 311 *e*P **PKPbc** 11 59 24.7 -0.2
SECR 149.31 321 ⇑P **PKPbc** 11 59 25.3 +0.4
SHUT Suhut-Afyon 149.38 307 *e*P **PKPbc** 11 59 25.7 +0.3
SUTC Sutluce-Ispart 149.39 305 *e*P **PKPbc** 11 59 24.3 -1.2
PLAR PLOIESTI 149.40 321 ⇓P **PKiKP** 11 59 25.6 -0.3
SULR 149.41 320 ⇓P **PKPbc** 11 59 25.3 +0.2
YLV Yalova 149.45 311 *e*P **PKPbc** 11 59 24.8 -0.6
ISK Istanbul-Kandi 149.45 312 *e*P **PKPbc** 11 59 24.9 -0.4
PRD Provadia 149.52 317 ⇑P **PKiKP** 11 59 26.0 -0.1
CBBR Cluj-Babes-Bol 149.61 326 ⇑P **PKiKP** 11 59 26.5 +0.3
KSP Ksiaz 149.61 338 *e*PKP **PKiKP** 11 59 26.4 +0.3
CJR Cluj-Napoca 149.62 326 ⇓P **PKiKP** 11 59 26.3 0.0
CJR Cluj-Napoca 149.62 326 ⇓PKHKP PKPpre 11 59 26.3
ISP Isparta 149.64 305 *e*P **PKPbc** 11 59 25.2 -0.8
ISP Isparta 149.64 305 **PKPbc** 11 59 25.6 -0.4
ISP Isparta 149.64 305 PKHKP PKPpre 11 59 25.7
VOIR 149.65 323 ⇑P **PKiKP** 11 59 26.1 -0.3
VOIR 149.65 323 ⇑PKHKP PKPpre 11 59 26.1
MESR Meseseni 149.66 327 ⇓P **PKiKP** 11 59 26.4 +0.1
CTKS Kestanelik-??a 149.75 313 *e*P **PKPbc** 11 59 25.7 -0.3
MTUR Matau 149.77 322 ⇑P **PKiKP** 11 59 27.5 +0.8
MTUR Matau 149.77 322 ⇑PKHKP PKPpre 11 59 27.5
OKC Ostrava-Krasne 149.78 335 *e*PKHKP PKPpre 11 59 26.3
OKC Ostrava-Krasne 149.78 335⇑*e*PKP **PKiKP** 11 59 26.3 -0.2
ARMT Armutlu 149.80 311 *e*P **PKPbc** 11 59 25.7 -0.5
SGRR Singureni 149.83 320 ⇑P **PKPbc** 11 59 25.9 -0.2
TVSB Tavsanli 149.84 309 *e*P **PKPbc** 11 59 26.6 +0.2
MDNY Mudanya-Bursa 149.87 311 *e*P **PKPbc** 11 59 26.4 +0.1
OSTC Ostas 149.88 338⇑*e*PKP **PKiKP** 11 59 27.1 +0.4
CHVC Chvalec 149.91 338 *e*PKPDF **PKPdf** 11 59 20.8 +0.2
CHVC *e*PKP **PKiKP** 11 59 26.7 -0.1
ARR Arges 149.92 323 ⇑P **PKiKP** 11 59 28.3 +1.2
SLVT Silivri 149.95 313 *e*P **PKPbc** 11 59 26.6 +0.1
DSB Dublin 149.97 7 **PKPbc** 11 59 26.4 +0.2
UPC Upice 149.99 338 *e*PKIKP **PKPdf** 11 59 19.1 -1.6
UPC *e* 11 59 35.5
UPC Upice 149.99 338 *e*PKPDF **PKPdf** 11 59 19.1 -1.6
UPC ⇑*e*PKP **PKiKP** 11 59 27.0 +0.1
UPC *e*PKPAB **PKPab** 11 59 35.5 +0.9
LTVH Ltavrtes, Hu 150.01 328 ⇑P **PKPbc** 11 59 26.3 -0.1
LTVH Ltavrtes, Hu 150.01 328 PKP **PKiKP** 11 59 27.6 +0.6
DRGR 150.02 327 ⇓P **PKiKP** 11 59 26.9 -0.2
DRGR 150.02 327 ⇓PKHKP PKPpre 11 59 26.9
DPC Dobruska-Polom 150.02 338 *e*PKHKP PKPpre 11 59 27.2
DPC *e* 11 59 35.8
DPC Dobruska-Polom 150.02 338⇑*e*PKP **PKiKP** 11 59 27.2 +0.2
DPC *e*PKPAB **PKPab** 11 59 35.8 +1.0
GEDZ Gediz 150.03 308 *e*P **PKPbc** 11 59 26.9 0.0
MORC Moravsky Berou 150.05 336 ⇓P **PKiKP** 11 59 27.2 +0.1
MORC Moravsky Berou 150.05 336 ⇓PKHKP PKPpre 11 59 27.2
MORC Moravsky Berou 150.05 336 *e*PKP **PKiKP** 11 59 27.1 0.0
KRLC Kraliky 150.09 337 *e*PKHKP PKPpre 11 59 22.8
KRLC *e* 11 59 35.4
KRLC Kraliky 150.09 337 *e*PKPDF **PKPdf** 11 59 22.8 +1.9
KRLC ⇑*e*PKP **PKiKP** 11 59 27.1 -0.1
KRLC *e*PKPAB **PKPab** 11 59 35.4 +0.3
CLL Collm 150.22 342 *i* PKIKP **PKiKP** 11 59 27.3 0.0
CLL *i* 11 59 36.1
CLL pmax pmax
comp=Z,254nm,0.8s
CLL pmax pmax
comp=Z,90nm,1.0s
CLL Collm 150.22 342 *i* PKPbc **PKiKP** 11 59 27.3 0.0
comp=Z,254nm,0.8s
CLL *i* PKPab **PKPab** 11 59 36.1 +0.6
comp=Z,90nm,1.0s
CLL *e*(pPKPab) 12 01 44.0
HUMR Humele 150.24 321 ⇑P **PKPbc** 11 59 27.1 0.0
KCTX Karacabey (Bur 150.28 311 *e*P **PKPbc** 11 59 26.5 -0.8
MAUC Maruska 150.28 335⇑*e*PKP **PKiKP** 11 59 27.9 +0.3
SIMA Simav-Kutahya 150.32 309 *e*P **PKPbc** 11 59 27.5 -0.1
COPA Copaceanca 150.33 320 ⇑P **PKPbc** 11 59 27.4 +0.2
BRG Berggiesshubel 150.34 341 *i* PKP **PKPdf** 11 59 20.4 -0.8
BRG Amp 11 59 22.4
comp=Z,12nm,0.6s
BRG *i* x x 11 59 27.9
BRG Amp 11 59 28.4
comp=Z,164nm,0.5s
BRG *i* x x 11 59 36.9
BRG Amp 11 59 37.5
comp=Z,73nm,0.8s
BRG *e*x x 12 01 39.7
BRG Amp 12 01 46.4
comp=Z,12nm,1.1s
BRG Berggiesshubel 150.34 341 *i* PKIKP **PKPdf** 11 59 20.4 -0.8
BRG *i* 11 59 36.9
BRG pmax pmax
comp=Z,12nm,0.6s
LOT Lotru 150.35 324 ⇑P **PKPdf** 11 59 23.8 +2.3
SZH Strazhica 150.39 318 P **PKPbc** 11 59 27.0 -0.5
JMB Yambol 150.41 316 P **PKiKP** 11 59 28.0 0.0
PVCC Panska Ves 150.45 340 *e*PKIKP **PKiKP** 11 59 28.2 +0.4
PVCC *e* 11 59 37.2
PVCC Panska Ves 150.45 340⇑*e*PKP **PKiKP** 11 59 28.2 +0.4
PVCC *e*PKPAB **PKPab** 11 59 37.2 +0.7
DEV Deva 150.53 325 ⇑P **PKiKP** 11 59 28.1 0.0
DEV Deva 150.53 325 ⇑PKIKP **PKiKP** 11 59 28.1 0.0
PSZ Piszkesteto 150.55 331 ⇑P **PKPbc** 11 59 28.0 +0.2
PSZ Piszkesteto 150.55 331 **PKiKP** 11 59 28.1 -0.1
PSZ Piszkesteto 150.55 331 PKIKP **PKiKP** 11 59 28.1 -0.1
PSZ Piszkesteto 150.55 331 PKP **PKPbc** 11 59 28.0 +0.2
VYHS Vyhne 150.56 333 *e*PKIKP **PKiKP** 11 59 28.4 +0.2
VYHS *e* 11 59 38.1
VYHS Vyhne 150.56 333 *e*PKP **PKiKP** 11 59 28.4 +0.2
VYHS *e* 11 59 38.1
EDRB Edirne 150.62 315 *e*P **PKPbc** 11 59 27.6 -0.4
MRMT Marmara Adasi 150.65 312 *e*P **PKPbc** 11 59 27.7 -0.5
JAVC Velka Javorina 150.75 335 *e*PKP **PKiKP** 11 59 29.7 +1.1
GZKV Gazikoy-Tekird 150.77 313 *e*P **PKiKP** 11 59 28.9 +0.1
KULA Kula-Manisa 150.77 308 *e*P **PKPbc** 11 59 28.4 -0.2
KULA Kula-Manisa 150.77 308 P **PKiKP** 11 59 28.9 -0.1
MAR3 Marsite Statio 150.79 313 *e*P **PKPbc** 11 59 28.6 +0.1
VRAC Vranov 150.79 336 PKPbc **PKiKP** 11 59 29.0 +0.4
comp=Z,21nm,0.6s,baz=262,slow=0.5,SNR=9.8
VRAC PKPab **PKPab** 11 59 39.0 +1.0
comp=Z,44nm,0.7s,baz=68,slow=2.8,SNR=13
VRAC Vranov 150.79 336 *e*PKP **PKPbc** 11 59 28.4 +0.2
VRAC *e* 11 59 38.9
BSZH Besenyszg 150.84 330 PKP **PKiKP** 11 59 30.6 +1.9
CAME Cameli-Denizli 150.85 304 *e*P **PKPbc** 11 59 29.1 +0.2
KSL Kastellorizon 150.88 303 P **PKPbc** 11 59 28.6 -0.2
SIRR Siria 150.91 327 ⇓P **PKiKP** 11 59 29.1 +0.1
PRU Pruhonice 150.93 339 *e*PKIKP **PKPdf** 11 59 22.8 +0.7
PRU Pruhonice 150.93 339 *e*PKPDF **PKPdf** 11 59 22.8 +0.7
PRU ⇑*e*PKP **PKPbc** 11 59 28.5 0.0
KRUC Moravsky 151.07 336 *e*PKP **PKiKP** 11 59 29.2 0.0
KRUC *e* 11 59 39.9
SMOL Smolenice 151.12 334 *e*PKIKP **PKiKP** 11 59 30.3 +1.0
SMOL *e* 11 59 40.4
SMOL Smolenice 151.12 334 *e*PKP **PKiKP** 11 59 30.3 +1.0
SMOL *e* 11 59 40.4
SRE Strehaia 151.16 323 ⇑P **PKiKP** 11 59 29.9 +0.4
SRE Strehaia 151.16 323 ⇑PKIKP **PKiKP** 11 59 29.9 +0.4
TREC Trest 151.20 338 *e*PKIKP **PKiKP** 11 59 29.4 -0.1
TREC *e* 11 59 40.2
TREC Trest 151.20 338⇑*e*PKP **PKiKP** 11 59 29.4 -0.1
TREC *e*PKPAB **PKPab** 11 59 40.2 +0.5
BUD Budapest 151.26 331 PKP **PKiKP** 11 59 30.3 +0.7
MODS Modra-Piesok 151.29 334 *e*PKIKP **PKiKP** 11 59 30.4 +0.7
MODS Modra-Piesok 151.29 334 *e*PKP **PKiKP** 11 59 30.4 +0.7
MODS *e* 11 59 41.7
SRO Srobarova 151.31 333 *e*PKIKP **PKiKP** 11 59 30.1 +0.4
SRO Srobarova 151.31 333 *e*PKP **PKiKP** 11 59 30.1 +0.4
NKC Novy Kostel 151.34 342 *e*PKIKP **PKPdf** 11 59 23.4 +0.6
NKC Novy Kostel 151.34 342 *e*PKPDF **PKPdf** 11 59 23.4 +0.6
NKC ⇑*e*PKP **PKiKP** 11 59 30.2 +0.5
BZS Buzias 151.38 326 ⇓P **PKiKP** 11 59 29.8 -0.1
BZS Buzias 151.38 326 ⇓PKIKP **PKiKP** 11 59 29.8 -0.1
HERR Herculane 151.44 324 ⇑P **PKPbc** 11 59 29.8 0.0
GELI Tayfur-Gelibol 151.50 313 *e*P **PKPbc** 11 59 29.4 -0.7
ZST Bratislava 151.51 334 *e*PKIKP **PKiKP** 11 59 30.4 +0.3
ZST Bratislava 151.51 334 *e*PKP **PKiKP** 11 59 30.4 +0.3
DJES Djerdap 151.53 324 ⇑P **PKPbc** 11 59 30.0 +0.1
AYDB Zeytinkoy-Aydi 151.55 307 *e*P **PKPbc** 11 59 30.5 +0.1
ALN Alexandroupoli 151.55 314 *e*P **PKPbc** 11 59 29.3 -0.8
ALN Alexandroupoli 151.55 314 P **PKPbc** 11 59 29.6 -0.5
CSKK Cskako 151.69 332 PKP **PKiKP** 11 59 30.5 0.0
RDO Rodhopi 151.76 315 *e*P **PKPbc** 11 59 30.2 -0.4
RDO Rodhopi 151.76 315 P **PKPbc** 11 59 30.4 -0.2
MLSB Milas 151.87 306 *e*P **PKiKP** 11 59 31.2 -0.1
MDVR Moldovita 151.89 325 ⇑P **PKPbc** 11 59 30.4 -0.5
ARG Arkhangelos 151.98 304 **PKiKP** 11 59 31.9 +0.4
ARG Arkhangelos 151.98 304 PKIKP **PKiKP** 11 59 31.9 +0.4
KHC Kasperske Hory 151.98 340 *e*PKIKP **PKPdf** 11 59 23.8 0.0
KHC *e* 11 59 43.8
KHC Kasperske Hory 151.98 340 *e*PKPDF **PKPdf** 11 59 23.8 0.0
KHC ⇑*e*PKP **PKiKP** 11 59 31.1 0.0
KHC *e*PKPAB **PKPab** 11 59 43.8 +0.8
CKRC Cesky Krumlov 152.01 338 *e*PKPDF **PKPdf** 11 59 22.1 -1.7
CKRC ⇑*e*PKP **PKPbc** 11 59 29.5 -1.5
CKRC *e*PKPAB **PKPab** 11 59 43.8 +0.6
EGYH Egyhazaskeszo 152.04 333 PKP **PKiKP** 11 59 32.2 +1.0
MPLH Magyarpolny 152.14 333 PKP **PKiKP** 11 59 31.7 +0.2
GEC2 GERESS Array S 152.19 339 **PKPdf** 11 59 24.1 -0.1
GEC2 **PKPbc** 11 59 31.4 0.0
GEC2 PKPab **PKPab** 11 59 44.7 +0.7
GERES GERESS Array B 152.19 339 PKP **PKPdf** 11 59 24.7 +0.5
comp=Z,2.4nm,0.7s,baz=64,slow=6.1,SNR=10
GERES PKPbc **PKiKP** 11 59 31.9 +0.3
comp=Z,6.6nm,0.7s,baz=59,slow=2.9,SNR=39
GERES PKPab **PKPab** 11 59 44.4 +0.4
comp=Z,13nm,0.6s,baz=37,slow=5.3,SNR=16
GERES GERESS Array B 152.19 339 PKPdf **PKPdf** 11 59 24.3 +0.1
GERES PKPbc **PKiKP** 11 59 31.7 +0.1
GERES PKPab **PKPab** 11 59 44.5 +0.4
TIH Tihany 152.20 332 PKP **PKiKP** 11 59 31.7 +0.2
CONA Conrad Observa 152.21 336 *e*P **PKiKP** 11 59 31.8 +0.1
comp=Z,19nm,0.6s,SNR=8.9
CONA *e*P **PKPab** 11 59 45.0 +0.9
comp=Z,37nm,0.7s
DAT Datca 152.22 305 *e*P **PKPbc** 11 59 31.2 -0.7
DAT Datca 152.22 305 P **PKPbc** 11 59 31.3 -0.7
RONA Rosalia, Austr 152.23 335 *e*P **PKiKP** 11 59 31.9 +0.3
comp=Z,29nm,0.5s,SNR=9.0
RONA *e*P **PKPab** 11 59 45.0 +0.9
comp=Z,47nm,1.1s
BEBN Eben Emael 152.26 351 *d*PKiKP **PKiKP** 11 59 31.8 +0.3
BEBN *d*PKPab **PKPab** 11 59 44.4 +0.4
MEM Membach 152.39 351 *d*PKiKP **PKiKP** 11 59 32.0 +0.2
MEM *d*PKPab **PKPab** 11 59 44.9 +0.3
MORH Mrgy, Hungar 152.39 330 ⇑P **PKPbc** 11 59 31.9 0.0
MORH Mrgy, Hungar 152.39 330 PKP **PKPdf** 11 59 24.3 0.0
BTNL Ternell 152.39 350 *d*PKiKP **PKiKP** 11 59 32.0 +0.1
BTNL *d*PKPab **PKPab** 11 59 44.8 +0.1
BSTI Sart Tilman 152.48 351 *d*PKiKP **PKiKP** 11 59 32.2 +0.2
KAVA Kavala 152.50 315 P **PKPbc** 11 59 31.8 -0.4
FRGS Fruska Gora 152.61 327 ⇓P **PKiKP** 11 59 32.6 +0.1
BHOU Houvegnez 152.64 350 *d*PKiKP **PKiKP** 11 59 33.0 +0.6
BHOU *d*PKPab **PKPab** 11 59 46.2 +0.5
BOVS Bovan 152.64 323 ⇓P **PKPbc** 11 59 32.0 -0.5
BCLA Clavier 152.68 351 *d*PKiKP **PKiKP** 11 59 32.4 0.0
BCLA *d*PKPab **PKPab** 11 59 45.6 -0.3
MMB Musomiste 152.68 317 P **PKPbc** 11 59 32.0 -0.7
SNF Seneffe 152.72 353 *d*PKiKP **PKiKP** 11 59 32.7 +0.2
SNF *d*PKPab **PKPab** 11 59 46.1 +0.1
NVR Nevrokopi 152.72 317 P **PKPbc** 11 59 32.4 -0.4
KOVH Kovagotottos 152.74 330 PKP **PKPdf** 11 59 25.2 +0.3
MOA Molln 152.86 337 *e*P **PKPbc** 11 59 32.9 0.0
comp=Z,8.5nm,0.6s
MOA *e*P **PKPab** 11 59 47.7 +0.9
comp=Z,26nm,1.0s
BMRD Maredsous 152.86 352 *d*PKiKP **PKiKP** 11 59 33.0 +0.2
BMRD *d*PKPab **PKPab** 11 59 46.5 -0.1
KKB Krupnik 152.92 318 P **PKPbc** 11 59 33.0 -0.2
KOKK Kokkinochori, 152.92 316 P **PKPbc** 11 59 32.4 -0.8
KARP Karpathos 152.94 303 *e*P **PKPbc** 11 59 33.1 -0.3
KARP Karpathos 152.94 303 P **PKPbc** 11 59 33.4 0.0
DOU Dourbes 153.09 352 *d*PKiKP **PKiKP** 11 59 33.5 +0.3
DOU *d*PKPab **PKPab** 11 59 47.8 +0.2
OUR Ouranopolis 153.19 315 *e*P **PKPbc** 11 59 32.8 -0.9
OUR Ouranopolis 153.19 315 P **PKPbc** 11 59 48.2 -0.2
BIOA Bad Ischl, Aus 153.21 338 *e*P **PKPab** 11 59 49.3 +1.0
comp=Z,32nm,0.6s
DIVS Divibare 153.26 325 **PKPdf** 11 59 25.8 -0.1
DIVS PKPbc **PKiKP** 11 59 34.0 0.0
DIVS PKPab **PKPab** 11 59 49.0 +0.2
WLF Walferdange 153.28 350 PKPbc **PKiKP** 11 59 34.8 +1.1
WLF PKPab **PKPab** 11 59 49.4 +1.0
WLF Walferdange 153.28 350 PKIKP **PKiKP** 11 59 34.8 +1.1
WLF 11 59 49.4
WLF Walferdange 153.28 350 *d*PKiKP **PKiKP** 11 59 34.7 +1.1
WLF *d*PKPab **PKPab** 11 59 49.2 +0.7
SOKA Soboth 153.56 335 *e*P **PKPdf** 11 59 25.5 -0.7
comp=Z,12nm,1.1s,SNR=5.5
SOKA *e*P **PKPbc** 11 59 34.1 -0.4
comp=Z,17nm,1.0s
SOKA *e*P **PKPab** 11 59 50.3 +0.4
comp=Z,20nm,0.7s
PERS Pernice 153.56 335 *e*PKPbc **PKPbc** 11 59 34.0 -0.4
PERS *i* PKPab **PKPab** 11 59 49.9 +0.1
KBA Koelnbreinsper 153.84 338 *e*P **PKPbc** 11 59 34.7 -0.5
comp=Z,18nm,1.2s
KBA *e*P **PKPab** 11 59 52.0 +0.8
comp=Z,11nm,0.5s
OBKA Obir 153.88 335 *e*P **PKPbc** 11 59 34.7 -0.5
comp=Z,7.1nm,0.7s
OBKA *e*P **PKPab** 11 59 51.1 -0.2
comp=Z,24nm,0.9s
CRES Cresnjev 154.09 333 *i* PKPdf **PKPdf** 11 59 26.5 -0.4
CRES *e*PKPbc **PKPbc** 11 59 35.5 0.0
MYKA Terra Mystica 154.12 337 *e*P **PKPbc** 11 59 34.9 -0.7
comp=Z,14nm,0.6s
MYKA *e*P **PKPab** 11 59 52.2 -0.1
comp=Z,42nm,0.8s
BFO Black Forest 154.15 346 PKPdf **PKPdf** 11 59 26.1 -0.8
BFO PKPbc **PKiKP** 11 59 35.6 0.0
BFO **PKPab** 11 59 52.4 +0.1
BFO Black Forest 154.15 346 PKIKP **PKPdf** 11 59 26.1 -0.8
BFO PKP **PKPab** 11 59 52.4 +0.1
WATA Walderalm 154.20 340 *e*P **PKPdf** 11 59 26.6 -0.6
comp=Z,12nm,1.1s
WATA *i* P **PKPbc** 11 59 35.7 -0.2
comp=Z,9.9nm,0.6s
WATA *e*P **PKPab** 11 59 53.4 +0.7
comp=Z,31nm,0.5s
WTTA Wattenberg 154.24 340 *i* P **PKPdf** 11 59 26.8 -0.4
comp=Z,8.7nm,0.9s
WTTA *i* P **PKiKP** 11 59 35.9 -0.1
comp=Z,19nm,0.5s
WTTA *e*P **PKPab** 11 59 53.6 +0.7
comp=Z,47nm,0.6s
LIT Litokhoron 154.28 316 P **PKiKP** 11 59 35.4 -0.7
LIT Litokhoron 154.28 316 **PKPdf** 11 59 26.2 -1.1
LIT PKPbc **PKiKP** 11 59 35.6 -0.5
LIT PKPab **PKPab** 11 59 53.2 0.0
LIT Litokhoron 154.28 316 PKIKP **PKPdf** 11 59 26.2 -1.1
LIT PKP **PKPab** 11 59 53.2 0.0
RETA Reutte 154.30 342 *e*P **PKPdf** 11 59 27.0 -0.2
comp=Z,6.1nm,0.9s
RETA *i* P **PKPab** 11 59 53.9 +0.8
comp=Z,28nm,0.7s,SNR=7.6
MOTA Moosalm 154.33 341 *e*P **PKPdf** 11 59 26.7 -0.7
comp=Z,13nm,0.9s

STAL				PKPab	**PKPab**	11 59 54.5	-0.5
PDG	**Podgorica**	**154.79**	**323**	⇑P	**PKPab**	**11 59 55.6**	**+0.4**
PDG	**Podgorica**	**154.79**	**323**	PKPab	**PKPab**	**11 59 55.8**	**+0.6**
TRI	**Trieste**	**154.85**	**335**		**PKPab**	**11 59 55.1**	**-0.3**
TRI	**Trieste**	**154.85**	**335**	PKP2	**PKPab**	**11 59 55.1**	**-0.3**
MAKR	**Makrakomi, Fth**	**155.10**	**314**	P	PKPdf	11 59 37.8	+9.3
TIR	**Tirane**	**155.15**	**321**	⇑P	**PKPab**	**11 59 57.8**	**+1.0**
TIR	**Tirane**	**155.15**	**321**	PKPdf	**PKPdf**	**11 59 28.1**	**-0.3**
TIR					**PKPab**	**11 59 57.1**	**+0.3**
TIR	**Tirane**	**155.15**	**321**	PKIKP	**PKPdf**	**11 59 28.1**	**-0.3**
TIR				PKP	**PKPab**	**11 59 57.1**	**+0.3**
DAVOX	**Davos/Dischmat**	**155.20**	**342**	PKP	**PKPdf**	**11 59 28.8**	**+0.2**
	comp=Z,7.5nm,0.7s,baz=40,slow=0.7,SNR=11						
DAVOX				PKPbc	PKPdf	11 59 38.6	+10
	comp=Z,11nm,0.4s,baz=3.9,slow=3.4,SNR=9.2						
DAVOX				PKPab	**PKPab**	**11 59 58.1**	**+1.1**
	comp=Z,28nm,0.5s,baz=9.5,slow=2.9,SNR=16						
CTI	**Castel Tesino**	**155.31**	**339**	PKPdf	**PKPdf**	**11 59 28.1**	**-0.6**
CTI				PKPab	**PKPab**	**11 59 57.0**	**-0.5**
CTI	**Castel Tesino**	**155.31**	**339**	PKIKP	**PKPdf**	**11 59 28.1**	**-0.6**
CTI				PKP	**PKPab**	**11 59 57.0**	**-0.5**
CLF	**Chambon-Foret**	**155.37**	**355**	PKPdf	**PKPdf**	**11 59 29.0**	**+0.5**
CLF				PKPab	**PKPab**	**11 59 57.4**	**0.0**
IMMV	**Iera Moni Meta**	**155.40**	**305**	P	**PKPab**	**11 59 58.6**	**+0.5**
ANX	**Ano Chora**	**155.46**	**313**	P	PKPdf	11 59 40.5	+11
GVD	**Gavdhos**	**155.54**	**303**	*e*P	PKPdf	11 59 38.8	+10
KLV	**Kalavryta, Ach**	**155.58**	**312**	P	PKPdf	11 59 38.6	+9.4
TUE	**Stuetta**	**155.62**	**343**	PKPdf	**PKPdf**	**11 59 29.2**	**0.0**
TUE				PKPab	**PKPab**	**11 59 59.8**	**+0.8**
SALO	**Salr**	**156.06**	**340**	PKPdf	**PKPdf**	**11 59 29.0**	**-0.5**
SALO				PKPab	**PKPab**	**12 00 00.9**	**+0.3**
ITM	**Ithomi**	**156.16**	**310**	P	**PKPab**	**12 00 00.8**	**-0.6**
ITM	**Ithomi**	**156.16**	**310**	PKPdf	**PKPdf**	**11 59 30.2**	**+0.3**
ITM					**PKPab**	**12 00 00.6**	**-0.8**
SENIN	**Lac Senin/Sane**	**156.23**	**346**	PKPdf	**PKPdf**	**11 59 30.0**	**+0.1**
SENIN				PKPab	**PKPab**	**12 00 01.8**	**+0.3**
SCTE	**Santa Cesarea**	**156.78**	**320**	PKPab	**PKPab**	**12 00 04.4**	**+0.5**
SGRT	**San Giovanni R**	**157.11**	**327**	PKPdf	**PKPdf**	**11 59 30.6**	**-0.5**
SGRT				PKPab	**PKPab**	**12 00 05.5**	**+0.1**
MATE	**Matera**	**157.40**	**323**	⇑P	**PKPab**	**12 00 07.0**	**+0.5**
NRCA	**Norcia**	**157.50**	**332**		**PKPdf**	**11 59 30.8**	**-0.7**
MSSA	**Maissana**	**157.54**	**340**		**PKPab**	**12 00 06.6**	**-0.5**
BNI	**Bardonecchia**	**157.62**	**346**	PKPdf	**PKPdf**	**11 59 31.7**	**+0.1**
BNI				PKPab	**PKPab**	**12 00 08.1**	**+0.6**
BNI	**Bardonecchia**	**157.62**	**346**	PKIKP	**PKPdf**	**11 59 31.7**	**+0.1**
SSB	**Saint Sauveur**	**157.81**	**350**		**PKPdf**	**11 59 31.6**	**-0.2**
SSB					**PKPab**	**12 00 08.2**	**0.0**
SSB	**Saint Sauveur**	**157.81**	**350**	PKIKP	**PKPdf**	**11 59 31.6**	**-0.2**
SSB				PKP	**PKPab**	**12 00 08.2**	**0.0**
TIP	**Timpagrande**	**158.36**	**320**	⇑P	**PKPab**	**12 00 11.5**	**+0.6**
PGAV	**Gavieira, Arco**	**160.53**	**17**	*e*PKPdf	**PKPdf**	**11 59 36.2**	**+1.1**
PGAV	**Gavieira, Arco**	**160.53**	**17**	*e*PKPab	**PKPab**	**12 00 20.7**	**+0.4**
PCAB	**Cabril**	**160.84**	**17**	*e*PKPab	**PKPab**	**12 00 22.1**	**+0.6**
PBRG	**Braganca**	**161.06**	**14**	*e*PKPab	**PKPab**	**12 00 22.8**	**+0.3**
POLO	**Lamas de Olo**	**161.21**	**16**	*e*PKPdf	**PKPdf**	**11 59 36.7**	**+0.9**
POLO	**Lamas de Olo**	**161.21**	**16**	*e*PKPab	**PKPab**	**12 00 23.9**	**+0.7**
PVRL	**Vila Real**	**161.32**	**16**	*e*PKPdf	**PKPdf**	**11 59 36.7**	**+0.9**
PVRL	**Vila Real**	**161.32**	**16**	*e*PKPab	**PKPab**	**12 00 24.5**	**+0.8**
MVO	**Moncorvo**	**161.60**	**15**	*e*PKPdf	**PKPdf**	**11 59 37.1**	**+0.9**
MVO	**Moncorvo**	**161.60**	**15**	*e*PKPab	**PKPab**	**12 00 25.6**	**+0.7**
PVIS	**Viseu**	**161.80**	**17**	*e*PKPdf	**PKPdf**	**11 59 37.1**	**+0.8**
PVIS	**Viseu**	**161.80**	**17**	*e*PKPab	**PKPab**	**12 00 26.9**	**+1.1**
MTE	**Manteigas**	**162.19**	**17**	*e*PKPdf	**PKPdf**	**11 59 37.8**	**+1.0**
MTE	**Manteigas**	**162.19**	**17**	*e*PKPab	**PKPab**	**12 00 28.3**	**+0.8**
MTE	**Manteigas**	**162.19**	**17**	PKPdf	**PKPdf**	**11 59 35.0**	**-1.8**
MTE					**PKPab**	**12 00 28.0**	**+0.5**
PCAS	**Casmilo, Conde**	**162.24**	**20**	*e*PKPdf	**PKPdf**	**11 59 37.7**	**+1.0**
PCAS	**Casmilo, Conde**	**162.24**	**20**	*e*PKPab	**PKPab**	**12 00 28.0**	**+0.3**
LIC	**Lamto**	**162.38**	**166**	⇑*i*PKIKP	**PKPdf**	**11 59 38.3**	**+0.7**
	comp=Z,4.6nm,0.5s						
KIC	**Kosan Boka**	**162.58**	**167**	⇑*i*PKIKP	**PKPdf**	**11 59 37.8**	**0.0**
	comp=Z,22nm,0.7s						
PSBE	**So Bento**	**162.63**	**21**	*e*PKPab	**PKPab**	**12 00 29.9**	**+0.4**
PCBR	**Castelo Branco**	**162.73**	**18**	*e*PKPdf	**PKPdf**	**11 59 38.4**	**+1.2**
PCBR	**Castelo Branco**	**162.73**	**18**	*e*PKPab	**PKPab**	**12 00 30.4**	**+0.6**
TIC	**Toumodi**	**162.79**	**166**	⇑*i*PKIKP	**PKPdf**	**11 59 38.1**	**0.0**
	comp=Z,1.1nm,0.2s						
DBIC	**Dimbokro**	**162.85**	**166**	PKP	**PKPdf**	**11 59 38.2**	**+0.1**
	comp=Z,15nm,0.7s,baz=146,slow=1.0,SNR=14						
DBIC	**Dimbokro**	**162.85**	**166**		**PKPdf**	**11 59 35.6**	**-2.4**
PMAFR	**Mafra**	**162.96**	**23**	*e*PKPdf	**PKPdf**	**11 59 38.9**	**+1.4**
PMAFR	**Mafra**	**162.96**	**23**	*e*PKPab	**PKPab**	**12 00 31.3**	**+0.4**
MAHO	**Mahon**	**163.06**	**346**	PKPdf	**PKPdf**	**11 59 35.9**	**-1.6**
MAHO				PKPab	**PKPab**	**12 00 31.0**	**-0.2**
PMRV	**Marv??o**	**163.14**	**18**	*e*PKPdf	**PKPdf**	**11 59 38.3**	**+0.7**
PMRV	**Marv??o**	**163.14**	**18**	*e*PKPab	**PKPab**	**12 00 32.3**	**+0.6**
PMTG	**Montargil**	**163.22**	**20**	*e*PKPdf	**PKPdf**	**11 59 38.4**	**+0.7**
PMTG	**Montargil**	**163.22**	**20**	*e*PKPab	**PKPab**	**12 00 31.6**	**-0.4**
PACT	**Alcochete**	**163.29**	**22**	*e*PKPab	**PKPab**	**12 00 33.0**	**+0.7**
PESTR	**Estremoz**	**163.60**	**19**	*e*PKPab	**PKPab**	**12 00 33.9**	**+0.2**
PESTR	**Estremoz**	**163.60**	**19**	PKPdf	**PKPdf**	**11 59 36.3**	**-1.8**
PESTR				PKPab	**PKPab**	**12 00 32.4**	**-1.3**
ESBB	**Sonseca Array**	**163.62**	**9**	PKPab	**PKPab**	**12 00 34.3**	**+0.5**
ESDC	**Sonseca Array**	**163.62**	**9**	PKP	**PKPdf**	**11 59 39.3**	**+1.2**
	comp=Z,1.6nm,0.8s,baz=342,slow=2.7,SNR=12						
ESDC				PKPab	**PKPab**	**12 00 34.0**	**+0.2**
	comp=Z,20nm,0.9s,baz=343,slow=4.0,SNR=46						
ESDC	**Sonseca Array**	**163.62**	**9**		**PKPdf**	**11 59 35.9**	**-2.2**
ESDC				PKPab	**PKPab**	**12 00 34.3**	**+0.4**
PAB	**San Pablo**	**163.69**	**10**		**PKPab**	**12 00 34.5**	**+0.4**
PAB	**San Pablo**	**163.69**	**10**	PKP2	**PKPab**	**12 00 34.5**	**+0.4**
PNCL	**Nicolau / Gran**	**163.98**	**23**	*e*PKPdf	**PKPdf**	**11 59 39.6**	**+1.2**
PNCL	**Nicolau / Gran**	**163.98**	**23**	*e*PKPab	**PKPab**	**12 00 35.8**	**+0.4**
PBEJ	**Beja**	**164.28**	**21**	*e*PKPdf	**PKPdf**	**11 59 40.3**	**+1.6**
PBEJ	**Beja**	**164.28**	**21**	*e*PKPab	**PKPab**	**12 00 37.0**	**+0.3**
MESJ	**Messejana**	**164.33**	**22**	*e*PKPdf	**PKPdf**	**11 59 39.2**	**+0.5**
MESJ	**Messejana**	**164.33**	**22**	*e*PKPdf	**PKPdf**	**11 59 40.1**	**+1.4**
MESJ	**Messejana**	**164.33**	**22**	*e*PKPab	**PKPab**	**12 00 37.4**	**+0.5**
PTEO	**Sao Teotonio**	**164.41**	**24**	*e*PKPdf	**PKPdf**	**11 59 40.2**	**+1.4**
PTEO	**Sao Teotonio**	**164.41**	**24**	*e*PKPab	**PKPab**	**12 00 37.7**	**+0.4**
PCVE	**Castro Verde**	**164.58**	**22**	*e*PKPdf	**PKPdf**	**11 59 40.2**	**+1.2**
PCVE	**Castro Verde**	**164.58**	**22**	*e*PKPab	**PKPab**	**12 00 38.5**	**+0.4**
MORF	**Marmelete**	**164.65**	**24**	*e*PKPdf	**PKPdf**	**11 59 39.7**	**+0.6**
MORF	**Marmelete**	**164.65**	**24**	*e*PKPdf	**PKPdf**	**11 59 40.5**	**+1.4**
MORF	**Marmelete**	**164.65**	**24**	*e*PKPab	**PKPab**	**12 00 38.8**	**+0.3**
PFVI	**Vila Bisbo**	**164.74**	**25**	*e*PKPdf	**PKPdf**	**11 59 40.9**	**+1.8**
PFVI	**Vila Bisbo**	**164.74**	**25**	*e*PKPab	**PKPab**	**12 00 39.4**	**+0.6**
PVAQ	**Vaqueiros**	**164.90**	**22**	*e*PKPdf	**PKPdf**	**11 59 40.4**	**+1.2**
PVAQ	**Vaqueiros**	**164.90**	**22**	*e*PKPab	**PKPab**	**12 00 40.1**	**+0.7**
PVAQ	**Vaqueiros**	**164.90**	**22**	PKPab	**PKPab**	**12 00 39.7**	**+0.3**
KEST	**Kesra**	**164.93**	**326**	PKP	**PKPdf**	**11 59 39.8**	**+0.4**
	comp=Z,3.3nm,0.7s,baz=203,slow=22,SNR=3.9						
KEST				PKPab	**PKPab**	**12 00 40.5**	**+0.7**
	comp=Z,12nm,0.7s,baz=17,slow=1.9,SNR=10						
PBDV	**Barranco-do-Ve**	**164.97**	**22**	*e*PKPdf	**PKPdf**	**11 59 41.0**	**+1.7**
TORD	**Torodi Ar. Bea**	**169.46**	**194**	PKP	**PKPdf**	**11 59 42.8**	**-0.3**
	comp=Z,20nm,1.2s,baz=3.1,slow=0.8,SNR=29						
TORD				PKPab	**PKPab**	**12 01 00.5**	**+0.5**
	comp=Z,4.4nm,0.8s,baz=164,slow=4.4,SNR=9.9						
TORD				PP	**PP**	**12 04 51.1**	**+1.6**
	comp=Z,3.2nm,1.0s,baz=169,slow=5.0,SNR=5.9						
TORD	**Torodi Ar. Bea**	**169.46**	**194**		**PKPdf**	**11 59 41.2**	**-1.9**
TORD					**PKPab**	**12 00 59.7**	**-0.3**

*NNC **21** 11:45:25.7±0.8, 44°.49N×80°.93E, h1km±7km, mb3.7, mpv3.5 Error ellipse: s-maj=7.5km s-min=4.1km az=127.0*
*SOME **21** 11:45:27.7, 44°.52N×80°.87E, h15km*

ISC 21 11:45:26.5±1.2, 44°.48N±0°.03×80°.93E±0°.03, h16km±10km, n38, σ1§75/62, 4C-9D, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**0.83**	**260**	*e*P	**Pb**	**11 45 43.1**	**+0.6**
	27nm,0.1s						
DJR				*e*S	**Sb**	**11 45 54.2**	**+0.7**
	116nm,0.2s						
DJR	**Jarkent**	**0.83**	**260**	P	**Pb**	**11 45 43.1**	**+0.6**
	27nm,0.1s						
DJR				S	**Sb**	**11 45 54.2**	**+0.7**
	116nm,0.2s						
KTMS	**Ketmen**	**1.11**	**202**	*e*P	**Pg**	**11 45 48.0**	**0.0**
	30nm,0.2s						
KTMS				*e*S	**Sg**	**11 46 03.0**	**+0.5**
	80nm,0.1s						
KTMS	**Ketmen**	**1.11**	**202**	P	**Pg**	**11 45 48.0**	**0.0**
	30nm,0.2s						
KTMS				S	**Sg**	**11 46 03.0**	**+0.5**
	80nm,0.1s						
KNOS	**Konyrlen**	**1.26**	**265**	*e*P	**Pg**	**11 45 50.8**	**+0.1**
	54nm,0.1s						
KNOS				*e*S	**Sn**	**11 46 07.2**	**+0.9**
	5.2nm,0.5s						
SHLS	**Shalkode**	**1.69**	**219**	*e*P	**Pn**	**11 45 54.2**	**-1.3**
	41nm,0.3s						
SHLS				*e*S	**Sn**	**11 46 13.3**	**-3.6**
	152nm,0.3s						
SHLS	**Shalkode**	**1.69**	**219**	P	**Pn**	**11 45 54.2**	**-1.3**
	41nm,0.3s						
SHLS				S	**Sn**	**11 46 13.3**	**-3.6**
	152nm,0.3s						
TDK	**Taldyqorghan**	**1.87**	**287**	*e*P	**Pb**	**11 46 01.2**	**+0.8**
	131nm,0.4s						
TDK				*e*S	**Sg**	**11 46 25.4**	**-1.3**
	544nm,0.7s						
TDK	**Taldyqorghan**	**1.87**	**287**	P	**Pb**	**11 46 01.2**	**+0.8**
	131nm,0.4s						
TDK				S	**Sg**	**11 46 25.4**	**-1.3**
	544nm,0.7s						
KPKS	**Kokpek**	**1.91**	**239**	*e*P	**Pb**	**11 46 01.7**	**+0.7**
	33nm,0.2s						
KPKS				*e*S	**Sb**	**11 46 25.8**	**+1.2**
	276nm,0.3s						
ZHN	**Zhinishke**	**2.23**	**235**	*e*P	**Pb**	**11 46 07.5**	**+1.1**
ZHN				*e*S	**Sb**	**11 46 35.8**	**+2.0**
ARXS	**Arharly**	**2.24**	**264**	*e*P	**Pb**	**11 46 07.3**	**+0.7**
	18nm,0.2s						
ARXS				*e*S	**Sb**	**11 46 36.1**	**+2.0**
	171nm,0.3s						
ARXS	**Arharly**	**2.24**	**264**	Pg	**Pb**	**11 46 07.3**	**+0.7**
	18nm,0.2s						
ARXS				Lg	Lg	11 46 36.1	
	171nm,0.3s						
SATY	**Saty**	**2.31**	**233**	*e*P	**Pb**	**11 46 08.2**	**+0.3**
	24nm,0.2s						
SATY				*e*S	**Sb**	**11 46 37.3**	**+1.0**
	109nm,0.5s						
SATY	**Saty**	**2.31**	**233**	Pg	**Pb**	**11 46 08.2**	**+0.3**
	24nm,0.2s						
SATY				Lg	Lg	11 46 37.3	
	109nm,0.5s						
MAKZ	**Makanchi**	**2.45**	**17**	⇓Pn	**Pn**	**11 46 05.4**	**-0.4**
	1.0nm,0.5s						
MAKZ				⇑Pg	**Pb**	**11 46 10.0**	**-0.2**
	5.5nm,0.7s						
MAKZ				⇑Lg	Lg	11 46 40.9	
	32nm,0.3s						
MK31	**Makanchi Array**	**2.51**	**22**	⇓Pn	**Pn**	**11 46 06.6**	**-0.1**
	0.6nm,0.3s,baz=208,slow=15,SNR=139						
MK31				⇓Pg	**Pb**	**11 46 11.2**	**0.0**
	2.5nm,0.3s,baz=193,slow=16,SNR=8.8						
MK31				⇓Lg	Lg	11 46 42.4	
	5.9nm,0.2s,baz=197,slow=25,SNR=9.5						
CHKK	**Chushkaly**	**2.90**	**259**	*e*P	**Pb**	**11 46 18.9**	**+1.0**
	7.8nm,0.3s						
CHKK				*e*S	**Sb**	**11 46 55.3**	**+2.2**
	254nm,0.5s						
KTBS	**Karatobe**	**3.15**	**257**	*e*P	**Pb**	**11 46 22.7**	**+0.5**
	9.7nm,0.3s						
KTBS				*e*S	**Sb**	**11 47 02.0**	**+1.6**
	272nm,0.7s						
KTBS	**Karatobe**	**3.15**	**257**	Pg	**Pb**	**11 46 22.7**	**+0.5**
	9.7nm,0.3s						
KTBS				Lg	Lg	11 47 02.0	
	272nm,0.7s						
TNSS	**Tian-Shan**	**3.22**	**245**	*e*P	**Pb**	**11 46 24.7**	**+1.2**
	26nm,0.5s						
TNSS				*e*S	**Sb**	**11 47 05.4**	**+2.6**
	5.9nm,0.3s						
TNSS	**Tian-Shan**	**3.22**	**245**	Pg	**Pb**	**11 46 24.7**	**+1.2**
	26nm,0.5s						
TNSS				Lg	Lg	11 47 05.4	
	5.9nm,0.3s						
KUU	**Kurty**	**3.35**	**262**	*e*P	**Pb**	**11 46 26.4**	**+0.8**
	8.9nm,0.6s						
KUU				*e*S	**Sb**	**11 47 08.4**	**+2.3**
	44nm,0.4s						
KUU	**Kurty**	**3.35**	**262**	Pg	**Pb**	**11 46 26.4**	**+0.8**
	8.9nm,0.6s						
KUU				Lg	Lg	11 47 08.4	
	44nm,0.4s						
MTBS	**Maitube**	**3.52**	**249**	*e*P	**Pb**	**11 46 29.3**	**+0.8**
	18nm,0.3s						
MTBS				*e*S	**Sb**	**11 47 13.4**	**+2.3**
	55nm,0.4s						
MTBS	**Maitube**	**3.52**	**249**	Pg	**Pb**	**11 46 29.3**	**+0.8**
	18nm,0.3s						
MTBS				Lg	Lg	11 47 13.4	
	55nm,0.4s						
KRBS	**Karabastau**	**3.86**	**260**	*e*P	**Pb**	**11 46 35.6**	**+1.3**
	1.6nm,0.2s						
KRBS				*e*S	**Sb**	**11 47 24.8**	**+3.9**
	13nm,0.4s						
KRBS	**Karabastau**	**3.86**	**260**	Pg	**Pb**	**11 46 35.6**	**+1.3**
	1.6nm,0.2s						
KRBS				Lg	Lg	11 47 24.8	
	13nm,0.4s						
KST	**Kastek**	**3.87**	**250**	*e*P	**Pg**	**11 46 39.3**	**-1.3**
	7.7nm,0.5s						
KST				*e*S	**Sg**	**11 47 30.5**	**-0.3**
	43nm,0.5s						
KST	**Kastek**	**3.87**	**250**	Pg	**Pg**	**11 46 39.3**	**-1.3**
	7.7nm,0.5s						
KST				Lg	Lg	11 47 30.5	
	43nm,0.5s						
DGS	**Degeres**	**3.93**	**253**	*e*P	**Pb**	**11 46 36.7**	**+1.3**
	8.1nm,0.3s						
DGS				*e*S	**Sb**	**11 47 25.9**	**+3.2**
	67nm,0.5s						
ZSN	**Zaisan**	**4.05**	**41**	*e*P	**Pb**	**11 46 38.3**	**+0.9**
	5.1nm,0.2s						
ZSN				*e*S	**Sb**	**11 47 28.7**	**+2.6**
	23nm,0.8s						
ZSN	**Zaisan**	**4.05**	**41**	Pg	**Pb**	**11 46 38.3**	**+0.9**
	5.1nm,0.2s						
ZSN				Lg	Lg	11 47 28.7	
	23nm,0.8s						
TKM2	**Tokmak 2**	**4.17**	**250**	⇓Pn	**Pn**	**11 46 29.8**	**+0.2**
	0.9nm,0.4s						
TKM2				⇑Pg	**Pb**	**11 46 40.8**	**+1.2**
	4.6nm,0.5s						
TKM2				⇑Lg	Lg	11 47 37.5	
	12nm,0.4s						
CHMS	**Chumysh**	**4.71**	**254**	⇓Pg	**Pb**	**11 46 51.7**	**+2.9**
	3.4nm,0.5s						
CHMS				⇓Lg	Lg	11 47 54.8	
	16nm,0.6s						
BTLS	**Baital**	**4.93**	**279**	*e*P	**Pb**	**11 46 56.4**	**+3.9**
	0.8nm,0.2s						
BTLS				*e*S	**Sg**	**11 47 59.5**	**-5.3**
	7.4nm,0.5s						
KURK	**Kurchatov**	**6.43**	**347**	⇓Lg	Lg	11 48 49.8	
	20nm,1.0s						
KK31	**Karatay Array**	**7.66**	**263**	⇓Lg	Lg	11 49 29.8	
	2.4nm,0.5s,baz=72,slow=28,SNR=7.0						

MAN 21 11:48:41.4, 16°.94N×120°.04E, h37km, mb3.9, ML2.7, MS2.2, Luzon

MAN 21 11:51:28.5, 16°.29N×120°.11E, h18km, mb3.8, ML2.6, MS2.1, 4D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.21**	**296**	⇓*e*P	**Pg**	**11 51 35.2**	**+2.1**
BOLP				*e*S		11 51 42.6	
SMPP	**San Manuel, Pa**	**0.57**	**104**	⇓*e*P	**Pg**	**11 51 40.3**	**+0.7**
SMPP				*e*S		11 51 51.4	
SAMP	**Sagada Mountai**	**1.12**	**44**	⇓*e*P	**Pn**	**11 51 47.7**	**+1.0**
SAMP				*e*S		11 52 04.8	
BALP	**Baler**	**1.51**	**111**	⇓*e*P	**Pn**	**11 51 53.6**	**+0.6**
BALP				*e*S		11 52 15.4	

VIE 21 11:58:03.5±0.1, 48°.44N×17°.21E, h0km, mb1.5/4, ml2.1/4, Error ellipse: s-maj=2.8km s-min=1.1km az=133.0 30 km N of Bratislava Suspected Mining explosion., Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MODS	**Modra-Piesok**	**0.08**	**145**	*e*PG	Pg	11 58 04.5	-0.5
MODS				*e*SG	Sg	11 58 06.8	+0.8
MODS				*e*LG	Lg	11 58 08.1	
SMOL	**Smolenice**	**0.17**	**62**	*e*PG	Pg	11 58 06.1	-0.6
SMOL				*e*SG	Sg	11 58 10.7	+1.9
SMOL				*e*LG	Lg	11 58 12.4	
ZST	**Bratislava**	**0.25**	**197**	*e*PG	Pg	11 58 07.8	-0.5
ZST				*e*SG	Sg	11 58 12.3	+0.8
ZST				*e*LG	Lg	11 58 16.0	
JAVC	**Velka Javorina**	**0.52**	**36**	*e*PG	Pg	11 58 13.8	+0.3
JAVC				*e*SG	Sg	11 58 20.6	+0.3
KRUC	**Moravsky**	**0.83**	**320**	*e*PG	Pg	11 58 19.6	+0.3
RONA	**Rosalia, Austr**	**0.96**	**220**	*e*Pg	Pg	11 58 22.0	+0.2
	0.9nm,0.1s						
RONA				Sg	Sb	11 58 36.6	+0.3
	7.8nm,0.3s						
VRAC	**Vranov**	**0.96**	**335**	*e*PG	Pg	11 58 22.4	+0.5
VRAC				*e*SG	Sg	11 58 34.2	-0.2
CONA	**Conrad Observa**	**1.04**	**241**	Pg	Pg	11 58 23.2	-0.1
	3.3nm,0.3s						
CONA				Sg	Sg	11 58 37.6	+0.8
	9.8nm,0.3s						
VYHS	**Vyhne**	**1.08**	**86**	*e*PG	Pg	11 58 23.9	-0.4
VYHS				*e*SG	Sb	11 58 40.4	+0.6
VYHS				*e*LG	Lg	11 58 43.5	
MORC	**Moravsky Berou**	**1.36**	**9**	*e*PG	Pg	11 58 28.7	-0.8

*NAO **21** 12:14:40.6±1.1, 76°.93N×18°.38E, h9km±8km, ML2.9*
*BER **21** 12:14:41.9±3.1, 76°.89N×18°.38E, h15km, ML2.4, ML2.9(NAO), Confirmed Earthquake*
*IEPN **21** 12:14:44.0, 77°.01N×18°.31E, h10km*

ISC 21 12:14:39.2±1.5, 76°.98N±0°.03×18°.70E±0°.06, h8km±14km, n18, σ1§41/33, 1D, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSPB	**Hornsund (broa**	**0.72**	**273**	Pg	**Pg**	**12 14 52.8**	**-0.2**
HSPB				Lg	Lg	12 15 01.2	
HSPB	**Hornsund (broa**	**0.72**	**273**	*e*P	**Pg**	**12 14 52.7**	**-0.2**
HSPB				*e*S	**Sg**	**12 15 01.2**	**-1.1**
HSPB	**Hornsund (broa**	**0.72**	**273**	⇓*i*P	**Pg**	**12 14 52.7**	**-0.2**
HSPB				*e*S	**Sg**	**12 15 01.1**	**-1.2**
SPA0	**Spitsbergen Ar**	**1.30**	**338**	Pn	**Pn**	**12 15 04.3**	**+0.6**
	baz=163,slow=16						
SPA0				Pg	**Pb**	**12 15 04.8**	**+0.9**
SPA0				Lg	Lg	12 15 23.2	
	baz=157,slow=37						
SPA0	**Spitsbergen Ar**	**1.30**	**338**	Pn	**Pn**	**12 15 04.3**	**+0.6**
	baz=163,slow=16						
SPA0				Pg	**Pb**	**12 15 04.8**	**+0.9**
SPA0				Sg	**Sn**	**12 15 23.2**	**+2.0**
	baz=157,slow=37						
SPA0	**Spitsbergen Ar**	**1.30**	**338**	*e*P	**Pn**	**12 15 03.8**	**+0.1**
SPA0				*i* S	**Sg**	**12 15 20.4**	**-0.5**
BRBA	**Barentsburg A**	**1.46**	**320**	Pn	**Pg**	**12 15 07.3**	**+0.3**
BRBA				Lg	Lg	12 15 26.1	
BRBA	**Barentsburg A**	**1.46**	**320**	*e*P	**Pg**	**12 15 07.2**	**+0.1**
BRBA				*e*S	**Sg**	**12 15 26.2**	**+0.4**
HOPEN	**Hopen**	**1.53**	**105**	Pn	**Pn**	**12 15 07.1**	**+0.4**
HOPEN				Sn	**Sn**	**12 15 26.6**	**-0.3**
HOPEN				Lg	Lg	12 15 29.7	
HOPEN	**Hopen**	**1.53**	**105**	*e*P	**Pn**	**12 15 07.1**	**+0.4**
HOPEN				*e*S	**Sn**	**12 15 26.9**	**0.0**
HOPEN				IAML		12 15 31.4	
	comp=Z,82nm,0.2s						
KBS	**Kingsbay**	**2.41**	**327**	Pn	**Pn**	**12 15 18.4**	**-0.5**
KBS				Pg	**Pg**	**12 15 25.1**	**-0.2**
KBS				Lg	Lg	12 15 54.9	
KBS	**Kingsbay**	**2.41**	**327**	*e*P	**Pn**	**12 15 18.4**	**-0.5**
KBS				*e*Pg	**Pb**	**12 15 24.1**	**+1.4**
KBS				*e*Sg	**Sg**	**12 15 55.1**	**-1.5**
KBS				IAML		12 16 03.3	
	comp=Z,63nm,0.5s						
BJO1	**Bjornoya**	**2.50**	**178**	Pg	**Pb**	**12 15 24.8**	**+0.6**
BJO1				Lg	Lg	12 15 54.8	
BJO1	**Bjornoya**	**2.50**	**178**	*e*Pg	**Pb**	**12 15 24.3**	**+0.1**
BJO1				*e*Sg	**Sb**	**12 15 54.8**	**-0.2**
B

MOPA				*e*S		**Sn**	12 32 10.2	-0.1
MOPA				IAML			12 32 36.4	
	comp=Z,21nm,0.4s							
MOPA	**Mopani**	**4.54**	**52**	*e*P		**Pn**	**12 31 19.6**	**+2.0**
MOPA				*e*S		**Sn**	**12 32 08.4**	**-1.9**
MOPA	**Mopani**	**4.54**	**52**	*e*P		**Pn**	**12 31 19.6**	**+2.0**
MOPA				*e*S		**Sn**	**12 32 08.4**	**-1.9**
HVD	**Gariep Dam**	**4.57**	**202**	*e*P		**Pn**	**12 31 19.7**	**+1.7**
HVD				*e*S		**Sn**	**12 32 11.9**	**+0.9**
HVD				IAML			12 32 32.6	
	comp=Z,26nm,0.4s							
MUSN	**Musina, Limpop**	**4.61**	**28**	*e*P		**Pn**	**12 31 21.4**	**+3.0**
MUSN				*e*S		**Sn**	**12 32 13.9**	**+2.1**
MUSN				IAML			12 32 36.9	
	comp=Z,30nm,0.6s							
MUSN	**Musina, Limpop**	**4.61**	**28**	*e*P		**Pn**	**12 31 19.6**	**+1.2**
MUSN				*e*S		**Sn**	**12 32 10.5**	**-1.3**
MUSN	**Musina, Limpop**	**4.61**	**28**	*e*P		**Pn**	**12 31 19.6**	**+1.2**
MUSN				*e*S		**Sn**	**12 32 10.5**	**-1.3**
UPI	**Upington**	**5.89**	**249**	*e*P		**Pn**	**12 31 36.8**	**+0.7**
UPI				*e*S		**Sn**	**12 32 42.5**	**-1.0**
UPI				IAML			12 33 14.7	
	comp=Z,10.0nm,0.5s							
MATP	**Matopo**	**5.99**	**9**	*e*P		**Pn**	**12 31 39.4**	**+1.9**
MATP				*e*S		**Sn**	**12 32 45.7**	**-0.4**
MATP	**Matopo**	**5.99**	**9**	*e*P		**Pn**	**12 31 38.3**	**+0.8**
MATP				*e*S		**Sn**	**12 32 43.4**	**-2.7**
MATP	**Matopo**	**5.99**	**9**	*e*P		**Pn**	**12 31 38.3**	**+0.8**
MATP				*e*S		**Sn**	**12 32 43.4**	**-2.7**
KEIM	**Keimoes**	**6.24**	**247**	*e*P		**Pn**	**12 31 42.7**	**+1.9**
KEIM				*e*S		**Sn**	**12 32 51.4**	**-0.7**
KEIM				IAML			12 33 25.7	
	comp=Z,16nm,0.4s							
BLWY	**Bulawayo**	**6.29**	**10**	*e*P		**Pn**	**12 31 43.4**	**+1.8**
BLWY				*e*S		**Sn**	**12 32 53.5**	**+0.1**
BLWY				IAML			12 33 26.9	
	comp=Z,34nm,0.5s							
BLWY	**Bulawayo**	**6.29**	**10**	*e*P		**Pn**	**12 31 43.4**	**+1.8**
BLWY				*e*S		**Sn**	**12 32 51.0**	**-2.4**
BLWY	**Bulawayo**	**6.29**	**10**	*e*P		**Pn**	**12 31 43.4**	**+1.8**
BLWY				*e*S		**Sn**	**12 32 51.0**	**-2.4**
SOE	**Somerset East**	**6.54**	**194**	*e*P		**Pn**	**12 31 46.5**	**+1.6**
SOE				*e*S		**Sn**	**12 32 57.8**	**-1.6**
SOE				IAML			12 33 35.6	
	comp=Z,11nm,0.5s							
AUGR	**Augrabies**	**6.73**	**249**	*e*P		**Pn**	**12 31 49.0**	**+1.5**
AUGR				*e*S		**Sn**	**12 33 04.6**	**+0.5**
AUGR				IAML			12 33 36.2	
	comp=Z,15nm,0.8s							
GRAN	**Grantham**	**7.51**	**217**	*e*P		**Pn**	**12 32 00.8**	**+2.5**
GRAN				*e*S		**Sn**	**12 33 22.4**	**-1.0**
GRAN				IAML			12 34 05.3	
	comp=Z,12nm,0.4s							
ROSN	**Rosenhof**	**8.12**	**198**	*e*P		**Pn**	**12 32 07.8**	**+1.3**
ROSN				*e*S		**Sn**	**12 33 33.8**	**-4.4**
ROSN				IAML			12 34 26.1	
	comp=Z,6.9nm,0.5s							
KROM	**Kromhout**	**8.13**	**197**	*e*P		**Pn**	**12 32 09.6**	**+2.8**
KROM				*e*S		**Sn**	**12 33 38.1**	**-0.5**
KROM				IAML			12 34 21.9	
	comp=Z,7.1nm,0.4s							
CVNA	**Calvinia**	**8.47**	**231**	*e*P		**Pn**	**12 32 13.0**	**+1.5**
CVNA				*e*S		**Sn**	**12 33 43.6**	**-3.5**
CVNA				IAML			12 34 34.5	
	comp=Z,16nm,0.8s							
MATJ	**Matjiesfontein**	**9.12**	**219**	*e*P		**Pn**	**12 32 21.5**	**+1.1**
MATJ				*e*S		**Sn**	**12 33 59.1**	**-3.9**
MATJ				IAML			12 34 57.0	
	comp=Z,9.7nm,0.5s							
CER	**Ceres**	**9.95**	**224**	*e*P		**Pn**	**12 32 33.9**	**+2.1**
CER				*e*S		**Sn**	**12 34 19.6**	**-3.8**
CER				IAML			12 35 23.5	
	comp=Z,2.9nm,0.6s							
ELIM	**Elim**	**10.57**	**217**	*e*P		**Pn**	**12 32 41.5**	**+1.3**
ELIM				*e*S		**Sn**	**12 34 34.5**	**-4.0**
ELIM				IAML			12 36 47.1	
	comp=Z,7.2nm,0.6s							

MAN 21 12:57:53.5, 9°.18N×126°.84E, h18km, mb3.9, ML2.7, MS2.3, 3C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	**General Luna,**	**0.92**	**311**	*e*P	Pb	12 58 10.5	+0.2
GLSP				*e*S		12 58 24.0	
BIPH	**Bislig**	**1.10**	**205**	*e*P	Pg	12 58 12.5	+2.9
BIPH				*e*S		12 58 24.8	
BUTP	**Butuan**	**1.22**	**260**	*e*P	Pg	12 58 14.1	+1.2
BUTP				*e*S		12 58 30.7	
SCPH	**Surigao**	**1.46**	**294**	*e*P	Pn	12 58 18.3	+0.8
MSLP	**Maasin**	**2.17**	**296**	*e*P	Pn	12 58 29.7	+0.7
MSLP				*e*S		12 58 55.5	
BUKP	**Musuan**	**2.18**	**234**	*i*P	Pn	12 58 31.2	+1.3
TBP	**Tagbilaran**	**2.98**	**280**	*e*P	Pn	12 58 41.2	+1.1
TBP				*e*S		12 59 19.5	

*IDC **21** 13:15:46.4±0.9, 56°.18S×26°.61W, h0km, mb4.2/4, mbtmp4.2/4, Error ellipse: s-maj=40.6km s-min=25.5km az=70.0*
*NEIC **21** 13:15:52.1±0.9, 56°.22S±0°.06×26°.5W±0°.2, h35km±2km, mb4.5/22, Error ellipse: s-maj=20.1km s-min=3.9km az=244.0*
ISC 21 13:15:51.7±0.6, 56°.18S±0°.10×26°.51W±0°.10, h35km, n31, σ0s95/31, mb4.5/13, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**6.02**	**284**	Pn	**Pn**	**13 17 20.6**	**+2.5**
VNA1	**Neumayer--Stat**	**16.54**	**158**	P	**P**	**13 19 44.8**	**+2.1**
VNA3	**Neumayer Olymp**	**16.74**	**161**	P	**P**	**13 19 45.2**	**+0.1**
SNAA	**Sanae**	**18.47**	**156**	P	**Pn**	**13 20 04.7**	**+0.2**
SNAA	**Sanae**	**18.47**	**156**	P	**P**	**13 20 04.2**	**0.0**
EFI	**East Falkland**	**19.02**	**270**	P	**P**	**13 20 08.8**	**-1.4**
EFI				IAmb	IAmb	13 20 13.3	
	comp=Z,52nm,1.4s						
TROLL	**Troll, Antarti**	**19.96**	**154**	P	**P**	**13 20 21.0**	**+0.4**
SMAI	**San Martin Ant**	**21.91**	**221**	P	**P**	**13 20 41.7**	**+0.3**
SMAI				IAmb	IAmb	13 20 56.8	
	comp=Z,36nm,1.5s						
BELA	**Belgrano 2**	**21.98**	**185**	P	**P**	**13 20 40.6**	**-1.5**
BELA				IAmb	IAmb	13 20 44.1	
	comp=Z,11nm,0.5s						
TRQA	**Tornquist**	**29.72**	**292**	P	**P**	**13 21 54.5**	**+0.1**
TRQA				IAmb	IAmb	13 22 18.2	
	comp=Z,14nm,1.5s						
PLTB	**Pedras Altas**	**30.87**	**311**	P	**P**	**13 22 02.8**	**-1.8**
PLTB				IAmb	IAmb	13 22 27.6	
	comp=Z,11nm,1.4s						
ITQB	**Itaqui**	**33.97**	**309**	P	**P**	**13 22 31.7**	**0.0**
QSPA	**South Pole Qui**	**34.07**	**180**	P	**P**	**13 22 32.0**	**-0.5**
QSPA				IAmb	IAmb	13 22 35.6	
	comp=Z,5.6nm,0.6s						
MT09	**Talagante**	**37.71**	**287**	P	**P**	**13 23 03.1**	**-0.8**
MT09				IAmb	IAmb	13 23 19.9	
	comp=Z,16nm,1.4s						
CO02	**Combarbal**	**39.72**	**290**	P	**P**	**13 23 20.9**	**+0.2**
MAW	**Mawson**	**39.82**	**143**	P	**P**	**13 23 21.3**	**+0.4**
	comp=Z,2.4nm,0.8s,baz=304,slow=7.3,SNR=2.0 comp=Z,2.4nm,0.8s						
SUR	**Sutherland**	**40.31**	**74**	P	**P**	**13 23 25.9**	**+0.3**
AC04	**Llanos de Chal**	**42.15**	**293**	P	**P**	**13 23 40.0**	**-0.6**
AC02	**Maricunga**	**42.27**	**296**	P	**P**	**13 23 41.8**	**-0.4**
AC02				IAmb	IAmb	13 24 01.3	
	comp=Z,16nm,1.5s						
GO02	**Mina Guanaco**	**43.89**	**297**	P	**P**	**13 23 54.8**	**-0.3**
SBA	**Scott Base**	**45.98**	**184**	P	**P**	**13 24 11.7**	**+1.1**
SBA				IAmb	IAmb	13 24 37.1	
	comp=Z,9.7nm,1.5s						
VNDA	**Vanda**	**46.46**	**183**	P	**P**	**13 24 14.5**	**0.0**
	comp=Z,5.4nm,0.7s,baz=188,slow=5.0,SNR=30 comp=Z,5.4nm,0.7s						
VNDA	**Vanda**	**46.46**	**183**	P	**P**	**13 24 14.4**	**0.0**
VNDA				IAmb	IAmb	13 24 17.0	
	comp=Z,6.0nm,0.8s						
LPAZ	**La Paz**	**50.76**	**305**	P	**P**	**13 24 49.1**	**+0.2**
	comp=Z,3.2nm,0.5s,baz=127,slow=5.0,SNR=11 comp=Z,3.2nm,0.5s						
LPAZ	**La Paz**	**50.76**	**305**	P	**P**	**13 24 48.9**	**0.0**
LPAZ				IAmb	IAmb	13 24 49.7	
	comp=Z,3.1nm,0.6s						
CASY	**Casey**	**53.66**	**160**	P	**P**	**13 25 08.9**	**-0.2**

TOA0	**Torodi Ar. Sit**	**72.98**	**29**	P	**P**		**13 27 18.1**	**+0.6**
TOA0				IAmb	IAmb		13 27 50.3	
	comp=Z,6.2nm,1.3s							
TORD	**Torodi Ar. Bea**	**72.98**	**29**	P	**P**		**13 27 18.4**	**+0.9**
	comp=Z,0.4nm,0.4s,baz=201,slow=6.2,SNR=7.7 comp=Z,0.4nm,0.4s							
TORD	**Torodi Ar. Bea**	**72.98**	**29**	P	**P**		**13 27 18.1**	**+0.6**
SONM	**Songino Array**	**150.36**	**86**	PKPbc	**PKPbc**		**13 35 37.7**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=213,slow=3.6,SNR=4.4							
ILAR	**Eielson Array**	**150.49**	**311**	PKPbc	**PKPbc**		**13 35 36.4**	**-1.6**
	comp=Z,0.5nm,0.7s,baz=144,slow=3.0,SNR=7.7							

*IDC **21** 13:18:36.5±1.4, 15°.19S×174°.99W, h243km±16km, mb3.4/7, mbtmp4.0/8, Error ellipse: s-maj=41.0km s-min=13.9km az=141.0*
*NEIC **21** 13:18:37.2±0.9, 15°.1S±0°.1×175°.0W±0°.1, h246km±8km, mb4.2/27, Error ellipse: s-maj=16.1km s-min=14.3km az=149.0*
ISC 21 13:18:37.0±0.5, 15°.08S±0°.09×174°.97W±0°.08, h250km, n43, σ0s69/45, mb4.2/22, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.30**	**70**	P	**Pn**	**13 19 32.5**	**-0.5**
	131nm,0.5s,baz=168,slow=0.9,SNR=32						
AFI				S	**S**	**13 20 17.4**	**+0.2**
	48nm,0.3s,baz=186,slow=19,SNR=6.0						
AFI	**Afiamalu**	**3.30**	**70**	Pn	**Pn**	**13 19 32.3**	**-0.6**
AFI					**S**	**13 20 16.2**	**-1.0**
NIUE	**Niue**	**6.25**	**130**	Pn	**Pn**	**13 20 08.3**	**+0.1**
FUNA	**Funafuti**	**8.66**	**318**	Pn	**Pn**	**13 20 38.5**	**-0.3**
URZ	**Urewera**	**24.13**	**195**	P	**P**	**13 23 28.8**	**-1.5**
	7.0nm,0.7s,baz=132,slow=6.7,SNR=3.7 7.0nm,0.7s						
CMWZ	**Cape Campbell**	**28.18**	**197**	P	**P**	**13 24 06.1**	**-0.3**
WHZ	**Wether Hill Ro**	**33.91**	**202**	P	**P**	**13 24 56.2**	**-0.3**
CTAO	**Charters Tower**	**37.24**	**257**	P	**P**	**13 25 25.6**	**+0.4**
CTAO				IAmb	IAmb	13 25 55.8	
	comp=Z,14nm,1.4s						
STKA	**Stephens Creek**	**42.89**	**239**	P	**P**	**13 26 10.9**	**-0.4**
	comp=Z,2.2nm,0.8s,baz=89,slow=7.5,SNR=7.4 comp=Z,2.2nm,0.8s						
BBOO	**Buckleboo**	**47.67**	**239**	P	**P**	**13 26 48.5**	**-0.2**
BBOO				IAmb	IAmb	13 26 48.8	
	comp=Z,43nm,1.4s						
WR0	**Warramunga Arr**	**48.25**	**257**	P	**P**	**13 26 53.3**	**0.0**
WB0	**Warramunga Arr**	**48.40**	**257**	P	**P**	**13 26 54.0**	**-0.5**
WB0				IAmb	IAmb	13 26 55.3	
	comp=Z,6.1nm,1.0s						
WB2	**Warramunga Arr**	**48.43**	**257**	P	**P**	**13 26 54.4**	**-0.4**
WRA	**Warramunga Arr**	**48.44**	**257**	P	**P**	**13 26 54.6**	**-0.2**
	comp=Z,2.2nm,0.6s,baz=96,slow=8.0,SNR=67 comp=Z,2.2nm,0.6s						
WRA	**Warramunga Arr**	**48.44**	**257**	P	**P**	**13 26 54.5**	**-0.4**
AS31	**Alice Springs**	**48.77**	**252**	P	**P**	**13 26 57.3**	**0.0**
AS31				IAmb	IAmb	13 26 58.8	
	comp=Z,6.9nm,0.6s						
ASAR	**Alice Springs**	**48.77**	**252**	P	**P**	**13 26 57.4**	**+0.1**
MTN	**Manton Dam**	**52.25**	**265**	P	**P**	**13 27 23.8**	**+0.5**
MTN				IAmb	IAmb	13 27 31.2	
	comp=Z,22nm,1.4s						
KNRA	**Kununurra**	**54.12**	**261**	P	**P**	**13 27 36.8**	**0.0**
KNRA				IAmb	IAmb	13 27 39.0	
	comp=Z,21nm,1.5s						
FORT	**Forrest**	**54.21**	**243**	P	**P**	**13 27 37.3**	**-0.1**
PSA00	**Pilbara Seismi**	**61.84**	**253**	P	**P**	**13 28 30.4**	**0.0**
PSA00				IAmb	IAmb	13 28 46.3	
	comp=Z,9.1nm,1.5s						
MBWA	**Marble Bar**	**61.99**	**254**	P	**P**	**13 28 31.5**	**+0.2**
MBWA				IAmb	IAmb	13 28 59.1	
	comp=Z,13nm,1.4s						
ADK	**Adak**	**66.70**	**359**	P	**P**	**13 29 00.2**	**-0.8**
UNV	**Unalaska Valle**	**69.03**	**5**	P	**P**	**13 29 14.9**	**-0.5**
QSPA	**South Pole Qui**	**74.96**	**180**	P	**P**	**13 29 51.1**	**+0.4**
QSPA				IAmb	IAmb	13 29 56.3	
	comp=Z,7.1nm,1.4s						
NVAR	**Mina Array Bea**	**75.11**	**43**	P	**P**	**13 29 53.1**	**+1.0**
	comp=Z,0.6nm,0.7s,baz=226,slow=11,SNR=5.5 comp=Z,0.6nm,0.7s						
G03D	**McMinnville, O**	**76.10**	**35**	P	**P**	**13 29 55.5**	**-1.7**
GHO	**Glory Hole Cre**	**79.33**	**12**	P	**P**	**13 30 15.8**	**+1.0**
GHO				IAmb	IAmb	13 30 39.0	
	comp=Z,12nm,1.4s						
GLB	**Gilahina Butte**	**80.18**	**15**	P	**P**	**13 30 19.4**	**+0.1**
GLB				IAmb	IAmb	13 30 56.9	
	comp=Z,7.3nm,1.2s						
TXAR	**Lajitas Array**	**81.70**	**57**	P	**P**	**13 30 29.5**	**+1.4**
	comp=Z,0.5nm,0.9s,baz=264,slow=7.2,SNR=3.5 comp=Z,0.5nm,0.9s						
BCAR	**Beaver Creek A**	**82.07**	**15**	P	**P**	**13 30 30.3**	**+1.2**
CCB	**Clear Creek Bu**	**82.14**	**11**	P	**P**	**13 30 30.3**	**+0.9**
H21K	**Melozitna Rive**	**82.21**	**9**	P	**P**	**13 30 30.4**	**+0.6**
H21K				IAmb	IAmb	13 30 47.6	
	comp=Z,4.8nm,1.5s						
IMAR	**Indian Mountai**	**82.38**	**9**	P	**P**	**13 30 31.6**	**+1.0**
IL31		**82.43**	**12**	P	**P**	**13 30 31.4**	**+0.5**
IL31				IAmb	IAmb	13 31 07.8	
	comp=Z,6.2nm,1.5s						
ILAR	**Eielson Array**	**82.43**	**12**	P	**P**	**13 30 31.2**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=213,slow=5.2,SNR=16 comp=Z,0.5nm,0.4s						
ILAR	**Eielson Array**	**82.43**	**12**	P	**P**	**13 30 30.9**	**0.0**
J25K	**Salcha River,**	**82.60**	**12**	P	**P**	**13 30 32.6**	**+0.6**
POKR	**Poker Plat Res**	**82.64**	**11**	P	**P**	**13 30 32.5**	**+0.5**
POKR				IAmb	IAmb	13 31 15.5	
	comp=Z,6.2nm,1.4s						
M30M	**Minto, Yukon**	**82.97**	**17**	P	**P**	**13 30 34.5**	**+0.7**
M30M				IAmb	IAmb	13 31 13.4	
	comp=Z,4.6nm,1.4s						
BW06	**Boulder Array**	**83.05**	**42**	P	**P**	**13 30 35.5**	**+0.6**
PDAR	**Pinedale Array**	**83.05**	**42**	P	**P**	**13 30 35.4**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=207,slow=3.9,SNR=9.2 comp=Z,1.0nm,0.6s						
GCMT	**Greycliff**	**84.39**	**40**	P	**P**	**13 30 42.6**	**+1.0**

*TUL **21** 13:27:11.2±0.4, 36°.71N±0°.01×98°.39W±0°.02, h9km±4km, **Error ellipse: s-maj=2.0km s-min=1.3km az=123.0,** **Oklahoma***

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T35A	**Sooner Cattle**	**1.52**	**81**		Pn	13 27 39.2	+0.3
FNO	**Franklin**	**1.65**	**151**	Pn	Pn	13 27 41.3	+0.7
R32A	**Long Quarter,**	**1.74**	**352**		Pb	13 27 43.1	-0.4
R32A				IAmb_Lg		13 28 06.3	
	comp=Z,11nm,0.8s						
WMOK	**Wichita Mounta**	**1.98**	**189**		Pn	13 27 46.1	+0.8
AMTX	**Amarillo**	**3.23**	**237**	IAmb_Lg		13 28 59.9	
	comp=Z,9.8nm,0.8s						
X37A	**Clayton**	**3.24**	**130**	IAmb_Lg		13 28 57.5	
	comp=Z,6.2nm,0.8s						
W39A	**Magazine**	**4.03**	**111**	IAmb_Lg		13 29 29.7	
	comp=Z,7.6nm,1.1s						
N33A	**J Bar K, Exete**	**4.10**	**10**	Pn	Pn	13 28 13.6	-0.7
MIAR	**Mount Ida**	**4.47**	**117**	IAmb_Lg		13 29 37.1	
	comp=Z,3.4nm,0.7s						
P38A	**Dawn**	**4.82**	**51**	IAmb_Lg		13 29 47.7	
	comp=Z,4.7nm,0.9s						
MGMO	**Mountain Grove**	**4.93**	**83**	IAmb_Lg		13 29 54.1	
	comp=Z,3.7nm,0.8s						
FCAR	**Ozark Folk Cen**	**5.13**	**97**	IAmb_Lg		13 29 58.1	
	comp=Z,3.2nm,0.8s						
L34A	**Svendsen Farm,**	**5.49**	**16**	IAmb_Lg		13 30 16.1	
	comp=Z,10nm,0.7s						
N38A	**Joes South For**	**5.74**	**43**	IAmb_Lg		13 30 14.2	
	comp=Z,9.5nm,0.7s						
P40A	**Paris**	**5.74**	**59**	IAmb_Lg		13 30 15.7	
	comp=Z,6.9nm,0.8s						
CCM	**Cathedral Cave**	**5.85**	**75**	IAmb_Lg		13 30 23.6	
	comp=Z,6.9nm,1.1s						

*TUL **21** 13:41:14.8±1.4, 36°.12N±0°.02×96°.86W±0°.02, h5km±6km, ML2.5, mb_Lg2.4/31(NEIC), Error ellipse: s-maj=2.3km s-min=1.9km az=178.0*
NEIC 21 13:41:14.7±0.6, 36°.14N±0°.01×96°.87W±0°.01, h10km±3km, Error ellipse: s-maj=2.2km s-min=1.2km az=135.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T35A	**Sooner Cattle**	**0.83**	**20**	Pg	Pg	13 41 30.7	0.0
OKCFA	**Oklahoma City**	**0.86**	**214**	Pg	Pg	13 41 31.4	+0.1
TUL1	**Leonard**	**0.90**	**104**	Pg	Pg	13 41 31.5	-0.5
FNO	**Franklin**	**0.98**	**207**		Pg	13 41 33.0	-0.5
X34A	**Smith Ranch, M**	**1.72**	**208**	IAmb_Lg		13 42 10.3	
	comp=Z,14nm,0.9s						
X37A	**Clayton**	**1.97**	**141**	IAmb_Lg		13 42 17.8	
	comp=Z,18nm,0.9s						
U38A	**Gravette**	**2.03**	**81**	Pn	Pn	13 41 49.3	+0.4
WMOK	**Wichita Mounta**	**2.10**	**229**	Pn	Pn	13 41 49.2	-0.7
S39A	**Bolivar**	**3.24**	**60**	IAmb_Lg		13 43 04.5	
	comp=Z,14nm,0.8s						
Z38A	**Mt. Pleasant**	**3.26**	**151**	IAmb_Lg		13 42 58.9	
	comp=Z,10nm,0.8s						
WHAR	**Wooly Hollow**	**3.82**	**101**	IAmb_Lg		13 43 15.7	
	comp=Z,9.4nm,0.9s						
MGMO	**Mountain Grove**	**3.83**	**73**	IAmb_Lg		13 43 16.3	
	comp=Z,7.6nm,0.8s						
W41B	**Gary Mavity, V**	**3.88**	**103**	IAmb_Lg		13 43 24.3	
	comp=Z,5.9nm,0.8s						
AMTX	**Amarillo**	**4.12**	**254**	IAmb_Lg		13 43 28.0	
	comp=Z,11nm,1.0s						
R40A	**Maddies Statio**	**4.25**	**58**	IAmb_Lg		13 43 28.7	
	comp=Z,7.4nm,0.8s						
P38A	**Dawn**	**4.37**	**36**	IAmb_Lg		13 43 45.3	
	comp=Z,5.1nm,0.7s						
LCAR	**Lake Charles**	**4.62**	**89**	IAmb_Lg		13 43 46.4	
	comp=Z,4.6nm,0.7s						
N35A	**Tabor**	**4.81**	**11**	IAmb_Lg		13 43 45.3	
	comp=Z,9.9nm,0.8s						
CCM	**Cathedral Cave**	**4.88**	**65**	IAmb_Lg		13 43 47.5	
	comp=Z,7.7nm,0.8s						
PBMO	**Poplar Bluff**	**5.23**	**81**	IAmb_Lg		13 44 10.3	
	comp=Z,7.8nm,0.7s						
FVM	**French Village**	**5.47**	**68**	IAmb_Lg		13 44 06.9	
	comp=Z,8.8nm,0.8s						

*NEIC **21** 14:10:20.6±1.4, 2°.19S±0°.08×99°.41E±0°.08, h7km±4km, mb5.3/95, Error ellipse: s-maj=13.4km s-min=8.7km az=49.0*
*IDC **21** 14:10:20.9±0.5, 1°.95S×99°.57E, h0km, mb4.9/39, mbtmp4.9/39, MS4.7/54, Error ellipse: s-maj=15.8km s-min=12.4km az=37.0*
*DJA **21** 14:10:21.7±0.4, 2°.5±2°×9°.9E±°, h13km±3km, M5.0/67, mB5.5/47, mb5.3/67, MLv5.5/20, Mw(mB)5.0/47, MwMwp5.1/19, Mwp5.4/19*
*BJI **21** 14:10:21.5±0.0, 2°.34S×99°.58E, h36km, mb5.1/82, mB5.1/71, Ms5.3/88, Ms7 5.2/82*
*MOS **21** 14:10:22.2±1.2, 1°.93S×99°.61E, h24km, mb5.4/64, MS4.9/8, Error ellipse: s-maj=8.0km s-min=4.4km az=104.6*
*GCMT **21** 14:10:25.6±0.2, 2°.34S±0°.01×99°.21E±0°.01, h25km, MW5.3/98, Moment Tensor Solution. s97,c159; s98,c160; Duration: 1±2 Moment tensor: Scale 10^17^Nm; Mrr0.64±.02; Mθθ-0.35±.01; Mϕϕ-0.28±.01; Mrθ0.74±.03; Mθϕ0.32±.01; Mrϕ-0.80±.03; Best double couple: M0 1.26400×10^17^ NP1:ϕs308.00000°, δ15.00000°, λ82.00000°. NP2:ϕs136.00000°, δ75.00000°, λ92.00000°. Principal axes: T 1.2660, Plg60.0000°, Azm50.0000°; N -0.0040, Plg2.0000°, Azm316.0000°; P -1.2620, Plg30.0000°, Azm225.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 21 14:10:23.8±0.4, 2°.15S±0°.04×99°.46E±0°.04, h28km±2km, h28km:pP-P, n577, σ1s58/599, mb5.2/168, MS5.0/91, 34C-15D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**0.82**	**138**	P	**Pb**	**14 10 38.3**	**-1.2**
SISI	**Saibi**	**0.90**	**336**	P	**Pn**	**14 10 40.2**	**-0.4**
KRJI	**Kerinci**	**2.00**	**88**	P	**Pn**	**14 10 56.3**	**+0.4**
BKNI	**Bangkinang**	**2.92**	**33**		**Pn**	**14 11 09.5**	**+1.0**
BKNI	**Bangkinang**	**2.92**	**33**	P	**Pn**	**14 11 09.6**	**+1.1**
BKNI	**Bangkinang**	**2.92**	**33**	P	**Pn**	**14 11 10.1**	**+1.6**
MASI	**Maura Aman, Be**	**2.95**	**110**	P	**Pn**	**14 11 09.6**	**+0.8**
RGRI	**Rengat**	**3.38**	**58**	P	**Pn**	**14 11 17.5**	**+2.7**
GSI	**Gunungsitoli**	**3.91**	**331**		**Pn**	**14 11 20.9**	**-1.2**
GSI	**Gunungsitoli**	**3.91**	**331**	P	**Pn**	**14 11 21.3**	**-0.8**
GSI	**Gunungsitoli**	**3.91**	**331**	P	**Pn**	**14 11 21.7**	**-0.4**
MNAI	**Manna**	**4.12**	**122**	Pn	**Pn**	**14 11 24.4**	**-0.6**
MNAI	**Manna**	**4.12**	**122**	P	**Pn**	**14 11 24.7**	**-0.3**
MNAI				S	**Sn**	**14 12 10.7**	**-1.7**
MNAI	**Manna**	**4.12**	**122**	P	**Pn**	**14 11 24.7**	**-0.3**
JMBI	**JAMBI**	**4.21**	**83**	P	**Pn**	**14 11 27.6**	**+1.4**
PMBI	**Palembang**	**5.36**	**98**	P	**Pn**	**14 11 42.3**	**+0.3**
	5.3nm9μm8μm493nm,1.2s						
PMBI				S	**Sn**	**14 12 40.3**	**-2.6**
	5.3nm9μm8μm493nm,1.2s						
DSRI	**Dabo**	**5.38**	**72**	P	**Pn**	**14 11 43.0**	**+0.7**
	2.2nm9μm4μm286nm,0.9s						
LWLI	**Liwa**	**5.40**	**122**	P	**Pn**	**14 11 42.6**	**-0.1**
	5.6nm4μm11μm902nm,0.6s						
TSI	**Tuntungan**	**5.68**	**351**	P	**Pn**	**14 11 46.7**	**+0.3**
	3.1nm12μm472nm,1.3s						
KCSI	**Kotacane, Aceh**	**5.88**	**343**	P	**Pn**	**14 11 48.5**	**-0.7**
	1.9nm3μm190nm,0.9s						
MYKOM	**Kota Tinggi**	**5.88**	**48**		**Pn**	**14 11 50.0**	**+0.9**
TPRI	**Tanjung Pinang**	**5.91**	**59**	P	**Pn**	**14 11 50.9**	**+1.3**
	2.4nm5μm445nm,0.5s						
KLI	**Kotabumi**	**6.02**	**117**	P	**Pn

KKM	**Kota Kinabalu**	**18.61**	**64**	P	**Pn**	**14 14 39.6**	**-0.1**		
KKM				IAmb	IAmb	14 14 43.0			
	comp=Z,166nm,0.9s								
KKM	**Kota Kinabalu**	**18.61**	**64**	P	**Pn**	**14 14 40.8**	**+1.1**		
PLAI	**Plampang**	**19.39**	**111**	P	**P**	**14 14 46.7**	**-1.1**		
	comp=Z,1µmcomp=Z,98nm,1.0s								
PLAI	**Plampang**	**19.39**	**111**	P	**P**	**14 14 47.8**	**0.0**		
	comp=Z,98nm,1.0s								
TTSI	**Tana Toraja**	**20.36**	**93**	P	Pn	14 14 59.5	-1.0		
	comp=Z,1µmcomp=Z,128nm,1.1s								
SPSI	**Sidrap Palu**	**20.36**	**96**	P	**P**	**14 14 57.9**	**-0.5**		
	comp=Z,3µmcomp=Z,795nmcomp=Z,53nm,0.8s								
MYLDM	**Lahad Datu**	**20.37**	**69**	P	**P**	**14 14 59.0**	**+0.6**		
KAPI	**Kappang**	**20.45**	**99**	P	**P**	**14 14 59.0**	**-0.3**		
	comp=Z,160nm,1.2s,baz=270,slow=8.0,SNR=20								
	comp=Z,160nm,1.2s								
KAPI	**Kappang**	**20.45**	**99**	P	**P**	**14 14 58.5**	**-0.9**		
KAPI	**Kappang**	**20.45**	**99**	P	Pn	14 15 00.4	-1.2		
CM31	**Chiang Mai Arr**	**20.48**	**359**	P	**P**	**14 14 59.2**	**-0.5**		
CMAR	**Chiang Mai Arr**	**20.48**	**359**	P	**P**	**14 14 58.5**	**-1.1**		
	comp=Z,13nm,0.7s,baz=187,slow=10,SNR=40								
CMAR				PcP	**PcP**	**14 19 13.7**	**+2.6**		
	comp=Z,0.5nm,0.3s,baz=219,slow=2.9,SNR=4.4								
CMAR				LR	LR	14 23 40.9			
	comp=Z,5µm,19.2s,baz=180,slow=39								
	comp=Z,13nm,0.7s								
CMAR	**Chiang Mai Arr**	**20.48**	**359**	*i* P	**P**	**14 14 58.5**	**-1.1**		
CMAR				pmax	pmax				
	comp=Z,14nm,0.7s								
MPSI	**Mapaga**	**20.58**	**83**	P	**P**	**14 15 00.9**	**+0.1**		
	comp=Z,5µmcomp=Z,3µmcomp=Z,309nm,1.3s								
BNSI	**Bone**	**20.73**	**97**	P	**P**	**14 15 02.1**	**-0.3**		
	comp=Z,6µmcomp=Z,2µmcomp=Z,200nm,1.2s								
CHTO	**Chiang Mai**	**20.84**	**359**	P	**P**	**14 15 03.4**	**-0.1**		
CHTO	**Chiang Mai**	**20.84**	**359**	P	**P**	**14 15 03.4**	**-0.1**		
CHTO				pmax	pmax				
	comp=Z,34nm,1.0s								
CHTO	**Chiang Mai**	**20.84**	**359**	P	Pn	14 15 05.0	-1.0		
BKSI	**Bulukumba**	**20.86**	**99**	P	**P**	**14 15 02.5**	**-1.3**		
	comp=Z,3µmcomp=Z,2µmcomp=Z,169nm,0.9s								
WBSI	**Waikabubak, Su**	**21.16**	**111**	P	**P**	**14 15 05.4**	**-1.7**		
	comp=Z,1µmcomp=Z,107nm,1.1s								
BSSI	**Bau Bau, Buton**	**21.34**	**101**	P	**P**	**14 15 07.3**	**-1.7**		
	comp=Z,762nmcomp=Z,53nm,1.3s								
TOLI2	**Tolitoli**	**21.56**	**82**	P	**P**	**14 15 10.5**	**-0.9**		
TOLI2				IAmb	IAmb	14 15 22.0			
	comp=Z,215nm,1.0s								
TOLI2	**Tolitoli**	**21.56**	**82**	P	**P**	**14 15 12.0**	**+0.6**		
APSI	**Ampana**	**22.21**	**87**	P	**P**	**14 15 19.6**	**+1.2**		
	comp=Z,2µmcomp=Z,114nm,1.2s								
BASI	**Baing, Sumba**	**22.46**	**112**	P	**P**	**14 15 22.9**	**+1.9**		
	comp=Z,1µmcomp=Z,158nm,1.0s								
MRSI	**Marisa**	**22.63**	**84**	P	**P**	**14 15 23.5**	**+0.7**		
	comp=Z,3µmcomp=Z,288nm,1.3s								
EDFI	**Ende, Flores**	**23.07**	**107**	P	**P**	**14 15 22.9**	**-4.6**		
	comp=Z,11nm,1.3s								
BBSI	**Bau Bau**	**23.29**	**99**	P	**P**	**14 15 30.1**	**+0.4**		
	comp=Z,134nmcomp=Z,13nm,1.0s								
LUWI	**Luwuk**	**23.33**	**88**	P	**P**	**14 15 29.1**	**-0.9**		
LUWI	**Luwuk**	**23.33**	**88**	P	**P**	**14 15 29.7**	**-0.3**		
	comp=Z,2µmcomp=Z,3µmcomp=Z,214nm,1.1s								
LUWI	**Luwuk**	**23.33**	**88**	P	**P**	**14 15 31.8**	**+1.8**		
QIZ	**Qiongzhong**	**23.39**	**25**	P	**P**	**14 15 29.2**	**-1.3**		
QIZ				IAmb	IAmb	14 15 33.7			
	comp=Z,157nm,1.1s								
QIZ	**Qiongzhong**	**23.39**	**25**	P	**P**	**14 15 30.4**	**-0.1**		
QIZ				sP	**sP**	**14 15 40.5**	**-1.2**		
QIZ				S	**S**	**14 19 46.0**	**+3.9**		
QIZ				sS	**sS**	**14 19 57.1**	**+1.7**		
QIZ				pmax	pmax				
	comp=Z,30nm,0.5s								
QIZ				pmax	pmax				
	comp=Z,400nm,4.1s								
QIZ				LR	LR				
	comp=Z,3µm,16.2s								
QIZ				LR	LR				
	comp=Z,3µm,15.3s								
QIZ				LR	LR				
	comp=Z,4µm,15.1s								
QIZ	**Qiongzhong**	**23.39**	**25**	P	**P**	**14 15 30.4**	**-0.1**		
MMRI	**Maumere**	**23.56**	**107**	P	**P**	**14 15 28.1**	**-4.2**		
	comp=Z,52nm,1.2s								
KMSI	**Cibinong**	**24.66**	**84**	P	**P**	**14 15 43.6**	**+1.0**		
	comp=Z,3µmcomp=Z,268nm,1.1s								
PCHI	**Peechi**	**26.23**	**299**	*e*P	P	14 16 04.3	+7.7		
PCHI				*e*S	**S**	**14 20 32.4**	**+4.8**		
SANI	**Sanana**	**26.51**	**90**	P	**P**	**14 15 58.4**	**-0.9**		
	comp=Z,715nmcomp=Z,49nm,1.1s								
SANI	**Sanana**	**26.51**	**90**	P	**P**	**14 15 59.3**	**0.0**		
	comp=Z,49nm,1.2s								
TGY	**Tagaytay City**	**26.72**	**52**	P	**P**	**14 16 01.1**	**0.0**		
	comp=Z,98nm,0.3s,baz=300,slow=9.7,SNR=4.8								
KMI	**Kunming**	**27.30**	**6**	⇑P	**P**	**14 16 05.4**	**-1.0**		
KMI				pP	pP	14 16 15.1	+0.6		
KMI				S	**S**	**14 20 45.3**	**+0.7**		
KMI				pmax	pmax				
	comp=Z,9.0nm,1.5s								
KMI				pmax	pmax				
	comp=Z,310nm,7.8s								
KMI				LR	LR				
	comp=Z,2µm,15.6s								
KMI				LR	LR				
	comp=Z,2µm,14.1s								
KMI				LR	LR				
	comp=Z,3µm,22.3s								
MBWA	**Marble Bar**	**27.34**	**135**	P	**P**	**14 16 06.1**	**-0.5**		
H08S2	**Diego Garcia H**	**27.41**	**258**	T	T	14 44 44.0			
	baz=80,slow=75,SNR=9105								
H08S3	**Diego Garcia H**	**27.41**	**258**	T	T	14 44 40.8			
	baz=80,slow=75,SNR=9324								
H08S1	**Diego Garcia H**	**27.43**	**258**	T	T	14 44 43.4			
	baz=80,slow=75,SNR=8960								
DAV	**Davao City (W)**	**27.63**	**70**	LR	LR	14 28 35.4			
	comp=Z,3µm,19.5s,baz=235,slow=40								
PSA00	**Pilbara Seismi**	**27.69**	**136**	P	**P**	**14 16 09.8**	**0.0**		
LBMI	**Labuha**	**28.07**	**87**	P	**P**	**14 16 14.6**	**+1.3**		
	comp=Z,142nm,1.2s								
HYBB	**Hyderabad (bro**	**28.34**	**314**	*e*P	**P**	**14 16 15.3**	**-0.4**		
PZH	**PanZhiHua**	**28.57**	**4**	P	**P**	**14 16 20.3**	**+2.6**		
PZH				pP	**sP**	**14 16 28.3**	**-0.8**		
PZH				PP	**PP**	**14 17 16.4**	**-6.2**		
PZH				SS	SS	14 22 36.8	-29		
PZH				pmax	pmax				
	comp=Z,10.0nm,0.9s								
PZH				pmax	pmax				
	comp=Z,350nm,11.8s								
PZH				LR	LR				
	comp=Z,2µm,13.5s								
PZH				LR	LR				
	comp=Z,3µm,14.0s								
PZH				LR	LR				
	comp=Z,3µm,14.7s								
GYA	**Guiyang**	**29.28**	**13**	⇓P	**P**	**14 16 26.8**	**+2.8**		
GYA				pP	sP	14 16 34.0	-1.4		
GYA				S	**S**	**14 21 13.9**	**-1.7**		
GYA				pmax	pmax				
	comp=Z,14nm,1.1s								
GYA				pmax	pmax				
	comp=Z,360nm,14.8s								
GYA				LR	LR				
	comp=Z,2µm,19.0s								
GYA				LR	LR				
	comp=Z,2µm,22.4s								
GYA				LR	LR				
	comp=Z,5µm,19.2s								
RAMN	**Ramite**	**31.48**	**338**	*e*P	**P**	**14 16 44.7**	**+1.1**		
	comp=Z,87nm,1.0s								
SWI	**Sorong**	**31.81**	**88**	P	**P**	**14 16 45.8**	**-0.7**		
	comp=Z,97nm,0.9s								
KNRA	**Kununurra**	**31.85**	**117**	P	**P**	**14 16 45.0**	**-1.8**		
	baz=32,SNR=5.0								
KNRA	**Kununurra**	**31.85**	**117**	P	**P**	**14 16 44.5**	**-2.3**		
KNRA				IAmb	IAmb	14 17 10.4			
	comp=Z,29nm,0.9s								
KNRA	**Kununurra**	**31.85**	**117**	P	**P**	**14 16 46.6**	**-0.1**		
	comp=Z,37nm,1.2s								
JIRN	**Jiri**	**32.27**	**338**	*e*P	**P**	**14 16 52.1**	**+1.4**		
	comp=Z,120nm,1.0s								
PKI	**Pulchoki**	**32.50**	**336**	*e*P	**P**	**14 16 53.9**	**+1.2**		
PKIN	**Phulchoki**	**32.51**	**336**	*e*P	**P**	**14 16 54.0**	**+1.3**		
TWG	**Pinlang**	**32.56**	**39**	P	**P**	**14 16 51.8**	**-1.1**		
TWG				IAmb	IAmb	14 16 55.6			
	comp=Z,80nm,1.5s								
GUN	**Gumba**	**32.62**	**337**	*e*P	**P**	**14 16 55.4**	**+1.7**		
TPUB	**Ta-pu**	**32.64**	**38**	P	**P**	**14 16 52.5**	**-1.1**		
TPUB	**Ta-pu**	**32.64**	**38**	P	**P**	**14 16 54.2**	**+0.6**		
LSA	**Lhasa**	**32.65**	**347**	P	**P**	**14 16 53.8**	**-0.3**		
LSA				IAmb	IAmb	14 16 58.5			
	comp=Z,36nm,1.1s								
LSA	**Lhasa**	**32.65**	**347**	P	**P**	**14 16 55.4**	**+1.3**		
LSA				pmax	pmax				
	comp=Z,11nm,0.4s								
LSA	**Lhasa**	**32.65**	**347**	P	**P**	**14 16 53.8**	**-0.3**		
LSA				pmax	pmax				
	comp=Z,36nm,1.1s								
QZH	**Quanzhou**	**32.71**	**33**	⇑*i*P	**P**	**14 16 52.8**	**-1.3**		
QZH				S	**S**	**14 22 11.8**	**+2.8**		
QZH				pmax	pmax				
	comp=Z,36nm,1.4s								
QZH				pmax	pmax				
	comp=Z,190nm,6.1s								
QZH				LR	LR				
	comp=Z,2µm,15.6s								
QZH				LR	LR				
	comp=Z,3µm,15.6s								
QZH				LR	LR				
	comp=Z,3µm,15.6s								
FAKI	**Fak Fak**	**32.77**	**92**	P	**P**	**14 16 53.7**	**-1.2**		
FAKI				IAmb	IAmb	14 17 17.8			
	comp=Z,52nm,1.1s								
FAKI	**Fak Fak**	**32.77**	**92**	P	**P**	**14 16 54.0**	**-0.8**		
	comp=Z,50nm,1.2s								
FAKI	**Fak Fak**	**32.77**	**92**	P	**P**	**14 16 56.5**	**+1.7**		
	comp=Z,50nm,1.2s								
CNSH	**ChangSha**	**32.82**	**22**	⇓P	**P**	**14 16 55.0**	**0.0**		
CNSH				S	**S**	**14 22 11.1**	**+0.4**		
CNSH				pmax	pmax				
	comp=Z,27nm,1.2s								
CNSH				LR	LR				
	comp=Z,3µm,16.9s								
CNSH				LR	LR				
	comp=Z,1µm,15.7s								
CNSH				LR	LR				
	comp=Z,4µm,17.0s								
MTN	**Manton Dam**	**33.10**	**110**	P	**P**	**14 16 57.2**	**-0.5**		
YULB	**Yu-li**	**33.12**	**39**	P	**P**	**14 16 58.4**	**+0.6**		
YULB				IAmb	IAmb	14 17 01.3			
	comp=Z,35nm,0.7s								
CD2	**Chengdu**	**33.13**	**7**	P	**P**	**14 16 56.0**	**-1.8**		
CD2				pP	pP	14 17 06.4	+0.5		
CD2				S	**S**	**14 22 21.4**	**+5.8**		
CD2				sS	sS	14 22 33.1	+4.2		
CD2				pmax	pmax				
	comp=Z,240nm,9.0s								
CD2				LR	LR				
	comp=Z,370nm,15.2s								
CD2				LR	LR				
	comp=Z,3µm,14.2s								
CD2				LR	LR				
	comp=Z,4µm,12.3s								
GKN	**Gorkha**	**33.20**	**336**	*e*P	**P**	**14 16 59.7**	**+1.1**		
SSLB	**Suanglung**	**33.20**	**38**	P	**P**	**14 16 58.8**	**+0.4**		
SSLB				IAmb	IAmb	14 17 08.5			
	comp=Z,77nm,1.2s								
SSLB	**Suanglung**	**33.20**	**38**	P	**P**	**14 17 00.1**	**+1.6**		
KOLN	**Koldanda**	**33.43**	**334**	*e*P	**P**	**14 16 59.9**	**-0.8**		
	comp=Z,20nm,1.8s								
ENH	**Enshi**	**33.63**	**16**	P	**P**	**14 16 59.8**	**-2.3**		
ENH				IAmb	IAmb	14 17 03.5			
	comp=Z,29nm,0.9s								
DANN	**Dangsing**	**33.87**	**335**	*e*P	**P**	**14 17 06.1**	**+1.5**		
NACB	**Ninganchiao**	**33.87**	**38**	P	**P**	**14 17 02.9**	**-1.5**		
NACB				IAmb	IAmb	14 17 08.3			
	comp=Z,48nm,0.9s								
PYUN	**Piuthan**	**33.99**	**333**	*e*P	**P**	**14 17 06.9**	**+1.4**		
YHNB	**Yeheng**	**34.11**	**37**	P	**P**	**14 17 05.7**	**-0.7**		
YHNB	**Yeheng**	**34.11**	**37**	P	**P**	**14 17 08.4**	**+2.0**		
TATO	**Taipei**	**34.40**	**37**	P	**P**	**14 17 08.0**	**-0.9**		
YOJ	**Yonaguni jima**	**34.97**	**39**	P	**P**	**14 17 13.6**	**-0.2**		
YOJ				IAmb	IAmb	14 17 22.4			
	comp=Z,66nm,0.9s								
YOJ	**Yonaguni jima**	**34.97**	**39**	P	**P**	**14 17 13.6**	**-0.2**		
YOJ				pmax	pmax				
	comp=Z,66nm,0.9s								
H01W3	**Cape Leeuwin H**	**35.32**	**159**	T	T	14 54 32.6			
	baz=336,slow=76,SNR=350								
H01W2	**Cape Leeuwin H**	**35.33**	**159**	T	T	14 54 35.4			
	baz=336,slow=76,SNR=379								
H01W1	**Cape Leeuwin H**	**35.34**	**159**	T	T	14 54 34.3			
	baz=336,slow=76,SNR=526								
WHN	**Wuhan**	**35.48**	**22**	⇑P	**P**	**14 17 19.4**	**+1.3**		
WHN				pmax	pmax				
	comp=Z,88nm,1.4s								
WHN				pmax	pmax				
	comp=Z,560nm,8.7s								
WHN				LR	LR				
	comp=Z,5µm,12.1s								
WHN				LR	LR				
	comp=Z,6µm,13.6s								
WHN				LR	LR				
	comp=Z,8µm,17.6s								
WRKA	**Warakurna**	**35.93**	**132**	P	**P**	**14 17 22.7**	**+0.6**		
	baz=36,SNR=22								
WRKA	**Warakurna**	**35.93**	**132**	P	**P**	**14 17 23.4**	**+1.3**		
XAN	**Xi'an**	**37.08**	**13**	P	**P**	**14 17 30.0**	**-1.8**		
XAN				S	**S**	**14 23 19.1**	**+2.8**		
XAN				pmax	pmax				
	comp=Z,26nm,1.0s								
XAN				pmax	pmax				
	comp=Z,280nm,4.5s								
XAN				LR	LR				
	comp=Z,6µm,12.4s								
XAN				LR	LR				
	comp=Z,4µm,15.5s								
XAN				LR	LR				
	comp=Z,9µm,16.5s								
LZH	**Lanzhou**	**38.26**	**6**	*e*P	**P**	**14 17 42.5**	**+0.6**		
LZH				pP	sP	14 17 51.5	-1.9		
LZH				PcP	**PcP**	**14 19 58.8**	**+2.9**		
LZH				*e*S	**S**	**14 23 35.3**	**+0.9**		
LZH				sS	sS	14 23 51.1	+3.3		
LZH				pmax	pmax				
	comp=Z,36nm,1.1s								
LZH				pmax	pmax				
	comp=Z,220nm,5.2s								
LZH				LR	LR				
	comp=Z,2µm,13.8s								
LZH				LR	LR				
	comp=Z,3µm,15.4s								
LZH				LR	LR				
	comp=Z,4µm,16.0s								
WB0	**Warramunga Arr**	**38.36**	**120**	P	**P**	**14 17 42.4**	**-0.5**		
WB0				IAmb	IAmb	14 17 53.3			
	comp=Z,117nm,1.3s								
WRA	**Warramunga Arr**	**38.38**	**120**	P	**P**	**14 17 42.4**	**-0.7**		
	comp=Z,48nm,1.0s,baz=298,slow=9.6,SNR=41								
WRA				PcP	**PcP**	**14 19 57.9**	**+1.4**		
	comp=Z,2.5nm,0.9s,baz=318,slow=2.7,SNR=4.9								
WRA				S	**S**	**14 23 32.9**	**-3.6**		
	comp=Z,6.3nm,1.0s,baz=293,slow=15,SNR=9.4								
WRA				LR	LR	14 35 14.8			
	comp=Z,1µm,21.7s,baz=280,slow=39								
	comp=Z,48nm,1.0s								
WRA	**Warramunga Arr**	**38.38**	**120**	P	**P**	**14 17 42.4**	**-0.7**		
WRAB	**Tennant Creek**	**38.39**	**120**	P	**P**	**14 17 41.9**	**-1.2**		
WRAB				IAmb	IAmb	14 17 54.4			
	comp=Z,135nm,1.4s								
WRAB	**Tennant Creek**	**38.39**	**120**	*c**e*P	**P**	**14 17 42.4**	**-0.7**		
WRAB				pmax	pmax				
	comp=Z,92nm,1.3s								
WRAB	**Tennant Creek**	**38.39**	**120**	P	**P**	**14 17 44.4**	**+1.3**		
GOMU	**GeErMu**	**38.40**	**354**	P	**P**	**14 17 43.6**	**+0.3**		
GOMU				S	**S**	**14 23 38.4**	**+1.6**		
GOMU				pmax	pmax				
	comp=Z,16nm,1.5s								
GOMU				pmax	pmax				
	comp=Z,180nm,5.8s								
GOMU				LR	LR				
	comp=Z,470nm,19.1s								
GOMU				LR	LR				
	comp=Z,1µm,19.5s								
GOMU				LR	LR				
	comp=Z,540nm,19.1s								
WB2	**Warramunga Arr**	**38.40**	**120**	P	**P**	**14 17 42.6**	**-0.6**		
WB2				IAmb	IAmb	14 17 53.7			
	comp=Z,68nm,1.0s								
LYN	**LuoYang**	**38.50**	**17**	*e*P	**P**	**14 17 43.5**	**-0.2**		
LYN				pP	sP	14 17 53.6	-1.7		
LYN				PP	**PnPn**	**14 19 17.9**	**+3.7**		
LYN				S	**S**	**14 23 37.8**	**+0.1**		
LYN				SS	**SnSn**	**14 26 20.5**	**-5.3**		
LYN				pmax	pmax				
	comp=Z,70nm,0.8s								
LYN				pmax	pmax				
	comp=Z,260nm,7.4s								
LYN				LR	LR				
	comp=Z,3µm,15.1s								
LYN				LR	LR				
	comp=Z,3µm,14.3s								
LYN				LR	LR				
	comp=Z,3µm,14.5s								
WR0	**Warramunga Arr**	**38.57**	**120**	P	**P**	**14 17 43.3**	**-1.3**		
WR0				IAmb	IAmb	14 17 56.0			
	comp=Z,111nm,1.0s								
NJ2	**Nanjing**	**38.67**	**27**	*e*P	**P**	**14 17 46.5**	**+1.3**		
NJ2				sP	**sP**	**14 17 54.8**	**-1.7**		
NJ2				S	**S**	**14 23 43.1**	**+2.8**		
NJ2				pmax	pmax				
	comp=Z,18nm,0.5s								
NJ2				pmax	pmax				
	comp=Z,250nm,4.5s								
NJ2				LR	LR				
	comp=Z,3µm,17.1s								
NJ2				LR	LR				
	comp=Z,3µm,14.9s								
NJ2				LR	LR				
	comp=Z,2µm,19.9s								
SSE	**Sheshan**	**38.99**	**30**	P	**P**	**14 17 49.6**	**+1.7**		
SSE				S	**S**	**14 23 50.4**	**+5.1**		
SSE				pmax	pmax				
	comp=Z,32nm,0.8s								
SSE				pmax	pmax				
	comp=Z,62nm,3.5s								
SSE				LR	LR				
	comp=Z,1µm,16.9s								
SSE				LR	LR				
	comp=Z,1µm,17.3s								
AS31	**Alice Springs**	**39.60**	**126**	P	**P**	**14 17 52.4**	**-0.9**		
ASAR	**Alice Springs**	**39.60**	**126**	P	**P**	**14 17 52.2**	**-1.1**		
ASAR	**Alice Springs**	**39.60**	**126**	P	**P**	**14 17 52.2**	**-1.1**		
JOW	**Kunigami**	**40.03**	**42**	P	**P**	**14 17 56.6**	**-0.1**		
	comp=Z,18nm,0.8s,baz=85,slow=26,SNR=5.6								
	comp=Z,18nm,0.8s								
JOW	**Kunigami**	**40.03**	**42**	P	**P**	**14 17 55.1**	**-1.6**		
JOW	**Kunigami**	**40.03**	**42**	P	**P**	**14 17 59.7**	**+3.0**		
	comp=Z,65nm,1.7s								
GTA	**Gaotai**	**41.36**	**0**	⇑P	**P**	**14 18 07.4**	**-0.2**		
GTA				pP	pP	14 18 14.5	-1.3		
GTA				sP	sP	14 18 20.3	+1.1		
GTA				PP	**PnPn**	**14 19 49.5**	**+1.3**		
GTA				S	**S**	**14 24 20.6**	**-0.1**		
GTA				pmax	pmax				
	comp=Z,30nm,1.6s								
GTA				pmax	pmax				
	comp=Z,250nm,6.6s								
GTA				LR	LR				
	comp=Z,2µm,17.1s								
GTA				LR	LR				
	comp=Z,2µm,18.5s								
GTA				LR	LR				
	comp=Z,3µm,17.0s								
TIY	**Taiyuan**	**41.44**	**16**	*e*P	**P**	**14 18 10.8**	**+2.5**		
TIY				LR	LR				
	comp=Z,1µm,15.9s								
TIY				LR	LR				
	comp=Z,2µm,14.5s								
TIY				LR	LR				
	comp=Z,1µm,19.0s								
TIA	**Tai'an**	**41.57**	**22**	*e*P	**P**	**14 18 08.8**	**-0.4**		
TIA				pmax	pmax				
	comp=Z,9.0nm,0.9s								
TIA				pmax	pmax				
	comp=Z,200nm,9.0s								
TIA				LR	LR				
	comp=Z,5µm,15.1s								
TIA				LR	LR				
	comp=Z,3µm,14.7s								
TIA				LR	LR				
	comp=Z,7µm,16.7s								
HNS	**HongShan**	**41.81**	**18**	⇑P	**P**	**14 18 10.8**	**-0.4**		
HNS				pP	**sP**	**14 18 22.8**	**+0.2**		
HNS				PcP	**PcP**	**14 20 08.3**	**+1.3**		
HNS				*e*S	**S**	**14 24 28.3**	**+1.1**		
HNS				sS	**sS**	**14 24 41.9**	**+1.1**		
HNS				pmax	pmax				
	comp=Z,34nm,0.8s								
HNS				pmax	pmax				
	comp=Z,320nm,7.8s								
HNS				LR	LR				
	comp=Z,1µm,17.5s								
HNS				LR	LR				
	comp=Z,3µm,18.0s								
HNS				LR	LR				
	comp=Z,2µm,15.5s								
OOD	**Oodnadatta**	**42.99**	**130**	P	**P**	**14 18 22.5**	**+1.5**		
MULG	**Mulgathing**	**43.09**	**134**	P	**P**	**14 18 24.2**	**+2.4**		
	comp=Z,27nm,0.7s								
QIS	**Mount Isa**	**43.21**	**118**	P	**P**	**14 18 22.9**	**0.0**		
	baz=43,SNR=12								
QIS	**Mount Isa**	**43.21**	**118**	P	**P**	**14 18 23.3**	**+0.4**		
BTO	**Baotou**	**43.63**	**12**	*e*P	**P**	**14 18 26.1**	**+0.1**		
BTO				S	**S**	**14 24 54.3**	**+0.2**		
BTO				LR	LR				
	comp=Z,14µm,15.9s								
BTO				LR	LR				
	comp=Z,7µm,15.3s								
HHC	**Hu-ho-hao-te**	**44.20**	**13**	*e*P	**P**	**14 18 31.1**	**+0.5**		
HHC				sP	sP	14 18 41.8	-0.2		
HHC				pmax	pmax				
	comp=Z,31nm,0.9s								
HHC				pmax	pmax				
	comp=Z,350nm,5.8s								
HHC				LR	LR				
	comp=Z,10µm,14.1s								
HHC				LR	LR				
	comp=Z,3µm,17.9s								
HHC				LR	LR				
	comp=Z,10µm,14.4s								
JSU	**Suzuyama**	**44.58**	**39**	P	**P**	**14 18 33.1**	**-0.5**		
BJT	**Baijiatuan**	**44.67**	**18**	P	**P**	**14 18 33.5**	**-0.7**		
BJT	**Baijiatuan**	**44.67**	**18**	P	**P**	**14 18 33.5**	**-0.7**		
BJT				pmax	pmax				
	comp=Z,26nm,1.2s								
BJI	**Beijing**	**44.69**	**18**	P	**P**	**14 18 34.1**	**-0.3**		
BJI				pP	**pP**	**14 18 41.8**	**-0.8**		
BJI				PcP	**PP**	**14 20 19.3**	**+0.2**		
BJI				S	**S**	**14 25 06.6**	**-2.7**		
BJI				pmax	pmax				
	comp=Z,14nm,2.0s								
BJI				pmax	pmax				
	comp=Z,250nm,4.7s								
BJI				LR	LR				
	comp=Z,340nm,15.5s								
BJI				LR	LR				
	comp=Z,580nm,17.9s								
BJI				LR	LR				
	comp=Z,2µm,13.0s								
NAWB	**Namwon**	**45.61**	**32**	P	**P**	**

KSH pmax pmax
comp=Z,200nm,7.1s
KSH LR LR
comp=Z,760nm,21.6s
KSH LR LR
comp=Z,1μm,20.3s
KSH LR LR
comp=Z,2μm,21.3s
MTSU Mount Surprise 46.75 113 P **P** **14 18 51.1 0.0**
baz=46,SNR=7.5
MTSU Mount Surprise 46.75 113 P **P** **14 18 52.0 +0.9**
comp=Z,15nm,1.0s
INCN Inchon 46.79 30 P **P** **14 18 53.7 +2.6**
comp=Z,21nm,1.0s
WMQ Urumqi 46.97 348 *e*P **P** **14 18 53.3 +0.9**
WMQ pP sP 14 19 04.8 +0.8
WMQ S **S** **14 25 42.8 +0.7**
WMQ sS sS 14 25 58.6 +2.8
WMQ pmax pmax
comp=Z,110nm,1.3s
WMQ pmax pmax
comp=Z,380nm,6.3s
WMQ LR LR
comp=Z,980nm,15.3s
WMQ LR LR
comp=Z,830nm,15.3s
WMQ LR LR
comp=Z,760nm,19.9s
KSCHJ Chungju 47.01 32 P **P** **14 18 52.9 +0.1**
KSCHJ IAmb IAmb 14 18 56.2
comp=Z,28nm,1.0s
WSAR Wadi Sarin 47.09 305 LR LR 14 36 15.9
comp=Z,752nm,20.8s,baz=132,slow=33
SOCY Socotra 47.36 289 P **P** **14 18 56.7 +0.7**
KSAR Wonju Array Be 47.39 31 P **P** **14 18 55.5 -0.2**
KSAR Wonju Array Be 47.39 31 P **P** **14 18 55.5 -0.2**
KSRS Korea Array 47.42 31 P **P** **14 18 55.4 -0.5**
comp=Z,28nm,0.9s,baz=224,slow=8.7,SNR=48
KSRS LR LR 14 39 34.6
comp=Z,812nm,19.4s,baz=225,slow=37
comp=Z,28nm,0.9s
KS19 Wonju Array Si 47.43 31 P **P** **14 18 55.8 -0.2**
KS19 IAmb IAmb 14 18 58.7
comp=Z,42nm,1.0s
GUMO Guam 47.66 70 LR LR 14 38 49.9
comp=Z,314nm,21.5s,baz=226,slow=36
TARG Taragay, Kyrgy 47.89 338 P **P** **14 18 58.6 -1.5**
TARG IAmb IAmb 14 19 11.6
comp=Z,21nm,0.9s
TARG Taragay, Kyrgy 47.89 338 P **P** **14 18 58.6 -1.5**
TARG pmax pmax
comp=Z,21nm,0.9s
PMG Port Moresby 47.96 101 LR LR 14 43 39.2
comp=Z,612nm,18.9s,baz=272,slow=42
PMG Port Moresby 47.96 101 *i* P **P** **14 19 00.0 -0.5**
PMG pmax pmax
comp=Z,21nm,1.0s
XLT XiLinHaoTe 48.20 16⇓ *i*P **P** **14 19 02.4 +0.4**
XLT pP pP 14 19 10.8 +0.4
XLT sP sP 14 19 13.0 -0.5
XLT sS sS 14 26 16.9 +3.4
XLT SS **SS** **14 29 26.1 -3.4**
XLT pmax pmax
comp=Z,36nm,1.1s
XLT pmax pmax
comp=Z,240nm,6.0s
XLT LR LR
comp=Z,2μm,15.6s
XLT LR LR
comp=Z,2μm,16.4s
SEHB SEOHWA 48.21 31 P **P** **14 19 01.6 -0.5**
HTT Hallett 48.27 135 P **P** **14 19 02.7 0.0**
baz=48,SNR=3.6
KDJ Kajisay 48.47 338 P **P** **14 19 04.6 +0.3**
KDJ Kajisay 48.47 338 P **P** **14 19 04.6 +0.3**
KDJ pmax pmax
comp=Z,59nm,1.1s
SHLS Shalkode 48.56 340 *e*P **P** **14 19 03.7 -1.2**
SHLS pmax pmax
comp=Z,15nm,0.8s
SHLS Shalkode 48.56 340 *e*P **P** **14 19 03.7 -1.2**
comp=Z,15nm,0.8s,baz=341
JHS Saijyo 48.58 37 P **P** **14 19 04.6 -0.4**
SATY Saty 48.84 340 *e*P **P** **14 19 06.7 -0.3**
SATY pmax pmax
comp=Z,25nm,1.1s
SATY Saty 48.84 340 *e*P **P** **14 19 06.8 -0.3**
comp=Z,25nm,1.1s,baz=339
ZHN Zhinishke 48.92 340 *e*P **P** **14 19 06.9 -0.7**
ZHN Zhinishke 48.92 340 *e*P **P** **14 19 06.9 -0.7**
baz=340
SNY Shenyang 48.94 24⇓ P **P** **14 19 06.9 -0.7**
SNY S **S** **14 26 18.0 +8.1**
SNY pmax pmax
comp=Z,39nm,0.9s
SNY pmax pmax
comp=Z,220nm,5.3s
SNY LR LR
comp=Z,810nm,18.2s
SNY LR LR
comp=Z,2μm,19.2s
SNY LR LR
comp=Z,3μm,17.2s
GAR Garm 48.95 330 P **P** **14 19 07.6 -0.3**
GAR IAmb IAmb 14 19 29.1
comp=Z,22nm,0.9s
CTA Charters Tower 49.02 115 LR LR 14 42 10.7
comp=Z,1μm,21.3s,baz=282,slow=39
CTA Charters Tower 49.02 115 P **P** **14 19 09.6 +0.9**
CTAO Charters Tower 49.02 115 P **P** **14 19 07.8 -0.9**
CTAO Charters Tower 49.02 115 P **P** **14 19 07.8 -0.9**
CTAO pmax pmax
comp=Z,60nm,1.0s
CTAO Charters Tower 49.02 115 P **P** **14 19 10.1 +1.4**
KPKS Kokpek 49.10 340*ce*P **P** **14 19 07.7 -1.2**
KPKS pmax pmax
comp=Z,27nm,1.8s
KPKS Kokpek 49.10 340⇑ *e*P **P** **14 19 07.8 -1.2**
comp=Z,27nm,1.8s,baz=340
CHGR Chuyangaron 49.28 329 P **P** **14 19 08.5 -1.9**
CHGR IAmb IAmb 14 19 30.7
comp=Z,39nm,0.9s
CHGR Chuyangaron 49.28 329 P **P** **14 19 08.5 -1.9**
CHGR pmax pmax
comp=Z,39nm,0.9s
QLP Quilpie 49.32 124 P **P** **14 19 11.8 +1.0**
baz=49,SNR=7.6
QLP Quilpie 49.32 124 P **P** **14 19 13.1 +2.3**
TNSS Tian-Shan 49.34 338 *e*P **P** **14 19 11.0 -0.2**
TNSS Tian-Shan 49.34 338 *e*P **P** **14 19 11.1 -0.2**
baz=338
STKA Stephens Creek 49.46 131 P **P** **14 19 12.8 +0.9**
comp=Z,28nm,0.8s,baz=300,slow=8.6,SNR=26
STKA LR LR 14 41 09.0
comp=Z,2μm,21.7s,baz=290,slow=37
comp=Z,28nm,0.8s
STKA Stephens Creek 49.46 131 P **P** **14 19 12.7 +0.9**
baz=49,SNR=24
STKA Stephens Creek 49.46 131 P **P** **14 19 11.9 +0.1**
STKA Stephens Creek 49.46 131 P **P** **14 19 11.9 +0.1**
STKA pmax pmax
comp=Z,7.0nm,0.9s
STKA Stephens Creek 49.46 131 P **P** **14 19 13.2 +1.4**
comp=Z,12nm,1.1s
AAA Alma-Ata 49.50 338 *e*P **P** **14 19 09.5 -2.5**
AAA Alma-Ata 49.50 338 *e*P **P** **14 19 09.6 -2.5**
baz=338
BTK Batken 49.51 331 P **P** **14 19 11.4 -0.8**
BTK IAmb IAmb 14 19 39.3
comp=Z,58nm,1.5s
BTK Batken 49.51 331 P **P** **14 19 11.4 -0.8**
BTK pmax pmax
comp=Z,58nm,1.5s
UCH Uchtor 49.61 336 P **P** **14 19 15.5 +2.2**
SNR=9.7
TKM2 Tokmak 2 49.76 337 P **P** **14 19 15.2 +1.1**
SNR=26
KBK Karagaybulak 49.79 336 P **P** **14 19 17.0 +2.6**
SNR=13
AAK Ala-Archa 49.96 336 LR LR 14 43 35.4
comp=Z,2μm,20.4s,baz=164,slow=40
AAK Ala-Archa 49.96 336*ce*P **P** **14 19 16.5 +0.9**
AAK pmax pmax
comp=Z,48nm,2.5s
CHKK Chushkaly 50.03 339 *e*P **P** **14 19 13.9 -2.1**
CHKK Chushkaly 50.03 339 *e*P **P** **14 19 13.9 -2.1**
baz=339
ARXS Arharly 50.05 340 *e*P **P** **14 19 15.8 -0.4**
SONM Songino Array 50.15 6 P **P** **14 19 17.4 +0.5**
comp=Z,68nm,0.8s,baz=189,slow=8.2,SNR=132
comp=Z,68nm,0.8s
SONM Songino Array 50.15 6 P **P** **14 19 17.3 +0.4**
SONM Songino Array 50.15 6 P **P** **14 19 17.3 +0.4**
SONM pmax pmax
comp=Z,75nm,0.8s
CHMS Chumysh 50.16 336 P **P** **14 19 18.8 +1.9**
SNR=8.6
ULN Ulaanbaatar 50.25 7 P **P** **14 19 17.1 -0.6**
ULN Ulaanbaatar 50.25 7*ce*P **P** **14 19 18.0 +0.3**
ULN pmax pmax
comp=Z,77nm,0.8s
EKS2 Erkin-Say 50.27 335 P **P** **14 19 18.8 +0.8**
SNR=19
KUU Kurty 50.30 338 *e*P **P** **14 19 16.6 -1.4**
KUU pmax pmax
comp=Z,51nm,1.1s
KUU Kurty 50.30 338 *e*P **P** **14 19 16.7 -1.4**
comp=Z,51nm,1.1s,baz=338
JCJ Chichijima 50.39 52 LR LR 14 40 01.7
comp=Z,564nm,20.6s,baz=237,slow=36
JCJ Chichijima 50.39 52 P **P** **14 19 22.0 +3.1**
comp=Z,54nm,1.1s
USP Ospenovka 50.48 336 P **P** **14 19 20.3 +0.9**
SNR=24
TDK Taldyqorghan 50.55 341 *e*P **P** **14 19 18.2 -1.7**
TDK Taldyqorghan 50.55 341 *e*P **P** **14 19 18.2 -1.7**
baz=341
SGDS Sogindy 50.58 337 *e*P **P** **14 19 19.5 -0.7**
SGDS pmax pmax
comp=Z,9.0nm,1.9s
SGDS Sogindy 50.58 337 *e*P **P** **14 19 17.1 -3.1**
baz=337
ZSN Zaisan 51.02 347 *e*P **P** **14 19 22.7 -0.6**
ZSN pmax pmax
comp=Z,21nm,0.7s
ZSN Zaisan 51.02 347 *e*P **P** **14 19 22.8 -0.6**
comp=Z,21nm,0.7s,baz=347
MK31 Makanchi Array 51.03 345 P **P** **14 19 23.1 -0.3**
MK31 IAmb IAmb 14 19 27.0
comp=Z,37nm,0.8s
MK31 Makanchi Array 51.03 345 P **P** **14 19 23.2 -0.3**
MK31 pmax pmax
comp=Z,37nm,0.8s
MKAR Makanchi Array 51.03 345 P **P** **14 19 24.1 +0.6**
comp=Z,42nm,0.7s,baz=151,slow=7.2,SNR=111
MKAR LR LR 14 45 05.3
comp=Z,774nm,20.0s,baz=156,slow=41
comp=Z,42nm,0.7s
MKAR Makanchi Array 51.03 345 P **P** **14 19 23.4 0.0**
MKAR Makanchi Array 51.03 345 *i* P **P** **14 19 23.6 +0.2**
MKAR pmax pmax
comp=Z,42nm,0.7s
MAKZ Makanchi 51.12 345 P **P** **14 19 23.7 -0.5**
MAKZ IAmb IAmb 14 19 27.6
comp=Z,26nm,0.9s
MAKZ Makanchi 51.12 345 P **P** **14 19 23.7 -0.5**
MAKZ pmax pmax
comp=Z,26nm,0.9s
INU Inuyama 51.23 40 P **P** **14 19 24.9 -0.2**
INU Inuyama 51.23 40 P **P** **14 19 27.9 +2.8**
comp=Z,26nm,1.3s
CN2 Changchun 51.34 24 *e*P **P** **14 19 24.9 -0.9**
CN2 *e*S **S** **14 26 40.8 -2.6**
CN2 pmax pmax
comp=Z,40nm,1.0s
CN2 pmax pmax
comp=Z,200nm,8.0s
CN2 LR LR
comp=Z,2μm,17.0s
CN2 LR LR
comp=Z,1μm,17.0s
CN2 LR LR
comp=Z,1μm,17.0s
DZA Taraz 51.51 334 *e*P **P** **14 19 24.8 -2.3**
DZA Taraz 51.51 334 *e*P **P** **14 19 24.9 -2.3**
baz=334
IUG Iuzhnay 51.51 332 *e*P **P** **14 19 25.8 -1.5**
IUG Iuzhnay 51.51 332 *e*P **P** **14 19 25.9 -1.4**
baz=332
JGF Kuroka 51.61 40 P **P** **14 19 27.4 -0.6**
KKAR Karatay Array 52.04 333 P **P** **14 19 30.6 -0.5**
KKAR Karatay Array 52.04 333 P **P** **14 19 30.6 -0.5**
BTLS Baital 52.15 337 *e*P **P** **14 19 30.8 -1.0**
BTLS pmax pmax
comp=Z,6.0nm,1.0s
BTLS Baital 52.15 337 *e*P **P** **14 19 29.8 -1.9**
baz=337
ZAK Zakamensk 52.43 3 *e*P **P** **14 19 33.4 -0.5**
ZAK pmax pmax
comp=Z,15nm,1.5s
CMSA Cobar Meteorol 52.44 129 P **P** **14 19 35.0 +0.8**
baz=52,SNR=29
CMSA Cobar Meteorol 52.44 129 P **P** **14 19 36.6 +2.4**
MAJO Matsushiro 52.73 39 P **P** **14 19 33.9 -2.4**
MAJO IAmb IAmb 14 19 38.8
comp=Z,32nm,1.1s
MAJO Matsushiro 52.73 39 *i* P **P** **14 19 34.4 -1.9**
MAJO pmax pmax
comp=Z,37nm,1.1s
MAJO Matsushiro 52.73 39 P **P** **14 19 36.6 +0.3**
MJB9 Matsu-Tunnel 52.73 39 P **P** **14 19 34.1 -2.3**
MJB9 IAmb IAmb 14 19 38.8
comp=Z,31nm,1.1s
MJAR Matsushiro Arr 52.73 39 P **P** **14 19 35.7 -0.6**
comp=Z,20nm,0.9s,baz=224,slow=6.2,SNR=22
comp=Z,20nm,0.9s
MJAR Matsushiro Arr 52.73 39 P **P** **14 19 33.6 -2.7**
MJAR Matsushiro Arr 52.73 39 P **P** **14 19 33.6 -2.7**
MJAR pmax pmax
comp=Z,19nm,1.1s
MSHR Mys Shultsa 52.92 29*ce*P **P** **14 19 38.2 +0.6**
MSHR pmax pmax
comp=Z,22nm,1.3s
RMQ Roma 53.09 122 P **P** **14 19 40.1 +0.9**
baz=53,SNR=15
RMQ Roma 53.09 122 P **P** **14 19 41.6 +2.4**
comp=Z,21nm,1.1s
MOY Mondy 53.63 1 *e*P **P** **14 19 43.5 +0.7**
MOY pmax pmax
comp=Z,33nm,2.1s
VLA Vladivostok 53.68 29*c i*P **P** **14 19 42.6 -0.5**
VLA pmax pmax
comp=Z,119nm,1.8s
JSD Sado 53.69 38 P **P** **14 19 42.6 -0.7**
JSD IAmb IAmb 14 19 45.8
comp=Z,43nm,0.9s
OPO Ambohidratompo 53.71 249 LR LR 14 38 38.6
comp=Z,295nm,18.4s,baz=214,slow=32
BNX BinXian 53.73 24⇓P **P** **14 19 44.0 +0.6**
BNX pP **sP** **14 19 54.0 -1.0**
BNX sP **pP** **14 19 57.8 +5.9**
BNX PP **PP** **14 21 46.4 +1.8**
BNX S **S** **14 27 16.8 +0.9**
BNX pmax pmax
comp=Z,31nm,0.7s
BNX pmax pmax
comp=Z,250nm,4.1s
BNX LR LR
comp=Z,2μm,17.3s
BNX LR LR
comp=Z,900nm,15.1s
BNX LR LR
comp=Z,3μm,16.9s
MDJ Mudanjiang 53.76 26 P **P** **14 19 42.8 -0.9**
MDJ IAmb IAmb 14 19 48.4
comp=Z,32nm,1.0s
MDJ Mudanjiang 53.76 26 P **P** **14 19 43.3 -0.4**
MDJ pmax pmax
comp=Z,17nm,2.3s
MDJ pmax pmax
comp=Z,360nm,5.1s
MDJ LR LR
comp=Z,3μm,18.2s
MDJ LR LR
comp=Z,1μm,18.9s
MDJ LR LR
comp=Z,4μm,15.0s
MDJ Mudanjiang 53.76 26 P **P** **14 19 45.0 +1.3**
comp=Z,39nm,1.1s
JYT Yasato 53.82 41 P **P** **14 19 42.7 -1.6**
JYT IAmb IAmb 14 20 00.5
comp=Z,33nm,1.1s
HIA Hailar 54.13 16 P **P** **14 19 45.6 -0.8**
HIA IAmb IAmb 14 19 48.8
comp=Z,26nm,1.2s
HIA Hailar 54.13 16 P **P** **14 19 45.6 -0.8**
HIA pmax pmax
comp=Z,26nm,1.2s
IRK Irkutsk 54.34 4 *e*P **P** **14 19 48.5 +0.7**
IRK pmax pmax
comp=Z,72nm,1.9s
USA0B Ussuriysk Arra 54.54 28 P **P** **14 19 49.0 -0.4**
USA0B Ussuriysk Arra 54.54 28 P **P** **14 19 49.0 -0.4**
USA0B pmax pmax
comp=Z,85nm,0.9s
USRK Ussuriysk Ar. 54.54 28 P **P** **14 19 49.3 -0.1**
comp=Z,61nm,0.8s,baz=228,slow=7.9,SNR=55
USRK LR LR 14 45 44.2
comp=Z,1μm,18.3s,baz=210,slow=39
comp=Z,61nm,0.8s
USRK Ussuriysk Ar. 54.54 28 P **P** **14 19 49.0 -0.4**
EIDS Eidsvold 54.75 120 P **P** **14 19 52.1 +0.8**
baz=54,SNR=6.3
EIDS Eidsvold 54.75 120 P **P** **14 19 50.4 -0.9**
EIDS IAmb IAmb 14 20 04.3
comp=Z,20nm,0.9s
EIDS Eidsvold 54.75 120 P **P** **14 19 52.8 +1.5**
comp=Z,22nm,1.2s
SEM Semipalatinsk 54.89 345 *e*P **P** **14 19 50.3 -1.7**
SEM Semipalatinsk 54.89 345 *e*P **P** **14 19 50.4 -1.7**
baz=345
JMM Marumori 55.17 40 P **P** **14 19 53.4 -0.7**
JMM IAmb IAmb 14 19 56.4
comp=Z,47nm,0.9s
GEYT Alibeck 55.22 321 P **P** **14 19 55.3 +0.8**
comp=Z,5.6nm,0.7s,baz=124,slow=9.7,SNR=8.4
GEYT LR LR 14 44 29.3
comp=Z,663nm,20.5s,baz=152,slow=37
comp=Z,5.6nm,0.7s
GEYT Alibeck 55.22 321 P **P** **14 19 53.5 -1.0**
GYA0 ALIBECK ARRAY 55.22 321 P **P** **14 19 54.4 -0.1**
GYA0 pmax pmax
comp=Z,14nm,1.1s
GYA0B ALIBECK ARRAY 55.22 321 P **P** **14 19 53.6 -0.9**
CIT Chita 55.27 11 *e*P **P** **14 19 55.5 +0.9**
CIT *e* 14 20 02.9
CIT *e* 14 20 06.4
CIT pmax pmax
comp=Z,99nm,1.9s
KURBB Kurchatov Arra 55.54 344 P **P** **14 19 56.6 +0.1**
comp=Z,16nm,0.8s,baz=161,slow=6.9,SNR=37
KURBB LR LR 14 49 12.8
comp=Z,634nm,18.1s,baz=139,slow=42
comp=Z,16nm,0.8s
KURK Kurchatov 55.60 344 P **P** **14 19 56.2 -0.7**
KURK IAmb IAmb 14 20 00.4
comp=Z,42nm,0.9s
KURK Kurchatov 55.60 344*ce*P **P** **14 19 56.9 0.0**
KURK pmax pmax
comp=Z,46nm,0.8s
CAN Canberra 56.51 132 P **P** **14 20 02.7 -1.2**
CAN IAmb IAmb 14 20 07.4
comp=Z,59nm,1.3s
CAN Canberra 56.51 132 P **P** **14 20 02.7 -1.2**
CAN pmax pmax
comp=Z,59nm,1.3s
CAN Canberra 56.51 132 P **P** **14 20 06.2 +2.3**
ARMA Armidale 56.76 125 P **P** **14 20 06.8 +1.0**
baz=56,SNR=6.4
ARMA Armidale 56.76 125 P **P** **14 20 07.6 +1.8**
BRZS Berezniki 56.81 340 *e*P **P** **14 20 04.5 -1.1**
BRZS pmax pmax
comp=Z,6.0nm,1.3s
BRZS Berezniki 56.81 340 *e*P **P** **14 20 03.3 -2.3**
baz=340
JTM Tenmabayashi 57.10 37 P **P** **14 20 07.0 -0.9**
ZAA0 Zalesovo Array 57.22 350 P **P** **14 20 08.3 -0.1**
ZALV Zalesovo Beam 57.22 350 P **P** **14 20 08.4 +0.1**
comp=Z,59nm,0.7s,baz=181,slow=5.6,SNR=103
comp=Z,59nm,0.7s
ZALV Zalesovo Beam 57.22 350 P **P** **14 20 08.2 -0.2**
ZALV Zalesovo Beam 57.22 350 *i* P **P** **14 20 08.3 -0.1**
ZALV pmax pmax
comp=Z,72nm,0.8s
ATD Arta Tunnel 57.89 285 LR LR 14 41 29.3
comp=Z,632nm,19.8s,baz=108,slow=32
KLR Kul'dur 58.29 24 P **P** **14 20 16.0 0.0**
comp=Z,51nm,0.9s,baz=236,slow=6.4,SNR=83
comp=Z,51nm,0.9s
KLR Kul'dur 58.29 24*ce*P **P** **14 20 15.9 -0.1**
KLR pmax pmax
comp=Z,180nm,1.7s
RAYN Ar Rayn 58.34 299 P **P** **14 20 18.2 +1.3**
BRVK Borovoye 60.20 340 P **P** **14 20 29.2 0.0**
BRVK Borovoye 60.20 340*ce*P **P** **14 20 29.4 +0.2**
BRVK pmax pmax
comp=Z,15nm,0.8s
ZEA Zeya 60.32 19 *e*P **P** **14 20 29.9 0.0**
ZEA *e*S **S** **14 28 44.8 +2.2**
ZEA pmax pmax
comp=E,10.0nm,0.8s
ZEA pmax pmax
comp=N,20nm,1.4s
ZEA pmax pmax
comp=Z,40nm,1.0s
ZEA pmax pmax
comp=N,100nm,6.1s
ZEA pmax pmax
comp=Z,100nm,9.6s
ZEA smax smax
comp=E,100nm,13.1s
ZEA smax smax
comp=N,200nm,12.4s
ZEA MLR MLR
comp=N,1μm,16.0s
ZEA MLR MLR
comp=E,600nm,16.0s
ZEA MLR MLR
comp=Z,1μm,15.0s
HNR Honiara 60.54 100 LR LR 14 47 47.4
comp=Z,268nm,21.9s,baz=256,slow=37
BOD Bodaibo 60.91 9 *e*P **P** **14 20 33.5 -0.4**
BOD pmax pmax
comp=Z,65nm,1.6s
GRNR Gornyy 61.43 26⇑ *i*P **P** **14 20 37.6 0.0**
GRNR pmax pmax
comp=Z,10.0nm,1.1s
GRNR MLR MLR
comp=N,1μm,15.0s
GRNR MLR MLR
comp=E,490nm,15.0s
GRNR MLR MLR
comp=Z,2μm,15.0s
ABKAR Akbulak array 61.51 332 P **P** **14 20 37.0 -1.2**
ABKAR IAmb IAmb 14 20 40.7
comp=Z,31nm,0.9s
YSS Yuzh-Sakhalins 61.89 32 P **P** **14 20 39.4 -1.4**
YSS Yuzh-Sakhalins 61.89 32 *e*P **P** **14 20 39.7 -1.1**
YSS *e**SP **sP** **14 20 52.5 +0.1**
YSS *e* 14 22 54.2
YSS *e*S **S** **14 28 57.7 -5.2**
YSS *e*PS **PnS** **14 29 18.0 -1.9**
YSS pmax pmax
comp=Z,300nm,5.2s
YSS pmax pmax
comp=Z,50nm,1.1s
YSS Yuzh-Sakhalins 61.89 32 P **P** **14 20 41.7 +0.9**
KMBO Kilima Mbogo 62.19 270 LR LR 14 44 25.8
comp=Z,650nm,19.0s,baz=88,slow=33
AKTO Aktyubinsk 63.23 332 P **P** **14 20 48.4 -1.2**
comp=Z,8.0nm,0.8s,baz=131,slow=4.5,SNR=16
AKTO LR LR 14 51 39.2
comp=Z,476nm,20.8s,baz=141,slow=39
comp=Z,8.0nm,0.8s
TYV Tymovskoe 64.35 29 *e*P **P** **14 20 59.1 +2.1**
TYV *e*S **S** **14 29 38.0 +4.5**
TYV pmax pmax
comp=Z,21nm,1.5s
TYV pmax pmax
comp=Z,200nm,2.4s
TYV smax smax
comp=E,300nm,5.4s
MAK Makhachkala 64.73 320 *e*P **P** **14 20 55.7 -4.0**
MAK *e* 14 23 21.6
MAK *e*PPP PPP 14 24 54.8
MAK *e*S **S** **14 29 34.0 -4.5**
MAK *e*SS **SS** **14 33 50.7 +0.6**
MAK pmax pmax

comp=Z,22nm,0.3s
NKL Nikolayevsk 64.98 26 *e*P **P 14 20 58.4 -2.6**
NKL *e*S **S 14 29 35.9 -5.2**
NKL smax smax
comp=E,2.0nm,1.2s
NKL smax smax
comp=N,364nm,1.1s
NKL MLR MLR
comp=E,12nm,11.0s
NKL MLR MLR
comp=N,5µm,14.0s
NKL MLR MLR
comp=Z,1µm,15.0s
GNI Garni 65.26 316 LR LR 14 50 50.1
comp=Z,313nm,20.7s,baz=112,slow=37
KOUNC Koumac, New Ca 65.71 111 P **P 14 21 05.8 -0.7**
KOUNC Koumac, New Ca 65.71 111 P **P 14 21 08.2 +1.7**
GROC Groznyy 65.95 320 *e*P **P 14 21 08.7 +1.1**
GROC *e* 14 21 37.3
GROC pmax pmax
comp=Z,19nm,0.4s
SVE Sverdlovsk 66.62 338 *e*P **P 14 21 12.2 +0.6**
SVE *e*S **S 14 29 58.6 -2.4**
SVE pmax pmax
comp=Z,40nm,1.1s
SVE MLR MLR
comp=Z,528nm,17.0s
ZEI Tsey 66.99 319 *e*P **P 14 21 16.6 +2.1**
ZEI pmax pmax
comp=Z,9.0nm,0.7s
ARU Arti 67.13 337 P **P 14 21 15.2 +0.3**
comp=Z,5.5nm,0.5s,baz=154,slow=4.3,SNR=7.0
ARU LR LR 14 53 18.6
comp=Z,688nm,20.0s,baz=125,slow=38
comp=Z,5.5nm,0.5s
ARU Arti 67.13 337 P **P 14 21 14.5 -0.3**
ARU IAmb IAmb 14 21 17.3
comp=Z,20nm,1.0s
ARU Arti 67.13 337*c i*P **P 14 21 14.6 -0.2**
ARU 14 21 42.3
ARU 14 23 40.8
ARU S **S 14 30 08.6 +1.4**
ARU SS **SS 14 34 21.3 -5.5**
ARU pmax pmax
comp=Z,31nm,1.2s
ONI Oni 67.20 318 P **P 14 21 16.6 +0.9**
DZM Mont Dzumac 67.89 113 *e*LR LR 14 41 20.6
comp=Z,1µm,23.3s
DZM Mont Dzumac 67.89 113 LR LR 14 53 51.4
comp=Z,837nm,18.9s,baz=286,slow=38
YAK Yakutsk 68.02 15 P **P 14 21 19.1 -1.2**
comp=Z,19nm,0.7s,baz=156,slow=2.9,SNR=18
YAK LR LR 14 55 17.9
comp=Z,2µm,18.4s,baz=236,slow=40
comp=Z,19nm,0.7s
YAK Yakutsk 68.02 15 P **P 14 21 18.9 -1.5**
YAK Yakutsk 68.02 15*c i*P **P 14 21 18.9 -1.5**
YAK *e**PP **pP 14 21 28.6 -0.4**
YAK *e* 14 21 42.8
YAK *e* 14 23 49.0
YAK *e*PPP PPP 14 25 27.7
YAK *e*S **S 14 30 17.0 -0.7**
YAK *e**SS **sS 14 30 32.1 +0.2**
YAK *e* 14 31 16.3
YAK *e*SS **SS 14 34 41.2 +0.8**
YAK pmax pmax
comp=Z,60nm,0.9s
YAK pmax pmax
comp=N,16nm,1.1s
YAK pmax pmax
comp=E,7.0nm,0.9s
YAK pmax pmax
comp=Z,61nm,3.0s
YAK pmax pmax
comp=N,26nm,2.5s
YAK pmax pmax
comp=E,24nm,2.0s
YAK smax smax
comp=E,65nm,2.9s
YAK smax smax
comp=N,16nm,2.2s
YAK MLR MLR
comp=Z,661nm,27.0s
YAK MLR MLR
comp=N,1µm,23.0s
YAK MLR MLR
comp=E,894nm,16.0s
KBZ Khabaz 68.07 319 P **P 14 21 21.6 +0.6**
comp=E,8.1nm,0.8s,baz=132,slow=6.4,SNR=15
comp=E,8.1nm,0.8s
KBZ Khabaz 68.07 319*ce*P **P 14 21 20.8 -0.2**
KBZ pmax pmax
comp=Z,14nm,0.9s
ASF Jabal al Asfar 68.24 306 P **P 14 21 24.6 +2.2**
comp=Z,1.6nm,0.5s,baz=168,slow=5.2,SNR=4.0
comp=Z,1.6nm,0.5s
OUENC Ouen Island, N 68.30 113 P **P 14 21 22.3 -0.7**
OUENC IAmb IAmb 14 21 41.8
comp=Z,38nm,1.1s
KIV Kislovodsk 68.30 319 P **P 14 21 22.8 +0.1**
KIV IAmb IAmb 14 21 37.5
comp=Z,20nm,1.2s
KIV Kislovodsk 68.30 319 *e*P **P 14 21 22.5 -0.1**
KIV *e*S **S 14 30 21.3 -0.7**
KIV pmax pmax
comp=Z,12nm,1.1s
MBAR Mbarara 68.71 270 LR LR 14 46 16.6
comp=Z,505nm,21.4s,baz=75,slow=31
BELG Belogornoye 69.58 329 P **P 14 21 30.6 +0.4**
comp=Z,10nm,0.6s,baz=111,slow=2.8,SNR=5.1
BELG LR LR 14 56 28.0
comp=Z,516nm,20.6s,slow=40
comp=Z,10nm,0.6s
MMAI Mount Meron Ar 69.69 306 LR LR 14 52 52.0
comp=Z,1µm,19.0s,baz=273,slow=37
MAW Mawson 70.01 194 P **P 14 21 35.3 +2.7**
comp=Z,3.6nm,0.9s,baz=354,slow=8.8,SNR=3.0
MAW LR LR 14 47 42.6
comp=Z,962nm,19.8s,baz=32,slow=32
comp=Z,3.6nm,0.9s
SOC Sochi 70.10 318 *e*P P 14 21 25.9 -7.8
SOC *i* 14 24 07.7
SOC *e*PPP PPP 14 25 49.0
SOC *e*SS SS 14 35 12.4 -0.9
SKR Severo-Kuril's 71.30 34 *i*P **P 14 21 42.0 +1.3**
MATP Matopo 71.42 249 LR LR 14 48 28.1
comp=Z,1µm,20.9s,baz=60,slow=32
VRH Novokhopyorsk 72.14 326 *e*P **P 14 21 45.5 -0.3**
VRH pmax pmax
comp=Z,50nm,1.0s
KIRV Kirov 72.28 335 P **P 14 21 47.5 +1.0**
comp=Z,19nm,0.8s,baz=132,slow=3.3,SNR=12
KIRV LR LR 14 58 04.0
comp=Z,594nm,19.1s,baz=133,slow=40
comp=Z,19nm,0.8s
KIRV Kirov 72.28 335*ce*P **P 14 21 46.8 +0.3**
BR131 Keskin Array S 73.02 313 P **P 14 21 50.9 -0.7**
BR131 Keskin Array S 73.02 313 P **P 14 21 50.9 -0.7**
BR131 pmax pmax
comp=Z,9.0nm,0.9s
BRTR Keskin Array B 73.02 313 P **P 14 21 51.8 +0.1**
comp=Z,2.4nm,0.8s,baz=135,slow=5.9,SNR=12
BRTR LR LR 14 56 22.4
comp=Z,407nm,20.7s,baz=122,slow=38
comp=Z,2.4nm,0.8s
BRTR Keskin Array B 73.02 313 P **P 14 21 50.6 -1.0**
BRTR Keskin Array B 73.02 313 *i*P **P 14 21 51.7 +0.1**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
PEA0B Petropavlovsk- 73.30 32 P **P 14 21 51.9 -0.8**
PEA0B Petropavlovsk- 73.30 32 P **P 14 21 51.9 -0.8**
PEA0B pmax pmax
comp=Z,12nm,0.9s
PETK Petropavlovsk- 73.30 32 P **P 14 21 52.4 -0.3**
comp=Z,5.4nm,0.9s,baz=207,slow=6.2,SNR=12
comp=Z,5.4nm,0.9s
PETK Petropavlovsk- 73.30 32 P **P 14 21 52.2 -0.5**
MA2 Magadan 73.39 24 P **P 14 21 54.1 +1.0**
comp=Z,9.7nm,0.8s,baz=214,slow=6.2,SNR=4.9
MA2 LR LR 14 57 19.9
comp=Z,714nm,18.6s,baz=239,slow=38
comp=Z,9.7nm,0.8s
MA2 Magadan 73.39 24 P **P 14 21 53.1 0.0**
MA2 Magadan 73.39 24 *i*P **P 14 21 52.4 -0.7**
MA2 pmax pmax
comp=Z,74nm,1.2s
MA2 Magadan 73.39 24 P **P 14 21 56.3 +3.2**
comp=Z,56nm,1.7s
VSR Storozhevoye 73.59 325 *e*P **P 14 21 54.4 0.0**
VSR pmax pmax
comp=Z,30nm,0.9s
VORR Voronezh 73.76 326 *e*P **P 14 21 55.1 -0.3**
VORR pmax pmax
comp=Z,51nm,1.4s
PET Petropavlovsk 73.77 33 P **P 14 21 53.2 -2.3**
PET IAmb IAmb 14 22 13.5
comp=Z,28nm,1.0s
PET Petropavlovsk 73.77 33*ce*P **P 14 21 54.9 -0.5**
PET *e**PP **sP 14 22 05.5 -1.7**
PET *e* 14 24 43.0
PET *e*S **SKiKP 14 31 22.6 -0.6**
PET *e*PS **PnS 14 32 00.5 +0.5**
PET *e*PPS PPS 14 32 13.5
PET pmax pmax
comp=Z,200nm,10.8s
PET pmax pmax
comp=Z,38nm,1.2s
PET pmax pmax
comp=Z,300nm,8.9s
PET pmax pmax
comp=Z,200nm,18.4s
PET pmax pmax
comp=Z,200nm,14.9s
PET MLR MLR
comp=Z,700nm,18.0s
PET Petropavlovsk 73.77 33 P **P 14 21 57.8 +2.4**
comp=Z,126nm,1.3s
LPSR Galich'ya Gora 74.32 327 *e*P P 14 21 49.1 -10
LPSR pmax pmax
comp=Z,7.0nm,0.7s
LBTB Lobatse 74.47 245 LR LR 14 50 13.2
comp=Z,1µm,19.2s,baz=85,slow=32
BOSA Boshof 75.11 241 LR LR 14 50 15.8
comp=Z,815nm,19.1s,baz=86,slow=32
RPZ Rata Peaks 75.26 135 LR LR 14 56 41.2
comp=Z,631nm,19.6s,baz=278,slow=37
PRGR Permogore 75.59 337 *e*P **P 14 22 04.5 -1.3**
PRGR *e* 14 22 15.7
SEY Seymchan 75.97 22 P **P 14 22 07.7 -0.2**
comp=Z,12nm,0.8s,baz=221,slow=7.8,SNR=24
comp=Z,12nm,0.8s
SEY Seymchan 75.97 22*ce*P **P 14 22 06.9 -1.1**
SEY pmax pmax
comp=Z,21nm,1.0s
TIXI Tiksi 76.09 9 P **P 14 22 07.5 -1.0**
comp=Z,4.5nm,0.5s,baz=91,slow=23,SNR=19
TIXI LR LR 14 59 18.2
comp=Z,1µm,20.1s,baz=181,slow=39
comp=Z,4.5nm,0.5s
TIXI Tiksi 76.09 9 P **P 14 22 06.5 -1.9**
TIXI IAmb IAmb 14 22 26.3
comp=Z,54nm,1.4s
TIXI Tiksi 76.09 9*ce*P **P 14 22 07.1 -1.4**
TIXI pmax pmax
comp=Z,36nm,1.7s
MOS Moscow 76.35 329 *e*P **P 14 22 09.3 -0.9**
MOS *e* 14 22 17.0
MOS pmax pmax
comp=Z,87nm,1.4s
OBN Obninsk 76.64 328 P **P 14 22 11.7 -0.2**
comp=Z,5.3nm,0.4s,baz=85,slow=4.0,SNR=11
OBN LR LR 15 00 45.1
comp=Z,66nm,19.1s,baz=152,slow=40
comp=Z,5.3nm,0.4s
OBN Obninsk 76.64 328 *e*P **P 14 22 11.5 -0.4**
OBN *e* 14 22 20.3
OBN *e* 14 25 03.9
OBN *i*PPP PPP 14 26 51.1
OBN *e*S **S 14 31 56.2 -0.3**
OBN *e*SS **SS 14 36 46.6 -5.8**
OBN pmax pmax
comp=Z,70nm,1.7s
OBN MLR MLR
comp=Z,402nm,22.0s
KLMR Klimovskoe 77.73 334 *e*P **P 14 22 15.8 -2.1**
KLMR *e* 14 25 09.1
KLMR pmax pmax
comp=Z,38nm,1.4s
KLMR Klimovskoe 77.73 334 *e*P **P 14 22 15.9 -2.0**
KLMR AMP 14 22 20.9
comp=Z,38nm,1.4s
KLMR *e*PP **PP 14 25 09.1 -4.4**
TPGR Topolog 78.19 317 ⇓P P 14 22 12.8 -8.1
MSVF Nonsavu 78.48 108 LR LR 14 59 02.7
comp=Z,366nm,19.6s,baz=184,slow=37
BKZ Black Stump Fm 78.59 129 P **P 14 22 22.8 -0.5**
BKZ IAmb IAmb 14 22 26.2
comp=Z,26nm,0.8s
BKZ Black Stump Fm 78.59 129 P **P 14 22 25.9 +2.6**
IDI Anoyia 78.69 306 LR LR 15 02 08.4
comp=Z,239nm,18.8s,baz=85,slow=40
SORM Soroca 79.10 320 ⇓P **P 14 22 25.3 -0.5**
SORM Soroca 79.10 320 ⇓P **P 14 22 25.3 -0.5**
SUR Sutherland 79.26 238 LR LR 14 51 22.5
comp=Z,1µm,19.6s,baz=87,slow=31
AKASG Malin Array Be 79.27 322 P **P 14 22 26.7 +0.1**
comp=Z,1.1nm,0.7s,baz=86,slow=5.3,SNR=14
comp=Z,1.1nm,0.7s
AKASG Malin Array Be 79.27 322 *i*P **P 14 22 26.5 -0.2**
AKBB Malin Array Si 79.27 322*ce*P **P 14 22 26.4 -0.3**
BISRR Bisoca 79.53 317 ⇓P **P 14 22 30.5 +2.2**
VRI Vrincioaia 79.59 317 ⇑P **P 14 22 30.6 +2.0**
VRI Vrincioaia 79.59 317 ⇑P **P 14 22 30.6 +2.0**
PLOR Plostina 79.64 317 ⇓P **P 14 22 31.5 +2.6**
PLOR Plostina 79.64 317 ⇓P **P 14 22 31.5 +2.6**
TESR Tescani 79.80 318 ⇑P **P 14 22 30.2 +0.5**
MLR Muntele Rosu 80.04 317 ⇓P **P 14 22 32.5 +1.3**
MLR Muntele Rosu 80.04 317 P **P 14 22 32.4 +1.3**
comp=Z,11nm,0.9s,baz=93,slow=1.7,SNR=14
comp=Z,11nm,0.9s
MLR Muntele Rosu 80.04 317 P **P 14 22 31.3 +0.2**
MLR IAmb IAmb 14 22 56.3
comp=Z,28nm,1.1s
MLR Muntele Rosu 80.04 317 P **P 14 22 31.3 +0.2**
MLR pmax pmax
comp=Z,28nm,1.1s
BIZ Bicaz 80.27 318 ⇓P P 14 22 37.2 +5.0
VOIR 80.64 317 ⇑P **P 14 22 35.8 +1.5**
VOIR 80.64 317 ⇑P **P 14 22 35.8 +1.5**
BURAR Bucovina Array 81.02 319 ⇑P **P 14 22 37.8 +1.5**
BURAR Bucovina Array 81.02 319 P **P 14 22 35.5 -0.8**
BURAR Bucovina Array 81.02 319 ⇑P **P 14 22 37.8 +1.5**
BUR08 Bucovina Ar. S 81.03 319 P **P 14 22 35.5 -0.9**
TSUM Tsumeb 81.63 251 LR LR 14 55 44.4
comp=Z,914nm,18.9s,baz=144,slow=33
NACGM Naroch 81.87 326*ce*P P 14 22 49.8 +9.3
baz=105
VNDA Vanda 82.12 169 P **P 14 22 45.3 +3.9**
comp=Z,1.3nm,1.1s,baz=255,slow=7.2,SNR=2.7
VNDA LR LR 14 57 36.1
comp=Z,419nm,18.0s,baz=316,slow=34
comp=Z,1.3nm,1.1s
KOLS Kolonicke sedl 83.22 320 *e*P **P 14 22 49.9 +2.2**
KOLS pmax pmax
comp=Z,16nm,0.9s
KOLS Kolonicke sedl 83.22 320 *e*P **P 14 22 49.9 +2.2**
BILL Bilibino 83.48 20 *e*P **P 14 22 47.7 -1.0**
BILL *e* 14 26 02.6
BILL *e*PPP PPP 14 27 48.3
BILL *e*S **S 14 33 07.6 -0.6**
BILL *e*SS **SS 14 38 35.6 +1.3**
BILL *e*SSS SSS 14 42 05.2
BILL pmax pmax
comp=Z,11nm,2.0s
CRVS Cervenica-Dubn 83.73 320 *e*P **P 14 22 50.6 +0.2**
CRVS Cervenica-Dubn 83.73 320 *e*P **P 14 22 50.6 +0.2**
FIA1 FINESS Array S 83.99 332 P **P 14 22 50.0 -1.4**
FIA1 IAmb IAmb 14 23 02.7
comp=Z,24nm,1.1s
FINES FINESS Array B 83.99 332 P **P 14 22 52.6 +1.2**
comp=Z,2.8nm,0.5s,baz=111,slow=6.1,SNR=15
FINES LR LR 15 03 06.6
comp=Z,288nm,21.2s,baz=105,slow=38
comp=Z,2.8nm,0.5s
FINES FINESS Array B 83.99 332 P **P 14 22 50.0 -1.4**
PDG Podgorica 84.21 313 ⇓P **P 14 22 55.2 +2.3**
MORH Mrgy, Hungar 85.18 317 ⇓P P 14 23 07.1 +9.4
KEV Kevo 85.99 341 P **P 14 23 01.6 +0.4**
KEV IAmb IAmb 14 23 13.7
comp=Z,26nm,1.2s
KEV Kevo 85.99 341 P **P 14 23 01.6 +0.4**
KEV pmax pmax
comp=Z,26nm,1.2s
JAVC Velka Javorina 86.20 319 *e*P **P 14 23 04.9 +2.1**
MORC Moravsky Berou 86.40 320 *e*P **P 14 23 04.4 +0.6**
ARCES ARCESS Array B 86.43 340 P **P 14 23 04.3 +0.9**
comp=Z,13nm,0.8s,baz=104,slow=5.1,SNR=31
ARCES LR LR 15 06 33.4
comp=Z,419nm,19.7s,baz=107,slow=39
comp=Z,13nm,0.8s
ARCES ARCESS Array B 86.43 340 P **P 14 23 04.0 +0.6**
ARCES IAmb IAmb 14 23 07.1
comp=Z,18nm,0.9s
ARCES ARCESS Array B 86.43 340 P **P 14 23 04.0 +0.6**
ARCES pmax pmax
comp=Z,18nm,1.0s
KRLC Kraliky 86.93 320 *e*PCP **PcP 14 23 07.9 -0.7**
KRLC *ex* x 14 23 14.4
VRAC Vranov 86.96 319 *e*P **P 14 23 07.8 +1.3**
KRUC Moravsky 87.06 319 *e*P **P 14 23 07.9 +0.9**
DPC Dobruska-Polom 87.25 320 *e*PCP **PcP 14 23 10.5 +0.5**
DPC *ex* x 14 23 19.4
QSPA South Pole Qui 87.81 180 LR LR 14 58 28.4
comp=Z,927nm,19.8s,baz=322,slow=33
AFI Afiamalu 88.29 104 LR LR 15 06 14.5
comp=Z,117nm,18.2s,baz=192,slow=38
CKRC Cesky Krumlov 88.40 319 *e*PCP **PcP 14 23 15.6 +0.5**
CKRC *ex* x 14 23 21.8
GERES GERESS Array B 88.80 319 P **P 14 23 16.8 +1.4**
comp=Z,1.4nm,0.8s,baz=114,slow=3.2,SNR=10
comp=Z,1.4nm,0.8s
GERES GERESS Array B 88.80 319 P **P 14 23 14.1 -1.3**
BRG Berggiesshubel 88.81 321 *e*P **P 14 23 17.2 +1.9**
BRG Amp 14 23 19.1
comp=Z,12nm,1.4s
BRG *ex* x 14 23 38.5
BRG Amp 14 23 41.0
comp=Z,12nm,1.3s
BRG Berggiesshubel 88.81 321 *e*P **P 14 23 17.2 +1.9**
BRG pmax pmax
comp=Z,12nm,1.4s
KHC Kasperske Hory 88.91 319 *e*PCP **PcP 14 23 18.0 +0.7**
KHC *ex* x 14 23 27.1
CLL Collm 89.44 321 *i*P P 14 23 04.6 -14
CLL *e*S **S 14 34 05.0 -1.8**
CLL pmax pmax
comp=Z,29nm,2.0s
CLL MLR MLR
comp=Z,300nm,24.9s
CLL Collm 89.44 321 *i*P **P 14 23 18.9 +0.7**
comp=Z,29nm,2.0s
CLL *i* x x 14 23 47.7
comp=Z,12nm,1.4s
CLL *e*S **S 14 34 08.0 +1.2**
comp=N,300nm,29.4s
CLL *e*S **S 14 34 08.0 +1.2**
comp=E,100nm,17.6s
CLL *e*S **S 14 34 08.0 +1.2**
comp=Z,100nm,19.9s
CLL *e*PS **PS 14 35 18.0 +2.8**
CLL *e*SS **SS 14 40 00.0 -2.3**
CLL *e*SSS SSS 14 43 24.0
CLL LmV 15 12 00.0
comp=Z,200nm,18.1s
HFS Hagfors 89.73 330 P **P 14 23 22.2 +2.8**
comp=Z,2.3nm,0.8s,baz=108,slow=9.5,SNR=4.2
HFS LR LR 15 08 00.5
comp=Z,316nm,19.6s,baz=88,slow=39
comp=Z,2.3nm,0.8s
TROLL Troll, Antarti 90.12 198 P **P 14 23 21.2 0.0**
SPITS Spitsbergen Ar 90.67 348 LR LR 15 12 26.1
comp=Z,590nm,18.2s,baz=66,slow=41
NB2 NORSAR Subarra 91.01 331 P **P 14 23 27.8 +2.4**
comp=Z,3.2nm,0.9s,baz=94,slow=4.8
NOA NORSAR Array B 91.01 331 P **P 14 23 27.7 +2.4**
comp=Z,1.1nm,0.8s,baz=93,slow=4.6,SNR=4.1
NOA LR LR 15 09 13.2
comp=Z,254nm,19.5s,baz=100,slow=39
comp=Z,1.1nm,0.8s
DAVOX Davos/Dischmat 91.26 317 P **P 14 23 29.7 +2.7**
comp=Z,4.1nm,0.8s,baz=116,slow=7.8,SNR=9.1
DAVOX LR LR 15 10 09.5
comp=Z,180nm,19.7s,baz=83,slow=39
comp=Z,4.1nm,0.8s
KEST Kesra 91.33 306 P **P 14 23 30.1 +2.5**
comp=Z,4.4nm,0.8s,baz=326,slow=3.2,SNR=5.7
comp=Z,4.4nm,0.8s
KEST Kesra 91.33 306 IAmb IAmb 14 23 52.6
comp=Z,14nm,0.9s
SNAA Sanae 91.83 198 LR LR 14 59 27.1
comp=Z,489nm,18.3s,baz=103,slow=32
A21K Barrow 96.47 18 P **P 14 23 50.5 +0.4**
A21K Barrow 96.47 18 P **P 14 23 51.6 +1.4**
baz=283
N16K Nishlik Lake 97.66 29 P Pdif 14 23 57.2 +1.2
baz=279
JMIC Jan Mayen 97.83 342 LR LR 15 12 08.9
comp=Z,280nm,21.5s,baz=71,slow=38
TORD Torodi Ar. Bea 98.04 283 LR LR 15 06 44.7
comp=Z,379nm,19.7s,baz=32,slow=34
F21K Alatna River 98.54 22 P Pdif 14 23 60.0 +0.3
baz=285
IMAR Indian Mountai 98.75 23 P **P 14 23 59.9 -0.7**
C23K Itkillik River 98.80 19 P Pdif 14 24 01.3 +0.5
baz=288
N18K Kilae Creek 99.02 29 P **Pdif 14 24 01.6 -0.3**
baz=282
J20K Nowinta River 99.03 25 P **Pdif 14 24 02.6 +0.8**
baz=284
H21K Melozitna Rive 99.21 24 P **Pdif 14 24 02.8 +0.1**
H21K IAmb IAmb 14 24 21.7
comp=Z,9.6nm,1.2s
H21K Melozitna Rive 99.21 24 P **Pdif 14 24 03.2 +0.5**
baz=285
RAR Rarotonga 99.25 112 LR LR 15 08 55.0
comp=Z,162nm,21.4s,baz=258,slow=35
K20K Telida 99.26 26 P **Pdif 14 24 02.9 -0.1**
baz=284
TOLK Toolik Lake Re 99.53 20 P **Pdif 14 24 05.3 +1.2**
baz=289
N19K Bonanza Creek 99.67 29 P **Pdif 14 24 05.2 +0.3**
baz=283
H22K Ishtalitna Cre 99.71 23 P **Pdif 14 24 06.0 +1.1**
baz=287
G23K Bananza Creek 99.99 22 P **Pdif 14 24 07.1 +0.9**
baz=288
ILAR Eielson Array 101.86 24 PP PP 14 28 12.7 -13
comp=Z,0.5nm,0.9s,baz=280,slow=6.5,SNR=4.3
TBI Tubuai 108.40 115 *e*LR LR 15 00 05.8
comp=Z,532nm,28.2s
PPT2 Papeete2 109.26 109 *e*LR LR 15 00 31.8
comp=Z,656nm,24.8s
NVAR Mina Array Bea 130.05 39 PKP **PKiKP 14 29 34.7 +2.0**
comp=Z,0.7nm,0.7s,baz=270,slow=2.7,SNR=5.8
NVAR SKP 14 33 10.6
comp=Z,1.4nm,1.0s,baz=283,slow=3.6,SNR=3.9
ULM Lac du Bonnet 130.33 13 PKP **PKiKP 14 29 33.2 +0.6**
comp=Z,4.2nm,0.8s,baz=63,slow=3.0,SNR=4.0
ULM Lac du Bonnet 130.33 13 **PKPdf 14 29 31.5 -0.2**
PDAR Pinedale Array 131.97 29 PKP **PKiKP 14 29 37.3 +0.9**
comp=Z,0.3nm,0.4s,baz=252,slow=3.0,SNR=4.7
PDAR Pinedale Array 131.97 29 **PKPdf 14 29 35.4 0.0**
N23A Red Feather La 135.12 27 PKPdf **PKPdf 14 29 39.5 -1.9**
PV07 Paradox Valley 135.67 32 **PKPdf 14 29 39.5 -2.9**
R49A Shelbyville 143.78 6 PKPbc 14 29 54.0 -0.4
R49A Shelbyville 143.78 6 P PKPbc 14 29 54.2 -0.2
baz=352
R49A P PKPbc 14 29 54.2 -0.2
baz=352
R50A Paris 143.87 5 PKPab 14 29 54.2 +0.1
CPUP Villa Florida 143.88 217 PKP **PKPdf 14 29 58.1 +0.7**
comp=Z,2.5nm,0.9s,baz=184,slow=2.4,SNR=4.3
PBMO Poplar Bluff 144.35 14 P PKPbc 14 29 56.3 +0.1
baz=343
S54A Dingess, Beckl 144.51 1 **PKPab 14 29 56.4 -0.1**
S57A Dark Hollow, R 144.53 358 P **PKPab 14 29 56.3 -0.3**
baz=2.8,SNR=6.1
S57A P **PKPab 14 29 56.3 -0.3**
baz=2.8,SNR=6.1
S51A Beattyville 144.57 4 **PKPab 14 29 56.7 0.0**
S51A Beattyville 144.57 4 P **PKPab 14 29 56.2 -0.5**
baz=355
S51A P **PKPab 14 29 56.2 -0.5**
baz=355
ABTX Abilene, Hawle 144.77 29 PKPdf **PKPab 14 29 56.9 -0.7**
LCAR Lake Charles 144.84 15 PKPdf **PKPab 14 29 56.7 -1.0**
T50A Nancy 145.07 6 P **PKPbc 14 29 58.3 -0.2**
baz=353

T50A				P		**PKPbc**	**14 29 58.3**	**-0.2**
	baz=353							
TX31	**Lajitas Ar. Si**	**145.14**	**37**	P		**PKPdf**	**14 29 59.8**	**+0.2**
	baz=317							
TXAR	**Lajitas Array**	**145.15**	**37**	PKP		**PKPdf**	**14 30 00.1**	**+0.4**
	comp=Z,27nm,0.8s,baz=276,slow=1.4,SNR=124							
T59A	**Double "B" Far**	**145.24**	**356**	P		**PKPbc**	**14 29 56.9**	**-2.2**
	baz=5.3,SNR=8.3							
T59A				P		**PKPbc**	**14 29 56.9**	**-2.2**
	baz=5.3,SNR=8.3							
Z35A	**Perchaven, San**	**145.25**	**25**	P		**PKPbc**	**14 29 58.5**	**-0.7**
	baz=330,SNR=7.7							
T57A	**Hurt**	**145.30**	**358**	P		**PKPbc**	**14 29 57.5**	**-1.8**
	baz=2.3,SNR=10							
T57A				P		**PKPbc**	**14 29 57.5**	**-1.8**
	baz=2.3,SNR=10							
W41B	**Gary Mavity, V**	**145.38**	**17**	P		**PKPbc**	**14 29 58.7**	**-0.9**
	baz=339,SNR=16							
U49A	**Red Boiling Sp**	**145.46**	**7**	P		**PKPbc**	**14 29 58.6**	**-1.2**
	baz=351							
WVT	**Waverly**	**145.52**	**10**	PKPbc		**PKPdf**	**14 29 59.2**	**-0.8**
WVT	**Waverly**	**145.52**	**10**	PKIKP		**PKPdf**	**14 29 59.2**	**-0.8**
WVT	**Waverly**	**145.52**	**10**	P		**PKPdf**	**14 29 59.4**	**-0.5**
	baz=347							
MIAR	**Mount Ida**	**145.55**	**19**	P		**PKPdf**	**14 29 59.6**	**-0.4**
	baz=337,SNR=22							
TZTN	**Tazewell**	**145.66**	**4**	P		**PKPdf**	**14 29 59.3**	**-0.9**
	baz=355,SNR=23							
X40A	**Basin Creek Fa**	**145.84**	**18**	P		**PKPbc**	**14 30 00.8**	**-0.3**
	baz=338,SNR=6.7							
X40A				P		**PKPbc**	**14 30 00.8**	**-0.3**
	baz=338,SNR=6.7							
V48A	**Smith Brothers**	**146.07**	**9**	P		**PKPdf**	**14 30 01.1**	**+0.2**
	baz=349,SNR=11							
V52A	**Sevierville**	**146.35**	**4**	P		**PKPdf**	**14 30 01.8**	**+0.4**
	baz=355,SNR=8.5							
JCT	**Junction City**	**146.43**	**31**	P		**PKPbc**	**14 30 02.4**	**-0.6**
	baz=324							
V55A	**Taylorsville**	**146.46**	**1**	P		**PKPab**	**14 30 03.3**	**-0.4**
	baz=359,SNR=6.9							
V55A				P		**PKPab**	**14 30 03.3**	**-0.4**
	baz=359,SNR=6.9							
TKL	**Tuckaleechee C**	**146.52**	**5**	P		**PKPbc**	**14 30 02.7**	**-0.4**
	baz=354,SNR=13							
V53A	**Saluda**	**146.58**	**3**	P		**PKPbc**	**14 30 02.8**	**-0.5**
	baz=356,SNR=15							
V53A				P		**PKPbc**	**14 30 02.8**	**-0.5**
	baz=356,SNR=15							
KMSC	**Kings Mountain**	**147.16**	**1**	P		**PKPbc**	**14 30 04.5**	**-0.5**
	baz=359,SNR=5.5							
CASEE	**Lake Jocassee**	**147.25**	**4**	P		**PKPbc**	**14 30 05.0**	**-0.2**
	baz=356,SNR=16							
X48A	**Hartselle**	**147.29**	**10**	P		**PKPbc**	**14 30 04.5**	**-0.8**
	baz=348,SNR=17							
X51A	**Calhoun**	**147.50**	**7**	P		**PKPbc**	**14 30 06.7**	**+0.8**
	baz=352,SNR=8.8							
X51A				P		**PKPbc**	**14 30 06.7**	**+0.8**
	baz=352,SNR=8.8							
Y49A	**Blount Mountai**	**147.98**	**9**	P		**PKPbc**	**14 30 06.5**	**-0.7**
	baz=349,SNR=19							
JSC	**Jenkinsville**	**148.02**	**1**	PKPbc		**PKPbc**	**14 30 06.7**	**-0.6**
JSC	**Jenkinsville**	**148.02**	**1**	PKP2		**PKPbc**	**14 30 06.7**	**-0.6**
JSC	**Jenkinsville**	**148.02**	**1**	P		**PKPbc**	**14 30 07.3**	**0.0**
	baz=359							
HODGE	**Hodges**	**148.04**	**3**	PKPbc		**PKPbc**	**14 30 06.7**	**-0.6**
HODGE	**Hodges**	**148.04**	**3**	P		**PKPbc**	**14 30 06.6**	**-0.8**
	baz=357,SNR=8.1							
Y52A	**Lilburn**	**148.28**	**6**	PKPbc		**PKPbc**	**14 30 07.3**	**-0.7**
Y52A	**Lilburn**	**148.28**	**6**	P		**PKPbc**	**14 30 08.0**	**0.0**
	baz=353							
Y52A				P		**PKPbc**	**14 30 08.0**	**0.0**
	baz=353							
146A	**Union**	**148.63**	**14**	PKPbc		**PKPbc**	**14 30 08.1**	**-0.9**
HKT	**Hockley**	**148.77**	**26**	PKPbc		**PKPbc**	**14 30 07.8**	**-1.5**
HKT	**Hockley**	**148.77**	**26**	PKP2		**PKPbc**	**14 30 07.8**	**-1.5**
250A	**Grady**	**149.84**	**10**	PKPbc		**PKPbc**	**14 30 10.7**	**-1.4**

*ISK **21** 14:15:04.1,39˚.55N×25˚.94E,h5km,ML3.3/26*
*THE **21** 14:15:05.7,39˚.54N×26˚.01E,h10km,ML3.0/8,Error ellipse: s-maj=1.0km s-min=0.5km az=140.0*
*ATH **21** 14:15:06.0,39˚.54N×25˚.98E,h16km±4km,ML3.0/9,Error ellipse: s-maj=4.9km s-min=1.1km az=142.0*
*DDA **21** 14:15:05.2±0.0,39˚.54N×26˚.04E,h17km±1km,MW3.3*

ISC 21 14:15:05.5±0.9,39˚.53N±0˚.01×26˚.03E±0˚.02,h13km±7km,n84,σ0s93/124,2C-3D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GPNR	**Gulpinar-Canak**	**0.11**	**133**	PG	**Pg**	**14 15 08.1**	**-0.5**
BOZC	**Bozcaada**	**0.31**	**4**	P	**Pg**	**14 15 11.6**	**-0.3**
BOZC				S	**Sg**	**14 15 16.5**	**+0.4**
BOZC				S	**Sg**	**14 15 16.5**	**+0.4**
PRK	**Paraskevi**	**0.34**	**146**	P	**Pb**	**14 15 13.7**	**+0.2**
PRK				S	**Sb**	**14 15 19.0**	**+0.2**
PRK				AML	AML	14 15 19.2	
	comp=E,19316μm,0.2s						
PRK				AML	AML	14 15 19.7	
	comp=N,13416μm,0.3s						
PRK	**Paraskevi**	**0.34**	**146**	P	**Pb**	**14 15 13.6**	**+0.1**
PRK				S	**Sg**	**14 15 18.3**	**+1.2**
	comp=N,8μm,0.2s						
SIGR	**SIGRI**	**0.35**	**203**	P	**Pg**	**14 15 12.5**	**0.0**
SIGR				S	**Sg**	**14 15 17.7**	**+0.5**
SIGR				AML	AML	14 15 18.9	
	comp=E,4322μm,0.2s						
SIGR				AML	AML	14 15 19.4	
	comp=N,7144μm,0.3s						
SIGR	**SIGRI**	**0.35**	**203**	P	**Pg**	**14 15 12.5**	**0.0**
SIGR				S	**Sg**	**14 15 17.6**	**+0.4**
	comp=N,3μm,0.2s						
EZN	**Ezine**	**0.37**	**38**	P	**Pg**	**14 15 12.9**	**-0.1**
EZN				S	**Sg**	**14 15 18.4**	**+0.4**
	comp=N,2μm,0.1s						
EZN	**Ezine**	**0.37**	**38**	PG	**Pg**	**14 15 12.9**	**-0.1**
BAYC	**CANAKKALE_Bayr**	**0.45**	**62**	P	**Pg**	**14 15 14.2**	**-0.3**
BAYC				S	**Sg**	**14 15 20.4**	**-0.1**
ECEA	**Canakkale, Ece**	**0.52**	**12**	P	**Pg**	**14 15 15.7**	**-0.1**
ECEA				S	**Sb**	**14 15 23.4**	**-0.7**
AYVA	**Ayvalik**	**0.56**	**113**	P	**Pg**	**14 15 16.7**	**+0.3**
AYVA				S	**Sg**	**14 15 24.8**	**+0.9**
GOKA	**anakkale-Gk**	**0.66**	**352**	P	**Pg**	**14 15 18.0**	**-0.4**
GOKA				S	**Sb**	**14 15 27.4**	**-0.7**
GADA	**Gvkgeada**	**0.67**	**351**	PG	**Pg**	**14 15 17.9**	**-0.6**
GADA				SG	**Sb**	**14 15 27.6**	**-0.6**
LIA	**Limnos Island**	**0.75**	**300**	P	**Pg**	**14 15 20.0**	**0.0**
LIA				S	**Sb**	**14 15 29.9**	**-0.6**
LIA				AML	AML	14 15 32.5	
	comp=E,1349μm,0.3s						
LIA				AML	AML	14 15 34.3	
	comp=N,1553μm,0.5s						
LIA	**Limnos Island**	**0.75**	**300**	P	**Pg**	**14 15 19.9**	**0.0**
LIA				S	**Sb**	**14 15 30.4**	**-0.1**
	comp=N,712nm,0.4s						
EFSA	**Agios Efstrati**	**0.80**	**271**	P	**Pg**	**14 15 21.0**	**0.0**
EFSA				AML	AML	14 15 33.6	
	comp=E,2984μm,0.4s						
EFSA				AML	AML	14 15 34.3	
	comp=N,1972μm,0.5s						
BUHA	**Balikesir, Bur**	**0.81**	**92**	P	**Pb**	**14 15 20.3**	**-1.2**
BUHA				S	**Sb**	**14 15 32.0**	**-0.4**
GELI	**Tayfur-Gelibol**	**0.93**	**22**	PG	**Pb**	**14 15 23.1**	**-0.4**
GELI				SG	**Sn**	**14 15 36.8**	**-0.7**
FOCM	**Foa**	**0.98**	**146**	PG	**Pb**	**14 15 24.2**	**-0.2**
ZEDA	**zmir-Bergama**	**0.99**	**124**	P	**Pb**	**14 15 23.9**	**-0.7**
ZEDA				S	**Sg**	**14 15 38.2**	**+0.6**
SMTH	**Samothraki Isl**	**1.01**	**338**	P	**Pb**	**14 15 24.6**	**-0.3**
SMTH				S	**Sg**	**14 15 38.2**	**-0.1**
SMTH				AML	AML	14 15 39.0	
	comp=E,1467μm,0.4s						
SMTH				AML	AML	14 15 39.4	
	comp=N,1451μm,0.2s						
SMTH	**Samothraki Isl**	**1.01**	**338**	P	**Pb**	**14 15 24.6**	**-0.3**
SMTH				S	**Sg**	**14 15 38.4**	**+0.2**
	comp=N,732nm,0.3s						
KRBN	**Karaburun**	**1.02**	**156**	PG	**Pn**	**14 15 25.4**	**-0.2**
PSRA	**Psara**	**1.05**	**200**	P	**Pn**	**14 15 25.8**	**-0.2**
PSRA				AML	AML	14 15 43.7	
	comp=N,2422μm,0.2s						
PSRA				AML	AML	14 15 44.9	
	comp=E,2612μm,0.2s						
CHOS	**Chios island**	**1.14**	**179**	P	**Pn**	**14 15 26.3**	**-1.1**
CHOS				AML	AML	14 15 45.6	
	comp=E,1990μm,0.2s						
CHOS				AML	AML	14 15 46.9	
	comp=N,1014μm,0.5s						
CHOS	**Chios island**	**1.14**	**179**	P	**Pn**	**14 15 26.3**	**-1.1**
CHOS				S	**Sg**	**14 15 43.2**	**+0.8**
	comp=N,748nm,0.4s						
CHOS	**Chios island**	**1.14**	**179**	PN	**Pb**	**14 15 27.6**	**+0.4**
CAVK	**Edirne/Enez-Ca**	**1.16**	**5**	P	**Pn**	**14 15 26.7**	**-0.8**
CAVK				S	**Sg**	**14 15 43.5**	**+0.5**
ERIK	**Erikli-Kesan**	**1.20**	**18**	PN	**Pn**	**14 15 27.4**	**-0.6**
ENEZ	**Enez**	**1.21**	**5**	P	**Pn**	**14 15 27.7**	**-0.4**
ENEZ				S	**Sg**	**14 15 44.3**	**-0.1**
	comp=N,1μm,0.4s						
ENEZ	**Enez**	**1.21**	**5**	PN	**Pb**	**14 15 28.0**	**-0.2**
BALY	**Balya**	**1.25**	**80**	P	**Pn**	**14 15 28.3**	**-0.4**
BALY				S	**Sn**	**14 15 45.2**	**-0.2**
URLA	**Izmir**	**1.25**	**159**	P	**Pn**	**14 15 27.6**	**-1.2**
URLA				S	**Sb**	**14 15 43.8**	**-1.3**
KRBG	**Karabiga-Canak**	**1.30**	**48**	PN	**Pb**	**14 15 29.6**	**-0.2**
STEP	**BALIKESIR_Sava**	**1.32**	**96**	P	**Pb**	**14 15 30.6**	**+0.5**
STEP				S	**Sg**	**14 15 49.4**	**+1.4**
ZEYE	**Izmir, Urla-Ze**	**1.34**	**164**	P	**Pn**	**14 15 28.7**	**-1.3**
ZEYE				S	**Sb**	**14 15 48.4**	**+0.7**
ALN	**Alexandroupoli**	**1.36**	**1**	P	**Pn**	**14 15 29.9**	**-0.4**
ALN				AML	AML	14 15 50.1	
	comp=N,599μm,0.5s						
ALN				AML	AML	14 15 50.1	
	comp=E,1003μm,0.4s						
ALN	**Alexandroupoli**	**1.36**	**1**	P	**Pn**	**14 15 30.0**	**-0.3**
ALN				S	**Sb**	**14 15 48.1**	**-0.2**
	comp=E,402nm,0.4s						
ALN	**Alexandroupoli**	**1.36**	**1**	PN	**Pb**	**14 15 30.8**	**-0.1**
KNL	**Balıkesir**	**1.37**	**57**	P	**Pn**	**14 15 30.4**	**0.0**
KNL				S	**Sg**	**14 15 49.8**	**+0.2**
GONE	**Gonen-Balikesi**	**1.38**	**68**	PN	**Pg**	**14 15 31.9**	**-0.1**
KESN	**Edirne-Kesan**	**1.39**	**21**	P	**Pn**	**14 15 30.3**	**-0.7**
KESN				S	**Sb**	**14 15 49.0**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.45**	**37**	PN	**Pb**	**14 15 32.3**	**-0.2**
SART	**Tekirdag**	**1.46**	**37**	P	**Pn**	**14 15 31.0**	**-0.6**
SART				S	**Sg**	**14 15 52.3**	**0.0**
THAS	**Thassos island**	**1.47**	**317**	P	**Pn**	**14 15 31.0**	**-0.7**
THAS				S	**Sn**	**14 15 49.8**	**-1.0**
THAS				AML	AML	14 15 54.4	
	comp=N,487μm,0.3s						
THAS				AML	AML	14 15 55.4	
	comp=E,402nm,0.6s						
THAS	**Thassos island**	**1.47**	**317**	P	**Pn**	**14 15 30.9**	**-0.8**
MAR6	**Marsite Statio**	**1.51**	**39**	PN	**Pb**	**14 15 33.7**	**+0.3**
MAR6				SN	**Sg**	**14 15 54.9**	**+0.9**
MAR3	**Marsite Statio**	**1.55**	**38**	PN	**Pb**	**14 15 33.7**	**-0.4**
GZKV	**Gazikoy-Tekird**	**1.57**	**39**	PN	**Pb**	**14 15 34.7**	**+0.3**
GZKV				SN	**Sg**	**14 15 57.0**	**+0.9**
DGB	**zmir**	**1.62**	**155**	P	**Pn**	**14 15 32.6**	**-1.3**
DGB				S	**Sb**	**14 15 56.3**	**+0.6**
EDC	**Edincik**	**1.63**	**59**	PN	**Pb**	**14 15 35.1**	**+0.2**
RDO	**Rodhopi**	**1.66**	**347**	P	**Pn**	**14 15 34.1**	**-0.2**
RDO	**Rodhopi**	**1.66**	**347**	P	**Pn**	**14 15 33.7**	**-0.6**
RDO	**Rodhopi**	**1.66**	**347**	PN	**Pn**	**14 15 34.7**	**+0.4**
UKOP	**Uzunkopru-Edir**	**1.66**	**16**	PN	**Pb**	**14 15 35.9**	**-0.1**
OUR	**Ouranopolis**	**1.77**	**298**	P	**Pn**	**14 15 35.5**	**-0.3**
OUR	**Ouranopolis**	**1.77**	**298**	PN	**Pn**	**14 15 35.7**	**-0.1**
PAIG	**Paliouri**	**1.85**	**283**	P	**Pn**	**14 15 36.3**	**-0.7**
TKR	**Tekirdag**	**1.86**	**38**	PN	**Pb**	**14 15 38.9**	**-0.4**
KAVA	**Kavala**	**1.87**	**322**	P	**Pn**	**14 15 36.8**	**-0.4**
DURS	**Dursunbey**	**1.89**	**87**	P	**Pn**	**14 15 38.0**	**+0.4**
DURS				S	**Sn**	**14 16 01.7**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**2.15**	**137**	PN	**Pb**	**14 15 43.1**	**-1.3**
AYDB				SN	**Sb**	**14 16 12.3**	**+1.2**
ORLT	**Orhaneli**	**2.27**	**76**	PN	**Pb**	**14 15 45.3**	**-1.1**
KULA	**Kula-Manisa**	**2.29**	**116**	PN	**Pb**	**14 15 45.5**	**-1.2**
SIMA	**Simav-Kutahya**	**2.34**	**100**	PN	**Pb**	**14 15 46.3**	**-1.2**
MDNY	**Mudanya-Bursa**	**2.35**	**68**	PN	**Pb**	**14 15 46.1**	**-1.6**
RZN	**Rozhen**	**2.37**	**336**	P	**Pn**	**14 15 44.8**	**+0.5**
EDRB	**Edirne**	**2.38**	**13**	PN	**Pn**	**14 15 45.7**	**+1.5**
SLVT	**Silivri**	**2.38**	**44**	PN	**Pb**	**14 15 46.4**	**-1.8**
SLVT				SN	**Sb**	**14 16 16.7**	**-0.8**
KIRK	**Kırklareli**	**2.39**	**20**	P	**Pn**	**14 15 45.2**	**+0.8**
KIRK				S	**Sb**	**14 16 18.5**	**+0.7**
ARMT	**Armutlu**	**2.41**	**64**	PN	**Pb**	**14 15 46.9**	**-1.8**
VIZE	**Kirklareli, Vi**	**2.47**	**33**	P	**Pn**	**14 15 44.4**	**-1.0**
VIZE				S	**Sb**	**14 16 21.1**	**+1.1**
ULDT	**Uludag**	**2.47**	**75**	P	**Pn**	**14 15 47.0**	**+1.3**
ULDT				S	**Sg**	**14 16 24.0**	**-0.9**
CTKS	**Kestanelik-??a**	**2.55**	**47**	PN	**Pb**	**14 15 48.7**	**-2.4**
ARMN	**Kirklareli, Me**	**2.56**	**24**	P	**Pn**	**14 15 46.3**	**-0.4**
CTYL	**Yalikoy Yolu**	**2.60**	**41**	PN	**Pn**	**14 15 49.3**	**+2.1**
MMB	**Musomiste**	**2.70**	**320**	P	**Pn**	**14 15 48.1**	**-0.6**
GDZ	**Gediz**	**2.72**	**98**	P	**Pn**	**14 15 50.8**	**+1.8**
GDZ				S	**Sg**	**14 16 32.7**	**-0.1**
KKB	**Krupnik**	**3.23**	**317**	P	**Pn**	**14 15 57.0**	**+1.0**
VTS	**Vitosha**	**3.74**	**327**	⇓S	**Sg**	**14 17 08.3**	**+2.8**
MLR	**Muntele Rosu**	**5.96**	**359**	⇑P	**Pn**	**14 16 37.2**	**+3.7**
PLOR	**Plostina**	**6.33**	**4**	⇑P	**Pn**	**14 16 40.3**	**+1.7**
VRI	**Vrincioaia**	**6.35**	**4**	⇓P	**Pn**	**14 16 41.7**	**+2.9**
BZS	**Buzias**	**6.90**	**333**	⇓P	Pn	14 16 51.3	+5.0

MAN 21 14:27:40.1,13˚.54N×120˚.73E,h9km,mb3.8,ML2.5,MS2.1, 2C-2D,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.22**	**101**	⇑*e*P	Pn	14 27 46.3	+0.3
PGP				*i* S		14 27 51.0	
LUBP	**Lubang**	**0.51**	**292**	⇑*i*P	Pn	14 27 50.2	+0.4
LUBP				*i* S		14 27 56.1	
MACP	**Maragondon, Ca**	**0.72**	**359**	⇓*e*P	Pn	14 27 55.9	+0.2
MACP				*e*S		14 28 11.0	
SJMP	**San Jose**	**1.14**	**161**	⇓*e*P	Pn	14 28 01.8	+10
SJMP				*e*S		14 28 16.8	

*IDC **21** 14:30:38.5±1.1,16˚.09S×167˚.20E,h0km,mb3.9/5, mbtmp4.1/6,ML4.6/1,Error ellipse: s-maj=33.2km s-min=24.9km az=100.0*
*NEIC **21** 14:30:40.5±2.1,16˚.29S±0˚.03×167˚.2E±0˚.1,h10km±1km, mb4.3/5,Error ellipse: s-maj=23.7km s-min=4.9km az=91.0*

ISC 21 14:30:39.6±0.9,16˚.24S±0˚.09×167˚.2E±0˚.1,h10km,n19, σ1s25/20,mb4.3/7,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIFNC	**LIFOU**	**4.51**	**179**	Pn	**Pn**	**14 31 48.2**	**+0.2**
KOUNC	**Koumac, New Ca**	**5.09**	**212**		**Pn**	**14 31 55.9**	**-0.1**
MARNC	**Mare, Loyalty**	**5.27**	**171**	Pn	**Pn**	**14 31 57.4**	**-1.1**
DZM	**Mont Dzumac**	**5.84**	**187**	Pn	**Pn**	**14 32 07.0**	**+0.6**
	15nm,0.3s,baz=19,slow=19,SNR=29						
DZM				Sn	**Sn**	**14 33 11.3**	**-2.2**
	baz=127,slow=20 28nm,0.3s						
OUENC	**Ouen Island, N**	**6.15**	**183**		**Pn**	**14 32 11.3**	**+0.7**
PINNC	**Pines Island,**	**6.34**	**178**	Pn	**Pn**	**14 32 13.8**	**+0.6**
CTA	**Charters Tower**	**20.25**	**256**	P	**P**	**14 35 16.5**	**+1.2**
	4.3nm,0.9s,baz=82,slow=15,SNR=3.9 4.3nm,0.9s						
URZ	**Urewera**	**23.61**	**160**	P	**P**	**14 35 53.6**	**+2.8**
	8.9nm,0.8s,baz=280,slow=9.9,SNR=5.6 8.9nm,0.8s						
BKZ	**Black Stump Fm**	**24.25**	**162**	P	**P**	**14 35 58.7**	**+1.8**
MSWZ	**Moikau Station**	**26.03**	**166**	P	**P**	**14 36 12.9**	**-0.2**
WB0	**Warramunga Arr**	**31.36**	**259**	P	**P**	**14 37 00.0**	**-0.7**
WB0				IAmb	IAmb	14 37 19.8	
	comp=Z,10nm,1.4s						
WRA	**Warramunga Arr**	**31.41**	**258**	P	**P**	**14 37 02.0**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=89,slow=8.8,SNR=4.2 comp=Z,0.5nm,0.8s						
AS31	**Alice Springs**	**32.09**	**251**	P	**P**	**14 37 07.8**	**+0.6**
AS31				IAmb	IAmb	14 37 30.9	
	comp=Z,0.8nm,0.7s						
ASAR	**Alice Springs**	**32.09**	**251**	P	**P**	**14 37 07.5**	**+0.3**
KNRA	**Kununurra**	**36.91**	**265**	P	**P**	**14 37 47.7**	**-1.3**
KNRA				IAmb	IAmb	14 38 08.3	
	comp=Z,12nm,1.3s						
KSAR	**Wonju Array Be**	**64.95**	**326**	P	**P**	**14 41 18.9**	**-0.7**
PETK	**Petropavlovsk-**	**69.55**	**354**	P	**P**	**14 41 49.3**	**+0.8**
	comp=Z,2.1nm,0.9s,baz=161,slow=10,SNR=4.5 comp=Z,2.1nm,0.9s						
ILAR	**Eielson Array**	**87.98**	**18**	P	**P**	**14 43 28.1**	**-1.5**
	comp=Z,0.5nm,0.6s,baz=237,slow=6.0,SNR=7.9 comp=Z,0.5nm,0.6s						
ARCES	**ARCESS Array B**	**121.69**	**345**	PKP	**PKPdf**	**14 49 33.2**	**0.0**
	comp=Z,0.8nm,0.6s,baz=124,slow=2.6,SNR=5.0						

MAN 21 14:38:01.2,8˚.37N×122˚.71E,h95km,mb3.8,ML2.6,MS2.1, Mindanao

*IDC **21** 14:52:32.4±0.6,0˚.95N×97˚.47E,h0km,mb4.4/22, mbtmp4.3/24,ML4.4/2,MS3.8/8,Error ellipse: s-maj=18.3km s-min=15.3km az=66.0*
*DJA **21** 14:52:35.1±0.3,1˚.N±2˚×97˚.E±˚,h19km±2km,M4.6/18, mB4.9/6,mb4.6/18,MLv5.0/13,Mw(mB)4.2/6*
*BJI **21** 14:52:37.6±0.0,0˚.97N×97˚.56E,h41km,mb4.6/47, mB4.9/23,Ms4.4/11,Ms7 4.2/11*
*NEIC **21** 14:52:37.6±1.7,0˚.96N±0˚.06×97˚.40E±0˚.07,h30km±4km, mb4.8/65,Error ellipse: s-maj=11.0km s-min=8.7km az=72.0*

ISC 21 14:52:36.5±0.5,0˚.93N±0˚.05×97˚.40E±0˚.05,h26km±2km, h26km:pP-P,n175,σ1s21/175,mb4.7/72,MS4.0/10,6C-9D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.41**	**25**	Pg	**Pn**	**14 52 46.7**	**-0.2**
GSI				Sg	**Sb**	**14 52 52.1**	**+0.7**
GSI	**Gunungsitoli**	**0.41**	**25**	P	**Pn**	**14 52 46.7**	**-0.2**
GSI				S	**Sn**	**14 52 54.6**	**+0.9**
MNSI	**Mandailing Nat**	**2.18**	**93**	P	**Pn**	**14 53 12.6**	**+1.4**
KCSI	**Kotacane, Aceh**	**2.60**	**8**	P	**Pn**	**14 53 16.7**	**-0.3**
SISI	**Saibi**	**2.80**	**143**	P	**Pn**	**14 53 19.4**	**-0.4**
TSI	**Tuntungan**	**2.81**	**24**	P	**Pn**	**14 53 20.6**	**+0.8**
PPI	**Padang Panjang**	**3.30**	**115**	P	**Pn**	**14 53 27.6**	**+1.1**
BKNI	**Bangkinang**	**3.69**	**99**	Pn	**Pn**	**14 53 31.9**	**0.0**
BKNI	**Bangkinang**	**3.69**	**99**	P	**Pn**	**14 53 32.0**	**+0.1**
LHMI	**Lhok Sumawe**	**4.30**	**354**	Pn	**Pn**	**14 53 40.0**	**-0.3**
LHMI	**Lhok Sumawe**	**4.30**	**354**	P	**Pn**	**14 53 40.2**	**-0.1**
PPSI	**Pulau Pagai**	**4.50**	**145**	P	**Pn**	**14 53 42.2**	**-0.9**
KRJI	**Kerinci**	**5.05**	**126**	P	**Pn**	**14 53 50.4**	**-0.3**
	4.0nm306nm,0.6s						
IPM	**Ipoh**	**5.05**	**46**	Pn	**Pn**	**14 53 52.2**	**+1.4**
KULM	**Kulim**	**5.41**	**37**	Pn	**Pn**	**14 53 55.9**	**+0.3**
MYKOM	**Kota Tinggi**	**6.50**	**82**	Pn	**Pn**	**14 54 11.1**	**+0.4**
MNAI	**Manna**	**7.64**	**133**	Pn	**Pn**	**14 54 25.8**	**-0.6**
MNAI	**Manna**	**7.64**	**133**	P	**Pn**	**14 54 25.9**	**-0.4**
SRIT	**Nakonsritamara**	**7.93**	**16**		**Pn**	**14 54 29.0**	**-1.2**
KASI	**Kota Agung**	**9.55**	**132**	P	**Pn**	**14 54 50.7**	**-1.8**
	35nm,0.9s						
TNG	**Tangerang**	**11.62**	**128**	P	Pn	14 55 35.1	+14
STKI	**Sintang**	**14.10**	**93**	P	P	14 56 09.8	+7.6
SBUM	**Sibu**	**14.89**	**84**	Pn	**Pn**	**14 56 04.9**	**-0.6**
DLV	**T Lat**	**15.52**	**45**	P	**P**	**14 56 17.6**	**-0.5**
CM31	**Chiang Mai Arr**	**17.49**	**5**	Pn	**Pn**	**14 56 34.8**	**-4.0**
CMAR	**Chiang Mai Arr**	**17.49**	**5**	P	**Pn**	**14 56 38.0**	**-0.8**
	0.7nm,0.3s,baz=195,slow=12,SNR=26						
CMAR				LR	LR	15 04 14.1	
	comp=Z,338nm,18.1s,baz=225,slow=40 3.5nm,0.6s						
CMAR	**Chiang Mai Arr**	**17.49**	**5**	Pn	**Pn**	**14 56 34.7**	**-4.1**
PALK	**Pallekele**	**17.80**	**291**	P	**Pn**	**14 56 43.9**	**+1.1**
	0.6nm,0.3s,baz=216,slow=13,SNR=4.3						
PALK				LR	LR	15 02 42.4	
	comp=Z,412nm,18.2s,baz=195,slow=34 8.6nm,0.7s						
PALK	**Pallekele**	**17.80**	**291**	P	**Pn**	**14 56 43.4**	**+0.7**
CHTO	**Chiang Mai**	**17.84**	**5**	Pn	**Pn**	**14 56 40.2**	**-2.9**
KKM	**Kota Kinabalu**	**19.45**	**74**	P	**Pn**	**14 57 03.5**	**+0.7**
KKM				P	IAmb	14 57 18.7	
	comp=Z,27nm,0.9s						
MYLDM	**Lahad Datu**	**21.48**	**78**	P	**P**	**14 57 24.3**	**+0.8**
MYLDM				P	IAmb	14 57 33.0	
	comp=Z,19nm,0.8s						
TWSI	**Taliwang, Sumb**	**21.66**	**117**	P	**P**	**14 57 25.4**	**0.0**
	comp=Z,6.8nm,0.9s						
VIS	**Vishakhapatnam**	**21.68**	**321**	*e*P	**P**	**14 57 29.2**	**+3.7**
VIS				P	IAmb	14 57 36.1	
	comp=Z,24nm,0.9s						
MPSI	**Mapaga**	**22.50**	**91**	P	P	14 57 44.3	+10
KAPI	**Kappang**	**23.09**	**105**	LR	LR	15 07 23.7	
	comp=Z,178nm,18.7s,baz=284,slow=39						
TOLI2	**Tolitoli**	**23.38**	**89**	P	**P**	**14 57 43.6**	**+0.1**
TOLI2				P	I

GTA					LR	LR		
	comp=Z,190nm,16.7s							
GTA					LR	LR		
	comp=Z,190nm,13.8s							
H01W3	**Cape Leeuwin H**	**38.92**	**158**		T	T	15 41 17.2	
	baz=334,slow=76,SNR=301							
H01W2	**Cape Leeuwin H**	**38.93**	**158**		T	T	15 41 18.2	
	baz=334,slow=76,SNR=386							
H01W1	**Cape Leeuwin H**	**38.93**	**158**		T	T	15 41 18.3	
	baz=334,slow=76,SNR=237							
WRA	**Warramunga Arr**	**41.72**	**122**		P	**P**	**15 00 22.6**	**-1.2**
	comp=Z,1.3nm,0.6s,baz=304,slow=9.0,SNR=25							
	comp=Z,1.3nm,0.6s							
WRA	**Warramunga Arr**	**41.72**	**122**		P	**P**	**15 00 22.3**	**-1.5**
WRAB	**Tennant Creek**	**41.73**	**122**		P	**P**	**15 00 22.5**	**-1.3**
WRAB	**Tennant Creek**	**41.73**	**122**		P	**P**	**15 00 22.7**	**-1.1**
WRAB					pP	**pP**	**15 00 30.1**	**-1.5**
WRAB					x	x	15 00 36.1	
WB2	**Warramunga Arr**	**41.73**	**122**		P	**P**	**15 00 22.6**	**-1.3**
HHC	**Hu-ho-hao-te**	**41.76**	**16**	*e*P		**P**	**15 00 24.4**	**+0.5**
HHC					pmax	pmax		
	comp=Z,34nm,0.9s							
HHC					pmax	pmax		
	comp=Z,320nm,7.0s							
HHC					LR	LR		
	comp=Z,560nm,17.2s							
HHC					LR	LR		
	comp=Z,230nm,16.5s							
HHC					LR	LR		
	comp=Z,390nm,16.7s							
WR0	**Warramunga Arr**	**41.90**	**122**		P	**P**	**15 00 24.1**	**-1.1**
BJT	**Baijiatuau**	**42.49**	**21**		P	**P**	**15 00 28.9**	**-0.8**
BJT					IAmb	IAmb	15 00 37.9	
	comp=Z,11nm,0.5s							
BJI	**Beijing**	**42.52**	**21**		P	**P**	**15 00 30.0**	**+0.1**
BJI					pP	**pP**	**15 00 37.5**	**-0.2**
BJI					pmax	pmax		
	comp=Z,8.0nm,0.7s							
FORT	**Forrest**	**42.94**	**140**		P	**P**	**15 00 34.7**	**+1.2**
ASAR	**Alice Springs**	**43.07**	**127**		P	**P**	**15 00 34.0**	**-0.8**
AS31	**Alice Springs**	**43.07**	**127**		P	**P**	**15 00 33.9**	**-0.9**
WMQ	**Urumqi**	**43.58**	**350**	*e*P		**P**	**15 00 41.1**	**+2.6**
WMQ					pP	pP	15 00 46.3	0.0
WMQ					pmax	pmax		
	comp=Z,28nm,0.7s							
WMQ					pmax	pmax		
	comp=Z,180nm,5.3s							
JSU	**Suzuyama**	**43.60**	**42**		P	**P**	**15 00 39.1**	**+0.3**
TARG	**Taragay, Kyrgy**	**44.30**	**339**		P	**P**	**15 00 45.1**	**+0.3**
TARG					IAmb	IAmb	15 00 54.0	
	comp=Z,8.0nm,0.9s							
KDJ	**Kajisay**	**44.87**	**339**		P	**P**	**15 00 48.4**	**-0.7**
KDJ					IAmb	IAmb	15 00 58.4	
	comp=Z,14nm,0.9s							
GAR	**Garm**	**45.27**	**330**		P	**P**	**15 00 52.1**	**-0.1**
CHGR	**Chuyangaron**	**45.60**	**329**		P	**P**	**15 00 54.1**	**-0.7**
BOOM	**Boomskoye usch**	**45.65**	**338**		P	**P**	**15 00 56.4**	**+1.1**
BOOM					IAmb	IAmb	15 01 01.7	
	comp=Z,23nm,1.1s							
BTK	**Batken**	**45.84**	**331**		P	**P**	**15 00 58.0**	**+1.3**
BTK					IAmb	IAmb	15 01 18.7	
	comp=Z,9.1nm,0.8s							
KSRS	**Korea Array**	**45.96**	**34**		P	**P**	**15 00 57.4**	**-0.1**
	comp=Z,2.4nm,0.6s,baz=219,slow=8.9,SNR=19							
KSRS					LR	LR	15 21 55.3	
	comp=Z,54nm,18.2s,baz=225,slow=38							
	comp=Z,2.4nm,0.6s							
SEHB	**SEOHWA**	**46.72**	**34**		P	**P**	**15 01 04.2**	**+0.7**
SEHB					IAmb	IAmb	15 01 21.4	
	comp=Z,9.5nm,1.2s							
SONM	**Songino Array**	**47.37**	**8**		P	**P**	**15 01 09.3**	**+0.7**
	comp=Z,2.0nm,0.5s,baz=188,slow=10.0,SNR=15							
SONM					PcP	**PcP**	**15 02 39.3**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=213,slow=3.7,SNR=1.7							
	comp=Z,2.0nm,0.5s							
SONM	**Songino Array**	**47.37**	**8**		P	**P**	**15 01 07.9**	**-0.6**
JHS	**Saijyo**	**47.49**	**41**		P	**P**	**15 01 08.8**	**-0.8**
ULN	**Ulaanbaatar**	**47.50**	**9**		P	**P**	**15 01 07.9**	**-1.7**
ULN	**Ulaanbaatar**	**47.50**	**9**		P	**P**	**15 01 08.3**	**-1.3**
ULN					pP	**pP**	**15 01 16.6**	**-0.9**
ULN					x	x	15 01 19.9	
MK31	**Makanchi Array**	**47.55**	**346**		P	**P**	**15 01 10.4**	**+0.5**
MK31					IAmb	IAmb	15 01 17.9	
	comp=Z,8.9nm,0.7s							
MKAR	**Makanchi Array**	**47.55**	**346**		P	**P**	**15 01 10.5**	**+0.6**
	comp=Z,8.4nm,0.5s,baz=156,slow=7.5,SNR=62							
	comp=Z,8.4nm,0.5s							
MAKZ	**Makanchi**	**47.64**	**346**		P	**P**	**15 01 10.8**	**+0.2**
MAKZ					IAmb	IAmb	15 01 23.7	
	comp=Z,12nm,0.9s							
MAKZ	**Makanchi**	**47.64**	**346**		P	**P**	**15 01 11.1**	**+0.5**
MAKZ					pP	**pP**	**15 01 17.9**	**-0.6**
MAKZ					sP	**sP**	**15 01 22.6**	**+1.0**
KKAR	**Karatay Array**	**48.39**	**334**		P	**P**	**15 01 16.4**	**0.0**
CN2	**Changchun**	**49.45**	**27**	*e*P		**P**	**15 01 24.8**	**+0.2**
CN2					pmax	pmax		
	comp=Z,10.0nm,0.5s							
CN2					LR	LR		
	comp=Z,200nm,14.0s							
CN2					LR	LR		
	comp=Z,200nm,14.0s							
CN2					LR	LR		
	comp=Z,200nm,15.0s							
BBOO	**Buckleboo**	**49.55**	**136**		P	**P**	**15 01 25.8**	**+0.4**
MJAR	**Matsushiro Arr**	**51.76**	**42**		LR	LR	15 25 28.7	
	comp=Z,74nm,18.8s,baz=222,slow=38							
BNX	**BinXian**	**51.84**	**26**	⇓P		P	15 01 49.3	+6.8
BNX					pmax	pmax		
	comp=Z,8.0nm,0.6s							
BNX					pmax	pmax		
	comp=Z,140nm,12.0s							
KURK	**Kurchatov**	**52.11**	**345**		P	**P**	**15 01 44.1**	**-0.3**
KURK					IAmb	IAmb	15 01 52.4	
	comp=Z,11nm,1.1s							
KURK	**Kurchatov**	**52.11**	**345**		P	**P**	**15 01 45.4**	**+1.0**
KURK					pP	**pP**	**15 01 51.5**	**-0.9**
USA0B	**Ussuriysk Arra**	**52.90**	**31**		P	**P**	**15 01 48.1**	**-2.3**
USA0B					IAmb	IAmb	15 02 03.4	
	comp=Z,10nm,1.0s							
USRK	**Ussuriysk Ar.**	**52.90**	**31**		P	**P**	**15 01 48.5**	**-1.9**
	comp=Z,3.6nm,0.7s,baz=234,slow=6.1,SNR=5.3							
USRK					LR	LR	15 26 09.7	
	comp=Z,120nm,19.7s,baz=233,slow=38							
	comp=Z,3.6nm,0.7s							
USRK	**Ussuriysk Ar.**	**52.90**	**31**		P	**P**	**15 01 48.0**	**-2.4**
OPO	**Ambohidratompo**	**53.00**	**246**		P	**P**	**15 01 51.5**	**-0.3**
	comp=Z,6.7nm,0.9s,baz=87,slow=10,SNR=3.7							
	comp=Z,6.7nm,0.9s							
STKA	**Stephens Creek**	**53.03**	**132**		P	**P**	**15 01 51.6**	**0.0**
	comp=Z,4.6nm,0.7s,baz=312,slow=5.7,SNR=9.8							
	comp=Z,4.6nm,0.7s							
STKA	**Stephens Creek**	**53.03**	**132**		P	**P**	**15 01 51.6**	**0.0**
ZAA0	**Zalesovo Array**	**53.86**	**351**		P	**P**	**15 01 57.0**	**-0.3**
ZALV	**Zalesovo Beam**	**53.86**	**351**		P	**P**	**15 01 57.5**	**+0.2**
	comp=Z,7.2nm,0.4s,baz=171,slow=6.8,SNR=36							
	comp=Z,7.2nm,0.4s							
ZALV	**Zalesovo Beam**	**53.86**	**351**		P	**P**	**15 01 57.3**	**0.0**
RAYN	**Ar Rayn**	**55.06**	**298**		P	**P**	**15 02 07.2**	**+0.5**
RAYN					pP	**pP**	**15 02 14.3**	**-0.3**
RAYN					sP	**sP**	**15 02 19.4**	**+1.6**
BRVK	**Borovoye**	**56.63**	**341**		P	**P**	**15 02 15.9**	**-1.5**
BRVK					IAmb	IAmb	15 02 24.4	
	comp=Z,5.0nm,0.6s							
BRVK	**Borovoye**	**56.63**	**341**		P	**P**	**15 02 17.3**	**0.0**
BRVK					pP	**pP**	**15 02 23.6**	**-1.8**
BRVK					sP	**sP**	**15 02 29.6**	**+1.2**
ABKAR	**Akbulak array**	**57.85**	**332**		P	**P**	**15 02 25.1**	**-0.9**
ABKAR	**Akbulak array**	**57.85**	**332**		P	**P**	**15 02 25.2**	**-0.8**
ABKAR					IAmb	IAmb	15 02 33.3	
	comp=Z,6.8nm,0.7s							
AKTO	**Aktyubinsk**	**59.56**	**332**		P	**P**	**15 02 37.3**	**-0.6**
	comp=Z,1.5nm,0.8s,baz=121,slow=7.6,SNR=6.6							
	comp=Z,1.5nm,0.8s							
CAN	**Canberra**	**60.09**	**132**		P	**P**	**15 02 42.9**	**+1.0**
ARMA	**Armidale**	**60.21**	**126**		P	**P**	**15 02 43.7**	**+0.8**
YSS	**Yuzh-Sakhalins**	**60.46**	**34**		P	**P**	**15 02 46.0**	**+1.9**
YSS					pP	**pP**	**15 02 53.7**	**+1.5**
KBZ	**Khabaz**	**64.41**	**319**		P	**P**	**15 03 10.1**	**-0.4**
	comp=Z,2.1nm,0.7s,baz=119,slow=8.5,SNR=5.1							
	comp=Z,2.1nm,0.7s							
ASF	**Jabal al Asfar**	**64.78**	**305**		P	**P**	**15 03 12.3**	**-1.1**
	comp=Z,1.6nm,0.5s,baz=106,slow=12,SNR=3.5							
	comp=Z,1.6nm,0.5s							
EIL	**Elat**	**65.77**	**302**		P	**P**	**15 03 20.5**	**+0.8**
	comp=Z,7.4nm,0.7s,baz=117,slow=2.8,SNR=7.7							
	comp=Z,7.4nm,0.7s							

MMAI	**Mount Meron Ar**	**66.22**	**306**		P		**15 03 24.1**	**+1.3**
	comp=Z,0.8nm,0.4s,baz=128,slow=9.3,SNR=4.6							
	comp=Z,0.8nm,0.4s							
MA2	**Magadan**	**71.49**	**26**		P	**P**	**15 03 55.0**	**+0.2**
MA2					IAmb	IAmb	15 04 02.4	
	comp=Z,10nm,0.7s							
MAW	**Mawson**	**72.50**	**193**		P	**P**	**15 04 00.5**	**-0.1**
	comp=Z,2.7nm,0.7s,baz=329,slow=5.9,SNR=4.2							
	comp=Z,2.7nm,0.7s							
MAW	**Mawson**	**72.50**	**193**		P	**P**	**15 04 00.9**	**+0.2**
TIXI	**Tiksi**	**73.42**	**10**		P	**P**	**15 04 04.5**	**-1.6**
TIXI					IAmb	IAmb	15 04 13.2	
	comp=Z,4.7nm,0.5s							
LBTB	**Lobatse**	**73.95**	**244**		P	**P**	**15 04 09.7**	**-0.6**
LBTB					IAmb	IAmb	15 04 36.8	
	comp=Z,14nm,1.4s							
KLMR	**Klimovskoe**	**74.08**	**334**	*e*P		**P**	**15 04 07.5**	**-2.7**
KLMR					AMP		15 04 11.1	
	comp=Z,12nm,1.4s							
TIRR	**Tirgusor**	**74.46**	**316**	⇑P		P	15 04 05.3	-7.4
TPGR	**Topolog**	**74.55**	**316**	⇓P		**P**	**15 04 12.5**	**-0.8**
BOSA	**Boshof**	**74.82**	**240**		P	**P**	**15 04 15.9**	**+0.6**
	comp=Z,3.7nm,0.7s,baz=58,slow=4.4,SNR=4.5							
	comp=Z,3.7nm,0.7s							
BOSA	**Boshof**	**74.82**	**240**		P	**P**	**15 04 15.7**	**+0.4**
BOSA					IAmb	IAmb	15 04 27.4	
	comp=Z,17nm,1.3s							
HARR	**Harsova**	**74.85**	**316**	⇓P		P	15 04 21.3	+6.4
IDI	**Anoyia**	**75.22**	**306**		P	**P**	**15 04 16.4**	**-1.0**
IDI					IAmb	IAmb	15 04 19.7	
	comp=Z,16nm,1.2s							
SORM	**Soroca**	**75.44**	**320**	⇓P		**P**	**15 04 17.9**	**-0.4**
AKASG	**Malin Array Be**	**75.59**	**322**		P	**P**	**15 04 18.4**	**-0.7**
	comp=Z,1.0nm,0.5s,baz=87,slow=5.2,SNR=11							
	comp=Z,1.0nm,0.5s							
VRI	**Vrincioaia**	**75.95**	**317**	⇓P		**P**	**15 04 21.5**	**+0.1**
TESR	**Tescani**	**76.16**	**318**	⇑P		**P**	**15 04 22.9**	**+0.4**
MLR	**Muntele Rosu**	**76.40**	**317**	⇑P		**P**	**15 04 24.7**	**+0.7**
MLR	**Muntele Rosu**	**76.40**	**317**		P	**P**	**15 04 22.9**	**-1.2**
MLR					IAmb	IAmb	15 04 25.9	
	comp=Z,14nm,1.2s							
DOPR	**Dopca**	**76.89**	**317**	⇓P		**P**	**15 04 26.8**	**+0.2**
VOIR		**77.01**	**316**	⇓P		**P**	**15 04 26.8**	**-0.6**
BURAR	**Bucovina Array**	**77.36**	**319**	⇑P		**P**	**15 04 30.2**	**+0.8**
BURAR	**Bucovina Array**	**77.36**	**319**		P	**P**	**15 04 29.4**	**+0.1**
BURAR					IAmb	IAmb	15 04 31.3	
	comp=Z,7.3nm,1.1s							
BUR08	**Bucovina Ar. S**	**77.38**	**319**		P	**P**	**15 04 29.8**	**+0.3**
BUR08					IAmb	IAmb	15 04 31.7	
	comp=Z,7.1nm,1.0s							
LIT	**Litokhoron**	**77.88**	**311**		P	**P**	**15 04 29.9**	**-2.4**
LIT					IAmb	IAmb	15 04 31.8	
	comp=Z,6.3nm,0.7s							
RPZ	**Rata Peaks**	**78.87**	**135**		LR	LR	15 39 24.4	
	comp=Z,93nm,20.6s,baz=284,slow=36							
RPZ	**Rata Peaks**	**78.87**	**135**		P	**P**	**15 04 38.2**	**+0.5**
LVZ	**Lovozero**	**79.16**	**340**		P	**P**	**15 04 38.4**	**-0.4**
BZS	**Buzias**	**79.41**	**316**	⇓P		**P**	**15 04 40.6**	**0.0**
KOLS	**Kolonicke sedl**	**79.55**	**320**	*e*P		**P**	**15 04 42.8**	**+1.5**
FIA1	**FINESS Array S**	**80.33**	**332**		P	**P**	**15 04 44.7**	**-0.5**
FIA1					IAmb	IAmb	15 04 53.3	
	comp=Z,8.2nm,1.2s							
FINES	**FINESS Array B**	**80.33**	**332**		P	**P**	**15 04 44.2**	**-1.0**
	comp=Z,1.4nm,0.5s,baz=108,slow=6.8,SNR=15							
	comp=Z,1.4nm,0.5s							
FINES	**FINESS Array B**	**80.33**	**332**		P	**P**	**15 04 44.7**	**-0.5**
KECS	**Kecovo**	**80.64**	**319**	*e*P		**P**	**15 04 47.9**	**+0.7**
BKZ	**Black Stump Fm**	**82.13**	**130**		P	**P**	**15 04 55.2**	**-0.1**
ARCES	**ARCESS Array B**	**82.86**	**340**		P	**P**	**15 04 58.3**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=108,slow=4.9,SNR=12							
	comp=Z,0.8nm,0.5s							
ARCES	**ARCESS Array B**	**82.86**	**340**		P	**P**	**15 04 58.6**	**+0.1**
ARCES					IAmb	IAmb	15 05 07.1	
	comp=Z,6.3nm,1.1s							
GERES	**GERESS Array B**	**85.15**	**319**		P	**P**	**15 05 10.8**	**+0.1**
	comp=Z,3.1nm,1.0s,baz=91,slow=9.9,SNR=9.6							
	comp=Z,3.1nm,1.0s							
VNDA	**Vanda**	**85.52**	**169**		P	**P**	**15 05 11.6**	**-0.2**
NC602	**NORSAR Array S**	**87.16**	**331**		P	**P**	**15 05 20.3**	**+0.1**
NC602					IAmb	IAmb	15 05 28.9	
	comp=Z,9.0nm,1.1s							
NC303	**NORSAR Array S**	**87.27**	**331**		P	**P**	**15 05 20.5**	**-0.3**
NC303					IAmb	IAmb	15 05 37.1	
	comp=Z,8.8nm,1.2s							
NB2	**NORSAR Array B**	**87.34**	**331**		P	**P**	**15 05 20.7**	**-0.5**
	comp=Z,1.5nm,0.7s,baz=93,slow=5.3							
NOA	**NORSAR Array B**	**87.34**	**331**		P	**P**	**15 05 21.0**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=116,slow=4.2,SNR=3.9							
	comp=Z,0.7nm,0.6s							
NC204	**NORSAR Array S**	**87.57**	**331**		P	**P**	**15 05 22.7**	**+0.4**
KEST	**Kesra**	**87.88**	**306**		P	**P**	**15 05 24.9**	**+0.6**
	comp=Z,5.5nm,0.9s,baz=2.9,slow=2.7,SNR=4.5							
	comp=Z,5.5nm,0.9s							
KEST	**Kesra**	**87.88**	**306**		P	**P**	**15 05 25.1**	**+0.8**
KEST					IAmb	IAmb	15 05 26.6	
	comp=Z,6.9nm,1.0s							
TORD	**Torodi Ar. Bea**	**95.35**	**283**		P	**P**	**15 05 59.2**	**-0.1**
	comp=Z,0.5nm,0.9s,baz=98,slow=4.4,SNR=2.3							
	comp=Z,0.5nm,0.9s							
TXAR	**Lajitas Array**	**143.79**	**32**	PKP		PKPbc	15 12 08.2	+0.3
	comp=Z,0.3nm,0.6s,baz=180,slow=0.1,SNR=5.4							
CPUP	**Villa Florida**	**144.94**	**222**	PKPbc		**PKPbc**	**15 12 12.0**	**+0.5**
	comp=Z,12nm,0.9s,baz=126,slow=3.8,SNR=18							
CPUP	**Villa Florida**	**144.94**	**222**			**PKPbc**	**15 12 11.5**	**0.0**

MAN 21 15:05:11.6, 12°.83N×121°.04E, *h4*km, mb3.9, ML2.6, MS2.2, 1C-5D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SJMP	**San Jose**	**0.37**	**168**	⇓*e*P		Pg	15 05 19.1	+0.9
SJMP				*e*S			15 05 25.5	
PGP	**Puerto Galera**	**0.68**	**353**	⇑*e*P		Pg	15 05 24.6	+0.5
PGP				*i* S			15 05 34.3	
BOAC	**Boac**	**1.00**	**51**	⇓*e*P		Pb	15 05 31.4	+0.2
BOAC				*e*S			15 05 46.5	
LUBP	**Lubang**	**1.19**	**319**	⇓*e*P		Pg	15 05 34.6	+0.1
LUBP				*e*S			15 05 51.0	
MACP	**Maragondon, Ca**	**1.46**	**348**	⇓*e*P		Pn	15 05 35.1	+3.7
MACP				*e*S			15 06 00.4	
CUYO	**Cuyo Island**	**1.96**	**181**	⇓*e*P		Pn	15 05 47.9	+0.8

MAN 21 15:07:12.9, 16°.93N×121°.70E, *h27*km, mb3.8, ML2.6, MS2.1, 1C-5D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CAUP	**Cauayan**	**0.12**	**83**	⇓*e*P		Pb	15 07 18.9	+1.6
CAUP				*e*S			15 07 21.0	
PALP	**Palanan**	**0.71**	**79**	⇓*e*P		Pn	15 07 27.2	+1.5
SAMP	**Sagada Mountai**	**0.77**	**281**	⇓*e*P		Pb	15 07 27.9	+0.5
SAMP				*e*S			15 07 35.9	
APYP	**Conner**	**1.02**	**335**	⇑*e*P		Pb	15 07 30.9	+0.3
APYP				*i* S			15 07 44.3	
BALP	**Baler**	**1.19**	**186**	⇓*e*P		Pn	15 07 33.4	+0.7
BALP				*e*S			15 07 49.0	
SMPP	**San Manuel, Pa**	**1.25**	**232**	⇓*e*P		Pb	15 07 34.7	+0.6
SMPP				*e*S			15 07 51.2	

*ISK **21** 15:14:49.4, 38°.71N×35°.67E, h5km, ML2.4/6*
*DDA **21** 15:14:50.8±0.0, 38°.71N×35°.72E, h7km±3km, ML2.3*
ISC 21 15:14:51.2±1.1, 38°.73N±0°.02×35°.70E±0°.02, h3km±10km, n27, σ1s07/44, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
BNN	**Bunyan**	**0.17**	**41**		PG	**Pg**	**15 14 53.9**	**-0.6**
BNN					SG	**Sg**	**15 14 57.8**	**+1.0**
SARI	**SarD1z-Kayseri**	**0.64**	**119**		PG	**Pg**	**15 15 03.2**	**-0.4**
SARI					SG	**Sb**	**15 15 13.9**	**-0.7**
YAHY	**KAYSERI_Yahyal**	**0.69**	**203**		P	**Pg**	**15 15 03.6**	**-0.7**
YAHY					S	**Sb**	**15 15 14.2**	**-1.5**
SAIM	**ADANA**	**0.81**	**158**		P	**Pg**	**15 15 06.3**	**-0.3**
SAIM					S	**Sb**	**15 15 19.6**	**+0.4**
SAIM					*i* AML	AML	15 15 22.0	
	comp=N,212nm,0.3s							
SAIM					*i* AML	AML	15 15 25.0	
	comp=E,224nm,0.3s							
SAIM	**ADANA**	**0.81**	**158**		P	**Pg**	**15 15 06.3**	**-0.3**
SAIM					*i* AML	AML	15 15 22.0	
	comp=N,212nm,0.3s							
SAIM					*i* AML	AML	15 15 25.0	
	comp=E,224nm,0.3s							
CUSAR	**Sarkisla-SIVAS**	**0.81**	**31**		P	**Pg**	**15 15 06.0**	**-0.8**
CUSAR					*i* AML	AML	15 15 21.0	
	comp=N,53nm,0.3s							
HACI	**Hacifakili, Ak**	**0.98**	**1**		P	**Pg**	**15 15 08.9**	**-1.1**
ELBS	**KAHRAMANMARAS**	**1.19**	**109**		P	**Pg**	**15 15 13.1**	**-0.8**
ELBS					S	**Sn**	**15 15 32.9**	**+1.3**
ELBS					*i* AML	AML	15 15 36.0	
	comp=N,84nm,0.3s							
ELBS					*i* AML	AML	15 15 38.0	
	comp=E,129nm,0.4s							
ELBS	**KAHRAMANMARAS**	**1.19**	**109**		P	**Pg**	**15 15 13.2**	**-0.8**
ELBS					S	**Sn**	**15 15 32.8**	**+1.3**
ELBS					*i* AML	AML	15 15 36.0	
	comp=N,84nm,0.3s							
ELBS					*i* AML	AML	15 15 38.0	
	comp=E,129nm,0.4s							
CMRD	**Camardi-Nigde**	**1.20**	**208**		PN	**Pg**	**15 15 13.4**	**-0.8**
GULA	**Gulagac**	**1.21**	**252**		PN	**Pg**	**15 15 13.7**	**-0.7**
KOZT	**Kozan**	**1.25**	**176**		PN	**Pb**	**15 15 13.9**	**-1.4**
ANDN	**Andirin**	**1.25**	**156**		P	**Pg**	**15 15 14.7**	**-0.5**
ANDN					S	**Sn**	**15 15 34.3**	**+1.3**
ANDN					*i* AML	AML	15 15 38.0	
	comp=N,93nm,0.5s							
ANDN					*i* AML	AML	15 15 40.0	
	comp=E,76nm,0.7s							
ANDN	**Andirin**	**1.25**	**156**		P	**Pn**	**15 15 15.6**	**-0.1**
ANDN					S	**Sn**	**15 15 34.1**	**+1.1**
ANDN					*i* AML	AML	15 15 38.0	
	comp=N,93nm,0.5s							
ANDN					*i* AML	AML	15 15 40.0	
	comp=E,76nm,0.7s							
AKO	**Adana**	**1.28**	**189**		P	**Pn**	**15 15 15.0**	**-0.9**
AKO					S	**Sn**	**15 15 33.7**	**+0.2**
AKO					*i* AML	AML	15 15 36.0	
	comp=N,61nm,0.3s							
AKO					*i* AML	AML	15 15 37.0	
	comp=E,46nm,0.4s							
AKO	**Adana**	**1.28**	**189**		P	**Pn**	**15 15 15.1**	**-0.9**
AKO					S	**Sn**	**15 15 34.0**	**+0.4**
AKO					*i* AML	AML	15 15 36.0	
	comp=N,60nm,0.3s							
AKO					*i* AML	AML	15 15 37.0	
	comp=E,46nm,0.4s							
CDAG	**Cicekdag**	**1.37**	**311**		P	**Pg**	**15 15 17.9**	**+0.5**
CDAG					S	**Sn**	**15 15 37.3**	**+1.3**
CDAG					*i* AML	AML	15 15 43.0	
	comp=E,23nm,0.4s							
CDAG					*i* AML	AML	15 15 47.0	
	comp=N,20nm,0.4s							
DARE	**Darende-Malaty**	**1.40**	**96**		PN	**Pb**	**15 15 17.6**	**-0.4**
CUKAN	**kangal_SIVAS**	**1.50**	**66**		P	**Pg**	**15 15 19.5**	**-0.4**
CUKAN					S	**Sg**	**15 15 40.3**	**+1.1**
CUKAN					*i* AML	AML	15 15 43.0	
	comp=E,94nm,0.4s							
CUKAN					*i* AML	AML	15 15 44.0	
	comp=N,74nm,0.3s							
SVSK	**Karacayir**	**1.56**	**40**		PN	**Pb**	**15 15 19.7**	**-0.9**
GULE	**Gulek**	**1.61**	**207**		P	**Pb**	**15 15 21.0**	**-0.7**
GULE					S	**Sg**	**15 15 45.2**	**+2.1**
GULE					*i* AML	AML	15 15 48.0	
	comp=E,61nm,0.4s							
GULE					*i* AML	AML	15 15 49.0	
	comp=N,47nm,0.4s							
GULE	**Gulek**	**1.61**	**207**		P	**Pb**	**15 15 20.9**	**-0.8**
GULE					S	**Sg**	**15 15 45.3**	**+2.1**
GULE					*i* AML	AML	15 15 48.0	
	comp=E,60nm,0.4s							
GULE					*i* AML	AML	15 15 49.0	
	comp=N,47nm,0.4s							
COAL	**Corum-Alaca**	**1.62**	**340**		P	**Pg**	**15 15 22.1**	**-0.2**
COAL					S	**Sg**	**15 15 44.8**	**+1.3**
COAL					*i* AML	AML	15 15 51.0	
	comp=N,31nm,1.0s							
COAL					*i* AML	AML	15 15 53.0	
	comp=E,35nm,0.9s							
KAMA	**Osmaniye**	**1.72**	**153**		P	**Pg**	**15 15 23.7**	**-0.4**
KAMA					S	**Sg**	**15 15 49.0**	**+2.7**
KAMA					*i* AML	AML	15 15 51.0	
	comp=E,26nm,0.4s							
AKCD	**Akcadag**	**1.79**	**103**		P	**Pg**	**15 15 25.1**	**-0.4**
AKCD					S	**Sg**	**15 15 49.5**	**+0.7**
AKCD					*i* AML	AML	15 15 53.0	
	comp=N,73nm,0.4s							
AKCD					*i* AML	AML	15 15 54.0	
	comp=E,40nm,0.3s							
GZT	**Gaziantep**	**2.01**	**132**		P	**Pb**	**15 15 27.1**	**-1.3**
G

BELA	Belgrano 2	34.94	187	P		P		16 01 30.6	+0.1
H10N1	ASCENSION HYDR	35.89	3	T		T		16 39 41.4	
	baz=182								
H10N3	ASCENSION HYDR	35.89	3	T		T		16 39 42.6	
	baz=182,slow=74,SNR=21								
H10N2	ASCENSION HYDR	35.90	3	T		T		16 39 44.2	
	baz=182,slow=74,SNR=7.8								
BOSA	Boshof	36.34	79	LR		LR		16 13 14.6	
	comp=Z,102nm,21.3s,baz=221,slow=31								
TSUM	Tsumeb	37.45	60	LR		LR		16 14 01.5	
	comp=Z,256nm,18.4s,baz=182,slow=31								
CPUP	Villa Florida	37.46	284	P		P		16 01 53.2	+0.6
	3.6nm,0.7s,baz=119,slow=7.8,SNR=8.3								
CPUP				LR		LR		16 16 30.6	
	comp=Z,219nm,18.8s,baz=90,slow=35								
	3.6nm,0.7s								
CPUP	Villa Florida	37.46	284	P		P		16 01 52.0	-0.6
CPUP				IAmb		IAmb		16 02 00.4	
	comp=Z,16nm,1.1s								
LBTB	Lobatse	38.78	75	P		P		16 02 03.5	-0.3
	comp=Z,4.8nm,1.0s,baz=250,slow=5.6,SNR=3.7								
	comp=Z,4.8nm,1.0s								
LBTB	Lobatse	38.78	75	P		P		16 02 03.0	-0.9
LBTB				IAmb		IAmb		16 02 08.1	
	comp=Z,25nm,1.4s								
BDFB	Brasilia	38.97	306	P		P		16 02 07.2	+1.6
	comp=Z,1.0nm,0.3s,baz=141,slow=11,SNR=1.2								
BDFB				LR		LR		16 15 16.7	
	comp=Z,320nm,18.4s,baz=225,slow=32								
	comp=Z,1.0nm,0.3s								
BDFB	Brasilia	38.97	306	P		P		16 02 06.3	+0.8
BDFB				IAmb		IAmb		16 02 29.5	
	comp=Z,26nm,1.5s								
LL02	Futaleuf	39.69	251	P		P		16 02 10.9	-0.3
LL02				IAmb		IAmb		16 02 13.7	
	comp=Z,28nm,1.6s								
PLCA	Paso Flores	39.71	255	P		P		16 02 12.3	+0.8
	comp=Z,4.6nm,1.3s,baz=122,slow=8.4,SNR=4.0								
PLCA				LR		LR		16 16 54.7	
	comp=Z,126nm,22.0s,baz=123,slow=34								
	comp=Z,4.6nm,1.3s								
PLCA	Paso Flores	39.71	255	P		P		16 02 11.9	+0.4
ROC1	El Roble	43.57	265	P		P		16 02 42.8	-0.6
CO03	El Pedregal	44.46	268	P		P		16 02 50.1	-0.2
MAW	Mawson	46.37	149	P		P		16 03 03.3	-1.5
	comp=Z,3.9nm,0.9s,baz=242,slow=7.6,SNR=4.0								
MAW				LR		LR		16 18 35.4	
	comp=Z,88nm,21.5s,baz=248,slow=31								
	comp=Z,3.9nm,0.9s								
QSPA	South Pole Qui	46.42	180	LR		LR		16 20 22.6	
	comp=Z,55nm,19.0s,baz=164,slow=33								
QSPA	South Pole Qui	46.42	180	P		P		16 03 05.8	+0.3
AC01	Pan de Azucar	47.05	273	P		P		16 03 11.3	+0.5
LSZ	Lusaka	47.18	67	LR		LR		16 19 45.6	
	comp=Z,242nm,20.9s,baz=232,slow=32								
PB07	IPOC Station P	49.26	279	P		P		16 03 27.6	-0.5
GO01	Chusmiza	50.09	281	P		P		16 03 35.1	+0.3
GO01				IAmb		IAmb		16 05 32.8	
	comp=Z,14nm,0.6s								
LPAZ	La Paz	51.61	285	P		P		16 03 46.1	-0.3
SAML	Samuel	53.52	296	P		P		16 03 58.7	-1.1
VNDA	Vanda	58.91	180	P		P		16 04 38.8	+1.3
	comp=Z,0.9nm,0.6s,baz=218,slow=6.8,SNR=6.2								
	comp=Z,0.9nm,0.6s								
VNDA	Vanda	58.91	180	P		P		16 04 37.9	+0.4
VNDA				IAmb		IAmb		16 04 40.4	
	comp=Z,18nm,1.6s								
TOA0	Torodi Ar. Sit	59.02	20	P		P		16 04 37.2	-1.8
TOA0				IAmb		IAmb		16 04 39.7	
	comp=Z,17nm,1.4s								
TORD	Torodi Ar. Bea	59.02	20	P		P		16 04 39.1	+0.2
	comp=Z,4.8nm,1.0s,baz=198,slow=3.5,SNR=8.4								
	comp=Z,4.8nm,1.0s								
TORD	Torodi Ar. Bea	59.02	20	P		P		16 04 37.5	-1.5
TORD				IAmb		IAmb		16 04 39.7	
	comp=Z,12nm,1.4s								
BIRV	Birongo	70.59	307	P		P		16 05 52.4	-2.0
MPOM	Morne Pois Mar	70.87	314	P		P		16 05 54.6	-1.5
CRPR	Cabo Rojo, PR	77.16	311	P		P		16 06 31.8	-1.0
KEST	Kesra	82.54	21	P		P		16 07 03.5	+1.9
	comp=Z,4.9nm,1.0s,baz=176,slow=6.8,SNR=4.0								
	comp=Z,4.9nm,1.0s								
ESDC	Sonseca Array	83.87	9	P		P		16 07 09.0	+0.6
	comp=Z,2.7nm,1.1s,baz=182,slow=5.1,SNR=11								
	comp=Z,2.7nm,1.1s								
ESDC	Sonseca Array	83.87	9	P		P		16 07 08.7	+0.3
ESDC				IAmb		IAmb		16 07 16.1	
	comp=Z,11nm,1.3s								
H01W2	Cape Leeuwin H	89.54	141	T		T		17 47 49.0	
	baz=216,SNR=4.1								
H01W1	Cape Leeuwin H	89.55	141	T		T		17 47 51.0	
	baz=216								
H01W3	Cape Leeuwin H	89.55	141	T		T		17 47 44.3	
	baz=216								
CSS	Mathiatis	90.47	39	P		P		16 07 40.7	+0.2
DIVS	Divibare	93.33	25	P		P		16 07 53.8	+0.1
DIVS				IAmb		IAmb		16 08 01.2	
	comp=Z,7.5nm,0.9s								
BRTR	Keskin Array B	94.56	36	P		P		16 08 01.8	+2.2
	comp=Z,2.4nm,0.9s,baz=198,slow=3.6,SNR=9.5								
	comp=Z,2.4nm,0.9s								
BRTR	Keskin Array B	94.56	36	P		P		16 07 59.9	+0.4
BMAR	Burnt Mountain	144.10	329	PKPdf		PKPab		16 14 11.6	+0.3
J26L	Joseph Creek	144.31	324			PKPab		16 14 12.6	+0.5
L26K	Log Cabin Wild	144.44	321			PKPab		16 14 12.3	-0.3
SCRK	Sand Creek	144.58	323	PKPdf		PKPab		16 14 13.3	+0.1
DOT	Dot Lake	144.67	322			PKPab		16 14 13.2	-0.2
RIDG	Independent Ri	145.00	323			PKPbc		16 14 14.6	0.0
J25K	Salcha River,	145.06	324			PKPbc		16 14 14.2	-0.6
TOLK	Toolik Lake Re	145.51	332			PKPdf		16 14 15.4	-0.6
IL31		145.66	325			PKPdf		16 14 16.0	-0.2
ILAR	Eielson Array	145.66	325	PKPbc		PKPdf		16 14 16.2	0.0
	comp=Z,2.7nm,0.7s,baz=113,slow=2.5,SNR=25								
ILAR	Eielson Array	145.66	325	PKPdf		PKPdf		16 14 15.3	-1.0
HDA	Harding Lake	145.77	324			PKPdf		16 14 16.1	-0.4
H24K	Noodor Dome	145.79	327	PKPdf		PKPdf		16 14 16.4	-0.2
MDM	Murphy Dome	146.17	325			PKPdf		16 14 17.1	-0.1
H23K	Yukon River	146.45	327	PKPdf		PKPdf		16 14 17.2	-0.5
I23K	Minto, Yukon-K	146.58	326			PKPdf		16 14 18.2	+0.4
NEA2	Nenana	146.62	325	PKPdf		PKPdf		16 14 17.9	0.0
MLY	Manley	147.17	326	PKPdf		PKPdf		16 14 18.3	-0.6
TRF	Thorofare Moun	147.44	323			PKPbc		16 14 22.3	+0.2
BPAW	Bear Paw Mtn.	147.56	324	PKPdf		PKPdf		16 14 21.0	+1.4
H21K	Melozitna River	147.78	328	PKPdf		PKPdf		16 14 20.9	+1.0
IMAR	Indian Mountai	148.02	329	PKPdf		PKPdf		16 14 21.1	+0.9
SKT	Skwentna	148.36	321	PKPdf		PKPdf		16 14 21.9	+1.0
PPLA	Purkeypile	148.41	323	PKPdf		PKPdf		16 14 21.9	+0.8
J20K	Nowinta River	148.84	325			PKPbc		16 14 25.6	0.0
K20K	Telida	149.09	324			PKPbc		16 14 24.9	-1.3

*NOU **21** 15:58:34.2, 36°.51S × 178°.87E, h235km, MLv4.5/6, Off E. Coast of N. Island, N.Z.*
*WEL **21** 15:58:58.3 ± 1.0, 37°.9S × 17°.7E ± °, h95km ± 6km, M2.8/28, ML3.0/32, MLv2.8/28, Error ellipse: s-maj=0.0km s-min=0.0km az=0.3*

ISC 21 15:58:50.8 ± 2.5, **37°.4S** ± 0°.1 × **177°.49E** ± 0°.07, **h156** km ± 11km, **n105**, σ **2°55**/111, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WIZ	White Island	0.27	242	P		Pn	15 59 12.3	+0.4
WIZ				S		Sn	15 59 24.2	-3.8
HAZ	Te Kaha	0.42	147	P		Pn	15 59 13.6	+1.2
HAZ				S		Sn	15 59 26.2	-2.8
RUGZ	Raukumara Rang	0.58	165	P		Pn	15 59 14.3	+1.0
RUGZ				S		Sn	15 59 27.4	-3.3
MXZ	Matakaoa Point	0.67	104	P		Pn	15 59 16.2	+2.5
MXZ				S		Sn	15 59 31.3	+0.1
PKGZ	Pakihiroa	0.67	136	P		Pn	15 59 16.0	+2.2
PKGZ				S		Sn	15 59 30.9	-0.6
WMGZ	Waiomatatini S	0.85	120	P		Pn	15 59 17.8	+2.9
OPRZ	Ohinepanea	0.86	239	P		Pn	15 59 16.4	+1.4
OPRZ				S		Sn	15 59 30.8	-2.7
TWGZ	Tauwhareparae	0.87	153	P		Pn	15 59 17.9	+2.8
MARZ	Manawahe	0.87	228	P		Pn	15 59 16.7	+1.6
PUZ	Puketiti	0.91	138	P		Pn	15 59 17.8	+2.5
URZ	Urewera	0.91	199	P		Pn	15 59 17.2	+1.8
URZ				S		Sn	15 59 32.7	-1.5
URZ	Urewera	0.91	199	P		Pn	15 59 17.2	+1.8
MWZ	Matawai	0.93	178	P		Pn	15 59 17.8	+2.1
TKGZ	Te Karaka	1.07	165	P		Pn	15 59 19.3	+2.5
OMRZ	Omania	1.13	231	P		Pn	15 59 19.3	+2.0
TARZ	Mount Tarawera	1.14	223	P		Pn	15 59 20.4	+2.9
RRRZ	Republican Roa	1.21	219	P		Pn	15 59 20.4	+2.4
MUGZ	Murupara	1.22	208	P		Pn	15 59 20.4	+2.4
CNGZ	Carnagh Statio	1.22	153	P		Pn	15 59 21.5	+3.5
HLRZ	Highlands Stat	1.24	226	P		Pn	15 59 20.9	+2.7
RTZ	Ruatahuna	1.28	198	P		Pn	15 59 21.1	+2.4
RIGZ	Rimuhau	1.32	171	P		Pn	15 59 21.7	+2.7
HSRZ	Hossack Road	1.34	227	P		Pn	15 59 22.4	+3.3
HRRZ	Handcock Road	1.37	224	P		Pn	15 59 22.4	+2.9
SNGZ	Shannon Statio	1.38	185	P		Pn	15 59 22.2	+2.6
PRRZ	Plateau Road	1.40	218	P		Pn	15 59 22.5	+2.7
GRRZ	Galatos Road	1.45	229	P		Pn	15 59 23.3	+3.0
ALRZ	Allen Road	1.47	218	P		Pn	15 59 23.4	+2.9
WPRZ	Whakapapatarin	1.53	223	P		Pn	15 59 24.4	+3.3
MTHZ	Maungataniwha	1.54	199	P		Pn	15 59 24.0	+2.8
RAHZ	Arahi	1.55	192	P		Pn	15 59 24.3	+3.0
TOZ	Tahuroa Road	1.61	258	P		Pn	15 59 24.9	+2.9
KNZ	Kokohu	1.62	175	P		Pn	15 59 25.1	+3.0
MRHZ	Matea Rd	1.66	210	P		Pn	15 59 25.3	+2.8
KUTZ	Kaahu Road	1.71	230	P		Pn	15 59 26.5	+3.5
NMHZ	Naumai	1.78	197	P		Pn	15 59 27.3	+3.4
MHGZ	Mahia Peninsul	1.78	169	P		Pn	15 59 27.2	+3.4
TLZ	Tolley Road	1.80	238	P		Pn	15 59 25.5	+1.5
HATZ	Hinemaiaia	1.85	216	P		Pn	15 59 27.7	+3.1
ARHZ	Aropaoanui	1.90	192	P		Pn	15 59 28.1	+3.0
WATZ	Wairara	1.90	226	P		Pn	15 59 28.8	+3.6
BKZ	Black Stump Fm	1.93	204	P		Pn	15 59 28.1	+2.6
BKZ	Black Stump Fm	1.93	204	P		Pn	15 59 28.4	+2.9
RITZ	Rihia Road	2.03	219	P		Pn	15 59 30.9	+4.2
MCHZ	McNeill Hill	2.13	197	P		Pn	15 59 30.9	+3.1
KWHZ	Kaweka Forest	2.19	202	P		Pn	15 59 31.3	+2.8
TMVZ	Te Maari	2.21	219	P		Pn	15 59 32.5	+3.7
NTVZ	North Tongarir	2.22	220	P		Pn	15 59 32.5	+3.8
ETVZ	East Tongariro	2.23	218	P		Pn	15 59 32.7	+3.6
KRVZ	Karewarewa	2.23	220	P		Pn	15 59 33.2	+4.1
OTVZ	Oturere	2.27	219	P		Pn	15 59 33.3	+3.7
NNVZ	North Ngauruho	2.27	220	P		Pn	15 59 33.6	+4.0
CKHZ	Cape Kidnapper	2.28	188	P		Pn	15 59 32.4	+2.9
SNVZ	South Ngauruho	2.30	219	P		Pn	15 59 33.9	+4.0
HIZ	Hauiti	2.36	241	P		Pn	15 59 34.8	+4.3
HIZ	Hauiti	2.36	241	P		Pn	15 59 34.9	+4.4
BHHZ	Black Hill Sta	2.37	208	P		Pn	15 59 33.4	+2.8
FWVZ	Far West T-bar	2.40	219	P		Pn	15 59 34.9	+3.8
WHVZ	Whangaehu Hut	2.40	218	P		Pn	15 59 34.6	+3.4
KRHZ	Kereru	2.41	201	P		Pn	15 59 33.4	+2.3
MOVZ	Moawhango	2.42	214	P		Pn	15 59 33.9	+2.6
WNVZ	Wahianoa	2.43	217	P		Pn	15 59 34.7	+3.2
KAHZ	Kahuranaki	2.44	191	P		Pn	15 59 34.5	+3.1
PXZ	Pawanui	2.67	190	P		Pn	15 59 36.5	+2.3
PNHZ	Pukenui	2.71	202	P		Pn	15 59 36.7	+2.0
VRZ	Vera Road	2.75	230	P		Pn	15 59 39.9	+4.7
WPHZ	Waipukurau	2.78	197	P		Pn	15 59 38.0	+2.4
TSZ	Tatarapari Road	2.91	204	P		Pn	15 59 39.2	+1.9
PRHZ	Porangahau	2.94	193	P		Pn	15 59 39.6	+2.0
WAZ	Wanganui	3.06	219	P		Pn	15 59 42.9	+3.7
DVHZ	Dannevirke	3.07	199	P		Pn	15 59 41.1	+1.9
ANWZ	Angora Road	3.16	194	P		Pn	15 59 42.5	+2.2
POWZ	Post Office Ro	3.27	204	P		Pn	15 59 44.0	+2.2
PKE	Pukeiti	3.29	236	P		Pn	15 59 45.1	+3.1
PRWZ	Pori Road	3.37	200	P		Pn	15 59 45.0	+2.1
BFZ	Birch Farm	3.42	196	P		Pn	15 59 45.4	+1.8
BFZ	Birch Farm	3.42	196	P		Pn	15 59 45.9	+2.3
MRZ	Mangatainoka R	3.58	204	P		Pn	15 59 47.0	+1.3
TIWZ	Tintock	3.59	200	P		Pn	15 59 47.7	+1.7
HOWZ	Holdsworth Sta	3.81	203	P		Pn	15 59 49.9	+1.1
OGWZ	Otaki Gorge	3.86	207	P		Pn	15 59 50.9	+1.6
TMWZ	Te Maipa	3.90	198	P		Pn	15 59 51.4	+1.4
KIWI	Kapiti Island	4.00	209	P		Pn	15 59 52.0	+0.9
MTW	Mount Morrison	4.06	202	P		Pn	15 59 52.8	+0.9
CAW	Cannon Point	4.15	206	P		Pn	15 59 54.0	+0.9
TRWZ	Traveller	4.23	199	P		Pn	15 59 55.1	+1.0
PAWZ	Paruwai Farm	4.29	201	P		Pn	15 59 55.6	+0.7
PLWZ	Palliser	4.51	202	P		Pn	15 59 58.1	+0.3
TCW	Tory Channel	4.55	212	P		Pn	15 59 59.2	+1.0
TUWZ	Tuamarina	4.87	213	P		Pn	16 00 03.4	+0.9
NNZ	Nelson	4.97	219	P		Pn	16 00 05.0	+1.2
BSWZ	Blackbirch Sta	5.13	212	P		Pn	16 00 07.4	+1.4
MRNZ	Matariki Terra	5.42	221	P		Pn	16 00 10.7	+0.9
THZ	Tophouse	5.61	218	P		Pn	16 00 13.2	+0.8
KHZ	Kahutara	5.86	210	P		Pn	16 00 16.0	+0.4
KHZ	Kahutara	5.86	210	P		Pn	16 00 16.0	+0.4
LTZ	Lake Taylor	6.70	215	P		Pn	16 00 26.5	-0.3
OKCZ	Okains Bay	7.16	207	P		Pn	16 00 32.9	0.0
MQZ	McQueen's Vall	7.29	209	P		Pn	16 00 33.8	-0.9
RACZ	Rakaia	7.52	211	P		Pn	16 00 37.1	-0.5
WAKZ	Wakanui South	7.82	212	P		Pn	16 00 39.7	-0.4
ARCZ	Arndel	8.11	214	P		Pn	16 00 46.1	+0.5
TMZ	Timaru	8.53	213	P		Pn	16 00 51.1	0.0
ODZ	Otahua Downs	9.21	212	P		Pn	16 01 00.2	+0.1
ODZ	Otahua Downs	9.21	212	P		Pn	16 00 59.9	-0.2

*NEIC **21** 16:00:22.5 ± 1.4, 2°.16S ± 0°.09 × 99°.34E ± 0°.09, h10km ± 1km, mb4.2/12, Error ellipse: s-maj=18.4km s-min=11.3km az=227.0*
*DJA **21** 16:00:24.3 ± 1.1, 2°.3S ± 6°.9 × 9°.9E ± °, h16km ± 13km, M4.3/8, mb4.7/1, mB5.4/1, MLv4.1/8, Mw(mB)4.8/1*
*IDC **21** 16:00:26.1 ± 2.1, 2°.08S × 99°.50E, h25km ± 5km, mb3.6/7, mbtmp3.8/7, Error ellipse: s-maj=79.2km s-min=19.7km az=53.0*

ISC 21 16:00:25.2 ± 0.8, **2°.16S** ± 0°.07 × **99°.4E** ± 0°.1, **h30** km, **n41**, σ **0°66**/37, **mb4.2**/10, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PPSI	Pulau Pagai	0.85	135	P		Pn	16 00 40.3	-0.8
SISI	Saibi	0.89	339	P		Pn	16 00 41.9	+0.2
PPI	Padang Panjang	1.96	30	P		Pn	16 00 56.6	+0.2
KRJI	Kerinci	2.06	88	P		Pn	16 00 57.6	-0.2
BKNI	Bangkinang	2.96	33	Pn		Pn	16 01 09.3	-0.9
BKNI	Bangkinang	2.96	33	P		Pn	16 01 10.2	0.0
GSI	Gunungsitoli	3.90	332	Pn		Pn	16 01 22.9	-0.2
GSI	Gunungsitoli	3.90	332	P		Pn	16 01 23.1	0.0
MNAI	Manna	4.16	122	Pn		Pn	16 01 27.9	+1.1
MNAI	Manna	4.16	122	P		Pn	16 01 27.9	+1.1
LWLI	Liwa	5.44	122	P		Pn	16 01 45.4	+0.9
MYLDM	Lahad Datu	20.42	69	Pn		Pn	16 05 02.0	-0.4
MYLDM				IAmb		IAmb	16 05 27.1	
	comp=Z,24nm,1.5s							
CMAR	Chiang Mai Arr	20.49	359	P		P	16 05 01.6	+0.7
	comp=Z,0.5nm,0.5s,baz=194,slow=8.6,SNR=6.9							
	comp=Z,0.5nm,0.5s							
KAPI	Kappang	20.50	99	Pn		Pn	16 05 03.1	-0.2
H08S2	Diego Garcia H	27.35	258	T		T	16 34 40.5	
	baz=80,slow=75,SNR=285							
H08S3	Diego Garcia H	27.36	258	T		T	16 34 43.1	
	baz=80,slow=75,SNR=287							
H08S1	Diego Garcia H	27.37	258	T		T	16 34 41.9	
	baz=80,slow=75,SNR=267							
H01W3	Cape Leeuwin H	35.33	159	T		T	16 44 29.2	
	baz=336,slow=76,SNR=9.2							
H01W2	Cape Leeuwin H	35.34	159	T		T	16 44 32.4	
	baz=336,slow=76,SNR=11							
H01W1	Cape Leeuwin H	35.34	159	T		T	16 44 30.0	
	baz=336,slow=76,SNR=7.7							
WRA	Warramunga Arr	38.43	120	P		P	16 07 44.9	+0.4
	comp=Z,0.7nm,0.8s,baz=305,slow=9.1,SNR=2.5							
WRA				pP		pP	16 07 53.1	-0.3
	comp=Z,0.7nm,0.5s,baz=301,slow=9.2,SNR=4.7							
	comp=Z,0.7nm,0.8s							
WB2	Warramunga Arr	38.44	120	P		P	16 07 44.5	-0.1
WR0	Warramunga Arr	38.61	120	P		P	16 07 45.3	-0.7
WR0				IAmb		IAmb	16 08 15.7	
	comp=Z,7.5nm,1.4s							
AS31	Alice Springs	39.64	126	P		P	16 07 53.9	-0.8
ASAR	Alice Springs	39.64	126	P		P	16 07 53.8	-0.9
SONM	Songino Array	50.16	6	P		P	16 09 19.2	+1.1
	comp=Z,2.0nm,0.7s,baz=188,slow=9.3,SNR=10							
	comp=Z,2.0nm,0.7s							
SONM	Songino Array	50.16	6	P		P	16 09 18.2	+0.1
SONM				IAmb		IAmb	16 09 20.0	
	comp=Z,1.7nm,0.7s							
MK31	Makanchi Array	51.02	345	P		P	16 09 24.8	+0.2
MKAR	Makanchi Array	51.02	345	P		P	16 09 25.6	+1.0
	comp=Z,1.1nm,0.6s,baz=144,slow=8.4,SNR=14							
MKAR				pP		pP	16 09 33.6	+0.1
	comp=Z,0.9nm,0.7s,baz=145,slow=9.0,SNR=6.7							
	comp=Z,1.1nm,0.6s							
MKAR	Makanchi Array	51.02	345	P		P	16 09 24.7	+0.2
USA0B	Ussuriysk Arra	54.58	28	P		P	16 09 50.6	-0.1
USA0B				IAmb		IAmb	16 10 33.9	
	comp=Z,2.7nm,0.8s							
USRK	Ussuriysk Ar.	54.58	28	P		P	16 09 50.8	0.0
	comp=Z,1.7nm,0.6s,baz=215,slow=5.3,SNR=5.8							
	comp=Z,1.7nm,0.6s							
USRK	Ussuriysk Ar.	54.58	28	P		P	16 09 50.5	-0.2
KURBB	Kurchatov Arra	55.54	344	P		P	16 09 58.3	+0.7
	comp=Z,0.3nm,0.7s,baz=163,slow=6.8,SNR=4.2							
KURBB				pP		pP	16 10 05.7	-0.9
	comp=Z,0.7nm,0.9s,baz=170,slow=5.7,SNR=4.3							
	comp=Z,0.3nm,0.7s							
KURK	Kurchatov	55.60	344	P		P	16 09 56.8	-1.2
KURK				IAmb		IAmb	16 10 09.6	
	comp=Z,1.3nm,0.8s							
ZAA0	Zalesovo Array	57.22	350	P		P	16 10 08.9	-0.6
ZAA0				IAmb		IAmb	16 10 10.5	
	comp=Z,1.9nm,0.7s							
ZALV	Zalesovo Beam	57.22	350	P		P	16 10 10.1	+0.6
	comp=Z,1.5nm,0.4s,baz=180,slow=5.5,SNR=8.9							
ZALV				pP		pP	16 10 18.0	-0.6
	comp=Z,1.2nm,0.6s,baz=186,slow=5.9,SNR=3.3							
	comp=Z,1.5nm,0.4s							
ZALV	Zalesovo Beam	57.22	350	P		P	16 10 08.8	-0.6
CASY	Casey	64.48	175	P		P	16 10 58.3	-0.3
TXAR	Lajitas Array	145.19	37	PKPbc		PKPdf	16 20 01.2	+0.5
	comp=Z,1.1nm,0.8s,baz=289,slow=1.7,SNR=12							
TXAR				pPKPbc		pPKPab	16 20 09.8	-0.2
	comp=Z,0.5nm,0.6s,baz=325,slow=1.6,SNR=5.5							
TXAR	Lajitas Array	145.19	37			PKPbc	16 20 00.5	+0.1

*MOS **21** 16:07:38.7 ± 1.3, 40°.37N × 52°.96E, h35km, mb4.0/11, Error ellipse: s-maj=6.4km s-min=5.8km az=131.2*
*NEIC **21** 16:07:41.5 ± 2.0, 40°.30N ± 0°.09 × 52°.94E ± 0°.08, h48km ± 8km, mb4.3/22, Error ellipse: s-maj=13.2km s-min=9.3km az=185.0*
*AZER **21** 16:07:41.9 ± 0.1, 40°.04N × 52°.81E, h66km ± 16km, Error ellipse: s-maj=3.4km s-min=1.0km az=267.0*
*IDC **21** 16:07:42.4 ± 1.1, 40°.35N × 52°.89E, h47km ± 7km, mb3.7/13, mbtmp4.0/19, MS2.9/3, Error ellipse: s-maj=25.3km s-min=11.6km az=13.0*
*TEH **21** 16:07:42.1, 40°.09N × 52°.86E, h40km, ML4.2*
*NNC **21** 16:07:43.8 ± 3.4, 40°.55N × 53°.42E, h27km ± 47km, mb4.1, Error ellipse: s-maj=45.9km s-min=7.4km az=73.0*

ISC 21 16:07:41.4 ± 0.4, **40°.29N** ± 0°.04 × **52°.96E** ± 0°.03, **h50** km, **n204**, σ **1°92**/245, **mb4.1**/26, **19C-5D, Turkmenistan**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NDR	Nardaran	2.29	278	P		Pn	16 08 19.2	+2.6
NDR				S		Sn	16 08 46.0	+2.4
GOBA	Gobu	2.47	274	S		Sn	16 08 47.3	-0.8
ALIB	Äli-Bayra	3.05	265	ePn		Pn	16 08 27.9	+0.8
ALIB	Äli-Bayra	3.05	265	P		Pn	16 08 27.9	+0.8
ALIB				S		Sn	16 09 02.6	+0.2
GBS	Qobustan	3.08	276	ePn		Pn	16 08 29.0	+1.5
GBS	Qobustan	3.08	276	P		Pn	16 08 29.1	+1.5
GBS				S		Sn	16 09 03.6	+0.5
ATGJ	Altiaghaj	3.12	282	ePn		Pn	16 08 29.7	+1.6
ATGJ	Altiaghaj	3.12	282	P		Pn	16 08 29.8	+1.6
	SNR=3.5							
ATGJ				S		Sn

comp=Z,2µm,0.2s
IANJ Anjilo 4.87 171 *e*Pn **Pn 16 08 53.1 +0.7**
IANJ *e* 16 09 49.4
comp=Z,3µm,0.4s
ILAS Lasjerd 4.90 180 *e*Pn **Pn 16 08 52.3 -0.4**
ILAS *e* 16 09 49.9
comp=Z,3µm,0.3s
IMHD Mahdasht 4.94 202 *e*Pn **Pn 16 08 53.5 +0.3**
IMHD *e* 16 08 55.6
comp=Z,2µm,0.2s
ZKTA Zakatala 4.98 288 P **Pn 16 08 54.8 +1.2**
ZKTA Zakatala 4.98 288 P **Pn 16 08 54.9 +1.2**
ZKTA S **Sn 16 09 51.2 +1.2**
IHRS Heris 4.99 249 *e*Pn **Pn 16 08 53.8 -0.2**
IHRS *e* 16 08 55.6
comp=Z,2µm,0.2s
IHSB Hasanabad 5.02 196 *e*Pn **Pn 16 08 54.3 0.0**
GANJ Ganja 5.08 276 P **Pn 16 08 54.8 -0.1**
GANJ Ganja 5.08 276 P **Pn 16 08 54.8 -0.1**
SNR=5.1
GANJ S **Sn 16 09 49.7 -2.5**
ISFR Sfrayin 5.10 128 *e*Pn **Pn 16 08 56.7 +1.2**
ISFR *e* 16 10 01.7
comp=Z,2µm,0.5s
IEMG Emamgholi 5.29 121 *e*Pn **Pn 16 08 59.1 +1.0**
SBZV Sabzevar 5.34 135 *e*Pn **Pn 16 08 59.9 +1.1**
IVRN Varamin 5.38 191 *e*Pn **Pn 16 08 58.9 -0.2**
IBST Bostanabad 5.39 243 *e*Pn **Pn 16 08 59.0 -0.4**
IRAZ Razeghan 5.43 207 *e*Pn **Pn 16 08 59.5 -0.5**
IRAZ *e* 16 10 10.7
comp=Z,1µm,0.7s
GDB GEDABAY 5.51 277 P **Pn 16 09 01.7 +0.7**
SNR=6.0
GDB S **Sn 16 09 59.9 -3.2**
ORD Ordubad 5.55 258 S **Sn 16 10 00.6 -3.4**
IQOM Qom 5.64 196 *e*Pn **Pn 16 09 02.6 -0.3**
SBZ Shahbuz 5.77 263 P **Pn 16 09 05.1 +0.6**
SNR=4.7
SBZ S **Sn 16 10 06.9 -2.5**
QZX Qazax, Azerbai 5.82 280 P **Pn 16 09 05.4 +0.2**
QZX S **Sn 16 10 07.6 -3.0**
IAKL Akhelmad 5.85 127 *e*Pn **Pn 16 09 07.2 +1.4**
IAKL *e* 16 10 15.8
comp=Z,1µm,0.2s
ISFB Sefidab 5.96 186 *e*Pn **Pn 16 09 07.0 -0.1**
ISHB Shabestar 6.04 253 *e*Pn **Pn 16 09 08.3 0.0**
GROC Groznyy 6.10 301 *e*P **Pn 16 09 08.5 -0.4**
GROC *e*S **Sn 16 10 18.9 +1.6**
GROC pmax pmax
comp=Z,18nm,0.5s
IPAY Payeh 6.10 127 *e*Pn **Pn 16 09 09.9 +0.8**
IPAY *e* 16 10 20.7
comp=Z,808nm,0.2s
IKRD Kardeh 6.22 122 *e*Pn **Pn 16 09 11.7 +0.9**
IKRD *e* 16 10 24.0
comp=Z,947nm,0.2s
GNI Garni 6.29 271 *i* P **Pn 16 09 09.4 -2.3**
IMYA Miami 6.86 123 *e*Pn **Pn 16 09 20.4 +0.9**
TNSJ Nastanj 6.95 154 *e*Pn **Pn 16 09 21.7 +0.9**
ANAR Anarak 7.11 175 *e*Pn **Pn 16 09 23.2 +0.2**
TKDS Koohdasht(Taba 7.45 152 *e*Pn **Pn 16 09 28.1 +0.5**
IKOM Komasi 7.49 217 *e*Pn **Pn 16 09 28.1 -0.1**
IDOB Doab 7.53 212 *e*Pn **Pn 16 09 28.2 -0.6**
KARS Kars 7.54 276 Pn **Pn 16 09 26.5 -2.3**
KARS Kars 7.54 276 P **Pn 16 09 26.5 -2.3**
TPRV Parvadeh(Tabas 7.84 156 *e*Pn **Pn 16 09 33.8 +0.9**
KBZ Khabaz 8.24 298 P **Pn 16 09 38.0 -0.2**
comp=Z,1.3nm,0.3s,baz=180,slow=2.1,SNR=10
KBZ S **Sn 16 11 04.7 -5.2**
comp=Z,3.2nm,0.4s,baz=280,slow=18,SNR=1.8
KBZ Khabaz 8.24 298 *i* P **Pn 16 09 36.9 -1.3**
KVAR Kislovodsk Arr 8.46 299 S **Sn 16 11 08.5 -7.0**
comp=Z,10nm,0.3s,baz=214,slow=3.6,SNR=4.9
KIV Kislovodsk 8.47 299 *e*P **Pn 16 09 40.9 -0.5**
KIV *e*S **Sn 16 11 12.2 -3.4**
KIV pmax pmax
comp=Z,6.0nm,0.9s
IRAM Ramesheh 8.48 183 *e*Pn **Pn 16 09 42.2 +0.5**
AB31 Akbulak array 10.24 27 P **Pn 16 10 03.0 -2.6**
AB31 S Sn 16 11 49.7 -9.2
AB31 Akbulak array 10.24 27 ⇑Pn **Pn 16 10 03.0 -2.6**
comp=Z,1.2nm,0.3s,baz=210,slow=13,SNR=48
AB31 ⇑Sn **Sn 16 11 53.2 -5.7**
comp=Z,7.8nm,0.5s,baz=177,slow=24,SNR=14
ABKAR Akbulak array 10.24 27 Pn 16 10 03.1 -2.5
SOC Sochi 10.40 293 *i* P **Pn 16 10 05.9 -1.9**
AKTO Aktyubinsk 10.75 18 P **Pn 16 10 11.1 -1.4**
comp=Z,4.5nm,0.3s,baz=212,slow=7.8,SNR=29
AKTO S **Sn 16 12 03.5 -7.8**
comp=Z,16nm,0.4s,baz=6.5,slow=22,SNR=11
AKTO Aktyubinsk 10.75 18 P **Pn 16 10 10.6 -1.9**
AKTO S **Sn 16 12 03.6 -7.7**
AKTO Aktyubinsk 10.75 18 ⇑Pn **Pn 16 10 10.6 -1.9**
comp=Z,2.5nm,0.3s
AKTO ⇓Sn **Sn 16 12 06.4 -4.9**
comp=Z,22nm,0.5s
BELG Belogornoye 12.65 345 P **Pn 16 10 36.7 -1.7**
comp=Z,7.7nm,0.3s,baz=323,slow=3.1,SNR=14
BELG S Sn 16 12 45.6 -12
comp=Z,7.9nm,0.6s,baz=52,slow=19,SNR=2.4
BELG Belogornoye 12.65 345 *i* P **Pn 16 10 35.9 -2.5**
KK31 Karatay Array 13.41 72 Pn **Pn 16 10 45.9 -3.1**
KK31 Karatay Array 13.41 72 P **Pn 16 10 47.9 -1.1**
KK31 SN **Sn 16 13 13.9 -2.5**
KK31 Karatay Array 13.41 72 ⇑Pn **Pn 16 10 47.9 -1.1**
comp=Z,1.3nm,0.5s,baz=283,slow=6.4,SNR=21
KK31 ⇑Sn **Sn 16 13 14.0 -2.5**
comp=Z,0.8nm,0.3s,baz=308,slow=13,SNR=4.2
KKAR Karatay Array 13.41 72 Pn 16 10 45.8 -3.2
KKAR Karatay Array 13.41 72 P **Pn 16 10 45.8 -3.2**
GAR Garm 13.44 90 Pn **Pn 16 10 49.4 0.0**
BTK Batken 13.66 85 Pn **Pn 16 10 51.9 -0.6**
BTK Batken 13.66 85 P **Pn 16 10 51.9 -0.6**
VSR Storozhevoye 14.54 323 *e*P **P 16 11 12.6 +3.2**
VSR pmax pmax
comp=Z,10.0nm,0.6s
LPSR Galich'ya Gora 15.62 327 *e*P **Pn 16 11 16.5 -1.5**
LPSR pmax pmax
comp=Z,30nm,0.8s
OTUK Ortayu 15.97 54 P **Pn 16 11 21.2 -1.4**
OTUK Ortayu 15.97 54 ⇓Pn **Pn 16 11 21.2 -1.4**
comp=Z,5.7nm,0.6s
AAK Ala-Archa 16.31 75 LR LR 16 18 42.5
comp=Z,46nm,18.1s,baz=265,slow=40
AAK Ala-Archa 16.31 75 *ce*P **P 16 11 31.7 +2.4**
AAK pmax pmax
comp=Z,9.0nm,2.5s
ARU Arti 16.57 11 P **Pn 16 11 28.6 -1.4**
comp=Z,3.7nm,0.3s,baz=216,slow=14,SNR=6.7
ARU LR LR 16 19 03.4
comp=Z,32nm,21.0s,baz=314,slow=41
ARU Arti 16.57 11 P **Pn 16 11 27.9 -2.0**
ARU IAmb IAmb 16 11 46.6
comp=Z,7.1nm,0.5s
ARU Arti 16.57 11 *c i*P **Pn 16 11 28.0 -2.0**
ARU S **Sn 16 14 27.6 -5.1**
ARU pmax pmax
comp=Z,4.0nm,0.6s
SVE Sverdlovsk 17.29 14 *e*P **P 16 11 41.8 +1.9**
SVE *e*S **Sn 16 14 42.8 -7.5**
BOOM Boomskoye usch 17.38 75 Pn **Pn 16 11 40.3 -0.1**
BOOM IAmb IAmb 16 12 00.3
comp=Z,24nm,1.4s
BOOM Boomskoye usch 17.38 75 P **Pn 16 11 40.3 -0.1**
BOOM pmax pmax
comp=Z,24nm,1.5s
BRVK Borovoye 17.39 37 Pn **Pn 16 11 38.5 -1.7**
BRVK IAmb IAmb 16 12 01.4
comp=Z,11nm,0.9s
BRVK Borovoye 17.39 37 P **Pn 16 11 38.7 -1.5**
BRVK S Sn 16 14 41.2 -11
BRVK Borovoye 17.39 37 ⇑Pn **Pn 16 11 38.7 -1.5**
comp=Z,10nm,1.0s
BRVK ⇓Sn **Sn 16 14 44.7 -7.9**
comp=Z,5.3nm,0.7s
BVAR Borovoye Array 17.41 37 LR LR 16 19 36.4
comp=Z,49nm,19.2s,baz=120,slow=41
RAYN Ar Rayn 17.86 203 P **Pn 16 11 44.4 -1.9**
RAYN Ar Rayn 17.86 203 P **Pn 16 11 44.4 -1.9**
RAYN pmax pmax
comp=Z,9.0nm,1.1s
OBN Obninsk 18.41 329 *e*P **P 16 11 51.3 -0.9**
OBN pmax pmax
comp=Z,3.0nm,0.8s
OBN MLR MLR
comp=Z,39nm,10.0s
KIRV Kirov 18.45 354 *ce*P **Pn 16 11 53.5 +0.4**
AKASG Malin Array Be 19.54 310 P **P 16 12 04.3 -0.3**
comp=Z,0.6nm,0.3s,baz=107,slow=9.3,SNR=9.4
AKASG Malin Array Be 19.54 310 *ce*P **P**
AKASG pmax pmax **16 12 04.5 -0.1**
comp=Z,2.0nm,0.4s
AKBB Malin Array Si 19.54 310 *ce*P **P 16 12 04.8 +0.2**
VRI Vrincioaia 19.91 295 ⇓P Pn 16 12 20.5 +10
MLR Muntele Rosu 20.42 294 ⇑P Pn 16 12 17.2 +0.4
MLR Muntele Rosu 20.42 294 P Pn 16 12 16.6 -0.2
comp=Z,1.7nm,0.4s,baz=122,slow=4.3,SNR=3.1
comp=Z,1.7nm,0.4s
MLR Muntele Rosu 20.42 294 P Pn
MLR pmax pmax **16 12 16.7 -0.1**
comp=Z,3.0nm,0.7s
KURBB Kurchatov Arra 20.60 51 P Pn 16 12 18.1 -0.7
comp=Z,2.2nm,0.8s,baz=255,slow=11,SNR=8.8
comp=Z,2.2nm,0.8s
KURK Kurchatov 20.69 51 P **P 16 12 16.9 -0.1**
KURK Kurchatov 20.69 51 *ce*P Pn 16 12 18.4 -1.4
KURK pmax pmax
comp=Z,7.0nm,1.3s
KURK Kurchatov 20.69 51 ⇑Pn Pn 16 12 18.8 -1.0
comp=Z,4.4nm,0.8s
VOIR 21.04 293 ⇑P **P 16 12 22.5 +1.5**
BURAR Bucovina Array 21.20 299 ⇑P **P 16 12 24.5 +1.8**
BURAR Bucovina Array 21.20 299 P **P 16 12 20.5 -2.2**
BUR08 Bucovina Ar. S 21.21 299 P **P 16 12 20.2 -2.6**
MAKZ Makanchi 21.94 63 P **P 16 12 30.8 +0.2**
MAKZ IAmb IAmb 16 12 35.5
comp=Z,4.5nm,0.8s
MAKZ Makanchi 21.94 63 P **P 16 12 30.8 +0.2**
MAKZ pmax pmax
comp=Z,4.0nm,0.8s
MK31 Makanchi Array 22.15 63 P **P 16 12 33.1 +0.2**
MK31 Makanchi Array 22.15 63 P **P 16 12 33.1 +0.2**
MK31 pmax pmax
comp=Z,2.0nm,0.8s
MK31 Makanchi Array 22.15 63 P **P 16 12 32.7 -0.1**
comp=Z,3.9nm,0.8s,baz=254,slow=9.8,SNR=21
MKAR Makanchi Array 22.15 63 P **P 16 12 34.6 +1.8**
comp=Z,2.3nm,0.6s,baz=256,slow=10.0,SNR=19
comp=Z,2.3nm,0.6s
MKAR Makanchi Array 22.15 63 P **P 16 12 33.2 +0.4**
MKAR Makanchi Array 22.15 63 P **P 16 12 33.2 +0.4**
KLMR Klimovskoe 22.20 342 *e*P **P 16 12 32.0 -1.2**
KLMR *e* 16 16 31.1
KLMR pmax pmax
comp=Z,6.0nm,0.8s
KLMR Klimovskoe 22.20 342 *e*P **P 16 12 32.0 -1.2**
KLMR AMP 16 12 48.8
comp=Z,6.0nm,0.8s
KLMR *e*PcP **PcP 16 16 31.2 +3.3**
LIT Litokhoron 23.23 279 P **P 16 12 43.5 -0.6**
LIT IAmb IAmb 16 12 47.0
comp=Z,9.0nm,1.5s
LIT Litokhoron 23.23 279 P **P 16 12 43.5 -0.6**
LIT pmax pmax
comp=Z,9.0nm,1.5s
UZH Uzhgorod 23.30 301 *e*P **P 16 12 46.0 +1.4**
UZH *i* 16 13 25.6
UZH *e*S **S 16 16 52.4 -0.8**
UZH MLR MLR
comp=N,100nm,16.0s
UZH MLR MLR
comp=E,110nm,16.0s
UZH MLR MLR
comp=Z,41nm,16.0s
ZALV Zalesovo Beam 25.37 47 P **P 16 13 04.7 +1.1**
comp=Z,2.3nm,0.7s,baz=263,slow=10,SNR=10
ZALV pP **pP 16 13 17.5 +1.2**
comp=Z,1.5nm,0.5s,baz=251,slow=9.8,SNR=4.2
comp=Z,2.3nm,0.7s
ZALV Zalesovo Beam 25.37 47 *i* P **P 16 13 05.5 +1.9**
ZALV pmax pmax
comp=Z,2.0nm,0.7s
WMQ Urumqi 25.92 71 *e*P **P 16 13 10.1 +1.3**
FIA1 FINESS Array S 26.78 331 P **P 16 13 15.9 -0.4**
FIA1 IAmb IAmb 16 13 20.3
comp=Z,11nm,1.4s
FINES FINESS Array B 26.78 331 P **P 16 13 17.0 +0.7**
comp=Z,1.4nm,0.4s,baz=137,slow=11,SNR=19
comp=Z,1.4nm,0.4s
FINES FINESS Array B 26.78 331 P **P 16 13 16.4 +0.1**
FINES FINESS Array B 26.78 331 *i* P **P 16 13 17.0 +0.7**
FINES pmax pmax
comp=Z,1.0nm,0.4s
HFS Hagfors 31.34 322 P **P 16 13 57.4 +0.6**
comp=Z,2.3nm,0.3s,baz=108,slow=8.8,SNR=44
comp=Z,2.3nm,0.3s
KEV Kevo 32.52 344 P **P 16 14 07.8 +0.9**
KEV Kevo 32.52 344 P **P 16 14 07.9 +0.9**
KEV pmax pmax
comp=Z,17nm,1.3s
NC602 NORSAR Array S 32.56 323 P **P 16 14 07.5 0.0**
NC602 IAmb IAmb 16 14 26.3
comp=Z,15nm,1.2s
NC405 NORSAR Array S 32.61 324 P **P 16 14 08.2 +0.3**
ARCES ARCESS Array B 32.68 343 P **P 16 14 08.8 +0.4**
comp=Z,0.3nm,0.3s,baz=147,slow=10,SNR=8.9
comp=Z,0.3nm,0.3s
ARCES ARCESS Array B 32.68 343 IAmb IAmb 16 14 19.7
comp=Z,8.1nm,1.4s
NB201 NORSAR Array S 32.78 323 P **P 16 14 08.4 -1.0**
NC303 NORSAR Array S 32.81 324 P **P 16 14 07.9 -1.7**
NC303 IAmb IAmb 16 14 16.4
comp=Z,18nm,1.4s
NB2 NORSAR Subarra 32.81 323 P **P 16 14 09.8 +0.1**
comp=Z,0.6nm,0.3s,baz=106,slow=9.3
NOA NORSAR Array B 32.81 323 P **P 16 14 09.5 -0.2**
comp=Z,0.5nm,0.4s,baz=114,slow=8.3,SNR=5.7
NOA pP **pP 16 14 23.2 +0.5**
comp=Z,0.5nm,0.5s,baz=114,slow=8.4,SNR=3.0
comp=Z,0.5nm,0.4s
GOMU GeErMu 32.90 83 P **P 16 14 12.9 +1.7**
GOMU pP pP 16 14 16.3 -7.9
GOMU sP sP 16 14 20.6 -10
GOMU pmax pmax
comp=Z,1.0nm,0.7s
GOMU pmax pmax
comp=Z,120nm,6.7s
ULN Ulaanbaatar 38.90 60 *ce*P **P 16 15 03.1 +1.0**
ULN pmax pmax
comp=Z,4.0nm,1.7s
EKA Eskdalemuir Ar 39.44 312 P **P 16 15 06.9 +0.6**
comp=Z,0.7nm,0.4s,baz=98,slow=8.8,SNR=9.0
EKA pP **pP 16 15 18.9 -0.6**
comp=Z,1.6nm,0.4s,baz=95,slow=8.6,SNR=11
comp=Z,0.7nm,0.4s
SPB2 Spitsbergen Ar 40.80 349 P **P 16 15 17.7 +0.4**
SPITS Spitsbergen Ar 40.81 349 P **P 16 15 19.3 +1.9**
comp=Z,8.6nm,0.9s,baz=125,slow=11,SNR=6.4
comp=Z,8.6nm,0.9s
SPITS Spitsbergen Ar 40.81 349 P **P 16 15 18.4 +1.0**
SPITS pmax pmax
comp=Z,17nm,1.1s
PZH PanZhiHua 42.48 93 P **P 16 15 32.9 +1.1**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,110nm,5.9s
ESDC Sonseca Array 42.96 288 P **P 16 15 36.0 +0.5**
comp=Z,0.6nm,0.8s,baz=55,slow=9.9,SNR=4.5
ESDC pP **pP 16 15 48.7 -0.1**
comp=Z,0.5nm,0.5s,baz=65,slow=8.5,SNR=3.7
comp=Z,0.6nm,0.8s
HHC Hu-ho-hao-te 43.78 69 *e*P **P 16 15 41.9 -0.3**
HHC pmax pmax
comp=Z,28nm,1.1s
HHC pmax pmax
comp=Z,140nm,5.1s
CMAR Chiang Mai Arr 44.99 105 P **P 16 15 53.0 +1.1**
comp=Z,0.5nm,0.7s,baz=303,slow=8.0,SNR=4.8
comp=Z,0.5nm,0.7s
CMAR Chiang Mai Arr 44.99 105 *ce*P **P 16 15 52.7 +0.8**
CMAR pmax pmax
comp=Z,1.0nm,0.7s
ENH Enshi 46.52 84 P **P 16 16 01.6 -2.3**
ENH IAmb IAmb 16 16 20.3
comp=Z,3.5nm,0.5s
KSRS Korea Array 56.77 67 P **P 16 17 21.4 +1.1**
comp=Z,0.9nm,0.5s,baz=293,slow=7.1,SNR=7.7
KSRS pP **pP 16 17 36.0 +1.9**
comp=Z,0.7nm,0.6s,baz=295,slow=5.4,SNR=4.2
comp=Z,0.9nm,0.5s
BILL Bilibino 61.12 23 *e*P **P 16 17 50.6 +0.7**
BILL *e* 16 18 34.5
BILL *e* 16 20 06.1
BILL pmax pmax
comp=Z,2.0nm,1.0s
TOLK Toolik Lake Re 70.09 9 P **P 16 18 48.5 +0.7**
TOLK IAmb IAmb 16 18 50.0
comp=Z,2.6nm,0.6s
BMAR Burnt Mountain 71.78 7 P **P 16 18 59.0 +0.9**
IMAR Indian Mountai 72.06 11 P **P 16 19 00.5 +0.8**
BCAR Beaver Creek A 76.31 7 P **P 16 19 26.1 +1.5**

*IDC **21** 16:07:47.4±2.0,0.°85N×97.°46E,h0km,mb4.1/8, mbtmp4.0/9,ML4.2/1,MS2.8/1,Error ellipse: s-maj=56.5km s-min=25.8km az=53.0*
*DJA **21** 16:07:48.8±1.0,1.°1N±3.°×9.°7E±.°,h25km±5km,M4.3/10, mb4.3/3,MLv4.4/10*
*NEIC **21** 16:07:51.5±1.1,0.°88N±0.°07×97.°33E±0.°08,h26km±3km, mb4.4/25,Error ellipse: s-maj=11.9km s-min=9.4km az=75.0*

ISC 21 16:07:50.8±0.7,0.°84N±0.°06×97.°37E±0.°08,h27km,n67, σ0.°93/63,mb4.3/22,1C,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.51**	**24**	Pn	**Pn**	**Pn**	**Pn**	**16 08 01.4**	**-0.9**
GSI				Sg	**Sn**	**Sn**	**Sn**	**16 08 08.4**	**-1.7**
GSI	**Gunungsitoli**	**0.51**	**24**	P	**Pn**	**Pn**	**Pn**	**16 08 01.9**	**-0.4**
GSI				S	**Sn**	**Sn**	**Sn**	**16 08 09.8**	**-0.3**
KCSI	**Kotacane, Aceh**	**2.70**	**8**	P	**Pn**	**Pn**	**Pn**	**16 08 32.3**	**-0.2**
KCSI				S	**Sn**	**Sn**	**Sn**	**16 09 04.1**	**-0.2**
SISI	**Saibi**	**2.75**	**141**	P	**Pn**	**Pn**	**Pn**	**16 08 30.7**	**-2.5**
TSI	**Tuntungan**	**2.90**	**24**	P	**Pn**	**Pn**	**Pn**	**16 08 35.4**	**+0.1**
BKNI	**Bangkinang**	**3.70**	**98**	Pn	**Pn**	**Pn**	**Pn**	**16 08 47.3**	**+1.0**
BKNI	**Bangkinang**	**3.70**	**98**	P	**Pn**	**Pn**	**Pn**	**16 08 44.7**	**-1.6**
LHMI	**Lhok Sumawe**	**4.38**	**354**	Pn	**Pn**	**Pn**	**Pn**	**16 08 55.3**	**-0.4**
LHMI	**Lhok Sumawe**	**4.38**	**354**	P	**Pn**	**Pn**	**Pn**	**16 08 55.3**	**-0.4**
LHMI				S	**Sn**	**Sn**	**Sn**	**16 09 45.5**	**-0.4**
PPSI	**Pulau Pagai**	**4.44**	**144**	P	**Pn**	**Pn**	**Pn**	**16 08 53.9**	**-2.6**
IPM	**Ipoh**	**5.14**	**45**	Pn	**Pn**	**Pn**	**Pn**	**16 09 06.4**	**+0.3**
KULM	**Kulim**	**5.50**	**36**	Pn	**Pn**	**Pn**	**Pn**	**16 09 11.1**	**+0.1**
MYKOM	**Kota Tinggi**	**6.54**	**82**	Pn	**Pn**	**Pn**	**Pn**	**16 09 26.5**	**+1.1**
SRIT	**Nakonsritamara**	**8.02**	**16**	Pn	**Pn**	**Pn**	**Pn**	**16 09 45.0**	**-0.6**
DLV	**T Lat**	**15.60**	**45**	P	**P**	**P**	**P**	**16 11 32.8**	**-0.4**
DLV						IAmb	IAmb	16 11 40.2	
comp=Z,39nm,1.5s									
CMAR	**Chiang Mai Arr**	**17.58**	**5**	P	**Pn**	**Pn**	**Pn**	**16 11 53.2**	**-0.8**
comp=Z,0.3nm,0.3s,baz=194,slow=12,SNR=12									
CMAR						LR	LR	16 18 00.2	
comp=Z,29nm,19.5s,baz=205,slow=35									
comp=Z,1.3nm,0.6s									
CHTO	**Chiang Mai**	**17.93**	**5**	Pn	**Pn**	**Pn**	**Pn**	**16 11 55.9**	**-2.5**
KKM	**Kota Kinabalu**	**19.50**	**74**	P	**P**	**P**	**P**	**16 12 16.1**	**-0.1**
KKM						IAmb	IAmb	16 12 25.6	
comp=Z,28nm,1.2s									
MYLDM	**Lahad Datu**	**21.53**	**78**	P	**P**	**P**	**P**	**16 12 37.5**	**-0.6**
MYLDM						IAmb	IAmb	16 12 41.8	
comp=Z,19nm,1.3s									
TOLI2	**Tolitoli**	**23.41**	**89**	P	**P**	**P**	**P**	**16 12 57.7**	**-0.3**
TOLI2						IAmb	IAmb	16 12 57.8	
comp=Z,12nm,1.2s									
KMI	**Kunming**	**24.69**	**12**	⇑P	**P**	**P**	**P**	**16 13 10.8**	**+0.7**
KMI						pP	pP	16 13 19.6	+1.6
KMI						pmax	pmax		
comp=Z,8.0nm,1.0s									
SHL	**Shillong**	**25.15**	**348**	P	**P**	**P**	**P**	**16 13 15.1**	**+1.0**
PZH	**PanZhiHua**	**25.86**	**9**	P	**P**	**P**	**P**	**16 13 23.1**	**+2.6**
PZH						pmax	pmax		
comp=Z,10.0nm,0.7s									
PZH						pmax	pmax		
comp=Z,100nm,5.0s									
H08S2	**Diego Garcia H**	**26.20**	**251**	T	T	T	T	16 40 27.0	
baz=71,slow=76,SNR=747									
H08S3	**Diego Garcia H**	**26.21**	**251**	T	T	T	T	16 40 27.2	
baz=71,slow=76,SNR=622									
H08S1	**Diego Carcia H**	**26.22**	**251**	T	T	T	T	16 40 28.3	
baz=71,slow=76,SNR=747									
XAN	**Xi'an**	**34.76**	**17**	P	**P**	**P**	**P**	**16 14 38.0**	**-1.1**
XAN						pP	pP	16 14 43.3	-3.8
XAN						sP	sP	16 14 48.3	-2.0
XAN						pmax	pmax		
comp=Z,7.0nm,0.5s									
GTA	**Gaotai**	**38.45**	**3**	*e*P	**P**	**P**	**P**	**16 15 11.0**	**+0.4**
GTA						pP	pP	16 15 19.8	+1.1
GTA						sP	sP	16 15 24.3	+2.4
GTA						pmax	pmax		
comp=Z,6.0nm,0.8s									
H01W3	**Cape Leeuwin H**	**38.85**	**158**	T	T	T	T	16 56 35.6	
baz=334,slow=76,SNR=52									
H01W2	**Lape Leeuwin H**	**38.86**	**158**	T	T	T	T	16 56 36.5	
baz=334,slow=76,SNR=56									
H01W1	**Cape Leeuwin H**	**38.86**	**158**	T	T	T	T	16 56 33.5	
baz=334,slow=76,SNR=54									
JOW	**Kunigami**	**39.36**	**46**	P	**P**	**P**	**P**	**16 15 19.0**	**+0.7**
WB0	**Warramunga Arr**	**41.67**	**121**	P	**P**	**P**	**P**	**16 15 37.2**	**-0.2**
WB0						IAmb	IAmb	16 15 44.6	
comp=Z,7.4nm,1.2s									
WRA	**Warramunga Arr**	**41.70**	**122**	P	**P**	**P**	**P**	**16 15 37.5**	**-0.2**
comp=Z,0.9nm,0.8s,baz=302,slow=9.0,SNR=6.7									
comp=Z,0.9nm,0.8s									
WRA	**Warramunga Arr**	**41.70**	**122**	P	**P**	**P**	**P**	**16 15 37.8**	**+0.1**
WRAB	**Tennant Creek**	**41.70**	**122**	P	**P**	**P**	**P**	**16 15 37.7**	**-0.1**
WRAB						IAmb	IAmb	16 15 50.1	
comp=Z,14nm,1.4s									
WB2	**Warramunga Arr**	**41.71**	**122**	P	**P**	**P**	**P**	**16 15 37.9**	**+0.1**
WR0	**Warramunga Arr**	**41.88**	**122**	P	**P**	**P**	**P**	**16 15 39.1**	**-0.1**
AS31	**Alice Springs**	**43.04**	**127**	P	**P**	**P**	**P**	**16 15 49.0**	**+0.3**
ASAR	**Alice Springs**	**43.04**	**127**	P	**P**	**P**	**P**	**16 15 48.9**	**+0.2**
WMQ	**Urumqi**	**43.66**	**350**	*e*P	**P**	**P**	**P**	**16 15 55.3**	**+2.0**
KSRS	**Korea Array**	**46.05**	**34**	P	**P**	**P**	**P**	**16 16 12.4**	**+0.1**
comp=Z,1.2nm,0.6s,baz=216,slow=9.0,SNR=9.4									
comp=Z,1.2nm,0.6s									
SONM	**Songino Array**	**47.46**	**8**	P	**P**	**P**	**P**	**16 16 23.5**	**0.0**
comp=Z,1.3nm,0.6s,baz=194,slow=9.3,SNR=9.1									
comp=Z,1.3nm,0.6s									
SONM	**Songino Array**	**47.46**	**8**	P	**P**	**P**	**P**	**16 16 23.3**	**-0.2**
JHS	**Saijyo**	**47.58**	**41**	P	**P**	**P**	**P**	**16 16 24.8**	**+0.3**
MK31	**Makanchi Array**	**47.63**	**346**	P	**P**	**P**	**P**	**16 16 25.1**	**+0.4**
MK31						IAmb	IAmb	16 16 26.2	
comp=Z,2.8nm,0.7s									
MKAR	**Makanchi Array**	**47.63**	**346**	P	**P**	**P**	**P**	**16 16 25.4**	**+0.8**
comp=Z,2.6nm,0.5s,baz=162,slow=8.9,SNR=34									
comp=Z,2.6nm,0.5s									
MKAR	**Makanchi Array**	**47.63**	**346**	P	**P**	**P**	**P**	**16 16 25.1**	**+0.4**
MAKZ	**Makanchi**	**47.72**	**346**	P	**P**	**P**	**P**	**16 16 25.9**	**+0.6**
MAKZ						IAmb	IAmb	16 16 26.7	
comp=Z,2.6nm,0.7s									
KKAR	**Karatay Array**	**48.46**	**334**	P	**P**	**P**	**P**	**16 16 32.0**	**+0.9**
JGF	**Kuroka**	**50.74**	**43**	P	**P**	**P**	**P**	**16 16 48.7**	**0.0**
KURBB	**Kurchatov Arra**	**52.12**	**345**	P	**P**	**P**	**P**	**16 16 59.5**	**+0.8**
comp=Z,1.8nm,0.7s,baz=162,slow=6.3,SNR=7.8									
comp=Z,1.8nm,0.7s									
KURK	**Kurchatov**	**52.19**	**345**	P	**P**	**P**	**P**	**16 16 59.5**	**+0.4**
KURK	**Kurchatov**	**52.19**	**345**	IAmb	IAmb	IAmb	IAmb	16 17 02.0	
comp=Z,3.0nm,0.8s									
USA0B	**Ussuriysk Arra**	**52.99**	**31**	P	**P**	**P**	**P**	**16 17 05.6**	**+0.4**
USA0B						IAmb	IAmb	16 17 06.7	
comp=Z,3.4nm,0.8s									
USRK	**Ussuriysk Ar.**	**52.99**	**31**	P	**P**	**P**	**P**	**16 17 05.5**	**+0.3**
comp=Z,2.3nm,0.9s,baz=318,slow=1.7,SNR=5.1									
comp=Z,2.3nm,0.9s									
USRK	**Ussuriysk Ar.**	**52.99**	**31**	P	**P**	**P**	**P**	**16 17 05.3**	**+0.1**
ZAA0	**Zalesovo Array**	**53.94**	**351**	P	**P**	**P**	**P**	**16 17 12.2**	**+0.2**
ZAA0						IAmb	IAmb	16 17 13.3	
comp=Z,5.9nm,1.0s									
ZALV	**Zalesovo Beam**	**53.94**	**351**	P	**P**	**P**	**P**	**16 17 12.6**	**+0.6**
comp=Z,3.2nm,0.4s,baz=186,slow=6.1,SNR=16									
comp=Z,3.2nm,0.4s									
ZALV	**Zalesovo Beam**	**53.94**	**351**	P	**P**	**P**	**P**	**16 17 12.1**	**+0.1**
ABKAR	**Akbulak array**	**57.91**	**332**	P	**P**	**P**	**P**	**16 17 39.0**	**-1.6**
YAK	**Yakutsk**	**65.72**	**16**	P	**P**	**P**	**P**	**16 18 32.7**	**-0.1**
LBTB	**Lobatse**	**73.88**	**244**	P	**P**	**P**	**P**	**16 19 23.9**	**-0.1**
LBTB						IAmb	IAmb	16 19 40.4	
comp=Z,8.3nm,1.1s									
CMWZ	**Cape Campbell**	**80.75**	**132**	P	**P**	**P**	**P**	**16 20 03.1**	**+1.1**
MSWZ	**Moikau Station**	**81.47**	**132**	P	**P**	**P**	**P**	**16 20 06.1**	**+0.2**
**AR

MAN 21 16:11:34.6, 10°.79N×122°.65E, h69km, mb3.8, ML2.5, MS2.0, Panay

*BJI **21** 16:12:53.0±0.0, 22°.70N×45°.10W, h10km, mb5.1/2, Ms7 5.4/1*
*IDC **21** 16:12:53.6±0.5, 22°.66N×45°.16W, h0km, mb4.4/37, mbtmp4.4/37, Error ellipse: s-maj=14.3km s-min=11.3km az=144.0*
*NEIC **21** 16:12:54.8±1.6, 22°.6N±0°.1×45°.03W±0°.10, h10km±1km, mb4.9/232, Error ellipse: s-maj=17.4km s-min=14.4km az=158.0*
ISC 21 16:12:54.9±0.4, 22°.53N±0°.07×45°.11W±0°.06, h14km, n364, σ1s90/342, mb4.9/156, 4C-18D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
GDSD	**La Dsirade Is**	**16.27**	**250**	Pn	**P**		**16 16 45.0**	**-1.2**
H05S1	**Guadeloupe/Mar**	**16.95**	**244**	T	T		16 34 04.3	
	SNR=8.3							
HUMP	**Col San Antoni**	**19.93**	**261**	P	**P**		**16 17 27.1**	**+0.6**
GCPR	**Guaynabo City**	**20.10**	**262**	P	Pn		16 17 30.7	+0.5
GCPR				IAmb	IAmb		16 17 41.0	
	comp=Z,72nm,1.3s							
PDPR	**Patillas Dam,**	**20.12**	**261**		Pn		16 17 30.7	+0.3
PDPR				IAmb	IAmb		16 17 42.1	
	comp=Z,71nm,1.1s							
SJG	**San Juan**	**20.21**	**261**	P	Pn		16 17 35.3	+3.8
	comp=Z,12nm,0.2s,baz=55,slow=9.4,SNR=5.5							
SJG	**San Juan**	**20.21**	**261**	P	Pn		16 17 31.3	-0.2
SJG				IAmb	IAmb		16 17 43.1	
	comp=Z,75nm,1.1s							
CELP	**Cerrillos**	**20.62**	**261**	P	**P**		**16 17 33.7**	**-0.3**
OBIP	**Obispado Ponce**	**20.65**	**261**	P	**P**		**16 17 34.2**	**-0.2**
AOPR	**Arecibo Observ**	**20.70**	**262**	P	Pn		16 17 37.5	+0.2
AGPR	**Aguadilla, PR**	**21.00**	**263**	P	**P**		**16 17 38.8**	**+0.7**
CRPR	**Cabo Rojo, PR**	**21.12**	**262**	P	**P**		**16 17 40.5**	**+1.1**
CRPR				IAmb	IAmb		16 17 59.9	
	comp=Z,68nm,1.3s							
SACV	**Santiago Islan**	**21.68**	**107**	P	**P**		**16 17 43.7**	**-1.9**
SACV				IAmb	IAmb		16 17 51.1	
	comp=Z,103nm,1.4s							
DR12	**Loma Pena Alta**	**23.01**	**265**	P	**P**		**16 18 00.1**	**+0.4**
BANI	**BANI**	**24.00**	**265**	P	**P**		**16 18 10.3**	**+0.8**
SDDR	**Presa de Saban**	**24.73**	**267**	P	**P**		**16 18 18.1**	**+2.0**
SDDR				IAmb	IAmb		16 18 27.5	
	comp=Z,41nm,1.1s							
G62A	**West of Eustis**	**30.72**	**324**	P	**P**		**16 19 10.2**	**+0.8**
G62A				IAmb	IAmb		16 19 17.2	
	comp=Z,25nm,1.0s							
E62A	**Clayton Lake**	**31.10**	**327**	P	**P**		**16 19 12.8**	**0.0**
E62A				IAmb	IAmb		16 19 20.6	
	comp=Z,21nm,1.1s							
MVL	**Millersville**	**31.66**	**311**	P	**P**		**16 19 19.2**	**+1.4**
SDMD	**Soldier's Deli**	**31.78**	**309**	P	**P**		**16 19 18.4**	**-0.5**
SDMD				IAmb	IAmb		16 19 38.0	
	comp=Z,16nm,1.5s							
FRNY	**Flat Rock**	**32.23**	**320**	P	**P**		**16 19 23.7**	**+0.9**
ZARC	**Zaragoza, Cauc**	**32.30**	**247**	P	**P**		**16 19 24.4**	**+0.7**
J58A	**Remsen**	**32.48**	**317**	P	**P**		**16 19 26.1**	**+1.1**
J57A	**Williamstown**	**32.96**	**317**	P	**P**		**16 19 30.7**	**+1.6**
J57A				IAmb	IAmb		16 19 36.9	
	comp=Z,10nm,0.8s							
K57A	**Scipio Center**	**32.97**	**315**	P	**P**		**16 19 31.0**	**+1.7**
Q56A	**Snyder Ridge,**	**33.35**	**307**	P	**P**		**16 19 34.6**	**+2.0**
Q56A				IAmb	IAmb		16 19 41.3	
	comp=Z,17nm,1.0s							
BLA	**Blacksburg**	**33.72**	**304**	P	**P**		**16 19 37.7**	**+1.7**
BLA				IAmb	IAmb		16 19 45.1	
	comp=Z,21nm,0.9s							
R55A	**Marlinton**	**33.80**	**306**	P	**P**		**16 19 36.7**	**+0.1**
J55A	**Hilton**	**34.06**	**315**	P	**P**		**16 19 40.5**	**+1.7**
J55A				IAmb	IAmb		16 19 46.6	
	comp=Z,15nm,0.9s							
WVNY	**West Valley, N**	**34.21**	**313**	P	**P**		**16 19 41.1**	**+1.1**
WVNY				IAmb	IAmb		16 19 48.7	
	comp=Z,22nm,1.2s							
V53A	**Saluda**	**35.24**	**300**	P	**P**		**16 19 50.6**	**+1.5**
SADO	**Sadowa**	**35.59**	**317**	P	P		16 19 56.8	+4.8
	comp=Z,6.3nm,1.0s,baz=134,slow=8.8,SNR=4.2							
TZTN	**Tazewell**	**36.00**	**302**	P	**P**		**16 19 57.3**	**+1.7**
VLDQ	**Val d'Or**	**36.27**	**323**	P	**P**		**16 19 58.9**	**+1.1**
VLDQ				IAmb	IAmb		16 20 07.7	
	comp=Z,17nm,1.1s							
MTE	**Manteigas**	**36.32**	**52**	P	**P**		**16 19 58.2**	**-0.2**
Q51A	**Peebles**	**36.43**	**306**	P	**P**		**16 19 59.8**	**+0.5**
Q51A				IAmb	IAmb		16 20 07.6	
	comp=Z,24nm,0.9s							
K50A	**Casco**	**37.08**	**312**	P	**P**		**16 20 04.9**	**+0.1**
MDT	**Midelt**	**37.10**	**65**	P	**P**		**16 20 06.7**	**+1.5**
	comp=Z,4.9nm,1.2s,baz=280,slow=12,SNR=4.4							
	comp=Z,4.9nm,1.2s							
T50A	**Nancy**	**37.11**	**302**	P	**P**		**16 20 05.6**	**+0.6**
W50A	**Signal Mountai**	**37.16**	**299**	P	**P**		**16 20 05.6**	**0.0**
W50A				IAmb	IAmb		16 20 14.2	
	comp=Z,14nm,0.8s							
FPAL	**Fort Paine**	**37.31**	**298**	P	**P**		**16 20 06.9**	**0.0**
P49A	**Miami Univ. Ec**	**37.59**	**306**	P	**P**		**16 20 09.5**	**+0.4**
P49A				IAmb	IAmb		16 20 17.1	
	comp=Z,29nm,1.3s							
250A	**Grady**	**37.60**	**294**	P	**P**		**16 20 09.7**	**+0.5**
250A				IAmb	IAmb		16 20 17.5	
	comp=Z,24nm,1.1s							
R49A	**Shelbyville**	**37.64**	**304**	P	**P**		**16 20 10.2**	**+0.7**
R49A				IAmb	IAmb		16 20 18.1	
	comp=Z,21nm,1.1s							
BDFB	**Brasilia**	**38.04**	**185**	P	**P**		**16 20 15.0**	**+1.8**
	comp=Z,2.2nm,0.4s,baz=3.4,slow=9.8,SNR=3.6							
	comp=Z,2.2nm,0.4s							
BDFB	**Brasilia**	**38.04**	**185**	P	**P**		**16 20 12.4**	**-0.7**
PAB	**San Pablo**	**38.45**	**54**	P	**P**		**16 20 14.7**	**-1.8**
PAB				IAmb	IAmb		16 20 18.4	
	comp=Z,32nm,1.5s							
X48A	**Hartselle**	**38.48**	**297**	P	**P**		**16 20 16.7**	**+0.1**
ESDC	**Sonseca Array**	**38.77**	**54**	P	**P**		**16 20 19.4**	**+0.3**
	comp=Z,4.6nm,1.1s,baz=256,slow=8.5,SNR=19							
	comp=Z,4.6nm,1.1s							
ESDC	**Sonseca Array**	**38.77**	**54**	P	**P**		**16 20 18.0**	**-1.1**
Z47A	**Carrollton**	**39.20**	**295**	P	**P**		**16 20 22.8**	**0.0**
Z47A				IAmb	IAmb		16 20 31.2	
	comp=Z,24nm,0.8s							
OTAV	**Otavalo**	**39.29**	**240**	P	**P**		**16 20 24.2**	**0.0**
WVT	**Waverly**	**39.33**	**300**	P	**P**		**16 20 24.1**	**+0.3**
PLAL	**Pickwick Lake**	**39.38**	**298**	P	**P**		**16 20 24.7**	**+0.5**
E46A	**Sault Ste Mari**	**39.56**	**317**	P	**P**		**16 20 25.1**	**-0.5**
M44A	**Midewin, Midew**	**40.51**	**308**	P	**P**		**16 20 32.5**	**-1.0**
S44A	**Carbondale**	**40.69**	**302**	P	**P**		**16 20 35.6**	**+0.6**
S44A				IAmb	IAmb		16 20 43.8	
	comp=Z,30nm,1.1s							
H43A	**Windswept, Lux**	**41.17**	**313**	P	**P**		**16 20 39.5**	**+0.6**
H43A				IAmb	IAmb		16 20 47.1	
	comp=Z,24nm,1.2s							
E43A	**Lone Tree Farm**	**41.29**	**316**	P	**P**		**16 20 38.6**	**-1.2**
SIV	**San Ignacio**	**41.35**	**204**	P	**P**		**16 20 41.6**	**+0.9**
	comp=Z,1.7nm,1.0s,baz=12,slow=7.5,SNR=6.8							
	comp=Z,1.7nm,1.0s							
FVM	**French Village**	**41.65**	**302**	P	**P**		**16 20 43.0**	**+0.1**
L42A	**Oliver, Polo**	**41.84**	**308**	P	**P**		**16 20 44.9**	**+0.4**
CCM	**Cathedral Cave**	**42.30**	**302**	P	**P**		**16 20 47.1**	**-1.1**
CCM				IAmb	IAmb		16 20 56.5	
	comp=Z,18nm,0.9s							
H10N2	**ASCENSION HYDR**	**42.54**	**132**	T	T		17 05 53.6	
	baz=316,slow=75,SNR=940							
H10N3	**ASCENSION HYDR**	**42.54**	**132**	T	T		17 05 53.1	
	baz=316,slow=75,SNR=523							
H10N1	**ASCENSION HYDR**	**42.56**	**132**	T	T		17 05 58.0	
	baz=316,slow=75,SNR=505							
COWI	**Conover**	**42.59**	**314**	P	**P**		**16 20 50.3**	**-0.3**
W41B	**Gary Mavity, V**	**42.80**	**298**	P	**P**		**16 20 52.4**	**0.0**
W41B				IAmb	IAmb		16 21 00.4	
	comp=Z,31nm,1.1s							
WHAR	**Wooly Hollow**	**42.85**	**298**	P	**P**		**16 20 52.7**	**0.0**
WHAR				IAmb	IAmb		16 21 00.6	
	comp=Z,27nm,1.0s							
R40A	**Maddies Statio**	**43.13**	**302**	P	**P**		**16 20 55.2**	**+0.2**
H10S3	**ASCENSION HYDR**	**43.23**	**133**	T	T		17 06 45.8	
	baz=315,slow=74,SNR=214							
H10S2	**ASCENSION HYDR**	**43.24**	**133**	T	T		17 06 48.7	
	baz=265,slow=74,SNR=104							
X40A	**Basin Creek Fa**	**43.24**	**297**	P	**P**		**16 20 54.9**	**-1.1**
MIAR	**Mount Ida**	**43.86**	**297**	P	**P**		**16 21 00.2**	**-0.8**
S39A	**Bolivar**	**43.89**	**301**	P	**P**		**16 21 00.8**	**-0.4**
W39A	**Magazine**	**44.06**	**298**	P	**P**		**16 21 02.1**	**-0.4**
W39A				IAmb	IAmb		16 21 10.8	
	comp=Z,20nm,1.1s							
FRB	**Frobisher Bay**	**44.07**	**345**	P	**P**		**16 21 03.3**	**+1.1**
	comp=Z,10nm,1.0s,baz=167,slow=9.0,SNR=4.5							
	comp=Z,10nm,1.0s							
P38A	**Dawn**	**44.29**	**304**	P	**P**		**16 21 04.5**	**+0.2**
P38A				IAmb	IAmb		16 21 12.1	
	comp=Z,18nm,1.1s							
LPAZ	**La Paz**	**44.68**	**212**	P	**P**		**16 21 10.3**	**+2.0**
	comp=Z,11nm,0.9s,baz=17,slow=8.1,SNR=22							
	comp=Z,11nm,0.9s							
LPAZ	**La Paz**	**44.68**	**212**	P	**P**		**16 21 08.5**	**+0.2**
LPAZ				IAmb	IAmb		16 21 12.5	
	comp=Z,18nm,1.0s							
EYMN	**Ely**	**44.70**	**316**	P	**P**		**16 21 06.9**	**-0.6**
Z38A	**Mt. Pleasant**	**45.00**	**295**	P	**P**		**16 21 10.2**	**+0.2**
CLF	**Chambon-Foret**	**45.35**	**44**	P	**P**		**16 21 11.9**	**-0.7**
TOA0	**Torodi Ar. Sit**	**45.36**	**94**	P	**P**		**16 21 12.5**	**-0.7**
TOA0				IAmb	IAmb		16 21 14.6	
	comp=Z,13nm,1.2s							
TORD	**Torodi Ar. Bea**	**45.36**	**94**	P	**P**		**16 21 13.0**	**-0.1**
	comp=Z,4.6nm,1.1s,baz=294,slow=8.1,SNR=11							
	comp=Z,4.6nm,1.1s							
TORD	**Torodi Ar. Bea**	**45.36**	**94**	P	**P**		**16 21 12.4**	**-0.7**
T35A	**Sooner Cattle**	**46.36**	**300**	P	**P**		**16 21 20.4**	**-0.4**
DOU	**Dourbes**	**47.42**	**42**	*dx*	x		16 21 29.7	
BMRD	**Maredsous**	**47.59**	**42**	*dx*	x		16 21 30.3	
BNI	**Bardonecchia**	**47.61**	**49**	P	**P**		**16 21 30.8**	**+0.2**
AGMN	**Agassiz Nation**	**47.61**	**316**	P	**P**		**16 21 29.6**	**-0.8**
AGMN				IAmb	IAmb		16 21 37.2	
	comp=Z,9.6nm,0.9s							
PB12	**IPOC Station P**	**47.75**	**213**	P	**P**		**16 21 30.2**	**-1.7**
RCHB	**Rochefort**	**47.83**	**42**	*dx*	x		16 21 32.4	
BCLA	**Clavier**	**47.95**	**42**	*dx*	x		16 21 33.7	
GO01	**Chusmiza**	**48.09**	**211**	P	**P**		**16 21 32.8**	**-2.2**
GO01				IAmb	IAmb		16 21 36.4	
	comp=Z,21nm,1.3s							
ULM	**Lac du Bonnet**	**48.13**	**318**	P	**P**		**16 21 33.9**	**-0.5**
	comp=Z,5.0nm,1.0s,baz=119,slow=11,SNR=4.8							
	comp=Z,5.0nm,1.0s							
ULM	**Lac du Bonnet**	**48.13**	**318**	P	**P**		**16 21 31.8**	**-2.6**
ULM				IAmb	IAmb		16 21 41.1	
	comp=Z,19nm,1.1s							
WMOK	**Wichita Mounta**	**48.15**	**297**	P	**P**		**16 21 35.2**	**+0.3**
WMOK				IAmb	IAmb		16 21 42.8	
	comp=Z,18nm,1.1s							
WLF	**Walferdange**	**48.27**	**43**	*dx*	x		16 21 36.5	
SENIN	**Lac Senin/Sane**	**48.28**	**47**	P	**P**		**16 21 35.1**	**-0.8**
BHOU	**Houvegnez**	**48.36**	**42**	*dx*	x		16 21 36.2	
PB11	**IPOC Station P**	**48.39**	**212**	P	**P**		**16 21 36.3**	**-0.6**
MEM	**Membach**	**48.44**	**42**	*dx*	x		16 21 37.6	
PB08	**IPOC Station P**	**48.48**	**211**	P	**P**		**16 21 37.6**	**-0.1**
PB08				IAmb	IAmb		16 21 38.9	
	comp=Z,16nm,1.1s							
BTNL	**Ternell**	**48.50**	**42**	*dx*	x		16 21 38.1	
ECH	**Echery**	**48.57**	**45**	P	**P**		**16 21 36.8**	**-1.1**
ECH				IAmb	IAmb		16 21 38.9	
	comp=Z,15nm,1.5s							
KEST	**Kesra**	**48.79**	**62**	P	**P**		**16 21 40.8**	**+1.0**
	comp=Z,25nm,1.1s,baz=134,slow=4.7,SNR=11							
	comp=Z,25nm,1.1s							
KEST	**Kesra**	**48.79**	**62**	P	**P**		**16 21 39.2**	**-0.5**
VSL	**Villasalto**	**48.93**	**57**	P	**P**		**16 21 40.5**	**-0.2**
833A	**Chaparral WMA,**	**49.03**	**289**	P	**P**		**16 21 41.0**	**-0.6**
833A				IAmb	IAmb		16 21 48.8	
	comp=Z,10nm,0.7s							
BFO	**Black Forest**	**49.36**	**45**	P	**P**		**16 21 43.4**	**-0.6**
BFO				IAmb	IAmb		16 21 45.9	
	comp=Z,25nm,1.3s							
MSSA	**Maissana**	**49.50**	**50**	P	**P**		**16 21 44.3**	**-0.8**
TUE	**Stuetta**	**49.70**	**48**	P	**P**		**16 21 45.7**	**-1.1**
TUE				IAmb	IAmb		16 21 48.7	
	comp=Z,23nm,1.4s							
SCO	**Scoresbysund**	**49.87**	**10**	P	**P**		**16 21 47.4**	**0.0**
CPUP	**Villa Florida**	**49.99**	**194**	P	**P**		**16 21 49.6**	**+0.8**
	comp=Z,3.2nm,0.9s,baz=36,slow=9.6,SNR=4.1							
	comp=Z,3.2nm,0.9s							
CPUP	**Villa Florida**	**49.99**	**194**	P	**P**		**16 21 49.2**	**+0.4**
CPUP				IAmb	IAmb		16 21 50.8	
	comp=Z,22nm,1.5s							
FCC	**Fort Churchill**	**50.10**	**329**	P	**P**		**16 21 49.4**	**+0.1**
DAVOX	**Davos/Dischmat**	**50.11**	**47**	P	**P**		**16 21 50.6**	**+0.8**
	comp=Z,2.4nm,0.7s,baz=261,slow=6.5,SNR=8.5							
	comp=Z,2.4nm,0.7s							
DAVA	**Damuels**	**50.19**	**47**	*eP*	**P**		**16 21 51.1**	**+0.6**
	comp=Z,23nm,1.4s,SNR=8.5							
SUMG	**Summit**	**50.21**	**3**	P	**P**		**16 21 50.0**	**-0.4**
SUMG				IAmb	IAmb		16 22 01.9	
	comp=Z,26nm,1.5s							
LVC	**Limon Verde**	**50.50**	**209**	P	**P**		**16 21 52.1**	**-1.1**
AMTX	**Amarillo**	**50.54**	**297**	P	**P**		**16 21 52.6**	**-0.6**
ZCCA	**Zocca**	**50.54**	**50**	P	**P**		**16 21 52.8**	**-0.2**
OSSC	**Osservatorio P**	**50.65**	**52**	P	**P**		**16 21 52.0**	**-1.7**
FETA	**Feichten**	**50.72**	**47**	*eP*	**P**		**16 21 54.9**	**+0.4**
	comp=Z,21nm,1.2s,SNR=12							
PB04	**IPOC Station P**	**50.83**	**210**	P	**P**		**16 21 54.2**	**-1.2**
OGNE	**Ogallala**	**50.88**	**305**	P	**P**		**16 21 54.7**	**-1.0**
MOTA	**Moosalm**	**51.02**	**47**	*eP*	**P**		**16 21 57.0**	**+0.4**
	comp=Z,24nm,1.3s,SNR=9.3							
SQTA	**Sankt Quirin**	**51.07**	**47**	*eP*	**P**		**16 21 57.4**	**+0.3**
	comp=Z,25nm,1.1s,SNR=11							
TEOL	**Teolo**	**51.15**	**49**	P	**P**		**16 21 56.3**	**-1.1**
CTI	**Castel Tesino**	**51.21**	**48**	P	**P**		**16 21 57.6**	**-0.5**
WATA	**Walderalm**	**51.34**	**47**	*eP*	**P**		**16 21 59.1**	**+0.1**
	comp=Z,23nm,1.3s,SNR=8.3							
WTTA	**Wattenberg**	**51.37**	**47**	*eP*	**P**		**16 21 59.5**	**+0.2**
	comp=Z,27nm,1.3s,SNR=9.4							
GRFO	**Grafenberg**	**51.49**	**44**	P	**P**		**16 21 57.4**	**-2.5**
GRFO				IAmb	IAmb		16 22 01.9	
	comp=Z,28nm,1.4s							
GRA1	**Grafenberg Arr**	**51.49**	**44**	P	**P**		**16 21 57.5**	**-2.6**
GRA1				IAmb	IAmb		16 22 01.9	
	comp=Z,24nm,1.3s							
MURB	**Monte Urbino**	**51.55**	**52**	P	**P**		**16 21 59.6**	**-1.0**
MURB				IAmb	IAmb		16 22 01.9	
	comp=Z,23nm,1.2s							
ABTA	**Abfaltersbach**	**51.89**	**48**	*eP*	**P**		**16 22 02.9**	**-0.2**
	comp=Z,18nm,1.3s,SNR=10							
NRCA	**Norcia**	**51.95**	**53**	P	**P**		**16 22 02.3**	**-1.4**
STAL	**STALIGIAL**	**51.97**	**48**	P	**P**		**16 22 03.1**	**-0.6**
STAL				IAmb	IAmb		16 22 05.1	
	comp=Z,25nm,1.3s							
NKC	**Novy Kostel**	**52.37**	**43**	*eP*	**P**		**16 22 06.9**	**+0.4**
KBA	**Koelnbreinsper**	**52.50**	**47**	*eP*	**P**		**16 22 07.4**	**-0.3**
	comp=Z,15nm,1.4s,SNR=9.3							
RSSD	**Black Hills**	**52.56**	**309**	P	**P**		**16 22 07.0**	**-1.3**
TXAR	**Lajitas Array**	**52.64**	**290**	P	**P**		**16 22 09.5**	**+0.5**
	comp=Z,1.3nm,1.0s,baz=95,slow=8.9,SNR=8.3							
	comp=Z,1.3nm,1.0s							
TXAR	**Lajitas Array**	**52.64**	**290**	P	**P**		**16 22 07.8**	**-1.2**
MYKA	**Terra Mystica**	**52.65**	**48**	*eP*	**P**		**16 22 08.7**	**0.0**
	comp=Z,22nm,1.1s,SNR=8.4							
BIOA	**Bad Ischl, Aus**	**52.77**	**46**	*eP*	**P**		**16 22 09.2**	**-0.4**
	comp=Z,27nm,1.4s,SNR=7.4							
CLL	**Collm**	**52.90**	**42**	P	**P**		**16 22 09.4**	**-1.0**
CLL				IAmb	IAmb		16 22 11.6	
	comp=Z,22nm,1.4s							
CLL	**Collm**	**52.90**	**42**	*i* P	**P**		**16 22 10.9**	**+0.5**
	comp=Z,22nm,1.4s							
CLL				*eS*	**S**		**16 29 46.0**	**+7.0**
KHC	**Kasperske Hory**	**52.92**	**45**	*eP*	**P**		**16 22 10.3**	**-0.4**
KHC				*ex*	x		16 22 21.5	
GEC2	**GERESS Array S**	**52.96**	**45**	P	**P**		**16 22 09.8**	**-1.3**
GEC2				IAmb	IAmb		16 22 12.8	
	comp=Z,28nm,1.4s							
GERES	**GERESS Array B**	**52.96**	**45**	P	**P**		**16 22 11.2**	**+0.2**
	comp=Z,4.9nm,1.2s,baz=253,slow=7.7,SNR=20							
	comp=Z,4.9nm,1.2s							
GERES	**GERESS Array B**	**52.96**	**45**	P	**P**		**16 22 09.9**	**-1.1**
GO02	**Mina Guanaco**	**53.03**	**208**	P	**P**		**16 22 12.1**	**+0.1**
LJU	**Ljubljana**	**53.21**	**49**	*eP*	**P**		**16 22 13.3**	**+0.6**
MOA	**Molln**	**53.21**	**46**	*eP*	**P**		**16 22 12.2**	**-0.6**
	comp=Z,14nm,1.4s,SNR=7.0							
Q24A	**Divide**	**53.24**	**303**	P	**P**		**16 22 13.9**	**+0.4**
Q24A				IAmb	IAmb		16 22 22.1	
	comp=Z,18nm,1.1s							
OBKA	**Obir**	**53.26**	**48**	*eP*	**P**		**16 22 12.7**	**-0.6**
	comp=Z,33nm,1.6s,SNR=10							
CKRC	**Cesky Krumlov**	**53.36**	**45**	*eP*	**P**		**16 22 13.2**	**-0.7**
BRG	**Berggiesshubel**	**53.41**	**43**	*eP*	**P**		**16 22 14.8**	**+0.6**
BRG				Amp			16 22 16.5	
	comp=Z,15nm,1.4s							
SOKA	**Soboth**	**53.61**	**48**	*eP*	**P**		**16 22 15.2**	**-0.7**
	comp=Z,13nm,1.7s							
LEGS	**Legarje**	**53.75**	**49**	*eP*	**P**		**16 22 17.0**	**+0.2**
MNTX	**Cornudas Mount**	**53.85**	**294**	P	**P**		**16 22 17.7**	**0.0**
CUC	**Castrocucco**	**53.91**	**56**	P	**P**		**16 22 17.5**	**-0.6**
CUC				IAmb	IAmb		16 22 20.5	
	comp=Z,16nm,1.2s							
GROS	**Grobnik**	**53.91**	**48**	*eP*	**P**		**16 22 17.8**	**-0.3**
NC204	**NORSAR Array S**	**54.25**	**30**	P	**P**		**16 22 19.8**	**-0.4**
CONA	**Conrad Observa**	**54.29**	**46**	*eP*	**P**		**16 22 20.2**	**-0.5**
	comp=Z,1.5nm,1.5s,SNR=13							
NB2	**NORSAR Subarra**	**54.38**	**30**	P	**P**		**16 22 21.1**	**-0.1**
	baz=251,slow=7.4							
NB2	**NORSAR Subarra**	**54.38**	**30**	P	**P**		**16 22 21.1**	**-0.1**
	comp=Z,42nm,1.7s,baz=251,slow=7.4							
NOA	**NORSAR Array B**	**54.38**	**30**	P	**P**		**16 22 21.5**	**+0.3**
	comp=Z,3.6nm,0.9s,baz=250,slow=7.5,SNR=6.9							
	comp=Z,3.6nm,0.9s							
NB201	**NORSAR Array S**	**54.42**	**30**	P	**P**		**16 22 20.7**	**-0.8**
NC602	**NORSAR Array S**	**54.44**	**30**	P	**P**		**16 22 20.8**	**-0.7**
NC602				IAmb	IAmb		16 22 33.5	
	comp=Z,19nm,1.1s							
ANMO	**Albuquerque**	**54.45**	**298**	P	**P**		**16 22 23.2**	**+0.9**
NC303	**NORSAR Array S**	**54.51**	**30**	P	**P**		**16 22 22.3**	**+0.2**
NC303				IAmb	IAmb		16 22 34.1	
	comp=Z,17nm,1.1s							
RONA	**Rosalia, Austr**	**54.56**	**47**	*eP*	**P**		**16 22 22.2**	**-0.5**
	comp=Z,16nm,1.3s,SNR=9.4							
BNM	**Barren Site**	**54.66**	**297**	P	**P**		**16 22 23.3**	**-0.6**
CHVC	**Chvalec**	**54.70**	**43**	*eP*	**P**		**16 22 23.9**	**+0.2**
SOP	**Sopron**	**54.73**	**47**	P	**P**		**16 22 23.7**	**-0.2**
KRUC	**Moravsky**	**54.75**	**45**	*eP*	**P**		**16 22 24.0**	**0.0**
RWWY	**Rawlins**	**54.80**	**306**	P	**P**		**16 22 24.5**	**-0.4**
DPC	**Dobruska-Polom**	**54.84**	**43**	*eP*	**P**		**16 22 25.1**	**+0.4**
VRAC	**Vranov**	**54.90**	**45**	P	**P**		**16 22 24.7**	**-0.4**
	comp=Z,1.2nm,0.2s,baz=263,slow=8.9,SNR=12							
	comp=Z,1.2nm,0.2s							
VRAC	**Vranov**	**54.90**	**45**	*eP*	**P**		**16 22 24.9**	**-0.2**
LENM	**Lemitar**	**54.94**	**297**	P	**P**		**16 22 25.8**	**-0.1**
KRLC	**Kraliky**	**55.10**	**44**	*eP*	**P**		**16 22 27.0**	**+0.4**
ZST	**Bratislava**	**55.14**	**46**	*eP*	**P**		**16 22 27.2**	**+0.4**
MODS	**Modra-Piesok**	**55.27**	**46**	*eP*	**P**		**16 22 28.6**	**+0.8**
HFS	**Hagfors**	**55.28**	**31**	P	**P**		**16 22 27.6**	**0.0**
	comp=Z,6.7nm,0.8s,baz=226,slow=6.0,SNR=9.5							
	comp=Z,6.7nm,0.8s							
MPLH	**Magyarpolny**	**55.36**	**47**	P	**P**		**16 22 28.9**	**+0.4**
MORC	**Moravsky Berou**	**55.56**	**44**	⇓P	**P**		**16 22 30.3**	**+0.4**
MORC	**Moravsky Berou**	**55.56**	**44**	P	**P**		**16 22 29.6**	**-0.3**
MORC	**Moravsky Berou**	**55.56**	**44**	*eP*	**P**		**16 22 29.9**	**0.0**
JAVC	**Velka Javorina**	**55.57**	**45**	*eP*	**P**		**16 22 30.6**	**+0.6**
TIH	**Tihany**	**55.59**	**48**	P	**P**		**16 22 31.3**	**+1.3**
O20A	**White River Ci**	**55.60**	**304**	P	**P**		**16 22 31.1**	**+0.5**
O20A				IAmb	IAmb		16 22 39.1	
	comp=Z,25nm,1.4s							
KOVH	**Kovagotottos**	**55.69**	**49**	P	**P**		**16 22 31.2**	**+0.4**
121A	**Cookes Peak, D**	**55.78**	**295**	P	**P**		**16 22 32.6**	**+0.6**
121A				IAmb	IAmb		16 22 41.0	
	comp=Z,11nm,1.1s							
CSKK	**Cskako**	**55.86**	**47**	P	**P**		**16 22 32.0**	**0.0**
MVCO	**Mesa Verde**	**55.94**	**301**	P	**P**		**16 22 33.9**	**+0.8**
MVCO				IAmb	IAmb		16 22 42.0	
	comp=Z,19nm,1.3s							
SRO2	**Moca**	**55.98**

PLID IAmb IAmb 16 23 16.4
comp=Z,15nm,1.4s
MLR Muntele Rosu 61.18 49 ⇓P P 16 23 10.4 +1.1
MLR Muntele Rosu 61.18 49 P P 16 23 10.5 +1.1
comp=Z,17nm,1.0s,baz=296,slow=5.0,SNR=22
comp=Z,17nm,1.0s
MLR Muntele Rosu 61.18 49 P P 16 23 09.1 -0.3
BIZ Bicaz 61.21 48 ⇓P P 16 23 10.6 +1.2
BO04 La Punta 61.23 204 P P 16 23 09.7 +0.2
RDO Rodhopi 61.24 54 P P 16 23 09.3 -0.3
RDO IAmb IAmb 16 23 23.7
comp=Z,12nm,1.2s
IDI Anoyia 61.45 61 ⇓P P 16 23 10.9 -0.4
IDI Anoyia 61.45 61 P P 16 23 11.7 +0.4
comp=Z,15nm,1.1s,baz=288,slow=11,SNR=4.2
comp=Z,15nm,1.1s
IDI Anoyia 61.45 61 P P 16 23 10.8 -0.4
FINES FINESS Array B 61.48 31 P P 16 23 10.8 -0.1
comp=Z,2.1nm,0.8s,baz=217,slow=9.1,SNR=5.2
comp=Z,2.1nm,0.8s
FINES FINESS Array B 61.48 31 P P 16 23 10.3 -0.6
PLOR Plostina 61.65 49 ⇓P P 16 23 13.7 +1.2
NEW Newport 61.70 314 P P 16 23 12.9 +0.3
VRI Vrincioaia 61.71 49 ⇑P P 16 23 14.2 +1.4
BMO Blue Mountains 62.04 310 P P 16 23 15.3 +0.1
BMO IAmb IAmb 16 23 41.0
comp=Z,6.9nm,1.1s
TPNV Topopah Spring 62.13 301 P P 16 23 15.7 -0.2
TPNV IAmb IAmb 16 23 25.1
comp=Z,12nm,1.2s
ARCES ARCESS Array B 62.32 22 P P 16 23 16.0 -0.5
comp=Z,4.6nm,0.8s,baz=274,slow=7.2,SNR=10
comp=Z,4.6nm,0.8s
ARCES ARCESS Array B 62.32 22 P P 16 23 15.4 -1.0
ARCES IAmb IAmb 16 23 28.1
comp=Z,9.9nm,1.1s
BMN Battle Mountai 62.43 305 P P 16 23 18.0 +0.1
E09A Wood Farm, Sta 62.50 312 P P 16 23 18.2 +0.2
GWY Greenwater Val 62.58 300 P P 16 23 19.6 +0.6
GWY IAmb IAmb 16 23 27.7
comp=Z,8.4nm,1.4s
SORM Soroca 62.66 46 ⇓P P 16 23 17.6 -1.5
QSM Queen of Sheba 62.77 300 P P 16 23 21.1 +1.0
QSM IAmb IAmb 16 23 29.0
comp=Z,16nm,1.4s
KEV Kevo 62.87 22 P P 16 23 20.0 -0.1
D08A Wollman Farm, 62.99 313 P P 16 23 21.8 +0.6
TIRR Tirgusor 63.01 50 ⇑P P 16 23 21.7 +0.2
TIRR Tirgusor 63.01 50 P P 16 23 21.0 -0.5
MILM Milestii Mici 63.07 48 eP P 16 23 21.0 -0.8
comp=Z,400nm,1.2s
AKASG Malin Array Be 63.07 43 P P 16 23 21.4 -0.3
comp=Z,3.2nm,0.9s,baz=276,slow=5.7,SNR=24
comp=Z,3.2nm,0.9s
G08A Pilot Rock 63.17 311 P P 16 23 22.2 -0.5
G08A IAmb IAmb 16 23 24.5
comp=Z,11nm,1.5s
LCH Last Change Ra 63.20 301 P P 16 23 23.5 +0.5
LCH IAmb IAmb 16 23 31.5
comp=Z,11nm,1.4s
KVN Kaiserville 63.28 304 P P 16 23 23.6 -0.1
HAWA Hanford 63.46 312 P P 16 23 23.5 -1.0
NVAR Mina Array Bea 63.53 303 P P 16 23 25.4 0.0
comp=Z,0.7nm,0.8s,baz=100,slow=7.7,SNR=6.1
comp=Z,0.7nm,0.8s
NVAR Mina Array Bea 63.53 303 P P 16 23 24.3 -1.0
E07A Sunnyside 63.67 312 P P 16 23 25.1 -0.8
RYN Ryan 63.67 303 P P 16 23 26.4 +0.2
LTY Liberty 64.16 313 P P 16 23 28.7 -0.4
LTY IAmb IAmb 16 23 36.1
comp=Z,12nm,1.2s
PAHR Pah Rah Range 64.17 304 P P 16 23 28.8 -0.7
PNTR Pine Nut 64.43 304 P P 16 23 31.3 +0.1
MOD Modoc Plateau 64.54 307 P P 16 23 31.9 0.0
MOD IAmb IAmb 16 23 39.9
comp=Z,16nm,1.3s
LLLB Lillooet 64.64 317 P P 16 23 31.1 -1.0
HOOD Mount Hood Mea 65.06 311 P P 16 23 35.7 +0.6
ELL Elmali 65.23 59 P P 16 23 36.4 +0.1
H04A Detroit Lake 65.52 310 P P 16 23 37.8 -0.2
H04A IAmb IAmb 16 23 45.4
comp=Z,12nm,1.3s
A36M Sachs Harbour 65.71 340 P P 16 23 38.0 -0.6
BBGB Big Mountain B 65.99 301 P P 16 23 39.7 -1.6
DBO Dodson Butte 66.51 309 P P 16 23 43.7 -0.7
OBN Obninsk 67.12 38 P P 16 23 48.1 +0.1
comp=Z,2.2nm,0.4s,baz=248,slow=5.3,SNR=9.2
comp=Z,2.2nm,0.4s
OBN Obninsk 67.12 38 P P 16 23 48.0 +0.1
PLCA Paso Flores 67.24 201 P P 16 23 50.3 +1.4
comp=Z,2.1nm,0.9s,baz=63,slow=8.0,SNR=3.3
comp=Z,2.1nm,0.9s
KBO Bosley Butte 67.38 308 P P 16 23 50.5 +0.5
BR131 Keskin Array S 67.56 55 P P 16 23 50.6 -0.6
BR131 IAmb IAmb 16 24 03.5
comp=Z,11nm,1.1s
BRTR Keskin Array B 67.56 55 P P 16 23 51.9 +0.6
comp=Z,2.0nm,0.9s,baz=282,slow=5.7,SNR=9.1
comp=Z,2.0nm,0.9s
BRTR Keskin Array B 67.56 55 P P 16 23 50.6 -0.7
KLMR Klimovskoe 68.00 32 eP P 16 23 51.4 -2.0
KLMR AMP 16 23 54.8
comp=Z,26nm,1.4s
DLBC Dease Lake 68.47 326 P P 16 23 56.2 -0.4
DLBC IAmb IAmb 16 24 04.5
comp=Z,12nm,1.0s
INK Inuvik 68.71 336 P P 16 23 56.4 -1.3
INK IAmb IAmb 16 24 04.5
comp=Z,11nm,1.4s
MMAI Mount Meron Ar 70.44 62 P P 16 24 10.9 +1.7
comp=Z,1.1nm,0.6s,baz=267,slow=11,SNR=1.9
comp=Z,1.1nm,0.6s
N31M Braeburn, Yuko 70.79 329 P P 16 24 10.1 -0.7
EIL Elat 70.94 65 P P 16 24 13.3 +1.1
comp=Z,8.6nm,1.2s,baz=328,slow=3.1,SNR=6.8
comp=Z,8.6nm,1.2s
DAWY Dawson 71.83 333 P P 16 24 16.1 -0.9
ASF Jabal al Asfar 71.88 62 P P 16 24 19.4 +1.5
comp=Z,1.1nm,0.4s,baz=319,slow=2.7,SNR=7.7
comp=Z,1.1nm,0.4s
KOPT Kop Dagi 72.64 53 P P 16 24 21.3 -1.3
KOPT IAmb IAmb 16 24 38.2
comp=Z,13nm,1.2s
BMAR Burnt Mountain 72.98 337 P P 16 24 24.1 +0.3
BCAR Beaver Creek A 73.13 332 P P 16 24 24.4 -0.4
L27K Beaver Creek, 73.15 332 P P 16 24 24.6 -0.3
KBZ Khabaz 73.39 49 P P 16 24 28.4 +1.8
comp=Z,1.6nm,0.6s,baz=284,slow=6.4,SNR=7.8
comp=Z,1.6nm,0.6s
LOGN Logan Glacier 73.41 329 P P 16 24 25.8 -0.8
LOGN IAmb IAmb 16 24 29.7
comp=Z,22nm,1.5s
J26L Joseph Creek 73.47 333 P P 16 24 26.3 -0.5
BARN Barnard Glacie 73.65 330 P P 16 24 27.1 -0.9
BARN IAmb IAmb 16 24 36.0
comp=Z,9.5nm,0.9s
BELG Belogornoye 74.09 40 P P 16 24 30.6 +0.1
comp=Z,5.5nm,0.6s,baz=86,slow=6.6,SNR=8.7
comp=Z,5.5nm,0.6s
MCARA McCarthy VSAT 74.18 330 P P 16 24 31.1 +0.1
MCARA IAmb IAmb 16 24 38.9
comp=Z,16nm,0.9s
RIDG Independent Ri 74.24 333 P P 16 24 30.6 -0.7
VRDI Verde Repeater 74.43 330 P P 16 24 31.2 -1.4
VRDI IAmb IAmb 16 24 40.9
comp=Z,19nm,1.5s
IL31 74.73 334 P P 16 24 33.7 -0.3
IL31 IAmb IAmb 16 24 41.4
comp=Z,14nm,1.1s
ILAR Eielson Array 74.73 334 P P 16 24 34.3 +0.2
comp=Z,3.0nm,0.8s,baz=71,slow=4.5,SNR=22
comp=Z,3.0nm,0.8s
ILAR Eielson Array 74.73 334 P P 16 24 33.6 -0.4
MDM Murphy Dome 75.20 335 P P 16 24 36.6 -0.2
MDM IAmb IAmb 16 24 44.2
comp=Z,13nm,1.3s
WRH Wood River Hil 75.33 334 P P 16 24 37.5 0.0
WRH IAmb IAmb 16 24 44.8
comp=Z,12nm,1.1s
H23K Yukon River 75.39 336 P P 16 24 37.2 -0.7
H23K IAmb IAmb 16 24 46.2
comp=Z,14nm,1.1s
I23K Minto, Yukon-K 75.58 335 P P 16 24 39.1 +0.2
I23K IAmb IAmb 16 24 46.7
comp=Z,12nm,1.2s

NEA2 Nenana 75.67 334 P P 16 24 38.7 -0.8
MLY Manley 76.16 335 P P 16 24 42.1 -0.2
H21K Melozitna Rive 76.69 336 P P 16 24 45.8 +0.5
H21K IAmb IAmb 16 24 53.4
comp=Z,12nm,1.5s
IMAR Indian Mountai 76.90 337 P P 16 24 46.7 +0.2
MBAR Mbarara 77.17 96 P P 16 24 50.8 +1.8
comp=Z,3.7nm,0.2s,baz=308,slow=6.1,SNR=9.8
comp=Z,3.7nm,0.2s
PPLA Purkeypile 77.63 333 P P 16 24 50.9 +0.2
PPLA IAmb IAmb 16 25 02.3
comp=Z,21nm,1.4s
SKT Skwentna 77.74 332 P P 16 24 51.0 -0.3
SKT IAmb IAmb 16 24 58.4
comp=Z,19nm,1.5s
K20K Telida 78.19 334 P P 16 24 53.4 -0.4
K20K IAmb IAmb 16 25 05.7
comp=Z,12nm,1.4s
M20K Styx River 78.47 333 P P 16 24 55.0 -0.4
M20K IAmb IAmb 16 24 56.3
comp=Z,16nm,1.5s
ARU Arti 78.73 33 P P 16 24 57.1 +0.3
ARU IAmb IAmb 16 24 58.7
comp=Z,19nm,1.4s
M19K Big River Lodg 78.99 333 P P 16 24 57.5 -0.6
M19K IAmb IAmb 16 25 09.9
comp=Z,13nm,1.1s
L19K White Mountain 79.05 333 P P 16 24 58.1 -0.4
LODK Lodwar 79.89 90 P P 16 25 02.1 -1.9
LODK IAmb IAmb 16 25 07.6
comp=Z,18nm,1.5s
ABKAR Akbulak array 82.50 40 P P 16 25 15.4 -1.7
ABKAR IAmb IAmb 16 25 20.2
comp=Z,12nm,1.5s
ABKAR Akbulak array 82.50 40 P P 16 25 15.7 -1.5
KMBO Kilima Mbogo 83.37 94 P P 16 25 25.7 +3.1
comp=Z,3.2nm,0.9s,baz=319,slow=6.5,SNR=8.2
comp=Z,3.2nm,0.9s
KMBO Kilima Mbogo 83.37 94 pP 16 25 25.5 -0.7
SDPT Sand Point 85.04 329 P P 16 25 29.9 -0.1
TIXI Tiksi 85.98 2 P P 16 25 33.9 -0.5
BRVK Borovoye 86.30 33 P P 16 25 36.8 +0.4
BILL Bilibino 86.78 349 P P 16 25 38.6 +0.2
BILL IAmb IAmb 16 25 46.0
comp=Z,9.9nm,1.4s
UOSS Minazif 90.28 63 P P 16 25 52.6 -3.3
KURBB Kurchatov Arra 91.86 32 P P 16 26 03.4 +0.7
comp=Z,3.1nm,1.3s,baz=303,slow=5.3,SNR=9.2
comp=Z,3.1nm,1.3s
WMQ Urumqi 101.06 33 eP Pdif 16 26 46.3 +1.6
HHC Hu-ho-hao-te 113.32 19 ePKP PKiKP 16 31 26.9 -5.8
PZH PanZhiHua 121.64 35 PKP PKPdf 16 31 48.0 -1.1
NJ2 Nanjing 123.60 16 ePKP PKiKP 16 31 53.4 +0.6
CMAR Chiang Mai Arr 126.19 44 PKP PKiKP 16 31 58.5 +0.2
comp=Z,1.4nm,0.8s,baz=297,slow=3.0,SNR=12
CMAR Chiang Mai Arr 126.19 44 PKPdf 16 31 57.5 -0.3

MAN 21 16:13:07.8, 12.76N×121.01E, h12km, mb4.1, ML2.9, MS2.5, Mindoro

*IDC **21** 16:25:42.2±0.7, 22.6N×45.06W, h0km, mb3.9/14, mbtmp3.9/14, Error ellipse: s-maj=22.9km s-min=17.6km az=125.0*
*NEIC **21** 16:25:44.2±1.6, 22.7N±0.1×45.1W±0.1, h10km±1km, mb4.4/23, Error ellipse: s-maj=22.7km s-min=19.4km az=152.0*
ISC 21 16:25:44.4±0.7, 22.7N±0.1×45.1W±0.1, h14km, n15, σ0961/15, mb4.0/14, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**44.83**	**212**	P	**P**	**16 33 59.0**	**+0.1**
	5.0nm,0.8s,baz=15,slow=6.5,SNR=18						
	5.0nm,0.8s						
TORD	**Torodi Ar. Bea**	**45.32**	**94**	P	**P**	**16 34 02.9**	**+0.5**
	1.1nm,0.9s,baz=282,slow=10,SNR=4.3						
	1.1nm,0.9s						
CPUP	**Villa Florida**	**50.15**	**194**	P	**P**	**16 34 40.1**	**+0.7**
	1.9nm,0.8s,baz=9.2,slow=9.4,SNR=3.3						
	1.9nm,0.8s						
TXAR	**Lajitas Array**	**52.64**	**290**	P	**P**	**16 34 59.1**	**+0.7**
	0.2nm,0.5s,baz=95,slow=11,SNR=2.2						
	0.2nm,0.5s						
NOA	**NORSAR Array B**	**54.23**	**30**	P	**P**	**16 35 10.3**	**+0.7**
	1.4nm,0.8s,baz=251,slow=7.4,SNR=5.0						
	1.4nm,0.8s						
PDAR	**Pinedale Array**	**56.49**	**307**	P	**P**	**16 35 26.1**	**-0.3**
	0.5nm,0.7s,baz=76,slow=12,SNR=4.0						
	0.5nm,0.7s						
YKA	**Yellowknife Ar**	**60.70**	**330**	P	**P**	**16 35 54.6**	**-0.5**
	1.0nm,0.7s,baz=98,slow=7.6,SNR=3.8						
	1.0nm,0.7s						
FINES	**FINESS Array B**	**61.34**	**31**	P	**P**	**16 35 59.5**	**+0.1**
	0.9nm,0.7s,baz=242,slow=11,SNR=3.5						
	0.9nm,0.7s						
ARCES	**ARCESS Array B**	**62.16**	**22**	P	**P**	**16 36 05.3**	**+0.4**
	2.3nm,0.8s,baz=292,slow=6.4,SNR=7.1						
	2.3nm,0.8s						
AKASG	**Malin Array Be**	**62.94**	**43**	P	**P**	**16 36 09.3**	**-1.0**
	0.6nm,0.5s,baz=278,slow=5.6,SNR=6.1						
	0.6nm,0.5s						
NVAR	**Mina Array Bea**	**63.49**	**303**	P	**P**	**16 36 14.3**	**-0.3**
	0.3nm,0.6s,baz=88,slow=8.2,SNR=2.7						
	0.3nm,0.6s						
PLCA	**Paso Flores**	**67.39**	**201**	P	**P**	**16 36 38.4**	**-1.0**
	2.4nm,1.0s,baz=20,slow=3.5,SNR=3.7						
	2.4nm,1.0s						
BRTR	**Keskin Array B**	**67.44**	**55**	P	**P**	**16 36 39.7**	**-0.3**
	0.5nm,0.6s,baz=264,slow=8.3,SNR=3.0						
	0.5nm,0.6s						
ILAR	**Eielson Array**	**74.62**	**334**	P	**P**	**16 37 23.3**	**+0.4**
	1.3nm,0.7s,baz=73,slow=4.8,SNR=13						
	1.3nm,0.7s						
CMAR	**Chiang Mai Arr**	**126.06**	**44**	PKP	**PKiKP**	**16 44 47.2**	**-0.3**
	0.8nm,0.7s,baz=300,slow=3.3,SNR=8.9						

*MOS **21** 16:26:32.0±0.9, 22.66N×45.17W, h10km, mb5.9/57, MS5.9/96, Error ellipse: s-maj=5.2km s-min=3.4km az=51.8*
*IDC **21** 16:26:32.9±0.3, 22.65N×45.08W, h0km, mb5.2/38, mbtmp5.2/39, ML4.1/1, MS6.0/90, Error ellipse: s-maj=10.5km s-min=9.1km az=128.0*
*BJI **21** 16:26:33.9±0.0, 22.61N×44.97W, h10km, mb5.6/8, mB6.2/50, Ms6.4/53, Ms7 6.2/50*
*NEIC **21** 16:26:34.4±1.3, 22.66N±0.09×45.14W±0.09, h10km±1km, mb5.7/703, Ms_20 6.2/392, Mww6.1, Error ellipse: s-maj=15.2km s-min=13.3km az=148.0*
*GCMT **21** 16:26:37.4±0.1, 22.74N×44.95W, h12km, MW6.1/171, Moment Tensor Solution. s150,c310; s171,c642; Duration: 2s9 Moment tensor: Scale 10^18Nm; Mrr-1.99±.01; Mθθ-0.02±.01; Mϕϕ2.00±.01; Mrθ-0.14±.03; Mϕθ0.45±.01; Mϕr-0.34±.03; Best double couple: M₀2.07600×10^18 NP1:ϕs190.00000°,δ40.00000°, λ-93.00000°. NP2:ϕs14.00000°,δ50.00000°,λ-87.00000°. Principal axes: T 2.1280, Plg5.0000°, Azm102.0000°; N -0.1110, Plg2.0000°, Azm192.0000°; P -2.0240, Plg85.0000°, Azm303.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*NEIC **21** 16:26:40, 22.55N×45.09W, h12km, Moment Tensor Solution. Duration: 10s0 Moment tensor: Scale 10^18Nm; Mrr-1.51; Mθθ0.07; Mϕϕ1.44; Mrθ-0.01; Mϕθ0.41; Mϕr-0.17; Fault plane solution: M₀1.54000×10^18 NP1: ϕs197.00000°,δ42.00000°,λ-88.00000°. NP2:ϕs14.00000°, δ48.00000°,λ-91.00000°. Principal axes: T 1.5596, Plg3.0000°, Azm105.0000°; N -0.0400, Plg1.0000°, Azm15.0000°; P -1.5197, Plg87.0000°, Azm263.0000°;*
ISC 21 16:26:35.0±0.2, 22.51N±0.03×45.10W±0.03, h14km, n2502, σ2814/3157, mb5.7/535, MS6.2/354, 124C-160D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H05N1	**Guadeloupe/Mar**	**16.26**	**251**	T	T	16 47 48.0	
	SNR=26						
GDSD	**La Dsirade Is**	**16.27**	**251**	Pn	**Pn**	**16 30 22.9**	**-0.4**
ANWB	**Willy Bob**	**16.39**	**256**	Pn	**Pn**	**16 30 24.5**	**-0.3**
ANWB				IAmb	IAmb	16 30 38.6	
	comp=Z,958nm,1.5s						
ANWB	**Willy Bob**	**16.39**	**256**	*e*P	**Pn**	**16 30 22.6**	**-2.3**
ANWB	**Willy Bob**	**16.39**	**256**	*e*P	**Pn**	**16 30 24.8**	**-0.1**
ABD	**La Joyeuse, An**	**16.57**	**252**	Pn	**Pn**	**16 30 26.6**	**-0.5**
ABD				IAmb	IAmb	16 30 45.8	
	comp=Z,1μm,1.4s						
ABD	**La Joyeuse, An**	**16.57**	**252**	*e*P	**Pn**	**16 30 26.1**	**-1.0**
ABD	**La Joyeuse, An**	**16.57**	**252**	*e*P	**Pn**	**16 30 27.0**	**-0.2**
ANBD	**Bethesda, Anti**	**16.60**	**254**	*e*P	**Pn**	**16 30 26.9**	**-0.5**
ANBD	**Bethesda, Anti**	**16.60**	**254**	*e*P	**Pn**	**16 30 27.4**	**0.0**
BBGH	**Gun Hill**	**16.61**	**238**	*e*P	**Pn**	**16 30 28.2**	**+0.6**
BBGH	**Gun Hill**	**16.61**	**238**	*e*P	**P**	**16 30 32.7**	**+2.6**
MAGL	**Barre de l'ile**	**16.61**	**250**		**P**	**16 30 29.4**	**-0.7**
MAGL	**Barre de l'ile**	**16.61**	**250**	*e*P	**Pn**	**16 30 26.4**	**-1.3**
MAGL	**Barre de l'ile**	**16.61**	**250**	*e*P	**Pn**	**16 30 28.2**	**+0.6**
BPA	**Boggy Peak**	**16.68**	**254**	*e*P	**Pn**	**16 30 28.0**	**-0.5**
ILAM	**Ilet Lapin Mar**	**16.80**	**245**		**P**	**16 30 32.1**	**0.0**
ILAM				IAmb	IAmb	16 30 43.5	
	comp=Z,1μm,1.4s						
ILAM	**Ilet Lapin Mar**	**16.80**	**245**	*e*P	**Pn**	**16 30 28.9**	**-1.2**
ILAM	**Ilet Lapin Mar**	**16.80**	**245**	*e*P	**Pn**	**16 30 30.3**	**+0.2**
CBE	**Ff, Capester**	**16.84**	**251**		**P**	**16 30 32.1**	**-0.5**
CBE				IAmb	IAmb	16 30 44.6	
	comp=Z,1μm,1.4s						
CBE	**Ff, Capester**	**16.84**	**251**	*e*P	**Pn**	**16 30 27.9**	**-2.7**
CBE	**Ff, Capester**	**16.84**	**251**	*e*P	**P**	**16 30 32.6**	**0.0**
DLPL	**La Plaine**	**16.86**	**248**		**P**	**16 30 33.3**	**+0.5**
DLPL	**La Plaine**	**16.86**	**248**	*e*P	**Pn**	**16 30 27.9**	**-2.9**
MDVC	**Dominica, Viel**	**16.86**	**249**	*e*P	**P**	**16 30 34.2**	**+1.4**
GDHS	**Morne Mazeau,**	**16.90**	**251**	Pn	**Pn**	**16 30 30.9**	**-0.4**
H05S1	**Guadeloupe/Mar**	**16.95**	**244**	T	T	16 47 53.2	
	SNR=238						
MPOM	**Morne Pois Mar**	**16.95**	**244**	Pn	**Pn**	**16 30 31.8**	**-0.2**
MPOM	**Morne Pois Mar**	**16.95**	**244**	*e*P	**Pn**	**16 30 31.2**	**-0.7**
MPOM	**Morne Pois Mar**	**16.95**	**244**	*e*P	**Pn**	**16 30 32.7**	**+0.8**
DSLB	**Salisbury**	**16.96**	**248**	*e*P	**Pn**	**16 30 29.1**	**-2.9**
DSLB	**Salisbury**	**16.96**	**248**	*e*P	**P**	**16 30 33.6**	**-0.3**
TDBA	**Terre de Bas,**	**16.96**	**250**		**P**	**16 30 33.1**	**-0.8**
TDBA				IAmb	IAmb	16 30 45.0	
	comp=Z,702nm,1.5s						
TDBA	**Terre de Bas,**	**16.96**	**250**	*e*P	**Pn**	**16 30 28.8**	**-3.3**
TDBA	**Terre de Bas,**	**16.96**	**250**	*e*P	**Pn**	**16 30 32.4**	**+0.3**
TBG	**Guadaloupe-3**	**16.97**	**250**	*e*P	**Pn**	**16 30 30.0**	**-2.1**
LPMF	**Morne Lapointe**	**16.98**	**245**	*e*P	**Pn**	**16 30 32.1**	**-0.2**
MDN	**Morne-Daniel**	**16.99**	**248**	*e*P	**Pn**	**16 30 28.9**	**-3.5**
BAMF	**Morne Balai**	**17.02**	**246**	*e*P	**P**	**16 30 35.7**	**+1.1**
SVN	**Savane Anatole**	**17.02**	**246**	Pn	**Pn**	**16 30 31.9**	**-0.9**
SVN				IAmb	IAmb	16 30 46.9	
	comp=Z,1μm,1.3s						
SVN	**Savane Anatole**	**17.02**	**246**	*e*P	**P**	**16 30 34.4**	**-0.3**
ZAM	**Aeronautique**	**17.03**	**245**	*e*P	**Pn**	**16 30 33.8**	**+0.9**
CXM	**Morne La Croix**	**17.03**	**246**	*e*P	**P**	**16 30 34.1**	**-0.8**
GBMF	**Grand Be**	**17.04**	**246**	*e*P	**P**	**16 30 38.6**	**+3.8**
FDF	**Fort de France**	**17.06**	**246**	P	**P**	**16 30 35.6**	**+0.5**
FDF	**Fort de France**	**17.06**	**246**	*e*P	**Pn**	**16 30 31.9**	**-1.4**
FDF	**Fort de France**	**17.06**	**246**	*e*P	**Pn**	**16 30 33.5**	**+0.2**
PCM	**Pelee Case Pet**	**17.07**	**246**	*e*P	**P**	**16 30 37.8**	**+2.7**
TRMF	**Trois Ilets**	**17.07**	**245**	*e*P	**P**	**16 30 35.7**	**+0.6**
BIM	**Bigot**	**17.10**	**245**	P	**P**	**16 30 35.3**	**-0.2**
BIM				IAmb	IAmb	16 30 54.3	
	comp=Z,487nm,1.0s						
BIM	**Bigot**	**17.10**	**245**	*e*P	**Pn**	**16 30 33.5**	**-0.3**
BIM	**Bigot**	**17.10**	**245**	*e*P	**P**	**16 30 35.6**	**+0.1**
MLYT	**Lee's Yard**	**17.10**	**253**	*e*P	**Pn**	**16 30 31.4**	**-2.4**
MBFL	**Flemmings, Mon**	**17.11**	**253**	*e*P	**Pn**	**16 30 29.9**	**-4.0**
SLBI	**Saint Lucia, B**	**17.27**	**243**	*e*P	**Pn**	**16 30 33.8**	**-2.1**
SLBI	**Saint Lucia, B**	**17.27**	**243**	*e*P	**P**	**16 30 36.9**	**-0.4**
SKI	**Saint Kitts**	**17.36**	**256**	*e*P	**P**	**16 30 38.3**	**-0.2**
MCLT	**Moule a Chique**	**17.41**	**243**	*e*P	**Pn**	**16 30 37.1**	**-0.5**
MCLT	**Moule a Chique**	**17.41**	**243**	*e*P	**P**	**16 30 39.3**	**+0.7**
SMRT	**St. Maarten**	**17.44**	**259**		**Pn**	**16 30 37.5**	**-0.5**
SMRT				IAmb	IAmb	16 30 45.8	
	comp=Z,697nm,1.4s						
SMRT	**St. Maarten**	**17.44**	**259**	*e*P	**Pn**	**16 30 35.5**	**-2.6**
SEUS	**St. Eustatius**	**17.53**	**257**	*e*P	**Pn**	**16 30 37.8**	**-1.3**
SVB	**Belmont**	**17.89**	**242**		**Pn**	**16 30 43.7**	**0.0**
SVB	**Belmont**	**17.89**	**242**	*e*P	**Pn**	**16 30 44.0**	**+0.3**
SVB	**Belmont**	**17.89**	**242**	*e*P	**P**	**16 30 45.5**	**+1.2**
GCMP	**Grenada, Carri**	**18.47**	**240**	*e*P	**P**	**16 30 49.8**	**-0.8**
GCMP	**Grenada, Carri**	**18.47**	**240**	*e*P	**Pn**	**16 30 52.5**	**+1.7**
TOSP	**Speyside**	**18.48**	**235**	P	**P**	**16 30 49.7**	**-1.1**
TOSP				IAmb	IAmb	16 31 05.6	
	comp=Z,487nm,1.3s						
TOSP	**Speyside**	**18.48**	**235**	*e*P	**Pn**	**16 30 52.3**	**+1.4**
TOSP	**Speyside**	**18.48**	**235**	*e*P	**P**	**16 30 53.6**	**+2.7**
MPGF	**Montagnes des**	**18.77**	**204**	⇑P	**Pn**	**16 30 56.1**	**+1.7**
MDP	**Montagnes des**	**18.78**	**204**	P	**Pn**	**16 30 55.9**	**+1.4**
	comp=Z,0.6nm,0.3s,baz=17,slow=14,SNR=12						
MDP				LR	LR	16 36 37.3	
	comp=Z,15μm,21.7s,baz=17,slow=32						
	comp=Z,26nm,0.9s						
GRGR	**Grenville**	**18.86**	**240**		**Pn**	**16 30 55.8**	**+0.4**
GRGR	**Grenville**	**18.86**	**240**	*e*P	**Pn**	**16 30 55.9**	**+0.4**
GRGR	**Grenville**	**18.86**	**240**	*e*P	**Pn**	**16 30 57.5**	**+2.0**
GRGR	**Grenville**	**18.86**	**240**	⇑P	**Pn**	**16 30 57.3**	**+1.8**
GRFF	**Grenada Fort F**	**18.97**	**240**	*e*P	**Pn**	**16 30 57.5**	**+0.6**
STVI	**Saint Thomas**	**19.06**	**261**		**Pn**	**16 30 56.0**	**-1.1**
CUPR	**Culebra, Puert**	**19.37**	**261**		**P**	**16 30 58.8**	**-1.7**
TRN	**Trinidad (W)**	**19.55**	**236**	*e*P	**Pn**	**16 31 06.3**	**+2.5**
CBYP	**Canovanas**	**19.91**	**262**	P	**P**	**16 31 04.4**	**-2.0**
CBYP				IAmb	IAmb	16 31 21.1	
	comp=Z,682nm,1.4s						
BBSR	**BB Station**	**19.95**	**304**	P	**Pn**	**16 31 07.9**	**-0.6**
	baz=114						
BBSR				S	**S**	**16 34 46.6**	**-4.2**
	baz=114						
GCPR	**Guaynabo City**	**20.10**	**262**	P	**P**	**16 31 07.5**	**-1.0**
PDPR	**Patillas Dam,**	**20.13**	**261**		**P**	**16 31 08.3**	**-0.5**
SJG	**San Juan**	**20.22**	**261**	P	Pn	16 31 11.1	-0.6
	comp=Z,31nm,0.6s,baz=62,slow=9.0,SNR=15						
SJG				LR	LR	16 37 20.2	
	comp=Z,55μm,21.8s,baz=90,slow=32						
	comp=Z,31nm,0.6s						
SJG	**San Juan**	**20.22**	**261**	P	**P**	**16 31 08.8**	**-1.0**
SJG				IAmb	IAmb	16 31 24.1	
	comp=Z,750nm,1.2s						
SJG	**San Juan**	**20.22**	**261**	P	**P**	**16 31 08.8**	**-1.0**
SJG				pmax	pmax		
	comp=Z,750nm,1.3s						
SJG				MLR	MLR		
	comp=Z,48μm,21.0s						
SJG	**San Juan**	**20.22**	**261**	*e*P	**P**	**16 31 07.4**	**-2.3**
SJG	**San Juan**	**20.22**	**261**	⇑P	Pn	16 31 15.5	+3.8
EMPR	**Esperanza - Ma**	**20.47**	**263**	P	**P**	**16 31 11.2**	**-1.3**
H07S1	**FLORES T-PHASE**	**20.57**	**32**	*e*P	Pn	16 31 17.9	+2.2
H07S1				*e*S	Sn	16 35 18.8	+11
OBIP	**Obispado Ponce**	**20.65**	**261**	P	**P**	**16 31 14.0**	**-0.5**
AOPR	**Arecibo Observ**	**20.71**	**262**	P	**P**	**16 31 14.8**	**-0.3**
H07N1	**FLORES T-PHASE**	**20.85**	**32**	*e*P	Pn	16 31 23.4	+4.4
H07N1				*e*S	Sn	16 35 21.4	+7.2
MLPR	**Magueyes Islan**	**21.07**	**262**	P	**P**	**16 31 18.9**	**-0.1**
MLPR				IAmb	IAmb	16 31 34.4	
	comp=Z,590nm,1.2s						
CRPR	**Cabo Rojo, PR**	**21.12**	**262**	P	**P**	**16 31 19.1**	**-0.4**
CRPR				IAmb	IAmb	16 31 30.8	
	comp=Z,455nm,1.3s						
CALA

ADH comp=Z,506nm,1.3s eS Sn 16 35 49.0 +2.5
PAGU Agualva, Azore 22.30 39 eP **P 16 31 31.6 -0.5**
PAGU comp=Z,392nm,0.8s eS **S 16 35 41.4 +4.4**
PSMA Santa Maria 22.50 46 eP **P 16 31 33.6 -0.6**
PSMA comp=Z,496nm,1.7s eS Sn 16 35 49.4 -4.3
PSMN Pico do Norte, 22.54 46 eP **P 16 31 33.8 -0.9**
PSMN comp=Z,504nm,1.5s eS Sn 16 35 51.9 -2.9
PDA Ponta Delgada 22.59 43 eP **P 16 31 36.1 +1.0**
PDA comp=Z,659nm,1.4s eS Sn 16 35 56.2 +0.4
PSET Sete Cidades 22.59 43 eP **P 16 31 35.8 +0.5**
PSET comp=Z,588nm,1.6s eS Sn 16 35 52.8 -3.3
GRON Grota Negra 22.68 43 eP **P 16 31 39.1 +2.9**
GRON comp=Z,724nm,1.4s eS Sn 16 36 00.3 +2.1
CMLA Cha da Macela 22.68 44 P **P 16 31 35.5 -0.7**
CMLA comp=Z,344nm,1.2s IAmb IAmb 16 31 50.6
CMLA Cha da Macela 22.68 44 P **P 16 31 35.5 -0.7**
CMLA comp=Z,344nm,1.2s pmax pmax
CMLA comp=Z,26µm,19.0s MLR MLR
PCALD Caldeiras da R 22.73 43 eP **P 16 31 39.0 +2.4**
PCALD comp=Z,732nm,1.3s eS Sn 16 35 58.1 -1.2
BART Pico Bartolome 22.92 44 eP **P 16 31 39.1 +0.4**
BART comp=Z,571nm,1.5s eS Sn 16 36 02.8 -1.2
DR12 Loma Pena Alta 23.02 265 P **P 16 31 39.0 -0.8**
BIRV Birongo 23.53 243 P **P 16 31 44.8 -0.1**
BIRV comp=Z,216nm,1.5s IAmb IAmb 16 31 58.9
MCPB Macapa, AP 23.72 198 eP **P 16 31 46.5 -0.3**
SC01 Santiago de lo 24.12 267 P **P 16 31 50.2 -0.4**
GRTK Grand Turk 24.15 273 P **P 16 31 50.8 -0.1**
SDDR Presa de Saban 24.73 267 P **P 16 31 56.6 +0.3**
SDDR comp=Z,376nm,1.3s IAmb IAmb 16 32 08.2
SDDR Presa de Saban 24.73 267 ⇑P **P 16 31 57.9 +1.6**
TMAB Tom-Au,PA,Br 24.90 187 eP **P 16 31 58.6 +0.9**
BOAV Boa Vista 24.98 219 eP **P 16 31 59.4 +0.9**
ROSB Rosrio 25.27 178 eP **P 16 32 01.1 +0.1**
MALB Monte Alegre 25.81 201 eP **P 16 32 06.5 +0.5**
BAUV El Baul 25.82 242 P **P 16 32 05.2 -1.0**
JAKH Jacmel 26.04 266 P **P 16 32 07.0 -1.1**
JAKH comp=Z,217nm,1.1s IAmb IAmb 16 32 17.9
NBMO Morrinhos-CE 26.13 168 eP **P 16 32 12.6 +3.7**
MACI Morro de la Ar 26.42 72 P **P 16 32 11.1 -0.6**
MACI comp=Z,181nm,0.7s IAmb IAmb 16 32 19.6
GBN Guysborough 26.49 333 P **P 16 32 09.7 -2.2**
PMOZ Porto Moniz, M 26.69 61 eP **P 16 32 14.0 0.0**
PMOZ comp=Z,548nm,1.9s eS **S 16 36 53.4 +4.3**
PMOZ eLR LR 16 38 28.6
PMOZ Porto Moniz, M 26.69 61 eT T 16 59 26.4
HAL Halifax 26.80 330 P **P 16 32 13.2 -1.4**
HAL Halifax 26.80 330 P **P 16 32 13.2 -1.4**
HAL comp=Z,112nm,1.1s pmax pmax
PMAR Madeira 26.89 62 eP **P 16 32 16.5 +0.6**
PMAR Madeira 26.89 62 eT T 16 59 31.5
MBO M'Bour 27.85 102 IAMs_20 IAMs_20 16 40 12.2
SDV Santo Domingo 28.00 245 P **P 16 32 27.5 +1.5**
SDV comp=Z,97µm,20.0s LR LR 16 42 39.8
SDV Santo Domingo 28.00 245 P **P 16 32 25.0 -1.0**
SDV comp=Z,182nm,1.4s IAmb IAmb 16 32 42.9
SDV Santo Domingo 28.00 245 eP **P 16 32 25.3 -0.7**
SDV Santo Domingo 28.00 245 eP **P 16 32 27.7 +1.7**
GTBY Guantanamo Bay 28.07 270 P **P 16 32 24.8 -1.5**
LMN Caledonia Moun 28.28 330 P **P 16 32 25.7 -2.2**
NBPB Pedra_Branca-C 28.40 168 eP **P 16 32 29.5 +0.2**
ITTB Itaituba 28.66 203 eP **P 16 32 32.4 +0.8**
EMMW East Machias 28.76 326 P **P 16 32 31.0 -1.2**
EMMW comp=Z,42µm,20.0s IAMs_20 IAMs_20 16 41 32.9
EMMW East Machias 28.76 326 P **P 16 32 33.3 +1.2**
EMMW baz=133 S **S 16 37 23.6 +2.4**
PRPB Parauapebas 28.88 190 eP **P 16 32 34.1 +0.6**
CRJC Cerrejon, Guaj 28.89 251 eP **P 16 32 31.8 -2.0**
L64A Middleborough 28.96 318 S **S 16 37 30.9 +6.4**
L64A baz=124 S **S 16 37 30.9 +6.4**
G65A Princeton 29.15 326 P **P 16 32 34.4 -1.3**
G65A Princeton 29.15 326 P **P 16 32 37.4 +1.8**
G65A baz=134 P **P 16 32 37.4 +1.8**
G65A baz=134 S **S 16 37 28.1 +0.8**
G65A baz=134 S **S 16 37 28.1 +0.8**
BRYW Bryant College 29.39 317 IAMs_20 IAMs_20 16 41 46.0
BCX Boston College 29.39 318 P **P 16 32 37.0 -0.8**
BCX comp=Z,52µm,20.0s IAMs_20 IAMs_20 16 41 37.0
M63A Gales Ferry 29.44 316 P **P 16 32 38.7 +0.5**
M63A baz=121 P **P 16 32 38.7 +0.5**
M63A baz=121 S **S 16 37 34.4 +2.5**
M63A baz=121 S **S 16 37 34.4 +2.5**
WES Weston 29.51 318 IAMs_20 IAMs_20 16 41 40.2
WES Weston 29.51 318 S **S 16 37 36.8 +3.7**
RCBR Riachuelo 29.57 161 P **P 16 32 41.5 +1.8**
RCBR comp=Z,28nm,1.1s,baz=120,slow=9.8,SNR=7.0 LR LR 16 41 18.2
RCBR Riachuelo 29.57 161 P **P 16 32 40.7 +1.1**
RCBR Riachuelo 29.57 161 P **P 16 32 40.7 +1.1**
RCBR comp=Z,58nm,1.3s pmax pmax
RCBR comp=Z,32µm,20.0s MLR MLR
RCBR Riachuelo 29.57 161 eP **P 16 32 42.5 +2.9**
UNH University of 29.64 320 P **P 16 32 41.1 +1.1**
UNH baz=126 S **S 16 37 36.2 +1.1**
MACA Manacapuru-AM 29.71 213 eP **P 16 32 42.5 +1.6**
HRV Adam Dziewonsk 29.73 318 IAMs_20 IAMs_20 16 41 45.9
HRV Adam Dziewonsk 29.73 318 P **P 16 32 40.4 -0.4**
HRV baz=124 S **S 16 37 36.6 +0.1**
HRV Adam Dziewonsk 29.73 318 P **P 16 32 40.5 -0.3**
HRV baz=124 S **S 16 37 37.7 +1.2**
LL6C La Loma 6 Bece 29.83 249 eP **P 16 32 41.5 -0.5**
WVL Waterville 29.84 323 P **P 16 32 40.8 -1.1**
WVL comp=Z,100nm,1.1s IAmb IAmb 16 32 51.2
WVL comp=Z,44µm,21.0s IAMs_20 IAMs_20 16 41 52.9
BATG Bathurst New B 29.92 331 P **P 16 32 41.0 -1.4**
BATG comp=Z,94nm,1.1s IAmb IAmb 16 32 55.4
YLE Yale 29.97 315 comp=Z,45µm,19.0s IAMs_20 IAMs_20 16 42 18.2
F64A Sherman 30.01 327 P **P 16 32 42.0 -1.2**
F64A Sherman 30.01 327 P **P 16 32 43.8 +0.5**
F64A baz=133 P **P 16 32 43.8 +0.5**
F64A baz=133 S **S 16 37 42.2 +1.5**
F64A baz=133 S **S 16 37 42.2 +1.5**
I63A Otisfield 30.04 322 baz=133 P **P 16 32 43.7 0.0**
I63A baz=127 P **P 16 32 43.7 0.0**
I63A baz=127 S **S 16 37 42.5 +1.1**
I63A baz=127 S **S 16 37 42.5 +1.1**
QUA2 Belchertown 30.09 317 baz=127 P **P 16 32 42.8 -1.3**
QUA2 comp=Z,55µm,20.0s IAMs_20 IAMs_20 16 42 06.7
QUA2 Belchertown 30.09 317 baz=122 S **S 16 37 43.3 +1.0**
PKME Peaks-Kenny Pk 30.10 325 P **P 16 32 43.1 -0.9**
PKME comp=Z,168nm,1.4s IAmb IAmb 16 32 54.8
PKME Peaks-Kenny Pk 30.10 325 baz=131 P **P 16 32 44.6 +0.5**
PKME Peaks-Kenny Pk 30.10 325 baz=131 P **P 16 32 41.9 -2.2**
PKME baz=131 S **S 16 37 44.0 +1.8**
N62A Caumsett State 30.13 314 baz=119 S **S 16 37 45.7 +2.9**
N62A baz=119 S **S 16 37 45.7 +2.9**
WSPT Westport, CT 30.15 315 P **P 16 32 42.6 -2.0**
WSPT comp=Z,155nm,1.4s IAmb IAmb 16 32 55.1
WSPT comp=Z,46µm,21.0s IAMs_20 IAMs_20 16 41 43.3
LL1C La Loma 1 Cana 30.16 249 eP **P 16 32 45.5 +0.5**
K62A Royalston 30.23 318 P **P 16 32 43.2 -2.1**
K62A comp=Z,159nm,1.4s IAmb IAmb 16 32 56.6
K62A Royalston 30.23 318 baz=123 P **P 16 32 46.9 +1.6**
K62A baz=123 P **P 16 32 46.9 +1.6**
K62A baz=123 S **S 16 37 45.6 +1.1**
K62A baz=123 S **S 16 37 45.6 +1.1**
F63A Nahmakanta, Br 30.29 326 baz=132 P **P 16 32 46.3 +0.5**
F63A baz=132 P **P 16 32 46.3 +0.5**
F63A baz=132 S **S 16 37 46.4 +1.2**
F63A baz=132 S **S 16 37 46.4 +1.2**
TAMC Tame, Arauca 30.30 242 eP **P 16 32 49.6 +3.4**
FFD Franklin Falls 30.33 320 P **P 16 32 44.3 -1.9**
FFD comp=Z,219nm,1.4s IAmb IAmb 16 32 56.2
FFD comp=Z,46µm,21.0s IAMs_20 IAMs_20 16 42 05.8
NBMA Muriti-CE 30.33 167 eP **P 16 32 48.9 +2.5**
V61A Roper 30.37 303 baz=107 S **S 16 37 53.7 +7.0**
V61A baz=107 S **S 16 37 53.7 +7.0**
FOR Fordham 30.37 314 baz=118 P **P 16 32 47.4 +0.9**
FOR baz=118 S **S 16 37 43.3 -3.3**
I62A Tamworth 30.38 321 baz=126 P **P 16 32 46.9 +0.3**
I62A baz=126 P **P 16 32 46.9 +0.3**
I62A baz=126 S **S 16 37 46.5 -0.2**
I62A baz=126 S **S 16 37 46.5 -0.2**
CPNY Central Park 30.39 314 P **P 16 32 45.4 -1.3**
CPNY comp=Z,159nm,1.4s IAmb IAmb 16 32 56.6
L61B Northampton 30.39 317 comp=Z,47µm,20.0s IAMs_20 IAMs_20 16 42 04.5
L61B Northampton 30.39 317 baz=122 P **P 16 32 47.5 +0.7**
L61B baz=122 S **S 16 37 50.8 +3.8**
L61B Northampton 30.39 317 baz=122 P **P 16 32 45.9 -0.8**
L61B baz=122 S **S 16 37 50.1 +3.2**
PQI Presque Isle 30.40 328 P **P 16 32 46.0 -0.7**
PQI comp=Z,52µm,20.0s IAMs_20 IAMs_20 16 42 47.4
E63A Oxbow 30.43 327 baz=134,SNR=6.8 P **P 16 32 46.1 -0.9**
E63A baz=134,SNR=6.8 P **P 16 32 46.1 -0.9**
E63A baz=134 S **S 16 37 45.8 -1.6**
E63A baz=134 S **S 16 37 45.8 -1.6**
PAL Palisades 30.46 314 P **P 16 32 46.4 -0.9**
PAL comp=Z,45µm,20.0s IAMs_20 IAMs_20 16 42 13.4
PAL Palisades 30.46 314 P **P 16 32 46.4 -0.9**
PAL comp=Z,76nm,1.2s pmax pmax
PAL comp=Z,45µm,20.0s MLR MLR
PAL Palisades 30.46 314 baz=118 P **P 16 32 47.1 -0.2**
PAL baz=118 S **S 16 37 50.0 +2.0**
PAL Palisades 30.46 314 baz=118 P **P 16 32 45.7 -1.6**
PAL baz=118 S **S 16 37 49.5 +1.5**
MIDE Milford 30.51 309 baz=113 S **S 16 37 52.8 +4.0**
PAMC Pamplona, Colo 30.55 245 eP P 16 32 54.5 +5.6
ARGC Ariguani, Magd 30.62 250 eP **P 16 32 44.8 -4.2**
MTDJ Mount Denham 30.67 268 ⇑P **P 16 32 52.0 +2.5**
H62A Milan 30.69 322 baz=127 P **P 16 32 50.5 +1.2**
H62A baz=127 P **P 16 32 50.5 +1.2**
H62A baz=127 S **S 16 37 53.8 +2.2**
H62A baz=127 S **S 16 37 53.8 +2.2**
PANJ Princeton 30.70 312 baz=116 P **P 16 32 51.1 +1.6**
PANJ baz=116 S **S 16 37 51.8 -0.1**
BRNY Black Rk. Fore 30.72 315 baz=119 P **P 16 32 50.8 +1.1**
BRNY baz=119 S **S 16 37 50.6 -1.6**
G62A West of Eustis 30.74 324 P **P 16 32 49.2 -0.5**
G62A comp=Z,161nm,1.1s IAmb IAmb 16 32 59.1
G62A West of Eustis 30.74 324 baz=129,SNR=9.2 P **P 16 32 49.7 -0.1**
G62A baz=129,SNR=9.2 P **P 16 32 49.7 -0.1**
G62A baz=129 S **S 16 37 53.9 +1.5**
G62A baz=129 S **S 16 37 53.9 +1.5**
BRNJ Basking Ridge 30.75 313 baz=117 S **S 16 37 54.9 +2.4**
J61A Chester 30.80 319 P **P 16 32 49.0 -1.3**
J61A comp=Z,89nm,1.2s IAmb IAmb 16 33 00.3
J61A Chester 30.80 319 baz=124 P **P 16 32 51.0 +0.7**
J61A baz=124 P **P 16 32 51.0 +0.7**
J61A baz=124 S **S 16 37 52.3 -1.0**
J61A baz=124 S **S 16 37 52.3 -1.0**
HNH Hanover 30.84 320 P **P 16 32 49.5 -1.2**
HNH comp=Z,148nm,1.1s IAmb IAmb 16 33 00.7
HNH comp=Z,48µm,21.0s IAMs_20 IAMs_20 16 42 21.3
HNH Hanover 30.84 320 baz=124 S **S 16 37 57.9 +3.9**
F62A Pittston Farm, 30.87 325 P **P 16 32 50.1 -0.8**
F62A Pittston Farm, 30.87 325 baz=131 P **P 16 32 50.6 -0.3**
F62A baz=131 P **P 16 32 50.6 -0.3**
F62A baz=131 S **S 16 37 51.9 -2.4**
F62A baz=131 S **S 16 37 51.9 -2.4**
T60A Surry 30.91 305 baz=109 P **P 16 32 52.5 +1.1**
T60A baz=109 P **P 16 32 52.5 +1.1**
T60A baz=109 S **S 16 37 58.8 +3.6**
T60A baz=109 S **S 16 37 58.8 +3.6**
LBNH Lisbon 30.93 321 P **P 16 32 49.3 -2.2**
LBNH comp=Z,195nm,1.4s IAmb IAmb 16 33 02.7
LBNH comp=Z,49µm,20.0s IAMs_20 IAMs_20 16 42 33.8
LBNH Lisbon 30.93 321 P **P 16 32 49.3 -2.2**
LBNH comp=Z,195nm,1.4s pmax pmax
LBNH comp=Z,49µm,20.0s MLR MLR
LBNH Lisbon 30.93 321 baz=126 P **P 16 32 52.0 +0.4**
LBNH Lisbon 30.93 321 baz=126 P **P 16 32 50.3 -1.2**
LBNH baz=126 S **S 16 37 55.4 0.0**
ODNJ Ogdensburg 30.96 314 baz=118 S **S 16 37 58.9 +3.0**
NPNY Mohonk Preserv 30.97 315 baz=119 P **P 16 32 51.7 -0.2**
NPNY baz=119 S **S 16 37 58.3 +2.2**
NPGB Novo Progresso 31.04 200 eP **P 16 32 52.7 +0.1**
GEDE Greenville 31.11 311 baz=114 P **P 16 32 54.0 +1.0**
GEDE baz=114 S **S 16 38 00.8 +2.7**
E62A Clayton Lake 31.12 327 P **P 16 32 51.0 -2.1**
E62A comp=Z,126nm,1.1s IAmb IAmb 16 33 02.4
E62A Clayton Lake 31.12 327 baz=132,SNR=12 P **P 16 32 53.0 -0.1**
E62A baz=132,SNR=12 P **P 16 32 53.0 -0.1**
E62A baz=132 S **S 16 37 58.3 0.0**
E62A baz=132 S **S 16 37 58.3 0.0**
WUPA West Chester U 31.14 311 P **P 16 32 51.0 -2.2**
TRY Troy 31.16 317 comp=Z,54µm,21.0s IAMs_20 IAMs_20 16 42 17.8
TRY Troy 31.16 317 baz=121 P **P 16 32 54.1 +0.6**
TRY baz=121 S **S 16 38 00.6 +1.7**
D62A Allapoint, All 31.20 328 P **P 16 32 52.7 -1.1**
D62A comp=Z,122nm,1.1s IAmb IAmb 16 33 03.2
D62A Allapoint, All 31.20 328 baz=134,SNR=12 P **P 16 32 53.7 0.0**
D62A baz=134,SNR=12 P **P 16 32 53.7 0.0**
D62A baz=134 S **S 16 37 58.9 -0.4**
D62A baz=134 S **S 16 37 58.9 -0.4**
Y60A Bolivia 31.21 299 baz=103 P **P 16 32 55.6 +1.6**
Y60A baz=103 P **P 16 32 55.6 +1.6**
CNNC Cliffs of the 31.25 301 comp=Z,56µm,21.0s IAMs_20 IAMs_20 16 42 27.0
CNNC Cliffs of the 31.25 301 baz=105 P **P 16 32 52.3 -2.0**
LUPA Lehigh Univers 31.26 312 P **P 16 32 53.8 -0.6**
LUPA comp=Z,164nm,1.3s IAmb IAmb 16 33 04.7
SMTB Santa Maria do 31.27 185 eP **P 16 32 55.1 +0.4**
BARC Barichara 31.36 244 eP **P 16 32 51.3 -4.5**
MCVT Middlebury Col 31.40 320 baz=124 P **P 16 32 56.5 +0.9**
MCVT baz=124 S **S 16 38 05.2 +2.4**
SJCC San Jacinto, C 31.41 251 P **P 16 32 55.6 -0.5**
SJCC San Jacinto, C 31.41 251 eP P 16 32 51.3 -4.8
VT1 Waterbury 31.47 320 comp=Z,49µm,21.0s IAMs_20 IAMs_20 16 42 39.8
U59A Littleton 31.48 303 P **P 16 32 54.9 -1.5**
U59A comp=Z,102nm,1.4s IAmb IAmb 16 33 06.5
U59A Littleton 31.48 303 baz=107 S **S 16 38 09.6 +5.6**
U59A baz=107 S **S 16 38 09.6 +5.6**
T59A Double "B" Far 31.48 305 baz=108 P **P 16 32 57.5 +1.1**
T59A baz=108 P **P 16 32 57.5 +1.1**
T59A baz=108 S **S 16 38 07.9 +3.9**
T59A baz=108 S **S 16 38 07.9 +3.9**
ACCN Adirondack Com 31.50 318 baz=122 P **P 16 32 56.8 +0.3**
ACCN baz=122 S **S 16 38 05.1 +0.7**
HCNY Howe Caverns 31.61 316 baz=120 P **P 16 32 57.7 +0.2**
HCNY baz=120 S **S 16 38 05.6 -0.3**
RUSC La Rusia 31.66 243 eP **P 16 32 57.8 -1.0**
CBN Corbin Frederi 31.75 307 comp=Z,46µm,22.0s IAMs_20 IAMs_20 16 42 30.9
CBN Corbin Frederi 31.75 307 baz=110 P **P 16 32 58.6 -0.1**
CBN baz=110 S **S 16 38 10.6 +2.4**
CBN Corbin Frederi 31.75 307 baz=110 P **P 16 32 57.3 -1.4**
CBN baz=110 S **S 16 38 10.7 +2.4**
L59A Walton 31.77 315 P **P 16 32 57.1 -1.9**
L59A comp=Z,132nm,1.2s IAmb IAmb 16 33 08.8
L59A Walton 31.77 315 baz=119 P **P 16 32 57.9 -1.0**
L59A baz=119 P **P 16 32 57.9 -1.0**
L59A baz=119 S **S 16 38 08.1 -0.6**
L59A baz=119 S **S 16 38 08.1 -0.6**
SDMD Soldier's Deli 31.80 309 P **P 16 32 57.1 -2.1**
SDMD Soldier's Deli 31.80 309 baz=112 P **P 16 33 00.7 +1.5**
PTGC Puerto Gaitan, 31.88 239 eP **P 16 33 04.3 +4.2**
KSPA Keystone Colle 31.95 314 P **P 16 32 58.1 -2.4**
KSPA comp=Z,138nm,1.3s IAmb IAmb 16 33 10.5
KSPA Keystone Colle 31.95 314 baz=117 P **P 16 33 01.0 +0.5**
KSPA baz=117 S **S 16 38 12.4 +1.0**
R58B Mineral 32.04 306 P **P 16 32 59.4 -1.9**
R58B Mineral 32.04 306 baz=109 P **P 16 33 01.6 +0.3**
R58B baz=109 P **P 16 33 01.6 +0.3**
R58B baz=109 S **S 16 38 13.2 +0.4**
R58B baz=109 S **S 16 38 13.2 +0.4**
J59A Piesco 32.06 318 baz=121 P **P 16 33 02.2 +0.7**

J59A P P 16 33 02.2 +0.7
baz=121
J59A S S 16 38 12.7 -0.4
baz=121
J59A S S 16 38 12.7 -0.4
baz=121
NCB Newcomb 32.16 319 P P 16 33 02.9 +0.6
baz=122,SNR=18
NCB S S 16 38 18.4 +3.8
baz=122
FRNY Flat Rock 32.25 321 P P 16 33 02.6 -0.4
FRNY IAmb IAmb 16 33 12.9
comp=Z,149nm,1.1s
FRNY Flat Rock 32.25 321 P P 16 33 03.4 +0.4
baz=124,SNR=31
FRNY S S 16 38 14.4 -1.6
baz=124
N58A Sunbury 32.28 312 P P 16 33 02.6 -0.8
N58A Sunbury 32.28 312 P P 16 33 04.5 +1.1
baz=115
N58A P P 16 33 04.5 +1.1
baz=115
N58A S S 16 38 21.2 +4.6
baz=115
N58A S S 16 38 21.2 +4.6
baz=115
ZARC Zaragoza, Cauc 32.30 247 P P 16 33 02.2 -1.6
ZARC Zaragoza, Cauc 32.30 247 eP P 16 33 00.1 -3.7
V58A Windy Hill, Pi 32.35 302 P P 16 33 02.1 -1.9
V58A Windy Hill, Pi 32.35 302 P P 16 33 04.5 +0.4
baz=105,SNR=7.1
V58A P P 16 33 04.5 +0.4
baz=105,SNR=7.1
V58A S S 16 38 24.9 +7.2
baz=105
V58A S S 16 38 24.9 +7.2
baz=105
Y58A Scranton 32.37 298 P P 16 33 05.4 +1.2
baz=101
Y58A P P 16 33 05.4 +1.2
baz=101
BINY Binghamton 32.39 315 P P 16 33 02.1 -2.3
BINY IAMs_20 IAMs_20 16 43 12.6
comp=Z,37µm,21.0s
BINY Binghamton 32.39 315 P P 16 33 05.6 +1.2
baz=118
BINY S S 16 38 19.7 +1.4
baz=118
BINY Binghamton 32.39 315 P P 16 33 03.8 -0.6
baz=118
BINY S S 16 38 20.7 +2.4
baz=118
PTBC PUERTO BERRIO, 32.45 245 eP P 16 33 01.0 -4.1
NBRF Rio Formoso - 32.50 161 eP P 16 33 07.9 +2.4
J58A Remsen 32.50 317 P P 16 33 03.3 -2.0
J58A IAmb IAmb 16 33 15.3
comp=Z,116nm,1.2s
J58A Remsen 32.50 317 P P 16 33 04.7 -0.6
baz=120
J58A P P 16 33 04.7 -0.6
baz=120
J58A S S 16 38 21.7 +1.8
baz=120
J58A S S 16 38 21.7 +1.8
baz=120
NHSC New Hope 32.64 297 IAMs_20 IAMs_20 16 43 28.2
comp=Z,50µm,20.0s
NHSC New Hope 32.64 297 P P 16 33 08.6 +2.0
baz=100
NHSC New Hope 32.64 297 P P 16 33 05.8 -0.8
baz=100
NHSC S S 16 38 25.3 +3.0
baz=100
MNTQ Montreal, Queb 32.65 321 P P 16 33 04.9 -1.6
MNTQ IAmb IAmb 16 33 15.8
comp=Z,124nm,1.1s
P57A Homestead Farm 32.67 309 P P 16 33 07.4 +0.6
baz=111
P57A P P 16 33 07.4 +0.6
baz=111
P57A S S 16 38 26.6 +4.1
baz=111
P57A S S 16 38 26.6 +4.1
baz=111
LONY Lake Ozonia 32.72 319 P P 16 33 05.7 -1.5
LONY IAmb IAmb 16 33 17.1
comp=Z,109nm,1.4s
LONY IAMs_20 IAMs_20 16 43 28.1
comp=Z,44µm,21.0s
LONY Lake Ozonia 32.72 319 P P 16 33 06.5 -0.7
baz=123,SNR=15
LONY S S 16 38 24.1 +0.7
baz=123
UREC San Jos de Ur 32.74 248 eP P 16 33 04.6 -3.1
M57A Sunshine Farm, 32.78 312 P P 16 33 06.1 -1.6
M57A IAmb IAmb 16 33 19.7
comp=Z,93nm,1.3s
M57A Sunshine Farm, 32.78 312 P P 16 33 08.1 +0.3
baz=115
M57A P P 16 33 08.1 +0.3
baz=115
M57A S S 16 38 28.3 +4.0
baz=115
M57A S S 16 38 28.3 +4.0
baz=115
S57A Dark Hollow, R 32.78 305 P P 16 33 06.5 -1.3
S57A IAmb IAmb 16 33 18.1
comp=Z,180nm,1.4s
S57A Dark Hollow, R 32.78 305 P P 16 33 08.0 +0.2
baz=108,SNR=12
S57A P P 16 33 08.0 +0.2
baz=108,SNR=12
S57A S S 16 38 29.7 +5.3
baz=108
S57A S S 16 38 29.7 +5.3
baz=108
T57A Hurt 32.78 304 P P 16 33 09.0 +1.2
baz=106
T57A P P 16 33 09.0 +1.2
baz=106
T57A S S 16 38 28.0 +3.5
baz=106
T57A S S 16 38 28.0 +3.5
baz=106
BMNY Brushton-Moira 32.80 320 P P 16 33 07.7 -0.1
baz=123,SNR=13
BMNY S S 16 38 24.3 -0.1
baz=123
W57A Gilead 32.89 300 P P 16 33 06.8 -2.0
W57A Gilead 32.89 300 P P 16 33 09.0 +0.2
baz=103,SNR=11
W57A P P 16 33 09.0 +0.2
baz=103,SNR=11
CHIC Chingaza 32.91 242 eP P 16 33 14.0 +4.4
J57A Williamstown 32.98 317 P P 16 33 08.5 -1.0
J57A IAmb IAmb 16 33 20.3
comp=Z,203nm,1.5s
J57A Williamstown 32.98 317 P P 16 33 09.7 +0.2
baz=119
J57A P P 16 33 09.7 +0.2
baz=119
J57A S S 16 38 26.9 -0.4
baz=119
J57A S S 16 38 26.9 -0.4
baz=119
K57A Scipio Center 32.99 315 P P 16 33 08.0 -1.5
K57A Scipio Center 32.99 315 P P 16 33 10.6 +1.0
baz=118,SNR=14
K57A S S 16 38 28.4 +0.9
baz=118
SSPA Standing Stone 33.02 311 P P 16 33 08.6 -1.2
SSPA Standing Stone 33.02 311 P P 16 33 10.3 +0.5
baz=113
SSPA S S 16 38 25.5 -2.5
baz=113
SSPA Standing Stone 33.02 311 P P 16 33 09.7 -0.1
baz=113
SSPA S S 16 38 31.5 +3.5
baz=113
SSPA Standing Stone 33.02 311 ⇑P P 16 33 11.5 +1.7
WCNY West Carthage 33.05 318 P P 16 33 10.9 +0.8
baz=120
WCNY S S 16 38 28.5 +0.2
baz=120
NBAN Anadia - AL 33.13 164 eP P 16 33 12.2 +1.2
BIRD Birdtown, Kers 33.16 299 P P 16 33 11.6 +0.4
baz=102,SNR=12
BIRD S S 16 38 34.4 +4.1
baz=102
257A Skidaway Islan 33.18 294 P P 16 33 13.4 +2.1
baz=97
DWPF Disney Wildern 33.23 287 IAMs_20 IAMs_20 16 43 24.6
comp=Z,36µm,21.0s
DWPF Disney Wildern 33.23 287 P P 16 33 11.1 -0.8
baz=91
DWPF S S 16 38 36.3 +4.7
baz=91
ROSC El Rosal 33.27 242 P P 16 33 14.8 +2.1
comp=Z,9.8nm,0.5s,baz=100,slow=7.6,SNR=9.1
ROSC LR LR 16 47 37.4
comp=Z,20µm,20.1s,baz=36,slow=38
comp=Z,9.8nm,0.5s
ROSC El Rosal 33.27 242 IAmb IAmb 16 33 32.9
comp=Z,98nm,1.4s
ROSC El Rosal 33.27 242 P P 16 33 14.9 +2.1
ROSC pmax pmax
comp=Z,98nm,1.4s
ROSC El Rosal 33.27 242 eP P 16 33 20.5 +7.7
Q56A Snyder Ridge, 33.37 307 P P 16 33 12.3 -0.6
Q56A Snyder Ridge, 33.37 307 P P 16 33 13.6 +0.7
baz=109,SNR=9.2
Q56A P P 16 33 13.6 +0.7
baz=109,SNR=9.2
Q56A S S 16 38 33.8 +0.2
baz=109
Q56A S S 16 38 33.8 +0.2
baz=109
L56A Greenwood 33.41 314 P P 16 33 11.7 -1.6
L56A IAmb IAmb 16 33 23.4
comp=Z,122nm,1.3s
L56A Greenwood 33.41 314 P P 16 33 14.2 +0.8
baz=116
L56A P P 16 33 14.2 +0.8
baz=116
L56A S S 16 38 35.9 +1.7
baz=116
L56A S S 16 38 35.9 +1.7
baz=116
J56A Wolcott 33.46 316 P P 16 33 12.7 -1.0
J56A IAmb IAmb 16 33 25.2
comp=Z,199nm,1.4s
J56A Wolcott 33.46 316 P P 16 33 14.0 +0.3
baz=118
J56A P P 16 33 14.0 +0.3
baz=118
J56A S S 16 38 35.6 +0.8
baz=118
J56A S S 16 38 35.6 +0.8
baz=118
U56A King 33.49 302 P P 16 33 10.7 -3.3
U56A IAmb IAmb 16 33 25.7
comp=Z,102nm,1.2s
U56A King 33.49 302 P P 16 33 16.0 +2.0
baz=104
U56A P P 16 33 16.0 +2.0
baz=104
HELC Santa Helena 33.54 246 eP P 16 33 15.6 +0.5
TRQ Mont Tremblant 33.60 322 P P 16 33 12.1 -2.8
TRQ IAmb IAmb 16 33 23.9
comp=Z,84nm,1.2s
DBBC Dabeiba 33.69 248 eP P 16 33 17.1 +1.0
JSC Jenkinsville 33.74 298 P P 16 33 15.3 -0.9
JSC IAmb IAmb 16 33 25.9
comp=Z,68nm,1.1s
JSC Jenkinsville 33.74 298 P P 16 33 15.3 -0.9
JSC pmax pmax
comp=Z,68nm,1.1s
BLA Blacksburg 33.74 304 IAMs_20 IAMs_20 16 43 42.9
comp=Z,53µm,21.0s
BLA Blacksburg 33.74 304 P P 16 33 17.5 +1.2
baz=106,SNR=8.9
BLA S S 16 38 38.4 -1.0
baz=106
BLA Blacksburg 33.74 304 P P 16 33 14.8 -1.5
baz=106,SNR=8.9
BLA S S 16 38 41.7 +2.3
baz=106
R55A Marlinton 33.82 306 P P 16 33 15.6 -1.3
R55A IAmb IAmb 16 33 28.4
comp=Z,192nm,1.4s
R55A Marlinton 33.82 306 P P 16 33 16.3 -0.7
baz=107,SNR=13
R55A P P 16 33 16.3 -0.7
baz=107,SNR=13
R55A S S 16 38 41.8 +1.2
baz=107
R55A S S 16 38 41.8 +1.2
baz=107
PECO Prince Edward 33.86 317 P P 16 33 16.2 -0.9
PECO IAmb IAmb 16 33 28.8
comp=Z,161nm,1.4s
HAW Hawthorne Fire 33.87 297 P P 16 33 17.7 +0.4
baz=99
HAW S S 16 38 44.0 +2.7
baz=99
CAPC Capurgana 33.90 251 eP P 16 33 17.2 -0.5
MMNY Mt. Morris Dam 33.90 314 P P 16 33 16.1 -1.4
MMNY IAmb IAmb 16 33 29.2
comp=Z,200nm,1.4s
GUY2C Guyana, Caldas 33.92 244 eP P 16 33 16.1 -2.4
M55A Ridgway 33.95 312 P P 16 33 16.9 -1.1
M55A IAmb IAmb 16 33 23.1
comp=Z,132nm,1.4s
M55A Ridgway 33.95 312 P P 16 33 18.1 +0.1
baz=113
M55A P P 16 33 18.1 +0.1
baz=113
M55A S S 16 38 42.0 -0.6
baz=113
M55A S S 16 38 42.0 -0.6
baz=113
KMSC Kings Mountain 33.96 300 P P 16 33 16.7 -1.5
KMSC IAmb IAmb 16 33 28.4
comp=Z,164nm,1.4s
KMSC Kings Mountain 33.96 300 P P 16 33 18.5 +0.3
baz=102,SNR=22
KMSC Kings Mountain 33.96 300 P P 16 33 16.5 -1.7
baz=102,SNR=22
KMSC S S 16 38 44.1 +1.3
baz=102
V55A Taylorsville 34.02 301 P P 16 33 16.8 -1.9
V55A IAmb IAmb 16 33 29.3
comp=Z,101nm,1.3s
V55A Taylorsville 34.02 301 P P 16 33 19.2 +0.5
baz=103
V55A P P 16 33 19.2 +0.5
baz=103
MCWV Mont Chateau 34.05 308 IAMs_20 IAMs_20 16 44 13.9
comp=Z,34µm,20.0s
MCWV Mont Chateau 34.05 308 P P 16 33 20.5 +1.6
baz=110
MCWV S S 16 38 48.7 +4.6
baz=110
MCWV Mont Chateau 34.05 308 P P 16 33 18.3 -0.6
baz=110
MCWV S S 16 38 46.4 +2.3
baz=110
NBLA Lagarto - SE 34.06 167 eP P 16 33 19.4 +0.4
J55A Hilton 34.08 315 P P 16 33 17.0 -2.0
J55A IAmb IAmb 16 33 29.1
comp=Z,179nm,1.4s
J55A Hilton 34.08 315 P P 16 33 20.4 +1.4
baz=117
J55A P P 16 33 20.4 +1.4
baz=117
J55A S S 16 38 46.9 +2.5
baz=117
J55A S S 16 38 46.9 +2.5
baz=117
CBOC Ciudad Bolivar 34.12 246 eP P 16 33 17.2 -2.6
WVNY West Valley, N 34.23 313 P P 16 33 18.8 -1.6
WVNY IAmb IAmb 16 33 30.6
comp=Z,191nm,1.3s
WVNY West Valley, N 34.23 313 P P 16 33 19.8 -0.6
baz=115,SNR=8.9
WVNY S S 16 38 48.8 +2.0
baz=115
656A Willston 34.24 289 P P 16 33 22.6 +2.0
baz=92
656A S S 16 38 51.6 +4.3
baz=92
PAULI Pauline 34.29 299 P P 16 33 21.4 +0.4
baz=101
ANIL Santa Ana 34.36 243 eP P 16 33 30.2 +8.1
PRAC Prado 34.37 241 eP P 16 33 27.0 +5.0
255A Hazlehurst 34.40 294 P P 16 33 23.4 +1.5
baz=96
255A S S 16 38 54.2 +4.7
baz=96
PFVI Vila Bisbo 34.45 57 eP P 16 33 21.2 -1.2
comp=Z,152nm,1.8s
PFVI eS S 16 38 57.4 +7.1
MEDO Medina 34.45 315 P P 16 33 19.1 -3.2
MEDO IAmb IAmb 16 33 32.1
comp=Z,151nm,1.3s
MACC Macarena, Meta 34.48 238 eP P 16 33 17.2 -5.6
DELO Deloro Mine 34.54 317 P P 16 33 20.9 -2.1
HODGE Hodges 34.54 298 P P 16 33 22.4 -0.8
HODGE Hodges 34.54 298 P P 16 33 23.8 +0.6
baz=100,SNR=11
PEXB Peixe 34.54 186 eP P 16 33 24.2 +0.9
ORTC Ortega, Tolima 34.56 242 eP P 16 33 20.5 -3.0
Q54A Coxs Mills 34.56 307 P P 16 33 23.7 +0.4
baz=108
Q54A P P 16 33 23.7 +0.4
baz=108
Q54A S S 16 38 54.1 +2.1
baz=108
Q54A S S 16 38 54.1 +2.1
baz=108
S54A Dingess, Beckl 34.58 304 P P 16 33 22.5 -1.1
S54A IAmb IAmb 16 33 35.1
comp=Z,117nm,1.2s
S54A Dingess, Beckl 34.58 304 P P 16 33 24.6 +1.1
baz=106
S54A P P 16 33 24.6 +1.1
baz=106
S54A S S 16 38 54.3 +1.9
baz=106
S54A S S 16 38 54.3 +1.9
baz=106
PMAFR Mafra 34.61 53 eP P 16 33 23.5 -0.3
comp=Z,189nm,1.9s
PMAFR eS S 16 38 56.9 +4.1
O54A Avella 34.62 309 P P 16 33 22.6 -1.2
O54A Avella 34.62 309 P P 16 33 25.2 +1.4
baz=110
O54A P P 16 33 25.2 +1.4
baz=110
O54A S S 16 38 56.3 +3.5
baz=110
O54A S S 16 38 56.3 +3.5
baz=110
J54A Appleton 34.62 315 P P 16 33 22.6 -1.2
J54A Appleton 34.62 315 P P 16 33 23.3 -0.4
baz=116
J54A P P 16 33 23.3 -0.4
baz=116
J54A S S 16 38 54.3 +1.6
baz=116
J54A S S 16 38 54.3 +1.6
baz=116
MORF Marmelete 34.63 56 eP P 16 33 23.8 -0.2
MORF eS S 16 38 54.2 +1.0
MORF IAMs_20 IAMs_20 16 43 12.8
comp=Z,25µm,17.1s
MORF Marmelete 34.63 56 eP P 16 33 26.9 +2.9
comp=Z,127nm,1.9s
MORF Marmelete 34.63 56 ePcP PcP 16 36 01.2 +3.0
MORF eS S 16 39 00.1 +6.9
MORF Marmelete 34.63 56 eP P 16 33 23.7 -0.2
MORF eS S 16 38 54.1 +1.0
MORF Marmelete 34.63 56 ⇑P P 16 33 27.2 +3.2
PTEO Sao Teotonio 34.64 56 eP P 16 33 26.4 +2.5
comp=Z,122nm,1.4s
LIS Lisbon 34.64 54 eP P 16 33 23.9 -0.1
LIS eS S 16 38 54.0 +0.9
LIS IAMs_20 IAMs_20 16 44 01.4
comp=Z,34µm,17.5s
LIS Lisbon 34.64 54 eP P 16 33 23.8 -0.1
LIS eS S 16 38 54.0 +0.9
U54A Nelsons Funny 34.65 302 P P 16 33 23.3 -0.9
U54A IAmb IAmb 16 33 34.7
comp=Z,163nm,1.2s
U54A Nelsons Funny 34.65 302 P P 16 33 25.0 +0.7
baz=103
U54A P P 16 33 25.0 +0.7
baz=103
U54A S S 16 38 55.3 +1.7
baz=103
U54A S S 16 38 55.3 +1.7
baz=103
SDBA SAO DESIDERIO 34.70 180 eP P 16 33 25.9 +1.2
CLDB Colider 34.79 199 eP P 16 33 25.6 +0.2
SNDB Serra Nova Dou 34.80 191 eP P 16 33 26.1 +0.6
AVE Averroes 34.83 64 P P 16 33 24.1 -1.6
AVE S S 16 39 00.7 +4.5
AVE Averroes 34.83 64 P P 16 33 25.1 -0.5
SOR Soroa 34.92 278 P P 16 33 25.3 -1.3
SOR IAmb IAmb 16 33 37.6
comp=Z,128nm,1.3s
SOR Soroa 34.92 278 P P 16 33 25.3 -1.3
SOR pmax pmax
comp=Z,128nm,1.3s
PNCL Nicolau / Gran 34.94 55 eP P 16 33 26.8 +0.3
comp=Z,103nm,1.6s
PNCL Nicolau / Gran 34.94 55 ePcP PcP 16 36 01.0 +2.0
PNCL eS S 16 39 00.4 +2.7
ALLY Alegheny Colle 34.98 311 P P 16 33 28.6 +1.7
baz=112
PTAC Punta Ardita, 35.00 249 eP P 16 33 27.0 -0.3
154A Montrose 35.01 295 P P 16 33 25.0 -2.2
154A Montrose 35.01 295 P P 16 33 29.0 +1.7
baz=97
ERPA Erie 35.05 312 P P 16 33 28.0 +0.6
baz=113
ERPA S S 16 38 58.7 -0.8
baz=113
ERPA Erie 35.05 312 P P 16 33 25.6 -1.9
baz=113
ERPA S S 16 39 00.9 +1.5
baz=113
MESJ Messejana 35.10 56 eP P 16 33 27.8 -0.1
MESJ eS S 16 39 01.3 +1.1
MESJ IAMs_20 IAMs_20 16 43 36.9
comp=Z,28µm,25.0s
MESJ Messejana 35.10 56 eP P 16 33 28.4 +0.5
comp=Z,56nm,1.7s
MESJ Messejana 35.10 56 eP P 16 33 27.8 -0.1
MESJ eS S 16 39 01.3 +1.1
P53A Whipple 35.13 307 P P 16 33 25.7 -2.5
P53A Whipple 35.13 307 P P 16 33 29.6 +1.4
baz=108
P53A P P 16 33 29.6 +1.4
baz=108
P53A S S 16 39 01.8 +1.1
baz=108
P53A S S 16 39 01.8 +1.1
baz=108
PSBE So Bento 35.14 53 eP P 16 33 28.6 +0.2
comp=Z,175nm,1.4s
PSBE eS S 16 39 02.7 +1.7
N53A Lisbon 35.16 310 P P 16 33 29.6 +1.1
baz=110
N53A P P 16 33 29.6 +1.1
baz=110
N53A S S 16 39 01.4 +0.2
baz=110
N53A S S 16 39 01.4 +0.2
baz=110
PBDV Barranco-do-Ve 35.17 57 eP P 16 33 29.1 +0.5
comp=Z,172nm,1.4s
PBDV eS S 16 39 04.0 +2.6
PCVE Castro Verde 35.18 56 eP P 16 33 29.7 +1.0
comp=Z,108nm,1.6s
PCVE Castro Verde 35.18 56 ePcP PcP 16 36 02.2 +2.4
PCVE eS S 16 39 03.6 +2.0
R53A Hurricane 35.21 305 P P 16 33 28.7 -0.3
baz=106
R53A P P 16 33 28.7 -0.3
baz=106
R53A S S 16 39 01.8 -0.2
baz=106
R53A S S 16 39 01.8 -0.2
baz=106
BG3 Lake Jocassee 35.22 299 P P 16 33 28.1 -1.0
CASEE Lake Jocassee 35.22 299 P P 16 33 30.0 +0.9
baz=100,SNR=10
O53A New Philadelph 35.24 309 IAMs_20 IAMs_20 16 44 41.3
comp=Z,38µm,21.0s

O53A New Philadelph 35.24 309 P **P** **16 33 27.9 -1.3**
baz=109
O53A S **S** **16 39 02.7 +0.3**
baz=109
V53A Saluda 35.25 300 P **P** **16 33 28.6 -0.8**
V53A IAmb IAmb 16 33 39.8
comp=Z,100nm,1.2s
V53A Saluda 35.25 300 P **P** **16 33 30.2 +0.8**
baz=101,SNR=13
V53A P **P** **16 33 30.2 +0.8**
baz=101,SNR=13
M53A WI Miller and 35.27 311 IAMs_20 IAMs_20 16 44 42.0
comp=Z,39µm,22.0s
M53A WI Miller and 35.27 311 P **P** **16 33 27.5 -1.9**
baz=111
M53A S **S** **16 39 03.8 +0.9**
baz=111
TIGA Tifton 35.29 293 P **P** **16 33 29.2 -0.5**
TIGA IAmb IAmb 16 33 40.6
comp=Z,178nm,1.3s
TIGA Tifton 35.29 293 P **P** **16 33 31.7 +2.0**
baz=95
TIGA S **S** **16 39 00.5 -2.8**
baz=95
TIGA Tifton 35.29 293 P **P** **16 33 27.7 -2.0**
baz=95
TIGA S **S** **16 39 05.5 +2.1**
baz=95
PVAQ Vaqueiros 35.38 57 *e*P **P** **16 33 30.6 +0.3**
comp=Z,123nm,1.6s
PVAQ Vaqueiros 35.38 57 *e*PcP **PcP** **16 36 03.0 +2.7**
PVAQ *e*S **S** **16 39 11.0 +6.5**
PVAQ *e*LR LR 16 42 33.9
comp=Z,20µm,20.0s
PVAQ Vaqueiros 35.38 57 ⇑P **P** **16 33 29.9 -0.4**
PVAQ Vaqueiros 35.38 57 ⇑P **P** **16 33 30.8 +0.4**
GOGA Godfrey 35.41 296 IAMs_20 IAMs_20 16 45 21.5
comp=Z,35µm,20.0s
GOGA Godfrey 35.41 296 P **P** **16 33 32.8 +2.2**
baz=98
GOGA S **S** **16 39 11.9 +6.7**
baz=98
GOGA Godfrey 35.41 296 P **P** **16 33 28.3 -2.3**
baz=98
GOGA S **S** **16 39 08.9 +3.7**
baz=98
YOTC Yotoco, Valle 35.42 243 *e*P **P** **16 33 28.6 -2.4**
PBEJ Beja 35.42 56 *e*P **P** **16 33 31.6 +0.9**
comp=Z,108nm,1.6s
PMTG Montargil 35.43 54 *e*P **P** **16 33 30.4 -0.4**
comp=Z,208nm,1.5s
PMTG Montargil 35.43 54 *e*PcP **PcP** **16 36 02.4 +1.9**
PMTG *e*S **S** **16 39 08.6 +3.2**
EVO Evora 35.44 55 P P 16 33 40.0 +9.1
EVO S **S** **16 39 10.9 +5.4**
EVO Evora 35.44 55 *e*P **P** **16 33 31.1 +0.2**
comp=Z,120nm,1.4s
EVO Evora 35.44 55 *e*PcP **PcP** **16 36 03.0 +2.5**
PCAS Casmilo, Conde 35.53 52 *e*P **P** **16 33 31.8 +0.1**
comp=Z,102nm,1.5s
PCAS Casmilo, Conde 35.53 52 *e*PcP **PcP** **16 36 02.8 +2.1**
PCAS *e*S **S** **16 39 09.4 +2.5**
SADO Sadowa 35.62 317 P **P** **16 33 32.8 +0.5**
comp=Z,23nm,1.0s,baz=132,slow=6.9,SNR=9.8
SADO LR LR 16 45 15.4
comp=Z,48µm,21.3s,baz=138,slow=32
comp=Z,23nm,1.0s
SADO Sadowa 35.62 317 P **P** **16 33 30.9 -1.4**
SADO Sadowa 35.62 317 ⇑P **P** **16 33 33.4 +1.1**
Q52A Bidwell 35.62 306 P **P** **16 33 31.3 -1.2**
Q52A IAmb IAmb 16 33 42.5
comp=Z,113nm,1.1s
Q52A Bidwell 35.62 306 P **P** **16 33 31.9 -0.6**
baz=106,SNR=21
Q52A P **P** **16 33 31.9 -0.6**
baz=106,SNR=21
Q52A S **S** **16 39 11.6 +3.2**
baz=106
Q52A S **S** **16 39 11.6 +3.2**
baz=106
COI Coimbra 35.64 52 *e*P **P** **16 33 35.4 +2.8**
comp=Z,179nm,1.4s
COI *e*S **S** **16 39 10.9 +2.4**
O52A Adamsville 35.65 308 P **P** **16 33 31.2 -1.5**
O52A IAmb IAmb 16 33 44.5
comp=Z,129nm,1.4s
O52A Adamsville 35.65 308 P **P** **16 33 32.8 +0.1**
baz=108
O52A P **P** **16 33 32.8 +0.1**
baz=108
UPA Univ. de Panam 35.66 253 *e*P P 16 33 24.1 -8.9
P52A Corning 35.72 307 P **P** **16 33 31.1 -2.2**
P52A IAmb IAmb 16 33 43.1
comp=Z,112nm,1.3s
P52A IAMs_20 IAMs_20 16 44 44.1
comp=Z,40µm,22.0s
P52A Corning 35.72 307 P **P** **16 33 31.6 -1.7**
baz=107
P52A S **S** **16 39 11.0 +1.2**
baz=107
MARP Paez Belalcaza 35.75 241 *e*P **P** **16 33 30.2 -3.8**
GARC Garzon, Huila 35.76 240 *e*P **P** **16 33 35.3 +1.2**
PDRB Porto dos Gac 35.77 200 *e*P **P** **16 33 34.2 +0.3**
M52A Chesterland 35.78 311 P **P** **16 33 31.6 -2.2**
M52A IAmb IAmb 16 33 44.4
comp=Z,139nm,1.4s
M52A Chesterland 35.78 311 P **P** **16 33 35.1 +1.3**
baz=111
M52A P **P** **16 33 35.1 +1.3**
baz=111
M52A S **S** **16 39 09.8 -0.9**
baz=111
M52A S **S** **16 39 09.8 -0.9**
baz=111
BCIP Isla Barro Col 35.85 254 P **P** **16 33 32.8 -1.8**
BCIP IAmb IAmb 16 33 45.0
comp=Z,169nm,1.3s
BCIP Isla Barro Col 35.85 254 P **P** **16 33 32.8 -1.8**
BCIP pmax pmax
comp=Z,169nm,1.3s
BCIP MLR MLR
comp=Z,13µm,22.0s
BCIP Isla Barro Col 35.85 254 *e*P **P** **16 33 33.5 -1.2**
BCIP Isla Barro Col 35.85 254 ⇑P **P** **16 33 37.5 +2.8**
PESTR Estremoz 35.85 54 *e*P **P** **16 33 34.9 +0.5**
comp=Z,78nm,1.5s
PESTR *e*S **S** **16 39 14.2 +2.4**
PESTR Estremoz 35.85 54 P **P** **16 33 32.6 -1.8**
V52A Sevierville 35.91 300 P **P** **16 33 35.4 +0.4**
baz=101
V52A S **S** **16 39 12.7 -0.2**
baz=101
553A Crawfordville 35.93 291 P **P** **16 33 37.1 +1.9**
baz=93
SAML Samuel 35.94 212 P **P** **16 33 35.1 -0.2**
SAML Samuel 35.94 212 P **P** **16 33 35.1 -0.2**
SAML pmax pmax
comp=Z,26nm,1.0s
SAML Samuel 35.94 212 ⇓P **P** **16 33 35.8 +0.4**
Y52A Lilburn 35.96 297 P **P** **16 33 32.5 -3.0**
Y52A Lilburn 35.96 297 P **P** **16 33 36.2 +0.8**
baz=98
Y52A P **P** **16 33 36.2 +0.8**
baz=98
Y52A S **S** **16 39 12.8 -0.9**
baz=98
Y52A S **S** **16 39 12.8 -0.9**
baz=98
TZTN Tazewell 36.02 302 P **P** **16 33 35.6 -0.3**
TZTN IAMs_20 IAMs_20 16 45 15.2
comp=Z,57µm,21.0s
TZTN Tazewell 36.02 302 P **P** **16 33 36.7 +0.8**
baz=102,SNR=15
TZTN S **S** **16 39 15.3 +0.8**
baz=102
TZTN Tazewell 36.02 302 P **P** **16 33 34.9 -1.0**
baz=102,SNR=15
TZTN S **S** **16 39 15.1 +0.7**
baz=102
TKL Tuckaleechee C 36.02 300 P **P** **16 33 36.2 +0.2**
comp=Z,29nm,1.1s,baz=119,slow=10,SNR=9.4
TKL LR LR 16 45 13.5
comp=Z,51µm,21.9s,baz=104,slow=31
comp=Z,29nm,1.1s
TKL Tuckaleechee C 36.02 300 P **P** **16 33 36.4 +0.5**
baz=100,SNR=11
TKL S **S** **16 39 14.6 +0.1**
baz=100
W52A Murphy 36.04 299 P **P** **16 33 34.9 -1.3**
W52A IAmb IAmb 16 33 46.5
comp=Z,79nm,1.1s
W52A Murphy 36.04 299 P **P** **16 33 36.7 +0.5**
baz=100
ARNO Arenosillo 36.07 57 P **P** **16 33 36.5 +0.3**
ARNO S **S** **16 39 21.1 +6.0**
PBAR Barrancos 36.09 56 *e*S S 16 39 05.5 -10
SCHQ Schefferville 36.16 339 P **P** **16 33 36.1 -0.7**
comp=Z,27nm,1.0s,baz=156,slow=7.9,SNR=9.1
SCHQ PcP **PcP** **16 36 01.2 -1.1**
comp=Z,12nm,0.8s,baz=97,slow=4.8,SNR=3.9
SCHQ LR LR 16 46 27.0
comp=Z,29µm,21.5s,baz=150,slow=33
comp=Z,27nm,1.0s
SCHQ Schefferville 36.16 339 P **P** **16 33 35.4 -1.4**
SCHQ IAmb IAmb 16 33 47.4
comp=Z,94nm,1.2s
SCHQ Schefferville 36.16 339 ⇑P **P** **16 33 36.1 -0.7**
PMRV Marv??o 36.16 53 *e*P **P** **16 33 36.4 -0.7**
comp=Z,151nm,1.4s
PMRV Marv??o 36.16 53 *e*PcP **PcP** **16 36 04.3 +1.7**
PMRV *e*S **S** **16 39 23.5 +7.0**
PMRV *e*LR LR 16 42 56.8
comp=Z,21µm,18.0s
PVIS Viseu 36.18 51 *e*P **P** **16 33 37.5 +0.2**
comp=Z,86nm,1.7s
PVIS Viseu 36.18 51 *e*PcP **PcP** **16 36 04.4 +1.7**
PCBR Castelo Branco 36.21 53 *e*P **P** **16 33 36.8 -0.7**
comp=Z,129nm,1.4s
PCBR Castelo Branco 36.21 53 *e*PcP **PcP** **16 36 04.7 +2.0**
FLOC Florencia 36.25 239 *e*P **P** **16 33 37.4 -0.7**
S51A Beattyville 36.29 303 P **P** **16 33 35.7 -2.5**
S51A Beattyville 36.29 303 P **P** **16 33 38.4 +0.2**
baz=103
S51A P **P** **16 33 38.4 +0.2**
baz=103
S51A S **S** **16 39 15.9 -2.7**
baz=103
S51A S **S** **16 39 15.9 -2.7**
baz=103
VLDQ Val d'Or 36.29 323 P **P** **16 33 38.0 0.0**
VLDQ IAmb IAmb 16 33 49.0
comp=Z,130nm,1.2s
N51A Ashland 36.30 309 P **P** **16 33 36.5 -1.7**
N51A IAmb IAmb 16 33 48.0
comp=Z,110nm,1.2s
N51A Ashland 36.30 309 P **P** **16 33 39.2 +0.9**
baz=109
N51A P **P** **16 33 39.2 +0.9**
baz=109
N51A S **S** **16 39 17.6 -1.0**
baz=109
N51A S **S** **16 39 17.6 -1.0**
baz=109
MTE Manteigas 36.33 52 *e*P **P** **16 33 38.2 -0.4**
comp=Z,297nm,1.5s
MTE Manteigas 36.33 52 *e*PcP **PcP** **16 36 05.3 +2.1**
MTE *e*S **S** **16 39 21.4 +2.1**
MTE *e*LR LR 16 43 04.0
comp=Z,19µm,22.0s
MTE Manteigas 36.33 52 P **P** **16 33 36.7 -1.9**
MTE IAmb IAmb 16 33 46.9
comp=Z,173nm,1.2s
MTE Manteigas 36.33 52 ⇑P **P** **16 33 37.2 -1.4**
PGAV Gavieira, Arco 36.33 49 *e*P **P** **16 33 38.5 -0.1**
comp=Z,155nm,1.6s
PGAV *e*S **S** **16 39 24.7 +5.4**
PGAV *e*LR LR 16 42 49.5
comp=Z,14µm,18.0s
SFS San Fernando 36.35 59 P **P** **16 33 40.0 +1.3**
SFS S **S** **16 39 20.8 +1.4**
SFS San Fernando 36.35 59 IAMs_20 IAMs_20 16 45 20.7
comp=Z,42µm,22.0s
P51A Williamsport 36.36 307 P **P** **16 33 36.7 -2.1**
P51A IAmb IAmb 16 33 49.5
comp=Z,113nm,1.4s
P51A Williamsport 36.36 307 P **P** **16 33 39.6 +0.8**
baz=106
P51A P **P** **16 33 39.6 +0.8**
baz=106
152A Waverly Hall 36.36 295 P **P** **16 33 39.9 +1.0**
baz=96
152A S **S** **16 39 24.5 +4.7**
baz=96
PCON Cinco Dias 36.40 241 *e*P **P** **16 33 43.2 +3.2**
GDU01 Guandu, BA 36.41 171 *e*P **P** **16 33 38.7 -0.6**
PCAB Cabril 36.41 49 *e*P **P** **16 33 39.0 -0.2**
comp=Z,100nm,1.6s
352A Blakely 36.44 293 P **P** **16 33 42.1 +2.6**
baz=94
352A S **S** **16 39 26.9 +6.0**
baz=94
PTLC Puerto Leguiza 36.45 237 *e*P **P** **16 33 40.0 +0.2**
Q51A Peebles 36.45 306 P **P** **16 33 40.0 +0.4**
baz=105,SNR=16
Q51A P **P** **16 33 40.0 +0.4**
baz=105,SNR=16
Q51A S **S** **16 39 23.5 +2.5**
baz=105
Q51A S **S** **16 39 23.5 +2.5**
baz=105
POLO Lamas de Olo 36.47 50 *e*P **P** **16 33 39.2 -0.6**
comp=Z,80nm,1.5s
POLO Lamas de Olo 36.47 50 *e*PcP **PcP** **16 36 05.1 +1.5**
POLO *e*S **S** **16 39 24.8 +3.5**
PVRL Vila Real 36.49 50 *e*P **P** **16 33 41.5 +1.6**
comp=Z,130nm,1.6s
POPC Popayan, Colom 36.51 242 *e*P **P** **16 33 40.0 -0.6**
V51A Loudon 36.51 300 P **P** **16 33 38.4 -1.6**
V51A Loudon 36.51 300 P **P** **16 33 41.0 +0.9**
baz=100
V51A S **S** **16 39 19.8 -2.1**
baz=100
ACSO Alum Creek Sta 36.52 308 P **P** **16 33 38.7 -1.5**
ACSO IAmb IAmb 16 33 50.1
comp=Z,155nm,1.4s
ACSO IAMs_20 IAMs_20 16 45 20.3
comp=Z,34µm,22.0s
ACSO Alum Creek Sta 36.52 308 P **P** **16 33 40.4 +0.3**
baz=107
ACSO S **S** **16 39 20.6 -1.4**
baz=107
ACSO Alum Creek Sta 36.52 308 P **P** **16 33 39.2 -0.9**
baz=107
ACSO S **S** **16 39 22.6 +0.5**
baz=107
X51A Calhoun 36.72 298 P **P** **16 33 40.3 -1.6**
X51A IAmb IAmb 16 33 51.6
comp=Z,89nm,1.0s
X51A Calhoun 36.72 298 P **P** **16 33 42.4 +0.6**
baz=98,SNR=17
X51A P **P** **16 33 42.4 +0.6**
baz=98,SNR=17
X51A S **S** **16 39 24.0 -1.1**
baz=98
X51A S **S** **16 39 24.0 -1.1**
baz=98
IFR Ifrane 36.75 64 P **P** **16 33 42.8 +0.4**
IFR S **S** **16 39 32.8 +6.7**
Z51A Franklin 36.82 296 P **P** **16 33 41.4 -1.3**
Z51A Franklin 36.82 296 P **P** **16 33 43.6 +0.8**
baz=96
Z51A S **S** **16 39 34.9 +8.2**
baz=96
AZU Azuero 36.85 252 *e*P **P** **16 33 43.2 0.0**
CEU Ceuta 36.90 60 P **P** **16 33 44.9 +1.5**
CEU S **S** **16 39 33.4 +5.5**
M50A Fremont 36.93 310 P **P** **16 33 43.7 +0.1**
baz=109
M50A P **P** **16 33 43.7 +0.1**
baz=109
MVO Moncorvo 36.94 51 *e*P **P** **16 33 43.1 -0.7**
comp=Z,135nm,1.7s
MVO *e*S **S** **16 39 29.9 +1.3**
MVO *e*LR LR 16 43 24.6
comp=Z,19µm,20.0s
R50A Paris 37.01 304 P **P** **16 33 43.5 -0.8**
R50A Paris 37.01 304 P **P** **16 33 45.9 +1.6**
baz=104
R50A P **P** **16 33 45.9 +1.6**
baz=104
R50A S **S** **16 39 32.7 +3.2**
baz=104
R50A S **S** **16 39 32.7 +3.2**
baz=104
451A Vernon 37.09 291 P **P** **16 33 46.6 +1.6**
baz=92
451A S S 16 39 40.8 +10
baz=92
K50A Casco 37.10 312 P **P** **16 33 43.9 -1.2**
K50A IAmb IAmb 16 33 55.4
comp=Z,252nm,1.5s
K50A Casco 37.10 312 P **P** **16 33 45.0 -0.1**
baz=111
K50A P **P** **16 33 45.0 -0.1**
baz=111
K50A S **S** **16 39 36.6 +5.8**
baz=111
K50A S **S** **16 39 36.6 +5.8**
baz=111
MDT Midelt 37.11 65 P **P** **16 33 45.6 +0.2**
comp=Z,25nm,1.0s,baz=287,slow=8.7,SNR=16
MDT LR LR 16 45 53.7
comp=Z,28µm,20.1s,baz=280,slow=31
comp=Z,25nm,1.0s
T50A Nancy 37.13 302 P **P** **16 33 44.9 -0.5**
T50A IAmb IAmb 16 33 56.8
comp=Z,139nm,1.2s
T50A Nancy 37.13 302 P **P** **16 33 46.0 +0.7**
baz=102
T50A P **P** **16 33 46.0 +0.7**
baz=102
T50A S **S** **16 39 39.6 +8.2**
baz=102
T50A S **S** **16 39 39.6 +8.2**
baz=102
W50A Signal Mountai 37.18 299 P **P** **16 33 45.5 -0.4**
W50A Signal Mountai 37.18 299 P **P** **16 33 46.4 +0.5**
baz=99,SNR=14
W50A S **S** **16 39 40.1 +7.8**
baz=99
FPAL Fort Paine 37.33 298 P **P** **16 33 46.5 -0.7**
JANB Januaria 37.34 179 *e*P **P** **16 33 46.2 -1.1**
PBRG Braganca 37.35 50 *e*P **P** **16 33 47.0 -0.2**
comp=Z,108nm,1.7s
PBRG Braganca 37.35 50 *e*PcP **PcP** **16 36 08.2 +2.0**
PBRG *e*S **S** **16 39 38.9 +4.1**
O49A Covington 37.50 307 P **P** **16 33 47.0 -1.5**
O49A Covington 37.50 307 P **P** **16 33 48.3 -0.2**
baz=106
O49A P **P** **16 33 48.3 -0.2**
baz=106
O49A S **S** **16 39 42.0 +5.1**
baz=106
O49A S **S** **16 39 42.0 +5.1**
baz=106
N49A Columbus Grove 37.60 308 P **P** **16 33 47.6 -1.6**
N49A Columbus Grove 37.60 308 P **P** **16 33 48.9 -0.4**
baz=107
N49A P **P** **16 33 48.9 -0.4**
baz=107
N49A S **S** **16 39 35.6 -2.8**
baz=107
N49A S **S** **16 39 35.6 -2.8**
baz=107
P49A Miami Univ. Ec 37.61 306 P **P** **16 33 47.8 -1.7**
P49A IAmb IAmb 16 33 59.2
comp=Z,245nm,1.5s
P49A IAMs_20 IAMs_20 16 46 04.2
comp=Z,44µm,21.0s
P49A Miami Univ. Ec 37.61 306 P **P** **16 33 49.3 -0.1**
baz=105,SNR=16
P49A S **S** **16 39 42.6 +4.0**
baz=105
P49A Miami Univ. Ec 37.61 306 P **P** **16 33 48.9 -0.6**
baz=105,SNR=16
P49A S **S** **16 39 40.0 +1.4**
baz=105
250A Grady 37.61 294 P **P** **16 33 50.9 +1.4**
baz=94
250A S **S** **16 39 47.6 +8.8**
baz=94
PVLZ Peæn de 37.65 61 P **P** **16 33 49.6 -0.2**
PVLZ S **S** **16 39 39.9 +0.7**
R49A Shelbyville 37.66 304 P **P** **16 33 49.2 -0.6**
R49A IAmb IAmb 16 33 59.5
comp=Z,126nm,1.1s
R49A Shelbyville 37.66 304 P **P** **16 33 50.1 +0.3**
baz=103,SNR=12
R49A P **P** **16 33 50.1 +0.3**
baz=103,SNR=12
R49A S **S** **16 39 43.0 +3.7**
baz=103
R49A S **S** **16 39 43.0 +3.7**
baz=103
AAM Ann Arbor 37.66 311 P **P** **16 33 49.1 -0.6**
AAM IAMs_20 IAMs_20 16 45 55.1
comp=Z,45µm,22.0s
AAM Ann Arbor 37.66 311 P **P** **16 33 49.1 -0.6**
AAM pmax pmax
comp=Z,351nm,1.5s
AAM MLR MLR
comp=Z,45µm,22.0s
AAM Ann Arbor 37.66 311 P **P** **16 33 51.2 +1.4**
baz=109
AAM Ann Arbor 37.66 311 P **P** **16 33 47.8 -1.9**
baz=109
AAM S **S** **16 39 43.6 +4.4**
baz=109
I49A Point Hope 37.67 314 P **P** **16 33 48.8 -1.1**
I49A IAmb IAmb 16 34 01.0
comp=Z,154nm,1.4s
I49A Point Hope 37.67 314 P **P** **16 33 50.6 +0.8**
baz=112
I49A P **P** **16 33 50.6 +0.8**
baz=112
I49A S **S** **16 39 37.9 -1.5**
baz=112
I49A S **S** **16 39 37.9 -1.5**
baz=112
SWET Sewanee 37.69 299 P **P** **16 33 48.7 -1.4**
GMAL Guarumal, Vera 37.71 253 *e*P **P** **16 33 49.1 -1.4**
U49A Red Boiling Sp 37.77 301 P **P** **16 33 51.3 +0.5**
baz=100,SNR=13
U49A S **S** **16 39 44.7 +3.5**
baz=100
GCUF Volcan Galeras 37.81 240 *e*P **P** **16 33 50.9 -1.0**
Y49A Blount Mountai 37.90 297 P **P** **16 33 52.4 +0.4**
baz=96
Y49A S **S** **16 39 44.5 +1.2**
baz=96
BDFB Brasilia 38.02 185 P **P** **16 33 54.5 +1.4**
comp=Z,23nm,0.8s,baz=3.0,slow=6.7,SNR=21
BDFB LR LR 16 48 07.5
comp=Z,21µm,20.1s,baz=359,slow=34
comp=Z,23nm,0.8s
BDFB Brasilia 38.02 185 P **P** **16 33 53.0 -0.1**
BDFB Brasilia 38.02 185 P **P** **16 33 53.0 -0.1**
BDFB pmax pmax
comp=Z,88nm,1.1s
BDFB Brasilia 38.02 185 *e*P **P** **16 33 54.0 +0.8**
CMC01 Camacan, BA 38.03 171 *e*P **P** **16 33 54.3 +1.2**
L48A N Adams 38.09 310 P **P** **16 33 51.4 -2.1**
L48A IAmb IAmb 16 34 05.1
comp=Z,97nm,1.1s
L48A N Adams 38.09 310 P **P** **16 33 53.1 -0.3**
baz=108,SNR=11
L48A P **P** **16 33 53.1 -0.3**
baz=108,SNR=11
L48A S **S** **16 39 47.7 +1.8**
baz=108
L48A S **S** **16 39 47.7 +1.8**
baz=108
P48A Milroy 38.12 306 P **P** **16 33 52.0 -1.7**
P48A IAmb IAmb 16 34 03.9
comp=Z,139nm,1.4s
P48A Milroy 38.12 306 P **P** **16 33 52.7 -1.0**
baz=104,SNR=6.4
P48A P **P** **16 33 52.7 -1.0**
baz=104,SNR=6.4
P48A S **S** **16 39 47.3 +0.9**
baz=104
P48A S **S** **16 39 47.3 +0.9**
baz=104
O48B Farmland 38.12 307 P **P** **16 33 52.7 -1.1**
baz=105
O48B S **S** **16 39 46.6 +0.2**
baz=105
O48B Farmland 38.12 307 P **P** **16 33 51.5 -2.3**
baz=105

O48B S S 16 39 47.0 +0.6
baz=105
CLTN Cedars of Leba 38.14 300 P P 16 33 52.6 -1.3
ETMB Extrema 38.22 215 *e*P P 16 33 54.4 -0.3
VILB Vilhena 38.23 204 *e*P P 16 33 56.5 +1.7
BRAL Brewton 38.23 292 IAms_20 IAms_20 16 46 32.5
comp=Z,35µm,21.0s
BRAL Brewton 38.23 292 P P 16 33 56.4 +1.7
baz=92
BRAL S S 16 39 53.2 +5.0
baz=92
BRAL Brewton 38.23 292 P P 16 33 52.7 -2.0
baz=92
BRAL S S 16 39 54.1 +5.9
baz=92
LRAL Lakeview Retre 38.31 295 P P 16 33 54.7 -0.7
LRAL IAms_20 IAms_20 16 46 44.4
comp=Z,56µm,21.0s
LRAL Lakeview Retre 38.31 295 P P 16 33 55.9 +0.6
baz=95,SNR=15
LRAL S S 16 39 50.0 +0.6
baz=95
LRAL Lakeview Retre 38.31 295 P P 16 33 54.6 -0.7
baz=95,SNR=15
LRAL S S 16 39 51.2 +1.9
baz=95
PAB San Pablo 38.46 54 P P 16 33 55.2 -1.4
PAB San Pablo 38.46 54 IAms_20 IAms_20 16 46 49.2
comp=Z,26µm,19.0s
PAB San Pablo 38.46 54 P P 16 33 55.3 -1.4
PAB pmax pmax
comp=Z,75nm,1.2s
PAB MLR MLR
comp=Z,26µm,19.0s
PAB San Pablo 38.46 54 ⇓P P 16 33 55.7 -1.0
TULM Tulcn-Chalpat 38.47 240 *e*P P 16 33 53.0 -4.5
V48A Smith Brothers 38.48 300 P P 16 33 57.1 +0.3
baz=98
V48A S S 16 39 55.5 +3.6
baz=98
X48A Hartselle 38.49 297 P P 16 33 55.4 -1.5
X48A Hartselle 38.49 297 P P 16 33 57.4 +0.5
baz=97,SNR=11
X48A S S 16 39 52.5 +0.4
baz=97
TUMC Tumaco 38.59 243 P P 16 33 57.0 -0.9
N47A Urbana 38.69 308 P P 16 33 57.0 -1.5
N47A IAmb IAmb 16 34 08.8
comp=Z,153nm,1.4s
N47A Urbana 38.69 308 P P 16 33 57.4 -1.1
baz=106,SNR=7.0
N47A P P 16 33 57.4 -1.1
baz=106,SNR=7.0
N47A S S 16 39 56.5 +1.6
baz=106
N47A S S 16 39 56.5 +1.6
baz=106
IVI Ivigtut 38.73 358 P P 16 33 56.7 -1.7
WMELI Melilla 38.76 61 P P 16 33 57.4 -1.7
WMELI S S 16 39 59.4 +3.3
J47A Sunmer 38.78 312 P P 16 33 57.3 -1.9
J47A Sunmer 38.78 312 P P 16 33 59.8 +0.6
baz=109
J47A P P 16 33 59.8 +0.6
baz=109
J47A S S 16 39 54.1 -2.0
baz=109
J47A S S 16 39 54.1 -2.0
baz=109
ESDC Sonseca Array 38.78 54 P P 16 33 58.8 -0.5
comp=Z,37nm,1.1s,baz=255,slow=8.6,SNR=30
ESDC PcP PcP 16 36 10.8 +0.1
comp=Z,14nm,1.0s,baz=273,slow=3.4,SNR=12
ESDC LR LR 16 47 20.5
comp=Z,27µm,19.0s,baz=244,slow=32
comp=Z,37nm,1.1s
ESDC Sonseca Array 38.78 54 P P 16 33 58.4 -0.9
ESBB Sonseca Array 38.78 54 P P 16 33 57.7 -1.7
T47A Sharon Grove 38.90 301 P P 16 33 58.7 -1.6
T47A Sharon Grove 38.90 301 P P 16 34 01.1 +0.7
baz=100
T47A S S 16 39 58.7 +0.4
baz=100
SRBA San Rafael, Bu 38.97 256 P P 16 34 01.1 -0.2
CHAS Isla Isabel II 39.17 62 P P 16 34 02.0 -0.5
CHAS S S 16 40 03.3 +1.0
GUA01 Guaratinga, BA 39.20 172 *e*P P 16 34 03.0 +0.2
Z47A Carrollton 39.22 295 P P 16 34 01.1 -1.9
Z47A IAmb IAmb 16 34 14.6
comp=Z,142nm,1.1s
Z47A Carrollton 39.22 295 P P 16 34 01.3 -1.7
baz=94,SNR=7.6
Z47A S S 16 40 04.2 +1.1
baz=94
OTAV Otavalo 39.29 240 P P 16 34 04.1 -0.2
OTAV IAmb IAmb 16 34 15.4
comp=Z,170nm,1.5s
OTAV Otavalo 39.29 240 P P 16 34 04.1 -0.2
OTAV pmax pmax
comp=Z,170nm,1.5s
OTAV MLR MLR
comp=Z,11µm,20.0s
OTAV Otavalo 39.29 240 *e*P P 16 34 09.2 +4.9
OTAV Otavalo 39.29 240 *e*P P 16 34 04.5 +0.2
OTAV Otavalo 39.29 240 ⇑P P 16 34 05.3 +1.0
WVT Waverly 39.35 300 P P 16 34 02.7 -1.3
WVT Waverly 39.35 300 IAMs_20 IAMs_20 16 47 27.5
comp=Z,38µm,20.0s
WVT Waverly 39.35 300 P P 16 34 02.7 -1.3
WVT pmax pmax
comp=Z,86nm,1.0s
WVT MLR MLR
comp=Z,38µm,20.0s
WVT Waverly 39.35 300 P P 16 34 04.1 +0.1
baz=98,SNR=21
WVT S S 16 40 03.1 -1.8
baz=98
WVT Waverly 39.35 300 P P 16 34 01.7 -2.3
baz=98
WVT S S 16 40 04.4 -0.5
baz=98
WVT Waverly 39.35 300 ⇓P P 16 34 04.1 +0.1
PLAL Pickwick Lake 39.40 298 P P 16 34 03.6 -0.8
PLAL IAmb IAmb 16 34 14.4
comp=Z,128nm,1.1s
L46A Eue Claire 39.44 309 S S 16 40 09.0 +2.8
baz=106
L46A S S 16 40 09.0 +2.8
baz=106
UCM Universidad Co 39.47 53 P P 16 34 04.6 -0.4
UCM S S 16 40 08.6 +1.9
P46A Rosedale 39.50 305 P P 16 34 05.5 +0.3
baz=103
SALV Santo Antonio 39.56 196 *e*P P 16 34 06.6 +0.7
E46A Sault Ste Mari 39.58 317 P P 16 34 04.7 -1.1
E46A Sault Ste Mari 39.58 317 P P 16 34 05.4 -0.4
baz=113
E46A S S 16 40 09.1 +1.0
baz=113
SFIN Lafayette 39.59 307 P P 16 34 06.0 0.0
baz=104
SFIN S S 16 40 08.6 +0.1
baz=104
SFIN Lafayette 39.59 307 P P 16 34 04.8 -1.3
baz=104
SFIN S S 16 40 12.3 +3.8
baz=104
BOAB BOACO BROADBAN 39.85 262 P P 16 34 06.8 -1.7
BOAB IAMs_20 IAMs_20 16 49 02.9
comp=Z,37µm,21.0s
BOAB BOACO BROADBAN 39.85 262 ⇑P P 16 34 11.6 +3.1
SLOR San Lorenzo - 39.90 239 P P 16 34 08.7 -0.7
MATN Matagalpa 39.93 263 P P 16 34 08.8 -0.5
G45A Suttons Bay 39.96 314 P P 16 34 08.3 -0.7
G45A IAmb IAmb 16 34 19.8
comp=Z,214nm,1.4s
G45A Suttons Bay 39.96 314 P P 16 34 08.8 -0.2
baz=110
G45A P P 16 34 08.8 -0.2
baz=110
G45A S S 16 40 14.7 +0.8
baz=110
G45A S S 16 40 14.7 +0.8
baz=110
JTS Las Juntas de 39.99 259 LR LR 16 48 50.8
comp=Z,15µm,21.6s,baz=113,slow=33
JTS Las Juntas de 39.99 259 P P 16 34 08.6 -1.1
JTS Las Juntas de 39.99 259 *i*P P 16 34 08.5 -1.1
JTS pmax pmax
comp=Z,86nm,1.2s
JTS MLR MLR
comp=Z,5µm,17.0s
JTS Las Juntas de 39.99 259 ⇑P P 16 34 12.2 +2.6
I45A Fountain 40.01 312 S S 16 40 17.5 +2.9
baz=109
I45A S S 16 40 17.5 +2.9
baz=109
146A Union 40.01 294 P P 16 34 11.4 +1.8
baz=93
146A S S 16 40 19.7 +4.8
baz=93
T45B Paducah 40.13 301 P P 16 34 10.8 +0.3
baz=98
T45B S S 16 40 17.5 +0.9
baz=98
PTLB Pontes e Lacer 40.15 201 *e*P P 16 34 11.8 +1.0
346A Big Creek Wild 40.30 292 P P 16 34 11.3 -0.8
346A IAmb IAmb 16 34 22.6
comp=Z,181nm,1.2s
346A Big Creek Wild 40.30 292 P P 16 34 14.5 +2.4
baz=91
346A S S 16 40 27.4 +8.0
baz=91
W45A Hickory Valley 40.32 298 P P 16 34 11.4 -0.7
W45A Hickory Valley 40.32 298 P P 16 34 13.9 +1.8
baz=96
W45A S S 16 40 25.4 +5.8
baz=96
IPMB Ipameri, GO 40.36 185 *e*P P 16 34 12.6 0.0
NAN01 Guarapari, ES 40.40 173 *e*P P 16 34 14.6 +1.8
ORTG Ortega, Santa 40.42 259 P P 16 34 11.3 -2.0
CZSB Cruzeiro do Su 40.43 225 *e*P P 16 34 13.1 -0.1
OXF Oxford 40.44 297 P P 16 34 12.2 -0.9
OXF IAmb IAmb 16 34 22.7
comp=Z,170nm,1.1s
OXF Oxford 40.44 297 P P 16 34 12.3 -0.9
OXF pmax pmax
comp=Z,170nm,1.1s
OXF MLR MLR
comp=Z,20µm,20.0s
OXF Oxford 40.44 297 P P 16 34 12.9 -0.3
baz=95
OXF S S 16 40 25.0 +3.6
baz=95
OXF Oxford 40.44 297 P P 16 34 11.9 -1.3
baz=95
OXF S S 16 40 21.8 +0.5
baz=95
Y45A Yeager Farm, C 40.50 296 P P 16 34 11.5 -2.1
Y45A IAmb IAmb 16 34 24.8
comp=Z,174nm,1.3s
Y45A Yeager Farm, C 40.50 296 P P 16 34 15.1 +1.5
baz=94
HICK Hickman 40.52 300 P P 16 34 11.3 -2.5
GLAT Glass 40.53 300 P P 16 34 11.9 -2.0
M44A Midewin, Midew 40.53 308 P P 16 34 10.8 -3.1
M44A Midewin, Midew 40.53 308 P P 16 34 13.6 -0.2
baz=104
M44A S S 16 40 22.2 -0.3
baz=104
O44A Mansfield 40.56 306 P P 16 34 12.4 -1.7
O44A Mansfield 40.56 306 S S 16 40 23.2 +0.1
baz=102
PORT Chimborazo Vol 40.57 238 P P 16 34 14.6 -0.5
L44A Lake County Fo 40.64 309 IAMs_20 IAMs_20 16 47 58.1
comp=Z,39µm,22.0s
L44A Lake County Fo 40.64 309 S S 16 40 23.4 -0.7
baz=105
L44A Lake County Fo 40.64 309 P P 16 34 13.0 -1.7
baz=105
L44A S S 16 40 24.9 +0.8
baz=105
CART Cartagena 40.65 58 P P 16 34 12.1 -2.7
CART S S 16 40 27.7 +3.4
LNXT Lenox 40.68 300 P P 16 34 13.8 -1.3
LNXT IAmb IAmb 16 34 26.9
comp=Z,273nm,1.2s
LNXT Lenox 40.68 300 P P 16 34 17.0 +1.9
baz=97
LNXT S S 16 40 30.0 +5.2
baz=97
SIUC Southern Illin 40.68 302 P P 16 34 14.1 -1.0
SIUC IAmb IAmb 16 34 25.6
comp=Z,163nm,1.1s
S44A Carbondale 40.71 302 P P 16 34 14.1 -1.2
S44A IAmb IAmb 16 34 25.7
comp=Z,174nm,1.2s
S44A Carbondale 40.71 302 P P 16 34 15.8 +0.5
baz=99,SNR=15
S44A S S 16 40 27.5 +2.2
baz=99
Q44A Meyer Farm, Va 40.73 304 P P 16 34 14.4 -1.1
Q44A IAmb IAmb 16 34 25.6
comp=Z,118nm,0.9s
Q44A Meyer Farm, Va 40.73 304 P P 16 34 15.6 +0.1
baz=100
Q44A S S 16 40 26.3 +0.7
baz=100
TGUH Tegucigalpa,Un 40.81 266 P P 16 34 15.4 -1.1
TGUH IAmb IAmb 16 34 32.5
comp=Z,236nm,1.1s
TGUH Tegucigalpa,Un 40.81 266 ⇑P P 16 34 18.9 +2.4
PMNB Patos De Minas 40.81 182 *e*P P 16 34 16.1 -0.3
K43A Burlington 41.08 310 P P 16 34 16.7 -1.6
K43A Burlington 41.08 310 P P 16 34 19.5 +1.2
baz=105
K43A S S 16 40 30.2 -0.5
baz=105
SJMB Sao Joao De Ma 41.14 174 *e*P P 16 34 20.6 +1.6
H43A Windswept, Lux 41.19 313 P P 16 34 17.5 -1.7
H43A IAmb IAmb 16 34 29.9
comp=Z,130nm,1.3s
H43A Windswept, Lux 41.19 313 P P 16 34 18.2 -1.0
baz=108
H43A S S 16 40 31.8 -0.5
baz=108
VBMS Vicksburg 41.23 294 IAMs_20 IAMs_20 16 49 07.7
comp=Z,36µm,20.0s
VBMS Vicksburg 41.23 294 P P 16 34 21.6 +2.0
baz=92
VBMS Vicksburg 41.23 294 P P 16 34 19.7 0.0
baz=92
VBMS S S 16 40 36.0 +2.9
baz=92
P43A Skaggs, Pawnee 41.25 305 P P 16 34 18.4 -1.4
P43A Skaggs, Pawnee 41.25 305 P P 16 34 20.3 +0.5
baz=101
P43A S S 16 40 35.4 +2.1
baz=101
HDIL Hopedale 41.27 306 P P 16 34 20.2 +0.3
baz=102
HDIL S S 16 40 35.2 +1.7
baz=102
HDIL Hopedale 41.27 306 P P 16 34 20.3 +0.5
baz=102
HDIL S S 16 40 31.5 -2.0
baz=102
BSFB Barra de Sao F 41.30 174 *e*P P 16 34 20.4 +0.2
E43A Lone Tree Farm 41.31 316 P P 16 34 18.5 -1.6
E43A Lone Tree Farm 41.31 316 P P 16 34 19.8 -0.3
baz=111,SNR=14
E43A S S 16 40 34.4 +0.5
baz=111
SIV San Ignacio 41.34 204 P P 16 34 21.1 +0.5
comp=Z,10nm,1.0s,baz=44,slow=7.1,SNR=17
SIV LR LR 16 50 16.7
comp=Z,10µm,21.4s,baz=26,slow=34
comp=Z,10nm,1.0s
344A Westbrook Farm 41.39 292 P P 16 34 19.9 -1.1
344A IAmb IAmb 16 34 31.9
comp=Z,177nm,1.2s
344A Westbrook Farm 41.39 292 S S 16 40 37.0 +1.5
baz=91
BOSC San Juan Bosco 41.40 236 P P 16 34 20.5 -1.0
PBMO Poplar Bluff 41.51 301 P P 16 34 21.7 -0.3
baz=97,SNR=8.2
COHC Cochancay 41.56 238 P P 16 34 21.7 -0.9
SLM Saint Louis 41.62 303 P P 16 34 24.5 +1.6
baz=99
SLM S S 16 40 38.8 0.0
baz=99
FVM French Village 41.67 302 P P 16 34 21.9 -1.3
FVM French Village 41.67 302 P P 16 34 21.9 -1.3
FVM pmax pmax
comp=Z,72nm,1.0s
FVM French Village 41.67 302 P P 16 34 23.6 +0.4
baz=98,SNR=13
FVM S S 16 40 32.0 -7.6
baz=98
TIC Toumodi 41.70 106 ⇑*e*P P 16 34 23.5 -0.3
comp=Z,133nm,1.0s
I42A Draeger Farm, 41.81 311 P P 16 34 22.7 -1.6
I42A IAmb IAmb 16 34 34.9
comp=Z,162nm,1.5s
I42A Draeger Farm, 41.81 311 P P 16 34 24.8 +0.5
baz=106
I42A S S 16 40 42.4 +0.9
baz=106
RIB01 Linhares ES 41.82 173 *e*P P 16 34 24.7 +0.2
DBIC Dimbokro 41.83 106 *e*P P 16 34 23.2 -1.7
DBIC IAmb IAmb 16 34 32.5
comp=Z,101nm,0.9s
DBIC Dimbokro 41.83 106 P P 16 34 24.8 -0.1
comp=Z,64nm,0.9s,baz=304,slow=9.6,SNR=24
DBIC LR LR 16 48 36.4
comp=Z,44µm,21.7s,baz=292,slow=32
comp=Z,64nm,0.9s
DBIC Dimbokro 41.83 106 P P 16 34 25.5 +0.7
DBIC IAmb IAmb 16 34 32.8
comp=Z,112nm,1.0s
DBIC Dimbokro 41.83 106 P P 16 34 25.5 +0.7
DBIC pmax pmax
comp=Z,113nm,1.0s
DBIC Dimbokro 41.83 106 ⇑P P 16 34 24.7 -0.1
L42A Oliver, Polo 41.86 308 P P 16 34 23.6 -1.1
L42A Oliver, Polo 41.86 308 P P 16 34 24.9 +0.2
baz=103,SNR=8.4
L42A S S 16 40 42.8 +0.5
baz=103
LIC Lamto 41.88 107 ⇑*i*P P 16 34 27.2 +2.0
comp=Z,154nm,1.3s
NUUK Nuuk 41.89 356 *i*P P 16 34 24.8 +0.2
NUUK IAmb IAmb 16 34 32.8
comp=Z,18nm,0.9s
NUUK *i*S S 16 40 45.5 +3.5
NUUK Nuuk 41.89 356 ⇑P P 16 34 24.4 -0.2
143A Socs Landing, 41.99 294 P P 16 34 25.0 -0.9
143A IAmb IAmb 16 34 36.6
comp=Z,260nm,1.4s
143A Socs Landing, 41.99 294 P P 16 34 27.8 +1.9
baz=92
143A S S 16 40 47.8 +3.4
baz=92
LCAR Lake Charles 42.01 299 P P 16 34 25.1 -0.9
LCAR Lake Charles 42.01 299 P P 16 34 26.6 +0.6
baz=96
LCAR S S 16 40 45.5 +0.8
baz=96
KIC Kosan Boka 42.07 106 ⇓*i*P P 16 34 26.5 -0.3
comp=Z,85nm,0.9s
ITRB Iturama 42.27 187 *e*P P 16 34 29.9 +1.7
CCM Cathedral Cave 42.32 302 P P 16 34 27.6 -0.9
CCM IAmb IAmb 16 34 37.9
comp=Z,105nm,1.0s
CCM Cathedral Cave 42.32 302 P P 16 34 27.6 -0.9
CCM pmax pmax
comp=Z,105nm,1.0s
CCM MLR MLR
comp=Z,55µm,20.0s
CCM Cathedral Cave 42.32 302 P P 16 34 28.5 0.0
baz=98,SNR=25
CCM S S 16 40 42.4 -6.8
baz=98
CCM Cathedral Cave 42.32 302 P P 16 34 27.4 -1.2
baz=98
CCM S S 16 40 49.2 0.0
baz=98
CCM Cathedral Cave 42.32 302 ⇓P P 16 34 28.4 -0.1
CCAR Cane Creek 42.35 296 P P 16 34 27.3 -1.5
CCAR IAmb IAmb 16 34 36.4
comp=Z,155nm,1.3s
CCAR Cane Creek 42.35 296 P P 16 34 30.2 +1.3
baz=93
CCAR S S 16 40 51.4 +1.7
baz=93
DSB Dublin 42.45 34 P P 16 34 28.6 -0.9
DSB Dublin 42.45 34 ⇑P P 16 34 31.2 +1.8
N41A Harden Midland 42.46 306 P P 16 34 28.7 -0.9
N41A IAmb IAmb 16 34 39.1
comp=Z,162nm,1.0s
N41A Harden Midland 42.46 306 P P 16 34 29.4 -0.2
baz=101,SNR=11
N41A S S 16 40 41.1 -10
baz=101
JFWS Jewell Farm 42.49 310 P P 16 34 29.2 -0.7
JFWS Jewell Farm 42.49 310 IAMs_20 IAMs_20 16 48 54.2
comp=Z,40µm,22.0s
JFWS Jewell Farm 42.49 310 P P 16 34 29.2 -0.7
JFWS pmax pmax
comp=Z,54nm,1.0s
JFWS MLR MLR
comp=Z,40µm,22.0s
JFWS Jewell Farm 42.49 310 P P 16 34 30.1 +0.2
baz=104,SNR=5.9
JFWS S S 16 40 51.4 -0.2
baz=104
JFWS Jewell Farm 42.49 310 P P 16 34 29.4 -0.5
baz=104,SNR=5.9
JFWS S S 16 40 52.3 +0.7
baz=104
H10N2 ASCENSION HYDR 42.52 132 T T 17 19 38.6
baz=316,slow=75
H10N3 ASCENSION HYDR 42.52 132 T T 17 19 37.4
baz=316,slow=75
H10N1 ASCENSION HYDR 42.54 132 T T 17 19 41.3
baz=316,slow=75
D41A Chassel 42.56 316 P P 16 34 29.0 -1.3
D41A IAmb IAmb 16 34 41.8
comp=Z,174nm,1.2s
D41A Chassel 42.56 316 P P 16 34 30.6 +0.2
baz=110,SNR=13
D41A S S 16 40 52.3 -0.2
baz=110
COWI Conover 42.62 314 P P 16 34 29.7 -1.2
COWI IAMs_20 IAMs_20 16 49 47.1
comp=Z,38µm,20.0s
COWI Conover 42.62 314 P P 16 34 31.0 +0.1
baz=108
COWI S S 16 40 58.9 +5.6
baz=108
SNET Serv Nac Est T 42.73 266 IAMs_20 IAMs_20 16 49 27.8
comp=Z,32µm,22.0s
342B Flagon Creek P 42.75 292 P P 16 34 34.5 +2.4
baz=90
342B S S 16 40 59.2 +3.5
baz=90
FCAR Ozark Folk Cen 42.78 299 P P 16 34 30.6 -1.7
FCAR IAmb IAmb 16 34 41.6
comp=Z,129nm,1.2s
W41B Gary Mavity, V 42.82 298 P P 16 34 31.5 -1.1
W41B IAmb IAmb 16 34 42.3
comp=Z,158nm,1.1s
W41B Gary Mavity, V 42.82 298 P P 16 34 32.6 0.0
baz=94,SNR=31
W41B S S 16 40 57.3 +0.6
baz=94
W41B Gary Mavity, V 42.82 298 P P 16 34 31.1 -1.6
baz=94,SNR=31
W41B S S 16 40 55.5 -1.1
baz=94
WHAR Wooly Hollow 42.86 298 P P 16 34 31.6 -1.4
WHAR IAmb IAmb 16 34 42.0
comp=Z,148nm,1.1s
UALR University of 42.87 297 P P 16 34 31.6 -1.4
UALR IAmb IAmb 16 34 56.2
comp=Z,150nm,1.5s
JSA Saint Aubin 42.99 41 ⇑P P 16 34 34.0 +0.2
I40A Norwalk 43.00 311 P P 16 34 35.4 +1.4
baz=105
I40A S S 16 40 59.3 +0.2
baz=105
L40A Anamosa 43.00 308 P P 16 34 32.5 -1.6
L40A Anamosa 43.00 308 P P 16 34 33.5 -0.6
baz=102,SNR=13
L40A S S 16 41 00.0 +0.9
baz=102
MGMO Mountain Grove 43.02 301 P P 16 34 32.8 -1.5
ALF01 Guarapari-ES 43.08 174 *e*P P 16 34 35.7 +1.0
G40A Rib Lake 43.08 313 P P 16 34 33.3 -1.3

G40A IAmb IAmb 16 34 44.6
comp=Z,217nm,1.5s
G40A Rib Lake 43.08 313 P P 16 34 34.5 -0.1
baz=106,SNR=16
G40A S S **16 41 00.3 +0.1**
baz=106
R40A Maddies Statio 43.15 302 P P 16 34 33.7 -1.6
R40A Maddies Statio 43.15 302 P P 16 34 34.3 -1.0
baz=97,SNR=14
R40A S S **16 41 01.3 -0.1**
baz=97
P40A Paris 43.16 304 P P 16 34 33.7 -1.6
P40A IAmb IAmb 16 34 44.8
comp=Z,184nm,1.5s
P40A Paris 43.16 304 P P 16 34 34.7 -0.6
baz=99,SNR=16
P40A S S **16 41 02.0 +0.5**
baz=99
Z41A Richland Creek 43.18 295 P P 16 34 34.3 -1.3
Z41A IAmb IAmb 16 34 46.3
comp=Z,161nm,1.2s
Z41A Richland Creek 43.18 295 P P 16 34 37.4 +1.8
baz=92
Z41A P P **16 34 37.4 +1.8**
baz=92
Z41A S S **16 41 06.5 +4.5**
baz=92
Z41A S S **16 41 06.5 +4.5**
baz=92
Z41A Richland Creek 43.18 295 P P 16 34 35.6 0.0
baz=92
Z41A S S **16 41 02.7 +0.7**
baz=92
H10S3 ASCENSION HYDR 43.21 133 T T 17 20 30.4
baz=266,slow=74
H10S2 ASCENSION HYDR 43.22 133 T T 17 20 27.9
baz=314,slow=74,SNR=3921
BSCB Bom Sucesso 43.24 180 *e*P **P 16 34 37.5 +1.3**
X40A Basin Creek Fa 43.26 297 P P 16 34 34.8 -1.4
X40A IAMs_20 IAMs_20 16 49 27.4
comp=Z,25µm,22.0s
X40A Basin Creek Fa 43.26 297 P P 16 34 34.9 -1.4
baz=93
X40A P P **16 34 34.9 -1.4**
baz=93
X40A S S **16 41 02.6 -0.5**
baz=93
X40A S S **16 41 02.6 -0.5**
baz=93
X40A Basin Creek Fa 43.26 297 P P 16 34 35.4 -0.8
baz=93
X40A S S **16 41 01.9 -1.2**
baz=93
ANGG Ammassalik, Gr 43.37 5 P P 16 34 35.1 -1.5
ANGG IAmb IAmb 16 34 45.8
comp=Z,184nm,1.5s
MFF Saint Martin d 43.37 45 *e*P **P 16 34 36.2 -0.8**
MFF pmax pmax
comp=Z,159nm,1.1s
BB19B Bebedouro 43.44 185 *e*P **P 16 34 38.5 +0.8**
WLAR White Oak Lake 43.45 296 P P 16 34 36.2 -1.6
LFF La Frestale 43.49 48 *e*P **P 16 34 37.5 -0.4**
LFF pmax pmax
comp=Z,90nm,1.0s
441A DeRidder 43.50 291 P P 16 34 40.4 +2.2
baz=89
441A S S **16 41 10.8 +4.1**
baz=89
MCH1 Michaelchurch 43.67 37 ⇑P **P 16 34 38.7 -0.5**
MIAR Mount Ida 43.88 297 P P 16 34 40.4 -0.8
MIAR IAMs_20 IAMs_20 16 49 45.6
comp=Z,28µm,22.0s
MIAR Mount Ida 43.88 297 P P 16 34 40.4 -0.8
MIAR pmax pmax
comp=Z,52nm,1.1s
MIAR MLR MLR
comp=Z,28µm,22.0s
MIAR Mount Ida 43.88 297 P P 16 34 41.2 0.0
baz=92,SNR=30
MIAR S S **16 41 17.5 +5.4**
baz=92
MIAR Mount Ida 43.88 297 P P 16 34 40.1 -1.1
baz=92,SNR=30
MIAR S S **16 41 14.3 +2.2**
baz=92
MIAR Mount Ida 43.88 297 ⇑P **P 16 34 41.5 +0.3**
S39A Bolivar 43.91 301 P P 16 34 40.3 -1.1
S39A Bolivar 43.91 301 P P 16 34 41.0 -0.5
baz=96,SNR=15
S39A S S **16 41 12.2 -0.3**
baz=96
ATAH Atahualpa 43.94 232 LR LR 16 53 36.9
comp=Z,14µm,20.9s,baz=34,slow=37
DY2G Dye2 43.97 359 *i* P **P 16 34 41.7 0.0**
DY2G IAmb IAmb 16 34 48.7
comp=Z,44nm,0.8s
DY2G *i* S S **16 41 14.4 +1.4**
W39A Magazine 44.08 298 P P 16 34 41.7 -1.1
W39A IAmb IAmb 16 34 52.8
comp=Z,156nm,1.3s
W39A IAMs_20 IAMs_20 16 51 01.9
comp=Z,26µm,20.0s
W39A Magazine 44.08 298 P P 16 34 42.9 +0.1
baz=93,SNR=28
W39A S S **16 41 16.0 +1.0**
baz=93
W39A Magazine 44.08 298 P P 16 34 42.5 -0.3
baz=93,SNR=28
W39A S S **16 41 16.6 +1.5**
baz=93
FRB Frobisher Bay 44.09 345 P P 16 34 41.5 -1.0
comp=Z,50nm,1.1s,baz=140,slow=7.0,SNR=10
FRB LR LR 16 50 57.4
comp=Z,41µm,21.7s,baz=143,slow=33
comp=Z,50nm,1.1s
FRB Frobisher Bay 44.09 345 ⇑P **P 16 34 41.2 -1.3**
CAM01 Campos-RJ 44.19 175 *e*P **P 16 34 45.6 +1.9**
K38A Parkersburg 44.25 309 P P 16 34 42.5 -1.5
K38A Parkersburg 44.25 309 P P 16 34 44.5 +0.4
baz=101
K38A S S **16 41 17.3 0.0**
baz=101
N38A Joes South For 44.25 306 P P 16 34 42.7 -1.4
N38A IAmb IAmb 16 34 53.5
comp=Z,162nm,0.9s
N38A Joes South For 44.25 306 P P 16 34 44.0 -0.1
baz=99,SNR=8.6
N38A S S **16 41 14.3 -3.2**
baz=99
PCMB Pacaembu 44.26 188 *e*P **P 16 34 44.1 -0.1**
HHAR Hobbs 44.27 299 P P 16 34 42.1 -2.4
HHAR Hobbs 44.27 299 P P 16 34 43.6 -0.8
baz=94
P38A Dawn 44.30 304 P P 16 34 42.7 -1.8
P38A IAmb IAmb 16 34 54.0
comp=Z,111nm,1.1s
P38A Dawn 44.30 304 P P 16 34 44.5 -0.1
baz=98,SNR=13
P38A S S **16 41 15.0 -3.2**
baz=98
E38A The Farm, Brul 44.36 314 P P 16 34 43.3 -1.7
E38A The Farm, Brul 44.36 314 P P 16 34 44.4 -0.5
baz=106,SNR=7.2
E38A S S **16 41 16.1 -2.8**
baz=106
CAF Calviac 44.39 48 *e*P **P 16 34 44.0 -1.3**
CAF pmax pmax
comp=Z,68nm,1.1s
DUB01 Friburgo-RJ 44.40 176 *e*P **P 16 34 47.7 +2.3**
SCIA State Center 44.43 307 P P 16 34 45.4 -0.2
baz=100
SCIA S S **16 41 21.5 +1.5**
baz=100
SCIA State Center 44.43 307 P P 16 34 45.3 -0.2
baz=100
SCIA S S **16 41 20.3 +0.2**
baz=100
VAS01 Vassouras-RJ 44.55 178 *e*P **P 16 34 49.0 +2.4**
SFJD Kangerlussuaq 44.62 357 P P 16 34 45.4 -1.2
comp=Z,21nm,0.9s,baz=171,slow=15,SNR=10
SFJD LR LR 16 49 51.7
comp=Z,16µm,20.1s,baz=178,slow=31
comp=Z,21nm,0.9s
SFJD Kangerlussuaq 44.62 357 P P 16 34 45.0 -1.6
SFJD Kangerlussuaq 44.62 357 P P 16 34 45.1 -1.6
SFJD pmax pmax
comp=Z,58nm,1.0s
SFJD MLR MLR
comp=Z,14µm,20.0s
SFJD Kangerlussuaq 44.62 357 *i* P **P 16 34 44.7 -2.0**
SFJD IAmb IAmb 16 34 54.0
comp=Z,26nm,0.9s
SFJD *i* S S **16 41 21.4 -0.7**
SFJD Kangerlussuaq 44.62 357 ⇑P **P 16 34 47.0 +0.3**
U38A Gravette 44.65 300 P P 16 34 45.5 -1.9
U38A IAmb IAmb 16 34 56.6
comp=Z,104nm,1.4s
U38A Gravette 44.65 300 P P 16 34 47.0 -0.4
baz=94
U38A S S **16 41 22.6 -0.7**
baz=94
CCIG Comitan 44.66 271 P P 16 34 46.8 -1.1
CCIG IAmb IAmb 16 34 57.3
comp=Z,151nm,1.3s
LPAZ La Paz 44.67 212 P P 16 34 49.4 +1.0
comp=Z,69nm,0.8s,baz=22,slow=7.9,SNR=47
LPAZ LR LR 16 52 38.1
comp=Z,17µm,20.3s,baz=19,slow=35
comp=Z,69nm,0.8s
LPAZ La Paz 44.67 212 P P 16 34 48.6 +0.3
LPAZ La Paz 44.67 212 P P 16 34 48.6 +0.3
LPAZ pmax pmax
comp=Z,238nm,1.1s
LPAZ La Paz 44.67 212 *e*P **P 16 34 49.0 +0.7**
LPAZ La Paz 44.67 212 ⇓P **P 16 34 49.0 +0.7**
RCLB Rio Claro- Sao 44.72 183 *e*P **P 16 34 49.5 +1.5**
EYMN Ely 44.72 316 P P 16 34 46.0 -1.8
EYMN IAmb IAmb 16 34 57.8
comp=Z,86nm,1.1s
EYMN Ely 44.72 316 IAMs_20 IAMs_20 16 50 45.8
comp=Z,28µm,20.0s
EYMN Ely 44.72 316 P P 16 34 47.1 -0.7
baz=108
EYMN S S **16 41 26.9 +2.8**
baz=108
EYMN Ely 44.72 316 P P 16 34 46.9 -0.9
baz=108
EYMN S S **16 41 25.6 +1.5**
baz=108
NATX Nacogdoches 44.74 293 IAMs_20 IAMs_20 16 51 09.9
comp=Z,26µm,22.0s
NATX Nacogdoches 44.74 293 P P 16 34 49.9 +1.8
baz=89
NATX S S **16 41 26.3 +1.4**
baz=89
NATX Nacogdoches 44.74 293 P P 16 34 46.8 -1.3
baz=89
NATX S S **16 41 26.2 +1.4**
baz=89
SPMN Marine on St. 44.84 312 P P 16 34 46.8 -2.0
SPMN IAmb IAmb 16 35 01.3
comp=Z,82nm,0.9s
SPMN Marine on St. 44.84 312 P P 16 34 48.2 -0.6
baz=104
SPMN S S **16 41 26.7 +0.8**
baz=104
I37A Lemond, Waseca 44.98 310 P P 16 34 48.7 -1.2
I37B Waseca 44.98 310 P P 16 34 49.5 -0.4
baz=102,SNR=13
I37B S S **16 41 30.7 +2.8**
baz=102
Z38A Mt. Pleasant 45.01 295 P P 16 34 49.0 -1.3
Z38A Mt. Pleasant 45.01 295 P P 16 34 49.8 -0.5
baz=90
Z38A S S **16 41 32.9 +4.2**
baz=90
BORG Borgarnes 45.02 14 P P 16 34 50.5 +0.6
comp=Z,37nm,1.0s,baz=218,slow=12,SNR=5.9
BORG LR LR 16 48 54.8
comp=Z,14µm,19.1s,baz=226,slow=30
comp=Z,37nm,1.0s
BORG Borgarnes 45.02 14 P P 16 34 49.6 -0.3
BORG IAmb IAmb 16 34 60.0
comp=Z,85nm,1.1s
BORG Borgarnes 45.02 14 P P 16 34 49.6 -0.3
BORG pmax pmax
comp=Z,85nm,1.1s
BORG MLR MLR
comp=Z,14µm,21.0s
MAHO Mahon 45.05 56 P P 16 34 48.0 -2.5
MAHO S S **16 41 28.9 -0.1**
MAHO Mahon 45.05 56 P P 16 34 49.8 -0.7
MAHO IAmb IAmb 16 34 58.6
comp=Z,139nm,1.4s
MAHO Mahon 45.05 56 ⇓S **S 16 41 36.6 +7.6**
ESK Eskdalemuir 45.11 33 P P 16 34 49.5 -1.2
ESK IAmb IAmb 16 34 59.8
comp=Z,129nm,1.3s
ESK Eskdalemuir 45.11 33 P P 16 34 49.5 -1.2
ESK pmax pmax
comp=Z,129nm,1.3s
ESK MLR MLR
comp=Z,12µm,20.0s
ESK Eskdalemuir 45.11 33 ⇑P **P 16 34 51.0 +0.3**
MAN01 Angra dos Reis 45.11 179 *e*P **P 16 34 53.3 +2.2**
EKA Eskdalemuir Ar 45.14 33 LR LR 16 49 38.9
comp=Z,12µm,19.2s,baz=240,slow=31
ESAR Angra dos Reis 45.26 179 *e*P **P 16 34 54.5 +2.3**
VAO Valinhos 45.27 182 *e*P **P 16 34 54.1 +1.6**
TOA0 Torodi Ar. Sit 45.35 94 P P 16 34 52.4 -0.8
TOA0 IAmb IAmb 16 34 56.4
comp=Z,88nm,0.9s
TOA0 Torodi Ar. Sit 45.35 94 P P 16 34 52.8 -0.4
SNR=14
TOA0 P P **16 34 52.8 -0.4**
SNR=14
TORD Torodi Ar. Bea 45.35 94 P P 16 34 52.6 -0.6
comp=Z,80nm,0.9s,baz=294,slow=6.7,SNR=55
TORD LR LR 16 51 35.1
comp=Z,51µm,20.7s,baz=286,slow=33
comp=Z,80nm,0.9s
TORD Torodi Ar. Bea 45.35 94 P P 16 34 52.1 -1.1
TORD IAmb IAmb 16 34 56.4
comp=Z,84nm,0.9s
X37A Clayton 45.36 297 P P 16 34 51.9 -1.1
X37A IAmb IAmb 16 35 16.8
comp=Z,74nm,1.1s
X37A Clayton 45.36 297 P P 16 34 53.6 +0.6
baz=92,SNR=15
X37A S S **16 41 33.8 +0.2**
baz=92
CLF Chambon-Foret 45.36 44 P P 16 34 52.1 -0.8
CLF Chambon-Foret 45.36 44 ⇓P **P 16 34 52.5 -0.3**
F36A Milaca 45.49 313 P P 16 34 52.1 -1.8
F36A Milaca 45.49 313 P P 16 34 53.5 -0.5
baz=104,SNR=15
F36A S S **16 41 31.6 -3.6**
baz=104
PARB Paraibuna 45.57 181 *e*P **P 16 34 56.9 +2.1**
TRCB Terra Rica 45.62 190 *e*P **P 16 34 57.1 +1.9**
CKHR Kef el Ahmar 45.69 61 P 16 34 57.1
237A Washetta, Mont 45.71 293 P P 16 34 57.5 +1.6
baz=89
237A S S **16 41 39.5 +0.7**
baz=89
TUL1 Leonard 45.75 299 P P 16 34 55.8 -0.3
baz=92
TUL1 S S **16 41 41.1 +1.8**
baz=92
TUL1 Leonard 45.75 299 P P 16 34 55.0 -1.1
baz=92
TUL1 S S **16 41 39.3 +0.1**
baz=92
FRTB Fartura 45.78 186 *e*P **P 16 34 57.3 +0.9**
HKT Hockley 45.81 290 P P 16 34 55.6 -1.0
HKT Hockley 45.81 290 IAMs_20 IAMs_20 16 54 33.5
comp=Z,34µm,20.0s
HKT Hockley 45.81 290 P P 16 34 55.6 -1.0
HKT pmax pmax
comp=Z,40nm,1.2s
HKT MLR MLR
comp=Z,34µm,20.0s
HKT Hockley 45.81 290 P P 16 34 57.6 +1.0
baz=87
HKT S S **16 41 43.1 +3.0**
baz=87
SSF Saint Saulge 45.91 46 *e*P **P 16 34 56.2 -1.0**
SSF pmax pmax
comp=Z,158nm,1.0s
DFRA Djebel Bou Aff 46.01 60 P 16 35 01.5
N35A Tabor 46.07 306 P P 16 34 57.1 -1.5
N35A IAmb IAmb 16 35 07.8
comp=Z,142nm,1.1s
N35A Tabor 46.07 306 P P 16 34 58.1 -0.5
baz=97
N35A S S **16 41 45.6 +1.8**
baz=97
SSB Saint Sauveur 46.18 48 P P 16 34 58.1 -1.3
SSB IAmb IAmb 16 35 11.9
comp=Z,89nm,1.3s
SSB Saint Sauveur 46.18 48 P P 16 34 58.2 -1.3
SSB pmax pmax
comp=Z,89nm,1.3s
SSB MLR MLR
comp=Z,13µm,19.0s
SSB Saint Sauveur 46.18 48 ⇑P **P 16 34 59.4 -0.1**
B35A Bob, Littlefor 46.27 316 P P 16 34 58.3 -1.8
B35A IAmb IAmb 16 35 21.3
comp=Z,111nm,1.4s
B35A Bob, Littlefor 46.27 316 P P 16 34 59.2 -0.9
baz=106,SNR=17
B35A S S **16 41 46.5 0.0**
baz=106
NNA Nana 46.30 225 LR LR 16 53 49.8
comp=Z,8µm,21.9s,baz=33,slow=35
NNA Nana 46.30 225 *i* P **P 16 35 01.5 +0.8**
NNA pmax pmax
comp=Z,205nm,1.9s
NNA MLR MLR
comp=Z,12µm,20.0s
T35A Sooner Cattle 46.38 300 P P 16 34 59.2 -1.9
T35B Sooner Cattle 46.38 300 P P 16 35 00.5 -0.6
baz=93
T35B S S **16 41 46.0 -2.3**
baz=93
CTEI Djebel Teioual 46.41 61 P 16 35 03.1
PB18 Visviri 46.45 213 P P 16 35 01.8 -0.5
TAM Tamanrasset 46.52 79 ⇓P P 16 34 55.2 -7.3
PET01 Itanhaem-SP 46.57 183 *e*P **P 16 35 04.6 +2.1**
RUSF Rustrel 46.58 50 ⇑P **P 16 35 05.5 +3.0**
KSU1 Kansas State U 46.62 303 P P 16 35 01.0 -1.9
KSU1 Kansas State U 46.62 303 P P 16 35 01.5 -1.4
baz=95,SNR=13
KSU1 S S **16 41 53.0 +1.4**
baz=95
KSU1 Kansas State U 46.62 303 P P 16 35 01.5 -1.4
baz=95,SNR=13
KSU1 S S **16 41 53.4 +1.8**
baz=95
KSU1 Kansas State U 46.62 303 ⇓P **P 16 35 01.6 -1.3**
CKFL Kef-Lekhel 46.68 61 P 16 35 05.7
ICESG Greenland Ices 46.71 3 *i* P **P 16 35 03.6 +0.1**
ICESG IAmb IAmb 16 35 05.5
comp=Z,82nm,0.8s
L34A Svendsen Farm, 46.77 307 P P 16 35 02.4 -1.7
L34A Svendsen Farm, 46.77 307 P P 16 35 03.9 -0.2
baz=98,SNR=8.0
L34A S S **16 41 55.2 +1.5**
baz=98
ILULI Ilulissat 46.85 357 P P 16 35 01.8 -2.5
ILULI Ilulissat 46.85 357 P P 16 35 01.8 -2.5
ILULI pmax pmax
comp=Z,45nm,1.0s
ILULI MLR MLR
comp=Z,11µm,20.0s
ILULI Ilulissat 46.85 357 *i* P **P 16 34 59.6 -4.6**
Z35A Perchaven, San 46.91 295 P P 16 35 03.9 -1.4
Z35A IAmb IAmb 16 35 15.1
comp=Z,88nm,1.0s
Z35A Perchaven, San 46.91 295 P P 16 35 06.3 +1.0
baz=89
Z35A S S **16 41 56.5 +0.5**
baz=89
CMIG Matias Romero 46.99 273 LR LR 16 53 09.0
comp=Z,19µm,20.9s,baz=72,slow=34
FNO Franklin 47.04 298 P 16 35 05.4 -0.9
PB16 IPOC Station P 47.09 212 P P 16 35 05.8 -1.6
WHTX Lake Whitney, 47.11 293 P P 16 35 06.3 -0.6
WHTX Lake Whitney, 47.11 293 P P 16 35 07.0 +0.1
baz=88
WHTX S S **16 41 59.5 +0.5**
baz=88
WHTX Lake Whitney, 47.11 293 P P 16 35 06.6 -0.3
baz=88
WHTX S S **16 42 01.9 +3.0**
baz=88
ECSD EROS Data Cent 47.21 309 P P 16 35 06.2 -1.3
ECSD EROS Data Cent 47.21 309 IAMs_20 IAMs_20 16 51 50.0
comp=Z,27µm,22.0s
ECSD EROS Data Cent 47.21 309 P P 16 35 06.5 -1.0
baz=99
ECSD S S **16 41 57.6 -2.4**
baz=99
ECSD EROS Data Cent 47.21 309 P P 16 35 06.0 -1.5
baz=99
ECSD S S **16 41 59.1 -0.9**
baz=99
CMAH Djebel Manchou 47.25 60 P 16 35 08.2
435B Jarrell 47.28 292 IAMs_20 IAMs_20 16 53 55.1
comp=Z,23µm,20.0s
435B Jarrell 47.28 292 P P 16 35 09.2 +1.0
baz=87
435B S S **16 42 02.2 +0.9**
baz=87
435B Jarrell 47.28 292 P P 16 35 07.8 -0.4
baz=87
435B S S **16 42 02.6 +1.3**
baz=87
ABSA Djebel Ababsia 47.29 61 P 16 35 08.5
SNF Seneffe 47.36 41 *d*P **P 16 35 07.7 -0.8**
comp=Z,42nm,0.8s
F33A 5 Mile Ranch, 47.37 312 P P 16 35 06.6 -2.1
F33A 5 Mile Ranch, 47.37 312 P P 16 35 08.2 -0.5
baz=102
F33A S S **16 41 55.0 -7.2**
baz=102
X34A Smith Ranch, M 47.39 297 P 16 35 08.2 -0.8
N33B J Bar K, Exete 47.42 305 S S **16 42 03.4 +0.3**
baz=96
PTGB Pitanga 47.43 189 *e*P **P 16 35 09.8 +0.4**
DOU Dourbes 47.43 42 *d*P **P 16 35 08.0 -1.1**
comp=Z,29nm,1.1s
BMRD Maredsous 47.60 42 *d*P **P 16 35 09.3 -1.0**
comp=Z,24nm,1.2s
735A Kenedy 47.61 289 P P 16 35 09.3 -1.5
735A Kenedy 47.61 289 P P 16 35 12.3 +1.5
baz=85
735A S S **16 42 08.3 +2.2**
baz=85
BNI Bardonecchia 47.62 49 P P 16 35 10.6 -0.2
BNI IAMs_20 IAMs_20 16 51 45.2
comp=Z,19µm,20.0s
BNI Bardonecchia 47.62 49 P P 16 35 10.6 -0.2
BNI pmax pmax
comp=Z,310nm,1.3s
BNI MLR MLR
comp=Z,19µm,20.0s
BNI Bardonecchia 47.62 49 ⇑P **P 16 35 11.3 +0.5**
AGMN Agassiz Nation 47.63 316 P P 16 35 09.2 -1.5
AGMN IAmb IAmb 16 35 21.8
comp=Z,61nm,0.9s
AGMN IAMs_20 IAMs_20 16 52 52.8
comp=Z,26µm,20.0s
AGMN Agassiz Nation 47.63 316 P P 16 35 09.8 -0.9
baz=104,SNR=21
AGMN S S **16 42 06.0 +0.2**
baz=104
AGMN Agassiz Nation 47.63 316 P P 16 35 09.0 -1.7
baz=104,SNR=21
AGMN S S **16 42 06.2 +0.3**
baz=104
PB12 IPOC Station P 47.74 213 P P 16 35 10.9 -1.0
LPL La Plagne 47.74 48 *e*P **P 16 35 11.8 -0.1**
LPL pmax pmax
comp=Z,81nm,1.0s
KVTX Kingsville 47.81 287 IAMs_20 IAMs_20 16 55 34.0
comp=Z,28µm,21.0s
RCHB Rochefort 47.84 42 *d*P **P 16 35 10.8 -1.5**
comp=Z,40nm,1.0s
BCLA Clavier 47.96 42 *d*P **P 16 35 12.4 -0.8**
comp=Z,38nm,1.2s
BGNE Belgrade 48.02 306 P P 16 35 13.2 -0.7
baz=96
BGNE S S **16 42 10.3 -1.3**
baz=96
GO01 Chusmiza 48.08 211 P P 16 35 13.9 -1.0
ULM Lac du Bonnet 48.15 318 P P 16 35 13.1 -1.5
comp=Z,62nm,1.1s,baz=95,slow=6.7,SNR=18
ULM LR LR 16 52 48.9

comp=Z,41µm,21.1s,baz=108,slow=33
comp=Z,62nm,1.1s
ULM Lac du Bonnet 48.15 318 P **P** **16 35 12.4 -2.3**
ULM IAmb IAmb 16 35 25.1
comp=Z,108nm,1.1s
ULM Lac du Bonnet 48.15 318 P **P** **16 35 12.4 -2.3**
ULM Lac du Bonnet 48.15 318 ⇓P **P** **16 35 12.9 -1.7**
WMOK Wichita Mounta 48.17 297 P **P** **16 35 13.9 -1.2**
WMOK Wichita Mounta 48.17 297 IAMs_20 IAMs_20 16 52 22.3
comp=Z,26µm,22.0s
WMOK Wichita Mounta 48.17 297 P **P** **16 35 13.9 -1.2**
WMOK pmax pmax
comp=Z,180nm,1.3s
WMOK MLR MLR
comp=Z,26µm,22.0s
WMOK Wichita Mounta 48.17 297 P **P** **16 35 14.4 -0.6**
baz=90,SNR=23
WMOK S **S** **16 42 14.5 +0.6**
baz=90
WMOK Wichita Mounta 48.17 297 P **P** **16 35 14.5 -0.6**
baz=90,SNR=23
WMOK S **S** **16 42 11.9 -2.0**
baz=90
WMOK Wichita Mounta 48.17 297 ⇓P **P** **16 35 14.5 -0.6**
BSTI Sart Tilman 48.17 41 *d*P **P** **16 35 14.5 -0.3**
comp=Z,12nm,1.2s
R32A Long Quarter, 48.21 302 P **P** **16 35 13.9 -1.5**
R32A Long Quarter, 48.21 302 P **P** **16 35 14.9 -0.4**
baz=93
R32A S **S** **16 42 13.3 -1.0**
baz=93
WLF Walferdange 48.28 43 P **P** **16 35 14.0 -1.7**
WLF IAmb IAmb 16 35 19.4
comp=Z,93nm,1.0s
WLF IAMs_20 IAMs_20 16 52 14.3
comp=Z,17µm,18.0s
WLF Walferdange 48.28 43 P **P** **16 35 14.0 -1.7**
WLF pmax pmax
comp=Z,93nm,1.0s
WLF MLR MLR
comp=Z,17µm,18.0s
WLF Walferdange 48.28 43 *d*P **P** **16 35 15.3 -0.4**
comp=Z,48nm,1.1s
WLF Walferdange 48.28 43 ⇓P **P** **16 35 14.8 -0.9**
SENIN Lac Senin/Sane 48.29 47 P **P** **16 35 15.0 -1.1**
SENIN IAmb IAmb 16 35 30.5
comp=Z,71nm,1.2s
BHOU Houvegnez 48.38 42 *d*P **P** **16 35 15.8 -0.6**
comp=Z,64nm,1.3s
PB11 IPOC Station P 48.38 212 P **P** **16 35 15.3 -1.6**
MEM Membach 48.45 42 *d*P **P** **16 35 16.4 -0.5**
comp=Z,59nm,1.0s
PB08 IPOC Station P 48.46 211 P **P** **16 35 16.6 -1.2**
BTNL Ternell 48.52 42 *d*P **P** **16 35 17.2 -0.3**
comp=Z,71nm,1.1s
ECH Echery 48.58 45 P **P** **16 35 16.7 -1.4**
ECH IAmb IAmb 16 35 21.4
comp=Z,60nm,1.1s
ECH Echery 48.58 45 P **P** **16 35 16.7 -1.4**
ECH pmax pmax
comp=Z,60nm,1.1s
ECH MLR MLR
comp=Z,11µm,19.0s
ECH Echery 48.58 45 ⇑P **P** **16 35 17.3 -0.8**
K31A O'Neill 48.60 308 P **P** **16 35 16.5 -1.8**
K31A IAmb IAmb 16 35 27.4
comp=Z,113nm,1.1s
K31A O'Neill 48.60 308 P **P** **16 35 18.3 0.0**
baz=97
K31A S **S** **16 42 18.8 -1.1**
baz=97
KEST Kesra 48.79 62 P **P** **16 35 19.5 -0.4**
comp=Z,179nm,1.1s,baz=197,slow=4.2,SNR=22
KEST LR LR 16 53 23.8
comp=Z,20µm,21.4s,baz=229,slow=33
comp=Z,179nm,1.1s
KEST Kesra 48.79 62 P **P** **16 35 18.4 -1.5**
KEST Kesra 48.79 62 P **P** **16 35 19.9 -0.1**
SNR=37
KEST P **P** **16 35 19.9 -0.1**
SNR=37
ABTX Abilene, Hawle 48.94 294 P **P** **16 35 19.5 -1.6**
ABTX Abilene, Hawle 48.94 294 P **P** **16 35 20.6 -0.5**
baz=87,SNR=13
ABTX S **S** **16 42 25.7 +0.8**
baz=87
ABTX Abilene, Hawle 48.94 294 P **P** **16 35 19.5 -1.6**
baz=87,SNR=13
ABTX S **S** **16 42 23.4 -1.4**
baz=87
VSL Villasalto 48.94 57 P **P** **16 35 19.6 -1.4**
VSL Villasalto 48.94 57 ⇓P **P** **16 35 20.4 -0.5**
SUSD Miller 48.98 310 P **P** **16 35 19.0 -2.2**
SUSD Miller 48.98 310 P **P** **16 35 20.7 -0.5**
baz=98
SUSD S **S** **16 42 24.8 -0.4**
baz=98
SUSD Miller 48.98 310 P **P** **16 35 20.2 -1.0**
baz=98
SUSD S **S** **16 42 22.3 -2.8**
baz=98
CBKS Cedar Bluff 49.03 302 P **P** **16 35 19.3 -2.4**
CBKS Cedar Bluff 49.03 302 P **P** **16 35 19.3 -2.4**
CBKS pmax pmax
comp=Z,151nm,1.2s
CBKS MLR MLR
comp=Z,47µm,20.0s
CBKS Cedar Bluff 49.03 302 P **P** **16 35 20.6 -1.1**
baz=93
CBKS S **S** **16 42 24.5 -1.5**
baz=93
CBKS Cedar Bluff 49.03 302 P **P** **16 35 20.1 -1.6**
baz=93
CBKS S **S** **16 42 24.4 -1.6**
baz=93
833A Chaparral WMA, 49.05 289 P **P** **16 35 19.9 -2.0**
833A Chaparral WMA, 49.05 289 P **P** **16 35 21.4 -0.6**
baz=84
833A S **S** **16 42 19.7 -6.7**
baz=84
833A Chaparral WMA, 49.05 289 P **P** **16 35 20.4 -1.5**
baz=84
833A S **S** **16 42 26.0 -0.5**
baz=84
JCT Junction City 49.20 291 P **P** **16 35 21.5 -1.6**
JCT IAmb IAmb 16 35 32.4
comp=Z,137nm,1.4s
JCT IAMs_20 IAMs_20 16 54 12.2
comp=Z,26µm,22.0s
JCT Junction City 49.20 291 P **P** **16 35 21.5 -1.6**
JCT pmax pmax
comp=Z,137nm,1.4s
JCT MLR MLR
comp=Z,26µm,22.0s
JCT Junction City 49.20 291 P **P** **16 35 22.6 -0.5**
baz=85,SNR=7.8
JCT S **S** **16 42 30.5 +1.9**
baz=85
JCT Junction City 49.20 291 P **P** **16 35 21.6 -1.6**
baz=85,SNR=7.8
JCT S **S** **16 42 30.4 +1.7**
baz=85
JCT Junction City 49.20 291 ⇓P **P** **16 35 22.1 -1.1**
BFO Black Forest 49.37 45 P **P** **16 35 22.4 -1.7**
BFO IAmb IAmb 16 35 27.6
comp=Z,117nm,1.1s
BFO Black Forest 49.37 45 P **P** **16 35 22.4 -1.7**
BFO pmax pmax
comp=Z,117nm,1.1s
BFO MLR MLR
comp=Z,10µm,20.0s
BFO Black Forest 49.37 45 ⇓P **P** **16 35 23.1 -1.1**
PB01 IPOC Station P 49.40 211 P **P** **16 35 23.1 -1.5**
PB01 IAmb IAmb 16 35 34.5
comp=Z,133nm,1.0s
MSSA Maissana 49.51 50 P **P** **16 35 23.8 -1.5**
MSSA IAmb IAmb 16 35 33.1
comp=Z,97nm,1.0s
BOB Bobbio (Coli) 49.52 50 ⇓P **P** **16 35 24.9 -0.4**
PATCX Punta Patache 49.52 211 P **P** **16 35 23.9 -1.6**
PATCX IAmb IAmb 16 35 35.6
comp=Z,145nm,1.1s
TUE Stuetta 49.70 47 P **P** **16 35 25.7 -1.2**
TUE IAmb IAmb 16 35 36.2
comp=Z,141nm,1.2s
TUE IAMs_20 IAMs_20 16 53 10.3
comp=Z,22µm,19.0s
TUE Stuetta 49.70 47 ⇓P **P** **16 35 26.6 -0.4**
PB02 IPOC Station P 49.83 211 P **P** **16 35 26.9 -1.0**
SCO Scoresbysund 49.89 10 P **P** **16 35 26.2 -1.5**
SCO Scoresbysund 49.89 10 P **P** **16 35 26.2 -1.5**
SCO pmax pmax
comp=Z,208nm,1.2s
SCO MLR MLR
comp=Z,4µm,18.0s
SCO Scoresbysund 49.89 10 *i*P **P** **16 35 26.6 -1.1**
SCO IAmb IAmb 16 35 32.0
comp=Z,41nm,0.9s
SCO *i*S **S** **16 42 42.1 +5.1**
SCO Scoresbysund 49.89 10 ⇓P **P** **16 35 27.0 -0.7**
ITAB Concordia 49.92 188 *e*P **P** **16 35 27.9 -0.5**
PB09 IPOC Station P 49.93 210 P **P** **16 35 28.7 -0.1**
IBBN Ibbenburen 49.96 40 ⇓P **P** **16 35 27.7 -0.8**
CPUP Villa Florida 49.98 194 P **P** **16 35 29.0 +0.2**
comp=Z,14nm,0.9s,baz=15,slow=8.5,SNR=17
CPUP LR LR 16 56 32.3
comp=Z,5µm,18.5s,baz=18,slow=36
comp=Z,14nm,0.9s
CPUP Villa Florida 49.98 194 P **P** **16 35 28.6 -0.2**
CPUP IAmb IAmb 16 35 39.1
comp=Z,140nm,1.4s
CPUP Villa Florida 49.98 194 P **P** **16 35 28.6 -0.2**
CPUP pmax pmax
comp=Z,140nm,1.4s
CPUP Villa Florida 49.98 194 *e*P **P** **16 35 29.1 +0.2**
CPUP Villa Florida 49.98 194 ⇑P **P** **16 35 29.0 +0.2**
MDND Maddock 49.98 314 P **P** **16 35 26.7 -2.1**
MDND Maddock 49.98 314 P **P** **16 35 27.4 -1.4**
baz=100
MDND S **S** **16 42 38.6 -0.4**
baz=100
MDND Maddock 49.98 314 P **P** **16 35 27.0 -1.8**
baz=100
MDND S **S** **16 42 41.3 +2.3**
baz=100
STU Stuttgart 50.02 45 P **P** **16 35 27.4 -1.6**
STU IAmb IAmb 16 35 32.2
comp=Z,97nm,0.9s
STU Stuttgart 50.02 45 P **P** **16 35 27.5 -1.6**
STU pmax pmax
comp=Z,97nm,0.9s
STU MLR MLR
comp=Z,8µm,20.0s
DAVOX Davos/Dischmat 50.12 47 LR LR 16 53 24.7
comp=Z,13µm,19.3s,baz=251,slow=32
FCC Fort Churchill 50.13 329 P **P** **16 35 28.1 -1.5**
FCC Fort Churchill 50.13 329 P **P** **16 35 28.1 -1.5**
FCC pmax pmax
comp=Z,221nm,1.1s
PRMA PARMA 50.13 50 P **P** **16 35 28.8 -1.1**
PB07 IPOC Station P 50.17 211 P **P** **16 35 29.6 -1.0**
PB07 IAmb IAmb 16 35 39.9
comp=Z,117nm,1.1s
DAVA Damuels 50.20 47 *e*P **P** **16 35 30.0 -0.6**
comp=Z,125nm,1.1s,SNR=54
DAVA S **S** **16 42 47.2 +4.8**
comp=Z,3µm,13.8s
DAVA Damuels 50.20 47 ⇓P **P** **16 35 30.0 -0.6**
SUMG Summit 50.23 3 P **P** **16 35 28.9 -1.9**
SUMG IAmb IAmb 16 35 34.3
comp=Z,127nm,1.1s
SUMG Summit 50.23 3 P **P** **16 35 28.9 -1.9**
SUMG pmax pmax
comp=Z,127nm,1.1s
SUMG MLR MLR
comp=Z,6µm,20.0s
SUMG Summit 50.23 3 *i*P **P** **16 35 30.5 -0.2**
SUMG IAmb IAmb 16 35 33.3
comp=Z,35nm,0.9s
SUMG *i*S **S** **16 42 45.1 +2.5**
SUMG Summit 50.23 3 ⇓P **P** **16 35 29.5 -1.2**
TLIG Tlapa 50.26 275 P **P** **16 35 29.6 -1.8**
TLIG IAmb IAmb 16 35 57.1
comp=Z,84nm,1.3s
CASP Castiglione de 50.31 52 P **P** **16 35 30.0 -1.3**
CASP IAmb IAmb 16 35 40.5
comp=Z,89nm,1.0s
SALO Salr 50.39 49 P **P** **16 35 30.3 -1.6**
SALO IAmb IAmb 16 35 49.4
comp=Z,86nm,1.1s
AF01 San Pedro de A 50.46 208 P **P** **16 35 32.9 -0.1**
LVC Limon Verde 50.49 209 LR LR 16 57 05.5
comp=Z,7µm,20.0s,baz=4.5,slow=36
LVC Limon Verde 50.49 209 P **P** **16 35 32.4 -0.8**
LVC Limon Verde 50.49 209 P **P** **16 35 32.4 -0.8**
LVC pmax pmax
comp=Z,326nm,1.4s
LVC MLR MLR
comp=Z,8µm,19.0s
LVC Limon Verde 50.49 209 ⇓P **P** **16 35 32.9 -0.3**
E28A Huff 50.51 312 S **S** **16 42 48.1 +1.7**
baz=98
ZCCA Zocca 50.55 50 P **P** **16 35 32.3 -0.9**
AMTX Amarillo 50.55 297 P **P** **16 35 31.9 -1.5**
AMTX IAMs_20 IAMs_20 16 54 10.4
comp=Z,21µm,21.0s
AMTX Amarillo 50.55 297 P **P** **16 35 33.6 +0.2**
baz=88,SNR=26
AMTX S **S** **16 42 45.2 -2.3**
baz=88
AMTX Amarillo 50.55 297 P **P** **16 35 32.4 -1.0**
baz=88
AMTX S **S** **16 42 48.5 +1.0**
baz=88
OSSC Osservatorio P 50.66 52 P **P** **16 35 32.6 -1.3**
OSSC IAmb IAmb 16 35 37.5
comp=Z,103nm,0.9s
FETA Feichten 50.73 47 *e*P **P** **16 35 34.1 -0.6**
comp=Z,130nm,1.1s,SNR=80
FETA S **S** **16 42 53.0 +3.3**
comp=Z,2µm,14.9s
PB04 IPOC Station P 50.81 210 P **P** **16 35 34.8 -0.7**
RETA Reutte 50.83 46 *e*P **P** **16 35 34.5 -0.7**
comp=Z,29nm,1.0s,SNR=20
RETA S **S** **16 42 54.4 +3.5**
comp=Z,3µm,14.6s
PB06 IPOC Station P 50.87 210 P **P** **16 35 35.3 -0.6**
TER01 Tubaro-SC 50.89 185 *e*P **P** **16 35 36.9 +1.2**
OGNE Ogallala 50.90 305 P **P** **16 35 34.0 -1.9**
OGNE Ogallala 50.90 305 P **P** **16 35 36.4 +0.4**
baz=93,SNR=13
OGNE S **S** **16 42 50.8 -1.4**
baz=93
OGNE Ogallala 50.90 305 P **P** **16 35 34.7 -1.2**
baz=93,SNR=13
OGNE S **S** **16 42 51.3 -0.9**
baz=93
KMY Karmoy 50.95 31 *e*P **P** **16 35 33.8 -2.0**
KMY *e*S **S** **16 42 53.8 +1.8**
KMY IVMs_BB IVMs_BB 16 52 41.5
comp=Z,6µm,17.5s
LATE Laterza 50.98 53 P **P** **16 35 35.4 -1.1**
MOTA Moosalm 51.03 47 *e*P **P** **16 35 36.0 -0.9**
comp=Z,122nm,1.4s,SNR=44
MOTA S **S** **16 42 56.5 +2.5**
comp=Z,3µm,14.8s
SQTA Sankt Quirin 51.08 47 *e*P **P** **16 35 36.5 -0.7**
comp=Z,232nm,1.5s,SNR=87
SQTA S **S** **16 42 56.1 +1.5**
comp=Z,3µm,14.7s
TEOL Teolo 51.15 49 P **P** **16 35 36.0 -1.7**
CTI Castel Tesino 51.22 48 P **P** **16 35 36.8 -1.5**
CTI Castel Tesino 51.22 48 P **P** **16 35 36.8 -1.5**
CTI pmax pmax
comp=Z,160nm,0.9s
MGAB Montegabbione 51.23 52 ⇓P **P** **16 35 37.4 -0.9**
PB15 IPOC Station P 51.26 209 P **P** **16 35 37.9 -0.9**
PB15 IAmb IAmb 16 35 47.3
comp=Z,127nm,1.1s
KSCO Kaye Shedlock' 51.29 303 P **P** **16 35 36.4 -2.5**
KSCO IAmb IAmb 16 35 50.2
comp=Z,156nm,1.2s
KSCO Kaye Shedlock' 51.29 303 P **P** **16 35 38.4 -0.5**
baz=91
KSCO S **S** **16 42 59.6 +1.9**
baz=91
KSCO Kaye Shedlock' 51.29 303 P **P** **16 35 37.2 -1.8**
baz=91
KSCO S **S** **16 42 57.2 -0.5**
baz=91
WATA Walderalm 51.35 47 *e*P **P** **16 35 38.2 -1.0**
comp=Z,88nm,0.8s,SNR=55
WATA S **S** **16 43 01.2 +3.0**
comp=Z,2µm,15.6s
WTTA Wattenberg 51.38 47 *e*P **P** **16 35 38.5 -1.0**
comp=Z,130nm,0.8s,SNR=58
WTTA S **S** **16 43 02.3 +3.5**
comp=Z,3µm,15.5s
ASK Askoy 51.45 29 *e*P **P** **16 35 38.5 -1.0**
ASK IVmBBB 16 35 52.7
comp=Z,5µm,2.8s
BER Bergen 51.47 29 *e*P **P** **16 35 38.6 -1.1**
BER IVmB_BB 16 36 00.1
comp=Z,2µm,4.5s
BER *e*S **S** **16 42 59.8 +0.7**
BER IVMs_BB IVMs_BB 16 52 43.2
comp=Z,6µm,23.4s
MSTX Muleshoe 51.49 296 P **P** **16 35 38.5 -2.0**
MSTX IAmb IAmb 16 35 49.9
comp=Z,150nm,1.1s
MSTX Muleshoe 51.49 296 P **P** **16 35 40.2 -0.3**
baz=87
MSTX S **S** **16 42 57.4 -3.1**
baz=87
MSTX Muleshoe 51.49 296 P **P** **16 35 38.8 -1.8**
baz=87
MSTX S **S** **16 43 00.4 -0.2**
baz=87
SUE Sulen 51.50 28 *e*P **P** **16 35 38.9 -1.0**
SUE *e*S **S** **16 43 01.8 +2.3**
SUE IVMs_BB IVMs_BB 16 52 10.0
comp=Z,6µm,13.6s
GRFO Grafenberg 51.50 44 P **P** **16 35 38.4 -1.8**
GRFO IAmb IAmb 16 35 49.5
comp=Z,173nm,1.4s
GRFO Grafenberg 51.50 44 P **P** **16 35 38.4 -1.8**
GRFO pmax pmax
comp=Z,173nm,1.4s
GRFO MLR MLR
comp=Z,11µm,19.0s
GRA1 Grafenberg Arr 51.50 44 P **P** **16 35 38.5 -1.7**
GRA1 IAmb IAmb 16 35 49.5
comp=Z,186nm,1.4s
GRF Grafenberg Arr 51.50 44 P **P** **16 35 38.5 -1.7**
GRF pmax pmax
comp=Z,186nm,1.4s
GRF MLR MLR
comp=Z,11µm,20.0s
MURB Monte Urbino 51.56 52 P **P** **16 35 39.2 -1.6**
SNART Snartemo 51.57 32 *e*P **P** **16 35 39.5 -1.0**
SNART *e*S **S** **16 43 01.7 +1.1**
SNART IVMs_BB IVMs_BB 16 54 33.4
comp=Z,20µm,17.4s
BLS5 Blasjo 51.60 31 *e*P **P** **16 35 39.5 -1.3**
BLS5 IVmB_BB 16 35 42.8
comp=Z,2µm,4.0s
BLS5 IVMs_BB IVMs_BB 16 53 19.7
comp=Z,8µm,15.8s
CNLB Canela 51.82 186 *e*P **P** **16 35 44.5 +1.7**
FOO Floro 51.85 28 *e*P **P** **16 35 41.5 -1.0**
FOO IVmB_BB 16 35 55.6
comp=Z,2µm,3.6s
FOO IVMs_BB IVMs_BB 16 51 46.7
comp=Z,6µm,24.0s
ODD1 Odda 51.87 30 *e*P **P** **16 35 41.5 -1.4**
ODD1 *e*S **S** **16 43 07.7 +2.8**
ODD1 IVMs_BB IVMs_BB 16 52 47.5
comp=Z,7µm,21.4s
CLTB Caltabellotta 51.90 59 ⇑P **P** **16 35 44.2 +0.7**
ABTA Abfaltersbach 51.90 48 *e*P **P** **16 35 42.1 -1.2**
comp=Z,101nm,1.0s,SNR=44
ABTA S **S** **16 43 10.1 +4.3**
comp=Z,2µm,22.0s
MUD Monsted U'grnd 51.95 35 *i*P **P** **16 35 43.5 +0.2**
MUD IAmb IAmb 16 35 46.3
comp=Z,26nm,0.7s
MUD *i*S **S** **16 43 09.0 +3.2**
MUD Monsted U'grnd 51.95 35 ⇑P **P** **16 35 43.1 -0.3**
NRCA Norcia 51.96 53 P **P** **16 35 41.7 -2.2**
NRCA IAmb IAmb 16 35 51.9
comp=Z,87nm,1.3s
STAL STALIGIAL 51.98 48 P **P** **16 35 41.7 -2.2**
STAL IAmb IAmb 16 35 47.5
comp=Z,100nm,1.2s
FLTG Flechtingen 52.04 40 ⇓P **P** **16 35 43.0 -1.1**
AQU L'Aquila 52.15 53 P **P** **16 35 44.3 -0.9**
AQU L'Aquila 52.15 53 P **P** **16 35 44.3 -0.9**
AQU pmax pmax
comp=Z,215nm,1.0s
AQU MLR MLR
comp=Z,10µm,20.0s
AQU L'Aquila 52.15 53 ⇓P **P** **16 35 44.8 -0.4**
GOET G??ttrup 52.15 34 *i*P **P** **16 35 46.5 +1.6**
GOET *i*S **S** **16 43 14.0 +5.4**
HYA Hoyanger 52.17 29 *e*P **P** **16 35 44.2 -0.8**
HYA *e*S **S** **16 43 13.9 +5.1**
HOMB Homborsund 52.19 33 *e*P **P** **16 35 45.9 +0.8**
HOMB *e*S **S** **16 43 11.7 +2.6**
HOMB IVMs_BB IVMs_BB 16 55 02.5
comp=Z,6µm,17.0s
NKC Novy Kostel 52.38 43 *e*P **P** **16 35 45.9 -0.8**
NKC *e*S **S** **16 43 09.8 -2.3**
NKC MLR MLR
comp=Z,12µm,20.8s
NKC Novy Kostel 52.38 43 *e*P **P** **16 35 45.9 -0.8**
NKC *e*S **S** **16 43 09.8 -2.3**
NKC AMS AMS 16 53 10.0
comp=Z,12µm,20.8s
PTCC Patocco-Chiusa 52.44 48 ⇓P **P** **16 35 45.8 -1.6**
KBA Koelnbreinsper 52.51 47 *e*P **P** **16 35 46.5 -1.5**
comp=Z,78nm,0.7s,SNR=71
KBA S **S** **16 43 15.3 +1.0**
comp=Z,2µm,19.3s
KBA Koelnbreinsper 52.51 47 ⇑P **P** **16 35 46.5 -1.5**
ROBS Robic 52.53 48 *e*P **P** **16 35 46.5 -1.4**
RSSD Black Hills 52.58 309 P **P** **16 35 45.6 -3.0**
RSSD Black Hills 52.58 309 IAMs_20 IAMs_20 16 55 41.1
comp=Z,28µm,20.0s
RSSD Black Hills 52.58 309 P **P** **16 35 45.6 -3.0**
RSSD pmax pmax
comp=Z,59nm,1.3s
RSSD MLR MLR
comp=Z,28µm,20.0s
RSSD Black Hills 52.58 309 P **P** **16 35 48.7 0.0**
baz=94,SNR=9.1
RSSD S **S** **16 43 18.1 +2.7**
baz=94
RSSD Black Hills 52.58 309 P **P** **16 35 45.2 -3.4**
baz=94
RSSD S **S** **16 43 14.6 -0.8**
baz=94
RSSD Black Hills 52.58 309 ⇑P **P** **16 35 48.6 0.0**
TRI Trieste 52.65 49 P **P** **16 35 47.1 -1.7**
TRI IAmb IAmb 16 35 52.2
comp=Z,170nm,1.4s
TRI Trieste 52.65 49 P **P** **16 35 47.1 -1.7**
TRI pmax pmax
comp=Z,170nm,1.4s
TX31 Lajitas Ar. Si 52.66 290 P **P** **16 35 47.9 -1.3**
TX31 IAmb IAmb 16 35 58.0
comp=Z,109nm,1.1s
TX31 Lajitas Ar. Si 52.66 290 P **P** **16 35 48.8 -0.4**
baz=83,SNR=14
TX31 S **S** **16 43 17.0 +0.3**
baz=83
TX32 Lajitas Array 52.66 290 P **P** **16 35 46.8 -2.5**
TXAR Lajitas Array 52.66 290 P **P** **16 35 48.6 -0.6**
comp=Z,6.4nm,0.8s,baz=98,slow=7.7,SNR=25
TXAR LR LR 16 57 16.6
comp=Z,17µm,21.2s,baz=78,slow=35
comp=Z,6.4nm,0.8s
TXAR Lajitas Array 52.66 290 P **P** **16 35 47.6 -1.6**
TXAR Lajitas Array 52.66 290 P **P** **16 35 47.6 -1.6**
MYKA Terra Mystica 52.66 48 *e*P **P** **16 35 47.5 -1.5**
comp=Z,142nm,1.0s,SNR=75
MYKA S **S** **16 43 16.6 +0.5**
comp=Z,2µm,15.3s
CADS Cadrg 52.69 48 *e*P **P** **16 35 47.7 -1.4**
CADS *e*S **S** **16 43 19.2 +2.8**
T25A Trinidad 52.70 300 P **P** **16 35 47.8 -1.8**
baz=88,SNR=12
T25A S **S** **16 43 16.0 -1.4**
baz=88
BIOA Bad Ischl, Aus 52.78 46 *e*P **P** **16 35 48.3 -1.5**
comp=Z,120nm,1.0s,SNR=48
BIOA S **S** **16 43 18.0 +0.3**
comp=Z,2µm,15.2s
SKDS Skadanscina 52.81 49 *e*P **P** **16 35 48.8 -1.3**

RAFF Raffo Rosso 52.82 60 P P 16 35 47.8 -2.4
VAE Valguarnera 52.85 59 LR LR 16 54 29.7
comp=Z,11µm,21.1s,baz=338,slow=32
PB14 IPOC Station P 52.91 209 P P 16 35 50.2 -1.0
CLL Collm 52.91 42 P P 16 35 49.0 -1.6
CLL IAmb IAmb 16 35 54.2
comp=Z,93nm,1.1s
CLL IAMs_20 IAMs_20 16 55 04.6
comp=Z,14µm,19.0s
CLL Collm 52.91 42 *i* P P 16 35 49.8 -0.8
CLL *e*S S 16 43 21.0 +1.7
CLL pmax pmax
comp=Z,105nm,1.1s
CLL MLR MLR
comp=Z,14µm,19.1s
CLL Collm 52.91 42 *i* P P 16 35 49.8 -0.8
comp=Z,105nm,1.1s
CLL *e*Pmax 16 35 52.0
CLL *e*Plp 16 36 00.0
comp=E,900nm,11.6s
CLL *e*Plp 16 36 00.0
comp=Z,2µm,12.0s
CLL *e*PP PP 16 37 48.0 -2.1
CLL *e*S S 16 43 21.0 +1.7
comp=N,3µm,14.6s
CLL *e*S S 16 43 21.0 +1.7
comp=E,4µm,14.1s
CLL *e*S S 16 43 21.0 +1.7
comp=Z,4µm,11.1s
CLL Lm MLR 16 53 00.0
comp=Z,14µm,19.1s
CLL Lmax 16 54 00.0
JMIC Jan Mayen 52.92 14 LR LR 16 53 11.4
comp=Z,8µm,18.9s,baz=220,slow=30
JMIC Jan Mayen 52.92 14 *e*P P 16 35 50.2 -0.2
JMIC *e*S S 16 43 21.6 +2.8
JMIC IVMs_BB IVMs_BB 16 51 46.6
comp=Z,4µm,23.3s
KHC Kasperske Hory 52.93 45 *e*P P 16 35 49.8 -1.1
KHC *e* 16 35 58.0
KHC *e*S S 16 43 18.9 -0.8
KHC MLR MLR
comp=Z,9µm,18.3s
KHC Kasperske Hory 52.93 45 *e*P P 16 35 49.8 -1.1
KHC *ex* x 16 35 58.0
KHC *e*S S 16 43 18.9 -0.8
KHC AMS AMS 16 57 40.0
comp=Z,9µm,18.3s
KHC Kasperske Hory 52.93 45 ⇑P P 16 35 49.0 -1.9
AKN Aaknes 52.94 28 *e*P P 16 35 50.2 -0.5
AKN IVmB_BB 16 35 58.8
comp=Z,1µm,1.3s
AKN IVMs_BB IVMs_BB 16 52 16.8
comp=Z,5µm,27.0s
SKAR Skarslia 52.94 30 *e*P P 16 35 50.3 -0.4
SKAR IVmB_BB 16 36 07.6
comp=Z,1µm,3.7s
SKAR *e*S S 16 43 21.5 +2.0
SKAR IVMs_BB IVMs_BB 16 53 29.7
comp=Z,7µm,18.6s
GEC2 GERESS Array S 52.97 45 P P 16 35 49.0 -2.2
GEC2 IAmb IAmb 16 35 55.3
comp=Z,126nm,1.3s
GERES GERESS Array B 52.97 45 P P 16 35 50.0 -1.2
comp=Z,56nm,1.2s,baz=248,slow=7.1,SNR=31
GERES LR LR 16 56 02.1
comp=Z,7µm,18.7s,baz=252,slow=34
comp=Z,56nm,1.2s
GERES GERESS Array B 52.97 45 P P 16 35 49.1 -2.1
GERES GERESS Array B 52.97 45 P P 16 35 49.2 -2.1
GO02 Mina Guanaco 53.01 208 P P 16 35 51.1 -0.8
ITQB Itaqui 53.05 193 P P 16 35 51.5 -0.2
ITQB Itaqui 53.05 193 *e*P P 16 35 52.2 +0.4
CEY Cerknica 53.12 49 *e*P P 16 35 51.2 -1.1
DGMT Dagmar 53.12 314 P P 16 35 50.7 -1.6
DGMT IAmb IAmb 16 36 01.4
comp=Z,131nm,1.1s
DGMT Dagmar 53.12 314 IAMs_20 IAMs_20 16 55 03.0
comp=Z,22µm,22.0s
DGMT Dagmar 53.12 314 P P 16 35 52.4 +0.2
baz=97
DGMT S S 16 43 21.8 -0.5
baz=97
DGMT Dagmar 53.12 314 P P 16 35 51.4 -0.8
baz=97
DGMT S S 16 43 22.5 +0.2
baz=97
KONO Kongsberg 53.18 31 P P 16 35 50.8 -1.7
KONO IAmb IAmb 16 36 01.1
comp=Z,76nm,1.0s
KONO Kongsberg 53.18 31 IAMs_20 IAMs_20 16 54 44.8
comp=Z,17µm,19.0s
KONO Kongsberg 53.18 31 *ce*P P 16 35 51.1 -1.4
KONO pmax pmax
comp=Z,93nm,1.3s
KONO Kongsberg 53.18 31 *e*P P 16 35 51.7 -0.7
KONO IVmBBB 16 35 58.2
comp=Z,1µm,4.2s
KONO IVmB_BB 16 36 06.1
comp=Z,1µm,4.5s
KONO *e*S S 16 43 27.1 +4.4
KONO IVMs_BB IVMs_BB 16 54 35.2
comp=Z,6µm,17.9s
KONO Kongsberg 53.18 31 ⇑P P 16 35 51.8 -0.7
LJU Ljubljana 53.22 49 *e*P P 16 35 51.8 -1.2
LJU Ljubljana 53.22 49 *e*P P 16 35 52.1 -0.9
LJU *e*S S 16 43 27.4 +3.7
CPSB Cacapava Do Su 53.22 189 *e*P P 16 35 52.8 -0.2
MOA Molln 53.22 46 *e*P P 16 35 51.5 -1.6
comp=Z,69nm,1.3s,SNR=28
MOA S S 16 43 26.9 +3.2
comp=Z,2µm,15.1s
Q24A Divide 53.25 303 P P 16 35 53.3 -0.5
baz=89,SNR=19
Q24A S S 16 43 28.1 +3.1
baz=89
OBKA Obir 53.27 48 *e*P P 16 35 52.4 -1.1
comp=Z,100nm,0.7s,SNR=76
OBKA S S 16 43 26.9 +2.3
comp=Z,2µm,15.4s
LLD Lille Linde 53.29 37 *i* P P 16 35 52.5 -0.9
LLD IAmb IAmb 16 35 53.7
comp=Z,32nm,0.6s
LLD *i* S S 16 43 28.0 +3.7
MOL Molde 53.33 27 *e*P P 16 35 51.7 -1.8
MOL *e*S S 16 43 27.3 +2.7
CKRC Cesky Krumlov 53.37 45 *e*P P 16 35 52.6 -1.5
CKRC *e*S S 16 43 24.6 -1.0
BRG Berggiesshubel 53.42 43 *e*P P 16 35 53.7 -0.8
BRG Amp 16 35 55.8
comp=Z,21nm,1.2s
BRG *ex* x 16 35 57.4
BRG Amp 16 35 58.2
comp=Z,89nm,1.2s
BRG *ex* x 16 36 11.1
BRG Amp 16 36 12.4
comp=Z,187nm,2.0s
BRG *i* x x 16 36 22.6
BRG Amp 16 36 23.6
comp=Z,54nm,1.2s
BRG *ex* x 16 37 06.5
BRG Amp 16 37 13.8
comp=Z,100nm,2.0s
BRG Berggiesshubel 53.42 43 S S 16 43 34.0 +7.7
BRG Amp 16 54 12.0
comp=N,3.3nm,14.2s
BRG Amp 16 54 24.0
comp=E,11nm,20.6s
BRG Amp 16 54 29.0
comp=Z,14nm,17.9s
BRG *ex* x 16 55 31.9
BRG Amp 16 55 33.0
comp=Z,3.3nm,0.8s
BRG Berggiesshubel 53.42 43 *e*P P 16 35 53.6 -0.8
BRG *e* 16 35 57.4
BRG *e* 16 37 06.4
BRG S S 16 43 34.0 +7.7
BRG pmax pmax
comp=Z,21nm,1.2s
BRG smax smax
comp=N,3µm,14.2s
BRG MLR MLR
comp=E,11µm,20.6s
BRG MLR MLR
comp=Z,14µm,17.9s
BRG pmax pmax
comp=Z,3.0nm,0.8s
COP Copenhagen 53.50 36 *i* P P 16 35 53.5 -1.4
COP IAmb IAmb 16 35 58.2
comp=Z,108nm,0.8s
COP *i* S S 16 43 31.0 +3.9
DBG Daneborg 53.52 8 *i* P P 16 35 54.5 -0.3
DBG IAmb IAmb 16 36 04.4
comp=Z,7.3nm,0.9s
DBG *i* S S 16 43 34.9 +8.1
DBG Daneborg 53.52 8 ⇑P P 16 35 54.0 -0.7
SDCO Great Sand Dun 53.55 301 P P 16 35 54.0 -2.0
SDCO Great Sand Dun 53.55 301 P P 16 35 55.9 -0.1
baz=88,SNR=24
SDCO Great Sand Dun 53.55 301 P P 16 35 55.8 -0.1
baz=88,SNR=24
SDCO S S 16 43 33.8 +4.7
baz=88
RUE Ruedersdorf 53.60 41 ⇓P P 16 35 54.8 -0.8
ISCO Idaho Springs 53.61 304 P P 16 35 54.8 -1.5
ISCO Idaho Springs 53.61 304 P P 16 35 54.8 -1.5
ISCO pmax pmax
comp=Z,76nm,1.5s
ISCO MLR MLR
comp=Z,58µm,20.0s
ISCO Idaho Springs 53.61 304 P P 16 35 56.9 +0.5
baz=90,SNR=25
ISCO Idaho Springs 53.61 304 P P 16 35 56.1 -0.3
baz=90,SNR=25
ISCO S S 16 43 33.4 +3.6
baz=90
SOKA Soboth 53.62 48 *e*P P 16 35 54.2 -1.9
comp=Z,12nm,0.7s,SNR=24
SOKA S S 16 43 33.1 +3.8
comp=Z,2µm,15.2s
PRU Pruhonice 53.67 44 *e*P P 16 35 54.2 -2.0
PRU *e*S S 16 43 27.5 -2.2
PRU MLR MLR
comp=Z,9µm,16.5s
PRU Pruhonice 53.67 44 *e*P P 16 35 54.2 -2.0
PRU *e*S S 16 43 27.5 -2.2
PRU AMS AMS 16 56 40.0
comp=Z,9µm,16.5s
RGN Rugen 53.74 38 IAMs_20 IAMs_20 16 54 48.1
comp=Z,23µm,21.0s
PVCC Panska Ves 53.77 43 *e*P P 16 35 57.6 +0.7
PVCC *e*S S 16 43 32.3 +1.4
PVCC MLR MLR
comp=Z,13µm,18.4s
PVCC Panska Ves 53.77 43 *e*P P 16 35 57.6 +0.7
PVCC *e*S S 16 43 32.3 +1.4
PVCC AMS AMS 16 54 20.0
comp=Z,13µm,18.4s
DOMB Dombas 53.78 28 *e*P P 16 35 56.5 -0.4
DOMB *e*S S 16 43 31.6 +0.7
DOMB IVmBBB 16 53 12.7
comp=Z,5µm,29.5s
CRES Cresnjev 53.84 49 *e*P P 16 35 56.2 -1.4
MNTX Cornudas Mount 53.86 294 P P 16 35 55.9 -2.1
MNTX IAMs_20 IAMs_20 16 57 47.3
comp=Z,32µm,20.0s
MNTX Cornudas Mount 53.86 294 P P 16 35 57.0 -1.0
baz=84,SNR=22
MNTX Cornudas Mount 53.86 294 P P 16 35 55.5 -2.5
baz=84,SNR=22
MNTX S S 16 43 36.4 +3.6
baz=84
N23A Red Feather La 53.86 305 P P 16 35 56.9 -1.3
N23A IAmb IAmb 16 36 09.4
comp=Z,112nm,1.4s
N23A Red Feather La 53.86 305 P P 16 35 57.5 -0.7
baz=90,SNR=6.0
N23A S S 16 43 36.5 +3.4
baz=90
CUC Castrocucco 53.91 56 P P 16 35 57.2 -1.0
CUC IAmb IAmb 16 36 03.4
comp=Z,103nm,1.1s
GCIS Gornji Cirnik 53.97 49 *e*P P 16 35 57.4 -1.0
GCIS *e*S S 16 43 36.2 +2.4
NAO01 NORSAR Array S 54.18 30 P P 16 35 58.3 -1.5
TREC Trest 54.19 45 *e*P P 16 36 00.4 +0.3
TREC *e*S S 16 43 34.7 -2.1
TREC MLR MLR
comp=Z,7µm,18.9s
TREC Trest 54.19 45 *e*P P 16 36 00.4 +0.3
TREC *e*S S 16 43 34.7 -2.1
TREC AMS AMS 16 55 10.0
comp=Z,7µm,18.9s
NBO00 NORSAR Array S 54.20 30 P P 16 35 58.6 -1.3
NBO00 NORSAR Array S 54.20 30 *e*P P 16 35 59.4 -0.5
NBO00 IVmB_BB 16 36 02.5
comp=Z,2µm,2.7s
NC204 NORSAR Array S 54.27 30 P P 16 35 59.2 -1.3
AC02 Maricunga 54.29 207 P P 16 36 01.3 -0.3
CONA Conrad Observa 54.30 46 *e*P P 16 35 59.6 -1.4
comp=Z,102nm,1.5s,SNR=63
CONA S S 16 43 40.9 +2.5
comp=Z,3µm,14.9s
LAO LASA Array 54.30 312 IAMs_20 IAMs_20 16 56 10.5
comp=Z,31µm,22.0s
LAO LASA Array 54.30 312 P P 16 36 01.6 +0.5
baz=94
LAO LASA Array 54.30 312 P P 16 36 00.1 -1.0
baz=94
LAO S S 16 43 42.1 +3.6
baz=94
AC01 Pan de Azucar 54.31 208 P P 16 36 01.5 +0.4
AC01 IAmb IAmb 16 36 10.8
comp=Z,85nm,1.1s
K22A Casper 54.32 307 P P 16 35 58.5 -2.8
K22A IAmb IAmb 16 36 11.7
comp=Z,85nm,1.4s
K22A Casper 54.32 307 P P 16 36 01.9 +0.5
baz=91
K22A Casper 54.32 307 P P 16 36 00.3 -1.1
baz=91
K22A S S 16 43 41.1 +2.1
baz=91
NB2 NORSAR Subarra 54.40 30 P P 16 36 00.6 -0.8
baz=251,slow=7.4
NB2 NORSAR Subarra 54.40 30 P P 16 36 00.6 -0.8
comp=Z,159nm,1.1s,baz=251,slow=7.4
NOA NORSAR Array B 54.40 30 P P 16 36 00.7 -0.8
comp=Z,46nm,0.9s,baz=250,slow=7.5,SNR=31
NOA LR LR 16 54 57.4
comp=Z,18µm,20.7s,baz=250,slow=31
comp=Z,46nm,0.9s
NB201 NORSAR Array S 54.44 30 P P 16 36 00.6 -1.1
NC602 NORSAR Array S 54.45 30 P P 16 36 00.5 -1.2
NC602 NORSAR Array S 54.45 30 *e*P P 16 35 59.3 -2.5
NC602 *e*S S 16 43 43.3 +3.4
NC602 IVMs_BB IVMs_BB 16 54 55.9
comp=Z,7µm,21.6s
ANMO Albuquerque 54.47 298 LR LR 16 57 10.4
comp=Z,15µm,22.0s,baz=97,slow=34
ANMO Albuquerque 54.47 298 P P 16 36 01.8 -0.8
ANMO IAmb IAmb 16 36 13.2
comp=Z,72nm,1.2s
ANMO Albuquerque 54.47 298 IAMs_20 IAMs_20 16 56 48.0
comp=Z,16µm,22.0s
ANMO Albuquerque 54.47 298 P P 16 36 01.8 -0.8
ANMO pmax pmax
comp=Z,72nm,1.3s
ANMO MLR MLR
comp=Z,16µm,22.0s
ANMO Albuquerque 54.47 298 P P 16 36 03.1 +0.5
baz=86,SNR=17
ANMO Albuquerque 54.47 298 P P 16 36 02.7 +0.2
baz=86
ANMO S S 16 43 43.4 +2.1
baz=86
ANMO Albuquerque 54.47 298 ⇓P P 16 36 03.0 +0.5
NC303 NORSAR Array S 54.53 30 P P 16 36 01.2 -1.1
NC303 IAmb IAmb 16 36 07.0
comp=Z,129nm,1.1s
RONA Rosalia, Austr 54.57 47 *e*P P 16 36 01.5 -1.4
comp=Z,139nm,1.2s,SNR=74
RONA S S 16 43 44.0 +2.1
comp=Z,3µm,14.6s
PLTB Pedras Altas 54.58 189 P P 16 36 02.8 -0.2
PLTB Pedras Altas 54.58 189 *e*P P 16 36 04.5 +1.5
S22A 4UR Ranch, Cre 54.61 301 P P 16 36 03.3 -0.3
S22A 4UR Ranch, Cre 54.61 301 P P 16 36 03.5 -0.2
baz=87,SNR=38
S22A S S 16 43 49.6 +6.3
baz=87
NC405 NORSAR Array S 54.65 30 P P 16 36 02.1 -1.2
TIP Timpagrande 54.65 57 ⇑P P 16 36 02.2 -1.5
TIP Timpagrande 54.65 57 P P 16 36 02.0 -1.7
TIP IAMs_20 IAMs_20 16 58 38.2
comp=Z,15µm,19.0s
TIP Timpagrande 54.65 57 ⇑P P 16 36 02.8 -0.9
SMCO Snowmass 54.67 303 P P 16 36 02.9 -1.3
SMCO IAmb IAmb 16 36 15.4
comp=Z,109nm,1.4s
SMCO IAMs_20 IAMs_20 16 56 48.9
comp=Z,26µm,21.0s
SMCO Snowmass 54.67 303 ⇑P P 16 36 04.8 +0.5
BNM Barren Site 54.67 297 P P 16 36 02.8 -1.3
UPC Upice 54.68 43 *e*P P 16 36 02.7 -0.9
UPC *e*S S 16 43 39.9 -3.3
UPC MLR MLR
comp=Z,9µm,17.5s
UPC Upice 54.68 43 *e*P P 16 36 02.7 -0.9
UPC *e*S S 16 43 39.9 -3.3
UPC AMS AMS 16 55 00.0
comp=Z,9µm,17.5s
CHVC Chvalec 54.71 43 *e*P P 16 36 03.0 -0.9
CHVC *e*S S 16 43 43.0 -0.8
CHVC AMS AMS 16 54 50.0
comp=Z,9µm,17.3s
TBLU Trondheim 54.74 27 *e*P P 16 36 05.6 +1.8
TBLU *e*S S 16 43 50.4 +6.7
SOP Sopron 54.74 47 P P 16 36 02.8 -1.3
BSD Bornholm Skovb 54.75 38 *i* P P 16 36 01.4 -2.6
BSD IAmb IAmb 16 36 10.9
comp=Z,24nm,0.8s
BSD *i* S S 16 43 45.9 +1.9
KRUC Moravsky 54.76 45 *e*P P 16 36 02.5 -1.7
KRUC *e*S S 16 43 46.8 +2.4
CRNM Carthage 54.78 296 P P 16 36 03.0 -1.8
BEHE Becsehely 54.80 48 *e*P P 16 36 04.4 -0.1
BEHE Becsehely 54.80 48 P P 16 36 04.4 -0.1
EPT El Pao 54.80 294 IAMs_20 IAMs_20 16 58 07.3
comp=Z,29µm,20.0s
OSTC Ostas 54.81 43 *e*P P 16 36 03.6 -1.0
OSTC *e*S S 16 43 45.0 -0.1
OSTC AMS AMS 16 55 00.0
comp=Z,9µm,17.0s
RWWY Rawlins 54.82 306 P P 16 36 02.8 -2.3
DPC Dobruska-Polom 54.85 43 *e*P P 16 36 04.1 -0.8
DPC *e*S S 16 43 40.8 -4.9
DPC MLR MLR
comp=Z,6µm,21.1s
DPC Dobruska-Polom 54.85 43 *e*P P 16 36 04.1 -0.8
DPC *e*S S 16 43 40.8 -4.9
DPC AMS AMS 16 53 40.0
comp=Z,6µm,21.1s
KSP Ksiaz 54.90 43 *e*P P 16 36 04.0 -1.1
KSP *e*S S 16 43 47.9 +1.7
KSP *e*L L 16 55 17.0
comp=Z,15µm,19.8s
VRAC Vranov 54.91 45 ⇑P P 16 36 04.7 -0.7
VRAC Vranov 54.91 45 LR LR 16 56 18.6
comp=Z,4µm,19.3s,baz=250,slow=33
VRAC Vranov 54.91 45 ⇑P P 16 36 04.7 -0.7
VRAC Vranov 54.91 45 *e*P P 16 36 04.0 -1.3
VRAC *e*S S 16 43 49.2 +2.7
MGRS Mrkonjic Grad 54.92 51 *e*P P 16 36 05.1 -0.4
Y22D IRIS PASSCAL I 54.92 297 IAMs_20 IAMs_20 16 57 09.1
comp=Z,24µm,21.0s
Y22D IRIS PASSCAL I 54.92 297 P P 16 36 05.3 -0.5
baz=85
Y22D S S 16 43 53.5 +6.2
baz=85
Y22A Socorro 54.97 296 P P 16 36 06.3 +0.1
baz=85
BLY Banja Luka 55.00 50 *e*P P 16 36 04.7 -1.3
BLY Banja Luka 55.00 50 ⇓P P 16 36 05.0 -1.0
KRLC Kraliky 55.12 44 *e*P P 16 36 05.7 -1.1
KRLC *e*S S 16 43 46.4 -2.8
KRLC MLR MLR
comp=Z,6µm,15.8s
KRLC Kraliky 55.12 44 *e*P P 16 36 05.7 -1.1
KRLC *e*S S 16 43 46.4 -2.8
KRLC AMS AMS 16 58 00.0
comp=Z,6µm,15.8s
ZST Bratislava 55.15 46 *e*P P 16 36 06.4 -0.6
ZST pmax pmax
comp=Z,278nm,1.2s
ZST Bratislava 55.15 46 *e*P P 16 36 06.4 -0.6
EGYH Egyhazaskeszo 55.25 47 P P 16 36 09.2 +1.4
MODS Modra-Piesok 55.28 46 *e*P P 16 36 07.4 -0.6
MODS pmax pmax
comp=Z,269nm,1.4s
MODS Modra-Piesok 55.28 46 *e*P P 16 36 07.4 -0.6
HFS Hagfors 55.30 31 LR LR 16 56 11.7
comp=Z,14µm,18.4s,baz=253,slow=32
STON Ston 55.33 53 *e*P P 16 36 08.1 -0.3
TULEG Thule 55.36 353 P P 16 36 06.9 -1.2
MPLH Magyarpolny 55.37 47 P P 16 36 07.6 -1.1
GO03 Copiap 55.42 207 P P 16 36 07.4 -1.8
GO03 IAmb IAmb 16 36 18.9
comp=Z,106nm,1.1s
GO03 Copiap 55.42 207 ⇑P P 16 36 08.9 -0.3
MORC Moravsky Berou 55.58 44 ⇑P P 16 36 11.1 +0.9
MORC Moravsky Berou 55.58 44 P P 16 36 08.6 -1.5
MORC IAmb IAmb 16 36 28.3
comp=Z,91nm,1.4s
MORC Moravsky Berou 55.58 44 P P 16 36 08.6 -1.5
MORC pmax pmax
comp=Z,91nm,1.4s
MORC Moravsky Berou 55.58 44 *e*P P 16 36 08.8 -1.3
MORC *e*S S 16 43 58.7 +3.3
MORC Moravsky Berou 55.58 44 ⇓P P 16 36 08.9 -1.2
JAVC Velka Javorina 55.58 45 *e*P P 16 36 08.6 -1.6
JAVC *e*S S 16 43 59.1 +3.6
TIH Tihany 55.60 48 P P 16 36 09.7 -0.6
O20A White River Ci 55.62 304 P P 16 36 09.8 -1.0
O20A IAmb IAmb 16 36 22.7
comp=Z,162nm,1.4s
O20A White River Ci 55.62 304 P P 16 36 10.0 -0.8
baz=88,SNR=12
O20A S S 16 44 00.2 +3.6
baz=88
EKNA AfricaArray - 55.64 101 *e*P P 16 36 13.5 +2.4
KOVH Kovagotottos 55.70 49 P P 16 36 09.8 -1.2
MAUC Maruska 55.72 45 *e*P P 16 36 11.2 0.0
MAUC *e*S S 16 44 00.8 +3.4
MAUC AMS AMS 16 59 00.0
comp=Z,12µm,16.6s
GKP Gorka Klasztor 55.79 40 *e*P P 16 36 10.8 -0.8
GKP *e*S S 16 44 05.7 +7.7
GKP *e*L L 16 54 49.2
comp=Z,13µm,23.9s
121A Cookes Peak, D 55.80 295 P P 16 36 10.6 -1.6
121A IAmb IAmb 16 36 23.0
comp=Z,95nm,1.2s
121A Cookes Peak, D 55.80 295 P P 16 36 12.9 +0.7
baz=83,SNR=43
121A Cookes Peak, D 55.80 295 P P 16 36 12.2 0.0
baz=83,SNR=43
121A S S 16 44 04.7 +5.5
baz=83
DAG Danmarks Havn 55.87 7 *i* P P 16 36 10.0 -1.7
DAG IAmb IAmb 16 36 21.5
comp=Z,12nm,0.7s
DAG Danmarks Havn 55.87 7 ⇓P P 16 36 10.2 -1.5
CSKK Cskako 55.87 47 P P 16 36 11.4 -0.8
PV15 Paradox Valley 55.88 302 P P 16 36 11.2 -1.6
PV15 IAmb IAmb 16 36 23.1
comp=Z,76nm,1.2s
NSS Namsos 55.90 26 *e*P P 16 36 11.0 -1.1
NSS IVmB_BB 16 36 19.8
comp=Z,810nm,5.1s
NSS *e*S S 16 44 00.8 +1.7
NSS IVMs_BB IVMs_BB 16 53 43.7
comp=Z,3µm,29.3s
HCY Herceg Novi 55.92 53 ⇑*i* P P 16 36 13.1 +0.4
SRO Srobarova 55.93 47 *e*P P 16 36 12.1 -0.6
SRO pmax pmax
comp=Z,100nm,1.2s
SRO Srobarova 55.93 47 *e*P P 16 36 12.1 -0.6
BRY Bratogost 55.95 53 *e*P P 16 36 12.0 -1.1
BRY Bratogost 55.95 53 *e*P P 16 36 15.0 +1.9
MVCO Mesa Verde 55.96 301 P P 16 36 12.1 -1.3
MVCO IAmb IAmb 16 36 24.0
comp=Z,136nm,1.4s
MVCO IAMs_20 IAMs_20 16 59 09.3
comp=Z,24µm,19.0s

MVCO Mesa Verde 55.96 301 P P 16 36 12.7 -0.7
baz=86,SNR=16
MVCO S S 16 44 06.2 +4.9
baz=86
OKC Ostrava-Krasne 55.97 44 *e*S S 16 44 01.7 +1.1
OKC AMS AMS 16 58 40.0
comp=Z,5µm,16.9s
SRO2 Moca 55.98 47 *e*P P 16 36 12.4 -0.6
SRO2 pmax pmax
comp=Z,76nm,1.1s
SRO2 Moca 55.98 47 *e*P P 16 36 12.4 -0.6
MORH Mrgy, Hungar 56.08 49 ⇓P P 16 36 12.8 -0.9
MORH Mrgy, Hungar 56.08 49 *e*P P 16 36 12.5 -1.3
MORH Mrgy, Hungar 56.08 49 P P 16 36 12.3 -1.5
PV13 Radium Mtn., P 56.16 302 P P 16 36 13.4 -1.4
PV13 IAmb IAmb 16 36 25.0
comp=Z,61nm,1.2s
BUM Brajici-Budva 56.22 53⇑ *i*P P 16 36 17.8 +2.9
UPM Unac-Piva 56.22 52 *e*P P 16 36 14.4 -0.6
UPM Unac-Piva 56.22 52 *e*P P 16 36 14.4 -0.6
CEME Cevo 56.23 53⇑ *i*P P 16 36 14.3 -0.7
NKME Niksic 56.26 53 *e*P P 16 36 14.5 -0.6
NKY Niksic 56.28 53 *e*P P 16 36 14.7 -0.7
PV23 Carpenter Ridg 56.29 302 P P 16 36 13.4 -2.3
PV10 Paradox Valley 56.32 302 P P 16 36 13.8 -2.1
VYHS Vyhne 56.32 46 *e*P P 16 36 14.3 -1.2
VYHS pmax pmax
comp=Z,29nm,1.0s
VYHS Vyhne 56.32 46 *e*P P 16 36 14.3 -1.2
RLMT Red Lodge 56.35 310 P P 16 36 14.6 -1.4
RLMT IAmb IAmb 16 36 27.7
comp=Z,104nm,1.2s
RLMT IAMs_20 IAMs_20 16 57 58.7
comp=Z,19µm,21.0s
RLMT Red Lodge 56.35 310 P P 16 36 14.6 -1.4
baz=91,SNR=30
RLMT S S 16 44 10.6 +4.3
baz=91
BUD Budapest 56.40 47 P P 16 36 17.1 +1.2
PDG Podgorica 56.48 53 ⇓P P 16 36 16.0 -0.6
PDG Podgorica 56.48 53 P P 16 36 15.8 -0.9
PDG IAmb IAmb 16 36 20.8
comp=Z,98nm,1.0s
PDG Podgorica 56.48 53 *e*P P 16 36 16.9 +0.2
PDG Podgorica 56.48 53 ⇓P P 16 36 16.6 0.0
TTG Podgorica 56.48 53⇑ *i*P P 16 36 16.6 0.0
RUDO Rudo 56.56 52 *e*P P 16 36 16.2 -1.0
PD31 Pinedale Array 56.56 307 P P 16 36 15.1 -2.5
PD31 IAmb IAmb 16 36 29.2
comp=Z,59nm,1.1s
PD31 Pinedale Array 56.56 307 ⇓P P 16 36 16.4 -1.2
PDAR Pinedale Array 56.56 307 P P 16 36 16.6 -0.9
comp=Z,22nm,1.1s,baz=91,slow=7.4,SNR=28
PDAR LR LR 16 58 42.5
comp=Z,17µm,20.1s,baz=95,slow=34
comp=Z,22nm,1.1s
PDAR Pinedale Array 56.56 307 P P 16 36 15.4 -2.2
BW06 Boulder Array 56.56 307 P P 16 36 14.9 -2.7
BW06 IAmb IAmb 16 36 29.2
comp=Z,66nm,1.1s
BW06 IAMs_20 IAMs_20 16 58 31.5
comp=Z,19µm,19.0s
BW06 Boulder Array 56.56 307 P P 16 36 16.0 -1.6
baz=89,SNR=43
BW06 S S 16 44 10.1 +1.1
baz=89
BBLS Lazići 56.58 51 *e*P P 16 36 16.6 -0.9
RDMU Red Mountain 56.62 305 P P 16 36 16.2 -1.8
RDMU IAmb IAmb 16 36 29.2
comp=Z,94nm,1.2s
GCMT Greycliff 56.65 311 P P 16 36 16.0 -2.0
KOME Kolasin 56.67 53⇑ *i*P P 16 36 16.8 -1.3
TEKS Tekeris 56.67 51 *e*P P 16 36 16.1 -1.9
LANS Liptovska Anna 56.78 45 *e*P P 16 36 20.2 +1.4
LANS pmax pmax
comp=Z,16nm,1.2s
LANS Liptovska Anna 56.78 45 *e*P P 16 36 20.2 +1.4
EGMT Eagleton 56.78 314 P P 16 36 16.8 -2.1
EGMT IAMs_20 IAMs_20 16 59 50.9
comp=Z,20µm,19.0s
EGMT Eagleton 56.78 314 P P 16 36 17.7 -1.1
baz=92,SNR=34
EGMT S S 16 44 10.8 -0.8
baz=92
LCO Las Campanas 56.85 207 P P 16 36 19.4 -0.3
LCO Las Campanas 56.85 207 P P 16 36 19.4 -0.3
LCO pmax pmax
comp=Z,50nm,1.1s
LCO MLR MLR
comp=Z,5µm,20.0s
FRGS Fruska Gora 56.88 50 ⇓P P 16 36 20.6 +1.1
FRGS Fruska Gora 56.88 50 *e*P P 16 36 18.4 -1.1
IVA Berane 56.95 53 *e*P P 16 36 19.7 -0.4
KEK Kerkira 56.98 56 P P 16 36 21.5 +1.2
KEK Kerkira 56.98 56 P P 16 36 19.8 -0.6
KEK IAmb IAmb 16 36 25.6
comp=Z,120nm,1.1s
KEK Kerkira 56.98 56 ⇓P P 16 36 21.9 +1.6
SJES Sjenica 57.00 52 *e*P P 16 36 19.7 -0.8
PVY Plav 57.00 53 *e*P P 16 36 21.0 +0.5
PSZ Piszkesteto 57.00 47⇑P P 16 36 21.4 +1.0
PSZ Piszkesteto 57.00 47 P P 16 36 19.2 -1.2
PSZ Piszkesteto 57.00 47 P P 16 36 19.2 -1.2
PSZ pmax pmax
comp=Z,37nm,1.1s
PSZ MLR MLR
comp=Z,10µm,18.0s
PSZ Piszkesteto 57.00 47 P P 16 36 19.9 -0.5
PSZ Piszkesteto 57.00 47 ⇓P P 16 36 18.0 -2.4
DIVS Divibare 57.00 51 P P 16 36 19.2 -1.3
DIVS IAmb IAmb 16 36 29.4
comp=Z,61nm,1.2s
DIVS Divibare 57.00 51 *e*P P 16 36 19.5 -1.0
DIVS Divibare 57.00 51 ⇓P P 16 36 19.6 -0.8
KONS Konsvik 57.04 24 *e*P P 16 36 20.2 0.0
KONS IVmB_BB 16 36 22.7
comp=Z,2µm,2.9s
OJC Ojcow 57.06 44 *e*P P 16 36 19.9 -0.8
OJC *e*S S 16 44 18.8 +3.8
OJC Ojcow 57.06 44 P P 16 36 19.4 -1.2
OJC IAmb IAmb 16 36 24.5
comp=Z,98nm,1.4s
OJC Ojcow 57.06 44 P P 16 36 19.5 -1.2
OJC pmax pmax
comp=Z,98nm,1.4s
OJC Ojcow 57.06 44 ⇓P P 16 36 19.9 -0.8
W18A Petrified Fore 57.13 298 P P 16 36 20.2 -1.5
W18A IAmb IAmb 16 36 31.9
comp=Z,141nm,1.2s
W18A Petrified Fore 57.13 298 P P 16 36 20.4 -1.3
baz=84,SNR=14
W18A S S 16 44 22.9 +6.1
baz=84
P18A Preston Nutter 57.18 304 P P 16 36 20.8 -1.4
P18A IAmb IAmb 16 36 32.0
comp=Z,115nm,1.2s
LOHW Long Hollow 57.31 308 P P 16 36 21.5 -1.4
LOHW IAmb IAmb 16 36 33.8
comp=Z,69nm,1.2s
NIE Niedzica 57.34 45 *e*P P 16 36 22.8 +0.1
NIE *e*S S 16 44 24.4 +5.6
FLWY Flagg Ranch 57.37 309 P P 16 36 22.3 -1.0
FLWY IAmb IAmb 16 36 43.2
comp=Z,153nm,1.4s
FLWY IAMs_20 IAMs_20 16 58 04.0
comp=Z,24µm,22.0s
IGT Igoumenitsa 57.41 57 P P 16 36 23.6 +0.3
MOOW Moose Ponds 57.41 308 P P 16 36 22.3 -1.3
KECS Kecovo 57.42 46 *e*P P 16 36 24.1 +0.9
KECS pmax pmax
comp=Z,43nm,1.4s
KECS Kecovo 57.42 46 *e*P P 16 36 24.1 +0.9
SNOW Snow King Moun 57.42 308 P P 16 36 21.7 -1.9
SNOW IAmb IAmb 16 36 34.2
comp=Z,125nm,1.4s
SRU San Rafael Swe 57.43 303 P P 16 36 22.3 -1.4
SRU IAmb IAmb 16 36 33.6
comp=Z,110nm,1.1s
SRU San Rafael Swe 57.43 303 P P 16 36 22.3 -1.4
SRU pmax pmax
comp=Z,110nm,1.1s
MOR8 Moi Rana 57.44 25 *e*P P 16 36 24.5 +1.4
MOR8 IVmB_BB 16 36 26.0
comp=Z,1µm,2.8s
MOR8 *e*S S 16 44 22.4 +3.0
CO01 Juntas del Tor 57.45 206 P P 16 36 23.9 0.0
CO01 IAmb IAmb 16 36 34.6
comp=Z,73nm,1.1s
REDW Red Top Meadow 57.50 308 P P 16 36 22.4 -1.7
REDW IAmb IAmb 16 36 35.3
comp=Z,104nm,1.4s
TPAW Teton Pass 57.56 308 P P 16 36 23.4 -1.3
TPAW IAmb IAmb 16 36 36.4
comp=Z,78nm,1.2s
P17A Butcher Ranch, 57.58 303 P P 16 36 23.7 -1.0
LSK Leskovik 57.58 56 P P 16 36 25.9 +1.3
OHR Ohrid 57.68 55 *i*P P 16 36 29.7 +4.4
AHID Auburn Hatcher 57.69 307 P P 16 36 23.6 -1.9
AHID IAmb IAmb 16 36 36.2
comp=Z,104nm,1.3s
AHID IAMs_20 IAMs_20 17 00 13.6
comp=Z,21µm,19.0s
KBN Korca 57.69 55 P P 16 36 27.1 +1.7
KBN Korca 57.69 55 P P 16 36 24.6 -0.8
KBN IAmb IAmb 16 36 33.9
comp=Z,130nm,1.3s
KBN Korca 57.69 55 P P 16 36 24.6 -0.8
KBN pmax pmax
comp=Z,130nm,1.3s
KLNR Kaliningrad 57.70 39 *i*P P 16 36 24.1 -1.0
KLNR pmax pmax
comp=Z,207nm,1.0s
KLNR MLR MLR
comp=Z,3µm,16.0s
NYDR Nydri-Lefkada 57.74 58 P P 16 36 22.0 -3.7
LOF Lofoten 57.78 22 *e*P P 16 36 22.5 -2.9
LOF IVMs_BB IVMs_BB 16 55 26.7
comp=Z,2µm,10.3s
BEL Belsk 57.80 42 *e*P P 16 36 25.2 -0.6
BEL *e*S S 16 44 32.9 +8.3
BEL *e*L L 16 57 46.5
comp=Z,12µm,20.0s
ECR Eagle Creek 57.88 308 P P 16 36 25.3 -1.6
GO04 Tololo Observa 57.91 206 P P 16 36 26.0 -1.1
GO04 IAmb IAmb 16 36 36.8
comp=Z,85nm,1.2s
TMUT Trail Mountain 57.95 303 P P 16 36 26.4 -1.1
BOZ Bozeman (W) 58.02 311 P P 16 36 26.6 -1.2
BOZ IAMs_20 IAMs_20 16 59 41.0
comp=Z,17µm,21.0s
BOZ Bozeman (W) 58.02 311 P P 16 36 26.6 -1.2
BOZ pmax pmax
comp=Z,51nm,1.3s
BOZ MLR MLR
comp=Z,17µm,21.0s
BOZ Bozeman (W) 58.02 311 P P 16 36 26.5 -1.2
baz=90,SNR=32
BOZ S S 16 44 31.9 +3.8
baz=90
JLU Jordanelle 58.05 305 P P 16 36 26.9 -1.3
JLU IAmb IAmb 16 36 38.6
comp=Z,158nm,1.5s
CRVS Cervenica-Dubn 58.08 46 *e*P P 16 36 28.3 +0.4
CRVS pmax pmax
comp=Z,187nm,1.1s
CRVS Cervenica-Dubn 58.08 46 *e*P P 16 36 28.3 +0.4
HWUT Hardware Ranch 58.08 306 P P 16 36 26.9 -1.4
HWUT IAmb IAmb 16 36 39.5
comp=Z,66nm,1.1s
SKO Skopje 58.12 54 *i*P P 16 36 31.6 +3.3
FNA Florina 58.13 55 P P 16 36 26.4 -2.1
FNA Florina 58.13 55 P P 16 36 26.4 -2.1
FNA pmax pmax
comp=Z,40nm,1.0s
FAUS Fauske 58.15 23 *e*P P 16 36 28.7 +0.7
BZS Buzias 58.15 49 ⇓P P 16 36 28.5 +0.1
BZS Buzias 58.15 49 ⇓P P 16 36 28.5 +0.1
HRY Holter Researc 58.16 312 P P 16 36 26.2 -2.4
SIRR Siria 58.18 49 ⇓P P 16 36 28.4 -0.2
MDVR Moldovita 58.23 50⇑P P 16 36 28.4 -0.7
CTU Camp Tracy 58.27 305 P P 16 36 27.1 -2.5
CTU IAmb IAmb 16 36 39.7
comp=Z,97nm,1.4s
RES Resolute Bay 58.30 346 P P 16 36 28.4 -0.6
comp=Z,14nm,1.0s,baz=119,slow=4.3,SNR=16
RES LR LR 17 00 19.5
comp=Z,20µm,18.6s,baz=125,slow=35
comp=Z,14nm,1.0s
RES Resolute Bay 58.30 346 P P 16 36 27.5 -1.4
RES IAmb IAmb 16 36 38.6
comp=Z,116nm,1.4s
RES Resolute Bay 58.30 346 P P 16 36 27.5 -1.4
RES pmax pmax
comp=Z,116nm,1.5s
RES Resolute Bay 58.30 346⇑P P 16 36 27.8 -1.1
ZON Zonda 58.30 204 P P 16 36 29.6 0.0
ZON IAmb IAmb 16 36 44.3
comp=Z,102nm,1.5s
ZON Zonda 58.30 204 P P 16 36 29.6 0.0
ZON pmax pmax
comp=Z,102nm,1.5s
STEI Steigen 58.31 23 *e*P P 16 36 28.6 -0.5
STEI IVmB_BB 16 36 31.5
comp=Z,1µm,2.1s
TUC Tucson 58.34 295 P P 16 36 29.6 -0.5
TUC IAmb IAmb 16 36 40.6
comp=Z,128nm,1.4s
TUC Tucson 58.34 295 IAMs_20 IAMs_20 16 59 59.8
comp=Z,30µm,20.0s
TUC Tucson 58.34 295 P P 16 36 29.6 -0.5
TUC Tucson 58.34 295 P P 16 36 29.9 -0.2
baz=82
TUC S S 16 44 41.1 +8.5
baz=82
TUC Tucson 58.34 295 ⇓P P 16 36 30.1 0.0
LPA La Plata 58.39 192 *e*P P 16 36 28.9 -1.1
LPA sP **sP** 16 36 34.1 -0.6
LPA PCP **PcP** 16 37 21.8 +1.0
LPA PP **PP** 16 38 37.4 -2.2
LPA pPP 16 38 50.1
LPA PPP PPP 16 40 18.7
LPA PKIKP **PKiKP** 16 43 45.2 +0.8
LPA S **S** 16 44 38.3 +5.9
LPA PS **PnS** 16 44 43.6 -0.9
LPA PPS PPS 16 44 53.0
LPA SCS **ScS** 16 46 21.8 +2.4
LPA SKIKP 16 47 10.8
LPA PKIKS 16 47 15.3
LPA SS **SS** 16 48 29.1 +3.9
LPA SKIKS 16 50 51.1
LPA SSS SSS 16 51 32.6
PVO Paravola 58.40 58 P P 16 36 30.6 +0.3
RLS Riolos of Patr 58.40 58 P P 16 36 29.4 -0.9
WUAZ Wupatki 58.42 299 P P 16 36 28.5 -2.2
WUAZ IAMs_20 IAMs_20 16 59 05.6
comp=Z,23µm,21.0s
WUAZ Wupatki 58.42 299 P P 16 36 30.7 0.0
baz=83,SNR=25
WUAZ S S 16 44 42.1 +8.4
baz=83
WUAZ Wupatki 58.42 299 ⇓P P 16 36 31.4 +0.7
CO03 El Pedregal 58.45 206 P P 16 36 31.2 +0.5
CO03 IAmb IAmb 16 36 40.4
comp=Z,66nm,1.2s
NLU North Lily Min 58.57 304 P P 16 36 29.3 -2.4
NLU IAmb IAmb 16 36 41.6
comp=Z,122nm,1.4s
LRM Limekiln Ridge 58.59 311 P P 16 36 30.6 -1.2
X16A Lo Mia Camp, P 58.61 297 P P 16 36 31.6 -0.4
X16A IAmb IAmb 16 36 43.1
comp=Z,130nm,1.4s
KOLS Kolonicke sedl 58.62 45 *e*P P 16 36 31.4 -0.2
KOLS pmax pmax
comp=Z,36nm,0.7s
KOLS Kolonicke sedl 58.62 45 *e*P P 16 36 31.4 -0.2
UZH Uzhgorod 58.62 46⇓ *e*P P 16 36 28.0 -3.6
UZH *e* 16 36 33.8
UZH *e* 16 37 14.6
UZH *e* 16 38 38.7
UZH *e*PPP PPP 16 39 58.7
UZH *e*S S 16 44 25.4 -10
UZH *e*PS **PnS** **16 44 45.2 -2.2**
UZH *e*SS **SS** **16 48 26.4 -1.6**
UZH *e*SSS SSS 16 50 48.0
UZH MLR MLR
comp=N,850nm,15.5s
UZH MLR MLR
comp=E,1µm,15.5s
UZH MLR MLR
comp=Z,380nm,15.5s
CO06 Fray Jorge 58.70 207 P P 16 36 33.3 +1.0
CO06 IAmb IAmb 16 36 42.6
comp=Z,115nm,1.2s
HERR Herculane 58.73 50⇑P P 16 36 31.6 -0.8
MSU Marysvale 58.76 302 P P 16 36 32.3 -0.8
MSU Marysvale 58.76 302 P P 16 36 32.3 -0.8
LAKA Lakka 58.78 58 P P 16 36 31.9 -1.1
DJES Djerdap 58.81 50⇓P P 16 36 34.2 +1.2
MTPU Mount Pierson 58.81 302 P P 16 36 32.6 -1.1
MTPU IAmb IAmb 16 36 45.7
comp=Z,63nm,1.2s
PBUR Paburge 58.83 37 *e*P P 16 36 32.1 -0.8
ITM Ithomi 58.85 59 P P 16 36 31.6 -1.9
ITM Ithomi 58.85 59 P P 16 36 32.8 -0.7
ITM Ithomi 58.85 59 ⇓P P 16 36 33.4 0.0
GRG Griva 58.90 55 P P 16 36 33.0 -0.8
MCMT McKenzie Canyo 58.90 310 P P 16 36 32.4 -1.6
CO02 Combarbal 58.90 206 P P 16 36 33.4 -0.4
CO02 IAmb IAmb 16 36 43.6
comp=Z,48nm,1.1s
DRGR 58.90 48⇑P P 16 36 34.7 +1.0
DRGR 58.90 48⇑P P 16 36 34.7 +1.0
KLV Kalavryta, Ach 58.94 58 P P 16 36 33.5 -0.6
TCRU Three Creeks R 58.97 302 P P 16 36 33.2 -1.4
TCRU IAmb IAmb 16 36 46.5
comp=Z,75nm,1.2s
HVU Hansel Valley 58.98 306 P P 16 36 32.5 -2.0
HVU IAmb IAmb 16 36 43.5
comp=Z,64nm,1.3s
HVU Hansel Valley 58.98 306 P P 16 36 32.5 -2.0
HVU pmax pmax
comp=Z,64nm,1.3s
HSIG 59.00 291 P P 16 36 33.2 -1.4
HSIG IAmb IAmb 16 36 45.9
comp=Z,58nm,1.3s
VAY Valandovo 59.00 54 *i*P P 16 36 37.0 +2.6
LIT Litokhoron 59.03 56 P P 16 36 33.4 -1.3
LIT Litokhoron 59.03 56 P P 16 36 33.7 -0.9
LIT IAmb IAmb 16 36 38.2
comp=Z,57nm,1.0s
LIT Litokhoron 59.03 56 P P 16 36 33.7 -0.9
LIT pmax pmax
comp=Z,57nm,1.0s
LIT Litokhoron 59.03 56 ⇓P P 16 36 33.8 -0.9
DEV Deva 59.05 49 ⇓P P 16 36 36.3 +1.6
DEV Deva 59.05 49 ⇓P P 16 36 36.3 +1.6
MESR Meseseni 59.06 48⇑P P 16 36 36.4 +1.7
GUR Goura 59.10 58 P P 16 36 33.8 -1.5
PUNG Punghina 59.12 51 ⇓P P 16 36 37.3 +2.2
DUG Dugway, Tooele 59.12 304 P P 16 36 34.6 -0.9
DUG IAmb IAmb 16 36 45.3
comp=Z,131nm,1.4s
DUG Dugway, Tooele 59.12 304 P P 16 36 34.6 -0.9
DUG pmax pmax
comp=Z,131nm,1.4s
DUG MLR MLR
comp=Z,53µm,21.0s
DUG Dugway, Tooele 59.12 304 P P 16 36 34.4 -1.0
baz=86,SNR=36
DUG S S 16 44 46.7 +4.1
baz=86
SLBS Sierra La Lagu 59.18 285 P P 16 36 35.1 -1.0
SLBS IAmb IAmb 16 36 46.6
comp=Z,100nm,1.3s
SLBS Sierra La Lagu 59.18 285 ⇓P P 16 36 37.2 +1.1
SLIT Slitere, Latvi 59.19 35 *e*P P 16 36 33.4 -2.1
SLIT Slitere, Latvi 59.19 35 ⇓P P 16 36 33.2 -2.2
BGU Big Grassy Mou 59.23 305 P P 16 36 34.7 -1.5
KNT Kendrikon 59.26 55 P P 16 36 35.0 -1.2
SRE Strehaia 59.30 50⇑P P 16 36 38.5 +2.1
SRE Strehaia 59.30 50⇑P P 16 36 38.5 +2.1
BCYI Bear Canyon 59.31 309 P P 16 36 35.1 -1.7
KKB Krupnik 59.35 54 *e*P P 16 36 37.1 +0.2
RAF Rauma 59.38 31 *e*P P 16 36 36.2 -0.4
SUW Suwalki 59.39 40 *e*P P 16 36 35.0 -1.8
SUW *e*S S 16 44 46.8 +1.6
SUW *e*L L 16 56 38.1
comp=Z,12µm,25.6s
SUW Suwalki 59.39 40 P P 16 36 34.8 -2.1
SUW IAmb IAmb 16 36 40.6
comp=Z,104nm,1.1s
SUW Suwalki 59.39 40 P P 16 36 34.8 -2.1
SUW pmax pmax
comp=Z,104nm,1.1s
SUW MLR MLR
comp=Z,10µm,22.0s
SUW Suwalki 59.39 40 *e*P P 16 36 36.1 -0.7
LPIG La Paz 59.41 285 LR LR 17 01 31.2
comp=Z,8µm,21.7s,baz=80,slow=35
VTS Vitosha 59.41 53 *e*P P 16 36 37.3 -0.2
CJR Cluj-Napoca 59.51 48⇑P P 16 36 40.6 +2.7
CJR Cluj-Napoca 59.51 48⇑P P 16 36 40.6 +2.7
LKR Lokris 59.55 57 P P 16 36 37.0 -1.2
ATAL Atalanti 59.56 57 P P 16 36 36.1 -2.2
SZCU Shurtz Canyon 59.57 301 P P 16 36 37.2 -1.5
WALA Waterton Lakes 59.57 315 P P 16 36 36.3 -2.1
WALA IAmb IAmb 16 36 49.0
comp=Z,57nm,1.1s
WALA Waterton Lakes 59.57 315⇑P P 16 36 38.5 +0.1
MSO Missoula 59.61 312 P P 16 36 37.0 -1.7
MSO IAmb IAmb 16 37 05.3
comp=Z,60nm,1.4s
MSO Missoula 59.61 312 P P 16 36 36.5 -2.2
baz=89
MSO S S 16 44 51.7 +3.1
baz=89
XOR Xorichti 59.63 57 P P 16 36 36.2 -2.6
LOT Lotru 59.67 50⇑P P 16 36 40.9 +1.8
VLI Veliai 59.70 60 P P 16 36 37.9 -1.4
LCMT Little Creek M 59.76 301 P P 16 36 37.4 -2.5
LVV L'vov 59.78 44 *e*P P 16 36 37.9 -1.7
LVV *e*S S 16 44 45.0 -5.4
LVV *e*SS **SS** **16 48 50.1 +4.0**
LVV MLR MLR
comp=Z,5µm,18.0s
SRS Serrai 59.78 55 P P 16 36 40.4 +0.5
CCUT Cedar City 59.79 301 P P 16 36 38.8 -1.5
KRND KRANIDI 59.80 59 P P 16 36 38.5 -1.5
JTMT Jette 59.83 313 P P 16 36 38.3 -1.9
JTMT IAmb IAmb 16 36 50.4
comp=Z,66nm,1.4s
VILL Villia 59.84 58 P P 16 36 39.4 -0.9
MMB Musomiste 59.85 54 *e*P P 16 36 40.8 +0.5
PABE Paberze 59.93 38 P P 16 36 38.7 -1.9
PABE IAmb IAmb 16 36 43.8
comp=Z,93nm,1.0s
PABE IAMs_20 IAMs_20 16 58 18.0
comp=Z,13µm,21.0s
PABE Paberze 59.93 38 *e*P P 16 36 39.5 -1.1
PAIG Paliouri 59.95 56 P P 16 36 39.4 -1.6
ARCR ARCALIA 60.02 48⇑P P 16 36 42.7 +1.4
MDB Medias 60.07 49⇑P P 16 36 43.7 +2.0
MDB Medias 60.07 49⇑P P 16 36 43.7 +2.0
PSUT Pine Spring 60.07 302 P P 16 36 40.9 -1.2
PSUT IAmb IAmb 16 36 54.2
comp=Z,62nm,1.0s
HLID Hailey 60.08 308 P P 16 36 40.3 -1.8
HLID Hailey 60.08 308 P P 16 36 41.3 -0.7
baz=86,SNR=20
HLID S S 16 44 58.5 +3.6
baz=86
214A Organ Pipe Nat 60.09 295 P P 16 36 41.3 -0.8
baz=81,SNR=26
214A S S 16 45 01.4 +6.2
baz=81
ANKY Antikythira Is 60.10 61 P P 16 36 36.0 -6.1
VA03 San Esteban 60.10 205 P P 16 36 41.7 -0.3
VA03 IAmb IAmb 16 36 52.6
comp=Z,103nm,1.1s
TRO Tromso 60.11 21 *e*P P 16 36 40.6 -0.9
TRO *e*S S 16 44 59.1 +5.1
TRO IVMs_BB IVMs_BB 16 57 02.1
comp=Z,2µm,23.3s
MTSE Matsula 60.11 34 *e*P P 16 36 40.9 -0.9
VLAD Vladila 60.19 51 ⇓P P 16 36 44.7 +2.1
EUNU Eureka 60.29 352 P P 16 36 41.7 -1.1
EUNU IAmb IAmb 16 36 54.4
comp=Z,95nm,1.2s
DION Dionisos Attik 60.34 58 P P 16 36 40.0 -3.7
KYMI Kymi, Euboea I 60.40 57 P P 16 36 42.1 -2.0
ROC1 El Roble 60.47 205 P P 16 36 44.2 -0.5

ROC1 IAmb IAmb 16 36 55.2
comp=Z,91nm,1.2s
W13A Hualapai Mount 60.51 299 P **P** **16 36 44.9 -0.4**
PLD Plovdiv 60.54 53 *e*P **P** **16 36 45.0 0.0**
VOIR 60.57 49 ⇑P **P** **16 36 46.1 +0.9**
VOIR 60.57 49 ⇑P **P** **16 36 46.1 +0.9**
HUMR Humele 60.57 51 ⇓P **P** **16 36 47.4 +2.3**
BUR08 Bucovina Ar. S 60.58 47 P **P** **16 36 44.5 -0.8**
BUR08 IAmb IAmb 16 37 01.0
comp=Z,58nm,1.2s
RZN Rozhen 60.58 54 *e*P **P** **16 36 45.5 0.0**
MTUR Matau 60.59 50 ⇓P **P** **16 36 46.4 +1.0**
MTUR Matau 60.59 50 ⇓P **P** **16 36 46.4 +1.0**
JETT Jettan, Norway 60.59 22 *e*P **P** **16 36 44.4 -0.5**
JETT IVmB_BB 16 36 58.7
comp=Z,2µm,4.0s
BURAR Bucovina Array 60.59 47 ⇓P **P** **16 36 44.6 -0.8**
BURAR Bucovina Array 60.59 47 P **P** **16 36 44.4 -1.0**
BURAR Bucovina Array 60.59 47 ⇓P **P** **16 36 44.6 -0.8**
MT05 Renca 60.73 205 P **P** **16 36 46.1 -0.2**
MT03 Universidad Ad 60.73 204 P **P** **16 36 46.0 -0.4**
113A Mohawk Valley, 60.76 296 P **P** **16 36 45.8 -0.9**
MT02 Curacav 60.77 205 P **P** **16 36 46.8 +0.3**
DOPR Dopca 60.78 49 ⇓P **P** **16 36 49.0 +2.4**
YKA Yellowknife Ar 60.83 330 P **P** **16 36 44.9 -1.7**
comp=Z,29nm,0.9s,baz=98,slow=7.6,SNR=30
YKA LR LR 17 01 35.6
comp=Z,21µm,20.2s,baz=92,slow=35
comp=Z,29nm,0.9s
YKA Yellowknife Ar 60.83 330 P **P** **16 36 44.4 -2.2**
YKA Yellowknife Ar 60.83 330 P **P** **16 36 44.4 -2.2**
HEL Helsinki 60.83 33 P P 16 36 59.3 +13
HEL pmax pmax
comp=Z,111nm,1.2s
PDMCI Parker Dam,Lak 60.84 298 P **P** **16 36 46.8 -0.4**
baz=81
PDMCI S **S** **16 45 12.4 +8.0**
baz=81
ELK Elko 60.91 305 LR LR 17 00 49.3
comp=Z,31µm,21.4s,baz=88,slow=34
ELK Elko 60.91 305 P **P** **16 36 46.6 -1.3**
ELK IAmb IAmb 16 36 58.9
comp=Z,98nm,1.3s
ELK Elko 60.91 305 P **P** **16 36 46.6 -1.3**
ELK pmax pmax
comp=Z,98nm,1.3s
ELK MLR MLR
comp=Z,33µm,22.0s
LMEL Las Melosas 60.93 204 P **P** **16 36 47.5 -0.3**
LMEL IAmb IAmb 16 36 58.0
comp=Z,66nm,1.1s
OZUR 61.05 49 ⇑P **P** **16 36 51.2 +2.7**
MFID Camas Ranch 61.12 308 P **P** **16 36 47.9 -1.2**
MFID IAMs_20 IAMs_20 17 00 48.1
comp=Z,28µm,21.0s
PLID Pearl Lake 61.12 310 P **P** **16 36 47.8 -1.4**
PLID IAmb IAmb 16 37 00.1
comp=Z,76nm,1.2s
PLID IAMs_20 IAMs_20 17 00 51.0
comp=Z,15µm,22.0s
PRN Pahroc Range 61.14 301 P **P** **16 36 48.8 -0.6**
PRN IAmb IAmb 16 37 00.1
comp=Z,100nm,1.3s
PRN Pahroc Range 61.14 301 ⇓P **P** **16 36 50.0 +0.6**
NEE2 Needles Airpor 61.16 298 P **P** **16 36 49.1 -0.2**
baz=81
NEE2 S **S** **16 45 15.3 +6.7**
baz=81
ISAL Salakas 61.16 38 *e*P **P** **16 36 48.8 -0.2**
MT09 Talagante 61.16 205 P **P** **16 36 48.9 -0.4**
MLR Muntele Rosu 61.19 49 ⇑P **P** **16 36 49.4 -0.2**
MLR Muntele Rosu 61.19 49 LR LR 17 02 19.1
comp=Z,9µm,18.3s,baz=260,slow=35
MLR Muntele Rosu 61.19 49 P **P** **16 36 48.6 -1.0**
MLR Muntele Rosu 61.19 49 P **P** **16 36 48.6 -1.0**
MLR pmax pmax
comp=Z,231nm,0.9s
MLR MLR MLR
comp=Z,11µm,22.0s
BO04 La Punta 61.21 204 P **P** **16 36 49.4 -0.2**
IIGN Ignalina 61.21 38 *e*P **P** **16 36 49.0 -0.3**
BIZ Bicaz 61.22 48 ⇑P **P** **16 36 49.9 +0.3**
BLYC Blythe 61.23 297 P **P** **16 36 48.6 -1.3**
BLYC IAmb IAmb 16 37 02.2
comp=Z,84nm,1.5s
RDO Rodhopi 61.24 54 P **P** **16 36 46.7 -3.1**
RDO Rodhopi 61.24 54 P **P** **16 36 48.6 -1.2**
RDO IAmb IAmb 16 36 54.2
comp=Z,100nm,1.4s
RDO Rodhopi 61.24 54 ⇓P **P** **16 36 49.5 -0.3**
SGRR Singureni 61.30 51 ⇓P P 16 36 36.2 -14
SECR 61.31 50 ⇓P **P** **16 36 51.7 +1.4**
MT01 Popeta 61.34 205 P **P** **16 36 49.8 -0.6**
MT01 IAmb IAmb 16 37 00.4
comp=Z,77nm,1.1s
SHPR Sheep Range 61.35 300 P **P** **16 36 48.9 -1.9**
COVR Voineasa-Covas 61.35 49 ⇓P **P** **16 36 51.7 +1.2**
KTK1 Kautokeino 61.44 22 *e*P **P** **16 36 49.4 -1.3**
KTK1 IVmB_BB 16 37 00.3
comp=Z,1µm,7.4s
KTK1 *e*S **S** **16 45 13.6 +2.5**
KTK1 IVMs_BB IVMs_BB 16 58 59.3
comp=Z,2µm,16.8s
NEHR Nehoiu 61.44 49 ⇑P **P** **16 36 52.7 +1.6**
R11A Troy Canyon, C 61.44 302 P **P** **16 36 49.7 -1.7**
R11A IAmb IAmb 16 37 01.4
comp=Z,60nm,1.3s
R11A Troy Canyon, C 61.44 302 P **P** **16 36 51.2 -0.3**
baz=83,SNR=25
R11A S **S** **16 45 17.0 +4.5**
baz=83
IDI Anoyia 61.46 61 ⇑P **P** **16 36 51.9 +0.4**
IDI Anoyia 61.46 61 LR LR 17 02 24.3
comp=Z,4µm,21.7s,baz=276,slow=35
IDI Anoyia 61.46 61 P **P** **16 36 50.8 -0.7**
IDI Anoyia 61.46 61 P **P** **16 36 51.0 -0.4**
IDI Anoyia 61.46 61 ⇓P **P** **16 36 51.5 +0.1**
SULR 61.47 50 ⇑P **P** **16 36 50.0 -1.3**
FINES FINESS Array B 61.50 31 P **P** **16 36 50.0 -1.1**
comp=Z,27nm,0.7s,baz=256,slow=3.9,SNR=33
FINES LR LR 17 00 21.5
comp=Z,15µm,18.6s,baz=264,slow=33
comp=Z,27nm,0.7s
FINES FINESS Array B 61.50 31 P **P** **16 36 49.3 -1.8**
FINES FINESS Array B 61.50 31 P **P** **16 36 49.3 -1.8**
FIA1 FINESS Array S 61.50 31 P **P** **16 36 49.1 -2.0**
FIA1 IAmb IAmb 16 36 54.4
comp=Z,94nm,1.2s
DRBR Darabani 61.50 46 ⇓P **P** **16 36 52.1 +0.6**
IDID Didziasalis 61.50 38 *e*P **P** **16 36 51.1 -0.2**
NACGM Naroch 61.52 39⇑ *e*P **P** **16 36 50.7 -0.8**
baz=269
GLA Glamis 61.60 296 P **P** **16 36 50.5 -1.9**
GLA IAmb IAmb 16 37 03.0
comp=Z,126nm,1.4s
GLA Glamis 61.60 296 P **P** **16 36 50.5 -1.9**
GLA pmax pmax
comp=Z,126nm,1.5s
GLA Glamis 61.60 296 P **P** **16 36 52.6 +0.2**
baz=80
GLA S **S** **16 45 21.1 +6.7**
baz=80
VSU Vasula 61.62 35 *i* P **P** **16 36 50.0 -2.0**
VSU pmax pmax
comp=Z,314nm,1.1s
VSU Vasula 61.62 35 *e*P **P** **16 36 51.0 -1.0**
VSU Vasula 61.62 35 ⇑P **P** **16 36 50.5 -1.5**
TESR Tescani 61.62 48 ⇓P **P** **16 36 53.5 +1.3**
BJO1 Bjornoya 61.63 16 *e*P **P** **16 36 53.2 +1.4**
BJO1 IVmB_BB 16 37 04.2
comp=Z,1µm,2.8s
BJO1 *e*S **S** **16 45 14.9 +1.6**
BJO1 IVMs_BB IVMs_BB 16 56 14.6
comp=Z,3µm,23.6s
ISR Istrita 61.64 50 ⇓P **P** **16 36 56.1 +3.6**
ALN Alexandroupoli 61.65 55 P P 16 36 43.0 -10
ALN Alexandroupoli 61.65 55 P **P** **16 36 52.3 -0.2**
ALN IAmb IAmb 16 37 10.3
comp=Z,90nm,1.4s
ALN Alexandroupoli 61.65 55 P **P** **16 36 52.3 -0.2**
ALN pmax pmax
comp=Z,90nm,1.4s
PLOR Plostina 61.66 49 ⇓P **P** **16 36 55.2 +2.6**
PLOR Plostina 61.66 49 ⇓P **P** **16 36 55.2 +2.6**

IRM Iron Mountain 61.68 298 P **P** **16 36 52.3 -0.6**
baz=81,SNR=14
IRM S **S** **16 45 21.6 +6.2**
baz=81
SIGR SIGRI 61.70 57 P **P** **16 36 51.5 -1.4**
NEW Newport 61.72 314 LR LR 17 01 08.3
comp=Z,33µm,21.7s,baz=86,slow=34
NEW Newport 61.72 314 P **P** **16 36 51.7 -1.2**
NEW Newport 61.72 314 P **P** **16 36 51.7 -1.2**
NEW pmax pmax
comp=Z,108nm,1.1s
NEW MLR MLR
comp=Z,31µm,21.0s
NEW Newport 61.72 314 P **P** **16 36 51.9 -1.1**
baz=87,SNR=26
NEW S **S** **16 45 16.9 +1.5**
baz=87
VRI Vrincioaia 61.72 49 ⇓P **P** **16 36 53.0 +0.1**
VRI Vrincioaia 61.72 49 ⇓P **P** **16 36 53.0 +0.1**
APE Apeiranthos 61.72 59 ⇑P **P** **16 36 55.1 +1.9**
APE Apeiranthos 61.72 59*c i*P **P** **16 36 54.2 +1.0**
APE pmax pmax
comp=Z,93nm,1.0s
APE MLR MLR
comp=Z,6µm,20.0s
BISRR Bisoca 61.73 49 ⇑P **P** **16 36 54.9 +1.8**
RAZG Razgrad 61.74 52 ⇓P **P** **16 36 53.9 +0.8**
HSPB Hornsund (broa 61.74 13 *e*P **P** **16 36 53.9 +1.4**
HSPB *e*S **S** **16 45 15.2 +0.5**
HSPB *e*L L 16 56 17.6
comp=Z,11µm,25.0s
BO01 Tunca 61.75 204 P **P** **16 36 52.4 -0.7**
SANT Santorini 61.76 60 ⇓P **P** **16 36 57.0 +3.6**
SANT Santorini 61.76 60 P **P** **16 36 51.9 -1.6**
KBS Kingsbay 61.92 11 P **P** **16 36 52.3 -1.5**
KBS Kingsbay 61.92 11 *i* P **P** **16 36 53.2 -0.5**
KBS pmax pmax
comp=Z,68nm,1.3s
KBS Kingsbay 61.92 11 *i* P **P** **16 36 53.8 +0.1**
KBS *i* S **S** **16 45 22.6 +5.7**
KBS Kingsbay 61.92 11 *e*P **P** **16 36 53.7 -0.1**
KBS *e*S **S** **16 45 20.7 +3.8**
KBS IVMs_BB IVMs_BB 16 59 07.8
comp=Z,2µm,20.0s
F10A Beach Ranch, E 61.92 311 P **P** **16 36 53.0 -1.4**
F10A IAmb IAmb 16 37 18.7
comp=Z,95nm,1.3s
F10A Beach Ranch, E 61.92 311 ⇑P **P** **16 36 54.1 -0.3**
GRER 61.92 49 ⇓P **P** **16 36 56.1 +1.8**
HAMF Hammerfest 61.94 21 *e*P **P** **16 36 53.5 -0.4**
HAMF *e*S **S** **16 45 19.7 +2.4**
HAMF IVMs_BB IVMs_BB 16 56 41.1
comp=Z,2µm,24.2s
ODBI Odobesti 61.95 49 ⇑P **P** **16 36 56.1 +1.6**
PGOR Pogoanele 61.97 50 ⇑P **P** **16 36 56.4 +1.8**
GMRC Granite Mounta 62.00 298 P **P** **16 36 54.5 -0.7**
baz=81,SNR=52
GMRC S **S** **16 45 25.7 +6.1**
baz=81
BC3 Big Chuckawall 62.01 297 P **P** **16 36 53.1 -2.2**
baz=80
BC3 S **S** **16 45 25.9 +6.1**
baz=80
BMO Blue Mountains 62.06 310 IAMs_20 IAMs_20 17 02 20.0
comp=Z,13µm,19.0s
EDRB Edirne 62.08 53 P **P** **16 36 54.5 -0.9**
TUQ Turquoise Moun 62.11 299 P **P** **16 36 54.2 -1.7**
baz=81
TUQ S S 16 45 30.5 +10
baz=81
TPNV Topopah Spring 62.15 301 P **P** **16 36 55.0 -1.2**
TPNV Topopah Spring 62.15 301 P **P** **16 36 55.0 -1.2**
TPNV pmax pmax
comp=Z,135nm,1.3s
TPNV MLR MLR
comp=Z,9µm,20.0s
TPNV Topopah Spring 62.15 301 P **P** **16 36 55.2 -1.0**
baz=82,SNR=19
TPNV S **S** **16 45 29.3 +7.8**
baz=82
MNK Minsk 62.16 39 *i* P **P** **16 36 56.0 +0.4**
MNK *i* 16 39 12.8
MNK *i* PPP PPP 16 40 39.0
MNK *i* S **S** **16 45 21.6 +1.0**
MNK *i* SS **SS** **16 49 26.3 +3.2**
MNK pmax pmax
comp=Z,174nm,1.2s
MNK pmax pmax
comp=E,10.0nm,0.8s
MNK pmax pmax
comp=N,19nm,0.8s
MNK MLR MLR
comp=E,754nm,18.0s
MNK MLR MLR
comp=Z,13µm,22.0s
MNK MLR MLR
comp=N,2µm,19.0s
MNK Minsk 62.16 39 *i* P **P** **16 36 56.1 +0.4**
comp=E,10.0nm,0.8s,baz=90
MNK *i* P **P** **16 36 56.1 +0.4**
comp=N,19nm,0.8s
MNK *i* P **P** **16 36 56.1 +0.4**
comp=Z,174nm,1.2s
MNK *i* PP **PP** **16 39 12.8 +0.5**
MNK *i* PPP PPP 16 40 39.1
MNK *i* S **S** **16 45 21.6 +1.0**
MNK *i* SS **SS** **16 49 26.4 +3.2**
MNK *i* SSS SSS 16 52 18.0
MNK *i* LQ LQ 16 58 30.7
MNK *i* LR LR 17 04 13.3
MNK *i* LRM MLR 17 06 20.8
comp=E,754nm,18.0s
MNK *i* LRM MLR 17 06 20.8
comp=Z,13µm,21.7s
MNK *i* LRM MLR 17 06 41.2
comp=N,2µm,19.3s
IAS Iasi 62.20 47 ⇑P **P** **16 36 57.2 +1.1**
IAS Iasi 62.20 47 ⇑P **P** **16 36 57.2 +1.1**
TRQA Tornquist 62.30 195 P **P** **16 36 56.5 -0.3**
TRQA Tornquist 62.30 195 P **P** **16 36 56.5 -0.3**
TRQA pmax pmax
comp=Z,7.0nm,1.1s
TRQA MLR MLR
comp=Z,8µm,21.0s
SHOC Shoshone, Teco 62.33 300 P **P** **16 36 56.9 -0.3**
baz=81
SHOC S **S** **16 45 30.6 +7.1**
baz=81
ARA0 ARCESS Array S 62.33 22 *e*P **P** **16 36 55.4 -1.3**
ARA0 IVmB_BB 16 37 09.7
comp=Z,1µm,4.5s
ARCES ARCESS Array B 62.33 22 P **P** **16 36 55.4 -1.3**
comp=Z,67nm,0.9s,baz=264,slow=5.9,SNR=35
ARCES LR LR 16 59 05.4
comp=Z,6µm,20.1s,baz=253,slow=31
comp=Z,67nm,0.9s
ARCES ARCESS Array B 62.33 22 P **P** **16 36 54.8 -1.9**
ARCES ARCESS Array B 62.33 22 P **P** **16 36 54.8 -1.9**
ARCES pmax pmax
comp=Z,99nm,1.0s
SPA0 Spitsbergen Ar 62.38 12 *e*P **P** **16 36 56.8 -0.1**
SPA0 *e*S **S** **16 45 25.1 +2.3**
SPITS Spitsbergen Ar 62.38 12 LR LR 16 58 29.3
comp=Z,4µm,18.5s,baz=216,slow=31
SPITS Spitsbergen Ar 62.38 12 P **P** **16 36 56.1 -0.8**
SPITS pmax pmax
comp=Z,83nm,1.1s
SPB2 Spitsbergen Ar 62.39 12 P **P** **16 36 56.1 -0.8**
SPB2 IAmb IAmb 16 37 06.4
comp=Z,58nm,0.9s
TUDR 62.39 49 ⇑P **P** **16 36 58.1 +0.7**
VASR Vaslui 62.40 48 ⇓P **P** **16 36 58.4 +1.0**
BELC Belle Mtn. Jos 62.40 298 P **P** **16 36 55.7 -2.3**
baz=80,SNR=20
BELC S **S** **16 45 30.5 +5.8**
baz=80
PRD Provadia 62.42 52 *e*P **P** **16 36 56.8 -0.9**
SWSC Sam W. Stewart 62.42 296 P **P** **16 36 56.2 -1.7**
baz=80
SWSC S **S** **16 45 32.7 +8.1**
baz=80
BMN Battle Mountai 62.45 305 P **P** **16 36 56.5 -1.7**
BMN IAmb IAmb 16 37 09.2
comp=Z,46nm,1.2s
BMN Battle Mountai 62.45 305 P **P** **16 36 56.5 -1.7**

BMN pmax pmax
comp=Z,46nm,1.2s
SLCR Slobozia Conac 62.47 49 ⇓P **P** **16 36 57.6 -0.3**
IZVR Izvoarele 62.47 49 ⇓P **P** **16 36 58.3 +0.3**
C09A Chrisman Ranch 62.51 313 P **P** **16 36 56.4 -1.8**
E09A Wood Farm, Sta 62.52 312 P **P** **16 36 56.1 -2.2**
HEC Hector,Ludlow 62.54 299 P **P** **16 36 57.1 -1.7**
baz=80,SNR=10
HEC S **S** **16 45 32.7 +6.4**
baz=80
YUH Yuha Desert 62.58 296 P **P** **16 36 58.4 -0.5**
YUH IAmb IAmb 16 37 10.7
comp=Z,99nm,1.4s
GWY Greenwater Val 62.60 300 P **P** **16 36 57.7 -1.5**
GWY IAmb IAmb 16 37 09.6
comp=Z,57nm,1.3s
SCTR Scanteiesti 62.62 49 ⇓P **P** **16 36 59.6 +0.7**
GO05 Huala 62.62 205 P **P** **16 36 58.5 -0.4**
Q09A Carvers 62.62 303 P **P** **16 36 57.6 -1.7**
HARR Harsova 62.66 50 ⇓P **P** **16 36 57.7 -1.5**
HARR Harsova 62.66 50 ⇓P **P** **16 36 57.7 -1.5**
TATR Tatarca 62.66 49 ⇓P **P** **16 37 01.8 +2.6**
VLDR Vladesti 62.66 49 ⇓P **P** **16 36 59.2 0.0**
SORM Soroca 62.67 46 ⇑P **P** **16 36 57.3 -2.0**
SORM Soroca 62.67 46 ⇑P **P** **16 36 57.3 -2.0**
FURC Furnace Creek, 62.71 301 P **P** **16 36 59.2 -0.5**
baz=81
FURC S **S** **16 45 35.1 +7.0**
baz=81
IKP In-Ko-Pah, Jac 62.73 296 P **P** **16 36 57.9 -2.2**
baz=80
IKP S **S** **16 45 36.2 +7.5**
baz=80
TLBR Topalu 62.75 50 ⇑P **P** **16 37 00.5 +0.7**
TPH Tonopah 62.76 302 P **P** **16 36 58.5 -1.8**
TPH Tonopah 62.76 302 P **P** **16 36 58.5 -1.8**
TPH pmax pmax
comp=Z,190nm,1.4s
CFR Carcaliu 62.76 50 ⇑P **P** **16 37 00.6 +0.7**
CFR Carcaliu 62.76 50 ⇑P **P** **16 37 00.6 +0.7**
QSM Queen of Sheba 62.79 300 P **P** **16 36 59.5 -0.9**
TPFO Pinon Flats 62.84 297 P **P** **16 36 57.7 -0.2**
baz=80
TPFO S **S** **16 45 36.2 +6.0**
baz=80
GSC Goldstone, Bar 62.85 299 P **P** **16 36 58.5 -2.3**
GSC IAmb IAmb 16 37 12.8
comp=Z,55nm,1.2s
GSC Goldstone, Bar 62.85 299 P **P** **16 36 58.5 -2.3**
GSC pmax pmax
comp=Z,55nm,1.2s
GSC Goldstone, Bar 62.85 299 P **P** **16 36 58.9 -1.9**
baz=80,SNR=5.3
GSC S **S** **16 45 36.1 +6.0**
baz=80
PFO Pinyon Flats O 62.85 297 LR LR 17 01 53.4
comp=Z,9µm,21.4s,baz=89,slow=34
PFO Pinyon Flats O 62.85 297 P **P** **16 37 00.5 -0.3**
baz=80
PFO S **S** **16 45 37.6 +7.3**
baz=80
KEV Kevo 62.89 22 P **P** **16 36 58.9 -1.4**
KEV Kevo 62.89 22 P **P** **16 36 58.9 -1.4**
KEV pmax pmax
comp=Z,131nm,1.0s
KEV MLR MLR
comp=Z,5µm,21.0s
KEV Kevo 62.89 22 ⇓P **P** **16 36 59.0 -1.4**
MONP2 Monument Peak 62.95 296 P **P** **16 37 01.1 -0.5**
baz=80
MONP2 S **S** **16 45 36.9 +5.2**
baz=80
TPGR Topolog 62.99 50 ⇓P **P** **16 37 02.0 +0.5**
D08A Wollman Farm, 63.01 313 P **P** **16 37 00.3 -1.2**
TIRR Tirgusor 63.02 50 ⇑P **P** **16 37 00.6 -1.0**
TIRR Tirgusor 63.02 50 P **P** **16 36 59.3 -2.4**
TIRR IAMs_20 IAMs_20 17 00 40.9
comp=Z,20µm,22.0s
TIRR Tirgusor 63.02 50 P **P** **16 36 59.3 -2.4**
TIRR pmax pmax
comp=Z,198nm,1.2s
TIRR MLR MLR
comp=Z,20µm,22.0s
TIRR Tirgusor 63.02 50 ⇓P **P** **16 37 00.3 -1.4**
GRAC Grapevine Rang 63.03 301 P **P** **16 37 01.0 -1.0**
GRAC Grapevine Rang 63.03 301 P **P** **16 37 01.7 -0.2**
baz=81
GRAC S **S** **16 45 40.6 +8.3**
baz=81
J08A Circle Bar Ran 63.04 308 P **P** **16 37 00.8 -1.2**
J08A IAmb IAmb 16 37 23.8
comp=Z,64nm,1.4s
RRX Edison Barstow 63.07 299 P **P** **16 37 01.6 -0.7**
baz=80
RRX S **S** **16 45 40.4 +7.5**
baz=80
KIS Kishinev 63.07 48 ⇓ *i*P **P** **16 37 00.0 -2.0**
comp=Z,350nm,4.7s
KIS *e*S **S** **16 45 33.0 +0.7**
comp=Z,1µm,16.5s
KIS *e*L L 16 54 57.0
KIS LRM MLR 17 01 58.0
comp=Z,2µm,18.0s
KIS Kishinev 63.07 48 ⇑P **P** **16 37 02.2 +0.2**
KIS Kishinev 63.07 48*d i*P **P** **16 37 00.0 -2.0**
KIS *e* 16 37 40.0
KIS *e*S **S** **16 45 33.0 +0.7**
KIS pmax pmax
comp=Z,350nm,4.7s
KIS smax smax
comp=E,1µm,16.5s
KIS MLR MLR
comp=E,2µm,18.0s
MILM Milestii Mici 63.08 48 ⇓ *i*P **P** **16 37 00.0 -2.0**
comp=E,1µm,3.8s
MILM *i* S **S** **16 45 32.0 -0.4**
comp=E,2µm,8.0s
MILM Milestii Mici 63.08 48 ⇓P **P** **16 37 02.4 +0.4**
MILM Milestii Mici 63.08 48*d i*P **P** **16 37 00.0 -2.0**
MILM *i* S **S** **16 45 32.0 -0.4**
MILM *i* PS **PnS** **16 45 48.0 -0.5**
MILM pmax pmax
comp=Z,1µm,3.8s
MILM smax smax
comp=E,2µm,8.0s
MILM smax smax
comp=N,1µm,9.4s
AKASG Malin Array Be 63.09 43 P **P** **16 37 00.6 -1.4**
comp=N,56nm,0.8s,baz=275,slow=5.8,SNR=36
AKASG LR LR 17 00 43.4
comp=N,7µm,21.0s,baz=272,slow=33
comp=N,56nm,0.8s
AKBB Malin Array Si 63.09 43*ce*P **P** **16 37 00.5 -1.5**
ML02 Panimavida 63.09 204 P **P** **16 37 01.4 -0.6**
BBRC Big Bear Solar 63.11 298 P **P** **16 37 02.7 -0.1**
baz=80
BBRC S **S** **16 45 38.6 +4.8**
baz=80
E08A Dider Farm, El 63.15 312 P **P** **16 37 00.4 -2.1**
E08A IAmb IAmb 16 37 11.8
comp=Z,92nm,1.2s
B08A Colville Reser 63.18 314 P **P** **16 37 00.9 -1.9**
BAR Barrett 63.19 296 P **P** **16 37 01.7 -1.4**
G08A Pilot Rock 63.19 311 P **P** **16 37 01.1 -1.9**
G08A IAmb IAmb 16 37 13.3
comp=Z,62nm,1.3s
LCH Last Change Ra 63.21 301 P **P** **16 37 02.0 -1.3**
LCH IAmb IAmb 16 37 13.5
comp=Z,70nm,1.3s
MANR Mangalia 63.22 51 ⇓P **P** **16 37 06.1 +3.1**
TLCR 63.23 50 ⇑P **P** **16 37 04.0 +1.0**
TLCR 63.23 50 ⇑P **P** **16 37 04.0 +1.0**
KARP Karpathos 63.25 60 P **P** **16 37 02.1 -1.3**
KARP Karpathos 63.25 60 ⇓P **P** **16 37 02.9 -0.5**
WVOR Wild Horse Val 63.27 307 P **P** **16 37 02.4 -1.1**
WVOR IAMs_20 IAMs_20 17 01 51.0
comp=Z,24µm,22.0s
WVOR Wild Horse Val 63.27 307 P **P** **16 37 02.4 -1.1**
WVOR pmax pmax
comp=Z,24nm,1.3s
WVOR MLR MLR
comp=Z,24µm,22.0s
WVOR Wild Horse Val 63.27 307 ⇓P **P** **16 37 02.6 -0.9**
MPMC Manual Prospec 63.27 300 P **P** **16 37 03.5 -0.2**
baz=80,SNR=22

MPMC S **S** **16 45 39.6 +3.9**
baz=80
PNT Penticton 63.30 315 P P 16 37 10.1 +6.6
PNT pmax pmax
comp=Z,30nm,1.2s
PNT Penticton 63.30 315 ⇓P **P** **16 37 02.5 -0.9**
KVN Kaiserville 63.30 304 P **P** **16 37 01.8 -2.1**
KVN IAmb IAmb 16 37 13.1
comp=Z,54nm,1.1s
KVN Kaiserville 63.30 304 P **P** **16 37 01.8 -2.1**
KVN pmax pmax
comp=Z,54nm,1.1s
JURR Jurilovca 63.32 50 ⇑P P 16 36 57.0 -6.7
NV11 Mina Array Sit 63.43 303 P **P** **16 37 02.6 -2.2**
MURC Murrieta 63.45 297 P **P** **16 37 04.8 -0.1**
baz=80
MURC S **S** **16 45 42.3 +4.6**
baz=80
HAWA Hanford 63.48 312 P **P** **16 37 03.3 -1.4**
HAWA IAMs_20 IAMs_20 17 02 51.4
comp=Z,22µm,20.0s
HAWA Hanford 63.48 312 ⇓P **P** **16 37 04.1 -0.6**
PUL Pulkovo 63.51 33 *i* P **P** **16 37 05.0 +0.4**
PUL pmax pmax
comp=Z,93nm,0.4s
109C Camp Elliot, M 63.51 297 IAMs_20 IAMs_20 17 02 39.5
comp=Z,18µm,21.0s
109C Camp Elliot, M 63.51 297 P **P** **16 37 02.5 -2.6**
baz=79
109C S **S** **16 45 41.8 +3.5**
baz=79
LRMC Laurel Mtn Rad 63.52 300 P **P** **16 37 04.7 -0.6**
baz=80
LRMC S **S** **16 45 46.0 +7.3**
baz=80
NVAR Mina Array Bea 63.55 303 P **P** **16 37 04.8 -0.7**
comp=Z,4.6nm,0.8s,baz=82,slow=6.8,SNR=20
NVAR LR LR 17 02 43.3
comp=Z,41µm,20.8s,baz=106,slow=34
NVAR PKP2bc 17 06 08.3
comp=Z,1.5nm,0.9s,baz=223,slow=2.9,SNR=5.8
comp=Z,4.6nm,0.8s
NVAR Mina Array Bea 63.55 303 P **P** **16 37 04.0 -1.6**
HOPEN Hopen 63.65 14 *eP* **P** **16 37 07.3 +2.0**
HOPEN IVmB_BB 16 37 19.0
comp=Z,1µm,3.4s
HOPEN *eS* **S** **16 45 45.8 +7.1**
HOPEN *eSS* SS 16 49 57.8 +12
HOPEN IVMs_BB IVMs_BB 16 58 32.5
comp=Z,4µm,16.7s
CWC Cottonwood Cre 63.68 301 P **P** **16 37 06.5 0.0**
baz=80
CWC S **S** **16 45 46.3 +5.6**
baz=80
E07A Sunnyside 63.69 312 P **P** **16 37 04.5 -1.6**
RYN Ryan 63.69 303 P **P** **16 37 04.3 -2.1**
RYN IAmb IAmb 16 37 17.3
comp=Z,82nm,1.4s
I07A Izee 63.70 309 P **P** **16 37 04.8 -1.6**
I07A IAmb IAmb 16 37 15.8
comp=Z,58nm,1.3s
TIN Tinemaha, Big 63.70 301 P **P** **16 37 04.4 -2.1**
baz=81
TIN S **S** **16 45 44.4 +3.6**
baz=81
BFSC Mount Baldy Ra 63.72 298 P **P** **16 37 03.5 -3.2**
baz=80
BFSC S **S** **16 45 44.7 +3.5**
baz=80
VALR Valaam 63.80 31 *d i* P **P** **16 37 04.1 -2.4**
VALR pmax pmax
comp=Z,46nm,0.9s
VALR MLR MLR
comp=Z,9µm,18.0s
PURM Purcari 63.84 48 ⇑P **P** **16 37 05.5 -1.5**
CCAC Calif City Air 63.85 299 P **P** **16 37 06.5 -0.9**
EDW2 Edwards Air Fo 63.88 299 P **P** **16 37 06.8 -0.8**
baz=80,SNR=10.0
EDW2 S **S** **16 45 48.4 +5.4**
baz=80
ARG Arkhangelos 63.91 60 P **P** **16 37 06.9 -0.8**
ARG Arkhangelos 63.91 60 P **P** **16 37 06.9 -0.8**
ARG pmax pmax
comp=Z,145nm,1.1s
ARG Arkhangelos 63.91 60 ⇑P **P** **16 37 08.4 +0.7**
KULA Kula-Manisa 63.96 57 P **P** **16 37 05.1 -3.0**
MLAC Mammoth, Mammo 64.09 302 P **P** **16 37 08.5 -0.7**
baz=81
MLAC S **S** **16 45 51.6 +5.8**
baz=81
ISA Isabella, Lake 64.13 300 P **P** **16 37 08.9 -0.3**
ISA Isabella, Lake 64.13 300 P **P** **16 37 09.0 -0.3**
ISA pmax pmax
comp=Z,112nm,1.3s
ISA Isabella, Lake 64.13 300 P **P** **16 37 08.6 -0.7**
baz=80,SNR=18
ISA S **S** **16 45 53.4 +7.3**
baz=80
PASC Pasadena Art C 64.16 298 P **P** **16 37 07.4 -2.0**
PASC Pasadena Art C 64.16 298 IAMs_20 IAMs_20 17 02 44.6
comp=Z,22µm,21.0s
PAHR Pah Rah Range 64.19 304 P **P** **16 37 08.2 -1.5**
PAHR IAmb IAmb 16 37 20.7
comp=Z,63nm,1.4s
OMMB Old Mammoth Mi 64.22 302 P **P** **16 37 08.8 -1.3**
OMMB IAmb IAmb 16 37 37.7
comp=Z,104nm,1.4s
DECC Green Verdugo 64.27 298 P **P** **16 37 09.7 -0.5**
baz=79
DECC S **S** **16 45 51.0 +3.3**
baz=79
MDPB Devils Postpil 64.28 302 P **P** **16 37 09.7 -0.7**
MDPB IAmb IAmb 16 37 20.9
comp=Z,87nm,1.2s
FMP Fort Macarthur 64.33 298 P **P** **16 37 07.5 -3.1**
baz=79
FMP S **S** **16 45 54.2 +5.7**
baz=79
PNTR Pine Nut 64.45 304 P **P** **16 37 10.1 -1.4**
VCNR Virginia City 64.46 304 P **P** **16 37 09.8 -1.8**
CIS Catalina Islan 64.49 297 P **P** **16 37 10.6 -1.1**
baz=79
CIS S **S** **16 45 55.2 +4.7**
baz=79
ARVC Arvin 64.51 299 P **P** **16 37 10.9 -0.8**
baz=79
ARVC S **S** **16 45 57.3 +6.7**
baz=79
OSI Osito Audit: C 64.52 299 P **P** **16 37 11.3 -0.5**
baz=79
OSI S **S** **16 45 56.0 +5.1**
baz=79
MOD Modoc Plateau 64.56 307 P **P** **16 37 11.2 -0.9**
MOD IAMs_20 IAMs_20 17 02 54.4
comp=Z,26µm,21.0s
VES Vestal, Richgr 64.59 300 P **P** **16 37 10.9 -1.2**
baz=80
LLLB Lillooet 64.66 317 P **P** **16 37 10.7 -1.7**
LLLB IAmb IAmb 16 37 22.9
comp=Z,98nm,1.3s
SCI2 San Clemente I 64.68 297 P **P** **16 37 11.3 -1.5**
baz=78
SCI2 S **S** **16 45 58.6 +5.7**
baz=78
VOG Valley Oaks Go 64.74 301 P **P** **16 37 11.1 -2.0**
baz=80
VOG S **S** **16 45 56.0 +2.6**
baz=80
MPK Martis Peak 64.75 304 P **P** **16 37 12.0 -1.5**
MPK IAmb IAmb 16 37 24.6
comp=Z,49nm,1.3s
PINE Pine Mountain 64.77 309 P **P** **16 37 11.9 -1.5**
PINE IAmb IAmb 16 37 23.6
comp=Z,53nm,1.4s
G05D Wamic, OR 64.85 311 P **P** **16 37 11.4 -2.3**
baz=83
G05D S **S** **16 45 58.9 +4.4**
baz=83
K05A Summer Lake 64.88 308 P **P** **16 37 12.7 -1.5**
BEKR Beckworth 64.91 305 P **P** **16 37 12.7 -1.7**
I05D Terrebonne, OR 64.98 310 P **P** **16 37 13.9 -0.7**
baz=82
I05D S **S** **16 46 01.9 +5.6**
baz=82
APA Apatity 65.03 25 ⇓*i* P **P** **16 37 12.3 -2.1**
APA *i* 16 37 47.3
APA *i* PPP PPP 16 41 18.5
APA *i* S **S** **16 45 52.0 -3.9**
APA *i* PS **PnS** **16 46 21.0 +6.5**
APA *i* SS **SS** **16 50 04.0 -3.4**
APA pmax pmax
comp=Z,49nm,1.1s
J05D Fort Rock, OR 65.05 309 P **P** **16 37 12.6 -2.6**
baz=82,SNR=34
J05D S **S** **16 46 01.0 +3.7**
baz=82
HOOD Mount Hood Mea 65.07 311 P **P** **16 37 14.7 -0.7**
CMB Columbia Colle 65.23 303 P **P** **16 37 15.5 -0.9**
CMB IAmb IAmb 16 37 26.4
comp=Z,75nm,1.4s
CMB Columbia Colle 65.23 303 P **P** **16 37 15.5 -0.9**
CMB pmax pmax
comp=Z,75nm,1.5s
CMB MLR MLR
comp=Z,41µm,20.0s
ELL Elmali 65.23 59 P **P** **16 37 15.6 -0.9**
ELL Elmali 65.23 59 P **P** **16 37 15.6 -0.9**
ELL pmax pmax
comp=Z,632nm,1.0s
ELL Elmali 65.23 59 ⇓P **P** **16 37 16.8 +0.2**
C36M Paulatuk 65.25 337 P **P** **16 37 14.6 -1.3**
C36M IAMs_20 IAMs_20 17 04 37.5
comp=Z,17µm,19.0s
C36M Paulatuk 65.25 337 P **P** **16 37 13.5 -2.3**
baz=92
C36M S **S** **16 45 58.3 -0.2**
baz=92
PKM Mcpherson Peak 65.35 299 P **P** **16 37 14.7 -2.7**
baz=79
PKM S **S** **16 46 06.2 +4.8**
baz=79
SBC Santa Barbara 65.35 299 P **P** **16 37 15.6 -1.6**
baz=79
SBC S **S** **16 46 04.2 +3.2**
baz=79
SCZ2 Santa Cruz Isl 65.38 298 P **P** **16 37 16.1 -1.3**
baz=78
SCZ2 S **S** **16 46 04.4 +3.0**
baz=78
SNCC San Nicolas Is 65.43 297 P **P** **16 37 16.5 -1.3**
baz=78
SNCC S **S** **16 46 06.8 +4.7**
baz=78
LVZ Lovozero 65.51 24 *i* P **P** **16 37 16.1 -1.5**
LVZ pmax pmax
comp=Z,66nm,1.1s
LVZ MLR MLR
comp=Z,10µm,23.0s
LVZ Lovozero 65.51 24 ⇑P **P** **16 37 18.7 +1.1**
K04D Chiloquin, OR 65.52 308 P **P** **16 37 16.3 -1.9**
baz=81
K04D S **S** **16 46 06.2 +3.0**
baz=81
ISP Isparta 65.53 57 P **P** **16 37 17.6 -0.8**
ISP Isparta 65.53 57 *i* P **P** **16 37 18.0 -0.4**
ISP pmax pmax
comp=Z,26nm,1.0s
ISP MLR MLR
comp=Z,4µm,18.0s
H04A Detroit Lake 65.53 310 P **P** **16 37 16.9 -1.3**
MDUB Mudurnu 65.59 54 P **P** **16 37 17.4 -1.3**
KDZE Karadeniz Ereo 65.64 54 ⇓P **P** **16 37 17.9 -1.0**
J04D Umpqua Nationa 65.69 309 P **P** **16 37 18.7 -0.8**
J04D IAMs_20 IAMs_20 17 08 00.0
comp=Z,14µm,18.0s
J04D Umpqua Nationa 65.69 309 P **P** **16 37 18.5 -1.0**
baz=81,SNR=16
J04D S **S** **16 46 08.5 +3.3**
baz=81
A36M Sachs Harbour 65.73 340 P **P** **16 37 18.0 -1.0**
A36M IAMs_20 IAMs_20 17 04 49.2
comp=Z,18µm,19.0s
A36M Sachs Harbour 65.73 340 P **P** **16 37 18.2 -0.7**
baz=92,SNR=21
A36M S **S** **16 46 06.1 +1.7**
baz=92
I04A Tendick Farm, 65.82 309 P **P** **16 37 18.9 -1.2**
baz=81
I04A S **S** **16 46 04.4 -2.2**
baz=81
ORV Oroville 65.83 305 P **P** **16 37 19.3 -0.9**
ORV IAmb IAmb 16 37 29.8
comp=Z,83nm,1.4s
ORV Oroville 65.83 305 P **P** **16 37 19.3 -0.9**
ORV pmax pmax
comp=Z,83nm,1.4s
ORV MLR MLR
comp=Z,31µm,22.0s
PGC Sidney 65.88 315 P **P** **16 37 17.8 -2.5**
PGC IAmb IAmb 16 37 28.8
comp=Z,73nm,1.1s
F04D Rainier, OR 65.92 312 P **P** **16 37 19.5 -1.1**
baz=82
F04D S **S** **16 46 07.8 +0.3**
baz=82
H04D Lebanon 65.95 310 P **P** **16 37 19.1 -1.7**
H04D IAmb IAmb 16 37 31.3
comp=Z,86nm,1.2s
H04D IAMs_20 IAMs_20 17 05 10.8
comp=Z,12µm,19.0s
H04D Lebanon 65.95 310 P **P** **16 37 19.8 -1.0**
baz=81
H04D S **S** **16 46 12.2 +4.2**
baz=81
B04A Port Angeles 65.99 314 P **P** **16 37 19.6 -1.4**
L04D Klamath Falls 65.99 308 P **P** **16 37 19.5 -1.8**
L04D IAMs_20 IAMs_20 17 03 38.1
comp=Z,16µm,21.0s
L04D Klamath Falls 65.99 308 P **P** **16 37 20.1 -1.3**
baz=81,SNR=24
L04D S **S** **16 46 13.9 +5.1**
baz=81
G03D McMinnville, O 66.22 311 P **P** **16 37 21.7 -0.8**
G03D IAMs_20 IAMs_20 17 04 50.8
comp=Z,20µm,20.0s
G03D McMinnville, O 66.22 311 P **P** **16 37 19.7 -2.8**
baz=81,SNR=7.2
SAO San Andreas Ge 66.29 302 IAMs_20 IAMs_20 17 05 17.7
comp=Z,24µm,19.0s
NLWA Neilton Lookou 66.32 313 P **P** **16 37 22.1 -1.1**
COR Corvallis 66.34 310 P **P** **16 37 22.6 -0.6**
COR Corvallis 66.34 310 IAMs_20 IAMs_20 17 04 05.1
comp=Z,15µm,21.0s
COR Corvallis 66.34 310 P **P** **16 37 22.7 -0.6**
COR pmax pmax
comp=Z,110nm,1.2s
COR MLR MLR
comp=Z,15µm,21.0s
YBH Yreka Blue Hor 66.37 307 LR LR 17 04 34.6
comp=Z,24µm,20.8s,baz=82,slow=34
YBH Yreka Blue Hor 66.37 307 P **P** **16 37 21.6 -2.1**
YBH IAMs_20 IAMs_20 17 04 34.1
comp=Z,23µm,21.0s
YBH Yreka Blue Hor 66.37 307 P **P** **16 37 21.6 -2.1**
YBH pmax pmax
comp=Z,34nm,1.1s
YBH MLR MLR
comp=Z,23µm,21.0s
HUMO Hull Mountain 66.40 308 P **P** **16 37 22.0 -1.8**
HUMO IAMs_20 IAMs_20 17 04 59.0
comp=Z,18µm,21.0s
HUMO Hull Mountain 66.40 308 ⇑P **P** **16 37 22.4 -1.4**
I03D Drain, OR 66.51 309 P **P** **16 37 21.6 -2.8**
baz=81,SNR=12
I03D S **S** **16 46 18.6 +3.8**
baz=81
DBO Dodson Butte 66.53 309 P **P** **16 37 23.3 -1.4**
DBO IAmb IAmb 16 37 33.8
comp=Z,96nm,1.2s
I02E Swisshome, OR 66.80 310 P **P** **16 37 26.2 -0.1**
baz=80
I02E S **S** **16 46 23.1 +4.8**
baz=80
H09N1 TRISTAN DA CUN 66.83 152 T T 17 50 13.2
SNR=23
TRIS Tristan da Cun 66.83 152 IAMs_20 IAMs_20 16 59 17.2
comp=Z,13µm,22.0s
H09W1 TRISTAN DA CUN 66.85 152 T T 17 50 20.1
SNR=17
ANTO Ankara 66.90 55 P **P** **16 37 26.2 -0.9**
ANTO IAmb IAmb 16 37 31.5
comp=Z,54nm,0.9s
ANTO Ankara 66.90 55 P **P** **16 37 26.2 -0.9**
ANTO pmax pmax
comp=Z,54nm,1.0s
ANTO MLR MLR
comp=Z,4µm,20.0s
K02D Willamette Mer 66.90 308 P **P** **16 37 25.5 -1.6**
baz=80,SNR=13
K02D S **S** **16 46 25.2 +5.4**
baz=80
L02F Cave Junction 66.93 308 P **P** **16 37 24.4 -2.8**
baz=80
L02F S **S** **16 46 24.7 +4.7**
baz=80
CBB Campbell River 66.94 316 P **P** **16 37 25.5 -1.6**
SIM Simferopol' 66.99 49 *d i* P **P** **16 37 26.1 -1.4**
SIM *i* 16 39 56.0
SIM *e* PPP PPP 16 41 33.0
SIM *i* S **S** **16 46 22.0 +1.4**
SIM pmax pmax
comp=Z,70nm,1.2s
SIM MLR MLR
comp=Z,6µm,17.0s
J01E Myrtle Point 67.02 309 P **P** **16 37 25.8 -1.9**
J01E Myrtle Point 67.02 309 P **P** **16 37 26.5 -1.2**
baz=80
HOPS Hopland Field 67.13 304 IAMs_20 IAMs_20 17 04 47.6
comp=Z,23µm,20.0s
OBN Obninsk 67.14 38 ⇑P **P** **16 37 28.9 +0.7**
OBN Obninsk 67.14 38 LR LR 17 04 27.6
comp=Z,5µm,18.5s,baz=273,slow=34
OBN Obninsk 67.14 38 P **P** **16 37 26.7 -1.4**
OBN IAMs_20 IAMs_20 17 04 24.4
comp=Z,19µm,19.0s
OBN Obninsk 67.14 38 *de* P **P** **16 37 27.3 -0.9**
OBN *e* *PP **pP** **16 37 31.4 -0.4**
OBN *e* 16 37 54.1
OBN *e* 16 39 54.4
OBN *e* PPP PPP 16 41 31.0
OBN *i* S **S** **16 46 23.0 +1.1**
OBN *eSS* **SS** **16 50 36.8 -3.8**
OBN pmax pmax
comp=Z,201nm,1.3s
KSXB Camp Six Broad 67.21 307 P **P** **16 37 28.0 -1.1**
KSXB IAmb IAmb 16 37 38.4
comp=Z,79nm,1.1s
PLCA Paso Flores 67.23 201 P **P** **16 37 29.1 +0.2**
comp=Z,10nm,0.9s,baz=14,slow=5.8,SNR=15
PLCA LR LR 17 06 40.4
comp=Z,5µm,21.9s,baz=26,slow=36
comp=Z,10nm,0.9s
PLCA Paso Flores 67.23 201 P **P** **16 37 29.2 +0.2**
PLCA Paso Flores 67.23 201 ⇑P **P** **16 37 29.2 +0.2**
PLCA Paso Flores 67.23 201 ⇑P **P** **16 37 29.4 +0.5**
TGTN Hyland Airport 67.25 329 P **P** **16 37 27.0 -1.9**
baz=85
TGTN S **S** **16 46 23.0 -0.2**
baz=85
KEBM Edson Butte 67.36 309 P **P** **16 37 28.9 -1.1**
KMRM Mail Ridge 67.38 306 P **P** **16 37 29.3 -0.8**
KBO Bosley Butte 67.40 308 P **P** **16 37 29.9 -0.4**
BZK Bozkurt 67.42 52 ⇓P **P** **16 37 29.5 -0.8**
BZK Bozkurt 67.42 52 P **P** **16 37 29.9 -0.4**
KRPM Rodgers 67.44 307 P **P** **16 37 30.3 -0.2**
JCC Jacoby Creek, 67.51 306 P **P** **16 37 30.1 -0.7**
JCC IAMs_20 IAMs_20 17 04 52.4
comp=Z,20µm,21.0s
BR131 Keskin Array S 67.57 55 P **P** **16 37 30.5 -0.9**
BR131 IAmb IAmb 16 37 41.4
comp=Z,63nm,1.1s
BR131 Keskin Array S 67.57 55 P **P** **16 37 30.5 -0.9**
BR131 pmax pmax
comp=Z,63nm,1.1s
BR131 Keskin Array S 67.57 55 P **P** **16 37 31.6 +0.1**
SNR=34
BR131 P **P** **16 37 31.6 +0.1**
SNR=34
BRTR Keskin Array B 67.57 55 P **P** **16 37 30.9 -0.6**
comp=Z,19nm,0.8s,baz=266,slow=5.4,SNR=33
BRTR LR LR 17 06 34.2
comp=Z,5µm,18.7s,baz=280,slow=36
comp=Z,19nm,0.8s
BRTR Keskin Array B 67.57 55 P **P** **16 37 30.6 -0.9**
BRTR Keskin Array B 67.57 55 P **P** **16 37 30.6 -0.9**
KMPM Mount Pierce 67.65 306 P **P** **16 37 31.2 -0.7**
MOS Moscow 67.66 37 *eP* **P** **16 37 29.9 -1.6**
MOS *e* 16 37 53.2
MOS *e* 16 39 59.9
MOS *e* PPP PPP 16 41 42.2
MOS *eS* **S** **16 46 30.4 +2.2**
MOS *e* 16 47 26.3
MOS *eSS* **SS** **16 50 47.4 -1.3**
MOS pmax pmax
comp=Z,159nm,1.3s
MOS pmax pmax
comp=Z,1µm,3.8s
MOS pmax pmax
comp=N,1µm,3.8s
MOS pmax pmax
comp=E,900nm,3.8s
MOS MLR MLR
comp=N,6µm,20.0s
MOS MLR MLR
comp=E,13µm,20.0s
MOS MLR MLR
comp=Z,18µm,20.0s
TLCB Telegraph Cove 67.80 317 P **P** **16 37 31.4 -1.0**
TLCB IAmb IAmb 16 37 44.3
comp=Z,54nm,1.0s
KLMR Klimovskoe 68.01 32 *eP* **P** **16 37 30.4 -3.2**
KLMR *e* 16 39 59.9
KLMR *eS* **S** **16 46 27.0 -5.3**
KLMR *eSS* **SS** **16 50 47.4 -6.5**
KLMR pmax pmax
comp=Z,175nm,1.3s
KLMR Klimovskoe 68.01 32 *eP* **P** **16 37 30.5 -3.2**
KLMR AMP 16 37 42.4
comp=Z,175nm,1.3s
KLMR *e* PP **PP** **16 39 59.9 -3.5**
KLMR *eS* **S** **16 46 27.0 -5.3**
KLMR *eS* **S** **16 46 27.0 -5.3**
KLMR *eSS* **SS** **16 50 47.5 -6.5**
KLMR *eSS* **SS** **16 50 47.5 -6.5**
KLMR *eSSS* SSS 16 54 01.4
KLMR *eSSS* SSS 16 54 01.4
KLMR LQ LQ 16 58 07.8
KLMR LQ LQ 16 58 07.8
KLMR LR LR 17 00 54.7
KLMR AMP 17 04 48.6
comp=Z,9µm,16.9s
CSS Mathiatis 68.32 60 P **P** **16 37 35.2 -0.9**
CSS IAmb IAmb 16 37 44.4
comp=Z,42nm,0.9s
CSS Mathiatis 68.32 60 ⇓P **P** **16 37 35.2 -0.9**
BBB Bella Bella 68.34 319 LR LR 17 06 35.5
comp=Z,27µm,18.4s,baz=79,slow=35
DIKM Dikmen 68.40 53 ⇑P **P** **16 37 36.9 +0.4**
DLBC Dease Lake 68.49 326 LR LR 17 07 59.6
comp=Z,10µm,18.0s,baz=80,slow=36
DLBC Dease Lake 68.49 326 P **P** **16 37 35.5 -1.3**
DLBC IAmb IAmb 16 37 46.3
comp=Z,62nm,1.1s
DLBC Dease Lake 68.49 326 P **P** **16 37 35.1 -1.7**
baz=82,SNR=14
DLBC S **S** **16 46 38.5 +0.2**
baz=82
MMPY Sheldon Lake, 68.53 330 P **P** **16 37 35.6 -1.3**
baz=82
MMPY S **S** **16 46 40.6 +2.0**
baz=82
HOLB Holberg 68.60 317 P **P** **16 37 36.5 -1.1**
INK Inuvik 68.73 336 LR LR 17 06 07.5
comp=Z,32µm,21.0s,baz=78,slow=35
INK Inuvik 68.73 336 P **P** **16 37 35.8 -2.2**
INK IAmb IAmb 16 37 47.9
comp=Z,94nm,1.4s
INK Inuvik 68.73 336 P **P** **16 37 35.8 -2.2**
INK pmax pmax
comp=Z,94nm,1.4s
INK Inuvik 68.73 336 P **P** **16 37 36.1 -1.9**
baz=83,SNR=13
INK S **S** **16 46 36.1 -4.4**
baz=83
INK Inuvik 68.73 336 ⇓P **P** **16 37 36.4 -1.6**
T35M Bob Quinn 68.82 324 P **P** **16 37 35.9 -3.0**
baz=81

T35M S **S** **16 46 44.7 +2.5**
baz=81
LPSR Galich'ya Gora 68.88 41 *e*P **P** **16 37 38.0 -1.2**
LPSR *e*S **S** **16 46 43.7 +0.8**
LPSR pmax pmax
comp=Z,150nm,1.0s
LPSR smax smax
comp=E,2μm,11.2s
VORR Voronezh 69.21 42 *e*P **P** **16 37 41.1 -0.2**
VORR pmax pmax
comp=Z,60nm,0.4s
RUBB Prince Rupert 69.25 321 P **P** **16 37 40.3 -1.2**
RUBB IAmb IAmb 16 37 51.6
comp=Z,47nm,1.1s
VSR Storozhevoye 69.27 42 *e*P **P** **16 37 39.9 -1.7**
VSR *e*S **S** **16 46 46.6 -0.9**
VSR pmax pmax
comp=Z,140nm,1.2s
VSR smax smax
comp=E,1μm,9.4s
LL01 San Ignacio de 69.32 201 P **P** **16 37 42.5 +0.7**
ANN Anapa 69.34 49 *e*P **P** **16 37 41.6 -0.6**
ANN *e*S **S** **16 46 46.0 -2.5**
ANN pmax pmax
comp=Z,71nm,0.9s
ANN MLR MLR
comp=N,2μm,18.0s
ANN MLR MLR
comp=Z,4μm,16.0s
ANN MLR MLR
comp=E,515nm,14.0s
BNN Bunyan 69.42 55 P **P** **16 37 42.0 -1.0**
N32M Quiet Lake 69.60 329 P **P** **16 37 41.0 -2.6**
baz=80
N32M S **S** **16 46 51.5 +0.3**
baz=80
P33M Teslin, Yukon 69.63 328 P **P** **16 37 42.2 -1.6**
P33M IAmb IAmb 16 37 53.5
comp=Z,109nm,1.5s
P33M Teslin, Yukon 69.63 328 P **P** **16 37 41.1 -2.7**
baz=80,SNR=13
P33M S **S** **16 46 52.9 +1.3**
baz=80
LL02 Futaleuf 69.86 201 P **P** **16 37 45.1 -0.1**
LL02 IAmb IAmb 16 37 55.2
comp=Z,71nm,1.5s
M31M Drury Creek, Y 70.03 330 P **P** **16 37 44.9 -1.3**
M31M IAmb IAmb 16 37 56.5
comp=Z,102nm,1.4s
M31M IAMs_20 IAMs_20 17 07 01.1
comp=Z,22μm,20.0s
M31M Drury Creek, Y 70.03 330 P **P** **16 37 43.8 -2.4**
baz=80,SNR=9.9
M31M S **S** **16 46 58.1 +1.8**
baz=80
WRAK Wrangell Islan 70.06 324 IAMs_20 IAMs_20 17 07 49.3
comp=Z,17μm,19.0s
WRAK Wrangell Islan 70.06 324 P **P** **16 37 45.9 -0.5**
baz=79
WRAK S **S** **16 46 59.8 +3.3**
baz=79
P32M Atlin 70.18 327 P **P** **16 37 46.2 -1.1**
baz=79
P32M S **S** **16 46 59.8 +1.6**
baz=79
EPYK Eagle Plains 70.26 335 P **P** **16 37 46.0 -1.6**
EPYK IAmb IAmb 16 37 57.1
comp=Z,116nm,1.5s
EPYK Eagle Plains 70.26 335 P **P** **16 37 44.7 -2.9**
baz=79
EPYK S **S** **16 46 59.3 +0.5**
baz=79
BHL Bhannes 70.43 61 *e*P **P** **16 37 46.8 -2.5**
MMAI Mount Meron Ar 70.45 62 LR LR 17 11 54.2
comp=Z,2μm,18.3s,baz=83,slow=39
WHY Whitehorse 70.55 329 P **P** **16 37 48.4 -1.1**
WHY Whitehorse 70.55 329 P **P** **16 37 48.0 -1.5**
baz=79
WHY S **S** **16 47 02.7 +0.1**
baz=79
HWQ Hawqa 70.57 60 *e*P **P** **16 37 49.7 -0.5**
SHBL Chebaa 70.64 61 ⇓*e*P **P** **16 37 51.6 +0.9**
CRAG Craig 70.67 323 P **P** **16 37 49.9 -0.2**
baz=78
CRAG S **S** **16 47 08.4 +4.6**
baz=78
DIB Dawson Inlet, 70.76 320 P **P** **16 37 49.5 -1.3**
JIS Juneau Island 70.78 326 IAMs_20 IAMs_20 17 11 09.2
comp=Z,12μm,18.0s
PRGR Permogore 70.80 30 *e*P **P** **16 37 48.9 -2.0**
N31M Braeburn, Yuko 70.81 329 P **P** **16 37 49.6 -1.4**
N31M Braeburn, Yuko 70.81 329 P **P** **16 37 48.5 -2.6**
baz=78,SNR=37
N31M S **S** **16 47 06.3 +0.8**
baz=78
VRH Novokhopyorsk 70.84 42 *e*P **P** **16 37 50.1 -1.2**
VRH *e*S **S** **16 47 04.6 -1.4**
VRH pmax pmax
comp=Z,120nm,0.9s
VRH smax smax
comp=E,2μm,11.8s
EIL Elat 70.94 65 LR LR 17 09 35.8
comp=E,19μm,19.8s,baz=274,slow=36
EIL Elat 70.94 65 ⇓P **P** **16 37 52.2 -0.1**
SKAG Skagway 71.01 327 P **P** **16 37 51.0 -1.2**
SKAG IAmb IAmb 16 38 01.5
comp=Z,45nm,1.1s
SKAG Skagway 71.01 327 P **P** **16 37 51.1 -1.2**
baz=78
SKAG S **S** **16 47 08.9 +1.3**
baz=78
SKAG Skagway 71.01 327 ⇑P **P** **16 37 53.7 +1.5**
GHAJ Ghor Haditha 71.02 63 P **P** **16 37 52.1 -0.7**
M30M Minto, Yukon 71.05 331 P **P** **16 37 50.7 -1.8**
M30M IAmb IAmb 16 38 02.2
comp=Z,105nm,1.5s
M30M IAMs_20 IAMs_20 17 08 03.2
comp=Z,21μm,20.0s
M30M Minto, Yukon 71.05 331 P **P** **16 37 50.6 -1.8**
baz=78,SNR=18
M30M S **S** **16 47 09.7 +1.5**
baz=78
I29M Ogilvie Camp, 71.10 334 P **P** **16 37 50.9 -1.8**
I29M IAmb IAmb 16 38 01.1
comp=Z,49nm,1.1s
I29M Ogilvie Camp, 71.10 334 P **P** **16 37 50.6 -2.1**
baz=77,SNR=19
I29M S **S** **16 47 09.9 +1.3**
baz=77
O30N Mendenhall 71.11 329 P **P** **16 37 51.7 -1.2**
baz=78,SNR=24
O30N S **S** **16 47 10.8 +1.9**
baz=78
SOC Sochi 71.20 50 *e*P **P** **16 37 52.4 -1.3**
SOC *e* 16 40 37.8
SOC *e*PPP PPP 16 42 19.1
SOC *e*S **S** **16 47 11.0 +0.5**
SOC *e*SS **SS** **16 51 40.5 -3.4**
SOC pmax pmax
comp=Z,111nm,1.1s
AY01 Puyuhuapi 71.22 200 P **P** **16 37 52.8 -0.6**
AY01 IAmb IAmb 16 38 03.2
comp=Z,69nm,1.3s
J29M Klondike Camp 71.27 333 P **P** **16 37 52.9 -0.8**
baz=77
J29M S **S** **16 47 10.3 -0.4**
baz=77
N30M Aishikik Lake 71.43 330 P **P** **16 37 52.5 -2.3**
baz=77,SNR=14
N30M S **S** **16 47 12.1 -0.6**
baz=77
PLBC Pleasant Camp 71.53 327 P **P** **16 37 53.0 -2.4**
baz=77
PLBC S **S** **16 47 16.2 +2.5**
baz=77
SIT Sitka 71.53 325 P **P** **16 37 53.5 -1.9**
baz=77
SIT S **S** **16 47 16.3 +2.5**
baz=77
P30M Million Dollar 71.67 328 P **P** **16 37 54.8 -1.5**
baz=77
P30M S **S** **16 47 18.3 +2.8**
baz=77
HYT Haines Junctio 71.77 329 P **P** **16 37 55.4 -1.6**
HYT IAmb IAmb 16 38 07.1
comp=Z,104nm,1.3s
HYT Haines Junctio 71.77 329 P **P** **16 37 54.8 -2.2**
baz=76,SNR=12
HYT S **S** **16 47 16.9 +0.1**
baz=76
DAWY Dawson 71.86 333 P **P** **16 37 55.5 -1.8**
DAWY IAmb IAmb 16 38 06.1
comp=Z,64nm,1.1s
DAWY Dawson 71.86 333 P **P** **16 37 54.9 -2.4**
baz=76,SNR=19
DAWY S **S** **16 47 18.6 +1.1**
baz=76
DAWY Dawson 71.86 333 ⇓P **P** **16 37 56.1 -1.2**
KTUT Trabzon 71.86 53 ⇓P **P** **16 37 58.4 +0.8**
COYC Coyhaique 72.07 200 IAMs_20 IAMs_20 17 10 41.1
comp=Z,9μm,20.0s
YUK6 Outpost Mounta 72.15 329 P **P** **16 37 56.4 -2.9**
baz=76,SNR=17
YUK6 S **S** **16 47 21.9 +0.5**
baz=76
YUK4 Talbot Arm 72.19 330 P **P** **16 37 55.7 -3.8**
baz=76,SNR=14
YUK8 Steele Glacier 72.72 330 P **P** **16 37 59.9 -3.0**
baz=75
YUK8 S **S** **16 47 26.6 -1.3**
baz=75
YUK3 Moose Creek 72.92 330 P **P** **16 38 02.6 -1.2**
baz=74,SNR=29
YUK3 S **S** **16 47 27.7 -2.3**
baz=74
BVCY Beaver Creek 72.92 331 P **P** **16 38 02.1 -1.6**
baz=74,SNR=18
BVCY S **S** **16 47 31.2 +1.4**
baz=74
PNL Peninsula 72.98 328 P **P** **16 38 02.4 -1.6**
baz=75
PNL S **SKiKP** **16 47 33.6 -3.0**
baz=75
BMAR Burnt Mountain 73.00 337 P **P** **16 38 03.1 -1.0**
K27K Chicken 73.00 333 P **P** **16 38 02.8 -1.3**
baz=74
BCPM Bancas Point 73.02 328 IAMs_20 IAMs_20 17 07 42.2
comp=Z,19μm,22.0s
I26K Coal Creek Min 73.08 334 P **P** **16 38 03.1 -1.4**
I26K Coal Creek Min 73.08 334 P **P** **16 38 03.4 -1.2**
baz=73
CHVG Ch'k'valeri 73.09 50 ⇑P P 16 38 10.0 +4.9
CHVG Ch'k'valeri 73.09 50 ⇑P P 16 38 10.0 +5.0
BCAR Beaver Creek A 73.15 332 P **P** **16 38 03.6 -1.5**
GOF Gofitskoye 73.16 48 ⇑*e*P **P** **16 38 05.5 +0.2**
GOF pmax pmax
comp=Z,167nm,1.4s
L27K Beaver Creek, 73.17 332 P **P** **16 38 03.6 -1.6**
L27K IAmb IAmb 16 38 14.1
comp=Z,50nm,1.1s
L27K Beaver Creek, 73.17 332 P **P** **16 38 03.7 -1.5**
baz=74,SNR=33
L27K S **S** **16 47 33.3 +0.8**
baz=74
KIV Kislovodsk 73.20 49 ⇓P **P** **16 38 06.1 +0.3**
KIV Kislovodsk 73.20 49 P **P** **16 38 05.2 -0.5**
KIV Kislovodsk 73.20 49 *e*P **P** **16 38 05.7 0.0**
KIV *e*S **S** **16 47 34.3 +0.7**
KIV *e*SS **SS** **16 52 15.6 +1.0**
KIV pmax pmax
comp=Z,115nm,1.0s
KIV pmax pmax
comp=Z,189nm,3.5s
KIV MLR MLR
comp=Z,3μm,18.0s
KIV Kislovodsk 73.20 49 P **P** **16 38 06.3 +0.5**
KIV P **P** **16 38 06.3 +0.5**
KIV Kislovodsk 73.20 49 *i*P **P** **16 38 04.3 -1.4**
SNR=28
KIV Kislovodsk 73.20 49 ⇓P **P** **16 38 05.8 0.0**
KVAR Kislovodsk Arr 73.20 49 LR LR 17 11 00.1
comp=Z,4μm,18.6s,baz=180,slow=36
PINM Pinnacle 73.28 329 P **P** **16 38 05.1 -0.7**
baz=74
PINM S **SKiKP** **16 47 36.1 -1.1**
baz=74
PCA Pinnacle 73.28 329 P **P** **16 38 04.9 -1.0**
PCA IAmb IAmb 16 38 15.1
comp=Z,51nm,1.0s
KIRV Kirov 73.37 33 LR LR 17 06 09.6
comp=Z,10μm,21.5s,baz=284,slow=32
KIRV Kirov 73.37 33 *ce*P **P** **16 38 05.1 -1.2**
M27K Edge Creek, AK 73.39 331 P **P** **16 38 05.5 -1.1**
M27K IAmb IAmb 16 38 15.7
comp=Z,61nm,1.1s
M27K IAMs_20 IAMs_20 17 07 48.0
comp=Z,22μm,22.0s
M27K Edge Creek, AK 73.39 331 P **P** **16 38 05.5 -1.1**
baz=73,SNR=18
M27K S **S** **16 47 36.0 +0.7**
baz=73
KBZ Khabaz 73.40 49 P **P** **16 38 07.8 +1.0**
comp=Z,36nm,0.9s,baz=283,slow=6.3,SNR=16
KBZ LR LR 17 11 15.3
comp=Z,4μm,18.4s,baz=286,slow=37
comp=Z,36nm,0.9s
KBZ Khabaz 73.40 49 *ce*P **P** **16 38 07.6 +0.8**
KBZ pmax pmax
comp=Z,64nm,1.1s
KBZ MLR MLR
comp=Z,4μm,18.0s
LOGN Logan Glacier 73.43 329 P **P** **16 38 05.8 -1.1**
LOGN IAmb IAmb 16 38 17.3
comp=Z,58nm,1.1s
J26L Joseph Creek 73.49 333 P **P** **16 38 05.3 -1.8**
J26L IAMs_20 IAMs_20 17 09 34.4
comp=Z,20μm,19.0s
J26L Joseph Creek 73.49 333 P **P** **16 38 04.5 -2.6**
baz=72,SNR=17
J26L S **SKiKP** **16 47 37.8 +0.4**
baz=72
CTGM Chitina Glacie 73.55 330 P **P** **16 38 06.7 -0.9**
CTGM IAmb IAmb 16 38 17.1
comp=Z,66nm,1.1s
CTG Chitna Glacier 73.55 330 P **P** **16 38 06.7 -0.8**
baz=73,SNR=9.3
TABL Table Mountain 73.61 329 P **P** **16 38 07.3 -0.7**
TABL IAmb IAmb 16 38 17.2
comp=Z,56nm,0.9s
BARN Barnard Glacie 73.67 330 P **P** **16 38 07.0 -1.3**
BARN IAmb IAmb 16 38 17.9
comp=Z,92nm,1.1s
GRNC Granite Creek 73.81 329 P **P** **16 38 08.2 -1.0**
SCRK Sand Creek 73.83 333 P **P** **16 38 07.0 -2.1**
SCRK IAMs_20 IAMs_20 17 08 33.4
comp=Z,21μm,22.0s
SCRK Sand Creek 73.83 333 P **P** **16 38 06.9 -2.2**
baz=72
SCRK S **S** **16 47 40.5 +0.4**
baz=72
L26K Log Cabin Wild 73.84 332 P **P** **16 38 07.2 -1.9**
baz=72
L26K S **S** **16 47 40.6 +0.5**
baz=72
M26K Nabesna, AK 73.88 331 P **P** **16 38 07.4 -2.0**
M26K IAMs_20 IAMs_20 17 08 47.9
comp=Z,22μm,22.0s
M26K Nabesna, AK 73.88 331 P **P** **16 38 06.4 -2.9**
baz=72
M26K S **S** **16 47 40.9 +0.3**
baz=72
D24K Happy Valley 73.93 339 P **P** **16 38 08.2 -1.2**
baz=69
D24K S **S** **16 47 43.6 +2.8**
baz=69
TSUM Tsumeb 73.94 119 *e*P **P** **16 38 10.4 -0.1**
TSUM IAmb IAmb 16 38 15.1
comp=Z,597nm,1.4s
TSUM Tsumeb 73.94 119 LR LR 17 03 18.5
comp=Z,17μm,21.7s,baz=312,slow=30
TSUM Tsumeb 73.94 119 P **P** **16 38 09.9 -0.5**
TSUM IAmb IAmb 16 38 15.5
comp=Z,68nm,1.3s
TSUM Tsumeb 73.94 119 IAMs_20 IAMs_20 17 03 06.7
comp=Z,17μm,21.0s
TSUM Tsumeb 73.94 119 ⇓P **P** **16 38 11.8 +1.3**
DOT Dot Lake 73.96 333 P **P** **16 38 08.4 -1.4**
MENT Mentasta 74.03 332 P **P** **16 38 08.3 -1.9**
MESA MESA 74.07 329 P **P** **16 38 08.0 -2.6**
baz=73
MESA S **S** **16 47 44.8 +1.7**
baz=73
ONI Oni 74.10 50 P **P** **16 38 10.0 -1.0**
ONI IAmb IAmb 16 38 15.7
comp=Z,59nm,1.0s
ONI Oni 74.10 50 P **P** **16 38 10.0 -1.0**
ONI pmax pmax
comp=Z,59nm,1.0s
BELG Belogornoye 74.11 40 LR LR 17 08 31.2
comp=Z,15μm,19.2s,baz=290,slow=34
BELG Belogornoye 74.11 40 *di*P **P** **16 38 09.1 -1.6**
BELG pmax pmax
comp=Z,42nm,1.1s
ISLE Juniper Island 74.12 329 P **P** **16 38 09.3 -1.6**
ISLE IAmb IAmb 16 38 21.8
comp=Z,91nm,1.2s
J25K Salcha River, 74.19 334 P **P** **16 38 08.9 -2.3**
J25K Salcha River, 74.19 334 P **P** **16 38 08.5 -2.7**
baz=71,SNR=8.4
J25K S **S** **16 47 43.3 -0.8**
baz=71
MCARA McCarthy VSAT 74.20 330 P **P** **16 38 10.3 -0.9**
baz=72
C23K Itkillik River 74.26 340 P **P** **16 38 11.3 0.0**
baz=68
RIDG Independent Ri 74.26 333 P **P** **16 38 10.3 -1.3**
RIDG IAMs_20 IAMs_20 17 09 40.9
comp=Z,20μm,20.0s
RIDG Independent Ri 74.26 333 P **P** **16 38 09.4 -2.2**
baz=71,SNR=11
TGL Tana Glacier 74.31 330 P **P** **16 38 10.7 -1.2**
TGL IAmb IAmb 16 38 21.1
comp=Z,60nm,1.0s
ZEI Tsey 74.36 50 *e*P **P** **16 38 12.0 -0.8**
ZEI pmax pmax
comp=Z,48nm,1.0s
TOLK Toolik Lake Re 74.37 338 P **P** **16 38 11.3 -0.8**
TOLK Toolik Lake Re 74.37 338 P **P** **16 38 11.3 -0.8**
baz=68,SNR=9.3
TOLK S **S** **16 47 44.8 -1.0**
baz=68
TOLK S **SKiKP** **16 47 48.2 +10**
baz=68
WAX Waxell Ridge 74.41 329 P **P** **16 38 11.1 -1.4**
WAX IAmb IAmb 16 38 22.9
comp=Z,87nm,1.3s
VRDI Verde Repeater 74.45 330 P **P** **16 38 11.6 -1.3**
VRDI IAmb IAmb 16 38 23.4
comp=Z,63nm,1.1s
VRDI IAMs_20 IAMs_20 17 10 32.0
comp=Z,17μm,19.0s
GLB Gilahina Butte 74.54 330 P **P** **16 38 12.0 -1.2**
GLB IAmb IAmb 16 38 22.3
comp=Z,58nm,1.1s
GLB IAMs_20 IAMs_20 17 08 50.5
comp=Z,14μm,22.0s
D23K Nanushuk River 74.62 339 P **P** **16 38 13.4 -0.1**
baz=68
K24K Donnelly Dome 74.63 333 P **P** **16 38 12.1 -1.6**
baz=70
K24K S **S** **16 47 51.3 +2.4**
baz=70
BGLC Bering Glacier 74.72 329 P **P** **16 38 13.2 -1.0**
baz=72
EFI East Falkland 74.73 188 *ce*P **P** **16 38 15.4 +1.3**
EFI pmax pmax
comp=Z,290nm,2.5s
EFI MLR MLR
comp=Z,6μm,19.0s
IL31 74.76 334 P **P** **16 38 12.9 -1.4**
IL31 IAmb IAmb 16 38 23.2
comp=Z,72nm,1.0s
ILAR Eielson Array 74.76 334 P **P** **16 38 13.6 -0.8**
comp=Z,26nm,0.9s,baz=72,slow=4.4,SNR=42
ILAR LR LR 17 10 32.5
comp=Z,30μm,19.9s,baz=64,slow=35
comp=Z,26nm,0.9s
ILAR Eielson Array 74.76 334 P **P** **16 38 13.0 -1.3**
ILAR Eielson Array 74.76 334 P **P** **16 38 13.0 -1.3**
H24K Noodor Dome 74.77 335 P **P** **16 38 13.2 -1.3**
H24K Noodor Dome 74.77 335 P **P** **16 38 13.9 -0.5**
baz=69,SNR=9.4
H24K S **S** **16 47 52.7 +2.3**
baz=69
PAX Paxson 74.78 332 P **P** **16 38 12.1 -2.5**
PAX Paxson 74.78 332 P **P** **16 38 12.1 -2.5**
PAX pmax pmax
comp=Z,43nm,1.1s
PAX Paxson 74.78 332 P **P** **16 38 12.7 -2.0**
baz=70,SNR=18
PAX S **S** **16 47 50.2 -0.6**
baz=70
HARP HAARP 74.84 332 P **P** **16 38 13.5 -1.4**
baz=71,SNR=10.0
N25K Chitina, Valde 74.85 331 P **P** **16 38 12.7 -2.4**
N25K IAMs_20 IAMs_20 17 09 21.5
comp=Z,16μm,22.0s
N25K Chitina, Valde 74.85 331 P **P** **16 38 13.8 -1.3**
baz=71,SNR=12
N25K S **S** **16 47 51.3 -0.2**
baz=71
POKR Poker Plat Res 74.85 335 P **P** **16 38 12.9 -2.0**
POKR Poker Plat Res 74.85 335 P **P** **16 38 12.8 -2.0**
baz=69
POKR S **S** **16 47 52.5 +1.2**
baz=69
HDA Harding Lake 74.91 334 P **P** **16 38 13.7 -1.6**
baz=70
HDA S **S** **16 47 53.6 +1.6**
baz=70
HDA S **S** **16 47 53.6 +1.6**
baz=70
BMRM Bremner River 75.06 330 P **P** **16 38 14.6 -1.7**
BMRM IAMs_20 IAMs_20 17 11 01.2
comp=Z,19μm,19.0s
BMRM Bremner River 75.06 330 P **P** **16 38 14.8 -1.4**
baz=71,SNR=9.3
BMRM S **S** **16 47 54.6 +0.7**
baz=71
COLA College 75.11 334 *di*P **P** **16 38 14.5 -1.8**
COLA pmax pmax
comp=Z,106nm,1.6s
COLA MLR MLR
comp=Z,29μm,19.0s
COLA College 75.11 334 P **P** **16 38 15.4 -0.9**
baz=69
COLA S **S** **16 47 56.1 +2.1**
baz=69
TCOL CIGO, UAF Yank 75.11 334 P **P** **16 38 15.0 -1.3**
baz=69
TCOL S **S** **16 47 55.4 +1.3**
baz=69
HMT Hamilton 75.11 329 P **P** **16 38 15.4 -1.1**
HMT IAmb IAmb 16 38 25.9
comp=Z,54nm,1.0s
COLD Coldfoot 75.12 337 P **P** **16 38 15.6 -0.8**
COLD Coldfoot 75.12 337 P **P** **16 38 14.1 -2.3**
baz=67
COLD S **S** **16 47 57.4 +3.2**
baz=67
CCB Clear Creek Bu 75.17 334 P **P** **16 38 15.1 -1.6**
CCB IAmb IAmb 16 38 27.2
comp=Z,118nm,1.4s
MDM Murphy Dome 75.23 335 P **P** **16 38 15.6 -1.5**
MDM IAmb IAmb 16 38 26.8
comp=Z,106nm,1.4s
WRH Wood River Hil 75.35 334 P **P** **16 38 16.2 -1.5**
WRH IAmb IAmb 16 38 26.6
comp=Z,79nm,1.0s
M24K Tolsona, Glenn 75.38 332 IAMs_20 IAMs_20 17 10 16.6
comp=Z,20μm,20.0s
M24K Tolsona, Glenn 75.38 332 P **P** **16 38 15.6 -2.4**
baz=70
M24K S **S** **16 47 59.1 +1.7**
baz=70
H23K Yukon River 75.41 336 P **P** **16 38 17.3 -0.9**
H23K IAmb IAmb 16 38 29.6
comp=Z,113nm,1.2s
H23K Yukon River 75.41 336 P **P** **16 38 17.6 -0.5**
baz=68,SNR=31
H23K S **S** **16 48 01.8 +4.3**
baz=68
A21K Barrow 75.46 342 P **P** **16 38 17.7 -0.5**
baz=63
A21K S **S** **16 47 59.2 +1.4**
baz=63
KLU Klutina 75.48 331 P **P** **16 38 17.1 -1.6**
KLU IAmb IAmb 16 38 27.5
comp=Z,62nm,1.0s

KLU IAMs_20 IAMs_20 17 09 52.3
comp=Z,18µm,21.0s
KLU Klutina 75.48 331 P P 16 38 16.1 -2.6
baz=70,SNR=14
KLU S S **16 47 59.0 +0.5**
baz=70
DIV Divide 75.54 330 P P 16 38 17.2 -1.9
DHY Denali Highway 75.56 333 P P 16 38 17.8 -1.4
DHY Denali Highway 75.56 333 P P 16 38 17.5 -1.7
baz=69
GROC Groznyy 75.58 49 *e*P P **16 38 19.4 -0.1**
GROC *e* 16 38 34.2
GROC *e*S S **16 48 02.5 +2.5**
GROC pmax pmax
comp=Z,19nm,0.5s
I23K Minto, Yukon-K 75.60 335 P P 16 38 17.9 -1.3
I23K IAmb IAmb 16 38 29.3
comp=Z,138nm,1.4s
I23K Minto, Yukon-K 75.60 335 P P **16 38 17.1 -2.0**
baz=68,SNR=21
I23K S S **16 48 00.2 +0.7**
baz=68
NEA2 Nenana 75.70 334 P P 16 38 17.9 -1.8
NEA2 IAmb IAmb 16 38 28.5
comp=Z,54nm,1.1s
NEA2 Nenana 75.70 334 P P **16 38 18.1 -1.7**
baz=68,SNR=12
NEA2 S S **16 47 59.4 -1.2**
baz=68
GNI Garni 75.73 52 *ce*P P **16 38 19.9 -0.7**
GNI pmax pmax
comp=Z,127nm,1.3s
GNI MLR MLR
comp=Z,3µm,21.0s
GNI Garni 75.73 52 P P **16 38 21.4 +0.8**
GNI Garni 75.73 52 P P **16 38 20.5 -0.2**
GNI Garni 75.73 52 ⇓P P **16 38 20.9 +0.2**
EYAK Cordova Ski Ar 75.73 330 P P 16 38 19.2 -0.8
baz=70
EYAK S S **16 48 01.9 +0.8**
baz=70
WAT6 Susitna Watana 75.90 332 P P 16 38 19.0 -2.1
baz=68
MCK McKinley 75.97 334 P P 16 38 19.7 -1.7
MCK IAmb IAmb 16 38 30.1
comp=Z,49nm,1.0s
MCK McKinley 75.97 334 P P 16 38 19.7 -1.7
MCK pmax pmax
comp=Z,49nm,1.0s
MCK MLR MLR
comp=Z,24µm,20.0s
MCK McKinley 75.97 334 P P 16 38 20.0 -1.4
baz=68
MCK S S **16 48 02.4 -1.3**
baz=68
SCM Sheep Creek Mo 75.99 331 P P 16 38 20.2 -1.4
SCM IAMs_20 IAMs_20 17 10 05.6
comp=Z,20µm,21.0s
SCM Sheep Creek Mo 75.99 331 P P 16 38 20.2 -1.4
SCM pmax pmax
comp=Z,51nm,1.4s
SCM MLR MLR
comp=Z,20µm,21.0s
SCM Sheep Creek Mo 75.99 331 P P 16 38 19.4 -2.2
baz=69
SCM S S **16 48 01.9 -2.2**
baz=69
FID Port Fidalgo 76.00 330 IAMs_20 IAMs_20 17 11 34.6
comp=Z,17µm,19.0s
BWN Browne 76.02 334 P P 16 38 20.4 -1.2
RND Reindeer 76.06 333 P P 16 38 20.6 -1.4
RND IAmb IAmb 16 38 32.7
comp=Z,61nm,1.2s
RND IAMs_20 IAMs_20 17 12 02.4
comp=Z,19µm,19.0s
RND Reindeer 76.06 333 P P 16 38 20.6 -1.4
RND pmax pmax
comp=Z,61nm,1.2s
RND MLR MLR
comp=Z,18µm,19.0s
H22K Ishtalitna Cre 76.08 336 P P 16 38 21.2 -0.7
baz=66,SNR=20
H22K S S **16 48 07.0 +2.1**
baz=66
HIN Hinchinbrook I 76.14 330 P P 16 38 21.3 -1.1
HIN IAmb IAmb 16 38 31.8
comp=Z,117nm,1.3s
WAT1 Susitna Watana 76.15 333 P P 16 38 20.9 -1.6
baz=68
WAT1 S S **16 48 05.5 -0.3**
baz=68
M23K Glacier View 76.18 331 P P 16 38 20.4 -2.2
baz=68
M23K S S **16 48 04.4 -1.8**
baz=68
MLY Manley 76.18 335 P P 16 38 21.3 -1.3
MLY Manley 76.18 335 P P 16 38 21.5 -1.1
baz=66,SNR=10
MLY S S **16 48 06.3 +0.2**
baz=66
GLI Glacier Island 76.23 330 P P 16 38 21.0 -1.9
GLI IAMs_20 IAMs_20 17 09 55.2
comp=Z,20µm,22.0s
GLI Glacier Island 76.23 330 P P 16 38 21.0 -1.9
baz=69
GLI S S **16 48 05.4 -1.3**
baz=69
Q23K Middleton Isla 76.41 329 IAMs_20 IAMs_20 17 10 34.9
comp=Z,14µm,20.0s
Q23K Middleton Isla 76.41 329 P P 16 38 21.8 -2.1
baz=69
SML Sawmill 76.44 332 P P 16 38 21.8 -2.3
SML Sawmill 76.44 332 P P 16 38 21.6 -2.5
baz=68
SML S S **16 48 07.2 -1.9**
baz=68
I21K Tanana 76.60 335 P P 16 38 23.6 -1.3
I21K IAmb IAmb 16 38 36.0
comp=Z,99nm,1.4s
I21K Tanana 76.60 335 P P 16 38 23.9 -1.0
baz=65
I21K S S **16 48 10.7 +0.1**
baz=65
TRF Thorofare Moun 76.64 334 P P 16 38 23.6 -1.8
TRF IAmb IAmb 16 38 37.8
comp=Z,86nm,1.1s
TRF IAMs_20 IAMs_20 17 11 39.6
comp=Z,20µm,20.0s
TRF Thorofare Moun 76.64 334 P P 16 38 24.2 -1.2
baz=66
TRF S S **16 48 10.9 -0.4**
baz=66
KNK Knik Glacier 76.65 331 P P 16 38 23.2 -2.1
baz=68
KNK S S **16 48 12.5 +1.2**
baz=68
BPAW Bear Paw Mtn. 76.66 334 P P 16 38 23.1 -2.1
BPAW Bear Paw Mtn. 76.66 334 P P 16 38 23.7 -1.6
baz=66
BPAW S S **16 48 11.0 -0.3**
baz=66
H21K Melozitna Rive 76.71 336 P P 16 38 24.0 -1.5
H21K IAmb IAmb 16 38 35.1
comp=Z,51nm,1.1s
H21K Melozitna Rive 76.71 336 P P 16 38 25.0 -0.5
baz=65,SNR=16
H21K S S **16 48 13.3 +1.5**
baz=65
GHO Glory Hole Cre 76.72 332 P P 16 38 23.9 -1.9
GHO IAmb IAmb 16 38 34.7
comp=Z,56nm,1.1s
MAK Makhachkala 76.84 49 *e*P P 16 38 21.8 -4.8
MAK *e* 16 41 15.4
MAK *e*PPP PPP 16 43 01.3
MAK *e*S S **16 48 07.1 -6.8**
MAK *e*SS SS **16 53 03.3 -6.4**
MAK pmax pmax
comp=Z,105nm,1.3s
MAK MLR MLR
comp=Z,4µm,16.0s
KTH Kantishna Hill 76.85 334 P P 16 38 24.5 -1.9
KTH IAmb IAmb 16 38 35.3
comp=Z,92nm,1.0s
PMR Palmer 76.88 332 P P 16 38 24.8 -1.7
PMR IAmb IAmb 16 38 35.4
comp=Z,51nm,1.2s
PMR Palmer 76.88 332 P P **16 38 24.8 -1.7**
PMR pmax pmax
comp=Z,51nm,1.2s
PMR Palmer 76.88 332 P P **16 38 25.0 -1.5**
baz=67
PMR S S **16 48 14.4 +0.8**
baz=67
IMAR Indian Mountai 76.92 337 P P 16 38 25.7 -1.0
CUT Chulitna 77.05 333 P P 16 38 26.2 -1.2
CUT Chulitna 77.05 333 P P 16 38 25.5 -1.9
baz=66
CUT S S **16 48 16.0 +0.5**
baz=66
MBAR Mbarara 77.16 96 LR LR 17 10 24.0
comp=Z,19µm,20.5s,baz=279,slow=34
MBAR Mbarara 77.16 96 P P **16 38 29.0 -0.1**
MBAR IAmb IAmb 16 38 34.6
comp=Z,95nm,1.2s
MBAR Mbarara 77.16 96*d i*P P **16 38 29.7 +0.5**
MBAR pmax pmax
comp=Z,109nm,1.3s
MBAR Mbarara 77.16 96 P P **16 38 30.3 +1.2**
MBAR P P **16 38 30.3 +1.2**
MBAR Mbarara 77.16 96 *e*P P 16 38 22.5 -6.6
MBAR *e*S S **16 48 22.3 +3.7**
MBAR Mbarara 77.16 96⇓*e*P P **16 38 27.6 -1.6**
MBAR *e*S S 16 48 29.4 +11
MBAR Mbarara 77.16 96⇓*e*P P **16 38 30.2 +1.0**
MBAR *e*S S 16 48 29.4 +11
MBAR Mbarara 77.16 96 *e*P P **16 38 31.4 +2.2**
MBAR *e*S S 16 48 30.0 +11
MBAR Mbarara 77.16 96 ⇓P P **16 38 29.6 +0.5**
M22K Willow 77.25 332 P P **16 38 27.5 -1.1**
M22K IAMs_20 IAMs_20 17 11 03.8
comp=Z,18µm,20.0s
M22K Willow 77.25 332 P P **16 38 27.1 -1.5**
baz=66
M22K S S **16 48 17.2 -0.5**
baz=66
CHUM Lake Minchumin 77.28 334 P P **16 38 27.5 -1.2**
baz=65,SNR=12
CHUM S S **16 48 18.6 +0.7**
baz=65
RC01 Rabbit Creek A 77.34 331 P P **16 38 27.7 -1.4**
RC01 IAmb IAmb 16 38 38.2
comp=Z,50nm,1.1s
RC01 Rabbit Creek A 77.34 331 P P **16 38 26.9 -2.3**
baz=66
RC01 S S **16 48 19.1 +0.3**
baz=66
CAST Castle Rocks 77.39 334 P P **16 38 26.8 -2.5**
baz=65
FIS Fire Island 77.54 331 IAMs_20 IAMs_20 17 10 56.5
comp=Z,19µm,21.0s
O22K Cooper Landing 77.58 331 P P **16 38 29.0 -1.4**
baz=66
SEW Seward 77.61 330 P P **16 38 29.2 -1.4**
baz=66
SEW S S **16 48 17.9 -3.7**
baz=66
SUA Susitna One 77.64 332 P P **16 38 29.4 -1.5**
SUA IAMs_20 IAMs_20 17 11 18.2
comp=Z,17µm,20.0s
SUA Susitna One 77.64 332 P P **16 38 29.5 -1.5**
baz=66
SUA S S **16 48 20.1 -2.2**
baz=66
PPLA Purkeypile 77.65 333 P P **16 38 29.6 -1.4**
PPLA Purkeypile 77.65 333 P P **16 38 29.8 -1.2**
baz=65,SNR=9.4
PPLA S S **16 48 20.1 -2.3**
baz=65
SKT Skwentna 77.76 332 P P **16 38 30.2 -1.3**
SKT IAmb IAmb 16 38 40.3
comp=Z,56nm,1.1s
SKT Skwentna 77.76 332 P P **16 38 29.9 -1.6**
baz=65,SNR=21
SKT S S **16 48 22.8 -0.6**
baz=65
J20K Nowinta River 77.88 335 P P **16 38 31.0 -1.1**
J20K Nowinta River 77.88 335 P P **16 38 29.9 -2.2**
baz=63
J20K S S **16 48 23.3 -1.2**
baz=63
CAPN Captain Cook N 78.11 331 P P **16 38 31.9 -1.4**
baz=65
CAPN S S **16 48 27.5 +0.5**
baz=65
K20K Telida 78.22 334 P P **16 38 32.2 -1.7**
K20K Telida 78.22 334 P P **16 38 32.3 -1.7**
baz=63,SNR=11
K20K S S **16 48 25.9 -2.3**
baz=63
SPU Mount Spurr 78.33 332 P P **16 38 33.1 -1.6**
BRSE Bradley Lake S 78.35 330 P P **16 38 32.3 -2.5**
baz=65
N20K Mount Spurr 78.39 332 P P **16 38 33.2 -1.9**
baz=64
M20K Styx River 78.49 333 P P **16 38 33.1 -2.5**
M20K IAmb IAmb 16 38 45.9
comp=Z,58nm,1.2s
M20K Styx River 78.49 333 P P **16 38 33.4 -2.2**
baz=64,SNR=11
M20K S S **16 48 31.5 +0.2**
baz=64
L20K Farewell, AK 78.53 333 P P **16 38 32.9 -2.9**
baz=63,SNR=10
L20K S S **16 48 31.1 -0.6**
baz=63
GCSA Galena City Sc 78.66 336 P P **16 38 35.5 -0.8**
baz=61
GCSA S S **16 48 34.4 +1.6**
baz=61
CNPM China Poot 78.67 330 P P **16 38 35.3 -1.3**
CNPM IAmb IAmb 16 38 45.7
comp=Z,68nm,1.2s
ARU Arti 78.75 33 LR LR 17 11 07.5
comp=Z,8µm,18.2s,baz=286,slow=34
ARU Arti 78.75 33 P P **16 38 35.7 -1.3**
ARU IAmb IAmb 16 38 47.1
comp=Z,61nm,1.1s
ARU IAMs_20 IAMs_20 17 10 54.9
comp=Z,9µm,19.0s
ARU Arti 78.75 33*d i*P P **16 38 36.5 -0.5**
ARU 16 38 45.6
ARU 16 41 33.1
ARU PPP PPP 16 43 19.3
ARU S S **16 48 36.2 +2.2**
ARU SS SS **16 53 38.9 +1.2**
ARU SSS SSS 16 56 58.8
ARU pmax pmax
comp=Z,34nm,1.1s
ARU Arti 78.75 33 ⇑P P **16 38 36.1 -0.9**
HOM Homer 78.80 330 IAMs_20 IAMs_20 17 11 13.1
comp=Z,21µm,22.0s
HOM Homer 78.80 330 P P **16 38 36.2 -1.0**
baz=65
M19K Big River Lodg 79.01 333 P P **16 38 36.7 -1.7**
M19K IAmb IAmb 16 38 49.1
comp=Z,56nm,1.1s
M19K Big River Lodg 79.01 333 P P **16 38 37.0 -1.4**
baz=63
RDOG Red Dog Mine 79.02 340 P P 16 38 32.7 -5.6
baz=56
RDOG S S **16 48 34.2 -2.4**
baz=56
O20K Slope Mountain 79.06 331 P P **16 38 37.4 -1.4**
baz=64
O20K S S **16 48 36.8 -0.6**
baz=64
L19K White Mountain 79.08 333 P P **16 38 37.0 -1.7**
L19K IAmb IAmb 16 38 49.0
comp=Z,90nm,1.3s
L19K IAMs_20 IAMs_20 17 12 42.1
comp=Z,17µm,20.0s
L19K White Mountain 79.08 333 P P **16 38 37.3 -1.5**
baz=62,SNR=11
L19K S S **16 48 33.4 -4.1**
baz=62
TTA Tatalina 79.20 334 P P **16 38 37.4 -2.1**
TTA Tatalina 79.20 334 P P **16 38 37.4 -2.1**
TTA pmax pmax
comp=Z,20nm,1.4s
TTA Tatalina 79.20 334 P P **16 38 37.2 -2.3**
baz=62
RPN Rapa Nui 79.30 235 LR LR 17 09 19.7
comp=Z,2µm,21.6s,baz=49,slow=32
N19K Bonanza Creek 79.55 332 P P **16 38 40.0 -1.5**
N19K IAMs_20 IAMs_20 17 12 27.8
comp=Z,16µm,20.0s
N19K Bonanza Creek 79.55 332 P P **16 38 40.5 -0.9**
baz=62,SNR=8.2
N19K S S **16 48 42.9 +0.1**
baz=62
USHA Ushuaia 79.58 193 LR LR 17 14 25.3
comp=Z,5µm,21.4s,baz=24,slow=36
Q20K Shuyak Island 79.61 329 P P **16 38 40.4 -1.2**
baz=64
SVE Sverdlovsk 79.62 33*ce*P P **16 38 41.4 -0.4**
SVE *e* 16 41 39.8
SVE *e* 16 43 40.0
SVE *e*S S **16 48 46.1 +2.7**
SVE pmax pmax
comp=Z,167nm,1.7s
O19K Port Alsworth 79.77 331 IAMs_20 IAMs_20 17 12 27.5
comp=Z,18µm,21.0s
O19K Port Alsworth 79.77 331 P P **16 38 41.1 -1.4**
baz=62
O19K S S **16 48 43.5 -1.2**
baz=62
LODK Lodwar 79.89 90 P P **16 38 43.9 -0.2**
LODK IAMs_20 IAMs_20 17 13 02.3
comp=Z,15µm,20.0s
LODK Lodwar 79.89 90 P P **16 38 44.7 +0.6**
SNR=23
LODK Lodwar 79.89 90 *e*P P **16 38 43.2 -0.9**
LODK *e*S S 16 48 58.6 +11
LODK Lodwar 79.89 90⇓*e*P P **16 38 44.1 0.0**
LODK Lodwar 79.89 90 *e*P P **16 38 45.6 +1.5**
LODK Lodwar 79.89 90 *e*P P **16 38 44.1 0.0**
LODK *e*S S **16 48 54.0 +6.3**
SVW2 Sparrevohn 79.89 332 P P **16 38 41.7 -1.5**
Q19K Cape Douglas, 80.05 330 P P **16 38 42.4 -1.7**
baz=63
KDAK Kodiak Island 80.06 329 LR LR 17 13 45.2
comp=Z,18µm,20.4s,baz=84,slow=35
KDAK Kodiak Island 80.06 329 IAMs_20 IAMs_20 17 13 44.5
comp=Z,17µm,20.0s
KDAK Kodiak Island 80.06 329 *i* P P **16 38 40.9 -3.2**
KDAK pmax pmax
comp=Z,91nm,1.5s
KDAK MLR MLR
comp=Z,18µm,18.0s
KDAK Kodiak Island 80.06 329 P P **16 38 43.9 -0.3**
baz=64
KDAK S S **16 48 46.4 -1.5**
baz=64
N18K Kilae Creek 80.23 332 P P **16 38 43.8 -1.2**
N18K IAmb IAmb 16 38 55.4
comp=Z,83nm,1.3s
N18K Kilae Creek 80.23 332 P P **16 38 43.1 -2.0**
baz=61
N18K S S **16 48 47.9 -1.8**
baz=61
O18K Koktuh Hills 80.32 331 P P **16 38 44.0 -1.5**
O18K IAMs_20 IAMs_20 17 12 45.2
comp=Z,20µm,21.0s
O18K Koktuh Hills 80.32 331 P P **16 38 44.3 -1.2**
baz=62,SNR=11
O18K S S **16 48 49.1 -1.6**
baz=62
P18K Big Mountain, 80.55 331 P P **16 38 44.9 -1.9**
P18K IAmb IAmb 16 38 56.9
comp=Z,164nm,1.3s
P18K Big Mountain, 80.55 331 P P **16 38 44.9 -1.9**
baz=62,SNR=6.8
P18K S S **16 48 49.0 -4.2**
baz=62
OHAK Old Harbor 80.66 328 P P **16 38 46.3 -1.0**
baz=63
OHAK S S **16 48 54.4 +0.3**
baz=63
Q18K Katmai Hardscr 80.81 330 P P **16 38 46.6 -1.6**
baz=62
AKTO Aktyubinsk 80.88 39 LR LR 17 11 50.8
comp=Z,7µm,21.0s,baz=303,slow=34
FURI Furi 80.94 84 IAMs_20 IAMs_20 17 12 14.4
comp=Z,12µm,22.0s
FURI Furi 80.94 84 *e*P P **16 38 51.5 +1.5**
FURI *e*S **SKSac** **16 49 12.1 +2.7**
FURI Furi 80.94 84⇓*e*P P 16 38 55.1 +5.1
FURI Furi 80.94 84 *e*P P **16 38 52.2 +2.1**
FURI *e*S **SKSac** **16 49 15.8 +6.5**
FURI Furi 80.94 84 *e*P P **16 38 52.0 +2.0**
FURI Furi 80.94 84 *e*P P **16 38 52.2 +2.1**
FURI *e*SKSac **SKSac** **16 49 16.0 +6.7**
FURI Furi 80.94 84 *e*P P **16 38 47.5 -2.5**
FURI *e*S S **16 49 01.6 +2.4**
AAE Adis Abeba 80.97 84 *e*P P **16 38 49.4 -0.8**
AAE *e*S S **16 48 56.5 -3.0**
AAE Adis Abeba 80.97 84⇑*e*P P **16 38 49.9 -0.3**
AAE ⇓*e*P P **16 38 51.5 +1.4**
AAE ⇓*e*S S 16 49 09.2 +10
AAE Adis Abeba 80.97 84⇓*e*P P **16 38 51.5 +1.4**
AAE ⇓*e*S S 16 49 09.2 +10
AAE Adis Abeba 80.97 84 *e*P P **16 38 47.3 -2.9**
AAE *e*S S **16 49 02.0 +2.4**
LSZ Lusaka 80.97 111 LR LR 17 10 16.1
comp=Z,7µm,19.4s,baz=324,slow=32
LSZ Lusaka 80.97 111 IAMs_20 IAMs_20 17 14 02.4
comp=Z,13µm,18.0s
AUGR Augrabies 80.98 126 *e*P P **16 38 50.7 +1.2**
AUGR IAmb IAmb 16 38 54.1
comp=Z,152nm,1.5s
DESE Dese 81.01 82⇓*e*P P **16 38 50.5 0.0**
DESE *e*S S **16 49 04.8 +4.8**
DESE Dese 81.01 82⇓*e*P P **16 38 52.4 +1.9**
DESE *e*S **SKSac** **16 49 14.0 +4.2**
DESE Dese 81.01 82 *e*P P 16 38 58.1 +7.6
DESE *e*S **SKSac** **16 49 15.8 +6.0**
DESE Dese 81.01 82⇓*e*P P **16 38 52.4 +1.9**
DESE *e*S S 16 49 09.6 +10
DESE Dese 81.01 82 *e*P P **16 38 53.9 +3.5**
DESE *e*SKSac **SKSac** **16 49 18.2 +8.4**
DESE Dese 81.01 82 *e*P P **16 38 47.5 -2.9**
DESE *e*S S **16 49 01.4 +1.4**
P17K Kvichak River 81.19 331 P P **16 38 47.8 -2.4**
baz=61
O17K Koliganek Bris 81.19 332 P P **16 38 47.9 -2.2**
baz=60
Q17K Contact Creek 81.39 330 P P **16 38 50.0 -1.4**
baz=61
SII Sitkinak Islan 81.40 328 IAMs_20 IAMs_20 17 15 09.9
comp=Z,12µm,19.0s
SII Sitkinak Islan 81.40 328 P P **16 38 50.7 -0.7**
baz=62
DILA Dilla 81.47 87 *e*P P **16 38 51.0 -1.7**
DILA *e*S **SKSac** **16 49 19.3 +6.6**
DILA Dilla 81.47 87 *e*P P **16 38 52.9 +0.2**
DILA *e*SKSac **SKSac** **16 49 17.1 +4.4**
KEIM Keimoes 81.51 126 *e*P P **16 38 52.7 +0.3**
KEIM IAmb IAmb 16 38 57.3
comp=Z,201nm,1.4s
Q16K King Salmon 81.54 331 P P **16 38 50.5 -1.6**
baz=60,SNR=9.6
UPI Upington 81.54 125 *e*P P **16 38 54.5 +1.8**
UPI IAmb IAmb 16 39 02.3
comp=Z,9.8nm,0.8s
N16K Nishlik Lake 81.56 333 P P **16 38 50.9 -1.3**
baz=59,SNR=39
N16K S S **16 49 07.2 +3.6**
baz=59
ANKE Ethiopia-Afar 81.65 83 *e*P P **16 38 52.2 -1.7**
ANKE *e*S **SKSac** **16 49 20.5 +6.2**
ANKE Ethiopia-Afar 81.65 83 *e*P P **16 38 56.0 +2.1**
ANKE *e*SKSac **SKSac** **16 49 21.0 +6.6**
O16K Kokwok River B 81.72 332 P P **16 38 51.7 -1.3**
baz=59
O16K S S **16 49 07.4 +2.2**
baz=59
RAYN Ar Rayn 81.83 68 P P **16 38 52.8 -1.5**
RAYN Ar Rayn 81.83 68 P P **16 38 52.8 -1.5**
RAYN pmax pmax
comp=Z,12nm,0.9s
RAYN MLR MLR
comp=Z,18µm,18.0s
RAYN Ar Rayn 81.83 68 *i* P P **16 38 53.7 -0.6**
SNR=7.8
RAYN Ar Rayn 81.83 68 ⇓P P **16 38 55.6 +1.3**
ANM Nome 81.84 338 IAMs_20 IAMs_20 17 15 00.8
comp=Z,10µm,20.0s

ANM Nome 81.84 338 P **P** 16 38 51.9 -1.6
baz=54
ANM S **S** 16 49 08.5 +2.2
baz=54
R17K Ugashik Creek 81.93 330 P **P** 16 38 53.0 -1.1
baz=60
R17K S **S** 16 49 06.6 -0.9
baz=60
P16K Nushagak River 81.97 331 P **P** 16 38 53.1 -1.1
baz=59
TEND Ethiopian Broa 82.02 81 *e*P **P** 16 38 56.9 +1.5
TEND *e*S **SKSac** 16 49 25.2 +9.1
CVNA Calvinia 82.08 129 *e*P **P** 16 38 57.4 +2.0
CVNA IAmb IAmb 16 39 00.6
comp=Z,254nm,1.5s
TNA Tin City 82.09 339 P **P** 16 38 52.8 -2.0
baz=52
TNA S **S** 16 49 12.5 +3.7
baz=52
CHIR Chirikof Isln 82.46 328 IAMs_20 IAMs_20 17 14 34.9
comp=Z,10µm,19.0s
CHIR Chirikof Isln 82.46 328 P **P** 16 38 54.1 -2.8
baz=61
CHIR S **S** 16 49 14.9 +2.0
baz=61
ABKAR Akbulak array 82.51 40 P **P** 16 38 56.2 -1.1
ABKAR Akbulak array 82.51 40 P **P** 16 38 55.8 -1.5
ABKAR IAmb IAmb 16 39 07.8
comp=Z,90nm,1.5s
ABKAR Akbulak array 82.51 40 ⇓P **P** 16 38 57.0 -0.4
CER Ceres 82.75 130 *e*P **P** 16 39 00.4 +1.6
CER IAmb IAmb 16 39 03.8
comp=Z,59nm,1.5s
ORCD Orcadas 82.95 180 P **P** 16 38 58.0 -1.0
LBTB Lobatse 83.26 120 *e*P **P** 16 39 01.3 -0.4
LBTB IAmb IAmb 16 39 06.2
comp=Z,98nm,1.3s
LBTB Lobatse 83.26 120 LR LR 17 09 22.0
comp=Z,21µm,21.0s,baz=304,slow=31
LBTB Lobatse 83.26 120 P **P** 16 39 00.3 -1.3
LBTB IAmb IAmb 16 39 06.5
comp=Z,83nm,1.2s
LBTB Lobatse 83.26 120 P **P** 16 39 00.4 -1.3
LBTB pmax pmax
comp=Z,83nm,1.3s
SUR Sutherland 83.31 129 LR LR 17 08 45.2
comp=Z,12µm,20.7s,baz=305,slow=30
SUR Sutherland 83.31 129 IAMs_20 IAMs_20 17 07 22.1
comp=Z,13µm,22.0s
KMBO Kilima Mbogo 83.36 94 P **P** 16 39 04.0 +1.3
comp=Z,33nm,1.0s,baz=304,slow=5.6,SNR=27
KMBO LR LR 17 16 00.4
comp=Z,14µm,18.3s,baz=290,slow=36
comp=Z,33nm,1.0s
KMBO Kilima Mbogo 83.36 94 IAMs_20 IAMs_20 17 15 47.6
comp=Z,15µm,18.0s
KMBO Kilima Mbogo 83.36 94 *d i*P **P** 16 39 04.0 +1.3
KMBO Kilima Mbogo 83.36 94 *e*P **P** 16 39 03.9 +1.3
KMBO *e*S S 16 49 35.9 +12
KMBO Kilima Mbogo 83.36 94 ⇓*e*P **P** 16 39 02.3 -0.4
KMBO *e*S S 16 49 34.5 +11
KMBO Kilima Mbogo 83.36 94 ⇓*e*P **P** 16 39 02.3 -0.4
KMBO *e*SKSac **SKSac** 16 49 27.9 +2.5
KMBO Kilima Mbogo 83.36 94 *e*P **P** 16 39 00.8 -1.9
KMBO *e*SKSac **S** 16 49 18.1 -5.9
KMBO Kilima Mbogo 83.36 94 P **P** 16 39 05.0 +2.3
BLWY Bulawayo 83.48 115 *e*P **P** 16 39 03.3 +0.3
BLWY IAmb IAmb 16 39 14.2
comp=Z,745nm,2.2s
MATP Matopo 83.52 115 *e*P **P** 16 39 03.3 +0.2
MATP Matopo 83.52 115 LR LR 17 10 56.3
comp=Z,11µm,19.8s,baz=313,slow=32
MATJ Matjiesfontein 83.61 130 *e*P **P** 16 39 01.7 -1.6
MATJ IAmb IAmb 16 39 09.1
comp=Z,313nm,1.4s
ELIM Elim 83.73 131 *e*P **P** 16 39 03.7 -0.1
ELIM IAmb IAmb 16 39 08.6
comp=Z,275nm,1.5s
ATD Arta Tunnel 83.79 80 LR LR 17 17 38.9
comp=Z,7µm,18.1s,baz=296,slow=37
ATD Arta Tunnel 83.79 80 IAMs_20 IAMs_20 17 19 07.6
comp=Z,9µm,18.0s
ATD Arta Tunnel 83.79 80 *e*P **P** 16 39 05.0 +0.3
ATD *e*S **S** 16 49 22.4 -5.6
ATD Arta Tunnel 83.79 80 ⇓*e*P P 16 39 10.6 +5.9
ATD ⇓*e*S **S** 16 49 36.9 +8.9
ATD Arta Tunnel 83.79 80 *e*P **P** 16 39 05.8 +1.2
ATD *e*SKSac **S** 16 49 30.2 +2.2
ATD Arta Tunnel 83.79 80 *e*P **P** 16 39 00.3 -4.3
ATD *e*SKSac **SKSac** 16 49 17.4 -10
S14K Fog Glacier 84.12 329 P **P** 16 39 04.9 -0.7
baz=58,SNR=5.8
S14K S **S** 16 49 31.5 +1.6
baz=58
GRAN Grantham 84.25 128 *e*P **P** 16 39 06.2 -0.4
GRAN IAmb IAmb 16 39 16.0
comp=Z,45nm,0.9s
GAMB Gambell 84.49 339 IAMs_20 IAMs_20 17 16 38.9
comp=Z,14µm,21.0s
GAMB Gambell 84.49 339 P **P** 16 39 06.1 -1.1
baz=48
GAMB S **S** 16 49 35.1 +2.0
baz=48
KIBK Kibwezi 84.56 95 IAMs_20 IAMs_20 17 19 28.5
comp=Z,10µm,18.0s
KIBK Kibwezi 84.56 95 P **P** 16 39 10.6 +2.0
SNR=12
BOSA Boshof 84.72 124 *e*P **P** 16 39 08.3 -0.8
BOSA IAmb IAmb 16 39 13.1
comp=Z,113nm,1.5s
BOSA Boshof 84.72 124 P **P** 16 39 09.6 +0.5
comp=Z,32nm,1.2s,baz=291,slow=5.5,SNR=7.2
BOSA LR LR 17 12 59.3
comp=Z,9µm,18.1s,baz=314,slow=33
comp=Z,32nm,1.2s
BOSA Boshof 84.72 124 P **P** 16 39 08.4 -0.7
BOSA IAmb IAmb 16 39 13.5
comp=Z,104nm,1.4s
BOSA Boshof 84.72 124 P **P** 16 39 08.4 -0.7
BOSA pmax pmax
comp=Z,104nm,1.5s
BOSA Boshof 84.72 124 ⇓P **P** 16 39 10.5 +1.4
CHNA Chernabura Isl 84.91 328 P **P** 16 39 08.6 -0.9
baz=58
CHNA S **S** 16 49 39.7 +2.0
baz=58
CNBA Chernabura Isl 84.92 328 IAMs_20 IAMs_20 17 16 10.8
comp=Z,17µm,21.0s
HARA HARA 85.02 82 *e*P P 16 39 01.9 -9.2
HARA HARA 85.02 82 ⇓*e*P P 16 39 04.8 -6.3
HARA *e*S **S** 16 49 38.1 -2.5
HARA HARA 85.02 82 *e*P **P** 16 39 15.7 +4.6
HARA *e*S **S** 16 49 39.3 -1.3
HARA HARA 85.02 82 *e*P **P** 16 39 11.9 +0.8
HARA *e*S **S** 16 49 38.1 -2.5
HARA HARA 85.02 82 *e*P **P** 16 39 11.6 +0.5
HARA *e*SKSac **SKSac** 16 49 37.8 +1.6
HARA HARA 85.02 82 *e*P **P** 16 39 07.5 -3.6
HARA *e*SKSac **SKSac** 16 49 26.4 -10
SDPT Sand Point 85.06 329 P **P** 16 39 09.6 -0.7
SDPT Sand Point 85.06 329 P **P** 16 39 09.3 -1.0
baz=57,SNR=13
SDPT S **S** 16 49 39.7 +0.6
baz=57
HRAO HartRAO 85.34 120 *e*P **P** 16 39 11.2 -1.0
HRAO IAmb IAmb 16 39 22.3
comp=Z,182nm,1.8s
MUSN Musina, Limpop 85.48 116 *e*P **P** 16 39 13.2 +0.2
MUSN IAmb IAmb 16 39 18.1
comp=Z,136nm,1.5s
MUSN Musina, Limpop 85.48 116 IAmb IAmb 16 39 18.1
comp=Z,136nm,1.5s
MUSN Musina, Limpop 85.48 116 *e*P **P** 16 39 13.2 +0.2
PRYS Parys 85.56 121 *e*P **P** 16 39 12.0 -1.4
PRYS IAmb IAmb 16 39 17.5
comp=Z,764nm,3.4s
SLR Silverton 85.75 120 *e*P **P** 16 39 15.6 +1.3
SLR IAmb IAmb 16 39 19.0
comp=Z,134nm,1.4s
HVD Gariep Dam 85.87 125 *e*P **P** 16 39 15.3 +0.5
HVD IAmb IAmb 16 39 19.6
comp=Z,206nm,1.5s
TIXI Tiksi 86.00 2 LR LR 17 15 04.0
comp=Z,2µm,18.4s,baz=0.0,slow=34
TIXI Tiksi 86.00 2 P **P** 16 39 12.4 -2.2
TIXI IAmb IAmb 16 39 25.2
comp=Z,130nm,1.5s
TIXI Tiksi 86.00 2 *ce*P **P** 16 39 13.9 -0.7
TIXI pmax pmax
comp=Z,102nm,2.5s
TIXI MLR MLR
comp=Z,2µm,18.0s
TIXI Tiksi 86.00 2 ⇓P **P** 16 39 13.5 -1.1
GEYT Alibeck 86.22 50 P **P** 16 39 14.6 -1.9
GYA0B ALIBECK ARRAY 86.22 50 P **P** 16 39 14.6 -1.9
BRVK Borovoye 86.32 33 P **P** 16 39 15.2 -1.4
BRVK IAmb IAmb 16 39 21.1
comp=Z,54nm,1.1s
BRVK Borovoye 86.32 33 IAMs_20 IAMs_20 17 14 58.1
comp=Z,10µm,20.0s
BRVK Borovoye 86.32 33 *ce*P **P** 16 39 15.8 -0.8
BRVK pmax pmax
comp=Z,45nm,1.0s
BRVK Borovoye 86.32 33 ⇓P **P** 16 39 16.2 -0.4
BVAR Borovoye Array 86.39 33 LR LR 17 15 32.7
comp=Z,7µm,18.9s,baz=184,slow=34
SNKL Senekal, Frees 86.51 122 *e*P **P** 16 39 18.8 +0.7
SNKL IAmb IAmb 16 39 24.9
comp=Z,53nm,1.0s
FALS False Pass 86.74 329 P **P** 16 39 16.4 -2.2
baz=54
FALS S **S** 16 49 58.2 +2.7
baz=54
BILL Bilibino 86.81 349 P **P** 16 39 17.5 -1.2
BILL IAmb IAmb 16 39 30.4
comp=Z,57nm,1.3s
BILL IAMs_20 IAMs_20 17 24 26.2
comp=Z,6µm,18.0s
BILL Bilibino 86.81 349 *ce*P **P** 16 39 17.5 -1.2
BILL *e**PP **pP** 16 39 22.6 +0.3
BILL *e*S **SKSac** 16 49 40.5 -4.5
BILL pmax pmax
comp=Z,67nm,2.5s
SOE Somerset East 86.94 127 *e*P **P** 16 39 20.6 +0.7
SOE IAmb IAmb 16 39 24.7
comp=Z,157nm,1.5s
CRLN Carolina, Mapu 87.26 119 *e*P P 16 39 26.6 +4.8
CRLN IAmb IAmb 16 39 32.2
comp=Z,194nm,2.1s
MOPA Mopani 87.30 117 *e*P **P** 16 39 23.6 +1.8
MOPA IAmb IAmb 16 39 29.1
comp=Z,43nm,1.2s
JRN Qarnain Island 87.50 64 P **P** 16 39 24.9 +2.1
JRN P **P** 16 39 24.9 +2.1
NWCL Newcastle 87.93 121 *e*P **P** 16 39 24.5 -0.4
NWCL IAmb IAmb 16 39 29.5
comp=Z,115nm,1.4s
PMSA Palmer Station 88.23 188 LR LR 17 18 42.4
comp=Z,3µm,20.1s,baz=5.5,slow=35
SPIA Saint Paul Isl 88.32 334 P **P** 16 39 23.9 -2.2
baz=49
UNV Unalaska Valle 88.79 330 P **P** 16 39 25.4 -3.0
baz=52
UNV S **S** 16 50 17.6 +2.4
baz=52
MZR Muzera 88.81 66 *i*P **P** 16 39 29.5 +0.3
SNR=7.5
BRZS Berezniki 89.28 35 *de*P **P** 16 39 29.2 -1.6
BRZS *e* 16 42 58.1
BRZS Berezniki 89.28 35 ⇓*e*P **P** 16 39 29.3 -1.6
baz=35
BRZS *e*PP **PP** 16 42 58.1 -2.8
baz=35
ASUD Al Ashush, Dub 89.69 64 P **P** 16 39 34.2 +0.9
SHME Shamm 89.76 62 P **P** 16 39 33.3 -0.3
SNR=17
SHME P **P** 16 39 33.3 -0.3
SNR=17
SHME Shamm 89.76 62 *i*P **P** 16 39 32.8 -0.7
SNR=14
NAZ Nazwa, Dubai 89.81 63 P **P** 16 39 33.8 0.0
FAQ Al Faqa, Dubai 89.86 63 P **P** 16 39 36.0 +2.0
SNR=5.3
FAQ P **P** 16 39 36.0 +2.0
SNR=5.3
FAQ Al Faqa, Dubai 89.86 63 P **P** 16 39 33.5 -0.5
BANOM Banah 89.95 62 P **P** 16 39 34.6 +0.1
SNR=13
BANOM P **P** 16 39 34.6 +0.1
SNR=13
BANOM Banah 89.95 62 *i*P **P** 16 39 33.0 -1.5
SNR=9.8
MASF Masafi 90.06 63 P **P** 16 39 35.2 +0.1
SNR=18
MASF P **P** 16 39 35.2 +0.1
SNR=18
MSFE Esma-Masafi 90.07 63 *i*P **P** 16 39 34.2 -0.8
SNR=13
ASHO Ashiyiah 90.27 63 P **P** 16 39 35.9 -0.1
SNR=14
ASHO P **P** 16 39 35.9 -0.1
SNR=14
ASHO Ashiyiah 90.27 63 *i*P **P** 16 39 35.5 -0.5
SNR=9.7
ALNE Al Ain 90.28 64 P **P** 16 39 35.3 -0.7
SNR=9.4
ALNE P **P** 16 39 35.3 -0.7
SNR=9.4
ALNE Al Ain 90.28 64 *i*P **P** 16 39 35.8 -0.2
SNR=5.4
UOSS Minazif 90.28 63 P **P** 16 39 34.9 -1.1
UOSS IAmb IAmb 16 39 41.9
comp=Z,57nm,1.0s
UOSS Minazif 90.28 63 IAMs_20 IAMs_20 17 23 07.2
comp=Z,9µm,19.0s
UOSS Minazif 90.28 63 P **P** 16 39 36.0 0.0
UOSS P **P** 16 39 36.0 0.0
UOSS Minazif 90.28 63 *i*P **P** 16 39 34.8 -1.2
SNR=12
UOSS Minazif 90.28 63 ⇓P **P** 16 39 35.3 -0.7
NIKH Nikolski High 90.44 330 P **P** 16 39 35.2 -1.0
baz=50
NIKH S **S** 16 50 30.7 +0.1
baz=50
HOQ Hoqain 91.77 64 P **P** 16 39 42.7 -0.3
SNR=8.0
KURK Kurchatov 91.86 32 P **P** 16 39 41.6 -1.2
KURK IAmb IAmb 16 39 52.6
comp=Z,51nm,1.4s
KURK Kurchatov 91.86 32 IAMs_20 IAMs_20 17 18 32.7
comp=Z,7µm,19.0s
KURK Kurchatov 91.86 32 *ce*P **P** 16 39 41.6 -1.2
KURK pmax pmax
comp=Z,46nm,1.4s
KURK Kurchatov 91.86 32 ⇓P **P** 16 39 41.9 -0.9
KURBB Kurchatov Arra 91.88 32 PKKP 16 56 58.6
comp=Z,1.1nm,0.9s,baz=131,slow=2.4,SNR=5.4
KURBB LR LR 17 18 46.7
comp=Z,8µm,19.6s,baz=293,slow=34
KKAR Karatay Array 91.92 41 P **P** 16 39 41.9 -1.4
KKAR Karatay Array 91.92 41 P **P** 16 39 41.9 -1.4
IUG luzhnay 92.15 42 *e*P **P** 16 39 43.0 -1.5
IUG *e* 16 43 20.4
IUG luzhnay 92.15 42 *e*P **P** 16 39 43.0 -1.5
baz=42
IUG *e*PP **PP** 16 43 20.5 -3.5
baz=42
ZALV Zalesovo Beam 92.51 27 P **P** 16 39 45.2 -0.5
comp=Z,14nm,0.9s,baz=304,slow=4.6,SNR=21
ZALV PP **PP** 16 43 19.3 -6.9
comp=Z,2.2nm,0.8s,baz=298,slow=9.6,SNR=3.0
ZALV LR LR 17 19 13.3
comp=Z,5µm,20.5s,baz=314,slow=34
comp=Z,14nm,0.9s
ZALV Zalesovo Beam 92.51 27 P **P** 16 39 44.0 -1.7
ZALV Zalesovo Beam 92.51 27 P **P** 16 39 44.0 -1.7
DZA Taraz 92.54 41 *e*P **P** 16 39 43.4 -2.8
DZA Taraz 92.54 41 *e*P **P** 16 39 43.5 -2.8
baz=41
SEM Semipalatinsk 92.86 32 *e*P **P** 16 39 45.0 -2.7
SEM *e* 16 43 25.8
SEM Semipalatinsk 92.86 32 *e*P **P** 16 39 45.0 -2.7
baz=32
SEM *e*PP **PP** 16 43 25.9 -3.5
baz=32
BTLS Baital 92.92 38 *e*P **P** 16 39 46.0 -1.8
BTLS *e* 16 43 27.2
BTLS Baital 92.92 38 *e*P **P** 16 39 46.0 -1.8
baz=38
BTLS *e*PP **PP** 16 43 27.2 -2.5
baz=38
JMDO Jabal Madar 92.95 64 P **P** 16 39 49.7 +1.3
JMDO P **P** 16 39 49.7 +1.3
WSAR Wadi Sarin 93.01 63 LR LR 17 22 10.0
comp=Z,9µm,21.9s,baz=314,slow=36
MHTO MHTO 93.43 66 P **P** 16 39 50.4 -0.2
SNR=8.5
MHTO P **P** 16 39 50.4 -0.2
SNR=8.5
SOCY Socotra 93.61 75 IAMs_20 IAMs_20 17 20 33.5
comp=Z,12µm,20.0s
SEY Seymchan 93.73 352 *ce*P **P** 16 39 48.5 -2.7
SEY pmax pmax
comp=Z,22nm,1.6s
GAR Garm 94.05 45 P **P** 16 39 52.5 -0.8
GAR IAmb IAmb 16 40 03.0
comp=Z,44nm,1.1s
SGDS Sogindy 94.19 39 *e*P **P** 16 39 51.0 -2.8
SGDS *e* 16 43 36.6
SGDS Sogindy 94.19 39 *e*P **P** 16 39 51.0 -2.8
baz=39
SGDS *e*PP **PP** 16 43 36.6 -3.3
baz=39
AML Almayashu 94.41 41 *i*P **P** 16 39 55.6 +0.3
SNR=8.0
AAK Ala-Archa 94.59 40 LR LR 17 20 06.6
comp=Z,7µm,22.0s,baz=326,slow=34
AAK Ala-Archa 94.59 40 IAMs_20 IAMs_20 17 21 59.0
comp=Z,5µm,19.0s
AAK Ala-Archa 94.59 40 *i*P **P** 16 39 54.9 -0.9
AAK pmax pmax
comp=Z,28nm,1.9s
AAK MLR MLR
comp=Z,5µm,18.0s
AAK Ala-Archa 94.59 40 P **P** 16 39 56.7 +0.9
ADK Adak 94.69 332 IAMs_20 IAMs_20 17 24 29.0
comp=Z,11µm,19.0s
KUU Kurty 94.92 38 *e*P **P** 16 39 55.2 -1.9
KUU Kurty 94.92 38 *e*P **P** 16 39 55.2 -1.9
baz=38
TDK Taldyqorghan 95.39 36 *e*P **P** 16 39 56.5 -2.7
TDK *e* 16 43 46.3
TDK Taldyqorghan 95.39 36 *e*P **P** 16 39 56.5 -2.7
baz=36
TDK *e*PP **PP** 16 43 46.4 -2.7
baz=36
TDK *e*LR LR 17 19 25.5
comp=Z,8µm,19.8s,baz=36
YAK Yakutsk 95.65 2 LR LR 17 18 47.7
comp=Z,4µm,21.1s,baz=15,slow=33
YAK Yakutsk 95.65 2 P **P** 16 39 58.5 -1.5
YAK IAmb IAmb 16 40 10.1
comp=Z,48nm,1.5s
YAK Yakutsk 95.65 2 *e*P **P** 16 39 57.6 -2.4
YAK *e* 16 43 47.7
YAK *e*S **SKSac** 16 50 33.4 -2.2
YAK *e* 16 51 17.1
YAK *e*SS **SS** 16 57 42.8 -0.9
YAK pmax pmax
comp=Z,8.0nm,1.3s
YAK pmax pmax
comp=N,6.0nm,1.5s
YAK pmax pmax
comp=E,3.0nm,1.4s
YAK pmax pmax
comp=Z,268nm,3.5s
YAK pmax pmax
comp=N,89nm,3.0s
YAK pmax pmax
comp=E,39nm,2.9s
YAK smax smax
comp=E,155nm,4.8s
YAK smax smax
comp=N,131nm,4.0s
YAK MLR MLR
comp=Z,3µm,21.0s
YAK MLR MLR
comp=N,2µm,20.0s
YAK MLR MLR
comp=E,2µm,24.0s
AAA Alma-Ata 95.67 39 *e*P **P** 16 39 57.3 -3.3
AAA Alma-Ata 95.67 39 *e*P **P** 16 39 57.4 -3.3
baz=38
MAKZ Makanchi 96.10 33 P **P** 16 40 00.3 -2.1
MAKZ IAMs_20 IAMs_20 17 20 51.0
comp=Z,10µm,20.0s
MAKZ Makanchi 96.10 33 P **P** 16 40 00.3 -2.1
MAKZ pmax pmax
comp=Z,19nm,1.4s
MAKZ MLR MLR
comp=Z,10µm,20.0s
MAKZ Makanchi 96.10 33 ⇑P **P** 16 40 05.0 +2.6
MK31 Makanchi Array 96.27 33 P **P** 16 40 01.2 -2.0
MK31 Makanchi Array 96.27 33 P **P** 16 40 01.2 -2.0
MK31 pmax pmax
comp=Z,11nm,1.4s
MKAR Makanchi Array 96.27 33 P **P** 16 40 01.9 -1.3
comp=Z,1.2nm,0.7s,baz=305,slow=4.3,SNR=9.3
MKAR PP **PP** 16 43 52.5 -3.4
comp=Z,1.7nm,0.8s,baz=308,slow=7.1,SNR=4.1
MKAR PKKP **PKKPdf** 16 56 49.6 -0.3
comp=Z,1.0nm,0.8s,baz=101,slow=6.3,SNR=5.3
MKAR LR LR 17 21 17.9
comp=Z,9µm,19.7s,baz=307,slow=34
comp=Z,1.2nm,0.7s
MKAR Makanchi Array 96.27 33 P **P** 16 40 01.2 -2.0
MKAR Makanchi Array 96.27 33 P **P** 16 40 01.2 -2.0
VNA1 Neumayer--Stat 96.44 168 P **P** 16 40 03.1 0.0
KPKS Kokpek 96.51 38 *e*P **P** 16 40 02.6 -1.8
KPKS Kokpek 96.51 38 *e*P **P** 16 40 02.6 -1.8
baz=38
SATY Saty 96.61 38 *e*P **P** 16 40 01.7 -3.3
SATY Saty 96.61 38 *e*P **P** 16 40 01.7 -3.3
baz=38
VNA3 Neumayer Olymp 96.69 169 P **P** 16 40 04.0 -0.3
VNA2 Neumayer--Watz 96.83 168 P **P** 16 40 04.5 -0.4
baz=334,slow=4.0
ZSN Zaisan 97.10 32 *e*P **P** 16 40 04.9 -2.0
ZSN *e* 16 43 58.6
ZSN Zaisan 97.10 32 *e*P **P** 16 40 04.9 -2.0
baz=32
ZSN *e*PP **PP** 16 43 58.7 -3.4
baz=32
SHLS Shalkode 97.15 37 *e*P **P** 16 40 05.3 -2.1
SHLS *e* 16 44 00.5
SHLS Shalkode 97.15 37 *e*P **P** 16 40 05.3 -2.1
baz=37
SHLS *e*PP **PP** 16 44 00.6 -2.2
baz=37
MA2 Magadan 97.18 352 *i*P Pdif 16 40 08.6 +1.5
MA2 pmax pmax
comp=Z,30nm,1.3s
MA2 MLR MLR
comp=Z,6µm,21.0s
KSH Kashi 97.35 42 P Pdif 16 40 09.0 +0.5
KSH pP pP 16 40 11.8 -0.3
KSH sP pwP 16 40 16.6 +0.6
KSH PP **PP** 16 44 07.6 +3.1
KSH S **S** 16 51 37.3 +4.8
KSH pmax pmax
comp=Z,26nm,1.3s
KSH pmax pmax
comp=Z,740nm,8.9s
KSH LR LR
comp=Z,5µm,19.2s
KSH LR LR
comp=Z,7µm,19.9s
KSH LR LR
comp=Z,9µm,20.3s
SHEM Shemya Is, Ala 97.68 337 LR LR 17 25 10.9
comp=Z,10µm,19.2s,baz=51,slow=36
TAOE Nuku Hiva Isla 97.97 264 *e*S S 16 52 33.7 +55
comp=Z,2µm,25.6s
TAOE Nuku Hiva Isla 97.97 264 *e*LR LR 17 12 57.8
comp=Z,7µm,30.0s
BOD Bodaibo 98.09 11 *e*P **P** 16 40 09.3 -1.8
BOD pmax pmax
comp=Z,37nm,1.4s
SNAA Sanae 98.31 168 P **P** 16 40 11.0 -0.6
SNAA Sanae 98.31 168 LR LR 17 15 35.5
comp=Z,5µm,21.9s,baz=325,slow=30
SNAA Sanae 98.31 168 P Pdif 16 40 11.9 +0.2
SNAA IAMs_20 IAMs_20 17 15 01.5
comp=Z,6µm,21.0s
SNAA Sanae 98.31 168 P Pdif 16 40 11.9 +0.2
SNAA pmax pmax
comp=Z,13nm,1.4s

SNAA						MLR	MLR			
	comp=Z,6μm,21.0s									
OPO	**Ambohidratompo**	**98.94**	**106**			LR	LR	17 21 44.4		
	comp=Z,8μm,20.2s,baz=104,slow=34									
ABPO	**Ambohimpanom**	**99.14**	**107**			IAMs_20	IAMs_20	17 25 33.7		
	comp=Z,9μm,19.0s									
TROLL	**Troll, Antarti**	**99.68**	**167**			P	**Pdif**	**16 40 16.7**	**-1.2**	
VOI	**Vohitsoka**	**99.76**	**110**			IAMs_20	IAMs_20	17 24 43.4		
	comp=Z,10μm,20.0s									
POHA	**Pohakuloa**	**100.15**	**296**			IAMs_20	IAMs_20	17 22 25.9		
	comp=Z,6μm,19.0s									
FOMA	**Nahampoana Res**	**100.97**	**113**			IAMs_20	IAMs_20	17 24 42.4		
	comp=Z,10μm,19.0s									
NVL	**N'lazarevskaya**	**101.06**	**164**		*e*P		**Pdif**	**16 40 33.7**	**+10**	
NVL						pmax	pmax			
	comp=Z,5.0nm,0.9s									
NVL						MLR	MLR			
	comp=Z,1μm,18.0s									
WMQ	**Urumqi**	**101.08**	**33**		P		**Pdif**	**16 40 25.3**	**+0.4**	
WMQ						LR	LR			
	comp=Z,8μm,23.1s									
WMQ						LR	LR			
	comp=Z,5μm,21.3s									
WMQ						LR	LR			
	comp=Z,9μm,28.3s									
PET	**Petropavlovsk**	**102.00**	**346**		*e*P		**Pdif**	**16 40 28.9**	**+0.3**	
PET					*e*			16 44 41.2		
PET					*e*			16 51 09.9		
PET					*e*S		**Sdif**	**16 52 03.6**	**-7.1**	
PET					*e*PS		**PS**	**16 53 44.1**	**-0.3**	
PET					*e*PPS		PPS	16 54 33.1		
PET					*e*SS		**SS**	**16 59 15.8**	**+2.9**	
PET						pmax	pmax			
	comp=Z,300nm,9.6s									
PET						pmax	pmax			
	comp=Z,300nm,8.0s									
PET						pmax	pmax			
	comp=Z,600nm,7.0s									
PET						pmax	pmax			
	comp=Z,900nm,9.9s									
PET						MLR	MLR			
	comp=Z,6μm,20.0s									
ZEA	**Zeya**	**103.78**	**5**		*e*P		**Pdif**	**16 40 37.9**	**+1.3**	
ZEA					*e*			16 44 56.8		
ZEA					*e*			16 51 16.6		
ZEA					*e*			16 54 04.4		
ZEA					*e*			16 59 48.1		
ZEA						pmax	pmax			
	comp=Z,100nm,10.4s									
ZEA						MLR	MLR			
	comp=Z,2μm,15.0s									
SONM	**Songino Array**	**105.44**	**19**		PP		**PKiKP**	**16 44 50.8**	**-7.1**	
	comp=Z,1.5nm,0.9s,baz=328,slow=10,SNR=5.0									
RER	**Riviere de l'E**	**107.40**	**106**			IAMs_20	IAMs_20	17 28 42.4		
	comp=Z,9μm,19.0s									
PPT2	**Papeete2**	**109.56**	**259**		*e*LR		LR	17 18 20.4		
	comp=Z,6μm,25.0s									
XMAS	**Kiritimati**	**109.75**	**281**			IAMs_20	IAMs_20	17 40 32.5		
	comp=Z,7μm,20.0s									
GTA	**Gaotai**	**110.21**	**28**		*e*PKPbc		PKiKP	16 45 16.8	+10	
GTA						PP	PP	16 45 48.6	+8.5	
GTA	**Gaotai**	**110.21**	**28**		SS		SS	17 01 17.3	+12	
GTA						AMB	AMB			
	comp=Z,670nm,10.2s									
GTA						LR	LR			
	comp=N,3μm,22.5s									
GTA						LR	LR			
	comp=E,4μm,21.8s									
GTA						LR	LR			
	comp=Z,5μm,24.8s									
GOMU	**GeErMu**	**110.39**	**34**		Pdif		**Pdif**	**16 41 02.4**	**-4.4**	
GOMU					PP		**PP**	**16 45 48.8**	**+7.0**	
GOMU					SS		SS	17 01 09.1	+0.2	
GOMU					LR		LR			
	comp=Z,7μm,22.9s									
GOMU						LR	LR			
	comp=Z,4μm,22.4s									
GOMU						LR	LR			
	comp=Z,9μm,22.3s									
YSS	**Yuzh-Sakhalins**	**110.50**	**354**			IAMs_20	IAMs_20	17 33 46.0		
	comp=Z,7μm,20.0s									
YSS	**Yuzh-Sakhalins**	**110.50**	**354**		*e*P		**Pdif**	**16 41 14.4**	**+7.8**	
YSS					*e*			16 45 45.8		
YSS					*e*			16 56 17.6		
YSS					*e*SS		SS	17 01 20.3	+12	
YSS						MLR	MLR			
	comp=Z,6μm,17.0s									
TBI	**Tubuai**	**111.15**	**253**		*e*LR		LR	17 19 10.9		
	comp=Z,9μm,39.8s									
KUR	**Kuril'sk**	**111.56**	**350**		*i* P		**Pdif**	**16 41 09.8**	**-1.5**	
KUR					*i*			16 45 07.1		
KUR					*e*			16 56 20.9		
KUR					*e*SS		SS	17 01 14.8	-7.8	
KUR						MLR	MLR			
	comp=Z,10μm,21.0s									
MDJ	**Mudanjiang**	**113.03**	**4**			IAMs_20	IAMs_20	17 37 41.1		
	comp=Z,5μm,20.0s									
BTO	**Baotou**	**113.08**	**20**		*e*PKP		**PKiKP**	**16 45 13.8**	**+1.4**	
HHC	**Hu-ho-hao-te**	**113.33**	**19**		*e*PKP		**PKiKP**	**16 45 07.1**	**-5.8**	
HHC					PP		**PP**	**16 46 06.1**	**+3.9**	
HHC					SS		SS	17 01 44.5	-2.4	
HHC					AMB		AMB			
	comp=Z,650nm,8.2s									
HHC						LR	LR			
	comp=Z,8μm,19.0s									
HHC						LR	LR			
	comp=Z,8μm,17.5s									
HHC						LR	LR			
	comp=Z,11μm,18.7s									
LZH	**Lanzhou**	**114.74**	**27**		*e*PKP		**PKiKP**	**16 45 09.8**	**-6.0**	
LZH					PP		**PP**	**16 46 11.6**	**-0.8**	
LZH					SKKS			16 53 12.4		
LZH					SS		**SS**	**17 02 10.3**	**+4.4**	
LZH					AMB		AMB			
	comp=Z,1μm,6.8s									
LZH						LR	LR			
	comp=Z,7μm,19.0s									
LZH						LR	LR			
	comp=Z,6μm,18.4s									
LZH						LR	LR			
	comp=Z,9μm,20.9s									
SNY	**Shenyang**	**115.14**	**9**		⇓Pdif		**Pdif**	**16 41 35.9**	**+8.6**	
SNY					PP		**PP**	**16 46 17.3**	**+2.7**	
ERM	**Erimo**	**115.35**	**353**			IAMs_20	IAMs_20	17 31 59.4		
	comp=Z,9μm,21.0s									
BJI	**Beijing**	**115.37**	**16**		Pdif		**Pdif**	**16 41 32.8**	**+4.4**	
BJI					PP		**PP**	**16 46 11.3**	**-5.0**	
BJT	**Baijiatuau**	**115.39**	**16**			IAMs_20	IAMs_20	17 35 46.3		
	comp=Z,6μm,20.0s									
HNS	**HongShan**	**117.45**	**18**		*e*PKP		**PKPdf**	**16 45 20.4**	**-0.3**	
HNS					PP		PP	16 46 38.8	+7.8	
HNS					SKKS			16 53 22.4		
HNS					SS		**SS**	**17 02 44.1**	**+3.6**	
HNS					AMB		AMB			
	comp=Z,500nm,8.4s									
HNS						LR	LR			
	comp=Z,3μm,19.4s									
HNS						LR	LR			
	comp=Z,5μm,18.2s									
HNS						LR	LR			
	comp=Z,5μm,18.6s									
DGAR	**Diego Garcia**	**118.23**	**86**			IAMs_20	IAMs_20	17 32 10.0		
	comp=Z,8μm,20.0s									
XAN	**Xi'an**	**118.57**	**24**		PKP		**PKPdf**	**16 45 21.6**	**-1.4**	
TIA	**Tai'an**	**119.23**	**16**		PKP		**PKPdf**	**16 45 18.8**	**-5.4**	
PALK	**Pallekele**	**119.26**	**67**			IAMs_20	IAMs_20	17 33 56.7		
	comp=Z,7μm,21.0s									
LYN	**LuoYang**	**119.38**	**21**		*e*PKP		**PKPdf**	**16 45 21.8**	**-2.7**	
LYN					SKKS			16 53 40.4		
LYN					SS		**SS**	**17 03 09.3**	**+3.6**	
LYN					AMB		AMB			
	comp=Z,2μm,10.6s									
LYN						LR	LR			
	comp=Z,10μm,19.4s									
LYN						LR	LR			
	comp=Z,5μm,17.3s									
LYN						LR	LR			
	comp=Z,8μm,23.1s									
INCN	**Inchon**	**119.82**	**8**			IAMs_20	IAMs_20	17 33 29.2		
	comp=Z,4μm,19.0s									
KSRS	**Korea Array**	**120.00**	**6**		PKP		**PKPdf**	**16 45 25.6**	**0.0**	
	comp=Z,1.2nm,0.8s,baz=4.4,slow=2.6,SNR=8.4									
MJB9	**Matsu-Tunnel**	**121.18**	**357**				**PKPdf**	**16 45 24.4**	**-3.5**	
MAJO	**Matsushiro**	**121.19**	**357**				**PKPdf**	**16 45 24.3**	**-3.7**	
MAJO	**Matsushiro**	**121.19**	**357**			IAMs_20	IAMs_20	17 42 51.8		
	comp=Z,4μm,19.0s									
MAJO	**Matsushiro**	**121.19**	**357**	*i*	PKIKP		**PKPdf**	**16 45 26.0**	**-2.0**	
MJAR	**Matsushiro Arr**	**121.19**	**357**		PKP		**PKPdf**	**16 45 26.7**	**-1.3**	
	comp=Z,4.1nm,0.7s,baz=41,slow=2.1,SNR=10									
PZH	**PanZhiHua**	**121.65**	**35**		PKP		**PKPdf**	**16 45 27.3**	**-2.0**	
PZH					SKKS			16 53 59.8		
PZH					SS		**SS**	**17 03 34.8**	**-1.2**	
PZH					AMB		AMB			
	comp=Z,730nm,8.3s									
PZH						LR	LR			
	comp=Z,3μm,21.2s									
PZH						LR	LR			
	comp=Z,2μm,20.8s									
PZH						LR	LR			
	comp=Z,4μm,21.5s									
ENH	**Enshi**	**122.12**	**26**				**PKPdf**	**16 45 28.1**	**-1.8**	
ENH						IAMs_20	IAMs_20	17 36 37.6		
	comp=Z,5μm,21.0s									
KMI	**Kunming**	**123.29**	**35**	⇑	PKP		**PKiKP**	**16 45 32.8**	**0.0**	
KMI					sPKP			16 45 40.6		
KMI					SKKS			16 54 11.1		
KMI					SS		**SS**	**17 03 53.9**	**-3.1**	
KMI					AMB		AMB			
	comp=Z,670nm,10.2s									
KMI						LR	LR			
	comp=Z,2μm,16.6s									
KMI						LR	LR			
	comp=Z,3μm,18.0s									
KMI						LR	LR			
	comp=Z,5μm,20.8s									
VNDA	**Vanda**	**123.42**	**187**		PKP		**PKiKP**	**16 45 31.1**	**-0.1**	
	comp=Z,4.7nm,1.0s,baz=340,slow=1.5,SNR=12									
VNDA	**Vanda**	**123.42**	**187**		PKPdf		**PKPdf**	**16 45 30.8**	**-0.1**	
VNDA	**Vanda**	**123.42**	**187**		PKIKP		**PKPdf**	**16 45 30.8**	**-0.1**	
NJ2	**Nanjing**	**123.62**	**16**	*e*	PKP		**PKPdf**	**16 45 31.6**	**-1.1**	
NJ2					sPKP			16 45 39.4		
NJ2					AMB		AMB			
	comp=Z,1μm,9.0s									
NJ2						LR	LR			
	comp=Z,6μm,17.1s									
NJ2						LR	LR			
	comp=Z,3μm,17.1s									
NJ2						LR	LR			
	comp=Z,6μm,18.0s									
WHN	**Wuhan**	**123.68**	**21**	⇑	PKP		**PKiKP**	**16 45 33.3**	**+0.2**	
WHN					PP		**PP**	**16 47 19.3**	**+5.6**	
WHN					AMB		AMB			
	comp=Z,1μm,11.9s									
WHN						LR	LR			
	comp=Z,6μm,14.4s									
WHN						LR	LR			
	comp=Z,5μm,19.5s									
WHN						LR	LR			
	comp=Z,16μm,18.3s									
GYA	**Guiyang**	**124.17**	**31**		Pdif		**Pdif**	**16 42 08.9**	**+0.9**	
GYA				⇓	PKP		**PKiKP**	**16 45 35.1**	**+0.7**	
GYA					PP		**PP**	**16 47 19.3**	**+1.8**	
GYA					SKS		**SKSdf**	**16 52 41.8**	**-4.3**	
GYA					SKKS		**SKKSac**	**16 54 14.3**	**-3.1**	
GYA					SS		**SS**	**17 04 10.8**	**+3.1**	
GYA					AMB		AMB			
	comp=Z,770nm,9.0s									
GYA						LR	LR			
	comp=Z,2μm,17.9s									
GYA						LR	LR			
	comp=Z,2μm,18.8s									
GYA						LR	LR			
	comp=Z,4μm,21.4s									
KNTN	**Kanton**	**124.70**	**283**			IAMs_20	IAMs_20	17 24 02.5		
	comp=Z,4μm,18.0s									
SSE	**Sheshan**	**125.10**	**14**		PKP		**PKiKP**	**16 45 36.6**	**+0.7**	
SSE					PP		**PP**	**16 47 29.0**	**+5.9**	
SSE					SS		SS	17 04 14.6	-3.7	
SSE					AMB		AMB			
	comp=Z,290nm,10.3s									
SSE						LR	LR			
	comp=Z,2μm,16.7s									
SSE						LR	LR			
	comp=Z,2μm,17.2s									
CNSH	**ChangSha**	**125.33**	**24**	⇓	PKP		**PKiKP**	**16 45 38.9**	**+2.5**	
CNSH					PP		**PP**	**16 47 23.6**	**-1.2**	
CNSH					SS		SS	17 04 21.6	0.0	
CNSH					LR		LR			
	comp=Z,3μm,17.8s									
CNSH						LR	LR			
	comp=Z,3μm,16.3s									
CHTO	**Chiang Mai**	**125.94**	**43**		PKPdf		**PKPdf**	**16 45 35.6**	**-1.9**	
CHTO	**Chiang Mai**	**125.94**	**43**		IAMs_20	IAMs_20	17 43 02.7			
	comp=Z,4μm,21.0s									
CHTO	**Chiang Mai**	**125.94**	**43**		PKIKP		**PKPdf**	**16 45 35.6**	**-1.9**	
CHTO					MLR	MLR				
	comp=Z,4μm,21.0s									
CM31	**Chiang Mai Arr**	**126.21**	**44**				**PKPdf**	**16 45 36.4**	**-1.6**	
CM31	**Chiang Mai Arr**	**126.21**	**44**		P		**PKPdf**	**16 45 37.8**	**-0.3**	
	SNR=14									
CMAR	**Chiang Mai Arr**	**126.21**	**44**		PKP		**PKPdf**	**16 45 37.0**	**-1.0**	
	comp=Z,17nm,0.8s,baz=301,slow=2.9,SNR=36									
CMAR						PP	PP	**16 47 28.6**	**-2.8**	
	comp=Z,2.6nm,1.0s,baz=306,slow=6.5,SNR=2.2									
CMAR	**Chiang Mai Arr**	**126.21**	**44**		PKPdf		**PKPdf**	**16 45 36.4**	**-1.6**	
CMAR	**Chiang Mai Arr**	**126.21**	**44**		PKIKP		**PKPdf**	**16 45 36.4**	**-1.6**	
AFI	**Afiamalu**	**128.85**	**270**		IAMs_20	IAMs_20	17 24 20.9			
	comp=Z,7μm,20.0s									
AIS	**Amsterdam Isla**	**128.88**	**121**		IAMs_20	IAMs_20	17 34 25.5			
	comp=Z,7μm,20.0s									
KNMB	**Chin-men Tao**	**130.63**	**20**		IAMs_20	IAMs_20	17 29 28.2			
	comp=Z,5μm,21.0s									
NACB	**Ninganchiao**	**131.83**	**16**		IAMs_20	IAMs_20	17 45 42.7			
	comp=Z,6μm,20.0s									
QIZ	**Qiongzhong**	**132.00**	**33**		IAMs_20	IAMs_20	17 45 36.2			
	comp=Z,4μm,18.0s									
QIZ	**Qiongzhong**	**132.00**	**33**		PKP		**PKPdf**	**16 45 47.4**	**-1.6**	
QIZ					PP		**PP**	**16 48 07.1**	**-1.8**	
QIZ					SS		SS	17 05 46.1	+1.3	
QIZ					AMB		AMB			
	comp=Z,460nm,7.7s									
QIZ						LR	LR			
	comp=Z,3μm,17.7s									
QIZ						LR	LR			
	comp=Z,2μm,25.5s									
QIZ						LR	LR			
	comp=Z,4μm,16.8s									
YULB	**Yu-li**	**132.49**	**17**		IAMs_20	IAMs_20	17 28 39.4			
	comp=Z,8μm,20.0s									
CASY	**Casey**	**133.54**	**167**		PKPdf		**PKPdf**	**16 45 50.7**	**+0.3**	
CASY	**Casey**	**133.54**	**167**		IAMs_20	IAMs_20	17 39 55.4			
	comp=Z,6μm,20.0s									
LHMI	**Lhok Sumawe**	**133.76**	**58**		IAMs_20	IAMs_20	17 43 08.9			
	comp=Z,6μm,22.0s									
KULM	**Kulim**	**136.57**	**55**		IAMs_20	IAMs_20	17 45 20.4			
	comp=Z,5μm,22.0s									
IPM	**Ipoh**	**137.38**	**55**		IAMs_20	IAMs_20	17 45 37.0			
	comp=Z,7μm,21.0s									
MSVF	**Nonsavu**	**139.31**	**269**	*e*	PKIKP		**PKPdf**	**16 46 01.7**	**-1.0**	
MYKOM	**Kota Tinggi**	**141.26**	**55**		IAMs_20	IAMs_20	17 45 38.7			
	comp=Z,7μm,22.0s									
THZ	**Tophouse**	**142.91**	**230**				**PKPdf**	**16 46 07.3**	**-1.2**	
WHZ	**Wether Hill Ro**	**144.47**	**221**		PKPdf		**PKPdf**	**16 46 10.8**	**-0.2**	
KSM	**Kuching**	**146.19**	**48**		PKPdf		**PKPdf**	**16 46 13.5**	**-1.4**	
MYLDM	**Lahad Datu**	**148.14**	**32**		PKPab		**PKPbc**	**16 46 21.7**	**+0.3**	
XMIS	**Christmas Isla**	**149.58**	**72**		PKPdf		**PKPdf**	**16 46 19.3**	**-1.2**	
OUENC	**Ouen Island, N**	**150.51**	**264**		PKPbc		**PKPbc**	**16 46 25.3**	**-1.7**	
ONTNC	**Ouen Toro**	**150.86**	**264**				**PKPbc**	**16 46 26.4**	**-1.5**	
KOUNC	**Koumac, New Ca**	**152.62**	**269**		PKPdf		**PKPdf**	**16 46 23.4**	**-1.5**	
TOLI2	**Tolitoli**	**152.78**	**32**		PKPdf		**PKPdf**	**16 46 24.1**	**-1.3**	
TOLI2							**sPKPdf**	**16 46 30.3**	**-0.2**	
STKA	**Stephens Creek**	**168.93**	**211**		PKP		**PKPdf**	**16 46 43.2**	**+1.0**	
	comp=Z,7.9nm,1.0s,baz=30,slow=3.2,SNR=5.1									
KNRA	**Kununurra**	**171.06**	**42**				**PKPdf**	**16 46 42.3**	**-1.5**	
WRA	**Warramunga Arr**	**177.39**	**12**		PKP		**PKPdf**	**16 46 46.3**	**+0.4**	
	comp=Z,5.1nm,0.9s,baz=309,slow=1.1,SNR=13									
WRA					PKPab		PKPab	16 48 29.4	-1.3	
	comp=Z,6.9nm,1.0s,baz=342,slow=3.9,SNR=9.1									
WRA					PP		**PP**	**16 52 24.6**	**+2.1**	
	comp=Z,3.9nm,1.1s,baz=341,slow=4.5,SNR=6.2									
WRA	**Warramunga Arr**	**177.39**	**12**				**PKPdf**	**16 46 44.2**	**-1.7**	
WRA	**Warramunga Arr**	**177.39**	**12**		PKIKP		**PKPdf**	**16 46 44.2**	**-1.7**	
ASAR	**Alice Springs**	**178.53**	**142**				**PKPdf**	**16 46 44.0**	**-1.9**	
ASAR	**Alice Springs**	**178.53**	**142**		PKIKP		**PKPdf**	**16 46 44.0**	**-1.9**	
AS31	**Alice Springs**	**178.53**	**142**				**PKPdf**	**16 46 44.1**	**-1.8**	

*STR **21** 16:27:27.1±1.3, 46°N±9°×°±°, h8km, MLv0.8/3, Error ellipse: s-maj=0.0km s-min=0.0km az=171.7, preliminary*
*ZUR **21** 16:27:27.5, 46.27N×7.40E, h8km, MLh1.0/15, Error ellipse: s-maj=1.5km s-min=0.7km az=150.0*
*LDG **21** 16:27:27.5±0.1, 46.26N×7.40E, h8km, Ml1.5/5, Error ellipse: s-maj=1.2km s-min=0.9km az=151.0*
*GEN **21** 16:27:28.1, 46.21N×7.46E, h7km±2km, Ml0.6*

ISC 21 16:27:27.4±1.0, 46°26N±0.02×7°39E±0.02, h10km±5km, n27, σ0°27/44, 7C-1D, Switzerland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
SIOV	**Sion-Valere**	**0.04**	**213**	⇑	Pg	**Pg**	**16 27 29.3**	**-0.1**
SIOV					Sg	**Sg**	**16 27 30.2**	**-0.5**
SIEB	**Ecole de Borzu**	**0.10**	**73**		Sg	**Sg**	**16 27 32.0**	**-0.1**
SENIN	**Lac Senin/Sane**	**0.12**	**327**	⇓	Pg	**Pg**	**16 27 30.5**	**+0.1**
SENIN					Sg	**Sg**	**16 27 32.6**	**-0.1**
VANNI	**Vissoie, Val d**	**0.15**	**111**		Pg	**Pg**	**16 27 31.3**	**+0.4**
VANNI	**Vissoie, Val d**	**0.15**	**111**		P	**Pg**	**16 27 31.3**	**+0.4**
VANNI					S	**Sg**	**16 27 33.2**	**-0.2**
DIX	**Grande Dixence**	**0.18**	**176**	⇑	Pg	**Pg**	**16 27 31.8**	**+0.3**
DIX					Sg	**Sg**	**16 27 34.2**	**-0.1**
DIX	**Grande Dixence**	**0.18**	**176**		P	**Pg**	**16 27 31.8**	**+0.3**
DIX					S	**Sg**	**16 27 34.3**	**-0.1**
GRYON	**Gryon**	**0.20**	**266**	⇑	Pg	**Pg**	**16 27 31.8**	**+0.2**
GRYON					Sg	**Sg**	**16 27 34.6**	**+0.1**
LKBD	**Leukerbad**	**0.20**	**53**	⇑	Pg	**Pg**	**16 27 32.0**	**+0.2**
LKBD					Sg	**Sg**	**16 27 34.8**	**0.0**
LKBD2	**Leukerbad 2**	**0.21**	**58**	⇑	Pg	**Pg**	**16 27 32.0**	**+0.2**
LKBD2					Sg	**Sg**	**16 27 34.9**	**0.0**
LAUCH	**Lauchernalp**	**0.30**	**60**		Pg	**Pg**	**16 27 33.8**	**+0.2**
LAUCH					Sg	**Sg**	**16 27 37.9**	**+0.1**
LAUCH	**Lauchernalp**	**0.30**	**60**		P	**Pg**	**16 27 33.7**	**+0.1**
LAUCH					S	**Sg**	**16 27 37.9**	**+0.1**
EMBD	**Embd, Matterta**	**0.31**	**99**		S	**Sg**	**16 27 37.8**	**0.0**
EMBD	**Embd, Matterta**	**0.31**	**99**	⇑	Pg	**Pg**	**16 27 33.1**	**-0.5**
EMBD	**Embd, Matterta**	**0.31**	**99**		Sg	**Sg**	**16 27 37.8**	**0.0**
SALAN	**Lac Salanfe**	**0.31**	**248**	⇑	Pg	**Pg**	**16 27 34.0**	**+0.2**
SALAN	**Lac Salanfe**	**0.31**	**248**		P	**Pg**	**16 27 33.8**	**+0.1**
SALAN					S	**Sg**	**16 27 38.2**	**+0.2**
SIMPL	**Simplonpass**	**0.44**	**93**		S	**Sg**	**16 27 41.8**	**0.0**
MMK	**Mattmark**	**0.45**	**118**		S	**Sg**	**16 27 42.2**	**-0.1**
OGSI	**Sixt**	**0.48**	**246**		Pg	**Sg**	**16 27 36.6**	**-0.2**
OGSI					Sg	**Sg**	**16 27 43.7**	**+0.4**
SATI	**Passo dei Sala**	**0.51**	**139**		P	**Pg**	**16 27 37.4**	**0.0**
SATI					S	**Sg**	**16 27 43.9**	**-0.4**
MRGE	**Morge**	**0.55**	**205**		S	**Sg**	**16 27 45.8**	**+0.3**
LPL	**La Plagne**	**0.88**	**212**	*e*	Pg	**Pb**	**16 27 44.8**	**0.0**
LPL				*e*	Sg	**Sg**	**16 27 55.8**	**0.0**
	1.8nm,0.3s							
LPG	**La Plagne**	**0.89**	**210**	*e*	Pg	**Pb**	**16 27 44.8**	**-0.2**
LPG				*e*	Sg	**Sg**	**16 27 55.7**	**-0.4**
	1.1nm,0.2s							
CABF	**La Chapelle**	**0.97**	**292**	*e*	Pg	**Pb**	**16 27 46.2**	**0.0**
CABF				*e*	Sg	**Sb**	**16 27 58.8**	**-0.3**
	1.0nm,0.2s							
HINF	**Hinteralfeld**	**1.60**	**347**	*e*	Pg	**Pg**	**16 27 57.8**	**-0.2**
HINF				*e*	Sg	**Sg**	**16 28 18.3**	**-0.4**
	1.1nm,0.2s							
HAU	**Haudompre**	**1.88**	**338**	*e*	Sg	**Sb**	**16 28 26.1**	**+0.7**
	0.8nm,0.2s							

*NEIC **21** 16:47:15.9±1.5, 35.44N±0.08×74.26E±0.09, h35km±1km, mb4.5/42, Error ellipse: s-maj=14.0km s-min=12.5km az=142.0*
*IDC **21** 16:47:17.4±4.1, 35.39N×74.27E, h52km±36km, mb3.9/13, mbtmp4.2/17, ML3.8/4, MS4.0/1, Error ellipse: s-maj=25.6km s-min=13.6km az=23.0*
*NNC **21** 16:47:18.5±9.5, 35.60N×73.48E, h13km±133km, mb4.4, mpv4.4, Error ellipse: s-maj=104.9km s-min=46.0km az=152.0*

ISC 21 16:47:15.4±0.4, 35°42N±0.04×74°25E±0.06, h36km, n110, σ1°80/116, mb4.3/33, 5C, Northwestern Kashmir

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
JMU	**Jammu**	**2.75**	**169**	*e*P		**Pn**	**16 47 56.0**	**-1.0**
JMU				*e*P		**Pn**	**16 48 00.6**	**+3.6**
JMU				*e*S		**Sn**	**16 48 32.5**	**+3.6**
JMU				*e*S		**Sn**	**16 48 35.8**	**+6.8**
THW	**Thamme Wali**	**3.35**	**219**	P		**Pn**	**16 48 07.1**	**+1.9**
KBL	**Kabul**	**4.37**	**260**	Pn		**Pn**	**16 48 19.9**	**+0.5**
DRK	**Karamyk**	**4.49**	**335**			**Pn**	**16 48 20.4**	**-0.8**
GAR	**Garm**	**4.75**	**320**	Pn		**Pn**	**16 48 24.7**	**+0.1**
SMLA	**Simla**	**4.93**	**150**	*e*P		**Pn**	**16 48 28.0**	**+1.1**
SMLA					IAML		16 49 46.4	
	comp=N,460nm,0.5s							
SMLA					IAML		16 49 51.0	
	comp=E,915nm,0.5s							
CHGR	**Chuyangaron**	**5.20**	**310**			**Pn**	**16 48 32.3**	**+1.6**
BTK	**Batken**	**5.37**	**331**	Pn		**Pn**	**16 48 32.7**	**-0.3**
AML	**Almayashu**	**6.71**	**356**	P		**Pn**	**16 48 55.3**	**+3.5**
	SNR=7.5							
UCH	**Uchtor**	**6.80**	**2**	P		**Pn**	**16 48 56.1**	**+3.2**
	SNR=27							
TARG	**Taragay, Kyrgy**	**6.88**	**23**	Pn		**Pn**	**16 48 58.0**	**+3.9**
BOOM	**Boomskoye usch**	**7.18**	**10**			**Pn**	**16 48 58.4**	**+0.5**
AAK	**Ala-Archa**	**7.21**	**1**	P		**Pn**	**16 49 01.4**	**+3.2**
	comp=E,1.6nm,0.3s,baz=196,slow=6.9,SNR=8.9							
	comp=E,4.3nm,0

BELG	**Belogornoye**	**25.39**	**320**	P		**P**	**16 52 38.9**	**-0.2**
	comp=E,15nm,0.9s,baz=93,slow=17,SNR=6.4							
	comp=E,15nm,0.9s							
SONM	**Songino Array**	**26.83**	**53**	P		**P**	**16 52 53.7**	**+1.3**
	comp=E,1.1nm,0.7s,baz=280,slow=8.6,SNR=6.5							
	comp=E,1.1nm,0.7s							
SONM	**Songino Array**	**26.83**	**53**	P		**P**	**16 52 53.0**	**+0.6**
CHTO	**Chiang Mai**	**27.39**	**121**	P		**P**	**16 52 57.6**	**+0.1**
CMAR	**Chiang Mai Arr**	**27.63**	**121**	P		**P**	**16 52 59.5**	**-0.2**
	comp=E,2.9nm,0.6s,baz=310,slow=10,SNR=25							
	comp=E,2.9nm,0.6s							
PALK	**Pallekele**	**28.64**	**167**	LR		LR	17 05 11.0	
	comp=E,269nm,20.0s,baz=1.2,slow=38							
BR131	**Keskin Array S**	**32.28**	**290**	P		**P**	**16 53 41.3**	**+0.5**
BR131				IAmb		IAmb	16 54 09.1	
	comp=Z,5.6nm,1.2s							
BRTR	**Keskin Array B**	**32.28**	**290**	P		**P**	**16 53 42.3**	**+1.5**
	comp=Z,0.8nm,0.6s,baz=102,slow=11,SNR=6.4							
	comp=Z,0.8nm,0.6s							
BRTR	**Keskin Array B**	**32.28**	**290**	P		**P**	**16 53 41.4**	**+0.6**
CSS	**Mathiatis**	**33.28**	**281**	P		**P**	**16 53 49.7**	**+0.3**
CSS				IAmb		IAmb	16 54 09.6	
	comp=Z,5.9nm,1.1s							
AKASG	**Malin Array Be**	**35.67**	**310**	P		**P**	**16 54 10.4**	**+0.6**
	comp=Z,2.8nm,0.6s,baz=80,slow=7.2,SNR=11							
	comp=Z,2.8nm,0.6s							
PABE	**Paberze**	**39.52**	**317**	P		**P**	**16 54 42.9**	**+0.5**
PABE				IAmb		IAmb	16 54 47.5	
	comp=Z,8.7nm,0.9s							
FINES	**FINESS Array B**	**39.85**	**326**	P		**P**	**16 54 45.8**	**+0.8**
	comp=Z,3.3nm,0.9s,baz=167,slow=9.2,SNR=5.6							
	comp=Z,3.3nm,0.9s							
KS19	**Wonju Array Si**	**42.68**	**71**	P		**P**	**16 55 08.9**	**+0.3**
KS19				IAmb		IAmb	16 55 10.0	
	comp=Z,7.9nm,0.8s							
KSAR	**Wonju Array Be**	**42.71**	**71**	P		**P**	**16 55 07.8**	**-1.1**
KEK	**Kerkira**	**42.82**	**293**	P		**P**	**16 55 08.0**	**-1.8**
ARCES	**ARCESS Array B**	**43.15**	**337**	P		**P**	**16 55 13.4**	**+1.4**
	comp=Z,2.9nm,0.6s,baz=114,slow=8.9,SNR=22							
	comp=Z,2.9nm,0.6s							
ARCES	**ARCESS Array B**	**43.15**	**337**	P		**P**	**16 55 12.7**	**+0.7**
ARCES				IAmb		IAmb	16 55 14.8	
	comp=Z,9.7nm,1.2s							
CUC	**Castrocucco**	**45.75**	**294**	P		**P**	**16 55 33.4**	**+0.2**
CUC				IAmb		IAmb	16 55 36.0	
	comp=Z,7.0nm,1.1s							
TIXI	**Tiksi**	**45.80**	**21**	P		**P**	**16 55 33.5**	**+0.5**
TIXI				IAmb		IAmb	16 55 33.8	
	comp=Z,4.3nm,1.1s							
CLL	**Collm**	**45.91**	**310**	*i* P		**P**	**16 55 35.6**	**+1.3**
	comp=Z,5.0nm,1.1s							
NC405	**NORSAR Array S**	**46.58**	**324**	P		**P**	**16 55 39.9**	**+0.5**
NB201	**NORSAR Array S**	**46.78**	**324**	P		**P**	**16 55 41.8**	**+0.8**
NB2	**NORSAR Subarra**	**46.82**	**323**	P		**P**	**16 55 41.8**	**+0.5**
	comp=Z,1.2nm,0.6s,baz=93,slow=7.9							
NOA	**NORSAR Array B**	**46.82**	**323**	P		**P**	**16 55 41.8**	**+0.5**
	comp=Z,1.7nm,0.7s,baz=95,slow=7.6,SNR=7.7							
	comp=Z,1.7nm,0.7s							
NC204	**NORSAR Array S**	**47.05**	**324**	P		**P**	**16 55 44.0**	**+0.8**
NC204				IAmb		IAmb	16 55 50.6	
	comp=Z,11nm,1.1s							
MJAR	**Matsushiro Arr**	**50.89**	**69**	P		**P**	**16 56 12.8**	**-0.1**
	comp=Z,2.1nm,0.8s,baz=288,slow=9.5,SNR=4.2							
	comp=Z,2.1nm,0.8s							
BNI	**Bardonecchia**	**51.11**	**303**	P		**P**	**16 56 13.2**	**-1.3**
BNI				IAmb		IAmb	16 56 48.3	
	comp=Z,3.8nm,1.2s							
JHJ2	**Mitsune**	**53.32**	**72**	P		**P**	**16 56 30.8**	**-0.2**
ESDC	**Sonseca Array**	**60.29**	**300**	P		**P**	**16 57 21.1**	**+0.7**
	comp=Z,1.2nm,0.7s,baz=57,slow=6.5,SNR=10							
	comp=Z,1.2nm,0.7s							
VOI	**Vohitsoka**	**62.68**	**209**	P		**P**	**16 57 37.5**	**+0.9**
EUNU	**Eureka**	**64.26**	**356**	P		**P**	**16 57 45.6**	**-0.7**
EUNU				IAmb		IAmb	16 58 16.2	
	comp=Z,3.2nm,0.9s							
TOA0	**Torodi Ar. Sit**	**68.35**	**271**	P		**P**	**16 58 12.4**	**-1.0**
TOA0				IAmb		IAmb	16 58 14.1	
	comp=Z,10nm,1.5s							
TORD	**Torodi Ar. Bea**	**68.35**	**271**	P		**P**	**16 58 12.9**	**-0.5**
	comp=Z,1.2nm,0.5s,baz=51,slow=5.8,SNR=8.5							
	comp=Z,1.2nm,0.5s							
TORD	**Torodi Ar. Bea**	**68.35**	**271**	P		**P**	**16 58 12.4**	**-1.0**
TORD				IAmb		IAmb	16 58 13.5	
	comp=Z,2.6nm,1.0s							
TOLK	**Toolik Lake Re**	**71.27**	**16**	P		**P**	**16 58 30.8**	**+0.2**
TOLK				IAmb		IAmb	16 58 54.8	
	comp=Z,10nm,1.4s							
IMAR	**Indian Mountai**	**72.37**	**19**	P		**P**	**16 58 37.7**	**+0.5**
KNRA	**Kununurra**	**72.44**	**125**	P		**P**	**16 58 38.6**	**+0.4**
K20K	**Telida**	**74.32**	**20**	P		**P**	**16 58 49.8**	**+1.1**
K20K				IAmb		IAmb	16 58 51.0	
	comp=Z,3.2nm,1.0s							
C36M	**Paulatuk**	**74.67**	**7**	P		**P**	**16 58 50.6**	**+0.1**
C36M				IAmb		IAmb	16 59 06.6	
	comp=Z,6.2nm,1.1s							
NEA2	**Nenana**	**74.68**	**18**	P		**P**	**16 58 51.5**	**+0.7**
NEA2				IAmb		IAmb	16 58 53.4	
	comp=Z,4.4nm,1.0s							
MACI	**Morro de la Ar**	**74.80**	**294**	P		**P**	**16 58 52.3**	**-0.1**
IL31		**75.06**	**17**	P		**P**	**16 58 52.8**	**-0.1**
ILAR	**Eielson Array**	**75.06**	**17**	P		**P**	**16 58 53.2**	**+0.2**
	comp=Z,2.3nm,1.1s,baz=314,slow=5.2,SNR=13							
	comp=Z,2.3nm,1.1s							
I26K	**Coal Creek Min**	**75.46**	**15**	P		**P**	**16 58 55.8**	**+0.5**
I26K				IAmb		IAmb	16 58 59.7	
	comp=Z,8.3nm,1.5s							
J25K	**Salcha River,**	**75.55**	**16**	P		**P**	**16 58 55.8**	**-0.1**
J25K				IAmb		IAmb	16 58 57.3	
	comp=Z,4.3nm,1.3s							
SML	**Sawmill**	**77.16**	**19**	P		**P**	**16 59 05.3**	**+0.3**
SML				IAmb		IAmb	16 59 18.8	
	comp=Z,5.9nm,0.9s							
BCAR	**Beaver Creek A**	**77.70**	**16**	P		**P**	**16 59 06.8**	**-1.3**
BOSA	**Boshof**	**78.68**	**223**	P		**P**	**16 59 13.2**	**-0.8**
WB0	**Warramunga Arr**	**79.11**	**124**	P		**P**	**16 59 15.9**	**-0.4**
WB0				IAmb		IAmb	16 59 26.0	
	comp=Z,8.6nm,1.4s							
WRA	**Warramunga Arr**	**79.19**	**124**	P		**P**	**16 59 17.3**	**+0.5**
	comp=Z,2.2nm,0.7s,baz=326,slow=5.7,SNR=31							
	comp=Z,2.2nm,0.7s							
WRA	**Warramunga Arr**	**79.19**	**124**	P		**P**	**16 59 16.5**	**-0.3**
WRAB	**Tennant Creek**	**79.19**	**124**	P		**P**	**16 59 17.2**	**+0.4**
WRAB				IAmb		IAmb	16 59 17.8	
	comp=Z,3.8nm,0.7s							
WR0	**Warramunga Arr**	**79.34**	**124**	P		**P**	**16 59 17.7**	**+0.1**
WR0				IAmb		IAmb	16 59 41.0	
	comp=Z,15nm,1.5s							
AS31	**Alice Springs**	**81.49**	**127**	P		**P**	**16 59 29.0**	**-0.1**
ASAR	**Alice Springs**	**81.49**	**127**	P		**P**	**16 59 29.4**	**+0.3**
CTAO	**Charters Tower**	**87.70**	**117**	P		**P**	**17 00 00.7**	**+0.2**
DIB	**Dawson Inlet,**	**88.73**	**16**	P		**P**	**17 00 02.6**	**-2.3**
PLCA	**Paso Flores**	**151.92**	**248**	PKPbc		**PKiKP**	**17 07 07.2**	**+0.4**
	comp=Z,0.9nm,0.5s,baz=135,slow=4.3,SNR=8.9							

DJA 21 16:48:24.2±1.6, **1°N**±6°×**9°E**±°, **h11**km±7km, **M4.1/7, mb4.1/2, MLv4.1/7, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.74**	**30**	P	Pn	16 48 40.0	-0.6
GSI				S	Sg	16 48 48.3	0.0
SISI	**Saibi**	**2.73**	**136**	P	Pn	16 49 07.3	-0.7
KCSI	**Kotacane, Aceh**	**2.90**	**11**	P	Pn	16 49 10.3	-0.1
TSI	**Tuntungan**	**3.13**	**26**	P	Pn	16 49 14.0	+0.4
LHMI	**Lhok Sumawe**	**4.54**	**357**	P	Pn	16 49 32.3	-0.7

*NEIC **21** 17:07:45.8±0.9, 36°.50N±0°.02×98°.47W±0°.01, h5km±2km, Error ellipse: s-maj=3.0km s-min=2.7km az=314.0*
*TUL **21** 17:07:45.8±1.1, 36°.51N±0°.02×98°.48W±0°.01, h5km±7km, ML3.5, mb_Lg3.0/27(NEIC), Error ellipse: s-maj=2.2km s-min=1.4km az=169.0*
*ANF **21** 17:07:46.0±0.5, 36°.50N×98°.47W, h5km, ML3.5/8, Error ellipse: s-maj=5.9km s-min=3.2km az=64.0*

ISC 21 17:07:46.6±1.0, **36°.48N**±0°.03×**98°.47W**±0°.04, **h10**km, **n51, σ0s92/50, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK009	**Oakdale Elemen**	**1.23**	**136**	Pg	**Pn**	**17 08 09.2**	**-0.6**
OK005	**Luther M Schoo**	**1.32**	**128**	Pn	**Pn**	**17 08 10.9**	**-0.2**
OKCFA	**Oklahoma City**	**1.34**	**142**	Pn	**Pn**	**17 08 10.9**	**-0.5**
OKCFA	**Oklahoma City**	**1.34**	**142**	P	**Pn**	**17 08 11.0**	**-0.4**
	baz=323						
OKCFA				S	**Sg**	**17 08 30.1**	**+0.3**
	baz=323						
OKCSW	**OKLAHOMA CITY**	**1.36**	**142**		**Pn**	**17 08 11.3**	**-0.3**
FNO	**Franklin**	**1.50**	**144**		**Pn**	**17 08 13.6**	**+0.1**
T35A	**Sooner Cattle**	**1.63**	**74**		**Pn**	**17 08 15.6**	**+0.2**
T35B	**Sooner Cattle**	**1.63**	**74**	P	**Pn**	**17 08 15.7**	**+0.3**
	baz=256						
T35B				S	**Sb**	**17 08 37.0**	**-0.4**
	baz=256						
WMOK	**Wichita Mounta**	**1.76**	**189**		**Pn**	**17 08 17.0**	**-0.1**
WMOK	**Wichita Mounta**	**1.76**	**189**	P	**Pn**	**17 08 17.4**	**+0.3**
	baz=8.1						
X34A	**Smith Ranch, M**	**1.94**	**164**		**Pb**	**17 08 21.1**	**-1.0**
R32A	**Long Quarter,**	**1.95**	**354**		**Pn**	**17 08 20.3**	**+0.6**
R32A	**Long Quarter,**	**1.95**	**354**	P	**Pn**	**17 08 20.4**	**+0.6**
	baz=174						
R32A				S	**Sb**	**17 08 46.4**	**-0.2**
	baz=174						
TUL1	**Leonard**	**2.24**	**104**		**Pn**	**17 08 25.0**	**+1.4**
TUL1	**Leonard**	**2.24**	**104**	S	**Sn**	**17 08 52.9**	**+1.5**
	baz=286						
CBKS	**Cedar Bluff**	**2.54**	**337**		**Pn**	**17 08 27.3**	**-0.6**
CBKS	**Cedar Bluff**	**2.54**	**337**	Sb	**Sb**	**17 09 03.5**	**-0.1**
	baz=156						
KSU1	**Kansas State U**	**3.00**	**29**	Pn	**Pn**	**17 08 34.3**	**+0.1**
KSU1	**Kansas State U**	**3.00**	**29**	IAmb_Lg		17 09 28.2	
	comp=Z,28nm,0.8s						
AMTX	**Amarillo**	**3.06**	**240**		**Pn**	**17 08 34.3**	**-0.8**
AMTX				IAmb_Lg		17 09 30.5	
	comp=Z,35nm,0.8s						
X37A	**Clayton**	**3.15**	**126**		**Pn**	**17 08 36.6**	**+0.4**
X37A				IAmb_Lg		17 09 32.8	
	comp=Z,60nm,0.8s						
X37A	**Clayton**	**3.15**	**126**	P	**Pn**	**17 08 36.9**	**+0.7**
	baz=308						
U38A	**Gravette**	**3.29**	**89**		**Pn**	**17 08 38.5**	**+0.3**
U38A				IAmb_Lg		17 09 38.3	
	comp=Z,39nm,1.0s						
Z35A	**Perchaven, San**	**3.29**	**162**	Pn	**Pn**	**17 08 38.9**	**+0.6**
Z35A	**Perchaven, San**	**3.29**	**162**	P	**Pn**	**17 08 39.2**	**+1.0**
	baz=343						
HHAR	**Hbbs**	**3.66**	**92**		**Pn**	**17 08 43.4**	**+0.1**
ABTX	**Abilene, Hawle**	**3.97**	**195**	Pn	**Pn**	**17 08 46.5**	**-1.1**
KSCO	**Kaye Shedlock'**	**4.16**	**309**	Pn	**Pn**	**17 08 49.9**	**-0.3**
KSCO					**Pb**	**17 09 01.2**	**+1.4**
S39A	**Bolivar**	**4.29**	**72**		**Pn**	**17 08 51.7**	**-0.1**
S39A				IAmb_Lg		17 10 02.0	
	comp=Z,26nm,0.8s						
S39A	**Bolivar**	**4.29**	**72**	P	**Pn**	**17 08 51.4**	**-0.4**
	baz=255						
Z38A	**Mt. Pleasant**	**4.30**	**137**	Pn	**Pn**	**17 08 51.0**	**-1.0**
N33A	**J Bar K, Exete**	**4.33**	**10**	Pn	**Pn**	**17 08 50.7**	**-1.7**
MIAR	**Mount Ida**	**4.43**	**114**	Pn	**Pn**	**17 08 53.8**	**0.0**
WHTX	**Lake Whitney,**	**4.55**	**169**	Pn	**Pn**	**17 08 55.8**	**+0.2**
T25A	**Trinidad**	**4.82**	**280**		**Pn**	**17 08 59.6**	**+0.3**
T25A				IAmb_Lg		17 10 24.0	
	comp=Z,50nm,0.9s						
237A	**Washetta, Mont**	**4.98**	**153**	Pn	**Pn**	**17 09 01.6**	**+0.3**
P38A	**Dawn**	**5.00**	**50**	Pn	**Pn**	**17 09 01.5**	**-0.2**
P38A				IAmb_Lg		17 10 34.3	
	comp=Z,23nm,0.9s						
X40A	**Basin Creek Fa**	**5.01**	**112**	IAmb_Lg		17 10 29.7	
	comp=Z,22nm,0.8s						
MGMO	**Mountain Grove**	**5.02**	**80**	Pn	**Pn**	**17 09 02.8**	**+0.8**
WHAR	**Wooly Hollow**	**5.15**	**101**		**Pn**	**17 09 03.4**	**-0.4**
WHAR				IAmb_Lg		17 10 34.8	
	comp=Z,25nm,1.0s						
FCAR	**Ozark Folk Cen**	**5.16**	**95**	Pn	**Pn**	**17 09 03.7**	**-0.2**
FCAR				IAmb_Lg		17 10 40.6	
	comp=Z,17nm,0.8s						
R40A	**Maddies Statio**	**5.26**	**68**		**Pn**	**17 09 04.6**	**-0.6**
R40A				IAmb_Lg		17 10 42.8	
	comp=Z,12nm,0.8s						
OGNE	**Ogallala**	**5.26**	**329**		**Pn**	**17 09 02.9**	**-2.4**
UALR	**University of**	**5.27**	**107**	IAmb_Lg		17 10 40.9	
	comp=Z,26nm,0.7s						
Q24A	**Divide**	**5.85**	**297**	Pn	**Pn**	**17 09 12.0**	**-1.6**
Q24A				IAmb_Lg		17 11 00.7	
	comp=Z,22nm,0.8s						
P40A	**Paris**	**5.91**	**57**	IAmb_Lg		17 10 57.0	
	comp=Z,33nm,0.7s						
LCAR	**Lake Charles**	**5.92**	**92**	Pn	**Pn**	**17 09 12.1**	**-2.2**
CCM	**Cathedral Cave**	**5.97**	**73**	Pn	**Pn**	**17 09 14.2**	**-0.8**
JCT	**Junction City**	**6.09**	**191**	IAmb_Lg		17 11 05.5	
	comp=Z,41nm,1.1s						
ISCO	**Idaho Springs**	**6.54**	**303**	Pn	**Pn**	**17 09 20.5**	**-2.5**
FVM	**French Village**	**6.59**	**74**	Pn	**Pn**	**17 09 22.7**	**-0.8**

*NEIC **21** 17:08:57.5±1.6, 20°.9S±0°.1×178°.5W±0°.1, h595km±8km, mb4.5/36, Error ellipse: s-maj=18.3km s-min=16.0km az=119.0*
*IDC **21** 17:08:59.0±1.8, 20°.97S×178°.57W, h617km±20km, mb3.2/11, mbtmp4.2/13, Error ellipse: s-maj=22.6km s-min=17.1km az=123.0*

ISC 21 17:08:57.6±0.5, **20°.88S**±0°.08×**178°.46W**±0°.09, **h600**km, **n57, σ1s27/53, mb4.2/25, 1C, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.54**	**313**	P	**P**	**17 10 28.8**	**+1.7**
	74nm,0.8s,baz=156,slow=10,SNR=26						
MSVF	**Nonsavu**	**4.54**	**313**	P	**P**	**17 10 28.2**	**+1.1**
NIUE	**Niue**	**8.22**	**79**		**P**	**17 10 55.4**	**-3.7**
AFI	**Afiamalu**	**9.42**	**44**	P	**P**	**17 11 10.8**	**0.0**
KOUNC	**Koumac, New Ca**	**16.15**	**268**	P	**P**	**17 12 17.9**	**+1.6**
KOUNC				IAmb	IAmb	17 12 37.2	
	comp=Z,28nm,1.4s						
URZ	**Urewera**	**17.74**	**192**	P	**P**	**17 12 30.1**	**-0.5**
	comp=Z,7.4nm,0.5s,baz=284,slow=3.3,SNR=7.6						
URZ	**Urewera**	**17.74**	**192**	IAmb	IAmb	17 12 50.5	
	comp=Z,31nm,1.3s						
BKZ	**Black Stump Fm**	**18.74**	**192**	P	**P**	**17 12 39.9**	**+0.1**
BKZ				IAmb	IAmb	17 12 59.3	
	comp=Z,20nm,1.2s						
BFZ	**Birch Farm**	**20.25**	**192**	P	**P**	**17 12 53.5**	**+0.1**
LTZ	**Lake Taylor**	**23.19**	**198**	P	**P**	**17 13 19.0**	**-0.6**
WHZ	**Wether Hill Ro**	**27.33**	**201**	P	**P**	**17 13 56.9**	**+0.8**
WHZ				IAmb	IAmb	17 14 08.5	
	comp=Z,64nm,1.5s						
EIDS	**Eidsvold**	**28.33**	**255**	P	**P**	**17 14 04.6**	**-0.4**
EIDS				IAmb	IAmb	17 14 07.7	
	comp=Z,9.3nm,1.1s						
CTA	**Charters Tower**	**33.02**	**265**	P	**P**	**17 14 45.0**	**-0.2**
	comp=Z,4.3nm,0.7s,baz=100,slow=9.2,SNR=9.1						
	comp=Z,4.3nm,0.7s						
STKA	**Stephens Creek**	**37.24**	**245**	P	**P**	**17 15 20.0**	**+0.1**
	comp=Z,2.7nm,0.8s,baz=101,slow=10,SNR=1.9						
	comp=Z,2.7nm,0.8s						
STKA	**Stephens Creek**	**37.24**	**245**	IAmb	IAmb	17 15 28.2	
	comp=Z,3.1nm,1.5s						
MCQ	**Macquarie Isla**	**37.68**	**201**	P	**P**	**17 15 24.0**	**+1.0**
BBOO	**Buckleboo**	**41.99**	**244**	P	**P**	**17 15 57.7**	**-0.1**
BBOO				IAmb	IAmb	17 16 15.0	
	comp=Z,62nm,1.4s						
WR0	**Warramunga Arr**	**43.93**	**263**	P	**P**	**17 16 12.0**	**-1.0**
WR0				IAmb	IAmb	17 16 16.8	
	comp=Z,17nm,1.6s						
AS31	**Alice Springs**	**44.01**	**257**	P	**P**	**17 16 13.2**	**-0.5**
ASAR	**Alice Springs**	**44.01**	**257**	P	**P**	**17 16 12.8**	**-0.9**
WB0	**Warramunga Arr**	**44.10**	**263**	P	**P**	**17 16 13.4**	**-1.0**
WB0				IAmb	IAmb	17 16 14.6	
	comp=Z,19nm,1.4s						
WB2	**Warramunga Arr**	**44.11**	**263**	P	**P**	**17 16 13.3**	**-1.2**
WRA	**Warramunga Arr**	**44.12**	**263**	P	**P**	**17 16 13.7**	**-0.9**
	comp=Z,3.0nm,0.5s,baz=97,slow=8.6,SNR=92						
	comp=Z,3.0nm,0.5s						
WRA	**Warramunga Arr**	**44.12**	**263**	P	**P**	**17 16 12.8**	**-1.7**
FORT	**Forrest**	**48.75**	**247**	P	**P**	**17 16 48.3**	**-0.9**
FORT				IAmb	IAmb	17 17 11.9	
	comp=Z,33nm,1.1s						
KNRA	**Kununurra**	**50.20**	**267**	P	**P**	**17 16 58.8**	**-1.2**
FAKI	**Fak Fak**	**51.16**	**284**	P	**P**	**17 17 06.2**	**-0.8**
TNTI	**Ternate**	**57.14**	**285**	P	**P**	**17 17 47.0**	**-1.9**
VNDA	**Vanda**	**57.50**	**185**	P	**P**	**17 17 49.5**	**-0.7**
	comp=Z,0.9nm,0.8s,baz=39,slow=6.5,SNR=3.9						
	comp=Z,0.9nm,0.8s						
VNDA	**Vanda**	**57.50**	**185**	IAmb	IAmb	17 17 55.0	
	comp=Z,2.6nm,1.1s						
TOLI2	**Tolitoli**	**63.26**	**282**	P	**P**	**17 18 26.9**	**-2.3**
TOLI2				IAmb	IAmb	17 18 39.8	
	comp=Z,51nm,1.1s						
CASY	**Casey**	**63.44**	**205**	P	**P**	**17 18 30.2**	**+0.8**
CASY				IAmb	IAmb	17 18 36.9	
	comp=Z,18nm,1.6s						
QSPA	**South Pole Qui**	**69.19**	**180**	P	**P**	**17 19 07.0**	**+1.9**
UGM	**Wanagama**	**69.52**	**269**	P	**P**	**17 19 07.0**	**-0.8**
JGF	**Kuroka**	**70.05**	**323**	P	**P**	**17 19 10.0**	**-0.5**
INU	**Inuyama**	**70.06**	**322**	P	**P**	**17 19 10.0**	**-0.5**
PETK	**Petropavlovsk-**	**76.52**	**345**	P	**P**	**17 19 47.2**	**+0.4**
	comp=Z,2.8nm,0.8s,baz=112,slow=6.4,SNR=2.9						
	comp=Z,2.8nm,0.8s						
KSRS	**Korea Array**	**76.88**	**319**	P	**P**	**17 19 49.6**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=127,slow=6.5,SNR=5.1						
	comp=Z,0.7nm,0.7s						
BELA	**Belgrano 2**	**79.24**	**173**	P	**P**	**17 20 01.8**	**+0.6**
NVAR	**Mina Array Bea**	**81.59**	**44**	P	**P**	**17 20 16.4**	**+2.2**
	comp=Z,0.5nm,0.6s,baz=225,slow=8.2,SNR=6.2						
	comp=Z,0.5nm,0.6s						
NVAR	**Mina Array Bea**	**81.59**	**44**	P	**P**	**17 20 15.5**	**+1.3**
KVN	**Kaiserville**	**82.08**	**43**	P	**P**	**17 20 18.2**	**+1.6**
K05A	**Summer Lake**	**82.53**	**39**	P	**P**	**17 20 21.4**	**+2.6**
K05A				IAmb	IAmb	17 20 24.9	
	comp=Z,12nm,1.5s						
O18K	**Koktuh Hills**	**82.66**	**12**	P	**P**	**17 20 19.3**	**+0.5**
O18K				IAmb	IAmb	17 20 39.6	
	comp=Z,29nm,1.4s						
CNPM	**China Poot**	**83.16**	**14**	P	**P**	**17 20 21.4**	**0.0**
CNPM				IAmb	IAmb	17 20 41.0	
	comp=Z,7.2nm,1.0s						
U15A	**North Rim**	**84.53**	**48**	P	**P**	**17 20 31.0**	**+2.0**
GAMB	**Gambell**	**84.54**	**3**	P	**P**	**17 20 28.2**	**+0.3**
GAMB				IAmb	IAmb	17 20 33.1	
	comp=Z,43nm,1.3s						
SUA	**Susitna One**	**85.02**	**13**	P	**P**	**17 20 30.0**	**-0.5**
SUA				IAmb	IAmb	17 20 35.2	
	comp=Z,8.2nm,1.2s						
SEY	**Seymchan**	**86.64**	**347**	P	**P**	**17 20 37.8**	**-0.2**
	comp=Z,1.9nm,0.6s,baz=168,slow=7.7,SNR=10						
	comp=Z,1.9nm,0.6s						
CCB	**Clear Creek Bu**	**88.47**	**13**	P	**P**	**17 20 44.8**	**-1.7**
CCB				IAmb	IAmb	17 20 47.0	
	comp=Z,3.1nm,0.8s						
ILAR	**Eielson Array**	**88.77**	**13**	P	**P**	**17 20 47.2**	**-0.7**
	comp=Z,0.8nm,0.6s,baz=228,slow=5.7,SNR=7.2						
	comp=Z,0.8nm,0.6s						
PDAR	**Pinedale Array**	**89.53**	**43**	P	**P**	**17 20 53.8**	**+1.5**
	comp=Z,0.7nm,0.7s,baz=227,slow=2.2,SNR=5.8						
	comp=Z,0.7nm,0.7s						
CMAR	**Chiang Mai Arr**	**89.83**	**290**	P	**P**	**17 20 55.0**	**+1.0**
	comp=Z,1.3nm,0.8s,baz=124,slow=2.9,SNR=10						
	comp=Z,1.3nm,0.8s						
AKASG	**Malin Array Be**	**143.13**	**331**	PKP	PKPab	17 27 21.1	-1.0
	comp=Z,2.3nm,0.3s,baz=44,slow=4.2,SNR=17						
BRTR	**Keskin Array B**	**146.77**	**312**	PKPbc	**PKPbc**	**17 27 32.5**	**-1.2**
	comp=Z,1.0nm,0.7s,baz=106,slow=3.1,SNR=2.3						
CLL	**Collm**	**148.32**	**346**	⇑*i* PKPbc	**PKPbc**	**17 27 37.4**	**+0.3**
	comp=Z,8.0nm,1.2s						
GERES	**GERESS Array B**	**150.44**	**344**	PKPbc	**PKPbc**	**17 27 41.0**	**-1.3**
	comp=Z,0.7nm,0.7s,baz=38,slow=5.0,SNR=5.1						

*MOS **21** 17:12:06.5±1.1, 3°.41S×151°.81E, h362km, mb5.5/24, Error ellipse: s-maj=6.2km s-min=4.4km az=105.6*
*IDC **21** 17:12:07.6±0.3, 3°.48S×151°.82E, h362km±2km, mb4.7/38, mbtmp5.4/42, Error ellipse: s-maj=7.7km s-min=4.8km az=70.0*
*BJI **21** 17:12:07.4±0.0, 3°.55S×152°.40E, h395km, mb4.9/75, mB5.3/59*
*NEIC **21** 17:12:07.4±2.2, 3°.42S±0°.07×151°.88E±0°.07, h354km±1km, mb5.9/438, Mwb6.3/24, Mwc6.3/92, Mww6.3, Error ellipse: s-maj=11.7km s-min=11.3km az=83.0*
*NEIC **21** 17:12:08.6, 3°.48S×151°.86E, h357km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}=2.60; $M_{\theta\theta}$0.34; $M_{\phi\phi}$2.26; $M_{r\theta}$1.45; $M_{\theta\phi}$-0.02; $M_{\phi r}$-1.37; Fault plane solution: $M_0$3.16000×10^{18} NP1:ϕ_s335.16000°, δ64.06000°, λ-108.40000°. NP2:ϕ_s192.43000°, δ31.43000°, λ-57.01000°. Principal axes: T 2.6972, Plg17.0000°, Azm79.0000°; N 0.7790, Plg16.0000°, Azm343.0000°; P -3.4762, Plg66.0000°, Azm212.0000°;*
*DJA **21** 17:12:08.7±0.2

153nm,0.7s,baz=18,slow=12,SNR=59
CTA S **S** **17 18 53.8 +2.6**
114nm,1.1s,baz=8.4,slow=7.4,SNR=1.5
CTA Charters Tower 17.41 198 P **P** **17 15 49.0 +0.1**
CTAO Charters Tower 17.41 198 P **P** **17 15 48.4 -0.4**
CTAO IAmb IAmb 17 16 03.4
comp=Z,523nm,0.9s
CTAO Charters Tower 17.41 198 P **P** **17 15 48.4 -0.4**
CTAO pmax pmax
comp=Z,523nm,1.0s
CTAO Charters Tower 17.41 198 P **P** **17 15 49.0 +0.1**
GUMO Guam 18.38 338 P **P** **17 15 56.6 -2.6**
comp=Z,154nm,0.7s,baz=176,slow=15,SNR=1.9
GUMO S **S** **17 19 05.5 -4.6**
comp=Z,63nm,0.8s,baz=128,slow=13,SNR=0.8
FAKI Fak Fak 19.70 271 P **P** **17 16 11.2 -1.9**
FAKI IAmb IAmb 17 16 20.8
comp=Z,718nm,0.9s
FAKI Fak Fak 19.70 271 P **P** **17 16 10.4 -2.6**
comp=Z,13µmcomp=Z,920nm,1.5s
FAKI Fak Fak 19.70 271 P **P** **17 16 10.5 -2.6**
FAKI Fak Fak 19.70 271 ⇑P **P** **17 16 10.3 -2.8**
KWAJ Kwajalein Atol 19.81 52 P **P** **17 16 12.8 -1.3**
KWAJ Kwajalein Atol 19.81 52 P **P** **17 16 12.8 -1.3**
KWAJ pmax pmax
comp=Z,2µm,1.0s
KWAJ Kwajalein Atol 19.81 52 P **P** **17 16 13.8 -0.3**
comp=Z,2µm,1.0s
KWAJ Kwajalein Atol 19.81 52 ⇑P **P** **17 16 12.3 -1.8**
RK1H Rockhampton Ha 19.83 184 P **P** **17 16 13.9 -0.2**
KOUNC Koumac, New Ca 20.77 146 P **P** **17 16 23.1 +0.3**
KOUNC Koumac, New Ca 20.77 146 P **P** **17 16 24.2 +1.3**
KOUNC Koumac, New Ca 20.77 146 ⇑P **P** **17 16 22.5 -0.4**
QIS Mount Isa 20.80 214 P **P** **17 16 21.4 -1.9**
baz=21,SNR=112
QIS Mount Isa 20.80 214 P **P** **17 16 22.1 -1.2**
SWI Sorong 20.86 277 P **P** **17 16 21.5 -2.3**
comp=Z,8µmcomp=Z,708nm,0.7s
SAUI Saumlaki 21.04 257 P **P** **17 16 23.1 -2.3**
SAUI Saumlaki 21.04 257 P **P** **17 16 25.5 0.0**
comp=Z,35µmcomp=Z,3µm,1.6s
SAUI Saumlaki 21.04 257 P **P** **17 16 25.9 +0.4**
SAUI Saumlaki 21.04 257 ⇑P **P** **17 16 27.9 +2.5**
DVP Devils Point 21.27 133 P **P** **17 16 29.4 +1.9**
KDU Kakadu 21.34 244 P **P** **17 16 24.5 -3.6**
baz=21,SNR=98
KDU Kakadu 21.34 244 P **P** **17 16 26.0 -2.1**
KDU Kakadu 21.34 244 ⇓P **P** **17 16 24.4 -3.6**
TARA Tarawa 21.49 77 P **P** **17 16 28.2 -1.3**
TARA Tarawa 21.49 77 P **P** **17 16 28.8 -0.7**
TARA Tarawa 21.49 77 ⇑P **P** **17 16 28.8 -0.7**
EIDS Eidsvold 21.77 182 P **P** **17 16 30.5 -1.4**
baz=22,SNR=85
EIDS Eidsvold 21.77 182 P **P** **17 16 30.0 -1.9**
EIDS IAmb IAmb 17 16 36.7
comp=Z,806nm,1.3s
EIDS Eidsvold 21.77 182 P **P** **17 16 32.4 +0.5**
EIDS Eidsvold 21.77 182 ⇑P **P** **17 16 30.5 -1.4**
BNDI Bandanaira 22.04 267 P **P** **17 16 34.6 0.0**
MTN Manton Dam 22.60 245 P **P** **17 16 38.0 -1.7**
baz=22,SNR=46
MTN Manton Dam 22.60 245 P **P** **17 16 37.9 -1.7**
MTN IAmb IAmb 17 16 46.4
comp=Z,170nm,0.5s
MTN Manton Dam 22.60 245 P **P** **17 16 38.4 -1.3**
MTN Manton Dam 22.60 245 ⇓P **P** **17 16 37.9 -1.7**
RMQ Roma 23.07 187 P **P** **17 16 42.6 -1.1**
baz=23,SNR=105
RMQ Roma 23.07 187 P **P** **17 16 42.4 -1.3**
NOUC Port Laguerre 23.14 144 P **P** **17 16 44.7 +0.3**
DZM Mont Dzumac 23.20 144 *eP* **P** **17 16 48.0 +2.9**
comp=Z,4µm,1.2s
DZM *e*LR LR 17 22 58.3
comp=Z,6µm,25.1s
DZM Mont Dzumac 23.20 144 P **P** **17 16 44.7 -0.3**
comp=Z,876nm,0.8s,baz=340,slow=7.1,SNR=236
DZM S **S** **17 20 27.7 -1.8**
comp=Z,30nm,0.9s,baz=142,slow=16,SNR=1.1
YATNC Mamie plateau, 23.45 143 P **P** **17 16 48.8 +1.5**
WB0 Warramunga Arr 23.58 225 P **P** **17 16 45.9 -2.5**
WB0 IAmb IAmb 17 16 56.1
comp=Z,903nm,0.9s
WR0 Warramunga Arr 23.60 225 P **P** **17 16 46.0 -2.7**
OUENC Ouen Island, N 23.70 144 P **P** **17 16 49.1 -0.4**
OUENC IAmb IAmb 17 17 09.8
comp=Z,401nm,1.1s
WRAB Tennant Creek 23.72 225 P **P** **17 16 47.0 -2.6**
WRAB Tennant Creek 23.72 225 P **P** **17 16 47.1 -2.6**
WRAB pmax pmax
comp=Z,5µm,2.0s
WRAB Tennant Creek 23.72 225 P **P** **17 16 47.2 -2.5**
WB2 Warramunga Arr 23.72 225 P **P** **17 16 47.2 -2.5**
MARNC Mare, Loyalty 23.73 140 P **P** **17 16 49.4 -0.3**
MARNC Mare, Loyalty 23.73 140 P **P** **17 16 50.6 +0.9**
MARNC Mare, Loyalty 23.73 140 ⇑P **P** **17 16 49.6 -0.1**
WRA Warramunga Arr 23.73 225 P **P** **17 16 47.0 -2.9**
comp=Z,177nm,0.5s,baz=47,slow=9.1,SNR=206
WRA PcP **PcP** **17 20 22.3 -0.2**
comp=Z,74nm,0.6s,baz=49,slow=2.2,SNR=6.0
WRA S **S** **17 20 36.2 -1.6**
comp=Z,46nm,0.6s,baz=62,slow=14,SNR=6.6
WRA ScP **ScP** **17 23 25.1 -0.5**
comp=Z,87nm,1.0s,baz=38,slow=2.5,SNR=6.3
WRA Warramunga Arr 23.73 225 P **P** **17 16 48.0 -1.8**
WRA IAmb IAmb 17 16 56.9
comp=Z,645nm,2.0s
I07AU WARRAMUNGA INE23.73 225 P **P** **17 16 49.1 -0.7**
baz=46,slow=9.6,SNR=1.9
AAI Ambon 23.73 269 P **P** **17 16 48.6 -1.3**
comp=Z,6µmcomp=Z,597nm,0.8s
QLP Quilpie 24.12 197 P **P** **17 16 51.6 -1.7**
baz=24,SNR=175
QLP Quilpie 24.12 197 P **P** **17 16 52.0 -1.2**
QLP Quilpie 24.12 197 ⇓P **P** **17 16 51.6 -1.7**
PINNC Pines Island, 24.21 143 P **P** **17 16 54.2 +0.2**
PINNC IAmb IAmb 17 16 58.0
comp=Z,760nm,1.2s
PINNC Pines Island, 24.21 143 P **P** **17 16 54.8 +0.8**
LBMI Labuha 24.62 276 P **P** **17 16 58.4 +0.5**
comp=Z,9µmcomp=Z,6µmcomp=Z,538nm,0.9s
NLAI Namlea 24.83 270 P **P** **17 17 00.5 +0.7**
comp=Z,15µmcomp=Z,6µmcomp=Z,288nm,0.5s
KNRA Kununurra 25.85 241 P **P** **17 17 05.8 -3.0**
baz=26,SNR=27
KNRA Kununurra 25.85 241 P **P** **17 17 06.4 -2.4**
KNRA IAmb IAmb 17 17 21.0
comp=Z,176nm,1.0s
KNRA Kununurra 25.85 241 P **P** **17 17 06.8 -2.0**
SANI Sanana 26.00 272 P **P** **17 17 08.0 -2.1**
comp=Z,25µmcomp=Z,3µmcomp=Z,187nm,0.8s
SANI Sanana 26.00 272 P **P** **17 17 10.7 +0.6**
SANI Sanana 26.00 272 ⇑P **P** **17 17 09.4 -0.8**
H11S3 WAKE ISLAND Hy 26.22 33 P **P** **17 17 12.3 +0.4**
baz=213,slow=7.0,SNR=5.5
H11S2 WAKE ISLAND Hy 26.23 33 P **P** **17 17 12.6 +0.7**
baz=213,slow=7.0,SNR=5.5
H11S1 WAKE ISLAND Hy 26.24 33 P **P** **17 17 12.6 +0.6**
baz=213,slow=7.0,SNR=4.5
INKA Innaminka 26.39 203 P **P** **17 17 11.2 -2.2**
AS31 Alice Springs 26.59 219 P **P** **17 17 14.0 -1.4**
AS31 IAmb IAmb 17 17 24.9
comp=Z,285nm,0.3s
ASAR Alice Springs 26.59 219 P **P** **17 17 13.3 -2.0**
ASAR Alice Springs 26.59 219 P **P** **17 17 13.3 -2.0**
ARMA Armidale 26.78 181 P **P** **17 17 16.1 -0.9**
baz=27,SNR=35
ARMA Armidale 26.78 181 P **P** **17 17 16.4 -0.6**
ARMA Armidale 26.78 181 P **P** **17 17 16.5 -0.5**
ARMA Armidale 26.78 181 ⇑P **P** **17 17 16.9 -0.2**
H11N1 WAKE ISLAND Hy 27.33 32 P **P** **17 17 21.7 +0.1**
baz=220,slow=12,SNR=9.7
H11N3 WAKE ISLAND Hy 27.34 32 P **P** **17 17 22.1 +0.4**
baz=220,slow=12,SNR=15
H11N2 WAKE ISLAND Hy 27.35 32 P **P** **17 17 22.1 +0.4**
baz=220,slow=12,SNR=8.9
SGSI Sangihe 27.38 285 P P 17 17 30.2 +7.8
FUNA Funafuti 27.52 102 P **P** **17 17 24.4 +0.7**
FUNA IAmb IAmb 17 17 29.2
comp=Z,297nm,0.8s
KMSI Cibinong 28.27 278 P **P** **17 17 32.3 +2.0**
comp=Z,920nm,0.7s
DAV Davao City (W) 28.36 292 PcP **PcP** **17 20 36.2 +2.8**
comp=Z,116nm,0.7s,baz=32,slow=15,SNR=1.0
DAV ScP **ScP** **17 23 39.3 -0.1**
comp=Z,81nm,0.3s,baz=77,slow=7.7,SNR=1.4

CMSA Cobar Meteorol 28.51 191 P **P** **17 17 30.4 -1.8**
baz=28,SNR=506
CMSA Cobar Meteorol 28.51 191 P **P** **17 17 30.2 -2.0**
GSPH General Santos 28.62 289⇑*e*P **P** **17 17 34.3 +0.8**
OOD Oodnadatta 28.73 211 P **P** **17 17 33.6 -0.5**
KCP Kidapawan 28.79 291⇓*e*P **P** **17 17 37.8 +2.8**
MSVF Nonsavu 29.21 121 P **P** **17 17 39.9 +1.3**
comp=Z,81nm,0.5s,baz=276,slow=7.7,SNR=34
MSVF S **S** **17 22 02.0 -2.2**
comp=Z,3.8nm,0.5s,baz=200,slow=19,SNR=0.9
MSVF ScP **ScP** **17 23 43.5 +1.4**
comp=Z,7.3nm,0.6s,baz=300,slow=24,SNR=2.6
comp=Z,81nm,0.5s
MSVF Nonsavu 29.21 121 P **P** **17 17 39.8 +1.3**
MSVF IAmb IAmb 17 17 46.0
comp=Z,269nm,0.8s
MSVF Nonsavu 29.21 121 P **P** **17 17 40.3 +1.7**
MSVF Nonsavu 29.21 121 ⇓P **P** **17 17 40.4 +1.7**
MSVF Nonsavu 29.21 121 P **P** **17 17 40.5 +1.9**
MSVF PP **PP** **17 18 57.8 +4.1**
MSVF ScP **ScP** **17 23 46.7 +4.7**
LUWI Luwuk 29.28 274 P **P** **17 17 37.7 -1.4**
LUWI IAmb IAmb 17 17 46.9
comp=Z,426nm,0.8s
LUWI Luwuk 29.28 274 P **P** **17 17 37.8 -1.4**
comp=Z,5µmcomp=Z,653nm,0.9s
LUWI Luwuk 29.28 274 P **P** **17 17 37.9 -1.3**
LUWI Luwuk 29.28 274 ⇑P **P** **17 17 40.5 +1.3**
BBSI Bau Bau 29.38 265 P **P** **17 17 39.6 -0.5**
comp=Z,467nmcomp=Z,48nm,1.1s
CTBH Cotabato--PC H 29.65 291⇑*e*P **P** **17 17 43.7 +1.3**
LCRK Leigh Creek 29.80 204 P **P** **17 17 41.5 -2.0**
STKA Stephens Creek 29.87 198 P **P** **17 17 42.5 -1.6**
comp=Z,81nm,0.5s,baz=12,slow=11,SNR=42
STKA S **S** **17 22 08.8 -5.2**
comp=Z,11nm,0.6s,baz=344,slow=22,SNR=1.1
STKA ScP **ScP** **17 23 44.2 +0.4**
comp=Z,21nm,0.8s,baz=21,slow=16,SNR=2.1
comp=Z,81nm,0.5s
STKA Stephens Creek 29.87 198 P **P** **17 17 41.5 -2.6**
baz=30,SNR=92
STKA Stephens Creek 29.87 198 P **P** **17 17 41.8 -2.3**
STKA Stephens Creek 29.87 198 P **P** **17 17 42.4 -1.7**
MMRI Maumere 30.00 259 P **P** **17 17 43.0 -2.4**
MMRI Maumere 30.00 259 P **P** **17 17 42.5 -3.0**
comp=Z,4µmcomp=Z,246nm,0.6s
MMRI Maumere 30.00 259 P **P** **17 17 44.6 -0.9**
MMRI Maumere 30.00 259 ⇑P **P** **17 17 42.8 -2.6**
DGTI Dogotuki 30.11 117 P **P** **17 17 47.2 +0.8**
SYDH Sydney Hard Ro 30.13 182 P **P** **17 17 46.0 -0.3**
MSLP Maasin 30.21 297⇑*i*P **P** **17 17 48.3 +1.0**
MRSI Marisa 30.28 277 P **P** **17 17 45.5 -2.4**
comp=Z,2µmcomp=Z,125nm,0.7s
APSI Ampana 30.41 274 P **P** **17 17 47.7 -1.4**
comp=Z,3µmcomp=Z,265nm,0.6s
EDFI Emo, Flores 30.55 259 P **P** **17 17 47.3 -3.1**
comp=Z,10µmcomp=Z,3µmcomp=Z,256nm,0.8s
TAVE Taveuni 30.58 117 P **P** **17 17 53.3 +2.8**
TBP Tagbilaran 30.92 295 *eP* **P** **17 17 53.5 0.0**
WRKA Warakurna 31.27 225 P **P** **17 17 52.6 -3.9**
baz=31,SNR=1000
WRKA Warakurna 31.27 225 P **P** **17 17 54.7 -1.8**
WRKA Warakurna 31.27 225 ⇓P **P** **17 17 52.5 -3.9**
SNPH Sibulan 31.35 294 *eP* **P** **17 17 55.1 -2.3**
BSSI Bau Bau, Buton 31.48 264 P **P** **17 17 57.5 -0.9**
comp=Z,11µmcomp=Z,5µmcomp=Z,359nm,1.8s
TOLI2 Tolitoli 31.51 278 P **P** **17 17 57.2 -1.5**
TOLI2 Tolitoli 31.51 278 P **P** **17 18 00.2 +1.5**
MULG Mulgathing 31.57 211 P **P** **17 17 56.1 -2.9**
CNB Canberra Magne 31.75 184 P **P** **17 17 59.4 -1.1**
baz=32,SNR=71
CNB Canberra Magne 31.75 184 P **P** **17 17 59.6 -0.9**
CAN Canberra 31.79 185 P **P** **17 17 59.5 -1.2**
CAN Canberra 31.79 185 P **P** **17 17 59.6 -1.2**
CAN pmax pmax
comp=Z,92nm,0.7s
CAN Canberra 31.79 185 P **P** **17 18 00.0 -0.8**
CAN Canberra 31.79 185 ⇓P **P** **17 17 59.9 -0.9**
CAN Canberra 31.79 185 P **P** **17 18 01.4 +0.6**
CAN PP **PnPn** **17 19 27.8 +3.8**
CAN ScP **ScP** **17 23 55.4 +5.2**
BNSI Bone 31.80 267 P **P** **17 17 59.3 -1.9**
comp=Z,5µmcomp=Z,354nm,1.1s
BKSI Bulukumba 31.81 266 P **P** **17 17 58.3 -2.9**
comp=Z,19µmcomp=Z,2µmcomp=Z,113nm,0.9s
JCJ Chichijima 31.85 343 P P 17 17 55.9 -5.5
comp=Z,39nm,0.6s,baz=190,slow=11,SNR=2.4
JCJ PcP **PcP** **17 20 44.0 +1.8**
comp=Z,103nm,0.6s,baz=196,slow=5.3,SNR=6.3
JCJ ScP **ScP** **17 23 50.9 +0.3**
comp=Z,70nm,0.7s,baz=162,slow=20,SNR=2.2
JCJ Chichijima 31.85 343 P **P** **17 18 00.8 -0.5**
BASI Baing, Sumba 31.86 256 P **P** **17 18 00.1 -1.6**
comp=Z,10µmcomp=Z,6µmcomp=Z,376nm,0.8s
TTSI Tana Toraja 32.11 270 P **P** **17 18 04.8 +1.0**
comp=Z,3µmcomp=Z,170nm,1.3s
LKBA Tubou, Lakemba 32.13 119 P **P** **17 18 06.8 +2.9**
SPSI Sidrap Palu 32.14 268 P **P** **17 18 01.4 -2.7**
comp=Z,2µmcomp=Z,169nm,1.4s
KAPI Kappang 32.17 266 P **P** **17 18 01.6 -2.8**
comp=Z,28nm,0.6s,baz=130,slow=0.7,SNR=18
KAPI PcP **PcP** **17 20 45.7 +2.2**
comp=Z,90nm,0.9s,baz=80,slow=4.6,SNR=5.5
KAPI ScP **ScP** **17 23 51.7 -0.3**
comp=Z,36nm,0.8s,baz=38,slow=1.6,SNR=6.2
comp=Z,28nm,0.6s
KAPI Kappang 32.17 266 P **P** **17 18 01.8 -2.6**
KAPI Kappang 32.17 266 P **P** **17 18 01.8 -2.6**
KAPI pmax pmax
comp=Z,217nm,1.0s
KAPI Kappang 32.17 266 P **P** **17 18 03.1 -1.3**
KAPI Kappang 32.17 266 P **P** **17 18 04.0 -0.3**
KAPI Kappang 32.17 266 P **P** **17 18 03.4 -1.0**
KAPI pP **pwP** **17 19 13.8 -0.7**
KAPI x x 17 20 48.9
KAPI ScP **ScP** **17 23 54.4 +2.4**
HTT Hallett 32.18 201 P **P** **17 18 01.9 -2.4**
baz=32,SNR=242
HTT Hallett 32.18 201 P **P** **17 18 03.3 -0.9**
HTT Hallett 32.18 201 ⇑P **P** **17 18 01.9 -2.4**
MPSI Mapaga 32.28 276 P **P** **17 18 02.3 -3.0**
comp=Z,5µmcomp=Z,301nm,0.6s
PTPS Port Pirie 32.29 202 P **P** **17 18 04.8 -0.3**
WHYH Whyalla 32.33 203 P **P** **17 18 04.1 -1.3**
RCP Roxas 32.69 298⇓*e*P **P** **17 18 10.9 +2.0**
BBOO Buckleboo 32.75 205 P **P** **17 18 06.4 -2.8**
baz=33,SNR=158
BBOO Buckleboo 32.75 205 P **P** **17 18 06.3 -2.8**
BBOO IAmb IAmb 17 18 15.5
comp=Z,884nm,1.4s
BBOO Buckleboo 32.75 205 P **P** **17 18 06.5 -2.6**
WBSI Waikabubak, Su 32.92 258 P **P** **17 18 08.8 -2.1**
comp=Z,6µmcomp=Z,557nm,0.9s
TWOA Tennyson Woods 33.75 200 P **P** **17 18 17.0 -0.6**
PLAI Plampang 34.40 260 P **P** **17 18 21.5 -1.9**
comp=Z,5µmcomp=Z,440nm,0.8s
PLAI Plampang 34.40 260 P **P** **17 18 19.7 -3.7**
ARPS Mount Arapiles 34.40 194 P **P** **17 18 21.7 -1.4**
baz=34,SNR=73
ARPS Mount Arapiles 34.40 194 P **P** **17 18 22.0 -1.1**
TOO Toolangi 34.43 189 P **P** **17 18 22.3 -1.1**
baz=34,SNR=14
TOO Toolangi 34.43 189 P **P** **17 18 22.6 -0.7**
TOO Toolangi 34.43 189 P **P** **17 18 22.7 -0.7**
TOO pmax pmax
comp=Z,253nm,1.5s
TOO Toolangi 34.43 189 P **P** **17 18 24.0 +0.6**
TOO Toolangi 34.43 189 ⇑P **P** **17 18 23.8 +0.4**
MYLDM Lahad Datu 34.53 284 P **P** **17 18 24.4 -0.1**
MYLDM Lahad Datu 34.53 284 ⇓P **P** **17 18 27.2 +2.6**
BRAT Ballarat 34.69 191 P **P** **17 18 26.3 +0.8**
SMKI Samarinda 34.87 274 P **P** **17 18 29.7 +2.2**
comp=Z,311nm,0.8s
PGP Puerto Galera 35.11 299⇓*e*P **P** **17 18 29.5 0.0**
TWSI Taliwang, Sumb 35.26 260 P **P** **17 18 28.9 -1.9**
comp=Z,2µmcomp=Z,210nm,0.8s
FORT Forrest 35.30 217 P **P** **17 18 27.6 -3.2**
baz=35,SNR=96
FORT Forrest 35.30 217 P **P** **17 18 28.1 -2.8**
FORT Forrest 35.30 217 P **P** **17 18 27.9 -2.9**
FORT Forrest 35.30 217 ⇓P **P** **17 18 27.5 -3.3**
TGY Tagaytay City 35.40 300 P **P** **17 18 33.8 +1.9**
comp=Z,140nm,0.4s,baz=156,slow=14,SNR=6.3
TGY PcP **PcP** **17 20 55.6 +2.8**
comp=Z,902nm,0.9s,baz=239,slow=15,SNR=2.4

PPR Puerto Princes 35.65 292⇓*i*P **P** **17 18 33.6 -0.3**
MBWA Marble Bar 35.93 238 P **P** **17 18 33.2 -3.0**
MBWA Marble Bar 35.93 238 P **P** **17 18 33.5 -2.8**
MBWA Marble Bar 35.93 238 P **P** **17 18 33.7 -2.6**
MBWA Marble Bar 35.93 238 ⇑P **P** **17 18 32.9 -3.4**
MBWA Marble Bar 35.93 238 P **P** **17 18 35.6 -0.7**
MBWA pP **pP** **17 19 48.2 +2.8**
MBWA sP **sP** **17 20 29.4 +2.1**
PCPH Palayan 35.95 303⇓*e*P **P** **17 18 38.1 +1.6**
PSA00 Pilbara Seismi 36.01 237 P **P** **17 18 35.2 -1.8**
PSA00 Pilbara Seismi 36.01 237 P **P** **17 18 34.8 -2.1**
PSA00 IAmb IAmb 17 18 45.0
comp=Z,67nm,1.1s
PSA00 Pilbara Seismi 36.01 237 P **P** **17 18 37.5 +0.6**
KNTN Kanton 36.26 90 P **P** **17 18 38.8 -0.4**
KNTN PP **PP** **17 20 09.7 -1.3**
SRBI Singaraja 36.84 261 P **P** **17 18 44.2 +0.2**
comp=Z,3µmcomp=Z,245nm,1.6s
DNP Denpasar 36.90 260 P **P** **17 18 47.1 +2.6**
comp=Z,12µmcomp=Z,745nm,1.0s
KKM Kota Kinabalu 36.95 285 P **P** **17 18 42.8 -2.2**
KKM Kota Kinabalu 36.95 285 P **P** **17 18 46.6 +1.6**
KKM Kota Kinabalu 36.95 285 ⇑P **P** **17 18 46.6 +1.6**
IGBI Denpasar 36.98 260 P **P** **17 18 46.0 +0.8**
comp=Z,6µmcomp=Z,335nm,0.6s
BBKI Banjar Baru 37.06 269 P **P** **17 18 46.2 +0.3**
comp=Z,9µmcomp=Z,694nm,1.5s
MTKI Muara Teweh, K 37.13 273 P **P** **17 18 45.9 -0.6**
comp=Z,92nm,0.7s
AFI Afiamalu 37.24 108 P **P** **17 18 48.3 +0.9**
comp=Z,61nm,0.6s,baz=306,slow=19,SNR=3.9
comp=Z,61nm,0.6s
AFI Afiamalu 37.24 108 P **P** **17 18 48.3 +0.9**
AFI Afiamalu 37.24 108 P **P** **17 18 49.8 +2.4**
AFI Afiamalu 37.24 108 P **P** **17 18 50.0 +2.7**
OUZ Omahuta 37.39 150 P **P** **17 18 48.9 +0.6**
OUZ IAmb IAmb 17 18 56.7
comp=Z,323nm,1.0s
OUZ Omahuta 37.39 150 ⇓P **P** **17 18 49.1 +0.9**
GLAD Gladstone 37.49 185 P **P** **17 18 50.0 +1.0**
ABJI Asem Bagus 37.79 262 P **P** **17 18 52.8 +0.9**
comp=Z,4µmcomp=Z,210nm,0.9s
JOW Kunigami 37.86 324 P **P** **17 18 51.4 -0.9**
JOW Kunigami 37.86 324 P **P** **17 18 54.0 +1.7**
JOW Kunigami 37.86 324 ⇓P **P** **17 18 54.0 +1.7**
JOW Kunigami 37.86 324 P **P** **17 18 54.1 +1.7**
JAGI Jajag, Banyuwa 37.92 261 P **P** **17 18 49.8 -3.2**
JAGI Jajag, Banyuwa 37.92 261 P **P** **17 18 49.8 -3.2**
comp=Z,3µmcomp=Z,268nm,0.8s
JAGI Jajag, Banyuwa 37.92 261 P **P** **17 18 50.1 -2.9**
JAGI Jajag, Banyuwa 37.92 261 ⇑P **P** **17 18 49.9 -3.1**
KMMI Kalianget 38.00 263 P **P** **17 18 56.0 +2.3**
comp=Z,3µmcomp=Z,140nm,1.2s
CORO Coronation Par 38.04 186 P **P** **17 18 54.7 +1.2**
JHJ Hachijo jima 2 38.20 343 P **P** **17 18 56.1 +1.1**
comp=Z,163nm,0.8s,baz=202,slow=11,SNR=3.4
JMJ Miyako jima 2 38.26 319 P **P** **17 18 56.7 +1.1**
JAM Amami Oshima 38.33 327 P **P** **17 18 58.4 +2.3**
RAO Raoul Island 38.37 135 P **P** **17 18 60.0 +3.5**
comp=Z,207nm,0.4s,baz=283,slow=18,SNR=1.9
BLJI Banyuglugur 38.41 262 P **P** **17 18 57.7 +0.6**
comp=Z,2µmcomp=Z,155nm,0.8s
GMJI Gumukmas 38.60 261 P **P** **17 18 56.8 -1.8**
comp=Z,2µmcomp=Z,106nm,1.3s
MOO Moorlands 39.01 186 P **P** **17 19 02.3 +0.7**
baz=39,SNR=29
MOO Moorlands 39.01 186 P **P** **17 19 01.7 +0.2**
BWJI Bawean 39.25 265 P **P** **17 19 09.4 +5.5**
TAU Tasmania Unive 39.46 185 P **P** **17 19 04.2 -1.0**
TAU Tasmania Unive 39.46 185 P **P** **17 19 04.2 -1.0**
TAU pmax pmax
comp=Z,185nm,1.5s
TAU Tasmania Unive 39.46 185 P **P** **17 19 04.7 -0.5**
TAU Tasmania Unive 39.46 185 ⇑P **P** **17 19 04.2 -1.0**
TAU Tasmania Unive 39.46 185 P **P** **17 19 04.2 -1.0**
TAU sP **PP** **17 20 47.0 +1.8**
TAU x x 17 21 11.1
GRJI Gresik 39.47 263 P P 17 19 15.6 +10
YOJ Yonaguni jima 39.57 316 P **P** **17 19 03.7 -2.6**
YOJ Yonaguni jima 39.57 316 P **P** **17 19 03.7 -2.6**
YOJ pmax pmax
comp=Z,296nm,0.9s
YOJ Yonaguni jima 39.57 316 P **P** **17 19 08.2 +1.9**
YOJ Yonaguni jima 39.57 316 ⇑P **P** **17 19 08.1 +1.7**
YOJ Yonaguni jima 39.57 316 P **P** **17 19 08.0 +1.7**
YULB Yu-li 40.11 313 P **P** **17 19 09.4 -1.3**
SBUM Sibu 40.17 278 P **P** **17 19 10.2 -1.2**
SBUM Sibu 40.17 278 ⇑P **P** **17 19 10.6 -0.8**
PWJI Pagerwojo 40.20 262 P **P** **17 19 10.5 -1.2**
comp=Z,4µmcomp=Z,290nm,1.0s
PBKI Pangkalan Bun 40.25 270 P **P** **17 19 13.5 +1.4**
comp=Z,8µmcomp=Z,683nm,1.0s
NIUE Niue 40.31 116 P **P** **17 19 13.9 +1.5**
baz=40,SNR=3.7
NACB Ninganchiao 40.38 315 P **P** **17 19 12.0 -0.9**
JSU Suzuyama 40.39 331 P **P** **17 19 13.7 +0.8**
JSU Suzuyama 40.39 331 ⇓P **P** **17 19 14.1 +1.1**
TPUB Ta-pu 40.54 313 P **P** **17 19 12.4 -1.9**
TPUB Ta-pu 40.54 313 P **P** **17 19 15.5 +1.2**
SSLB Suanglung 40.60 313 P **P** **17 19 13.9 -0.9**
SSLB Suanglung 40.60 313 P **P** **17 19 15.7 +0.9**
HIZ Hauiti 40.62 152 P **P** **17 19 15.3 +0.6**
HIZ IAmb IAmb 17 19 23.9
comp=Z,531nm,1.1s
HIZ Hauiti 40.62 152 P **P** **17 19 16.7 +2.0**
STKI Sintang 40.63 274 P **P** **17 19 14.7 -0.5**
comp=Z,7µmcomp=Z,114nm,1.3s
TGRZ Tauranga 40.68 150 P **P** **17 19 18.4 +3.2**
PCJI Pacitan 40.84 262 P **P** **17 19 15.6 -1.2**
comp=Z,11µmcomp=Z,839nm,1.1s
YHNB Yeheng 40.84 315 P **P** **17 19 16.6 -0.1**
YHNB Yeheng 40.84 315 P **P** **17 19 17.8 +1.0**
KARZ Kaharoa 40.90 150 P P 17 19 22.9 +5.9
OPRZ Ohinepanea 40.92 150 P **P** **17 19 18.6 +1.4**
TATO Taipei 40.95 315 P **P** **17 19 17.7 +0.1**
TATO Taipei 40.95 315 P **P** **17 19 19.4 +1.9**
TATO Taipei 40.95 315 P **P** **17 19 19.5 +1.9**
TATO pP **pP** **17 20 29.7 +1.0**
TATO sP **PcP** **17 21 07.2 -2.8**
UWJI Ujung Watu 40.97 264 P **P** **17 19 18.8 +0.9**
comp=Z,5µmcomp=Z,402nm,1.1s
JYT Yasato 41.02 345 P **P** **17 19 16.7 -1.2**
JYT Yasato 41.02 345 ⇓P **P** **17 19 18.6 +0.6**
JYT Yasato 41.02 345 P **P** **17 19 18.0 +0.1**
OMRZ Omania 41.03 150 P **P** **17 19 20.9 +2.9**
WOJI Wonogiri, Jawa 41.06 262 P **P** **17 19 17.7 -0.9**
comp=Z,4µmcomp=Z,243nm,1.3s
GRRZ Galatos Road 41.09 151 P **P** **17 19 22.2 +3.6**
INU Inuyama 41.11 341 P **P** **17 19 16.8 -1.9**
INU IAmb IAmb 17 19 27.4
comp=Z,66nm,0.8s
INU Inuyama 41.11 341 P **P** **17 19 20.1 +1.4**
INU Inuyama 41.11 341 ⇑P **P** **17 19 18.5 -0.2**
INU Inuyama 41.11 341 P **P** **17 19 22.1 +3.5**
INU sP **PcP** **17 21 15.9 +5.6**
INU ScP **ScP** **17 24 25.7 +1.0**
HSRZ Hossack Road 41.13 151 P **P** **17 19 23.4 +4.5**
JRY Ryogami san 41.17 344 P **P** **17 19 15.1 -4.0**
GIRL Giralia 41.20 239 P **P** **17 19 21.4 +1.7**
baz=41,SNR=11
GIRL Giralia 41.20 239 P **P** **17 19 17.9 -1.7**
GIRL IAmb IAmb 17 19 28.9
comp=Z,523nm,1.1s
GIRL Giralia 41.20 239 P **P** **17 19 20.0 +0.4**
GIRL Giralia 41.20 239 ⇑P **P** **17 19 21.5 +1.9**
HRRZ Handcock Road 41.21 151 P **P** **17 19 21.9 +2.3**
JGF Kuroka 41.24 342 P **P** **17 19 18.8 -1.0**
JGF IAmb IAmb 17 19 26.9
comp=Z,51nm,0.8s
JGF Kuroka 41.24 342 ⇓P **P** **17 19 18.6 -1.2**
JGF Kuroka 41.24 342 P **P** **17 19 18.5 -1.2**
RRRZ Republican Roa 41.28 150 P **P** **17 19 23.8 +3.7**
PRRZ Plateau Road 41.35 151 P **P** **17 19 22.7 +2.1**
WTVZ West Tongariro 41.45 152 P **P** **17 19 23.4 +1.9**
UGM Wanagama 41.46 262 P **P** **17 19 20.3 -1.6**
UGM Wanagama 41.46 262 P **P** **17 19 20.8 -1.1**
comp=Z,5µmcomp=Z,345nm,0.9s
UGM Wanagama 41.46 262 P **P** **17 19 21.1 -0.8**
RITZ Rihia Road 41.47 152 P **P** **17 19 25.4 +3.9**
NNVZ North Ngauruho 41.47 152 P **P** **17 19 24.7 +2.9**
PKVZ Pokaka 41.47 152 P **P** **17 19 23.5 +1.9**
NTVZ North Tongarir 41.48 152 P **P** **17 19 23.3 +1.6**
HAZ Te Kaha 41.48 149 P **P** **17 19 23.1 +1.4**

SMRI	Semarang	41.50 263	P		P		17 19 24.1	+1.9
	comp=Z,6µmcomp=Z,205nm,1.5s							
NGZ	Ngauruhoe	41.50 152	P		P		17 19 23.2	+1.2
TMVZ	Te Maari	41.50 152	P		P		17 19 24.1	+2.2
HATZ	Hinemaiaia	41.51 151	P		P		17 19 24.0	+2.1
URZ	Urewera	41.52 150	P		P		17 19 21.9	0.0
	comp=Z,213nm,1.1s,baz=304,slow=2.8,SNR=37							
URZ			PcP		PcP		17 21 11.3	-0.3
	comp=Z,129nm,0.7s,baz=288,slow=1.2,SNR=6.6							
URZ			S		S		17 25 13.3	+3.6
	comp=Z,16nm,0.7s,baz=200,slow=23,SNR=8.9							
	comp=Z,213nm,1.1s							
URZ	Urewera	41.52 150	P		P		17 19 21.5	-0.4
URZ					S		17 25 18.0	+8.3
URZ	Urewera	41.52 150	P		P		17 19 21.7	-0.3
URZ	Urewera	41.52 150	P		P		17 19 22.0	+0.1
URZ	Urewera	41.52 150	⇓P		P		17 19 21.6	-0.4
ETVZ	East Tongariro	41.52 152	P		P		17 19 24.7	+2.6
OTVZ	Oturere	41.52 152	P		P		17 19 24.2	+2.0
QRZ	Quartz Range	41.52 156	P		P		17 19 21.9	0.0
QRZ			IAmb		IAmb		17 19 30.2	
	comp=Z,322nm,0.9s							
QRZ	Quartz Range	41.52 156	P		P		17 19 23.4	+1.5
SNVZ	South Ngauruho	41.53 152	P		P		17 19 24.2	+1.9
JNU	Nakatsue	41.53 333	P		P		17 19 20.5	-1.7
	comp=Z,41nm,0.7s,baz=129,slow=5.5,SNR=13							
JNU			S		S		17 25 07.8	-2.4
	comp=Z,7.7nm,0.5s,baz=328,slow=2.0,SNR=1.5							
	comp=Z,41nm,0.7s							
JNU	Nakatsue	41.53 333	P		P		17 19 20.2	-2.0
JNU	Nakatsue	41.53 333	P		P		17 19 23.4	+1.2
JNU	Nakatsue	41.53 333	⇓P		P		17 19 22.9	+0.7
JNU	Nakatsue	41.53 333	P		P		17 19 20.1	-2.1
FWVZ	Far West T-bar	41.54 152	P		P		17 19 23.8	+1.4
TRVZ	Turoa	41.58 152	P		P		17 19 24.7	+2.0
WHVZ	Whangaehu Hut	41.58 152	P		P		17 19 25.2	+2.5
RUGZ	Raukumara Rang	41.58 149	P		P		17 19 23.0	+0.4
JWT	Wachi	41.59 339	P		P		17 19 15.1	-7.5
MXZ	Matakaoa Point	41.61 148	P		P		17 19 23.2	+0.5
MXZ	Matakaoa Point	41.61 148	P		P		17 19 25.0	+2.3
WNVZ	Wahianoa	41.62 152	P		P		17 19 25.0	+2.1
MRHZ	Matea Rd	41.62 151	P		P		17 19 25.6	+2.8
YOGI	Yogyakarta	41.68 262	P		P		17 19 24.6	+0.9
	comp=Z,9µmcomp=Z,603nm,1.1s							
PKGZ	Pakihiroa	41.73 148	P		P		17 19 24.8	+1.0
JAD	Aida	41.74 338	P		P		17 19 19.0	-4.7
MOVZ	Moawhango	41.76 152	P		P		17 19 24.2	+0.2
MWZ	Matawai	41.79 149	P		P		17 19 24.1	-0.1
JGN	Niukaw	41.82 342	P		P		17 19 21.2	-3.2
MTHZ	Maungataniwha	41.84 151	P		P		17 19 24.4	-0.2
MJAR	Matsushiro Arr	41.85 343	P		P		17 19 21.6	-3.0
	comp=Z,8.8nm,0.8s,baz=160,slow=8.6,SNR=20							
MJAR			PcP		PcP		17 21 12.6	-0.1
	comp=Z,31nm,0.9s,baz=158,slow=4.2,SNR=4.8							
MJAR			ScP		ScP		17 24 27.8	0.0
	comp=Z,9.0nm,1.1s,baz=165,slow=3.7,SNR=3.1							
	comp=Z,8.8nm,0.8s							
MJAR	Matsushiro Arr	41.85 343	P		P		17 19 19.4	-5.3
RAGZ	Rawiri	41.85 150	P		P		17 19 26.2	+1.4
MAJO	Matsushiro	41.85 343	P		P		17 19 21.5	-3.2
MAJO	Matsushiro	41.85 343	P		P		17 19 21.5	-3.2
MAJO			pmax		pmax			
	comp=Z,79nm,0.9s							
MAJO	Matsushiro	41.85 343	P		P		17 19 25.2	+0.5
MAJO	Matsushiro	41.85 343	⇑P		P		17 19 21.7	-2.9
MAJO	Matsushiro	41.85 343	P		P		17 19 24.9	+0.3
MAJO			sP		sP		17 21 17.0	+1.2
MAJO			ScP		ScP		17 24 34.1	+6.3
MAT	Matsushiro	41.85 343	P		P		17 19 21.4	-3.2
MJB9	Matsu-Tunnel	41.86 343	P		P		17 19 21.8	-2.9
WMGZ	Waiomatatini S	41.86 148	P		P		17 19 25.3	+0.7
TWGZ	Tauwhareparae	41.90 149	P		P		17 19 25.9	+0.8
BKZ	Black Stump Fm	41.92 151	P		P		17 19 24.2	-1.0
BKZ	Black Stump Fm	41.92 151	P		P		17 19 24.5	-0.7
BKZ	Black Stump Fm	41.92 151	P		P		17 19 24.6	-0.6
KSM	Kuching	41.94 276	P		P		17 19 24.1	-1.6
KSM	Kuching	41.94 276	P		P		17 19 24.5	-1.2
KSM	Kuching	41.94 276	⇑P		P		17 19 23.7	-2.0
PUZ	Puketiti	41.97 148	P		P		17 19 26.0	+0.4
BHHZ	Black Hill Sta	41.97 152	P		P		17 19 25.1	-0.6
RAHZ	Arahi	42.01 150	P		P		17 19 26.1	+0.2
TKGZ	Te Karaka	42.03 149	P		P		17 19 26.5	+0.5
SNGZ	Shannon Statio	42.04 150	P		P		17 19 25.8	-0.4
KWHZ	Kaweka Forest	42.09 151	P		P		17 19 27.5	+1.0
RIGZ	Rimuhau	42.19 150	P		P		17 19 27.6	+0.3
JHS	Saijyo	42.19 337	P		P		17 19 25.1	-2.4
JHS	Saijyo	42.19 337	⇑P		P		17 19 26.3	-1.1
NNZ	Nelson	42.20 156	P		P		17 19 27.6	+0.3
KRHZ	Kereru	42.23 152	P		P		17 19 27.1	-0.6
ARHZ	Aropaoanui	42.24 151	P		P		17 19 27.2	-0.5
TSZ	Takapari Road	42.37 152	P		P		17 19 28.0	-0.8
JMM	Marumori	42.44 347	P		P		17 19 27.1	-2.1
JMM	Marumori	42.44 347	⇑P		P		17 19 29.1	-0.1
THZ	Tophouse	42.47 157	P		P		17 19 29.4	-0.2
MORW	Morawa	42.54 229	P		P		17 19 26.9	-3.4
	baz=42,SNR=215							
MORW	Morawa	42.54 229	P		P		17 19 27.6	-2.7
MORW	Morawa	42.54 229	P		P		17 19 28.0	-2.3
MORW	Morawa	42.54 229	⇓P		P		17 19 26.9	-3.4
TUWZ	Tuamarina	42.61 155	P		P		17 19 29.5	-1.0
KLBR	Kellerberrin	42.62 225	P		P		17 19 27.0	-3.9
	baz=42,SNR=32							
KLBR	Kellerberrin	42.62 225	P		P		17 19 28.2	-2.7
BSWZ	Blackbirch Sta	42.82 156	P		P		17 19 32.2	-0.1
SNZO	South Karori	42.83 155	P		P		17 19 31.4	-0.9
SNZO	South Karori	42.83 155	P		P		17 19 31.4	-0.9
SNZO	South Karori	42.83 155	⇓P		P		17 19 31.3	-0.9
SNZO	South Karori	42.83 155	P		P		17 19 32.5	+0.2
BLDU	Ballidu	42.84 227	P		P		17 19 29.6	-3.1
	baz=43,SNR=46							
BLDU	Ballidu	42.84 227	P		P		17 19 29.5	-3.1
FOZ	Fox Glacier	42.89 161	P		P		17 19 33.1	+0.3
FOZ			IAmb		IAmb		17 19 36.4	
	comp=Z,577nm,1.4s							
BHW	Baring Head	42.98 155	P		P		17 19 32.4	-1.2
CMWZ	Cape Campbell	42.98 155	P		P		17 19 33.1	-0.5
BFZ	Birch Farm	43.00 153	P		P		17 19 32.2	-1.5
BFZ			IAmb		IAmb		17 19 35.9	
	comp=Z,548nm,1.3s							
BFZ	Birch Farm	43.00 153	P		P		17 19 32.5	-1.2
QZH	Quanzhou	43.01 313	i/P		P		17 19 35.5	+1.5
QZH			PP		PP		17 21 24.0	+1.1
QZH			S		S		17 25 32.5	+0.7
QZH			pmax		pmax			
	comp=Z,92nm,0.8s							
QZH			pmax		pmax			
	comp=Z,970nm,6.0s							
QZH			LR		LR			
	comp=Z,2µm,18.9s							
QZH			LR		LR			
	comp=Z,2µm,17.5s							
QZH			LR		LR			
	comp=Z,3µm,18.5s							
JOHN	Johnston Islan	43.01 61	P		P		17 19 33.6	-0.5
JOHN			IAmb		IAmb		17 19 38.3	
	comp=Z,654nm,1.3s							
LTZ	Lake Taylor	43.09 158	P		P		17 19 34.2	-0.3
LTZ			IAmb		IAmb		17 19 38.7	
	comp=Z,842nm,1.5s							
MSWZ	Moikau Station	43.15 154	P		P		17 19 33.7	-1.2
MIDW	Midway	43.17 41	P		P		17 19 35.2	-0.1
MIDW	Midway	43.17 41	P		P		17 19 34.9	-0.4
JSD	Sado	43.24 344	P		P		17 19 34.2	-1.4
JSD	Sado	43.24 344	⇑P		P		17 19 34.4	-1.2
JSD	Sado	43.24 344	P		P		17 19 31.8	-3.8
KHZ	Kahutara	43.27 157	P		P		17 19 34.3	-1.5
KHZ			IAmb		IAmb		17 19 42.0	
	comp=Z,680nm,1.5s							
KHZ	Kahutara	43.27 157	P		P		17 19 34.1	-1.7
KHZ	Kahutara	43.27 157	⇓P		P		17 19 33.8	-2.0
PLWZ	Palliser	43.28 154	P		P		17 19 34.0	-1.9
JTU	Tsushima	43.38 333	P		P		17 19 35.6	-1.2
JTU	Tsushima	43.38 333	⇑P		P		17 19 38.5	+1.7
JYA	Atsumi	43.39 346	P		P		17 19 33.8	-3.0
RPZ	Rata Peaks	43.47 160	P		P		17 19 36.7	-0.7
	comp=Z,122nm,0.5s,baz=358,slow=5.6,SNR=43							
	comp=Z,122nm,0.5s							
RPZ	Rata Peaks	43.47 160	P		P		17 19 37.2	-0.2
RPZ			IAmb		IAmb		17 19 47.6	
	comp=Z,392nm,0.9s							
RPZ	Rata Peaks	43.47 160	P		P		17 19 38.3	+0.9
OXZ	Oxford	43.48 159	P		P		17 19 37.0	-0.5
CMJI	Cimerak	43.51 262	P		P		17 19 35.7	-2.5
	comp=Z,7µmcomp=Z,571nm,0.7s							
JCJI	Jatiwangi	43.63 264	P		P		17 19 44.6	+5.5
NWAO	Narrogin (SRO)	43.73 224	P		P		17 19 37.5	-2.2
NWAO	Narrogin (SRO)	43.73 224	P		P		17 19 37.5	-2.2
NWAO			pmax		pmax			
	comp=Z,143nm,1.0s							
NWAO	Narrogin (SRO)	43.73 224	P		P		17 19 39.5	-0.2
NWAO	Narrogin (SRO)	43.73 224	P		P		17 19 38.4	-1.2
NWAO	Narrogin (SRO)	43.73 224	P		P		17 19 39.3	-0.3
NWAO			sP		PP		17 21 29.1	-0.8
LBZ	Lake Benmore	43.77 161	P		P		17 19 38.4	-1.4
WKZ	Wanaka	43.81 162	P		P		17 19 39.4	-0.7
DCZ	Deep Cove	43.87 165	P		P		17 19 40.1	-0.3
JOM	Ohasama	43.88 348	P		P		17 19 35.5	-5.1
MUN	Mundaring	43.93 226	P		P		17 19 38.5	-2.7
	baz=44,SNR=82							
MUN	Mundaring	43.93 226	P		P		17 19 41.2	0.0
MQZ	McQueen's Vall	44.03 158	P		P		17 19 40.6	-1.2
MLZ	Mavora Lakes	44.04 164	P		P		17 19 40.6	-1.2
WHZ	Wether Hill Ro	44.47 164	P		P		17 19 44.9	-0.4
ODZ	Otahua Downs	44.51 161	P		P		17 19 45.3	-0.2
ODZ	Otahua Downs	44.51 161	P		P		17 19 45.4	-0.2
ODZ	Otahua Downs	44.51 161	⇓P		P		17 19 45.4	-0.2
CNJI	Cibinong	44.79 263	P		P		17 19 48.1	-0.1
	comp=Z,17µmcomp=Z,1µm,1.3s							
RKGY	Rocky Gully	44.87 222	P		P		17 19 46.8	-1.7
	baz=45,SNR=29							
RKGY	Rocky Gully	44.87 222	P		P		17 19 47.6	-1.0
CBJI	Citeko	45.04 264	P		P		17 19 51.2	+1.0
	comp=Z,4µmcomp=Z,336nm,1.0s							
NAWB	Namwon	45.05 331	P		P		17 19 49.3	-0.6
DBJI	Dramaga	45.14 264	P		P		17 19 49.2	-1.8
	comp=Z,115nm,0.8s							
JTM	Tenmabayashi	45.19 348	P		P		17 19 48.0	-2.9
JTM	Tenmabayashi	45.19 348	⇑P		P		17 19 48.0	-2.9
SKJI	Sukabumi	45.35 264	P		P		17 19 53.4	+0.8
PPBI	Pangkal Pinang	45.80 270	P		P		17 19 57.0	+0.9
	comp=Z,5µmcomp=Z,171nm,1.0s							
TJN	Taejon	45.84 332	P		P		17 19 55.2	-0.8
TJN			IAmb		IAmb		17 20 03.0	
	comp=Z,686nm,0.8s							
TJN	Taejon	45.84 332	P		P		17 19 55.2	-0.8
TJN			pmax		pmax			
	comp=Z,686nm,0.8s							
TJN	Taejon	45.84 332	P		P		17 19 56.3	+0.3
	comp=Z,939nm,0.9s							
DLV	T Lat	45.87 290	P		P		17 19 55.2	-1.6
DLV	T Lat	45.87 290	P		P		17 19 57.3	+0.5
KSCHJ	Chungju	45.97 333	P		P		17 19 58.2	+1.2
ERM	Erimo	46.00 351	P		P		17 19 55.2	-1.9
ERM	Erimo	46.00 351	i P		P		17 19 57.5	+0.4
ERM			pmax		pmax			
	comp=Z,55nm,0.9s							
ERM	Erimo	46.00 351	P		P		17 20 01.0	+3.9
ERM			x		x		17 21 33.1	
GZH	Guangzhou	46.02 307	P		P		17 19 59.5	+1.9
GZH			S		S		17 26 19.3	+4.5
GZH			pmax		pmax			
	comp=Z,530nm,5.5s							
XMI	Christmas Isla	46.42 259	P		P		17 20 01.6	+0.8
XMI	Christmas Isla	46.42 259	⇑P		P		17 20 01.9	+1.0
XMIS	Christmas Isla	46.45 259	P		P		17 19 59.2	-2.0
XMIS			IAmb		IAmb		17 20 07.4	
	comp=Z,526nm,1.1s							
XMIS	Christmas Isla	46.45 259	P		P		17 20 02.0	+0.9
KSRS	Korea Array	46.47 333	P		P		17 19 59.9	-0.9
	comp=Z,19nm,0.9s,baz=152,slow=8.4,SNR=33							
KSRS			pP		pP		17 21 13.8	+1.3
	comp=Z,14nm,0.9s,baz=152,slow=7.6,SNR=1.3							
KSRS			S		S		17 26 17.8	-2.9
	comp=Z,0.9nm,1.0s,baz=164,slow=19,SNR=2.0							
KSRS			PKiKP		PKiKP		17 28 23.3	+0.9
	comp=Z,2.8nm,0.8s,baz=152,slow=1.0,SNR=9.8							
	comp=Z,19nm,0.9s							
KSAR	Wonju Array Be	46.48 333	P		P		17 19 59.4	-1.5
KSAR	Wonju Array Be	46.48 333	P		P		17 19 59.4	-1.5
KS19	Wonju Array Si	46.54 333	P		P		17 19 59.4	-2.0
BLSI	Bandar Lampung	46.62 266	P		P		17 20 03.2	+0.8
	comp=Z,3µmcomp=Z,150nm,1.1s							
SEHB	SEOHWA	47.00 334	P		P		17 20 04.0	-1.0
KLI	Kotabumi	47.01 267	P		P		17 20 05.7	+0.3
	comp=Z,5µmcomp=Z,228nm,0.6s							
INCN	Inchon	47.08 332	P		P		17 20 04.9	-0.7
INCN			IAmb		IAmb		17 20 12.7	
	comp=Z,373nm,0.9s							
INCN	Inchon	47.08 332	P		P		17 20 04.9	-0.7
INCN			pmax		pmax			
	comp=Z,373nm,0.9s							
INCN	Inchon	47.08 332	P		P		17 20 06.2	+0.6
	comp=Z,453nm,0.9s							
INCN	Inchon	47.08 332	⇑P		P		17 20 05.5	-0.1
INCN	Inchon	47.08 332	P		P		17 20 06.6	+1.0
INCN			pP		pP		17 21 16.8	+0.7
INCN			x		x		17 21 36.3	
INCN			sP		PP		17 21 59.5	-0.9
JEW	Eniwo	47.09 349	P		P		17 20 04.8	-0.7
JEW	Eniwo	47.09 349	⇑P		P		17 20 10.7	+5.1
QIZ	Qiongzhong	47.10 300	P		P		17 20 08.5	+2.5
QIZ			S		S		17 26 30.1	-0.2
QIZ			pmax		pmax			
	comp=Z,32nm,0.8s							
QIZ			pmax		pmax			
	comp=Z,1µm,8.2s							
QIZ	Qiongzhong	47.10 300	P		P		17 20 08.5	+2.5
QIZ	Qiongzhong	47.10 300	P		P		17 20 08.6	+2.5
QIZ			pP		pP		17 21 21.1	+1.7
QIZ			sP		PP		17 22 04.3	+3.4
PMBI	Palembang	47.13 269	P		P		17 20 09.8	+3.5
	comp=Z,282nm,0.9s							
NJ2	Nanjing	47.32 321	⇓P		P		17 20 09.3	+1.9
NJ2			PcP		pwP		17 21 27.3	+3.5
NJ2			PP		PP		17 22 02.3	-0.4
NJ2			S		S		17 26 36.9	+4.1
NJ2			SS		SS		17 30 08.1	+2.0
NJ2			pmax		pmax			
	comp=Z,33nm,0.8s							
NJ2			pmax		pmax			
	comp=Z,1µm,9.1s							
NJ2			LR		LR			
	comp=Z,5µm,19.9s							
NJ2			LR		LR			
	comp=Z,4µm,20.8s							
NJ2			LR		LR			
	comp=Z,6µm,19.8s							
KASI	Kota Agung	47.36 266	P		P		17 20 07.9	-0.2
	comp=Z,3µmcomp=Z,368nm,0.9s							
DSRI	Dabo	47.46 273	P		P		17 20 10.0	+1.2
	comp=Z,3µmcomp=Z,157nm,1.6s							
TPRI	Tanjung Pinang	47.63 274	P		P		17 20 11.1	+1.0
	comp=Z,4µmcomp=Z,176nm,1.5s							
LWLI	Liwa	47.80 266	P		P		17 20 12.1	+0.5
	comp=Z,4µmcomp=Z,563nm,0.8s							
HJU	Haeju	47.96 332	P		P		17 20 11.8	-0.3
HJU			pP		pP		17 21 25.6	+0.9
HJU			sP		sP		17 22 05.8	+0.5
HJU			S		S		17 26 44.7	+3.2
HJU			AmB					
	comp=Z,1µm,2.5s							
HJU			AMS		AMS			
	comp=N,5µm,6.2s							
HJU			AMS		AMS			
	comp=E,6µm,7.5s							
HJU			AMS		AMS			
	comp=Z,5µm,6.7s							
JKA	Kamikawa-asahi	48.14 351	P		P		17 20 12.7	-0.8
ASAJ	Asahikawa	48.14 351	P		P		17 20 12.7	-0.7
ASAJ			pmax		pmax			
	comp=Z,176nm,1.1s							
ASAJ	Asahikawa	48.14 351	P		P		17 20 12.6	-0.8
JMBI	JAMBI	48.32 271	P		P		17 20 22.2	+6.9
MYKOM	Kota Tinggi	48.39 275	P		P		17 20 14.1	-1.8
MYKOM	Kota Tinggi	48.39 275	⇑P		P		17 20 16.8	+0.9
KUR	Kuril'sk	48.65 356	eP		P		17 20 16.0	-1.2
KUR			e				17 21 35.6	
KUR			e				17 22 13.5	
KUR			eS		S		17 26 50.1	-0.8
KUR			pmax		pmax			
	comp=Z,423nm,1.2s							
KUR			pmax		pmax			
	comp=E,92nm,1.3s							
KUR			pmax		pmax			
	comp=N,81nm,1.4s							
HHU	Hamhung	48.70 335	P		P		17 20 17.4	-0.3
HHU			pP		pP		17 21 31.1	+0.5
HHU			sP		PP		17 22 14.9	-0.2
HHU			S		S		17 26 55.2	+3.5
HHU			AmB					
	comp=Z,281nm,1.0s							
HHU			AMS		AMS			
	comp=N,6µm,17.0s							
HHU			AMS		AMS			
	comp=E,2µm,5.1s							
HHU			AMS		AMS			
	comp=Z,3µm,7.4s							
PYAG	Pyongyang	48.76 333	P		P		17 20 19.4	+1.2
PYAG			pP		pP		17 21 32.4	+1.4
PYAG			sP		sP		17 22 12.6	+1.0
PYAG			S		S		17 26 54.2	+1.6
PYAG			AmB					
	comp=Z,459nm,1.3s							
PYAG			AMS		AMS			
	comp=N,4µm,12.1s							
PYAG			AMS		AMS			
	comp=E,5µm,12.4s							
PYAG			AMS		AMS			
	comp=Z,3µm,8.3s							
CNSH	ChangSha	49.01 313	⇑P		P		17 20 18.8	-1.5
CNSH			PP		PP		17 22 17.1	-1.0
CNSH			S		S		17 26 53.1	-3.4
CNSH			LR		LR			
	comp=Z,7µm,17.2s							
CNSH			LR		LR			
	comp=Z,6µm,15.7s							
CNSH			LR		LR			
	comp=Z,5µm,20.3s							
WHN	Wuhan	49.35 316	⇓i P		P		17 20 22.8	0.0
WHN			pP		PcP		17 21 41.5	+2.3
WHN			PP		PP		17 22 22.4	+1.3
WHN			S		S		17 27 01.8	+0.7
WHN			pmax		pmax			
	comp=Z,95nm,1.1s							
WHN			pmax		pmax			
	comp=Z,2µm,11.4s							
MSHR	Mys Shultsa	49.59 340	ce P		P		17 20 21.4	-2.9
MASI	Maura Aman, Be	49.65 269	P		P		17 20 30.7	+5.3
VLA	Vladivostok	49.82 341	i P		P		17 20 22.9	-3.2
VLA			pmax		pmax			
	comp=Z,164nm,1.0s							
RAR	Rarotonga	50.06 115	P		P		17 20 29.3	+1.1
	comp=Z,46nm,0.8s,baz=246,slow=5.9,SNR=9.3							
	comp=Z,46nm,0.8s							
RAR	Rarotonga	50.06 115	P		P		17 20 28.1	-0.2
RAR	Rarotonga	50.06 115	P		P		17 20 28.1	-0.2
RAR			pmax		pmax			
	comp=Z,220nm,1.6s							
RAR	Rarotonga	50.06 115	P		P		17 20 30.5	+2.2
RAR			sP		sP		17 22 23.9	+0.4
SUJ	Sinuiju	50.18 333	P		P		17 20 28.7	-0.1
SUJ			pP		pP		17 21 43.3	+0.9
SUJ			sP		sP		17 22 23.4	+0.8
SUJ			S		S		17 27 10.1	-2.1
SUJ			AmB					
	comp=Z,842nm,3.1s							
SUJ			AMS		AMS			
	comp=N,10µm,13.7s							
SUJ			AMS		AMS			
	comp=E,8µm,11.1s							
SUJ			AMS		AMS			
	comp=Z,13µm,18.2s							
TEY	Ternei	50.23 346	⇓e P		P		17 20 31.5	+2.4
TEY			e				17 21 39.8	
TEY			e				17 27 10.0	
TEY			pmax		pmax			
	comp=Z,100nm,7.5s							
TEY			MLR		MLR			
	comp=E,100nm,15.0s							
TEY			MLR		MLR			
	comp=N,100nm,16.0s							
TEY			MLR		MLR			
	comp=Z,100nm,17.0s							
KRJI	Kerinci	50.47 270	P		P		17 20 36.2	+4.6
	comp=Z,7µmcomp=Z,837nm,0.9s							
USA0B	Ussuriysk Arra	50.76 341	P		P		17 20 31.1	-1.8
USA0B	Ussuriysk Arra	50.76 341	P		P		17 20 31.2	-1.8
USA0B			pmax		pmax			
	comp=Z,121nm,1.0s							
USRK	Ussuriysk Ar.	50.76 341	P		P		17 20 32.0	-0.9
	comp=Z,23nm,0.8s,baz=160,slow=7.9,SNR=29							
USRK			pP		pP		17 21 47.2	+1.1
	comp=Z,52nm,1.0s,baz=122,slow=5.3,SNR=3.7							
USRK			ScP		ScP		17 25 07.0	+2.2
	comp=Z,12nm,0.9s,baz=157,slow=4.1,SNR=3.2							
	comp=Z,23nm,0.8s							
USRK	Ussuriysk Ar.	50.76 341	P		P		17 20 30.7	-2.3
XMAS	Kiritimati	50.85 85	P		P		17 20 34.4	+0.1
XMAS	Kiritimati	50.85 85	P		P		17 20 36.1	+1.8
	comp=Z,292nm,1.2s							
XMAS	Kiritimati	50.85 85	⇓P		P		17 20 35.4	+1.1
XMAS	Kiritimati	50.85 85	P		P		17 20 34.7	+0.4
XMAS			pP		pwP		17 21 50.2	-1.1
YSS	Yuzh-Sakhalins	50.89 352	P		P		17 20 31.4	-2.5
YSS	Yuzh-Sakhalins	50.89 352	eP		P		17 20 30.9	-3.0
YSS			e*PP		PcP		17 21 44.4	-0.1
YSS			e*SP		sP		17 22 26.8	-0.4
YSS			eS		S		17 27 17.0	-4.6
YSS			e*SS		sS		17 29 31.0	-4.8
YSS			e				17 29 48.0	
YSS			pmax		pmax			
	comp=Z,800nm,7.8s							
YSS			pmax		pmax			
	comp=Z,90nm,1.0s							
YSS	Yuzh-Sakhalins	50.89 352	P		P		17 20 33.3	-0.6
	comp=Z,108nm,1.0s							
YSS	Yuzh-Sakhalins	50.89 352	⇓P		P		17 20 33.0	-0.9
YSS	Yuzh-Sakhalins	50.89 352	P		P		17 20 32.8	-1.1
YSS			pP		pP		17 21 49.2	+1.9
BKNI	Bangkinang	51.05 273	P		P		17 20 33.9	-1.8
BKNI			IAmb		IAmb		17 20 43.6	
	comp=Z,417nm,1.1s							
BKNI	Bangkinang	51.05 273	P		P		17 20 41.5	+5.8
MCQ	Macquarie Isla	51.16 175	P		P		17 20 36.0	+0.2
MCQ	Macquarie Isla	51.16 175	P		P		17 20 36.0	+0.2
MCQ		

SNY				LR	LR			
	comp=Z,6μm,17.2s							
KULM	**Kulim**	**52.01 279**		P	**P**	**17 20 39.6**	**-3.2**	
KULM	**Kulim**	**52.01 279**		⇑P	**P**	**17 20 39.9**	**-2.9**	
ENH	**Enshi**	**52.67 313**		P	**P**	**17 20 45.4**	**-2.0**	
ENH	**Enshi**	**52.67 313**		P	**P**	**17 20 48.5**	**+1.2**	
ENH				x	x	17 21 56.1		
ENH				pP	**pP**	**17 22 02.6**	**+0.1**	
ENH				ScP	**ScP**	**17 25 19.3**	**+5.8**	
CN2	**Changchun**	**52.78 336**		*e*P	**P**	**17 20 47.8**	**0.0**	
CN2				PcP	**PcP**	**17 21 52.5**	**+0.7**	
CN2				*e*S	**S**	**17 27 45.9**	**-1.4**	
CN2				pmax	pmax			
	comp=Z,50nm,0.8s							
CN2				pmax	pmax			
	comp=Z,500nm,10.0s							
SISI	**Saibi**	**52.88 271**		P	**P**	**17 20 51.8**	**+2.7**	
	comp=Z,3μmcomp=Z,132nm,0.6s							
GYA	**Guiyang**	**52.96 307**		⇓P	**P**	**17 20 51.6**	**+2.0**	
GYA				S	**S**	**17 27 55.4**	**+4.9**	
GYA				pmax	pmax			
	comp=Z,37nm,1.0s							
GYA				LR	LR			
	comp=Z,2μm,16.8s							
GYA				LR	LR			
	comp=Z,2μm,20.2s							
GYA				LR	LR			
	comp=Z,2μm,16.4s							
LYN	**LuoYang**	**53.02 319**		*e*P	**P**	**17 20 50.0**	**+0.2**	
LYN				pP	pP	17 22 10.0	+4.8	
LYN				sP	PP	17 22 50.5	-3.6	
LYN				PP	**PP**	**17 22 56.3**	**+2.2**	
LYN				S	**S**	**17 27 50.4**	**-0.5**	
LYN				ScS	**ScS**	**17 29 55.0**	**-5.8**	
LYN				pmax	pmax			
	comp=Z,30nm,2.0s							
LYN				pmax	pmax			
	comp=Z,1μm,11.4s							
UGL	**Uglegorsk**	**53.06 352**		*e*P	**P**	**17 20 48.6**	**-1.1**	
UGL				*e*S	**S**	**17 27 47.2**	**-3.7**	
UGL				pmax	pmax			
	comp=Z,130nm,1.0s							
UGL				smax	smax			
	comp=E,2μm,9.8s							
UGL				smax	smax			
	comp=N,4μm,8.8s							
HNS	**HongShan**	**53.42 323**		⇑P	**P**	**17 20 52.5**	**0.0**	
HNS				S	**S**	**17 27 57.8**	**+1.8**	
HNS				pmax	pmax			
	comp=N,250nm,1.0s							
HNS				LR	LR			
	comp=N,2μm,18.2s							
HNS				LR	LR			
	comp=N,3μm,16.7s							
HNS				LR	LR			
	comp=N,4μm,18.6s							
SRIT	**Nakonsritamara**	**53.58 283**		P	**P**	**17 20 52.8**	**-1.3**	
KEKH	**Kekaha**	**53.59 59**		P	**P**	**17 20 53.7**	**-0.3**	
KEKH				IAmb	IAmb	17 21 00.8		
	comp=Z,289nm,0.8s							
BNX	**BinXian**	**53.66 339**		⇑P	**P**	**17 20 55.8**	**+1.7**	
BNX				pmax	pmax			
	comp=Z,130nm,1.0s							
BNX				pmax	pmax			
	comp=Z,940nm,11.7s							
TSI	**Tuntungan**	**53.83 277**		P	**P**	**17 20 58.0**	**+2.1**	
	comp=Z,3μmcomp=Z,77nm,1.1s							
SKR	**Severo-Kuril's**	**54.08 3**		*i*P	**P**	**17 20 56.3**	**-0.7**	
BJT	**Baijiatuau**	**54.35 326**		P	**P**	**17 21 00.7**	**+1.6**	
BJT				x	x	17 22 03.0		
BJT				pP	**pwP**	**17 22 18.8**	**+1.4**	
BJI	**Beijing**	**54.36 326**		P	**P**	**17 20 59.4**	**+0.2**	
BJI				S	**S**	**17 28 07.9**	**-0.6**	
BJI				sS	**sS**	**17 30 26.9**	**+2.4**	
BJI				SS	**SS**	**17 31 57.8**	**+0.8**	
BJI				pmax	pmax			
	comp=Z,7.0nm,0.8s							
BJI				pmax	pmax			
	comp=Z,950nm,11.5s							
BJI				LR	LR			
	comp=Z,710nm,16.7s							
BJI				LR	LR			
	comp=Z,2μm,16.4s							
BJI				LR	LR			
	comp=Z,4μm,20.3s							
GSI	**Gunungsitoli**	**54.58 274**		P	**P**	**17 21 00.2**	**-1.1**	
GSI				IAmb	IAmb	17 21 06.7		
	comp=Z,230nm,0.8s							
GSI	**Gunungsitoli**	**54.58 274**		P	**P**	**17 21 01.0**	**-0.3**	
	comp=Z,3μmcomp=Z,322nm,0.9s							
GSI	**Gunungsitoli**	**54.58 274**		P	**P**	**17 21 01.5**	**+0.2**	
GSI	**Gunungsitoli**	**54.58 274**		⇑P	**P**	**17 21 00.3**	**-1.1**	
KCSI	**Kotacane, Aceh**	**54.62 277**		P	**P**	**17 21 02.2**	**+0.6**	
	comp=Z,2μmcomp=Z,116nm,0.7s							
TYV	**Tymovskoe**	**54.73 353**		*e*P	P	17 21 06.5	+4.8	
TYV				*e*S	S	17 28 23.8	+11	
TYV				pmax	pmax			
	comp=Z,85nm,1.4s							
TYV				pmax	pmax			
	comp=Z,500nm,2.3s							
TYV				smax	smax			
	comp=N,800nm,6.6s							
TYV				smax	smax			
	comp=E,1μm,6.6s							
HON	**Honolulu**	**54.83 61**		P	**P**	**17 21 03.9**	**+1.0**	
HON				IAmb	IAmb	17 21 10.9		
	comp=Z,651nm,1.0s							
HON	**Honolulu**	**54.83 61**		P	**P**	**17 21 03.9**	**+1.0**	
HON				pmax	pmax			
	comp=Z,651nm,1.0s							
KIP	**Kipapa**	**54.85 61**		P	**P**	**17 21 03.5**	**+0.4**	
KIP				IAmb	IAmb	17 21 09.8		
	comp=Z,395nm,0.7s							
KIP	**Kipapa**	**54.85 61**		P	**P**	**17 21 03.5**	**+0.4**	
KIP				pmax	pmax			
	comp=Z,395nm,0.7s							
KIP	**Kipapa**	**54.85 61**		P	**P**	**17 21 04.1**	**+1.0**	
KIP	**Kipapa**	**54.85 61**		P	**P**	**17 21 04.2**	**+1.1**	
KIP	**Kipapa**	**54.85 61**		P	**P**	**17 21 03.5**	**+0.4**	
KIP				x	x	17 22 07.5		
KIP				pP	**pwP**	**17 22 22.9**	**+0.3**	
OPA	**Opana**	**54.95 61**		P	**P**	**17 21 04.1**	**+0.4**	
OPA	**Opana**	**54.95 61**		P	**P**	**17 21 04.1**	**+0.4**	
OPA				pmax	pmax			
	comp=Z,801nm,0.7s							
TIY	**Taiyuan**	**55.00 322**		*e*P	**P**	**17 21 04.4**	**+0.5**	
TIY				pP	pP	17 22 28.3	+8.3	
TIY				S	**S**	**17 28 19.3**	**+2.0**	
TIY				pmax	pmax			
	comp=Z,58nm,0.9s							
TIY				pmax	pmax			
	comp=Z,1μm,11.6s							
TIY				LR	LR			
	comp=Z,3μm,17.6s							
TIY				LR	LR			
	comp=Z,2μm,17.7s							
TIY				LR	LR			
	comp=Z,4μm,19.0s							
XAN	**Xi'an**	**55.12 316**		P	**P**	**17 21 05.8**	**+1.0**	
XAN				pP	pP	17 22 25.5	+4.6	
XAN				S	**S**	**17 28 19.3**	**+0.4**	
XAN				pmax	pmax			
	comp=Z,150nm,1.0s							
XAN				pmax	pmax			
	comp=Z,1μm,11.7s							
XAN				LR	LR			
	comp=Z,5μm,16.5s							
XAN				LR	LR			
	comp=Z,3μm,16.5s							
XAN				LR	LR			
	comp=Z,7μm,22.0s							
XAN	**Xi'an**	**55.12 316**		P	**P**	**17 21 05.8**	**+1.0**	
XAN				pP	**pP**	**17 22 22.2**	**+1.3**	
XAN				sP	**sP**	**17 22 58.7**	**-2.1**	
KLR	**Kul'dur**	**55.37 344**		P	**P**	**17 21 03.8**	**-2.4**	
	comp=Z,26nm,0.6s,baz=167,slow=6.3,SNR=29							
KLR				PcP	**PcP**	**17 22 04.6**	**+3.0**	
	comp=Z,52nm,0.7s,baz=116,slow=0.9,SNR=5.6							
KLR				pP	**pP**	**17 22 21.5**	**+0.5**	
	comp=Z,55nm,0.9s,baz=144,slow=6.1,SNR=3.5							
	comp=Z,26nm,0.6s							
KMI	**Kunming**	**55.58 304**		⇑P	**P**	**17 21 08.0**	**-0.5**	
KMI				pP	pP	17 22 29.3	+4.5	
KMI				sP	sP	17 23 11.1	+6.3	
KMI				PP	**PP**	**17 23 18.8**	**+1.5**	
KMI				S	**S**	**17 28 21.8**	**-3.8**	
KMI				sS	sS	17 30 46.9	+4.7	
KMI				pmax	pmax			
	comp=Z,46nm,1.0s							
KMI				pmax	pmax			
	comp=Z,1μm,10.9s							
KMI				LR	LR			
	comp=Z,1μm,17.6s							
KMI				LR	LR			
	comp=Z,1μm,18.1s							
KMI				LR	LR			
	comp=Z,2μm,21.4s							
KMI	**Kunming**	**55.58 304**		P	**P**	**17 21 10.8**	**+2.4**	
KMI				x	x	17 22 05.5		
LHMI	**Lhok Sumawe**	**55.65 279**		P	**P**	**17 21 08.3**	**-0.5**	
LHMI				IAmb	IAmb	17 21 15.4		
	comp=Z,425nm,0.8s							
LHMI	**Lhok Sumawe**	**55.65 279**		P	**P**	**17 21 10.8**	**+2.0**	
	comp=Z,4μmcomp=Z,587nm,0.8s							
LHMI	**Lhok Sumawe**	**55.65 279**		P	**P**	**17 21 08.9**	**+0.1**	
LHMI	**Lhok Sumawe**	**55.65 279**		⇓P	**P**	**17 21 10.4**	**+1.6**	
GRNR	**Gornyy**	**55.68 348**		⇑*i*P	**P**	**17 21 06.6**	**-1.8**	
KHLH	**Kahului Airpor**	**56.06 62**		P	**P**	**17 21 12.8**	**+1.2**	
KHLH				IAmb	IAmb	17 21 19.1		
	comp=Z,661nm,0.9s							
HLK	**Haleakala**	**56.18 62**		P	**P**	**17 21 13.6**	**+0.9**	
HLK				IAmb	IAmb	17 21 19.6		
	comp=Z,526nm,0.8s							
HUH	**Hualalai**	**56.20 64**		P	**P**	**17 21 13.5**	**+0.6**	
HUH				IAmb	IAmb	17 21 19.5		
	comp=Z,435nm,1.0s							
KHU	**Kahuku**	**56.26 64**		P	**P**	**17 21 13.9**	**+0.6**	
KHU				IAmb	IAmb	17 21 19.7		
	comp=Z,436nm,0.8s							
KHU	**Kahuku**	**56.26 64**		P	**P**	**17 21 13.9**	**+0.6**	
KHU				pmax	pmax			
	comp=Z,436nm,0.8s							
MHA	**Mahukona**	**56.30 63**		P	**P**	**17 21 13.9**	**+0.6**	
MHA	**Mahukona**	**56.30 63**		P	**P**	**17 21 13.9**	**+0.6**	
MWH	**Moku'aweowe**	**56.35 64**		P	**P**	**17 21 14.5**	**+0.3**	
MLOA	**Mauna Loa Obse**	**56.38 64**		P	**P**	**17 21 14.5**	**+0.1**	
MLOA				IAmb	IAmb	17 21 21.0		
	comp=Z,446nm,1.0s							
HPAH	**Hawaii Prepara**	**56.43 63**		P	**P**	**17 21 14.1**	**-0.2**	
HPAH				PcP	**PcP**	**17 22 03.9**	**-2.6**	
AIN	**Ainahou**	**56.44 64**		P	**P**	**17 21 14.9**	**+0.4**	
AIN				IAmb	IAmb	17 21 23.4		
	comp=Z,472nm,1.0s							
HMH	**Humu'ula Sheep**	**56.49 64**		P	**P**	**17 21 14.8**	**-0.2**	
HMH				IAmb	IAmb	17 21 22.5		
	comp=Z,750nm,1.0s							
POHA	**Pohakuloa**	**56.49 64**		P	**P**	**17 21 15.0**	**+0.1**	
POHA	**Pohakuloa**	**56.49 64**		P	**P**	**17 21 17.2**	**+2.3**	
POHA	**Pohakuloa**	**56.49 64**		⇑P	**P**	**17 21 15.1**	**+0.2**	
POHA	**Pohakuloa**	**56.49 64**		P	**P**	**17 21 15.1**	**+0.1**	
MLH	**Mauna Loa**	**56.54 64**		P	**P**	**17 21 15.7**	**+0.4**	
MLH				IAmb	IAmb	17 21 23.2		
	comp=Z,319nm,0.7s							
CM31	**Chiang Mai Arr**	**56.58 295**		P	**P**	**17 21 14.1**	**-1.3**	
CM31	**Chiang Mai Arr**	**56.58 295**		P	**P**	**17 21 16.6**	**+1.2**	
	SNR=60							
CMAR	**Chiang Mai Arr**	**56.58 295**		P	**P**	**17 21 13.7**	**-1.6**	
	comp=Z,23nm,1.0s,baz=112,slow=5.0,SNR=59							
CMAR				PcP	**PcP**	**17 22 06.8**	**-0.2**	
	comp=Z,7.0nm,0.6s,baz=119,slow=3.2,SNR=1.0							
CMAR				PKPPKP	**P'P'df**	**17 51 02.6**	**-3.7**	
	comp=Z,3.6nm,0.9s,baz=299,slow=4.3,SNR=5.8							
CMAR				PKP2bc		17 51 18.2		
	comp=Z,9.3nm,0.9s,baz=290,slow=3.9,SNR=10							
	comp=Z,23nm,1.0s							
CMAR	**Chiang Mai Arr**	**56.58 295**		P	**P**	**17 21 13.6**	**-1.7**	
PET	**Petropavlovsk**	**56.59 5**		P	**P**	**17 21 14.2**	**-0.4**	
PET	**Petropavlovsk**	**56.59 5**		*e*P	**P**	**17 21 16.3**	**+1.6**	
PET				*e*		17 22 10.6		
PET				*e**PP	**pP**	**17 22 28.9**	**-0.7**	
PET				*e*S	**S**	**17 28 41.2**	**+3.9**	
PET				pmax	pmax			
	comp=Z,195nm,0.7s							
PET				MLR	MLR			
	comp=Z,2μm,18.0s							
PET				MLR	MLR			
	comp=Z,2μm,17.0s							
PET	**Petropavlovsk**	**56.59 5**		P	**P**	**17 21 18.6**	**+3.9**	
PET				x	x	17 22 10.6		
PET				pP	**pP**	**17 22 31.3**	**+1.7**	
PEA0B	**Petropavlovsk-**	**56.60 4**		P	**P**	**17 21 11.8**	**-3.0**	
PEA0B				IAmb	IAmb	17 21 21.5		
	comp=Z,225nm,0.8s							
PEA0B	**Petropavlovsk-**	**56.60 4**		P	**P**	**17 21 11.8**	**-3.0**	
PEA0B				pmax	pmax			
	comp=Z,225nm,0.9s							
PETK	**Petropavlovsk-**	**56.60 4**		P	**P**	**17 21 13.3**	**-1.5**	
	comp=Z,10.0nm,0.5s,baz=164,slow=6.0,SNR=28							
PETK				PcP	**PcP**	**17 22 06.0**	**-0.4**	
	comp=Z,13nm,0.6s,baz=178,slow=8.7,SNR=1.2							
PETK				pP	**pP**	**17 22 30.7**	**+1.0**	
	comp=Z,36nm,0.8s,baz=186,slow=13,SNR=2.7							
PETK				PKP2bc		17 51 14.9		
	comp=Z,3.7nm,0.8s,baz=97,slow=3.3,SNR=6.2							
	comp=Z,10.0nm,0.5s							
PETK	**Petropavlovsk-**	**56.60 4**		P	**P**	**17 21 13.5**	**-1.3**	
PETK					**P'P'df**	**17 51 11.9**	**+4.3**	
PUH	**Pauahi**	**56.66 64**		P	**P**	**17 21 16.4**	**+0.5**	
CHTO	**Chiang Mai**	**56.69 295**		P	**P**	**17 21 14.4**	**-1.7**	
CHTO	**Chiang Mai**	**56.69 295**		P	**P**	**17 21 14.4**	**-1.7**	
CHTO				pmax	pmax			
	comp=Z,61nm,1.1s							
CHTO	**Chiang Mai**	**56.69 295**		P	**P**	**17 21 17.8**	**+1.8**	
CHTO	**Chiang Mai**	**56.69 295**		⇓P	**P**	**17 21 17.8**	**+1.8**	
CHTO	**Chiang Mai**	**56.69 295**		P	**P**	**17 21 17.9**	**+1.8**	
CHTO				x	x	17 22 12.2		
CHTO				pP	**pP**	**17 22 36.2**	**+3.4**	
PZH	**PanZhiHua**	**56.96 305**		P	**P**	**17 21 16.4**	**-1.5**	
PZH				pP	**pP**	**17 22 38.3**	**+3.6**	
PZH				S	**S**	**17 28 44.8**	**+1.5**	
PZH				SS	**SS**	**17 32 38.5**	**-0.2**	
PZH				pmax	pmax			
	comp=Z,40nm,0.6s							
PZH				pmax	pmax			
	comp=Z,1μm,7.0s							
XLT	**XiLinHaoTe**	**57.13 330**		*e*P	**P**	**17 21 19.3**	**+0.5**	
XLT				pP	pwP	17 22 37.3	-1.8	
XLT				S	**S**	**17 28 39.9**	**-5.0**	
XLT				pmax	pmax			
	comp=Z,300nm,1.0s							
XLT				pmax	pmax			
	comp=Z,2μm,8.5s							
XLT				LR	LR			
	comp=Z,470nm,19.4s							
XLT				LR	LR			
	comp=Z,4μm,17.9s							
XLT				LR	LR			
	comp=Z,7μm,19.6s							
CD2	**Chengdu**	**57.27 310**		P	**P**	**17 21 21.1**	**+1.2**	
CD2				pP	pP	17 22 41.5	+4.8	
CD2				sP	sP	17 23 20.8	+4.3	
CD2				PP	**PP**	**17 23 36.9**	**+4.9**	
CD2				S	**S**	**17 28 45.8**	**-1.3**	
CD2				SS	**SS**	**17 32 47.3**	**+4.0**	
CD2				pmax	pmax			
	comp=Z,330nm,0.8s							
CD2				pmax	pmax			
	comp=Z,1μm,13.7s							
HHC	**Hu-ho-hao-te**	**57.52 324**		*e*P	**P**	**17 21 22.4**	**+0.9**	
HHC				ScS	ScS	17 30 31.0	-2.3	
BTO	**Baotou**	**58.27 323**		*e*P	**P**	**17 21 26.4**	**-0.3**	
BTO				S	**S**	**17 28 58.8**	**-1.0**	
BTO				LR	LR			
	comp=Z,14μm,17.8s							
BTO				LR	LR			
	comp=Z,11μm,16.7s							
PPT	**Papeete**	**58.91 108**		P	**P**	**17 21 32.7**	**+1.4**	
	comp=Z,24nm,0.7s,baz=241,slow=13,SNR=1.8							
	comp=Z,24nm,0.7s							
SHEM	**Shemya Is, Ala**	**59.05 15**		P	**P**	**17 21 31.9**	**+0.3**	
	comp=Z,71nm,0.5s,baz=264,slow=19,SNR=13							
	comp=Z,71nm,0.5s							
SMY	**Shemya**	**59.05 15**		P	**P**	**17 21 31.5**	**-0.1**	
SMY				IAmb	IAmb	17 21 38.5		
	comp=Z,341nm,0.6s							
SMY	**Shemya**	**59.05 15**		P	**P**	**17 21 31.5**	**-0.1**	
SMY				pmax	pmax			
	comp=Z,341nm,0.6s							
SMY	**Shemya**	**59.05 15**		⇑P	**P**	**17 21 32.3**	**+0.7**	
TIAR	**Tiarei**	**59.12 108**		*e*P	**P**	**17 21 37.2**	**+4.4**	
	comp=Z,20nm,0.9s							
AMKA	**Amchitka**	**59.43 20**		P	**P**	**17 21 34.2**	**0.0**	
HIA	**Hailar**	**59.52 336**		P	**P**	**17 21 32.1**	**-2.8**	
HIA	**Hailar**	**59.52 336**		*i*P	**P**	**17 21 34.3**	**-0.6**	
HIA				pmax	pmax			
	comp=Z,127nm,1.0s							
HIA	**Hailar**	**59.52 336**		P	**P**	**17 21 35.6**	**+0.8**	
HIA				pP	**pP**	**17 22 52.4**	**+0.7**	
LZH	**Lanzhou**	**59.73 316**		*e*P	**P**	**17 21 38.6**	**+1.8**	
LZH				*e*S	**S**	**17 29 15.9**	**-2.7**	
LZH				SS	**SS**	**17 33 28.4**	**+6.5**	
LZH				pmax	pmax			
	comp=Z,280nm,1.0s							
LZH				pmax	pmax			
	comp=Z,1μm,4.9s							
LZH				LR	LR			
	comp=Z,3μm,16.3s							
LZH				LR	LR			
	comp=Z,3μm,15.2s							
LZH				LR	LR			
	comp=Z,4μm,17.9s							
ZEA	**Zeya**	**60.67 343**		*e*P	**P**	**17 21 41.6**	**-0.9**	
ZEA				*e*		17 22 28.0		
ZEA				*e*		17 29 34.9		
ZEA				pmax	pmax			
	comp=N,60nm,1.0s							
ZEA				pmax	pmax			
	comp=E,20nm,1.0s							
ZEA				pmax	pmax			
	comp=Z,90nm,1.1s							
PBA	**Port Blair**	**60.79 285**		P	**P**	**17 21 42.6**	**-1.5**	
DGPR	**DIGLIPUR**	**60.90 287**		*e*P	**P**	**17 21 46.4**	**+1.6**	
DGPR				IAmb	IAmb	17 21 52.3		
	comp=Z,197nm,1.0s							
KIWB	**Kanaga Island**	**61.06 21**		P	**P**	**17 21 43.8**	**-1.4**	
ADK	**Adak**	**61.26 22**		P	**P**	**17 21 45.9**	**-0.5**	
ADK				IAmb	IAmb	17 21 53.1		
	comp=Z,636nm,1.1s							
ADK	**Adak**	**61.26 22**		P	**P**	**17 21 45.9**	**-0.5**	
ADK				pmax	pmax			
	comp=Z,636nm,1.1s							
ADK	**Adak**	**61.26 22**		P	**P**	**17 21 48.5**	**+2.1**	
ADK	**Adak**	**61.26 22**		⇑P	**P**	**17 21 45.9**	**-0.5**	
ADK	**Adak**	**61.26 22**		P	**P**	**17 21 48.1**	**+1.6**	
ADK				pP	**pP**	**17 23 03.0**	**-0.4**	
ATKA	**Atka Island**	**62.45 23**		P	**P**	**17 21 55.8**	**+1.5**	
ATKA	**Atka Island**	**62.45 23**		⇑P	**P**	**17 21 53.4**	**-0.9**	
MA2	**Magadan**	**62.89 359**		P	**P**	**17 21 54.2**	**-2.9**	
	comp=Z,38nm,0.7s,baz=160,slow=7.8,SNR=18							
	comp=Z,38nm,0.7s							
MA2	**Magadan**	**62.89 359**		P	**P**	**17 21 54.5**	**-2.6**	
MA2				IAmb	IAmb	17 22 03.2		
	comp=Z,226nm,0.9s							
MA2	**Magadan**	**62.89 359**	*c*	*e*P	**P**	**17 21 54.4**	**-2.6**	
MA2				pmax	pmax			
	comp=Z,99nm,1.7s							
MA2	**Magadan**	**62.89 359**		⇑P	**P**	**17 21 54.2**	**-2.9**	
MA2	**Magadan**	**62.89 359**		P	**P**	**17 21 57.6**	**+0.6**	
MA2				pP	**pP**	**17 23 15.0**	**+1.1**	
MOKO	**MOKOCHONG**	**62.92 302**		*e*P	**P**	**17 21 58.8**	**+0.7**	
MOKO				IAmb	IAmb	17 22 05.8		
	comp=Z,169nm,0.9s							
KOHI	**KOHIMA**	**63.08 301**		*e*P	**P**	**17 21 59.8**	**+0.6**	
DRV	**Dumont d'Urvil**	**63.61 185**		P	**P**	**17 22 01.1**	**-0.4**	
DRV				pP	**pP**	**17 23 23.5**	**+3.0**	
DRV				sP	**sP**	**17 24 01.7**	**+1.4**	
ITAN	**ITANAGAR**	**63.86 302**		*e*P	**P**	**17 22 05.5**	**+1.4**	
ITAN				IAmb	IAmb	17 22 11.9		
	comp=Z,252nm,0.9s							
ZIRO	**ZIRO**	**63.88 303**		*e*P	**P**	**17 22 05.9**	**+1.5**	
GTA	**Gaotai**	**64.15 317**		*e*P	**P**	**17 22 04.8**	**-1.0**	
GTA				PcP	**PcP**	**17 22 38.0**	**+0.6**	
GTA				pP	pP	17 23 29.8	+5.3	
GTA				sP	sP	17 24 07.6	+3.8	
GTA				S	**S**	**17 30 16.0**	**+2.7**	
GTA				pmax	pmax			
	comp=Z,37nm,1.0s							
CIT	**Chita**	**64.18 335**		*e*P	P	17 22 11.5	+5.9	
CIT				*e*		17 22 41.5		
CIT				pmax	pmax			
	comp=Z,278nm,1.1s							
ULN	**Ulaanbaatar**	**64.46 328**		P	**P**	**17 22 06.5**	**-1.2**	
ULN	**Ulaanbaatar**	**64.46 328**		P	**P**	**17 22 06.5**	**-1.2**	
ULN				pmax	pmax			
	comp=Z,105nm,0.9s							
ULN	**Ulaanbaatar**	**64.46 328**		⇓P	**P**	**17 22 07.2**	**-0.5**	
ULN				⇓p	**pwP**	**17 23 34.9**	**+6.3**	
ULN	**Ulaanbaatar**	**64.46 328**		P	**P**	**17 22 09.2**	**+1.5**	
ULN				x	x	17 22 40.1		
ULN				pP	**pP**	**17 23 26.5**	**+0.1**	
ULN				sP	**sP**	**17 24 01.6**	**-4.0**	
TEZP	**TEZPUR**	**64.48 302**		*e*P	**P**	**17 22 09.3**	**+1.3**	
TEZP				IAmb	IAmb	17 22 14.8		
	comp=Z,288nm,0.9s							
SONM	**Songino Array**	**64.79 328**		P	**P**	**17 22 07.8**	**-2.0**	
	comp=Z,16nm,0.6s,baz=143,slow=5.8,SNR=38							
SONM				PcP	**PcP**	**17 22 40.7**	**+0.9**	
	comp=Z,24nm,0.8s,baz=141,slow=5.6,SNR=5.6							
SONM				PKiKP	**PKiKP**	**17 28 45.0**	**+1.4**	
	comp=Z,1.1nm,0.5s,baz=169,slow=1.9,SNR=1.4							
SONM				PKP2bc		17 50 56.1		
	comp=Z,6.2nm,1.0s,baz=320,slow=2.1,SNR=10							
	comp=Z,16nm,0.6s							
SONM	**Songino Array**	**64.79 328**		P	**P**	**17 22 08.3**	**-1.4**	
SONM	**Songino Array**	**64.79 328**		P	**P**	**17 22 08.3**	**-1.4**	
SONM				pmax	pmax			
	comp=Z,96nm,1.1s							
SHL	**Shillong**	**64.94 300**		P	**P**	**17 22 09.1**	**-2.1**	
SHL				IAmb	IAmb	17 22 18.4		
	comp=Z,310nm,0.8s							
SHL	**Shillong**	**64.94 300**		P	**P**	**17 22 09.1**	**-2.1**	
SHL				pmax	pmax			
	comp=Z,310nm,0.8s							
SHL	**Shillong**	**64.94 300**		P	**P**	**17 22 10.9**	**-0.4**	
	SNR=104							
SHL	**Shillong**	**64.94 300**		*e*P	**P**	**17 22 12.1**	**+0.8**	
SHL				IAmb	IAmb	17 22 18.2		
	comp=Z,273nm,0.9s							
NIKH	**Nikolski High**	**65.18 25**		P	**P**	**17 22 11.3**	**-0.6**	
NIKH	**Nikolski High**	**65.18 25**		P	**P**	**17 22 10.0**	**-1.9**	
	baz=224,SNR=11							
NIKH				S	**S**	**17 30 26.7**	**+1.7**	
	baz=224							
GUWA	**GUWAHATI**	**65.29 301**		*e*P	**P**	**17 22 13.8**	**+0.6**	
SEY	**Seymchan**	**66.25 0**		P	**P**	**17 22 17.2**	**-1.3**	
	comp=Z,4.3nm,0.4s,baz=190,slow=7.1,SNR=21							
SEY				PKP2bc		17 50 51.7		
	comp=Z,2.4nm,0.7s,baz=266,slow=1.7,SNR=5.6							
	comp=Z,4.3nm,0.4s							
SEY	**Seymchan**	**66.25 0**	*c*	*e*P	**P**	**17 22 16.8**	**-1.7**	
SEY				pmax	pmax			
	comp=Z,42nm,1.7s							
GOMU	**GeErMu**	**66.28 312

YAK IAmb IAmb 17 22 33.4
comp=Z,375nm,1.2s
YAK Yakutsk 67.54 349 *e*P **P** **17 22 25.0 -1.6**
YAK *e* 17 22 47.3
YAK *e**PP **pP** **17 23 45.0 -0.6**
YAK *e* 17 24 56.3
YAK *e*PPP PPP 17 26 42.1
YAK *e*S **S** **17 30 52.3 -0.5**
YAK *e* 17 31 40.1
YAK *e*SS **SS** **17 35 19.4 -2.4**
YAK pmax pmax
comp=Z,349nm,1.2s
YAK pmax pmax
comp=N,114nm,1.4s
YAK pmax pmax
comp=E,40nm,1.3s
YAK pmax pmax
comp=Z,2µm,13.9s
YAK pmax pmax
comp=N,2µm,16.2s
YAK pmax pmax
comp=E,1µm,17.9s
YAK smax smax
comp=E,1µm,5.8s
YAK smax smax
comp=N,264nm,5.3s
YAK Yakutsk 67.54 349 ⇓P **P** **17 22 25.2 -1.4**
YAK Yakutsk 67.54 349 P **P** **17 22 26.1 -0.5**
YAK pP **pP** **17 23 45.3 -0.3**
YAK sP **sP** **17 24 24.1 -0.3**
SPIA Saint Paul Isl 67.74 21 P **P** **17 22 28.5 +0.7**
SPIA Saint Paul Isl 67.74 21 P **P** **17 22 25.8 -2.1**
baz=221,SNR=14
SPIA S **S** **17 30 56.1 +0.8**
baz=221
ZAK Zakamensk 67.96 329 *e*P **P** **17 22 28.8 -0.8**
ZAK *e* 17 23 49.5
ZAK pmax pmax
comp=Z,162nm,1.0s
GTK Tadong 68.26 301 *e*P **P** **17 22 33.2 +1.2**
GTK IAmb IAmb 17 22 40.3
comp=Z,162nm,0.8s
BOD Bodaibo 68.29 339 *e*P **P** **17 22 30.0 -1.3**
BOD pmax pmax
comp=Z,155nm,1.1s
IRK Irkutsk 68.58 331 *e*P **P** **17 22 31.3 -1.9**
IRK *e* 17 23 54.1
IRK *e* 17 31 13.0
IRK pmax pmax
comp=Z,175nm,1.0s
FALS False Pass 68.81 26 P **P** **17 22 33.6 -0.9**
FALS False Pass 68.81 26 P **P** **17 22 33.2 -1.3**
baz=229,SNR=13
FALS S **S** **17 31 07.8 -0.2**
baz=229
FALS False Pass 68.81 26 P **P** **17 22 36.0 +1.5**
CASY Casey 69.02 197 P **P** **17 22 33.6 -2.0**
CASY Casey 69.02 197 ⇑P **P** **17 22 33.9 -1.7**
CASY Casey 69.02 197 P **P** **17 22 34.2 -1.4**
BWNR Bhubaneshwar 69.04 293 *e*P **P** **17 22 38.3 +1.7**
BOK Bokaro 69.74 297 *e*P **P** **17 22 42.6 +1.7**
BOK IAmb IAmb 17 22 48.5
comp=Z,48nm,0.8s
MOY Mondy 69.88 329 *e*P **P** **17 22 40.7 -0.6**
MOY pmax pmax
comp=Z,158nm,1.5s
RAMN Ramite 69.88 300 *e*P **P** **17 22 43.4 +1.4**
comp=Z,142nm,0.3s
SDPT Sand Point 70.42 27 P **P** **17 22 41.8 -2.4**
SDPT Sand Point 70.42 27 P **P** **17 22 42.6 -1.7**
baz=232,SNR=71
SDPT S **S** **17 31 26.1 -0.5**
baz=232
CNBA Chernabura Isl 70.50 27 P **P** **17 22 42.9 -1.8**
CNBA IAmb IAmb 17 22 50.5
comp=Z,414nm,1.1s
CHNA Chernabura Isl 70.50 27 P **P** **17 22 43.1 -1.7**
baz=232,SNR=54
CHNA S **S** **17 31 25.8 -1.7**
baz=232
GUN Gumba 70.75 301 *e*P **P** **17 22 48.9 +1.6**
comp=Z,474nm,0.6s
VIS Vishakhapatnam 70.85 290 *e*P **P** **17 22 50.2 +2.6**
PKI Pulchoki 71.06 301 *e*P **P** **17 22 50.4 +1.3**
comp=Z,239nm,0.7s
PKIN Phulchoki 71.08 301 *e*P **P** **17 22 50.4 +1.3**
comp=Z,124nm,0.4s
KNGR Kungurtug, Tuv 71.15 327 *i*P **P** **17 22 47.6 -1.3**
KNGR pmax pmax
comp=Z,188nm,0.9s
DMN Daman 71.33 301 *e*P **P** **17 22 52.3 +1.6**
S14K Fog Glacier 71.41 26 P **P** **17 22 49.3 -0.9**
baz=232,SNR=50
S14K S **S** **17 31 37.5 -0.6**
baz=232
HALK Hakmana 71.82 278 ⇓P **P** **17 22 55.0 +1.5**
GKN Gorkha 71.83 301 *e*P **P** **17 22 54.8 +1.3**
PALK Pallekele 71.92 279 P **P** **17 22 53.3 -0.8**
PALK IAmb IAmb 17 23 01.7
comp=Z,144nm,0.8s
PALK Pallekele 71.92 279 P **P** **17 22 53.3 -0.8**
PALK pmax pmax
comp=Z,144nm,0.8s
PALK Pallekele 71.92 279 P **P** **17 22 55.1 +1.0**
PALK Pallekele 71.92 279 ⇑P **P** **17 22 54.9 +0.8**
PALK ⇓P **P** **17 22 55.8 +1.7**
PALK ⇑P PcP 17 23 00.5 -10
PALK Pallekele 71.92 279 P **P** **17 22 55.8 +1.7**
PALK pP **pwP** **17 24 17.7 -0.1**
BILL Bilibino 72.08 6 P **P** **17 22 51.6 -2.2**
BILL IAmb IAmb 17 23 00.8
comp=Z,195nm,0.9s
BILL Bilibino 72.08 6 *de*P **P** **17 22 53.3 -0.6**
BILL *e* 17 23 06.0
BILL *e**PP **pP** **17 24 11.9 -1.8**
BILL *e* 17 25 38.2
BILL pmax pmax
comp=Z,63nm,1.7s
MALK Mahakanadarawa 72.20 280 ⇑P **P** **17 22 54.7 -1.0**
GAMB Gambell 72.36 16 P **P** **17 22 55.4 -0.1**
GAMB IAmb IAmb 17 23 02.8
comp=Z,264nm,0.8s
GAMB Gambell 72.36 16 P **P** **17 22 54.6 -0.9**
baz=218,SNR=12
GAMB S **SKiKP** **17 31 50.9 -0.8**
baz=218
GAMB Gambell 72.36 16 ⇑P P 17 23 00.6 +5.1
DANN Dangsing 72.67 301 *e*P **P** **17 22 59.4 +0.9**
comp=Z,362nm,0.7s
KOLN Koldanda 72.67 300 *e*P **P** **17 22 58.0 -0.4**
comp=Z,58nm,1.0s
BLSP Bilaspur 72.77 294 *e*P **P** **17 22 59.8 +0.9**
CHIR Chirikof Islan 72.92 28 P **P** **17 22 59.4 +0.4**
CHIR Chirikof Islan 72.92 28 P **P** **17 22 58.3 -0.7**
baz=236,SNR=12
PYUN Piuthan 73.27 301 *e*P **P** **17 23 02.7 +0.8**
comp=Z,1µm,0.9s
R17K Ugashik Creek 73.61 26 P **P** **17 23 02.1 -0.9**
baz=235,SNR=74
R17K S **S** **17 32 02.9 +0.4**
baz=235
P16K Nushagak River 73.76 24 P **P** **17 23 02.5 -1.3**
baz=233,SNR=40
P16K S **S** **17 32 03.8 -0.3**
baz=233
SII Sitkinak Islan 74.00 28 P **P** **17 23 05.0 -0.2**
SII Sitkinak Islan 74.00 28 P **P** **17 23 04.2 -1.0**
baz=237,SNR=47
SII S **S** **17 32 07.5 +0.5**
baz=237
SII Sitkinak Islan 74.00 28 P **P** **17 23 07.2 +1.9**
O16K Kokwok River B 74.06 24 P **P** **17 23 04.5 -0.9**
baz=233,SNR=72
O16K S **S** **17 32 05.5 -1.9**
baz=233
Q16K King Salmon 74.10 25 P **P** **17 23 05.0 -0.7**
baz=234,SNR=7.0
VNDA Vanda 74.16 178 P **P** **17 23 04.0 -1.7**
comp=Z,31nm,0.5s,baz=337,slow=6.9,SNR=63
comp=Z,31nm,0.5s
VNDA Vanda 74.16 178 P **P** **17 23 04.4 -1.4**
VNDA IAmb IAmb 17 23 13.0
comp=Z,177nm,1.1s
VNDA Vanda 74.16 178 P **P** **17 23 04.4 -1.4**
VNDA pmax pmax
comp=Z,177nm,1.1s
WMQ Urumqi 74.23 317 P **P** **17 23 07.8 +0.8**
WMQ PcP **PcP** **17 23 19.8 0.0**
WMQ pP pP 17 24 31.9 +3.6
WMQ S **S** **17 32 11.3 +1.1**
WMQ pmax pmax
comp=Z,170nm,1.3s
WMQ LR LR
comp=Z,2µm,18.5s
WMQ LR LR
comp=Z,2µm,15.9s
WMQ LR LR
comp=Z,2µm,21.1s
N16K Nishlik Lake 74.33 23 P **P** **17 23 06.1 -1.0**
baz=232,SNR=56
N16K S **S** **17 32 11.0 +0.5**
baz=232
P17K Kvichak River 74.50 25 P **P** **17 23 07.2 -0.8**
baz=234,SNR=40
P17K S **S** **17 32 09.9 -2.3**
baz=234
O17K Koliganek Bris 74.57 24 P **P** **17 23 07.8 -0.6**
baz=234,SNR=151
O17K S **S** **17 32 11.9 -1.1**
baz=234
SBA Scott Base 74.71 177 P **P** **17 23 08.9 -0.1**
SBA IAmb IAmb 17 23 17.5
comp=Z,141nm,1.1s
SBA Scott Base 74.71 177 P **P** **17 23 08.9 -0.1**
SBA pmax pmax
comp=Z,141nm,1.1s
OHAK Old Harbor 74.77 27 P **P** **17 23 07.9 -1.7**
OHAK Old Harbor 74.77 27 P **P** **17 23 08.3 -1.3**
baz=238,SNR=124
OHAK S **S** **17 32 14.7 -0.7**
baz=238
TNA Tin City 74.78 16 P **P** **17 23 08.5 -1.0**
TNA IAmb IAmb 17 23 16.3
comp=Z,135nm,0.8s
TNA Tin City 74.78 16 P **P** **17 23 08.6 -0.9**
baz=222,SNR=11
TNA S **S** **17 32 16.6 +1.5**
baz=222
ANM Nome 74.79 18 P **P** **17 23 09.1 -0.5**
ANM IAmb IAmb 17 23 17.0
comp=Z,352nm,0.9s
ANM Nome 74.79 18 P **P** **17 23 09.1 -0.5**
ANM Nome 74.79 18 P **P** **17 23 08.1 -1.5**
baz=225,SNR=17
ANM S **S** **17 32 15.9 +0.6**
baz=225
Q18K Katmai Hardscr 74.79 26 P **P** **17 23 08.4 -1.5**
baz=236
SALM Salem 74.87 283 *e*P **P** **17 23 13.2 +2.2**
P18K Big Mountain, 75.12 25 P **P** **17 23 11.5 -0.1**
P18K IAmb IAmb 17 23 17.9
comp=Z,144nm,0.9s
P18K Big Mountain, 75.12 25 P **P** **17 23 10.3 -1.3**
baz=235,SNR=18
P18K S **S** **17 32 16.6 -2.6**
baz=235
HYB Hyderabad 75.29 289 *e*P **P** **17 23 14.4 +1.0**
O18K Koktuh Hills 75.39 25 P **P** **17 23 13.2 +0.1**
O18K IAmb IAmb 17 23 19.4
comp=Z,180nm,1.0s
O18K Koktuh Hills 75.39 25 P **P** **17 23 11.0 -2.1**
baz=235,SNR=44
O18K S **S** **17 32 19.3 -2.8**
baz=235
KDAK Kodiak Island 75.39 27 P **P** **17 23 12.6 -0.5**
comp=Z,41nm,1.1s,baz=238,slow=9.5,SNR=26
comp=Z,41nm,1.1s
KDAK Kodiak Island 75.39 27 P **P** **17 23 13.1 0.0**
KDAK IAmb IAmb 17 23 20.0
comp=Z,275nm,0.8s
KDAK Kodiak Island 75.39 27 P **P** **17 23 13.1 0.0**
KDAK pmax pmax
comp=Z,275nm,0.9s
KDAK Kodiak Island 75.39 27 P **P** **17 23 11.4 -1.7**
baz=238
KDAK S **S** **17 32 18.9 -3.2**
baz=238
NGP Nagpur 75.41 293 *e*P **P** **17 23 14.9 +0.9**
KOD Kodaikanal 75.42 281 *e*P **P** **17 23 16.6 +2.1**
Q19K Cape Douglas, 75.54 26 P **P** **17 23 12.6 -1.4**
Q19K Cape Douglas, 75.54 26 P **P** **17 23 12.1 -1.9**
baz=237,SNR=81
Q19K S **S** **17 32 22.1 -1.7**
baz=237
N18K Kilae Creek 75.59 24 P **P** **17 23 14.0 -0.2**
N18K IAmb IAmb 17 23 21.6
comp=Z,466nm,1.1s
N18K Kilae Creek 75.59 24 P **P** **17 23 12.4 -1.8**
baz=234,SNR=74
N18K S **S** **17 32 24.0 -0.3**
baz=234
LGTI Lohaghat 75.92 301 *e*P **P** **17 23 18.7 +2.1**
Q20K Shuyak Island 75.92 26 P **P** **17 23 14.7 -1.4**
baz=238,SNR=9.8
Q20K S **S** **17 32 27.8 0.0**
baz=238
O19K Port Alsworth 75.95 25 P **P** **17 23 15.6 -0.6**
O19K IAmb IAmb 17 23 22.4
comp=Z,149nm,0.7s
O19K Port Alsworth 75.95 25 P **P** **17 23 15.1 -1.1**
baz=236,SNR=13
O19K S **S** **17 32 26.0 -2.1**
baz=236
SVW2 Sparrevohn 75.96 23 P **P** **17 23 15.6 -0.7**
PTH Pithoragarh 75.96 301 *e*P **P** **17 23 18.5 +1.3**
N19K Bonanza Creek 76.23 24 P **P** **17 23 17.3 -0.6**
N19K IAmb IAmb 17 23 24.5
comp=Z,178nm,0.8s
N19K Bonanza Creek 76.23 24 P **P** **17 23 16.4 -1.5**
baz=236,SNR=82
N19K S **S** **17 32 29.9 -1.5**
baz=236
TIXI Tiksi 76.51 353 P **P** **17 23 16.6 -2.4**
comp=Z,13nm,0.8s,baz=88,slow=23,SNR=22
TIXI PKiKP **PKiKP** **17 29 01.7 +2.4**
comp=Z,10nm,0.7s,baz=251,slow=1.1,SNR=8.9
comp=Z,13nm,0.8s
TIXI Tiksi 76.51 353 P **P** **17 23 16.5 -2.5**
TIXI Tiksi 76.51 353 *i*P **P** **17 23 17.1 -1.9**
TIXI pmax pmax
comp=Z,95nm,0.9s
TIXI Tiksi 76.51 353 ⇑P **P** **17 23 17.3 -1.7**
TIXI ⇓P **P** **17 23 19.7 +0.6**
TIXI ⇑P **PcP** **17 23 22.5 -6.4**
O20K Slope Mountain 76.60 25 P **P** **17 23 18.6 -1.4**
baz=238,SNR=80
O20K S **S** **17 32 31.5 -3.8**
baz=238
JHNI Jhansi 76.62 297 *e*P **P** **17 23 20.4 -0.3**
RSO Redoubt South 76.75 25 P **P** **17 23 18.5 -2.4**
HOM Homer 76.80 26 P **P** **17 23 19.7 -1.2**
HOM Homer 76.80 26 P **P** **17 23 20.0 -1.0**
baz=239,SNR=24
HOM S **S** **17 32 35.0 -2.3**
baz=239
L19K White Mountain 76.87 23 P **P** **17 23 20.1 -1.2**
L19K White Mountain 76.87 23 P **P** **17 23 20.3 -1.0**
baz=235,SNR=81
L19K S **S** **17 32 40.5 +2.5**
baz=235
TTA Tatalina 76.87 22 P **P** **17 23 19.4 -2.0**
TTA Tatalina 76.87 22 P **P** **17 23 19.4 -2.0**
TTA pmax pmax
comp=Z,422nm,0.8s
TTA Tatalina 76.87 22 P **P** **17 23 20.1 -1.2**
baz=234,SNR=138
TTA S **S** **17 32 40.1 +2.0**
baz=234
M19K Big River Lodg 76.89 23 P **P** **17 23 20.1 -1.3**
M19K Big River Lodg 76.89 23 P **P** **17 23 20.6 -0.8**
baz=236
M19K S **S** **17 32 38.2 0.0**
baz=236
CNPM China Poot 76.91 26 P **P** **17 23 19.9 -1.6**
BRLK Bradley Lake 77.18 26 P **P** **17 23 21.8 -1.3**
AKL Akola 77.22 292 *e*P **P** **17 23 25.0 +0.9**
BRSE Bradley Lake S 77.23 26 P **P** **17 23 22.4 -1.0**
baz=240,SNR=89
BRSE S **S** **17 32 41.7 -0.3**
baz=240
BHPL Bhopal 77.24 295 *e*P **P** **17 23 24.8 +0.6**
BHPL IAmb IAmb 17 23 30.5
comp=Z,159nm,1.0s
ZSN Zaisan 77.35 320 *e*P **P** **17 23 23.8 -0.5**
ZSN *e*S **S** **17 32 41.6 -2.1**
ZSN pmax pmax
comp=Z,53nm,0.9s
ZSN Zaisan 77.35 320 *e*P **P** **17 23 23.8 -0.5**
comp=Z,53nm,0.9s,baz=320
ZSN *e*S **S** **17 32 41.6 -2.1**
baz=320
M20K Styx River 77.37 23 P **P** **17 23 23.2 -1.0**
M20K Styx River 77.37 23 P **P** **17 23 23.1 -1.0**
baz=237,SNR=62
M20K S **S** **17 32 42.5 -1.1**
baz=237
N20K Mount Spurr 77.38 24 P **P** **17 23 23.2 -1.0**
baz=238
L20K Farewell, AK 77.41 23 P **P** **17 23 23.8 -0.5**
baz=236,SNR=58
L20K S **S** **17 32 45.4 +1.6**
baz=236
SPU Mount Spurr 77.43 24 P **P** **17 23 22.2 -2.2**
CAPN Captain Cook N 77.58 25 P **P** **17 23 24.6 -0.6**
CAPN Captain Cook N 77.58 25 P **P** **17 23 24.3 -0.9**
baz=239,SNR=7.9
CAPN S **S** **17 32 45.2 -0.4**
baz=239
GCSA Galena City Sc 77.65 20 P **P** **17 23 24.7 -0.8**
baz=233,SNR=19
GCSA S **S** **17 32 44.4 -1.7**
baz=233
K20K Telida 77.83 22 P **P** **17 23 25.7 -0.9**
K20K Telida 77.83 22 P **P** **17 23 24.4 -2.2**
baz=236,SNR=529
K20K S **S** **17 32 49.3 +1.1**
baz=236
RDOG Red Dog Mine 77.96 16 P P 17 23 21.0 -6.2
RDOG Red Dog Mine 77.96 16 P P 17 23 21.1 -6.0
baz=226,SNR=140
RDOG S **S** **17 32 46.8 -2.6**
baz=226
SEW Seward 77.98 26 P **P** **17 23 26.2 -1.1**
SEW Seward 77.98 26 P **P** **17 23 26.4 -1.0**
baz=241,SNR=109
SEW S **S** **17 32 49.3 -0.4**
baz=241
O22K Cooper Landing 78.05 26 P **P** **17 23 26.0 -1.7**
O22K Cooper Landing 78.05 26 P **P** **17 23 27.3 -0.4**
baz=240,SNR=26
O22K S **S** **17 32 50.5 0.0**
baz=240
SKT Skwentna 78.06 24 P **P** **17 23 25.7 -2.2**
SKT IAmb IAmb 17 23 33.1
comp=Z,99nm,0.8s
SKT Skwentna 78.06 24 P **P** **17 23 25.3 -2.6**
baz=238,SNR=47
SKT S **S** **17 32 51.0 +0.2**
baz=238
SUA Susitna One 78.11 24 P **P** **17 23 26.1 -2.2**
SUA Susitna One 78.11 24 P **P** **17 23 25.2 -3.1**
baz=239,SNR=88
SUA S **S** **17 32 49.3 -2.2**
baz=239
FIS Fire Island 78.17 25 P **P** **17 23 28.1 -0.3**
J20K Nowinta River 78.27 21 P **P** **17 23 26.8 -2.1**
J20K Nowinta River 78.27 21 P **P** **17 23 27.4 -1.5**
baz=236,SNR=137
J20K S **S** **17 32 54.4 +1.6**
baz=236
PPLA Purkeypile 78.29 23 P **P** **17 23 27.5 -1.8**
PPLA IAmb IAmb 17 23 41.0
comp=Z,141nm,0.8s
PPLA Purkeypile 78.29 23 P **P** **17 23 27.2 -2.1**
baz=238,SNR=55
PPLA S **S** **17 32 51.8 -1.6**
baz=238
RC01 Rabbit Creek A 78.34 25 P **P** **17 23 27.6 -1.7**
RC01 Rabbit Creek A 78.34 25 P **P** **17 23 27.9 -1.5**
baz=240,SNR=84
RC01 S **S** **17 32 52.5 -1.2**
baz=240
M22K Willow 78.52 24 P **P** **17 23 28.4 -1.8**
M22K Willow 78.52 24 P **P** **17 23 28.6 -1.6**
baz=240,SNR=23
M22K S **S** **17 32 53.4 -2.0**
baz=240
CAST Castle Rocks 78.62 22 P **P** **17 23 29.1 -1.8**
CAST Castle Rocks 78.62 22 P **P** **17 23 28.3 -2.5**
baz=238,SNR=33
CHUM Lake Minchumin 78.78 22 P **P** **17 23 30.2 -1.4**
baz=237,SNR=79
CHUM S **S** **17 32 58.0 -0.2**
baz=237
CUT Chulitna 78.79 24 P **P** **17 23 29.8 -2.0**
CUT Chulitna 78.79 24 P **P** **17 23 29.8 -2.0**
baz=240,SNR=15
CUT S **S** **17 32 56.5 -1.8**
baz=240
MK31 Makanchi Array 78.81 319 P **P** **17 23 29.6 -2.7**
MK31 IAmb IAmb 17 23 39.1
comp=Z,164nm,0.9s
MK31 Makanchi Array 78.81 319 P **P** **17 23 29.6 -2.7**
MK31 pmax pmax
comp=Z,164nm,0.9s
MKAR Makanchi Array 78.81 319 P **P** **17 23 29.6 -2.7**
comp=Z,20nm,0.7s,baz=102,slow=6.2,SNR=115
MKAR PKiKP **PKiKP** **17 29 03.7 +0.1**
comp=Z,2.8nm,0.5s,baz=75,slow=1.8,SNR=1.1
MKAR S **S** **17 32 58.7 -0.5**
comp=Z,1.7nm,0.9s,baz=104,slow=6.1,SNR=2.1
MKAR PKKPbc **PKKPbc** **17 42 24.1 -1.5**
comp=Z,3.5nm,0.7s,baz=239,slow=1.8,SNR=9.1
comp=Z,20nm,0.7s
MKAR Makanchi Array 78.81 319 P **P** **17 23 30.1 -2.1**
PMR Palmer 78.85 25 P **P** **17 23 30.9 -1.1**
PMR IAmb IAmb 17 23 39.6
comp=Z,371nm,1.1s
PMR Palmer 78.85 25 P **P** **17 23 30.9 -1.1**
PMR pmax pmax
comp=Z,371nm,1.1s
PMR Palmer 78.85 25 P **P** **17 23 30.6 -1.4**
baz=241,SNR=50
PMR S **S** **17 32 56.7 -2.1**
baz=241
SMLA Simla 78.86 302 *e*P **P** **17 23 32.2 -0.6**
SMLA IAmb IAmb 17 23 38.7
comp=Z,214nm,0.8s
KUDL Kundal 78.90 299 *e*P **P** **17 23 33.5 +0.4**
MAKZ Makanchi 79.02 319 P **P** **17 23 30.8 -2.6**
MAKZ IAmb IAmb 17 23 40.2
comp=Z,385nm,1.1s
MAKZ Makanchi 79.02 319 P **P** **17 23 30.8 -2.6**
MAKZ pmax pmax
comp=Z,385nm,1.1s
GHO Glory Hole Cre 79.02 25 P **P** **17 23 31.0 -2.1**
KAAM Kaadhehdhoo 79.03 271 ⇑P **P** **17 23 37.6 +3.5**
KAAM ⇑P **PcP** **17 23 41.2 0.0**
KNK Knik Glacier 79.04 25 P **P** **17 23 30.9 -2.3**
KNK Knik Glacier 79.04 25 P **P** **17 23 31.9 -1.3**
baz=241,SNR=67
KNK S **S** **17 33 01.3 +0.3**
baz=241
Q23K Middleton Isla 79.05 27 P **P** **17 23 31.8 -1.4**
Q23K Middleton Isla 79.05 27 P **P** **17 23 32.5 -0.7**
baz=244,SNR=7.4
Q23K S **S** **17 33 02.6 +1.5**
baz=244
MID Middleton Isla 79.05 27 P **P** **17 23 32.6 -0.6**
MID Middleton Isla 79.05 27 P **P** **17 23 32.6 -0.6**
MID pmax pmax
comp=Z,421nm,0.8s
KTH Kantishna Hill 79.13 23 P **P** **17 23 32.0 -1.7**
SML Sawmill 79.29 25 P **P** **17 23 33.0 -1.5**
SML Sawmill 79.29 25 P **P** **17 23 32.7 -1.8**
baz=241,SNR=271
SML S **S** **17 33 02.6 -1.0**
baz=241
TRF Thorofare Moun 79.32 23 P **P** **17 23 32.7 -2.1**
TRF Thorofare Moun 79.32 23 P **P** **17 23 32.4 -2.4**
baz=239,SNR=56
TRF S **S** **17 33 02.0 -2.2**
baz=239
GLI Glacier Island 79.37 26 P **P** **17 23 33.6 -1.3**
GLI pP **pP** **17 24 55.6 -0.8**
GLI Glacier Island 79.37 26 P **P** **17 23 32.8 -2.1**
baz=243,SNR=58

GLI S **S** **17 33 03.9 -0.6**
baz=243
BPAW **Bear Paw Mtn.** **79.39 22** P **P** **17 23 33.0 -2.0**
BPAW IAmb IAmb 17 23 41.0
comp=Z,205nm,0.8s
BPAW **Bear Paw Mtn.** **79.39 22** P **P** **17 23 33.3 -1.7**
baz=238,SNR=58
BPAW S **S** **17 33 01.6 -3.0**
baz=238
HIN **Hinchinbrook I** **79.41 26** P **P** **17 23 34.7 -0.5**
IMAR **Indian Mountai** **79.44 20** P **P** **17 23 34.5 -0.7**
KHET **Khetri** **79.48 299** *eP* **P** **17 23 36.3 0.0**
M23K **Glacier View** **79.53 25** P **P** **17 23 33.6 -2.2**
baz=242,SNR=46
M23K S **S** **17 33 03.9 -2.2**
baz=242
H21K **Melozitna Rive** **79.58 20** P **P** **17 23 34.8 -1.2**
H21K IAmb IAmb 17 23 42.7
comp=Z,233nm,1.1s
H21K **Melozitna Rive** **79.58 20** P **P** **17 23 34.2 -1.7**
baz=237,SNR=68
H21K S **S** **17 33 07.7 +1.2**
baz=237
FID **Port Fidalgo** **79.58 26** P **P** **17 23 34.5 -1.5**
FID pP **pP** **17 24 57.9 +0.4**
I21K **Tanana** **79.61 21** P **P** **17 23 35.3 -0.7**
I21K pP **pP** **17 24 57.9 +0.2**
I21K **Tanana** **79.61 21** P **P** **17 23 35.0 -1.1**
baz=237,SNR=106
I21K S **S** **17 33 07.1 +0.4**
baz=237
ZAA0 **Zalesovo Array** **79.62 326** P **P** **17 23 33.3 -3.1**
ZAA0 IAmb IAmb 17 23 42.4
comp=Z,143nm,0.9s
ZALV **Zalesovo Beam** **79.62 326** P **P** **17 23 34.3 -2.0**
comp=Z,36nm,0.6s,baz=111,slow=5.9,SNR=34
ZALV pP **pP** **17 24 58.9 +0.1**
comp=Z,13nm,0.8s,baz=120,slow=5.8,SNR=2.0
ZALV PKiKP **PKiKP** **17 29 04.7 +0.1**
comp=Z,3.1nm,0.6s,baz=199,slow=2.8,SNR=2.3
ZALV S **S** **17 33 07.5 +0.2**
comp=Z,3.0nm,1.0s,baz=143,slow=5.0,SNR=2.7
ZALV PKKPbc **PKKPbc** **17 42 21.1 -3.1**
comp=Z,1.8nm,0.5s,baz=288,slow=2.1,SNR=8.3
comp=Z,36nm,0.6s
ZALV **Zalesovo Beam** **79.62 326** P **P** **17 23 33.3 -3.1**
WAT1 **Susitna Watana** **79.69 24** P **P** **17 23 34.9 -1.8**
baz=241
WAT1 S **S** **17 33 06.7 -1.1**
baz=241
SCM **Sheep Creek Mo** **79.72 25** P **P** **17 23 36.0 -0.9**
SCM **Sheep Creek Mo** **79.72 25** P **P** **17 23 36.0 -0.9**
SCM pmax pmax
comp=Z,512nm,1.0s
SCM **Sheep Creek Mo** **79.72 25** P **P** **17 23 35.3 -1.5**
baz=242,SNR=66
SCM S **S** **17 33 07.3 -0.9**
baz=242
SHLS **Shalkode** **79.73 315** *eP* **P** **17 23 34.7 -2.7**
SHLS *eS* **S** **17 33 05.1 -4.1**
SHLS pmax pmax
comp=Z,45nm,1.0s
SHLS **Shalkode** **79.73 315** *eP* **P** **17 23 34.7 -2.7**
comp=Z,45nm,1.0s,baz=315
SHLS *eS* **S** **17 33 05.2 -4.1**
baz=315
EYAK **Cordova Ski Ar** **79.81 26** P **P** **17 23 36.7 -0.6**
EYAK IAmb IAmb 17 23 43.6
comp=Z,221nm,1.1s
EYAK **Cordova Ski Ar** **79.81 26** P **P** **17 23 34.9 -2.3**
baz=244,SNR=14
EYAK S **S** **17 33 10.2 +1.1**
baz=244
RND **Reindeer** **79.86 23** P **P** **17 23 34.7 -2.8**
RND pP **pP** **17 24 58.2 -1.0**
RND **Reindeer** **79.86 23** P **P** **17 23 34.7 -2.8**
RND *PP **pP** **17 24 58.2 -1.0**
POO **Poona** **79.88 289** *eP* **P** **17 23 39.6 +1.1**
WAT6 **Susitna Watana** **79.90 24** P **P** **17 23 36.0 -2.0**
baz=242,SNR=74
WAT6 S **S** **17 33 09.0 -1.2**
baz=242
MLY **Manley** **79.97 21** P **P** **17 23 35.7 -2.4**
MLY pP **pP** **17 24 59.2 -0.6**
MLY **Manley** **79.97 21** P **P** **17 23 36.1 -2.0**
baz=239,SNR=409
MLY S **S** **17 33 10.6 -0.1**
baz=239
MCK **McKinley** **79.98 23** P **P** **17 23 35.4 -2.8**
MCK **McKinley** **79.98 23** P **P** **17 23 35.4 -2.8**
MCK **McKinley** **79.98 23** P **P** **17 23 36.4 -1.8**
baz=240,SNR=69
MCK S **S** **17 33 07.5 -3.3**
baz=240
BWN **Browne** **80.00 22** P **P** **17 23 37.5 -0.7**
DIV **Divide** **80.06 26** P **P** **17 23 37.8 -0.9**
KLU **Klutina** **80.16 25** P **P** **17 23 38.2 -1.0**
KLU pP **pP** **17 25 01.3 +0.2**
KLU **Klutina** **80.16 25** P **P** **17 23 37.9 -1.3**
baz=244,SNR=68
KLU S **S** **17 33 13.6 +0.8**
baz=244
H22K **Ishtalitna Cre** **80.20 20** P **P** **17 23 38.4 -0.8**
baz=238,SNR=76
H22K S **S** **17 33 13.0 0.0**
baz=238
AJM **Ajmer** **80.25 297** *eP* **P** **17 23 40.2 -0.2**
DHY **Denali Highway** **80.28 24** P **P** **17 23 38.0 -1.9**
DHY **Denali Highway** **80.28 24** P **P** **17 23 37.7 -2.2**
baz=242
THN **Thein Dam** **80.32 304** *eP* **P** **17 23 42.1 +1.6**
M24K **Tolsona, Glenn** **80.33 25** P **P** **17 23 38.8 -1.3**
M24K **Tolsona, Glenn** **80.33 25** P **P** **17 23 39.0 -1.1**
baz=243,SNR=66
M24K S **S** **17 33 15.6 +1.1**
baz=243
KPKS **Kokpek** **80.36 315** *eP* **P** **17 23 39.2 -1.5**
KPKS *eS* **S** **17 33 16.5 +0.9**
KPKS pmax pmax
comp=Z,41nm,1.0s
KPKS **Kokpek** **80.36 315** *eP* **P** **17 23 39.2 -1.5**
comp=Z,41nm,1.0s,baz=315
KPKS *eS* **S** **17 33 16.6 +0.9**
baz=315
NEA2 **Nenana** **80.36 22** P **P** **17 23 37.5 -2.6**
NEA2 **Nenana** **80.36 22** P **P** **17 23 38.1 -2.0**
baz=240,SNR=26
NEA2 S **S** **17 33 13.8 -0.8**
baz=240
HMT **Hamilton** **80.39 27** P **P** **17 23 39.1 -1.2**
SATY **Saty** **80.46 315** *eP* **P** **17 23 40.2 -1.1**
SATY *eS* **S** **17 33 15.0 -1.8**
SATY pmax pmax
comp=Z,47nm,1.2s
SATY **Saty** **80.46 315** *eP* **P** **17 23 40.2 -1.1**
comp=Z,47nm,1.2s,baz=314
SATY *eS* **S** **17 33 15.0 -1.8**
baz=314
ZHN **Zhinishke** **80.47 315** *eP* **P** **17 23 40.0 -1.3**
ZHN **Zhinishke** **80.47 315** *eP* **P** **17 23 40.0 -1.3**
baz=315
SUCK **Suckling Hills** **80.50 27** P **P** **17 23 41.0 0.0**
SUCK IAmb IAmb 17 23 48.4
comp=Z,255nm,0.9s
BMRM **Bremner River** **80.50 26** P **P** **17 23 40.0 -1.0**
BMRM IAmb IAmb 17 23 50.4
comp=Z,277nm,0.8s
BMRM **Bremner River** **80.50 26** P **P** **17 23 39.2 -1.8**
baz=245,SNR=106
BMRM S **S** **17 33 17.7 +1.4**
baz=245
I23K **Minto, Yukon-K** **80.53 21** P **P** **17 23 38.6 -2.4**
I23K IAmb IAmb 17 23 48.6
comp=Z,143nm,0.6s
I23K **Minto, Yukon-K** **80.53 21** P **P** **17 23 39.3 -1.7**
baz=240,SNR=93
I23K S **S** **17 33 16.3 0.0**
baz=240
TARG **Taragay, Kyrgy** **80.58 313** P **P** **17 23 43.4 +1.1**
TARG **Taragay, Kyrgy** **80.58 313** P **P** **17 23 43.4 +1.1**
TARG pmax pmax
comp=Z,59nm,0.8s
WRH **Wood River Hil** **80.67 22** P **P** **17 23 39.0 -2.7**
BGLC **Bering Glacier** **80.75 27** P **P** **17 23 40.3 -1.9**
baz=246,SNR=7.5
BGLC S **S** **17 33 21.4 +2.8**
baz=246
N25K **Chitina, Valde** **80.78 26** P **P** **17 23 40.8 -1.7**
N25K IAmb IAmb 17 23 49.1
comp=Z,235nm,1.1s
N25K **Chitina, Valde** **80.78 26** P **P** **17 23 39.4 -3.1**
baz=245,SNR=73
N25K S **S** **17 33 20.3 +1.1**
baz=245
H23K **Yukon River** **80.81 21** P **P** **17 23 40.9 -1.6**
H23K IAmb IAmb 17 23 49.0
comp=Z,198nm,0.9s
H23K **Yukon River** **80.81 21** P **P** **17 23 40.5 -2.0**
baz=240,SNR=68
H23K S **S** **17 33 19.7 +0.5**
baz=240
MDM **Murphy Dome** **80.86 22** P **P** **17 23 40.3 -2.5**
MDM IAmb IAmb 17 23 47.9
comp=Z,152nm,1.0s
CCB **Clear Creek Bu** **80.86 22** P **P** **17 23 39.9 -2.8**
HARP **HAARP** **80.89 25** P **P** **17 23 42.0 -0.9**
baz=244,SNR=32
HARP S **S** **17 33 20.5 +0.4**
baz=244
TDK **Taldyqorghan** **80.93 316** *eP* **P** **17 23 41.2 -2.3**
TDK **Taldyqorghan** **80.93 316** *eP* **P** **17 23 41.3 -2.3**
baz=316
TCOL **CIGO, UAF Yank** **80.95 22** P **P** **17 23 40.9 -2.3**
TCOL **CIGO, UAF Yank** **80.95 22** P **P** **17 23 41.4 -1.7**
baz=241,SNR=19
TCOL S **S** **17 33 20.8 +0.2**
baz=241
COLA **College** **80.96 22** P **P** **17 23 40.4 -2.8**
COLA **College** **80.96 22** *i* P **P** **17 23 38.7 -4.5**
COLA pmax pmax
comp=Z,627nm,1.0s
COLA **College** **80.96 22** P **P** **17 23 42.0 -1.2**
baz=241
COLA S **S** **17 33 18.1 -2.5**
baz=241
COLA **College** **80.96 22** ⇑P **P** **17 23 41.6 -1.6**
COLA ⇑P **PcP** **17 23 42.9 -5.6**
COLA ⇑P P 17 23 44.5 +1.3
COLA ⇑P P 17 23 46.9 +3.7
SNH **Sunshine Point** **80.97 27** P **P** **17 23 44.6 +1.1**
PAX **Paxson** **81.01 24** P **P** **17 23 41.8 -1.9**
PAX IAmb IAmb 17 23 49.6
comp=Z,218nm,1.2s
PAX **Paxson** **81.01 24** P **P** **17 23 41.8 -1.9**
PAX pmax pmax
comp=Z,218nm,1.2s
PAX **Paxson** **81.01 24** P **P** **17 23 42.5 -1.1**
baz=244,SNR=128
PAX S **S** **17 33 20.3 -1.2**
baz=244
JMU **Jammu** **81.05 304** *eP* **P** **17 23 46.7 +2.3**
GLB **Gilahina Butte** **81.05 26** P **P** **17 23 42.6 -1.3**
WAX **Waxell Ridge** **81.08 27** P **P** **17 23 43.7 -0.3**
HDA **Harding Lake** **81.08 23** P **P** **17 23 41.0 -2.9**
HDA IAmb IAmb 17 23 50.3
comp=Z,196nm,0.6s
HDA **Harding Lake** **81.08 23** P **P** **17 23 42.1 -1.8**
baz=242,SNR=94
HDA S **S** **17 33 19.5 -2.5**
baz=242
HDA S **S** **17 33 19.5 -2.5**
baz=242
VRDI **Verde Repeater** **81.12 26** P **P** **17 23 43.5 -0.9**
VRDI IAmb IAmb 17 23 51.2
comp=Z,302nm,0.9s
KDJ **Kajisay** **81.13 313** P **P** **17 23 43.0 -1.9**
KDJ IAmb IAmb 17 23 52.7
comp=Z,185nm,0.9s
KDJ pP **pP** **17 25 07.0 -1.1**
KDJ **Kajisay** **81.13 313** P **P** **17 23 43.0 -1.9**
KDJ *PP **pP** **17 25 07.0 -1.1**
KDJ pmax pmax
comp=Z,185nm,0.9s
ARXS **Arharly** **81.14 316** *eP* **P** **17 23 45.7 +0.9**
SEM **Semipalatinsk** **81.16 322** *eP* **P** **17 23 41.4 -3.4**
SEM **Semipalatinsk** **81.16 322** *eP* **P** **17 23 41.5 -3.4**
baz=322
POKR **Poker Plat Res** **81.23 22** P **P** **17 23 42.6 -2.0**
POKR IAmb IAmb 17 23 50.6
comp=Z,147nm,0.7s
POKR **Poker Plat Res** **81.23 22** P **P** **17 23 42.3 -2.4**
baz=242,SNR=24
POKR S **S** **17 33 21.1 -2.4**
baz=242
K24K **Donnelly Dome** **81.26 23** P **P** **17 23 43.1 -1.7**
baz=243,SNR=67
K24K S **S** **17 33 24.8 +0.9**
baz=243
IL31 **81.27 22** P **P** **17 23 42.2 -2.6**
ILAR **Eielson Array** **81.27 22** P **P** **17 23 41.0 -3.9**
comp=Z,25nm,0.7s,baz=248,slow=5.4,SNR=58
ILAR pP **pP** **17 25 08.6 +1.8**
comp=Z,13nm,0.8s,baz=244,slow=5.3,SNR=1.8
ILAR PKiKP **PKiKP** **17 29 08.8 +1.9**
comp=Z,2.3nm,0.6s,baz=261,slow=2.8,SNR=4.1
ILAR S **S** **17 33 20.3 -3.6**
comp=Z,4.5nm,1.0s,baz=254,slow=7.9,SNR=9.3
ILAR PKKPbc **PKKPbc** **17 42 17.4 -3.6**
comp=Z,5.4nm,0.7s,baz=358,slow=1.4,SNR=18
ILAR **Eielson Array** **81.27 22** P **P** **17 23 42.0 -2.9**
COLD **Coldfoot** **81.31 19** P **P** **17 23 43.9 -1.2**
COLD IAmb IAmb 17 23 52.4
comp=Z,229nm,0.9s
COLD **Coldfoot** **81.31 19** P **P** **17 23 43.5 -1.5**
baz=239,SNR=156
COLD S **S** **17 33 24.2 0.0**
baz=239
ISLE **Juniper Island** **81.37 27** P **P** **17 23 44.1 -1.5**
ISLE IAmb IAmb 17 23 52.5
comp=Z,305nm,0.9s
MESA **MESA** **81.38 28** P **P** **17 23 46.0 +0.2**
MESA **MESA** **81.38 28** P **P** **17 23 44.8 -1.0**
baz=247,SNR=22
MESA S **S** **17 33 26.6 +1.0**
baz=247
H24K **Noodor Dome** **81.41 21** P **P** **17 23 44.1 -1.5**
H24K IAmb IAmb 17 23 52.9
comp=Z,153nm,0.7s
H24K **Noodor Dome** **81.41 21** P **P** **17 23 43.9 -1.7**
baz=241,SNR=97
H24K S **S** **17 33 23.6 -1.8**
baz=241
KSH **Kashi** **81.47 311** P **P** **17 23 49.1 +2.5**
KSH S **S** **17 33 33.1 +5.9**
KSH sS sS 17 36 02.8 +10
KSH pmax pmax
comp=Z,93nm,0.9s
TNSS **Tian-Shan** **81.50 314** *eP* **P** **17 23 46.5 -0.5**
TNSS **Tian-Shan** **81.50 314** *eP* **P** **17 23 46.5 -0.5**
baz=314
YAH **Yahtse** **81.55 27** P **P** **17 23 46.6 -0.1**
YAH IAmb IAmb 17 23 53.8
comp=Z,210nm,0.9s
AAA **Alma-Ata** **81.56 314** *eP* **P** **17 23 43.7 -3.2**
AAA **Alma-Ata** **81.56 314** *eP* **P** **17 23 43.8 -3.2**
baz=314
RIDG **Independent Ri** **81.60 24** P **P** **17 23 45.4 -1.3**
RIDG **Independent Ri** **81.60 24** P **P** **17 23 45.7 -1.0**
baz=244,SNR=210
RIDG S **S** **17 33 26.5 -0.9**
baz=244
CHKK **Chushkaly** **81.65 315** *eP* **P** **17 23 46.5 -0.8**
CHKK **Chushkaly** **81.65 315** *eP* **P** **17 23 46.5 -0.8**
baz=315
MENT **Mentasta** **81.72 25** P **P** **17 23 45.9 -1.4**
MENT IAmb IAmb 17 23 54.1
comp=Z,210nm,0.8s
A21K **Barrow** **81.76 15** P **P** **17 23 46.2 -1.1**
A21K IAmb IAmb 17 23 53.9
comp=Z,247nm,0.9s
A21K **Barrow** **81.76 15** P **P** **17 23 45.8 -1.4**
baz=232,SNR=24
A21K S **S** **17 33 27.7 -0.9**
baz=232
J25K **Salcha River,** **81.78 23** P **P** **17 23 45.6 -2.0**
J25K **Salcha River,** **81.78 23** P **P** **17 23 45.2 -2.4**
baz=244,SNR=102
J25K S **S** **17 33 27.1 -2.2**
baz=244
M26K **Nabesna, AK** **81.80 25** P **P** **17 23 46.7 -1.0**
M26K IAmb IAmb 17 23 55.7
comp=Z,147nm,1.1s
M26K **Nabesna, AK** **81.80 25** P **P** **17 23 46.3 -1.5**
baz=246,SNR=123
M26K S **S** **17 33 29.5 0.0**
baz=246
ULHL **Ulahol** **81.83 313** P **P** **17 23 51.9 +3.3**
SNR=5.6
BARN **Barnard Glacie** **81.85 27** P **P** **17 23 46.9 -1.3**
TABL **Table Mountain** **81.85 27** P **P** **17 23 46.6 -1.6**
BHV **Bhavnagar** **81.86 292** *eP* **P** **17 23 50.5 +1.6**
DOT **Dot Lake** **81.88 24** P **P** **17 23 47.0 -1.1**
L26K **Log Cabin Wild** **81.91 25** P **P** **17 23 46.7 -1.5**
L26K IAmb IAmb 17 23 55.5
comp=Z,278nm,0.8s
L26K **Log Cabin Wild** **81.91 25** P **P** **17 23 46.7 -1.5**
baz=246,SNR=68
CTG **Chitna Glacier** **81.96 27** P **P** **17 23 47.3 -1.4**
baz=248
SCRK **Sand Creek** **82.05 24** P **P** **17 23 47.1 -1.9**
SCRK IAmb IAmb 17 23 55.6
comp=Z,203nm,0.8s
SCRK **Sand Creek** **82.05 24** P **P** **17 23 47.2 -1.9**
baz=245,SNR=66
SCRK S **S** **17 33 29.2 -2.9**
baz=245
BOOM **Boomskoye usch** **82.10 314** P **P** **17 23 47.0 -2.9**
BOOM **Boomskoye usch** **82.10 314** P **P** **17 23 47.0 -2.9**
BOOM pmax pmax
comp=Z,91nm,1.1s
KUU **Kurty** **82.11 315** *eP* **P** **17 23 47.7 -2.0**
KUU *eS* **S** **17 33 32.3 -1.1**
KUU pmax pmax
comp=Z,279nm,1.0s
KUU **Kurty** **82.11 315** *eP* **P** **17 23 47.8 -2.0**
comp=Z,279nm,1.0s,baz=315
KUU *eS* **S** **17 33 32.3 -1.1**
baz=315
PCA **Pinnacle** **82.14 28** P **P** **17 23 48.5 -1.0**
PCA IAmb IAmb 17 23 56.5
comp=Z,294nm,0.9s
PINM **Pinnacle** **82.14 28** P **P** **17 23 48.4 -1.2**
baz=249,SNR=66
PINM S **S** **17 33 33.3 +0.2**
baz=249
KURK **Kurchatov** **82.24 322** P **P** **17 23 47.9 -2.2**
KURK IAmb IAmb 17 23 56.5
comp=Z,184nm,0.9s
KURK pP **pP** **17 25 12.2 -1.1**
KURK **Kurchatov** **82.24 322** **PKiKP** **17 29 10.0 +1.2**
KURK **Kurchatov** **82.24 322** P **P** **17 23 47.0 -3.2**
KURK S **S** **17 33 33.6 -0.6**
TOLK **Toolik Lake Re** **82.24 18** P **P** **17 23 48.8 -1.1**
TOLK **Toolik Lake Re** **82.24 18** P **P** **17 23 48.2 -1.7**
baz=239,SNR=229
TOLK S **S** **17 33 31.8 -2.0**
baz=239
M27K **Edge Creek, AK** **82.26 25** P **P** **17 23 47.9 -2.4**
M27K pP **pP** **17 25 12.1 -0.4**
M27K **Edge Creek, AK** **82.26 25** P **P** **17 23 49.0 -1.3**
baz=247,SNR=92
M27K S **S** **17 33 31.9 -2.4**
baz=247
KURBB **Kurchatov Arra** **82.27 322** P **P** **17 23 47.0 -3.4**
comp=Z,20nm,1.1s,baz=107,slow=3.8,SNR=49
KURBB PKiKP **PKiKP** **17 29 10.0 +1.1**
comp=Z,8.1nm,0.7s,baz=117,slow=1.5,SNR=11
KURBB S **S** **17 33 33.6 -1.0**
comp=Z,0.3nm,0.5s,baz=75,slow=14,SNR=3.1
KURBB PKKPbc **PKKPbc** **17 42 14.9 -3.0**
comp=Z,3.4nm,0.7s,baz=292,slow=2.8,SNR=13
KURBB PKPPKP **P'P'df** **17 50 18.3 -4.7**
comp=Z,3.4nm,1.1s,baz=270,slow=2.7,SNR=6.2
comp=Z,20nm,1.1s
BCPM **Bancas Point** **82.38 28** P **P** **17 23 50.0 -0.7**
PNL **Peninsula** **82.39 28** P **P** **17 23 49.7 -1.1**
baz=250,SNR=37
PNL S **S** **17 33 34.9 -0.6**
baz=250
J26L **Joseph Creek** **82.43 23** P **P** **17 23 49.0 -2.0**
J26L IAmb IAmb 17 23 57.7
comp=Z,176nm,0.8s
J26L **Joseph Creek** **82.43 23** P **P** **17 23 50.1 -0.9**
baz=245,SNR=71
J26L S **S** **17 33 36.3 +0.4**
baz=245
C23K **Itkillik River** **82.55 17** P **P** **17 23 50.6 -0.7**
baz=238
L27K **Beaver Creek,** **82.56 25** P **P** **17 23 50.9 -0.7**
L27K IAmb IAmb 17 23 58.8
comp=Z,229nm,0.8s
L27K **Beaver Creek,** **82.56 25** P **P** **17 23 50.3 -1.2**
baz=247,SNR=47
L27K S **S** **17 33 36.5 -0.5**
baz=247
BCAR **Beaver Creek A** **82.58 25** P **P** **17 23 50.2 -1.5**
YUK3 **Moose Creek** **82.66 26** P **P** **17 23 51.8 -0.6**
baz=249,SNR=59
YUK3 S **S** **17 33 39.4 +0.9**
baz=249
BVCY **Beaver Creek** **82.72 26** P **P** **17 23 52.2 -0.2**
baz=248,SNR=57
BVCY S **S** **17 33 40.1 +1.4**
baz=248
D24K **Happy Valley** **82.74 18** P **P** **17 23 51.7 -0.7**
baz=240,SNR=210
D24K S **S** **17 33 39.4 +0.8**
baz=240
YUK8 **Steele Glacier** **82.79 27** P **P** **17 23 51.9 -1.2**
baz=249,SNR=107
K27K **Chicken** **82.83 24** P **P** **17 23 52.3 -0.6**
baz=247
KBK **Karagaybulak** **82.85 314** P **P** **17 23 55.9 +2.2**
SNR=22
I26K **Coal Creek Min** **82.93 23** P **P** **17 23 52.6 -0.8**
baz=246
CHMS **Chumysh** **83.06 314** P **P** **17 23 56.1 +1.5**
SNR=34
UCH **Uchtor** **83.08 313** P **P** **17 23 57.6 +2.3**
SNR=36
AAK **Ala-Archa** **83.18 313** P **P** **17 23 57.6 +2.3**
SNR=23
AAK **Ala-Archa** **83.18 313** PKKPbc PKKPbc 17 42 14.5 -1.1
comp=Z,2.4nm,0.4s,baz=248,slow=5.7,SNR=2.1
AAK **Ala-Archa** **83.18 313** P **P** **17 23 53.6 -1.8**
AAK IAmb IAmb 17 24 03.5
comp=Z,194nm,0.7s
AAK **Ala-Archa** **83.18 313** P **P** **17 23 53.6 -1.8**
AAK pmax pmax
comp=Z,194nm,0.7s
AAK **Ala-Archa** **83.18 313** P **P** **17 23 57.7 +2.3**
AAK **Ala-Archa** **83.18 313** *i* P **P** **17 23 57.0 +1.6**
SNR=95
SGDS **Sogindy** **83.24 314** *eP* **P** **17 23 52.7 -2.8**
SGDS *eS* **S** **17 33 40.7 -4.0**
SGDS pmax pmax
comp=Z,53nm,0.7s
SGDS **Sogindy** **83.24 314** *eP* **P** **17 23 52.8 -2.8**
comp=Z,53nm,0.7s,baz=314
SGDS *eS* **S** **17 33 40.8 -4.0**
baz=314
USP **Ospenovka** **83.30 314** P **P** **17 23 57.3 +1.5**
SNR=58
YUK6 **Outpost Mounta** **83.31 27** P **P** **17 23 54.8 -0.9**
baz=251,SNR=20
YUK6 S **S** **17 33 45.9 +0.8**
baz=251
BMAR **Burnt Mountain** **83.32 20** P **P** **17 23 54.3 -1.1**
YUK4 **Talbot Arm** **83.32 27** P **P** **17 23 55.0 -0.7**
baz=250,SNR=62
SIT **Sitka** **83.60 32** P **P** **17 23 56.7 -0.2**
SIT IAmb IAmb 17 24 04.3
comp=Z,218nm,0.8s
SIT **Sitka** **83.60 32** P **P** **17 23 56.7 -0.2**
SIT pmax pmax
comp=Z,218nm,0.8s
SIT **Sitka** **83.60 32** P **P** **17 23 56.5 -0.4**
baz=254,SNR=19
SIT S **S** **17 33 49.7 +2.2**
baz=254
AML **Almayashu** **83.67 313** P **P** **17 24 00.3 +2.2**
SNR=19
AML **Almayashu** **83.67 313** *i* P **P** **17 24 00.2 +2.2**
SNR=64
HYT **Haines Junctio** **83.67 28** P **P** **17 23 56.1 -1.2**
HYT **Haines Junctio** **83.67 28** P **P** **17 23 57.3 -0.1**
baz=251,SNR=83
HYT S **S** **17 33 48.5 0.0**
baz=251

P30M Million Dollar 83.70 28 P **P** 17 23 56.9 -0.6
baz=252,SNR=88
P30M S **S** 17 33 49.8 +1.2
baz=252
PLBC Pleasant Camp 83.78 29 P **P** 17 23 57.4 -0.4
baz=252,SNR=52
PLBC S **S** 17 33 49.0 -0.3
baz=252
DAWY Dawson 83.94 24 P **P** 17 23 57.8 -0.8
DAWY IAmb IAmb 17 24 05.5
comp=Z,190nm,0.8s
DAWY Dawson 83.94 24 P **P** 17 23 58.0 -0.6
baz=249,SNR=54
DAWY S **S** 17 33 51.0 +0.1
baz=249
BTLS Baital 83.96 316 *e*P **P** 17 23 57.2 -1.8
BTLS pmax pmax
comp=Z,106nm,0.9s
BTLS Baital 83.96 316 *e*P **P** 17 23 57.2 -1.8
comp=Z,106nm,0.9s,baz=316
N30M Aishikik Lake 84.06 27 P **P** 17 23 58.7 -0.6
baz=252,SNR=78
N30M S **S** 17 33 52.0 -0.2
baz=252
DIB Dawson Inlet, 84.18 36 P **P** 17 23 59.7 -0.1
DIB IAmb IAmb 17 24 06.9
comp=Z,107nm,0.9s
H02S1 DAWSON INLET T 84.18 36 P **P** 17 24 03.6 +3.7
SNR=371
BESE Bessie Mountai 84.27 30 P **P** 17 24 00.3 -0.1
BESE IAmb IAmb 17 24 07.9
comp=Z,255nm,1.0s
SKAG Skagway 84.29 29 P **P** 17 24 00.6 +0.3
SKAG IAmb IAmb 17 24 10.1
comp=Z,147nm,1.0s
SKAG Skagway 84.29 29 P **P** 17 23 59.0 -1.3
baz=253,SNR=45
SKAG S **S** 17 33 53.9 -0.3
baz=253
O30N Mendenhall 84.31 28 P **P** 17 23 59.7 -0.8
baz=253,SNR=122
O30N S **S** 17 33 54.4 -0.2
baz=253
CRAG Craig 84.36 34 P **P** 17 24 00.8 0.0
CRAG IAmb IAmb 17 24 08.3
comp=Z,157nm,0.9s
CRAG Craig 84.36 34 P **P** 17 23 59.6 -1.1
baz=256
CRAG S **S** 17 33 54.7 -0.4
baz=256
JIS Juneau Island 84.43 31 P **P** 17 23 59.0 -2.0
JIS IAmb IAmb 17 24 08.4
comp=Z,142nm,0.9s
M30M Minto, Yukon 84.55 26 P **P** 17 24 00.9 -0.7
M30M IAmb IAmb 17 24 08.9
comp=Z,240nm,0.9s
M30M Minto, Yukon 84.55 26 P **P** 17 24 01.1 -0.6
baz=252,SNR=81
M30M S **S** 17 33 56.0 -0.9
baz=252
J29M Klondike Camp 84.56 24 P **P** 17 24 01.8 +0.1
baz=250,SNR=7.8
J29M S **S** 17 33 54.8 -2.1
baz=250
N31M Braeburn, Yuko 84.67 27 P **P** 17 24 01.2 -1.0
N31M IAmb IAmb 17 24 09.3
comp=Z,297nm,0.9s
N31M Braeburn, Yuko 84.67 27 P **P** 17 24 00.8 -1.5
baz=253,SNR=160
N31M S **S** 17 33 56.2 -1.9
baz=253
HG4B Hotspring 84.73 37 P **P** 17 24 02.3 -0.3
I29M Ogilvie Camp, 84.83 23 P **P** 17 24 01.2 -1.8
I29M Ogilvie Camp, 84.83 23 P **P** 17 24 01.3 -1.6
baz=250,SNR=65
I29M S **S** 17 33 56.5 -2.9
baz=250
WHY Whitehorse 84.85 28 P **P** 17 24 02.4 -0.8
WHY IAmb IAmb 17 24 11.1
comp=Z,188nm,0.9s
WHY Whitehorse 84.85 28 P **P** 17 24 02.0 -1.2
baz=254,SNR=78
WHY S **S** 17 33 59.8 -0.2
baz=254
WRAK Wrangell Islan 85.02 33 P **P** 17 24 03.3 -0.7
WRAK Wrangell Islan 85.02 33 P **P** 17 24 02.9 -1.0
baz=256,SNR=70
WRAK S **S** 17 33 59.9 -1.6
baz=256
P32M Atlin 85.11 29 P **P** 17 24 03.4 -1.1
baz=255,SNR=75
P32M S **S** 17 34 03.1 +0.6
baz=255
BTK Batken 85.47 310 P **P** 17 24 04.8 -1.9
BTK IAmb IAmb 17 24 13.7
comp=Z,221nm,0.9s
BTK Batken 85.47 310 P **P** 17 24 04.8 -1.9
BTK pmax pmax
comp=Z,221nm,1.0s
M31M Drury Creek, Y 85.51 27 P **P** 17 24 04.7 -1.7
M31M IAmb IAmb 17 24 13.2
comp=Z,270nm,0.9s
M31M Drury Creek, Y 85.51 27 P **P** 17 24 05.4 -0.9
baz=254,SNR=55
M31M S **S** 17 34 04.2 -2.0
baz=254
DZA Taraz 85.52 313 *e*P **P** 17 24 05.3 -1.5
DZA Taraz 85.52 313 *e*P **P** 17 24 05.4 -1.5
baz=313
OTUK Ortayu 85.70 319 P **P** 17 24 07.3 -0.3
GAR Garm 85.71 309 P **P** 17 24 06.7 -1.3
P33M Teslin, Yukon 85.71 29 P **P** 17 24 06.4 -1.1
P33M IAmb IAmb 17 24 14.4
comp=Z,181nm,1.0s
P33M Teslin, Yukon 85.71 29 P **P** 17 24 06.6 -0.8
baz=256,SNR=71
P33M S **S** 17 34 07.2 -1.2
baz=256
RUBB Prince Rupert 85.71 35 P **P** 17 24 07.1 -0.3
EPYK Eagle Plains 85.78 23 P **P** 17 24 06.0 -1.7
EPYK Eagle Plains 85.78 23 P **P** 17 24 06.9 -0.7
baz=252,SNR=85
GRNB Grenville Isla 85.79 36 P **P** 17 24 06.8 -1.1
BRZS Berezniki 85.79 321 *ce*P **P** 17 24 07.0 -1.0
BRZS *e*S **SKSac** 17 33 57.1 -0.9
BRZS Berezniki 85.79 321⇑ *e*P **P** 17 24 07.0 -1.0
baz=320
BRZS *e*S **SKSac** 17 33 57.1 -0.9
baz=320
N32M Quiet Lake 85.83 28 P **P** 17 24 06.7 -1.2
baz=255,SNR=25
N32M S **S** 17 34 10.9 +1.5
baz=255
KK31 Karatay Array 86.14 313 P **P** 17 24 07.9 -2.0
KK31 IAmb IAmb 17 24 17.7
comp=Z,68nm,0.8s
KK31 Karatay Array 86.14 313 P **P** 17 24 07.9 -2.0
KK31 pmax pmax
comp=Z,68nm,0.8s
KKAR Karatay Array 86.14 313 P **P** 17 24 06.9 -3.0
KKAR Karatay Array 86.14 313 P **P** 17 24 08.3 -1.6
KKAR IAmb IAmb 17 24 17.6
comp=Z,68nm,0.8s
KKAR Karatay Array 86.14 313 P **P** 17 24 08.3 -1.6
KKAR pmax pmax
comp=Z,68nm,0.8s
KBL Kabul 86.15 305 P **P** 17 24 08.9 -1.4
KBL Kabul 86.15 305 P **P** 17 24 08.9 -1.4
KBL pmax pmax
comp=Z,34nm,0.7s
KBL Kabul 86.15 305 P **P** 17 24 10.6 +0.3
SNR=22
T35M Bob Quinn 86.27 32 P **P** 17 24 09.0 -1.2
baz=258,SNR=93
T35M S **S** 17 34 16.6 +2.8
baz=258
HOLB Holberg 86.28 39 P **P** 17 24 09.8 -0.6
IUG luzhnay 86.36 312 *e*P **P** 17 24 09.8 -1.2
IUG *e*S **SKSac** 17 34 00.3 -1.7
IUG luzhnay 86.36 312 *e*P **P** 17 24 09.8 -1.2
baz=312
IUG *e*S **SKSac** 17 34 00.4 -1.7
baz=312
MAW Mawson 86.45 203 P **P** 17 24 07.8 -2.9
comp=Z,13nm,0.7s,baz=76,slow=5.5,SNR=14
MAW PKKPbc **PKKPbc** 17 42 08.1 -0.5
comp=Z,3.0nm,0.5s,baz=287,slow=11,SNR=11
comp=Z,13nm,0.7s
MAW Mawson 86.45 203 P **P** 17 24 10.0 -0.7
baz=86,SNR=13
MAW Mawson 86.45 203 P **P** 17 24 08.9 -1.8
QSPA South Pole Qui 86.45 180 P **P** 17 24 08.3 -2.7
CHGR Chuyangaron 86.56 309 P **P** 17 24 11.9 -0.1
CHGR Chuyangaron 86.56 309 P **P** 17 24 11.9 -0.1
BBB Bella Bella 86.56 37 P **P** 17 24 09.2 -2.3
comp=Z,50nm,1.3s,baz=269,slow=4.8,SNR=2.3
comp=Z,50nm,1.3s
BBB Bella Bella 86.56 37 P **P** 17 24 11.0 -0.6
BBB IAmb IAmb 17 24 18.3
comp=Z,179nm,1.0s
BRLS Boroldav 86.62 313 *e*P **P** 17 24 08.5 -3.6
BRLS *e*S **SKSac** 17 34 01.2 -2.2
BRLS Boroldav 86.62 313 *e*P **P** 17 24 08.5 -3.6
baz=313
BRLS *e*S **SKSac** 17 34 01.2 -2.2
baz=313
DLBC Dease Lake 86.69 31 P **P** 17 24 11.3 -0.8
comp=Z,22nm,0.9s,baz=267,slow=3.8,SNR=17
DLBC PKKPbc **PKKPbc** 17 42 06.8 -1.2
comp=Z,4.9nm,0.9s,baz=48,slow=1.2,SNR=5.8
comp=Z,22nm,0.9s
DLBC Dease Lake 86.69 31 P **P** 17 24 11.9 -0.2
DLBC Dease Lake 86.69 31 P **P** 17 24 11.5 -0.7
baz=258,SNR=98
DLBC S **S** 17 34 18.1 +0.4
baz=258
MMPY Sheldon Lake, 87.02 27 P **P** 17 24 12.7 -0.9
baz=257,SNR=59
MMPY S **S** 17 34 20.8 +0.1
baz=257
TLCB Telegraph Cove 87.08 39 P **P** 17 24 15.0 +0.9
TLCB IAmb IAmb 17 24 21.4
comp=Z,100nm,0.8s
TLCB pP **pP** 17 25 34.5 -3.6
INK Inuvik 87.54 21 P **P** 17 24 13.9 -1.9
comp=Z,21nm,1.0s,baz=258,slow=6.4,SNR=15
INK PKiKP **PKiKP** 17 29 18.3 +1.4
comp=Z,14nm,0.8s,baz=161,slow=1.7,SNR=5.1
INK PKKPbc **PKKPbc** 17 42 02.8 -3.4
comp=Z,9.7nm,0.5s,baz=39,slow=2.9,SNR=6.3
comp=Z,21nm,1.0s
INK Inuvik 87.54 21 P **P** 17 24 13.9 -1.9
INK IAmb IAmb 17 24 22.2
comp=Z,256nm,0.9s
INK pP **pP** 17 25 37.6 -2.0
INK Inuvik 87.54 21 P **P** 17 24 14.9 -1.0
baz=254
INK S **S** 17 34 23.6 -1.5
baz=254
KMPM Mount Pierce 87.61 49 P **P** 17 24 17.2 +0.3
KMPM IAmb IAmb 17 24 24.2
comp=Z,194nm,0.8s
OZB Mount Ozzard 87.71 41 P **P** 17 24 16.9 -0.2
OZB IAmb IAmb 17 24 24.3
comp=Z,159nm,0.9s
JCC Jacoby Creek, 87.72 49 P **P** 17 24 16.8 -0.5
JCC IAmb IAmb 17 24 25.4
comp=Z,127nm,1.1s
KEBM Edson Butte 87.73 47 P **P** 17 24 16.5 -0.9
KEBM IAmb IAmb 17 24 24.6
comp=Z,129nm,0.9s
KBO Bosley Butte 87.73 48 P **P** 17 24 16.8 -0.7
KBO IAmb IAmb 17 24 25.0
comp=Z,228nm,0.9s
KRPM Rodgers 87.76 49 P **P** 17 24 16.2 -1.4
KRPM IAmb IAmb 17 24 25.9
comp=Z,165nm,1.1s
BRVK Borovoye 87.78 323 P **P** 17 24 14.6 -2.7
BRVK IAmb IAmb 17 24 23.3
comp=Z,238nm,0.8s
BRVK pP **pP** 17 25 37.8 -3.9
BRVK Borovoye 87.78 323 *i* P **P** 17 24 13.8 -3.5
BRVK pmax pmax
comp=Z,258nm,0.9s
KMRM Mail Ridge 87.89 50 P **P** 17 24 17.6 -0.7
KMRM IAmb IAmb 17 24 27.0
comp=Z,111nm,0.8s
KCPM Cahto Peak 87.93 50 P **P** 17 24 18.5 -0.1
CBB Campbell River 87.94 40 P **P** 17 24 17.8 -0.4
CBB IAmb IAmb 17 24 25.3
comp=Z,94nm,0.7s
KSXB Camp Six Broad 87.95 48 P **P** 17 24 19.2 +0.7
KSXB IAmb IAmb 17 24 25.8
comp=Z,101nm,0.9s
KHMM Horse Mountain 87.95 49 P **P** 17 24 19.1 +0.5
KHMM IAmb IAmb 17 24 27.4
comp=Z,274nm,1.2s
J01E Myrtle Point 88.06 47 P **P** 17 24 17.8 -1.1
J01E Myrtle Point 88.06 47 P **P** 17 24 18.1 -0.8
baz=264,SNR=25
J01E S **S** 17 34 30.5 -0.6
baz=264
TGTN Hyland Airport 88.17 28 P **P** 17 24 19.0 -0.1
baz=259,SNR=17
TGTN S **S** 17 34 31.4 -0.2
baz=259
K02D Willamette Mer 88.20 47 P **P** 17 24 19.2 -0.5
baz=264,SNR=68
K02D S **S** 17 34 35.1 +2.5
baz=264
L02F Cave Junction 88.21 48 P **P** 17 24 19.0 -0.6
baz=264,SNR=22
L02F S **S** 17 34 34.4 +1.8
baz=264
I02E Swisshome, OR 88.23 46 P **P** 17 24 21.0 +1.3
I02E IAmb IAmb 17 24 26.4
comp=Z,165nm,1.1s
I02E Swisshome, OR 88.23 46 P **P** 17 24 19.1 -0.5
baz=264
I02E S **S** 17 34 34.9 +2.2
baz=264
HOPS Hopland Field 88.25 51 P **P** 17 24 20.3 +0.4
HOPS IAmb IAmb 17 24 27.3
comp=Z,167nm,1.2s
HEBO Mount Hebo 88.42 45 **P** 17 24 18.6 -2.0
HEBO IAmb IAmb 17 24 27.7
comp=Z,140nm,0.9s
GDXM Geysers 88.45 51 P **P** 17 24 20.4 -0.6
GDXM IAmb IAmb 17 24 28.4
comp=Z,72nm,0.9s
I03D Drain, OR 88.54 46 P **P** 17 24 20.7 -0.4
baz=264,SNR=51
I03D S **S** 17 34 37.9 +2.3
baz=264
DBO Dodson Butte 88.56 47 P **P** 17 24 20.8 -0.5
DBO IAmb IAmb 17 24 28.4
comp=Z,98nm,1.0s
NLWA Neilton Lookou 88.59 43 P **P** 17 24 21.4 0.0
NLWA IAmb IAmb 17 24 28.4
comp=Z,184nm,0.9s
WISH Wishkah 88.62 43 P **P** 17 24 22.2 +0.8
WISH IAmb IAmb 17 24 28.8
comp=Z,221nm,0.8s
COR Corvallis 88.67 45 P **P** 17 24 21.5 -0.2
COR IAmb IAmb 17 24 28.4
comp=Z,82nm,0.9s
COR Corvallis 88.67 45 P **P** 17 24 21.5 -0.2
COR pmax pmax
comp=Z,83nm,1.0s
E03A Lebam 88.70 43 P **P** 17 24 21.8 0.0
HUMO Hull Mountain 88.71 47 P **P** 17 24 22.0 0.0
G03D McMinnville, O 88.76 45 P **P** 17 24 22.5 +0.4
G03D IAmb IAmb 17 24 29.1
comp=Z,152nm,0.9s
G03D McMinnville, O 88.76 45 P **P** 17 24 20.7 -1.4
baz=264,SNR=16
G03D S **S** 17 34 38.5 +1.0
baz=264
YBH Yreka Blue Hor 88.81 48 P **P** 17 24 22.3 -0.2
comp=Z,22nm,1.2s,baz=200,slow=4.3,SNR=14
comp=Z,22nm,1.2s
YBH Yreka Blue Hor 88.81 48 P **P** 17 24 22.3 -0.2
YBH IAmb IAmb 17 24 29.8
comp=Z,208nm,0.9s
BUCK Buck Mountain 88.85 46 P **P** 17 24 22.6 -0.1
BUCK IAmb IAmb 17 24 31.2
comp=Z,210nm,1.1s
B04A Port Angeles 88.91 42 P **P** 17 24 22.9 +0.1
B04A IAmb IAmb 17 24 29.9
comp=Z,166nm,0.8s
PGC Sidney 89.01 41 P **P** 17 24 22.9 -0.3
PGC IAmb IAmb 17 24 29.9
comp=Z,128nm,0.9s
F04D Rainier, OR 89.03 44 P **P** 17 24 22.3 -1.1
baz=264
F04D S **S** 17 34 41.7 +1.7
baz=264
H04D Lebanon 89.06 45 P **P** 17 24 23.5 -0.1
H04D IAmb IAmb 17 24 31.9
comp=Z,290nm,1.4s
H04D Lebanon 89.06 45 P **P** 17 24 22.4 -1.1
baz=264,SNR=16
H04D S **S** 17 34 41.1 +0.7
baz=264
L04D Klamath Falls 89.15 48 P **P** 17 24 23.2 -1.0
L04D Klamath Falls 89.15 48 P **P** 17 24 23.0 -1.3
baz=265,SNR=93
L04D S **S** 17 34 41.9 +0.3
baz=265
I04A Tendick Farm, 89.23 46 P **P** 17 24 23.5 -0.9
baz=265,SNR=68
I04A S **S** 17 34 41.5 -0.6
baz=265
J04D Umpqua Nationa 89.39 47 P **P** 17 24 24.6 -0.8
J04D Umpqua Nationa 89.39 47 P **P** 17 24 24.5 -0.8
baz=265,SNR=90
J04D S **S** 17 34 43.4 -0.5
baz=265
F04A Amboy 89.43 44 P **P** 17 24 24.7 -0.5
F04A IAmb IAmb 17 24 32.3
comp=Z,163nm,0.9s
H04A Detroit Lake 89.47 45 P **P** 17 24 24.2 -1.3
ORV Oroville 89.52 51 P **P** 17 24 25.2 -0.6
ORV Oroville 89.52 51 P **P** 17 24 25.2 -0.6
ORV pmax pmax
comp=Z,81nm,1.1s
K04D Chiloquin, OR 89.60 47 P **P** 17 24 25.6 -0.7
baz=265,SNR=25
K04D S **S** 17 34 45.2 -0.5
baz=265
BBGB Big Mountain B 89.64 54 P **P** 17 24 26.3 -0.2
BBGB IAmb IAmb 17 24 40.8
comp=Z,104nm,0.9s
PMPB Monarch Peak 89.80 54 P **P** 17 24 26.9 -0.3
PMPB IAmb IAmb 17 24 36.1
comp=Z,139nm,1.3s
D05A Enumclaw 89.84 43 P **P** 17 24 26.6 -0.5
D05A IAmb IAmb 17 24 35.0
comp=Z,160nm,0.9s
J05D Fort Rock, OR 90.03 47 P **P** 17 24 27.0 -1.3
baz=265,SNR=285
J05D S **S** 17 34 48.4 -1.3
baz=265
I05D Terrebonne, OR 90.05 46 P **P** 17 24 27.4 -0.8
baz=265,SNR=19
I05D S **S** 17 34 48.0 -1.5
baz=265
G05D Wamic, OR 90.14 45 P **P** 17 24 28.3 -0.3
baz=265,SNR=16
G05D S **S** 17 34 49.6 -0.6
baz=265
PAGB Antelope Grade 90.21 54 P **P** 17 24 28.4 -0.7
LLLB Lillooet 90.22 39 P **P** 17 24 28.0 -0.9
LLLB IAmb IAmb 17 24 35.7
comp=Z,78nm,0.7s
K05A Summer Lake 90.24 47 P **P** 17 24 28.8 -0.5
CMB Columbia Colle 90.27 52 P **P** 17 24 28.8 -0.6
CMB IAmb IAmb 17 24 36.7
comp=Z,103nm,1.1s
CMB Columbia Colle 90.27 52 P **P** 17 24 28.8 -0.6
CMB pmax pmax
comp=Z,103nm,1.2s
PINE Pine Mountain 90.29 46 P **P** 17 24 28.4 -1.1
PINE IAmb IAmb 17 24 36.6
comp=Z,208nm,0.9s
BEKR Beckworth 90.42 50 P **P** 17 24 29.4 -0.9
BEKR IAmb IAmb 17 24 36.4
comp=Z,95nm,0.9s
PKM Mcpherson Peak 90.51 55 P **P** 17 24 29.5 -1.3
baz=266,SNR=16
PKM S **S** 17 34 55.3 +0.9
baz=266
SBC Santa Barbara 90.56 56 P **P** 17 24 29.5 -1.3
baz=266
SCZ2 Santa Cruz Isl 90.60 56 P **P** 17 24 29.5 -1.4
baz=266,SNR=12
MOD Modoc Plateau 90.61 48 P **P** 17 24 30.4 -0.7
MOD IAmb IAmb 17 24 37.9
comp=Z,248nm,0.9s
MPK Martis Peak 90.64 51 P **P** 17 24 30.4 -1.0
MPK IAmb IAmb 17 24 38.2
comp=Z,267nm,1.1s
SNCC San Nicolas Is 90.64 57 P **P** 17 24 30.2 -1.0
baz=266,SNR=8.1
BCW Bitter Crk WRg 90.84 55 P **P** 17 24 32.0 -0.1
BCW IAmb IAmb 17 24 39.9
comp=Z,199nm,0.8s
VOG Valley Oaks Go 90.95 54 P **P** 17 24 31.5 -1.0
baz=266,SNR=6.5
PNTR Pine Nut 90.96 51 P **P** 17 24 32.5 -0.2
PNTR IAmb IAmb 17 24 39.9
comp=Z,149nm,0.9s
A36M Sachs Harbour 91.06 18 P **P** 17 24 31.1 -1.1
A36M IAmb IAmb 17 24 38.7
comp=Z,185nm,0.7s
A36M Sachs Harbour 91.06 18 P **P** 17 24 31.0 -1.1
baz=262,SNR=52
A36M S **S** 17 34 57.6 +0.3
baz=262
C36M Paulatuk 91.11 21 P **P** 17 24 30.6 -1.8
C36M IAmb IAmb 17 24 38.4
comp=Z,181nm,0.8s
C36M Paulatuk 91.11 21 P **P** 17 24 31.1 -1.3
baz=263,SNR=42
C36M S **S** 17 34 57.9 0.0
baz=263
PAHR Pah Rah Range 91.16 50 P **P** 17 24 33.1 -0.5
PAHR IAmb IAmb 17 24 40.0
comp=Z,90nm,1.0s
VES Vestal, Richgr 91.16 54 P **P** 17 24 32.1 -1.4
baz=267,SNR=9.0
YERR Yerington 91.23 51 P **P** 17 24 33.2 -0.8
YERR IAmb IAmb 17 24 40.4
comp=Z,96nm,1.0s
E07A Sunnyside 91.25 44 P **P** 17 24 33.2 -0.5
E07A IAmb IAmb 17 24 40.5
comp=Z,141nm,1.0s
ARVC Arvin 91.33 55 P **P** 17 24 33.0 -1.3
baz=267,SNR=6.8
OMMB Old Mammoth Mi 91.34 53 P **P** 17 24 34.2 -0.5
OMMB IAmb IAmb 17 24 41.6
comp=Z,99nm,1.1s
I07A Izee 91.34 46 P **P** 17 24 32.9 -1.4
I07A IAmb IAmb 17 24 40.7
comp=Z,91nm,0.9s
OSI Osito Audit: C 91.39 56 P **P** 17 24 33.8 -0.8
baz=267
SCI2 San Clemente I 91.44 57 P **P** 17 24 34.4 -0.4
baz=267
HAWA Hanford 91.46 44 P **P** 17 24 34.3 -0.4
HAWA IAmb IAmb 17 24 41.4
comp=Z,138nm,0.9s
CIS Catalina Islan 91.58 57 P **P** 17 24 35.3 -0.2
baz=267
PNT Penticton 91.58 41 P **P** 17 24 32.6 -2.6
PNT pmax pmax
comp=Z,149nm,0.9s
ISA Isabella, Lake 91.65 55 P **P** 17 24 35.1 -0.8
ISA IAmb IAmb 17 24 42.5
comp=Z,92nm,1.0s
ISA Isabella, Lake 91.65 55 P **P** 17 24 35.1 -0.8
ISA pmax pmax
comp=Z,92nm,1.0s
ISA Isabella, Lake 91.65 55 P **P** 17 24 35.4 -0.5
baz=267,SNR=26
DECC Green Verdugo 91.69 56 P **P** 17 24 35.9 -0.1
baz=267,SNR=9.3
FMP Fort Macarthur 91.69 57 P **P** 17 24 35.7 -0.3
baz=267
B08A Colville Reser 91.72 42 P **P** 17 24 34.2 -1.6
B08A IAmb IAmb 17 24 42.2
comp=Z,65nm,0.9s
HRA Herat 91.73 304 P **P** 17 24 35.6 -0.8
LHV Little Huntoon 91.76 52 P **P** 17 24 35.9 -0.3
LHV IAmb IAmb 17 24 45.3
comp=Z,183nm,1.0s
RYN Ryan 91.77 52 P **P** 17 24 36.3 -0.2
RYN IAmb IAmb 17 24 43.4

	comp=Z,111nm,1.0s									
E08A	**Dider Farm, El**	**91.80**	**44**	P	**P**	**17 24 35.8**	**-0.3**			
E08A				IAmb	IAmb	17 24 43.0				
	comp=Z,152nm,1.0s									
G08A	**Pilot Rock**	**91.80**	**45**	P	**P**	**17 24 35.7**	**-0.7**			
G08A				IAmb	IAmb	17 24 43.1				
	comp=Z,68nm,1.0s									
WVOR	**Wild Horse Val**	**91.88**	**48**	P	**P**	**17 24 36.1**	**-0.7**			
WVOR				IAmb	IAmb	17 24 43.7				
	comp=Z,94nm,0.9s									
WVOR	**Wild Horse Val**	**91.88**	**48**	P	**P**	**17 24 36.1**	**-0.7**			
WVOR				pmax	pmax					
	comp=Z,94nm,0.9s									
TIN	**Tinemaha, Big**	**91.92**	**53**	P	**P**	**17 24 37.0**	**-0.2**			
	baz=267,SNR=23									
D08A	**Wollman Farm,**	**91.92**	**43**	P	**P**	**17 24 36.2**	**-0.5**			
D08A				IAmb	IAmb	17 24 43.4				
	comp=Z,82nm,0.9s									
NVAR	**Mina Array Bea**	**91.93**	**52**	P	**P**	**17 24 35.2**	**-2.1**			
	comp=Z,21nm,1.2s,baz=255,slow=5.9,SNR=34									
NVAR				PKiKP	**PKiKP**	**17 29 29.3**	**+3.8**			
	comp=Z,4.1nm,0.9s,baz=262,slow=3.3,SNR=2.8									
NVAR				PKKPbc	**PKKPdf**	**17 41 50.7**	**-0.3**			
	comp=Z,1.2nm,0.6s,baz=104,slow=3.8,SNR=4.7									
	comp=Z,21nm,1.2s									
NVAR	**Mina Array Bea**	**91.93**	**52**	P	**P**	**17 24 35.9**	**-1.4**			
EDW2	**Edwards Air Fo**	**92.00**	**55**	P	**P**	**17 24 37.1**	**-0.4**			
	baz=267,SNR=71									
CWC	**Cottonwood Cre**	**92.01**	**54**	P	**P**	**17 24 37.3**	**-0.4**			
	baz=267									
CWC				S	**S**	**17 35 06.5**	**-1.1**			
	baz=267									
NV11	**Mina Array Sit**	**92.05**	**52**	P	**P**	**17 24 36.9**	**-0.9**			
NV11				IAmb	IAmb	17 24 44.7				
	comp=Z,124nm,0.9s									
J08A	**Circle Bar Ran**	**92.05**	**47**	P	**P**	**17 24 36.9**	**-0.7**			
J08A				IAmb	IAmb	17 24 44.3				
	comp=Z,120nm,0.9s									
KVN	**Kaiserville**	**92.12**	**51**	P	**P**	**17 24 37.2**	**-0.9**			
KVN				IAmb	IAmb	17 24 44.4				
	comp=Z,70nm,0.9s									
KVN	**Kaiserville**	**92.12**	**51**	P	**P**	**17 24 37.2**	**-0.9**			
KVN				pmax	pmax					
	comp=Z,70nm,0.9s									
BFSC	**Mount Baldy Ra**	**92.25**	**56**	P	**P**	**17 24 38.6**	**-0.1**			
	baz=267,SNR=20									
LRMC	**Laurel Mtn Rad**	**92.29**	**55**	P	**P**	**17 24 39.0**	**+0.1**			
	baz=267,SNR=99									
LRMC				S	**S**	**17 35 10.6**	**+0.5**			
	baz=267									
LCH	**Last Change Ra**	**92.39**	**53**	P	**P**	**17 24 38.5**	**-0.9**			
C09A	**Chrisman Ranch**	**92.40**	**42**	P	**P**	**17 24 37.6**	**-1.3**			
C09A				IAmb	IAmb	17 24 45.4				
	comp=Z,84nm,0.9s									
ELS	**Elsinore Mount**	**92.41**	**57**	P	**P**	**17 24 38.9**	**-0.5**			
ELS				IAmb	IAmb	17 24 46.4				
	comp=Z,69nm,0.9s									
E09A	**Wood Farm, Sta**	**92.43**	**44**	P	**P**	**17 24 38.3**	**-0.8**			
E09A				IAmb	IAmb	17 24 45.8				
	comp=Z,168nm,0.9s									
MPMC	**Manual Prospec**	**92.47**	**54**	P	**P**	**17 24 39.7**	**-0.1**			
	baz=268,SNR=211									
MPMC				S	**S**	**17 35 10.6**	**-1.2**			
	baz=268									
MURC	**Murrieta**	**92.60**	**57**	P	**P**	**17 24 40.1**	**-0.2**			
	baz=268,SNR=20									
GRAC	**Grapevine Rang**	**92.61**	**53**	P	**P**	**17 24 39.2**	**-1.0**			
GRAC				IAmb	IAmb	17 24 47.2				
	comp=Z,116nm,0.9s									
GRAC	**Grapevine Rang**	**92.61**	**53**	P	**P**	**17 24 39.9**	**-0.3**			
	baz=268,SNR=74									
109C	**Camp Elliot, M**	**92.65**	**57**	P	**P**	**17 24 39.8**	**-0.6**			
109C	**Camp Elliot, M**	**92.65**	**57**	P	**P**	**17 24 40.1**	**-0.3**			
	baz=268,SNR=17									
TPH	**Tonopah**	**92.77**	**52**	P	**P**	**17 24 40.2**	**-0.9**			
TPH	**Tonopah**	**92.77**	**52**	P	**P**	**17 24 40.2**	**-0.9**			
RRX	**Edison Barstow**	**92.82**	**55**	P	**P**	**17 24 40.5**	**-0.7**			
	baz=268,SNR=5.7									
BMN	**Battle Mountai**	**92.86**	**50**	P	**P**	**17 24 41.0**	**-0.4**			
BMN				IAmb	IAmb	17 24 49.1				
	comp=Z,96nm,0.9s									
BMN	**Battle Mountai**	**92.86**	**50**	P	**P**	**17 24 41.0**	**-0.4**			
BMN				pmax	pmax					
	comp=Z,96nm,0.9s									
BBRC	**Big Bear Solar**	**92.86**	**56**	P	**P**	**17 24 41.9**	**+0.3**			
	baz=268,SNR=9.8									
BMO	**Blue Mountains**	**92.95**	**45**	P	**P**	**17 24 40.3**	**-1.4**			
BMO				IAmb	IAmb	17 24 47.6				
	comp=Z,79nm,1.0s									
BMO	**Blue Mountains**	**92.95**	**45**	P	**P**	**17 24 40.3**	**-1.4**			
BMO				pmax	pmax					
	comp=Z,79nm,1.0s									
QSM	**Queen of Sheba**	**92.97**	**54**	P	**P**	**17 24 41.1**	**-0.7**			
FURC	**Furnace Creek,**	**92.99**	**54**	P	**P**	**17 24 41.7**	**-0.1**			
	baz=268,SNR=198									
GSC	**Goldstone, Bar**	**92.99**	**55**	P	**P**	**17 24 41.0**	**-1.1**			
GSC				IAmb	IAmb	17 24 49.0				
	comp=Z,100nm,0.9s									
GSC	**Goldstone, Bar**	**92.99**	**55**	P	**P**	**17 24 41.0**	**-1.1**			
GSC				pmax	pmax					
	comp=Z,100nm,0.9s									
GSC	**Goldstone, Bar**	**92.99**	**55**	P	**P**	**17 24 41.8**	**-0.3**			
	baz=268,SNR=74									
GSC				S	**S**	**17 35 12.6**	**-3.6**			
	baz=268									
BAR	**Barrett**	**93.00**	**58**	P	**P**	**17 24 42.0**	**-0.1**			
BAR				IAmb	IAmb	17 24 49.5				
	comp=Z,109nm,0.8s									
F10A	**Beach Ranch, E**	**93.04**	**44**	P	**P**	**17 24 40.6**	**-1.5**			
F10A				IAmb	IAmb	17 24 48.4				
	comp=Z,107nm,0.9s									
GWY	**Greenwater Val**	**93.14**	**54**	P	**P**	**17 24 41.9**	**-0.9**			
GWY				IAmb	IAmb	17 24 49.5				
	comp=Z,83nm,0.8s									
NEW	**Newport**	**93.19**	**42**	P	**P**	**17 24 41.8**	**-0.8**			
	comp=Z,25nm,1.0s,baz=269,slow=4.2,SNR=13									
	comp=Z,25nm,1.0s									
NEW	**Newport**	**93.19**	**42**	P	**P**	**17 24 41.6**	**-1.0**			
NEW				IAmb	IAmb	17 24 49.1				
	comp=Z,127nm,1.1s									
NEW	**Newport**	**93.19**	**42**	P	**P**	**17 24 41.6**	**-1.0**			
NEW				pmax	pmax					
	comp=Z,127nm,1.1s									
NEW	**Newport**	**93.19**	**42**	P	**P**	**17 24 42.8**	**+0.2**			
	baz=268,SNR=63									
NEW				S	**S**	**17 35 15.8**	**-1.4**			
	baz=268									
PFO	**Pinyon Flats O**	**93.22**	**57**	P	**P**	**17 24 42.7**	**-0.5**			
PFO	**Pinyon Flats O**	**93.22**	**57**	P	**P**	**17 24 42.3**	**-0.9**			
PFO	**Pinyon Flats O**	**93.22**	**57**	*i* P	**P**	**17 24 43.1**	**-0.1**			
PFO	**Pinyon Flats O**	**93.22**	**57**	P	**P**	**17 24 43.1**	**-0.1**			
	baz=268,SNR=44									
PFO				S	**S**	**17 35 14.8**	**-3.5**			
	baz=268									
TPFO	**Pinon Flats**	**93.22**	**57**	P	**P**	**17 24 43.1**	**-0.1**			
	baz=268,SNR=45									
TPFO				S	**S**	**17 35 14.4**	**-3.9**			
	baz=268									
MONP2	**Monument Peak**	**93.22**	**57**	P	**P**	**17 24 42.9**	**-0.4**			
	baz=268,SNR=92									
HEC	**Hector,Ludlow**	**93.36**	**55**	P	**P**	**17 24 43.4**	**-0.3**			
	baz=268,SNR=18									
HEC				S	**S**	**17 35 15.1**	**-4.3**			
	baz=268									
SHOC	**Shoshone, Teco**	**93.45**	**54**	P	**P**	**17 24 44.6**	**+0.6**			
	baz=268,SNR=6.0									
IKP	**In-Ko-Pah, Jac**	**93.48**	**58**	P	**P**	**17 24 43.6**	**-0.7**			
	baz=268,SNR=21									
TPNV	**Topopah Spring**	**93.50**	**53**	P	**P**	**17 24 43.6**	**-0.9**			
TPNV				IAmb	IAmb	17 24 51.8				
	comp=Z,105nm,0.9s									
TPNV	**Topopah Spring**	**93.50**	**53**	P	**P**	**17 24 43.6**	**-0.9**			
TPNV				pmax	pmax					
	comp=Z,105nm,1.0s									
TPNV	**Topopah Spring**	**93.50**	**53**	P	**P**	**17 24 44.1**	**-0.4**			
	baz=268,SNR=204									
TPNV				S	**S**	**17 35 21.2**	**+0.5**			
	baz=268									
RMX	**La Rumorosa**	**93.50**	**58**	P	**P**	**17 24 43.9**	**-0.6**			
RMX				IAmb	IAmb	17 24 52.4				
	comp=Z,142nm,1.0s									
BELC	**Belle Mtn. Jos**	**93.61**	**56**	P	**P**	**17 24 45.3**	**+0.2**			
	baz=268,SNR=92									
BELC				S	**S**	**17 35 19.4**	**-2.4**			
	baz=268									
SVE	**Sverdlovsk**	**93.64**	**327**	*ce* P	**P**	**17 24 46.8**	**+2.4**			
SVE				*eS*	**SKSac**	**17 34 46.6**	**+3.6**			
SVE				pmax	pmax					
	comp=Z,53nm,1.0s									
YUH	**Yuha Desert**	**93.64**	**58**	P	**P**	**17 24 44.9**	**0.0**			
YUH				IAmb	IAmb	17 24 52.6				
	comp=Z,154nm,0.9s									
TUQ	**Turquoise Moun**	**93.72**	**55**	P	**P**	**17 24 45.2**	**-0.3**			
	baz=268,SNR=20									
TUQ				S	**S**	**17 35 19.9**	**-2.8**			
	baz=268									
SWSC	**Sam W. Stewart**	**93.75**	**57**	P	**P**	**17 24 45.0**	**-0.5**			
	baz=268,SNR=22									
SWSC				S	**S**	**17 35 24.7**	**+2.1**			
	baz=268									
PLID	**Pearl Lake**	**93.88**	**45**	P	**P**	**17 24 44.6**	**-1.5**			
PLID				IAmb	IAmb	17 24 51.9				
	comp=Z,54nm,0.8s									
GMRC	**Granite Mounta**	**93.92**	**56**	P	**P**	**17 24 46.3**	**-0.1**			
	baz=269,SNR=157									
GMRC				S	**S**	**17 35 23.5**	**-0.8**			
	baz=269									
S11A	**Rachel**	**93.92**	**53**	P	**P**	**17 24 45.9**	**-0.4**			
S11A				IAmb	IAmb	17 25 25.2				
	comp=Z,89nm,1.1s									
AB31	**Akbulak array**	**93.95**	**319**	*i* P	**P**	**17 24 44.1**	**-1.9**			
ABKAR	**Akbulak array**	**93.95**	**319**	P	**P**	**17 24 44.4**	**-1.6**			
ABKAR				IAmb	IAmb	17 24 51.0				
	comp=Z,54nm,0.9s									
ABKAR	**Akbulak array**	**93.95**	**319**	P	**P**	**17 24 43.9**	**-2.2**			
MFID	**Camas Ranch**	**93.98**	**47**	P	**P**	**17 24 45.7**	**-0.7**			
MFID				IAmb	IAmb	17 24 53.3				
	comp=Z,62nm,1.2s									
BC3	**Big Chuckawall**	**94.06**	**57**	P	**P**	**17 24 46.8**	**-0.2**			
	baz=269,SNR=94									
R11A	**Troy Canyon, C**	**94.06**	**52**	P	**P**	**17 24 46.7**	**-0.3**			
R11A				IAmb	IAmb	17 24 55.9				
	comp=Z,50nm,0.9s									
R11A	**Troy Canyon, C**	**94.06**	**52**	P	**P**	**17 24 47.1**	**0.0**			
	baz=269,SNR=114									
R11A				S	**S**	**17 35 24.2**	**-1.4**			
	baz=269									
WBK	**Wadi Bani Khal**	**94.10**	**292**	P	P	17 24 52.4	+5.0			
	SNR=8.4									
IRM	**Iron Mountain**	**94.33**	**56**	P	**P**	**17 24 47.7**	**-0.4**			
	baz=269,SNR=107									
SHPR	**Sheep Range**	**94.36**	**54**	P	**P**	**17 24 48.2**	**-0.2**			
SHPR				IAmb	IAmb	17 24 55.7				
	comp=Z,118nm,0.9s									
ELK	**Elko**	**94.37**	**50**	P	**P**	**17 24 46.6**	**-1.9**			
	comp=Z,1.4nm,0.5s,baz=258,slow=4.0,SNR=33									
	comp=Z,1.4nm,0.5s									
ELK	**Elko**	**94.37**	**50**	P	**P**	**17 24 47.8**	**-0.7**			
ELK	**Elko**	**94.37**	**50**	P	**P**	**17 24 47.8**	**-0.7**			
ELK				pmax	pmax					
	comp=Z,23nm,0.7s									
WSAR	**Wadi Sarin**	**94.44**	**293**	P	P	17 24 54.0	+5.2			
	SNR=7.7									
PRN	**Pahroc Range**	**94.47**	**53**	P	**P**	**17 24 48.5**	**-0.3**			
GLA	**Glamis**	**94.57**	**57**	P	**P**	**17 24 49.4**	**+0.1**			
GLA				IAmb	IAmb	17 24 57.2				
	comp=Z,163nm,0.9s									
GLA	**Glamis**	**94.57**	**57**	P	**P**	**17 24 49.4**	**+0.1**			
GLA				pmax	pmax					
	comp=Z,163nm,1.0s									
GLA	**Glamis**	**94.57**	**57**	P	**P**	**17 24 49.0**	**-0.3**			
	baz=269,SNR=20									
YKA	**Yellowknife Ar**	**94.66**	**28**	P	**P**	**17 24 46.7**	**-2.2**			
	comp=Z,7.2nm,0.8s,baz=270,slow=4.5,SNR=5.4									
YKA				pP	**pP**	**17 26 13.7**	**+0.2**			
	comp=Z,11nm,0.8s,baz=271,slow=4.6,SNR=3.2									
YKA				PKiKP	**PKiKP**	**17 29 31.6**	**+2.4**			
	comp=Z,5.8nm,0.8s,baz=269,slow=1.2,SNR=8.5									
YKA				PKKPbc	**PKKPdf**	**17 41 44.8**	**-1.5**			
	comp=Z,5.6nm,0.8s,baz=94,slow=2.6,SNR=9.0									
	comp=Z,7.2nm,0.8s									
YKA	**Yellowknife Ar**	**94.66**	**28**	P	**P**	**17 24 47.3**	**-1.6**			
NEE2	**Needles Airpor**	**94.77**	**56**	P	**P**	**17 24 50.3**	**+0.2**			
	baz=269,SNR=16									
ARU	**Arti**	**94.78**	**326**	PKKPbc	PKKPbc	17 41 44.8	-2.6			
	comp=Z,5.9nm,0.6s,baz=322,slow=1.5,SNR=3.8									
ARU	**Arti**	**94.78**	**326**	P	**P**	**17 24 46.6**	**-3.0**			
ARU				IAmb	IAmb	17 24 54.5				
	comp=Z,83nm,0.9s									
ARU	**Arti**	**94.78**	**326**	*d i* P	**P**	**17 24 46.7**	**-2.9**			
ARU				*PP	**pP**	**17 26 14.4**	**-0.1**			
ARU						17 28 39.3				
ARU				S	**SKSac**	**17 34 48.1**	**-1.0**			
ARU				SP	**SP**	**17 36 56.6**	**+7.1**			
ARU				pmax	pmax					
	comp=Z,17nm,0.8s									
JMDO	**Jabal Madar**	**94.89**	**292**	P	**P**	**17 24 54.5**	**+3.5**			
BIDO	**Bibid**	**94.91**	**293**	P	**P**	**17 24 53.2**	**+2.2**			
	SNR=12									
SMDO	**Samad**	**94.96**	**293**	P	**P**	**17 24 52.8**	**+1.5**			
MHTO	**MHTO**	**94.98**	**291**	P	**P**	**17 24 51.4**	**+0.1**			
	SNR=6.6									
HLID	**Hailey**	**95.01**	**47**	P	**P**	**17 24 50.4**	**-0.8**			
HLID	**Hailey**	**95.01**	**47**	P	**P**	**17 24 51.0**	**-0.3**			
	baz=270,SNR=32									
HLID				S	**S**	**17 35 32.0**	**-1.6**			
	baz=270									
PDMCI	**Parker Dam,Lak**	**95.16**	**56**	P	**P**	**17 24 52.5**	**+0.6**			
	baz=269,SNR=22									
GEYT	**Alibeck**	**95.17**	**308**	P	**P**	**17 24 50.4**	**-1.5**			
	comp=Z,6.4nm,0.8s,baz=56,slow=11,SNR=3.4									
GEYT				pP	**pP**	**17 26 16.4**	**-0.9**			
	comp=Z,4.6nm,0.8s,baz=265,slow=32,SNR=1.3									
	comp=Z,6.4nm,0.8s									
GEYT	**Alibeck**	**95.17**	**308**	IAmb	IAmb	17 24 59.3				
	comp=Z,23nm,0.9s									
AKTO	**Aktyubinsk**	**95.20**	**320**	P	**P**	**17 24 49.9**	**-1.8**			
WALA	**Waterton Lakes**	**95.32**	**41**	P	**P**	**17 24 51.9**	**-0.5**			
WALA				IAmb	IAmb	17 24 59.2				
	comp=Z,148nm,1.0s									
MSO	**Missoula**	**95.33**	**43**	P	**P**	**17 24 53.3**	**+0.8**			
	baz=271,SNR=8.4									
W13A	**Hualapai Mount**	**95.38**	**55**	P	**P**	**17 24 52.4**	**-0.7**			
W13A				IAmb	IAmb	17 25 00.4				
	comp=Z,100nm,1.0s									
PSUT	**Pine Spring**	**95.42**	**52**	P	**P**	**17 24 53.0**	**-0.3**			
HOQ	**Hoqain**	**95.66**	**293**	P	**P**	**17 24 55.9**	**+1.5**			
	SNR=7.1									
CCUT	**Cedar City**	**95.81**	**53**	P	**P**	**17 24 53.8**	**-1.3**			
CCUT				IAmb	IAmb	17 25 04.0				
	comp=Z,58nm,1.0s									
LCMT	**Little Creek M**	**95.91**	**53**	P	**P**	**17 24 54.8**	**-0.6**			
LCMT				IAmb	IAmb	17 25 02.6				
	comp=Z,60nm,0.9s									
BGU	**Big Grassy Mou**	**96.05**	**49**	P	**P**	**17 24 54.2**	**-1.8**			
MCMT	**McKenzie Canyo**	**96.12**	**45**	P	**P**	**17 24 56.1**	**-0.2**			
DUG	**Dugway, Tooele**	**96.22**	**50**	P	**P**	**17 24 56.3**	**-0.4**			
DUG				IAmb	IAmb	17 25 04.4				
	comp=Z,48nm,1.2s									
DUG	**Dugway, Tooele**	**96.22**	**50**	P	**P**	**17 24 56.3**	**-0.4**			
DUG				pmax	pmax					
	comp=Z,48nm,1.2s									
DUG	**Dugway, Tooele**	**96.22**	**50**	P	**P**	**17 24 57.0**	**+0.2**			
	baz=271,SNR=22									
HVU	**Hansel Valley**	**96.23**	**49**	P	**P**	**17 24 56.4**	**-0.4**			
HVU				IAmb	IAmb	17 25 03.3				
	comp=Z,75nm,0.9s									
HVU	**Hansel Valley**	**96.23**	**49**	P	**P**	**17 24 56.4**	**-0.4**			
HVU				pmax	pmax					
	comp=Z,75nm,0.9s									
214A	**Organ Pipe Nat**	**96.26**	**58**	P	**P**	**17 24 57.4**	**+0.4**			
	baz=270,SNR=18									
214A				S	**S**	**17 35 47.1**	**+2.6**			
	baz=270									
BANOM	**Banah**	**96.62**	**296**	P	**P**	**17 24 59.8**	**+1.1**			
	SNR=12									
BANOM	**Banah**	**96.62**	**296**	*i* P	**P**	**17 24 60.0**	**+1.3**			
	SNR=28									
PKCU	**Pink Cliffs**	**96.65**	**53**	P	**P**	**17 24 59.8**	**+0.8**			
PKCU				IAmb	IAmb	17 25 07.0				
	comp=Z,87nm,1.0s									
U15A	**North Rim**	**96.67**	**54**	P	**P**	**17 24 58.4**	**-0.7**			
U15A				IAmb	IAmb	17 25 06.4				
	comp=Z,56nm,0.7s									
UOSS	**Minazif**	**96.69**	**295**	P	**P**	**17 24 57.0**	**-2.0**			
UOSS	**Minazif**	**96.69**	**295**	*i* P	**P**	**17 24 58.6**	**-0.4**			
	SNR=7.3									
MSFE	**Esma-Masafi**	**96.74**	**295**	*i* P	**P**	**17 25 00.0**	**+0.7**			
	SNR=22									
MASF	**Masafi**	**96.74**	**295**	P	**P**	**17 25 00.0**	**+0.8**			
	SNR=12									
MSU	**Marysvale**	**96.74**	**52**	P	**P**	**17 24 58.4**	**-0.8**			
MSU	**Marysvale**	**96.74**	**52**	P	**P**	**17 24 58.4**	**-0.8**			
MTPU	**Mount Pierson**	**96.74**	**52**	P	**P**	**17 24 59.0**	**-0.5**			
MTPU				IAmb	IAmb	17 25 09.9				
	comp=Z,38nm,0.8s									
HATD	**Hatta, Dubai**	**96.75**	**294**	*i* P	**P**	**17 24 59.3**	**0.0**			
	SNR=7.3									
SHME	**Shamm**	**96.76**	**296**	P	**P**	**17 25 00.9**	**+1.7**			
	SNR=11									
SHME	**Shamm**	**96.76**	**296**	*i* P	**P**	**17 25 00.0**	**+0.7**			
	SNR=24									
NLU	**North Lily Min**	**96.79**	**50**	P	**P**	**17 24 59.5**	**0.0**			
ASHO	**Ashiyiah**	**96.82**	**294**	P	**P**	**17 25 04.3**	**+4.7**			
ASHO	**Ashiyiah**	**96.82**	**294**	*i* P	**P**	**17 25 02.3**	**+2.6**			
	SNR=7.7									
BOZ	**Bozeman (W)**	**96.96**	**45**	P	**P**	**17 25 00.9**	**+0.9**			
BOZ	**Bozeman (W)**	**96.96**	**45**	P	**P**	**17 25 00.9**	**+0.9**			
BOZ				pmax	pmax					
	comp=Z,23nm,0.7s									
BOZ	**Bozeman (W)**	**96.96**	**45**	P	**P**	**17 24 59.8**	**-0.2**			
	baz=272,SNR=27									
BOZ				S	**S**	**17 35 48.2**	**-2.0**			
	baz=272									
ALNE	**Al Ain**	**97.09**	**294**	P	Pdif	17 25 04.5	+3.7			
	SNR=6.7									
ALNE	**Al Ain**	**97.09**	**294**	*i* P	Pdif	17 25 04.2	+3.3			
	SNR=5.5									
X16A	**Lo Mia Camp, P**	**97.39**	**56**	P	**P**	**17 25 01.9**	**-0.3**			
X16A				IAmb	IAmb	17 25 10.9				
	comp=Z,33nm,1.0s									
WUAZ	**Wupatki**	**97.43**	**55**	P	Pdif	17 25 02.4	0.0			
WUAZ				IAmb	IAmb	17 25 09.9				
	comp=Z,71nm,0.8s									
WUAZ	**Wupatki**	**97.43**	**55**	P	**P**	**17 25 01.9**	**-0.4**			
	baz=271,SNR=30									
AHID	**Auburn Hatcher**	**97.45**	**47**	P	**P**	**17 25 01.7**	**-0.6**			
AHID				IAmb	IAmb	17 25 08.4				
	comp=Z,32nm,0.8s									
TMUT	**Trail Mountain**	**97.48**	**51**	P	**P**	**17 25 02.5**	**-0.1**			
TMUT				IAmb	IAmb	17 25 09.4				
	comp=Z,51nm,0.8s									
ASUD	**Al Ashush, Dub**	**97.48**	**294**	P	Pdif	17 25 07.1	+4.5			
ASUD	**Al Ashush, Dub**	**97.48**	**294**	*i* Pdif	Pdif	17 25 02.8	+0.2			
	SNR=8.1									
Q16A	**Castle Valley**	**97.52**	**51**	P	**P**	**17 25 01.3**	**-1.4**			
P17A	**Butcher Ranch,**	**97.83**	**51**	P	**P**	**17 25 02.6**	**-1.4**			
P17A				IAmb	IAmb	17 25 10.6				
	comp=Z,30nm,0.9s									
TUC	**Tucson**	**97.98**	**58**	P	**P**	**17 25 04.2**	**-0.5**			
TUC				IAmb	IAmb	17 25 14.0				
	comp=Z,37nm,1.1s									
TUC	**Tucson**	**97.98**	**58**	P	**P**	**17 25 04.2**	**-0.5**			
TUC				pmax	pmax					
	comp=Z,37nm,1.1s									
TUC	**Tucson**	**97.98**	**58**	P	**P**	**17 25 03.8**	**-1.0**			
	baz=271									
SRU	**San Rafael Swe**	**98.02**	**51**	P	**P**	**17 25 04.0**	**-0.9**			
SRU				IAmb	IAmb	17 25 14.5				
	comp=Z,41nm,1.1s									
SRU	**San Rafael Swe**	**98.02**	**51**	P	**P**	**17 25 04.0**	**-0.9**			
SRU				pmax	pmax					
	comp=Z,41nm,1.1s									
EGMT	**Eagleton**	**98.12**	**42**	P	**P**	**17 25 04.3**	**-0.7**			
	baz=274,SNR=16									
P18A	**Preston Nutter**	**98.21**	**51**	P	Pdif	17 25 05.5	-0.4			
RBK	**Rabkut**	**98.45**	**287**	P	**P**	**17 25 11.1**	**+4.0**			
DOK	**Doka**	**98.54**	**288**	P	**P**	**17 25 11.5**	**+4.2**			
BW06	**Boulder Array**	**98.58**	**47**	P	Pdif	17 25 06.7	-0.7			
	baz=273,SNR=48									
PDAR	**Pinedale Array**	**98.58**	**47**	P	Pdif	17 25 05.2	-2.1			
	comp=Z,4.6nm,0.8s,baz=250,slow=1.8,SNR=8.0									
PDAR				PP	**PP**	**17 29 15.2**	**+1.7**			
	comp=Z,12nm,1.1s,baz=265,slow=5.3,SNR=8.0									
PDAR				PKiKP	**PKiKP**	**17 29 39.3**	**+2.3**			
	comp=Z,3.8nm,0.9s,baz=228,slow=2.3,SNR=2.0									
PDAR				PKKPbc	**PKKPbc**	**17 41 33.0**	**-3.8**			
	comp=Z,0.9nm,0.6s,baz=105,slow=4.6,SNR=6.9									
PDAR				PKPPKP	**P'P'df**	**17 49 52.7**	**+0.1**			
	comp=Z,1.8nm,1.0s,ba

SNAA	Sanae		103.20	188		Pdiff	Pdif	17 25 26.2	-0.9	
APA	Apatity		103.83	340	⇑	iP	Pdif	17 25 31.5	+1.7	
APA						i		17 29 49.8		
APA							pmax	pmax		
	comp=Z,17nm,1.0s									
KLMR	Klimovskoe		103.86	332		eP	Pdif	17 25 27.7	-2.4	
KLMR						e		17 29 48.8		
KLMR							pmax	pmax		
	comp=Z,42nm,0.9s									
KLMR	Klimovskoe		103.86	332		eP	Pdif	17 25 27.7	-2.4	
KLMR						AMP		17 25 34.3		
	comp=Z,42nm,0.9s									
KLMR						eP	PP	17 29 48.8	-3.1	
KLMR						ePKKPbc	PKKPbc	17 41 17.1	-5.0	
KSCO	Kaye Shedlock'		104.15	51		P	Pdif	17 25 38.1	+6.0	
	baz=277									
KSCO	Kaye Shedlock'		104.15	51		P	Pdif	17 25 31.6	-0.5	
	baz=277									
TX31	Lajitas Ar. Si		104.22	61		P	Pdif	17 25 39.1	+6.5	
	baz=274									
TXAR	Lajitas Array		104.22	61		Pdiff	Pdif	17 25 35.8	+3.2	
	comp=Z,2.6nm,0.7s,baz=236,slow=4.5,SNR=12									
TXAR						PKiKP	PKiKP	17 29 48.6	+1.1	
	comp=Z,7.8nm,0.9s,baz=155,slow=2.3,SNR=15									
TXAR						PKKPbc	PKKPbc	17 41 17.1	-2.7	
	comp=Z,1.0nm,0.6s,baz=77,slow=2.9,SNR=3.5									
TXAR						PKPPKP	P'P'df	17 49 41.2	-0.3	
	comp=Z,1.4nm,0.9s,baz=134,slow=3.9,SNR=5.5									
TXAR	Lajitas Array		104.22	61			PKiKP	17 29 49.3	+1.9	
OGNE	Ogallala		104.35	49		P	Pdif	17 25 32.6	-0.3	
	baz=278									
VNA3	Neumayer Olymp		104.43	186		PKiKP	PKiKP	17 29 46.5	-0.1	
VNA3	Neumayer Olymp		104.43	186		Pdiff	Pdif	17 25 33.8	+1.3	
VNA2	Neumayer--Watz		104.47	187		Pdiff	Pdif	17 25 31.0	-1.7	
	baz=183,slow=5.0									
VNA1	Neumayer--Stat		104.83	187		PKiKP	PKiKP	17 29 47.4	+0.2	
HAMF	Hammerfest		105.27	344		e	PKiKP	17 29 52.6	+4.6	
VRH	Novokhopyorsk		105.33	322		eP	Pdif	17 25 38.9	+2.0	
VRH							pmax	pmax		
	comp=Z,20nm,0.9s									
ARA0	ARCESS Array S		105.39	343		e		PKiKP	17 29 53.0	+4.6
ARA0						IAmb		IAmb	17 29 54.7	
	comp=Z,27nm,0.8s									
ARCES	ARCESS Array B		105.39	343		Pdiff		Pdif	17 25 37.3	+0.5
	comp=Z,10nm,0.9s,baz=78,slow=6.3,SNR=8.5									
ARCES						PKiKP		PKiKP	17 29 48.7	+0.4
	comp=Z,22nm,0.7s,baz=330,slow=1.7,SNR=31									
ARCES						PKKPbc		PKKPbc	17 41 16.8	-1.0
	comp=Z,2.7nm,0.6s,baz=234,slow=3.5,SNR=12									
ARCES	ARCESS Array B		105.39	343				Pdif	17 25 38.0	+1.2
ARCES								PKKPbc	17 41 14.6	-3.2
ARCES	ARCESS Array B		105.39	343		P		Pdif	17 25 38.0	+1.2
AMTX	Amarillo		105.39	55		P		PKiKP	17 29 48.1	-1.4
	baz=277									
GNI	Garni		105.40	311		PKiKP		PKiKP	17 29 55.3	+5.9
ZEI	Tsey		105.60	313		eP		Pdif	17 25 38.0	-0.6
ZEI							pmax	pmax		
	comp=Z,14nm,0.9s									
SUSD	Miller		106.01	45		P		PKiKP	17 29 48.5	-1.7
	baz=281									
AKH	Akhalkalaki		106.14	312		⇑P		PKiKP	17 29 52.6	+1.9
KBZ	Khabaz		106.16	314		Pdiff		Pdif	17 25 41.6	+0.9
	comp=Z,3.3nm,0.8s,baz=143,slow=5.3,SNR=4.2									
KBZ						PKiKP		PKiKP	17 29 52.0	+1.6
	comp=Z,4.1nm,0.8s,baz=86,slow=3.8,SNR=2.2									
KBZ						PKKPbc		PKKPbc	17 41 13.2	-1.2
	comp=Z,2.7nm,0.7s,baz=266,slow=1.2,SNR=3.3									
KTK1	Kautokeino		106.35	343		e		PKiKP	17 29 54.3	+4.2
MOS	Moscow		106.42	328		iP		Pdif	17 25 43.9	+2.3
MOS						e			17 30 16.4	
MOS							pmax	pmax		
	comp=Z,43nm,0.9s									
RAYN	Ar Rayn		106.49	293		i PKiKP		PKiKP	17 29 55.6	+3.9
	SNR=6.6									
DAG	Danmarks Havn		106.60	358		iP		PKiKP	17 29 53.4	+3.1
LPSR	Galich'ya Gora		106.64	324		eP		Pdif	17 25 43.9	+1.3
LPSR							pmax	pmax		
	comp=Z,20nm,0.9s									
VORR	Voronezh		106.73	323		eP		Pdif	17 25 46.5	+3.4
VORR							pmax	pmax		
	comp=Z,30nm,0.3s									
ULM	Lac du Bonnet		106.74	38		Pdiff		Pdif	17 25 45.2	+2.0
	comp=Z,15nm,0.8s,baz=290,slow=5.6,SNR=12									
ULM						PKiKP		PKiKP	17 29 52.4	+1.1
	comp=Z,14nm,0.8s,baz=316,slow=2.1,SNR=9.3									
VSR	Storozhevoye		106.89	323		eP		Pdif	17 25 45.0	+1.2
VSR							pmax	pmax		
	comp=Z,9.0nm,1.0s									
AGMN	Agassiz Nation		107.25	40		P		PKiKP	17 29 51.9	-0.5
	baz=285									
ABTX	Abilene, Hawle		107.34	57		P		PKiKP	17 29 58.6	+5.5
	baz=277									
ABTX	Abilene, Hawle		107.34	57		P		PKiKP	17 29 51.7	-1.4
	baz=277									
JCT	Junction City		107.46	59		P		PKiKP	17 29 58.5	+5.2
	baz=276									
JCT	Junction City		107.46	59		P		PKiKP	17 29 51.9	-1.4
	baz=276									
WMOK	Wichita Mounta		107.78	55		P		PKiKP	17 29 58.6	+4.8
	baz=278									
WMOK	Wichita Mounta		107.78	55		P		PKiKP	17 29 52.6	-1.2
	baz=278									
ECSD	EROS Data Cent		107.81	45		P		PKiKP	17 29 57.9	+4.3
	baz=283									
ECSD	EROS Data Cent		107.81	45		P		PKiKP	17 29 53.0	-0.6
	baz=283,SNR=10.0									
833A	Chaparral WMA,		108.04	61		P		PKiKP	17 29 53.4	-1.1
	baz=276									
KSU1	Kansas State U		108.76	50		P		PKiKP	17 29 54.7	-0.8
	baz=281									
DBG	Daneborg		109.11	358		i P		PKiKP	17 29 58.3	+3.2
T35B	Sooner Cattle		109.24	52		P		PKiKP	17 30 01.0	+4.5
	baz=281									
435B	Jarrell		109.32	59		P		PKiKP	17 29 56.1	-0.7
	baz=278									
F36A	Milaca		109.43	42		P		PKiKP	17 30 01.4	+4.9
	baz=286									
FINES	FINESS Array B		109.53	336		Pdiff		Pdif	17 25 49.5	-5.8
	comp=Z,0.9nm,0.6s,baz=64,slow=6.3,SNR=2.7									
FINES						PKiKP		PKiKP	17 29 55.3	-0.9
	comp=Z,43nm,0.7s,baz=99,slow=3.1,SNR=20									
FINES						PKKPbc		PKKPbc	17 41 01.9	-2.7
	comp=Z,3.7nm,0.5s,baz=194,slow=2.9,SNR=17									
FINES	FINESS Array B		109.53	336				PKiKP	17 29 55.8	-0.4
LOF	Lofoten		109.63	345		e		PKiKP	17 29 58.6	+2.4
FAUS	Fauske		109.68	344		e		PKiKP	17 30 00.9	+4.6
SPMN	Marine on St.		110.09	43		P		PKiKP	17 29 57.7	-0.1
	baz=286									
EYMN	Ely		110.16	40		P		PKiKP	17 29 57.8	-0.1
	baz=288									
X37A	Clayton		110.57	54		P		PKiKP	17 29 59.3	+0.3
	baz=280,SNR=9.2									
237A	Washetta, Mont		110.65	57		P		PKiKP	17 30 00.1	+0.9
	baz=279,SNR=5.7									
SCIA	State Center		110.67	46		P		PKiKP	17 29 58.9	-0.1
	baz=285									
SUMG	Summit		110.70	3		i P		PKiKP	17 30 02.9	+4.2
VSU	Vasula		110.75	333		eP		Pdif	17 26 04.6	+3.9
VSU	Vasula		110.75	333		eP		PKiKP	17 30 04.0	+5.4
MOR8	Moi Rana		110.76	343		e		PKiKP	17 30 03.1	+4.7
KONS	Konsvik		110.91	344		e		PKiKP	17 30 04.3	+5.7
HKT	Hockley		110.94	59		i PKiKP		PKiKP	17 29 59.2	-0.5
P38A	Dawn		110.98	49		P		PKiKP	17 30 00.2	+0.5
	baz=284									
U38A	Gravette		111.01	52		P		PKiKP	17 29 58.7	-1.1
	baz=282,SNR=15									
RAF	Rauma		111.51	336		eP		PKiKP	17 30 05.1	+5.2
S39A	Bolivar		111.58	51		P		PKiKP	17 30 01.5	+0.7
	baz=283,SNR=20									
NATX	Nacogdoches		111.65	57		P		PKiKP	17 30 00.9	-0.2
	baz=280									
W39A	Magazine		111.74	54		P		PKiKP	17 30 01.8	+0.6
	baz=282,SNR=10.0									
W39A	Magazine		111.74	54		P		PKiKP	17 30 01.6	+0.3
	baz=282,SNR=10.0									
MTSE	Matsula		111.93	334		eP		Pdif	17 26 10.2	+4.2
MTSE	Matsula		111.93	334		eP		PKiKP	17 30 06.0	+5.2
MIAR	Mount Ida		112.04	54		P		PKiKP	17 30 00.9	-0.9
	baz=282,SNR=8.9									
MIAR	Mount Ida		112.04	54		P		PKiKP	17 30 02.1	+0.3
	baz=282,SNR=8.9									
MNK	Minsk		112.06	329		i PKiKP		PKiKP	17 30 06.9	+5.7
MNK						i			17 30 56.8	
MNK							pmax	pmax		
	comp=Z,51nm,0.9s									
MNK							pmax	pmax		
	comp=N,33nm,0.9s									
MNK							pmax	pmax		
	comp=E,3.0nm,0.9s									
MNK	Minsk		112.06	329		i PKP		PKiKP	17 30 06.9	+5.7
	comp=E,3.0nm,0.9s									
MNK						i PKP		PKiKP	17 30 06.9	+5.7
	comp=N,33nm,0.9s									
MNK						i PKP		PKiKP	17 30 06.9	+5.7
	comp=Z,51nm,0.9s,baz=61									
MNK						i pPKP		PP	17 30 56.8	+5.6
MNK						i PP		PP	17 31 16.8	+26
MNK						i PPP		PPP	17 33 45.5	
MNK						i SKS		SKSdf	17 36 44.1	+6.2
MNK						i SS		SS	17 46 32.3	+32
MNK						i SSS		SSS	17 51 16.6	
DIKM	Dikmen		112.11	314		⇑P		PKiKP	17 30 03.0	+1.3
R40A	Maddies Statio		112.25	50		P		PKiKP	17 30 00.7	-1.4
	baz=284,SNR=12									
IDID	Didziasalis		112.27	330		eP		PKiKP	17 30 07.6	+6.1
D41A	Chassel		112.32	40		P		PKiKP	17 30 01.5	-0.4
	baz=290									
NACGM	Naroch		112.44	329	⇑	ePKP		PKiKP	17 30 08.2	+6.2
	baz=62									
ISAL	Salakas		112.45	330		eP		PKiKP	17 30 07.8	+5.9
IIGN	Ignalina		112.51	330		eP		PKiKP	17 30 08.1	+6.0
JFWS	Jewell Farm		112.51	45		P		PKiKP	17 30 01.6	-0.9
	baz=287									
JFWS	Jewell Farm		112.51	45		P		PKiKP	17 30 01.7	-0.7
	baz=287									
ILULI	Ilulissat		112.61	9		i P		PKiKP	17 30 05.2	+3.3
X40A	Basin Creek Fa		112.65	54		P		PKiKP	17 30 02.1	-0.8
	baz=282									
NSS	Namsos		112.66	342		e		PKiKP	17 30 06.5	+4.4
Z41A	Richland Creek		112.92	55		P		PKiKP	17 30 02.7	-0.8
	baz=282									
BZK	Bozkurt		112.92	314		⇓P		PKiKP	17 30 07.4	+4.2
AKASG	Malin Array Be		112.96	324		Pdiff		Pdif	17 26 08.0	-2.8
	comp=Z,5.3nm,0.8s,baz=51,slow=4.9,SNR=13									
AKASG						PKiKP		PKiKP	17 30 02.6	-0.4
	comp=Z,34nm,0.6s,baz=55,slow=2.8,SNR=30									
AKASG						PKKPbc		PKKPbc	17 40 49.8	-3.3
	comp=Z,6.4nm,0.6s,baz=265,slow=3.5,SNR=15									
AKBB	Malin Array Si		112.96	324		i PKiKP		PKiKP	17 30 02.2	-0.8
W41B	Gary Mavity, V		112.98	53		P		PKiKP	17 30 02.2	-1.3
	baz=283,SNR=14									
W41B	Gary Mavity, V		112.98	53		P		PKiKP	17 30 02.4	-1.1
	baz=283,SNR=14									
SCO	Scoresbysund		112.99	358		i P		PKiKP	17 30 04.8	+2.3
CCM	Cathedral Cave		113.09	50		P		PKiKP	17 30 04.1	+0.4
	baz=284,SNR=12									
CCM	Cathedral Cave		113.09	50		P		PKiKP	17 30 03.3	-0.4
	baz=284									
SLIT	Slitere, Latvi		113.20	333		eP		PKiKP	17 30 07.7	+4.5
VSVD	Vaisvydziai		113.32	331		eP		PKiKP	17 30 10.1	+6.6
PABE	Paberze		113.55	331		eP		Pdif	17 26 17.4	+4.2
PABE	Paberze		113.55	331		eP		PKiKP	17 30 09.2	+5.2
FVM	French Village		113.74	50		P		PKiKP	17 30 05.6	+0.6
	baz=285,SNR=9.5									
BR131	Keskin Array S		113.83	312		i PKiKP		PKiKP	17 30 04.1	-1.2
BR131	Keskin Array S		113.83	312		P		PKiKP	17 30 09.5	+4.2
	SNR=17									
BRTR	Keskin Array B		113.83	312		Pdiff		Pdif	17 26 15.8	+0.7
	comp=Z,0.3nm,0.5s,baz=87,slow=4.0,SNR=3.1									
BRTR						PKiKP		PKiKP	17 30 05.1	-0.2
	comp=Z,15nm,0.6s,baz=121,slow=2.4,SNR=24									
BRTR						PKKPbc		PKKPbc	17 40 50.5	+0.5
	comp=Z,3.7nm,0.7s,baz=220,slow=2.9,SNR=11									
BRTR	Keskin Array B		113.83	312				Pdif	17 26 13.2	-1.9
BRTR								PKiKP	17 30 04.0	-1.2
HDIL	Hopedale		113.88	47		P		PKiKP	17 30 05.4	+0.2
	baz=287,SNR=6.4									
P43A	Skaggs, Pawnee		113.97	48		P		PKiKP	17 30 06.4	+1.1
	baz=286									
PBMO	Poplar Bluff		114.04	51		P		PKiKP	17 30 06.2	+0.7
	baz=285									
ICESG	Greenland Ices		114.05	5		i P		PKiKP	17 30 08.4	+3.3
TBLU	Trondheim		114.11	342		ePKPdf		PKiKP	17 30 07.8	+2.9
PURM	Purcari		114.21	320		⇑P		PKiKP	17 30 07.8	+2.2
X43A	Marvell		114.22	54		P		PKPdf	17 30 04.7	-1.3
	baz=283									
PBUR	Paburge		114.25	332		eP		PKiKP	17 30 10.8	+5.4
L44A	Lake County Fo		114.38	45		P		PKPdf	17 30 05.6	-0.4
	baz=289									
SORM	Soroca		114.53	322		⇓P		PKKPab	17 40 46.7	-6.8
KMBO	Kilima Mbogo		114.59	267		PKP		PKPdf	17 30 07.1	-0.5
	comp=Z,36nm,0.9s,baz=57,slow=3.0,SNR=17									
KMBO						PKKPab		PKKPab	17 40 52.6	-1.4
	comp=Z,4.3nm,0.8s,baz=230,slow=3.8,SNR=7.5									
KMBO	Kilima Mbogo		114.59	267		i PKiKP		PKiKP	17 30 08.6	+1.0
	SNR=28									
SFJD	Kangerlussuaq		114.70	10		i P		PKiKP	17 30 08.7	+2.8
S44A	Carbondale		114.71	50		P		PKiKP	17 30 07.0	+0.2
	baz=286,SNR=7.4									
SUW	Suwalki		114.71	330		ePKPdf		PKiKP	17 30 11.0	+4.7
SUW	Suwalki		114.71	330		eP		Pdif	17 26 22.4	+3.9
SUW	Suwalki		114.71	330		eP		PKiKP	17 30 11.5	+5.2
MILM	Milestii Mici		114.73	321		⇑P		PKiKP	17 30 11.0	+4.5
MILM	Milestii Mici		114.73	321		⇑P		PKKPab	17 40 50.0	-2.7
MILM	Milestii Mici		114.73	321		⇑PKiKP		PKiKP	17 30 11.0	+4.5
NC303	NORSAR Array S		115.23	340				PKiKP	17 30 06.0	-1.1
E46A	Sault Ste Mari		115.30	40		P		PKiKP	17 30 08.1	+0.4
	baz=294									
CSS	Mathiatis		115.31	307				PKPdf	17 30 06.8	-1.3
DOMB	Dombas		115.38	342		ePKPdf		PKiKP	17 30 10.2	+2.8
DOMB						IAmb		IAmb	17 30 13.4	
	comp=Z,38nm,0.8s									
NC204	NORSAR Array S		115.40	340				PKPdf	17 30 06.2	-1.3
OXF	Oxford		115.40	53		P		PKPdf	17 30 07.3	-0.9
	baz=284									
TLCR			115.40	319		⇓P		PKiKP	17 30 13.5	+5.6
TLCR			115.40	319		⇑P		PKKPab	17 40 47.7	-2.0
TLCR			115.40	319		⇓PKiKP		PKiKP	17 30 13.5	+5.6
NB2	NORSAR Subarra		115.42	340		P		Pdif	17 26 26.6	+5.0
	baz=49,slow=4.6									
NB2						PKPdf		PKPdf	17 30 07.5	0.0
	baz=44,slow=1.9									
NB2	NORSAR Subarra		115.42	340		P		Pdif	17 26 26.6	+5.0
	comp=Z,2.3nm,0.8s,baz=49,slow=4.6									
NB2	NORSAR Subarra		115.42	340		PKPdf		PKPdf	17 30 07.5	0.0
	comp=Z,15nm,0.7s,baz=44,slow=1.9									
NOA	NORSAR Array B		115.42	340		PKP		PKiKP	17 30 08.2	+0.7
	comp=Z,17nm,0.8s,baz=46,slow=2.0,SNR=17									
NOA						PKKPbc		PKKPbc	17 40 42.7	-2.6
	comp=Z,3.5nm,0.8s,baz=226,slow=4.2,SNR=9.9									
MOL	Molde		115.45	343		ePKPdf		PKiKP	17 30 13.3	+5.9
Y45A	Yeager Farm, C		115.45	54		P		PKPdf	17 30 08.3	0.0
	baz=284,SNR=8.3									
VASR	Vaslui		115.49	321		⇑P		PKiKP	17 30 12.7	+4.7
NC602	NORSAR Array S		115.52	340				PKPdf	17 30 07.0	-0.7
NC602	NORSAR Array S		115.52	340		ePKPdf		PKPdf	17 30 07.2	-0.5
SFIN	Lafayette		115.53	47		P		PKiKP	17 30 09.4	+1.1
	baz=289									
SFIN	Lafayette		115.53	47		P		PKPdf	17 30 08.1	-0.2
	baz=289,SNR=6.7									
DRBR	Darabani		115.56	323		⇓P		PKiKP	17 30 12.5	+4.4
NBO00	NORSAR Array S		115.57	340				PKPdf	17 30 06.7	-1.1
VLDR	Vladesti		115.62	320		⇑P		PKiKP	17 30 13.8	+5.5
P46A	Rosedale		115.69	47		P		PKPdf	17 30 08.0	-0.7
	baz=288,SNR=16									
SCTR	Scanteiesti		115.74	320		⇑P		PKiKP	17 30 14.0	+5.4
VARL	Varlezi		115.75	320		⇑P		PKiKP	17 30 13.5	+4.9
TPGR	Topolog		115.78	319		⇑P		PKiKP	17 30 11.4	+2.7
TPGR	Topolog		115.78	319		⇑P		PKKPab	17 40 46.9	-1.2
CFR	Carcaliu		115.85	319		⇑P		PKiKP	17 30 13.4	+4.6
CFR	Carcaliu		115.85	319		⇑P		PKKPab	17 40 43.0	-4.7
CFR	Carcaliu		115.85	319		⇑PKiKP		PKiKP	17 30 13.4	+4.6
DY2G	Dye2		115.85	8		i P		PKiKP	17 30 11.7	+3.2
AKN	Aaknes		115.91	343		ePKPdf		PKiKP	17 30 09.6	+1.1
SLCR	Slobozia Conac		115.92	320		⇓P		PKiKP	17 30 14.2	+5.3
EFOR	EFORIE		115.94	318		⇑P		PKiKP	17 30 14.8	+5.9
TIRR	Tirgusor		115.94	318		⇑P		PKiKP	17 30 14.0	+5.0
TIRR	Tirgusor		115.94	318		⇑P		PKiKP	17 30 14.0	+5.0
TIRR	Tirgusor		115.94	318		⇓P		PKKPab	17 40 46.0	-1.3
IZVR	Izvoarele		115.94	320		⇑P		PKiKP	17 30 14.7	+5.8
GHRR			115.96	320		⇓P		PKiKP	17 30 12.1	+3.1
GHRR			115.96	320		⇑P		PKKPab	17 40 46.4	-0.8
TUDR			115.98	320		⇓P		PKiKP	17 30 16.1	+7.1
MFTR	Murfatlar		116.04	318		⇓P		PKKPab	17 40 44.7	-2.2
MANR	Mangalia		116.07	318		⇑P		PKiKP	17 30 10.4	+1.1
HARR	Harsova		116.17	319		⇑P		PKiKP	17 30 11.4	+2.0
HARR	Harsova		116.17	319		⇑PKiKP		PKiKP	17 30 11.4	+2.0
PANC	Panciu		116.21	320		⇑P		PKiKP	17 30 15.8	+6.4
WVT	Waverly		116.23	51		P		PKPdf	17 30 09.3	-0.5
	baz=286,SNR=10									
WVT	Waverly		116.23	51		P		PKPdf	17 30 08.5	-1.3
	baz=286									
MOPA	Mopani		116.23	242		eP		PKiKP	17 30 11.1	+0.9
MOPA	Mopani		116.23	242		eP		PKiKP	17 30 11.1	+0.9
MOPA	Mopani		116.23	242		eP		PKiKP	17 30 11.1	+0.9
TESR	Tescani		116.26	321		⇓P		PKiKP	17 30 14.0	+4.4
TESR	Tescani		116.26	321		⇑P		PKKPab	17 40 42.8	-3.2
LVV	L'vov		116.34	325		ePKIKP		PKiKP	17 30 14.1	+4.5
LVV						MLR		MLR		
	comp=Z,880nm,20.0s									
OSL	Oslo		116.38	339		ePKPdf		PKiKP	17 30 13.2	+3.9
PSN	Preselentsi		116.39	318		eP		PKiKP	17 30 14.2	+4.3
BIZ	Bicaz		116.42	322		⇑P		PKiKP	17 30 11.4	+1.6
BIZ	Bicaz		116.42	322		⇑P		PKKPab	17 40 44.2	-1.0
VRI	Vrincioaia		116.48	320		⇑P		PKiKP	17 30 12.3	+2.3
VRI	Vrincioaia		116.48	320		⇑P		PKKPab	17 40 44.2	-0.9
VRI	Vrincioaia		116.48	320		⇑PKIKP		PKiKP	17 30 12.3	+2.3
PLOR	Plostina		116.53	320		⇑P		PKiKP	17 30 15.6	+5.4
PLOR	Plostina		116.53	320		⇑P		PKKPab	17 40 39.9	-4.9
PLOR	Plostina		116.53	320		⇑PKIKP		PKiKP	17 30 15.6	+5.4
T47A	Sharon Grove		116.55	50		P		PKiKP	17 30 11.0	+0.6
	baz=287,SNR=20									
BISRR	Bisoca		116.62	320		⇑P		PKiKP	17 30 16.6	+6.2
BISRR	Bisoca		116.62	320		⇑P		PKKPab	17 40 44.2	-0.2
SKAR	Skarslia		116.65	341		ePKPdf		PKiKP	17 30 12.1	+2.1
BURAR	Bucovina Array		116.66	323		⇓P		PKiKP	17 30 12.9	+2.5
BURAR	Bucovina Array		116.66	323		⇓P		PKKPab	17 40 43.8	-0.5
BURAR	Bucovina Array		116.66	323		⇓PKIKP		PKiKP	17 30 12.9	+2.5
COVR	Voineasa-Covas		116.82	321		⇑P		PKiKP	17 30 15.9	+5.2
COVR	Voineasa-Covas		116.82	321		⇑P		PKKPab	17 40 43.2	-0.3
ISR	Istrita		116.90	320		⇑P		PKiKP	17 30 16.5	+5.6
ISR	Istrita		116.90	320		⇑P		PKKPab	17 40 39.2	-3.9
ISR	Istrita		116.90	320		⇑PKIKP		PKiKP	17 30 16.5	+5.6
NEHR	Nehoiu		116.94	320		⇓P		PKiKP	17 30 16.1	+5.1
NEHR	Nehoiu		116.94	320		⇓P		PKKPab	17 40 37.8	-5.2
HYA	Hoyanger		116.94	342		ePKPdf		PKiKP	17 30 14.7	+4.3
FOO	Floro		116.95	343		ePKPdf		PKiKP	17 30 12.5	+2.1
O48B	Farmland		116.97	46		P		PKiKP	17 30 11.7	+0.5
	baz=290,SNR=16									
O48B	Farmland		116.97	46		P		PKPdf	17 30 10.8	-0.3
	baz=290,SNR=16									
OZUR			116.98	321		⇑P		PKiKP	17 30 16.7	+5.7
OZUR			116.98	321		⇑P		PKKPab	17 40 42.0	-0.9
KONO

N51A					P		PKiKP	17 30 14.7	+0.2	
	baz=293,SNR=12									
P51A	**Williamsport**	**118.75**	**46**				**PKPdf**	17 30 13.7	-0.9	
P51A	**Williamsport**	**118.75**	**46**		P		**PKiKP**	17 30 17.5	+2.9	
	baz=291,SNR=12									
P51A					P		PKiKP	17 30 17.5	+2.9	
	baz=291,SNR=12									
LTVH	**Ltavrtes, Hu**	**118.76**	**324**	⇑	P		PKiKP	17 30 18.9	+4.5	
VLAD	**Vladila**	**118.76**	**319**	⇑	P		PKiKP	17 30 19.4	+4.9	
KMY	**Karmoy**	**118.77**	**341**	*e*	PKPdf		PKiKP	17 30 17.9	+3.9	
SNART	**Snartemo**	**118.78**	**340**	*e*	PKPdf		PKiKP	17 30 15.1	+1.0	
DEV	**Deva**	**118.87**	**322**	⇑	P		PKiKP	17 30 20.4	+5.8	
DEV	**Deva**	**118.87**	**322**	⇑	PKIKP		PKiKP	17 30 20.4	+5.8	
ALN	**Alexandroupoli**	**118.92**	**315**		P		**PKPdf**	17 30 11.9	-2.9	
S51A	**Beattyville**	**119.00**	**48**		P		PKiKP	17 30 15.8	+0.7	
	baz=290,SNR=23									
S51A					P		PKiKP	17 30 15.8	+0.7	
	baz=290,SNR=23									
X51A	**Calhoun**	**119.00**	**52**		P		PKiKP	17 30 15.7	+0.4	
	baz=287,SNR=10.0									
X51A					P		PKiKP	17 30 15.7	+0.4	
	baz=287,SNR=10.0									
LLD	**Lille Linde**	**119.02**	**335**	*i*	P		PKiKP	17 30 18.8	+4.3	
GOET	**G??ttrup**	**119.02**	**338**	*i*	P		PKiKP	17 30 18.8	+4.3	
V51A	**Loudon**	**119.02**	**51**		P		**PKPdf**	17 30 14.4	-0.8	
	baz=288,SNR=11									
Z51A	**Franklin**	**119.11**	**54**		P		PKiKP	17 30 16.1	+0.6	
	baz=286,SNR=21									
EZN	**Ezine**	**119.12**	**314**		P		**PKPdf**	17 30 14.9	-0.3	
RDO	**Rodhopi**	**119.17**	**316**		P		**PKPdf**	17 30 14.3	-1.0	
M52A	**Chesterland**	**119.18**	**44**		P		**PKPdf**	17 30 14.4	-1.0	
	baz=294,SNR=6.3									
M52A					P		**PKPdf**	17 30 14.4	-1.0	
	baz=294,SNR=6.3									
SRE	**Strehaia**	**119.24**	**320**	⇑	P		PKiKP	17 30 20.8	+5.4	
SRE	**Strehaia**	**119.24**	**320**	⇑	PKIKP		PKiKP	17 30 20.8	+5.4	
LANS	**Liptovska Anna**	**119.24**	**326**	*e*	PKIKP		PKiKP	17 30 17.4	+2.1	
LANS	**Liptovska Anna**	**119.24**	**326**	*e*	PKP		PKiKP	17 30 17.4	+2.1	
SADO	**Sadowa**	**119.26**	**39**		PKP		**PKPdf**	17 30 14.9	-0.5	
	comp=Z,32nm,0.7s,baz=298,slow=5.0,SNR=5.7									
JAWL	**J.Aulia**	**119.34**	**285**	*i*	P		PKiKP	17 30 16.8	+0.4	
JAWL				*i*				17 30 24.6		
	baz=330,slow=9.3									
JAWL				*i*	S			17 30 36.9		
P52A	**Corning**	**119.37**	**46**		P		**PKPdf**	17 30 14.2	-1.5	
	baz=292,SNR=10									
O52A	**Adamsville**	**119.40**	**45**		P		PKiKP	17 30 16.3	+0.4	
	baz=293,SNR=9.8									
O52A					P		PKiKP	17 30 16.3	+0.4	
	baz=293,SNR=9.8									
TZTN	**Tazewell**	**119.40**	**50**		P		**PKPdf**	17 30 15.5	-0.4	
	baz=289,SNR=18									
TZTN	**Tazewell**	**119.40**	**50**		P		**PKPdf**	17 30 14.7	-1.2	
	baz=289									
SIRR	**Siria**	**119.45**	**323**	⇓	P		PKiKP	17 30 16.6	+0.9	
SIRR	**Siria**	**119.45**	**323**	⇓	P		**PKKPab**	17 40 32.8	+0.9	
MUD	**Monsted U'grnd**	**119.46**	**337**	*i*	P		PKiKP	17 30 19.5	+4.1	
TKL	**Tuckaleechee C**	**119.52**	**51**		PKP		**PKPdf**	17 30 15.9	-0.3	
	comp=Z,17nm,0.6s,baz=170,slow=4.2,SNR=13									
TKL	**Tuckaleechee C**	**119.52**	**51**		P		PKiKP	17 30 17.1	+0.9	
	baz=289,SNR=46									
Q52A	**Bidwell**	**119.52**	**47**		P		PKiKP	17 30 16.8	+0.7	
	baz=292,SNR=10									
Q52A					P		PKiKP	17 30 16.8	+0.7	
	baz=292,SNR=10									
W52A	**Murphy**	**119.57**	**51**		P		PKiKP	17 30 17.4	+1.0	
	baz=288,SNR=17									
OKC	**Ostrava-Krasne**	**119.58**	**328**	*e*	PKIKP		PKiKP	17 30 17.2	+1.3	
OKC	**Ostrava-Krasne**	**119.58**	**328**	*e*	PKPDF		PKiKP	17 30 17.2	+1.3	
OKC				*ex*			x	17 30 21.1		
V52A	**Sevierville**	**119.59**	**50**		P		PKiKP	17 30 17.4	+1.0	
	baz=289,SNR=39									
HERR	**Herculane**	**119.64**	**321**	⇑	P		PKiKP	17 30 16.9	+0.7	
PSZ	**Piszkesteto**	**119.66**	**325**	⇑	P		PKiKP	17 30 20.2	+4.0	
PSZ	**Piszkesteto**	**119.66**	**325**	⇓	P		**PKKPab**	17 40 33.0	+1.9	
PSZ	**Piszkesteto**	**119.66**	**325**	⇑	PKIKP		PKiKP	17 30 20.2	+4.0	
PSZ	**Piszkesteto**	**119.66**	**325**		PKP		PKiKP	17 30 19.2	+3.0	
152A	**Waverly Hall**	**119.66**	**54**		P		PKiKP	17 30 17.5	+0.9	
	baz=286,SNR=20									
BLWY	**Bulawayo**	**119.67**	**245**	*e*	P		PKiKP	17 30 17.9	+0.7	
BLWY	**Bulawayo**	**119.67**	**245**	*e*	P		PKiKP	17 30 17.9	+0.7	
BLWY	**Bulawayo**	**119.67**	**245**	*e*	P		PKiKP	17 30 17.9	+0.7	
DJES	**Djerdap**	**119.67**	**321**	⇑	P		PKiKP	17 30 21.4	+5.1	
M53A	**Wi Miller and**	**119.69**	**43**		P		**PKPdf**	17 30 15.6	-0.7	
	baz=294,SNR=13									
MATP	**Matopo**	**119.69**	**244**	*e*	P		**PKPdf**	17 30 16.6	-0.5	
MATP	**Matopo**	**119.69**	**244**	*e*	P		**PKPdf**	17 30 16.6	-0.5	
MATP	**Matopo**	**119.69**	**244**	*e*	P		**PKPdf**	17 30 16.6	-0.5	
BOSA	**Boshof**	**119.73**	**234**		PKP		**PKPdf**	17 30 15.7	-1.2	
	comp=Z,18nm,0.5s,baz=122,slow=1.3,SNR=45									
BOSA					PKKPab		**PKKPab**	17 40 31.4	-0.1	
	comp=Z,10.0nm,0.9s,baz=329,slow=2.1,SNR=9.3									
BOSA	**Boshof**	**119.73**	**234**				**PKPdf**	17 30 14.5	-2.5	
BOSA	**Boshof**	**119.73**	**234**		PKIKP		**PKPdf**	17 30 14.5	-2.5	
BOSA	**Boshof**	**119.73**	**234**	*e*	P		**PKPdf**	17 30 15.8	-1.2	
BOSA	**Boshof**	**119.73**	**234**	*e*	P		**PKPdf**	17 30 15.8	-1.2	
BOSA	**Boshof**	**119.73**	**234**	*e*	P		**PKPdf**	17 30 15.8	-1.2	
O53A	**New Philadelph**	**119.78**	**45**		P		**PKPdf**	17 30 15.8	-0.7	
	baz=293,SNR=11									
BZS	**Buzias**	**119.79**	**322**	⇑	P		PKiKP	17 30 17.3	+0.9	
BZS	**Buzias**	**119.79**	**322**	⇑	PKIKP		PKiKP	17 30 17.3	+0.9	
352A	**Blakely**	**119.81**	**56**		P		PKiKP	17 30 17.7	+0.8	
	baz=286,SNR=11									
N53A	**Lisbon**	**119.83**	**44**		P		PKiKP	17 30 17.1	+0.5	
	baz=294,SNR=48									
N53A					P		PKiKP	17 30 17.1	+0.5	
	baz=294,SNR=48									
Y52A	**Lilburn**	**119.84**	**53**		P		PKiKP	17 30 18.2	+1.3	
	baz=288,SNR=18									
Y52A					P		PKiKP	17 30 18.2	+1.3	
	baz=288,SNR=18									
ERPA	**Erie**	**119.87**	**43**		P		**PKPdf**	17 30 16.2	-0.4	
	baz=295									
LIA	**Limnos Island**	**119.91**	**315**		P		**PKPdf**	17 30 14.5	-2.2	
KAVA	**Kavala**	**119.94**	**316**		P		**PKPdf**	17 30 16.6	-0.2	
MORC	**Moravsky Berou**	**119.94**	**328**	⇑	P		PKiKP	17 30 19.2	+2.5	
MORC	**Moravsky Berou**	**119.94**	**328**	⇓	P		**PKKPab**	17 40 32.8	+3.1	
MORC	**Moravsky Berou**	**119.94**	**328**				**PKPdf**	17 30 15.2	-1.4	
MORC	**Moravsky Berou**	**119.94**	**328**		PKIKP		**PKPdf**	17 30 15.2	-1.4	
MORC	**Moravsky Berou**	**119.94**	**328**	*e*	PKP		**PKPdf**	17 30 15.8	-0.8	
VYHS	**Vyhne**	**119.95**	**326**	*e*	PKIKP		PKiKP	17 30 17.1	+0.4	
VYHS	**Vyhne**	**119.95**	**326**	*e*	PKP		PKiKP	17 30 17.1	+0.4	
P53A	**Whipple**	**119.95**	**46**		P		PKiKP	17 30 18.1	+1.1	
	baz=293,SNR=17									
P53A					P		PKiKP	17 30 18.1	+1.1	
	baz=293,SNR=17									
SCHQ	**Schefferville**	**119.96**	**25**		PKP		PKiKP	17 30 16.8	+0.3	
	comp=Z,43nm,0.8s,baz=341,slow=3.1,SNR=28									
SCHQ	**Schefferville**	**119.96**	**25**				PKiKP	17 30 18.4	+1.8	
KSP	**Ksiaz**	**119.97**	**329**	*e*	PKPdf		PKiKP	17 30 21.7	+5.0	
R53A	**Hurricane**	**119.98**	**47**		P		**PKPdf**	17 30 16.4	-0.6	
	baz=292,SNR=15									
R53A					P		**PKPdf**	17 30 16.4	-0.6	
	baz=292,SNR=15									
MAUC	**Maruska**	**120.02**	**327**	*e*	PKPDF		PKiKP	17 30 18.2	+1.3	
MAUC				*ex*			x	17 30 22.7		
MAUC				*e*	PKKP		**PKKPab**	17 40 29.2	-0.2	
MDVR	**Moldovita**	**120.13**	**321**	⇓	P		PKiKP	17 30 19.0	+1.7	
MDVR	**Moldovita**	**120.13**	**321**	⇑	P		**PKKPab**	17 40 28.8	-0.2	
VTS	**Vitosha**	**120.13**	**318**	*e*	P		PKiKP	17 30 22.3	+4.9	
KOLL	**Kolacno**	**120.14**	**326**	*e*	PKP		PKiKP	17 30 18.2	+1.1	
KRLC	**Kraliky**	**120.17**	**328**	*e*	PKIKP		PKiKP	17 30 17.9	+0.8	
KRLC	**Kraliky**	**120.17**	**328**	*e*	PKPDF		PKiKP	17 30 17.9	+0.8	
KRLC				*ex*			x	17 30 22.1		
KRLC				*e*	PKKP		**PKKPbc**	17 40 27.9	-0.1	
OSTC	**Ostas**	**120.18**	**329**	*e*	PKPDF		PKiKP	17 30 18.3	+1.2	
OSTC				*ex*			x	17 30 22.5		
OSTC				*ex*			x	17 40 31.7		
BANR	**Banloc**	**120.20**	**322**	⇑	P		PKiKP	17 30 21.6	+4.4	
NVR	**Nevrokopi**	**120.25**	**317**		P		**PKPdf**	17 30 17.1	-0.3	
CHVC	**Chvalec**	**120.25**	**329**	*e*	PKPDF		PKiKP	17 30 18.3	+1.1	
CHVC				*ex*			x	17 30 22.5		
CHVC				*e*	PKKP		**PKKPab**	17 40 31.2	+2.8	
DPC	**Dobruska-Polom**	**120.25**	**329**	*e*	PKIKP		PKiKP	17 30 18.5	+1.2	
DPC	**Dobruska-Polom**	**120.25**	**329**	*e*	PKPDF		PKiKP	17 30 18.5	+1.2	
DPC				*ex*			x	17 30 22.6		
DPC				*e*	PKKP		**PKKPbc**	17 40 27.1	-0.7	
V53A	**Saluda**	**120.25**	**50**		P		PKiKP	17 30 19.0	+1.2	
	baz=289,SNR=22									
V53A					P		PKiKP	17 30 19.0	+1.2	
	baz=289,SNR=22									
J54A	**Appleton**	**120.26**	**41**		P		PKiKP	17 30 17.7	+0.2	
	baz=297,SNR=6.9									
J54A					P		PKiKP	17 30 17.7	+0.2	
	baz=297,SNR=6.9									
UPC	**Upice**	**120.32**	**329**	*e*	PKIKP		PKiKP	17 30 18.1	+0.7	
UPC	**Upice**	**120.32**	**329**	*e*	PKPDF		PKiKP	17 30 18.1	+0.7	
UPC				*ex*			x	17 30 22.5		
UPC				*e*	PKKP		**PKKPab**	17 40 31.5	+3.5	
KOKK	**Kokkinochori,**	**120.37**	**316**		P		**PKPdf**	17 30 16.9	-0.7	
CASEE	**Lake Jocassee**	**120.38**	**51**		P		PKiKP	17 30 19.4	+1.4	
	baz=289,SNR=18									
JAVC	**Velka Javorina**	**120.39**	**327**	*e*	PKP		PKiKP	17 30 18.2	+0.6	
O54A	**Avella**	**120.40**	**45**		P		PKiKP	17 30 18.9	+1.1	
	baz=294,SNR=18									
O54A					P		PKiKP	17 30 18.9	+1.1	
	baz=294,SNR=18									
IVI	**Ivigtut**	**120.44**	**11**				**PKPdf**	17 30 16.5	-0.6	
IVI	**Ivigtut**	**120.44**	**11**	*i*	P		PKiKP	17 30 21.1	+3.9	
GOGA	**Godfrey**	**120.45**	**53**		P		PKiKP	17 30 19.2	+1.1	
	baz=288,SNR=19									
GOGA	**Godfrey**	**120.45**	**53**		P		**PKPdf**	17 30 17.8	-0.1	
	baz=288									
SRS	**Serrai**	**120.53**	**317**		P		**PKPdf**	17 30 16.7	-1.2	
Q54A	**Coxs Mills**	**120.55**	**46**		P		PKiKP	17 30 19.0	+0.8	
	baz=293,SNR=29									
Q54A					P		PKiKP	17 30 19.0	+0.8	
	baz=293,SNR=29									
KKB	**Krupnik**	**120.56**	**318**	*e*	P		PKiKP	17 30 21.3	+3.2	
SRO2	**Moca**	**120.59**	**325**	*e*	PKIKP		PKiKP	17 30 19.1	+1.2	
SRO2	**Moca**	**120.59**	**325**	*e*	PKP		PKiKP	17 30 19.1	+1.2	
SRO	**Srobarova**	**120.61**	**325**	*e*	PKIKP		PKiKP	17 30 19.3	+1.3	
SRO	**Srobarova**	**120.61**	**325**	*e*	PKP		PKiKP	17 30 19.3	+1.3	
S54A	**Dingess, Beckl**	**120.64**	**48**		P		PKiKP	17 30 19.1	+0.7	
	baz=292,SNR=20									
S54A					P		PKiKP	17 30 19.1	+0.7	
	baz=292,SNR=20									
BOVS	**Bovan**	**120.67**	**320**	⇑	P		PKiKP	17 30 18.4	+0.2	
BOVS	**Bovan**	**120.67**	**320**	⇑	P		**PKKPab**	17 40 29.4	+2.9	
WVNY	**West Valley, N**	**120.67**	**42**		P		PKiKP	17 30 18.4	+0.1	
	baz=296,SNR=12									
APE	**Apeiranthos**	**120.71**	**312**	⇑	P		PKiKP	17 30 23.3	+4.7	
APE	**Apeiranthos**	**120.71**	**312**	⇑	PKIKP		PKiKP	17 30 23.3	+4.7	
VRAC	**Vranov**	**120.72**	**328**	⇑	P		PKiKP	17 30 23.2	+5.0	
VRAC	**Vranov**	**120.72**	**328**	⇑	PKIKP		PKiKP	17 30 23.2	+5.0	
VRAC	**Vranov**	**120.72**	**328**	*e*	PKP		**PKPdf**	17 30 18.0	-0.1	
U54A	**Nelsons Funny**	**120.72**	**49**		P		PKiKP	17 30 18.8	+0.2	
	baz=291,SNR=8.9									
U54A					P		PKiKP	17 30 18.8	+0.2	
	baz=291,SNR=8.9									
J55A	**Hilton**	**120.80**	**41**		P		**PKPdf**	17 30 18.1	-0.3	
	baz=298,SNR=10.0									
J55A					P		**PKPdf**	17 30 18.1	-0.3	
	baz=298,SNR=10.0									
MODS	**Modra-Piesok**	**120.88**	**326**	*e*	PKIKP		PKiKP	17 30 19.6	+1.1	
MODS	**Modra-Piesok**	**120.88**	**326**	*e*	PKP		PKiKP	17 30 19.6	+1.1	
CSKK	**Cskako**	**120.89**	**325**		PKP		PKiKP	17 30 19.8	+1.3	
TIGA	**Tifton**	**120.92**	**55**		P		**PKPdf**	17 30 18.2	-0.8	
	baz=286									
PLG	**Polygyros**	**120.94**	**316**		P		**PKPdf**	17 30 17.8	-1.0	
KRUC	**Moravsky**	**120.97**	**328**	*e*	PKP		**PKPdf**	17 30 16.6	-1.9	
M55A	**Ridgway**	**120.98**	**43**		P		PKiKP	17 30 19.5	+0.5	
	baz=296,SNR=15									
M55A					P		PKiKP	17 30 19.5	+0.5	
	baz=296,SNR=15									
KNT	**Kendrikon**	**120.98**	**317**		P		**PKPdf**	17 30 17.3	-1.5	
MCWV	**Mont Chateau**	**120.98**	**45**		P		PKiKP	17 30 19.3	+0.3	
	baz=294,SNR=8.3									
MCWV	**Mont Chateau**	**120.98**	**45**		P		**PKPdf**	17 30 18.3	-0.5	
	baz=294,SNR=8.3									
NRS	**Narsarsuaq**	**120.98**	**10**	*i*	P		PKiKP	17 30 19.2	+0.9	
SANT	**Santorini**	**121.01**	**311**	⇑	P		PKiKP	17 30 20.4	+1.2	
PVCC	**Panska Ves**	**121.04**	**330**	*e*	PKIKP		PKiKP	17 30 18.8	0.0	
PVCC	**Panska Ves**	**121.04**	**330**	*e*	PKPDF		PKiKP	17 30 18.8	0.0	
PVCC				*ex*			x	17 30 23.5		
HORT	**Hortiatis**	**121.08**	**316**		P		**PKPdf**	17 30 17.9	-1.2	
FRGS	**Fruska Gora**	**121.12**	**322**	⇑	P		PKiKP	17 30 20.1	+1.0	
FRGS	**Fruska Gora**	**121.12**	**322**	*e*	P		**PKPdf**	17 30 18.4	-0.6	
BRG	**Berggiesshubel**	**121.14**	**330**	*i*	PKP		PKiKP	17 30 19.8	+0.8	
BRG					Amp			17 30 21.5		
	comp=Z,14nm,0.7s									
BRG				*i*	x		x	17 30 24.4		
BRG					Amp			17 30 25.7		
	comp=Z,116nm,1.1s									
BRG				*ex*			x	17 30 42.0		
BRG					Amp			17 30 42.6		
	comp=Z,10nm,0.7s									
BRG					PP		**PP**	17 31 51.8	-2.1	
BRG					Amp			17 31 54.4		
	comp=Z,14nm,1.2s									
BRG	**Berggiesshubel**	**121.14**	**330**	*i*	PKIKP		PKiKP	17 30 19.7	+0.8	
BRG								17 31 51.8		
BRG					pmax		pmax			
	comp=Z,14nm,0.7s									
BRG					pmax		pmax			
	comp=Z,14nm,1.2s									
VAY	**Valandovo**	**121.14**	**317**	*i*	P		PKiKP	17 30 22.9	+3.7	
HODGE	**Hodges**	**121.15**	**52**		P		PKiKP	17 30 20.5	+1.0	
	baz=289,SNR=49									
MORH	**Mrgy, Hungar**	**121.28**	**324**	⇓	P		PKiKP	17 30 21.2	+1.9	
MORH	**Mrgy, Hungar**	**121.28**	**324**	⇑	P		**PKKPab**	17 40 23.5	-0.3	
MORH	**Mrgy, Hungar**	**121.28**	**324**	*e*	P		**PKPdf**	17 30 18.9	-0.3	
MORH	**Mrgy, Hungar**	**121.28**	**324**		PKP		**PKPdf**	17 30 19.1	0.0	
PAULI	**Pauline**	**121.30**	**51**		P		PKiKP	17 30 20.2	+0.5	
	baz=290,SNR=19									
PLCA	**Paso Flores**	**121.31**	**143**		PKP		**PKPdf**	17 30 17.8	-1.8	
	comp=Z,16nm,0.5s,baz=230,slow=1.6,SNR=55									
PLCA					PKKPbc		**PKKPbc**	17 40 21.6	-2.0	
	comp=Z,1.8nm,0.8s,baz=63,slow=4.0,SNR=2.0									
PLCA	**Paso Flores**	**121.31**	**143**				**PKPdf**	17 30 18.2	-1.4	
PLCA	**Paso Flores**	**121.31**	**143**		PKIKP		**PKPdf**	17 30 18.2	-1.4	
PLCA	**Paso Flores**	**121.31**	**143**	*e*	P		**PKPdf**	17 30 18.6	-0.9	
TREC	**Trest**	**121.31**	**328**	*e*	PKIKP		PKiKP	17 30 20.2	+0.8	
TREC	**Trest**	**121.31**	**328**	*e*	PKPDF		PKiKP	17 30 20.2	+0.8	
TREC				*ex*			x	17 30 24.3		
CLL	**Collm**	**121.32**	**331**				**PKPdf**	17 30 18.3	-0.8	
CLL	**Collm**	**121.32**	**331**	*i*	PKIKP		PKiKP	17 30 24.5	+5.2	
CLL					pmax		pmax			
	comp=Z,131nm,0.7s									
CLL	**Collm**	**121.32**	**331**	*e*	PKPdf		**PKPdf**	17 30 19.0	-0.1	
CLL				*i*	PKPdf(2)			17 30 24.1		
	comp=Z,131nm,0.7s									
CLL					*e*PP		**PP**	17 31 53.0	-2.1	
CLL					*e*PP(2)			17 32 00.0		
CLL					*e*SKSac		**SKSac**	17 36 48.0	+4.9	
CLL				*e*	PKKPbc		**PKKPab**	17 40 23.0	-0.6	
	comp=Z,12nm,1.4s									
CLL				*i*	PKKPab		**PKKPbc**	17 40 26.5	+2.7	
	comp=Z,8.0nm,0.9s									
CLL				*e*	PKKSbc		PKKSbc	17 44 12.0	-1.8	
CLL				*e*	SS		SS	17 48 12.0	+13	
R55A	**Marlinton**	**121.33**	**47**		P		PKiKP	17 30 20.6	+0.8	
	baz=293,SNR=28									
R55A					P		PKiKP	17 30 20.6	+0.8	
	baz=293,SNR=28									
TIH	**Tihany**	**121.35**	**325**		PKP		PKiKP	17 30 23.8	+4.4	
PRU	**Pruhonice**	**121.38**	**329**	*e*	PKIKP		PKiKP	17 30 20.2	+0.8	
PRU	**Pruhonice**	**121.38**	**329**	*e*	PKPDF		PKiKP	17 30 20.2	+0.8	
PRU				*ex*			x	17 30 23.1		
PRU				*e*	PKKP		**PKKPab**	17 40 23.0	-0.4	
EGYH	**Egyhazaskeszo**	**121.39**	**326**		PKP		PKiKP	17 30 24.5	+5.0	
MPLH	**Magyarpolny**	**121.40**	**325**		PKP		PKiKP	17 30 20.1	+0.5	
GRG	**Griva**	**121.41**	**317**		P		**PKPdf**	17 30 17.4	-2.3	
V55A	**Taylorsville**	**121.41**	**50**		P		PKiKP	17 30 21.0	+1.0	
	baz=291,SNR=19									
V55A					P		PKiKP	17 30 21.0	+1.0	
	baz=291,SNR=19									
J56A	**Wolcott**	**121.42**	**40**		P		PKiKP	17 30 20.2	+0.5	
	baz=298,SNR=11									
J56A					P		PKiKP	17 30 20.2	+0.5	
	baz=298,SNR=11									
L56A	**Greenwood**	**121.49**	**42**		P		**PKPdf**	17 30 19.3	-0.5	
	baz=297,SNR=16									
L56A					P		**PKPdf**	17 30 19.3	-0.5	
	baz=297,SNR=16									
BLA	**Blacksburg**	**121.52**	**48**		P		PKiKP	17 30 20.7	+0.5	
	baz=292,SNR=18									
BLA	**Blacksburg**	**121.52**	**48**		P		**PKPdf**	17 30 19.5	-0.5	
	baz=292									
XOR	**Xorichti**	**121.53**	**315**		P		**PKPdf**	17 30 16.2	-3.7	
DIVS	**Divibare**	**121.54**	**321**	*e*	P		PKiKP	17 30 20.6	+0.5	
KMSC	**Kings Mountain**	**121.57**	**50**		P		PKiKP	17 30 20.5	+0.3	
	baz=290,SNR=19									
KMSC	**Kings Mountain**	**121.57**	**50**		P		**PKPdf**	17 30 20.1	0.0	
	baz=290									
TEKS	**Tekeris**	**121.60**	**322**	*e*	P		**PKPdf**	17 30 19.3	-0.6	
SKO	**Skopje**	**121.61**	**318**	*i*	P		PKiKP	17 30 24.6	+4.4	
KOVH	**Kovagototos**	**121.67**	**324**		PKP		PKiKP	17 30 20.3	+0.2	
	baz=297,SNR=6.9									
SOP	**Sopron**	**121.67**	**326**		PKP		PKiKP	17 30 24.7	+4.6	
Q56A	**Snyder Ridge,**	**121.70**	**45**		P		PKiKP	17 30 21.0	+0.5	
	baz=294,SNR=16									
Q56A					P		PKiKP	17 30 21.0	+0.5	
	baz=294,SNR=16									
LIT	**Litokhoron**	**121.72**	**316**		P		**PKPdf**	17 30 18.3	-2.0	
RONA	**Rosalia, Austr**	**121.81**	**326**	*i*	P		**PKPdf**	17 30 21.0	+0.6	
	comp=Z,5.9nm,0.8s,SNR=51									
RONA				*e*	P		**PKKPab**	17 40 19.9	-1.7	
	comp=Z,3.5nm,1.0s									
IDI	**Anoyia**	**121.82**	**310**	⇑	P		PKiKP	17 30 22.0	+1.1	
IDI	**Anoyia**	**121.82**	**310**	⇑	P		**PKKPab**	17 40 26.5	+4.7	
IDI	**Anoyia**	**121.82**	**310**		P		PKiKP	17 30 21.3	+0.5	
WCNY	**West Carthage**	**121.84**	**39**		P		PKiKP	17 30 20.9	+0.4	
	baz=300,SNR=12									
U56A	**King**	**121.86**	**49**		P		**PKPdf**	17 30 20.7	+0.1	
	baz=292,SNR=6.6									
U56A					P		**PKPdf**	17 30 20.7	+0.1	
	baz=292,SNR=6.6									
K57A	**Scipio Center**	**121.89**	**41**		P		PKiKP	17 30 20.6	-0.1	
	baz=298,SNR=12									
J57A	**Williamstown**	**121.90**	**40**		P		PKiKP	17 30 21.3	+0.6	
	baz=299,SNR=9.4									
J57A					P		PKiKP	17 30 21.3	+0.6	
	baz=299,SNR=9.4									
CONA	**Conrad Observa**	**121.91**	**327**	*i*	P		PKiKP	17 30 21.4	+0.7	
	comp=Z,4.6nm,0.6s,SNR=37									
CONA				*e*	P		**PKKPab**	17 40 20.0	-1.2	
	comp=Z,5.2nm,0.6s									

BIOA eP **PKKPab** 17 40 15.2 -0.2
comp=Z,4.3nm,0.8s,SNR=12
comp=Z,11nm,1.1s

TREB Trebinje 123.26 320 eP **PKiKP** 17 30 23.9 +0.5
HCNY Howe Caverns 123.27 40 P **PKiKP** 17 30 28.3 +4.9
baz=300,SNR=5.8
Y58A Scranton 123.29 51 P **PKiKP** 17 30 27.4 +3.7
baz=291,SNR=7.4
Y58A P **PKiKP** 17 30 27.4 +3.7
baz=291,SNR=7.4
RLS Riolos of Patr 123.30 314 P **PKiKP** 17 30 24.1 +0.5
SRKY Kupres RS 123.30 322 eP **PKiKP** 17 30 26.8 +3.2
HCY Herceg Novi 123.31 320 eP **PKPdf** 17 30 22.8 -0.4
CBN Corbin Frederi 123.34 46 P **PKiKP** 17 30 26.9 +3.2
baz=295,SNR=5.3
CRES Cresnjev 123.35 325 eP **PKPdf** 17 30 22.9 -0.3
ACCN Adirondack Com 123.38 39 P **PKiKP** 17 30 27.0 +3.3
baz=302,SNR=8.7
IGT Igoumenitsa 123.46 316 P **PKPdf** 17 30 23.2 -0.4
OBKA Obir 123.47 326 eP **PKiKP** 17 30 23.8 0.0
comp=Z,34nm,0.9s,SNR=12
OBKA eP **PKKPab** 17 40 15.0 +0.4
comp=Z,10.0nm,1.4s
MCVT Middlebury Col 123.50 38 P **PKiKP** 17 30 24.7 +0.8
baz=302,SNR=14
LKD2 Lefkada island 123.56 315 P **PKPdf** 17 30 22.4 -1.5
NYDR Nydri-Lefkada 123.56 315 P **PKPdf** 17 30 22.6 -1.2
STON Ston 123.60 321 eP **PKPdf** 17 30 23.7 0.0
DWPF Disney Wildern 123.64 58 P **PKPdf** 17 30 22.8 -1.4
baz=286
BOJS Bojanci 123.65 325 i **PKiKP** 17 30 28.9 +4.8
T59A Double "B" Far 123.72 47 P **PKiKP** 17 30 25.2 +0.8
baz=294,SNR=24
T59A P **PKiKP** 17 30 25.2 +0.8
baz=294,SNR=24
LJU Ljubljana 123.75 325 eP **PKPdf** 17 30 24.1 +0.1
KBA Koelnbreinsper 123.79 327 i P **PKiKP** 17 30 25.2 +0.6
comp=Z,74nm,1.0s,SNR=19
KBA eP **PKKPab** 17 40 13.0 -0.2
comp=Z,4.6nm,0.8s
U59A Littleton 123.79 48 P **PKiKP** 17 30 24.8 +0.2
baz=294,SNR=6.4
U59A P **PKiKP** 17 30 24.8 +0.2
baz=294,SNR=6.4
GEDE Greenville 123.85 43 P **PKiKP** 17 30 25.5 +0.9
baz=298,SNR=14
Y59A Loris 123.87 51 P **PKiKP** 17 30 27.1 +2.3
baz=291,SNR=6.2
Y59A P **PKiKP** 17 30 27.1 +2.3
baz=291,SNR=6.2
CRNS Crni Vrh 123.88 326 e **PKiKP** 17 30 28.6 +4.0
MYKA Terra Mystica 123.90 326 eP **PKPdf** 17 30 24.4 +0.1
comp=Z,49nm,1.1s,SNR=16
NPNY Mohonk Preserv 123.91 41 P **PKiKP** 17 30 25.3 +0.6
baz=300,SNR=12
ODNJ Ogdensburg 123.94 41 P **PKiKP** 17 30 25.2 +0.4
baz=299,SNR=13
D62A Allapoint, All 123.98 33 P **PKiKP** 17 30 24.8 +0.2
baz=308,SNR=15
D62A P **PKiKP** 17 30 24.8 +0.2
baz=308,SNR=15
TUPA Temple Univers 123.99 43 P **PKiKP** 17 30 28.7 +3.8
baz=298,SNR=5.9
CEY Cerknica 123.99 325 eP **PKPdf** 17 30 23.0 -1.5
LBNH Lisbon 123.99 37 P **PKiKP** 17 30 25.6 +0.8
baz=304,SNR=14
LBNH Lisbon 123.99 37 P **PKPdf** 17 30 24.2 -0.3
baz=304,SNR=14
E62A Clayton Lake 124.00 33 P **PKiKP** 17 30 28.9 +4.1
baz=307,SNR=13
E62A P **PKiKP** 17 30 28.9 +4.1
baz=307,SNR=13
J61A Chester 124.09 38 P **PKiKP** 17 30 25.8 +0.8
baz=302,SNR=13
J61A P **PKiKP** 17 30 25.8 +0.8
baz=302,SNR=13
BRNJ Basking Ridge 124.16 42 P **PKiKP** 17 30 29.9 +4.7
baz=299,SNR=11
CNNC Cliffs of the 124.16 49 P **PKiKP** 17 30 29.6 +4.2
baz=293,SNR=6.9
BRNY Black Rk. Fore 124.16 41 P **PKiKP** 17 30 30.1 +4.9
baz=300,SNR=7.0
F62A Pittston Farm, 124.19 34 P **PKiKP** 17 30 25.6 +0.5
baz=306
F62A P **PKiKP** 17 30 25.6 +0.5
baz=306
PANJ Princeton 124.21 42 P **PKiKP** 17 30 29.5 +4.2
baz=299,SNR=7.8
G62A West of Eustis 124.26 35 P **PKiKP** 17 30 30.2 +4.9
baz=306,SNR=9.4
G62A P **PKiKP** 17 30 30.2 +4.9
baz=306,SNR=9.4
H62A Milan 124.26 36 P **PKiKP** 17 30 30.2 +4.9
baz=305,SNR=8.5
H62A P **PKiKP** 17 30 30.2 +4.9
baz=305,SNR=8.5
SKDS Skadanscina 124.34 325 eP **PKPdf** 17 30 24.6 -0.5
PAL Palisades 124.44 41 P **PKiKP** 17 30 30.5 +4.8
baz=300,SNR=12
PAL Palisades 124.44 41 P **PKPdf** 17 30 25.0 -0.4
baz=300
ABTA Abfaltersbach 124.45 327 eP **PKiKP** 17 30 25.6 -0.1
comp=Z,143nm,1.0s,SNR=41
ABTA eP **PKKPbc** 17 40 11.1 -0.7
comp=Z,13nm,0.7s
L61B Northampton 124.49 39 P **PKiKP** 17 30 30.3 +4.5
baz=302,SNR=12
L61B Northampton 124.49 39 P **PKPdf** 17 30 24.6 -0.9
baz=302,SNR=12
FOR Fordham 124.52 41 P **PKiKP** 17 30 30.4 +4.5
baz=300
I62A Tamworth 124.55 37 P **PKiKP** 17 30 30.6 +4.8
baz=304,SNR=10
I62A P **PKiKP** 17 30 30.6 +4.8
baz=304,SNR=10
WATA Walderalm 124.58 328 i P **PKiKP** 17 30 27.3 +1.2
comp=Z,146nm,1.1s,SNR=38
WTTA Wattenberg 124.59 328 i P **PKiKP** 17 30 26.5 +0.3
comp=Z,211nm,0.9s,SNR=66
WTTA eP **PKKPbc** 17 40 11.2 -0.2
comp=Z,7.4nm,0.7s
STAL STALIGIAL 124.64 327 **PKPdf** 17 30 24.5 -1.2
K62A Royalston 124.66 39 P **PKiKP** 17 30 30.8 +4.6
baz=302,SNR=9.7
K62A P **PKiKP** 17 30 30.8 +4.6
baz=302,SNR=9.7
E63A Oxbow 124.72 33 P **PKiKP** 17 30 30.0 +3.8
baz=308,SNR=10
E63A P **PKiKP** 17 30 30.0 +3.8
baz=308,SNR=10
F63A Nahmakanta, Br 124.78 34 P **PKiKP** 17 30 30.9 +4.5
baz=307,SNR=9.6
F63A P **PKiKP** 17 30 30.9 +4.5
baz=307,SNR=9.6
MOTA Mooselm 124.82 328 i P **PKiKP** 17 30 26.6 0.0
comp=Z,164nm,0.7s,SNR=66
MOTA eP **PKKPab** 17 40 09.5 +0.6
comp=Z,6.4nm,1.1s
SQTA Sankt Quirin 124.84 328 i P **PKiKP** 17 30 26.9 +0.3
comp=Z,128nm,0.7s,SNR=56
MT01 Popeta 124.86 136 **PKPdf** 17 30 25.7 -0.8
I63A Otisfield 124.90 36 P **PKiKP** 17 30 31.5 +4.9
baz=305
I63A P **PKiKP** 17 30 31.5 +4.9
baz=305
RETA Reutte 124.90 329 eP **PKiKP** 17 30 26.9 +0.3
comp=Z,53nm,0.8s,SNR=13
RETA eP **PKKPab** 17 40 08.1 -0.2
comp=Z,4.4nm,0.9s
PKME Peaks-Kenny Pk 124.94 35 P **PKiKP** 17 30 31.1 +4.5
baz=307,SNR=12
PKME Peaks-Kenny Pk 124.94 35 P **PKPdf** 17 30 25.0 -1.2
baz=307,SNR=12
MEM Membach 125.01 334 dPKiKP **PKPdf** 17 30 26.2 0.0
BEBN Eben Emael 125.02 335 dPKiKP **PKiKP** 17 30 29.1 +2.5
MT09 Talagante 125.09 136 **PKPdf** 17 30 26.9 -0.3
F64A Sherman 125.11 34 P **PKiKP** 17 30 31.1 +4.1
baz=308,SNR=14
F64A P **PKiKP** 17 30 31.1 +4.1
baz=308,SNR=14
WVL Waterville 125.14 36 P **PKiKP** 17 30 31.3 +4.3
baz=306,SNR=8.7
HRV Adam Dziewonsk 125.16 39 **PKPdf** 17 30 24.1 -2.7
HRV Adam Dziewonsk 125.16 39 PKIKP **PKPdf** 17 30 24.1 -2.7
HRV Adam Dziewonsk 125.16 39 P **PKiKP** 17 30 31.8 +4.6
baz=303,SNR=6.3
HRV Adam Dziewonsk 125.16 39 P **PKPdf** 17 30 25.8 -1.0
baz=303
BHOU Houvegnez 125.20 334 dPKiKP **PKiKP** 17 30 27.8 +0.8
BSTI Sart Tilman 125.22 334 dPKiKP **PKiKP** 17 30 27.5 +0.5
FETA Feichten 125.22 328 eP **PKPdf** 17 30 26.8 -0.1
comp=Z,18nm,0.7s,SNR=63
FETA eP **PKKPab** 17 40 04.6 -2.6
comp=Z,10nm,1.3s
UNH University of 125.27 38 P **PKiKP** 17 30 31.5 +4.2
baz=304,SNR=7.3
CTI Castel Tesino 125.35 327 **PKPdf** 17 30 26.4 -0.8
CTI Castel Tesino 125.35 327 PKIKP **PKPdf** 17 30 26.4 -0.8
MATE Matera 125.37 319 ⇑P **PKiKP** 17 30 29.4 +1.8
SGRT San Giovanni R 125.42 321 **PKPdf** 17 30 26.4 -1.0
M63A Gales Ferry 125.44 40 P **PKiKP** 17 30 32.5 +4.8
baz=302,SNR=5.4
M63A P **PKiKP** 17 30 32.5 +4.8
baz=302,SNR=5.4
BCLA Clavier 125.46 334 dPKiKP **PKPdf** 17 30 27.2 +0.1
DAVA Damuels 125.49 329 eP **PKiKP** 17 30 28.9 +1.0
comp=Z,120nm,0.9s,SNR=14
DAVA eP **PKKPab** 17 40 06.3 +0.3
comp=Z,12nm,1.2s
ROC1 El Roble 125.51 135 **PKPdf** 17 30 27.5 -0.6
BFO Black Forest 125.56 331 **PKPdf** 17 30 24.7 -2.7
BFO Black Forest 125.56 331 PKIKP **PKPdf** 17 30 24.7 -2.7
LMEL Las Melosas 125.59 137 **PKPdf** 17 30 26.0 -2.1
WLF Walferdange 125.64 333 **PKPdf** 17 30 26.3 -1.2
WLF Walferdange 125.64 333 PKIKP **PKPdf** 17 30 26.3 -1.2
WLF Walferdange 125.64 333 dPKiKP **PKiKP** 17 30 27.8 -0.1
PEL Peldehue 125.65 136 **PKPdf** 17 30 25.3 -2.8
PEL Peldehue 125.65 136 PKIKP **PKPdf** 17 30 25.3 -2.8
RCHB Rochefort 125.68 334 dPKiKP **PKiKP** 17 30 27.9 0.0
BMRD Maredsous 125.77 335 dPKiKP **PKPdf** 17 30 27.4 -0.3
DAVOX Davos/Dischmat 125.82 329 PKKPbc PKKPbc 17 40 06.4 -0.1
comp=Z,72nm,0.7s,baz=223,slow=15,SNR=4.1
SNF Seneffe 125.82 335 dPKiKP **PKiKP** 17 30 28.3 +0.1
L64A Middleborough 125.92 39 P **PKiKP** 17 30 32.6 +4.0
baz=303,SNR=7.0
L64A P **PKiKP** 17 30 32.6 +4.0
baz=303,SNR=7.0
G65A Princeton 125.95 34 P **PKiKP** 17 30 32.9 +4.3
baz=308,SNR=12
G65A P **PKiKP** 17 30 32.9 +4.3
baz=308,SNR=12
VA03 San Esteban 125.96 135 **PKPdf** 17 30 26.7 -2.0
DOU Dourbes 126.00 335 dPKiKP **PKiKP** 17 30 28.6 +0.1
TIP Timpagrande 126.07 317 ⇑P **PKiKP** 17 30 33.0 +3.9
TIP Timpagrande 126.07 317 **PKPdf** 17 30 26.8 -2.0
ECH Echery 126.20 331 **PKPdf** 17 30 26.8 -1.8
ECH Echery 126.20 331 PKIKP **PKPdf** 17 30 26.8 -1.8
CUC Castrocucco 126.29 319 **PKPdf** 17 30 27.5 -1.6
CO03 El Pedregal 126.90 133 **PKPdf** 17 30 28.6 -2.0
GMAL Guarumal, Vera 126.91 83 eP **PKiKP** 17 30 32.0 +0.5
SENIN Lac Senin/Sane 127.42 330 PKPpre 17 30 22.3
CO01 Juntas del Tor 127.79 133 **PKPdf** 17 30 30.6 -1.9
LCO Las Campanas 127.85 131 **PKPdf** 17 30 29.2 -3.5
LCO Las Campanas 127.85 131 PKIKP **PKPdf** 17 30 29.2 -3.5
ZON Zonda 127.95 135 **PKPdf** 17 30 30.9 -1.6
ZON Zonda 127.95 135 PKIKP **PKPdf** 17 30 30.9 -1.6
UPA Univ. de Panam 128.54 81 eP **PKiKP** 17 30 34.4 -0.3
CLF Chambon-Foret 128.57 334 PKPpre 17 30 22.5
CLF PKPdf **PKPdf** 17 30 32.4 -0.7
ATAH Atahualpa 128.63 102 PKP **PKPdf** 17 30 33.4 -1.4
comp=Z,7.2nm,0.6s,baz=259,slow=1.0,SNR=4.9
ATAH SKPbc SKPbc 17 33 23.8
comp=Z,38nm,0.9s,baz=188,slow=2.5,SNR=7.6
BNI Bardonecchia 128.64 329 PKPpre 17 30 24.4
BNI Bardonecchia 128.64 329 PKIKP PKPpre 17 30 24.4
RAFF Raffo Rosso 128.68 316 **PKPdf** 17 30 29.5 -4.2
NNA Nana 129.09 108 PKP **PKiKP** 17 30 35.6 -0.3
comp=Z,105nm,1.1s,baz=231,slow=5.4,SNR=7.1
CLTB Caltabellotta 129.28 317 **PKPdf** 17 30 31.3 -3.6
OTAV Otavalo 129.51 93 ⇓PKIKP PKPpre 17 30 27.9
OTAV Otavalo 129.51 93 eP **PKPdf** 17 30 36.6 +0.1
TSUM Tsumeb 129.80 242 **PKPdf** 17 30 33.6 -2.8
GCUF Volcan Galeras 130.68 91 eP **PKiKP** 17 30 40.7 +1.0
VSL Villasalto 130.69 322 **PKPdf** 17 30 33.9 -3.5
CAPC Capurgana 130.72 82 eP **PKiKP** 17 30 39.1 0.0
BBAC Balboa, Cauca 130.82 90 eP **PKPdf** 17 30 39.1 +0.4
POPC Popayan, Colom 131.41 90 eP **PKPdf** 17 30 40.2 +0.4
SOTA Rioblanco 131.46 90 eP **PKiKP** 17 30 43.5 +2.3
PB15 IPOC Station P 131.66 125 **PKPdf** 17 30 37.4 -2.5
YOTC Yotoco, Valle 131.79 88 eP **PKPdf** 17 30 36.8 -3.6
DBBC Dabeiba 131.91 84 eP **PKPdf** 17 30 41.0 +0.5
FLOC Florencia 132.39 91 eP **PKPdf** 17 30 39.3 -2.0
LVC Limon Verde 132.39 125 PKP **PKPdf** 17 30 38.5 -3.0
comp=Z,7.4nm,0.7s,baz=274,slow=2.9,SNR=4.5
LVC SKP 17 33 37.7
comp=Z,13nm,0.6s,baz=252,slow=2.9,SNR=8.9
LVC Limon Verde 132.39 125 **SKPab** 17 33 35.5 +0.3
GUY2C Guyana, Caldas 132.77 86 eP PKPpre 17 30 32.8
SJCC San Jacinto, C 132.78 80 **PKPdf** 17 30 39.9 -2.2
SJCC San Jacinto, C 132.78 80 eP **PKiKP** 17 30 42.9 -0.4
ORTC Ortega, Tolima 132.88 88 eP **PKPdf** 17 30 36.9 -5.4
KEST Kesra 132.89 318 PKhKP PKPpre 17 30 31.3
comp=Z,6.4nm,0.8s,baz=291,slow=2.7,SNR=6.3
KEST SKP 17 33 37.5
comp=Z,33nm,0.8s,baz=355,slow=2.1,SNR=8.7
KEST Kesra 132.89 318 PKPpre 17 30 31.0
KEST Kesra 132.89 318 P **PKiKP** 17 30 48.2 +5.2
SNR=11
PB11 IPOC Station P 133.03 121 PKPpre 17 30 30.7
ZARC Zaragoza, Cauc 133.23 83 PKPpre 17 30 32.6
ZARC Zaragoza, Cauc 133.23 83 eP **PKPdf** 17 30 37.1 -5.8
PTBC PUERTO BERRIO 133.66 84 eP **PKPdf** 17 30 42.3 -1.4
PB16 IPOC Station P 133.74 119 PKPpre 17 30 31.8
ROSC El Rosal 133.81 87 PKhKP PKPpre 17 30 37.6
comp=Z,36nm,0.6s,baz=138,slow=18,SNR=4.4
ROSC SKP 17 33 40.6
comp=Z,27nm,0.8s,baz=163,slow=9.2,SNR=4.5
ROSC El Rosal 133.81 87 **PKPdf** 17 30 39.8 -4.7
ROSC SKPbc 17 33 37.9 -0.8
ROSC El Rosal 133.81 87 PKIKP **PKPdf** 17 30 39.8 -4.7
ROSC El Rosal 133.81 87 eP **PKPdf** 17 30 41.7 -2.8
SPBC San Pablo de B 134.06 86 eP **PKPdf** 17 30 42.6 -2.0
VILC Villavicencio, 134.43 88 eP **PKPdf** 17 30 45.3 -0.1
BARC Barichara 134.93 84 eP **PKPdf** 17 30 46.4 +0.1
SDDR Presa de Saban 135.03 67 **PKPdf** 17 30 42.9 -3.3
RUSC La Rusia 135.04 85 eP **PKPdf** 17 30 41.7 -5.2
LPAZ La Paz 135.75 118 PKhKP PKPpre 17 30 39.0
comp=Z,7.0nm,0.6s,baz=246,slow=2.8,SNR=16
LPAZ SKP 17 33 46.5
comp=Z,18nm,0.7s,baz=291,slow=0.9,SNR=5.4
LPAZ La Paz 135.75 118 PKPpre 17 30 35.1
LPAZ **SKPbc** 17 33 40.3 -4.7
LPAZ La Paz 135.75 118 PKHKP PKPpre 17 30 35.1
PLTB Pedras Altas 137.32 147 PKPpre 17 30 38.8
SDV Santo Domingo 137.33 81 PKhKP PKPpre 17 30 44.3
comp=Z,23nm,0.6s,baz=270,slow=3.3,SNR=7.5
SDV Santo Domingo 137.33 81 **PKPdf** 17 30 46.2 -4.5
PBRG Braganca 137.36 336 ePKPdf **PKPdf** 17 30 47.8 -2.1
PBRG eSKPab **SKPab** 17 33 54.9 -1.1
PGAV Gavieira, Arco 137.81 338 ePKPdf **PKiKP** 17 30 52.0 -0.9
PGAV eSKPab **SKPab** 17 33 56.4 -1.6
ESBB Sonseca Array 137.90 332 **PKPdf** 17 30 47.4 -3.6
ESDC Sonseca Array 137.90 332 PKhKP PKPpre 17 30 40.8
comp=Z,2.5nm,1.0s,baz=17,slow=2.6,SNR=6.9
ESDC SKPbc **SKPbc** 17 33 44.5 -5.4
comp=Z,6.0nm,0.9s,baz=28,slow=7.4,SNR=6.3
ESDC SKPab **SKiKP** 17 33 56.1 +2.2
comp=Z,15nm,1.1s,baz=22,slow=3.1,SNR=8.8
ESDC Sonseca Array 137.90 332 PKPpre 17 30 39.9
PCAB Cabril 137.94 338 ePKPdf **PKiKP** 17 30 54.8 +1.8
PCAB eSKPab **SKPab** 17 33 56.9 -1.6
MVO Moncorvo 138.01 336 ePKPdf **PKPdf** 17 30 49.2 -1.9
MVO eSKPab **SKPab** 17 33 57.0 -1.9
POLO Lamas de Olo 138.14 337 ePKPdf **PKPdf** 17 30 50.5 -0.9
POLO eSKPab **SKPab** 17 33 57.7 -1.8
PVRL Vila Real 138.19 337 ePKPdf **PKPdf** 17 30 48.9 -2.5
PVRL eSKPab **SKPab** 17 33 57.8 -1.9
PVIS Viseu 138.74 337 ePKPdf **PKPdf** 17 30 50.3 -2.2
PVIS eSKPab **SKPab** 17 33 59.5 -2.6
MTE Manteigas 138.87 336 ePKPdf **PKPdf** 17 30 52.4 -0.3
MTE eSKPab **SKPab** 17 33 59.9 -2.8
MTE Manteigas 138.87 336 PKPpre 17 30 42.0
CPUP Villa Florida 138.98 138 PKhKP PKPpre 17 30 42.5
comp=Z,12nm,0.8s,baz=231,slow=2.7,SNR=15
CPUP SKPbc **SKPbc** 17 33 52.1 -1.1
comp=Z,4.7nm,0.8s,baz=250,slow=3.0,SNR=1.8
CPUP Villa Florida 138.98 138 PKPpre 17 30 43.5
CRPR Cabo Rojo, PR 139.11 66 **PKPdf** 17 30 50.9 -2.7
MLPR Magueyes Islan 139.18 66 **PKPdf** 17 30 49.8 -4.0
PCBR Castelo Branco 139.31 336 ePKPdf **PKPdf** 17 30 52.5 -1.0
PCBR eSKPab **SKPab** 17 34 00.8 -3.8
AOPR Arecibo Observ 139.34 66 **PKPdf** 17 30 50.2 -3.9
PCAS Casmilo, Conde 139.55 337 ePKPdf **PKiKP** 17 30 56.7 +0.4
PCAS eSKPab **SKiKP** 17 34 01.3 +4.1
OBIP Obispado Ponce 139.56 66 **PKPdf** 17 30 50.8 -3.7
CELP Cerrillos 139.57 66 **PKPdf** 17 30 51.1 -3.4
PMRV Marv??o 139.62 335 ePKPdf **PKPdf** 17 30 50.6 -3.5
PMRV eSKPab **SKiKP** 17 34 01.7 +4.3
BAUV El Baul 139.88 80 PKPpre 17 30 46.9
SJG San Juan 139.95 66 PKhKP PKPpre 17 30 47.1
comp=Z,6.9nm,0.4s,baz=323,slow=23,SNR=0.5
SJG SKPbc **SKPbc** 17 33 55.3 -0.8
comp=Z,11nm,0.3s,baz=303,slow=21,SNR=1.7
SJG San Juan 139.95 66 PKPpre 17 30 46.7
SJG San Juan 139.95 66 PKHKP PKPpre 17 30 46.7
GCPR Guaynabo City 139.96 66 **PKPdf** 17 30 53.3 -1.9
PDPR Patillas Dam, 140.10 66 **PKPdf** 17 30 52.7 -2.7
PSBE So Bento 140.12 337 ePKPdf **PKPdf** 17 30 56.1 +1.1
PSBE eSKPab **SKiKP** 17 34 03.3 +4.8
CBYP Canovanas 140.17 66 **PKPdf** 17 30 53.6 -2.1
PESTR Estremoz 140.18 335 ePKPdf **PKPdf** 17 30 53.6 -1.5
PESTR Estremoz 140.18 335 **PKPdf** 17 30 52.1 -3.0
HUMP Col San Antoni 140.22 66 **PKPdf** 17 30 50.7 -4.9
PMTG Montargil 140.27 336 ePKPdf **PKPdf** 17 30 53.6 -1.6
PMTG eSKPab **SKiKP** 17 34 03.3 +4.6
EVO Evora 140.64 335 ePKPdf **PKPdf** 17 30 55.4 -0.5
EVO Evora 140.64 335 ePP **PP** 17 34 00.0 +1.3
PACT Alcochete 140.78 336 ePKPdf **PKiKP** 17 31 00.0 +1.2
PMAFR Mafra 140.80 337 ePKPdf **PKPdf** 17 30 57.0 +0.8
STVI Saint Thomas 140.97 65 **PKPdf** 17 30 52.7 -4.2
PBEJ Beja 141.00 334 ePKPdf **PKPdf** 17 30 54.3 -2.3
PBEJ Beja 141.00 334 ePP **PP** 17 34 01.4 +0.5
PNCL Nicolau / Gran 141.21 335 ePKPdf **PKPdf** 17 30 55.4 -1.5
PNCL Nicolau / Gran 141.21 335 ePP **PP** 17 34 03.9 +1.7
MESJ Messejana 141.31 335 ePKPdf **PKPdf** 17 30 55.5 -1.6
MESJ ePP **PP** 17 34 02.4 -0.3
MESJ Messejana 141.31 335 ePKPdf **PKPdf** 17 30 54.4 -2.7
MESJ Messejana 141.31 335 ePP **PP** 17 34 06.5 +3.7
PCVE Castro Verde 141.41 334 ePKPdf **PKPdf** 17 30 58.2 +0.9
PCVE Castro Verde 141.41 334 ePP **PP** 17 34 06.5 +3.1
PVAQ Vaqueiros 141.45 334 ePKPdf **PKPdf** 17 30 57.8 +0.4
PVAQ Vaqueiros 141.45 334 ePP **PP** 17 34 06.8 +3.1
ITAB Concordia 141.60 144 **PKPdf** 17 30 54.6 -3.4
PBDV Barranco-do-Ve 141.68 334 ePKPdf **PKPdf** 17 30 59.0 +1.1
PBDV Barranco-do-Ve 141.68 334 ePP **PP** 17 34 08.1 +3.0
PTEO Sao Teotonio 141.77 335 ePKPdf **PKPdf** 17 30 57.6 -0.3
PTEO Sao Teotonio 141.77 335 ePP **PP** 17 34 08.1 +2.5
MORF Marmelete 141.94 335 ePKPdf **PKPdf** 17 30 56.6 -1.8
MORF ePP **PP** 17 34 06.2 -0.4
MORF Marmelete 141.94 335 ePKPdf **PKPdf** 17 30 58.3 0.0
MORF Marmelete 141.94 335 ePP **PP** 17 34 07.0 +0.3
SIV San Ignacio 142.01 122 PKHKP PKPpre 17 30 52.4
comp=Z,24nm,0.6s,baz=246,slow=3.4,SNR=34
SIV SKPbc **SKPbc** 17 34 01.8 +0.3
comp=Z,29nm,1.1s,baz=213,slow=5.8,SNR=2.0
PFVI Vila Bisbo 142.16 335 ePKPdf **PKPdf** 17 30 57.8 -0.9
PFVI Vila Bisbo 142.16 335 ePP **PP** 17 34 08.6 +0.7
EKNA AfricaArray - 142.73 272 eP **PKPdf** 17 30 59.5 -0.9
SMRT St. Maarten 142.76 65 eP **PKPdf** 17 31 01.1 +0.9
SAML Samuel 142.84 110 PKPpre 17 30 55.8
SAML Samuel 142.84 110 PKHKP PKPpre 17 30 55.8
PTGB Pitanga 143.50 141 eP PKPab 17 30 58.1 -0.9
MDT Midelt 143.51 326 SKPbc **SKPbc** 17 34 04.2 -0.6
baz=34,slow=3.6
H07N1 FLORES T-PHASE 143.86 4 ePKP **PKiKP** 17 31 05.4 +0.2
MBFL Flemmings, Mon 143.94 66 eP PKPab 17 31 00.6 -0.1
MLYT Lee's Yard 143.97 66 eP **PKPdf** 17 31 04.1 +1.7
ANWB Willy Bob 144.04 64 eP **PKPdf** 17 31 03.2 +0.7
H07S1 FLORES T-PHASE 144.17 4 ePKP **PKiKP** 17 31 04.6 -1.3
BPA Boggy Peak 144.18 66 eP **PKPab** 17 31 01.3 -0.4
ANBD Bethesda, Anti 144.26 65 eP **PKPdf** 17 31 03.5 +0.7
TRCB Terra Rica 144.50 139 PKPbc 17 31 00.8 -2.0
SRBC Serra Branca 144.62 0 ePKP **PKiKP** 17 31 07.2 +0.4
ABD La Joyeuse, An 144.69 66 eP **PKPab** 17 31 05.3 +1.7
TBG Guadaloupe-3 144.73 67 eP **PKiKP** 17 31 06.9 -0.6
PAGU Agualva, Azore 144.88 359 ePKP **PKiKP** 17 31 08.3 +1.0
ROSA Rosais 144.94 0 ePKP **PKiKP** 17 31 06.7 -0.7
MDCT Cottage Hill, 144.96 68 eP **PKiKP** 17 31 08.2 +0.2
ADH Angra Heroismo 145.00 359 ePKP **PKiKP** 17 31 09.4 +1.9
PCED Cedros 145.03 1 ePKP **PKiKP** 17 31 08.1 +0.5
PMAN Manadas 145.03 0 ePKP **PKiKP** 17 31 07.0 -0.6
MAGL Barre de l'ile 145.03 67 eP **PKiKP** 17 31 06.3 +1.4
DSLB Salisbury 145.05 68 eP **PKiKP** 17 31 07.7 -0.6
CALA Caldeira 145.07 1 ePKP **PKiKP** 17 31 09.8 +2.0
MDN Morne-Daniel 145.11 68 eP **PKiKP** 17 31 07.3 -1.0
HOR Horta 145.13 1 ePKP **PKiKP** 17 31 08.8 +1.0
PICO Pico 145.16 1 ePKP **PKiKP** 17 31 07.7 -0.3
PPNO Prainha do Nor 145.19 0 ePKP **PKiKP** 17 31 09.9 +1.9
PCAN Candelaria 145.19 1 ePKP **PKiKP** 17 31 08.4 +0.4
PID Ribeirinha 145.22 0 ePKP **PKiKP** 17 31 07.2 -0.8
DLPL La Plaine 145.25 68 eP **PKiKP** 17 31 08.6 -0.1
FDF Fort de France 145.50 69 eP **PKPbc** 17 31 06.0 0.0
BIM Bigot 145.63 69 eP **PKPbc** 17 31 06.3 0.0
GRGR Grenville 145.63 74 eP **PKPbc** 17 31 07.1 -0.2
ILAM Ilet Lapin Mar 145.75 69 eP **PKPbc** 17 31 06.1 -0.5
SVB Belmont 145.77 72 **PKPdf** 17 31 03.8 -1.7
SVB Belmont 145.77 72 eP **PKPdf** 17 31 05.0 -0.6
PSET Sete Cidades 145.77 357 ePKP **PKiKP** 17 31 09.5 +0.3
GCMP Grenada, Carri 145.78 73 eP **PKPab** 17 31 07.6 -0.3
BART Pico Bartolome 145.78 356 ePKP **PKiKP** 17 31 09.8 +0.5
SVV Soufriere Volc 145.79 71 eP **PKPbc** 17 31 07.1 +0.3
GRON Grota Negra 145.81 356 ePKP **PKiKP** 17 31 10.7 +1.4
SLB Belfond 145.84 70 eP **PKPab** 17 31 08.1 0.0
PDA Ponta Delgada 145.84 357 ePKP **PKiKP** 17 31 10.2 +0.9
MPOM Morne Pois Mar 145.85 69 **PKPdf** 17 31 04.1 -1.5
MPOM Morne Pois Mar 145.85 69 eP **PKPdf** 17 31 05.9 +0.3
SLBI Saint Lucia, B 145.85 70 eP **PKPdf** 17 31 06.0 +0.4
MCLT Moule a Chique 145.96 71 eP **PKPbc** 17 31 07.5 +0.2
FRTB Fartura 146.05 143 eP **PKPdf** 17 31 04.3 -1.5
PCMB Pacaembu 146.24 139 eP **PKPdf** 17 31 06.1 -0.1
SALV Santo Antonio 146.53 126 eP **PKPdf** 17 31 05.5 -1.3
PSMN Pico do Norte, 146.54 356 ePKP **PKPab** 17 31 10.4 +0.2
PSMA Santa Maria 146.56 356 ePKP **PKPab** 17 31 10.4 +0.2
PET01 Itanhaem-SP 146.63 147 eP **PKPdf** 17 31 05.9 -0.8
MACA Manacapuru-AM 146.70 101 eP **PKPdf** 17 31 06.2 -1.0
TOSP Speyside 146.87 75 **PKPdf** 17 31 07.6 +0.3
TOSP Speyside 146.87 75 eP **PKPbc** 17 31 09.4 -0.4
BOAV Boa Vista 147.53 91 eP **PKPdf** 17 31 07.9 -0.6
PDRB Porto dos Gac 147.75 118 eP **PKPdf** 17 31 07.6 -1.2
VAO Valinhos 147.82 146 eP **PKPdf** 17 31 10.3 +1.5
RCLB Rio Claro- Sao 147.96 144 eP **PKPdf** 17 31 07.8 -1.3
ITRB Iturama 148.17 137 eP **PKPdf** 17 31 08.2 -1.2
PARB Paraibuna 148.28 148 eP **PKPdf** 17 31 08.9 -0.7
BB19B Bebedouro 148.38 141 eP **PKPdf** 17 31 08.6 -1.2
PMPST Porto Santo, M 148.60 341 ePKPab **PKiKP** 17 31 15.3 +0.2
PMPS Porto Santo 148.62 341 ePKPab **PKiKP** 17 31 15.9 +0.7
CLDB Colider 148.89 118 eP **PKPdf** 17 31 09.5 -1.3
TOA0 Torodi Ar. Sit 149.11 290 **PKPdf** 17 31 10.7 -0.3
TOA0 Torodi Ar. Sit 149.11 290 P **PKPbc** 17 31 13.3 -2.3
SNR=70
TORD Torodi Ar. Bea 149.11 290 PKPbc **PKPdf** 17 31 11.8 +0.8
comp=Z,37nm,1.0s,baz=39,slow=1.8,SNR=36
TORD Torodi Ar. Bea 149.11 290 **PKPdf** 17 31 09.8 -1.2
PMOZ Porto Moniz, M 149.11 342 ePKPab **PKPab** 17 31 18.8 -2.0
PMOZ Porto Moniz, M 149.11 342 **PKiKP** 17 31 17.4 +1.1
PMAR Madeira 149.12 342 ePKPab **PKPab** 17 31 19.0 -1.9
ESAR Angra dos Reis 149.16 149 eP **PKPdf** 17 31 09.9 -1.0
FUL Funchal 149.18 341 ePKPab **PKPab** 17 31 20.1 -0.8
MAN01 Angra dos Reis 149.53 150 eP **PKPdf** 17 31 10.3 -1.3
VAS01 Vassouras-RJ 150.28 150 eP **PKPdf** 17 31 11.2 -

NAN01	Guarapari, ES	155.67	151	*e*P		PKPdf	17 31 19.1	-1.5	
MCPB	Macapa, AP	155.68	99	*e*P		PKPdf	17 31 19.2	-1.5	
PRPB	Parauapebas	156.22	114	*e*P		PKPdf	17 31 20.3	-1.1	
KIC	Kosan Boka	156.63	278	*e*PKP1		PKPdf	17 31 25.5	+3.5	
	comp=Z,92nm,0.9s								
DBIC	Dimbokro	156.71	279	PKP		PKPdf	17 31 21.6	-0.4	
	comp=Z,25nm,1.2s,baz=36,slow=2.3,SNR=3.8								
DBIC				PKPab		PKPab	17 31 53.5	0.0	
	comp=Z,60nm,0.6s,baz=112,slow=5.6,SNR=5.6								
TIC	Toumodi	156.88	279	*e*PKP1		PKPdf	17 31 26.0	+3.7	
	comp=Z,6.9nm,0.2s								
LIC	Lamto	156.93	278	*e*PKP1		PKPdf	17 31 26.3	+4.0	
	comp=Z,132nm,1.2s								
SMTB	Santa Maria do	156.95	122	*e*P		PKPdf	17 31 21.3	-1.0	
SDBA	SAO DESIDERIO	156.96	134	*e*P		PKPdf	17 31 20.9	-1.5	
CMC01	Camacan, BA	158.08	149	*e*P		PKPdf	17 31 22.1	-1.6	
TMAB	Tom-Au,PA,Br	159.11	106	*e*P		PKPdf	17 31 23.6	-1.4	
GDU01	Guandu, BA	159.41	146	*e*P		PKPdf	17 31 24.1	-1.2	
NBLA	Lagarto - SE	162.63	146	*e*P		PKPdf	17 31 28.2	-0.5	
ROSB	Rosrio	162.70	111	*e*P		PKPdf	17 31 27.6	-1.2	
NBAN	Anadia - AL	164.55	148	*e*P		PKPdf	17 31 29.1	-1.4	
NBMA	Muriti-CE	164.79	135	*e*P		PKPdf	17 31 29.1	-1.7	
NBPB	Pedra_Branca-C	165.38	128	*e*P		PKPdf	17 31 29.5	-1.7	
NBRF	Rio Formoso -	165.98	150	*e*P		PKPdf	17 31 31.1	-0.6	
NBMO	Morrinhos-CE	166.22	119	*e*P		PKPdf	17 31 30.9	-1.0	
RCBR	Riachuelo	167.85	140	PKP		PKPdf	17 31 33.6	+0.4	
RCBR				PKPab		PKPab	17 32 41.6	-0.6	
	comp=Z,13nm,0.8s,baz=14,slow=6.5,SNR=2.4								
RCBR	Riachuelo	167.85	140	*e*P		PKPdf	17 31 31.8	-1.4	

IDC ***21*** *17:40:39.8±1.8,54˚.92N×165˚.82E,h0km,mb3.7/5, mbtmp3.7/7,ML4.0/2,Error ellipse: s-maj=48.9km s-min=18.7km az=3.0*

KRSC ***21*** *17:40:42.3±2.1,54˚.87N×165˚.40E,h41km±15km,ML4.3*

NEIC ***21*** *17:40:43.9±1.6,54˚.7N±0˚.1×165˚.8E±0˚.2,h37km±7km, mb4.2/11,Error ellipse: s-maj=18.4km s-min=12.8km az=160.0*

MOS ***21*** *17:40:44.7±0.7,54˚.93N×165˚.49E,h66km,mb4.2/4,Error ellipse: s-maj=11.4km s-min=6.2km az=146.0*

ISC 21 17:40:43.8±0.6,54˚.91N±0˚.05×165˚.67E±0˚.05,h35km,n92, σ1s58/125,mb4.0/12,Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**0.34**	**31**	PN	**Pn**	**17 40 52.1**	**-0.1**
BKI	**Bering**	**0.34**	**31**	*e*P	**Pn**	**17 40 52.1**	**-0.1**
BKI				*e*S	**Sn**	**17 40 57.9**	**0.0**
KBTR	**Krutoberegovo**	**2.08**	**310**	PN	**Pn**	**17 41 14.1**	**-2.0**
KBTR	**Krutoberegovo**	**2.08**	**310**	*e*P	**Pn**	**17 41 14.1**	**-2.0**
KBG	**Krutoberegovo**	**2.15**	**310**	PN	**Pn**	**17 41 15.7**	**-1.4**
KBG				S	**Sn**	**17 41 38.6**	**-4.0**
KBG	**Krutoberegovo**	**2.15**	**310**	*e*P	**Pn**	**17 41 15.7**	**-1.4**
KBG				*e*S	**Sn**	**17 41 38.6**	**-4.0**
MKZ	**Mys Kozlova**	**2.31**	**263**	PN	**Pn**	**17 41 19.7**	**+0.4**
MKZ				S	**Sn**	**17 41 45.1**	**-1.4**
MKZ	**Mys Kozlova**	**2.31**	**263**	*e*P	**Pn**	**17 41 19.7**	**+0.4**
MKZ				*e*S	**Sn**	**17 41 45.1**	**-1.4**
TUMR	**Tumrok**	**3.20**	**279**	PN	**Pn**	**17 41 32.8**	**+1.2**
TUMR				S	**Sn**	**17 42 08.2**	**-0.3**
TUMR	**Tumrok**	**3.20**	**279**	*e*P	**Pn**	**17 41 32.8**	**+1.2**
TUMR				*e*S	**Sn**	**17 42 08.2**	**-0.3**
KMNR	**Kamenistaya**	**3.22**	**287**	PN	**Pn**	**17 41 33.3**	**+1.5**
KMNR				S	**Sn**	**17 41 57.9**	**+2.0**
KMNR	**Kamenistaya**	**3.22**	**287**	*e*P	**Pn**	**17 41 33.3**	**+1.5**
KMNR				*e*S	**Sn**	**17 42 10.9**	**+2.0**
KPT	**Kopyto**	**3.28**	**291**	PN	**Pn**	**17 41 34.2**	**+1.5**
KPT	**Kopyto**	**3.28**	**291**	*e*P	**Pn**	**17 41 34.2**	**+1.5**
KII	**Karymskiy**	**3.73**	**259**	PN	**Pn**	**17 41 40.4**	**+1.5**
KII	**Karymskiy**	**3.73**	**259**	*e*P	**Pn**	**17 41 40.4**	**+1.5**
SPN	**Mys Shipunski**	**3.80**	**244**	PN	**Pn**	**17 41 39.9**	**+0.2**
SPN				S	**Sn**	**17 42 20.3**	**-2.8**
SPN	**Mys Shipunski**	**3.80**	**244**	*e*P	**Pn**	**17 41 39.9**	**+0.2**
SPN				*e*S	**Sn**	**17 42 20.3**	**-2.8**
ESO	**Esso**	**4.10**	**287**	PN	**Pn**	**17 41 45.3**	**+1.4**
ESO	**Esso**	**4.10**	**287**	*e*P	**Pn**	**17 41 45.3**	**+1.4**
NLC	**Nalytchevo**	**4.12**	**248**	PN	**Pn**	**17 41 44.8**	**+0.7**
NLC				S	**Sn**	**17 42 29.4**	**-1.5**
NLC	**Nalytchevo**	**4.12**	**248**	*e*P	**Pn**	**17 41 44.8**	**+0.7**
NLC				*e*S	**Sn**	**17 42 29.4**	**-1.5**
SDLR	**Sedlovina**	**4.32**	**250**	PN	**Pn**	**17 41 48.3**	**+1.3**
SDLR				S	**Sn**	**17 42 35.8**	**-0.3**
SDLR	**Sedlovina**	**4.32**	**250**	*e*P	**Pn**	**17 41 48.3**	**+1.3**
SDLR				*e*S	**Sn**	**17 42 35.8**	**-0.3**
SMAR	**Somma**	**4.37**	**251**	PN	**Pn**	**17 41 49.2**	**+1.4**
SMAR				S	**Sn**	**17 42 36.7**	**-0.8**
SMAR	**Somma**	**4.37**	**251**	*e*P	**Pn**	**17 41 49.2**	**+1.4**
SMAR				*e*S	**Sn**	**17 42 36.7**	**-0.8**
KRER	**Koryakskii**	**4.38**	**251**	PN	**Pn**	**17 41 49.7**	**+1.8**
KRER				S	**Sn**	**17 42 37.6**	**-0.2**
KRER	**Koryakskii**	**4.38**	**251**	*e*P	**Pn**	**17 41 49.7**	**+1.8**
KRER				*e*S	**Sn**	**17 42 37.6**	**-0.2**
UGLR	**Uglovaya**	**4.38**	**250**	PN	**Pn**	**17 41 49.3**	**+1.5**
UGLR				S	**Sn**	**17 42 38.0**	**+0.4**
UGLR	**Uglovaya**	**4.38**	**250**	*e*P	**Pn**	**17 41 49.3**	**+1.5**
UGLR				*e*S	**Sn**	**17 42 38.0**	**+0.4**
AVH	**Avacha**	**4.40**	**251**	PN	**Pn**	**17 41 49.8**	**+1.7**
AVH				S	**Sn**	**17 42 37.5**	**-0.6**
AVH	**Avacha**	**4.40**	**251**	*e*P	**Pn**	**17 41 49.8**	**+1.7**
AVH				*e*S	**Sn**	**17 42 37.5**	**-0.6**
KRX	**Arik**	**4.41**	**252**	PN	**Pn**	**17 41 50.0**	**+1.7**
KRX	**Arik**	**4.41**	**252**	*e*P	**Pn**	**17 41 50.0**	**+1.7**
KOK	**Koryaka**	**4.45**	**251**	PN	**Pn**	**17 41 50.4**	**+1.7**
KOK	**Koryaka**	**4.45**	**251**	*e*P	**Pn**	**17 41 50.4**	**+1.7**
DALK	**Dalny**	**4.50**	**248**	PN	**Pn**	**17 41 50.6**	**+1.3**
DALK				S	**Sn**	**17 42 38.1**	**-2.2**
DALK	**Dalny**	**4.50**	**248**	*e*P	**Pn**	**17 41 50.6**	**+1.3**
DALK				*e*S	**Sn**	**17 42 38.1**	**-2.2**
PET	**Petropavlovsk**	**4.55**	**248**	Pn	**Pn**	**17 41 51.3**	**+1.1**
PET					**Sn**	**17 42 39.9**	**-1.8**
PET	**Petropavlovsk**	**4.55**	**248**	PN	**Pn**	**17 41 51.2**	**+1.1**
PET				S	**Sn**	**17 42 39.8**	**-1.9**
PET	**Petropavlovsk**	**4.55**	**248**	*e*P	**Pn**	**17 41 51.2**	**+1.1**
PET				*e*S	**Sn**	**17 42 39.8**	**-1.9**
GNL	**Ganaly**	**4.69**	**258**	PN	**Pn**	**17 41 54.2**	**+2.1**
GNL	**Ganaly**	**4.69**	**258**	*e*P	**Pn**	**17 41 54.2**	**+2.1**
KRMR	**Karymshinskiy**	**4.93**	**248**	PN	**Pn**	**17 41 57.3**	**+2.1**
KRMR				S	**Sn**	**17 42 50.5**	**-0.4**
KRMR	**Karymshinskiy**	**4.93**	**248**	*e*P	**Pn**	**17 41 57.3**	**+2.1**
KRMR				*e*S	**Sn**	**17 42 50.5**	**-0.4**
RUS	**Russkaya**	**4.93**	**243**	PN	**Pn**	**17 41 56.3**	**+1.1**
RUS				S	**Sn**	**17 42 48.4**	**-2.5**
RUS	**Russkaya**	**4.93**	**243**	*e*P	**Pn**	**17 41 56.3**	**+1.1**
RUS				*e*S	**Sn**	**17 42 48.4**	**-2.5**
PEA0B	**Petropavlovsk-**	**5.04**	**252**		**Pn**	**17 41 58.0**	**+1.3**
PEA0B	**Petropavlovsk-**	**5.04**	**252**	PN	**Pn**	**17 41 58.1**	**+1.3**
PETK	**Petropavlovsk-**	**5.04**	**252**	Pn	**Pn**	**17 41 57.5**	**+0.7**
	3.1nm,0.3s,baz=74,slow=17,SNR=21						
PETK				Sn	**Sn**	**17 42 54.0**	**+0.3**
	2.0nm,0.3s,baz=103,slow=19,SNR=4.7						
	5.5nm,0.5s						
PETK	**Petropavlovsk-**	**5.04**	**252**		**Pn**	**17 41 57.0**	**+0.2**
PETK	**Petropavlovsk-**	**5.04**	**252**	PN	**Pn**	**17 41 57.0**	**+0.2**
PETK						17 42 54.0	
MTVR	**Mutnovka**	**5.07**	**244**	PN	**Pn**	**17 41 58.8**	**+1.5**
MTVR				S	**Sn**	**17 42 52.6**	**-2.1**
MTVR	**Mutnovka**	**5.07**	**244**	*e*P	**Pn**	**17 41 58.8**	**+1.5**
MTVR				*e*S	**Sn**	**17 42 52.6**	**-2.1**
GRL	**Gorelyy**	**5.09**	**245**	PN	**Pn**	**17 41 59.0**	**+1.4**
GRL	**Gorelyy**	**5.09**	**245**	*e*P	**Pn**	**17 41 59.0**	**+1.4**
ASAK	**Asacha**	**5.27**	**244**	PN	**Pn**	**17 42 01.9**	**+1.9**
ASAK	**Asacha**	**5.27**	**244**	*e*P	**Pn**	**17 42 01.9**	**+1.9**
APC	**Apacha**	**5.41**	**252**	PN	**Pn**	**17 42 04.3**	**+2.5**
APC	**Apacha**	**5.41**	**252**	*e*P	**Pn**	**17 42 04.3**	**+2.5**
KDTR	**Khodutka, Kamc**	**5.51**	**239**	PN	**Pn**	**17 42 03.7**	**+0.5**
KDTR	**Khodutka, Kamc**	**5.51**	**239**	*e*P	**Pn**	**17 42 03.7**	**+0.5**
KDTR				*e*S	**Sn**	**17 43 01.0**	**-4.2**
SKR	**Severo-Kuril's**	**7.17**	**238**	PN	**Pn**	**17 42 27.2**	**+1.2**
SKR	**Severo-Kuril's**	**7.17**	**238**	*e*P	**Pn**	**17 42 27.2**	**+1.2**
SKR				*e*S	**Sn**	**17 43 41.7**	**-4.5**
MA2	**Magadan**	**9.32**	**306**	Pn	**Pn**	**17 42 58.9**	**+3.4**
	0.3nm,0.3s,baz=167,slow=18,SNR=1.6						
	3.7nm,0.8s						
IMAR	**Indian Mountai**	**22.42**	**44**	P	**P**	**17 45 39.4**	**+0.5**
KDAK	**Kodiak Island**	**23.04**	**66**	P	**P**	**17 45 45.2**	**-0.3**
	5.5nm,0.9s,baz=270,slow=7.1,SNR=2.2						
	5.5nm,0.9s						
KDAK	**Kodiak Island**	**23.04**	**66**	IAmb	IAmb	17 45 45.8	
	comp=Z,40nm,1.5s						
USA0B	**Ussuriysk Arra**	**24.10**	**258**	P	**P**	**17 45 56.2**	**+0.4**
USA0B				IAmb	IAmb	17 46 19.5	
	comp=Z,3.7nm,0.9s						
USA0B	**Ussuriysk Arra**	**24.10**	**258**	P	**P**	**17 45 56.2**	**+0.4**
USA0B				pmax	pmax		
	comp=Z,4.0nm,0.9s						
H23K	**Yukon River**	**24.11**	**45**	P	**P**	**17 45 55.3**	**-0.5**
H23K				IAmb	IAmb	17 46 07.9	
	comp=Z,7.0nm,1.5s						
RND	**Reindeer**	**24.31**	**51**	P	**P**	**17 45 57.4**	**-0.3**
RND	**Reindeer**	**24.31**	**51**	P	**P**	**17 45 57.4**	**-0.3**
RND				pmax	pmax		
	comp=Z,5.0nm,1.4s						
TOLK	**Toolik Lake Re**	**24.51**	**38**	P	**P**	**17 45 59.2**	**-0.2**
CCB	**Clear Creek Bu**	**24.78**	**48**	P	**P**	**17 46 02.5**	**+0.7**
CCB				IAmb	IAmb	17 46 04.0	
	comp=Z,3.5nm,0.8s						
SCM	**Sheep Creek Mo**	**25.10**	**55**	P	**P**	**17 46 05.2**	**+0.3**
SCM				IAmb	IAmb	17 46 07.7	
	comp=Z,6.0nm,0.9s						
SCM	**Sheep Creek Mo**	**25.10**	**55**	P	**P**	**17 46 05.2**	**+0.3**
SCM				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ILAR	**Eielson Array**	**25.17**	**48**	P	**P**	**17 46 05.3**	**-0.1**
	comp=Z,1.4nm,0.9s,baz=257,slow=8.5,SNR=11						
	comp=Z,1.4nm,0.9s						
BMAR	**Burnt Mountain**	**26.21**	**42**	P	**P**	**17 46 15.3**	**+0.5**
H11N2	**WAKE ISLAND Hy**	**35.13**	**178**	T	T	18 25 13.6	
	baz=359,slow=76,SNR=47						
H11N3	**WAKE ISLAND Hy**	**35.15**	**178**	T	T	18 25 17.9	
	baz=359,slow=76,SNR=37						
H11N1	**WAKE ISLAND Hy**	**35.15**	**178**	T	T	18 25 20.2	
	baz=359,slow=76,SNR=46						
YKA	**Yellowknife Ar**	**39.56**	**46**	P	**P**	**17 48 11.4**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=296,slow=7.6,SNR=1.9						
	comp=Z,0.5nm,0.6s						
D05A	**Enumclaw**	**44.23**	**69**	P	**P**	**17 48 49.8**	**+0.6**
GUMO	**Guam**	**44.32**	**210**	P	**P**	**17 48 48.0**	**-2.2**
GUMO	**Guam**	**44.32**	**210**	P	**P**	**17 48 48.0**	**-2.2**
KURK	**Kurchatov**	**49.52**	**303**	P	**P**	**17 49 30.3**	**-0.2**
KURK				IAmb	IAmb	17 49 51.6	
	comp=Z,2.0nm,1.1s						
KURK	**Kurchatov**	**49.52**	**303**	P	**P**	**17 49 30.3**	**-0.2**
KURK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
FCC	**Fort Churchill**	**49.96**	**42**	P	**P**	**17 49 34.1**	**+0.4**
FCC				IAmb	IAmb	17 49 46.1	
	comp=Z,7.8nm,1.4s						
FCC	**Fort Churchill**	**49.96**	**42**	P	**P**	**17 49 34.1**	**+0.4**
NVAR	**Mina Array Bea**	**52.06**	**75**	P	**P**	**17 49 51.4**	**+1.4**
	comp=Z,0.6nm,0.6s,baz=306,slow=7.7,SNR=4.7						
	comp=Z,0.6nm,0.6s						
TXAR	**Lajitas Array**	**66.91**	**72**	P	**P**	**17 51 33.2**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=285,slow=3.9,SNR=3.6						
	comp=Z,0.3nm,0.6s						

NEIC ***21*** *17:51:59.4±1.6,17˚.7S±0˚.2×178˚.5W±0˚.2,h555km±11km, mb4.5/22,Error ellipse: s-maj=30.4km s-min=20.8km az=126.0*

IDC ***21*** *17:52:04.1±3.3,17˚.02S×179˚.46W,h563km±19km,mb3.2/3, mbtmp4.0/5,Error ellipse: s-maj=116.4km s-min=27.7km az=135.0*

ISC 21 17:51:59.3±1.1,17˚.7S±0˚.2×178˚.6W±0˚.2,h550km,n28, σ0s83/28,mb4.2/14,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.17**	**270**	P	**P**	**17 53 17.5**	**+2.0**
	11nm,0.6s,baz=212,slow=15,SNR=7.6						
DZM	**Mont Dzumac**	**14.68**	**250**	P	**P**	**17 55 04.5**	**-1.2**
	2.2nm,0.6s,baz=65,slow=17,SNR=1.6						
URZ	**Urewera**	**20.78**	**189**	P	**P**	**17 56 01.4**	**-0.9**
URZ				IAmb	IAmb	17 56 03.8	
	comp=Z,14nm,1.0s						
BKZ	**Black Stump Fm**	**21.77**	**190**	P	**P**	**17 56 10.6**	**-0.7**
BKZ				IAmb	IAmb	17 56 16.7	
	comp=Z,23nm,1.3s						
THZ	**Tophouse**	**25.02**	**195**	P	**P**	**17 56 41.0**	**+0.9**
KHZ	**Kahutara**	**25.49**	**194**	P	**P**	**17 56 44.4**	**+0.2**
LTZ	**Lake Taylor**	**26.14**	**195**	P	**P**	**17 56 49.5**	**-0.5**
LTZ				IAmb	IAmb	17 57 32.7	
	comp=Z,42nm,1.4s						
LBZ	**Lake Benmore**	**28.18**	**197**	P	**P**	**17 57 07.7**	**-0.2**
LBZ				IAmb	IAmb	17 57 34.0	
	comp=Z,37nm,1.3s						
WKZ	**Wanaka**	**28.93**	**198**	P	**P**	**17 57 13.9**	**-0.4**
ARMA	**Armidale**	**29.84**	**239**	P	**P**	**17 57 23.1**	**+0.5**
ARMA				IAmb	IAmb	17 57 29.5	
	comp=Z,22nm,1.4s						
WHZ	**Wether Hill Ro**	**30.21**	**199**	P	**P**	**17 57 26.1**	**+0.7**
TOO	**Toolangi**	**37.11**	**231**	P	**P**	**17 58 24.0**	**+0.4**
TOO				IAmb	IAmb	17 59 01.9	
	comp=Z,18nm,1.1s						
STKA	**Stephens Creek**	**38.53**	**241**	P	**P**	**17 58 36.1**	**+1.0**
	comp=Z,2.0nm,0.4s,baz=98,slow=11,SNR=3.1						
	comp=Z,2.0nm,0.4s						
BBOO	**Buckleboo**	**43.30**	**241**	P	**P**	**17 59 13.3**	**+0.2**
BBOO				IAmb	IAmb	17 59 16.2	
	comp=Z,43nm,1.4s						
WR0	**Warramunga Arr**	**44.27**	**259**	P	**P**	**17 59 19.4**	**-1.3**
WR0				IAmb	IAmb	17 59 47.0	
	comp=Z,7.6nm,1.4s						
WB0	**Warramunga Arr**	**44.42**	**260**	P	**P**	**17 59 20.9**	**-1.0**
WB0				IAmb	IAmb	18 00 02.6	
	comp=Z,8.8nm,1.4s						
WRAB	**Tennant Creek**	**44.45**	**259**	P	**P**	**17 59 21.0**	**-1.1**
WRAB				IAmb	IAmb	17 59 37.5	
	comp=Z,7.4nm,1.2s						
WRA	**Warramunga Arr**	**44.46**	**259**	P	**P**	**17 59 21.0**	**-1.2**
	comp=Z,0.8nm,0.7s,baz=94,slow=7.6,SNR=20						
	comp=Z,0.8nm,0.7s						
AS31	**Alice Springs**	**44.63**	**254**	P	**P**	**17 59 23.4**	**-0.2**
ASAR	**Alice Springs**	**44.63**	**254**	P	**P**	**17 59 22.9**	**-0.6**
FORT	**Forrest**	**49.89**	**244**	P	**P**	**18 00 02.6**	**-0.3**
KNRA	**Kununurra**	**50.30**	**264**	P	**P**	**18 00 06.6**	**+0.6**
KNRA				IAmb	IAmb	18 00 27.1	
	comp=Z,14nm,1.4s						
SEY	**Seymchan**	**83.57**	**347**	P	**P**	**18 03 28.7**	**-0.8**
	comp=Z,1.5nm,0.5s,baz=146,slow=11,SNR=8.1						
	comp=Z,1.5nm,0.5s						
N25K	**Chibna, Valde**	**83.60**	**16**	P	**P**	**18 03 30.0**	**+0.2**
GLB	**Gilahina Butte**	**83.66**	**16**	P	**P**	**18 03 29.6**	**-0.4**
GLB				IAmb	IAmb	18 03 29.8	
	comp=Z,6.7nm,1.3s						
RND	**Reindeer**	**84.15**	**13**	P	**P**	**18 03 32.4**	**0.0**
CLL	**Collm**	**145.25**	**347**	*e*PKPbc	**PKPbc**	**18 10 36.0**	**+0.5**
GERES	**GERESS Array B**	**147.40**	**345**	PKPbc	**PKPbc**	**18 10 41.7**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=19,slow=4.2,SNR=4.9						

MOS ***21*** *17:59:54.5±2.0,51˚.39N×142˚.30E,h11km,mb3.8/4,Error ellipse: s-maj=13.3km s-min=8.5km az=83.2*

MOS Felt (IV) at Argi-Pagi, Chir-Unvd; (III-IV) at Nysh; (II) at Tymovskoye, Ado-Tymovo, Nogliki.

SKHL ***21*** *17:59:55.1±0.1,51˚.30N×142˚.60E,h13km±1km,mb5.0/8*

IDC ***21*** *17:59:56.3±1.4,51˚.58N×142˚.71E,h0km,mb3.6/6, mbtmp3.6/9,ML2.6/3,Error ellipse: s-maj=40.4km s-min=19.2km az=161.0*

ISC 21 17:59:55.1±1.3,51˚.39N±0˚.03×142˚.63E±0˚.05,h2km±10km, n42,σ1s99/48,mb3.7/10,2D,Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TYV	**Tymovskoe**	**0.53**	**178**	*e*PN	**Pg**	**18 00 05.1**	**-0.2**
TYV				*e*S	**Sb**	**18 00 14.7**	**-0.5**
TYV				pmax	pmax		
	comp=Z,987nm,0.8s						
TYV				pmax	pmax		
	comp=Z,2μm,1.2s						
TYV				smax	smax		
	comp=N,4μm,0.7s						
TYV				smax	smax		
	comp=E,4μm,0.7s						
TYV	**Tymovskoe**	**0.53**	**178**	*e*Pg	**Pg**	**18 00 05.0**	**-0.2**
TYV				AMB	AMB	18 00 07.9	
	comp=E,2μm,0.7s						
TYV				*e*Sg	**Sg**	**18 00 11.9**	**-0.2**
TYV				A	A	18 00 18.0	
	comp=E,5μm,0.5s						
TYV				A	A	18 00 18.0	
	comp=E,8μm,0.5s						
NKL	**Nikolayevsk**	**2.13**	**327**	*e*P	**Pn**	**18 00 31.8**	**+0.2**
NKL				AMB	AMB	18 00 32.0	
	comp=E,700nm,0.3s						
NKL				*e*P	**Pg**	**18 00 35.4**	**-0.4**
NKL				P	**Pb**	**18 00 37.4**	**+3.1**
	comp=E,2μm,0.5s						
NKL				*e*S	**Sb**	**18 01 00.0**	**-1.1**
OKH	**Okha**	**2.17**	**5**	*e*PN	Pn	18 00 24.0	-8.1
OKH				pmax	pmax		
	comp=Z,126nm,1.5s						
OKH	**Okha**	**2.17**	**5**	*e*P	**Pb**	**18 00 33.5**	**-1.5**
OKH				AMB	AMB	18 00 34.1	
	comp=Z,340nm,0.3s						
OKH				*e*S	**Sb**	**18 01 02.2**	**-0.1**
OKH				A	A	18 01 03.0	
	comp=Z,700nm,0.7s						
OKH				A	A	18 01 03.0	
	comp=Z,750nm,0.7s						
UGL	**Uglegorsk**	**2.35**	**189**	*e*PN	**Pb**	**18 00 37.8**	**-0.2**
UGL				*e*S	**Sg**	**18 01 10.6**	**+0.2**
UGL				pmax	pmax		
	comp=Z,100nm,0.4s						
UGL				smax	smax		
	comp=E,400nm,0.7s						
UGL				smax	smax		
	comp=N,300nm,0.6s						
UGL	**Uglegorsk**	**2.35**	**189**	*e*Pg	**Pg**	**18 00 39.6**	**-0.4**
UGL				AMB	AMB	18 00 41.0	
	comp=N,140nm,0.5s						
UGL				*e*Sg	**Sg**	**18 01 11.0**	**+0.6**
UGL				A	A	18 01 11.5	
	comp=N,300nm,0.7s						
UGL				A	A	18 01 11.5	
	comp=N,430nm,0.7s						
GRNR	**Gornyy**	**3.96**	**263**	*i*PN	**Pn**	**18 00 55.9**	**-0.9**
GRNR				*e*S	**Sn**	**18 01 45.8**	**+1.9**
GRNR				pmax	pmax		
	comp=N,1.0nm,0.4s						
GRNR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GRNR				smax	smax		
	comp=N,20nm,0.4s						
GRNR				MLR	MLR		
	comp=Z,690nm,17.0s						
GRNR	**Gornyy**	**3.96**	**263**	*e*P	**Pn**	**18 00 55.9**	**-0.9**
GRNR				AMB	AMB	18 00 56.7	
	comp=Z,1.0nm,0.3s						
YSS	**Yuzh-Sakhalins**	**4.45**	**179**	*e*PN	**Pn**	**18 01 03.4**	**0.0**
YSS				pmax	pmax		
	comp=Z,30nm,0.7s						
YSS				MLR	MLR		
	comp=Z,800nm,13.0s						
YSS	**Yuzh-Sakhalins**	**4.45**	**179**	*e*P	**Pn**	**18 01 02.8**	**-0.6**
YSS				AMB	AMB	18 01 05.6	
	comp=Z,23nm,0.7s						
YSS				*e*P	**Pb**	**18 01 12.3**	**-1.5**
YSS				P	Pg	18 01 14.4	-5.8
	comp=Z,30nm,0.6s						
YSS				*e*Pg	Pg	18 01 21.7	+1.5
YSS				AMB	AMB	18 01 24.1	
	comp=Z,50nm,0.7s						
YSS				*e*Sg	**Sg**	**18 02 22.9**	**+5.1**
YSS				A	A	18 02 24.0	
	comp=Z,70nm,0.7s						
YSS				A	A	18 02 24.0	
	comp=Z,170nm,0.7s						
KLR	**Kul'dur**	**7.29**	**257**	Pn	Pn	18 01 49.0	+6.5
	comp=Z,0.5nm,0.3s,baz=81,slow=11,SNR=3.5						
KLR				Pg	Pg	18 02 08.8	-5.9
	comp=Z,1.2nm,0.3s,baz=62,slow=18,SNR=15						
KLR				Lg	Lg	18 03 46.2	
	comp=Z,2.5nm,0.3s,baz=152,slow=23,SNR=13						
KLR	**Kul'dur**	**7.29**	**257**	*i* PN	**Pn**	**18 01 38.5**	**-4.1**
KLR	**Kul'dur**	**7.29**	**257**	*e*P	**Pn**	**18 01 43.6**	**+1.0**
MA2	**Magadan**	**9.40**	**26**	Pn	**Pn**	**18 02 09.2**	**-2.2**
	comp=Z,0.5nm,0.3s,baz=194,slow=22,SNR=4.2						
PETK	**Petropavlovsk-**	**9.40**	**74**	Pn	**Pn**	**18 02 12.5**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=266,slow=17,SNR=3.4						
PETK				Sn	**Sn**	**18 03 57.0**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=251,slow=7.4,SNR=1.3						
	comp=Z,0.9nm,0.5s						
ZEA	**Zeya**	**9.65**	**290**	*e*PN	Pn	18 02 24.1	+9.2
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ZEA	**Zeya**	**9.65**	**290**	*e*P	**Pn**	**18 02 15.9**	**+1.0**
USA0B	**Ussuriysk Arra**	**10.14**	**229**	*i* PN	**Pn**	**18 02 18.0**	**-3.6**

MLZ	**Mavora Lakes**	**2.13**	**41**	P	Pn	18 45 32.5	+0.4
MLZ				S	Sb	18 46 00.1	-1.5
TUZ	**Tuapeka**	**2.63**	**68**	P	Pn	18 45 39.4	+0.5
TUZ				S	Sn	18 46 11.6	+1.0
MSZ	**Milford Sound**	**2.63**	**29**	P	Pn	18 45 38.7	-0.3
MSZ				S	Sn	18 46 11.9	+1.0
EAZ	**Earnscleugh**	**2.82**	**52**	P	Pn	18 45 41.5	-0.1
EAZ				S	Sn	18 46 16.5	+1.0
WKZ	**Wanaka**	**2.95**	**44**	P	Pn	18 45 44.3	+0.8
WKZ				S	Sn	18 46 21.1	+2.2
HHSZ	**Highcliff Hill**	**3.27**	**72**	P	Pn	18 45 48.3	+0.5
HHSZ				S	Sn	18 46 27.2	+0.5
JCZ	**Jackson Bay**	**3.46**	**33**	P	Pn	18 45 51.7	+1.3
ODZ	**Otahua Downs**	**3.69**	**60**	P	Pn	18 45 52.1	-1.5
ODZ				S	Sn	18 46 35.5	-1.5
LBZ	**Lake Benmore**	**3.85**	**49**	P	Pn	18 45 53.9	-1.8
TMZ	**Timaru**	**4.29**	**54**	P	Pn	18 46 00.1	-1.8
FOZ	**Fox Glacier**	**4.33**	**38**	P	Pn	18 46 02.2	-0.1
ARCZ	**Arundel**	**4.67**	**51**	P	Pn	18 46 04.7	-2.3
RPZ	**Rata Peaks**	**4.77**	**48**	P	Pn	18 46 05.7	-2.7
WACZ	**Wakanui South**	**5.04**	**55**	P	Pn	18 46 10.0	-2.0
RACZ	**Rakaia**	**5.34**	**54**	P	Pn	18 46 14.5	-1.7
OXZ	**Oxford**	**5.55**	**51**	P	Pn	18 46 18.2	-0.9
MQZ	**McQueen's Vall**	**5.64**	**57**	P	Pn	18 46 18.2	-2.1
LTZ	**Lake Taylor**	**6.06**	**48**	P	Pn	18 46 24.2	-1.8
THZ	**Tophouse**	**7.13**	**45**	P	Pn	18 46 39.3	-1.5
MRNZ	**Matariki Terra**	**7.34**	**43**	P	Pn	18 46 42.6	-1.1
QRZ	**Quartz Range**	**7.70**	**39**	P	Pn	18 46 48.2	-0.4
DUWZ	**D'Urville Isla**	**8.36**	**45**	P	Pn	18 46 58.4	+0.8

*IDC **21** 18:47:34.5±0.5, 43°.81S×16°.08W, h0km, mb4.5/15, mbtmp4.5/15, MS4.4/15, Error ellipse: s-maj=18.1km s-min=14.9km az=172.0*

*MOS **21** 18:47:34.7±0.9, 43°.91S×16°.24W, h10km, mb5.2/24, Error ellipse: s-maj=14.8km s-min=12.5km az=92.3*

*NEIC **21** 18:47:36.3±1.4, 43°.8S±0°.1×16°.1W±0°.1, h10km±1km, mb5.2/70, Error ellipse: s-maj=18.5km s-min=17.1km az=180.0*

ISC 21 18:47:36.6±0.3, 43°.80S±0°.07×16°.13W±0°.07, h16km, n379, σ0.971/341, mb5.1/51, MS4.5/15, 1C, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ORCD	**Orcadas**	**24.07**	**215**	P	**P**	**18 52 50.4**	**-0.4**
VNA1	**Neumayer--Stat**	**27.21**	**174**	P	**P**	**18 53 20.2**	**+1.0**
VNA1	**Neumayer--Stat**	**27.21**	**174**	PcP	**PcP**	**18 56 38.1**	**-0.7**
VNA3	**Neumayer Olymp**	**27.70**	**176**	P	**P**	**18 53 24.0**	**+0.3**
VNA3	**Neumayer Olymp**	**27.70**	**176**	PcP	**PcP**	**18 56 39.7**	**-0.3**
SNAA	**Sanae**	**28.69**	**171**	P	**P**	**18 53 32.6**	**+0.1**
SNAA	**Sanae**	**28.69**	**171**	PcP	**PcP**	**18 56 42.3**	**-0.2**
SNAA	**Sanae**	**28.69**	**171**	P	**P**	**18 53 32.2**	**-0.3**
	4.6nm,1.3s,baz=349,slow=11,SNR=4.5						
	4.6nm,1.3s						
SNAA	**Sanae**	**28.69**	**171**	P	**P**	**18 53 31.7**	**-0.8**
SNAA	**Sanae**	**28.69**	**171**	P	**P**	**18 53 31.7**	**-0.8**
SNAA				pmax	pmax		
	comp=Z,14nm,1.4s						
TROLL	**Troll, Antarti**	**29.69**	**168**	P	**P**	**18 53 42.1**	**+0.6**
NVL	**N'lazarevskaya**	**30.38**	**162**	*eP*	**P**	**18 53 46.7**	**-0.7**
NVL				pmax	pmax		
	comp=Z,11nm,1.0s						
SUR	**Sutherland**	**30.98**	**81**	LR	LR	19 03 22.4	
	comp=Z,577nm,19.9s,baz=202,slow=31						
PARB	**Paraibuna**	**31.68**	**300**	*eP*	**P**	**18 53 59.2**	**-0.2**
PLTB	**Pedras Altas**	**31.70**	**280**	P	**P**	**18 53 59.4**	**-0.1**
PLTB				IAmb	IAmb	18 54 08.1	
	comp=Z,27nm,1.1s						
PLTB	**Pedras Altas**	**31.70**	**280**	*eP*	**P**	**18 53 59.5**	**0.0**
RIB01	**Linhares ES**	**31.77**	**312**	*eP*	**P**	**18 54 00.4**	**+0.3**
PET01	**Itanhaem-SP**	**32.05**	**297**	*eP*	**P**	**18 54 02.1**	**-0.4**
CPSB	**Cacapava Do Su**	**32.34**	**282**	*eP*	**P**	**18 54 05.2**	**+0.2**
SJMB	**Sao Joao De Ma**	**32.69**	**312**	*eP*	**P**	**18 54 07.9**	**-0.3**
GUA01	**Guaratinga, BA**	**33.74**	**316**	*eP*	**P**	**18 54 17.4**	**+0.1**
CMC01	**Camacan, BA**	**34.64**	**318**	*eP*	**P**	**18 54 25.4**	**+0.2**
H10S2	**ASCENSION HYDR**	**34.73**	**3**	T	T	19 31 21.7	
	baz=38,slow=74,SNR=8.4						
H10S3	**ASCENSION HYDR**	**34.73**	**3**	T	T	19 31 17.9	
	baz=182,slow=74,SNR=24						
TRQA	**Tornquist**	**34.77**	**263**	P	**P**	**18 54 25.2**	**-0.9**
TRQA				IAmb	IAmb	18 54 27.4	
	comp=Z,60nm,1.8s						
TRQA	**Tornquist**	**34.77**	**263**	P	**P**	**18 54 25.2**	**-0.9**
TRQA				pmax	pmax		
	comp=Z,60nm,1.8s						
FRBT	**Francisco Belt**	**34.77**	**288**	*eP*	**P**	**18 54 26.3**	**-0.1**
PTGB	**Pitanga**	**34.92**	**291**	*eP*	**P**	**18 54 27.0**	**-0.6**
BELA	**Belgrano 2**	**34.99**	**187**	P	**P**	**18 54 27.6**	**0.0**
BELA				IAmb	IAmb	18 54 35.4	
	comp=Z,32nm,1.0s						
ITQB	**Itaqui**	**35.03**	**280**	P	**P**	**18 54 28.2**	**-0.2**
ITQB				IAmb	IAmb	18 54 36.8	
	comp=Z,60nm,1.2s						
ITQB	**Itaqui**	**35.03**	**280**	*eP*	**P**	**18 54 28.2**	**-0.2**
H10N1	**ASCENSION HYDR**	**35.84**	**3**	T	T	19 32 46.7	
	baz=180						
H10N3	**ASCENSION HYDR**	**35.84**	**3**	T	T	19 32 54.4	
	baz=180,slow=74						
H10N2	**ASCENSION HYDR**	**35.86**	**3**	T	T	19 32 42.3	
	baz=180,slow=74,SNR=6.3						
GDU01	**Guandu, BA**	**36.09**	**319**	*eP*	**P**	**18 54 37.2**	**-0.4**
BOSA	**Boshof**	**36.27**	**79**	P	**P**	**18 54 38.8**	**-0.5**
	comp=Z,7.1nm,0.9s,baz=235,slow=7.5,SNR=7.0						
BOSA				LR	LR	19 06 00.2	
	comp=Z,552nm,19.8s,baz=265,slow=30						
	comp=Z,7.1nm,0.9s						
BOSA	**Boshof**	**36.27**	**79**	P	**P**	**18 54 37.9**	**-1.4**
BOSA				IAmb	IAmb	18 54 45.0	
	comp=Z,37nm,1.4s						
BOSA	**Boshof**	**36.27**	**79**	P	**P**	**18 54 37.9**	**-1.4**
BOSA				pmax	pmax		
	comp=Z,37nm,1.5s						
MG04	**Isla Riesco**	**37.11**	**236**	P	**P**	**18 54 46.1**	**+0.2**
IPMB	**Ipameri, GO**	**37.29**	**303**	*eP*	**P**	**18 54 47.8**	**-0.1**
TSUM	**Tsumeb**	**37.37**	**60**	P	**P**	**18 54 48.3**	**-0.4**
	comp=Z,5.7nm,0.7s,baz=232,slow=11,SNR=7.4						
	comp=Z,5.7nm,0.7s						
TSUM	**Tsumeb**	**37.37**	**60**	P	**P**	**18 54 48.4**	**-0.3**
JANB	**Januaria**	**37.38**	**311**	*eP*	**P**	**18 54 48.3**	**-0.4**
CPUP	**Villa Florida**	**37.52**	**284**	P	**P**	**18 54 50.2**	**+0.5**
	comp=Z,6.5nm,0.7s,baz=126,slow=6.6,SNR=14						
	comp=Z,6.5nm,0.7s						
CPUP	**Villa Florida**	**37.52**	**284**	P	**P**	**18 54 49.6**	**-0.1**
CPUP				IAmb	IAmb	18 54 57.6	
	comp=Z,48nm,1.0s						
CPUP	**Villa Florida**	**37.52**	**284**	P	**P**	**18 54 49.6**	**-0.1**
CPUP				pmax	pmax		
	comp=Z,49nm,1.0s						
CPUP	**Villa Florida**	**37.52**	**284**	*eP*	**P**	**18 54 49.4**	**-0.3**
NBAN	**Anadia - AL**	**38.25**	**327**	*eP*	**P**	**18 54 55.2**	**-0.8**
LBTB	**Lobatse**	**38.70**	**75**	P	**P**	**18 55 00.0**	**+0.1**
	comp=Z,9.3nm,0.8s,baz=220,slow=7.6,SNR=9.7						
LBTB				LR	LR	19 07 45.1	
	comp=Z,852nm,19.4s,baz=264,slow=31						
	comp=Z,9.3nm,0.8s						
LBTB	**Lobatse**	**38.70**	**75**	P	**P**	**18 55 00.4**	**+0.5**
LBTB				IAmb	IAmb	18 55 05.9	
	comp=Z,68nm,1.7s						
LBTB	**Lobatse**	**38.70**	**75**	P	**P**	**18 55 00.4**	**+0.5**
LBTB				pmax	pmax		
	comp=Z,68nm,1.7s						
NBRF	**Rio Formoso -**	**38.71**	**329**	*eP*	**P**	**18 55 00.0**	**+0.2**
BDFB	**Brasilia**	**39.00**	**306**	P	**P**	**18 55 03.0**	**+0.6**
	comp=Z,2.1nm,0.5s,baz=184,slow=7.5,SNR=4.5						
	comp=Z,2.1nm,0.5s						
BDFB	**Brasilia**	**39.00**	**306**	P	**P**	**18 55 02.4**	**0.0**
BDFB	**Brasilia**	**39.00**	**306**	P	**P**	**18 55 02.4**	**0.0**
BDFB				pmax	pmax		
	comp=Z,31nm,1.1s						
BDFB	**Brasilia**	**39.00**	**306**	*eP*	**P**	**18 55 02.4**	**0.0**
COYC	**Coyhaique**	**39.14**	**247**	P	**P**	**18 55 03.0**	**-0.2**
COYC	**Coyhaique**	**39.14**	**247**		**P**	**18 55 03.6**	**+0.4**
LL02	**Futaleuf**	**39.77**	**251**	P	**P**	**18 55 08.4**	**-0.1**
LL02				IAmb	IAmb	18 55 16.1	
	comp=Z,40nm,1.1s						
PLCA	**Paso Flores**	**39.79**	**255**	P	**P**	**18 55 09.0**	**+0.3**
	comp=Z,1.7nm,0.8s,baz=118,slow=8.2,SNR=8.7						
PLCA				LR	LR	19 09 12.0	
	comp=Z,504nm,21.6s,baz=134,slow=33						
	comp=Z,1.7nm,0.8s						
PLCA	**Paso Flores**	**39.79**	**255**	P	**P**	**18 55 09.1**	**+0.3**
PLCA	**Paso Flores**	**39.79**	**255**	P	**P**	**18 55 09.1**	**+0.3**
PLCA				pmax	pmax		
	comp=Z,23nm,1.3s						
PLCA	**Paso Flores**	**39.79**	**255**	*eP*	**P**	**18 55 08.3**	**-0.5**
SDBA	**SAO DESIDERIO**	**39.89**	**313**	*eP*	**P**	**18 55 10.3**	**+0.6**
NBMA	**Muriti-CE**	**41.35**	**325**	*eP*	**P**	**18 55 22.1**	**+0.3**
PEXB	**Peixe**	**42.00**	**309**	*eP*	**P**	**18 55 27.1**	**-0.1**
ZON	**Zonda**	**42.70**	**268**	P	**P**	**18 55 32.0**	**-0.8**
ZON	**Zonda**	**42.70**	**268**	P	**P**	**18 55 32.0**	**-0.8**
ZON				pmax	pmax		
	comp=Z,14nm,1.1s						
BO04	**La Punta**	**42.84**	**264**	P	**P**	**18 55 33.0**	**-0.8**
BO01	**Tunca**	**42.98**	**263**	P	**P**	**18 55 35.8**	**+0.9**
PEL	**Peldehue**	**43.32**	**265**	P	**P**	**18 55 38.1**	**+0.3**
PEL	**Peldehue**	**43.32**	**265**	P	**P**	**18 55 38.1**	**+0.3**
NBPB	**Pedra_Branca-C**	**43.33**	**325**	*eP*	**P**	**18 55 38.2**	**+0.3**
VA03	**San Esteban**	**43.41**	**266**	P	**P**	**18 55 38.2**	**-0.4**
VA03				IAmb	IAmb	18 55 46.3	
	comp=Z,48nm,1.1s						
SALV	**Santo Antonio**	**43.54**	**297**	*eP*	**P**	**18 55 39.8**	**+0.2**
MT02	**Curacav**	**43.59**	**265**	P	**P**	**18 55 40.8**	**+1.0**
MT02				IAmb	IAmb	18 55 46.9	
	comp=Z,34nm,1.0s						
ROC1	**El Roble**	**43.64**	**265**	P	**P**	**18 55 40.0**	**-0.6**
MATP	**Matopo**	**43.73**	**72**	P	**P**	**18 55 41.2**	**-0.1**
	comp=Z,10.0nm,1.2s,baz=240,slow=8.2,SNR=5.0						
	comp=Z,10.0nm,1.2s						
SNDB	**Serra Nova Dou**	**43.83**	**306**	*eP*	**P**	**18 55 42.1**	**+0.1**
SMTB	**Santa Maria do**	**44.28**	**312**	*eP*	**P**	**18 55 46.0**	**+0.4**
CO01	**Juntas del Tor**	**44.57**	**269**	P	**P**	**18 55 49.4**	**+1.4**
CO01				IAmb	IAmb	18 55 56.8	
	comp=Z,23nm,1.0s						
GO04	**Tololo Observa**	**44.97**	**269**	P	**P**	**18 55 51.4**	**+0.1**
GO04				IAmb	IAmb	18 55 59.0	
	comp=Z,34nm,1.0s						
NBMO	**Morrinhos-CE**	**45.54**	**325**	*eP*	**P**	**18 55 55.7**	**+0.2**
LCO	**Las Campanas**	**45.54**	**270**	P	**P**	**18 55 56.1**	**+0.2**
LCO				IAmb	IAmb	18 56 03.1	
	comp=Z,44nm,1.1s						
LCO	**Las Campanas**	**45.54**	**270**	P	**P**	**18 55 56.1**	**+0.2**
LCO				pmax	pmax		
	comp=Z,44nm,1.1s						
PTLB	**Pontes e Lacer**	**46.12**	**294**	*eP*	**P**	**18 56 00.4**	**+0.2**
MAW	**Mawson**	**46.37**	**149**	P	**P**	**18 56 01.6**	**+0.1**
	comp=Z,8.2nm,0.9s,baz=266,slow=5.2,SNR=7.5						
	comp=Z,8.2nm,0.9s						
MAW	**Mawson**	**46.37**	**149**	P	**P**	**18 56 01.9**	**+0.4**
MAW	**Mawson**	**46.37**	**149**	P	**P**	**18 56 01.9**	**+0.4**
MAW				pmax	pmax		
	comp=Z,4.0nm,1.1s						
QSPA	**South Pole Qui**	**46.47**	**180**	P	**P**	**18 56 03.2**	**+0.7**
GO02	**Mina Guanaco**	**46.98**	**275**	P	**P**	**18 56 07.7**	**+0.5**
GO02				IAmb	IAmb	18 56 15.5	
	comp=Z,32nm,1.1s						
LSZ	**Lusaka**	**47.11**	**67**	LR	LR	19 12 40.3	
	comp=Z,825nm,20.0s,baz=217,slow=32						
LSZ	**Lusaka**	**47.11**	**67**	P	**P**	**18 56 08.1**	**0.0**
LSZ	**Lusaka**	**47.11**	**67**	P	**P**	**18 56 08.1**	**0.0**
LSZ				pmax	pmax		
	comp=Z,20nm,1.6s						
CLDB	**Colider**	**47.41**	**302**	*eP*	**P**	**18 56 10.4**	**+0.1**
PDRB	**Porto dos Gac**	**47.42**	**300**	*eP*	**P**	**18 56 10.4**	**0.0**
ROSB	**Rosrio**	**47.69**	**321**	*eP*	**P**	**18 56 12.4**	**0.0**
PRPB	**Paraupebas**	**47.72**	**312**	*eP*	**P**	**18 56 12.9**	**+0.2**
PB14	**IPOC Station P**	**47.89**	**275**	P	**P**	**18 56 14.4**	**+0.1**
LVC	**Limon Verde**	**48.06**	**278**	LR	LR	19 15 41.9	
	comp=Z,300nm,21.1s,baz=166,slow=35						
PB06	**IPOC Station P**	**48.48**	**278**	P	**P**	**18 56 19.1**	**+0.4**
VILB	**Vilhena**	**48.64**	**295**	*eP*	**P**	**18 56 20.0**	**+0.1**
PB07	**IPOC Station P**	**49.32**	**279**	P	**P**	**18 56 25.2**	**0.0**
PB01	**IPOC Station P**	**49.47**	**280**	P	**P**	**18 56 26.7**	**+0.5**
PB01				IAmb	IAmb	18 56 34.0	
	comp=Z,40nm,1.1s						
PB08	**IPOC Station P**	**49.81**	**281**	P	**P**	**18 56 29.0**	**-0.2**
PB08				IAmb	IAmb	18 56 37.2	
	comp=Z,44nm,1.3s						
GO01	**Chusmiza**	**50.15**	**281**	P	**P**	**18 56 32.7**	**+0.8**
GO01				IAmb	IAmb	18 56 39.6	
	comp=Z,50nm,1.4s						
NPGB	**Novo Progresso**	**50.15**	**305**	*eP*	**P**	**18 56 31.4**	**+0.1**
PB16	**IPOC Station P**	**51.25**	**282**	P	**P**	**18 56 39.0**	**-1.4**
LPAZ	**La Paz**	**51.66**	**285**	P	**P**	**18 56 43.5**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=144,slow=7.9,SNR=4.7						
LPAZ				LR	LR	19 18 13.3	
	comp=Z,673nm,18.8s,baz=100,slow=36						
	comp=Z,0.9nm,0.5s						
LPAZ	**La Paz**	**51.66**	**285**	P	**P**	**18 56 41.9**	**-1.5**
LPAZ	**La Paz**	**51.66**	**285**	P	**P**	**18 56 41.9**	**-1.5**
LPAZ				pmax	pmax		
	comp=Z,10.0nm,1.2s						
LPAZ	**La Paz**	**51.66**	**285**	*eP*	**P**	**18 56 42.8**	**-0.7**
ITTB	**Itaituba**	**52.52**	**307**	*eP*	**P**	**18 56 49.1**	**0.0**
SAML	**Samuel**	**53.56**	**296**	P	**P**	**18 56 57.5**	**+0.7**
SAML				IAmb	IAmb	18 57 05.1	
	comp=Z,24nm,0.9s						
SAML	**Samuel**	**53.56**	**296**	P	**P**	**18 56 57.5**	**+0.7**
SAML				pmax	pmax		
	comp=Z,24nm,1.0s						
MALB	**Monte Alegre**	**53.74**	**310**	*eP*	**P**	**18 56 58.6**	**+0.5**
MCPB	**Macapa, AP**	**53.80**	**313**	*eP*	**P**	**18 56 58.5**	**0.0**
ETMB	**Extrema**	**54.92**	**293**	*eP*	**P**	**18 57 06.6**	**-0.1**
MACA	**Manacapuru-AM**	**56.43**	**303**	*eP*	**P**	**18 57 17.7**	**+0.2**
OPO	**Ambohidratompo**	**58.21**	**86**	LR	LR	19 17 45.5	
	comp=Z,126nm,21.0s,baz=4.5,slow=31						
SBA	**Scott Base**	**58.61**	**181**	P	**P**	**18 57 33.5**	**+1.4**
SBA	**Scott Base**	**58.61**	**181**	P	**P**	**18 57 33.5**	**+1.4**
SBA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
VNDA	**Vanda**	**58.95**	**179**	P	**P**	**18 57 35.4**	**+0.9**
	comp=Z,1.8nm,0.5s,baz=205,slow=7.8,SNR=21						
	comp=Z,1.8nm,0.5s						
VNDA	**Vanda**	**58.95**	**179**	P	**P**	**18 57 34.9**	**+0.4**
VNDA				IAmb	IAmb	18 57 37.8	
	comp=Z,33nm,1.6s						
VNDA	**Vanda**	**58.95**	**179**	P	**P**	**18 57 34.9**	**+0.4**
VNDA				pmax	pmax		
	comp=Z,33nm,1.6s						
TOA0	**Torodi Ar. Sit**	**58.96**	**20**	P	**P**	**18 57 35.1**	**-0.1**
TOA0				IAmb	IAmb	18 57 41.7	
	comp=Z,23nm,1.1s						
TORD	**Torodi Ar. Bea**	**58.96**	**20**	P	**P**	**18 57 34.9**	**-0.3**
	comp=Z,7.4nm,1.1s,baz=188,slow=6.2,SNR=13						
	comp=Z,7.4nm,1.1s						
TORD	**Torodi Ar. Bea**	**58.96**	**20**	P	**P**	**18 57 34.8**	**-0.3**
TORD				IAmb	IAmb	18 57 41.7	
	comp=Z,19nm,1.1s						
MBAR	**Mbarara**	**59.85**	**58**	LR	LR	19 20 54.9	
	comp=Z,439nm,18.4s,baz=213,slow=33						
KMBO	**Kilima Mbogo**	**63.55**	**64**	LR	LR	19 22 43.0	
	comp=Z,392nm,21.4s,baz=212,slow=33						
OTAV	**Otavalo**	**70.52**	**290**	P	**P**	**18 58 51.4**	**+0.1**
OTAV				IAmb	IAmb	18 58 59.7	
	comp=Z,22nm,1.5s						
OTAV	**Otavalo**	**70.52**	**290**	P	**P**	**18 58 51.4**	**+0.1**
OTAV				pmax	pmax		
	comp=Z,22nm,1.5s						
OTAV	**Otavalo**	**70.52**	**290**	*eP*	**P**	**18 58 51.1**	**-0.2**
BIRV	**Birongo**	**70.62**	**307**	P	**P**	**18 58 52.3**	**+1.0**
ZARC	**Zaragoza, Cauc**	**73.54**	**298**	P	**P**	**18 59 06.4**	**-2.4**
SJCC	**San Jacinto, C**	**75.57**	**299**	P	**P**	**18 59 20.8**	**+0.1**
SJCC				IAmb	IAmb	18 59 29.9	
	comp=Z,16nm,1.0s						
ATD	**Arta Tunnel**	**76.77**	**60**	LR	LR	19 31 13.9	
	comp=Z,209nm,19.6s,baz=167,slow=34						
KEST	**Kesra**	**82.48**	**21**	P	**P**	**18 59 59.7**	**+1.7**
	comp=Z,9.8nm,1.1s,baz=188,slow=2.3,SNR=6.7						
	comp=Z,9.8nm,1.1s						
KEST	**Kesra**	**82.48**	**21**	P	**P**	**18 59 59.2**	**+1.2**
KEST				IAmb	IAmb	19 00 17.4	
	comp=Z,28nm,1.2s						
PMTG	**Montargil**	**82.79**	**6**	*eP*	P	19 00 06.9	+7.4
PMRV	**Marv??o**	**83.22**	**7**	*eP*	P	**19 00 04.6**	**+2.9**
	comp=Z,39nm,1.8s						
ACON	**Acoyapa**	**83.61**	**293**	P	**P**	**19 00 03.7**	**-0.6**
PAB	**San Pablo**	**83.64**	**9**	P	**P**	**19 00 05.5**	**+1.5**
PAB				IAmb	IAmb	19 00 12.3	
	comp=Z,18nm,1.2s						
PAB	**San Pablo**	**83.64**	**9**	P	**P**	**19 00 05.5**	**+1.5**
PAB				pmax	pmax		
	comp=Z,18nm,1.2s						
PCAS	**Casmilo, Conde**	**83.75**	**6**	*eP*	P	19 00 11.9	+7.5
	comp=Z,45nm,1.4s						
ESDC	**Sonseca Array**	**83.81**	**9**	P	**P**	**19 00 06.1**	**+1.3**
	comp=Z,3.2nm,0.9s,baz=186,slow=5.3,SNR=19						
ESDC				LR	LR	19 34 05.4	
	comp=Z,368nm,21.5s,baz=266,slow=33						
	comp=Z,3.2nm,0.9s						
ESDC	**Sonseca Array**	**83.81**	**9**	P	**P**	**19 00 05.4**	**+0.6**
ESDC				IAmb	IAmb	19 00 13.2	
	comp=Z,15nm,1.1s						
ESBB	**Sonseca Array**	**83.81**	**9**	P	**P**	**19 00 06.1**	**+1.3**
ESBB				IAmb	IAmb	19 00 13.2	
	comp=Z,20nm,1.1s						
MTE	**Manteigas**	**84.17**	**7**	*eP*	**P**	**19 00 10.0**	**+3.4**
MTE	**Manteigas**	**84.17**	**7**	P	**P**	**19 00 06.4**	**-0.2**
MTE				IAmb	IAmb	19 00 15.2	
	comp=Z,17nm,1.0s						
MVO	**Moncorvo**	**84.97**	**7**	*eP*	P	19 00 18.3	+7.6
PBRG	**Braganca**	**85.63**	**7**	*eP*	**P**	**19 00 15.6**	**+1.7**
	comp=Z,24nm,1.7s						
RAYN	**Ar Rayn**	**87.58**	**54**	P	**P**	**19 00 23.7**	**-0.2**
RAYN				IAmb	IAmb	19 00 28.8	
	comp=Z,35nm,2.0s						
RAYN	**Ar Rayn**	**87.58**	**54**	P	**P**	**19 00 23.7**	**-0.2**
RAYN				pmax	pmax		
	comp=Z,35nm,2.0s						
H01W2	**Cape Leeuwin H**	**89.53**	**141**	T	T	20 40 50.3	
	baz=215,slow=75,SNR=5.5						
H01W1	**Cape Leeuwin H**	**89.55**	**141**	T	T	20 40 48.2	
	baz=215,slow=75,SNR=4.8						
H01W3	**Cape Leeuwin H**	**89.55**	**141**	T	T	20 40 51.9	
	baz=215,slow=75,SNR=5.2						
MMAI	**Mount Meron Ar**	**89.74**	**41**	LR	LR	19 38 15.8	
	comp=Z,253nm,20.0s,baz=33,slow=34						
AQU	**L'Aquila**	**89.76**	**21**	P	**P**	**19 00 34.7**	**+0.9**
AQU	**L'Aquila**	**89.76**	**21**	P	**P**	**19 00 34.7**	**+0.9**
KBN	**Korca**	**90.38**	**27**	P	**P**	**19 00 38.0**	**+1.3**
KBN	**Korca**	**90.38**	**27**	P	**P**	**19 00 38.0**	**+1.3**
KBN				pmax	pmax		
	comp=Z,23nm,1.1s						
CSS	**Mathiatis**	**90.39**	**39**	P	**P**	**19 00 37.0**	**+0.2**
SSB	**Saint Sauveur**	**90.58**	**14**	P	**P**	**19 00 38.3**	**+0.9**
SSB				IAmb	IAmb	19 00 46.2	
	comp=Z,13nm,1.2s						
SSB	**Saint Sauveur**	**90.58**	**14**	P	**P**	**19 00 38.3**	**+0.9**
SSB				pmax	pmax		
	comp=Z,13nm,1.2s						
BNI	**Bardonecchia**	**90.76**	**16**	P	**P**	**19 00 39.7**	**+1.3**
BNI	**Bardonecchia**	**90.76**	**16**	P	**P**	**19 00 39.7**	**+1.3**
BNI				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ZCCA	**Zocca**	**91.03**	**19**	P	**P**	**19 00 41.7**	**+2.1**
ZCCA				IAmb	IAmb	19 00 49.5	
	comp=Z,20nm,1.2s						
PDG	**Podgorica**	**91.52**	**25**	P	**P**	**19 00 42.8**	**+1.0**
RDO	**Rodhopi**	**92.49**	**30**	P	**P**	**19 00 45.5**	**-0.9**
CTI	**Castel Tesino**	**92.79**	**19**	P	**P**	**19 00 48.1**	**+0.3**
CTI				IAmb	IAmb	19 00 55.9	
	comp=Z,9.7nm,0.9s						
CTI	**Castel Tesino**	**92.79**	**19**	P	**P**	**19 00 48.1**	**+0.3**
CTI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
DIVS	**Divibare**	**93.26**	**25**	P	**P**	**19 00 49.2**	**-0.7**
BR131	**Keskin Array S**	**94.49**	**36**	P	**P**	**19 00 56.1**	**+0.3**
BR131	**Keskin Array S**	**94.49**	**36**	P	**P**	**19 00 56.1**	**+0.3**
BRTR	**Keskin Array B**	**94.49**	**36**	P	**P**	**19 00 57.2**	**+1.4**
	comp=Z,4.3nm,0.9s,baz=193,slow=5.1,SNR=25						
	comp=Z,4.3nm,0.9s						
BRTR	**Keskin Array B**	**94.49**	**36**	P	**P**	**19 00 55.9**	**+0.1**
WSAR	**Wadi Sarin**	**95.48**	**63**	LR	LR	19 42 51.9	
	comp=Z,137nm,18.9s,baz=214,slow=35						
MLR	**Muntele Rosu**	**96.44**	**28**	LR	LR	19 43 54.3	
	comp=Z,158nm,19.6s,baz=302,slow=35						
MLR	**Muntele Rosu**	**96.44**	**28**	P	**P**	**19 01 04.5**	**0.0**
MLR	**Muntele Rosu**	**96.44**	**28**	P	**P**	**19 01 04.5**	**0.0**
BURAR	**Bucovina Array**	**98.05**	**27**	P	Pdif	19 01 12.8	+1.0
BURAR				IAmb	IAmb	19 01 20.9	
	comp=Z,4.0nm,0.9s						
BURAR	**Bucovina Array**	**98.05**	**27**	P	Pdif	19 01 12.8	+1.0
BURAR		

BMRM	**Bremner River** baz=84,SNR=5.7	145.27	318	P		PKPab	19 07 12.5	0.0
HARP	**HAARP** baz=82,SNR=5.8	145.35	320	P		PKPab	19 07 12.7	+0.1
C23K	**Itkillik River** baz=65	145.37	334	P		PKPab	19 07 13.0	+0.6
K24K	**Donnelly Dome** baz=79,SNR=9.9	145.40	323	P		PKPab	19 07 12.7	0.0
PAX	**Paxson**	145.41	322			PKPdf	19 07 12.2	-0.5
PAX	**Paxson**	145.41	322	PKIKP		PKPdf	19 07 12.2	-0.5
PAX	**Paxson** baz=81,SNR=21	145.41	322	P		PKPdf	19 07 12.4	-0.3
TOLK	**Toolik Lake Re**	145.50	332			PKPbc	19 07 12.9	+0.1
TOLK	**Toolik Lake Re** baz=68,SNR=19	145.50	332	P		PKPbc	19 07 12.8	+0.1
IL31		145.66	325			PKPdf	19 07 12.9	+0.1
ILAR	**Eielson Array** comp=Z,9.8nm,0.6s,baz=122,slow=2.0,SNR=60	145.66	325	PKPbc		PKPbc	19 07 13.4	+0.1
ILAR	**Eielson Array**	145.66	325			PKPdf	19 07 12.6	-0.4
D23K	**Nanushuk River** baz=66	145.75	333	P		PKPbc	19 07 13.5	0.0
HDA	**Harding Lake**	145.77	324			PKPdf	19 07 13.3	+0.1
HDA	**Harding Lake** baz=77,SNR=15	145.77	324	P		PKPbc	19 07 13.7	0.0
H24K	**Noodor Dome**	145.79	327			PKPbc	19 07 13.9	+0.1
H24K	**Noodor Dome** baz=74,SNR=30	145.79	327	P		PKPab	19 07 14.0	-0.2
POKR	**Poker Plat Res**	145.81	326			PKPdf	19 07 13.4	+0.2
POKR	**Poker Plat Res** baz=76,SNR=6.7	145.81	326	P		PKPab	19 07 14.2	-0.1
DIV	**Divide**	145.82	318			PKPdf	19 07 13.6	+0.2
KLU	**Klutina**	145.84	319			PKPab	19 07 14.7	+0.1
KLU	**Klutina** baz=82,SNR=11	145.84	319	P		PKPab	19 07 14.9	+0.4
M24K	**Tolsona, Glenn**	145.87	320			PKPdf	19 07 13.1	-0.4
M24K	**Tolsona, Glenn** baz=81	145.87	320	P		PKPab	19 07 14.8	+0.2
EYAK	**Cordova Ski Ar**	145.87	317			PKPab	19 07 15.1	+0.6
EYAK	**Cordova Ski Ar** baz=84	145.87	317	P		PKPbc	19 07 13.9	-0.1
CIT	**Chita**	145.89	58	*e*PKP2		PKPbc	19 07 14.7	+0.2
CIT	comp=Z,70nm,1.7s			pmax	pmax			
XLT	**XiLinHaoTe**	145.91	73⇑	*i*PKPbc		PKPab	19 07 15.3	-0.1
COLA	**College**	146.04	325			PKPdf	19 07 13.4	-0.1
COLA	**College**	146.04	325	PKP2		PKPdf	19 07 13.4	-0.1
COLA	**College** baz=75	146.04	325	P		PKPbc	19 07 14.2	-0.2
TCOL	**CIGO, UAF Yank**	146.04	325			PKPdf	19 07 13.1	-0.4
TCOL	**CIGO, UAF Yank** baz=75	146.04	325	P		PKPbc	19 07 14.2	-0.2
CCB	**Clear Creek Bu**	146.08	325			PKPdf	19 07 13.5	-0.2
MDM	**Murphy Dome**	146.17	325			PKPdf	19 07 13.5	-0.4
COLD	**Coldfoot**	146.24	330			PKPbc	19 07 14.6	-0.4
COLD	**Coldfoot** baz=69,SNR=11	146.24	330	P		PKPbc	19 07 14.9	-0.1
WRH	**Wood River Hil**	146.24	325			PKPdf	19 07 14.1	+0.1
HIN	**Hinchinbrook I**	146.26	317	PKPdf		PKPbc	19 07 15.4	+0.1
Q23K	**Middleton Isla** baz=85	146.28	315	P		PKPbc	19 07 14.8	-0.5
BOD	**Bodaibo**	146.34	48	*e*PKP2		PKPdf	19 07 14.7	+0.4
BOD	comp=Z,33nm,1.2s			pmax	pmax			
A21K	**Barrow**	146.40	338			PKPbc	19 07 14.9	-0.5
A21K	**Barrow** baz=56	146.40	338	P		PKPbc	19 07 15.6	+0.3
SCM	**Sheep Creek Mo**	146.45	320			PKPbc	19 07 15.9	0.0
SCM	**Sheep Creek Mo**	146.45	320	PKP2		PKPbc	19 07 15.9	0.0
SCM	**Sheep Creek Mo** baz=80,SNR=8.7	146.45	320	P		PKPbc	19 07 16.0	+0.1
H23K	**Yukon River**	146.45	327			PKPbc	19 07 15.8	+0.1
H23K	**Yukon River** baz=72,SNR=18	146.45	327	P		PKPbc	19 07 15.8	+0.1
GLI	**Glacier Island**	146.49	318			PKPbc	19 07 16.2	+0.2
GLI	**Glacier Island** baz=82	146.49	318	P		PKPbc	19 07 16.2	+0.2
WAT6	**Susitna Watana** baz=79,SNR=11	146.51	321	P		PKPbc	19 07 16.1	0.0
I23K	**Minto, Yukon-K**	146.58	326			PKPdf	19 07 15.0	+0.6
I23K	**Minto, Yukon-K** baz=73,SNR=15	146.58	326	P		PKPbc	19 07 15.6	-0.5
NEA2	**Nenana**	146.62	325			PKPdf	19 07 15.4	+0.7
NEA2	**Nenana** baz=74,SNR=8.5	146.62	325	P		PKPdf	19 07 15.3	+0.7
M23K	**Glacier View** baz=80	146.65	320	P		PKPbc	19 07 15.8	-0.6
MCK	**McKinley**	146.78	323			PKPdf	19 07 15.8	+0.9
MCK	**McKinley**	146.78	323	PKP2		PKPdf	19 07 15.8	+0.9
MCK	**McKinley** baz=76	146.78	323	P		PKPbc	19 07 16.5	-0.3
WAT1	**Susitna Watana** baz=78	146.82	322	P		PKPbc	19 07 16.9	0.0
SML	**Sawmill**	146.93	320			PKPbc	19 07 17.4	+0.2
SML	**Sawmill** baz=79,SNR=9.7	146.93	320	P		PKPbc	19 07 17.3	0.0
KNK	**Knik Glacier** baz=80	147.06	319	P		PKPbc	19 07 16.9	-0.7
H22K	**Ishtalitna Cre** baz=70,SNR=12	147.14	328	P		PKPbc	19 07 17.4	-0.3
MLY	**Manley**	147.18	326			PKPbc	19 07 17.1	-0.7
MLY	**Manley** baz=72,SNR=13	147.18	326	P		PKPbc	19 07 17.1	-0.7
GHO	**Glory Hole Cre**	147.21	320			PKPbc	19 07 18.3	+0.2
TIXI	**Tiksi**	147.35	20			PKPbc	19 07 16.9	-1.1
TIXI	**Tiksi**	147.35	20	PKP2		PKPbc	19 07 17.0	-1.1
TRF	**Thorofare Moun**	147.44	323			PKPbc	19 07 18.6	-0.2
TRF	**Thorofare Moun** baz=75	147.44	323	P		PKPbc	19 07 17.8	-0.9
BPAW	**Bear Paw Mtn.**	147.56	325			PKPdf	19 07 17.4	+1.2
BPAW	**Bear Paw Mtn.** baz=73	147.56	325	P		PKPbc	19 07 17.8	-1.1
I21K	**Tanana** baz=70	147.62	327	P		PKPbc	19 07 18.5	-0.4
KTH	**Kantishna Hill**	147.69	324			PKPbc	19 07 18.9	-0.4
CUT	**Chulitna** baz=76	147.69	321	P		PKPbc	19 07 18.7	-0.5
RC01	**Rabbit Creek A**	147.72	319			PKPbc	19 07 20.1	+0.7
RC01	**Rabbit Creek A** baz=79	147.72	319	P		PKPbc	19 07 19.5	+0.1
SEW	**Seward** baz=81	147.76	317	P		PKPbc	19 07 19.2	-0.2
M22K	**Willow**	147.77	320			PKPdf	19 07 17.8	+1.2
H21K	**Melozitna Rive**	147.78	328			PKPbc	19 07 18.9	-0.5
H21K	**Melozitna Rive** baz=69,SNR=12	147.78	328	P		PKPbc	19 07 19.2	-0.2
O22K	**Cooper Landing** baz=80	147.83	318	P		PKPbc	19 07 20.5	+0.9
IMAR	**Indian Mountai**	148.02	329			PKPbc	19 07 19.6	-0.4
SUA	**Susitna One**	148.12	320			PKPbc	19 07 21.3	+0.7
SUA	**Susitna One** baz=78,SNR=9.8	148.12	320	P		PKPbc	19 07 21.1	+0.5
CHUM	**Lake Minchumin** baz=72	148.18	324	P		PKPbc	19 07 20.5	0.0
CAST	**Castle Rocks** baz=73	148.22	324	P		PKPbc	19 07 20.9	+0.2
SKT	**Skwentna** baz=76,SNR=17	148.37	321	P		PKPbc	19 07 21.0	-0.1
PPLA	**Purkeypile**	148.42	323			PKPbc	19 07 20.5	-0.8
PPLA	**Purkeypile** baz=74,SNR=15	148.42	323	P		PKPbc	19 07 20.9	-0.5
BRSE	**Bradley Lake S** baz=80	148.46	316	P		PKiKP	19 07 22.4	-0.5
J20K	**Nowinta River**	148.84	326			PKPbc	19 07 22.2	0.0
J20K	**Nowinta River** baz=69,SNR=15	148.84	326	P		PKPbc	19 07 22.8	+0.6
N20K	**Mount Spurr** baz=76	148.87	319	P		PKPbc	19 07 22.9	+0.5
K20K	**Telida**	149.09	324			PKPbc	19 07 23.2	+0.3
K20K	**Telida** baz=71,SNR=11	149.09	324	P		PKPbc	19 07 23.5	+0.6
M20K	**Styx River**	149.12	321			PKPbc	19 07 23.0	-0.1
M20K	**Styx River** baz=74,SNR=14	149.12	321	P		PKPbc	19 07 23.3	+0.2
L20K	**Farewell, AK** baz=72,SNR=6.7	149.29	322	P		PKPbc	19 07 23.9	+0.5
O20K	**Slope Mountain** baz=78	149.32	317	P		PKPbc	19 07 24.1	+0.5
Q20K	**Shuyak Island** baz=80	149.49	315	P		PKiKP	19 07 25.0	0.0
M19K	**Big River Lodg** baz=73	149.69	321	P		PKiKP	19 07 25.4	0.0
GCSA	**Galena City Sc** baz=65	149.72	327	P		PKiKP	19 07 25.5	+0.1
KDAK	**Kodiak Island** baz=82	149.72	313	P		PKiKP	19 07 25.5	-0.1
L19K	**White Mountain**	149.81	322			PKPbc	19 07 24.4	-0.3
L19K	**White Mountain** baz=72,SNR=5.6	149.81	322	P		PKiKP	19 07 26.5	+0.8
N19K	**Bonanza Creek**	150.04	319			PKPbc	19 07 25.1	-0.3
N19K	**Bonanza Creek** baz=74	150.04	319	P		PKiKP	19 07 26.8	+0.5
TTA	**Tatalina** baz=69,SNR=11	150.07	324	P		PKiKP	19 07 26.3	+0.1
RDOG	**Red Dog Mine** baz=53	150.09	336	P		PKiKP	19 07 25.9	-0.2
OHAK	**Old Harbor** baz=82	150.18	312	P		PKiKP	19 07 26.3	-0.1
O18K	**Koktuh Hills** baz=75	150.64	318	P		PKiKP	19 07 27.2	-0.3
N18K	**Kilae Creek** baz=73	150.74	319	P		PKiKP	19 07 27.3	-0.3
SII	**Sitkinak Islan** baz=82	150.75	311	P		PKPbc	19 07 26.9	-0.2
P18K	**Big Mountain,**	150.76	317			PKPbc	19 07 26.3	-0.8
P18K	**Big Mountain,** baz=76	150.76	317	P		PKPbc	19 07 26.1	-1.0
Q18K	**Katmai Hardscr** baz=78	150.82	315	P		PKPbc	19 07 27.6	+0.2
P17K	**Kvichak River** baz=75	151.42	317	P		PKiKP	19 07 28.9	-0.1
O17K	**Koliganek Bris** baz=73	151.58	318	P		PKiKP	19 07 29.3	0.0
CHIR	**Chirikof Islan** baz=82	151.65	309	P		PKPbc	19 07 29.4	+0.2
R17K	**Ugashik Creek** baz=78	151.75	313	P		PKiKP	19 07 30.2	+0.5
KSAR	**Wonju Array Be**	152.11	91			PKPdf	19 07 24.4	+0.3
KSAR	**Wonju Array Be**	152.11	91	PKIKP		PKPdf	19 07 24.5	+0.3
O16K	**Kokwok River B** baz=73	152.12	318	P		PKiKP	19 07 31.7	+1.2
KSRS	**Korea Array** comp=Z,0.6nm,0.8s,baz=242,slow=3.3,SNR=2.6	152.14	91	PKPbc		PKPbc	19 07 30.9	0.0
N16K	**Nishlik Lake** baz=70	152.16	320	P		PKiKP	19 07 31.9	+1.3
P16K	**Nushagak River** baz=74	152.23	317	P		PKiKP	19 07 32.3	+1.6
YAK	**Yakutsk**	152.95	36			PKPdf	19 07 24.2	-0.4
YAK	**Yakutsk**	152.95	36	PKIKP		PKPdf	19 07 24.2	-0.4
BILL	**Bilibino**	155.66	358	*e*PKIKP		PKPdf	19 07 28.3	0.0
BILL	comp=Z,4.0nm,1.2s			pmax	pmax			
MJAR	**Matsushiro Arr**	159.14	102	PKPdf		PKPdf	19 07 32.6	-1.0
MJAR				PKPab		PKPab	19 08 10.7	0.0
MJAR	**Matsushiro Arr**	159.14	102	PKP2		PKPab	19 08 10.7	0.0
MJAR							20 07 32.7	

*KRNET **21** 18:50:05.0±0.1, 40.˚84N×74.˚84E, h23km, mb2.4*
*SOME **21** 18:50:05.0, 40.˚80N×75.˚08E, h15km*
*NNC **21** 18:50:06.7±1.9, 40.˚90N×75.˚08E, h0km, mb3.0, mpv2.6, Error ellipse: s-maj=12.8km s-min=9.7km az=151.0*
ISC 21 18:50:09.5±2.4, 40.˚9N±0.˚1×74.˚89E±0.˚05, h31km±15km, n26, σ2ᵖ11/40, 11C-8D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ARLS	**Aral** baz=39	1.06	336	⇓*i*P			Pn	18 50 25.6	-2.8
ARLS				⇓*i*S			Sn	18 50 39.6	-2.5
UCH	**Uchtor** baz=50	1.37	348	⇑*i*P			Pn	18 50 30.8	-2.0
UCH				⇑*i*S			Sn	18 50 49.9	-0.2
ULHL	**Ulahol** baz=36	1.69	36	⇓*i*P			Pn	18 50 36.4	-0.7
ULHL				⇓*i*S			Sn	18 51 00.0	+2.2
KBK	**Karagaybulak** baz=2.0	1.77	1	⇑*i*P			Pn	18 50 37.4	-0.7
KBK				⇑*i*S			Sn	18 51 01.4	+1.9
BOOM	**Boomskoye usch** baz=26	1.78	261	⇑*e*P			Pn	18 50 37.8	-0.5
BOOM				⇑*i*S			Sn	18 51 02.2	+2.3
TKM2	**Tokmak 2** baz=15	2.10	14	⇑*i*P			Pn	18 50 42.1	-0.5
TKM2				⇑*i*S			Sn	18 51 09.6	+1.8
TKM2	**Tokmak 2** 1.4nm,0.6s	2.10	14	⇓Pg			Pb	18 50 45.3	-1.6
TKM2	2.3nm,0.4s			⇓Lg			Lg	18 51 12.8	
CHMS	**Chumysh** 2.3nm,0.5s	2.11	357	⇑Lg			Lg	18 51 13.4	
KDJ	**Kajisay** baz=53	2.12	53	⇓*i*P			Pn	18 50 42.5	-0.4
KDJ				⇓*i*S			Sn	18 51 10.1	+1.9
MRKS	**Merke** 2.5nm,0.2s	2.23	327	*e*P			Pb	18 50 49.7	+0.5
MRKS				*e*S			Sb	18 51 22.4	+5.9
MRKS	**Merke** 2.5nm,0.2s	2.23	327	Pg			Pb	18 50 49.7	+0.5
MRKS				Lg			Lg	18 51 22.4	
KST	**Kastek** 1.1nm,0.4s	2.29	20	*e*P			Pb	18 50 47.8	-2.5
KST				*e*S			Sb	18 51 18.9	+0.6
KST	**Kastek** 1.1nm,0.4s	2.29	20	Pg			Pb	18 50 47.8	-2.5
KST				Lg			Lg	18 51 18.9	
TARG	**Taragay, Kyrgy** baz=67	2.35	68	⇑*i*P			Pn	18 50 45.5	-0.8
TARG				⇑*i*S			Sn	18 51 15.5	+1.2
DGS	**Degeres** 1.1nm,0.3s	2.44	15	*e*P			Pb	18 50 50.6	-2.1
DGS				*e*S			Sb	18 51 23.5	+1.1
DGS	**Degeres** 1.1nm,0.3s	2.44	15	Pg			Pb	18 50 50.6	-2.1
DGS				Lg			Lg	18 51 23.5	
SGDS	**Sogindy** 2.2nm,0.2s	2.57	356	*e*P			Pb	18 50 52.8	-2.0
SGDS				*e*S			Sb	18 51 27.9	+1.9
SGDS	**Sogindy** 2.2nm,0.2s	2.57	356	Pg			Pb	18 50 52.8	-2.0
SGDS				Lg			Lg	18 51 27.9	
TNSS	**Tian-Shan** 2.6nm,0.5s	2.63	35	*e*P			Pb	18 50 55.2	-1.1
TNSS				*e*S			Sb	18 51 31.2	+2.9
KRBS	**Karabastau** 0.6nm,0.3s	2.86	11	*e*P			Pb	18 50 57.5	-2.4
KRBS				*e*S			Sb	18 51 35.2	+0.7
KRBS	**Karabastau** 0.6nm,0.3s	2.86	11	Pg			Pb	18 50 57.5	-2.4
KRBS				Lg			Lg	18 51 35.3	
KTBS	**Karatobe** 0.4nm,0.3s	3.12	25	*e*P			Pb	18 51 02.3	-1.9
KTBS				*e*S			Sb	18 51 43.8	+2.0
KTBS	**Karatobe** 0.4nm,0.3s	3.12	25	Pg			Pb	18 51 02.3	-1.9
KTBS				Lg			Lg	18 51 43.8	
KUU	**Kurty** 0.9nm,0.2s	3.19	19	*e*P			Pb	18 51 03.0	-2.4
KUU				*e*S			Sb	18 51 44.9	+1.1
KUU	**Kurty** 0.9nm,0.2s	3.19	19	Pg			Pb	18 51 03.0	-2.4
KUU				Lg			Lg	18 51 44.8	
KK31	**Karatay Array** 0.2nm,0.2s,baz=122,slow=30,SNR=4.6	3.94	306	Lg			Lg	18 52 10.6	

*NEIC **21** 19:11:31.7±2.2, 12.˚98N±0.˚01×86.˚94W±0.˚03, h4km±5km, mb4.1/10, Error ellipse: s-maj=4.2km s-min=1.3km az=106.0*

*INET **21** 19:11:32.5±0.6, 12.˚90N×87.˚04W, h4km±2km, MW4.1*
*SNET **21** 19:11:32.5±1.0, 12.˚95N×86.˚98W, h7km±28km, ML4.0*
*UCR **21** 19:11:32.8±0.9, 12.˚92N×86.˚97W, h12km±26km, ML4.0, mb4.1(NEIC)*
*IDC **21** 19:11:37.4±2.0, 12.˚77N×87.˚02W, h45km±25km, mb3.6/9, mbtmp3.8/11, ML3.1/2, MS3.3/1, Error ellipse: s-maj=36.7km s-min=14.5km az=51.0*
ISC 21 19:11:32.4±1.0, 12.˚92N±0.˚03×86.˚98W±0.˚03, h9km±8km, n65, σ1ᵖ23/73, mb4.0/13, 2C, Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	0.23	198				Pg	19 11 37.6	+0.4
CRIN							Sg	19 11 41.4	+0.9
CRIN	**San Cristobal**	0.23	198	*e*P			Pg	19 11 37.6	+0.4
CRIN				*e*S			Sg	19 11 41.3	+0.9
TELN	**Telica**	0.35	156	*e*P			Pb	19 11 40.5	-0.3
CNGN	**Cerro Negro**	0.50	147				Pb	19 11 43.1	-0.3
CSGN	**Cosiguina Volc**	0.57	275	*e*P			Pb	19 11 43.1	-1.4
MOMN	**Momotombo**	0.67	140	*e*P			Pb	19 11 46.1	-0.1
COPN	**Copaltepe**	0.83	153	*e*P			Pb	19 11 48.7	-0.3
CNCH	**Conchagua**	0.91	293⇑	*e*P			Pg	19 11 49.1	-0.8
CNCH				*e*S			Sb	19 12 02.2	-0.4
CNCH	comp=Z,6μm,0.5s			IAML				19 12 11.5	
CNCH	**Conchagua**	0.91	293⇑	*e*P			Pg	19 11 49.1	-0.8
CNCH				*e*S			Sb	19 12 02.2	-0.4
CNCH	comp=Z,6μm,0.5s			IAML				19 12 11.5	
APYN	**Apoyeque**	0.92	138	*e*P			Pb	19 11 50.6	+0.1
LCND	**La Caada**	0.97	293	*e*P			Pg	19 11 50.1	-0.9
LCND				*e*S			Sb	19 12 04.4	+0.2
LCND	comp=Z,3μm,0.6s			IAML				19 12 06.8	
LCND	**La Caada**	0.97	293	*e*P			Pg	19 11 50.1	-0.9
LCND				*e*S			Sb	19 12 04.4	+0.2
LCND	comp=Z,3μm,0.6s			IAML				19 12 06.8	
HUEN		0.98	126	*e*P			Pb	19 11 51.7	+0.2
MATN	**Matagalpa**	1.02	90				Pg	19 11 51.5	-0.7
MATN					Sn		Sg	19 12 06.4	+0.9
TISN	**Laguna Tiscapa**	1.04	138	*e*P			Pb	19 11 52.5	-0.1
TGUH	**Tegucigalpa,Ún**	1.16	346				Pg	19 11 54.6	-0.2
TGUH					Sn		Sb	19 12 10.7	+0.6
VSM	**San Miguel**	1.36	292	*e*P			Pb	19 11 57.9	-0.3
VSM	**San Miguel**	1.36	292	*e*P			Pb	19 11 57.9	-0.3
BOAB	**BOACO BROADBAN**	1.36	110				Pn	19 11 57.6	0.0
BOAB					Sn		Sn	19 12 16.7	+0.9
PACA	**Pacayal**	1.42	293	*e*P			Pn	19 11 57.9	-0.6
PACA	**Pacayal**	1.42	293	*e*P			Pn	19 11 57.9	-0.6
CAHU	**Cacacuatique**	1.47	305	*e*P			Pn	19 11 58.9	-0.3
CAHU	**Cacacuatique**	1.47	305	*e*P			Pn	19 11 58.9	-0.3
COEB	**Comit de Eme**	1.62	291	*e*P			Pn	19 12 01.2	0.0
COEB	**Comit de Eme**	1.62	291	*e*P			Pn	19 12 01.2	0.0
ACON	**Acoyapa**	2.00	118				Pn	19 12 05.9	-0.4
ACON					Sn		Sb	19 12 34.7	+0.7
ACON	**Acoyapa**	2.00	118	*e*P			Pb	19 12 07.7	-1.2
SNET	**Serv Nac Est T**	2.32	289				Pn	19 12 10.3	-0.6
HZTE	**Horizontes, Gu**	2.58	148				Pn	19 12 14.6	+0.3
ESPN	**Las Esperanzas**	2.71	105				Pn	19 12 16.8	+0.7
ESPN	**Las Esperanzas**	2.71	105	*e*P			Pn	19 12 16.7	+0.6
ORTG	**Ortega, Santa**	2.95	150				Pn	19 12 18.9	-0.6
DUNO	**Dulce Nombre,**	3.18	153				Pn	19 12 22.2	-0.4
JTS	**Las Juntas de** comp=Z,4.6nm,0.3s,baz=13,slow=12,SNR=7.0	3.28	143	P			Pn	19 12 24.8	+0.8
JTS	comp=Z,14nm,0.4s,baz=322,slow=4.5,SNR=1.7			S			Sn	19 13 02.2	-1.0
JTS	comp=Z,486nm,19.5s,baz=5.5,slow=42 comp=Z,9.2nm,0.3s			LR			LR	19 13 52.2	
JTS	**Las Juntas de**	3.28	143				Pn	19 12 23.9	-0.2
JACO	**JACO, Garabito**	3.96	145	Pn			Pn	19 12 34.0	+0.7
CVTR	**Volcan Turrial**	4.27	132	Pn			Pn	19 12 37.9	-0.2
RIMA	**Rio Macho**	4.38	135				Pn	19 12 35.4	-3.9
BATAN	**Batan**	4.51	128	Pn			Pn	19 12 33.8	-7.1
PEZE	**Perez Zeledon,**	4.78	137				Pn	19 12 42.9	-1.8
RTAL	**Retalhuleu**	4.85	290	Pn			Pn	19 12 44.0	-1.6
PETF	**Flores**	4.85	325	Pn			Pn	19 12 43.7	-1.9
SRBA	**San Rafael, Bu**	5.10	136				Pn	19 12 49.9	+0.7
DRK0	**Durika**	5.16	134				Pn	19 12 50.3	+0.3
PRVC	**Isla de Provid**	5.49	85	Pn			Pn	19 12 52.9	-1.4
BRU2	**Volcan**	5.88	134	Pn			Pn	19 12 57.9	-2.0
CCIG	**Comitan**	6.01	304				Pn	19 12 59.7	-2.0
CMIG	**Matias Romero** comp=Z,0.1nm,0.3s,baz=113,slow=14,SNR=2.5 comp=Z,2.6nm,0.8s	8.69	299	P			Pn	19 13 41.3	+3.0
SJCC	**San Jacinto, C**	11.95	103	Pn			Pn	19 14 18.8	-4.3
TXAR	**Lajitas Array** comp=Z,0.8nm,0.8s,baz=145,slow=12,SNR=6.7 comp=Z,0.8nm,0.8s	22.51	319	P		P	19 16 33.5	+0.9
TX31	**Lajitas Ar. Si**	22.51	319	P		P	19 16 32.1	-0.5
TX31	comp=Z,9.6nm,1.1s			IAmb		IAmb	19 16 49.9	
TX32	**Lajitas Array**	22.51	319	P		P	19 16 31.8	-0.9
TKL	**Tuckaleechee C** comp=Z,3.2nm,0.7s,baz=175,slow=12,SNR=3.7 comp=Z,3.2nm,0.7s	22.82	7	P		P	19 16 38.6	+3.0
TKL	**Tuckaleechee C** comp=Z,5.4nm,1.1s	22.82	7	IAmb		IAmb	19 16 40.2	
WMOK	**Wichita Mounta**	24.21	336	P		P	19 16 48.7	-0.8
WMOK	comp=Z,4.2nm,1.1s			IAmb		IAmb	19 16 56.0	
MNTX	**Cornudas Mount**	25.21	321	P		P	19 16 57.5	-1.1
MNTX	comp=Z,4.0nm,1.2s			IAmb		IAmb	19 17 02.8	
CCM	**Cathedral Cave**	25.32	352	P		P	19 16 58.4	-1.0
CCM	comp=Z,4.6nm,0.9s			IAmb		IAmb	19 17 03.4	
SADO	**Sadowa** comp=Z,3.2nm,0.7s,baz=198,slow=9.3,SNR=3.1 comp=Z,3.2nm,0.7s	32.44	10	P		P	19 18 04.5	+1.8
SADO	**Sadowa** comp=Z,6.5nm,1.1s	32.44	10	IAmb		IAmb	19 18 10.7	
NVAR	**Mina Array Bea** comp=Z,0.3nm,0.5s,baz=134,slow=6.5,SNR=2.8 comp=Z,0.3nm,0.5s	37.66	318	P		P	19 18 50.3	+2.1
YKA	**Yellowknife Ar** comp=Z,1.8nm,0.9s,baz=130,slow=9.0,SNR=6.2 comp=Z,1.8nm,0.9s	53.28	344	P		P	19 20 52.3	+1.0
PLCA	**Paso Flores** comp=Z,0.8nm,0.8s,baz=9.5,slow=6.1,SNR=3.1 comp=Z,0.8nm,0.8s	55.51	165	P		P	19 21 07.0	-0.8
DLBC	**Dease Lake** comp=Z,1.5nm,0.6s,baz=137,slow=11,SNR=3.4 comp=Z,1.5nm,0.6s	55.68	334	P		P	19 21 10.2	+1.3
ILAR	**Eielson Array** comp=Z,0.5nm,0.7s,baz=123,slow=4.8,SNR=4.7 comp=Z,0.5nm,0.7s	65.78	336	P		P	19 22 17.6	0.0
ESDC	**Sonseca Array** comp=Z,0.6nm,0.8s,baz=280,slow=5.9,SNR=4.8 comp=Z,0.6nm,0.8s	76.54	52	P		P	19 23 23.9	+0.6

*DJA **21** 19:18:13.7±0.2, 5.˚5S±2.˚3×13.˚1E±.˚1, h40km±3km, M4.5/36, mB5.1/11, mb4.7/36, MLv4.6/13, Mw(mB)4.5/11*
*NEIC **21** 19:18:13.5±1.9, 5.˚23S±0.˚05×130.˚66E±0.˚07, h44km±7km, mb4.6/50, Error ellipse: s-maj=10.0km s-min=6.8km az=72.0*
*IDC **21** 19:18:13.2±0.6, 5.˚19S×130.˚56E, h38km±4km, mb4.1/15, mbtmp4.4/17, ML3.5/2, MS3.6/2,

SANI	**Sanana**	**5.66**	**304**	P		**Pn**	**19 19 33.1**	**-2.2**
BAKI	**Biak**	**6.75**	**54**	P		**Pn**	**19 19 50.7**	**+0.3**
MTN	**Manton Dam**	**7.56**	**177**	Pn		**Pn**	**19 20 01.2**	**-0.2**
MTN				Sn		**Sn**	**19 21 23.1**	**-2.8**
MTN	**Manton Dam**	**7.56**	**177**	P		**Pn**	**19 20 01.8**	**+0.4**
KDU	**Kakadu**	**7.60**	**167**	P		**Pn**	**19 20 01.3**	**-0.7**
WAMI	**Wamena**	**8.12**	**81**	P		Pn	19 20 14.1	+5.0
	127nm,0.8s							
SMPI	**Sarmi**	**8.64**	**68**	P		**Pn**	**19 20 17.9**	**+1.6**
	18nm,1.2s							
LUWI	**Luwuk**	**8.93**	**298**	Pn		**Pn**	**19 20 18.4**	**-1.9**
LUWI	**Luwuk**	**8.93**	**298**	P		**Pn**	**19 20 19.6**	**-0.6**
	80nm,0.9s							
MMRI	**Maumere**	**9.03**	**248**			**Pn**	**19 20 17.0**	**-4.6**
MMRI	**Maumere**	**9.03**	**248**	P		**Pn**	**19 20 20.5**	**-1.1**
	86nm,1.2s							
EDFI	**Ende, Flores**	**9.58**	**248**	P		**Pn**	**19 20 29.7**	**+0.5**
	225nm20nm,1.0s							
GENI	**Genyem**	**9.83**	**75**	P		**Pn**	**19 20 32.9**	**+0.4**
	54nm,0.7s							
APSI	**Anpana**	**9.99**	**295**	P		**Pn**	**19 20 35.8**	**+1.0**
	298nm38nm,0.9s							
BSSI	**Bau Bau, Buton**	**10.18**	**265**	P		**Pn**	**19 20 37.4**	**+0.1**
	408nm45nm,1.0s							
MRSI	**Marisa**	**10.42**	**303**	P		**Pn**	**19 20 40.7**	**+0.1**
	18nm,1.3s							
BKSI	**Bulukumba**	**10.51**	**269**	P		**Pn**	**19 20 42.6**	**+0.7**
	332nm30nm,1.2s							
KNRA	**Kununurra**	**10.53**	**190**	Pn		**Pn**	**19 20 39.6**	**-2.5**
KNRA	**Kununurra**	**10.53**	**190**	P		**Pn**	**19 20 40.5**	**-1.6**
KAPI	**Kappang**	**10.89**	**271**	Pn		**Pn**	**19 20 47.0**	**0.0**
	2.6nm,0.3s,baz=118,slow=6.3,SNR=8.1							
	6.9nm,0.4s							
KAPI	**Kappang**	**10.89**	**271**	Pn		**Pn**	**19 20 47.9**	**+0.9**
SPSI	**Sidrap Palu**	**10.95**	**276**	P		**Pn**	**19 20 49.1**	**+1.2**
	21nm,0.8s							
TTSI	**Tana Toraja**	**11.05**	**281**	P		Pn	19 21 04.1	+15
TOLI2	**Tolitoli**	**11.73**	**302**	Pn		**Pn**	**19 20 58.5**	**-0.1**
WBSI	**Waikabubak, Su**	**12.01**	**248**	P		**Pn**	**19 21 05.3**	**+2.9**
	38nm,1.4s							
MPSI	**Mapaga**	**12.11**	**297**	P		**Pn**	**19 21 05.8**	**+2.0**
	7.5nm,1.1s							
DAV	**Davao City (W)**	**13.25**	**337**	LR		LR	19 27 31.8	
	comp=Z,187nm,20.4s,baz=133,slow=42							
PLAI	**Plampang**	**13.29**	**254**	P		**Pn**	**19 21 23.0**	**+3.1**
	23nm,0.8s							
TWSI	**Taliwang, Sumb**	**14.13**	**255**	P		**Pn**	**19 21 32.7**	**+1.5**
	11nm,0.8s							
WB0	**Warramunga Arr**	**14.88**	**166**	Pn		Pn	19 21 34.7	-6.5
WRAB	**Tennant Creek**	**15.03**	**167**	Pn		**Pn**	**19 21 39.1**	**-3.9**
WRA	**Warramunga Arr**	**15.03**	**167**	Pn		**Pn**	**19 21 38.6**	**-4.6**
	1.6nm,0.3s,baz=345,slow=13,SNR=43							
WRA				Sn		**Sn**	**19 24 19.1**	**-10**
	2.7nm,0.3s,baz=346,slow=22,SNR=11							
WRA	**Warramunga Arr**	**15.03**	**167**	Pn		**Pn**	**19 21 37.0**	**-6.2**
WB2	**Warramunga Arr**	**15.04**	**167**	Pn		**Pn**	**19 21 38.2**	**-5.0**
WB2				IAmb		IAmb	19 21 52.3	
	comp=Z,15nm,0.6s							
COEN	**Coen**	**15.05**	**126**			**Pn**	**19 21 41.7**	**-1.7**
COEN				IAmb		IAmb	19 21 50.8	
	comp=Z,26nm,1.0s							
COEN	**Coen**	**15.05**	**126**	P		**Pn**	**19 21 43.0**	**-0.3**
WR0	**Warramunga Arr**	**15.10**	**166**			**Pn**	**19 21 39.6**	**-4.3**
WR0				IAmb		IAmb	19 22 02.5	
	comp=Z,20nm,0.9s							
JAGI	**Jajag, Banyuwa**	**16.72**	**258**			**P**	**19 22 05.4**	**-0.9**
JAGI				IAmb		IAmb	19 22 13.7	
	comp=Z,32nm,1.2s							
JAGI	**Jajag, Banyuwa**	**16.72**	**258**	P		**P**	**19 22 05.5**	**-0.9**
	comp=Z,26nm,1.2s							
PMG	**Port Moresby**	**16.86**	**105**	Pn		**P**	**19 22 07.8**	**-0.1**
	comp=Z,1.3nm,0.3s,baz=313,slow=10,SNR=5.9							
	comp=Z,38nm,0.9s							
PMG	**Port Moresby**	**16.86**	**105**	P		**P**	**19 22 08.1**	**+0.2**
PMG				IAmb		IAmb	19 22 10.9	
	comp=Z,41nm,0.9s							
MANU	**Manus Island**	**16.95**	**80**			**P**	**19 22 10.0**	**+1.1**
BLJI	**Banyuglugur**	**17.16**	**261**	P		**P**	**19 22 13.4**	**+2.3**
	comp=Z,42nm,1.1s							
QIS	**Mount Isa**	**17.52**	**151**	P		**Pn**	**19 22 14.2**	**-0.3**
AS31	**Alice Springs**	**18.57**	**171**			**P**	**19 22 25.5**	**-1.3**
ASAR	**Alice Springs**	**18.57**	**171**			**P**	**19 22 25.1**	**-1.6**
MBWA	**Marble Bar**	**19.05**	**213**	P		**P**	**19 22 30.0**	**-2.0**
MBWA	**Marble Bar**	**19.05**	**213**	P		**P**	**19 22 31.9**	**-0.1**
PSA00	**Pilbara Seismi**	**19.33**	**212**	P		**P**	**19 22 34.6**	**-0.5**
PSA00				IAmb		IAmb	19 22 40.8	
	comp=Z,44nm,1.3s							
PSA00	**Pilbara Seismi**	**19.33**	**212**	P		**P**	**19 22 34.7**	**-0.3**
PSA00				IAmb		IAmb	19 22 40.6	
	comp=Z,20nm,1.3s							
PSA00	**Pilbara Seismi**	**19.33**	**212**	P		**P**	**19 22 35.5**	**+0.5**
	comp=Z,25nm,2.5s							
WRKA	**Warakurna**	**19.81**	**186**	P		**P**	**19 22 40.7**	**+0.4**
CTA	**Charters Tower**	**21.14**	**136**	P		**P**	**19 22 56.8**	**+2.1**
	comp=Z,25nm,0.9s,baz=310,slow=10,SNR=18							
	comp=Z,25nm,0.9s							
CTAO	**Charters Tower**	**21.14**	**136**	P		**P**	**19 22 54.3**	**-0.5**
CTAO				IAmb		IAmb	19 23 02.1	
	comp=Z,30nm,0.9s							
RABL	**Rabaul**	**21.44**	**88**	P		**P**	**19 22 58.7**	**+0.7**
OOD	**Oodnadatta**	**22.92**	**169**	P		**P**	**19 23 15.1**	**+1.5**
INKA	**Innaminka**	**24.33**	**158**	P		**P**	**19 23 30.0**	**+3.1**
QLP	**Quilpie**	**24.85**	**150**	P		**P**	**19 23 35.1**	**+3.4**
MULG	**Mulgathing**	**25.10**	**173**	P		**P**	**19 23 36.3**	**+2.4**
FORT	**Forrest**	**25.52**	**185**	P		**P**	**19 23 38.3**	**+0.7**
FORT				IAmb		IAmb	19 23 52.9	
	comp=Z,28nm,0.8s							
FORT	**Forrest**	**25.52**	**185**	P		**P**	**19 23 40.0**	**+2.3**
	comp=Z,44nm,1.6s							
LCRK	**Leigh Creek**	**26.05**	**165**	P		**P**	**19 23 44.5**	**+2.0**
BBOO	**Buckleboo**	**27.88**	**170**	P		**P**	**19 23 59.6**	**+0.7**
	comp=Z,32nm,1.8s							
STKA	**Stephens Creek**	**28.40**	**160**	P		**P**	**19 24 04.7**	**+1.1**
	comp=Z,6.3nm,0.6s,baz=343,slow=8.8,SNR=20							
STKA				LR		LR	19 37 12.2	
	comp=Z,150nm,19.0s,baz=319,slow=40							
	comp=Z,6.3nm,0.8s							
STKA	**Stephens Creek**	**28.40**	**160**	P		**P**	**19 24 05.1**	**+1.5**
KLBR	**Kellerberrin**	**28.88**	**203**	P		**P**	**19 24 08.4**	**+0.6**
CMSA	**Cobar Meteorol**	**29.70**	**153**	P		**P**	**19 24 17.8**	**+2.6**
NJ2	**Nanjing**	**38.77**	**344**	*e*P		**P**	**19 25 36.3**	**+2.8**
NJ2				pmax		pmax		
	comp=Z,10.0nm,0.5s							
CMAR	**Chiang Mai Arr**	**39.16**	**308**	P		**P**	**19 25 36.8**	**-0.3**
	comp=Z,1.5nm,0.8s,baz=139,slow=7.9,SNR=18							
	comp=Z,1.5nm,0.8s							
GYA	**Guiyang**	**39.18**	**325**	⇓P		**P**	**19 25 36.8**	**-0.4**
GYA				pmax		pmax		
	comp=Z,6.0nm,0.9s							
CHTO	**Chiang Mai**	**39.36**	**308**	P		**P**	**19 25 37.9**	**-0.8**
CHTO				IAmb		IAmb	19 25 38.9	
	comp=Z,4.4nm,0.8s							
MJAR	**Matsushiro Arr**	**42.16**	**9**	P		**P**	**19 26 01.0**	**-0.5**
	comp=Z,3.2nm,0.8s,baz=182,slow=9.3,SNR=7.3							
MJAR				pP		**pP**	**19 26 11.9**	**-0.9**
	comp=Z,3.9nm,0.7s,baz=176,slow=11,SNR=7.1							
	comp=Z,3.2nm,0.8s							
MAJO	**Matsushiro**	**42.17**	**9**	P		**P**	**19 26 01.0**	**-0.6**
MAJO				IAmb		IAmb	19 26 12.6	
	comp=Z,12nm,0.8s							
MJB9	**Matsu-Tunnel**	**42.17**	**9**	P		**P**	**19 26 00.6**	**-1.0**
MJB9				IAmb		IAmb	19 26 12.6	
	comp=Z,12nm,0.8s							
PZH	**PanZhiHua**	**42.21**	**320**	P		**P**	**19 26 01.8**	**-0.4**
PZH				pmax		pmax		
	comp=Z,10.0nm,0.6s							
PZH				pmax		pmax		
	comp=Z,110nm,5.3s							
KSAR	**Wonju Array Be**	**42.55**	**357**	P		**P**	**19 26 03.9**	**-0.7**
KSRS	**Korea Array**	**42.56**	**357**	P		**P**	**19 26 05.0**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=174,slow=6.8,SNR=6.1							
KSRS				pP		**pP**	**19 26 16.4**	**0.0**
	comp=Z,1.4nm,0.7s,baz=177,slow=8.6,SNR=5.6							
KSRS				PcP		**PcP**	**19 27 55.4**	**-1.0**
	comp=Z,0.4nm,0.5s,baz=197,slow=2.9,SNR=5.0							
	comp=Z,1.0nm,0.7s							
JMM	**Marumori**	**43.91**	**12**	P		**P**	**19 26 16.1**	**+0.5**
LZH	**Lanzhou**	**48.20**	**331**	*e*P		P	19 26 54.8	+5.2
LZH				pP		sP	19 27 05.3	-1.7
LZH				pmax		pmax		
	comp=Z,32nm,1.1s							
HHC	**Hu-ho-hao-te**	**49.11**	**341**	*e*P		**P**	**19 26 56.5**	**0.0**
HHC				pmax		pmax		
	comp=Z,44nm,0.9s							
HHC				pmax		pmax		
	comp=Z,150nm,5.7s							

USRK	**Ussuriysk Ar.**	**49.23**	**1**	P		**P**	**19 26 57.7**	**+0.5**
	comp=Z,2.8nm,0.6s,baz=194,slow=8.9,SNR=5.3							
USRK				pP		**pP**	**19 27 09.0**	**+0.4**
	comp=Z,5.3nm,0.7s,baz=182,slow=6.8,SNR=5.3							
	comp=Z,2.8nm,0.6s							
OUZ	**Omahuta**	**49.51**	**133**	P		**P**	**19 27 00.4**	**+0.9**
GTA	**Gaotai**	**52.79**	**330**	⇓P		**P**	**19 27 24.4**	**+0.2**
GTA				pP		pP	19 27 34.8	-1.6
GTA				sP		sP	19 27 40.3	-1.4
GTA				pmax		pmax		
	comp=Z,3.0nm,1.0s							
GTA				pmax		pmax		
	comp=Z,160nm,6.5s							
GTA				LR		LR		
	comp=N,80nm,15.3s							
GTA				LR		LR		
	comp=E,160nm,18.2s							
GTA				LR		LR		
	comp=Z,140nm,20.0s							
HSRZ	**Hossack Road**	**52.80**	**135**	P		**P**	**19 27 24.0**	**-0.2**
GOMU	**GeErMu**	**53.18**	**324**	P		**P**	**19 27 27.9**	**+0.5**
GOMU				pP		pP	19 27 30.9	-8.7
GOMU				sP		sP	19 27 34.9	-10
GOMU				pmax		pmax		
	comp=Z,1.0nm,0.5s							
GOMU				pmax		pmax		
	comp=Z,73nm,9.8s							
ULN	**Ulaanbaatar**	**56.83**	**341**	P		**P**	**19 27 54.2**	**+0.9**
ULN				IAmb		IAmb	19 28 06.2	
	comp=Z,5.7nm,1.1s							
SONM	**Songino Array**	**57.01**	**341**	P		**P**	**19 27 55.1**	**+0.5**
	comp=Z,1.3nm,0.7s,baz=161,slow=7.4,SNR=11							
SONM				pP		**pP**	**19 28 06.4**	**-0.1**
	comp=Z,1.6nm,0.6s,baz=160,slow=6.8,SNR=6.4							
SONM				PcP		**PcP**	**19 28 49.6**	**+0.4**
	comp=Z,1.5nm,0.7s,baz=151,slow=5.6,SNR=5.0							
	comp=Z,1.3nm,0.7s							
SONM	**Songino Array**	**57.01**	**341**	P		**P**	**19 27 54.4**	**-0.1**
KAAM	**Kaadhehdhoo**	**57.89**	**274**	P		**P**	**19 28 00.7**	**-0.5**
WMQ	**Urumqi**	**62.31**	**326**	*e*P		**P**	**19 28 33.0**	**+1.9**
PEA0B	**Petropavlovsk-**	**62.46**	**18**	P		**P**	**19 28 31.9**	**+0.2**
PEA0B				IAmb		IAmb	19 28 45.1	
	comp=Z,6.3nm,0.7s							
PETK	**Petropavlovsk-**	**62.46**	**18**	P		**P**	**19 28 33.4**	**+1.6**
	comp=Z,2.0nm,0.7s,baz=199,slow=7.8,SNR=5.9							
PETK				pP		**pP**	**19 28 44.5**	**+0.9**
	comp=Z,4.8nm,0.6s,baz=182,slow=4.5,SNR=10.0							
	comp=Z,2.0nm,0.7s							
PETK	**Petropavlovsk-**	**62.46**	**18**	P		**P**	**19 28 31.7**	**-0.1**
YAK	**Yakutsk**	**67.09**	**359**	P		**P**	**19 29 01.9**	**+0.3**
MK31	**Makanchi Array**	**67.15**	**326**	P		**P**	**19 29 02.2**	**-0.2**
MK31				IAmb		IAmb	19 29 03.6	
	comp=Z,4.5nm,0.8s							
MKAR	**Makanchi Array**	**67.15**	**326**	P		**P**	**19 29 02.7**	**+0.3**
	comp=Z,4.8nm,0.7s,baz=123,slow=7.8,SNR=46							
MKAR				pP		**pP**	**19 29 13.7**	**-1.3**
	comp=Z,3.9nm,0.5s,baz=115,slow=8.9,SNR=11							
	comp=Z,4.8nm,0.7s							
MKAR	**Makanchi Array**	**67.15**	**326**	P		**P**	**19 29 02.5**	**0.0**
MAKZ	**Makanchi**	**67.33**	**326**	P		**P**	**19 29 03.2**	**-0.4**
MAKZ				IAmb		IAmb	19 29 15.1	
	comp=Z,5.1nm,0.6s							
KBL	**Kabul**	**70.17**	**309**	P		**P**	**19 29 20.9**	**-0.8**
ZAA0	**Zalesovo Array**	**70.33**	**333**	P		**P**	**19 29 21.5**	**-0.6**
ZAA0				IAmb		IAmb	19 29 22.7	
	comp=Z,14nm,1.4s							
ZALV	**Zalesovo Beam**	**70.33**	**333**	P		**P**	**19 29 21.9**	**-0.1**
	comp=Z,4.2nm,0.7s,baz=116,slow=5.9,SNR=18							
ZALV				pP		**pP**	**19 29 33.0**	**-1.2**
	comp=Z,2.0nm,0.6s,baz=113,slow=5.4,SNR=6.7							
	comp=Z,4.2nm,0.7s							
ZALV	**Zalesovo Beam**	**70.33**	**333**	P		**P**	**19 29 21.1**	**-0.9**
KURK	**Kurchatov**	**71.39**	**328**	P		**P**	**19 29 28.1**	**-0.5**
VNDA	**Vanda**	**74.09**	**173**	P		**P**	**19 29 45.4**	**+1.2**
	comp=Z,1.8nm,0.9s,baz=304,slow=6.9,SNR=12							
	comp=Z,1.8nm,0.9s							
VNDA	**Vanda**	**74.09**	**173**	P		**P**	**19 29 44.8**	**+0.6**
TIXI	**Tiksi**	**76.76**	**359**	P		**P**	**19 29 59.1**	**-0.4**
TIXI				IAmb		IAmb	19 30 12.0	
	comp=Z,5.9nm,0.8s							
MAW	**Mawson**	**76.82**	**201**	P		**P**	**19 30 01.0**	**+1.1**
	comp=Z,3.5nm,0.9s,baz=105,slow=17,SNR=3.7							
	comp=Z,3.5nm,0.9s							
BRVK	**Borovoye**	**77.03**	**327**	P		**P**	**19 30 00.4**	**-0.9**
BRVK				IAmb		IAmb	19 30 13.5	
	comp=Z,5.6nm,0.8s							
ABKAR	**Akbulak array**	**81.57**	**321**	P		**P**	**19 30 25.0**	**-1.1**
ABKAR	**Akbulak array**	**81.57**	**321**	P		**P**	**19 30 25.1**	**-1.1**
ABKAR				IAmb		IAmb	19 30 29.2	
	comp=Z,4.0nm,0.9s							
SDPT	**Sand Point**	**82.49**	**32**	P		**P**	**19 30 32.1**	**+1.2**
AKTO	**Aktyubinsk**	**83.11**	**322**	P		**P**	**19 30 33.5**	**-0.8**
	comp=Z,1.9nm,0.8s,baz=96,slow=9.0							
	comp=Z,1.9nm,0.8s							
ARU	**Arti**	**84.59**	**328**	P		**P**	**19 30 41.3**	**-0.3**
ARU				IAmb		IAmb	19 30 42.8	
	comp=Z,8.8nm,1.1s							
QSPA	**South Pole Qui**	**84.72**	**180**	P		**P**	**19 30 42.3**	**0.0**
	comp=Z,2.0nm,0.8s,baz=270,slow=2.2,SNR=5.9							
	comp=Z,2.0nm,0.8s							
QSPA	**South Pole Qui**	**84.72**	**180**	P		**P**	**19 30 42.1**	**-0.2**
TTA	**Tatalina**	**87.13**	**26**	P		**P**	**19 30 55.2**	**+1.0**
TTA				IAmb		IAmb	19 30 56.8	
	comp=Z,4.5nm,0.8s							
N19K	**Bonanza Creek**	**87.22**	**28**	P		**P**	**19 30 55.9**	**+1.2**
L19K	**White Mountain**	**87.43**	**27**	P		**P**	**19 30 55.9**	**+0.4**
RAYN	**Ar Rayn**	**87.66**	**294**	P		**P**	**19 30 57.0**	**-0.6**
RAYN				IAmb		IAmb	19 31 09.3	
	comp=Z,4.5nm,1.1s							
K20K	**Telida**	**88.10**	**26**	P		**P**	**19 31 00.7**	**+1.9**
K20K				IAmb		IAmb	19 31 13.4	
	comp=Z,7.3nm,1.4s							
HOM	**Homer**	**88.30**	**30**	P		**P**	**19 30 59.5**	**-0.2**
RND	**Reindeer**	**90.40**	**26**	P		**P**	**19 31 09.3**	**-0.3**
COLD	**Coldfoot**	**90.60**	**22**	P		**P**	**19 31 11.3**	**+0.9**
COLD				IAmb		IAmb	19 31 12.4	
	comp=Z,3.3nm,0.8s							
MDM	**Murphy Dome**	**90.95**	**25**	P		**P**	**19 31 12.0**	**-0.1**
CCB	**Clear Creek Bu**	**91.07**	**25**	P		**P**	**19 31 11.8**	**-0.8**
CCB				IAmb		IAmb	19 31 24.1	
	comp=Z,5.9nm,1.2s							
ILAR	**Eielson Array**	**91.48**	**25**	P		**P**	**19 31 14.1**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=275,slow=4.2,SNR=11							
ILAR				pP		**pP**	**19 31 27.2**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=246,slow=5.2,SNR=4.6							
	comp=Z,1.0nm,0.7s							
BMAR	**Burnt Mountain**	**92.78**	**23**	P		**P**	**19 31 21.6**	**+1.1**
L27K	**Beaver Creek,**	**93.50**	**27**	P		**P**	**19 31 24.8**	**+0.9**
L27K				IAmb		IAmb	19 31 26.2	
	comp=Z,2.2nm,0.8s							
ULM	**Lac du Bonnet**	**120.62**	**33**	PKP		**PKiKP**	**19 37 00.1**	**0.0**
	comp=Z,1.6nm,0.6s,baz=117,slow=3.4,SNR=2.9							
TORD	**Torodi Ar. Bea**	**129.11**	**283**	PKP		**PKiKP**	**19 37 17.5**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=52,slow=3.1,SNR=4.0							
CPUP	**Villa Florida**	**147.66**	**166**	PKPbc		**PKPbc**	**19 37 54.4**	**+0.8**
	comp=Z,1.8nm,0.6s,baz=335,slow=17,SNR=3.2							
LPAZ	**La Paz**	**151.64**	**139**	PKPbc		**PKiKP**	**19 38 06.1**	**+1.3**
	comp=Z,1.3nm,0.4s,baz=31,slow=3.0,SNR=7.3							
LPAZ				PKPab		**sPKPdf**	**19 38 15.3**	**-0.5**
	comp=Z,5.3nm,0.8s,baz=193,slow=4.0,SNR=15							

MW3.5,ML3.4(NAO),Confirmed Earthquake
*KOLA **21** 19:22:30.8,77.25N×20.41E,h0km,ML2.3*
ISC 21 19:22:26.9±0.7,77.16N±0.03×18.14E±0.03,h28km,n33,
σ2838/58,1C-1D,Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HSPB	**Hornsund (broa**	**0.61**	**256**	Pg		**Pn**	**19 22 40.3**	**+0.6**
HSPB				Lg		Lg	19 22 48.4	
HSPB	**Hornsund (broa**	**0.61**	**256**	*e*P		**Pn**	**19 22 40.2**	**+0.6**
HSPB				*e*S		**Sb**	**19 22 48.5**	**+1.2**
HSPB				IAML			19 22 56.3	
	comp=Z,205nm,0.4s							
HSPB	**Hornsund (broa**	**0.61**	**256**	⇓*i*P		**Pn**	**19 22 40.2**	**+0.6**
HSPB				*i* S		**Sb**	**19 22 48.6**	**+1.3**
SPA0	**Spitsbergen Ar**	**1.09**	**340**	Pn		**Pn**	**19 22 46.3**	**0.0**
	baz=149,slow=18							
SPA0				Pg		**Pb**	**19 22 47.9**	**+0.7**
SPA0				Lg		Lg	19 22 59.6	
	baz=161,slow=37							
SPA0	**Spitsbergen Ar**	**1.09**	**340**	Pg		**Pb**	**19 22 47.9**	**+0.7**
SPA0				*e*Pg		**Pn**	**19 22 48.0**	**+1.7**
SPA0				*e*Sg		**Sb**	**19 23 01.8**	**+0.8**
SPA0				IAML			19 23 04.7	
	comp=Z,647nm,0.4s							
SPA0	**Spitsbergen Ar**	**1.09**	**340**	⇑*i*P		**Pn**	**19 22 46.1**	**-0.2**
SPA0				*i* S		**Sn**	**19 22 59.4**	**-1.1**
BRBA	**Barentsburg A**	**1.24**	**319**	Pg		**Pb**	**19 22 49.9**	**+0.3**
BRBA				Lg		Lg	19 23 05.0	
BRBA	**Barentsburg A**	**1.24**	**319**	*e*P		**Pb**	**19 22 49.9**	**+0.3**
BRBA				Sg		**Sb**	**19 23 05.0**	**-0.1**
BRBA				IAML			19 23 07.9	
	comp=Z,852nm,0.3s							
HOPEN	**Hopen**	**1.70**	**109**	Pn		**Pb**	**19 22 57.8**	**+0.3**
HOPEN				Sn		**Sb**	**19 23 18.6**	**+0.2**
HOPEN				Lg		Lg	19 23 22.4	
HOPEN	**Hopen**	**1.70**	**109**	*e*P		**Pb**	**19 22 57.9**	**+0.4**
HOPEN				*e*Pg		Pn	19 23 00.1	+5.4
HOPEN				*e*S		**Sb**	**19 23 18.8**	**+0.3**
HOPEN				*e*Sg		**Sn**	**19 23 23.3**	**+7.8**
HOPEN				IAML			19 23 27.9	
	comp=Z,189nm,0.4s							
KBS	**Kingsbay**	**2.19**	**327**	Pn		**Pn**	**19 23 02.2**	**+0.8**
KBS				Pg		**Pb**	**19 23 06.7**	**+0.8**
KBS				Lg		Lg	19 23 32.6	
KBS	**Kingsbay**	**2.19**	**327**	*e*P		**Pn**	**19 23 02.1**	**+0.8**
KBS				*e*Pg		**Pb**	**19 23 06.2**	**+0.4**
KBS				*e*Sg		**Sb**	**19 23 33.1**	**+0.6**
KBS				IAML			19 23 42.0	
	comp=Z,664nm,0.4s							
BJO1	**Bjornoya**	**2.68**	**175**	Pn		**Pb**	**19 23 12.1**	**-2.1**
BJO1				Pg		Pn	19 23 19.3	+11
BJO1				Lg		Lg	19 23 54.3	
BJO1	**Bjornoya**	**2.68**	**175**	*e*P		**Pb**	**19 23 11.9**	**-2.3**
BJO1				*e*Pg		Pn	19 23 18.4	+10
BJO1				*e*Sg		**Sb**	**19 23 52.5**	**+6.0**
BJO1				IAML			19 23 59.9	
	comp=Z,84nm,1.0s							
ZFI	**Zemlya Franca-**	**6.64**	**43**	*e*P		**Pn**	**19 24 03.3**	**+0.9**
ZFI				*e*S		**Sn**	**19 25 13.5**	**-3.5**
	comp=Z,13nm,1.3s							
ZFI2	**Zemlya Franca-**	**6.64**	**43**	*e*P		**Pn**	**19 24 03.3**	**+0.8**
ZFI2				*e*S		**Sn**	**19 25 13.4**	**-3.7**
	comp=Z,21nm,1.4s							
HAMF	**Hammerfest**	**6.73**	**164**	Pn		**Pn**	**19 24 07.0**	**+3.4**
HAMF				Sn		**Sn**	**19 25 17.1**	**-2.1**
HAMF	**Hammerfest**	**6.73**	**164**	*e*P		**Pn**	**19 24 06.7**	**+3.0**
HAMF				*e*S		**Sn**	**19 25 17.2**	**-2.0**
NOR	**Nord**	**7.66**	**321**	*e*P		**Pn**	**19 24 16.2**	**-0.2**
ARA0	**ARCESS Array S**	**7.94**	**161**	Pn		**Pn**	**19 24 22.8**	**+2.5**
	baz=348,slow=11							
ARA0				Sn		**Sn**	**19 25 49.3**	**+0.2**
	baz=355,slow=22							
ARA0	**ARCESS Array S**	**7.94**	**161**	Pn		**Pn**	**19 24 22.8**	**+2.5**
	baz=348,slow=11							
ARA0				Sn		**Sn**	**19 25 49.3**	**+0.2**
	baz=355,slow=22							
ARCES	**ARCESS Array B**	**7.94**	**161**	Pn		**Pn**	**19 24 23.1**	**+2.8**
	comp=Z,0.3nm,0.3s,baz=352,slow=13,SNR=17							
ARCES				Sn		**Sn**	**19 25 49.3**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=353,slow=23,SNR=4.7							
	comp=Z,0.9nm,0.4s							
ARCES	**ARCESS Array B**	**7.94**	**161**	P		Pn	19 24 25.2	+4.9
ARCES				S		**Sn**	**19 25 48.9**	**-0.2**
DAG	**Danmarks Havn**	**8.22**	**285**	*e*S		**Sn**	**19 25 52.5**	**-3.4**
KIF	**Kilpisjarvi**	**8.24**	**173**	Pn		**Pn**	**19 24 27.4**	**+3.0**
KIF				Sn		**Sn**	**19 25 56.0**	**-0.3**
KIF	**Kilpisjarvi**	**8.24**	**173**	Pn		**Pn**	**19 24 27.4**	**+3.0**
K

mb4.7/239, Error ellipse: s-maj=15.4km s-min=12.8km az=117.0
*IDC **21** 19:24:13.3±1.1, 23°.62S×179°.94W, h535km±11km, mb4.0/24, mbtmp4.8/26, Error ellipse: s-maj=12.8km s-min=9.2km az=85.0*
*NOU **21** 19:24:13.7, 23°.68S×179°.90W, h546km, mb4.8/75, South of Fiji Islands*
ISC 21 19:24:12.9±0.5, 23°.75S±0'.05×179°.94W±0'.06, h541km±5km, n735, σ1§09/772, mb4.7/145, 76C-64D, Fault plane solution: NP1:φ≡100.13611°, δ52.82330°, λ148.68218°. **NP2:**φ≡210.32269°, δ65.53407°, λ41.59700°.
Principal axes: T Plg46.0658°, Azm70.6694°; N Plg42.8971°, Azm235.3327°; P Plg7.7261°, Azm332.5746°; **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LKBA	**Tubou, Lakemba**	**5.59**	**11**	P	**P**	**19 25 48.0**	**+0.5**
RIZ	**Raoul Island**	**5.76**	**162**	P	**P**	**19 25 49.5**	**+0.8**
RIZ				S	**S**	**19 27 06.8**	**-0.4**
RAO	**Raoul Island**	**5.77**	**162**	P	**P**	**19 25 50.3**	**+1.4**
	860nm,0.3s,baz=66,slow=10,SNR=20						
RAO				S	**S**	**19 27 04.3**	**-3.1**
	357nm,0.4s,baz=264,slow=23,SNR=1.6						
RAO	**Raoul Island**	**5.77**	**162**	P	**P**	**19 25 49.5**	**+0.7**
RAO					**S**	**19 27 06.7**	**-0.7**
RAO	**Raoul Island**	**5.77**	**162**	P	**P**	**19 25 50.1**	**+1.2**
GLKZ	**Green Lake**	**5.78**	**162**	P	**P**	**19 25 49.5**	**+0.6**
GLKZ				S	**S**	**19 27 04.3**	**-3.2**
MSVF	**Nonsavu**	**6.28**	**342**	P	**P**	**19 25 53.5**	**-0.4**
	81nm,0.4s,baz=215,slow=6.0,SNR=79						
MSVF	**Nonsavu**	**6.28**	**342**	P	**P**	**19 25 53.7**	**-0.2**
TAVE	**Taveuni**	**7.01**	**0**	P	**P**	**19 26 01.6**	**+0.8**
DGTI	**Dogotuki**	**7.42**	**358**	P	**P**	**19 26 05.1**	**+0.3**
MARNC	**Mare, Loyalty**	**11.34**	**279**	P	**P**	**19 26 45.3**	**+0.6**
MARNC	**Mare, Loyalty**	**11.34**	**279**	P	**P**	**19 26 45.6**	**+0.9**
PINNC	**Pines Island,**	**11.66**	**273**	P	**P**	**19 26 49.4**	**+1.4**
OUENC	**Ouen Island, N**	**12.24**	**274**	P	**P**	**19 26 55.2**	**+1.2**
OUENC	**Ouen Island, N**	**12.24**	**274**	P	**P**	**19 26 54.9**	**+0.9**
YATNC	**Mamie plateau,**	**12.26**	**275**	P	**P**	**19 26 55.8**	**+1.6**
RTV	**Rentapao**	**12.39**	**296**	P	**P**	**19 26 56.1**	**+0.5**
AFI	**Afiamalu**	**12.46**	**40**	P	**P**	**19 26 52.6**	**-3.9**
	44nm,0.8s,baz=253,slow=14,SNR=2.4						
AFI				S	S	19 29 00.1	-11
	12nm,0.3s,baz=24,slow=20,SNR=1.7						
AFI	**Afiamalu**	**12.46**	**40**	P	**P**	**19 26 54.9**	**-1.6**
ONTNC	**Ouen Toro**	**12.62**	**274**	P	**P**	**19 26 57.0**	**-0.9**
ONTNC	**Ouen Toro**	**12.62**	**274**	P	**P**	**19 26 59.3**	**+1.4**
DVP	**Devils Point**	**12.62**	**296**	P	**P**	**19 26 58.7**	**+0.7**
DZM	**Mont Dzumac**	**12.66**	**275**	P	**P**	**19 26 60.0**	**+1.5**
	11nm,0.4s,baz=70,slow=18,SNR=30						
OUZ	**Omahuta**	**12.74**	**205**	P	**P**	**19 26 57.9**	**-1.1**
NOUC	**Port Laguerre**	**12.79**	**275**	P	**P**	**19 27 00.6**	**+0.9**
MXZ	**Matakaoa Point**	**13.85**	**186**	P	**P**	**19 27 12.4**	**+2.0**
MXZ				S	**S**	**19 29 35.4**	**-1.3**
WMGZ	**Waiomatatini S**	**14.09**	**185**	P	**P**	**19 27 15.4**	**+2.4**
WMGZ				S	**S**	**19 29 40.8**	**-0.5**
HAZ	**Te Kaha**	**14.10**	**187**	P	**P**	**19 27 12.2**	**-0.7**
HAZ				S	**S**	**19 29 40.1**	**-1.2**
PKGZ	**Pakihiroa**	**14.19**	**186**	P	**P**	**19 27 13.2**	**-0.9**
RUGZ	**Raukumara Rang**	**14.31**	**188**	P	**P**	**19 27 15.3**	**-0.1**
RUGZ				S	**S**	**19 29 45.3**	**-0.5**
PUZ	**Puketiti**	**14.36**	**186**	P	**P**	**19 27 18.3**	**+2.6**
PUZ				S	**S**	**19 29 40.5**	**-6.0**
TWGZ	**Tauwhareparae**	**14.49**	**187**	P	**P**	**19 27 19.2**	**+1.1**
TWGZ				S	**S**	**19 29 45.7**	**-3.3**
URZ	**Urewera**	**14.68**	**189**	P	**P**	**19 27 17.2**	**-1.9**
	34nm,0.4s,baz=271,slow=2.2,SNR=26						
URZ				S	**S**	**19 29 46.4**	**-6.0**
	27nm,0.7s,baz=196,slow=18,SNR=8.6						
URZ	**Urewera**	**14.68**	**189**	P	**P**	**19 27 16.7**	**-2.3**
URZ	**Urewera**	**14.68**	**189**	P	**P**	**19 27 16.9**	**-2.1**
URZ				S	**S**	**19 29 46.5**	**-6.0**
MWZ	**Matawai**	**14.70**	**188**	P	**P**	**19 27 18.7**	**-0.6**
MWZ				S	**S**	**19 29 49.1**	**-3.8**
CNGZ	**Carnagh Statio**	**14.77**	**186**	P	**P**	**19 27 21.3**	**+1.3**
HRRZ	**Handcock Road**	**14.95**	**192**	P	**P**	**19 27 21.9**	**+0.1**
MUGZ	**Murupara**	**14.95**	**190**	P	**P**	**19 27 21.9**	**0.0**
RIGZ	**Rimuhau**	**15.04**	**187**	P	**P**	**19 27 21.7**	**-1.1**
RIGZ				S	**S**	**19 29 59.0**	**-0.2**
SNGZ	**Shannon Statio**	**15.16**	**188**	P	**P**	**19 27 23.8**	**-0.3**
HIZ	**Hauiti**	**15.37**	**196**	P	**P**	**19 27 26.8**	**+0.6**
HIZ	**Hauiti**	**15.37**	**196**	P	**P**	**19 27 27.8**	**+1.6**
BKZ	**Black Stump Fm**	**15.66**	**190**	P	**P**	**19 27 26.8**	**-2.4**
BFZ	**Birch Farm**	**17.18**	**190**	P	**P**	**19 27 42.0**	**-1.6**
MSWZ	**Moikau Station**	**18.07**	**192**	P	**P**	**19 27 50.6**	**-1.1**
SNZO	**South Karori**	**18.07**	**193**	P	**P**	**19 27 51.4**	**-0.3**
SNZO	**South Karori**	**18.07**	**193**	P	**P**	**19 27 52.7**	**+1.0**
QRZ	**Quartz Range**	**18.16**	**199**	P	**P**	**19 27 54.3**	**+1.7**
QRZ	**Quartz Range**	**18.16**	**199**	P	**P**	**19 27 54.6**	**+2.0**
PLWZ	**Palliser**	**18.22**	**192**	P	**P**	**19 27 52.1**	**-0.9**
NNZ	**Nelson**	**18.29**	**196**	P	**P**	**19 27 54.0**	**+0.3**
TUWZ	**Tuamarina**	**18.36**	**195**	P	**P**	**19 27 53.9**	**-0.4**
CMWZ	**Cape Campbell**	**18.60**	**194**	P	**P**	**19 27 56.5**	**0.0**
BSWZ	**Blackbirch Sta**	**18.64**	**195**	P	**P**	**19 27 56.9**	**0.0**
THZ	**Tophouse**	**18.93**	**197**	P	**P**	**19 27 59.3**	**-0.3**
KHZ	**Kahutara**	**19.39**	**195**	P	**P**	**19 28 03.7**	**0.0**
KHZ	**Kahutara**	**19.39**	**195**	P	**P**	**19 28 03.7**	**0.0**
LTZ	**Lake Taylor**	**20.05**	**197**	P	**P**	**19 28 09.1**	**-0.6**
OXZ	**Oxford**	**20.62**	**197**	P	**P**	**19 28 13.9**	**-0.9**
MQZ	**McQueen's Vall**	**20.82**	**195**	P	**P**	**19 28 15.5**	**-1.1**
RPZ	**Rata Peaks**	**21.25**	**198**	P	**P**	**19 28 21.6**	**+1.1**
	23nm,0.5s,baz=327,slow=0.4,SNR=20						
	23nm,0.5s						
RPZ	**Rata Peaks**	**21.25**	**198**	P	**P**	**19 28 20.7**	**+0.2**
RPZ	**Rata Peaks**	**21.25**	**198**	P	**P**	**19 28 21.3**	**+0.7**
FOZ	**Fox Glacier**	**21.46**	**201**	P	**P**	**19 28 21.8**	**-0.6**
LBZ	**Lake Benmore**	**22.12**	**199**	P	**P**	**19 28 27.0**	**-1.4**
LBZ				IAmb	IAmb	19 28 47.9	
	comp=Z,33nm,1.1s						
ODZ	**Otahua Downs**	**22.59**	**198**	P	**P**	**19 28 32.6**	**+0.1**
ODZ				IAmb	IAmb	19 28 33.6	
	comp=Z,18nm,1.1s						
ODZ	**Otahua Downs**	**22.59**	**198**	P	**P**	**19 28 32.7**	**+0.2**
WKZ	**Wanaka**	**22.88**	**201**	P	**P**	**19 28 34.3**	**-0.8**
MLZ	**Mavora Lakes**	**23.65**	**201**	P	**P**	**19 28 42.4**	**+0.4**
MLZ				IAmb	IAmb	19 28 44.1	
	comp=Z,20nm,0.8s						
DCZ	**Deep Cove**	**24.07**	**203**	P	**P**	**19 28 46.0**	**+0.3**
DCZ				IAmb	IAmb	19 29 12.5	
	comp=Z,32nm,1.1s						
WHZ	**Wether Hill Ro**	**24.17**	**201**	P	**P**	**19 28 47.1**	**+0.5**
ARMA	**Armidale**	**26.13**	**249**	P	**P**	**19 29 04.2**	**-0.1**
ARMA				IAmb	IAmb	19 29 27.1	
	comp=Z,17nm,1.3s						
ARMA	**Armidale**	**26.13**	**249**	P	**P**	**19 29 06.5**	**+2.2**
EIDS	**Eidsvold**	**26.39**	**260**	P	**P**	**19 29 06.9**	**+0.4**
EIDS				IAmb	IAmb	19 29 08.5	
	comp=Z,13nm,0.5s						
EIDS	**Eidsvold**	**26.39**	**260**	P	**P**	**19 29 07.2**	**+0.7**
RMQ	**Roma**	**28.44**	**258**	P	**P**	**19 29 26.6**	**+2.1**
CAN	**Canberra**	**29.27**	**240**	P	**P**	**19 29 32.6**	**+1.0**
CAN				IAmb	IAmb	19 29 44.0	
	comp=Z,28nm,1.4s						
CMSA	**Cobar Meteorol**	**31.32**	**248**	P	**P**	**19 29 49.9**	**+0.6**
CTA	**Charters Tower**	**31.54**	**270**	P	**P**	**19 29 51.8**	**+0.5**
	comp=Z,40nm,0.4s,baz=95,slow=11,SNR=83						
	comp=Z,40nm,0.4s						
CTA	**Charters Tower**	**31.54**	**270**	P	**P**	**19 29 51.8**	**+0.5**
CTAO	**Charters Tower**	**31.54**	**270**	P	**P**	**19 29 51.7**	**+0.5**
CTAO	**Charters Tower**	**31.54**	**270**	P	**P**	**19 29 51.9**	**+0.6**
QLP	**Quilpie**	**32.49**	**257**	P	**P**	**19 30 00.8**	**+1.5**
TOO	**Toolangi**	**32.58**	**237**	P	**P**	**19 30 01.5**	**+1.6**
TOO				IAmb	IAmb	19 30 21.3	
	comp=Z,26nm,1.4s						
TOO	**Toolangi**	**32.58**	**237**	P	**P**	**19 30 01.7**	**+1.8**
XMAS	**Kiritimati**	**33.71**	**44**	P	**P**	**19 30 10.2**	**+0.5**
XMAS	**Kiritimati**	**33.71**	**44**	P	**P**	**19 30 10.2**	**+0.5**
MTSU	**Mount Surprise**	**33.79**	**273**	P	**P**	**19 30 11.0**	**+0.6**
PMG	**Port Moresby**	**34.50**	**289**	P	**P**	**19 30 15.6**	**-0.8**
	comp=Z,29nm,0.8s,baz=129,slow=6.3,SNR=6.2						
	comp=Z,29nm,0.8s						
PMG	**Port Moresby**	**34.50**	**289**	P	**P**	**19 30 16.4**	**+0.1**
PMG				IAmb	IAmb	19 30 17.5	
	comp=Z,28nm,0.8s						
STKA	**Stephens Creek**	**34.83**	**248**	P	**P**	**19 30 19.9**	**+1.0**
	comp=Z,6.8nm,0.7s,baz=93,slow=10.0,SNR=17						
STKA				PcP	**PcP**	**19 32 38.2**	**+1.4**
	comp=Z,3.1nm,0.4s,baz=68,slow=5.4,SNR=4.3						
	comp=Z,6.8nm,0.7s						
STKA	**Stephens Creek**	**34.83**	**248**	P	**P**	**19 30 19.2**	**+0.3**
STKA	**Stephens Creek**	**34.83**	**248**	P	**P**	**19 30 19.9**	**+1.0**
ARPS	**Mount Arapiles**	**35.24**	**239**	P	**P**	**19 30 23.6**	**+1.3**
INKA	**Innaminka**	**35.54**	**255**	P	**P**	**19 30 26.4**	**+1.6**
COEN	**Coen**	**36.15**	**279**	P	**P**	**19 30 30.5**	**+0.4**
COEN	**Coen**	**36.15**	**279**	P	**P**	**19 30 30.8**	**+0.7**
HTT	**Hallett**	**37.19**	**246**	P	**P**	**19 30 39.1**	**+0.7**
QIS	**Mount Isa**	**37.52**	**267**	P	**P**	**19 30 41.6**	**+0.3**
LCRK	**Leigh Creek**	**37.69**	**250**	P	**P**	**19 30 43.1**	**+0.6**
BBOO	**Buckleboo**	**39.56**	**247**	P	**P**	**19 30 57.7**	**+0.1**
BBOO				IAmb	IAmb	19 31 10.7	
	comp=Z,21nm,1.1s						
BBOO				PcP	**PcP**	**19 32 52.3**	**+0.8**
BBOO	**Buckleboo**	**39.56**	**247**	P	**P**	**19 30 57.5**	**-0.1**
OOD	**Oodnadatta**	**40.01**	**255**	P	**P**	**19 31 02.5**	**+1.2**
MULG	**Mulgathing**	**41.28**	**251**	P	**P**	**19 31 11.6**	**+0.2**
AS31	**Alice Springs**	**42.12**	**260**	P	**P**	**19 31 18.1**	**-0.1**
ASAR	**Alice Springs**	**42.12**	**260**	P	**P**	**19 31 18.1**	**-0.1**
WR0	**Warramunga Arr**	**42.29**	**266**	P	**P**	**19 31 18.8**	**-0.7**
WR0				IAmb	IAmb	19 31 19.6	
	comp=Z,13nm,0.8s						
WB2	**Warramunga Arr**	**42.47**	**266**	P	**P**	**19 31 20.3**	**-0.6**
WB0	**Warramunga Arr**	**42.47**	**266**	P	**P**	**19 31 20.2**	**-0.7**
WRAB	**Tennant Creek**	**42.47**	**266**	P	**P**	**19 31 20.2**	**-0.6**
WRAB				IAmb	IAmb	19 31 21.4	
	comp=Z,21nm,0.8s						
WRAB	**Tennant Creek**	**42.47**	**266**	P	**P**	**19 31 20.3**	**-0.6**
WRA	**Warramunga Arr**	**42.48**	**266**	P	**P**	**19 31 20.4**	**-0.6**
	comp=Z,20nm,0.5s,baz=90,slow=5.8,SNR=580						
WRA				ScP	**ScP**	**19 36 03.7**	**+2.9**
	comp=Z,2.2nm,0.7s,baz=95,slow=4.2,SNR=9.3						
WRA				S	**S**	**19 36 59.5**	**-4.7**
	comp=Z,4.5nm,0.9s,baz=101,slow=13,SNR=9.5						
WRA				PKiKP	**PKiKP**	**19 40 02.8**	**-1.5**
	comp=Z,0.3nm,0.5s,baz=81,slow=0.4,SNR=5.7						
	comp=Z,20nm,0.5s						
WRA	**Warramunga Arr**	**42.48**	**266**	P	**P**	**19 31 19.7**	**-1.3**
KDU	**Kakadu**	**46.33**	**275**	P	**P**	**19 31 49.9**	**-0.8**
FORT	**Forrest**	**46.42**	**249**	P	**P**	**19 31 51.2**	**0.0**
FORT				PcP	**PcP**	**19 33 15.9**	**+0.9**
FORT	**Forrest**	**46.42**	**249**	P	**P**	**19 31 50.9**	**-0.3**
WRKA	**Warakurna**	**46.93**	**257**	P	**P**	**19 31 55.0**	**-0.2**
MTN	**Manton Dam**	**47.50**	**274**	P	**P**	**19 31 58.6**	**-1.0**
MTN				IAmb	IAmb	19 32 00.9	
	comp=Z,19nm,0.9s						
MTN				PcP	**PcP**	**19 33 19.9**	**+0.8**
MTN	**Manton Dam**	**47.50**	**274**	P	**P**	**19 31 58.6**	**-1.0**
KNRA	**Kununurra**	**48.75**	**270**	P	**P**	**19 32 08.5**	**-0.3**
KNRA				IAmb	IAmb	19 32 09.5	
	comp=Z,22nm,0.6s						
KNRA	**Kununurra**	**48.75**	**270**	P	**P**	**19 32 08.7**	**-0.1**
MLH	**Mauna Loa**	**49.20**	**31**	P	**P**	**19 32 11.8**	**-0.5**
HMH	**Humu'ula Sheep**	**49.25**	**31**	P	**P**	**19 32 12.4**	**-0.4**
HPAH	**Hawaii Prepara**	**49.52**	**30**	P	**P**	**19 32 14.9**	**+0.5**
FAKI	**Fak Fak**	**50.60**	**287**	P	**P**	**19 32 22.1**	**-0.3**
FAKI				IAmb	IAmb	19 32 49.7	
	comp=Z,49nm,1.3s						
FAKI	**Fak Fak**	**50.60**	**287**	P	**P**	**19 32 22.5**	**0.0**
SBA	**Scott Base**	**54.53**	**183**	P	**P**	**19 32 52.1**	**+2.5**
SBA				PcP	**PcP**	**19 33 46.7**	**+2.3**
VNDA	**Vanda**	**54.53**	**185**	P	**P**	**19 32 52.1**	**+2.6**
	comp=Z,2.0nm,0.9s,baz=343,slow=5.1,SNR=6.0						
VNDA				PcP	**PcP**	**19 33 46.2**	**+1.8**
	comp=Z,1.4nm,0.6s,baz=323,slow=5.3,SNR=6.3						
VNDA				ScP	**ScP**	**19 36 52.1**	**+1.1**
	comp=Z,1.7nm,0.7s,baz=340,slow=4.2,SNR=10						
	comp=Z,2.0nm,0.9s						
VNDA	**Vanda**	**54.53**	**185**	P	**P**	**19 32 52.0**	**+2.4**
VNDA				PcP	**PcP**	**19 33 46.3**	**+1.8**
KLBR	**Kellerberrin**	**55.10**	**247**	P	**P**	**19 32 54.8**	**+0.4**
PSA00	**Pilbara Seismi**	**55.25**	**259**	P	**P**	**19 32 55.1**	**-0.4**
PSA00	**Pilbara Seismi**	**55.25**	**259**	P	**P**	**19 32 55.1**	**-0.4**
PSA00				PcP	**PcP**	**19 33 48.5**	**+0.2**
PSA00	**Pilbara Seismi**	**55.25**	**259**	P	**P**	**19 32 55.7**	**+0.2**
MBWA	**Marble Bar**	**55.46**	**260**	P	**P**	**19 32 56.6**	**-0.4**
MBWA				IAmb	IAmb	19 32 57.7	
	comp=Z,29nm,1.1s						
MBWA	**Marble Bar**	**55.46**	**260**	P	**P**	**19 32 56.9**	**-0.1**
BLDU	**Ballidu**	**56.14**	**248**	P	**P**	**19 33 01.4**	**-0.2**
MUN	**Mundaring**	**56.34**	**246**	P	**P**	**19 33 03.2**	**+0.2**
MORW	**Morawa**	**56.98**	**250**	P	**P**	**19 33 07.7**	**+0.3**
MORW				IAmb	IAmb	19 33 08.4	
	comp=Z,24nm,1.0s						
MORW	**Morawa**	**56.98**	**250**	P	**P**	**19 33 07.5**	**+0.1**
MMRI	**Maumere**	**57.17**	**275**	P	**P**	**19 33 08.7**	**-0.2**
MMRI				IAmb	IAmb	19 33 09.7	
	comp=Z,27nm,1.0s						
MMRI	**Maumere**	**57.17**	**275**	P	**P**	**19 33 09.1**	**+0.2**
GIRL	**Giralia**	**60.01**	**257**	P	**P**	**19 33 29.8**	**+2.0**
PLAI	**Plampang**	**61.17**	**273**	P	**P**	**19 33 35.4**	**-0.3**
JCJ	**Chichijima**	**62.40**	**322**	P	**P**	**19 33 43.4**	**+0.1**
	comp=Z,23nm,0.4s,baz=292,slow=21,SNR=7.0						
	comp=Z,23nm,0.4s						
JCJ	**Chichijima**	**62.40**	**322**	P	**P**	**19 33 42.7**	**-0.7**
JCJ				IAmb	IAmb	19 33 45.1	
	comp=Z,45nm,1.1s						
JCJ	**Chichijima**	**62.40**	**322**	P	**P**	**19 33 43.4**	**+0.1**
TOLI2	**Tolitoli**	**62.60**	**284**	P	**P**	**19 33 44.0**	**-0.9**
TOLI2				IAmb	IAmb	19 33 46.7	
	comp=Z,17nm,0.7s						
TOLI2	**Tolitoli**	**62.60**	**284**	P	**P**	**19 33 44.6**	**-0.3**
JAGI	**Jajag, Banyuwa**	**64.62**	**272**	P	**P**	**19 33 56.3**	**-1.6**
JAGI				PcP	**PcP**	**19 34 25.6**	**-0.7**
JAGI	**Jajag, Banyuwa**	**64.62**	**272**	P	**P**	**19 33 57.2**	**-0.7**
QSPA	**South Pole Qui**	**66.33**	**180**	P	**P**	**19 34 09.5**	**+1.7**
	comp=Z,4.8nm,0.7s,baz=12,slow=1.6,SNR=12						
	comp=Z,4.8nm,0.7s						
QSPA	**South Pole Qui**	**66.33**	**180**	P	**P**	**19 34 09.7**	**+1.9**
UGM	**Wanagama**	**68.16**	**271**	P	**P**	**19 34 19.6**	**-0.3**
UGM	**Wanagama**	**68.16**	**271**	P	**P**	**19 34 20.1**	**+0.3**
KKM	**Kota Kinabalu**	**68.92**	**287**	P	**P**	**19 34 25.1**	**+0.6**
JOW	**Kunigami**	**70.94**	**312**	P	**P**	**19 34 36.4**	**+0.3**
	comp=Z,26nm,0.5s,baz=108,slow=8.2,SNR=8.0						
	comp=Z,26nm,0.5s						
JOW	**Kunigami**	**70.94**	**312**	P	**P**	**19 34 36.8**	**+0.8**
JOW				IAmb	IAmb	19 34 37.7	
	comp=Z,31nm,0.8s						
JOW	**Kunigami**	**70.94**	**312**	P	**P**	**19 34 37.1**	**+1.0**
MJAR	**Matsushiro Arr**	**71.81**	**326**	P	**P**	**19 34 40.9**	**-0.1**
	comp=Z,4.7nm,0.7s,baz=155,slow=6.4,SNR=16						
	comp=Z,4.7nm,0.7s						
MJAR	**Matsushiro Arr**	**71.81**	**326**	P	**P**	**19 34 40.8**	**-0.2**
MAJO	**Matsushiro**	**71.81**	**326**	P	**P**	**19 34 40.9**	**-0.1**
MJB9	**Matsu-Tunnel**	**71.81**	**326**	P	**P**	**19 34 41.1**	**0.0**
KSM	**Kuching**	**72.14**	**280**	P	**P**	**19 34 43.5**	**0.0**
KSM				IAmb	IAmb	19 34 44.6	
	comp=Z,20nm,0.6s						
KSM	**Kuching**	**72.14**	**280**	P	**P**	**19 34 44.0**	**+0.6**
JSU	**Suzuyama**	**72.61**	**317**	P	**P**	**19 34 45.7**	**0.0**
JSU				IAmb	IAmb	19 34 47.0	
	comp=Z,22nm,0.6s						
JHS	**Saijyo**	**73.45**	**321**	P	**P**	**19 34 50.9**	**+0.4**
JHS				IAmb	IAmb	19 34 52.2	
	comp=Z,17nm,0.9s						
TWG	**Pinlang**	**73.68**	**305**	P	**P**	**19 34 50.5**	**-1.5**
TWG				IAmb	IAmb	19 34 50.9	
	comp=Z,11nm,0.5s						
TPUB	**Ta-pu**	**74.28**	**305**	P	**P**	**19 34 54.4**	**-1.0**
TPUB				IAmb	IAmb	19 35 01.5	
	comp=Z,22nm,1.1s						
SSLB	**Suanglung**	**74.32**	**305**	P	**P**	**19 34 54.6**	**-1.0**
YHNB	**Yeheng**	**74.52**	**306**	P	**P**	**19 34 56.7**	**-0.1**
AMKA	**Amchitka**	**74.80**	**360**	P	**P**	**19 34 57.4**	**-0.2**
JEW	**Eniwo**	**75.21**	**332**	P	**P**	**19 34 60.0**	**-0.2**
KIWB	**Kanaga Island**	**75.32**	**2**	P	**P**	**19 35 00.4**	**-0.1**
ADK	**Adak**	**75.36**	**2**	P	**P**	**19 35 00.4**	**-0.4**
ADK	**Adak**	**75.36**	**2**	P	**P**	**19 35 00.4**	**-0.4**
JKA	**Kamikawa-asahi**	**75.76**	**333**	P	**P**	**19 35 04.4**	**+1.2**
JKA				IAmb	IAmb	19 35 06.7	
	comp=Z,14nm,0.8s						
ATKA	**Atka Island**	**75.79**	**4**	P	**P**	**19 35 02.3**	**-0.8**
BELA	**Belgrano 2**	**76.57**	**173**	P	**P**	**19 35 07.6**	**+0.3**
NIKH	**Nikolski High**	**77.00**	**7**	P	**P**	**19 35 09.4**	**-0.4**
NIKH	**Nikolski High**	**77.00**	**7**	P	**P**	**19 35 08.8**	**-1.0**
	baz=190						
TJN	**Taejon**	**77.78**	**319**	P	**P**	**19 35 15.2**	**+0.8**
MAW	**Mawson**	**77.91**	**200**	P	**P**	**19 35 16.6**	**+2.0**
	comp=Z,4.5nm,0.6s,baz=131,slow=5.6,SNR=12						
	comp=Z,4.5nm,0.6s						
MAW	**Mawson**	**77.91**	**200**	P	**P**	**19 35 16.1**	**+1.4**
YSS	**Yuzh-Sakhalins**	**78.03**	**335**	P	**P**	**19 35 17.1**	**+1.6**
YSS				IAmb	IAmb	19 35 18.0	
	comp=Z,20nm,0.6s						
MYKOM	**Kota Tinggi**	**78.12**	**277**	P	**P**	**19 35 16.7**	**-0.1**
UNV	**Unalaska Valle**	**78.14**	**8**	P	**P**	**19 35 15.4**	**-0.5**
UNV				IAmb	IAmb	19 35 16.7	
	comp=Z,28nm,0.8s						
UNV	**Unalaska Valle**	**78.14**	**8**	P	**P**	**19 35 14.9**	**-1.0**
	baz=192						
KSRS	**Korea Array**	**78.17**	**320**	P	**P**	**19 35 17.9**	**+1.4**
	comp=Z,4.6nm,0.7s,baz=132,slow=5.6,SNR=30						
	comp=Z,4.6nm,0.7s						
KSAR	**Wonju Array Be**	**78.19**	**320**	P	**P**	**19 35 18.0**	**+1.4**
KS19	**Wonju Array Si**	**78.24**	**320**	P	**P**	**19 35 17.8**	**+0.9**
AKUT	**Akutan**	**78.52**	**8**	P	**P**	**19 35 17.2**	**-0.7**
PEA0B	**Petropavlovsk-**	**78.97**	**346**	P	**P**	**19 35 20.8**	**+0.4**
PEA0B				IAmb	IAmb	19 35 21.7	
	comp=Z,20nm,0.7s						
PETK	**Petropavlovsk-**	**78.97**	**346**	P	**P**	**19 35 19.9**	**-0.5**
	comp=Z,12nm,0.6s,baz=134,slow=6.7,SNR=29						
	comp=Z,12nm,0.6s						
PETK	**Petropavlovsk-**	**78.97**	**346**	P	**P**	**19 35 19.7**	**-0.7**
CNBA	**Chernabura Isl**	**80.18**	**12**	P	**P**	**19 35 26.4**	**-0.3**
CHNA	**Chernabura Isl**	**80.19**	**12**	P	**P**	**19 35 26.3**	**-0.4**
	baz=199						
SDPT	**Sand Point**	**80.52**	**11**	P	**P**	**19 35 27.7**	**-0.7**
SDPT				IAmb	IAmb	19 35 28.8	
	comp=Z,22nm,0.6s						
SDPT	**Sand Point**	**80.52**	**11**	P	**P**	**19 35 28.0**	**-0.5**
	baz=198,SNR=6.0						
NJ2	**Nanjing**	**80.61**	**311**	*e*P	**P**	**19 35 28.8**	**-0.7**
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
USA0B	**Ussuriysk Arra**	**80.67**	**327**	P	**P**	**19 35 29.5**	**0.0**
USRK	**Ussuriysk Ar.**	**80.67**	**327**	P	**P**	**19 35 30.5**	**+1.0**
	comp=Z,4.9nm,0.5s,baz=149,slow=4.1,SNR=18						
	comp=Z,4.9nm,0.5s						
USRK	**Ussuriysk Ar.**	**80.67**	**327**	P	**P**	**19 35 30.2**	**+0.7**
SNCC	**San Nicolas Is**	**80.76**	**48**	P	**P**	**19 35 30.6**	**+0.3**
	baz=234						
SPIA	**Saint Paul Isl**	**81.02**	**5**	P	**P**	**19 35 30.0**	**-1.0**
	baz=189						
PKM	**Mcpherson Peak**	**81.54**	**46**	P	**P**	**19 35 35.5**	**+1.0**
	baz=233						
IPM	**Ipoh**	**81.80**	**279**	P	**P**	**19 35 36.5**	**+0.4**
IPM				IAmb	IAmb	19 35 37.2	
	comp=Z,17nm,0.7s						
IPM	**Ipoh**	**81.80**	**279**	P	**P**	**19 35 36.7**	**+0.6**
BCW	**Bitter Crk WRg**	**81.83**	**46**	P	**P**	**19 35 37.7**	**+1.8**
BCW				IAmb	IAmb	19 35 38.6	
	comp=Z,19nm,0.7s						
MDJ	**Mudanjiang**	**82.17**	**326**	P	**P**	**19 35 37.4**	**+0.2**
MDJ				IAmb	IAmb	19 35 39.3	
	comp=Z,11nm,0.7s						
ELS	**Elsinore Mount**	**82.42**	**48**	P	**P**	**19 35 40.0**	**+1.1**
MURC	**Murrieta**	**82.55**	**48**	P	**P**	**19 35 40.5**	**+1.0**
	baz=235						
BFSC	**Mount Baldy Ra**	**82.60**	**48**	P	**P**	**19 35 40.3**	**+0.5**
	baz=235,SNR=5.6						
SLBS	**Sierra La Lagu**	**82.68**	**60**	P	**P**	**19 35 42.1**	**+1

HSIG IAmb IAmb 19 35 52.1
comp=Z,17nm,0.7s
RYN Ryan 84.58 44 P P 19 35 50.0 +0.4
NVAR Mina Array Bea 84.61 44 P P 19 35 50.7 +0.9
comp=Z,3.4nm,0.6s,baz=227,slow=7.6,SNR=22
comp=Z,3.4nm,0.6s
NVAR Mina Array Bea 84.61 44 P P 19 35 49.7 -0.1
Q18K Katmai Hardscr 84.66 13 P P 19 35 49.6 +0.1
baz=203
PAHR Pah Rah Range 84.68 42 P P 19 35 50.5 +0.5
NV11 Mina Array Sit 84.70 44 P P 19 35 49.9 -0.2
214A Organ Pipe Nat 84.73 52 P P 19 35 50.0 -0.3
214A IAmb IAmb 19 35 53.3
comp=Z,17nm,1.3s
214A Organ Pipe Nat 84.73 52 P P 19 35 51.2 +0.9
baz=238
SNAA Sanae 84.81 179 P P 19 35 50.4 +0.3
SNAA Sanae 84.81 179 P P 19 35 50.0 -0.1
I03D Drain, OR 84.82 37 P P 19 35 51.4 +1.0
baz=230
P17K Kvichak River 84.89 12 P P 19 35 50.0 -0.3
baz=202,SNR=6.2
O16K Kokwok River B 84.96 11 P P 19 35 50.0 -0.7
baz=200
VNA3 Neumayer Olymp 85.02 177 P P 19 35 51.4 +0.3
VNA3 Neumayer Olymp 85.02 177 pP pP 19 37 47.8 +0.3
PDMCI Parker Dam,Lak 85.05 49 P P 19 35 52.5 +0.8
baz=237
TPNV Topopah Spring 85.08 46 P P 19 35 52.6 +0.5
TPNV IAmb IAmb 19 35 54.2
comp=Z,7.5nm,0.7s
TPNV Topopah Spring 85.08 46 P P 19 35 52.5 +0.5
baz=235,SNR=8.3
TPH Tonopah 85.09 45 P P 19 35 51.5 -0.6
KVN Kaiserville 85.10 44 P P 19 35 52.0 -0.2
Q19K Cape Douglas, 85.20 13 P P 19 35 51.8 -0.2
baz=204
J04D Umpqua Nationa 85.23 38 P P 19 35 53.5 +0.8
J04D Umpqua Nationa 85.23 38 P P 19 35 53.4 +0.8
baz=231
P18K Big Mountain, 85.31 12 P P 19 35 52.0 -0.4
P18K IAmb IAmb 19 35 53.0
comp=Z,14nm,0.7s
P18K Big Mountain, 85.31 12 P P 19 35 52.0 -0.4
baz=203
O17K Koliganek Bris 85.31 11 P P 19 35 51.9 -0.5
baz=201
BUCK Buck Mountain 85.34 37 P P 19 35 54.7 +1.7
BUCK IAmb IAmb 19 35 55.4
comp=Z,9.1nm,0.6s
I04A Tendick Farm, 85.41 38 P P 19 35 54.2 +0.9
baz=231
MOD Modoc Plateau 85.45 40 P P 19 35 54.4 +0.7
MOD IAmb IAmb 19 35 56.6
comp=Z,10nm,0.9s
SHPR Sheep Range 85.56 47 P P 19 35 54.5 +0.1
K05A Summer Lake 85.61 39 P P 19 35 55.3 +0.8
K05A IAmb IAmb 19 35 57.2
comp=Z,15nm,0.9s
W13A Hualapai Mount 85.66 49 P P 19 35 54.4 -0.5
N16K Nishlik Lake 85.68 10 P P 19 35 53.8 -0.4
baz=199,SNR=6.8
H04D Lebanon 85.69 37 P P 19 35 55.2 +0.6
baz=230
O18K Koktuh Hills 85.74 12 P P 19 35 53.5 -0.9
O18K Koktuh Hills 85.74 12 P P 19 35 53.8 -0.7
baz=203,SNR=10
J05D Fort Rock, OR 85.76 39 P P 19 35 56.3 +1.1
baz=232
H04A Detroit Lake 86.09 37 P P 19 35 56.8 +0.2
H04A IAmb IAmb 19 35 58.4
comp=Z,22nm,1.4s
PRN Pahroc Range 86.13 46 P P 19 35 57.9 +0.9
PRN IAmb IAmb 19 35 59.8
comp=Z,8.3nm,0.8s
PINE Pine Mountain 86.24 38 P P 19 35 58.2 +0.7
PINE IAmb IAmb 19 36 00.2
comp=Z,14nm,0.8s
CNPM China Poot 86.27 14 P P 19 35 56.6 -0.4
CNPM IAmb IAmb 19 35 58.3
comp=Z,19nm,0.8s
HOM Homer 86.30 14 P P 19 35 56.9 -0.2
baz=206
R11A Troy Canyon, C 86.31 45 P P 19 35 57.7 -0.2
R11A Troy Canyon, C 86.31 45 P P 19 35 58.5 +0.5
baz=236
I05D Terrebonne, OR 86.35 38 P P 19 35 58.7 +0.9
baz=232
N18K Kilae Creek 86.38 12 P P 19 35 57.3 -0.2
baz=202
TUC Tucson 86.38 52 P P 19 35 59.8 +1.5
TUC IAmb IAmb 19 36 02.1
comp=Z,12nm,0.9s
TUC Tucson 86.38 52 P P 19 35 59.0 +0.7
baz=239
ENH Enshi 86.41 305 P P 19 35 57.9 -0.4
ENH IAmb IAmb 19 36 00.4
comp=Z,15nm,0.9s
HNS HongShan 86.44 314 ⇓P P 19 36 00.3 +2.0
HNS pmax pmax
comp=Z,13nm,0.8s
BMN Battle Mountai 86.45 43 P P 19 35 58.7 +0.2
BMN IAmb IAmb 19 36 00.7
comp=Z,9.1nm,0.8s
MA2 Magadan 86.45 346 P P 19 35 56.7 -1.1
MA2 IAmb IAmb 19 35 58.9
comp=Z,20nm,0.9s
O20K Slope Mountain 86.47 13 P P 19 35 57.8 -0.2
baz=205
BRLK Bradley Lake 86.56 14 P P 19 35 57.7 -0.7
BRSE Bradley Lake S 86.58 14 P P 19 35 58.3 -0.1
baz=207
F04A Amboy 86.75 36 P P 19 36 00.6 +1.0
F04A IAmb IAmb 19 36 02.5
comp=Z,37nm,1.5s
WVOR Wild Horse Val 86.76 41 P P 19 35 59.9 0.0
WVOR IAmb IAmb 19 36 02.2
comp=Z,12nm,1.1s
N19K Bonanza Creek 86.77 12 P P 19 35 58.5 -0.9
N19K IAmb IAmb 19 35 59.7
comp=Z,9.8nm,0.9s
N19K Bonanza Creek 86.77 12 P P 19 35 58.7 -0.7
baz=203
RSO Redoubt South 86.79 13 P P 19 35 59.2 -0.5
SVW2 Sparrevohn 86.82 12 P P 19 35 59.2 -0.3
HG4B Hotspring 86.84 28 P P 19 36 00.2 +0.3
BJI Beijing 86.97 316 P P 19 36 01.8 +1.1
BJI pmax pmax
comp=Z,8.0nm,0.9s
X16A Lo Mia Camp, P 87.00 50 P P 19 36 01.7 +0.4
LCMT Little Creek M 87.13 47 P P 19 36 02.4 +0.6
SEW Seward 87.19 15 P P 19 36 01.2 -0.1
baz=208
I07A Izee 87.24 39 P P 19 36 02.9 +0.8
I07A IAmb IAmb 19 36 05.2
comp=Z,14nm,0.9s
CCUT Cedar City 87.34 47 P P 19 36 03.4 +0.5
J08A Circle Bar Ran 87.40 40 P P 19 36 03.5 +0.7
J08A IAmb IAmb 19 36 05.2
comp=Z,28nm,1.3s
U15A North Rim 87.46 48 P P 19 36 04.0 +0.4
U15A IAmb IAmb 19 36 06.4
comp=Z,11nm,0.8s
PSUT Pine Spring 87.54 46 P P 19 36 04.8 +1.0
SZCU Shurtz Canyon 87.54 47 P P 19 36 04.9 +1.1
SPU Mount Spurr 87.59 13 P P 19 36 02.7 -0.5
HPIG 87.63 59 P P 19 36 03.7 -0.8
HPIG IAmb IAmb 19 36 06.8
comp=Z,10nm,0.9s
D05A Enumclaw 87.78 35 P P 19 36 05.0 +0.6
M19K Big River Lodg 87.79 12 P P 19 36 04.0 0.0
baz=203
ELK Elko 87.87 43 P P 19 36 05.2 -0.1
ELK IAmb IAmb 19 36 07.2
comp=Z,10nm,1.4s
L19K White Mountain 87.96 11 P P 19 36 04.7 -0.2
L19K IAmb IAmb 19 36 06.3
comp=Z,13nm,0.7s
L19K White Mountain 87.96 11 P P 19 36 04.4 -0.5
baz=203,SNR=17
PKCU Pink Cliffs 87.98 47 P P 19 36 07.3 +1.2
RC01 Rabbit Creek A 88.01 14 P P 19 36 04.8 -0.3
RC01 IAmb IAmb 19 36 06.2
comp=Z,13nm,0.8s
RC01 Rabbit Creek A 88.01 14 P P 19 36 04.5 -0.6
baz=207
M20K Styx River 88.01 12 P P 19 36 04.4 -0.8
baz=204
X18A Snowflake 88.11 51 P P 19 36 06.9 +0.4
X18A IAmb IAmb 19 36 09.1
comp=Z,7.8nm,0.8s
SUA Susitna One 88.12 14 P P 19 36 04.6 -1.2
SUA Susitna One 88.12 14 P P 19 36 05.3 -0.5
baz=206,SNR=16
G08A Pilot Rock 88.27 38 P P 19 36 07.6 +0.7
PLCA Paso Flores 88.33 134 P P 19 36 08.7 +1.3
comp=Z,0.9nm,0.7s,baz=256,slow=4.3,SNR=4.5
comp=Z,0.9nm,0.7s
MTPU Mount Pierson 88.39 47 P P 19 36 08.8 +0.9
MTPU IAmb IAmb 19 36 11.1
comp=Z,9.8nm,0.7s
L20K Farewell, AK 88.41 12 P P 19 36 06.6 -0.4
baz=204,SNR=5.4
SKT Skwentna 88.42 13 P P 19 36 05.7 -1.3
SKT Skwentna 88.42 13 P P 19 36 06.4 -0.6
baz=206
GLI Glacier Island 88.44 15 P P 19 36 07.1 -0.1
GLI Glacier Island 88.44 15 P P 19 36 06.9 -0.3
baz=210,SNR=8.1
TTA Tatalina 88.45 11 P P 19 36 06.7 -0.5
TTA Tatalina 88.45 11 P P 19 36 06.7 -0.5
baz=202
EYAK Cordova Ski Ar 88.49 16 P P 19 36 07.3 0.0
baz=211
M22K Willow 88.51 14 P P 19 36 07.6 +0.2
LTY Liberty 88.53 36 P P 19 36 08.2 +0.3
LTY IAmb IAmb 19 36 09.8
comp=Z,9.7nm,0.8s
E07A Sunnyside 88.54 37 P P 19 36 08.4 +0.4
KNK Knik Glacier 88.58 15 P P 19 36 07.6 -0.2
KNK Knik Glacier 88.58 15 P P 19 36 07.6 -0.2
baz=209
PMR Palmer 88.59 14 P P 19 36 07.6 -0.1
PMR IAmb IAmb 19 36 08.8
comp=Z,10nm,0.7s
PMR Palmer 88.59 14 P P 19 36 07.9 +0.1
baz=208
HAWA Hanford 88.62 37 P P 19 36 08.9 +0.6
HAWA IAmb IAmb 19 36 10.7
comp=Z,12nm,0.8s
MSU Marysvale 88.64 47 P P 19 36 09.6 +0.7
121A Cookes Peak, D 88.69 54 P P 19 36 09.6 +0.3
121A Cookes Peak, D 88.69 54 P P 19 36 09.7 +0.5
baz=241
HMT Hamilton 88.69 17 P P 19 36 08.8 +0.5
GHO Glory Hole Cre 88.80 14 P P 19 36 08.3 -0.6
B06A Marblemount 88.88 35 P P 19 36 09.0 -0.4
B06A IAmb IAmb 19 36 11.1
comp=Z,17nm,1.1s
E08A Dider Farm, El 88.94 37 P P 19 36 09.7 -0.1
E08A IAmb IAmb 19 36 12.7
comp=Z,14nm,1.2s
SNH Sunshine Point 88.95 18 P 19 36 11.1 +1.6
BMO Blue Mountains 88.96 39 P P 19 36 10.2 +0.2
MFID Camas Ranch 89.01 41 P P 19 36 10.8 +0.4
MFID IAmb IAmb 19 36 13.1
comp=Z,11nm,0.9s
CUT Chulitna 89.06 13 P P 19 36 10.0 0.0
M23K Glacier View 89.09 15 P P 19 36 09.8 -0.3
baz=209
PPLA Purkeypile 89.12 12 P P 19 36 09.3 -1.1
baz=205
SEY Seymchan 89.14 348 P P 19 36 10.7 +0.4
comp=Z,8.2nm,0.5s,baz=150,slow=5.4,SNR=47
comp=Z,8.2nm,0.5s
BMRM Bremner River 89.14 16 P P 19 36 10.0 -0.5
baz=212
WAX Waxell Ridge 89.17 17 P P 19 36 10.9 +0.3
K20K Telida 89.19 11 P P 19 36 10.7 +0.1
K20K IAmb IAmb 19 36 11.6
comp=Z,8.1nm,0.9s
K20K Telida 89.19 11 P P 19 36 09.9 -0.6
baz=204,SNR=7.0
MESA MESA 89.19 18 P P 19 36 10.9 0.0
baz=214
SCM Sheep Creek Mo 89.22 15 P P 19 36 10.9 +0.1
SCM Sheep Creek Mo 89.22 15 P P 19 36 10.6 -0.2
baz=210,SNR=6.2
KLU Klutina 89.26 16 P P 19 36 11.0 0.0
baz=211
D08A Wollman Farm, 89.35 37 P P 19 36 12.3 +0.6
D08A IAmb IAmb 19 36 14.0
comp=Z,9.7nm,0.9s
BGU Big Grassy Mou 89.37 44 P P 19 36 12.1 0.0
WRAK Wrangell Islan 89.40 24 P P 19 36 13.0 +1.3
WRAK Wrangell Islan 89.40 24 P P 19 36 11.7 0.0
baz=222
YAH Yahtse 89.41 18 P P 19 36 11.9 0.0
ISLE Juniper Island 89.44 18 P P 19 36 13.1 +1.2
ISLE IAmb IAmb 19 36 14.0
comp=Z,14nm,1.0s
E09A Wood Farm, Sta 89.46 37 P P 19 36 12.1 -0.1
E09A IAmb IAmb 19 36 14.6
comp=Z,9.9nm,1.1s
NLU North Lily Min 89.47 45 P P 19 36 13.3 +0.6
PNL Peninsula 89.52 19 P P 19 36 11.6 -0.7
baz=216
CM31 Chiang Mai Arr 89.53 290 P P 19 36 15.5 +2.3
CM31 IAmb IAmb 19 36 16.1
comp=Z,10nm,1.1s
CMAR Chiang Mai Arr 89.53 290 P P 19 36 15.0 +1.8
comp=Z,4.3nm,0.9s,baz=137,slow=3.3,SNR=31
CMAR PKKPbc **PKKPbc 19 53 44.7 +0.6**
comp=Z,0.6nm,0.5s,baz=284,slow=4.5,SNR=6.2
comp=Z,4.3nm,0.9s
CMAR Chiang Mai Ar 89.53 290 P P 19 36 14.7 +1.5
TABL Table Mountain 89.64 18 P P 19 36 13.8 +0.8
TABL IAmb IAmb 19 36 15.0
comp=Z,11nm,0.8s
F10A Beach Ranch, E 89.66 38 P P 19 36 12.9 -0.4
F10A IAmb IAmb 19 36 14.8
comp=Z,8.8nm,0.8s
VRDI Verde Repeater 89.66 17 P P 19 36 14.0 +1.0
VRDI IAmb IAmb 19 36 42.4
comp=Z,17nm,1.4s
CHTO Chiang Mai 89.68 291 P P 19 36 11.7 -2.2
CHTO IAmb IAmb 19 36 16.5
comp=Z,9.8nm,1.0s
N25K Chitina, Valde 89.69 16 P P 19 36 12.1 -0.9
N25K IAmb IAmb 19 36 14.4
comp=Z,11nm,1.2s
N25K Chitina, Valde 89.69 16 P P 19 36 12.2 -0.8
baz=212
TMUT Trail Mountain 89.69 46 P P 19 36 14.5 +0.6
M24K Tolsona, Glenn 89.72 15 P P 19 36 13.2 +0.1
baz=211
GLB Gilahina Butte 89.75 16 P P 19 36 13.7 +0.4
GLB IAmb IAmb 19 36 14.6
comp=Z,12nm,1.1s
WAT6 Susitna Watana 89.77 14 P P 19 36 12.3 -1.2
baz=209,SNR=6.4
MPU Maple Canyon 89.79 46 P P 19 36 14.4 +0.2
MPU IAmb IAmb 19 36 17.1
comp=Z,11nm,0.7s
PLID Pearl Lake 89.86 40 P P 19 36 14.2 -0.1
PLID IAmb IAmb 19 36 16.0
comp=Z,7.1nm,1.2s
B08A Colville Reser 89.91 36 P P 19 36 13.7 -0.7
J20K Nowinta River 89.93 11 P P 19 36 12.8 -1.1
J20K IAmb IAmb 19 36 15.7
comp=Z,7.0nm,1.1s
J20K Nowinta River 89.93 11 P P 19 36 12.4 -1.6
baz=203
HLID Hailey 89.94 41 P P 19 36 15.1 +0.3
HLID IAmb IAmb 19 36 17.2
comp=Z,5.1nm,0.8s
HLID Hailey 89.94 41 P P 19 36 15.3 +0.5
baz=236,SNR=7.6
KTH Kantishna Hill 89.96 13 P P 19 36 13.8 -0.4
KTH IAmb IAmb 19 36 14.6
comp=Z,13nm,1.0s
LLLB Lillooet 89.99 33 P P 19 36 15.1 +0.5
LLLB IAmb IAmb 19 36 16.5
comp=Z,6.6nm,0.8s
HVU Hansel Valley 89.99 44 P P 19 36 15.2 +0.1
TRF Thorofare Moun 90.00 13 P P 19 36 14.2 -0.4
TRF IAmb IAmb 19 36 15.2
comp=Z,10nm,0.7s
TRF Thorofare Moun 90.00 13 P P 19 36 13.9 -0.6
baz=207
BARN Barnard Glacie 90.00 18 P P 19 36 13.9 -0.7
BARN IAmb IAmb 19 36 17.4
comp=Z,19nm,1.3s
CTG Chitna Glacier 90.02 18 P P 19 36 14.3 -0.3
baz=215
SRU San Rafael Swe 90.05 47 P P 19 36 15.5 0.0
CTU Camp Tracy 90.07 45 P P 19 36 15.0 -0.5
CTU IAmb IAmb 19 36 17.9
comp=Z,11nm,0.9s
LENM Lemitar 90.07 52 P P 19 36 16.5 +0.9
MNTX Cornudas Mount 90.08 55 P P 19 36 16.3 +0.8
MNTX IAmb IAmb 19 36 18.0
comp=Z,6.6nm,0.9s
MNTX Cornudas Mount 90.08 55 P P 19 36 16.1 +0.6
baz=242
P17A Butcher Ranch, 90.10 46 P P 19 36 17.3 +1.8
P17A IAmb IAmb 19 36 18.7
comp=Z,14nm,1.2s
HARP HAARP 90.22 15 P P 19 36 15.4 0.0
baz=212
RND Reindeer 90.26 13 P P 19 36 15.2 -0.4
TX31 Lajitas Ar. Si 90.30 58 P P 19 36 17.3 +0.7
TX32 Lajitas Array 90.30 58 P P 19 36 17.8 +1.1
TX32 IAmb IAmb 19 36 19.4
comp=Z,7.1nm,0.8s
TXAR Lajitas Array 90.30 58 P P 19 36 17.9 +1.2
comp=Z,5.7nm,0.7s,baz=214,slow=6.5,SNR=76
TXAR PKKPbc **PKKPbc 19 53 43.4 +0.7**
comp=Z,0.3nm,0.5s,baz=128,slow=2.6,SNR=5.5
comp=Z,5.7nm,0.7s
TXAR Lajitas Array 90.30 58 P P 19 36 17.3 +0.7
BNM Barren Site 90.32 53 P P 19 36 17.2 +0.4
HHC Hu-ho-hao-te 90.36 315 eP P 19 36 17.8 +1.1
HHC pmax pmax
comp=Z,17nm,0.9s
HHC pmax pmax
comp=Z,120nm,5.2s
P18A Preston Nutter 90.50 46 P P 19 36 17.6 0.0
P18A IAmb IAmb 19 36 19.8
comp=Z,6.1nm,0.8s
MCK McKinley 90.53 13 P P 19 36 16.5 -0.3
baz=208
P30M Million Dollar 90.63 20 P P 19 36 16.7 -0.7
baz=219
PAX Paxson 90.64 15 P P 19 36 16.9 -0.5
baz=211
PZH PanZhiHua 90.66 299 P P 19 36 19.5 +1.1
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,100nm,6.8s
HWUT Hardware Ranch 90.67 44 P P 19 36 18.8 +0.6
HWUT IAmb IAmb 19 36 19.9
comp=Z,8.2nm,0.7s
YUK8 Steele Glacier 90.72 18 P P 19 36 17.8 -0.3
baz=216
PV23 Carpenter Ridg 90.74 48 P P 19 36 19.3 +0.6
PV23 IAmb IAmb 19 36 21.1
comp=Z,8.2nm,0.8s
M26K Nabesna, AK 90.77 16 P P 19 36 18.1 +0.2
M26K Nabesna, AK 90.77 16 P P 19 36 17.8 -0.1
baz=213
ANMO Albuquerque 90.82 52 P P 19 36 18.6 -0.5
ANMO Albuquerque 90.82 52 P P 19 36 19.4 +0.3
baz=241
YUK3 Moose Creek 90.92 18 P P 19 36 18.6 -0.3
baz=216,SNR=11
HYT Haines Junctio 91.02 19 P P 19 36 19.2 -0.1
baz=218
M27K Edge Creek, AK 91.02 17 P P 19 36 19.6 +0.3
M27K IAmb IAmb 19 36 20.9
comp=Z,6.8nm,0.7s
M27K Edge Creek, AK 91.02 17 P P 19 36 19.1 -0.1
baz=214,SNR=8.5
MENT Mentasta 91.03 16 P P 19 36 19.5 +0.4
MENT IAmb IAmb 19 36 20.5
comp=Z,5.9nm,0.6s
NEW Newport 91.05 36 P P 19 36 20.1 +0.5
baz=234
L26K Log Cabin Wild 91.20 16 P P 19 36 19.5 -0.4
baz=213
NEA2 Nenana 91.26 13 P P 19 36 19.5 -0.7
baz=208
P32M Atlin 91.28 22 P P 19 36 20.2 -0.2
baz=221
MLY Manley 91.33 12 P P 19 36 19.5 -1.0
baz=206
BVCY Beaver Creek 91.34 17 P P 19 36 20.4 -0.1
baz=215
WRH Wood River Hil 91.36 13 P P 19 36 18.8 -1.8
WRH IAmb IAmb 19 36 20.9
comp=Z,5.2nm,0.9s
O30N Mendenhall 91.41 20 P P 19 36 20.8 -0.2
baz=219
RIDG Independent Ri 91.44 15 P P 19 36 20.6 -0.5
baz=212
H21K Melozitna Rive 91.52 11 P P 19 36 20.6 -0.7
baz=205
HDA Harding Lake 91.55 14 P P 19 36 20.9 -0.5
HDA IAmb IAmb 19 36 23.3
comp=Z,5.8nm,0.6s
HDA Harding Lake 91.55 14 P P 19 36 20.9 -0.5
baz=210,SNR=6.6
CCB Clear Creek Bu 91.57 13 P P 19 36 20.3 -1.2
CCB IAmb IAmb 19 36 21.7
comp=Z,7.1nm,1.0s
L27K Beaver Creek, 91.61 16 P P 19 36 22.1 +0.2
L27K Beaver Creek, 91.61 16 P P 19 36 21.7 -0.2
baz=214
N30M Aishikik Lake 91.64 19 P P 19 36 21.4 -0.6
baz=218
IMAR Indian Mountai 91.66 10 P P 19 36 22.2 +0.3
I23K Minto, Yukon-K 91.70 12 P P 19 36 21.7 -0.4
baz=208
WHY Whitehorse 91.71 20 P P 19 36 21.9 -0.5
baz=220
MDM Murphy Dome 91.76 13 P P 19 36 22.1 -0.3
MDM IAmb IAmb 19 36 22.6
comp=Z,4.4nm,1.0s
SCRK Sand Creek 91.85 15 P P 19 36 23.0 0.0
SCRK Sand Creek 91.85 15 P P 19 36 23.1 +0.1
baz=212
ILAR Eielson Array 91.87 14 P P 19 36 22.0 -0.9
comp=Z,1.3nm,0.5s,baz=214,slow=5.6,SNR=18
comp=Z,1.3nm,0.5s
S22A 4UR Ranch, Cre 91.89 49 P P 19 36 24.5 +0.4
S22A IAmb IAmb 19 36 26.9
comp=Z,5.0nm,0.8s
S22A 4UR Ranch, Cre 91.89 49 P P 19 36 23.9 -0.2
baz=241
H22K Ishtalitna Cre 91.98 11 P P 19 36 23.1 -0.4
baz=206
P33M Teslin, Yukon 92.04 21 P P 19 36 23.4 -0.6
baz=222
N31M Braeburn, Yuko 92.06 20 P P 19 36 23.5 -0.4
baz=220
J25K Salcha River, 92.07 14 P P 19 36 23.4 -0.5
J25K IAmb IAmb 19 36 25.4
comp=Z,6.2nm,1.3s
J25K Salcha River, 92.07 14 P P 19 36 23.6 -0.4
baz=211,SNR=6.8
BILL Bilibino 92.08 355 P P 19 36 23.9 +0.1
BILL IAmb IAmb 19 36 25.2
comp=Z,8.0nm,0.9s
K27K Chicken 92.35 16 P P 19 36 24.8 -0.4
baz=214
J26L Joseph Creek 92.39 15 P P 19 36 24.8 -0.7
J26L IAmb IAmb 19 36 27.0
comp=Z,5.8nm,0.8s
J26L Joseph Creek 92.39 15 P P 19 36 25.0 -0.4
baz=213,SNR=11
SMCO Snowmass 92.48 48 P P 19 36 25.5 -1.3
SMCO IAmb IAmb 19 36 28.7
comp=Z,4.0nm,0.8s
BW06 Boulder Array 92.54 44 P P 19 36 27.1 +0.2
baz=240
PD31 Pinedale Array 92.54 44 P P 19 36 26.9 +0.1
PDAR Pinedale Array 92.54 44 P P 19 36 27.4 +0.5
comp=Z,2.9nm,0.7s,baz=218,slow=3.7,SNR=22
comp=Z,2.9nm,0.7s
PDAR Pinedale Array 92.54 44 P P 19 36 25.8 -1.1
M30M Minto, Yukon 92.60 18 P P 19 36 26.2 -0.2
M30M IAmb IAmb 19 36 29.3
comp=Z,3.7nm,0.7s
M30M Minto, Yukon 92.60 18 P P 19 36 25.7 -0.7
baz=219,SNR=7.8
BOZ Bozeman (W) 92.72 41 P P 19 36 28.0 +0.5
BOZ Bozeman (W) 92.72 41 P P 19 36 27.6 +0.1

baz=238
SDCO Great Sand Dun 92.82 50 P P 19 36 28.2 -0.1
SDCO IAmb IAmb 19 36 30.1
comp=Z,3.4nm,0.8s
SDCO Great Sand Dun 92.82 50 P P 19 36 28.6 +0.3
baz=242
M31M Drury Creek, Y 93.03 20 P P 19 36 28.2 -0.1
baz=221
DAWY Dawson 93.07 17 P P 19 36 28.0 -0.5
DAWY IAmb IAmb 19 36 29.8
comp=Z,5.5nm,0.8s
DAWY Dawson 93.07 17 P P 19 36 28.4 -0.1
baz=217
MSTX Muleshoe 93.07 54 P P 19 36 29.9 +0.6
baz=243
I26K Coal Creek Min 93.16 15 P P 19 36 28.0 -0.8
baz=213
T25A Trinidad 93.31 51 P P 19 36 30.5 0.0
baz=243
COLD Coldfoot 93.39 11 P P 19 36 29.0 -0.8
baz=207
MMPY Sheldon Lake, 94.32 20 P P 19 36 34.7 +0.4
baz=224
YAK Yakutsk 94.46 339 P P 19 36 34.1 -0.7
comp=Z,2.2nm,0.4s,baz=35,slow=1.1,SNR=6.3
comp=Z,2.2nm,0.4s
YAK Yakutsk 94.46 339 P P 19 36 33.4 -1.4
YAK IAmb IAmb 19 36 35.9
comp=Z,7.3nm,0.8s
TOLK Toolik Lake Re 94.76 11 P P 19 36 35.5 -0.6
baz=208
D24K Happy Valley 95.34 11 P P 19 36 37.7 -1.0
baz=208
KSCO Kaye Shedlock' 95.41 50 P P 19 36 40.2 +0.3
baz=244
EPYK Eagle Plains 95.59 16 P P 19 36 39.2 -0.7
baz=219
C23K Itkillik River 95.66 10 P P 19 36 39.3 -0.8
baz=207
435B Jarrell 95.68 59 P P 19 36 41.5 +0.4
baz=246
RSSD Black Hills 96.72 45 P P 19 36 43.6 -2.1
baz=243
SONM Songino Array 97.03 319 P Pdif 19 36 47.4 +0.5
comp=Z,0.5nm,0.5s,baz=124,slow=4.4,SNR=3.9
comp=Z,0.5nm,0.5s
ZALV Zalesovo Beam 111.88 321 PKiKP PKiKP 19 41 45.3 -0.9
comp=Z,1.4nm,0.4s,baz=180,slow=0.4,SNR=9.7
MKAR Makanchi Array 112.10 313 Pdiff Pdif 19 37 55.8 +1.9
comp=Z,0.3nm,0.4s,baz=77,slow=8.6,SNR=4.8
MKAR PKiKP **PKiKP 19 41 46.2 -0.7**
comp=Z,1.3nm,0.4s,baz=207,slow=0.9,SNR=24
SSPA Standing Stone 113.91 55 P PKiKP 19 41 50.2 -0.4
baz=259
KURK Kurchatov 115.14 317 PKPdf PKPdf 19 41 51.3 -1.2
KURBB Kurchatov Arra 115.18 316 PKP PKPdf 19 41 51.4 -1.2
comp=Z,2.8nm,0.5s,baz=107,slow=1.8,SNR=39
BINY Binghamton 115.61 53 P PKPdf 19 41 53.2 -0.6
baz=260
I62A Tamworth 119.21 52 PKPdf PKPdf 19 41 59.8 -0.9
GAR Garm 119.49 303 PKPdf PKPdf 19 41 59.9 -1.6
I63A Otisfield 119.77 52 PKPdf 19 41 58.7 -3.0
KKAR Karatay Array 119.82 307 PKPdf 19 42 00.7 -1.2
KKAR Karatay Array 119.82 307 PKPdf PKPdf 19 42 00.5 -1.4
KBL Kabul 119.83 297 PKPdf PKPdf 19 42 01.9 -0.5
BRVK Borovoye 120.43 319 PKPdf 19 42 01.5 -1.2
PKME Peaks-Kenny Pk 120.78 50 P PKPdf 19 42 03.1 -0.5
baz=266
BOSA Boshof 122.56 206 PKP PKiKP 19 42 08.4 +0.3
comp=Z,2.3nm,0.6s,baz=257,slow=1.6,SNR=6.1
SPITS Spitsbergen Ar 124.98 356 PKP PKPdf 19 42 10.8 0.0
comp=Z,7.2nm,0.6s,baz=86,slow=3.4,SNR=13
SPB2 Spitsbergen Ar 124.98 356 PKPdf 19 42 10.5 -0.3
DAG Danmarks Havn 126.13 5 *i* P **PKPdf 19 42 11.0 -2.0**
ARU Arti 126.80 324 PKP PKiKP 19 42 15.0 -0.3
comp=Z,13nm,0.4s,baz=84,slow=1.7,SNR=31
ARU Arti 126.80 324 PKPdf PKPdf 19 42 13.9 -0.9
ABKAR Akbulak array 127.15 315 PKPdf PKPdf 19 42 15.5 -0.2
ABKAR Akbulak array 127.15 315 PKPdf PKPdf 19 42 15.1 -0.6
AKTO Aktyubinsk 128.23 316 PKP PKiKP 19 42 18.3 -0.1
comp=Z,4.5nm,0.6s,baz=109,slow=3.0,SNR=16
DBG Daneborg 128.27 7 *i* P **PKPdf 19 42 16.1 -1.0**
DY2G Dye2 128.38 22 *i* P **PKPdf 19 42 17.0 -0.8**
ICESG Greenland Ices 128.82 17 *i* P **PKPdf 19 42 18.1 -0.6**
GEYT Alibeck 128.94 300 PKP PKPdf 19 42 19.6 +0.1
comp=Z,3.8nm,0.6s,baz=61,slow=19,SNR=4.6
KIRV Kirov 130.83 328 PKP PKiKP 19 42 23.3 0.0
comp=Z,13nm,0.5s,baz=100,slow=2.1,SNR=9.1
ARA0 ARCESS Array S 131.75 348 *eP* **PKPdf 19 42 23.6 -0.3**
ARA0 IAmb IAmb 19 42 31.1
comp=Z,134nm,2.2s
ARCES ARCESS Array B 131.75 348 PKHKP PKPpre 19 42 09.3
comp=Z,2.5nm,1.1s,baz=39,slow=4.6,SNR=3.9
ARCES PKP **PKPdf 19 42 23.6 -0.3**
comp=Z,4.8nm,0.5s,baz=26,slow=1.3,SNR=33
ARCES ARCESS Array B 131.75 348 PKPdf PKPdf 19 42 23.1 -0.8
BELG Belogornoye 134.06 321 PKP PKiKP 19 42 30.0 -0.1
comp=Z,25nm,0.8s,baz=283,slow=0.8,SNR=11
KLMR Klimovskoe 134.07 334 *e*PKPdf **PKPdf 19 42 28.1 -0.3**
KLMR AMP 19 42 30.1
comp=Z,5.0nm,0.8s
FINES FINESS Array B 138.32 342 PKHKP PKPpre 19 42 25.4
comp=Z,0.9nm,0.3s,baz=43,slow=3.5,SNR=11
FINES PKP **PKPdf 19 42 37.3 +1.0**
comp=Z,2.3nm,0.3s,baz=90,slow=2.8,SNR=7.9
FINES SKPbc **SKPbc 19 45 19.9 0.0**
comp=Z,3.2nm,0.8s,baz=321,slow=2.4,SNR=5.5
RAF Rauma 139.85 344 *eP* **PKPdf 19 42 32.4 -6.6**
VSU Vasula 140.45 338 *eP* **PKPdf 19 42 33.9 -6.3**
MBAR Mbarara 141.62 235 PKPdf 19 42 41.4 -2.5
NC303 NORSAR Array S 141.75 351 PKPpre 19 42 37.9
NB201 NORSAR Array S 141.92 351 PKPpre 19 42 38.5
NB2 NORSAR Subarra 141.94 351 PKPab PKPdf 19 42 38.1 -4.8
baz=16,slow=3.2
NB2 NORSAR Subarra 141.94 351 PKP PKPdf 19 42 38.1 -4.8
comp=Z,2.0nm,0.5s,baz=16,slow=3.2
NOA NORSAR Array B 141.94 351 PKHKP PKPpre 19 42 38.8
comp=Z,4.1nm,0.6s,baz=16,slow=4.6,SNR=30
NAO01 NORSAR Array S 142.18 351 PKPpre 19 42 39.5
NC602 NORSAR Array S 142.19 351 PKPpre 19 42 39.1
NC602 NORSAR Array S 142.19 351 *eP* **PKPdf 19 42 39.2 -4.1**
NC602 IAmb IAmb 19 42 39.7
comp=Z,10.0nm,0.7s
HFS Hagfors 142.41 349 PKHKP PKPpre 19 42 39.4
comp=Z,27nm,0.4s,baz=67,slow=3.9,SNR=246
SLIT Slitere, Latvi 142.55 340 *eP* **PKPdf 19 42 40.6 -3.3**
IDID Didziasalis 142.81 335 *eP* **PKPdf 19 42 42.7 -1.8**
IIGN Ignalina 142.99 335 *eP* **PKPdf 19 42 43.0 -1.8**
OSL Oslo 143.07 351 *eP* PKPbc 19 42 42.7 -0.2
OSL IAmb IAmb 19 42 43.1
comp=Z,23nm,0.8s
NACGM Naroch 143.10 334⇓ *e*PKP PKPab 19 42 41.3 -1.4
baz=43
BER Bergen 143.21 356 *eP* PKPbc 19 42 43.4 +0.1
BER IAmb IAmb 19 42 43.8
comp=Z,43nm,0.6s
KONO Kongsberg 143.51 352 PKPdf PKPab 19 42 43.9 -0.2
KONO Kongsberg 143.51 352 *eP* PKPbc 19 42 44.2 0.0
KONO IAmb IAmb 19 42 44.7
comp=Z,44nm,0.7s
ODD1 Odda 143.57 354 *eP* PKPab 19 42 43.8 -0.6
ODD1 IAmb IAmb 19 42 44.7
comp=Z,21nm,0.5s
PABE Paberze 143.70 337 PKPab 19 42 43.9 -1.1
PABE Paberze 143.70 337 *eP* PKPbc 19 42 45.1 +0.1
PBUR Paburge 143.99 339 *eP* PKPab 19 42 46.1 +0.1
AKASG Malin Array Be 144.88 327 PKP PKPdf 19 42 47.6 -0.7
comp=Z,11nm,0.3s,baz=42,slow=4.7,SNR=118
AKASG pPKP **pPKPdf 19 44 53.5 -0.7**
comp=Z,0.3nm,0.4s,baz=36,slow=3.4,SNR=1.5
HOMB Homborsund 144.99 352 *i* P **PKPdf 19 42 48.0 -0.2**
SNART Snartemo 145.07 353 *i* P **PKPbc 19 42 49.2 +0.1**
SNART Snartemo 145.07 353 *eP* **PKPbc 19 42 49.5 +0.3**
SNART IAML 19 42 50.7
comp=Z,11nm,0.8s
SUW Suwalki 145.15 336 PKPdf 19 42 48.6 0.0
SUW Suwalki 145.15 336 *eP* **PKPbc 19 42 49.6 +0.1**
ONAU Onsala 145.31 349 *i* P **PKPdf 19 42 48.7 -0.1**
OVD Ostervraa, Den 145.67 350 *i* P **PKPab 19 42 52.8 +0.3**
BNN Bunyan 146.16 305 PKPdf 19 42 51.9 +0.8
BJUU Bjuv 146.34 347 *i* P **PKPdf 19 42 51.2 +0.7**
BZK Bozkurt 146.49 311⇑ P **PKPbc 19 42 54.0 +0.3**
BZK Bozkurt 146.49 311 PKPbc 19 42 54.1 +0.3
ASF Jabal al Asfar 146.53 293 PKPbc PKiKP 19 42 55.5 -1.0
comp=Z,11nm,0.7s,baz=88,slow=2.2,SNR=22
MUD Monsted U'grnd 146.66 351 *i* P **PKPbc 19 42 53.3 -0.4**

BSD Bornholm Skovb 146.79 344 *eP* **PKPbc 19 42 54.4 +0.3**
BSD Bornholm Skovb 146.79 344 *i* P **PKPdf 19 42 52.0 +0.7**
COP Copenhagen 146.82 347 *i* P **PKPbc 19 42 53.8 -0.3**
SORM Soroca 146.92 324⇓ P **PKPbc 19 42 53.8 -0.8**
HWQ Hawqa 147.07 297 *eP* **PKPbc 19 42 55.7 0.0**
LLD Lille Linde 147.19 347 *i* P **PKPbc 19 42 54.6 -0.5**
BHL Bhannes 147.36 296 *eP* **PKPbc 19 42 56.3 -0.1**
SHBL Chebaa 147.37 295 *eP* **PKiKP 19 42 57.5 -0.7**
BR131 Keskin Array S 147.54 307 PKPbc 19 42 56.5 -0.3
BRTR Keskin Array B 147.54 307 PKPbc PKPbc 19 42 56.5 -0.3
comp=Z,5.1nm,0.6s,baz=144,slow=5.4,SNR=30
BRTR PKPab **PKPab 19 43 01.3 +0.5**
comp=Z,1.9nm,0.8s,baz=80,slow=3.4,SNR=5.0
BRTR Keskin Array B 147.54 307 PKPdf PKPdf 19 42 52.7 -0.6
BRTR **PKPbc 19 42 55.8 -1.0**
MMAI Mount Meron Ar 147.69 295 PKPbc PKiKP 19 42 58.4 -0.4
comp=Z,24nm,0.4s,baz=72,slow=4.7,SNR=65
DRBR Darabani 147.78 326⇑ P **PKPbc 19 42 56.7 -0.2**
GKP Gorka Klasztor 147.78 341 *e*PKPbc **PKPbc 19 42 56.8 0.0**
GKP Gorka Klasztor 147.78 341 *eP* **PKPbc 19 42 57.2 +0.4**
VASR Vaslui 148.12 323⇓ P **PKPbc 19 42 57.8 0.0**
TLCR 148.35 320⇑ P **PKPbc 19 42 58.5 +0.1**
EKA Eskdalemuir Ar 148.37 4 PKPbc PKPbc 19 42 57.3 -0.9
comp=Z,5.9nm,0.4s,baz=341,slow=2.6,SNR=76
VLDR Vladesti 148.41 321⇓ P **PKPbc 19 42 58.3 -0.2**
VARL Varlezi 148.51 321⇑ P **PKiKP 19 42 59.7 -0.3**
JURR Jurilovca 148.54 319⇑ P **PKPbc 19 42 59.0 +0.1**
SCTR Scanteiesti 148.56 321⇓ P **PKiKP 19 42 59.8 -0.2**
GHRR 148.67 322⇓ P **PKiKP 19 43 01.3 +1.0**
SLCR Slobozia Conac 148.74 321⇑ P **PKPdf 19 42 47.5 -7.3**
CFR Carcaliu 148.76 320⇑ P **PKPbc 19 42 59.8 +0.3**
TPGR Topolog 148.77 319⇑ P **PKPbc 19 42 59.8 +0.3**
TESR Tescani 148.82 323⇑ P **PKPbc 19 42 59.7 +0.1**
BIZ Bicaz 148.85 324⇓ P **PKiKP 19 43 00.8 +0.2**
BUR08 Bucovina Ar. S 148.87 326 PKPbc 19 43 00.2 +0.4
BURAR Bucovina Array 148.88 326⇑ P **PKiKP 19 43 01.8 +1.0**
BURAR Bucovina Array 148.88 326 PKiKP 19 43 00.3 -0.5
TIRR Tirgusor 148.99 319⇑ P **PKPbc 19 42 59.3 -0.7**
TIRR Tirgusor 148.99 319 PKPbc 19 42 59.5 -0.5
CSS Mathiatis 149.06 299 PKPbc 19 42 60.0 -0.6
HARR Harsova 149.15 319⇑ P **PKiKP 19 43 01.3 0.0**
TLBR Topalu 149.16 319⇑ P **PKPbc 19 43 00.4 -0.1**
VRI Vrincioaia 149.17 322⇑ P **PKPbc 19 43 00.5 0.0**
MANR Mangalia 149.22 318⇑ P **PKiKP 19 43 01.2 -0.2**
PLOR Plostina 149.22 322⇑ P **PKiKP 19 42 59.4 -1.3**
KOLS Kolonicke sedl 149.37 331 *e*PKP **PKiKP 19 43 02.2 +0.5**
OJC Ojcow 149.43 335 *e*PKPbc **PKPbc 19 43 00.9 0.0**
OJC Ojcow 149.43 335 PKPbc 19 43 00.5 -0.4
COVR Voineasa-Covas 149.47 323⇑ P **PKPbc 19 43 01.2 0.0**
OZUR 149.55 323⇑ P **PKiKP 19 43 02.1 -0.1**
ARCR ARCALIA 149.67 326⇑ P **PKiKP 19 43 02.6 +0.3**
NEHR Nehoiu 149.68 322⇑ P **PKiKP 19 43 02.0 -0.4**
CRVS Cervenica-Dubn 149.76 331 *e*PKP **PKPbc 19 43 01.8 0.0**
MLR Muntele Rosu 149.83 322⇑ P **PKPbc 19 43 00.5 -1.7**
MLR Muntele Rosu 149.83 322 PKPbc PKPbc 19 43 02.3 +0.1
comp=Z,5.2nm,0.4s,baz=321,slow=7.6,SNR=27
MLR Muntele Rosu 149.83 322 PKPdf PKPdf 19 42 55.4 -1.3
MLR PKPbc **PKiKP 19 43 02.6 -0.3**
DOPR Dopca 149.85 324⇑ P **PKiKP 19 43 03.2 +0.5**
NIE Niedzica 149.86 333 *e*PKPbc **PKiKP 19 43 03.0 +0.4**
SECR 150.04 322⇓ P **PKiKP 19 43 02.9 -0.3**
KSP Ksiaz 150.17 339 *e*PKPbc **PKiKP 19 43 03.3 +0.1**
CJR Cluj-Napoca 150.31 326⇑ P **PKiKP 19 43 04.0 +0.3**
MESR Meseseni 150.33 328⇑ P **PKiKP 19 43 04.0 +0.4**
VOIR 150.36 323⇓ P **PKiKP 19 43 03.7 -0.2**
OKC Ostrava-Krasne 150.37 336⇑ *e*PKP **PKiKP 19 43 03.5 -0.1**
OKC *e*PKPab **PKiKP 19 43 12.2 +0.3**
LANS Liptovska Anna 150.41 334 *e*PKP **PKiKP 19 43 05.1 +1.3**
OSTC Ostas 150.44 339⇑ *e*PKP **PKPbc 19 43 03.3 0.0**
CHVC Chvalec 150.47 339⇑ *e*PKP **PKPbc 19 43 03.4 0.0**
UPC Upice 150.55 339⇑ *e*PKP **PKPbc 19 43 03.2 -0.4**
SGRR Singureni 150.57 320⇑ P **PKPbc 19 43 03.6 -0.2**
DPC Dobruska-Polom 150.58 339⇑ *e*PKP **PKPbc 19 43 03.7 0.0**
DPC *e*PKPAB **PKPab 19 43 13.5 +0.6**
RAZG Razgrad 150.62 319⇑ P **PKiKP 19 43 04.4 0.0**
MORC Moravsky Berou 150.64 337⇓ P **PKiKP 19 43 04.6 +0.3**
MORC Moravsky Berou 150.64 337 PKPbc 19 43 02.7 -1.2
MORC Moravsky Berou 150.64 337 *e*PKP **PKiKP 19 43 04.2 -0.1**
KRLC Kraliky 150.66 338⇑ *e*PKP **PKPbc 19 43 03.4 -0.5**
KRLC *e*PKPAB **PKPab 19 43 13.9 +0.7**
LTVH Ltavrtes, Hu 150.67 329 PKP PKiKP 19 43 05.3 +0.9
CLL Collm 150.73 343 PKPbc 19 43 03.1 -0.8
CLL Collm 150.73 343 *e*PKPbc **PKPbc 19 43 04.0 +0.1**
comp=Z,38nm,0.8s
CLL Collm 150.73 343 *ep*PKPab pPKPab 19 45 14.0 +0.7
comp=Z,12nm,1.3s
CLL Collm 150.73 343 *i* PKPab **PKPab 19 43 13.5 +0.1**
comp=Z,12nm,0.7s
BRG Berggiesshubel 150.86 342 *e*PKP **PKPbc 19 43 04.3 0.0**
BRG Amp 19 43 05.4
comp=Z,31nm,0.4s
BRG *ex* x 19 43 14.7
BRG Amp 19 43 15.2
comp=Z,8.4nm,0.7s
BRG pPKP **pPKPab 19 45 16.2 +2.4**
BRG Amp 19 45 17.9
comp=Z,13nm,1.6s
MAUC Maruska 150.87 336⇑ *e*PKP **PKiKP 19 43 05.0 +0.2**
HUMR Humele 150.96 322⇑ P **PKPbc 19 43 04.7 0.0**
PVC Panska Ves 150.99 341⇑ *e*PKP **PKiKP 19 43 04.7 -0.2**
VYHS Vyhne 151.18 334 *e*PKP **PKiKP 19 43 05.4 0.0**
VYHS *e* 19 43 15.9
PSZ Piszkesteto 151.18 332⇑ P **PKPbc 19 43 04.7 -0.4**
PSZ Piszkesteto 151.18 332 PKPbc 19 43 04.3 -0.8
PSZ Piszkesteto 151.18 332 PKP PKiKP 19 43 06.4 +0.9
ELL Elmali 151.28 304 PKPbc 19 43 05.9 +0.1
KOLL Kolacno 151.29 334 *e*PKP **PKiKP 19 43 05.7 +0.1**
JAVC Velka Javorina 151.35 335 *e*PKP **PKiKP 19 43 07.0 +1.2**
JAVC *e* 19 43 17.7
VRAC Vranov 151.37 337⇓ P **PKiKP 19 43 05.9 +0.2**
VRAC Vranov 151.37 337 PKPbc PKiKP 19 43 05.8 0.0
comp=Z,3.3nm,0.4s,baz=149,slow=2.1,SNR=4.5
VRAC PKPab **PKPab 19 43 16.4 +0.2**
comp=Z,9.2nm,0.5s,baz=8.0,slow=2.7,SNR=11
VRAC Vranov 151.37 337 *e*PKP **PKPbc 19 43 04.8 -0.7**
VRAC *e* 19 43 16.4
PRU Pruhonice 151.47 340⇑ *e*PKP **PKiKP 19 43 05.9 0.0**
PRU *e*PKPAB **PKPab 19 43 17.5 +0.9**
SIRR Siria 151.58 328⇑ P **PKiKP 19 43 06.3 0.0**
VLAD Vladila 151.61 321⇓ P **PKiKP 19 43 07.0 +0.6**
KRUC Moravsky 151.65 337 *e*PKP **PKiKP 19 43 06.3 0.0**
KRUC *e* 19 43 17.2
TREC Trest 151.77 338⇑ *e*PKP **PKPbc 19 43 06.2 -0.2**
NKC Novy Kostel 151.86 343⇑ *e*PKP **PKiKP 19 43 07.0 +0.2**
NKC *e*PKPAB **PKPab 19 43 18.2 0.0**
MODS Modra-Piesok 151.89 335 *e*PKP **PKiKP 19 43 07.0 +0.1**
MODS *e* 19 43 19.9
BZS Buzias 152.06 327⇑ P **PKiKP 19 43 07.4 +0.1**
HERR Herculane 152.15 325⇑ P **PKPbc 19 43 07.1 -0.2**
CSKK Cskako 152.31 333 PKP PKiKP 19 43 08.1 +0.4
KHC Kasperske Hory 152.52 341⇑ *e*PKP **PKiKP 19 43 08.1 -0.1**
KHC *e*PKPAB **PKPab 19 43 21.5 +0.4**
CKRC Cesky Krumlov 152.57 339⇑ *e*PKP **PKPdf 19 43 02.1 +1.5**
CKRC *e*PKPAB **PKPbc 19 43 07.6 -0.5**
MDVR Moldovita 152.58 325⇑ P **PKPbc 19 43 07.7 -0.6**
SOP Sopron 152.74 335 PKP PKiKP 19 43 09.2 +0.6
GEC2 GERESS Array S 152.74 340 PKPbc 19 43 08.2 -0.4
GERES GERESS Array B 152.74 340 PKP PKPdf 19 43 01.6 +0.6
comp=Z,0.6nm,0.8s,baz=17,slow=1.4,SNR=5.2
GERES PKPbc **PKiKP 19 43 08.7 0.0**
comp=Z,2.1nm,0.5s,baz=37,slow=2.5,SNR=20
GERES PKPab **PKPab 19 43 22.1 0.0**
comp=Z,1.3nm,0.6s,baz=42,slow=4.3,SNR=5.7
GERES pPKPbc **pPKPbc 19 45 14.6 +0.7**
comp=Z,0.2nm,0.6s,baz=72,slow=3.2,SNR=1.5
GERES GERESS Array B 152.74 340 PKPdf 19 43 00.8 -0.2
GERES PKPbc **PKPbc 19 43 08.3 -0.3**
MPLH Magyarpolny 152.76 333 PKP PKiKP 19 43 10.0 +1.4
CONA Conrad Observa 152.79 336 *i* P **PKiKP 19 43 09.0 +0.1**
comp=Z,4.2nm,0.6s
CONA *i* P **PKPab 19 43 23.4 +1.0**
comp=Z,5.8nm,0.5s
MEM Membach 152.79 352 *d*PKiKP **PKiKP 19 43 09.3 +0.7**
BTNL Ternell 152.80 352 *d*PKiKP **PKPbc 19 43 08.4 -0.2**
RONA Rosalia, Austr 152.82 336 *i* P **PKiKP 19 43 09.0 +0.2**
comp=Z,4.6nm,0.5s
RONA *eP* **PKPab 19 43 23.4 +1.0**
comp=Z,5.7nm,0.5s
BSTI Sart Tilman 152.88 352 *d*PKiKP **PKPbc 19 43 08.7 0.0**
BSTI *d*PKPab **PKPab 19 43 22.8 +0.4**
MORH Mrgy, Hungar 153.04 331⇑ P **PKPbc 19 43 09.1 -0.1**

BHOU Houvegnez 153.04 352 *d*PKiKP **PKiKP 19 43 10.0 +0.8**
BHOU *d*PKPab **PKPab 19 43 23.6 +0.4**
BCLA Clavier 153.07 353 *d*PKPab **PKPab 19 43 22.4 -0.9**
BMRD Maredsous 153.24 353 *d*PKiKP **PKPbc 19 43 09.3 -0.2**
BMRD *d*PKPab **PKPab 19 43 23.6 -0.4**
FRGS Fruska Gora 153.28 328⇑ P **PKiKP 19 43 09.9 0.0**
RCHB Rochefort 153.34 353 *d*PKPab **PKPab 19 43 23.3 -1.1**
KOVH Kovagototos 153.38 331 PKP PKiKP 19 43 10.6 +0.6
MOA Molln 153.43 338 *eP* **PKPbc 19 43 09.8 -0.2**
comp=Z,1.3nm,0.5s
MOA *i* P **PKPab 19 43 26.1 +1.1**
comp=Z,3.1nm,0.7s
DOU Dourbes 153.47 353 *d*PKiKP **PKiKP 19 43 10.2 +0.1**
BIOA Bad Ischl, Aus 153.77 339 *i* P **PKPbc 19 43 10.7 -0.1**
comp=Z,2.6nm,0.7s
BIOA *eP* **PKPab 19 43 27.4 +0.9**
comp=Z,2.4nm,0.5s
SOKA Soboth 154.15 336 *i* P **PKPab 19 43 28.3 +0.1**
comp=Z,2.4nm,0.5s,SNR=4.9
MYKA Terra Mystica 154.69 338 *i* P **PKPab 19 43 30.1 -0.4**
comp=Z,4.2nm,0.5s,SNR=4.4
WATA Walderalm 154.73 341 *eP* **PKPab 19 43 31.1 +0.4**
comp=Z,4.0nm,0.5s,SNR=4.3
WTTA Wattenberg 154.78 341 *i* P **PKPab 19 43 31.5 +0.6**
comp=Z,8.7nm,0.5s,SNR=5.8
RETA Reutte 154.82 343 *eP* **PKPab 19 43 31.6 +0.6**
comp=Z,3.4nm,0.5s
MOTA Moosalm 154.85 342 *eP* **PKPab 19 43 32.3 +1.0**
comp=Z,2.3nm,0.4s
SQTA Sankt Quirin 154.94 342 *eP* **PKPab 19 43 32.7 +1.1**
comp=Z,5.2nm,0.7s
ABTA Abfaltersbach 154.97 339 *eP* **PKPab 19 43 32.1 +0.4**
comp=Z,3.3nm,0.5s
DAVA Damuels 155.24 344 *eP* **PKPab 19 43 33.3 +0.3**
comp=Z,15nm,0.9s
DAVOX Davos/Dischmat 155.71 343 PKPab **PKPab 19 43 35.5 +0.5**
comp=Z,12nm,0.6s,baz=32,slow=4.6,SNR=16
CLF Chambon-Foret 155.71 356 PKPab PKPab 19 43 34.0 -0.7
TUE Stuetta 156.13 344 PKPab PKPab 19 43 36.5 -0.4
BNI Bardonecchia 158.08 347 PKPab PKPab 19 43 45.3 +0.1
ESDC Sonseca Array 163.76 11 PKPab PKPab 19 44 09.6 -0.6
comp=Z,2.5nm,0.8s,baz=344,slow=4.4,SNR=14
ESDC Sonseca Array 163.76 11 PKPab PKPab 19 44 09.5 -0.7
KEST Kesra 165.61 328 PKPab PKPab 19 44 18.0 -0.6
comp=Z,3.7nm,0.8s,baz=314,slow=3.3,SNR=5.5
TORD Torodi Ar. Bea 169.34 189 PKP PKPdf 19 43 18.6 -0.5
comp=Z,1.5nm,0.8s,baz=356,slow=1.0,SNR=10
TORD PKPab **PKPab 19 44 35.9 +0.7**
comp=Z,1.3nm,0.7s,baz=170,slow=3.8,SNR=9.9

IDC **21** *19:31:45.9±0.9, 35.07N×73.91E, h0km, mb3.7/10, mbtmp3.7/13, ML3.8/2, MS3.9/1 Error ellipse: s-maj=29.3km s-min=17.7km az=41.0*
NNC **21** *19:31:55.3±11.0, 35.62N×73.02E, h0km, mb3.9, mpv4.0, Error ellipse: s-maj=295.1km s-min=71.4km az=88.0*
ISC 21 19:31:50.2±0.6, 35.21N±0.07×74.1E±0.1, h34km, n26, σ1s91/27, mb3.7/10, 1C-2D, Northwestern Kashmir

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMU	**Jammu**	**2.58**	**165**	*eP*	**Pb**	**19 32 33.0**	**-2.7**
JMU				*eS*	**Sb**	**19 33 10.0**	**+3.1**
AAK	**Ala-Archa**	**7.42**	**2**	Pn	**Pn**	**19 33 37.9**	**+1.7**
0.5nm,0.3s,baz=188,slow=7.1,SNR=1.7							
KK31	**Karatay Array**	**8.36**	**342**	⇓P	**Pn**	**19 33 49.2**	**+0.3**
4.1nm,0.5s,baz=143,slow=16,SNR=40							
KK31				⇑S	**Sn**	**19 35 18.3**	**-3.8**
1.4nm,0.5s,baz=45,slow=5.3,SNR=4.1							
PYUN	**Piuthan**	**10.36**	**131**	*eP*	**Pn**	**19 34 16.2**	**-0.4**
16nm,0.4s							
DANN	**Dangsing**	**10.68**	**127**	*eP*	**Pn**	**19 34 19.9**	**-1.2**
GKN	**Gorkha**	**11.49**	**126**	*eP*	**Pn**	**19 34 30.2**	**-1.8**
21nm,0.4s							
PKIN	**Phulchoki**	**12.28**	**125**	*eP*	**Pn**	**19 34 40.4**	**-2.5**
16nm,0.5s							
PKI	**Phulchoki**	**12.29**	**125**	*eP*	**Pn**	**19 34 40.3**	**-2.8**
10nm,0.5s							
JIRN	**Jiri**	**12.76**	**123**	*eP*	**Pn**	**19 34 46.3**	**-3.3**
15nm,0.4s							
MKAR	**Makanchi Array**	**13.10**	**26**	Pn	**Pn**	**19 34 57.7**	**+3.8**
0.5nm,0.7s,baz=196,slow=12,SNR=1.7							
KURBB	**Kurchatov Arra**	**15.73**	**10**	Pn	**Pn**	**19 35 30.3**	**+1.2**
0.2nm,0.3s,baz=201,slow=10,SNR=16							
0.8nm,0.7s							
AB31	**Akbulak array**	**17.48**	**328**	P	**Pn**	**19 35 50.6**	**-0.5**
0.5nm,0.5s,baz=260,slow=35,SNR=13							
AKTO	**Aktyubinsk**	**19.19**	**327**	P	**Pn**	**19 36 11.6**	**-0.5**
0.6nm,0.3s,baz=126,slow=10,SNR=8.7							
3.0nm,0.5s							
AKTO	**Aktyubinsk**	**19.19**	**327**	⇓P	**P**	**19 36 10.7**	**-0.2**
4.4nm,0.7s							
ZALV	**Zalesovo Beam**	**20.18**	**19**	P	**P**	**19 36 20.3**	**-1.4**
0.8nm,0.5s,baz=211,slow=11,SNR=11							
CMAR	**Chiang Mai Arr**	**27.62**	**121**	P	**P**	**19 37 35.9**	**+1.2**
0.6nm,0.6s,baz=308,slow=11,SNR=8.2							
0.6nm,0.6s							
BRTR	**Keskin Array B**	**32.24**	**290**	P	**P**	**19 38 15.5**	**0.0**
0.2nm,0.4s,baz=84,slow=12,SNR=2.6							
0.2nm,0.4s							
AKASG	**Malin Array Be**	**35.72**	**310**	P	**P**	**19 38 46.0**	**+0.7**
0.8nm,0.6s,baz=77,slow=6.8,SNR=5.9							
0.8nm,0.6s							
FINES	**FINESS Array B**	**39.96**	**326**	P	**P**	**19 39 20.8**	**-0.2**
0.7nm,0.8s,baz=113,slow=11,SNR=1.3							
0.7nm,0.8s							
ARCES	**ARCESS Array B**	**43.30**	**337**	P	**P**	**19 39 49.3**	**+1.0**
2.2nm,1.0s,baz=98,slow=8.7,SNR=6.4							
2.2nm,1.0s							
HFS	**Hagfors**	**45.63**	**322**	P	**P**	**19 40 07.6**	**+0.6**
1.8nm,0.8s,baz=92,slow=10,SNR=4.3							
1.8nm,0.8s							
NOA	**NORSAR Array B**	**46.92**	**324**	P	**P**	**19 40 17.2**	**0.0**
0.5nm,0.7s,baz=95,slow=7.7,SNR=3.3							
0.5nm,0.7s							
ASAJ	**Asahikawa**	**52.08**	**58**	LR	LR	20 04 36.2	
comp=Z,125nm,20.8s,baz=20,slow=38							
ESDC	**Sonseca Array**	**60.29**	**300**	P	**P**	**19 41 56.4**	**+1.0**
0.5nm,0.7s,baz=68,slow=8.4,SNR=4.5							
0.5nm,0.7s							
TORD	**Torodi Ar. Bea**	**68.24**	**271**	P	**P**	**19 42 48.0**	**+0.1**
0.5nm,0.5s,baz=59,slow=4.5,SNR=5.5							
0.5nm,0.5s							
WRA	**Warramunga Arr**	**79.17**	**124**	P	**P**	**19 43 53.1**	**+1.4**
0.3nm,0.5s,baz=318,slow=5.5,SNR=7.9							
0.3nm,0.5s							

KRNET 21 19:32:56.7±0.1, 40.23N×75.25E, mb2.6, 10C-2D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JGN	**Niukaw**	**0.09**	**69**	*eP*	**Pn**	**19 36 49.6**	**+0.2**
JGN				*eS*	**S**	**19 37 14.7**	**-0.2**
JYTA	**Yamagatataniai**	**0.71**	**213**	*eP*	**Pn**	**19 36 50.9**	**0.0**
JYTA				*eS*	**S**	**19 37 16.7**	**-0.7**
JKG	**Kaga**	**0.72**	**277**	*eP*	**Pn**	**19 36 51.8**	**+0.9**
JKG				*eS*	**S**	**19 37 18.2**	**+0.8**
MAT	**Matsushiro**	**0.87**	**66**	P	**Pn**	**19 36 51.9**	**+0.3**
MAT				*eS*	**S**	**19 37 18.6**	**-0.1**
MJAR	**Matsushiro Arr**	**0.88**	**66**	P	**Pn**	**19 36 51.9**	**+0.3**
	6.7nm,0.3s,baz=246,slow=6.5,SNR=31						
MJAR				S	**S**	**19 37 19.3**	**+0.6**
	3.4nm,0.7s,baz=238,slow=11,SNR=8.6						
JSZ	**Suzu**	**1.26**	**5**	P	**Pn**	**19 36 54.3**	**+0.5**
JYN	**Shimob**	**1.28**	**122**	P	**Pn**	**19 36 54.1**	**-0.1**
JRY	**Ryogami san**	**1.38**	**97**	P	**Pn**	**19 36 54.6**	**-0.1**
JWT	**Wachi**	**1.73**	**239**	P	**Pn**	**19 36 57.8**	**+0.4**
JWT				*eS*	**S**	**19 37 28.9**	**-0.2**
JOD2	**Odawara 2**	**1.78**	**121**	P	**Pn**	**19 36 57.6**	**-0.2**
JAG	**Ashikaga**	**1.82**	**82**	P	**Pn**	**19 36 57.5**	**-0.6**
JIE	**Ise**	**1.84**	**193**	P	**Pn**	**19 36 58.7**	**+0.4**
JIE				*eS*	**S**	**19 37 30.5**	**-0.3**
JSD	**Sado**	**2.02**	**24**	P	**Pn**	**19 37 00.4**	**+0.6**
JSD				*eS*	**S**	**19 37 33.3**	**-0.2**
JNS	**Sasagawa**	**2.34**	**45**	*eP*	**Pn**	**19 37 03.0**	**+0.2**
JWY	**Kouya**	**2.38**	**214**	*eS*	**S**	**19 37 39.1**	**-0.8**
JTNC	**Tanabenakahech**	**2.71**	**210**	*eS*	**S**	**19 37 45.5**	**-0.3**
JAW	**Awa shima**	**2.78**	**35**	*eP*	**Pn**	**19 37 07.8**	**+0.5**
JHJ	**Hachijo jima 2**	**3.73**	**145**	P	**Pn**	**19 37 18.5**	**+0.7**
	53nm,0.7s,baz=275,slow=18,SNR=1.6						
JHJ				S	**S**	**19 38 07.5**	**+1.5**
	51nm,0.6s,baz=101,slow=23,SNR=9.1						
USRK	**Ussuriysk Ar.**	**8.94**	**335**	P	**Pn**	**19 38 22.6**	**+0.5**
	1.7nm,0.5s,baz=136,slow=13,SNR=3.5						
KLR	**Kul'dur**	**13.63**	**345**	P	**Pn**	**19 39 20.1**	**-0.4**
	1.5nm,0.5s,baz=177,slow=12,SNR=7.2						
MKAR	**Makanchi Array**	**41.71**	**302**	P	**P**	**19 43 42.2**	**+0.8**
	0.3nm,0.6s,baz=101,slow=7.5,SNR=2.5						
	0.3nm,0.6s						
KURBB	**Kurchatov Arra**	**43.86**	**308**	P	**P**	**19 43 58.5**	**0.0**
	0.7nm,0.7s,baz=86,slow=7.7,SNR=5.3						
	0.7nm,0.7s						
WRA	**Warramunga Arr**	**55.90**	**183**	P	**P**	**19 45 28.4**	**-0.7**
	0.5nm,0.4s,baz=357,slow=7.7,SNR=10						
	0.5nm,0.4s						

LJU ***21*** *19:41:10.4, 45°.89N × 15°.21E, h4km, ML0.8*
ISC 21 19:41:10.6±1.0, 45°.90N±0°.03 × 15°.22E±0°.03, h6km±9km, n16, σ0°.51/28, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEGS	**Legarje**	**0.09**	**54**	*i* Pg	**Pg**	**19 41 12.2**	**-0.4**
LEGS				*i* Sg	**Sg**	**19 41 13.6**	**-0.2**
CRES	**Cresnjev**	**0.18**	**113**	*i* Pg	**Pg**	**19 41 14.1**	**-0.1**
CRES				*i* Sg	**Sg**	**19 41 17.0**	**+0.4**
CRES				IAML		19 41 18.1	
	comp=Z,10.0nm,0.1s						
CESS	**Cesta pri Krsk**	**0.19**	**66**	*e*Sg	**Sg**	**19 41 17.1**	**+0.3**
CESS				IAML		19 41 18.5	
	comp=Z,5.9nm,0.1s						
PDKS	**Podkum**	**0.22**	**317**	*i* Pg	**Pg**	**19 41 15.1**	**+0.1**
PDKS				*i* Sg	**Sg**	**19 41 18.4**	**+0.4**
PDKS				IAML		19 41 19.4	
	comp=Z,15nm,0.1s						
VISS	**Visnje**	**0.28**	**251**	*i* Pg	**Pg**	**19 41 15.9**	**-0.1**
GCIS	**Gornji Cirnik**	**0.29**	**96**	*i* Pg	**Pg**	**19 41 16.7**	**+0.6**
GOLS	**Golise**	**0.30**	**68**	*i* Pg	**Pg**	**19 41 16.9**	**+0.4**
GOLS				*i* Sg	**Sg**	**19 41 21.4**	**+0.9**
GOLS				IAML		19 41 22.6	
	comp=Z,6.0nm,0.1s						
DOBS	**Dobrina**	**0.31**	**35**	*i* Pg	**Pg**	**19 41 16.5**	**0.0**
DOBS				*i* Sg	**Sg**	**19 41 21.2**	**+0.6**
DOBS				IAML		19 41 22.8	
	comp=Z,5.5nm,0.1s						
OZLJ	**Ozalj**	**0.33**	**148**	*e*Pg	**Pg**	**19 41 16.7**	**-0.2**
OZLJ				Sg	**Sg**	**19 41 21.8**	**+0.4**
BOJS	**Bojanci**	**0.39**	**177**	*i* Pg	**Pg**	**19 41 18.0**	**-0.2**
PTJ	**Puntijarka**	**0.52**	**89**	*e*Pg	**Pg**	**19 41 20.4**	**-0.2**
PTJ				Sg	**Sg**	**19 41 27.4**	**0.0**
KALN	**Kalnik**	**0.89**	**74**	*e*Pg	**Pg**	**19 41 26.6**	**-1.1**
KALN				Sg	**Sb**	**19 41 40.3**	**-0.4**
PLIT	**Plitvice**	**1.06**	**164**	*e*Pg	**Pb**	**19 41 31.4**	**0.0**
PLIT				Sg	**Sb**	**19 41 45.9**	**+0.5**
MOSL	**Moslavina**	**1.11**	**104**	*e*Pg	**Pg**	**19 41 31.9**	**0.0**
MOSL				Sg	**Sb**	**19 41 47.1**	**+0.1**
SMRN	**Sveta Marina**	**1.14**	**221**	*e*Pg	**Pg**	**19 41 32.1**	**-0.4**
SMRN				Sg	**Sn**	**19 41 48.2**	**-0.8**
BRJN	**Brijuni**	**1.43**	**227**	*e*Pn	**Pn**	**19 41 36.7**	**-0.4**
BRJN				Sg	**Sn**	**19 41 57.4**	**+1.1**

IDC 21 20:06:49.9±2.3, 3°.73S × 144°.81E, h0km, mb3.7/2, mbtmp3.8/4, ML3.9/1, Error ellipse: s-maj=63.2km s-min=26.1km az=68.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.10**	**158**	Pn	Pn	20 08 22.3	+0.9
	5.8nm,0.3s,baz=341,slow=17,SNR=2.0						
PMG				Sn	Sn	20 09 34.1	+2.0
	0.9nm,0.3s,baz=294,slow=18,SNR=1.5						
WRA	**Warramunga Arr**	**19.08**	**212**	P	P	20 11 14.2	0.0
	0.4nm,0.3s,baz=35,slow=12,SNR=29						
	1.5nm,0.4s						
CMAR	**Chiang Mai Arr**	**50.27**	**298**	P	P	20 15 48.5	+0.1
	0.3nm,0.3s,baz=124,slow=7.1,SNR=4.6						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**74.37**	**321**	P	P	20 18 29.2	-0.4
	0.5nm,0.8s,baz=120,slow=5.7,SNR=2.2						
	0.5nm,0.8s						

SOME ***21*** *20:19:09.9, 39°.73N × 74°.45E, h15km*
KRNET ***21*** *20:19:09.2±0.1, 39°.56N × 74°.48E, mb3.2*
NNC ***21*** *20:19:12.7±1.1, 39°.87N × 74°.51E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=8.2km s-min=5.1km az=165.0*
ISC 21 20:19:08.6±1.3, 39°.68N±0°.06 × 74°.78E±0°.04, h10km, n44, σ1°.78/73, 23C-17D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**		**1.75**	**299** ⇑*i*P	**Pb**	**20 19 39.8**	**-1.0**
	baz=7.0						
OHH				⇑*i*S	**Sn**	**20 20 01.8**	**+0.4**
	baz=7.0						
ARLS	**Aral**		**2.21**	**351** ⇑*e*P	**Pg**	**20 19 50.5**	**-0.3**
	baz=57						
ARLS				⇑*i*S	**Sg**	**20 20 20.6**	**+1.1**
	baz=57						
DRK	**Karamyk**		**2.31**	**266** ⇑*i*P	**Pn**	**20 19 47.5**	**+0.5**
	baz=69						
DRK				⇑*i*S	**Sn**	**20 20 15.3**	**-0.3**
	baz=69						
UCH	**Uchtor**		**2.55**	**356** P	**Pb**	**20 19 54.9**	**+0.2**
	SNR=12						
UCH	**Uchtor**		**2.55**	**356** ⇓*i*P	**Pg**	**20 19 55.8**	**-1.7**
	baz=1.0						
UCH				⇓*i*S	**Sg**	**20 20 29.4**	**-1.2**
	baz=1.0						
AML	**Almayashu**		**2.58**	**342** P	**Pb**	**20 19 54.4**	**-0.8**
	SNR=6.3						
ULHL	**Ulahol**		**2.79**	**23** P	**Pg**	**20 20 02.9**	**+0.9**
	SNR=7.9						
ULHL	**Ulahol**		**2.79**	**23** ⇑*i*P	**Pg**	**20 20 00.2**	**-1.9**
	baz=26						
ULHL				⇑*i*S	**Sg**	**20 20 37.7**	**-0.5**
	baz=26						
BOOM	**Boomskoye usch**		**2.94**	**17** ⇑*e*P	**Pb**	**20 20 02.1**	**+0.9**
	baz=20						
BOOM				⇑*i*S	**Sg**	**20 20 40.9**	**-2.1**
	baz=20						
AAK	**Ala-Archa**		**2.96**	**356** ⇑*i*P	**Pb**	**20 20 01.3**	**-0.2**
	baz=0.0						
AAK				⇑*i*S	**Sb**	**20 20 39.6**	**+1.8**
	baz=0.0						
KBK	**Karagaybulak**		**2.98**	**2** P	**Pb**	**20 20 01.7**	**0.0**
	SNR=6.3						
KBK	**Karagaybulak**		**2.98**	**2** ⇓*e*P	**Pb**	**20 20 01.8**	**0.0**
	baz=6.0						
KBK				⇓*i*S	**Sb**	**20 20 40.5**	**+2.3**
	baz=6.0						
ARK	**Arkit**		**3.01**	**316** ⇑*i*P	**Pb**	**20 19 59.5**	**-2.8**
	baz=20						
ARK				⇑*i*S	**Sb**	**20 20 36.2**	**-2.9**
	baz=20						
KDJ	**Kajisay**		**3.05**	**36** ⇑*e*P	**Pg**	**20 20 04.3**	**-2.7**
	baz=38						
KDJ				⇑*e*S	**Sg**	**20 20 44.5**	**-2.0**
	baz=38						
BTK	**Batken**		**3.07**	**278** ⇓*i*P	**Pn**	**20 19 58.3**	**+1.1**
	baz=81						
BTK				⇓*i*S	**Sn**	**20 20 34.2**	**+0.1**
	baz=81						
EKS2	**Erkin-Say**		**3.07**	**346** ⇑*e*P	**Pb**	**20 20 02.2**	**-1.2**
	baz=51						
EKS2				⇑*i*S	**Sb**	**20 20 41.1**	**+0.1**
	baz=51						
TARG	**Taragay, Kyrgy**		**3.08**	**47** ⇓*e*P	**Pg**	**20 20 05.0**	**-2.5**
	baz=48						
TARG				⇓*i*S	**Sg**	**20 20 45.5**	**-1.9**
	baz=48						
MRKS	**Merke**		**3.28**	**340** *e*P	**Pb**	**20 20 07.5**	**+0.6**
	3.3nm,0.2s						
MRKS				*e*S	**Sb**	**20 20 49.3**	**+2.5**
	12nm,0.4s						
MRKS	**Merke**		**3.28**	**340** Pg	**Pb**	**20 20 07.5**	**+0.6**
	3.3nm,0.2s						
MRKS				Lg	Lg	20 20 49.3	
	12nm,0.4s						
TKM2	**Tokmak 2**		**3.29**	**10** P	**Pb**	**20 20 05.7**	**-1.5**
	SNR=9.8						
TKM2	**Tokmak 2**		**3.29**	**10** ⇑*e*P	**Pb**	**20 20 06.6**	**-0.6**
	baz=14						
TKM2				⇑*i*S	**Sb**	**20 20 48.6**	**+1.1**
	baz=14						
TKM2	**Tokmak 2**		**3.29**	**10** ⇓Pn	**Pb**	**20 20 05.0**	**-2.2**
	5.2nm,0.6s						
TKM2				⇓Lg	Lg	20 20 52.4	
	16nm,0.7s						
CHMS	**Chumysh**		**3.31**	**360** ⇓Pn	**Pb**	**20 20 03.5**	**-4.0**
	5.2nm,0.8s						
CHMS				⇓Lg	Lg	20 20 51.3	
	6.8nm,0.7s						
TRKS	**Terek-Say**		**3.33**	**305** ⇓*i*P	**Pn**	**20 20 02.4**	**+1.6**
	baz=8.0						
TRKS				⇓*i*S	**Sn**	**20 20 41.4**	**+0.8**
	baz=8.0						
KST	**Kastek**		**3.48**	**14** *e*P	**Pg**	**20 20 12.3**	**-2.8**
	3.7nm,0.4s						
KST				*e*S	**Sg**	**20 20 57.0**	**-3.2**
	17nm,0.6s						
KST	**Kastek**		**3.48**	**14** Pg	**Pg**	**20 20 12.3**	**-2.8**
	3.7nm,0.4s						
KST				Lg	Lg	20 20 58.0	
	17nm,0.6s						
DGS	**Degeres**		**3.64**	**12** *e*P	**Pb**	**20 20 13.9**	**+0.9**
	3.8nm,0.4s						
DGS				*e*S	**Sb**	**20 21 00.2**	**+3.1**
	7.3nm,0.3s						
DGS	**Degeres**		**3.64**	**12** Pg	**Pg**	**20 20 15.3**	**-2.9**
	3.8nm,0.4s						
DGS				Lg	Lg	20 21 03.5	
	7.3nm,0.3s						
MTBS	**Maitube**		**3.66**	**19** *e*P	**Pg**	**20 20 18.3**	**-0.5**
	8.5nm,0.4s						
MTBS				*e*S	**Sg**	**20 21 07.2**	**+1.1**
	10nm,0.2s						
MTBS	**Maitube**		**3.66**	**19** Pg	**Pg**	**20 20 18.0**	**-0.8**
	8.5nm,0.4s						
MTBS				Lg	Lg	20 21 07.5	
	10nm,0.2s						
TNSS	**Tian-Shan**		**3.73**	**25** *e*P	**Pg**	**20 20 19.8**	**-0.2**
	10nm,0.6s						
TNSS				*e*S	**Sg**	**20 21 10.4**	**+2.1**
	6.8nm,1.0s						
TNSS	**Tian-Shan**		**3.73**	**25** Pg	**Pg**	**20 20 19.8**	**-0.2**
	10nm,0.6s						
TNSS				Lg	Lg	20 21 10.4	
	6.8nm,1.0s						
SGDS	**Sogindy**		**3.77**	**358** *e*P	**Pg**	**20 20 17.9**	**-2.8**
	2.2nm,0.7s						
SGDS				*e*S	**Sg**	**20 21 06.6**	**-3.0**
	5.7nm,0.5s						
SGDS	**Sogindy**		**3.77**	**358** Pg	**Pg**	**20 20 18.4**	**-2.3**
	2.2nm,0.7s						
SGDS				Lg	Lg	20 21 08.5	
	5.7nm,0.5s						
ANVS	**Anan'yevo**		**3.79**	**34** ⇑*i*P	**Pb**	**20 20 14.4**	**-1.2**
	baz=36						
ANVS				⇑*i*S	**Sb**	**20 21 02.4**	**+0.8**
	baz=36						
KRBS	**Karabastau**		**4.07**	**9** *e*P	**Pg**	**20 20 24.8**	**-1.7**
	1.7nm,0.3s						
KRBS				*e*S	**Sg**	**20 21 18.3**	**-0.8**
	12nm,0.7s						
KRBS	**Karabastau**		**4.07**	**9** Pg	**Pg**	**20 20 23.9**	**-2.6**
	1.7nm,0.3s						
KRBS				Lg	Lg	20 21 18.0	
	12nm,0.7s						
KTBS	**Karatobe**		**4.27**	**19** *e*P	**Pg**	**20 20 29.0**	**-1.3**
	7.7nm,0.6s						
KTBS				*e*S	**Sg**	**20 21 26.1**	**+0.4**
	15nm,0.5s						
KTBS	**Karatobe**		**4.27**	**19** Pg	**Pg**	**20 20 28.8**	**-1.6**
	7.7nm,0.6s						
KTBS				Lg	Lg	20 21 26.7	
	15nm,0.5s						
SATY	**Saty**		**4.34**	**38** *e*P	**Pg**	**20 20 31.6**	**0.0**
	2.9nm,0.5s						
SATY				*e*S	**Sg**	**20 21 30.9**	**+3.0**
	8.1nm,0.5s						
SATY	**Saty**		**4.34**	**38** Pg	**Pg**	**20 20 31.6**	**0.0**
	2.9nm,0.5s						
SATY				Lg	Lg	20 21 30.9	
	8.1nm,0.5s						
IUG	**Iuzhnay**		**4.36**	**306** *e*P	**Pb**	**20 20 26.0**	**+0.7**
	69nm,0.6s						
IUG				*e*S	**Sb**	**20 21 20.5**	**+2.5**
	17nm,0.6s						
KUU	**Kurty**		**4.37**	**15** *e*P	**Pg**	**20 20 30.2**	**-2.0**
	1.1nm,0.2s						
KUU				*e*S	**Sg**	**20 21 28.3**	**-0.5**
	15nm,0.8s						
KK31	**Karatay Array**		**4.69**	**318** ⇓Pn	**Pn**	**20 20 20.7**	**+1.3**
	0.3nm,0.3s,baz=0.0,slow=0.1,SNR=7.6						
KK31				⇑Pg	**Pb**	**20 20 33.8**	**+2.9**
	0.5nm,0.3s,baz=134,slow=15,SNR=4.2						
KK31				⇓Sn	**Sn**	**20 21 14.5**	**+0.6**
	2.0nm,0.6s,baz=333,slow=40,SNR=4.9						
KK31				⇓Lg	Lg	20 21 32.1	
	1.9nm,0.5s,baz=136,slow=27,SNR=3.6						

NOU ***21*** *20:29:08.8, 37°.15S × 177°.23E, h267km, MLv4.4/9, Off E. Coast of N. Island, N.Z.*
WEL ***21*** *20:29:16.3±0.8, 37°.5S±1° × 17°.7E±1°, h195km±7km, M3.6/55, ML3.6/7, MLv3.6/55, Error ellipse: s-maj=0.0km s-min=0.0km az=47.3*
ISC 21 20:29:09.8±2.3, 37°.20S±0°.09 × 176°.92E±0°.08, h246km±11km, n142, σ2°.06/144, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPRZ	**Ohinepanea**		**0.71**	**204** P	**Pn**	**20 29 44.4**	**+1.5**
HAZ	**Te Kaha**		**0.89**	**129** P	**Pn**	**20 29 45.2**	**+1.4**
HAZ				S	**S**	**20 30 07.5**	**-2.9**
RUGZ	**Raukumara Rang**		**0.97**	**142** P	**Pn**	**20 29 45.4**	**+1.0**
RUGZ				S	**S**	**20 30 07.5**	**-4.1**
KARZ	**Kaharoa**		**0.98**	**213** P	**Pn**	**20 29 46.2**	**+2.0**
OMRZ	**Omania**		**1.01**	**205** P	**Pn**	**20 29 46.5**	**+2.0**
KUZ	**Kuaotunu**		**1.06**	**295** P	**Pn**	**20 29 45.3**	**+0.6**
URZ	**Urewera**		**1.07**	**172** P	**Pn**	**20 29 46.1**	**+1.4**
URZ				S	**S**	**20 30 09.4**	**-2.9**
URZ	**Urewera**		**1.07**	**172** P	**Pn**	**20 29 46.1**	**+1.4**
TARZ	**Mount Tarawera**		**1.09**	**197** P	**Pn**	**20 29 47.2**	**+2.2**
PKGZ	**Pakihiroa**		**1.15**	**127** P	**Pn**	**20 29 47.7**	**+2.3**
MXZ	**Matakaoa Point**		**1.16**	**109** P	**Pn**	**20 29 47.4**	**+2.0**
RRRZ	**Republican Roa**		**1.18**	**196** P	**Pn**	**20 29 47.5**	**+2.0**
RRRZ				S	**S**	**20 30 13.0**	**-0.6**
MWZ	**Matawai**		**1.23**	**157** P	**Pn**	**20 29 47.6**	**+1.8**
TOZ	**Tahuroa Road**		**1.25**	**244** P	**Pn**	**20 29 47.5**	**+1.7**
MUGZ	**Murupara**		**1.28**	**185** P	**Pn**	**20 29 47.9**	**+1.8**
MUGZ				S	**S**	**20 30 12.5**	**-2.3**
TWGZ	**Tauwhareparae**		**1.29**	**140** P	**Pn**	**20 29 48.9**	**+2.7**
GRRZ	**Galatos Road**		**1.32**	**209** P	**Pn**	**20 29 48.7**	**+2.3**
WMGZ	**Waiomatatini S**		**1.34**	**118** P	**Pn**	**20 29 49.1**	**+2.5**
RAGZ	**Rawiri**		**1.35**	**163** P	**Pn**	**20 29 49.0**	**+2.3**
PRRZ	**Plateau Road**		**1.36**	**198** P	**Pn**	**20 29 48.9**	**+2.2**
PRRZ				S	**S**	**20 30 14.2**	**-1.6**
PUZ	**Puketiti**		**1.37**	**130** P	**Pn**	**20 29 49.1**	**+2.4**
RTZ	**Ruatahuna**		**1.42**	**178** P	**Pn**	**20 29 49.0**	**+1.8**
TKGZ	**Te Karaka**		**1.44**	**150** P	**Pn**	**20 29 49.7**	**+2.5**
WIAZ	**Waiheke Island**		**1.48**	**285** P	**Pn**	**20 29 48.8**	**+1.2**
GRZ	**Great Barrier**		**1.51**	**308** P	**Pn**	**20 29 48.6**	**+0.8**
KUTZ	**Kaahu Road**		**1.55**	**214** P	**Pn**	**20 29 50.8**	**+2.7**
ETAZ	**East Tamaki Re**		**1.61**	**278** P	**Pn**	**20 29 50.2**	**+1.6**
SNGZ	**Shannon Statio**		**1.62**	**168** P	**Pn**	**20 29 51.0**	**+2.4**
CNGZ	**Carnagh Statio**		**1.64**	**142** P	**Pn**	**20 29 51.8**	**+3.1**
RIGZ	**Rimuhau**		**1.65**	**156** P	**Pn**	**20 29 51.8**	**+2.9**
MTHZ	**Maungataniwha**		**1.65**	**182** P	**Pn**	**20 29 50.9**	**+1.9**
MBAZ	**Motutapu North**		**1.67**	**284** P	**Pn**	**20 29 50.7**	**+1.6**
MRHZ	**Matea Rd**		**1.68**	**193** P	**Pn**	**20 29 51.1**	**+1.9**
RAHZ	**Arahi**		**1.72**	**176** P	**Pn**	**20 29 52.0**	**+2.6**
WATZ	**Wairara**		**1.77**	**212** P	**Pn**	**20 29 52.5**	**+2.5**
ABAZ	**Army Bay**		**1.78**	**289** P	**Pn**	**20 29 51.5**	**+1.6**
HATZ	**Hinemaiaia**		**1.81**	**201** P	**Pn**	**20 29 52.3**	**+2.1**
AWAZ	**Awhitu Peninsu**		**1.82**	**274** P	**Pn**	**20 29 51.9**	**+1.5**
PRGZ	**Paritu Road**		**1.88**	**156** P	**Pn**	**20 29 53.8**	**+2.9**
WTAZ	**Waiatarua**		**1.90**	**277** P	**Pn**	**20 29 52.6**	**+1.6**
RATZ	**Rangitukua**		**1.90**	**208** P	**Pn**	**20 29 53.3**	**+2.3**
NMHZ	**Naumai**		**1.90**	**183** P	**Pn**	**20 29 54.0**	**+2.9**
KNZ	**Kokohu**		**1.92**	**162** P	**Pn**	**20 29 53.6**	**+2.6**
RITZ	**Rihia Road**		**1.96**	**205** P	**Pn**	**20 29 54.2**	**+2.6**
BKZ	**Black Stump Fm**		**1.99**	**190** P	**Pn**	**20 29 53.7**	**+1.8**
BKZ	**Black Stump Fm**		**1.99**	**190** P	**Pn**	**20 29 53.7**	**+1.8**
KATZ	**Kakaramea**		**2.02**	**208** P	**Pn**	**20 29 55.1**	**+2.9**
ARHZ	**Aropaoanui**		**2.06**	**178** P	**Pn**	**20 29 55.2**	**+2.8**
HIZ	**Hauiti**		**2.10**	**231** P	**Pn**	**20 29 55.3**	**+2.6**
HIZ	**Hauiti**		**2.10**	**231** P	**Pn**	**20 29 55.5**	**+2.7**
MHGZ	**Mahia Peninsul**		**2.10**	**159** P	**Pn**	**20 29 55.6**	**+2.8**
NTVZ	**North Tongarir**		**2.14**	**207** P	**Pn**	**20 29 55.8**	**+2.5**
TMVZ	**Te Maari**		**2.14**	**206** P	**Pn**	**20 29 55.8**	**+2.5**
KRVZ	**Karewarewa**		**2.15**	**208** P	**Pn**	**20 29 55.8**	**+2.4**
ETVZ	**East Tongariro**		**2.16**	**206** P	**Pn**	**20 29 55.9**	**+2.4**
WTVZ	**West Tongariro**		**2.18**	**208** P	**Pn**	**20 29 56.4**	**+2.6**
NNVZ	**North Ngauruho**		**2.19**	**208** P	**Pn**	**20 29 56.3**	**+2.5**
OTVZ	**Oturere**		**2.20**	**206** P	**Pn**	**20 29 56.3**	**+2.4**
TWVZ	**Taurewa**		**2.21**	**212** P	**Pn**	**20 29 56.3**	**+2.4**
SNVZ	**South Ngauruho**		**2.23**	**207** P	**Pn**	**20 29 56.6**	**+2.4**
NGZ	**Ngauruhoe**		**2.23**	**207** P	**Pn**	**20 29 57.1**	**+2.8**
MCHZ	**McNeill Hill**		**2.25**	**184** P	**Pn**	**20 29 57.0**	**+2.8**
KWHZ	**Kaweka Forest**		**2.26**	**190** P	**Pn**	**20 29 56.7**	**+2.3**
TUVZ	**Tukino**		**2.29**	**205** P	**Pn**	**20 29 57.2**	**+2.3**
FWVZ	**Far West T-bar**		**2.32**	**207** P	**Pn**	**20 29 57.7**	**+2.5**
WHVZ	**Whangaehu Hut**		**2.33**	**206** P	**Pn**	**20 29 57.5**	**+2.3**
TRVZ	**Turoa**		**2.36**	**207** P	**Pn**	**20 29 58.1**	**+2.5**
WNVZ	**Whahianoa**		**2.37**	**206** P	**Pn**	**20 29 57.7**	**+2.2**
BHHZ	**Black Hill Sta**		**2.38**	**196** P	**Pn**	**20 29 57.5**	**+1.8**
MOWZ	**Moawhango**		**2.39**	**202** P	**Pn**	**20 29 57.4**	**+1.7**
WCZ	**Waipu Caves**		**2.42**	**300** P	**Pn**	**20 29 57.5**	**+1.5**
PKVZ	**Pokaka**		**2.43**	**210** P	**Pn**	**20 29 58.4**	**+2.4**
CKHZ	**Cape Kidnapper**		**2.46**	**177** P	**Pn**	**20 29 59.0**	**+2.8**
MTVZ	**Mangateitei**		**2.46**	**207** P	**Pn**	**20 29 58.7**	**+2.3**
KRHZ	**Kereru**		**2.48**	**190** P	**Pn**	**20 29 58.6**	**+2.1**
VRZ	**Vera Road**		**2.57**	**221** P	**Pn**	**20 30 00.6**	**+3.2**
KAHZ	**Kahuranaki**		**2.59**	**181** P	**Pn**	**20 30 00.3**	**+2.6**
PNHZ	**Pukenui**		**2.77**	**192** P	**Pn**	**20 30 01.3**	**+1.8**
PXZ	**Pawanui**		**2.83**	**181** P	**Pn**	**20 30 02.2**	**+2.1**
WPHZ	**Waipukurau**		**2.89**	**187** P	**Pn**	**20 30 02.9**	**+2.2**
TSZ	**Takapari Road**		**2.95**	**194** P	**Pn**	**20 30 03.5**	**+2.0**
WAZ	**Wanganui**		**2.97**	**210** P	**Pn**	**20 30 03.9**	**+2.2**
LREZ	**Lake Rotokare**		**3.00**	**220** P	**Pn**	**20 30 05.3**	**+3.3**
NEZ	**North Egmont**		**3.04**	**226** P	Pn	20 30 06.7	+4.2
PREZ	**Palmer Road**		**3.05**	**225** P	**Pn**	**20 30 06.5**	**+3.9**
PKEZ	**Pukeiti**		**3.05**	**228** P	**Pn**	**20 30 06.6**	**+4.0**
PRHZ	**Porangahau**		**3.07**	**184** P	**Pn**	**20 30 04.8**	**+2.1**
KHEZ	**Kahui Hut**		**3.10**	**227** P	Pn	20 30 07.6	+4.5
DVHZ	**Dannevirke**		**3.15**	**191** P	**Pn**	**20 30 05.4**	**+1.7**
NBEZ	**Newall Road No**		**3.17**	**228** P	Pn	20 30 08.8	+4.9
OHWZ	**Ohakea**		**3.25**	**202** P	**Pn**	**20 30 07.3**	**+2.5**
NMEZ	**Namu Road**		**3.26**	**226** P	Pn	20 30 09.1	+4.3
ANWZ	**Angora Road**		**3.28**	**186** P	**Pn**	**20 30 07.3**	**+2.3**
POWZ	**Post Office Ro**		**3.31**	**195** P	**Pn**	**20 30

BDM	**Black Diamond**	**1.10**	**141**			Pg	20 37 40.8	-0.7
FARB	**Farallon Islan**	**1.14**	**191**			Pg	20 37 41.1	-1.2
ORV	**Oroville**	**1.21**	**52**			Pg	20 37 41.2	-2.5
KBSM	**Bell Springs**	**1.29**	**329**			Pb	20 37 46.3	+1.0
WENL	**Wente Vineyard**	**1.42**	**147**			Pn	20 37 45.8	-1.1
JRSC	**Jasper Ridge**	**1.46**	**164**			Pn	20 37 46.0	-1.5
LTCM	**Tuscan Springs**	**1.47**	**18**			Pn	20 37 46.8	-0.9
KMRM	**Mail Ridge**	**1.59**	**332**			Pb	20 37 50.1	-0.4
KMRM					IAML		20 37 59.8	
	comp=N,180nm,0.7s							
KMRM					IAML		20 38 03.3	
	comp=E,226nm,0.7s							
COSM	**Mount Oso**	**1.69**	**140**			Pn	20 37 49.4	-1.4
MHC	**Mount Hamilton**	**1.71**	**149**			Pn	20 37 49.6	-1.4
CMPM	**Mikes Peak**	**1.83**	**142**			Pn	20 37 52.0	-0.7
KMPM	**Mount Pierce**	**1.93**	**327**	Pn	Pn	Pn	20 37 52.3	-1.7
KMPM					IAML		20 38 06.7	
	comp=N,103nm,0.7s							
KMPM					IAML		20 38 45.6	
	comp=E,176nm,1.7s							
GHS	**Gilroy Hot Spr**	**2.00**	**149**			Pn	20 37 54.0	-0.9
CMB	**Columbia Colle**	**2.00**	**112**	Pn	Pn	Pn	20 37 54.0	-1.0
CMB					IAML		20 38 26.5	
	comp=N,88nm,0.7s							
EMB	**Emerald Bay**	**2.06**	**85**	Pn	Pn	Pn	20 37 56.6	+0.6
EMB					IAML		20 38 28.9	
	comp=E,163nm,0.7s							
EMB					IAML		20 38 33.4	
	comp=N,166nm,1.0s							
HFEM	**San Felipe**	**2.11**	**150**			Pn	20 37 55.2	-1.3
BEKR	**Beckworth**	**2.12**	**60**			Pn	20 37 57.1	+0.3
BEKR					IAML		20 38 34.4	
	comp=N,71nm,0.7s							
BEKR					IAML		20 38 38.3	
	comp=E,60nm,0.8s							
MPK	**Martis Peak**	**2.16**	**76**			Pn	20 37 57.0	-0.3
KHMM	**Horse Mountain**	**2.19**	**340**			Pn	20 37 57.0	-0.8
KHMM					IAML		20 38 11.9	
	comp=E,57nm,1.1s							
KHMM					IAML		20 39 02.9	
	comp=N,62nm,1.9s							
JCC	**Jacoby Creek,**	**2.23**	**334**			Pn	20 37 57.5	-0.7
SAO	**San Andreas Ge**	**2.29**	**153**	Pn	Pn	Pn	20 37 57.4	-1.5
VCNR	**Virginia City**	**2.45**	**78**			Pn	20 38 01.4	+0.1
VCNR					IAML		20 38 44.0	
	comp=N,78nm,0.9s							
VCNR					IAML		20 38 53.1	
	comp=E,102nm,1.0s							
PNTR	**Pine Nut**	**2.46**	**83**			Pn	20 38 01.8	+0.4
BBGB	**Big Mountain B**	**2.61**	**148**			Pn	20 38 02.6	-0.8
YERR	**Yerington**	**2.73**	**85**			Pn	20 38 06.1	+0.9
PAHR	**Pah Rah Range**	**2.75**	**70**			Pn	20 38 05.5	+0.1
PAHR					IAML		20 39 00.8	
	comp=E,33nm,1.3s							
YBH	**Yreka Blue Hor**	**2.91**	**0**	Pn	Pn	Pn	20 38 06.7	-0.9
PMPB	**Monarch Peak**	**3.02**	**149**			Pn	20 38 08.4	-0.6
PMPB					IAML		20 39 23.2	
	comp=E,54nm,1.3s							
PMPB					IAML		20 39 24.1	
	comp=N,63nm,3.7s							
MDPB	**Devils Postpil**	**3.11**	**111**			Pn	20 38 10.5	0.0
MDPB					IAML		20 38 56.1	
	comp=E,57nm,0.6s							
OMMB	**Old Mammoth Mi**	**3.17**	**111**			Pn	20 38 11.5	+0.1
OMMB					IAML		20 39 05.2	
	comp=E,29nm,0.9s							
OMMB					IAML		20 39 08.6	
	comp=N,33nm,0.9s							
RYN	**Ryan**	**3.30**	**92**			Pn	20 38 14.1	+1.1
RYN					IAML		20 39 14.4	
	comp=E,33nm,0.9s							
RYN					IAML		20 39 24.2	
	comp=N,36nm,1.3s							
LHV	**Little Huntoon**	**3.36**	**98**			Pn	20 38 13.3	-0.4
LHV					IAML		20 39 23.8	
	comp=E,54nm,1.1s							
L04D	**Klamath Falls**	**3.41**	**5**			Pb	20 38 22.8	+1.2
L04D					IAML		20 39 18.9	
	comp=E,21nm,2.7s							
NVAR	**Mina Array Bea**	**3.49**	**95**			Pn	20 38 15.0	-0.7
KBO	**Bosley Butte**	**3.58**	**342**	Pn	Pn	Pn	20 38 16.1	-0.7
MOD	**Modoc Plateau**	**3.60**	**30**			Pn	20 38 16.1	-1.0
NV11	**Mina Array Sit**	**3.60**	**95**	Pn	Pn	Pn	20 38 17.0	-0.1
NV11					IAML		20 39 16.8	
	comp=N,31nm,1.6s							
NV11					IAML		20 39 31.1	
	comp=E,23nm,1.4s							
KVN	**Kaiserville**	**3.62**	**85**	Pn	Pn	Pn	20 38 17.0	-0.4
KVN					IAML		20 39 19.5	
	comp=N,23nm,1.5s							
PAGB	**Antelope Grade**	**3.66**	**147**	Pn	Pn	Pn	20 38 16.8	-1.1
PAGB					IAML		20 39 38.8	
	comp=N,27nm,3.0s							
PAGB					IAML		20 39 41.7	
	comp=E,29nm,3.6s							
HUMO	**Hull Mountain**	**3.79**	**357**			Pb	20 38 26.0	-1.9
K05A	**Summer Lake**	**4.15**	**19**			Pn	20 38 24.1	-0.6
K05A					IAML		20 40 05.5	
	comp=E,11nm,3.1s							
K05A					IAML		20 40 23.6	
	comp=N,12nm,3.0s							
LCH	**Last Change Ra**	**4.32**	**110**	Pn	Pn	Pn	20 38 27.7	+0.8
LCH					IAML		20 39 44.0	
	comp=E,12nm,1.3s							
TPH	**Tonopah**	**4.39**	**98**			Pn	20 38 28.1	+0.1
BMN	**Battle Mountai**	**4.55**	**68**	Pn	Pn	Pn	20 38 29.3	-0.8
ISA	**Isabella, Lake**	**4.63**	**132**			Pn	20 38 29.2	-2.0
ISA					IAML		20 39 45.6	
	comp=E,14nm,0.9s							
ISA					IAML		20 39 55.4	
	comp=N,9.0nm,0.9s							
WVOR	**Wild Horse Val**	**4.77**	**39**			Pn	20 38 32.7	-0.4
CCAC	**Calif City Air**	**5.25**	**133**	Pn	Pn	Pn	20 38 38.7	-1.0
TPNV	**Topopah Spring**	**5.46**	**108**			Pb	20 38 56.9	+0.6
QSM	**Queen of Sheba**	**5.47**	**120**			Pb	20 38 57.8	+1.3
GWY	**Greenwater Val**	**5.49**	**117**			Pb	20 38 58.1	+1.1
R11A	**Troy Canyon, C**	**5.62**	**93**			Pb	20 39 01.5	+2.3
SMCO	**Snowmass**	**12.27**	**83**	Pn	Pn	Pn	20 40 16.3	+0.1

*IDC **21** 20:38:34.6±1.1,32°.62N×130°.77E, h0km, mb3.6/10, mbtmp3.6/11, ML3.0/1, MS3.0/2, Error ellipse: s-maj=24.7km s-min=8.9km az=106.0*

*NIED **21** 20:38:37.1,32°.69N×130°.71E, h11km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; Mrr=5.67; Mθθ=6.39; Mφφ=-0.72; Mrθ=0.49; Mrφ=1.02; Mθφ=-1.54; Fault plane solution: M0=6.35000×10^{14} NP1:φs=66.00000°, δ=46.00000°, λ=-114.00000°. NP2:φs=278.00000°, δ=49.00000°, λ=-67.00000°.*

*JMA **21** 20:38:37.1±0.0,32°.69N±0°.08×130°.7E±0°.1, h11km, MV3.9/20, NW KUMAMOTO PREF*

JMA Felt IV J1 at NW KUMAMOTO PREF .

ISC 21 20:38:36.9±1.0,**32°.70N**±0°.05×**130°.79E**±0°.09,**h11**km±6km, **n20**,σ1°**74**/20,**mb3.7**/10,**Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIU3	**Izumi3**	**0.15**	**173**	P	**Pb**	**20 38 40.9**	**-0.8**
JIU3				S	**Sb**	**20 38 43.7**	**+0.9**
JTA	**Tamana**	**0.34**	**320**	P	**Pg**	**20 38 43.5**	**-0.1**
JTA				S	**Sg**	**20 38 48.2**	**-0.1**
JNU	**Nakatsue**	**0.42**	**10**	Pg	**Pg**	**20 38 45.0**	**-0.3**
	447nm,0.3s,baz=192,slow=12,SNR=931						
JNU				Lg	Lg	20 38 51.1	
	2μm,0.3s,baz=221,slow=20,SNR=35						
JTZ	**Takazaki**	**0.84**	**162**	*e*P	**Pn**	**20 38 54.2**	**-0.4**
KSRS	**Korea Array**	**5.29**	**334**	Pn	**Pn**	**20 39 56.0**	**+0.2**
	0.5nm,0.3s,baz=152,slow=14,SNR=7.1						
KSRS				Pg	**Pg**	**20 40 14.1**	**-4.1**
	1.5nm,0.3s,baz=154,slow=16,SNR=11						
KSRS				Lg	Lg	20 41 24.3	
	3.5nm,0.3s,baz=158,slow=30,SNR=6.2						
	0.9nm,0.4s						
JOW	**Kunigami**	**6.25**	**201**	Pn	**Pn**	**20 40 11.7**	**+2.8**
	2.2nm,0.3s,baz=13,slow=14,SNR=6.4						
MJAR	**Matsushiro Arr**	**7.21**	**56**	Pn	Pn	20 40 27.3	+5.0
	0.1nm,0.3s,baz=241,slow=13,SNR=9.0						
ASAJ	**Asahikawa**	**14.66**	**36**	LR	LR	20 48 01.0	
	comp=Z,64nm,20.2s,baz=31,slow=38						
KLR	**Kul'dur**	**16.53**	**2**	Pn	**P**	**20 42 35.3**	**+4.2**
	0.2nm,0.3s,baz=178,slow=10.0,SNR=9.1						
SONM	**Songino Array**	**23.84**	**316**	P	**P**	**20 43 50.5**	**+0.4**
	0.5nm,0.6s,baz=136,slow=9.4,SNR=3.7						
DAV	**Davao City (W)**	**25.96**	**192**	LR	LR	20 56 09.1	
	comp=Z,24nm,18.3s,baz=308,slow=41						
CMAR	**Chiang Mai Arr**	**31.89**	**251**	P	**P**	**20 45 01.1**	**-1.3**
	0.4nm,0.4s,baz=52,slow=10,SNR=2.1						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**39.24**	**306**	P	**P**	**20 46 05.0**	**-0.2**
	0.4nm,0.7s,baz=72,slow=7.8,SNR=2.7						
	0.4nm,0.7s						
WRA	**Warramunga Arr**	**52.46**	**176**	P	**P**	**20 47 48.8**	**-0.9**
	0.2nm,0.7s,baz=355,slow=7.8,SNR=1.9						
	0.2nm,0.7s						
ILAR	**Eielson Array**	**57.72**	**30**	P	**P**	**20 48 27.2**	**-0.1**
	0.3nm,0.7s,baz=258,slow=4.5,SNR=2.7						
	0.3nm,0.7s						
KBZ	**Khabaz**	**66.87**	**308**	P	**P**	**20 49 29.6**	**+0.7**
	2.3nm,0.8s,baz=90,slow=1.4,SNR=4.4						
	2.3nm,0.8s						
FINES	**FINESS Array B**	**68.37**	**330**	P	**P**	**20 49 37.5**	**-0.6**
	0.6nm,0.5s,baz=74,slow=6.0,SNR=11						
	0.6nm,0.5s						
AKASG	**Malin Array Be**	**72.09**	**319**	P	**P**	**20 50 00.7**	**-0.4**
	0.8nm,0.5s,baz=52,slow=6.7,SNR=4.8						
	0.8nm,0.5s						
NOA	**NORSAR Array B**	**74.50**	**334**	P	**P**	**20 50 14.5**	**-0.7**
	0.6nm,0.8s,baz=51,slow=5.9,SNR=2.8						
	0.6nm,0.8s						
NVAR	**Mina Array Bea**	**84.46**	**47**	P	**P**	**20 51 10.1**	**0.0**
	0.2nm,0.3s,baz=293,slow=2.5,SNR=2.1						
	0.2nm,0.3s						

DJA 21 21:09:01.4±0.7,**10°S**±5°×**11°7E**±°,**h37**km±15km,**M3.3**/11, **mb3.6**/3,**MLv3.2**/11,**Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWSI	**Taliwang, Sumb**	**0.79**	**15**	P	Pn	21 09 16.3	+0.2
TWSI				S	Sn	21 09 27.5	+0.8
PLAI	**Plampang**	**1.28**	**58**	P	Pn	21 09 22.2	-0.5
PLAI				S	Sn	21 09 38.4	-0.2
IGBI	**Denpasar**	**1.66**	**294**	P	Pn	21 09 28.2	+0.2
IGBI				S	Sn	21 09 48.2	+0.1
DNP	**Denpasar**	**1.67**	**300**	P	Pn	21 09 27.7	-0.4
WBSI	**Waikabubak, Su**	**2.68**	**93**	P	Pn	21 09 41.4	-0.6
JAGI	**Jajag, Banyuwa**	**2.70**	**292**	P	Pn	21 09 42.8	+0.5
JAGI				S	Sn	21 10 13.7	-0.1
GMJI	**Gumukmas**	**3.42**	**291**	P	Pn	21 09 53.2	+1.0
EDFI	**Ende, Flores**	**5.00**	**82**	P	Pn	21 10 14.3	+0.2
	0.0nm3.0nm,1.2s						
BSSI	**Bau Bau, Buton**	**5.04**	**49**	P	Pn	21 10 15.3	+0.8
	0.0nm6.4nm,1.2s						
PCJI	**Pacitan**	**5.59**	**283**	P	Pn	21 10 22.1	0.0

*LDG **21** 21:29:44.4±0.2,50°.07N×18°.49E, h1km, Ml3.9/6, Error ellipse: s-maj=5.2km s-min=3.1km az=18.0, Suspected Mining induced.*

*VIE **21** 21:29:44.8±0.3,50°.11N×18°.46E, h0km, mb2.1/4, ml3.0/3, Error ellipse: s-maj=3.0km s-min=1.8km az=168.0 35 km NNE of Ostrava Suspected Mining induced.*

*BGR **21** 21:29:45.3±0.4, 50°.03N×18°.41E, h1km, ML3.2/9, Error ellipse: s-maj=7.8km s-min=3.3km az=175.0*

*IPEC **21** 21:29:45.3±0.2,50°.06N×18°.53E, h1km, ML3.0/4, Error ellipse: s-maj=2.0km s-min=1.0km az=164.0*

*MCSM **21** 21:29:45.8±0.4, 50°N±7°×1°9E±°, h6km±3km, ML2.9*

*IDC **21** 21:29:46.8±1.0,50°.02N×18°.36E, h0km, mbtmp3.1/5, ML2.6/5, Error ellipse: s-maj=19.1km s-min=8.4km az=144.0*

*PRU **21** 21:29:46.6±0.0,50°.06N×18°.42E, h0km*

ISC 21 21:29:44.1±0.6,**50°.09N**±0°.02×**18°.44E**±0°.02,**h0**km,**n90**, σ1°**69**/138,**13C-3D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.16**	**268**	*e*PG	**Pg**	**21 29 50.1**	**+3.0**
RAC				*e*SG	**Sg**	**21 29 53.4**	**+4.2**
OKC	**Ostrava-Krasne**	**0.32**	**217**	*e*PG	**Pg**	**21 29 51.9**	**+1.8**
OKC				*e*SG	**Sg**	**21 29 56.4**	**+2.2**
	comp=Z,577nm,0.8s						
OKC	**Ostrava-Krasne**	**0.32**	**217**	Pg	**Pg**	**21 29 51.9**	**+1.8**
OKC				Sg	**Sg**	**21 29 57.0**	**+2.8**
MORC	**Moravsky Berou**	**0.66**	**242**	⇑P	**Pb**	**21 29 58.4**	**-0.1**
MORC				⇑S	**Sb**	**21 30 07.9**	**-0.4**
MORC	**Moravsky Berou**	**0.66**	**242**	*e*Pg	**Pb**	**21 29 58.4**	**-0.1**
	baz=65						
MORC				*e*Sg	**Sg**	**21 30 07.2**	**+2.0**
	225nm,0.6s,baz=65						
MORC	**Moravsky Berou**	**0.66**	**242**	*e*PG	**Pb**	**21 29 58.5**	**0.0**
MORC				*e*SG	**Sg**	**21 30 07.3**	**+2.0**
MORC	**Moravsky Berou**	**0.66**	**242**	Pg	**Pg**	**21 29 58.1**	**+1.4**
MORC	**Moravsky Berou**	**0.66**	**242**	*e*Pg	**Pb**	**21 29 58.3**	**-0.2**
MORC				*e*Sg	**Sg**	**21 30 06.3**	**+1.0**
MAUC	**Maruska**	**0.83**	**209**	*e*PG	**Pb**	**21 30 01.6**	**+0.2**
MAUC				*e*SG	**Sg**	**21 30 12.2**	**+1.6**
	comp=Z,436nm,0.4s						
OJC	**Ojcow**	**0.88**	**81**	*e*Pg	**Pg**	**21 30 01.3**	**+0.3**
OJC				*e*Sg	**Sb**	**21 30 14.9**	**+0.3**
OJC	**Ojcow**	**0.88**	**81**	Pg	**Pg**	**21 30 01.2**	**+0.3**
OJC	**Ojcow**	**0.88**	**81**	*e*Pg	**Pg**	**21 30 01.4**	**+0.4**
OJC				*e*Sg	**Sb**	**21 30 15.2**	**+0.6**
KRLC	**Kraliky**	**1.07**	**270**	*e*PG	**Pg**	**21 30 05.2**	**+0.6**
KRLC				*e*SG	**Sb**	**21 30 20.3**	**+0.2**
	comp=Z,184nm,0.5s						
KRLC	**Kraliky**	**1.07**	**270**	Pg	**Pg**	**21 30 05.2**	**+0.6**
LANS	**Liptovska Anna**	**1.15**	**144**	*e*PG	**Pb**	**21 30 07.0**	**+0.1**
LANS				*e*SG	**Sb**	**21 30 23.4**	**+1.0**
LANS				*e*LG	Lg	21 30 27.7	
JAVC	**Velka Javorina**	**1.33**	**203**	*e*Pg	**Pb**	**21 30 10.5**	**+0.6**
	baz=24						
JAVC	**Velka Javorina**	**1.33**	**203**	*e*PG	**Pb**	**21 30 10.6**	**+0.6**
NIE	**Niedzica**	**1.38**	**118**	*e*Pg	**Pn**	**21 30 10.7**	**+0.1**
NIE				*e*Sg	**Sn**	**21 30 30.8**	**+1.3**
DPC	**Dobruska-Polom**	**1.39**	**282**	*e*PG	**Pb**	**21 30 11.6**	**+0.7**
DPC				*e*SG	**Sn**	**21 30 31.4**	**+1.6**
	comp=Z,129nm,0.7s						
VRAC	**Vranov**	**1.43**	**238**	⇑P	**Pg**	**21 30 12.1**	**+0.6**
VRAC				⇑S	**Sg**	**21 30 31.0**	**+1.0**
VRAC	**Vranov**	**1.43**	**238**	Pg	**Pg**	**21 30 12.1**	**+0.6**
	4.2nm,0.3s,baz=51,slow=15,SNR=33						
VRAC				Lg	Lg	21 30 30.6	
	27nm,0.3s,baz=139,slow=20,SNR=21						
VRAC	**Vranov**	**1.43**	**238**	*e*Pg	**Pg**	**21 30 12.0**	**+0.6**
	baz=58						
VRAC				*e*Sg	**Sg**	**21 30 31.0**	**+1.0**
	107nm,0.4s,baz=58						
VRAC	**Vranov**	**1.43**	**238**	*e*PG	**Pg**	**21 30 12.1**	**+0.6**
VRAC				*e*SG	**Sg**	**21 30 31.1**	**+1.0**
OSTC	**Ostas**	**1.50**	**289**	*e*PG	**Pg**	**21 30 13.2**	**+0.3**
OSTC				*e*SG	**Sn**	**21 30 34.4**	**+1.8**
	comp=Z,111nm,0.9s						
KSP	**Ksiaz**	**1.57**	**300**	*e*Pg	**Pb**	**21 30 13.9**	**0.0**
KSP				*e*Sg	**Sg**	**21 30 35.9**	**+1.5**
KSP	**Ksiaz**	**1.57**	**300**	*e*Pn	**Pb**	**21 30 13.9**	**0.0**
KSP				*e*SG	**Sg**	**21 30 36.1**	**+1.7**
CHVC	**Chvalec**	**1.61**	**289**	*e*PG	**Pg**	**21 30 15.2**	**+0.3**
CHVC				*e*SG	**Sg**	**21 30 37.9**	**+2.1**
	comp=Z,116nm,1.0s						
UPC	**Upice**	**1.61**	**286**	*e*PG	**Pg**	**21 30 15.7**	**+0.7**
UPC				*e*SG	**Sg**	**21 30 38.2**	**+2.3**
	comp=Z,185nm,1.3s						
VYHS	**Vyhne**	**1.62**	**171**	*e*PG	**Pn**	**21 30 14.2**	**+0.3**
VYHS				*e*SG	**Sb**	**21 30 36.4**	**+0.6**
VYHS				*e*LG	Lg	21 30 38.7	
KRUC	**Moravsky**	**1.68**	**233**	*e*Pn	**Pb**	**21 30 16.2**	**+0.3**
	baz=53						
KRUC				*e*Sg	**Sb**	**21 30 38.8**	**+1.1**
	110nm,0.5s,baz=53						
KRUC	**Moravsky**	**1.68**	**233**	*e*PN	**Pb**	**21 30 16.2**	**+0.3**
KRUC				*e*SG	**Sb**	**21 30 38.8**	**+1.1**
SMOL	**Smolenice**	**1.71**	**203**	*e*PG	**Pn**	**21 30 15.5**	**+0.3**
SMOL				*e*SG	**Sn**	**21 30 37.1**	**-0.6**
SMOL				*e*LG	Lg	21 30 41.2	
MODS	**Modra-Piesok**	**1.88**	**204**	*e*PG	**Pn**	**21 30 18.0**	**+0.5**
MODS				*e*SG	**Sn**	**21 30 41.6**	**-0.3**
TREC	**Trest**	**2.08**	**249**	*e*SG	**Sg**	**21 30 51.2**	**+0.4**
	comp=Z,46nm,0.3s						
ZST	**Bratislava**	**2.09**	**205**	*e*PG	**Pn**	**21 30 20.9**	**+0.6**
ZST				*e*SG	**Sn**	**21 30 46.7**	**-0.3**
ZST				*e*LG	Lg	21 30 50.4	
KECS	**Kecovo**	**2.09**	**139**	*e*PN	**Pn**	**21 30 20.4**	**0.0**
CRVS	**Cervenica-Dubn**	**2.30**	**120**	*e*Pg	**Pb**	**21 30 27.1**	**+0.7**
PSZ	**Piszkesteto**	**2.38**	**156**	⇑P	**Pn**	**21 30 24.7**	**+0.4**
PSZ	**Piszkesteto**	**2.38**	**156**	P	**Pn**	**21 30 24.4**	**+0.1**
PRU	**Pruhonice**	**2.52**	**269**	*e*PG	**Pb**	**21 30 30.8**	**+0.7**
PRU				*e*SG	**Sg**	**21 31 05.6**	**+0.7**
	comp=Z,56nm,0.9s						
PVCC	**Panska Ves**	**2.52**	**281**	*e*PG	**Pg**	**21 30 32.3**	**-0.1**
PVCC				*e*SG	**Sg**	**21 31 07.5**	**+2.4**
	comp=Z,71nm,0.5s						
CONA	**Conrad Observa**	**2.75**	**219**	*e*Pn	**Pn**	**21 30 29.8**	**+0.2**
	1.5nm,0.4s						
CONA				Sn	**Sn**	**21 31 03.3**	**-0.2**
	18nm,0.5s						
KOLS	**Kolonicke sedl**	**2.75**	**113**	*e*PG	**Pg**	**21 30 38.1**	**+1.3**
RONA	**Rosalia, Austr**	**2.78**	**211**	*e*Pn	**Pn**	**21 30 30.8**	**+0.9**
	2.5nm,0.4s						
RONA				Sn	**Sn**	**21 31 05.5**	**+1.4**
	9.1nm,0.4s						
BRG	**Berggiesshubel**	**2.98**	**287**	Pg	**Pg**	**21 30 40.7**	**-0.4**
BRG				Sg	**Sg**	**21 30 20.7**	**+0.9**
BRG				Amp		21 31 24.2	
	comp=Z,19nm,0.4s						
BRG	**Berggiesshubel**	**2.98**	**287**	*e*Pg	**Pg**	**21 30 40.8**	**-0.3**
BRG				*e*Sg	**Sg**	**21 31 20.3**	**+0.6**
CKRC	**Cesky Krumlov**	**2.98**	**246**	*e*PG	**Pb**	**21 30 38.6**	**+0.5**
CKRC				*e*SG	**Sg**	**21 31 19.4**	**-0.4**
MPLH	**Magyarpolny**	**2.98**	**192**	P	**Pn**	**21 30 33.5**	**+0.9**
KHC	**Kasperske Hory**	**3.31**	**255**	*e*PN	**Pn**	**21 30 38.2**	**+1.1**
KHC				*e*PG	**Pb**	**21 30 44.8**	**+1.2**
KHC				*e*SG	**Sg**	**21 31 30.6**	**+0.4**
	comp=Z,29nm,0.4s						
GEC2	**GERESS Array S**	**3.33**	**250**	*e*Pg	**Pg**	**21 30 46.7**	**-1.2**
GEC2				*e*Sg	**Sb**	**21 31 27.4**	**+2.2**
GERES	**GERESS Array B**	**3.33**	**250**	Pn	**Pn**	**21 30 38.4**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=70,slow=15,SNR=6.5						
GERES				Pg	**Pg**	**21 30 47.6**	**-0.3**
	comp=Z,1.2nm,0.3s,baz=65,slow=18,SNR=18						
GERES				Lg	Lg	21 31 28.6	
	comp=Z,9.6nm,0.3s,baz=64,slow=34,SNR=13						
	comp=Z,0.4nm,0.2s						
FBE	**Freiberg**	**3.35**	**286**	*e*Pg	**Pg**	**21 30 48.0**	**-0.4**
FBE				*e*Sg	**Sg**	**21 31 30.9**	**-0.9**
MOA	**Molln**	**3.55**	**232**	*i* Pn	**Pn**	**21 30 41.0**	**+0.6**
	comp=Z,0.6nm,0.2s						
CLL	**Collm**	**3.67**	**291**	*e*(Pg)	**Pg**	**21 30 56.0**	**+1.7**
CLL				*ex*	x	21 30 58.0	
CLL				*e*Sg	**Sg**	**21 31 45.0**	**+3.2**
	comp=Z,33nm,0.6s						
CLL	**Collm**	**3.67**	**291**	*e*Sg	**Sg**	**21 31 41.9**	**+0.1**
WET	**Wettzell**	**3.74**	**257**	*e*Pg	**Pg**	**21 30 55.6**	**-0.1**
WET				*e*Sg	**Sg**	**21 31 43.0**	**-1.2**
NKC	**Novy Kostel**	**3.86**	**274**	*e*PG	**Pb**	**21 30 54.6**	**+1.6**
NKC				*e*SG	**Sg**	**21 31 48.1**	**+0.2**
	comp=Z,29nm,0.5s						
MORH	**Mrgy, Hungar**	**3.88**	**178**	⇓P	**Pn**	**21 30 45.3**	**+0.3**
MORH				⇓S	**Sn**	**21 31 27.6**	**-3.6**
MORH	**Mrgy, Hungar**	**3.88**	**178**	P	**Pn**	**21 30 45.1**	**+0.2**
WERD	**Werda**	**3.95**	**278**	*e*Pg	**Pg**	**21 30 58.1**	**-1.7**
WERD				*e*Sg	**Sg**	**21 31 49.3**	**-1.7**
KOVH	**Kovagotottos**	**4.01**	**183**	P	**Pn**	**21 30 47.3**	**+0.6**
DRGR		**4.36**	**138**	⇑P	**Pn**	**21 30 52.2**	**+0.6**
DRGR				⇑S	**Sn**	**21 31 41.7**	**-1.3**
SIRR	**Siria**	**4.39**	**149**	⇑P	**Pn**	**21 30 52.5**	**+0.6**
GRF	**Grafenberg Arr**	**4.69**	**268**	*e*Sg	**Sg**	**21 32 14.4**	**-0.1**
CJR	**Cluj-Napoca**	**4.82**	**133**	⇓P	**Pn**	**21 30 59.0**	**+1.1**
BZS	**Buzias**	**4.96**	**153**	⇑P	**Pn**	**21 31 00.4**	**+0.6**
FRGS	**Fruska Gora**	**5.02**	**169**	⇑P	**Pn**	**21 31 01.2**	**+0.6**
BURAR	**Bucovina Array**	**5.11**	**116**	⇑P	**Pn**	**21 31 02.9**	**+1.0**
KMPD	**K-Podol'skiy**	**5.46**	**103**	Pn	**Pn**	**21 31 05.6**	**-1.0**
KMPD				pP	Pb	21 31 08.3	-12
MDVR	**Moldovita**	**5.75**	**156**	⇑P	**Pn**	**21 31 11.4**	**+0.6**
HERR	**Herculane**	**5.87**	**151**	⇑P	**Pn**	**21 31 12.4**	**+0.2**
MI28	**Mi28,Pidlybu**	**5.95**	**78**	Sn	**Sn**	**21 32 20.1**	**-2.0**
MI29	**MI29, Kamyanyy**	**6.04**	**83**	Pn	**Pn**	**21 31 14.3**	**-0.3**
MI29				pP	Pb	21 31 16.4	-14
MI29				Sn	**Sn**	**21 32 20.1**	**-4.4**
MI30	**MI30,Zelenitsa**	**6.26**	**80**	Pn	**Pn**	**21 31 17.4**	**-0.3**
MI30				Sn	**Sn**	**21 32 27.5**	**-2.4**
DAVOX	**Davos/Dischmat**	**6.59**	**243**	Lg	Lg	21 33 12.6	
	comp=Z,0.4nm,0.3s,baz=30,slow=16,SNR=2.0						
SORM	**Soroca**	**6.79**	**103**	Pn	**Pn**	**21 31 24.5**	**-0.

comp=E,9μm,0.1s
YUH Yuha Desert 0.43 224 Pg 21 55 55.6 +0.2
YUH IAML 21 56 02.0
comp=E,10μm,0.3s
YUH IAML 21 56 02.1
comp=N,13μm,0.5s
YUCAX Ej. Yucatɲn 0.54 132 eP Pb 21 55 58.3 +0.6
EMSC East Mesa 0.54 114⇓ eP Pg 21 55 57.9 +0.6
IKP In-Ko-Pah, Jac 0.55 236 P Pg 21 55 58.1 +0.5
baz=54,SNR=362
IKP S **Sg 21 56 05.1 +0.1**
baz=54
IKP In-Ko-Pah, Jac 0.55 236⇑ eP Pg 21 55 58.1 +0.5
RMX La Rumorosa 0.56 230 Pg 21 55 58.2 +0.5
RMX IAML 21 56 06.8
comp=N,7μm,0.3s
RMX IAML 21 56 07.0
comp=E,12μm,0.5s
RMX La Rumorosa 0.56 230⇓ eP Pg 21 55 58.3 +0.5
CPBX Cerro Prieto 0.58 158 Pg 21 55 58.4 +0.2
CPBX Cerro Prieto 0.58 158⇓ eP Pg 21 55 58.5 +0.2
CPBX IAML 21 56 16.6
comp=N,17μm,0.4s
SLH Sleepy Hollow 0.62 292⇑ iP Pg 21 55 59.1 +0.2
GLA Glamis 0.63 82 Pg 21 55 59.1 +0.1
GLA IAML 21 56 09.2
comp=N,10μm,0.6s
GLA IAML 21 56 09.3
comp=E,5μm,0.6s
GLA Glamis 0.63 82 P Pg 21 55 59.2 +0.1
baz=263,SNR=694
GLA S **Sg 21 56 07.6 +0.2**
baz=263
GLA Glamis 0.63 82⇑ iP Pg 21 55 59.2 +0.1
MBIG Mexicali 0.64 150 eP Pg 21 55 59.6 +0.5
SALX Saltillo 0.65 145 eP Pg 21 55 56.8 -2.7
SALX ⇓ eP **Pb 21 55 57.1 -2.6**
SALX eS **Sg 21 56 04.1 -4.0**
BC3 Big Chuckawall 0.70 8 P Pg 21 56 00.6 +0.2
baz=188,SNR=1000
BC3 S **Sg 21 56 10.0 +0.3**
baz=188
MONP2 Monument Peak 0.72 265 P Pg 21 56 00.9 +0.1
baz=83,SNR=1000
MONP2 S **Sg 21 56 10.5 +0.1**
baz=83
MONP2 Monument Peak 0.72 265⇑ iP Pg 21 56 00.9 +0.1
MONP2 eS **Sg 21 56 10.7 +0.3**
JUEM Julian Eagle M 0.87 278⇑ iP Pb 21 56 03.1 -0.4
SLRCX San Luis Rio C 0.89 124 eP Pb 21 56 03.4 -0.2
MATG Mataguay Scout 0.94 285⇑ iP Pb 21 56 04.2 -0.5
YMD Yuma Desert 0.95 115⇑ iP Pb 21 56 03.9 -1.0
ALAMX Rancho Alamar 0.96 187 i P Pb 21 56 04.6 -0.3
TKX Tecate 0.96 246 Pb 21 56 04.6 -0.3
TKX Tecate 0.96 246 eP Pb 21 56 04.8 -0.2
TKX eS **Sb 21 56 17.0 -0.4**
BAR Barrett 0.97 253 Pb 21 56 04.7 -0.4
BAR Barrett 0.97 253⇑ eP Pb 21 56 04.7 -0.4
BAR eS **Sb 21 56 17.3 -0.4**
PFO Pinyon Flats O 0.99 311 Pg Pb 21 56 04.5 -1.0
PFO IAML 21 56 25.9
comp=E,3μm,0.8s
PFO Pinyon Flats O 0.99 311 P Pb 21 56 04.6 -1.0
baz=130,SNR=596
PFO S **Sb 21 56 18.1 -0.3**
baz=130
TJIG Tijuana 1.07 241 eP Pb 21 56 06.3 -0.6
EML El Monte Cty P 1.08 267⇑ eP Pb 21 56 06.1 -0.8
BELC Belle Mtn. Jos 1.10 341 P Pb 21 56 06.3 -1.1
baz=161,SNR=158
BELC S **Sb 21 56 20.9 -0.6**
baz=161
CBX Cerro Bola 1.13 235 Pb 21 56 07.6 -0.3
CBX Cerro Bola 1.13 235⇑ eP Pb 21 56 07.5 -0.3
CBX IAML 21 56 27.0
comp=N,5μm,0.5s
BLYC Blythe 1.18 48 Pn 21 56 08.3 -0.2
BLYC IAML 21 56 33.2
comp=E,3μm,0.8s
BLYC IAML 21 56 33.8
comp=N,2μm,0.6s
SDRC San Diego Road 1.18 259⇑ eP Pn 21 56 07.8 -0.7
OLP Otay Lakes Par 1.20 253⇑ eP Pn 21 56 08.4 -0.5
IRM Iron Mountain 1.24 16 P Pn 21 56 08.7 -0.8
baz=197,SNR=444
IRM S **Sb 21 56 25.6 -0.1**
baz=197
109C Camp Elliot, M 1.29 267 Pn Pn 21 56 09.5 -0.7
109C Camp Elliot, M 1.29 267 P Pn 21 56 09.3 -0.9
baz=86,SNR=93
109C S **Sb 21 56 26.6 -0.4**
baz=86
TJX Tijuana 1.33 251 Pn 21 56 10.7 +0.1
TJX Tijuana 1.33 251⇑ eP Pn 21 56 10.8 +0.1
CCX Cicese 1.43 221 Pn 21 56 12.3 +0.3
CCX Cicese 1.43 221⇓ eP Pn 21 56 12.4 +0.4
MURC Murrieta 1.50 295 P Pn 21 56 12.1 -1.0
baz=114,SNR=168
MURC Sb **Sb 21 56 34.3 +1.2**
baz=114
113A Mohawk Valley, 1.53 97 Pn 21 56 12.3 -1.0
ECBX El Chinero 1.55 163 eP Pn 21 56 12.3 -1.3
ELS Elsinore Mount 1.70 294 Pn 21 56 15.0 -0.8
SVX San Vicente 1.73 200 eP Pb 21 56 18.2 +0.1
PDMCI Parker Dam,Lak 1.79 41 Pb Pb 21 56 18.7 -0.4
baz=222
PDMCI Sb **Sb 21 56 42.3 +0.9**
baz=222
GMRC Granite Mounta 1.82 358 P Pn 21 56 16.6 -0.9
baz=178,SNR=90
GMRC S **Sn 21 56 39.7 -0.6**
baz=178
SPIG San Pedro Mart 1.91 177⇓ eP Pn 21 56 18.8 -0.2
HEC Hector,Ludlow 1.97 341 Pb Pb 21 56 21.5 -0.7
baz=161,SNR=68
SFX San Felipe 2.01 162 Pn 21 56 20.8 +0.8
BFSC Mount Baldy Ra 2.16 307 Pb Pb 21 56 24.6 -0.9
baz=126
Y14A Wickenburg 2.35 65 Pn 21 56 25.5 +0.7
FMP Fort Macarthur 2.40 289 Pb Pb 21 56 28.9 -0.6
baz=107
FMP Sb **Sb 21 56 59.9 +1.0**
baz=107
CIS Catalina Islan 2.43 281 Pb Pb 21 56 29.2 -0.8
baz=99
CIS Sb **Sb 21 57 00.5 +0.8**
baz=99
TUQ Turquoise Moun 2.48 353 Pb Pb 21 56 30.1 -0.9
baz=173
PASC Pasadena Art C 2.50 300 Pn 21 56 27.4 +0.8
PASC IAML 21 57 10.9
comp=N,357nm,0.7s
214A Organ Pipe Nat 2.54 113 Pn 21 56 26.2 -1.1
214A IAML 21 57 17.5
comp=N,318nm,0.6s
214A Organ Pipe Nat 2.54 113 P Pn 21 56 26.0 -1.3
baz=294,SNR=32
214A Organ Pipe Nat 2.54 113⇑ eP Pn 21 56 26.0 -1.3
W13A Hualapai Mount 2.55 33 Pn 21 56 27.6 0.0
GSC Goldstone, Bar 2.55 337 Pn 21 56 27.6 +0.1
GSC IAML 21 57 29.1
comp=E,353nm,0.9s
DECC Green Verdugo 2.64 300 Sb Sb 21 57 07.9 +1.9
baz=118
EDW2 Edwards Air Fo 2.78 314 Sb Sb 21 57 12.5 +2.6
baz=133
CCAC Calif City Air 2.98 318 Pn 21 56 33.8 +0.3
CCAC IAML 21 57 32.0
comp=E,569nm,1.1s
CCAC IAML 21 57 34.8
comp=N,494nm,1.3s
QSM Queen of Sheba 3.18 341 Pn 21 56 36.4 +0.3
SNCC San Nicolas Is 3.33 276 Pn Pn 21 56 37.9 -0.3
GWY Greenwater Val 3.34 345 Pn 21 56 39.7 +1.2
MPMC Manual Prospec 3.47 333 P Pn 21 56 39.6 -0.7
baz=152
SHPR Sheep Range 3.55 5 Pn 21 56 41.8 +0.4
LAPR La Primavera 3.70 131 eP Pn 21 56 42.8 -0.4
X16A Lo Mia Camp, P 3.73 66 Pn 21 56 45.3 +1.4
BCW Bitter Crk WRg 3.75 303 Pn 21 56 43.3 -0.8
TPNV Topopah Spring 4.02 352 Pn 21 56 48.8 +1.0
PKM Mcpherson Peak 4.02 300 Pb Pb 21 56 56.0 -1.2
baz=117
TUC Tucson 4.09 98 Pn Pn 21 56 48.8 +0.1
TUC Tucson 4.09 98 P Pn 21 56 48.0 -0.6

baz=281
WUAZ Wupatki 4.31 53 Pn 21 56 53.4 +1.7
U15A North Rim 4.39 37 Pn 21 56 54.5 +1.5
PRN Pahroc Range 4.46 5 Pn 21 56 56.0 +2.3
LCMT Little Creek M 4.47 25 Pn 21 56 55.1 +1.2
LCH Last Change Ra 4.59 339 Pn Pn 21 56 55.8 +0.2
CCUT Cedar City 4.92 21 Pn 21 57 01.8 +1.5
X18A Snowflake 4.94 70 Pn 21 57 01.4 +1.1
PKCU Pink Cliffs 5.21 30 Pn Pn 21 57 05.6 +1.3
W18A Petrified Fore 5.30 64 Pn 21 57 06.4 +1.0
W18A Petrified Fore 5.30 64 Pb Pb 21 57 19.4 +0.4
baz=248
R11A Troy Canyon, C 5.38 360 Pn 21 57 06.7 +0.3
PSUT Pine Spring 5.73 14 Pn Pn 21 57 11.7 +0.4
NVAR Mina Array Bea 5.89 339 Pn Pn 21 57 15.8 +2.2
comp=N,0.2nm,0.3s,baz=157,slow=12,SNR=1.8
NVAR Pg **Pb 21 57 26.9 -2.2**
comp=N,0.3nm,0.3s,baz=161,slow=15,SNR=5.5
NVAR Lg Lg 21 58 52.5
comp=N,0.3nm,0.3s,baz=152,slow=38,SNR=2.2
comp=N,0.3nm,0.5s
NVAR Mina Array Bea 5.89 339 Pn 21 57 15.1 +1.6
121A Cookes Peak, D 6.57 92 Pn 21 57 23.1 +0.3
121A Cookes Peak, D 6.57 92 P Pn 21 57 23.2 +0.3
baz=276,SNR=29
BNM Barren Site 7.56 79 Pn 21 57 37.9 +1.5
MNTX Cornudas Mount 8.71 96 Pn 21 57 52.8 +0.7
MNTX Cornudas Mount 8.71 96 P Pn 21 57 52.7 +0.7
baz=281,SNR=6.2
TX31 Lajitas Ar. Si 10.82 106 Pn Pn 21 58 21.4 +0.4
TXAR Lajitas Array 10.82 106 Pn Pn 21 58 22.7 +1.7
comp=N,0.2nm,0.3s,baz=284,slow=13,SNR=8.7
TXAR Lg Lg 22 01 24.9
baz=289,slow=34,SNR=3.5
comp=N,0.4nm,0.4s
TXAR Lajitas Array 10.82 106 Pn Pn 21 58 21.3 +0.2
PDAR Pinedale Array 10.88 24 Pn Pn 21 58 27.1 +5.2
comp=N,0.1nm,0.3s,baz=212,slow=9.6,SNR=2.8
comp=N,0.5nm,0.8s

DJA 21 21:56:06.7±0.7, 8°S±4°×10°6E±°, h25km±7km, M3.9/7, mb4.2/2, mB5.1/1, MLv3.7/7, Mw(mB)4.5/1, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.70**	**9**	P	Pn	21 56 20.7	-0.3
SKJI				S	Sb	21 56 30.3	+0.7
CNJI	**Cibinong**	**0.79**	**60**	P	Pn	21 56 22.7	+0.5
CNJI				S	Sn	21 56 33.0	-0.2
CMJI	**Cimerak**	**1.99**	**93**	P	Pn	21 56 40.3	+1.5
CMJI				S	Sn	21 57 02.1	-0.9
PCJI	**Pacitan**	**4.72**	**96**	P	Pn	21 57 16.4	+0.1
MNAI	**Manna**	**4.80**	**314**	P	Pn	21 57 17.3	-0.1
JAGI	**Jajag, Banyuwa** 0.1nm1μm21nm,1.7s	**7.67**	**96**	P	Pn	21 57 57.1	+0.1

*IDC **21** 22:17:02.3±1.1, 2°S3S×140°7E, h0km, mb3.9/4, mbtmp3.9/5, ML3.9/1, MS3.2/3, Error ellipse: s-maj=44.8km s-min=27.2km az=69.0*
*NEIC **21** 22:17:05.5±1.7, 2°6S×140°7E×0°1, h10km±1km, mb4.2/10, Error ellipse: s-maj=26.7km s-min=19.8km az=33.0*
*DJA **21** 22:17:10.0±1.2, 2°S×8°×14°0E±°, h10km, M4.4/6, mb4.8/1, mB5.5/1, MLv4.2/6, Mw(mB)5.0/1*
ISC 21 22:17:06.6±0.8, 2°61S±0°08×140°68E±0°08, h24km, n30, σ1§24/27, mb4.0/7, MS3.4/3, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**0.51**	**272**	P	**Pb**	**22 17 16.2**	**-0.8**
GENI				S	**Sb**	**22 17 23.9**	**-0.1**
SMPI	**Sarmi**	**2.06**	**287**	P	**Pn**	**22 17 40.6**	**+0.8**
WAMI	**Wamena**	**2.34**	**237**	P	**Pb**	**22 17 47.8**	**-0.3**
SRPI	**Serui, Papua**	**4.50**	**279**	P	**Pn**	**22 18 15.9**	**+2.6**
BAKI	**Biak**	**4.78**	**287**	P	**Pn**	**22 18 20.3**	**+3.1**
FAKI	**Fak Fak**	**8.43**	**268**	Pn	**Pn**	**22 19 07.8**	**+0.4**
MTN	**Manton Dam**	**13.88**	**222**	Pn	**Pn**	**22 20 21.5**	**-0.5**
KNRA	**Kununurra**	**17.50**	**221**		**P**	**22 21 11.5**	**+1.3**
KNRA				IAmb	IAmb	22 21 21.5	
comp=Z,19nm,1.1s							
WB0	**Warramunga Arr**	**18.12**	**199**		**Pn**	**22 21 17.5**	**+0.6**
WB0				IAmb	IAmb	22 21 25.7	
comp=Z,8.4nm,1.1s							
WRA	**Warramunga Arr**	**18.30**	**199**	P	**P**	**22 21 17.8**	**-1.3**
comp=Z,0.4nm,0.3s,baz=22,slow=12,SNR=19							
WRA				S	**Sn**	**22 24 41.0**	**-2.0**
comp=Z,0.6nm,0.8s,baz=28,slow=24,SNR=2.6							
comp=Z,1.4nm,0.5s							
WRA	**Warramunga Arr**	**18.30**	**199**	P	**P**	**22 21 18.9**	**-0.3**
TOLI2	**Tolitoli**	**20.23**	**280**	P	**P**	**22 21 39.6**	**-0.7**
TOLI2				IAmb	IAmb	22 21 53.3	
comp=Z,5.5nm,0.8s							
AS31	**Alice Springs**	**21.93**	**197**	P	**P**	**22 21 60.0**	**+1.4**
ASAR	**Alice Springs**	**21.93**	**197**	P	**P**	**22 21 59.0**	**+0.4**
EIDS	**Eidsvold**	**24.75**	**157**	P	**P**	**22 22 27.9**	**+1.4**
EIDS				IAmb	IAmb	22 22 35.4	
comp=Z,15nm,1.2s							
DZM	**Mont Dzumac**	**31.63**	**130**	LR	LR	22 35 25.8	
comp=Z,70nm,18.0s,baz=40,slow=35							
H11S3	**WAKE ISLAND Hy**	**33.10**	**50**	T	T	22 58 27.6	
baz=232,slow=75,SNR=225							
H11S2	**WAKE ISLAND Hy**	**33.11**	**50**	T	T	22 58 28.0	
baz=232,slow=75,SNR=104							
H11S1	**WAKE ISLAND Hy**	**33.12**	**50**	T	T	22 58 29.0	
baz=232,slow=75,SNR=181							
MORW	**Morawa**	**35.24**	**219**	P	**P**	**22 23 59.7**	**+0.2**
MORW				IAmb	IAmb	22 24 20.6	
comp=Z,11nm,1.1s							
GSI	**Gunungsitoli**	**43.27**	**275**	P	**P**	**22 25 05.6**	**-1.2**
CMAR	**Chiang Mai Arr**	**46.10**	**299**	P	**P**	**22 25 28.4**	**-0.9**
comp=Z,1.5nm,0.3s,baz=123,slow=6.8,SNR=14							
CMAR				LR	LR	22 45 59.8	
comp=Z,8.6nm,18.1s,baz=145,slow=38							
comp=Z,1.5nm,0.3s							
RAR	**Rarotonga**	**60.75**	**113**	LR	LR	22 52 20.6	
comp=Z,35nm,18.1s,baz=276,slow=35							
MKAR	**Makanchi Array**	**70.92**	**322**	P	**P**	**22 28 21.9**	**-0.1**
comp=Z,0.9nm,1.0s,baz=114,slow=7.1,SNR=3.8							
comp=Z,0.9nm,1.0s							
MKAR	**Makanchi Array**	**70.92**	**322**	P	**P**	**22 28 22.6**	**+0.5**
MAKZ	**Makanchi**	**71.12**	**322**	P	**P**	**22 28 23.9**	**+0.7**
MAKZ				IAmb	IAmb	22 28 26.4	
comp=Z,1.1nm,0.8s							
VNDA	**Vanda**	**75.71**	**175**	P	**P**	**22 28 50.5**	**+0.8**
comp=Z,0.8nm,0.8s,baz=92,slow=21,SNR=7.1							
comp=Z,0.8nm,0.8s							
ILAR	**Eielson Array**	**84.93**	**24**	P	**P**	**22 29 38.2**	**-1.3**
comp=Z,0.2nm,0.3s,baz=281,slow=5.4,SNR=2.9							
comp=Z,0.2nm,0.3s							
QSPA	**South Pole Qui**	**87.33**	**180**	P	**P**	**22 29 51.5**	**0.0**
LPAZ	**La Paz**	**145.90**	**124**	PKPbc	**PKPdf**	**22 36 44.2**	**-1.1**
comp=Z,0.4nm,0.3s,baz=228,slow=14,SNR=6.7							

*NOU **21** 22:31:01.2, 14°05S×167°67E, h185km, mb3.9/7, Vanuatu Islands*
*IDC **21** 22:31:09.7±4.5, 14°74S×167°15E, h177km±39km, mb3.4/4, mbtmp3.8/5, Error ellipse: s-maj=35.2km s-min=30.1km az=65.0*
*NEIC **21** 22:31:10.0±1.4, 14°68S±0°05×167°4E±0°2, h175km±8km, mb4.1/11, Error ellipse: s-maj=24.6km s-min=6.2km az=96.0*
ISC 21 22:31:08.9±0.8, 14°66S±0°09×167°4E±0°1, h170km, n29, σ0§81/30, mb4.0/9, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**3.14**	**166**	P	**Pn**	**22 31 58.5**	**-0.4**
KOUNC	**Koumac, New Ca**	**6.55**	**206**	Pn	**Pn**	**22 32 42.9**	**-0.2**
KOUNC				Sn	**Sn**	**22 33 56.6**	**-0.7**
KOUNC	**Koumac, New Ca**	**6.55**	**206**	P	**Pn**	**22 32 43.7**	**+0.6**
YATNC	**Mamie plateau,**	**7.37**	**183**	P	**Pn**	**22 32 54.7**	**+0.8**
DZM	**Mont Dzumac** 2.7nm,0.3s,baz=138,slow=19,SNR=12	**7.42**	**187**	P	**Pn**	**22 32 54.9**	**+0.2**
DZM				S	**Sn**	**22 34 16.8**	**-1.3**
4.0nm,0.7s,baz=118,slow=18,SNR=1.6							
NOUC	**Port Laguerre**	**7.47**	**188**	P	**Pn**	**22 32 56.7**	**+1.5**
OUENC	**Ouen Island, N**	**7.73**	**184**	Pn	**Pn**	**22 32 60.0**	**+1.3**
PINNC	**Pines Island,**	**7.91**	**179**	Pn	**Pn**	**22 33 01.7**	**+0.7**
EIDS	**Eidsvold**	**18.63**	**233**	P	**P**	**22 35 13.8**	**+0.1**
EIDS				IAmb	IAmb	22 35 19.7	
comp=Z,3.4nm,0.8s							
BKZ	**Black Stump Fm**	**25.70**	**163**	P	**P**	**22 36 23.6**	**+0.3**
WB0	**Warramunga Arr**	**31.87**	**256**	P	**P**	**22 37 18.1**	**-0.1**
WB0				IAmb	IAmb	22 37 31.3	
comp=Z,3.9nm,1.1s							
WB2	**Warramunga Arr**	**31.93**	**256**	P	**P**	**22 37 19.3**	**+0.6**
WB2				IAmb	IAmb	22 37 40.2	
comp=Z,5.9nm,1.1s							
WRA	**Warramunga Arr**	**31.94**	**256**	P	**P**	**22 37 16.3**	**-2.5**
comp=Z,0.3nm,0.7s,baz=78,slow=5.6,SNR=8.5							
comp=Z,0.3nm,0.7s							
AS31	**Alice Springs**	**32.79**	**249**	P	**P**	**22 37 25.9**	**-0.4**
ASAR	**Alice Springs**	**32.79**	**249**	P	**P**	**22 37 25.8**	**-0.5**
BBOO	**Buckleboo**	**33.70**	**232**	P	**P**	**22 37 34.8**	**+0.8**
MBWA	**Marble Bar**	**45.66**	**255**		**P**	**22 39 13.2**	**+0.3**
MBWA				IAmb	IAmb	22 39 28.2	
comp=Z,19nm,1.4s							
VNDA	**Vanda**	**62.93**	**181**	P	**P**	**22 41 16.0**	**-0.7**
comp=Z,0.8nm,0.6s,baz=350,slow=4.8,SNR=9.7							
comp=Z,0.8nm,0.6s							
VNDA	**Vanda**	**62.93**	**181**	P	**P**	**22 41 16.3**	**-0.4**
VNDA				IAmb	IAmb	22 41 17.9	
comp=Z,3.0nm,1.2s							
SBA	**Scott Base**	**63.20**	**180**	P	**P**	**22 41 19.5**	**+1.1**
SBA				IAmb	IAmb	22 41 20.9	
comp=Z,2.2nm,0.8s							
QSPA	**South Pole Qui**	**75.36**	**180**	P	**P**	**22 42 33.7**	**+0.2**
QSPA				IAmb	IAmb	22 42 48.3	
comp=Z,4.9nm,1.5s							
ILAR	**Eielson Array**	**86.43**	**18**	P	**P**	**22 43 31.7**	**-0.1**
comp=Z,0.5nm,0.8s,baz=247,slow=5.5,SNR=4.7							
comp=Z,0.5nm,0.8s							
BELA	**Belgrano 2**	**86.78**	**175**	P	**P**	**22 43 32.9**	**-0.5**
MKAR	**Makanchi Array**	**97.22**	**316**	P	**P**	**22 44 22.1**	**-0.2**
comp=Z,0.5nm,0.7s,baz=106,slow=4.4,SNR=5.6							
comp=Z,0.5nm,0.7s							
MKAR	**Makanchi Array**	**97.22**	**316**	P	Pdif	22 44 22.9	+0.6
ARCES	**ARCESS Array B**	**120.21**	**345**	PKP	**PKPdf**	**22 49 38.9**	**-0.2**
comp=Z,0.6nm,0.5s,baz=57,slow=1.8,SNR=11							
ARCES	**ARCESS Array B**	**120.21**	**345**	PKP	**PKiKP**	**22 49 39.3**	**+0.1**
FINES	**FINESS Array B**	**125.70**	**338**	PKP	**PKPdf**	**22 49 49.9**	**+0.2**
comp=Z,0.3nm,0.3s,baz=70,slow=2.2,SNR=6.5							
TORD	**Torodi Ar. Bea**	**166.01**	**266**	PKPab	**PKPab**	**22 51 55.5**	**-0.1**
comp=Z,0.7nm,0.8s,baz=103,slow=4.2,SNR=3.0							

*NORS **21** 22:38:23.4±0.0, 42°30N×46°28E, h29km, MPVA3.9*
*MOS **21** 22:38:23.2±0.0, 42°35N×46°38E, h38km, MPVA3.8*
*DRS **21** 22:38:24.3±0.0, 42°27N×46°25E, h18km*
ISC 21 22:38:26.3±1.1, 42°40N±0°02×46°40E±0°02, h34km±2km, n39, σ1§56/78, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XNZR	**Khunzakh**	**0.27**	**57**	*i* Pg	**Pb**	**22 38 34.0**	**0.0**
XNZR				*e*Sg	**Sb**	**22 38 41.2**	**+1.9**
GNBR	**Gunib**	**0.42**	**91**	*i* Pg	**Pb**	**22 38 34.3**	**-1.6**
GNBR				*i* Sg	**Sb**	**22 38 42.7**	**+0.3**
UNCR	**Uncukul**	**0.43**	**42**	*i* Pg	**Pb**	**22 38 35.2**	**-0.8**
UNCR				*e*Sg	**Sn**	**22 38 43.6**	**+0.7**
ARKR	**Arakani**	**0.49**	**65**	*i* Pg	**Pb**	**22 38 35.6**	**-1.2**
ARKR				*e*Sg	**Sb**	**22 38 44.4**	**+0.3**
KRNR	**Karanay**	**0.57**	**41**	*e*Pg	**Pb**	**22 38 36.9**	**-1.3**
KRNR				*e*Sg	**Sb**	**22 38 46.5**	**+0.1**
LGD	**Lagodekhi**	**0.57**	**192**	P	**Pb**	**22 38 37.5**	**-0.6**
LGD				S	**Sn**	**22 38 48.1**	**+1.9**
KMKR	**Kumukh**	**0.58**	**117**	*i* Pg	**Pb**	**22 38 37.3**	**-1.1**
KMKR				*e*Sg	**Sb**	**22 38 46.1**	**-0.7**
DVE	**Vedeno**	**0.60**	**340**	*i* Pg	**Pn**	**22 38 37.8**	**-0.6**
DVE				*i* Sg	**Sb**	**22 38 47.3**	**+0.3**
BUJR	**Buynaksk**	**0.68**	**50**	*e*Pg	**Pn**	**22 38 38.8**	**-0.6**
BUJR				*e*Sg	**Sn**	**22 38 50.2**	**+1.3**
DLMR	**Dylym**	**0.70**	**14**	*i* Pg	**Pn**	**22 38 38.8**	**-0.9**
DLMR				*e*Sg	**Sn**	**22 38 50.0**	**+0.7**
DBC	**Dubki**	**0.70**	**27**	*i* Pg	**Pn**	**22 38 38.9**	**-0.9**
DBC				*e*Sg	**Sn**	**22 38 50.2**	**+0.6**
GROC	**Groznyy**	**0.92**	**331**	*e*Pg	**Pn**	**22 38 42.7**	**-0.2**
GROC				*e*Sg	**Sb**	**22 38 57.6**	**+1.7**
SGKR	**Sergokala**	**0.94**	**86**	*e*Pg	**Pn**	**22 38 42.9**	**-0.2**
SGKR				*e*Sg	**Sb**	**22 38 56.4**	**+0.2**
URKR	**Urkarakh**	**0.94**	**104**	*i* Pg	**Pn**	**22 38 42.5**	**-0.8**
URKR				*e*Sg	**Sn**	**22 38 55.5**	**-0.1**
DDFL	**Dedoflistskaro**	**0.97**	**193**	P	**Pb**	**22 38 45.6**	**+0.9**
DDFL				S	**Sb**	**22 39 03.4**	**+6.1**
MAK	**Makhachkala**	**0.99**	**55**	*e*Pg	**Pn**	**22 38 44.4**	**+0.6**
MAK				*e*Sg	**Sb**	**22 38 59.1**	**+1.2**
KANR	**Karaman**	**1.13**	**45**	*e*Pg	**Pn**	**22 38 46.2**	**+0.5**
KANR				*e*Sg	**Sb**	**22 39 02.7**	**+0.8**
KMGR	**Komgaron**	**1.31**	**301**	*e*Pg	**Pn**	**22 38 48.2**	**0.0**
KMGR				*e*Sg	**Sb**	**22 39 07.3**	**+0.4**
PNSH	**Pansheti**	**1.34**	**281**	P	**Pn**	**22 38 48.4**	**-0.3**
PNSH				S	**Sb**	**22 39 08.3**	**+0.4**
AKT	**Akhty**	**1.35**	**132**	*i* Pg	**Pn**	**22 38 48.0**	**-0.9**
AKT				*e*Sg	**Sb**	**22 39 07.0**	**-1.2**
BTNK	**Botanikuri**	**1.39**	**240**	P	**Pn**	**22 38 44.7**	**-4.5**
BTNK				S	**Sn**	**22 39 04.9**	**-1.5**
MTEO	**Meteo**	**1.41**	**282**	P	**Pn**	**22 38 50.1**	**+0.2**
MTEO				S	**Sb**	**22 39 08.9**	**-1.2**
GUDG	**Gudauri**	**1.42**	**273**	P	**Pn**	**22 38 50.5**	**+0.6**
GUDG				S	**Sb**	**22 39 12.2**	**+1.8**
VLKR	**Vladikavkaz**	**1.43**	**298**	*e*Pg	**Pn**	**22 38 50.6**	**+0.8**
VLKR				*e*Sg	**Sb**	**22 39 09.4**	**-0.8**
DRN	**Derbent**	**1.48**	**104**	*e*Pg	**Pn**	**22 38 50.6**	**+0.1**
DRN				*e*Sg	**Sn**	**22 39 10.1**	**+1.5**
KSMR	**Kasumkent**	**1.51**	**121**	*e*Pg	**Pn**	**22 38 51.1**	**+0.1**
KSMR				*e*Sg	**Sn**	**22 39 11.1**	**+1.6**
LACR	**Lac**	**1.61**	**286**	*e*Pg	**Pn**	**22 38 51.7**	**-0.8**
LACR				*e*Sg	**Sb**	**22 39 14.1**	**-1.5**
BTKR	**Batakoyurt**	**1.68**	**306**	*e*Pg	**Pn**	**22 38 53.4**	**+0.1**
BTKR				*e*Sg	**Sn**	**22 39 15.4**	**+1.8**
ARNR	**Ardon**	**1.74**	**297**	*e*Pg	**Pn**	**22 38 53.9**	**-0.3**
ARNR				*e*Sg	**Sn**	**22 39 16.9**	**+1.7**
TRKR	**Terskaya**	**1.80**	**318**	*e*Pg	**Pn**	**22 38 53.5**	**-1.5**
TRKR				*e*Sg	**Sn**	**22 39 17.4**	**+0.8**
KORR	**Kora**	**1.85**	**293**	*e*Pg	**Pn**	**22 38 55.4**	**-0.3**
KORR				*e*Sg	**Sn**	**22 39 19.4**	**+1.6**
ZEI	**Tsey**	**1.89**	**283**	*e*Pg	**Pn**	**22 38 56.8**	**+0.5**
ZEI				*e*Sg	**Sn**	**22 39 20.1**	**+1.2**
TRLG	**Trialeti**	**1.91**	**244**	P	**Pn**	**22 38 55.2**	**-1.5**
TRLG				S	**Sn**	**22 39 19.3**	**-0.3**
DMNI	**Dmanisi**	**1.96**	**238**	P	**Pn**	**22 38 55.8**	**-1.5**
DMNI				S	**Sn**	**22 39 19.9**	**-0.8**
PRTR	**Priterechnaya**	**2.06**	**312**	*e*Pg	**Pn**	**22 38 57.9**	**-0.5**
PRTR				*e*Sg	**Sn**	**22 39 24.0**	**+1.0**
LSNR	**Lesken**	**2.09**	**296**	*e*Pg	**Pb**	**22 39 06.0**	**+2.4**
LSNR				*e*Sg	**Sb**	**22 39 32.4**	**+3.2**
KBZ	**Khabaz**	**2.89**	**299**	*i* Pn	**Pn**	**22 39 07.3**	**-2.6**
KBZ				*e*Sn	**Sn**	**22 39 41.2**	**-2.2**
SHA1	**Shidzhatmaz**	**3.05**	**297**	*e*Pn	**Pn**	**22 39 10.6**	**-1.8**
SHA1				*e*Sn	**Sn**	**22 39 45.3**	**-2.4**
KIV	**Kislovodsk**	**3.13**	**301**	*e*Pn	**Pn**	**22 39 10.4**	**-2.9**
KIV				*e*Sn	**Sn**	**22 39 46.3**	**-3.2**

**IDC 21 22:47:24.4±1.2, 18°74N×46°30W, h0km, mb3.7/5, mbtmp3.7/5, MS3.3/11, Error ellipse: s-maj=39.4km s-min=29.3km az=45.0, Northern Mid-

1.0nm,1.0s,baz=282,slow=7.2,SNR=3.4
1.0nm,1.0s
ULM Lac du Bonnet 50.26 321 LR LR 23 14 26.3
comp=Z,39nm,20.0s,baz=186,slow=32
TXAR Lajitas Array 53.00 293 P P 22 56 43.7 +0.3
0.2nm,0.8s,baz=127,slow=6.0,SNR=2.3
TXAR LR LR 23 18 11.6
comp=Z,31nm,20.0s,baz=154,slow=35
0.2nm,0.8s
PDAR Pinedale Array 57.99 309 P P 22 57 19.7 +0.4
1.3nm,0.9s,baz=101,slow=7.7,SNR=7.3
PDAR LR LR 23 20 05.8
comp=Z,27nm,20.4s,baz=161,slow=34
1.3nm,0.9s
NOA NORSAR Array B 58.22 29 LR LR 23 18 55.6
comp=Z,14nm,19.4s,baz=295,slow=32
NEW Newport 63.54 315 LR LR 23 23 41.8
comp=Z,28nm,20.7s,baz=149,slow=34
YKA Yellowknife Ar 63.55 331 LR LR 23 24 05.1
comp=Z,43nm,19.3s,baz=144,slow=35
ILAR Eielson Array 77.65 334 P P 22 59 21.9 -0.7
0.8nm,0.8s,baz=71,slow=4.6,SNR=7.2
0.8nm,0.8s
LBTB Lobatse 82.36 120 LR LR 23 29 12.0
comp=Z,33nm,19.1s,baz=236,slow=30

*IDC **21** 22:56:32.5±1.2,51°.63N×173°.17W,h0km,mb3.6/7, mbtmp3.7/9,ML3.7/2,Error ellipse: s-maj=37.7km s-min=20.7km az=173.0*
*AEIC **21** 22:56:36±3.3,51°.46N±0°.08×173°.22W±0°.08,h2km±5km, Error ellipse: s-maj=11.2km s-min=6.9km az=191.0*
*NEIC **21** 22:56:39.3±1.7,51°.55N±0°.09×173°.23W±0°.09,h37km±8km, mb3.7/31,ML3.4(AEIC),Error ellipse: s-maj=13.5km s-min=7.8km az=182.0*
ISC 21 22:56:38.3±0.8,51°.5N±0°.1×173°.18W±0°.05,h37km,n76, σ0s96/69,mb3.7/10,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**0.98**	**320**		**Pn**	**22 56 54.4**	**-1.2**
KOFP	**Korovin Flat P**	**1.00**	**326**		**Pn**	**22 56 55.4**	**-0.5**
KOSE	**Korovin Southe**	**1.05**	**329**		**Pn**	**22 56 56.5**	**+0.1**
KOKL	**Mount Kliuchef**	**1.08**	**324**		**Pn**	**22 56 56.7**	**-0.2**
KONE	**Korovin Northe**	**1.11**	**329**		**Pn**	**22 56 57.1**	**-0.2**
GSMY	**Great Sitkin M**	**1.89**	**289**		**Pn**	**22 57 08.2**	**+0.3**
GSTR	**Great Sitkin T**	**1.90**	**291**	Pn	**Pn**	**22 57 08.9**	**+0.7**
GSCK	**Great Sitkin C**	**1.94**	**288**		**Pn**	**22 57 09.0**	**+0.4**
GSTD	**Great Sitkin T**	**1.94**	**289**		**Pn**	**22 57 09.1**	**+0.4**
ADK	**Adak**	**2.23**	**283**		**Pn**	**22 57 13.0**	**+0.4**
KIWB	**Kanaga Island**	**2.51**	**281**		**Pn**	**22 57 16.9**	**+0.4**
KIMD	**Kanaga Island**	**2.55**	**279**		**Pn**	**22 57 17.3**	**+0.2**
TAFP	**Tanaga Falls P**	**3.03**	**280**		**Pn**	**22 57 23.1**	**-0.5**
NIKH	**Nikolski High**	**3.06**	**58**		**Pn**	**22 57 25.4**	**+1.3**
GANE	**Gareloi Northe**	**3.51**	**278**		**Pn**	**22 57 30.7**	**+0.5**
GANO	**Gareloi North**	**3.53**	**278**		**Pn**	**22 57 31.1**	**+0.6**
CESW	**Semis' Southwe**	**4.54**	**279**		**Pn**	**22 57 43.9**	**-0.5**
MSW	**Makushin Switc**	**4.61**	**55**		**Pn**	**22 57 45.8**	**+0.5**
AMKA	**Amchitka**	**4.71**	**272**		**Pn**	**22 57 46.1**	**-0.6**
UNV	**Unalaska Valle**	**4.72**	**57**	Pn	**Pn**	**22 57 47.0**	**+0.2**
CNBA	**Chernabura Isl**	**8.84**	**62**		**Pn**	**22 58 42.6**	**-0.6**
KDAK	**Kodiak Island**	**13.48**	**54**	Pn	**Pn**	**22 59 45.4**	**-1.3**
	0.1nm,0.3s,baz=354,slow=16,SNR=1.9						
	5.8nm,1.0s						
M19K	**Big River Lodg**	**14.64**	**37**	Pn	**Pn**	**23 00 04.2**	**+1.7**
CNPM	**China Poot**	**14.78**	**48**	Pn	**Pn**	**23 00 04.7**	**+0.4**
K20K	**Telida**	**15.67**	**33**		**Pn**	**23 00 18.1**	**+2.1**
SUA	**Susitna One**	**15.86**	**42**	Pn	**Pn**	**23 00 19.8**	**+1.2**
SUA				IAmb	IAmb	23 01 01.6	
	comp=Z,6.5nm,1.3s						
PPLA	**Purkeypile**	**16.06**	**36**		**P**	**23 00 23.8**	**-0.3**
PPLA				IAmb	IAmb	23 00 54.8	
	comp=Z,4.4nm,1.0s						
J20K	**Nowinta River**	**16.20**	**31**		**P**	**23 00 26.2**	**+0.7**
BPAW	**Bear Paw Mtn.**	**17.21**	**34**		**P**	**23 00 37.0**	**+0.2**
BPAW				IAmb	IAmb	23 00 48.2	
	comp=Z,8.5nm,1.5s						
FID	**Port Fidalgo**	**17.44**	**47**	Pn	**Pn**	**23 00 36.3**	**-2.1**
SCM	**Sheep Creek Mo**	**17.48**	**44**	Pn	**Pn**	**23 00 37.8**	**-1.1**
SCM				IAmb	IAmb	23 00 55.6	
	comp=Z,3.5nm,0.7s						
H21K	**Melozitna Rive**	**17.63**	**28**		**P**	**23 00 42.4**	**+1.0**
MLY	**Manley**	**17.87**	**32**		**P**	**23 00 44.9**	**+0.9**
KLU	**Klutina**	**17.96**	**45**		**Pn**	**23 00 44.1**	**-0.8**
KLU				IAmb	IAmb	23 00 44.9	
	comp=Z,9.9nm,1.4s						
M24K	**Tolsona, Glenn**	**18.09**	**43**		**P**	**23 00 47.3**	**+0.8**
M24K				IAmb	IAmb	23 01 14.5	
	comp=Z,14nm,1.1s						
HMT	**Hamilton**	**18.35**	**50**	P	**P**	**23 00 49.0**	**-0.4**
I23K	**Minto, Yukon-K**	**18.40**	**33**	P	**P**	**23 00 50.1**	**+0.3**
I23K				IAmb	IAmb	23 00 59.5	
	comp=Z,3.2nm,0.6s						
CCB	**Clear Creek Bu**	**18.66**	**35**	P	**P**	**23 00 50.8**	**-1.8**
CCB				IAmb	IAmb	23 01 12.5	
	comp=Z,6.5nm,1.5s						
MDM	**Murphy Dome**	**18.68**	**34**	P	**P**	**23 00 52.3**	**-0.7**
H23K	**Yukon River**	**18.76**	**31**	P	**Pn**	**23 00 54.7**	**+0.3**
HDA	**Harding Lake**	**18.84**	**36**	P	**P**	**23 00 53.6**	**-1.1**
HDA				IAmb	IAmb	23 00 56.9	
	comp=Z,3.1nm,0.8s						
VRDI	**Verde Repeater**	**18.99**	**47**	P	**P**	**23 00 56.2**	**-0.3**
VRDI				IAmb	IAmb	23 01 23.7	
	comp=Z,14nm,1.5s						
IL31		**19.06**	**36**	P	**P**	**23 00 57.4**	**+0.4**
ILAR	**Eielson Array**	**19.06**	**36**	P	**P**	**23 00 54.4**	**-2.6**
	comp=Z,0.6nm,0.3s,baz=219,slow=9.2,SNR=32						
	comp=Z,0.8nm,0.6s						
ILAR	**Eielson Array**	**19.06**	**36**	P	**P**	**23 00 56.6**	**-0.4**
H24K	**Noodor Dome**	**19.31**	**32**	P	**P**	**23 01 00.2**	**+0.3**
H24K				IAmb	IAmb	23 01 20.4	
	comp=Z,2.7nm,0.8s						
RIDG	**Independent Ri**	**19.33**	**40**	P	**P**	**23 00 59.5**	**-0.6**
RIDG				IAmb	IAmb	23 01 10.8	
	comp=Z,2.7nm,0.6s						
J25K	**Salcha River,**	**19.54**	**37**	P	**P**	**23 01 00.8**	**-1.6**
SCRK	**Sand Creek**	**19.78**	**39**	P	**P**	**23 01 04.0**	**-1.1**
SCRK				IAmb	IAmb	23 01 23.3	
	comp=Z,2.4nm,0.8s						
J26L	**Joseph Creek**	**20.18**	**38**	P	**P**	**23 01 08.4**	**-1.0**
BCAR	**Beaver Creek A**	**20.33**	**43**	P	Pn	23 01 14.3	+1.1
TOLK	**Toolik Lake Re**	**20.63**	**25**	P	**P**	**23 01 14.7**	**+0.5**
TOLK				IAmb	IAmb	23 01 41.4	
	comp=Z,6.1nm,1.1s						
BMAR	**Burnt Mountain**	**21.31**	**31**	P	**P**	**23 01 22.3**	**+0.8**
HYT	**Haines Junctio**	**21.71**	**51**	P	**P**	**23 01 27.4**	**+1.5**
HYT				IAmb	IAmb	23 01 42.2	
	comp=Z,2.7nm,0.8s						
I29M	**Ogilvie Camp,**	**22.57**	**39**	P	**P**	**23 01 33.9**	**-1.1**
I29M				IAmb	IAmb	23 02 04.3	
	comp=Z,2.8nm,1.1s						
INK	**Inuvik**	**25.41**	**34**	P	**P**	**23 01 59.2**	**-2.6**
	comp=Z,1.7nm,0.3s,baz=270,slow=7.3,SNR=1.9						
	comp=Z,1.7nm,0.3s						
H11N2	**WAKE ISLAND Hy**	**35.32**	**214**	T	T	23 41 44.0	
	baz=21,slow=76,SNR=5.9						
H11N3	**WAKE ISLAND Hy**	**35.33**	**214**	T	T	23 41 35.7	
	baz=21,slow=76,SNR=7.3						
H11N1	**WAKE ISLAND Hy**	**35.34**	**214**	T	T	23 41 38.4	
	baz=21,slow=76,SNR=5.1						
H11S1	**WAKE ISLAND Hy**	**36.52**	**213**	T	T	23 42 52.6	
	baz=19,slow=74						
H11S2	**WAKE ISLAND Hy**	**36.53**	**213**	T	T	23 42 55.7	
	baz=19,slow=74						
H11S3	**WAKE ISLAND Hy**	**36.54**	**213**	T	T	23 42 58.3	
	baz=19						
NVAR	**Mina Array Bea**	**40.04**	**87**	P	**P**	**23 04 08.9**	**-1.0**
	comp=Z,0.4nm,0.7s,baz=283,slow=8.2,SNR=2.5						
	comp=Z,0.4nm,0.7s						
PDAR	**Pinedale Array**	**42.91**	**76**	P	**P**	**23 04 33.0**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=303,slow=5.7,SNR=6.4						
	comp=Z,0.9nm,0.7s						
PDAR	**Pinedale Array**	**42.91**	**76**	P	**P**	**23 04 33.9**	**+0.6**
SONM	**Songino Array**	**49.72**	**299**	P	**P**	**23 05 26.9**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=58,slow=7.7,SNR=5.0						
	comp=Z,0.4nm,0.5s						
TXAR	**Lajitas Array**	**55.15**	**85**	P	**P**	**23 06 07.5**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=298,slow=5.4,SNR=6.3						
	comp=Z,0.4nm,0.6s						
KURK	**Kurchatov**	**61.45**	**317**	P	**P**	**23 06 50.9**	**+0.4**
D62A	**Allapoint, Al**	**62.28**	**48**	P	**P**	**23 06 56.6**	**+0.3**
MK31	**Makanchi Array**	**62.69**	**312**	P	**P**	**23 06 58.6**	**-0.3**
MKAR	**Makanchi Array**	**62.69**	**312**	P	**P**	**23 06 57.4**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=60,slow=5.7,SNR=3.3						
	comp=Z,0.2nm,0.3s						

MKAR	**Makanchi Array**	**62.69**	**312**	P	**P**	**23 06 58.8**	**-0.2**
ABKAR	**Akbulak array**	**69.93**	**326**	P	**P**	**23 07 45.6**	**+0.4**
ABKAR	**Akbulak array**	**69.93**	**326**	P	**P**	**23 07 45.6**	**+0.4**
ABKAR				IAmb	IAmb	23 07 45.7	
	comp=Z,1.9nm,1.2s						
KKAR	**Karatay Array**	**70.86**	**316**	P	**P**	**23 07 51.2**	**+0.2**
WRA	**Warramunga Arr**	**84.61**	**229**	P	**P**	**23 09 06.8**	**-0.9**
	comp=Z,0.5nm,1.0s,baz=31,slow=5.7,SNR=2.3						
	comp=Z,0.5nm,1.0s						

*IDC **21** 23:12:16.0±2.1,21°.63N×143°.37E,h303km±19km,mb3.1/8, mbtmp3.9/11,Error ellipse: s-maj=28.3km s-min=16.1km az=93.0*
ISC 21 23:12:15.4±0.9,21°.6N±0°.1×143°.4E±0°.2,h300km,n13, σ0s54/15,mb3.5/7,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.58**	**349**	P	**Pn**	**23 13 40.8**	**+1.1**
	7.9nm,0.4s,baz=30,slow=19,SNR=7.9						
JCJ				S	**S**	**23 14 47.5**	**-0.1**
	29nm,0.4s,baz=93,slow=24,SNR=7.9						
JHJ	**Hachijo jima 2**	**11.92**	**345**	P	**Pn**	**23 14 56.6**	**-0.3**
	40nm,0.6s,baz=55,slow=17,SNR=1.8						
MJAR	**Matsushiro Arr**	**15.56**	**344**	P	**P**	**23 15 38.6**	**0.0**
	1.1nm,0.3s,baz=165,slow=10,SNR=4.7						
KSRS	**Korea Array**	**20.71**	**323**	P	**P**	**23 16 33.8**	**+0.5**
	0.5nm,0.3s,baz=146,slow=9.2,SNR=5.4						
	0.5nm,0.3s						
WRA	**Warramunga Arr**	**42.22**	**193**	P	**P**	**23 19 39.9**	**+0.1**
	1.9nm,0.8s,baz=9.1,slow=9.4,SNR=25						
	1.9nm,0.8s						
MKAR	**Makanchi Array**	**54.90**	**313**	P	**P**	**23 21 15.6**	**0.0**
	0.2nm,0.5s,baz=92,slow=8.4,SNR=2.1						
MKAR				PcP	**PcP**	**23 22 13.4**	**-0.1**
	0.2nm,0.5s,baz=59,slow=7.2,SNR=2.6						
	0.2nm,0.5s						
ILAR	**Eielson Array**	**62.05**	**27**	P	**P**	**23 22 03.4**	**-0.8**
	0.7nm,0.9s,baz=251,slow=5.7,SNR=6.0						
	0.7nm,0.9s						
YKA	**Yellowknife Ar**	**76.46**	**28**	P	**P**	**23 23 32.4**	**+0.3**
	0.6nm,0.6s,baz=300,slow=9.7,SNR=1.6						
	0.6nm,0.6s						
ARCES	**ARCESS Array B**	**79.08**	**342**	P	**P**	**23 23 46.5**	**+0.1**
	1.6nm,0.8s,baz=64,slow=6.9,SNR=5.9						
	1.6nm,0.8s						
NVAR	**Mina Array Bea**	**83.06**	**52**	P	**P**	**23 24 08.6**	**+0.3**
	0.6nm,0.7s,baz=264,slow=6.3,SNR=5.1						
	0.6nm,0.7s						
FINES	**FINESS Array B**	**83.35**	**335**	P	**P**	**23 24 07.9**	**-1.0**
	0.5nm,0.6s,baz=68,slow=3.7,SNR=1.5						
	0.5nm,0.6s						
TORD	**Torodi Ar. Bea**	**128.95**	**309**	PKP	**PKPdf**	**23 30 48.5**	**0.0**
	0.4nm,0.8s,baz=347,slow=1.9,SNR=2.4						
LPAZ	**La Paz**	**149.76**	**85**	PKPbc	**PKiKP**	**23 31 32.7**	**+0.3**
	0.7nm,0.6s,baz=182,slow=3.4,SNR=3.6						

NEIC 21 23:32:57.3±0.5,37°.18N±0°.02×98°.06W±0°.02,h4km±4km, Error ellipse: s-maj=3.2km s-min=1.6km az=162.0, Kansas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T35A	**Sooner Cattle**	**1.27**	**102**		**Pg**	**23 33 20.4**	**-1.2**
R32A	**Long Quarter,**	**1.34**	**338**	Pg	Pn	23 33 21.8	-1.1
FNO	**Franklin**	**1.99**	**164**	Pn	Pn	23 33 31.6	-0.2
CBKS	**Cedar Bluff**	**2.10**	**321**	Pn	Pn	23 33 33.2	-0.1
TUL1	**Leonard**	**2.23**	**124**	Pn	Pn	23 33 34.4	-0.6
TUL1				IAmb_Lg		23 34 09.9	
	comp=Z,38nm,1.0s						
KSU1	**Kansas State U**	**2.23**	**30**	Pn	Pn	23 33 35.0	-0.1
WMOK	**Wichita Mounta**	**2.51**	**194**	Pn	Pn	23 33 38.8	-0.1
X34A	**Smith Ranch, M**	**2.58**	**176**	IAmb_Lg		23 34 18.4	
	comp=Z,20nm,0.9s						
U38A	**Gravette**	**3.04**	**103**	Pn	Pn	23 33 46.0	-0.3
U38A				IAmb_Lg		23 34 41.2	
	comp=Z,12nm,0.8s						
X37A	**Clayton**	**3.39**	**139**	Pn	Pn	23 33 51.0	+0.1
X37A				IAmb_Lg		23 34 48.9	
	comp=Z,13nm,0.8s						
HHAR	**Hobbs**	**3.43**	**104**	Pn	Pn	23 33 51.8	+0.2
N33A	**J Bar K, Exete**	**3.58**	**7**	IAmb_Lg		23 34 58.6	
	comp=Z,20nm,0.9s						
AMTX	**Amarillo**	**3.72**	**233**	Pn	Pn	23 33 53.8	-1.9
S39A	**Bolivar**	**3.81**	**81**	Pn	Pn	23 33 55.9	-0.9
S39A				IAmb_Lg		23 35 01.9	
	comp=Z,17nm,1.0s						
W39A	**Magazine**	**3.99**	**119**	Pn	Pn	23 33 59.6	+0.4
W39A				IAmb_Lg		23 35 07.0	
	comp=Z,12nm,0.9s						
KSCO	**Kaye Shedlock'**	**4.04**	**298**	Pn	Pn	23 33 58.5	-1.5
KSCO				IAmb_Lg		23 35 04.9	
	comp=Z,9.5nm,0.8s						
P38A	**Dawn**	**4.31**	**54**	Pn	Pn	23 34 03.6	-0.1
P38A				IAmb_Lg		23 35 19.5	
	comp=Z,8.4nm,0.7s						
MIAR	**Mount Ida**	**4.49**	**125**	Pn	Pn	23 34 06.4	+0.2
MIAR				IAmb_Lg		23 35 25.5	
	comp=Z,9.0nm,1.0s						
MGMO	**Mountain Grove**	**4.63**	**89**	Pn	Pn	23 34 08.1	+0.1
MGMO				IAmb_Lg		23 35 24.3	
	comp=Z,16nm,0.8s						
R40A	**Maddies Statio**	**4.72**	**75**	Pn	Pn	23 34 08.6	-0.7
R40A				IAmb_Lg		23 35 27.0	
	comp=Z,13nm,0.7s						
FCAR	**Ozark Folk Cen**	**4.95**	**103**	Pn	Pn	23 34 12.9	+0.5
FCAR				IAmb_Lg		23 35 35.2	
	comp=Z,7.5nm,0.8s						
L34A	**Svendsen Farm,**	**4.95**	**15**	IAmb_Lg		23 35 43.8	
	comp=Z,17nm,0.8s						
X40A	**Basin Creek Fa**	**5.03**	**121**	Pn	Pn	23 34 13.4	-0.1
WHAR	**Wooly Hollow**	**5.03**	**110**	Pn	Pn	23 34 13.8	+0.1
WHAR				IAmb_Lg		23 35 36.3	
	comp=Z,11nm,1.1s						
T25A	**Trinidad**	**5.07**	**271**	IAmb_Lg		23 35 41.7	
	comp=Z,9.1nm,1.2s						
W41B	**Gary Mavity, V**	**5.11**	**111**	Pn	Pn	23 34 13.7	-1.0
P40A	**Paris**	**5.28**	**62**	IAmb_Lg		23 35 54.3	
	comp=Z,8.3nm,0.8s						
LCAR	**Lake Charles**	**5.67**	**99**	IAmb_Lg		23 35 56.2	
	comp=Z,6.2nm,1.1s						
PBMO	**Poplar Bluff**	**6.12**	**91**	IAmb_Lg		23 36 11.9	
	comp=Z,6.6nm,0.9s						
N41A	**Harden Midland**	**6.63**	**56**	IAmb_Lg		23 36 27.8	
	comp=Z,9.8nm,0.8s						
JCT	**Junction City**	**6.84**	**193**	IAmb_Lg		23 36 37.5	
	comp=Z,7.8nm,0.8s						
N23A	**Red Feather La**	**7.17**	**304**	IAmb_Lg		23 36 57.8	
	comp=Z,10.0nm,1.0s						
HDIL	**Hopedale**	**7.62**	**61**	IAmb_Lg		23 37 14.7	
	comp=Z,9.6nm,0.7s						
MNTX	**Cornudas Mount**	**8.15**	**230**	IAmb_Lg		23 37 24.3	
	comp=Z,5.2nm,1.0s						

*IDC **21** 23:52:02.4±0.6,30°.76S×176°.74W,h0km,mb4.3/11, mbtmp4.2/11,MS3.5/7,Error ellipse: s-maj=24.5km s-min=17.2km az=64.0*
*NEIC **21** 23:52:04.2±1.5,30°.93S±0°.07×176°.7W±0°.1,h10km±1km, mb4.7/28,Error ellipse: s-maj=20.3km s-min=12.0km az=83.0*
ISC 21 23:52:03.9±0.5,30°.93S±0°.06×176°.78W±0°.09,h10km,n75, σ1s43/68,mb4.6/23,MS3.5/6,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.94**	**329**	Pn	**Pn**	**23 52 36.7**	**-0.3**
	266nm,0.3s,baz=146,slow=3.6,SNR=17						
RAO				Sn	**Sn**	**23 52 58.8**	**-2.6**
	466nm,0.3s,baz=97,slow=22,SNR=20						
RAO	**Raoul Island**	**1.94**	**329**		**Pn**	**23 52 36.2**	**-0.8**
URZ	**Urewera**	**8.88**	**213**	Pn	**Pn**	**23 54 09.9**	**-2.3**
	1.4nm,0.3s,baz=257,slow=3.6,SNR=12						
URZ				Sn	**Sn**	**23 55 47.9**	**-4.4**
	6.7nm,0.3s,baz=27,slow=21,SNR=8.7						
URZ	**Urewera**	**8.88**	**213**		**Pn**	**23 54 10.6**	**-1.7**
BKZ	**Black Stump Fm**	**9.90**	**212**	Pn	**Pn**	**23 54 25.4**	**-0.8**
NNZ	**Nelson**	**12.98**	**215**		**Pn**	**23 55 09.0**	**+0.6**
MSVF	**Nonsavu**	**13.95**	**339**	LR	LR	00 00 31.2	
	comp=Z,169nm,18.1s,baz=177,slow=37						
RPZ	**Rata Peaks**	**16.00**	**214**	Pn	**Pn**	**23 55 45.0**	**-4.1**
	4.3nm,0.3s,baz=123,slow=1.6,SNR=14						
RPZ				Sn	Sn	23 58 27.7	-19
	0.5nm,0.3s,baz=46,slow=23,SNR=1.2						

RPZ	**Rata Peaks**	**16.00**	**214**		**Pn**	**23 55 44.9**	**-4.1**
MARNC	**Mare, Loyalty**	**16.55**	**301**	P	**P**	**23 56 00.8**	**+2.1**
OUENC	**Ouen Island, N**	**16.90**	**296**	P	**Pn**	**23 56 02.6**	**+2.0**
DZM	**Mont Dzumac**	**17.40**	**296**	P	**P**	**23 56 09.4**	**+1.1**
	7.0nm,0.7s,baz=144,slow=13,SNR=10.0						
ARMA	**Armidale**	**27.14**	**263**	P	**P**	**23 57 50.2**	**+2.8**
ARMA				IAmb	IAmb	23 58 12.4	
	comp=Z,16nm,1.2s						
PPT	**Papeete**	**28.05**	**68**	LR	LR	00 09 24.6	
	comp=Z,37nm,18.3s,baz=44,slow=37						
EIDS	**Eidsvold**	**28.82**	**273**	P	**P**	**23 58 05.1**	**+2.8**
EIDS				IAmb	IAmb	23 58 09.1	
	comp=Z,15nm,1.4s						
CTA	**Charters Tower**	**34.92**	**279**	LR	LR	00 13 10.0	
	comp=Z,78nm,18.7s,baz=85,slow=36						
CTAO	**Charters Tower**	**34.92**	**279**	P	**P**	**23 58 58.1**	**+2.0**
CTAO				IAmb	IAmb	23 58 58.9	
	comp=Z,9.2nm,0.7s						
STKA	**Stephens Creek**	**35.39**	**257**	P	**P**	**23 59 01.0**	**+1.0**
	comp=Z,5.2nm,0.7s,baz=100,slow=10,SNR=5.4						
STKA				LR	LR	00 12 27.1	
	comp=Z,98nm,18.2s,baz=41,slow=34						
	comp=Z,5.2nm,0.7s						
STKA	**Stephens Creek**	**35.39**	**257**	P	**P**	**23 59 01.6**	**+1.6**
BBOO	**Buckleboo**	**39.84**	**255**	P	**P**	**23 59 38.0**	**+0.4**
AS31	**Alice Springs**	**44.13**	**267**	P	**P**	**00 00 13.3**	**+0.4**
ASAR	**Alice Springs**	**44.13**	**267**	P	**P**	**00 00 12.7**	**-0.2**
WR0	**Warramunga Arr**	**44.99**	**272**	P	**P**	**00 00 19.4**	**-0.4**
WR0				IAmb	IAmb	00 00 27.9	
	comp=Z,9.0nm,1.3s						
WB2	**Warramunga Arr**	**45.16**	**272**	P	**P**	**00 00 21.0**	**-0.1**
WB2				IAmb	IAmb	00 00 23.0	
	comp=Z,5.6nm,0.6s						
WRAB	**Tennant Creek**	**45.16**	**272**	P	**P**	**00 00 20.6**	**-0.5**
WRAB				IAmb	IAmb	00 00 22.9	
	comp=Z,5.3nm,0.7s						
WRA	**Warramunga Arr**	**45.17**	**272**	P	**P**	**00 00 20.3**	**-0.8**
	comp=Z,3.1nm,0.5s,baz=113,slow=7.3,SNR=50						
	comp=Z,3.1nm,0.5s						
WRA	**Warramunga Arr**	**45.17**	**272**	P	**P**	**00 00 21.1**	**-0.1**
WB0	**Warramunga Arr**	**45.20**	**272**	P	**P**	**00 00 21.2**	**-0.2**
WB0				IAmb	IAmb	00 00 22.2	
	comp=Z,6.8nm,0.9s						
FORT	**Forrest**	**46.93**	**255**	P	**P**	**00 00 34.3**	**-0.6**
VNDA	**Vanda**	**47.68**	**186**	P	**P**	**00 00 41.5**	**+1.4**
	comp=Z,1.4nm,1.0s,baz=3.8,slow=6.8,SNR=4.8						
	comp=Z,1.4nm,1.0s						
VNDA	**Vanda**	**47.68**	**186**	P	**P**	**00 00 41.5**	**+1.4**
MTN	**Manton Dam**	**51.10**	**279**	P	**P**	**00 01 07.4**	**+0.4**
CASY	**Casey**	**55.17**	**208**	P	**P**	**00 01 37.4**	**+1.1**
PSA00	**Pilbara Seismi**	**56.95**	**263**	P	**P**	**00 01 49.2**	**-0.6**
QSPA	**South Pole Qui**	**59.19**	**180**	P	**P**	**00 02 06.6**	**+1.7**
	comp=Z,5.1nm,0.8s,baz=52,slow=1.4,SNR=28						
	comp=Z,5.1nm,0.8s						
QSPA	**South Pole Qui**	**59.19**	**180**	P	**P**	**00 02 06.9**	**+2.0**
QSPA				IAmb	IAmb	00 02 07.4	
	comp=Z,6.0nm,0.8s						
TROLL	**Troll, Antarti**	**77.35**	**180**	P	**P**	**00 03 59.2**	**+0.6**
SNAA	**Sanae**	**77.60**	**178**	P	**P**	**00 04 00.2**	**+0.3**
SNAA	**Sanae**	**77.60**	**178**	P	**P**	**00 04 00.3**	**+0.3**
SNAA				IAmb	IAmb	00 04 01.3	
	comp=Z,7.5nm,1.0s						
VNA3	**Neumayer Olymp**	**77.71**	**176**	P	**P**	**00 04 00.5**	**0.0**
VNA1	**Neumayer--Stat**	**78.38**	**176**	P	**P**	**00 04 04.4**	**+0.3**
MJAR	**Matsushiro Arr**	**79.28**	**325**	P	**P**	**00 04 07.9**	**-1.6**
	comp=Z,0.8nm,0.4s,baz=153,slow=6.3,SNR=1.9						
	comp=Z,0.8nm,0.4s						
H03S2	**Juan Fernandez**	**79.29**	**123**	T	T	01 31 13.0	
	baz=238						
H03S1	**Juan Fernandez**	**79.31**	**123**	T	T	01 31 12.3	
	baz=238						
H03S3	**Juan Fernandez**	**79.31**	**123**	T	T	01 31 13.3	
	baz=238						
PLCA	**Paso Flores**	**81.38**	**132**	P	**P**	**00 04 21.5**	**+0.4**
	comp=Z,1.4nm,0.8s,baz=146,slow=4.9,SNR=3.0						
	comp=Z,1.4nm,0.8s						
PLCA	**Paso Flores**	**81.38**	**132**	P	**P**	**00 04 20.9**	**-0.1**
PLCA				IAmb	IAmb	00 04 25.0	
	comp=Z,11nm,1.4s						
KSRS	**Korea Array**	**85.43**	**319**	P	**P**	**00 04 41.2**	**-0.4**
	comp=Z,0.8nm,0.4s,baz=136,slow=6.3,SNR=5.4						
	comp=Z,0.8nm,0.4s						
NVAR	**Mina Array Bea**	**87.92**	**42**	P	**P**	**00 04 53.5**	**-0.6**
	comp=Z,1.7nm,0.8s,baz=221,slow=7.7,SNR=9.9						
	comp=Z,1.7nm,0.8s						
NVAR	**Mina Array

KOK				eS		Sn	00 25 33.9	-0.3
PET	**Petropavlovsk**	**1.26**	**260**	eP		Pn	00 25 18.9	+0.2
PET				eS		Sn	00 25 34.2	-0.2
MKZ	**Mys Kozlova**	**1.44**	**25**	eP		Pn	00 25 21.6	+0.5
MKZ				eS		Sn	00 25 38.2	-0.6
RUS	**Russkaya**	**1.56**	**239**	eP		Pn	00 25 23.1	+0.2
RUS				eS		Sn	00 25 41.0	-0.9
KRMR	**Karymshinskiy**	**1.61**	**256**	eP		Pn	00 25 24.0	+0.5
KRMR				eS		Sn	00 25 45.6	+2.5
GNL	**Ganaly**	**1.71**	**286**	eP		Pn	00 25 25.9	+0.9
GNL				eS		Sn	00 25 49.1	+3.5
MTVR	**Mutnovka**	**1.71**	**244**	eP		Pn	00 25 25.7	+0.6
MTVR				eS		Sn	00 25 47.9	+2.1
GRL	**Gorelyy**	**1.74**	**247**	eP		Pn	00 25 26.7	+1.2
GRL				eS		Sn	00 25 49.6	+3.1
PETK	**Petropavlovsk-**	**1.81**	**266**	P		Pn	00 25 28.1	+1.7
	18nm,0.3s,baz=98,slow=19,SNR=86							
PETK				S		Sn	00 25 48.8	+0.7
	18nm,0.3s,baz=93,slow=18,SNR=5.8							
ASAK	**Asacha**	**1.91**	**244**	eP		Pn	00 25 29.2	+1.4
ASAK				eS		Sn	00 25 54.3	+3.6
TUMR	**Tumrok**	**2.05**	**351**	eP		Pn	00 25 31.4	+1.7
APC	**Apacha**	**2.16**	**263**	eP		Pn	00 25 33.8	+2.7
KDTR	**Khodutka, Kamc**	**2.16**	**229**	eP		Pn	00 25 32.4	+1.3
KMNR	**Kamenistaya**	**2.52**	**354**	eP		Pn	00 25 38.2	+2.1
KPT	**Kopyto**	**2.73**	**354**	eP		Pn	00 25 41.3	+2.4
ESO	**Esso**	**2.92**	**337**	eP		Pn	00 25 42.9	+1.5
KBTR	**Krutoberegovo**	**3.20**	**22**	eP		Pn	00 25 47.6	+2.3
BKI	**Bering**	**3.66**	**56**	eP		Pn	00 25 53.8	+2.3
BKI				eS		Sn	00 26 31.8	-1.5
H11N2	**WAKE ISLAND Hy**	**33.81**	**169**	T		T	01 08 02.1	
	baz=353,slow=76,SNR=20							
H11N3	**WAKE ISLAND Hy**	**33.82**	**169**	T		T	01 08 03.4	
	baz=353,slow=76,SNR=19							
H11N1	**WAKE ISLAND Hy**	**33.82**	**169**	T		T	01 08 05.0	
	baz=353,slow=76,SNR=20							
H11S1	**WAKE ISLAND Hy**	**34.99**	**170**	T		T	01 09 27.4	
	baz=352							
H11S3	**WAKE ISLAND Hy**	**35.01**	**170**	T		T	01 09 27.2	
	baz=352							
H11S2	**WAKE ISLAND Hy**	**35.01**	**170**	T		T	01 09 29.3	
	baz=352							
MKAR	**Makanchi Array**	**48.41**	**296**	P		**P**	**00 33 32.2**	**-2.7**
	0.3nm,0.5s,baz=50,slow=6.6,SNR=2.0							
	0.3nm,0.5s							
ULM	**Lac du Bonnet**	**58.44**	**47**	LR		LR	01 00 32.8	
	comp=Z,33nm,18.3s,baz=148,slow=36							
FINES	**FINESS Array B**	**60.11**	**337**	P		**P**	**00 34 59.2**	**-0.4**
	1.5nm,0.9s,baz=37,slow=7.1,SNR=4.9							
	1.5nm,0.9s							

*IDC **22** 00:31:13.9±1.2,16°.31N×94°.12W,h65^{km}±15^{km},mb3.6/13, mbtmp3.9/15,MS3.1/4,Error ellipse: s-maj=27.8km s-min=12.6km az=68.0*

*NEIC **22** 00:31:14.8±2.4,16°.14N±0°.09×94°.49W×0°.07,h75^{km}±8^{km}, mb4.2/44,Md4.7/18(MEX),Error ellipse: s-maj=14.9km s-min=6.0km az=215.0*

*MEX **22** 00:31:14.7±0.7,16°.04N×94°.60W,h73^{km}±14^{km},MD4.7*

ISC 22 00:31:13.8±0.8,16°.07N±0°.05×94°.53W±0°.04,h78^{km}±7^{km}, n89,σ1^{s}36/99,mb4.0/19,Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**1.07**	**342**	P	**Pn**	**00 31 33.0**	**-0.6**
	699nm,0.3s,baz=182,slow=9.9,SNR=2128						
CMIG				S	**Sn**	**00 31 47.3**	**-1.0**
	3μm,0.5s,baz=270,slow=20,SNR=50						
CMIG	**Matias Romero**	**1.07**	**342**	*i* P	**Pn**	**00 31 33.0**	**-0.6**
CMIG				eS	**Sn**	**00 31 47.4**	**-1.0**
UXUV	**UXUV**	**1.29**	**17**	*i* P	**Pn**	**00 31 36.4**	**0.0**
UXUV				eS	**Sn**	**00 31 52.8**	**-0.6**
PCIG		**1.31**	**106**		**Pn**	**00 31 36.5**	**-0.1**
PCIG					**Sn**	**00 31 53.9**	**+0.1**
PCIG		**1.31**	**106**	*i* P	**Pn**	**00 31 36.5**	**-0.1**
PCIG				eS	**Sn**	**00 31 53.9**	**+0.1**
TGIG		**1.52**	**62**	P	**Pn**	**00 31 38.5**	**-0.9**
TGIG		**1.52**	**62**	*i* P	**Pn**	**00 31 38.5**	**-0.9**
HUIG	**Huatulco**	**1.55**	**259**		**Pn**	**00 31 38.1**	**-1.5**
HUIG					**Sn**	**00 31 56.1**	**-3.1**
HUIG	**Huatulco**	**1.55**	**259**	*i* P	**Pn**	**00 31 38.1**	**-1.5**
HUIG				eS	**Sn**	**00 31 56.1**	**-3.1**
NEUV	**Arroyo Zacate**	**2.04**	**323**	eP	**Pn**	**00 31 45.7**	**-0.4**
NEUV				eS	**Sn**	**00 32 08.1**	**-2.6**
CCIG	**Comitan**	**2.31**	**84**	Pn	**Pn**	**00 31 49.1**	**-0.8**
CCIG	**Comitan**	**2.31**	**84**	*i* P	**Pn**	**00 31 49.3**	**-0.7**
CCIG				eS	**Sn**	**00 32 16.0**	**-1.7**
VHO	**Vista Hermosa**	**2.33**	**296**	*i* P	**Pn**	**00 31 51.6**	**+1.3**
VHO				eS	**Sn**	**00 32 18.1**	**-0.1**
HUEH	**Huehuetenango**	**3.01**	**104**	Pn	**Pn**	**00 31 59.9**	**+0.4**
RTAL	**Retalhuleu**	**3.14**	**119**	Pn	**Pn**	**00 32 01.1**	**0.0**
JAUV	**Jalcomulco**	**3.93**	**327**	eP	**Pn**	**00 32 10.6**	**-1.1**
JAUV				eS	**Sn**	**00 32 56.1**	**-0.7**
TLIG	**Tlapa**	**4.14**	**292**		**Pn**	**00 32 16.2**	**+1.5**
PETF	**Flores**	**4.55**	**79**	Pn	**Pn**	**00 32 19.6**	**-0.6**
MTOB	**Montecristo**	**5.26**	**108**	Pn	**Pn**	**00 32 29.1**	**-1.1**
MOIG	**Morelia**	**7.28**	**300**	Pn	**Pn**	**00 33 00.7**	**+3.0**
TGUH	**Tegucigalpa,Un**	**7.29**	**105**	Pn	**Pn**	**00 32 58.8**	**+1.0**
CRIN	**San Cristobal**	**7.99**	**114**	Pn	**Pn**	**00 33 09.1**	**+1.9**
MATN	**Matagalpa**	**8.90**	**109**	Pn	**Pn**	**00 33 20.2**	**+0.5**
BOAB	**BOACO BROADBAN**	**9.32**	**112**	Pn	**Pn**	**00 33 27.1**	**+1.8**
HZTE	**Horizontes, Gu**	**10.19**	**120**	Pn	**Pn**	**00 33 39.2**	**+1.9**
ORTG	**Ortega, Santa**	**10.50**	**122**	Pn	**Pn**	**00 33 42.4**	**+0.9**
DUNO	**Dulce Nombre,**	**10.63**	**123**	Pn	**Pn**	**00 33 44.3**	**+1.0**
JTS	**Las Juntas de**	**10.95**	**120**	P	**Pn**	**00 33 46.0**	**-1.7**
	5.5nm,0.4s,baz=356,slow=4.7,SNR=8.2						
JTS	**Las Juntas de**	**10.95**	**120**	Pn	**Pn**	**00 33 48.7**	**+1.0**
RIMA	**Rio Macho**	**12.14**	**120**	Pn	**Pn**	**00 34 04.1**	**+0.1**
SRBA	**San Rafael, Bu**	**12.84**	**121**	Pn	**Pn**	**00 34 14.1**	**+0.6**
DRK0	**Durika**	**12.92**	**120**	Pn	**Pn**	**00 34 14.6**	**0.0**
833A	**Chaparral WMA,**	**12.99**	**341**	Pn	**Pn**	**00 34 17.6**	**+2.2**
BRU2	**Volcan**	**13.63**	**121**	Pn	**Pn**	**00 34 24.7**	**+0.7**
435B	**Jarrell**	**14.91**	**350**	P	**P**	**00 34 44.1**	**0.0**
JCT	**Junction City**	**15.13**	**342**	P	**P**	**00 34 46.7**	**0.0**
JCT				IAmb	IAmb	00 35 16.0	
	comp=Z,8.4nm,0.7s						
TX31	**Lajitas Ar. Si**	**15.65**	**329**		**P**	**00 34 52.3**	**-0.1**
TX32	**Lajitas Array**	**15.65**	**329**	P	**P**	**00 34 53.8**	**+1.4**
TXAR	**Lajitas Array**	**15.65**	**329**	P	**Pn**	**00 34 50.6**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=150,slow=12,SNR=3.2						
TXAR	**Lajitas Array**	**15.65**	**329**	Pn	**Pn**	**00 34 49.4**	**-0.4**
ABTX	**Abilene, Hawle**	**17.12**	**345**		**P**	**00 35 09.8**	**+1.2**
ABTX				IAmb	IAmb	00 35 34.8	
	comp=Z,10nm,0.8s						
X37A	**Clayton**	**18.46**	**358**	P	**Pn**	**00 35 24.3**	**+0.1**
GTBY	**Guantanamo Bay**	**18.86**	**75**	P	**P**	**00 35 26.0**	**-1.8**
GTBY				IAmb	IAmb	00 35 27.5	
	comp=Z,25nm,1.1s						
WMOK	**Wichita Mounta**	**18.98**	**349**	P	**P**	**00 35 29.0**	**0.0**
FNO	**Franklin**	**19.28**	**353**	P	**Pn**	**00 35 35.8**	**+1.8**
MSTX	**Muleshoe**	**19.31**	**339**	P	**Pn**	**00 35 35.8**	**+1.3**
AMTX	**Amarillo**	**19.80**	**342**	P	**P**	**00 35 38.2**	**+0.2**
AMTX				IAmb	IAmb	00 36 05.2	
	comp=Z,10.0nm,0.6s						
FCAR	**Ozark Folk Cen**	**19.85**	**6**	P	**P**	**00 35 37.8**	**-0.7**
GOGA	**Godfrey**	**19.95**	**28**	P	**Pn**	**00 35 41.3**	**-0.6**
GOGA				IAmb	IAmb	00 36 09.5	
	comp=Z,9.8nm,1.1s						
Y52A	**Lilburn**	**20.07**	**26**	P	**Pn**	**00 35 43.0**	**-0.4**
Y52A				IAmb	IAmb	00 35 59.8	
	comp=Z,16nm,1.1s						
W50A	**Signal Mountai**	**20.76**	**22**	P	**P**	**00 35 48.9**	**+0.5**
W50A				IAmb	IAmb	00 36 05.9	
	comp=Z,14nm,0.9s						
T35A	**Sooner Cattle**	**20.84**	**356**	P	**P**	**00 35 50.0**	**+0.8**
T35A				IAmb	IAmb	00 36 14.1	
	comp=Z,14nm,0.8s						
CRNM	**Carthage**	**20.93**	**331**	P	**P**	**00 35 52.1**	**+1.8**
BNM	**Barren Site**	**21.04**	**331**	P	**P**	**00 35 53.2**	**+1.6**
S39A	**Bolivar**	**21.56**	**3**	P	**P**	**00 35 56.9**	**+0.1**
ANMO	**Albuquerque**	**21.62**	**333**	P	**P**	**00 35 58.8**	**+1.1**
	comp=Z,1.5nm,1.0s,baz=186,slow=3.8,SNR=3.6						
	comp=Z,1.5nm,1.0s						
ANMO	**Albuquerque**	**21.62**	**333**	P	**P**	**00 35 57.8**	**0.0**
TKL	**Tuckaleechee C**	**21.75**	**24**	P	**P**	**00 35 56.4**	**-2.4**
	comp=Z,2.0nm,0.9s,baz=212,slow=8.4,SNR=2.9						
TKL				S	**S**	**00 39 50.3**	**-4.9**
	comp=Z,2.2nm,0.8s,baz=170,slow=12,SNR=1.6						
TKL				LR	LR	00 44 58.0	
	comp=Z,32nm,19.6s,baz=198,slow=39						
	comp=Z,2.0nm,0.9s						
U49A	**Red Boiling Sp**	**21.80**	**19**	P	**P**	**00 36 00.3**	**+1.0**
U49A				IAmb	IAmb	00 36 18.6	
	comp=Z,6.4nm,0.6s						
TUC	**Tucson**	**21.89**	**321**	P	**P**	**00 36 03.2**	**+2.7**
R40A	**Maddies Statio**	**22.22**	**5**	P	**P**	**00 36 03.0**	**-0.9**
R40A				IAmb	IAmb	00 36 22.5	
	comp=Z,5.0nm,0.8s						
R32A	**Long Quarter,**	**22.57**	**351**	P	**P**	**00 36 06.8**	**-0.9**
N38A	**Joes South For**	**24.66**	**2**	P	**P**	**00 36 25.9**	**-1.3**
SJG	**San Juan**	**27.19**	**82**	LR	LR	00 49 17.4	
	comp=Z,40nm,18.5s,baz=207,slow=40						
ECSD	**EROS Data Cent**	**27.63**	**357**	P	**P**	**00 36 53.6**	**-0.3**
NVAR	**Mina Array Bea**	**30.53**	**321**	P	**P**	**00 37 22.3**	**+2.2**
	comp=Z,0.3nm,0.7s,baz=135,slow=9.0,SNR=1.4						
	comp=Z,0.3nm,0.7s						
AGMN	**Agassiz Nation**	**32.16**	**358**	P	**P**	**00 37 33.1**	**-0.8**
AGMN				IAmb	IAmb	00 37 59.1	
	comp=Z,4.3nm,0.8s						
SAML	**Samuel**	**39.76**	**127**	P	**P**	**00 38 37.2**	**-2.1**
SAML				IAmb	IAmb	00 38 39.8	
	comp=Z,1.6nm,0.7s						
LPAZ	**La Paz**	**41.38**	**140**	P	**P**	**00 38 53.6**	**+0.4**
	comp=Z,1.2nm,0.5s,baz=326,slow=4.6,SNR=13						
	comp=Z,1.2nm,0.5s						
LPAZ	**La Paz**	**41.38**	**140**	P	**P**	**00 38 53.6**	**+0.4**
YKA	**Yellowknife Ar**	**48.48**	**348**	P	**P**	**00 39 48.6**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=141,slow=8.9,SNR=1.8						
	comp=Z,0.5nm,0.6s						
CPUP	**Villa Florida**	**55.54**	**139**	P	**P**	**00 40 42.5**	**+1.3**
	comp=Z,1.5nm,0.3s,baz=8.2,slow=2.4,SNR=4.5						
	comp=Z,1.5nm,0.3s						
CPUP	**Villa Florida**	**55.54**	**139**	P	**P**	**00 40 39.8**	**-1.4**
BDFB	**Brasilia**	**55.69**	**122**	P	**P**	**00 40 42.5**	**-0.1**
	comp=Z,3.5nm,0.5s,baz=283,slow=8.2,SNR=5.1						
	comp=Z,3.5nm,0.5s						
BDFB	**Brasilia**	**55.69**	**122**	P	**P**	**00 40 43.3**	**+0.7**
INK	**Inuvik**	**57.78**	**344**	P	**P**	**00 40 57.7**	**+1.2**
INK				IAmb	IAmb	00 41 21.3	
	comp=Z,3.2nm,1.1s						
BMAR	**Burnt Mountain**	**60.52**	**340**	P	**P**	**00 41 17.1**	**+1.6**
TOLK	**Toolik Lake Re**	**62.75**	**340**	P	**P**	**00 41 33.9**	**+3.4**
SUMG	**Summit**	**64.91**	**16**	P	**P**	**00 41 45.3**	**+0.2**
SUMG				IAmb	IAmb	00 41 45.4	
	comp=Z,2.2nm,0.6s						
BORG	**Borgarnes**	**68.43**	**26**	LR	LR	01 12 12.4	
	comp=Z,27nm,18.0s,baz=296,slow=36						
ESDC	**Sonseca Array**	**80.35**	**52**	P	**P**	**00 43 15.8**	**-1.0**
	comp=Z,1.0nm,0.8s,baz=282,slow=5.4,SNR=6.0						
	comp=Z,1.0nm,0.8s						
ESDC	**Sonseca Array**	**80.35**	**52**	P	**P**	**00 43 16.8**	**0.0**
NB2	**NORSAR Subarra**	**83.49**	**28**	P	**P**	**00 43 33.4**	**+0.6**
	comp=Z,0.7nm,0.7s,baz=291,slow=5.3						
NOA	**NORSAR Array B**	**83.49**	**28**	P	**P**	**00 43 32.8**	**-0.1**
	comp=Z,1.4nm,0.8s,baz=293,slow=5.1,SNR=5.8						
NOA				LR	LR	01 19 12.7	
	comp=Z,10.0nm,21.8s,baz=315,slow=35						
	comp=Z,1.4nm,0.8s						
ARCES	**ARCESS Array B**	**84.94**	**18**	P	**P**	**00 43 40.0**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=289,slow=4.9,SNR=6.9						
	comp=Z,0.7nm,0.6s						
ARCES	**ARCESS Array B**	**84.94**	**18**	P	**P**	**00 43 40.7**	**+0.7**
GERES	**GERESS Array B**	**89.55**	**39**	P	**P**	**00 44 02.2**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=288,slow=1.3,SNR=4.6						
	comp=Z,0.4nm,0.7s						
FINES	**FINESS Array B**	**89.65**	**24**	P	**P**	**00 44 02.8**	**0.0**
	comp=Z,0.7nm,0.6s,baz=197,slow=30,SNR=4.1						
	comp=Z,0.7nm,0.6s						
TORD	**Torodi Ar. Bea**	**92.26**	**76**	P	**P**	**00 44 14.0**	**-1.8**
	comp=Z,0.3nm,0.5s,baz=294,slow=4.1,SNR=6.5						
	comp=Z,0.3nm,0.5s						

*IDC **22** 00:42:31.5±4.6,11°.41S×118°.18E,h0^{km},mb3.8/3, mbtmp3.8/4,ML4.1/1,MS3.1/5,Error ellipse: s-maj=215.6km s-min=37.6km az=44.0*

*DJA **22** 00:42:42.7±0.6,10°.5±4°.×12°.0E±°,h20^{km}±4^{km},M4.5/14, mb4.7/3,mB4.8/2,MLv4.4/14,Mw(mB)4.1/2*

ISC 22 00:42:41.4±0.7,10°.20S±0°.06×119°.63E±0°.06,h35^{km},n32, σ2^{s}39/30,mb3.9/5,MS3.1/4,Sumba region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WBSI	**Waikabubak, Su**	**0.60**	**337**	P	**Pn**	**00 42 52.2**	**-1.4**
WBSI				S	**Sn**	**00 42 59.8**	**-2.4**
BASI	**Baing, Sumba**	**0.93**	**91**	P	**Pn**	**00 43 01.7**	**+3.7**
PLAI	**Plampang**	**2.28**	**307**	P	**Pn**	**00 43 16.2**	**-0.4**
PLAI				S	**Sn**	**00 43 42.6**	**-1.0**
PLAI	**Plampang**	**2.28**	**307**	P	**Pn**	**00 43 16.2**	**-0.4**
EDFI	**Ende, Flores**	**2.49**	**55**	P	**Pn**	**00 43 21.5**	**+2.0**
TWSI	**Taliwang, Sumb**	**3.08**	**298**	P	**Pn**	**00 43 27.1**	**-0.5**
BSSI	**Bau Bau, Buton**	**4.12**	**12**	P	**Pn**	**00 43 44.3**	**+2.4**
DNP	**Denpasar**	**4.62**	**289**	P	**Pn**	**00 43 51.0**	**+2.3**
IGBI	**Denpasar**	**4.63**	**287**	P	**Pn**	**00 43 50.3**	**+1.3**
SRBI	**Singaraja**	**4.84**	**295**	P	**Pn**	**00 43 51.7**	**-0.1**
BKSI	**Bulukumba**	**4.87**	**6**	P	**Pn**	**00 43 54.3**	**+2.1**
BKSI				S	**Sn**	**00 44 47.7**	**+0.3**
KAPI	**Kappang**	**5.16**	**1**	P	**Pn**	**00 43 58.8**	**+2.7**
JAGI	**Jajag, Banyuwa**	**5.68**	**287**	P	**Pn**	**00 44 04.1**	**+0.8**
	0.5nm,0μm 105nm,0.9s						
JAGI	**Jajag, Banyuwa**	**5.68**	**287**	P	**Pn**	**00 44 04.3**	**+1.0**
GMJI	**Gumukmas**	**6.40**	**287**	P	**Pn**	**00 44 14.4**	**+1.1**
UGM	**Wanagama**	**9.28**	**283**	P	**Pn**	**00 44 53.5**	**+0.7**
KNRA	**Kununurra**	**10.43**	**122**	P	**Pn**	**00 45 10.4**	**+1.9**
MBWA	**Marble Bar**	**10.90**	**180**	P	**Pn**	**00 45 14.9**	**0.0**
PSA00	**Pilbara Seismi**	**11.31**	**179**	P	**Pn**	**00 45 20.3**	**-0.3**
MTN	**Manton Dam**	**11.57**	**104**	P	**Pn**	**00 45 25.3**	**+1.1**
WRA	**Warramunga Arr**	**17.18**	**126**	P	**Pn**	**00 46 40.0**	**+1.2**
	0.7nm,0.3s,baz=297,slow=13,SNR=52						
WRA				S	**Sn**	**00 49 39.8**	**-9.1**
	1.8nm,0.6s,baz=292,slow=23,SNR=6.2						
	1.6nm,0.5s						
DAV	**Davao City (W)**	**18.15**	**19**	LR	LR	00 53 52.0	
	comp=Z,42nm,21.8s,baz=180,slow=34						
PMG	**Port Moresby**	**27.13**	**91**	LR	LR	01 03 21.5	
	comp=Z,53nm,18.2s,baz=164,slow=44						
CMAR	**Chiang Mai Arr**	**35.04**	**324**	LR	LR	01 04 57.4	
	comp=Z,37nm,18.7s,baz=270,slow=38						
PZH	**PanZhiHua**	**40.41**	**335**	PKP	P	00 50 25.0	+8.4
NJ2	**Nanjing**	**42.02**	**359**	*e*P	**P**	**00 50 30.4**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KSRS	**Korea Array**	**48.04**	**9**	LR	LR	01 13 05.8	
	comp=Z,7.4nm,20.0s,baz=150,slow=37						
SONM	**Songino Array**	**58.96**	**350**	P	**P**	**00 52 39.8**	**+2.4**
	comp=Z,0.5nm,0.6s,baz=180,slow=7.3,SNR=1.6						
	comp=Z,0.5nm,0.6s						
KSH	**Kashi**	**63.94**	**324**	P	**P**	**00 53 11.3**	**+0.1**
KSH				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MKAR	**Makanchi Array**	**65.80**	**333**	P	**P**	**00 53 22.0**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=141,slow=7.9,SNR=6.8						
	comp=Z,0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**70.38**	**339**	P	**P**	**00 53 49.6**	**-2.0**
	comp=Z,0.4nm,0.3s,baz=128,slow=5.2,SNR=2.6						
	comp=Z,0.4nm,0.3s						
EIL	**Elat**	**90.42**	**300**	LR	LR	01 38 36.6	
	comp=Z,20nm,18.4s,baz=264,slow=38						

*HLW **22** 00:57:54.0,29°.41N×35°.11E,h22^{km}±2^{km},Md1.9,Ml2.6 GII **22** 00:57:54.3±0.6,29°.55N×34°.89E,h10^{km}±2^{km},MD1.5/2, Mm1.6/3*

ISC 22 00:57:53.3±1.2,29°.50N±0°.04×34°.93E±0°.08,h24^{km}±12^{km}, n14,σ0^{s}65/22,Egypt

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MBRI	**Mt Berech**	**0.29**	**358**	Pg	**Pb**	**00 58 00.0**	**-0.2**
MBRI				Sg	**Sb**	**00 58 04.8**	**-0.1**
HBST	**Basata**	**0.33**	**211**	P	**Pn**	**00 58 01.7**	**-0.9**
	baz=241						
NUB	**Nuweibaa**	**0.53**	**207**	P	**Pn**	**00 58 05.2**	**-0.1**
	baz=225						
NUB				S	**Sn**	**00 58 13.8**	**+0.3**
	baz=225						
HRFI	**Mount Harif**	**0.54**	**10**	Pg	**Pb**	**00 58 04.1**	**-0.1**
HRFI				Sg	**Sb**	**00 58 11.6**	**0.0**
KRMI	**Paran Flat**	**0.64**	**344**	Pg	**Pb**	**00 58 05.8**	**0.0**
KRMI				Sg	**Sb**	**00 58 14.3**	**-0.1**
HDHB	**Dhahab**	**0.82**	**199**	P	**Pb**	**00 58 09.7**	**+0.8**
	baz=213						
PRNI	**Paran**	**0.85**	**5**	Pg	**Pb**	**00 58 09.7**	**+0.3**
PRNI				Sg	**Sb**	**00 58 21.3**	**+0.9**
ZFRI	**Zfri**	**1.07**	**12**	Pg	**Pb**	**00 58 14.3**	**+1.2**
ZFRI				Sg	**Sb**	**00 58 27.9**	**+1.2**
HKAT	**Jabal Katrina**	**1.27**	**220**	P	**Pb**	**00 58 16.1**	**-0.6**
	baz=229						
KZIT	**Kziot**	**1.47**	**342**	Pn	**Pb**	**00 58 20.1**	**+0.1**
KZIT				Sn	**Sb**	**00 58 39.2**	**+0.9**
SUZ	**Suez**	**1.85**	**281**	P	**Pb**	**00 58 26.7**	**+0.2**
	baz=283						
YTIR	**Yattir**	**1.86**	**5**	Pn	**Pb**	**00 58 26.3**	**-0.4**
YTIR				Sn	**Sb**	**00 58 49.8**	**+0.2**
GHAJ	**Ghor Haditha**	**1.88**	**17**	Pn	**Pb**	**00 58 26.2**	**-0.7**
DSI	**Dead Sea**	**2.10**	**11**	Pn	**Pb**	**00 58 29.9**	**-0.8**

*IDC **22** 01:27:50.8±6.2,34°.61N×73°.03E,h0^{km},mb3.5/3, mbtmp3.6/3,MS3.1/2,Error ellipse: s-maj=156.4km s-min=38.6km az=129.0*

ISC 22 01:27:54.9±2.2,34°.9N±0°.2×72°.7E±0°.3,h10^{km},n6,σ2^{s}07/5, 2D,Pakistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**8.38**	**349**	⇓P	**Pn**	**01 29 58.4**	**+2.0**
	1.0nm,0.3s,baz=170,slow=12,SNR=16						
KK31				⇓S	**Sn**	**01 31 29.3**	**-1.7**
	0.7nm,0.4s,baz=174,slow=22,SNR=3.7						
ZALV	**Zalesovo Beam**	**20.88**	**20**	P	**P**	**01 32 36.0**	**-1.0**
	0.4nm,0.3s,baz=226,slow=9.9,SNR=4.1						
	0.4nm,0.3s						
ARCES	**ARCESS Array B**	**43.15**	**338**	P	**P**	**01 35 55.6**	**+0.3**
	1.3nm,0.9s,baz=120,slow=8.4,SNR=9.3						
	1.3nm,0.9s						
GERES	**GERESS Array B**	**44.99**	**307**	LR	LR	01 59 31.5	
	comp=Z,18nm,18.7s,baz=258,slow=42						
TIXI	**Tiksi**	**46.76**	**21**	LR	LR	01 57 52.5	
	comp=Z,21nm,19.1s,baz=186,slow=38						
TORD	**Torodi Ar. Bea**	**67.08**	**270**	P	**P**	**01 38 48.1**	**-0.7**
	0.4nm,0.7s,baz=53,slow=6.4,SNR=6.0						
	0.4nm,0.7s						

*CRAAG **22** 01:31:30.7,36°.36N×3°.39E,Ml2.8,Hypocentre not reviewed by the ISC*

MDD 22 01:31:33.6±1.2,36°.30N×3°.53E,h10^{km}±26^{km},Mb3.6/7, M_mb2.8/7,6C,Error ellipse: s-maj=32.0km s-min=6.8km az=134.0,Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADJB	**Djebel Djouab**	**0.16**	**209**	P		01 31 36.2	
AKET	**Djebel Ketaf**	**0.38**	**131**	P		01 31 41.0	
ABMS	**Boumerdes**	**0.45**	**355**	P		01 31 40.6	
ABA	**Alger-Bouzarea**	**0.64**	**322**	P		01 31 43.3	
EIBI	**Ibiza**	**3.23**	**328**	Pn	Pn	01 32 22.7	-1.7
EIBI				⇑*i*Vmb_V		01 32 27.4	
	97nm,SNR=0.9						
EIBI				Sn	Sn	01 32 59.2	-3.7
ETOS	**Mallorca**	**3.51**	**351**	Pn	Pn	01 32 26.4	-1.8
ETOS				⇑*i*Vmb_V		01 32 28.9	
	109nm,SNR=2.6						
ETOS				Sn	Sn	01 33 06.0	-3.9
ECOL	**Islas Columbre**	**4.24**	**329**	Pn	Pn	01 32 36.5	-1.7
ECOL				Sn	Sn	01 33 22.7	-5.0
EZAR	**Zarzadilla de**	**4.46**	**292**	Pn	Pn	01 32 40.2	-1.2
ETOB	**Tobarra**	**4.67**	**302**	Pn	Pn	01 32 43.6	-0.6
ETOB				⇑*i*Vmb_V		01 32 45.6	
	86nm,SNR=0.9						
ECHE	**Chera**	**4.84**	**314**	Pn	Pn	01 32 45.7	-0.9
ECHE				⇑*i*Vmb_V		01 32 48.0	
	61nm,SNR=0.7						
ECHE				Sn	Sn	01 33

JOW	**Kunigami**	**39.34**	**46**	P		**P**	**01 44 52.7**	**+0.3**	
WB0	**Warramunga Arr**	**41.68**	**121**	P		**P**	**01 45 11.2**	**-0.5**	
WB0				IAmb		IAmb	01 45 17.4		
	comp=Z,11nm,1.5s								
WRA	**Warramunga Arr**	**41.70**	**122**	P		**P**	**01 45 11.2**	**-0.8**	
	comp=Z,2.5nm,0.9s,baz=305,slow=9.2,SNR=18								
WRA				PcP		**PcP**	**01 47 09.7**	**+1.2**	
	comp=Z,1.1nm,1.2s,baz=303,slow=4.0,SNR=2.5								
	comp=Z,2.5nm,0.9s								
WRA	**Warramunga Arr**	**41.70**	**122**	P		**P**	**01 45 10.4**	**-1.6**	
WRAB	**Tennant Creek**	**41.71**	**122**	P		**P**	**01 45 10.9**	**-1.1**	
WRAB				IAmb		IAmb	01 45 13.3		
	comp=Z,6.4nm,1.0s								
WB2	**Warramunga Arr**	**41.72**	**122**	P		**P**	**01 45 10.3**	**-1.8**	
WB2				IAmb		IAmb	01 45 19.3		
	comp=Z,7.2nm,1.3s								
HHC	**Hu-ho-hao-te**	**41.83**	**16**	*e*P		**P**	**01 45 13.8**	**+1.0**	
HHC				pmax		pmax			
	comp=Z,34nm,0.7s								
HHC				pmax		pmax			
	comp=Z,140nm,6.3s								
HHC				LR		LR			
	comp=N,270nm,14.0s								
HHC				LR		LR			
	comp=E,210nm,13.3s								
HHC				LR		LR			
	comp=Z,280nm,13.3s								
WR0	**Warramunga Arr**	**41.88**	**122**	P		**P**	**01 45 12.8**	**-0.6**	
WR0				IAmb		IAmb	01 45 30.7		
	comp=Z,11nm,1.4s								
ASAR	**Alice Springs**	**43.05**	**127**	P		**P**	**01 45 22.7**	**-0.3**	
WMQ	**Urumqi**	**43.64**	**350**	*e*P		**P**	**01 45 29.6**	**+2.2**	
TARG	**Taragay, Kyrgy**	**44.35**	**339**	P		**P**	**01 45 35.0**	**+1.4**	
XLT	**XiLinHaoTe**	**45.98**	**19**	*e*P		**P**	**01 45 47.5**	**+1.4**	
XLT				pP		sP	01 45 57.4	-0.1	
XLT				sP		pP	01 46 00.6	+6.3	
XLT				pmax		pmax			
	comp=Z,8.0nm,0.9s								
XLT				pmax		pmax			
	comp=Z,100nm,4.6s								
KSAR	**Wonju Array Be**	**45.99**	**34**	P		**P**	**01 45 46.5**	**+0.3**	
KSRS	**Korea Array**	**46.02**	**34**	P		**P**	**01 45 46.0**	**-0.4**	
	comp=Z,3.1nm,0.6s,baz=223,slow=8.9,SNR=14								
KSRS				LR		LR	02 07 25.8		
	comp=Z,27nm,18.3s,baz=225,slow=39								
	comp=Z,3.1nm,0.6s								
AAK	**Ala-Archa**	**46.38**	**337**	LR		LR	02 08 30.0		
	comp=Z,33nm,18.8s,baz=172,slow=40								
SONM	**Songino Array**	**47.44**	**8**	P		**P**	**01 45 57.7**	**+0.2**	
	comp=Z,2.2nm,0.7s,baz=192,slow=9.3,SNR=16								
SONM				PcP		**PcP**	**01 47 28.3**	**+0.6**	
	comp=Z,0.8nm,0.8s,baz=185,slow=3.1,SNR=3.6								
	comp=Z,2.2nm,0.7s								
SONM	**Songino Array**	**47.44**	**8**	P		**P**	**01 45 57.1**	**-0.4**	
SONM				IAmb		IAmb	01 45 58.9		
	comp=Z,2.5nm,0.9s								
JHS	**Saijyo**	**47.56**	**41**	P		**P**	**01 45 58.4**	**-0.1**	
ULN	**Ulaanbaatar**	**47.56**	**9**	P		**P**	**01 45 58.4**	**-0.1**	
MK31	**Makanchi Array**	**47.61**	**346**	P		**P**	**01 45 58.5**	**-0.3**	
MK31				IAmb		IAmb	01 46 00.1		
	comp=Z,3.7nm,0.7s								
MKAR	**Makanchi Array**	**47.61**	**346**	P		**P**	**01 45 59.3**	**+0.5**	
	comp=Z,6.2nm,0.7s,baz=158,slow=7.9,SNR=52								
	comp=Z,6.2nm,0.7s								
MKAR	**Makanchi Array**	**47.61**	**346**	P		**P**	**01 45 58.5**	**-0.3**	
MAKZ	**Makanchi**	**47.70**	**346**	P		**P**	**01 45 58.8**	**-0.7**	
MAKZ				IAmb		IAmb	01 46 00.7		
	comp=Z,3.3nm,0.7s								
KKAR	**Karatay Array**	**48.44**	**334**	P		**P**	**01 46 05.6**	**+0.4**	
MJAR	**Matsushiro Arr**	**51.82**	**42**	P		**P**	**01 46 30.7**	**-0.2**	
	comp=Z,1.1nm,0.5s,baz=216,slow=5.6,SNR=4.9								
MJAR				LR		LR	02 10 05.7		
	comp=Z,32nm,18.5s,baz=227,slow=38								
	comp=Z,1.1nm,0.5s								
MJAR	**Matsushiro Arr**	**51.82**	**42**	P		**P**	**01 46 30.1**	**-0.9**	
KURK	**Kurchatov**	**52.16**	**345**	P		**P**	**01 46 33.0**	**-0.2**	
KURK				IAmb		IAmb	01 46 34.6		
	comp=Z,4.0nm,0.9s								
USA0B	**Ussuriysk Arra**	**52.97**	**31**	P		**P**	**01 46 39.0**	**-0.3**	
USRK	**Ussuriysk Ar.**	**52.97**	**31**	P		**P**	**01 46 39.4**	**+0.1**	
	comp=Z,3.3nm,0.8s,baz=239,slow=6.0,SNR=9.8								
	comp=Z,3.3nm,0.8s								
USRK	**Ussuriysk Ar.**	**52.97**	**31**	P		**P**	**01 46 38.8**	**-0.4**	
STKA	**Stephens Creek**	**53.00**	**132**	P		**P**	**01 46 40.6**	**+0.8**	
	comp=Z,2.4nm,0.7s,baz=270,slow=3.0,SNR=3.9								
	comp=Z,2.4nm,0.7s								
STKA	**Stephens Creek**	**53.00**	**132**	P		**P**	**01 46 39.7**	**-0.1**	
ZAA0	**Zalesovo Array**	**53.92**	**351**	P		**P**	**01 46 46.1**	**0.0**	
ZALV	**Zalesovo Beam**	**53.92**	**351**	P		**P**	**01 46 46.4**	**+0.3**	
	comp=Z,5.7nm,0.4s,baz=181,slow=6.4,SNR=31								
ZALV				LR		LR	02 13 02.4		
	comp=Z,31nm,18.9s,baz=192,slow=40								
	comp=Z,5.7nm,0.4s								
ZALV	**Zalesovo Beam**	**53.92**	**351**	P		**P**	**01 46 45.7**	**-0.4**	
BRVK	**Borovoye**	**56.69**	**341**	P		**P**	**01 47 05.4**	**-0.7**	
BRVK				IAmb		IAmb	01 47 16.4		
	comp=Z,2.1nm,0.7s								
ABKAR	**Akbulak array**	**57.90**	**332**	P		**P**	**01 47 13.8**	**-0.9**	
BRTR	**Keskin Array B**	**69.47**	**312**	P		**P**	**01 48 31.4**	**-0.1**	
	comp=Z,1.2nm,0.8s,baz=119,slow=8.4,SNR=3.3								
	comp=Z,1.2nm,0.8s								
LSZ	**Lusaka**	**70.19**	**254**	LR		LR	02 15 51.7		
	comp=Z,35nm,18.0s,baz=137,slow=33								
MA2	**Magadan**	**71.56**	**26**	LR		LR	02 20 54.7		
	comp=Z,24nm,21.5s,baz=264,slow=36								
TIXI	**Tiksi**	**73.48**	**10**	P		**P**	**01 48 54.9**	**0.0**	
TIXI				IAmb		IAmb	01 48 55.0		
	comp=Z,3.3nm,0.9s								
SEY	**Seymchan**	**74.00**	**23**	LR		LR	02 24 30.5		
	comp=Z,32nm,18.3s,baz=192,slow=38								
BURAR	**Bucovina Array**	**77.40**	**319**	P		**P**	**01 49 17.9**	**0.0**	
BURAR				IAmb		IAmb	01 49 20.8		
	comp=Z,2.7nm,0.8s								
BUR08	**Bucovina Ar. S**	**77.41**	**319**	P		**P**	**01 49 17.3**	**-0.7**	
BUR08				IAmb		IAmb	01 49 20.5		
	comp=Z,2.4nm,0.8s								
RPZ	**Rata Peaks**	**78.84**	**135**	LR		LR	02 26 02.6		
	comp=Z,66nm,18.2s,baz=50,slow=37								
SUR	**Sutherland**	**79.13**	**237**	LR		LR	02 17 45.2		
	comp=Z,50nm,20.6s,baz=220,slow=31								
FINES	**FINESS Array B**	**80.38**	**333**	P		**P**	**01 49 33.7**	**-0.2**	
	comp=Z,1.2nm,0.7s,baz=101,slow=7.2,SNR=8.1								
	comp=Z,1.2nm,0.7s								
FINES	**FINESS Array B**	**80.38**	**333**	P		**P**	**01 49 33.9**	**0.0**	
ARCES	**ARCESS Array B**	**82.91**	**340**	P		**P**	**01 49 47.0**	**-0.1**	
	comp=Z,1.0nm,0.7s,baz=93,slow=4.0,SNR=5.2								
	comp=Z,1.0nm,0.7s								
GERES	**GERESS Array B**	**85.19**	**319**	P		**P**	**01 50 00.0**	**+0.7**	
	comp=Z,0.7nm,0.8s,baz=95,slow=6.1,SNR=6.9								
	comp=Z,0.7nm,0.8s								
GERES	**GERESS Array B**	**85.19**	**319**	P		**P**	**01 49 59.4**	**+0.1**	
NB2	**NORSAR Subarra**	**87.39**	**331**	P		**P**	**01 50 09.8**	**0.0**	
	comp=Z,0.5nm,0.7s,baz=96,slow=4.8								
NOA	**NORSAR Array B**	**87.39**	**331**	P		**P**	**01 50 09.4**	**-0.3**	
	comp=Z,0.8nm,0.7s,baz=94,slow=4.8,SNR=5.2								
NOA				LR		LR	02 32 36.1		
	comp=Z,13nm,19.5s,baz=285,slow=38								
	comp=Z,0.8nm,0.7s								
TXAR	**Lajitas Array**	**143.86**	**32**	PKP		**PKPdf**	**01 56 57.3**	**-1.5**	
	comp=Z,0.3nm,0.7s,baz=264,slow=2.7,SNR=3.0								
CPUP	**Villa Florida**	**144.88**	**222**	PKP		**PKPab**	**01 56 58.5**	**-1.1**	
	comp=Z,1.5nm,1.1s,baz=180,slow=6.1,SNR=2.0								

*IDC **22** 01:41:17.2±2.2, 0.°77N×97.°33E, h0km, mb3.9/6, mbtmp3.9/6, Error ellipse: s-maj=71.8km s-min=28.0km az=53.0*
*DJA **22** 01:41:18.9±1.0, 1.°1N±3.°×9.°7E±.°, h16km±5km, M4.4/8, mb4.6/4, MLv4.3/8*
*NEIC **22** 01:41:22.7±0.6, 0.°9N±0.°1×97.°5E±0.°2, h26km±7km, mb4.1/9, Error ellipse: s-maj=22.2km s-min=13.9km az=106.0*

ISC 22 01:41:22.1±0.8, **0.°88N**±0.°05×**97.°4E**±0.°1, **h27**km, **n27**, σ0§**85**/28, **mb4.2**/11, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSI	**Gunungsitoli**	**0.47**	**27**	Pg	**Pb**	**01 41 32.3**	**+0.4**
GSI	**Gunungsitoli**	**0.47**	**27**	P	**Pn**	**01 41 32.7**	**-0.4**
GSI				S	**Sn**	**01 41 40.6**	**+0.1**
RPSI	**Rantau Prapat**	**2.38**	**41**	Pn	**Pn**	**01 41 59.7**	**+0.3**
KCSI	**Kotacane, Aceh**	**2.65**	**9**	P	**Pn**	**01 42 01.9**	**-1.2**
SISI	**Saibi**	**2.79**	**142**	P	**Pn**	**01 42 05.0**	**-0.1**
PPI	**Padang Panjang**	**3.31**	**114**	P	**Pn**	**01 42 13.1**	**+0.9**
PPSI	**Pulau Pagai**	**4.49**	**144**	P	**Pn**	**01 42 28.8**	**+0.4**
IPM	**Ipoh**	**5.11**	**46**	Pn	**Pn**	**01 42 37.8**	**+0.7**
KULM	**Kulim**	**5.47**	**37**	Pn	**Pn**	**01 42 41.9**	**0.0**
MNAI	**Manna**	**7.64**	**133**	P	**Pn**	**01 43 11.9**	**+0.1**
WB0	**Warramunga Arr**	**41.70**	**122**	P	**P**	**01 49 07.9**	**-1.2**
WRA	**Warramunga Arr**	**41.73**	**122**	P	**P**	**01 49 08.2**	**-1.1**
	0.3nm,0.6s,baz=306,slow=9.1,SNR=6.1						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**41.73**	**122**	P	**P**	**01 49 07.3**	**-2.0**
WB2	**Warramunga Arr**	**41.74**	**122**	P	**P**	**01 49 07.7**	**-1.6**
WR0	**Warramunga Arr**	**41.91**	**122**	P	**P**	**01 49 09.5**	**-1.2**
WR0				IAmb	IAmb	01 49 28.8	
	comp=Z,6.9nm,1.3s						
BTK	**Batken**	**45.86**	**331**	P	**P**	**01 49 43.2**	**+1.0**
BTK				IAmb	IAmb	01 49 52.4	
	comp=Z,5.0nm,1.4s						
KSRS	**Korea Array**	**46.02**	**34**	P	**P**	**01 49 42.9**	**-0.5**
	comp=Z,1.2nm,0.4s,baz=216,slow=7.8,SNR=4.8						
	comp=Z,1.2nm,0.4s						
SONM	**Songino Array**	**47.42**	**8**	P	**P**	**01 49 54.2**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=193,slow=8.4,SNR=4.1						
	comp=Z,0.5nm,0.5s						
MK31	**Makanchi Array**	**47.59**	**346**	P	**P**	**01 49 55.8**	**+0.2**
MK31				IAmb	IAmb	01 49 56.8	
	comp=Z,1.3nm,0.7s						
MKAR	**Makanchi Array**	**47.59**	**346**	P	**P**	**01 49 56.2**	**+0.6**
	comp=Z,2.1nm,0.7s,baz=162,slow=8.5,SNR=12						
	comp=Z,2.1nm,0.7s						
KURK	**Kurchatov**	**52.14**	**345**	P	**P**	**01 50 30.4**	**+0.4**
KURK				IAmb	IAmb	01 50 32.0	
	comp=Z,1.6nm,0.9s						
USRK	**Ussuriysk Ar.**	**52.96**	**31**	P	**P**	**01 50 35.9**	**-0.3**
ZAA0	**Zalesovo Array**	**53.89**	**351**	P	**P**	**01 50 42.6**	**-0.3**
ZAA0				IAmb	IAmb	01 50 44.0	
	comp=Z,2.3nm,0.9s						
ZALV	**Zalesovo Beam**	**53.89**	**351**	P	**P**	**01 50 42.9**	**0.0**
	comp=Z,2.0nm,0.3s,baz=175,slow=6.9,SNR=7.5						
	comp=Z,2.0nm,0.3s						
ZALV	**Zalesovo Beam**	**53.89**	**351**	P	**P**	**01 50 43.4**	**+0.5**
BURAR	**Bucovina Array**	**77.37**	**319**	P	**P**	**01 53 16.0**	**+1.3**
FINES	**FINESS Array B**	**80.35**	**333**	P	**P**	**01 53 30.0**	**-0.7**
	comp=Z,0.9nm,0.9s,baz=96,slow=7.0,SNR=1.7						
	comp=Z,0.9nm,0.9s						

*NEIC **22** 01:55:07.2±2.9, 11.°5S±0.°2×162.°1E±0.°1, h10km±2km, mb4.3/12, Error ellipse: s-maj=33.7km s-min=11.5km az=36.0*
*IDC **22** 01:55:11.2±3.1, 11.°24S×162.°03E, h63km±28km, mb3.5/3, mbtmp4.0/6, ML4.1/3, MS3.4/4, Error ellipse: s-maj=34.4km s-min=27.7km az=83.0*

ISC 22 01:55:08.9±1.0, **11.°24S**±0.°09×**162.°1E**±0.°1, **h35**km, **n20**, σ1§**42**/21, **mb4.2**/8, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**2.79**	**310**	P	**Pn**	**01 55 52.7**	**+1.6**
	54nm,0.3s,baz=149,slow=5.3,SNR=8.8						
HNR				S	**Sn**	**01 56 22.0**	**-1.6**
	462nm,0.8s,baz=330,slow=4.0,SNR=4.3						
	264nm,0.5s						
HNR	**Honiara**	**2.79**	**310**		**Pn**	**01 55 53.3**	**+2.2**
DZM	**Mont Dzumac**	**11.54**	**159**	P	**Pn**	**01 57 53.3**	**+2.0**
	0.3nm,0.3s,baz=31,slow=9.0,SNR=12						
DZM				S	**Sn**	**01 59 56.7**	**-2.3**
	2.5nm,0.5s,baz=227,slow=14,SNR=2.3						
DZM				LR	LR	02 02 00.7	
	comp=Z,107nm,18.8s,baz=22,slow=35						
	0.8nm,0.3s						
PMG	**Port Moresby**	**14.83**	**276**	LR	LR	02 04 16.5	
	comp=Z,222nm,18.7s,baz=104,slow=37						
EIDS	**Eidsvold**	**17.51**	**215**		**Pn**	**01 59 10.6**	**+0.3**
CTA	**Charters Tower**	**17.61**	**238**	P	**P**	**01 59 12.7**	**+0.3**
	0.8nm,0.3s,baz=65,slow=12,SNR=16						
CTA				LR	LR	02 04 51.9	
	comp=Z,94nm,20.7s,baz=60,slow=33						
	7.3nm,0.7s						
CTAO	**Charters Tower**	**17.61**	**238**	P	**P**	**01 59 13.0**	**+0.6**
COEN	**Coen**	**18.68**	**260**	P	**Pn**	**01 59 26.1**	**+1.3**
COEN				IAmb	IAmb	01 59 29.3	
	comp=Z,26nm,1.4s						
ARMA	**Armidale**	**21.42**	**205**	P	**P**	**01 59 53.7**	**-0.4**
ARMA				IAmb	IAmb	02 00 15.8	
	comp=Z,16nm,1.4s						
WR0	**Warramunga Arr**	**27.90**	**249**	P	**P**	**02 00 54.7**	**-1.2**
WR0				IAmb	IAmb	02 01 03.1	
	comp=Z,5.6nm,1.1s						
WB0	**Warramunga Arr**	**27.99**	**249**	P	**P**	**02 00 55.4**	**-1.3**
WB0				IAmb	IAmb	02 01 22.5	
	comp=Z,6.7nm,1.2s						
WRAB	**Tennant Creek**	**28.07**	**249**	P	**P**	**02 00 55.4**	**-2.0**
WRAB				IAmb	IAmb	02 01 03.3	
	comp=Z,6.8nm,1.2s						
WB2	**Warramunga Arr**	**28.07**	**249**	P	**P**	**02 00 56.4**	**-1.0**
WRA	**Warramunga Arr**	**28.08**	**249**	P	**P**	**02 00 56.1**	**-1.4**
	comp=Z,1.2nm,0.7s,baz=78,slow=10.0,SNR=16						
WRA				LR	LR	02 12 15.5	
	comp=Z,141nm,18.1s,baz=166,slow=37						
	comp=Z,1.2nm,0.7s						
BBOO	**Buckleboo**	**32.15**	**224**	P	**P**	**02 01 33.5**	**+0.1**
KNRA	**Kununurra**	**32.71**	**259**	P	**P**	**02 01 37.1**	**-1.3**
MORW	**Morawa**	**46.41**	**241**	P	**P**	**02 03 31.6**	**-0.8**
SONM	**Songino Array**	**76.75**	**325**	P	**P**	**02 06 56.2**	**-0.7**
	comp=Z,1.0nm,0.9s,baz=138,slow=7.6,SNR=3.6						
	comp=Z,1.0nm,0.9s						
QSPA	**South Pole Qui**	**78.76**	**180**	P	**P**	**02 07 08.9**	**+1.0**
QSPA				IAmb	IAmb	02 07 15.2	
	comp=Z,7.0nm,1.2s						
ILAR	**Eielson Array**	**84.86**	**20**	P	**P**	**02 07 38.7**	**-0.9**
	comp=Z,0.2nm,0.4s,baz=243,slow=4.0,SNR=2.0						
	comp=Z,0.2nm,0.4s						

*NEIC **22** 02:27:55.9±1.5, 13.°81N±0.°05×122.°1E±0.°1, h93km±9km, mb4.3/9, Error ellipse: s-maj=20.1km s-min=7.4km az=81.0*
*IDC **22** 02:28:02.1±1.5, 13.°90N×121.°27E, h118km±9km, mb3.6/7, mbtmp3.9/7, Error ellipse: s-maj=94.7km s-min=19.7km az=64.0*
*MAN **22** 02:28:03.6, 13.°74N×120.°58E, h82km, mb4.4, ML3.2, MS3.0*

ISC 22 02:27:56.5±0.8, **13.°55N**±0.°07×**121.°9E**±0.°1, **h100**km, **n25**, σ1§**56**/26, **mb4.0**/12, **1C-3D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PGP	**Puerto Galera**	**0.95**	**267**	*e*P	**Pn**	**02 28 18.0**	**+1.6**
PGP				*i* S	**Sn**	**02 28 30.4**	**-0.9**
TGY	**Tagaytay City**	**1.11**	**300**	P	**Pn**	**02 28 19.8**	**+1.6**
TGY	578nm,0.3s,baz=239,slow=6.3,SNR=11						
				S	**Sn**	**02 28 33.8**	**-0.8**
	3µm,0.4s,baz=108,slow=20,SNR=13						
TGY	**Tagaytay City**	**1.11**	**300**	*e*P	**Pn**	**02 28 21.0**	**+2.8**
TGY				*e*S	**Sn**	**02 28 33.5**	**-1.1**
LUBP	**Lubang**	**1.64**	**277**	*i*P	Pn	02 28 18.6	-5.9
LUBP				*e*S	Sn	02 28 29.9	-16
PCPH	**Palayan**	**2.16**	**338**	*e*P	**Pn**	**02 28 34.1**	**+2.9**
PCPH				*e*S	**Sn**	**02 28 59.3**	**+1.6**
MYLDM	**Lahad Datu**	**8.97**	**202**	Pn	Pn	02 30 10.8	+7.4
SBUM	**Sibu**	**14.62**	**222**	P	**P**	**02 31 22.7**	**+0.7**
SOEI	**Soe**	**23.27**	**174**	P	**P**	**02 32 57.6**	**+2.0**
SOEI				IAmb	IAmb	02 33 18.7	
	comp=Z,12nm,0.6s						
MAJO	**Matsushiro**	**27.16**	**30**	P	**P**	**02 33 27.4**	**-3.0**
MAJO				IAmb	IAmb	02 33 32.4	
	comp=Z,12nm,1.5s						
WB0	**Warramunga Arr**	**35.31**	**159**	P	**P**	**02 34 42.8**	**+0.7**
WRA	**Warramunga Arr**	**35.45**	**160**	P	P	02 34 52.0	+8.6
	comp=Z,0.5nm,0.8s,baz=343,slow=8.7,SNR=6.5						
	comp=Z,0.5nm,0.8s						
WRA	**Warramunga Arr**	**35.45**	**160**	P	**P**	**02 34 43.8**	**+0.4**
WB2	**Warramunga Arr**	**35.45**	**160**	P	**P**	**02 34 43.7**	**+0.2**
WB2				IAmb	IAmb	02 34 58.6	
	comp=Z,7.3nm,1.4s						
WR0	**Warramunga Arr**	**35.53**	**159**	P	**P**	**02 34 43.7**	**-0.4**
WR0				IAmb	IAmb	02 35 07.2	
	comp=Z,5.7nm,1.4s						
SONM	**Songino Array**	**36.55**	**342**	P	**P**	**02 34 52.8**	**+0.1**
	comp=Z,1.2nm,0.7s,baz=158,slow=10.0,SNR=7.4						
	comp=Z,1.2nm,0.7s						
MK31	**Makanchi Array**	**46.87**	**323**	P	**P**	**02 36 15.2**	**-1.4**
MK31				IAmb	IAmb	02 36 16.6	
	comp=Z,2.1nm,0.9s						
MKAR	**Makanchi Array**	**46.87**	**323**	P	**P**	**02 36 15.5**	**-1.1**
	comp=Z,1.6nm,0.7s,baz=128,slow=9.6,SNR=16						
	comp=Z,1.6nm,0.7s						
ZALV	**Zalesovo Beam**	**49.74**	**332**	P	**P**	**02 36 37.2**	**-1.3**
	comp=Z,0.6nm,0.3s,baz=126,slow=7.3,SNR=2.7						
	comp=Z,0.6nm,0.3s						
ZALV	**Zalesovo Beam**	**49.74**	**332**	P	**P**	**02 36 37.5**	**-1.0**
KURK	**Kurchatov**	**50.98**	**326**	P	**P**	**02 36 47.3**	**-0.6**
ABKAR	**Akbulak array**	**61.63**	**319**	P	**P**	**02 38 01.8**	**-1.8**
AKTO	**Aktyubinsk**	**63.10**	**320**	P	**P**	**02 38 12.1**	**-1.3**
	comp=Z,0.9nm,0.5s,baz=68,slow=2.7,SNR=4.7						
	comp=Z,0.9nm,0.5s						
ARU	**Arti**	**64.17**	**327**	P	**P**	**02 38 18.7**	**-1.6**
	comp=Z,1.7nm,0.3s,baz=321,slow=23,SNR=4.3						
	comp=Z,1.7nm,0.3s						
ARCES	**ARCESS Array B**	**79.65**	**339**	P	**P**	**02 39 53.5**	**+0.9**
	comp=Z,1.0nm,0.8s,baz=76,slow=7.5,SNR=5.8						
	comp=Z,1.0nm,0.8s						
BURAR	**Bucovina Array**	**84.58**	**318**	P	**P**	**02 40 18.8**	**-0.2**

*DJA **22** 02:28:14.3±0.9, 1.°N±5.°×9.°7E±.°, h19km±5km, M3.6/5, MLv3.6/5*
*IDC **22** 02:28:22.3±9.1, 2.°21N×98.°79E, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=449.2km s-min=32.8km az=55.0*

ISC 22 02:28:17.8±1.7, **1.°1N**±0.°2×**97.°2E**±0.°1, **h10**km, **n9**, σ1§**17**/6, **mb3.8**/3, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSI	**Gunungsitoli**	**0.45**	**61**	P	**Pb**	**02 28 27.6**	**-0.2**
GSI				S	**Sb**	**02 28 35.0**	**+0.4**
KCSI	**Kotacane, Aceh**	**2.49**	**14**	P	**Pn**	**02 28 57.9**	**-0.5**
SISI	**Saibi**	**3.06**	**141**	P	Pn	02 28 59.8	-6.5
H01W3	**Cape Leeuwin H**	**39.15**	**158**	T	T	03 16 57.5	
	baz=334,slow=76,SNR=5.9						
H01W2	**Cape Leeuwin H**	**39.16**	**158**	T	T	03 16 58.9	
	baz=334,slow=76,SNR=7.1						
H01W1	**Cape Leeuwin H**	**39.16**	**158**	T	T	03 16 57.9	
	baz=334,slow=76,SNR=2.3						
WRA	**Warramunga Arr**	**41.99**	**122**	P	**P**	**02 36 09.3**	**-0.2**
	0.3nm,0.9s,baz=304,slow=9.0,SNR=1.5						
	0.3nm,0.9s						
MKAR	**Makanchi Array**	**47.35**	**346**	P	**P**	**02 36 51.2**	**-0.7**
	0.4nm,0.5s,baz=161,slow=8.8,SNR=4.4						
	0.4nm,0.5s						
ZALV	**Zalesovo Beam**	**53.67**	**351**	P	**P**	**02 37 41.2**	**+1.8**
	0.6nm,0.4s,baz=157,slow=7.8,SNR=2.4						
	0.6nm,0.4s						

*VIE **22** 02:31:19.6±0.5, 49.°93N×18.°51E, h0km, mb2.1/3, ml2.4/2, Error ellipse: s-maj=5.7km s-min=3.4km az=144.0 22 km ENE of Ostrava Suspected Mining induced.*
*IPEC **22** 02:31:19.8±0.2, 49.°86N×18.°52E, h0km, ML2.3/4, Error ellipse: s-maj=1.8km s-min=1.1km az=164.0*
*PRU **22** 02:31:21.1±0.0, 49.°84N×18.°39E, h0km, Mining Induced Event Csa, E=6.9e+05*
*IDC **22** 02:31:22.7±2.4, 49.°94N×18.°13E, h0km, mbtmp2.7/3, ML1.7/2, Error ellipse: s-maj=37.1km s-min=10.5km az=130.0*

ISC 22 02:31:18.9±0.7, **49.°92N**±0.°03×**18.°50E**±0.°02, **h0**km, **n41**, σ0§**90**/72, **Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.24**	**250**	*e*PG	**Pg**	**02 31 25.0**	**+1.5**
OKC				*e*SG	**Sg**	**02 31 27.3**	**+0.6**
	comp=Z,212nm,0.4s						
RAC	**Raciborz**	**0.26**	**310**	*e*PG	**Pb**	**02 31 26.7**	**+0.3**
RAC				*e*SG	**Sb**	**02 31 31.8**	**+0.4**
MORC	**Moravsky Berou**	**0.64**	**257**	*e*Pg	**Pg**	**02 31 31.8**	**+0.7**
	baz=82						
MORC				*e*Sg	**Sg**	**02 31 39.5**	**+0.2**
	54nm,0.3s,baz=82						
MORC	**Moravsky Berou**	**0.64**	**257**	*e*PG	**Pg**	**02 31 31.9**	**+0.8**
MORC				*e*SG	**Sg**	**02 31 39.5**	**+0.2**
MAUC	**Maruska**	**0.71**	**218**	*e*PG	**Pg**	**02 31 33.2**	**+0.8**
MAUC				*e*SG	**Sg**	**02 31 42.0**	**+0.5**
OJC	**Ojcow**	**0.89**	**70**	*e*Pg	**Pb**	**02 31 37.3**	**+0.1**
OJC				*e*Sg	**Sb**	**02 31 50.5**	**+0.9**
LANS	**Liptovska Anna**	**1.00**	**140**	*e*PG	**Pb**	**02 31 38.8**	**-0.2**
LANS				*e*SG	**Sn**	**02 31 54.7**	**-0.2**
LANS				*e*L

comp=Z,0.8nm,0.3s,baz=64,slow=14,SNR=9.8
GERES Lg Lg 02 32 59.9
comp=Z,3.5nm,0.3s,baz=69,slow=27,SNR=25
comp=Z,0.2nm,0.3s
BEHE Becsehely 3.64 199 P **Pn** **02 32 16.3 -0.1**
CLL Collm 3.77 294 *e*(Pg) **Pg** **02 32 29.0 -2.0**
CLL *e*Sg **Sg** **02 33 20.0 +0.2**
NOA NORSAR Array B 11.88 343 Pn **Pn** **02 34 06.8 -2.5**
baz=167,slow=12,SNR=1.4
comp=Z,0.2nm,0.6s
FINES FINESS Array B 12.30 17 Pn **Pn** **02 34 13.9 -1.3**
comp=Z,0.2nm,0.5s,baz=202,slow=22,SNR=0.6

IDC ***22*** *02:37:51.1±2.6, 16°.51S×173°.78W, h44km±25km, mb4.0/11, mbtmp4.3/13, ML3.4/2, MS3.3/2, Error ellipse: s-maj=27.2km s-min=14.1km az=136.0*
NEIC ***22*** *02:37:51.8±1.5, 16°.53S±0°.04×173°.7W±0°.1, h47km±7km, mb4.5/70, Error ellipse: s-maj=16.3km s-min=4.5km az=80.0*
NOU ***22*** *02:37:55.5, 16°.54S×173°.30W, h82km, MLv5.0/16, Tonga Islands*

ISC 22 02:37:53.0±0.4, 16°.55S±0°.06×173°.62W±0°.07, h66km, n146, σ1§51/141, mb4.5/46, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.17**	**34**	P	**Pn**	**02 38 40.4**	**-0.1**
	728nm,0.3s,baz=151,slow=0.6,SNR=95						
AFI				S	**Sn**	**02 39 13.2**	**-4.0**
	1µm,0.4s,baz=234,slow=19,SNR=7.9						
AFI				LR	LR	02 39 24.9	
	comp=Z,132nm,21.2s,baz=186,slow=29						
AFI	**Afiamalu**	**3.17**	**34**	Pn	**Pn**	**02 38 40.2**	**-0.4**
AFI	**Afiamalu**	**3.17**	**34**	P	**Pn**	**02 38 40.7**	**+0.2**
AFI	**Afiamalu**	**3.17**	**34**	P	**Pn**	**02 38 40.7**	**+0.2**
NIUE	**Niue**	**4.33**	**126**	Pn	**Pn**	**02 38 56.3**	**+0.1**
NIUE	**Niue**	**4.33**	**126**	P	**Pn**	**02 38 56.5**	**+0.3**
MSVF	**Nonsavu**	**8.05**	**260**	P	Pn	02 39 55.6	+8.2
	24nm,0.8s,baz=109,slow=14,SNR=9.0						
MSVF	**Nonsavu**	**8.05**	**260**		Pn	02 39 56.9	+10
GLKZ	**Green Lake**	**13.26**	**197**	P	**Pn**	**02 40 57.0**	**-1.3**
GLKZ				S	Sn	02 43 13.6	-10
RAR	**Rarotonga**	**13.90**	**112**	P	**Pn**	**02 41 06.2**	**-0.7**
	1.0nm,0.3s,baz=258,slow=20,SNR=2.1						
	13nm,0.8s						
RAR	**Rarotonga**	**13.90**	**112**	Pn	**Pn**	**02 41 05.6**	**-1.3**
RAR	**Rarotonga**	**13.90**	**112**	P	**Pn**	**02 41 04.0**	**-2.9**
MARNC	**Mare, Loyalty**	**18.03**	**251**	P	**P**	**02 41 58.6**	**-0.1**
PINNC	**Pines Island,**	**18.82**	**248**	P	**P**	**02 42 07.8**	**+0.4**
OUENC	**Ouen Island, N**	**19.32**	**249**	P	**P**	**02 42 09.1**	**-3.7**
OUENC				IAmb	IAmb	02 42 19.4	
	comp=Z,30nm,1.0s						
DZM	**Mont Dzumac**	**19.59**	**251**	P	**P**	**02 42 13.7**	**-2.3**
	comp=Z,0.2nm,0.3s,baz=103,slow=19,SNR=1.9						
DZM				LR	LR	02 48 13.8	
	comp=Z,130nm,20.3s,baz=104,slow=32						
	comp=Z,2.7nm,0.7s						
OUZ	**Omahuta**	**21.82**	**209**	P	**P**	**02 42 38.5**	**-1.3**
WCZ	**Waipu Caves**	**22.09**	**207**	P	**P**	**02 42 43.3**	**+0.7**
MXZ	**Matakaoa Point**	**22.11**	**197**	P	**P**	**02 42 44.9**	**+2.1**
WMGZ	**Waiomatatini S**	**22.32**	**197**	P	**P**	**02 42 48.5**	**+3.3**
HAZ	**Te Kaha**	**22.45**	**198**	P	**P**	**02 42 47.1**	**+0.7**
PKGZ	**Pakihiroa**	**22.48**	**197**	P	**P**	**02 42 49.1**	**+2.2**
PUZ	**Puketiti**	**22.60**	**197**	P	**P**	**02 42 48.4**	**+0.2**
CNGZ	**Carnagh Statio**	**23.00**	**197**	P	**P**	**02 42 51.6**	**-0.7**
PPT	**Papeete**	**23.01**	**96**	LR	LR	02 49 46.1	
	comp=Z,49nm,19.9s,baz=305,slow=31						
MWZ	**Matawai**	**23.06**	**198**	P	**P**	**02 42 54.1**	**+1.2**
URZ	**Urewera**	**23.11**	**199**	P	**P**	**02 42 53.0**	**-0.4**
	comp=Z,49nm,0.5s,baz=50,slow=2.4,SNR=32						
	comp=Z,49nm,0.5s						
URZ	**Urewera**	**23.11**	**199**	P	**P**	**02 42 53.3**	**-0.1**
URZ	**Urewera**	**23.11**	**199**	P	**P**	**02 42 53.2**	**-0.1**
URZ	**Urewera**	**23.11**	**199**	P	**P**	**02 42 53.9**	**+0.6**
KMRZ	**Kaimai**	**23.12**	**201**	P	**P**	**02 42 55.5**	**+2.0**
TOZ	**Tahuroa Road**	**23.18**	**202**	P	**P**	**02 42 54.4**	**+0.4**
RIGZ	**Rimuhau**	**23.33**	**197**	P	**P**	**02 42 58.3**	**+2.8**
SNGZ	**Shannon Statio**	**23.53**	**198**	P	**P**	**02 42 59.8**	**+2.5**
RAHZ	**Arahi**	**23.73**	**198**	P	**P**	**02 43 00.6**	**+1.5**
MTHZ	**Maungataniwha**	**23.74**	**199**	P	**P**	**02 43 01.3**	**+2.0**
NMHZ	**Naumai**	**23.98**	**199**	P	**P**	**02 43 03.6**	**+2.2**
HIZ	**Hauiti**	**24.11**	**203**	P	**P**	**02 43 04.5**	**+2.0**
HIZ	**Hauiti**	**24.11**	**203**	P	**P**	**02 43 05.2**	**+2.7**
BKZ	**Black Stump Fm**	**24.14**	**199**	P	**P**	**02 43 02.9**	**+0.1**
BKZ	**Black Stump Fm**	**24.14**	**199**	P	**P**	**02 43 04.7**	**+1.9**
MCHZ	**McNeill Hill**	**24.33**	**198**	P	**P**	**02 43 05.6**	**+1.1**
BHHZ	**Black Hill Sta**	**24.57**	**199**	P	**P**	**02 43 06.1**	**-0.6**
KAHZ	**Kahuranaki**	**24.60**	**198**	P	**P**	**02 43 11.9**	**+4.9**
KRHZ	**Kereru**	**24.61**	**199**	P	**P**	**02 43 09.9**	**+2.8**
VRZ	**Vera Road**	**24.68**	**202**	P	**P**	**02 43 10.4**	**+2.7**
PXZ	**Pawanui**	**24.82**	**198**	P	**P**	**02 43 11.4**	**+2.5**
PNHZ	**Pukenui**	**24.91**	**199**	P	**P**	**02 43 10.8**	**+0.9**
TSZ	**Takapari Road**	**25.12**	**199**	P	**P**	**02 43 13.5**	**+1.7**
BFZ	**Birch Farm**	**25.60**	**198**	P	**P**	**02 43 17.1**	**+1.1**
BFZ	**Birch Farm**	**25.60**	**198**	P	**P**	**02 43 17.4**	**+1.3**
	comp=Z,34nm,2.0s						
MRZ	**Mangatainoka R**	**25.79**	**199**	P	**P**	**02 43 18.9**	**+1.2**
HOWZ	**Holdsworth Sta**	**26.02**	**199**	P	**P**	**02 43 24.2**	**+4.3**
QRZ	**Quartz Range**	**27.00**	**204**	P	**P**	**02 43 31.9**	**+3.2**
QRZ	**Quartz Range**	**27.00**	**204**	P	**P**	**02 43 32.1**	**+3.4**
KHZ	**Kahutara**	**28.03**	**200**	P	**P**	**02 43 40.7**	**+2.9**
	comp=Z,33nm,0.7s						
OXZ	**Oxford**	**29.35**	**202**	P	**P**	**02 43 48.3**	**-1.3**
EIDS	**Eidsvold**	**34.03**	**249**	P	**P**	**02 44 29.6**	**-1.3**
EIDS				IAmb	IAmb	02 44 41.5	
	comp=Z,12nm,1.5s						
ARMA	**Armidale**	**34.58**	**240**	P	**P**	**02 44 35.2**	**-0.5**
CTA	**Charters Tower**	**38.19**	**258**	P	**P**	**02 45 06.1**	**-0.5**
	comp=Z,2.0nm,0.4s,baz=117,slow=13,SNR=4.3						
	comp=Z,2.0nm,0.4s						
CTAO	**Charters Tower**	**38.19**	**258**	P	**P**	**02 45 06.8**	**+0.2**
CTAO				IAmb	IAmb	02 45 13.9	
	comp=Z,9.2nm,1.3s						
H11S2	**WAKE ISLAND Hy**	**39.84**	**330**	T	T	03 27 24.6	
	baz=149						
H11S3	**WAKE ISLAND Hy**	**39.85**	**330**	T	T	03 26 44.9	
	baz=149						
H11S1	**WAKE ISLAND Hy**	**39.86**	**330**	T	T	03 27 24.9	
	baz=149						
TOO	**Toolangi**	**41.59**	**232**	P	**P**	**02 45 33.5**	**-1.0**
STKA	**Stephens Creek**	**43.29**	**241**	P	**P**	**02 45 47.6**	**-0.7**
	comp=Z,7.4nm,0.8s,baz=96,slow=12,SNR=8.2						
	comp=Z,7.4nm,0.8s						
STKA	**Stephens Creek**	**43.29**	**241**	P	**P**	**02 45 47.2**	**-1.1**
BBOO	**Buckleboo**	**48.06**	**241**	P	**P**	**02 46 24.9**	**-1.1**
WR0	**Warramunga Arr**	**49.19**	**258**	P	**P**	**02 46 34.2**	**-0.7**
WR0				IAmb	IAmb	02 46 53.3	
	comp=Z,7.9nm,1.3s						
WB0	**Warramunga Arr**	**49.35**	**258**	P	**P**	**02 46 35.0**	**-1.1**
WB0				IAmb	IAmb	02 46 39.3	
	comp=Z,6.4nm,1.2s						
WB2	**Warramunga Arr**	**49.37**	**258**	P	**P**	**02 46 34.6**	**-1.7**
WB2				IAmb	IAmb	02 46 40.5	
	comp=Z,4.7nm,1.1s						
WRAB	**Tennant Creek**	**49.38**	**258**	P	**P**	**02 46 34.9**	**-1.4**
WRAB				IAmb	IAmb	02 46 35.8	
	comp=Z,8.4nm,1.4s						
WRA	**Warramunga Arr**	**49.38**	**258**	P	**P**	**02 46 34.6**	**-1.8**
	comp=Z,1.6nm,0.6s,baz=97,slow=6.5,SNR=24						
	comp=Z,1.6nm,0.6s						
WRA	**Warramunga Arr**	**49.38**	**258**	P	**P**	**02 46 35.1**	**-1.2**
AS31	**Alice Springs**	**49.56**	**253**	P	**P**	**02 46 36.9**	**-0.8**
ASAR	**Alice Springs**	**49.56**	**253**	P	**P**	**02 46 36.9**	**-0.9**
FORT	**Forrest**	**54.72**	**244**	P	**P**	**02 47 14.2**	**-1.6**
VNDA	**Vanda**	**62.22**	**186**	P	**P**	**02 48 08.9**	**+1.7**
	comp=Z,1.3nm,0.9s,baz=14,slow=6.8,SNR=3.7						
	comp=Z,1.3nm,0.9s						
VNDA	**Vanda**	**62.22**	**186**	P	**P**	**02 48 07.8**	**+0.5**
MBWA	**Marble Bar**	**62.84**	**254**	P	**P**	**02 48 14.4**	**+2.0**
KMRM	**Mail Ridge**	**73.09**	**38**	P	**P**	**02 49 18.4**	**+2.1**
PETK	**Petropavlovsk-**	**73.65**	**342**	P	**P**	**02 49 19.6**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=102,slow=6.1,SNR=2.2						
	comp=Z,1.0nm,0.7s						
YBH	**Yreka Blue Hor**	**74.64**	**37**	P	**P**	**02 49 27.1**	**+1.7**
YBH				IAmb	IAmb	02 49 43.1	
	comp=Z,8.2nm,1.3s						
BEKR	**Beckworth**	**74.88**	**40**	P	**P**	**02 49 28.2**	**+1.3**
PNTR	**Pine Nut**	**74.88**	**41**	P	**P**	**02 49 29.1**	**+2.1**
PNTR				IAmb	IAmb	02 49 30.1	
	comp=Z,6.2nm,0.9s						
HUMO	**Hull Mountain**	**75.05**	**36**	P	**P**	**02 49 29.2**	**+1.6**
HUMO				IAmb	IAmb	02 49 33.6	
	comp=Z,10.0nm,1.4s						
NVAR	**Mina Array Bea**	**75.32**	**42**	P	**P**	**02 49 30.4**	**+0.9**
	comp=Z,1.3nm,0.7s,baz=239,slow=8.3,SNR=9.5						
	comp=Z,1.3nm,0.7s						
NVAR	**Mina Array Bea**	**75.32**	**42**	P	**P**	**02 49 30.6**	**+1.1**
113A	**Mohawk Valley,**	**75.32**	**49**	P	**P**	**02 49 30.3**	**+1.0**
NV11	**Mina Array Sit**	**75.42**	**42**	P	**P**	**02 49 29.8**	**-0.2**
TPH	**Tonopah**	**75.81**	**43**	P	**P**	**02 49 33.1**	**+0.7**
SHPR	**Sheep Range**	**76.32**	**45**	P	**P**	**02 49 36.2**	**+1.1**
PRN	**Pahroc Range**	**76.88**	**44**	P	**P**	**02 49 39.7**	**+1.4**
PINE	**Pine Mountain**	**76.94**	**36**	P	**P**	**02 49 39.8**	**+1.2**
PINE				IAmb	IAmb	02 49 41.2	
	comp=Z,4.8nm,0.8s						
R11A	**Troy Canyon, C**	**77.04**	**43**	P	**P**	**02 49 39.7**	**+0.5**
TUC	**Tucson**	**77.28**	**51**	P	**P**	**02 49 41.6**	**+1.0**
TUC				IAmb	IAmb	02 49 43.1	
	comp=Z,4.7nm,1.1s						
X16A	**Lo Mia Camp, P**	**77.83**	**48**	P	**P**	**02 49 44.6**	**+0.9**
X16A				IAmb	IAmb	02 49 46.4	
	comp=Z,4.7nm,0.9s						
LCMT	**Little Creek M**	**77.89**	**45**	P	**P**	**02 49 44.8**	**+0.8**
LCMT				IAmb	IAmb	02 49 46.3	
	comp=Z,3.3nm,0.9s						
CCUT	**Cedar City**	**78.09**	**45**	P	**P**	**02 49 46.6**	**+1.4**
CCUT				IAmb	IAmb	02 49 47.3	
	comp=Z,4.1nm,0.9s						
U15A	**North Rim**	**78.24**	**46**	P	**P**	**02 49 47.2**	**+1.0**
U15A				IAmb	IAmb	02 49 48.9	
	comp=Z,6.6nm,1.1s						
PSUT	**Pine Spring**	**78.28**	**44**	P	**P**	**02 49 47.1**	**+0.9**
PSUT				IAmb	IAmb	02 49 48.1	
	comp=Z,3.1nm,0.6s						
SZCU	**Shurtz Canyon**	**78.30**	**45**	P	**P**	**02 49 47.6**	**+1.3**
SZCU				IAmb	IAmb	02 49 48.8	
	comp=Z,5.2nm,1.0s						
ELK	**Elko**	**78.58**	**41**	P	**P**	**02 49 48.0**	**+0.2**
PKCU	**Pink Cliffs**	**78.75**	**45**	P	**P**	**02 49 50.8**	**+1.8**
PKCU				IAmb	IAmb	02 49 51.8	
	comp=Z,6.2nm,0.8s						
MTPU	**Mount Pierson**	**79.14**	**45**	P	**P**	**02 49 52.9**	**+1.8**
MTPU				IAmb	IAmb	02 49 54.1	
	comp=Z,8.2nm,1.2s						
MSU	**Marysvale**	**79.39**	**45**	P	**P**	**02 49 53.0**	**+0.7**
BMO	**Blue Mountains**	**79.66**	**37**	P	**P**	**02 49 54.0**	**+0.6**
BMO				IAmb	IAmb	02 49 55.1	
	comp=Z,6.8nm,1.4s						
MFID	**Camas Ranch**	**79.71**	**39**	P	**P**	**02 49 54.0**	**+0.2**
HLID	**Hailey**	**80.64**	**39**	P	**P**	**02 49 59.3**	**+0.5**
HVU	**Hansel Valley**	**80.70**	**41**	P	**P**	**02 49 59.8**	**+0.6**
SRU	**San Rafael Swe**	**80.80**	**45**	P	**P**	**02 50 00.1**	**+0.3**
MNTX	**Cornudas Mount**	**81.08**	**53**	P	**P**	**02 50 01.6**	**+0.4**
TX31	**Lajitas Ar. Si**	**81.42**	**56**	P	**P**	**02 50 04.1**	**+0.8**
TX31				IAmb	IAmb	02 50 06.6	
	comp=Z,4.3nm,0.9s						
TX32	**Lajitas Array**	**81.42**	**56**	P	**P**	**02 50 04.5**	**+1.2**
TXAR	**Lajitas Array**	**81.42**	**56**	P	**P**	**02 50 04.7**	**+1.5**
	comp=Z,1.0nm,0.8s,baz=219,slow=8.1,SNR=9.9						
	comp=Z,1.0nm,0.8s						
TXAR	**Lajitas Array**	**81.42**	**56**	P	**P**	**02 50 03.9**	**+0.7**
PV23	**Carpenter Ridg**	**81.51**	**46**	P	**P**	**02 50 05.4**	**+1.6**
PV23				IAmb	IAmb	02 50 06.4	
	comp=Z,7.2nm,0.9s						
BCYI	**Bear Canyon**	**81.66**	**39**	P	**P**	**02 50 05.3**	**+0.9**
MCMT	**McKenzie Canyo**	**82.28**	**39**	P	**P**	**02 50 08.2**	**+0.7**
MCK	**McKinley**	**82.28**	**11**	P	**P**	**02 50 07.0**	**+0.1**
MCK				IAmb	IAmb	02 50 08.1	
	comp=Z,12nm,1.3s						
S22A	**4UR Ranch, Cre**	**82.70**	**47**	P	**P**	**02 50 11.2**	**+1.2**
S22A				IAmb	IAmb	02 50 12.5	
	comp=Z,6.6nm,0.9s						
REDW	**Red Top Meadow**	**82.74**	**41**	P	**P**	**02 50 10.0**	**0.0**
REDW				IAmb	IAmb	02 50 12.5	
	comp=Z,4.8nm,0.9s						
TPAW	**Teton Pass**	**82.74**	**41**	P	**P**	**02 50 09.3**	**-0.8**
TPAW				IAmb	IAmb	02 50 12.1	
	comp=Z,4.6nm,0.8s						
O20A	**White River Ci**	**82.84**	**45**	P	**P**	**02 50 10.7**	**+0.1**
O20A				IAmb	IAmb	02 50 12.4	
	comp=Z,4.1nm,0.8s						
LOHW	**Long Hollow**	**83.02**	**41**	P	**P**	**02 50 12.1**	**+0.7**
LOHW				IAmb	IAmb	02 50 13.2	
	comp=Z,5.2nm,1.2s						
QLMT	**Earthquake Lak**	**83.14**	**39**	P	**P**	**02 50 13.5**	**+1.5**
BW06	**Boulder Array**	**83.26**	**42**	P	**P**	**02 50 12.4**	**-0.3**
BW06				IAmb	IAmb	02 50 14.0	
	comp=Z,4.6nm,0.7s						
PD31	**Pinedale Array**	**83.26**	**42**	P	**P**	**02 50 12.8**	**+0.1**
PD31				IAmb	IAmb	02 50 14.0	
	comp=Z,4.1nm,0.7s						
PDAR	**Pinedale Array**	**83.26**	**42**	P	**P**	**02 50 13.0**	**+0.3**
	comp=Z,4.4nm,0.7s,baz=209,slow=3.0,SNR=30						
	comp=Z,4.4nm,0.7s						
PDAR	**Pinedale Array**	**83.26**	**42**	P	**P**	**02 50 13.2**	**+0.5**
SMCO	**Snowmass**	**83.26**	**46**	P	**P**	**02 50 13.4**	**+0.4**
SMCO				IAmb	IAmb	02 50 15.0	
	comp=Z,5.0nm,0.9s						
CCB	**Clear Creek Bu**	**83.32**	**11**	P	**P**	**02 50 12.4**	**+0.2**
CCB				IAmb	IAmb	02 50 13.3	
	comp=Z,2.7nm,0.7s						
BOZ	**Bozeman (W)**	**83.42**	**39**	P	**P**	**02 50 14.1**	**+0.8**
BOZ				IAmb	IAmb	02 50 15.4	
	comp=Z,3.5nm,0.8s						
COLA	**College**	**83.52**	**11**	P	**P**	**02 50 13.9**	**+0.8**
ILAR	**Eielson Array**	**83.61**	**11**	P	**P**	**02 50 13.8**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=236,slow=5.9,SNR=14						
	comp=Z,0.7nm,0.8s						
ILAR	**Eielson Array**	**83.61**	**11**	P	**P**	**02 50 13.2**	**-0.4**
IMAR	**Indian Mountai**	**83.63**	**8**	P	**P**	**02 50 14.5**	**+0.7**
HRY	**Holter Researc**	**83.88**	**38**	P	**P**	**02 50 15.6**	**-0.1**
MSTX	**Muleshoe**	**84.03**	**52**	P	**P**	**02 50 17.4**	**+0.7**
MSTX				IAmb	IAmb	02 50 18.0	
	comp=Z,5.3nm,0.8s						
ABTX	**Abilene, Hawle**	**85.90**	**54**	P	**P**	**02 50 26.8**	**+0.8**
MAW	**Mawson**	**86.64**	**199**	P	**P**	**02 50 29.0**	**0.0**
	comp=Z,2.8nm,0.7s,baz=127,slow=9.7,SNR=2.9						
	comp=Z,2.8nm,0.7s						
HHC	**Hu-ho-hao-te**	**89.65**	**313**	*e*P	**P**	**02 50 46.0**	**+2.2**
HHC				pmax	pmax		
	comp=Z,20nm,0.9s						
HHC				pmax	pmax		
	comp=Z,160nm,4.8s						
BRTR	**Keskin Array B**	**146.90**	**320**	PKPbc	**PKPab**	**02 57 30.1**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=114,slow=3.5,SNR=1.6						
BRTR	**Keskin Array B**	**146.90**	**320**		**PKPbc**	**02 57 28.7**	**+0.3**
MODS	**Modra-Piesok**	**147.02**	**347**	*e*PKP	**PKPab**	**02 57 29.4**	**-0.5**
GERES	**GERESS Array B**	**147.24**	**351**	PKPbc	**PKPbc**	**02 57 29.3**	**+0.3**
	comp=Z,0.2nm,0.6s,baz=52,slow=3.8,SNR=1.7						

IDC ***22*** *02:42:00.3±0.5, 0°.97N×97°.41E, h0km, mb4.3/26, mbtmp4.3/28, ML4.7/2, MS4.3/57, Error ellipse: s-maj=16.2km s-min=13.9km az=45.0*
DJA ***22*** *02:42:03.2±0.6, 1°.N±2°×9°.7E±°, h28km±4km, M4.8/21, mb4.7/21, mB5.2/14, MLv5.4/16, Mw(mB)4.6/14, MwMwp4.7/7, Mwp5.1/7*
MOS ***22*** *02:42:03.3±1.0, 0°.98N×97°.42E, h33km, mb5.1/44, MS4.5/7, Error ellipse: s-maj=8.6km s-min=5.4km az=99.6*
BJI ***22*** *02:42:04.6±0.0, 0°.88N×97°.53E, h46km, mb4.8/68, mB5.1/54, Ms5.0/66, Ms7 4.8/62*
NEIC ***22*** *02:42:06.3±1.1, 0°.98N±0°.04×97°.41E±0°.07, h36km±5km, mb5.1/70, Error ellipse: s-maj=10.4km s-min=5.4km az=101.0*
GCMT ***22*** *02:42:06.3±0.3, 0°.78N±0°.03×97°.19E±0°.03, h27km±1km, MW5.1/73, Moment Tensor Solution. s52,c69; s73,c95; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 3.03±.18; Mθθ -1.14±.12; Mϕϕ -1.89±.13; Mrθ 2.47±.24; Mϕθ 1.31±.08; Mϕr -3.34±.27; Best double couple: Mo 5.09700×10^16 NP1: ϕs 323.00000°, δ18.00000°, λ89.00000°. NP2: ϕs 143.00000°, δ72.00000°, λ90.00000°. Principal axes: T 5.1730, Plg63.0000°, Azm54.0000°; N -0.1530, Plg0.0000°, Azm323.0000°; P -5.0210, Plg27.0000°, Azm233.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 02:42:05.1±0.4, 0°.94N±0°.03×97°.47E±0°.04, h32km±2km, h32km:pP-P, n329, σ1§74/327, mb4.8/119, MS4.5/83, 18C-3D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.38**	**16**	P	**Pn**	**02 42 14.7**	**+0.3**
GSI				S	**Sn**	**02 42 22.7**	**+2.0**
GSI	**Gunungsitoli**	**0.38**	**16**	P	Pn	**02 42 14.9**	**+0.4**
RPSI	**Rantau Prapat**	**2.27**	**40**		**Pn**	**02 42 41.6**	**+1.1**
PSI	**Prapat**	**2.35**	**38**	P	Pn	**02 42 41.6**	**-0.1**
KCSI	**Kotacane, Aceh**	**2.58**	**7**	P	**Pn**	**02 42 44.8**	**0.0**
SISI	**Saibi**	**2.77**	**144**	P	Pn	**02 42 47.4**	**0.0**
SISI				S	**Sn**	**02 43 18.9**	**-0.9**
TSI	**Tuntungan**	**2.77**	**23**	P	**Pn**	**02 42 48.2**	**+0.8**
BKNI	**Bangkinang**	**3.62**	**100**	Pn	**Pn**	**02 43 00.7**	**+1.7**
BKNI	**Bangkinang**	**3.62**	**100**	P	**Pn**	**02 43 00.6**	**+1.6**
BKNI	**Bangkinang**	**3.62**	**100**	P	**Pn**	**02 43 01.9**	**+2.9**
LHMI	**Lhok Sumawe**	**4.29**	**353**	Pn	**Pn**	**02 43 08.1**	**-0.2**
LHMI	**Lhok Sumawe**	**4.29**	**353**	P	**Pn**	**02 43 08.3**	**0.0**
LHMI	**Lhok Sumawe**	**4.29**	**353**	P	**Pn**	**02 43 09.6**	**+1.3**
PPSI	**Pulau Pagai**	**4.47**	**145**	P	**Pn**	**02 43 09.8**	**-0.9**
IPM	**Ipoh**	**5.00**	**45**	Pn	**Pn**	**02 43 18.7**	**+0.7**
IPM	**Ipoh**	**5.00**	**45**	P	**Pn**	**02 43 20.1**	**+2.1**
KRJI	**Kerinci**	**5.00**	**127**	P	**Pn**	**02 43 21.3**	**+3.2**
	12nm25µm747nm,0.7s						
KULM	**Kulim**	**5.36**	**36**	Pn	**Pn**	**02 43 23.8**	**+0.8**
MYKOM	**Kota Tinggi**	**6.43**	**82**	Pn	**Pn**	**02 43 38.7**	**+1.0**
JMBI	**JAMBI**	**6.68**	**112**	P	**Pn**	**02 43 41.3**	**+0.2**
	1.5nm109nm,0.4s						
DSRI	**Dabo**	**7.24**	**101**	P	**Pn**	**02 43 50.2**	**+1.3**
	0.5nm2µm18nm,0.9s						
MNAI	**Manna**	**7.60**	**134**	Pn	**Pn**	**02 43 54.6**	**+0.8**
MNAI	**Manna**	**7.60**	**134**	P	**Pn**	**02 43 54.5**	**+0.7**
	2.3nm328nm,1.0s						
MNAI	**Manna**	**7.60**	**134**	P	**Pn**	**02 43 54.6**	**+0.8**
	322nm,1.0s						
SRIT	**Nakonsritamara**	**7.90**	**16**		**Pn**	**02 43 57.8**	**-0.1**
LWLI	**Liwa**	**8.85**	**132**	P	Pn	02 44 26.7	+16
KSM	**Kuching**	**12.85**	**88**	Pn	**Pn**	**02 45 06.3**	**+0.6**
STKI	**Sintang**	**14.03**	**93**	P	**P**	**02 45 31.7**	**+2.3**
SBUM	**Sibu**	**14.82**	**84**	Pn	**Pn**	**02 45 33.6**	**+1.0**
CM31	**Chiang Mai Arr**	**17.47**	**5**	Pn	**Pn**	**02 46 05.4**	**-1.2**
CMAR	**Chiang Mai Arr**	**17.47**	**5**	P	**Pn**	**02 46 05.1**	**-1.4**
	2.8nm,0.3s,baz=191,slow=11,SNR=3.1						
CMAR				LR	LR	02 53 38.8	
	comp=Z,2µm,18.7s,baz=190,slow=40						
	20nm,0.5s						
CHTO	**Chiang Mai**	**17.82**	**5**	P	**Pn**	**02 46 09.6**	**-1.3**
CHTO	**Chiang Mai**	**17.82**	**5**	P	**Pn**	**02 46 09.6**	**-1.3**
CHTO				pmax	pmax		
	comp=Z,16nm,1.0s						
PALK	**Pallekele**	**17.86**	**291**	P	**Pn**	**02 46 10.9**	**-0.6**
	comp=Z,0.7nm,0.3s,baz=90,slow=8.1,SNR=1.9						
PALK				S	Sn	02 49 15.0	-15
	comp=Z,5.9nm,0.7s,baz=124,slow=17,SNR=1.8						
	comp=Z,6.0nm,0.8s						
BBKI	**Banjar Baru**	**17.90**	**104**	P	**P**	**02 46 12.9**	**+0.6**
JAGI	**Jajag, Banyuwa**	**19.07**	**120**	P	**P**	**02 46 25.5**	**+0.3**
KKM	**Kota Kinabalu**	**19.38**	**74**	P	**P**	**02 46 29.1**	**+0.4**
KKM				IAmb	IAmb	02 46 33.1	
	comp=Z,139nm,1.3s						
KKM	**Kota Kinabalu**	**19.38**	**74**	P	Pn	**02 46 31.2**	**+1.3**
BKB	**Balikpapan**	**19.55**	**96**	P	Pn	**02 46 31.6**	**-0.2**
BKB				IAmb	IAmb	02 46 34.7	
	comp=Z,228nm,1.3s						
SRBI	**Singaraja**	**19.83**	**117**	P	Pn	02 46 49.6	+14
MYLDM	**Lahad Datu**	**21.41**	**78**	P	**P**	**02 46 51.5**	**+0.9**
MYLDM				IAmb	IAmb	02 47 03.2	
	comp=Z,141nm,1.3s						
TWSI	**Taliwang, Sumb**	**21.60**	**117**	P	**P**	**02 46 53.0**	**+0.4**
	comp=Z,11nm,1.0s						
QIZ	**Qiongzhong**	**21.69**	**33**	P	**P**	**02 46 53.3**	**-0.3**
QIZ				IAmb	IAmb	02 46 54.4	
	comp=Z,62nm,1.4s						
QIZ	**Qiongzhong**	**21.69**	**33**	P	**P**	**02 46 53.5**	**0.0**
QIZ				sP	**sP**	**02 47 05.8**	**-0.3**
QIZ				pmax	pmax		
	comp=Z,28nm,1.2s						

ITAN	**ITANAGAR**	**26.30**	**352**	*e*P	**P**	**02 47 38.1**	**0.0**
ITAN				IAmb	IAmb	02 47 41.4	
	comp=Z,47nm,0.6s						
H08S2	**Diego Garcia H**	**26.33**	**251**	T	T	03 14 44.3	
	baz=71,slow=75,SNR=8662						
H08S3	**Diego Garcia H**	**26.34**	**251**	T	T	03 14 46.0	
	baz=71,slow=75						
H08S1	**Diego Garcia H**	**26.35**	**251**	T	T	03 14 48.6	
	baz=71,slow=75						
ZIRO	**ZIRO**	**26.66**	**353**	*e*P	**P**	**02 47 41.1**	**-0.5**
GYA	**Guiyang**	**26.87**	**18**	⇑P	**P**	**02 47 44.1**	**+0.7**
GYA				pP	pP	02 47 52.6	+0.1
GYA				PcP	**PcP**	**02 51 07.6**	**+2.1**
GYA				S	**S**	**02 52 20.8**	**+2.6**
GYA				pmax	pmax		
	comp=Z,20nm,1.2s						
GYA				pmax	pmax		
	comp=Z,180nm,3.7s						
GYA				LR	LR		
	comp=Z,1μm,19.7s						
GYA				LR	LR		
	comp=Z,1μm,17.4s						
GYA				LR	LR		
	comp=Z,1μm,20.4s						
GTK	**Tadong**	**27.58**	**343**	*e*P	**P**	**02 47 50.3**	**+0.6**
RAMN	**Ramite**	**27.89**	**339**	*e*P	**P**	**02 47 53.9**	**+1.2**
DAV	**Davao City (W)**	**28.68**	**77**	LR	LR	03 00 48.5	
	comp=Z,949nm,19.7s,baz=198,slow=39						
JIRN	**Jiri**	**28.69**	**339**	*e*P	**P**	**02 48 00.9**	**+1.0**
PKI	**Pulchoki**	**28.90**	**337**	*e*P	**P**	**02 48 03.1**	**+1.4**
GUN	**Gumba**	**29.03**	**339**	*e*P	**P**	**02 48 04.5**	**+1.6**
	comp=Z,51nm,0.6s						
DMN	**Daman**	**29.05**	**337**	*e*P	**P**	**02 48 07.0**	**+4.0**
LSA	**Lhasa**	**29.23**	**349**	P	**P**	**02 48 04.5**	**-0.3**
LSA				IAmb	IAmb	02 48 19.8	
	comp=Z,41nm,1.4s						
LSA	**Lhasa**	**29.23**	**349**	P	**P**	**02 48 05.8**	**+1.0**
LSA				pmax	pmax		
	comp=Z,19nm,1.0s						
LSA	**Lhasa**	**29.23**	**349**	P	**P**	**02 48 04.5**	**-0.3**
LSA				pmax	pmax		
	comp=Z,41nm,1.4s						
LSA	**Lhasa**	**29.23**	**349**	P	**P**	**02 48 05.2**	**+0.5**
GKN	**Gorkha**	**29.59**	**337**	*e*P	**P**	**02 48 08.4**	**+0.8**
DANN	**Dangsing**	**30.25**	**335**	*e*P	**P**	**02 48 14.5**	**+0.9**
	comp=Z,13nm,0.4s						
PYUN	**Piuthan**	**30.36**	**334**	*e*P	**P**	**02 48 15.5**	**+1.0**
CD2	**Chengdu**	**30.40**	**11**	P	**P**	**02 48 13.3**	**-1.3**
CD2				sP	sP	02 48 27.0	-0.7
CD2				S	**S**	**02 53 06.5**	**-7.0**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,110nm,4.7s						
CD2				LR	LR		
	comp=Z,330nm,14.2s						
CD2				LR	LR		
	comp=Z,2μm,12.3s						
CD2				LR	LR		
	comp=Z,4μm,13.3s						
ENH	**Enshi**	**31.33**	**20**	P	**P**	**02 48 21.6**	**-1.2**
ENH				IAmb	IAmb	02 48 23.1	
	comp=Z,48nm,1.3s						
TPUB	**Ta-pu**	**31.61**	**44**	P	**P**	**02 48 25.1**	**-0.3**
YULB	**Yu-li**	**32.14**	**44**	P	**P**	**02 48 29.9**	**-0.1**
SSLB	**Suanglung**	**32.16**	**43**	P	**P**	**02 48 30.1**	**-0.2**
WHN	**Wuhan**	**33.52**	**27**	⇑P	**P**	**02 48 41.9**	**-0.1**
WHN				S	**S**	**02 54 07.5**	**+5.4**
WHN				pmax	pmax		
	comp=Z,430nm,3.9s						
WHN				LR	LR		
	comp=Z,4μm,12.9s						
WHN				LR	LR		
	comp=Z,2μm,11.1s						
WHN				LR	LR		
	comp=Z,5μm,12.6s						
XAN	**Xi'an**	**34.63**	**17**	P	**P**	**02 48 50.8**	**-0.9**
XAN				S	**S**	**02 54 16.6**	**-2.7**
XAN				pmax	pmax		
	comp=Z,32nm,1.0s						
XAN				pmax	pmax		
	comp=Z,160nm,3.8s						
XAN				LR	LR		
	comp=Z,2μm,14.3s						
XAN				LR	LR		
	comp=Z,1μm,13.1s						
XAN				LR	LR		
	comp=Z,2μm,13.1s						
XAN	**Xi'an**	**34.63**	**17**	P	**P**	**02 48 50.6**	**-1.0**
GOMU	**GeErMu**	**35.17**	**356**	P	**P**	**02 48 57.0**	**+0.3**
GOMU				S	**S**	**02 54 25.4**	**-2.7**
GOMU				pmax	pmax		
	comp=Z,11nm,1.2s						
GOMU				pmax	pmax		
	comp=Z,63nm,3.5s						
GOMU				LR	LR		
	comp=Z,190nm,17.6s						
GOMU				LR	LR		
	comp=Z,270nm,17.3s						
LZH	**Lanzhou**	**35.47**	**9**	*e*P	**P**	**02 48 59.4**	**+0.4**
LZH				pP	pP	02 49 07.8	-0.5
LZH				sP	sP	02 49 13.4	+1.3
LZH				*e*S	**S**	**02 54 28.3**	**-4.0**
LZH				pmax	pmax		
	comp=Z,22nm,1.2s						
LZH				pmax	pmax		
	comp=Z,170nm,4.9s						
LZH				LR	LR		
	comp=Z,1μm,12.5s						
LZH				LR	LR		
	comp=Z,2μm,14.1s						
LZH				LR	LR		
	comp=Z,1μm,17.1s						
LYN	**LuoYang**	**36.26**	**21**	⇑P	**P**	**02 49 05.6**	**0.0**
LYN				pP	pP	02 49 15.9	+1.0
LYN				S	**S**	**02 54 48.8**	**+4.7**
LYN				pmax	pmax		
	comp=Z,30nm,1.4s						
LYN				pmax	pmax		
	comp=Z,170nm,5.1s						
LYN				LR	LR		
	comp=Z,3μm,12.6s						
LYN				LR	LR		
	comp=Z,1μm,13.9s						
LYN				LR	LR		
	comp=Z,2μm,12.7s						
NJ2	**Nanjing**	**36.95**	**31**	*e*P	**P**	**02 49 11.0**	**-0.5**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
SSE	**Sheshan**	**37.47**	**35**	P	**P**	**02 49 16.0**	**+0.1**
SSE				S	**S**	**02 55 00.4**	**-2.3**
SSE				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SSE				pmax	pmax		
	comp=Z,84nm,3.8s						
SSE				LR	LR		
	comp=Z,710nm,14.5s						
SSE				LR	LR		
	comp=Z,470nm,14.3s						
GTA	**Gaotai**	**38.35**	**3**	⇑P	**P**	**02 49 23.3**	**-0.1**
GTA				pP	pP	02 49 32.3	-0.5
GTA				sP	sP	02 49 36.4	-0.2
GTA				PP	**PnPn**	**02 50 57.0**	**+3.6**
GTA				S	**S**	**02 55 16.9**	**+0.8**
GTA				pmax	pmax		
	comp=Z,16nm,1.2s						
GTA				pmax	pmax		
	comp=Z,110nm,5.5s						
GTA				LR	LR		
	comp=Z,570nm,13.1s						
GTA				LR	LR		
	comp=Z,640nm,14.2s						
GTA				LR	LR		
	comp=Z,600nm,13.5s						
H01W3	**Cape Leeuwin H**	**38.90**	**158**	T	T	03 30 45.6	
	baz=334,slow=76,SNR=416						
H01W2	**Cape Leeuwin H**	**38.91**	**158**	T	T	03 30 46.5	
	baz=334,slow=76,SNR=354						
H01W1	**Cape Leeuwin H**	**38.92**	**158**	T	T	03 30 46.7	
	baz=334,slow=76,SNR=430						
HNS	**HongShan**	**39.61**	**22**	⇑P	**P**	**02 49 34.6**	**+0.8**
HNS				pP	**pP**	**02 49 44.0**	**+0.8**
HNS				sP	**sP**	**02 49 48.9**	**+1.8**
HNS				S	**S**	**02 55 39.9**	**+5.0**
HNS				sS	**sS**	**02 55 49.3**	**-1.0**
HNS				pmax	pmax		
	comp=Z,18nm,1.0s						
HNS				LR	LR		
	comp=Z,700nm,12.6s						
HNS				LR	LR		
	comp=Z,870nm,15.1s						
HNS				LR	LR		
	comp=Z,970nm,13.9s						
WRA	**Warramunga Arr**	**41.67**	**122**	P	**P**	**02 49 50.1**	**-1.0**
	comp=Z,1.6nm,0.3s,baz=296,slow=10,SNR=12						
	comp=Z,1.6nm,0.3s						
WRA	**Warramunga Arr**	**41.67**	**122**	P	**P**	**02 49 50.8**	**-0.3**
WRA	**Warramunga Arr**	**41.67**	**122**	P	**P**	**02 49 50.8**	**-0.3**
WRAB	**Tennant Creek**	**41.67**	**122**	*ce*P	**P**	**02 49 50.9**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,10.0nm,1.3s						
WRAB	**Tennant Creek**	**41.67**	**122**	P	**P**	**02 49 50.9**	**-0.3**
WB2	**Warramunga Arr**	**41.68**	**122**	P	**P**	**02 49 50.8**	**-0.4**
HHC	**Hu-ho-hao-te**	**41.73**	**16**	*e*P	**P**	**02 49 52.8**	**+1.4**
HHC				S	**S**	**02 56 11.5**	**+4.9**
HHC				pmax	pmax		
	comp=Z,41nm,0.9s						
HHC				pmax	pmax		
	comp=Z,380nm,6.5s						
HHC				LR	LR		
	comp=Z,3μm,15.9s						
HHC				LR	LR		
	comp=Z,2μm,15.9s						
HHC				LR	LR		
	comp=Z,3μm,15.2s						
BJT	**Baijiatuau**	**42.46**	**21**	IAmb	IAmb	02 49 59.0	
	comp=Z,21nm,0.9s						
BJT	**Baijiatuau**	**42.46**	**21**	P	**P**	**02 49 58.3**	**+1.1**
BJT				pP	**sP**	**02 50 09.3**	**-1.2**
BJI	**Beijing**	**42.48**	**21**	P	**P**	**02 49 58.4**	**+1.0**
BJI				pP	**pP**	**02 50 08.3**	**+1.4**
BJI				sP	**sP**	**02 50 12.6**	**+1.9**
BJI				S	**S**	**02 56 20.3**	**+2.9**
BJI				pmax	pmax		
	comp=Z,26nm,1.3s						
BJI				pmax	pmax		
	comp=Z,230nm,4.7s						
BJI				LR	LR		
	comp=Z,130nm,15.7s						
BJI				LR	LR		
	comp=Z,490nm,15.3s						
BJI				LR	LR		
	comp=Z,680nm,15.0s						
AS31	**Alice Springs**	**43.02**	**127**	P	**P**	**02 50 02.1**	**0.0**
ASAR	**Alice Springs**	**43.02**	**127**	P	**P**	**02 50 01.6**	**-0.6**
ASAR	**Alice Springs**	**43.02**	**127**	P	**P**	**02 50 01.6**	**-0.6**
KSH	**Kashi**	**43.12**	**335**	P	**P**	**02 50 01.5**	**-1.3**
KSH				S	**S**	**02 56 19.8**	**-7.4**
KSH				sS	pS	02 56 40.3	+2.2
KSH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KSH				LR	LR		
	comp=Z,430nm,21.0s						
KSH				LR	LR		
	comp=Z,340nm,20.6s						
KSH				LR	LR		
	comp=Z,710nm,22.7s						
WMQ	**Urumqi**	**43.58**	**350**	*e*P	**P**	**02 50 07.5**	**+1.2**
WMQ				pmax	pmax		
	comp=Z,35nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,250nm,6.3s						
WMQ				LR	LR		
	comp=Z,380nm,24.9s						
WMQ				LR	LR		
	comp=Z,590nm,21.1s						
WMQ				LR	LR		
	comp=Z,460nm,21.7s						
WSAR	**Wadi Sarin**	**43.72**	**303**	LR	LR	03 08 48.5	
	comp=Z,284nm,18.2s,baz=119,slow=37						
DL2	**Dalian**	**43.78**	**27**	P	**P**	**02 50 08.6**	**+0.7**
DL2				S	**S**	**02 56 36.8**	**+0.2**
DL2				pmax	pmax		
	comp=Z,39nm,1.3s						
DL2				pmax	pmax		
	comp=Z,320nm,4.3s						
DL2				LR	LR		
	comp=Z,720nm,15.2s						
DL2				LR	LR		
	comp=Z,530nm,13.4s						
DL2				LR	LR		
	comp=Z,780nm,14.5s						
TARG	**Taragay, Kyrgy**	**44.31**	**339**	P	**P**	**02 50 12.6**	**-0.1**
TARG	**Taragay, Kyrgy**	**44.31**	**339**	P	**P**	**02 50 12.6**	**-0.1**
TARG				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TJN	**Taejon**	**44.83**	**35**	P	**P**	**02 50 16.4**	**0.0**
TJN	**Taejon**	**44.83**	**35**	P	**P**	**02 50 16.4**	**0.0**
TJN				pmax	pmax		
	comp=Z,176nm,1.3s						
KDJ	**Kajisay**	**44.89**	**339**	IAmb	IAmb	02 50 19.4	
	comp=Z,17nm,0.9s						
GAR	**Garm**	**45.30**	**330**	P	**P**	**02 50 19.5**	**-0.7**
KSCHJ	**Chungju**	**45.53**	**35**	IAmb	IAmb	02 50 23.4	
	comp=Z,29nm,1.3s						
CHGR	**Chuyangaron**	**45.63**	**329**	P	**P**	**02 50 22.2**	**-0.7**
CHGR	**Chuyangaron**	**45.63**	**329**	P	**P**	**02 50 22.2**	**-0.7**
CHGR				pmax	pmax		
	comp=Z,89nm,1.3s						
BTK	**Batken**	**45.87**	**331**	IAmb	IAmb	02 50 39.9	
	comp=Z,39nm,1.4s						
XLT	**XiLinHaoTe**	**45.88**	**19**	*e*P	**P**	**02 50 25.6**	**+0.9**
XLT				pP	pP	02 50 33.9	-0.3
XLT				sP	sP	02 50 38.3	+0.3
XLT				S	**S**	**02 57 08.4**	**+1.4**
XLT				sS	sS	02 57 24.0	+1.4
XLT				pmax	pmax		
	comp=Z,19nm,1.4s						
XLT				pmax	pmax		
	comp=Z,200nm,4.1s						
XLT				LR	LR		
	comp=Z,140nm,13.5s						
XLT				LR	LR		
	comp=Z,970nm,17.3s						
XLT				LR	LR		
	comp=Z,2μm,13.5s						
KSAR	**Wonju Array Be**	**45.88**	**34**	P	**P**	**02 50 24.0**	**-0.7**
KSAR	**Wonju Array Be**	**45.88**	**34**	P	**P**	**02 50 24.0**	**-0.7**
KSRS	**Korea Array**	**45.91**	**34**	P	**P**	**02 50 23.9**	**-0.9**
	comp=Z,8.4nm,0.9s,baz=224,slow=8.4,SNR=39						
KSRS				LR	LR	03 10 10.0	
	comp=Z,436nm,20.5s,baz=225,slow=37						
	comp=Z,8.4nm,0.9s						
KSRS	**Korea Array**	**45.91**	**34**	P	**P**	**02 50 24.0**	**-0.9**
KS19	**Wonju Array Si**	**45.91**	**34**	IAmb	IAmb	02 50 26.4	
	comp=Z,30nm,1.1s						
AAK	**Ala-Archa**	**46.35**	**337**	LR	LR	03 12 02.6	
	comp=Z,573nm,21.1s,baz=158,slow=39						
AAK	**Ala-Archa**	**46.35**	**337**	P	**P**	**02 50 28.7**	**+0.2**
AAK				IAmb	IAmb	02 50 55.7	
	comp=Z,26nm,1.7s						
AAK	**Ala-Archa**	**46.35**	**337**	P	**P**	**02 50 28.7**	**+0.2**
AAK				pmax	pmax		
	comp=Z,26nm,1.7s						
SNY	**Shenyang**	**47.01**	**27**	⇑P	**P**	**02 50 32.8**	**-0.7**
SNY				pmax	pmax		
	comp=Z,31nm,1.4s						
SNY				pmax	pmax		
	comp=Z,200nm,4.4s						
SNY				LR	LR		
	comp=Z,970nm,14.7s						
SNY				LR	LR		
	comp=Z,920nm,13.7s						
SNY				LR	LR		
	comp=Z,2μm,14.6s						
SONM	**Songino Array**	**47.35**	**8**	P	**P**	**02 50 36.2**	**0.0**
	comp=Z,3.9nm,0.7s,baz=192,slow=9.0,SNR=28						
SONM				LR	LR	03 12 57.6	
	comp=Z,1μm,19.2s,baz=192,slow=39						
	comp=Z,3.9nm,0.7s						
SONM	**Songino Array**	**47.35**	**8**	P	**P**	**02 50 36.2**	**0.0**
SONM				IAmb	IAmb	02 50 38.2	
	comp=Z,34nm,1.7s						
JHS	**Saijyo**	**47.44**	**41**	P	**P**	**02 50 37.3**	**+0.2**
ULN	**Ulaanbaatar**	**47.48**	**9**	P	**P**	**02 50 37.0**	**-0.2**
ULN	**Ulaanbaatar**	**47.48**	**9**	P	**P**	**02 50 37.0**	**-0.2**
ULN				pmax	pmax		
	comp=Z,14nm,1.3s						
ULN	**Ulaanbaatar**	**47.48**	**9**	P	**P**	**02 50 36.5**	**-0.7**
ULN				pP	**pP**	**02 50 47.8**	**+1.1**
MK31	**Makanchi Array**	**47.56**	**346**	P	**P**	**02 50 37.6**	**-0.2**
MK31				IAmb	IAmb	02 50 51.5	
	comp=Z,12nm,0.8s						
MK31	**Makanchi Array**	**47.56**	**346**	P	**P**	**02 50 37.6**	**-0.2**
MK31				pmax	pmax		
	comp=Z,12nm,0.9s						
MKAR	**Makanchi Array**	**47.56**	**346**	P	**P**	**02 50 37.6**	**-0.1**
	comp=Z,7.4nm,0.5s,baz=160,slow=8.8,SNR=80						
MKAR				LR	LR	03 14 25.4	
	comp=Z,405nm,20.4s,baz=156,slow=41						
	comp=Z,7.4nm,0.5s						
MKAR	**Makanchi Array**	**47.56**	**346**	P	**P**	**02 50 37.8**	**+0.1**
MKAR	**Makanchi Array**	**47.56**	**346**	*ce*P	**P**	**02 50 38.2**	**+0.4**
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.5s						
MAKZ	**Makanchi**	**47.65**	**346**	P	**P**	**02 50 38.0**	**-0.4**
MAKZ				IAmb	IAmb	02 50 52.0	
	comp=Z,12nm,0.9s						
MAKZ	**Makanchi**	**47.65**	**346**	P	**P**	**02 50 38.0**	**-0.4**
MAKZ				pmax	pmax		
	comp=Z,12nm,0.9s						
MAKZ	**Makanchi**	**47.65**	**346**	P	**P**	**02 50 39.0**	**+0.6**
MAKZ				pP	**pP**	**02 50 47.9**	**-0.1**
MAKZ				pwP	**sP**	**02 50 51.2**	**-0.5**
MAKZ				sP	sP	02 50 53.9	+2.2
KK31	**Karatay Array**	**48.41**	**334**	P	**P**	**02 50 44.3**	**-0.1**
KK31	**Karatay Array**	**48.41**	**334**	P	**P**	**02 50 44.3**	**-0.1**
KK31				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KKAR	**Karatay Array**	**48.41**	**334**	P	**P**	**02 50 44.6**	**+0.3**
KKAR	**Karatay Array**	**48.41**	**334**	P	**P**	**02 50 44.7**	**+0.3**
KKAR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
GUMO	**Guam**	**48.55**	**73**	LR	LR	03 12 58.1	
	comp=Z,77nm,19.3s,baz=192,slow=38						
CN2	**Changchun**	**49.41**	**27**	*e*P	**P**	**02 50 51.8**	**-0.2**
CN2				*e*S	**S**	**02 57 54.8**	**-2.3**
CN2				SS	**SS**	**03 01 24.1**	**-5.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CN2				pmax	pmax		
	comp=Z,100nm,4.1s						
CN2				LR	LR		
	comp=Z,900nm,15.0s						
CN2				LR	LR		
	comp=Z,500nm,15.0s						
CN2				LR	LR		
	comp=Z,900nm,16.5s						
KNGR	**Kungurtug, Tuv**	**49.48**	**0**	*i* P	**P**	**02 50 53.0**	**+0.4**
KNGR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BBOO	**Buckleboo**	**49.50**	**136**	P	**P**	**02 50 53.8**	**+0.9**
ZAK	**Zakamensk**	**49.51**	**5**	*e*P	**P**	**02 50 52.3**	**-0.5**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.6s						
GEYT	**Alibeck**	**51.59**	**320**	P	**P**	**02 51 08.5**	**-0.2**
	comp=Z,1.9nm,0.7s,baz=95,slow=16,SNR=3.2						
GEYT				LR	LR	03 15 39.9	
	comp=Z,169nm,19.2s,baz=142,slow=39						
	comp=Z,1.9nm,0.7s						
MAJO	**Matsushiro**	**51.70**	**42**	P	**P**	**02 51 07.8**	**-1.7**
MAJO				IAmb	IAmb	02 51 10.3	
	comp=Z,51nm,1.9s						
MAJO	**Matsushiro**	**51.70**	**42**	P	**P**	**02 51 07.8**	**-1.7**
MAJO				pmax	pmax		
	comp=Z,51nm,1.9s						
MJAR	**Matsushiro Arr**	**51.70**	**42**	P	**P**	**02 51 10.3**	**+0.8**
	comp=Z,0.8nm,0.3s,baz=229,slow=9.4,SNR=7.4						
	comp=Z,0.8nm,0.3s						
MJAR	**Matsushiro Arr**	**51.70**	**42**	P	**P**	**02 51 08.8**	**-0.7**
MJAR	**Matsushiro Arr**	**51.70**	**42**	P	**P**	**02 51 08.8**	**-0.7**
MJAR				pmax	pmax		
	comp=Z,11nm,1.5s						
BNX	**BinXian**	**51.80**	**26**	⇓P	**P**	**02 51 10.3**	**+0.3**
BNX				pmax	pmax		
	comp=Z,5.0nm,0.5s						
BNX				pmax	pmax		
	comp=Z,140nm,7.5s						
HIA	**Hailar**	**51.80**	**18**	*i* P	**P**	**02 51 10.1**	**+0.1**
HIA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MDJ	**Mudanjiang**	**51.96**	**29**	P	**P**	**02 51 12.3**	**+1.0**
MDJ				S	**S**	**02 58 37.6**	**+5.2**
MDJ				pmax	pmax		
	comp=Z,11nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,290nm,4.8s						
MDJ				LR	LR		
	comp=Z,1μm,15.7s						
MDJ				LR	LR		
	comp=Z,890nm,16.7s						
MDJ				LR	LR		
	comp=Z,2μm,16.2s						
KURBB	**Kurchatov Arra**	**52.05**	**345**	LR	LR	03 17 35.9	
	comp=Z,449nm,18.6s,baz=138,slow=41						
KURK	**Kurchatov**	**52.11**	**345**	P	**P**	**02 51 12.3**	**0.0**
KURK				IAmb	IAmb	02 51 56.3	
	comp=Z,12nm,1.0s						
KURK	**Kurchatov**	**52.11**	**345**	*ce*P	**P**	**02 51 12.3**	**0.0**
KURK				pmax	pmax		
	comp=Z,17nm,1.3s						
KURK	**Kurchatov**	**52.11**	**345**	P	**P**	**02 51 12.6**	**+0.4**
CTA	**Charters Tower**	**52.14**	**116**	LR	LR	03 16 20.9	
	comp=Z,391nm,18.6s,baz=280,slow=40						
CTAO	**Charters Tower**	**52.14**	**116**	P	**P**	**02 51 13.7**	**+0.7**
CTAO				pP	**sP**	**02 51 25.4**	**-0.9**
USA0B	**Ussuriysk Arra**	**52.85**	**31**	P	**P**	**02 51 18.5**	**+0.7**
USA0B				IAmb	IAmb	02 51 19.8	
	comp=Z,46nm,1.4s						
USA0B	**Ussuriysk Arra**	**52.85**	**31**	P	**P**	**02 51 18.5**	**+0.7**
USA0B				pmax	pmax		
	comp=Z,46nm,1.4s						
USRK	**Ussuriysk Ar.**	**52.85**	**31**	P	**P**	**02 51 17.8**	**0.0**
	comp=Z,12nm,1.1s,baz=230,slow=4.7,SNR=30						
USRK				LR	LR	03 15 35.2	
	comp=Z,544nm,19.6s,baz=216,slow=38						
	comp=Z,12nm,1.1s						
USRK	**Ussuriysk Ar.**	**52.85**	**31**	P	**P**	**02 51 18.1**	**+0.2**
USRK	**Ussuriysk Ar.**	**52.85**	**31**	P	**P**	**02 51 18.1**	**+0.2**
STKA	**Stephens Creek**	**52.98**	**132**	P	**P**	**02 51 20.2**	**+1.1**
	comp=Z,4.7nm,0.8s,baz=314,slow=6.7,SNR=5.7						
STKA				LR	LR	03 15 53.7	
	comp=Z,539nm,21.6s,baz=295,slow=38						
	comp=Z,4.7nm,0.8s						
OPO	**Ambohidratompo**	**53.07**	**246**	P	**P**	**02 51 20.2**	**+0.2**
	comp=Z,4.3nm,0.8s,baz=96,slow=9.2,SNR=2.4						
OPO				LR	LR	03 11 16.7	
	comp=Z,101nm,18.7s,baz=190,slow=33						
	comp=Z,4.3nm,0.8s						
ZAA0	**Zalesovo Array**	**53.86**	**351**	P	**P**	**02 51 25.1**	**0.0**
ZAA0				IAmb	IAmb	02 51 25.9	
	comp=Z,22nm,1.1s						
ZALV	**Zalesovo Beam**	**53.86**	**351**	P	**P**	**02 51 25.0**	**-0.1**
	comp=Z,6.8nm,0.4s,baz=180,slow=5.9,SNR=49						
ZALV				LR	LR	03 17 42.3	
	comp=Z,310nm,19.6s,baz=172,slow=40						
	comp=Z,6.8nm,0.4s						
ZALV	**Zalesovo Beam**	**53.86**	**351**	P	**P**	**02 51 24.9**	**-0.1**
ZALV	**Zalesovo Beam**	**53.86**	**351**	*i* P	**P**	**02 51 25.2**	**+0.1**
ZALV				pmax	pmax		
	comp=Z,7.0nm,0.4s						
RAYN	**Ar Rayn**	**55.12**	**298**	P	**P**	**02 51 34.9**	**0.0**
RAYN				pP	**pP**	**02 51 44.9**	**+0.4**
ATD	**Arta Tunnel**	**55.21**	**283**	LR	LR	03 12 46.8	
	comp=Z,126nm,18.8s,baz=6.0,slow=34						
KLR	**Kul'dur**	**56.37**	**26**	*ce*P	**P**	**02 51 43.9**	**+0.6**
KLR				pmax	pmax		
	comp=Z,28nm,1.7s						
BVAR	**Borovoye Array**	**56.59**	**341**	LR	LR	03 19 18.9	
	comp=Z,355nm,21.2s,baz=26,slow=40						
BRVK	**Borovoye**	**56.65**	**341**	P	**P**	**02 51 44.2**	**-1.0**
BRVK	**Borovoye**	**56.65**	**341**	P	**P**	**02 51 44.2**	**-1.0**
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BRVK	**Borovoye**	**56.65**	**341**	P	**P**	**02 51 45.0**	**-0.2**
ABKAR	**Akbulak array**	**57.87**	**332**	P	**P**	**02 51 53.3**	**-0.6**
EIDS	**Eidsvold**	**58.01**	**121**	IAmb	IAmb	02 51 57.4	
	comp=Z,24nm,1.4s						
ZEA	**Zeya**	**58.09**	**20**	*e*P	**P**	**02 51 55.8**	**+0.5**
ZEA				pmax	pmax		
	comp=E,10.0nm,0.4s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ZEA				MLR	MLR		
	comp=E,300nm,17.0s						
ZEA				MLR	MLR		
	comp=Z,500nm,14.0s						

BOD	**Bodaibo**	**58.22**	**10**	*e*P		**P**		**02 51 55.8**	**-0.4**
BOD					pmax	pmax			
	comp=Z,25nm,1.5s								
KMBO	**Kilima Mbogo**	**60.25**	**268**	P		**P**		**02 52 12.0**	**+0.6**
	comp=Z,1.2nm,0.6s,baz=357,slow=5.3,SNR=3.5								
KMBO				LR		LR		03 14 48.6	
	comp=Z,228nm,19.6s,baz=96,slow=33								
	comp=Z,1.2nm,0.6s								
KMBO	**Kilima Mbogo**	**60.25**	**268**	P		**P**		**02 52 09.6**	**-1.8**
KMBO	**Kilima Mbogo**	**60.25**	**268**	P		**P**		**02 52 09.6**	**-1.8**
KMBO					pmax	pmax			
	comp=Z,6.0nm,1.1s								
YSS	**Yuzh-Sakhalins**	**60.41**	**34**	P		**P**		**02 52 11.4**	**-0.1**
YSS	**Yuzh-Sakhalins**	**60.41**	**34**‖	*e*P		**P**		**02 52 11.9**	**+0.4**
YSS				*e*S		**S**		**03 00 24.0**	**-0.5**
YSS				*e*SS		**SS**		**03 04 19.7**	**-3.0**
YSS					pmax	pmax			
	comp=Z,20nm,0.9s								
YSS					pmax	pmax			
	comp=Z,200nm,5.7s								
YSS					MLR	MLR			
	comp=Z,200nm,16.0s								
GNI	**Garni**	**61.67**	**316**	LR		LR		03 20 57.8	
	comp=Z,122nm,21.8s,baz=111,slow=38								
GROC	**Groznyy**	**62.32**	**320**	*e*P		P		02 52 32.9	+8.3
SVE	**Sverdlovsk**	**63.03**	**338**	*e*P		**P**		**02 52 29.2**	**+0.2**
SVE					pmax	pmax			
	comp=Z,18nm,1.1s								
NKL	**Nikolayevsk**	**63.13**	**28**	*e*P		**P**		**02 52 31.5**	**+1.8**
NKL				*e*				02 53 02.8	
NKL				*e*S		**S**		**03 00 57.1**	**-1.6**
NKL					pmax	pmax			
	comp=E,3.0nm,0.5s								
NKL					pmax	pmax			
	comp=Z,18nm,1.4s								
NKL					pmax	pmax			
	comp=Z,33nm,1.7s								
NKL					smax	smax			
	comp=E,2.0nm,1.5s								
NKL					smax	smax			
	comp=N,640nm,1.9s								
NKL					MLR	MLR			
	comp=E,19nm,13.0s								
NKL					MLR	MLR			
	comp=N,6µm,18.0s								
NKL					MLR	MLR			
	comp=Z,268nm,12.0s								
ZEI	**Tsey**	**63.38**	**319**	*e*P		P		02 52 39.6	+7.7
ZEI					pmax	pmax			
	comp=Z,7.0nm,1.0s								
ARU	**Arti**	**63.53**	**337**	LR		LR		03 21 52.8	
	comp=Z,201nm,20.9s,baz=128,slow=38								
ARU	**Arti**	**63.53**	**337**	P		**P**		**02 52 30.4**	**-2.0**
ARU				IAmb		IAmb		02 52 42.5	
	comp=Z,17nm,1.4s								
ARU	**Arti**	**63.53**	**337**	*d i*P		**P**		**02 52 31.4**	**-0.9**
ARU								02 53 08.0	
ARU				S		**S**		**03 01 05.1**	**+1.5**
ARU				SS		**SS**		**03 05 11.1**	**-0.1**
ARU					pmax	pmax			
	comp=Z,16nm,1.6s								
ARU					MLR	MLR			
	comp=Z,446nm,18.0s								
KBZ	**Khabaz**	**64.45**	**319**	P		**P**		**02 52 38.4**	**-0.2**
	comp=Z,2.4nm,0.8s,baz=98,slow=5.0,SNR=5.5								
	comp=Z,2.4nm,0.8s								
KBZ	**Khabaz**	**64.45**	**319**	*ce*P		**P**		**02 52 37.8**	**-0.8**
KBZ					pmax	pmax			
	comp=Z,8.0nm,1.3s								
KIV	**Kislovodsk**	**64.68**	**319**	P		**P**		**02 52 39.0**	**-1.3**
KIV				IAmb		IAmb		02 52 50.9	
	comp=Z,22nm,1.5s								
KIV	**Kislovodsk**	**64.68**	**319**	*e*P		**P**		**02 52 39.5**	**-0.8**
KIV					pmax	pmax			
	comp=Z,10.0nm,1.1s								
YAK	**Yakutsk**	**65.59**	**16**	LR		LR		03 24 12.8	
	comp=Z,654nm,18.2s,baz=264,slow=39								
YAK	**Yakutsk**	**65.59**	**16**	P		**P**		**02 52 45.0**	**-0.7**
YAK	**Yakutsk**	**65.59**	**16**	*e*P		**P**		**02 52 44.4**	**-1.3**
YAK					pmax	pmax			
	comp=Z,22nm,0.8s								
YAK					pmax	pmax			
	comp=E,8.0nm,1.2s								
YAK					MLR	MLR			
	comp=Z,627nm,18.0s								
YAK					MLR	MLR			
	comp=N,554nm,20.0s								
YAK					MLR	MLR			
	comp=E,395nm,20.0s								
EIL	**Elat**	**65.82**	**302**	LR		LR		03 21 37.3	
	comp=E,580nm,18.3s,baz=103,slow=36								
MMAI	**Mount Meron Ar**	**66.28**	**306**	LR		LR		03 22 25.0	
	comp=E,141nm,20.1s,baz=262,slow=37								
MBAR	**Mbarara**	**66.75**	**269**	LR		LR		03 21 45.5	
	comp=E,164nm,18.2s,baz=77,slow=36								
MBAR	**Mbarara**	**66.75**	**269**	*i* P		**P**		**02 52 53.9**	**-0.4**
MBAR					pmax	pmax			
	comp=Z,9.0nm,1.3s								
MBAR	**Mbarara**	**66.75**	**269**	P		**P**		**02 52 53.5**	**-0.8**
MBAR				pP		**pP**		**02 53 03.0**	**-1.1**
VRH	**Novokhopyorsk**	**68.49**	**326**	*e*P		**P**		**02 53 02.1**	**-2.2**
VRH					pmax	pmax			
	comp=Z,9.0nm,0.9s								
KIRV	**Kirov**	**68.66**	**335**	*ce*P		**P**		**02 53 03.9**	**-1.3**
BRTR	**Keskin Array B**	**69.49**	**312**	P		**P**		**02 53 09.9**	**-1.0**
	comp=Z,1.1nm,0.6s,baz=135,slow=5.2,SNR=5.7								
	comp=Z,1.1nm,0.6s								
BRTR	**Keskin Array B**	**69.49**	**312**	P		**P**		**02 53 10.0**	**-1.0**
SKR	**Severo-Kuril's**	**69.91**	**35**	*e*P		**P**		**02 53 10.8**	**-2.3**
SKR				*e*S		**S**		**03 02 15.3**	**-5.6**
SKR					pmax	pmax			
	comp=Z,21nm,1.0s								
SKR					pmax	pmax			
	comp=Z,100nm,10.3s								
SKR					MLR	MLR			
	comp=Z,100nm,18.0s								
VSR	**Storozhevoye**	**69.94**	**325**	*e*P		**P**		**02 53 13.7**	**+0.4**
VSR					pmax	pmax			
	comp=Z,7.0nm,1.0s								
VORR	**Voronezh**	**70.11**	**326**	*e*P		**P**		**02 53 12.6**	**-1.7**
VORR					pmax	pmax			
	comp=Z,40nm,0.4s								
LSZ	**Lusaka**	**70.30**	**254**	LR		LR		03 18 45.2	
	comp=Z,301nm,21.6s,baz=92,slow=31								
LPSR	**Galich'ya Gora**	**70.66**	**327**	*e*P		**P**		**02 53 15.0**	**-2.7**
LPSR					pmax	pmax			
	comp=Z,10.0nm,0.8s								
DZM	**Mont Dzumac**	**70.93**	**114**	P		**P**		**02 53 20.4**	**+0.3**
	comp=Z,2.4nm,0.8s,baz=34,slow=14,SNR=1.7								
DZM					LR	LR		03 27 58.0	
	comp=Z,128nm,19.6s,baz=261,slow=39								
	comp=Z,2.4nm,0.8s								
MA2	**Magadan**	**71.45**	**25**	LR		LR		03 27 48.6	
	comp=Z,237nm,19.0s,baz=240,slow=38								
MDUB	**Mudurnu**	**71.49**	**313**	P		**P**		**02 53 22.4**	**-0.7**
PETK	**Petropavlovsk-**	**71.80**	**33**	P		**P**		**02 53 26.3**	**+1.7**
	comp=Z,0.5nm,0.5s,baz=243,slow=6.3,SNR=2.0								
PETK					LR	LR		03 28 57.2	
	comp=Z,276nm,18.2s,baz=238,slow=39								
	comp=Z,0.5nm,0.5s								
PRGR	**Permogore**	**71.98**	**337**	*e*P		**P**		**02 53 23.3**	**-2.2**
PRGR				*e*PP		**pP**		**02 53 31.3**	**-4.1**
PET	**Petropavlovsk**	**72.30**	**34**	*e*P		**P**		**02 53 27.7**	**+0.2**
PET					pmax	pmax			
	comp=Z,100nm,10.6s								
PET					MLR	MLR			
	comp=Z,300nm,15.0s								
MAW	**Mawson**	**72.52**	**193**	P		**P**		**02 53 28.8**	**+0.2**
	comp=Z,1.5nm,0.8s,baz=66,slow=10.0,SNR=1.8								
MAW					LR	LR		03 21 04.3	
	comp=Z,213nm,18.0s,baz=24,slow=32								
	comp=Z,1.5nm,0.8s								
MOS	**Moscow**	**72.69**	**329**	*e*P		**P**		**02 53 27.0**	**-2.8**
OBN	**Obninsk**	**72.98**	**328**	LR		LR		03 29 49.2	
	comp=Z,34nm,20.6s,baz=160,slow=39								
OBN	**Obninsk**	**72.98**	**328**	*ce*P		**P**		**02 53 30.4**	**-1.1**
OBN				*i*				02 53 38.7	
OBN				*e*				02 53 47.5	
OBN					pmax	pmax			
	comp=Z,31nm,2.4s								
TIXI	**Tiksi**	**73.40**	**10**	P		**P**		**02 53 32.4**	**-1.3**
TIXI	**Tiksi**	**73.40**	**10**	*ce*P		**P**		**02 53 31.3**	**-2.4**
TIXI					pmax	pmax			
	comp=Z,19nm,2.5s								
SEY	**Seymchan**	**73.89**	**23**	LR		LR		03 28 36.7	
	comp=Z,263nm,19.8s,baz=245,slow=38								
SEY	**Seymchan**	**73.89**	**23**	*ce*P		**P**		**02 53 35.6**	**-1.2**
SEY					pmax	pmax			
	comp=Z,20nm,1.8s								
LBTB	**Lobatse**	**74.02**	**244**	LR		LR		03 23 34.9	
	comp=Z,181nm,18.1s,baz=82,slow=34								
KLMR	**Klimovskoe**	**74.10**	**334**	*e*P		**P**		**02 53 33.8**	**-4.2**
KLMR					pmax	pmax			
	comp=Z,16nm,1.3s								
KLMR	**Klimovskoe**	**74.10**	**334**	*e*P		**P**		**02 53 33.8**	**-4.2**
KLMR					AMP			02 53 49.3	
	comp=Z,16nm,1.3s								
BOSA	**Boshof**	**74.89**	**240**	P		**P**		**02 53 43.1**	**-0.3**
	comp=Z,2.4nm,0.9s,baz=132,slow=3.3,SNR=3.7								
BOSA					LR	LR		03 22 45.3	
	comp=Z,234nm,18.1s,baz=60,slow=33								
	comp=Z,2.4nm,0.9s								
BOSA	**Boshof**	**74.89**	**240**	P		**P**		**02 53 43.6**	**+0.2**
BOSA					IAmb	IAmb		02 54 50.1	
	comp=Z,30nm,1.6s								
BOSA	**Boshof**	**74.89**	**240**	P		**P**		**02 53 43.6**	**+0.2**
BOSA					pmax	pmax			
	comp=Z,30nm,1.7s								
IDI	**Anoyia**	**75.27**	**306**	LR		LR		03 31 45.8	
	comp=Z,81nm,19.2s,baz=90,slow=40								
AKASG	**Malin Array Be**	**75.63**	**322**	P		**P**		**02 53 46.1**	**-1.0**
	comp=Z,0.8nm,0.4s,baz=88,slow=4.6,SNR=13								
AKASG					LR	LR		03 32 08.2	
	comp=Z,74nm,18.3s,baz=82,slow=40								
	comp=Z,0.8nm,0.4s								
AKBB	**Malin Array Si**	**75.63**	**322**	*ce*P		**P**		**02 53 46.0**	**-1.1**
MLR	**Muntele Rosu**	**76.44**	**317**	LR		LR		03 34 29.5	
	comp=Z,106nm,18.4s,baz=90,slow=41								
MLR	**Muntele Rosu**	**76.44**	**317**	P		**P**		**02 53 51.5**	**-0.5**
MLR					IAmb	IAmb		02 54 04.0	
	comp=Z,35nm,1.7s								
MLR	**Muntele Rosu**	**76.44**	**317**	P		**P**		**02 53 51.5**	**-0.5**
MLR					pmax	pmax			
	comp=Z,35nm,1.7s								
BURAR	**Bucovina Array**	**77.40**	**319**	P		**P**		**02 53 57.5**	**+0.2**
BUR08	**Bucovina Ar. S**	**77.42**	**319**	P		**P**		**02 53 57.3**	**-0.1**
LVV	**L'vov**	**78.64**	**321**	*e*P		**P**		**02 54 03.9**	**-0.1**
RPZ	**Rata Peaks**	**78.83**	**135**	LR		LR		03 28 53.5	
	comp=Z,390nm,21.9s,baz=278,slow=36								
SUR	**Sutherland**	**79.25**	**237**	LR		LR		03 26 08.7	
	comp=Z,372nm,18.2s,baz=82,slow=33								
UZH	**Uzhgorod**	**79.52**	**319**	‖ *i* P		**P**		**02 54 08.5**	**-0.4**
UZH				*i*				02 54 18.5	
UZH				*i*				02 54 31.0	
KOLS	**Kolonicke sedl**	**79.59**	**320**	*e*P		**P**		**02 54 10.9**	**+1.6**
KOLS				*e*				02 54 19.2	
KOLS	**Kolonicke sedl**	**79.59**	**320**	*e*P		**P**		**02 54 10.9**	**+1.6**
KOLS				*e*				02 54 19.2	
SUW	**Suwalki**	**80.04**	**325**	*e*P		**P**		**02 54 11.1**	**-0.5**
SUW	**Suwalki**	**80.04**	**325**	P		**P**		**02 54 11.0**	**-0.5**
SUW					IAmb	IAmb		02 54 21.9	
	comp=Z,33nm,1.1s								
SUW	**Suwalki**	**80.04**	**325**	P		**P**		**02 54 11.0**	**-0.5**
SUW					pmax	pmax			
	comp=Z,33nm,1.1s								
FIA1	**FINESS Array S**	**80.36**	**332**	P		**P**		**02 54 12.9**	**-0.2**
FIA1					IAmb	IAmb		02 54 23.9	
	comp=Z,48nm,1.9s								
FINES	**FINESS Array B**	**80.36**	**332**	P		**P**		**02 54 12.7**	**-0.4**
	comp=Z,1.6nm,0.4s,baz=108,slow=5.7,SNR=22								
FINES					LR	LR		03 33 03.3	
	comp=Z,231nm,21.0s,baz=104,slow=38								
	comp=Z,1.6nm,0.4s								
FINES	**FINESS Array B**	**80.36**	**332**	P		**P**		**02 54 12.8**	**-0.3**
FINES	**FINESS Array B**	**80.36**	**332**	*i* P		**P**		**02 54 13.0**	**-0.1**
FINES					pmax	pmax			
	comp=Z,2.0nm,0.4s								
TSUM	**Tsumeb**	**80.76**	**250**	LR		LR		03 28 00.6	
	comp=Z,155nm,18.2s,baz=34,slow=34								
SHEM	**Shenya Is, Ala**	**81.17**	**37**	LR		LR		03 28 04.9	
	comp=Z,90nm,21.8s,baz=308,slow=34								
MSVF	**Nonsavu**	**81.31**	**108**	LR		LR		03 31 15.7	
	comp=Z,110nm,21.4s,baz=153,slow=36								
BILL	**Bilibino**	**81.31**	**21**	*e*P		**P**		**02 54 18.3**	**+0.2**
BILL				*e*PPP		PPP		02 59 10.5	
BILL					pmax	pmax			
	comp=Z,6.0nm,1.1s								
BKZ	**Black Stump Fm**	**82.08**	**130**	P		**P**		**02 54 23.3**	**+0.5**
BKZ					IAmb	IAmb		02 54 55.3	
	comp=Z,40nm,1.3s								
URZ	**Urewera**	**82.44**	**129**	LR		LR		03 32 44.6	
	comp=Z,321nm,20.0s,baz=211,slow=37								
ARCES	**ARCESS Array B**	**82.87**	**340**	P		**P**		**02 54 25.1**	**-1.2**
	comp=Z,1.2nm,0.5s,baz=106,slow=4.6,SNR=15								
ARCES					LR	LR		03 35 10.0	
	comp=Z,252nm,20.4s,baz=106,slow=38								
	comp=Z,1.2nm,0.5s								
ARCES	**ARCESS Array B**	**82.87**	**340**	P		**P**		**02 54 25.9**	**-0.4**
ARCES					IAmb	IAmb		02 54 37.0	
	comp=Z,45nm,1.8s								
ARCES	**ARCESS Array B**	**82.87**	**340**	P		**P**		**02 54 25.9**	**-0.4**
ARCES					pmax	pmax			
	comp=Z,45nm,1.8s								
KRLC	**Kraliky**	**83.30**	**320**	*e*pP		pP		02 54 37.5	-1.6
DPC	**Dobruska-Polom**	**83.62**	**320**	*e*P		**P**		**02 54 31.1**	**+0.5**
OSTC	**Ostas**	**83.72**	**321**	*e*pP		pP		02 54 39.3	-1.8
CKRC	**Cesky Krumlov**	**84.79**	**319**	*e*P		**P**		**02 54 36.5**	**0.0**
CKRC				*ex*		x		02 54 45.2	
BRG	**Berggiesshubel**	**85.18**	**321**	Amp				02 54 50.7	
	comp=Z,20nm,1.8s								
BRG	**Berggiesshubel**	**85.18**	**321**	*e*P		pP		02 54 48.7	+0.2
GEC2	**GERESS Array S**	**85.19**	**319**	IAmb		IAmb		02 54 49.9	
	comp=Z,20nm,1.5s								
GERES	**GERESS Array B**	**85.19**	**319**	P		**P**		**02 54 38.4**	**-0.3**
	comp=Z,1.7nm,0.9s,baz=102,slow=4.4,SNR=16								
	comp=Z,1.7nm,0.9s								
KHC	**Kasperske Hory**	**85.29**	**319**	*e*P		**P**		**02 54 38.9**	**-0.2**
KHC				*e*				02 54 47.7	
KHC	**Kasperske Hory**	**85.29**	**319**	*e*P		**P**		**02 54 38.9**	**-0.2**
KHC				*e*pP		**pP**		**02 54 47.7**	**-1.5**
VNDA	**Vanda**	**85.52**	**169**	LR		LR		03 30 40.2	
	comp=Z,212nm,18.1s,baz=316,slow=34								
CLL	**Collm**	**85.81**	**321**	*e*P		**P**		**02 54 41.0**	**-0.5**
CLL				*i* pP		**pP**		**02 54 50.9**	**-0.7**
	comp=Z,8.0nm,1.1s								
CLL				*e*S		**S**		**03 05 16.0**	**+3.6**
CLL				*e*PS		**PnS**		**03 06 12.0**	**-0.2**
CLL				*e*SS		**SS**		**03 11 00.0**	**+10**
CLL				*e*SSS		SSS		03 14 12.0	
CLL				LmV				03 36 00.0	
	comp=Z,100nm,21.7s								
HFS	**Hagfors**	**86.08**	**330**	LR		LR		03 38 18.9	
	comp=Z,151nm,18.5s,baz=90,slow=39								
CTI	**Castel Tesino**	**86.42**	**316**	P		**P**		**02 54 44.8**	**-0.1**
CTI					IAmb	IAmb		02 54 56.2	
	comp=Z,14nm,1.3s								
CTI	**Castel Tesino**	**86.42**	**316**	P		**P**		**02 54 44.8**	**-0.1**
CTI					pmax	pmax			
	comp=Z,14nm,1.3s								
SPITS	**Spitsbergen Ar**	**87.26**	**348**	LR		LR		03 41 10.6	
	comp=Z,288nm,20.3s,baz=72,slow=41								
NB2	**NORSAR Subarra**	**87.36**	**331**	P		**P**		**02 54 48.4**	**-0.6**
	comp=Z,0.7nm,0.7s,baz=96,slow=4.8								
NOA	**NORSAR Array B**	**87.36**	**331**	P		**P**		**02 54 48.5**	**-0.5**
	comp=Z,1.0nm,0.8s,baz=95,slow=5.1,SNR=6.7								
NOA					LR	LR		03 37 15.1	
	comp=Z,129nm,21.7s,baz=95,slow=38								
	comp=Z,1.0nm,0.8s								
DAVOX	**Davos/Dischmat**	**87.67**	**317**	LR		LR		03 38 04.0	
	comp=Z,39nm,21.5s,baz=68,slow=38								
KEST	**Kesra**	**87.93**	**306**	P		**P**		**02 54 53.1**	**+0.8**
	comp=Z,1.9nm,0.8s,baz=352,slow=3.3,SNR=4.4								
KEST					LR	LR		03 35 00.2	
	comp=Z,85nm,21.7s,baz=222,slow=36								
	comp=Z,1.9nm,0.8s								
NVL	**N'lazarevskaya**	**89.44**	**199**	*e*P		P		02 55 06.8	+8.3
NVL					pmax	pmax			
	comp=Z,9.0nm,0.6s								
QSPA	**South Pole Qui**	**90.88**	**180**	P		**P**		**02 55 06.1**	**+0.6**
	comp=Z,1.7nm,1.0s,baz=184,slow=0.2,SNR=2.3								
QSPA					LR	LR		03 34 23.4	
	comp=Z,240nm,18.2s,baz=308,slow=35								
	comp=Z,1.7nm,1.0s								
QSPA	**South Pole Qui**	**90.88**	**180**	P		**P**		**02 55 06.6**	**+1.0**
QSPA					IAmb	IAmb		02 55 15.3	
	comp=Z,24nm,1.9s								
SNAA	**Sanae**	**94.13**	**198**	LR		LR		03 34 27.7	
	comp=Z,160nm,18.0s,baz=118,slow=33								
JMIC	**Jan Mayen**	**94.29**	**342**	LR		LR		03 40 03.5	
	comp=Z,57nm,21.7s,baz=68,slow=37								
TORD	**Torodi Ar. Bea**	**95.42**	**283**	P		**P**		**02 55 27.5**	**+0.1**
	comp=Z,0.3nm,0.9s,baz=123,slow=6.3,SNR=1.6								
	comp=Z,0.3nm,0.9s								
IMAR	**Indian Mountai**	**96.71**	**23**	P		**P**		**02 55 32.6**	**+0.4**
ESDC	**Sonseca Array**	**98.20**	**310**	LR		LR		03 44 59.2	
	comp=Z,81nm,18.1s,baz=115,slow=38								
MDT	**Midelt**	**99.64**	**303**	LR		LR		03 45 57.6	
	comp=Z,80nm,18.1s,baz=106,slow=38								
ILAR	**Eielson Array**	**99.83**	**23**	LR		LR		03 45 51.2	
	comp=Z,101nm,18.5s,baz=292,slow=38								
ANMO	**Albuquerque**	**137.86**	**30**	*i* PKIKP		**PKPdf**		**03 01 25.8**	**-1.5**
TXAR	**Lajitas Array**	**143.75**	**32**	PKP		PKPbc		03 01 36.1	+0.6
	comp=Z,0.2nm,0.4s,baz=242,slow=1.0,SNR=10								
TXAR	**Lajitas Array**	**143.75**	**32**			PKPbc		03 01 35.6	+0.1
JCT	**Junction City**	**144.69**	**26**			**PKPab**		**03 01 37.9**	**-0.3**
JCT	**Junction City**	**144.69**	**26**	PKIKP		**PKPab**		**03 01 37.9**	**-0.3**
CPUP	**Villa Florida**	**144.99**	**222**	PKP		**PKPdf**		**03 01 40.0**	**-0.1**
	comp=Z,3.8nm,0.8s,baz=114,slow=2.6,SNR=7.9								
CPUP	**Villa Florida**	**144.99**	**222**	PKPdf		**PKPab**		**03 01 38.4**	**-1.0**
CPUP	**Villa Florida**	**144.99**	**222**	PKIKP		**PKPab**		**03 01 38.4**	**-1.0**

IDC ***22*** *02:44:04.1±11.0, 5.°09S×129.°75E, h134km±117km, mb3.5/4, mbtmp4.1/5, ML4.5/1, Error ellipse: s-maj=71.0km s-min=28.9km az=83.0*

DJA ***22*** *02:44:11.6±0.4, 5.°5S±4.°×13.°0E±.°, h200km±7km, M4.5/12, mb4.6/5, mB4.8/4, MLv4.5/12, Mw(mB)4.1/4*

NEIC ***22*** *02:44:11.8±2.9, 5.°16S±0.°09×129.°9E±0.°1, h206km±10km, mb4.4/20, Error ellipse: s-maj=19.6km s-min=10.7km az=112.0*

ISC 22 02:44:10.7±0.6, 5.°23S±0.°06×129.°90E±0.°07, h200km, n58, σ1s71/62, mb4.3/9, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BNDI	**Bandanaira**	**0.70**	**0**	P		**Pn**	**02 44 40.9**	**+2.2**
MSAI	**Masohi**	**2.10**	**332**	P		**Pn**	**02 44 51.2**	**+0.9**
MSAI				S		**Sn**	**02 45 20.0**	**-1.2**
AAI	**Ambon**	**2.29**	**312**	P		**Pn**	**02 44 54.1**	**+1.8**
AAI				S		**Sn**	**02 45 23.8**	**-0.9**
SAUI	**Saumlaki**	**3.07**	**153**	Pn		**Pn**	**02 45 03.7**	**+2.5**
SAUI	**Saumlaki**	**3.07**	**153**	P		**Pn**	**02 45 03.4**	**+2.2**
FAKI	**Fak Fak**	**3.27**	**46**			**Pn**	**02 45 04.2**	**+0.6**
FAKI	**Fak Fak**	**3.27**	**46**	P		**Pn**	**02 45 04.2**	**+0.6**
FAKI	**Fak Fak**	**3.27**	**46**	P		**Pn**	**02 45 04.4**	**+0.8**
NLAI	**Namlea**	**3.42**	**305**	P		**Pn**	**02 45 06.8**	**+1.4**
NLAI				S		**Sn**	**02 45 50.4**	**+2.2**
SWI	**Sorong**	**4.54**	**17**	P		**Pn**	**02 45 18.9**	**-0.4**
SANI	**Sanana**	**5.02**	**309**	P		**Pn**	**02 45 24.8**	**-0.6**
SANI	**Sanana**	**5.02**	**309**	P		**Pn**	**02 45 26.1**	**+0.7**
LBMI	**Labuha**	**5.15**	**332**	P		**Pn**	**02 45 26.8**	**-0.3**
	0.4nm2µm72nm,0.7s							
SOEI	**Soe**	**7.17**	**231**	Pn		**Pn**	**02 45 55.7**	**+2.4**
BAKI	**Biak**	**7.38**	**57**	P		**Pn**	**02 45 57.8**	**+1.9**
	0.4nm1µm113nm,0.5s							
MTN	**Manton Dam**	**7.67**	**171**	Pn		**Pn**	**02 45 59.9**	**+0.2**
MTN	**Manton Dam**	**7.67**	**171**	P		**Pn**	**02 45 59.9**	**+0.2**
KDU	**Kakadu**	**7.84**	**161**	P		**Pn**	**02 46 02.2**	**+0.4**
EDFI	**Ende, Flores**	**8.87**	**246**	P		**Pn**	**02 46 13.8**	**-1.7**
KNRA	**Kununurra**	**10.45**	**186**	Pn		**Pn**	**02 46 35.9**	**+0.2**
KNRA	**Kununurra**	**10.45**	**186**	P		**Pn**	**02 46 36.2**	**+0.5**
WB0	**Warramunga Arr**	**15.10**	**164**			**Pn**	**02 47 34.6**	**+0.4**
WB0					IAmb	IAmb	02 47 37.7	
	comp=Z,7.6nm,0.7s							
WRAB	**Tennant Creek**	**15.25**	**164**			**Pn**	**02 47 36.0**	**0.0**
WRAB					IAmb	IAmb	02 47 49.0	
	comp=Z,16nm,1.3s							
WRAB	**Tennant Creek**	**15.25**	**164**	P		**P**	**02 47 36.8**	**+0.4**
WRA	**Warramunga Arr**	**15.25**	**164**	P		**Pn**	**02 47 35.9**	**-0.2**
	comp=Z,2.0nm,0.3s,baz=341,slow=12,SNR=54							
WRA				S		**S**	**02 50 16.3**	**-9.2**
	comp=Z,2.5nm,0.4s,baz=348,slow=22,SNR=4.0							
	comp=Z,4.8nm,0.3s							
WRA	**Warramunga Arr**	**15.25**	**164**			**Pn**	**02 47 36.4**	**+0.3**
WB2	**Warramunga Arr**	**15.26**	**164**	P		**Pn**	**02 47 36.1**	**0.0**
WB2					IAmb	IAmb	02 47 39.6	
	comp=Z,7.3nm,0.7s							
WR0	**Warramunga Arr**	**15.32**	**163**			**Pn**	**02 47 37.4**	**+0.5**
COEN	**Coen**	**15.69**	**125**	P		**Pn**	**02 47 43.0**	**+1.6**
JAGI	**Jajag, Banyuwa**	**15.97**	**257**	P		**P**	**02 47 43.7**	**-0.7**
JAGI					IAmb	IAmb	02 47 53.3	
	comp=Z,18nm,1.0s							
QIS	**Mount

	comp=Z,6.6nm,1.3s						
WB0	**Warramunga Arr**	**42.26**	**268**	P	**P**	02 58 31.3	**-0.7**
WB0				IAmb	IAmb	02 58 37.8	
	comp=Z,9.9nm,1.4s						
WRA	**Warramunga Arr**	**42.26**	**267**	P	**P**	02 58 31.1	**-0.9**
	comp=Z,2.8nm,0.6s,baz=100,slow=7.1,SNR=34						
	comp=Z,2.8nm,0.6s						
WRA	**Warramunga Arr**	**42.26**	**267**	P	**P**	02 58 31.2	**-0.8**
KNRA	**Kununurra**	**48.61**	**271**	P	**P**	02 59 20.6	**-0.1**
TROLL	**Troll, Antarti**	**83.17**	**181**	P	**P**	03 02 56.0	**+0.3**
SNAA	**Sanae**	**83.51**	**179**	P	**P**	03 02 57.3	**-0.1**
SNAA	**Sanae**	**83.51**	**179**	P	**P**	03 02 57.1	**-0.3**
SNAA				IAmb	IAmb	03 03 02.9	
	comp=Z,5.0nm,1.5s						
VNA3	**Neumayer Olymp**	**83.72**	**177**	P	**P**	03 02 58.0	**-0.3**
AKASG	**Malin Array Be**	**145.89**	**326**	PKP	**PKPab**	03 10 07.2	**-0.2**
	comp=Z,1.0nm,0.6s,baz=43,slow=3.2,SNR=4.5						

PRU 22 02:54:07.0±0.0,**50.28N**×**18.77E**,**h0**km,**Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.60**	**222**	*e*P	Pg	02 54 18.7	+0.3
OKC	**Ostrava-Krasne**	**0.60**	**222**	*e*PG	Pg	02 54 18.7	+0.3
OJC	**Ojcow**	**0.66**	**95**	*e*P	Pg	02 54 19.0	-0.7
OJC	**Ojcow**	**0.66**	**95**	*e*Pg	Pg	02 54 19.0	-0.7
OJC				*e*Sg	Sg	02 54 27.7	-0.6
OJC	**Ojcow**	**0.66**	**95**	P	Pg	02 54 18.7	-1.0
OJC	**Ojcow**	**0.66**	**95**	pmax	pmax		
	comp=Z,28nm,0.6s						
OJC	**Ojcow**	**0.66**	**95**	P	Pg	02 54 18.7	-0.9
MORC	**Moravsky Berou**	**0.94**	**238**	P	Pg	02 54 24.5	-0.5
MORC	**Moravsky Berou**	**0.94**	**238**	*e*PG	Pg	02 54 24.9	-0.1
MORC				*e*SG	Sg	02 54 37.3	+0.2
MORC	**Moravsky Berou**	**0.94**	**238**	pmax	pmax		
	comp=Z,24nm,1.6s						
MORC	**Moravsky Berou**	**0.94**	**238**	P	Pg	02 54 24.5	-0.5
MAUC	**Maruska**	**1.10**	**214**	*e*PG	Pg	02 54 27.8	-0.3
MAUC				*e*SG	Sg	02 54 43.0	+0.7
	comp=Z,32nm,0.9s						
LANS	**Liptovska Anna**	**1.22**	**158**	*e*PG	Pg	02 54 30.0	-0.3
LANS				*e*SG	Sg	02 54 46.3	+0.2
LANS				*e*LG	Lg	02 54 48.4	
KRLC	**Kraliky**	**1.29**	**262**	*e*PG	Pg	02 54 29.5	-2.3
KRLC				*e*SG	Sg	02 54 47.8	-0.8
	comp=Z,4.5nm,0.3s						
NIE	**Niedzica**	**1.31**	**130**	*e*Pg	Pg	02 54 31.6	-0.5
NIE				*e*Sg	Sb	02 54 50.0	0.0
DPC	**Dobruska-Polom**	**1.57**	**274**	*e*PG	Pn	02 54 35.5	-0.7
DPC				*e*SG	Sg	02 54 57.7	+0.3
	comp=Z,5.6nm,0.6s						
OSTC	**Ostas**	**1.66**	**281**	*e*PG	Pn	02 54 37.5	+0.1
OSTC				*e*SG	Sn	02 54 59.2	-0.1
KSP	**Ksiaz**	**1.68**	**291**	*e*Pg	Pb	02 54 38.9	+0.1
KSP				*e*Sg	Sg	02 55 01.9	+1.1
VRAC	**Vranov**	**1.71**	**236**	*e*PN	Pn	02 54 38.3	+0.2
VRAC				*e*SG	Sb	02 55 01.2	-0.2
CHVC	**Chvalec**	**1.76**	**281**	*e*PG	Pb	02 54 39.7	-0.5
VYHS	**Vyhne**	**1.79**	**179**	*e*SN	Sn	02 55 00.8	-1.7
KRUC	**Moravsky**	**1.97**	**233**	*e*SG	Sb	02 55 08.2	-0.5
KHC	**Kasperske Hory**	**3.56**	**253**	*e*SG	Sg	02 56 00.7	-0.6

IASPEI ***22*** *02:57:14.8±1.6,45.81N±0.03×26.67E±0.03,h105km±8km, Error ellipse: s-maj=4.4km s-min=3.9km az=152.7,GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*

BUC ***22*** *02:57:14.9±0.3,45.77N×26.71E,h102km±2km, ml3.6/37, Error ellipse: s-maj=1.7km s-min=1.6km az=126.0*

SOF ***22*** *02:57:15.9,45.68N×26.77E,h100km,MD3.3*

ISC 22 02:57:14.1±1.3,**45.79N**±0.02×**26.69E**±0.02,**h111**km±5km, **n114,** σ0.9**75**/201,**124C-72D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLOR	**Plostina**	**0.06**	**335**	↑P	**Pn**	**02 57 29.3**	**-0.1**
PLOR				↓S	**Sn**	**02 57 40.1**	**-0.9**
PLOR	**Plostina**	**0.06**	**335**	↑P	**Pn**	**02 57 29.3**	**-0.1**
PLOR				↓S	**Sn**	**02 57 40.1**	**-0.9**
VRI	**Vrincioaia**	**0.08**	**21**	↓P	**Pn**	**02 57 29.4**	**0.0**
VRI				↓S	**Sn**	**02 57 40.0**	**-1.0**
VRI	**Vrincioaia**	**0.08**	**21**	↓P	**Pn**	**02 57 29.4**	**0.0**
VRI				↓S	**Sn**	**02 57 40.0**	**-1.0**
BISRR	**Bisoca**	**0.25**	**176**	↑P	**Pn**	**02 57 30.3**	**+0.4**
BISRR				↑S	**Sn**	**02 57 40.4**	**-1.3**
BISRR	**Bisoca**	**0.25**	**176**	↑P	**Pn**	**02 57 30.3**	**+0.4**
BISRR				↑S	**Sn**	**02 57 40.4**	**-1.3**
ODBI	**Odobesti**	**0.26**	**97**	↓P	**Pn**	**02 57 30.7**	**+0.9**
ODBI				↓S	**Sn**	**02 57 42.4**	**+0.8**
PANC	**Panciu**	**0.33**	**76**	↑P	**Pn**	**02 57 30.5**	**+0.4**
PANC				↑S	**Sn**	**02 57 42.0**	**-0.1**
PANC	**Panciu**	**0.33**	**76**	↑P	**Pn**	**02 57 30.5**	**+0.4**
PANC				↑S	**Sn**	**02 57 42.0**	**-0.1**
COVR	**Voineasa-Covas**	**0.34**	**279**	↑P	**Pn**	**02 57 30.1**	**-0.1**
COVR				↑S	**Sn**	**02 57 41.6**	**-0.7**
COVR	**Voineasa-Covas**	**0.34**	**279**	↑P	**Pn**	**02 57 30.1**	**-0.1**
COVR				↑S	**Sn**	**02 57 41.6**	**-0.7**
NEHR	**Nehoiu**	**0.46**	**217**	↑P	**Pn**	**02 57 31.5**	**+0.7**
NEHR				↑S	**Sn**	**02 57 43.5**	**+0.1**
NEHR	**Nehoiu**	**0.46**	**217**	↑P	**Pn**	**02 57 31.5**	**+0.7**
NEHR				↑S	**Sn**	**02 57 43.5**	**+0.1**
GRER		**0.46**	**154**	↑P	**Pn**	**02 57 32.1**	**+1.3**
GRER				↑S	**Sn**	**02 57 45.5**	**+2.2**
GHRR		**0.57**	**62**	↑P	**Pn**	**02 57 32.0**	**+0.5**
GHRR				↓S	**Sn**	**02 57 45.0**	**+0.4**
GHRR		**0.57**	**62**	↑P	**Pn**	**02 57 32.0**	**+0.5**
GHRR				↓S	**Sn**	**02 57 45.0**	**+0.4**
MLR	**Muntele Rosu**	**0.60**	**240**	↓P	**Pn**	**02 57 32.2**	**+0.3**
MLR				↑S	**Sn**	**02 57 44.9**	**-0.5**
MLR	**Muntele Rosu**	**0.60**	**240**	↓P	**Pn**	**02 57 32.2**	**+0.3**
MLR				↑S	**Sn**	**02 57 44.9**	**-0.5**
ISR	**Istrita**	**0.68**	**189**	↓S	**Sn**	**02 57 46.0**	**-0.3**
ISR	**Istrita**	**0.68**	**189**	↓S	**Sn**	**02 57 46.0**	**-0.3**
OZUR		**0.70**	**296**	↓P	**Pn**	**02 57 32.4**	**-0.1**
OZUR				↑S	**Sn**	**02 57 45.1**	**-1.4**
OZUR		**0.70**	**296**	↓P	**Pn**	**02 57 32.4**	**-0.1**
TUDR		**0.72**	**106**	↓P	**Pn**	**02 57 32.6**	**-0.1**
TUDR				↑S	**Sn**	**02 57 46.4**	**-0.2**
TUDR		**0.72**	**106**	↓P	**Pn**	**02 57 32.6**	**-0.1**
TUDR				↑S	**Sn**	**02 57 46.4**	**-0.2**
TESR	**Tescani**	**0.72**	**358**	↑P	**Pn**	**02 57 32.6**	**-0.1**
TESR				↑S	**Sn**	**02 57 45.0**	**-1.7**
TESR	**Tescani**	**0.72**	**358**	↑P	**Pn**	**02 57 32.6**	**-0.1**
TESR				↑S	**Sn**	**02 57 45.0**	**-1.7**
SLCR	**Slobozia Conac**	**0.79**	**105**	↑P	**Pn**	**02 57 33.2**	**-0.1**
SLCR				↑S	**Sn**	**02 57 47.4**	**-0.3**
SLCR	**Slobozia Conac**	**0.79**	**105**	↑P	**Pn**	**02 57 33.2**	**-0.1**
SLCR				↑S	**Sn**	**02 57 47.4**	**-0.3**
IZVR	**Izvoarele**	**0.80**	**108**	↑P	**Pn**	**02 57 33.6**	**+0.3**
IZVR				↓S	**Sn**	**02 57 47.0**	**-0.8**
IZVR	**Izvoarele**	**0.80**	**108**	↑P	**Pn**	**02 57 33.6**	**+0.3**
IZVR				↓S	**Sn**	**02 57 47.0**	**-0.8**
BIR	**Birlad**	**0.81**	**54**	↑P	**Pn**	**02 57 34.0**	**+0.5**
BIR				↓S	**Sn**	**02 57 47.5**	**-0.6**
BIR	**Birlad**	**0.81**	**54**	↑P	**Pn**	**02 57 34.0**	**+0.5**
BIR				↓S	**Sn**	**02 57 47.5**	**-0.6**
VARL	**Varlezi**	**0.82**	**82**	↑P	**Pn**	**02 57 33.9**	**+0.4**
VARL				↑S	**Sn**	**02 57 48.2**	**0.0**
VARL	**Varlezi**	**0.82**	**82**	↑P	**Pn**	**02 57 33.9**	**+0.4**
VARL				↑S	**Sn**	**02 57 48.2**	**0.0**
SCHL	**Schela**	**0.85**	**110**	↓P	**Pn**	**02 57 34.3**	**+0.4**
SCHL				↓S	**Sn**	**02 57 48.1**	**-0.7**
SCHL	**Schela**	**0.85**	**110**	↓P	**Pn**	**02 57 34.3**	**+0.4**
SCHL				↓S	**Sn**	**02 57 48.1**	**-0.7**
SECR		**0.88**	**210**	↓P	**Pn**	**02 57 34.9**	**+0.7**
SECR				↓S	**Sn**	**02 57 48.1**	**-1.2**
SECR		**0.88**	**210**	↓P	**Pn**	**02 57 34.9**	**+0.7**
SECR				↓S	**Sn**	**02 57 48.1**	**-1.2**
PGOR	**Pogoanele**	**0.91**	**167**	↑S	**Sn**	**02 57 51.5**	**+1.7**
SCTR	**Scanteiesti**	**0.92**	**97**	↓P	**Pn**	**02 57 35.2**	**+0.7**
SCTR				↓S	**Sn**	**02 57 49.8**	**-0.2**
SCTR	**Scanteiesti**	**0.92**	**97**	↓P	**Pn**	**02 57 35.2**	**+0.7**
SCTR				↓S	**Sn**	**02 57 49.8**	**-0.2**
DOPR	**Dopca**	**0.92**	**281**	↓P	**Pn**	**02 57 34.8**	**+0.2**
DOPR				↓S	**Sn**	**02 57 49.8**	**-0.3**
DOPR	**Dopca**	**0.92**	**281**	↓P	**Pn**	**02 57 34.8**	**+0.2**
DOPR				↓S	**Sn**	**02 57 49.8**	**-0.3**
TATR	**Tatarca**	**0.97**	**101**	↑P	**Pn**	**02 57 35.7**	**+0.6**
TATR				↓S	**Sn**	**02 57 50.6**	**-0.3**
TATR	**Tatarca**	**0.97**	**101**	↑P	**Pn**	**02 57 35.7**	**+0.6**
TATR				↓S	**Sn**	**02 57 50.6**	**-0.3**
VLDR	**Vladesti**	**0.98**	**87**	↑P	**Pn**	**02 57 35.6**	**+0.5**
VLDR				↑S	**Sn**	**02 57 50.7**	**-0.2**
VLDR	**Vladesti**	**0.98**	**87**	↑P	**Pn**	**02 57 35.6**	**+0.5**
VLDR				↑S	**Sn**	**02 57 50.7**	**-0.2**
PLAR	**PLOIESTI**	**0.99**	**208**	↓S	**Sn**	**02 57 50.9**	**-0.4**
PLAR	**PLOIESTI**	**0.99**	**208**	↓S	**Sn**	**02 57 50.9**	**-0.4**
GIUM	**Giurgiulesti**	**1.11**	**106**	↑P	**Pn**	**02 57 37.2**	**+0.7**
GIUM				↓S	**Sn**	**02 57 53.4**	**0.0**
GIUM	**Giurgiulesti**	**1.11**	**106**	↑P	**Pn**	**02 57 37.2**	**+0.7**
VASR	**Vaslui**	**1.14**	**42**	↑P	**Pn**	**02 57 37.3**	**+0.4**
VASR				↑S	**Sn**	**02 57 53.6**	**-0.5**
VASR	**Vaslui**	**1.14**	**42**	↑P	**Pn**	**02 57 37.3**	**+0.4**
VASR				↑S	**Sn**	**02 57 53.6**	**-0.5**
SULR		**1.16**	**195**	↑P	**Pn**	**02 57 37.8**	**+0.8**
SULR				↓S	**Sn**	**02 57 54.9**	**+0.6**
SULR		**1.16**	**195**	↑P	**Pn**	**02 57 37.8**	**+0.8**
SULR				↓S	**Sn**	**02 57 54.9**	**+0.6**
CFR	**Carcaliu**	**1.19**	**121**	↑P	**Pn**	**02 57 37.6**	**+0.2**
CFR				↑S	**Sn**	**02 57 54.4**	**-0.6**
CFR	**Carcaliu**	**1.19**	**121**	↑P	**Pn**	**02 57 37.6**	**+0.2**
CFR				↑S	**Sn**	**02 57 54.4**	**-0.6**
VOIR		**1.20**	**253**	↑P	**Pn**	**02 57 37.8**	**+0.2**
VOIR				↑S	**Sn**	**02 57 54.6**	**-0.8**
VOIR		**1.20**	**253**	↑P	**Pn**	**02 57 37.8**	**+0.2**
VOIR				↑S	**Sn**	**02 57 54.6**	**-0.8**
BIZ	**Bicaz**	**1.22**	**341**	↑P	**Pn**	**02 57 38.6**	**+0.9**
BIZ				↑S	**Sn**	**02 57 55.8**	**+0.3**
BIZ	**Bicaz**	**1.22**	**341**	↑P	**Pn**	**02 57 38.6**	**+0.9**
BIZ				↑S	**Sn**	**02 57 55.8**	**+0.3**
JOSR	**Joseni**	**1.22**	**319**	↓P	**Pn**	**02 57 38.1**	**+0.3**
AMRR	**Amara**	**1.27**	**159**	↑P	**Pn**	**02 57 38.9**	**+0.6**
AMRR				↑S	**Sn**	**02 57 56.8**	**+0.2**
AMRR	**Amara**	**1.27**	**159**	↑P	**Pn**	**02 57 38.9**	**+0.6**
AMRR				↑S	**Sn**	**02 57 56.8**	**+0.2**
LEOM	**Leova**	**1.28**	**57**	↑P	**Pn**	**02 57 39.0**	**+0.6**
LEOM				↑S	**Sn**	**02 57 56.8**	**+0.1**
LEOM	**Leova**	**1.28**	**57**	↑P	**Pn**	**02 57 39.0**	**+0.6**
LEOM				↑S	**Sn**	**02 57 56.8**	**+0.1**
LEHL	**Lehliu**	**1.32**	**176**	↑P	**Pn**	**02 57 39.6**	**+0.7**
LEHL				↓S	**Sn**	**02 57 58.1**	**+0.5**
LEHL	**Lehliu**	**1.32**	**176**	↑P	**Pn**	**02 57 39.6**	**+0.7**
LEHL				↓S	**Sn**	**02 57 58.1**	**+0.5**
HARR	**Harsova**	**1.41**	**141**	↓P	**Pn**	**02 57 40.2**	**+0.3**
HARR	**Harsova**	**1.41**	**141**	↓P	**Pn**	**02 57 40.2**	**+0.3**
IAS	**Iasi**	**1.52**	**23**	↓P	**Pn**	**02 57 41.4**	**+0.2**
IAS				↓S	**Sn**	**02 58 00.9**	**-0.9**
IAS	**Iasi**	**1.52**	**23**	↓P	**Pn**	**02 57 41.4**	**+0.2**
IAS				↓S	**Sn**	**02 58 00.9**	**-0.9**
TPGR	**Topolog**	**1.54**	**127**	↑P	**Pn**	**02 57 41.4**	**-0.1**
TPGR				↓S	**Sn**	**02 58 00.6**	**-1.6**
TPGR	**Topolog**	**1.54**	**127**	↑P	**Pn**	**02 57 41.4**	**-0.1**
TPGR				↓S	**Sn**	**02 58 00.6**	**-1.6**
TLBR	**Topalu**	**1.58**	**142**	↑P	**Pn**	**02 57 42.3**	**+0.4**
TLBR				↓S	**Sn**	**02 58 01.3**	**-1.7**
TLBR	**Topalu**	**1.58**	**142**	↑P	**Pn**	**02 57 42.3**	**+0.4**
TLBR				↓S	**Sn**	**02 58 01.3**	**-1.7**
RASA	**Rasa**	**1.61**	**168**	↑P	**Pn**	**02 57 42.7**	**+0.3**
RASA				↑S	**Sn**	**02 58 03.2**	**-0.6**
RASA	**Rasa**	**1.61**	**168**	↑P	**Pn**	**02 57 42.7**	**+0.3**
RASA				↑S	**Sn**	**02 58 03.2**	**-0.6**
TLCR		**1.61**	**111**	↑P	**Pn**	**02 57 42.8**	**+0.5**
TLCR				↑S	**Sn**	**02 58 02.9**	**-0.9**
TLCR		**1.61**	**111**	↑P	**Pn**	**02 57 42.8**	**+0.5**
TLCR				↑S	**Sn**	**02 58 02.9**	**-0.9**
SGRR	**Singureni**	**1.65**	**198**	↓P	**Pn**	**02 57 42.0**	**-0.8**
SGRR				↓S	**Sn**	**02 58 04.5**	**0.0**
SGRR	**Singureni**	**1.65**	**198**	↓P	**Pn**	**02 57 42.0**	**-0.8**
SGRR				↓S	**Sn**	**02 58 04.5**	**0.0**
CVDA	**Cernavoda**	**1.75**	**146**	↑P	**Pn**	**02 57 44.4**	**+0.5**
CVDA				↑S	**Sn**	**02 58 06.4**	**-0.2**
CVDA	**Cernavoda**	**1.75**	**146**	↑P	**Pn**	**02 57 44.4**	**+0.5**
CVDA				↑S	**Sn**	**02 58 06.4**	**-0.2**
HUMR	**Humele**	**1.75**	**224**	↑S	**Sn**	**02 58 06.0**	**-0.8**
HUMR	**Humele**	**1.75**	**224**	↑S	**Sn**	**02 58 06.0**	**-0.8**
TIRR	**Tirgusor**	**1.81**	**137**	↓P	**Pn**	**02 57 44.9**	**+0.1**
TIRR				↑S	**Sn**	**02 58 06.1**	**-1.9**
TIRR	**Tirgusor**	**1.81**	**137**	↓P	**Pn**	**02 57 44.9**	**+0.1**
TIRR				↑S	**Sn**	**02 58 06.1**	**-1.9**
MILM	**Milestii Mici**	**1.85**	**52**	↑P	**Pn**	**02 57 45.7**	**+0.4**
MILM				↑S	**Sn**	**02 58 07.9**	**-1.4**
MILM	**Milestii Mici**	**1.85**	**52**	↑P	**Pn**	**02 57 45.7**	**+0.4**
MILM				↑S	**Sn**	**02 58 07.9**	**-1.0**
ICOR	**Ion Corvin**	**1.85**	**154**	↓P	**Pn**	**02 57 46.0**	**+0.7**
ICOR				↑S	**Sn**	**02 58 08.2**	**-0.8**
ICOR	**Ion Corvin**	**1.85**	**154**	↓P	**Pn**	**02 57 46.0**	**+0.7**
ICOR				↑S	**Sn**	**02 58 08.2**	**-0.8**
KIS	**Kishinev**	**1.90**	**50**	↑P	**Pn**	**02 57 46.4**	**+0.5**
KIS				↑S	**Sn**	**02 58 09.2**	**-0.9**
KIS	**Kishinev**	**1.90**	**50**	↑P	**Pn**	**02 57 46.4**	**+0.5**
COPA	**Copaceanca**	**1.96**	**213**	↑P	**Pn**	**02 57 46.7**	**+0.1**
COPA				↑S	**Sn**	**02 58 10.3**	**-1.2**
COPA	**Copaceanca**	**1.96**	**213**	↑P	**Pn**	**02 57 46.7**	**+0.1**
COPA				↑S	**Sn**	**02 58 10.3**	**-1.2**
MFTR	**Murfatlar**	**2.03**	**142**	↑P	**Pn**	**02 57 47.8**	**+0.3**
MFTR				↑S	**Sn**	**02 58 12.2**	**-0.8**
MFTR	**Murfatlar**	**2.03**	**142**	↑P	**Pn**	**02 57 47.8**	**+0.3**
MFTR				↑S	**Sn**	**02 58 12.2**	**-0.8**
BURAR	**Bucovina Array**	**2.08**	**331**	↑P	**Pn**	**02 57 50.0**	**+1.7**
BURAR	**Bucovina Array**	**2.08**	**331**	↑P	**Pn**	**02 57 50.0**	**+1.7**
EFOR	**EFORIE**	**2.20**	**140**	↓S	**Sn**	**02 58 16.1**	**-0.8**
EFOR	**EFORIE**	**2.20**	**140**	↓S	**Sn**	**02 58 16.1**	**-0.8**
RAZG	**Razgrad**	**2.23**	**183**	↓S	**Sn**	**02 58 15.8**	**-1.8**
PURM	**Purcari**	**2.33**	**70**	↓S	**Sn**	**02 58 19.3**	**-0.5**
PURM	**Purcari**	**2.33**	**70**	↓S	**Sn**	**02 58 19.3**	**-0.5**
PSN	**Preselentsi**	**2.37**	**153**	*i* P	**Pn**	**02 57 52.9**	**+1.1**
MANR	**Mangalia**	**2.40**	**145**	↑P	**Pn**	**02 57 52.9**	**+0.8**
MANR				↑S	**Sn**	**02 58 20.4**	**-1.0**
MANR	**Mangalia**	**2.40**	**145**	↑P	**Pn**	**02 57 52.9**	**+0.8**
MANR				↑S	**Sn**	**02 58 20.4**	**-1.0**
SZH	**Strazhica**	**2.58**	**192**	*i* P	**Pn**	**02 57 54.7**	**0.0**
PRD	**Provadia**	**2.64**	**169**	*i* P	**Pn**	**02 57 56.6**	**+1.2**
ROIA	**ROIAK**	**2.75**	**169**	*i* P	**Pn**	**02 57 57.7**	**+0.9**
DRGR		**2.93**	**291**	↑P	**Pn**	**02 57 59.7**	**+0.4**
DRGR		**2.93**	**291**	↑P	**Pn**	**02 57 59.7**	**+0.4**
MPEP	**Malo Peshtene**	**3.22**	**222**	P	**Pn**	**02 58 04.8**	**+1.7**

AEIC ***22*** *03:01:52±1.8,51.20N±0.07×176.27W±0.09,h26km±8km, ML3.8,mb3.9/23(NEIC), Error ellipse: s-maj=10.8km s-min=6.3km az=147.0*

NEIC ***22*** *03:01:55.0±1.1,51.32N±0.06×176.34W±0.05, h35km±17km, Error ellipse: s-maj=8.4km s-min=4.4km az=160.0*

IDC ***22*** *03:01:55.3±0.8,51.37N×176.49W,h45km±8km,mb3.5/9, mbtmp3.8/10,ML3.7/1,MS2.7/1, Error ellipse: s-maj=35.6km s-min=15.9km az=167.0*

ISC 22 03:01:55.7±0.7,**51.34N**±0.08×**176.38W**±0.04,**h47**km,**n71,** σ1.9**06/69,mb3.8**/10,**Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETKA	**Kagalaska Isla**	**0.52**	**358**		**Pn**	**03 02 05.6**	**-1.5**
ADK	**Adak**	**0.58**	**341**		**Pn**	**03 02 05.6**	**-2.1**
ADK				Sn	**Sn**	**03 02 15.8**	**-0.6**
KIMD	**Kanaga Island**	**0.68**	**309**		**Pn**	**03 02 07.7**	**-1.4**
GSCK	**Great Sitkin C**	**0.69**	**11**		**Pn**	**03 02 08.1**	**-1.0**
KIWB	**Kanaga Island**	**0.71**	**317**		**Pn**	**03 02 08.4**	**-1.0**
GSMY	**Great Sitkin M**	**0.73**	**16**		**Pn**	**03 02 08.8**	**-1.0**
GSTD	**Great Sitkin T**	**0.73**	**11**		**Pn**	**03 02 08.9**	**-0.9**
GSTD					**Sn**	**03 02 20.8**	**+0.8**
KIKV	**Kanaga Island**	**0.73**	**318**		**Pn**	**03 02 08.9**	**-0.9**
KICM	**Kanaga Island**	**0.77**	**319**		**Pn**	**03 02 09.5**	**-0.7**
GSTR	**Great Sitkin T**	**0.78**	**14**		**Pn**	**03 02 09.8**	**-0.6**
TAPA	**Tanaga Point A**	**1.01**	**299**		**Pn**	**03 02 12.4**	**-1.2**
TASE	**Tanaga Southea**	**1.15**	**296**		**Pn**	**03 02 14.7**	**-0.7**
GAKI	**Gareloi-Kavalg**	**1.54**	**279**		**Pn**	**03 02 19.2**	**-1.5**
GAEA	**Gareloi East**	**1.54**	**288**		**Pn**	**03 02 20.3**	**-0.4**
GALAA	**Gareloi Lava P**	**1.55**	**287**		**Pn**	**03 02 20.3**	**-0.6**
ATKA	**Atka Island**	**1.61**	**57**		**Pn**	**03 02 19.0**	**-2.5**
ATKA					**Sn**	**03 02 41.4**	**+0.3**
GASW	**Gareloi Southw**	**1.61**	**287**		**Pn**	**03 02 20.8**	**-0.8**
CERAA	**Semis' Rag'd T**	**2.52**	**285**		**Pn**	**03 02 33.9**	**-0.2**
CERB	**Semis' Cerberu**	**2.56**	**285**		**Pn**	**03 02 34.6**	**-0.1**
CERB					**Sn**	**03 03 05.8**	**+1.3**
CESW	**Semis' Southwe**	**2.59**	**284**		**Pn**	**03 02 35.0**	**0.0**
CEAP	**Semis' Anvil P**	**2.60**	**286**		**Pn**	**03 02 35.5**	**+0.3**
AMKA	**Amchitka**	**2.71**	**273**		**Pn**	**03 02 35.5**	**-1.1**
LSPA	**Little Sitkin**	**3.21**	**283**		**Pn**	**03 02 43.8**	**+0.3**
LSNW	**Little Sitkin**	**3.24**	**283**		**Pn**	**03 02 44.4**	**+0.4**
NIKH	**Nikolski High**	**4.91**	**68**		**Pn**	**03 03 06.3**	**-0.5**
SHEM	**Shemya Is, Ala**	**6.04**	**287**	LR	LR	03 05 23.0	
	comp=Z,63nm,20.6s,baz=289,slow=35						
SPIA	**Saint Paul Isl**	**6.86**	**29**		**Pn**	**03 03 35.0**	**+1.5**
SVW2	**Sparrevohn**	**15.07**	**42**	Pn	**Pn**	**03 05 25.3**	**0.0**
SVW2				IAmb	IAmb	03 06 01.3	
	comp=Z,6.4nm,1.1s						
KDAK	**Kodiak Island**	**15.18**	**56**	P	**Pn**	**03 05 25.9**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=0.3,slow=2.8,SNR=12						
KDAK				S	**Sn**	**03 08 17.5**	**+4.0**
	comp=Z,3.8nm,0.9s,baz=356,slow=8.5,SNR=1.8						
	comp=Z,8.1nm,0.3s						
KDAK	**Kodiak Island**	**15.18**	**56**	Pn	**Pn**	**03 05 26.2**	**-0.5**
N19K	**Bonanza Creek**	**15.39**	**44**	Pn	**Pn**	**03 05 28.2**	**-1.4**
N19K				IAmb	IAmb	03 05 47.6	
	comp=Z,6.6nm,0.9s						
L19K	**White Mountain**	**15.94**	**39**		**Pn**	**03 05 36.6**	**+0.1**
L19K				IAmb	IAmb	03 05 55.3	
	comp=Z,12nm,1.1s						
CNPM	**China Poot**	**16.37**	**50**		**Pn**	**03 05 41.8**	**-0.1**
CNPM				IAmb	IAmb	03 06 11.5	
	comp=Z,14nm,1.1s						
SKT	**Skwentna**	**17.20**	**42**		**Pn**	**03 05 52.8**	**+0.6**
SUA	**Susitna One**	**17.31**	**44**		**Pn**	**03 05 53.1**	**-0.7**
SUA				IAmb	IAmb	03 06 35.1	
	comp=Z,8.5nm,1.2s						
J20K	**Nowinta River**	**17.36**	**34**		**Pn**	**03 05 55.0**	**+0.8**
SEW	**Seward**	**17.41**	**49**	Pn	**Pn**	**03 05 52.5**	**-2.3**
SEW				IAmb	IAmb	03 05 55.0	
	comp=Z,8.8nm,1.1s						
RND	**Reindeer**	**18.95**	**40**	P	**P**	**03 06 12.7**	**+0.1**
RND				IAmb	IAmb	03 06 26.6	
	comp=Z,4.2nm,0.6s						
MLY	**Manley**	**19.05**	**34**		**P**	**03 06 13.3**	**-0.4**
DHY	**Denali Highway**	**19.41**	**42**	P	**P**	**03 06 18.1**	**+0.4**
DHY				IAmb	IAmb	03 06 35.4	
	comp=Z,4.6nm,0.6s						
HDA	**Harding Lake**	**20.15**	**38**	P	**P**	**03 06 26.0**	**+0.4**
HDA				IAmb	IAmb	03 06 42.8	
	comp=Z,5.8nm,0.8s						
PAX	**Paxson**	**20.17**	**43**	P	**P**	**03 06 25.9**	**0.0**
IL31		**20.34**	**37**	P	**P**	**03 06 28.9**	**+1.3**
ILAR	**Eielson Array**	**20.34**	**37**	P	**P**	**03 06 25.8**	**-1.9**
	comp=Z,0

HNR	**Honiara**	**36.20**	**150**	LR	LR		03 43 50.7	
	comp=Z,81nm,20.6s,baz=135,slow=34							
SONM	**Songino Array**	**38.19**	**320**	LR	LR		03 46 32.8	
	comp=Z,60nm,18.3s,baz=106,slow=37							
CMAR	**Chiang Mai Arr**	**40.96**	**272**	LR	LR		03 45 54.5	
	comp=Z,48nm,21.7s,baz=80,slow=34							
WB2	**Warramunga Arr**	**43.16**	**191**	P	**P**		**03 31 06.2**	**-1.2**
WB2				IAmb	IAmb		03 31 52.3	
	comp=Z,11nm,1.4s							
WRA	**Warramunga Arr**	**43.16**	**191**	P	**P**		**03 31 09.2**	**+1.9**
	comp=Z,3.5nm,1.0s,baz=11,slow=8.4,SNR=12							
	comp=Z,3.5nm,1.0s							
WRA	**Warramunga Arr**	**43.16**	**191**	P	**P**		**03 31 06.9**	**-0.4**
AS31	**Alice Springs**	**46.87**	**191**	P	**P**		**03 31 35.6**	**-1.2**
AS31				IAmb	IAmb		03 31 41.6	
	comp=Z,1.2nm,0.6s							
DZM	**Mont Dzumac**	**50.23**	**151**	LR	LR		03 50 36.6	
	comp=Z,117nm,20.9s,baz=28,slow=33							
ZALV	**Zalesovo Beam**	**53.06**	**321**	LR	LR		03 56 32.6	
	comp=Z,44nm,18.0s,baz=138,slow=38							
MKAR	**Makanchi Array**	**53.59**	**312**	P	**P**		**03 32 27.9**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=88,slow=9.7,SNR=6.0							
	comp=Z,0.5nm,0.6s							
MKAR	**Makanchi Array**	**53.59**	**312**	P	**P**		**03 32 25.0**	**-2.5**
ILAR	**Eielson Array**	**61.39**	**27**	P	**P**		**03 33 22.5**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=252,slow=5.6,SNR=5.2							
	comp=Z,0.5nm,0.8s							
ILAR	**Eielson Array**	**61.39**	**27**	P	**P**		**03 33 20.8**	**-1.4**
GRNC	**Granite Creek**	**63.46**	**32**	P	**P**		**03 33 36.1**	**-0.2**
BESE	**Bessie Mountai**	**67.07**	**34**	P	**P**		**03 33 57.9**	**-1.6**
BESE				IAmb	IAmb		03 34 12.1	
	comp=Z,6.6nm,0.8s							
ABKAR	**Akbulak array**	**68.42**	**316**	P	**P**		**03 34 07.5**	**-0.7**
BELG	**Belogornoye**	**75.25**	**321**	LR	LR		04 09 37.2	
	comp=Z,44nm,19.2s,baz=139,slow=37							
YKA	**Yellowknife Ar**	**75.82**	**28**	P	**P**		**03 34 53.2**	**+1.1**
	comp=Z,0.9nm,0.5s,baz=291,slow=5.8,SNR=14							
	comp=Z,0.9nm,0.5s							
ARCES	**ARCESS Array B**	**77.78**	**341**	P	**P**		**03 35 03.7**	**+0.6**
	comp=Z,1.9nm,0.6s,baz=66,slow=9.0,SNR=10							
	comp=Z,1.9nm,0.6s							
ARCES	**ARCESS Array B**	**77.78**	**341**	P	**P**		**03 35 03.3**	**+0.2**
FINES	**FINESS Array B**	**82.02**	**334**	P	**P**		**03 35 26.2**	**+0.1**
	comp=Z,1.7nm,0.5s,baz=56,slow=5.5,SNR=11							
	comp=Z,1.7nm,0.5s							
FINES	**FINESS Array B**	**82.02**	**334**	P	**P**		**03 35 25.5**	**-0.6**
FINES				PP	**PP**		**03 38 35.6**	**+2.0**
NVAR	**Mina Array Bea**	**82.95**	**51**	P	**P**		**03 35 33.9**	**+2.1**
	comp=Z,0.2nm,0.3s,baz=350,slow=2.0,SNR=2.2							
	comp=Z,0.2nm,0.3s							
NVAR	**Mina Array Bea**	**82.95**	**51**	P	**P**		**03 35 31.1**	**-0.7**
QSM	**Queen of Sheba**	**84.99**	**53**	P	**P**		**03 35 39.9**	**-2.1**
QSM				IAmb	IAmb		03 35 41.6	
	comp=Z,3.3nm,0.8s							
AKASG	**Malin Array Be**	**86.35**	**324**	P	**P**		**03 35 48.8**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=62,slow=2.5,SNR=1.6							
	comp=Z,0.3nm,0.4s							
PDAR	**Pinedale Array**	**87.06**	**45**	P	**P**		**03 35 54.3**	**+1.9**
	comp=Z,0.1nm,0.3s,baz=238,slow=5.2,SNR=2.0							
	comp=Z,0.1nm,0.3s							
NOA	**NORSAR Array B**	**87.79**	**339**	P	**P**		**03 35 55.2**	**0.0**
	comp=Z,0.8nm,0.9s,baz=38,slow=0.7,SNR=3.2							
	comp=Z,0.8nm,0.9s							
PLCA	**Paso Flores**	**146.85**	**131**	PKPbc	**PKPab**		**03 42 50.4**	**+0.4**
	comp=Z,3.9nm,1.0s,baz=242,slow=5.3,SNR=7.5							
LPAZ	**La Paz**	**150.40**	**83**	PKPbc	**PKiKP**		**03 43 00.1**	**+0.2**
	comp=Z,1.0nm,0.7s,baz=31,slow=15,SNR=5.7							

*IDC **22** 03:26:16.8±0.8, 22.2°85N×142.5°50E, h0km, mb4.0/7, mbtmp4.0/9, ML3.8/2, Error ellipse: s-maj=37.5km s-min=18.2km az=85.0*

ISC 22 03:26:22.1±0.8, 22.1°81N±0.1°09×142.5°5E±0.2°, h35km, n17, σ0.6s5/12, mb4.0/7, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**4.27**	**356**	Pn		**Pn**		**03 27 24.5**	**-0.2**
	9.0nm,0.3s,baz=270,slow=17,SNR=5.0								
JCJ				Sn		**Sn**		**03 28 14.1**	**+0.8**
	2.3nm,0.3s,baz=112,slow=24,SNR=1.3								
	22nm,0.4s								
KSRS	**Korea Array**	**19.24**	**323**	P		**P**		**03 30 43.4**	**+0.1**
	0.2nm,0.3s,baz=139,slow=13,SNR=2.8								
	0.8nm,0.5s								
H11N1	**WAKE ISLAND Hy**	**22.94**	**93**	T		T		03 54 59.5	
	baz=282,slow=74,SNR=24								
H11N2	**WAKE ISLAND Hy**	**22.94**	**93**	T		T		03 54 59.8	
	baz=282,slow=74,SNR=30								
H11N3	**WAKE ISLAND Hy**	**22.96**	**93**	T		T		03 55 00.4	
	baz=282,slow=74,SNR=28								
H11S3	**WAKE ISLAND Hy**	**23.04**	**96**	T		T		03 55 05.7	
	baz=276								
H11S1	**WAKE ISLAND Hy**	**23.04**	**96**	T		T		03 55 17.4	
	baz=276								
H11S2	**WAKE ISLAND Hy**	**23.05**	**96**	T		T		03 55 08.5	
	baz=276								
CTA	**Charters Tower**	**42.80**	**175**	P		**P**		**03 34 17.3**	**+0.7**
	2.4nm,0.8s,baz=359,slow=9.1,SNR=2.4								
	2.4nm,0.8s								
WRA	**Warramunga Arr**	**43.23**	**191**	P		**P**		**03 34 20.1**	**-0.1**
	2.5nm,0.9s,baz=12,slow=8.6,SNR=9.9								
	2.5nm,0.9s								
MKAR	**Makanchi Array**	**53.48**	**312**	P		**P**		**03 35 39.1**	**+0.2**
	0.2nm,0.4s,baz=79,slow=7.9,SNR=3.3								
	0.2nm,0.4s								
ILAR	**Eielson Array**	**61.35**	**27**	P		**P**		**03 36 33.6**	**-0.5**
	0.7nm,0.9s,baz=247,slow=6.1,SNR=6.4								
	0.7nm,0.9s								
YKA	**Yellowknife Ar**	**75.77**	**28**	P		**P**		**03 38 04.3**	**+0.2**
	1.3nm,0.7s,baz=292,slow=5.9,SNR=8.3								
	1.3nm,0.7s								
ARCES	**ARCESS Array B**	**77.67**	**341**	P		**P**		**03 38 15.0**	**+0.3**
	2.1nm,0.7s,baz=64,slow=8.2,SNR=6.2								
	2.1nm,0.7s								
FINES	**FINESS Array B**	**81.90**	**334**	P		**P**		**03 38 36.3**	**-1.5**
	1.6nm,0.6s,baz=56,slow=5.2,SNR=8.5								
	1.6nm,0.6s								
PLCA	**Paso Flores**	**146.97**	**131**	PKPbc		**PKPbc**		**03 46 01.4**	**+0.2**
	0.9nm,0.7s,baz=238,slow=5.6,SNR=4.8								
LPAZ	**La Paz**	**150.46**	**83**	PKPbc		**PKPbc**		**03 46 11.3**	**-0.3**
	0.6nm,0.5s,baz=279,slow=1.8,SNR=3.9								

*IDC **22** 03:35:01.1±0.9, 22.2°86N×142.5°50E, h0km, mb3.9/10, mbtmp3.9/11, ML3.8/1, Error ellipse: s-maj=31.4km s-min=21.9km az=91.0*

*NEIC **22** 03:35:06.1±0.8, 22.2°78N±0.1°10×142.6°E±0.1°, h35km±2km, mb4.3/6, Error ellipse: s-maj=20.3km s-min=14.8km az=117.0*

ISC 22 03:35:05.7±0.8, 22.1°75N±0.1°09×142.6°E±0.2°, h35km, n28, σ0.9s1/24, mb4.0/13, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**4.34**	**356**	Pn		**Pn**		**03 36 08.6**	**-0.6**
	5.7nm,0.3s,baz=281,slow=22,SNR=10								
JCJ				Sn		**Sn**		**03 36 59.5**	**+0.9**
	1.9nm,0.3s,baz=112,slow=22,SNR=1.4								
	16nm,0.4s								
JCJ	**Chichijima**	**4.34**	**356**			**Pn**		**03 36 08.8**	**-0.4**
JCJ						**Sn**		**03 36 58.1**	**-0.5**
H11N1	**WAKE ISLAND Hy**	**22.88**	**93**	T		T		04 03 43.2	
	baz=282,slow=75,SNR=86								
H11N2	**WAKE ISLAND Hy**	**22.88**	**93**	T		T		04 03 43.4	
	baz=282,slow=75,SNR=102								
H11N3	**WAKE ISLAND Hy**	**22.89**	**93**	T		T		04 03 44.5	
	baz=282,slow=75,SNR=81								
H11S3	**WAKE ISLAND Hy**	**22.97**	**96**	T		T		04 03 33.8	
	baz=285,slow=75,SNR=41								
H11S1	**WAKE ISLAND Hy**	**22.98**	**96**	T		T		04 03 36.0	
	baz=285,slow=75,SNR=29								
H11S2	**WAKE ISLAND Hy**	**22.98**	**96**	T		T		04 03 37.0	
	baz=285,slow=75,SNR=44								
WB0	**Warramunga Arr**	**43.00**	**191**	P		**P**		**03 43 01.4**	**-0.5**
WB0				IAmb		IAmb		03 43 25.3	
	comp=Z,6.1nm,1.2s								
WB2	**Warramunga Arr**	**43.18**	**191**	P		**P**		**03 43 04.0**	**+0.6**
WB2				IAmb		IAmb		03 43 16.2	
	comp=Z,11nm,1.4s								
WRA	**Warramunga Arr**	**43.19**	**191**	P		**P**		**03 43 04.8**	**+1.4**
	comp=Z,1.8nm,0.8s,baz=8.7,slow=8.5,SNR=12								
	comp=Z,1.8nm,0.8s								
WRA	**Warramunga Arr**	**43.19**	**191**	P		**P**		**03 43 02.9**	**-0.5**
MKAR	**Makanchi Array**	**53.56**	**312**	P		**P**		**03 44 23.3**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=90,slow=8.5,SNR=4.0								
	comp=Z,0.4nm,0.6s								

KURK	**Kurchatov**	**56.31**	**317**	P		**P**		**03 44 43.0**	**0.0**
KURK				IAmb		IAmb		03 44 52.8	
	comp=Z,2.6nm,1.2s								
KURBB	**Kurchatov Arra**	**56.36**	**317**	P		**P**		**03 44 42.8**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=92,slow=7.7,SNR=12								
	comp=Z,0.9nm,0.6s								
ILAR	**Eielson Array**	**61.37**	**27**	P		**P**		**03 45 17.5**	**-0.4**
	comp=Z,0.6nm,1.0s,baz=260,slow=4.7,SNR=5.1								
	comp=Z,0.6nm,1.0s								
ILAR	**Eielson Array**	**61.37**	**27**	P		**P**		**03 45 17.9**	**0.0**
YKA	**Yellowknife Ar**	**75.80**	**28**	P		**P**		**03 46 48.5**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=294,slow=5.8,SNR=9.4								
	comp=Z,0.7nm,0.6s								
YKA	**Yellowknife Ar**	**75.80**	**28**	P		**P**		**03 46 47.5**	**-0.4**
RES	**Resolute Bay**	**76.19**	**13**	P		**P**		**03 46 50.1**	**+0.2**
	comp=Z,2.4nm,0.9s,baz=317,slow=11,SNR=2.5								
	comp=Z,2.4nm,0.9s								
RES	**Resolute Bay**	**76.19**	**13**	P		**P**		**03 46 50.5**	**+0.6**
RES				IAmb		IAmb		03 47 33.6	
	comp=Z,4.6nm,1.1s								
ARCES	**ARCESS Array B**	**77.74**	**341**	P		**P**		**03 46 58.7**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=77,slow=7.7,SNR=8.5								
	comp=Z,0.9nm,0.6s								
ARCES	**ARCESS Array B**	**77.74**	**341**	P		**P**		**03 46 58.9**	**+0.2**
KBZ	**Khabaz**	**81.22**	**314**	P		**P**		**03 47 19.1**	**+1.0**
	comp=Z,0.6nm,0.4s,baz=219,slow=5.9,SNR=1.7								
	comp=Z,0.6nm,0.4s								
FINES	**FINESS Array B**	**81.98**	**334**	P		**P**		**03 47 21.1**	**-0.8**
	comp=Z,1.1nm,0.6s,baz=56,slow=7.1,SNR=8.2								
	comp=Z,1.1nm,0.6s								
NVAR	**Mina Array Bea**	**82.94**	**51**	P		**P**		**03 47 28.7**	**+1.1**
	comp=Z,0.2nm,0.6s,baz=298,slow=5.7,SNR=1.9								
	comp=Z,0.2nm,0.6s								
LPAZ	**La Paz**	**150.41**	**83**	PKPbc		**PKiKP**		**03 54 56.1**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=248,slow=9.5,SNR=2.7								
LPAZ	**La Paz**	**150.41**	**83**	PKPdf		**PKPdf**		**03 54 46.8**	**-3.0**

IDC 22 03:37:06.6±13.0, 0.8°86N×14.5°59W, h0km, mb3.6/2, mbtmp3.8/3, ML3.7/1, Error ellipse: s-maj=588.5km s-min=67.2km az=159.0, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**8.63**	**179**	T		T		03 45 15.9	
	baz=360,slow=73,SNR=46								
H10N3	**ASCENSION HYDR**	**8.65**	**179**	T		T		03 45 16.9	
	baz=360,slow=73,SNR=24								
H10N1	**ASCENSION HYDR**	**8.65**	**179**	T		T		03 45 09.8	
	baz=360,slow=73,SNR=60								
DBIC	**Dimbokro**	**11.30**	**59**	Pn		Pn		03 39 49.1	-0.3
	0.5nm,0.3s,baz=248,slow=14,SNR=24								
DBIC				Sn		Sn		03 41 58.1	+1.6
	0.2nm,0.3s,baz=148,slow=13,SNR=2.6								
	3.0nm,0.6s								
TORD	**Torodi Ar. Bea**	**20.23**	**52**	P		P		03 41 43.6	+0.1
	2.8nm,0.8s,baz=234,slow=11,SNR=17								
	2.8nm,0.8s								
BRTR	**Keskin Array B**	**58.45**	**42**	P		P		03 47 04.6	-0.1
	0.4nm,0.7s,baz=243,slow=6.3,SNR=2.8								
	0.4nm,0.7s								

*NEIC **22** 03:41:16.3±1.3, 38.4°47N±0.0°05×141.7°E±0.1°, h62km±3km, mb4.4/9, Error ellipse: s-maj=13.6km s-min=5.9km az=106.0*

*NIED **22** 03:41:16.6, 38.4°47N×141.6°60E, h56km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr4.05; Mθθ-0.28; Mφφ-3.78; Mrθ2.20; Mθφ-1.20; Mφr2.98; Fault plane solution: M₀5.52000×10¹⁴ NP1: φs185.00000°, δ26.00000°, λ68.00000°. NP2:φs30.00000°, δ66.00000°, λ100.00000°.*

*JMA **22** 03:41:16.6±0.1, 38.5°N±0.2°×141.6°E±0.4, h56km, MD3.7/38, MV4.0/38, KINKAZAN REGION*

JMA Felt II J1 at KINKAZAN REGION .

*IDC **22** 03:41:17.1±2.8, 38.4°45N×141.6°9E, h69km±26km, mb3.6/11, mbtmp3.9/15, MS2.6/1, Error ellipse: s-maj=25.9km s-min=18.9km az=74.0*

ISC 22 03:41:15.7±0.8, 38.4°44N±0.0°04×141.6°9E±0.0°06, h58km±6km, n69, σ1s0.6/67, mb4.0/15, 18D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.22**	**234**	*i* P		**Pn**		**03 41 25.7**	**+0.6**
JIKH				S		**Sn**		**03 41 31.9**	**+0.2**
JIKH	**Ishinomakikobu**	**0.22**	**234**	A		A		03 41 25.7	
	comp=E,15nm,0.4s,comp=E,8.0nm,0.5s								
JIO	**Ouri**	**0.27**	**273**	*i* P		**Pn**		**03 41 25.8**	**+0.4**
JIO				S		**Sn**		**03 41 32.0**	**-0.4**
JIO	**Ouri**	**0.27**	**273**	A		A		03 41 25.8	
	comp=E,17nm,0.5s,comp=E,15nm,0.5s								
JKMT	**Kesennumamotoy**	**0.41**	**335**	⇓*i* P		**Pn**		**03 41 27.0**	**+0.4**
JKMT				⇓S		**Sn**		**03 41 34.0**	**-0.4**
JKMT	**Kesennumamotoy**	**0.41**	**335**	A		A		03 41 27.0	
	comp=E,11nm,0.5s,comp=E,9.0nm,0.6s								
JMK	**Ichinoseki**	**0.63**	**324**	⇓*i* P		**Pn**		**03 41 29.3**	**+0.3**
JMK				⇓S		**Sn**		**03 41 38.1**	**-0.5**
JMK	**Ichinoseki**	**0.63**	**324**	A		A		03 41 29.3	
	comp=E,12nm,0.6s,comp=E,14nm,0.3s								
JOFO	**Osakifurukawao**	**0.64**	**285**	⇓P		**Pn**		**03 41 29.2**	**+0.2**
JOFO				⇓S		**Sn**		**03 41 38.6**	**-0.1**
JOFO	**Osakifurukawao**	**0.64**	**285**	A		A		03 41 29.2	
	comp=E,22nm,0.6s,comp=E,10.0nm,1.0s								
OFUJ	**Ofunato**	**0.64**	**358**	⇓*i* P		**Pn**		**03 41 29.5**	**+0.4**
OFUJ				⇓S		**Sn**		**03 41 38.6**	**-0.3**
OFUJ	**Ofunato**	**0.64**	**358**	A		A		03 41 29.5	
	comp=E,7.0nm,2.0s,comp=E,6.0nm,1.1s								
JOU	**Okura**	**0.81**	**265**	⇓*i* P		**Pn**		**03 41 31.3**	**0.0**
JOU				⇓S		**Sn**		**03 41 42.0**	**-0.6**
JOU	**Okura**	**0.81**	**265**	A		A		03 41 31.3	
	comp=E,5.0nm,0.5s,comp=E,6.0nm,0.6s								
JMM	**Marumori**	**0.91**	**231**			**Pn**		**03 41 32.4**	**0.0**
JMM				Sn		**Sn**		**03 41 44.1**	**-0.7**
JMM	**Marumori**	**0.91**	**231**	⇓*i* P		**Pn**		**03 41 32.5**	**0.0**
JMM				⇓S		**Sn**		**03 41 44.0**	**-0.9**
JMM	**Marumori**	**0.91**	**231**	A		A		03 41 32.5	
	comp=E,4.0nm,1.0s,comp=E,5.0nm,0.5s								
JOM	**Ohasama**	**1.08**	**343**	⇓*i* P		**Pn**		**03 41 34.9**	**+0.2**
JOM	**Ohasama**	**1.08**	**343**	A		A		03 41 34.9	
	comp=E,6.0nm,0.3s,comp=E,4.0nm,2.8s								
JYK	**Kaneyama**	**1.15**	**295**	⇓*i* P		**Pn**		**03 41 35.7**	**+0.1**
JFK	**Kawauchi**	**1.25**	**211**	*i* P		**Pn**		**03 41 37.6**	**+0.6**
JFK				S		**Sn**		**03 41 52.8**	**-0.1**
JRG	**Rokugo**	**1.26**	**319**	⇓*i* P		**Pn**		**03 41 37.5**	**+0.3**
JRG				⇓*e*S		**Sn**		**03 41 52.7**	**-0.5**
JYS	**Shirataka**	**1.30**	**261**	⇓*i* P		**Pn**		**03 41 38.0**	**+0.4**
JYS				⇓*e*S		**Sn**		**03 41 54.1**	**+0.1**
JFT	**Otama**	**1.41**	**230**	P		**Pn**		**03 41 40.0**	**+0.8**
ONAJ	**Iwakimizuishiy**	**1.51**	**208**	A		A		03 41 41.7	
	comp=E,6.0nm,0.3s,comp=E,5.0nm,0.3s								
JTM	**Tenmabayashi**	**2.39**	**349**			**Pn**		**03 41 53.1**	**+0.7**
JTM				Sn		**Sn**		**03 42 20.5**	**-0.1**
JYT	**Yasato**	**2.51**	**209**			**Pn**		**03 41 56.0**	**+1.9**
JSD	**Sado**	**2.73**	**263**	Pn		**Pn**		**03 41 56.6**	**-0.5**
MAJO	**Matsushiro**	**3.36**	**237**			**Pn**		**03 42 07.5**	**+1.8**
MJAR	**Matsushiro Arr**	**3.36**	**237**	P		**Pn**		**03 42 06.6**	**+0.9**
	5.7nm,0.5s,baz=36,slow=12,SNR=30								
MJAR	**Matsushiro Arr**	**3.36**	**237**			**Pn**		**03 42 06.3**	**+0.7**
MJB9	**Matsu-Tunnel**	**3.36**	**237**			**Pn**		**03 42 07.5**	**+1.8**
ERM	**Erimo**	**3.74**	**17**	Pn		**Pn**		**03 42 11.1**	**+0.2**
JGF	**Kuroka**	**4.48**	**232**			**Pn**		**03 42 25.0**	**+3.9**
INU	**Inuyama**	**4.85**	**232**			**Pn**		**03 42 28.9**	**+2.7**
JHJ	**Hachijo jima 2**	**5.53**	**197**	P		**Pn**		**03 42 36.1**	**+0.6**
	23nm,0.5s,baz=317,slow=23,SNR=6.8								
JHJ				S		**Sn**		**03 43 35.7**	**-2.0**
	54nm,0.8s,baz=59,slow=15,SNR=1.5								
JHJ2	**Mitsune**	**5.53**	**197**	Pn		**Pn**		**03 42 36.3**	**+0.8**
JHS	**Saijyo**	**7.70**	**246**	Pn		**Pn**		**03 43 05.5**	**+0.4**
USRK	**Ussuriysk Ar.**	**9.29**	**311**	P		**Pn**		**03 43 27.9**	**+1.1**
	4.1nm,0.4s,baz=122,slow=14,SNR=11								
USA0B	**Ussuriysk Arra**	**9.29**	**311**	Pn		**Pn**		**03 43 27.5**	**+0.7**
KSRS	**Korea Array**	**10.92**	**269**	P		**Pn**		**03 43 52.8**	**+3.6**
	1.5nm,0.5s,baz=81,slow=14,SNR=5.1								
KSRS				LR		LR		03 47 18.8	
	comp=Z,34nm,20.8s,baz=70,slow=33								
ENH	**Enshi**	**27.70**	**263**	P		**P**		**03 46 57.6**	**-0.9**
ENH				IAmb		IAmb		03 47 03.4	
	comp=Z,11nm,0.7s								
H11N2	**WAKE ISLAND Hy**	**28.70**	**123**	T		T		04 17 43.1	
	baz=317,slow=76,SNR=260								
H11N1	**WAKE ISLAND Hy**	**28.71**	**123**	T		T		04 17 28.4	
	baz=317,slow=76,SNR=353								
H11N3	**WAKE ISLAND Hy**	**28.72**	**123**	T		T		04 17 44.4	
	baz=317,slow=76,SNR=313								
H11S1	**WAKE ISLAND Hy**	**29.46**	**125**	T		T		04 18 21.5	
	baz=318,slow=76,SNR=207								
H11S3	**WAKE ISLAND Hy**	**29.46**	**125**	T		T		04 18 29.5	
	baz=318,slow=76,SNR=221								
H11S2	**WAKE ISLAND Hy**	**29.48**	**125**	T		T		04 18 23.1	
	baz=318,slow=76,SNR=161								
ZALV	**Zalesovo Beam**	**41.15**	**311**	P		**P**		**03 48 54.1**	**+0.2**
	comp=Z,1.4nm,0.5s,baz=79,slow=7.7,SNR=5.8								
	comp=Z,1.4nm,0.5s								
MK31	**Makanchi Array**	**43.57**	**301**	P		**P**		**03 49 14.2**	**+0.4**
MK31				IAmb		IAmb		03 49 14.8	
	comp=Z,2.3nm,0.8s								
MKAR	**Makanchi Array**	**43.57**	**301**	P		**P**		**03 49 14.0**	**+0.2**
	comp=Z,1.7nm,0.6s,baz=85,slow=9.6,SNR=18								
	comp=Z,1.7nm,0.6s								
MKAR	**Makanchi Array**	**43.57**	**301**	P		**P**		**03 49 13.6**	**-0.2**
MAKZ	**Makanchi**	**43.78**	**301**	P		**P**		**03 49 15.3**	**-0.2**
KURK	**Kurchatov**	**45.25**	**307**	P		**P**		**03 49 25.9**	**-1.2**
KURK				IAmb		IAmb		03 49 27.8	
	comp=Z,7.1nm,0.8s								
KURBB	**Kurchatov Arra**	**45.32**	**307**	P		**P**		**03 49 27.6**	**0.0**
	comp=Z,6.4nm,0.7s,baz=81,slow=8.1,SNR=42								
	comp=Z,6.4nm,0.7s								
ILAR	**Eielson Array**	**48.19**	**33**	P		**P**		**03 49 51.1**	**+1.2**
	comp=Z,0.3nm,0.7s,baz=272,slow=6.0,SNR=3.9								
	comp=Z,0.3nm,0.7s								
BARN	**Barnard Glacie**	**51.01**	**38**	P		**P**		**03 50 10.2**	**-1.4**
ABKAR	**Akbulak array**	**57.21**	**310**	P		**P**		**03 50 56.4**	**-0.3**
ABKAR				IAmb		IAmb		03 50 57.1	
	comp=Z,1.6nm,0.7s								
WB2	**Warramunga Arr**	**58.48**	**188**	P		**P**		**03 51 05.5**	**-0.3**
WRA	**Warramunga Arr**	**58.48**	**188**	P		**P**		**03 51 06.2**	**+0.5**
	comp=Z,0.9nm,0.8s,baz=4.5,slow=7.4,SNR=10								
	comp=Z,0.9nm,0.8s								
WRA	**Warramunga Arr**	**58.48**	**188**	P		**P**		**03 51 06.1**	**+0.3**
RES	**Resolute Bay**	**61.19**	**15**	P		**P**		**03 51 23.1**	**-0.6**
	comp=Z,0.6nm,0.4s,baz=300,slow=3.7,SNR=6.7								
	comp=Z,0.6nm,0.4s								
RES	**Resolute Bay**	**61.19**	**15**	P		**P**		**03 51 21.9**	**-1.8**
RES				IAmb		IAmb		03 52 02.4	
	comp=Z,9.0nm,1.4s								
ARCES	**ARCESS Array B**	**62.76**	**339**	P		**P**		**03 51 34.4**	**0.0**
	comp=Z,1.2nm,0.8s,baz=62,slow=9.5,SNR=4.3								
	comp=Z,1.2nm,0.8s								
FINES	**FINESS Array B**	**67.68**	**332**	P		**P**		**03 52 06.2**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=19,slow=10,SNR=2.1								
	comp=Z,0.7nm,0.6s								
NB2	**NORSAR Subarra**	**72.98**	**337**	P		**P**		**03 52 38.7**	**0.0**
	comp=Z,1.8nm,0.8s,baz=38,slow=6.2								
NOA	**NORSAR Array B**	**72.98**	**337**	P		**P**		**03 52 39.2**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=37,slow=5.9,SNR=5.0								
	comp=Z,0.7nm,0.7s								
AKASG	**Malin Array Be**	**73.32**	**322**	P		**P**		**03 52 40.9**	**0.0**
	comp=Z,0.4nm,0.3s,baz=45,slow=3.9,SNR=5.0								
	comp=Z,0.4nm,0.3s								
PDAR	**Pinedale Array**	**76.53**	**46**	P		**P**		**03 53 00.2**	**+0.4**
	comp=Z,

comp=Z,2.3nm,0.7s
BDFB Brasilia 26.31 61 P **P** **04 00 05.3 -1.0**
comp=Z,6.8nm,0.7s,baz=244,slow=7.1,SNR=13
comp=Z,6.8nm,0.7s
BDFB Brasilia 26.31 61 P **P** **04 00 04.8 -1.4**
BDFB IAmb IAmb 04 00 06.2
comp=Z,8.4nm,0.8s
BBAC Balboa, Cauca 32.86 350 *eP* **P** **04 01 05.8 +1.3**
ORTC Ortega, Tolima 34.48 354 *eP* **P** **04 01 19.4 +1.0**
ORCD Orcadas 35.05 157 P **P** **04 01 22.4 -0.3**
RUSC La Rusia 36.31 358 *eP* **P** **04 01 35.6 +1.1**
CBOC Ciudad Bolivar 36.49 353 *eP* **P** **04 01 37.4 +1.6**
HELC Santa Helena 36.76 354 *eP* **P** **04 01 39.0 +0.7**
PTBC PUERTO BERRIO, 37.02 355 *eP* **P** **04 01 39.5 -0.6**
DBBC Dabeiba 37.65 353 *eP* **P** **04 01 46.8 +1.3**
ZARC Zaragoza, Cauc 37.99 355 P **P** **04 01 48.4 0.0**
ZARC IAmb IAmb 04 01 50.9
comp=Z,5.8nm,1.0s
ZARC Zaragoza, Cauc 37.99 355 *eP* **P** **04 01 47.6 -0.7**
SDV Santo Domingo 39.27 2 P **P** **04 02 00.6 +1.3**
comp=Z,9.3nm,0.4s,baz=14,slow=9.1,SNR=1.6
comp=Z,9.3nm,0.4s
BAUV El Baul 39.47 6 P **P** **04 02 00.0 -0.7**
MDP Montagnes des 39.91 30 P **P** **04 02 05.7 +1.2**
comp=Z,6.5nm,1.0s,baz=248,slow=23,SNR=2.1
comp=Z,6.5nm,1.0s
SJCC San Jacinto, C 40.40 355 *eP* **P** **04 02 09.1 +0.5**
MLPR Magueyes Islan 48.49 6 P **P** **04 03 13.2 +0.1**
OBIP Obispado Ponce 48.61 6 P **P** **04 03 13.6 -0.4**
CELP Cerrillos 48.64 7 P **P** **04 03 13.5 -0.7**
CBYP Canovanas 48.91 7 P **P** **04 03 15.3 -1.1**
BELA Belgrano 2 50.18 170 P **P** **04 03 25.7 +0.4**
VNA3 Neumayer Olymp 52.41 159 P **P** **04 03 41.7 -0.4**
VNA3 Neumayer Olymp 52.41 159 pP pP 04 03 50.1 -0.4
VNA1 Neumayer--Stat 52.70 158 P **P** **04 03 44.5 +0.3**
VNA1 Neumayer--Stat 52.70 158 pP pP 04 03 52.3 -0.2
SNAA Sanae 54.63 159 P **P** **04 03 58.5 -0.1**
SNAA Sanae 54.63 159 pP pP 04 04 06.4 -0.5
SNAA Sanae 54.63 159 P **P** **04 03 58.3 -0.2**
SNAA IAmb IAmb 04 03 58.7
comp=Z,3.2nm,0.7s
TROLL Troll, Antarti 56.35 159 P **P** **04 04 10.8 -0.1**
TROLL Troll, Antarti 56.35 159 pP pP 04 04 18.4 -0.5
QSPA South Pole Qui 59.63 180 P **P** **04 04 34.5 +0.5**
TXAR Lajitas Array 66.92 330 P **P** **04 05 23.7 +1.1**
comp=Z,0.4nm,0.8s,baz=163,slow=6.6,SNR=4.3
comp=Z,0.4nm,0.8s
VNDA Vanda 67.48 191 P **P** **04 05 26.9 +1.4**
comp=Z,0.4nm,0.7s,baz=128,slow=12,SNR=1.9
comp=Z,0.4nm,0.7s
LCAR Lake Charles 68.79 343 P **P** **04 05 34.3 +0.2**
LCAR IAmb IAmb 04 05 35.7
comp=Z,2.7nm,0.7s
MNTX Cornudas Mount 69.71 330 P **P** **04 05 40.5 +0.5**
HHAR Hobbs 69.72 341 P **P** **04 05 39.5 -0.4**
HHAR IAmb IAmb 04 05 41.8
comp=Z,4.7nm,1.0s
SIUC Southern Illin 69.90 345 P **P** **04 05 40.7 -0.3**
TUL1 Leonard 69.92 339 P **P** **04 05 41.3 +0.2**
TUL1 IAmb IAmb 04 05 42.8
comp=Z,4.3nm,0.8s
MSTX Muleshoe 70.60 333 P **P** **04 05 44.2 -1.3**
MSTX IAmb IAmb 04 05 46.4
comp=Z,2.8nm,0.8s
CCM Cathedral Cave 70.69 344 P **P** **04 05 46.0 +0.1**
CCM IAmb IAmb 04 05 47.2
comp=Z,3.7nm,0.9s
S39A Bolivar 70.88 342 P **P** **04 05 45.8 -1.2**
S39A IAmb IAmb 04 05 47.9
comp=Z,2.5nm,0.9s
PPT Papeete 71.05 260 P **P** **04 05 50.4 +1.9**
comp=Z,30nm,1.0s,baz=255,slow=23,SNR=1.5
comp=Z,30nm,1.0s
R40A Maddies Statio 71.17 343 P **P** **04 05 48.4 -0.3**
P40A Paris 72.29 344 P **P** **04 05 56.0 +0.6**
P40A IAmb IAmb 04 05 56.8
comp=Z,6.0nm,0.8s
P38A Dawn 72.75 343 P **P** **04 05 58.1 0.0**
P38A IAmb IAmb 04 05 59.2
comp=Z,5.4nm,1.1s
N38A Joes South For 73.78 343 P **P** **04 06 04.5 +0.3**
DBIC Dimbokro 73.84 72 P **P** **04 06 05.0 -0.2**
comp=Z,7.6nm,0.7s,baz=232,slow=6.8,SNR=8.9
comp=Z,7.6nm,0.7s
L40A Anamosa 74.50 345 P **P** **04 06 08.3 -0.1**
L40A IAmb IAmb 04 06 09.8
comp=Z,5.8nm,0.8s
X16A Lo Mia Camp, P 74.74 327 P **P** **04 06 10.8 +0.6**
SDCO Great Sand Dun 74.97 333 P **P** **04 06 11.4 -0.2**
MAW Mawson 76.36 164 P **P** **04 06 19.0 +0.2**
comp=Z,4.5nm,0.5s,baz=204,slow=8.0,SNR=15
comp=Z,4.5nm,0.5s
U15A North Rim 76.78 327 P **P** **04 06 21.8 -0.1**
K31A O'Neill 76.99 340 P **P** **04 06 23.3 +0.7**
ECSD EROS Data Cent 77.41 342 P **P** **04 06 25.4 +0.5**
ECSD IAmb IAmb 04 06 26.3
comp=Z,6.3nm,0.9s
COWI Conover 77.95 348 P **P** **04 06 27.5 -0.5**
COWI IAmb IAmb 04 06 29.8
comp=Z,5.7nm,1.1s
MTPU Mount Pierson 78.05 328 P **P** **04 06 28.5 -0.6**
SRU San Rafael Swe 78.20 330 P **P** **04 06 30.0 +0.3**
P18A Preston Nutter 78.51 331 P **P** **04 06 32.3 +0.7**
P18A IAmb IAmb 04 06 34.0
comp=Z,2.2nm,0.9s
P17A Butcher Ranch, 78.59 330 P **P** **04 06 31.8 0.0**
P17A IAmb IAmb 04 06 33.5
comp=Z,5.1nm,1.2s
F36A Milaca 78.63 345 P **P** **04 06 31.1 -0.5**
F36A IAmb IAmb 04 06 32.8
comp=Z,3.7nm,0.9s
JLU Jordanelle 79.83 330 P **P** **04 06 39.0 +0.3**
JLU IAmb IAmb 04 06 40.6
comp=Z,2.5nm,0.9s
R11A Troy Canyon, C 79.88 326 P **P** **04 06 37.9 -1.0**
HWUT Hardware Ranch 80.72 331 P **P** **04 06 43.5 +0.1**
HWUT IAmb IAmb 04 06 44.9
comp=Z,2.1nm,0.8s
PDAR Pinedale Array 80.87 333 P **P** **04 06 44.7 +0.5**
comp=Z,0.3nm,0.6s,baz=346,slow=36,SNR=2.1
comp=Z,0.3nm,0.6s
B35A Bob, Littlefor 81.04 345 P **P** **04 06 42.7 -1.9**
B35A IAmb IAmb 04 06 44.7
comp=Z,2.6nm,0.7s
NVAR Mina Array Bea 81.27 325 P **P** **04 06 47.0 +0.6**
comp=Z,0.7nm,0.9s,baz=185,slow=6.0,SNR=4.1
comp=Z,0.7nm,0.9s
BOSA Boshof 81.41 118 P **P** **04 06 47.5 0.0**
comp=Z,4.3nm,0.9s,baz=237,slow=1.7,SNR=5.0
comp=Z,4.3nm,0.9s
BOSA Boshof 81.41 118 P **P** **04 06 46.9 -0.5**
BOSA IAmb IAmb 04 06 47.7
comp=Z,6.0nm,1.0s
AGMN Agassiz Nation 81.47 344 P **P** **04 06 46.8 -0.1**
AGMN IAmb IAmb 04 06 48.3
comp=Z,4.5nm,1.1s
ELK Elko 81.62 328 P **P** **04 06 48.3 +0.1**
TOA0 Torodi Ar. Sit 82.79 70 P **P** **04 06 53.9 -0.8**
TORD Torodi Ar. Bea 82.79 70 P **P** **04 06 54.2 -0.4**
comp=Z,2.4nm,0.7s,baz=282,slow=6.1,SNR=42
comp=Z,2.4nm,0.7s
TORD Torodi Ar. Bea 82.79 70 P **P** **04 06 54.0 -0.6**
TORD IAmb IAmb 04 06 56.0
comp=Z,3.7nm,1.0s
ULM Lac du Bonnet 83.30 345 P **P** **04 06 55.8 -0.6**
comp=Z,2.2nm,0.7s,baz=195,slow=0.5,SNR=3.6
comp=Z,2.2nm,0.7s
CASY Casey 83.42 181 P **P** **04 06 58.0 +1.0**
HLID Hailey 83.52 330 P **P** **04 06 58.2 +0.2**
ORV Oroville 83.74 324 P **P** **04 06 59.5 +0.6**
ORV IAmb IAmb 04 07 01.0
comp=Z,3.6nm,0.9s
J08A Circle Bar Ran 85.16 328 P **P** **04 07 06.2 0.0**
J08A IAmb IAmb 04 07 08.4
comp=Z,3.4nm,0.9s
SCHQ Schefferville 85.18 3 P **P** **04 07 06.8 +0.9**
comp=Z,1.8nm,0.8s,baz=282,slow=8.7,SNR=1.7
comp=Z,1.8nm,0.8s
PLID Pearl Lake 85.43 330 P **P** **04 07 08.1 +0.4**
PLID IAmb IAmb 04 07 08.8
comp=Z,2.1nm,0.8s
I07A Izee 86.20 328 P **P** **04 07 10.2 -1.2**
JTMT Jette 86.86 333 P **P** **04 07 14.4 -0.2**
JTMT IAmb IAmb 04 07 15.1
comp=Z,1.6nm,0.8s

TAM Tamanrasset 91.10 64 P **P** **04 07 35.0 -0.2**
TAM IAmb IAmb 04 07 35.8
comp=Z,3.0nm,1.0s
YKA Yellowknife Ar 98.93 341 P **P** **04 08 08.4 -1.4**
comp=Z,0.4nm,0.7s,baz=181,slow=4.3,SNR=1.4
comp=Z,0.4nm,0.7s
WRA Warramunga Arr 123.85 210 PKP **PKPdf** **04 13 27.3 -1.4**
comp=Z,1.1nm,0.7s,baz=166,slow=1.6,SNR=12
H11S2 WAKE ISLAND Hyl 26.03 271 T T 06 32 22.0
baz=116,slow=75,SNR=521
H11S1 WAKE ISLAND Hyl 26.05 271 T T 06 32 22.1
baz=116,slow=75,SNR=537
H11S3 WAKE ISLAND Hyl 26.05 271 T T 06 32 20.2
baz=116,slow=75,SNR=619
H11N3 WAKE ISLAND Hyl 26.36 273 T T 06 32 48.1
baz=117,slow=75,SNR=42
H11N1 WAKE ISLAND Hyl 26.38 273 T T 06 32 49.4
baz=117,slow=75,SNR=21
H11N2 WAKE ISLAND Hyl 26.38 273 T T 06 32 47.6
baz=117,slow=75,SNR=70
ZALV Zalesovo Beam 151.17 29 PKPbc **PKPbc** **04 14 22.6 -0.2**
comp=Z,14nm,0.7s,baz=296,slow=3.4,SNR=45
ZALV Zalesovo Beam 151.17 29 PKPdf **PKPdf** **04 14 17.3 +0.4**
ZALV Zalesovo Beam 151.17 29 PKPdf **PKiKP** **04 14 22.9 -0.4**
ZALV Zalesovo Beam 151.17 29 PKIKP **PKiKP** **04 14 22.9 -0.4**
MKAR Makanchi Array 154.22 44 PKPbc **PKPbc** **04 14 29.2 -0.7**
comp=Z,1.8nm,0.8s,baz=307,slow=2.6,SNR=12
MKAR Makanchi Array 154.22 44 PKPdf **PKPdf** **04 14 22.7 +1.1**
MKAR PKPbc **PKiKP** **04 14 30.0 0.0**
KLR Kul'dur 154.29 323 PKPbc **PKPbc** **04 14 28.7 -1.2**
comp=Z,2.3nm,0.9s,baz=344,slow=2.1,SNR=5.0
KLR Kul'dur 154.29 323 **PKPbc** **04 14 28.7 -1.2**
KLR Kul'dur 154.29 323 PKIKP **PKPbc** **04 14 28.7 -1.2**
MJAR Matsushiro Arr 154.44 291 PKPab **PKPab** **04 14 46.3 +1.2**
comp=Z,0.5nm,0.3s,baz=108,slow=4.0,SNR=2.4
SONM Songino Array 162.72 4 PKPab **PKPab** **04 15 21.1 +0.5**
comp=Z,1.1nm,0.8s,baz=325,slow=4.2,SNR=4.5

VAO ***22*** *03:54:36.9±0.5, 30.°39S×71.°73W, h26km, mb5.0*
IDC ***22*** *03:54:36.3±0.6, 30.°61S×71.°69W, h0km, mb4.6/12, mbtmp4.6/15, ML4.6/3, MS4.2/2, Error ellipse: s-maj=22.2km s-min=16.7km az=83.0*
MOS ***22*** *03:54:39.0±0.9, 30.°62S×71.°70W, h29km, mb5.2/28, Error ellipse: s-maj=14.9km s-min=7.7km az=94.9*
NEIC ***22*** *03:54:40.6±1.4, 30.°64S±0.°01×71.°69W±0.°08, h26km±4km, mb5.0/114, Mwr4.9/60, Mww5.1, Mwr5.1(GUC), Error ellipse: s-maj=10.2km s-min=1.2km az=80.0*
GUC ***22*** *03:54:41.0±0.5, 30.°62S×71.°72W, h34km±2km, ML5.2*
NEIC ***22*** *03:54:42.1, 30.°64S×71.°66W, h29km, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr 1.66; Mθθ 0.09; Mϕϕ -1.75; Mrθ 0.55; Mθϕ 0.08; Mϕr -1.71; Fault plane solution: M₀ 2.48000×10¹⁶ NP1:ϕs 166.44000°, δ 68.48000°, λ 81.26000°. NP2:ϕs 9.19000°, δ 23.15000°, λ 111.08000°. Principal axes: T 2.4677, Plg 65.0000°, Azm 61.0000°; N 0.0275, Plg 8.0000°, Azm 170.0000°; P -2.4952, Plg 23.0000°, Azm 263.0000°;*
GCMT ***22*** *03:54:43.6±0.2, 30.°68S±0.°02×72.°01W±0.°02, h35km, MW5.1/94, Moment Tensor Solution. s63,c81; s94,c125; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr 5.30±.20; Mθθ 0.11±.13; Mϕϕ -5.41±.14; Mrθ 0.63±.13; Mθϕ 0.27±.09; Mϕr -3.53±.18; Best double couple: M₀ 6.45000×10¹⁶ NP1:ϕs 1.00000°, δ 28.00000°, λ 97.00000°. NP2: ϕs 173.00000°, δ 62.00000°, λ 86.00000°. Principal axes: T 6.4030, Plg 73.0000°, Azm 74.0000°; N 0.0960, Plg 3.0000°, Azm 175.0000°; P -6.4980, Plg 17.0000°, Azm 266.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***22*** *03:54:46, 30.°63S×71.°89W, h40km, Moment Tensor Solution. Duration: 80 Moment tensor: Scale 10¹⁶Nm; Mrr 4.99; Mθθ 0.72; Mϕϕ -5.70; Mrθ 0.66; Mθϕ 0.18; Mϕr -1.43; Fault plane solution: M₀ 5.61000×10¹⁶ NP1:ϕs 6.00000°, δ 38.00000°, λ 102.00000°. NP2:ϕs 171.00000°, δ 53.00000°, λ 81.00000°. Principal axes: T 5.2619, Plg 79.0000°, Azm 43.0000°; N 0.6403, Plg 8.0000°, Azm 177.0000°; P -5.9022, Plg 8.0000°, Azm 268.0000°;*
ISC 22 03:54:40.0±0.8, 30.°59S±0.°03×71.°67W±0.°04, h31km±5km, n269, σt 9/69/268, mb 4.9/78, MS 4.6/8, 11C-1D, Fault plane solution: NP1:ϕs 353.64856°, δ 37.65818°, λ 95.45094°. NP2:ϕs 166.77550°, δ 52.54151°, λ 85.80724°. Principal axes: T Plg 81.8288°, Azm 55.4457°; N Plg 3.3271°, Azm 169.3284°; P Plg 7.4547°, Azm 259.7642°; Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.09**	**163**	*i* P		**Pb**	**03 54 45.9**	**+0.5**
CO06				*e*S		**Sb**	**03 54 49.6**	**+0.5**
CO05	**La Serena**	**0.76**	**29**	Pn		**Pb**	**03 54 55.7**	**+0.9**
CO05				Sn		**Sn**	**03 55 07.7**	**+2.6**
CO05	**La Serena**	**0.76**	**29**	*i* P		**Pb**	**03 54 55.9**	**+1.1**
CO05				*e*S		**Sn**	**03 55 06.9**	**+1.9**
CO05				IAML			03 55 09.4	
comp=N,102μm,0.4s								
CO02	**Combarbal**	**0.84**	**137**	Pn		**Pb**	**03 54 56.7**	**+0.5**
CO02				Sn		**Sn**	**03 55 08.1**	**+0.9**
CO02	**Combarbal**	**0.84**	**137**	*e*P		**Pb**	**03 54 56.6**	**+0.5**
CO02				*e*S		**Sn**	**03 55 08.2**	**+1.0**
CO02				IAML			03 55 12.8	
comp=N,168μm,0.2s								
GO04	**Tololo Observa**	**0.85**	**61**	Pn		**Pb**	**03 54 58.0**	**+1.5**
GO04				Sn		**Sn**	**03 55 10.2**	**+2.5**
GO04	**Tololo Observa**	**0.85**	**61**	*i* P		**Pb**	**03 54 57.7**	**+1.2**
GO04				*i* S		**Sn**	**03 55 10.7**	**+3.0**
GO04				IAML			03 55 14.0	
comp=E,396μm,0.6s								
CO03	**El Pedregal**	**0.88**	**107**	Pn		**Pb**	**03 54 57.0**	**+0.2**
CO03				Sn		**Sb**	**03 55 09.5**	**+1.3**
CO03	**El Pedregal**	**0.88**	**107**	*i* P		**Pb**	**03 54 57.4**	**+0.6**
CO03				*e*S		**Sb**	**03 55 10.0**	**+1.7**
CO03				IAML			03 55 13.8	
comp=N,90μm,0.4s								
CO01	**Juntas del Tor**	**1.49**	**66**	Pn		**Pb**	**03 55 07.8**	**+0.7**
CO01	**Juntas del Tor**	**1.49**	**66**	*e*P		**Pb**	**03 55 07.9**	**+0.7**
CO01				IAML			03 55 30.8	
comp=N,14μm,0.3s								
LCO	**Las Campanas**	**1.78**	**28**	Pn		**Pb**	**03 55 11.3**	**-0.8**
LCO	**Las Campanas**	**1.78**	**28**	P		**Pb**	**03 55 11.4**	**-0.8**
LCO	**Las Campanas**	**1.78**	**28**	*e*P		**Pb**	**03 55 11.4**	**-0.8**
VA06	**Catapilco**	**1.99**	**171**	IAML			03 55 45.8	
comp=E,33μm,0.4s								
VA03	**San Esteban**	**2.37**	**157**	IAML			03 55 54.9	
comp=E,21μm,0.1s								
AC04	**Llanos de Chal**	**2.43**	**12**	*e*P		**Pb**	**03 55 22.7**	**-0.4**
AC04				IAML			03 56 04.3	
comp=E,8μm,0.4s								
PEL	**Peldehue**	**2.68**	**162**	*e*S		**Sb**	**03 55 57.1**	**-2.7**
ML02	**Panimavida**	**5.17**	**178**			**Pn**	**03 55 54.0**	**-1.2**
PB14	**IPOC Station P**	**6.04**	**11**	Pn		**Pn**	**03 56 06.1**	**-1.5**
H03N1	**Juan Fernandez**	**6.78**	**243**	Pn		**Pn**	**03 56 16.5**	**-0.6**
H03N3	**Juan Fernandez**	**6.79**	**243**	Pn		**Pn**	**03 56 16.3**	**-1.0**
H03N2	**Juan Fernandez**	**6.79**	**243**	Pn		**Pn**	**03 56 16.6**	**-0.7**
H03S3	**Juan Fernandez**	**6.94**	**240**	Pn		**Pn**	**03 56 17.1**	**-2.1**
H03S1	**Juan Fernandez**	**6.94**	**240**	Pn		**Pn**	**03 56 17.6**	**-1.7**
H03S2	**Juan Fernandez**	**6.95**	**240**	Pn		**Pn**	**03 56 17.3**	**-2.1**
PB06	**IPOC Station P**	**8.07**	**14**			**Pn**	**03 56 35.6**	**+0.4**
AF01	**San Pedro de A**	**8.22**	**23**			**Pn**	**03 56 39.2**	**+1.9**
LVC	**Limon Verde**	**8.32**	**18**			**Pn**	**03 56 39.2**	**+0.4**
LVC	**Limon Verde**	**8.32**	**18**	P		**Pn**	**03 56 39.2**	**+0.4**
LVC	**Limon Verde**	**8.32**	**18**	*e*P		Pn	03 56 32.7	-6.1
PB04	**IPOC Station P**	**8.33**	**10**			**Pn**	**03 56 39.0**	**+0.2**
PB07	**IPOC Station P**	**8.97**	**11**			**Pn**	**03 56 48.7**	**+1.2**
PB09	**IPOC Station P**	**9.02**	**15**			**Pn**	**03 56 50.2**	**+1.9**
PB02	**IPOC Station P**	**9.37**	**10**			**Pn**	**03 56 53.6**	**+0.6**
LR04	**Corral**	**9.38**	**188**	Pn		**Pn**	**03 56 52.5**	**-0.5**
PB01	**IPOC Station P**	**9.71**	**12**			**Pn**	**03 56 57.6**	**0.0**
PLCA	**Paso Flores**	**10.16**	**175**	Pn		**Pn**	**03 57 04.6**	**+0.8**
comp=E,0.9nm,0.3s,baz=348,slow=14,SNR=8.8								
comp=E,3.9nm,0.5s								
LL03	**Petrohue**	**10.54**	**183**	Pn		**Pn**	**03 57 09.8**	**+0.9**
GO01	**Chusmiza**	**11.10**	**12**			**Pn**	**03 57 17.8**	**+0.7**
PB16	**IPOC Station P**	**12.36**	**10**			**Pn**	**03 57 35.6**	**+1.3**
GO07	**Milladeo Hill,**	**12.60**	**187**			**Pn**	**03 57 37.7**	**+0.7**
PB18	**Visviri**	**13.09**	**9**			**Pn**	**03 57 45.8**	**+1.4**
CPUP	**Villa Florida**	**13.30**	**75**	Pn		**Pn**	**03 57 49.0**	**+2.3**
comp=E,2.4nm,0.3s,baz=251,slow=12,SNR=10								
comp=E,6.0nm,0.3s								

LPAZ La Paz 14.60 14 Pn **P** **03 58 08.4 -2.7**
comp=E,1.2nm,0.3s,baz=181,slow=9.9,SNR=20
ITAB Concordia 17.43 84 *e*P **Pn** **03 58 37.4 -3.4**
SIV San Ignacio 17.47 36 P **P** **03 58 43.5 +1.2**
comp=E,0.1nm,0.3s,baz=218,slow=11,SNR=28
SIV LR LR 04 06 45.5
comp=E,2μm,21.1s,baz=220,slow=42
comp=E,28nm,0.9s
CNLB Canela 18.08 91 *e*P **Pn** **03 58 46.2 -2.7**
PTGB Pitanga 18.31 76 *e*P **P** **03 58 47.8 -3.9**
TRCB Terra Rica 18.68 70 *e*P **P** **03 58 52.3 -3.4**
GO09 Cerro Castillo 20.67 181 P Pn 03 59 19.2 -0.4
GO09 IAmb IAmb 03 59 37.3
comp=Z,127nm,1.2s
TIJ01 Guaruva-PR 20.68 81 *e*P **P** **03 59 14.2 -3.4**
FRTB Fartura 20.96 75 *e*P **P** **03 59 16.5 -4.0**
MG05 Puerto Natales 21.08 181 **P** **03 59 22.9 +1.4**
MG05 IAmb IAmb 03 59 49.1
comp=Z,71nm,1.1s
ETMB Extrema 21.28 15 *e*P **P** **03 59 18.5 -5.5**
ITRB Iturama 22.08 66 *e*P **P** **03 59 29.5 -3.2**
PET01 Itanhaem-SP 22.51 80 *e*P **P** **03 59 33.5 -3.7**
CZSB Cruzeiro do Su 22.76 357 *e*P **P** **03 59 33.9 -5.9**
BB19B Bebedouro 22.85 71 *e*P **P** **03 59 36.8 -4.0**
MG03 Isla Dawson 23.26 178 P **P** **03 59 45.6 +1.0**
MG03 IAmb IAmb 04 00 08.7
comp=Z,93nm,1.2s
EFI East Falkland 23.35 158 *ce*P **P** **03 59 45.9 +0.4**
EFI pmax pmax
comp=Z,122nm,2.5s
PDRB Porto dos Gac 23.42 39 *e*P **P** **03 59 40.0 -6.5**
USHA Ushuaia 24.34 175 P **P** **03 59 55.5 +0.7**
comp=Z,20nm,0.7s,baz=46,slow=5.0,SNR=3.7
comp=Z,20nm,0.7s
CLDB Colider 24.54 40 *e*P **P** **03 59 53.4 -3.6**
IPMB Ipameri, GO 24.73 65 *e*P **P** **03 59 55.8 -3.0**
BDFB Brasilia 26.27 61 P **P** **04 00 13.8 +0.9**
comp=Z,23nm,0.7s,baz=236,slow=9.7,SNR=7.0
comp=Z,23nm,0.7s
VAS01 Vassouras-RJ 26.54 79 *e*P **P** **04 00 13.7 -1.4**
CAM01 Campos-RJ 28.23 79 *e*P **P** **04 00 28.0 -2.3**
PEXB Peixe 28.39 55 *e*P **P** **04 00 27.4 -4.3**
OTAV Otavalo 31.33 347 *e*P P 04 00 53.5 -4.7
GUA01 Guaratinga, BA 32.23 72 *e*P **P** **04 01 02.5 -3.1**
CMC01 Camacan, BA 33.10 70 *e*P **P** **04 01 10.1 -3.2**
POPC Popayan, Colom 33.29 351 *e*P **P** **04 01 18.9 +3.8**
GDU01 Guandu, BA 33.97 68 *e*P **P** **04 01 17.8 -3.1**
CHIC Chingaza 35.07 356 *e*P **P** **04 01 29.1 -1.7**
MCPB Macapa, AP 35.37 35 *e*P **P** **04 01 30.2 -2.7**
PLMC San Jos del P 35.57 352 *e*P **P** **04 01 36.9 +2.2**
GUY2C Guyana, Caldas 35.78 354 *e*P **P** **04 01 39.8 +2.8**
NBLA Lagarto - SE 36.97 66 *e*P **P** **04 01 43.4 -3.3**
BAUV El Baul 39.46 6 P **P** **04 02 08.6 +1.1**
BAUV IAmb IAmb 04 02 09.0
comp=Z,40nm,0.8s
SJCC San Jacinto, C 40.39 355 P **P** **04 02 17.4 +2.0**
SJCC IAmb IAmb 04 02 30.7
comp=Z,35nm,1.2s
MLPR Magueyes Islan 48.48 6 **P** **04 03 21.0 +1.2**
MLPR IAmb IAmb 04 03 22.7
comp=Z,106nm,1.1s
CRPR Cabo Rojo, PR 48.51 6 P **P** **04 03 21.7 +1.7**
OBIP Obispado Ponce 48.59 6 P **P** **04 03 21.6 +0.9**
OBIP IAmb IAmb 04 03 23.0
comp=Z,64nm,0.8s
SJG San Juan 48.71 7 P **P** **04 03 21.6 0.0**
SJG San Juan 48.71 7 P **P** **04 03 21.6 0.0**
SJG pmax pmax
comp=Z,39nm,1.0s
SNAA Sanae 54.63 159 *i* P **P** **04 04 05.1 -0.3**
SNAA pmax pmax
comp=Z,30nm,1.4s
TROLL Troll, Antarti 56.34 159 PKiKP **PKiKP** **04 11 42.8 -0.5**
TROLL S **S** **04 12 06.0 +0.2**
NVL N'lazarevskaya 59.33 157 *e*P **P** **04 04 38.1 -0.4**
NVL *e*S **S** **04 12 44.8 +0.2**
NVL pmax pmax
comp=Z,16nm,1.0s
NVL MLR MLR
comp=Z,515nm,21.0s
833A Chaparral WMA, 64.28 333 P **P** **04 05 13.9 +1.6**
HKT Hockley 64.45 337 P **P** **04 05 14.7 +1.4**
HKT IAmb IAmb 04 05 25.0
comp=Z,19nm,1.4s
HKT Hockley 64.45 337 P **P** **04 05 14.7 +1.4**
HKT pmax pmax
comp=Z,19nm,1.5s
X48A Hartselle 66.30 346 P **P** **04 05 25.3 0.0**
JCT Junction City 66.36 334 P **P** **04 05 27.7 +1.9**
JCT IAmb IAmb 04 05 38.8
comp=Z,21nm,1.2s
JCT Junction City 66.36 334 P **P** **04 05 27.7 +1.9**
JCT pmax pmax
comp=Z,21nm,1.3s
SWET Sewanee 66.82 347 P **P** **04 05 29.1 +0.4**
OXF Oxford 66.88 344 P **P** **04 05 29.4 +0.4**
OXF Oxford 66.88 344 P **P** **04 05 29.4 +0.4**
OXF pmax pmax
comp=Z,56nm,1.3s
TX32 Lajitas Array 66.94 330 P **P** **04 05 30.3 +0.7**
TXAR Lajitas Array 66.94 330 P **P** **04 05 31.4 +1.8**
comp=Z,1.4nm,0.9s,baz=147,slow=7.7,SNR=9.2
comp=Z,1.4nm,0.9s
TXAR Lajitas Array 66.94 330 P **P** **04 05 30.3 +0.7**
TX31 Lajitas Ar. Si 66.94 330 P **P** **04 05 29.6 0.0**
TX31 IAmb IAmb 04 05 59.3
comp=Z,11nm,1.1s
PLAL Pickwick Lake 67.03 345 P **P** **04 05 30.3 +0.4**
PLAL IAmb IAmb 04 05 40.2
comp=Z,26nm,1.5s
WLAR White Oak Lake 67.06 341 P **P** **04 05 32.6 +2.4**
V48A Smith Brothers 67.50 347 P **P** **04 05 34.3 +1.4**
VNDA Vanda 67.50 191 P **P** **04 05 34.0 +1.5**
comp=Z,1.7nm,0.9s,baz=118,slow=3.6,SNR=6.3
VNDA LR LR 04 31 34.3
comp=Z,60nm,18.7s,baz=148,slow=33
comp=Z,1.7nm,0.9s
VNDA Vanda 67.50 191 **P** **04 05 34.0 +1.5**
VNDA Vanda 67.50 191 P **P** **04 05 34.0 +1.5**
CLTN Cedars of Leba 67.74 347 P **P** **04 05 35.5 +1.1**
MIAR Mount Ida 68.00 341 P **P** **04 05 37.4 +1.3**
MIAR Mount Ida 68.00 341 P **P** **04 05 37.4 +1.3**
MIAR pmax pmax
comp=Z,7.0nm,1.1s
Z35A Perchaven, San 68.02 337 P **P** **04 05 36.9 +0.6**
WVT Waverly 68.08 346 P **P** **04 05 37.2 +0.7**
WVT Waverly 68.08 346 P **P** **04 05 37.2 +0.7**
WVT pmax pmax
comp=Z,38nm,1.4s
ABTX Abilene, Hawle 68.22 335 P **P** **04 05 39.0 +1.4**
WHAR Wooly Hollow 68.34 342 **P** **04 05 40.1 +1.9**
WHAR IAmb IAmb 04 06 05.3
comp=Z,15nm,1.4s
TBI Tubuai 68.46 255 *e*LR LR 04 26 26.2
comp=Z,366nm,25.5s
TBI Tubuai 68.46 255 *e*T T 05 20 06.0
comp=Z,17nm,0.3s
W39A Magazine 68.67 341 **P** **04 05 41.9 +1.7**
W39A IAmb IAmb 04 05 54.5
comp=Z,20nm,1.1s
T47A Sharon Grove 68.76 347 P **P** **04 05 41.6 +0.8**
LCAR Lake Charles 68.79 343 P **P** **04 05 41.6 +0.6**
LCAR IAmb IAmb 04 05 43.1
comp=Z,7.2nm,0.8s
X34A Smith Ranch, M 69.38 337 P **P** **04 05 46.3 +1.6**
X34A IAmb IAmb 04 05 58.5
comp=Z,18nm,1.1s
MEH Mehetia 69.66 261 *e*T T 05 21 39.3
comp=Z,30nm,0.2s
HHAR Hobbs 69.73 341 **P** **04 05 47.9 +1.1**
HHAR IAmb IAmb 04 05 57.6
comp=Z,24nm,1.4s
S44A Carbondale 69.89 345 P **P** **04 05 49.4 +1.6**
S44A IAmb IAmb 04 05 50.8
comp=Z,11nm,0.8s
MGMO Mountain Grove 70.10 343 P **P** **04 05 50.6 +1.5**
MGMO IAmb IAmb 04 06 02.5
comp=Z,12nm,1.1s
FVM French Village 70.44 344 P **P** **04 05 52.0 +0.9**
FVM French Village 70.44 344 P **P** **04 05 52.0 +0.9**
FVM pmax pmax
comp=Z,35nm,1.4s
CCM Cathedral Cave 70.70 344 **P** **04 05 53.6 +0.9**
CCM IAmb IAmb 04 06 03.5

	comp=Z,38nm,1.5s						
CCM	**Cathedral Cave**	**70.70**	**344**	P	**P**	**04 05 53.6**	**+0.9**
CCM				pmax	pmax		
	comp=Z,38nm,1.5s						
TVO	**Taravao**	**70.71**	**260**	*e*T	T	05 22 53.3	
	comp=Z,1.5nm,0.2s						
TIAR	**Tiarei**	**70.89**	**261**	*e*T	T	05 23 09.9	
	comp=Z,3.4nm,0.2s						
PPT2	**Papeete2**	**71.08**	**260**	*e*LR	LR	04 27 37.0	
	comp=Z,368nm,23.8s						
T35A	**Sooner Cattle**	**71.08**	**339**		**P**	**04 05 56.6**	**+1.5**
T35A				IAmb	IAmb	04 06 06.1	
	comp=Z,21nm,1.3s						
R40A	**Maddies Statio**	**71.17**	**343**	P	**P**	**04 05 56.8**	**+1.2**
R40A				IAmb	IAmb	04 06 08.9	
	comp=Z,19nm,1.0s						
121A	**Cookes Peak, D**	**71.49**	**328**		**P**	**04 05 59.3**	**+1.4**
P43A	**Skaggs, Pawnee**	**71.82**	**346**	P	**P**	**04 05 59.9**	**+0.5**
P43A				IAmb	IAmb	04 06 09.9	
	comp=Z,30nm,1.3s						
N49A	**Columbus Grove**	**72.09**	**350**	P	**P**	**04 06 01.6**	**+0.6**
N47A	**Urbana**	**72.29**	**349**	P	**P**	**04 06 04.2**	**+2.0**
N47A				IAmb	IAmb	04 06 12.1	
	comp=Z,26nm,1.3s						
ANMO	**Albuquerque**	**72.96**	**331**		**P**	**04 06 08.1**	**+1.5**
ANMO	**Albuquerque**	**72.96**	**331**	P	**P**	**04 06 08.1**	**+1.5**
ANMO				pmax	pmax		
	comp=Z,7.0nm,1.3s						
N41A	**Harden Midland**	**73.13**	**345**	P	**P**	**04 06 08.6**	**+1.4**
N41A				IAmb	IAmb	04 06 17.6	
	comp=Z,25nm,1.2s						
LIC	**Lamto**	**73.42**	**72**⇑	*e*P	**P**	**04 06 10.9**	**+1.4**
	comp=Z,13nm,0.5s						
TIC	**Toumodi**	**73.66**	**72**⇑	*i*P	**P**	**04 06 11.8**	**+0.8**
	comp=Z,2.8nm,0.2s						
KIC	**Kosan Boka**	**73.73**	**72**⇑	*e*P	**P**	**04 06 12.4**	**+1.0**
	comp=Z,3.4nm,0.2s						
DBIC	**Dimbokro**	**73.81**	**72**	P	**P**	**04 06 13.3**	**+1.5**
	comp=Z,12nm,0.6s,baz=243,slow=6.7,SNR=19						
	comp=Z,12nm,0.6s						
DBIC	**Dimbokro**	**73.81**	**72**	P	**P**	**04 06 12.5**	**+0.7**
DBIC	**Dimbokro**	**73.81**	**72**	P	**P**	**04 06 12.5**	**+0.7**
DBIC				pmax	pmax		
	comp=Z,91nm,1.0s						
T25A	**Trinidad**	**74.03**	**333**	P	**P**	**04 06 14.6**	**+1.7**
T25A				IAmb	IAmb	04 06 25.9	
	comp=Z,25nm,1.3s						
X18A	**Snowflake**	**74.15**	**328**	P	**P**	**04 06 15.6**	**+2.0**
N35A	**Tabor**	**74.48**	**341**	P	**P**	**04 06 16.1**	**+1.0**
JFWS	**Jewell Farm**	**75.11**	**346**		**P**	**04 06 19.9**	**+1.2**
JFWS				IAmb	IAmb	04 06 30.4	
	comp=Z,26nm,1.4s						
JFWS	**Jewell Farm**	**75.11**	**346**	P	**P**	**04 06 20.0**	**+1.2**
JFWS				pmax	pmax		
	comp=Z,26nm,1.4s						
S22A	**4UR Ranch, Cre**	**75.51**	**332**	P	**P**	**04 06 23.6**	**+2.0**
WUAZ	**Wupatki**	**75.62**	**327**		**P**	**04 06 24.1**	**+2.0**
WUAZ				IAmb	IAmb	04 06 35.1	
	comp=Z,17nm,1.2s						
MVCO	**Mesa Verde**	**75.75**	**330**		**P**	**04 06 23.7**	**+0.9**
MVCO				IAmb	IAmb	04 06 35.6	
	comp=Z,9.3nm,1.1s						
Q24A	**Divide**	**75.90**	**334**	P	**P**	**04 06 24.1**	**+0.4**
Q24A				IAmb	IAmb	04 06 36.5	
	comp=Z,20nm,1.2s						
MAW	**Mawson**	**76.35**	**164**	P	**P**	**04 06 27.2**	**+1.5**
	comp=Z,16nm,0.7s,baz=217,slow=7.1,SNR=20						
	comp=Z,16nm,0.7s						
MAW	**Mawson**	**76.35**	**164**	P	**P**	**04 06 26.8**	**+1.1**
MAW	**Mawson**	**76.35**	**164**	P	**P**	**04 06 26.8**	**+1.1**
MAW				pmax	pmax		
	comp=Z,6.0nm,1.0s						
W13A	**Hualapai Mount**	**76.48**	**325**	P	**P**	**04 06 29.0**	**+1.9**
PV13	**Radium Mtn., P**	**76.69**	**331**	P	**P**	**04 06 30.4**	**+2.3**
PV13				IAmb	IAmb	04 06 46.4	
	comp=Z,10nm,1.1s						
SMCO	**Snowmass**	**76.80**	**333**	P	**P**	**04 06 29.9**	**+0.9**
ISCO	**Idaho Springs**	**76.80**	**334**		**P**	**04 06 30.2**	**+1.3**
ISCO				IAmb	IAmb	04 06 41.6	
	comp=Z,16nm,1.4s						
ISCO	**Idaho Springs**	**76.80**	**334**	P	**P**	**04 06 30.2**	**+1.3**
ISCO				pmax	pmax		
	comp=Z,16nm,1.4s						
D62A	**Allapoint, All**	**77.35**	**2**	P	**P**	**04 06 33.0**	**+1.7**
ECSD	**EROS Data Cent**	**77.41**	**342**	P	**P**	**04 06 33.5**	**+1.7**
ECSD				IAmb	IAmb	04 06 42.8	
	comp=Z,39nm,1.4s						
PKCU	**Pink Cliffs**	**77.63**	**328**	P	**P**	**04 06 34.7**	**+1.1**
PKCU				IAmb	IAmb	04 06 36.6	
	comp=Z,13nm,1.3s						
LCMT	**Little Creek M**	**77.71**	**327**	P	**P**	**04 06 34.7**	**+0.9**
SPMN	**Marine on St.**	**77.87**	**345**	P	**P**	**04 06 35.1**	**+0.8**
SPMN				IAmb	IAmb	04 06 45.2	
	comp=Z,11nm,1.2s						
N23A	**Red Feather La**	**77.88**	**334**	P	**P**	**04 06 36.2**	**+1.4**
N23A				IAmb	IAmb	04 06 46.9	
	comp=Z,24nm,1.4s						
SZCU	**Shurtz Canyon**	**78.11**	**328**	P	**P**	**04 06 38.0**	**+1.9**
SZCU				IAmb	IAmb	04 06 48.5	
	comp=Z,12nm,1.3s						
O20A	**White River Ci**	**78.12**	**332**	P	**P**	**04 06 38.2**	**+2.1**
O20A				IAmb	IAmb	04 06 48.9	
	comp=Z,16nm,1.2s						
CCUT	**Cedar City**	**78.20**	**327**		**P**	**04 06 38.3**	**+1.6**
CCUT				IAmb	IAmb	04 06 49.4	
	comp=Z,15nm,1.3s						
SHPR	**Sheep Range**	**78.22**	**325**	P	**P**	**04 06 37.6**	**+0.9**
SHPR				IAmb	IAmb	04 06 49.0	
	comp=Z,16nm,1.4s						
Q16A	**Castle Valley**	**78.33**	**330**	P	**P**	**04 06 38.5**	**+1.2**
Q16A				IAmb	IAmb	04 06 51.9	
	comp=Z,9.7nm,1.0s						
MSU	**Marysvale**	**78.44**	**329**	P	**P**	**04 06 38.6**	**+0.6**
MSU	**Marysvale**	**78.44**	**329**	P	**P**	**04 06 38.6**	**+0.6**
F36A	**Milaca**	**78.63**	**345**	P	**P**	**04 06 39.7**	**+1.2**
F36A				IAmb	IAmb	04 06 41.2	
	comp=Z,8.2nm,1.0s						
GWY	**Greenwater Val**	**78.72**	**324**	P	**P**	**04 06 40.9**	**+1.4**
D41A	**Chassel**	**78.78**	**348**	P	**P**	**04 06 41.0**	**+1.8**
D41A				IAmb	IAmb	04 06 55.0	
	comp=Z,17nm,0.8s						
TPNV	**Topopah Spring**	**79.11**	**325**	P	**P**	**04 06 42.3**	**+0.8**
TPNV	**Topopah Spring**	**79.11**	**325**	P	**P**	**04 06 42.3**	**+0.8**
TPNV				pmax	pmax		
	comp=Z,3.0nm,1.1s						
PSUT	**Pine Spring**	**79.22**	**328**	P	**P**	**04 06 43.9**	**+1.7**
MPU	**Maple Canyon**	**79.44**	**330**	P	**P**	**04 06 44.9**	**+1.6**
NLU	**North Lily Min**	**79.58**	**330**	P	**P**	**04 06 45.2**	**+1.0**
K22A	**Casper**	**79.62**	**335**	P	**P**	**04 06 45.4**	**+1.2**
K22A				IAmb	IAmb	04 06 56.9	
	comp=Z,33nm,1.4s						
TSUM	**Tsumeb**	**79.85**	**106**		**P**	**04 06 46.1**	**0.0**
TSUM				IAmb	IAmb	04 07 00.9	
	comp=Z,18nm,1.0s						
RSSD	**Black Hills**	**80.02**	**337**	P	**P**	**04 06 47.4**	**+0.9**
RSSD	**Black Hills**	**80.02**	**337**	P	**P**	**04 06 47.4**	**+0.9**
RSSD				pmax	pmax		
	comp=Z,6.0nm,1.1s						
LCH	**Last Change Ra**	**80.03**	**324**	P	**P**	**04 06 47.6**	**+1.1**
DUG	**Dugway, Tooele**	**80.10**	**329**	P	**P**	**04 06 48.8**	**+1.9**
DUG				IAmb	IAmb	04 06 58.8	
	comp=Z,11nm,1.1s						
DUG	**Dugway, Tooele**	**80.10**	**329**	P	**P**	**04 06 48.8**	**+1.9**
DUG				pmax	pmax		
	comp=Z,11nm,1.2s						
EYMN	**Ely**	**80.18**	**347**	P	**P**	**04 06 47.7**	**+0.8**
EYMN				IAmb	IAmb	04 07 03.1	
	comp=Z,14nm,1.3s						
TPH	**Tonopah**	**80.47**	**325**	P	**P**	**04 06 50.2**	**+1.2**
TPH	**Tonopah**	**80.47**	**325**	P	**P**	**04 06 50.2**	**+1.2**
TPH				pmax	pmax		
	comp=Z,44nm,1.3s						
HWUT	**Hardware Ranch**	**80.72**	**331**	P	**P**	**04 06 51.5**	**+1.3**
HWUT				IAmb	IAmb	04 07 01.5	
	comp=Z,9.9nm,1.0s						
PDAR	**Pinedale Array**	**80.88**	**333**	P	**P**	**04 06 52.5**	**+1.5**
	comp=Z,0.8nm,0.6s,baz=145,slow=5.4,SNR=7.1						
	comp=Z,0.8nm,0.6s						
PDAR	**Pinedale Array**	**80.88**	**333**	P	**P**	**04 06 52.1**	**+1.0**
OMMB	**Old Mammoth Mi**	**81.00**	**324**	P	**P**	**04 06 53.2**	**+1.3**
NV11	**Mina Array Sit**	**81.21**	**325**	P	**P**	**04 06 54.8**	**+1.9**
LHV	**Little Huntoon**	**81.24**	**324**	P	**P**	**04 06 53.9**	**+1.2**
NVAR	**Mina Array Bea**	**81.28**	**325**	P	**P**	**04 06 55.7**	**+2.4**
	comp=Z,2.6nm,0.9s,baz=154,slow=5.4,SNR=12						
	comp=Z,2.6nm,0.9s						
NVAR	**Mina Array Bea**	**81.28**	**325**	P	**P**	**04 06 54.3**	**+1.0**
BOSA	**Boshof**	**81.38**	**118**	P	**P**	**04 06 55.6**	**+1.4**
	comp=Z,7.1nm,0.9s,baz=236,slow=5.8,SNR=8.1						
	comp=Z,7.1nm,0.9s						
HVU	**Hansel Valley**	**81.38**	**330**	P	**P**	**04 06 54.2**	**+0.5**
HVU	**Hansel Valley**	**81.38**	**330**	P	**P**	**04 06 54.2**	**+0.5**
HVU				pmax	pmax		
	comp=Z,6.0nm,0.9s						
RYN	**Ryan**	**81.54**	**325**	P	**P**	**04 06 55.1**	**+0.5**
ELK	**Elko**	**81.64**	**328**	P	**P**	**04 06 56.5**	**+1.3**
ELK				IAmb	IAmb	04 06 58.4	
	comp=Z,4.7nm,0.9s						
ELK	**Elko**	**81.64**	**328**	P	**P**	**04 06 56.5**	**+1.3**
ELK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KVN	**Kaiserville**	**81.66**	**325**	P	**P**	**04 06 55.5**	**+0.2**
KVN	**Kaiserville**	**81.66**	**325**	P	**P**	**04 06 55.5**	**+0.2**
KVN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
REDW	**Red Top Meadow**	**81.89**	**332**	P	**P**	**04 06 57.5**	**+1.0**
REDW				IAmb	IAmb	04 07 22.3	
	comp=Z,11nm,1.3s						
TPAW	**Teton Pass**	**82.04**	**332**	P	**P**	**04 06 57.7**	**+0.4**
TPAW				IAmb	IAmb	04 07 08.6	
	comp=Z,11nm,1.3s						
FLWY	**Flagg Ranch**	**82.43**	**333**	P	**P**	**04 07 00.2**	**+1.0**
FLWY				IAmb	IAmb	04 07 11.8	
	comp=Z,13nm,1.4s						
PNTR	**Pine Nut**	**82.44**	**324**	P	**P**	**04 06 59.4**	**+0.1**
PNTR				IAmb	IAmb	04 07 13.4	
	comp=Z,17nm,1.1s						
TORD	**Torodi Ar. Bea**	**82.75**	**70**	P	**P**	**04 07 02.5**	**+1.2**
	comp=Z,5.0nm,0.5s,baz=279,slow=5.9,SNR=47						
	comp=Z,5.0nm,0.5s						
ULM	**Lac du Bonnet**	**83.30**	**345**	P	**P**	**04 07 04.0**	**+0.7**
	comp=Z,6.9nm,0.8s,baz=169,slow=2.5,SNR=8.4						
	comp=Z,6.9nm,0.8s						
ULM	**Lac du Bonnet**	**83.30**	**345**	P	**P**	**04 07 04.0**	**+0.7**
ULM				IAmb	IAmb	04 07 04.6	
	comp=Z,9.3nm,1.0s						
ULM	**Lac du Bonnet**	**83.30**	**345**	P	**P**	**04 07 04.0**	**+0.7**
BEKR	**Beckworth**	**83.41**	**324**	P	**P**	**04 07 05.7**	**+1.4**
BEKR				IAmb	IAmb	04 07 22.5	
	comp=Z,10nm,1.4s						
LBTB	**Lobatse**	**83.45**	**115**		**P**	**04 07 05.7**	**+0.7**
LBTB	**Lobatse**	**83.45**	**115**	P	**P**	**04 07 05.7**	**+0.7**
LBTB				pmax	pmax		
	comp=Z,23nm,1.0s						
HLID	**Hailey**	**83.53**	**330**	P	**P**	**04 07 06.8**	**+1.9**
HLID				IAmb	IAmb	04 07 20.8	
	comp=Z,4.6nm,1.0s						
BCYI	**Bear Canyon**	**83.72**	**331**	P	**P**	**04 07 07.0**	**+1.1**
ORV	**Oroville**	**83.75**	**324**	P	**P**	**04 07 07.4**	**+1.5**
ORV				IAmb	IAmb	04 07 18.6	
	comp=Z,15nm,1.2s						
ORV	**Oroville**	**83.75**	**324**	P	**P**	**04 07 07.4**	**+1.5**
ORV				pmax	pmax		
	comp=Z,15nm,1.2s						
MCMT	**McKenzie Canyo**	**83.91**	**332**	P	**P**	**04 07 07.3**	**+0.4**
DGMT	**Dagmar**	**83.92**	**339**	P	**P**	**04 07 07.6**	**+1.0**
SCHQ	**Schefferville**	**85.17**	**3**	P	**P**	**04 07 13.6**	**+0.9**
J08A	**Circle Bar Ran**	**85.18**	**328**	P	**P**	**04 07 13.9**	**+0.8**
J08A				IAmb	IAmb	04 07 16.3	
	comp=Z,14nm,1.1s						
PINE	**Pine Mountain**	**86.66**	**327**	P	**P**	**04 07 19.4**	**-1.2**
PINE				IAmb	IAmb	04 07 27.5	
	comp=Z,8.7nm,1.0s						
FCC	**Fort Churchill**	**90.96**	**349**	P	**P**	**04 07 41.1**	**+0.9**
FCC				IAmb	IAmb	04 07 56.9	
	comp=Z,13nm,1.1s						
FCC	**Fort Churchill**	**90.96**	**349**	P	**P**	**04 07 41.2**	**+0.9**
FCC				pmax	pmax		
	comp=Z,13nm,1.1s						
YKA	**Yellowknife Ar**	**98.94**	**341**	P	**P**	**04 08 16.5**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=141,slow=4.5,SNR=6.4						
	comp=Z,0.3nm,0.5s						
DZM	**Mont Dzumac**	**103.50**	**234**	*e*LR	LR	04 42 39.4	
	comp=Z,350nm,23.4s						
AKASG	**Malin Array Be**	**119.63**	**46**	PKP	**PKPdf**	**04 13 26.1**	**-0.2**
	comp=Z,2.0nm,0.8s,baz=261,slow=2.0,SNR=5.8						
AKBB	**Malin Array Si**	**119.63**	**46**	*i* PKIKP	**PKPdf**	**04 13 25.3**	**-1.0**
BRTR	**Keskin Array B**	**119.86**	**59**	PKP	**PKiKP**	**04 13 28.4**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=284,slow=20,SNR=3.5						
WRA	**Warramunga Arr**	**123.88**	**210**	PKP	**PKPdf**	**04 13 35.3**	**-0.3**
	comp=Z,1.8nm,0.8s,baz=145,slow=1.9,SNR=9.6						
OBN	**Obninsk**	**124.71**	**42**	*e*PKIKP	**PKPdf**	**04 13 36.0**	**+0.1**
OBN				*e*		04 13 44.1	
OBN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KLMR	**Klimovskoe**	**126.45**	**35**	*e*PKIKP	**PKPdf**	**04 13 38.6**	**-0.5**
KLMR				pmax	pmax		
	comp=Z,20nm,1.3s						
KLMR	**Klimovskoe**	**126.45**	**35**	*e*PKPdf	**PKPdf**	**04 13 38.6**	**-0.5**
KLMR				AMP		04 13 51.0	
	comp=Z,20nm,1.3s						
KIV	**Kislovodsk**	**127.37**	**56**	*i* PKIKP	**PKPdf**	**04 13 40.1**	**-1.4**
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,53nm,23.0s						
PRGR	**Permogore**	**129.32**	**33**	*e*PKIKP	**PKiKP**	**04 13 46.0**	**+0.8**
PRGR				*e*		04 13 54.6	
BILL	**Bilibino**	**129.89**	**335**	*e*PKIKP	**PKPdf**	**04 13 45.1**	**-0.4**
BILL				*e*		04 13 53.3	
BILL				*e*PPP	PPP	04 18 48.9	
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KIRV	**Kirov**	**131.64**	**37**	*i* PKIKP	**PKPdf**	**04 13 49.5**	**+0.5**
ARU	**Arti**	**136.92**	**38**	*i* PKIKP	**PKPdf**	**04 13 58.3**	**-0.7**
ARU						04 16 39.2	
ARU				MLR	MLR		
	comp=Z,169nm,18.0s						
SEY	**Seymchan**	**137.21**	**332**	*i* PKIKP	**PKiKP**	**04 14 01.3**	**+0.1**
TIXI	**Tiksi**	**137.40**	**351**	*i* PKIKP	**PKPdf**	**04 13 59.9**	**+0.5**
BRVK	**Borovoye**	**144.44**	**40**	*i* PKIKP	PKPbc	04 14 11.9	+0.7
YAK	**Yakutsk**	**145.61**	**342**	*e*PKP2	**PKPab**	**04 14 15.2**	**+0.2**
YAK				pmax	pmax		
	comp=Z,42nm,0.8s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.1s						
YSS	**Yuzh-Sakhalins**	**148.89**	**311**	*e*PKP2	**PKPbc**	**04 14 25.0**	**+0.7**
YSS				pmax	pmax		
	comp=Z,30nm,1.1s						
HYBB	**Hyderabad (bro**	**149.90**	**109**	*e*PKPdf	**PKPdf**	**04 14 22.4**	**-0.5**
KURK	**Kurchatov**	**150.11**	**39**^c	*i* PKIKP	**PKiKP**	**04 14 28.7**	**+0.6**
KURK				pmax	pmax		
	comp=Z,21nm,1.3s						
ZALV	**Zalesovo Beam**	**151.14**	**29**	PKPbc	**PKiKP**	**04 14 30.9**	**+0.8**
	comp=Z,56nm,0.9s,baz=298,slow=3.2,SNR=40						
KSH	**Kashi**	**152.17**	**62**	PKPbc	**PKPdf**	**04 14 25.5**	**-0.4**
KSH				pPKP	PKiKP	04 14 33.8	+0.9
KSH				sPKP		04 14 42.3	
KSH				LR	LR		
	comp=Z,170nm,16.2s						
BOD	**Bodaibo**	**152.49**	**353**	*e*PKIKP	**PKPbc**	**04 14 32.8**	**+0.3**
BOD				pmax	pmax		
	comp=Z,8.0nm,1.5s						
ZEA	**Zeya**	**153.12**	**335**	*e*PKIKP	**PKiKP**	**04 14 34.6**	**+0.4**
MKAR	**Makanchi Array**	**154.19**	**44**	PKPbc	**PKiKP**	**04 14 37.5**	**+0.8**
	comp=Z,4.8nm,0.9s,baz=304,slow=2.4,SNR=17						
WMQ	**Urumqi**	**158.98**	**45**	*e*PKP	**PKPdf**	**04 14 36.0**	**+1.2**
ZAK	**Zakamensk**	**159.87**	**9**	*e*PKP2	**PKPab**	**04 15 15.8**	**+1.0**
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
SONM	**Songino Array**	**162.71**	**4**	PKP	**PKPdf**	**04 14 39.4**	**+0.6**
	comp=Z,0.2nm,0.4s,baz=45,slow=0.2,SNR=3.8						
SONM				PKPab	**PKPab**	**04 15 29.3**	**+1.9**
	comp=Z,3.1nm,1.0s,baz=338,slow=3.6,SNR=9.8						
GOMU	**GeErMu**	**167.40**	**60**	PKP	**PKPdf**	**04 14 42.6**	**-0.9**
GOMU				AMB	AMB		
	comp=Z,39nm,7.2s						
GTA	**Gaotai**	**168.77**	**36**	*e*PKP	**PKPdf**	**04 14 45.8**	**+1.8**
GTA				pPKP	pPKPdf	04 14 54.4	+0.1
GTA				sPKP		04 14 58.8	
GTA				LR	LR		
	comp=Z,84nm,18.9s						
GTA				LR	LR		
	comp=Z,86nm,18.9s						
GTA				LR	LR		
	comp=Z,140nm,20.0s						
HHC	**Hu-ho-hao-te**	**169.43**	**347**	*e*PKP	**PKPdf**	**04 14 45.4**	**+1.1**
NJ2	**Nanjing**	**170.88**	**282**	*e*PKP	**PKPdf**	**04 14 43.5**	**-1.7**
PZH	**PanZhiHua**	**172.92**	**123**	PKP	**PKPdf**	**04 14 39.5**	**-7.1**
PZH	**PanZhiHua**	**172.92**	**123**	PKP	**PKPdf**	**04 14 47.3**	**+0.7**

MAN 22 04:16:09.1, 7.30N×123.71E, h30km, mb3.6, ML2.3, MS1.8, Mindanao

WEL 22 04:30:57.7±0.7, 40.5S±2.2°×177.4E±.1°, h63km±10km, M3.2/17, ML3.5/17, MLv3.2/17, Error ellipse: s-maj=0.0km s-min=0.0km az=77.3, Cook Strait

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DUWZ	**D'Urville Isla**	**0.51**	**212**	P	Pn	04 31 10.8	+0.8
DUWZ				S	Sn	04 31 22.3	+3.2
KIW	**Kapiti Island**	**0.69**	**136**	P	Pn	04 31 12.5	+0.5
KIW				S	Sn	04 31 24.1	+1.6
OGWZ	**Otaki Gorge**	**0.81**	**124**	P	Pn	04 31 14.0	+0.6
OGWZ				S	Sn	04 31 26.1	+1.0
WAZ	**Wanganui**	**0.82**	**42**	P	Pn	04 31 14.2	+0.7
WAZ				S	Sn	04 31 27.6	+2.4
TCW	**Tory Channel**	**0.84**	**180**	P	Pn	04 31 14.3	+0.4
TCW				S	Sn	04 31 27.4	+1.7
LREZ	**Lake Rotokare**	**0.91**	**6**	P	Pn	04 31 15.1	+0.4
LREZ				S	Sn	04 31 29.8	+2.5
CAW	**Cannon Point**	**0.95**	**141**	P	Pn	04 31 15.6	+0.4
CAW				S	Sn	04 31 29.0	+0.8
NMEZ	**Namu Road**	**1.00**	**342**	P	Pn	04 31 15.8	0.0
NMEZ				S	Sn	04 31 30.3	+1.0
PREZ	**Palmer Road**	**1.03**	**355**	P	Pn	04 31 16.3	+0.1
MRZ	**Mangatainoka R**	**1.03**	**107**	P	Pn	04 31 17.1	+0.8
MRZ				S	Sn	04 31 30.0	0.0
HOWZ	**Holdsworth Sta**	**1.08**	**120**	P	Pn	04 31 16.9	+0.1
HOWZ				S	Sn	04 31 31.0	-0.2
NNZ	**Nelson**	**1.09**	**218**	P	Pn	04 31 17.0	+0.1
NNZ				S	Sn	04 31 32.4	+1.1
KHEZ	**Kahui Hut**	**1.09**	**349**	P	Pn	04 31 16.9	-0.2
KHEZ				S	Sn	04 31 32.0	+0.5
TUWZ	**Tuamarina**	**1.09**	**193**	P	Pn	04 31 16.9	0.0
TUWZ				S	Sn	04 31 32.3	+0.9
NEZ	**North Egmont**	**1.10**	**353**	P	Pn	04 31 16.9	-0.4
NEZ				S	Sn	04 31 31.1	-0.7
BHW	**Baring Head**	**1.13**	**157**	P	Pn	04 31 17.5	-0.1
POWZ	**Post Office Ro**	**1.14**	**92**	P	Pn	04 31 18.9	+1.3
POWZ				S	Sn	04 31 33.4	+0.9
NBEZ	**Newall Road No**	**1.14**	**344**	P	Pn	04 31 17.5	-0.1
NBEZ				S	Sn	04 31 32.9	+0.3
DREZ	**Durham Road**	**1.18**	**357**	P	Pn	04 31 18.0	-0.1
DREZ				S	Sn	04 31 33.6	+0.2
PKE	**Pukeiti**	**1.19**	**349**	P	Pn	04 31 18.1	-0.3
TKNZ	**Takaka Hill**	**1.20**	**236**	P	Pn	04 31 18.1	-0.4
MTW	**Mount Morrison**	**1.22**	**131**	P	Pn	04 31 18.8	+0.1
MSWZ	**Moikau Station**	**1.28**	**145**	P	Pn	04 31 19.4	-0.1
TIWZ	**Tintock**	**1.29**	**109**	P	Pn	04 31 22.5	+2.9
VRZ	**Vera Road**	**1.30**	**17**	P	Pn	04 31 19.4	-0.2
PRWZ	**Pori Road**	**1.30**	**99**	P	Pn	04 31 22.2	+2.4
PAWZ	**Paruwai Farm**	**1.34**	**140**	P	Pn	04 31 20.1	-0.2
PKVZ	**Pokaka**	**1.35**	**38**	P	Pn	04 31 20.1	-0.4
BSWZ	**Blackbirch Sta**	**1.38**	**193**	P	Pn	04 31 21.1	+0.3
CMWZ	**Cape Campbell**	**1.38**	**182**	P	Pn	04 31 21.6	+0.8
QRZ	**Quartz Range**	**1.41**	**250**	P	Pn	04 31 20.1	-1.1
PLWZ	**Palliser**	**1.41**	**149**	P	Pn	04 31 20.7	-0.5
TMWZ	**Te Maipa**	**1.43**	**122**	P	Pn	04 31 23.3	+1.8
TRVZ	**Turoa**	**1.45**	**43**	P	Pn	04 31 21.7	-0.3
WNVZ	**Wahianoa**	**1.45**	**45**	P	Pn	04 31 21.3	-0.7
WHVZ	**Whangaehu Hut**	**1.48**	**43**	P	Pn	04 31 22.0	-0.4
FWVZ	**Far West T-bar**	**1.48**	**42**	P	Pn	04 31 21.8	-0.6
MOVZ	**Moawhango**	**1.49**	**50**	P	Pn	04 31 21.5	-0.8
TUVZ	**Tukino**	**1.53**	**44**	P	Pn	04 31 22.7	-0.2
BFZ	**Birch Farm**	**1.53**	**102**	P	Pn	04 31 22.4	-0.5
PNHZ	**Pukenui**	**1.54**	**74**	P	Pn	04 31 22.0	-1.1
MRNZ	**Matariki Terra**	**1.55**	**228**	P	Pn	04 31 22.7	-0.3
NGZ	**Ngauruhoe**	**1.57**	**41**	P	Pn	04 31 22.8	-0.7
TWVZ	**Taurewa**	**1.57**	**35**	P	Pn	04 31 22.8	-0.8
SNVZ	**South Ngauruho**	**1.58**	**42**	P	Pn	04 31 23.1	-0.5
NNVZ	**North Ngauruho**	**1.61**	**40**	P	Pn	04 31 23.3	-0.8
WTVZ	**West Tongariro**	**1.61**	**39**	P	Pn	04 31 23.1	-0.8
OTVZ	**Oturere**	**1.61**	**42**	P	Pn	04 31 23.4	-0.6
BHHZ	**Black Hill Sta**	**1.63**	**58**	P	Pn	04 31 22.9	-1.3
KRVZ	**Karewarewa**	**1.65**	**40**	P	Pn	04 31 23.9	-0.7
ETVZ	**East Tongariro**	**1.65**	**42**	P	Pn	04 31 23.8	-0.8
NTVZ	**North Tongarir**	**1.66**	**41**	P	Pn	04 31 24.2	-0.6
TMVZ

ACON	Acoyapa	1.19	96			Pn	05 24 54.2	-0.2
ACON	Acoyapa	1.19	96	*e*	P	Pn	05 24 54.2	-0.2
ACON	Acoyapa	1.19	96	*e*	P	Pn	05 24 54.3	-0.2
ACON					*e*S	Sn	05 25 17.2	-1.1
RCON	San Juan de Ri	1.40	9	*e*	P	Pn	05 24 56.5	+0.1
CSGN	Cosiguina Volc	1.45	307	*e*	P	Pn	05 24 55.7	-1.0
HZTE	Horizontes, Gu	1.57	151			Pn	05 24 58.0	+0.2
HZTE	Horizontes, Gu	1.57	151	⇑ *i*	P	Pn	05 24 57.7	-0.2
HZTE					*e*S	Sn	05 25 22.6	-1.9
HZTE	Horizontes, Gu	1.57	151	*e*	P	Pn	05 24 57.8	0.0
HZTE					*e*S	Sn	05 25 22.6	-1.9
GPS2	Hotel Rincn d	1.67	143	*e*	P	Pn	05 24 58.6	-0.2
GPS2					*e*S	Sn	05 25 24.6	-1.6
GUAB	Guayabo de Bag	1.78	141	*e*	P	Pn	05 24 59.8	0.0
HORNC	Hornillas	1.81	139	*e*	P	Pn	05 25 00.7	+0.6
COLC	Colonia	1.83	141	⇑ *e*	P	Pn	05 25 00.1	-0.2
CUI	Cuipilapa	1.86	140	*e*	P	Pn	05 25 00.5	-0.1
LCND	La Caada	1.90	309	*e*	P	Pn	05 25 00.3	-0.7
LCND					*e*S	Sn	05 25 30.1	0.0
LCND	La Caada	1.90	309	*e*	P	Pn	05 25 00.3	-0.7
LCND					*e*S	Sn	05 25 30.1	0.0
PTEN	Parque Tenorio	1.94	135	⇓ *e*	P	Pn	05 25 01.1	-0.3
PTEN					*e*S	Sn	05 25 29.3	-1.5
ORTG	Ortega, Santa	1.95	152	Pn		Pn	05 25 01.4	-0.2
ORTG	Ortega, Santa	1.95	152	*e*	P	Pn	05 25 01.0	-0.5
ORTG	Ortega, Santa	1.95	152	*e*	P	Pn	05 25 01.5	0.0
GUAI	GUAI	2.01	155	⇑ *i*	P	Pn	05 25 02.0	0.0
PLVR	Palo Verde	2.01	150	*e*	P	Pn	05 25 01.8	-0.4
ESPN	Las Esperanzas	2.03	87			Pn	05 25 02.3	0.0
ESPN	Las Esperanzas	2.03	87	⇓ *i*	P	Pn	05 25 02.3	0.0
ESPN	Las Esperanzas	2.03	87	*e*	P	Pn	05 25 02.2	0.0
ESPN					*e*S	Sn	05 25 31.3	-1.1
SAJU	San Juanillo,	2.12	162	*e*	P	Pn	05 25 02.7	-0.6
TGUH	Tegucigalpa,Un	2.13	336			Pn	05 25 04.1	+0.6
TGUH	Tegucigalpa,Un	2.13	336	*e*	P	Pn	05 25 04.1	+0.6
NICO	Nicoya	2.15	155	⇑ *i*	P	Pn	05 25 03.3	-0.3
DUNO	Dulce Nombre,	2.19	157			Pn	05 25 04.0	0.0
DUNO	Dulce Nombre,	2.19	157	*e*	P	Pn	05 25 03.9	-0.1
DUNO	Dulce Nombre,	2.19	157	*e*	P	Pn	05 25 03.8	-0.1
JTS	Las Juntas de	2.28	142	P		Pn	05 25 04.7	-0.3
	122nm,0.3s,baz=26,slow=19,SNR=147							
JTS					S	Sn	05 25 36.5	-0.6
	374nm,0.3s,baz=18,slow=22,SNR=9.7							
JTS	Las Juntas de	2.28	142	*e*	P	Pn	05 25 05.7	+0.7
JTS	Las Juntas de	2.28	142	*e*	P	Pn	05 25 04.9	0.0
CEDE	Laguna Cedeo	2.29	134	*e*	P	Pn	05 25 05.1	-0.1
ARE1	Arenal 1	2.30	135	*e*	P	Pn	05 25 05.3	+0.1
CASO	Castillo	2.31	136	*e*	P	Pn	05 25 05.5	+0.1
CASO					*e*S	Sn	05 25 37.4	-0.5
FORC	Fortuna	2.33	134	*e*	P	Pn	05 25 05.6	+0.1
PACA	Pacayal	2.34	306	*e*	P	Pn	05 25 05.7	+0.1
INDI	Punta indio, G	2.38	159	*i*	P	Pn	05 25 05.5	-0.5
COEB	Comit de Eme	2.52	304	*e*	P	Pn	05 25 07.7	0.0
COEB					*e*S	Sn	05 25 41.0	-1.1
COEB					IAML		05 25 46.8	
	comp=Z,542nm,0.3s							
COEB	Comit de Eme	2.52	304	*e*	P	Pn	05 25 07.7	0.0
COEB					*e*S	Sn	05 25 41.0	-1.1
COEB					IAML		05 25 46.8	
	comp=Z,542nm,0.3s							
COEB	Comit de Eme	2.52	304	*e*	P	Pn	05 25 07.8	+0.1
PQSS	Presa 15 de Se	2.61	306	*e*	P	Pn	05 25 08.5	-0.1
PQSS					*e*S	Sn	05 25 44.6	+0.8
PQSS	Presa 15 de Se	2.61	306	*e*	P	Pn	05 25 08.5	-0.1
PQSS				*i*	P		05 25 08.8	
PQSS					*e*S	Sn	05 25 44.6	+0.8
LAFE	Finca La Fe, P	2.69	148	*e*	P	Pn	05 25 09.5	-0.1
LAFE	Finca La Fe, P	2.69	148	*e*	P	Pn	05 25 09.5	-0.1
SRA1	San Ramn	2.73	137	*e*	P	Pn	05 25 11.4	+1.2
COEG	Centro de Oper	2.87	302	*e*	P	Pn	05 25 11.3	-0.4
COEG					*e*S	Sn	05 25 48.9	-0.4
COEG	Centro de Oper	2.87	302	*e*	P	Pn	05 25 11.3	-0.4
COEG					*e*S	Sn	05 25 48.9	-0.4
JACO	JACO, Garabito	2.95	145	Pn		Pn	05 25 13.2	+0.6
JACO	JACO, Garabito	2.95	145	*i*	P	Pn	05 25 13.2	+0.6
PAVA	Las Pavas	2.97	303	*e*	P	Pn	05 25 12.0	-0.8
PAVA					*e*S	Sn	05 25 51.5	+0.2
PAVA	Las Pavas	2.97	303	*e*	P	Pn	05 25 12.0	-0.8
PAVA					*e*S	Sn	05 25 51.5	+0.2
PAVA	Las Pavas	2.97	303	*e*	P	Pn	05 25 12.7	-0.2
SJTE	Alcalda de S	2.97	301	*e*	P	Pn	05 25 12.7	-0.2
SJTE	Alcalda de S	2.97	301	*e*	P	Pn	05 25 12.7	-0.2
SNET	Serv Nac Est T	3.20	300			Pn	05 25 14.9	-0.7
SNET						Sn	05 25 53.6	-2.6
CVTR	Volcan Turrial	3.30	129			Pn	05 25 16.7	-0.4
RAFA	San Farael, Vo	3.30	130	*e*	P	Pn	05 25 19.5	+2.5
JAYA	Jayaque - finc	3.37	298	*e*	P	Pn	05 25 17.8	+0.1
JAYA					*e*S	Sn	05 25 57.2	-2.9
JAYA	Jayaque - finc	3.37	298	*e*	P	Pn	05 25 17.8	+0.1
JAYA					*e*S	Sn	05 25 57.2	-2.9
RIMA	Rio Macho	3.39	133			Pn	05 25 18.9	+0.9
RIMA	Rio Macho	3.39	133	*e*	P	Pn	05 25 18.7	+0.7
RIMA	Rio Macho	3.39	133	*e*	P	Pn	05 25 18.8	+0.9
CEVE	Cerro Verde	3.60	299	*e*	S	Sn	05 26 03.5	-1.7
CDM	Cerro de Muert	3.60	134	*e*	P	Pn	05 25 21.9	+1.0
CDM	Cerro de Muert	3.60	134	*e*	P	Pn	05 25 21.9	+1.0
MTO3	Montecristo	3.70	309			Pn	05 25 22.3	+0.5
MTO3	Montecristo	3.70	309	*e*	P	Pn	05 25 22.3	+0.5
EDDO	Dominical	3.75	139	*e*	P	Pn	05 25 23.7	+1.5
NUBE	Las Nubes	3.77	299	*e*	P	Pn	05 25 21.9	-0.7
NUBE					*e*S	Sn	05 26 07.4	-1.5
NUBE	Las Nubes	3.77	299	*e*	P	Pn	05 25 21.9	-0.7
NUBE					*e*S	Sn	05 26 07.4	-1.5
PEZE	Perez Zeledon,	3.79	135			Pn	05 25 23.7	+0.9
SLOZ	Alcaldia de Sa	3.83	300	*e*	P	Pn	05 25 23.0	-0.3
DRK0	Durika	4.17	132			Pn	05 25 29.4	+1.8
DRK0	Durika	4.17	132	*e*	P	Pn	05 25 29.5	+1.8
POTG	Potrero Grande	4.41	133	*e*	P	Pn	05 25 31.4	+0.9
BRU2	Volcan	4.89	132			Pn	05 25 37.5	+0.8
PRVC	Isla de Provid	5.05	75	Pn		Pn	05 25 37.5	-1.1
BCIP	Isla Barro Col	7.06	114			Pn	05 26 05.2	+0.5
ZARC	Zaragoza, Cauc	12.24	111	P		Pn	05 27 14.3	+2.7
ROSC	El Rosal	13.93	120	P		P	05 27 36.6	+1.4
	comp=Z,6.2nm,0.6s,baz=65,slow=12,SNR=8.7							
ROSC	El Rosal	13.93	120	P		P	05 27 36.0	+0.7
PORT	Chimborazo Vol	15.45	150	P		Pn	05 27 51.9	-0.2
PORT					IAmb	IAmb	05 27 57.7	
	comp=Z,18nm,0.7s							
SDV	Santo Domingo	15.81	100	P		P	05 27 55.0	-0.8
	comp=Z,20nm,0.8s,baz=302,slow=8.2,SNR=5.3							
BAUV	El Baul	18.30	98	P		P	05 28 22.6	-0.3
ATAH	Atahualpa	20.69	157	P		P	05 28 49.8	+0.7
	comp=Z,7.5nm,0.8s,baz=320,slow=5.6,SNR=4.6							
	comp=Z,7.5nm,0.8s							
LRAL	Lakeview Retre	20.85	359	P		P	05 28 50.9	+0.8
GOGA	Godfrey	21.38	7	P		P	05 28 55.5	-0.2
GOGA					IAmb	IAmb	05 28 58.9	
	comp=Z,22nm,1.4s							
Y49A	Blount Mountai	21.66	360	P		P	05 28 59.2	+0.6
Y49A					IAmb	IAmb	05 29 00.1	
	comp=Z,13nm,0.7s							
HODGE	Hodges	22.35	9	IAmb		IAmb	05 29 06.9	
	comp=Z,8.4nm,0.7s							
FPAL	Fort Paine	22.35	2	P		P	05 29 05.9	+0.6
OXF	Oxford	22.48	353	P		P	05 29 06.1	-0.3
PLAL	Pickwick Lake	22.84	356	P		P	05 29 10.3	+0.7
PAULI	Pauline	23.00	10	IAmb		IAmb	05 29 14.1	
	comp=Z,9.0nm,0.9s							
BG3	Lake Jocassee	23.01	7	IAmb		IAmb	05 29 12.8	
	comp=Z,8.4nm,0.8s							
SWET	Sewanee	23.02	1	P		P	05 29 11.7	+0.4
SWET					IAmb	IAmb	05 29 13.5	
	comp=Z,14nm,1.2s							
W50A	Signal Mountai	23.02	2	P		P	05 29 11.0	-0.3
W50A					IAmb	IAmb	05 29 13.8	
	comp=Z,13nm,0.8s							
MIAR	Mount Ida	23.29	345	P		P	05 29 13.1	-0.5
CPCT	Cooper Cave	23.31	4	P		P	05 29 14.5	+0.7
CPCT					IAmb	IAmb	05 29 17.2	
	comp=Z,13nm,0.9s							
KMSC	Kings Mountain	23.39	10	IAmb		IAmb	05 29 16.7	
	comp=Z,9.4nm,0.9s							
TXAR	Lajitas Array	23.52	319	P		P	05 29 17.1	+1.2
	comp=Z,2.9nm,0.7s,baz=139,slow=10.0,SNR=29							
TXAR					pP	pP	05 29 55.4	+2.6
	comp=Z,0.8nm,0.7s,baz=137,slow=12,SNR=3.4							
	comp=Z,2.9nm,0.7s							
TXAR	Lajitas Array	23.52	319	P		P	05 29 16.1	+0.2
TX31	Lajitas Ar. Si	23.52	319	P		P	05 29 16.1	+0.1
TX31					IAmb	IAmb	05 29 19.0	
	comp=Z,11nm,0.9s							
TX32	Lajitas Array	23.52	319	P		P	05 29 15.7	-0.2
V48A	Smith Brothers	23.54	359	P		P	05 29 16.2	+0.2
TKL	Tuckaleechee C	23.57	5	P		P	05 29 16.8	+0.5
	comp=Z,7.6nm,0.8s,baz=134,slow=5.0,SNR=13							
	comp=Z,7.6nm,0.8s							
TKL	Tuckaleechee C	23.57	5	IAmb		IAmb	05 29 19.7	
	comp=Z,11nm,1.0s							
V53A	Saluda	23.69	7	IAmb		IAmb	05 29 21.1	
	comp=Z,9.1nm,0.7s							
WHAR	Wooly Hollow	23.70	348	P		P	05 29 17.4	0.0
CLTN	Cedars of Leba	23.89	0	IAmb		IAmb	05 29 22.4	
	comp=Z,7.7nm,0.7s							
V55A	Taylorsville	24.11	10	IAmb		IAmb	05 29 24.9	
	comp=Z,13nm,0.7s							
U54A	Nelsons Funny	24.66	9	P		P	05 29 27.2	+1.0
T57A	Hurt	25.61	13	IAmb		IAmb	05 29 35.9	
	comp=Z,7.9nm,0.7s							
Q51A	Peebles	26.95	5	P		P	05 29 47.1	+0.3
Q52A	Bidwell	27.00	7	IAmb		IAmb	05 29 48.7	
	comp=Z,14nm,0.8s							
Q54A	Coxs Mills	27.23	9	IAmb		IAmb	05 29 50.8	
	comp=Z,10nm,0.8s							
P51A	Williamsport	27.43	6	IAmb		IAmb	05 29 52.6	
	comp=Z,9.6nm,0.9s							
Q56A	Snyder Ridge,	27.58	12	IAmb		IAmb	05 29 54.8	
	comp=Z,12nm,0.8s							
P38A	Dawn	28.14	348	IAmb		IAmb	05 29 57.0	
	comp=Z,4.8nm,0.7s							
SFIN	Lafayette	28.18	359	IAmb		IAmb	05 29 57.8	
	comp=Z,8.0nm,0.7s							
ACSO	Alum Creek Sta	28.18	6	IAmb		IAmb	05 29 58.7	
	comp=Z,12nm,0.7s							
P57A	Homestead Farm	28.27	14	P		P	05 29 60.0	+1.6
P57A					IAmb	IAmb	05 30 00.8	
	comp=Z,15nm,0.9s							
SSPA	Standing Stone	29.39	13	P		P	05 30 09.4	+1.0
SSPA					IAmb	IAmb	05 30 10.0	
	comp=Z,12nm,0.7s							
JFWS	Jewell Farm	30.89	354	IAmb		IAmb	05 30 21.6	
	comp=Z,4.4nm,0.9s							
I42A	Draeger Farm,	31.75	357	IAmb		IAmb	05 30 29.7	
	comp=Z,12nm,1.1s							
J58A	Remsen	32.59	15	IAmb		IAmb	05 30 38.1	
	comp=Z,28nm,1.3s							
LPAZ	La Paz	33.48	147	P		P	05 30 44.9	-0.1
	comp=Z,1.0nm,0.5s,baz=321,slow=4.0,SNR=7.5							
	comp=Z,1.0nm,0.5s							
LONY	Lake Ozonia	33.95	15	IAmb		IAmb	05 30 49.1	
	comp=Z,13nm,0.9s							
E43A	Lone Tree Farm	34.17	359	IAmb		IAmb	05 30 50.2	
	comp=Z,9.0nm,0.8s							
PB16	IPOC Station P	34.52	151	P		P	05 30 55.3	+1.4
PB16					IAmb	IAmb	05 30 57.5	
	comp=Z,6.1nm,0.6s							
F33A	5 Mile Ranch,	34.67	348	IAmb		IAmb	05 31 01.1	
	comp=Z,7.7nm,0.6s							
E38A	The Farm, Brul	34.67	354	IAmb		IAmb	05 30 53.9	
	comp=Z,11nm,1.1s							
PDAR	Pinedale Array	36.58	331	P		P	05 31 10.8	-0.1
	comp=Z,0.2nm,0.3s,baz=294,slow=40,SNR=2.9							
PDAR					pP	pP	05 31 54.2	+1.9
	comp=Z,0.1nm,0.4s,baz=320,slow=39,SNR=2.9							
	comp=Z,0.2nm,0.3s							
LATQ	La Tuque	36.98	15	IAmb		IAmb	05 31 15.0	
	comp=Z,11nm,0.8s							
SIV	San Ignacio	37.49	138	P		P	05 31 17.4	-1.2
	comp=Z,2.6nm,0.5s,baz=314,slow=7.3,SNR=14							
	comp=Z,2.6nm,0.5s							
NVAR	Mina Array Bea	38.66	318	P		P	05 31 29.7	+1.4
	comp=Z,0.9nm,0.7s,baz=134,slow=7.3,SNR=7.7							
NVAR					pP	pP	05 32 13.7	+3.6
	comp=Z,0.4nm,0.6s,baz=130,slow=7.2,SNR=3.2							
	comp=Z,0.9nm,0.7s							
SCHQ	Schefferville	45.32	16	P		P	05 32 20.4	-1.3
	comp=Z,3.5nm,0.5s,baz=219,slow=6.2,SNR=13							
	comp=Z,3.5nm,0.5s							
BDFB	Brasilia	46.92	125	P		P	05 32 32.1	-2.6
	comp=Z,1.9nm,0.6s,baz=260,slow=5.6,SNR=3.4							
	comp=Z,1.9nm,0.6s							
BDFB	Brasilia	46.92	125	IAmb		IAmb	05 32 34.1	
	comp=Z,6.6nm,1.1s							
CPUP	Villa Florida	47.51	144	P		P	05 32 37.1	-1.9
	comp=Z,1.3nm,0.9s,baz=350,slow=4.8,SNR=3.3							
	comp=Z,1.3nm,0.9s							
YKA	Yellowknife Ar	54.23	344	pP		pP	05 34 11.1	-2.2
	comp=Z,0.9nm,0.8s,baz=138,slow=7.5,SNR=3.6							
PLCA	Paso Flores	54.57	165	P		P	05 33 31.9	+0.5
	comp=Z,2.7nm,0.7s,baz=336,slow=8.3,SNR=16							
	comp=Z,2.7nm,0.7s							
PLCA	Paso Flores	54.57	165	P		P	05 33 31.9	+0.5
TRQA	Tornquist	54.88	157	P		P	05 33 32.9	-0.8
TRQA					IAmb	IAmb	05 33 36.5	
	comp=Z,13nm,1.2s							
ESDC	Sonseca Array	76.58	52	P		P	05 35 51.7	-0.8
	comp=Z,1.6nm,0.9s,baz=284,slow=6.4,SNR=7.3							
	comp=Z,1.6nm,0.9s							
DBIC	Dimbokro	80.37	85	P		P	05 36 13.3	-0.2
	comp=Z,5.5nm,0.9s,baz=30,slow=14,SNR=2.1							
	comp=Z,5.5nm,0.9s							
NOA	NORAR Array B	83.17	29	P		P	05 36 27.3	0.0
	comp=Z,0.1nm,0.3s,baz=212,slow=19,SNR=2.0							
	comp=Z,0.1nm,0.3s							
STKA	Stephens Creek	131.80	238	PKP		PKPdf	05 43 14.3	+0.6
	comp=Z,1.9nm,0.5s,baz=352,slow=13,SNR=4.4							
WRA	Warramunga Arr	140.18	253	PKhKP		PKPpre	05 43 22.5	
	comp=Z,0.5nm,0.7s,baz=90,slow=3.5,SNR=11							
WRA				PKP		PKPdf	05 43 29.9	+0.3
	comp=Z,2.3nm,0.6s,baz=90,slow=2.6,SNR=37							
PZH	PanZhiHua	140.83	348	PKP		PKPdf	05 43 31.3	+0.5

BJI ***22*** *06:09:45.4±0.0, 24°.48N×141°.32E, h206km, mb5.2/67, mB4.7/30*
IDC ***22*** *06:09:46.9±1.0, 24°.46N×141°.22E, h205km±8km, mb4.5/26, mbtmp5.0/31, MS3.1/4, Error ellipse: s-maj=11.3km s-min=9.8km az=66.0*
MOS ***22*** *06:09:47.4±0.9, 24°.43N×141°.20E, h225km, mb4.8/45, Error ellipse: s-maj=9.8km s-min=5.0km az=116.5*
NEIC ***22*** *06:09:47.8±1.9, 24°.46N±0°.08×141°.2E±0°.1, h201km±6km, mb4.7/253, Error ellipse: s-maj=14.2km s-min=11.3km az=89.0*
JMA ***22*** *06:09:50.1±0.3, 25°.N±1°×14°.1E±°, h186km±1km, MD4.9/35, MW4.8/35, IOTO ISLANDS REGION*

ISC 22 06:09:47.2±0.5, 24°.48N±0°.04×141°.25E±0°.05, h209km±3km, h209km:pP-P, n544, σ1°50/475, mb4.7/204, 25C-6D, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JHH2	Haha-jima-NKT2	2.30	21	P	Pn		06 10 30.7	+1.2
JHH2				*e*S	S		06 11 01.7	-0.6
JHH2	Haha-jima-NKT2	2.30	21	A	A		06 10 30.7	
	comp=E,24nm,0.5s,comp=E,14nm,0.3s							
CBIJ	Chichi jima	2.74	18	P	Pn		06 10 35.3	+1.0
CBIJ				*e*S	S		06 11 10.5	-0.3
CBIJ	Chichi jima	2.74	18	A	A		06 10 35.3	
	comp=E,15nm,0.4s,comp=E,12nm,0.5s							
JCJ	Chichijima	2.74	18	P	Pn		06 10 35.3	+1.0
	454nm,0.4s,baz=253,slow=13,SNR=292							
JCJ					S	S	06 11 10.7	-0.1
	4μm,0.4s,baz=235,slow=22,SNR=72							
JHJ2	Mitsune	8.69	352	Pn	Pn		06 11 49.9	+0.6
JHJ2					S		06 13 26.2	-0.9
JHJ	Hachijo jima 2	8.70	352	P	Pn		06 11 49.4	-0.1
	51nm,0.4s,baz=96,slow=9.2,SNR=12							
JHJ					S	S	06 13 21.7	-5.7
	113nm,0.4s,baz=265,slow=22,SNR=2.6							
BSO3	Boso 3	10.30	357	*e*P	Pn		06 12 08.3	-1.6
BSO3				*e*S	S		06 13 58.4	-6.9
BSO4	Boso 4	10.50	356	*e*P	Pn		06 12 11.5	-1.1
BSO4				*e*S	S		06 14 03.8	-6.4
JNY	Yasuok	11.23	346	*e*P	Pn		06 12 21.4	-0.7
JAO	Obara	11.29	343	*e*P	Pn		06 12 24.9	+2.0
INU	Inuyama	11.43	342	Pn	Pn		06 12 25.6	+1.1
JGF	Kuroka	11.58	344		Pn		06 12 26.5	0.0
JSU	Suzuyama	11.82	309	Pn	Pn		06 12 30.1	+0.5
JOW	Kunigami	11.93	284	LR	LR		06 17 20.4	
	comp=Z,85nm,18.5s,baz=121,slow=38							
MJAR	Matsushiro Arr	12.30	348	P	Pn		06 12 35.3	-0.3
	2.5nm,0.4s,baz=171,slow=12,SNR=7.9							
MJAR					S		06 14 47.0	-4.9
	5.9nm,0.7s,baz=145,slow=19,SNR=5.0							
MJAR					LR	LR	06 17 11.1	
	comp=Z,29nm,19.9s,baz=180,slow=36							
MJAR	Matsushiro Arr	12.30	348	Pn	Pn		06 12 36.5	+0.9
MJAR	Matsushiro Arr	12.30	348	P	Pn		06 12 36.5	+0.9
MJAR					S	S	06 14 47.0	-4.9
MAJO	Matsushiro	12.30	348		Pn	Pn	06 12 36.6	+1.1
MAJO	Matsushiro	12.30	348	*i*	P	Pn	06 12 36.7	+1.1
MJB9	Matsu-Tunnel	12.31	348		P	Pn	06 12 36.5	+0.9
JNU	Nakatsue	12.51	316		P	Pn	06 12 39.7	+1.4
	22nm,0.6s,baz=105,slow=6.0,SNR=4.3							
JNU	Nakatsue	12.51	316		P	P	06 12 41.6	-0.4
JHS	Saijyo	12.63	328			P	06 12 43.2	0.0
JMM	Marumori	13.35	358			Pn	06 12 47.4	-1.3
JSD	Sado	13.75	350		Pn	Pn	06 12 52.7	-0.9
JTU	Tsushima	14.36	317		P	P	06 13 04.8	+2.4
NAWB	Namwon	16.20	316		P	Pn	06 13 26.2	+2.8
JTM	Tenmabayashi	16.26	360		P	Pn	06 13 24.3	+0.2
YOJ	Yonaguni jima	16.60	274		P	Pn	06 13 29.1	+0.7
YOJ	Yonaguni jima	16.60	274		P	Pn	06 13 29.1	+0.7
YOJ					pmax	pmax		
	comp=Z,266nm,1.3s							
TJN	Taejon	16.83	318	*e*	P	Pn	06 13 31.5	+0.6
KSRS	Korea Array	17.23	322		P	Pn	06 13 35.2	-0.5
	comp=Z,29nm,0.5s							
ERM	Erimo	17.56	5		P	Pn	06 13 40.5	+1.0
ERM	Erimo	17.56	5	*i*	P	Pn	06 13 40.8	+1.3
SEHB	SEOHWA	17.64	324		P	Pn	06 13 39.6	-0.9
INCN	Inchon	18.00	319		P	Pn	06 13 43.6	-1.1
INCN	Inchon	18.00	319		P	Pn	06 13 43.6	-1.1
INCN					pmax	pmax		
	comp=Z,70nm,0.7s							
YHNB	Yeheng	18.08	275		P	P	06 13 43.4	-0.1
YHNB					IAmb	IAmb	06 13 59.1	
	comp=Z,35nm,0.8s							
JEW	Eniwo	18.31	0	P		P	06 13 47.0	+1.3
SSLB	Suanglung	18.54	272	P		P	06 13 49.0	+0.6
ASAJ	Asahikawa	19.62	3	P		P	06 14 00.3	+0.6
ASAJ					pmax	pmax		
	comp=Z,66nm,1.5s							
JKA	Kamikawa-asahi	19.62	3	P		P	06 14 00.3	+0.5
JKA					IAmb	IAmb	06 14 14.3	
	comp=Z,66nm,1.5s							
QZH	Quanzhou	20.58	276	⇓ *i*	P	P	06 14 10.3	0.0
QZH					sP	sP	06 15 09.9	+0.2
QZH					S	S	06 17 47.8	-0.8
QZH					pmax	pmax		
	comp=Z,32nm,0.6s							
KNMB	Chin-men Tao	20.80	275		P	P	06 14 11.4	-1.2
USA0B	Ussuriysk Arra	21.08	341		P	P	06 14 15.4	+0.2
USA0B	Ussuriysk Arra	21.08	341		P	P	06 14 15.4	+0.2
USA0B					pmax	pmax		
	comp=Z,27nm,0.6s							
USRK	Ussuriysk Ar.	21.08	341		P	P	06 14 15.3	+0.1
	comp=Z,28nm,0.5s,baz=143,slow=9.4,SNR=77							
	comp=Z,28nm,0.5s							
USRK	Ussuriysk Ar.	21.08	341		P	P	06 14 15.5	+0.3
USRK	Ussuriysk Ar.	21.08	341		P	P	06 14 15.5	+0.3
NJ2	Nanjing	21.09	296	⇑ *i*	P	P	06 14 16.3	+0.8
NJ2					sP	sP	06 15 19.8	+4.8
NJ2					pmax	pmax		
	comp=Z,170nm,0.8s							
DL2	Dalian	21.97	316		P	P	06 14 23.5	-0.8
DL2					pmax	pmax		
	comp=Z,96nm,0.8s							
YSS	Yuzh-Sakhalins	22.46	3	*ce*	P	P	06 14 29.2	+0.5
YSS					pmax	pmax		
	comp=Z,25nm,1.7s							
CN2	Changchun	23.21	330	*e*	P	P	06 14 36.3	+0.7
CN2				*e*	S	S	06 18 29.8	-1.8
CN2					pmax	pmax		
	comp=Z,10.0nm,0.6s							
CN2					pmax	pmax		
	comp=Z,100nm,3.0s							
CN2					LR	LR

ULN Ulaanbaatar 35.69 320 P **P** **06 16 26.7 +0.9**
ULN Ulaanbaatar 35.69 320 P **P** **06 16 26.7 +0.9**
ULN pmax pmax
comp=Z,7.0nm,0.9s
BKSI Bulukumba 36.07 218 P **P** **06 16 26.5 -2.6**
comp=Z,20nm,0.9s
SONM Songino Array 36.07 319 P **P** **06 16 28.8 -0.2**
comp=Z,6.0nm,0.5s,baz=137,slow=7.7,SNR=20
SONM PcP **PcP** **06 18 50.6 +0.3**
comp=Z,4.0nm,0.8s,baz=107,slow=1.3,SNR=7.5
SONM ScP **ScP** **06 22 16.1 -0.5**
comp=Z,1.0nm,0.5s,baz=116,slow=3.4,SNR=6.4
comp=Z,6.0nm,0.5s
SONM Songino Array 36.07 319 P **P** **06 16 29.3 +0.4**
SONM IAmb IAmb 06 16 32.7
comp=Z,6.7nm,0.6s
SONM Songino Array 36.07 319 P **P** **06 16 29.3 +0.4**
SONM pmax pmax
comp=Z,7.0nm,0.6s
MMRI Maumere 37.78 212 P **P** **06 16 41.0 -2.5**
GTA Gaotai 37.83 303 ⇑P **P** **06 16 44.6 +0.7**
GTA sP sP 06 17 54.8 +4.9
GTA pmax pmax
comp=Z,18nm,0.8s
GTA pmax pmax
comp=Z,64nm,6.9s
GTA LR LR
comp=Z,80nm,17.8s
GTA LR LR
comp=Z,120nm,17.1s
GTA LR LR
comp=Z,100nm,18.2s
EDFI Ende, Flores 38.15 212 P **P** **06 16 44.8 -1.9**
comp=Z,8.2nm,1.1s
COEN Coen 38.25 177 P **P** **06 16 48.0 +0.6**
MTN Manton Dam 38.39 196 P **P** **06 16 47.3 -1.2**
MTN IAmb IAmb 06 16 47.7
comp=Z,21nm,0.6s
SEY Seymchan 39.16 8 P **P** **06 16 55.1 +0.8**
comp=Z,4.2nm,0.5s,baz=186,slow=6.9,SNR=4.1
comp=Z,4.2nm,0.5s
SEY Seymchan 39.16 8*ce*P **P** **06 16 55.3 +0.9**
SEY pmax pmax
comp=Z,9.0nm,1.0s
CHTO Chiang Mai 39.61 270 P **P** **06 16 58.9 +0.2**
CHTO IAmb IAmb 06 17 00.1
comp=Z,19nm,0.8s
CHTO Chiang Mai 39.61 270 P **P** **06 16 58.9 +0.2**
CHTO pmax pmax
comp=Z,19nm,0.8s
CMAR Chiang Mai Arr 39.71 270 P **P** **06 17 00.1 +0.6**
comp=Z,12nm,0.7s,baz=64,slow=6.5,SNR=4.5
comp=Z,12nm,0.7s
GOMU GeErMu 41.39 298 P **P** **06 17 16.3 +2.8**
GOMU pmax pmax
comp=Z,62nm,1.0s
GOMU pmax pmax
comp=Z,38nm,3.6s
SRIT Nakonsritamara 42.73 256 IAmb IAmb 06 17 26.5
comp=Z,27nm,1.0s
KULM Kulim 43.39 251 P **P** **06 17 29.8 +0.3**
KULM IAmb IAmb 06 17 31.6
comp=Z,24nm,0.9s
IPM Ipoh 43.48 249 P **P** **06 17 30.1 -0.1**
IPM IAmb IAmb 06 17 31.7
comp=Z,36nm,1.1s
WB0 Warramunga Arr 44.48 189 P **P** **06 17 37.5 -0.4**
SHL Shillong 44.53 282 P **P** **06 17 39.3 +0.6**
SHL pmax pmax
comp=Z,152nm,0.8s
CTAO Charters Tower 44.57 173 P **P** **06 17 39.0 +0.4**
CTAO Charters Tower 44.57 173 P **P** **06 17 39.0 +0.4**
CTAO pmax pmax
comp=Z,7.0nm,0.7s
LSA Lhasa 44.63 288 IAmb IAmb 06 17 42.8
comp=Z,20nm,0.8s
WR0 Warramunga Arr 44.65 189 IAmb IAmb 06 17 39.4
comp=Z,30nm,0.6s
WRAB Tennant Creek 44.65 189 P **P** **06 17 38.8 -0.5**
WRAB Tennant Creek 44.65 189 P **P** **06 17 38.8 -0.5**
WRAB pmax pmax
comp=Z,75nm,0.5s
WB2 Warramunga Arr 44.66 189 P **P** **06 17 38.9 -0.5**
WRA Warramunga Arr 44.66 189 P **P** **06 17 38.6 -0.8**
comp=Z,55nm,0.6s,baz=8.7,slow=8.6,SNR=630
WRA PcP **PcP** **06 19 18.2 -0.1**
comp=Z,1.2nm,0.4s,baz=11,slow=8.8,SNR=2.1
WRA ScP **ScP** **06 22 49.2 -1.3**
comp=Z,1.4nm,0.9s,baz=1.8,slow=4.2,SNR=4.9
WRA S **S** **06 23 56.4 -3.5**
comp=Z,1.8nm,1.0s,baz=12,slow=14,SNR=6.1
comp=Z,55nm,0.6s
WRA Warramunga Arr 44.66 189 P **P** **06 17 38.4 -1.0**
WRA Warramunga Arr 44.66 189 P **P** **06 17 38.4 -1.0**
WRA pmax pmax
comp=Z,7.0nm,0.6s
BILL Bilibino 46.18 13 *eP* **P** **06 17 51.0 +0.3**
BILL *e* 06 19 23.2
BILL *e* 06 19 44.0
BILL pmax pmax
comp=Z,8.0nm,0.6s
RPSI Rantau Prapat 46.20 249 IAmb IAmb 06 17 52.8
comp=Z,42nm,0.9s
WMQ Urumqi 47.46 308 *eP* **P** **06 18 02.8 +1.7**
WMQ pP pP 06 18 46.3 +0.7
WMQ pmax pmax
comp=Z,46nm,0.9s
WMQ pmax pmax
comp=Z,170nm,4.7s
GSI Gunungsitoli 48.07 248 P **P** **06 18 05.7 -0.4**
GSI IAmb IAmb 06 18 06.8
comp=Z,43nm,0.8s
ASAR Alice Springs 48.39 189 P **P** **06 18 06.7 -1.6**
ASAR Alice Springs 48.39 189 P **P** **06 18 06.7 -1.6**
GUN Gumba 49.45 287 *eP* **P** **06 18 18.4 +1.6**
comp=Z,106nm,0.5s
ZSN Zaisan 49.83 312 *eP* **P** **06 18 18.0 -1.0**
ZSN Zaisan 49.83 312 *eP* **P** **06 18 18.1 -1.0**
baz=312
PKI Pulchoki 49.91 286 *eP* **P** **06 18 21.1 +0.8**
comp=Z,32nm,0.5s
PKIN Phulchoki 49.92 286 *eP* **P** **06 18 21.1 +0.8**
comp=Z,28nm,0.4s
DMN Daman 50.17 286 *eP* **P** **06 18 23.1 +0.9**
comp=Z,37nm,0.4s
GKN Gorkha 50.52 287 *eP* **P** **06 18 25.8 +1.2**
ZAA0 Zalesovo Array 50.93 321 P **P** **06 18 27.4 +0.4**
ZAA0 IAmb IAmb 06 18 28.4
comp=Z,16nm,0.5s
ZALV Zalesovo Beam 50.93 321 P **P** **06 18 27.1 0.0**
comp=Z,17nm,0.5s,baz=108,slow=7.9,SNR=34
ZALV PcP **PcP** **06 19 40.0 -0.4**
comp=Z,9.0nm,0.5s,baz=128,slow=3.7,SNR=13
comp=Z,17nm,0.5s
ZALV Zalesovo Beam 50.93 321 P **P** **06 18 27.0 -0.1**
DANN Dangsing 51.22 288 *eP* **P** **06 18 31.7 +1.7**
MK31 Makanchi Array 51.52 311 IAmb IAmb 06 18 33.4
comp=Z,27nm,0.7s
MK31 Makanchi Array 51.52 311 *i* P **P** **06 18 32.2 +0.6**
MKAR Makanchi Array 51.52 311 P **P** **06 18 32.5 +0.9**
comp=Z,34nm,0.6s,baz=91,slow=9.0,SNR=333
MKAR PcP **PcP** **06 19 42.9 +0.2**
comp=Z,3.2nm,0.6s,baz=76,slow=5.5,SNR=3.8
MKAR ScP **ScP** **06 23 18.3 -1.0**
comp=Z,2.3nm,0.9s,baz=86,slow=6.2,SNR=6.2
comp=Z,34nm,0.6s
MAKZ Makanchi 51.73 311 P **P** **06 18 34.3 +1.1**
MAKZ Makanchi 51.73 311 P **P** **06 18 34.3 +1.1**
MAKZ pmax pmax
comp=Z,37nm,0.7s
PYUN Piuthan 51.93 287 *eP* **P** **06 18 36.6 +1.4**
SDPT Sand Point 52.27 38 P **P** **06 18 38.2 +1.2**
baz=258
CNBA Chernabura Isl 52.67 39 IAmb IAmb 06 18 45.1
comp=Z,30nm,1.3s
CHNA Chernabura Isl 52.68 39 P **P** **06 18 39.9 -0.1**
baz=260
SEM Semipalatinsk 53.17 316 *eP* **P** **06 18 42.5 -1.5**
SEM pmax pmax
comp=Z,16nm,0.6s
SEM Semipalatinsk 53.17 316 *eP* **P** **06 18 42.5 -1.5**
comp=Z,16nm,0.6s,baz=316
SHLS Shalkode 53.41 307 *eP* **P** **06 18 43.8 -1.9**
SHLS pmax pmax
comp=Z,6.0nm,0.4s
SHLS Shalkode 53.41 307 *eP* **P** **06 18 43.8 -1.9**
comp=Z,6.1nm,0.4s,baz=307
KPKS Kokpek 53.97 307 *ce*P **P** **06 18 50.4 +0.7**
KPKS pmax pmax
comp=Z,10.0nm,0.5s
KPKS Kokpek 53.97 307⇑ *e*P **P** **06 18 50.5 +0.7**
comp=Z,9.7nm,0.5s,baz=307
SATY Saty 54.18 306 *e*P **P** **06 18 51.9 +0.6**
SATY pmax pmax
comp=Z,7.0nm,0.5s
SATY Saty 54.18 306 *e*P **P** **06 18 52.0 +0.6**
comp=Z,7.0nm,0.5s,baz=307
KURK Kurchatov 54.24 316 P **P** **06 18 51.8 +0.5**
KURK Kurchatov 54.24 316 P **P** **06 18 51.8 +0.5**
KURK pmax pmax
comp=Z,47nm,1.0s
N16K Nishlik Lake 54.29 32 P **P** **06 18 52.5 +0.9**
baz=256,SNR=19
KURBB Kurchatov Arra 54.29 316 P **P** **06 18 51.6 -0.1**
comp=Z,41nm,0.6s,baz=94,slow=7.7,SNR=224
comp=Z,41nm,0.6s
P16K Nushagak River 54.35 34 P **P** **06 18 52.9 +0.9**
baz=258
O16K Kokwok River B 54.42 33 P **P** **06 18 53.8 +1.3**
baz=258,SNR=7.5
R17K Ugashik Creek 54.92 36 P **P** **06 18 56.9 +0.7**
baz=261
O17K Koliganek Bris 54.95 33 P **P** **06 18 58.2 +1.9**
baz=258,SNR=8.8
CHIR Chirikof Islan 55.07 38 P **P** **06 18 58.6 +1.4**
baz=262
P17K Kvichak River 55.17 34 P **P** **06 18 59.0 +1.1**
baz=259,SNR=7.9
TNSS Tian-Shan 55.25 306⇓ *e*P **P** **06 19 00.8 +1.5**
TNSS Tian-Shan 55.25 306⇓ *e*P **P** **06 19 00.8 +1.5**
baz=307
KUU Kurty 55.66 308*ce*P **P** **06 19 02.5 +0.8**
KUU pmax pmax
comp=Z,52nm,0.6s
KUU Kurty 55.66 308⇑ *e*P **P** **06 19 02.6 +0.8**
comp=Z,52nm,0.6s,baz=308
N18K Kilae Creek 55.72 32 P **P** **06 19 05.2 +3.4**
N18K IAmb IAmb 06 19 05.9
comp=Z,14nm,1.3s
N18K Kilae Creek 55.72 32 P **P** **06 19 02.9 +1.0**
baz=259
ULHL Ulahol 55.81 306 P **P** **06 19 04.8 +1.7**
SNR=12
P18K Big Mountain, 55.81 34 P **P** **06 19 03.1 +0.5**
baz=260
O18K Koktuh Hills 55.90 33 IAmb IAmb 06 19 08.3
comp=Z,27nm,1.1s
O18K Koktuh Hills 55.90 33 P **P** **06 19 04.3 +1.1**
baz=260
SVW2 Sparrevohn 55.95 32 IAmb IAmb 06 19 08.5
comp=Z,7.5nm,0.6s
SII Sitkinak Islan 55.96 37 P **P** **06 19 05.7 +2.1**
baz=263
STKA Stephens Creek 56.04 180 P **P** **06 19 03.5 -0.8**
comp=Z,11nm,0.5s,baz=354,slow=7.2,SNR=34
comp=Z,11nm,0.5s
TTA Tatalina 56.13 29 P **P** **06 19 06.5 +1.8**
baz=257
GCSA Galena City Sc 56.19 27 P **P** **06 19 06.5 +1.5**
baz=255
KSH Kashi 56.22 302 P **P** **06 19 10.3 +4.4**
KSH sP sP 06 20 16.4 +1.6
KSH pmax pmax
comp=Z,67nm,0.6s
TKM2 Tokmak 2 56.25 306 P **P** **06 19 08.0 +1.8**
SNR=30
TKM2 Tokmak 2 56.25 306 P **P** **06 19 07.3 +1.2**
FORT Forrest 56.38 194 P **P** **06 19 06.4 -0.4**
O19K Port Alsworth 56.40 33 IAmb IAmb 06 19 11.3
comp=Z,29nm,1.1s
O19K Port Alsworth 56.40 33 P **P** **06 19 07.8 +1.2**
baz=261
N19K Bonanza Creek 56.42 32 IAmb IAmb 06 19 12.4
comp=Z,8.9nm,0.7s
N19K Bonanza Creek 56.42 32 P **P** **06 19 08.8 +1.9**
baz=260,SNR=10
L19K White Mountain 56.50 30 IAmb IAmb 06 19 11.8
comp=Z,6.4nm,0.6s
L19K White Mountain 56.50 30 P **P** **06 19 09.1 +1.7**
baz=259,SNR=6.1
OHAK Old Harbor 56.52 36 P **P** **06 19 09.5 +2.0**
OHAK IAmb IAmb 06 19 11.8
comp=Z,15nm,0.7s
OHAK Old Harbor 56.52 36 P **P** **06 19 09.3 +1.8**
baz=264,SNR=5.6
Q19K Cape Douglas, 56.55 34 P **P** **06 19 08.3 +0.5**
baz=262
M19K Big River Lodg 56.66 31 P **P** **06 19 09.0 +0.6**
baz=260
KBK Karagaybulak 56.74 306 P **P** **06 19 11.1 +1.6**
SNR=20
CHMS Chumysh 56.86 307 P **P** **06 19 11.6 +1.3**
SNR=6.1
SGDS Sogindy 56.92 307 *eP* **P** **06 19 10.7 0.0**
SGDS pmax pmax
comp=Z,5.0nm,0.5s
SGDS Sogindy 56.92 307 *eP* **P** **06 19 10.8 0.0**
comp=Z,4.9nm,0.5s,baz=307
KDAK Kodiak Island 56.96 36 P **P** **06 19 12.7 +2.1**
KDAK Kodiak Island 56.96 36 P **P** **06 19 12.7 +2.1**
KDAK pmax pmax
comp=Z,18nm,0.6s
KDAK Kodiak Island 56.96 36 P **P** **06 19 12.0 +1.4**
baz=264
L20K Farewell, AK 57.00 30 P **P** **06 19 13.0 +2.2**
baz=260,SNR=6.4
USP Ospenovka 57.03 307 P **P** **06 19 12.5 +1.1**
SNR=13
AAK Ala-Archa 57.08 306 P **P** **06 19 13.5 +1.5**
SNR=8.9
AAK Ala-Archa 57.08 306 P **P** **06 19 13.0 +1.1**
AAK IAmb IAmb 06 19 14.1
comp=Z,16nm,0.7s
AAK Ala-Archa 57.08 306 P **P** **06 19 13.0 +1.1**
AAK pmax pmax
comp=Z,16nm,0.7s
AAK Ala-Archa 57.08 306 *i* P **P** **06 19 13.3 +1.4**
SNR=9.5
K20K Telida 57.08 29 IAmb IAmb 06 19 16.7
comp=Z,11nm,0.9s
K20K Telida 57.08 29 P **P** **06 19 13.7 +2.3**
baz=259,SNR=17
UCH Uchtor 57.09 306 P **P** **06 19 14.6 +2.2**
SNR=50
Q20K Shuyak Island 57.16 35 P **P** **06 19 13.1 +1.2**
baz=264,SNR=5.0
BBOO Buckleboo 57.19 185 P **P** **06 19 12.2 -0.2**
J20K Nowinta River 57.21 28 IAmb IAmb 06 19 17.7
comp=Z,21nm,1.1s
J20K Nowinta River 57.21 28 P **P** **06 19 14.7 +2.4**
baz=259,SNR=20
M20K Styx River 57.24 31 P **P** **06 19 13.8 +1.2**
baz=261
BTLS Baital 57.25 309*ce*P **P** **06 19 13.7 +0.8**
BTLS pmax pmax
comp=Z,15nm,0.4s
BTLS Baital 57.25 309⇑ *e*P **P** **06 19 13.7 +0.8**
comp=Z,14nm,0.4s,baz=309
EKS2 Erkin-Say 57.60 306 P **P** **06 19 17.0 +1.5**
SNR=14
AML Almayashu 57.71 306 P **P** **06 19 18.6 +2.0**
SNR=6.0
AML Almayashu 57.71 306 *i* P **P** **06 19 18.6 +2.0**
SNR=6.3
PPLA Purkeypile 57.84 30 IAmb IAmb 06 19 23.7
comp=Z,16nm,1.4s
PPLA Purkeypile 57.84 30 P **P** **06 19 17.9 +1.1**
baz=261
CNPM China Poot 57.85 34 IAmb IAmb 06 19 22.7
comp=Z,11nm,0.7s
CHUM Lake Minchumin 57.95 29 P **P** **06 19 18.6 +1.2**
baz=260
CAST Castle Rocks 57.97 29 IAmb IAmb 06 19 22.0
comp=Z,11nm,0.6s
CAST Castle Rocks 57.97 29 P **P** **06 19 18.6 +1.0**
baz=261,SNR=16
SKT Skwentna 58.01 31 P **P** **06 19 19.2 +1.3**
baz=262,SNR=8.4
BRLK Bradley Lake 58.05 34 IAmb IAmb 06 19 22.4
comp=Z,18nm,0.8s
H21K Melozitna Rive 58.07 26 IAmb IAmb 06 19 23.5
comp=Z,6.8nm,0.7s
H21K Melozitna Rive 58.07 26 P **P** **06 19 20.0 +1.8**
baz=259,SNR=11
BRSE Bradley Lake S 58.12 34 P **P** **06 19 19.6 +0.9**
baz=264
A21K Barrow 58.18 20 IAmb IAmb 06 19 22.2
comp=Z,10nm,0.6s
A21K Barrow 58.18 20 P **P** **06 19 20.3 +1.5**
baz=252,SNR=8.1
OTUK Ortayu 58.29 313 P **P** **06 19 20.4 +0.3**
SUA Susitna One 58.31 32 P **P** **06 19 21.2 +1.1**
baz=263
I21K Tanana 58.31 27 P **P** **06 19 21.0 +1.1**
baz=260
BPAW Bear Paw Mtn. 58.56 28 IAmb IAmb 06 19 26.0
comp=Z,13nm,1.1s
BPAW Bear Paw Mtn. 58.56 28 P **P** **06 19 23.6 +1.9**
baz=261,SNR=13
M22K Willow 58.64 31 P **P** **06 19 23.5 +1.3**
baz=264
CUT Chulitna 58.65 30 P **P** **06 19 23.6 +1.4**
baz=263
H22K Ishtalitna Cre 58.69 26 P **P** **06 19 25.2 +2.7**
baz=260,SNR=7.1
RC01 Rabbit Creek A 58.76 32 IAmb IAmb 06 19 26.8
comp=Z,8.9nm,0.4s
RC01 Rabbit Creek A 58.76 32 P **P** **06 19 24.0 +1.0**
baz=264,SNR=6.7
TRF Thorofare Moun 58.77 29 IAmb IAmb 06 19 33.5
comp=Z,9.6nm,0.8s
TRF Thorofare Moun 58.77 29 P **P** **06 19 24.2 +0.9**
baz=262
SEW Seward 58.80 33 IAmb IAmb 06 19 26.6
comp=Z,13nm,0.7s
SEW Seward 58.80 33 P **P** **06 19 24.9 +1.6**
baz=265,SNR=6.5
MLY Manley 58.81 27 IAmb IAmb 06 19 28.3
comp=Z,6.9nm,0.7s
MLY Manley 58.81 27 P **P** **06 19 25.3 +1.9**
baz=261,SNR=11
PMR Palmer 59.09 31 IAmb IAmb 06 19 28.7
comp=Z,7.8nm,0.6s
PMR Palmer 59.09 31 P **P** **06 19 26.6 +1.3**
baz=265
GHO Glory Hole Cre 59.21 31 IAmb IAmb 06 19 32.0
comp=Z,12nm,0.6s
COLD Coldfoot 59.38 25 IAmb IAmb 06 19 31.9
comp=Z,7.4nm,0.7s
COLD Coldfoot 59.38 25 P **P** **06 19 28.5 +1.3**
baz=260
KNK Knik Glacier 59.40 32 P **P** **06 19 29.0 +1.5**
baz=265,SNR=7.7
I23K Minto, Yukon-K 59.40 27 IAmb IAmb 06 19 31.9
comp=Z,7.3nm,0.7s
I23K Minto, Yukon-K 59.40 27 P **P** **06 19 29.3 +1.9**
baz=262,SNR=8.4
MCK McKinley 59.41 29 IAmb IAmb 06 19 31.5
comp=Z,21nm,1.0s
MCK McKinley 59.41 29 P **P** **06 19 28.7 +1.2**
baz=264,SNR=7.8
RND Reindeer 59.41 29 IAmb IAmb 06 19 30.7
comp=Z,17nm,1.4s
H23K Yukon River 59.42 27 IAmb IAmb 06 19 32.5
comp=Z,6.1nm,0.7s
H23K Yukon River 59.42 27 P **P** **06 19 29.4 +1.9**
baz=262,SNR=7.2
NEA2 Nenana 59.45 28 P **P** **06 19 28.9 +1.1**
baz=263
BRVK Borovoye 59.47 319 P **P** **06 19 28.9 +0.8**
BRVK Borovoye 59.47 319 P **P** **06 19 28.9 +0.8**
BRVK pmax pmax
comp=Z,41nm,0.7s
WAT1 Susitna Watana 59.48 30 P **P** **06 19 29.0 +1.0**
baz=264
SML Sawmill 59.49 31 P **P** **06 19 28.9 +0.7**
baz=265,SNR=7.1
D23K Nanushuk River 59.53 23 P **P** **06 19 30.1 +1.9**
baz=259,SNR=11
M23K Glacier View 59.78 31 P **P** **06 19 30.7 +0.6**
baz=266
WAT6 Susitna Watana 59.84 30 P **P** **06 19 32.0 +1.4**
baz=265,SNR=8.6
MDM Murphy Dome 59.85 28 IAmb IAmb 06 19 35.2
comp=Z,7.2nm,0.6s
TOLK Toolik Lake Re 59.86 23 P **P** **06 19 31.4 +0.9**
baz=260
KK31 Karatay Array 59.95 307 *i* P **P** **06 19 32.0 +0.5**
SCM Sheep Creek Mo 59.97 31 IAmb IAmb 06 19 47.0
comp=Z,10nm,0.6s
SCM Sheep Creek Mo 59.97 31 P **P** **06 19 33.0 +1.5**
baz=266,SNR=6.8
TCOL CIGO, UAF Yank 60.00 28 IAmb IAmb 06 19 36.7
comp=Z,11nm,0.8s
COLA College 60.01 28 *i* P **P** **06 19 32.2 +0.7**
COLA pmax pmax
comp=Z,6.0nm,0.7s
GLI Glacier Island 60.02 32 IAmb IAmb 06 19 36.0
comp=Z,11nm,0.8s
GLI Glacier Island 60.02 32 P **P** **06 19 32.7 +1.0**
baz=267
H24K Noodor Dome 60.10 27 IAmb IAmb 06 19 36.8
comp=Z,7.3nm,0.6s
H24K Noodor Dome 60.10 27 P **P** **06 19 34.4 +2.1**
baz=263,SNR=13
D24K Happy Valley 60.22 23 P **P** **06 19 33.7 +0.9**
baz=260
HDA Harding Lake 60.35 28 P **P** **06 19 34.6 +0.8**
baz=265
IL31 60.41 28 IAmb IAmb 06 19 37.5
comp=Z,9.8nm,0.8s
ILAR Eielson Array 60.41 28 P **P** **06 19 34.8 +0.6**
comp=Z,7.2nm,0.8s,baz=259,slow=5.5,SNR=52
ILAR LR LR 06 45 29.1
comp=Z,21nm,19.7s,baz=144,slow=35
comp=Z,7.2nm,0.8s
IUG Iuzhnay 60.42 306*ce*P **P** **06 19 35.6 +0.8**
IUG Iuzhnay 60.42 306⇑ *e*P **P** **06 19 35.6 +0.8**
baz=306
KLU Klutina 60.62 32 IAmb IAmb 06 19 39.7
comp=Z,10nm,0.4s
KLU Klutina 60.62 32 P **P** **06 19 37.4 +1.6**
baz=268,SNR=11
EYAK Cordova Ski Ar 60.67 33 P **P** **06 19 37.2 +1.2**
baz=268
K24K Donnelly Dome 60.81 29 P **P** **06 19 38.4 +1.3**
baz=266,SNR=6.8
PAX Paxson 60.90 30 P **P** **06 19 39.6 +1.9**
PAX IAmb IAmb 06 19 41.6
comp=Z,5.4nm,0.6s
PAX Paxson 60.90 30 P **P** **06 19 39.6 +1.9**
PAX pmax pmax
comp=Z,5.0nm,0.6s
PAX Paxson 60.90 30 P **P** **06 19 39.2 +1.5**
baz=267,SNR=7.6
HARP HAARP 61.02 31 P **P** **06 19 39.5 +1.1**
baz=268
J25K Salcha River, 61.04 28 P **P** **06 19 39.3 +0.7**
baz=266,SNR=7.7
RIDG Independent Ri 61.22 29 IAmb IAmb 06 19 43.3
comp=Z,22nm,1.1s
RIDG Independent Ri 61.22 29 P **P** **06 19 40.8 +1.0**
baz=267,SNR=9.1
BMRM Bremner River 61.24 32 P **P** **06 19 42.1 +2.1**
BMRM IAmb IAmb 06 19 44.7
comp=Z,14nm,0.6s
BMRM Bremner River 61.24 32 P **P** **06 19 41.6 +1.6**
baz=269,SNR=10
N25K Chitina, Valde 61.26 32 IAmb IAmb 06 19 44.3
comp=Z,9.3nm,1.2s
N25K Chitina, Valde 61.26 32 P **P** **06 19 41.3 +1.2**
baz=269
DOT Dot Lake 61.57 29 P **P** **06 19 43.5 +1.4**
DOT IAmb IAmb 06 19 46.1
comp=Z,12nm,0.8s
CHGR Chuyangaron 61.59 302 P **P** **06 19 44.0 +1.2**
SCRK Sand Creek 61.61 29 P **P** **06 19 43.9 +1.4**
baz=268,SNR=26
GLB Gilahina Butte 61.63 32 IAmb IAmb 06 19 47.7
comp=Z,19nm,1.4s
MENT Mentasta 61.70 30 IAmb IAmb 06 19 57.1
comp=Z,6.2nm,0.5s
J26L Joseph Creek 61.82 28 IAmb IAmb 06 19 47.6
comp=Z,16nm,0.8s
J26L Joseph Creek 61.82 28 P **P** **06 19 45.0 +1.2**
baz=268,SNR=21
L26K Log Cabin Wild 61.87 30 IAmb IAmb 06 19 48.3
comp=Z,6.4nm,0.9s
L26K Log Cabin Wild 61.87 30 P **P** **06 19 46.0 +1.9**
baz=269,SNR=7.4

MCARA	**McCarthy VSAT**	62.01	32	P		**P**		06 19 46.7	+1.6	
	baz=270									
I26K	**Coal Creek Min**	62.02	27	P		**P**		06 19 46.4	+1.3	
	baz=268									
M26K	**Nabesna, AK**	62.03	31	IAmb		IAmb		06 19 49.8		
	comp=Z,8.9nm,1.3s									
M26K	**Nabesna, AK**	62.03	31	P		**P**		06 19 46.6	+1.4	
	baz=270									
KBL	**Kabul**	62.45	298	P		**P**		06 19 49.6	+0.9	
KBL	**Kabul**	62.45	298	P		**P**		06 19 49.7	+0.9	
KBL				pmax		pmax				
	comp=Z,79nm,0.8s									
K27K	**Chicken**	62.46	29	P		**P**		06 19 49.7	+1.8	
	baz=270									
M27K	**Edge Creek, AK**	62.55	31	P		**P**		06 19 49.6	+0.9	
	baz=271									
L27K	**Beaver Creek,**	62.57	30	P		**P**		06 19 50.6	+1.9	
	baz=270,SNR=7.6									
GRNC	**Granite Creek**	62.64	33	IAmb		IAmb		06 19 53.3		
	comp=Z,22nm,1.3s									
YUK3	**Moose Creek**	63.23	31	P		**P**		06 19 55.1	+1.7	
	baz=272,SNR=6.3									
PINM	**Pinnacle**	63.41	33	P		**P**		06 19 55.7	+1.4	
	baz=273									
YUK8	**Steele Glacier**	63.58	32	P		**P**		06 19 57.2	+1.5	
	baz=273									
DAWY	**Dawson**	63.64	29	IAmb		IAmb		06 20 00.5		
	comp=Z,8.5nm,1.2s									
DAWY	**Dawson**	63.64	29	P		**P**		06 19 57.4	+1.6	
	baz=272,SNR=8.5									
I29M	**Ogilvie Camp,**	64.06	27	IAmb		IAmb		06 20 01.3		
	comp=Z,11nm,1.0s									
I29M	**Ogilvie Camp,**	64.06	27	P		**P**		06 19 59.6	+1.1	
	baz=272									
EPYK	**Eagle Plains**	64.66	26	IAmb		IAmb		06 20 05.7		
	comp=Z,20nm,0.9s									
EPYK	**Eagle Plains**	64.66	26	P		**P**		06 20 03.2	+0.9	
	baz=273,SNR=13									
HYT	**Haines Junctio**	64.71	32	IAmb		IAmb		06 20 08.3		
	comp=Z,6.4nm,0.8s									
HYT	**Haines Junctio**	64.71	32	P		**P**		06 20 03.7	+0.8	
	baz=275									
SVE	**Sverdlovsk**	64.79	323	*e*P		**P**		06 20 04.5	+1.2	
SVE				pmax		pmax				
	comp=Z,26nm,0.8s									
N30M	**Aishikik Lake**	64.86	32	P		**P**		06 20 04.9	+1.1	
	baz=275									
M30M	**Minto, Yukon**	64.90	30	IAmb		IAmb		06 20 08.5		
	comp=Z,7.7nm,0.7s									
M30M	**Minto, Yukon**	64.90	30	P		**P**		06 20 05.6	+1.6	
	baz=275,SNR=12									
P30M	**Million Dollar**	65.05	33	P		**P**		06 20 06.3	+1.2	
	baz=276									
O30N	**Mendenhall**	65.41	32	P		**P**		06 20 08.4	+1.1	
	baz=276									
PLBC	**Pleasant Camp**	65.42	34	P		**P**		06 20 08.5	+1.2	
	baz=277,SNR=8.2									
N31M	**Braeburn, Yuko**	65.48	32	IAmb		IAmb		06 20 12.9		
	comp=Z,14nm,1.1s									
N31M	**Braeburn, Yuko**	65.48	32	P		**P**		06 20 09.1	+1.4	
	baz=276									
INK	**Inuvik**	65.75	24	P		**P**		06 20 10.0	+0.8	
	comp=Z,3.6nm,0.4s,baz=269,slow=5.2,SNR=15									
	comp=Z,3.6nm,0.4s									
INK	**Inuvik**	65.75	24	IAmb		IAmb		06 20 11.2		
	comp=Z,9.0nm,1.1s									
INK	**Inuvik**	65.75	24	P		**P**		06 20 10.3	+1.1	
	baz=275									
SKAG	**Skagway**	65.95	34	P		**P**		06 20 12.8	+2.2	
SKAG	**Skagway**	65.95	34	P		**P**		06 20 11.3	+0.6	
	baz=278									
ARU	**Arti**	65.98	323	P		**P**		06 20 11.2	+0.3	
	comp=Z,40nm,0.4s,baz=92,slow=4.4,SNR=36									
	comp=Z,40nm,0.4s									
ARU	**Arti**	65.98	323	P		**P**		06 20 11.2	+0.3	
ARU	**Arti**	65.98	323	*d* iP		**P**		06 20 10.8	-0.1	
ARU				S		**S**		06 28 44.5	+3.2	
ARU				SS		**SS**		06 33 03.8	+3.6	
ARU				pmax		pmax				
	comp=Z,26nm,0.5s									
WHY	**Whitehorse**	66.01	32	IAmb		IAmb		06 20 15.8		
	comp=Z,6.4nm,0.8s									
WHY	**Whitehorse**	66.01	32	P		**P**		06 20 12.6	+1.4	
	baz=278,SNR=5.4									
M31M	**Drury Creek, Y**	66.05	31	IAmb		IAmb		06 20 15.5		
	comp=Z,8.0nm,0.7s									
M31M	**Drury Creek, Y**	66.05	31	P		**P**		06 20 12.6	+1.3	
	baz=277,SNR=12									
SIT	**Sitka**	66.29	36	P		**P**		06 20 14.1	+1.2	
	baz=279									
BESE	**Bessie Mountai**	66.31	35	IAmb		IAmb		06 20 17.8		
	comp=Z,19nm,1.3s									
AB31	**Akbulak array**	66.32	315	*i* P		**P**		06 20 12.9	-0.4	
JIS	**Juneau Island**	66.60	35	IAmb		IAmb		06 20 20.1		
	comp=Z,16nm,0.6s									
P32M	**Atlin**	66.74	33	P		**P**		06 20 17.0	+1.2	
	baz=279									
N32M	**Quiet Lake**	66.81	32	P		**P**		06 20 17.2	+1.0	
	baz=279									
P33M	**Teslin, Yukon**	67.09	33	P		**P**		06 20 18.6	+0.6	
	baz=279									
AKTO	**Aktyubinsk**	67.33	317	P		**P**		06 20 19.1	-0.5	
MMPY	**Sheldon Lake,**	67.43	30	P		**P**		06 20 22.3	+2.2	
	baz=280,SNR=6.5									
DLBC	**Dease Lake**	68.83	34	IAmb		IAmb		06 20 33.7		
	comp=Z,6.1nm,0.7s									
DLBC	**Dease Lake**	68.83	34	P		**P**		06 20 30.2	+1.4	
	baz=282									
C36M	**Paulatuk**	68.97	22	IAmb		IAmb		06 20 31.7		
	comp=Z,6.3nm,0.6s									
C36M	**Paulatuk**	68.97	22	P		**P**		06 20 30.3	+0.9	
	baz=283									
TGTN	**Hyland Airport**	69.02	31	P		**P**		06 20 31.5	+1.5	
	baz=283									
T35M	**Bob Quinn**	69.03	36	P		**P**		06 20 30.9	+0.8	
	baz=283									
GEYT	**Alibeck**	70.22	303	P		**P**		06 20 38.1	+0.4	
	comp=Z,16nm,0.7s,baz=84,slow=5.7,SNR=16									
	comp=Z,16nm,0.7s									
GEYT	**Alibeck**	70.22	303	IAmb		IAmb		06 20 40.0		
	comp=Z,18nm,1.0s									
GYA0B	**ALIBECK ARRAY**	70.22	303	IAmb		IAmb		06 20 39.9		
	comp=Z,24nm,1.0s									
KIRV	**Kirov**	70.38	326	P		**P**		06 20 37.4	-0.8	
	comp=Z,18nm,0.5s,baz=28,slow=2.7,SNR=7.5									
	comp=Z,18nm,0.5s									
KIRV	**Kirov**	70.38	326	*ce*P		**P**		06 20 38.1	-0.1	
PRGR	**Permogore**	71.37	330	*e*P		**P**		06 20 43.9	-0.2	
SPA0	**Spitsbergen Ar**	72.79	350	*e*P		**P**		06 20 52.5	+0.2	
SPB2	**Spitsbergen Ar**	72.79	350	P		**P**		06 20 52.9	+0.6	
SPB2				IAmb		IAmb		06 21 11.3		
	comp=Z,24nm,1.4s									
SPITS	**Spitsbergen Ar**	72.79	350	P		**P**		06 20 52.7	+0.4	
SPITS				pmax		pmax				
	comp=Z,17nm,1.3s									
BELG	**Belogornoye**	73.12	320	P		**P**		06 20 54.7	+0.1	
	baz=52,slow=1.0									
BELG	**Belogornoye**	73.12	320	*c* iP		**P**		06 20 54.5	-0.1	
BELG				pmax		pmax				
	comp=Z,7.0nm,0.9s									
LVZ	**Lovozero**	73.56	338	*ce*P		**P**		06 20 57.2	+0.2	
LVZ				pmax		pmax				
	comp=Z,13nm,1.3s									
HSPB	**Hornsund (broa**	73.68	349	*e*P		**P**		06 20 58.1	+0.6	
KLMR	**Klimovskoe**	74.41	330	*e*P		**P**		06 21 00.3	-1.7	
KLMR				pmax		pmax				
	comp=Z,9.0nm,0.9s									
KLMR	**Klimovskoe**	74.41	330	*e*P		**P**		06 21 00.4	-1.6	
KLMR				AMP				06 21 03.1		
	comp=Z,9.0nm,0.9s									
YKA	**Yellowknife Ar**	74.84	28	P		**P**		06 21 04.3	-0.1	
	comp=Z,6.2nm,0.6s,baz=309,slow=4.0,SNR=65									
	comp=Z,6.2nm,0.6s									
YKA	**Yellowknife Ar**	74.84	28	*ce*P		**P**		06 21 04.1	-0.3	
YKA				pmax		pmax				
	comp=Z,2.0nm,0.4s									
KEV	**Kevo**	75.16	341	P		**P**		06 21 06.3	+0.2	
KEV	**Kevo**	75.16	341	P		**P**		06 21 06.3	+0.2	
KEV				pmax		pmax				
	comp=Z,23nm,0.5s									
PGC	**Sidney**	75.37	43	P		**P**		06 21 09.7	+2.0	
PGC				IAmb		IAmb		06 21 12.2		
	comp=Z,7.5nm,0.8s									
BANOM	**Banah**	75.44	292	*i* P		**P**		06 21 09.9	+1.3	
	SNR=8.0									
SHME	**Shamm**	75.53	292	*i* P		**P**		06 21 10.8	+1.8	
	SNR=7.6									
NLWA	**Neilton Lookou**	75.54	44	IAmb		IAmb		06 21 14.3		
	comp=Z,7.7nm,0.6s									
HAMF	**Hammerfest**	75.64	342	*e*P		**P**		06 21 08.2	-0.7	
ARA0	**ARCESS Array S**	75.72	341	*e*P		**P**		06 21 09.6	+0.2	
ARCES	**ARCESS Array B**	75.72	341	P		**P**		06 21 09.4	+0.1	
	comp=Z,16nm,0.5s,baz=70,slow=8.0,SNR=111									
	comp=Z,16nm,0.5s									
ARCES	**ARCESS Array B**	75.72	341	IAmb		IAmb		06 21 11.1		
	comp=Z,15nm,0.6s									
MSFE	**Esma-Masafi**	75.75	292	*i* P		**P**		06 21 11.6	+1.2	
	SNR=8.5									
UOSS	**Minazif**	75.86	291	P		**P**		06 21 11.3	+0.3	
UOSS				IAmb		IAmb		06 21 12.3		
	comp=Z,16nm,0.9s									
UOSS	**Minazif**	75.86	291	*i* P		**P**		06 21 11.4	+0.5	
	SNR=9.0									
SOHO	**SOHO**	75.86	290	*i* P		**P**		06 21 11.7	+0.7	
	SNR=20									
HATD	**Hatta, Dubai**	75.96	291	*i* P		**P**		06 21 12.4	+0.9	
	SNR=16									
E03A	**Lebam**	76.04	45	P		**P**		06 21 14.4	+2.9	
E03A				IAmb		IAmb		06 21 26.2		
	comp=Z,32nm,1.3s									
ASHO	**Ashiyiah**	76.07	291	*i* P		**P**		06 21 13.0	+0.8	
	SNR=14									
FAQ	**Al Faqa, Dubai**	76.45	291	*i* P		**P**		06 21 15.1	+0.8	
	SNR=11									
ALNE	**Al Ain**	76.56	290	*i* P		**P**		06 21 15.9	+1.0	
	SNR=6.8									
KTK1	**Kautokeino**	76.69	341	*e*P		**P**		06 21 15.6	+0.8	
ASUD	**Al Ashush, Dub**	76.71	291	*i* P		**P**		06 21 16.9	+1.1	
	SNR=6.6									
VRH	**Novokhopyorsk**	76.97	320	*e*P		**P**		06 21 15.2	-1.4	
VRH				pmax		pmax				
	comp=Z,20nm,0.8s									
F04A	**Amboy**	77.00	45	IAmb		IAmb		06 21 21.1		
	comp=Z,12nm,0.8s									
JETT	**Jettan, Norway**	77.19	342	*e*P		**P**		06 21 18.8	+1.2	
TRO	**Tromso**	77.56	342	*e*P		**P**		06 21 19.4	-0.2	
H04A	**Detroit Lake**	77.62	47	P		**P**		06 21 22.4	+2.0	
H04A				IAmb		IAmb		06 21 24.0		
	comp=Z,22nm,1.4s									
I04A	**Tendick Farm,**	77.80	47	P		**P**		06 21 21.5	0.0	
	baz=292									
LPSR	**Galich'ya Gora**	77.99	322	*e*P		**P**		06 21 21.6	-0.7	
LPSR				pmax		pmax				
	comp=Z,10.0nm,0.6s									
B08A	**Colville Reser**	78.02	42	IAmb		IAmb		06 21 26.7		
	comp=Z,12nm,0.6s									
OBN	**Obninsk**	78.19	325	*ce*P		**P**		06 21 21.3	-2.0	
OBN				*e*				06 21 33.4		
OBN				*e*				06 24 23.0		
OBN				pmax		pmax				
	comp=Z,10.0nm,0.5s									
J04D	**Umpqua Nationa**	78.22	48	IAmb		IAmb		06 21 27.5		
	comp=Z,29nm,1.3s									
J04D	**Umpqua Nationa**	78.22	48	P		**P**		06 21 24.8	+0.8	
	baz=292									
VSR	**Storozhevoye**	78.44	321	*e*P		**P**		06 21 23.8	-0.9	
VSR				pmax		pmax				
	comp=Z,10.0nm,0.4s									
L04D	**Klamath Falls**	78.47	49	P		**P**		06 21 26.8	+1.5	
	baz=293									
K04D	**Chiloquin, OR**	78.69	48	P		**P**		06 21 27.2	+0.7	
	baz=293									
PINE	**Pine Mountain**	78.79	47	IAmb		IAmb		06 21 31.7		
	comp=Z,30nm,1.4s									
J05D	**Fort Rock, OR**	78.79	48	P		**P**		06 21 28.8	+1.8	
	baz=293									
D08A	**Wollman Farm,**	78.80	43	IAmb		IAmb		06 21 31.3		
	comp=Z,9.2nm,0.9s									
ZEI	**Tsey**	78.86	312	*e*P		**P**		06 21 27.1	-0.4	
ZEI				pmax		pmax				
	comp=Z,15nm,0.6s									
SHAO	**Shalim**	78.88	285	P		**P**		06 21 28.1	+0.4	
MZR	**Muzera**	78.88	290	*i* P		**P**		06 21 28.5	+0.7	
	SNR=8.9									
E08A	**Dider Farm, El**	78.94	44	IAmb		IAmb		06 21 31.9		
	comp=Z,5.8nm,0.7s									
KBZ	**Khabaz**	79.17	313	P		**P**		06 21 29.6	+0.7	
	comp=Z,34nm,0.8s,baz=104,slow=3.4,SNR=72									
	comp=Z,34nm,0.8s									
KBZ	**Khabaz**	79.17	313	*ce*P		**P**		06 21 29.3	+0.4	
KBZ				pmax		pmax				
	comp=Z,38nm,0.8s									
KIV	**Kislovodsk**	79.22	313	*e*P		**P**		06 21 30.4	+1.1	
KIV				pmax		pmax				
	comp=Z,17nm,1.1s									
K05A	**Summer Lake**	79.24	48	IAmb		IAmb		06 21 34.5		
	comp=Z,12nm,1.0s									
ONI	**Oni**	79.24	312	IAmb		IAmb		06 21 31.9		
	comp=Z,14nm,0.9s									
GNI	**Garni**	79.31	309	*i* P		**P**		06 21 30.6	+0.6	
GNI				pmax		pmax				
	comp=Z,21nm,1.3s									
NEW	**Newport**	79.41	42	P		**P**		06 21 31.3	+1.1	
	baz=295									
E09A	**Wood Farm, Sta**	79.50	44	IAmb		IAmb		06 21 35.4		
	comp=Z,13nm,1.0s									
STEI	**Steigen**	79.68	342	*e*P		**P**		06 21 31.0	-0.1	
FIA1	**FINESS Array S**	79.91	334	IAmb		IAmb		06 21 33.0		
	comp=Z,12nm,0.5s									
FINES	**FINESS Array B**	79.91	334	P		**P**		06 21 31.9	-0.6	
	comp=Z,12nm,0.4s,baz=70,slow=4.9,SNR=132									
	comp=Z,12nm,0.4s									
FINES	**FINESS Array B**	79.91	334	*i* P		**P**		06 21 31.8	-0.7	
FINES				pmax		pmax				
	comp=Z,12nm,0.4s									
FAUS	**Fauske**	80.03	341	*e*P		**P**		06 21 33.8	+0.8	
J08A	**Circle Bar Ran**	80.60	47	IAmb		IAmb		06 21 41.0		
	comp=Z,13nm,1.3s									
BMO	**Blue Mountains**	80.73	45	IAmb		IAmb		06 21 41.9		
	comp=Z,9.1nm,0.9s									
BEKR	**Beckworth**	80.75	50	IAmb		IAmb		06 21 42.7		
	comp=Z,7.3nm,0.7s									
WALA	**Waterton Lakes**	80.98	40	IAmb		IAmb		06 21 42.9		
	comp=Z,17nm,0.6s									
MOR8	**Moi Rana**	81.10	341	*e*P		**P**		06 21 38.1	-0.7	
EMB	**Emerald Bay**	81.30	51	IAmb		IAmb		06 21 45.3		
	comp=Z,8.3nm,1.0s									
SOC	**Sochi**	81.33	314	*e*P		**P**		06 21 39.4	-1.0	
SOC				*e*				06 24 47.2		
SOC				*e*PPP		PPP		06 26 37.8		
SOC				*e*S		**S**		06 31 34.9	+1.4	
SOC				*e*SS		**SS**		06 36 53.6	0.0	
SOC				*e*SSS		SSS		06 40 26.2		
SOC				pmax		pmax				
	comp=Z,12nm,0.6s									
MSO	**Missoula**	81.97	42	P		**P**		06 21 44.9	+1.0	
	baz=297									
ANN	**Anapa**	82.27	316	*e*P		**P**		06 21 41.1	-4.2	
ANN				*e**PP		**pP**		06 22 30.7	-4.2	
ANN				*e*				06 24 54.9		
ANN				*e*S		**S**		06 31 37.9	-5.2	
ANN				pmax		pmax				
	comp=Z,22nm,0.7s									
MFID	**Camas Ranch**	82.32	46	IAmb		IAmb		06 21 49.9		
	comp=Z,14nm,1.2s									
KVN	**Kaiserville**	82.68	50	IAmb		IAmb		06 21 51.6		
	comp=Z,4.6nm,0.5s									
NVAR	**Mina Array Bea**	82.80	51	P		**P**		06 21 48.8	+0.3	
	comp=Z,2.1nm,0.5s,baz=283,slow=5.9,SNR=24									
	comp=Z,2.1nm,0.5s									
MNK	**Minsk**	82.88	327	*i* P		**P**		06 21 47.2	-1.0	
MNK				*i*				06 24 59.9		
MNK				*i* PPP		PPP		06 26 52.0		
MNK				*i* S		**S**		06 31 48.6	-0.3	
MNK				*i* *SS		**sS**		06 33 15.1	-0.2	
MNK				*i* SS		**SS**		06 37 18.9	+3.1	
MNK				*i* SSS		SSS		06 40 48.7		
MNK				pmax		pmax				
	comp=E,3.0nm,1.1s									
MNK				pmax		pmax				
	comp=N,37nm,0.8s									
MNK				pmax		pmax				
	comp=Z,16nm,0.8s									
MNK				MLR		MLR				
	comp=E,13nm,22.0s									
MNK				MLR		MLR				
	comp=N,163nm,18.0s									
MNK				MLR		MLR				
	comp=Z,4μm,15.0s									
MNK	**Minsk**	82.88	327	*i* P		**P**		06 21 47.3	-1.0	
	comp=E,3.0nm,1.1s									
MNK				*i* P		**P**		06 21 47.3	-1.0	
	comp=N,37nm,0.8s									
MNK				*i* P		**P**		06 21 47.3	-1.0	
	comp=Z,16nm,0.8s,baz=58									
MNK				*i* pP		**pP**		06 22 34.6	-3.5	
MNK				*i* PP		**PP**		06 24 59.9	-1.2	
MNK				*i* PPP		PPP		06 26 52.0		
MNK				*i* S		**S**		06 31 48.6	-0.3	
MNK				*i* sS		**sS**		06 33 15.1	-0.2	
MNK				*i* SS		**SS**		06 37 19.0	+3.1	
MNK				*i* SSS		SSS		06 40 48.7		
MNK				*i* LRM		MLR		07 00 46.7		
	comp=E,13nm,21.6s									
MNK				*i* LRM		MLR		07 00 56.9		
	comp=N,163nm,17.8s									
MNK				*i* LRM		MLR		07 01 03.2		
	comp=Z,4μm,15.3s									
NSS	**Namsos**	82.98	340	*e*P		**P**		06 21 48.3	-0.3	
HLID	**Hailey**	83.17	45	P		**P**		06 21 51.6	+1.3	
HLID	**Hailey**	83.17	45	P		**P**		06 21 51.4	+1.2	
	baz=297									
NACGM	**Naroch**	83.19	328	*e*P		**P**		06 21 49.9	+0.1	
	baz=56									
PKM	**Mcpherson Peak**	83.21	55	P		**P**		06 21 52.3	+1.6	
	baz=295									
VES	**Vestal, Richgr**	83.35	54	P		**P**		06 21 52.6	+1.6	
	baz=295									
TPH	**Tonopah**	83.72	51	IAmb		IAmb		06 21 57.7		
	comp=Z,14nm,0.6s									
CWC	**Cottonwood Cre**	83.82	53	P		**P**		06 21 54.6	+1.0	
	baz=296									
EGMT	**Eagleton**	83.90	40	IAmb		IAmb		06 21 57.6		
	comp=Z,8.8nm,0.8s									
EGMT	**Eagleton**	83.90	40	P		**P**		06 21 55.4	+1.7	
	baz=300									
ELK	**Elko**	83.91	48	P		**P**		06 21 55.8	+1.7	
ELK	**Elko**	83.91	48	P		**P**		06 21 55.8	+1.7	
ELK				pmax		pmax				
	comp=Z,4.0nm,0.7s									
BOZ	**Bozeman (W)**	83.97	42	IAmb		IAmb		06 21 58.3		
	comp=Z,8.8nm,0.7s									
BOZ	**Bozeman (W)**	83.97	42	P		**P**		06 21 55.9	+1.7	
	baz=299									
GRAC	**Grapevine Rang**	84.09	52	P		**P**		06 21 57.4	+2.5	
	baz=296									
AKASG	**Malin Array Be**	84.22	324	P		**P**		06 21 54.2	-0.9	
	comp=Z,2.7nm,0.4s,baz=50,slow=5.4,SNR=34									
	comp=Z,2.7nm,0.4s									
AKASG	**Malin Array Be**	84.22	324	*i* P		**P**		06 21 54.7	-0.4	
AKASG				pmax		pmax				
	comp=Z,3.0nm,0.4s									
AKBB	**Malin Array Si**	84.22	324	*ce*P		**P**		06 21 54.2	-0.9	
MPMC	**Manual Prospec**	84.42	53	P		**P**		06 21 57.3	+0.6	
	baz=296									
LRMC	**Laurel Mtn Rad**	84.53	54	P		**P**		06 21 58.0	+0.8	
	baz=296									
FURC	**Furnace Creek,**	84.69	52	P		**P**		06 21 59.4	+1.7	
	baz=297									
R11A	**Troy Canyon, C**	84.76	50	P		**P**		06 21 59.5	+1.2	
	baz=297									
QSM	**Queen of Sheba**	84.91	53	IAmb		IAmb		06 22 04.0		
	comp=Z,8.3nm,0.7s									
TPNV	**Topopah Spring**	84.92	52	IAmb		IAmb		06 22 03.6		
	comp=Z,8.7nm,0.8s									
TPNV	**Topopah Spring**	84.92	52	P		**P**		06 22 00.3	+1.2	
	baz=297									
GWY	**Greenwater Val**	84.96	53	IAmb		IAmb		06 22 03.5		
	comp=Z,10nm,0.7s									
H17A	**Grant Village**	85.21	43	IAmb		IAmb		06 22 07.0		
	comp=Z,24nm,1.5s									
GSC	**Goldstone, Bar**	85.25	53	IAmb		IAmb		06 22 07.7		
	comp=Z,6.3nm,0.8s									
GSC	**Goldstone, Bar**	85.25	53	P		**P**		06 22 01.9	+1.2	
	baz=297									
FLWY	**Flagg Ranch**	85.29	43	IAmb		IAmb		06 22 06.1		
	comp=Z,12nm,0.7s									
FCC	**Fort Churchill**	85.32	25	IAmb		IAmb		06 22 01.5		
	comp=Z,6.1nm,0.7s									
SHOC	**Shoshone, Teco**	85.37	53	P		**P**		06 22 02.5	+1.2	
	baz=297									
RAYN	**Ar Rayn**	85.42	294	P		**P**		06 22 02.6	+0.9	
RAYN	**Ar Rayn**	85.42	294	P		**P**		06 22 02.6	+0.9	
RAYN				pmax		pmax				
	comp=Z,30nm,0.6s									
RAYN	**Ar Rayn**	85.42	294	*i* P		**P**		06 22 02.7	+0.9	
	SNR=32									
NC303	**NORSAR Array S**	85.53	338	*e*P		**P**		06 22 01.2	-0.2	
RLMT	**Red Lodge**	85.65	42	P		**P**		06 22 04.5	+1.8	
	baz=301									
DOMB	**Dombas**	85.69	339	*e*P		**P**		06 22 01.6	-0.7	
NC204	**NORSAR Array S**	85.69	338	IAmb		IAmb		06 22 03.1		
	comp=Z,10nm,0.7s									
NB2	**NORSAR Subarra**	85.71	338	P		**P**		06 22 00.9	-1.5	
	baz=55,slow=4.6									
NB2	**NORSAR Subarra**	85.71	338	P	

AGMN	**Agassiz Nation**	**91.36**	**34**	IAmb	IAmb	06 22 32.0	
	comp=Z,5.5nm,0.9s						
SDCO	**Great Sand Dun**	**91.95**	**47**	IAmb	IAmb	06 22 36.2	
	comp=Z,3.3nm,0.7s						
SDCO	**Great Sand Dun**	**91.95**	**47**	P	**P**	**06 22 34.5**	**+1.9**
	baz=303						
ANMO	**Albuquerque**	**92.81**	**50**	P	**P**	**06 22 38.2**	**+1.6**
	baz=303						
T25A	**Trinidad**	**93.00**	**47**	IAmb	IAmb	06 22 40.7	
	comp=Z,2.7nm,0.8s						
T25A	**Trinidad**	**93.00**	**47**	P	**P**	**06 22 38.8**	**+1.4**
	baz=304						
GERES	**GERESS Array B**	**93.29**	**328**	P	**P**	**06 22 37.0**	**-1.3**
	comp=Z,1.1nm,0.4s,baz=46,slow=3.9,SNR=13						
	comp=Z,1.1nm,0.4s						
GERES	**GERESS Array B**	**93.29**	**328**	P	**P**	**06 22 37.0**	**-1.3**
MNTX	**Cornudas Mount**	**95.31**	**52**	P	**P**	**06 22 49.6**	**+1.8**
	baz=303						
SCHQ	**Schefferville**	**97.41**	**16**	P	**P**	**06 22 56.6**	**-0.2**
	comp=Z,3.1nm,0.9s,baz=315,slow=8.6,SNR=2.0						
	comp=Z,3.1nm,0.9s						
TXAR	**Lajitas Array**	**97.84**	**53**	P	Pdif	06 23 00.1	+0.6
	comp=Z,0.5nm,0.6s,baz=293,slow=3.0,SNR=8.2						
	comp=Z,0.5nm,0.6s						
TORD	**Torodi Ar. Bea**	**125.61**	**309**	PKP	**PKPdf**	**06 28 24.1**	**-0.4**
	comp=Z,2.0nm,0.9s,baz=25,slow=2.3,SNR=7.9						
TORD				PP	**PP**	**06 30 18.6**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=15,slow=4.6,SNR=4.1						
TROLL	**Troll, Antarti**	**127.19**	**195**	PKPdf	**PKPdf**	**06 28 25.9**	**0.0**
SNAA	**Sanae**	**128.64**	**194**	PKPdf	**PKPdf**	**06 28 27.2**	**-1.4**
VNA3	**Neumayer Olymp**	**130.35**	**192**	PKPdf	**PKPdf**	**06 28 32.0**	**+0.1**
MDP	**Montagnes des**	**147.63**	**27**	PKPbc	**PKPbc**	**06 29 08.4**	**+0.6**
	comp=Z,10nm,0.5s,baz=327,slow=2.3,SNR=28						
PLCA	**Paso Flores**	**148.91**	**129**	PKPbc	**PKiKP**	**06 29 11.3**	**-0.4**
	comp=Z,2.2nm,0.6s,baz=234,slow=4.2,SNR=17						
LPAZ	**La Paz**	**151.33**	**79**	PKPbc	**PKiKP**	**06 29 18.1**	**+0.2**
	comp=Z,3.2nm,0.6s,baz=264,slow=3.5,SNR=25						
LVC	**Limon Verde**	**152.32**	**92**	PKPbc	**PKiKP**	**06 29 19.5**	**0.0**
	comp=Z,2.0nm,0.5s,baz=270,slow=5.1,SNR=1.9						

IDC ***22*** *06:10:56.5±4.5, 36.18N×71.20E, h49km±30km, mb3.7/8, mbtmp3.9/13, ML3.6/5, MS3.0/2, Error ellipse: s-maj=53.8km s-min=25.0km az=151.0*
NNC ***22*** *06:11:00.7±7.6, 36.83N×70.92E, h0km, mb4.1, mpv3.9, Error ellipse: s-maj=77.2km s-min=37.0km az=158.0*

ISC 22 06:11:04.3±1.3, 36.7N±0.1×71.1E±0.1, h100km, n26, σ1s 19/27, mb3.9/8, 3C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.83**	**20**	P			**Pn**	**06 12 28.8**	**+0.2**
	SNR=29								
UCH	**Uchtor**	**6.17**	**25**	P			**Pn**	**06 12 33.6**	**+0.4**
	SNR=13								
EKS2	**Erkin-Say**	**6.35**	**18**	P			**Pn**	**06 12 35.9**	**+0.5**
	SNR=6.5								
KK31	**Karatay Array**	**6.45**	**356**	P			**Pn**	**06 12 36.5**	**-0.2**
	2.2nm,0.2s,baz=175,slow=12,SNR=44								
KK31				⇑S			**Sn**	**06 13 47.6**	**-1.2**
	12nm,0.6s,baz=175,slow=20,SNR=4.1								
AAK	**Ala-Archa**	**6.53**	**23**	P			**Pn**	**06 12 37.8**	**-0.1**
	SNR=8.0								
AAK	**Ala-Archa**	**6.53**	**23**	P			**Pn**	**06 12 37.4**	**-0.4**
	4.1nm,0.3s,baz=169,slow=4.2,SNR=10								
AAK				S			**Sn**	**06 13 50.3**	**-0.6**
	5.3nm,0.5s,baz=345,slow=23,SNR=1.5								
AAK				LR			LR	06 14 42.0	
	comp=Z,15nm,19.8s,baz=259,slow=32								
	8.8nm,0.3s								
CHMS	**Chumysh**	**6.94**	**23**	P			**Pn**	**06 12 43.8**	**+0.6**
	SNR=6.5								
TKM2	**Tokmak 2**	**7.16**	**28**	P			**Pn**	**06 12 46.1**	**-0.3**
	SNR=7.2								
TKM2	**Tokmak 2**	**7.16**	**28**	⇓P			**Pn**	**06 12 46.1**	**-0.3**
	6.6nm,0.8s								
TKM2				⇑S			**Sn**	**06 14 07.8**	**+1.5**
	9.8nm,0.9s								
GEYT	**Alibeck**	**10.40**	**281**	P			Pn	06 13 25.6	-4.8
	1.4nm,0.3s,baz=84,slow=14,SNR=5.2								
GEYT				S			Sn	06 15 16.1	-8.9
	3.5nm,0.5s,baz=121,slow=23,SNR=2.2								
	2.3nm,0.3s								
MKAR	**Makanchi Array**	**13.13**	**36**	P			**Pn**	**06 14 04.9**	**-1.9**
	0.1nm,0.3s,baz=223,slow=12,SNR=3.8								
	0.4nm,0.7s								
KURBB	**Kurchatov Arra**	**14.96**	**19**	P			**Pn**	**06 14 28.8**	**-1.4**
	baz=205,slow=11,SNR=4.9								
	0.5nm,0.6s								
AB31	**Akbulak array**	**14.97**	**331**	P			**Pn**	**06 14 28.2**	**-2.2**
	0.5nm,0.3s,baz=144,slow=12,SNR=43								
AKTO	**Aktyubinsk**	**16.67**	**330**	P			**Pn**	**06 14 51.1**	**-0.5**
	0.4nm,0.3s,baz=135,slow=14,SNR=4.1								
	1.0nm,0.3s								
AKTO	**Aktyubinsk**	**16.67**	**330**	⇑P			**Pn**	**06 14 50.3**	**-1.3**
	2.5nm,0.6s								
ZALV	**Zalesovo Beam**	**19.75**	**25**	P			**P**	**06 15 25.0**	**-1.0**
	5.0nm,0.3s,baz=207,slow=9.7,SNR=30								
	5.0nm,0.3s								
ARU	**Arti**	**21.50**	**341**	P			**P**	**06 15 44.7**	**-0.1**
	4.7nm,0.2s,baz=163,slow=7.7,SNR=1.5								
	4.7nm,0.2s								
GTA	**Gaotai**	**22.77**	**74**	*eP*			**P**	**06 15 58.3**	**-0.1**
GTA					pmax		pmax		
	comp=Z,6.0nm,0.9s								
AKASG	**Malin Array Be**	**32.89**	**309**	P			**P**	**06 17 30.0**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=82,slow=7.0,SNR=4.7								
	comp=Z,0.2nm,0.3s								
FINES	**FINESS Array B**	**37.38**	**326**	P			**P**	**06 18 08.6**	**+1.6**
	comp=Z,0.6nm,0.4s,baz=117,slow=8.0,SNR=6.1								
	comp=Z,0.6nm,0.4s								
ARCES	**ARCESS Array B**	**41.02**	**338**	P			**P**	**06 18 38.5**	**+1.4**
	comp=Z,1.4nm,0.6s,baz=115,slow=8.4,SNR=11								
	comp=Z,1.4nm,0.6s								
NB2	**NORSAR Subarra**	**44.29**	**323**	P			**P**	**06 19 05.3**	**+1.6**
	comp=Z,1.5nm,0.6s,baz=97,slow=7.9								
NOA	**NORSAR Array B**	**44.29**	**323**	P			**P**	**06 19 04.2**	**+0.4**
	comp=Z,1.8nm,0.7s,baz=96,slow=7.7,SNR=8.7								
	comp=Z,1.8nm,0.7s								
TORD	**Torodi Ar. Bea**	**65.78**	**269**	P			**P**	**06 21 36.8**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=52,slow=5.8,SNR=5.6								
	comp=Z,0.1nm,0.3s								
YKA	**Yellowknife Ar**	**81.08**	**3**	P			**P**	**06 23 09.1**	**+1.2**
	comp=Z,0.9nm,0.8s,baz=348,slow=5.2,SNR=3.7								
	comp=Z,0.9nm,0.8s								
SCHQ	**Schefferville**	**81.97**	**337**	LR			LR	06 58 20.1	
	comp=Z,60nm,18.6s,baz=141,slow=34								

IDC 22 06:15:56.9±3.0, 54.17N×86.57E, h0km, mbtmp2.9/2, ML2.7/2, Error ellipse: s-maj=25.2km s-min=15.1km az=52.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.06**	**259**	*i*				06 22 08.6	
	baz=79,slow=311,SNR=2.5								
ZALV	**Zalesovo Beam**	**1.06**	**259**	Pg		Pg		06 16 16.4	-0.8
	1.1nm,0.3s,baz=75,slow=17,SNR=5.3								
ZALV				Lg		Lg		06 16 32.0	
	1.8nm,0.3s,baz=74,slow=28,SNR=9.0								
KURBB	**Kurchatov Arra**	**6.07**	**237**	Pn		Pn		06 17 28.9	+1.0
	0.1nm,0.3s,baz=55,slow=14,SNR=5.5								
	0.5nm,0.3s								
MKAR	**Makanchi Array**	**7.87**	**202**	Pn		Pn		06 17 53.4	+0.8
	0.1nm,0.3s,baz=16,slow=11,SNR=6.1								
	0.2nm,0.3s								

IDC ***22*** *06:37:23.9±2.6, 51.53N×160.31E, h0km, mb3.6/4, mbtmp3.5/5, ML2.4/1, MS2.3/1, Error ellipse: s-maj=81.6km s-min=28.8km az=24.0*
KRSC ***22*** *06:37:28.2±1.6, 52.00N×160.68E, h55km±21km, ML3.9*

ISC 22 06:37:28.8±2.1, 51.9N±0.1×160.7E±0.1, h21km±26km, n29, σ0s 94/32, mb3.7/4, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**1.23**	**342**	*eP*			**Pn**	**06 37 49.0**	**-1.7**
RUS	**Russkaya**	**1.41**	**291**	*eP*			**Pn**	**06 37 52.6**	**-0.6**
RUS				*eS*			**Sn**	**06 38 09.8**	**-1.3**
DALK	**Dalny**	**1.60**	**314**	*eP*			**Pn**	**06 37 55.2**	**-0.6**
KDTR	**Khodutka, Kamc**	**1.60**	**266**	*eP*			**Pn**	**06 37 55.7**	**-0.1**
KDTR				*eS*			**Sn**	**06 38 15.0**	**-0.8**
MTVR	**Mutnovka**	**1.62**	**291**	*eP*			**Pn**	**06 37 56.0**	**-0.2**
MTVR				*eS*			**Sn**	**06 38 15.7**	**-0.7**
PET	**Petropavlovsk**	**1.64**	**312**	*eP*			**Pn**	**06 37 55.9**	**-0.4**
UGLR	**Uglovaya**	**1.69**	**319**	*eP*			**Pn**	**06 37 57.2**	**0.0**
GRL	**Gorelyy**	**1.70**	**292**	*eP*			**Pn**	**06 37 57.9**	**+0.6**
SDLR	**Sedlovina**	**1.72**	**322**	*eP*			**Pn**	**06 37 57.4**	**-0.2**
SMAR	**Somma**	**1.74**	**320**	*eP*			**Pn**	**06 37 56.6**	**-1.4**
ASAK	**Asacha**	**1.75**	**286**	*eP*			**Pn**	**06 37 58.5**	**+0.5**
ASAK				*eS*			**Sn**	**06 38 20.2**	**+0.5**
AVH	**Avacha**	**1.77**	**319**	*eP*			**Pn**	**06 37 58.3**	**+0.1**
KRMR	**Karymshinskiy**	**1.79**	**301**	*eP*			**Pn**	**06 37 58.2**	**-0.2**
KRER	**Koryakskii**	**1.80**	**320**	*eP*			**Pn**	**06 37 58.9**	**+0.2**
KOK	**Koryaka**	**1.83**	**319**	*eP*			**Pn**	**06 37 59.0**	**-0.1**
KRX	**Arik**	**1.88**	**320**	*eP*			**Pn**	**06 37 59.7**	**-0.1**
PETK	**Petropavlovsk-**	**2.15**	**304**	Pn			**Pn**	**06 38 02.9**	**-0.5**
	5.3nm,0.3s,baz=118,slow=18,SNR=16								
PETK				Sn			**Sn**	**06 38 32.1**	**+2.6**
	11nm,0.3s,baz=94,slow=16,SNR=7.7								
PETK				LR			LR	06 38 35.8	
	comp=Z,59nm,18.8s,baz=113,slow=32								
	9.9nm,0.5s								
APC	**Apacha**	**2.36**	**296**	*eP*			**Pn**	**06 38 07.3**	**+1.1**
APC				*eS*			**Sn**	**06 38 35.0**	**+0.5**
GNL	**Ganaly**	**2.41**	**318**	*eP*			**Pn**	**06 38 07.9**	**+0.8**
MKZ	**Mys Kozlova**	**2.70**	**13**	*eP*			**Pn**	**06 38 10.1**	**-0.8**
TUMR	**Tumrok**	**3.37**	**355**	*eP*			**Pn**	**06 38 20.9**	**+0.7**
KBTR	**Krutoberegovo**	**4.46**	**16**	*eP*			**Pn**	**06 38 35.5**	**+0.4**
H11N2	**WAKE ISLAND Hy**	**32.51**	**169**	T			T	07 18 25.2	
	baz=352								
H11N3	**WAKE ISLAND Hy**	**32.53**	**169**	T			T	07 18 35.8	
	baz=352,slow=74								
H11N1	**WAKE ISLAND Hy**	**32.53**	**169**	T			T	07 18 38.4	
	baz=352,slow=74								
MKAR	**Makanchi Array**	**48.98**	**297**	P			**P**	**06 46 11.7**	**-1.7**
	0.4nm,0.4s,baz=54,slow=7.8,SNR=7.1								
	0.4nm,0.4s								
FINES	**FINESS Array B**	**61.32**	**337**	P			**P**	**06 47 42.9**	**+0.7**
	1.6nm,0.7s,baz=39,slow=9.0,SNR=4.9								
	1.6nm,0.7s								
NOA	**NORSAR Array B**	**64.75**	**344**	P			**P**	**06 48 05.0**	**0.0**
	0.3nm,0.6s,baz=21,slow=6.5,SNR=1.9								
	0.3nm,0.6s								
TXAR	**Lajitas Array**	**70.78**	**67**	P			**P**	**06 48 44.6**	**+1.1**
	0.1nm,0.4s,baz=322,slow=5.7,SNR=2.5								
	0.1nm,0.4s								

IDC 22 07:30:15.0±2.5, 53.66N×87.01E, h0km, mbtmp3.0/2, ML2.9/1, Error ellipse: s-maj=21.5km s-min=13.6km az=74.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.33**	**283**	Pg		Pg		07 30 39.4	-1.1
	1.7nm,0.3s,baz=98,slow=16,SNR=12								
ZALV				Lg		Lg		07 30 57.6	
	1.5nm,0.3s,baz=102,slow=28,SNR=12								
I46RU	**ZALESOVO INFRA**	**1.33**	**283**	*i*				07 38 20.0	
	baz=102,slow=309,SNR=9.0								
KURBB	**Kurchatov Arra**	**6.04**	**243**	Pn		Pn		07 31 46.0	+0.5
	0.9nm,0.6s,baz=59,slow=14,SNR=5.0								
KURBB				Sn		Sn		07 32 54.8	-0.5
	baz=76,slow=35,SNR=1.3								
KURBB				Lg		Lg		07 33 27.5	
	baz=59,slow=31								
MKAR	**Makanchi Array**	**7.51**	**206**	Pn		Pn		07 32 07.5	+1.8
	0.2nm,0.3s,baz=26,slow=13,SNR=6.3								
MKAR				Sn		Sn		07 33 31.1	-0.4
	0.1nm,0.3s,baz=28,slow=28,SNR=4.2								
MKAR				Lg		Lg		07 34 12.1	
	baz=27,slow=30,SNR=5.8								
	0.3nm,0.3s								

IDC ***22*** *07:32:23.1±3.5, 53.84N×90.97E, h0km, mbtmp3.4/2, ML3.0/2, Error ellipse: s-maj=29.0km s-min=23.9km az=49.0*
NNC ***22*** *07:32:30.3±6.4, 53.15N×91.06E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=48.0km s-min=31.8km az=72.0, Suspected Mining explosion.*

ISC 22 07:32:23.6±3.5, 53.9N±0.1×90.9E±0.2, h0km, n10, σ1s 93/15, 3C-11D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.58**	**273**	*i*				07 52 55.0	
	0.1nm,1.3s,baz=90,slow=318,SNR=8.1								
ZAA0	**Zalesovo Array**	**3.58**	**273**	⇑Pn			**Pg**	**07 33 29.9**	**-2.3**
	1.6nm,0.7s								
ZAA0				⇓Sn			**Sg**	**07 34 19.5**	**+1.0**
	8.6nm,0.9s								
ZALV	**Zalesovo Beam**	**3.58**	**273**	Pg			**Pb**	**07 33 27.6**	**-0.1**
	1.7nm,0.3s,baz=94,slow=16,SNR=12								
ZALV				Lg			Lg	07 34 18.9	
	5.3nm,0.3s,baz=91,slow=25,SNR=12								
KURK	**Kurchatov**	**8.16**	**252**	⇓Pn			**Pn**	**07 34 25.3**	**+2.2**
	2.2nm,0.8s								
KURK				⇑Sn			**Sn**	**07 35 60.0**	**+4.0**
	4.5nm,0.7s								
KURK				⇓Lg			Lg	07 36 42.4	
	15nm,0.9s								
KURBB	**Kurchatov Arra**	**8.25**	**252**	Pn			**Pn**	**07 34 24.6**	**+0.1**
	0.2nm,0.3s,baz=64,slow=14,SNR=7.8								
KURBB				Sn			**Sn**	**07 35 56.4**	**-1.9**
	baz=65,slow=26,SNR=2.0								
KURBB				Lg			Lg	07 36 46.8	
	0.1nm,0.3s,baz=62,slow=28,SNR=6.1								
	1.5nm,0.4s								
KURBB	**Kurchatov Arra**	**8.25**	**252**	⇓Pn			**Pn**	**07 34 26.4**	**+2.0**
	2.7nm,0.5s								
KURBB				⇓Sn			**Sn**	**07 35 57.0**	**-1.3**
	27nm,0.8s								
KURBB				⇑Lg			Lg	07 36 48.9	
	35nm,1.0s								
MK31	**Makanchi Array**	**8.98**	**221**	⇓Pn			**Pn**	**07 34 35.3**	**+0.8**
	0.5nm,0.5s,baz=35,slow=14,SNR=4.2								
MK31				⇓Sn			**Sn**	**07 36 15.9**	**-0.4**
	0.4nm,0.5s,baz=38,slow=23,SNR=8.8								
MK31				⇓Lg			Lg	07 37 04.4	
	1.7nm,0.7s,baz=24,slow=26,SNR=3.9								
MKAR	**Makanchi Array**	**8.98**	**221**	Pn			**Pn**	**07 34 34.1**	**-0.4**
	0.2nm,0.3s,baz=42,slow=15,SNR=6.3								
MKAR				Sn			**Sn**	**07 36 15.7**	**-0.6**
	0.2nm,0.3s,baz=40,slow=23,SNR=2.8								
MKAR				Lg			Lg	07 37 06.0	
	0.2nm,0.3s,baz=38,slow=32,SNR=6.8								
	0.8nm,0.6s								
MAKZ	**Makanchi**	**9.09**	**222**	⇓Pn			**Pn**	**07 34 38.6**	**+2.6**
	1.4nm,0.6s								
MAKZ				⇓Sn			**Sn**	**07 36 18.3**	**-0.8**
	2.8nm,0.7s								
MAKZ				⇓Lg			Lg	07 37 01.2	
	5.7nm,0.9s								
SONM	**Songino Array**	**11.53**	**116**	Lg			Lg	07 38 22.2	
	0.1nm,0.3s,baz=301,slow=29,SNR=5.1								

IDC 22 07:41:57.3±2.9, 54.39N×86.11E, h0km, mbtmp2.8/2, ML2.6/2, Error ellipse: s-maj=21.7km s-min=13.2km az=48.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.88**	**240**	*i*				07 46 10.0	
	baz=59,slow=312,SNR=1.5								
ZALV	**Zalesovo Beam**	**0.88**	**240**	Pg		Pg		07 42 12.9	-1.2
	0.6nm,0.3s,baz=57,slow=18,SNR=5.8								
ZALV				Lg		Lg		07 42 27.4	
	2.5nm,0.3s,baz=63,slow=30,SNR=12								
KURBB	**Kurchatov Arra**	**5.97**	**234**	Pn		Pn		07 43 25.5	-1.3
	0.1nm,0.3s,baz=46,slow=54,SNR=4.4								
	0.3nm,0.3s								
MKAR	**Makanchi Array**	**7.99**	**199**	Pn		Pn		07 43 57.2	+2.7
	0.2nm,0.3s,baz=24,slow=14,SNR=5.1								
	0.2nm,0.3s								

NNC ***22*** *07:47:01.4±8.0, 54.28N×87.50E, h0km, mb2.9, mpv2.6, Error ellipse: s-maj=70.7km s-min=46.9km az=7.0, Suspected Mining explosion.*
IDC ***22*** *07:47:07.6±3.2, 54.22N×87.23E, h0km, mbtmp2.8/2, ML2.7/1, Error ellipse: s-maj=28.6km s-min=17.3km az=64.0*

ISC 22 07:47:12.0±4.6, 54.1N±0.2×86.8E±0.2, h0km, n8, σ1s 26/10, 6C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.17**	**265**	*i*				07 54 50.0	
	baz=76,slow=314,SNR=1.9								
ZAA0	**Zalesovo Array**	**1.17**	**265**	⇑P			Pg	07 47 28.4	-5.9
	0.6nm,0.7s								
ZAA0				⇑S			**Sn**	**07 47 53.1**	**+0.9**
	0.8nm,0.5s								
ZALV	**Zalesovo Beam**	**1.17**	**265**	Pg			**Pg**	**07 47 33.2**	**-1.1**
	0.8nm,0.3s,baz=76,slow=14,SNR=5.2								
ZALV				Lg			Lg	07 47 54.5	
	0.9nm,0.3s,baz=78,slow=29,SNR=4.6								
KURK	**Kurchatov**	**6.02**	**239**	⇑Pn			**Pn**	**07 48 43.5**	**+1.3**
	0.2nm,0.3s								
KURK				⇑Sn			**Sn**	**07 49 53.7**	**+2.0**
	1.5nm,0.7s								
KURK				⇑Lg			Lg	07 50 27.6	
	6.7nm,1.1s								
KURBB	**Kurchatov Arra**	**6.12**	**239**	Pn			**Pn**	**07 48 43.9**	**+0.3**
	0.3nm,0.3s,baz=56,slow=14,SNR=5.3								
KURBB	**Kurchatov Arra**	**6.12**	**239**	⇓Pn			**Pn**	**07 48 42.7**	**-1.0**
	1.3nm,0.6s								
KURBB				⇑Sn			**Sn**	**07 49 53.7**	**-0.5**
	2.5nm,0.7s								
KURBB				⇓Lg			Lg	07 50 27.9	
	8.0nm,0.9s								
MK31	**Makanchi Array**	**7.83**	**203**	⇓Sn			**Sn**	**07 50 35.1**	**-1.2**
	0.5nm,0.6s,baz=19,slow=26,SNR=2.6								
MK31				Lg			Lg	07 51 26.8	
	5.7nm,1.1s,baz=27,slow=29,SNR=4.3								
MKAR	**Makanchi Array**	**7.83**	**203**	Pn			**Pn**	**07 49 08.0**	**+0.9**
	0.1nm,0.3s,baz=26,slow=12,SNR=4.5								
MKAR				Sn			**Sn**	**07 50 36.5**	**+0.2**
	0.1nm,0.3s,baz=22,slow=27,SNR=4.7								
MKAR				Lg			Lg	07 51 22.3	
	baz=28,slow=28,SNR=2.3								
	0.3nm,0.5s								

UCR ***22*** *07:47:16.9±1.8, 11.82N×83.46W, h13km±7km, MW3.9*
INET ***22*** *07:47:17.9±1.1, 11.94N×83.55W, h1km±7km, MW2.9*

ISC 22 07:47:15.0±2.1, 11.86N±0.08×83.42W±0.09, h9km±15km, n40, σ0s 68/48, 1C-2D, Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ESPN	**Las Esperanzas**	**0.93**	**291**	*eP*			**Pg**	**07 47 32.9**	**0.0**
ESPN				*eS*			**Sb**	**07 47 44.8**	**-0.9**
ESPN	**Las Esperanzas**	**0.93**	**291**	*eP*			**Pg**	**07 47 32.8**	**0.0**
ESPN				*eS*			**Sb**	**07 47 44.8**	**-0.9**
RIFO	**Rio Frio, Sara**	**1.61**	**198**	⇓*iP*			**Pn**	**07 47 43.1**	**-0.5**
RIFO				*eS*			**Sn**	**07 48 03.3**	**-1.3**
ACON	**Acoyapa**	**1.72**	**274**	*eP*			**Pn**	**07 47 45.2**	**0.0**
ACON				*eS*			**Sn**	**07 48 07.1**	**-0.3**
ACON	**Acoyapa**	**1.72**	**274**	*eP*			**Pn**	**07 47 45.2**	**0.0**
FORC	**Fortuna**	**1.85**	**222**	⇑*iP*			**Pn**	**07 47 47.7**	**+0.7**
FORC				*eS*			**Sn**	**07 48 11.3**	**+0.7**
CEDE	**Laguna Cedeo**	**1.86**	**223**	*eP*			**Pn**	**07 47 47.8**	**+0.6**
CVTR	**Volcan Turrial**	**1.86**	**190**	*eP*			**Pn**	**07 47 47.0**	**-0.4**
ARE1	**Arenal 1**	**1.89**	**223**	*eP*			**Pn**	**07 47 47.6**	**+0.1**
PTEN	**Parque Tenorio**	**1.91**	**234**	*eP*			**Pn**	**07 47 48.2**	**+0.3**
PTEN				*eS*			**Sn**	**07 48 12.5**	**+0.3**
CASO	**Castillo**	**1.92**	**223**	*eP*			**Pn**	**07 47 47.6**	**-0.4**
CASO				*eS*			**Sn**	**07 48 12.7**	**+0.4**
RAFA	**San Farael, Vo**	**1.93**	**192**	*eP*			**Pn**	**07 47 48.4**	**0.0**
HDC3	**Heredia 3**	**1.97**	**200**	*eP*			**Pn**	**07 47 49.5**	**+0.8**
VMAR	**Armenia, Volca**	**1.97**	**238**	*eP*			**Pn**	**07 47 48.9**	**+0.3**
HDC	**Heredia**	**1.97**	**200**	*eP*			**Pn**	**07 47 49.0**	**+0.3**
SJS	**Escuela Geolog**	**2.01**	**198**	*eP*			**Pn**	**07 47 50.1**	**+0.8**
OCM	**Ochomogo**	**2.02**	**195**	⇓*eP*			**Pn**	**07 47 50.1**	**+0.6**
SRA1	**San Ramn**	**2.05**	**211**	*eP*			**Pn**	**07 47 50.5**	**+0.6**
HORNC	**Hornillas**	**2.07**	**237**	*eP*			**Pn**	**07 47 50.6**	**+0.5**
CUI	**Cuipilapa**	**2.09**	**235**	*eP*			**Pn**	**07 47 49.6**	**-0.7**
COLC	**Colonia**	**2.12**	**236**	*eP*			**Pn**	**07 47 51.5**	**+0.8**
RIMA	**Rio Macho**	**2.12**	**192**	*eP*			**Pn**	**07 47 51.3**	**+0.3**
JTS	**Las Juntas de**	**2.17**	**224**	*eP*			**Pn**	**07 47 50.6**	**-0.8**
GPS2	**Hotel Rincn d**	**2.19**	**240**	*eP*			**Pn**	**07 47 53.0**	**+1.3**
GPS2				*eS*			**Sn**	**07 48 19.6**	**+0.5**
BOAB	**BOACO BROADBAN**	**2.27**	**285**	*eP*			**Pn**	**07 47 53.3**	**+0.5**
CDM	**Cerro de Muert**	**2.31**	**188**	*eP*			**Pn**	**07 47 53.4**	**-0.4**
HZTE	**Horizontes, Gu**	**2.42**	**242**	*eP*			**Pn**	**07 47 56.4**	**+1.6**
PLVR	**Palo Verde**	**2.42**	**232**	*eP*			**Pn**	**07 47 54.9**	**-0.1**
LAFE	**Finca La Fe, P**	**2.51**	**216**	*eP*			**Pn**	**07 47 56.4**	**+0.3**
DRK

MATP	**Matopo**	**7.82**	**204**	*eP*		**Pn**	**08 14 51.7**	**+1.9**
MATP	**Matopo**	**7.82**	**204**	Pn		**Pn**	**08 14 51.0**	**+1.2**
	comp=Z,2.1nm,0.3s,baz=20,slow=16,SNR=28							
MATP					Sn	**Sn**	**08 16 14.8**	**-3.8**
	comp=Z,6.0nm,0.3s,baz=299,slow=19,SNR=13							
MATP					Lg	Lg	08 17 02.0	
	comp=Z,16nm,0.3s,baz=303,slow=23,SNR=3.4							
	comp=Z,7.2nm,0.5s							
MATP	**Matopo**	**7.82**	**204**	*i* P		**Pn**	**08 14 52.5**	**+2.7**
MATP				*i* S		**Sn**	**08 16 14.7**	**-3.8**
MATP	**Matopo**	**7.82**	**204**	*i* P		**Pn**	**08 14 52.5**	**+2.7**
MATP				*i* S		**Sn**	**08 16 14.7**	**-3.8**
MATP	**Matopo**	**7.82**	**204**	*i* P		**Pn**	**08 14 52.5**	**+2.7**
MATP				*i* S		**Sn**	**08 16 14.7**	**-3.8**
MUSN	**Musina, Limpop**	**9.19**	**191**	*eP*		**Pn**	**08 15 10.4**	**+1.9**
MUSN	**Musina, Limpop**	**9.19**	**191**	*i* P		Pn	08 15 04.0	-4.5
MUSN				*i* S		Sn	08 16 37.1	-15
MUSN	**Musina, Limpop**	**9.19**	**191**	*i* P		Pn	08 15 04.0	-4.5
MUSN				*i* S		Sn	08 16 37.1	-15
MUSN	**Musina, Limpop**	**9.19**	**191**	*i* P		Pn	08 15 04.0	-4.5
MUSN				*i* S		Sn	08 16 37.1	-15
MOPA	**Mopani**	**10.23**	**182**	*eP*		**Pn**	**08 15 23.8**	**+1.0**
MOPA	**Mopani**	**10.23**	**182**	*i* P		Pn	08 15 18.0	-4.7
MOPA				*i* S		Sn	08 17 00.1	-17
MOPA	**Mopani**	**10.23**	**182**	*i* P		Pn	08 15 18.0	-4.7
MOPA				*i* S		Sn	08 17 00.1	-17
MOPA	**Mopani**	**10.23**	**182**	*i* P		Pn	08 15 18.0	-4.7
MOPA				*i* S		Sn	08 17 00.1	-17
KIBK	**Kibwezi**	**12.46**	**30**	Pn		**Pn**	**08 15 53.4**	**0.0**
MBAR	**Mbarara**	**12.60**	**355**	Pn		**Pn**	**08 15 53.3**	**-2.1**
	comp=Z,6.5nm,0.3s,baz=119,slow=16,SNR=12							
MBAR					Sn	**Sn**	**08 18 11.1**	**-4.9**
	comp=Z,5.8nm,0.3s,baz=104,slow=17,SNR=4.0							
MBAR					Lg	Lg	08 19 24.7	
	comp=Z,6.6nm,0.3s,baz=96,slow=18,SNR=8.0							
MBAR					LR	LR	08 20 48.7	
	comp=Z,82nm,18.6s,baz=167,slow=37							
MBAR	**Mbarara**	**12.60**	**355**	*eP*		**Pn**	**08 15 54.0**	**-1.4**
MBAR				*eS*		Sn	08 18 07.8	-8.2
SLR	**Silverton**	**12.87**	**194**	*eP*		**Pn**	**08 16 01.3**	**+2.3**
CNG	**Changalane**	**12.99**	**179**	*eP*		**Pn**	**08 16 01.8**	**+1.3**
LBTB	**Lobatse**	**13.10**	**206**	*i/P*		**Pn**	**08 16 01.4**	**-0.8**
LBTB	**Lobatse**	**13.10**	**206**	Pn		**Pn**	**08 16 01.3**	**-0.8**
	comp=Z,1.9nm,0.3s,baz=30,slow=14,SNR=24							
LBTB					Sn	Sn	08 18 19.5	-8.6
	comp=Z,2.7nm,0.3s,baz=17,slow=7.8,SNR=4.9							
LBTB					Lg	Lg	08 19 42.1	
	comp=Z,2.1nm,0.3s,baz=116,slow=9.2,SNR=3.6							
LBTB					LR	LR	08 21 14.2	
	comp=Z,56nm,19.7s,baz=8.5,slow=38							
	comp=Z,5.4nm,0.3s							
LBTB	**Lobatse**	**13.10**	**206**			**Pn**	**08 16 01.6**	**-0.6**
LBTB	**Lobatse**	**13.10**	**206**	*i* P		**Pn**	**08 16 03.9**	**+1.8**
LBTB	**Lobatse**	**13.10**	**206**	*i* P		**Pn**	**08 16 03.9**	**+1.8**
LBTB	**Lobatse**	**13.10**	**206**	*i* P		**Pn**	**08 16 03.9**	**+1.8**
KMBO	**Kilima Mbogo**	**13.18**	**25**	Pn		**Pn**	**08 16 01.1**	**-2.4**
	comp=Z,0.2nm,0.3s,baz=204,slow=17,SNR=3.0							
KMBO					Lg	Lg	08 19 42.5	
	comp=Z,0.6nm,0.3s,baz=270,slow=19,SNR=6.9							
KMBO					LR	LR	08 21 28.2	
	comp=Z,46nm,19.5s,baz=270,slow=39							
	comp=Z,3.3nm,0.5s							
KMBO	**Kilima Mbogo**	**13.18**	**25**			**Pn**	**08 16 02.6**	**-0.9**
KSR	**Koster**	**13.37**	**200**	*eP*		**Pn**	**08 16 05.3**	**-0.6**
POGA	**Pongola**	**14.03**	**180**	*eP*		**Pn**	**08 16 17.9**	**+3.1**
PRYS	**Parys**	**14.24**	**196**	*eP*		**Pn**	**08 16 19.5**	**+1.7**
NWCL	**Newcastle**	**14.53**	**187**	*eP*		**Pn**	**08 16 22.1**	**+0.4**
TSUM	**Tsumeb**	**14.89**	**245**	*eP*		**Pn**	**08 16 27.1**	**+0.4**
TSUM	**Tsumeb**	**14.89**	**245**	Pn		**Pn**	**08 16 26.7**	**-0.1**
	comp=Z,3.5nm,0.4s,baz=50,slow=11,SNR=9.2							
TSUM					Sn	**Sn**	**08 19 07.3**	**-4.6**
	comp=Z,1.1nm,0.3s,baz=333,slow=22,SNR=3.7							
TSUM					Lg	Lg	08 20 41.4	
	comp=Z,1.6nm,0.3s,baz=128,slow=17,SNR=2.3							
TSUM					LR	LR	08 22 41.7	
	comp=Z,90nm,21.7s,baz=128,slow=39							
TSUM	**Tsumeb**	**14.89**	**245**			**Pn**	**08 16 27.9**	**+1.2**
TSUM					IAmb	IAmb	08 16 46.3	
	comp=Z,16nm,0.8s							
SWZ	**Schweizer**	**15.14**	**203**	*eP*		**Pn**	**08 16 28.2**	**-1.8**
SNKL	**Senekal, Frees**	**15.43**	**194**	*eP*		**Pn**	**08 16 33.9**	**+0.1**
BOSA	**Boshof**	**16.47**	**201**	*eP*		**Pn**	**08 16 46.8**	**-0.5**
BOSA	**Boshof**	**16.47**	**201**	Pn		**Pn**	**08 16 46.3**	**-0.9**
	comp=Z,1.0nm,0.3s,baz=16,slow=9.5,SNR=12							
BOSA					Sn	**Sn**	**08 19 42.1**	**-8.1**
	comp=Z,0.9nm,0.3s,baz=307,slow=20,SNR=6.5							
BOSA					Lg	Lg	08 21 31.0	
	comp=Z,1.5nm,0.3s,baz=119,slow=16,SNR=2.1							
BOSA					LR	LR	08 23 24.4	
	comp=Z,74nm,18.1s,baz=5.5,slow=38							
	comp=Z,2.6nm,0.3s							
BOSA	**Boshof**	**16.47**	**201**	Pn		**Pn**	**08 16 46.7**	**-0.5**
BOSA	**Boshof**	**16.47**	**201**	*i* P		**Pn**	**08 16 46.7**	**-0.5**
BOSA				*i* S		Sn	08 19 40.4	-10
BOSA	**Boshof**	**16.47**	**201**	*i* P		**Pn**	**08 16 46.7**	**-0.5**
BOSA				*i* S		Sn	08 19 40.4	-10
BOSA	**Boshof**	**16.47**	**201**	*i* P		**Pn**	**08 16 46.7**	**-0.5**
BOSA				*i* S		Sn	08 19 40.4	-10
UPI	**Upington**	**17.98**	**212**	*eP*		**Pn**	**08 17 06.8**	**+0.7**
KEIM	**Keimoes**	**18.40**	**212**	*eP*		**P**	**08 17 09.7**	**-1.5**
GRAN	**Grantham**	**20.93**	**203**	*eP*		**P**	**08 17 39.7**	**+0.9**
CVNA	**Calvinia**	**21.27**	**209**	*eP*		**P**	**08 17 41.8**	**-0.7**
CVNA					IAmb	IAmb	08 17 46.0	
	comp=Z,59nm,1.5s							
SUR	**Sutherland**	**21.55**	**206**	P		**P**	**08 17 45.5**	**-0.1**
	comp=Z,4.0nm,0.7s,baz=22,slow=15,SNR=7.7							
SUR					Lg	Lg	08 24 11.0	
	comp=Z,0.5nm,0.3s,baz=108,slow=16,SNR=3.4							
SUR					LR	LR	08 26 12.4	
	comp=Z,65nm,21.1s,baz=313,slow=37							
	comp=Z,4.0nm,0.7s							
SUR	**Sutherland**	**21.55**	**206**	P		**P**	**08 17 45.3**	**-0.4**
TOA0	**Torodi Ar. Sit**	**39.73**	**310**	P		**P**	**08 20 30.1**	**+1.3**
TOA0					IAmb	IAmb	08 20 39.6	
	comp=Z,5.6nm,0.6s							
TORD	**Torodi Ar. Bea**	**39.73**	**310**	P		**P**	**08 20 29.8**	**+1.0**
	comp=Z,6.1nm,0.6s,baz=126,slow=8.1,SNR=43							
	comp=Z,6.1nm,0.6s							
TORD	**Torodi Ar. Bea**	**39.73**	**310**	P		**P**	**08 20 29.9**	**+1.0**
TORD					IAmb	IAmb	08 20 39.7	
	comp=Z,3.9nm,0.7s							
BRTR	**Keskin Array B**	**52.72**	**2**	P		**P**	**08 22 11.8**	**+0.9**
	comp=Z,2.0nm,0.7s,baz=172,slow=8.6,SNR=8.5							
	comp=Z,2.0nm,0.7s							
GEYT	**Alibeck**	**56.56**	**25**	LR		LR	08 48 39.6	
	comp=Z,35nm,19.9s,baz=348,slow=38							
ESDC	**Sonseca Array**	**62.29**	**329**	P		**P**	**08 23 19.2**	**+1.0**
	comp=Z,0.3nm,0.5s,baz=134,slow=5.5,SNR=2.2							
	comp=Z,0.3nm,0.5s							
AKASG	**Malin Array Be**	**63.71**	**358**	P		**P**	**08 23 27.2**	**-0.1**
	comp=Z,1.9nm,0.7s,baz=177,slow=5.7,SNR=12							
	comp=Z,1.9nm,0.7s							
GERES	**GERESS Array B**	**63.86**	**347**	P		**P**	**08 23 29.6**	**+1.0**
	comp=Z,0.7nm,0.7s,baz=174,slow=6.3,SNR=8.5							
	comp=Z,0.7nm,0.7s							
KKAR	**Karatay Array**	**66.32**	**30**	P		**P**	**08 23 44.5**	**-0.1**
ABKAR	**Akbulak array**	**67.00**	**20**	P		**P**	**08 23 48.4**	**-0.3**
CMAR	**Chiang Mai Arr**	**73.28**	**66**	P		**P**	**08 24 28.0**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=251,slow=5.6,SNR=1.0							
	comp=Z,0.7nm,0.3s							
FINES	**FINESS Array B**	**74.58**	**357**	P		**P**	**08 24 35.1**	**+0.5**
	comp=Z,1.8nm,0.8s,baz=149,slow=11,SNR=4.4							
	comp=Z,1.8nm,0.8s							
MAKZ	**Makanchi**	**74.75**	**33**	P		**P**	**08 24 35.8**	**-0.2**
MAKZ					IAmb	IAmb	08 24 36.3	
	comp=Z,2.8nm,0.5s							
MK31	**Makanchi Array**	**74.90**	**33**	P		**P**	**08 24 36.8**	**-0.1**
MKAR	**Makanchi Array**	**74.90**	**33**	P		**P**	**08 24 36.6**	**-0.3**
	comp=Z,1.9nm,0.8s,baz=221,slow=5.7,SNR=19							
	comp=Z,1.9nm,0.8s							
MKAR	**Makanchi Array**	**74.90**	**33**	P		**P**	**08 24 36.3**	**-0.6**
NOA	**NORSAR Array B**	**75.83**	**350**	P		**P**	**08 24 42.9**	**+1.0**
	comp=Z,1.5nm,1.0s,baz=162,slow=5.5,SNR=4.2							
	comp=Z,1.5nm,1.0s							
ZALV	**Zalesovo Beam**	**80.63**	**29**	P		**P**	**08 25 08.1**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=208,slow=2.8,SNR=2.2							
	comp=Z,0.4nm,0.3s							
ARCES	**ARCESS Array B**	**82.68**	**358**	P		**P**	**08 25 19.6**	**+0.4**
	comp=Z,1.4nm,0.7s,baz=184,slow=3.5,SNR=5.3							
	comp=Z,1.4nm,0.7s							
ARCES	**ARCESS Array B**	**82.68**	**358**	IAmb		IAmb	08 25 20.1	
	comp=Z,13nm,1.2s							
YKA	**Yellowknife Ar**	**125.33**	**342**	PKP		**PKPdf**	**08 31 56.3**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=43,slow=2.6,SNR=4.7							
ILAR	**Eielson Array**	**128.53**	**359**	PKP		**PKPdf**	**08 32 02.1**	**-0.5**
	comp=Z,0.7nm,0.9s,baz=335,slow=3.9,SNR=5.9							
PDAR	**Pinedale Array**	**135.58**	**319**	PKP		**PKPdf**	**08 32 16.9**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=104,slow=6.3,SNR=4.9							
TXAR	**Lajitas Array**	**135.83**	**299**	PKP		**PKPdf**	**08 32 18.5**	**+0.9**
	comp=Z,0.4nm,0.9s,baz=151,slow=2.1,SNR=2.8							
NVAR	**Mina Array Bea**	**143.51**	**319**	PKP		PKPbc	08 32 30.0	+1.3
	comp=Z,0.7nm,0.7s,baz=56,slow=4.4,SNR=7.0							

*IDC **22** 08:40:21.5±3.6, 11°.52S×166°.24E, h56km±30km, mb4.0/11, mbtmp4.3/13, ML4.4/2, MS3.4/15, Error ellipse: s-maj=27.6km s-min=15.4km az=62.0*
*NEIC **22** 08:40:22.3±2.6, 11°.47S±0°.09×166°.3E±0°.1, h62km±7km, mb4.5/22, Error ellipse: s-maj=16.0km s-min=11.2km az=55.0*
ISC 22 08:40:21.6±0.7, **11°.51S**±0°.07×**166°.29E**±0°.09, **h59**km, **n53, σ1°22/43, mb4.4/22, MS3.4/11, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.57**	**288**	P		P	**Pn**	**08 41 56.4**	**+0.7**
	25nm,0.3s,baz=227,slow=16,SNR=4.7								
HNR				S			**Sn**	**08 43 07.3**	**-2.0**
	118nm,0.8s,baz=174,slow=9.2,SNR=1.4								
HNR				LR		LR		08 44 48.0	
	comp=Z,237nm,18.4s,baz=114,slow=41								
	167nm,0.6s								
KOUNC	**Koumac, New Ca**	**9.19**	**192**				**Pn**	**08 42 32.9**	**+1.4**
KOUNC							**Sn**	**08 44 12.2**	**-1.3**
DZM	**Mont Dzumac**	**10.50**	**179**	P			**Pn**	**08 42 50.6**	**+1.1**
	0.9nm,0.3s,baz=280,slow=21,SNR=20								
DZM				S			**Sn**	**08 44 42.0**	**-3.7**
	4.8nm,0.6s,baz=316,slow=22,SNR=2.7								
DZM				LR		LR		08 46 31.1	
	comp=Z,198nm,20.4s,baz=16,slow=35								
	1.7nm,0.3s								
ONTNC	**Ouen Toro**	**10.74**	**179**	Pn			**Pn**	**08 42 54.4**	**+1.7**
OUENC	**Ouen Island, N**	**10.86**	**177**	Pn			**Pn**	**08 42 56.1**	**+1.8**
PINNC	**Pines Island,**	**11.10**	**174**	Pn			**Pn**	**08 42 60.0**	**+2.4**
KRVT	**Keravat (AS076**	**15.83**	**296**	LR		LR		08 50 43.6	
	comp=Z,52nm,18.9s,baz=262,slow=39								
PMG	**Port Moresby**	**18.93**	**275**	LR		LR		08 51 17.2	
	comp=Z,133nm,21.1s,baz=120,slow=35								
EIDS	**Eidsvold**	**19.92**	**224**	P			**P**	**08 44 49.0**	**+0.3**
EIDS				IAmb		IAmb		08 45 07.2	
	comp=Z,8.9nm,0.8s								
CTA	**Charters Tower**	**21.06**	**244**	P			**P**	**08 45 02.2**	**+1.2**
	comp=Z,5.3nm,0.7s,baz=77,slow=9.4,SNR=9.6								
CTA				LR		LR		08 52 01.3	
	comp=Z,101nm,20.5s,baz=75,slow=33								
	comp=Z,5.3nm,0.7s								
CTAO	**Charters Tower**	**21.06**	**244**	P			**P**	**08 45 02.3**	**+1.2**
ARMA	**Armidale**	**23.22**	**214**	P			**P**	**08 45 25.4**	**+1.6**
ARMA				IAmb		IAmb		08 45 46.2	
	comp=Z,31nm,1.4s								
BKZ	**Black Stump Fm**	**29.00**	**163**	P			**P**	**08 46 15.7**	**-0.2**
BKZ				IAmb		IAmb		08 46 48.3	
	comp=Z,24nm,1.3s								
H11S2	**WAKE ISLAND Hy**	**29.81**	**1**	T		T		09 16 59.0	
	baz=180,slow=74,SNR=6.2								
H11S3	**WAKE ISLAND Hy**	**29.82**	**1**	T		T		09 17 04.9	
	baz=180								
H11S1	**WAKE ISLAND Hy**	**29.83**	**1**	T		T		09 17 00.2	
	baz=180,slow=74,SNR=3.5								
BFZ	**Birch Farm**	**30.35**	**165**	P			**P**	**08 46 26.6**	**-1.2**
STKA	**Stephens Creek**	**30.48**	**224**	P			**P**	**08 46 28.6**	**-0.4**
	comp=Z,2.7nm,0.7s,baz=71,slow=9.3,SNR=7.7								
STKA				LR		LR		08 57 29.8	
	comp=Z,106nm,20.3s,baz=30,slow=34								
	comp=Z,2.7nm,0.7s								
THZ	**Tophouse**	**30.69**	**170**	P			**P**	**08 46 31.1**	**+0.3**
MSWZ	**Moikau Station**	**30.81**	**167**	P			**P**	**08 46 30.4**	**-1.4**
WB0	**Warramunga Arr**	**31.75**	**251**	P			**P**	**08 46 40.6**	**+0.2**
WB0				IAmb		IAmb		08 46 41.0	
	comp=Z,12nm,0.9s								
WRAB	**Tennant Creek**	**31.82**	**251**	P			**P**	**08 46 38.9**	**-2.0**
WRAB				IAmb		IAmb		08 46 54.4	
	comp=Z,5.4nm,1.1s								
WB2	**Warramunga Arr**	**31.82**	**251**	P			**P**	**08 46 40.6**	**-0.3**
WB2				IAmb		IAmb		08 46 41.2	
	comp=Z,4.8nm,0.8s								
WRA	**Warramunga Arr**	**31.83**	**251**	P			**P**	**08 46 40.5**	**-0.5**
	comp=Z,4.2nm,0.9s,baz=82,slow=9.2,SNR=24								
WRA				PcP			**PcP**	**08 49 31.2**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=78,slow=3.4,SNR=4.6								
WRA				LR		LR		08 58 34.8	
	comp=Z,62nm,18.8s,baz=224,slow=34								
	comp=Z,4.2nm,0.9s								
OXZ	**Oxford**	**32.09**	**172**	P			**P**	**08 46 43.9**	**+0.8**
RPZ	**Rata Peaks**	**32.35**	**174**	P			**P**	**08 46 45.9**	**+0.6**
	comp=Z,8.6nm,0.6s,baz=339,slow=3.6,SNR=5.2								
	comp=Z,8.6nm,0.6s								
GUMO	**Guam**	**32.76**	**319**	LR		LR		08 58 04.9	
	comp=Z,20nm,20.9s,baz=99,slow=32								
AS31	**Alice Springs**	**33.06**	**244**	P			**P**	**08 46 51.3**	**-0.5**
ASAR	**Alice Springs**	**33.06**	**244**	P			**P**	**08 46 51.6**	**-0.3**
RAR	**Rarotonga**	**33.90**	**111**	LR		LR		08 58 51.4	
	comp=Z,63nm,18.2s,baz=266,slow=33								
MTN	**Manton Dam**	**34.38**	**264**	P			**P**	**08 47 04.0**	**+0.7**
MTN				IAmb		IAmb		08 47 36.6	
	comp=Z,18nm,1.3s								
PPT	**Papeete**	**43.07**	**103**	LR		LR		09 02 14.4	
	comp=Z,61nm,21.8s,baz=312,slow=30								
PSA00	**Pilbara Seismi**	**45.48**	**251**	P			**P**	**08 48 35.6**	**+0.2**
PSA00				IAmb		IAmb		08 48 37.1	
	comp=Z,3.7nm,0.9s								
TOLI2	**Tolitoli**	**46.92**	**282**	P			**P**	**08 48 47.6**	**+0.8**
MORW	**Morawa**	**49.87**	**242**	P			**P**	**08 49 09.6**	**+0.3**
MJAR	**Matsushiro Arr**	**54.63**	**332**	P			**P**	**08 49 42.8**	**-1.6**
	comp=Z,1.1nm,0.6s,baz=160,slow=11,SNR=4.1								
	comp=Z,1.1nm,0.6s								
PETK	**Petropavlovsk-**	**64.78**	**354**	LR		LR		09 15 45.0	
	comp=Z,16nm,18.7s,baz=119,slow=33								
VNDA	**Vanda**	**66.04**	**181**	P			**P**	**08 51 01.2**	**-0.4**
	comp=Z,1.2nm,0.7s,baz=349,slow=7.0,SNR=4.8								
	comp=Z,1.2nm,0.7s								
MA2	**Magadan**	**71.94**	**352**	LR		LR		09 17 25.3	
	comp=Z,15nm,20.5s,baz=138,slow=31								
CMAR	**Chiang Mai Arr**	**72.79**	**294**	P			**P**	**08 51 45.3**	**+1.0**
	comp=Z,2.1nm,0.3s,baz=118,slow=4.5,SNR=7.5								
	comp=Z,2.1nm,0.3s								
SEY	**Seymchan**	**74.99**	**353**	LR		LR		09 20 40.8	
	comp=Z,33nm,19.6s,baz=166,slow=32								
KDAK	**Kodiak Island**	**76.82**	**21**	LR		LR		09 19 28.0	
	comp=Z,26nm,20.0s,baz=214,slow=30								
QSPA	**South Pole Qui**	**78.50**	**180**	P			**P**	**08 52 15.9**	**-0.4**
QSPA				IAmb		IAmb		08 52 16.9	
	comp=Z,8.4nm,1.1s								
SONM	**Songino Array**	**79.36**	**324**	P			**P**	**08 52 21.7**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=107,slow=4.0,SNR=4.7								
	comp=Z,0.8nm,0.6s								
SONM	**Songino Array**	**79.36**	**324**	IAmb		IAmb		08 52 22.4	
	comp=Z,1.5nm,1.0s								
HDA	**Harding Lake**	**83.51**	**19**	P			**P**	**08 52 41.7**	**-1.1**
HDA				IAmb		IAmb		08 52 44.8	
	comp=Z,3.5nm,0.6s								
J25K	**Salcha River,**	**84.15**	**19**	P			**P**	**08 52 45.2**	**-0.8**
J25K				IAmb		IAmb		08 52 48.4	
	comp=Z,2.6nm,0.7s								
SCRK	**Sand Creek**	**84.17**	**20**	P			**P**	**08 52 45.9**	**-0.4**
SCRK				IAmb		IAmb		08 52 46.5	
	comp=Z,2.9nm,1.0s								
NVAR	**Mina Array Bea**	**85.92**	**50**	P			**P**	**08 52 56.6**	**+0.9**
	comp=Z,0.4nm,0.7s,baz=228,slow=7.2,SNR=4.6								
	comp=Z,0.4nm,0.7s								
MKAR	**Makanchi Array**	**94.22**	**317**	P			**P**	**08 53 34.0**	**-0.3**
	comp=Z,2.4nm,0.6s,baz=87,slow=6.1,SNR=15								
	comp=Z,2.4nm,0.6s								
ZALV	**Zalesovo Beam**	**94.24**	**324**	P			**P**	**08 53 33.3**	**-0.9**
	comp=Z,1.0nm,0.5s,baz=116,slow=6.6,SNR=2.0								
	comp=Z,1.0nm,0.5s								
TXAR	**Lajitas Array**	**95.58**	**61**	LR		LR		09 31 21.4	
	comp=Z,42nm,18.7s,baz=172,slow=32								
TORD	**Torodi Ar. Bea**	**164.86**	**278**	PKPab			**PKPab**	**09 01 16.3**	**-0.1**
	comp=Z,1.0nm,1.1s,baz=85,slow=5.1,SNR=3.6								

ISK 22 08:58:40.5, 37°.24N×27°.87E, h0km, ML1.1/3, Suspected Mining explosion., Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MLSB	**Milas**	**0.09**	**304**	PG		Pg		08 58 44.9	+2.6
MLSB				SG		Sg		08 58 48.2	+4.7
YER	**Yerkesik**	**0.34**	**108**	PG		Pb		08 58 48.5	-1.1
YER				SG		Sb		08 58 54.2	-1.4
BODT	**Bodrum**	**0.48**	**248**	PG		Pg		08 58 50.8	+1.0
BODT				SG		Sb		08 58 58.5	-1.1

*IDC **22** 08:58:38.0±1.2, 36°.79N×22°.01E, h0km, mb3.8/11, mbtmp3.7/13, ML3.8/2, MS3.4/5, Error ellipse: s-maj=25.5km s-min=19.4km az=45.0*
*ISK **22** 08:58:42.9, 36°.76N×22°.26E, h6km, ML3.6/17*
*THE **22** 08:58:42.6, 36°.65N×22°.05E, h4km±1km, ML3.7/9, Error ellipse: s-maj=1.3km s-min=0.4km az=224.0*
*ATH **22** 08:58:43.2, 36°.63N×22°.03E, h14km±3km, ML3.7/17, Error ellipse: s-maj=3.8km s-min=1.4km az=275.0*
ISC 22 08:58:41.7±1.0, **36°.61N**±0°.03×**21°.99E**±0°.03, **h27**km±7km, **n91, σ1°30/101, mb3.7/11, MS3.9/3, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.35**	**325**	P		P	**Pb**	**08 58 49.5**	**-0.2**
PYL				S		S	**Sb**	**08 58 54.4**	**-0.7**
PYL	**PYLOS**	**0.35**	**325**	P		P	**Pb**	**08 58 49.5**	**-0.2**
PYL				S		S	**Sb**	**08 58 54.4**	**-0.7**
ITM	**Ithomi**	**0.58**	**355**	P		P	**Pb**	**08 58 52.9**	**-0.4**
ITM				S		S	**Sb**	**08 59 00.1**	**-1.0**
ITM				AML		AML		08 59 01.0	
	comp=E,23754μm,0.3s								
ITM				AML		AML		08 59 03.3	
	comp=N,19310μm,0.4s								
ITM	**Ithomi**	**0.58**	**355**	P		P	**Pb**	**08 58 52.9**	**-0.4**
ITM				S		S	**Sb**	**08 59 00.1**	**-1.0**
	comp=N,11μm,0.3s								
ITM	**Ithomi**	**0.58**	**355**	PG		P	**Pb**	**08 58 52.8**	**-0.5**
ITM				SG		S	**Sb**	**08 59 00.5**	**-0.7**
VLI	**Veliai**	**0.77**	**81**	P		P	**Pb**	**08 58 56.7**	**-0.1**
VLI				AML		AML		08 59 10.6	
	comp=E,8345μm,0.4s								
VLI				AML		AML		08 59 10.9	
	comp=N,7486μm,0.3s								
VLI	**Veliai**	**0.77**	**81**	P		P	**Pn**	**08 58 56.7**	**-0.1**
VLI				S		S	**Sb**	**08 59 06.1**	**-0.5**
	comp=N,4μm,0.3s								
MNVA	**Monemvasia**	**0.84**	**84**	P		P	**Pn**	**08 58 58.3**	**+0.5**
KTHR	**Kythira**	**0.89**	**112**	P		P	**Pn**	**08 58 58.7**	**+0.3**
KTHR				AML		AML		08 59 19.5	
	comp=E,25687μm,0.4s								
KTHR				AML		AML		08 59 21.7	
	comp=N,25204μm,0.3s								
KTHR	**Kythira**	**0.89**	**112**	P		P	**Pn**	**08 58 58.7**	**+0.3**
KTHR				S		S	**Sn**	**08 59 11.0**	**+0.6**
	comp=N,4μm,0.4s								
KTHA	**Kythira Island**	**0.93**	**112**	P		P	**Pn**	**08 58 59.5**	**+0.5**
KTHA				AML		AML		08 59 20.2	
	comp=N,8110μm,0.3s								
KTHA				AML		AML		08 59 20.4	
	comp=E,14847μm,0.6s								
KTHA	**Kythira Island**	**0.93**	**112**	P		P	**Pn**	**08 58 59.5**	**+0.5**
KTHA				S		S	**Sn**	**08 59 12.6**	**+1.1**
	comp=E,9067μm,0.4s								
KRND	**KRANIDI**	**1.21**	**50**	P		P	**Pb**	**08 59 04.4**	**+0.5**
KRND				AML		AML		08 59 22.

IDI	**Anoyia**	**2.69**	**118**	Pn	**Pn**	**08 59 24.7**	**+1.4**
	comp=N,3.4nm,0.3s,baz=256,slow=10,SNR=28							
IDI				Sn	**Sb**	**09 00 00.8**	**-1.1**
	comp=N,15nm,0.3s,baz=276,slow=20,SNR=8.4							
	comp=N,7.8nm,0.4s							
IDI	**Anoyia**	**2.69**	**118**	PN	**Pn**	**08 59 25.9**	**+2.6**
SANT	**Santorini**	**2.80**	**94**	PN	**Pn**	**08 59 26.9**	**+2.1**
APE	**Apeiranthos**	**2.88**	**80**	PN	**Pn**	**08 59 27.3**	**+1.5**
CHOS	**Chios island**	**3.69**	**60**	PN	**Pn**	**08 59 38.5**	**+1.5**
OUR	**Ouranopolis**	**4.04**	**22**	PN	**Pn**	**08 59 44.2**	**+2.5**
URLA	**Izmir**	**4.06**	**63**	PN	**Pn**	**08 59 43.7**	**+1.6**
HORT	**Hortiatis**	**4.08**	**12**	PN	**Pn**	**08 59 44.9**	**+2.5**
FNA	**Florina**	**4.20**	**354**	PN	**Pn**	**08 59 47.5**	**+3.5**
BODT	**Bodrum**	**4.29**	**82**	PN	**Pn**	**08 59 47.7**	**+2.5**
KARP	**Karpathos**	**4.32**	**103**	PN	**Pn**	**08 59 47.9**	**+2.3**
GRG	**Griva**	**4.36**	**4**	PN	**Pn**	**08 59 49.2**	**+3.0**
DAT	**Datca**	**4.49**	**87**	PN	**Pn**	**08 59 50.7**	**+2.6**
ARG	**Arkhangelos**	**4.96**	**93**	PN	**Pn**	**08 59 57.5**	**+3.0**
BRTR	**Keskin Array B**	**9.69**	**68**	LR	LR	09 05 05.1	
	comp=N,43nm,18.1s,baz=310,slow=40							
MMAI	**Mount Meron Ar**	**11.59**	**104**	Pn	**Pn**	**09 01 25.4**	**0.0**
	comp=N,2.4nm,0.3s,baz=291,slow=12,SNR=3.9							
	comp=N,0.5nm,0.2s							
GNI	**Garni**	**18.18**	**72**	LR	LR	09 11 31.0		
	comp=N,18nm,19.5s,baz=266,slow=43							
BELG	**Belogornoye**	**23.97**	**41**	P	**P**	**09 03 53.5**	**-0.2**
	comp=N,5.1nm,0.5s,baz=240,slow=20,SNR=2.5							
	comp=N,5.1nm,0.5s							
HFS	**Hagfors**	**24.14**	**350**	P	**P**	**09 03 54.4**	**-0.8**
	comp=N,1.0nm,0.5s,baz=165,slow=12,SNR=7.5							
	comp=N,1.0nm,0.5s							
FINES	**FINESS Array B**	**25.00**	**5**	P	**P**	**09 04 02.9**	**0.0**
	comp=N,0.5nm,0.4s,baz=167,slow=9.6,SNR=3.4							
	comp=N,0.5nm,0.4s							
NOA	**NORSAR Array B**	**25.39**	**348**	P	**P**	**09 04 06.1**	**-0.6**
	comp=N,0.1nm,0.3s,baz=152,slow=9.9,SNR=1.9							
	comp=N,0.1nm,0.3s							
TORD	**Torodi Ar. Bea**	**29.61**	**223**	P	**P**	**09 04 46.2**	**+1.4**
	comp=N,0.3nm,0.7s,baz=46,slow=8.5,SNR=2.3							
	comp=N,0.3nm,0.7s							
ARCES	**ARCESS Array B**	**33.04**	**2**	P	**P**	**09 05 12.9**	**-1.6**
	comp=N,1.3nm,0.8s,baz=181,slow=9.6,SNR=5.3							
	comp=N,1.3nm,0.8s							
KURBB	**Kurchatov Arra**	**42.24**	**52**	P	**P**	**09 06 31.1**	**-1.3**
	comp=N,1.0nm,0.6s,baz=280,slow=8.9,SNR=8.3							
	comp=N,1.0nm,0.6s							
MKAR	**Makanchi Array**	**45.15**	**57**	P	**P**	**09 06 54.4**	**-1.5**
	comp=N,0.8nm,0.4s,baz=265,slow=7.5,SNR=11							
MKAR				PcP	**PcP**	**09 08 36.7**	**+0.7**
	comp=N,0.3nm,0.5s,baz=273,slow=5.3,SNR=2.0							
	comp=N,0.8nm,0.4s							
ZALV	**Zalesovo Beam**	**45.88**	**47**	P	**P**	**09 06 59.9**	**-1.6**
	comp=N,1.9nm,0.5s,baz=267,slow=8.1,SNR=8.6							
	comp=N,1.9nm,0.5s							
SADO	**Sadowa**	**72.18**	**313**	LR	LR	09 40 33.4		
	comp=N,55nm,19.1s,baz=144,slow=35							
YKA	**Yellowknife Ar**	**75.26**	**341**	P	**P**	**09 10 20.4**	**-1.4**
	comp=N,0.4nm,0.7s,baz=6.2,slow=7.5,SNR=1.8							
	comp=N,0.4nm,0.7s							
KSRS	**Korea Array**	**79.41**	**51**	P	**P**	**09 10 45.2**	**-0.2**
	comp=N,0.9nm,0.6s,baz=321,slow=4.7,SNR=4.6							
	comp=N,0.9nm,0.6s							
JOW	**Kunigami**	**86.28**	**59**	LR	LR	09 54 57.8		
	comp=N,26nm,19.3s,baz=318,slow=39							
JTS	**Las Juntas de**	**97.20**	**288**	LR	LR	09 51 48.1		
	comp=N,115nm,20.7s,baz=46,slow=33							

*NNC **22** 09:00:06.5±2.8, 54°.33N×86°.13E, h0km, mb3.5, mpv2.7, Error ellipse: s-maj=34.7km s-min=15.0km az=162.0, Suspected Mining explosion.*

*IDC **22** 09:00:07.0±2.5, 54°.29N×86°.13E, h0km, mbtmp3.0/2, ML2.6/2, Error ellipse: s-maj=19.1km s-min=12.4km az=51.0*

ISC 22 09:00:07.1±3.8, 54°.3N±0°.2×86°.2E±0°.1, h0km, n8, σ1s16/12, 6C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.86**	**247**	*i*			09 05 28.6	
	baz=64,slow=313,SNR=1.6							
ZAA0	**Zalesovo Array**	**0.86**	**247**	⇑P		**Pg**	**09 00 21.9**	**-1.6**
	0.2nm,0.3s							
ZAA0				⇓S		**Sg**	**09 00 35.4**	**+0.7**
	2.6nm,0.5s							
ZALV	**Zalesovo Beam**	**0.86**	**247**	Pg		**Pg**	**09 00 21.8**	**-1.8**
	0.7nm,0.3s,baz=64,slow=16,SNR=6.4							
ZALV				Lg		Lg	09 00 34.8	
	4.4nm,0.3s,baz=67,slow=25,SNR=11							
KURK	**Kurchatov**	**5.83**	**235**	⇓Pn		**Pn**	**09 01 36.1**	**+1.4**
	1.4nm,0.8s							
KURK				⇑Sn		**Sn**	**09 02 42.5**	**+0.3**
	1.3nm,0.9s							
KURK				⇓Lg		Lg	09 03 12.6	
	6.9nm,1.0s							
KURBB	**Kurchatov Arra**	**5.93**	**235**	Pn		**Pn**	**09 01 37.2**	**+1.0**
	0.1nm,0.3s,baz=52,slow=14,SNR=9.2							
KURBB				Lg		Lg	09 03 17.2	
	baz=51,slow=33,SNR=7.4							
	1.0nm,0.5s							
KURBB	**Kurchatov Arra**	**5.93**	**235**	⇓Pn		**Pn**	**09 01 37.4**	**+1.2**
	1.2nm,0.5s							
KURBB				⇑Sn		**Sn**	**09 02 45.4**	**+0.6**
	1.5nm,0.4s							
KURBB				⇑Lg		Lg	09 03 17.0	
	8.8nm,0.8s							
MK31	**Makanchi Array**	**7.90**	**200**	Pn		**Pn**	**09 02 04.2**	**+1.0**
	0.7nm,0.6s,baz=25,slow=14,SNR=6.1							
MK31				⇑Sn		**Sn**	**09 03 33.2**	**-0.1**
	0.6nm,0.6s,baz=28,slow=24,SNR=4.0							
MK31				⇑Lg		Lg	09 04 14.2	
	2.1nm,0.8s,baz=22,slow=27,SNR=4.6							
MKAR	**Makanchi Array**	**7.90**	**200**	Pn		**Pn**	**09 02 03.4**	**+0.2**
	0.2nm,0.3s,baz=21,slow=12,SNR=7.8							
MKAR				Sn		**Sn**	**09 03 33.1**	**-0.2**
	0.1nm,0.3s,baz=19,slow=18,SNR=4.4							
MKAR				Lg		Lg	09 04 15.2	
	0.1nm,0.3s,baz=21,slow=30,SNR=9.5							
	0.5nm,0.5s							

BUC 22 09:00:46.5±0.2, 45°.06N×28°.23E, h5km, ml0.9/2, 18C-2D, Error ellipse: s-maj=1.7km s-min=1.0km az=72.0, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
CFR	**Carcaliu**	**0.14**	**331**	⇑P		Pg	09 00 49.1	-0.3
CFR				⇑S		Sg	09 00 51.3	0.0
CFR	**Carcaliu**	**0.14**	**331**	⇑P		Pg	09 00 49.1	-0.3
CFR				⇑S		Sg	09 00 51.3	0.0
TPGR	**Topolog**	**0.24**	**146**	⇑P		Pg	09 00 51.4	+0.2
TPGR				⇑S		Sg	09 00 54.2	-0.1
TPGR	**Topolog**	**0.24**	**146**	⇑P		Pg	09 00 51.4	+0.2
TPGR				⇑S		Sg	09 00 54.2	-0.1
HARR	**Harsova**	**0.42**	**211**	⇑P		Pg	09 00 54.7	0.0
HARR	**Harsova**	**0.42**	**211**	⇑P		Pg	09 00 54.7	0.0
TLCR		**0.43**	**72**	⇑P		Pg	09 00 54.8	-0.1
TLCR				⇑S		Sg	09 01 01.0	+0.4
TLCR		**0.43**	**72**	⇓P		Pg	09 00 54.8	-0.1
TLCR				⇑S		Sg	09 01 01.0	+0.4
TIRR	**Tirgusor**	**0.61**	**168**	⇑P		Pg	09 00 58.7	+0.5
TIRR				⇑S		Sg	09 01 06.8	+0.7
TIRR	**Tirgusor**	**0.61**	**168**	⇑P		Pg	09 00 58.7	+0.5
TIRR				⇑S		Sg	09 01 06.8	+0.7
VLDR	**Vladesti**	**0.80**	**352**	⇑S		Sb	09 01 13.2	-0.8
VLDR	**Vladesti**	**0.80**	**352**	⇑S		Sb	09 01 13.2	-0.8

*IDC **22** 09:03:41.1±1.0, 19°.82S×70°.47W, h0km, mb3.6/5, mbtmp3.6/6, ML3.2/1, MS3.1/1, Error ellipse: s-maj=48.2km s-min=21.3km az=66.0*

*GUC **22** 09:03:44.2±0.9, 20°.13S×70°.85W, h20km±7km, ML3.7*

ISC 22 09:03:42.0±1.6, 20°.02S±0°.04×70°.77W±0°.06, h12km±9km, n33, σ1s31/36, mb3.8/4, 4C-7D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
TA02	**Huaiquique**	**0.65**	**113**	*e*P		**Pn**	**09 03 55.9**	**-1.1**
TA02				*i* S		**Sn**	**09 04 05.5**	**-1.7**
TA02				IAML			09 04 08.3	
	comp=N,7μm,0.2s							
TA01	**Diego Aracena**	**0.78**	**135**	⇓*i*P		**Pg**	**09 03 57.0**	**0.0**
TA01				*i* S		**Sb**	**09 04 07.8**	**-0.1**
TA01				IAML			09 04 11.5	
	comp=N,3μm,0.7s							
PATCX	**Punta Patache**	**0.99**	**144**	⇓*i*P		**Pb**	**09 04 00.1**	**-0.9**
PATCX				*i* S		**Sb**	**09 04 13.6**	**-0.5**
PATCX				IAML			09 04 19.3	
	comp=N,2μm,0.4s							
PB11	**IPOC Station P**	**1.08**	**77**	⇑*i*P		**Pn**	**09 04 03.7**	**+0.6**
PB11				*i* S		**Sn**	**09 04 19.0**	**+1.0**
PB12	**IPOC Station P**	**1.46**	**17**	*e*P		**Pg**	**09 04 10.2**	**+0.2**
PB12				*i* S		**Sg**	**09 04 31.1**	**+2.2**
PB12				IAML			09 04 39.1	
	comp=E,578nm,0.3s							
GO01	**Chusmiza**	**1.52**	**77**	⇑*i*P		**Pg**	**09 04 11.3**	**+0.1**
GO01				*i* S		**Sg**	**09 04 32.9**	**+1.9**
GO01				IAML			09 04 34.5	
	comp=N,4μm,0.3s							
PB08	**IPOC Station P**	**1.52**	**95**	⇑*i*P		**Pg**	**09 04 10.9**	**-0.4**
PB08				*i* S		**Sg**	**09 04 31.7**	**+0.6**
PB08				IAML			09 04 37.0	
	comp=N,9μm,1.0s							
PB02	**IPOC Station P**	**1.53**	**148**	⇓*i*P		**Pn**	**09 04 08.4**	**-0.9**
PB02				*i* S		**Sn**	**09 04 27.9**	**-1.3**
PB02				IAML			09 04 34.6	
	comp=E,5μm,0.3s							
PB01	**IPOC Station P**	**1.57**	**131**	⇓*i*P		**Pn**	**09 04 09.9**	**+0.1**
PB01				*i* S		**Sb**	**09 04 30.5**	**-0.5**
PB01				IAML			09 04 35.7	
	comp=N,2μm,0.3s							
PB07	**IPOC Station P**	**1.89**	**154**	⇓*i*P		**Pn**	**09 04 12.9**	**-1.4**
PB07				IAML			09 04 48.7	
	comp=E,694nm,0.4s							
PB16	**IPOC Station P**	**2.05**	**36**	⇑*i*P		**Pg**	**09 04 21.0**	**-0.4**
PB16				*i* S		**Sg**	**09 04 49.3**	**+1.3**
PB16				IAML			09 04 53.0	
	comp=N,350nm,0.3s							
PB09	**IPOC Station P**	**2.27**	**141**	⇓*i*P		**Pn**	**09 04 20.2**	**+0.6**
PB09				*i* S		**Sn**	**09 04 49.0**	**+1.3**
PB09				IAML			09 05 05.4	
	comp=N,815nm,0.7s							
PB04	**IPOC Station P**	**2.38**	**166**	*e*P		**Pn**	**09 04 18.9**	**-2.1**
PB04				IAML			09 05 03.5	
	comp=N,657nm,0.5s							
LVC	**Limon Verde**	**3.11**	**146**	Pn		**Pn**	**09 04 31.5**	**+0.3**
	comp=N,3.1nm,0.3s,baz=313,slow=10.0,SNR=34							
LVC				Sn		**Sn**	**09 05 10.8**	**+2.3**
	comp=N,17nm,0.3s,baz=327,slow=10,SNR=5.6							
LVC				LR		LR	09 05 50.2	
	comp=N,305nm,19.6s,baz=252,slow=41							
	comp=N,16nm,0.4s							
LVC	**Limon Verde**	**3.11**	**146**	⇓*i*P		**Pn**	**09 04 31.6**	**+0.4**
LVC				*i* S		**Sn**	**09 05 08.2**	**-0.2**
LPAZ	**La Paz**	**4.47**	**34**	Pn		**Pb**	**09 04 57.0**	**-4.0**
	comp=N,0.9nm,0.3s,baz=168,slow=2.2,SNR=26							
SIV	**San Ignacio**	**10.05**	**68**	Pn		**Pn**	**09 06 07.3**	**+0.9**
	baz=258,slow=10,SNR=16							
H03N1	**Juan Fernandez**	**15.21**	**207**	T		T	09 22 49.0	
	baz=32,slow=72,SNR=20							
H03N2	**Juan Fernandez**	**15.22**	**207**	T		T	09 22 39.7	
	baz=32,slow=72,SNR=19							
H03N3	**Juan Fernandez**	**15.23**	**207**	T		T	09 22 35.5	
	baz=32,slow=72,SNR=17							
PLCA	**Paso Flores**	**20.65**	**180**	P		Pn	09 08 25.0	+1.1
	comp=N,0.7nm,0.6s,baz=8.4,slow=11,SNR=6.6							
	comp=N,0.7nm,0.6s							
TXAR	**Lajitas Array**	**58.43**	**326**	P		**P**	**09 13 38.2**	**+0.3**
	comp=N,0.3nm,0.8s,baz=154,slow=13,SNR=3.1							
	comp=N,0.3nm,0.8s							
NVAR	**Mina Array Bea**	**73.26**	**323**	P		**P**	**09 15 15.1**	**+1.6**
	comp=N,0.6nm,0.8s,baz=142,slow=4.6,SNR=3.9							
	comp=N,0.6nm,0.8s							
TORD	**Torodi Ar. Bea**	**78.51**	**71**	P		**P**	**09 15 42.8**	**-0.9**
	comp=N,1.1nm,0.8s,baz=250,slow=3.2,SNR=5.0							
	comp=N,1.1nm,0.8s							
YKA	**Yellowknife Ar**	**89.22**	**341**	P		**P**	**09 16 37.4**	**+0.1**
	comp=N,0.7nm,0.9s,baz=128,slow=6.9,SNR=2.9							
	comp=N,0.7nm,0.9s							
H11S2	**WAKE ISLAND Hyd**	**25.95**	**279**	T		T	11 42 04.8	
	baz=102,slow=74,SNR=5.4							
H11S1	**WAKE ISLAND Hyd**	**25.96**	**279**	T		T	11 42 09.9	
	baz=102,slow=74,SNR=5.2							
H11S3	**WAKE ISLAND Hyd**	**25.97**	**279**	T		T	11 42 12.8	
	baz=102,slow=74,SNR=4.9							
H11N3	**WAKE ISLAND Hyd**	**26.00**	**280**	T		T	11 42 15.7	
	baz=102,slow=74,SNR=5.0							
H11N2	**WAKE ISLAND Hyd**	**26.02**	**280**	T		T	11 42 17.5	
	baz=102,slow=74,SNR=5.3							
H11N1	**WAKE ISLAND Hyd**	**26.02**	**280**	T		T	11 42 13.3	
	baz=102,slow=74,SNR=3.1							
MKAR	**Makanchi Array**	**145.40**	**33**	PKPbc		**PKPdf**	**09 23 20.4**	**+0.4**
	comp=N,0.8nm,0.6s,baz=336,slow=2.7,SNR=5.6							
SONM	**Songino Array**	**152.15**	**4**	PKPbc		**PKiKP**	**09 23 38.3**	**+0.4**
	comp=N,0.5nm,0.3s,baz=356,slow=1.9,SNR=2.2							

IDC 22 09:09:10.7±3.1, 53°.36N×87°.53E, h0km, mbtmp2.8/2, ML2.4/2, Error ellipse: s-maj=29.1km s-min=15.6km az=57.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
ZALV	**Zalesovo Beam**	**1.72**	**291**	Pg		Pn	09 09 42.0	+0.2
	0.8nm,0.3s,baz=111,slow=14,SNR=8.5							
ZALV				Lg		Lg	09 10 06.2	
	0.9nm,0.3s,baz=113,slow=28,SNR=8.1							
I46RU	**ZALESOVO INFRA**	**1.72**	**291**	*i*			09 19 26.7	
	baz=108,slow=310,SNR=3.6							
KURBB	**Kurchatov Arra**	**6.20**	**247**	Pn		Pn	09 10 41.6	-1.8
	baz=62,slow=14,SNR=1.6							
KURBB				Lg		Lg	09 12 29.0	
	baz=62,slow=30,SNR=3.1							
	0.4nm,0.5s							
MKAR	**Makanchi Array**	**7.38**	**209**	Pn		Pn	09 11 01.9	+2.2
	0.2nm,0.3s,baz=31,slow=14,SNR=7.5							
	0.3nm,0.4s							

*IDC **22** 09:15:57.0±2.9, 53°.56N×87°.82E, h0km, mbtmp3.0/2, ML2.7/2, Error ellipse: s-maj=23.7km s-min=14.9km az=61.0*

*NNC **22** 09:15:58.0±3.0, 53°.43N×87°.80E, h0km, mb3.2, mpv2.8, Error ellipse: s-maj=22.5km s-min=12.6km az=68.0, Suspected Mining explosion.*

ISC 22 09:15:56.3±3.2, 53°.6N±0°.1×87°.9E±0°.2, h0km, n8, σ1s34/13, 9C-2D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.83**	**281**	*i*			09 27 40.0	
	0.1nm,0.9s,baz=98,slow=309,SNR=12							
ZAA0	**Zalesovo Array**	**1.83**	**281**	⇑P		**Pb**	**09 16 29.7**	**-0.9**
	0.6nm,0.5s							
ZAA0				⇓S		**Sg**	**09 16 56.4**	**+1.4**
	2.9nm,0.5s							
ZALV	**Zalesovo Beam**	**1.83**	**281**	Pg		**Pn**	**09 16 29.0**	**+0.1**
	2.1nm,0.3s,baz=100,slow=15,SNR=21							
ZALV				Lg		Lg	09 16 56.4	
	4.9nm,0.3s,baz=102,slow=25,SNR=27							
KURK	**Kurchatov**	**6.39**	**246**	⇓Pn		**Pn**	**09 17 33.9**	**+2.4**
	2.2nm,0.9s							
KURK				⇑Sn		**Sn**	**09 18 44.5**	**-0.6**
	0.7nm,0.6s							
KURK				⇑Lg		Lg	09 19 18.6	
	2.6nm,0.8s							
KURBB	**Kurchatov Arra**	**6.48**	**246**	Pn		**Pn**	**09 17 33.8**	**+0.9**
	0.1nm,0.3s,baz=62,slow=14,SNR=9.5							
KURBB				Sn		**Sn**	**09 18 45.4**	**-2.1**
	baz=54,slow=14,SNR=1.8							
KURBB				Lg		Lg	09 19 19.4	
	baz=62,slow=34,SNR=4.8							
	1.2nm,0.6s							
KURBB	**Kurchatov Arra**	**6.48**	**246**	⇑Pn		**Pn**	**09 17 33.6**	**+0.8**
	1.1nm,0.4s							
KURBB				⇑Sn		**Sn**	**09 18 46.1**	**-1.4**
	4.5nm,0.6s							
KURBB				⇑Lg		Lg	09 19 19.5	
	4.6nm,0.7s							
MK31	**Makanchi Array**	**7.72**	**210**	⇑Pn		**Pn**	**09 17 49.6**	**-0.3**
	0.2nm,0.5s,baz=30,slow=14,SNR=6.0							
MK31				⇑Sn		**Sn**	**09 19 17.4**	**-0.6**
	0.5nm,0.6s							
MK31				⇑Lg		Lg	09 19 56.8	
	0.9nm,0.6s							
MKAR	**Makanchi Array**	**7.72**	**210**	Pn		**Pn**	**09 17 50.9**	**+1.1**
	0.2nm,0.3s,baz=28,slow=14,SNR=6.4							
MKAR				Sn		**Sn**	**09 19 17.7**	**-0.2**
	0.2nm,0.3s,baz=27,slow=26,SNR=2.8							
MKAR				Lg		Lg	09 19 57.0	
	0.1nm,0.3s,baz=38,slow=33,SNR=4.4							
	0.2nm,0.3s							

IDC 22 09:22:13.9±3.6, 55°.26N×85°.57E, h0km, mbtmp2.6/2, ML2.5/2, Error ellipse: s-maj=32.8km s-min=20.5km az=26.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.38**	**199**	*i*			09 31 20.0	
	baz=16,slow=317,SNR=5.4							
ZALV	**Zalesovo Beam**	**1.38**	**199**	Pg		Pg	09 22 37.9	-2.5
	0.8nm,0.3s,baz=17,slow=17,SNR=9.1							
ZALV				Lg		Lg	09 22 58.0	
	0.6nm,0.3s,baz=20,slow=30,SNR=4.6							
KURBB	**Kurchatov Arra**	**6.30**	**225**	Pn		Pn	09 23 48.4	+0.4
	0.1nm,0.3s,baz=43,slow=13,SNR=6.3							
	0.3nm,0.3s							
MKAR	**Makanchi Array**	**8.72**	**195**	Pn		Pn	09 24 21.6	+0.3
	0.1nm,0.3s,baz=20,slow=14,SNR=1.5							
	0.1nm,0.3s							

*UCR **22** 09:47:01.2±1.4, 10°.33N×84°.73W, h85km±2km, MW4.2*
*UPA **22** 09:47:02.2±1.6, 9°.77N×84°.82W, h1km±6km, MW4.3*
*INET **22** 09:47:02.1±1.9, 10°.46N×84°.65W, h14km±8km, MW3.3*

ISC 22 09:47:01.4±1.3, 10°.33N±0°.04×84°.76W±0°.03, h86km±6km, n60, σ0s96/95, 15C-11D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
CASO	**Castillo**	**0.10**	**15**	⇑*i*P		**Pn**	**09 47 13.5**	**-0.3**
CASO				*i* S		**Sn**	**09 47 23.5**	**+0.7**
ARE1	**Arenal 1**	**0.14**	**18**	⇑*i*P		**Pn**	**09 47 13.7**	**-0.1**
ARE1				*e*S		**Sn**	**09 47 23.7**	**+0.8**
FORC	**Fortuna**	**0.16**	**34**	⇑*i*P		**Pn**	**09 47 13.5**	**-0.3**
FORC				*i* S		**Sn**	**09 47 23.4**	**+0.4**
CEDE	**Laguna Cedeo**	**0.17**	**20**	⇑*i*P		**Pn**	**09 47 13.7**	**-0.3**
CEDE				*e*S		**Sn**	**09 47 23.9**	**+0.7**
JTS	**Las Juntas de**	**0.19**	**258**	⇑*i*P		**Pn**	**09 47 13.3**	**-0.6**
JTS				*e*S		**Sn**	**09 47 23.1**	**-0.1**
JTS	**Las Juntas de**	**0.19**	**258**	*e*P		**Pn**	**09 47 13.4**	**-0.5**
JTS				*e*S		**Sn**	**09 47 23.1**	**-0.1**
SRA1	**San Ramn**	**0.37**	**131**	⇑*i*P		**Pn**	**09 47 14.4**	**-0.6**
PTEN	**Parque Tenorio**	**0.44**	**330**	⇓*i*P		**Pn**	**09 47 15.3**	**-0.1**
CUI	**Cuipilapa**	**0.51**	**309**	⇓*i*P		**Pn**	**09 47 15.7**	**-0.2**
CUI				*e*S		**Sn**	**09 47 26.7**	**0.0**
LAFE	**Finca La Fe, P**	**0.54**	**196**	⇑*i*P		**Pn**	**09 47 15.7**	**-0.5**
LAFE				*e*S		**Sn**	**09 47 27.6**	**+0.6**
LAFE	**Finca La Fe, P**	**0.54**	**196**	*e*P		**Pn**	**09 47 15.6**	**-0.5**
LAFE				*e*S		**Sn**	**09 47 27.7**	**+0.6**
CRPO	**Crater poas**	**0.54**	**104**	⇑*i*P		**Pn**	**09 47 15.8**	**-0.6**
COLC	**Colonia**	**0.55**	**307**	⇓*i*P		**Pn**	**09 47 16.0**	**-0.2**
COLC				*e*S		**Sn**	**09 47 27.3**	**+0.1**
HORNC	**Hornillas**	**0.56**	**313**	⇓*i*P		**Pn**	**09 47 16.1**	**-0.3**
HORNC				*e*S		**Sn**	**09 47 27.4**	**0.0**
GUAB	**Guayabo de Bag**	**0.59**	**309**	⇓*i*P		**Pn**	**09 47 16.3**	**-0.3**
VMAR	**Armenia, Volca**	**0.59**	**324**	⇓*e*P		**Pn**	**09 47 16.4**	**-0.3**
VMAR				*e*S		**Sn**	**09 47 28.4**	**+0.4**
JACO	**JACO, Garabito**	**0.67**	**171**	⇑*i*P		**Pn**	**09 47 16.6**	**-0.1**
JACO				*e*S		**Sn**	**09 47 30.0**	**+0.8**
ORTG	**Ortega, Santa**	**0.69**	**273**	*e*P		**Pn**	**09 47 17.6**	**+0.1**
ORTG				*e*S		**Sn**	**09 47 30.1**	**+0.5**
GPS2	**Hotel Rincn d**	**0.71**	**306**	⇓*i*P		**Pn**	**09 47 17.7**	**-0.1**
GPS2				*e*S		**Sn**	**09 47 30.2**	**+0.2**
HDC	**Heredia**	**0.72**	**117**	⇑*i*P		**Pn**	**09 47 17.4**	**-0.5**
HDC				*e*S		**Sn**	**09 47 29.9**	**-0.3**
HDC	**Heredia**	**0.72**	**117**	⇑*i*P		**Pn**	**09 47 17.4**	**-0.5**
HDC				*i* S		**Sn**	**09 47 30.1**	**-0.1**
HDC3	**Heredia 3**	**0.72**	**117**	⇑*i*P		**Pn**	**09 47 17.4**	**-0.5**
HDC3				*e*S		**Sn**	**09 47 30.0**	**-0.3**
HDC3	**Heredia 3**	**0.72**	**117**	*e*P		**Pn**	**09 47 17.4**	**-0.5**
DUNO	**Dulce Nombre,**	**0.76**	**251**	*e*P		**Pn**	**09 47 18.0**	**-0.2**
DUNO	**Dulce Nombre,**	**0.76**	**251**	*e*P		**Pn**	**09 47 18.0**	**-0.2**
DUNO				*e*S		**Sn**	**09 47 31.4**	**+0.7**
INDI	**Punta indio, G**	**0.86**	**238**	*e*P		**Pn**	**09 47 18.7**	**-0.5**
INDI				*e*S		**Sn**	**09 47 32.3**	**-0.4**
HZTE	**Horizontes, Gu**	**0.90**	**295**	⇓*i*P	

baz=1.3,SNR=225
WMOK S Sb 09 51 49.6 -0.6
baz=1.3
X34A Smith Ranch, M 2.17 161 Pn 09 51 28.2 +1.1
CBKS Cedar Bluff 2.30 339 Pn 09 51 29.4 +0.5
CBKS IAmb_Lg 09 52 05.0
comp=Z,153nm,0.8s
CBKS Cedar Bluff 2.30 339 P **Pn 09 51 28.8 -0.1**
baz=159,SNR=56
CBKS S **Sb 09 51 59.8 -1.3**
baz=159
TUL1 Leonard 2.46 107 Pn **Pn 09 51 31.2 +0.2**
TUL1 IAmb_Lg 09 52 09.4
comp=Z,101nm,0.9s
TUL1 Leonard 2.46 107 P **Pn 09 51 31.4 +0.4**
baz=288,SNR=46
KSU1 Kansas State U 2.94 33 Pn 09 51 38.6 +1.0
KSU1 IAmb_Lg 09 52 29.8
comp=Z,98nm,0.9s
KSU1 Kansas State U 2.94 33 P **Pn 09 51 38.4 +0.8**
baz=215,SNR=29
AMTX Amarillo 3.01 235 Pn 09 51 38.5 -0.3
AMTX IAmb_Lg 09 52 29.3
comp=Z,102nm,0.9s
AMTX Amarillo 3.01 235 P **Pn 09 51 38.7 -0.1**
baz=53
X37A Clayton 3.40 127 Pn 09 51 44.6 +0.5
X37A Clayton 3.40 127 P **Pn 09 51 44.4 +0.3**
baz=308,SNR=42
U38A Gravette 3.47 92 Pn 09 51 45.3 +0.3
U38A IAmb_Lg 09 52 44.7
comp=Z,88nm,0.7s
U38A Gravette 3.47 92 P **Pn 09 51 45.8 +0.8**
baz=275,SNR=20
Z35A Perchaven, San 3.53 160 Pn 09 51 46.1 +0.3
Z35A Perchaven, San 3.53 160 P **Pn 09 51 46.4 +0.6**
baz=340,SNR=18
HHAR Hobbs 3.84 94 Pn Pn 09 51 52.0 +1.9
HHAR IAmb_Lg 09 52 55.2
comp=Z,57nm,0.8s
W39A Magazine 4.24 109 IAmb_Lg 09 53 18.5
comp=Z,72nm,0.8s
S39A Bolivar 4.41 75 IAmb_Lg 09 53 11.4
comp=Z,50nm,0.7s
S39A Bolivar 4.41 75 P **Pn 09 51 58.2 +0.4**
baz=258
Z38A Mt. Pleasant 4.56 137 IAmb_Lg 09 53 24.2
comp=Z,77nm,0.8s
Z38A Mt. Pleasant 4.56 137 P **Pn 09 52 00.3 +0.4**
baz=319
T25A Trinidad 4.61 278 IAmb_Lg 09 53 12.7
comp=Z,77nm,0.9s
MIAR Mount Ida 4.67 115 IAmb_Lg 09 53 28.6
comp=Z,68nm,0.7s
BGNE Belgrade 4.75 5 Pn 09 52 02.4 -0.3
WHTX Lake Whitney, 4.77 167 Pn 09 52 03.0 +0.2
WHTX Lake Whitney, 4.77 167 P **Pn 09 52 03.8 +0.9**
baz=348,SNR=9.1
OGNE Ogallala 5.01 330 Pn Pn 09 52 06.1 -0.1
OGNE IAmb_Lg 09 53 34.2
comp=Z,66nm,0.7s
OGNE Ogallala 5.01 330 P **Pn 09 52 06.4 +0.2**
baz=148,SNR=9.6
P38A Dawn 5.02 52 IAmb_Lg 09 53 39.1
comp=Z,49nm,0.8s
P38A Dawn 5.02 52 P **Pn 09 52 06.7 +0.4**
baz=236,SNR=21
MGMO Mountain Grove 5.17 83 Pn 09 52 07.8 -0.5
MGMO IAmb_Lg 09 53 39.0
comp=Z,39nm,0.8s
237A Washetta, Mont 5.23 152 Pn 09 52 08.4 -0.7
237A IAmb_Lg 09 53 50.3
comp=Z,44nm,0.8s
X40A Basin Creek Fa 5.24 113 Pn 09 52 10.0 +0.7
X40A IAmb_Lg 09 53 46.9
comp=Z,50nm,0.8s
X40A Basin Creek Fa 5.24 113 P **Pn 09 52 09.7 +0.4**
baz=296,SNR=7.8
X40A P **Pn 09 52 09.7 +0.4**
baz=296,SNR=7.8
FCAR Ozark Folk Cen 5.36 96 IAmb_Lg 09 53 49.5
comp=Z,42nm,0.8s
WHAR Wooly Hollow 5.37 103 Pn Pn 09 52 10.9 -0.1
WLAR White Oak Lake 5.45 121 Pn Pn 09 52 12.0 -0.1
Q24A Divide 5.61 296 Pn 09 52 13.2 -1.4
Q24A IAmb_Lg 09 53 52.5
comp=Z,58nm,0.8s
N38A Joes South For 5.93 44 Pn 09 52 18.4 -0.3
N38A IAmb_Lg 09 54 00.6
comp=Z,45nm,0.7s
435B Jarrell 5.94 171 IAmb_Lg 09 54 09.4
comp=Z,40nm,0.8s
P40A Paris 5.96 59 Pn 09 52 18.6 -0.7
P40A IAmb_Lg 09 54 07.2
comp=Z,34nm,0.8s
CCM Cathedral Cave 6.09 75 IAmb_Lg 09 54 21.9
comp=Z,31nm,0.8s
LCAR Lake Charles 6.11 93 IAmb_Lg 09 54 11.5
comp=Z,28nm,0.8s
CCAR Cane Creek 6.28 114 IAmb_Lg 09 54 29.3
comp=Z,38nm,0.9s
ISCO Idaho Springs 6.29 302 Pn Pn 09 52 23.7 -0.3
ISCO IAmb_Lg 09 54 11.4
comp=Z,28nm,1.0s
ANMO Albuquerque 6.54 257 Pn **Pn 09 52 27.3 -0.1**
comp=Z,0.3nm,0.4s,baz=78,slow=5.3,SNR=2.5
ANMO Pg **Pb 09 52 48.7 +4.0**
comp=Z,0.6nm,0.3s,baz=77,slow=16,SNR=11
ANMO Sn **Sn 09 53 44.3 +1.9**
comp=Z,0.6nm,0.3s,baz=82,slow=18,SNR=1.7
ANMO Lg Lg 09 54 11.2
comp=Z,2.3nm,0.3s,baz=35,slow=8.9,SNR=6.7
PBMO Poplar Bluff 6.63 87 IAmb_Lg 09 54 35.2
comp=Z,42nm,0.7s
FVM French Village 6.71 76 IAmb_Lg 09 54 27.7
comp=Z,39nm,0.8s
SLM Saint Louis 6.99 71 IAmb_Lg 09 54 33.6
comp=Z,25nm,0.8s
N23A Red Feather La 7.07 309 Pn **Pn 09 52 34.1 -0.5**
143A Socs Landing, 7.18 121 IAmb_Lg 09 54 56.0
comp=Z,24nm,0.9s
Y22D IRIS PASSCAL I 7.21 251 IAmb_Lg 09 54 54.2
comp=Z,30nm,0.9s
N41A Harden Midland 7.33 54 IAmb_Lg 09 54 53.9
comp=Z,35nm,0.8s
MNTX Cornudas Mount 7.44 230 Pn **Pn 09 52 38.6 -0.9**
K38A Parkersburg 7.52 36 IAmb_Lg 09 55 04.4
comp=Z,41nm,0.9s
S44A Carbondale 7.60 79 IAmb_Lg 09 54 58.9
comp=Z,32nm,0.7s
SIUC Southern Illin 7.63 79 IAmb_Lg 09 55 02.5
comp=Z,41nm,0.8s
P43A Skaggs, Pawnee 7.81 65 IAmb_Lg 09 55 09.2
comp=Z,40nm,0.7s
W45A Hickory Valley 7.86 98 IAmb_Lg 09 55 12.8
comp=Z,38nm,0.9s
Q44A Meyer Farm, Va 7.98 71 IAmb_Lg 09 55 20.2
comp=Z,32nm,0.8s
Y45A Yeager Farm, C 7.98 108 IAmb_Lg 09 55 17.9
comp=Z,30nm,1.0s
833A Chaparral WMA, 8.34 184 IAmb_Lg 09 55 20.7
comp=Z,22nm,1.0s
I37A Lemond, Waseca 8.38 27 IAmb_Lg 09 55 38.4
comp=Z,21nm,0.9s
TXAR Lajitas Array 8.42 211 Pn **Pn 09 52 51.6 -1.5**
comp=Z,0.7nm,0.3s,baz=33,slow=11,SNR=56
TXAR Pg **Pb 09 53 14.4 -2.2**
comp=Z,0.4nm,0.3s,baz=38,slow=12,SNR=5.4
TXAR Lg Lg 09 55 11.7
comp=Z,1.3nm,0.3s,baz=24,slow=28,SNR=15
comp=Z,0.8nm,0.3s
RSSD Black Hills 8.49 333 Pn **Pn 09 52 53.1 -1.0**
RSSD IAmb_Lg 09 55 28.6
comp=Z,24nm,1.1s
L42A Oliver, Polo 8.79 50 IAmb_Lg 09 55 51.8
comp=Z,23nm,0.9s
JFWS Jewell Farm 9.00 44 IAmb_Lg 09 55 41.7
comp=Z,25nm,0.7s
F33A 5 Mile Ranch, 9.34 10 IAmb_Lg 09 55 43.2
comp=Z,23nm,1.1s
E28A Huff 10.01 352 IAmb_Lg 09 56 35.7
comp=Z,25nm,0.9s
PDAR Pinedale Array 10.35 309 Pn **Pn 09 53 17.6 -2.0**
comp=Z,0.1nm,0.3s,baz=125,slow=14,SNR=3.5
PDAR Lg Lg 09 56 09.6
comp=Z,0.5nm,0.3s,baz=116,slow=32,SNR=4.3
comp=Z,0.2nm,0.3s

TKL Tuckaleechee C 12.10 90 Pn **Pn 09 53 43.3 -0.1**
comp=Z,0.1nm,0.3s,baz=250,slow=12,SNR=1.0
TKL Lg Lg 09 57 08.3
comp=Z,0.5nm,0.3s,baz=342,slow=20,SNR=2.3
comp=Z,0.6nm,0.3s
ULM Lac du Bonnet 13.73 8 Sn Sn 09 56 24.3 -14
comp=Z,0.1nm,0.3s,baz=140,slow=18,SNR=1.5
NVAR Mina Array Bea 15.66 282 Pn **Pn 09 54 32.2 +0.3**
comp=Z,0.1nm,0.3s,baz=107,slow=8.6,SNR=2.3
comp=Z,0.1nm,0.4s

*SJA **22** 09:58:34.8±1.1,31°.23S×72°.49W,h20km,ML4.3,MW4.4*
*IDC **22** 09:58:36.0±1.0,31°.16S×72°.29W,h0km,mb4.0/5,*
mbtmp3.9/10,ML4.0/5,MS3.4/5,Error ellipse:
s-maj=31.1km s-min=21.7km az=105.0
*NEIC **22** 09:58:36,31°.19S×72°.36W,h17km,Moment Tensor*
Solution. Moment tensor: Scale 10¹⁵Nm; Mrr1.47;
Mθθ0.10; Mϕϕ-1.57; Mrθ0.48; Mrϕ-0.25; Mθϕ0.72; Fault
plane solution: M₀1.77000×10¹⁵ NP1:φs175.20000°,
δ32.84000°,λ67.94000°. NP2:φs20.95000°,δ59.83000°,
λ103.63000°. Principal axes: T 1.7372, Plg72.0000°,
Azm323.0000°; N 0.0631, Plg12.0000°, Azm194.0000°; P
-1.8003, Plg14.0000°, Azm101.0000°;
*NEIC **22** 09:58:38.3±1.2,31°.21S±0°.04×72°.27W±0°.07,h15km±4km,*
mb4.4/11,Mwr4.1/46,ML4.3(GUC) Error ellipse:
s-maj=10.5km s-min=2.1km az=125.0
*GUC **22** 09:58:39.5±0.8,31°.19S×72°.14W,h45km±8km,ML4.3*
ISC 22 09:58:38.5±1.1,31°.21S±0°.03×72°.28W±0°.04,h17km±6km,
n107,σ1°§39/134,mb4.5/8,7C-2D,Off coast of central
Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.77**	**46**	Pg		**Pb**	**09 58 53.4**	**-0.1**
CO06	**Fray Jorge**	**0.77**	**46**	↓*i*P		**Pb**	**09 58 53.5**	**0.0**
CO06				*i* S		**Sg**	**09 59 04.5**	**+0.6**
CO06				IAML			09 59 05.8	
	comp=E,8μm,0.4s							
CO02	**Combarbal**	**1.10**	**90**			**Pb**	**09 58 57.9**	**-1.2**
CO02	**Combarbal**	**1.10**	**90**	↓*i*P		**Pb**	**09 58 58.1**	**-1.0**
CO02				*i* S		**Sb**	**09 59 12.2**	**-1.0**
CO02	**Combarbal**	**1.10**	**90**	*e*P		**Pb**	**09 58 58.1**	**-1.0**
CO02				*e*S		**Sn**	**09 59 13.8**	**-0.3**
CO02				IAML			09 59 14.7	
	comp=Z,8μm,0.3s							
CO03	**El Pedregal**	**1.42**	**75**			**Pn**	**09 59 03.1**	**-0.4**
CO03						**Sn**	**09 59 21.1**	**-0.8**
CO03	**El Pedregal**	**1.42**	**75**	↑*i*P		**Pn**	**09 59 03.1**	**-0.4**
CO03				*i* S		**Sn**	**09 59 21.2**	**-0.7**
CO03				IAML			09 59 28.0	
	comp=E,6μm,0.4s							
CO03	**El Pedregal**	**1.42**	**75**	*e*P		**Pn**	**09 59 03.2**	**-0.4**
CO03				*e*S		**Sb**	**09 59 22.6**	**+0.3**
CO03				IAML			09 59 24.4	
	comp=Z,4μm,0.5s							
CO05	**La Serena**	**1.57**	**35**	*e*P		**Pn**	**09 59 05.5**	**-0.1**
CO05				*i* S		**Sn**	**09 59 25.0**	**-0.6**
CO05				IAML			09 59 32.4	
	comp=E,6μm,0.9s							
VA06	**Catapilco**	**1.58**	**148**	Pn		**Pn**	**09 59 05.0**	**-0.7**
VA06	**Catapilco**	**1.58**	**148**	↑*i*P		**Pn**	**09 59 05.1**	**-0.7**
VA06				*i* S		**Sn**	**09 59 24.0**	**-1.9**
VA06				IAML			09 59 33.3	
	comp=E,9μm,0.5s							
GO04	**Tololo Observa**	**1.64**	**51**			**Pn**	**09 59 06.7**	**-0.1**
GO04	**Tololo Observa**	**1.64**	**51**	↑*i*P		**Pn**	**09 59 06.7**	**-0.1**
GO04				*i* S		**Sb**	**09 59 29.9**	**+0.8**
GO04	**Tololo Observa**	**1.64**	**51**	*e*P		**Pn**	**09 59 06.7**	**-0.1**
GO04				*e*S		**Sg**	**09 59 30.7**	**-1.0**
VA01	**Torpederas**	**1.89**	**164**			**Pn**	**09 59 09.0**	**-0.9**
VA01	**Torpederas**	**1.89**	**164**	*e*P		Pn	09 59 03.4	-6.5
VA01				*e*P		**Pn**	**09 59 09.0**	**-0.9**
VA01				*e*S		Sg	09 59 45.3	+6.0
ROCH	**El Roble**	**2.06**	**149**	*e*P		**Pn**	**09 59 12.1**	**-0.5**
ROCH				*i* S		**Sn**	**09 59 39.4**	**+1.4**
ROCH				IAML			09 59 51.8	
	comp=E,5μm,0.5s							
ROC1	**El Roble**	**2.06**	**149**			**Pn**	**09 59 12.1**	**-0.5**
ROC1	**El Roble**	**2.06**	**149**	*e*P		**Pn**	**09 59 12.2**	**-0.5**
VA03	**San Esteban**	**2.13**	**137**			**Pn**	**09 59 13.7**	**+0.2**
VA03	**San Esteban**	**2.13**	**137**	↑*i*P		**Pn**	**09 59 13.7**	**+0.2**
VA03				*i* S		**Sn**	**09 59 41.0**	**+1.3**
VA03				IAML			09 59 48.8	
	comp=E,7μm,0.6s							
VA03	**San Esteban**	**2.13**	**137**	*e*P		**Pn**	**09 59 13.9**	**+0.4**
VA03				*e*S		**Sb**	**09 59 41.9**	**-1.1**
VA03				IAML			09 59 50.3	
	comp=Z,3μm,0.7s							
CO01	**Juntas del Tor**	**2.25**	**57**			**Pn**	**09 59 15.8**	**+0.6**
CO01	**Juntas del Tor**	**2.25**	**57**	↑*i*P		**Pn**	**09 59 15.9**	**+0.7**
CO01				*i* S		**Sn**	**09 59 43.5**	**+0.8**
CO01				IAML			09 59 52.6	
	comp=N,1μm,0.7s							
CO01	**Juntas del Tor**	**2.25**	**57**	*e*P		**Pn**	**09 59 16.2**	**+0.9**
CO01				*e*S		**Sb**	**09 59 45.9**	**-0.6**
CO01				IAML			09 59 50.6	
	comp=Z,869nm,0.7s							
MT02	**Curacav**	**2.26**	**155**			**Pn**	**09 59 14.3**	**-0.8**
MT02	**Curacav**	**2.26**	**155**	*e*P		**Pn**	**09 59 14.5**	**-0.6**
MT02				*e*S		**Sn**	**09 59 43.5**	**+0.9**
PEL	**Peldehue**	**2.35**	**145**			**Pn**	**09 59 16.3**	**-0.2**
PEL	**Peldehue**	**2.35**	**145**	↑*i*P		**Pn**	**09 59 16.4**	**0.0**
PEL				IAML			09 59 58.0	
	comp=E,2μm,0.4s							
PEL	**Peldehue**	**2.35**	**145**	*e*P		**Pn**	**09 59 16.5**	**0.0**
PEL				*e*S		Sg	10 00 00.7	+6.4
VA05	**Santo Domingo**	**2.50**	**167**			**Pn**	**09 59 17.5**	**-0.9**
MT05	**Renca**	**2.54**	**149**	Pn		**Pn**	**09 59 18.8**	**-0.1**
MT05	**Renca**	**2.54**	**149**	*e*P		**Pn**	**09 59 18.7**	**-0.3**
MT05				*i* S		**Sn**	**09 59 51.7**	**+2.2**
MT05				IAML			10 00 10.8	
	comp=E,2μm,0.4s							
MT05	**Renca**	**2.54**	**149**	*e*P		Pn	09 59 13.4	-5.6
MT05				*e*P		Pb	09 59 18.9	-4.8
MT05				*e*S		**Sn**	**09 59 49.4**	**-0.1**
MT05				IAML			10 00 01.4	
	comp=Z,1μm,0.9s							
LCO	**Las Campanas**	**2.58**	**32**	Pn		**Pn**	**09 59 20.0**	**+0.2**
LCO	**Las Campanas**	**2.58**	**32**	*e*P		**Pn**	**09 59 19.8**	**0.0**
RTLS	**Leoncito**	**2.62**	**104**	*e*P		**Pb**	**09 59 22.9**	**-2.2**
RTLS				*e*P		**Pn**	**09 59 23.1**	**+2.8**
RTLS				*e*S		**Sb**	**09 59 55.9**	**-1.2**
RTLS				IAML			10 00 05.3	
	comp=Z,1μm,1.3s							
AROD	**Rodeo**	**2.63**	**67**	*e*P		**Pb**	**09 59 23.1**	**-2.3**
AROD				*e*S		**Sb**	**09 59 55.4**	**-2.2**
AROD				*e*S		**Sn**	**09 59 56.4**	**+4.2**
FCH	**Farellones**	**2.70**	**142**	*e*P		**Pn**	**09 59 21.5**	**+0.1**
FCH				IAML			10 00 12.2	
	comp=E,903nm,0.3s							
MT03	**Universidad Ad**	**2.73**	**147**			**Pn**	**09 59 21.7**	**+0.1**
MT03	**Universidad Ad**	**2.73**	**147**	*e*P		**Pn**	**09 59 21.9**	**+0.3**
MT03				*e*S		**Sn**	**09 59 54.5**	**+0.3**
MT03				IAML			10 00 08.4	
	comp=Z,1μm,0.5s							
MT09	**Talagante**	**2.78**	**157**			**Pn**	**09 59 22.5**	**+0.1**
MT01	**Popeta**	**2.79**	**162**			**Pn**	**09 59 21.8**	**-0.6**
MT01	**Popeta**	**2.79**	**162**	↑*i*P		**Pn**	**09 59 21.7**	**-0.6**
MT01	**Popeta**	**2.79**	**162**	*e*P		**Pn**	**09 59 21.8**	**-0.6**
MT01				*e*P		Pb	09 59 21.9	-5.9
MT01				*e*S		Sn	09 59 45.9	-10
MT01				*e*S		Sg	10 00 05.4	-2.7
ACCO	**Cerro Coronel**	**2.83**	**78**	*e*P		**Pb**	**09 59 26.2**	**-2.7**
ACCO				*e*S		**Sn**	**09 59 56.9**	**-0.3**
ACCO				*e*S		**Sb**	**10 00 03.9**	**+0.5**
ACDV	**Cuesta del Vie**	**2.92**	**70**	*e*P		**Pn**	**09 59 21.9**	**-2.3**
ACDV				*e*P		**Pb**	**09 59 27.0**	**-3.1**
ACDV				*e*S		**Sb**	**10 00 03.4**	**-2.1**
ACDV				IAML			10 00 19.2	
	comp=Z,486nm,0.6s							
BO04	**La Punta**	**3.11**	**153**			**Pn**	**09 59 27.0**	**+0.2**
BO04	**La Punta**	**3.11**	**153**	IAML			10 00 19.4	
	comp=E,940nm,0.2s							
AC04	**Llanos de Chal**	**3.17**	**20**	Pn		**Pn**	**09 59 27.3**	**-0.4**
AC04	**Llanos de Chal**	**3.17**	**20**	*e*P		**Pn**	**09 59 27.2**	**-0.5**
AC04				*e*S		**Sb**	**10 00 15.9**	**+3.0**
AC04				*e*S		Sg	10 00 17.4	-3.2
ASAL	**Salagasta**	**3.24**	**116**	*e*P		**Pn**	**09 59 32.2**	**+3.5**
ASAL				*e*S		**Sb**	**10 00 15.9**	**+1.1**
RTLL	**Cerro Villicun**	**3.26**	**93**	*e*P		**Pn**	**09 59 31.2**	**+2.3**
RTLL				*e*S		**Sb**	**10 00 13.4**	**-2.0**
ARCO	**CERRO ARCO**	**3.28**	**121**	*e*P		**Pn**	**09 59 32.3**	**+3.1**
ARCO				*e*S		**Sb**	**10 00 17.4**	**+1.4**
ARCO				IAML			10 00 27.6	
	comp=Z,580nm,0.6s							
BO01	**Tunca**	**3.33**	**163**	Pn		**Pn**	**09 59 29.6**	**-0.2**
BO01	**Tunca**	**3.33**	**163**	*e*P		**Pn**	**09 59 29.6**	**-0.2**
BO01				*e*S		**Sb**	**10 00 20.9**	**+3.6**
BO01				IAML			10 00 27.3	
	comp=Z,353nm,1.4s							
AAGR	**Agrelo**	**3.47**	**123**	*e*P		**Pn**	**09 59 35.3**	**+3.4**
AAGR				*e*S		**Sb**	**10 00 25.4**	**+3.8**
GO05	**Huala**	**3.80**	**176**			**Pn**	**09 59 35.2**	**-1.1**
GO05	**Huala**	**3.80**	**176**	*e*P		**Pn**	**09 59 35.2**	**-1.1**
GO05				*e*S		**Sn**	**10 00 18.9**	**-1.7**
GO03	**Copiap**	**4.02**	**27**	*e*P		**Pn**	**09 59 41.5**	**+2.1**
AVFE	**Valle Fertil**	**4.18**	**84**	*e*P		**Pn**	**09 59 43.7**	**+2.0**
ML02	**Panimavida**	**4.60**	**171**			**Pn**	**09 59 46.8**	**-0.4**
RFA	**San Rafael**	**4.78**	**139**	*e*P		**Pn**	**09 59 51.3**	**+1.4**
APLL	**PUNTA DE LOS L**	**5.02**	**82**	*e*P		**Pn**	**09 59 49.4**	**-3.7**
AC02	**Maricunga**	**5.16**	**33**	Pn		**Pn**	**09 59 55.4**	**0.0**
AC01	**Pan de Azucar**	**5.26**	**17**	Pn		**Pn**	**09 59 54.7**	**-1.6**
H03N1	**Juan Fernandez**	**6.04**	**247**	T		T	10 06 56.6	
	baz=76,slow=72,SNR=461							
H03N3	**Juan Fernandez**	**6.05**	**247**	Pn		**Pn**	**10 00 07.4**	**+0.4**
H03N3				T		T	10 06 53.4	
	baz=76,slow=72,SNR=832							
H03N2	**Juan Fernandez**	**6.05**	**247**	T		T	10 06 54.7	
	baz=76,slow=72,SNR=636							
H03S1	**Juan Fernandez**	**6.18**	**243**	Pn		**Pn**	**10 00 08.0**	**-0.7**
LR04	**Corral**	**8.70**	**186**	Pn		**Pn**	**10 00 42.1**	**-1.4**
LVC	**Limon Verde**	**9.08**	**20**	Pn		**Pn**	**10 00 49.7**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=140,slow=23,SNR=1.7							
LVC				Sn		**Sn**	**10 02 30.5**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=159,slow=12,SNR=1.7							
	comp=Z,2.2nm,0.7s							
LVC	**Limon Verde**	**9.08**	**20**			**Pn**	**10 00 48.4**	**-0.8**
PLCA	**Paso Flores**	**9.60**	**172**	Pn		**Pn**	**10 00 56.1**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=336,slow=12,SNR=45							
PLCA				LR		LR	10 03 54.9	
	comp=Z,119nm,19.1s,baz=10.0,slow=33							
	comp=Z,2.0nm,0.4s							
PLCA	**Paso Flores**	**9.60**	**172**			**Pn**	**10 00 55.7**	**-0.4**
LL04	**Puerto Octay**	**9.68**	**181**	Pn		**Pn**	**10 00 57.3**	**+0.3**
TRQA	**Tornquist**	**10.89**	**132**	Pn		**Pn**	**10 01 13.3**	**-0.3**
CPUP	**Villa Florida**	**13.98**	**73**	Pn		**Pn**	**10 01 56.2**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=249,slow=9.3,SNR=4.3							
CPUP				LR		LR	10 07 35.8	
	comp=Z,102nm,19.6s,baz=246,slow=39							
	comp=Z,0.8nm,0.2s							
CPUP	**Villa Florida**	**13.98**	**73**			**Pn**	**10 01 55.2**	**-0.6**
LPAZ	**La Paz**	**15.33**	**15**	Pn		**Pn**	**10 02 15.1**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=190,slow=5.0,SNR=12							
LPAZ				LR		LR	10 09 03.8	
	comp=Z,94nm,19.5s,baz=106,slow=41							
	comp=Z,3.4nm,0.7s							
LPAZ	**La Paz**	**15.33**	**15**	Pn		**Pn**	**10 02 14.3**	**-0.5**
PLTB	**Pedras Altas**	**15.95**	**97**	Pn		**Pn**	**10 02 20.8**	**-1.4**
SIV	**San Ignacio**	**18.28**	**37**	P		**Pn**	**10 02 50.4**	**-1.1**
	baz=215,slow=11,SNR=9.7							
	comp=Z,2.4nm,0.9s							
BDFB	**Brasilia**	**27.04**	**61**	P		**P**	**10 04 19.2**	**-0.9**
	comp=Z,7.7nm,0.7s,baz=230,slow=10.0,SNR=10							
	comp=Z,7.7nm,0.7s							
BDFB	**Brasilia**	**27.04**	**61**	P		**P**	**10 04 19.3**	**-0.8**
BDFB				IAmb		IAmb	10 04 20.8	
	comp=Z,11nm,0.9s							
ESPZ	**Base Esperanza**	**33.64**	**168**	P		**P**	**10 05 19.0**	**+1.1**
SDV	**Santo Domingo**	**39.90**	**3**	LR		LR	10 23 45.2	
	comp=Z,73nm,18.8s,baz=271,slow=38							
SDV	**Santo Domingo**	**39.90**	**3**	P		**P**	**10 06 11.9**	**0.0**
SDV				IAmb		IAmb	10 06 25.5	
	comp=Z,8.0nm,0.8s							
BANI	**BANI**	**49.35**	**2**	P		**P**	**10 07 24.8**	**-2.4**
VNA3	**Neumayer Olymp**	**52.02**	**159**	P		**P**	**10 07 48.0**	**+1.4**
SNAA	**Sanae**	**54.24**	**159**	P		**P**	**10 08 04.3**	**+1.3**
SNAA	**Sanae**	**54.24**	**159**	P		**P**	**10 08 04.2**	**+1.2**
SNAA				IAmb		IAmb	10 08 04.7	
	comp=Z,3.7nm,0.8s							
TROLL	**Troll, Antarti**	**55.95**	**159**	P		**P**	**10 08 16.8**	**+1.4**
QSPA	**South Pole Qui**	**59.02**	**180**	P		**P**	**10 08 39.3**	**+2.1**
QSPA				IAmb		IAmb	10 08 39.4	
	comp=Z,4.6nm,1.1s							
TXAR	**Lajitas Array**	**67.21**	**330**	P		**P**	**10 09 31.5**	**-0.4**
	comp=Z,0.1nm,0.5s,baz=146,slow=8.3,SNR=2.1							
	comp=Z,0.1nm,0.5s							
TXAR	**Lajitas Array**	**67.21**	**330**	P		**P**	**10 09 31.1**	**-0.8**
MAW	**Mawson**	**75.91**	**164**	P		**P**	**10 10 24.3**	**+0.6**
	comp=Z,1.6nm,0.6s,baz=229,slow=11,SNR=2.9							
	comp=Z,1.6nm,0.6s							
NVAR	**Mina Array Bea**	**81.48**	**325**	P		**P**	**10 10 54.7**	**-0.2**
	comp=Z,0.2nm,0.7s,baz=169,slow=5.3,SNR=1.6							
	comp=Z,0.2nm,0.7s							
TORD	**Torodi Ar. Bea**	**83.46**	**70**	P		**P**	**10 11 06.0**	**+0.5**
	comp=Z,3.6nm,0.7s,baz=257,slow=4.5,SNR=19							
	comp=Z,3.6nm,0.7s							
TORD	**Torodi Ar. Bea**	**83.46**	**70**	P		**P**	**10 11 05.1**	**-0.4**
LBTB	**Lobatse**	**83.67**	**115**	LR		LR	10 45 14.2	
	comp=Z,39nm,18.9s,baz=224,slow=33							
WRA	**Warramunga Arr**	**123.08**	**210**	PKP		**PKiKP**	**10 17 35.4**	**+0.5**
	comp=Z,0.7nm,1.2s,baz=157,slow=1.6,SNR=1.6							
H11S2	**WAKE ISLAND Hyl**	**25.56**	**271**	T		T	12 36 34.0	
	baz=116,slow=75,SNR=9.6							
H11S1	**WAKE ISLAND Hyl**	**25.57**	**271**	T		T	12 36 29.5	
	baz=116,slow=75,SNR=6.4							
H11S3	**WAKE ISLAND Hyl**	**25.57**	**271**	T		T	12 36 28.3	
	baz=116,slow=75,SNR=6.5							
ZALV	**Zalesovo Beam**	**151.94**	**29**	PKPbc		**PKiKP**	**10 18 33.1**	**+0.7**
	comp=Z,1.6nm,0.5s,baz=297,slow=5.1,SNR=5.2							
ZALV				PKPab		**sPKPbc**	**10 18 39.9**	**+1.6**
	comp=Z,0.6nm,0.3s,baz=321,slow=3.7,SNR=3.1							
ZALV	**Zalesovo Beam**	**151.94**	**29**			**PKiKP**	**10 18 33.5**	**+1.1**

*IDC **22** 10:21:56.3±1.0,46°.29N×152°.79E,h0km,mb3.7/12,*
mbtmp3.7/14,ML2.0/2,MS3.0/3,Error ellipse:
s-maj=27.9km s-min=21.4km az=159.0
*SKHL **22** 10:21:59.8±0.3,45°.90N×153°.30E,h60km±3km,mb4.4/4*
*MOS **22** 10:22:00.4±1.4,46°.29N×152°.82E,h39km,mb4.0/3,Error*
ellipse: s-maj=15.3km s-min=9.6km az=65.0
ISC 22 10:22:01.3±0.8,46°.2N±0°.1×152°.98E±0°.09,h35km,n44,
σ1°§41/40,mb3.6/12,MS2.9/3,5D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.70**	**257**	*d* iPN		**Pn**	**10 22 58.2**	**+2.3**
KUR		

PETK	**Petropavlovsk-** comp=E,0.2nm,0.3s,baz=191,slow=14,SNR=2.6 comp=E,2.2nm,0.8s	**7.60**	**22**	Pn		**Pn**	**10 23 47.6**	**-1.8**
ERM	**Erimo**	**8.20**	**243**	‖ *e*PN		**Pn**	**10 23 59.8**	**+2.2**
KLR	**Kul'dur**	**14.62**	**290**	‖ *e*P		**Pn**	**10 25 25.3**	**-0.1**
KLR	**Kul'dur**	**14.62**	**290**	*e*P		**Pn**	**10 25 25.3**	**-0.1**
USRK	**Ussuriysk Ar.** baz=78,slow=13,SNR=1.9 comp=E,0.8nm,0.7s	**14.93**	**270**	Pn		**Pn**	**10 25 27.2**	**-2.4**
KSRS	**Korea Array** comp=E,0.4nm,0.3s,baz=57,slow=10,SNR=2.3 comp=E,0.4nm,0.3s	**20.54**	**254**	P		**P**	**10 26 35.6**	**-1.0**
YAK	**Yakutsk** comp=E,29nm,19.5s,baz=90,slow=38	**20.77**	**328**	LR		LR	10 34 57.0	
BILL	**Bilibino**	**22.99**	**13**	*e*P		**P**	**10 27 03.1**	**+0.6**
BILL				*e**PP		**sP**	**10 27 14.8**	**-0.1**
BILL				*e*			10 27 27.4	
BILL	comp=Z,1.0nm,1.0s			pmax	pmax			
BILL	**Bilibino**	**22.99**	**13**	*e*P		**P**	**10 27 03.1**	**+0.6**
H11N2	**WAKE ISLAND Hy** baz=340,slow=76,SNR=11	**28.74**	**152**	T		T	10 59 34.4	
H11N1	**WAKE ISLAND Hy** baz=340,slow=76,SNR=5.6	**28.75**	**152**	T		T	10 59 44.3	
H11N3	**WAKE ISLAND Hy** baz=340,slow=76,SNR=8.1	**28.76**	**152**	T		T	10 59 47.8	
H11S1	**WAKE ISLAND Hy** baz=341,slow=75	**29.82**	**153**	T		T	11 01 02.1	
H11S3	**WAKE ISLAND Hy** baz=341,slow=75	**29.83**	**153**	T		T	11 01 02.4	
H11S2	**WAKE ISLAND Hy** baz=341,slow=75	**29.84**	**153**	T		T	11 01 03.0	
SONM	**Songino Array** comp=Z,30nm,21.7s,baz=257,slow=38	**31.45**	**290**	LR		LR	10 41 52.3	
ILAR	**Eielson Array** comp=Z,0.3nm,0.9s,baz=261,slow=8.3,SNR=2.9 comp=Z,0.3nm,0.8s	**37.07**	**38**	P		**P**	**10 29 08.4**	**+0.8**
ZALV	**Zalesovo Beam** comp=Z,34nm,19.8s,baz=86,slow=38	**42.88**	**306**	LR		LR	10 49 13.0	
MKAR	**Makanchi Array** comp=Z,0.2nm,0.3s,baz=69,slow=7.9,SNR=4.2 comp=Z,0.2nm,0.3s	**47.13**	**298**	P		**P**	**10 30 27.4**	**-2.5**
MKAR	**Makanchi Array**	**47.13**	**298**	*e*P		**P**	**10 30 29.7**	**-0.2**
MKAR	**Makanchi Array**	**47.13**	**298**	*e*P		**P**	**10 30 29.7**	**-0.2**
ARCES	**ARCESS Array B** comp=Z,3.5nm,1.1s,baz=34,slow=6.8,SNR=1.7 comp=Z,3.5nm,1.1s	**58.38**	**341**	P		**P**	**10 31 51.0**	**-1.6**
ARCES	**ARCESS Array B**	**58.38**	**341**	P		**P**	**10 31 51.0**	**-1.6**
NVAR	**Mina Array Bea** comp=Z,0.2nm,0.7s,baz=302,slow=6.9,SNR=1.4 comp=Z,0.2nm,0.7s	**62.79**	**62**	P		**P**	**10 32 22.5**	**-0.8**
FINES	**FINESS Array B** comp=Z,0.9nm,0.4s,baz=43,slow=7.5,SNR=2.6 comp=Z,0.9nm,0.4s	**64.53**	**335**	P		**P**	**10 32 33.4**	**-0.8**
WRA	**Warramunga Arr** comp=Z,0.3nm,1.0s,baz=14,slow=6.5,SNR=1.2 comp=Z,0.3nm,1.0s	**67.93**	**199**	P		**P**	**10 32 57.6**	**+1.2**
NOA	**NORSAR Array B** comp=Z,0.3nm,0.4s,baz=26,slow=6.5,SNR=3.0 comp=Z,0.3nm,0.4s	**68.75**	**341**	P		**P**	**10 33 01.4**	**+0.2**
HFS	**Hagfors** comp=Z,0.5nm,0.4s,baz=59,slow=9.2,SNR=1.6 comp=Z,0.5nm,0.4s	**68.98**	**340**	P		**P**	**10 33 02.1**	**-0.4**
KBZ	**Khabaz** comp=Z,1.7nm,0.7s,baz=83,slow=6.9,SNR=3.8 comp=Z,1.7nm,0.7s	**71.20**	**314**	*e*P		**P**	**10 33 16.2**	**-0.2**
KBZ	**Khabaz** comp=Z,2.0nm,0.7s	**71.20**	**314**	*e*P		**P**	**10 33 18.5**	**+2.1**
KBZ				pmax	pmax			
AKASG	**Malin Array Be** comp=Z,1.2nm,0.5s,baz=32,slow=6.0,SNR=5.2 comp=Z,1.2nm,0.5s	**71.98**	**326**	P		**P**	**10 33 20.7**	**-0.3**
AKASG	**Malin Array Be**	**71.98**	**326**	*e*P		**P**	**10 33 21.2**	**+0.2**
AKASG	comp=Z,1.0nm,0.4s			pmax	pmax			
TXAR	**Lajitas Array** comp=Z,0.2nm,0.5s,baz=307,slow=5.0,SNR=4.9 comp=Z,0.2nm,0.5s	**77.86**	**60**	P		**P**	**10 33 56.2**	**+0.8**
PLCA	**Paso Flores** comp=Z,0.9nm,0.9s,baz=269,slow=8.6,SNR=3.0	**148.24**	**96**	PKPbc		**PKPbc**	**10 41 44.1**	**+0.9**

IDC 22 10:34:25.6±1.6, 3.60N×126.92E, h0km, mb3.6/4, mbtmp3.7/4, Error ellipse: s-maj=140.5km s-min=24.8km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr** 0.5nm,0.5s,baz=342,slow=11,SNR=18 0.5nm,0.5s	**24.51**	**163**	P		P	10 39 47.0	+0.1
SONM	**Songino Array** 0.4nm,0.4s,baz=152,slow=6.5,SNR=1.6 0.4nm,0.4s	**47.48**	**341**	P		P	10 43 01.4	-1.1
MKAR	**Makanchi Array** 0.4nm,0.4s,baz=126,slow=7.5,SNR=8.2 0.4nm,0.4s	**57.77**	**325**	P		P	10 44 19.0	+0.4
KURBB	**Kurchatov Arra** 0.9nm,0.8s,baz=126,slow=6.4,SNR=5.9 0.9nm,0.8s	**61.95**	**327**	P		P	10 44 47.3	+0.1

*DDA **22** 10:47:02.9±0.0, 38.44N×44.91E, h2km±3km, MW4.4*
*NSSP **22** 10:47:03.0, 38.43N×44.90E, h10km, Ms4.5*
*IDC **22** 10:47:04.1±0.7, 38.45N×44.93E, h0km, mb4.0/18, mbtmp4.0/31, ML3.7/12, MS3.6/31, Error ellipse: s-maj=10.8km s-min=9.9km az=113.0*
*MOS **22** 10:47:04.5±2.2, 38.23N×44.78E, h17km, mb4.5/14, Error ellipse: s-maj=6.2km s-min=3.6km az=94.7*
*TEH **22** 10:47:04.6, 38.48N×44.82E, h6km, ML4.3*
*ISK **22** 10:47:04.8, 38.51N×44.74E, h5km, ML4.3/20*
*AZER **22** 10:47:05.7±0.1, 38.65N×44.95E, h2km, Error ellipse: s-maj=1.3km s-min=0.7km az=280.0*
*NEIC **22** 10:47:06.8±2.5, 38.39N±0.05×44.87E±0.06, h27km±6km, Error ellipse: s-maj=8.3km s-min=5.9km az=140.0*

ISC 22 10:47:04.7±0.8, 38.36N±0.02×44.84E±0.01, h7km±5km, n339, σ2.25/370, mb4.1/36, MS3.6/23, 17C-21D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
ISHB	**Shabestar**	**0.61**	**97**	*e*Pg		**Pg**	**10 47 16.7**	**+0.1**
ISHB	comp=Z,1μm,0.3s			*e*			10 47 30.0	
OZAP	**Van, Ozalp-Mer**	**0.73**	**295**	P		**Pg**	**10 47 17.7**	**-1.2**
OZAP				S		**Sb**	**10 47 29.5**	**-0.8**
OZAP	comp=Z,3μm,0.8s			*i* AML		AML	10 47 42.0	
OZAP	comp=Z,6μm,1.3s			*i* AML		AML	10 47 44.0	
IMRD	**Marand**	**0.76**	**62**	*e*Pg		**Pb**	**10 47 18.4**	**-2.0**
IMRD				*e*Sg		**Sb**	**10 47 29.5**	**-1.6**
IMRD	comp=Z,3μm,0.2s			*e*			10 47 32.6	
NAX	**Nakhchivan**	**0.96**	**32**	PG		**Pb**	**10 47 21.1**	**-2.6**
NAX	**Nakhchivan**	**0.96**	**32**	*e*Pg		**Pb**	**10 47 21.1**	**-2.6**
NAX	**Nakhchivan** SNR=617	**0.96**	**32**	P		**Pb**	**10 47 21.1**	**-2.6**
NAX				S		**Sb**	**10 47 33.6**	**-3.0**
MAKU	**Maku**	**1.00**	**353**	*e*Pg		Pb	10 47 20.7	-3.8
MAKU				*e*Sg		**Sb**	**10 47 34.4**	**-3.6**
ITBZ	**Tabriz**	**1.03**	**97**	*e*Pg		**Pb**	**10 47 23.7**	**-1.4**
ITBZ				*e*Sg		**Sn**	**10 47 39.6**	**-1.0**
ITBZ	comp=Z,55μm,0.2s			*e*			10 47 40.8	
ORD	**Ordubad**	**1.06**	**57**	*e*Pg		**Pn**	**10 47 23.9**	**-2.2**
ORD	**Ordubad** SNR=150	**1.06**	**57**	P		**Pn**	**10 47 24.0**	**-2.2**
ORD				S		**Sb**	**10 47 38.4**	**-1.3**
CLDR	**Caldiran**	**1.07**	**318**	PG		**Pb**	**10 47 22.3**	**-3.4**
CLDR				SG		**Sb**	**10 47 36.7**	**-3.2**
CLDR	**Caldiran**	**1.07**	**318**	*e*Pg		**Pb**	**10 47 22.3**	**-3.4**
CLDR	**Caldiran**	**1.07**	**318**	P		**Pb**	**10 47 22.3**	**-3.4**
CLDR				S		**Sb**	**10 47 37.3**	**-2.6**
CLDR	comp=Z,9μm,0.7s			*i* AML		AML	10 47 46.0	
CLDR	comp=Z,7μm,0.8s			*i* AML		AML	10 47 50.0	
IAZR	**Azarshahr**	**1.13**	**127**	*e*Pg		**Pg**	**10 47 27.8**	**+1.4**
IAZR	comp=Z,52μm,0.7s			*e*			10 47 58.9	
VANB	**Van**	**1.17**	**282**	PG		**Pn**	**10 47 25.2**	**-2.4**
VANB				SG		**Sn**	**10 47 41.4**	**-2.4**
VANB	**Van**	**1.17**	**282**	*e*Pg		**Pb**	**10 47 26.4**	**-0.9**
SBZ	**Shahbuz**	**1.18**	**28**	*e*Pg		**Pn**	**10 47 24.9**	**-2.8**
SBZ	**Shahbuz** SNR=322	**1.18**	**28**	P		**Pn**	**10 47 24.9**	**-2.8**
SBZ				S		**Sn**	**10 47 39.6**	**-4.4**
HAKT	**HAKKARI**	**1.20**	**229**	*e*Pg		**Pg**	**10 47 28.3**	**+0.5**
HAKT	**HAKKARI**	**1.20**	**229**	P		**Pg**	**10 47 28.3**	**+0.5**
HAKT				S		**Sn**	**10 47 46.0**	**+1.2**
HAKT	comp=Z,3μm,0.8s			*i* AML		AML	10 47 54.0	
HAKT	comp=Z,3μm,0.7s			*i* AML		AML	10 48 03.0	
TAB1	**Tabriz**	**1.21**	**104**	*e*Pg		**Pg**	**10 47 28.9**	**+0.9**
ERCV	**ERCIS-VAN**	**1.35**	**300**	PN		**Pn**	**10 47 29.1**	**-1.1**
ERCV				SN		**Sn**	**10 47 46.8**	**-1.6**
ERCV	**ERCIS-VAN**	**1.35**	**300**	*e*Pg		**Pn**	**10 47 29.3**	**-0.9**
HYR	**Heyderabad**	**1.36**	**0**	*e*Pg		**Pn**	**10 47 27.2**	**-3.0**
HYR	**Heyderabad** SNR=190	**1.36**	**0**	P		**Pn**	**10 47 27.2**	**-3.0**
HYR				S		**Sn**	**10 47 45.1**	**-3.4**
GEVA	**Gevas**	**1.40**	**269**	P		**Pb**	**10 47 29.5**	**-1.9**
GEVA				S		**Sg**	**10 47 52.2**	**+2.3**
GEVA	comp=Z,2μm,1.0s			*i* AML		AML	10 48 01.0	
GEVA	comp=Z,2μm,1.0s			*i* AML		AML	10 48 02.0	
TVRZ	**Varzaqan**	**1.44**	**84**	*e*Pg		**Pb**	**10 47 31.6**	**-0.4**
AKDM	**Akdamar-Van**	**1.47**	**269**	PN		**Pg**	**10 47 31.4**	**-1.5**
AKDM				SN		**Sg**	**10 47 52.4**	**+0.5**
AKDM	**Akdamar-Van**	**1.47**	**269**	*e*Pn		**Pb**	**10 47 30.6**	**-1.8**
CUKT	**Cukurca**	**1.48**	**222**	PN		**Pg**	**10 47 34.5**	**+1.4**
CUKT	**Cukurca**	**1.48**	**222**	*e*Pn		**Pg**	**10 47 33.7**	**+0.6**
CUKT	**Cukurca**	**1.48**	**222**	P		**Pg**	**10 47 33.8**	**+0.6**
DYDN	**Diyadin**	**1.49**	**323**	P		**Pn**	**10 47 31.2**	**-0.9**
DYDN				S		**Sb**	**10 47 52.8**	**+0.8**
DYDN	comp=Z,2μm,1.4s			*i* AML		AML	10 48 00.0	
DYDN	comp=Z,3μm,0.8s			*i* AML		AML	10 48 01.0	
IGDI	**IGDIR**	**1.62**	**339**	*e*Pn		**Pn**	**10 47 33.3**	**-0.5**
IGDI	**IGDIR**	**1.62**	**339**	P		**Pn**	**10 47 33.4**	**-0.5**
IGDI				S		**Sn**	**10 47 55.3**	**+0.4**
IGDI	comp=Z,2μm,0.8s			*i* AML		AML	10 47 59.0	
IGDI	comp=Z,1μm,1.0s			*i* AML		AML	10 48 04.0	
NRKZ	**NAREK**	**1.65**	**355**	‖ *i*P		**Pn**	**10 47 33.2**	**-1.0**
NRKZ				‖ *i*S		**Sn**	**10 47 56.9**	**+1.3**
TASB	**TASBURUN-IGDIR**	**1.69**	**344**	PN		**Pn**	**10 47 33.6**	**-1.1**
TASB				SN		**Sn**	**10 47 56.2**	**-0.4**
TASB	**TASBURUN-IGDIR**	**1.69**	**344**	*e*Pn		**Pn**	**10 47 33.4**	**-1.3**
ADCV	**BITLIS_Adilcev**	**1.72**	**286**	*e*Pn		**Pb**	**10 47 36.4**	**-0.4**
ADCV	**BITLIS_Adilcev**	**1.72**	**286**	P		**Pb**	**10 47 36.4**	**-0.4**
ADCV				S		**Sg**	**10 48 02.3**	**+2.3**
ADCV	comp=Z,1μm,0.7s			*i* AML		AML	10 48 04.0	
ADCV	comp=Z,1μm,0.8s			*i* AML		AML	10 48 07.0	
IHRS	**Heris**	**1.73**	**91**	*e*Pg		**Pb**	**10 47 36.5**	**-0.5**
IHRS	comp=Z,37μm,0.4s			*e*			10 47 46.0	
IHRS				*e*Sg		**Sg**	**10 48 02.2**	**+1.8**
MAHB	**Mahabad**	**1.73**	**156**	*e*Pn		**Pg**	**10 47 38.5**	**+0.6**
MAHB	comp=Z,22μm,0.8s			*e*			10 48 24.7	
IBST	**Bostanabad**	**1.75**	**112**	*e*Pn		**Pg**	**10 47 37.3**	**-0.9**
IBST	comp=Z,19μm,0.6s			*e*			10 48 08.4	
GNI	**Garni** comp=Z,145nm,0.3s,baz=236,slow=1.9,SNR=200	**1.79**	**357**	Pg		**Pn**	**10 47 35.6**	**-0.6**
GNI	comp=Z,208nm,0.3s,baz=5.1,slow=21,SNR=5.2			Lg		Lg	10 47 59.0	
GNI	**Garni**	**1.79**	**357**	‖ *i*P		**Pn**	**10 47 35.5**	**-0.8**
GNI				‖ *i*S		**Sn**	**10 47 58.8**	**-0.5**
GNI	**Garni**	**1.79**	**357**	PN		**Pn**	**10 47 35.4**	**-0.8**
GNI	**Garni**	**1.79**	**357**	Pn		**Pn**	**10 47 34.5**	**-1.8**
PERV	**Siirt/Pervari-**	**1.86**	**258**	P		**Pg**	**10 47 41.2**	**+0.8**
PERV				S		**Sg**	**10 48 07.8**	**+3.3**
PERV	comp=Z,6μm,1.0s			*i* AML		AML	10 48 18.0	
PERV	comp=Z,4μm,1.1s			*i* AML		AML	10 48 18.0	
METS	**Metsamor**	**1.88**	**342**	‖ *i*P		**Pn**	**10 47 38.2**	**+0.8**
METS				‖ *i*S		**Sb**	**10 48 06.0**	**+2.7**
AGRB	**Hanur-Agry**	**1.89**	**311**	PN		**Pn**	**10 47 37.3**	**-0.3**
AGRB	**Hanur-Agry**	**1.89**	**311**	*e*Pn		**Pb**	**10 47 39.3**	**-0.3**
VNNZ	**Vanand**	**1.91**	**336**	‖ *i*P		**Pb**	**10 47 39.8**	**-0.2**
VNNZ				‖ *i*S		**Sg**	**10 48 08.3**	**+2.0**
KOTA	**Agri, Merkez-K**	**1.92**	**319**	P		**Pn**	**10 47 38.8**	**+0.8**
KOTA				S		**Sb**	**10 48 05.5**	**+1.0**
KOTA	comp=Z,680nm,1.1s			*i* AML		AML	10 48 10.0	
KOTA	comp=Z,634nm,2.0s			*i* AML		AML	10 48 11.0	
MLAZ	**Malazgirt-MUS**	**1.96**	**294**	PN		**Pb**	**10 47 38.9**	**-1.9**
KAPZ	**Kaputan**	**1.96**	**357**	‖ *i*P		**Pn**	**10 47 39.2**	**+0.6**
KAPZ				‖ *i*S		**Sb**	**10 48 07.2**	**+1.5**
AMBZ	**Amberd**	**2.08**	**348**	‖ *i*P		**Pb**	**10 47 42.6**	**-0.3**
AMBZ				‖ *i*S		**Sb**	**10 48 13.0**	**+4.0**
BLIS	**Bitlis-Merkez**	**2.15**	**272**	*e*Pn		**Pg**	**10 47 43.8**	**-2.0**
BLIS	**Bitlis-Merkez**	**2.15**	**272**	P		**Pg**	**10 47 43.8**	**-2.0**
BLIS	comp=Z,1μm,1.6s			*i* AML		AML	10 48 26.0	
BLIS	comp=Z,869nm,1.2s			*i* AML		AML	10 48 28.0	
IHSH	**Hashtrud**	**2.19**	**118**	*e*Pn		**Pb**	**10 47 44.5**	**-0.3**
IHSH	comp=Z,18μm,0.6s			*e*			10 48 21.1	
GURO	**Guroymak-BITLI**	**2.21**	**276**	PN		**Pb**	**10 47 43.2**	**-2.0**
GURO	**Guroymak-BITLI**	**2.21**	**276**			**Pb**	**10 47 42.2**	**-3.0**
GURO				Sn		**Sn**	**10 48 08.6**	**-1.1**
QRD	**Qoradiz** SNR=142	**2.22**	**60**	P		**Pn**	**10 47 43.3**	**+1.3**
QRD				S		**Sb**	**10 48 13.5**	**+0.6**
ISRB	**Sarab**	**2.29**	**103**	*e*Pn		**Pb**	**10 47 45.5**	**-1.0**
ISRB	comp=Z,21μm,0.6s			*e*			10 47 53.7	
DIGO	**Kars**	**2.35**	**331**	P		**Pb**	**10 47 46.8**	**-0.7**
DIGO				S		**Sg**	**10 48 21.3**	**+1.2**
DIGO	comp=Z,2μm,0.7s			*i* AML		AML	10 48 31.0	
DIGO	comp=Z,2μm,1.0s			*i* AML		AML	10 48 35.0	
EATA	**Eleskirt**	**2.37**	**310**	P		**Pb**	**10 47 47.1**	**-0.8**
EATA				S		**Sg**	**10 48 22.8**	**+1.9**
EATA	comp=Z,628nm,0.8s			*i* AML		AML	10 48 34.0	
EATA	comp=Z,884nm,1.9s			*i* AML		AML	10 48 36.0	
GRMI	**Germi**	**2.43**	**78**	*e*Pn		**Pn**	**10 47 46.7**	**+1.7**
GRMI	comp=Z,99nm,1.3s			*e*			10 48 34.2	
GDB	**GEDABAY** SNR=124	**2.46**	**16**	P		**Pn**	**10 47 46.4**	**+1.0**
GDB				S		**Sn**	**10 48 14.8**	**-1.0**
AGDM	**Agdam** SNR=152	**2.48**	**44**	P		**Pn**	**10 47 47.4**	**+1.9**
AGDM				S		**Sb**	**10 48 21.0**	**+0.7**
EAK	**Akyaka**	**2.51**	**338**	P		**Pb**	**10 47 49.0**	**-1.3**
EAK	comp=Z,1μm,0.8s			*i* AML		AML	10 48 33.0	
EAK	comp=Z,1μm,1.4s			*i* AML		AML	10 48 45.0	
BLQ	**Beylaqan** SNR=143	**2.51**	**56**	P		**Pn**	**10 47 48.2**	**+2.2**
BLQ				S		**Sb**	**10 48 21.8**	**+0.4**
GANJ	**Ganja**	**2.55**	**26**	PN		**Pn**	**10 47 47.9**	**+1.3**
GANJ	**Ganja** SNR=117	**2.55**	**26**	P		**Pn**	**10 47 47.9**	**+1.3**
GANJ				S		**Sn**	**10 48 20.9**	**+3.0**
BRDA	**Brd** SNR=44	**2.63**	**43**	P		**Pb**	**10 47 51.2**	**-0.9**
BRDA				S		**Sb**	**10 48 24.9**	**+0.4**
MUSM	**Mu-Merkez**	**2.64**	**279**	P		**Pb**	**10 47 52.2**	**-0.2**
MUSM				S		**Sg**	**10 48 28.5**	**-1.0**
MUSM	comp=Z,203nm,1.7s			*i* AML		AML	10 48 44.0	
MUSM	comp=Z,255nm,1.2s			*i* AML		AML	10 48 56.0	
KARS	**Kars**	**2.65**	**329**	PN		**Pn**	**10 47 47.9**	**0.0**
KARS	**Kars**	**2.65**	**329**			**Pn**	**10 47 46.1**	**-1.9**
KARS	**Kars**	**2.65**	**329**	PN		**Pb**	**10 47 51.2**	**-1.3**
YRD	**Yardimli** SNR=163	**2.72**	**77**	P		**Pb**	**10 47 51.4**	**-2.4**
YRD				S		**Sb**	**10 48 28.9**	**+1.5**
QZX	**Qazax, Azerbai**	**2.73**	**8**	P		**Pn**	**10 47 51.0**	**+2.0**
QZX	SNR=103			S		**Sn**	**10 48 26.3**	**+4.2**
LRK	**Lerik** SNR=180	**2.76**	**83**	P		**Pb**	**10 47 52.7**	**-1.8**
LRK				S		**Sb**	**10 48 32.1**	**+3.6**
VRTB	**Varto-Mus**	**2.77**	**288**	PN		**Pn**	**10 47 50.3**	**+0.7**
KOPR	**Koprukoy-ERZUR**	**2.84**	**306**	PN		**Pn**	**10 47 51.0**	**+0.4**
SVAN	**Silvan-Diyarba**	**2.88**	**267**	PN		**Pb**	**10 47 52.6**	**-3.8**
SVAN	**Silvan-Diyarba**	**2.88**	**267**	P		**Pb**	**10 47 54.9**	**-1.5**
MIDY	**Mardin/Midyat-**	**2.89**	**252**	P		**Pb**	**10 47 55.4**	**-1.2**
GLBA	**Cilabad** SNR=33	**2.91**	**71**	P		**Pb**	**10 47 56.9**	**0.0**
GLBA				S		**Sb**	**10 48 35.6**	**+2.9**
ZRD	**Zardab** SNR=47	**2.92**	**48**	P		**Pb**	**10 47 57.0**	**-0.1**
ZRD				S		**Sb**	**10 48 33.0**	**0.0**
MNGR	**Mingechevir, A**	**2.97**	**35**	PN		**Pn**	**10 47 55.9**	**+3.7**
MNGR	**Mingechevir, A** SNR=20	**2.97**	**35**	P		**Pn**	**10 47 56.0**	**+3.7**
MNGR				S		**Sb**	**10 48 33.8**	**-0.5**
DMNI	**Dmanisi**	**3.01**	**351**	P		**Pb**	**10 47 57.4**	**-1.3**
DMNI	**Dmanisi**	**3.01**	**351**	PN		**Pb**	**10 47 57.4**	**-1.3**
KZRT	**Kazreti**	**3.04**	**354**	PN		**Pb**	**10 47 58.9**	**-0.3**
BGD	**Bogdanovka**	**3.06**	**342**	P		**Pb**	**10 47 58.2**	**-1.4**
BGD				S		**Sn**	**10 48 34.7**	**+4.1**
BGD	**Bogdanovka**	**3.06**	**342**	PN		**Pb**	**10 47 58.1**	**-1.4**
BGD				S		**Sn**	**10 48 34.7**	**+4.1**
ASTR	**Astara** SNR=180	**3.10**	**85**	P		**Pb**	**10 47 57.0**	**-3.2**
ASTR				S		**Sb**	**10 48 40.6**	**+2.2**
LKRN	**Lenkeran, Azer**	**3.11**	**82**	PN		**Pb**	**10 47 57.1**	**-3.2**
LKRN	**Lenkeran, Azer** SNR=77	**3.11**	**82**	P		**Pb**	**10 47 57.1**	**-3.2**
LKRN				S		**Sb**	**10 48 40.3**	**+1.9**
DGRG	**David-gareji**	**3.11**	**7**	P		**Pb**	**10 48 00.1**	**-0.4**
DGRG				S		**Sb**	**10 48 40.5**	**+1.8**
DGRG	**David-gareji**	**3.11**	**7**	PN		**Pb**	**10 48 00.1**	**-0.4**
DGRG				S		**Sb**	**10 48 40.5**	**+1.8**
SAAT	**Saatly** SNR=40	**3.16**	**61**	P		**Pn**	**10 47 58.3**	**+3.4**
SAAT				S		**Sb**	**10 48 38.4**	**-1.5**
AKH	**Akhalkalaki**	**3.22**	**342**	‖ P		**Pb**	**10 48 04.1**	**+1.8**
AKH	**Akhalkalaki**	**3.22**	**342**	P		**Pb**	**10 48 01.7**	**-0.7**
AKH				S		**Sb**	**10 48 45.9**	**+4.0**
AKH	**Akhalkalaki**	**3.22**	**342**	PN		**Pn**	**10 47 56.1**	**+0.2**
AKH	**Akhalkalaki**	**3.22**	**342**	PN		**Pb**	**10 48 01.6**	**-0.7**
AKH				S		**Sb**	**10 48 45.8**	**+4.0**
TRLG	**Trialeti**	**3.23**	**350**	P		**Pb**	**10 48 01.5**	**-0.9**
TRLG	**Trialeti**	**3.23**	**350**	PN		**Pb**	**10 48 01.6**	**-0.9**
DDFL	**Dedoflistskaro**	**3.23**	**17**	P		**Pb**	**10 48 01.6**	**-0.9**
DDFL	**Dedoflistskaro**	**3.23**	**17**	PN		**Pb**	**10 48 01.6**	**-0.9**
KDMR	**Kurdemir** SNR=31	**3.28**	**51**	P		**Pb**	**10 48 02.6**	**-0.7**
KDMR				S		**Sb**	**10 48 44.5**	**+1.1**
BNGB	**Bingl**	**3.32**	**282**	PN		**Pn**	**10 47 58.4**	**+1.2**
BTNK	**Botanikuri**	**3.32**	**359**	P		**Pn**	**10 47 58.8**	**+1.6**
BTNK				S		**Sn**	**10 48 40.9**	**+4.0**
BTNK	**Botanikuri**	**3.32**	**359**	PN		**Pn**	**10 47 58.7**	**+1.6**
BTNK				S		**Sn**	**10 48 40.8**	**+4.0**
BRNG	**Burnasheti**	**3.35**	**347**	P		**Pb**	**10 48 04.0**	**-0.6**
SEKA	**Sheki**	**3.38**	**32**	PN		**Pn**	**10 47 58.9**	**+1.0**
SEKA	**Sheki** SNR=9.4	**3.38**	**32**	P		**Pn**	**10 47 58.5**	**+0.5**
SEKA				S		**Sb**	**10 48 47.6**	**+1.5**
MARD	**Mardin**	**3.38**	**253**	P		**Pb**	**10 48 01.8**	**-3.3**
BINT	**Bingol**	**3.45**	**280**	PN		**Pn**	**10 48 00.1**	**+1.3**
CSN1	**Caspian**	**3.45**	**102**	*e*Pn		Pb	10 48 01.8	-4.4
QBL	**Gabala** SNR=39	**3.47**	**41**	P		**Pb**	**10 48 05.0**	**-1.5**
QBL				S		**Sb**	**10 48 47.8**	**-1.0**
HANI	**Diyarbakir_Han**	**3.49**	**272**	P		**Pb**	**10 48 03.6**	**-3.3**
HANI				S		**Sg**	**10 49 00.9**	**+4.0**
HANI	comp=Z,293nm,2.1s			*i* AML		AML	10 49 07.0	
YEDI	**Yedisu-Bingol**	**3.52**	**289**	PN		**Pn**	**10 48 01.2**	**+1.2**
DAGI	**Agillar**	**3.53**	**321**	P		**Pb**	**10 48 08.5**	**+0.9**
IML	**Ismayilli** SNR=11	**3.54**	**46**	P		**Pb**	**10 48 06.0**	**-1.7**
IML				S		**Sb**	**10 48 50.4**	**-0.6**
ZKTA	**Zakatala**	**3.55**	**22**	PN		**Pn**	**10 48 03.3**	**+3.1**
ZKTA	**Zakatala** SNR=72	**3.55**	**22**	P		**Pn**	**10 48 03.9**	**+3.7**
ZKTA				S		**Sn**	**10 48 40.9**	**-1.6**
MAZI	**Mazidag**	**3.59**	**257**	PN		Pb	10 48 03.2	-5.4
DBAD	**Bademkaya**	**3.60**	**319**	P		**Pb**	**10 48 10.0**	**+1.3**
ALIB	**Äli-Bayra** SNR=4.5	**3.61**	**62**	P		**Pb**	**10 48 06.0**	**-2.9**
ALIB				S		**Sn**	**10 48 49.0**	**+5.1**
LGD	**Lagodekhi**	**3.63**	**17**	P		**Pn**	**10 48 03.3**	**+1.9**
LGD	**Lagodekhi**	**3.63**	**17**	PN		**Pn**	**10 48 03.3**	**+1.9**
DYBB	**Diyarbakir**	**3.73**	**265**	PN		Pb	10 48 04.8	-6.2
ABS	**Abastumani**	**3.73**	**336**	P		**Pb**	**10 48 11.2**	**+0.1**
ABS				S		**Sg**	**10 49 10.2**	**+5.5**
ABS	**Abastumani**	**3.73**	**336**	PN		**Pb**	**10 48 11.2**	**+0.1**
ABS				S		**Sg**	**10 49 10.1**	**+5.5**
PQL	**Pirkuli** SNR=33	**3.78**	**49**	P		**Pb**	**10 48 08.6**	**-3.2**
PQL				S		**Sn**	**10 48 54.6**	**+6.3**
XNQ	**Khinaliq** SNR=22	**3.79**	**41**	P		**Pn**	**10 48 04.5**	**+

KBZ				Lg	Lg	10 49 54.5		
	comp=Z,0.2nm,0.3s,baz=120,slow=15,SNR=1.0							
KBZ				LR	LR	10 50 51.3		
	comp=Z,898nm,20.7s,baz=132,slow=41							
KVAR	**Kislovodsk Arr**	**5.82**	**345**	Pn	**Pn**	**10 48 33.8**	**+2.2**	
	baz=273,slow=21							
KVAR				Lg	Lg	10 50 12.6		
	baz=270,slow=19							
	comp=Z,2.6nm,0.3s							
KIV	**Kislovodsk**	**5.82**	**344**	Pn	Pn	10 48 38.1	+6.5	
KIV	**Kislovodsk**	**5.82**	**344**	*e*P	**Pn**	**10 48 32.1**	**+0.5**	
KIV				pmax	pmax			
	comp=Z,8.0nm,1.0s							
KIV				MLR	MLR			
	comp=Z,104nm,7.0s							
IPRN	**Peran**	**6.34**	**107**	*e*Pn	**Pn**	**10 48 41.6**	**+2.9**	
IDMV	**Damavand**	**6.39**	**114**	*e*Pn	Pn	10 48 43.0	+3.5	
IVRN	**Varamin**	**6.47**	**119**	*e*Pn	Pn	10 48 43.6	+3.1	
SOC	**Sochi**	**6.50**	**325**	*e*P	**Pn**	**10 48 39.0**	**-1.8**	
SOC				*e*SS	**Sn**	**10 50 03.2**	**+8.1**	
SOC				MLR	MLR			
	comp=Z,810nm,12.0s							
BNN	**Bunyan**	**7.06**	**277**	Pn	Pn	10 48 53.5	+4.9	
ISFB	**Sefidab**	**7.18**	**122**	*e*Pn	Pn	10 48 53.3	+3.0	
ISHM	**Shahmirzad**	**7.22**	**108**	*e*Pn	Pn	10 48 55.0	+4.1	
IGLO	**Ghaloghah**	**7.39**	**102**	*e*Pn	**Pn**	**10 48 56.4**	**+3.2**	
ANN	**Anapa**	**8.50**	**322**	*e*P	**Pn**	**10 49 08.3**	**+0.2**	
ANN				*e*S	**Sn**	**10 50 43.2**	**-1.0**	
ANN				pmax	pmax			
	comp=Z,45nm,1.4s							
ANN				MLR	MLR			
	comp=N,469nm,12.0s							
ANN				MLR	MLR			
	comp=E,247nm,11.0s							
ANN				MLR	MLR			
	comp=Z,472nm,12.0s							
BR131	**Keskin Array S**	**8.82**	**282**	Pn	**Pn**	**10 49 12.4**	**-0.4**	
BR131	**Keskin Array S**	**8.82**	**282**	P	**Pn**	**10 49 12.4**	**-0.4**	
BRTR	**Keskin Array B**	**8.82**	**282**	Pn	Pn	10 49 17.9	+5.1	
	comp=Z,0.1nm,0.3s,baz=97,slow=10,SNR=7.8							
BRTR				Lg	Lg	10 51 47.6		
	baz=80,slow=10,SNR=1.0							
BRTR				LR	LR	10 52 58.8		
	comp=Z,491nm,19.7s,baz=111,slow=40							
	comp=Z,2.2nm,0.6s							
ANAR	**Anarak**	**8.87**	**123**	*e*Pn	Pn	10 49 17.1	+3.6	
MRVT	**Maraveh tapeh**	**8.90**	**91**	*e*Pn	**Pn**	**10 49 15.4**	**+1.5**	
ASF	**Jabal al Asfar**	**8.96**	**229**	Pn	**Pn**	**10 49 15.0**	**+0.4**	
	comp=Z,0.4nm,0.3s,baz=196,slow=3.7,SNR=1.6							
ASF				Lg	Lg	10 51 46.3		
	comp=Z,0.1nm,0.3s,baz=344,slow=19,SNR=1.6							
	comp=Z,0.9nm,0.3s							
IRAM	**Ramesheh**	**8.99**	**134**	*e*Pn	Pn	10 49 19.4	+4.2	
KLNJ	**Kolanjah**	**9.20**	**141**	*e*Pn	Pn	10 49 21.9	+3.8	
MMAI	**Mount Meron Ar**	**9.35**	**238**	Pn	Pn	10 49 22.2	+2.3	
	comp=Z,1.3nm,0.3s,baz=254,slow=42,SNR=1.8							
MMAI				Lg	Lg	10 52 08.3		
	comp=Z,2.0nm,0.3s,baz=55,slow=25,SNR=2.6							
	comp=Z,0.6nm,0.3s							
SBZV	**Sabzevar**	**10.35**	**97**	*e*Pn	**Pn**	**10 49 37.1**	**+3.3**	
GEYT	**Alibeck**	**10.47**	**88**	Pn	**Pn**	**10 49 34.6**	**-0.6**	
	comp=Z,0.7nm,0.3s,baz=263,slow=11,SNR=1.8							
GEYT				Sn	Sn	10 51 41.4	+8.6	
	comp=Z,0.5nm,0.3s,baz=358,slow=36,SNR=1.5							
	comp=Z,7.8nm,0.8s							
GEYT	**Alibeck**	**10.47**	**88**	Pn	**Pn**	**10 49 35.2**	**0.0**	
GYA0B	**ALIBECK ARRAY**	**10.47**	**88**	Pn	**Pn**	**10 49 34.4**	**-0.8**	
EIL	**Elat**	**11.93**	**226**	Lg	Lg	10 53 27.8		
	comp=Z,0.3nm,0.3s,baz=188,slow=22,SNR=1.6							
EIL				LR	LR	10 54 46.0		
	comp=Z,359nm,19.6s,baz=46,slow=38							
IMYA	**Miami**	**12.31**	**95**	*e*Pn	**Pn**	**10 50 04.3**	**+3.7**	
VORR	**Voronezh**	**13.89**	**345**	*e*P	**Pn**	**10 50 19.5**	**-2.3**	
VORR				pmax	pmax			
	comp=Z,60nm,0.4s							
BELG	**Belogornoye**	**14.17**	**7**	Pn	**Pn**	**10 50 23.9**	**-1.8**	
	comp=Z,0.8nm,0.3s,baz=54,slow=4.7,SNR=7.4							
BELG				LR	LR	10 57 22.4		
	comp=Z,267nm,18.5s,baz=142,slow=44							
	comp=Z,3.9nm,0.6s							
BELG	**Belogornoye**	**14.17**	**7**	*d*P	**Pn**	**10 50 26.3**	**+0.6**	
HRA	**Herat**	**14.57**	**100**	Pn	**Pn**	**10 50 30.9**	**-0.5**	
RAYN	**Ar Rayn**	**14.80**	**178**		**Pn**	**10 50 32.8**	**-1.8**	
RAYN	**Ar Rayn**	**14.80**	**178**	⇓P	**Pn**	**10 50 33.1**	**-1.4**	
RDO	**Rodhopi**	**15.11**	**287**	Pn	**Pn**	**10 50 37.2**	**-1.3**	
RDO				IAmb	IAmb	10 51 06.5		
	comp=Z,12nm,1.1s							
AKTO	**Aktyubinsk**	**15.28**	**34**	Pn	**Pn**	**10 50 38.8**	**-1.9**	
	comp=Z,0.2nm,0.3s,baz=211,slow=14,SNR=6.2							
AKTO				LR	LR	10 57 57.0		
	comp=Z,61nm,21.3s,baz=211,slow=43							
	comp=Z,1.6nm,0.8s							
VRI	**Vrincioaia**	**15.38**	**305**	P	**P**	**10 50 45.6**	**-1.2**	
ABKAR	**Akbulak array**	**15.38**	**40**		**Pn**	**10 50 40.3**	**-1.8**	
ABKAR	**Akbulak array**	**15.38**	**40**	Pn	**Pn**	**10 50 40.7**	**-1.3**	
PLOR	**Plostina**	**15.42**	**305**	⇑P	**P**	**10 50 49.7**	**+2.4**	
PLOR	**Plostina**	**15.42**	**305**	⇑P	**P**	**10 50 49.7**	**+2.4**	
MLR	**Muntele Rosu**	**15.75**	**303**	⇓P	**P**	**10 50 56.1**	**+5.1**	
MLR	**Muntele Rosu**	**15.75**	**303**	Pn	**P**	**10 50 48.7**	**-2.3**	
	comp=Z,0.2nm,0.3s,baz=21,slow=6.2,SNR=1.6							
	comp=Z,0.7nm,0.3s							
MLR	**Muntele Rosu**	**15.75**	**303**		**Pn**	**10 50 46.4**	**-0.6**	
BIZ	**Bicaz**	**16.21**	**308**	⇑P	**P**	**10 50 58.3**	**+2.3**	
IDI	**Anoyia**	**16.21**	**265**	Pn	**Pn**	**10 50 52.8**	**-0.9**	
	comp=Z,0.4nm,0.3s,baz=323,slow=20,SNR=2.2							
IDI				LR	LR	10 58 01.0		
	comp=Z,177nm,21.7s,baz=81,slow=40							
	comp=Z,11nm,0.8s							
IDI	**Anoyia**	**16.27**	**265**	Pn	**Pn**	**10 50 52.9**	**-0.9**	
IDI				IAmb	IAmb	10 51 22.9		
	comp=Z,44nm,1.3s							
DOPR	**Dopca**	**16.28**	**304**	⇑P	**P**	**10 51 00.9**	**+4.0**	
VOIR		**16.32**	**302**	⇓P	**P**	**10 51 00.5**	**+3.1**	
VOIR		**16.32**	**302**	⇓P	**P**	**10 51 00.5**	**+3.1**	
UOSS	**Minazif**	**16.48**	**141**	Pn	**P**	**10 50 56.9**	**-2.3**	
UOSS				IAmb	IAmb	10 51 17.7		
	comp=Z,19nm,0.9s							
MMB	**Musomiste**	**16.50**	**288**	*e*P	**P**	**10 51 01.7**	**+2.4**	
AKASG	**Malin Array Be**	**16.58**	**323**	Pn	**Pn**	**10 50 57.5**	**0.0**	
	comp=Z,0.5nm,0.3s,baz=129,slow=12,SNR=32							
AKASG				LR	LR	10 58 04.3		
	comp=Z,209nm,20.4s,baz=144,slow=40							
	comp=Z,0.5nm,0.3s							
AKBB	**Malin Array Si**	**16.58**	**323**	*d*e*P*	**P**	**10 50 58.7**	**-1.3**	
AKBB				pmax	pmax			
	comp=Z,27nm,1.5s							
ARR	**Arges**	**16.58**	**301**	⇑P	**P**	**10 51 03.6**	**+3.4**	
VTS	**Vitosha**	**16.97**	**291**	*e*P	**P**	**10 51 06.5**	**+1.9**	
KKB	**Krupnik**	**17.00**	**289**	*e*P	**P**	**10 51 06.4**	**+1.5**	
BURAR	**Bucovina Array**	**17.04**	**309**	⇓P	**P**	**10 51 09.3**	**+3.9**	
BURAR	**Bucovina Array**	**17.04**	**309**		**Pn**	**10 51 02.9**	**-0.6**	
BURAR	**Bucovina Array**	**17.04**	**309**	⇓P	**P**	**10 51 09.3**	**+3.9**	
BUR08	**Bucovina Ar. S**	**17.06**	**309**	P	**P**	**10 51 07.8**	**+2.2**	
OBN	**Obninsk**	**17.67**	**344**	P	**Pn**	**10 51 09.9**	**-1.3**	
	comp=Z,1.4nm,0.3s,baz=150,slow=17,SNR=8.9							
OBN				LR	LR	10 58 25.6		
	comp=Z,70nm,19.0s,baz=224,slow=39							
	comp=Z,4.6nm,0.4s							
OBN	**Obninsk**	**17.67**	**344**	P	**Pn**	**10 51 09.2**	**-1.9**	
OBN	**Obninsk**	**17.67**	**344**	*e*P	**Pn**	**10 51 10.8**	**-0.3**	
OBN				pmax	pmax			
	comp=Z,109nm,2.5s							
OBN				MLR	MLR			
	comp=Z,234nm,19.0s							
MOS	**Moscow**	**18.05**	**347**	*e*P	**Pn**	**10 51 14.8**	**-1.0**	
MDVR	**Moldovita**	**18.43**	**298**	⇑P	**Pn**	**10 51 23.0**	**+2.4**	
CHGR	**Chuyangaron**	**19.02**	**82**	P	**P**	**10 51 26.4**	**-0.9**	
CHGR				IAmb	IAmb	10 51 33.3		
	comp=Z,20nm,1.1s							
CHGR	**Chuyangaron**	**19.02**	**82**	P	**P**	**10 51 26.4**	**-0.9**	
CHGR				pmax	pmax			
	comp=Z,20nm,1.1s							
WSAR	**Wadi Sarin**	**19.13**	**138**	P	**Pn**	**10 51 28.7**	**-0.6**	
	comp=Z,0.1nm,0.3s,baz=250,slow=12,SNR=1.8							
WSAR				LR	LR	10 59 43.3		
	comp=Z,167nm,18.1s,baz=316,slow=40							
	comp=Z,7.8nm,1.1s							
UZH	**Uzhgorod**	**19.25**	**309**	*e*P	**Pn**	**10 51 32.2**	**+1.8**	
DIVS	**Divibare**	**19.52**	**295**	P	**P**	**10 51 29.7**	**-2.9**	
DIVS				IAmb	IAmb	10 51 42.6		
	comp=Z,25nm,1.4s							
KBL	**Kabul**	**19.82**	**94**	P	**Pn**	**10 51 38.8**	**+1.1**	
CRVS	**Cervenica-Dubn**	**19.86**	**310**	*e*P	**Pn**	**10 51 43.5**	**+5.7**	
CRVS	**Cervenica-Dubn**	**19.86**	**310**	*e*P	**Pn**	**10 51 43.5**	**+5.7**	
GAR	**Garm**	**19.88**	**80**		**P**	**10 51 36.4**	**-0.3**	
KK31	**Karatay Array**	**19.99**	**68**	P	**P**	**10 51 38.0**	**+0.3**	
KK31				IAmb	IAmb	10 51 46.5		
	comp=Z,14nm,0.9s							
KK31	**Karatay Array**	**19.99**	**68**	P	**P**	**10 51 38.0**	**+0.3**	
KK31				pmax	pmax			
	comp=Z,14nm,0.9s							
KKAR	**Karatay Array**	**19.99**	**68**	P	**P**	**10 51 37.9**	**+0.2**	
KKAR				IAmb	IAmb	10 51 46.5		
	comp=Z,14nm,0.9s							
KKAR	**Karatay Array**	**19.99**	**68**	P	**P**	**10 51 37.9**	**+0.2**	
KKAR				pmax	pmax			
	comp=Z,14nm,0.9s							
ARU	**Arti**	**20.25**	**22**	P	**P**	**10 51 39.7**	**-0.7**	
	comp=Z,4.5nm,0.4s,baz=210,slow=10,SNR=18							
ARU				LR	LR	11 02 06.3		
	comp=Z,73nm,18.1s,baz=176,slow=45							
	comp=Z,4.5nm,0.4s							
ARU	**Arti**	**20.25**	**22**	P	**P**	**10 51 39.3**	**-1.2**	
ARU				IAmb	IAmb	10 51 43.6		
	comp=Z,29nm,1.3s							
ARU	**Arti**	**20.25**	**22**	*c i*P	**P**	**10 51 41.2**	**+0.8**	
ARU				S	**S**	**10 55 25.8**	**-1.8**	
ARU				pmax	pmax			
	comp=Z,23nm,1.1s							
KIRV	**Kirov**	**20.46**	**7**	P	**P**	**10 51 42.0**	**-0.5**	
	comp=Z,6.6nm,0.5s,baz=198,slow=20,SNR=1.6							
KIRV				LR	LR	11 00 56.3		
	comp=Z,180nm,20.6s,baz=201,slow=41							
	comp=Z,6.6nm,0.5s							
KIRV	**Kirov**	**20.46**	**7**	*d i*P	Pn	10 51 44.1	-0.6	
PSZ	**Piszkesteto**	**20.48**	**306**		**P**	**10 51 41.8**	**-1.3**	
PSZ	**Piszkesteto**	**20.48**	**306**	P	**P**	**10 51 41.8**	**-1.3**	
PSZ				pmax	pmax			
	comp=Z,51nm,1.4s							
PSZ	**Piszkesteto**	**20.48**	**306**	P	Pn	10 51 45.7	+0.5	
MORH	**Mrgy, Hungar**	**20.84**	**301**	P	Pn	10 51 49.4	0.0	
LANS	**Liptovska Anna**	**21.17**	**309**	*e*P	P	10 51 57.3	+6.8	
LANS	**Liptovska Anna**	**21.17**	**309**	*e*P	P	10 51 57.3	+6.8	
SVE	**Sverdlovsk**	**21.23**	**24**	*e*P	**P**	**10 51 55.4**	**+4.4**	
OJC	**Ojcow**	**21.38**	**312**	P	**P**	**10 51 49.8**	**-2.9**	
OJC	**Ojcow**	**21.38**	**312**	P	**P**	**10 51 49.8**	**-2.9**	
OJC				pmax	pmax			
	comp=Z,6.0nm,0.8s							
SUW	**Suwalki**	**21.55**	**324**	P	**P**	**10 51 56.4**	**+2.0**	
SUW				pmax	pmax			
	comp=Z,37nm,1.6s							
MPLH	**Magyarpolny**	**21.80**	**303**	P	**P**	**10 52 00.9**	**+3.7**	
TIP	**Timpagrande**	**21.88**	**281**	P	**P**	**10 51 55.9**	**-2.4**	
TIP				IAmb	IAmb	10 52 02.4		
	comp=Z,28nm,1.5s							
JAVC	**Velka Javorina**	**22.18**	**307**	*e*P	**P**	**10 52 03.5**	**+2.1**	
VSVD	**Vaisvydziai**	**22.49**	**328**	*e*P	P	10 51 54.9	-10	
CUC	**Castrocucco**	**22.52**	**283**	P	**P**	**10 52 03.5**	**-1.6**	
CUC				IAmb	IAmb	10 52 10.8		
	comp=Z,9.7nm,0.9s							
MORC	**Moravsky Berou**	**22.56**	**309**	P	**P**	**10 52 03.3**	**-2.1**	
MORC	**Moravsky Berou**	**22.56**	**309**	P	**P**	**10 52 03.3**	**-2.1**	
MORC				pmax	pmax			
	comp=Z,10.0nm,1.3s							
MORC	**Moravsky Berou**	**22.56**	**309**	*e*P	**P**	**10 52 08.1**	**+2.7**	
KLMR	**Klimovskoe**	**22.77**	**353**	*e*P	**P**	**10 52 07.6**	**+0.2**	
KLMR				pmax	pmax			
	comp=Z,35nm,1.5s							
KLMR	**Klimovskoe**	**22.77**	**353**	*e*P	**P**	**10 52 07.7**	**+0.3**	
KLMR				AMP		10 52 16.6		
	comp=Z,35nm,1.5s							
AAK	**Ala-Archa**	**22.89**	**70**	P	**P**	**10 52 07.2**	**-1.9**	
AAK	**Ala-Archa**	**22.89**	**70**	P	**P**	**10 52 07.2**	**-1.9**	
AAK				pmax	pmax			
	comp=Z,16nm,1.1s							
BRVK	**Borovoye**	**22.89**	**42**	P	**P**	**10 52 13.6**	**+4.8**	
BRVK				IAmb	IAmb	10 52 15.8		
	comp=Z,8.4nm,0.7s							
BRVK	**Borovoye**	**22.89**	**42**	P	**P**	**10 52 13.6**	**+4.8**	
BRVK				pmax	pmax			
	comp=Z,8.0nm,0.7s							
VRAC	**Vranov**	**23.00**	**308**	P	**P**	**10 52 10.6**	**+0.7**	
	comp=Z,1.8nm,0.3s,baz=119,slow=6.3,SNR=2.2							
	comp=Z,1.8nm,0.3s							
VRAC	**Vranov**	**23.00**	**308**	*e*P	**P**	**10 52 12.9**	**+2.9**	
KRUC	**Moravsky**	**23.05**	**307**	*e*P	**P**	**10 52 13.9**	**+3.4**	
VSU	**Vasula**	**23.29**	**336**	⇓*e*P	**P**	**10 52 16.7**	**+3.9**	
VSU				pmax	pmax			
	comp=Z,87nm,1.8s							
PRGR	**Permogore**	**23.31**	**1**	*e*P	**P**	**10 52 12.3**	**-0.6**	
BOOM	**Boomskoye usch**	**23.96**	**70**	P	**P**	**10 52 19.3**	**-0.5**	
BOOM				IAmb	IAmb	10 52 46.5		
	comp=Z,11nm,0.9s							
BOOM	**Boomskoye usch**	**23.96**	**70**	P	**P**	**10 52 19.3**	**-0.5**	
BOOM				pmax	pmax			
	comp=Z,11nm,1.0s							
VAE	**Valguarnera**	**23.98**	**277**	LR	LR	11 01 44.2		
	comp=Z,67nm,20.0s,baz=140,slow=37							
KSH	**Kashi**	**24.18**	**77**	P	**P**	**10 52 24.1**	**+2.2**	
KSH				sP	sP	10 52 30.8	+5.3	
KSH				pmax	pmax			
	comp=Z,4.0nm,0.7s							
KSH				LR	LR			
	comp=Z,230nm,13.0s							
NRCA	**Norcia**	**24.42**	**291**	P	**P**	**10 52 22.7**	**-1.3**	
GEC2	**GERESS Array S**	**24.70**	**305**	P	**P**	**10 52 29.2**	**+2.7**	
GEC2				IAmb	IAmb	10 52 32.4		
	comp=Z,9.4nm,0.9s							
GERES	**GERESS Array B**	**24.70**	**305**	P	**P**	**10 52 27.9**	**+1.4**	
	comp=Z,3.4nm,0.7s,baz=100,slow=11,SNR=12							
	comp=Z,3.4nm,0.7s							
GERES	**GERESS Array B**	**24.70**	**305**	P	**P**	**10 52 28.3**	**+1.8**	
GERES	**GERESS Array B**	**24.70**	**305**	P	**P**	**10 52 28.3**	**+1.8**	
KHC	**Kasperske Hory**	**24.85**	**306**	*e*P	**P**	**10 52 28.6**	**+0.9**	
KHC	**Kasperske Hory**	**24.85**	**306**	*e*P	**P**	**10 52 28.6**	**+0.9**	
MURB	**Monte Urbino**	**24.85**	**292**	P	**P**	**10 52 32.5**	**+4.7**	
CLL	**Colim**	**25.80**	**310**	*e*Px	Px	10 52 38.0		
FINES	**FINESS Array B**	**25.89**	**339**	P	**P**	**10 52 36.5**	**-0.4**	
	comp=Z,1.0nm,0.5s,baz=134,slow=11,SNR=3.9							
FINES				LR	LR	11 03 13.8		
	comp=Z,155nm,20.3s,baz=128,slow=38							
	comp=Z,1.0nm,0.5s							
FINES	**FINESS Array B**	**25.89**	**339**	P	**P**	**10 52 35.0**	**-1.8**	
FINES	**FINESS Array B**	**25.89**	**339**	*i* P	**P**	**10 52 38.2**	**+1.4**	
FINES				pmax	pmax			
	comp=Z,2.0nm,0.5s							
KURBB	**Kurchatov Arra**	**26.73**	**52**	P	**P**	**10 52 44.7**	**0.0**	
	comp=Z,3.2nm,0.9s,baz=263,slow=8.9,SNR=15							
KURBB				LR	LR	11 05 35.3		
	comp=Z,99nm,20.6s,baz=232,slow=42							
	comp=Z,3.2nm,0.9s							
ATD	**Arta Tunnel**	**26.78**	**184**	LR	LR	11 04 26.8		
	comp=Z,145nm,18.9s,baz=343,slow=39							
KURK	**Kurchatov**	**26.81**	**52**	P	**P**	**10 52 44.3**	**-1.0**	
KURK				IAmb	IAmb	10 53 20.3		
	comp=Z,6.1nm,0.9s							
KURK	**Kurchatov**	**26.81**	**52**	*d i*P	**P**	**10 52 49.6**	**+4.2**	
KURK				pmax	pmax			
	comp=Z,5.0nm,0.9s							
DAVOX	**Davos/Dischmat**	**26.91**	**300**	P	**P**	**10 52 46.5**	**-0.1**	
	comp=Z,1.7nm,0.4s,baz=171,slow=23,SNR=2.7							
	comp=Z,1.7nm,0.4s							
KEST	**Kesra**	**28.35**	**276**	P	**P**	**10 52 59.7**	**+0.3**	
	comp=Z,2.6nm,0.7s,baz=322,slow=10,SNR=2.4							
	comp=Z,2.6nm,0.7s							
MAKZ	**Makanchi**	**28.40**	**61**	P	P	10 53 04.2	+4.5	
MAKZ	**Makanchi**	**28.40**	**61**	P	P	10 53 04.2	+4.5	
MAKZ				pmax	pmax			
	comp=Z,3.0nm,0.9s							
MK31	**Makanchi Array**	**28.61**	**61**	P	**P**	**10 53 04.7**	**+3.1**	
MK31	**Makanchi Array**	**28.61**	**61**	P	**P**	**10 53 04.7**	**+3.1**	
MK31				pmax	pmax			
	comp=Z,2.0nm,0.9s							
MKAR	**Makanchi Array**	**28.61**	**61**	P	**P**	**10 53 00.6**	**-0.9**	
	comp=Z,1.3nm,0.8s,baz=261,slow=8.7,SNR=3.1							
MKAR				LR	LR	11 06 44.9		
	comp=Z,125nm,19.5s,baz=264,slow=41							
	comp=Z,1.3nm,0.8s							
BNI	**Bardonecchia**	**29.06**	**296**	P	**P**	**10 53 04.7**	**-1.1**	
BNI				IAmb	IAmb	10 53 12.5		
	comp=Z,5.1nm,0.9s							
BNI	**Bardonecchia**	**29.06**	**296**	P	**P**	**10 53 04.7**	**-1.1**	
BNI				pmax	pmax			
	comp=Z,5.0nm,0.9s							
HFS	**Hagfors**	**29.33**	**328**	P	**P**	**10 53 07.3**	**-0.4**	
	comp=Z,1.1nm,0.5s,baz=128,slow=9.3,SNR=2.7							
HFS				LR	LR	11 05 47.4		
	comp=Z,160nm,20.7s,baz=122,slow=38							
	comp=Z,1.1nm,0.5s							
NOA	**NORSAR Array B**	**30.85**	**328**	P	**P**	**10 53 21.3**	**+0.1**	
	comp=Z,0.5nm,0.7s,baz=123,slow=9.0,SNR=2.2							
NOA				LR	LR	11 06 45.1		
	comp=Z,158nm,20.9s,baz=130,slow=38							
	comp=Z,0.5nm,0.7s							
ZALV	**Zalesovo Beam**	**31.28**	**47**	P	**P**	**10 53 24.3**	**-0.8**	
	comp=Z,0.5nm,0.4s,baz=263,slow=8.9,SNR=2.3							
ZALV				LR	LR	11 07 55.8		
	comp=Z,90nm,20.8s,baz=255,slow=40							
	comp=Z,0.5nm,0.4s							
ARCES	**ARCESS Array B**	**32.92**	**348**	P	**P**	**10 53 37.1**	**-2.1**	
	comp=Z,1.3nm,0.9s,baz=150,slow=9.4,SNR=1.6							
ARCES				LR	LR	11 07 37.1		
	comp=Z,145nm,19.2s,baz=108,slow=38							
	comp=Z,1.3nm,0.9s							
EKA	**Eskdalemuir Ar**	**36.12**	**314**	LR	LR	11 11 20.2		
	comp=Z,60nm,19.1s,baz=162,slow=40							
ESDC	**Sonseca Array**	**37.57**	**288**	P	**P**	**10 54 19.0**	**-0.7**	
	comp=Z,1.3nm,0.8s,baz=67,slow=9.3,SNR=9.7							
	comp=Z,1.3nm,0.8s							
KMBO	**Kilima Mbogo**	**39.91**	**192**	LR	LR	11 10 10.4		
	comp=Z,161nm,19.7s,baz=312,slow=35							
JMIC	**Jan Mayen**	**42.46**	**337**	LR	LR	11 12 30.0		
	comp=Z,109nm,20.1s,baz=88,slow=36							
ULN	**Ulaanbaatar**	**45.27**	**57**	⇑*i*P	P	10 55 27.4	+4.4	
ULN				pmax	pmax			
	comp=Z,9.0nm,1.7s							
TOA0	**Torodi Ar. Sit**	**45.70**	**249**	P	**P**	**10 55 25.4**	**-1.1**	
TOA0				IAmb	IAmb	10 55 44.6		
	comp=Z,6.4nm,1.3s							
TORD	**Torodi Ar. Bea**	**45.70**	**249**	P	**P**	**10 55 26.8**	**+0.2**	
	comp=Z,1.6nm,0.9s,baz=42,slow=8.3,SNR=7.9							
TORD				LR	LR	11 17 58.7		
	comp=Z,86nm,18.2s,baz=214,slow=40							
	comp=Z,1.6nm,0.9s							
TORD	**Torodi Ar. Bea**	**45.70**	**249**	P	**P**	**10 55 26.0**	**-0.5**	
TORD				IAmb	IAmb	10 55 29.4		
	comp=Z,3.9nm,1.4s							
CMAR	**Chiang Mai Arr**	**50.80**	**97**	P	**P**	**10 56 06.0**	**+0.1**	
	comp=Z,1.3nm,0.3s,baz=301,slow=7.6,SNR=8.5							
	comp=Z,1.3nm,0.3s							
DBIC	**Dimbokro**	**54.80**	**248**	P	**P**	**10 56 33.3**	**-2.2**	
	comp=Z,2.6nm,0.6s,baz=2.8,slow=11,SNR=1.5							
DBIC				LR	LR	11 24 27.2		
	comp=Z,51nm,18.5s,baz=100,slow=41							
ZEA	**Zeya**	**56.02**	**45**	*i* P	P	10 56 48.3	+4.5	
SFJD	**Kangerlussuaq**	**57.39**	**332**	LR	LR	11 21 05.4		
	comp=Z,76nm,21.3s,baz=64,slow=36							
NJ2	**Nanjing**	**59.32**	**72**	*e*P	**P**	**10 57 09.3**	**+2.0**	
NJ2				pmax	pmax			
	comp=Z,8.0nm,0.5s							
KLR	**Kul'dur**	**60.36**	**49**	⇓*e*P	**P**	**10 57 17.3**	**+3.0**	
KLR				pmax	pmax			
	comp=Z,8.0nm,2.1s							
KSRS	**Korea Array**	**63.28**	**62**	P	**P**	**10 57 33.9**	**-0.2**	
	comp=Z,0.6nm,0.4s,baz=293,slow=7.2,SNR=1.4							
	comp=Z,0.6nm,0.4s							
SEY	**Seymchan**	**63.82**	**29**	⇓*e*P	**P**	**10 57 41.0**	**+3.8**	
FRB	**Frobisher Bay**	**65.50**	**333**	LR	LR	11 26 36.1		
	comp=Z,89nm,18.6s,baz=183,slow=36							
LBTB	**Lobatse**	**65.57**	**199**	LR	LR	11 29 08.6		
	comp=Z,53nm,19.2s,baz=26,slow=38							
INK	**Inuvik**	**73.65**	**359**	LR	LR	11 37 57.1		
	comp=Z,24nm,18.1s,baz=356,slow=42							
IMAR	**Indian Mountai**	**74.99**	**8**	P	**P**	**10 58 45.7**	**-0.6**	
YKA	**Yellowknife Ar**	**78.14**	**350**	P	**P**	**10 59 04.9**	**+0.8**	
	comp=Z,0.7nm,0.7s,baz=32,slow=5.6,SNR=1.9							
	comp=Z,0.7nm,0.7s							
RCBR	**Riachuelo**	**86.36**	**260**	LR	LR	11 37

TOLI2 **Tolitoli** 6.25 276 Pn **Pn** 11 01 28.5 +0.1
TOLI2 **Tolitoli** 6.25 276 P **Pn** 11 01 29.0 +0.7
DAV **Davao City (W)** 6.68 348 P **Pn** 11 01 33.5 -0.8
365nm,0.5s,baz=58,slow=21,SNR=1.2
DAV S **Sn** 11 02 49.9 +0.9
416nm,0.5s,baz=91,slow=23,SNR=2.4
DAV **Davao City (W)** 6.68 348 **Pn** 11 01 34.8 +0.5
DAV **Davao City (W)** 6.68 348 P **Pn** 11 01 35.6 +1.3
KCP **Kidapawan** 6.75 344 ⇓*iP* **Pn** 11 01 35.3 +0.1
KCP *i*S **Sn** 11 02 53.1 +2.5
MPSI **Mapaga** 7.11 269 P **Pn** 11 01 40.4 +0.4
0.7nm2µm153nm,0.9s
MPSI S **Sn** 11 02 59.8 +0.5
0.7nm2µm153nm,0.9s
CTBH **Cotabato--PC H** 7.22 338⇑*e*P **Pn** 11 01 41.5 -0.1
BBSI **Bau Bau** 7.41 217 P **Pn** 11 01 45.4 +1.2
0.4nm494nm52nm,0.6s
BBSI S **Sn** 11 03 07.4 +0.7
0.4nm494nm52nm,0.6s
BUKP **Musuan** 7.58 345 ⇓*iP* **Pn** 11 01 46.4 -0.3
BIPH **Bislig** 7.66 355⇑*e*P **Pn** 11 01 47.9 +0.3
BIPH *e*S **Sn** 11 03 08.2 -4.7
TTSI **Tana Toraja** 8.00 244 P **Pn** 11 01 53.7 +1.6
4.2nm7µm790nm,0.6s
TTSI S **Sn** 11 03 17.6 -3.4
4.2nm7µm790nm,0.6s
ZCP **Zamboanga City** 8.06 323⇓*e*P **Pn** 11 01 53.6 +0.5
ZCP *e*S **Sn** 11 03 18.7 -4.0
BNSI **Bone** 8.43 235 P **Pn** 11 01 59.0 +0.9
2µm158nm,0.8s
BNSI S **Sn** 11 03 29.0 -2.7
2µm158nm,0.8s
SPSI **Sidrap Palu** 8.48 238 P **Pn** 11 02 01.3 +2.6
1µm6µm650nm,0.6s
SPSI S **Sn** 11 03 31.8 -1.0
1µm6µm650nm,0.6s
BKSI **Bulukumba** 8.98 230 P **Pn** 11 02 06.7 +1.2
2µm173nm,0.7s
KAPI **Kappang** 9.08 233 P **Pn** 11 02 08.6 +1.7
65nm,0.2s,baz=26,slow=6.0,SNR=83
KAPI S **Sn** 11 03 45.7 -1.7
474nm,0.5s,baz=178,slow=22,SNR=56
KAPI **Kappang** 9.08 233 Pn **Pn** 11 02 07.3 +0.4
BAKI **Biak** 9.26 100 P **Pn** 11 02 11.1 +1.7
7µm521nm,1.4s
BSSI **Bau Bau, Buton** 9.26 224 P **Pn** 11 02 10.4 +1.0
1µm92nm,0.9s
MYLDM **Lahad Datu** 9.68 299 Pn **Pn** 11 02 17.2 +2.0
SMKI **Samarinda** 9.84 265 P **Pn** 11 02 18.0 +0.7
10µm131nm,0.8s
MMRI **Maumere** 10.24 208 Pn **Pn** 11 02 23.4 +0.6
MMRI **Maumere** 10.24 208 P **Pn** 11 02 25.9 +3.2
1µm2µm124nm,1.1s
MMRI **Maumere** 10.24 208 P **Pn** 11 02 24.1 +1.4
BKB **Balikpapan** 10.25 260 Pn **Pn** 11 02 24.1 +1.2
SOEI **Soe** 10.54 195 Pn **Pn** 11 02 29.8 +2.8
SOEI **Soe** 10.54 195 P **Pn** 11 02 30.3 +3.3
4µm515nm,0.9s
SOEI **Soe** 10.54 195 P **Pn** 11 02 29.7 +2.7
EDFI **Ende, Flores** 10.60 210 P **Pn** 11 02 29.4 +1.6
1µm85nm,0.7s
SMPI **Sarmi** 11.96 102 P **Pn** 11 02 48.8 +2.7
4µm93nm,2.1s
KKM **Kota Kinabalu** 12.09 297 **Pn** 11 02 49.0 +1.0
BASI **Baing, Sumba** 12.42 211 P **Pn** 11 02 52.7 +0.5
2µm150nm,0.9s
WBSI **Waikabubak, Su** 12.60 217 P **Pn** 11 02 56.3 +1.6
2µm166nm,1.0s
BBKI **Banjar Baru** 12.77 252 P **Pn** 11 02 59.8 +2.8
26nm,1.1s
PLAI **Plampang** 13.05 225 P **Pn** 11 03 02.3 +1.7
1µm103nm,1.1s
PLAI **Plampang** 13.05 225 P **Pn** 11 03 02.6 +2.0
GENI **Genyem** 13.52 103 P **Pn** 11 03 08.1 +1.3
6µm104nm,1.5s
TWSI **Taliwang, Sumb** 13.63 227 P **P** 11 03 12.0 -1.9
564nm64nm,0.9s
MTN **Manton Dam** 13.87 163 P **Pn** 11 03 09.9 -1.5
baz=14,SNR=6.0
MTN **Manton Dam** 13.87 163 Pn **Pn** 11 03 09.8 -1.5
MTN **Manton Dam** 13.87 163 P **Pn** 11 03 11.0 -0.4
KDU **Kakadu** 14.18 158 P **Pn** 11 03 12.9 -2.4
baz=14,SNR=6.7
SRBI **Singaraja** 14.52 234 P **P** 11 03 21.9 -1.9
57nm,1.1s
LUBP **Lubang** 14.76 333⇓*e*P **Pn** 11 03 22.6 -0.2
TGY **Tagaytay City** 14.79 336 P **Pn** 11 03 22.6 -0.7
96nm,0.3s,baz=268,slow=2.7,SNR=5.8
SBUM **Sibu** 14.90 278 **Pn** 11 03 23.2 -1.5
KMMI **Kalianget** 15.01 240 P **P** 11 03 28.8 -0.5
STKI **Sintang** 15.53 268 P **P** 11 03 35.0 -0.1
JAGI **Jajag, Banyuwa** 15.60 235 Pn **Pn** 11 03 33.2 -0.3
JAGI **Jajag, Banyuwa** 15.60 235 P **P** 11 03 38.1 +2.3
876nm86nm,0.9s
KNRA **Kununurra** 16.16 174 P **Pn** 11 03 40.0 -0.5
baz=16,SNR=92
KNRA **Kununurra** 16.16 174 **Pn** 11 03 39.9 -0.7
KNRA **Kununurra** 16.16 174 P **Pn** 11 03 40.5 0.0
KSM **Kuching** 16.72 273 **P** 11 03 49.1 +0.8
PWJI **Pagerwojo** 17.35 241 P **P** 11 03 57.8 +2.6
88nm,0.9s
KPJI **Karang Pucung** 19.63 246 P **Pn** 11 04 23.6 +1.2
114nm,1.1s
MANU **Manus Island** 20.52 97 P **P** 11 04 29.9 +0.1
WB0 **Warramunga Arr** 21.40 161 P **P** 11 04 39.2 0.0
COEN **Coen** 21.51 132 P **P** 11 04 39.8 -0.6
baz=22,SNR=12
COEN **Coen** 21.51 132 P **P** 11 04 40.7 +0.2
COEN **Coen** 21.51 132 P **P** 11 04 42.9 +2.4
WRAB **Tennant Creek** 21.54 161 P **P** 11 04 39.8 -0.9
WRAB **Tennant Creek** 21.54 161*d* *i*P **P** 11 04 41.1 +0.4
WRAB pmax pmax
comp=Z,96nm,0.7s
WRAB **Tennant Creek** 21.54 161 P **P** 11 04 40.7 0.0
WRA **Warramunga Arr** 21.55 161 P **P** 11 04 40.5 -0.3
comp=Z,96nm,0.6s,baz=339,slow=11,SNR=559
WRA S **S** 11 08 30.3 -4.4
comp=Z,30nm,1.0s,baz=331,slow=17,SNR=16
WRA ScP **ScP** 11 12 08.5 -0.7
comp=Z,8.5nm,1.0s,baz=333,slow=3.2,SNR=9.3
WRA LR LR 11 13 26.6
comp=Z,282nm,18.8s,baz=78,slow=37
comp=Z,96nm,0.6s
WRA **Warramunga Arr** 21.55 161 P **P** 11 04 39.4 -1.4
WB2 **Warramunga Arr** 21.55 161 P **P** 11 04 40.6 -0.2
baz=22
WB2 **Warramunga Arr** 21.55 161 P **P** 11 04 40.8 0.0
WR0 **Warramunga Arr** 21.63 160 P **P** 11 04 41.1 -0.5
GUMO **Guam** 21.96 53 P **P** 11 04 45.3 +0.1
comp=Z,112nm,0.9s,baz=208,slow=9.8,SNR=4.4
GUMO LR LR 11 12 29.6
comp=Z,157nm,21.8s,baz=236,slow=34
comp=Z,112nm,0.9s
PMG **Port Moresby** 22.35 117 P **P** 11 04 49.8 +0.4
comp=Z,15nm,0.7s,baz=325,slow=16,SNR=6.5
comp=Z,15nm,0.7s
PMG **Port Moresby** 22.35 117 P **P** 11 04 47.8 -1.6
PMG **Port Moresby** 22.35 117 P **P** 11 04 47.8 -1.6
MBWA **Marble Bar** 22.66 198 P **P** 11 04 52.0 -0.5
MBWA **Marble Bar** 22.66 198 P **P** 11 04 52.1 -0.5
KLI **Kotabumi** 22.75 256 P **P** 11 04 56.0 +2.4
comp=Z,108nm,0.9s
TWG **Pinlang** 22.93 346 P **P** 11 04 52.9 -2.4
PSA00 **Pilbara Seismi** 23.02 197 P **P** 11 04 55.3 -0.8
PSA00 **Pilbara Seismi** 23.02 197 P **P** 11 04 57.2 +1.1
KASI **Kota Agung** 23.25 255 P **P** 11 05 00.7 +2.2
comp=Z,6µmcomp=Z,291nm,1.0s
TPUB **Ta-pu** 23.50 345 P **P** 11 04 59.8 -0.8
TPUB **Ta-pu** 23.50 345 P **P** 11 05 02.7 +2.1
LWLI **Liwa** 23.56 256 P **P** 11 05 02.7 +1.3
comp=Z,114nm,0.7s
SSLB **Suanglung** 23.89 346 P **P** 11 05 04.5 +0.5
SSLB **Suanglung** 23.89 346 P **P** 11 05 05.4 +1.3
QIS **Mount Isa** 24.29 150 P **P** 11 05 08.3 +0.6
baz=24,SNR=41
QIS **Mount Isa** 24.29 150 P **P** 11 05 08.6 +0.9
YHNB **Yeheng** 24.64 348 IAmb IAmb 11 05 17.8
comp=Z,64nm,0.9s
YHNB **Yeheng** 24.64 348 P **P** 11 05 12.1 +1.2
AS31 **Alice Springs** 24.93 165 P **P** 11 05 14.1 +0.5
ASAR **Alice Springs** 24.94 165 P **P** 11 05 13.6 0.0
ASAR **Alice Springs** 24.94 165 P **P** 11 05 13.6 0.0
QIZ **Qiongzhong** 24.95 319 P **P** 11 05 14.1 +0.4
QIZ **Qiongzhong** 24.95 319 P **P** 11 05 15.4 +1.6
QIZ S **S** 11 09 33.8 +2.8
comp=Z,19nm,0.8s pmax pmax
MTSU **Mount Surprise** 25.16 138 P **P** 11 05 16.3 +0.7
baz=25,SNR=8.1
MTSU **Mount Surprise** 25.16 138 P **P** 11 05 17.3 +1.6
WRKA **Warakurna** 25.41 177 P **P** 11 05 18.9 +1.0
baz=26,SNR=311
WRKA **Warakurna** 25.41 177 P **P** 11 05 19.4 +1.5
KRVT **Keravat (AS076** 25.45 101 P **P** 11 05 18.8 +0.4
comp=Z,66nm,0.6s,baz=224,slow=7.3,SNR=7.2
comp=Z,66nm,0.6s
RABL **Rabaul** 25.57 101 P **P** 11 05 18.1 -1.3
RABL IAmb IAmb 11 05 22.5
comp=Z,76nm,0.6s
RABL **Rabaul** 25.57 101 P **P** 11 05 20.6 +1.1
GIRL **Giralia** 26.15 208 P **P** 11 05 24.4 -0.1
JOW **Kunigami** 26.21 3 P **P** 11 05 26.7 +1.6
comp=Z,115nm,0.6s,baz=186,slow=9.4,SNR=26
comp=Z,115nm,0.6s
JOW **Kunigami** 26.21 3 P **P** 11 05 25.9 +0.8
JOW **Kunigami** 26.21 3 P **P** 11 05 26.9 +1.8
IPM **Ipoh** 26.25 279 P **P** 11 05 26.2 +0.6
KULM **Kulim** 26.74 281 P **P** 11 05 30.6 +0.6
CTA **Charters Tower** 27.82 138 P **P** 11 05 39.1 -0.5
comp=Z,14nm,0.9s,baz=317,slow=9.3,SNR=16
CTA ScP **ScP** 11 12 27.4 +0.7
comp=Z,8.9nm,0.9s,baz=265,slow=4.3,SNR=7.5
CTA LR LR 11 19 17.3
comp=Z,115nm,18.0s,baz=316,slow=42
comp=Z,14nm,0.9s
CTA **Charters Tower** 27.82 138 P **P** 11 05 41.4 +1.7
CTAO **Charters Tower** 27.82 138 P **P** 11 05 39.8 +0.1
CTAO **Charters Tower** 27.82 138 P **P** 11 05 39.8 +0.1
CTAO pmax pmax
comp=Z,24nm,1.2s
CTAO **Charters Tower** 27.82 138 P **P** 11 05 41.3 +1.6
GSI **Gunungsitoli** 29.43 272 P **P** 11 05 52.9 -1.1
GSI IAmb IAmb 11 06 05.1
comp=Z,122nm,1.6s
JCJ **Chichijima** 30.21 28 P **P** 11 05 59.2 -1.5
comp=Z,23nm,0.4s,baz=289,slow=21,SNR=9.3
JCJ LR LR 11 15 45.1
comp=Z,88nm,21.6s,baz=236,slow=31
comp=Z,23nm,0.4s
JCJ **Chichijima** 30.21 28 P **P** 11 05 59.1 -1.5
JCJ IAmb IAmb 11 06 05.3
comp=Z,54nm,0.7s
JCJ **Chichijima** 30.21 28 P **P** 11 06 00.9 +0.2
JSU **Suzuyama** 31.02 6 P **P** 11 06 08.1 +0.3
JSU IAmb IAmb 11 06 08.7
comp=Z,27nm,0.6s
INKA **Innaminka** 31.02 156 P **P** 11 06 09.1 +1.2
FORT **Forrest** 31.12 178 P **P** 11 06 09.6 +0.9
baz=31,SNR=11
FORT **Forrest** 31.12 178 P **P** 11 06 08.8 +0.2
FORT IAmb IAmb 11 06 11.6
comp=Z,46nm,0.7s
FORT **Forrest** 31.12 178 P **P** 11 06 10.0 +1.3
MORW **Morawa** 31.21 199 P **P** 11 06 09.6 +0.1
baz=31,SNR=7.2
MORW **Morawa** 31.21 199 P **P** 11 06 09.4 -0.2
MORW IAmb IAmb 11 06 40.4
comp=Z,49nm,1.6s
QLP **Quilpie** 31.63 150 P **P** 11 06 13.4 +0.1
baz=32,SNR=11
QLP **Quilpie** 31.63 150 P **P** 11 06 14.1 +0.9
WHN **Wuhan** 32.21 339 ⇓P **P** 11 06 22.4 +4.2
NJ2 **Nanjing** 32.32 347 ⇓*i*P **P** 11 06 21.5 +2.3
NJ2 pmax pmax
comp=Z,30nm,0.8s
GYA **Guiyang** 32.40 324 ⇓P **P** 11 06 23.3 +3.2
GYA pmax pmax
comp=Z,25nm,0.9s
LCRK **Leigh Creek** 32.57 162 P **P** 11 06 23.2 +1.8
JNU **Nakatsue** 32.66 6 P **P** 11 06 21.6 -0.6
comp=Z,54nm,0.9s,baz=133,slow=4.0,SNR=8.7
comp=Z,54nm,0.9s
JNU **Nakatsue** 32.66 6 P **P** 11 06 22.0 -0.2
JNU **Nakatsue** 32.66 6 P **P** 11 06 22.9 +0.7
comp=Z,79nm,1.0s
CMAR **Chiang Mai Arr** 32.83 305 P **P** 11 06 24.7 +0.8
comp=Z,1.0nm,0.3s,baz=136,slow=7.4,SNR=9.7
CMAR PcP **PcP** 11 09 05.9 -1.1
comp=Z,4.2nm,0.8s,baz=132,slow=1.7,SNR=10
CMAR ScP **ScP** 11 12 43.8 +0.7
comp=Z,1.3nm,0.3s,baz=148,slow=2.4,SNR=9.2
CMAR PKiKP **PKiKP** 11 16 32.2 -1.5
comp=Z,1.2nm,0.3s,baz=229,slow=1.0,SNR=4.1
comp=Z,1.0nm,0.3s
CMAR **Chiang Mai Arr** 32.83 305 P **P** 11 06 23.9 0.0
CMAR PcP **PcP** 11 09 07.3 +0.3
CMAR **Chiang Mai Arr** 32.83 305 *i*P **P** 11 06 25.6 +1.8
RK1H **Rockhampton Ha** 32.94 138 P **P** 11 06 25.4 +0.7
comp=Z,99nm,0.8s
CHTO **Chiang Mai** 33.01 305 P **P** 11 06 26.6 +1.2
CHTO **Chiang Mai** 33.01 305 P **P** 11 06 26.6 +1.2
CHTO pmax pmax
comp=Z,21nm,1.8s
KLBR **Kellerberrin** 33.09 195 P **P** 11 06 26.0 0.0
baz=33,SNR=26
MUN **Mundaring** 33.88 197 P **P** 11 06 32.8 0.0
baz=34,SNR=6.6
KMI **Kunming** 33.90 318 ⇑P **P** 11 06 36.8 +3.5
KMI pmax pmax
comp=Z,15nm,1.1s
KMI pmax pmax
comp=Z,26nm,3.5s
KMI LR LR
comp=Z,240nm,20.7s
KMI LR LR
comp=Z,210nm,23.2s
KMI LR LR
comp=Z,140nm,21.5s
ENH **Enshi** 33.98 332 P **P** 11 06 35.0 +1.3
ENH IAmb IAmb 11 06 37.9
comp=Z,31nm,0.9s
ENH **Enshi** 33.98 332 P **P** 11 06 35.5 +1.8
ENH x x 11 06 58.7
RMQ **Roma** 34.05 144 P **P** 11 06 34.5 +0.1
baz=34,SNR=9.4
RMQ **Roma** 34.05 144 P **P** 11 06 34.8 +0.4
comp=Z,17nm,0.7s
BBOO **Buckleboo** 34.21 166 P **P** 11 06 36.2 +0.6
baz=34,SNR=19
BBOO **Buckleboo** 34.21 166 P **P** 11 06 36.0 +0.3
JHJ **Hachijo jima 2** 34.61 19 P **P** 11 06 37.0 -2.1
comp=Z,24nm,0.4s,baz=242,slow=22,SNR=6.5
comp=Z,24nm,0.4s
EIDS **Eidsvold** 34.69 140 P **P** 11 06 40.0 +0.1
baz=35,SNR=6.2
EIDS **Eidsvold** 34.69 140 P **P** 11 06 39.8 -0.1
EIDS IAmb IAmb 11 06 41.4
comp=Z,25nm,0.8s
EIDS **Eidsvold** 34.69 140 P **P** 11 06 40.9 +1.0
NAWB **Namwon** 34.75 1 IAmb IAmb 11 06 42.1
comp=Z,42nm,0.9s
JHS **Saijyo** 34.80 9 P **P** 11 06 41.1 +0.4
WHYH **Whyalla** 34.81 164 P **P** 11 06 41.6 +0.8
comp=Z,40nm,0.8s
STKA **Stephens Creek** 35.04 158 P **P** 11 06 43.4 +0.6
comp=Z,8.5nm,0.5s,baz=338,slow=8.2,SNR=29
STKA LR LR 11 22 28.0
comp=Z,138nm,18.4s,baz=354,slow=38
comp=Z,8.5nm,0.5s
STKA **Stephens Creek** 35.04 158 P **P** 11 06 43.3 +0.6
baz=35,SNR=26
STKA **Stephens Creek** 35.04 158 P **P** 11 06 43.4 +0.6
STKA **Stephens Creek** 35.04 158*de*P **P** 11 06 43.6 +0.8
STKA **Stephens Creek** 35.04 158 P **P** 11 06 43.4 +0.6
PZH **PanZhiHua** 35.49 319 P **P** 11 06 47.3 +0.4
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,130nm,6.9s
HTT **Hallett** 35.56 163 P **P** 11 06 48.5 +1.1
baz=36,SNR=6.8
TJN **Taejon** 35.70 1 P **P** 11 06 49.3 +0.9
TJN **Taejon** 35.70 1 P **P** 11 06 49.3 +0.9
TJN pmax pmax
comp=Z,178nm,1.1s
TJN **Taejon** 35.70 1 P **P** 11 06 49.9 +1.5
comp=Z,162nm,1.1s
INU **Inuyama** 35.91 14 P **P** 11 06 50.6 +0.4
INU **Inuyama** 35.91 14 P **P** 11 06 50.8 +0.6
INU **Inuyama** 35.91 14 P **P** 11 06 50.2 0.0
INU pP **pP** 11 07 07.3 -3.4
INU sP **sP** 11 07 19.2 -1.8
KSCHJ **Chungju** 36.21 1 IAmb IAmb 11 06 54.4
comp=Z,30nm,0.9s
JGF **Kuroka** 36.23 14 P **P** 11 06 52.8 -0.2
JGF IAmb IAmb 11 06 54.4
comp=Z,18nm,0.7s
CMSA **Cobar Meteorol** 36.45 153 P **P** 11 06 55.9 +0.9
baz=36,SNR=6.0
CMSA **Cobar Meteorol** 36.45 153 P **P** 11 06 56.7 +1.8
LYN **LuoYang** 36.51 340 ⇑P **P** 11 06 56.8 +1.5
LYN pP pwP 11 07 17.8 -0.6
LYN S **S** 11 12 32.1 +1.2
LYN pmax pmax
comp=Z,50nm,0.9s
LYN pmax pmax
comp=Z,60nm,5.4s
TIA **Tai'an** 36.70 347 ⇑P **P** 11 06 57.6 +0.6
TIA pmax pmax
comp=Z,19nm,0.9s
KSAR **Wonju Array Be** 36.77 1 P **P** 11 06 59.0 +1.5
KSAR PcP **PcP** 11 09 18.3 +0.3
KSAR **Wonju Array Be** 36.77 1 P **P** 11 06 59.0 +1.5
KSAR 11 09 18.3
KSRS **Korea Array** 36.79 1 P **P** 11 06 58.3 +0.7
comp=Z,23nm,0.8s,baz=178,slow=9.9,SNR=112
KSRS PcP **PcP** 11 09 18.0 -0.1
comp=Z,4.8nm,0.8s,baz=181,slow=3.6,SNR=9.2
comp=Z,23nm,0.8s
INCN **Inchon** 36.81 360 P **P** 11 06 58.4 +0.6
INCN IAmb IAmb 11 06 59.7
comp=Z,22nm,0.9s
INCN **Inchon** 36.81 360 P **P** 11 06 58.4 +0.6
INCN pmax pmax
comp=Z,22nm,1.0s
KS19 **Wonju Array Si** 36.83 1 P **P** 11 06 58.0 0.0
KS19 IAmb IAmb 11 06 59.4
comp=Z,24nm,0.8s
MJAR **Matsushiro Arr** 37.34 15 P **P** 11 07 00.1 -2.3
comp=Z,15nm,0.6s,baz=176,slow=9.8,SNR=66
MJAR PcP **PcP** 11 09 19.9 0.0
comp=Z,4.7nm,0.8s,baz=154,slow=3.8,SNR=5.2
comp=Z,15nm,0.6s
MJAR **Matsushiro Arr** 37.34 15 P **P** 11 07 01.4 -1.0
MJAR IAmb IAmb 11 07 03.3
comp=Z,23nm,0.8s
MJAR **Matsushiro Arr** 37.34 15 P **P** 11 07 01.4 -1.0
MJAR pmax pmax
comp=Z,23nm,0.8s
MAJO **Matsushiro** 37.34 15 P **P** 11 07 01.2 -1.2
MAJO IAmb IAmb 11 07 03.3
comp=Z,31nm,0.7s
MAJO **Matsushiro** 37.34 15 P **P** 11 07 01.2 -1.2
MAJO pmax pmax
comp=Z,31nm,0.7s
MAJO **Matsushiro** 37.34 15 P **P** 11 07 01.7 -0.7
MAJO **Matsushiro** 37.34 15 P **P** 11 07 01.2 -1.2
MJB9 **Matsu-Tunnel** 37.34 15 P **P** 11 07 01.2 -1.2
MJB9 IAmb IAmb 11 07 03.3
comp=Z,30nm,0.7s
XAN **Xi'an** 37.42 335 P **P** 11 07 04.3 +1.1
XAN S **S** 11 12 45.8 +0.8
XAN pmax pmax
comp=Z,37nm,0.6s
XAN **Xi'an** 37.42 335 P **P** 11 07 04.2 +1.0
XAN sP **sP** 11 07 31.6 -2.2
CD2 **Chengdu** 37.43 326 P **P** 11 07 05.9 +2.6
CD2 pmax pmax
comp=Z,20nm,0.7s
JYT **Yasato** 37.60 18 P **P** 11 07 02.1 -2.4
JYT IAmb IAmb 11 07 04.1
comp=Z,27nm,0.6s
SEHB **SEOHWA** 37.61 2 IAmb IAmb 11 07 07.1
comp=Z,27nm,0.8s
HNS **HongShan** 38.44 344 ⇑P **P** 11 07 12.6 +1.1
HNS pmax pmax
comp=Z,29nm,0.9s
DL2 **Dalian** 38.54 353 P **P** 11 07 13.3 +0.9
DL2 pmax pmax
comp=Z,53nm,0.9s
ARMA **Armidale** 38.66 145 P **P** 11 07 15.0 +1.4
baz=39,SNR=25
ARMA **Armidale** 38.66 145 P **P** 11 07 14.7 +1.0
ARMA IAmb IAmb 11 07 15.8
comp=Z,34nm,0.8s
ARMA **Armidale** 38.66 145 P **P** 11 07 15.4 +1.7
JSD **Sado** 38.77 14 P **P** 11 07 13.5 -0.9
JMM **Marumori** 39.30 17 P **P** 11 07 17.5 -1.2
TIY **Taiyuan** 39.40 342 *e*P **P** 11 07 21.1 +1.4
TIY pmax pmax
comp=Z,41nm,0.5s
ARPS **Mount Arapiles** 39.55 161 P **P** 11 07 22.2 +1.4
baz=40,SNR=14
ARPS **Mount Arapiles** 39.55 161 P **P** 11 07 22.4 +1.5
BJT **Baijiatuao** 40.56 347 P **P** 11 07 29.8 +0.6
BJT IAmb IAmb 11 07 30.8
comp=Z,37nm,0.7s
BJT **Baijiatuao** 40.56 347 P **P** 11 07 29.8 +0.6
BJT pmax pmax
comp=Z,37nm,0.7s
BJT **Baijiatuao** 40.56 347 P **P** 11 07 29.9 +0.7
BJT x x 11 07 53.3
BJT sP **sP** 11 07 58.0 -1.9
BJI **Beijing** 40.58 347 P **P** 11 07 30.0 +0.7
BJI pP **pwP** 11 07 53.3 +0.1
BJI sP **sP** 11 08 01.9 +1.9
BJI PcP **PcP** 11 09 31.0 +1.1
BJI S **S** 11 13 29.9 -2.2
BJI pmax pmax
comp=Z,50nm,0.7s
BJI pmax pmax
comp=Z,91nm,4.0s
BJI LR LR
comp=Z,24nm,18.8s
BJI LR LR
comp=Z,69nm,16.9s
CAN **Canberra** 41.13 152 P **P** 11 07 35.4 +1.4
CAN pP **pP** 11 07 55.6 +0.3
SNY **Shenyang** 41.26 356 ⇓P **P** 11 07 35.5 +0.6
SNY S **S** 11 13 42.9 +0.8
SNY pmax pmax
comp=Z,56nm,0.9s
SNY pmax pmax
comp=Z,120nm,2.8s
SNY LR LR
comp=Z,89nm,11.5s
SNY LR LR
comp=Z,360nm,20.2s
SNY LR LR
comp=Z,160nm,19.9s
LZH **Lanzhou** 41.43 331 *e*P **P** 11 07 38.6 +2.0
LZH pP pwP 11 08 00.3 +0.3
LZH PcP **PcP** 11 09 34.4 +1.4
LZH *e*S **S** 11 13 42.9 -2.3
LZH pmax pmax
comp=Z,43nm,0.9s
LZH LR LR
comp=Z,190nm,16.1s
LZH LR LR
comp=Z,200nm,18.3s
LZH LR LR
comp=Z,160nm,18.5s
TOO **Toolangi** 41.56 158 P **P** 11 07 38.4 +0.9
baz=42,SNR=5.5
TOO **Toolangi** 41.56 158 P **P** 11 07 39.0 +1.5
TOO IAmb IAmb 11 08 13.3
comp=Z,52nm,1.4s
TOO **Toolangi** 41.56 158 P **P** 11 07 39.0 +1.5
TOO pmax pmax
comp=Z,52nm,1.4s
SHL **Shillong** 42.06 309 P **P** 11 07 42.2 +0.3
SHL IAmb IAmb 11 07 43.6
comp=Z,22nm,0.6s
SHL **Shillong** 42.06 309 P **P** 11 07 42.2 +0.3
SHL pmax pmax
comp=Z,22nm,0.6s
MSHR **Mys Shultsa** 42.06 5*c* *i*P **P** 11 07 42.3 +0.9
MSHR pmax pmax
comp=Z,27nm,0.7s
JTM **Tenmabayashi** 42.09 16 P **P** 11 07 42.1 +0.4
HHC **Hu-ho-hao-te** 42.54 343 *e*P **P** 11 07 47.1 +1.6
HHC S **S** 11 14 00.8 -0.5
HHC pmax pmax
comp=Z,67nm,0.8s
HHC pmax pmax
comp=Z,290nm,4.4s

VLA Vladivostok 42.66 5 *c* iP P 11 07 47.0 +0.8
VLA pmax pmax
comp=Z,64nm,1.6s
BTO Baotou 42.80 341 *e*P P 11 07 48.9 +1.3
BTO S S 11 14 08.5 +3.3
BTO LR LR
comp=Z,260nm,8.2s
BTO LR LR
comp=Z,230nm,4.9s
CN2 Changchun 43.14 358 *e*P P 11 07 54.8 +4.7
CN2 *e*S S 11 14 14.8 +5.0
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=Z,100nm,19.0s
CN2 LR LR
comp=Z,100nm,19.0s
CN2 LR LR
comp=Z,100nm,11.0s
USRK Ussuriysk Ar. 43.74 5 P P 11 07 55.2 +0.3
comp=Z,23nm,0.6s,baz=193,slow=7.3,SNR=57
comp=Z,23nm,0.6s
USRK Ussuriysk Ar. 43.74 5 P P 11 07 55.3 +0.4
USA0B Ussuriysk Arra 43.74 5 P P 11 07 55.5 +0.6
USA0B IAmb IAmb 11 07 56.4
comp=Z,33nm,0.8s
USA0B Ussuriysk Arra 43.74 5 P P 11 07 55.5 +0.6
USA0B pmax pmax
comp=Z,33nm,0.8s
ERM Erimo 43.82 17 P P 11 07 55.3 -0.4
ERM IAmb IAmb 11 09 06.6
comp=Z,84nm,1.3s
ERM Erimo 43.82 17 P P 11 07 55.3 -0.4
ERM pmax pmax
comp=Z,84nm,1.3s
MDJ Mudanjiang 43.99 3 P P 11 07 57.6 +0.7
MDJ IAmb IAmb 11 07 59.1
comp=Z,59nm,0.9s
MDJ Mudanjiang 43.99 3 P P 11 07 57.9 +0.9
MDJ pmax pmax
comp=Z,79nm,0.8s
MDJ pmax pmax
comp=Z,100nm,4.0s
MDJ Mudanjiang 43.99 3 P P 11 07 58.1 +1.1
MDJ Mudanjiang 43.99 3 P P 11 07 57.8 +0.8
XLT XiLinHaoTe 44.30 349 *e*P P 11 08 00.1 +0.5
XLT pP pwP 11 08 23.1 -0.5
XLT sP sP 11 08 35.3 +4.8
XLT PcP **PcP** 11 09 34.8 -7.6
XLT PcS **PcS** 11 13 28.3 -7.4
XLT pmax pmax
comp=Z,39nm,0.8s
XLT pmax pmax
comp=Z,130nm,4.6s
XLT LR LR
comp=Z,15nm,13.5s
XLT LR LR
comp=Z,130nm,16.8s
XLT LR LR
comp=Z,110nm,16.9s
NOUC Port Laguerre 44.41 123 P P 11 08 01.1 +0.5
NOUC Port Laguerre 44.41 123 P P 11 08 01.3 +0.7
NOUC pP **pP** 11 08 20.2 -2.1
DZM Mont Dzumac 44.51 123 P P 11 08 01.4 -0.2
comp=Z,21nm,0.9s,baz=330,slow=5.9,SNR=15
comp=Z,21nm,0.9s
LSA Lhasa 44.81 314 P P 11 08 04.7 +0.3
LSA IAmb IAmb 11 08 08.0
comp=Z,18nm,0.7s
LSA Lhasa 44.81 314 P P 11 08 06.4 +2.1
LSA pmax pmax
comp=Z,29nm,0.7s
LSA Lhasa 44.81 314 P P 11 08 04.7 +0.3
LSA pmax pmax
comp=Z,18nm,0.7s
LSA Lhasa 44.81 314 P P 11 08 06.7 +2.3
LSA Lhasa 44.81 314 P P 11 08 06.8 +2.4
YATNC Mamie plateau, 44.88 123 P P 11 08 05.1 +0.6
OUENC Ouen Island, N 44.99 123 P P 11 08 04.9 -0.4
BNX BinXian 45.06 0 ⇓P P 11 08 05.3 -0.1
BNX pP **pwP** 11 08 28.3 -0.5
BNX sP **sP** 11 08 40.4 +3.7
BNX PP **PP** 11 09 49.0 -3.5
BNX S **S** 11 14 39.5 +1.9
BNX sS **sS** 11 15 15.3 +0.7
BNX pmax pmax
comp=Z,13nm,0.7s
BNX pmax pmax
comp=Z,98nm,5.5s
BNX LR LR
comp=Z,140nm,19.4s
BNX LR LR
comp=Z,100nm,14.9s
BNX LR LR
comp=Z,110nm,11.0s
TEY Ternei 45.16 10⇑ *e*P P 11 08 06.6 +0.4
ASAJ Asahikawa 45.60 16 P P 11 08 09.3 -0.4
ASAJ pmax pmax
comp=Z,46nm,1.1s
JKA Kamikawa-asahi 45.60 16 P P 11 08 09.2 -0.5
JKA IAmb IAmb 11 08 11.4
comp=Z,46nm,1.1s
GTA Gaotai 46.01 331 ⇑P P 11 08 14.9 +1.6
GTA pP pwP 11 08 37.3 +0.4
GTA sP sP 11 08 49.5 +5.3
GTA PcP **PcP** 11 09 49.4 +0.9
GTA pmax pmax
comp=Z,25nm,1.0s
GTA pmax pmax
comp=Z,65nm,6.2s
GTA LR LR
comp=Z,130nm,17.1s
GTA LR LR
comp=Z,94nm,19.6s
GTA LR LR
comp=Z,100nm,18.9s
GOMU GeErMu 46.40 323 P P 11 08 18.8 +2.1
GOMU pmax pmax
comp=Z,5.0nm,0.7s
GOMU pmax pmax
comp=Z,66nm,7.0s
YSS Yuzh-Sakhalins 48.28 14 P P 11 08 30.8 +0.3
YSS IAmb IAmb 11 08 31.5
comp=Z,29nm,0.9s
YSS Yuzh-Sakhalins 48.28 14 *e*P P 11 08 30.7 +0.2
YSS pmax pmax
comp=Z,30nm,0.8s
YSS MLR MLR
comp=Z,100nm,13.0s
YSS Yuzh-Sakhalins 48.28 14 P P 11 08 30.8 +0.3
comp=Z,38nm,0.9s
YSS Yuzh-Sakhalins 48.28 14 P P 11 08 30.5 0.0
HIA Hailar 48.98 354 P P 11 08 36.1 +0.2
HIA IAmb IAmb 11 08 37.7
comp=Z,27nm,1.4s
HIA Hailar 48.98 354 *c* iP P 11 08 36.5 +0.5
HIA pmax pmax
comp=Z,27nm,1.6s
ULN Ulaanbaatar 50.26 343 P P 11 08 46.9 +1.1
ULN Ulaanbaatar 50.26 343 *c* iP P 11 08 47.0 +1.1
ULN pmax pmax
comp=Z,52nm,0.8s
ULN Ulaanbaatar 50.26 343 P P 11 08 47.1 +1.3
SONM Songino Array 50.43 342 P P 11 08 47.9 +0.8
comp=Z,25nm,0.7s,baz=156,slow=8.5,SNR=93
SONM PcP **PcP** 11 10 04.1 -0.1
comp=Z,7.7nm,0.7s,baz=158,slow=4.6,SNR=5.7
comp=Z,25nm,0.7s
SONM Songino Array 50.43 342 P P 11 08 48.1 +1.0
SONM IAmb IAmb 11 08 49.1
comp=Z,26nm,0.8s
SONM Songino Array 50.43 342 P P 11 08 48.1 +1.0
SONM pmax pmax
comp=Z,26nm,0.8s
HYBB Hyderabad (bro 50.52 292 *e*P P 11 08 49.3 +1.1
HYBB *e*S S 11 15 58.0 +2.1
HYBB *e*ScS **ScS** 11 18 30.8 -0.2
GRNR Gornyy 50.73 8⇑ *i* P P 11 08 49.7 +0.6
GRNR pmax pmax
comp=N,10.0nm,0.9s
GRNR pmax pmax
comp=Z,30nm,0.8s
GRNR MLR MLR
comp=E,60nm,10.0s
GRNR MLR MLR
comp=N,70nm,15.0s
GRNR MLR MLR
comp=Z,80nm,15.0s
ZEA Zeya 53.06 0 *e*P P 11 09 06.5 +0.1
ZEA pmax pmax
comp=Z,10.0nm,1.1s
MSVF Nonsavu 53.38 113 P P 11 09 09.8 +0.3
comp=Z,47nm,0.8s,baz=274,slow=6.3,SNR=16
comp=Z,47nm,0.8s
MSVF Nonsavu 53.38 113 P P 11 09 11.2 +1.7
MSVF Nonsavu 53.38 113 P P 11 09 11.2 +1.7
MSVF pmax pmax
comp=Z,75nm,1.0s
MSVF Nonsavu 53.38 113 P P 11 09 10.4 +0.9
MSVF Nonsavu 53.38 113 P P 11 09 11.1 +1.7
MSVF sP **sP** 11 09 42.0 +0.2
ZAK Zakamensk 53.65 341 *e*P P 11 09 11.2 +0.3
ZAK pmax pmax
comp=Z,8.0nm,1.3s
DGTI Dogotuki 54.62 110 P P 11 09 19.9 +1.5
IRK Irkutsk 54.98 343 *e*P P 11 09 20.7 +0.3
IRK pmax pmax
comp=Z,28nm,2.3s
MOY Mondy 55.50 341 *e*P P 11 09 25.7 +1.4
MOY pmax pmax
comp=Z,36nm,1.6s
WMQ Urumqi 55.53 326 *e*P P 11 09 26.8 +2.2
WMQ pP pwP 11 09 50.3 +0.4
WMQ pmax pmax
comp=Z,69nm,0.9s
WMQ pmax pmax
comp=Z,200nm,3.9s
KNGR Kungurtug, Tuv 55.85 338⇑ *e*P P 11 09 28.2 +1.3
BOD Bodaibo 58.08 352 *e*P P 11 09 42.2 -0.1
BOD pmax pmax
comp=Z,25nm,0.9s
PEA0B Petropavlovsk- 58.32 21 P P 11 09 44.7 +0.7
PEA0B Petropavlovsk- 58.32 21 P P 11 09 44.7 +0.7
PEA0B pmax pmax
comp=Z,40nm,0.6s
PETK Petropavlovsk- 58.32 21 P P 11 09 43.9 -0.2
comp=Z,28nm,0.5s,baz=187,slow=5.5,SNR=62
comp=Z,28nm,0.5s
PET Petropavlovsk 58.60 22 P P 11 09 46.7 +0.7
PET Petropavlovsk 58.60 22⇑ *e*P P 11 09 46.5 +0.6
LBZ Lake Benmore 58.88 145 P P 11 09 48.1 0.0
RPZ Rata Peaks 58.99 144 P P 11 09 49.6 +0.7
comp=Z,15nm,0.8s,baz=293,slow=5.3,SNR=5.9
RPZ LR LR 11 36 32.4
comp=Z,106nm,18.0s,baz=290,slow=37
comp=Z,15nm,0.8s
ZSN Zaisan 59.36 328 *e*P P 11 09 51.9 +0.5
ZSN Zaisan 59.36 328 *e*P P 11 09 51.9 +0.5
baz=328
TUWZ Tuamarina 59.49 140 P P 11 09 52.0 -0.3
KHZ Kahutara 59.76 142 P P 11 09 53.8 -0.4
SHLS Shalkode 60.01 321 *e*P P 11 09 53.7 -2.3
SHLS Shalkode 60.01 321 *e*P P 11 09 53.8 -2.3
baz=322
URZ Urewera 60.03 136 P P 11 09 55.6 -0.5
comp=Z,39nm,0.8s,baz=32,slow=4.3,SNR=5.3
comp=Z,39nm,0.8s
BKZ Black Stump Fm 60.03 137 P P 11 09 55.9 -0.3
BKZ Black Stump Fm 60.03 137 P P 11 09 57.3 +1.1
BHW Baring Head 60.07 140 P P 11 09 55.3 -1.0
MSWZ Moikau Station 60.32 140 P P 11 09 57.4 -0.7
TARG Taragay, Kyrgy 60.34 319 P P 11 09 59.4 +0.6
TARG IAmb IAmb 11 10 26.7
comp=Z,11nm,0.6s
TARG Taragay, Kyrgy 60.34 319 P P 11 09 59.4 +0.6
TARG pmax pmax
comp=Z,11nm,0.6s
MK31 Makanchi Array 60.36 326 P P 11 09 59.5 +1.2
MK31 IAmb IAmb 11 10 24.0
comp=Z,31nm,0.9s
MK31 Makanchi Array 60.36 326 P P 11 09 59.5 +1.2
MK31 pmax pmax
comp=Z,31nm,0.9s
MKAR Makanchi Array 60.36 326 P P 11 09 59.3 +1.0
comp=Z,23nm,0.4s,baz=115,slow=7.9,SNR=347
MKAR PcP **PcP** 11 10 42.3 -0.2
comp=Z,16nm,0.7s,baz=123,slow=4.5,SNR=8.3
MKAR S **S** 11 18 08.4 +2.4
comp=Z,0.3nm,0.6s,baz=117,slow=15,SNR=3.2
MKAR LR LR 11 37 29.0
comp=Z,41nm,19.7s,baz=90,slow=37
comp=Z,23nm,0.4s
KSH Kashi 60.53 316 P P 11 10 01.8 +2.1
KSH pP pwP 11 10 24.5 -0.2
KSH PcP **PcP** 11 10 44.4 +0.9
KSH pmax pmax
comp=Z,17nm,0.9s
MAKZ Makanchi 60.55 326 P P 11 10 00.3 +0.8
MAKZ Makanchi 60.55 326 P P 11 10 00.3 +0.8
MAKZ pmax pmax
comp=Z,39nm,0.9s
MAKZ Makanchi 60.55 326 P P 11 10 00.6 +1.1
MAKZ pP **pP** 11 10 20.7 -0.7
MAKZ x x 11 10 23.9
MAKZ sP **sP** 11 10 32.1 +1.0
KPKS Kokpek 60.66 321 *e*P P 11 10 00.7 +0.2
KPKS pmax pmax
comp=Z,11nm,0.5s
KPKS Kokpek 60.66 321 *e*P P 11 10 00.7 +0.2
comp=Z,11nm,0.5s,baz=321
ZHN Zhinishke 60.66 321 *e*P P 11 10 00.7 +0.2
ZHN Zhinishke 60.66 321 *e*P P 11 10 00.7 +0.2
baz=321
KDJ Kajisay 60.95 319 P P 11 10 03.8 +1.2
KDJ Kajisay 60.95 319 P P 11 10 03.8 +1.2
KDJ pmax pmax
comp=Z,33nm,0.7s
YAK Yakutsk 61.41 1 P P 11 10 05.6 +0.6
comp=Z,42nm,0.6s,baz=280,slow=0.4,SNR=15
comp=Z,42nm,0.6s
YAK Yakutsk 61.41 1 P P 11 10 05.6 +0.6
YAK Yakutsk 61.41 1 *c* iP P 11 10 05.2 +0.2
YAK *e**PP **pP** 11 10 27.6 +0.3
YAK *e* 11 10 46.0
YAK *e* 11 12 21.2
YAK *e*PPP PPP 11 13 53.0
YAK *e*S **S** 11 18 19.7 +1.0
YAK *e**SS **sS** 11 18 59.0 +2.4
YAK *e* 11 19 46.4
YAK *e*SS **SS** 11 22 27.3 +6.2
YAK pmax pmax
comp=Z,96nm,0.9s
YAK pmax pmax
comp=E,6.0nm,0.9s
YAK pmax pmax
comp=N,25nm,1.1s
YAK pmax pmax
comp=Z,16nm,1.0s
YAK pmax pmax
comp=N,5.0nm,1.0s
YAK pmax pmax
comp=E,3.0nm,1.0s
YAK smax smax
comp=N,22nm,2.5s
YAK smax smax
comp=E,26nm,2.5s
YAK Yakutsk 61.41 1 P P 11 10 05.3 +0.2
YAK pP **pwP** 11 10 29.7 +0.1
TNSS Tian-Shan 61.54 320 *e*P P 11 10 07.8 +1.0
TNSS Tian-Shan 61.54 320 *e*P P 11 10 07.9 +1.0
baz=320
TDK Taldyqorghan 61.62 323 *e*P P 11 10 05.1 -1.8
TDK pmax pmax
comp=Z,14nm,0.5s
TDK Taldyqorghan 61.62 323 *e*P P 11 10 05.1 -1.8
comp=Z,14nm,0.5s,baz=323
AAA Alma-Ata 61.64 320 *e*P P 11 10 07.7 +0.7
AAA Alma-Ata 61.64 320 *e*P P 11 10 07.8 +0.7
baz=320
MA2 Magadan 61.76 13 P P 11 10 08.3 +0.9
comp=Z,56nm,0.7s,baz=193,slow=6.7,SNR=22
comp=Z,56nm,0.7s
MA2 Magadan 61.76 13 P P 11 10 08.5 +1.0
MA2 Magadan 61.76 13 P P 11 10 08.7 +1.3
MA2 Magadan 61.76 13 P P 11 10 08.5 +1.0
BOOM Boomskoye usch 61.92 319 IAmb IAmb 11 10 11.6
comp=Z,23nm,1.2s
KUU Kurty 62.34 321 *e*P P 11 10 11.9 +0.2
KUU Kurty 62.34 321 *e*P P 11 10 12.0 +0.2
baz=321
TKM2 Tokmak 2 62.35 320 P P 11 10 13.5 +1.5
SNR=21
TKM2 Tokmak 2 62.35 320 P P 11 10 13.1 +1.1
UCH Uchtor 62.74 318 P P 11 10 16.8 +1.8
SNR=25
CHMS Chumysh 62.94 319 P P 11 10 16.7 +1.0
SNR=5.4
AAK Ala-Archa 62.94 319 P P 11 10 16.0 +0.1
comp=Z,2.6nm,0.3s,baz=135,slow=6.0,SNR=12
comp=Z,2.6nm,0.3s
AAK Ala-Archa 62.94 319 P P 11 10 17.4 +1.5
AAK Ala-Archa 62.94 319 *c* iP P 11 10 17.4 +1.5
AAK pmax pmax
comp=Z,15nm,1.3s
AAK Ala-Archa 62.94 319 P P 11 10 17.5 +1.6
AAK Ala-Archa 62.94 319 P P 11 10 17.3 +1.5
USP Ospenovka 63.22 320 P P 11 10 18.8 +1.2
SNR=12
SGDS Sogindy 63.23 320 *e*P P 11 10 17.4 -0.2
SGDS Sogindy 63.23 320 *e*P P 11 10 17.5 -0.2
baz=320
AML Almayashu 63.24 318 P P 11 10 19.9 +1.8
SNR=12
AML Almayashu 63.24 318 *i* P P 11 10 19.8 +1.7
SNR=12
EKS2 Erkin-Say 63.42 319 P P 11 10 20.8 +1.8
SNR=15
ZAA0 Zalesovo Array 63.58 334 P P 11 10 19.5 -0.1
ZAA0 IAmb IAmb 11 10 20.4
comp=Z,24nm,0.9s
ZALV Zalesovo Beam 63.58 334 P P 11 10 19.3 -0.3
comp=Z,19nm,0.8s,baz=111,slow=6.5,SNR=72
ZALV S **S** 11 18 43.3 -3.0
comp=Z,0.6nm,0.6s,baz=119,slow=12,SNR=3.9
ZALV LR LR 11 39 54.7
comp=Z,28nm,18.3s,baz=115,slow=38
comp=Z,19nm,0.8s
KBL Kabul 63.72 309 P P 11 10 22.0 +0.8
KBL IAmb IAmb 11 10 23.0
comp=Z,24nm,0.8s
KBL Kabul 63.72 309 P P 11 10 22.0 +0.8
KBL pmax pmax
comp=Z,25nm,0.8s
GAR Garm 64.32 314 P P 11 10 26.0 +1.0
BTLS Baital 64.33 321 *e*P P 11 10 24.3 -0.4
BTLS Baital 64.33 321 *e*P P 11 10 24.4 -0.4
baz=321
KURBB Kurchatov Arra 64.60 328 P P 11 10 26.9 +0.5
comp=Z,51nm,0.6s,baz=129,slow=6.1,SNR=429
KURBB S **S** 11 18 57.3 -1.7
comp=Z,0.2nm,0.3s,baz=134,slow=11,SNR=5.2
comp=Z,51nm,0.6s
KURK Kurchatov 64.61 328 P P 11 10 27.1 +0.7
KURK Kurchatov 64.61 328 P P 11 10 27.1 +0.7
KURK pmax pmax
comp=Z,94nm,1.0s
KURK Kurchatov 64.61 328 P P 11 10 27.1 +0.7
KURK pP **pwP** 11 10 50.4 -1.4
KURK sP **PcP** 11 11 00.6 +1.0
CHGR Chuyangaron 65.04 313 P P 11 10 30.3 +0.7
CHGR Chuyangaron 65.04 313 P P 11 10 30.3 +0.7
CHGR pmax pmax
comp=Z,54nm,1.0s
SEY Seymchan 65.11 12 P P 11 10 29.3 -0.1
comp=Z,34nm,0.9s,baz=209,slow=4.6,SNR=45
SEY LR LR 11 37 13.8
comp=Z,22nm,21.2s,baz=255,slow=34
comp=Z,34nm,0.9s
SEY Seymchan 65.11 12 *c* iP P 11 10 30.7 +1.3
SEY pmax pmax
comp=Z,46nm,1.0s
SHEM Shemya Is, Ala 65.11 29 P P 11 10 29.7 0.0
comp=Z,39nm,0.6s,baz=318,slow=5.3,SNR=4.4
comp=Z,39nm,0.6s
IUG luzhnay 65.73 317 *e*P P 11 10 34.0 0.0
IUG luzhnay 65.73 317 *e*P P 11 10 34.1 0.0
baz=317
KK31 Karatay Array 65.78 318 P P 11 10 34.8 +0.6
KK31 IAmb IAmb 11 10 36.0
comp=Z,24nm,0.9s
KK31 Karatay Array 65.78 318 P P 11 10 34.8 +0.6
KK31 pmax pmax
comp=Z,24nm,0.9s
KKAR Karatay Array 65.78 318 P P 11 10 34.7 +0.5
KKAR Karatay Array 65.78 318 P P 11 10 34.7 +0.5
DRV Dumont d'Urvil 67.65 174 P P 11 10 45.4 -0.1
CASY Casey 67.66 187 P P 11 10 46.4 +0.7
CASY Casey 67.66 187 P P 11 10 46.3 +0.7
HRA Herat 69.05 307 P P 11 10 55.5 +0.2
KIWB Kanaga Island 69.21 33 P P 11 10 56.0 +0.3
WSAR Wadi Sarin 69.98 294 P P 11 11 01.4 +0.4
comp=Z,14nm,0.9s,baz=126,slow=6.4,SNR=8.6
WSAR LR LR 11 43 59.7
comp=Z,12nm,20.0s,baz=100,slow=38
comp=Z,14nm,0.9s
BRVK Borovoye 70.24 328 P P 11 11 02.2 +0.2
BRVK IAmb IAmb 11 11 03.3
comp=Z,40nm,0.9s
BRVK Borovoye 70.24 328 *c* iP P 11 11 02.3 +0.4
BRVK pmax pmax
comp=Z,41nm,0.9s
BRVK Borovoye 70.24 328 P P 11 11 02.5 +0.5
BRVK pP **pwP** 11 11 27.3 -0.6
TIXI Tiksi 71.05 1 P P 11 11 05.8 -0.6
comp=Z,28nm,0.4s,baz=272,slow=22,SNR=67
comp=Z,28nm,0.4s
TIXI Tiksi 71.05 1 P P 11 11 05.6 -0.8
TIXI IAmb IAmb 11 11 07.1
comp=Z,40nm,0.9s
TIXI Tiksi 71.05 1 *c* iP P 11 11 05.7 -0.8
TIXI pmax pmax
comp=Z,65nm,1.3s
TIXI Tiksi 71.05 1 P P 11 11 05.8 -0.6
TIXI pP **pwP** 11 11 30.9 -0.7
UOSS Minazif 72.41 296 P P 11 11 15.9 +0.3
UOSS Minazif 72.41 296 *i* P P 11 11 15.7 +0.1
SNR=8.4
HATD Hatta, Dubai 72.46 296 *i* P P 11 11 16.7 +0.8
SNR=9.2
BANOM Banah 72.46 297 P P 11 11 17.0 +1.1
ASHO Ashiyiah 72.51 296 *i* P P 11 11 17.3 +1.0
SNR=10
MSFE Esma-Masafi 72.51 296 *i* P P 11 11 17.7 +1.5
SNR=6.1
BILL Bilibino 72.59 14 *d* iP P 11 11 15.5 -0.3
BILL *e* 11 11 30.1
BILL *e**PP **pP** 11 11 40.6 +1.8
BILL *e**SP **sP** 11 11 47.2 -1.3
BILL *e* 11 13 57.7
BILL *e*PPP PPP 11 15 44.8
BILL pmax pmax
comp=Z,7.0nm,1.0s
SHME Shamm 72.62 297 P P 11 11 17.8 +1.0
ALNE Al Ain 72.70 295 *i* P P 11 11 18.6 +1.2
SNR=22
NAZ Nazwa, Dubai 72.91 296 P P 11 11 18.9 +0.4
FAQ Al Faqa, Dubai 72.94 296 *i* P P 11 11 19.3 +0.6
SNR=11
GEYT Alibeck 73.14 310 P P 11 11 20.9 +1.2
comp=Z,15nm,0.8s,baz=121,slow=5.7,SNR=13
comp=Z,15nm,0.8s
GEYT Alibeck 73.14 310 P P 11 11 20.4 +0.7
GYA0 ALIBECK ARRAY 73.14 310 P P 11 11 20.4 +0.7
GYA0 pmax pmax
comp=Z,17nm,0.8s
GYA0B ALIBECK ARRAY 73.14 310 P P 11 11 20.3 +0.6
ASUD Al Ashush, Dub 73.16 295 P P 11 11 21.3 +1.3
RAR Rarotonga 74.56 112 LR LR 11 43 36.7
comp=Z,36nm,20.1s,baz=174,slow=35
MZR Muzera 74.65 294 P P 11 11 29.6 +0.8
AB31 Akbulak array 74.82 321 *i* P P 11 11 28.8 -0.4
ABKAR Akbulak array 74.82 321 P P 11 11 29.3 +0.1
UNV Unalaska Valle 75.92 34 P P 11 11 35.4 +0.1
baz=251
AKTO Aktyubinsk 76.35 322 P P 11 11 38.1 +0.2
comp=Z,22nm,0.7s,baz=102,slow=7.3,SNR=105
comp=Z,22nm,0.7s
SVE Sverdlovsk 76.85 329⇓ *e*P P 11 11 40.4 -0.2
SVE pmax pmax
comp=Z,47nm,1.0s
GAMB Gambell 77.23 24 P P 11 11 43.3 +0.8
baz=244
ARU Arti 77.80 328 P P 11 11 45.0 -0.9
comp=Z,17nm,0.5s,baz=116,slow=2.2,SNR=25

comp=Z,17nm,0.5s
ARU Arti 77.80 328 P P 11 11 45.2 -0.7
ARU IAmb IAmb 11 11 46.2
comp=Z,22nm,0.7s
ARU Arti 77.80 328 *c i*P **P 11 11 45.3 -0.6**
ARU *PP **pP 11 12 10.2 +1.5**
ARU S **S 11 21 30.9 -0.3**
ARU pmax pmax
comp=Z,23nm,0.7s
FALS False Pass 77.95 34 P **P 11 11 47.3 +0.5**
baz=253
TNA Tin City 79.45 23 P **P 11 11 55.2 +0.5**
baz=247
SDPT Sand Point 79.71 34 P **P 11 11 56.3 -0.1**
SDPT Sand Point 79.71 34 P **P 11 11 56.3 -0.1**
baz=256,SNR=13
CNBA Chernabura Isl 80.08 34 P **P 11 11 58.8 +0.4**
CNBA IAmb IAmb 11 11 59.4
comp=Z,26nm,1.0s
CHNA Chernabura Isl 80.08 34 P **P 11 11 58.3 -0.1**
baz=257
ANM Nome 80.09 24 P **P 11 11 59.1 +0.8**
baz=250
VNDA Vanda 80.20 173 P **P 11 11 58.7 +0.1**
comp=Z,10nm,0.8s,baz=314,slow=6.0,SNR=36
VNDA LR LR 11 45 41.2
comp=Z,31nm,21.3s,baz=331,slow=34
comp=Z,10nm,0.8s
VNDA Vanda 80.20 173 P **P 11 11 58.8 +0.2**
S14K Fog Glacier 80.44 33 P **P 11 12 00.8 +0.3**
baz=256
MAW Mawson 80.84 200 P **P 11 12 02.7 +0.5**
comp=Z,9.3nm,0.6s,baz=85,slow=5.0,SNR=36
MAW LR LR 11 45 31.0
comp=Z,38nm,21.6s,baz=346,slow=34
comp=Z,9.3nm,0.6s
MAW Mawson 80.84 200 P **P 11 12 03.1 +1.0**
baz=81,SNR=28
MAW Mawson 80.84 200 P **P 11 12 03.1 +1.0**
MAW Mawson 80.84 200 P **P 11 12 03.1 +1.0**
MAW pmax pmax
comp=Z,2.0nm,0.7s
VOI Vohitsoka 81.10 248 P **P 11 12 05.1 +0.4**
VOI IAmb IAmb 11 12 06.0
comp=Z,17nm,0.8s
VOI Vohitsoka 81.10 248 P **P 11 12 05.8 +1.1**
SBA Scott Base 81.11 172 P **P 11 12 04.6 +1.1**
SBA Scott Base 81.11 172 P **P 11 12 04.6 +1.1**
SBA pmax pmax
comp=Z,11nm,0.9s
N16K Nishlik Lake 81.83 29 P **P 11 12 08.9 +1.2**
baz=256,SNR=17
P16K Nushagak River 81.89 30 P **P 11 12 08.6 +0.7**
baz=257
O16K Kokwok River B 81.96 30 P **P 11 12 08.9 +0.6**
baz=257,SNR=15
SEKA Sheki 82.00 311 P **P 11 12 09.3 +0.3**
RAYN Ar Rayn 82.00 294 P **P 11 12 09.8 +0.4**
RAYN IAmb IAmb 11 12 10.7
comp=Z,20nm,1.0s
RAYN Ar Rayn 82.00 294 P **P 11 12 09.8 +0.4**
RAYN pmax pmax
comp=Z,20nm,1.0s
RAYN Ar Rayn 82.00 294 *i*P **P 11 12 09.9 +0.5**
SNR=12
R17K Ugashik Creek 82.43 32 P **P 11 12 10.6 -0.2**
baz=259,SNR=9.5
ZKTA Zakatala 82.48 312 P **P 11 12 11.9 +0.5**
Q16K King Salmon 82.49 31 P **P 11 12 10.3 -0.7**
baz=258
O17K Koliganek Bris 82.49 30 P **P 11 12 11.8 +0.8**
baz=258,SNR=19
CHIR Chirikof Islan 82.51 34 P **P 11 12 11.3 +0.1**
baz=260
GANJ Ganja 82.60 311 P **P 11 12 12.5 +0.4**
P17K Kvichak River 82.70 30 P **P 11 12 13.0 +0.8**
baz=259
KIRV Kirov 83.11 329 P **P 11 12 14.8 +0.6**
comp=Z,39nm,0.6s,baz=92,slow=2.8,SNR=16
comp=Z,39nm,0.6s
BELG Belogornoye 83.12 323 P **P 11 12 14.2 -0.2**
comp=Z,85nm,0.8s,baz=116,slow=1.0,SNR=48
comp=Z,85nm,0.8s
GROC Groznyy 83.24 313 *e*P **P 11 12 12.4 -2.9**
GROC *e* 11 15 26.3
GROC pmax pmax
comp=Z,36nm,0.4s
N18K Kilae Creek 83.27 29 P **P 11 12 16.2 +1.1**
N18K IAmb IAmb 11 12 17.4
comp=Z,19nm,1.0s
N18K Kilae Creek 83.27 29 P **P 11 12 16.2 +1.1**
baz=259,SNR=7.7
P18K Big Mountain, 83.35 30 P **P 11 12 15.3 -0.2**
baz=260
SII Sitkinak Islan 83.42 33 P **P 11 12 16.6 +0.7**
baz=261
O18K Koktuh Hills 83.44 30 P **P 11 12 16.9 +0.9**
O18K IAmb IAmb 11 12 17.8
comp=Z,25nm,0.9s
O18K Koktuh Hills 83.44 30 P **P 11 12 16.5 +0.5**
baz=260,SNR=9.4
SVW2 Sparrevohn 83.49 29 IAmb IAmb 11 12 18.4
comp=Z,31nm,0.8s
GCSA Galena City Sc 83.65 25 P **P 11 12 17.6 +0.7**
baz=258,SNR=9.5
TTA Tatalina 83.65 27 IAmb IAmb 11 12 18.9
comp=Z,34nm,0.8s
TTA Tatalina 83.65 27 P **P 11 12 17.8 +0.7**
baz=259,SNR=33
O19K Port Alsworth 83.94 30 IAmb IAmb 11 12 20.9
comp=Z,32nm,1.3s
O19K Port Alsworth 83.94 30 P **P 11 12 18.6 +0.1**
baz=260
N19K Bonanza Creek 83.97 29 P **P 11 12 19.8 +1.0**
baz=260,SNR=61
OHAK Old Harbor 84.01 33 IAmb IAmb 11 12 21.1
comp=Z,20nm,0.7s
OHAK Old Harbor 84.01 33 P **P 11 12 19.3 +0.4**
baz=262
L19K White Mountain 84.03 27 IAmb IAmb 11 12 21.0
comp=Z,39nm,0.9s
L19K White Mountain 84.03 27 P **P 11 12 19.9 +0.9**
baz=260,SNR=35
Q19K Cape Douglas, 84.08 31 P **P 11 12 18.8 -0.4**
baz=261
GUDG Gudauri 84.14 312 P **P 11 12 16.0 -4.2**
M19K Big River Lodg 84.20 28 P **P 11 12 20.9 +1.1**
baz=260
KDAK Kodiak Island 84.47 32 P **P 11 12 21.6 +0.4**
comp=Z,29nm,0.8s,baz=258,slow=5.2,SNR=20
KDAK LR LR 11 44 01.4
comp=Z,50nm,21.3s,baz=273,slow=31
comp=Z,29nm,0.8s
KDAK Kodiak Island 84.47 32 P **P 11 12 21.4 +0.2**
KDAK IAmb IAmb 11 12 22.8
comp=Z,32nm,0.8s
KDAK Kodiak Island 84.47 32 P **P 11 12 21.4 +0.2**
KDAK pmax pmax
comp=Z,32nm,0.8s
KDAK Kodiak Island 84.47 32 P **P 11 12 21.6 +0.4**
baz=262
L20K Farewell, AK 84.53 27 P **P 11 12 22.3 +0.8**
baz=260,SNR=22
K20K Telida 84.59 26 P **P 11 12 22.5 +0.8**
baz=260,SNR=10
ZEI Tsey 84.59 313 *e*P **P 11 12 21.9 -0.6**
ZEI pmax pmax
comp=Z,33nm,1.4s
Q20K Shuyak Island 84.68 31 P **P 11 12 22.4 +0.2**
baz=262
J20K Nowinta River 84.70 26 P **P 11 12 22.8 +0.6**
baz=260,SNR=8.0
O20K Slope Mountain 84.77 30 P **P 11 12 22.0 -0.8**
baz=262
M20K Styx River 84.78 28 IAmb IAmb 11 12 24.8
comp=Z,24nm,0.8s
M20K Styx River 84.78 28 P **P 11 12 23.3 +0.5**
baz=261,SNR=19
AKH Akhalkalaki 84.80 311 ⇓P **P 11 12 24.6 +1.0**
AKH Akhalkalaki 84.80 311 P **P 11 12 24.5 +1.0**
ONI Oni 84.91 313 P **P 11 12 25.2 +1.3**
GEVA Gevas 84.93 308 P **P 11 12 24.6 +0.3**
N20K Mount Spurr 85.12 29 P **P 11 12 24.1 -0.4**
baz=262
IMAR Indian Mountai 85.17 24 P **P 11 12 24.8 +0.2**
A21K Barrow 85.18 18 P **P 11 12 25.3 +0.8**
baz=257,SNR=19

HOM Homer 85.20 30 P **P 11 12 24.7 -0.1**
baz=263
PPLA Purkeypile 85.37 27 P **P 11 12 25.5 -0.3**
baz=262
CNPM China Poot 85.39 30 P **P 11 12 25.9 0.0**
KBZ Khabaz 85.39 314 P **P 11 12 25.6 -0.5**
comp=Z,9.5nm,0.9s,baz=126,slow=3.0,SNR=17
comp=Z,9.5nm,0.9s
KBZ Khabaz 85.39 314 *c i*P **P 11 12 26.2 +0.1**
KBZ pmax pmax
comp=Z,14nm,1.1s
CHUM Lake Minchumin 85.45 26 P **P 11 12 26.3 +0.3**
baz=262
PRGR Permogore 85.46 332 *e*P **P 11 12 24.9 -1.2**
CAST Castle Rocks 85.49 26 P **P 11 12 27.1 +0.8**
CAST Castle Rocks 85.49 26 P **P 11 12 26.6 +0.3**
baz=262
H21K Melozitna Rive 85.50 24 P **P 11 12 26.5 +0.2**
baz=261,SNR=8.3
SKT Skwentna 85.55 28 IAmb IAmb 11 12 27.4
comp=Z,26nm,1.2s
SKT Skwentna 85.55 28 P **P 11 12 25.9 -0.6**
baz=263,SNR=18
KIV Kislovodsk 85.56 314 *e*P **P 11 12 27.3 +0.2**
KIV pmax pmax
comp=Z,13nm,1.0s
BRSE Bradley Lake S 85.66 30 P **P 11 12 26.8 -0.4**
baz=264
GURO Guroymak-BITLI 85.75 308 IAmb IAmb 11 12 30.5
comp=Z,25nm,0.9s
I21K Tanana 85.77 25 P **P 11 12 27.5 -0.1**
baz=262
SUA Susitna One 85.86 28 IAmb IAmb 11 12 29.3
comp=Z,31nm,0.9s
SUA Susitna One 85.86 28 P **P 11 12 27.4 -0.8**
baz=263,SNR=20
CHVG Ch'k'valeri 85.92 313 ⇑P **P 11 12 29.9 +1.0**
BPAW Bear Paw Mtn. 86.06 26 P **P 11 12 29.0 0.0**
baz=263
H22K Ishtalitna Cre 86.12 24 P **P 11 12 29.7 +0.3**
baz=262,SNR=6.9
BATM Batumi 86.16 311 ⇑P **P 11 12 30.4 +0.4**
BATM Batumi 86.16 311 P **P 11 12 30.4 +0.4**
M22K Willow 86.19 28 P **P 11 12 29.2 -0.4**
baz=264,SNR=10
O22K Cooper Landing 86.25 30 P **P 11 12 29.7 -0.3**
baz=264
MLY Manley 86.28 25 P **P 11 12 30.0 -0.2**
baz=263,SNR=14
TRF Thorofare Moun 86.29 27 P **P 11 12 29.6 -0.8**
baz=264
RC01 Rabbit Creek A 86.30 29 IAmb IAmb 11 12 31.0
comp=Z,24nm,1.0s
RC01 Rabbit Creek A 86.30 29 P **P 11 12 29.4 -0.9**
baz=264,SNR=17
SEW Seward 86.34 30 IAmb IAmb 11 12 31.5
comp=Z,18nm,0.8s
SEW Seward 86.34 30 P **P 11 12 30.0 -0.5**
baz=265
PMR Palmer 86.64 28 P **P 11 12 31.1 -0.8**
PMR IAmb IAmb 11 12 32.7
comp=Z,13nm,0.9s
PMR Palmer 86.64 28 P **P 11 12 31.1 -0.8**
PMR Palmer 86.64 28 P **P 11 12 30.9 -1.0**
baz=265,SNR=11
MARD Mardin 86.69 307 P **P 11 12 33.1 +0.2**
COLD Coldfoot 86.75 23 P **P 11 12 32.6 +0.2**
COLD IAmb IAmb 11 12 33.7
comp=Z,16nm,0.7s
COLD Coldfoot 86.75 23 P **P 11 12 32.6 +0.2**
baz=264
D23K Nanushuk River 86.77 21 P **P 11 12 33.0 +0.6**
baz=263,SNR=14
H23K Yukon River 86.86 24 IAmb IAmb 11 12 34.1
comp=Z,10nm,0.8s
H23K Yukon River 86.86 24 P **P 11 12 33.1 +0.1**
baz=264,SNR=15
I23K Minto, Yukon-K 86.87 25 P **P 11 12 32.6 -0.3**
I23K IAmb IAmb 11 12 33.9
comp=Z,17nm,0.9s
I23K Minto, Yukon-K 86.87 25 P **P 11 12 32.8 -0.1**
baz=264,SNR=21
C23K Itkillik River 86.91 20 P **P 11 12 33.1 +0.1**
baz=263,SNR=16
MCK McKinley 86.92 26 P **P 11 12 32.3 -1.0**
baz=265
NEA2 Nenana 86.94 25 P **P 11 12 32.7 -0.7**
baz=265
KNK Knik Glacier 86.94 29 IAmb IAmb 11 12 34.9
comp=Z,18nm,0.8s
KNK Knik Glacier 86.94 29 P **P 11 12 33.1 -0.3**
baz=265,SNR=5.6
WAT1 Susitna Watana 87.02 27 P **P 11 12 32.7 -1.1**
baz=265
SML Sawmill 87.04 28 IAmb IAmb 11 12 35.2
comp=Z,20nm,0.8s
SML Sawmill 87.04 28 P **P 11 12 33.3 -0.6**
baz=266,SNR=15
TOLK Toolik Lake Re 87.14 21 IAmb IAmb 11 12 35.5
comp=Z,13nm,0.8s
TOLK Toolik Lake Re 87.14 21 P **P 11 12 34.5 +0.2**
baz=264,SNR=13
M23K Glacier View 87.32 28 P **P 11 12 34.5 -0.7**
baz=266,SNR=12
WAT6 Susitna Watana 87.37 28 P **P 11 12 35.0 -0.7**
baz=266,SNR=14
D24K Happy Valley 87.46 21 P **P 11 12 35.9 +0.1**
baz=265
COLA College 87.48 25⇑ *e*P **P 11 12 34.2 -1.7**
COLA pmax pmax
comp=Z,3.0nm,0.8s
SCM Sheep Creek Mo 87.51 28 IAmb IAmb 11 12 38.0
comp=Z,14nm,0.8s
SCM Sheep Creek Mo 87.51 28 P **P 11 12 35.7 -0.6**
baz=266,SNR=9.0
H24K Noodor Dome 87.55 24 P **P 11 12 36.2 -0.1**
baz=266,SNR=13
GLI Glacier Island 87.57 29 IAmb IAmb 11 12 37.3
comp=Z,16nm,0.8s
GLI Glacier Island 87.57 29 P **P 11 12 36.1 -0.4**
baz=267
SOC Sochi 87.69 313 *e*P **P 11 12 38.2 +0.8**
SOC *e* 11 16 01.6
SOC *e*PPP PPP 11 17 57.2
SOC *e*S **SKSac 11 22 58.2 +0.8**
SOC *e*SS **SS 11 28 58.9 -1.5**
SOC *e*SSS SSS 11 32 32.3
SOC pmax pmax
comp=Z,7.0nm,0.4s
HDA Harding Lake 87.84 26 P **P 11 12 35.8 -1.9**
baz=267,SNR=16
ILAR Eielson Array 87.89 25 P **P 11 12 35.9 -2.0**
comp=Z,3.0nm,0.8s,baz=243,slow=4.7,SNR=29
ILAR PP PP 11 16 03.8 -1.2
comp=Z,0.5nm,0.8s,baz=269,slow=6.0,SNR=4.4
ILAR PKKP **PKKPdf 11 30 19.9 -0.5**
comp=Z,1.2nm,0.8s,baz=47,slow=1.7,SNR=16
comp=Z,3.0nm,0.8s
M24K Tolsona, Glenn 88.07 28 IAmb IAmb 11 12 41.8
comp=Z,18nm,0.8s
M24K Tolsona, Glenn 88.07 28 P **P 11 12 39.0 +0.1**
baz=267,SNR=7.2
KLU Klutina 88.17 29 P **P 11 12 39.1 -0.3**
baz=268
EYAK Kordova Ski Ar 88.21 30 P **P 11 12 39.1 -0.4**
baz=268
VORR Voronezh 88.24 321 *e*P **P 11 12 38.6 -1.2**
VORR pmax pmax
comp=Z,40nm,0.3s
K24K Donnelly Dome 88.33 26 P **P 11 12 39.1 -0.9**
baz=268,SNR=11
KLMR Klimovskoe 88.34 331 *e*P **P 11 12 37.7 -2.4**
KLMR Klimovskoe 88.34 331 *e*P **P 11 12 37.7 -2.4**
PAX Paxson 88.43 27 P **P 11 12 40.2 -0.5**
baz=268,SNR=13
J25K Salcha River, 88.53 26 P **P 11 12 39.4 -1.6**
baz=268,SNR=9.5
HARP HAARP 88.56 28 P **P 11 12 40.9 -0.2**
baz=268
RIDG Independent Ri 88.74 26 IAmb IAmb 11 12 42.2
comp=Z,17nm,0.9s
RIDG Independent Ri 88.74 26 P **P 11 12 41.3 -0.7**
baz=268,SNR=19
BMRM Bremner River 88.79 29 P **P 11 12 42.2 -0.1**
baz=269
N25K Chitina, Valde 88.80 29 P **P 11 12 42.2 -0.2**
baz=269

BMAR Burnt Mountain 88.94 23 P **P 11 12 43.7 +0.8**
KIBK Kibwezi 88.98 268 P **P 11 12 43.7 -0.5**
KIBK IAmb IAmb 11 12 46.4
comp=Z,11nm,1.1s
DOT Dot Lake 89.08 27 P **P 11 12 42.7 -0.9**
DOT IAmb IAmb 11 12 43.9
comp=Z,8.3nm,0.8s
SCRK Sand Creek 89.12 26 P **P 11 12 43.1 -0.7**
baz=269,SNR=7.1
MENT Mentasta 89.23 27 P **P 11 12 44.1 -0.1**
MENT IAmb IAmb 11 12 45.1
comp=Z,7.6nm,0.7s
MOS Moscow 89.24 326 *e*P **P 11 12 41.8 -2.6**
MOS pmax pmax
comp=Z,40nm,0.8s
J26L Joseph Creek 89.31 26 IAmb IAmb 11 12 45.5
comp=Z,14nm,0.8s
J26L Joseph Creek 89.31 26 P **P 11 12 44.2 -0.5**
baz=270,SNR=19
ANN Anapa 89.35 315 *e*P **P 11 12 41.9 -3.2**
ANN *e**PP **pP 11 13 06.9 -1.6**
ANN *e* 11 16 13.7
ANN *e*S **SKSac 11 23 02.9 -4.3**
ANN pmax pmax
comp=Z,29nm,0.7s
VRDI Verde Repeater 89.35 29 IAmb IAmb 11 12 48.1
comp=Z,14nm,1.4s
L26K Log Cabin Wild 89.40 27 P **P 11 12 44.8 -0.2**
baz=270,SNR=7.7
I26K Coal Creek Min 89.49 25 P **P 11 12 44.6 -0.8**
baz=270
M26K Nabesna, AK 89.56 28 IAmb IAmb 11 12 46.8
comp=Z,20nm,1.9s
M26K Nabesna, AK 89.56 28 P **P 11 12 45.6 -0.3**
baz=270
WAX Waxell Ridge 89.64 30 IAmb IAmb 11 12 47.2
comp=Z,9.5nm,0.7s
KMBO Kilima Mbogo 89.76 269 P **P 11 12 48.7 +0.6**
comp=Z,4.7nm,0.9s,baz=71,slow=2.1,SNR=7.2
comp=Z,4.7nm,0.9s
KMBO Kilima Mbogo 89.76 269 P **P 11 12 49.6 +1.5**
ASF Jabal al Asfar 89.83 302 P **P 11 12 47.8 -0.1**
comp=Z,7.7nm,0.7s,baz=129,slow=4.5,SNR=10
comp=Z,7.7nm,0.7s
OBN Obninsk 89.85 325 P **P 11 12 45.2 -2.0**
comp=Z,5.7nm,0.3s,baz=93,slow=7.1,SNR=7.5
comp=Z,5.7nm,0.3s
OBN Obninsk 89.85 325 P **P 11 12 46.3 -1.0**
OBN Obninsk 89.85 325 *e*P **P 11 12 46.1 -1.1**
OBN *i* PPP PPP 11 18 18.9
OBN pmax pmax
comp=Z,53nm,1.2s
ISLE Juniper Island 89.90 30 P **P 11 12 47.5 -0.1**
K27K Chicken 89.96 26 IAmb IAmb 11 12 49.5
comp=Z,22nm,0.9s
K27K Chicken 89.96 26 P **P 11 12 48.2 +0.6**
baz=271
M27K Edge Creek, AK 90.09 28 P **P 11 12 48.4 0.0**
baz=271
L27K Beaver Creek, 90.09 27 IAmb IAmb 11 12 49.6
comp=Z,11nm,0.8s
L27K Beaver Creek, 90.09 27 P **P 11 12 48.6 +0.2**
baz=271
MESA MESA 90.10 30 P **P 11 12 47.8 -0.8**
baz=271
BCAR Beaver Creek A 90.11 27 P **P 11 12 48.7 +0.3**
GRNC Granite Creek 90.18 29 IAmb IAmb 11 12 50.4
comp=Z,9.1nm,0.8s
BARN Barnard Glacie 90.22 29 IAmb IAmb 11 12 50.6
comp=Z,13nm,0.8s
CTG Chitna Glacier 90.38 29 P **P 11 12 50.4 +0.5**
baz=272
CTGM Chitina Glacie 90.38 29 IAmb IAmb 11 12 51.4
comp=Z,16nm,0.8s
QSPA South Pole Qui 90.42 180 P **P 11 12 50.1 +0.2**
QSPA IAmb IAmb 11 12 51.1
comp=Z,11nm,0.9s
LVZ Lovozero 90.43 338 P **P 11 12 48.7 -1.1**
LVZ IAmb IAmb 11 12 49.3
comp=Z,21nm,0.9s
LVZ Lovozero 90.43 338 *d i*P **P 11 12 48.5 -1.3**
LVZ pmax pmax
comp=Z,26nm,0.9s
TABL Table Mountain 90.49 30 IAmb IAmb 11 12 53.7
comp=Z,11nm,0.8s
BVCY Beaver Creek 90.56 28 P **P 11 12 50.8 +0.3**
baz=272
YUK3 Moose Creek 90.77 28 P **P 11 12 52.0 +0.3**
baz=272
PCA Pinnacle 90.95 30 IAmb IAmb 11 12 58.1
comp=Z,23nm,1.3s
PINM Pinnacle 90.95 30 P **P 11 12 52.5 +0.1**
baz=273
MMAI Mount Meron Ar 91.08 303 P **P 11 12 52.4 -1.3**
comp=Z,0.8nm,0.2s,baz=96,slow=6.8,SNR=5.5
MMAI LR LR 12 01 12.8
comp=Z,14nm,19.5s,baz=240,slow=40
comp=Z,0.8nm,0.2s
YUK8 Steele Glacier 91.13 29 P **P 11 12 53.8 +0.4**
baz=273
DAWY Dawson 91.14 26 IAmb IAmb 11 12 54.3
comp=Z,12nm,0.8s
DAWY Dawson 91.14 26 P **P 11 12 53.1 -0.1**
baz=273,SNR=18
PNL Peninsula 91.40 30 P **P 11 12 54.8 +0.3**
baz=273
I29M Ogilvie Camp, 91.52 25 IAmb IAmb 11 12 55.7
comp=Z,12nm,0.8s
I29M Ogilvie Camp, 91.52 25 P **P 11 12 54.6 -0.3**
baz=274
YUK4 Talbot Arm 91.67 29 P **P 11 12 56.4 +0.6**
baz=274
YUK6 Outpost Mounta 91.83 29 P **P 11 12 56.9 +0.2**
baz=274
EPYK Eagle Plains 92.08 24 IAmb IAmb 11 12 58.6
comp=Z,14nm,0.9s
EPYK Eagle Plains 92.08 24 P **P 11 12 57.8 +0.3**
baz=276
HYT Haines Junctio 92.26 29 IAmb IAmb 11 12 59.9
comp=Z,10nm,0.9s
HYT Haines Junctio 92.26 29 P **P 11 12 58.9 +0.3**
baz=275,SNR=9.8
BR131 Keskin Array S 92.28 310⇓ *e*P **P 11 12 58.1 -1.0**
BRTR Keskin Array B 92.28 310 P **P 11 12 57.6 -1.5**
comp=Z,3.2nm,0.9s,baz=112,slow=5.5,SNR=8.9
comp=Z,3.2nm,0.9s
N30M Aishikik Lake 92.40 29 P **P 11 12 59.6 +0.5**
baz=275,SNR=12
M30M Minto, Yukon 92.43 27 P **P 11 12 59.7 +0.5**
M30M IAmb IAmb 11 13 00.8
comp=Z,18nm,1.2s
M30M Minto, Yukon 92.43 27 P **P 11 12 59.7 +0.5**
baz=276,SNR=14
P30M Million Dollar 92.59 30 P **P 11 13 00.5 +0.5**
baz=276
O30N Mendenhall 92.95 29 P **P 11 13 01.9 +0.2**
baz=276,SNR=7.2
PLBC Pleasant Camp 92.96 31 P **P 11 13 01.7 +0.1**
baz=276
N31M Braeburn, Yuko 93.02 28 IAmb IAmb 11 13 03.5
comp=Z,14nm,1.0s
N31M Braeburn, Yuko 93.02 28 P **P 11 13 02.4 +0.4**
baz=277,SNR=9.0
INK Inuvik 93.05 22 P **P 11 13 01.1 -0.7**
comp=Z,5.2nm,0.8s,baz=282,slow=7.0,SNR=5.9
comp=Z,5.2nm,0.8s
INK Inuvik 93.05 22 P **P 11 13 00.9 -0.9**
INK IAmb IAmb 11 13 02.1
comp=Z,24nm,1.4s
INK Inuvik 93.05 22 P **P 11 13 00.9 -0.9**
INK pmax pmax
comp=Z,24nm,1.4s
INK Inuvik 93.05 22 P **P 11 13 01.2 -0.7**
baz=279
SKAG Skagway 93.48 30 P **P 11 13 04.6 +0.6**
baz=277,SNR=10
ARA0 ARCESS Array S 93.56 340 *e*P **P 11 13 03.5 -0.7**
ARCES ARCESS Array B 93.56 340 P **P 11 13 03.3 -0.9**
comp=Z,18nm,0.6s,baz=80,slow=6.1,SNR=142
comp=Z,18nm,0.6s
ARCES ARCESS Array B 93.56 340 P **P 11 13 02.8 -1.4**
ARCES ARCESS Array B 93.56 340 P **P 11 13 02.8 -1.4**
ARCES pmax pmax
comp=Z,40nm,1.1s
WHY Whitehorse 93.56 29 P **P 11 13 04.9 +0.4**
baz=277,SNR=12
M31M Drury Creek, Y 93.59 28 IAmb IAmb 11 13 05.5

	comp=Z,6.6nm,0.9s								
M31M	**Drury Creek, Y**	93.59	28	P		**P**	11 13 04.4	-0.1	
	baz=278,SNR=8.5								
SPB2	**Spitsbergen Ar**	93.68	349	P		**P**	11 13 04.0	-0.6	
SPA0	**Spitsbergen Ar**	93.68	349	*e*P		**P**	11 13 04.0	-0.7	
BESE	**Bessie Mountai**	93.84	31	IAmb		IAmb	11 13 07.3		
	comp=Z,16nm,1.0s								
HAMF	**Hammerfest**	93.94	341	*e*P		**P**	11 13 04.9	-1.0	
JIS	**Juneau Island**	94.12	32	IAmb		IAmb	11 13 08.4		
	comp=Z,7.6nm,0.8s								
KBS	**Kingsbay**	94.21	350	*e*P		**P**	11 13 06.7	-0.4	
HSPB	**Hornsund (broa**	94.27	348	*e*P		**P**	11 13 06.9	-0.4	
P32M	**Atlin**	94.28	30	P		**P**	11 13 07.9	+0.1	
	baz=278								
N32M	**Quiet Lake**	94.36	29	P		**P**	11 13 08.1	0.0	
	baz=279								
KTK1	**Kautokeino**	94.46	339	*e*P		**P**	11 13 07.2	-1.2	
AKASG	**Malin Array Be**	94.56	321	P		**P**	11 13 07.4	-1.7	
	comp=Z,0.6nm,0.4s,baz=65,slow=4.6,SNR=7.0								
	comp=Z,0.6nm,0.4s								
AKBB	**Malin Array Si**	94.56	321	⇓*i*P		**P**	11 13 07.9	-1.2	
AKBB				pmax		pmax			
	comp=Z,13nm,1.9s								
P33M	**Teslin, Yukon**	94.64	30	IAmb		IAmb	11 13 10.4		
	comp=Z,7.4nm,0.9s								
P33M	**Teslin, Yukon**	94.64	30	P		**P**	11 13 09.3	-0.1	
	baz=279,SNR=5.5								
FINES	**FINESS Array B**	94.79	332	P		**P**	11 13 08.4	-1.6	
	comp=Z,2.4nm,0.5s,baz=64,slow=5.1,SNR=11								
	comp=Z,2.4nm,0.5s								
FINES	**FINESS Array B**	94.79	332	*i* P		**P**	11 13 08.6	-1.4	
FINES				pmax		pmax			
	comp=Z,2.0nm,0.5s								
MNK	**Minsk**	94.90	325	*i* P		**P**	11 13 09.1	-1.5	
MNK				*i* *PP		**pP**	11 13 33.2	-0.9	
MNK				*i*			11 16 58.9		
MNK				*i* PPP		PPP	11 19 01.7		
MNK				*i* S		**SKSac**	11 23 36.1	-1.9	
MNK				*i* *SS		**ScS**	11 24 19.5	+1.5	
MNK				*i* SS		**SS**	11 30 44.3	+0.8	
MNK				*i* SSS		SSS	11 34 27.8		
MNK				pmax		pmax			
	comp=N,26nm,0.8s								
MNK				pmax		pmax			
	comp=E,4.0nm,0.8s								
MNK				pmax		pmax			
	comp=Z,22nm,0.8s								
MNK				MLR		MLR			
	comp=N,418nm,16.0s								
MNK				MLR		MLR			
	comp=Z,3μm,15.0s								
MNK				MLR		MLR			
	comp=E,20nm,17.0s								
MNK	**Minsk**	94.90	325	*i* P		**P**	11 13 09.2	-1.5	
	comp=E,4.0nm,0.8s								
MNK				*i* P		**P**	11 13 09.2	-1.5	
	comp=N,26nm,0.8s								
MNK				*i* P		**P**	11 13 09.2	-1.5	
	comp=Z,22nm,0.8s,baz=82								
MNK				*i* pP		**pP**	11 13 33.2	-0.9	
MNK				*i* PP		**PP**	11 16 58.9	-1.6	
MNK				*i* PPP		PPP	11 19 01.8		
MNK				*i* S		**SKSac**	11 23 36.1	-1.9	
MNK				*i* sS		**ScS**	11 24 19.5	+1.5	
MNK				*i* SS		**SS**	11 30 44.3	+0.8	
MNK				*i* SSS		SSS	11 34 27.8		
MNK				*i* LQ		LQ	11 50 03.6		
MNK				*i* LR		LR	11 54 39.9		
MNK				*i* LRM		MLR	11 57 31.1		
	comp=N,418nm,16.0s								
MNK				*i* LRM		MLR	11 57 43.3		
	comp=Z,3μm,15.3s								
MNK				*i* LRM		MLR	11 58 33.8		
	comp=E,20nm,16.6s								
VSU	**Vasula**	94.95	329	⇓*e*P		**P**	11 13 09.2	-1.6	
VSU				pmax		pmax			
	comp=Z,22nm,0.7s								
MMPY	**Sheldon Lake,**	94.96	27	P		**P**	11 13 11.1	+0.3	
	baz=281,SNR=20								
JETT	**Jettan, Norway**	95.30	340	*e*P		**P**	11 13 11.4	-0.7	
WRAK	**Wrangell Islan**	95.48	33	P		**P**	11 13 13.0	-0.2	
	baz=279								
TPGR	**Topolog**	95.75	315	⇑P		**P**	11 13 14.2	-0.6	
TIRR	**Tirgusor**	95.79	315	⇑P		**P**	11 13 14.5	-0.4	
TIRR	**Tirgusor**	95.79	315	P		**P**	11 13 14.5	-0.4	
CFR	**Carcaliu**	95.91	315	⇑P		**P**	11 13 14.8	-0.6	
C36M	**Paulatuk**	96.14	20	P		**P**	11 13 15.4	-0.5	
	baz=288								
DLBC	**Dease Lake**	96.36	31	P		**P**	11 13 17.6	+0.3	
	baz=281								
TGTN	**Hyland Airport**	96.56	28	P		**P**	11 13 18.5	+0.4	
	baz=283								
TESR	**Tescani**	96.77	317	⇑P		**P**	11 13 19.0	-0.4	
VRI	**Vrincioaia**	96.80	316	⇓P		**P**	11 13 19.3	-0.2	
VRI	**Vrincioaia**	96.80	316	P		**P**	11 13 19.3	-0.2	
VRI				pmax		pmax			
	comp=Z,11nm,1.0s								
MLR	**Muntele Rosu**	97.40	316	⇑P		**P**	11 13 22.0	-0.4	
MLR	**Muntele Rosu**	97.40	316	P		**P**	11 13 21.7	-0.7	
	comp=Z,8.8nm,0.7s,baz=198,slow=1.7,SNR=11								
	comp=Z,8.8nm,0.7s								
BURAR	**Bucovina Array**	97.58	318	⇑P		**P**	11 13 22.8	-0.3	
BURAR	**Bucovina Array**	97.58	318	P		**P**	11 13 22.8	-0.3	
BURAR	**Bucovina Array**	97.58	318	P		**P**	11 13 22.8	-0.3	
BURAR				pmax		pmax			
	comp=Z,12nm,0.8s								
BUR08	**Bucovina Ar. S**	97.58	318	P		**P**	11 13 23.0	-0.2	
STEI	**Steigen**	97.59	339	*e*P		**P**	11 13 21.4	-1.2	
DOPR	**Dopca**	97.72	316	⇑P		**P**	11 13 23.4	-0.3	
FAUS	**Fauske**	97.77	339	*e*P		**P**	11 13 21.9	-1.4	
MOR8	**Moi Rana**	98.51	338	*e*P		**P**	11 13 24.5	-2.2	
CRVS	**Cervenica-Dubn**	99.81	320	*e*P		**Pdif**	11 13 33.0	+0.1	
CRVS	**Cervenica-Dubn**	99.81	320	*e*PDIFF		**Pdif**	11 13 33.0	+0.1	
BOSA	**Boshof**	100.55	241	P		**Pdif**	11 13 36.8	-0.1	
	comp=Z,2.0nm,0.8s,baz=28,slow=7.4,SNR=3.2								
HFS	**Hagfors**	100.99	332	P		**Pdif**	11 13 36.5	-1.4	
	comp=Z,3.5nm,0.7s,baz=108,slow=4.8,SNR=12								
NB2	**NORSAR Subarra**	101.78	333	P		**Pdif**	11 13 39.8	-1.7	
	baz=68,slow=4.6								
NB2	**NORSAR Subarra**	101.78	333	P		**Pdif**	11 13 39.8	-1.7	
	comp=Z,2.5nm,0.6s,baz=68,slow=4.6								
NOA	**NORSAR Array B**	101.78	333	P		**Pdif**	11 13 39.9	-1.6	
	comp=Z,2.9nm,0.7s,baz=69,slow=4.4,SNR=14								
YKA	**Yellowknife Ar**	102.31	25	P		**Pdif**	11 13 42.2	-1.5	
	comp=Z,0.7nm,0.6s,baz=288,slow=4.6,SNR=4.6								
YKA				PKiKP		**PKiKP**	11 18 02.8	-2.3	
	comp=Z,1.0nm,0.6s,baz=305,slow=1.8,SNR=4.9								
YKA				PKKPbc		**PKKPbc**	11 29 45.1	-3.0	
	comp=Z,1.2nm,0.7s,baz=121,slow=2.4,SNR=4.1								
YKA	**Yellowknife Ar**	102.31	25	*i* P		**Pdif**	11 13 45.0	+1.3	
YKA				pmax		pmax			
	comp=Z,1.0nm,0.6s								
AKN	**Aaknes**	103.12	335	*e*P		**Pdif**	11 13 47.3	-0.1	
I03D	**Drain, OR**	103.77	45	P		**Pdif**	11 13 51.2	+0.6	
	baz=284								
H04D	**Lebanon**	103.99	44	P		**Pdif**	11 13 51.4	-0.2	
	baz=285								
GERES	**GERESS Array B**	104.76	321	Pdiff		**Pdif**	11 13 54.6	-0.5	
	comp=Z,0.3nm,0.2s,baz=3.3,slow=7.0,SNR=3.6								
GERES				PKiKP		**PKiKP**	11 18 10.1	0.0	
	comp=Z,0.3nm,0.2s,baz=100,slow=1.1,SNR=1.6								
J05D	**Fort Rock, OR**	105.36	45	P		**PKiKP**	11 18 12.0	+0.5	
	baz=286								
NVAR	**Mina Array Bea**	108.83	49	Pdiff		**Pdif**	11 14 14.0	+0.4	
	comp=Z,0.5nm,0.7s,baz=278,slow=5.8,SNR=4.9								
NVAR				PKiKP		**PKiKP**	11 18 18.2	0.0	
	comp=Z,0.7nm,0.7s,baz=266,slow=2.2,SNR=6.5								
NVAR				PP		**PP**	11 18 45.5	-0.5	
	comp=Z,0.6nm,0.7s,baz=294,slow=7.4,SNR=4.1								
HLID	**Hailey**	109.99	43	P		**PKiKP**	11 18 20.5	+0.4	
	baz=291								
EDW2	**Edwards Air Fo**	110.04	52	P		**PKiKP**	11 18 20.4	+0.1	
	baz=285								
TPFO	**Pinon Flats**	111.61	53	P		**PKiKP**	11 18 23.0	-0.4	
	baz=286								
MONP2	**Monument Peak**	111.82	54	P		**PKiKP**	11 18 24.1	+0.2	
	baz=286								
BELC	**Belle Mtn. Jos**	111.86	53	P		**PKiKP**	11 18 24.3	+0.4	
	baz=286								
GMRC	**Granite Mounta**	111.91	52	P		**PKiKP**	11 18 24.3	+0.4	
	baz=287								
DUG	**Dugway, Tooele**	112.31	46	P		**PKiKP**	11 18 25.0	+0.4	
	baz=291								
IRM	**Iron Mountain**	112.50	53	P		**PKiKP**	11 18 25.8	+0.8	
	baz=287								
BW06	**Boulder Array**	113.58	42	P		**PKiKP**	11 18 26.8	-0.2	
	baz=294								
PDAR	**Pinedale Array**	113.58	42	PKiKP		**PKiKP**	11 18 26.5	-0.5	
	comp=Z,0.2nm,0.5s,baz=270,slow=2.7,SNR=4.6								
PDAR				PKKPbc		**PKKPbc**	11 29 11.0	-1.3	
	comp=Z,0.8nm,0.5s,baz=115,slow=4.7,SNR=8.3								
PDAR				PKKPab		**PKKPab**	11 29 17.9	-1.0	
	comp=Z,0.5nm,0.5s,baz=110,slow=5.1,SNR=4.8								
WUAZ	**Wupatki**	115.01	50	P		**PKPdf**	11 18 30.4	+0.5	
	baz=290								
214A	**Organ Pipe Nat**	115.02	54	P		**PKPdf**	11 18 30.1	+0.3	
	baz=288								
O20A	**White River Ci**	115.56	44	P		**PKPdf**	11 18 30.9	+0.1	
	baz=294								
W18A	**Petrified Fore**	116.40	50	P		**PKiKP**	11 18 32.7	+0.1	
	baz=291								
TUC	**Tucson**	116.54	53	P		**PKiKP**	11 18 33.2	+0.4	
	baz=289								
RSSD	**Black Hills**	116.55	39	P		**PKPdf**	11 18 32.1	-0.6	
	baz=300								
MVCO	**Mesa Verde**	116.55	47	P		**PKiKP**	11 18 33.2	+0.3	
	baz=293								
N23A	**Red Feather La**	116.82	43	P		**PKPdf**	11 18 33.3	0.0	
	baz=297								
ISCO	**Idaho Springs**	117.53	44	P		**PKiKP**	11 18 34.9	+0.1	
	baz=296								
S22A	**4UR Ranch, Cre**	117.55	46	P		**PKiKP**	11 18 35.5	+0.5	
	baz=294								
ULM	**Lac du Bonnet**	117.64	30	PKP		**PKPdf**	11 18 32.9	-1.4	
	comp=Z,3.5nm,0.5s,baz=311,slow=2.3,SNR=5.8								
SDCO	**Great Sand Dun**	118.51	46	P		**PKPdf**	11 18 36.5	-0.3	
	baz=296								
SDCO	**Great Sand Dun**	118.51	46	P		**PKiKP**	11 18 37.0	+0.2	
	baz=296								
121A	**Cookes Peak, D**	118.85	52	P		**PKiKP**	11 18 37.7	+0.2	
	baz=291								
ANMO	**Albuquerque**	118.96	49	PKPdf		**PKPdf**	11 18 37.2	-0.4	
ANMO	**Albuquerque**	118.96	49	PKiKP		**PKPdf**	11 18 37.2	-0.4	
ANMO	**Albuquerque**	118.96	49	P		**PKPdf**	11 18 36.9	-0.7	
	baz=293								
ANMO	**Albuquerque**	118.96	49	P		**PKiKP**	11 18 37.9	+0.3	
	baz=293								
Y22A	**Socorro**	118.97	50	P		**PKiKP**	11 18 38.2	+0.5	
	baz=292								
T25A	**Trinidad**	119.55	46	P		**PKiKP**	11 18 38.8	+0.1	
	baz=296								
B35A	**Bob, Littlefor**	119.93	30	P		**PKPdf**	11 18 37.0	-1.8	
	baz=311								
ESDC	**Sonseca Array**	120.03	318	PP		**PP**	11 20 08.6	+4.1	
	comp=Z,1.2nm,0.8s,baz=61,slow=6.7,SNR=5.9								
MNTX	**Cornudas Mount**	121.05	52	P		**PKiKP**	11 18 41.6	0.0	
	baz=292								
MNTX	**Cornudas Mount**	121.05	52	P		**PKiKP**	11 18 41.6	0.0	
	baz=292								
ECSD	**EROS Data Cent**	121.26	36	PKPdf		**PKPdf**	11 18 40.6	-0.9	
ECSD	**EROS Data Cent**	121.26	36	P		**PKPdf**	11 18 40.9	-0.6	
	baz=306								
ECSD	**EROS Data Cent**	121.26	36	P		**PKPdf**	11 18 40.6	-0.9	
	baz=306,SNR=6.0								
EYMN	**Ely**	121.32	29	P		**PKPdf**	11 18 40.8	-0.7	
	baz=313								
F36A	**Milaca**	121.67	32	P		**PKPdf**	11 18 41.5	-0.7	
	baz=310								
MSTX	**Muleshoe**	122.14	49	P		**PKPdf**	11 18 43.1	-0.5	
	baz=296								
SPMN	**Marine on St.**	122.47	32	P		**PKPdf**	11 18 43.4	-0.3	
	baz=311								
AMTX	**Amarillo**	122.54	47	P		**PKPdf**	11 18 44.2	-0.1	
	baz=297								
R32A	**Long Quarter,**	122.90	42	P		**PKPdf**	11 18 44.9	+0.1	
	baz=302								
TX31	**Lajitas Ar. Si**	123.31	54	P		**PKPdf**	11 18 45.8	-0.2	
	baz=292								
TXAR	**Lajitas Array**	123.31	54	PKP		**PKPdf**	11 18 45.4	-0.5	
	comp=Z,1.6nm,0.8s,baz=225,slow=1.4,SNR=18								
TXAR				PKKPbc		**PKKPab**	11 28 36.1	-0.1	
	comp=Z,0.4nm,0.7s,baz=130,slow=6.2,SNR=6.0								
TXAR	**Lajitas Array**	123.31	54	PKPdf		**PKPdf**	11 18 45.5	-0.4	
SCHQ	**Schefferville**	123.69	10	PKP		**PKPdf**	11 18 45.9	+0.1	
	comp=Z,5.6nm,0.6s,baz=34,slow=4.4,SNR=6.9								
COWI	**Conover**	123.76	30	P		**PKPdf**	11 18 45.8	-0.4	
	baz=315								
G40A	**Rib Lake**	123.81	31	P		**PKPdf**	11 18 45.4	-0.9	
	baz=313								
KSU1	**Kansas State U**	123.92	40	P		**PKPdf**	11 18 46.4	-0.3	
	baz=304								
KSU1	**Kansas State U**	123.92	40	P		**PKPdf**	11 18 46.3	-0.4	
	baz=304								
TOA0	**Torodi Ar. Sit**	124.13	286	PKPdf		**PKPdf**	11 18 47.3	-0.4	
TORD	**Torodi Ar. Bea**	124.13	286	PKP		**PKPdf**	11 18 47.5	-0.2	
	comp=Z,6.7nm,0.6s,baz=74,slow=1.9,SNR=52								
TORD				PP		**PP**	11 20 36.4	+3.1	
	comp=Z,2.5nm,1.2s,baz=66,slow=5.0,SNR=3.9								
TORD				SKP			11 22 14.7		
	comp=Z,1.1nm,0.7s,baz=88,slow=1.4,SNR=4.1								
TORD				PKKPbc		**PKKPbc**	11 28 32.6	-0.1	
	comp=Z,5.6nm,0.7s,baz=279,slow=3.7,SNR=28								
WMOK	**Wichita Mounta**	124.71	46	P		**PKPdf**	11 18 48.1	-0.3	
	baz=299								
ABTX	**Abilene, Hawle**	125.08	49	P		**PKPdf**	11 18 49.1	0.0	
	baz=297								
JFWS	**Jewell Farm**	125.38	33	P		**PKPdf**	11 18 48.0	-1.4	
	baz=312								
JFWS	**Jewell Farm**	125.38	33	P		**PKPdf**	11 18 48.4	-1.0	
	baz=312								
L40A	**Anamosa**	125.40	34	P		**PKPdf**	11 18 48.8	-0.7	
	baz=311								
I42A	**Draeger Farm,**	125.42	31	P		**PKPdf**	11 18 48.7	-0.8	
	baz=314								
P38A	**Dawn**	125.56	38	P		**PKPdf**	11 18 49.2	-0.6	
	baz=307								
E46A	**Sault Ste Mari**	125.83	26	P		**PKPdf**	11 18 50.1	0.0	
	baz=320								
JCT	**Junction City**	125.91	51	PKPdf		**PKPdf**	11 18 50.6	-0.2	
JCT	**Junction City**	125.91	51	PKiKP		**PKPdf**	11 18 50.7	-0.2	
JCT	**Junction City**	125.91	51	P		**PKPdf**	11 18 51.0	+0.1	
	baz=296								
JCT	**Junction City**	125.91	51	P		**PKPdf**	11 18 50.6	-0.2	
	baz=296								
TUL1	**Leonard**	126.20	43	P		**PKPdf**	11 18 51.2	0.0	
	baz=303								
K43A	**Burlington**	126.55	32	P		**PKPdf**	11 18 50.8	-0.8	
	baz=314								
S39A	**Bolivar**	126.84	40	P		**PKPdf**	11 18 51.0	-1.4	
	baz=306								
U38A	**Gravette**	126.86	42	P		**PKPdf**	11 18 52.0	-0.4	
	baz=304								
R40A	**Maddies Statio**	127.15	39	P		**PKPdf**	11 18 52.6	-0.3	
	baz=308								
833A	**Chaparral WMA,**	127.15	53	P		**PKiKP**	11 18 53.6	-0.1	
	baz=295								
833A	**Chaparral WMA,**	127.15	53	P		**PKiKP**	11 18 53.8	+0.1	
	baz=295								
HDIL	**Hopedale**	127.48	35	P		**PKPdf**	11 18 52.7	-0.8	
	baz=312								
CCM	**Cathedral Cave**	127.93	38	PKPdf		**PKPdf**	11 18 54.0	-0.4	
CCM	**Cathedral Cave**	127.93	38	PKiKP		**PKPdf**	11 18 54.0	-0.4	
CCM	**Cathedral Cave**	127.93	38	P		**PKPdf**	11 18 54.5	+0.1	
	baz=308								
CCM	**Cathedral Cave**	127.93	38	P		**PKPdf**	11 18 53.8	-0.6	
	baz=308								
J47A	**Sumner**	127.96	29	P		**PKPdf**	11 18 54.0	-0.3	
	baz=318								
J47A				P		**PKPdf**	11 18 54.0	-0.3	
	baz=318								
W39A	**Magazine**	127.96	43	P		**PKiKP**	11 18 55.0	-0.2	
	baz=304								
W39A	**Magazine**	127.96	43	P		**PKPdf**	11 18 54.3	-0.2	
	baz=304								
MIAR	**Mount Ida**	128.47	43	P		**PKPdf**	11 18 55.5	-0.1	
	baz=304								
X40A	**Basin Creek Fa**	129.01	43	P		**PKPdf**	11 18 56.3	-0.3	
	baz=305								
W41B	**Gary Mavity, V**	129.01	42	P		**PKPdf**	11 18 56.1	-0.4	
	baz=306								
L48A	**N Adams**	129.11	30	P		**PKPdf**	11 18 56.4	-0.1	
	baz=318								
L48A				P		**PKPdf**	11 18 56.4	-0.1	
	baz=318								
O48B	**Farmland**	129.97	32	P		**PKPdf**	11 18 57.5	-0.8	
	baz=316								
P49A	**Miami Univ. Ec**	130.72	32	P		**PKPdf**	11 18 59.2	-0.5	
	baz=316								
ERPA	**Erie**	131.09	27	P		**PKPdf**	11 18 59.8	-0.5	
	baz=323								
ACSO	**Alum Creek Sta**	131.11	31	P		**PKPdf**	11 19 00.1	-0.3	
	baz=318								
LONY	**Lake Ozonia**	131.15	20	P		**PKPdf**	11 19 00.2	-0.1	
	baz=331								
WVT	**Waverly**	131.26	38			**PKPdf**	11 19 01.0	+0.2	
WVT	**Waverly**	131.26	38	PKIKP		**PKPdf**	11 19 01.0	+0.2	
WVT	**Waverly**	131.26	38	P		**PKPdf**	11 19 00.4	-0.4	
	baz=311								
M53A	**WI Miller and**	131.31	28	P		**PKPdf**	11 19 00.8	+0.1	
	baz=322								
DBIC	**Dimbokro**	131.44	279	PKP		**PKiKP**	11 19 02.4	-0.3	
	comp=Z,2.8nm,0.6s,baz=311,slow=2.1,SNR=4.0								
DBIC				SKPbc		**SKPbc**	11 22 17.8	-1.2	
	comp=Z,4.6nm,0.7s,baz=95,slow=3.1,SNR=6.5								
P51A	**Williamsport**	131.63	31	P		**PKPdf**	11 19 01.6	+0.2	
	baz=318								
P51A				P		**PKPdf**	11 19 01.6	+0.2	
	baz=318								
N53A	**Lisbon**	131.73	28	P		**PKiKP**	11 19 02.3	-0.3	
	baz=321								
N53A				P		**PKiKP**	11 19 02.3	-0.3	
	baz=321								
J58A	**Remsen**	131.99	22	P		**PKPdf**	11 19 02.1	+0.1	
	baz=329								
J58A				P		**PKPdf**	11 19 02.1	+0.1	
	baz=329								
P52A	**Corning**	131.99	30	P		**PKPdf**	11 19 01.7	-0.4	
	baz=319								
L56A	**Greenwood**	132.12	25	P		**PKPdf**	11 19 01.9	-0.4	
	baz=326								
L56A				P		**PKPdf**	11 19 01.9	-0.4	
	baz=326								
LBNH	**Lisbon**	132.37	18	P		**PKPdf**	11 19 02.7	+0.1	
	baz=334								
T50A	**Nancy**	132.44	35	P		**PKPdf**	11 19 02.9	-0.1	
	baz=314								
T50A				P		**PKPdf**	11 19 02.9	-0.1	
	baz=314								
BINY	**Binghamton**	132.71	23	P		**PKPdf**	11 19 03.2	-0.2	
	baz=328								
SSPA	**Standing Stone**	133.22	26	P		**PKPdf**	11 19 04.4	0.0	
	baz=325								
TZTN	**Tazewell**	133.50	34	P		**PKPdf**	11 19 04.8	-0.2	
	baz=316								
L61B	**Northampton**	133.72	20	P		**PKPdf**	11 19 05.0	-0.2	
	baz=332								
LRAL	**Lakeview Retre**	133.77	41	P		**PKPdf**	11 19 06.0	+0.4	
	baz=309								
LRAL	**Lakeview Retre**	133.77	41	P		**PKPdf**	11 19 05.7	+0.1	
	baz=309								
V52A	**Sevierville**	133.97	35	P		**PKPdf**	11 19 06.4	+0.4	
	baz=315								
HRV	**Adam Dziewonsk**	134.04	19	P		**PKPdf**	11 19 05.9	0.0	
	baz=334								
PAL	**Palisades**	134.53	22	P		**PKPdf**	11 19 06.4	-0.4	
	baz=330								
GOGA	**Godfrey**	135.74	37	P		**PKiKP**	11 19 10.7	-0.1	
	baz=314								
KMSC	**Kings Mountain**	135.76	34	P		**PKiKP**	11 19 10.6	-0.3	
	baz=317								
PLCA	**Paso Flores**	136.90	160	PKP		**PKPdf**	11 19 12.0	+0.7	
	comp=Z,2.5nm,0.6s,baz=196,slow=3.9,SNR=9.2								
PLCA				SKPbc		**SKPbc**	11 22 35.3	-0.9	
	comp=Z,3.0nm,0.7s,baz=225,slow=3.9,SNR=13								
PLCA	**Paso Flores**	136.90	160	*e*P		**PKPdf**	11 19 09.4	-2.0	
JTS	**Las Juntas de**	146.45	70			**PKPdf**	11 19 28.4	-0.6	
JTS				PKPbc		**PKPab**	11 19 31.1	-0.4	
JTS	**Las Juntas de**	146.45	70	PKP2		**PKPab**	11 19 31.2	-0.4	
LCO	**Las Campanas**	146.99	151			**PKPbc**	11 19 32.6	+0.7	
LCO	**Las Campanas**	146.99	151	PKP2		**PKPbc**	11 19 32.6	+0.7	
SRBA	**San Rafael, Bu**	148.26	72			**PKiKP**	11 19 36.9	-0.3	
PLTB	**Pedras Altas**	148.90	179			**PKiKP**	11 19 37.7	-0.3	
PLTB	**Pedras Altas**	148.90	179	*e*P		**PKPdf**	11 19 29.5	-3.1	
ITQB	**Itaqui**	150.78	174	*e*P		**PKPdf**	11 19 32.4	-3.2	
ITAB	**Concordia**	153.40	182	*e*P		**PKPdf**	11 19 37.3	-2.2	
CPUP	**Villa Florida**	153.98	171	PKP		**PKPdf**	11 19 39.9	-0.5	
	comp=Z,2.2nm,0.6s,baz=21,slow=2.6,SNR=1.4								
CPUP				PKPbc		**PKiKP**	11 19 48.5	0.0	
	comp=Z,11nm,0.9s,baz=160,slow=1.0,SNR=12	

METS	**Metsamor**	**1.78**	**341**	*e*P	**Pb**	**11 05 07.7 +0.2**
METS				*e*S	**Sg**	**11 05 32.0 +0.6**
IBST	**Bostanabad**	**1.79**	**115**	*e*		11 05 33.5
	comp=Z,4µm,0.6s					
IBST				*e*Pn	**Pb**	**11 05 06.6 -1.0**
VNNZ	**Vanand**	**1.81**	**334**	*e*P	**Pg**	**11 05 08.7 -0.3**
VNNZ				*e*S	**Sg**	**11 05 34.8 +2.3**
AGRB	**Hanur-Agry**	**1.82**	**308**	PN	**Pb**	**11 05 07.2 -0.9**
AGRB	**Hanur-Agry**	**1.82**	**308**	*e*Pn	**Pb**	**11 05 07.2 -0.9**
MAHB	**Mahabad**	**1.83**	**158**	*e*		11 05 44.6
	comp=Z,2µm,0.6s					
MAHB				*e*Pn	**Pb**	**11 05 07.7 -0.6**
KOTA	**Agri, Merkez-K**	**1.84**	**317**	P	**Pg**	**11 05 09.1 -0.5**
KOTA				S	**Sg**	**11 05 33.2 -0.2**
KAPZ	**Kaputan**	**1.85**	**357**	*e*P	**Pb**	**11 05 08.4 -0.3**
KAPZ				*e*S	**Sg**	**11 05 34.8 +1.0**
PERV	**Siirt/Pervari-**	**1.89**	**255**	P	**Pg**	**11 05 10.7 +0.3**
MLAZ	**Malazgirt-MUS**	**1.92**	**291**	PN	**Pn**	**11 05 08.1 +0.4**
MLAZ	**Malazgirt-MUS**	**1.92**	**291**	*e*Pn	**Pb**	**11 05 08.3 -1.5**
AMBZ	**Amberd**	**1.97**	**347**	*e*P	**Pb**	**11 05 10.9 +0.2**
AMBZ				⇓S	**Sg**	**11 05 38.9 +1.4**
QRD	**Qoradiz**	**2.17**	**62**	*e*Pn	**Pb**	**11 05 13.1 -0.8**
QRD	**Qoradiz**	**2.17**	**62**	P	**Pb**	**11 05 13.2 -0.8**
	SNR=15					
QRD				S	**Sg**	**11 05 43.2 -0.7**
GURO	**Guroymak-BITLI**	**2.21**	**273**	PN	**Pn**	**11 05 12.4 +0.7**
GURO	**Guroymak-BITLI**	**2.21**	**273**	*e*Pn	**Pn**	**11 05 12.4 +0.7**
IHSH	**Hashtrud**	**2.24**	**121**	*e*Pn	**Pb**	**11 05 14.4 -1.0**
EATA	**Eleskirt**	**2.30**	**308**	P	**Pb**	**11 05 16.6 +0.2**
ISRB	**Sarab**	**2.31**	**105**	*e*Pn	**Pb**	**11 05 15.1 -1.5**
ISRB				*e*		11 05 32.3
	comp=Z,2µm,0.4s					
GDB	**GEDABAY**	**2.35**	**17**	P	**Pb**	**11 05 15.7 -1.6**
	SNR=28					
GDB				S	**Sb**	**11 05 45.4 -1.4**
AGDM	**Agdam**	**2.40**	**46**	P	**Pb**	**11 05 17.4 -0.6**
	SNR=16					
GRMI	**Germi**	**2.41**	**81**	*e*Pn	**Pb**	**11 05 17.6 -0.6**
GRMI				*e*		11 05 57.3
	comp=Z,99nm,0.8s					
EAK	**Akyaka**	**2.41**	**337**	P	**Pb**	**11 05 18.6 +0.4**
BLQ	**Beylaqan**	**2.45**	**59**	P	**Pb**	**11 05 17.4 -1.4**
	SNR=16					
GANJ	**Ganja**	**2.45**	**27**	P	**Pb**	**11 05 17.4 -1.5**
	SNR=35					
GANJ				S	**Sb**	**11 05 47.6 -1.9**
KARS	**Kars**	**2.55**	**328**	PN	**Pn**	**11 05 17.0 +0.5**
STE	**Stepanavan**	**2.55**	**352**	*e*P	**Pg**	**11 05 22.5 -0.6**
STE				*e*S	**Sg**	**11 05 59.5 +3.3**
QZX	**Qazax, Azerbai**	**2.62**	**9**	P	**Pb**	**11 05 20.5 -1.1**
	SNR=10					
QZX				S	**Sn**	**11 05 50.4 +0.9**
YRD	**Yardimli**	**2.69**	**79**	P	**Pb**	**11 05 21.3 -1.7**
	SNR=15					
YRD				S	**Sb**	**11 05 57.2 +0.6**
LRK	**Lerik**	**2.74**	**85**	P	**Pb**	**11 05 24.2 +0.3**
	SNR=59					
LRK				S	**Sb**	**11 05 57.3 -0.7**
ZRD	**Zardab**	**2.85**	**50**	P	**Pg**	**11 05 27.3 -1.4**
ZRD				S	**Sb**	**11 06 02.1 +1.4**
GLBA	**Clilabad**	**2.87**	**73**	P	**Pb**	**11 05 24.8 -1.2**
	SNR=4.2					
GLBA				S	**Sb**	**11 06 00.9 -0.6**
SVAN	**Silvan-Diyarba**	**2.89**	**265**	PN	**Pn**	**11 05 22.1 +1.1**
LKRN	**Lenkeran, Azer**	**3.09**	**84**	P	**Pn**	**11 05 25.9 +2.2**
	SNR=8.3					
LKRN				S	**Sb**	**11 06 05.5 -2.2**
ASTR	**Astara**	**3.10**	**87**	P	**Pb**	**11 05 27.5 -2.3**
	SNR=3.5					
ASTR				S	**Sb**	**11 06 06.4 -1.4**
SEKA	**Sheki**	**3.28**	**33**	P	**Pb**	**11 05 29.6 -3.3**
	SNR=11					
SEKA				S	**Sb**	**11 06 12.5 -0.7**
BNGB	**Bingl**	**3.30**	**280**	PN	**Pn**	**11 05 27.9 +1.2**
ZKTA	**Zakatala**	**3.44**	**23**	P	**Pn**	**11 05 30.2 +1.6**
	SNR=6.2					
ZKTA				S	**Sb**	**11 06 13.8 -4.2**
IML	**Ismayilli**	**3.47**	**47**	P	**Pb**	**11 05 32.9 -3.2**
	SNR=4.6					
ZNJK	**Zanjan**	**3.54**	**119**	*e*Pn	**Pn**	**11 05 32.1 +2.0**
XNQ	**Khinaliq**	**3.70**	**42**	P	**Pn**	**11 05 35.0 +2.6**
	SNR=5.6					
XNQ				S	**Sb**	**11 06 21.7 -3.8**
PQL	**Pirkuli**	**3.71**	**50**	P	**Pn**	**11 05 35.7 +3.4**
	SNR=7.2					
PQL				S	**Sb**	**11 06 23.8 -1.8**
SNGE	**Sanandaj**	**3.92**	**148**	*e*Pn	**Pb**	**11 05 39.7 -4.3**
QSAR	**Qusar**	**4.02**	**40**	P	**Pb**	**11 05 42.0 -3.5**
	SNR=3.4					
QALM	**Alamut, Qazvin**	**5.04**	**112**	*e*Pn	**Pn**	**11 05 53.4 +2.6**

*IDC **22** 11:05:59.2±3.6,24°.69S×179°.82W,h488km±32km, mb3.5/4, mbtmp4.2/5, Error ellipse: s-maj=66.4km s-min=23.8km az=152.0*
*NEIC **22** 11:06:00.4±1.3,24°.42S±0°.10×179°.8W±0°.2, h496km±7km, mb4.1/14, Error ellipse: s-maj=24.3km s-min=12.7km az=106.0*

ISC 22 11:06:01.4±0.8,24°.38S±0°.10×180°.0W±0°.1, h505km, n24, σ0s75/25, mb4.1/12, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.87**	**344**	P	**P**	**11 07 47.7**	**+1.0**
	1.9nm,0.4s,baz=137,slow=23,SNR=4.3						
MSVF	**Nonsavu**	**6.87**	**344**	P	**P**	**11 07 47.2**	**+0.5**
MSVF					**S**	**11 09 11.9**	**-0.8**
CTA	**Charters Tower**	**31.51**	**271**	P	**P**	**11 11 41.8**	**+0.1**
	5.3nm,0.4s,baz=97,slow=9.6,SNR=14						
	5.3nm,0.4s						
CTAO	**Charters Tower**	**31.51**	**271**	P	**P**	**11 11 42.4**	**+0.7**
STKA	**Stephens Creek**	**34.58**	**249**	P	**P**	**11 12 07.1**	**-0.4**
	3.6nm,0.6s,baz=90,slow=20,SNR=6.3						
	3.6nm,0.6s						
STKA	**Stephens Creek**	**34.58**	**249**	P	**P**	**11 12 07.1**	**-0.4**
AS31	**Alice Springs**	**41.99**	**261**	P	**P**	**11 13 09.0**	**+0.9**
WR0	**Warramunga Arr**	**42.22**	**267**	P	**P**	**11 13 09.0**	**-0.8**
WR0				IAmb	IAmb	11 13 17.6	
	comp=Z,4.8nm,1.1s						
WB2	**Warramunga Arr**	**42.40**	**267**	P	**P**	**11 13 10.7**	**-0.6**
WB2				IAmb	IAmb	11 13 29.9	
	comp=Z,11nm,1.4s						
WRAB	**Tennant Creek**	**42.40**	**267**	P	**P**	**11 13 10.7**	**-0.6**
WRAB				IAmb	IAmb	11 13 24.3	
	comp=Z,6.9nm,1.2s						
WB0	**Warramunga Arr**	**42.41**	**267**	P	**P**	**11 13 10.8**	**-0.6**
WB0				IAmb	IAmb	11 13 24.1	
	comp=Z,9.2nm,1.2s						
WRA	**Warramunga Arr**	**42.41**	**267**	P	**P**	**11 13 10.3**	**-1.0**
	comp=Z,2.4nm,0.5s,baz=106,slow=8.8,SNR=28						
WRA				ScP	**ScP**	**11 17 57.0**	**+1.4**
	comp=Z,0.7nm,0.8s,baz=95,slow=3.4,SNR=3.6						
	comp=Z,2.4nm,0.5s						
WRA	**Warramunga Arr**	**42.41**	**267**	P	**P**	**11 13 10.8**	**-0.6**
KNRA	**Kununurra**	**48.72**	**270**	P	**P**	**11 13 59.5**	**-0.2**
CASY	**Casey**	**59.70**	**206**	P	**P**	**11 15 15.9**	**-0.4**
CASY				IAmb	IAmb	11 15 31.7	
	comp=Z,13nm,1.4s						
QSPA	**South Pole Qui**	**65.71**	**180**	P	**P**	**11 15 56.7**	**+1.3**
QSPA				IAmb	IAmb	11 16 24.9	
	comp=Z,6.4nm,1.4s						
BELA	**Belgrano 2**	**75.96**	**173**	P	**P**	**11 16 55.7**	**+0.2**
BELA				IAmb	IAmb	11 17 21.2	
	comp=Z,3.6nm,1.3s						
MAW	**Mawson**	**77.31**	**200**		pP	11 18 48.4	-1.5
PMSA	**Palmer Station**	**78.46**	**157**	P	**P**	**11 17 08.2**	**-1.1**
TROLL	**Troll, Antarti**	**83.86**	**181**	P	**P**	**11 17 37.4**	**+0.2**
SNAA	**Sanae**	**84.19**	**179**	P	**P**	**11 17 38.4**	**-0.3**
SNAA	**Sanae**	**84.19**	**179**	P	**P**	**11 17 38.6**	**-0.1**
SNAA				IAmb	IAmb	11 17 56.1	
	comp=Z,6.6nm,1.4s						
VNA3	**Neumayer Olymp**	**84.40**	**177**	P	**P**	**11 17 39.6**	**-0.1**
TXAR	**Lajitas Array**	**90.66**	**58**	P	**P**	**11 18 09.7**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=212,slow=8.1,SNR=5.8						
	comp=Z,0.6nm,0.8s						

IDC 22 11:10:44.7±3.8, 53°.46N×90°.30E, h0km, mbtmp3.0/3, ML1.9/2, Error ellipse: s-maj=33.1km s-min=25.4km az=38.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.29**	**281**	*i*		11 32 05.0	

	0.1nm,1.1s,baz=91,slow=317,SNR=7.7					
ZALV	**Zalesovo Beam**	**3.29**	**281**	Pn	Pn	11 11 39.1 +1.6
	0.4nm,0.3s,baz=97,slow=14,SNR=2.3					
ZALV				Lg	Lg	11 12 29.6
	1.1nm,0.3s,baz=94,slow=21,SNR=8.6					
	1.0nm,0.3s					
KURBB	**Kurchatov Arra**	**7.79**	**253**	Pn	Pn	11 12 39.4 +0.2
	baz=66,slow=15,SNR=2.3					
KURBB				Sn	Sn	11 14 05.6 -2.4
	baz=64,slow=23					
KURBB				Lg	Lg	11 14 52.5
	baz=65,slow=34,SNR=1.3					
	0.4nm,0.3s					
MKAR	**Makanchi Array**	**8.42**	**221**	Pn	Pn	11 12 48.4 +0.5
	0.5nm,0.5s,baz=34,slow=12,SNR=1.4					
MKAR				Lg	Lg	11 15 11.5
	0.1nm,0.3s,baz=19,slow=32,SNR=3.4					

*JMA **22** 11:27:06.0±0.2,35°.6N±0°.6×14°.1E±°, h37km±1km, MV3.4/35, NEAR CHOSHI CITY*
*IDC **22** 11:27:07.8±2.5,35°.42N×140°.83E, h50km±22km, mb3.7/9, mbtmp3.9/14, ML3.0/4, MS3.1/7, Error ellipse: s-maj=29.6km s-min=12.3km az=81.0*

ISC 22 11:27:05.2±0.7, 35°.46N±0°.04×141°.10E±0°.08, h33km, n37, σ1s63/28, mb4.0/9, MS3.3/3, 9D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.31**	**321**	⇓P	**Pb**	**11 27 13.2**	**0.0**
CHOJ				⇓*e*S	**Sb**	**11 27 17.9**	**-0.5**
JSMT	**Sammumatsuo**	**0.56**	**289**	⇓P	**Pn**	**11 27 16.9**	**+0.1**
JIHU	**Itakohorinouch**	**0.69**	**317**	⇓P	**Pn**	**11 27 18.4**	**-0.2**
JIHU				⇓*e*S	**Sb**	**11 27 27.4**	**-0.7**
KTR	**Katsuura**	**0.71**	**244**	*e*P	**Pb**	**11 27 19.7**	**+0.5**
JCN	**Nagara**	**0.73**	**267**	⇓P	**Pb**	**11 27 20.5**	**+0.9**
BSO2	**Boso 2**	**0.76**	**202**	*e*X		11 27 34.7	
BSO4	**Boso 4**	**0.78**	**233**	⇓P	**Pb**	**11 27 21.1**	**+0.8**
BSO1	**Boso 1**	**0.81**	**187**	P	**Pb**	**11 27 21.8**	**+1.2**
BSO1				X		11 27 33.8	
BSO3	**Boso 3**	**0.81**	**216**	⇓P	**Pb**	**11 27 21.6**	**+0.8**
JYT	**Yasato**	**1.06**	**316**	⇓P	**Pn**	**11 27 23.2**	**-0.6**
JHJ	**Hachijo jima 2**	**2.58**	**205**	P	**Pn**	**11 27 45.6**	**+1.0**
	28nm,0.3s,baz=140,slow=23,SNR=24						
JHJ				S	**Sn**	**11 28 14.7**	**-0.1**
	150nm,0.3s,baz=262,slow=23,SNR=8.8						
JHJ				LR	LR	11 28 16.8	
	comp=Z,50nm,18.8s,baz=322,slow=28						
	69nm,0.3s						
MJAR	**Matsushiro Arr**	**2.58**	**296**	P	**Pn**	**11 27 45.2**	**+0.5**
	2.8nm,0.3s,baz=99,slow=8.1,SNR=136						
MJAR				LR	LR	11 28 52.8	
	comp=Z,393nm,19.8s,baz=168,slow=44						
	8.0nm,0.3s						
JCJ	**Chichijima**	**8.39**	**173**	P	**Pn**	**11 29 05.2**	**+0.6**
	20nm,0.3s,baz=278,slow=22,SNR=10						
JCJ				S	**Sn**	**11 30 31.1**	**-7.1**
	12nm,0.4s,baz=147,slow=23,SNR=2.6						
KSRS	**Korea Array**	**10.80**	**284**	P	**Pn**	**11 29 37.6**	**+0.1**
	0.2nm,0.3s,baz=96,slow=14,SNR=2.8						
KSRS				LR	LR	11 33 48.4	
	comp=Z,151nm,21.0s,baz=95,slow=38						
	0.2nm,0.3s						
USRK	**Usuysk Ar.**	**11.18**	**324**	P	**Pn**	**11 29 44.1**	**+1.4**
	0.2nm,0.3s,baz=129,slow=11,SNR=1.7						
	1.1nm,0.6s						
KLR	**Kul'dur**	**15.38**	**336**	LR	LR	11 36 24.0	
	comp=Z,88nm,19.4s,baz=202,slow=36						
H11N2	**WAKE ISLAND Hy**	**27.60**	**118**	T	T	12 01 53.2	
	baz=310,slow=75,SNR=45						
H11N1	**WAKE ISLAND Hy**	**27.61**	**118**	T	T	12 01 58.4	
	baz=310,slow=75,SNR=46						
H11N3	**WAKE ISLAND Hy**	**27.62**	**118**	T	T	12 01 50.6	
	baz=310,slow=75,SNR=34						
H11S1	**WAKE ISLAND Hy**	**28.26**	**120**	T	T	12 02 46.6	
	baz=312,slow=75,SNR=189						
H11S3	**WAKE ISLAND Hy**	**28.26**	**120**	T	T	12 02 43.5	
	baz=312,slow=75,SNR=140						
H11S2	**WAKE ISLAND Hy**	**28.27**	**120**	T	T	12 02 42.4	
	baz=312,slow=75,SNR=140						
SONM	**Songino Array**	**28.48**	**306**	P	**P**	**11 32 56.2**	**-1.2**
	0.7nm,0.6s,baz=104,slow=8.7,SNR=4.2						
SONM				LR	LR	11 44 43.5	
	comp=Z,48nm,18.4s,baz=195,slow=37						
	0.7nm,0.6s						
CMAR	**Chiang Mai Arr**	**40.87**	**257**	LR	LR	11 53 26.7	
	comp=Z,36nm,18.4s,baz=70,slow=39						
ZALV	**Zalesovo Beam**	**42.80**	**314**	P	**P**	**11 34 59.4**	**-0.2**
	1.5nm,0.5s,baz=93,slow=7.6,SNR=7.8						
	1.5nm,0.5s						
MKAR	**Makanchi Array**	**44.75**	**303**	P	**P**	**11 35 15.0**	**-0.5**
	0.6nm,0.5s,baz=82,slow=9.9,SNR=8.4						
	0.6nm,0.5s						
ILAR	**Eielson Array**	**50.96**	**32**	P	**P**	**11 36 05.2**	**+1.9**
	0.2nm,0.5s,baz=268,slow=6.0,SNR=6.2						
	0.2nm,0.5s						
WRA	**Warramunga Arr**	**55.47**	**188**	P	**P**	**11 36 37.8**	**+1.0**
	1.4nm,0.7s,baz=6.1,slow=8.2,SNR=22						
	1.4nm,0.7s						
ARCES	**ARCESS Array B**	**65.38**	**340**	P	**P**	**11 37 44.1**	**+0.2**
	2.8nm,0.9s,baz=46,slow=6.4,SNR=4.2						
	2.8nm,0.9s						
FINES	**FINESS Array B**	**70.09**	**332**	P	**P**	**11 38 14.2**	**+0.6**
	1.4nm,0.5s,baz=76,slow=8.0,SNR=7.7						
	1.4nm,0.5s						
AKASG	**Malin Array Be**	**75.38**	**322**	P	**P**	**11 38 44.6**	**-0.7**
	0.9nm,0.5s,baz=48,slow=6.1,SNR=5.6						
	0.9nm,0.5s						
NB2	**NORSAR Subarra**	**75.54**	**337**	P	**P**	**11 38 46.9**	**+0.8**
	comp=Z,0.6nm,0.6s,baz=41,slow=5.9						
NOA	**NORSAR Array B**	**75.54**	**337**	P	**P**	**11 38 46.3**	**+0.2**
	comp=Z,1.4nm,0.8s,baz=40,slow=5.7,SNR=4.7						
	comp=Z,1.4nm,0.8s						
URZ	**Urewera**	**80.58**	**152**	LR	LR	12 09 06.4	
	comp=Z,38nm,20.3s,baz=31,slow=31						
H03N2	**Juan Fernandez**	**147.08**	**98**	T	T	14 31 18.1	
	baz=289,slow=76,SNR=7.9						
H03N3	**Juan Fernandez**	**147.09**	**98**	T	T	14 31 09.8	
	baz=289,slow=76,SNR=8.3						
H03N1	**Juan Fernandez**	**147.10**	**98**	T	T	14 31 26.1	
	baz=289,slow=76,SNR=9.0						

*TUL **22** 11:37:05.5±0.4,36°.55N±0°.01×97°.07W±0°.02, h6km±7km, ML2.5, mb_Lg2.3/25(NEIC), Error ellipse: s-maj=3.0km s-min=1.1km az=61.0*

NEIC 22 11:37:05.5±0.5, 36°.54N±0°.01×97°.08W±0°.01, h5km±7km, Error ellipse: s-maj=1.9km s-min=1.1km az=186.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T35A	**Sooner Cattle**	**0.59**	**50**	Pg	Pg	11 37 16.7	-0.2
OKCSW	**OKLAHOMA CITY**	**1.17**	**195**	Pg	Pg	11 37 27.6	-0.3
TUL1	**Leonard**	**1.22**	**121**	Pg	Pg	11 37 28.3	-0.5
FNO	**Franklin**	**1.30**	**192**	Pn	Pn	11 37 29.7	-0.7
R32A	**Long Quarter,**	**2.29**	**326**	IAmb_Lg		11 38 24.0	
	comp=Z,11nm,0.8s						
X37A	**Clayton**	**2.39**	**144**	IAmb_Lg		11 38 21.8	
	comp=Z,14nm,1.1s						
MGMO	**Mountain Grove**	**3.91**	**80**	IAmb_Lg		11 39 11.0	
	comp=Z,5.9nm,0.8s						
X40A	**Basin Creek Fa**	**4.02**	**119**	IAmb_Lg		11 39 12.5	
	comp=Z,7.9nm,0.7s						
FCAR	**Ozark Folk Cen**	**4.06**	**98**	IAmb_Lg		11 39 20.7	
	comp=Z,6.0nm,0.8s						
AMTX	**Amarillo**	**4.09**	**248**	IAmb_Lg		11 39 22.4	
	comp=Z,7.4nm,1.1s						
W41B	**Gary Mavity, V**	**4.15**	**108**	IAmb_Lg		11 39 16.0	
	comp=Z,6.4nm,0.8s						
R40A	**Maddies Statio**	**4.21**	**64**	IAmb_Lg		11 39 18.6	
	comp=Z,8.4nm,0.8s						
UALR	**University of**	**4.24**	**113**	IAmb_Lg		11 39 20.9	
	comp=Z,6.4nm,0.9s						
LCAR	**Lake Charles**	**4.81**	**94**	IAmb_Lg		11 39 39.5	
	comp=Z,5.4nm,0.8s						
CCM	**Cathedral Cave**	**4.89**	**70**	IAmb_Lg		11 39 39.1	
	comp=Z,5.8nm,0.7s						
P40A	**Paris**	**4.97**	**52**	IAmb_Lg		11 39 44.5	
	comp=Z,4.7nm,0.8s						
FVM	**French Village**	**5.50**	**73**	IAmb_Lg		11 40 06.2	
	comp=Z,5.7nm,0.7s						

*IDC **22** 12:03:20.1±0.8,57°.30N×33°.18W, h0km, mb3.8/12,*

mbtmp3.8/14, ML3.2/2, MS3.6/41, Error ellipse: s-maj=30.5km s-min=13.7km az=15.0
*NEIC **22** 12:03:22.1±1.2,57°.47N±0°.08×33°.1W±0°.1, h10km±1km, mb4.5/78, Error ellipse: s-maj=14.7km s-min=10.9km az=210.0*

ISC 22 12:03:22.4±0.4, 57°.42N±0°.08×33°.07W±0°.05, h15km, n127, σ0s70/84, mb4.4/51, MS3.6/36, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRS	**Narsarsuaq**	**7.35**	**306**	Pn	**Pn**	**12 05 08.4**	**-0.6**
ANGG	**Ammassalik, Gr**	**8.50**	**347**	Pn	**Pn**	**12 05 23.8**	**-0.9**
IVI	**Ivigtut**	**8.60**	**302**	Pn	**Pn**	**12 05 25.0**	**-1.1**
SFJD	**Kangerlussuaq**	**12.56**	**327**	LR	LR	12 10 23.2	
	comp=Z,300nm,19.9s,baz=146,slow=34						
SUMG	**Summit**	**15.37**	**354**		**Pn**	**12 06 58.0**	**-0.8**
ESK	**Eskdalemuir**	**16.61**	**85**	Pn	**Pn**	**12 07 13.0**	**-1.4**
EKA	**Eskdalemuir Ar**	**16.63**	**85**	Pn	**P**	**12 07 16.0**	**-1.1**
	baz=299,slow=8.9						
EKA				LR	LR	12 12 18.0	
	comp=Z,249nm,21.0s,baz=221,slow=32						
	1.5nm,0.8s						
DRLN	**Deer Lake**	**16.65**	**251**	Pn	**Pn**	**12 07 14.8**	**-0.1**
JMIC	**Jan Mayen**	**17.09**	**28**	LR	LR	12 12 24.7	
	comp=Z,90nm,21.6s,baz=231,slow=32						
FRB	**Frobisher Bay**	**18.34**	**305**	LR	LR	12 13 40.5	
	comp=Z,168nm,19.2s,baz=118,slow=34						
SCHQ	**Schefferville**	**18.88**	**277**	P	**P**	**12 07 40.8**	**-1.1**
	0.2nm,0.3s,baz=76,slow=14,SNR=4.3						
SCHQ				LR	LR	12 13 48.4	
	comp=Z,272nm,18.8s,baz=71,slow=33						
	11nm,1.1s						
SCHQ	**Schefferville**	**18.88**	**277**	P	**Pn**	**12 07 42.6**	**+0.1**
ROSA	**Rosais**	**18.98**	**168**	P	**Pn**	**12 07 42.9**	**-0.9**
NC204	**NORSAR Array S**	**22.34**	**62**	P	**P**	**12 08 19.1**	**-0.2**
NOA	**NORSAR Array B**	**22.60**	**62**	LR	LR	12 15 48.7	
	comp=Z,69nm,20.3s,baz=280,slow=33						
HFS	**Hagfors**	**23.99**	**64**	P	**P**	**12 08 37.3**	**+1.3**
	4.4nm,0.9s,baz=269,slow=7.4,SNR=6.9						
HFS				LR	LR	12 16 51.2	
	comp=Z,60nm,21.0s,baz=295,slow=34						
	4.4nm,0.9s						
LMQ	**La Malbaie**	**24.45**	**262**	P	**P**	**12 08 40.5**	**+0.2**
G65A	**Princeton**	**24.49**	**255**	P	**P**	**12 08 41.9**	**+1.2**
ESDC	**Sonseca Array**	**25.89**	**121**	P	**P**	**12 08 53.7**	**+0.2**
	1.6nm,0.9s,baz=315,slow=8.3,SNR=9.9						
ESDC				LR	LR	12 16 44.6	
	comp=Z,104nm,21.7s,baz=322,slow=31						
	1.6nm,0.9s						
ESDC	**Sonseca Array**	**25.89**	**121**	P	**P**	**12 08 54.5**	**+1.0**
I63A	**Otisfield**	**26.86**	**256**	P	**P**	**12 09 03.5**	**+1.5**
BNI	**Bardonecchia**	**27.37**	**100**	P	**P**	**12 09 06.3**	**-0.5**
LBNH	**Lisbon**	**27.44**	**258**	P	**P**	**12 09 07.5**	**+0.2**
ARCES	**ARCESS Array B**	**27.56**	**40**	LR	LR	12 17 55.7	
	comp=Z,51nm,20.0s,baz=288,slow=32						
TUE	**Stuetta**	**27.89**	**95**	P	**P**	**12 09 11.9**	**+0.3**
TUE				IAmb	IAmb	12 09 23.1	
	comp=Z,7.1nm,1.0s						
RES	**Resolute Bay**	**28.52**	**331**	LR	LR	12 19 58.4	
	comp=Z,73nm,19.1s,baz=98,slow=35						
FINES	**FINESS Array B**	**29.44**	**57**	LR	LR	12 20 22.7	
	comp=Z,55nm,18.7s,baz=282,slow=35						
VRAC	**Vranov**	**30.11**	**84**	LR	LR	12 21 40.6	
	comp=Z,134nm,18.4s,baz=308,slow=36						
SADO	**Sadowa**	**30.95**	**266**	LR	LR	12 20 43.5	
	comp=Z,188nm,18.6s,baz=146,slow=34						
S61A	**Accomac**	**34.12**	**253**	P	**P**	**12 10 07.3**	**+1.0**
KEST	**Kesra**	**35.52**	**109**	P	**P**	**12 10 18.9**	**+0.4**
	comp=Z,1.2nm,0.5s,baz=287,slow=6.7,SNR=4.1						
	comp=Z,1.2nm,0.5s						
KEST	**Kesra**	**35.52**	**109**	P	**P**	**12 10 18.6**	**+0.1**
EYMN	**Ely**	**35.61**	**280**	P	**P**	**12 10 19.3**	**+0.2**
EYMN				IAmb	IAmb	12 10 24.9	
	comp=Z,10.0nm,1.1s						
BURAR	**Bucovina Array**	**35.73**	**80**	P	**P**	**12 10 20.9**	**+0.7**
AKASG	**Malin Array Be**	**36.00**	**73**	P	**P**	**12 10 22.9**	**+0.5**
	comp=Z,1.7nm,0.7s,baz=306,slow=8.4,SNR=7.4						
AKASG				LR	LR	12 24 32.2	
	comp=Z,61nm,19.7s,baz=258,slow=35						
	comp=Z,1.7nm,0.7s						
ULM	**Lac du Bonnet**	**36.53**	**286**	LR	LR	12 24 10.9	
	comp=Z,152nm,18.2s,baz=92,slow=34						
VAE	**Valguarnera**	**36.83**	**102**	LR	LR	12 24 14.5	
	comp=Z,80nm,18.7s,baz=332,slow=34						
OBN	**Obninsk**	**37.20**	**63**	LR	LR	12 24 19.2	
	comp=Z,22nm,20.8s,baz=356,slow=34						
AGMN	**Agassiz Nation**	**37.70**	**284**	P	**P**	**12 10 37.7**	**+0.8**
F36A	**Milaca**	**38.00**	**279**	P	**P**	**12 10 39.8**	**+0.4**
F36A				IAmb	IAmb	12 10 48.9	
	comp=Z,8.7nm,1.2s						
FNA	**Florina**	**38.17**	**92**	P	**P**	**12 10 41.3**	**+0.3**
FNA				IAmb	IAmb	12 10 43.9	
	comp=Z,7.0nm,1.0s						
YKA	**Yellowknife Ar**	**38.57**	**313**	P	**P**	**12 10 44.7**	**+0.7**
	comp=Z,2.2nm,0.8s,baz=58,slow=9.3,SNR=6.7						
YKA				LR

comp=Z,34nm,20.7s,baz=106,slow=34
comp=Z,1.8nm,0.9s
DOT Dot Lake 48.23 326 IAmb IAmb 12 12 08.7
comp=Z,5.9nm,1.3s
NEW Newport 48.46 297 LR LR 12 31 08.7
comp=Z,133nm,20.3s,baz=42,slow=34
MDM Murphy Dome 48.46 329 P **P** **12 12 04.2 +0.6**
MDM IAmb IAmb 12 12 10.0
comp=Z,5.8nm,1.1s
PDAR Pinedale Array 48.54 287 P **P** **12 12 03.9 -1.0**
comp=Z,0.8nm,0.8s,baz=62,slow=6.9,SNR=6.0
PDAR LR LR 12 31 17.9
comp=Z,98nm,19.0s,baz=55,slow=35
comp=Z,0.8nm,0.8s
PDAR Pinedale Array 48.54 287 P **P** **12 12 03.0 -1.8**
ISCO Idaho Springs 48.61 282 IAmb IAmb 12 12 09.5
comp=Z,4.5nm,1.1s
WMOK Wichita Mounta 48.68 272 P **P** **12 12 05.6 -0.1**
WMOK IAmb IAmb 12 12 11.7
comp=Z,7.7nm,1.4s
MCMT McKenzie Canyo 48.76 291 P **P** **12 12 07.1 +0.6**
NEA2 Nenana 48.97 329 IAmb IAmb 12 12 09.9
comp=Z,7.8nm,1.4s
IMAR Indian Mountai 49.13 332 P **P** **12 12 09.3 +0.6**
PAX Paxson 49.16 326 IAmb IAmb 12 12 13.8
comp=Z,8.9nm,1.5s
BCYI Bear Canyon 49.41 291 P **P** **12 12 11.6 +0.1**
BPAW Bear Paw Mtn. 49.88 330 IAmb IAmb 12 12 16.3
comp=Z,7.3nm,1.4s
N25K Chitina, Valde 49.92 324 IAmb IAmb 12 12 21.0
comp=Z,8.9nm,1.1s
ISLE Juniper Island 49.95 323 P **P** **12 12 15.7 +0.4**
TGL Tana Glacier 50.00 323 P **P** **12 12 16.3 +0.8**
SDCO Great Sand Dun 50.05 280 P **P** **12 12 16.9 +0.4**
F10A Beach Ranch, E 50.12 295 P **P** **12 12 16.6 -0.1**
F10A IAmb IAmb 12 12 24.0
comp=Z,8.7nm,1.5s
RDMU Red Mountain 50.13 285 IAmb IAmb 12 12 19.9
comp=Z,5.4nm,1.0s
PLID Pearl Lake 50.15 294 P **P** **12 12 17.3 +0.2**
PLID IAmb IAmb 12 12 18.0
comp=Z,7.9nm,1.4s
TIXI Tiksi 50.59 7 P **P** **12 12 19.9 +0.1**
BBB Bella Bella 50.70 308 LR LR 12 30 59.0
comp=Z,72nm,20.6s,baz=88,slow=33
GNI Garni 51.12 74 LR LR 12 34 41.4
comp=Z,21nm,20.6s,baz=48,slow=37
TORD Torodi Ar. Bea 51.46 135 P **P** **12 12 26.3 -0.6**
comp=Z,0.9nm,0.8s,baz=348,slow=4.6,SNR=5.0
comp=Z,0.9nm,0.8s
TORD Torodi Ar. Bea 51.46 135 P **P** **12 12 27.1 +0.1**
PV13 Radium Mtn., P 51.51 283 P **P** **12 12 28.3 +0.9**
PV13 IAmb IAmb 12 12 33.6
comp=Z,6.5nm,1.0s
NLU North Lily Min 51.88 286 IAmb IAmb 12 12 36.3
comp=Z,5.3nm,1.1s
MVCO Mesa Verde 52.04 281 IAmb IAmb 12 12 38.5
comp=Z,8.9nm,1.2s
TTA Tatalina 52.17 331 P **P** **12 12 31.5 -0.3**
ANMO Albuquerque 52.66 278 LR LR 12 33 54.9
comp=Z,160nm,19.3s,baz=50,slow=35
ELK Elko 52.93 289 LR LR 12 34 21.1
comp=Z,98nm,18.1s,baz=78,slow=35
PINE Pine Mountain 53.52 296 IAmb IAmb 12 12 48.1
comp=Z,7.9nm,1.1s
PKCU Pink Cliffs 53.88 285 IAmb IAmb 12 12 50.7
comp=Z,5.2nm,1.1s
LCMT Little Creek M 54.69 285 P **P** **12 12 50.9 +0.2**
WUAZ Wupatki 54.84 282 P **P** **12 12 52.3 +0.4**
WUAZ IAmb IAmb 12 12 55.1
comp=Z,8.9nm,1.4s
DBIC Dimbokro 55.21 145 LR LR 12 33 40.2
comp=Z,95nm,18.6s,baz=332,slow=33
TXAR Lajitas Array 55.47 271 P **P** **12 12 56.5 +0.1**
comp=Z,0.4nm,0.8s,baz=48,slow=4.1,SNR=4.7
TXAR LR LR 12 33 41.9
comp=Z,52nm,19.5s,baz=234,slow=33
comp=Z,0.4nm,0.8s
TXAR Lajitas Array 55.47 271 P **P** **12 12 56.9 +0.4**
KVN Kaiserville 55.65 290 P **P** **12 12 58.5 +0.8**
KVN IAmb IAmb 12 13 03.3
comp=Z,4.4nm,0.9s
PAHR Pah Rah Range 55.81 291 IAmb IAmb 12 13 04.9
comp=Z,3.6nm,0.9s
YBH Yreka Blue Hor 55.93 295 LR LR 12 35 28.6
comp=Z,84nm,21.8s,baz=28,slow=34
TPH Tonopah 55.95 289 P **P** **12 13 01.0 +1.2**
NVAR Mina Array Bea 56.23 290 P **P** **12 13 02.0 +0.1**
comp=Z,0.4nm,0.7s,baz=51,slow=5.5,SNR=5.2
NVAR LR LR 12 36 24.7
comp=Z,140nm,18.1s,baz=76,slow=35
comp=Z,0.4nm,0.7s
GWY Greenwater Val 57.10 287 P **P** **12 13 08.4 +0.4**
GWY IAmb IAmb 12 13 11.2
comp=Z,6.6nm,1.2s
ZALV Zalesovo Beam 58.08 38 LR LR 12 38 58.0
comp=Z,11nm,18.6s,baz=36,slow=37
113A Mohawk Valley, 58.22 282 P **P** **12 13 15.8 0.0**
113A IAmb IAmb 12 13 17.4
comp=Z,7.6nm,1.2s
PFO Pinyon Flats O 58.98 285 LR LR 12 37 59.8
comp=Z,87nm,18.7s,baz=182,slow=35
ZAIG Zacatecas 60.10 266 P **P** **12 13 28.1 -1.1**
ZAIG IAmb IAmb 12 13 41.7
comp=Z,2.7nm,0.6s
MKAR Makanchi Array 63.13 44 P **P** **12 13 49.4 +0.3**
comp=Z,0.6nm,0.8s,baz=324,slow=7.1,SNR=2.1
comp=Z,0.6nm,0.8s
MKAR Makanchi Array 63.13 44 **S** **12 22 18.9 -0.4**
MA2 Magadan 63.30 358 LR LR 12 43 01.2
comp=Z,13nm,18.1s,baz=184,slow=38
SONM Songino Array 69.85 28 LR LR 12 46 41.7
comp=Z,22nm,20.9s,baz=298,slow=37
SONM Songino Array 69.85 28 P **P** **12 14 32.6 +0.5**
KMBO Kilima Mbogo 80.46 107 LR LR 12 51 11.6
comp=Z,27nm,18.6s,baz=304,slow=36

*IDC **22** 12:15:07.7±1.6, 18°.13S×177°.94W, h630km±17km, mb3.0/6, mbtmp4.0/9, Error ellipse: s-maj=56.3km s-min=16.0km az=149.0*
*NEIC **22** 12:15:07.0±0.7, 18°.3S±0°.1×177°.6W±0°.1, h641km±11km, mb4.2/25, Error ellipse: s-maj=20.3km s-min=14.4km az=102.0*
ISC 22 12:15:07.8±0.6, 18°.3S±0°.1×177.73W±0°.10, h650km, n43, σ1§33/43, mb4.2/18, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.06**	**278**	P	**P**	**12 16 35.7**	**-1.7**
	26nm,0.7s,baz=142,slow=22,SNR=17						
MSVF	**Nonsavu**	**4.06**	**278**	P	**P**	**12 16 36.2**	**-1.2**
AFI	**Afiamalu**	**7.20**	**53**	P	**P**	**12 16 59.6**	**-2.4**
	24nm,0.6s,baz=223,slow=3.3,SNR=5.0						
AFI	**Afiamalu**	**7.20**	**53**	P	**P**	**12 16 59.8**	**-2.2**
NIUE	**Niue**	**7.43**	**97**	P	**P**	**12 16 59.5**	**-4.4**
MARNC	**Mare, Loyalty**	**13.76**	**254**	P	**P**	**12 18 03.6**	**+0.9**
PINNC	**Pines Island,**	**14.54**	**250**	P	**P**	**12 18 09.3**	**-0.5**
DZM	**Mont Dzumac**	**15.32**	**253**	P	**P**	**12 18 16.4**	**-0.7**
	1.7nm,0.3s,baz=123,slow=15,SNR=8.6						
KNTN	**Kanton**	**16.53**	**22**	P	**P**	**12 18 27.2**	**-0.9**
KOUNC	**Koumac, New Ca**	**17.11**	**260**	P	**P**	**12 18 33.0**	**-0.4**
KOUNC				IAmb	IAmb	12 18 45.6	
	comp=Z,23nm,1.5s						
LTZ	**Lake Taylor**	**25.83**	**197**	P	**P**	**12 19 51.0**	**+0.2**
ARMA	**Armidale**	**30.30**	**241**	P	**P**	**12 20 30.1**	**+0.3**
ARMA				IAmb	IAmb	12 20 49.8	
	comp=Z,21nm,1.4s						
CAN	**Canberra**	**33.98**	**233**	P	**P**	**12 21 00.6**	**+0.1**
CTAO	**Charters Tower**	**34.02**	**261**	P	**P**	**12 21 01.0**	**0.0**
CTAO				IAmb	IAmb	12 21 01.5	
	comp=Z,5.3nm,0.8s						
COEN	**Coen**	**37.76**	**271**	P	**P**	**12 21 31.5**	**-0.2**
COEN				IAmb	IAmb	12 21 33.4	
	comp=Z,9.9nm,0.9s						
STKA	**Stephens Creek**	**39.01**	**242**	P	**P**	**12 21 41.5**	**+0.1**
	comp=Z,1.7nm,0.4s,baz=76,slow=7.5,SNR=8.9						
	comp=Z,1.7nm,0.4s						
STKA	**Stephens Creek**	**39.01**	**242**	P	**P**	**12 21 41.5**	**+0.1**
BBOO	**Buckleboo**	**43.78**	**241**	P	**P**	**12 22 18.4**	**-0.3**
WR0	**Warramunga Arr**	**45.01**	**260**	P	**P**	**12 22 28.0**	**-0.3**
WR0				IAmb	IAmb	12 22 41.4	
	comp=Z,14nm,1.5s						
WB0	**Warramunga Arr**	**45.17**	**260**	P	**P**	**12 22 29.3**	**-0.2**
WB0				IAmb	IAmb	12 22 29.6	
	comp=Z,8.1nm,0.5s						
WB2	**Warramunga Arr**	**45.19**	**260**	P	**P**	**12 22 29.5**	**-0.2**
WB2				IAmb	IAmb	12 22 29.8	
	comp=Z,6.3nm,0.5s						
WRAB	**Tennant Creek**	**45.19**	**260**	P	**P**	**12 22 29.4**	**-0.3**
WRAB				IAmb	IAmb	12 22 29.7	
	comp=Z,6.5nm,0.4s						
WRA	**Warramunga Arr**	**45.20**	**260**	P	**P**	**12 22 29.4**	**-0.4**
	comp=Z,4.9nm,0.4s,baz=98,slow=6.8,SNR=288						
	comp=Z,4.9nm,0.4s						
WRA	**Warramunga Arr**	**45.20**	**260**	P	**P**	**12 22 29.4**	**-0.4**
AS31	**Alice Springs**	**45.31**	**255**	P	**P**	**12 22 30.6**	**0.0**
ASAR	**Alice Springs**	**45.31**	**255**	P	**P**	**12 22 29.9**	**-0.7**
MTN	**Manton Dam**	**49.44**	**269**	P	**P**	**12 23 01.1**	**-0.2**
MTN				IAmb	IAmb	12 23 39.1	
	comp=Z,17nm,1.4s						
FORT	**Forrest**	**50.42**	**245**	P	**P**	**12 23 07.8**	**-0.4**
KNRA	**Kununurra**	**51.09**	**264**	P	**P**	**12 23 13.3**	**0.0**
KNRA				IAmb	IAmb	12 23 13.8	
	comp=Z,5.0nm,0.8s						
SOEI	**Soe**	**56.72**	**270**	P	**P**	**12 23 52.0**	**-0.7**
PSA00	**Pilbara Seismi**	**58.44**	**256**	P	**P**	**12 24 03.7**	**-0.4**
MBWA	**Marble Bar**	**58.60**	**256**	P	**P**	**12 24 04.9**	**-0.3**
MBWA				IAmb	IAmb	12 24 25.4	
	comp=Z,21nm,1.4s						
SBA	**Scott Base**	**60.06**	**184**	P	**P**	**12 24 16.2**	**+2.4**
VNDA	**Vanda**	**60.10**	**185**	P	**P**	**12 24 15.0**	**+0.9**
QSPA	**South Pole Qui**	**71.74**	**180**	P	**P**	**12 25 27.1**	**+0.8**
QSPA				IAmb	IAmb	12 25 48.3	
	comp=Z,8.6nm,1.5s						
PETK	**Petropavlovsk-**	**74.23**	**345**	P	**P**	**12 25 40.7**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=134,slow=8.3,SNR=1.5						
	comp=Z,0.7nm,0.6s						
NVAR	**Mina Array Bea**	**79.27**	**43**	P	**P**	**12 26 10.3**	**+2.1**
	comp=Z,0.4nm,0.7s,baz=233,slow=16,SNR=3.8						
	comp=Z,0.4nm,0.7s						
TXAR	**Lajitas Array**	**85.67**	**57**	P	**P**	**12 26 43.1**	**+2.8**
	comp=Z,0.4nm,0.7s,baz=227,slow=6.5,SNR=6.8						
	comp=Z,0.4nm,0.7s						
CCB	**Clear Creek Bu**	**85.83**	**12**	P	**P**	**12 26 41.0**	**+1.0**
CCB				IAmb	IAmb	12 26 41.2	
	comp=Z,1.0nm,0.5s						
IMAR	**Indian Mountai**	**85.97**	**10**	P	**P**	**12 26 42.2**	**+1.5**
ILAR	**Eielson Array**	**86.14**	**13**	P	**P**	**12 26 42.1**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=220,slow=4.8,SNR=6.1						
	comp=Z,0.2nm,0.5s						
ILAR	**Eielson Array**	**86.14**	**13**	P	**P**	**12 26 43.2**	**+1.7**
GEC2	**GERESS Array S**	**148.16**	**346**		**PKPdf**	**12 33 35.6**	**-2.5**

*IDC **22** 12:46:02.5±2.1, 6°.20S×152°.16E, h41km±17km, mb3.8/11, mbtmp4.1/12, ML2.6/1, MS3.2/13, Error ellipse: s-maj=24.1km s-min=9.4km az=107.0*
*NEIC **22** 12:46:03.6±1.1, 6°.05S±0°.07×152°.0E±0°.2, h35km±8km, mb4.5/45, Error ellipse: s-maj=26.0km s-min=3.7km az=113.0*
ISC 22 12:46:02.5±0.6, 6°.15S±0°.07×152°.2E±0°.1, h36km, n73, σ1§03/60, mb4.4/34, MS3.3/11, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.84**	**356**	P	**Pn**	**12 46 31.4**	**-0.1**
	317nm,0.3s,baz=334,slow=0.7,SNR=93						
KRVT				S	**Sn**	**12 46 55.1**	**+1.7**
	1µm,0.4s,baz=232,slow=18,SNR=31						
KRVT				LR	LR	12 47 23.0	
	comp=Z,640nm,18.2s,baz=325,slow=43						
RABL	**Rabaul**	**1.95**	**0**		**Pn**	**12 46 32.5**	**-0.5**
PMG	**Port Moresby**	**5.92**	**237**	P	**Pn**	**12 47 28.8**	**+1.2**
	10nm,0.3s,baz=58,slow=5.7,SNR=27						
PMG				S	**Sn**	**12 48 34.5**	**+0.3**
	18nm,0.3s,baz=45,slow=16,SNR=2.9						
PMG				LR	LR	12 50 06.5	
	comp=Z,89nm,18.6s,baz=105,slow=41						
	20nm,0.3s						
PMG	**Port Moresby**	**5.92**	**237**		**Pn**	**12 47 27.8**	**+0.2**
CTA	**Charters Tower**	**14.99**	**202**	LR	LR	12 54 15.4	
	comp=Z,140nm,21.0s,baz=44,slow=33						
EIDS	**Eidsvold**	**19.14**	**183**	P	**P**	**12 50 23.4**	**+0.8**
GUMO	**Guam**	**20.91**	**340**	LR	LR	12 57 20.4	
	comp=Z,40nm,21.2s,baz=142,slow=32						
DZM	**Mont Dzumac**	**21.00**	**140**	P	**P**	**12 50 41.7**	**-1.3**
	1.9nm,0.7s,baz=206,slow=16,SNR=1.6						
DZM				LR	LR	12 57 18.3	
	comp=Z,146nm,20.9s,baz=2.5,slow=32						
	1.9nm,0.7s						
MTN	**Manton Dam**	**21.77**	**251**	P	**P**	**12 50 50.8**	**-0.4**
MTN				IAmb	IAmb	12 51 06.2	
	comp=Z,15nm,0.8s						
WB0	**Warramunga Arr**	**21.94**	**230**	P	**P**	**12 50 53.4**	**+0.3**
WB0				IAmb	IAmb	12 50 57.3	
	comp=Z,21nm,1.4s						
WR0	**Warramunga Arr**	**21.94**	**230**	P	**P**	**12 50 52.8**	**-0.2**
WRAB	**Tennant Creek**	**22.07**	**230**	P	**P**	**12 50 55.4**	**+0.9**
WB2	**Warramunga Arr**	**22.08**	**230**	P	**P**	**12 50 55.2**	**+0.7**
WRA	**Warramunga Arr**	**22.09**	**230**	P	**P**	**12 50 53.9**	**-0.7**
	comp=Z,4.8nm,0.9s,baz=57,slow=10,SNR=33						
WRA				PcP	**PcP**	**12 54 51.3**	**-0.3**
	comp=Z,0.8nm,0.8s,baz=50,slow=1.9,SNR=4.6						
	comp=Z,4.8nm,0.9s						
WRA	**Warramunga Arr**	**22.09**	**230**	P	**P**	**12 50 55.5**	**+0.8**
AS31	**Alice Springs**	**24.73**	**223**	P	**P**	**12 51 21.1**	**+0.4**
ASAR	**Alice Springs**	**24.73**	**223**	P	**P**	**12 51 20.9**	**+0.2**
KNRA	**Kununurra**	**24.82**	**246**	P	**P**	**12 51 21.1**	**-0.4**
KNRA				IAmb	IAmb	12 51 32.6	
	comp=Z,13nm,0.7s						
STKA	**Stephens Creek**	**27.43**	**200**	P	**P**	**12 51 43.6**	**-1.3**
	comp=Z,1.3nm,0.3s,baz=32,slow=11,SNR=3.2						
STKA				LR	LR	13 02 47.5	
	comp=Z,54nm,19.6s,baz=27,slow=37						
	comp=Z,1.3nm,0.3s						
STKA	**Stephens Creek**	**27.43**	**200**	P	**P**	**12 51 47.4**	**+2.4**
DAV	**Davao City (W)**	**29.60**	**296**	LR	LR	13 04 34.1	
	comp=Z,21nm,18.1s,baz=152,slow=38						
JCJ	**Chichijima**	**34.43**	**344**	LR	LR	13 05 47.5	
	comp=Z,12nm,19.6s,baz=168,slow=34						
URZ	**Urewera**	**39.16**	**148**	LR	LR	13 07 39.9	
	comp=Z,77nm,19.1s,baz=31,slow=33						
RPZ	**Rata Peaks**	**40.94**	**159**	LR	LR	13 07 29.0	
	comp=Z,88nm,19.9s,baz=298,slow=32						
ASAJ	**Asahikawa**	**50.77**	**351**	LR	LR	13 14 12.4	
	comp=Z,16nm,21.1s,baz=43,slow=33						
CMAR	**Chiang Mai Arr**	**57.88**	**296**	P	**P**	**12 55 49.1**	**-2.2**
	comp=Z,0.3nm,0.6s,baz=115,slow=6.5,SNR=1.5						
	comp=Z,0.3nm,0.6s						
KLR	**Kul'dur**	**57.96**	**344**	LR	LR	13 20 13.1	
	comp=Z,8nm,20.4s,baz=230,slow=35						
PETK	**Petropavlovsk-**	**59.22**	**4**	P	**P**	**12 56 00.0**	**+0.1**
	comp=Z,1.1nm,0.5s,baz=168,slow=7.4,SNR=2.7						
PETK				LR	LR	13 17 14.8	
	comp=Z,27nm,20.6s,baz=131,slow=32						
	comp=Z,1.1nm,0.5s						
SONM	**Songino Array**	**67.13**	**328**	P	**P**	**12 56 53.4**	**+0.8**
	comp=Z,1.6nm,0.8s,baz=156,slow=5.2,SNR=6.6						
	comp=Z,1.6nm,0.8s						
SONM	**Songino Array**	**67.13**	**328**	P	**P**	**12 56 51.1**	**-1.6**
BILL	**Bilibino**	**74.69**	**5**	P	**P**	**12 57 39.0**	**+1.1**
SVW2	**Sparrevohn**	**78.31**	**23**	P	**P**	**12 57 59.8**	**+1.1**
SVW2				IAmb	IAmb	12 58 01.2	
	comp=Z,3.9nm,0.9s						
N19K	**Bonanza Creek**	**78.57**	**24**	P	**P**	**12 58 01.0**	**+0.8**
CNPM	**China Poot**	**79.20**	**26**	P	**P**	**12 58 04.3**	**+0.8**
L19K	**White Mountain**	**79.23**	**22**	P	**P**	**12 58 04.7**	**+1.0**
L19K				IAmb	IAmb	12 58 06.1	
	comp=Z,6.2nm,0.8s						
TTA	**Tatalina**	**79.25**	**21**	P	**P**	**12 58 05.2**	**+1.4**
TTA				IAmb	IAmb	12 58 06.0	
	comp=Z,6.3nm,1.2s						
K20K	**Telida**	**80.22**	**22**	P	**P**	**12 58 10.9**	**+1.9**
SUA	**Susitna One**	**80.44**	**24**	P	**P**	**12 58 11.2**	**+0.8**
SUA				IAmb	IAmb	12 58 11.9	
	comp=Z,4.5nm,1.0s						
J20K	**Nowinta River**	**80.67**	**21**	P	**P**	**12 58 13.2**	**+1.8**
J20K				IAmb	IAmb	12 58 13.8	
	comp=Z,4.3nm,0.9s						
MKAR	**Makanchi Array**	**80.92**	**319**	P	**P**	**12 58 12.9**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=97,slow=8.0,SNR=4.2						
	comp=Z,0.4nm,0.6s						
CAST	**Castle Rocks**	**80.99**	**22**	P	**P**	**12 58 13.1**	**0.0**
CAST				IAmb	IAmb	12 58 14.7	
	comp=Z,4.5nm,0.6s						
SML	**Sawmill**	**81.61**	**24**	P	**P**	**12 58 17.4**	**+0.9**
IMAR	**Indian Mountai**	**81.86**	**20**	P	**P**	**12 58 18.6**	**+1.0**
ZAA0	**Zalesovo Array**	**81.92**	**327**	P	**P**	**12 58 17.6**	**-0.6**
ZAA0				IAmb	IAmb	12 58 18.1	
	comp=Z,3.4nm,0.7s						
ZALV	**Zalesovo Beam**	**81.92**	**327**	P	**P**	**12 58 17.6**	**-0.7**
	comp=Z,4.2nm,0.6s,baz=113,slow=6.1,SNR=19						
	comp=Z,4.2nm,0.6s						
ZALV	**Zalesovo Beam**	**81.92**	**327**	P	**P**	**12 58 17.7**	**-0.5**
H21K	**Melozitna Rive**	**81.99**	**20**	P	**P**	**12 58 19.5**	**+1.1**
I21K	**Tanana**	**82.01**	**21**	IAmb	IAmb	12 58 21.1	
	comp=Z,4.0nm,0.9s						
RND	**Reindeer**	**82.21**	**23**	IAmb	IAmb	12 58 22.4	
	comp=Z,4.4nm,0.9s						
MLY	**Manley**	**82.36**	**21**	P	**P**	**12 58 21.3**	**+0.9**
MLY				IAmb	IAmb	12 58 21.5	
	comp=Z,3.3nm,0.6s						
KLU	**Klutina**	**82.46**	**25**	P	**P**	**12 58 21.9**	**+0.9**
NEA2	**Nenana**	**82.74**	**22**	IAmb	IAmb	12 58 22.9	
	comp=Z,3.6nm,0.8s						
CCB	**Clear Creek Bu**	**83.24**	**22**	IAmb	IAmb	12 58 25.8	
	comp=Z,6.9nm,1.4s						
COLA	**College**	**83.33**	**22**	P	**P**	**12 58 24.8**	**-0.5**
HDA	**Harding Lake**	**83.44**	**22**	P	**P**	**12 58 26.1**	**+0.2**
HDA				IAmb	IAmb	12 58 46.8	
	comp=Z,3.0nm,1.0s						
IL31		**83.64**	**22**	P	**P**	**12 58 27.1**	**+0.2**
IL31				IAmb	IAmb	12 58 27.1	
	comp=Z,2.6nm,0.7s						
ILAR	**Eielson Array**	**83.64**	**22**	P	**P**	**12 58 26.4**	**-0.5**
	comp=Z,2.5nm,0.7s,baz=250,slow=5.2,SNR=24						
	comp=Z,2.5nm,0.7s						
ILAR	**Eielson Array**	**83.64**	**22**	P	**P**	**12 58 26.7**	**-0.2**
QSPA	**South Pole Qui**	**83.82**	**180**	P	**P**	**12 58 27.0**	**-1.0**
QSPA				IAmb	IAmb	12 59 00.3	
	comp=Z,8.0nm,1.4s						
RIDG	**Independent Ri**	**83.94**	**23**	P	**P**	**12 58 29.4**	**+0.8**
RIDG				IAmb	IAmb	12 58 46.7	
	comp=Z,5.5nm,1.3s						
J25K	**Salcha River,**	**84.14**	**23**	P	**P**	**12 58 30.4**	**+0.8**
L26K	**Log Cabin Wild**	**84.23**	**24**	IAmb	IAmb	12 58 31.8	
	comp=Z,2.3nm,0.7s						
KURK	**Kurchatov**	**84.44**	**322**	P	**P**	**12 58 31.1**	**-0.2**
KURBB	**Kurchatov Arra**	**84.47**	**322**	P	**P**	**12 58 31.0**	**-0.5**
	comp=Z,1.9nm,0.8s,baz=111,slow=3.8,SNR=17						
	comp=Z,1.9nm,0.8s						
M27K	**Edge Creek, AK**	**84.56**	**25**	P	**P**	**12 58 33.1**	**+1.2**
BCAR	**Beaver Creek A**	**84.89**	**25**	P	**P**	**12 58 35.2**	**+1.8**
K27K	**Chicken**	**85.17**	**24**	IAmb	IAmb	12 58 36.8	
	comp=Z,2.7nm,1.0s						
DAWY	**Dawson**	**86.27**	**24**	P	**P**	**12 58 42.3**	**+2.1**
DAWY				IAmb	IAmb	12 58 44.3	
	comp=Z,2.7nm,1.1s						
M30M	**Minto, Yukon**	**86.84**	**26**	IAmb	IAmb	12 58 45.3	
	comp=Z,4.1nm,1.2s						
N31M	**Braeburn, Yuko**	**86.93**	**27**	P	**P**	**12 58 45.0**	**+1.5**
NVAR	**Mina Array Bea**	**93.42**	**52**	P	**P**	**12 59 15.1**	**+0.5**
	comp=Z,0.7nm,0.8s,baz=263,slow=5.1,SNR=5.2						
	comp=Z,0.7nm,0.8s						
GEYT	**Alibeck**	**96.93**	**307**	LR	LR	13 45 23.3	
	comp=Z,36nm,21.6s,baz=188,slow=37						
TORD	**Torodi Ar. Bea**	**150.09**	**286**	PKPbc	**PKPbc**	**13 05 49.8**	**-0.7**
	comp=Z,2.9nm,0.8s,baz=64,slow=2.5,SNR=13						

*ISK **22** 12:55:07.5, 36°.48N×27°.78E, h68km±1km, ML2.6/12*
*ATH **22** 12:55:08.4, 36°.41N×27°.68E, h59km±5km, ML2.8/2, Error ellipse: s-maj=5.5km s-min=2.0km az=32.0*
*THE **22** 12:55:08.9, 36°.48N×27°.83E, h66km±4km, ML2.8/3, Error ellipse: s-maj=4.0km s-min=1.2km az=102.0*
*DDA **22** 12:55:09.2±0.0, 36°.69N×27°.88E, h83km±1km, ML2.4*
*NIC **22** 12:55:09.1±0.0, 36°.19N×27°.98E, h76km±1km, MI3.5/4*
ISC 22 12:55:06.6±1.4, 36°.46N±0°.03×27°.79E±0°.03, h82km±8km, n39, σ0§97/66, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.37**	**131**	P	**Pn**	**12 55 19.9**	**+0.4**
ARG				S	**Sn**	**12 55 28.8**	**-0.2**
ARG				AML	AML	12 55 30.2	
	comp=N,1367µm,0.2s						
ARG				AML	AML	12 55 30.6	
	comp=E,1969µm,0.2s						
ARG	**Arkhangelos**	**0.37**	**131**	P	**Pn**	**12 55 20.0**	**+0.5**
ARG				S	**Sn**	**12 55 27.6**	**-1.4**
	comp=E,812nm,0.1s						
ARG	**Arkhangelos**	**0.37**	**131**	PG	**Pn**	**12 55 19.9**	**+0.4**
ARG				SG	**Sn**	**12 55 28.3**	**-0.7**
ARG	**Arkhangelos**	**0.37**	**131**	P	**Pn**	**12 55 20.0**	**+0.5**
ARG				S	**Sn**	**12 55 29.0**	**0.0**
NIS1	**Nisyros Isl.**	**0.51**	**286**	P	**Pn**	**12 55 20.9**	**+0.3**
NIS1				S	**Sn**	**12 55 29.2**	**-1.8**
NIS1	**Nisyros Isl.**	**0.51**	**286**	P	**Pn**	**12 55 21.2**	**+0.6**
NIS1				S	**Sn**	**12 55 30.7**	**-0.3**
	comp=E,390nm,0.5s						
NIS1	**Nisyros Isl.**	**0.51**	**286**	PG	**Pn**	**12 55 20.5**	**-0.1**
NIS1				SG	**Sn**	**12 55 30.1**	**-0.9**
BODT	**Bodrum**	**0.71**	**328**	P	**Pn**	**12 55 23.0**	**+0.4**
BODT				S	**Sn**	**12 55 33.9**	**-0.5**
BODT	**Bodrum**	**0.71**	**328**	PG	**Pn**	**12 55 22.9**	**+0.4**
BODT				SG	**Sn**	**12 55 33.9**	**-0.5**
YER	**Yerkesik**	**0.78**	**30**	P	**Pn**	**12 55 23.9**	**+0.6**
YER				S	**Sn**	**12 55 33.9**	**-1.9**
YER	**Yerkesik**	**0.78**	**30**	PG	**Pn**	**12 55 23.8**	**+0.5**
YER				SG	**Sn**	**12 55 35.2**	**-0.6**
DALY	**Dalyan (Mula)**	**0.78**	**63**	PG	**Pn**	**12 55 24.3**	**+1.1**
DALY				SG	**Sn**	**12 55 35.5**	**-0.1**
MULA	**Mugla, Merkez-**	**0.90**	**28**	P	**Pn**	**12 55 25.4**	**+0.6**
MULA				S	**Sn**	**12 55 38.1**	**-0.1**
KARP	**Karpathos**	**1.04**	**209**	P	**Pn**	**12 55 27.3**	**+1.1**
KARP				S	**Sn**	**12 55 41.4**	**+0.4**
KARP				AML	AML	12 55 42.3	
	comp=N,1445µm,0.1s						
KARP				AML	AML	12 55 42.6	
	comp=E,1191µm,0.1s						
KARP	**Karpathos**	**1.04**	**209**	P	**Pn**	**12 55 27.4**	**+1.1**
KARP				S	**Sn**	**12 55 41.6**	**+0.6**
	comp=E,685nm,0.1s						
KARP	**Karpathos**	**1.04**	**209**	PG	**Pn**	**12 55 27.4**	**

AKMS				AML	AML	12 56 49.6		
	comp=E,0.2nm,0.3s							
OSC1	**CSNet OBS 1**	**4.11**	**135**	P	**Pn**	**12 56 06.8**	**-0.2**
OSC1				S	**Sn**	**12 56 51.2**	**-2.7**
ALFC	**Alefka**	**4.12**	**107**	P	**Pn**	**12 56 06.8**	**-0.4**
ALFC				AML	AML	12 56 51.9		
	comp=E,0.2nm,0.2s							
ALFC				AML	AML	12 56 52.4		
	comp=E,0.2nm,0.2s							
NATA	**Nata**	**4.24**	**112**	P	**Pn**	**12 56 09.5**	**+0.6**
SZAC	**Souni**	**4.49**	**111**	P	**Pn**	**12 56 12.4**	**+0.2**
SZAC				AML	AML	12 57 01.4		
	comp=E,0.2nm,0.2s							
SZAC				AML	AML	12 57 01.8		
	comp=E,0.2nm,0.2s							
ASGA	**Asgata**	**4.75**	**109**	P	**Pn**	**12 56 16.2**	**+0.5**
OSC2	**CSNet OBS 4**	**5.00**	**131**	P	**Pn**	**12 56 18.8**	**-0.3**

IDC 22 13:00:10.2±5.6, 27°.83N×86°.70E, h0km, mb3.4/3, mbtmp3.4/4, ML3.5/1, Error ellipse: s-maj=292.1km s-min=24.1km az=65.0, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.25**	**351**	P	P	13 04 35.3	-0.8
	0.1nm,0.3s,baz=181,slow=11,SNR=4.7						
	0.3nm,0.3s						
KURBB	**Kurchatov Arra**	**23.60**	**347**	P	P	13 05 21.6	-0.9
	0.3nm,0.4s,baz=171,slow=9.2,SNR=6.8						
	0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**26.13**	**357**	P	P	13 05 47.6	+1.8
	0.3nm,0.3s,baz=182,slow=8.2,SNR=2.0						
	0.3nm,0.3s						
WRA	**Warramunga Arr**	**66.18**	**131**	P	P	13 10 59.8	-0.1
	0.3nm,0.4s,baz=324,slow=6.5,SNR=15						
	0.3nm,0.4s						

BJI ***22*** *13:03:18.5±0.0, 22°.75N×94°.43E, h104km, mb4.4/38, mB4.6/21*
NEIC ***22*** *13:03:20.2±1.7, 22°.68N±0°.08×94°.63E±0°.08, h109km±6km, mb4.6/46, Error ellipse: s-maj=13.2km s-min=9.4km az=224.0*
IDC ***22*** *13:03:20.1±0.6, 22°.70N×94°.62E, h113km±3km, mb4.1/22, mbtmp4.4/23, MS3.2/13, Error ellipse: s-maj=16.8km s-min=10.5km az=65.0*
NDI ***22*** *13:03:21.0±3.3, 22°.72N×94°.37E, h100km, ML4.8, mb4.6(NEIC)*
ISC 22 13:03:19.3±0.4, 22°.63N±0°.04×94°.41E±0°.04, h110km±3km, h111km:pP-P, n158, σ2s35/201, mb4.6/49, 3C-9D, Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IMP	**Imphal**	**2.23**	**349**	*e*P	**Pn**	**13 03 56.3**	**+0.9**
IMP				IAML		13 04 22.4	
	comp=N,2μm,0.3s						
IMP				IAML		13 04 24.4	
	comp=E,1μm,0.5s						
SILR	**SILCHAR**	**2.60**	**326**	*e*S	**Sn**	**13 04 30.7**	**-0.6**
KOHI	**KOHIMA**	**3.09**	**355**	*e*P	**Pn**	**13 04 07.4**	**+0.7**
KOHI				*e*S	**Sn**	**13 04 40.3**	**-3.0**
KOHI				IAML		13 04 43.0	
	comp=E,3μm,0.6s						
KOHI				IAML		13 04 44.0	
	comp=N,2μm,0.6s						
AGT	**Agartala**	**3.16**	**294**	*e*P	**Pn**	**13 04 09.0**	**+1.5**
AGT				*e*S	**Sn**	**13 04 44.1**	**-0.5**
AGT				IAML		13 04 47.5	
	comp=N,2μm,0.2s						
MOKO	**MOKOCHONG**	**3.68**	**2**	*e*P	**Pn**	**13 04 15.7**	**+1.1**
MOKO				*e*S	**Sn**	**13 04 54.2**	**-3.0**
SHL	**Shillong**	**3.73**	**322**	Pn	**Pn**	**13 04 15.4**	**+0.2**
SHL	**Shillong**	**3.73**	**322**	*e*P	**Pn**	**13 04 15.2**	**+0.1**
SHL				*e*S	**Sn**	**13 04 54.1**	**-4.3**
SHL				IAML		13 04 57.2	
	comp=E,3μm,0.1s						
SHL				IAML		13 04 57.8	
	comp=N,4μm,0.1s						
JORH	**JORHAT**	**4.10**	**358**	*e*P	**Pn**	**13 04 21.0**	**+1.0**
JORH				*e*S	**Sn**	**13 05 03.7**	**-3.4**
TEZP	**TEZPUR**	**4.23**	**340**	*e*P	**Pn**	**13 04 21.2**	**-0.6**
TEZP				*e*S	**Sn**	**13 05 04.5**	**-5.7**
TEZP				IAML		13 05 08.1	
	comp=N,4μm,0.2s						
GUWA	**GUWAHATI**	**4.33**	**326**	*e*P	**Pn**	**13 04 22.6**	**-0.5**
GUWA				*e*S	**Sn**	**13 05 06.6**	**-6.0**
GUWA				IAML		13 05 12.2	
	comp=E,24μm,0.2s						
GUWA				IAML		13 05 13.1	
	comp=N,32μm,0.2s						
ITAN	**ITANAGAR**	**4.54**	**352**	*e*P	**Pn**	**13 04 25.6**	**-0.4**
ITAN				*e*S	**Sn**	**13 05 13.7**	**-4.1**
ITAN				IAML		13 05 19.5	
	comp=E,2μm,0.3s						
TURI	**Tura**	**4.72**	**309**	*e*P	**Pn**	**13 04 27.1**	**-1.3**
TURI				*e*S	**Sn**	**13 05 17.3**	**-4.9**
TURI				IAML		13 05 21.2	
	comp=E,4μm,0.2s						
LKP	**Lekhapani**	**4.87**	**15**	*e*P	**Pn**	**13 04 32.3**	**+2.0**
ZIRO	**ZIRO**	**4.91**	**354**	*e*P	**Pn**	**13 04 30.8**	**-0.3**
ZIRO				*e*S	**Sn**	**13 05 21.9**	**-4.8**
ZIRO				IAML		13 05 26.9	
	comp=N,5μm,0.2s						
DHUB	**DHUBRI**	**5.25**	**311**	*e*P	**Pn**	**13 04 34.6**	**-1.0**
DHUB				*e*S	**Sn**	**13 05 29.2**	**-5.7**
DHUB				IAML		13 05 33.1	
	comp=E,2μm,0.2s						
DHUB				IAML		13 05 35.0	
	comp=N,2μm,0.2s						
CHTO	**Chiang Mai**	**5.70**	**131**	Pn	**Pn**	**13 04 39.2**	**-2.4**
CM31	**Chiang Mai Arr**	**5.94**	**133**		**Pn**	**13 04 42.4**	**-2.5**
CMAR	**Chiang Mai Arr**	**5.94**	**133**	P	**Pn**	**13 04 44.7**	**-0.2**
	comp=N,5.0nm,0.4s,baz=312,slow=13,SNR=45						
CMAR	**Chiang Mai Arr**	**5.94**	**133**		**Pn**	**13 04 44.4**	**-0.6**
GTK	**Tadong**	**7.04**	**313**	*e*P	**Pn**	**13 05 00.1**	**+0.2**
GTK				*e*S	**Sn**	**13 06 14.6**	**-3.9**
GTK				IAML		13 06 20.6	
	comp=E,15μm,0.2s						
LSA	**Lhasa**	**7.63**	**338**	Pn	**Pn**	**13 05 09.0**	**+0.8**
LSA	**Lhasa**	**7.63**	**338**	P	**Pn**	**13 05 08.8**	**+0.6**
PZH	**PanZhiHua**	**7.71**	**59**	P	**Pn**	**13 05 11.5**	**+2.5**
PZH				S	**Sn**	**13 06 30.8**	**-4.1**
PZH				smax	smax		
	comp=E,20nm,1.4s						
PZH				smax	smax		
	comp=E,30nm,1.5s						
BOK	**Bokaro**	**7.92**	**280**	*e*P	**Pn**	**13 05 12.5**	**+0.7**
BOK				*e*S	**Sn**	**13 06 34.9**	**-5.0**
KMI	**Kunming**	**8.02**	**70**	⇓P	**Pn**	**13 05 16.5**	**+3.2**
KMI				S	**Sn**	**13 06 43.6**	**+1.1**
KMI				pmax	pmax		
	comp=E,68nm,1.1s						
KMI				pmax	pmax		
	comp=E,280nm,5.2s						
KMI				LR	LR		
	comp=E,380nm,5.4s						
KMI				LR	LR		
	comp=E,230nm,6.1s						
KMI				LR	LR		
	comp=E,260nm,11.0s						
GUN	**Gumba**	**9.34**	**306**	*e*Pn	**Pn**	**13 05 31.1**	**-0.2**
GUN				*e*Sn	**Sn**	**13 07 09.1**	**-5.5**
	comp=E,233nm,0.3s						
DGPR	**DIGLIPUR**	**9.50**	**189**	*e*P	**Pn**	**13 05 33.2**	**-0.1**
DGPR				*e*S	**Sn**	**13 07 10.6**	**-7.6**
PKI	**Pulchoki**	**9.52**	**303**	*e*Pn	**Pn**	**13 05 33.2**	**-0.6**
PKI				*e*Sn	**Sn**	**13 07 12.8**	**-6.3**
	comp=E,242nm,0.3s						
PKIN	**Phulchoki**	**9.54**	**303**	*e*Pn	**Pn**	**13 05 33.6**	**-0.3**
PKIN				*e*Sn	**Sn**	**13 07 13.2**	**-6.1**
	comp=E,115nm,0.3s						
DMN	**Daman**	**9.78**	**302**	*e*Pn	**Pn**	**13 05 36.5**	**-0.6**
DMN				*e*Sn	**Sn**	**13 07 19.3**	**-5.9**
	comp=E,126nm,0.3s						
GKN	**Gorkha**	**10.33**	**303**	*e*Pn	**Pn**	**13 05 43.6**	**-1.0**
GKN				*e*Sn	**Sn**	**13 07 32.7**	**-5.8**
	comp=E,216nm,0.2s						
PBA	**Port Blair**	**11.03**	**189**	Pn	**Pn**	**13 05 54.1**	**+0.2**
PBA	**Port Blair**	**11.03**	**189**	*e*P	**Pn**	**13 05 54.2**	**+0.4**
PBA				*e*S	**Sn**	**13 07 51.1**	**-4.1**
DANN	**Dangsing**	**11.17**	**303**	*e*Pn	**Pn**	**13 05 55.1**	**-1.0**
DANN				*e*Sn	**Sn**	**13 07 51.8**	**-7.4**
PYUN	**Piuthan**	**11.67**	**300**	*e*Pn	**Pn**	**13 06 01.6**	**-1.0**
PYUN				*e*Sn	**Sn**	**13 08 04.0**	**-7.1**
GOMU	**GeErMu**	**13.53**	**1**	P	**Pn**	**13 06 23.8**	**-3.3**
GOMU				pmax	pmax		
	comp=E,6.0nm,0.8s						
GOMU				LR	LR		
	comp=E,39nm,7.9s						
GOMU				LR	LR		
	comp=E,87nm,7.2s						
GOMU				LR	LR		
	comp=E,61nm,7.5s						
ENH	**Enshi**	**15.50**	**57**		**Pn**	**13 06 49.4**	**-2.5**
LZH	**Lanzhou**	**15.72**	**29**	*e*P	**P**	**13 06 56.4**	**-0.1**
LZH				sP	sP	13 07 29.4	-1.3
LZH				pmax	pmax		
	comp=E,18nm,1.1s						
HYBB	**Hyderabad (bro**	**15.77**	**254**	*e*P	**Pn**	**13 06 54.5**	**-0.8**
HYBB				*es*P	**sP**	**13 07 34.2**	**+2.7**
DDI	**Dehra Dun**	**16.51**	**301**	*e*P	**P**	**13 07 06.9**	**+1.8**
GTA	**Gaotai**	**17.36**	**14**	*e*P	**P**	**13 07 13.8**	**-0.6**
GTA				pP	pP	13 07 29.6	-5.1
GTA				sP	sP	13 07 40.8	-7.9
GTA				pmax	pmax		
	comp=E,4.0nm,1.2s						
GTA				pmax	pmax		
	comp=E,100nm,4.4s						
GTA				LR	LR		
	comp=E,90nm,13.5s						
GTA				LR	LR		
	comp=E,77nm,13.1s						
GTA				LR	LR		
	comp=E,84nm,17.8s						
SMLA	**Simla**	**17.54**	**303**	*e*P	**Pn**	**13 07 20.8**	**+3.9**
KULM	**Kulim**	**18.26**	**160**	P	**P**	**13 07 24.1**	**-0.3**
IPM	**Ipoh**	**19.14**	**159**	P	**P**	**13 07 33.3**	**-0.8**
IPM				IAmb	IAmb	13 07 35.9	
	comp=E,20nm,0.8s						
KCSI	**Kotacane, Aceh**	**19.27**	**170**	P	**P**	**13 07 35.7**	**+0.2**
	comp=E,24nm,0.8s						
LYN	**LuoYang**	**19.78**	**49**	*e*P	**P**	**13 07 35.8**	**-5.0**
LYN				pP	Pn	13 07 51.9	+8.5
LYN				PP	**pP**	**13 08 00.1**	**-1.3**
LYN				S	**S**	**13 11 08.0**	**-10**
LYN				SS	**sS**	**13 11 55.5**	**+3.5**
PALK	**Pallekele**	**20.18**	**223**	P	Pn	13 07 48.1	-0.2
	comp=E,6.3nm,0.5s,baz=148,slow=11,SNR=7.0						
PALK				S	**S**	**13 11 21.9**	**-4.0**
	comp=E,5.6nm,0.7s,baz=278,slow=21,SNR=1.7						
	comp=E,6.3nm,0.5s						
PALK	**Pallekele**	**20.18**	**223**	P	Pn	13 07 48.2	0.0
PALK				IAmb	IAmb	13 07 52.3	
	comp=E,19nm,0.9s						
GSI	**Gunungsitoli**	**21.42**	**171**	P	**P**	**13 08 00.5**	**+1.9**
	comp=E,68nm,1.6s						
WMQ	**Urumqi**	**21.86**	**347**	*e*P	**P**	**13 08 03.3**	**+0.2**
WMQ				pmax	pmax		
	comp=E,28nm,0.9s						
WMQ				LR	LR		
	comp=E,220nm,9.3s						
WMQ				LR	LR		
	comp=E,290nm,9.9s						
WMQ				LR	LR		
	comp=E,96nm,14.1s						
HNS	**HongShan**	**22.86**	**45**	⇓P	**P**	**13 08 16.6**	**+3.3**
KSH	**Kashi**	**23.01**	**321**	P	**P**	**13 08 16.8**	**+1.9**
KSH				pP	pP	13 08 41.8	+5.0
KSH				S	**S**	**13 12 17.3**	**+0.3**
KSH				pmax	pmax		
	comp=E,7.0nm,0.8s						
HHC	**Hu-ho-hao-te**	**23.23**	**35**	*e*P	**P**	**13 08 16.3**	**-0.6**
HHC				pmax	pmax		
	comp=E,24nm,0.7s						
HHC				pmax	pmax		
	comp=E,170nm,7.2s						
TARG	**Taragay, Kyrgy**	**23.59**	**328**	P	**P**	**13 08 22.9**	**+2.3**
RGRI	**Rengat**	**24.11**	**160**	P	**P**	**13 08 25.2**	**+0.3**
BOOM	**Boomskoye usch**	**25.09**	**326**	P	**P**	**13 08 34.8**	**+0.9**
KBL	**Kabul**	**25.16**	**304**	P	**P**	**13 08 37.3**	**+2.7**
KRJI	**Kerinci**	**25.51**	**163**	P	**P**	**13 08 37.8**	**0.0**
	comp=E,15μmcomp=Z,349nm,0.5s						
AAK	**Ala-Archa**	**25.95**	**325**	P	**P**	**13 08 43.7**	**+2.1**
AAK				IAmb	IAmb	13 09 13.1	
	comp=E,13nm,0.9s						
MK31	**Makanchi Array**	**26.02**	**341**	P	**P**	**13 08 43.3**	**+1.2**
MK31				IAmb	IAmb	13 09 12.4	
	comp=E,28nm,0.9s						
MKAR	**Makanchi Array**	**26.02**	**341**	P	**P**	**13 08 43.6**	**+1.6**
	comp=E,9.9nm,0.8s,baz=148,slow=9.8,SNR=44						
MKAR				pP	**pP**	**13 09 06.2**	**0.0**
	comp=E,11nm,0.9s,baz=145,slow=11,SNR=4.2						
MKAR				PcP	**PcP**	**13 12 07.9**	**+0.6**
	comp=E,1.0nm,0.4s,baz=162,slow=3.2,SNR=9.4						
MKAR				ScP	**ScP**	**13 15 37.2**	**+0.3**
	comp=E,0.2nm,0.3s,baz=168,slow=2.6,SNR=4.1						
MKAR				LR	LR	13 19 47.0	
	comp=E,38nm,19.9s,baz=186,slow=38						
	comp=Z,9.9nm,0.8s						
MKAR	**Makanchi Array**	**26.02**	**341**	P	**P**	**13 08 43.3**	**+1.2**
MAKZ	**Makanchi**	**26.13**	**340**	P	**P**	**13 08 44.3**	**+1.3**
MAKZ				IAmb	IAmb	13 09 13.4	
	comp=E,28nm,1.1s						
GAR	**Garm**	**26.23**	**314**	P	**P**	**13 08 45.1**	**+1.0**
BTK	**Batken**	**26.48**	**316**	P	**P**	**13 08 47.8**	**+1.5**
BTK				IAmb	IAmb	13 09 14.8	
	comp=E,15nm,0.8s						
SONM	**Songino Arbaz**	**26.93**	**18**	P	**P**	**13 08 50.1**	**-0.2**
	comp=E,0.4nm,0.5s,baz=185,slow=31,SNR=1.5						
SONM				pP	**pP**	**13 09 13.6**	**-0.9**
	comp=E,0.8nm,0.7s,baz=218,slow=11,SNR=1.9						
SONM				ScP	**ScP**	**13 15 38.9**	**-0.8**
	comp=E,0.6nm,0.6s,baz=180,slow=3.7,SNR=4.7						
	comp=E,0.4nm,0.5s						
SONM	**Songino Array**	**26.93**	**18**	IAmb	IAmb	13 09 09.9	
	comp=E,1.8nm,1.2s						
KURBB	**Kurchatov Arra**	**30.57**	**340**	P	**P**	**13 09 23.5**	**+1.1**
	comp=E,1.6nm,0.4s,baz=154,slow=8.3,SNR=32						
KURBB				pP	**pP**	**13 09 46.6**	**-0.3**
	comp=E,2.9nm,0.7s,baz=150,slow=8.8,SNR=5.4						
KURBB				PcP	**PcP**	**13 12 19.1**	**+0.6**
	comp=E,4.0nm,0.7s,baz=170,slow=2.3,SNR=9.4						
KURBB				ScP	**ScP**	**13 15 51.0**	**+0.1**
	comp=E,1.3nm,0.8s,baz=149,slow=2.6,SNR=8.8						
	comp=E,1.6nm,0.4s						
KURK	**Kurchatov**	**30.63**	**340**	P	**P**	**13 09 24.5**	**+1.7**
KURK				IAmb	IAmb	13 09 53.0	
	comp=E,10nm,0.8s						
ZALV	**Zalesovo Beam**	**32.11**	**349**	P	**P**	**13 09 36.8**	**+1.0**
	comp=E,2.9nm,0.3s,baz=169,slow=8.9,SNR=24						
ZALV				PcP	**PcP**	**13 12 21.3**	**-1.2**
	comp=E,0.9nm,0.4s,baz=172,slow=2.5,SNR=2.9						
	comp=E,2.9nm,0.3s						
BBKI	**Banjar Baru**	**32.72**	**140**	P	**P**	**13 09 43.0**	**+1.3**
DAV	**Davao City (W)**	**33.76**	**112**	LR	LR	13 24 45.3	
	comp=E,21nm,18.3s,baz=180,slow=38						
GEYT	**Alibeck**	**34.61**	**305**	PcP	**PcP**	**13 12 29.4**	**-0.5**
	comp=E,3.0nm,0.4s,baz=222,slow=1.9,SNR=4.5						
GEYT				LR	LR	13 27 07.3	
	comp=E,70nm,18.6s,baz=215,slow=41						
APSI	**Ampana**	**35.38**	**128**	P	**P**	**13 10 05.2**	**+0.5**
	comp=E,17nm,0.8s						
BVAR	**Borovoye Array**	**35.45**	**335**	LR	LR	13 26 57.0	
	comp=E,33nm,20.1s,baz=27,slow=40						
TTSI	**Tana Toraja**	**35.59**	**133**	P	**P**	**13 10 07.5**	**+1.1**
	comp=E,17nm,1.1s						
KAPI	**Kappang**	**37.00**	**135**	LR	LR	13 27 11.5	
	comp=E,18nm,18.8s,baz=315,slow=39						
ABKAR	**Akbulak array**	**37.99**	**323**	P	**P**	**13 10 27.6**	**+1.2**
ABKAR	**Akbulak array**	**37.99**	**323**	P	**P**	**13 10 28.1**	**+1.7**
ABKAR				IAmb	IAmb	13 10 29.3	
	comp=E,8.0nm,1.0s						
AKTO	**Aktyubinsk**	**39.67**	**324**	P	**P**	**13 10 42.0**	**+1.5**
	comp=E,3.9nm,0.6s,baz=124,slow=8.1,SNR=15						
AKTO				LR	LR	13 29 35.0	
	comp=E,31nm,19.2s,baz=103,slow=40						
	comp=E,3.9nm,0.6s						
MJAR	**Matsushiro Arr**	**40.20**	**60**	LR	LR	13 28 05.9	
	comp=E,36nm,18.1s,baz=260,slow=37						
ARU	**Arti**	**42.77**	**331**	P	**P**	**13 11 06.0**	**+0.3**
	comp=E,3.7nm,0.3s,baz=157,slow=5.3,SNR=5.1						
ARU				pP	**pP**	**13 11 32.4**	**+1.3**
	comp=E,2.1nm,0.4s,baz=129,slow=1.7,SNR=1.9						
	comp=Z,3.7nm,0.3s						
SOEI	**Soe**	**43.49**	**135**	P	**P**	**13 11 11.3**	**-0.8**
SOEI	**Soe**	**43.49**	**135**	P	**P**	**13 11 11.5**	**-0.7**
	comp=E,47nm,1.1s						
FAKI	**Fak Fak**	**44.82**	**120**	P	**P**	**13 11 21.8**	**-0.9**
AKH	**Akhalkalaki**	**46.35**	**306**	P	**P**	**13 11 36.1**	**+1.4**
BELG	**Belogornoye**	**46.37**	**322**	LR	LR	13 34 26.3	
	comp=E,33nm,21.5s,baz=205,slow=40						
KBZ	**Khabaz**	**47.13**	**309**	P	**P**	**13 11 42.5**	**+2.1**
	comp=E,1.0nm,0.5s,baz=112,slow=10,SNR=4.0						
	comp=E,1.0nm,0.5s						
KNRA	**Kununurra**	**50.80**	**135**	P	**P**	**13 12 08.4**	**-0.3**
GENI	**Genyem**	**51.19**	**113**	P	**P**	**13 12 12.6**	**+0.9**
	comp=Z,3μmcomp=Z,91nm,1.1s						
TIXI	**Tiksi**	**52.83**	**13**	P	**P**	**13 12 21.6**	**-1.5**
	comp=E,1.6nm,0.3s,baz=132,slow=6.5,SNR=16						
	comp=E,1.6nm,0.3s						
TIXI	**Tiksi**	**52.83**	**13**	P	**P**	**13 12 21.8**	**-1.2**
KLMR	**Klimovskoe**	**53.58**	**330**	*e*P	**P**	**13 12 28.2**	**-0.5**
KLMR				AMP		13 12 30.3	
	comp=E,6.0nm,0.8s						
KLMR				*e*PcP	**PcP**	**13 13 32.5**	**-1.4**
BRTR	**Keskin Array B**	**53.74**	**303**	P	**P**	**13 12 31.4**	**+1.0**
	comp=E,1.0nm,0.8s,baz=97,slow=9.2,SNR=4.0						
BRTR				pP	**pP**	**13 12 58.4**	**+1.2**
	comp=E,2.3nm,0.9s,baz=66,slow=3.1,SNR=3.6						
	comp=E,1.0nm,0.8s						
BORA	**Eskisehir**	**56.19**	**304**	P	**P**	**13 12 48.7**	**+0.8**
PETK	**Petropavlovsk-**	**56.25**	**40**	LR	LR	13 37 45.0	
	comp=E,21nm,18.9s,baz=118,slow=37						
AKASG	**Malin Array Be**	**57.19**	**317**	P	**P**	**13 12 54.9**	**+0.1**
	comp=E,1.4nm,0.4s,baz=78,slow=7.0,SNR=18						
AKASG				pP	**pP**	**13 13 22.0**	**+0.4**
	comp=E,0.8nm,0.3s,baz=78,slow=7.0,SNR=4.6						
AKASG				LR	LR	13 40 48.9	
	comp=E,55nm,20.1s,baz=45,slow=39						
	comp=E,1.4nm,0.4s						
WB0	**Warramunga Arr**	**57.45**	**134**	P	**P**	**13 12 56.4**	**-0.6**
WRA	**Warramunga Arr**	**57.53**	**134**	P	**P**	**13 12 57.9**	**+0.3**
	comp=E,4.6nm,0.3s,baz=322,slow=7.3,SNR=402						
WRA				PcP	**PcP**	**13 13 49.3**	**-0.6**
	comp=E,0.9nm,0.3s,baz=336,slow=3.7,SNR=5.6						
	comp=E,4.6nm,0.3s						
WRA	**Warramunga Arr**	**57.53**	**134**	P	**P**	**13 12 56.6**	**-1.0**
MNK	**Minsk**	**58.30**	**321**	*i* P	**P**	**13 13 01.4**	**-1.1**
	comp=E,5.0nm,0.8s						
MNK				*i* P	**P**	**13 13 01.4**	**-1.1**
	comp=N,29nm,1.0s						
MNK				*i* P	**P**	**13 13 01.4**	**-1.1**
	comp=Z,22nm,1.0s,baz=95						
MNK				*i* pP	**pP**	**13 13 24.4**	**-4.9**
MNK				*i* PP	**PP**	**13 13 11.6**	**-0.9**
MNK				*i* PPP	PPP	13 16 32.3	
MNK				*i* S	**S**	**13 20 56.9**	**+0.8**
MNK				*i* sS	**sS**	**13 21 39.0**	**-3.1**
MNK				*i* SS	**SS**	**13 24 52.0**	**+2.6**
MNK				*i* SSS	SSS	13 27 32.1	
MNK				*i* LQ	LQ	13 34 10.7	
MNK				*i* LR	LR	13 38 25.3	
MNK				*i* LRM	MLR	13 40 43.3	
	comp=E,48nm,17.8s						
MNK				*i* LRM	MLR	13 40 45.9	
	comp=Z,3μm,14.0s						
MNK				*i* LRM	MLR	13 41 38.0	
	comp=N,842nm,20.4s						
TESR	**Tescani**	**58.79**	**312**	⇓P	**P**	**13 13 06.8**	**+0.8**
PLOR	**Plostina**	**58.80**	**311**	⇓P	**P**	**13 13 08.6**	**+2.5**
NACGM	**Naroch**	**58.97**	**321**	⇓*e*P	**P**	**13 13 06.5**	**-0.5**
	baz=94						
BIZ	**Bicaz**	**59.16**	**312**	⇑P	**P**	**13 13 09.8**	**+1.3**
MLR	**Muntele Rosu**	**59.30**	**310**	⇓P	**P**	**13 13 11.8**	**+2.0**
MLR	**Muntele Rosu**	**59.30**	**310**	P	**P**	**13 13 12.1**	**+2.4**
BURAR	**Bucovina Array**	**59.75**	**313**	⇓P	**P**	**13 13 14.2**	**+1.4**
BURAR	**Bucovina Array**	**59.75**	**313**	P	**P**	**13 13 13.2**	**+0.4**
BURAR				IAmb	IAmb	13 13 14.6	
	comp=E,2.7nm,0.8s						
BUR08	**Bucovina Ar. S**	**59.76**	**313**	P	**P**	**13 13 13.8**	**+1.0**
BUR08				IAmb	IAmb	13 13 14.8	
	comp=E,5.6nm,1.2s						
AS31	**Alice Springs**	**59.93**	**138**	P	**P**	**13 13 14.0**	**-0.1**
AS31				IAmb	IAmb	13 13 16.7	
	comp=E,3.5nm,0.4s						
ASAR	**Alice Springs**	**59.93**	**138**	P	**P**	**13 13 14.4**	**+0.3**
VOIR		**59.93**	**310**	⇑P	**P**	**13 13 15.4**	**+1.4**
FINES	**FINESS Array B**	**60.04**	**329**	P	**P**	**13 13 14.8**	**+0.5**
	comp=E,2.9nm,0.5s,baz=101,slow=9.9,SNR=11						
	comp=E,2.9nm,0.5s						
PABE	**Paberze**	**60.62**	**322**	P	**P**	**13 13 18.8**	**+0.4**
ARCES	**ARCESS Array B**	**61.64**	**338**	P	**P**	**13 13 25.6**	**+0.6**
	comp=E,1.4nm,0.4s,baz=96,slow=7.7,SNR=22						
	comp=E,1.4nm,0.4s						
ARCES	**ARCESS Array B**	**61.64**	**338**	P	**P**	**13 13 25.0**	**0.0**
SIRR	**Siria**	**62.25**	**312**	⇑P	**P**	**13 13 31.8**	**+2.2**
LIT	**Litokhoron**	**62.26**	**305**	P	**P**	**13 13 30.3**	**+0.5**
LIT				IAmb	IAmb	13 13 31.0	
	comp=E,8.4nm,1.0s						
MDVR	**Moldovita**	**62.34**	**310**	⇓P	**P**	**13 13 31.9**	**+1.7**
FNA	**Florina**	**63.02**	**305**	P	**P**	**13 13 35.1**	**+0.3**
FNA				IAmb	IAmb	13 13 35.8	
	comp=Z,7.0nm,0.8s						
DIVS	**Divibare**	**63.63**	**309**	P	**P**	**13 13 39.5**	**+0.7**
DIVS				IAmb	IAmb	13 13 41.3	
	comp=Z,8.5nm,1.2s						
MORH	**Mrgy, Hungar**	**64.34**	**312**	⇓P	**P**	**13 13 44.3**	**+1.1**
SPB2	**Spitsbergen Ar**	**65.55**	**347**	P	**P**	**13 13 51.1**	**+0.4**
SPB2				IAmb	IAmb	13 13 54.7	
	comp=Z,17nm,1.3s						
CTAO	**Charters Tower**	**66.06**	**126**	P	**P**	**13 13 55.1**	**+0.4**
CTAO				IAmb	IAmb	13 13 56.4	
	comp=Z,12nm,1.2s						
BRG	**Berggiesshubel**	**66.86**	**317**	*e*P	**P**	**13 14 00.6**	**+1.2**
BRG				Amp		13 14 02.3	
	comp=Z,4.5nm,0.9s						
BRG				*ex*	x

C36M	**Paulatuk**	**84.20**	**13**	P	**P**	**13 15 36.9**	**-1.1**
C36M				IAmb	IAmb	13 15 38.6	
	comp=Z,7.5nm,1.1s						
TOA0	**Torodi Ar. Sit**	**87.48**	**283**	P	**P**	**13 15 56.8**	**+1.6**
TOA0				IAmb	IAmb	13 15 57.9	
	comp=Z,4.4nm,1.1s						
TORD	**Torodi Ar. Bea**	**87.48**	**283**	P	**P**	**13 15 56.8**	**+1.5**
	comp=Z,1.1nm,0.6s,baz=65,slow=3.8,SNR=8.2						
TORD				pP	**pP**	**13 16 26.6**	**+2.6**
	comp=Z,2.6nm,0.9s,baz=64,slow=5.0,SNR=7.6						
	comp=Z,1.1nm,0.6s						
TORD	**Torodi Ar. Bea**	**87.48**	**283**	P	**P**	**13 15 56.3**	**+1.0**
SUR	**Sutherland**	**89.03**	**234**	LR	LR	13 58 07.5	
	comp=Z,22nm,18.2s,baz=116,slow=37						
TROLL	**Troll, Antarti**	**111.90**	**200**	PKiKP	**PKiKP**	**13 21 41.8**	**+1.1**
SNAA	**Sanae**	**113.56**	**200**	PKiKP	**PKiKP**	**13 21 44.2**	**+0.4**
VNA3	**Neumayer Olymp**	**115.76**	**200**	PKiKP	**PKiKP**	**13 21 48.4**	**+0.3**
TXAR	**Lajitas Array**	**125.49**	**19**	PKP	**PKPdf**	**13 22 08.1**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=73,slow=0.8,SNR=7.3						
BDFB	**Brasília**	**143.90**	**274**	PKP	PKPbc	13 22 41.7	+1.0
	comp=Z,3.4nm,0.6s,baz=98,slow=3.5,SNR=3.9						
BDFB				pPKP	pPKPdf	13 23 11.7	-1.2
	comp=Z,3.8nm,0.7s,baz=140,slow=4.1,SNR=2.6						
ROSC	**El Rosal**	**150.56**	**337**	PKPbc	**PKiKP**	**13 23 00.2**	**-0.1**
	comp=Z,16nm,0.4s,baz=105,slow=8.2,SNR=8.4						
CPUP	**Villa Florida**	**154.03**	**256**	PKPbc	**PKPbc**	**13 23 05.6**	**-1.0**
	comp=Z,2.2nm,0.5s,baz=109,slow=2.3,SNR=5.7						
LPAZ	**La Paz**	**162.37**	**288**	PKP	**PKPdf**	**13 23 10.1**	**+0.5**
	comp=Z,2.6nm,1.0s,baz=45,slow=2.2,SNR=6.4						
LPAZ				pPKP	**pPKPdf**	**13 23 41.5**	**+1.5**
	comp=Z,0.6nm,0.5s,baz=132,slow=7.3,SNR=2.2						

*IDC **22** 13:07:43.8±0.6,29.°10S×61.°10E,h0km,mb4.0/14, mbtmp4.1/15,ML4.6/1,MS3.5/21,Error ellipse: s-maj=23.1km s-min=18.4km az=73.0*
*NEIC **22** 13:07:46.3±2.0,29.°10S±0.°09×61.°05E±0.°08,h10km±1km, mb4.4/17,Error ellipse: s-maj=17.3km s-min=9.1km az=145.0*

ISC 22 13:07:45.6±0.5,29.°1S±0.°1×61.°0E±0.°1,h10km,n61, σ0s89/36,mb4.2/18,MS3.6/21,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RER	**Riviere de l'E**	**9.25**	**328**			**Pn**	**13 09 57.3**	**-1.8**
FOMA	**Nahampoana Res**	**13.19**	**285**	Pn		**Pn**	**13 10 51.5**	**-1.4**
VOI	**Vohitsoka**	**14.71**	**296**			**Pn**	**13 11 14.2**	**+0.2**
ABPO	**Ambohimpanom**	**16.11**	**305**	Pn		**Pn**	**13 11 31.8**	**-0.5**
OPO	**Ambohidratompo**	**16.43**	**307**	Pn		**Pn**	**13 11 36.6**	**+0.1**
	0.2nm,0.3s,baz=119,slow=13,SNR=9.6							
OPO				Sn		Sn	13 14 27.0	-12
	0.3nm,0.3s,baz=252,slow=19,SNR=6.5							
	5.2nm,0.5s							
H08S1	**Diego Carcia H**	**23.91**	**29**	T		T	13 37 42.4	
	baz=204,slow=76,SNR=32							
H08S2	**Diego Garcia H**	**23.92**	**29**	T		T	13 37 43.1	
	baz=204,slow=76,SNR=6.1							
H08S3	**Diego Garcia H**	**23.93**	**29**	T		T	13 37 44.0	
	baz=204,slow=76,SNR=26							
LSZ	**Lusaka**	**33.26**	**287**	LR		LR	13 25 56.2	
	comp=Z,74nm,19.8s,baz=154,slow=33							
SUR	**Sutherland**	**34.59**	**254**	LR		LR	13 26 32.4	
	comp=Z,84nm,19.1s,baz=128,slow=33							
KMBO	**Kilima Mbogo**	**35.89**	**317**	LR		LR	13 26 33.3	
	comp=Z,114nm,21.2s,baz=95,slow=31							
MAW	**Mawson**	**38.55**	**179**	P		**P**	**13 15 09.5**	**+1.5**
	1.9nm,0.9s,baz=350,slow=9.1,SNR=2.4							
MAW				LR		LR	13 26 57.8	
	comp=Z,95nm,18.5s,baz=14,slow=30							
	1.9nm,0.9s							
MAW	**Mawson**	**38.55**	**179**	IAmb		IAmb	13 15 18.1	
	comp=Z,0.5nm,0.8s							
MNCI	**Minicoy**	**38.93**	**19**	P		**P**	**13 15 12.0**	**+0.3**
MBAR	**Mbarara**	**40.48**	**309**	LR		LR	13 30 30.2	
	comp=Z,88nm,20.7s,baz=109,slow=34							
TSUM	**Tsumeb**	**40.66**	**274**	P		**P**	**13 15 26.3**	**-0.1**
	comp=Z,3.2nm,0.8s,baz=96,slow=9.2,SNR=3.6							
	comp=Z,3.2nm,0.8s							
TSUM	**Tsumeb**	**40.66**	**274**	P		**P**	**13 15 26.9**	**+0.4**
TSUM				IAmb		IAmb	13 15 46.2	
	comp=Z,5.9nm,0.9s							
H01W2	**Cape Leeuwin H**	**44.97**	**112**	T		T	14 03 37.7	
	baz=261,slow=75,SNR=74							
H01W3	**Cape Leeuwin H**	**44.97**	**112**	T		T	14 03 40.5	
	baz=261,slow=75,SNR=74							
H01W1	**Cape Leeuwin H**	**44.98**	**112**	T		T	14 03 40.1	
	baz=261,slow=75,SNR=83							
WSAR	**Wadi Sarin**	**52.09**	**357**	LR		LR	13 34 36.2	
	comp=Z,54nm,18.1s,baz=198,slow=31							
SNAA	**Sanae**	**54.48**	**200**	LR		LR	13 36 24.3	
	comp=Z,38nm,19.3s,baz=87,slow=32							
CM31	**Chiang Mai Arr**	**59.79**	**42**	P		**P**	**13 17 51.2**	**0.0**
CMAR	**Chiang Mai Arr**	**59.79**	**42**	P		**P**	**13 17 51.8**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=229,slow=7.8,SNR=8.9							
CMAR				LR		LR	13 40 23.7	
	comp=Z,19nm,19.6s,baz=240,slow=33							
	comp=Z,1.0nm,0.6s							
QSPA	**South Pole Qui**	**61.05**	**180**	P		**P**	**13 17 58.8**	**-0.6**
	comp=Z,3.4nm,1.1s,baz=262,slow=2.4,SNR=6.2							
QSPA				LR		LR	13 41 35.0	
	comp=Z,70nm,19.3s,baz=243,slow=33							
	comp=Z,3.4nm,1.1s							
QSPA	**South Pole Qui**	**61.05**	**180**	IAmb		IAmb	13 18 21.4	
	comp=Z,4.4nm,0.9s							
SOEI	**Soe**	**61.96**	**86**	P		**P**	**13 18 06.4**	**+0.1**
EIL	**Elat**	**63.53**	**335**	LR		LR	13 42 02.7	
	comp=Z,52nm,20.4s,baz=85,slow=32							
VNDA	**Vanda**	**64.11**	**166**	P		**P**	**13 18 17.9**	**-1.5**
	comp=Z,0.7nm,0.7s,baz=272,slow=9.1,SNR=2.9							
VNDA				LR		LR	13 44 23.9	
	comp=Z,116nm,18.0s,baz=262,slow=34							
	comp=Z,0.7nm,0.7s							
ASAR	**Alice Springs**	**64.56**	**104**	P		**P**	**13 18 22.4**	**-0.9**
AS31	**Alice Springs**	**64.56**	**104**	P		**P**	**13 18 22.9**	**-0.5**
WRA	**Warramunga Arr**	**66.38**	**100**	P		**P**	**13 18 34.3**	**-0.8**
	comp=Z,2.5nm,0.9s,baz=247,slow=5.7,SNR=13							
	comp=Z,2.5nm,0.9s							
MMAI	**Mount Meron Ar**	**66.39**	**337**	LR		LR	13 44 17.7	
	comp=Z,50nm,20.4s,baz=283,slow=33							
GNI	**Garni**	**70.54**	**347**	LR		LR	13 47 49.4	
	comp=Z,57nm,20.6s,baz=62,slow=34							
TORD	**Torodi Ar. Bea**	**71.02**	**298**	P		**P**	**13 19 04.2**	**+0.2**
	comp=Z,2.2nm,0.8s,baz=114,slow=6.3,SNR=8.7							
	comp=Z,2.2nm,0.8s							
TORD	**Torodi Ar. Bea**	**71.02**	**298**	IAmb		IAmb	13 19 07.5	
	comp=Z,2.4nm,0.9s							
KK31	**Karatay Array**	**72.38**	**7**	P		**P**	**13 19 12.1**	**+0.5**
KK31				IAmb		IAmb	13 19 42.6	
	comp=Z,3.2nm,1.2s							
KKAR	**Karatay Array**	**72.38**	**7**	P		**P**	**13 19 12.5**	**+0.9**
DBIC	**Dimbokro**	**72.59**	**288**	LR		LR	13 48 44.9	
	comp=Z,31nm,20.7s,baz=141,slow=34							
BRTR	**Keskin Array B**	**73.07**	**338**	P		**P**	**13 19 15.8**	**-0.2**
	comp=Z,1.0nm,0.7s,baz=180,slow=8.6,SNR=4.4							
	comp=Z,1.0nm,0.7s							
MAKZ	**Makanchi**	**77.89**	**15**	P		**P**	**13 19 45.0**	**+1.6**
MAKZ				IAmb		IAmb	13 19 47.1	
	comp=Z,3.9nm,1.1s							
MKAR	**Makanchi Array**	**77.95**	**15**	P		**P**	**13 19 43.2**	**-0.5**
	comp=Z,1.1nm,0.8s,baz=187,slow=4.9,SNR=7.0							
	comp=Z,1.1nm,0.8s							
ABKAR	**Akbulak array**	**78.01**	**359**	P		**P**	**13 19 44.5**	**+0.6**
AKTO	**Aktyubinsk**	**79.23**	**358**	P		**P**	**13 19 50.3**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=146,slow=7.3,SNR=2.4							
AKTO				LR		LR	13 51 51.2	
	comp=Z,24nm,21.7s,baz=163,slow=33							
	comp=Z,0.8nm,0.5s							
KURBB	**Kurchatov Arra**	**80.87**	**11**	P		**P**	**13 19 59.2**	**-0.2**
	comp=Z,1.1nm,0.8s,baz=204,slow=6.2,SNR=7.6							
	comp=Z,1.1nm,0.8s							
KURK	**Kurchatov**	**80.98**	**11**	P		**P**	**13 19 60.0**	**0.0**
KURK				IAmb		IAmb	13 20 01.4	
	comp=Z,3.0nm,1.1s							
BELG	**Belogornoye**	**81.99**	**352**	LR		LR	13 57 59.1	
	comp=Z,12nm,18.9s,baz=169,slow=37							
RPZ	**Rata Peaks**	**83.34**	**137**	LR		LR	13 48 58.0	
	comp=Z,113nm,18.2s,baz=237,slow=30							
AKASG	**Malin Array Be**	**84.29**	**340**	P		**P**	**13 20 16.2**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=152,slow=3.8,SNR=1.7							
	comp=Z,0.2nm,0.3s							
ZAA0	**Zalesovo Array**	**85.23**	**14**	P		**P**	**13 20 22.3**	**+0.3**
ZAA0				IAmb		IAmb	13 20 42.6	
	comp=Z,3.3nm,0.9s							
ZALV	**Zalesovo Beam**	**85.23**	**14**	P		**P**	**13 20 21.7**	**-0.2**
	comp=Z,1.1nm,0.5s,baz=215,slow=4.9,SNR=6.0							
ZALV				LR		LR	13 53 49.3	
	comp=Z,21nm,20.7s,baz=103,slow=32							
	comp=Z,1.1nm,0.5s							
OBN	**Obninsk**	**86.47**	**346**	LR		LR	14 00 19.1	
	comp=Z,7.9nm,19.1s,baz=297,slow=36							
KSRS	**Korea Array**	**91.12**	**47**	LR		LR	14 02 37.8	
	comp=Z,7.7nm,18.0s,baz=180,slow=36							
ESDC	**Sonseca Array**	**91.28**	**316**	P		**P**	**13 20 53.1**	**+1.8**
	comp=Z,0.6nm,0.7s,baz=109,slow=3.8,SNR=4.3							
	comp=Z,0.6nm,0.7s							
ESDC	**Sonseca Array**	**91.28**	**316**	IAmb		IAmb	13 20 57.0	
	comp=Z,1.7nm,1.1s							
FINES	**FINESS Array B**	**94.57**	**344**	LR		LR	14 06 14.3	
	comp=Z,16nm,18.5s,baz=28,slow=37							
YKA	**Yellowknife Ar**	**146.48**	**356**	PKPbc		**PKPdf**	**13 27 24.9**	**0.0**
	comp=Z,1.9nm,0.8s,baz=15,slow=2.6,SNR=5.2							
ULM	**Lac du Bonnet**	**152.60**	**327**	PKPbc		**PKPbc**	**13 27 41.0**	**-1.1**
	comp=Z,3.0nm,0.7s,baz=11,slow=3.8,SNR=5.0							
PDAR	**Pinedale Array**	**164.40**	**333**	PKP		**PKPdf**	**13 27 49.0**	**-0.8**
	comp=Z,1.3nm,1.0s,baz=141,slow=0.9,SNR=5.3							
TXAR	**Lajitas Array**	**166.64**	**275**	PKP		**PKPdf**	**13 27 52.5**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=141,slow=2.2,SNR=4.8							
NVAR	**Mina Array Bea**	**170.68**	**357**	PKP		**PKPdf**	**13 27 55.6**	**+1.3**
	comp=Z,0.4nm,0.8s,baz=208,slow=2.1,SNR=3.7							

DDA 22 13:10:31.7±0.0,39.°40N×27.°91E,h6km±2km,ML1.4, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
STEP	**BALIKESIR_Sava**	**0.15**	**260**	P		Pg	13 10 35.1	+0.3
STEP				S		Sg	13 10 38.5	+1.5
STEP				*i*	AML	AML	13 10 39.0	
	comp=N,114nm,0.4s							
BALY	**Balya**	**0.41**	**326**	P		Pg	13 10 39.4	-0.2
BALY				S		Sb	13 10 46.5	-1.3
BALY				*i*	AML	AML	13 10 56.0	
	comp=N,20nm,0.8s							
DURS	**Dursunbey**	**0.48**	**65**	P		Pg	13 10 41.1	+0.2
DURS				*i*	AML	AML	13 10 48.0	
	comp=E,35nm,0.7s							
DURS				S		Sb	13 10 48.5	-1.3
BUHA	**Balikesir, Bur**	**0.66**	**279**	P		Pg	13 10 44.7	+0.4
ULDT	**Uludag**	**1.20**	**52**	P		Pg	13 10 54.7	0.0
ULDT				S		Sg	13 11 09.8	-0.4
ULDT				*i*	AML	AML	13 11 15.0	
	comp=N,9.7nm,0.4s							

*IDC **22** 13:22:21.9±3.6,38.°18N×75.°63E,h120km±33km,mb3.7/11, mbtmp4.1/15,Error ellipse: s-maj=21.2km s-min=20.4km az=170.0*
*NEIC **22** 13:22:24.2±1.8,38.°34N±0.°10×75.°52E±0.°06,h130km±9km, mb4.7/5,Error ellipse: s-maj=15.6km s-min=3.5km az=155.0*
*NNC **22** 13:22:24.9±8.4,38.°62N×74.°96E,h0km,mb4.3,mpv4.3, Error ellipse: s-maj=81.4km s-min=43.8km az=134.0*

ISC 22 13:22:23.8±0.5,38.°19N±0.°05×75.°60E±0.°07,h150km,n72, σ2s23/76,mb4.1/10,3C-2D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DRK	**Karamyk**	**3.23**	**295**			**Pn**	**13 23 12.3**	**-2.1**
TARG	**Taragay, Kyrgy**	**3.92**	**25**	Pn		**Pn**	**13 23 21.9**	**-1.5**
ULHL	**Ulahol**	**4.08**	**7**	P		**Pn**	**13 23 24.0**	**-1.2**
	SNR=61							
UCH	**Uchtor**	**4.12**	**349**	P		**Pn**	**13 23 24.5**	**-1.5**
	SNR=177							
KDJ	**Kajisay**	**4.12**	**17**			**Pn**	**13 23 24.0**	**-1.7**
BTK	**Batken**	**4.16**	**298**			**Pn**	**13 23 24.8**	**-1.4**
AML	**Almayashu**	**4.20**	**340**	P		**Pn**	**13 23 25.3**	**-1.7**
	SNR=39							
GAR	**Garm**	**4.21**	**283**			**Pn**	**13 23 25.7**	**-1.3**
BOOM	**Boomskoye usch**	**4.30**	**3**			**Pn**	**13 23 26.8**	**-1.4**
KBK	**Karagaybulak**	**4.49**	**354**	P		**Pn**	**13 23 29.7**	**-0.9**
	SNR=41							
AAK	**Ala-Archa**	**4.52**	**350**	P		**Pn**	**13 23 30.2**	**-0.8**
	SNR=27							
AAK	**Ala-Archa**	**4.52**	**350**	Pn		**Pn**	**13 23 29.5**	**-1.5**
FRU1	**Bishkek**	**4.67**	**351**	Pn		**Pn**	**13 23 31.3**	**-1.6**
EKS2	**Erkin-Say**	**4.68**	**343**	P		**Pn**	**13 23 32.0**	**-1.0**
	SNR=36							
TKM2	**Tokmak 2**	**4.73**	**0**	P		**Pn**	**13 23 32.9**	**-0.8**
	SNR=113							
TKM2	**Tokmak 2**	**4.73**	**0**	⇑P		**Pn**	**13 23 32.7**	**-1.0**
	47nm,0.5s							
TKM2				⇓S		**Sn**	**13 24 23.7**	**-4.5**
	46nm,0.6s							
PRZ	**Przheval'sk**	**4.79**	**26**			**Pn**	**13 23 33.9**	**-0.7**
CHMS	**Chumysh**	**4.85**	**353**	P		**Pn**	**13 23 34.0**	**-1.2**
	SNR=13							
CHCP	**Chirah Chowk**	**4.90**	**203**	P		**Pn**	**13 23 38.1**	**+2.1**
CHGR	**Chuyangaron**	**5.08**	**277**			**Pn**	**13 23 35.8**	**-2.5**
USP	**Ospenovka**	**5.14**	**351**	P		**Pn**	**13 23 37.2**	**-1.8**
	SNR=12							
JMU	**Jammu**	**5.49**	**186**	*e*P		**Pn**	**13 23 44.4**	**+0.7**
THN	**Thein Dam**	**5.74**	**179**	*e*P		**Pn**	**13 23 48.4**	**+1.3**
THN				*e*S		**Sn**	**13 24 50.6**	**-1.6**
THW	**Thamme Wali**	**6.23**	**211**	P		**Pn**	**13 23 54.2**	**+0.5**
KK31	**Karatay Array**	**6.25**	**323**	Pn		**Pn**	**13 23 51.6**	**-2.2**
KK31	**Karatay Array**	**6.25**	**323**	⇑P		**Pn**	**13 23 51.7**	**-2.0**
	4.9nm,0.2s,baz=145,slow=14,SNR=111							
KK31				⇓S		**Sn**	**13 24 57.1**	**-7.1**
	10nm,0.3s,baz=154,slow=27,SNR=6.4							
KKAR	**Karatay Array**	**6.25**	**323**			**Pn**	**13 23 51.0**	**-2.7**
KKAR	**Karatay Array**	**6.25**	**323**	Pn		**Pn**	**13 23 51.3**	**-2.4**
KBL	**Kabul**	**6.42**	**237**			**Pn**	**13 23 56.1**	**-0.2**
SARP	**Sargodha**	**6.70**	**202**	P		**Pn**	**13 23 59.8**	**0.0**
BHK	**Bhakra**	**6.79**	**174**	*e*P		**Pn**	**13 24 02.7**	**+1.6**
BHK				*e*S		**Sn**	**13 25 18.8**	**+1.5**
PTH	**Pithoragarh**	**9.43**	**155**	*e*P		**Pn**	**13 24 35.5**	**-1.0**
LGTI	**Lohaghat**	**9.53**	**155**	*e*P		**Pn**	**13 24 38.2**	**+0.6**
LGTI				*i*	P	**Pn**	**13 24 38.2**	**+0.6**
AYAN	**Aya Nagar**	**9.77**	**172**	*e*P		**Pn**	**13 24 39.4**	**-1.3**
AYAN				*e*S		**Sn**	**13 26 24.0**	**-4.9**
MAKZ	**Makanchi**	**9.81**	**27**			**Pn**	**13 24 39.6**	**-1.6**
MK31	**Makanchi Array**	**9.91**	**28**	Pn		**Pn**	**13 24 41.4**	**-1.1**
MKAR	**Makanchi Array**	**9.91**	**28**	P		**Pn**	**13 24 41.5**	**-1.0**
	2.0nm,0.5s,baz=199,slow=15,SNR=27							
SONA	**Sohna**	**9.99**	**172**	*e*P		**Pn**	**13 24 41.2**	**-2.5**
KUDL	**Kundal**	**10.05**	**175**	*e*P		**Pn**	**13 24 43.6**	**-0.8**
KUDL				*e*S		**Sn**	**13 26 29.2**	**-6.4**
AJM	**Ajmer**	**11.70**	**184**	*e*P		**Pn**	**13 25 06.5**	**+0.3**
AJM				*e*S		**Sn**	**13 27 09.3**	**-6.4**
PYUN	**Piuthan**	**11.81**	**146**	*e*P		**Pn**	**13 25 05.4**	**-2.4**
	84nm,0.3s							
DANN	**Dangsing**	**11.95**	**143**	*e*P		**Pn**	**13 25 07.1**	**-2.6**
	32nm,0.4s							
KOLN	**Koldanda**	**12.37**	**145**	*e*P		**Pn**	**13 25 13.2**	**-1.9**
	1.8nm,0.3s							
KURBB	**Kurchatov Arra**	**12.61**	**9**	P		**Pn**	**13 25 15.0**	**-2.7**
	1.7nm,0.8s,baz=198,slow=12,SNR=11							
GKN	**Gorkha**	**12.66**	**141**	*e*P		**Pn**	**13 25 16.5**	**-2.4**
	23nm,0.3s							
PKI	**Pulchoki**	**13.41**	**139**	*e*P		**Pn**	**13 25 26.8**	**-1.8**
JIRN	**Jiri**	**13.75**	**137**	*e*P		**Pn**	**13 25 31.0**	**-1.9**
	21nm,0.3s							
RAMN	**Ramite**	**14.53**	**137**	*e*P		**Pn**	**13 25 39.9**	**-2.8**
	8.0nm,0.3s							
BHPL	**Bhopal**	**14.98**	**173**	*e*P		**P**	**13 25 52.6**	**+2.7**
BHPL				IAmb		IAmb	13 25 52.9	
	comp=Z,12nm,0.5s							
BHPL				*e*S		Sn	13 28 20.8	-14
AB31	**Akbulak array**	**15.79**	**319**	P		**Pn**	**13 25 55.7**	**-2.0**
	comp=Z,1.1nm,0.4s,baz=125,slow=13,SNR=41							
ABKAR	**Akbulak array**	**15.79**	**319**	Pn		**Pn**	**13 25 56.1**	**-1.7**
ZAA0	**Zalesovo Array**	**16.99**	**19**	P		**Pn**	**13 26 11.2**	**-1.0**
ZALV	**Zalesovo Beam**	**16.99**	**19**	P		**Pn**	**13 26 11.4**	**-0.8**
	comp=Z,3.5nm,0.5s,baz=213,slow=11,SNR=18							
AKTO	**Aktyubinsk**	**17.50**	**320**	P		**Pn**	**13 26 18.9**	**+0.4**
	comp=Z,2.0nm,0.3s,baz=113,slow=10.0,SNR=9.6							
AKTO	**Aktyubinsk**	**17.50**	**320**	⇑P		**Pn**	**13 26 18.4**	**0.0**
	comp=Z,1.3nm,0.4s							
WSAR	**Wadi Sarin**	**20.80**	**229**	P		**P**	**13 26 54.2**	**+0.8**
	comp=Z,6.4nm,0.8s,baz=79,slow=10,SNR=2.8							
	comp=Z,6.4nm,0.8s							
ARU	**Arti**	**21.49**	**334**	P		**P**	**13 27 01.6**	**+1.3**
	comp=Z,3.0nm,0.3s,baz=148,slow=9.2,SNR=7.4							
	comp=Z,3.0nm,0.3s							
BRTR	**Keskin Array B**	**32.45**	**286**	P		**P**	**13 28 42.7**	**+2.8**
FINES	**FINESS Array B**	**38.21**	**324**	P		**P**	**13 29 30.3**	**+1.7**
	comp=Z,1.3nm,0.5s,baz=113,slow=11,SNR=2.5							
	comp=Z,1.3nm,0.5s							
IDI	**Anoyia**	**40.33**	**282**	P		**P**	**13 29 48.1**	**+1.5**
ARCES	**ARCESS Array B**	**41.05**	**336**	P		**P**	**13 29 52.0**	**0.0**
	comp=Z,2.3nm,0.9s,baz=107,slow=8.1,SNR=6.8							
	comp=Z,2.3nm,0.9s							
ARCES	**ARCESS Array B**	**41.05**	**336**	IAmb		IAmb	13 30 36.7	
	comp=Z,70nm,1.9s							
NOA	**NORSAR Array B**	**45.28**	**322**	P		**P**	**13 30 27.5**	**+1.4**
	comp=Z,0.5nm,0.5s,baz=91,slow=7.8,SNR=3.5							
	comp=Z,0.5nm,0.5s							
ESDC	**Sonseca Array**	**59.89**	**299**	P		**P**	**13 32 15.1**	**+1.3**
	comp=Z,0.6nm,0.6s,baz=54,slow=7.0,SNR=6.7							
	comp=Z,0.6nm,0.6s							
ESDC	**Sonseca Array**	**59.89**	**299**	IAmb		IAmb	13 32 18.1	
	comp=Z,7.6nm,2.0s							
TORD	**Torodi Ar. Bea**	**69.39**	**271**	P		**P**	**13 33 16.9**	**+1.2**
	comp=Z,2.5nm,0.5s,baz=50,slow=5.8,SNR=45							
	comp=Z,2.5nm,0.5s							
TORD	**Torodi Ar. Bea**	**69.39**	**271**	IAmb		IAmb	13 33 17.5	
	comp=Z,2.5nm,0.8s							
INK	**Inuvik**	**71.60**	**11**	P		**P**	**13 33 30.2**	**+2.0**
	comp=Z,1.9nm,0.7s,baz=45,slow=2.9,SNR=3.3							
	comp=Z,1.9nm,0.7s							
INK	**Inuvik**	**71.60**	**11**	IAmb		IAmb	13 35 31.2	
	comp=Z,22nm,1.9s							
DBIC	**Dimbokro**	**78.41**	**269**	P		**P**	**13 34 09.8**	**+1.6**
	comp=Z,2.8nm,0.5s,baz=49,slow=3.0,SNR=2.2							
	comp=Z,2.8nm,0.5s							
YKA	**Yellowknife Ar**	**79.33**	**5**	P		**P**	**13 34 14.0**	**+1.6**
	comp=Z,0.8nm,0.5s,baz=346,slow=5.4,SNR=4.7							
	comp=Z,0.8nm,0.5s							
WRA	**Warramunga Arr**	**79.87**	**125**	P		**P**	**13 34 17.2**	**+1.4**
	comp=Z,0.4nm,0.6s,baz=327,slow=4.7,SNR=11							
	comp=Z,0.4nm,0.6s							

MAN 22 13:44:18.5,18.°56N×119.°73E,h15km,mb4.0,ML2.7, MS2.3,Philippine Islands region

DJA 22 13:54:40.5±1.3,1.°N±3.°×11.°9E±.°,h30km±14km,M3.9/9, mb3.9/1,MLv3.9/9,Borneo

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MPSI	**Mapaga**	**1.54**	**138**	P		Pn	13 55 05.3	-0.7
MPSI				S		Sb	13 55 26.4	-1.3
MRSI	**Marisa**	**3.24**	**108**	P		Pn	13 55 29.9	+0.6
APSI	**Ampana**	**3.67**	**131**	P		Pn	13 55 35.9	+0.7
TTSI	**Tana Toraja**	**4.61**	**168**	P		Pn	13 55 48.2	+0.1
LUWI	**Luwuk**	**4.65**	**123**	P		Pn	13 55 48.8	+0.1
SPSI	**Sidrap Palu**	**5.49**	**170**	P		Pn	13 55 59.9	-0.4
BNSI	**Bone**	**5.98**	**168**	P		Pn	13 56 07.7	+0.6

*ISU **22** 13:56:11.8,40.°90N×69.°26E,h15km*
*KRNET **22** 13:56:14.1±0.1,41.°17N×69.°63E,h19km,mb3.1*

ISC 22 13:56:16.8±1.0,41.°09N±0.°04×69.°80E±0.°04,h11km±10km, n12,σ1s61/24,8C-3D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
YBZ	**Yangibazar**	**0.26**	**323**	P		**Pg**	**13 56 20.5**	**-1.8**
YBZ				S		**Sg**	**13 56 26.8**	**+0.9**
TGS	**TashGRES**	**0.39**	**328**	P		**Pg**	**13 56 24.0**	**-0.6**
TGS				S		**Sg**	**13 56 31.0**	**+1.2**
CHMG	**Chimgan**	**0.48**	**19**	P		**Pg**	**13 56 26.9**	**+0.6**
CHMG				S		**Sn**	**13 56 37.7**	**+4.9**
TRKS	**Terek-Say**	**1.10**	**66**	⇑

SBZ	**Shahbuz**	**2.24**	**13**	P		**Pb**	**14 17 18.9**	**-0.7**
	SNR=11							
SBZ				S		**Sn**	**14 17 46.0**	**+1.2**
ISRB	**Sarab**	**2.27**	**73**	*e*Pn		**Pg**	**14 17 21.9**	**0.0**
ISRB				*e*			14 17 27.9	
	comp=Z,4μm,0.3s							
HYR	**Heyderabad**	**2.50**	**359**	P		**Pb**	**14 17 23.1**	**-1.0**
	SNR=4.6							
HYR				S		**Sn**	**14 17 51.9**	**+0.6**
GURO	**Guroymak-BITLI**	**2.65**	**301**	PN		**Pn**	**14 17 22.4**	**+0.3**
GURO	**Guroymak-BITLI**	**2.65**	**301**	*e*Pn		**Pg**	**14 17 22.5**	**+0.3**
IDHR	**Dehrash**	**2.77**	**154**	*e*Pn		**Pg**	**14 17 33.1**	**+1.5**
IDHR				*e*			14 17 34.6	
	comp=Z,2μm,0.2s							
AGRB	**Hanur-Agry**	**2.80**	**328**	PN		**Pn**	**14 17 25.7**	**+1.3**
AGRB	**Hanur-Agry**	**2.80**	**328**	*e*Pn		**Pn**	**14 17 25.6**	**+1.2**
GRMI	**Germi**	**2.84**	**55**	*e*Pn		**Pb**	**14 17 28.2**	**-1.7**
GRMI				*e*			14 17 34.6	
	comp=Z,99nm,0.7s							
SNGE	**Sanandaj**	**2.89**	**136**	*e*Pn		**Pg**	**14 17 35.2**	**+1.5**
QRD	**Qoradiz**	**2.94**	**39**	S		**Sn**	**14 18 02.4**	**+0.5**
GNI	**Garni**	**2.94**	**357**	PN		**Pn**	**14 17 27.6**	**+1.4**
LRK	**Lerik**	**3.06**	**61**	P		**Pb**	**14 17 33.0**	**-0.7**
	SNR=24							
LRK				S		**Sn**	**14 18 07.9**	**+2.7**
ZNJK	**Zanjan**	**3.07**	**99**	*e*Pn		**Pg**	**14 17 36.2**	**-1.0**
MUSM	**Mu-Merkez**	**3.09**	**300**	*e*Pn		**Pn**	**14 17 29.1**	**+0.9**
MUSM	**Mu-Merkez**	**3.09**	**300**	P		**Pn**	**14 17 29.2**	**+0.9**
YRD	**Yardimli**	**3.13**	**56**	P		**Pb**	**14 17 34.0**	**-0.8**
	SNR=20							
YRD				S		**Sb**	**14 18 09.9**	**-3.5**
ASTR	**Astara**	**3.35**	**65**	P		**Pb**	**14 17 37.4**	**-1.0**
	SNR=4.0							
GLBA	**Clilabad**	**3.41**	**52**	P		**Pb**	**14 17 37.2**	**-2.2**
	SNR=5.7							
GDB	**GEDABAY**	**3.56**	**10**	P		**Pn**	**14 17 37.5**	**+2.7**
	SNR=6.3							
GDB				S		**Sn**	**14 18 17.5**	**-0.1**
GANJ	**Ganja**	**3.60**	**17**	P		**Pn**	**14 17 37.7**	**+2.5**
	SNR=10							
QZX	**Qazax, Azerbai**	**3.86**	**5**	P		**Pn**	**14 17 40.9**	**+2.1**
	SNR=5.5							
QZX				S		**Sn**	**14 18 23.7**	**-1.0**
BHD	**Baghdad**	**3.96**	**187**	*e*Pn		**Pb**	**14 17 48.0**	**-0.8**
BHD				*e*Sn		**Sb**	**14 18 30.8**	**+0.9**
QABG	**Abgarm-Qazvin**	**4.05**	**110**	*e*Pn		**Pb**	**14 17 48.5**	**-2.0**
IBDR	**Badra**	**4.17**	**168**	*e*Pn		**Pb**	**14 17 51.0**	**-1.5**
IBDR				*e*Sn		**Sb**	**14 18 44.0**	**+0.6**
IBDR				AML	AML		14 18 53.0	
	comp=N,109nm,0.3s							
IBDR				AML	AML		14 19 14.9	
	comp=E,56nm,0.2s							
IKFM	**Kafar-mosalman**	**4.39**	**146**	*e*Pn		**Pb**	**14 17 54.4**	**-1.8**
IRAZ	**Razeghan**	**4.43**	**113**	*e*		Pg	14 18 13.8	+10
	comp=Z,253nm,0.8s							
QALM	**Alamut, Qazvin**	**4.66**	**98**	*e*Pn		**Pb**	**14 17 56.5**	**-4.5**
QALM				*e*			14 18 19.5	
	comp=Z,280nm,0.7s							
ASAO	**Ashtian**	**4.92**	**121**	*e*Pn		**Pb**	**14 18 03.1**	**-2.4**
CHTH	**Charan**	**5.16**	**103**	*e*Pn		**Pb**	**14 18 05.3**	**-4.3**
AMIS	**Naft Sefid**	**6.60**	**146**	*e*Pn		Pb	14 18 24.6	-9.4

MAN 22 14:19:03.5, 17°29N×120°36E, h22km, mb3.8, ML2.5, MS2.1, Luzon

*IDC **22** 14:26:38.1±1.6, 33°.46N×138°.52E, h0km, mb3.6/2, mbtmp3.5/3, ML2.5/1, Error ellipse: s-maj=27.1km s-min=22.5km az=54.0*
*JMA **22** 14:26:38.4±0.3, 34°.2N±0°.7×14°.1E±°, h55km±3km, MV3.4/33, FAR S OFF BOSO PENINSULA*
ISC 22 14:26:38.0±1.3, 34°.21N±0°.05×140°.79E±0°.07, h58km±14km, n21, σ0°83/25, 6D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.47**	**19**	*i* P		**Pn**	**14 26 49.4**	**+0.4**
BSO1				*i* X			14 26 58.9	
BSO3	**Boso 3**	**0.64**	**339**	P		**Pn**	**14 26 51.5**	**+0.4**
BSO3				*e*X			14 27 01.6	
BSO4	**Boso 4**	**0.87**	**335**	P		**Pn**	**14 26 54.8**	**+0.6**
KTR	**Katsuura**	**1.02**	**337**	P		**Pn**	**14 26 56.5**	**+0.3**
JMKN	**Mikurajimanish**	**1.04**	**253**	⇓*i*P		**Pn**	**14 26 57.0**	**+0.4**
JMKN				⇓S		**Sn**	**14 27 10.3**	**-0.1**
JKUC	**kamogawauchiur**	**1.07**	**333**	P		**Pn**	**14 26 57.0**	**+0.2**
JKUC				*e*S		**Sn**	**14 27 10.9**	**0.0**
JIM2	**Oshima 3**	**1.23**	**295**	⇓P		**Pn**	**14 26 58.9**	**-0.2**
JIM2				⇓*e*S		**Sn**	**14 27 14.1**	**-0.8**
JTHY	**Toshimahigashi**	**1.28**	**285**	P		**Pn**	**14 27 00.1**	**+0.4**
JHJ2	**Mitsune**	**1.36**	**217**	P		**Pn**	**14 27 01.7**	**+0.9**
JHJ	**Hachijo jima 2**	**1.37**	**218**	Pn		**Pn**	**14 27 01.7**	**+0.8**
	61nm,0.3s,baz=165,slow=23,SNR=50							
JHJ					Sn	**Sn**	**14 27 16.9**	**-1.2**
	169nm,0.3s,baz=293,slow=20,SNR=17							
JKO	**Kozu shima**	**1.37**	**270**	P		**Pn**	**14 27 01.3**	**+0.4**
JKO				*e*S		**Sn**	**14 27 18.5**	**+0.4**
JSMT	**Sammumatsuo**	**1.46**	**349**	P		**Pn**	**14 27 02.6**	**+0.5**
KTJ3	**Kamata3**	**1.60**	**298**	⇓P		**Pn**	**14 27 03.7**	**-0.2**
KTJ3				⇓S		**Sn**	**14 27 21.9**	**-1.6**
JIZS	**Izushimoda**	**1.66**	**288**	P		**Pn**	**14 27 05.2**	**+0.3**
JIZS				*e*S		**Sn**	**14 27 25.2**	**+0.1**
MJAR	**Matsushiro Arr**	**3.15**	**319**	Pn		**Pn**	**14 27 26.2**	**+1.2**
	0.6nm,0.3s,baz=176,slow=15,SNR=59							
MJAR					Sn	**Sn**	**14 27 59.9**	**-1.5**
	0.8nm,0.3s,baz=128,slow=11,SNR=8.9 3.1nm,0.4s							
JCJ	**Chichijima**	**7.19**	**170**	Pn		**Pn**	**14 28 18.8**	**-1.7**
	8.3nm,0.3s,baz=292,slow=23,SNR=14							
JCJ					Sn	Sn	14 29 33.0	-7.7
	1.8nm,0.3s,baz=292,slow=21,SNR=1.3							
H11N2	**WAKE ISLAND Hy**	**27.27**	**115**	T		T	15 02 15.4	
	baz=309,slow=74							
H11N1	**WAKE ISLAND Hy**	**27.27**	**115**	T		T	15 02 19.0	
	baz=309							
H11N3	**WAKE ISLAND Hy**	**27.29**	**115**	T		T	15 02 17.1	
	baz=309,slow=74							
ILAR	**Eielson Array**	**52.16**	**31**	P		P	14 36 03.3	+21
	0.6nm,1.1s,baz=248,slow=6.7,SNR=3.1 0.6nm,1.1s							
WRA	**Warramunga Arr**	**54.20**	**187**	P		**P**	**14 35 58.1**	**+0.5**
	0.4nm,0.3s,baz=1.7,slow=7.8,SNR=7.5 0.4nm,0.3s							

*NSSP **22** 14:33:22.1, 38°.42N×45°.05E, h7km, Ms3.2*
*DDA **22** 14:33:23.9±0.0, 38°.43N×44°.95E, h4km±4km, MW3.5*
*TEH **22** 14:33:25.6, 38°.46N×44°.85E, h7km, ML3.0*
*ISK **22** 14:33:26.0, 38°.50N×44°.72E, h5km, ML3.2/8*
*AZER **22** 14:33:26.2±0.3, 38°.63N×44°.89E, h5km, Error ellipse: s-maj=3.8km s-min=2.0km az=235.0*
ISC 22 14:33:25.4±1.1, 38°.45N±0°.02×44°.89E±0°.02, h7km±10km, n74, σ1$53/112, 8C-4D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
ISHB	**Shabestar**	**0.60**	**106**	*e*Pg		**Pg**	**14 33 37.3**	**+0.3**
ISHB				*e*			14 33 53.9	
	comp=Z,15μm,0.5s							
IMRD	**Marand**	**0.69**	**67**	*e*Pg		**Pb**	**14 33 39.3**	**-0.7**
OZAP	**Van, Ozalp-Mer**	**0.73**	**287**	P		**Pg**	**14 33 38.4**	**-1.2**
OZAP				S		**Sb**	**14 33 51.1**	**0.0**
NAX	**Nakhchivan**	**0.87**	**33**	*e*Pg		**Pg**	**14 33 42.3**	**+0.1**
NAX	**Nakhchivan**	**0.87**	**33**	P		**Pg**	**14 33 42.2**	**+0.1**
	SNR=53							
NAX				S		**Sb**	**14 33 54.2**	**-0.6**
MAKU	**Maku**	**0.92**	**350**	*e*Pg		**Pg**	**14 33 41.9**	**-1.3**
YOVA	**Hakkari_Yksek**	**0.98**	**209**	*e*Pg		**Pg**	**14 33 43.9**	**-0.3**
YOVA	**Hakkari_Yksek**	**0.98**	**209**	P		**Pg**	**14 33 44.0**	**-0.3**
YOVA				S		**Sn**	**14 34 02.3**	**+2.2**
YOVA				*i* AML		AML	14 34 10.0	
	comp=Z,261nm,0.5s							
ORD	**Ordubad**	**0.99**	**61**	P		**Pb**	**14 33 44.8**	**-0.2**
	SNR=28							
ORD				S		**Sn**	**14 33 59.4**	**-0.7**
ITBZ	**Tabriz**	**1.01**	**102**	*e*Pg		**Pb**	**14 33 45.5**	**+0.1**
ITBZ				*e*			14 34 01.5	
	comp=Z,4μm,0.3s							
CLDR	**Caldiran**	**1.03**	**313**	PG		**Pg**	**14 33 43.3**	**-1.9**
CLDR				SG		**Sg**	**14 33 58.2**	**-0.4**
CLDR	**Caldiran**	**1.03**	**313**	*e*Pg		**Pg**	**14 33 44.6**	**-0.6**
SBZ	**Shahbuz**	**1.08**	**28**	*e*Pn		**Pn**	**14 33 46.9**	**-0.3**
SBZ	**Shahbuz**	**1.08**	**28**	P		**Pg**	**14 33 46.2**	**-0.1**
	SNR=30							
SBZ				S		**Sb**	**14 34 01.2**	**+0.3**
IAZR	**Azarshahr**	**1.15**	**131**	*e*Pg		**Pn**	**14 33 48.3**	**0.0**
VANB	**Van**	**1.19**	**278**	PG		**Pg**	**14 33 46.9**	**-1.3**
VANB	**Van**	**1.19**	**278**	*e*Pg		**Pg**	**14 33 46.9**	**-1.3**
VANB	**Van**	**1.19**	**278**	P		**Pg**	**14 33 46.6**	**-1.5**
VANB				S		**Sn**	**14 34 05.5**	**+0.5**
HYR	**Heyderabad**	**1.27**	**359**	P		**Pn**	**14 33 49.2**	**-0.5**
HYR				S		**Sn**	**14 34 06.7**	**-0.4**
HAKT	**HAKKARI**	**1.29**	**227**	*e*Pn		**Pg**	**14 33 49.3**	**-0.8**
HAKT	**HAKKARI**	**1.29**	**227**	P		**Pg**	**14 33 49.3**	**-0.8**
HAKT				S		**Sn**	**14 34 10.2**	**+2.6**
TVRZ	**Varzaqan**	**1.40**	**87**	*e*Pn		**Pg**	**14 33 52.7**	**+0.4**
TVRZ				*e*			14 34 22.7	
	comp=Z,7μm,0.5s							
DYDN	**Diyadin**	**1.44**	**320**	*e*Pn		**Pn**	**14 33 51.6**	**-0.5**
DYDN	**Diyadin**	**1.44**	**320**	P		**Pn**	**14 33 51.7**	**-0.5**
DYDN				S		**Sg**	**14 34 16.6**	**+4.8**
GEVA	**Gevas**	**1.44**	**265**	*e*Pn		**Pn**	**14 33 50.9**	**-1.2**
GEVA	**Gevas**	**1.44**	**265**	P		**Pn**	**14 33 51.0**	**-1.2**
GEVA				S		**Sg**	**14 34 13.1**	**+1.2**
AKDM	**Akdamar-Van**	**1.50**	**266**	PN		**Pn**	**14 33 52.7**	**-0.3**
AKDM				SN		**Sg**	**14 34 13.8**	**0.0**
AKDM	**Akdamar-Van**	**1.50**	**266**	*e*Pn		**Pb**	**14 33 53.2**	**-0.6**
AKDM	**Akdamar-Van**	**1.50**	**266**	P		**Pn**	**14 33 52.6**	**-0.3**
AKDM				S		**Sg**	**14 34 15.6**	**+1.8**
AKDM				*i* AML		AML	14 34 26.0	
	comp=Z,240nm,0.6s							
GRS	**Goris**	**1.54**	**47**	⇓*i*P		**Pn**	**14 33 52.5**	**-1.0**
GRS				⇑*i*S		**Sn**	**14 34 13.6**	**-0.3**
IGDI	**IGDIR**	**1.55**	**336**	*e*Pn		**Pg**	**14 33 54.6**	**-0.6**
IGDI	**IGDIR**	**1.55**	**336**	P		**Pg**	**14 33 54.6**	**-0.6**
IGDI				S		**Sg**	**14 34 17.4**	**+2.0**
NRKZ	**NAREK**	**1.56**	**354**	⇑*i*P		**Pg**	**14 33 55.2**	**-0.3**
NRKZ				⇑*i*S		**Sg**	**14 34 18.0**	**+2.4**
CUKT	**Cukurca**	**1.57**	**221**	PN		**Pg**	**14 33 55.7**	**+0.2**
CUKT				SN		**Sg**	**14 34 17.4**	**+1.6**
CUKT	**Cukurca**	**1.57**	**221**	*e*Pn		**Pg**	**14 33 55.3**	**-0.2**
TASB	**TASBURUN-IGDIR**	**1.62**	**342**	PN		**Pg**	**14 33 55.9**	**-0.6**
TASB				SN		**Sg**	**14 34 17.2**	**-0.2**
TASB	**TASBURUN-IGDIR**	**1.62**	**342**	*e*Pn		**Pg**	**14 33 56.3**	**-0.2**
IHRS	**Heris**	**1.70**	**94**	*e*Pg		**Pg**	**14 33 57.6**	**-0.4**
IHRS				*e*			14 34 27.4	
	comp=Z,3μm,0.6s							
GNI	**Garni**	**1.71**	**356**	⇓*i*P		**Pb**	**14 33 56.4**	**-0.8**
GNI				⇑*i*S		**Sg**	**14 34 21.9**	**+1.6**
GNI	**Garni**	**1.71**	**356**	PN		**Pb**	**14 33 57.0**	**-0.2**
GNI				SN		**Sg**	**14 34 20.3**	**0.0**
IBST	**Bostanabad**	**1.75**	**115**	*e*Pn		**Pg**	**14 33 58.3**	**-0.7**
MAHB	**Mahabad**	**1.80**	**159**	*e*Pn		**Pg**	**14 34 00.0**	**+0.1**
METS	**Metsamor**	**1.81**	**340**	⇑*i*P		**Pg**	**14 33 59.3**	**-0.9**
METS				⇑*i*S		**Sg**	**14 34 25.7**	**+2.0**
VNNZ	**Vanand**	**1.85**	**334**	⇑*i*P		**Pg**	**14 34 00.5**	**-0.4**
VNNZ				⇓*i*S		**Sg**	**14 34 27.8**	**+2.9**
AGRB	**Hanur-Agry**	**1.86**	**308**	PN		**Pn**	**14 33 58.4**	**+0.5**
AGRB	**Hanur-Agry**	**1.86**	**308**	*e*Pn		**Pb**	**14 33 59.4**	**-0.5**
KAPZ	**Kaputan**	**1.88**	**356**	⇓*i*P		**Pb**	**14 34 00.4**	**+0.2**
KAPZ				⇑*i*S		**Sg**	**14 34 26.5**	**+0.6**
KOTA	**Agri, Merkez-K**	**1.88**	**317**	P		**Pg**	**14 34 00.1**	**-0.1**
KOTA				S		**Sg**	**14 34 27.7**	**+1.7**
PERV	**Siirt/Pervari-**	**1.91**	**256**	P		**Pg**	**14 34 02.0**	**-0.1**
PERV				S		**Sg**	**14 34 29.9**	**+3.0**
MLAZ	**Malazgirt-MUS**	**1.95**	**292**	PN		**Pn**	**14 33 59.6**	**+0.4**
QRD	**Qoradiz**	**2.15**	**61**	P		**Pb**	**14 34 04.6**	**-0.1**
	SNR=8.4							
QRD				S		**Sg**	**14 34 34.9**	**+0.3**
IHSH	**Hashtrud**	**2.20**	**120**	*e*Pn		**Pb**	**14 34 04.6**	**-1.1**
IHSH				*e*			14 34 41.9	
	comp=Z,1μm,0.1s							
GURO	**Guroymak-BITLI**	**2.24**	**274**	PN		**Pn**	**14 34 03.8**	**+0.7**
GURO	**Guroymak-BITLI**	**2.24**	**274**	*e*Pn		**Pb**	**14 34 04.3**	**-2.1**
ISRB	**Sarab**	**2.28**	**105**	*e*		**Pg**	**14 34 12.7**	**+3.6**
	comp=Z,1μm,0.2s							
GDB	**GEDABAY**	**2.37**	**16**	P		**Pb**	**14 34 07.4**	**-1.1**
	SNR=3.7							
GDB				S		**Sb**	**14 34 39.1**	**+1.1**
GRMI	**Germi**	**2.38**	**80**	*e*			14 34 44.6	
	comp=Z,99nm,0.4s							
GRMI				*e*Pn		**Pb**	**14 34 06.9**	**-1.8**
AGDM	**Agdam**	**2.39**	**45**	P		**Pb**	**14 34 07.7**	**-1.2**
AGDM				S		**Sb**	**14 34 39.8**	**+1.2**
BLQ	**Beylaqan**	**2.44**	**58**	P		**Pb**	**14 34 09.0**	**-0.6**
	SNR=6.3							
BLQ				S		**Sg**	**14 34 42.1**	**-1.7**
GANJ	**Ganja**	**2.46**	**26**	P		**Pb**	**14 34 08.6**	**-1.4**
	SNR=11							
GANJ				S		**Sb**	**14 34 40.8**	**+0.3**
QZX	**Qazax, Azerbai**	**2.63**	**8**	P		**Pb**	**14 34 10.8**	**-2.2**
	SNR=12							
QZX				S		**Sb**	**14 34 45.4**	**-0.2**
YRD	**Yardimli**	**2.67**	**79**	P		**Pb**	**14 34 12.8**	**-0.8**
	SNR=32							
YRD				S		**Sg**	**14 34 49.2**	**-1.9**
LRK	**Lerik**	**2.71**	**85**	P		**Pb**	**14 34 13.6**	**-0.8**
	SNR=22							
LRK				S		**Sb**	**14 34 50.2**	**+2.3**
ZRD	**Zardab**	**2.84**	**49**	S		**Sb**	**14 34 50.9**	**-0.4**
GLBA	**Clilabad**	**2.85**	**73**	P		**Pb**	**14 34 15.0**	**-1.6**
	SNR=3.8							
GLBA				S		**Sb**	**14 34 52.3**	**+0.6**
LKRN	**Lenkeran, Azer**	**3.06**	**84**	P		**Pb**	**14 34 18.2**	**-2.0**
	SNR=4.3							
LKRN				S		**Sb**	**14 34 57.0**	**-0.8**
ASTR	**Astara**	**3.06**	**87**	P		**Pb**	**14 34 18.1**	**-2.2**
	SNR=7.8							
ASTR				S		**Sb**	**14 34 57.7**	**-0.2**
SEKA	**Sheki**	**3.28**	**32**	P		**Pn**	**14 34 20.2**	**+2.8**
	SNR=4.7							
SEKA				S		**Sb**	**14 35 01.7**	**-2.6**
ZNJK	**Zanjan**	**3.50**	**119**	*e*Pn		**Pb**	**14 34 24.9**	**-3.0**
ALIB	**Äli-Bayra**	**3.54**	**63**	S		**Sb**	**14 35 07.7**	**-3.8**
PQL	**Pirkuli**	**3.70**	**50**	P		**Pn**	**14 34 25.6**	**+2.4**
	SNR=2.9							
PQL				S		**Sb**	**14 35 12.0**	**-4.3**
XNQ	**Khinaliq**	**3.70**	**42**	P		**Pn**	**14 34 25.6**	**+2.4**
	SNR=3.8							
SNGE	**Sanandaj**	**3.89**	**149**	*e*Pn		**Pb**	**14 34 30.9**	**-3.5**
SIZA	**Siyzn**	**4.06**	**48**	P		**Pn**	**14 34 30.4**	**+2.4**
	SNR=4.7							

MAN 22 14:38:18.8, 9°34N×125°83E, h124km, mb3.9, ML2.7, MS2.3, Mindanao

*IDC **22** 14:44:37.9±10.0, 6°.86N×94°.94E, h280km±98km, mb3.2/5, mbtmp3.8/6, Error ellipse: s-maj=106.1km s-min=20.8km az=57.0*
ISC 22 14:44:30.1±1.8, 6°.8N±0°.2×94°.8E±0°.3, h206km, n6, σ0°26/6, mb3.4/5, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**12.31**	**19**	P		**P**	**14 47 23.1**	**+0.1**
	1.4nm,0.5s,baz=211,slow=11,SNR=16							
MKAR	**Makanchi Array**	**41.31**	**347**	P		**P**	**14 51 55.7**	**+0.1**
	0.3nm,0.3s,baz=165,slow=9.7,SNR=7.0 0.3nm,0.3s							
SONM	**Songino Array**	**42.11**	**12**	P		**P**	**14 52 01.8**	**-0.3**
	0.6nm,0.4s,baz=189,slow=9.5,SNR=3.8 0.6nm,0.4s							
WRA	**Warramunga Arr**	**47.11**	**125**	P		**P**	**14 52 41.9**	**0.0**
	0.4nm,0.8s,baz=300,slow=9.8,SNR=6.7 0.4nm,0.8s							
ZALV	**Zalesovo Beam**	**47.74**	**352**	P		**P**	**14 52 46.4**	**+0.2**
	1.4nm,0.3s,baz=180,slow=9.1,SNR=4.0 1.4nm,0.3s							
FINES	**FINESS Array B**	**73.98**	**332**	P		**P**	**14 55 42.7**	**-0.1**
	0.6nm,0.5s,baz=104,slow=5.9,SNR=0.9 0.6nm,0.5s							

*JMA **22** 14:59:27.4±0.1, 24°.5N±0°.6×123°.9E±0°.4, h48km±1km, MV3.2/13, NEAR ISHIGAKIJIMA ISLAND*
ISC 22 14:59:28.1±1.3, 24°.46N±0°.09×123°.91E±0°.03, h43km±10km, n16, σ0°47/28, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.21**	**233**	P		**Pn**	**14 59 35.6**	**-0.1**
IRIF				S		**Sn**	**14 59 42.1**	**+1.0**
JIJ	**Ishigaki jima**	**0.23**	**116**	P		**Pn**	**14 59 35.5**	**-0.4**
JIJ				S		**Sn**	**14 59 41.4**	**0.0**
JKRS	**Kuro-shima**	**0.24**	**159**	P		**Pn**	**14 59 35.8**	**-0.2**
JKRS				S		**Sn**	**14 59 41.5**	**0.0**
JISG	**Ishigakijimahi**	**0.38**	**71**	*i* P		**Pn**	**14 59 37.3**	**-0.1**
JISG				S		**Sn**	**14 59 43.8**	**-0.2**
HATJ	**Hateruma jima**	**0.42**	**194**	P		**Pn**	**14 59 37.4**	**-0.4**
HATJ				S		**Sn**	**14 59 45.0**	**+0.2**
JTJ	**Tarama**	**0.74**	**76**	P		**Pn**	**14 59 41.8**	**-0.3**
JTJ				S		**Sn**	**14 59 52.5**	**+0.3**
YOJ	**Yonaguni jima**	**0.82**	**270**	P		**Pn**	**14 59 42.6**	**-0.6**
YOJ	**Yonaguni jima**	**0.82**	**270**	P		**Pn**	**14 59 42.7**	**-0.5**
YOJ				*e*S		**Sn**	**14 59 54.3**	**0.0**
JYNG	**Yonagunijimaku**	**0.88**	**269**	P		**Pn**	**14 59 43.6**	**-0.5**
JYNG				S		**Sn**	**14 59 55.5**	**-0.2**
JIRB	**Irabujima**	**1.20**	**72**	P		**Pn**	**14 59 47.8**	**-0.6**
JIRB				*e*S		**Sn**	**15 00 03.4**	**-0.1**
JIKM	**Ikemajima**	**1.30**	**69**	*e*P		**Pn**	**14 59 49.5**	**-0.2**
JIKM				*e*S		**Sn**	**15 00 06.0**	**+0.2**
JMJ2	**Miyako jima3**	**1.32**	**78**	P		**Pn**	**14 59 49.9**	**-0.1**
JMJ2				S		**Sn**	**15 00 06.0**	**-0.3**
JOGS	**Gusukube**	**1.39**	**77**	P		**Pn**	**14 59 51.2**	**+0.2**
JOGS				S		**Sn**	**15 00 09.3**	**+1.2**
YHNB	**Yeheng**	**2.32**	**276**	P		**Pn**	**15 00 04.4**	**+0.6**
SSLB	**Suanglung**	**2.79**	**257**	P		**Pn**	**15 00 09.8**	**-0.4**
TPUB	**Ta-pu**	**3.22**	**250**	P		**Pn**	**15 00 16.5**	**+0.3**

*BJI **22** 15:14:10.2±0.0, 22°.41N×143°.62E, h91km, mb4.7/57, mB4.8/30*
*MOS **22** 15:14:11.4±1.3, 22°.52N×143°.32E, h84km, mb4.8/45, Error ellipse: s-maj=10.0km s-min=4.8km az=112.1*
*IDC **22** 15:14:14.2±1.4, 22°.58N×143°.37E, h95km±11km, mb4.1/21, mbtmp4.5/26, MS3.2/17, Error ellipse: s-maj=15.9km s-min=10.4km az=80.0*
*NEIC **22** 15:14:14.3±1.9, 22°.55N±0°.06×143°.4E±0°.1, h90km±6km, mb4.7/134, Error ellipse: s-maj=13.7km s-min=8.9km az=80.0*
*JMA **22** 15:14:17.8±0.1, 23°.0N±0°.6×14°3E±°, h143km±2km, MD5.0/53, MV5.4/53, IOTO ISLANDS REGION*
ISC 22 15:14:13.8±0.5, 22°.60N±0°.04×143°.45E±0°.06, h95km±3km, h95km: pP-P, n320, σ1$58/341, mb4.7/125, 20C-52D, Fault plane solution: NP1: ϕs74.71974°, δ84.05937°, λ-119.25768°. NP2: ϕs334.25235°, δ29.80232°, λ-12.01931°. Principal axes: T Plg32.7112°, Azm188.9704°; N Plg29.0854°, Azm78.0380°; P Plg43.3752°, Azm316.3312°; Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**4.18**	**344**	P		**Pn**	**15 15 16.0**	**+0.6**
JHH2				*e*S		**Sn**	**15 16 00.5**	**-2.6**
JHH2	**Haha-jima-NKT2**	**4.18**	**344**	A		A	15 15 16.0	
	comp=E,10.0nm,1.0s,comp=E,18nm,2.0s							
CBIJ	**Chichi jima**	**4.62**	**346**	P		**Pn**	**15 15 21.7**	**+0.3**
CBIJ				*e*S		**Sn**	**15 16 11.3**	**-2.6**
CBIJ	**Chichi jima**	**4.62**	**346**	A		A	15 15 21.7	
	comp=E,6.0nm,6.0s,comp=E,6.0nm,2.0s							
JCJ	**Chichijima**	**4.62**	**346**	P		**Pn**	**15 15 21.6**	**+0.2**
	372nm,0.5s,baz=284,slow=22,SNR=245							
JCJ					S	**Sn**	**15 16 13.0**	**-0.9**
	779nm,0.2s,baz=143,slow=23,SNR=22							
GUMO	**Guam**	**9.06**	**171**	P		**Pn**	**15 16 20.8**	**-1.0**
	114nm,0.9s,baz=15,slow=19,SNR=1.6							
GUMO					LR	LR	15 18 39.2	
	comp=Z,118nm,19.5s,baz=4.0,slow=29							
GUMO	**Guam**	**9.06**	**171**			**Pn**	**15 16 21.1**	**-0.7**
GUMO	**Guam**	**9.06**	**171**	P		**Pn**	**15 16 21.1**	**-0.7**
JHCJ	**Hachijojimakas**	**10.92**	**344**	*e*P		**Pn**	**15 16 45.7**	**-1.4**
JHCJ				*e*S		Sn	15 18 38.2	-9.1
JHJ2	**Mitsune**	**10.96**	**344**			**Pn**	**15 16 48.2**	**+0.7**
JHJ	**Hachijo jima 2**	**10.97**	**344**	P		**Pn**	**15 16 46.0**	**-1.8**
	71nm,0.8s,baz=72,slow=16,SNR=2.7							
JHJ					S	Sn	15 18 35.8	-13
	63nm,0.7s,baz=66,slow=20,SNR=2.7							
JMKN	**Mikurajimanish**	**11.76**	**344**	*e*P		**Pn**	**15 16 58.1**	**-0.2**
BSO1	**Boso 1**	**12.21**	**350**	P		**Pn**	**15 17 03.3

SEHB SEOHWA 20.34 324 P **P** **15 18 42.0 -0.5**
SEHB IAmb IAmb 15 18 46.0
comp=Z,29nm,0.9s
YULB Yu-li 20.41 277 P **P** **15 18 44.5 +1.1**
YULB IAmb IAmb 15 18 51.5
comp=Z,26nm,0.6s
TWG Pinlang 20.64 275 P **P** **15 18 46.1 +0.2**
TWG IAmb IAmb 15 18 50.3
comp=Z,80nm,1.5s
SSLB Suanglung 20.71 278 P Pn 15 18 49.9 0.0
INCN Inchon 20.74 319 P **P** **15 18 48.6 +1.8**
INCN IAmb IAmb 15 18 51.5
comp=Z,35nm,0.8s
INCN Inchon 20.74 319 P **P** **15 18 48.6 +1.8**
INCN pmax pmax
comp=Z,35nm,0.8s
TPUB Ta-pu 21.02 276 P **P** **15 18 51.2 +1.2**
PATS Pohnpei 21.23 135 P **P** **15 18 51.0 -1.2**
ASAJ Asahikawa 21.48 358 LR LR 15 27 15.1
comp=Z,40nm,21.4s,baz=193,slow=36
H11N1 WAKE ISLAND Hy 22.05 93 T T 15 41 36.9
baz=282,slow=75,SNR=22
H11N2 WAKE ISLAND Hy 22.05 93 T T 15 41 30.4
baz=282,slow=75,SNR=9.3
H11N3 WAKE ISLAND Hy 22.06 93 T T 15 41 48.0
baz=282,slow=75,SNR=10.0
H11S3 WAKE ISLAND Hy 22.13 96 T T 15 41 38.0
baz=283,slow=75,SNR=7.1
H11S1 WAKE ISLAND Hy 22.14 96 T T 15 41 46.8
baz=283,slow=75,SNR=35
H11S2 WAKE ISLAND Hy 22.15 96 T T 15 41 46.8
baz=283,slow=75,SNR=6.7
MSHR Mys Shultsa 22.41 336*c i* P **P** **15 19 05.3 +0.8**
MSHR pmax pmax
comp=Z,39nm,0.9s
VLA Vladivostok 22.61 338*d i* P **P** **15 19 07.5 +0.9**
VLA pmax pmax
comp=Z,116nm,0.8s
KNMB Chin-men Tao 23.05 280 P **P** **15 19 11.7 +0.6**
TEY Ternei 23.08 348⇑ *eP* **P** **15 19 13.8 +2.6**
TEY pmax pmax
comp=Z,10.0nm,0.6s
USA0B Ussuriysk Arra 23.53 339 P **P** **15 19 17.4 +2.0**
USA0B Ussuriysk Arra 23.53 339 P **P** **15 19 17.4 +2.0**
USA0B pmax pmax
comp=Z,57nm,0.9s
USRK Ussuriysk Ar. 23.53 339 P **P** **15 19 16.8 +1.3**
comp=Z,50nm,0.8s,baz=156,slow=9.4,SNR=110
USRK LR LR 15 28 54.9
comp=Z,54nm,20.2s,baz=150,slow=37
comp=Z,50nm,0.8s
USRK Ussuriysk Ar. 23.53 339 P **P** **15 19 16.9 +1.5**
NJ2 Nanjing 23.75 299⇑ *i* P **P** **15 19 18.0 +0.5**
NJ2 pmax pmax
comp=Z,43nm,1.0s
YSS Yuzh-Sakhalins 24.31 359 P **P** **15 19 23.5 +1.1**
YSS IAmb IAmb 15 19 50.6
comp=Z,75nm,1.5s
YSS Yuzh-Sakhalins 24.31 359 *eP* **P** **15 19 24.0 +1.6**
YSS *e**PP **pP** **15 19 45.3 +3.6**
YSS *eS* **S** **15 23 33.1 -1.5**
YSS pmax pmax
comp=Z,10.0nm,1.1s
YSS MLR MLR
comp=Z,100nm,14.0s
MDJ Mudanjiang 24.74 336 P **P** **15 19 27.2 +0.9**
MDJ IAmb IAmb 15 19 31.3
comp=Z,25nm,1.1s
MDJ Mudanjiang 24.74 336 P **P** **15 19 28.4 +2.0**
MDJ pmax pmax
comp=Z,21nm,1.1s
MDJ pmax pmax
comp=Z,130nm,5.7s
CN2 Changchun 25.86 329 *eP* **P** **15 19 38.3 +1.8**
CN2 S **S** **15 23 56.8 -2.5**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=Z,100nm,11.0s
CN2 LR LR
comp=Z,100nm,11.0s
CN2 LR LR
comp=Z,100nm,13.0s
BNX BinXian 26.53 334⇑ P **P** **15 19 43.4 +0.9**
BNX pmax pmax
comp=Z,10.0nm,0.8s
BNX pmax pmax
comp=Z,57nm,3.9s
TIA Tai'an 26.55 307⇑ P **P** **15 19 43.6 +0.8**
TIA pmax pmax
comp=Z,33nm,1.2s
WHN Wuhan 27.15 293⇑ P **P** **15 19 51.9 +3.7**
WHN pmax pmax
comp=Z,46nm,0.5s
KLR Kul'dur 28.15 344 P **P** **15 19 58.4 +1.4**
comp=Z,8.1nm,0.6s,baz=152,slow=8.1,SNR=34
KLR LR LR 15 30 40.8
comp=Z,43nm,21.9s,baz=168,slow=35
comp=Z,8.1nm,0.6s
KLR Kul'dur 28.15 344*d i* P **P** **15 19 58.3 +1.4**
KLR pmax pmax
comp=Z,9.0nm,0.7s
GRNR Gornyy 28.65 351⇑ *i* P **P** **15 20 03.4 +2.0**
GRNR pmax pmax
comp=N,10.0nm,0.7s
GRNR pmax pmax
comp=Z,20nm,0.6s
GRNR MLR MLR
comp=E,40nm,14.0s
GRNR MLR MLR
comp=N,30nm,12.0s
GRNR MLR MLR
comp=Z,60nm,13.0s
HNS HongShan 28.80 307⇑ P **P** **15 20 03.6 +0.8**
HNS pmax pmax
comp=Z,33nm,0.9s
BJT Baijiatuau 28.90 313 P **P** **15 20 04.5 +0.8**
BJT IAmb IAmb 15 20 10.0
comp=Z,10nm,0.8s
BJT Baijiatuau 28.90 313 P **P** **15 20 04.5 +0.8**
BJT pmax pmax
comp=Z,10.0nm,0.8s
BJI Beijing 28.91 313 P **P** **15 20 05.1 +1.3**
BJI pP **pP** **15 20 24.6 +0.6**
BJI sP **sP** **15 20 34.3 -0.3**
BJI pmax pmax
comp=Z,3.0nm,0.6s
LYN LuoYang 29.58 301⇑ P **P** **15 20 11.3 +1.4**
LYN pmax pmax
comp=Z,130nm,4.0s
PMG Port Moresby 32.01 173 LR LR 15 32 12.5
comp=Z,73nm,19.9s,baz=114,slow=34
PETK Petropavlovsk- 32.35 16 LR LR 15 33 47.8
comp=Z,25nm,20.5s,baz=169,slow=36
HHC Hu-ho-hao-te 32.41 312 *eP* **P** **15 20 36.4 +1.5**
HHC pmax pmax
comp=Z,34nm,1.1s
HHC pmax pmax
comp=Z,140nm,6.5s
HIA Hailar 32.55 331 P **P** **15 20 34.8 -1.0**
HIA Hailar 32.55 331 P **P** **15 20 34.8 -1.0**
HIA pmax pmax
comp=Z,10.0nm,0.4s
ZEA Zeya 33.43 342 *eP* **P** **15 20 44.5 +1.1**
ZEA pmax pmax
comp=N,10.0nm,0.9s
ZEA pmax pmax
comp=Z,20nm,0.7s
SPSI Sidrap Palu 35.10 224 P **P** **15 20 58.7 +0.4**
comp=Z,12nm,0.5s
BNSI Bone 35.22 223 P **P** **15 21 01.0 +1.7**
comp=Z,14nm,1.6s
KAPI Kappang 35.92 223 P **P** **15 21 05.3 +0.1**
KAPI IAmb IAmb 15 21 18.9
comp=Z,10nm,1.1s
KAPI Kappang 35.92 223 P **P** **15 21 05.3 +0.1**
KAPI pmax pmax
comp=Z,10.0nm,1.2s
SBUM Sibu 36.32 241 P **P** **15 21 09.5 +0.8**
COEN Coen 36.33 180 P **P** **15 21 08.6 -0.1**
COEN IAmb IAmb 15 21 10.3
comp=Z,13nm,0.9s
MTKI Muara Teweh, K 36.35 234 P **P** **15 21 09.9 +0.9**
SLVN Son La 36.62 276 P **P** **15 21 12.5 +1.2**

LZH Lanzhou 36.80 300 *eP* **P** **15 21 14.0 +1.2**
LZH sP sP 15 21 48.3 +3.9
LZH pmax pmax
comp=Z,14nm,1.0s
LZH LR LR
comp=Z,120nm,15.6s
LZH LR LR
comp=Z,110nm,16.8s
MTN Manton Dam 37.23 200 P **P** **15 21 15.6 -0.8**
MTN IAmb IAmb 15 21 19.1
comp=Z,6.1nm,0.5s
EDFI Ende, Flores 37.75 217 P **P** **15 21 21.9 +1.0**
comp=Z,7.8nm,0.8s
PZH PanZhiHua 38.02 285 P **P** **15 21 23.4 +0.3**
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,80nm,5.5s
SHEM Shemya Is, Ala 38.12 30 LR LR 15 33 57.4
comp=Z,21nm,20.1s,baz=43,slow=31
STKI Sintang 38.34 239 P **P** **15 21 26.3 +0.6**
ULN Ulaanbaatar 38.43 320 P **P** **15 21 26.5 +0.1**
ULN IAmb IAmb 15 21 28.3
comp=Z,9.9nm,1.1s
ULN Ulaanbaatar 38.43 320*d i* P **P** **15 21 27.0 +0.6**
ULN pmax pmax
comp=Z,15nm,1.7s
SONM Songino Array 38.81 320 P **P** **15 21 30.4 +0.9**
comp=Z,3.7nm,0.7s,baz=126,slow=8.5,SNR=22
SONM ScP **ScP** **15 27 18.1 -0.7**
comp=Z,0.5nm,0.5s,baz=143,slow=3.0,SNR=5.1
SONM LR LR 15 37 37.1
comp=Z,35nm,19.3s,baz=88,slow=36
comp=Z,3.7nm,0.7s
SONM Songino Array 38.81 320 P **P** **15 21 29.5 0.0**
SONM Songino Array 38.81 320 P **P** **15 21 29.5 0.0**
SONM pmax pmax
comp=Z,7.0nm,1.1s
YAK Yakutsk 40.53 350 P **P** **15 21 43.2 -0.1**
YAK Yakutsk 40.53 350 *eP* **P** **15 21 42.9 -0.4**
YAK *e**PP **pwP** **15 22 09.3 -0.8**
YAK *e* 15 23 18.5
YAK *e* 15 23 44.0
YAK *e*PPP PPP 15 23 50.8
YAK *eS* **S** **15 27 45.4 +0.2**
YAK *e**SS **sS** **15 28 24.1 +2.9**
YAK *e* 15 31 40.8
YAK pmax pmax
comp=Z,11nm,0.9s
YAK pmax pmax
comp=N,3.0nm,1.4s
YAK pmax pmax
comp=Z,22nm,1.8s
YAK pmax pmax
comp=N,11nm,1.6s
YAK pmax pmax
comp=E,13nm,1.9s
YAK smax smax
comp=N,23nm,2.5s
YAK smax smax
comp=E,23nm,2.5s
GTA Gaotai 40.56 305 *eP* **P** **15 21 44.6 +0.5**
GTA ScP **ScP** **15 27 25.3 -0.4**
GTA pmax pmax
comp=E,5.0nm,1.4s
GTA pmax pmax
comp=E,51nm,7.3s
GTA LR LR
comp=E,72nm,15.6s
GTA LR LR
comp=E,67nm,15.6s
GTA LR LR
comp=E,89nm,16.0s
KNRA Kununurra 40.66 202 P **P** **15 21 42.6 -2.4**
KNRA IAmb IAmb 15 21 46.5
comp=Z,11nm,0.6s
SEY Seymchan 40.77 6 P **P** **15 21 47.5 +2.2**
comp=Z,4.7nm,0.8s,baz=169,slow=5.7,SNR=7.7
comp=Z,4.7nm,0.8s
SEY Seymchan 40.77 6*ce* P **P** **15 21 47.9 +2.6**
SEY pmax pmax
comp=Z,7.0nm,1.4s
KMMI Kalianget 41.24 228 P **P** **15 21 50.6 +0.8**
comp=Z,36nm,0.9s
CHTO Chiang Mai 41.69 273 P **P** **15 21 53.0 -0.5**
CHTO IAmb IAmb 15 21 55.3
comp=Z,5.1nm,0.7s
CHTO Chiang Mai 41.69 273 P **P** **15 21 53.0 -0.5**
CHTO pmax pmax
comp=Z,5.0nm,0.7s
CM31 Chiang Mai Arr 41.77 273 P **P** **15 21 54.2 +0.1**
CM31 IAmb IAmb 15 21 56.0
comp=Z,4.5nm,0.6s
CMAR Chiang Mai Arr 41.77 273 P **P** **15 21 55.0 +0.9**
comp=Z,3.1nm,0.7s,baz=64,slow=7.4,SNR=27
CMAR ScP **ScP** **15 27 28.4 -2.3**
comp=Z,0.3nm,0.3s,baz=113,slow=2.4,SNR=4.3
CMAR LR LR 15 37 30.0
comp=Z,19nm,22.0s,baz=70,slow=34
comp=Z,3.1nm,0.7s
CMAR Chiang Mai Arr 41.77 273 P **P** **15 21 53.7 -0.5**
JAGI Jajag, Banyuwa 42.15 226 P **P** **15 21 57.2 0.0**
CTA Charters Tower 42.51 176 LR LR 15 37 21.4
comp=Z,50nm,20.2s,baz=11,slow=33
CTAO Charters Tower 42.51 176 P **P** **15 21 58.6 -1.4**
CTAO IAmb IAmb 15 22 00.8
comp=Z,11nm,1.0s
CTAO Charters Tower 42.51 176 P **P** **15 21 58.7 -1.4**
CTAO pmax pmax
comp=Z,11nm,1.0s
WB0 Warramunga Arr 43.02 193 P **P** **15 22 03.2 -0.9**
WB0 IAmb IAmb 15 22 07.7
comp=Z,5.2nm,0.6s
WR0 Warramunga Arr 43.18 192 P **P** **15 22 04.3 -1.1**
WR0 IAmb IAmb 15 22 06.1
comp=Z,13nm,1.4s
WRAB Tennant Creek 43.19 193 P **P** **15 22 04.8 -0.7**
WRAB IAmb IAmb 15 22 07.0
comp=Z,12nm,0.9s
WRAB Tennant Creek 43.19 193 P **P** **15 22 04.8 -0.7**
WRAB pmax pmax
comp=Z,13nm,0.9s
WB2 Warramunga Arr 43.20 193 P **P** **15 22 04.7 -1.0**
WB2 IAmb IAmb 15 22 07.2
comp=Z,15nm,0.9s
WRA Warramunga Arr 43.20 193 P **P** **15 22 04.8 -0.9**
comp=Z,5.1nm,0.4s,baz=14,slow=8.7,SNR=99
WRA PcP **PcP** **15 23 54.1 +0.6**
comp=Z,3.0nm,0.7s,baz=4.8,slow=3.5,SNR=6.4
WRA ScP **ScP** **15 27 35.0 -1.3**
comp=Z,4.8nm,1.1s,baz=15,slow=4.4,SNR=6.9
comp=Z,5.1nm,0.4s
WRA Warramunga Arr 43.20 193 P **P** **15 22 04.8 -0.9**
WRA Warramunga Arr 43.20 193 *eP* **P** **15 22 04.4 -1.2**
WRA pmax pmax
comp=Z,5.0nm,0.4s
PWJI Pagerwojo 43.43 229 P **P** **15 22 07.0 -0.6**
comp=Z,21nm,0.8s
GOMU GeErMu 44.06 299 P **P** **15 22 14.5 +1.6**
GOMU pmax pmax
comp=Z,21nm,0.7s
GOMU pmax pmax
comp=Z,70nm,3.5s
UGM Wanagama 44.26 230 P **P** **15 22 14.1 -0.1**
KULM Kulim 44.75 254 P **P** **15 22 18.0 -0.1**
KULM IAmb IAmb 15 22 32.8
comp=Z,16nm,1.3s
AS31 Alice Springs 46.91 192 P **P** **15 22 34.3 -0.6**
ASAR Alice Springs 46.91 192 P **P** **15 22 34.3 -0.7**
ASAR Alice Springs 46.91 192 P **P** **15 22 34.3 -0.7**
SHL Shillong 46.94 284 P **P** **15 22 34.2 -1.3**
SHL IAmb IAmb 15 22 35.4
comp=Z,13nm,0.9s
SHL Shillong 46.94 284 P **P** **15 22 34.2 -1.3**
SHL pmax pmax
comp=Z,13nm,0.9s
KOUNC Koumac, New Ca 47.46 153 P **P** **15 22 38.7 -0.5**
KOUNC IAmb IAmb 15 23 05.2
comp=Z,22nm,1.5s
BILL Bilibino 47.59 11 *eP* **P** **15 22 40.7 +1.0**
BILL *e* 15 24 08.0
BILL *e* 15 24 34.1
BILL *e*PPP PPP 15 25 17.1
BILL pmax pmax
comp=Z,10.0nm,2.5s
EIDS Eidsvold 48.25 171 P **P** **15 22 44.3 -1.0**
EIDS IAmb IAmb 15 22 44.9
comp=Z,3.8nm,0.6s
MBWA Marble Bar 49.26 210 P **P** **15 22 52.5 -0.5**
MBWA IAmb IAmb 15 22 55.4
comp=Z,7.9nm,0.8s
GSI Gunungsitoli 49.31 251 P **P** **15 22 54.0 +0.3**
PSA00 Pilbara Seismi 49.56 209 P **P** **15 22 56.0 +0.6**
TIXI Tiksi 49.79 354 P **P** **15 22 57.0 +0.6**
TIXI IAmb IAmb 15 23 26.3
comp=Z,5.2nm,0.8s
TIXI Tiksi 49.79 354⇑ *eP* **P** **15 22 57.3 +0.9**
TIXI pmax pmax
comp=Z,3.0nm,1.0s
WMQ Urumqi 50.21 309 *eP* **P** **15 23 01.6 +1.4**
WMQ pmax pmax
comp=Z,11nm,1.5s
GAMB Gambell 50.70 24 P **P** **15 23 04.4 +0.9**
JIRN Jiri 51.70 288 *eP* **P** **15 23 12.6 +0.6**
comp=Z,6.8nm,0.2s
PKI Pulchoki 52.40 288 *eP* **P** **15 23 17.3 +0.2**
comp=Z,5.4nm,0.2s
PKIN Phulchoki 52.41 288 *eP* **P** **15 23 17.5 +0.4**
comp=Z,9.5nm,0.4s
MSVF Nonsavu 52.46 137 P **P** **15 23 18.5 +1.3**
MSVF Nonsavu 52.46 137 P **P** **15 23 18.5 +1.3**
MSVF pmax pmax
comp=Z,15nm,0.7s
SDPT Sand Point 52.54 37 P **P** **15 23 17.4 +0.1**
ZAA0 Zalesovo Array 53.66 321 P **P** **15 23 24.6 -1.0**
ZAA0 IAmb IAmb 15 23 29.5
comp=Z,5.9nm,0.8s
ZALV Zalesovo Beam 53.66 321 P **P** **15 23 25.4 -0.1**
comp=Z,4.4nm,0.5s,baz=99,slow=6.9,SNR=17
ZALV PcP **PcP** **15 24 29.7 -1.0**
comp=Z,2.4nm,0.6s,baz=116,slow=5.0,SNR=3.8
ZALV LR LR 15 47 31.4
comp=Z,22nm,18.1s,baz=53,slow=37
comp=Z,4.4nm,0.5s
ZALV Zalesovo Beam 53.66 321 P **P** **15 23 24.9 -0.7**
ZALV Zalesovo Beam 53.66 321 *eP* **P** **15 23 27.5 +1.9**
ZALV pmax pmax
comp=Z,4.0nm,0.5s
DANN Dangsing 53.73 289 *eP* **P** **15 23 27.4 +0.5**
comp=Z,52nm,0.4s
STKA Stephens Creek 54.19 182 P **P** **15 23 29.2 -0.4**
comp=Z,5.9nm,0.4s,baz=6.3,slow=8.1,SNR=31
comp=Z,5.9nm,0.4s
STKA Stephens Creek 54.19 182 P **P** **15 23 29.4 -0.2**
STKA Stephens Creek 54.19 182 *eP* **P** **15 23 29.9 +0.3**
STKA pmax pmax
comp=Z,6.0nm,0.4s
MK31 Makanchi Array 54.28 312 P **P** **15 23 30.8 +0.6**
MK31 IAmb IAmb 15 23 31.7
comp=Z,8.5nm,0.7s
MK31 Makanchi Array 54.28 312 P **P** **15 23 30.8 +0.6**
MK31 pmax pmax
comp=Z,9.0nm,0.7s
MKAR Makanchi Array 54.28 312 P **P** **15 23 30.8 +0.6**
comp=Z,9.5nm,0.6s,baz=91,slow=9.0,SNR=94
MKAR ScP **ScP** **15 28 22.1 -0.9**
comp=Z,1.3nm,0.8s,baz=82,slow=5.3,SNR=5.5
comp=Z,9.5nm,0.6s
PYUN Piuthan 54.44 289 *eP* **P** **15 23 32.1 +0.2**
MAKZ Makanchi 54.49 312 P **P** **15 23 32.3 +0.6**
MAKZ Makanchi 54.49 312 P **P** **15 23 32.3 +0.6**
MAKZ pmax pmax
comp=Z,17nm,0.9s
FORT Forrest 55.09 196 P **P** **15 23 36.1 0.0**
BBOO Buckleboo 55.55 188 P **P** **15 23 38.8 -0.5**
SII Sitkinak Islan 56.26 36 P **P** **15 23 45.9 +1.6**
N18K Kilae Creek 56.26 31 P **P** **15 23 46.5 +2.3**
N18K IAmb IAmb 15 24 11.3
comp=Z,9.9nm,1.4s
O18K Koktuh Hills 56.39 32 P **P** **15 23 47.1 +1.9**
SVW2 Sparrevohn 56.51 31 P **P** **15 23 48.1 +2.1**
SVW2 IAmb IAmb 15 24 13.8
comp=Z,6.8nm,1.5s
TTA Tatalina 56.79 28 P **P** **15 23 49.5 +1.5**
TTA Tatalina 56.79 28 P **P** **15 23 49.5 +1.5**
TTA pmax pmax
comp=Z,6.0nm,1.4s
OHAK Old Harbor 56.86 35 P **P** **15 23 49.5 +1.1**
N19K Bonanza Creek 56.96 31 P **P** **15 23 50.8 +1.5**
N19K IAmb IAmb 15 24 02.9
comp=Z,7.0nm,1.3s
KURK Kurchatov 56.99 317 P **P** **15 23 49.6 +0.1**
KURK Kurchatov 56.99 317 P **P** **15 23 49.6 +0.1**
KURK pmax pmax
comp=Z,16nm,1.0s
L19K White Mountain 57.12 29 P **P** **15 23 52.0 +1.7**
TARG Taragay, Kyrgy 57.41 306 P **P** **15 23 53.4 +0.3**
TARG IAmb IAmb 15 23 55.6
comp=Z,7.5nm,0.9s
TARG Taragay, Kyrgy 57.41 306 P **P** **15 23 53.4 +0.3**
TARG pmax pmax
comp=Z,8.0nm,0.9s
MORW Morawa 57.75 208 P **P** **15 23 55.0 -0.1**
K20K Telida 57.76 28 P **P** **15 23 57.1 +2.4**
J20K Nowinta River 57.93 27 P **P** **15 23 58.2 +2.3**
J20K IAmb IAmb 15 23 58.6
comp=Z,3.8nm,0.7s
CNPM China Poot 58.30 33 P **P** **15 23 59.0 +0.4**
CNPM IAmb IAmb 15 24 06.5
comp=Z,7.0nm,1.0s
PPLA Purkeypile 58.48 29 P **P** **15 23 59.8 -0.1**
PPLA IAmb IAmb 15 24 07.8
comp=Z,13nm,1.4s
IMAR Indian Mountai 58.57 25 P **P** **15 24 01.8 +1.5**
SKT Skwentna 58.60 30 P **P** **15 24 01.5 +1.0**
BOOM Boomskoye usch 58.76 307 P **P** **15 24 03.4 +1.1**
BOOM Boomskoye usch 58.76 307 P **P** **15 24 03.4 +1.1**
BOOM pmax pmax
comp=Z,13nm,0.6s
H21K Melozitna Rive 58.86 26 P **P** **15 24 04.1 +1.7**
H21K IAmb IAmb 15 24 32.9
comp=Z,5.0nm,1.1s
SUA Susitna One 58.87 31 P **P** **15 24 03.5 +0.9**
SUA IAmb IAmb 15 24 16.9
comp=Z,7.3nm,1.4s
KSH Kashi 58.94 303 P **P** **15 24 07.3 +3.8**
KSH pP sP 15 24 34.9 -0.9
KSH pmax pmax
comp=Z,10.0nm,0.7s
TKM2 Tokmak 2 58.99 307 P **P** **15 24 03.5 -0.4**
I21K Tanana 59.08 26 P **P** **15 24 04.9 +1.1**
I21K IAmb IAmb 15 24 07.0
comp=Z,7.2nm,1.1s
BPAW Bear Paw Mtn. 59.26 28 P **P** **15 24 07.0 +1.8**
BPAW IAmb IAmb 15 24 07.2
comp=Z,3.3nm,0.6s
GHO Glory Hole Cre 59.78 31 P **P** **15 24 10.0 +1.2**
GHO IAmb IAmb 15 24 13.5
comp=Z,3.3nm,0.7s
AAK Ala-Archa 59.82 307*de* P **P** **15 24 10.4 +0.9**
AAK pmax pmax
comp=Z,7.0nm,1.7s
SML Sawmill 60.06 31 P **P** **15 24 11.0 +0.3**
SML IAmb IAmb 15 24 12.5
comp=Z,7.5nm,0.9s
I23K Minto, Yukon-K 60.16 27 P **P** **15 24 13.7 +2.5**
NEA2 Nenana 60.18 27 P **P** **15 24 11.6 +0.3**
H23K Yukon River 60.21 26 P **P** **15 24 13.9 +2.3**
H23K IAmb IAmb 15 24 41.4
comp=Z,3.0nm,0.7s
GLI Glacier Island 60.54 32 P **P** **15 24 14.9 +1.0**
GLI IAmb IAmb 15 24 39.6
comp=Z,11nm,1.1s
SCM Sheep Creek Mo 60.54 31 P **P** **15 24 14.6 +0.6**
SCM IAmb IAmb 15 24 16.1
comp=Z,7.5nm,1.0s
SCM Sheep Creek Mo 60.54 31 P **P** **15 24 14.6 +0.6**
SCM pmax pmax
comp=Z,8.0nm,1.0s
TOLK Toolik Lake Re 60.80 23 P **P** **15 24 17.1 +1.5**
TOLK IAmb IAmb 15 24 18.8
comp=Z,5.1nm,1.1s
FID Port Fidalgo 60.83 32 P **P** **15 24 16.4 +0.5**
FID IAmb IAmb 15 24 17.2
comp=Z,6.9nm,0.8s
H24K Noodor Dome 60.89 26 P **P** **15 24 18.2 +1.9**
IL31 61.13 27 P **P** **15 24 18.2 +0.4**
ILAR Eielson Array 61.13 27 P **P** **15 24 17.9 0.0**
comp=Z,1.4nm,0.7s,baz=257,slow=5.3,SNR=22
comp=Z,1.4nm,0.7s
ILAR Eielson Array 61.13 27 P **P** **15 24 17.7 -0.2**

ILAR	**Eielson Array**	**61.13**	**27**	*e*P		**P**		**15 24 17.9**	**0.0**
ILAR					pmax	pmax			
	comp=Z,2.0nm,0.8s								
J25K	**Salcha River,**	**61.76**	**28**	P		**P**		**15 24 22.3**	**+0.2**
BMRM	**Bremner River**	**61.76**	**32**	P		**P**		**15 24 22.9**	**+0.7**
BMRM					IAmb	IAmb		15 24 24.1	
	comp=Z,6.6nm,0.9s								
RIDG	**Independent Ri**	**61.89**	**29**	P		**P**		**15 24 23.8**	**+0.7**
RIDG					IAmb	IAmb		15 24 51.4	
	comp=Z,5.5nm,1.1s								
BRVK	**Borovoye**	**62.22**	**319**	P		**P**		**15 24 25.8**	**+0.4**
BRVK	**Borovoye**	**62.22**	**319**	P		**P**		**15 24 25.8**	**+0.4**
BRVK					pmax	pmax			
	comp=Z,21nm,0.8s								
SCRK	**Sand Creek**	**62.29**	**28**	P		**P**		**15 24 26.6**	**+0.8**
BMAR	**Burnt Mountain**	**62.43**	**24**	P		**P**		**15 24 29.3**	**+2.7**
J26L	**Joseph Creek**	**62.52**	**28**	P		**P**		**15 24 27.4**	**+0.1**
KK31	**Karatay Array**	**62.70**	**308**	P		**P**		**15 24 29.8**	**+1.0**
KK31					IAmb	IAmb		15 24 30.3	
	comp=Z,11nm,0.8s								
KK31	**Karatay Array**	**62.70**	**308**	P		**P**		**15 24 29.8**	**+1.0**
KK31					pmax	pmax			
	comp=Z,11nm,0.9s								
KKAR	**Karatay Array**	**62.70**	**308**	P		**P**		**15 24 29.6**	**+0.8**
KKAR	**Karatay Array**	**62.70**	**308**	P		**P**		**15 24 29.6**	**+0.9**
KKAR					IAmb	IAmb		15 24 30.3	
	comp=Z,11nm,0.8s								
KKAR	**Karatay Array**	**62.70**	**308**	P		**P**		**15 24 29.7**	**+0.9**
KKAR					pmax	pmax			
	comp=Z,11nm,0.9s								
M27K	**Edge Creek, AK**	**63.14**	**30**	P		**P**		**15 24 31.4**	**-0.1**
L27K	**Beaver Creek,**	**63.19**	**29**	P		**P**		**15 24 32.4**	**+0.7**
BCAR	**Beaver Creek A**	**63.21**	**29**	P		**P**		**15 24 33.5**	**+1.7**
GAR	**Garm**	**63.36**	**303**	P		**P**		**15 24 33.5**	**+0.1**
CHGR	**Chuyangaron**	**64.31**	**303**	P		**P**		**15 24 40.1**	**+0.6**
CHGR	**Chuyangaron**	**64.31**	**303**	P		**P**		**15 24 40.2**	**+0.6**
CHGR					pmax	pmax			
	comp=Z,28nm,0.6s								
KBL	**Kabul**	**65.12**	**299**	P		**P**		**15 24 45.2**	**+0.1**
KBL					IAmb	IAmb		15 24 46.1	
	comp=Z,14nm,0.8s								
KBL	**Kabul**	**65.12**	**299**	P		**P**		**15 24 45.2**	**+0.1**
KBL					pmax	pmax			
	comp=Z,14nm,0.8s								
HYT	**Haines Junctio**	**65.22**	**32**	P		**P**		**15 24 46.9**	**+1.8**
N31M	**Braeburn, Yuko**	**66.03**	**31**	P		**P**		**15 24 52.3**	**+2.1**
INK	**Inuvik**	**66.65**	**24**	P		**P**		**15 24 54.4**	**+0.5**
	comp=Z,1.8nm,0.5s,baz=18,slow=3.2,SNR=3.4								
	comp=Z,1.8nm,0.5s								
SVE	**Sverdlovsk**	**67.50**	**324**	*e*P		**P**		**15 25 00.1**	**+0.6**
SVE					pmax	pmax			
	comp=Z,11nm,1.0s								
P33M	**Teslin, Yukon**	**67.58**	**32**	P		**P**		**15 25 00.3**	**+0.2**
ARU	**Arti**	**68.69**	**324**	P		**P**		**15 25 07.2**	**+0.2**
ARU	**Arti**	**68.69**	**324**	*d* iP		**P**		**15 25 06.7**	**-0.3**
ARU					*PP	**pP**		**15 25 27.4**	**-2.4**
ARU								15 25 34.2	
ARU								15 27 37.2	
ARU					S	**S**		**15 34 03.8**	**+1.3**
ARU					SS	**SS**		**15 38 23.3**	**-5.0**
ARU					pmax	pmax			
	comp=Z,7.0nm,0.6s								
BKZ	**Black Stump Fm**	**68.78**	**153**	P		**P**		**15 25 07.1**	**-0.7**
BKZ					IAmb	IAmb		15 25 26.4	
	comp=Z,26nm,1.4s								
AB31	**Akbulak array**	**69.08**	**316**	*i* P		**P**		**15 25 09.3**	**-0.2**
ABKAR	**Akbulak array**	**69.08**	**316**	P		**P**		**15 25 09.5**	**0.0**
THZ	**Tophouse**	**69.60**	**157**	P		**P**		**15 25 12.0**	**-0.8**
MSWZ	**Moikau Station**	**70.19**	**155**	P		**P**		**15 25 14.9**	**-1.4**
GEYT	**Alibeck**	**72.94**	**304**	P		**P**		**15 25 34.0**	**+0.8**
	comp=Z,3.2nm,0.8s,baz=258,slow=18,SNR=3.7								
	comp=Z,3.2nm,0.8s								
GEYT	**Alibeck**	**72.94**	**304**	P		**P**		**15 25 32.0**	**-1.2**
KIRV	**Kirov**	**73.06**	**327**	*de*P		**P**		**15 25 33.2**	**-0.2**
PRGR	**Permogore**	**74.00**	**331**	*e*P		**P**		**15 25 36.5**	**-2.4**
PRGR				*e**PP		**pP**		**15 25 59.7**	**-2.1**
PRGR				*e**SP		**pwP**		**15 26 06.3**	**-1.0**
YKA	**Yellowknife Ar**	**75.55**	**28**	P		**P**		**15 25 48.6**	**+0.8**
	comp=Z,1.6nm,0.4s,baz=293,slow=5.8,SNR=14								
	comp=Z,1.6nm,0.4s								
BELG	**Belogornoye**	**75.85**	**321**	*ce*P		**P**		**15 25 49.6**	**-0.1**
BELG					pmax	pmax			
	comp=Z,3.0nm,0.8s								
KLMR	**Klimovskoe**	**77.04**	**331**	*e*P		**P**		**15 25 54.0**	**-2.3**
KLMR				*e**PP		**pP**		**15 26 16.9**	**-2.5**
KLMR					pmax	pmax			
	comp=Z,7.0nm,0.9s								
KLMR	**Klimovskoe**	**77.04**	**331**	*e*P		**P**		**15 25 54.0**	**-2.3**
KLMR					AMP			15 25 56.5	
	comp=Z,7.0nm,0.9s								
KLMR				*e*pP		**pP**		**15 26 16.9**	**-2.5**
ARCES	**ARCESS Array B**	**78.15**	**341**	P		**P**		**15 26 02.4**	**+0.1**
	comp=Z,1.4nm,0.6s,baz=46,slow=8.7,SNR=5.8								
	comp=Z,1.4nm,0.6s								
ARCES	**ARCESS Array B**	**78.15**	**341**	P		**P**		**15 26 01.9**	**-0.4**
ARCES	**ARCESS Array B**	**78.15**	**341**	*e*P		**P**		**15 26 05.6**	**+3.3**
ARCES					pmax	pmax			
	comp=Z,4.0nm,0.8s								
L04D	**Klamath Falls**	**78.17**	**49**	P		**P**		**15 26 04.3**	**+1.2**
L04D					IAmb	IAmb		15 26 16.8	
	comp=Z,14nm,1.1s								
PINE	**Pine Mountain**	**78.58**	**47**	P		**P**		**15 26 07.5**	**+2.1**
PINE					IAmb	IAmb		15 26 08.2	
	comp=Z,5.7nm,0.8s								
K05A	**Summer Lake**	**78.98**	**48**	P		**P**		**15 26 08.9**	**+1.3**
K05A					IAmb	IAmb		15 26 26.5	
	comp=Z,8.0nm,1.1s								
BEKR	**Beckworth**	**80.38**	**51**	P		**P**		**15 26 16.4**	**+1.2**
BMO	**Blue Mountains**	**80.62**	**45**	P		**P**		**15 26 17.4**	**+1.1**
BMO	**Blue Mountains**	**80.62**	**45**	P		**P**		**15 26 17.4**	**+1.1**
BMO					pmax	pmax			
	comp=Z,3.0nm,0.9s								
OBN	**Obninsk**	**80.88**	**326**	*e*P		**P**		**15 26 17.6**	**+0.3**
OBN				*e*				15 29 23.5	
OBN				*e*PPP		PPP		15 31 12.8	
OBN					pmax	pmax			
	comp=Z,6.0nm,0.9s								
ZEI	**Tsey**	**81.62**	**313**	*e*P		**P**		**15 26 21.3**	**-0.5**
ZEI					pmax	pmax			
	comp=Z,7.0nm,0.8s								
KBZ	**Khabaz**	**81.92**	**314**	P		**P**		**15 26 23.8**	**+0.8**
	comp=Z,14nm,0.8s,baz=95,slow=2.6,SNR=32								
	comp=Z,14nm,0.8s								
KIV	**Kislovodsk**	**81.97**	**314**	P		**P**		**15 26 23.2**	**-0.3**
KIV					IAmb	IAmb		15 26 26.3	
	comp=Z,9.9nm,0.9s								
KIV	**Kislovodsk**	**81.97**	**314**	*e*P		**P**		**15 26 24.8**	**+1.3**
KIV					pmax	pmax			
	comp=Z,12nm,1.1s								
ONI	**Oni**	**82.00**	**313**	P		**P**		**15 26 24.1**	**+0.4**
ONI					IAmb	IAmb		15 26 26.5	
	comp=Z,10nm,1.2s								
ONI	**Oni**	**82.00**	**313**	P		**P**		**15 26 24.1**	**+0.4**
ONI					pmax	pmax			
	comp=Z,10.0nm,1.2s								
GNI	**Garni**	**82.06**	**310**	*e*P		**P**		**15 26 23.8**	**-0.3**
GNI					pmax	pmax			
	comp=Z,14nm,1.2s								
NVAR	**Mina Array Bea**	**82.39**	**52**	P		**P**		**15 26 27.6**	**+1.6**
	comp=Z,2.1nm,0.7s,baz=274,slow=5.7,SNR=18								
	comp=Z,2.1nm,0.7s								
NVAR	**Mina Array Bea**	**82.39**	**52**	P		**P**		**15 26 27.3**	**+1.3**
FIA1	**FINESS Array S**	**82.48**	**335**	P		**P**		**15 26 24.6**	**-0.9**
FINES	**FINESS Array B**	**82.48**	**335**	P		**P**		**15 26 24.7**	**-0.9**
	comp=Z,2.1nm,0.4s,baz=73,slow=4.9,SNR=31								
	comp=Z,2.1nm,0.4s								
HEL	**Helsinki**	**83.66**	**334**	P		**P**		**15 26 35.0**	**+3.3**
HEL					pmax	pmax			
	comp=Z,3.0nm,0.8s								
VSU	**Vasula**	**83.88**	**332**	*e*P		**P**		**15 26 32.1**	**-0.8**
VSU					pmax	pmax			
	comp=Z,21nm,0.7s								
R11A	**Troy Canyon, C**	**84.39**	**51**	P		**P**		**15 26 37.0**	**+0.9**
QLMT	**Earthquake Lak**	**84.44**	**44**	P		**P**		**15 26 37.9**	**+1.5**
GWY	**Greenwater Val**	**84.48**	**53**	P		**P**		**15 26 37.0**	**+0.4**
YHL	**Hebgen Lake**	**84.59**	**44**	P		**P**		**15 26 37.7**	**+0.5**
GURO	**Guroymak-BITLI**	**84.62**	**309**	P		**P**		**15 26 38.2**	**+0.9**
GURO					IAmb	IAmb		15 26 38.9	
	comp=Z,4.6nm,0.8s								
ANN	**Anapa**	**85.02**	**317**	*e*P		**P**		**15 26 36.2**	**-2.7**
ANN				*e**PP		**pP**		**15 26 57.4**	**-5.2**
ANN				*e*S		S		15 36 51.9	-8.5
ANN					pmax	pmax			
	comp=Z,49nm,1.0s								
MNK	**Minsk**	**85.54**	**328**	*i* P		**P**		**15 26 43.1**	**+1.8**
MNK				*i* *PP		**pP**		**15 27 04.4**	**-0.4**
MNK				*i*				15 30 02.2	
MNK				*i* PPP		PPP		15 31 55.8	
MNK				*i* S		**S**		**15 37 00.1**	**-5.0**
MNK				*i* SS		**SS**		**15 42 46.4**	**+4.6**
MNK				*i* SSS		SSS		15 46 18.5	
MNK					pmax	pmax			
	comp=Z,16nm,1.1s								
MNK					pmax	pmax			
	comp=N,26nm,0.8s								
MNK					pmax	pmax			
	comp=E,2.0nm,1.5s								
MNK					MLR	MLR			
	comp=E,28nm,26.0s								
MNK					MLR	MLR			
	comp=N,821nm,12.0s								
MNK	**Minsk**	**85.54**	**328**	*i* P		**P**		**15 26 43.1**	**+1.8**
	comp=E,2.0nm,1.4s								
MNK				*i* P		**P**		**15 26 43.1**	**+1.8**
	comp=N,26nm,0.8s								
MNK				*i* P		**P**		**15 26 43.1**	**+1.8**
	comp=Z,16nm,1.1s,baz=57								
MNK				*i* pP		**pP**		**15 27 04.5**	**-0.4**
MNK				*i* PP		**PP**		**15 30 03.7**	**+3.2**
MNK				*i* PPP		PPP		15 31 55.8	
MNK				*i* PPP		PPP		15 31 55.9	
MNK				*i* S		**S**		**15 37 00.2**	**-5.0**
MNK				*i* sS		**pS**		**15 37 38.7**	**+3.7**
MNK				*i* SS		**SS**		**15 42 46.5**	**+4.6**
MNK				*i* SSS		SSS		15 46 18.6	
MNK				*i* LQ		LQ		15 59 30.8	
MNK				*i* LR		LR		16 04 20.3	
MNK				*i* LRM		MLR		16 07 34.9	
	comp=E,28nm,25.8s								
MNK				*i* LRM		MLR		16 07 36.2	
	comp=N,821nm,11.6s								
MNK				*i* LRM		MLR		16 09 18.1	
	comp=Z,5μm,21.9s								
PSUT	**Pine Spring**	**85.54**	**50**	P		**P**		**15 26 42.6**	**+0.6**
DUG	**Dugway, Tooele**	**85.56**	**48**	P		**P**		**15 26 43.0**	**+1.1**
DUG					IAmb	IAmb		15 26 43.8	
	comp=Z,3.5nm,0.6s								
DUG	**Dugway, Tooele**	**85.56**	**48**	P		**P**		**15 26 43.0**	**+1.1**
DUG					pmax	pmax			
	comp=Z,4.0nm,0.6s								
NACGM	**Naroch**	**85.85**	**329**	*e*P		**P**		**15 26 41.6**	**-1.2**
	baz=55								
PDAR	**Pinedale Array**	**86.58**	**45**	P		**P**		**15 26 46.8**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=202,slow=1.0,SNR=2.2								
	comp=Z,0.2nm,0.3s								
AKASG	**Malin Array Be**	**86.92**	**324**	P		**P**		**15 26 46.3**	**-1.8**
	comp=Z,0.9nm,0.6s,baz=52,slow=5.5,SNR=5.3								
	comp=Z,0.9nm,0.6s								
AKASG	**Malin Array Be**	**86.92**	**324**	*e*P		**P**		**15 26 46.7**	**-1.5**
AKASG					pmax	pmax			
	comp=Z,1.0nm,0.6s								
NB2	**NORSAR Subarra**	**88.20**	**339**	P		**P**		**15 26 52.5**	**-1.6**
	comp=Z,0.8nm,0.7s,baz=44,slow=5.1								
NOA	**NORSAR Array B**	**88.20**	**339**	P		**P**		**15 26 52.7**	**-1.4**
	comp=Z,0.6nm,0.6s,baz=47,slow=4.7,SNR=3.9								
NOA					LR	LR		16 07 47.1	
	comp=Z,11nm,21.9s,baz=0.0,slow=36								
	comp=Z,0.6nm,0.6s								
NOA	**NORSAR Array B**	**88.20**	**339**	*e*P		**P**		**15 26 56.2**	**+2.1**
NOA					pmax	pmax			
	comp=Z,1.0nm,0.7s								
BR131	**Keskin Array S**	**89.91**	**313**	*e*P		**P**		**15 27 01.8**	**-0.9**
BRTR	**Keskin Array B**	**89.91**	**313**	P		**P**		**15 27 01.6**	**-1.2**
	comp=Z,2.2nm,0.9s,baz=70,slow=7.2,SNR=7.3								
	comp=Z,2.2nm,0.9s								
BRTR	**Keskin Array B**	**89.91**	**313**	*e*P		**P**		**15 27 01.9**	**-0.8**
BRTR					pmax	pmax			
	comp=Z,2.0nm,0.9s								
VRAC	**Vranov**	**94.24**	**328**	LR		LR		16 12 17.8	
	comp=Z,24nm,18.2s,baz=334,slow=37								
DAVOX	**Davos/Dischmat**	**99.22**	**330**	LR		LR		16 14 47.7	
	comp=Z,32nm,19.3s,baz=270,slow=37								
PLCA	**Paso Flores**	**146.16**	**130**	PKPbc		**PKPdf**		**15 33 43.6**	**+1.4**
	comp=Z,7.2nm,0.7s,baz=239,slow=3.7,SNR=30								
LPAZ	**La Paz**	**149.61**	**84**	PKP		**PKPdf**		**15 33 50.5**	**+1.2**
	comp=Z,4.9nm,0.5s,baz=231,slow=0.9,SNR=5.0								
LPAZ				PKPbc		**PKPbc**		**15 33 54.7**	**+0.7**
	comp=Z,4.9nm,0.5s,baz=320,slow=2.5,SNR=18								

IDC 22 15:19:39.1±1.1, 22.72N×45.10W, h0km, mb3.9/6, mbtmp3.9/6, MS3.5/27 Error ellipse: s-maj=38.6km s-min=27.2km az=137.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SJG	**San Juan**	**20.25**	**261**	LR		LR	15 30 35.0	
	comp=Z,76nm,20.7s,baz=94,slow=32							
SDV	**Santo Domingo**	**28.09**	**245**	LR		LR	15 35 41.5	
	comp=Z,63nm,19.1s,baz=154,slow=34							
SADO	**Sadowa**	**35.46**	**317**	LR		LR	15 39 34.5	
	comp=Z,56nm,18.2s,baz=326,slow=34							
TKL	**Tuckaleechee C**	**35.91**	**300**	LR		LR	15 39 18.5	
	comp=Z,66nm,18.7s,baz=60,slow=33							
MDT	**Midelt**	**37.02**	**65**	LR		LR	15 38 57.4	
	comp=Z,55nm,19.9s,baz=284,slow=31							
ESDC	**Sonseca Array**	**38.66**	**54**	LR		LR	15 40 34.4	
	comp=Z,48nm,18.2s,baz=294,slow=32							
DBIC	**Dimbokro**	**41.90**	**106**	LR		LR	15 41 18.1	
	comp=Z,69nm,21.2s,baz=290,slow=31							
H10N2	**ASCENSION HYDR**	**42.66**	**132**	T		T	16 12 51.8	
	baz=316,slow=75,SNR=1120							
H10N3	**ASCENSION HYDR**	**42.66**	**132**	T		T	16 12 51.8	
	baz=316,slow=75,SNR=902							
H10N1	**ASCENSION HYDR**	**42.68**	**132**	T		T	16 12 53.1	
	baz=316,slow=75,SNR=1490							
H10S3	**ASCENSION HYDR**	**43.36**	**133**	T		T	16 13 36.9	
	baz=316,slow=74,SNR=171							
H10S2	**ASCENSION HYDR**	**43.37**	**133**	T		T	16 13 45.2	
	baz=264,slow=74,SNR=53							
FRB	**Frobisher Bay**	**43.89**	**345**	LR		LR	15 45 04.1	
	comp=Z,39nm,19.0s,baz=232,slow=35							
LPAZ	**La Paz**	**44.84**	**212**	P		P	15 27 56.2	+0.2
	1.6nm,0.8s,baz=30,slow=3.3,SNR=6.1							
	1.6nm,0.8s							
TORD	**Torodi Ar. Bea**	**45.37**	**94**	P		P	15 27 58.5	-1.1
	1.2nm,0.9s,baz=309,slow=7.5,SNR=5.0							
TORD					LR	LR	15 45 18.6	
	comp=Z,101nm,18.0s,baz=217,slow=34							
	1.2nm,0.9s							
ULM	**Lac du Bonnet**	**47.99**	**318**	LR		LR	15 46 03.4	
	comp=Z,64nm,20.8s,baz=113,slow=33							
KEST	**Kesra**	**48.70**	**62**	P		P	15 28 27.0	+1.5
	4.6nm,1.0s,baz=222,slow=3.9,SNR=4.3							
	4.6nm,1.0s							
NOA	**NORSAR Array B**	**54.22**	**30**	P		P	15 29 06.8	+0.4
	0.7nm,0.8s,baz=250,slow=7.3,SNR=3.3							
NOA					LR	LR	15 47 29.7	
	comp=Z,30nm,20.9s,baz=275,slow=31							
	0.7nm,0.8s							
ANMO	**Albuquerque**	**54.37**	**297**	LR		LR	15 49 52.3	
	comp=Z,69nm,21.3s,baz=135,slow=33							
YKA	**Yellowknife Ar**	**60.64**	**330**	LR		LR	15 54 18.8	
	comp=Z,31nm,20.7s,baz=126,slow=34							
ELK	**Elko**	**60.79**	**305**	LR		LR	15 55 39.1	
	comp=Z,54nm,19.7s,baz=132,slow=36							
MLR	**Muntele Rosu**	**61.06**	**49**	LR		LR	15 52 46.7	
	comp=Z,28nm,21.0s,baz=214,slow=33							
NEW	**Newport**	**61.56**	**314**	LR		LR	15 53 59.6	
	comp=Z,51nm,21.8s,baz=153,slow=34							
SPITS	**Spitsbergen Ar**	**62.18**	**12**	LR		LR	15 51 12.8	
	comp=Z,96nm,20.5s,baz=290,slow=30							
AKASG	**Malin Array Be**	**62.94**	**43**	P		P	15 30 06.6	-0.7
	0.9nm,0.7s,baz=274,slow=6.1,SNR=4.5							
	0.9nm,0.7s							
YBH	**Yreka Blue Hor**	**66.23**	**307**	LR		LR	15 57 58.1	
	comp=Z,40nm,19.7s,baz=150,slow=35							
BBB	**Bella Bella**	**68.17**	**319**	LR		LR	16 00 07.7	
	comp=Z,48nm,19.1s,baz=97,slow=36							
INK	**Inuvik**	**68.53**	**336**	LR		LR	15 58 51.4	
	comp=Z,51nm,19.5s,baz=196,slow=34							
EIL	**Elat**	**70.86**	**65**	LR		LR	16 02 21.3	
	comp=Z,30nm,19.0s,baz=268,slow=36							
TSUM	**Tsumeb**	**74.05**	**119**	LR		LR	15 56 45.3	
	comp=Z,30nm,19.5s,baz=327,slow=30							
ILAR	**Eielson Array**	**74.56**	**334**	P		P	15 31 19.3	-0.3
	0.5nm,0.8s,baz=79,slow=4.8,SNR=6.2							
ILAR					LR	LR	16 05 24.0	
	comp=Z,52nm,18.1s,baz=98,slow=37							
	0.5nm,0.8s							
MBAR	**Mbarara**	**77.18**	**96**	LR		LR	16 03 51.7	
	comp=Z,26nm,18.2s,baz=38,slow=34							

LBTB	**Lobatse**	**83.38**	**120**	LR		LR		16 02 27.5	
	comp=Z,30nm,19.7s,baz=279,slow=31								
KMBO	**Kilima Mbogo**	**83.38**	**94**	LR		LR		16 09 06.7	
	comp=Z,25nm,18.6s,baz=96,slow=36								
TIXI	**Tiksi**	**85.79**	**2**	LR		LR		16 04 31.3	
	comp=Z,16nm,20.9s,baz=280,slow=31								

MAN 22 15:23:22.6, 16.92N×120.21E, h27km, mb3.9, ML2.7, MS2.2, 1C-5D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BOLP	**Bolinao**	**0.61**	**208**	*e*P		Pn	15 23 35.1	+0.3
BOLP				*e*S			15 23 45.1	
SAMP	**Sagada Mountai**	**0.68**	**77**	*e*P		Pb	15 23 35.8	+1.9
SAMP				*e*S			15 23 45.0	
SMPP	**San Manuel, Pa**	**0.89**	**149**	*e*P		Pb	15 23 38.9	+0.5
SMPP				*e*S			15 23 51.3	
CAUP	**Cauayan**	**1.54**	**89**	*e*P		Pb	15 23 51.5	+0.6
CAUP				*e*S			15 24 15.1	
PCPH	**Palayan**	**1.60**	**148**	*e*P		Pn	15 23 50.5	+0.6
PCPH				*e*S			15 24 15.5	
BALP	**Baler**	**1.76**	**132**	*e*P		Pn	15 23 53.2	+0.7
BALP				*e*S			15 24 16.1	

*IDC **22** 15:40:25.5±0.9, 0.48N×80.60W, h0km, mb4.0/9, mbtmp4.0/10, ML4.1/1, MS3.3/3, Error ellipse: s-maj=41.4km s-min=18.1km az=61.0*
*IGQ **22** 15:40:26±0.6, 0.°N±3.°×8.°W±.°, h10km*
*NEIC **22** 15:40:27.3±2.4, 0.40N±0.07×80.64W±0.08, h10km±1km, mb4.3/29, Error ellipse: s-maj=13.9km s-min=11.6km az=258.0*

ISC 22 15:40:26.4±0.5, 0.38N±0.04×80.68W±0.04, h11km, n107, σ1838/107, mb4.2/20, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JAMA	**Jama**	**0.80**	**143**	P		**Pg**	**15 40 41.0**	**-0.8**
JAMA				S		**Sg**	**15 40 54.0**	**+1.7**
CABP	**Cabo Pasado**	**0.80**	**162**	P		**Pg**	**15 40 41.0**	**-0.9**
CABP				S		**Sg**	**15 40 53.0**	**+0.5**
MAG1	**Magdalena**	**1.02**	**116**	P		**Pg**	**15 40 46.0**	**0.0**
AV21	**Acelerografo,**	**1.17**	**76**	P		**Pn**	**15 40 48.0**	**-0.7**
AV21				S		**Sn**	**15 41 05.0**	**+0.3**
AV18	**Acelerografo,**	**1.21**	**93**	P		**Pg**	**15 40 50.0**	**+0.4**
BV15	**Puerto Quito-O**	**1.48**	**99**	P		**Pb**	**15 40 53.0**	**-0.9**
BV15				S		**Sb**	**15 41 12.0**	**-0.7**
ISPT	**Isla de la Pla**	**1.68**	**193**	P		Pn	15 40 52.0	-3.7
ISPT				S		**Sn**	**15 41 14.0**	**-3.2**
HPAL	**Hacienda Las P**	**2.12**	**106**	P		**Pn**	**15 41 01.0**	**-1.1**
PINO	**Pino**	**2.14**	**104**	P		**Pn**	**15 41 02.0**	**-0.7**
TERV	**Terraza Guagua**	**2.15**	**105**	P		**Pg**	**15 41 07.0**	**-0.7**
JUA2	**San Juan 2**	**2.16**	**106**	P		**Pn**	**15 41 03.0**	**+0.2**
YANA	**Yana**	**2.17**	**103**	P		**Pn**	**15 41 03.0**	**+0.1**
OTAV	**Otavalo**	**2.24**	**94**	Pn		**Pn**	**15 41 03.5**	**-0.3**
OTAV	**Otavalo**	**2.24**	**94**	*e*P		**Pn**	**15 41 04.6**	**+0.8**
CUSE	**Cuicocha Este**	**2.29**	**92**	*e*P		**Pg**	**15 41 09.4**	**-0.8**
PAST	**Pastocalle**	**2.31**	**118**	P		**Pn**	**15 41 05.0**	**+0.3**
ALIT	**Ecuador-Imbabu**	**2.36**	**80**	P		**Pn**	**15 41 05.0**	**-0.2**
SUCR	**Mariscal Sucre**	**2.41**	**115**	P		**Pn**	**15 41 07.0**	**+0.8**
TUMC	**Tumaco**	**2.42**	**54**	*e*P		Pg	15 41 24.9	+12
BNAS	**Cotopaxi Volca**	**2.44**	**115**	P		**Pn**	**15 41 07.0**	**+0.4**
SLOR	**San Lorenzo -**	**2.45**	**117**	Pn		**Pn**	**15 41 08.1**	**+1.4**
SLOR	**San Lorenzo -**	**2.45**	**117**	P		**Pn**	**15 41 07.0**	**+0.3**
BMOR	**Cotopaxi Volca**	**2.48**	**116**	P		**Pn**	**15 41 08.0**	**+0.7**
BVC2	**Cotopaxi Volca**	**2.50**	**114**	P		**Pn**	**15 41 08.0**	**+0.5**
BTAM	**Cotopaxi Volca**	**2.52**	**115**	P		**Pn**	**15 41 09.0**	**+1.3**
TAMB	**Tambo**	**2.55**	**115**	P		**Pn**	**15 41 10.0**	**+1.8**
CHSH	**Refugio Sur-Vo**	**2.60**	**136**	P		**Pn**	**15 41 10.0**	**+1.1**
YAHU	**Yahuarcocha**	**2.61**	**90**	P		**Pb**	**15 41 11.0**	**-2.5**
PORT	**Chimborazo Vol**	**2.65**	**134**	Pn		**Pn**	**15 41 09.8**	**+0.2**
PORT	**Chimborazo Vol**	**2.65**	**134**	P		**Pn**	**15 41 10.0**	**+0.4**
ANTI	**Antisana**	**2.65**

NVAR	**Mina Array Bea**	**51.23**	**322**	P	**P**	**15 49 31.0**	**+0.6**
ULM	**Lac du Bonnet**	**51.35**	**348**	P	**P**	**15 49 30.2**	**-0.6**
	comp=Z,2.5nm,0.6s,baz=158,slow=12,SNR=3.8						
	comp=Z,2.5nm,0.6s						
ULM	**Lac du Bonnet**	**51.35**	**348**	P	**P**	**15 49 30.4**	**-0.4**
ULM				IAmb	IAmb	15 49 39.4	
	comp=Z,2.6nm,0.7s						
YHL	**Hebgen Lake**	**51.87**	**333**	P	**P**	**15 49 36.3**	**+1.2**
YHL				IAmb	IAmb	15 49 38.2	
	comp=Z,6.2nm,1.1s						
MCMT	**McKenzie Canyo**	**52.63**	**332**	P	**P**	**15 49 41.7**	**+0.9**
BOZ	**Bozeman (W)**	**52.64**	**333**	P	**P**	**15 49 41.8**	**+1.1**
BOZ				IAmb	IAmb	15 49 42.9	
	comp=Z,2.9nm,1.1s						
G08A	**Pilot Rock**	**56.02**	**328**	P	**P**	**15 50 05.5**	**+0.1**
G08A				IAmb	IAmb	15 50 07.3	
	comp=Z,3.0nm,0.8s						
FCC	**Fort Churchill**	**59.16**	**352**	P	**P**	**15 50 26.8**	**-0.2**
YKA	**Yellowknife Ar**	**66.98**	**344**	P	**P**	**15 51 19.1**	**+0.2**
	comp=Z,1.2nm,0.5s,baz=132,slow=7.0,SNR=4.8						
	comp=Z,1.2nm,0.5s						
DBIC	**Dimbokro**	**75.88**	**83**	P	**P**	**15 52 13.7**	**0.0**
	comp=Z,9.1nm,1.0s,baz=206,slow=5.2,SNR=3.9						
	comp=Z,9.1nm,1.0s						
K27K	**Chicken**	**77.48**	**337**	P	**P**	**15 52 23.2**	**+1.5**
K27K				IAmb	IAmb	15 52 23.7	
	comp=Z,1.8nm,0.8s						
ESDC	**Sonseca Array**	**79.54**	**50**	P	**P**	**15 52 34.9**	**+1.2**
	comp=Z,1.0nm,0.7s,baz=264,slow=7.0,SNR=7.0						
	comp=Z,1.0nm,0.7s						
ILAR	**Eielson Array**	**79.69**	**337**	P	**P**	**15 52 33.6**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=100,slow=7.4,SNR=2.9						
	comp=Z,0.3nm,0.6s						
BMAR	**Burnt Mountain**	**79.87**	**339**	P	**P**	**15 52 35.8**	**+0.9**
SUA	**Susitna One**	**80.24**	**333**	P	**P**	**15 52 36.8**	**-0.3**
SKT	**Skwentna**	**80.75**	**333**	P	**P**	**15 52 40.0**	**+0.3**
SKT				IAmb	IAmb	15 52 56.8	
	comp=Z,6.0nm,1.4s						
PPLA	**Purkeypile**	**81.31**	**334**	P	**P**	**15 52 42.8**	**0.0**
K20K	**Telida**	**82.25**	**334**	P	**P**	**15 52 47.3**	**-0.3**
K20K				IAmb	IAmb	15 52 52.1	
	comp=Z,5.0nm,1.5s						
IMAR	**Indian Mountai**	**82.81**	**337**	P	**P**	**15 52 49.7**	**-0.7**
WRA	**Warramunga Arr**	**140.59**	**238**	PKP	**PKPdf**	**15 59 56.1**	**-1.0**
	comp=Z,1.3nm,1.0s,baz=109,slow=1.6,SNR=6.0						
WRA	**Warramunga Arr**	**140.59**	**238**		**PKPdf**	**15 59 56.0**	**-1.1**

*IDC **22** 15:42:13.5±2.4,4.˚98N×128.˚31E,h0km,mb4.0/3, mbtmp4.0/3,MS2.3/1,Error ellipse: s-maj=204.4km s-min=24.1km az=65.0*

*NEIC **22** 15:42:15.8±1.5,4.˚96N±0.˚09×128.˚1E±0.˚1,h10km±1km, mb4.1/15,Error ellipse: s-maj=21.1km s-min=15.1km az=76.0*

*MAN **22** 15:42:28.0,4.˚78N×127.˚38E,h94km,mb4.8,ML3.7,MS3.7*

ISC 22 15:42:15.8±0.8,4.˚82N±0.˚07×128.˚0E±0.˚1,h10km,n28, σ1§29/28,mb4.1/9,2C,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**3.27**	**293**	⇑*e*P	Pg	15 43 29.3	+11
GSPH				*i* S	**Sn**	**15 43 44.8**	**-1.6**
DAV	**Davao City (W)**	**3.27**	**313**	LR	LR	15 44 21.3	
	comp=Z,48nm,19.6s,baz=157,slow=37						
KCP	**Kidapawan**	**3.60**	**307**	⇑*i*P	**Pb**	**15 43 17.3**	**-2.5**
KCP				*i* S	**Sn**	**15 43 55.0**	**+0.5**
TNTI	**Ternate**	**4.07**	**189**	Pn	**Pb**	**15 43 25.8**	**-1.9**
LUWI	**Luwuk**	**7.81**	**222**	Pn	**Pn**	**15 44 10.9**	**+1.2**
TOLI2	**Tolitoli**	**8.08**	**243**	Pn	**Pn**	**15 44 14.6**	**+1.3**
MYLDM	**Lahad Datu**	**9.45**	**273**	Pn	**Pn**	**15 44 36.0**	**+3.9**
SBUM	**Sibu**	**15.90**	**262**	Pn	**P**	**15 46 02.6**	**-1.0**
SBUM				IAmb	IAmb	15 46 04.5	
	comp=Z,7.7nm,0.8s						
MTN	**Manton Dam**	**17.83**	**170**		**Pn**	**15 46 24.8**	**+0.6**
MTN				IAmb	IAmb	15 46 37.8	
	comp=Z,13nm,1.4s						
KNRA	**Kununurra**	**20.38**	**178**	P	**P**	**15 46 54.0**	**+1.1**
KNRA				IAmb	IAmb	15 46 58.4	
	comp=Z,11nm,1.2s						
WB0	**Warramunga Arr**	**25.23**	**166**	P	**P**	**15 47 41.8**	**-0.4**
WB0				IAmb	IAmb	15 47 55.9	
	comp=Z,3.8nm,0.9s						
WRAB	**Tennant Creek**	**25.38**	**166**	P	**P**	**15 47 43.0**	**-0.6**
WRAB				IAmb	IAmb	15 48 00.4	
	comp=Z,11nm,1.5s						
WRA	**Warramunga Arr**	**25.39**	**166**	P	**P**	**15 47 43.5**	**-0.1**
	comp=Z,1.1nm,0.6s,baz=348,slow=8.8,SNR=34						
	comp=Z,1.1nm,0.6s						
WRA	**Warramunga Arr**	**25.39**	**166**	P	**P**	**15 47 43.3**	**-0.3**
WB2	**Warramunga Arr**	**25.39**	**166**	P	**P**	**15 47 43.3**	**-0.3**
WB2				IAmb	IAmb	15 47 49.9	
	comp=Z,8.4nm,1.4s						
WR0	**Warramunga Arr**	**25.46**	**166**	P	**P**	**15 47 44.7**	**+0.5**
WR0				IAmb	IAmb	15 48 00.2	
	comp=Z,11nm,1.4s						
AS31	**Alice Springs**	**28.90**	**169**	P	**P**	**15 48 14.9**	**-0.2**
ASAR	**Alice Springs**	**28.90**	**169**	P	**P**	**15 48 14.8**	**-0.3**
BBOO	**Buckleboo**	**38.20**	**169**	P	**P**	**15 49 35.7**	**-0.2**
STKA	**Stephens Creek**	**38.73**	**161**	P	**P**	**15 49 40.0**	**-0.3**
	comp=Z,2.9nm,0.7s,baz=341,slow=8.7,SNR=8.0						
	comp=Z,2.9nm,0.7s						
STKA	**Stephens Creek**	**38.73**	**161**	P	**P**	**15 49 40.4**	**+0.1**
SONM	**Songino Array**	**46.69**	**340**	P	**P**	**15 50 46.9**	**+1.9**
MK31	**Makanchi Array**	**57.39**	**324**	P	**P**	**15 52 04.0**	**-0.5**
MK31				IAmb	IAmb	15 52 30.1	
	comp=Z,1.7nm,0.9s						
MKAR	**Makanchi Array**	**57.39**	**324**	P	**P**	**15 52 04.2**	**-0.4**
	comp=Z,0.7nm,0.4s,baz=113,slow=7.6,SNR=14						
	comp=Z,0.7nm,0.4s						
MKAR	**Makanchi Array**	**57.39**	**324**	P	**P**	**15 52 03.8**	**-0.7**
MAKZ	**Makanchi**	**57.58**	**324**	P	**P**	**15 52 05.9**	**0.0**
MAKZ				IAmb	IAmb	15 52 31.4	
	comp=Z,2.7nm,1.0s						
KURK	**Kurchatov**	**61.51**	**327**	P	**P**	**15 52 31.5**	**-1.4**
TIXI	**Tiksi**	**66.75**	**0**	P	**P**	**15 53 06.4**	**-0.5**

IDC 22 15:57:07.1±8.6,29.˚07N×86.˚38E,h78km±81km,mb3.3/4, mbtmp3.6/5,ML4.0/1,Error ellipse: s-maj=49.0km s-min=26.4km az=57.0,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**15.60**	**130**	P	Pn	16 00 43.1	+0.6
	0.2nm,0.3s,baz=312,slow=11,SNR=17						
	1.8nm,0.7s						
KURBB	**Kurchatov Arra**	**22.32**	**347**	P	P	16 01 57.2	-1.0
	0.4nm,0.2s,baz=168,slow=10,SNR=2.3						
	0.4nm,0.2s						
SONM	**Songino Array**	**24.30**	**34**	P	P	16 02 18.3	+1.0
	0.5nm,0.5s,baz=235,slow=9.2,SNR=2.9						
	0.5nm,0.5s						
WRA	**Warramunga Arr**	**67.20**	**131**	P	P	16 07 52.7	-0.5
	0.7nm,0.9s,baz=324,slow=6.5,SNR=5.1						
	0.7nm,0.9s						
TORD	**Torodi Ar. Bea**	**79.15**	**279**	P	P	16 09 04.4	+0.5
	0.4nm,0.5s,baz=57,slow=5.3,SNR=2.5						
	0.4nm,0.5s						

*NEIC **22** 16:19:28.1±0.7,22.˚31N±0.˚05×120.˚37E±0.˚06,h7km±5km, mb4.4/5,ML4.2(TAP),Error ellipse: s-maj=9.1km s-min=6.8km az=117.0*

*TAP **22** 16:19:31.1,22.˚43N×120.˚59E,h22km,ML3.5,B*

ISC 22 16:19:31.5±0.8,22.˚40N±0.˚02×120.˚57E±0.˚02,h31km±4km, n105,σ1§45/177,mb4.3/3,17C-17D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCZT	**Fangliau**	**0.05**	**122**	⇓*i*P	**Pb**	**16 19 35.2**	**-1.6**
	baz=145						
SCZT				*i* S	**Sb**	**16 19 38.5**	**-1.9**
	baz=145						
SSPT	**Xinbi**	**0.08**	**358**	⇑*i*P	**Pb**	**16 19 35.6**	**-1.4**
	baz=344						
SSPT				S	**Sb**	**16 19 39.1**	**-1.5**
	baz=344						
WLCH	**Liuqiu**	**0.18**	**255**	⇑*i*P	**Pb**	**16 19 38.0**	**+0.3**
	baz=248						
WLCH				*e*S	**Sb**	**16 19 45.3**	**+3.4**
	baz=248						
TWP	**Hsiaoliuchiu**	**0.20**	**254**	⇑*i*P	**Pb**	**16 19 38.3**	**+0.4**
	baz=248						
TWP				*e*S	**Sb**	**16 19 45.3**	**+3.1**
	baz=248						
MASBT	**Mashibuluo**	**0.22**	**15**	⇓*i*P	**Pb**	**16 19 37.0**	**-1.2**
	baz=14						
MASBT				S	**Sb**	**16 19 41.1**	**-1.4**
	baz=14						
EAST	**Anshuo**	**0.26**	**94**	⇓*i*P	**Pb**	**16 19 38.1**	**-0.5**
	baz=100						
EAST				S	**Sb**	**16 19 43.6**	**+0.2**
	baz=100						
SLIU	**Shizi**	**0.28**	**131**	⇓*i*P	**Pb**	**16 19 38.1**	**-0.8**
	baz=137						
SLIU				*i* S	**Sb**	**16 19 43.2**	**-0.6**
	baz=137						
TSPT	**Pingtung City**	**0.28**	**346**	P	**Pn**	**16 19 39.0**	**-0.5**
	baz=340						
TSPT				*e*S	**Sn**	**16 19 44.4**	**-0.4**
	baz=340						
KAU	**Kaohsiung**	**0.29**	**304**	⇑*e*P	**Pn**	**16 19 39.9**	**+0.2**
	baz=299						
KAU				*e*S	**Sn**	**16 19 47.6**	**+2.6**
	baz=299						
TAWH	**Dawu Township**	**0.30**	**102**	⇓*i*P	**Pb**	**16 19 38.4**	**-0.6**
	baz=107						
TAWH				S	**Sn**	**16 19 44.4**	**-0.7**
	baz=107						
TAW	**Tawu**	**0.30**	**98**	⇓*i*P	**Pb**	**16 19 38.7**	**-0.5**
	baz=104						
TAW				*e*S	**Sn**	**16 19 44.3**	**-0.9**
	baz=104						
TSMG	**Majia**	**0.31**	**13**	⇓*i*P	**Pb**	**16 19 38.3**	**-1.0**
	baz=11						
TSMG				S	**Sb**	**16 19 43.2**	**-1.3**
	baz=11						
SGLT	**Jiouru**	**0.33**	**347**	*e*P	**Pn**	**16 19 40.2**	**-0.1**
	baz=345						
SGLT				*e*S	**Sn**	**16 19 48.1**	**+2.1**
	baz=345						
SSD	**Sandimen**	**0.35**	**9**	⇓*i*P	**Pb**	**16 19 38.9**	**-0.9**
	baz=9.0						
SSD				S	**Sb**	**16 19 44.3**	**-1.1**
	baz=9.0						
WSSB	**Gushan**	**0.37**	**310**	*e*P	**Pn**	**16 19 41.2**	**+0.3**
	baz=305						
WSSB				*e*S	**Sn**	**16 19 49.5**	**+2.4**
	baz=305						
HEN	**Hengchun**	**0.42**	**158**	*e*P	**Pb**	**16 19 41.0**	**+0.2**
	baz=161						
HEN				*e*S	**Sn**	**16 19 48.6**	**+0.4**
	baz=161						
TWM1	**Shoushan**	**0.44**	**342**	P	**Pn**	**16 19 42.1**	**+0.3**
	baz=340						
TWM1				*e*S	**Sn**	**16 19 53.2**	**+4.4**
	baz=340						
SMST	**Manzhou Townsh**	**0.45**	**147**	⇓*i*P	**Pb**	**16 19 41.2**	**0.0**
	baz=150						
SMST				S	**Sn**	**16 19 48.8**	**-0.1**
	baz=150						
SNW	**Nanwan**	**0.47**	**159**	*e*P	**Pn**	**16 19 42.5**	**+0.3**
	baz=162						
SNW				*e*S	**Sn**	**16 19 51.2**	**+1.9**
	baz=162						
SCST	**Cishan**	**0.49**	**352**	⇑*i*P	**Pb**	**16 19 42.6**	**+0.2**
	baz=349						
SCST				*e*S	**Sn**	**16 19 51.2**	**+1.4**
	baz=349						
TWK1	**Hengchun**	**0.50**	**154**	⇓*i*P	**Pb**	**16 19 42.4**	**+0.3**
	baz=156						
TWK1				*e*S	**Sn**	**16 19 50.8**	**+0.6**
	baz=156						
TWKBT	**Hengchun**	**0.51**	**154**	⇓*i*P	**Pb**	**16 19 42.4**	**+0.2**
	baz=157						
TWKBT				*e*S	**Sn**	**16 19 50.9**	**+0.6**
	baz=157						
TSEB	**Hengchuen, Pin**	**0.58**	**148**	⇑*i*P	**Pb**	**16 19 43.6**	**+0.2**
	baz=155						
TSEB				S	**Sn**	**16 19 52.9**	**+0.7**
	baz=155						
SLGT	**Liugui**	**0.59**	**7**	*e*P	**Pn**	**16 19 43.6**	**-0.2**
	baz=6.0						
SLGT				*e*S	**Sn**	**16 19 51.8**	**-0.7**
	baz=6.0						
TWG	**Pinlang**	**0.62**	**48**	Pg	**Pn**	**16 19 43.8**	**-0.5**
TWG	**Pinlang**	**0.62**	**48**	⇓*e*P	**Pn**	**16 19 43.9**	**-0.3**
	baz=50						
TWGBT	**Beinan**	**0.63**	**48**	⇓*i*P	**Pn**	**16 19 43.9**	**-0.4**
	baz=50						
TWGBT				S	**Sn**	**16 19 52.4**	**-0.9**
	baz=50						
TTN	**Taitung**	**0.64**	**56**	⇓*e*P	**Pn**	**16 19 45.1**	**+0.7**
	baz=58						
TTN				*e*S	**Sn**	**16 19 55.8**	**+2.3**
	baz=58						
SHHT	**Tainan City**	**0.65**	**342**	*e*P	**Pn**	**16 19 45.7**	**+1.1**
	baz=340						
SHHT				*e*S	**Sn**	**16 19 57.1**	**+3.2**
	baz=340						
SGST	**Jiashian**	**0.68**	**1**	⇑*e*P	**Pb**	**16 19 44.3**	**-0.7**
SGST				*e*S	**Sn**	**16 19 56.1**	**+1.5**
CHN3	**Shinhua**	**0.70**	**344**	*e*P	**Pn**	**16 19 46.5**	**+1.2**
	baz=342						
CHN3				*e*S	**Sn**	**16 19 58.5**	**+3.4**
	baz=342						
TAI1	**Yung-k'ang**	**0.71**	**334**	*e*P	**Pn**	**16 19 45.7**	**+0.2**
	baz=332						
TAI1				*e*S	**Sn**	**16 19 57.4**	**+2.1**
	baz=332						
LONT	**Longtian**	**0.72**	**46**	⇓*i*P	**Pn**	**16 19 45.6**	**0.0**
	baz=47						
LONT				*e*S	**Sn**	**16 19 55.6**	**0.0**
	baz=47						
STYT	**Tauyuan**	**0.78**	**13**	⇑*e*P	**Pn**	**16 19 46.6**	**+0.1**
	baz=13						
STYT				*e*S	**Sn**	**16 19 58.5**	**+1.4**
	baz=13						
CHN1	**Nanshi**	**0.78**	**357**	⇑*e*P	**Pn**	**16 19 46.6**	**+0.1**
	baz=356						
CHN1				*e*S	**Sn**	**16 20 00.1**	**+3.0**
	baz=356						
STYH	**Taoyuan**	**0.79**	**14**	⇑P	**Pn**	**16 19 46.9**	**+0.3**
	baz=14						
STYH				*e*S	**Sn**	**16 19 58.7**	**+1.4**
	baz=14						
SNST	**Tainan City**	**0.82**	**355**	*e*P	**Pn**	**16 19 47.5**	**+0.5**
	baz=354						
SNST				*e*S	**Sn**	**16 19 59.8**	**+1.8**
	baz=354						
WTP	**Ta-pu**	**0.84**	**3**	⇑*e*P	**Pn**	**16 19 47.3**	**0.0**
	baz=2.0						
WTP				*e*S	**Sn**	**16 20 00.9**	**+2.2**
	baz=2.0						
SCLT	**Jiali**	**0.85**	**336**	*e*P	**Pn**	**16 19 47.3**	**0.0**
	baz=334						
SCLT				*e*S	**Sn**	**16 20 00.2**	**+1.5**
	baz=334						
TWK	**Hsinying**	**0.87**	**355**	⇓*e*P	**Pn**	**16 19 47.7**	**+0.1**
	baz=355						
TWK				*e*S	**Sn**	**16 20 01.9**	**+2.6**
	baz=355						
LDUT	**Ludao**	**0.87**	**72**	⇓*e*P	**Pn**	**16 19 47.6**	**-0.1**
	baz=73						
LDUT				*e*S	**Sn**	**16 20 01.1**	**+1.8**
	baz=73						
EDH	**Donghe**	**0.88**	**50**	⇑*e*P	**Pn**	**16 19 48.2**	**+0.4**
	baz=51						
EDH				*e*S	**Sn**	**16 20 01.4**	**+1.8**
	baz=51						
ELDTW	**Lidau**	**0.89**	**28**	⇑P	**Pn**	**16 19 48.4**	**+0.4**
	baz=28						
ELDTW				*e*S	**Sn**	**16 20 01.6**	**+1.8**
	baz=28						
TPUB	**Ta-pu**	**0.90**	**3**	Pg	**Pb**	**16 19 47.6**	**-1.0**
TPUB	**Ta-pu**	**0.90**	**3**	*e*P	**Pn**	**16 19 47.9**	**-0.2**
	baz=3.0						
TPUB				*e*S	**Sn**	**16 20 01.8**	**+1.8**
	baz=3.0						
ECS	**Chishang**	**0.92**	**41**	*e*P	**Pn**	**16 19 49.9**	**+1.6**
	baz=41						
CHN4	**Tsaushan**	**0.95**	**1**	*e*P	**Pn**	**16 19 48.7**	**0.0**
LAY	**Lan-yu**	**0.98**	**111**	*e*P	**Pb**	**16 19 48.3**	**-1.6**
	baz=113						
LAY				*e*S	**Sn**	**16 20 02.7**	**+0.8**
	baz=113						
ICHU	**Yijhu**	**0.99**	**344**	*e*P	**Pb**	**16 19 49.0**	**-1.2**
	baz=343						
CHN8	**Yiju**	**1.00**	**341**	*e*P	**Pb**	**16 19 48.5**	**-1.8**
	baz=340						
CHKT	**Chengkung**	**1.01**	**46**	*e*P	**Pn**	**16 19 50.2**	**+0.7**
	baz=47						
CHKT				*e*S	**Sn**	**16 20 05.2**	**+2.4**
	baz=47						
LYUB	**Lan-yu**	**1.02**	**113**	⇑*e*P	**Pb**	**16 19 47.8**	**-2.9**
	baz=115						
LYUB				*e*S	**Sb**	**16 20 00.2**	**-3.5**
	baz=115						
FULB	**Fuli**	**1.04**	**40**	*e*P	**Pn**	**16 19 51.1**	**+1.1**
	baz=40						
FULB				*e*S	**Sn**	**16 20 06.9**	**+3.5**
	baz=40						
CHY	**Chiayi**	**1.10**	**353**	*e*P	**Pn**	**16 19 51.3**	**-0.7**
	baz=352						
CHY				*e*S	**Sn**	**16 20 05.3**	**+0.3**
	baz=352						
ALS	**Alishan**	**1.13**	**11**	*e*P	**Pb**	**16 19 51.7**	**-0.9**
	baz=11						
ALS				*e*S	**Sn**	**16 20 09.5**	**+3.5**
	baz=11						
YUS	**Yu-Shan**	**1.14**	**18**	*e*P	**Pb**	**16 19 52.1**	**-0.8**
	baz=18						
YUS				*e*S	**Sn**	**16 20 09.9**	**+3.3**
	baz=18						
TWF1	**Yuli**	**1.16**	**35**	*e*P	**Pb**	**16 19 52.5**	**-0.5**
	baz=36						
TWF1				*e*S	**Sn**	**16 20 08.3**	**+1.8**
	baz=36						
EYUL	**Yuli**	**1.17**	**36**	*e*P	**Pb**	**16 19 52.9**	**-0.2**
	baz=36						
EYUL				*e*S	**Sn**	**16 20 08.9**	**+2.2**
	baz=36						
YULB	**Yu-li**	**1.19**	**34**	Pn	**Pb**	**16 19 52.8**	**-0.8**
YULB	**Yu-li**	**1.19**	**34**	⇑*e*P	**Pb**	**16 19 52.4**	**-1.2**
	baz=34						
YULB				*e*S	**Sn**	**16 20 08.9**	**+1.7**
	baz=34						
CHN5	**Tsauling**	**1.20**	**5**	*e*P	**Pn**	**16 19 52.4**	**+0.2**
	baz=4.0						
CHN5				*e*S	**Sn**	**16 20 10.3**	**+2.8**
	baz=4.0						
WDGT	**Dungji**	**1.20**	**316**	*e*P	**Pn**	**16 19 51.0**	**-1.1**
	baz=314						
WDGT				*e*S	**Sb**	**16 20 06.0**	**-2.9**
	baz=314						
WSF	**Szhu**	**1.27**	**345**	*e*P	**Pn**	**16 19 52.7**	**-0.5**
	baz=345						
WSF				*e*S	**Sb**	**16 20 09.8**	**-1.1**
	baz=345						
WGK	**Gukeng**	**1.28**	**360**	*e*P	**Pn**	**16 19 53.5**	**+0.2**
	baz=359						
WGK				*e*S	**Sb**	**16 20 10.5**	**-0.7**
	baz=359						
WDLH	**Douliu**	**1.28**	**359**	*e*P	**Pn**	**16 19 53.4**	**+0.1**
	baz=358						
WDLH				*e*S	**Sb**	**16 20 11.1**	**-0.2**
	baz=358						
WTK	**Tuku**	**1.29**	**353**	*e*P	**Pn**	**16 19 53.2**	**-0.2**
	baz=352						
WTK				*e*S	**Sb**	**16 20 10.0**	**-1.5**
	baz=352						
EHY	**Hungye**	**1.30**	**32**	*e*P	**Pb**	**16 19 54.7**	**-0.7**
	baz=33						
VCHM	**Qimei**	**1.33**	**308**	⇓*e*P	**Pn**	**16 19 52.6**	**-1.3**
	baz=306						
VCHM				*e*S	**Sn**	**16 20 08.8**	**-1.7**
	baz=306						
HGSD	**Ruisui**	**1.34**	**36**	⇑*e*P	**Pb**	**16 19 55.4**	**-0.7**
	baz=36						
HGSD				*e*S	**Sb**	**16 20 14.8**	**+1.8**
	baz=36						
WJS	**Zhushan**	**1.42**	**6**	*e*P	**Pn**	**16 19 55.5**	**+0.3**
	baz=5.0						
SSLB	**Suanglung**	**1.43**	**14**	Pn	**Pn**	**16 19 55.7**	**+0.3**
SSLB	**Suanglung**	**1.43**	**14**	*e*P	**Pn**	**16 19 55.5**	**+0.2**
	baz=14						
PHUB	**P'eng-hu**	**1.44**	**320**	*e*P	**Pn**	**16 19 54.3**	**-1.2**
	baz=319						
PHUB				*e*S	**Sn**	**16 20 11.7**	**-1.6**
	baz=319						
VWDT	**VWDT**	**1.45**	**21**	*e*P	**Pb**	**16 19 56.4**	**-1.5**
	baz=21						
VWDT				*e*S	**Sb**	**16 20 19.3**	**+3.4**
	baz=21						
WNT	**Mingjian**	**1.48**	**4**	*e*P	**Pn**	**16 19 56.4**	**+0.4**
	baz=4.0						
WNT				*e*S	**Sn**	**16 20 13.7**	**-0.5**
	baz=4.0						
EGFH	**Guangfu**	**1.49**	**32**	*e*P	**Pb**	**16 19 57.2**	**-1.4**
	baz=32						
EGFH				*e*S	**Sb**	**16 20 18.3**	**+1.2**
	baz=32						
PNG	**Penghu**	**1.49**	**321**	*e*P	**Pn**	**16 19 55.2**	**-1.0**
	baz=320						
PNG				*e*S	**Sn**	**16 20 14.5**	**-0.1**
	baz=320						
WRL	**Guolierlin Hig**	**1.50**	**353**	*e*P	**Pn**	**16 19 56.2**	**-0.2**
	baz=353						
WRL				*e*S	**Sb**	**16 20 15.7**	**-1.9**
	baz=353						
SMLT	**Sun Moon Lake**	**1.51**	**12**	*e*P	**Pn**	**16 19 56.9**	**+0.4**
	baz=12						
TYC	**Yuchr**	**1.52**	**10**	*e*P	**Pn**	**16 19 56.9**	**+0.4**
	baz=10.0						
TYC				*e*S	**Sb**	**16 20 19.5**	**+1.5**
	baz=10.0						
ESL	**Shilin**	**1.61**	**29**	*e*P	**Pn**	**16 19 58.5**	**+0.5**
	baz=30						
OWD	**Renai**	**1.64**	**20**	*e*P	**Pn**	**16 19 59.1**	**+0.7**
	baz=20						
OWD				*e*S	**Sn**	**16 20 17.0**	**-1.6**
	baz=20						
DPDB	**Guoxing**	**1.66**	**11**	*e*P	**Pn**	**16 19 58.5**	**0.0**
	baz=11						
WUSB	**Renai**	**1.66**	**17**	*e*P	**Pn**	**16 19 59.2**	**+0.6**
	baz=17						
WUSB				*e*S	**Sb**	**16 20 20.2**	**-2.0**
	baz=17						
WCS	**Beigang Elemen**	**1.68**	**11**	*e*P	**Pn**	**16 19 58.9**	**+0.1**
	baz=10.0						
TCU	**Taichung**	**1.74**	**3**	*e*P	**Pn**	**16 20 00.3**	**+0.6**
	baz=3.0						
CHGB	**Renai**	**1.74**	**18**	*e*P	**Pn**	**16 20 00.5**	**+0.7**
	baz=18						
CHGB				*e*S	**Sb**	**16 20 23.2**	**-1.4**
	baz=18						
WHF	**Hehuan Shan**	**1.85**	**20**	*e*P	**Pn**	**16 20 02.5**	**+1.0**
	baz=20						
WHF				*e*S	**Sn**	**16 20 25.1**	**+1.0**
	baz=20						
FUSS	**Fushou**	**1.94**	**18**	*e*P	**Pn**	**16 20 03.2**	**+0.6**
	baz=18						
ETLH	**Xiulin Townshi**	**1.98**	**25**	*e*P	**Pn**	**16 20 04.2**	**+1.2**
	baz=25						
NACB	**Ninganchiao**	**2.00**	**28**	Pn	**Pb**	**16 20 04.8**	**-2.4**
NNSB	**Datong**	**2.15**	**20**	*e*P	**Pn**	**16 20 07.0**	**+1.6**
	baz=20						
YHNB	**Yeheng**	**2.38**	**18**	Pn	**Pn**	**16 20 09.7**	**+1.3**
TATO	**Taipei**	**2.70**	**18**	Pn	**Pn**	**16 20 13.6**	**+0.8**
VWUC	**VWUC**	**2.78**	**338**	*e*P	**Pn**	**16 20 13.5**	**-0.4**
	ba

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO05	**La Serena**	**0.74**	**131**	*e*P	**Pn**	**16 19 56.6**	**-0.6**
CO05				*e*S	**Sn**	**16 20 07.1**	**-1.3**
CO05				IAML		16 20 10.6	
	comp=E,5μm,0.5s						
LCO	**Las Campanas**	**1.11**	**68**	*e*P	**Pg**	**16 20 02.9**	**+0.7**
LCO				*e*S	**Sn**	**16 20 18.7**	**+0.8**
GO04	**Tololo Observa**	**1.20**	**129**	⇓*i*P	**Pg**	**16 20 04.4**	**+0.6**
GO04				*i* S	**Sg**	**16 20 19.7**	**+0.2**
GO04				IAML		16 20 25.9	
	comp=E,8μm,0.3s						
CO06	**Fray Jorge**	**1.26**	**170**	⇑*e*P	**Pb**	**16 20 04.2**	**-0.3**
CO06				*e*S	**Sn**	**16 20 21.0**	**-0.2**
CO06				IAML		16 20 23.6	
	comp=E,905nm,0.3s						
AC04	**Llanos de Chal**	**1.41**	**30**	⇑*i*P	**Pb**	**16 20 06.2**	**-0.9**
AC04				*e*S	**Sb**	**16 20 24.1**	**-1.0**
AC04				IAML		16 20 33.8	
	comp=N,574nm,0.4s						
CO01	**Juntas del Tor**	**1.65**	**110**	⇓*e*P	**Pg**	**16 20 12.0**	**-0.4**
CO01				*i* S	**Sg**	**16 20 34.1**	**+0.3**
CO01				IAML		16 20 39.0	
	comp=N,673nm,0.5s						
CO03	**El Pedregal**	**1.74**	**144**	⇑*e*P	**Pb**	**16 20 12.4**	**-0.5**
CO03				*e*S	**Sb**	**16 20 35.1**	**+0.3**
CO03				IAML		16 20 39.8	
	comp=E,1μm,0.3s						
CO02	**Combarbal**	**1.92**	**157**	⇑*e*P	**Pb**	**16 20 15.0**	**-1.0**
CO02				*e*S	**Sb**	**16 20 39.0**	**-1.0**
CO02				IAML		16 20 46.7	
	comp=N,3μm,0.4s						
GO03	**Copiap**	**2.33**	**39**	⇓*e*P	**Pn**	**16 20 19.9**	**+0.8**
GO03				*e*S	**Sb**	**16 20 50.4**	**-1.3**
GO03				IAML		16 21 02.5	
	comp=E,363nm,0.5s						
AC01	**Pan de Azucar**	**3.46**	**19**	*e*P	**Pn**	**16 20 33.2**	**-1.4**
GO02	**Mina Guanaco**	**4.71**	**26**	*e*P	**Pn**	**16 20 52.0**	**-0.2**
H03N1	**Juan Fernandez**	**7.22**	**235**	T	T	16 29 13.5	
	baz=63,slow=71,SNR=136						
H03N2	**Juan Fernandez**	**7.23**	**235**	T	T	16 29 11.3	
	baz=63,slow=71,SNR=136						
H03N3	**Juan Fernandez**	**7.23**	**235**	T	T	16 29 12.8	
	baz=63,slow=71,SNR=131						
LVC	**Limon Verde**	**7.30**	**22**	Pn	**Pn**	**16 21 27.0**	**-0.7**
	comp=E,0.5nm,0.3s,baz=202,slow=11,SNR=1.7						
	comp=E,2.6nm,0.6s						
PLCA	**Paso Flores**	**11.33**	**175**	Pn	**Pn**	**16 22 22.8**	**+0.1**
	comp=E,0.2nm,0.3s,baz=341,slow=11,SNR=9.4						
	comp=E,0.6nm,0.4s						
LPAZ	**La Paz**	**13.53**	**16**	Pn	**Pn**	**16 22 54.4**	**+1.2**
	comp=E,0.1nm,0.3s,baz=198,slow=6.4,SNR=3.0						
	comp=E,0.9nm,0.6s						
SIV	**San Ignacio**	**16.67**	**39**	Pn	**Pn**	**16 23 34.4**	**-0.1**
	baz=239,slow=18,SNR=4.5						
	comp=E,0.7nm,0.4s						
TORD	**Torodi Ar. Bea**	**82.54**	**70**	P	**P**	**16 32 05.4**	**+1.3**
	comp=E,0.8nm,0.9s,baz=249,slow=3.8,SNR=4.4						
	comp=E,0.8nm,0.9s						
WRA	**Warramunga Arr**	**124.79**	**210**	PKP	**PKiKP**	**16 38 41.6**	**-0.1**
	comp=E,0.3nm,0.8s,baz=148,slow=1.8,SNR=1.7						
ZALV	**Zalesovo Beam**	**150.22**	**28**	PKPbc	**PKiKP**	**16 39 32.6**	**+0.4**
	comp=E,1.4nm,0.6s,baz=295,slow=2.9,SNR=8.3						

MOS ***22*** *16:23:20.6±1.4, 46°.21N×153°.00E, h35km, mb4.2/6, Error ellipse: s-maj=12.1km s-min=8.5km az=51.1*
SKHL ***22*** *16:23:20.8±0.4, 46°.00N×153°.30E, h59km±5km, mb4.5/5*
NIED ***22*** *16:23:21.3, 46°.52N×152°.80E, h30km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr-0.57; Mθθ1.34; Mφφ-0.77; Mrθ-0.19; Mθφ0.16; Mφr-0.06; Fault plane solution: M0 1.08000×10^15 NP1: φs311.00000°, δ77.00000°, λ-5.00000°. NP2: φs42.00000°, δ86.00000°, λ-167.00000°.*
JMA ***22*** *16:23:21.3±0.9, 47°.N±6°×15°.3E±°, h30km, MV4.1/13, KURILE ISLANDS REGION*
NEIC ***22*** *16:23:23.2±0.9, 46°.26N±0°.09×153°.0E±0°.2, h38km±10km, mb4.1/11, Error ellipse: s-maj=20.4km s-min=2.4km az=127.0*
IDC ***22*** *16:23:24.7±4.0, 46°.37N×152°.98E, h47km±33km, mb3.5/8, mbtmp3.8/10, ML2.5/2, MS3.3/7, Error ellipse: s-maj=40.9km s-min=22.5km az=149.0*

ISC 22 16:23:21.4±0.9, 46°.0N±0°.1×153°.7E±0°.0, h35km, n91, σ1§44/85, mb4.0/16, MS3.5/5, 2C-4D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.80**	**260**	*d*iPN	**Pn**	**16 24 19.1**	**+1.7**
KUR				*e*S	**Sn**	**16 25 02.0**	**+1.1**
KUR				pmax	pmax		
	comp=Z,113μm,0.3s						
KUR				pmax	pmax		
	comp=N,41nm,0.2s						
KUR				pmax	pmax		
	comp=E,14nm,0.2s						
KUR				smax	smax		
	comp=N,145nm,0.5s						
KUR				smax	smax		
	comp=E,26nm,0.2s						
KUR	**Kuril'sk**	**3.80**	**260**	*i* P	**Pn**	**16 24 18.3**	**+0.9**
KUR				AMB	AMB	16 24 20.4	
	comp=E,70nm,0.4s						
KUR				*e*S	**Sn**	**16 25 01.1**	**+0.2**
KUR				A	A	16 25 11.8	
	comp=E,200nm,0.6s						
KUR				A	A	16 25 11.8	
	comp=E,190nm,0.6s						
SHO	**Shikotan**	**4.99**	**247**	*e*PN	**Pn**	**16 24 32.8**	**-0.9**
SHO				pmax	pmax		
	comp=E,11nm,0.3s						
SHO				pmax	pmax		
	comp=Z,21nm,0.3s						
SHO				pmax	pmax		
	comp=N,4.0nm,0.1s						
SHO	**Shikotan**	**4.99**	**247**	*e*P	**Pn**	**16 24 33.9**	**+0.2**
SHO				AMB	AMB	16 24 37.6	
	comp=N,20nm,0.3s						
SHO				*e*S	**Sn**	**16 25 28.2**	**-2.0**
SHO				A	A	16 25 35.8	
	comp=N,50nm,0.3s						
SHO				A	A	16 25 35.8	
	comp=N,40nm,0.3s						
SKR	**Severo-Kuril's**	**5.05**	**22**	*e*PN	**Pn**	**16 24 35.6**	**+1.1**
SKR				pmax	pmax		
	comp=Z,100nm,2.8s						
SKR				pmax	pmax		
	comp=Z,27nm,0.5s						
SKR				MLR	MLR		
	comp=Z,100nm,12.0s						
SKR	**Severo-Kuril's**	**5.05**	**22**	*e*P	**Pn**	**16 24 34.6**	**+0.1**
SKR				AMB	AMB	16 24 37.6	
	comp=Z,30nm,0.5s						
SKR				*e*S	**Sn**	**16 25 29.0**	**-2.6**
SKR				A	A	16 25 39.3	
	comp=Z,40nm,0.3s						
SKR				A	A	16 25 39.3	
	comp=Z,40nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**5.55**	**251**	PN	**Pn**	**16 24 41.4**	**0.0**
YUK				pmax	pmax		
	comp=Z,76nm,0.4s						
YUK				pmax	pmax		
	comp=N,67nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**5.55**	**251**	*e*P	**Pn**	**16 24 41.9**	**+0.5**
YUK				AMB	AMB	16 24 44.3	
	comp=N,30nm,0.4s						
YUK				*e*S	**Sn**	**16 25 42.3**	**-1.6**
YUK				A	A	16 25 43.5	
	comp=N,60nm,0.4s						
YUK				A	A	16 25 43.5	
	comp=N,70nm,0.4s						
NEM2	**Nemuro 2**	**5.92**	**246**	*e*P	**Pn**	**16 24 45.9**	**-0.6**
NEM2				*e*S	**Sn**	**16 25 49.1**	**-4.1**
RUSJ	**Misakicho**	**5.93**	**254**	*e*PN	**Pn**	**16 24 49.2**	**+2.6**
RUSJ				*e*S	**Sn**	**16 25 55.5**	**+2.2**
NMR	**Nemuro--Hokkai**	**5.93**	**246**	*e*PN	**Pn**	**16 24 45.3**	**-1.4**
NMR	**Nemuro--Hokkai**	**5.93**	**246**	*e*P	**Pn**	**16 24 46.2**	**-0.5**
NMR				*e*S	**Sn**	**16 25 50.6**	**-2.8**
PAU	**Pauzhetka**	**5.95**	**23**	*e*P	**Pn**	**16 24 49.1**	**+2.3**
PAU				AMB	AMB	16 24 51.9	
	comp=N,20nm,0.5s						
JRA	**Rausu**	**6.08**	**253**	*e*P	**Pn**	**16 24 50.6**	**+1.9**
JNK	**Nakash**	**6.49**	**251**	*e*P	**Pn**	**16 24 55.0**	**+0.7**
AKK	**Akkeshi**	**6.67**	**246**	*e*P	**Pn**	**16 24 57.8**	**+1.0**
AKK				*e*S	**Sn**	**16 26 08.5**	**-3.0**
JAK	**Akkeshi**	**6.77**	**246**	*e*P	**Pn**	**16 24 57.4**	**-0.8**
JAK				*e*S	**Sn**	**16 26 09.4**	**-4.7**
JTKR	**Abashiri--Toko**	**6.88**	**256**	*e*P	**Pn**	**16 25 01.0**	**+1.3**
JAR	**Ashorobuto**	**7.24**	**251**	*e*P	**Pn**	**16 25 05.9**	**+1.3**
JAR				*e*S	**Sn**	**16 26 23.5**	**-2.0**
YSS	**Yuzh-Sakhalins**	**7.25**	**281**	Pn	**Pn**	**16 25 05.5**	**+0.8**
YSS	**Yuzh-Sakhalins**	**7.25**	**281**	*e*P	**Pn**	**16 25 06.1**	**+1.4**
YSS				AMB	AMB	16 25 09.4	
	comp=N,10.0nm,0.3s						
PEA0B	**Petropavlovsk-**	**7.67**	**21**	Pn	**Pn**	**16 25 09.7**	**-0.8**
PEA0B	**Petropavlovsk-**	**7.67**	**21**	PN	**Pn**	**16 25 09.7**	**-0.8**
PETK	**Petropavlovsk-**	**7.67**	**21**	P	**Pn**	**16 25 10.3**	**-0.1**
	comp=N,0.3nm,0.3s,baz=191,slow=12,SNR=8.7						
	comp=N,5.8nm,0.9s						
PETK	**Petropavlovsk-**	**7.67**	**21**	Pn	**Pn**	**16 25 10.2**	**-0.3**
JKK2	**Kamakawa 2**	**7.70**	**257**	*e*P	**Pn**	**16 25 12.9**	**+1.9**
JKA	**Kamikawa-asahi**	**7.72**	**259**	Pn	**Pn**	**16 25 11.8**	**+0.6**
JKA	**Kamikawa-asahi**	**7.72**	**259**	*e*P	**Pn**	**16 25 11.8**	**+0.6**
ASAJ	**Asahikawa**	**7.72**	**259**	PN	**Pn**	**16 25 11.8**	**+0.5**
JCH	**Churui**	**7.81**	**248**	*e*P	**Pn**	**16 25 12.5**	**0.0**
ERM	**Erimo**	**8.25**	**244**	Pn	**Pn**	**16 25 20.3**	**+1.8**
ERM	**Erimo**	**8.25**	**244**	⇓*e*PN	**Pn**	**16 25 20.6**	**+2.1**
JNBK	**Urakawa-nobuka**	**8.37**	**247**	*e*P	**Pn**	**16 25 19.4**	**-0.8**
JANG	**Nango**	**10.21**	**240**	*e*S	Sn	16 27 29.6	-8.9
JTM	**Tenmabayashi**	**10.24**	**243**	Pn	**Pn**	**16 25 45.9**	**+0.2**
JTH	**Tanohata**	**10.27**	**238**	*e*S	Sn	16 27 30.2	-10
MA2	**Magadan**	**13.64**	**355**	LR	LR	16 32 08.6	
	comp=N,36nm,19.1s,baz=249,slow=39						
KLR	**Kul'dur**	**14.78**	**290**	LR	LR	16 32 45.6	
	comp=N,45nm,19.6s,baz=38,slow=38						
USRK	**Ussuriysk Ar.**	**15.06**	**271**	P	**Pn**	**16 26 52.2**	**+0.8**
	comp=N,0.2nm,0.3s,baz=73,slow=10,SNR=5.6						
	comp=N,0.7nm,0.4s						
USRK	**Ussuriysk Ar.**	**15.06**	**271**	Pn	**Pn**	**16 26 52.7**	**+1.3**
USRK	**Ussuriysk Ar.**	**15.06**	**271**	P	**Pn**	**16 26 52.7**	**+1.3**
KSRS	**Korea Array**	**20.63**	**254**	P	Pn	16 27 59.8	-0.3
	comp=N,0.4nm,0.5s,baz=57,slow=12,SNR=3.1						
	comp=N,0.4nm,0.5s						
KS19	**Wonju Array Si**	**20.64**	**255**	P	Pn	16 28 00.2	0.0
KS19				IAmb	IAmb	16 28 25.0	
	comp=Z,13nm,1.5s						
YAK	**Yakutsk**	**20.95**	**328**	P	**P**	**16 27 59.5**	**-1.3**
	comp=Z,2.5nm,0.4s,baz=116,slow=3.3,SNR=6.8						
	comp=Z,2.5nm,0.4s						
YAK	**Yakutsk**	**20.95**	**328**	P	**P**	**16 27 59.0**	**-1.9**
YAK				IAmb	IAmb	16 28 09.0	
	comp=Z,7.1nm,0.7s						
YAK	**Yakutsk**	**20.95**	**328**	⇓*i*P	**P**	**16 28 00.6**	**-0.2**
YAK				pmax	pmax		
	comp=Z,19nm,2.3s						
YAK	**Yakutsk**	**20.95**	**328**	*e*P	**P**	**16 28 00.6**	**-0.2**
BILL	**Bilibino**	**23.08**	**13**	*e*P	**P**	**16 28 22.8**	**-0.7**
BILL				*e*		16 28 47.2	
BILL				*e*PPP	PPP	16 28 58.2	
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BILL	**Bilibino**	**23.08**	**13**	*e*P	**P**	**16 28 22.8**	**-0.7**
TIXI	**Tiksi**	**28.16**	**344**	LR	LR	16 41 23.7	
	comp=Z,20nm,18.9s,baz=183,slow=39						
H11N2	**WAKE ISLAND Hy**	**28.57**	**152**	T	T	17 00 55.2	
	baz=340,slow=76,SNR=31						
H11N1	**WAKE ISLAND Hy**	**28.58**	**152**	T	T	17 00 55.7	
	baz=340,slow=76,SNR=5.9						
H11N3	**WAKE ISLAND Hy**	**28.59**	**152**	T	T	17 00 55.9	
	baz=340,slow=76,SNR=22						
H11S1	**WAKE ISLAND Hy**	**29.65**	**153**	T	T	17 02 21.3	
	baz=341,slow=76,SNR=6.8						
H11S3	**WAKE ISLAND Hy**	**29.66**	**153**	T	T	17 02 20.9	
	baz=341,slow=76,SNR=13						
H11S2	**WAKE ISLAND Hy**	**29.67**	**153**	T	T	17 02 18.8	
	baz=341,slow=76,SNR=13						
SONM	**Songino Array**	**31.61**	**291**	LR	LR	16 43 19.8	
	comp=Z,28nm,20.2s,baz=74,slow=38						
SVW2	**Sparrevohn**	**32.98**	**44**	P	**P**	**16 29 54.6**	**+2.1**
SVW2				IAmb	IAmb	16 30 05.6	
	comp=Z,4.3nm,1.2s						
L27K	**Beaver Creek.**	**39.40**	**41**	P	**P**	**16 30 47.0**	**-0.3**
BCAR	**Beaver Creek A**	**39.42**	**41**	P	**P**	**16 30 48.1**	**+0.6**
ZALV	**Zalesovo Beam**	**43.06**	**306**	LR	LR	16 50 40.8	
	comp=Z,53nm,18.6s,baz=46,slow=38						
MK31	**Makanchi Array**	**47.30**	**298**	P	**P**	**16 31 50.6**	**-0.7**
MK31	**Makanchi Array**	**47.30**	**298**	P	**P**	**16 31 50.6**	**-0.7**
MK31				pmax	pmax		
	comp=Z,1.0nm,1.1s						
MKAR	**Makanchi Array**	**47.30**	**298**	P	**P**	**16 31 50.2**	**-1.1**
	comp=Z,0.9nm,0.7s,baz=68,slow=7.3,SNR=7.6						
	comp=Z,0.9nm,0.7s						
MKAR	**Makanchi Array**	**47.30**	**298**	P	**P**	**16 31 49.9**	**-1.5**
MKAR	**Makanchi Array**	**47.30**	**298**	*e*P	**P**	**16 31 49.6**	**-1.7**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**47.30**	**298**	*e*P	**P**	**16 31 49.6**	**-1.7**
KURK	**Kurchatov**	**47.79**	**304**	⇑*e*P	**P**	**16 31 54.0**	**-1.0**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KURK	**Kurchatov**	**47.79**	**304**	*e*P	**P**	**16 31 54.0**	**-1.0**
CMAR	**Chiang Mai Arr**	**52.24**	**257**	P	**P**	**16 32 31.4**	**+2.3**
	comp=Z,0.6nm,0.8s,baz=40,slow=7.1,SNR=6.8						
	comp=Z,0.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**52.24**	**257**	*e*P	**P**	**16 32 31.3**	**+2.2**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KK31	**Karatay Array**	**56.38**	**299**	P	**P**	**16 32 58.4**	**-0.5**
KK31				IAmb	IAmb	16 33 05.0	
	comp=Z,1.2nm,0.8s						
KK31	**Karatay Array**	**56.38**	**299**	P	**P**	**16 32 58.4**	**-0.5**
KK31				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KKAR	**Karatay Array**	**56.38**	**299**	P	**P**	**16 32 58.6**	**-0.4**
KKAR	**Karatay Array**	**56.38**	**299**	P	**P**	**16 32 58.6**	**-0.4**
ABKAR	**Akbulak array**	**58.91**	**310**	P	**P**	**16 33 16.3**	**-0.3**
ABKAR				IAmb	IAmb	16 33 36.1	
	comp=Z,1.7nm,1.1s						
FIA1	**FINESS Array S**	**64.70**	**335**	P	**P**	**16 33 55.5**	**+0.2**
FINES	**FINESS Array B**	**64.70**	**335**	P	**P**	**16 33 55.0**	**-0.4**
	comp=Z,2.4nm,0.9s,baz=38,slow=5.6,SNR=8.5						
	comp=Z,2.4nm,0.9s						
FINES	**FINESS Array B**	**64.70**	**335**	P	**P**	**16 33 55.0**	**-0.4**
FINES	**FINESS Array B**	**64.70**	**335**	*i* P	**P**	**16 33 54.4**	**-0.9**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NB201	**NORSAR Array S**	**68.89**	**341**	P	**P**	**16 34 22.3**	**+0.2**
NOA	**NORSAR Array B**	**68.92**	**341**	P	**P**	**16 34 22.4**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=29,slow=6.6,SNR=6.3						
	comp=Z,0.4nm,0.5s						
KBZ	**Khabaz**	**71.38**	**314**	⇑*e*P	**P**	**16 34 39.7**	**+2.1**
KBZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
AKASG	**Malin Array Se**	**72.16**	**326**	P	**P**	**16 34 42.2**	**+0.1**
	comp=Z,0.8nm,0.4s,baz=31,slow=4.3,SNR=7.4						
	comp=Z,0.8nm,0.4s						
AKBB	**Malin Array Si**	**72.16**	**326**	⇓*i*P	**P**	**16 34 42.1**	**0.0**
AKBB				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BUR08	**Bucovina Ar. S**	**76.19**	**327**	P	**P**	**16 35 05.8**	**-0.1**
BUR08				IAmb	IAmb	16 35 07.4	
	comp=Z,2.2nm,0.8s						
BURAR	**Bucovina Array**	**76.20**	**327**	P	**P**	**16 35 06.7**	**+0.8**
BURAR				IAmb	IAmb	16 35 07.8	
	comp=Z,2.1nm,0.8s						
WSAR	**Wadi Sarin**	**76.66**	**290**	LR	LR	17 12 49.4	
	comp=Z,133nm,18.3s,baz=283,slow=39						
MLR	**Muntele Rosu**	**77.67**	**325**	LR	LR	17 10 31.1	
	comp=Z,89nm,21.9s,baz=88,slow=37						
TXAR	**Lajitas Array**	**77.81**	**60**	P	**P**	**16 35 16.6**	**+1.3**
	comp=Z,0.3nm,0.6s,baz=302,slow=5.0,SNR=5.4						
	comp=Z,0.3nm,0.6s						
TXAR	**Lajitas Array**	**77.81**	**60**	P	**P**	**16 35 16.0**	**+0.7**

AZER ***22*** *16:56:57.0±0.5, 38°.57N×44°.86E, h2km, Error ellipse: s-maj=6.5km s-min=3.6km az=234.0*
ISK ***22*** *16:56:57.9, 38°.49N×44°.74E, h5km, ML4.2/17*
DDA ***22*** *16:56:57.9±0.0, 38°.48N×44°.74E, h3km±4km, MW4.2*
TEH ***22*** *16:56:58.3, 38°.50N×44°.85E, h6km, ML4.3*
IDC ***22*** *16:56:58.5±0.8, 38°.56N×44°.78E, h0km, mb4.0/18, mbtmp4.0/24, ML3.7/6, MS3.4/32, Error ellipse: s-maj=13.4km s-min=11.6km az=157.0*
NSSP ***22*** *16:56:58.3, 38°.60N×44°.82E, h10km, Ms4.4*
MOS ***22*** *16:57:00.3±1.6, 38°.63N×44°.96E, h13km, mb4.4/14, Error ellipse: s-maj=5.7km s-min=4.3km az=114.0*
NEIC ***22*** *16:57:00.8±2.1, 38°.54N±0°.04×44°.86E±0°.04, h10km±1km,*

mb4.3/36, mb_Lg4.3(TEH), ML4.2(ISK), Error ellipse: s-maj=6.6km s-min=5.7km az=25.0

ISC 22 16:57:00.3±0.4, 38°.49N±0°.02×44°.85E±0°.01, h10km, n439, σ1§81/478, mb4.2/53, MS3.4/27, 21C-22D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISHB	**Shabestar**	**0.64**	**109**	*e*Pg	**Pg**	**16 57 10.2**	**-2.6**
ISHB				*e*Sg	**Sg**	**16 57 19.5**	**-1.7**
ISHB				*e*		16 57 20.4	
	comp=Z,82μm,0.4s						
OZAP	**Van, Ozalp-Mer**	**0.69**	**285**	P	**Pg**	**16 57 11.1**	**-2.6**
IMRD	**Marand**	**0.71**	**71**	Pg	**Pg**	**16 57 11.9**	**-2.1**
IMRD				Sg	**Sg**	**16 57 22.3**	**-1.0**
IMRD	**Marand**	**0.71**	**71**	*e*Pg	**Pg**	**16 57 11.9**	**-2.1**
IMRD				*e*Sg	**Sg**	**16 57 22.4**	**-0.9**
IMRD				*e*		16 57 26.8	
	comp=Z,90μm,0.4s						
NAX	**Nakhchivan**	**0.85**	**36**	P	**Pg**	**16 57 14.7**	**-2.0**
	SNR=651						
NAX				S	**Sg**	**16 57 27.0**	**-0.8**
MAKU	**Maku**	**0.87**	**352**	Pg	**Pg**	**16 57 14.3**	**-2.9**
MAKU				Sg	**Sg**	**16 57 25.7**	**-2.9**
MAKU	**Maku**	**0.87**	**352**	*e*Pg	**Pg**	**16 57 14.3**	**-2.9**
MAKU				*e*Sg	**Sg**	**16 57 25.7**	**-2.9**
CLDR	**Caldiran**	**0.97**	**312**	PG	**Pg**	**16 57 15.9**	**-3.2**
CLDR				SG	**Sg**	**16 57 30.7**	**-1.1**
CLDR	**Caldiran**	**0.97**	**312**	Pg	**Pg**	**16 57 18.0**	**-1.1**
CLDR	**Caldiran**	**0.97**	**312**	*e*Pg	**Pg**	**16 57 18.0**	**-1.1**
CLDR	**Caldiran**	**0.97**	**312**	P	**Pg**	**16 57 15.8**	**-3.3**
CLDR				S	**Sg**	**16 57 29.5**	**-2.3**
ORD	**Ordubad**	**1.00**	**64**	P	**Pg**	**16 57 17.5**	**-2.1**
	SNR=26						
ORD				S	**Sg**	**16 57 32.0**	**-0.6**
YOVA	**Hakkari_Yksek**	**1.00**	**206**	*e*Pg	**Pg**	**16 57 16.7**	**-2.9**
YOVA	**Hakkari_Yksek**	**1.00**	**206**	P	**Pg**	**16 57 16.8**	**-2.9**
ITBZ	**Tabriz**	**1.05**	**104**	*e*Pg	**Pg**	**16 57 17.3**	**-3.3**
ITBZ				*e*Sg	**Sg**	**16 57 32.9**	**-1.4**
ITBZ				*e*		16 57 34.1	
	comp=Z,33μm,0.3s						
SBZ	**Shahbuz**	**1.06**	**31**	P	**Pg**	**16 57 18.2**	**-2.5**
	SNR=466						
SBZ				S	**Sg**	**16 57 32.8**	**-1.7**
TVAN	**Van**	**1.13**	**272**	P	**Pg**	**16 57 19.5**	**-2.6**
VANB	**Van**	**1.15**	**276**	PG	**Pb**	**16 57 18.0**	**-4.3**
VANB				SG	**Sg**	**16 57 35.1**	**-2.2**
VANB	**Van**	**1.15**	**276**		**Pb**	**16 57 20.2**	**-2.1**
VANB	**Van**	**1.15**	**276**	*e*Pg	**Pb**	**16 57 18.2**	**-2.1**
VANB	**Van**	**1.15**	**276**	P	Pb	16 57 16.8	-5.5
IAZR	**Azarshahr**	**1.21**	**132**		**Sb**	**16 57 39.2**	**0.0**
IAZR	**Azarshahr**	**1.21**	**132**	*e*Pg	**Pn**	**16 57 21.2**	**-2.3**
IAZR				*e*Sg	**Sb**	**16 57 39.2**	**0.0**
HYR	**Heyderabad**	**1.23**	**0**	P	**Pb**	**16 57 21.0**	**-2.7**
	SNR=200						
HYR				S	**Sn**	**16 57 39.7**	**-0.6**
TAB	**Tabriz**	**1.24**	**109**	PG	**Pn**	**16 57 22.0**	**-1.8**
TAB1	**Tabriz**	**1.25**	**110**		**Pn**	**16 57 22.0**	**-2.0**
TAB1	**Tabriz**	**1.25**	**110**	*e*Pg	**Pn**	**16 57 22.0**	**-2.0**
ERCV	**ERCIS-VAN**	**1.29**	**295**	PN	**Pn**	**16 57 22.9**	**-1.7**
ERCV	**ERCIS-VAN**	**1.29**	**295**	Pn	**Pn**	**16 57 23.7**	**-0.9**
ERCV	**ERCIS-VAN**	**1.29**	**295**	*e*Pn	**Pn**	**16 57 23.7**	**-0.9**
HAKT	**HAKKARI**	**1.29**	**224**	*e*Pg	**Pn**	**16 57 22.1**	**-2.6**
HAKT	**HAKKARI**	**1.29**	**224**	P	**Pn**	**16 57 21.3**	**-3.1**
HAKT				S	**Sb**	**16 57 39.6**	**-2.0**
HAKT				*i* AML	AML	16 57 54.0	
	comp=Z,2μm,0.8s						
DYDN	**Diyadin**	**1.39**	**320**	P	**Pn**	**16 57 23.2**	**-2.7**
DYDN				S	**Sg**	**16 57 44.9**	**0.0**
DYDN				*i* AML	AML	16 57 49.0	
	comp=Z,3μm,1.5s						
GEVA	**Gevas**	**1.42**	**263**	Pn	**Pn**	**16 57 23.4**	**-2.9**
GEVA	**Gevas**	**1.42**	**263**	*e*Pn	**Pn**	**16 57 23.2**	**-3.1**
GEVA	**Gevas**	**1.42**	**263**	P	**Pn**	**16 57 22.7**	**-3.6**
GEVA				S	**Sb**	**16 57 41.7**	**-3.3**
GEVA				*i* AML	AML	16 57 48.0	
	comp=Z,2μm,0.9s						
GEVA				*i* AML	AML	16 57 55.0	
	comp=Z,2μm,1.4s						
TVRZ	**Varzaqan**	**1.43**	**89**	*e*Pg	**Pn**	**16 57 24.9**	**-1.6**
TVRZ				*e*Sg	**Sn**	**16 57 45.2**	**-0.2**
TVRZ				*e*		16 58 02.8	
	comp=Z,90μm,0.6s						
AKDM	**Akdamar-Van**	**1.47**	**264**	PN	**Pn**	**16 57 25.1**	**-2.0**
AKDM				SN	**Sn**	**16 57 45.9**	**-0.6**
AKDM	**Akdamar-Van**	**1.47**	**264**	Pn	**Pn**	**16 57 26.0**	**-1.1**
AKDM	**Akdamar-Van**	**1.47**	**264**	*e*Pn	**Pn**	**16 57 26.0**	**-1.1**
AKDM	**Akdamar-Van**	**1.47**	**264**	P	**Pn**	**16 57 23.7**	**-3.4**
AKDM				S	**Sg**	**16 57 48.1**	**+0.3**
AKDM				*i* AML

AMBZ ⇓*i*S **Sb** **16 57 58.6 -1.9**
BLIS Bitlis-Merkez 2.15 269 Pn **Pn** **16 57 36.8 +0.5**
BLIS Bitlis-Merkez 2.15 269 *e*Pn **Pn** **16 57 36.8 +0.5**
BLIS Bitlis-Merkez 2.15 269 P **Pn** **16 57 36.9 +0.5**
BLIS S **Sb** **16 58 07.2 +1.1**
BLIS *i* AML AML 16 58 18.0
comp=Z,916nm,1.2s
QRD Qoradiz 2.16 63 P **Pn** **16 57 36.8 +0.4**
SNR=74
QRD S **Sb** **16 58 07.0 +0.7**
GURO Guroymak-BITLI 2.21 272 PN **Pn** **16 57 36.5 -0.6**
GURO Guroymak-BITLI 2.21 272 Pn **Pn** **16 57 37.1 -0.1**
GURO Guroymak-BITLI 2.21 272 P **Pn** **16 57 37.5 +0.4**
DIGO Kars 2.23 330 P **Pn** **16 57 38.6 +0.9**
IHSH Hashtrud 2.25 121 *e*Pn **Pn** **16 57 38.2 +0.3**
IHSH *e* 16 58 15.4
comp=Z,16μm,0.3s
EATA Eleskirt 2.29 308 P **Pb** **16 57 39.6 -2.2**
EATA S **Sg** **16 58 13.5 -0.3**
EATA *i* AML AML 16 58 22.0
comp=Z,493nm,1.3s
ISRB Sarab 2.32 106 Pn **Pn** **16 57 39.1 +0.3**
ISRB Sarab 2.32 106 *e*Pn **Pn** **16 57 39.1 +0.3**
ISRB *e* 16 57 47.3
comp=Z,15μm,0.4s
GDB GEDABAY 2.34 17 P **Pn** **16 57 39.3 +0.4**
SNR=171
GDB S **Sb** **16 58 10.8 -0.8**
AGDM Agdam 2.39 47 P **Pn** **16 57 40.8 +1.3**
SNR=18
AGDM S **Sb** **16 58 13.3 +0.4**
EAK Akyaka 2.39 337 P **Pb** **16 57 41.2 -2.4**
GRMI Germi 2.41 81 Pn **Pn** **16 57 40.1 +0.2**
GRMI Germi 2.41 81 *e*Pn **Pn** **16 57 40.2 +0.3**
GRMI *e* 16 58 15.7
comp=Z,99nm,0.6s
GANJ Ganja 2.44 27 P **Pn** **16 57 41.0 +0.8**
SNR=198
GANJ S **Sb** **16 58 14.8 +0.5**
BLQ Beylaqan 2.44 59 P **Pn** **16 57 40.9 +0.7**
SNR=51
BLQ S **Sb** **16 58 15.4 +0.9**
GMRZ Gyumri 2.45 342 *e*P **Pg** **16 57 45.0 -2.2**
GMRZ *e*S **Sg** **16 58 19.0 +0.1**
BRDA Brd 2.53 45 P **Pb** **16 57 43.6 -2.2**
SNR=62
BRDA S **Sb** **16 58 17.2 +0.2**
STE Stepanavan 2.53 352 *e*P **Pg** **16 57 46.6 -2.3**
STE ⇑⇑S **Sg** **16 58 20.6 -1.1**
KARS Kars 2.53 328 PN **Pn** **16 57 41.1 -0.5**
KARS Kars 2.53 328 Pn **Pn** **16 57 41.4 -0.2**
KARS Kars 2.53 328 PN **Pn** **16 57 41.4 -0.2**
QZX Qazax, Azerbai 2.60 9 P **Pn** **16 57 43.2 +0.8**
SNR=14
QZX S **Sb** **16 58 18.5 -0.4**
MUSM Mu-Merkez 2.62 276 Pn **Pn** **16 57 44.6 +1.8**
MUSM Mu-Merkez 2.62 276 *e*Pn **Pn** **16 57 44.6 +1.8**
MUSM Mu-Merkez 2.62 276 P **Pn** **16 57 44.6 +1.8**
YRD Yardimli 2.69 80 P **Pn** **16 57 44.8 +1.0**
SNR=236
YRD S **Sb** **16 58 23.0 +1.2**
VRTB Varto-Mus 2.73 285 PN **Pn** **16 57 43.7 -0.7**
VRTB Varto-Mus 2.73 285 P **Pb** **16 57 50.2 +0.9**
LRK Lerik 2.74 86 P **Pn** **16 57 45.7 +1.1**
SNR=455
LRK S **Sb** **16 58 24.2 +0.9**
HOMI Horasan 2.76 305 P **Pb** **16 57 48.1 -1.8**
KOPR Koprukoy-ERZUR 2.77 304 PN **Pn** **16 57 44.6 -0.2**
KOPR Koprukoy-ERZUR 2.77 304 P **Pb** **16 57 49.7 -0.2**
ZRD Zardab 2.83 50 P **Pn** **16 57 47.6 +2.0**
SNR=79
ZRD S **Sg** **16 58 29.2 -2.1**
MNGR Mingechevir, A 2.86 36 P **Pn** **16 57 47.2 +1.2**
SNR=20
MNGR S **Sb** **16 58 27.5 +1.0**
GLBA Clilabad 2.87 74 P **Pn** **16 57 47.1 +1.0**
SNR=93
GLBA S **Sb** **16 58 27.5 +0.8**
BTMN Batman 2.88 259 P **Pn** **16 57 47.6 +1.2**
SVAN Silvan-Diyarba 2.89 264 PN **Pn** **16 57 46.1 -0.3**
SVAN Silvan-Diyarba 2.89 264 Pn **Pn** **16 57 47.1 +0.7**
SVAN Silvan-Diyarba 2.89 264 *e*Pn **Pn** **16 57 47.1 +0.7**
SVAN Silvan-Diyarba 2.89 264 P **Pb** **16 57 50.9 -1.0**
ERZM Erzurum 3.05 299 PN **Pn** **16 57 48.5 -0.4**
KARO Karliova-Bingo 3.07 287 PN **Pn** **16 57 48.6 -0.5**
LKRN Lenkeran, Azer 3.09 85 P **Pn** **16 57 50.4 +1.3**
SNR=85
LKRN S **Sb** **16 58 35.2 +2.1**
AKH Akhalkalaki 3.10 341 PN **Pn** **16 57 49.6 +0.2**
ASTR Astara 3.10 87 P **Pn** **16 57 51.0 +1.8**
SNR=42
ASTR S **Sb** **16 58 33.8 +0.6**
SAAT Saatly 3.10 63 P **Pn** **16 57 50.4 +1.1**
SNR=16
SAAT S **Sb** **16 58 32.6 -0.7**
DDFL Dedoflistskaro 3.11 18 P **Pb** **16 57 56.6 +0.8**
KDMR Kurdemir 3.20 53 P **Pb** **16 57 54.3 -2.9**
SNR=20
KDMR S **Sb** **16 58 34.4 -1.8**
SEKA Sheki 3.26 33 P **Pn** **16 57 53.0 +1.4**
SNR=68
SEKA S **Sb** **16 58 37.9 -0.3**
BNGB Bingl 3.30 280 P **Pb** **16 57 59.8 +0.8**
QBL Gabala 3.37 42 P **Pb** **16 57 57.6 -2.5**
SNR=17
QBL S **Sb** **16 58 39.5 -1.7**
DDEM Demirkent 3.38 316 P **Pb** **16 58 01.9 +1.4**
EPOS Posof 3.42 332 P **Pb** **16 57 59.8 -1.3**
MARD Mardin 3.42 251 Pn **Pn** **16 57 54.0 +0.1**
ZKTA Zakatala 3.43 23 P **Pn** **16 57 56.1 +2.3**
SNR=25
ZKTA S **Sb** **16 58 40.4 -2.4**
DAGI Agillar 3.43 320 P **Pb** **16 57 59.8 -1.5**
IML Ismayilli 3.45 47 P **Pn** **16 57 57.0 +2.8**
SNR=25
IML S **Sb** **16 58 41.5 -2.1**
YEDI Yedisu-Bingol 3.48 287 PN **Pn** **16 57 54.5 -0.2**
DBAD Bademkaya 3.50 317 P **Pg** **16 58 04.5 -2.9**
ALIB Äli-Bayra 3.55 64 P **Pn** **16 57 57.2 +1.8**
SNR=7.4
ALIB S **Sb** **16 58 42.5 -3.8**
KRIK Erzurum-spir 3.55 303 P **Pb** **16 58 04.1 +0.8**
MAZI Mazidag 3.62 255 PN **Pn** **16 57 56.4 -0.2**
MAZI Mazidag 3.62 255 Pn **Pn** **16 57 57.2 +0.6**
MAZI Mazidag 3.62 255 *e*Pn **Pn** **16 57 57.2 +0.6**
XNQ Khinaliq 3.69 42 P **Pn** **16 57 57.4 -0.1**
SNR=27
XNQ S **Sb** **16 58 46.0 -4.6**
PQL Pirkuli 3.69 50 P **Pn** **16 57 59.4 +1.8**
SNR=63
PQL S **Sb** **16 58 46.5 -4.1**
DYBB Diyarbakir 3.75 263 PN **Pn** **16 57 58.1 -0.1**
DYBB Diyarbakir 3.75 263 P **Pb** **16 58 04.0 -2.6**
DBOC Borcka 3.75 320 P **Pg** **16 58 08.8 -3.5**
DIYA Diyarbakir 3.76 263 P **Pb** **16 58 08.2 +1.3**
GBS Qobustan 3.77 56 P **Pn** **16 58 00.3 +1.8**
SNR=30
GBS S **Sb** **16 58 49.4 -3.3**
ATGJ Altiaghaj 3.95 52 P **Pn** **16 58 03.2 +2.2**
SNR=41
ATGJ S **Sb** **16 58 55.3 -2.5**
KOVA Elazig, Kovanc 3.95 275 P **Pb** **16 58 08.6 -1.4**
ILIN Lien 3.95 154 Pn **Pn** **16 58 02.2 +1.0**
ILIN Lien 3.95 154 *e*Pn **Pn** **16 58 02.3 +1.0**
ILIN *e* 16 59 21.5
comp=Z,3μm,1.0s
BAYB BAYBURT 3.97 298 P **Pb** **16 58 09.8 -0.7**
IDHR Dehrash 3.98 161 Pn **Pn** **16 58 02.6 +1.0**
IDHR Dehrash 3.98 161 *e*Pn **Pn** **16 58 02.6 +1.0**
IDHR *e* 16 59 31.1
comp=Z,4μm,1.6s
QSAR Qusar 4.00 40 P **Pn** **16 58 03.9 +2.2**
SNR=22
QSAR S **Sb** **16 58 59.8 +0.4**
QUBA Quba, Azerbaij 4.01 43 P **Pn** **16 58 03.0 +1.2**
SNR=13
QUBA S **Sb** **16 58 54.7 -4.8**
SIZA Siyzn 4.05 49 P **Pn** **16 58 04.5 +2.0**
SNR=51
SIZA S **Sb** **16 58 56.1 -4.8**
ONI Oni 4.23 346 Pn **Pn** **16 58 07.4 +2.5**
ONI Oni 4.23 346 PN **Pn** **16 58 07.4 +2.5**
SVRC Sivrice-ELAZID 4.35 270 PN **Pn** **16 58 06.8 +0.2**

ZEI Tsey 4.35 351 *e*PN **Pb** **16 58 16.0 -1.0**
ZEI pmax pmax
comp=Z,38nm,0.9s
IGHG Ghaleghazi 4.38 161 Pn **Pn** **16 58 08.1 +1.0**
IGHG Ghaleghazi 4.38 161 *e*Pn **Pn** **16 58 08.2 +1.1**
IGHG *e* 16 59 39.1
comp=Z,4μm,1.2s
KCHF Cheshme Sefid, 4.56 157 Pn **Pn** **16 58 11.6 +2.0**
KCHF Cheshme Sefid, 4.56 157 *e*Pn **Pn** **16 58 11.7 +2.1**
KCHF *e* 16 59 44.4
comp=Z,2μm,1.2s
IBZA Bozab 4.69 148 Pn **Pn** **16 58 12.1 +0.7**
IBZA Bozab 4.69 148 *e*Pn **Pn** **16 58 12.2 +0.8**
IBZA *e* 17 00 07.3
comp=Z,1μm,1.0s
GROC Groznyy 4.76 8 *e*PN **Pn** **16 58 10.7 -1.4**
GROC *e* 16 58 26.1
GROC *e* 16 59 35.7
GROC pmax pmax
comp=Z,34nm,0.6s
GROC smax smax
comp=N,71nm,1.2s
GROC smax smax
comp=E,74nm,0.9s
GROC smax smax
comp=E,188nm,1.6s
GROC MLR MLR
comp=Z,22nm,2.0s
IGZV Ghazvin 4.76 115 *e* 16 59 42.6
comp=Z,3μm,1.1s
IKOM Komasi 4.81 153 Pn **Pn** **16 58 13.9 +0.9**
IKOM Komasi 4.81 153 *e*Pn **Pn** **16 58 14.0 +0.9**
IKOM *e* 17 00 00.1
comp=Z,2μm,1.0s
MAK Makhachkala 4.90 23 *e*PN Pn 16 58 08.8 -5.2
MAK *e*S **Sn** **16 59 04.8 -6.0**
MAK pmax pmax
comp=Z,49nm,0.8s
MAK MLR MLR
comp=Z,640nm,12.0s
QALM Alamut, Qazvin 5.05 112 Pn **Pn** **16 58 16.6 +0.3**
QALM Alamut, Qazvin 5.05 112 *e*Pn **Pn** **16 58 16.6 +0.3**
NCK Nalchik 5.09 350⇓ *e*PN **Pn** **16 58 15.5 -1.1**
IRAZ Razeghan 5.11 126 Pn **Pn** **16 58 17.4 +0.4**
IRAZ Razeghan 5.11 126 *e*Pn **Pn** **16 58 17.4 +0.4**
IRAZ *e* 16 58 43.3
comp=Z,1μm,0.8s
IDOB Doab 5.41 149 Pn **Pn** **16 58 22.4 +1.1**
IDOB Doab 5.41 149 *e*Pn **Pn** **16 58 22.4 +1.1**
IDOB *e* 17 00 21.2
comp=Z,874nm,1.3s
IMHD Mahdasht 5.43 119 Pn **Pn** **16 58 21.8 +0.4**
IMHD Mahdasht 5.43 119 *e*Pn **Pn** **16 58 21.9 +0.5**
IMHD *e* 17 00 01.7
comp=Z,1μm,0.6s
KBZ Khabaz 5.44 345 Pn Pn 16 58 25.6 +4.2
comp=Z,0.1nm,0.3s,baz=164,slow=8.5,SNR=6.4
KBZ LR LR 17 00 44.2
comp=Z,486nm,21.6s,baz=143,slow=42
KBZ Khabaz 5.44 345⇑ *e*PN **Pn** **16 58 22.2 +0.9**
IKFM Kafar-mosalman 5.52 153 Pn **Pn** **16 58 23.8 +1.3**
IKFM Kafar-mosalman 5.52 153 *e*Pn **Pn** **16 58 23.9 +1.4**
IKFM *e* 17 00 34.1
comp=Z,2μm,1.1s
KIV Kislovodsk 5.70 344 Pn **Pn** **16 58 27.1 +2.0**
KIV Kislovodsk 5.70 344 *e*P **Pn** **16 58 27.0 +2.0**
KIV pmax pmax
comp=Z,6.0nm,1.0s
KIV MLR MLR
comp=Z,70nm,8.0s
GZT Gaziantep 5.87 261 P **Pg** **16 58 48.8 -3.9**
IPRN Peran 6.38 108 Pn **Pn** **16 58 35.6 +1.2**
IPRN Peran 6.38 108 *e*Pn **Pn** **16 58 35.6 +1.2**
SOC Sochi 6.40 324 *e*P **Pn** **16 58 33.3 -1.2**
SOC *e* 16 59 46.2
SOC pmax pmax
comp=Z,4.0nm,0.4s
SOC MLR MLR
comp=Z,623nm,14.0s
IVRN Varamin 6.53 120 Pn **Pn** **16 58 37.1 +0.6**
IVRN Varamin 6.53 120 *e*Pn **Pn** **16 58 37.2 +0.7**
BNN Bunyan 7.05 276 Pn **Pn** **16 58 46.0 +2.3**
ISFB Sefidab 7.25 122 Pn **Pn** **16 58 46.7 +0.3**
ISFB Sefidab 7.25 122 *e*Pn **Pn** **16 58 46.7 +0.3**
IGLO Ghaloghah 7.41 103 Pn **Pn** **16 58 49.7 +0.9**
IGLO Ghaloghah 7.41 103 *e*Pn **Pn** **16 58 49.7 +0.9**
KRSH Karshahi 7.42 125 Pn **Pn** **16 58 48.9 +0.1**
KRSH Karshahi 7.42 125 *e*Pn **Pn** **16 58 48.9 +0.1**
AMIS Naft Sefid 7.72 151 *e*Pn **Pn** **16 58 53.3 +0.5**
BR131 Keskin Array S 8.80 282 Pn **Pn** **16 59 07.6 -0.1**
BR131 Keskin Array S 8.80 282⇑ *e*P **Pn** **16 59 11.4 +3.7**
BRTR Keskin Array B 8.80 282 Pn Pn 16 59 12.3 +4.6
comp=Z,0.1nm,0.3s,baz=101,slow=13,SNR=8.6
BRTR LR LR 17 02 27.8
comp=Z,232nm,18.9s,baz=111,slow=38
BRTR Keskin Array B 8.80 282 Pn **Pn** **16 59 10.2 +2.5**
BRTR Keskin Array B 8.80 282 P **Pn** **16 59 10.2 +2.5**
MRVT Maraveh tapeh 8.91 92 Pn **Pn** **16 59 08.5 -0.6**
MRVT Maraveh tapeh 8.91 92 *e*Pn **Pn** **16 59 08.5 -0.6**
ANAR Anarak 8.94 124 Pn **Pn** **16 59 10.6 +1.0**
ANAR Anarak 8.94 124 *e*Pn **Pn** **16 59 10.6 +1.0**
ASF Jabal al Asfar 9.05 228 Pn **Pn** **16 59 08.4 -2.6**
comp=Z,0.2nm,0.3s,baz=17,slow=11,SNR=1.9
comp=Z,0.5nm,0.3s
MMAI Mount Meron Ar 9.42 237 Pn **Pn** **16 59 17.1 +1.0**
comp=Z,0.7nm,0.3s,baz=84,slow=11,SNR=5.1
MMAI LR LR 17 02 42.2
comp=Z,226nm,21.5s,baz=228,slow=36
comp=Z,0.4nm,0.3s
SBZV Sabzevar 10.37 98 Pn **Pn** **16 59 30.1 +0.9**
SBZV Sabzevar 10.37 98 *e*Pn **Pn** **16 59 30.1 +0.9**
GEYT Alibeck 10.46 89 Pn **Pn** **16 59 29.9 -0.5**
comp=Z,1.5nm,0.3s,baz=279,slow=10,SNR=7.7
comp=Z,3.5nm,0.4s
GEYT Alibeck 10.46 89 Pn **Pn** **16 59 28.3 -2.1**
GYA0 ALIBECK ARRAY 10.46 89 P **Pn** **16 59 29.2 -1.2**
GYA0B ALIBECK ARRAY 10.46 89 Pn **Pn** **16 59 29.2 -1.1**
ISFR Sfrayin 10.51 94 Pn **Pn** **16 59 32.0 +0.7**
ISFR Sfrayin 10.51 94 *e*Pn **Pn** **16 59 32.1 +0.7**
IAKL Akhelmad 11.21 95 Pn **Pn** **16 59 41.3 +0.5**
IAKL Akhelmad 11.21 95 *e*Pn **Pn** **16 59 41.4 +0.6**
IPAY Payeh 11.43 96 Pn **Pn** **16 59 44.1 +0.3**
IPAY Payeh 11.43 96 *e*Pn **Pn** **16 59 44.2 +0.4**
EIL Elat 12.02 226 LR LR 17 04 38.6
comp=Z,240nm,18.4s,baz=48,slow=38
TBJM Torbat-e-JAM 12.81 100 Pn **Pn** **17 00 03.4 +0.8**
TBJM Torbat-e-JAM 12.81 100 *e*Pn **Pn** **17 00 03.4 +0.8**
VORR Voronezh 13.76 345 *e*P **Pn** **17 00 13.8 -1.5**
VORR pmax pmax
comp=Z,40nm,0.4s
BELG Belogornoye 14.04 7 Pn **Pn** **17 00 18.1 -1.0**
comp=Z,0.9nm,0.3s,baz=11,slow=13,SNR=6.9
BELG LR LR 17 07 05.3
comp=Z,163nm,18.4s,baz=243,slow=43
comp=Z,6.2nm,0.7s
BELG Belogornoye 14.04 7*de*P **Pn** **17 00 19.5 +0.4**
BELG pmax pmax
comp=Z,5.0nm,1.3s
HARR Harsova 14.08 301⇑P **P** **17 00 27.8 +0.2**
HARR Harsova 14.08 301⇑P **P** **17 00 27.8 +0.2**
HRA Herat 14.59 101 Pn **Pn** **17 00 29.1 +2.1**
RAYN Ar Rayn 14.93 178⇑P Pn 17 00 25.3 -6.2
AKTO Aktyubinsk 15.17 34 Pn **Pn** **17 00 31.0 -3.5**
comp=Z,0.1nm,0.3s,baz=200,slow=16,SNR=4.8
AKTO LR LR 17 07 39.1
comp=Z,70nm,19.3s,baz=214,slow=42
comp=Z,1.8nm,0.7s
ABKAR Akbulak array 15.28 40 Pn **Pn** **17 00 34.7 -1.2**
ABKAR Akbulak array 15.28 40 Pn **Pn** **17 00 34.4 -1.5**
ABKAR IAmb IAmb 17 00 59.6
comp=Z,3.5nm,0.8s
VRI Vrincioaia 15.30 305 P **P** **17 00 39.0 -2.1**
MLR Muntele Rosu 15.68 303⇓P **P** **17 00 47.2 +1.7**
MLR Muntele Rosu 15.68 303 Pn **P** **17 00 45.1 -0.4**
comp=Z,0.2nm,0.3s,baz=152,slow=9.3,SNR=4.7
MLR Muntele Rosu 15.68 303 Pn **Pn** **17 00 41.5 +0.2**
MLR Muntele Rosu 15.68 303 P **Pn** **17 00 41.5 +0.2**
MLR pmax pmax
comp=Z,10.0nm,1.1s
BIZ Bicaz 16.13 308⇑P **P** **17 00 52.4 +2.1**
DOPR Dopca 16.21 304⇑P **P** **17 00 52.6 +1.4**
VOIR 16.26 302⇓P **P** **17 00 53.8 +2.0**
VOIR 16.26 302⇓P **P** **17 00 53.8 +2.0**
IDI Anoyia 16.28 265 Pn **Pn** **17 00 49.8 +0.7**

comp=Z,0.4nm,0.3s,baz=152,slow=13,SNR=1.7
comp=Z,4.2nm,0.5s
AKASG Malin Array Be 16.47 323 Pn **Pn** **17 00 51.1 -0.2**
comp=Z,0.3nm,0.3s,baz=128,slow=11,SNR=9.6
AKASG Malin Array Be 16.47 323 *i*P **Pn** **17 00 51.0 -0.4**
AKBB Malin Array Si 16.47 323⇑*i*P **P** **17 00 52.9 -1.2**
AKBB pmax pmax
comp=Z,11nm,1.3s
UOSS Minazif 16.59 141 Pn **Pn** **17 00 52.0 -1.0**
UOSS IAmb IAmb 17 01 03.7
comp=Z,20nm,1.1s
BURAR Bucovina Array 16.96 309⇓P **P** **17 01 02.4 +2.8**
BURAR Bucovina Array 16.96 309 **P** **17 00 59.4 -0.2**
BURAR Bucovina Array 16.96 309⇓P **P** **17 01 02.4 +2.8**
BUR08 Bucovina Ar. S 16.98 309 Pn **Pn** **17 00 57.9 -0.1**
OBN Obninsk 17.55 344 Pn **Pn** **17 01 03.9 -0.9**
OBN IAmb IAmb 17 01 07.1
comp=Z,40nm,1.1s
OBN Obninsk 17.55 344⇑⇑ *e*P **Pn** **17 01 04.7 -0.1**
OBN pmax pmax
comp=Z,79nm,2.0s
OBN MLR MLR
comp=Z,78nm,16.0s
MOS Moscow 17.92 347 *e*P **Pn** **17 01 07.8 -1.7**
MOS pmax pmax
comp=Z,39nm,0.7s
MORS Morshin 18.43 312 P **P** **17 01 18.5 +2.8**
BZS Buzias 18.62 300⇑P **Pn** **17 01 19.4 +1.3**
BZS Buzias 18.62 300⇑P **Pn** **17 01 19.4 +1.3**
SIRR Siria 18.77 302⇓P **P** **17 01 16.8 -2.6**
CHGR Chuyangaron 19.00 82 P **P** **17 01 22.6 +0.4**
CHGR IAmb IAmb 17 01 45.9
comp=Z,13nm,0.8s
CHGR Chuyangaron 19.00 82 P **P** **17 01 22.6 +0.4**
CHGR pmax pmax
comp=Z,13nm,0.8s
KOLS Kolonicke sedl 19.30 310 *e*P **Pn** **17 01 32.6 +6.3**
KOLS Kolonicke sedl 19.30 310 *e*P **Pn** **17 01 32.6 +6.3**
KWP Kalwaria Pacla 19.34 312 P **Pn** **17 01 26.8 0.0**
KWP Kalwaria Pacla 19.34 312 P **Pn** **17 01 26.8 0.0**
KWP pmax pmax
comp=Z,337nm,1.2s
BRLS Boroldoy 19.44 69 *e*P **P** **17 01 25.1 -1.8**
BRLS Boroldoy 19.44 69 *e*P **P** **17 01 25.1 -1.8**
baz=70
DIVS Divibare 19.46 295 P **Pn** **17 01 28.9 +0.5**
IUG Iuzhnay 19.53 71 *e*P **P** **17 01 28.4 +0.5**
IUG Iuzhnay 19.53 71 *e*P **P** **17 01 28.4 +0.5**
baz=71
CRVS Cervenica-Dubn 19.78 309 *e*P **Pn** **17 01 37.7 +5.7**
CRVS Cervenica-Dubn 19.78 309 *e*P **Pn** **17 01 37.7 +5.7**
GAR Garm 19.86 81 P **P** **17 01 32.0 +0.3**
KK31 Karatay Array 19.94 68 P **P** **17 01 31.9 -0.4**
KK31 IAmb IAmb 17 01 42.2
comp=Z,9.2nm,0.8s
KK31 Karatay Array 19.94 68 P **P** **17 01 31.9 -0.4**
KK31 pmax pmax
comp=Z,9.0nm,0.8s
KKAR Karatay Array 19.94 68 P **P** **17 01 31.6 -0.7**
KKAR Karatay Array 19.94 68 P **P** **17 01 32.3 0.0**
KKAR IAmb IAmb 17 01 42.2
comp=Z,9.2nm,0.8s
KKAR Karatay Array 19.94 68 P **P** **17 01 32.3 0.0**
KKAR pmax pmax
comp=Z,9.0nm,0.8s
ARU Arti 20.13 23 P **P** **17 01 33.7 -0.6**
comp=Z,6.9nm,0.7s,baz=230,slow=6.9,SNR=12
ARU LR LR 17 11 10.9
comp=Z,71nm,18.7s,baz=204,slow=42
comp=Z,6.9nm,0.7s
ARU Arti 20.13 23 P **P** **17 01 32.8 -1.4**
ARU IAmb IAmb 17 01 36.3
comp=Z,35nm,1.5s
ARU Arti 20.13 23*c i*P **P** **17 01 33.3 -1.0**
ARU S **S** **17 05 19.3 -0.9**
ARU pmax pmax
comp=Z,26nm,1.5s
BTK Batken 20.15 77 P **P** **17 01 35.6 +0.9**
BTK Batken 20.15 77 P **P** **17 01 35.6 +0.9**
KIRV Kirov 20.33 7 P **P** **17 01 36.0 -0.3**
comp=Z,12nm,0.9s,baz=45,slow=1.4,SNR=3.3
KIRV LR LR 17 10 48.1
comp=Z,91nm,20.2s,baz=214,slow=41
comp=Z,12nm,0.9s
KIRV Kirov 20.33 7*de*P **P** **17 01 36.4 +0.1**
PSZ Piszkesteto 20.41 306 P Pn 17 01 39.6 +0.1
PSZ Piszkesteto 20.41 306 P Pn 17 01 39.6 +0.1
PSZ pmax pmax
comp=Z,9.0nm,1.1s
PSZ Piszkesteto 20.41 306 P Pn 17 01 44.0 +4.5
NACGM Naroch 20.46 329⇑ *e*P Pn 17 01 40.9 +0.9
baz=135
DZA Taraz 20.52 69 *e*P **P** **17 01 38.5 -0.2**
DZA Taraz 20.52 69 *e*P **P** **17 01 38.6 -0.2**
baz=69
MORH Mrgy, Hungar 20.78 300⇓P Pn 17 01 43.2 -0.6
MORH Mrgy, Hungar 20.78 300 P Pn 17 01 43.5 -0.3
DRK Karamyk 20.95 79 P **P** **17 01 44.1 +0.5**
DRK IAmb IAmb 17 01 53.0
comp=Z,17nm,1.1s
SVE Sverdlovsk 21.11 25 *e*P **P** **17 01 46.9 +2.0**
SVE pmax pmax
comp=Z,17nm,0.9s
VYHS Vyhne 21.26 306 *e*P **P** **17 01 53.1 +6.5**
VYHS Vyhne 21.26 306 *e*P **P** **17 01 53.1 +6.5**
OJC Ojcow 21.30 312 P **P** **17 01 46.0 -0.9**
OJC IAmb IAmb 17 01 55.6
comp=Z,17nm,1.5s
OJC Ojcow 21.30 312 P **P** **17 01 46.1 -0.9**
OJC pmax pmax
comp=Z,17nm,1.5s
CSKK Cskako 21.31 303 P **P** **17 01 53.3 +6.3**
SUW Suwalki 21.44 323 P **P** **17 01 47.8 -0.6**
SUW Suwalki 21.44 323 P **P** **17 01 47.8 -0.6**
SUW pmax pmax
comp=Z,53nm,1.3s
KOLL Kolacno 21.56 306 *e*P **P** **17 01 53.0 +3.2**
MPLH Magyarpolny 21.74 302 P **P** **17 01 54.7 +3.0**
TIP Timpagrande 21.86 281⇓P **P** **17 01 52.5 -0.7**
JAVC Velka Javorina 22.11 307 *e*P **P** **17 01 55.7 0.0**
MODS Modra-Piesok 22.22 305 *e*P **P** **17 02 00.3 +3.4**
MODS Modra-Piesok 22.22 305 *e*PN **P** **17 02 00.3 +3.4**
MORC Moravsky Berou 22.48 309 *e*P **P** **17 01 58.6 -1.1**
CUC Castrocucco 22.49 283 P **P** **17 01 59.5 -0.4**
SOP Sopron 22.50 303 P **P** **17 02 02.6 +2.7**
KLMR Klimovskoe 22.64 353 *e*P **P** **17 02 05.7 +4.5**
KLMR pmax pmax
comp=Z,18nm,1.4s
KLMR Klimovskoe 22.64 353 *e*P **P** **17 02 05.7 +4.5**
KLMR AMP 17 02 09.4
comp=Z,18nm,1.4s
BTLS Baital 22.66 64 *e*P **P** **17 02 01.5 -0.1**
BTLS Baital 22.66 64 *e*P **P** **17 02 01.6 -0.1**
baz=64
RONA Rosalia, Austr 22.68 303 *e*P **P** **17 02 03.2 +1.4**
comp=Z,10nm,1.1s
BRVK Borovoye 22.79 42 P **P** **17 02 03.1 +0.2**
BRVK IAmb IAmb 17 02 12.5
comp=Z,8.8nm,0.8s
BRVK Borovoye 22.79 42*ce*P **P** **17 02 03.5 +0.6**
BRVK pmax pmax
comp=Z,9.0nm,0.8s
AAK Ala-Archa 22.84 70 P **P** **17 02 04.6 +0.9**
comp=Z,2.5nm,0.5s,baz=228,slow=12,SNR=1.4
AAK LR LR 17 12 30.0
comp=Z,88nm,21.5s,baz=278,slow=41
comp=Z,2.5nm,0.5s
AAK Ala-Archa 22.84 70 P **P** **17 02 04.0 +0.2**
AAK IAmb IAmb 17 02 14.0
comp=Z,13nm,1.1s
AAK Ala-Archa 22.84 70 P **P** **17 02 04.0 +0.2**
AAK pmax pmax
comp=Z,13nm,1.1s
VRAC Vranov 22.92 307 P **P** **17 02 04.0 -0.2**
comp=Z,4.0nm,0.9s,baz=109,slow=10.0,SNR=5.3
VRAC LR LR 17 14 06.0
comp=Z,50nm,18.4s,baz=104,slow=45
comp=Z,4.0nm,0.9s
VRAC Vranov 22.92 307 *e*P **P** **17 02 04.1 -0.2**
FRU1 Bishkek 22.95 70 P **P** **17 02 05.0 +0.3**
FRU1 Bishkek 22.95 70 P **P** **17 02 05.0 +0.3**
FRU1 pmax pmax
comp=Z,36nm,1.5s
SGDS Sogindy 22.96 68 *e*P **P** **17 02 05.0 +0.1**
SGDS Sogindy 22.96 68 *e*P **P** **17 02 05.0 +0.1**

baz=68
KRUC Moravsky 22.97 307 *e*P **P** **17 02 04.9 +0.1**
CONA Conrad Observa 23.02 304 *e*P **P** **17 02 07.4 +1.9**
comp=Z,7.0nm,1.1s
VSU Vasula 23.17 335||*e*P **P** **17 02 08.0 +1.3**
VSU pmax pmax
comp=Z,89nm,2.8s
PRGR Permogore 23.18 1 *e*P **P** **17 02 05.0 -1.8**
SOKA Soboth 23.32 300 *e*P **P** **17 02 10.7 +2.2**
comp=Z,4.9nm,0.9s
DPC Dobruska-Polom 23.42 310 *e*P **P** **17 02 11.5 +2.1**
DPC Dobruska-Polom 23.42 310 *e*P **P** **17 02 11.5 +2.1**
OBKA Obir 23.62 300 *e*P **P** **17 02 11.4 -0.1**
comp=Z,8.0nm,1.3s
VAE Valguarnera 23.96 277 LR LR 17 11 40.2
comp=Z,45nm,20.4s,baz=160,slow=37
MOA Molln 24.05 303 *e*P **P** **17 02 15.9 +0.4**
comp=Z,3.5nm,0.8s
KUU Kurty 24.22 67 *e*P **P** **17 02 17.2 +0.1**
KUU Kurty 24.22 67 *e*P **P** **17 02 17.2 +0.1**
baz=67
CKRC Cesky Krumlov 24.23 305 *e*P **P** **17 02 19.9 +2.7**
NRCA Norcia 24.38 290 P **P** **17 02 18.6 -0.1**
NRCA IAmb IAmb 17 02 43.7
comp=Z,5.8nm,0.7s
PRU Pruhonice 24.39 308 AMS AMS 17 12 20.0
comp=Z,100nm,23.0s
BIOA Bad Ischl, Aus 24.43 302 *e*P **P** **17 02 20.4 +1.3**
comp=Z,8.9nm,1.1s
KBA Koelnbreinsper 24.53 301 *e*P **P** **17 02 20.9 +0.8**
comp=Z,12nm,0.9s
GEC2 GERESS Array S 24.63 305 P **P** **17 02 20.7 -0.2**
GEC2 IAmb IAmb 17 02 24.6
comp=Z,6.5nm,0.8s
GERES GERESS Array B 24.63 305 P **P** **17 02 20.7 -0.2**
comp=Z,3.7nm,0.7s,baz=103,slow=9.7,SNR=19
comp=Z,3.7nm,0.7s
GERES GERESS Array B 24.63 305 P **P** **17 02 20.4 -0.5**
CHKK Chushkaly 24.69 67 *e*P **P** **17 02 21.1 -0.2**
CHKK Chushkaly 24.69 67 *e*P **P** **17 02 21.2 -0.2**
baz=67
KHC Kasperske Hory 24.78 306 *e*P **P** **17 02 22.9 +0.7**
KHC Kasperske Hory 24.78 306 *e*P **P** **17 02 22.9 +0.7**
KHC *ex* x 17 02 33.5
MURB Monte Urbino 24.81 291 P **P** **17 02 24.0 +1.5**
BRG Berggiesshubel 25.02 310 *e*P **P** **17 02 25.8 +1.5**
BRG Amp 17 02 27.9
comp=Z,8.0nm,1.3s
BRG Berggiesshubel 25.02 310 *e*P **P** **17 02 25.8 +1.5**
BRG pmax pmax
comp=Z,8.0nm,1.3s
ABTA Abfaltersbach 25.05 300 *e*P **P** **17 02 26.5 +1.9**
comp=Z,4.8nm,0.9s
LATE Laterza 25.35 290 P **P** **17 02 28.1 +0.7**
CTI Castel Tesino 25.56 298 P **P** **17 02 28.5 -0.9**
CTI IAmb IAmb 17 02 48.0
comp=Z,5.3nm,0.9s
CTI Castel Tesino 25.56 298 P **P** **17 02 28.5 -0.9**
CTI pmax pmax
comp=Z,5.0nm,0.9s
WTTA Wattenberg 25.71 301 *e*P **P** **17 02 32.8 +2.0**
comp=Z,7.4nm,1.0s
CLL Collm 25.72 310 *i*P **P** **17 02 33.5 +2.9**
CLL pmax pmax
comp=Z,10.0nm,1.6s
CLL Collm 25.72 310 *e*P **P** **17 02 30.0 -0.6**
CLL *i* x x 17 02 33.5
comp=Z,10.0nm,1.6s
CLL *e*S **S** **17 07 06.0 +6.8**
WATA Walderalm 25.76 301 *e*P **P** **17 02 31.5 +0.3**
comp=Z,7.9nm,1.3s
FINES FINESS Array B 25.76 339 P **P** **17 02 31.5 +0.6**
comp=Z,0.8nm,0.5s,baz=140,slow=9.2,SNR=9.5
FINES LR LR 17 13 43.8
comp=Z,84nm,19.2s,baz=148,slow=39
comp=Z,0.8nm,0.5s
FINES FINESS Array B 25.76 339 P **P** **17 02 29.7 -1.2**
FINES FINESS Array B 25.76 339 *i*P **P** **17 02 34.2 +3.3**
FINES pmax pmax
comp=Z,2.0nm,0.6s
KPKS Kokpek 25.91 68 *e*P **P** **17 02 32.5 -0.1**
KPKS Kokpek 25.91 68 *e*P **P** **17 02 32.5 -0.1**
baz=68
SQTA Sankt Quirin 25.99 301 *e*P **P** **17 02 33.7 +0.4**
comp=Z,3.6nm,0.6s
MOTA Moosalm 26.08 301 *e*P **P** **17 02 33.7 -0.5**
comp=Z,9.0nm,1.1s
FETA Feichten 26.29 300 *e*P **P** **17 02 36.0 -0.1**
comp=Z,6.3nm,0.9s
RETA Reutte 26.33 301 *e*P **P** **17 02 36.8 +0.5**
comp=Z,1.6nm,0.6s
GRA1 Grafenberg Arr 26.40 306 P **P** **17 02 38.5 +1.7**
GRF Grafenberg Arr 26.40 306 P **P** **17 02 38.6 +1.7**
GRF pmax pmax
comp=Z,10.0nm,0.9s
GRFO Grafenberg 26.40 306 P **P** **17 02 39.1 +2.3**
GRFO IAmb IAmb 17 02 47.9
comp=Z,10nm,1.0s
GRFO Grafenberg 26.40 306 P **P** **17 02 39.1 +2.3**
GRFO pmax pmax
comp=Z,10.0nm,1.0s
SHLS Shalkode 26.49 69 *e*P **P** **17 02 42.8 +5.0**
SHLS Shalkode 26.49 69 *e*P **P** **17 02 42.9 +5.0**
baz=69
KURBB Kurchatov Arra 26.65 52 P **P** **17 02 39.4 +0.3**
comp=Z,2.0nm,0.7s,baz=263,slow=9.3,SNR=9.6
comp=Z,2.0nm,0.7s
KURK Kurchatov 26.73 52 P **P** **17 02 39.9 +0.2**
KURK IAmb IAmb 17 03 07.9
comp=Z,5.0nm,1.0s
KURK Kurchatov 26.73 52||*e*P **P** **17 02 40.9 +1.1**
KURK pmax pmax
comp=Z,6.0nm,1.5s
DAVOX Davos/Dischmat 26.85 299 P **P** **17 02 41.2 +0.1**
comp=Z,3.2nm,0.7s,baz=119,slow=13,SNR=4.6
comp=Z,3.2nm,0.7s
DAVA Damuels 26.90 300 *e*P **P** **17 02 41.5 0.0**
comp=Z,7.5nm,1.0s
ATD Arta Tunnel 26.91 184 LR LR 17 14 20.7
comp=Z,89nm,18.4s,baz=351,slow=39
MK31 Makanchi Array 28.55 61 P **P** **17 02 55.7 -0.4**
MK31 Makanchi Array 28.55 61 P **P** **17 02 55.7 -0.4**
MK31 pmax pmax
comp=Z,2.0nm,0.9s
MKAR Makanchi Array 28.55 61 P **P** **17 02 56.3 +0.2**
comp=Z,1.8nm,0.7s,baz=271,slow=6.4,SNR=9.7
MKAR LR LR 17 15 38.4
comp=Z,44nm,21.1s,baz=258,slow=39
comp=Z,1.8nm,0.7s
MKAR Makanchi Array 28.55 61 P **P** **17 02 55.3 -0.8**
MKAR Makanchi Array 28.55 61 *i*P **P** **17 02 56.0 -0.1**
MKAR pmax pmax
comp=Z,2.0nm,0.7s
BNI Bardonecchia 29.01 295 P **P** **17 02 59.0 -1.4**
BNI IAmb IAmb 17 03 04.4
comp=Z,8.2nm,1.1s
BNI Bardonecchia 29.01 295 P **P** **17 02 59.0 -1.4**
BNI pmax pmax
comp=Z,8.0nm,1.1s
HFS Hagfors 29.22 328 P **P** **17 03 01.5 -0.4**
comp=Z,2.8nm,0.9s,baz=128,slow=9.6,SNR=4.9
HFS LR LR 17 15 40.3
comp=Z,97nm,19.5s,baz=124,slow=38
comp=Z,2.8nm,0.9s
NOA NORSAR Array B 30.74 328 P **P** **17 03 13.9 -1.5**
comp=Z,0.4nm,0.7s,baz=140,slow=7.5,SNR=3.2
NOA LR LR 17 16 27.6
comp=Z,85nm,21.4s,baz=130,slow=38
comp=Z,0.4nm,0.7s
ZALV Zalesovo Beam 31.19 47 P **P** **17 03 19.4 -0.1**
comp=Z,0.7nm,0.5s,baz=262,slow=10,SNR=3.7
ZALV LR LR 17 17 58.3
comp=Z,76nm,18.1s,baz=262,slow=40
comp=Z,0.7nm,0.5s
ZALV Zalesovo Beam 31.19 47 P **P** **17 03 18.9 -0.6**
ZALV Zalesovo Beam 31.19 47 *i*P **P** **17 03 21.2 +1.8**
ZALV pmax pmax
comp=Z,1.0nm,0.5s
WMQ Urumqi 32.42 67 *e*P **P** **17 03 32.3 +1.8**
WMQ pmax pmax
comp=Z,10.0nm,0.9s
ARCES ARCESS Array B 32.79 348 LR LR 17 17 52.7
comp=Z,68nm,20.6s,baz=138,slow=38
ESDC Sonseca Array 37.53 288 P **P** **17 04 12.9 -1.7**
comp=Z,2.6nm,1.0s,baz=66,slow=10,SNR=9.2
comp=Z,2.6nm,1.0s
MDT Midelt 40.19 277 LR LR 17 22 36.4
comp=Z,39nm,19.5s,baz=110,slow=38
JMIC Jan Mayen 42.34 337 LR LR 17 23 05.8
comp=Z,68nm,18.8s,baz=126,slow=37
SONM Songino Array 44.77 57 P **P** **17 05 14.0 -0.1**
comp=Z,0.5nm,0.7s,baz=267,slow=5.8,SNR=3.0
SONM LR LR 17 26 15.7
comp=Z,51nm,21.5s,baz=258,slow=39
comp=Z,0.5nm,0.7s
PALK Pallekele 44.85 125 LR LR 17 25 42.0
comp=Z,38nm,18.7s,baz=28,slow=38
PALK Pallekele 44.85 125 *i*P **P** **17 05 18.7 +3.8**
ULN Ulaanbaatar 45.20 57 P **P** **17 05 17.3 -0.3**
ULN IAmb IAmb 17 05 21.8
comp=Z,2.9nm,0.8s
ULN Ulaanbaatar 45.20 57 *de*P **P** **17 05 17.8 +0.3**
ULN pmax pmax
comp=Z,3.0nm,0.8s
TORD Torodi Ar. Bea 45.75 248 P **P** **17 05 19.6 -2.4**
comp=Z,2.6nm,1.0s,baz=48,slow=6.6,SNR=8.6
comp=Z,2.6nm,1.0s
TORD Torodi Ar. Bea 45.75 248 P **P** **17 05 19.4 -2.6**
TORD IAmb IAmb 17 05 24.8
comp=Z,3.8nm,1.2s
PZH PanZhiHua 48.76 87 P **P** **17 05 46.4 +0.8**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,100nm,4.9s
HHC Hu-ho-hao-te 50.27 65 *e*P **P** **17 05 57.6 +0.7**
HHC pmax pmax
comp=Z,41nm,0.8s
HHC pmax pmax
comp=Z,120nm,6.5s
CHTO Chiang Mai 50.61 97 P **P** **17 06 01.9 +2.3**
CHTO IAmb IAmb 17 06 05.0
comp=Z,4.5nm,1.2s
CHTO Chiang Mai 50.61 97 P **P** **17 06 01.9 +2.3**
CHTO pmax pmax
comp=Z,5.0nm,1.2s
CMAR Chiang Mai Arr 50.81 97 P **P** **17 06 00.7 -0.4**
comp=Z,1.1nm,0.8s,baz=299,slow=8.0,SNR=8.0
CMAR LR LR 17 34 09.9
comp=Z,15nm,18.1s,baz=280,slow=44
comp=Z,1.1nm,0.8s
CMAR Chiang Mai Arr 50.81 97 P **P** **17 05 59.9 -1.2**
CMAR Chiang Mai Arr 50.81 97 *i*P **P** **17 06 03.9 +2.8**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
TIXI Tiksi 52.14 24 LR LR 17 32 39.6
comp=Z,63nm,18.3s,baz=264,slow=41
YAK Yakutsk 54.56 35||*e*P **P** **17 06 31.5 +3.3**
YAK pmax pmax
comp=Z,14nm,2.2s
ZEA Zeya 55.93 45 *e*P P 17 06 45.5 +7.2
SFJD Kangerlussuaq 57.28 332 LR LR 17 29 32.8
comp=Z,84nm,21.1s,baz=9.5,slow=34
KLR Kul'dur 60.27 49 LR LR 17 34 44.9
comp=Z,30nm,21.6s,baz=34,slow=38
USRK Ussuriysk Ar. 62.69 54 P **P** **17 07 24.3 -0.9**
comp=Z,1.0nm,0.8s,baz=238,slow=8.3,SNR=2.6
comp=Z,1.0nm,0.8s
KSAR Wonju Array Be 63.20 62 P **P** **17 07 28.6 -0.1**
KSAR Wonju Array Be 63.20 62 P **P** **17 07 28.6 -0.1**
KSRS Korea Array 63.22 62 P **P** **17 07 28.5 -0.3**
comp=Z,1.3nm,0.8s,baz=290,slow=5.5,SNR=5.1
KSRS LR LR 17 36 47.7
comp=Z,16nm,19.1s,baz=310,slow=38
comp=Z,1.3nm,0.8s
SEY Seymchan 63.70 29 LR LR 17 40 21.5
comp=Z,34nm,18.2s,baz=222,slow=41
MA2 Magadan 64.91 33 LR LR 17 38 17.7
comp=Z,32nm,19.5s,baz=340,slow=38
BOSA Boshof 69.22 198 LR LR 17 41 00.6
comp=Z,47nm,18.7s,baz=16,slow=38
ASAJ Asahikawa 69.28 50 LR LR 17 41 06.3
comp=Z,25nm,18.5s,baz=182,slow=38
PDAR Pinedale Array 95.84 341 LR LR 17 53 50.9
comp=Z,42nm,18.0s,baz=122,slow=36

IDC 22 17:06:52.9±17.0, 12°.61N×57°.27E, h0km, mb3.6/3, mbtmp3.7/4, ML3.6/1, MS3.4/3, Error ellipse: s-maj=559.2km s-min=39.0km az=80.0, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSAR	**Wadi Sarin**	**10.65**	**7**	Pn	Pn	17 09 25.4	-1.5
	0.5nm,0.3s,baz=218,slow=5.9,SNR=13						
	4.6nm,0.7s						
MKAR	**Makanchi Array**	**40.06**	**27**	P	P	17 14 29.9	-0.1
	0.3nm,0.8s,baz=218,slow=9.1,SNR=2.1						
	0.3nm,0.8s						
ARU	**Arti**	**43.74**	**1**	LR	LR	17 32 58.6	
	comp=Z,25nm,20.2s,baz=358,slow=36						
ZALV	**Zalesovo Beam**	**46.64**	**22**	P	P	17 15 23.8	+0.8
	0.3nm,0.3s,baz=213,slow=5.0,SNR=2.3						
	0.3nm,0.3s						
SUR	**Sutherland**	**56.72**	**217**	LR	LR	17 40 56.7	
	comp=Z,47nm,18.3s,baz=42,slow=36						
EKA	**Eskdalemuir Ar**	**63.05**	**326**	LR	LR	17 48 30.2	
	comp=Z,28nm,18.0s,baz=126,slow=40						
WRA	**Warramunga Arr**	**82.41**	**112**	P	P	17 19 17.4	-0.3
	0.5nm,0.7s,baz=298,slow=4.3,SNR=4.9						
	0.5nm,0.7s						

MAN 22 17:12:04.7, 11°.03N×125°.41E, h8km, mb4.7, ML3.6, MS3.5, Samar

*IDC **22** 17:17:19.2±1.3, 0°.47N×80°.59W, h0km, mb3.5/4, mbtmp3.6/5, ML3.7/1, MS3.5/2, Error ellipse: s-maj=59.4km s-min=24.5km az=57.0*

ISC 22 17:17:20.6±1.0, 0°.4N±0°.2×80°.7W±0°.3, h11km, n7, σ1s36/6, mb3.7/3, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**7.85**	**163**	Pn	**Pn**	**17 19 15.7**	**+0.4**
	0.9nm,0.3s,baz=12,slow=9.6,SNR=4.9						
ATAH				LR	LR	17 21 52.0	
	comp=Z,148nm,20.1s,baz=341,slow=35						
	4.1nm,0.5s						
LPAZ	**La Paz**	**20.71**	**144**	P	**P**	**17 22 01.9**	**+0.1**
	1.0nm,0.6s,baz=333,slow=4.5,SNR=3.1						
	1.0nm,0.6s						
TXAR	**Lajitas Array**	**36.16**	**325**	P	**P**	**17 24 23.4**	**0.0**
	0.2nm,0.8s,baz=144,slow=12,SNR=2.2						
	0.2nm,0.8s						
LPIG	**La Paz**	**37.13**	**312**	LR	LR	17 37 57.5	
	comp=Z,155nm,18.1s,baz=172,slow=33						
NVAR	**Mina Array Bea**	**51.20**	**322**	P	**P**	**17 26 25.4**	**+0.9**
	0.9nm,0.8s,baz=143,slow=7.7,SNR=6.6						
	0.9nm,0.8s						
ESDC	**Sonseca Array**	**79.51**	**50**	P	**P**	**17 29 27.8**	**0.0**
	0.8nm,0.9s,baz=280,slow=5.1,SNR=5.0						
	0.8nm,0.9s						
WRA	**Warramunga Arr**	**140.62**	**238**	PKP	**PKPdf**	**17 36 49.2**	**-2.1**
	0.4nm,0.8s,baz=107,slow=2.5,SNR=2.0						

*MOS **22** 17:41:52.9±1.5, 14°.83S×70°.74W, h183km, mb4.8/6, Error ellipse: s-maj=11.1km s-min=4.9km az=108.7*
*NEIC **22** 17:41:54.8±1.2, 14°.83S±0°.07×70°.59W±0°.10, h193km±5km, mb5.2/504, Mww4.9, Error ellipse: s-maj=14.0km s-min=10.3km az=79.0*
*VAO **22** 17:41:55.0±0.4, 14°.97S×70°.79W, h191km, mb5.1*
*IDC **22** 17:41:55.1±0.6, 14°.81S×70°.65W, h186km±5km, mb4.6/20, mbtmp5.0/25, Error ellipse: s-maj=11.5km s-min=7.6km az=59.0*
*NEIC **22** 17:41:55, 14°.93S×70°.89W, h210km, Moment Tensor Solution. Duration: 2s0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.97; $M_{\theta\theta}$-0.38; $M_{\phi\phi}$1.35; $M_{r\theta}$1.97; $M_{\theta\phi}$-1.62; $M_{\theta r}$-0.82; Fault plane solution: M_o2.94000×10^{16} NP1: ϕ_s188.00000°, δ37.00000°, λ-20.00000°. NP2: ϕ_s295.00000°, δ78.00000°, λ-125.00000°. Principal axes: T 3.1128, Plg25.0000°, Azm52.0000°; N -0.3933, Plg34.0000°, Azm303.0000°; P -2.7195, Plg45.0000°, Azm169.0000°;*
*GCMT **22** 17:41:57.8±0.3, 14°.89S±0°.02×70°.83W±0°.02, h195km±3km, MW5.1/87, Moment Tensor Solution. s23,c25; s87,c111; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.19±.19; $M_{\theta\theta}$-0.46±.21; $M_{\phi\phi}$1.65±.22; $M_{r\theta}$2.99±.13; $M_{\theta\phi}$-1.77±.18; $M_{\theta r}$-3.19±.16; Best double couple: M_o4.82500×10^{16} NP1: ϕ_s184.00000°, δ16.00000°, λ-41.00000°. NP2: ϕ_s314.00000°, δ79.00000°, λ-102.00000°. Principal axes: T 5.4430, Plg33.0000°, Azm55.0000°; N -1.2370, Plg12.0000°, Azm317.0000°; P -4.2060, Plg54.0000°, Azm209.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 22 17:41:54.2±0.4, 14°.98S±0°.04×70°.83W±0°.05, h185km±3km, h186km: pP-P, n1002, σ1s55/1025, mb5.2/270, 202C-96D, Fault plane solution: NP1: ϕ_s105.20791°, δ80.35932°, λ114.70002°. **NP2:** ϕ_s215.21462°, δ26.40441°, λ22.12229°.
Principal axes: T Plg48.7429°, Azm41.8280°; N Plg24.3284°, Azm280.8033°; P Plg30.9922°, Azm175.0453°; **Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB18	**Visviri**	**2.90**	**154**		**Pn**	**17 42 44.4**	**+1.9**
LPAZ	**La Paz**	**2.91**	**117**	P	**Pn**	**17 42 43.6**	**+1.0**
	601nm,0.4s,baz=310,slow=8.3,SNR=3240						
LPAZ				S	**Sn**	**17 43 20.6**	**+0.3**
	1µm,0.5s,baz=147,slow=18,SNR=24						
LPAZ	**La Paz**	**2.91**	**117**		**Pn**	**17 42 43.6**	**+1.0**
LPAZ				Sn	**Sn**	**17 43 19.6**	**-0.6**
LPAZ	**La Paz**	**2.91**	**117**	*e*P	**Pn**	**17 42 42.7**	**+0.1**
AP01	**Chacalluta**	**3.40**	**172**		**Pn**	**17 42 47.5**	**-0.5**
AP01				Sn	**Sn**	**17 43 27.4**	**-2.8**
AP01	**Chacalluta**	**3.40**	**172**	||*e*P	**Pn**	**17 42 47.3**	**-0.7**
AP01				*e*S	**Sn**	**17 43 27.2**	**-3.0**
AP01	**Chacalluta**	**3.40**	**172**	||*e*P	**Pn**	**17 42 47.3**	**-0.7**
AP01				*e*S	**Sn**	**17 43 27.2**	**-3.0**
PB16	**IPOC Station P**	**3.57**	**159**		**Pn**	**17 42 51.2**	**+0.6**
PB16				Sn	**Sn**	**17 43 35.7**	**+0.9**
PB16	**IPOC Station P**	**3.57**	**159**	||*e*P	**Pn**	**17 42 51.2**	**+0.6**
PB16				*e*S	**Sn**	**17 43 35.1**	**+0.3**
PB16	**IPOC Station P**	**3.57**	**159**	||*e*P	**Pn**	**17 42 51.2**	**+0.6**
PB16				*e*S	**Sn**	**17 43 35.1**	**+0.3**
PB12	**IPOC Station P**	**3.65**	**172**		**Pn**	**17 42 49.3**	**-1.8**
PB12				Sn	**Sn**	**17 43 31.6**	**-4.1**
PB12	**IPOC Station P**	**3.65**	**172**	||*e*P	**Pn**	**17 42 49.6**	**-1.5**
PB12				*e*S	**Sn**	**17 43 31.8**	**-4.0**
PB12	**IPOC Station P**	**3.65**	**172**	||*e*P	**Pn**	**17 42 49.6**	**-1.5**
PB12				*e*S	**Sn**	**17 43 31.8**	**-4.0**
PB11	**IPOC Station P**	**4.88**	**167**	Pn	**Pn**	**17 43 04.4**	**-2.5**
PB11	**IPOC Station P**	**4.88**	**167**	*e*P	**Pn**	**17 43 04.9**	**-2.0**
PB11	**IPOC Station P**	**4.88**	**167**	*e*P	**Pn**	**17 43 04.9**	**-2.0**
GO01	**Chusmiza**	**4.92**	**162**		**Pn**	**17 43 07.4**	**-0.3**
GO01	**Chusmiza**	**4.92**	**162**	||*e*P	**Pn**	**17 43 07.3**	**-0.3**
GO01				*e*S	**Sn**	**17 44 03.0**	**-2.4**
GO01	**Chusmiza**	**4.92**	**162**	||*e*P	**Pn**	**17 43 07.3**	**-0.3**
GO01				*e*S	**Sn**	**17 44 03.0**	**-2.4**
TA02	**Huaiquique**	**5.30**	**173**		**Pn**	**17 43 09.5**	**-2.7**
TA02	**Huaiquique**	**5.30**	**173**	*e*P	**Pn**	**17 43 09.7**	**-2.5**
TA02				*e*S	**Sn**	**17 44 07.2**	**-6.5**
TA02	**Huaiquique**	**5.30**	**173**	*e*P	**Pn**	**17 43 09.7**	**-2.5**
TA02				*e*S	**Sn**	**17 44 07.2**	**-6.5**
PB08	**IPOC Station P**	**5.38**	**163**		**Pn**	**17 43 12.3**	**-1.2**
TA01	**Diego Aracena**	**5.59**	**174**	Pn	**Pn**	**17 43 13.0**	**-2.9**
PATCX	**Punta Patache**	**5.84**	**174**		**Pn**	**17 43 15.8**	**-3.5**
PB01	**IPOC Station P**	**6.16**	**168**		**Pn**	**17 43 20.7**	**-2.8**
PB02	**IPOC Station P**	**6.37**	**172**		**Pn**	**17 43 23.4**	**-2.8**
NNA	**Nana**	**6.56**	**296**	P	**Pn**	**17 43 27.6**	**-1.1**
	72nm,0.3s,baz=131,slow=7.8,SNR=20						
NNA				S	**Sn**	**17 44 39.4**	**-3.9**
	261nm,0.5s,baz=302,slow=15,SNR=12						
NNA	**Nana**	**6.56**	**296**	Pn	**Pn**	**17 43 27.1**	**-1.6**
NNA	**Nana**	**6.56**	**296**	*de*P	**Pn**	**17 43 27.3**	**-1.4**
PB07	**IPOC Station P**	**6.77**	**173**		**Pn**	**17 43 28.4**	**-3.1**
ETMB	**Extrema**	**6.83**	**42**	*e*P	**Pn**	**17 43 31.5**	**-0.7**
PB09	**IPOC Station P**	**6.95**	**168**		**Pn**	**17 43 31.5**	**-2.3**
PB04	**IPOC Station P**	**7.34**	**175**		**Pn**	**17 43 35.3**	**-3.7**
PB06	**IPOC Station P**	**7.78**	**171**		**Pn**	**17 43 41.1**	**-3.5**
LVC	**Limon Verde**	**7.80**	**167**	P	**Pn**	**17 43 44.2**	**-1.0**
	348nm,0.3s,baz=350,slow=8.5,SNR=809						
LVC				S	**Sn**	**17 45 06.1**	**-7.2**
	289nm,0.4s,baz=47,slow=23,SNR=28						
LVC	**Limon Verde**	**7.80**	**167**	Pn	**Pn**	**17 43 43.1**	**-2.1**
LVC	**Limon Verde**	**7.80**	**167**	*e*P	**Pn**	**17 43 43.1**	**-2.1**
PB15	**IPOC Station P**	**8.29**	**171**		**Pn**	**17 43 48.9**	**-2.5**
AF01	**San Pedro de A**	**8.32**	**163**		**Pn**	**17 43 50.6**	**-1.3**
PB10	**IPOC Station P**	**8.49**	**178**	Pn	**Pn**	**17 43 51.1**	**-2.9**
SIV	**San Ignacio**	**9.46**	**97**	P	**Pn**	**17 44 04.9**	**-1.9**
	34nm,0.3s,baz=284,slow=11,SNR=99						
SAML	**Samuel**	**9.59**	**52**	Pn	**Pn**	**17 44 06.3**	**-2.0**
SAML	**Samuel**	**9.59**	**52**	P	**Pn**	**17 44 06.3**	**-2.0**
PB14	**IPOC Station P**	**9.60**	**178**	Pn	**Pn**	**17 44 05.0**	**-3.8**
GO02	**Mina Guanaco**	**10.20**	**174**	Pn	**Pn**	**17 44 13.4**	**-3.1**
VILB	**Vilhena**	**10.51**	**80**	*e*P	**Pn**	**17 44 18.8**	**-1.6**
ATAH	**Atahualpa**	**10.76**	**316**	P	**Pn**	**17 44 24.4**	**+0.3**
	39nm,0.6s,baz=135,slow=10,SNR=10.0						
AC01	**Pan de Azucar**	**11.11**	**179**		**Pn**	**17 44 25.9**	**-2.2**
PTLB	**Pontes e Lacer**	**11.30**	**94**	*e*P	**Pn**	**17 44 28.7**	**-1.8**
AC02	**Maricunga**	**11.90**	**173**	P	**Pn**	**17 44 38.1**	**-0.6**
GO03	**Copiap**	**12.56**	**178**	P	**Pn**	**17 44 45.1**	**-1.6**
AC04	**Llanos de Chal**	**13.16**	**181**	P	**Pn**	**17 44 52.1**	**-2.1**
LCO	**Las Campanas**	**13.96**	**180**	P	**Pn**	**17 45 04.2**	**-0.3**
LCO	**Las Campanas**	**13.96**	**180**	*e*P	**Pn**	**17 45 04.2**	**-0.3**
BOSC	**San Juan Bosco**	**13.97**	**327**	P	**Pn**	**17 45 02.1**	**-2.5**
PDRB	**Porto dos Gac**	**14.13**	**78**	*e*P	**Pn**	**17 45 04.6**	**-1.8**
ARNL	**Arenillas**	**14.56**	**320**	P	**Pn**	**17 45 11.3**	**-0.4**
SALV	**Santo Antonio**	**14.62**	**96**	*e*P	**Pn**	**17 45 12.0**	**-0.5**
CO05	**La Serena**	**14.87**	**181**	P	**Pn**	**17 45 15.0**	**-0.5**
CO05				IAmb	IAmb	17 45 18.6	
	comp=Z,125nm,0.6s						
CO01	**Juntas del Tor**	**14.94**	**178**		**Pn**	**17 45 16.6**	**0.0**
CO01				IAmb	IAmb	17 45 22.5	
	comp=Z,70nm,0.8s						
COHC	**Cochancay**	**14.96**	**325**	P	**P**	**17 45 17.5**	**-0.2**
GO04	**Tololo Observa**	**15.12**	**180**		**Pn**	**17 45 18.3**	**-0.5**
GO04				IAmb	IAmb	17 45 22.6	
	comp=Z,231nm,1.1s						
CLDB	**Colider**	**15.21**	**76**	*e*P	**Pn**	**17 45 18.6**	**-1.2**
MACA	**Manacapuru-AM**	**15.43**	**41**	*e*P	**Pn**	**17 45 21.1**	**-1.3**
PORT	**Chimborazo Vol**	**15.55**	**329**	P	**P**	**17 45 25.2**	**+0.3**
PORT				IAmb	IAmb	17 45 53.5	
	comp=Z,113nm,0.7s						
CO06	**Fray Jorge**	**15.64**	**183**	P	**Pn**	**17 45 24.4**	**-0.4**
CO06				IAmb	IAmb	17 45 27.5	
	comp=Z,55nm,0.8s						
CO03	**El Pedregal**	**15.79**	**180**	P	**Pn**	**17 45 26.4**	**-0.3**
CO03				IAmb	IAmb	17 45 29.6	
	comp=Z,82nm,0.7s						
SLOR	**San Lorenzo -**	**16.06**	**331**	P	**Pn**	**17 45 32.5**	**+1.9**
SLOR				IAmb	IAmb	17 45 40.6	
	comp=Z,80nm,0.7s						
CO02	**Combarbal**	**16.15**	**181**	P	**P**	**17 45 30.8**	**0.0**
CO02				IAmb	IAmb	17 45 34.1	
	comp=Z,169nm,0.9s						
ZON	**Zonda**	**16.61**	**174**	P	**Pn**	**17 45 37.0**	**+0.4**
ZON				IAmb	IAmb	17 45 40.7	
	comp=Z,70nm,0.6s						
ZON	**Zonda**	**16.61**	**174**	P	**Pn**	**17 45 37.0**	**+0.4**
ZON				pmax	pmax		
	comp=Z,70nm,0.6s						
OTAV	**Otavalo**	**16.89**	**333**	P	**Pn**	**17 45 41.0**	**+0.5**
OTAV				IAmb	IAmb	17 45 47.6	
	comp=Z,74nm,0.6s						
OTAV	**Otavalo**	**16.89**	**333**	P	**Pn**	**17 45 41.0**	**+0.5**
OTAV				pmax	pmax		
	comp=Z,74nm,0.6s						
OTAV	**Otavalo**	**16.89**	**333**	*e*P	**Pn**	**17 45 45.6**	**+5.0**
OTAV	**Otavalo**	**16.89**	**333**	*e*P	**Pn**	**17 45 45.6**	**+5.0**
CPUP	**Villa Florida**	**16.93**	**134**	P	**P**	**17 45 38.6**	**-0.7**
	comp=Z,50nm,0.7s,baz=313,slow=11,SNR=84						
CPUP	**Villa Florida**	**16.93**	**134**	P	**P**	**17 45 38.3**	**-1.0**
CPUP				IAmb	IAmb	17 45 40.9	
	comp=Z,48nm,0.7s						
CPUP	**Villa Florida**	**16.93**	**134**	*e*P	**P**	**17 45 39.9**	**+0.5**
TULM	**Tulcn-Chalpat**	**17.05**	**336**	P	**Pn**	**17 45 43.0**	**+0.6**
TULM	**Tulcn-Chalpat**	**17.05**	**336**	*e*P	**Pn**	**17 45 46.1**	**+3.7**
TULM	**Tulcn-Chalpat**	**17.05**

VA06 IAmb IAmb 17 45 49.1
comp=Z,93nm,0.7s
CRUC La Cruz 17.52 339 *eP* **Pn 17 45 48.6 +0.8**
CRUC La Cruz 17.52 339 *eP* **Pn 17 45 48.6 +0.8**
GARC Garzon, Huila 17.67 344 *eP* **P 17 45 47.0 -0.9**
GARC Garzon, Huila 17.67 344 *eP* **P 17 45 47.0 -0.9**
VA03 San Esteban 17.71 179 P **P 17 45 48.9 +1.0**
ROC1 El Roble 17.92 181 P **P 17 45 51.0 +0.6**
SOTA Rioblanco 17.94 341 *eP* **Pn 17 45 52.5 -0.4**
SOTA Rioblanco 17.94 341 *eP* **Pn 17 45 52.5 -0.4**
VA01 Torpederas 17.98 182 P **P 17 45 51.8 +1.0**
VA01 IAmb IAmb 17 45 52.6
comp=Z,78nm,0.7s
BBAC Balboa, Cauca 18.05 339 *eP* **Pn 17 45 52.9 -1.0**
BBAC Balboa, Cauca 18.05 339 *eP* **Pn 17 45 52.9 -1.0**
PCON Cinco Dias 18.06 342 *eP* **Pn 17 45 54.6 +0.2**
PCON Cinco Dias 18.06 342 *eP* **Pn 17 45 54.6 +0.2**
PEL Peldehue 18.08 180 P **Pn 17 45 53.5 -0.5**
PEL IAmb IAmb 17 45 54.5
comp=Z,98nm,0.6s
PEL Peldehue 18.08 180 P **Pn 17 45 53.5 -0.5**
PEL pmax pmax
comp=Z,98nm,0.6s
BETC Betania 18.13 345 *eP* **P 17 45 52.5 -0.1**
MT02 Curacav 18.20 181 P **P 17 45 53.8 +0.6**
MT02 IAmb IAmb 17 45 56.6
comp=Z,92nm,0.8s
ITTB Itaituba 18.22 56 *eP* **P 17 45 53.4 -0.2**
POPC Popayan, Colom 18.34 341 *eP* **Pn 17 45 56.0 -1.4**
POPC Popayan, Colom 18.34 341 *eP* **Pn 17 45 56.0 -1.4**
MT03 Universidad Ad 18.43 179 P **P 17 45 57.0 +1.2**
TUMC Tumaco 18.43 334 *eP* **Pn 17 45 59.9 +1.7**
TUMC Tumaco 18.43 334 *eP* **Pn 17 45 59.9 +1.7**
VA05 Santo Domingo 18.61 182 P **P 17 45 58.5 +0.9**
MT09 Talagante 18.71 180 P **P 17 45 59.9 +1.0**
LMEL Las Melosas 18.79 178 P **P 17 46 01.1 +1.4**
MT01 Popeta 18.81 181 P **P 17 46 00.6 +0.9**
TRCB Terra Rica 18.88 117 *eP* **P 17 45 58.6 -2.1**
BO04 La Punta 18.93 179 P **P 17 46 01.8 +0.6**
VILC Villavicencio, 19.18 351 *eP* **P 17 46 04.1 +0.1**
VILC Villavicencio, 19.18 351 *eP* **P 17 46 04.1 +0.1**
SNDB Serra Nova Dou 19.23 83 *eP* **P 17 46 04.8 +0.3**
ORTC Ortega, Tolima 19.27 347 *eP* **P 17 46 03.6 -1.3**
ORTC Ortega, Tolima 19.27 347 *eP* **P 17 46 03.6 -1.3**
GR1C Gorgona, Isla 19.29 337 *eP* **P 17 46 05.6 +0.5**
GR1C Gorgona, Isla 19.29 337 *eP* **P 17 46 05.6 +0.5**
BO01 Tunca 19.33 181 P **P 17 46 06.1 +0.7**
YOTC Yotoco, Valle 19.62 343 *eP* **P 17 46 08.4 -0.4**
YOTC Yotoco, Valle 19.62 343 *eP* **P 17 46 08.4 -0.4**
ITQB Itaqui 19.63 141 P **P 17 46 09.2 +0.6**
ITQB Itaqui 19.63 141 *eP* **P 17 46 09.2 +0.6**
PCMB Pacaembu 19.70 112 *eP* **P 17 46 07.9 -1.7**
ANIL Santa Ana 19.87 346 *eP* **P 17 46 12.5 +0.9**
ANIL Santa Ana 19.87 346 *eP* **P 17 46 12.5 +0.9**
MALC Bahia Malaga 19.94 341 *eP* **P 17 46 13.0 +0.9**
MALC Bahia Malaga 19.94 341 *eP* **P 17 46 13.0 +0.9**
VA04 Juan Fernndez 19.94 200 P **P 17 46 13.0 +1.0**
GO05 Huala 19.97 183 P **P 17 46 12.8 +0.5**
GO05 IAmb IAmb 17 46 16.7
comp=Z,77nm,0.7s
ROSC El Rosal 19.99 350 P **P 17 46 12.3 -0.8**
comp=Z,18nm,0.4s,baz=183,slow=20,SNR=4.0
ROSC El Rosal 19.99 350 P **P 17 46 12.9 -0.2**
ROSC IAmb IAmb 17 46 19.6
comp=Z,37nm,0.5s
BOAV Boa Vista 20.05 31 *eP* **P 17 46 13.5 +0.2**
ITRB Iturama 20.09 106 *eP* **P 17 46 12.7 -1.0**
PTGB Pitanga 20.11 122 *eP* **P 17 46 14.5 +0.5**
PLMC San Jos del P 20.48 344 *eP* **P 17 46 16.1 -1.8**
PLMC San Jos del P 20.48 344 *eP* **P 17 46 16.1 -1.8**
ML02 Panimavida 20.70 181 P **P 17 46 20.5 +0.5**
PIZC Pizarro, Choco 20.85 341 *eP* **P 17 46 24.1 +2.4**
PIZC Pizarro, Choco 20.85 341⇑ *eP* **P 17 46 24.1 +2.4**
RUSC La Rusia 20.86 354 *eP* **P 17 46 17.1 -5.2**
MALB Monte Alegre 20.92 53 *eP* **P 17 46 22.0 -0.5**
ITAB Concordia 21.25 128 P **P 17 46 24.6 -1.3**
ITAB IAmb IAmb 17 46 28.2
comp=Z,85nm,0.7s
ITAB Concordia 21.25 128 *eP* **P 17 46 23.8 -2.2**
TAMC Tame, Arauca 21.30 357 *eP* **P 17 46 25.4 -1.2**
TAMC Tame, Arauca 21.30 357 *eP* **P 17 46 25.4 -1.2**
CBOC Ciudad Bolivar 21.34 346 *eP* **P 17 46 26.9 -0.3**
CBOC Ciudad Bolivar 21.34 346 *eP* **P 17 46 26.9 -0.3**
PTBC PUERTO BERRIO, 21.68 350 *eP* **P 17 46 25.3 -5.2**
PTBC PUERTO BERRIO, 21.68 350 *eP* **P 17 46 25.3 -5.2**
FRTB Fartura 21.72 116 *eP* **P 17 46 31.4 -0.6**
BI05 Punta Hualpn 21.78 185 P **P 17 46 31.3 -0.8**
IPMB Ipameri, GO 21.89 101 *eP* **P 17 46 30.5 -2.2**
BDFB Brasilia 22.02 95 P **P 17 46 33.4 -0.7**
comp=Z,33nm,0.4s,baz=261,slow=11,SNR=49
comp=Z,33nm,0.4s
BDFB Brasilia 22.02 95 P **P 17 46 33.1 -1.0**
BDFB IAmb IAmb 17 46 34.1
comp=Z,92nm,1.1s
BDFB Brasilia 22.02 95 P **P 17 46 33.1 -1.0**
BDFB pmax pmax
comp=Z,92nm,1.1s
BDFB Brasilia 22.02 95 *eP* **P 17 46 33.0 -1.0**
BB19B Bebedouro 22.04 109 *eP* **P 17 46 32.9 -1.3**
PEXB Peixe 22.09 85 *eP* **P 17 46 34.6 -0.1**
CPSB Cacapava Do Su 22.16 137 *eP* **P 17 46 34.0 -1.2**
PAMC Pamplona, Colo 22.25 355 *eP* **P 17 46 34.2 -2.5**
PAMC Pamplona, Colo 22.25 355 *eP* **P 17 46 34.2 -2.5**
PRPB Parauapebas 22.42 69 *eP* **P 17 46 37.3 -0.5**
ZARC Zaragoza, Cauc 22.68 350 P **P 17 46 36.9 -3.3**
ZARC Zaragoza, Cauc 22.68 350 *eP* **P 17 46 37.0 -3.1**
ZARC Zaragoza, Cauc 22.68 350 *eP* **P 17 46 37.0 -3.1**
TIJ01 Guaruva-PR 22.89 120 *eP* **P 17 46 43.7 +1.6**
PLTB Pedras Altas 22.95 140 P **P 17 46 42.0 -0.5**
PLTB Pedras Altas 22.95 140 *eP* **P 17 46 41.9 -0.5**
UREC San Jos de Ur 23.06 348 *eP* P 17 46 31.9 -12
UREC San Jos de Ur 23.06 348 *eP* P 17 46 31.9 -12
RCLB Rio Claro- Sao 23.26 112 *eP* **P 17 46 45.2 -0.1**
CNLB Canela 23.31 131 *eP* **P 17 46 45.6 -0.2**
SMTB Santa Maria do 23.53 78 *eP* **P 17 46 48.3 +0.5**
MCPB Macapa, AP 23.56 54 *eP* **P 17 46 49.5 +1.3**
SDV Santo Domingo 23.71 0 P **P 17 46 49.1 -0.5**
comp=Z,40nm,0.4s,baz=206,slow=7.7,SNR=30
comp=Z,40nm,0.4s
SDV Santo Domingo 23.71 0 *eP* **P 17 46 47.7 -2.0**
SDV Santo Domingo 23.71 0 *eP* **P 17 46 48.1 -1.5**
VAO Valinhos 23.91 113 *eP* **P 17 46 50.4 -0.9**
BAUV El Baul 23.93 7 P **P 17 46 49.4 -2.0**
PET01 Itanhaem-SP 24.01 116 *eP* **P 17 46 52.4 +0.3**
TER01 Tubaro-SC 24.20 127 *eP* **P 17 46 53.1 -0.6**
TRQA Tornquist 24.28 163 P **P 17 46 54.1 -0.4**
TRQA IAmb IAmb 17 46 58.6
comp=Z,53nm,0.6s
TRQA Tornquist 24.28 163 P **P 17 46 54.1 -0.4**
TRQA pmax pmax
comp=Z,53nm,0.6s
CAPC Capurgana 24.34 344 *eP* **P 17 46 55.4 +0.3**
CAPC Capurgana 24.34 344 *eP* **P 17 46 55.4 +0.3**
LR03 Panguipulli 24.59 183 P **P 17 46 57.3 0.0**
LR03 IAmb IAmb 17 46 58.4
comp=Z,81nm,0.9s
LR04 Corral 24.91 185 P **P 17 47 01.2 +1.1**
SJCC San Jacinto, C 25.09 350 P **P 17 46 59.1 -2.9**
PARB Paraibuna 25.19 113 *eP* **P 17 47 02.8 -0.1**
SDBA SAO DESIDERIO 25.32 87 *eP* **P 17 47 03.2 -0.9**
BSCB Bom Sucesso 25.48 107 *eP* **P 17 47 04.7 -0.8**
BCIP Isla Barro Col 25.60 339 P **P 17 47 07.1 +0.6**
BCIP Isla Barro Col 25.60 339 P **P 17 47 07.1 +0.6**
BCIP pmax pmax
comp=Z,89nm,0.8s
JANB Januaria 25.61 94 *eP* **P 17 47 05.5 -1.2**
PLCA Paso Flores 25.66 180 P **P 17 47 08.2 +1.3**
comp=Z,42nm,0.5s,baz=356,slow=9.8,SNR=184
PLCA PcP **PcP 17 50 34.0 +1.6**
comp=Z,5.6nm,0.7s,baz=8.2,slow=7.6,SNR=3.5
PLCA ScP **ScP 17 53 57.1 +2.6**
comp=Z,3.0nm,0.7s,baz=12,slow=4.6,SNR=8.4
comp=Z,42nm,0.5s
PLCA Paso Flores 25.66 180 P **P 17 47 07.9 +0.9**
PLCA Paso Flores 25.66 180 P **P 17 47 07.9 +0.9**
PLCA pmax pmax
comp=Z,178nm,1.4s
PLCA Paso Flores 25.66 180 *eP* **P 17 47 07.8 +0.9**
TMAB Tom-Au,PA,Br 25.69 63 *eP* **P 17 47 08.8 +1.4**
BIRV Birongo 25.69 10 P **P 17 47 05.9 -1.4**
LL04 Puerto Octay 25.87 183 P **P 17 47 09.1 +0.4**
LL04 IAmb IAmb 17 47 09.5
comp=Z,28nm,0.5s
LL03 Petrohue 26.10 183 P **P 17 47 11.4 +0.6**
LL03 IAmb IAmb 17 47 21.9
comp=Z,53nm,0.7s
ESAR Angra dos Reis 26.17 112 *eP* **P 17 47 10.3 -1.3**
MAN01 Angra dos Reis 26.57 111 *eP* **P 17 47 14.6 -0.7**
MDP Montagnes des 26.89 43 P **P 17 47 18.3 +0.1**
comp=Z,29nm,0.5s,baz=226,slow=8.8,SNR=58
comp=Z,29nm,0.5s
VAS01 Vassouras-RJ 26.92 110 *eP* **P 17 47 17.5 -0.9**
DUB01 Friburgo-RJ 27.86 109 *eP* **P 17 47 25.8 -1.0**
TOSP Speyside 28.03 22 P **P 17 47 26.4 -1.8**
LL02 Futaleuf 28.13 182 P **P 17 47 29.1 +0.3**
LL02 IAmb IAmb 17 47 30.0
comp=Z,34nm,1.1s
GO07 Milladeo Hill, 28.14 184 P **P 17 47 29.5 +0.5**
SJMB Sao Joao De Ma 28.60 102 *eP* **P 17 47 32.0 -1.3**
BSFB Barra de Sao F 28.92 102 *eP* **P 17 47 34.9 -1.3**
ROSB Rosrio 28.94 68 *eP* **P 17 47 36.6 +0.3**
ALF01 Guarapari-ES 29.18 105 *eP* **P 17 47 38.4 0.0**
RIB01 Linhares ES 29.38 103 *eP* **P 17 47 39.2 -1.1**
AY01 Puyuhuapi 29.39 183 P **P 17 47 40.1 +0.2**
AY01 IAmb IAmb 17 47 40.8
comp=Z,34nm,0.7s
NAN01 Guarapari, ES 29.57 100 *eP* **P 17 47 40.9 -1.1**
SVB Belmont 29.63 19 P **P 17 47 40.5 -1.9**
GUA01 Guaratinga, BA 29.89 97 *eP* **P 17 47 43.6 -1.1**
MCLT Moule a Chique 30.14 19 P **P 17 47 45.5 -1.4**
CMC01 Camacan, BA 30.21 95 *eP* **P 17 47 46.5 -1.1**
GDU01 Guandu, BA 30.29 92 *eP* **P 17 47 47.3 -1.1**
COYC Coyhaique 30.51 182 P **P 17 47 50.6 +0.7**
COYC pP **pP 17 48 32.7 +3.4**
MPOM Morne Pois Mar 30.86 19 P **P 17 47 51.6 -1.5**
FDF Fort de France 31.04 18 P **P 17 47 53.0 -1.8**
FDF Fort de France 31.04 18 P **P 17 47 53.0 -1.8**
SVN Savane Anatole 31.13 18 P **P 17 47 53.0 -2.6**
NBPB Pedra_Branca-C 32.10 76 *eP* **P 17 48 04.7 +0.4**
CBE Ff, Capester 32.17 17 P **P 17 48 01.2 -3.5**
CBE IAmb IAmb 17 48 20.3
comp=Z,93nm,1.0s
GDHS Morne Mazeau, 32.32 16 P **P 17 48 02.7 -3.3**
GDHS IAmb IAmb 17 48 06.1
comp=Z,80nm,0.9s
NBMA Muriti-CE 32.32 80 *eP* **P 17 48 05.5 -0.7**
NBLA Lagarto - SE 32.42 87 *eP* **P 17 48 05.8 -1.2**
NBMO Morrinhos-CE 32.48 72 *eP* **P 17 48 07.6 +0.1**
ICMP Isla Caja de M 32.93 8 P **P 17 48 08.7 -2.6**
ICMP IAmb IAmb 17 48 13.8
comp=Z,85nm,0.8s
MLPR Magueyes Islan 32.95 7 P **P 17 48 09.0 -2.4**
MLPR IAmb IAmb 17 48 12.2
comp=Z,48nm,0.7s
CRPR Cabo Rojo, PR 32.98 7 P **P 17 48 09.0 -2.7**
CRPR IAmb IAmb 17 48 10.0
comp=Z,30nm,0.6s
OBIP Obispado Ponce 33.08 7 P **P 17 48 09.7 -2.8**
OBIP IAmb IAmb 17 48 10.9
comp=Z,92nm,1.4s
CELP Cerrillos 33.11 7 P **P 17 48 10.0 -2.9**
CELP IAmb IAmb 17 48 15.4
comp=Z,54nm,0.5s
PDPR Patillas Dam, 33.13 8 P **P 17 48 10.3 -2.7**
PDPR IAmb IAmb 17 48 13.4
comp=Z,32nm,0.7s
BANI BANI 33.16 1 P **P 17 48 10.8 -2.7**
SJG San Juan 33.20 8 P **P 17 48 10.8 -2.8**
SJG IAmb IAmb 17 48 16.9
comp=Z,30nm,0.8s
SJG San Juan 33.20 8 P **P 17 48 10.9 -2.8**
SJG pmax pmax
comp=Z,30nm,0.9s
HUMP Col San Antoni 33.28 9 P **P 17 48 11.4 -2.9**
HUMP IAmb IAmb 17 48 14.6
comp=Z,27nm,0.7s
CBYP Canovanas 33.40 9 P **P 17 48 12.6 -2.8**
CBYP IAmb IAmb 17 48 13.2
comp=Z,55nm,0.6s
GCPR Guaynabo City 33.41 8 P **P 17 48 12.6 -2.8**
GCPR IAmb IAmb 17 48 14.6
comp=Z,52nm,0.6s
AGPR Aguadilla, PR 33.44 6 P **P 17 48 12.8 -2.9**
AGPR IAmb IAmb 17 48 33.8
comp=Z,131nm,1.2s
CUPR Culebra, Puert 33.53 10 P **P 17 48 13.3 -3.1**
CUPR IAmb IAmb 17 48 14.9
comp=Z,65nm,0.6s
DR12 Loma Pena Alta 33.59 2 P **P 17 48 14.2 -2.8**
STVI Saint Thomas 33.62 10 P **P 17 48 13.8 -3.5**
STVI IAmb IAmb 17 48 17.3
comp=Z,34nm,0.4s
ANWB Willy Bob 33.65 16 P **P 17 48 14.1 -3.4**
SMRT St. Maarten 33.70 13 P **P 17 48 14.3 -3.6**
SDDR Presa de Saban 33.75 359 P **P 17 48 16.8 -1.7**
NBAN Anadia - AL 34.14 85 *eP* **P 17 48 20.9 -1.0**
MTO3 Montecristo 34.47 327 P **P 17 48 26.0 +1.1**
NBRF Rio Formoso - 35.47 84 *eP* **P 17 48 32.3 -0.9**
RCBR Riachuelo 35.49 79 *eP* **P 17 48 34.1 +0.6**
RCBR Riachuelo 35.49 79 P **P 17 48 34.0 +0.6**
RCBR pP **pP 17 49 15.8 +1.9**
MG02 Cerro Sombrero 37.73 178 P **P 17 48 53.4 +1.6**
EFI East Falkland 38.01 167 P **P 17 48 54.8 +0.6**
EFI IAmb IAmb 17 48 56.3
comp=Z,82nm,0.7s
EFI East Falkland 38.01 167 P **P 17 48 54.8 +0.6**
EFI pmax pmax
comp=Z,82nm,0.7s
EFI East Falkland 38.01 167 P **P 17 48 54.9 +0.8**
MG03 Isla Dawson 38.78 180 P **P 17 49 02.1 +1.6**
MG03 IAmb IAmb 17 49 03.0
comp=Z,72nm,0.7s
DSPA Despedida 38.94 178 P **P 17 49 03.5 +1.7**
SOR Soroa 39.39 342 P **P 17 49 06.2 +0.2**
SOR Soroa 39.39 342 P **P 17 49 06.2 +0.2**
SOR pmax pmax
comp=Z,135nm,0.8s
USHA Ushuaia 39.81 178 P **P 17 49 10.7 +1.6**
comp=Z,29nm,0.5s,baz=7.9,slow=7.1,SNR=10
comp=Z,29nm,0.5s
061Z Ochoppi 41.77 346 P **P 17 49 25.0 -0.4**
DWPF Disney Wildern 44.05 346 P **P 17 49 43.1 -0.6**
DWPF Disney Wildern 44.05 346 P **P 17 49 42.8 -1.0**
baz=165
DWPF Disney Wildern 44.05 346 P **P 17 49 43.0 -0.6**
656A Willston 45.52 346 P **P 17 49 54.7 -0.5**
656A IAmb IAmb 17 49 55.7
comp=Z,120nm,1.1s
456A Hilliard 46.70 347 P **P 17 50 03.9 -0.6**
553A Crawfordville 46.78 344 P **P 17 50 05.1 -0.1**
553A IAmb IAmb 17 50 05.7
comp=Z,81nm,0.6s
BBSR BB Station 47.45 7 P **P 17 50 08.3 -2.0**
451A Vernon 47.55 342 P **P 17 50 10.9 -0.2**
451A IAmb IAmb 17 50 11.3
comp=Z,53nm,0.6s
TIGA Tifton 47.75 345 P **P 17 50 11.4 -1.2**
TIGA IAmb IAmb 17 50 12.9
comp=Z,79nm,1.1s
TIGA Tifton 47.75 345 P **P 17 50 11.9 -0.7**
baz=163
255A Hazlehurst 47.96 347 P **P 17 50 13.3 -0.8**
255A IAmb IAmb 17 50 14.5
comp=Z,71nm,0.7s
352A Blakely 48.13 344 P **P 17 50 14.8 -0.8**
352A IAmb IAmb 17 50 15.9
comp=Z,117nm,0.8s
BRAL Brewton 48.46 341 P **P 17 50 17.8 -0.2**
BRAL Brewton 48.46 341 P **P 17 50 17.9 -0.2**
baz=159,SNR=12
CSU Charleston Sou 48.51 350 P **P 17 50 17.5 -0.9**
NHSC New Hope 48.64 350 P **P 17 50 18.8 -0.6**
NHSC New Hope 48.64 350 P **P 17 50 18.5 -0.9**
baz=168,SNR=5.8
154A Montrose 48.76 346 P **P 17 50 18.8 -1.5**
250A Grady 48.98 343 P **P 17 50 21.1 -0.9**
152A Waverly Hall 49.21 344 P **P 17 50 22.5 -1.2**
152A IAmb IAmb 17 50 23.7
comp=Z,139nm,0.9s
Y58A Scranton 49.34 350 P **P 17 50 23.6 -1.0**
ORCD Orcadas 49.45 163 P **P 17 50 24.2 -0.9**
346A Big Creek Wild 49.45 339 P **P 17 50 25.0 -0.6**
346A IAmb IAmb 17 50 26.4
comp=Z,109nm,0.8s
Y57A Sumter 49.57 350 P **P 17 50 25.4 -1.0**
GOGA Godfrey 49.61 346 P **P 17 50 25.6 -1.1**
GOGA IAmb IAmb 17 50 26.6
comp=Z,39nm,1.0s
GOGA Godfrey 49.61 346 P **P 17 50 25.6 -1.1**
GOGA pmax pmax
comp=Z,39nm,1.0s
GOGA Godfrey 49.61 346 P **P 17 50 25.6 -1.1**
baz=164,SNR=11
X58A Rowland 49.92 351 P **P 17 50 27.1 -1.9**
X58A IAmb IAmb 17 50 28.5
comp=Z,60nm,1.0s
Z51A Franklin 49.94 344 P **P 17 50 27.9 -1.4**
Z51A IAmb IAmb 17 50 29.2
comp=Z,144nm,1.4s
344A Westbrook Farm 49.97 338 P **P 17 50 29.7 +0.2**
344A IAmb IAmb 17 50 30.5
comp=Z,85nm,0.8s
JSC Jenkinsville 49.98 349 P **P 17 50 28.7 -0.9**
JSC IAmb IAmb 17 50 29.0
comp=Z,24nm,0.6s
JSC Jenkinsville 49.98 349 P **P 17 50 28.7 -0.9**
JSC pmax pmax
comp=Z,24nm,0.6s
HODGE Hodges 50.13 348 P **P 17 50 29.7 -1.0**
HODGE IAmb IAmb 17 50 30.6
comp=Z,36nm,0.9s
LRAL Lakeview Retre 50.18 342 P **P 17 50 29.8 -1.2**
LRAL IAmb IAmb 17 50 31.0
comp=Z,58nm,0.8s
LRAL Lakeview Retre 50.18 342 P **P 17 50 30.1 -1.0**
baz=159,SNR=28
Y52A Lilburn 50.18 346 P **P 17 50 29.6 -1.5**
Y52A IAmb IAmb 17 50 30.8
comp=Z,43nm,0.9s
BIRD Birdtown, Kers 50.19 350 P **P 17 50 29.8 -1.3**
BIRD IAmb IAmb 17 50 30.9
comp=Z,90nm,0.7s
146A Union 50.46 340 P **P 17 50 32.6 -0.5**
342A Flagon Creek P 50.50 336 P **P 17 50 33.8 +0.3**
342A IAmb IAmb 17 50 35.2
comp=Z,84nm,0.8s
VBMS Vicksburg 50.58 338 P **P 17 50 33.4 -0.6**
VBMS IAmb IAmb 17 50 34.6
comp=Z,62nm,0.7s
VBMS Vicksburg 50.58 338 P **P 17 50 33.7 -0.3**
baz=155
W57A Gilead 50.61 350 P **P 17 50 32.8 -1.5**
W57A IAmb IAmb 17 50 33.8
comp=Z,64nm,0.8s
PAULI Pauline 50.61 348 P **P 17 50 33.1 -1.1**
PAULI IAmb IAmb 17 50 34.3
comp=Z,56nm,1.1s
Z47A Carrollton 50.66 341 P **P 17 50 33.2 -1.4**
HKT Hockley 50.76 332⇓ *eP* **P 17 50 36.5 +1.1**
HKT pmax pmax
comp=Z,4.0nm,0.9s
Y49A Blount Mountai 50.79 343 P **P 17 50 34.3 -1.3**
KMSC Kings Mountain 50.83 349 P **P 17 50 34.8 -1.2**
KMSC IAmb IAmb 17 50 36.0
comp=Z,58nm,0.9s
KMSC Kings Mountain 50.83 349 P **P 17 50 34.9 -1.0**
baz=167,SNR=13
BG3 Lake Jocassee 51.01 347 P **P 17 50 36.2 -1.0**
BG3 IAmb IAmb 17 50 37.4
comp=Z,38nm,0.9s
X51A Calhoun 51.05 345 P **P 17 50 36.2 -1.3**
X51A IAmb IAmb 17 50 36.8
comp=Z,33nm,0.6s
V58A Windy Hill, Pi 51.10 351 P **P 17 50 36.1 -1.8**
V58A IAmb IAmb 17 50 37.2
comp=Z,29nm,0.8s
833A Chaparral WMA, 51.16 327 P **P 17 50 38.9 +0.4**
833A Chaparral WMA, 51.16 327 P **P 17 50 39.0 +0.4**
baz=143,SNR=7.1
FPAL Fort Paine 51.21 344 P **P 17 50 37.1 -1.7**
FPAL IAmb IAmb 17 50 38.9
comp=Z,28nm,0.8s
W52A Murphy 51.33 346 P **P 17 50 38.1 -1.6**
W52A IAmb IAmb 17 50 39.5
comp=Z,43nm,1.0s
143A Socs Landing, 51.34 338 P **P 17 50 38.9 -0.7**
143A IAmb IAmb 17 50 42.2
comp=Z,55nm,0.5s
U59A Littleton 51.48 353 P **P 17 50 38.7 -1.9**
V55A Taylorsville 51.50 349 P **P 17 50 39.9 -1.0**
V55A IAmb IAmb 17 50 41.2
comp=Z,75nm,0.8s
X48A Hartselle 51.52 343 P **P 17 50 39.8 -1.3**
X48A IAmb IAmb 17 50 40.4
comp=Z,75nm,0.6s
V53A Saluda 51.64 348 P **P 17 50 40.5 -1.5**
V53A IAmb IAmb 17 50 41.8
comp=Z,34nm,0.8s
Y45A Yeager Farm, C 51.74 340 P **P 17 50 41.8 -0.9**
Y45A IAmb IAmb 17 50 43.0
comp=Z,78nm,0.7s
W50A Signal Mountai 51.76 345 P **P 17 50 41.3 -1.5**
W50A IAmb IAmb 17 50 42.6
comp=Z,77nm,1.1s
NATX Nacogdoches 51.79 334 P **P 17 50 43.1 0.0**
NATX IAmb IAmb 17 50 45.4
comp=Z,56nm,0.6s
NATX Nacogdoches 51.79 334 P **P 17 50 43.5 +0.4**
baz=150,SNR=6.4
CPCT Cooper Cave 51.81 346 P **P 17 50 41.5 -1.6**
CPCT IAmb IAmb 17 50 42.8
comp=Z,31nm,0.7s
TKL Tuckaleechee C 51.83 347 P **P 17 50 41.7 -1.7**
TKL IAmb IAmb 17 50 42.9
comp=Z,41nm,0.8s
TKL Tuckaleechee C 51.83 347 P **P 17 50 41.7 -1.7**
TKL pmax pmax
comp=Z,41nm,0.8s
U56A King 51.84 350 P **P 17 50 42.8 -0.6**
U56A IAmb IAmb 17 50 43.6
comp=Z,71nm,0.9s
SWET Sewanee 51.94 344 P **P 17 50 42.8 -1.4**
V52A Sevierville 51.97 347 P **P 17 50 43.0 -1.4**
V52A IAmb IAmb 17 50 44.0
comp=Z,82nm,0.8s
T59A Double "B" Far 52.06 353 P **P 17 50 43.0 -1.9**
T59A IAmb IAmb 17 50 44.1
comp=Z,53nm,0.7s
V51A Loudon 52.10 346 P **P 17 50 43.5 -1.8**
V51A IAmb IAmb 17 50 45.0
comp=Z,43nm,0.9s
U54A Nelsons Funny 52.26 349 P **P 17 50 45.3 -1.2**
U54A IAmb IAmb 17 50 46.5
comp=Z,93nm,0.9s
OXF Oxford 52.29 341 P **P 17 50 44.4 -2.3**
OXF IAmb IAmb 17 50 46.6
comp=Z,113nm,1.2s
OXF Oxford 52.29 341 P **P 17 50 44.4 -2.3**
OXF pmax pmax
comp=Z,113nm,1.3s
OXF Oxford 52.29 341 P **P 17 50 44.8 -1.9**
baz=157,SNR=8.3
T57A Hurt 52.30 351 P **P 17 50 45.1 -1.6**
T57A IAmb IAmb 17 50 46.4
comp=Z,51nm,1.0s
PLAL Pickwick Lake 52.32 342 P **P 17 50 44.9 -2.0**
PLAL IAmb IAmb 17 50 46.2
comp=Z,40nm,0.8s
Z41A Richland Creek 52.36 337 P **P 17 50 47.1 -0.1**
baz=153
237A Washetta, Mont 52.49 333 P **P 17 50 49.0 +0.7**
237A IAmb IAmb 17 50 50.8
comp=Z,52nm,0.5s
CCAR Cane Creek 52.56 338 P **P 17 50 48.7 0.0**
CCAR IAmb IAmb 17 50 49.6
comp=Z,84nm,1.1s
TZTN Tazewell 52.63 347 P **P 17 50 47.7 -1.5**
TZTN IAmb IAmb 17 50 48.8
comp=Z,35nm,0.8s
TZTN Tazewell 52.63 347 P **P 17 50 47.8 -1.4**
baz=164,SNR=12
V48A Smith Brothers 52.67 344 P **P 17 50 48.2 -1.3**
V48A IAmb IAmb 17 50 49.1
comp=Z,73nm,0.7s
BLA Blacksburg 52.69 350 P **P 17 50 48.6 -1.1**
BLA IAmb IAmb 17 50 50.7
comp=Z,33nm,0.9s
BLA Blacksburg 52.69 350 P **P 17 50 48.6 -1.1**
BLA pmax pmax
comp=Z,33nm,0.9s
BLA Blacksburg 52.69 350 P **P 17 50 48.8 -0.9**

baz=168,SNR=6.0
JSRW J. Sargeant Re 52.81 353 P **P** **17 50 49.2 -1.2**
W45A Hickory Valley 52.82 341 P **P** **17 50 49.3 -1.2**
WLAR White Oak Lake 52.85 337 P **P** **17 50 51.6 +0.7**
WLAR IAmb IAmb 17 50 52.5
comp=Z,70nm,0.7s
CLTN Cedars of Leba 52.87 344 P **P** **17 50 49.2 -1.7**
CLTN IAmb IAmb 17 50 50.9
comp=Z,58nm,0.7s
S57A Dark Hollow, R 53.01 352 P **P** **17 50 50.6 -1.4**
S57A IAmb IAmb 17 50 51.6
comp=Z,37nm,0.8s
R58B Mineral 53.08 353 P **P** **17 50 50.2 -2.2**
JCT Junction City 53.11 328 P **P** **17 50 51.7 -1.2**
JCT Junction City 53.11 328 P **P** **17 50 51.7 -1.2**
JCT pmax pmax
comp=Z,6.0nm,0.9s
U49A Red Boiling Sp 53.12 345 P **P** **17 50 51.1 -1.8**
SMAI San Martin Ant 53.17 178 P **P** **17 50 54.0 +1.4**
SMAI IAmb IAmb 17 50 55.4
comp=Z,43nm,0.8s
WHTX Lake Whitney, 53.22 332 P **P** **17 50 54.7 +1.1**
baz=147
Z38A Mt. Pleasant 53.23 335 P **P** **17 50 53.9 +0.3**
Z38A IAmb IAmb 17 50 55.6
comp=Z,60nm,0.6s
WVT Waverly 53.31 343 P **P** **17 50 52.1 -2.1**
WVT IAmb IAmb 17 50 53.2
comp=Z,65nm,0.6s
WVT Waverly 53.31 343 P **P** **17 50 52.1 -2.1**
WVT pmax pmax
comp=Z,65nm,0.6s
WVT Waverly 53.31 343 P **P** **17 50 52.3 -1.9**
baz=159
WVT Waverly 53.31 343 P **P** **17 50 52.3 -1.9**
T50A Nancy 53.38 346 P **P** **17 50 53.0 -1.6**
T50A IAmb IAmb 17 50 54.0
comp=Z,49nm,0.7s
S54A Dingess, Beckl 53.41 350 P **P** **17 50 53.7 -1.2**
UALR University of 53.54 338 P **P** **17 50 55.1 -0.7**
UALR IAmb IAmb 17 50 56.1
comp=Z,60nm,0.8s
HBAR Harrisburg 53.66 340 P **P** **17 50 56.2 -0.5**
R55A Marlinton 53.69 351 P **P** **17 50 56.4 -0.6**
R55A IAmb IAmb 17 50 58.3
comp=Z,43nm,1.2s
S51A Beattyville 53.70 347 P **P** **17 50 55.2 -1.8**
S51A IAmb IAmb 17 50 56.3
comp=Z,35nm,0.8s
MIAR Mount Ida 53.79 337 P **P** **17 50 57.1 -0.6**
MIAR IAmb IAmb 17 50 58.3
comp=Z,29nm,0.8s
MIAR Mount Ida 53.79 337 P **P** **17 50 57.1 -0.6**
MIAR pmax pmax
comp=Z,29nm,0.9s
MIAR Mount Ida 53.79 337 P **P** **17 50 57.2 -0.6**
baz=152,SNR=18
W41B Gary Mavity, V 53.86 338 P **P** **17 50 57.3 -0.9**
W41B IAmb IAmb 17 50 58.3
comp=Z,39nm,0.7s
W41B Gary Mavity, V 53.86 338 P **P** **17 50 57.4 -0.8**
baz=154,SNR=23
T47A Sharon Grove 53.92 344 P **P** **17 50 56.9 -1.7**
WHAR Wooly Hollow 53.98 338 P **P** **17 50 57.7 -1.3**
WHAR IAmb IAmb 17 50 59.2
comp=Z,52nm,0.9s
R53A Hurricane 54.05 349 P **P** **17 50 58.0 -1.4**
PVMO Portageville 54.13 341 P **P** **17 50 59.6 -0.5**
Z35A Perchaven, San 54.26 333 P **P** **17 51 01.4 +0.3**
Z35A IAmb IAmb 17 51 03.4
comp=Z,39nm,0.9s
TXAR Lajitas Array 54.28 324 P **P** **17 51 02.0 +0.5**
comp=Z,2.1nm,0.5s,baz=151,slow=9.4,SNR=39
comp=Z,2.1nm,0.5s
TXAR Lajitas Array 54.28 324 P **P** **17 51 01.8 +0.3**
TX31 Lajitas Ar. Si 54.28 324 P **P** **17 51 01.1 -0.4**
TX32 Lajitas Array 54.28 324 P **P** **17 51 01.1 -0.4**
LCAR Lake Charles 54.29 340 P **P** **17 50 59.8 -1.5**
LCAR IAmb IAmb 17 51 01.0
comp=Z,41nm,0.8s
Q56A Snyder Ridge, 54.30 352 P **P** **17 51 00.4 -0.9**
Q56A IAmb IAmb 17 51 01.6
comp=Z,32nm,0.8s
PARMO Parma 54.38 341 P **P** **17 51 01.1 -0.8**
W39A Magazine 54.45 337 P **P** **17 51 02.3 -0.1**
W39A IAmb IAmb 17 51 03.6
comp=Z,75nm,1.2s
W39A Magazine 54.45 337 P **P** **17 51 02.3 -0.1**
baz=152,SNR=15
FCAR Ozark Folk Cen 54.46 339 P **P** **17 51 01.2 -1.3**
FCAR IAmb IAmb 17 51 02.2
comp=Z,68nm,0.6s
R50A Paris 54.47 347 P **P** **17 51 00.9 -1.6**
R50A IAmb IAmb 17 51 02.0
comp=Z,50nm,0.9s
Q54A Coxs Mills 54.49 350 P **P** **17 51 01.2 -1.4**
Q54A IAmb IAmb 17 51 02.4
comp=Z,59nm,0.8s
X37A Clayton 54.54 335 P **P** **17 51 03.5 +0.4**
X37A IAmb IAmb 17 51 04.7
comp=Z,30nm,0.6s
P57A Homestead Farm 54.59 353 P **P** **17 51 02.0 -1.4**
R49A Shelbyville 54.67 346 P **P** **17 51 02.4 -1.6**
R49A IAmb IAmb 17 51 03.2
comp=Z,32nm,0.7s
PBMO Poplar Bluff 54.70 341 P **P** **17 51 02.9 -1.3**
Q52A Bidwell 54.72 349 P **P** **17 51 02.5 -1.8**
Q52A IAmb IAmb 17 51 03.9
comp=Z,56nm,0.8s
ABTX Abilene, Hawle 54.78 330 P **P** **17 51 04.8 -0.1**
ABTX IAmb IAmb 17 51 06.5
comp=Z,29nm,1.1s
ABTX Abilene, Hawle 54.78 330 P **P** **17 51 05.2 +0.3**
baz=145,SNR=6.3
WUPA West Chester U 54.81 356 P **P** **17 51 03.2 -1.7**
WUPA IAmb IAmb 17 51 03.9
comp=Z,20nm,0.7s
MVL Millersville 54.94 355 P **P** **17 51 04.2 -1.7**
MVL IAmb IAmb 17 51 05.1
comp=Z,31nm,0.7s
Q51A Peebles 54.98 348 P **P** **17 51 04.4 -1.8**
Q51A IAmb IAmb 17 51 05.5
comp=Z,43nm,1.0s
MCWV Mont Chateau 55.00 352 P **P** **17 51 05.3 -1.0**
MCWV IAmb IAmb 17 51 06.0
comp=Z,29nm,0.6s
MCWV Mont Chateau 55.00 352 P **P** **17 51 05.3 -1.0**
baz=169
P53A Whipple 55.07 350 P **P** **17 51 05.7 -1.1**
S44A Carbondale 55.18 342 P **P** **17 51 06.5 -1.1**
SIUC Southern Illin 55.19 342 P **P** **17 51 06.5 -1.2**
P52A Corning 55.34 349 P **P** **17 51 07.0 -1.8**
P52A Corning 55.34 349 P **P** **17 51 07.3 -1.5**
baz=166,SNR=15
P51A Williamsport 55.37 349 P **P** **17 51 06.9 -2.1**
P51A IAmb IAmb 17 51 08.0
comp=Z,38nm,0.8s
LUPA Lehigh Univers 55.45 356 P **P** **17 51 07.4 -2.1**
LUPA IAmb IAmb 17 51 09.9
comp=Z,16nm,0.7s
HHAR Hobbs 55.47 337 P **P** **17 51 08.6 -1.2**
HHAR IAmb IAmb 17 51 10.0
comp=Z,52nm,1.1s
X34A Smith Ranch, M 55.59 333 **P** **17 51 10.5 -0.1**
X34A IAmb IAmb 17 51 12.6
comp=Z,51nm,0.6s
O54A Avella 55.59 351 P **P** **17 51 08.9 -1.6**
MGMO Mountain Grove 55.65 339 P **P** **17 51 10.0 -1.1**
MGMO IAmb IAmb 17 51 11.2
comp=Z,72nm,0.8s
SSPA Standing Stone 55.72 354 P **P** **17 51 10.1 -1.4**
SSPA Standing Stone 55.72 354 P **P** **17 51 10.0 -1.4**
baz=172
SSPA Standing Stone 55.72 354 P **P** **17 51 10.2 -1.3**
P49A Miami Univ. Ec 55.76 347 P **P** **17 51 09.4 -2.3**
P49A Miami Univ. Ec 55.76 347 P **P** **17 51 09.6 -2.1**
baz=163,SNR=22
O52A Adamsville 55.76 350 P **P** **17 51 10.2 -1.6**
U38A Gravette 55.77 337 P **P** **17 51 10.9 -1.0**
U38A IAmb IAmb 17 51 13.0
comp=Z,40nm,1.4s
PAL Palisades 55.77 357 P **P** **17 51 10.4 -1.4**
baz=176
O53A New Philadelph 55.79 350 P **P** **17 51 10.2 -1.7**
O53A New Philadelph 55.79 350 P **P** **17 51 10.5 -1.4**
baz=168,SNR=16
N58A Sunbury 55.80 355 P **P** **17 51 10.3 -1.6**
N58A IAmb IAmb 17 51 11.4
comp=Z,28nm,0.8s
FVM French Village 55.80 341 P **P** **17 51 11.0 -1.1**
FVM French Village 55.80 341 P **P** **17 51 11.0 -1.1**
BLO Bloomington 55.83 345 P **P** **17 51 10.4 -1.9**
BLO Bloomington 55.83 345 P **P** **17 51 10.4 -1.9**
BLO pmax pmax
comp=Z,95nm,0.7s
P48A Milroy 55.84 346 P **P** **17 51 09.8 -2.6**
P48A IAmb IAmb 17 51 10.8
comp=Z,46nm,0.7s
TUL1 Leonard 55.85 336 P **P** **17 51 12.8 +0.3**
TUL1 IAmb IAmb 17 51 14.2
comp=Z,22nm,0.7s
TUL1 Leonard 55.85 336 P **P** **17 51 12.4 -0.1**
baz=150,SNR=6.2
ODNJ Ogdensburg 55.89 357 P **P** **17 51 10.6 -2.0**
ODNJ IAmb IAmb 17 51 11.3
comp=Z,42nm,1.5s
WSPT Westport, CT 55.91 358 P **P** **17 51 10.9 -1.8**
WSPT IAmb IAmb 17 51 11.7
comp=Z,36nm,0.7s
FNO Franklin 55.96 334 **P** **17 51 13.3 0.0**
YLE Yale 56.04 358 P **P** **17 51 11.9 -1.8**
YLE IAmb IAmb 17 51 12.9
comp=Z,48nm,0.7s
ACSO Alum Creek Sta 56.08 349 P **P** **17 51 12.2 -1.8**
ACSO IAmb IAmb 17 51 13.3
comp=Z,87nm,1.0s
ACSO Alum Creek Sta 56.08 349 P **P** **17 51 12.3 -1.7**
baz=166,SNR=14
M63A Gales Ferry 56.11 359 P **P** **17 51 12.0 -2.1**
M63A IAmb IAmb 17 51 38.9
comp=Z,33nm,1.1s
WMOK Wichita Mounta 56.13 332 P **P** **17 51 14.8 +0.3**
WMOK IAmb IAmb 17 51 16.3
comp=Z,16nm,0.5s
WMOK Wichita Mounta 56.13 332 P **P** **17 51 14.8 +0.3**
WMOK pmax pmax
comp=Z,16nm,0.5s
WMOK Wichita Mounta 56.13 332 P **P** **17 51 15.6 +1.1**
baz=147,SNR=10
CCM Cathedral Cave 56.13 341 P **P** **17 51 13.2 -1.2**
CCM IAmb IAmb 17 51 14.9
comp=Z,110nm,1.2s
CCM Cathedral Cave 56.13 341 P **P** **17 51 13.2 -1.2**
CCM pmax pmax
comp=Z,110nm,1.2s
CCM Cathedral Cave 56.13 341 P **P** **17 51 13.1 -1.2**
baz=156
CCM Cathedral Cave 56.13 341 P **P** **17 51 13.2 -1.2**
CCM x x 17 52 10.6
Q44A Meyer Farm, Va 56.24 343 P **P** **17 51 13.3 -1.8**
N53A Lisbon 56.27 351 P **P** **17 51 13.9 -1.4**
O49A Covington 56.30 348 P **P** **17 51 13.4 -2.2**
O49A IAmb IAmb 17 51 14.6
comp=Z,67nm,0.9s
M57A Sunshine Farm, 56.33 354 P **P** **17 51 14.5 -1.2**
M57A IAmb IAmb 17 51 15.5
comp=Z,24nm,0.7s
SLM Saint Louis 56.35 342 P **P** **17 51 14.6 -1.3**
SLM IAmb IAmb 17 51 16.2
comp=Z,72nm,0.8s
SLM Saint Louis 56.35 342 P **P** **17 51 14.6 -1.3**
SLM pmax pmax
comp=Z,72nm,0.9s
P46A Rosedale 56.42 345 P **P** **17 51 13.6 -2.8**
KSCT Kent School, K 56.47 358 P **P** **17 51 14.4 -2.3**
KSCT IAmb IAmb 17 51 16.2
comp=Z,18nm,0.8s
S39A Bolivar 56.50 339 P **P** **17 51 15.7 -1.3**
O48B Farmland 56.55 347 P **P** **17 51 15.5 -1.8**
baz=163,SNR=16
BRYW Bryant College 56.62 359 P **P** **17 51 16.0 -1.8**
BRYW IAmb IAmb 17 51 16.9
comp=Z,55nm,0.8s
N51A Ashland 56.63 350 P **P** **17 51 16.1 -1.8**
M55A Ridgway 56.64 353 P **P** **17 51 16.2 -1.8**
M55A IAmb IAmb 17 51 17.6
comp=Z,31nm,0.9s
R40A Maddies Statio 56.68 340 P **P** **17 51 17.1 -1.2**
M53A WI Miller and 56.87 351 P **P** **17 51 18.2 -1.3**
M53A WI Miller and 56.87 351 P **P** **17 51 18.2 -1.3**
baz=168,SNR=31
N49A Columbus Grove 56.98 348 P **P** **17 51 18.4 -1.9**
ALLY Alegheny Colle 57.00 352 P **P** **17 51 19.0 -1.5**
T35A Sooner Cattle 57.02 336 P **P** **17 51 19.8 -0.9**
T35A IAmb IAmb 17 51 21.7
comp=Z,47nm,1.3s
L59A Walton 57.02 356 P **P** **17 51 19.1 -1.5**
L59A IAmb IAmb 17 51 20.1
comp=Z,32nm,0.8s
MNTX Cornudas Mount 57.03 325 P **P** **17 51 20.6 -0.3**
MNTX Cornudas Mount 57.03 325 P **P** **17 51 21.3 +0.4**
baz=139,SNR=14
P43A Skaggs, Pawnee 57.07 343 P **P** **17 51 19.1 -1.8**
M52A Chesterland 57.07 351 P **P** **17 51 19.3 -1.7**
M52A IAmb IAmb 17 51 20.4
comp=Z,61nm,0.7s
BINY Binghamton 57.09 355 P **P** **17 51 19.4 -1.7**
BINY IAmb IAmb 17 51 20.3
comp=Z,40nm,0.6s
BINY Binghamton 57.09 355 P **P** **17 51 19.8 -1.4**
baz=174,SNR=11
SFIN Lafayette 57.11 345 P **P** **17 51 18.7 -2.6**
SFIN Lafayette 57.11 345 P **P** **17 51 19.0 -2.3**
baz=161,SNR=44
L56A Greenwood 57.17 354 P **P** **17 51 19.9 -1.8**
L56A IAmb IAmb 17 51 21.0
comp=Z,36nm,0.6s
L61B Northampton 57.17 358 P **P** **17 51 19.8 -1.9**
L61B IAmb IAmb 17 51 20.5
comp=Z,21nm,0.7s
L61B Northampton 57.17 358 P **P** **17 51 19.6 -2.0**
baz=178
HRV Adam Dziewonsk 57.20 359 P **P** **17 51 20.1 -1.7**
HRV IAmb IAmb 17 51 21.1
comp=Z,30nm,0.8s
HRV Adam Dziewonsk 57.20 359 P **P** **17 51 20.2 -1.7**
HRV pmax pmax
comp=Z,30nm,0.8s
HRV Adam Dziewonsk 57.20 359 P **P** **17 51 20.2 -1.7**
baz=179
HRV Adam Dziewonsk 57.20 359 P **P** **17 51 20.5 -1.3**
M50A Fremont 57.23 349 P **P** **17 51 20.5 -1.5**
M50A IAmb IAmb 17 51 21.2
comp=Z,62nm,0.7s
O44A Mansfield 57.25 344 P **P** **17 51 19.7 -2.6**
O44A IAmb IAmb 17 51 20.8
comp=Z,51nm,0.6s
N47A Urbana 57.26 347 P **P** **17 51 19.8 -2.5**
MSTX Muleshoe 57.40 329 P **P** **17 51 23.5 -0.1**
MSTX IAmb IAmb 17 51 28.6
comp=Z,18nm,0.6s
MSTX Muleshoe 57.40 329 P **P** **17 51 24.1 +0.5**
baz=142
ERPA Erie 57.44 352 P **P** **17 51 22.3 -1.2**
baz=169,SNR=21
TRY Troy 57.48 358 P **P** **17 51 22.1 -1.6**
TRY IAmb IAmb 17 51 23.3
comp=Z,46nm,0.8s
WVNY West Valley, N 57.55 353 P **P** **17 51 22.8 -1.5**
WVNY IAmb IAmb 17 51 23.9
comp=Z,39nm,0.8s
AMTX Amarillo 57.60 330 P **P** **17 51 25.5 +0.6**
baz=144
K57A Scipio Center 57.66 355 P **P** **17 51 23.4 -1.7**
K57A IAmb IAmb 17 51 24.1
comp=Z,37nm,0.7s
P40A Paris 57.73 341 P **P** **17 51 24.3 -1.3**
MMNY Mt. Morris Dam 57.79 354 P **P** **17 51 24.3 -1.7**
HDIL Hopedale 57.85 343 P **P** **17 51 24.3 -2.1**
baz=159,SNR=15
L48A N Adams 58.01 348 P **P** **17 51 25.4 -2.2**
J61A Chester 58.06 359 P **P** **17 51 25.4 -2.4**
ACCN Adirondack Com 58.13 358 P **P** **17 51 26.3 -2.1**
J58A Remsen 58.20 356 P **P** **17 51 26.8 -2.0**
J58A IAmb IAmb 17 51 28.4
comp=Z,17nm,0.8s
AAM Ann Arbor 58.21 349 P **P** **17 51 27.1 -1.8**
AAM Ann Arbor 58.21 349 P **P** **17 51 27.1 -1.8**
AAM pmax pmax
comp=Z,46nm,0.5s
AAM Ann Arbor 58.21 349 P **P** **17 51 27.0 -1.9**
baz=165
J56A Wolcott 58.23 355 P **P** **17 51 26.9 -2.1**
J56A IAmb IAmb 17 51 28.0
comp=Z,41nm,1.2s
J59A Piesco 58.25 357 P **P** **17 51 27.6 -1.7**
J59A IAmb IAmb 17 51 28.7
comp=Z,31nm,0.9s
MEDO Medina 58.28 353 P **P** **17 51 27.6 -1.7**
MEDO IAmb IAmb 17 51 28.1
comp=Z,21nm,0.6s
J57A Williamstown 58.30 356 P **P** **17 51 26.3 -3.1**
J57A IAmb IAmb 17 51 28.5
comp=Z,29nm,0.8s
M44A Midewin, Midew 58.30 345 P **P** **17 51 26.7 -2.8**
M44A IAmb IAmb 17 51 28.1
comp=Z,44nm,1.4s
P38A Dawn 58.30 339 P **P** **17 51 28.5 -1.1**
J55A Hilton 58.31 354 P **P** **17 51 27.9 -1.7**
J55A IAmb IAmb 17 51 28.2
comp=Z,23nm,0.6s
J54A Appleton 58.41 353 P **P** **17 51 28.5 -1.7**
J54A IAmb IAmb 17 51 29.1
comp=Z,23nm,0.6s
N41A Harden Midland 58.44 342 P **P** **17 51 28.7 -1.8**
L46A Eue Claire 58.48 347 P **P** **17 51 28.5 -2.3**
K50A Casco 58.48 350 P **P** **17 51 29.0 -1.7**
NCB Newcomb 58.74 357 P **P** **17 51 31.1 -1.5**
PECO Prince Edward 58.90 355 P **P** **17 51 31.7 -1.8**
PECO IAmb IAmb 17 51 32.8
comp=Z,25nm,0.5s
LBNH Lisbon 58.94 359 P **P** **17 51 32.5 -1.4**
LBNH IAmb IAmb 17 51 33.7
comp=Z,26nm,0.9s
LBNH Lisbon 58.94 359 P **P** **17 51 32.5 -1.4**
LBNH pmax pmax
comp=Z,26nm,1.0s
LBNH Lisbon 58.94 359 P **P** **17 51 32.5 -1.4**
baz=178,SNR=5.2
KSU1 Kansas State U 58.95 337 P **P** **17 51 33.5 -0.6**
KSU1 Kansas State U 58.95 337 P **P** **17 51 33.5 -0.6**
baz=150,SNR=7.3
121A Cookes Peak, D 59.01 324 P **P** **17 51 34.1 -0.7**
121A Cookes Peak, D 59.01 324 P **P** **17 51 36.2 +1.3**
baz=137,SNR=8.9
L44A Lake County Fo 59.01 345 P **P** **17 51 31.9 -2.5**
baz=160
R32A Long Quarter, 59.20 335 P **P** **17 51 35.5 -0.4**
R32A IAmb IAmb 17 51 40.1
comp=Z,17nm,0.6s
N38A Joes South For 59.26 340 P **P** **17 51 34.8 -1.3**
N38A IAmb IAmb 17 51 35.7
comp=Z,55nm,0.7s
WVL Waterville 59.27 1 P **P** **17 51 35.0 -1.1**
WVL IAmb IAmb 17 51 35.4
comp=Z,28nm,0.5s
H62A Milan 59.27 360 P **P** **17 51 35.1 -1.1**
L42A Oliver, Polo 59.30 344 P **P** **17 51 34.6 -1.9**
L42A IAmb IAmb 17 51 35.4
comp=Z,51nm,0.6s
J47A Sunmer 59.34 348 P **P** **17 51 34.7 -2.0**
LONY Lake Ozonia 59.41 357 P **P** **17 51 35.4 -1.8**
LONY Lake Ozonia 59.41 357 P **P** **17 51 35.4 -1.8**
baz=176,SNR=6.4
EMMW East Machias 59.48 3 P **P** **17 51 36.3 -1.3**
EMMW IAmb IAmb 17 51 36.6
comp=Z,20nm,0.5s
DELO Deloro Mine 59.53 354 P **P** **17 51 36.2 -1.8**
DELO IAmb IAmb 17 51 36.9
comp=Z,26nm,0.6s
FRNY Flat Rock 59.58 358 P **P** **17 51 36.0 -2.3**
FRNY IAmb IAmb 17 51 37.8
comp=Z,30nm,1.1s
K43A Burlington 59.61 345 P **P** **17 51 36.5 -2.0**
I49A Point Hope 59.65 350 P **P** **17 51 36.7 -2.0**
L40A Anamosa 59.79 343 P **P** **17 51 37.8 -2.0**
L40A IAmb IAmb 17 51 39.7
comp=Z,50nm,0.8s
G62A West of Eustis 59.91 0 P **P** **17 51 39.7 -0.9**
G62A IAmb IAmb 17 51 40.7
comp=Z,81nm,0.8s
GGN Saint George 59.92 3 P **P** **17 51 38.8 -1.8**
GGN IAmb IAmb 17 51 40.3
comp=Z,38nm,1.2s
SADO Sadowa 59.94 353 P **P** **17 51 38.9 -1.8**
SADO IAmb IAmb 17 51 39.7
comp=Z,44nm,0.9s
CBKS Cedar Bluff 59.96 334 P **P** **17 51 40.5 -0.6**
CBKS IAmb IAmb 17 51 42.7
comp=Z,28nm,0.7s
CBKS Cedar Bluff 59.96 334 P **P** **17 51 40.5 -0.6**
CBKS pmax pmax
comp=Z,28nm,0.7s
CBKS Cedar Bluff 59.96 334 P **P** **17 51 41.8 +0.7**
baz=147
G65A Princeton 59.97 3 P **P** **17 51 39.6 -1.2**
PKME Peaks-Kenny Pk 59.97 1 P **P** **17 51 39.7 -1.3**
PKME IAmb IAmb 17 51 40.5
comp=Z,43nm,0.8s
PKME Peaks-Kenny Pk 59.97 1 P **P** **17 51 39.6 -1.3**
baz=181,SNR=12
ANMO Albuquerque 60.08 326 P **P** **17 51 42.9 +0.8**
ANMO Albuquerque 60.08 326 *de* P **P** **17 51 42.9 +0.8**
ANMO pmax pmax
comp=Z,9.0nm,1.0s
ANMO Albuquerque 60.08 326 P **P** **17 51 42.7 +0.6**
baz=139
ANMO Albuquerque 60.08 326 P **P** **17 51 43.0 +0.9**
N35A Tabor 60.14 338 P **P** **17 51 41.4 -0.8**
MNTQ Montreal, Queb 60.25 358 P **P** **17 51 41.6 -1.1**
MNTQ IAmb IAmb 17 51 42.3
comp=Z,71nm,0.8s
SCIA State Center 60.26 341 P **P** **17 51 41.6 -1.3**
baz=155
JFWS Jewell Farm 60.31 344 P **P** **17 51 41.9 -1.4**
JFWS Jewell Farm 60.31 344 P **P** **17 51 41.9 -1.4**
JFWS pmax pmax
comp=Z,91nm,0.5s
JFWS Jewell Farm 60.31 344 P **P** **17 51 41.9 -1.4**
baz=158,SNR=26
F63A Nahmakanta, Br 60.41 1 P **P** **17 51 42.4 -1.5**
F62A Pittston Farm, 60.59 1 P **P** **17 51 43.5 -1.6**
F62A IAmb IAmb 17 51 44.3
comp=Z,19nm,0.5s
F64A Sherman 60.60 2 P **P** **17 51 43.8 -1.3**
F64A IAmb IAmb 17 51 44.8
comp=Z,32nm,0.8s
TUC Tucson 60.61 321 P **P** **17 51 47.5 +1.8**
baz=134
TUC Tucson 60.61 321 P **P** **17 51 46.8 +1.1**
TUC pP **pP** **17 52 32.7 +2.9**
N33A J Bar K, Exete 60.69 337 P **P** **17 51 45.9 -0.1**
GBN Guysborough 60.69 8 P **P** **17 51 43.9 -1.9**
GBN IAmb IAmb 17 51 48.3
comp=Z,63nm,1.5s
T25A Trinidad 60.73 330 P **P** **17 51 46.4 -0.1**
T25A Trinidad 60.73 330 P **P** **17 51 47.1 +0.6**
baz=142
LMN Caledonia Moun 60.79 5 P **P** **17 51 44.6 -1.9**
LMN IAmb IAmb 17 51 45.5
comp=Z,31nm,0.8s
K38A Parkersburg 60.79 342 P **P** **17 51 45.1 -1.5**
I42A Draeger Farm, 60.87 345 P **P** **17 51 45.6 -1.5**
I42A IAmb IAmb 17 51 46.2
comp=Z,40nm,0.5s
TRQ Mont Tremblant 61.01 357 P **P** **17 51 46.2 -1.8**
TRQ IAmb IAmb 17 51 47.2
comp=Z,30nm,0.8s
H43A Windswept, Lux 61.15 346 P **P** **17 51 47.1 -1.8**
H43A IAmb IAmb 17 51 47.6
comp=Z,47nm,0.6s
G45A Suttons Bay 61.23 348 P **P** **17 51 47.6 -1.9**
G45A IAmb IAmb 17 51 48.2
comp=Z,50nm,0.6s
I40A Norwalk 61.31 344 P **P** **17 51 48.7 -1.3**
E62A Clayton Lake 61.32 1 P **P** **17 51 49.1 -0.9**
E62A IAmb IAmb 17 51 49.9
comp=Z,45nm,0.8s
L34A Svendsen Farm, 61.37 339 P **P** **17 51 49.7 -0.8**
PQI Presque Isle 61.42 2 P **P** **17 51 49.3 -1.4**
PQI IAmb IAmb 17 51 49.8
comp=Z,23nm,0.8s
BGNE Belgrade 61.53 337 P **P** **17 51 50.9 -0.8**
BGNE Belgrade 61.53 337 P **P** **17 51 51.5 -0.1**
baz=150,SNR=5.9

214A Organ Pipe Nat 61.62 320 P P 17 51 54.0 +1.6
baz=132
X18A Snowflake 61.70 324 pP pP 17 52 38.2 +0.9
SDCO Great Sand Dun 61.74 329 P P 17 51 54.5 +1.2
SDCO IAmb IAmb 17 51 56.2
comp=Z,11nm,0.5s
SDCO Great Sand Dun 61.74 329 P P 17 51 54.1 +0.8
baz=141,SNR=38
D62A Allapoint, All 61.80 1 P P 17 51 52.0 -1.2
BATG Bathurst New B 62.12 4 P P 17 51 54.0 -1.3
BATG IAmb IAmb 17 51 54.8
comp=Z,38nm,0.7s
I37A Lemond, Waseca 62.22 342 P P 17 51 54.9 -1.2
LMQ La Malbaie 62.24 0 P P 17 51 55.0 -1.2
LMQ IAmb IAmb 17 51 55.1
comp=Z,22nm,0.5s
E46A Sault Ste Mari 62.26 349 P P 17 51 54.4 -1.8
E46A IAmb IAmb 17 51 55.1
comp=Z,52nm,0.8s
S22A 4UR Ranch, Cre 62.40 328 P P 17 51 57.7 -0.1
S22A 4UR Ranch, Cre 62.40 328 P P 17 51 59.1 +1.3
baz=140
X16A Lo Mia Camp, P 62.48 323 P P 17 51 58.5 +0.2
G40A Rib Lake 62.49 345 P P 17 51 56.5 -1.4
G40A IAmb IAmb 17 51 56.8
comp=Z,12nm,0.6s
Q24A Divide 62.52 330 P P 17 51 58.4 -0.2
Q24A pP 17 52 44.6 +1.6
Q24A Divide 62.52 330 P P 17 51 59.3 +0.7
baz=142
OGNE Ogallala 62.71 334 P P 17 51 59.1 -0.4
OGNE Ogallala 62.71 334 P P 17 52 00.6 +1.1
baz=146,SNR=5.8
E43A Lone Tree Farm 62.79 347 P P 17 51 57.6 -2.2
K31A O'Neill 62.81 337 P P 17 51 59.0 -1.0
K31A IAmb IAmb 17 52 00.7
comp=Z,51nm,0.7s
MVCO Mesa Verde 62.87 327 P P 17 52 01.3 +0.5
MVCO IAmb IAmb 17 52 06.3
comp=Z,24nm,1.2s
MVCO Mesa Verde 62.87 327 P P 17 52 01.5 +0.7
baz=138
COWI Conover 63.00 346 P P 17 51 59.6 -1.7
COWI IAmb IAmb 17 52 00.3
comp=Z,19nm,0.5s
ECSD EROS Data Cent 63.01 339 P P 17 52 00.6 -0.8
ECSD IAmb IAmb 17 52 02.6
comp=Z,48nm,1.1s
ECSD EROS Data Cent 63.01 339 P P 17 52 00.8 -0.6
baz=152,SNR=32
VLDQ Val d'Or 63.08 355 P P 17 52 00.1 -1.5
VLDQ IAmb IAmb 17 52 01.2
comp=Z,36nm,0.6s
SPMN Marine on St. 63.15 343 P P 17 52 00.2 -2.0
SPMN Marine on St. 63.15 343 P P 17 52 00.9 -1.3
baz=156
WUAZ Wupatki 63.22 324 P P 17 52 03.5 +0.3
WUAZ Wupatki 63.22 324 P P 17 52 04.9 +1.8
baz=135,SNR=11
ISCO Idaho Springs 63.40 331 P P 17 52 05.2 +0.8
ISCO Idaho Springs 63.40 331 P P 17 52 05.2 +0.8
ISCO pmax pmax
comp=Z,6.0nm,0.9s
ISCO Idaho Springs 63.40 331 P P 17 52 05.1 +0.7
baz=142,SNR=10
SMCO Snowmass 63.58 329 P P 17 52 06.2 +0.6
PV15 Paradox Valley 63.70 328 P P 17 52 06.7 +0.4
PV15 IAmb IAmb 17 52 12.5
comp=Z,36nm,1.1s
PV13 Radium Mtn., P 63.74 327 P P 17 52 07.7 +1.1
PV13 IAmb IAmb 17 52 13.0
comp=Z,13nm,0.8s
D41A Chassel 63.78 347 P P 17 52 04.9 -1.4
PV11 David Mesa, Pa 63.88 327 P P 17 52 07.0 -0.4
F36A Milaca 63.94 343 P P 17 52 06.1 -1.3
F36A IAmb IAmb 17 52 07.3
comp=Z,43nm,0.9s
PV23 Carpenter Ridg 64.06 327 P P 17 52 09.5 +0.8
E38A The Farm, Brul 64.08 344 P P 17 52 07.0 -1.3
E38A IAmb IAmb 17 52 07.8
comp=Z,25nm,0.7s
CBX Cerro Bola 64.31 318 P P 17 52 11.1 +0.8
U15A North Rim 64.39 324 P P 17 52 12.3 +1.5
BC3 Big Chuckawall 64.40 319 P P 17 52 12.1 +1.3
baz=131
W13A Hualapai Mount 64.40 322 P P 17 52 10.3 -0.6
N23A Red Feather La 64.42 331 P P 17 52 09.7 -1.2
SUSD Miller 64.45 338 P P 17 52 10.2 -0.6
SUSD IAmb IAmb 17 52 12.2
comp=Z,58nm,0.9s
SUSD Miller 64.45 338 P P 17 52 10.4 -0.3
baz=149
MONP2 Monument Peak 64.52 318 P P 17 52 11.1 -0.6
baz=130
IRM Iron Mountain 64.54 320 P P 17 52 13.0 +1.4
baz=131
BAR Barrett 64.55 318 P P 17 52 12.5 +0.8
F33A 5 Mile Ranch, 64.77 341 P P 17 52 11.8 -0.9
O20A White River Ci 64.94 329 P P 17 52 14.4 +0.2
O20A White River Ci 64.94 329 P P 17 52 15.1 +0.9
baz=139,SNR=8.7
TPFO Pinon Flats 65.00 319 P P 17 52 14.6 -0.1
baz=130
DRLN Deer Lake 65.03 10 P P 17 52 12.3 -2.0
DRLN IAmb IAmb 17 52 13.0
comp=Z,43nm,0.7s
GMRC Granite Mounta 65.27 320 P P 17 52 17.5 +1.1
baz=131
EYMN Ely 65.31 345 P P 17 52 14.7 -1.4
EYMN IAmb IAmb 17 52 15.7
comp=Z,43nm,0.6s
EYMN Ely 65.31 345 P P 17 52 14.8 -1.4
baz=158,SNR=18
SRU San Rafael Swe 65.34 327 P P 17 52 17.7 +0.8
SRU San Rafael Swe 65.34 327 P P 17 52 17.7 +0.8
SRU pmax pmax
comp=Z,7.0nm,0.6s
LCMT Little Creek M 65.34 324 P P 17 52 17.2 +0.4
BELA Belgrano 2 65.42 172 P P 17 52 17.0 +0.4
BELA IAmb IAmb 17 52 19.2
comp=Z,42nm,1.4s
MTPU Mount Pierson 65.47 325 P P 17 52 18.3 +0.4
P18A Preston Nutter 65.58 327 P P 17 52 19.4 +0.9
SZCU Shurtz Canyon 65.66 324 P P 17 52 19.7 +0.7
P17A Butcher Ranch, 65.72 327 P P 17 52 19.4 +0.1
CCUT Cedar City 65.79 324 P P 17 52 21.2 +1.5
MSU Marysvale 65.80 325 P P 17 52 20.9 +1.1
MSU Marysvale 65.80 325 P P 17 52 20.9 +1.1
TMUT Trail Mountain 65.84 327 P P 17 52 21.3 +1.1
RDMU Red Mountain 65.93 329 P P 17 52 20.1 -0.5
TCRU Three Creeks R 66.02 325 P P 17 52 21.1 -0.2
SHPR Sheep Range 66.12 322 P P 17 52 21.9 +0.1
D32A Dogwood Acres, 66.15 341 P P 17 52 21.0 -0.6
BFSC Mount Baldy Ra 66.17 319 P P 17 52 24.1 +1.9
baz=129
B35A Bob, Littlefor 66.27 344 P P 17 52 21.2 -1.1
GSC Goldstone, Bar 66.32 320 P P 17 52 24.5 +1.4
GSC Goldstone, Bar 66.32 320 P P 17 52 24.5 +1.4
GSC pmax pmax
comp=Z,12nm,1.5s
GSC Goldstone, Bar 66.32 320 P P 17 52 24.3 +1.2
baz=130
PRN Pahroc Range 66.66 323 P P 17 52 26.1 +0.8
PSUT Pine Spring 66.75 324 P P 17 52 26.2 +0.3
NLU North Lily Min 66.78 327 P P 17 52 26.0 -0.1
QSM Queen of Sheba 66.79 321 P P 17 52 27.0 +1.1
VNA3 Neumayer Olymp 66.81 162 P P 17 52 26.7 +1.2
GWY Greenwater Val 66.81 321 P P 17 52 27.1 +0.9
AGMN Agassiz Nation 66.83 342 P P 17 52 25.1 -0.8
AGMN Agassiz Nation 66.83 342 P P 17 52 25.3 -0.5
baz=153,SNR=47
E28A Huff 66.91 338 P P 17 52 27.0 +0.6
JLU Jordanelle 66.92 327 P P 17 52 27.9 +1.0
LRMC Laurel Mtn Rad 66.98 320 P P 17 52 28.9 +1.6
baz=130
VNA1 Neumayer--Stat 67.01 161 P P 17 52 28.5 +1.8
TPNV Topopah Spring 67.06 322 P P 17 52 28.2 +0.4
TPNV Topopah Spring 67.06 322 P P 17 52 28.3 +0.4
TPNV pmax pmax
comp=Z,9.0nm,1.0s
TPNV Topopah Spring 67.06 322 P P 17 52 29.3 +1.5
baz=131,SNR=9.6
FURC Furnace Creek, 67.12 321 P P 17 52 29.4 +1.5
baz=131

MPMC Manual Prospec 67.23 320 P P 17 52 30.2 +1.3
baz=130
DUG Dugway, Tooele 67.35 326 P P 17 52 30.6 +1.1
DUG Dugway, Tooele 67.35 326 P P 17 52 30.6 +1.1
DUG pmax pmax
comp=Z,24nm,1.4s
DUG Dugway, Tooele 67.35 326 P P 17 52 30.6 +1.1
baz=135,SNR=8.8
BW06 Boulder Array 67.58 330 P P 17 52 31.7 +0.7
baz=139
PDAR Pinedale Array 67.58 330 P P 17 52 30.9 -0.2
comp=Z,3.0nm,0.4s,baz=121,slow=8.7,SNR=21
comp=Z,3.0nm,0.4s
ISA Isabella, Lake 67.60 319 P P 17 52 32.7 +1.6
ISA Isabella, Lake 67.60 319 P P 17 52 32.7 +1.6
ISA pmax pmax
comp=Z,5.0nm,0.8s
ISA Isabella, Lake 67.60 319 P P 17 52 32.8 +1.6
baz=129
R11A Troy Canyon, C 67.61 323 P P 17 52 32.5 +1.2
R11A Troy Canyon, C 67.61 323 P P 17 52 32.9 +1.7
baz=132,SNR=12
MDND Maddock 67.62 339 P P 17 52 31.5 +0.6
MDND Maddock 67.62 339 P P 17 52 31.6 +0.7
baz=150,SNR=43
HWUT Hardware Ranch 67.71 328 P P 17 52 30.5 -1.3
HWUT IAmb IAmb 17 52 34.6
comp=Z,12nm,0.5s
CWC Cottonwood Cre 67.85 320 P P 17 52 33.6 +0.9
baz=130
PKM Mcpherson Peak 67.97 318 P P 17 52 34.1 +0.6
baz=128
BGU Big Grassy Mou 67.98 327 P P 17 52 34.5 +1.0
LCH Last Change Ra 68.09 321 P P 17 52 35.5 +1.3
TPH Tonopah 68.39 322 P P 17 52 37.6 +1.5
TPH IAmb IAmb 17 52 41.9
comp=Z,38nm,1.0s
TPH pP 17 53 21.7 +0.4
TPH Tonopah 68.39 322 P P 17 52 37.6 +1.5
TPH *PP pP 17 53 21.7 +0.4
TPH pmax pmax
comp=Z,38nm,1.0s
HVU Hansel Valley 68.46 327 P P 17 52 36.9 +0.4
HVU Hansel Valley 68.46 327 P P 17 52 36.9 +0.4
HVU pmax pmax
comp=Z,6.0nm,0.8s
LIC Lamto 68.52 77 *e*PKP1 P 17 52 36.4 -0.8
comp=Z,28nm,0.5s
ULM Lac du Bonnet 68.58 343 P P 17 52 35.9 -0.9
comp=Z,72nm,0.6s,baz=153,slow=5.9,SNR=105
comp=Z,72nm,0.6s
ULM Lac du Bonnet 68.58 343 P P 17 52 35.6 -1.2
ULM Lac du Bonnet 68.58 343 P P 17 52 35.6 -1.2
ULM pmax pmax
comp=Z,71nm,0.7s
REDW Red Top Meadow 68.65 330 P P 17 52 38.1 +0.4
TIC Toumodi 68.66 77 *e*PKP1 P 17 52 36.6 -1.5
comp=Z,8.9nm,0.4s
SNOW Snow King Moun 68.68 330 P P 17 52 37.2 -0.7
SNOW IAmb IAmb 17 52 41.1
comp=Z,14nm,0.5s
TPAW Teton Pass 68.80 330 P P 17 52 39.1 +0.5
DBIC Dimbokro 68.83 77 P P 17 52 37.5 -1.5
comp=Z,28nm,0.4s,baz=254,slow=4.9,SNR=67
comp=Z,28nm,0.4s
DBIC Dimbokro 68.83 77 P P 17 52 35.3 -3.7
DBIC IAmb IAmb 17 52 38.6
comp=Z,38nm,0.6s
DBIC Dimbokro 68.83 77 P P 17 52 35.3 -3.7
DBIC pmax pmax
comp=Z,38nm,0.6s
DBIC Dimbokro 68.83 77 P P 17 52 37.5 -1.5
KIC Kosan Boka 68.83 77 /PKP1 P 17 52 37.4 -1.8
comp=Z,85nm,0.4s
MOOW Moose Ponds 68.89 330 P P 17 52 39.6 +0.4
SNAA Sanae 69.01 162 P P 17 52 40.6 +1.3
SNAA Sanae 69.01 162 P P 17 52 40.0 +0.7
SNAA IAmb IAmb 17 52 41.4
comp=Z,59nm,0.7s
SNAA Sanae 69.01 162 P P 17 52 40.0 +0.7
SNAA pmax pmax
comp=Z,59nm,0.7s
ELK Elko 69.05 325 P P 17 52 41.5 +1.3
ELK Elko 69.05 325 P P 17 52 41.5 +1.3
ELK pmax pmax
comp=Z,5.0nm,1.1s
FLWY Flagg Ranch 69.12 330 P P 17 52 39.8 -0.7
OMMB Old Mammoth Mi 69.16 321 P P 17 52 39.0 -2.0
NV11 Mina Array Sit 69.18 322 P P 17 52 41.7 +0.7
RLMT Red Lodge 69.23 332 P P 17 52 41.4 +0.2
baz=140
NVAR Mina Array Bea 69.26 322 P P 17 52 43.0 +1.4
comp=Z,2.2nm,0.8s,baz=135,slow=5.9,SNR=12
NVAR pP pP 17 53 30.4 +3.6
comp=Z,3.6nm,0.9s,baz=151,slow=7.4,SNR=4.2
comp=Z,2.2nm,0.8s
NVAR Mina Array Bea 69.26 322 P P 17 52 41.3 -0.3
LHV Little Huntoon 69.27 322 P P 17 52 43.4 +2.2
KVN Kaiserville 69.55 322 P P 17 52 43.6 +0.4
KVN Kaiserville 69.55 322 P P 17 52 43.6 +0.4
KVN pmax pmax
comp=Z,6.0nm,1.0s
SCHQ Schefferville 69.62 2 P P 17 52 41.3 -1.7
comp=Z,13nm,0.7s,baz=185,slow=4.7,SNR=15
comp=Z,13nm,0.7s
SCHQ Schefferville 69.62 2 P P 17 52 41.4 -1.7
DGMT Dagmar 69.79 337 P P 17 52 45.6 +1.3
DGMT IAmb IAmb 17 52 46.4
comp=Z,44nm,0.7s
DGMT Dagmar 69.79 337 P P 17 52 45.1 +0.8
baz=145
PMOZ Porto Moniz, M 69.88 46 *e*P P 17 52 46.1 +0.8
comp=Z,97nm,1.4s
YHL Hebgen Lake 69.92 331 P P 17 52 46.0 +0.5
YHL IAmb IAmb 17 52 49.9
comp=Z,33nm,1.5s
GCMT Greycliff 69.93 332 P P 17 52 44.5 -0.9
YERR Yerington 70.18 322 P P 17 52 47.1 0.0
HLID Hailey 70.58 328 P P 17 52 50.1 +0.7
HLID Hailey 70.58 328 P P 17 52 51.0 +1.6
baz=135
VCNR Virginia City 70.62 322 P P 17 52 49.4 -0.5
BOZ Bozeman (W) 70.69 331 P P 17 52 49.9 -0.1
BOZ Bozeman (W) 70.69 331 P P 17 52 49.9 -0.1
BOZ pmax pmax
comp=Z,4.0nm,0.7s
BOZ Bozeman (W) 70.69 331 P P 17 52 51.4 +1.4
baz=138
MCMT McKenzie Canyo 70.70 330 P P 17 52 49.7 -0.5
TROLL Troll, Antarti 70.72 162 P P 17 52 51.4 +1.6
TROLL Troll, Antarti 70.72 162 PKKPdf PKKPdf 18 12 28.8 -2.0
PAHR Pah Rah Range 70.73 322 P P 17 52 50.1 -0.3
MFID Camas Ranch 71.21 327 P P 17 52 54.6 +1.4
LRM Limekiln Ridge 71.24 331 P P 17 52 54.0 +0.6
BEKR Beckworth 71.41 322 P P 17 52 53.9 -0.6
HRY Holter Researc 71.61 332 P P 17 52 56.5 +1.0
EGMT Eagleton 71.68 334 P P 17 52 56.4 +0.6
EGMT IAmb IAmb 17 52 57.8
comp=Z,26nm,0.7s
EGMT Eagleton 71.68 334 P P 17 52 56.7 +0.9
baz=140,SNR=10
ORV Oroville 71.90 321 P P 17 52 57.6 +0.4
ORV Oroville 71.90 321 P P 17 52 57.6 +0.4
ORV pmax pmax
comp=Z,10.0nm,1.0s
PLID Pearl Lake 72.46 328 P P 17 53 01.4 +0.7
MOD Modoc Plateau 72.67 324 P P 17 53 03.0 +1.1
MSO Missoula 72.68 331 P P 17 53 01.9 +0.1
MSO Missoula 72.68 331 P P 17 53 03.5 +1.7
baz=136
BMO Blue Mountains 72.97 327 P P 17 53 04.5 +0.9
BMO Blue Mountains 72.97 327 P P 17 53 04.5 +0.9
BMO pmax pmax
comp=Z,5.0nm,0.6s
K05A Summer Lake 73.53 324 P P 17 53 07.4 +0.4
NVL N'lazarevskaya 73.55 160 *e*P P 17 53 06.8 +0.4
NVL pmax pmax
comp=Z,72nm,1.1s
I07A Izee 73.63 326 P P 17 53 07.9 +0.5
F10A Beach Ranch, E 73.70 328 P P 17 53 06.7 -1.1
K04D Chiloquin, OR 73.96 323 P P 17 53 11.7 +2.3
baz=128
YBH Yreka Blue Hor 73.97 322 P P 17 53 09.5 +0.1
YBH Yreka Blue Hor 73.97 322 P P 17 53 09.5 +0.1
YBH pmax pmax
comp=Z,5.0nm,0.9s
L04D Klamath Falls 74.03 323 P P 17 53 11.3 +1.5
baz=128
J05D Fort Rock, OR 74.08 324 P P 17 53 12.0 +1.9
baz=129
G08A Pilot Rock 74.13 327 P P 17 53 10.8 +0.5
PINE Pine Mountain 74.23 325 P P 17 53 11.8 +0.7
WALA Waterton Lakes 74.28 332 P P 17 53 10.6 -0.5
E09A Wood Farm, Sta 74.53 328 P P 17 53 12.5 +0.1
J04D Umpqua Nationa 74.55 324 P P 17 53 13.1 +0.2
J04D IAmb IAmb 17 53 19.0
comp=Z,37nm,1.4s
J04D Umpqua Nationa 74.55 324 P P 17 53 13.9 +1.0
baz=128
HUMO Hull Mountain 74.65 323 P P 17 53 13.1 -0.1
L02F Cave Junction 74.71 322 P P 17 53 15.0 +1.4
baz=127
I04A Tendick Farm, 75.06 324 P P 17 53 16.7 +1.1
baz=128
K02D Willamette Mer 75.11 323 P P 17 53 17.7 +1.7
baz=127
HAWA Hanford 75.16 327 P P 17 53 16.3 +0.2
QSPA South Pole Qui 75.17 180 P P 17 53 17.5 +1.4
comp=Z,14nm,0.6s,baz=348,slow=3.8,SNR=100
QSPA pP pP 17 54 03.8 +1.7
comp=Z,8.1nm,1.0s,baz=143,slow=4.6,SNR=2.7
QSPA PP PP 17 56 06.6 0.0
comp=Z,4.6nm,0.9s,baz=161,slow=5.6,SNR=4.2
comp=Z,14nm,0.6s
QSPA South Pole Qui 75.17 180 P P 17 53 16.9 +0.9
QSPA IAmb IAmb 17 53 18.6
comp=Z,22nm,0.9s
NEW Newport 75.22 330 P P 17 53 17.1 +0.7
baz=134
D08A Wollman Farm, 75.29 328 P P 17 53 16.7 -0.1
C09A Chrisman Ranch 75.47 329 P P 17 53 18.4 +0.6
H04A Detroit Lake 75.49 325 P P 17 53 19.0 +0.9
I03D Drain, OR 75.54 324 P P 17 53 19.3 +1.0
baz=127
HOOD Mount Hood Mea 75.60 326 P P 17 53 19.7 +0.9
FCC Fort Churchill 75.91 348 P P 17 53 19.2 -0.8
FCC IAmb IAmb 17 53 20.1
comp=Z,28nm,0.5s
FCC Fort Churchill 75.91 348 P P 17 53 19.2 -0.8
FCC pmax pmax
comp=Z,28nm,0.5s
LTY Liberty 76.32 328 P P 17 53 23.7 +0.9
B08A Colville Reser 76.37 329 P P 17 53 20.8 -2.2
TOA0 Torodi Ar. Sit 77.02 72 P P 17 53 25.5 -1.7
TOA0 IAmb IAmb 17 53 27.5
comp=Z,26nm,0.8s
TORD Torodi Ar. Bea 77.02 72 P P 17 53 25.7 -1.5
comp=Z,20nm,0.7s,baz=273,slow=5.1,SNR=91
TORD pP pP 17 54 13.4 +0.1
comp=Z,6.3nm,0.7s,baz=254,slow=5.1,SNR=2.8
comp=Z,20nm,0.7s
TORD Torodi Ar. Bea 77.02 72 P P 17 53 25.4 -1.9
TORD IAmb IAmb 17 53 27.5
comp=Z,22nm,0.8s
B06A Marblemount 77.55 328 P P 17 53 28.7 -0.7
NLWA Neilton Lookou 78.09 326 P P 17 53 32.5 -0.1
MORF Marmelete 78.19 46 *e*P P 17 53 34.2 +0.9
PNCL Nicolas Libran 78.67 45 *e*P P 17 53 36.3 +0.5
MESJ Messejana 78.75 46 *e*P P 17 53 37.0 +0.7
PCVE Castro Verde 78.78 46 *e*P P 17 53 37.1 +0.7
comp=Z,57nm,1.6s
PBEJ Beja 79.09 46 *e*P P 17 53 38.6 +0.5
EVO Evora 79.23 45 *e*P P 17 53 39.2 +0.3
PMTG Montargil 79.34 45 *e*P P 17 53 40.2 +0.7
comp=Z,25nm,1.7s
PCAS Casmilo, Conde 79.64 44 *e*P P 17 53 41.3 +0.2
PESTR Estremoz 79.68 45 *e*P P 17 53 42.9 +1.6
PCBR Castelo Branco 80.22 44 *e*P P 17 53 44.1 -0.1
MTE Manteigas 80.45 44 *e*P P 17 53 46.1 +0.6
POLO Lamas de Olo 80.75 43 *e*P P 17 53 46.9 -0.2
comp=Z,10nm,1.6s
MVO Moncorvo 81.16 43 *e*P P 17 53 49.1 -0.1
comp=Z,15nm,1.5s
PBRG Braganca 81.65 43 *e*P P 17 53 51.4 -0.4
comp=Z,17nm,1.5s
SBA Scott Base 81.88 190 P P 17 53 53.9 +1.6
SBA Scott Base 81.88 190 P P 17 53 53.9 +1.6
SBA pmax pmax
comp=Z,11nm,1.0s
PAB San Pablo 82.22 46 P P 17 53 54.6 -0.3
PAB San Pablo 82.22 46 P P 17 53 54.6 -0.3
PAB pmax pmax
comp=Z,6.0nm,0.6s
ESDC Sonseca Array 82.55 46 P P 17 53 56.5 0.0
comp=Z,3.9nm,0.6s,baz=256,slow=4.9,SNR=25
ESDC pP pP 17 54 44.7 +1.4
comp=Z,3.5nm,0.9s,baz=252,slow=5.3,SNR=5.0
comp=Z,3.9nm,0.6s
ESDC Sonseca Array 82.55 46 P P 17 53 56.3 -0.2
ESDC pP 17 54 43.3 0.0
ESDC Sonseca Array 82.55 46 P P 17 53 54.3 -2.2
VNDA Vanda 82.92 190 P P 17 53 59.7 +2.0
comp=Z,5.4nm,0.8s,baz=134,slow=4.8,SNR=24
comp=Z,5.4nm,0.8s
VNDA Vanda 82.92 190 P P 17 53 59.5 +1.8
VNDA Vanda 82.92 190 P P 17 53 59.5 +1.8
VNDA pmax pmax
comp=Z,10.0nm,1.1s
TSUM Tsumeb 83.73 108 P P 17 54 03.3 +0.1
TSUM IAmb IAmb 17 54 05.8
comp=Z,27nm,0.9s
YKA Yellowknife Ar 84.46 341 P P 17 54 06.1 +0.5
comp=Z,34nm,0.5s,baz=132,slow=5.4,SNR=170
YKA pP pP 17 54 53.3 +0.5
comp=Z,8.6nm,0.7s,baz=134,slow=5.3,SNR=4.4
comp=Z,34nm,0.5s
YKA Yellowknife Ar 84.46 341 P P 17 54 05.8 +0.2
T35M Bob Quinn 86.89 332 P P 17 54 19.7 +1.9
baz=123,SNR=6.5
DLBC Dease Lake 87.60 333 P P 17 54 21.3 +0.1
DLBC Dease Lake 87.60 333 P P 17 54 23.1 +1.9
baz=124
LFF La Frestale 87.93 42 *e*P P 17 54 21.4 -1.5
LFF pmax pmax
comp=Z,7.0nm,0.6s
MFF Saint Martin d 88.03 41 *e*P P 17 54 21.6 -1.8
MFF pmax pmax
comp=Z,30nm,1.6s
BOSA Boshof 88.15 119 P P 17 54 25.0 +0.4
comp=Z,3.0nm,0.4s,baz=271,slow=3.4,SNR=17
comp=Z,3.0nm,0.4s
BOSA Boshof 88.15 119 P P 17 54 23.2 -1.4
BOSA Boshof 88.15 119 P P 17 54 23.3 -1.4
BOSA pmax pmax
comp=Z,16nm,1.5s
TGTN Hyland Airport 88.64 336 P P 17 54 28.0 +2.0
baz=125,SNR=8.2
CAF Calviac 88.79 43 *e*P P 17 54 25.3 -1.8
CAF pmax pmax
comp=Z,3.0nm,0.6s
LBTB Lobatse 89.44 116 P P 17 54 28.8 -1.9
LBTB Lobatse 89.44 116 P P 17 54 28.8 -1.9
LBTB pmax pmax
comp=Z,8.0nm,0.6s
P33M Teslin, Yukon 89.77 334 P P 17 54 32.8 +1.5
P33M IAmb IAmb 17 54 33.8
comp=Z,10nm,0.6s
P33M Teslin, Yukon 89.77 334 P P 17 54 32.8 +1.5
baz=121,SNR=6.3
BESE Bessie Mountai 89.83 332 P P 17 54 32.9 +1.3
BESE IAmb IAmb 17 54 34.7
comp=Z,14nm,0.8s
P32M Atlin 89.83 333 P P 17 54 33.3 +1.7
baz=120,SNR=6.8
SUMG Summit 89.94 9 P P 17 54 31.4 -0.9
SUMG IAmb IAmb 17 54 33.6
comp=Z,33nm,1.3s
SUMG Summit 89.94 9 P P 17 54 31.4 -0.9
SUMG pmax pmax
comp=Z,33nm,1.3s
MMPY Sheldon Lake, 90.42 336 P P 17 54 35.7 +1.4
baz=123,SNR=5.8
SKAG Skagway 90.48 333 P P 17 54 36.1 +1.6
baz=119
SSF Saint Saulge 90.52 41 *e*P P 17 54 32.8 -2.2
SSF pmax pmax
comp=Z,3.0nm,0.8s
RES Resolute Bay 90.75 354 P P 17 54 35.9 +0.4
RES IAmb IAmb 17 54 36.7
comp=Z,14nm,0.7s
RES Resolute Bay 90.75 354 P P 17 54 35.9 +0.4

RES pmax pmax
comp=Z,14nm,0.7s
WHY Whitehorse 90.88 334 P **P** **17 54 37.8 +1.3**
baz=119
PLBC Pleasant Camp 90.94 332 P **P** **17 54 38.5 +1.9**
baz=118,SNR=5.5
MAW Mawson 91.07 164 P **P** **17 54 38.7 +1.4**
comp=Z,6.6nm,0.5s,baz=214,slow=11,SNR=12
comp=Z,6.6nm,0.5s
MAW Mawson 91.07 164 P **P** **17 54 38.6 +1.4**
MAW Mawson 91.07 164 P **P** **17 54 38.6 +1.4**
MAW pmax pmax
comp=Z,3.0nm,0.8s
M31M Drury Creek, Y 91.44 335 P **P** **17 54 40.4 +1.4**
baz=120
O30N Mendenhall 91.45 334 P **P** **17 54 40.1 +1.0**
baz=118
P30M Million Dollar 91.52 333 P **P** **17 54 41.2 +1.7**
baz=118
N31M Braeburn, Yuko 91.66 334 P **P** **17 54 41.2 +1.1**
baz=119
C36M Paulatuk 92.00 343 P **P** **17 54 41.0 -0.3**
baz=129
HYT Haines Junctio 92.09 333 P **P** **17 54 43.7 +1.5**
HYT Haines Junctio 92.09 333 P **P** **17 54 43.7 +1.5**
baz=117
N30M Aishikik Lake 92.20 334 P **P** **17 54 43.7 +1.1**
baz=118
YUK6 Outpost Mounta 92.52 333 P **P** **17 54 45.5 +1.3**
baz=116
M30M Minto, Yukon 92.60 335 P **P** **17 54 45.4 +1.0**
M30M Minto, Yukon 92.60 335 P **P** **17 54 45.2 +0.8**
baz=118
YUK4 Talbot Arm 92.82 333 P **P** **17 54 46.9 +1.3**
baz=116,SNR=14
PINM Pinnacle 92.99 332 P **P** **17 54 47.8 +1.5**
baz=115
YUK8 Steele Glacier 93.28 333 P **P** **17 54 49.0 +1.2**
baz=115
YUK3 Moose Creek 93.79 333 P **P** **17 54 51.0 +0.9**
baz=114
A36M Sachs Harbour 93.97 345 P **P** **17 54 50.6 +0.3**
A36M IAmb IAmb 17 54 51.6
comp=Z,21nm,0.8s
A36M Sachs Harbour 93.97 345 P **P** **17 54 50.0 -0.3**
baz=128,SNR=7.8
INK Inuvik 94.22 341 P **P** **17 54 51.8 +0.2**
INK IAmb IAmb 17 54 52.9
comp=Z,12nm,1.0s
INK Inuvik 94.22 341 P **P** **17 54 51.8 +0.2**
INK pmax pmax
comp=Z,12nm,1.0s
INK Inuvik 94.22 341 P **P** **17 54 51.8 +0.2**
baz=120,SNR=7.3
BVCY Beaver Creek 94.23 334 P **P** **17 54 53.0 +1.2**
baz=114
DAWY Dawson 94.32 336 P **P** **17 54 52.6 +0.3**
baz=115
EPYK Eagle Plains 94.36 338 P **P** **17 54 52.6 +0.3**
baz=118
M27K Edge Creek, AK 94.64 334 P **P** **17 54 54.4 +0.6**
M27K Edge Creek, AK 94.64 334 P **P** **17 54 54.5 +0.6**
baz=113
BCAR Beaver Creek A 94.88 334 P **P** **17 54 55.1 +0.3**
VRDI Verde Repeater 94.89 332 P **P** **17 54 55.5 +0.4**
L27K Beaver Creek, 94.90 334 P **P** **17 54 55.4 +0.5**
L27K Beaver Creek, 94.90 334 P **P** **17 54 55.2 +0.3**
baz=113,SNR=7.7
K27K Chicken 95.38 335 P **P** **17 54 58.1 +1.1**
baz=113
KLU Klutina 96.09 332 P **P** **17 55 00.6 +0.2**
KLU IAmb IAmb 17 55 01.4
comp=Z,5.3nm,0.7s
KLU Klutina 96.09 332 P **P** **17 55 00.7 +0.3**
baz=110
SCRK Sand Creek 96.14 335 P **P** **17 55 00.9 +0.3**
SCRK Sand Creek 96.14 335 P **P** **17 55 00.9 +0.3**
baz=111
J26L Joseph Creek 96.17 335 P **P** **17 55 01.2 +0.5**
J26L Joseph Creek 96.17 335 P **P** **17 55 00.9 +0.2**
baz=112
PAX Paxson 96.40 334 P **P** **17 55 02.0 +0.2**
PAX Paxson 96.40 334 P **P** **17 55 02.0 +0.2**
PAX pmax pmax
comp=Z,2.0nm,0.7s
PAX Paxson 96.40 334 P **P** **17 55 01.8 -0.1**
baz=110
RIDG Independent Ri 96.41 335 P **P** **17 55 02.2 +0.4**
baz=110
M24K Tolsona, Glenn 96.41 333 P **P** **17 55 02.1 +0.3**
baz=110
SCM Sheep Creek Mo 96.84 332 P **P** **17 55 04.2 +0.4**
SCM IAmb IAmb 17 55 15.3
comp=Z,5.9nm,0.7s
SCM Sheep Creek Mo 96.84 332 P **P** **17 55 04.2 +0.4**
SCM pmax pmax
comp=Z,6.0nm,0.7s
SCM Sheep Creek Mo 96.84 332 P **P** **17 55 04.2 +0.4**
baz=109
J25K Salcha River, 96.93 335 P **P** **17 55 04.2 0.0**
J25K Salcha River, 96.93 335 P **P** **17 55 04.0 -0.2**
baz=110,SNR=8.7
KNK Knik Glacier 97.22 332 P **P** **17 55 04.6 -0.8**
baz=108
WAT6 Susitna Watana 97.26 333 P Pdif 17 55 05.9 +0.1
baz=108
SML Sawmill 97.28 332 P Pdif 17 55 05.9 +0.1
baz=108
HDA Harding Lake 97.51 335 P Pdif 17 55 07.4 +0.7
baz=109
GHO Glory Hole Cre 97.54 332 P Pdif 17 55 07.4 +0.4
GHO IAmb IAmb 17 55 08.1
comp=Z,4.3nm,0.7s
GERES GERESS Array B 97.59 42 P **P** **17 55 06.0 -1.4**
comp=Z,0.6nm,0.6s,baz=256,slow=3.7,SNR=6.3
comp=Z,0.6nm,0.6s
ILAR Eielson Array 97.60 335 P **P** **17 55 06.8 -0.2**
comp=Z,0.8nm,0.8s,baz=150,slow=3.0,SNR=6.6
ILAR PP **PP** **17 59 01.4 -5.9**
comp=Z,0.7nm,0.8s,baz=109,slow=6.8,SNR=4.5
comp=Z,0.8nm,0.8s
ILAR Eielson Array 97.60 335 P **P** **17 55 04.9 -2.2**
RC01 Rabbit Creek A 97.71 331 P Pdif 17 55 08.4 +0.8
baz=107
BRSE Bradley Lake S 97.80 330 P **P** **17 55 07.7 -0.4**
baz=106
RND Reindeer 98.00 334 P Pdif 17 55 09.6 +0.6
RND Reindeer 98.00 334 P Pdif 17 55 09.6 +0.6
RND pmax pmax
comp=Z,3.0nm,0.7s
COLA College 98.03 335 *ce*P Pdif 17 55 09.4 +0.5
COLA pmax pmax
comp=Z,5.0nm,0.9s
MDM Murphy Dome 98.20 335 P Pdif 17 55 10.2 +0.3
MDM IAmb IAmb 17 55 13.7
comp=Z,3.5nm,0.6s
SUA Susitna One 98.28 331 P Pdif 17 55 10.9 +0.5
SUA IAmb IAmb 17 55 11.9
comp=Z,3.6nm,0.8s
SUA Susitna One 98.28 331 P Pdif 17 55 11.1 +0.7
baz=106
H24K Noodor Dome 98.33 336 P Pdif 17 55 11.1 +0.8
baz=108
OHAK Old Harbor 98.43 327 P **P** **17 55 10.6 -0.3**
baz=104
TRF Thorofare Moun 98.63 333 P Pdif 17 55 12.0 +0.1
TRF IAmb IAmb 17 55 12.8
comp=Z,3.5nm,0.7s
TRF Thorofare Moun 98.63 333 P **P** **17 55 11.9 0.0**
baz=106
I23K Minto, Yukon-K 98.72 335 P **P** **17 55 12.0 0.0**
baz=106
SKT Skwentna 98.78 332 P Pdif 17 55 12.9 +0.5
SKT IAmb IAmb 17 55 13.7
comp=Z,5.5nm,0.6s
SKT Skwentna 98.78 332 P **P** **17 55 12.1 -0.3**
baz=105,SNR=7.1
BPAW Bear Paw Mtn. 99.10 334 P **Pdif** **17 55 13.4 -0.4**
baz=105,SNR=6.5
PPLA Purkeypile 99.31 333 P **Pdif** **17 55 15.0 0.0**
baz=104
CHIR Chirikof Islan 99.36 325 P **Pdif** **17 55 17.0 +1.9**
baz=102
CHUM Lake Minchumin 99.61 334 P **Pdif** **17 55 16.2 +0.2**
baz=104
L20K Farewell, AK 99.97 332 P **Pdif** **17 55 17.6 -0.1**
baz=103

O18K Koktuh Hills 100.02 329 P **Pdif** **17 55 18.3 +0.3**
baz=102
R17K Ugashik Creek 100.15 327 P **Pdif** **17 55 19.1 +0.5**
baz=102
H21K Melozitna Rive 100.24 335 P **Pdif** **17 55 19.0 +0.2**
baz=103
K20K Telida 100.25 333 P **Pdif** **17 55 19.1 +0.1**
baz=102
D23K Nanushuk River 100.26 339 P **Pdif** **17 55 18.6 -0.2**
baz=104
L19K White Mountain 100.35 332 P **Pdif** **17 55 19.6 +0.2**
baz=102
J20K Nowinta River 100.47 334 P **Pdif** **17 55 20.0 +0.1**
baz=102
P17K Kvichak River 100.50 329 P **Pdif** **17 55 21.8 +1.7**
baz=101
UNV Unalaska Valle 105.28 322 P **Pdif** **17 55 43.5 +2.1**
baz=94
MNK Minsk 107.10 37 *i* PKP PP 18 00 08.4 -10
comp=E,2.0nm,1.4s
MNK *i* PKP PP 18 00 08.4 -10
comp=N,18nm,0.7s
MNK *i* PKP PP 18 00 08.4 -10
comp=Z,21nm,1.2s,baz=268
MNK *i* PP **PP** **18 00 19.8 +1.4**
MNK *i* PPP PPP 18 02 37.0
MNK *i* SKS **SKSdf** **18 06 57.0 +5.0**
MNK *i* SS **SS** **18 15 15.0 +3.7**
MNK *i* SSS SSS 18 19 20.3
MNK *i* LRM MLR 18 44 54.1
comp=N,271nm,23.6s
MNK *i* LRM MLR 18 44 54.7
comp=Z,6µm,24.2s
MNK *i* LRM MLR 18 44 56.0
comp=E,8.0nm,15.2s
APA Apatity 109.17 23 ↓*i*P **Pdif** **17 56 09.4 +11**
APA pmax pmax
comp=Z,3.0nm,1.0s
OBN Obninsk 112.10 36 *i* PKIKP **PKiKP** **18 00 08.9 +1.6**
OBN *e* 18 00 51.5
OBN *e**PP **PP** **18 00 58.4 +3.9**
OBN pmax pmax
comp=Z,2.0nm,0.6s
BILL Bilibino 115.81 339 *i* PKIKP **PKiKP** **18 00 16.4 +2.3**
BILL *e**PP **pPKiKP** **18 01 05.9 +2.2**
BILL *e* 18 01 17.2
BILL pmax pmax
comp=Z,2.0nm,1.0s
KIV Kislovodsk 117.14 48 *e*PKIKP **PKiKP** **18 00 18.4 +0.9**
KIV pmax pmax
comp=Z,3.0nm,1.1s
KBZ Khabaz 117.31 48 PKP **PKiKP** **18 00 19.0 +1.4**
comp=Z,1.9nm,0.6s,baz=230,slow=2.0,SNR=5.8
TIXI Tiksi 122.13 353 ↓*e*PKIKP **PKPdf** **18 00 26.2 +0.1**
ARU Arti 123.66 31 *i* PKIKP **PKiKP** **18 00 30.8 +1.1**
ARU 18 02 14.0
ARU 18 07 24.0
ARU SS SS 18 18 49.8 +2.7
STKA Stephens Creek 123.99 213 PKP **PKiKP** **18 00 31.8 +0.6**
comp=Z,5.8nm,0.5s,baz=101,slow=5.1,SNR=24
ABKAR Akbulak array 127.42 39 PKPdf **PKiKP** **18 00 37.4 0.0**
BRVK Borovoye 131.21 30 ↓*e*PKIKP **PKiKP** **18 00 45.2 +0.2**
ASAR Alice Springs 134.61 213 PKPdf **PKPdf** **18 00 51.2 -0.2**
ASAR Alice Springs 134.61 213 PKIKP **PKPdf** **18 00 51.2 -0.2**
AS31 Alice Springs 134.61 213 PKPdf **PKPdf** **18 00 51.4 -0.1**
KURK Kurchatov 136.67 28 ↓*e*PKIKP **PKiKP** **18 00 55.6 -0.5**
ZAA0 Zalesovo Array 136.69 21 PKPdf **PKPdf** **18 00 55.0 +0.8**
ZALV Zalesovo Beam 136.69 21 PKhKP PKPpre 18 00 49.5
comp=Z,18nm,0.7s,baz=231,slow=2.5,SNR=5.8
ZALV PKP **PKiKP** **18 00 55.5 -0.5**
comp=Z,19nm,0.7s,baz=296,slow=2.6,SNR=69
ZALV SKPbc **SKPbc** **18 04 10.8 +1.2**
comp=Z,8.4nm,0.8s,baz=316,slow=4.1,SNR=17
WR0 Warramunga Arr 137.24 216 **PKPdf** **18 00 55.0 -1.3**
WB2 Warramunga Arr 137.37 216 **PKPdf** **18 00 56.6 +0.1**
WRA Warramunga Arr 137.37 216 PKhKP PKPpre 18 00 44.0
comp=Z,0.6nm,0.4s,baz=148,slow=2.8,SNR=37
WRA PKP **PKPdf** **18 00 57.5 +0.9**
comp=Z,8.2nm,0.3s,baz=143,slow=1.9,SNR=26
WRA SKPbc **SKPbc** **18 04 13.8 +1.1**
comp=Z,5.5nm,0.9s,baz=142,slow=2.5,SNR=18
WRAB Tennant Creek 137.37 216 **PKPdf** **18 00 56.9 +0.3**
WRAB Tennant Creek 137.37 216 PKIKP **PKPdf** **18 00 56.9 +0.3**
WB0 Warramunga Arr 137.48 216 PKPdf **PKPdf** **18 00 57.4 +0.6**
AAK Ala-Archa 139.45 40 ↓*e*PKIKP **PKPdf** **18 01 01.1 +1.2**
MK31 Makanchi Array 141.16 30 PKPpre 18 00 55.2
MK31 Makanchi Array 141.16 30 PKHKP PKPpre 18 00 55.2
MKAR Makanchi Array 141.16 30 PKhKP PKPpre 18 00 55.8
comp=Z,1.0nm,0.6s,baz=339,slow=2.9,SNR=13
MKAR PKP **PKPdf** **18 01 02.8 +0.1**
comp=Z,2.2nm,0.6s,baz=328,slow=2.3,SNR=13
MKAR SKPbc **SKiKP** **18 04 23.8 -0.4**
comp=Z,5.8nm,0.7s,baz=331,slow=3.1,SNR=20
MKAR Makanchi Array 141.16 30 PKPpre 18 00 55.6
KLR Kul'dur 141.16 336 PKhKP PKPpre 18 00 56.5
comp=Z,1.0nm,0.4s,baz=333,slow=1.4,SNR=4.8
KLR PKP **PKiKP** **18 01 04.4 -0.9**
comp=Z,1.7nm,0.5s,baz=101,slow=5.4,SNR=6.2
KLR PP **PP** **18 04 05.2 -0.5**
comp=Z,3.6nm,0.9s,baz=6.5,slow=4.3,SNR=8.0
KLR Kul'dur 141.16 336 ↑*e*PKIKP **PKiKP** **18 01 05.5 +0.2**
KSH Kashi 142.03 44 PKP **PKiKP** **18 01 06.4 -1.2**
KSH PP **PP** **18 04 15.3 +3.5**
KNRA Kununurra 143.91 213 PKPdf PKPab 18 01 06.4 +0.5
ZAK Zakamensk 144.37 6 *e*PKIKP **PKPab** **18 01 06.9 0.0**
ZAK *e* 18 01 56.6
ZAK *e* 18 04 23.0
ZAK pmax pmax
comp=Z,9.0nm,1.1s
ZAK pmax pmax
comp=Z,5.0nm,1.5s
MTN Manton Dam 144.83 219 PKPbc 18 01 09.7 +0.2
USRK Ussuriysk Ar. 145.00 331 PKP **PKPdf** **18 01 11.2 +1.8**
comp=Z,9.7nm,0.5s,baz=28,slow=4.5,SNR=19
MDJ Mudanjiang 145.75 334 PKPbc **PKPab** **18 01 12.8 +0.6**
WMQ Urumqi 145.92 28 *e*PKPbc **PKPdf** **18 01 10.3 -0.9**
MJAR Matsushiro Arr 146.38 315 PKPbc **PKPbc** **18 01 14.3 +0.6**
comp=Z,1.9nm,0.4s,baz=34,slow=0.5,SNR=13
MJAR Matsushiro Arr 146.38 315 PKPab **PKPdf** **18 01 12.4 +0.2**
MAJO Matsushiro 146.38 315 PKPab **PKPbc** **18 01 14.0 +0.3**
MAJO Matsushiro 146.38 315 ↑*i*PKP2 **PKPbc** **18 01 13.7 0.0**
SONM Songino Array 147.16 3 PKPbc **PKPbc** **18 01 15.3 -0.4**
comp=Z,18nm,0.7s,baz=334,slow=1.9,SNR=105
SONM SKPbc **SKiKP** **18 04 39.1 +2.5**
comp=Z,3.3nm,0.9s,baz=319,slow=1.4,SNR=6.4
SONM Songino Array 147.16 3 **PKPdf** **18 01 14.3 +1.1**
ULN Ulaanbaatar 147.16 3 **PKPdf** **18 01 13.3 +0.1**
ULN Ulaanbaatar 147.16 3 ↓*e*PKP2 **PKPbc** **18 01 15.0 -0.7**
HYBB Hyderabad (bro 150.51 81 *e*PKiKP **PKPbc** **18 01 23.8 -1.1**
XLT XiLinHaoTe 150.58 350 *i* PKPbc **PKiKP** **18 01 25.4 +0.4**
XLT pPKP pPKPbc 18 02 16.1 +2.3
XLT PKS **PP** **18 04 59.6 -1.4**
KSRS Korea Array 152.11 327 PKP **PKPdf** **18 01 23.2 +2.1**
comp=Z,6.5nm,0.5s,baz=38,slow=1.5,SNR=8.2
KSRS PKPbc **PKiKP** **18 01 29.1 +0.9**
comp=Z,10nm,0.8s,baz=8.8,slow=2.4,SNR=22
HHC Hu-ho-hao-te 154.14 356 *e*PKPbc **PKPdf** **18 01 25.6 +1.4**
GTA Gaotai 154.31 17 ↓PKPbc **PKPdf** **18 01 26.3 +1.8**
GTA LR LR
comp=Z,49nm,17.4s
GTA LR LR
comp=Z,93nm,18.2s
GTA LR LR
comp=Z,76nm,18.5s
GOMU GeErMu 155.28 29 PKP **PKPdf** **18 01 25.6 -0.6**
GOMU AMB AMB
comp=Z,52nm,4.6s
TIA Tai'an 157.69 343 ↓P **PKPab** **18 02 01.8 -0.2**
TIA pmax pmax
comp=Z,16nm,1.0s
LZH Lanzhou 158.45 12 *e*P **PKPab** **18 02 05.3 -0.1**
LZH pP sPKPdf 18 02 30.8 -8.4
LZH sP pPKPab 18 02 41.4 -12
LZH pmax pmax
comp=Z,12nm,1.0s
NJ2 Nanjing 160.84 334 *e*PKP **PKPdf** **18 01 32.8 +0.2**
CD2 Chengdu 163.38 16 PKP **PKPdf** **18 01 32.8 -2.5**
WHN Wuhan 163.79 344 PKPbc **PKPab** **18 02 28.3 -0.4**
PZH PanZhiHua 166.60 30 PKP **PKPdf** **18 01 36.0 -2.2**
CMAR Chiang Mai Arr 169.61 69 PKP **PKPdf** **18 01 38.9 -1.5**
comp=Z,0.6nm,0.7s,baz=258,slow=3.5,SNR=3.9
CMAR PKPab **PKPab** **18 02 54.2 -0.8**
comp=Z,3.0nm,0.6s,baz=284,slow=6.0,SNR=32

MAN 22 17:53:47.3, 12°.58N×123°.61E, h7km, mb4.3, ML3.1, MS2.9, 1C-3D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PVCP	**Virac**	**1.14**	**27**	↓*e*P	Pn	17 54 08.9	+0.4
PVCP				*e*S		17 54 25.4	
GQP	**Guinayangan**	**1.74**	**319**	↑*e*P	Pb	17 54 17.4	+0.7
GQP				*e*S		17 54 40.9	
BOAC	**Boac**	**1.92**	**297**	↓*e*P	Pn	17 54 19.9	+0.8
BOAC				*e*S		17 54 46.4	
JCNP	**Jose Panganiba**	**1.92**	**332**	↓*e*P	Pb	17 54 20.7	+0.5
JCNP				*e*S		17 54 44.6	

MAN 22 17:58:06.7, 14°.37N×119°.77E, h15km, mb4.1, ML2.8, MS2.5, 1C-4D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.79**	**144**	↓*i*P	Pb	17 58 20.8	0.0
LUBP				*i* S		17 58 31.6	
MACP	**Maragondon, Ca**	**0.93**	**97**	↓*e*P	Pn	17 58 24.2	+0.1
MACP				*e*S		17 58 38.4	
PGP	**Puerto Galera**	**1.44**	**127**	↑*e*P	Pn	17 58 31.5	+0.5
PGP				*i* S		17 58 52.6	
SMPP	**San Manuel, Pa**	**1.97**	**26**	↓*e*P	Pn	17 58 37.9	+0.4
SMPP				*e*S		17 59 03.0	
SAMP	**Sagada Mountai**	**2.91**	**22**	↓*e*P	Pn	17 58 53.4	+2.3
SAMP				*e*S		17 59 29.4	

*IDC **22** 17:59:15.3±1.9, 21°.65N×143°.27E, h305km±18km, mb3.4/10, mbtmp4.1/12, Error ellipse: s-maj=33.0km s-min=12.6km az=81.0*
*NEIC **22** 17:59:15.9±0.9, 21°.64N±0°.08×143°.2E±0°.2, h306km±10km, mb4.1/27, Error ellipse: s-maj=32.7km s-min=9.3km az=76.0*

ISC 22 17:59:15.7±1.0, 21°.64N±0°.07×143°.2E±0°.2, h311km, n46, σ0s51/45, mb3.9/20, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**5.51**	**350**	P	**Pn**	**18 00 38.9**	**-0.6**
	41nm,0.5s,baz=306,slow=22,SNR=17						
JCJ				S	**S**	**18 01 47.1**	**-0.1**
	74nm,0.4s,baz=312,slow=23,SNR=11						
JYT	**Yasato**	**14.77**	**350**	P	**P**	**18 02 30.0**	**+0.4**
JGF	**Kuroka**	**14.83**	**341**	Pn	**Pn**	**18 02 31.9**	**+0.1**
JSU	**Suzuyama**	**15.06**	**313**		**P**	**18 02 32.1**	**-0.9**
MJAR	**Matsushiro Arr**	**15.48**	**345**	P	**P**	**18 02 36.4**	**-1.0**
	1.1nm,0.4s,baz=197,slow=9.0,SNR=7.6						
MJAR	**Matsushiro Arr**	**15.48**	**345**	IAmb	IAmb	18 02 43.8	
	comp=Z,2.6nm,0.9s						
MAJO	**Matsushiro**	**15.48**	**345**	P	**P**	**18 02 37.5**	**+0.1**
MAJO				IAmb	IAmb	18 02 53.1	
	comp=Z,18nm,1.5s						
MJB9	**Matsu-Tunnel**	**15.48**	**345**	P	**P**	**18 02 37.5**	**+0.1**
MJB9				IAmb	IAmb	18 02 53.1	
	comp=Z,18nm,1.5s						
JHS	**Saijyo**	**16.00**	**328**	P	**P**	**18 02 43.9**	**+0.7**
JMM	**Marumori**	**16.31**	**353**	P	**Pn**	**18 02 48.7**	**-0.1**
JSD	**Sado**	**16.89**	**346**	P	**P**	**18 02 51.8**	**-0.9**
YHNB	**Yeheng**	**20.33**	**283**	P	**P**	**18 03 28.4**	**-1.0**
KSRS	**Korea Array**	**20.59**	**323**	P	**P**	**18 03 31.5**	**-0.3**
	comp=Z,4.7nm,0.6s,baz=146,slow=8.9,SNR=32						
	comp=Z,4.7nm,0.6s						
KSAR	**Wonju Array Be**	**20.60**	**323**	P	**P**	**18 03 32.2**	**+0.3**
KS19	**Wonju Array Si**	**20.66**	**323**	P	**P**	**18 03 32.3**	**-0.2**
KS19				IAmb	IAmb	18 03 37.4	
	comp=Z,18nm,1.5s						
SSLB	**Suanglung**	**20.67**	**280**	P	**P**	**18 03 32.6**	**-0.1**
SSLB				IAmb	IAmb	18 03 39.8	
	comp=Z,14nm,1.2s						
KLR	**Kul'dur**	**29.01**	**344**	P	**P**	**18 04 47.9**	**+0.5**
	comp=Z,4.6nm,0.6s,baz=158,slow=7.6,SNR=15						
	comp=Z,4.6nm,0.6s						
SONM	**Songino Array**	**39.41**	**320**	P	**P**	**18 06 16.1**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=136,slow=8.1,SNR=6.4						
	comp=Z,0.5nm,0.4s						
KNRA	**Kununurra**	**39.71**	**202**	P	**P**	**18 06 18.9**	**0.0**
KNRA				IAmb	IAmb	18 06 19.1	
	comp=Z,5.6nm,0.6s						
CMAR	**Chiang Mai Arr**	**41.63**	**274**	P	**P**	**18 06 35.2**	**+0.7**
	comp=Z,0.6nm,0.6s,baz=89,slow=6.0,SNR=12						
	comp=Z,0.6nm,0.6s						
WB0	**Warramunga Arr**	**42.06**	**192**	P	**P**	**18 06 37.7**	**-0.2**
WB0				IAmb	IAmb	18 06 40.4	
	comp=Z,7.2nm,1.3s						
WR0	**Warramunga Arr**	**42.21**	**192**	P	**P**	**18 06 38.7**	**-0.4**
WR0				IAmb	IAmb	18 06 41.4	
	comp=Z,11nm,1.4s						
WRAB	**Tennant Creek**	**42.23**	**192**	P	**P**	**18 06 38.8**	**-0.4**
WRAB				IAmb	IAmb	18 06 39.4	
	comp=Z,5.1nm,0.6s						
WB2	**Warramunga Arr**	**42.23**	**192**	P	**P**	**18 06 39.1**	**-0.2**
WB2				IAmb	IAmb	18 06 39.5	
	comp=Z,5.0nm,0.6s						
WRA	**Warramunga Arr**	**42.24**	**193**	P	**P**	**18 06 39.1**	**-0.2**
	comp=Z,3.4nm,0.6s,baz=13,slow=8.4,SNR=34						
	comp=Z,3.4nm,0.6s						
WRA	**Warramunga Arr**	**42.24**	**193**	P	**P**	**18 06 38.9**	**-0.4**
KULM	**Kulim**	**44.31**	**255**	P	**P**	**18 06 56.0**	**+0.1**
KULM				IAmb	IAmb	18 07 01.8	
	comp=Z,14nm,1.3s						
AS31	**Alice Springs**	**45.94**	**192**	P	**P**	**18 07 08.2**	**-0.3**
ASAR	**Alice Springs**	**45.95**	**192**	P	**P**	**18 07 07.7**	**-0.9**
PSA00	**Pilbara Seismi**	**48.65**	**209**	P	**P**	**18 07 29.1**	**-0.1**
PSA00	**Pilbara Seismi**	**48.65**	**209**	P	**P**	**18 07 28.9**	**-0.3**
PSA00				IAmb	IAmb	18 07 54.5	
	comp=Z,39nm,1.5s						
STKA	**Stephens Creek**	**53.24**	**182**	P	**P**	**18 08 03.2**	**+0.2**
	comp=Z,1.6nm,0.4s,baz=2.2,slow=8.5,SNR=6.0						
	comp=Z,1.6nm,0.4s						
STKA	**Stephens Creek**	**53.24**	**182**	IAmb	IAmb	18 08 11.1	
	comp=Z,3.6nm,1.4s						
ZALV	**Zalesovo Beam**	**54.29**	**322**	P	**P**	**18 08 09.7**	**-0.6**
	comp=Z,1.4nm,0.6s,baz=102,slow=7.6,SNR=5.3						
	comp=Z,1.4nm,0.6s						
MKAR	**Makanchi Array**	**54.77**	**313**	P	**P**	**18 08 14.4**	**+0.5**
	comp=Z,0.9nm,0.5s,baz=90,slow=8.7,SNR=9.2						
	comp=Z,0.9nm,0.5s						
MAKZ	**Makanchi**	**54.99**	**313**	P	**P**	**18 08 16.0**	**+0.5**
MAKZ				IAmb	IAmb	18 08 16.3	
	comp=Z,1.7nm,0.7s						
KURK	**Kurchatov**	**57.55**	**317**	P	**P**	**18 08 33.5**	**+0.2**
BRVK	**Borovoye**	**62.81**	**320**	P	**P**	**18 09 09.3**	**+0.6**
BRVK				IAmb	IAmb	18 09 09.9	
	comp=Z,2.9nm,0.6s						
KKAR	**Karatay Array**	**63.13**	**308**	P	**P**	**18 09 11.9**	**+0.9**
ARU	**Arti**	**69.34**	**324**	P	**P**	**18 09 50.1**	**+0.1**
ARU				IAmb	IAmb	18 09 50.3	
	comp=Z,2.2nm,0.4s						
ABKAR	**Akbulak array**	**69.63**	**316**	P	**P**	**18 09 51.8**	**0.0**
ABKAR	**Akbulak array**	**69.63**	**316**	P	**P**	**18 09 51.8**	**0.0**
ABKAR				IAmb	IAmb	18 09 52.6	
	comp=Z,2.7nm,0.6s						
ARCES	**ARCESS Array B**	**78.99**	**342**	P	**P**	**18 10 46.1**	**+1.0**
	comp=Z,0.7nm,0.4s,baz=70,slow=7.8,SNR=9.6						
	comp=Z,0.7nm,0.4s						
FIA1	**FINESS Array S**	**83.25**	**335**	P	**P**	**18 11 07.1**	**-0.4**
FIA1				IAmb	IAmb	18 11 08.0	
	comp=Z,3.5nm,0.9s						
FINES	**FINESS Array B**	**83.25**	**335**	P	**P**	**18 11 07.1**	**-0.4**
	comp=Z,1.0nm,0.5s,baz=73,slow=4.4,SNR=14						
	comp=Z,1.0nm,0.5s						
FINES	**FINESS Array B**	**83.25**	**335**	P	**P**	**18 11 06.9**	**-0.6**

TAP 22 18:07:59.2, 24°.89N×122°.45E, h15km±1km, ML2.2, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.44**	**286**	*e*P	Pb	18 08 08.5	-0.1
	baz=285						
TWB1				*e*S	Sb	18 08 14.6	-0.4
	baz=285						
EGS		**0.47**	**265**	*e*P	Pg	18 08 08.8	+0.2
	baz=253						
EGS				*e*S	Sg	18 08 15.4	+0.4
	baz=253						
SXI1	**Grass Mountain**	**0.56**	**291**	*e*P	Pb	18 08 11.1	+0.3
	baz=291						
SXI1				*e*S	Sb	18 08 19.6	+1.0

	baz=291							
TIPB	**Shuangxi**	**0.57**	**278**	P		Pb	18 08 11.1	+0.2
	baz=278							
TIPB				*e*S		Sb	18 08 19.3	+0.3
	baz=278							
TWC	**Suao**	**0.61**	**243**	*e*P		Pg	18 08 11.4	+0.1
	baz=242							
TWC				*e*S		Sb	18 08 19.8	-0.3
	baz=242							
NWF	**Wu-fen Shan**	**0.63**	**287**	*e*P		Pb	18 08 12.7	+0.6
	baz=286							
NWF				*e*S		Sb	18 08 21.6	+0.9
	baz=286							
YOJ	**Yonaguni jima**	**0.67**	**130**	*e*P		Pg	18 08 11.8	-0.4
	baz=120							
NDS	**Dongshan**	**0.72**	**249**	P		Pg	18 08 13.2	+0.1
	baz=249							
NDS				*e*S		Sb	18 08 23.3	+0.3
	baz=249							
TWE	**Neicheng**	**0.73**	**257**	*e*P		Pb	18 08 14.1	+0.5
	baz=256							
TWE				*e*S		Sb	18 08 23.6	+0.1
	baz=256							
EWUT	**Wuta**	**0.76**	**234**	*e*P		Pb	18 08 14.2	+0.2
	baz=234							
EWUT				*e*S		Sb	18 08 24.3	+0.2
	baz=234							
ENA	**Nanau**	**0.79**	**235**	*e*P		Pb	18 08 15.0	+0.3
	baz=234							
ENA				*e*S		Sg	18 08 25.0	-0.1
	baz=234							
FUSB	**Fushanzhiwuyua**	**0.80**	**261**	*e*P		Pb	18 08 15.2	+0.4
	baz=260							
FUSB				*e*S		Sb	18 08 25.9	+0.5
	baz=260							
YM01	**YM01**	**0.84**	**288**	*e*P		Pn	18 08 16.7	+0.2
	baz=287							
YM01				*e*S		Sn	18 08 27.9	-0.7
	baz=287							
TWY	**Chenhua**	**0.86**	**297**	*e*P		Pn	18 08 16.6	-0.1
	baz=296							
TWY				*e*S		Sn	18 08 28.5	-0.6
	baz=296							
NWLT	**Wulai**	**0.87**	**263**	*e*P		Pn	18 08 16.6	-0.3
	baz=262							
NWLT				*e*S		Sg	18 08 28.3	+0.8
	baz=262							
LATG	**Datong**	**0.91**	**247**	P		Pg	18 08 17.2	+0.3
	baz=233							
LATG				S		Sg	18 08 29.4	+0.5
	baz=233							
YHNB	**Yeheng**	**1.00**	**258**	*e*P		Pg	18 08 18.6	0.0
	baz=267							
YHNB				*e*S		Sn	18 08 32.4	-0.2
	baz=267							
NSK	**Sanguang**	**1.02**	**258**	*e*P		Pn	18 08 19.0	0.0
	baz=257							
NSK				*e*S		Sg	18 08 32.6	+0.4
	baz=257							
NACB	**Ninganchiao**	**1.06**	**228**	*e*P		Pn	18 08 19.5	+0.1
	baz=238							
NACB				*e*S		Sb	18 08 32.9	+0.1
	baz=238							
NNSB	**Datong**	**1.08**	**245**	*e*P		Pb	18 08 19.7	+0.1
	baz=233							
NNSB				*e*S		Sn	18 08 34.3	-0.2
	baz=233							
NNS	**Nan Shan**	**1.08**	**246**	*e*P		Pn	18 08 19.8	-0.1
	baz=245							
NNS				*e*S		Sg	18 08 34.1	0.0
	baz=245							
ETLH	**Xiulin Townshi**	**1.11**	**233**	*e*P		Pn	18 08 20.5	+0.2
	baz=232							
ETLH				*e*S		Sb	18 08 34.4	-0.2
	baz=232							
NFF	**Wufeng Townshi**	**1.24**	**258**	*e*P		Pg	18 08 23.0	-0.1
	baz=269							
NFF				*e*S		Sg	18 08 39.2	-0.1
	baz=269							
FUSS	**Fushou**	**1.27**	**240**	*e*P		Pb	18 08 23.3	+0.3
	baz=239							
FUSS				*e*S		Sg	18 08 40.5	+0.1
	baz=239							
WHF	**Hehuan Shan**	**1.31**	**236**	*e*P		Pg	18 08 24.6	+0.1
	baz=235							
WHF				*e*S		Sn	18 08 41.1	+0.4
	baz=235							

JMA 22 18:08:48.3±0.1, 24°.7N±0°.9×124°.6E±0°.4, h58km, MV2.2/13, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTJ	**Tarama**	**0.16**	**128**	P	Pn	18 08 57.3	-0.1
JTJ				S	Sn	18 09 04.1	+0.2
JISG	**Ishigakijimahi**	**0.28**	**236**	P	Pn	18 08 58.1	0.0
JISG				S	Sn	18 09 05.3	+0.3
JIJ	**Ishigaki jima**	**0.54**	**225**	P	Pn	18 09 00.4	-0.2
JIJ				S	Sn	18 09 09.2	-0.2
JIRB	**Irabujima**	**0.56**	**81**	P	Pn	18 09 00.7	-0.1
JIRB				S	Sn	18 09 09.8	-0.1
JIKM	**Ikemajima**	**0.65**	**74**	P	Pn	18 09 01.9	+0.1
JIKM				S	Sn	18 09 11.9	+0.2
JMJ2	**Miyako jima3**	**0.70**	**90**	P	Pn	18 09 02.6	+0.1
JMJ2				*e*S	Sn	18 09 13.1	+0.4
JKRS	**Kuro-shima**	**0.71**	**225**	P	Pn	18 09 02.9	+0.3
JKRS				S	Sn	18 09 13.5	+0.5
JOGS	**Gusukube**	**0.77**	**88**	P	Pn	18 09 03.6	+0.3
JOGS				*e*S	Sn	18 09 14.7	+0.4
IRIF	**Iriomote-Funau**	**0.86**	**242**	P	Pn	18 09 04.6	+0.1
IRIF				S	Sn	18 09 16.9	+0.6
HATJ	**Hateruma jima**	**0.97**	**226**	*e*S	Sn	18 09 19.3	+0.4
YOJ	**Yonaguni jima**	**1.44**	**259**	P	Pn	18 09 12.8	+0.6
YOJ				*e*S	Sn	18 09 30.5	+0.5
JYNG	**Yonagunijimaku**	**1.50**	**259**	S	Sn	18 09 32.2	+0.7

*KRNET **22** 18:18:31.9±0.1, 39°.93N×77°.16E, mb2.8*
*SOME **22** 18:18:31.2, 42°.55N×80°.00E, h15km*
*NNC **22** 18:18:32.9±2.4, 42°.59N×79°.92E, h0km, mpv2.9, Error ellipse: s-maj=16.5km s-min=7.5km az=149.0*
ISC 22 18:18:31.6±1.7, 42°.59N±0°.05×79°.91E±0°.06, h6km±10km, n19, σ1s70/35, 4C-6D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**0.66**	**330**	*e*P	**Pg**	**18 18 43.0**	**-1.3**
	8.0nm,0.1s						
SHLS				*e*S	**Sg**	**18 18 51.8**	**-1.1**
	9.4nm,0.2s						
SHLS	**Shalkode**	**0.66**	**330**	P	**Pg**	**18 18 43.0**	**-1.3**
	8.0nm,0.1s						
SHLS				S	**Sg**	**18 18 51.8**	**-1.1**
	9.4nm,0.2s						
KTMS	**Ketmen**	**0.92**	**20**	*e*P	**Pb**	**18 18 50.8**	**+0.8**
	2.0nm,0.1s						
KTMS				*e*S	**Sn**	**18 19 04.8**	**+0.1**
	1.3nm,0.1s						
KTMS	**Ketmen**	**0.92**	**20**	P	**Pb**	**18 18 50.8**	**+0.8**
	2.0nm,0.1s						
KTMS				S	**Sn**	**18 19 04.8**	**+0.1**
	1.3nm,0.1s						
PRZ	**Przheval'sk**	**1.12**	**265**	⇑*e*P	Pn	18 19 18.0	+24
	baz=20						
PRZ				⇑*i*S	Sn	18 19 51.7	+42
	baz=20						
SATY	**Saty**	**1.21**	**294**	*e*P	**Pn**	**18 18 56.2**	**+1.1**
	1.3nm,0.1s						
SATY				*e*S	**Sn**	**18 19 14.0**	**+2.2**
	5.3nm,0.2s						
SATY	**Saty**	**1.21**	**294**	P	**Pn**	**18 18 56.2**	**+1.1**
	1.3nm,0.1s						
SATY				S	**Sn**	**18 19 14.0**	**+2.2**
	5.3nm,0.2s						
KPKS	**Kokpek**	**1.26**	**315**	*e*P	**Pn**	**18 18 55.1**	**-0.7**
	2.1nm,0.1s						
KPKS				*e*S	**Sb**	**18 19 12.4**	**+0.1**
	5.4nm,0.2s						
KPKS	**Kokpek**	**1.26**	**315**	P	**Pn**	**18 18 55.1**	**-0.7**
	2.1nm,0.1s						
KPKS				S	**Sb**	**18 19 12.4**	**+0.1**
	5.4nm,0.2s						
DJR	**Jarkent**	**1.75**	**357**	*e*P	**Pb**	**18 19 04.5**	**+0.4**
	1.9nm,0.2s						
DJR				*e*S	**Sg**	**18 19 28.9**	**+1.1**
	2.4nm,0.3s						
DJR	**Jarkent**	**1.75**	**357**	P	**Pb**	**18 19 04.5**	**+0.4**
	1.9nm,0.2s						
DJR				S	**Sg**	**18 19 29.0**	**+1.2**
	2.4nm,0.3s						
TARG	**Taragay, Kyrgy**	**1.79**	**242**	⇓*i*P	**Pg**	**18 19 06.1**	**+0.3**
	baz=15						
TARG				⇓*i*S	**Sg**	**18 19 30.8**	**+1.8**
	baz=15						
KDJ	**Kajisay**	**2.08**	**258**	⇑*i*P	**Pb**	**18 19 10.5**	**+0.8**
	baz=1.0						
KDJ				⇑*i*S	**Sg**	**18 19 38.7**	**+0.4**
	baz=1.0						
ARXS	**Arharly**	**2.23**	**318**	*e*P	**Pb**	**18 19 12.3**	**0.0**
	1.6nm,0.3s						
ARXS				*e*S	**Sb**	**18 19 41.7**	**+1.6**
	2.7nm,0.5s						
TNSS	**Tian-Shan**	**2.23**	**283**	*e*P	**Pb**	**18 19 13.8**	**+1.4**
	0.7nm,0.2s						
TNSS				*e*S	**Sg**	**18 19 44.7**	**+1.5**
	1.2nm,0.3s						
TNSS	**Tian-Shan**	**2.23**	**283**	Pg	**Pb**	**18 19 13.8**	**+1.4**
	0.7nm,0.2s						
TNSS				Lg	Lg	18 19 44.7	
	1.2nm,0.3s						
KTBS	**Karatobe**	**2.62**	**297**	*e*P	**Pb**	**18 19 19.1**	**+0.1**
	0.4nm,0.2s						
KTBS				*e*S	**Sb**	**18 19 53.3**	**+2.0**
	7.5nm,0.3s						
ULHL	**Ulahol**	**2.74**	**264**	⇓*i*P	**Pn**	**18 19 13.6**	**-2.6**
	baz=44						
ULHL				⇓*i*S	**Sn**	**18 19 44.2**	**-5.5**
	baz=44						
BOOM	**Boomskoye usch**	**2.94**	**269**	⇓*i*P	**Pn**	**18 19 17.8**	**-1.1**
	baz=41						
BOOM				⇓*i*S	**Sn**	**18 19 51.4**	**-3.2**
	baz=41						

*NCEDC **22** 18:43:03.3±1.6, 36°.63N±0°.02×121°.26W±0°.05, h9km±7km, ML3.0/31, ML2.8/48(NEIC), Error ellipse: s-maj=6.1km s-min=2.1km az=59.0*
NEIC 22 18:43:03.3±1.0, 36°.60N±0°.02×121°.30W±0°.03, h18km±4km, Error ellipse: s-maj=4.3km s-min=2.8km az=58.0, Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLRM	**Lewis Ranch**	**0.07**	**18**		Pg	18 43 05.5	-1.2
SCZ	**Santa Cruz**	**0.08**	**271**		Pg	18 43 06.1	-0.7
SCZ					Sg	18 43 08.1	-1.0
BJCM	**Johnson Can.**	**0.09**	**236**		Pg	18 43 06.4	-0.5
BBNM	**San Benito**	**0.20**	**116**		Pg	18 43 07.9	-0.4
BBGB	**Big Mountain B**	**0.21**	**95**		Pg	18 43 08.2	-0.3
BSMM	**Soledad Missio**	**0.24**	**206**		Pb	18 43 09.2	0.0
HSFM	**Saint Francis**	**0.27**	**323**		Pg	18 43 08.9	-0.4
LRV	**Little Rabbit**	**0.29**	**127**		Pg	18 43 09.5	-0.2
HAST	**Hastings Reser**	**0.29**	**224**		Pb	18 43 10.0	-0.1
HAST					Sb	18 43 14.7	0.0
HFEM	**San Felipe**	**0.39**	**348**		Pg	18 43 11.3	-0.2
PACP	**Pacheco Peak**	**0.41**	**2**		Pg	18 43 11.5	-0.3
HCOM	**Corn Cob Canyo**	**0.44**	**312**		Pg	18 43 12.0	-0.2
GHS	**Gilroy Hot Spr**	**0.51**	**347**		Pg	18 43 13.4	-0.3
PMPB	**Monarch Peak**	**0.55**	**133**		Pg	18 43 14.1	-0.3
PAPM	**Alder Peak**	**0.69**	**184**		Pb	18 43 17.3	+0.4
MOBB	**Monterey Bay O**	**0.70**	**278**		Pg	18 43 17.5	+0.4
CMPM	**Mikes Peak**	**0.76**	**359**		Pb	18 43 18.1	0.0
MHC	**Mount Hamilton**	**0.79**	**340**		Pb	18 43 18.5	-0.2
PDRM	**Domengine Ranc**	**0.80**	**109**		Pg	18 43 18.9	0.0
SCCB	**Santa Clara Co**	**0.82**	**327**		Pb	18 43 18.8	-0.4
PKD	**Bear Valley Ra**	**0.89**	**136**		Pb	18 43 20.1	-0.2
COSM	**Mount Oso**	**0.91**	**356**		Pg	18 43 20.9	-0.2
RAMR	**Ramage Ranch**	**1.02**	**160**		Pn	18 43 22.8	-0.1
WENL	**Wente Vineyard**	**1.09**	**341**		Pb	18 43 23.0	-0.6
JRSC	**Jasper Ridge**	**1.10**	**317**		Pb	18 43 22.6	-1.3
TCHL	**Shandon**	**1.16**	**141**		Pb	18 43 25.0	+0.1
PAGB	**Antelope Grade**	**1.21**	**135**		Pn	18 43 25.5	0.0
PAGB				IAML		18 43 48.1	
	comp=E,259nm,0.8s						
PAGB				IAML		18 43 50.5	
	comp=N,280nm,0.6s						
THIS	**South End of C**	**1.23**	**135**		Pn	18 43 25.7	-0.1
TRAM	**Private Proper**	**1.24**	**137**		Pn	18 43 25.7	-0.2
TSCN	**Private Proper**	**1.30**	**143**		Pn	18 43 25.0	-1.8
BKS	**Berkeley--Byer**	**1.48**	**330**		Pn	18 43 28.2	-0.9
CMB	**Columbia Colle**	**1.61**	**27**		Pn	18 43 30.4	-0.5
CMB				IAML		18 43 54.1	
	comp=N,106nm,0.3s						
CMB				IAML		18 43 54.2	
	comp=E,113nm,0.9s						
KCC	**Kaiser Creek**	**1.75**	**65**		Pn	18 43 30.8	-2.0
PMLM	**Mount Lospe**	**1.79**	**161**		Pn	18 43 33.1	-0.4
MCCM	**Marconi Confer**	**1.99**	**321**		Pn	18 43 35.1	-1.1
MCCM	**Marconi Confer**	**1.99**	**321**	IAML		18 44 19.8	
	comp=E,83nm,1.8s						
MCCM				IAML		18 44 21.2	
	comp=N,95nm,2.5s						
MDPB	**Devils Postpil**	**2.05**	**59**		Pn	18 43 37.4	+0.2
MDPB				IAML		18 44 07.3	
	comp=E,100nm,0.5s						
MDPB				IAML		18 44 07.5	
	comp=N,91nm,0.4s						
OMMB	**Old Mammoth Mi**	**2.10**	**60**		Pn	18 43 38.7	+0.7
OMMB				IAML		18 44 07.9	
	comp=E,72nm,0.5s						
OMMB				IAML		18 44 09.1	
	comp=N,85nm,0.6s						
MDCM	**Deadman Creek**	**2.12**	**58**		Pn	18 43 39.3	+1.1
MTUM	**Tungsten Hills**	**2.32**	**70**		Pn	18 43 42.1	+1.3
ISA	**Isabella, Lake**	**2.47**	**111**		Pn	18 43 43.3	+0.5
ISA				IAML		18 44 22.9	
	comp=N,42nm,0.5s						
EMB	**Emerald Bay**	**2.56**	**21**		Pn	18 43 44.4	+0.2
LHV	**Little Huntoon**	**2.77**	**53**		Pn	18 43 47.1	+0.3
LHV				IAML		18 44 36.8	
	comp=N,55nm,1.1s						
PNTR	**Pine Nut**	**2.83**	**28**		Pn	18 43 47.9	0.0
YERR	**Yerington**	**2.89**	**34**		Pn	18 43 48.9	+0.2
YERR				IAML		18 44 38.6	
	comp=N,38nm,0.8s						
LCH	**Last Change Ra**	**3.00**	**77**		Pn	18 43 50.6	+0.5
LCH				IAML		18 44 45.4	
	comp=E,25nm,0.5s						
CCAC	**Calif City Air**	**3.03**	**117**		Pn	18 43 51.0	+0.5
CCAC				IAML		18 44 48.2	
	comp=E,29nm,0.9s						
CCAC				IAML		18 45 05.8	
	comp=N,39nm,1.1s						
NV11	**Mina Array Sit**	**3.10**	**53**		Pn	18 43 52.2	+0.6
GRAC	**Grapevine Rang**	**3.18**	**82**		Pn	18 43 52.9	+0.3
GRAC				IAML		18 44 53.1	
	comp=E,25nm,0.8s						
GRAC				IAML		18 45 01.5	
	comp=N,21nm,1.6s						
PASC	**Pasadena Art C**	**3.51**	**133**		Pn	18 43 54.5	-2.6
PASC	**Pasadena Art C**	**3.51**	**133**	IAML		18 46 16.3	
	comp=E,15nm,2.8s						
KVN	**Kaiserville**	**3.52**	**45**		Pn	18 43 58.0	+0.6
KVN				IAML		18 44 55.6	
	comp=N,21nm,1.1s						
KVN				IAML		18 44 59.5	
	comp=E,22nm,1.5s						
QSM	**Queen of Sheba**	**3.64**	**99**		Pn	18 43 58.7	-0.1
GSC	**Goldstone, Bar**	**3.87**	**108**		Pn	18 44 02.7	+0.6
GSC				IAML		18 45 20.5	
	comp=E,15nm,2.1s						
TPNV	**Topopah Spring**	**4.07**	**84**		Pn	18 44 05.1	+0.2

TAP 22 18:46:10.0, 23°.88N×121°.55E, h9km, ML0.8, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEYL	**Yanliau Villag**	**0.04**	**101**	P	Pg	18 46 12.2	+0.5
	baz=59						
TEYL				S	Sg	18 46 14.0	+1.0
	baz=59						
HWA	**Hwalien**	**0.11**	**26**	*e*P	Pg	18 46 13.2	+0.6
	baz=29						
HWA				*e*S	Sg	18 46 15.9	+1.5
	baz=29						
ESL	**Shilin**	**0.12**	**240**	P	Pg	18 46 13.6	+0.8
	baz=237						
ESL				S	Sg	18 46 15.7	+0.9
	baz=237						
EGFH	**Guangfu**	**0.24**	**209**	*e*P	Pg	18 46 15.8	+1.0
	baz=208						
EGFH				*e*S	Sg	18 46 19.2	+1.3
	baz=208						
NACB	**Ninganchiao**	**0.30**	**7**	*e*P	Pg	18 46 16.1	+0.2
	baz=7.0						
NACB				*e*S	Sg	18 46 20.7	+0.7
	baz=7.0						
ETLH	**Xiulin Townshi**	**0.34**	**349**	*e*P	Pg	18 46 17.0	+0.3
	baz=349						
ETLH				*e*S	Sg	18 46 22.2	+1.0
	baz=349						
OWD	**Renai**	**0.35**	**283**	*e*P	Pb	18 46 18.2	-0.3
	baz=282						
OWD				*e*S	Sb	18 46 23.2	-1.1
	baz=282						
WHF	**Hehuan Shan**	**0.38**	**316**	*e*P	Pg	18 46 18.2	+0.7
	baz=316						
WHF				*e*S	Sb	18 46 24.2	-1.1
	baz=316						
CHGB	**Renai**	**0.39**	**298**	*e*P	Pb	18 46 19.1	-0.2
	baz=297						
CHGB				*e*S	Sb	18 46 25.0	-0.5
	baz=297						
VWDT	**VWDT**	**0.40**	**252**	*e*P	Pb	18 46 19.7	+0.6
	baz=252						
VWDT				*e*S	Sb	18 46 25.0	-0.3
	baz=252						
WUSB	**Renai**	**0.41**	**286**	*e*P	Pb	18 46 19.5	-0.1
	baz=286						
WUSB				*e*S	Sb	18 46 25.9	-0.2
	baz=286						
FUSS	**Fushou**	**0.47**	**323**	*e*P	Pb	18 46 20.3	-0.2
	baz=322						
FUSS				*e*S	Sb	18 46 27.2	-0.4
	baz=322						
YULB	**Yu-li**	**0.54**	**206**	*e*P	Pb	18 46 21.3	-0.3
	baz=205						
YULB				*e*S	Sb	18 46 30.1	+0.7
	baz=205						
SSLB	**Suanglung**	**0.56**	**261**	*e*S	Sb	18 46 29.9	-0.1
	baz=260						

JMA 22 18:46:16.5±0.2, 24°.0N±1°.0×122°.3E±°, h20km±4km, MV1.6/6, NW OFF ISHIGAKIJIMA IS, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.93**	**69**	P	Pb	18 46 33.5	-0.4
IRIF				*e*S	Sb	18 46 46.1	+0.4
JKRS	**Kuro-shima**	**1.15**	**78**	P	Pn	18 46 37.5	+0.1
JKRS				*e*S	Sb	18 46 51.8	-0.3
JIJ	**Ishigaki jima**	**1.29**	**74**	P	Pn	18 46 39.7	+0.2
JIJ				*e*S	Sb	18 46 56.3	0.0
JISG	**Ishigakijimahi**	**1.51**	**67**	P	Pn	18 46 43.1	+0.7
JISG				*e*S	Sn	18 47 01.5	-0.1

*ISN **22** 19:00:18.8±0.7, 32°.18N×47°.45E, h6km±25km, ML3.1*
*TEH **22** 19:00:21.3, 32°.18N×47°.59E, h14km, ML3.0*
ISC 22 19:00:19.8±1.4, 32°.13N±0°.04×47°.46E±0°.04, h8km±13km, n27, σ1s54/33, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DHL1	**Dehloran**	**0.57**	**344**	*e*Pg	**Pn**	**19 00 32.2**	**+0.2**
DHL1				*e*Sg	**Sn**	**19 00 41.5**	**-2.3**
RAFI	**Al-Rafai**	**1.22**	**251**	*e*Pg	**Pn**	**19 00 42.6**	**-0.5**
RAFI				*e*Sg	**Sb**	**19 00 59.5**	**+0.6**
RAFI				AML	AML	19 01 11.2	
	comp=E,237nm,0.2s						
AHWZ	**Ahwaz**	**1.28**	**128**	*e*Sg	**Sg**	**19 01 03.4**	**+2.3**
IKFM	**Kafar-mosalman**	**1.43**	**13**	*e*Pg	**Pg**	**19 00 46.7**	**-0.5**
IKFM				*e*Sg	**Sg**	**19 01 06.7**	**+1.0**
IKFM				*e*		19 01 11.2	
	comp=Z,3μm,0.5s						
AMIS	**Naft Sefid**	**1.62**	**106**	*e*Pg	**Pb**	**19 00 49.3**	**-0.6**
AMIS				*e*Sg	**Sg**	**19 01 10.8**	**-1.1**
AMIS				*e*		19 01 14.8	
	comp=Z,3μm,0.3s						
IBDR	**Badra**	**1.62**	**307**	*e*Pn	**Pn**	**19 00 49.0**	**+0.3**
IBDR				*e*Sn	**Sb**	**19 01 11.0**	**+0.5**
IDOB	**Doab**	**1.76**	**20**	*e*Pg	**Pb**	**19 00 51.9**	**-0.5**
IKOM	**Komasi**	**2.04**	**1**	*e*Pn	**Pb**	**19 00 55.8**	**-1.4**
IKOM				*e*		19 01 31.4	
	comp=Z,1μm,0.7s						
KCHF	**Cheshme Sefid,**	**2.17**	**351**	*e*Pg	**Pg**	**19 01 01.5**	**+0.2**
KCHF				*e*		19 01 35.3	
	comp=Z,826nm,0.3s						
HSAM	**Samen**	**2.28**	**24**	*e*Pn	**Pb**	**19 00 59.3**	**-2.1**
IGHG	**Ghaleghazi**	**2.32**	**341**	*e*Pn	**Pb**	**19 01 00.9**	**-1.1**
IBZA	**Bozab**	**2.35**	**8**	*e*		19 01 06.8	
	comp=Z,484nm,0.2s						
IBZA				*e*Pn	**Pb**	**19 01 01.1**	**-1.5**
KHMZ	**Khomeyn**	**2.64**	**52**	*e*Pn	**Pb**	**19 01 04.5**	**-3.0**
IDHR	**Dehrash**	**2.71**	**341**	*e*Pn	**Pn**	**19 01 05.9**	**+2.0**
IDHR				*e*		19 01 51.9	
	comp=Z,630nm,0.3s						
BHD	**Baghdad**	**2.84**	**294**	*e*Pn	**Pn**	**19 01 06.0**	**+0.6**
BHD				*e*Sn	**Sn**	**19 01 41.0**	**+1.3**
BHD				AML	AML	19 01 41.4	
	comp=E,194nm,0.3s						
SHK1	**Shahrekord**	**2.91**	**85**	*e*		19 01 16.0	
	comp=Z,360nm,0.5s						
SHK1				*e*Pn	**Pn**	**19 01 07.5**	**+0.9**
IPIR	**Pirpir**	**2.95**	**78**	*e*		19 01 56.5	
	comp=Z,408nm,0.3s						
IPIR				*e*Pn	**Pn**	**19 01 08.6**	**+1.3**
SNGE	**Sanandaj**	**2.95**	**358**	*e*Pn	**Pb**	**19 01 09.9**	**-2.9**
ASAO	**Ashtian**	**3.23**	**41**	*e*Pn	**Pn**	**19 01 12.8**	**+1.8**
QAMS	**Qamsar**	**3.67**	**63**	*e*Pn	**Pn**	**19 01 18.8**	**+1.6**
QAMS				*e*		19 02 18.9	
	comp=Z,341nm,0.4s						
KLNJ	**Kolanjah**	**3.70**	**107**	*e*Pn	**Pn**	**19 01 18.2**	**+0.6**
KLNJ				*e*		19 02 24.4	
	comp=Z,233nm,0.6s						
IRAZ	**Razeghan**	**3.86**	**32**	*e*Pn	**Pn**	**19 01 22.0**	**+2.4**
IRAZ				*e*		19 01 30.1	
	comp=Z,364nm,0.4s						
GHVR	**GHOM**	**3.97**	**53**	*e*Pn	**Pn**	**19 01 22.1**	**+1.0**
IQOM	**Qom**	**4.05**	**47**	*e*Pn	**Pn**	**19 01 22.4**	**+0.1**
IQOM				*e*		19 01 38.0	
	comp=Z,304nm,0.6s						
IZEF	**Zefreh**	**4.18**	**78**	*e*Pn	**Pn**	**19 01 25.1**	**+1.0**
NASN	**Na'in**	**4.57**	**80**	*e*Pn	**Pn**	**19 01 30.7**	**+1.2**
QALM	**Alamut, Qazvin**	**5.03**	**31**	*e*Pn	**Pn**	**19 01 37.6**	**+1.8**

MAN 22 19:01:41.2, 18°.94N×121°.50E, h6km, mb4.2, ML3.1, MS2.8, 4D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGCP	**Gonzaga**	**0.87**	**143**	⇓*e*P	Pg	19 01 58.0	+0.4
SGCP				*e*S		19 02 14.3	
SIPP	**Brgy, Tapao**	**1.41**	**224**	⇓*i*P	Pb	19 02 07.0	+0.1
SIPP				*i*S		19 02 31.2	
SAMP	**Sagada Mountai**	**1.93**	**197**	⇓*e*P	Pn	19 02 14.0	0.0
SAMP				*e*S		19 02 38.6	
CAUP	**Cauayan**	**2.01**	**171**	⇓*e*P	Pb	19 02 18.1	+0.1
CAUP				*e*S		19 02 49.5	

**IDC 22 19:08:54.8±18.0

SADO	**Sadowa**	**36.45**	**36**	LR		LR		19 32 31.7
	comp=Z,52nm,18.1s,baz=58,slow=39							

NEIC ***22*** *19:27:22.2±1.2,58.1°S±0.1°×27.1°W±0.3,h238km±8km, mb4.2/12,Error ellipse: s-maj=27.3km s-min=15.6km az=58.0*
IDC ***22*** *19:27:24.0±5.8,58.24°S×27.29°W,h260km±57km,mb3.4/5, mbtmp4.0/6,Error ellipse: s-maj=31.7km s-min=16.7km az=52.0*
ISC 22 19:27:22.5±0.7,58.4°S±0.1°×27.1°W±0.2,h250km,n24, σ2ŝ41/25,**mb3.9/7,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**14.66**	**155**	P	**P**	**19 30 38.4**	**+0.2**
VNA1				S	S	19 33 08.0	-12
VNA3	**Neumayer Olymp**	**14.82**	**158**	P	**P**	**19 30 40.1**	**+0.1**
VNA3				S	S	19 33 09.7	-14
SNAA	**Sanae**	**16.64**	**153**	P	**Pn**	**19 31 04.4**	**+2.6**
SNAA				S	**S**	**19 33 55.1**	**-5.6**
SNAA	**Sanae**	**16.64**	**153**	P	**Pn**	**19 31 04.4**	**+2.6**
	2.1nm,0.5s,baz=312,slow=15,SNR=37						
SNAA				S	**S**	**19 33 53.6**	**-7.0**
	1.0nm,0.8s,baz=335,slow=19,SNR=2.5						
SNAA	**Sanae**	**16.64**	**153**		**Pn**	**19 31 04.1**	**+2.3**
TROLL	**Troll, Antarti**	**18.19**	**151**	P	**Pn**	**19 31 24.3**	**+4.2**
TROLL				S	S	**19 33 32.3**	**+0.8**
EFI	**East Falkland**	**18.84**	**277**	P	**P**	**19 31 24.1**	**+0.1**
QSPA	**South Pole Qui**	**31.90**	**180**	P	**P**	**19 33 25.0**	**+0.6**
	0.7nm,0.5s,baz=249,slow=1.2,SNR=14						
	0.7nm,0.5s						
QSPA	**South Pole Qui**	**31.90**	**180**	P	**P**	**19 33 25.3**	**+0.9**
QSPA				IAmb	IAmb	19 33 39.6	
	comp=Z,9.5nm,1.5s						
PLCA	**Paso Flores**	**32.52**	**284**	P	**P**	**19 33 30.6**	**+0.7**
	comp=Z,2.3nm,0.9s,baz=146,slow=3.6,SNR=4.1						
	comp=Z,2.3nm,0.9s						
PLCA	**Paso Flores**	**32.52**	**284**	IAmb	IAmb	19 33 57.5	
	comp=Z,5.0nm,1.2s						
MT09	**Talagante**	**38.12**	**291**	P	**P**	**19 34 18.0**	**+0.3**
MT01	**Popeta**	**38.18**	**290**	P	**P**	**19 34 18.6**	**+0.6**
MT01				IAmb	IAmb	19 34 44.1	
	comp=Z,23nm,1.4s						
MT02	**Curacav**	**38.61**	**291**	P	**P**	**19 34 19.7**	**-1.9**
SIV	**San Ignacio**	**49.21**	**315**	P	**P**	**19 35 44.4**	**-1.3**
	comp=Z,1.9nm,0.5s,baz=151,slow=10,SNR=8.2						
	comp=Z,1.9nm,0.5s						
LPAZ	**La Paz**	**51.77**	**307**	P	**P**	**19 36 04.9**	**-0.6**
	comp=Z,1.3nm,0.5s,baz=172,slow=6.4,SNR=6.6						
	comp=Z,1.3nm,0.5s						
LPAZ	**La Paz**	**51.77**	**307**	P	**P**	**19 36 04.8**	**-0.7**
SAML	**Samuel**	**56.47**	**316**	P	**P**	**19 36 37.6**	**-0.9**
SAML				IAmb	IAmb	19 36 38.4	
	comp=Z,3.1nm,0.8s						
TORD	**Torodi Ar. Bea**	**75.04**	**29**	P	**P**	**19 38 36.5**	**0.0**
	comp=Z,0.5nm,0.3s,baz=195,slow=6.1,SNR=11						
	comp=Z,0.5nm,0.3s						
TORD	**Torodi Ar. Bea**	**75.04**	**29**	IAmb	IAmb	19 38 36.8	
	comp=Z,5.8nm,1.5s						
FINES	**FINESS Array B**	**126.39**	**29**	PKP	**PKiKP**	**19 45 54.3**	**-0.1**
	comp=Z,1.5nm,0.9s,baz=161,slow=4.4,SNR=10						
ARCES	**ARCESS Array B**	**133.06**	**22**	PKP	**PKPdf**	**19 46 06.4**	**0.0**
	comp=Z,1.5nm,0.7s,baz=207,slow=3.0,SNR=3.7						
SONM	**Songino Array**	**150.74**	**91**	PKPbc	**PKiKP**	**19 46 44.8**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=208,slow=3.4,SNR=8.1						
ILAR	**Eielson Array**	**151.64**	**308**	PKPbc	**PKiKP**	**19 46 45.6**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=138,slow=5.9,SNR=6.4						

IDC ***22*** *19:30:13.3±3.3,15.87°N×99.02°W,h0km,mb3.7/3, mbtmp3.5/5,ML3.1/2,MS3.2/2,Error ellipse: s-maj=56.9km s-min=19.8km az=5.0*
NEIC ***22*** *19:30:15.5±2.6,16.25°N±0.03°×98.99°W±0.02,h10km±1km, mb4.1/21,Md4.2/56(MEX),Error ellipse: s-maj=5.7km s-min=3.7km az=194.0*
MEX ***22*** *19:30:17.0±1.9,16.10°N×99.02°W,h16km±59km,MD4.2*
ISC 22 19:30:15.7±1.5,16.15N±0.06°×99.02W±0.03,h15km±8km, n70,σ2ŝ19/107,**mb4.0**/14,**Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRIG	**Cruz Grande**	**0.59**	**349**		**Pg**	**19 30 26.9**	**-0.5**
CRIG					**Sg**	**19 30 35.6**	**+0.3**
CRIG	**Cruz Grande**	**0.59**	**349**	*eP*	**Pg**	**19 30 26.9**	**-0.5**
CRIG				*eS*	**Sg**	**19 30 35.6**	**+0.3**
PNIG	**Pinotepa**	**0.89**	**74**		**Pb**	**19 30 31.0**	**-1.8**
PNIG					**Sb**	**19 30 42.6**	**-1.9**
PNIG	**Pinotepa**	**0.89**	**74**	*eP*	**Pb**	**19 30 31.0**	**-1.8**
PNIG				*eS*	**Sb**	**19 30 42.6**	**-1.9**
DAIG	**Los Arroyos**	**1.06**	**325**		**Pb**	**19 30 34.0**	**-1.8**
DAIG					**Sb**	**19 30 47.4**	**-2.0**
DAIG	**Los Arroyos**	**1.06**	**325**	*eP*	**Pb**	**19 30 34.0**	**-1.8**
DAIG				*eS*	**Sb**	**19 30 47.4**	**-2.0**
MGIG	**Malinaltepec**	**1.14**	**19**	*eP*	**Pn**	**19 30 35.4**	**-1.8**
MGIG				*eS*	**Sb**	**19 30 50.7**	**-1.1**
TLIG	**Tlapa**	**1.47**	**17**		**Pn**	**19 30 40.7**	**-1.1**
TLIG					**Sn**	**19 30 58.7**	**-2.1**
TLIG	**Tlapa**	**1.47**	**17**	*eP*	**Pn**	**19 30 40.7**	**-1.1**
TLIG				*eS*	**Sn**	**19 30 58.7**	**-2.1**
CAIG	**El Cayaco**	**1.50**	**307**		**Pn**	**19 30 40.8**	**-1.2**
CAIG					**Sn**	**19 30 57.3**	**-4.0**
CAIG	**El Cayaco**	**1.50**	**307**	*eP*	**Pn**	**19 30 40.8**	**-1.2**
CAIG				*eS*	**Sn**	**19 30 57.3**	**-4.0**
YOIG	**Yosondua**	**1.57**	**63**	*eP*	**Pn**	**19 30 41.8**	**-1.5**
YOIG				*eS*	**Sn**	**19 30 59.8**	**-3.8**
TXIG	**Tlaxiaco**	**1.62**	**47**	*eP*	**Pn**	**19 30 42.7**	**-1.3**
TXIG				*eS*	**Sn**	**19 31 02.2**	**-2.6**
MEIG	**Mezcala**	**1.86**	**342**		**Pn**	**19 30 46.5**	**-0.5**
MEIG					**Sn**	**19 31 07.3**	**-3.0**
MEIG	**Mezcala**	**1.86**	**342**	*eP*	**Pn**	**19 30 46.5**	**-0.5**
MEIG				*eS*	**Sn**	**19 31 07.3**	**-3.0**
FTIG	**Fresnillo de T**	**1.94**	**26**	*eP*	**Pn**	**19 30 47.7**	**-0.6**
FTIG				*eS*	**Sn**	**19 31 10.4**	**-2.1**
PLIG	**Platanillo**	**2.28**	**348**		**Pn**	**19 30 51.8**	**-1.0**
PLIG					**Sn**	**19 31 19.6**	**-1.1**
PLIG	**Platanillo**	**2.28**	**348**	*eP*	**Pn**	**19 30 51.8**	**-1.0**
PLIG				*eS*	**Sn**	**19 31 19.6**	**-1.1**
VHO	**Vista Hermosa**	**2.37**	**67**	*eP*	**Pn**	**19 30 53.5**	**-0.8**
VHO				*eS*	**Sn**	**19 31 22.5**	**-0.7**
ARIG	**Puente Sto Nin**	**2.47**	**329**		**Pn**	**19 30 59.3**	**+3.9**
ARIG					**Sn**	**19 31 24.1**	**-1.3**
ARIG	**Puente Sto Nin**	**2.47**	**329**	*eP*	**Pn**	**19 30 59.3**	**+3.9**
ARIG				*eS*	**Sn**	**19 31 24.1**	**-1.3**
TOIG	**Toxpalan**	**2.69**	**44**	*eP*	**Pn**	**19 30 57.4**	**-1.1**
TOIG				*eS*	**Sn**	**19 31 31.4**	**+0.5**
YAIG	**Yautepec**	**2.70**	**359**		**Pn**	**19 31 03.1**	**+4.4**
YAIG					**Sn**	**19 31 29.3**	**-1.8**
YAIG	**Yautepec**	**2.70**	**359**	*eP*	**Pn**	**19 31 03.1**	**+4.4**
YAIG				*eS*	**Sn**	**19 31 29.3**	**-1.8**
ZIIG	**Zihuatanejo**	**2.75**	**302**		**Pn**	**19 31 01.1**	**+1.7**
ZIIG					**Sn**	**19 31 32.5**	**+0.2**
ZIIG	**Zihuatanejo**	**2.75**	**302**	*eP*	**Pn**	**19 31 01.1**	**+1.7**
ZIIG				*eS*	**Sn**	**19 31 32.5**	**+0.2**
HUIG	**Huatulco**	**2.82**	**97**		**Pn**	**19 30 59.0**	**-1.3**
HUIG					Sn	19 31 25.9	-8.2
HUIG	**Huatulco**	**2.82**	**97**	*eP*	**Pn**	**19 30 59.0**	**-1.3**
HUIG				*eS*	Sn	19 31 25.9	-8.2
MAVM	**Malinalco, Edo**	**2.83**	**351**		**Pn**	**19 31 05.1**	**+4.6**
MAVM					**Sn**	**19 31 35.1**	**+0.7**
MAVM	**Malinalco, Edo**	**2.83**	**351**	*eP*	**Pn**	**19 31 05.1**	**+4.6**
MAVM				*eS*	**Sn**	**19 31 35.1**	**+0.7**
TLVM	**San Miguel Top**	**3.04**	**358**	*eP*	**Pb**	**19 31 10.9**	**+1.1**
TLVM				*eS*	**Sn**	**19 31 41.8**	**+1.8**
XCVM	**Xochimilco**	**3.08**	**358**	*eP*	**Pn**	**19 31 03.1**	**-1.1**
XCVM				*eS*	**Sn**	**19 31 34.5**	**-6.4**
AOVM	**Tlapan**	**3.11**	**355**	*eP*	**Pb**	**19 31 10.7**	**-0.4**
AOVM				*eS*	**Sn**	**19 31 40.6**	**-1.3**
THVM	**De Xico**	**3.14**	**1**	*eP*	**Pb**	**19 31 12.0**	**+0.6**
THVM				*eS*	**Sn**	**19 31 42.8**	**+0.5**
UNM	**Universidad Na**	**3.16**	**357**	Pn	**Pn**	**19 31 03.1**	**-2.1**
GMVM	**Gustavo A Made**	**3.32**	**358**	*eP*	**Pb**	**19 31 14.0**	**-0.6**
GMVM				*eS*	**Sn**	**19 31 48.2**	**+1.4**
NEUV	**Arroyo Zacate**	**3.44**	**63**	*eP*	**Pn**	**19 31 08.2**	**-0.7**
NEUV				*eS*	**Sn**	**19 31 52.7**	**+3.3**
JAUV	**Jalcomulco**	**3.83**	**33**	*eP*	**Pn**	**19 31 12.8**	**-1.4**
JAUV				*eS*	**Sn**	**19 32 04.9**	**+5.9**
CMIG	**Matias Romero**	**4.07**	**76**	Pn	**Pn**	**19 31 16.8**	**-0.7**
	0.5nm,0.3s,baz=261,slow=13,SNR=8.9						
CMIG				Pg	**Pb**	**19 31 30.6**	**+3.5**
	1.6nm,0.3s,baz=286,slow=13,SNR=11						
CMIG				Lg	Lg	19 32 25.0	
	12nm,0.3s,baz=285,slow=6.6,SNR=18						
	1.5nm,0.3s						
MOIG	**Morelia**	**4.07**	**330**	Pn	**Pn**	**19 31 16.0**	**-1.7**
MOIG	**Morelia**	**4.07**	**330**	*eP*	Pn	19 31 23.6	+5.9
MOIG				*eS*	**Sn**	**19 32 03.0**	**-2.2**
DEIG	**Demacu**	**4.13**	**360**	*eP*	Pn	19 31 25.3	+6.9
DEIG				*eS*	**Sn**	**19 32 07.6**	**+1.0**
CCIG	**Comitan**	**6.61**	**88**		**Pn**	**19 31 50.5**	**-2.1**
CCIG				Sn	**Sn**	**19 33 06.2**	**-1.5**
ZAIG	**Zacatecas**	**7.38**	**334**	Pn	**Pn**	**19 32 01.9**	**-1.4**
TXAR	**Lajitas Array**	**13.80**	**343**	Pn	**Pn**	**19 33 34.0**	**+3.1**
	baz=146,slow=9.8,SNR=2.9						
TXAR				Lg	Lg	19 37 39.4	
	baz=164,slow=29,SNR=5.7						
	0.4nm,0.9s						
TUC	**Tucson**	**19.31**	**329**	P	**P**	**19 34 39.1**	**-1.3**
LCAR	**Lake Charles**	**21.04**	**18**	P	**P**	**19 35 02.8**	**+3.8**
PLAL	**Pickwick Lake**	**21.16**	**26**	P	**P**	**19 35 01.7**	**+1.4**
PLAL				IAmb	IAmb	19 35 05.0	
	comp=Z,6.4nm,0.9s						
X16A	**Lo Mia Camp, P**	**21.34**	**331**	P	**P**	**19 35 02.7**	**+0.2**
T25A	**Trinidad**	**21.44**	**348**	P	**P**	**19 35 03.8**	**+0.1**
WUAZ	**Wupatki**	**22.22**	**333**	P	**P**	**19 35 14.1**	**+2.1**
WUAZ				IAmb	IAmb	19 35 17.8	
	comp=Z,9.5nm,1.2s						
WVT	**Waverly**	**22.25**	**25**	P	**P**	**19 35 11.9**	**-0.2**
WVT				IAmb	IAmb	19 35 14.8	
	comp=Z,5.7nm,1.0s						
MVCO	**Mesa Verde**	**22.59**	**340**	P	**P**	**19 35 17.5**	**+1.5**
MVCO				IAmb	IAmb	19 35 19.3	
	comp=Z,5.9nm,0.9s						
R40A	**Maddies Statio**	**22.84**	**14**	P	**P**	**19 35 19.3**	**+1.0**
R40A				IAmb	IAmb	19 35 20.8	
	comp=Z,6.5nm,1.0s						
SIUC	**Southern Illin**	**23.16**	**20**	P	**P**	**19 35 20.6**	**-0.9**
CPCT	**Cooper Cave**	**23.18**	**31**	P	**P**	**19 35 21.3**	**-0.5**
CPCT				IAmb	IAmb	19 35 23.0	
	comp=Z,7.9nm,1.2s						
T47A	**Sharon Grove**	**23.29**	**25**	P	**P**	**19 35 22.9**	**0.0**
U15A	**North Rim**	**23.39**	**332**	P	**P**	**19 35 23.6**	**-0.7**
PV13	**Radium Mtn., P**	**23.56**	**340**	P	**P**	**19 35 23.3**	**-2.6**
PV13				IAmb	IAmb	19 35 51.0	
	comp=Z,3.9nm,0.8s						
PV07	**Paradox Valley**	**23.76**	**341**	P	**P**	**19 35 24.8**	**-3.0**
PV07				IAmb	IAmb	19 35 25.6	
	comp=Z,9.2nm,1.3s						
SMCO	**Snowmass**	**23.98**	**345**	P	**P**	**19 35 33.6**	**+3.5**
SMCO				IAmb	IAmb	19 35 38.6	
	comp=Z,4.3nm,1.1s						
P40A	**Paris**	**24.07**	**13**	P	**P**	**19 35 28.2**	**-2.3**
ISCO	**Idaho Springs**	**24.25**	**348**	P	**P**	**19 35 32.6**	**+0.1**
ISCO				IAmb	IAmb	19 35 35.3	
	comp=Z,5.8nm,1.1s						
MTPU	**Mount Pierson**	**24.70**	**335**	P	**P**	**19 35 37.4**	**+0.7**
SRU	**San Rafael Swe**	**25.00**	**338**	P	**P**	**19 35 39.6**	**+0.5**
P18A	**Preston Nutter**	**25.36**	**339**	P	**P**	**19 35 43.9**	**+1.3**
P18A				IAmb	IAmb	19 35 47.5	
	comp=Z,4.5nm,0.9s						
NVAR	**Mina Array Bea**	**27.93**	**326**	P	**P**	**19 36 09.2**	**+3.5**
	comp=Z,0.5nm,0.7s,baz=157,slow=9.8,SNR=5.0						
NVAR				LR	LR	19 46 56.1	
	comp=Z,78nm,18.6s,baz=250,slow=36						
	comp=Z,0.5nm,0.7s						
PDAR	**Pinedale Array**	**28.02**	**343**	P	**P**	**19 36 08.9**	**+2.5**
	comp=Z,1.3nm,0.9s,baz=153,slow=11,SNR=7.7						
PDAR				LR	LR	19 49 17.7	
	comp=Z,34nm,21.9s,baz=168,slow=40						
	comp=Z,1.3nm,0.9s						
LRM	**Limekiln Ridge**	**31.65**	**342**	P	**P**	**19 36 36.7**	**-1.9**
ILAR	**Eielson Array**	**58.26**	**338**	P	**P**	**19 40 10.1**	**+0.7**
	comp=Z,0.8nm,0.9s,baz=143,slow=4.2,SNR=5.7						
	comp=Z,0.8nm,0.9s						

IDC ***22*** *19:54:27.1±1.6,1.90°N×125.25°E,h0km,mb4.1/3, mbtmp4.2/3,Error ellipse: s-maj=188.4km s-min=22.9km az=63.0*
NEIC ***22*** *19:54:34.6±0.9,3.21°N±0.09°×127.9°E±0.2,h89km±7km, mb4.0/12,Error ellipse: s-maj=22.4km s-min=11.8km az=78.0*
MAN ***22*** *19:54:35.8,3.41°N×127.93°E,h51km,mb4.9,ML3.9,MS3.9*
DJA ***22*** *19:54:37.7±0.4,3°N±3°×12°8E±°,h89km±7km,M4.4/13, mb4.4/13,mB4.8/4,MLv4.4/12,Mw(mB)4.1/4*
ISC 22 19:54:35.5±0.8,3.22N±0.06°×127.80E±0.07,h100km,n45, σ1ŝ65/50,**mb4.0**/6,**3C,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**2.31**	**282**	P	**Pn**	**19 55 13.0**	**+0.9**
SGSI				S	**Sn**	**19 55 40.7**	**+0.5**
TNTI	**Ternate**	**2.47**	**190**	Pn	**Pn**	**19 55 13.1**	**-1.2**
TNTI	**Ternate**	**2.47**	**190**	P	**Pn**	**19 55 15.9**	**+1.7**
LBMI	**Labuha**	**3.84**	**184**	P	**Pn**	**19 55 34.7**	**+2.1**
GSPH	**General Santos**	**4.02**	**315**	*iP*	**Pn**	**19 55 32.9**	**-2.2**
KCP	**Kidapawan**	**4.63**	**325**	*iP*	**Pn**	**19 55 44.9**	**+1.6**
KCP				*eS*	**Sn**	**19 56 36.5**	**+0.5**
KMSI	**Cibinong**	**4.63**	**236**	P	**Pn**	**19 55 45.4**	**+2.1**
KMSI				S	**Sn**	**19 56 36.4**	**+0.5**
CTBH	**Cotabato--PC H**	**5.32**	**318**	*eP*	**Pn**	**19 55 53.5**	**+0.9**
SWI	**Sorong**	**5.33**	**139**	P	**Pn**	**19 55 54.3**	**+1.5**
	0.4nm2µm63nm,0.5s						
SANI	**Sanana**	**5.54**	**199**	P	**Pn**	**19 55 54.8**	**-0.8**
	0.4nm2µm42nm,0.6s						
NLAI	**Namlea**	**6.45**	**186**	P	**Pn**	**19 56 09.6**	**+1.6**
	0.2nm14nm,0.4s						
MRSI	**Marisa**	**6.46**	**245**	P	**Pn**	**19 56 10.4**	**+2.4**
	0.2nm517nm43nm,0.6s						
MRSI				S	**Sn**	**19 57 19.3**	**-1.0**
	0.2nm517nm43nm,0.6s						
LUWI	**Luwuk**	**6.57**	**230**	Pn	**Pn**	**19 56 09.4**	**-0.2**
LUWI					**Sn**	**19 57 25.1**	**+2.0**
LUWI	**Luwuk**	**6.57**	**230**	P	**Pn**	**19 56 11.4**	**+1.8**
	0.5nm29nm,0.7s						
LUWI				S	**Sn**	**19 57 24.4**	**+1.3**
	0.5nm29nm,0.7s						
TOLI2	**Tolitoli**	**7.32**	**254**	Pn	**Pn**	**19 56 18.7**	**-1.0**
APSI	**Ampana**	**7.39**	**236**	P	**Pn**	**19 56 22.2**	**+1.5**
	0.1nm359nm17nm,0.6s						
FAKI	**Fak Fak**	**7.55**	**144**	Pn	**Pn**	**19 56 24.5**	**+1.6**
FAKI	**Fak Fak**	**7.55**	**144**	P	**Pn**	**19 56 24.8**	**+1.9**
	0.3nm59nm,1.4s						
MPSI	**Mapaga**	**8.40**	**250**	P	**Pn**	**19 56 36.2**	**+1.7**
	2.9nm,0.4s						
BAKI	**Biak**	**9.39**	**118**	P	**Pn**	**19 56 50.9**	**+2.9**
	100nm,1.4s						
MYLDM	**Lahad Datu**	**9.47**	**282**	Pn	**Pn**	**19 56 47.7**	**-1.4**
BBSI	**Bau Bau**	**10.10**	**211**	P	**Pn**	**19 57 00.2**	**+2.5**
	1.7nm,0.8s						
SPSI	**Sidrap Palu**	**10.74**	**228**	P	**Pn**	**19 57 07.3**	**+1.0**
	9.1nm,0.7s						
BNSI	**Bone**	**10.79**	**225**	P	**Pn**	**19 57 08.3**	**+1.3**
	8.8nm,1.6s						
BKSI	**Bulukumba**	**11.44**	**222**	P	**Pn**	**19 57 17.8**	**+2.1**
	6.1nm,0.5s						
BSSI	**Bau Bau, Buton**	**11.82**	**218**	P	**Pn**	**19 57 22.6**	**+1.7**
MTN	**Manton Dam**	**16.30**	**168**	P	**Pn**	**19 58 13.6**	**-5.0**
MTN				IAmb	IAmb	19 58 33.9	
	comp=Z,20nm,1.4s						
KNRA	**Kununurra**	**18.80**	**177**	P	**P**	**19 58 46.8**	**-0.5**
KNRA				IAmb	IAmb	19 58 48.1	
	comp=Z,10nm,1.1s						
WB0	**Warramunga Arr**	**23.75**	**164**	P	**P**	**19 59 37.7**	**-1.2**
WRAB	**Tennant Creek**	**23.89**	**165**	P	**P**	**19 59 38.9**	**-1.2**
WRAB				IAmb	IAmb	19 59 41.0	
	comp=Z,4.7nm,0.7s						
WRA	**Warramunga Arr**	**23.90**	**165**	P	**P**	**19 59 39.4**	**-0.8**
	comp=Z,2.6nm,0.6s,baz=337,slow=11,SNR=57						
	comp=Z,2.6nm,0.6s						
WRA	**Warramunga Arr**	**23.90**	**165**	P	**P**	**19 59 37.8**	**-2.4**
WB2	**Warramunga Arr**	**23.90**	**165**	P	**P**	**19 59 39.3**	**-1.0**
WB2				IAmb	IAmb	20 00 03.1	
	comp=Z,8.8nm,1.2s						
WR0	**Warramunga Arr**	**23.97**	**164**	P	**P**	**19 59 39.8**	**-1.0**
WR0				IAmb	IAmb	20 00 03.2	
	comp=Z,7.1nm,1.4s						
AS31	**Alice Springs**	**27.38**	**168**	P	**P**	**20 00 10.6**	**-1.0**
ASAR	**Alice Springs**	**27.38**	**168**	P	**P**	**20 00 10.4**	**-1.2**
BBOO	**Buckleboo**	**36.68**	**168**	P	**P**	**20 01 31.0**	**-1.8**
STKA	**Stephens Creek**	**37.29**	**160**	P	**P**	**20 01 38.1**	**+0.2**
	comp=Z,2.8nm,0.4s,baz=338,slow=7.7,SNR=16						
	comp=Z,2.8nm,0.4s						
STKA	**Stephens Creek**	**37.29**	**160**	P	**P**	**20 01 38.1**	**+0.2**
STKA	**Stephens Creek**	**37.29**	**160**	IAmb	IAmb	20 01 38.8	
	comp=Z,1.9nm,1.1s						
MK31	**Makanchi Array**	**58.58**	**325**	P	**P**	**20 04 22.9**	**+0.9**
MKAR	**Makanchi Array**	**58.58**	**325**	P	**P**	**20 04 23.1**	**+1.2**
	comp=Z,0.6nm,0.3s,baz=114,slow=7.9,SNR=15						
	comp=Z,0.6nm,0.3s						
MKAR	**Makanchi Array**	**58.58**	**325**	P	**P**	**20 04 23.1**	**+1.2**
MAKZ	**Makanchi**	**58.77**	**325**	P	**P**	**20 04 23.5**	**+0.3**
KKAR	**Karatay Array**	**64.33**	**317**	P	**P**	**20 05 00.8**	**+0.1**

MAN 22 19:55:44.2,15.47N×119.85E,h24km,mb3.8,ML2.6, MS2.1,1C-5D,Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOLP	**Bolinao**	**0.91**	**4**	*eP*	Pn	19 56 00.6	+0.4
BOLP				*eS*		19 56 13.3	
SMPP	**San Manuel, Pa**	**1.05**	**50**	*eP*	Pb	19 56 02.9	+0.1
SMPP				*eS*		19 56 17.7	
PCPH	**Palayan**	**1.21**	**85**	*eP*	Pn	19 56 04.8	+0.1
MACP	**Maragondon, Ca**	**1.46**	**145**	*eP*	Pn	19 56 08.9	+0.8
MACP				*eS*		19 56 28.1	
BALP	**Baler**	**1.69**	**80**	*eP*	Pn	19 56 12.3	+0.9
BALP				*eS*		19 56 34.1	
SAMP	**Sagada Mountai**	**1.90**	**32**	*eP*	Pb	19 56 16.0	+1.3
SAMP				*eS*		19 56 40.0	

IDC ***22*** *20:10:11.3±0.5,55.47°S×26.74W,h0km,mb4.7/12, mbtmp4.7/13,ML3.7/1,MS4.4/41,Error ellipse: s-maj=19.9km s-min=15.2km az=43.0*
MOS ***22*** *20:10:12.8±1.1,55.61°S×27.02W,h19km,mb5.0/6,Error ellipse: s-maj=20.3km s-min=11.2km az=117.1*
NEIC ***22*** *20:10:14.5±1.2,55.54°S±0.09°×26.9°W±0.2,h20km±2km, mb5.2/69,Error ellipse: s-maj=14.7km s-min=11.9km az=221.0*
GCMT ***22*** *20:10:18.5±0.2,55.39°S±0.02°×26.72°W±0.03,h17km, MW5.1/88,Moment Tensor Solution. s59,c74; s88,c146; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr3.82±.18; Mθθ-1.53±.13; Mϕϕ-2.29±.13; Mre-3.36±.39; Mθϕ2.47±.09; Mϕr2.21±.36; Best double couple: M₀5.76600×10¹⁶ NP1:ϕs153.00000°,δ25.00000°,λ114.00000°. NP2: ϕs308.00000°,δ68.00000°,λ80.00000°. Principal axes: T 5.5660, Plg66.0000°, Azm199.0000°; N 0.4000, Plg10.0000°, Azm312.0000°; P -5.9660, Plg22.0000°, Azm45.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 22 20:10:16.2±0.3,55.59S±0.06×26.96W±0.06,h35km,n426, σ0ŝ77/389,**mb5.2**/42,**MS4.5**/50,**3C-7D,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.65**	**279**		**Pn**	**20 11 37.1**	**-0.4**
HOPE					Sn	**20 12 38.2**	**-2.8**
HOPE	**Hope Point**	**5.65**	**279**	P	**Pn**	**20 11 37.1**	**-0.4**
HOPE						20 12 38.2	
ORCD	**Orcadas**	**10.70**	**234**	Pn	**Pn**	**20 12 46.8**	**+0.1**
VNA1	**Neumayer--Stat**	**17.18**	**159**	P	**P**	**20 14 15.1**	**+0.8**
VNA3	**Neumayer Olymp**	**17.39**	**161**	P	**Pn**	**20 14 15.7**	**+0.1**
EFI	**East Falkland**	**18.77**	**269**	P	**P**	**20 14 32.4**	**+0.4**
EFI	**East Falkland**	**18.77**	**269**	*eP*	**P**	**20 14 32.7**	**+0.8**
SNAA	**Sanae**	**19.11**	**157**	P	**P**	**20 14 35.8**	**+0.1**
SNAA	**Sanae**	**19.11**	**157**	PcP	**PcP**	**20 18 58.3**	**-0.2**
SNAA	**Sanae**	**19.11**	**157**	P	**P**	**20 14 36.1**	**+0.5**
	0.2nm,0.3s,baz=304,slow=9.4,SNR=23						
SNAA				LR	LR	20 20 39.1	
	comp=Z,1µm,20.8s,baz=316,slow=33						
	2.7nm,0.8s						
SNAA	**Sanae**	**19.11**	**157**	P	**P**	**20 14 35.4**	**-0.3**
SNAA	**Sanae**	**19.11**	**157**	*eP*	**P**	**20 14 36.2**	**+0.5**
SNAA				pmax	pmax		
	comp=Z,26nm,1.2s						
PMSA	**Palmer Station**	**20.30**	**228**	P	**P**	**20 14 50.3**	**+1.7**
	comp=Z,77nm,1.0s,baz=73,slow=11,SNR=3.7						
PMSA				LR	LR	20 21 35.9	
	comp=Z,2µm,18.1s,baz=78,slow=33						
	comp=Z,77nm,1.0s						
PMSA	**Palmer Station**

ZON IAmb IAmb 20 17 31.8
comp=Z,31nm,0.7s
ZON Zonda 37.78 292 P **P** **20 17 27.4 -1.4**
ZON pmax pmax
comp=Z,31nm,0.7s
VA03 San Esteban 37.83 289 P **P** **20 17 30.7 +1.5**
BB19B Bebedouro 38.07 326 *eP* **P** **20 17 32.9 +1.6**
SJMB Sao Joao De Ma 38.37 338 *eP* **P** **20 17 33.5 -0.3**
VA06 Catapilco 38.39 288 P **P** **20 17 34.3 +0.5**
PCMB Pacaembu 38.47 322 *eP* **P** **20 17 35.1 +0.4**
AMBA Amambai (Brazi 38.66 316 *eP* **P** **20 17 34.7 -1.5**
NAN01 Guarapari, ES 38.99 340 *eP* **P** **20 17 38.8 -0.1**
CO02 Combarbal 39.28 290 P **P** **20 17 42.3 +0.9**
CO02 IAmb IAmb 20 17 55.9
comp=Z,57nm,1.1s
DIAM Diamantina, MG 39.33 334 *eP* **P** **20 17 42.2 +0.2**
CO03 El Pedregal 39.40 290 P **P** **20 17 42.5 +0.1**
CO01 Juntas del Tor 39.76 292 P **P** **20 17 46.8 +1.2**
CO01 IAmb IAmb 20 17 59.4
comp=Z,54nm,1.1s
PMNB Patos De Minas 39.83 330 *eP* **P** **20 17 46.5 +0.4**
ITRB Iturama 39.93 324 *eP* **P** **20 17 47.9 +1.1**
GO04 Tololo Observa 39.98 291 P **P** **20 17 47.4 -0.1**
GO04 IAmb IAmb 20 18 00.3
comp=Z,70nm,1.2s
SUR Sutherland 40.40 75 P **P** **20 17 51.1 +0.3**
comp=Z,6.2nm,1.0s,baz=239,slow=12,SNR=2.5
SUR LR LR 20 31 04.2
comp=Z,923nm,19.6s,baz=217,slow=31
comp=Z,6.2nm,1.0s
CO05 La Serena 40.41 291 P **P** **20 17 50.2 -0.5**
MAW Mawson 40.45 144 P **P** **20 17 51.6 +1.0**
comp=Z,7.1nm,0.9s,baz=244,slow=4.7,SNR=8.5
MAW LR LR 20 33 57.4
comp=Z,605nm,19.5s,baz=259,slow=35
comp=Z,7.1nm,0.9s
MAW Mawson 40.45 144 P **P** **20 17 50.9 +0.4**
MAW Mawson 40.45 144 P **P** **20 17 50.9 +0.4**
MAW pmax pmax
comp=Z,2.0nm,0.9s
LCO Las Campanas 40.85 292 P **P** **20 17 54.7 0.0**
LCO IAmb IAmb 20 17 56.0
comp=Z,69nm,1.2s
LCO Las Campanas 40.85 292 *eP* **P** **20 17 54.7 0.0**
IPMB Ipameri, GO 40.87 328 *eP* **P** **20 17 55.5 +0.8**
AC04 Llanos de Chal 41.69 293 P **P** **20 18 01.6 +0.4**
GO03 Copiap 41.74 294 P **P** **20 18 01.7 -0.1**
GO03 IAmb IAmb 20 18 15.3
comp=Z,75nm,1.1s
AC02 Maricunga 41.79 296 P **P** **20 18 03.6 +0.9**
AC02 IAmb IAmb 20 18 18.1
comp=Z,47nm,0.9s
JANB Januaria 42.60 335 *eP* **P** **20 18 09.1 +0.3**
BDFB Brasilia 43.03 330 P **P** **20 18 12.7 +0.3**
comp=Z,1.9nm,0.4s,baz=118,slow=15,SNR=3.2
BDFB LR LR 20 37 52.7
comp=Z,719nm,18.1s,baz=154,slow=39
comp=Z,1.9nm,0.4s
BDFB Brasilia 43.03 330 IAmb IAmb 20 18 20.6
comp=Z,30nm,1.5s
BDFB Brasilia 43.03 330 P **P** **20 18 12.7 +0.3**
BDFB pmax pmax
comp=Z,30nm,1.5s
BDFB Brasilia 43.03 330 *eP* **P** **20 18 13.5 +1.1**
AC01 Pan de Azucar 43.10 295 P **P** **20 18 12.7 -0.1**
AC01 IAmb IAmb 20 18 15.0
comp=Z,79nm,1.2s
GO02 Mina Guanaco 43.40 297 P **P** **20 18 16.2 +0.7**
GO02 IAmb IAmb 20 18 17.6
comp=Z,88nm,1.3s
ARAG Araguaiana, MT 44.14 324 *eP* **P** **20 18 21.5 +0.3**
LVC Limon Verde 45.18 299 P **P** **20 18 31.5 +1.6**
comp=Z,21nm,0.7s,baz=154,slow=4.7,SNR=8.4
LVC LR LR 20 41 14.2
comp=Z,300nm,18.1s,baz=164,slow=41
comp=Z,21nm,0.7s
LVC Limon Verde 45.18 299 P **P** **20 18 30.7 +0.8**
LVC IAmb IAmb 20 18 36.5
comp=Z,36nm,0.9s
LVC Limon Verde 45.18 299 *eP* **P** **20 18 30.7 +0.8**
LVC Limon Verde 45.18 299 *eP* **P** **20 18 31.7 +1.8**
NBLA Lagarto - SE 45.29 345 *eP* **P** **20 18 29.5 -0.9**
SDBA SAO DESIDERIO 45.30 335 *eP* **P** **20 18 30.7 +0.2**
SALV Santo Antonio 45.32 319 *eP* **P** **20 18 31.1 +0.5**
BOSA Boshof 45.73 76 P **P** **20 18 32.1 -1.8**
comp=Z,7.1nm,1.1s,baz=236,slow=9.4,SNR=8.1
BOSA LR LR 20 34 20.2
comp=Z,1µm,19.6s,baz=196,slow=32
comp=Z,7.1nm,1.1s
BOSA Boshof 45.73 76 P **P** **20 18 32.2 -1.7**
BOSA Boshof 45.73 76 P **P** **20 18 32.3 -1.7**
BOSA pmax pmax
comp=Z,13nm,1.2s
PB09 IPOC Station P 46.03 300 P **P** **20 18 37.5 +1.1**
PB07 IPOC Station P 46.41 299 P **P** **20 18 39.9 +0.6**
PEXB Peixe 46.47 331 *eP* **P** **20 18 40.2 +0.5**
SBA Scott Base 46.55 184 P **P** **20 18 41.0 +1.4**
SBA Scott Base 46.55 184 P **P** **20 18 41.0 +1.4**
SBA pmax pmax
comp=Z,15nm,1.0s
PB02 IPOC Station P 46.76 299 P **P** **20 18 42.1 +0.1**
PB01 IPOC Station P 46.79 300 P **P** **20 18 42.9 +0.7**
VNDA Vanda 47.04 183 P **P** **20 18 44.5 +1.1**
comp=Z,9.5nm,0.8s,baz=189,slow=5.7,SNR=54
VNDA LR LR 20 37 10.1
comp=Z,251nm,19.6s,baz=162,slow=34
comp=Z,9.5nm,0.8s
VNDA Vanda 47.04 183 P **P** **20 18 43.9 +0.4**
VNDA IAmb IAmb 20 18 49.7
comp=Z,12nm,0.8s
VNDA Vanda 47.04 183 P **P** **20 18 43.9 +0.4**
VNDA pmax pmax
comp=Z,12nm,0.8s
PTLB Pontes e Lacer 47.05 315 *eP* **P** **20 18 44.1 0.0**
NBRF Rio Formoso - 47.23 349 *eP* **P** **20 18 45.1 -0.4**
SIV San Ignacio 47.35 313 P **P** **20 18 46.7 +0.1**
comp=Z,6.5nm,1.1s,baz=247,slow=7.7,SNR=12
SIV LR LR 20 37 35.4
comp=Z,298nm,21.8s,baz=169,slow=35
comp=Z,6.5nm,1.1s
PB08 IPOC Station P 47.39 301 P **P** **20 18 48.6 +1.3**
PB08 IAmb IAmb 20 19 04.4
comp=Z,30nm,0.9s
SNDB Serra Nova Dou 47.48 327 *eP* **P** **20 18 48.5 +1.0**
GO01 Chusmiza 47.81 301 P **P** **20 18 51.0 +0.3**
PB11 IPOC Station P 47.96 301 P **P** **20 18 51.0 -0.4**
LBTB Lobatse 48.75 73 LR LR 20 37 26.1
comp=Z,240nm,19.0s,baz=215,slow=34
NBMA Muriti-CE 49.00 344 *eP* **P** **20 18 59.0 -0.3**
PB16 IPOC Station P 49.10 302 P **P** **20 18 60.0 -0.7**
TSUM Tsumeb 49.34 61 LR LR 20 36 37.0
comp=Z,332nm,18.5s,baz=220,slow=32
SMTB Santa Maria do 49.38 333 *eP* **P** **20 19 02.8 +0.6**
PDRB Porto dos Gac 49.65 320 *eP* **P** **20 19 03.8 -0.5**
VILB Vilhena 49.74 316 *eP* **P** **20 19 04.9 0.0**
CLDB Colider 50.00 322 *eP* **P** **20 19 06.7 -0.2**
RCBR Riachuelo 50.13 348 LR LR 20 38 36.3
comp=Z,340nm,18.2s,baz=318,slow=34
RCBR Riachuelo 50.13 348 *eP* **P** **20 19 07.3 -0.6**
LPAZ La Paz 50.22 305 P **P** **20 19 10.0 +0.8**
comp=Z,26nm,1.0s,baz=130,slow=6.3,SNR=48
LPAZ LR LR 20 41 59.8
comp=Z,156nm,19.7s,baz=178,slow=38
comp=Z,26nm,1.0s
LPAZ La Paz 50.22 305 P **P** **20 19 09.4 +0.1**
LPAZ IAmb IAmb 20 19 24.2
comp=Z,28nm,0.8s
LPAZ La Paz 50.22 305 *eP* **P** **20 19 09.4 +0.1**
LPAZ La Paz 50.22 305 *eP* **P** **20 19 10.3 +1.0**
NBPB Pedra_Branca-C 50.92 344 *eP* **P** **20 19 14.6 +0.8**
PRPB Parauapebas 52.55 331 *eP* **P** **20 19 26.7 +0.7**
NBMO Morrinhos-CE 53.18 344 *eP* **P** **20 19 30.5 -0.2**
NPGB Novo Progresso 53.42 324 *eP* **P** **20 19 32.6 +0.2**
CASY Casey 54.30 160 P **P** **20 19 38.9 +0.7**
ROSB Rosrio 54.33 339 *eP* **P** **20 19 40.0 +0.9**
SAML Samuel 54.57 314 P **P** **20 19 40.4 -0.4**
SAML IAmb IAmb 20 19 41.7
comp=Z,24nm,1.2s
SAML Samuel 54.57 314 P **P** **20 19 40.4 -0.4**
SAML pmax pmax
comp=Z,24nm,1.2s
ETMB Extrema 55.06 310 *eP* **P** **20 19 44.5 +0.2**
TMAB Tom-Au,PA,Br 55.74 334 *eP* **P** **20 19 49.7 +0.4**
ITTB Itaituba 56.05 325 *eP* **P** **20 19 50.9 -0.6**
MALB Monte Alegre 57.95 327 *eP* **P** **20 20 05.5 +0.6**

LSZ Lusaka 58.09 69 LR LR 20 42 25.1
comp=Z,482nm,18.4s,baz=210,slow=33
NNA Nana 58.14 298 LR LR 20 44 53.4
comp=Z,153nm,21.8s,baz=153,slow=36
MCPB Macapa, AP 58.72 330 *eP* **P** **20 20 11.1 +0.8**
CZSB Cruzeiro do Su 59.83 305 *eP* **P** **20 20 17.8 -0.2**
ATAH Atahualpa 63.08 300 LR LR 20 50 56.8
comp=Z,196nm,18.9s,baz=155,slow=39
BOAV Boa Vista 63.99 322 *eP* **P** **20 20 45.7 -0.2**
MDP Montagnes des 64.09 331 LR LR 20 49 29.3
comp=Z,396nm,18.1s,baz=139,slow=37
DBIC Dimbokro 64.69 24 P **P** **20 20 50.0 -0.4**
comp=Z,7.9nm,0.9s,baz=208,slow=4.9,SNR=4.6
DBIC LR LR 20 42 41.8
comp=Z,442nm,20.2s,baz=193,slow=30
comp=Z,7.9nm,0.9s
DBIC Dimbokro 64.69 24 IAmb IAmb 20 20 56.8
comp=Z,27nm,1.4s
DBIC Dimbokro 64.69 24 P **P** **20 20 50.0 -0.4**
DBIC pmax pmax
comp=Z,27nm,1.5s
OPO Ambohidratompo 65.94 88 LR LR 20 44 24.9
comp=Z,381nm,20.5s,baz=336,slow=31
OTAV Otavalo 69.51 303 P **P** **20 21 22.0 +0.4**
OTAV IAmb IAmb 20 21 37.6
comp=Z,27nm,1.4s
OTAV Otavalo 69.51 303 *eP* **P** **20 21 22.0 +0.4**
OTAV Otavalo 69.51 303 *eP* **P** **20 21 23.3 +1.7**
ROSC El Rosal 71.69 309 LR LR 20 54 36.1
comp=Z,278nm,20.2s,baz=217,slow=37
MBAR Mbarara 71.82 63 LR LR 20 50 07.9
comp=Z,309nm,20.5s,baz=181,slow=33
MBAR Mbarara 71.82 63⇓ *eP* **P** **20 21 37.5 +2.1**
MBAR pmax pmax
comp=Z,5.0nm,1.3s
TOA0 Torodi Ar. Sit 72.59 29 P **P** **20 21 38.6 -1.0**
TOA0 IAmb IAmb 20 21 41.6
comp=Z,20nm,0.7s
TORD Torodi Ar. Bea 72.59 29 P **P** **20 21 39.2 -0.4**
comp=Z,14nm,0.5s,baz=199,slow=6.0,SNR=161
TORD LR LR 20 49 49.5
comp=Z,230nm,18.2s,baz=205,slow=33
comp=Z,14nm,0.5s
TORD Torodi Ar. Bea 72.59 29 P **P** **20 21 38.3 -1.3**
TORD IAmb IAmb 20 21 41.6
comp=Z,15nm,0.8s
BAUV El Baul 72.80 317 P **P** **20 21 40.7 -0.2**
SDV Santo Domingo 73.77 315 LR LR 20 55 52.2
comp=Z,276nm,19.6s,baz=150,slow=37
SDV Santo Domingo 73.77 315 P **P** **20 21 46.2 -0.7**
SDV IAmb IAmb 20 22 01.8
comp=Z,16nm,0.8s
SDV Santo Domingo 73.77 315 *eP* **P** **20 21 47.5 +0.5**
ZARC Zaragoza, Cauc 74.29 310 P **P** **20 21 48.0 -1.8**
KMBO Kilima Mbogo 74.75 69 LR LR 20 51 52.4
comp=Z,411nm,21.1s,baz=201,slow=34
SJCC San Jacinto, C 76.58 311 P **P** **20 22 03.0 +0.1**
SJCC IAmb IAmb 20 22 04.2
comp=Z,46nm,1.3s
RPZ Rata Peaks 79.90 193 LR LR 20 56 41.0
comp=Z,276nm,18.2s,baz=150,slow=35
SJG San Juan 80.55 322 LR LR 21 02 07.8
comp=Z,105nm,18.1s,baz=190,slow=39
JTS Las Juntas de 81.37 302 LR LR 21 01 27.9
comp=Z,131nm,19.4s,baz=226,slow=38
JTS Las Juntas de 81.37 302⇓ *eP* **P** **20 22 30.6 +1.5**
JTS pmax pmax
comp=Z,29nm,1.7s
TAM Tamanrasset 82.83 30 P P 20 22 30.1 -6.6
TAM Tamanrasset 82.83 30 P P 20 22 30.1 -6.6
TAM pmax pmax
comp=Z,9.0nm,1.4s
ACON Acoyapa 82.93 303 P **P** **20 22 36.6 -0.7**
ACON IAmb IAmb 20 22 38.4
comp=Z,23nm,1.1s
BOAB BOACO BROADBAND 83.58 303 P **P** **20 22 39.9 -0.7**
URZ Urewera 84.28 199 LR LR 20 58 08.0
comp=Z,142nm,18.1s,baz=211,slow=34
MTO3 Montecristo 87.05 301 P **P** **20 22 57.5 -0.7**
MTO3 IAmb IAmb 20 23 12.2
comp=Z,8.7nm,0.8s
TBI Tubuai 87.47 231 *e*LR LR 20 50 46.6
comp=Z,324nm,28.2s
ATD Arta Tunnel 88.36 67 LR LR 21 02 31.9
comp=Z,225nm,18.2s,baz=176,slow=36
MDT Midelt 90.11 19 LR LR 21 00 16.6
comp=Z,439nm,18.4s,baz=214,slow=33
CMIG Matias Romero 92.08 298 LR LR 21 02 40.9
comp=Z,82nm,19.2s,baz=191,slow=34
STKA Stephens Creek 92.34 170 LR LR 21 04 05.9
comp=Z,278nm,19.6s,baz=198,slow=35
PPT2 Papeete2 92.56 234 *e*LR LR 20 53 07.3
comp=Z,162nm,23.2s
PPT Papeete 92.58 234 LR LR 20 56 30.5
comp=Z,141nm,19.7s,baz=169,slow=30
RAR Rarotonga 93.66 223 LR LR 20 58 46.2
comp=Z,153nm,19.1s,baz=168,slow=31
TAOE Nuku Hiva Isla 95.45 246 *e*LR LR 20 54 28.2
comp=Z,464nm,28.9s
KEST Kesra 96.11 29 LR LR 21 02 41.0
comp=Z,219nm,20.7s,baz=232,slow=33
ESDC Sonseca Array 96.90 18 LR LR 21 02 45.9
comp=Z,139nm,21.4s,baz=186,slow=33
EIL Elat 99.95 51 LR LR 21 05 50.0
comp=Z,350nm,19.8s,baz=235,slow=34
DZM Mont Dzumac 101.81 193 *e*LR LR 20 57 25.1
comp=Z,304nm,24.4s
X43A Marvell 104.97 310 P **PKiKP** **20 28 35.0 +1.2**
baz=148
LONY Lake Ozonia 107.64 326 P **PKiKP** **20 28 40.0 +1.5**
baz=154
KIV Kislovodsk 115.27 48 *i* PKIKP **PKPdf** **20 28 52.8 -0.2**
KIV pmax pmax
comp=Z,3.0nm,1.0s
KIV MLR MLR
comp=Z,75nm,22.0s
NACGM Naroch 118.56 32 PP PP 20 30 05.2 -12
baz=212
MPMC Manual Prospec 119.12 292 P **PKiKP** **20 29 01.3 +0.4**
baz=140
TPNV Topopah Spring 119.15 293 P **PKiKP** **20 29 01.7 +0.9**
baz=140
NVAR Mina Arroyo Bea 121.33 293 PKP **PKiKP** **20 29 05.3 +0.1**
comp=Z,0.4nm,0.7s,baz=150,slow=3.8,SNR=3.6
OBN Obninsk 121.90 37 *e*PKIKP **PKiKP** **20 29 07.3 +1.9**
OBN *e* 20 30 40.3
OBN *e*PPP PPP 20 33 15.5
OBN pmax pmax
comp=Z,3.0nm,0.9s
MFID Camas Ranch 123.75 299 PKPdf **PKPdf** **20 29 09.0 -0.4**
FINES FINESS Array B 123.91 28 PKP **PKPdf** **20 29 08.7 -0.2**
comp=Z,1.2nm,0.6s,baz=174,slow=2.7,SNR=14
BELG Belogornoye 123.92 45⇓ *i*PKIKP **PKPdf** **20 29 09.0 -0.2**
EGMT Eagleton 124.22 306 P **PKiKP** **20 29 11.3 +1.0**
baz=137
CMAR Chiang Mai Arr 125.11 110 PKP **PKPdf** **20 29 12.7 0.0**
comp=Z,1.7nm,0.8s,baz=230,slow=3.8,SNR=9.8
CMAR Chiang Mai Arr 125.11 110 **PKPdf** **20 29 12.1 -0.5**
CMAR Chiang Mai Arr 125.11 110 PKIKP **PKPdf** **20 29 12.1 -0.5**
MSO Missoula 125.31 303 **PKiKP** **20 29 12.7 +0.1**
MSO Missoula 125.31 303 P **PKiKP** **20 29 13.3 +0.7**
baz=136
BMO Blue Mountains 125.53 299 **PKPdf** **20 29 12.6 -0.1**
BMO Blue Mountains 125.53 299 PKIKP **PKPdf** **20 29 12.6 -0.1**
G08A Pilot Rock 126.66 298 **PKiKP** **20 29 15.4 +0.1**
AKTO Aktyubinsk 126.95 53 PKP **PKiKP** **20 29 15.3 -0.3**
comp=Z,1.0nm,0.6s,baz=346,slow=1.3,SNR=2.7
ABKAR Akbulak array 127.00 55 **PKPdf** **20 29 14.3 -1.0**
K02D Willamette Mer 127.23 293 P **PKiKP** **20 29 17.6 +1.0**
baz=135
KKAR Karatay Array 127.92 67 **PKPdf** **20 29 17.1 -0.2**
KKAR Karatay Array 127.92 67 PKIKP **PKPdf** **20 29 17.1 -0.2**
KSH Kashi 128.32 74 PKP **PKPdf** **20 29 17.9 -0.4**
KSH LR LR
comp=Z,130nm,13.7s
KSH LR LR
comp=Z,170nm,16.1s
KSH LR LR
comp=Z,180nm,14.8s
AAK Ala-Archa 129.70 70 PKP **PKiKP** **20 29 21.7 +0.1**
comp=Z,1.5nm,0.3s,baz=14,slow=4.2,SNR=3.8
PRGR Permogore 129.95 36 *e*PKIKP **PKPdf** **20 29 20.7 +0.3**
ARCES ARCESS Array B 130.47 22 PKP **PKPdf** **20 29 21.1 -0.2**
comp=Z,7.3nm,0.9s,baz=207,slow=0.8,SNR=9.6
ARU Arti 131.29 47 PKPdf **PKPdf** **20 29 23.4 +0.3**
ARU Arti 131.29 47 *i* PKIKP **PKPdf** **20 29 23.5 +0.3**

ARU 20 31 41.0
PZH PanZhiHua 133.12 107 PKP **PKiKP** **20 29 28.8 -0.2**
BRVK Borovoye 134.39 57⇓ *e*PKIKP **PKiKP** **20 29 29.9 -0.6**
GYA Guiyang 135.72 112 PKP **PKiKP** **20 29 33.9 -0.4**
YKA Yellowknife Ar 135.91 318 PKP **PKiKP** **20 29 32.8 -0.5**
comp=Z,2.5nm,0.8s,baz=116,slow=2.8,SNR=3.7
GOMU GeErMu 136.54 91 PKP **PKPdf** **20 29 29.1 -5.1**
GOMU PP **PP** **20 32 19.3 +2.6**
GOMU SS SS 20 50 21.9 +4.8
GOMU LR LR
comp=Z,110nm,13.3s
GOMU LR LR
comp=Z,73nm,13.6s
GOMU LR LR
comp=Z,110nm,13.5s
MKAR Makanchi Array 136.62 71 PKP **PKiKP** **20 29 35.0 -0.3**
comp=Z,0.5nm,0.6s,baz=246,slow=2.9,SNR=2.9
KURBB Kurchatov Arra 136.99 64 PKP **PKPdf** **20 29 34.2 +0.1**
comp=Z,0.7nm,0.6s,baz=233,slow=2.7,SNR=7.6
KURK Kurchatov 137.09 64 **PKPdf** **20 29 34.2 0.0**
KURK Kurchatov 137.09 64 PKIKP **PKPdf** **20 29 34.2 0.0**
CD2 Chengdu 137.66 105 PKP **PKPdf** **20 29 36.3 +0.3**
WMQ Urumqi 137.68 78 *e*PKP **PKiKP** **20 29 36.9 -0.7**
WMQ LR LR
comp=Z,77nm,21.9s
ZALV Zalesovo Beam 142.05 63 PKP **PKiKP** **20 29 47.6 +1.5**
comp=Z,0.7nm,0.5s,baz=223,slow=5.7,SNR=2.8
WHY Whitehorse 143.37 308 PKPpre 20 29 42.7
M31M Drury Creek, Y 143.79 311 PKPpre 20 29 43.5
N31M Braeburn, Yuko 144.11 309 PKPbc 20 29 44.9 +0.1
HYT Haines Junctio 144.61 308 PKPdf **PKPdf** **20 29 47.5 -0.2**
HYT Haines Junctio 144.61 308 P **PKPdf** **20 29 47.4 -0.2**
baz=113,SNR=19
N30M Aishikik Lake 144.68 309 P PKPbc 20 29 47.2 +0.5
baz=113,SNR=48
M30M Minto, Yukon 144.97 311 PKPbc 20 29 47.1 -0.4
M30M Minto, Yukon 144.97 311 P **PKPab** **20 29 47.7 +0.1**
baz=111
PNL Peninsula 145.01 305 P **PKPdf** **20 29 48.4 +0.2**
baz=114,SNR=6.6
YUK6 Outpost Mounta 145.04 308 P **PKPbc** **20 29 48.1 +0.1**
baz=113
LYN LuoYang 145.16 110⇑ PKPbc **PKPbc** **20 29 48.3 -0.6**
LYN PP **PP** **20 33 08.4 -0.3**
LYN SKKS 20 40 02.3
LYN AMB AMB
comp=Z,100nm,5.1s
LYN LR LR
comp=Z,190nm,16.7s
LYN LR LR
comp=Z,190nm,19.0s
YUK4 Talbot Arm 145.32 308 P **PKPab** **20 29 49.5 +0.5**
baz=112,SNR=11
INK Inuvik 145.53 321 PKPbc **PKPdf** **20 29 48.4 -0.4**
comp=Z,12nm,0.7s,baz=100,slow=3.3,SNR=24
INK Inuvik 145.53 321 PKPdf **PKPab** **20 29 49.5 +0.1**
INK Inuvik 145.53 321 PKIKP **PKPab** **20 29 49.5 +0.1**
INK Inuvik 145.53 321 P **PKPbc** **20 29 49.2 +0.2**
baz=106,SNR=10
PINM Pinnacle 145.58 305 P **PKPab** **20 29 50.2 +0.4**
baz=113
PCA Pinnacle 145.58 305 **PKPab** **20 29 50.3 +0.3**
YUK8 Steele Glacier 145.80 308 P **PKPab** **20 29 50.8 -0.1**
baz=111,SNR=9.8
TABL Table Mountain 146.12 306 **PKPbc** **20 29 51.4 -0.1**
EPYK Eagle Plains 146.17 317 **PKPbc** **20 29 51.0 -0.2**
EPYK Eagle Plains 146.17 317 P **PKPbc** **20 29 51.2 0.0**
baz=106
LOGN Logan Glacier 146.20 306 **PKPdf** **20 29 50.8 +0.4**
YUK3 Moose Creek 146.29 308 P **PKPbc** **20 29 51.6 -0.2**
baz=110,SNR=9.3
MESA MESA 146.40 305 **PKPbc** **20 29 52.4 +0.2**
MESA MESA 146.40 305 P **PKPbc** **20 29 52.7 +0.5**
baz=112
CTGM Chitina Glacie 146.40 307 **PKPbc** **20 29 52.4 +0.3**
CTG Chitna Glacier 146.40 307 P **PKPbc** **20 29 52.5 +0.4**
baz=111
NJ2 Nanjing 146.47 120 *e*PKPbc **PKPab** **20 29 54.0 0.0**
I29M Ogilvie Camp, 146.51 315 **PKPdf** **20 29 51.3 +0.7**
DAWY Dawson 146.57 312 **PKPbc** **20 29 52.0 -0.5**
DAWY Dawson 146.57 312 P **PKPbc** **20 29 52.3 -0.1**
baz=108
BARN Barnard Glacie 146.58 307 **PKPbc** **20 29 52.7 0.0**
BVCY Beaver Creek 146.68 309 P **PKPbc** **20 29 53.1 +0.3**
baz=109
WAX Waxell Ridge 146.91 305 **PKPbc** **20 29 54.2 +0.7**
TGL Tana Glacier 147.01 306 **PKPbc** **20 29 53.1 -0.7**
M27K Edge Creek, AK 147.11 309 **PKPbc** **20 29 53.6 -0.5**
M27K Edge Creek, AK 147.11 309 P **PKPbc** **20 29 54.1 0.0**
baz=108,SNR=16
BCAR Beaver Creek A 147.29 310 PKPdf **PKPbc** **20 29 54.4 -0.1**
L27K Beaver Creek, 147.31 310 **PKPbc** **20 29 54.9 +0.4**
L27K Beaver Creek, 147.31 310 P **PKPbc** **20 29 54.6 0.0**
baz=107,SNR=21
MCARA McCarthy VSAT 147.31 307 P **PKPbc** **20 29 54.8 +0.3**
baz=109
VRDI Verde Repeater 147.46 306 **PKPbc** **20 29 55.3 +0.1**
HMT Hamilton 147.53 305 **PKPbc** **20 29 55.3 +0.1**
M26K Nabesna, AK 147.62 309 **PKPbc** **20 29 55.0 -0.4**
M26K Nabesna, AK 147.62 309 P **PKPbc** **20 29 55.3 -0.1**
baz=108
GLB Gilahina Butte 147.69 307 **PKPbc** **20 29 55.2 -0.4**
K27K Chicken 147.70 312 P **PKPbc** **20 29 56.2 +0.7**
baz=106
BMRM Bremner River 147.90 306 **PKPbc** **20 29 56.9 +0.7**
BMRM Bremner River 147.90 306 P **PKPbc** **20 29 56.5 +0.4**
baz=109,SNR=12
L26K Log Cabin Wild 147.96 310 **PKPbc** **20 29 56.4 +0.1**
L26K Log Cabin Wild 147.96 310 P **PKPbc** **20 29 56.4 +0.1**
baz=106,SNR=12
N25K Chitina, Valde 148.10 307 **PKPbc** **20 29 56.9 +0.2**
N25K Chitina, Valde 148.10 307 P **PKPbc** **20 29 57.3 +0.6**
baz=108,SNR=7.5
MENT Mentasta 148.10 309 **PKPbc** **20 29 56.8 +0.1**
EYAK Cordova Ski Ar 148.30 304 **PKPbc** **20 29 57.8 +0.7**
EYAK Cordova Ski Ar 148.30 304 P **PKPbc** **20 29 57.6 +0.5**
baz=109,SNR=6.2
DOT Dot Lake 148.44 311 **PKPbc** **20 29 58.0 +0.5**
J26L Joseph Creek 148.45 312 **PKPbc** **20 29 57.7 +0.2**
J26L Joseph Creek 148.45 312 P **PKPbc** **20 29 57.9 +0.3**
baz=104,SNR=16
HNS HongShan 148.49 109⇓ PKPbc **PKPbc** **20 29 59.0 +0.6**
SCRK Sand Creek 148.49 311 **PKPbc** **20 29 58.2 +0.5**
SCRK Sand Creek 148.49 311 P **PKPbc** **20 29 58.2 +0.5**
baz=104,SNR=12
HARP HAARP 148.58 308 P **PKPbc** **20 29 58.0 +0.1**
baz=106
HIN Hinchinbrook I 148.60 304 **PKPbc** **20 29 58.1 +0.2**
KLU Klutina 148.67 306 **PKPbc** **20 29 58.7 +0.5**
KLU Klutina 148.67 306 P **PKPbc** **20 29 58.8 +0.6**
baz=107,SNR=13
FID Port Fidalgo 148.70 305 **PKPbc** **20 29 59.0 +0.7**
RIDG Independent Ri 148.80 311 **PKPbc** **20 29 59.0 +0.6**
RIDG Independent Ri 148.80 311 P **PKPbc** **20 29 58.9 +0.4**
baz=104,SNR=24
TIA Tai'an 148.88 113 *e*PKPbc **PKPbc** **20 29 59.3 -0.1**
PAX Paxson 148.88 309 **PKPbc** **20 29 58.9 +0.1**
PAX Paxson 148.88 309 PKP2 **PKPbc** **20 29 58.9 +0.1**
PAX Paxson 148.88 309 P **PKPbc** **20 29 58.8 +0.1**
baz=105,SNR=14
M24K Tolsona, Glenn 148.96 307 P **PKiKP** **20 29 59.9 -0.2**
baz=106,SNR=8.0
GLI Glacier Island 149.03 305 **PKPbc** **20 29 59.4 +0.4**
GLI Glacier Island 149.03 305 P **PKPbc** **20 29 59.4 +0.4**
baz=107,SNR=7.3
HHC Hu-ho-hao-te 149.21 101 *e*PKPbc **PKPdf** **20 29 52.9 -3.1**
K24K Donnelly Dome 149.22 311 P **PKPbc** **20 29 59.9 +0.4**
baz=104
J25K Salcha River, 149.23 312 **PKPbc** **20 29 60.0 +0.5**
J25K Salcha River, 149.23 312 P **PKPbc** **20 29 59.8 +0.3**
baz=102,SNR=10
SCM Sheep Creek Mo 149.41 306 **PKPbc** **20 29 59.9 -0.2**
SCM Sheep Creek Mo 149.41 306 PKP2 **PKPbc** **20 29 59.9 -0.2**
SCM Sheep Creek Mo 149.41 306 P **PKPbc** **20 30 00.4 +0.4**
baz=106,SNR=8.3
BMAR Burnt Mountain 149.43 318 **PKPbc** **20 30 00.0 +0.1**
MOY Mondy 149.49 75 *e*PKP2 **PKiKP** **20 30 01.1 -0.6**
MOY pmax pmax
comp=Z,34nm,1.5s
M23K Glacier View 149.58 306 P **PKPbc** **20 30 00.7 +0.3**
baz=105,SNR=5.3
WAT6 Susitna Watana 149.79 308 P **PKPbc** **20 30 01.2 +0.2**
baz=104,SNR=12
KNK Knik Glacier 149.81 305 P **PKPbc** **20 30 01.3 +0.3**
baz=106

HDA	Harding Lake	149.85	311			PKPbc	20 30 01.1	+0.1
HDA	Harding Lake	149.85	311	P		PKPbc	20 30 00.8	-0.2
	baz=102,SNR=7.3							
SML	Sawmill	149.86	306	P		PKPbc	20 30 01.0	-0.1
	baz=105,SNR=9.7							
IL31		149.90	312			PKPbc	20 30 01.0	+0.1
ILAR	Eielson Array	149.90	312	PKPbc		PKPbc	20 30 01.0	-0.1
	comp=Z,14nm,1.0s,baz=119,slow=1.6,SNR=70							
ILAR	Eielson Array	149.90	312			PKPbc	20 30 01.3	+0.3
ILAR	Eielson Array	149.90	312	PKP2		PKPbc	20 30 01.3	+0.3
SEW	Seward	149.91	303			PKPbc	20 30 01.4	+0.2
SEW	Seward	149.91	303	P		PKPbc	20 30 01.4	+0.2
	baz=107							
GHO	Glory Hole Cre	150.12	306			PKPbc	20 30 02.1	+0.3
ZAK	Zakamensk	150.13	79	*e*PKIKP		PKPbc	20 30 02.3	+0.1
ZAK				pmax		pmax		
	comp=Z,15nm,1.4s							
PMR	Palmer	150.17	306			PKPbc	20 30 02.0	+0.3
PMR	Palmer	150.17	306	PKIKP		PKPbc	20 30 02.1	+0.3
PMR	Palmer	150.17	306	P		PKPbc	20 30 02.1	+0.3
	baz=105							
POKR	Poker Plat Res	150.19	313	P		PKPbc	20 30 00.7	-1.0
	baz=100							
WAT1	Susitna Watana	150.21	308	P		PKPbc	20 30 02.1	+0.2
	baz=103							
CCB	Clear Creek Bu	150.26	312			PKPbc	20 30 01.8	-0.1
RC01	Rabbit Creek A	150.32	304			PKiKP	20 30 02.7	-0.2
RC01	Rabbit Creek A	150.32	304	P		PKPbc	20 30 02.5	+0.4
	baz=105							
COLA	College	150.33	312	*c i*PKIKP		PKPbc	20 30 01.8	-0.2
WRH	Wood River Hil	150.35	311			PKPdf	20 29 54.5	-2.4
WRH						PKPbc	20 30 02.0	-0.1
BRSE	Bradley Lake S	150.42	301	P		PKiKP	20 30 03.1	-0.1
	baz=107							
RND	Reindeer	150.47	309			PKiKP	20 30 03.2	-0.1
RND	Reindeer	150.47	309	PKIKP		PKiKP	20 30 03.2	-0.1
H24K	Noodor Dome	150.50	314			PKPbc	20 30 02.8	+0.3
H24K	Noodor Dome	150.50	314	P		PKPbc	20 30 01.9	-0.7
	baz=98,SNR=9.6							
MDM	Murphy Dome	150.50	312			PKPbc	20 30 02.3	-0.3
BRLK	Bradley Lake	150.50	301			PKPbc	20 30 03.0	+0.3
SONM	Songino Array	150.57	85	PKP		PKPdf	20 29 57.9	0.0
	comp=Z,1.9nm,0.4s,baz=247,slow=3.1,SNR=4.1							
SONM				PKPbc		PKPbc	20 30 03.5	+0.2
	comp=Z,2.9nm,0.6s,baz=216,slow=3.1,SNR=16							
SONM	Songino Array	150.57	85			PKPbc	20 30 03.1	-0.3
SONM	Songino Array	150.57	85	PKIKP		PKPbc	20 30 03.1	-0.3
MCK	McKinley	150.57	310			PKPbc	20 30 03.1	+0.4
MCK	McKinley	150.57	310	PKIKP		PKPbc	20 30 03.1	+0.4
MCK	McKinley	150.57	310	P		PKPbc	20 30 02.5	-0.3
	baz=101,SNR=13							
CNPM	China Poot	150.60	301			PKPbc	20 30 03.0	+0.1
KDAK	Kodiak Island	150.72	297	P		PKPbc	20 30 03.5	+0.3
	baz=109							
NEA2	Nenana	150.79	312			PKPbc	20 30 03.0	-0.2
NEA2	Nenana	150.79	312	P		PKPbc	20 30 02.6	-0.6
	baz=100,SNR=13							
HOM	Homer	150.84	301	P		PKiKP	20 30 04.0	0.0
	baz=106							
BWN	Browne	150.89	311			PKPbc	20 30 03.4	0.0
CUT	Chulitna	150.89	307			PKPdf	20 29 59.4	+1.6
CUT	Chulitna	150.89	307	P		PKPbc	20 30 03.2	-0.3
	baz=103,SNR=5.4							
SUA	Susitna One	150.89	305			PKiKP	20 30 04.4	+0.1
SUA	Susitna One	150.89	305	P		PKiKP	20 30 04.4	+0.1
	baz=104							
OHAK	Old Harbor	150.89	296			PKiKP	20 30 04.2	-0.1
OHAK	Old Harbor	150.89	296	P		PKiKP	20 30 04.1	-0.1
	baz=110							
Q20K	Shuyak Island	150.89	299	P		PKiKP	20 30 04.2	+0.1
	baz=108							
ULN	Ulaanbaatar	150.96	86	⇓*e*PKIKP		PKPbc	20 30 01.4	-2.9
I23K	Minto, Yukon-K	151.00	313			PKPbc	20 30 03.4	-0.2
I23K	Minto, Yukon-K	151.00	313	P		PKiKP	20 30 04.6	+0.4
	baz=98							
TRF	Thorofare Moun	151.12	309			PKiKP	20 30 04.6	-0.2
TRF	Thorofare Moun	151.12	309	P		PKPbc	20 30 04.0	-0.2
	baz=101,SNR=7.9							
SII	Sitkinak Islan	151.12	294	P		PKiKP	20 30 04.8	0.0
	baz=110							
D24K	Happy Valley	151.16	321	P		PKiKP	20 30 04.2	-0.2
	baz=92							
H23K	Yukon River	151.17	314			PKPbc	20 30 04.0	-0.1
H23K	Yukon River	151.17	314	P		PKPbc	20 30 04.2	+0.1
	baz=97,SNR=5.6							
SKT	Skwentna	151.37	306	P		PKPbc	20 30 04.8	+0.2
	baz=102							
TOLK	Toolik Lake Re	151.41	320			PKiKP	20 30 05.1	+0.1
TOLK	Toolik Lake Re	151.41	320	P		PKPbc	20 30 04.2	-0.4
	baz=92,SNR=11							
KTH	Kantishna Hill	151.41	309			PKPbc	20 30 04.9	+0.1
SPU	Mount Spurr	151.44	304			PKPbc	20 30 04.2	-0.6
BPAW	Bear Paw Mtn.	151.53	310			PKPbc	20 30 04.4	-0.6
BPAW	Bear Paw Mtn.	151.53	310	P		PKPbc	20 30 05.2	+0.2
	baz=99,SNR=21							
IRK	Irkutsk	151.56	76	*e*PKIKP		PKiKP	20 30 05.6	-0.2
IRK				pmax		pmax		
	comp=Z,34nm,1.9s							
MLY	Manley	151.56	312			PKPbc	20 30 04.6	-0.5
MLY	Manley	151.56	312	P		PKPbc	20 30 04.9	-0.2
	baz=98,SNR=7.0							
COLD	Coldfoot	151.57	317			PKiKP	20 30 05.5	+0.2
COLD	Coldfoot	151.57	317	P		PKPbc	20 30 05.1	+0.2
	baz=94,SNR=5.3							
C23K	Itkillik River	151.79	322	P		PKPbc	20 30 05.4	+0.1
	baz=89,SNR=5.2							
D23K	Nanushuk River	151.82	321	P		PKiKP	20 30 05.8	0.0
	baz=90							
PPLA	Purkeypile	151.86	308	P		PKPbc	20 30 05.6	-0.2
	baz=100							
CAST	Castle Rocks	151.90	309			PKPbc	20 30 05.4	-0.5
CAST	Castle Rocks	151.90	309	P		PKPbc	20 30 05.3	-0.6
	baz=100,SNR=8.8							
H22K	Ishtalitna Cre	151.93	314	P		PKPbc	20 30 05.6	-0.2
	baz=95,SNR=5.6							
CHUM	Lake Minchumin	152.08	310	P		PKPbc	20 30 06.1	-0.1
	baz=98,SNR=7.3							
M20K	Styx River	152.09	305			PKPbc	20 30 06.5	+0.1
M20K	Styx River	152.09	305	P		PKPbc	20 30 06.2	-0.2
	baz=102							
I21K	Tanana	152.10	312	P		PKPbc	20 30 06.1	-0.1
	baz=96							
Q18K	Katmai Hardscr	152.21	298	P		PKPbc	20 30 06.5	-0.3
	baz=106							
H21K	Melozitna Rive	152.50	313			PKiKP	20 30 07.3	0.0
H21K	Melozitna Rive	152.50	313	P		PKiKP	20 30 07.3	0.0
	baz=95,SNR=5.7							
N19K	Bonanza Creek	152.50	303			PKPbc	20 30 06.3	-1.1
N19K	Bonanza Creek	152.50	303	P		PKPbc	20 30 06.6	-0.7
	baz=103							
P18K	Big Mountain,	152.52	299			PKPbc	20 30 05.8	-1.6
P18K	Big Mountain,	152.52	299	P		PKPbc	20 30 06.7	-0.6
	baz=105							
L20K	Farewell, AK	152.55	306	P		PKPbc	20 30 06.9	-0.4
	baz=100							
R17K	Ugashik Creek	152.62	295	P		PKPbc	20 30 07.7	+0.1
	baz=108							
O18K	Koktuh Hills	152.63	300			PKPbc	20 30 07.6	0.0
O18K	Koktuh Hills	152.63	300	P		PKPbc	20 30 07.4	-0.2
	baz=104							
M19K	Big River Lodg	152.68	305	P		PKPbc	20 30 07.3	-0.3
	baz=101							
K20K	Telida	152.78	308			PKPbc	20 30 07.8	0.0
K20K	Telida	152.78	308	P		PKPbc	20 30 07.4	-0.3
	baz=98							
IMAR	Indian Mountai	152.91	314			PKPbc	20 30 07.8	-0.2
J20K	Nowinta River	152.92	310			PKPbc	20 30 08.0	0.0
J20K	Nowinta River	152.92	310	P		PKPbc	20 30 08.1	+0.1
	baz=96							
L19K	White Mountain	152.95	306	P		PKiKP	20 30 08.8	+0.5
	baz=100							
TTA	Tatalina	153.59	307			PKPbc	20 30 09.7	+0.1
TTA	Tatalina	153.59	307	PKIKP		PKPbc	20 30 09.7	+0.1
TTA	Tatalina	153.59	307	P		PKiKP	20 30 10.6	+0.8
	baz=97							
XLT	XiLinHaoTe	153.74	101	*e*PKPbc		PKPdf	20 30 05.3	+2.6
BILL	Bilibino	166.08	339	*e*PKIKP		PKPdf	20 30 16.0	+0.3
BILL				*e*			20 35 05.4	
BILL				pmax		pmax		
	comp=Z,2.0nm,1.0s							

AZER **22** *20:19:37.4±0.1,38.°17N×44.°78E,h2km,Error ellipse: s-maj=2.5km s-min=0.8km az=251.0*

TEH **22** *20:19:40.5,38.°50N×44.°87E,h6km,ML3.5*
NSSP **22** *20:19:40.2,38.°42N×44.°82E,h10km,Ms3.4*
DDA **22** *20:19:40.2±0.0,38.°46N×44.°80E,h10km±2km,ML3.3*
ISK **22** *20:19:42.4,38.°57N×44.°62E,h5km,ML3.4/11*

ISC 22 20:19:38.7±1.1,38.°39N±0.°02×44.°84E±0.°02,h4km±11km, n96,σ1s73/137,7C-8D,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ISHB	Shabestar	0.62	100	*e*Pg		Pb		20 19 52.2	-0.1
ISHB				*e*				20 20 06.5	
	comp=Z,32μm,0.4s								
OZAP	Van, Ozalp-Mer	0.71	292	P		Pg		20 19 52.9	+0.5
IMRD	Marand	0.75	64	*e*Pg		Pb		20 19 54.0	-0.5
IMRD				*e*				20 19 59.2	
	comp=Z,65μm,0.2s								
YOVA	Hakkari_Yksek	0.91	208	*e*Pg		Pn		20 19 58.9	+0.4
YOVA	Hakkari_Yksek	0.91	208	P		Pn		20 19 59.0	+0.4
NAX	Nakhchivan	0.94	33	P		Pb		20 19 57.4	-0.2
	SNR=96								
NAX				S		Sg		20 20 09.0	+0.2
MAKU	Maku	0.97	353	*e*Pg		Pg		20 19 56.9	-0.4
CLDR	Caldiran	1.04	316	PG		Pg		20 19 58.2	-0.5
CLDR				SG		Sg		20 20 11.1	-1.0
CLDR	Caldiran	1.04	316	*e*Pg		Pb		20 19 59.2	-0.2
CLDR	Caldiran	1.04	316	P		Pg		20 19 58.2	-0.5
CLDR				S		Sg		20 20 12.6	+0.5
CLDR				*i* AML		AML		20 20 22.0	
	comp=Z,960nm,0.5s								
ITBZ	Tabriz	1.04	98	*e*Pg		Pn		20 19 59.3	-1.0
ITBZ				*e*Sg		Sn		20 20 15.0	-0.4
ITBZ				*e*				20 20 16.1	
	comp=Z,9μm,0.2s								
ORD	Ordubad	1.05	59	P		Pn		20 19 59.6	-0.7
	SNR=11								
ORD				S		Sn		20 20 13.8	-1.7
SBZ	Shahbuz	1.15	29	Pn		Pb		20 20 00.5	-0.7
	SNR=256								
SBZ				Sn		Sn		20 20 18.6	+0.6
IAZR	Azarshahr	1.15	128	*e*				20 20 06.3	
	comp=Z,29μm,0.6s								
IAZR				*e*Pg		Pn		20 20 03.1	+1.2
VANB	Van	1.15	281	PG		Pn		20 20 01.4	-0.4
VANB				SG		Sg		20 20 16.3	+0.5
VANB	Van	1.15	281	*e*Pg		Pn		20 20 01.9	+0.1
TAB1	Tabriz	1.23	106	*e*				20 20 10.1	
	comp=Z,25μm,0.3s								
TAB1				*e*Pg		Pg		20 20 04.7	+2.5
HYR	Heyderabad	1.32	1	Pn		Pn		20 20 03.2	-0.9
	SNR=26								
HYR				Sn		Sg		20 20 24.7	+3.4
TVRZ	Varzaqan	1.44	85	*e*Pg		Pg		20 20 06.9	+0.6
AKDM	Akdamar-Van	1.46	268	PN		Pg		20 20 08.0	+1.3
AKDM	Akdamar-Van	1.46	268	*e*Pn		Pg		20 20 08.9	+2.2
IGDI	IGDIR	1.59	338	*e*Pn		Pb		20 20 08.5	-0.2
IGDI	IGDIR	1.59	338	P		Pb		20 20 08.6	-0.2
IGDI				S		Sg		20 20 30.8	+1.1
GRS	Goris	1.61	46	⇓*i*P		Pb		20 20 08.1	-0.9
GRS				⇓*i*S		Sb		20 20 29.1	-0.7
NRKZ	NAREK	1.61	355	⇓*i*P		Pb		20 20 08.1	-1.1
NRKZ				⇑*i*S		Sb		20 20 29.6	-0.2
TASB	TASBURUN-IGDIR	1.66	344	PN		Pg		20 20 10.7	+0.2
TASB	TASBURUN-IGDIR	1.66	344	*e*Pn		Pg		20 20 11.1	+0.6
ADCV	BITLIS_Adilcev	1.71	285	*e*Pn		Pg		20 20 12.1	+0.7
ADCV	BITLIS_Adilcev	1.71	285	P		Pg		20 20 12.2	+0.7
IHRS	Heris	1.73	92	*e*Pg		Pg		20 20 12.1	+0.1
IHRS				*e*				20 20 14.1	
	comp=Z,10μm,0.3s								
GNI	Garni	1.76	358	⇑*i*P		Pb		20 20 11.1	-0.5
GNI				⇓*i*S		Sg		20 20 35.1	0.0
IBST	Bostanabad	1.76	112	*e*Pn		Pg		20 20 12.3	-0.2
IBST				*e*				20 20 13.9	
	comp=Z,4μm,0.4s								
MAHB	Mahabad	1.76	157	*e*Pn		Pg		20 20 15.0	+2.5
MAHB				*e*				20 20 49.8	
	comp=Z,3μm,0.6s								
METS	Metsamor	1.85	342	*e*P		Pg		20 20 13.8	-0.3
METS				⇓S		Sg		20 20 39.8	+1.6
AGRB	Hanur-Agry	1.86	310	PN		Pb		20 20 13.5	+0.1
AGRB	Hanur-Agry	1.86	310	*e*Pn		Pg		20 20 14.1	-0.3
PERV	Siirt/Pervari-	1.86	257	P		Pn		20 20 11.5	-0.1
VNNZ	Vanand	1.88	336	⇓*i*P		Pg		20 20 14.6	-0.1
VNNZ				⇑*i*S		Sg		20 20 41.3	+2.1
KOTA	Agri, Merkez-K	1.90	318	P		Pg		20 20 14.7	-0.4
KAPZ	Kaputan	1.93	357	⇑*i*P		Pb		20 20 14.6	0.0
KAPZ				⇑*i*S		Sb		20 20 38.6	-0.5
MLAZ	Malazgirt-MUS	1.94	293	PN		Pb		20 20 14.9	+0.2
MLAZ	Malazgirt-MUS	1.94	293	*e*Pn		Pg		20 20 15.9	+0.1
AMBZ	Amberd	2.04	348	⇓*i*P		Pb		20 20 16.8	+0.2
AMBZ				⇑*i*S		Sg		20 20 44.6	+0.2
BLIS	Bitlis-Merkez	2.14	271	*e*Pn		Pb		20 20 18.2	+0.1
BLIS	Bitlis-Merkez	2.14	271	P		Pb		20 20 18.3	+0.1
IHSH	Hashtrud	2.21	119	*e*Pn		Pb		20 20 19.3	-0.1
IHSH				*e*				20 20 25.8	
	comp=Z,3μm,0.4s								
GURO	Guroymak-BITLI	2.21	275	PN		Pb		20 20 19.3	0.0
GURO	Guroymak-BITLI	2.21	275	*e*Pn		Pg		20 20 20.2	-0.8
QRD	Qoradiz	2.21	60	Pn		Pb		20 20 18.8	-0.5
	SNR=17								
QRD				Sn		Sg		20 20 54.4	+4.7
ISRB	Sarab	2.30	103	*e*Pn		Pb		20 20 21.2	+0.2
ISRB				*e*				20 20 27.8	
	comp=Z,3μm,0.4s								
EATA	Eleskirt	2.34	310	*e*Pn		Pb		20 20 20.7	-1.0
EATA	Eleskirt	2.34	310	P		Pb		20 20 20.8	-1.0
GRMI	Germi	2.43	79	*e*Pn		Pb		20 20 21.0	-2.1
GRMI				*e*				20 20 25.3	
	comp=Z,99nm,0.3s								
GDB	GEDABAY	2.43	17	Pn		Pb		20 20 22.7	-0.4
	SNR=23								
GDB				Sn		Sg		20 21 02.3	+5.4
AGDM	Agdam	2.46	45	Pn		Pg		20 20 24.8	-1.0
	SNR=59								
AGDM				Sn		Sg		20 21 00.0	+2.3
EAK	Akyaka	2.48	338	P		Pg		20 20 25.4	-0.8
BLQ	Beylaqan	2.50	57	Pn		Pb		20 20 24.6	+0.4
	SNR=5.8								
BLQ				Sn		Sg		20 21 00.2	+1.2
GANJ	Ganja	2.53	27	Pn		Pb		20 20 23.3	-1.4
	SNR=43								
GANJ				Sn		Sg		20 21 00.2	+0.3
BRDA	Brd	2.61	43	Pn		Pg		20 20 27.0	-1.6
	SNR=15								
BRDA				Sn		Sg		20 21 02.6	+0.2
MUSM	Mu-Merkez	2.63	278	P		Pg		20 20 27.8	-1.3
STE	Stepanavan	2.63	352	⇑*i*P		Pg		20 20 28.0	-1.1
STE				⇓*i*S		Sg		20 21 05.7	+2.5
QZX	Qazax, Azerbai	2.69	9	Pn		Pg		20 20 29.8	-0.5
	SNR=23								
QZX				Sn		Sg		20 21 07.0	+1.8
YRD	Yardimli	2.72	78	Pn		Pb		20 20 27.0	-1.0
	SNR=132								
YRD				Sn		Sg		20 21 04.1	-1.8
VRTB	Varto-Mus	2.75	287	PN		Pb		20 20 26.6	-2.0
LRK	Lerik	2.76	84	Pn		Pb		20 20 27.4	-1.3
	SNR=116								
LRK				Sn		Sg		20 21 07.0	-0.3
KOPR	Koprukoy-ERZUR	2.81	306	PN		Pb		20 20 27.1	-2.6
ZRD	Zardab	2.90	49	Pn		Pb		20 20 32.2	+1.2
	SNR=6.0								
ZRD				Sn		Sg		20 21 12.5	+0.6
GLBA	Clilabad	2.91	72	Pn		Pb		20 20 30.1	-1.0
	SNR=18								
GLBA				Sn		Sg		20 21 11.1	-0.9
MNGR	Mingechevir, A	2.94	35	Pn		Pg		20 20 33.5	-1.6
MNGR				Sn		Sg		20 21 12.1	-1.2
LKRN	Lenkeran, Azer	3.11	83	Pn		Pb		20 20 33.0	-1.5
	SNR=9.7								
LKRN				Sn		Sg		20 21 16.1	-2.4
ASTR	Astara	3.11	86	Pn		Pb		20 20 32.9	-1.6
	SNR=22								
ASTR				Sn		Sg		20 21 16.4	-2.1
SAAT	Saatly	3.15	61	Sn		Sb		20 21 15.8	+1.7
KDMR	Kurdemir	3.26	52	Pn		Pb		20 20 38.5	+1.3
	SNR=4.7								
KDMR				Sn		Sg		20 21 22.2	-1.4
BNGB	Bingl	3.31	282	PN		Pb		20 20 34.7	-3.3
SEKA	Sheki	3.35	32	Pn		Pb		20 20 38.9	+0.2
	SNR=15								
SEKA				Sn		Sg		20 21 25.3	-1.0
QBL	Gabala	3.44	41	Pn		Pb		20 20 39.7	-0.6
	SNR=8.3								
QBL				Sn		Sg		20 21 27.6	-1.8
ZNJK	Zanjan	3.51	118	*e*Pn		Pb		20 20 38.1	-3.4
ZKTA	Zakatala	3.52	22	Pn		Pb		20 20 40.8	-0.8
	SNR=14								
ZKTA				Sn		Sg		20 21 28.9	-2.9
IML	Ismayilli	3.52	46	Pn		Pb		20 20 40.5	-1.2
	SNR=5.6								
IML				Sn		Sb		20 21 27.7	+2.8
MAZI	Mazidag	3.59	256	PN		Pb		20 20 39.9	-3.0
ALIB	Äli-Bayra	3.60	63	Pn		Pb		20 20 39.2	-3.6
ALIB				Sn		Sb		20 21 29.4	+2.5
KRIK	Erzurum-spir	3.60	304	P		Pg		20 20 46.7	-1.0
PQL	Pirkuli	3.76	49	Pn		Pb		20 20 42.0	-3.8
	SNR=12								
PQL				Sn		Sb		20 21 35.2	+3.4
XNQ	Khinaliq	3.77	41	Pn		Pb		20 20 45.8	-0.1
	SNR=15								
XNQ				Sn		Sb		20 21 35.1	+3.1
GBS	Qobustan	3.83	55	Pn		Pb		20 20 45.1	-1.8
	SNR=3.6								
GBS				Sn		Sg		20 21 37.7	-4.1
ILIN	Lien	3.87	153	*e*Pn		Pb		20 20 43.9	-3.7
ILIN				*e*				20 21 05.4	
	comp=Z,286nm,0.5s								
IDHR	Dehrash	3.89	161	*e*Pn		Pb		20 20 44.7	-3.3
IDHR				*e*				20 21 05.4	
	comp=Z,421nm,0.5s								
ATGJ	Altiaghaj	4.01	51	Pn		Pb		20 20 48.5	-1.5
	SNR=13								
ATGJ				Sn		Sb		20 21 40.9	+1.9
QSAR	Qusar	4.08	39	Pn		Pb		20 20 49.2	-2.0
	SNR=5.6								
QSAR				Sn		Sb		20 21 43.9	+3.0
QUBA	Quba, Azerbaij	4.08	42	Pn		Pb		20 20 48.7	-2.5
	SNR=5.0								
QUBA				Sn		Sb		20 21 43.7	+2.8
SIZA	Siyzn	4.12	48	Pn		Pb		20 20 49.5	-2.4
	SNR=10								
SIZA				Sn		Sb		20 21 42.7	+0.6
IGHG	Ghaleghazi	4.29	160	*e*				20 22 21.0	
	comp=Z,591nm,1.0s								
LHJ2	Lahijan - Gila	4.32	105	*e*Pn		Pn		20 20 48.1	+3.0
QALM	Alamut, Qazvin	5.02	111	*e*Pn		Pn		20 20 57.7	+2.6
IRAZ	Razeghan	5.05	125	*e*Pn		Pn		20 20 59.1	+3.6
IKFM	Kafar-mosalman	5.44	152	*e*Pn		Pn		20 21 06.0	+5.5

GUC 22 20:23:30.9±0.9,31.°60S×71.°77W,h37km±6km,ML3.7,1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CO02	Combarbal	0.77	59	⇓*i*P		Pn		20 23 46.9	+1.6
CO02				*e*S		Sn		20 23 57.5	+1.8
CO02				IAML				20 24 01.1	
	comp=N,9μm,0.3s								
CO06	Fray Jorge	0.93	7	*i*P		Pn		20 23 48.7	+1.2
CO06				*e*S		Sn		20 24 02.1	+2.4
CO06				IAML				20 24 06.3	
	comp=E,4μm,0.4s								
VA06	Catapilco	1.03	157	*i*P		Pn		20 23 50.2	+1.4
VA06				*i*S		Sn		20 24 03.7	+1.6
VA06				IAML				20 24 06.5	
	comp=N,3μm,0.4s								
CO03	El Pedregal	1.20	51	*e*P		Pn		20 23 53.5	+2.3
CO03				*e*S		Sn		20 24 10.0	+3.8
CO03				IAML				20 24 15.8	
	comp=E,2μm,0.2s								
VA01	Torpederas	1.42	176	*e*P		Pn		20 23 55.2	+1.1
ROCH	El Roble	1.51	155	*e*P				20 23 57.7	
ROCH				*e*P		Pn		20 23 57.6	+2.0
ROCH				*e*S		Sn		20 24 17.5	+3.4
ROCH				*i*S				20 24 17.5	
ROCH				IAML				20 24 22.3	
	comp=N,2μm,0.4s								
ROCH				IAML				20 24 22.4	
	comp=N,2μm,0.3s								
VA03	San Esteban	1.55	139	*e*P		Pn		20 23 58.6	+2.6
VA03				*e*S		Sn		20 24 19.9	+5.0
VA03				IAML				20 24 25.8	
	comp=E,3μm,0.4s								
GO04	Tololo Observa	1.65	31	*e*P		Pn		20 24 00.0	+2.5
GO04				*e*S		Sn		20 24 23.4	+5.7
MT02	Curacav	1.73	162	*e*P		Pn		20 24 00.2	+1.7
CO05	La Serena	1.74	15	*e*P		Pn		20 24 02.4	+3.8
CO05				IAML				20 24 33.8	
	comp=E,924nm,0.4s								
PEL	Peldehue	1.79	149	*e*P		Pn		20 24 02.0	+2.7
PEL				*e*S		Sn		20 24 23.4	+2.7
PEL				IAML				20 24 31.2	
	comp=N,674nm,0.3s								
MT05	Renca

comp=E,0.1nm,0.3s,baz=165,slow=11,SNR=13
comp=E,1.8nm,0.8s
KURK Kurchatov 19.68 347 P P 20 28 21.0 -0.3
SONM Songino Array 22.81 39 P P 20 28 57.4 +2.2
comp=E,0.2nm,0.4s,baz=225,slow=6.1,SNR=4.4
comp=E,0.2nm,0.4s
AKH Akhalkalaki 34.67 298 ⇓P P 20 30 44.1 +2.0
AKASG Malin Array Be 45.10 312 P P 20 32 07.3 -1.1
comp=E,0.4nm,0.4s,baz=78,slow=7.6,SNR=8.6
comp=E,0.4nm,0.4s
VRI Vrincioaia 46.80 305 ⇑P P 20 32 22.8 +0.8
PLOR Plostina 46.86 305 ⇑P P 20 32 23.6 +1.1
MLR Muntele Rosu 47.37 305 ⇑P P 20 32 27.8 +1.2
MLR Muntele Rosu 47.37 305 P P 20 32 27.3 +0.7
MLR IAmb IAmb 20 32 28.4
comp=Z,4.7nm,0.8s
BURAR Bucovina Array 47.73 308 P P 20 32 29.4 +0.1
BURAR IAmb IAmb 20 32 30.2
comp=Z,1.8nm,1.3s
BUR08 Bucovina Ar. S 47.74 308 P P 20 32 28.7 -0.8
BUR08 IAmb IAmb 20 32 46.4
comp=Z,3.2nm,1.4s
FINES FINESS Array B 48.10 326 P P 20 32 31.9 +0.2
comp=Z,1.6nm,0.9s,baz=115,slow=8.6,SNR=6.4
comp=Z,1.6nm,0.9s
ARCES ARCESS Array B 50.22 337 P P 20 32 48.4 +0.4
comp=Z,3.2nm,0.9s,baz=88,slow=9.3,SNR=3.6
comp=Z,3.2nm,0.9s
NOA NORSAR Array B 55.24 325 P P 20 33 24.1 -1.1
comp=Z,0.3nm,0.6s,baz=86,slow=7.2,SNR=1.8
comp=Z,0.3nm,0.6s
GERES GERESS Array B 55.24 310 P P 20 33 24.8 -0.7
comp=Z,0.5nm,0.7s,baz=76,slow=5.6,SNR=6.4
comp=Z,0.5nm,0.7s
NRCA Norcia 56.91 303 P P 20 33 37.5 0.0
NRCA IAmb IAmb 20 33 43.4
comp=Z,4.1nm,0.9s
WRA Warramunga Arr 69.60 131 P P 20 35 01.8 0.0
comp=Z,0.3nm,0.5s,baz=325,slow=6.2,SNR=8.5
comp=Z,0.3nm,0.5s
WRA Warramunga Arr 69.60 131 IAmb IAmb 20 35 09.1
comp=Z,0.4nm,1.5s
ILAR Eielson Array 75.67 20 P P 20 35 37.1 -0.2
comp=Z,0.7nm,0.7s,baz=302,slow=5.0,SNR=7.0
comp=Z,0.7nm,0.7s
SKT Skwentna 76.13 24 P P 20 35 39.8 -0.2
SKT IAmb IAmb 20 35 41.2
comp=Z,4.0nm,1.0s
SCRK Sand Creek 77.11 20 P P 20 35 46.0 +0.3
SCRK IAmb IAmb 20 35 46.8
comp=Z,2.5nm,1.0s
SML Sawmill 77.34 23 P P 20 35 47.3 +0.4
SCM Sheep Creek Mo 77.66 23 P P 20 35 48.6 -0.1
SCM IAmb IAmb 20 35 49.6
comp=Z,3.5nm,0.7s
TORD Torodi Ar. Bea 77.82 278 P P 20 35 49.1 -1.1
comp=Z,0.6nm,0.7s,baz=50,slow=4.9,SNR=9.4
comp=Z,0.6nm,0.7s
BOSA Boshof 82.76 230 P P 20 36 15.5 -1.1
comp=Z,2.8nm,0.8s,baz=14,slow=4.1,SNR=7.1
comp=Z,2.8nm,0.8s
BOSA Boshof 82.76 230 IAmb IAmb 20 36 16.0
comp=Z,5.4nm,0.9s

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*TAP **22** 20:33:49.6,21.28N×122.91E,h55km±1km,ML3.8,D*
*JMA **22** 20:33:50.8±0.6,21.1°N±3.2°×12.3°E±1.1°,h95km,MV3.6/21,FAR S OFF ISHIGAKIJIMA*
ISC 22 20:33:48.2±2.0,21.27N±0.10×122.96E±0.05,h24km±18km, n65,σ1s18/113,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LYUB	**Lan-yu**	**1.47**	**300**	*i* P	**Pn**	**20 34 13.5**	**+0.3**
LYUB	baz=300			*i* S	**Sn**	**20 34 31.1**	**-0.6**
LAY	**Lan-yu**	**1.52**	**300**	P	**Pn**	**20 34 13.3**	**-0.5**
LAY	baz=301			*e*S	**Sn**	**20 34 30.9**	**-2.0**
LDUT	**Ludao**	**1.96**	**316**	*e*P	**Pn**	**20 34 19.0**	**-1.0**
LDUT	baz=316			*e*S	**Sn**	**20 34 41.2**	**-2.7**
TSEB	**Hengchuen, Pin**	**2.02**	**288**	*e*P	**Pb**	**20 34 24.4**	**+0.1**
TSEB	baz=288			*e*S	**Sb**	**20 34 48.7**	**-0.2**
TWKBT	**Hengchun**	**2.10**	**289**	*e*P	**Pb**	**20 34 25.1**	**-0.6**
TWKBT	baz=289			*e*S	**Sn**	**20 34 48.0**	**+0.6**
TWK1	**Hengchun**	**2.11**	**289**	*e*P	**Pn**	**20 34 24.0**	**+2.0**
TWK1	baz=289			S	**Sn**	**20 34 48.1**	**+0.6**
HEN	**Hengchun**	**2.19**	**290**	*e*P	**Pn**	**20 34 23.8**	**+0.7**
HEN	baz=298			*e*S	**Sn**	**20 34 51.7**	**+2.2**
TAWH	**Dawu Township**	**2.20**	**299**	P	**Pn**	**20 34 23.6**	**+0.4**
TAWH	baz=299			*e*S	**Sn**	**20 34 49.0**	**-0.7**
TAW	**Tawu**	**2.20**	**300**	*e*P	**Pn**	**20 34 22.0**	**-1.3**
TAW	baz=300			S	**Sn**	**20 34 48.5**	**-1.3**
SLIU	**Shizi**	**2.22**	**295**	P	**Pn**	**20 34 24.6**	**+1.1**
SLIU	baz=296			S	**Sn**	**20 34 49.7**	**-0.5**
TTN	**Taitung**	**2.24**	**312**	P	**Pn**	**20 34 23.6**	**-0.1**
EAST	**Anshuo**	**2.25**	**300**	P	**Pn**	**20 34 24.4**	**+0.3**
EAST	baz=300			S	**Sn**	**20 34 51.0**	**-0.1**
EDH	**Donghe**	**2.28**	**318**	P	**Pn**	**20 34 23.8**	**-0.6**
EDH	baz=319			S	**Sn**	**20 34 50.1**	**-1.7**
TWGBT	**Beinan**	**2.32**	**312**	*e*P	**Pn**	**20 34 25.8**	**+0.8**
TWGBT	baz=300			S	**Sn**	**20 34 52.9**	**+0.1**
TWG	**Pinlang**	**2.33**	**312**	P	**Pn**	**20 34 26.0**	**+0.9**
TWG	baz=300			*e*S	**Sn**	**20 34 53.4**	**+0.4**
LONT	**Longtian**	**2.35**	**314**	P	**Pn**	**20 34 25.8**	**+0.5**
LONT	baz=322			*e*S	**Sn**	**20 34 53.2**	**-0.2**
ECS	**Chishang**	**2.43**	**319**	S	**Sn**	**20 34 55.6**	**+0.2**
FULB	**Fuli**	**2.46**	**321**	*e*P	**Pn**	**20 34 25.9**	**-1.0**
FULB	baz=329			S	**Sn**	**20 34 54.5**	**-1.7**
MASBT	**Mashibuluo**	**2.54**	**302**	*e*P	**Pn**	**20 34 28.8**	**+0.9**
MASBT	baz=302			*e*S	**Sn**	**20 34 57.2**	**-0.9**
EYUL	**Yuli**	**2.56**	**324**	P	**Pn**	**20 34 28.5**	**+0.2**
EYUL	baz=330			S	**Sn**	**20 34 58.1**	**-0.6**
TWF1	**Yuli**	**2.58**	**324**	P	**Pn**	**20 34 28.4**	**-0.1**
TWF1	baz=330			S	**Sn**	**20 34 58.5**	**-0.6**
SSD	**Sandimen**	**2.61**	**305**	*e*P	**Pn**	**20 34 30.1**	**+1.2**
HGSD	**Ruisui**	**2.63**	**328**	*e*P	**Pn**	**20 34 28.5**	**-0.6**
HGSD	baz=335			*e*S	**Sn**	**20 34 58.6**	**-1.6**
EHY	**Hungye**	**2.69**	**326**	P	**Pn**	**20 34 30.2**	**+0.2**
EHY	baz=333			*e*S	**Sn**	**20 35 02.1**	**+0.3**
EGFH	**Guangfu**	**2.77**	**330**	P	**Pn**	**20 34 31.4**	**+0.3**
EGFH	baz=338			*e*S	**Sn**	**20 35 03.8**	**-0.2**
HATJ	**Hateruma jima**	**2.88**	**16**	P	**Pn**	**20 34 33.7**	**+1.1**
HATJ				S	**Sn**	**20 35 05.5**	**-1.0**
YUS	**Yu-Shan**	**2.88**	**320**	*i* P	**Pn**	**20 34 34.1**	**+1.0**
YUS	baz=321			*e*S	**Sn**	**20 35 03.7**	**-3.6**
ESL	**Shilin**	**2.90**	**331**	P	**Pn**	**20 34 32.8**	**-0.1**
ESL	baz=332			*e*S	**Sn**	**20 35 06.2**	**-0.8**
VWDT	**VWDT**	**2.99**	**326**	P	**Pn**	**20 34 35.0**	**+0.9**
VWDT	baz=333			*e*S	**Sn**	**20 35 09.3**	**+0.1**
ALS	**Alishan**	**2.99**	**319**	P	**Pn**	**20 34 36.4**	**+2.0**
ALS	baz=319			*e*S	**Sn**	**20 35 12.0**	**+2.4**
ETM	**Tongmen**	**3.00**	**333**	P	**Pn**	**20 34 34.6**	**+0.3**
JKRS	**Kuro-shima**	**3.11**	**18**	P	**Pn**	**20 34 37.1**	**+1.3**
JKRS	baz=334			*e*S	**Sn**	**20 35 11.8**	**-0.3**
SSLB	**Suanglung**	**3.11**	**324**	*e*P	**Pn**	**20 34 38.8**	**+2.9**
SSLB	baz=331			*e*S	**Sn**	**20 35 10.7**	**-1.7**
IRIF	**Iriomote-Funau**	**3.13**	**13**	P	**Pn**	**20 34 37.3**	**+1.3**
IRIF	baz=331			*e*S	**Sn**	**20 35 12.8**	**+0.1**
OWD	**Renai**	**3.14**	**329**	P	**Pn**	**20 34 36.9**	**+0.6**
OWD	baz=336			S	**Sn**	**20 35 12.2**	**-0.9**
NACB	**Ninganchiao**	**3.15**	**337**	*e*P	**Pn**	**20 34 36.8**	**+0.5**
NACB	baz=346			*e*S	**Sn**	**20 35 12.9**	**-0.3**
JYNG	**Yonagunijimaku**	**3.16**	**360**	*e*P	**Pn**	**20 34 38.5**	**+2.0**
YOJ	**Yonaguni jima**	**3.17**	**1**	P	**Pn**	**20 34 38.4**	**+1.7**
YOJ	baz=1.0			*e*S	**Sn**	**20 35 14.8**	**+1.1**
YOJ	**Yonaguni jima**	**3.17**	**1**	P	**Pn**	**20 34 38.4**	**+1.7**
YOJ				*e*S	**Sn**	**20 35 14.7**	**+0.9**
WUSB	**Renai**	**3.20**	**328**	P	**Pn**	**20 34 38.3**	**+1.2**
WUSB	baz=336			S	**Sn**	**20 35 13.7**	**-0.8**
ETLH	**Xiulin Townshi**	**3.22**	**335**	P	**Pn**	**20 34 38.2**	**+0.8**
ETLH	baz=344			S	**Sn**	**20 35 14.4**	**-0.8**
CHGB	**Renai**	**3.23**	**330**	P	**Pn**	**20 34 38.9**	**+1.3**
CHGB	baz=330			*e*S	**Sn**	**20 35 13.4**	**-2.0**
WHF	**Hehuan Shan**	**3.26**	**332**	P	**Pn**	**20 34 39.2**	**+0.9**
WHF	baz=332			S	**Sn**	**20 35 14.9**	**-1.6**
JIJ	**Ishigaki jima**	**3.26**	**19**	P	**Pn**	**20 34 38.6**	**+0.6**
JIJ				S	**Sn**	**20 35 14.2**	**-1.8**
NNSB	**Datong**	**3.46**	**335**	P	**Pn**	**20 34 42.1**	**+1.4**
NNSB	baz=343			*e*S	**Sn**	**20 35 20.8**	**-0.2**
NNSH	**Datong**	**3.46**	**335**	P	**Pn**	**20 34 42.0**	**+1.2**
NNSH	baz=342			S	**Sn**	**20 35 19.9**	**-1.1**
LATG	**Datong**	**3.51**	**338**	*e*P	**Pn**	**20 34 43.3**	**+2.0**
JISG	**Ishigakijimahi**	**3.53**	**20**	P	**Pn**	**20 34 42.2**	**+0.7**
JISG	baz=346			*e*S	**Sn**	**20 35 21.2**	**-1.3**
NDS	**Dongshan**	**3.54**	**341**	*e*P	**Pn**	**20 34 43.7**	**+2.0**
NDS	baz=342			*e*S	**Sn**	**20 35 23.6**	**+0.9**
WDGT	**Dungji**	**3.64**	**304**	P	**Pn**	**20 34 43.2**	**+0.2**
WDGT	baz=303			*e*S	**Sn**	**20 35 26.0**	**+0.7**
JTJ	**Tarama**	**3.72**	**25**	P	**Pn**	**20 34 45.3**	**+1.2**
JTJ				*e*S	**Sn**	**20 35 26.1**	**-1.0**
VCHM	**Qimei**	**3.79**	**301**	P	**Pn**	**20 34 46.1**	**+0.9**
VCHM	baz=301			*e*S	**Sn**	**20 35 28.4**	**-0.7**
PHUB	**P'eng-hu**	**3.85**	**306**	*e*S	**Sn**	**20 35 30.4**	**0.0**
SXI1	**Grass Mountain**	**3.93**	**346**	P	**Pn**	**20 34 49.3**	**+2.1**
SXI1	baz=346			*e*S	**Sn**	**20 35 34.7**	**+2.1**
JIRB	**Irabujima**	**4.08**	**30**	P	**Pn**	**20 34 49.5**	**+0.3**
JMJ2	**Miyako jima3**	**4.08**	**32**	*e*P	**Pn**	**20 34 49.9**	**+0.7**
JMJ	**Miyako jima 2**	**4.13**	**31**	*e*P	**Pn**	**20 34 50.2**	**+0.4**
JMJ	baz=31			S	**Sn**	**20 35 36.7**	**-0.7**
JOGS	**Gusukube**	**4.14**	**33**	P	**Pn**	**20 34 50.7**	**+0.8**
JIKM	**Ikemajima**	**4.20**	**30**	S	**Sn**	**20 35 38.0**	**-1.1**
JNTH	**Nagotoyohara**	**6.98**	**41**	P	**Pn**	**20 35 28.5**	**-0.5**
JOW	**Kunigami**	**7.36**	**40**	*e*P	**Pn**	**20 35 33.9**	**-0.4**
JOW	**Kunigami**	**7.36**	**40**	*e*P	**Pn**	**20 35 34.3**	**0.0**
JYRO	**Yoronjima**	**7.61**	**40**	*e*P	**Pn**	**20 35 37.6**	**0.0**
HKPS	**Hong Kong Po S**	**8.26**	**279**	*e*P	**Pn**	**20 35 47.3**	**+0.8**
JTK	**Tokunoshima**	**8.47**	**39**	P	**Pn**	**20 35 48.4**	**-1.1**

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*MAN **22** 20:35:48.2,2.92N×127.47E,h9km,mb4.9,ML3.8,MS3.7*
*IDC **22** 20:35:58.3±1.3,3.47N×126.48E,h0km,mb3.9/5, mbtmp3.9/5,MS4.1/3,Error ellipse: s-maj=170.6km s-min=20.2km az=67.0*
*NEIC **22** 20:36:00.0±1.0,3.6N±0.1×126.7E±0.2,h10km±2km, mb4.1/12,Error ellipse: s-maj=35.9km s-min=15.9km az=67.0*
ISC 22 20:35:59.8±0.7,3.6N±0.1×126.7E±0.3,h10km,n26, σ1s10/23,mb4.0/11,MS4.2/3,1D,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**2.84**	**166**	Pn	**Pn**	**20 36 44.6**	**-0.7**
KCP	**Kidapawan**	**3.78**	**335**	⇓*e*P	**Pn**	**20 37 00.7**	**+2.4**
FAKI	**Fak Fak**	**8.51**	**139**	Pn	**Pn**	**20 38 04.8**	**+1.7**
SAUI	**Saumlaki**	**12.35**	**158**	Pn	**Pn**	**20 38 56.0**	**+0.1**
MTN	**Manton Dam**	**16.88**	**165**		**P**	**20 39 58.4**	**0.0**
KNRA	**Kununurra**	**19.21**	**174**	P	**Pn**	**20 40 25.3**	**+0.2**
WB0	**Warramunga Arr**	**24.38**	**162**	P	**P**	**20 41 20.8**	**+2.3**
WRAB	**Tennant Creek**	**24.52**	**162**	P	**P**	**20 41 19.3**	**-0.5**
WRAB				IAmb	IAmb	20 41 21.3	
WRA	comp=Z,7.5nm,1.1s **Warramunga Arr**	**24.53**	**162**	P	**P**	**20 41 19.7**	**-0.1**
	comp=Z,2.2nm,0.8s,baz=343,slow=10,SNR=11 comp=Z,2.2nm,0.8s						
WRA	**Warramunga Arr**	**24.53**	**162**	P	**P**	**20 41 20.3**	**+0.5**
WB2	**Warramunga Arr**	**24.53**	**162**	P	**P**	**20 41 19.7**	**-0.1**
WB2				IAmb	IAmb	20 41 25.7	
WR0	comp=Z,4.6nm,0.9s **Warramunga Arr**	**24.61**	**162**	P	**P**	**20 41 20.7**	**+0.2**
WR0				IAmb	IAmb	20 41 33.1	
KS19	comp=Z,3.5nm,0.9s **Wonju Array Si**	**33.81**	**2**	P	**P**	**20 42 40.8**	**-1.4**
STKA	**Stephens Creek**	**37.98**	**159**	P	**P**	**20 43 17.9**	**-0.1**
	comp=Z,2.2nm,0.7s,baz=309,slow=8.3,SNR=4.9 comp=Z,2.2nm,0.7s						
SHL	**Shillong**	**39.94**	**307**	P	**P**	**20 43 34.0**	**-0.8**
SHL				IAmb	IAmb	20 43 35.6	
LSA	comp=Z,5.4nm,0.8s **Lhasa**	**42.52**	**312**	P	**P**	**20 43 57.4**	**+1.1**
LSA				IAmb	IAmb	20 43 58.8	
PALK	comp=Z,2.1nm,0.6s **Pallekele**	**45.90**	**277**	LR	LR	21 06 32.8	
	comp=Z,240nm,18.1s,baz=272,slow=40						
DZM	**Mont Dzumac**	**46.48**	**125**	LR	LR	21 03 35.6	
	comp=Z,213nm,19.8s,baz=208,slow=36						
SONM	**Songino Array**	**47.45**	**342**	P	**P**	**20 44 35.4**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=159,slow=7.7,SNR=4.2 comp=Z,0.4nm,0.5s						
MK31	**Makanchi Array**	**57.67**	**325**	P	**P**	**20 45 49.4**	**-1.2**
MK31				IAmb	IAmb	20 46 18.5	
MKAR	comp=Z,3.0nm,1.5s **Makanchi Array**	**57.67**	**325**	P	**P**	**20 45 50.2**	**-0.3**
	comp=Z,1.3nm,0.6s,baz=117,slow=8.2,SNR=18 comp=Z,1.3nm,0.6s						
MKAR	**Makanchi Array**	**57.67**	**325**	P	**P**	**20 45 48.9**	**-1.6**
ZALV	**Zalesovo Beam**	**60.72**	**333**	P	**P**	**20 46 10.8**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=134,slow=8.2,SNR=2.5 comp=Z,0.4nm,0.4s						
KURK	**Kurchatov**	**61.86**	**328**	P	**P**	**20 46 18.7**	**-0.5**
KKAR	**Karatay Array**	**63.32**	**317**	P	**P**	**20 46 28.6**	**-0.7**
INK	**Inuvik**	**90.35**	**21**	LR	LR	21 33 19.9	
	comp=Z,78nm,18.9s,baz=112,slow=38						

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*NEIC **22** 20:40:59.9±0.8,17.9S±0.1×178.5W±0.2,h612km±10km, mb4.0/17,Error ellipse: s-maj=29.2km s-min=9.1km az=131.0*
*IDC **22** 20:41:00.6±2.1,17.69S×178.70W,h610km±20km,mb3.0/6, mbtmp4.0/7,Error ellipse: s-maj=83.7km s-min=19.7km az=151.0*
ISC 22 20:40:59.3±0.7,17.9S±0.2×178.5W±0.1,h600km,n28, σ0s76/27,mb3.9/15,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.26**	**273**	P	**P**	**20 42 21.5**	**+1.5**
	29nm,0.7s,baz=75,slow=2.6,SNR=18						
CTAO	**Charters Tower**	**33.33**	**261**	P	**P**	**20 46 49.6**	**+0.2**
CTAO				IAmb	IAmb	20 47 07.3	
COEN	comp=Z,5.5nm,1.2s **Coen**	**36.98**	**270**	P	**P**	**20 47 20.7**	**+1.0**
STKA	**Stephens Creek**	**38.52**	**241**	P	**P**	**20 47 32.0**	**+0.1**
	comp=Z,3.7nm,1.0s,baz=356,slow=14,SNR=4.4 comp=Z,3.7nm,1.0s						
BBOO	**Buckleboo**	**43.30**	**241**	P	**P**	**20 48 09.9**	**+0.2**
WR0	**Warramunga Arr**	**44.32**	**260**	P	**P**	**20 48 17.4**	**-0.4**
WR0				IAmb	IAmb	20 48 25.0	
WB2	comp=Z,6.6nm,1.2s **Warramunga Arr**	**44.50**	**260**	P	**P**	**20 48 18.6**	**-0.6**
WB2				IAmb	IAmb	20 48 19.5	
WRAB	comp=Z,4.0nm,0.7s **Tennant Creek**	**44.50**	**260**	P	**P**	**20 48 18.5**	**-0.7**
WRAB				IAmb	IAmb	20 48 34.8	
WRA	comp=Z,12nm,1.4s **Warramunga Arr**	**44.51**	**260**	P	**P**	**20 48 18.9**	**-0.3**
	comp=Z,1.7nm,0.5s,baz=96,slow=7.1,SNR=12 comp=Z,1.7nm,0.5s						
WRA	**Warramunga Arr**	**44.51**	**260**	IAmb	IAmb	20 48 19.4	
	comp=Z,0.2nm,0.7s						
AS31	**Alice Springs**	**44.67**	**254**	P	**P**	**20 48 20.6**	**+0.1**
AS31				IAmb	IAmb	20 48 21.5	
ASAR	comp=Z,2.8nm,0.5s **Alice Springs**	**44.67**	**254**	P	**P**	**20 48 20.0**	**-0.5**
FORT	**Forrest**	**49.90**	**245**	P	**P**	**20 48 58.8**	**-0.5**
KNRA	**Kununurra**	**50.37**	**264**	P	**P**	**20 49 01.1**	**-1.8**
VNDA	**Vanda**	**60.44**	**185**	P	**P**	**20 50 11.6**	**+0.1**
QSPA	**South Pole Qui**	**72.15**	**180**	P	**P**	**20 51 24.1**	**-0.1**
QSPA				IAmb	IAmb	20 51 33.5	
P18K	comp=Z,4.3nm,1.3s **Big Mountain,**	**79.35**	**12**	P	**P**	**20 52 03.1**	**-0.5**
P18K				IAmb	IAmb	20 52 26.5	
NVAR	comp=Z,14nm,1.5s **Mina Array Bea**	**79.51**	**44**	P	**P**	**20 52 05.4**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=222,slow=8.0,SNR=5.6 comp=Z,0.6nm,0.7s						
O18K	**Koktuh Hills**	**79.78**	**12**	P	**P**	**20 52 05.1**	**-0.8**
O18K				IAmb	IAmb	20 52 11.8	
U15A	comp=Z,9.6nm,1.4s **North Rim**	**82.61**	**48**	P	**P**	**20 52 20.5**	**-0.7**
J20K	**Nowinta River**	**83.97**	**10**	P	**P**	**20 52 27.1**	**+0.1**
J20K				IAmb	IAmb	20 52 27.2	
ILAR	comp=Z,3.5nm,1.1s **Eielson Array**	**85.91**	**13**	P	**P**	**20 52 35.4**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=220,slow=4.7,SNR=5.0 comp=Z,0.4nm,0.4s						
TXAR	**Lajitas Array**	**86.10**	**58**	P	**P**	**20 52 39.4**	**+1.2**
	comp=Z,0.9nm,0.7s,baz=220,slow=6.2,SNR=11 comp=Z,0.9nm,0.7s						
TXAR	**Lajitas Array**	**86.10**	**58**	P	**P**	**20 52 39.1**	**+0.9**
PDAR	**Pinedale Array**	**87.44**	**43**	P	**P**	**20 52 43.3**	**-1.0**
	comp=Z,0.5nm,0.6s,baz=207,slow=3.2,SNR=5.4 comp=Z,0.5nm,0.6s						
BMAR	**Burnt Mountain**	**88.69**	**12**	P	**P**	**20 52 49.5**	**+0.2**
CLL	**Collm**	**145.44**	**347**	*i* PKPbc	**PKPbc**	**20 59 31.0**	**-0.2**
GERES	**GERESS Array B**	**147.58**	**345**	PKPbc	**PKPbc**	**20 59 37.3**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=34,slow=5.0,SNR=5.8						

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*JMA **22** 20:50:32.1±0.1,24.0N±0.4×121.6E±0.4,h22km,MV2.9/11, TAIWAN REGION*
*TAP **22** 20:50:33.8,24.21N×121.75E,h12km,ML3.4,B*
ISC 22 20:50:33.4±0.8,24.17N±0.01×121.74E±0.02,h15km±5km, n102,σ1s17/169,1C-22D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETL	**Fush Village**	**0.10**	**263**	⇓*i*P	**Pg**	**20 50 37.2**	**+0.4**
ETL	baz=247			*i* S	**Sg**	**20 50 39.9**	**+0.9**
NACB	**Ninganchiao**	**0.13**	**271**	⇓*i*P	**Pb**	**20 50 37.5**	**-0.1**
NACB	baz=256			*i* S	**Sb**	**20 50 40.4**	**0.0**
EHP	**Heping Village**	**0.14**	**2**	*i* P	**Pg**	**20 50 36.6**	**-0.6**
EHP	baz=357			S	**Sg**	**20 50 39.1**	**-0.6**
TWD	**Chiawan**	**0.16**	**234**	*i* P	**Pg**	**20 50 38.1**	**+0.6**
TWD	baz=227			*i* S	**Sg**	**20 50 41.5**	**+1.4**
HWA	**Hwalien**	**0.23**	**212**	*i* P	**Pb**	**20 50 40.3**	**+1.0**
HWA	baz=209			*e*S	**Sb**	**20 50 45.8**	**+2.6**
ETLH	**Xiulin Townshi**	**0.23**	**279**	⇓*i*P	**Pb**	**20 50 39.2**	**-0.2**
ETLH	baz=269			*e*S	**Sb**	**20 50 43.3**	**-0.2**
ENA	**Nanau**	**0.26**	**1**	⇓*i*P	**Pg**	**20 50 38.5**	**-0.4**
ENA	baz=359			*i* S	**Sg**	**20 50 42.2**	**-0.6**
EWUT	**Wuta**	**0.28**	**8**	⇓*i*P	**Pg**	**20 50 38.8**	**-0.5**
EWUT	baz=5.0			*i* S	**Sg**	**20 50 42.6**	**-0.8**
ETM	**Tongmen**	**0.30**	**227**	P	**Pb**	**20 50 40.7**	**+0.2**
ETM	baz=224			*e*S	**Sb**	**20 50 45.8**	**+0.5**
TEYL	**Yanliau Villag**	**0.33**	**203**	*e*P	**Pn**	**20 50 41.8**	**-1.9**
TEYL	baz=205			*e*S	**Sn**	**20 50 50.0**	**-0.2**
LATG	**Datong**	**0.41**	**332**	⇓P	**Pg**	**20 50 41.9**	**+0.2**
LATG	baz=327			*e*S	**Sg**	**20 50 47.5**	**+0.1**
NNSH	**Datong**	**0.41**	**308**	⇓*i*P	**Pb**	**20 50 42.4**	**-0.1**
NNSH	baz=303			*e*S	**Sb**	**20 50 48.2**	**-0.4**
NNSB	**Datong**	**0.41**	**308**	⇓*e*P	**Pb**	**20 50 42.4**	**-0.1**
NNSB	baz=303			*e*S	**Sb**	**20 50 48.3**	**-0.3**
NNS	**Nan Shan**	**0.42**	**309**	⇓*e*P	**Pb**	**20 50 42.6**	**-0.1**
NNS	baz=304			*e*S	**Sb**	**20 50 48.6**	**-0.5**
WHF	**Hehuan Shan**	**0.43**	**266**	⇓*i*P	**Pn**	**20 50 43.1**	**-2.4**
WHF	baz=261			S	**Sn**	**20 50 49.9**	**-3.4**
TWC	**Suao**	**0.45**	**13**	⇓*i*P	**Pg**	**20 50 41.9**	**-0.5**
TWC	baz=14			*e*S	**Sg**	**20 50 47.1**	**-1.3**
ESL	**Shilin**	**0.45**	**218**	P	**Pn**	**20 50 43.3**	**-2.1**
ESL	baz=216			*e*S	**Sn**	**20 50 50.5**	**-2.8**
FUSS	**Fushou**	**0.46**	**280**	⇓*i*P	**Pn**	**20 50 43.7**	**-2.0**
FUSS	baz=275			*e*S	**Sb**	**20 50 50.1**	**+0.1**
NDS	**Dongshan**	**0.46**	**358**	⇓*i*P	**Pg**	**20 50 42.4**	**-0.2**
	baz=355						

NDS				*e*S	**Sg**	**20 50 47.9**	**-0.9**
	baz=355								
NDT	**Datong Townshi**	**0.47**	**335**	*e*P	**Pg**	**20 50 42.8**	**-0.1**
	baz=331								
NDT				*e*S	**Sg**	**20 50 49.5**	**+0.1**
	baz=331								
TEGC	**Jichi Village**	**0.49**	**201**	*e*P	**Pn**	**20 50 44.9**	**-1.1**
	baz=201								
TEGC				*e*S	**Sn**	**20 50 53.3**	**-1.0**
	baz=201								
TWT	**Tachien**	**0.52**	**279**	*e*P	**Pn**	**20 50 45.2**	**-1.2**
	baz=274								
TWT				*e*S	**Sn**	**20 50 52.9**	**-2.2**
	baz=274								
CHGB	**Renai**	**0.53**	**258**⇓	*e*P	**Pn**	**20 50 45.1**	**-1.5**
	baz=254								
CHGB				*e*S	**Sn**	**20 50 53.2**	**-2.2**
	baz=254								
TDCB	**Techi**	**0.53**	**279**⇓	*e*P	**Pn**	**20 50 45.3**	**-1.4**
	baz=274								
TDCB				*e*S	**Sn**	**20 50 52.6**	**-2.8**
	baz=274								
TWE	**Neicheng**	**0.55**	**354**	⇓P	**Pg**	**20 50 44.3**	**0.0**
	baz=353								
TWE				*e*S	**Sg**	**20 50 51.7**	**+0.1**
	baz=353								
OWD	**Renai**	**0.56**	**247**	*e*P	**Pn**	**20 50 45.4**	**-1.6**
	baz=244								
OWD				*e*S	**Sn**	**20 50 54.3**	**-1.7**
	baz=244								
EGFH	**Guangfu**	**0.57**	**209**	*e*P	**Pn**	**20 50 46.1**	**-1.0**
	baz=209								
EGFH				*e*S	**Sn**	**20 50 55.9**	**-0.4**
	baz=209								
ILA	**Ilan**	**0.59**	**1**	*e*P	**Pg**	**20 50 44.4**	**-0.7**
ILA				*e*S	**Sg**	**20 50 53.2**	**+0.2**
WUSB	**Renai**	**0.59**	**252**	*e*P	**Pn**	**20 50 46.3**	**-1.1**
	baz=250								
WUSB				*e*S	**Sn**	**20 50 55.1**	**-1.8**
	baz=250								
YHNB	**Yeheng**	**0.59**	**327**	⇓P	**Pb**	**20 50 45.8**	**+0.2**
	baz=323								
YHNB				*e*S	**Sg**	**20 50 53.7**	**+0.6**
	baz=323								
FUSB	**Fushanzhiwuyua**	**0.60**	**347**	⇓P	**Pg**	**20 50 45.5**	**+0.2**
	baz=344								
FUSB				*e*S	**Sg**	**20 50 53.4**	**+0.1**
	baz=344								
NSK	**Sanguang**	**0.61**	**326**⇓	*i*P	**Pb**	**20 50 46.0**	**+0.1**
	baz=323								
NSK				*e*S	**Sg**	**20 50 54.2**	**+0.7**
	baz=323								
NWLT	**Wulai**	**0.64**	**341**⇓	*i*P	**Pg**	**20 50 46.3**	**+0.3**
	baz=338								
NWLT				*e*S	**Sg**	**20 50 54.5**	**0.0**
	baz=338								
NTC	**Toucheng**	**0.69**	**7**	*e*P	**Pb**	**20 50 46.5**	**-0.6**
	baz=6.0								
NTC				*e*S	**Sb**	**20 50 55.9**	**-0.5**
	baz=6.0								
VWDT	**VWDT**	**0.69**	**233**	*e*P	**Pn**	**20 50 48.3**	**-0.2**
	baz=231								
VWDT				*e*S	**Sn**	**20 50 59.6**	**+0.6**
	baz=231								
EGS		**0.69**	**15**	*e*P	**Pb**	**20 50 47.1**	**-0.1**
	baz=15								
NFF	**Wufeng Townshi**	**0.73**	**309**	*e*P	**Pn**	**20 50 48.6**	**-0.6**
	baz=306								
NFF				*e*S	**Sb**	**20 50 58.3**	**+0.6**
	baz=306								
WHP	**Taichung City**	**0.73**	**278**	*e*P	**Pn**	**20 50 49.1**	**-0.1**
	baz=275								
WHP				*e*S	**Sn**	**20 50 59.3**	**-0.9**
	baz=275								
WPL	**Puli Township**	**0.73**	**258**	*e*P	**Pn**	**20 50 49.1**	**-0.1**
	baz=255								
WPL				*e*S	**Sn**	**20 50 59.2**	**-0.9**
	baz=255								
HGSD	**Ruisui**	**0.73**	**203**	*e*P	**Pn**	**20 50 49.2**	**0.0**
	baz=203								
HGSD				*e*S	**Sn**	**20 51 03.4**	**+3.2**
	baz=203								
DPDB	**Guoxing**	**0.75**	**260**	*e*P	**Pn**	**20 50 49.6**	**0.0**
	baz=257								
DPDB				*e*S	**Sn**	**20 51 00.1**	**-0.6**
	baz=257								
WCS	**Beigang Elemen**	**0.76**	**262**⇓	*e*P	**Pn**	**20 50 49.6**	**-0.1**
	baz=259								
WCS				*e*S	**Sn**	**20 51 00.2**	**-0.6**
	baz=259								
EHY	**Hungye**	**0.76**	**210**	*e*P	**Pn**	**20 50 48.7**	**-1.0**
	baz=209								
TIPB	**Shuangxi**	**0.80**	**6**	*e*P	**Pb**	**20 50 48.8**	**-0.3**
	baz=5.0								
TIPB				*e*S	**Sb**	**20 50 58.9**	**-0.9**
	baz=5.0								
LIOB	**Emei**	**0.81**	**306**	*e*P	**Pn**	**20 50 50.8**	**+0.4**
	baz=303								
LIOB				*e*S	**Sn**	**20 51 01.7**	**-0.4**
	baz=303								
NHDH	**Xindian Distri**	**0.81**	**346**	*e*P	**Pb**	**20 50 48.8**	**-0.5**
	baz=344								
NSTT	**Nanjuang**	**0.81**	**304**	*e*P	**Pn**	**20 50 50.6**	**+0.3**
	baz=302								
NSTT				*e*S	**Sn**	**20 51 01.2**	**-1.0**
	baz=302								
SSLB	**Suanglung**	**0.81**	**242**	*e*P	**Pn**	**20 50 50.2**	**-0.2**
	baz=240								
SSLB				*e*S	**Sn**	**20 51 01.0**	**-1.2**
	baz=240								
NJD	**Zhudong**	**0.81**	**314**	*e*P	**Pn**	**20 50 50.8**	**+0.4**
	baz=311								
SMLT	**Sun Moon Lake**	**0.82**	**250**	*e*P	**Pn**	**20 50 50.7**	**+0.2**
	baz=247								
SMLT				*e*S	**Sn**	**20 51 02.5**	**+0.1**
	baz=247								
TWA	**Mucha**	**0.82**	**350**	*e*P	**Pb**	**20 50 49.7**	**+0.4**
	baz=349								
TWA				*e*S	**Sb**	**20 50 59.8**	**-0.4**
	baz=349								
TATO	**Taipei**	**0.83**	**344**	*e*P	**Pb**	**20 50 49.8**	**+0.2**
	baz=343								
TYC	**Yuchr**	**0.85**	**252**	*e*P	**Pn**	**20 50 51.0**	**+0.2**
	baz=249								
TYC				*e*S	**Sn**	**20 51 03.2**	**+0.2**
	baz=249								
TWB1	**Santiao Chiao**	**0.86**	**15**	*e*P	**Pb**	**20 50 50.4**	**+0.3**
	baz=16								
YULB	**Yu-li**	**0.87**	**207**	*e*P	**Pn**	**20 50 51.0**	**-0.3**
	baz=207								
YULB				*e*S	**Sn**	**20 51 04.7**	**+1.0**
	baz=207								
HSN1	**Hsinchu**	**0.89**	**313**	*e*P	**Pn**	**20 50 52.9**	**+1.5**
	baz=310								
NWF	**Wu-fen Shan**	**0.90**	**3**	*e*P	**Pb**	**20 50 50.1**	**-0.6**
	baz=2.0								
NWF				*e*S	**Sb**	**20 51 02.0**	**-0.5**
	baz=2.0								
TWQ1	**Liyutan**	**0.90**	**281**	*e*P	**Pn**	**20 50 53.3**	**+1.8**
	baz=279								
TWQ1				*e*S	**Sn**	**20 51 04.8**	**+0.6**
	baz=279								
WFSB	**Wu-fen Shan**	**0.90**	**3**	*e*P	**Pb**	**20 50 51.0**	**+0.3**
	baz=2.0								
WFSB				*e*S	**Sb**	**20 51 02.1**	**-0.4**
	baz=2.0								
EYUL	**Yuli**	**0.91**	**205**	*e*P	**Pn**	**20 50 51.7**	**+0.1**
	baz=205								
TWF1	**Yuli**	**0.91**	**206**	*e*P	**Pn**	**20 50 51.5**	**-0.2**
	baz=206								
TWF1				*e*S	**Sn**	**20 51 05.9**	**+1.4**
	baz=206								
SBCB	**Hsinchu**	**0.92**	**312**	*e*P	**Pn**	**20 50 53.3**	**+1.5**
	baz=310								
SXI1	**Grass Mountain**	**0.93**	**8**	*e*P	**Pb**	**20 50 51.3**	**0.0**
	baz=7.0								
SXI1				*e*S	**Sb**	**20 51 02.9**	**-0.5**
	baz=7.0								
NMLH	**Miaoli**	**0.94**	**293**	*e*P	**Pn**	**20 50 54.3**	**+2.3**
	baz=290								
NCUH	**Zhongli**	**0.94**	**328**	*e*P	**Pn**	**20 50 53.2**	**+1.1**
	baz=326								
NCU	**National Centr**	**0.94**	**328**	*e*P	**Pn**	**20 50 53.6**	**+1.5**
	baz=326								
WWF	**Wufeng**	**0.96**	**262**	*e*P	**Pn**	**20 50 54.9**	**+2.6**
	baz=260								
TCU	**Taichung**	**0.97**	**269**	*e*P	**Pn**	**20 50 55.3**	**+2.8**
	baz=266								
TWS1	**Kuangyinshan**	**0.97**	**343**	*e*P	**Pg**	**20 50 52.8**	**+0.6**
	baz=341								
YM01	**YM01**	**0.98**	**351**	*e*P	**Pg**	**20 50 53.0**	**+0.5**
	baz=350								
WJS	**Zhushan**	**0.98**	**249**	*e*P	**Pn**	**20 50 54.9**	**+2.1**
	baz=248								
WJS				*e*S	**Sn**	**20 51 09.9**	**+3.5**
	baz=248								
YUS	**Yu-Shan**	**0.99**	**227**⇓	*e*P	**Pn**	**20 50 53.6**	**+0.4**
	baz=225								
YUS				*e*S	**Sn**	**20 51 08.2**	**+1.0**
	baz=225								
YM08	**YM08**	**1.02**	**353**	*e*P	**Pb**	**20 50 53.2**	**+0.4**
	baz=351								
FULB	**Fuli**	**1.05**	**203**	*e*P	**Pn**	**20 50 54.2**	**+0.5**
	baz=203								
ALS	**Alishan**	**1.08**	**232**	*e*P	**Pn**	**20 50 55.5**	**+1.2**
	baz=231								
ALS				*e*S	**Sn**	**20 51 10.7**	**+1.6**
	baz=231								
TWY	**Chenhua**	**1.11**	**354**	*e*P	**Pg**	**20 50 55.8**	**+1.0**
	baz=353								
CHKT	**Chengkung**	**1.12**	**198**	*e*P	**Pg**	**20 50 53.9**	**-1.2**
	baz=198								
JYNG	**Yonagunijimaku**	**1.14**	**76**	*e*P	**Pn**	**20 50 54.8**	**0.0**
JYNG				S	**Sg**	**20 51 11.6**	**+1.3**
ELDTW	**Lidau**	**1.18**	**214**	*e*P	**Pg**	**20 50 55.6**	**-0.6**
	baz=213								
ELDTW				*e*S	**Sg**	**20 51 13.8**	**+2.1**
	baz=213								
YOJ	**Yonaguni jima**	**1.20**	**76**	*i*P	**Pn**	**20 50 55.9**	**+0.2**
	baz=77								
YOJ				*e*S	**Sn**	**20 51 12.4**	**+0.7**
	baz=77								
YOJ	**Yonaguni jima**	**1.20**	**76**	P	**Pn**	**20 50 55.7**	**+0.1**
YOJ				*e*S	**Sn**	**20 51 12.1**	**+0.4**
EDH	**Donghe**	**1.26**	**198**	*e*P	**Pg**	**20 50 55.9**	**-1.8**
	baz=199								
STYH	**Taoyuan**	**1.33**	**222**	*e*P	**Pg**	**20 50 58.7**	**-0.3**
	baz=221								
STYH				*e*S	**Sg**	**20 51 17.6**	**+1.2**
	baz=221								
TPUB	**Ta-pu**	**1.33**	**230**⇑	*e*P	**Pg**	**20 51 00.0**	**+0.9**
	baz=229								
TPUB				*e*S	**Sg**	**20 51 19.0**	**+2.5**
	baz=229								
STYT	**Tauyuan**	**1.35**	**222**	*e*P	**Pg**	**20 50 59.4**	**0.0**
	baz=221								
CHY	**Chiayi**	**1.38**	**241**	*e*P	**Pg**	**20 51 01.4**	**+1.5**
	baz=240								
LONT	**Longtian**	**1.38**	**204**	*e*P	**Pg**	**20 50 57.8**	**-2.2**
	baz=204								
WTP	**Ta-pu**	**1.38**	**228**	*e*P	**Pg**	**20 51 00.7**	**+0.7**
	baz=227								
TWK	**Hsinying**	**1.46**	**232**	*e*P	**Pg**	**20 51 01.8**	**+0.4**
	baz=231								
TWGBT	**Beinan**	**1.48**	**204**	*e*P	**Pb**	**20 50 58.5**	**-2.1**
	baz=204								
PCYT	**Pengchaiyu**	**1.48**	**12**	*e*P	**Pn**	**20 51 00.3**	**+0.7**
	baz=12								
LDUT	**Ludao**	**1.51**	**189**	*e*P	**Pn**	**20 50 58.5**	**-1.5**
	baz=190								
LDUT				*e*S	**Sb**	**20 51 18.6**	**-1.6**
	baz=190								
SGST	**Jiashian**	**1.52**	**224**	*e*P	**Pg**	**20 51 02.1**	**-0.5**
	baz=223								
IRIF	**Iriomote-Funau**	**1.83**	**85**	P	**Pn**	**20 51 04.7**	**+0.4**
IRIF				*e*S	**Sn**	**20 51 28.3**	**+1.1**
HATJ	**Hateruma jima**	**1.90**	**93**	*e*S	**Sn**	**20 51 29.4**	**+0.6**
JKRS	**Kuro-shima**	**2.08**	**88**	*e*S	**Sb**	**20 51 35.2**	**-1.3**
WDGT	**Dungji**	**2.11**	**245**	*e*P	**Pb**	**20 51 10.7**	**-0.7**
	baz=244								
JIJ	**Ishigaki jima**	**2.21**	**85**	P	**Pn**	**20 51 09.6**	**0.0**
JIJ				*e*S	**Sn**	**20 51 36.6**	**+0.1**
VWUC	**VWUC**	**2.23**	**292**	*e*P	**Pn**	**20 51 10.8**	**+0.8**
	baz=290								
VWUC				*e*S	**Sb**	**20 51 38.9**	**-2.1**
	baz=290								
VCHM	**Qimei**	**2.32**	**246**	*e*P	**Pb**	**20 51 13.8**	**-1.2**
	baz=245								
JISG	**Ishigakijimahi**	**2.38**	**79**	S	**Sn**	**20 51 42.2**	**+1.3**
JTJ	**Tarama**	**2.75**	**80**	S	**Sn**	**20 51 51.7**	**+1.9**

TAP 22 20:52:13.6, 24.22N×121.72E, h14km, ML1.6, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.09**	**12**	*e*P	Pg	20 52 16.6	-0.1
	baz=17						
ETL	**Fush Village**	**0.11**	**235**	*i*P	Pg	20 52 16.9	0.0
	baz=234						
ETL				*i*S	Sg	20 52 19.6	+0.5
	baz=234						
NACB	**Ninganchiao**	**0.12**	**247**	*i*P	Pg	20 52 17.1	+0.1
	baz=247						
TWD	**Chiawan**	**0.18**	**219**	*i*P	Pg	20 52 17.9	0.0
	baz=217						
ENA	**Nanau**	**0.21**	**5**	*i*P	Pg	20 52 18.4	+0.1
	baz=7.0						
ENA				S	Sg	20 52 22.1	+0.6
	baz=7.0						
ETLH	**Xiulin Townshi**	**0.22**	**266**	*i*P	Pb	20 52 19.1	-0.4
	baz=266						
ETLH				*e*S	Sb	20 52 22.7	-0.7
	baz=266						
EWUT	**Wuta**	**0.23**	**13**	*i*P	Pg	20 52 18.6	0.0
	baz=14						
EWUT				*i*S	Sg	20 52 22.3	+0.3
	baz=14						
ETM	**Tongmen**	**0.33**	**219**	*e*P	Pb	20 52 21.2	-0.1
	baz=219						
LATG	**Datong**	**0.36**	**331**	P	Pb	20 52 21.9	0.0
	baz=330						
NNSB	**Datong**	**0.37**	**304**	*e*P	Pb	20 52 22.3	+0.2
	baz=304						
TEYL	**Yanliau Villag**	**0.37**	**198**	*e*P	Pg	20 52 20.8	-0.3
	baz=199						
TWC	**Suao**	**0.40**	**17**	*e*P	Pg	20 52 22.1	+0.4
	baz=18						
TWC				*e*S	Sb	20 52 28.0	-0.6
	baz=18						
NDS	**Dongshan**	**0.41**	**359**	*e*P	Pb	20 52 22.6	-0.1
	baz=360						
NDS				*e*S	Sb	20 52 28.4	-0.4
	baz=360						
NDT	**Datong Townshi**	**0.42**	**334**	*e*P	Pb	20 52 23.2	+0.3
	baz=333						
NDT				*e*S	Sb	20 52 29.7	+0.4
	baz=333						
WHF	**Hehuan Shan**	**0.42**	**260**	*e*P	Pb	20 52 23.6	+0.5
	baz=259						
WHF				*e*S	Sb	20 52 30.5	+0.9
	baz=259						

TAP 22 20:52:16.2, 24.21N×121.74E, h13km±1km, ML1.6, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.10**	**358**	*e*P	Pg	20 52 19.1	0.0
	baz=3.0						
EHP				*e*S	Sg	20 52 21.6	+0.3
	baz=3.0						
ETL	**Fush Village**	**0.12**	**245**	S	Sg	20 52 22.3	+0.5
	baz=245						
NACB	**Ninganchiao**	**0.14**	**255**	*i*P	Pg	20 52 19.8	+0.1
	baz=255						
NACB				*e*S	Sg	20 52 22.7	+0.5
	baz=255						
NACB	**Ninganchiao**	**0.14**	**255**	S	Pg	20 52 19.9	+0.2
	baz=247						
TWD	**Chiawan**	**0.19**	**226**	*e*S	Sg	20 52 23.9	+0.6
	baz=225						
ENA	**Nanau**	**0.22**	**359**	*i*P	Pg	20 52 21.1	+0.1
	baz=1.0						
ENA				S	Sg	20 52 24.6	+0.5
	baz=1.0						
EWUT	**Wuta**	**0.23**	**8**	*i*P	Pg	20 52 21.2	0.0
	baz=8.0						
EWUT				S	Sg	20 52 24.9	+0.3
	baz=8.0						
ETLH	**Xiulin Townshi**	**0.24**	**269**	*e*P	Pg	20 52 21.2	-0.2
	baz=269						
LATG	**Datong**	**0.38**	**328**	*e*S	Sg	20 52 27.5	-1.5
	baz=328						

IDC 22 20:56:58.2±6.5, 17.96S×67.42W, h106km±78km, mb3.3/1, mbtmp3.7/1, MS3.6/1, Error ellipse: s-maj=189.6km s-min=71.5km az=74.0, Central Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**1.79**	**338**	P	Pn	20 57 28.9	-0.1
	2.2nm,0.3s,baz=210,slow=9.1,SNR=21						
LPAZ				S	Sn	20 57 52.6	+0.3
	1.6nm,0.5s,baz=126,slow=24,SNR=7.4						
PLCA	**Paso Flores**	**22.86**	**186**	LR	LR	21 12 30.2	
	comp=Z,141nm,19.1s,baz=324,slow=41						
TORD	**Torodi Ar. Bea**	**74.85**	**71**	P	P	21 08 27.8	+0.1
	0.3nm,0.5s,baz=254,slow=5.4,SNR=5.8						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**141.94**	**34**	PKP	PKPdf	21 16 17.2	-0.5
	0.8nm,0.8s,baz=318,slow=1.9,SNR=5.4						

AZER ***22*** *21:05:37.5±1.7, 33.56N×46.40E, h10km, Error ellipse: s-maj=18.9km s-min=14.0km az=153.0*
IDC ***22*** *21:05:41.1±1.1, 34.87N×45.27E, h0km, mb3.6/8, mbtmp3.7/13, ML3.7/5, MS3.3/2, Error ellipse: s-maj=24.7km s-min=15.0km az=166.0*
NEIC ***22*** *21:05:43.1±2.0, 34.78N±0.02×45.2E±0.1, h10km±2km, Error ellipse: s-maj=17.5km s-min=3.0km az=102.0*
TEH ***22*** *21:05:43.3, 34.82N×45.30E, h12km, ML3.9*
ISN ***22*** *21:05:43.4±1.0, 34.90N×45.38E, h11km±31km, ML3.9*
GII ***22*** *21:06:40.9±0.0, 34.74N×44.84E, h1km*

ISC 22 21:05:43.4±0.5, 34.81N±0.03×45.29E±0.03, h10km, n179, σ2.9 24/171, mb4.0/30, 12C-3D, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDHR	**Dehrash**	**0.91**	**97**	*e*Pg	**Pg**	**21 06 00.4**	**-0.5**
IDHR				*e*Sg	**Sg**	**21 06 13.2**	**+0.4**
IDHR				*e*		21 06 19.2	
	comp=Z,44μm,0.6s						
IKRK	**Kirkuk**	**0.98**	**307**	*e*Pg	**Pn**	**21 06 03.0**	**-0.2**
IKRK				*e*Sg	**Sn**	**21 06 16.0**	**-1.1**
IKRK				AML	AML	21 06 18.8	
	comp=E,10μm,0.4s						
IKRK				AML	AML	21 06 19.3	
	comp=N,16μm,0.7s						
IGHG	**Ghaleghazi**	**1.16**	**114**	*e*		21 06 50.7	
	comp=Z,25μm,1.1s						
IGHG				*e*Pg	**Pb**	**21 06 06.0**	**+0.4**
ILIN	**Lien**	**1.38**	**85**	*e*		21 06 32.9	
	comp=Z,13μm,0.7s						
ILIN				*e*Pg	**Pn**	**21 06 09.5**	**+0.6**
KCHF	**Cheshme Sefid,**	**1.54**	**110**	*e*Pg	**Pn**	**21 06 12.3**	**+1.2**
KCHF				*e*		21 06 37.9	
	comp=Z,16μm,0.3s						
KER	**Kermanshah**	**1.58**	**105**	*e*Pg	**Pn**	**21 06 13.4**	**+1.9**
BHD	**Baghdad**	**1.71**	**206**	*e*Pn	**Pg**	**21 06 16.0**	**-0.2**
BHD				*e*Sn	**Sg**	**21 06 41.0**	**+2.6**
BHD				AML	AML	21 06 53.6	
	comp=E,2μm,0.3s						
IBDR	**Badra**	**1.78**	**162**	*e*Pn	**Pb**	**21 06 17.0**	**+1.0**
IBDR				*e*Sn	**Sg**	**21 06 41.0**	**+0.5**
IBDR				AML	AML	21 06 46.4	
	comp=E,535nm,0.3s						
IBDR				AML	AML	21 06 59.2	
	comp=N,370nm,0.8s						
IKOM	**Komasi**	**1.94**	**108**	*e*Pn	**Pn**	**21 06 18.6**	**+2.0**
IKOM				*e*		21 06 58.8	
	comp=Z,10μm,0.5s						
MAHB	**Mahabad**	**1.98**	**10**	*e*Pn	**Pn**	**21 06 18.4**	**+1.3**
IBZA	**Bozab**	**2.15**	**98**	*e*Pn	**Pn**	**21 06 20.5**	**+1.0**
IBZA				*e*		21 07 00.4	
	comp=Z,6μm,0.8s						
IKFM	**Kafar-mosalman**	**2.48**	**120**	*e*Pn	**Pn**	**21 06 25.7**	**+1.9**
IKFM				*e*		21 07 13.7	
	comp=Z,6μm,0.6s						
IDOB	**Doab**	**2.60**	**112**	*e*Pn	**Pn**	**21 06 27.1**	**+1.4**
IDOB				*e*		21 07 24.4	
	comp=Z,3μm,0.6s						
DHL1	**Dehloran**	**2.69**	**141**	*e*Pn	**Pn**	**21 06 28.0**	**+1.2**
HSAM	**Samen**	**2.80**	**101**	*e*Pn	**Pn**	**21 06 30.2**	**+1.7**
IAZR	**Azarshahr**	**2.92**	**11**	*e*Pn	**Pn**	**21 06 31.9**	**+1.8**
IHSH	**Hashtrud**	**2.96**	**32**	*e*Pn	**Pn**	**21 06 32.1**	**+1.3**
IHSH				*e*		21 06 46.9	
	comp=Z,5μm,0.6s						
RAFI	**Al-Rafai**	**3.15**	**167**	*e*Pn	**Pn**	**21 06 36.0**	**+2.9**
RAFI				*e*Sn	**Sb**	**21 07 15.0**	**-3.0**
RAFI				AML	AML	21 07 44.6	
	comp=E,240nm,0.3s						
IBST	**Bostanabad**	**3.16**	**24**	*e*Pn	**Pn**	**21 06 34.7**	**+1.2**
IBST				*e*		21 07 25.9	
	comp=Z,3μm,0.6s						
HAGD	**Aghdareh**	**3.17**	**89**	*e*Pn	**Pn**	**21 06 35.7**	**+2.2**
HAGD				*e*		21 07 42.0	
	comp=Z,2μm,1.1s						
ZNJK	**Zanjan**	**3.33**	**55**	*e*Pn	**Pn**	**21 06 38.0**	**+2.3**
ISHB	**Shabestar**	**3.48**	**4**	*e*Pn	**Pn**	**21 06 38.2**	**+0.4**
ITBZ	**Tabriz**	**3.49**	**11**	*e*Pn	**Pn**	**21 06 39.1**	**+1.2**
ISRB	**Sarab**	**3.57**	**32**	*e*Pn	**Pn**	**21 06 40.2**	**+1.2**
ISRB				*e*		21 07 00.4	
	comp=Z,3μm,0.7s						
QABG	**Abgarm-Qazvin**	**3.62**	**74**	*e*Pn	**Pn**	**21 06 40.6**	**+0.8**
IHRS	**Heris**	**3.78**	**21**	*e*Pn	**Pn**	**21 06 43.0**	**+1.1**
IHRS				*e*		21 07 59.0	
	comp=Z,3μm,0.8s						
IRAZ	**Razeghan**	**3.85**	**80**	*e*Pn	**Pn**	**21 06 44.3**	**+1.4**
TVRZ	**Varzaqan**	**3.85**	**16**	*e*Pn	**Pn**	**21 06 44.8**	**+1.9**
ASAO	**Ashtian**	**3.91**	**92**	*e*Pn	**Pn**	**21 06 46.7**	**+2.9**
IMRD	**Marand**	**3.91**	**5**	*e*Pn	**Pn**	**21 06 44.9**	**+1.2**
GEVA	**Gevas**	**3.93**	**333**	Pn	**Pn**	**21 06 46.0**	**+2.1**
KHMZ	**Khomeyn**	**4.01**	**104**	*e*Pn	**Pn**	**21 06 48.1**	**+3.0**
ORD	**Ordubad**	**4.15**	**8**	P	**Pb**	**21 06 56.3**	**-0.3**
	SNR=54						
ORD				S	**Sg**	**21 07 58.7**	**+2.1**
NAX	**Nakhchivan**	**4.36**	**2**	P	**Pb**	**21 07 01.1**	**+1.0**
	SNR=24						
NAX				S	**Sg**	**21 08 07.5**	**+4.0**
MARD	**Mardin**	**4.43**	**306**		**Pn**	**21 06 50.2**	**-0.5**
GRMI	**Germi**	**4.50**	**27**	*e*Pn	**Pn**	**21 06 53.6**	**+1.8**
LRK	**Lerik**	**4.54**	**32**	P	**Pn**	**21 06 55.3**	**+2.9**
	SNR=18						
LRK				S	**Sb**	**21 08 00.1**	**+1.9**
GURO	**Guroymak-BITLI**	**4.56**	**326**		**Pn**	**21 06 53.5**	**+0.9**
MAKU	**Maku**	**4.56**	**354**	*e*Pn	**Pn**	**21 06 53.0**	**+0.3**
SBZ	**Shahbuz**	**4.58**	**3**	P	**Pb**	**21 07 03.5**	**-0.5**
	SNR=7.2						
SBZ				S	**Sg**	**21 08 12.4**	**+1.8**
AMIS	**Naft Sefid**	**4.59**	**132**	*e*Pn	**Pn**	**21 06 54.0**	**+1.2**
QALM	**Alamut, Qazvin**	**4.65**	**68**	*e*Pn	**Pn**	**21 06 54.9**	**+0.9**
ASTR	**Astara**	**4.68**	**36**	P	**Pn**	**21 06 57.0**	**+2.9**
	SNR=7.3						
ASTR				S	**Sb**	**21 08 01.7**	**-0.3**
YRD	**Yardimli**	**4.73**	**29**	P	**Pn**	**21 06 59.5**	**+4.5**
	SNR=

	SNR=10								
BRDA					S		**Sb**	**21 08 34.0**	**+4.2**
KRSH	**Karshahi**	**5.72**	**96**	*e*Pn	**Pn**			**21 07 10.9**	**+2.3**
ISFB	**Sefidab**	**5.75**	**93**	*e*Pn	**Pn**			**21 07 09.8**	**+0.9**
ZRD	**Zardab**	**5.78**	**18**	S	**Sb**			**21 08 35.8**	**+2.2**
GANJ	**Ganja**	**5.88**	**8**	P	Pb			21 07 21.6	-4.4
	SNR=8.8								
GANJ					S		**Sb**	**21 08 43.1**	**+6.5**
GDB	**GEDABAY**	**5.91**	**3**	P	Pb			21 07 22.8	-3.9
	SNR=3.0								
GDB					S		**Sb**	**21 08 44.5**	**+6.9**
ALIB	**Äli-Bayra**	**5.93**	**29**	S	**Sb**			**21 08 34.2**	**-3.7**
KARS	**Kars**	**6.07**	**344**	Pn	**Pn**			**21 07 11.5**	**-1.8**
IGAR	**Gharneh**	**6.12**	**111**	*e*Pn	**Pn**			**21 07 15.2**	**+1.1**
IZEF	**Zefreh**	**6.16**	**106**	*e*Pn	**Pn**			**21 07 16.7**	**+2.0**
IFIR	**Firoozkooh**	**6.17**	**80**	*e*Pn	**Pn**			**21 07 16.6**	**+1.8**
QZX	**Qazax, Azerbai**	**6.24**	**1**	P	Pb			21 07 27.6	-4.5
	SNR=6.7								
QZX					S		**Sb**	**21 08 54.2**	**+7.4**
ILAS	**Lasjerd**	**6.31**	**83**	*e*Pn	**Pn**			**21 07 18.7**	**+1.9**
GBS	**Qobustan**	**6.41**	**26**	S	**Sb**			**21 08 47.4**	**-4.3**
QBL	**Gabala**	**6.45**	**17**	P	Pn			21 07 27.4	+8.9
	SNR=6.6								
KLNJ	**Kolanjah**	**6.51**	**124**	*e*Pn	**Pn**			**21 07 21.6**	**+2.0**
PQL	**Pirkuli**	**6.52**	**23**	P	Pn			21 07 26.9	+7.5
	SNR=4.3								
PQL					S		**Sb**	**21 08 51.9**	**-3.0**
SEKA	**Sheki**	**6.56**	**13**	P	Pn			21 07 29.5	+9.4
	SNR=2.8								
SEKA					S		**Sb**	**21 08 57.7**	**+1.5**
NASN	**Na'in**	**6.57**	**106**	*e*Pn	**Pn**			**21 07 23.6**	**+3.2**
GOBA	**Gobu**	**6.60**	**31**	S	Sn			21 08 49.1	+13
IRAM	**Ramesheh**	**6.65**	**115**	*e*Pn	**Pn**			**21 07 22.8**	**+1.5**
ATGJ	**Altiaghaj**	**6.70**	**24**	P	Pn			21 07 28.9	+7.0
	SNR=2.7								
ATGJ					S		**Sb**	**21 08 55.3**	**-4.7**
XNQ	**Khinaliq**	**6.74**	**19**	P	Pn			21 07 30.8	+8.2
	SNR=6.0								
XNQ					S		**Sb**	**21 08 59.3**	**-2.0**
SIZA	**Siyzn**	**6.88**	**23**	P	Pn			21 07 31.4	+7.1
	SNR=3.0								
SIZA					S		**Sb**	**21 09 00.5**	**-4.7**
QUBA	**Quba, Azerbaij**	**7.01**	**20**	S	**Sb**			**21 09 05.4**	**-3.5**
QSAR	**Qusar**	**7.09**	**18**	P	Pn			21 07 35.9	+8.7
	SNR=4.4								
ASF	**Jabal al Asfar**	**7.49**	**252**	Pn	**Pn**			**21 07 33.5**	**+0.8**
	comp=Z,1.1nm,0.3s,baz=65,slow=3.7,SNR=10								
ASF				Lg	Lg			21 09 36.9	
	comp=Z,2.1nm,0.3s,baz=302,slow=8.2,SNR=4.6								
	comp=Z,2.7nm,0.4s								
AHBU	**AHRAM**	**7.82**	**138**	*e*Pn	**Pn**			**21 07 41.0**	**+3.7**
ONI	**Oni**	**7.90**	**350**	Pn	**Pn**			**21 07 38.1**	**-0.3**
NATI	**Neve Ativ**	**8.08**	**262**	Pn	Pg			21 08 36.2	+18
YZKH	**Yazd**	**8.13**	**105**	*e*Pn	**Pn**			**21 07 44.5**	**+3.0**
GEM	**Giv'at Ha'Em**	**8.15**	**261**	Pn	Pg			21 08 36.1	+17
GEM					Sn		**Sg**	**21 10 04.9**	**-0.1**
MMA0B	**Mount Meron ar**	**8.41**	**261**	Sn	**Sg**			**21 10 11.9**	**-1.4**
MMAI	**Mount Meron Ar**	**8.41**	**261**	Pn	**Pn**			**21 07 46.3**	**+0.9**
	comp=Z,0.7nm,0.3s,baz=81,slow=16,SNR=8.2								
MMAI				Lg	Lg			21 10 08.2	
	comp=Z,3.1nm,0.3s,baz=95,slow=29,SNR=6.2								
	comp=Z,1.9nm,0.5s								
HMDT	**Nahal Hemdat**	**8.54**	**255**	Pn	Pg			21 08 40.5	+14
HMDT				Sn	**Sg**			**21 10 13.4**	**-4.1**
MMLI	**Mount Malkishu**	**8.56**	**257**	Pn	Pg			21 08 41.4	+14
MMLI				Sn	**Sg**			**21 10 15.5**	**-2.7**
BNN	**Bunyan**	**8.58**	**301**		**Pn**			**21 07 47.9**	**+0.2**
BLGI	**Bet Lehem HaGe**	**8.66**	**259**	Pn	Pg			21 08 44.0	+15
BLGI				Sn	**Sg**			**21 10 18.6**	**-2.6**
DSI	**Dead Sea**	**8.91**	**252**	Pn	Pg			21 08 44.8	+11
KBZ	**Khabaz**	**9.10**	**349**	Pn	Pn			21 07 59.6	+4.9
	comp=Z,0.2nm,0.3s,baz=155,slow=13,SNR=3.6								
MRVT	**Maraveh tapeh**	**9.18**	**69**	*e*Pn	**Pn**			**21 07 58.5**	**+2.6**
YTIR	**Yattir**	**9.20**	**251**	Pn	Pg			21 08 49.7	
YTIR				Sn	Sg			21 10 30.2	
KIV	**Kislovodsk**	**9.35**	**348**	Pn	**Pn**			**21 07 59.8**	**+1.5**
ZFRI	**Zfri**	**9.52**	**246**	Pn	Pg			21 08 53.8	
TPRV	**Parvadeh(Tabas**	**9.64**	**97**	*e*Pn	**Pn**			**21 08 03.9**	**+1.7**
PRNI	**Paran**	**9.75**	**246**	Pn	Pg			21 08 57.9	
HRFI	**Mount Harif**	**9.88**	**244**	Pn	Pg			21 08 59.5	
HRFI				Sn	Sg			21 10 49.0	
KZIT	**Kziot**	**9.95**	**250**	Pn	Pg			21 09 01.5	
KZIT				Sn	Sg			21 10 49.0	
KRMI	**Paran Flat**	**10.07**	**245**	Pn	Pg			21 09 04.1	
EIL	**Elat**	**10.14**	**243**	Pn	Pg			21 09 03.0	
BRTR	**Keskin Array B**	**10.50**	**301**	Pn	**Pn**			**21 08 18.5**	**+4.4**
	comp=Z,0.1nm,0.3s,baz=118,slow=16,SNR=4.6								
BRTR	**Keskin Array B**	**10.50**	**301**	Pn	**Pn**			**21 08 13.5**	**-0.6**
WSAR	**Wadi Sarin**	**16.38**	**131**	Pn	**Pn**			**21 09 31.4**	**-2.1**
	comp=Z,0.3nm,0.3s,baz=328,slow=12,SNR=1.6								
	comp=Z,4.8nm,0.7s								
CFR	**Carcaliu**	**16.70**	**313**	⇑P	**Pn**			**21 09 38.7**	**+1.3**
VRI	**Vrincioaia**	**17.91**	**314**	⇑P	**P**			**21 09 56.3**	**+3.2**
PLOR	**Plostina**	**17.94**	**314**	⇑P	**P**			**21 09 55.8**	**+2.3**
ABKAR	**Akbulak array**	**18.03**	**32**	P	**Pn**			**21 09 53.1**	**-0.8**
AKTO	**Aktyubinsk**	**18.17**	**27**	P	**Pn**			**21 09 54.2**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=209,slow=12,SNR=7.2								
	comp=Z,1.9nm,0.7s								
MLR	**Muntele Rosu**	**18.19**	**312**	⇑P	**P**			**21 09 58.8**	**+2.5**
TESR	**Tescani**	**18.30**	**315**	⇓P	**Pn**			**21 09 56.8**	**-0.4**
SORM	**Soroca**	**18.34**	**322**	⇑P	**Pn**			**21 09 56.4**	**-1.3**
DOPR	**Dopca**	**18.76**	**312**	⇑P	**P**			**21 10 01.7**	**-0.8**
BIZ	**Bicaz**	**18.84**	**316**	⇑P	**Pn**			**21 10 08.8**	**+4.9**
ARR	**Arges**	**18.95**	**310**	⇑P	**Pn**			**21 10 07.4**	**+2.2**
ITM	**Ithomi**	**19.05**	**284**	P	**P**			**21 10 03.7**	**-2.0**
ITM				IAmb	IAmb			21 10 05.8	
	comp=Z,19nm,1.2s								
AKASG	**Malin Array Be**	**19.71**	**329**	P	**P**			**21 10 11.9**	**-1.0**
	comp=Z,0.4nm,0.3s,baz=133,slow=11,SNR=9.0								
	comp=Z,0.7nm,0.5s								
BURAR	**Bucovina Array**	**19.72**	**317**	⇑P	**P**			**21 10 13.2**	**+0.2**
BUR08	**Bucovina Ar. S**	**19.75**	**317**	P	**P**			**21 10 11.9**	**-1.4**
FNA	**Florina**	**19.79**	**295**	P	**P**			**21 10 13.6**	**-0.3**
FNA				IAmb	IAmb			21 10 15.3	
	comp=Z,7.4nm,0.7s								
HERR	**Herculane**	**20.18**	**307**	⇓P	**P**			**21 10 18.6**	**+0.6**
BOVS	**Bovan**	**20.23**	**303**	⇑P	**P**			**21 10 19.3**	**+0.7**
GAR	**Garm**	**20.42**	**71**	P	**P**			**21 10 21.7**	**+0.9**
GAR				IAmb	IAmb			21 10 37.7	
	comp=Z,9.5nm,0.9s								
MDVR	**Moldovita**	**20.61**	**306**	⇑P	**P**			**21 10 23.3**	**+0.6**
KK31	**Karatay Array**	**21.23**	**60**	P	**P**			**21 10 30.1**	**+0.7**
KKAR	**Karatay Array**	**21.23**	**60**	P	**P**			**21 10 29.2**	**-0.2**
DIVS	**Divibare**	**21.56**	**303**	P	**P**			**21 10 31.9**	**-1.0**
DIVS				IAmb	IAmb			21 10 54.1	
	comp=Z,11nm,1.1s								
DRK	**Karamyk**	**21.61**	**70**	P	**P**			**21 10 34.3**	**+0.5**
DRK				IAmb	IAmb			21 10 44.6	
	comp=Z,11nm,0.9s								
KOLS	**Kolonicke sedl**	**22.09**	**317**	*e*P	**P**			**21 10 41.8**	**+3.2**
KWP	**Kalwaria Pacla**	**22.22**	**319**	P	**P**			**21 10 39.8**	**-0.2**
MORH	**Mrgy, Hungar**	**23.13**	**308**	⇑P	**P**			**21 10 48.2**	**-1.4**
ARU	**Arti**	**23.45**	**19**	P	**P**			**21 10 51.7**	**-1.0**
	comp=Z,1.3nm,0.5s,baz=159,slow=18,SNR=3.6								
	comp=Z,1.3nm,0.5s								
ARU	**Arti**	**23.45**	**19**	P	**P**			**21 10 52.5**	**-0.2**
ARU				IAmb	IAmb			21 11 13.8	
	comp=Z,4.1nm,0.8s								
NACGM	**Naroch**	**23.86**	**333**	⇓*e*P	P			21 10 43.2	-13
	baz=139								
OJC	**Ojcow**	**24.13**	**317**	P	**P**			**21 10 57.6**	**-1.7**
OJC				IAmb	IAmb			21 11 11.3	
	comp=Z,4.6nm,1.0s								
SUW	**Suwalki**	**24.68**	**328**	P	**P**			**21 11 02.8**	**-1.4**
RONA	**Rosalia, Austr**	**25.15**	**310**	*e*P	**P**			**21 11 08.6**	**-0.1**
	comp=Z,3.2nm,1.0s								
MORC	**Moravsky Berou**	**25.21**	**315**	P	**P**			**21 11 07.6**	**-1.6**
MORC				IAmb	IAmb			21 11 20.5	
	comp=Z,11nm,1.5s								
PABE	**Paberze**	**25.39**	**331**	P	**P**			**21 11 09.5**	**-1.1**
BRVK	**Borovoye**	**25.41**	**36**	P	**P**			**21 11 11.1**	**+0.2**
BRVK				IAmb	IAmb			21 11 31.4	
	comp=Z,3.7nm,0.9s								
CONA	**Conrad Observa**	**25.51**	**310**	*e*P	**P**			**21 11 12.3**	**+0.4**
	comp=Z,6.8nm,1.2s								
SOKA	**Soboth**	**25.65**	**307**	*e*P	**P**			**21 11 13.5**	**+0.3**
	comp=Z,4.9nm,1.1s								
OBKA	**Obir**	**25.92**	**306**	*e*P	**P**			**21 11 15.9**	**+0.1**
	comp=Z,7.5nm,1.2s								
OSTC	**Ostas**	**26.32**	**316**	*e*P	P			21 10 54.5	-25
CHVC	**Chvalec**	**26.42**	**316**	*e*P	**P**			**21 11 20.1**	**0.0**
MOA	**Molln**	**26.50**	**309**	*e*P	**P**			**21 11 20.2**	**-0.7**
	comp=Z,4.4nm,1.2s								
BIOA	**Bad Ischl, Aus**	**26.85**	**308**	*e*P	**P**			**21 11 24.0**	**0.0**
	comp=Z,5.1nm,1.2s								
KBA	**Koelnbreinsper**	**26.87**	**307**	*e*P	**P**			**21 11 25.7**	**+1.3**
	comp=Z,4.2nm,1.1s								
GERES	**GERESS Array B**	**27.17**	**311**	P	**P**			**21 11 25.4**	**-1.7**
	comp=Z,0.4nm,0.8s,baz=134,slow=4.2,SNR=2.1								
	comp=Z,0.4nm,0.8s								
KHC	**Kasperske Hory**	**27.34**	**311**	*e*P	P			21 11 39.9	+11
WTTA	**Wattenberg**	**28.05**	**307**	*e*P	**P**			**21 11 35.1**	**+0.1**
	comp=Z,3.0nm,0.8s								
WATA	**Walderalm**	**28.10**	**307**	*e*P	**P**			**21 11 36.5**	**+1.1**
	comp=Z,3.4nm,0.9s								
SQTA	**Sankt Quirin**	**28.32**	**306**	*e*P	**P**			**21 11 37.2**	**-0.1**
	comp=Z,2.3nm,0.6s								
MOTA	**Moosalm**	**28.42**	**307**	*e*P	**P**			**21 11 36.8**	**-1.5**
	comp=Z,2.3nm,0.7s								
FETA	**Feichten**	**28.59**	**306**	*e*P	**P**			**21 11 40.3**	**+0.5**
	comp=Z,2.3nm,0.9s								
RETA	**Reutte**	**28.68**	**307**	*e*P	**P**			**21 11 38.4**	**-2.0**
	comp=Z,0.6nm,0.2s								
DAVA	**Damuels**	**29.21**	**306**	*e*P	**P**			**21 11 45.9**	**+0.6**
	comp=Z,2.0nm,0.5s								
FIA1	**FINESS Array S**	**29.34**	**341**	P	**P**			**21 11 47.0**	**+1.0**
FINES	**FINESS Array B**	**29.34**	**341**	P	**P**			**21 11 44.7**	**-1.4**
	comp=Z,0.9nm,0.6s,baz=147,slow=11,SNR=7.0								
	comp=Z,0.9nm,0.6s								
MK31	**Makanchi Array**	**30.19**	**55**	P	**P**			**21 11 53.3**	**-0.5**
MK31				IAmb	IAmb			21 12 00.9	
	comp=Z,1.8nm,0.8s								
MKAR	**Makanchi Array**	**30.19**	**55**	P	**P**			**21 11 54.0**	**+0.3**
	comp=Z,1.7nm,0.9s,baz=258,slow=5.8,SNR=12								
	comp=Z,1.7nm,0.9s								
MKAR	**Makanchi Array**	**30.19**	**55**	P	**P**			**21 11 53.6**	**-0.1**
BNI	**Bardonecchia**	**31.06**	**301**	P	**P**			**21 12 00.2**	**-1.5**
BNI				IAmb	IAmb			21 12 17.3	
	comp=Z,6.9nm,1.1s								
NB2	**NORSAR Subarra**	**34.09**	**331**	P	**P**			**21 12 26.3**	**-1.6**
	comp=Z,1.7nm,0.8s,baz=126,slow=9.3								
NOA	**NORSAR Array B**	**34.09**	**331**	P	**P**			**21 12 26.4**	**-1.6**
	comp=Z,0.6nm,0.7s,baz=124,slow=8.8,SNR=3.3								
NOA				LR	LR			21 27 27.0	
	comp=Z,38nm,18.8s,baz=190,slow=38								
	comp=Z,0.6nm,0.7s								
KMBO	**Kilima Mbogo**	**36.53**	**194**	LR	LR			21 28 44.2	
	comp=Z,48nm,18.8s,baz=215,slow=38								
GTA	**Gaotai**	**43.17**	**67**	*e*P					
GTA				pP	sP			21 13 54.8	+5.8
GTA				sP	pP			21 13 58.5	+11
GTA				pmax	pmax				
	comp=Z,2.0nm,1.1s								
TORD	**Torodi Ar. Bea**	**44.85**	**252**	P	**P**			**21 13 57.0**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=49,slow=9.8,SNR=2.5								
	comp=Z,0.2nm,0.3s								
CMAR	**Chiang Mai Arr**	**50.08**	**95**	P	**P**			**21 14 38.1**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=296,slow=8.7,SNR=7.7								
	comp=Z,0.5nm,0.3s								
ILAR	**Eielson Array**	**80.29**	**5**	P	**P**			**21 17 51.2**	**-2.9**
	comp=Z,0.3nm,0.8s,baz=345,slow=6.7,SNR=2.6								
	comp=Z,0.3nm,0.8s								

*AZER **22** 21:10:04.8±0.9,34.˚16N×46.˚40E,h10km, Error ellipse: s-maj=9.6km s-min=6.7km az=9.0*
*ISN **22** 21:10:06.8±0.7,34.˚93N×45.˚41E,h15km±25km,ML3.5*
*TEH **22** 21:10:08.0,34.˚86N×45.˚34E,h15km, ML3.5*

ISC 22 21:10:08.3±0.8, 34.˚88N±0.˚03×45.˚32E±0.˚03, h10km, n32, σ1s75/41, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDHR	**Dehrash**	**0.89**	**101**	*e*Pg	**Pg**	**21 10 24.6**	**-1.0**
IDHR				*e*		21 10 41.6	
	comp=Z,16μm,0.6s						
IKRK	**Kirkuk**	**0.96**	**303**	*e*Pg	**Pg**	**21 10 25.7**	**-1.1**
IKRK				*e*Sg	**Sg**	**21 10 39.0**	**-0.3**
IKRK				AML	AML	21 10 41.5	
	comp=E,2μm,0.7s						
IKRK				AML	AML	21 10 41.9	
	comp=N,3μm,0.4s						
IGHG	**Ghaleghazi**	**1.17**	**118**	*e*Pg	**Pg**	**21 10 30.4**	**-0.4**
ILIN	**Lien**	**1.35**	**88**	*e*Pg	**Pn**	**21 10 32.9**	**-0.6**
ILIN				*e*Sg	**Sg**	**21 10 52.5**	**+0.7**
KCHF	**Cheshme Sefid,**	**1.54**	**113**	*e*Pg	**Pn**	**21 10 36.3**	**+0.3**
KCHF				*e*		21 11 01.0	
	comp=Z,5μm,0.5s						
KER	**Kermanshah**	**1.57**	**108**	*e*Pg	**Pn**	**21 10 37.1**	**+0.7**
BHD	**Baghdad**	**1.79**	**206**	*e*Pn	**Pn**	**21 10 40.0**	**+0.8**
BHD				*e*Sn	**Sb**	**21 11 04.0**	**+0.4**
BHD				AML	AML	21 11 05.5	
	comp=E,867nm,0.5s						
IBDR	**Badra**	**1.84**	**164**	*e*Pn	**Pn**	**21 10 40.0**	**+0.1**
IBDR				*e*Sn	**Sn**	**21 11 04.0**	**+0.8**
IBDR				AML	AML	21 11 15.8	
	comp=N,155nm,0.3s						
IBDR				AML	AML	21 11 22.2	
	comp=E,268nm,0.5s						
MAHB	**Mahabad**	**1.91**	**9**	*e*Pn	**Pn**	**21 10 41.3**	**+0.2**
IKOM	**Komasi**	**1.94**	**111**	*e*Pn	**Pn**	**21 10 42.3**	**+0.8**
IKOM				*e*		21 11 21.7	
	comp=Z,5μm,0.8s						
IBZA	**Bozab**	**2.13**	**100**	*e*Pn	**Pn**	**21 10 45.6**	**+1.3**
IBZA				*e*		21 11 19.2	
	comp=Z,2μm,0.5s						
IKFM	**Kafar-mosalman**	**2.49**	**122**	*e*Pn	**Pn**	**21 10 49.4**	**+0.5**
IKFM				*e*		21 11 49.3	
	comp=Z,2μm,0.9s						
HSAM	**Samen**	**2.79**	**103**	*e*Pn	**Pn**	**21 10 54.7**	**+1.4**
IAZR	**Azarshahr**	**2.84**	**11**	*e*Pn	**Pn**	**21 10 55.3**	**+1.3**
IHSH	**Hashtrud**	**2.88**	**32**	*e*Pn	**Pn**	**21 10 55.8**	**+1.1**
IHSH				*e*		21 11 08.9	
	comp=Z,2μm,0.4s						
IBST	**Bostanabad**	**3.09**	**24**	*e*Pn	**Pn**	**21 10 58.5**	**+1.1**
IBST				*e*		21 11 49.3	
	comp=Z,1μm,0.6s						
RAFI	**Al-Rafai**	**3.22**	**168**	*e*Pn	**Pn**	**21 10 59.0**	**+0.1**
RAFI				*e*Sn	**Sn**	**21 11 38.0**	**+0.7**
RAFI				AML	AML	21 11 46.8	
	comp=E,256nm,0.5s						
ISHB	**Shabestar**	**3.41**	**4**	*e*Pn	**Pn**	**21 11 03.7**	**+2.0**
IHRS	**Heris**	**3.70**	**21**	*e*Pn	**Pn**	**21 11 08.3**	**+2.5**
IHRS				*e*		21 12 20.7	
	comp=Z,1μm,0.8s						
IMRD	**Marand**	**3.84**	**4**	*e*		21 11 25.6	
	comp=Z,1μm,0.6s						
IMRD				*e*Pn	**Pn**	**21 11 07.8**	**+0.2**
ORD	**Ordubad**	**4.08**	**7**	P	**Pb**	**21 11 20.2**	**-0.1**
	SNR=7.0						
ORD				S	**Sg**	**21 12 20.2**	**+1.0**
NAX	**Nakhchivan**	**4.29**	**2**	P	**Pb**	**21 11 25.4**	**+1.5**
NAX				S	**Sg**	**21 12 27.5**	**+1.5**
GRMI	**Germi**	**4.43**	**27**	*e*Pn	**Pn**	**21 11 17.0**	**+1.3**
LRK	**Lerik**	**4.47**	**32**	P	**Pn**	**21 11 19.1**	**+2.8**
	SNR=5.2						
LRK				S	**Sb**	**21 12 21.4**	**+0.4**
SBZ	**Shahbuz**	**4.51**	**2**	P	**Pb**	**21 11 29.3**	**+1.6**
SBZ				S	**Sg**	**21 12 31.6**	**-1.7**
ASTR	**Astara**	**4.61**	**36**	P	**Pn**	**21 11 21.5**	**+3.5**
	SNR=4.2						
ASTR				S	**Sb**	**21 12 22.0**	**-2.9**
YRD	**Yardimli**	**4.66**	**29**	P	**Pn**	**21 11 23.5**	**+4.5**
	SNR=6.9						
YRD				S	**Sb**	**21 12 25.3**	**-1.2**
HYR	**Heyderabad**	**4.84**	**356**	P	**Pb**	**21 11 33.9**	**+0.5**
GLBA	**Clilabad**	**5.00**	**29**	P	Pn	21 11 29.2	+5.8
	SNR=3.6						
GLBA				S	**Sb**	**21 12 32.0**	**-4.0**
BLQ	**Beylaqan**	**5.15**	**20**	P	Pb	21 11 33.2	-5.3
	SNR=3.1						
AGDM	**Agdam**	**5.41**	**15**	P	Pb	21 11 38.5	-4.4
	SNR=3.1						
GANJ	**Ganja**	**5.81**	**8**	P	**Pb**	**21 11 46.4**	**-3.4**

*IDC **22** 21:24:04.8±1.4,55.˚32S×27.˚16W,h0km,mb3.8/2, mbtmp3.8/2,Error ellipse: s-maj=108.1km s-min=33.2km az=103.0*
*NEIC **22** 21:24:06±1.8,55.˚5S±0.˚2×26.˚8W±0.˚1,h10km±2km, mb4.1/6,Error ellipse: s-maj=27.1km s-min=10.0km az=11.0*

ISC 22 21:24:08.0±1.1, 55.˚5S±0.˚1×26.˚9W±0.˚2, h25km, n11, σ0s96/11, mb4.0/4, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.66**	**278**	Pn	**Pn**	**21 25 30.5**	**+0.2**
SNAA	**Sanae**	**19.20**	**157**	P	**Pn**	**21 28 30.9**	**+0.2**
BELA	**Belgrano 2**	**22.65**	**184**	P	**P**	**21 29 05.2**	**-1.6**
BELA				IAmb	IAmb	21 29 23.0	
	comp=Z,3.5nm,1.1s						
QSPA	**South Pole Qui**	**34.77**	**180**	P	**P**	**21 30 56.6**	**+0.6**
SBA	**Scott Base**	**46.66**	**184**	P	**P**	**21 32 33.2**	**-0.4**
SBA				IAmb	IAmb	21 32 33.8	
	comp=Z,6.9nm,1.2s						
VNDA	**Vanda**	**47.15**	**183**	P	**P**	**21 32 39.2**	**+1.7**
	comp=Z,0.7nm,0.7s,baz=194,slow=4.5,SNR=6.6						
	comp=Z,0.7nm,0.7s						
VNDA	**Vanda**	**47.15**	**183**	P	**P**	**21 32 38.0**	**+0.5**
VNDA				IAmb	IAmb	21 32 39.6	
	comp=Z,1.4nm,0.8s						
TOA0	**Torodi Ar. Sit**	**72.49**	**29**	P	**P**	**21 35 32.1**	**-0.2**
TORD	**Torodi Ar. Bea**	**72.49**	**29**	P	**P**	**21 35 32.6**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=201,slow=6.2,SNR=10.0						
	comp=Z,1.0nm,0.6s						
TORD	**Torodi Ar. Bea**	**72.49**	**29**	P	**P**	**21 35 32.3**	**+0.1**
TORD				IAmb	IAmb	21 35 33.7	
	comp=Z,3.1nm,1.4s						
ILAR	**Eielson Array**	**149.85**	**312**	PKPbc	**PKiKP**	**21 43 54.2**	**-1.0**
	comp=Z,0.4nm,0.8s,baz=100,slow=3.7,SNR=5.1						

*JMA **22** 21:24:07.8±0.6,46.˚N×3.˚3×15.˚2E±.˚, h30km, MV4.2/14, KURILE ISLANDS REGION*

SKHL 22 21:24:09.0±0.3, 45.30N×151.90E, h38km±2km, mb4.4/3, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.85**	**270**	*e*P	Pn	21 24 51.9	+0.1
KUR				AMB	AMB	21 24 53.0	
	50nm,0.3s						
KUR				*e*S	Sn	21 25 23.8	-1.1
KUR				A	A	21 25 31.9	
	180nm,0.3s						
KUR				A	A	21 25 31.9	
	100nm,0.3s						
SHO	**Shikotan**	**3.89**	**250**	*i* P	Pn	21 25 06.5	+0.3
SHO				AMB	AMB	21 25 08.2	
	20nm,0.2s						
SHO				*i* S	Sn	21 25 49.4	-1.2
SHO				A	A	21 25 55.1	
	60nm,0.2s						
SHO				A	A	21 25 55.1	
	60nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**4.49**	**256**	*e*P	Pn	21 25 16.4	+2.0
YUK				AMB	AMB	21 25 22.2	
	50nm,0.5s						
YUK				*e*S	Sn	21 26 05.4	+0.1
YUK				A	A	21 26 19.7	
	240nm,0.6s						
YUK				A	A	21 26 19.7	
	110nm,0.6s						
NEM2	**Nemuro 2**	**4.82**	**249**	*e*P	Pn	21 25 19.3	+0.4
NEM2				*e*S	Sn	21 26 13.0	-0.5
GLVR	**Golovnino**	**4.82**	**253**	*e*P	Pn	21 25 20.4	+1.4
GLVR				*e*S	Sn	21 26 14.2	+0.7
NMR	**Nemuro--Hokkai**	**4.83**	**249**	*e*P	Pn	21 25 19.5	+0.4
NMR				*e*S	Sn	21 26 12.5	-1.2
JRA	**Rausu**	**5.03**	**257**	*e*P	Pn	21 25 24.3	+2.5
JNK	**Nakash**	**5.42**	**254**	*e*P	Pn	21 25 28.7	+1.5
JNK				*e*S	Sn	21 26 29.2	+0.9
AKK	**Akkeshi**	**5.57**	**248**	*e*P	Pn	21 25 30.0	+0.8
AKK				*e*S	Sn	21 26 32.2	+0.4
JAK	**Akkeshi**	**5.67**	**249**	*e*P	Pn	21 25 31.0	+0.4
JAK				*e*S	Sn	21 26 33.3	-1.1
JTKR	**Abashiri--Toko**

DZM Sn **Sn** 21 45 32.0 -0.4
9.3nm,0.3s,baz=287,slow=21,SNR=6.7
14nm,0.5s
DZM Mont Dzumac 4.36 193 *e*Pn **Pn** 21 44 42.6 +0.3
194nm,1.5s
NOUC Port Laguerre 4.42 194 P **Pn** 21 44 42.8 -0.3
ONTNC Ouen Toro 4.58 192 P **Pn** 21 44 45.3 -0.1
ONTNC Ouen Toro 4.58 192 P **Pn** 21 44 47.5 +2.2
OUENC Ouen Island, N 4.63 187 P **Pn** 21 44 46.2 +0.3
OUENC Ouen Island, N 4.63 187 P **Pn** 21 44 48.4 +2.4
PINNC Pines Island, 4.79 180 P **Pn** 21 44 47.3 -0.8
MSVF Nonsavu 10.06 91 P **Pn** 21 46 03.6 +2.9
MSVF Nonsavu 10.06 91 *c i*P **Pn** 21 46 04.0 +3.4
HNR Honiara 11.09 318 LR LR 21 50 03.5
comp=Z,991nm,19.2s,baz=155,slow=34
HNR Honiara 11.09 318 Pn **Pn** 21 46 13.8 -0.8
HNR Honiara 11.09 318 P **Pn** 21 46 13.8 -0.8
EIDS Eidsvold 17.01 241 **Pn** 21 47 31.6 -2.2
RAO Raoul Island 17.55 133 LR LR 21 52 24.0
comp=Z,766nm,18.2s,baz=342,slow=30
ARMA Armidale 19.14 226 **P** 21 47 57.1 -2.0
RABL Rabaul 20.21 310 P **P** 21 48 10.4 -0.3
RABL IAmb IAmb 21 48 21.2
comp=Z,162nm,1.6s
CTA Charters Tower 20.21 260 P **P** 21 48 11.3 +0.5
comp=Z,7.4nm,0.7s,baz=93,slow=11,SNR=14
CTA LR LR 21 54 54.4
comp=Z,2µm,19.9s,baz=82,slow=33
comp=Z,7.4nm,0.7s
CTAO Charters Tower 20.21 260 P **P** 21 48 09.5 -1.3
CTAO Charters Tower 20.21 260 P **P** 21 48 09.5 -1.3
CTAO pmax pmax
comp=Z,59nm,1.6s
KRVT Keravat (AS076 20.23 310 P Pn 21 48 12.4 -0.6
comp=Z,21nm,0.5s,baz=33,slow=2.8,SNR=11
comp=Z,21nm,0.5s
AFI Afiamalu 20.31 82 LR LR 21 55 00.3
comp=Z,464nm,18.5s,baz=250,slow=34
PMG Port Moresby 21.43 290 LR LR 21 55 06.3
comp=Z,2µm,18.1s,baz=118,slow=32
PMG Port Moresby 21.43 290 P **P** 21 48 23.8 -0.2
PMG Port Moresby 21.43 290 P **P** 21 48 23.8 -0.2
PMG pmax pmax
comp=Z,102nm,2.0s
URZ Urewera 22.05 159 LR LR 21 55 39.5
comp=Z,1µm,18.9s,baz=31,slow=33
BKZ Black Stump Fm 22.68 162 P **P** 21 48 35.8 -1.4
COEN Coen 23.69 276 P **P** 21 48 46.2 -1.4
COEN IAmb IAmb 21 49 09.8
comp=Z,82nm,1.8s
CAN Canberra 23.97 220 P **P** 21 48 49.5 -0.6
CAN Canberra 23.97 220 P **P** 21 48 49.5 -0.6
CAN pmax pmax
comp=Z,176nm,1.9s
RPZ Rata Peaks 26.01 174 LR LR 21 57 44.3
comp=Z,538nm,19.7s,baz=344,slow=33
STKA Stephens Creek 27.27 234 P **P** 21 49 19.9 -0.2
comp=Z,4.6nm,0.8s,baz=39,slow=9.8,SNR=7.1
STKA LR LR 21 59 36.9
comp=Z,1µm,18.1s,baz=62,slow=35
comp=Z,4.6nm,0.8s
STKA Stephens Creek 27.27 234 P **P** 21 49 19.5 -0.6
STKA Stephens Creek 27.27 234 P **P** 21 49 19.5 -0.6
STKA pmax pmax
comp=Z,21nm,1.8s
GENI Genyem 30.77 296 P **P** 21 49 55.1 +3.8
comp=Z,1µmcomp=Z,48nm,0.7s
RAR Rarotonga 31.01 102 LR LR 22 00 47.9
comp=Z,202nm,19.8s,baz=276,slow=34
WB0 Warramunga Arr 31.37 261 P P 21 49 51.5 -5.1
WB0 IAmb IAmb 21 50 25.7
comp=Z,43nm,2.0s
WRA Warramunga Arr 31.41 261 P **P** 21 49 55.4 -1.6
comp=Z,2.0nm,1.0s,baz=89,slow=8.7,SNR=7.2
WRA LR LR 22 01 44.7
comp=Z,1µm,19.6s,baz=53,slow=34
comp=Z,2.0nm,1.0s
AS31 Alice Springs 31.90 254 P **P** 21 49 58.5 -2.7
ASAR Alice Springs 31.90 254 P **P** 21 49 58.9 -2.4
ASAR Alice Springs 31.90 254 P **P** 21 49 58.9 -2.4
BBOO Buckleboo 31.96 236 P **P** 21 49 59.0 -2.6
KNRA Kununurra 37.10 267 P **P** 21 50 44.1 -2.2
KNRA IAmb IAmb 21 50 59.9
comp=Z,62nm,1.9s
FORT Forrest 37.99 243 P **P** 21 50 52.3 -1.4
FORT IAmb IAmb 21 52 09.3
comp=Z,42nm,1.0s
GUMO Guam 38.36 323 LR LR 22 05 15.4
comp=Z,385nm,19.2s,baz=136,slow=34
TBI Tubuai 40.57 105 *e*LR LR 22 02 31.9
comp=Z,805nm,28.8s
PPT Papeete 40.84 96 LR LR 22 04 31.7
comp=Z,385nm,19.9s,baz=261,slow=31
MBWA Marble Bar 45.02 258 P **P** 21 51 49.2 -2.3
MBWA IAmb IAmb 21 52 03.1
comp=Z,58nm,1.6s
LUWI Luwuk 46.97 286 P **P** 21 52 04.9 -2.0
DAV Davao City (W) 48.20 297 LR LR 22 14 50.6
comp=Z,86nm,18.2s,baz=128,slow=39
BNSI Bone 48.21 280 P **P** 21 52 17.0 +0.4
comp=Z,701nmcomp=Z,19nm,2.1s
KAPI Kappang 48.34 279 LR LR 22 12 55.4
comp=Z,198nm,20.3s,baz=105,slow=36
KAPI Kappang 48.34 279 P **P** 21 52 16.3 -1.3
KAPI Kappang 48.34 279 P **P** 21 52 16.3 -1.3
TOLI2 Tolitoli 49.66 287 P **P** 21 52 25.8 -1.9
TOLI2 IAmb IAmb 21 52 36.4
comp=Z,25nm,1.4s
JCJ Chichijima 50.94 331 LR LR 22 11 39.8
comp=Z,218nm,22.0s,baz=111,slow=33
TAOE Nuku Hiva Isla 51.58 87 *e*S **S** 22 00 05.0 +3.0
comp=Z,433nm,26.4s
TAOE *e*LR LR 22 07 35.6
comp=Z,1µm,26.9s
BBKI Banjar Baru 53.47 279 P **P** 21 52 56.1 -0.1
JOW Kunigami 58.46 318 LR LR 22 14 26.4
comp=Z,201nm,22.0s,baz=163,slow=32
VNDA Vanda 59.81 181 P **P** 21 53 41.2 +0.9
comp=Z,0.6nm,0.8s,baz=117,slow=4.5,SNR=2.7
VNDA LR LR 22 17 11.9
comp=Z,96nm,18.1s,baz=12,slow=34
VNDA Vanda 59.81 181 **P** 21 53 40.4 +0.1
VNDA IAmb IAmb 21 53 51.6
comp=Z,26nm,1.8s
VNDA Vanda 59.81 181 P **P** 21 53 40.4 +0.1
VNDA pmax pmax
comp=Z,26nm,1.8s
SBA Scott Base 60.08 180 P **P** 21 53 42.3 +0.2
SBA Scott Base 60.08 180 P **P** 21 53 42.3 +0.2
SBA pmax pmax
comp=Z,57nm,1.8s
MJAR Matsushiro Arr 60.72 333 P **P** 21 53 47.6 +0.5
MJAR Matsushiro Arr 60.72 333 P **P** 21 53 47.6 +0.5
MJAR pmax pmax
comp=Z,8.0nm,1.6s
QZH Quanzhou 63.83 310⇑ *i*P **P** 21 54 09.3 +1.2
QZH S **S** 22 02 45.1 +3.1
QZH pmax pmax
comp=Z,140nm,5.5s
QZH LR LR
comp=Z,190nm,16.6s
TJN Taejon 65.89 325⇓ *e*P **P** 21 54 18.3 -3.0
KSRS Korea Array 66.39 326 LR LR 22 22 55.4
comp=Z,141nm,18.8s,baz=140,slow=35
KSAR Wonju Array Be 66.41 326 P **P** 21 54 24.6 0.0
KSAR Wonju Array Be 66.41 326 P **P** 21 54 24.6 0.0
QIZ Qiongzhong 67.43 300 P **P** 21 54 32.6 +1.1
QIZ S **S** 22 03 27.8 +1.5
QIZ pmax pmax
comp=Z,130nm,3.2s
QIZ LR LR
comp=Z,180nm,13.9s
QIZ LR LR
comp=Z,150nm,13.7s
QIZ LR LR
comp=Z,140nm,23.5s
NJ2 Nanjing 68.03 317 *e*P **P** 21 54 33.6 -1.4
NJ2 pmax pmax
comp=Z,11nm,0.5s
YSS Yuzh-Sakhalins 68.20 342⇓ *i*P **P** 21 54 36.2 +0.5
YSS *e*S **S** 22 03 35.0 +0.6
YSS pmax pmax
comp=Z,400nm,4.4s
YSS MLR MLR
comp=Z,400nm,17.0s
TEY Ternei 68.57 337 *e*P **P** 21 54 38.7 +0.6

USRK Ussuriysk Ar. 69.71 334 P **P** 21 54 45.8 +0.6
USRK Ussuriysk Ar. 69.71 334 P **P** 21 54 45.8 +0.6
USA0B Ussuriysk Arra 69.71 334 P **P** 21 54 46.4 +1.2
USA0B Ussuriysk Arra 69.71 334 P **P** 21 54 46.4 +1.2
USA0B pmax pmax
comp=Z,67nm,2.0s
SHEM Shemya Is, Ala 70.47 4 LR LR 22 20 25.8
comp=Z,356nm,20.2s,baz=138,slow=31
MDJ Mudanjiang 71.08 332 P **P** 21 54 54.8 +1.2
MDJ IAmb IAmb 21 55 21.2
comp=Z,23nm,1.6s
PEA0B Petropavlovsk- 71.12 354 P **P** 21 54 54.0 +0.4
PEA0B Petropavlovsk- 71.12 354 P **P** 21 54 54.0 +0.4
PEA0B pmax pmax
comp=Z,107nm,1.4s
PETK Petropavlovsk- 71.12 354 P **P** 21 54 53.2 -0.4
comp=Z,1.4nm,0.5s,baz=90,slow=7.4,SNR=5.7
PETK pP **pP** 21 55 01.4 +1.8
comp=Z,14nm,0.9s,baz=152,slow=8.0,SNR=12
PETK LR LR 22 24 01.1
comp=Z,130nm,18.0s,baz=162,slow=34
comp=Z,1.4nm,0.5s
PETK Petropavlovsk- 71.12 354 P **P** 21 54 53.1 -0.5
PETK Petropavlovsk- 71.12 354 P **P** 21 54 53.1 -0.5
QSPA South Pole Qui 72.24 180 LR LR 22 21 49.0
comp=Z,192nm,21.2s,baz=27,slow=32
QSPA South Pole Qui 72.24 180 P **P** 21 55 00.0 -0.5
QSPA IAmb IAmb 21 55 25.5
comp=Z,28nm,1.3s
CN2 Changchun 72.38 329 *e*P P 21 55 06.8 +5.4
CN2 pmax pmax
comp=Z,10.0nm,0.5s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=Z,100nm,15.0s
CN2 LR LR
comp=Z,200nm,15.0s
CN2 LR LR
comp=Z,100nm,20.0s
ENH Enshi 73.48 310 P **P** 21 55 07.4 -0.9
ENH IAmb IAmb 21 55 16.4
comp=Z,12nm,1.0s
LYN LuoYang 73.79 315 *e*P **P** 21 55 08.1 -1.8
LYN PP **PP** 21 57 54.3 -0.7
LYN S **S** 22 04 41.5 +1.7
LYN SKS **SKSac** 22 05 08.5 -6.9
LYN pmax pmax
comp=Z,250nm,5.0s
LYN LR LR
comp=Z,360nm,16.0s
LYN LR LR
comp=Z,210nm,14.9s
LYN LR LR
comp=Z,270nm,17.8s
KLR Kul'dur 73.89 337 LR LR 22 24 24.9
comp=Z,143nm,20.9s,baz=156,slow=33
KLR Kul'dur 73.89 337⇓ *e*P **P** 21 55 10.2 0.0
KLR pmax pmax
comp=Z,32nm,1.8s
HNS HongShan 74.03 319⇑ P P 21 55 18.8 +7.5
HNS *e*S S 22 04 54.8 +12
HNS pmax pmax
comp=Z,12nm,1.4s
HNS LR LR
comp=N,200nm,16.7s
HNS LR LR
comp=E,250nm,15.5s
HNS LR LR
comp=Z,320nm,16.9s
NKL Nikolayevsk 74.36 344 *e*P **P** 21 55 11.5 -1.3
NKL *e* 21 55 26.1
NKL *e*S **S** 22 04 46.8 +1.3
NKL pmax pmax
comp=Z,75nm,2.3s
NKL pmax pmax
comp=Z,25nm,1.3s
NKL pmax pmax
comp=E,3.0nm,0.9s
NKL smax smax
comp=E,2.0nm,0.9s
NKL smax smax
comp=N,545nm,1.0s
BJT Baijiatuau 74.78 322 P **P** 21 55 15.9 +0.3
BJT Baijiatuau 74.78 322 P **P** 21 55 15.9 +0.3
BJT pmax pmax
comp=Z,11nm,1.1s
BJI Beijing 74.79 322 P **P** 21 55 16.4 +0.8
BJI S **S** 22 04 51.4 +0.6
BJI pmax pmax
comp=Z,3.0nm,1.1s
BJI pmax pmax
comp=Z,160nm,4.9s
BJI LR LR
comp=Z,40nm,13.4s
BJI LR LR
comp=Z,130nm,16.5s
BJI LR LR
comp=Z,130nm,11.1s
KMI Kunming 76.11 302⇓ P **P** 21 55 23.8 -0.1
KMI S **S** 22 05 10.9 +4.3
KMI pmax pmax
comp=Z,8.0nm,2.2s
KMI pmax pmax
comp=Z,130nm,4.7s
KMI LR LR
comp=Z,150nm,14.7s
KMI LR LR
comp=Z,120nm,11.6s
KMI LR LR
comp=Z,150nm,13.9s
CM31 Chiang Mai Arr 76.40 295 P **P** 21 55 25.0 -0.4
CMAR Chiang Mai Arr 76.40 295 P **P** 21 55 26.1 +0.8
comp=Z,0.7nm,0.3s,baz=133,slow=4.4,SNR=7.1
CMAR pP **PcP** 21 55 35.2 -1.9
comp=Z,2.0nm,0.8s,baz=128,slow=3.5,SNR=5.2
comp=Z,0.7nm,0.3s
CMAR Chiang Mai Arr 76.40 295 P **P** 21 55 25.0 -0.4
CMAR Chiang Mai Arr 76.40 295 *i* P **P** 21 55 27.3 +1.9
CMAR pmax pmax
comp=Z,1.0nm,0.4s
CHTO Chiang Mai 76.55 295 **P** 21 55 26.2 0.0
CHTO IAmb IAmb 21 55 37.0
comp=Z,52nm,1.9s
CHTO Chiang Mai 76.55 295 P **P** 21 55 26.2 0.0
CHTO pmax pmax
comp=Z,52nm,1.9s
XLT XiLinHaoTe 77.32 325 *e*P **P** 21 55 32.8 +2.7
XLT pmax pmax
comp=Z,10.0nm,1.0s
XLT pmax pmax
comp=Z,230nm,5.6s
PZH PanZhiHua 77.54 303 P P 21 55 39.8 +8.0
PZH pmax pmax
comp=Z,10.0nm,1.1s
PZH pmax pmax
comp=Z,190nm,6.3s
CD2 Chengdu 78.05 308 *e*P **P** 21 55 35.0 +0.6
CD2 pmax pmax
comp=Z,10.0nm,0.5s
HHC Hu-ho-hao-te 78.06 320 *e*P **P** 21 55 36.4 +2.1
HHC S **S** 22 05 30.1 +3.1
HHC pmax pmax
comp=Z,25nm,0.9s
HHC pmax pmax
comp=Z,330nm,6.5s
HHC LR LR
comp=Z,340nm,12.1s
HHC LR LR
comp=Z,330nm,14.0s
HHC LR LR
comp=Z,580nm,13.3s
MAW Mawson 79.13 202 LR LR 22 25 12.5
comp=Z,274nm,21.8s,baz=98,slow=32
MAW Mawson 79.13 202 P **P** 21 55 39.7 0.0
MAW Mawson 79.13 202 P **P** 21 55 39.7 0.0
MAW pmax pmax
comp=Z,3.0nm,1.3s
LZH Lanzhou 80.54 313 *e*P P 21 55 57.3 +9.2
LZH sP pwP 21 56 03.3 +2.0
LZH *e*S **S** 22 05 57.1 +3.4
LZH Lanzhou 80.54 313 sS sS 22 06 07.5 +3.9
LZH pmax pmax
comp=Z,12nm,1.1s
LZH pmax pmax
comp=Z,430nm,4.9s

LZH LR LR
comp=N,100nm,13.0s
LZH LR LR
comp=E,160nm,11.7s
LZH LR LR
comp=Z,310nm,13.3s
KDAK Kodiak Island 82.25 20 LR LR 22 25 08.8
comp=Z,253nm,21.3s,baz=238,slow=30
BELA Belgrano 2 83.66 175 P **P** 21 56 03.1 -0.5
ULN Ulaanbaatar 84.73 324 P **P** 21 56 11.2 +1.6
ULN IAmb IAmb 21 56 33.9
comp=Z,18nm,1.2s
ULN Ulaanbaatar 84.73 324 P **P** 21 56 11.2 +1.6
ULN pmax pmax
comp=Z,18nm,1.2s
GTA Gaotai 84.94 314 *e*P P 21 56 19.3 +8.5
GTA pP sP 21 56 22.8 +3.2
GTA sP pwP 21 56 26.1 +1.9
GTA Gaotai 84.94 314 SKS **S** 22 06 35.4 -2.9
GTA pmax pmax
comp=Z,7.0nm,0.9s
GTA pmax pmax
comp=Z,92nm,5.1s
GTA LR LR
comp=N,180nm,17.1s
GTA LR LR
comp=E,160nm,19.6s
GTA LR LR
comp=Z,160nm,20.4s
YAK Yakutsk 85.02 343 LR LR 22 34 56.9
comp=Z,155nm,18.1s,baz=90,slow=36
YAK Yakutsk 85.02 343 P **P** 21 56 11.5 +1.1
YAK Yakutsk 85.02 343 *e*P P 21 56 18.2 +7.7
YAK *e**PP pwP 21 56 28.9 +4.3
YAK *e* 22 07 25.6
YAK pmax pmax
comp=Z,51nm,1.3s
YAK pmax pmax
comp=N,16nm,1.3s
YAK pmax pmax
comp=E,9.0nm,1.5s
SONM Songino Array 85.08 324 P **P** 21 56 14.1 +2.8
comp=E,2.5nm,1.2s,baz=160,slow=4.6,SNR=3.1
SONM LR LR 22 33 08.7
comp=E,88nm,19.1s,baz=116,slow=35
SONM Songino Array 85.08 324 P **P** 21 56 11.3 -0.1
SONM IAmb IAmb 21 56 35.5
comp=Z,14nm,1.3s
SONM Songino Array 85.08 324 P **P** 21 56 11.3 -0.1
SONM pmax pmax
comp=Z,14nm,1.3s
L19K White Mountain 85.10 17 P **P** 21 56 11.5 +0.5
BILL Bilibino 85.60 360 P **P** 21 56 12.6 -0.7
BILL Bilibino 85.60 360 *de*P **P** 21 56 12.2 -1.1
BILL *e**PP **pP** 21 56 20.6 +1.2
BILL pmax pmax
comp=Z,31nm,1.3s
BILL MLR MLR
comp=Z,42nm,8.0s
J20K Nowinta River 86.91 16 P **P** 21 56 19.4 -0.4
J20K IAmb IAmb 21 56 31.4
comp=Z,24nm,1.8s
GOMU GeErMu 87.09 309 P P 21 56 29.5 +7.7
GOMU pP sP 21 56 33.3 +2.7
GOMU sP pwP 21 56 36.8 +1.6
GOMU GeErMu 87.09 309 S S 22 06 48.9 -11
GOMU pmax pmax
comp=Z,2.0nm,0.5s
GOMU pmax pmax
comp=Z,70nm,4.4s
GOMU LR LR
comp=N,52nm,15.8s
GOMU LR LR
comp=E,75nm,15.2s
GOMU LR LR
comp=Z,150nm,15.2s
YBH Yreka Blue Hor 87.44 45 LR LR 22 28 40.8
comp=Z,168nm,19.8s,baz=280,slow=31
ZAK Zakamensk 88.17 325 *e*P P 21 56 32.6 +6.2
ZAK pmax pmax
comp=Z,6.0nm,2.0s
BEKR Beckworth 88.24 47 P **P** 21 56 27.4 +0.3
BEKR IAmb IAmb 21 56 35.4
comp=Z,13nm,1.4s
OMMB Old Mammoth Mi 88.28 50 P **P** 21 56 27.3 -0.2
OMMB IAmb IAmb 21 56 36.7
comp=Z,14nm,1.5s
IMAR Indian Mountai 88.47 15 P **P** 21 56 27.9 +0.7
PFO Pinyon Flats O 88.61 54 LR LR 22 28 30.8
comp=Z,275nm,20.0s,baz=232,slow=30
H04A Detroit Lake 89.09 42 P **P** 21 56 31.7 +1.0
H04A IAmb IAmb 21 56 38.8
comp=Z,7.1nm,1.0s
NVAR Mina Array Bea 89.11 49 P **P** 21 56 29.6 -1.6
comp=Z,0.5nm,0.8s,baz=206,slow=8.0,SNR=5.2
NVAR LR LR 22 28 40.0
comp=Z,182nm,20.1s,baz=270,slow=30
comp=Z,0.5nm,0.8s
NVAR Mina Array Bea 89.11 49 P **P** 21 56 30.3 -0.9
PALK Pallekele 89.16 278 LR LR 22 40 14.9
comp=Z,108nm,18.1s,baz=230,slow=38
COLA College 89.17 17⇓ *i*P **P** 21 56 33.1 +2.6
COLA pmax pmax
comp=Z,8.0nm,1.4s
BBB Bella Bella 89.20 34 LR LR 22 28 49.6
comp=Z,108nm,20.4s,baz=264,slow=30
IL31 89.37 18 P **P** 21 56 30.0 -1.4
ILAR Eielson Array 89.37 18 P **P** 21 56 28.8 -2.7
comp=Z,0.3nm,0.6s,baz=196,slow=6.2,SNR=4.5
ILAR pP **pP** 21 56 38.5 +0.2
comp=Z,0.6nm,0.7s,baz=238,slow=6.0,SNR=4.4
ILAR LR LR 22 33 37.0
comp=Z,290nm,18.9s,baz=222,slow=34
comp=Z,0.3nm,0.6s
ILAR Eielson Array 89.37 18 P **P** 21 56 29.9 -1.7
ILAR Eielson Array 89.37 18 P **P** 21 56 29.9 -1.7
PINE Pine Mountain 89.51 43 P **P** 21 56 33.2 +0.3
PINE IAmb IAmb 21 56 41.7
comp=Z,21nm,1.5s
TROLL Troll, Antarti 89.83 185 P **P** 21 56 34.4 +0.5
NVL N'lazarevskaya 90.05 188 *e*P P 21 56 22.5 -12
NVL pmax pmax
comp=Z,3.0nm,0.5s
J26L Joseph Creek 90.18 19 P **P** 21 56 35.8 +0.3
J26L IAmb IAmb 21 59 30.7
comp=Z,5.4nm,0.7s
WVOR Wild Horse Val 90.48 45 P **P** 21 56 36.4 -1.0
WVOR IAmb IAmb 21 56 46.8
comp=Z,20nm,1.6s
WVOR Wild Horse Val 90.48 45 P **P** 21 56 36.4 -1.0
WVOR pmax pmax
comp=Z,20nm,1.6s
SNAA Sanae 90.51 183 P **P** 21 56 37.9 +0.9
SNAA Sanae 90.51 183 P **P** 21 56 36.9 -0.1
SNAA IAmb IAmb 21 56 48.9
comp=Z,14nm,1.4s
SNAA Sanae 90.51 183 P **P** 21 56 36.9 -0.1
SNAA pmax pmax
comp=Z,14nm,1.4s
VNA3 Neumayer Olymp 91.16 181 P **P** 21 56 42.0 +2.0
DLBC Dease Lake 91.54 28 LR LR 22 31 57.9
comp=Z,177nm,19.4s,baz=264,slow=32
ELK Elko 92.18 48 LR LR 22 30 53.4
comp=Z,185nm,20.9s,baz=244,slow=31
NEW Newport 93.75 40 LR LR 22 34 12.9
comp=Z,59nm,18.3s,baz=270,slow=32
WMQ Urumqi 95.02 314 *e*P **P** 21 56 59.8 +1.5
WMQ LR LR
comp=Z,190nm,21.1s
INK Inuvik 95.72 19 LR LR 22 36 58.9
comp=Z,146nm,18.9s,baz=212,slow=34
ANMO Albuquerque 96.86 56 LR LR 22 36 11.0
comp=Z,94nm,18.3s,baz=259,slow=33
PDAR Pinedale Array 96.86 47 LR LR 22 34 05.9
comp=Z,83nm,20.4s,baz=266,slow=31
TXAR Lajitas Array 97.55 62 LR LR 22 34 43.1
comp=Z,99nm,18.5s,baz=236,slow=32
MKAR Makanchi Array 99.56 316 LR LR 22 43 19.8
comp=Z,55nm,19.2s,baz=104,slow=36
BELG Belogornoye 122.06 321⇓ *i*PKIKP **PKiKP** 22 02 31.1 +1.2
KIV Kislovodsk 127.08 312 *i* PKIKP **PKiKP** 22 02 40.2 -0.1
KIV pmax pmax
comp=Z,3.0nm,1.1s
OBN Obninsk 127.39 327 *e*PKIKP **PKiKP** 22 02 43.4 +3.0
OBN *e* 22 04 39.3
OBN *e*PPP PPP 22 07 26.2

OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NACGM	**Naroch**	**132.37**	**330**↑	*e*PKP	**PKPdf**	**22 02 46.0**	**-3.4**
	baz=55						
UZH	**Uzhgorod**	**138.28**	**325**	*e*PKIKP	**PKPdf**	**22 03 00.0**	**-0.6**
UZH				*i*		22 03 05.0	
DPC	**Dobruska-Polom**	**140.18**	**331**	*e*PKIKP	**PKiKP**	**22 03 09.6**	**+3.0**
DPC				MLR	MLR		
	comp=Z,100nm,14.7s						
DPC	**Dobruska-Polom**	**140.18**	**331**	*e*PKP	**PKiKP**	**22 03 09.6**	**+3.0**
DPC				AMS	AMS	23 06 40.0	
	comp=Z,100nm,14.7s						
RONA	**Rosalia, Austr**	**142.00**	**328**	*e*P	**PKiKP**	**22 03 10.3**	**-0.1**
	comp=Z,2.9nm,1.6s						
CKRC	**Cesky Krumlov**	**142.19**	**331**	*e*PKP	**PKiKP**	**22 03 13.0**	**+2.3**
CKRC				AMS	AMS	23 16 50.0	
	comp=Z,100nm,19.0s						
KHC	**Kasperske Hory**	**142.29**	**332**	*e*PKIKP	**PKiKP**	**22 03 13.3**	**+2.3**
KHC				MLR	MLR		
	comp=Z,200nm,15.7s						
KHC	**Kasperske Hory**	**142.29**	**332**	*e*PKP	**PKPdf**	**22 03 08.5**	**+0.6**
KHC				*e*pPKP	**PKiKP**	**22 03 13.3**	**+2.3**
KHC				AMS	AMS	23 15 00.0	
	comp=Z,200nm,15.7s						
GERES	**GERESS Array B**	**142.45**	**331**	PKP	**PKPdf**	**22 03 09.0**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=83,slow=4.2,SNR=6.0						
MOA	**Molln**	**142.89**	**330**	*e*P	**PKiKP**	**22 03 13.9**	**+1.7**
	comp=Z,4.1nm,1.3s						
BIOA	**Bad Ischl, Aus**	**143.31**	**330**	*e*P	**PKiKP**	**22 03 15.3**	**+2.3**
	comp=Z,2.7nm,0.8s						
OBKA	**Obir**	**143.68**	**328**	*e*P	**PKiKP**	**22 03 14.3**	**+0.3**
	comp=Z,10.0nm,1.2s						
KBA	**Koelnbreinsper**	**143.88**	**330**	*e*P	**PKiKP**	**22 03 17.4**	**+2.9**
	comp=Z,7.5nm,1.3s						
MYKA	**Terra Mystica**	**144.05**	**329**	*e*P	**PKiKP**	**22 03 16.1**	**+1.5**
	comp=Z,5.6nm,1.0s						
BHOU	**Houvegnez**	**144.30**	**340**	*d*pPKiKP	**PKiKP**	**22 03 18.4**	**+3.4**
BCLA	**Clavier**	**144.47**	**340**	*d*PKiKP	**PKiKP**	**22 03 16.0**	**+0.7**
ABTA	**Abfaltersbach**	**144.52**	**330**	*e*P	**PKiKP**	**22 03 17.4**	**+1.7**
	comp=Z,18nm,1.3s						
WATA	**Walderalm**	**144.52**	**331**	*e*P	**PKiKP**	**22 03 17.9**	**+2.1**
	comp=Z,13nm,1.7s						
WTTA	**Wattenberg**	**144.55**	**331**	*e*P	**PKiKP**	**22 03 19.9**	**+4.1**
	comp=Z,20nm,1.6s						
MOTA	**Moosalm**	**144.73**	**332**	*e*P	**PKPdf**	**22 03 13.8**	**+1.3**
	comp=Z,18nm,1.2s						
BMRD	**Maredsous**	**144.74**	**341**	*d*pPKiKP	**PKiKP**	**22 03 18.9**	**+3.1**
RETA	**Reutte**	**144.78**	**332**	*e*P	**PKiKP**	**22 03 14.2**	**-2.0**
	comp=Z,14nm,1.6s						
SQTA	**Sankt Quirin**	**144.78**	**332**	*e*P	**PKPdf**	**22 03 14.0**	**+1.5**
	comp=Z,18nm,1.1s						
WLF	**Walferdange**	**144.84**	**339**	PKPdf	**PKPdf**	**22 03 11.9**	**-0.4**
WLF	**Walferdange**	**144.84**	**339**	PKIKP	**PKPdf**	**22 03 11.9**	**-0.4**
WLF	**Walferdange**	**144.84**	**339**	*d*PKPdf	**PKPdf**	**22 03 12.9**	**+0.6**
WLF				*d*pPKiKP	**pPKPdf**	**22 03 19.4**	**+0.5**
WLF				*d*sPKiKP	**sPKPdf**	**22 03 20.4**	**-0.6**
BFO	**Black Forest**	**145.14**	**335**		**PKPbc**	**22 03 11.6**	**-0.8**
BFO	**Black Forest**	**145.14**	**335**	PKIKP	**PKPbc**	**22 03 11.6**	**-0.8**
FETA	**Feichten**	**145.14**	**332**	*e*P	**PKPdf**	**22 03 14.9**	**+1.7**
	comp=Z,30nm,1.2s						
DAVA	**Damuels**	**145.31**	**333**	*e*P	**PKPdf**	**22 03 13.3**	**-0.2**
	comp=Z,28nm,1.2s						
ECH	**Echery**	**145.68**	**336**		**PKPdf**	**22 03 12.5**	**-1.4**
ECH	**Echery**	**145.68**	**336**	PKIKP	**PKPdf**	**22 03 12.5**	**-1.4**
TUE	**Stuetta**	**146.18**	**332**	PKPdf	**PKPdf**	**22 03 13.8**	**-1.2**
NRCA	**Norcia**	**146.90**	**324**		**PKPdf**	**22 03 15.7**	**-0.5**
MURB	**Monte Urbino**	**146.94**	**325**		**PKPab**	**22 03 18.7**	**-0.9**
ZCCA	**Zocca**	**146.99**	**328**		**PKPbc**	**22 03 18.4**	**+0.2**
BNI	**Bardonecchia**	**148.45**	**334**		**PKPbc**	**22 03 21.0**	**-1.3**
BNI	**Bardonecchia**	**148.45**	**334**	PKP2	**PKPbc**	**22 03 21.0**	**-1.3**
SSB	**Saint Sauveur**	**149.12**	**336**		**PKPbc**	**22 03 22.7**	**-1.2**
SSB	**Saint Sauveur**	**149.12**	**336**	PKP2	**PKPbc**	**22 03 22.7**	**-1.2**
RAFF	**Raffo Rosso**	**149.48**	**315**		**PKPbc**	**22 03 24.0**	**-0.9**

IDC ***22*** *21:54:58.6±8.2,26.°18N×103.°49E, h0km, mb3.4/3, mbtmp3.5/4, ML4.1/1, Error ellipse: s-maj=232.3km s-min=37.7km az=96.0*

NDI ***22*** *21:55:21.7±4.2,24.°44N×94.°30E, h10km, ML3.9*

ISC 22 21:55:17.9±2.9, 24.°40N±0.°07×94.°67E±0.°10, h10km±16km, n16, σ0s98/20, mb3.3/3, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KOHI	**KOHIMA**	**1.41**	**339**	*e*P		**Pb**	**21 55 44.4**	**-0.1**
KOHI				*e*S		**Sg**	**21 56 03.5**	**+0.1**
MOKO	**MOKOCHONG**	**1.92**	**356**	*e*P		**Pb**	**21 55 52.4**	**-0.7**
MOKO				*e*S		**Sb**	**21 56 16.7**	**-0.5**
MOKO				IAML			21 56 18.8	
	comp=E,777nm,0.6s							
MOKO				IAML			21 56 19.6	
	comp=N,755nm,0.6s							
AZL	**Aizawl**	**1.93**	**250**	*e*P		**Pb**	**21 55 53.7**	**+0.4**
JORH	**JORHAT**	**2.36**	**351**	*e*P		**Pb**	**21 56 01.3**	**+0.6**
JORH				*e*S		**Sb**	**21 56 30.1**	**+0.2**
JORH				IAML			21 56 32.2	
	comp=N,1μm,0.6s							
JORH				IAML			21 56 34.3	
	comp=E,2μm,0.7s							
TEZP	**TEZPUR**	**2.78**	**323**	*e*P		**Pn**	**21 56 01.8**	**-0.8**
TEZP				*e*S		**Sn**	**21 56 34.8**	**-1.5**
TEZP				IAML			21 56 38.2	
	comp=E,3μm,0.3s							
ITAN	**ITANAGAR**	**2.86**	**343**	*e*P		**Pn**	**21 56 03.8**	**0.0**
ITAN				*e*S		**Sn**	**21 56 40.8**	**+2.5**
ITAN				IAML			21 56 47.4	
	comp=N,591nm,0.5s							
ITAN				IAML			21 56 48.1	
	comp=E,586nm,0.6s							
LKP	**Lekhapani**	**3.10**	**20**	*e*P		**Pb**	**21 56 13.1**	**-0.2**
LKP				*e*S		**Sb**	**21 56 51.4**	**+0.1**
LKP				IAML			21 57 01.8	
	comp=E,3μm,0.5s							
ZIRO	**ZIRO**	**3.20**	**347**	*e*P		**Pn**	**21 56 08.4**	**-0.1**
ZIRO				*e*S		**Sn**	**21 56 47.0**	**+0.2**
TURI	**Tura**	**4.10**	**287**	*e*P		**Pn**	**21 56 20.5**	**-0.3**
LSA	**Lhasa**	**6.14**	**330**	P		Pn	21 56 54.9	+5.7
LSA				pmax		pmax		
	comp=Z,4.0nm,0.9s							
GTK	**Tadong**	**6.19**	**299**	IAML			21 58 13.4	
	comp=N,17nm,0.5s							
CMAR	**Chiang Mai Arr**	**7.13**	**145**	Pn		Pn	21 57 07.0	+4.6
	comp=N,0.6nm,0.3s,baz=320,slow=12,SNR=4.1							
	comp=N,1.2nm,0.3s							
MKAR	**Makanchi Array**	**24.45**	**339**	P		**P**	**22 00 37.2**	**+0.2**
	comp=N,0.5nm,0.6s,baz=150,slow=9.5,SNR=6.6							
	comp=N,0.5nm,0.6s							
KURBB	**Kurchatov Arra**	**29.01**	**339**	P		**P**	**22 01 19.4**	**+1.5**
	comp=N,0.5nm,0.9s,baz=148,slow=9.5,SNR=4.6							
	comp=N,0.5nm,0.9s							
NB2	**NORSAR Subarra**	**65.83**	**328**	P		**P**	**22 06 02.5**	**-0.9**
	comp=Z,1.7nm,0.9s,baz=83,slow=6.5							
NOA	**NORSAR Array B**	**65.83**	**328**	P		**P**	**22 06 02.2**	**-1.2**
	comp=Z,0.2nm,0.5s,baz=82,slow=6.6,SNR=4.1							
	comp=Z,0.2nm,0.5s							

IDC ***22*** *21:55:37.9±1.3,55.°53S×26.°32W, h0km, mb3.8/3, mbtmp3.8/3, Error ellipse: s-maj=109.4km s-min=28.2km az=97.0*

NEIC ***22*** *21:55:39.1±2.0,55.°60S±0.°08×27.°1W±0.°3, h10km±1km, mb4.2/9, Error ellipse: s-maj=30.3km s-min=13.1km az=98.0*

ISC 22 21:55:41.3±1.0, 55.°6S±0.°1×27.°0W±0.°2, h25km, n12, σ0s95/12, mb4.0/4, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SNAA	**Sanae**	**19.12**	**157**	P		**P**	**22 00 01.6**	**-0.5**
BELA	**Belgrano 2**	**22.54**	**184**	P		**P**	**22 00 37.4**	**-1.5**
GO09	**Cerro Castillo**	**26.97**	**260**	P		**P**	**22 01 19.4**	**-1.1**
QSPA	**South Pole Qui**	**34.66**	**180**	P		**P**	**22 02 29.4**	**+1.0**
	1.0nm,0.7s,baz=192,slow=2.2,SNR=8.5							
	1.0nm,0.7s							
QSPA	**South Pole Qui**	**34.66**	**180**	P		**P**	**22 02 29.0**	**+0.6**
QSPA				IAmb		IAmb	22 02 43.5	
	comp=Z,4.5nm,1.2s							
MT02	**Curacav**	**37.74**	**288**	P		**P**	**22 02 55.2**	**+0.4**
VNDA	**Vanda**	**47.04**	**183**	P		**P**	**22 04 10.6**	**+0.8**
	comp=Z,0.6nm,0.6s,baz=190,slow=8.7,SNR=7.2							
	comp=Z,0.6nm,0.6s							
VNDA	**Vanda**	**47.04**	**183**	P		**P**	**22 04 10.3**	**+0.4**
VNDA				IAmb		IAmb	22 04 13.4	
	comp=Z,0.7nm,0.7s							

TOA0	**Torodi Ar. Sit**	**72.61**	**29**	P		**P**	**22 07 06.3**	**+0.1**
TOA0				IAmb		IAmb	22 07 28.9	
	comp=Z,6.6nm,1.4s							
TORD	**Torodi Ar. Bea**	**72.61**	**29**	P		**P**	**22 07 05.4**	**-0.9**
	comp=Z,0.9nm,0.9s,baz=198,slow=6.7,SNR=4.4							
	comp=Z,0.9nm,0.9s							
TORD	**Torodi Ar. Bea**	**72.61**	**29**	P		**P**	**22 07 05.6**	**-0.6**
TORD				IAmb		IAmb	22 07 06.4	
	comp=Z,2.9nm,1.4s							
ILAR	**Eielson Array**	**149.88**	**312**	PKPbc		**PKPbc**	**22 15 28.6**	**+1.0**
	comp=Z,0.6nm,0.8s,baz=127,slow=2.4,SNR=5.3							

TAP 22 22:03:03.1, 24.°22N×121.°75E, h9km, ML2.4, 7D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
EHP	**Heping Village**	**0.09**	**355**	*e*P		Pg	22 03 06.1	+0.6
EHP	baz=359			*e*S		Sg	22 03 08.2	+1.0
	baz=359							
ETL	**Fush Village**	**0.13**	**242**	P		Pg	22 03 07.0	+0.8
ETL	baz=241			S		Sg	22 03 09.6	+1.4
	baz=241							
NACB	**Ninganchiao**	**0.15**	**251**	⇓P		Pg	22 03 07.1	+0.7
NACB	baz=251			S		Sg	22 03 10.0	+1.4
	baz=251							
TWD	**Chiawan**	**0.20**	**225**	*i* P		Pg	22 03 07.9	+0.6
TWD	baz=223			*i* S		Sg	22 03 11.2	+1.2
	baz=223							
ENA	**Nanau**	**0.20**	**358**	⇓*i*P		Pg	22 03 08.2	+0.9
ENA	baz=359			*i* S		Sg	22 03 11.8	+1.6
	baz=359							
EWUT	**Wuta**	**0.22**	**7**	*i* P		Pg	22 03 08.6	+0.9
EWUT	baz=6.0			*i* S		Sg	22 03 12.3	+1.5
	baz=6.0							
ETLH	**Xiulin Townshi**	**0.24**	**267**	P		Pg	22 03 08.9	+0.8
ETLH	baz=266			S		Sg	22 03 13.4	+1.9
	baz=266							
HWA	**Hwalien**	**0.28**	**209**	*e*P		Pb	22 03 09.8	-0.5
HWA	baz=206			S		Sb	22 03 14.3	-0.7
	baz=206							
ETM	**Tongmen**	**0.35**	**223**	P		Pg	22 03 10.7	+0.7
	baz=222							
LATG	**Datong**	**0.37**	**327**	⇓P		Pb	22 03 11.7	-0.3
LATG	baz=326			S		Sb	22 03 17.5	-0.4
	baz=326							
NNSB	**Datong**	**0.39**	**302**	⇓P		Pb	22 03 12.1	-0.3
NNSB	baz=301			S		Sb	22 03 18.3	-0.2
	baz=301							
NNSH	**Datong**	**0.39**	**302**	*i* P		Pb	22 03 12.1	-0.2
NNSH	baz=301			S		Sb	22 03 18.4	-0.1
	baz=301							
TWC	**Suao**	**0.40**	**13**	*i* P		Pb	22 03 11.8	-0.5
TWC	baz=14			*i* S		Sb	22 03 17.4	-1.0
	baz=14							
NNS	**Nan Shan**	**0.41**	**302**	*i* P		Pb	22 03 12.3	-0.3
NNS	baz=302			S		Sb	22 03 18.4	-0.5
	baz=302							
NDS	**Dongshan**	**0.41**	**356**	*i* P		Pb	22 03 12.4	-0.2
NDS	baz=355			S		Sb	22 03 18.2	-0.7
	baz=355							
WHF	**Hehuan Shan**	**0.45**	**260**	*i* P		Pb	22 03 12.9	-0.5
WHF	baz=259			*i* S		Sb	22 03 19.3	-1.1
	baz=259							
FUSS	**Fushou**	**0.46**	**273**	*i* P		Pb	22 03 13.5	-0.1
	baz=273							
ESL	**Shilin**	**0.50**	**216**	*i* P		Pg	22 03 13.3	+0.5
	baz=214							
TWE	**Neicheng**	**0.50**	**351**	*i* P		Pb	22 03 14.0	-0.1
	baz=352							
TWT	**Tachien**	**0.53**	**274**	P		Pb	22 03 15.0	+0.4
	baz=272							
TDCB	**Techi**	**0.54**	**273**	P		Pb	22 03 14.9	+0.1
	baz=273							
CHGB	**Renai**	**0.55**	**253**	*e*P		Pb	22 03 14.7	-0.4
	baz=252							
FUSB	**Fushanzhiwuyua**	**0.56**	**345**	P		Pb	22 03 15.4	+0.4
	baz=344							
YHNB	**Yeheng**	**0.56**	**323**	⇓P		Pb	22 03 15.5	+0.3
	baz=322							
NSK	**Sanguang**	**0.58**	**322**	⇓*i*P		Pb	22 03 15.7	+0.3
	baz=322							
OWD	**Renai**	**0.59**	**243**	P		Pb	22 03 15.9	+0.3
OWD	baz=243			S		Sb	22 03 24.8	+0.7
	baz=243							
NWLT	**Wulai**	**0.60**	**338**	*e*P		Pb	22 03 15.9	+0.1
	baz=337							
NWLT				*e*S		Sb	22 03 24.2	-0.1
	baz=337							
WUSB	**Renai**	**0.62**	**249**	P		Pb	22 03 16.1	-0.1
WUSB	baz=248			S		Sb	22 03 25.1	+0.1
	baz=248							
EGFH	**Guangfu**	**0.62**	**208**	*e*P		Pb	22 03 16.7	+0.5
	baz=208							
EGFH				*e*S		Sb	22 03 25.6	+0.5
	baz=208							
NTC	**Toucheng**	**0.63**	**7**	⇓*e*P		Pb	22 03 16.6	+0.2
NTC	baz=6.0			*e*S		Sb	22 03 24.8	-0.5
	baz=6.0							
EGS		**0.64**	**15**	*e*P		Pb	22 03 16.6	+0.2
	baz=15							
EGS				S		Sb	22 03 26.0	+0.4
	baz=15							
NFF	**Wufeng Townshi**	**0.71**	**305**	P		Pn	22 03 18.6	-0.8
NFF	baz=305			S		Sb	22 03 28.1	+0.6
	baz=305							
VWDT	**VWDT**	**0.73**	**230**	P		Pb	22 03 18.6	+0.7
	baz=230							
VWDT				*i* S		Sb	22 03 27.9	-0.1
	baz=230							
WHP	**Taichung City**	**0.74**	**274**	P		Pn	22 03 19.1	-0.6
WHP	baz=274			S		Sb	22 03 29.6	+1.2
	baz=274							
TIPB	**Shuangxi**	**0.75**	**5**	P		Pb	22 03 18.7	+0.3
	baz=5.0							
TIPB				*e*S		Sb	22 03 28.4	-0.3
	baz=5.0							
NHDH	**Xindian Distri**	**0.77**	**345**	*e*P		Pb	22 03 18.7	+0.1
	baz=344							
NHDH				S		Sb	22 03 30.1	+1.0
	baz=344							
TWA	**Mucha**	**0.77**	**349**	*e*P		Pn	22 03 20.2	+0.1
	baz=349							
TWA				*e*S		Sb	22 03 30.6	+1.3
	baz=349							
WCS	**Beigang Elemen**	**0.78**	**258**	*e*P		Pb	22 03 19.2	+0.3
	baz=257							
WCS				*e*S		Sb	22 03 30.3	+0.7
	baz=257							
LIOB	**Emei**	**0.79**	**302**	*e*P		Pb	22 03 18.9	-0.2
	baz=302							
NSTT	**Nanjuang**	**0.80**	**301**	P		Pb	22 03 19.6	+0.5
	baz=301							
NSTT				*e*S		Sb	22 03 30.7	+0.7
	baz=301							
TWB1	**Santiao Chiao**	**0.81**	**15**	*e*P		Pg	22 03 18.9	+0.1
	baz=16							
TWB1				S		Sb	22 03 30.8	+0.3
	baz=16							
EHY	**Hungye**	**0.81**	**209**	P		Pb	22 03 19.6	+0.2
	baz=208							
EHY				*e*S		Sn	22 03 32.0	-0.9
	baz=208							
NWF	**Wu-fen Shan**	**0.85**	**2**	P		Pb	22 03 19.9	-0.1
	baz=1.0							
NWF				S		Sb	22 03 32.5	+1.0
	baz=1.0							
SMLT	**Sun Moon Lake**	**0.85**	**247**	P		Pb	22 03 20.1	+0.1
	baz=246							
SMLT				S		Sb	22 03 31.7	+0.1
	baz=246							
SSLB	**Suanglung**	**0.85**	**239**	P		Pb	22 03 19.8	-0.2
	baz=239							
SSLB				S		Sb	22 03 31.4	-0.1
	baz=239							
SXI1	**Grass Mountain**	**0.88**	**7**	P		Pn	22 03 21.2	-0.4
	baz=7.0							
SXI1				S		Sb	22 03 33.4	+1.1
	baz=7.0							
TYC	**Yuchr**	**0.88**	**249**	*e*P		Pb	22 03 20.2	-0.2
	baz=248							
TYC				S		Sb	22 03 33.1	+0.9
	baz=248							
NCUH	**Zhongli**	**0.90**	**325**	*e*P		Pb	22 03 21.0	+0.1
	baz=325							
NCUH				*e*S		Sn	22 03 34.2	-0.9
	baz=325							
YULB	**Yu-li**	**0.92**	**207**	*e*P		Pb	22 03 21.2	-0.1
	baz=206							
YULB				*e*S		Sb	22 03 34.2	+0.5
	baz=206							
TWS1	**Kuangyinshan**	**0.93**	**341**	*e*P		Pg	22 03 20.9	-0.1
	baz=341							
TWS1				*e*S		Sb	22 03 34.4	+0.7
	baz=341							
YM01	**YM01**	**0.94**	**350**	*e*P		Pn	22 03 22.2	-0.2
	baz=349							
YM01				*e*S		Sn	22 03 35.7	-0.3
	baz=349							
YUS	**Yu-Shan**	**1.03**	**225**	*e*P		Pb	22 03 23.6	+0.1
	baz=224							
YUS				*e*S		Sn	22 03 38.4	-0.5
	baz=224							

TAP 22 22:03:10.6, 24.°22N×121.°76E, h7km, ML2.6, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
EHP	**Heping Village**	**0.09**	**349**	*e*P		Pg	22 03 12.9	+0.2
	baz=353							
ETL	**Fush Village**	**0.14**	**243**	P		Pg	22 03 14.5	+0.9
	baz=242							
ETL				S		Sg	22 03 17.1	+1.5
	baz=242							
NACB	**Ninganchiao**	**0.16**	**252**	P		Pg	22 03 14.7	+0.9
	baz=251							
NACB				S		Sg	22 03 17.6	+1.5
	baz=251							
ENA	**Nanau**	**0.20**	**355**	*i* P		Pg	22 03 15.7	+1.0
	baz=357							
ENA				*i* S		Sg	22 03 19.2	+1.7
	baz=357							
TWD	**Chiawan**	**0.21**	**226**	*i* P		Pg	22 03 15.6	+0.8
	baz=224							
TWD				*i* S		Sg	22 03 18.9	+1.4
	baz=224							
EWUT	**Wuta**	**0.22**	**4**	*i* P		Pg	22 03 16.2	+1.2
	baz=4.0							
EWUT				*i* S		Sg	22 03 19.9	+1.8
	baz=4.0							
ETLH	**Xiulin Townshi**	**0.26**	**266**	P		Pb	22 03 17.3	-0.3
	baz=266							
ETLH				S		Sb	22 03 21.4	-0.8
	baz=266							
HWA	**Hwalien**	**0.28**	**210**	P		Pb	22 03 17.2	-0.8
	baz=208							
HWA				*e*S		Sb	22 03 22.2	-0.7
	baz=208							
ETM	**Tongmen**	**0.35**	**224**	P		Pb	22 03 18.5	-0.7
	baz=223							
ETM				S		Sb	22 03 23.9	-1.1
	baz=223							
LATG	**Datong**	**0.38**	**326**	*e*P		Pb	22 03 19.6	-0.1
	baz=325							
LATG				S		Sb	22 03 25.0	-0.7
	baz=325							
TEYL	**Yanliau Villag**	**0.38**	**203**	*e*P		Pb	22 03 19.3	-0.4
	baz=204							
TEYL				S		Sb	22 03 24.5	-1.3
	baz=204							
TWC	**Suao**	**0.39**	**12**	P		Pb	22 03 19.5	-0.3
	baz=13							
TWC				S		Sb	22 03 25.2	-0.9
	baz=13							
NNSB	**Datong**	**0.40**	**301**	P		Pb	22 03 19.7	-0.4
	baz=300							
NNSB				S		Sb	22 03 25.9	-0.5
	baz=300							
NNSH	**Datong**	**0.40**	**301**	*i* P		Pb	22 03 19.8	-0.3
	baz=300							
NNSH				S		Sb	22 03 25.9	-0.5
	baz=300							
NDS	**Dongshan**	**0.41**	**354**	*e*P		Pb	22 03 19.6	-0.5
	baz=354							
NDS				*i* S		Sb	22 03 26.4	-0.2
	baz=354							
NNS	**Nan Shan**	**0.41**	**301**	P		Pb	22 03 19.6	-0.7
	baz=301							
NNS				S		Sb	22 03 26.7	-0.1
	baz=301							
WHF	**Hehuan Shan**	**0.46**	**260**	P		Pb	22 03 20.7	-0.6
	baz=259							
WHF				*i* S		Sb	22 03 27.4	-1.0
	baz=259							
FUSS	**Fushou**	**0.47**	**273**	*e*P		Pb	22 03 20.9	-0.4
	baz=272							
FUSS				*e*S		Sb	22 03 28.1	-0.5
	baz=272							
TWE	**Neicheng**	**0.50**	**350**	P		Pb	22 03 21.6	-0.1
	baz=351							
TWE				*i* S		Sb	22 03 29.0	-0.3
	baz=351							
ESL	**Shilin**	**0.51**	**216**	P		Pb	22 03 21.6	-0.2
	baz=215							
ESL				*e*S		Sb	22 03 29.9	+0.5
	baz=215							
TWT	**Tachien**	**0.53**	**273**	P		Pb	22 03 22.4	0.0
	baz=272							
TWT				*e*S		Sb	22 03 31.0	+0.7
	baz=272							
ILA	**Ilan**	**0.54**	**359**	P		Pb	22 03 22.0	-0.3
	baz=359							
ILA				S		Sb	22 03 30.6	+0.3
	baz=359							
TDCB	**Techi**	**0.55**	**273**	P		Pb	22 03 22.4	-0.2
	baz=272							
TDCB				*e*S		Sb	22 03 30.9	+0.1
	baz=272							
FUSB	**Fushanzhiwuyua**	**0.56**	**344**	P		Pb	22 03 22.8	+0.1
	baz=343							
FUSB				S		Sb	22 03 30.6	-0.3
	baz=343							
CHGB	**Renai**	**0.56**	**253**	P		Pb	22 03 22.5	-0.3
	baz=253							
CHGB				S		Sb	22 03 31.4	+0.2
	baz=253							
YHNB	**Yeheng**	**0.56**	**322**	P		Pb	22 03 23.0	+0.2
	baz=321							
YHNB				S		Sb	22 03 31.2	0.0
	baz=321							
NSK	**Sanguang**	**0.58**	**321**	P		Pb	22 03 23.0	-0.1
	baz=321							
OWD	**Renai**	**0.60**	**243**	*e*P		Pb	22 03 23.2	-0.2
	baz=243							
NWLT	**Wulai**	**0.60**	**337**	*e*P		Pb	22 03 23.3	-0.1
	baz=336							
EGFH	**Guangfu**	**0.63**	**209**	*e*P		Pb	22 03 23.7	-0.3
	baz=208							
EGFH				*e*S		Sb	22 03 33.8	+0.8
	baz=208							
NTC	**Toucheng**	**0.63**	**

VWDT	**VWDT**	**0.73**	**231**	P		Pb	22 03 25.3	-0.3
	baz=230								
VWDT				*e*S		Sb	22 03 37.3	+1.4
	baz=230								
WHP	**Taichung City**	**0.74**	**274**	*e*P		Pg	22 03 25.3	+0.4
	baz=274								
WHP				*e*S		Sb	22 03 36.7	+0.3
	baz=274								
TIPB	**Shuangxi**	**0.75**	**5**	*e*P		Pb	22 03 26.1	+0.2
	baz=4.0								
TIPB				*e*S		Sb	22 03 36.5	+0.1
	baz=4.0								
NHDH	**Xindian Distri**	**0.77**	**344**	*e*S		Sb	22 03 37.4	+0.6
	baz=343								
TWA	**Mucha**	**0.77**	**348**	*e*P		Pb	22 03 26.3	0.0
	baz=348								
TWA				S		Sb	22 03 37.8	+0.8
	baz=348								
WCS	**Beigang Elemen**	**0.79**	**258**	*e*P		Pb	22 03 26.8	+0.1
	baz=257								
WCS				*e*S		Sb	22 03 37.7	0.0
	baz=257								
LIOB	**Emei**	**0.80**	**302**	*e*P		Pb	22 03 27.4	+0.6
	baz=301								
LIOB				*e*S		Sb	22 03 39.0	+1.2
	baz=301								
NSTT	**Nanjuang**	**0.80**	**301**	P		Pb	22 03 27.3	+0.5
	baz=300								
TWB1	**Santiao Chiao**	**0.81**	**15**	*e*P		Pb	22 03 27.0	0.0
	baz=15								
TWB1				*e*S		Sb	22 03 39.1	+1.0
	baz=15								
EHY	**Hungye**	**0.82**	**209**	*e*P		Pb	22 03 26.8	-0.4
	baz=208								
EHY				*e*S		Sb	22 03 39.4	+1.0
	baz=208								
NWF	**Wu-fen Shan**	**0.84**	**1**	*e*P		Pb	22 03 27.6	-0.1
	baz=1.0								
TAP	**Taipei**	**0.84**	**344**	*e*P		Pb	22 03 28.0	+0.4
	baz=344								
TAP				S		Sn	22 03 40.7	-0.8
	baz=344								
SMLT	**Sun Moon Lake**	**0.86**	**247**	P		Pb	22 03 27.6	-0.3
	baz=246								
SMLT				S		Sb	22 03 39.8	+0.2
	baz=246								
SSLB	**Suanglung**	**0.86**	**240**	P		Pb	22 03 27.7	-0.1
	baz=239								
SXI1	**Grass Mountain**	**0.87**	**7**	*e*P		Pb	22 03 28.1	0.0
	baz=6.0								
SXI1				*e*S		Sn	22 03 41.2	-1.1
	baz=6.0								
TYC	**Yuchr**	**0.89**	**249**	*e*P		Pg	22 03 27.7	+0.1
	baz=248								
NCUH	**Zhongli**	**0.91**	**325**	*e*P		Pg	22 03 28.3	+0.3
	baz=324								
NCUH				*e*S		Sn	22 03 42.4	-0.6
	baz=324								
NCU	**National Centr**	**0.91**	**325**	*e*S		Sn	22 03 42.1	-1.0
	baz=325								
TWS1	**Kuangyinshan**	**0.93**	**340**	*e*P		Pb	22 03 29.2	+0.2
	baz=340								
TWS1				*e*S		Sb	22 03 42.4	+0.9
	baz=340								
YULB	**Yu-li**	**0.93**	**207**	P		Pb	22 03 29.0	0.0
	baz=207								
YULB				*e*S		Sn	22 03 42.8	-0.9
	baz=207								
YM01	**YM01**	**0.93**	**349**	*e*P		Pg	22 03 28.6	0.0
	baz=349								
EYUL	**Yuli**	**0.96**	**205**	*e*P		Pb	22 03 29.6	0.0
	baz=204								
EYUL				*e*S		Sn	22 03 43.8	-0.6
	baz=204								
NTST	**Danshui**	**0.98**	**343**	*e*P		Pg	22 03 29.4	+0.1
	baz=343								
NTST				*e*S		Sb	22 03 43.8	+0.8
	baz=343								

TAP 22 22:03:21.1,24.24N×121.75E,h15km,ML2.7,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.07**	**352**	P	Pg	22 03 24.4	+0.4
	baz=357						
ETL	**Fush Village**	**0.14**	**236**	P	Pg	22 03 25.0	0.0
	baz=235						
ETL				S	Sb	22 03 28.5	0.0
	baz=235						
NACB	**Ninganchiao**	**0.16**	**246**	P	Pg	22 03 25.2	+0.1
	baz=245						
NACB				S	Sb	22 03 29.3	+0.4
	baz=245						
ENA	**Nanau**	**0.19**	**357**	*i* P	Pb	22 03 26.0	-0.4
	baz=359						
ENA				*i* S	Sb	22 03 29.8	0.0
	baz=359						
EWUT	**Wuta**	**0.21**	**7**	*i* P	Pb	22 03 26.6	-0.1
	baz=6.0						
EWUT				*i* S	Sb	22 03 30.5	+0.2
	baz=6.0						
TWD	**Chiawan**	**0.21**	**222**	*i* P	Pg	22 03 25.6	-0.3
	baz=220						
TWD				*i* S	Sb	22 03 30.8	+0.3
	baz=220						
ETLH	**Xiulin Townshi**	**0.25**	**263**	P	Pg	22 03 26.9	+0.3
	baz=262						
ETLH				S	Sb	22 03 31.8	+0.1
	baz=262						
HWA	**Hwalien**	**0.29**	**207**	P	Pb	22 03 27.9	-0.2
	baz=205						
HWA				*e*S	Sb	22 03 33.4	+0.5
	baz=205						
LATG	**Datong**	**0.36**	**325**	P	Pb	22 03 29.5	+0.2
	baz=325						
LATG				S	Sb	22 03 35.0	+0.1
	baz=325						
ETM	**Tongmen**	**0.36**	**221**	*e*P	Pb	22 03 29.6	+0.3
	baz=221						
ETM				*e*S	Sb	22 03 35.1	+0.3
	baz=221						
TWC	**Suao**	**0.38**	**13**	*i* P	Pb	22 03 29.8	+0.2
	baz=14						
TWC				S	Sb	22 03 35.5	+0.2
	baz=14						
NNSB	**Datong**	**0.39**	**299**	P	Pb	22 03 30.1	+0.3
	baz=299						
NNSB				S	Sb	22 03 35.9	+0.3
	baz=299						
NNSH	**Datong**	**0.39**	**299**	*e*S	Sb	22 03 36.0	+0.4
	baz=299						
NDS	**Dongshan**	**0.39**	**355**	*i* P	Pb	22 03 30.2	+0.4
	baz=355						
NDS				S	Sb	22 03 36.4	+0.6
	baz=355						
NNS	**Nan Shan**	**0.40**	**300**	P	Pb	22 03 30.1	+0.1
	baz=300						
NNS				S	Sb	22 03 36.1	0.0
	baz=300						
WHF	**Hehuan Shan**	**0.45**	**258**	*i* P	Pb	22 03 31.2	+0.1
	baz=257						
WHF				*i* S	Sb	22 03 37.4	-0.5
	baz=257						
FUSS	**Fushou**	**0.46**	**271**	P	Pb	22 03 31.4	+0.3
	baz=271						
FUSS				S	Sb	22 03 38.2	+0.2
	baz=271						
TWE	**Neicheng**	**0.49**	**351**	P	Pg	22 03 30.8	0.0
	baz=352						
TWE				*e*S	Sb	22 03 38.4	0.0
	baz=352						
ESL	**Shilin**	**0.51**	**215**	*i* P	Pb	22 03 31.9	0.0
	baz=213						
ILA	**Ilan**	**0.52**	**360**	*e*P	Pg	22 03 31.6	0.0
ILA				S	Sb	22 03 40.1	+0.6
TWT	**Tachien**	**0.53**	**272**	P	Pb	22 03 32.3	+0.1
	baz=271						
TWT				S	Sb	22 03 40.8	+1.1
	baz=271						
FUSB	**Fushanzhiwuyua**	**0.54**	**344**	*e*P	Pb	22 03 32.2	-0.2
	baz=343						
FUSB				S	Sb	22 03 41.1	+1.1
	baz=343						
TDCB	**Techi**	**0.54**	**272**	*e*P	Pb	22 03 32.2	-0.2
	baz=271						
TDCB				S	Sb	22 03 40.7	+0.5
	baz=271						
YHNB	**Yeheng**	**0.55**	**321**	*e*P	Pg	22 03 32.1	+0.1
	baz=321						
YHNB				*e*S	Sb	22 03 40.4	+0.1
	baz=321						
CHGB	**Renai**	**0.56**	**251**	*e*P	Pb	22 03 33.1	+0.3
	baz=251						
CHGB				S	Sb	22 03 41.3	+0.7
	baz=251						
NSK	**Sanguang**	**0.56**	**321**	P	Pg	22 03 31.7	-0.6
	baz=320						
NSK				S	Sb	22 03 41.2	+0.5
	baz=320						
NWLT	**Wulai**	**0.58**	**337**	*e*P	Pg	22 03 32.8	+0.2
	baz=336						
NWLT				*e*S	Sb	22 03 42.1	+0.9
	baz=336						
OWD	**Renai**	**0.60**	**242**	*e*P	Pg	22 03 32.9	0.0
	baz=241						
OWD				*e*S	Sb	22 03 42.7	+0.9
	baz=241						
NTC	**Toucheng**	**0.62**	**7**	*e*S	Sb	22 03 43.2	+1.1
	baz=6.0						
WUSB	**Renai**	**0.63**	**247**	*e*P	Pb	22 03 33.8	-0.2
	baz=246						
WUSB				*e*S	Sb	22 03 43.3	+0.7
	baz=246						
NFF	**Wufeng Townshi**	**0.70**	**304**	P	Pb	22 03 35.2	+0.1
	baz=304						
NFF				*e*S	Sb	22 03 45.1	+0.5
	baz=304						
TIPB	**Shuangxi**	**0.73**	**5**	*e*S	Sb	22 03 45.8	+0.2
	baz=5.0						
WHP	**Taichung City**	**0.74**	**273**	*e*P	Pb	22 03 36.1	+0.4
	baz=272						
WHP				*e*S	Sb	22 03 46.7	+1.0
	baz=272						
VWDT	**VWDT**	**0.74**	**229**	*e*P	Pb	22 03 36.0	+0.3
	baz=229						
VWDT				*e*S	Sb	22 03 46.4	+0.8
	baz=229						
WCS	**Beigang Elemen**	**0.79**	**257**	*e*S	Sn	22 03 48.2	-1.1
	baz=256						
NWF	**Wu-fen Shan**	**0.83**	**2**	*e*P	Pb	22 03 37.5	+0.2
	baz=1.0						
NWF				*e*S	Sb	22 03 48.8	+0.4
	baz=1.0						
SSLB	**Suanglung**	**0.86**	**239**	*e*P	Pn	22 03 38.3	-0.4
	baz=238						
SSLB				*e*S	Sn	22 03 50.2	-0.8
	baz=238						
TWS1	**Kuangyinshan**	**0.91**	**341**	*e*P	Pb	22 03 37.9	-0.8
	baz=340						
TWS1				*e*S	Sn	22 03 52.2	-0.1
	baz=340						

TAP 22 22:03:23.7,24.22N×121.76E,h6km,ML2.6,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.10**	**348**	*e*P	Pg	22 03 26.4	+0.5
	baz=352						
EHP				S	Sg	22 03 28.1	+0.8
	baz=352						
ETL	**Fush Village**	**0.14**	**246**	P	Pg	22 03 27.4	+0.8
	baz=245						
ETL				S	Sg	22 03 30.4	+1.8
	baz=245						
NACB	**Ninganchiao**	**0.16**	**254**	P	Pg	22 03 27.9	+0.9
	baz=254						
NACB				S	Sg	22 03 30.7	+1.5
	baz=254						
TWD	**Chiawan**	**0.20**	**228**	*i* P	Pg	22 03 28.5	+0.7
	baz=226						
TWD				*i* S	Sg	22 03 31.9	+1.4
	baz=226						
ENA	**Nanau**	**0.21**	**355**	*i* P	Pg	22 03 29.0	+1.0
	baz=356						
ENA				S	Sg	22 03 33.1	+2.4
	baz=356						
EWUT	**Wuta**	**0.23**	**4**	P	Pg	22 03 29.2	+1.0
	baz=3.0						
EWUT				*i* S	Sg	22 03 33.4	+2.1
	baz=3.0						
ETLH	**Xiulin Townshi**	**0.26**	**268**	P	Pb	22 03 29.9	-0.9
	baz=267						
ETLH				S	Sb	22 03 34.5	-1.1
	baz=267						
HWA	**Hwalien**	**0.28**	**211**	*e*P	Pb	22 03 30.2	-0.9
	baz=209						
HWA				*e*S	Sb	22 03 35.3	-0.8
	baz=209						
ETM	**Tongmen**	**0.35**	**225**	P	Pg	22 03 31.1	+0.5
	baz=224						
ETM				S	Sb	22 03 38.0	-0.2
	baz=224						
LATG	**Datong**	**0.38**	**326**	P	Pb	22 03 32.4	-0.6
	baz=325						
LATG				S	Sb	22 03 39.3	+0.1
	baz=325						
TWC	**Suao**	**0.40**	**11**	*e*P	Pb	22 03 32.4	-0.8
	baz=12						
TWC				S	Sb	22 03 38.3	-1.2
	baz=12						
NNSB	**Datong**	**0.41**	**301**	P	Pb	22 03 33.2	-0.2
	baz=301						
NNSB				*e*S	Sb	22 03 38.8	-1.1
	baz=301						
NNSH	**Datong**	**0.41**	**301**	*i* P	Pb	22 03 32.7	-0.7
	baz=301						
NNSH				S	Sb	22 03 39.7	-0.2
	baz=301						
NDS	**Dongshan**	**0.42**	**354**	P	Pb	22 03 33.1	-0.4
	baz=354						
NDS				*i* S	Sb	22 03 39.7	-0.5
	baz=354						
NNS	**Nan Shan**	**0.42**	**302**	*i* P	Pb	22 03 33.2	-0.4
	baz=302						
NNS				S	Sb	22 03 39.9	-0.4
	baz=302						
WHF	**Hehuan Shan**	**0.46**	**261**	*i* P	Pb	22 03 33.7	-0.9
	baz=260						
WHF				*i* S	Sg	22 03 39.9	+1.1
	baz=260						
FUSS	**Fushou**	**0.47**	**274**	P	Pb	22 03 35.1	+0.4
	baz=273						
FUSS				S	Sb	22 03 42.2	+0.2
	baz=273						
ESL	**Shilin**	**0.50**	**217**	P	Pb	22 03 34.7	-0.2
	baz=216						
ESL				S	Sb	22 03 42.4	-0.1
	baz=216						
TWE	**Neicheng**	**0.51**	**350**	P	Pb	22 03 35.1	0.0
	baz=351						
TWE				S	Sb	22 03 42.4	-0.3
	baz=351						
TWT	**Tachien**	**0.54**	**274**	P	Pb	22 03 36.8	+1.1
	baz=273						
TWT				S	Sb	22 03 43.5	-0.2
	baz=273						
ILA	**Ilan**	**0.55**	**359**	S	Sb	22 03 44.7	+0.8
	baz=359						
TDCB	**Techi**	**0.55**	**274**	P	Pb	22 03 36.4	+0.5
	baz=273						
TDCB				S	Sb	22 03 44.3	+0.2
	baz=273						
CHGB	**Renai**	**0.56**	**254**	*e*P	Pb	22 03 36.0	-0.1
	baz=253						
CHGB				S	Sb	22 03 43.5	-0.9
	baz=253						
FUSB	**Fushanzhiwuyua**	**0.56**	**344**	*e*P	Pb	22 03 35.4	-0.6
	baz=343						
FUSB				*e*S	Sb	22 03 43.8	-0.6
	baz=343						
YHNB	**Yeheng**	**0.57**	**322**	*e*P	Pb	22 03 36.4	+0.2
	baz=321						
NSK	**Sanguang**	**0.59**	**321**	P	Pb	22 03 36.2	-0.3
	baz=321						
NSK				S	Sb	22 03 45.8	+0.7
	baz=321						
OWD	**Renai**	**0.60**	**244**	P	Pb	22 03 36.9	+0.2
	baz=244						
OWD				S	Sb	22 03 46.0	+0.6
	baz=244						
NWLT	**Wulai**	**0.61**	**337**	P	Pb	22 03 36.9	+0.1
	baz=336						
NWLT				*e*S	Sb	22 03 46.1	+0.5
	baz=336						
EGFH	**Guangfu**	**0.63**	**209**	P	Pb	22 03 38.0	+0.9
	baz=209						
EGFH				*e*S	Sb	22 03 47.1	+1.0
	baz=209						
WUSB	**Renai**	**0.63**	**249**	*e*P	Pb	22 03 37.2	0.0
	baz=249						
WUSB				S	Sb	22 03 46.1	-0.3
	baz=249						
NTC	**Toucheng**	**0.64**	**5**	*e*S	Sb	22 03 46.7	+0.2
	baz=5.0						
EGS		**0.64**	**14**	*e*S	Sb	22 03 47.2	+0.6
	baz=14						
NFF	**Wufeng Townshi**	**0.72**	**305**	*e*P	Pb	22 03 39.2	+0.5
	baz=305						
NFF				*e*S	Sn	22 03 50.5	-1.3
	baz=305						
VWDT	**VWDT**	**0.73**	**231**	P	Pn	22 03 39.9	-0.7
	baz=230						
VWDT				S	Sn	22 03 50.9	-1.2
	baz=230						
WHP	**Taichung City**	**0.75**	**275**	*e*P	Pb	22 03 39.1	-0.1
	baz=274						
WHP				*e*S	Sb	22 03 49.8	0.0
	baz=274						
TIPB	**Shuangxi**	**0.75**	**4**	P	Pb	22 03 39.8	+0.5
	baz=4.0						
TIPB				*e*S	Sb	22 03 49.2	-0.6
	baz=4.0						
NHDH	**Xindian Distri**	**0.77**	**344**	*e*S	Sn	22 03 51.9	-1.2
	baz=343						
TWA	**Mucha**	**0.78**	**348**	*e*S	Sb	22 03 51.1	+0.6
	baz=348						
WCS	**Beigang Elemen**	**0.79**	**259**	*e*P	Pb	22 03 40.0	+0.1
	baz=258						
WCS				*e*S	Sb	22 03 51.5	+0.6
	baz=258						
LIOB	**Emei**	**0.80**	**302**	*e*P	Pb	22 03 40.5	+0.4
	baz=302						
LIOB				*e*S	Sb	22 03 52.4	+1.2
	baz=302						
NSTT	**Nanjuang**	**0.81**	**301**	*e*P	Pb	22 03 39.9	-0.3
	baz=300						
NSTT				*e*S	Sb	22 03 51.5	+0.2
	baz=300						
EHY	**Hungye**	**0.81**	**210**	*e*P	Pb	22 03 40.5	+0.2
	baz=209						
EHY				*e*S	Sb	22 03 52.7	+1.1
	baz=209						
NWF	**Wu-fen Shan**	**0.85**	**1**	*e*P	Pg	22 03 40.4	+0.3
	baz=1.0						
NWF				*e*S	Sb	22 03 53.4	+0.8
	baz=1.0						
SSLB	**Suanglung**	**0.85**	**240**	P	Pb	22 03 40.9	-0.1
	baz=239						
SSLB				*e*S	Sg	22 03 51.9	+0.6
	baz=239						
SMLT	**Sun Moon Lake**	**0.86**	**247**	*e*P	Pg	22 03 40.5	+0.3
	baz=246						
SMLT				*e*S	Sb	22 03 53.7	+0.8
	baz=246						
SXI1	**Grass Mountain**	**0.88**	**7**	*e*P	Pg	22 03 40.2	-0.4
	baz=6.0						
SXI1				*e*S	Sb	22 03 54.4	+0.9
	baz=6.0						
TYC	**Yuchr**	**0.89**	**250**	*e*P	Pb	22 03 41.7	+0.2
	baz=249						
TYC				*e*S	Sb	22 03 54.5	+1.0
	baz=249						
YULB	**Yu-li**	**0.93**	**208**	*e*S	Sb	22 03 55.1	+0.4
	baz=207						
TWS1	**Kuangyinshan**	**0.93**	**340**	*e*S	Sn	22 03 56.2	-0.9
	baz=340						

IDC ***22*** *22:20:50.8±0.7, 12°.29S×167°.16E, h244km±6km, mb4.3/19, mbtmp4.8/22, Error ellipse: s-maj=12.0km s-min=9.4km az=99.0*

NEIC ***22*** *22:20:52.0±1.4, 12°.31S±0°.09×167°.13E±0°.10, h254km±6km, mb4.8/139, Error ellipse: s-maj=14.1km s-min=13.1km az=108.0*

NOU ***22*** *22:20:51.8, 12°.33S×167°.04E, h243km, mb5.0/49, Santa Cruz Islands*

ISC 22 22:20:51.5±0.4,12°.30S±0°.05×167°.19E±0°.06,h254km±3km, h255km:pP-P,n545,σ0s81/567,mb4.8/108,17C-8D,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**5.48**	**170**	P	Pn	**22 22 13.6**	**+0.3**
RTV	**Rentapao**	**5.59**	**168**	P	Pn	**22 22 14.4**	**-0.3**
LIFNC	**LIFOU**	**8.43**	**180**	Pn	Pn	**22 22 49.0**	**-1.3**
LIFNC	**LIFOU**	**8.43**	**180**	P	Pn	**22 22 49.3**	**-1.0**
KOUNC	**Koumac, New Ca**	**8.67**	**198**	Pn	Pn	**22 22 53.0**	**-0.3**
KOUNC	**Koumac, New Ca**	**8.67**	**198**	P	Pn	**22 22 53.7**	**+0.4**
MARNC	**Mare, Loyalty**	**9.17**	**175**	Pn	Pn	**22 22 58.2**	**-1.3**
MARNC	**Mare, Loyalty**	**9.17**	**175**	P	Pn	**22 22 58.8**	**-0.8**
YATNC	**Mamie plateau,**	**9.71**	**182**	P	Pn	**22 23 04.9**	**-1.6**
DZM	**Mont Dzumac**	**9.75**	**184**	P	Pn	**22 23 07.4**	**+0.4**
	28nm,0.5s,baz=44,slow=17,SNR=50						
DZM				S	**S**	**22 24 58.4**	**+1.6**
	4.0nm,0.4s,baz=131,slow=20,SNR=1.1						
NOUC	**Port Laguerre**	**9.79**	**185**	P	**Pn**	**22 23 07.3**	**-0.1**
ONTNC	**Ouen Toro**	**9.98**	**184**	Pn	**Pn**	**22 23 09.7**	**-0.1**
ONTNC	**Ouen Toro**	**9.98**	**184**	P	**Pn**	**22 23 10.2**	**+0.4**
OUENC	**Ouen Island, N**	**10.07**	**182**	Pn	**Pn**	**22 23 10.6**	**-0.4**
OUENC	**Ouen Island, N**	**10.07**	**182**	P	**Pn**	**22 23 10.9**	**-0.1**
PINNC	**Pines Island,**	**10.26**	**179**	Pn	**Pn**	**22 23 13.0**	**-0.3**
MSVF	**Nonsavu**	**11.80**	**119**	P	**P**	**22 23 35.8**	**0.0**
	116nm,0.9s,baz=274,slow=8.5,SNR=35						
MSVF	**Nonsavu**	**11.80**	**119**		**P**	**22 23 35.5**	**-0.3**
MSVF	**Nonsavu**	**11.80**	**119**	P	**P**	**22 23 35.7**	**0.0**
KRVT	**Keravat (AS076**	**16.96**	**297**	P	**P**	**22 24 31.8**	**-1.0**
	42nm,0.6s,baz=209,slow=19,SNR=3.2						
PMG	**Port Moresby**	**19.88**	**276**	P	**P**	**22 25 04.2**	**+0.1**
	43nm,0.8s,baz=64,slow=6.1,SNR=8.9						
PMG	**Port Moresby**	**19.88**	**276**	P	**P**	**22 25 03.5**	**-0.6**
PMG				IAmb	IAmb	22 25 07.1	
	comp=Z,48nm,0.8s						
EIDS	**Eidsvold**	**20.01**	**227**	P	**P**	**22 25 05.5**	**0.0**
EIDS	**Eidsvold**	**20.01**	**227**	P	**P**	**22 25 06.1**	**+0.7**
LHI	**Lord Howe Isla**	**20.55**	**200**	P	**P**	**22 25 11.2**	**+0.1**
CTA	**Charters Tower**	**21.53**	**246**	P	**P**	**22 25 21.1**	**0.0**
	comp=Z,68nm,0.8s,baz=76,slow=11,SNR=93						
	comp=Z,68nm,0.8s						
CTA	**Charters Tower**	**21.53**	**246**	P	**P**	**22 25 21.0**	**0.0**
CTAO	**Charters Tower**	**21.53**	**246**	P	**P**	**22 25 20.6**	**-0.4**
CTAO	**Charters Tower**	**21.53**	**246**	P	**P**	**22 25 21.0**	**0.0**
RMQ	**Roma**	**22.35**	**228**	P	**P**	**22 25 29.5**	**+1.0**
MTSU	**Mount Surprise**	**22.81**	**252**	P	**P**	**22 25 32.9**	**+0.2**
NIUE	**Niue**	**23.02**	**110**	P	**P**	**22 25 34.1**	**-0.5**
ARMA	**Armidale**	**23.09**	**216**	P	**P**	**22 25 35.4**	**+0.2**
ARMA	**Armidale**	**23.09**	**216**	P	**P**	**22 25 36.3**	**+1.1**
COEN	**Coen**	**23.44**	**263**	P	**P**	**22 25 38.6**	**+0.1**
COEN				IAmb	IAmb	22 25 40.2	
	comp=Z,29nm,0.7s						
COEN	**Coen**	**23.44**	**263**	P	**P**	**22 25 37.9**	**-0.6**
QLP	**Quilpie**	**25.83**	**233**	P	**P**	**22 26 00.6**	**+0.7**
URZ	**Urewera**	**27.33**	**163**	P	**P**	**22 26 14.2**	**+1.1**
CMSA	**Cobar Meteorol**	**27.55**	**223**	P	**P**	**22 26 14.9**	**-0.3**
QIS	**Mount Isa**	**27.67**	**249**	P	**P**	**22 26 15.9**	**-0.5**
STKA	**Stephens Creek**	**30.56**	**226**	P	**P**	**22 26 41.9**	**+0.2**
	comp=Z,7.2nm,0.5s,baz=50,slow=8.9,SNR=20						
STKA				ScP	**ScP**	**22 32 54.0**	**+2.0**
	comp=Z,4.1nm,0.8s,baz=79,slow=8.4,SNR=3.2						
	comp=Z,7.2nm,0.5s						
STKA	**Stephens Creek**	**30.56**	**226**	P	**P**	**22 26 41.9**	**+0.2**
STKA	**Stephens Creek**	**30.56**	**226**	P	**P**	**22 26 42.2**	**+0.5**
LTZ	**Lake Taylor**	**30.69**	**173**	P	**P**	**22 26 43.1**	**+0.3**
OXZ	**Oxford**	**31.20**	**173**	P	**P**	**22 26 47.8**	**+0.7**
OXZ				IAmb	IAmb	22 26 48.9	
	comp=Z,28nm,0.8s						
RPZ	**Rata Peaks**	**31.48**	**175**	P	**P**	**22 26 49.8**	**+0.1**
	comp=Z,14nm,0.4s,baz=315,slow=1.1,SNR=11						
	comp=Z,14nm,0.4s						
RPZ	**Rata Peaks**	**31.48**	**175**	P	**P**	**22 26 50.3**	**+0.6**
RPZ	**Rata Peaks**	**31.48**	**175**	P	**P**	**22 26 50.8**	**+1.1**
TOO	**Toolangi**	**31.79**	**214**	P	**P**	**22 26 52.4**	**-0.1**
TOO				IAmb	IAmb	22 26 53.4	
	comp=Z,19nm,1.1s						
WR0	**Warramunga Arr**	**32.23**	**252**	P	**P**	**22 26 55.0**	**-1.5**
WR0				IAmb	IAmb	22 26 56.0	
	comp=Z,26nm,1.2s						
LCRK	**Leigh Creek**	**32.32**	**231**	P	**P**	**22 26 56.9**	**-0.2**
WRAB	**Tennant Creek**	**32.41**	**252**	P	**P**	**22 26 56.5**	**-1.5**
WRAB				IAmb	IAmb	22 26 57.3	
	comp=Z,29nm,1.1s						
WRAB	**Tennant Creek**	**32.41**	**252**	P	**P**	**22 26 56.8**	**-1.2**

WRAB Tennant Creek 32.41 252 P **P** **22 26 56.5 -1.5**
WRAB x x 22 28 23.2
WRA Warramunga Arr 32.42 252 P **P** **22 26 56.6 -1.5**
comp=Z,11nm,0.5s,baz=84,slow=8.9,SNR=226
WRA ScP **ScP** **22 32 59.8 +1.2**
comp=Z,2.3nm,1.0s,baz=75,slow=3.5,SNR=5.5
comp=Z,11nm,0.5s
WRA Warramunga Arr 32.42 252 P **P** **22 26 55.1 -3.0**
ODZ Otahua Downs 32.77 175 P **P** **22 27 01.1 +0.3**
GLAD Gladstone 33.17 207 P **P** **22 27 04.0 -0.3**
comp=Z,37nm,1.2s
OOD Oodnadatta 33.24 238 P **P** **22 27 04.9 -0.2**
HTT Hallett 33.29 226 P **P** **22 27 05.5 -0.1**
AS31 Alice Springs 33.53 246 P **P** **22 27 06.4 -1.3**
ASAR Alice Springs 33.53 246 P **P** **22 27 06.3 -1.5**
TAU Tasmania Unive 35.03 206 P **P** **22 27 19.8 -0.4**
BBOO Buckleboo 35.05 229 P **P** **22 27 20.2 -0.4**
BBOO Buckleboo 35.05 229 P **P** **22 27 20.4 -0.2**
MTN Manton Dam 35.18 265 P **P** **22 27 21.9 0.0**
MTN IAmb IAmb 22 27 23.7
comp=Z,68nm,1.8s
FAKI Fak Fak 35.82 282 P **P** **22 27 26.4 -0.9**
FAKI Fak Fak 35.82 282 P **P** **22 27 27.4 0.0**
KNRA Kununurra 37.41 260 P **P** **22 27 40.0 -0.7**
KNRA Kununurra 37.41 260 P **P** **22 27 40.3 -0.4**
WRKA Warakurna 38.82 245 P **P** **22 27 51.8 -0.6**
FORT Forrest 40.51 237 P **P** **22 28 05.9 -0.2**
FORT Forrest 40.51 237 P **P** **22 28 06.2 0.0**
NLAI Namlea 40.67 279 P **P** **22 28 07.9 +0.2**
comp=Z,1μmcomp=Z,37nm,0.6s
EDFI Ende, Flores 44.83 270 P **P** **22 28 40.7 -0.4**
comp=Z,12nm,1.1s
PSA00 Pilbara Seismi 46.07 252 P **P** **22 28 50.1 -0.5**
PSA00 Pilbara Seismi 46.07 252 P **P** **22 28 49.5 -1.1**
PSA00 IAmb IAmb 22 28 51.5
comp=Z,20nm,1.4s
PSA00 Pilbara Seismi 46.07 252 P **P** **22 28 50.5 -0.1**
MBWA Marble Bar 46.15 252 P **P** **22 28 50.8 -0.5**
MBWA Marble Bar 46.15 252 P **P** **22 28 51.5 +0.3**
MBWA Marble Bar 46.15 252 P **P** **22 28 50.9 -0.3**
MBWA pP **pP** **22 29 44.1 +0.3**
BNSI Bone 47.18 275 P **P** **22 28 59.5 +0.2**
comp=Z,30nm,0.8s
KAPI Kappang 47.39 274 P **P** **22 29 00.5 -0.4**
TOLI2 Tolitoli 47.95 283 P **P** **22 29 04.2 -1.0**
TOLI2 Tolitoli 47.95 283 P **P** **22 29 05.5 +0.3**
comp=Z,11nm,0.8s
KHU Kahuku 48.22 50 P **P** **22 29 08.0 +0.6**
AIN Ainahou 48.42 50 P **P** **22 29 08.8 0.0**
HMH Humu'ula Sheep 48.54 50 P **P** **22 29 11.0 +1.1**
MPSI Mapaga 48.57 281 P **P** **22 29 09.4 -0.5**
comp=Z,16nm,0.7s
PLAI Plampang 48.65 269 P **P** **22 29 10.0 -0.5**
comp=Z,42nm,0.6s
PLAI Plampang 48.65 269 P **P** **22 29 10.0 -0.5**
KLBR Kellerberrin 49.26 239 P **P** **22 29 14.0 -0.9**
TWSI Taliwang, Sumb 49.53 269 P **P** **22 29 16.3 -0.9**
comp=Z,14nm,0.6s
BLDU Ballidu 49.95 240 P **P** **22 29 20.2 +0.1**
NWAO Narrogin (SRO) 49.96 237 P **P** **22 29 19.2 -1.0**
NWAO IAmb IAmb 22 29 54.8
comp=Z,65nm,1.4s
NWAO Narrogin (SRO) 49.96 237 P **P** **22 29 19.2 -1.0**
comp=Z,44nm,1.2s
MORW Morawa 50.28 242 P **P** **22 29 21.9 -0.8**
MORW IAmb IAmb 22 29 50.4
comp=Z,44nm,1.8s
MORW Morawa 50.28 242 P **P** **22 29 23.2 +0.6**
TAOE Nuku Hiva Isla 51.82 92 P **P** **22 29 34.4 +0.1**
JAGI Jajag, Banyuwa 52.24 269 P **P** **22 29 35.5 -1.8**
JAGI Jajag, Banyuwa 52.24 269 P **P** **22 29 38.1 +0.8**
comp=Z,11nm,0.6s
JGF Kuroka 55.37 330 P **P** **22 29 58.9 -0.6**
JGF IAmb IAmb 22 29 59.9
comp=Z,12nm,0.6s
MJAR Matsushiro Arr 55.73 332 P **P** **22 30 00.5 -1.5**
comp=Z,7.5nm,0.8s,baz=165,slow=8.9,SNR=22
comp=Z,7.5nm,0.8s
MJAR Matsushiro Arr 55.73 332 P **P** **22 30 00.6 -1.5**
MAJO Matsushiro 55.73 332 P **P** **22 30 01.2 -0.8**
MAJO Matsushiro 55.73 332 P **P** **22 30 01.7 -0.4**
MJB9 Matsu-Tunnel 55.73 332 P **P** **22 30 01.3 -0.7**
UGM Wanagama 55.88 269 P **P** **22 30 03.1 -0.5**
UGM Wanagama 55.88 269 P **P** **22 30 04.1 +0.5**
JNU Nakatsue 56.92 324 P **P** **22 30 10.3 -0.2**
JNU IAmb IAmb 22 30 11.4
comp=Z,32nm,0.7s
JSD Sado 56.93 333 P **P** **22 30 10.2 -0.3**
JSD IAmb IAmb 22 30 11.6
comp=Z,21nm,1.0s
JHS Saijyo 57.06 327 P **P** **22 30 11.4 0.0**
JHS IAmb IAmb 22 30 12.5
comp=Z,18nm,0.7s
DRV Dumont d'Urvil 57.29 192 P **P** **22 30 12.7 +0.2**
SSLB Suanglung 57.70 308 P **P** **22 30 14.9 -1.2**
ERM Erimo 58.39 339 P **P** **22 30 21.1 +0.6**
ERM IAmb IAmb 22 30 43.4
comp=Z,53nm,1.3s
JKA Kamikawa-asahi 60.44 340 P **P** **22 30 35.1 +0.7**
JKA IAmb IAmb 22 30 36.3
comp=Z,13nm,0.6s
KSRS Korea Array 61.70 325 P **P** **22 30 43.2 +0.3**
comp=Z,3.5nm,0.8s,baz=138,slow=7.1,SNR=16
KSRS PcP **PcP** **22 31 23.1 +1.4**
comp=Z,0.3nm,0.3s,baz=129,slow=5.9,SNR=4.1
comp=Z,3.5nm,0.8s
KSAR Wonju Array Be 61.72 325 P **P** **22 30 43.2 +0.1**
YSS Yuzh-Sakhalins 62.91 341 P **P** **22 30 51.4 +0.6**
YSS IAmb IAmb 22 30 52.8
comp=Z,35nm,1.0s
USA0B Ussuriysk Arra 64.70 333 P **P** **22 31 02.5 +0.1**
USA0B IAmb IAmb 22 31 04.6
comp=Z,30nm,1.3s
USRK Ussuriysk Ar. 64.70 333 P **P** **22 31 03.7 +1.2**
comp=Z,12nm,1.0s,baz=134,slow=5.5,SNR=24
comp=Z,12nm,1.0s
USRK Ussuriysk Ar. 64.70 333 P **P** **22 31 03.2 +0.7**
VNDA Vanda 65.28 181 P **P** **22 31 06.2 +0.4**
comp=Z,3.5nm,0.6s,baz=353,slow=7.2,SNR=35
comp=Z,3.5nm,0.6s
VNDA Vanda 65.28 181 P **P** **22 31 06.1 +0.4**
VNDA Vanda 65.28 181 P **P** **22 31 06.1 +0.4**
SBA Scott Base 65.56 180 P **P** **22 31 08.5 +1.0**
SBA IAmb IAmb 22 31 09.9
comp=Z,12nm,0.8s
SBA Scott Base 65.56 180 P **P** **22 31 08.9 +1.4**
SBA pP **pP** **22 32 07.9 +2.9**
SBA sP **sP** **22 32 30.4 -2.0**
PEA0B Petropavlovsk- 65.65 354 P **P** **22 31 08.9 +0.5**
PETK Petropavlovsk- 65.65 354 P **P** **22 31 09.3 +0.9**
comp=Z,4.2nm,0.8s,baz=183,slow=15,SNR=11
comp=Z,4.2nm,0.8s
PETK Petropavlovsk- 65.65 354 P **P** **22 31 08.4 0.0**
CASY Casey 65.74 202 P **P** **22 31 08.6 -0.2**
CASY Casey 65.74 202 P **P** **22 31 08.8 -0.1**
GSTR Great Sitkin T 65.74 11 P **P** **22 31 09.5 +0.4**
MDJ Mudanjiang 66.11 332 P **P** **22 31 12.1 +0.6**
MDJ IAmb IAmb 22 31 13.5
comp=Z,21nm,1.2s
CCD Concordia, Ant 67.26 191 P **P** **22 31 19.1 +0.3**
CCD sP **sP** **22 32 46.3 +2.6**
CN2 Changchun 67.54 329 *e*P **P** **22 31 21.3 +0.8**
CN2 pmax pmax
comp=Z,10.0nm,1.2s
NIKH Nikolski High 68.18 15 P **P** **22 31 24.4 +0.1**
NIKH Nikolski High 68.18 15 P **P** **22 31 23.4 -0.9**
baz=205
LYN LuoYang 69.73 314 ⇑P **P** **22 31 34.4 +0.2**
LYN S **S** **22 40 30.0 +7.8**
LYN SKS **ScS** **22 41 11.9 +0.4**
LYN LuoYang 69.73 314 sS sS 22 42 07.9 +5.4
LYN LuoYang 69.73 314 SS SS 22 44 42.0 -15
LYN pmax pmax
comp=Z,20nm,0.8s
HNS HongShan 69.75 318 ⇑P **P** **22 31 35.1 +0.8**
ENH Enshi 69.78 309 P **P** **22 31 33.9 -0.8**
ENH IAmb IAmb 22 31 35.9
comp=Z,16nm,0.9s
ENH Enshi 69.78 309 P **P** **22 31 34.7 0.0**
BJI Beijing 70.34 321 P **P** **22 31 38.1 +0.3**
BJI pmax pmax
comp=Z,6.0nm,0.8s
SPIA Saint Paul Isl 71.69 13 P **P** **22 31 45.4 -0.1**
SPIA Saint Paul Isl 71.69 13 P **P** **22 31 45.2 -0.3**
baz=203
XAN Xi'an 72.00 312 P **P** **22 31 48.3 +0.3**
XAN pP PcP 22 31 56.5 -8.5
XAN pmax pmax
comp=Z,14nm,0.9s
XLT XiLinHaoTe 72.70 324 *e*P **P** **22 31 53.3 +1.4**
XLT pP pP 22 32 51.9 +1.3
XLT sP sP 22 33 19.9 +2.2
XLT S **SKiKP** **22 40 59.8 +0.7**
XLT ScS **SKSac** **22 41 26.4 -6.0**
XLT pmax pmax
comp=Z,22nm,0.8s
XLT pmax pmax
comp=Z,180nm,6.5s
HHC Hu-ho-hao-te 73.69 319 *e*P **P** **22 31 58.8 +1.0**
HHC pmax pmax
comp=Z,60nm,0.8s
HHC pmax pmax
comp=Z,310nm,6.2s
CM31 Chiang Mai Arr 73.91 293 P **P** **22 32 00.1 +0.8**
CMAR Chiang Mai Arr 73.91 293 P **P** **22 32 00.3 +1.0**
comp=Z,5.8nm,0.9s,baz=123,slow=4.5,SNR=30
CMAR pP **pP** **22 32 55.8 -1.4**
comp=Z,1.5nm,0.8s,baz=126,slow=4.7,SNR=3.1
comp=Z,5.8nm,0.9s
CMAR Chiang Mai Arr 73.91 293 P **P** **22 31 59.8 +0.5**
CHTO Chiang Mai 74.02 294 P **P** **22 31 59.8 -0.2**
PZH PanZhiHua 74.33 302 P **P** **22 32 01.9 +0.1**
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,80nm,5.7s
R17K Ugashik Creek 75.84 19 P **P** **22 32 09.2 -0.4**
baz=217
P16K Nushagak River 76.48 18 P **P** **22 32 11.7 -1.4**
baz=215
Q17K Contact Creek 76.50 19 P **P** **22 32 12.9 -0.5**
baz=217
OHAK Old Harbor 76.55 21 P **P** **22 32 13.7 +0.2**
OHAK IAmb IAmb 22 32 14.8
comp=Z,28nm,1.0s
OHAK Old Harbor 76.55 21 P **P** **22 32 12.9 -0.6**
baz=220
LZH Lanzhou 76.64 312 *e*P **P** **22 32 16.4 +1.6**
LZH pP pP 22 33 13.8 -0.4
LZH pmax pmax
comp=Z,29nm,1.0s
O16K Kokwok River B 76.91 17 P **P** **22 32 14.5 -1.0**
baz=215
P17K Kvichak River 77.08 18 P **P** **22 32 15.0 -1.4**
baz=216
Q18K Katmai Hardscr 77.09 19 P **P** **22 32 16.3 -0.3**
baz=218
KDAK Kodiak Island 77.23 21 P **P** **22 32 17.7 +0.4**
KDAK IAmb IAmb 22 32 49.1
comp=Z,33nm,1.6s
KDAK Kodiak Island 77.23 21 P **P** **22 32 17.6 +0.3**
baz=220
O17K Koliganek Bris 77.35 18 P **P** **22 32 17.4 -0.5**
baz=216,SNR=7.5
N16K Nishlik Lake 77.45 17 P **P** **22 32 19.6 +1.1**
baz=214
GAMB Gambell 77.55 9 P **P** **22 32 19.4 +0.5**
baz=201
P18K Big Mountain, 77.61 19 P **P** **22 32 18.7 -0.7**
P18K IAmb IAmb 22 32 20.0
comp=Z,33nm,0.9s
P18K Big Mountain, 77.61 19 P **P** **22 32 19.0 -0.4**
baz=218
QSPA South Pole Qui 77.72 180 P **P** **22 32 20.6 +0.4**
QSPA IAmb IAmb 22 32 21.0
comp=Z,16nm,0.7s
Q19K Cape Douglas, 77.75 20 P **P** **22 32 20.4 +0.2**
Q19K Cape Douglas, 77.75 20 P **P** **22 32 19.9 -0.3**
baz=219,SNR=6.3
Q20K Shuyak Island 77.92 20 P **P** **22 32 20.4 -0.7**
baz=220
O18K Koktuh Hills 77.99 18 P **P** **22 32 21.0 -0.5**
baz=218
N18K Kilae Creek 78.44 18 P **P** **22 32 23.4 -0.5**
baz=217
SVW2 Sparrevohn 78.87 17 P **P** **22 32 26.7 +0.5**
N19K Bonanza Creek 78.97 18 P **P** **22 32 26.3 -0.6**
baz=218
O20K Slope Mountain 78.98 19 P **P** **22 32 26.7 -0.2**
baz=220
CNPM China Poot 79.01 20 P **P** **22 32 27.8 +0.7**
CNPM IAmb IAmb 22 32 30.7
comp=Z,18nm,0.7s
BRSE Bradley Lake S 79.34 20 P **P** **22 32 28.9 +0.1**
baz=222,SNR=6.0
YAK Yakutsk 79.69 343 P **P** **22 32 30.6 0.0**
YAK IAmb IAmb 22 32 31.6
comp=Z,28nm,0.9s
M19K Big River Lodg 79.86 17 P **P** **22 32 31.9 +0.3**
baz=218
L19K White Mountain 79.94 17 P **P** **22 32 32.7 +0.6**
L19K IAmb IAmb 22 32 36.1
comp=Z,55nm,1.8s
L19K White Mountain 79.94 17 P **P** **22 32 32.9 +0.8**
baz=218,SNR=13
BILL Bilibino 80.12 360 P **P** **22 32 33.1 +0.3**
BILL IAmb IAmb 22 32 34.3
comp=Z,28nm,0.9s
ULN Ulaanbaatar 80.14 324 P **P** **22 32 33.6 0.0**
M20K Styx River 80.21 18 P **P** **22 32 32.9 -0.6**
baz=219
TTA Tatalina 80.22 16 P **P** **22 32 34.0 +0.5**
baz=216,SNR=9.8
O22K Cooper Landing 80.23 20 P **P** **22 32 34.0 +0.5**
baz=223
L20K Farewell, AK 80.46 17 P **P** **22 32 35.6 +0.8**
baz=218,SNR=20
SONM Songino Array 80.51 323 P **P** **22 32 36.0 +0.5**
comp=Z,2.9nm,0.8s,baz=146,slow=3.9,SNR=19
comp=Z,2.9nm,0.8s
SONM Songino Array 80.51 323 P **P** **22 32 35.1 -0.4**
SUA Susitna One 80.63 19 P **P** **22 32 35.4 -0.4**
baz=222,SNR=7.9
Q23K Middleton Isla 80.66 22 P **P** **22 32 35.5 -0.3**
baz=226
RC01 Rabbit Creek A 80.68 20 P **P** **22 32 36.2 +0.3**
RC01 IAmb IAmb 22 32 37.9
comp=Z,28nm,1.2s
RC01 Rabbit Creek A 80.68 20 P **P** **22 32 36.1 +0.2**
baz=223,SNR=9.0
SKT Skwentna 80.77 18 P **P** **22 32 36.8 +0.3**
baz=221
GTA Gaotai 80.94 314 ⇑P **P** **22 32 39.0 +1.0**
GTA pP pP 22 33 42.0 +4.0
GTA sP sP 22 34 08.0 +3.2
GTA pmax pmax
comp=Z,9.0nm,1.1s
M22K Willow 81.05 19 P **P** **22 32 38.0 +0.2**
baz=222
K20K Telida 81.09 17 P **P** **22 32 39.0 +0.9**
K20K Telida 81.09 17 P **P** **22 32 38.8 +0.7**
baz=218,SNR=9.0
PMR Palmer 81.25 20 P **P** **22 32 38.9 0.0**
baz=223
PPLA Purkeypile 81.28 18 P **P** **22 32 39.3 +0.1**
PPLA Purkeypile 81.28 18 P **P** **22 32 39.1 -0.1**
baz=220
KNK Knik Glacier 81.34 20 P **P** **22 32 39.8 +0.4**
baz=224,SNR=8.7
GLI Glacier Island 81.42 21 P **P** **22 32 39.8 0.0**
GLI IAmb IAmb 22 32 40.9
comp=Z,23nm,0.8s
GLI Glacier Island 81.42 21 P **P** **22 32 39.9 +0.1**
baz=225,SNR=14
GCSA Galena City Sc 81.47 15 P **P** **22 32 38.9 -1.0**
baz=216
CUT Chulitna 81.48 19 P **P** **22 32 39.5 -0.6**
baz=222
EYAK Cordova Ski Ar 81.66 21 P **P** **22 32 40.6 -0.4**
baz=226
SML Sawmill 81.66 20 P **P** **22 32 41.3 +0.2**
baz=224,SNR=11
CAST Castle Rocks 81.71 17 P **P** **22 32 40.8 -0.5**
CAST IAmb IAmb 22 32 42.8
comp=Z,20nm,0.7s
CAST Castle Rocks 81.71 17 P **P** **22 32 40.6 -0.7**
baz=220,SNR=18
J20K Nowinta River 81.72 16 P **P** **22 32 42.0 +0.7**
baz=218,SNR=18
M23K Glacier View 81.85 20 P **P** **22 32 42.2 0.0**
baz=224,SNR=6.6
CHUM Lake Minchumin 82.00 17 P **P** **22 32 42.6 -0.2**
baz=220,SNR=9.0
SCM Sheep Creek Mo 82.02 20 P **P** **22 32 43.4 +0.4**
SCM Sheep Creek Mo 82.02 20 P **P** **22 32 43.5 +0.4**
baz=225,SNR=19
KLU Klutina 82.25 21 P **P** **22 32 44.7 +0.5**
baz=226,SNR=12
TRF Thorofare Moun 82.26 18 P **P** **22 32 43.7 -0.6**
baz=222,SNR=18
WAT1 Susitna Watana 82.34 19 P **P** **22 32 44.6 0.0**
baz=224
SHL Shillong 82.35 298 P **P** **22 32 45.6 -0.1**
BMRM Bremner River 82.36 22 P **P** **22 32 45.0 +0.2**
BMRM Bremner River 82.36 22 P **P** **22 32 45.0 +0.2**
baz=227,SNR=10
WAT6 Susitna Watana 82.42 19 P **P** **22 32 45.4 +0.2**
baz=224,SNR=24
BPAW Bear Paw Mtn. 82.54 17 P **P** **22 32 44.8 -0.9**
baz=221,SNR=6.1
M24K Tolsona, Glenn 82.60 20 P **P** **22 32 46.9 +0.9**
M24K Tolsona, Glenn 82.60 20 P **P** **22 32 46.8 +0.9**
baz=226,SNR=20
KHMM Horse Mountain 82.72 46 P **P** **22 32 48.6 +1.4**
KHMM IAmb IAmb 22 32 49.6
comp=Z,15nm,0.9s
CRQE Cirque 82.76 22 P **P** **22 32 47.1 +0.1**
baz=229
N25K Chitina, Valde 82.79 21 P **P** **22 32 47.5 +0.5**
baz=227,SNR=27
MESA MESA 82.81 23 P **P** **22 32 47.9 +0.6**
baz=230,SNR=11
MCK McKinley 82.88 18 P **P** **22 32 47.3 -0.1**
MCK IAmb IAmb 22 32 49.8
comp=Z,14nm,0.6s
MCK McKinley 82.88 18 P **P** **22 32 47.1 -0.3**
baz=223
DHY Denali Highway 82.89 19 P **P** **22 32 47.6 0.0**
baz=225
DIB Dawson Inlet, 82.99 32 P **P** **22 32 48.5 +0.4**
DIB IAmb IAmb 22 32 49.7
comp=Z,29nm,0.8s
KSXB Camp Six Broad 83.00 45 P **P** **22 32 49.6 +1.0**
KSXB IAmb IAmb 22 32 49.9
comp=Z,14nm,1.1s
BWN Browne 83.04 18 P **P** **22 32 48.4 +0.2**
I21K Tanana 83.09 16 P **P** **22 32 49.0 +0.7**
baz=220,SNR=8.7
SNCC San Nicolas Is 83.10 54 P **P** **22 32 48.7 -0.5**
baz=250
HARP HAARP 83.14 20 P **P** **22 32 49.1 +0.4**
baz=227,SNR=6.7
MCARA McCarthy VSAT 83.20 22 P **P** **22 32 49.4 +0.4**
baz=229,SNR=7.8
H21K Melozitna Rive 83.24 16 P **P** **22 32 50.0 +0.8**
baz=219,SNR=15
IMAR Indian Mountai 83.25 15 P **P** **22 32 50.1 +0.9**
SCZ2 Santa Cruz Isl 83.27 53 P **P** **22 32 49.0 -1.0**
baz=250
MLY Manley 83.32 17 P **P** **22 32 49.7 0.0**
baz=221,SNR=13
L02F Cave Junction 83.32 44 P **P** **22 32 50.6 +0.5**
baz=247
PINM Pinnacle 83.42 24 P **P** **22 32 50.4 +0.1**
baz=231,SNR=5.3
PAX Paxson 83.43 20 P **P** **22 32 50.1 -0.1**
baz=226,SNR=8.3
NEA2 Nenana 83.47 17 P **P** **22 32 49.9 -0.4**
NEA2 IAmb IAmb 22 32 50.4
comp=Z,9.9nm,0.8s
NEA2 Nenana 83.47 17 P **P** **22 32 49.7 -0.6**
baz=223,SNR=16
K02D Willamette Mer 83.48 44 P **P** **22 32 51.9 +0.9**
baz=247,SNR=6.2
J01E Myrtle Point 83.48 43 P **P** **22 32 51.9 +1.1**
J01E IAmb IAmb 22 32 52.8
comp=Z,18nm,0.8s
J01E Myrtle Point 83.48 43 P **P** **22 32 51.9 +1.1**
baz=246
PNL Peninsula 83.49 24 P **P** **22 32 50.3 -0.3**
baz=232
BARN Barnard Glacie 83.49 22 P **P** **22 32 51.3 +0.6**
CTG Chitna Glacier 83.55 23 P **P** **22 32 51.5 +0.5**
baz=230,SNR=11
SIT Sitka 83.69 28 P **P** **22 32 51.4 -0.2**
baz=236
YBH Yreka Blue Hor 83.76 45 P **P** **22 32 53.2 +0.7**
YBH IAmb IAmb 22 32 54.6
comp=Z,22nm,0.9s
I23K Minto, Yukon-K 83.80 17 P **P** **22 32 51.7 -0.2**
baz=223,SNR=7.4
H22K Ishtalitna Cre 83.80 16 P **P** **22 32 52.7 +0.7**
baz=221,SNR=14
CRAG Craig 83.86 30 P **P** **22 32 52.9 +0.4**
baz=238
CCB Clear Creek Bu 83.88 18 P **P** **22 32 52.1 -0.3**
M26K Nabesna, AK 83.89 21 P **P** **22 32 52.8 +0.3**
baz=229,SNR=24
K24K Donnelly Dome 83.91 19 P **P** **22 32 53.0 +0.4**
baz=226,SNR=11
I02E Swisshome, OR 83.92 43 P **P** **22 32 53.6 +0.6**
I02E Swisshome, OR 83.92 43 P **P** **22 32 54.0 +1.0**
baz=246
HUMO Hull Mountain 83.93 44 P **P** **22 32 54.0 +0.9**
HUMO IAmb IAmb 22 32 55.4
comp=Z,24nm,0.9s
HDA Harding Lake 83.97 18 P **P** **22 32 53.0 +0.2**
baz=225,SNR=66
TCOL CIGO, UAF Yank 84.03 18 P **P** **22 32 52.8 -0.3**
baz=224,SNR=5.9
COLA College 84.03 18 P **P** **22 32 52.7 -0.4**
baz=224
I03D Drain, OR 84.09 43 P **P** **22 32 54.8 +0.9**
baz=247
HOLB Holberg 84.09 35 P **P** **22 32 54.1 +0.3**
MAW Mawson 84.10 202 P **P** **22 32 53.7 +0.2**
comp=Z,11nm,1.0s,baz=105,slow=4.4,SNR=14
comp=Z,11nm,1.0s
MAW Mawson 84.10 202 P **P** **22 32 53.6 +0.1**
RIDG Independent Ri 84.17 19 P **P** **22 32 54.0 +0.1**
baz=227,SNR=13
L04D Klamath Falls 84.22 45 P **P** **22 32 55.5 +0.7**
baz=248,SNR=11
H23K Yukon River 84.25 16 P **P** **22 32 54.6 +0.4**
baz=222,SNR=17
IL31 84.25 18 P **P** **22 32 53.9 -0.3**
ILAR Eielson Array 84.25 18 P **P** **22 32 54.4 +0.1**
comp=Z,30nm,0.6s,baz=242,slow=5.5,SNR=305
ILAR pP **pP** **22 33 53.4 -1.0**
comp=Z,2.7nm,0.7s,baz=226,slow=5.6,SNR=3.0
comp=Z,30nm,0.6s
ILAR Eielson Array 84.25 18 P **P** **22 32 53.9 -0.4**
M27K Edge Creek, AK 84.25 21 P **P** **22 32 54.5 0.0**
baz=230,SNR=22
POKR Poker Plat Res 84.33 18 P **P** **22 32 54.2 -0.5**
baz=224,SNR=9.1
YUK8 Steele Glacier 84.35 23 P **P** **22 32 55.1 -0.1**
baz=232,SNR=36
DOT Dot Lake 84.36 20 P **P** **22 32 55.2 +0.3**
DOT IAmb IAmb 22 32 56.2
comp=Z,18nm,0.7s
YUK3 Moose Creek 84.40 22 P **P** **22 32 55.0 -0.3**
baz=231,SNR=21
J25K Salcha River, 84.60 19 P **P** **22 32 56.6 +0.5**
J25K Salcha River, 84.60 19 P **P** **22 32 56.0 -0.1**
baz=226,SNR=60
PLBC Pleasant Camp 84.61 25 P **P** **22 32 56.5 +0.3**
baz=235,SNR=8.7
SCRK Sand Creek 84.61 19 P **P** **22 32 56.5 +0.2**
baz=228,SNR=27
GRNB Grenville Isla 84.62 32 P **P** **22 32 57.6 +1.3**
GRNB IAmb IAmb 22 32 58.2
comp=Z,15nm,0.8s
BVCY Beaver Creek 84.65 22 P **P** **22 32 56.8 +0.4**
baz=231
YUK6 Outpost Mounta 84.68 24 P **P** **22 32 57.2 +0.5**
baz=233,SNR=7.4
ISA Isabella, Lake 84.72 52 P **P** **22 32 57.1 -0.2**
ISA IAmb IAmb 22 32 59.1
comp=Z,12nm,1.1s
ISA Isabella, Lake 84.72 52 P **P** **22 32 57.0 -0.4**
baz=251
H24K Noodor Dome 84.72 17 P **P** **22 32 55.9 -0.8**
baz=224,SNR=6.1
L27K Beaver Creek, 84.73 21 P **P** **22 32 57.2 +0.4**
baz=230,SNR=12
WRAK Wrangell Islan 84.73 29 P **P** **22 32 57.2 +0.4**
baz=239

G03D	McMinnville, O	84.74	42	P	P	22 32 57.4	+0.3	
	baz=247							
BEKR	Beckworth	84.74	47	P	P	22 32 57.7	+0.2	
BEKR				IAmb	IAmb	22 32 58.6		
	comp=Z,10nm,0.8s							
J04D	Umpqua Nationa	84.74	44	P	P	22 32 58.2	+0.8	
J04D	Umpqua Nationa	84.74	44	P	P	22 32 58.0	+0.5	
	baz=248							
BCAR	Beaver Creek A	84.75	21	P	P	22 32 56.8	-0.1	
P30M	Million Dollar	84.75	25	P	P	22 32 56.4	-0.5	
	baz=234							
I04A	Tendick Farm,	84.75	43	P	P	22 32 57.6	+0.3	
	baz=248,SNR=8.8							
YUK4	Talbot Arm	84.81	23	P	P	22 32 57.4	0.0	
	baz=233,SNR=17							
H04D	Lebanon	84.81	42	P	P	22 32 58.0	+0.5	
H04D				IAmb	IAmb	22 32 59.5		
	comp=Z,19nm,0.9s							
H04D	Lebanon	84.81	42	P	P	22 32 58.4	+0.9	
	baz=247,SNR=5.5							
EDW2	Edwards Air Fo	84.84	53	P	P	22 32 58.5	+0.5	
	baz=251							
BFSC	Mount Baldy Ra	84.89	54	P	P	22 32 58.3	0.0	
	baz=252							
HYT	Haines Junctio	84.94	24	P	P	22 32 57.6	-0.3	
HYT				IAmb	IAmb	22 32 59.3		
	comp=Z,13nm,0.9s							
HYT	Haines Junctio	84.94	24	P	P	22 32 58.3	+0.4	
	baz=234,SNR=16							
SKAG	Skagway	85.04	26	P	P	22 32 58.3	0.0	
	baz=236							
J26L	Joseph Creek	85.10	19	P	P	22 32 59.4	+0.8	
J26L				IAmb	IAmb	22 33 00.6		
	comp=Z,19nm,1.4s							
J26L	Joseph Creek	85.10	19	P	P	22 32 59.1	+0.5	
	baz=228,SNR=9.3							
COLD	Coldfoot	85.12	15	P	P	22 32 59.5	+0.9	
	baz=222,SNR=12							
H04A	Detroit Lake	85.24	42	P	P	22 32 59.9	+0.2	
H04A				IAmb	IAmb	22 33 01.0		
	comp=Z,24nm,1.2s							
LRMC	Laurel Mtn Rad	85.27	52	P	P	22 33 00.5	+0.3	
	baz=251							
CWC	Cottonwood Cre	85.27	51	P	P	22 33 00.3	+0.1	
	baz=251							
K27K	Chicken	85.28	20	P	P	22 32 59.8	+0.5	
	baz=229							
J05D	Fort Rock, OR	85.35	44	P	P	22 32 59.8	-0.6	
	baz=248,SNR=14							
K05A	Summer Lake	85.38	45	P	P	22 33 01.6	+1.0	
K05A				IAmb	IAmb	22 33 02.7		
	comp=Z,25nm,0.9s							
MONP2	Monument Peak	85.46	55	P	P	22 33 01.8	+0.5	
	baz=252							
O30N	Mendenhall	85.48	24	P	P	22 32 59.7	-0.8	
	baz=235,SNR=9.9							
N30M	Aishikik Lake	85.48	23	P	P	22 33 00.6	+0.1	
	baz=234							
MPMC	Manual Prospec	85.60	52	P	P	22 33 01.8	-0.1	
	baz=251,SNR=8.2							
IKP	In-Ko-Pah, Jac	85.64	55	P	P	22 33 02.0	0.0	
	baz=252							
PFO	Pinyon Flats O	85.65	54	P	P	22 33 01.6	-0.4	
	baz=252							
TPFO	Pinon Flats	85.65	54	P	P	22 33 02.0	-0.1	
	baz=252							
I05D	Terrebonne, OR	85.67	43	P	P	22 33 02.3	+0.4	
	baz=248,SNR=5.6							
PINE	Pine Mountain	85.74	44	P	P	22 33 03.2	+0.8	
PINE				IAmb	IAmb	22 33 04.4		
	comp=Z,19nm,0.8s							
NVAR	Mina Array Bea	85.75	49	P	P	22 33 03.5	+0.9	
	comp=Z,5.7nm,0.8s,baz=231,slow=8.4,SNR=24							
NVAR				pP	pP	22 34 03.0	+0.2	
	comp=Z,3.9nm,1.0s,baz=233,slow=7.0,SNR=3.5							
	comp=Z,5.7nm,0.8s							
NVAR	Mina Array Bea	85.75	49	P	P	22 33 03.1	+0.5	
I26K	Coal Creek Min	85.77	19	P	P	22 33 01.9	+0.1	
	baz=228							
P32M	Atlin	85.80	26	P	P	22 33 02.0	-0.1	
	baz=237							
NV11	Mina Array Sit	85.86	49	P	P	22 33 03.6	+0.5	
NV11				IAmb	IAmb	22 33 04.8		
	comp=Z,12nm,1.1s							
GSC	Goldstone, Bar	85.89	53	P	P	22 33 03.3	+0.1	
	baz=252							
WHY	Whitehorse	85.90	25	P	P	22 33 02.2	-0.4	
	baz=236							
SWSC	Sam W. Stewart	85.97	55	P	P	22 33 03.2	-0.3	
	baz=253							
N31M	Braeburn, Yuko	86.01	24	P	P	22 33 02.5	-0.6	
	baz=235,SNR=6.4							
T35M	Bob Quinn	86.01	29	P	P	22 33 02.9	-0.3	
	baz=240							
G05D	Wamic, OR	86.02	42	P	P	22 33 03.1	-0.4	
	baz=248							
HEC	Hector,Ludlow	86.12	53	P	P	22 33 03.7	-0.6	
	baz=252							
BELC	Belle Mtn. Jos	86.13	54	P	P	22 33 05.3	+0.8	
	baz=252,SNR=7.3							
DAWY	Dawson	86.21	21	P	P	22 33 03.9	-0.1	
DAWY	Dawson	86.21	21	P	P	22 33 03.9	-0.1	
	baz=232							
FURC	Furnace Creek,	86.21	52	P	P	22 33 05.1	+0.5	
	baz=252,SNR=6.7							
M30M	Minto, Yukon	86.25	23	P	P	22 33 03.5	-0.7	
	baz=234,SNR=9.4							
TOLK	Toolik Lake Re	86.33	15	P	P	22 33 05.4	+0.8	
	baz=222,SNR=12							
BC3	Big Chuckawall	86.46	55	P	P	22 33 06.1	+0.1	
	baz=253							
SHOC	Shoshone, Teco	86.49	52	P	P	22 33 06.0	0.0	
	baz=252							
P33M	Teslin, Yukon	86.52	26	P	P	22 33 05.5	-0.2	
	baz=238							
GMRC	Granite Mounta	86.63	54	P	P	22 33 07.1	+0.3	
	baz=253,SNR=5.9							
BMAR	Burnt Mountain	86.78	17	P	P	22 33 07.7	+1.0	
TPNV	Topopah Spring	86.83	51	P	P	22 33 07.8	0.0	
	baz=252							
DLBC	Dease Lake	86.84	28	P	P	22 33 06.8	-0.4	
DLBC	Dease Lake	86.84	28	P	P	22 33 07.0	-0.2	
	baz=240,SNR=8.1							
WVOR	Wild Horse Val	86.84	46	P	P	22 33 08.2	+0.6	
WVOR				IAmb	IAmb	22 33 09.7		
	comp=Z,15nm,1.1s							
IRM	Iron Mountain	86.85	54	P	P	22 33 08.6	+0.7	
	baz=253,SNR=8.2							
D24K	Happy Valley	86.90	14	P	P	22 33 07.9	+0.8	
	baz=223,SNR=7.1							
C23K	Itkillik River	86.98	13	P	P	22 33 08.8	+1.3	
	baz=221,SNR=15							
BMN	Battle Mountai	87.19	48	P	P	22 33 10.0	+0.6	
BMN				IAmb	IAmb	22 33 11.5		
	comp=Z,36nm,1.8s							
BLYC	Blythe	87.23	55	P	P	22 33 10.3	+0.8	
BLYC				IAmb	IAmb	22 33 11.8		
	comp=Z,13nm,1.1s							
I29M	Ogilvie Camp,	87.38	20	P	P	22 33 08.9	-0.7	
I29M				IAmb	IAmb	22 33 11.2		
	comp=Z,9.7nm,0.8s							
I29M	Ogilvie Camp,	87.38	20	P	P	22 33 09.0	-0.5	
	baz=233							
TIXI	Tiksi	87.58	349	P	P	22 33 10.0	-0.3	
HAWA	Hanford	87.60	42	P	P	22 33 11.7	+0.7	
HAWA				IAmb	IAmb	22 33 12.9		
	comp=Z,17nm,0.9s							
LLLB	Lillooet	87.69	37	P	P	22 33 11.4	0.0	
LLLB				IAmb	IAmb	22 33 13.0		
	comp=Z,7.8nm,0.7s							
PDMCI	Parker Dam,Lak	87.69	54	P	P	22 33 12.7	+1.0	
	baz=254							
R11A	Troy Canyon, C	87.75	50	P	P	22 33 12.5	+0.3	
R11A	Troy Canyon, C	87.75	50	P	P	22 33 12.6	+0.4	
	baz=252,SNR=10							
E08A	Dider Farm, El	87.94	42	P	P	22 33 13.1	+0.5	
E08A				IAmb	IAmb	22 33 14.7		
	comp=Z,18nm,0.9s							
214A	Organ Pipe Nat	88.12	57	P	P	22 33 13.8	0.0	
	baz=254							
MMPY	Sheldon Lake,	88.42	24	P	P	22 33 13.4	-1.1	
	baz=239							
EPYK	Eagle Plains	88.50	20	P	P	22 33 14.4	-0.4	
	baz=234							
BMO	Blue Mountains	88.55	44	P	P	22 33 15.7	0.0	
BMO				IAmb	IAmb	22 33 17.4		
	comp=Z,15nm,1.2s							
ELK	Elko	88.72	48	P	P	22 33 17.2	+0.4	
ELK				IAmb	IAmb	22 33 18.6		
	comp=Z,13nm,1.1s							
HSIG		88.91	60	P	P	22 33 18.1	+0.5	
HSIG				IAmb	IAmb	22 33 20.2		
	comp=Z,36nm,1.6s							
MFID	Camas Ranch	89.11	45	P	P	22 33 18.8	+0.5	
MFID				IAmb	IAmb	22 33 20.2		
	comp=Z,13nm,0.8s							
BELA	Belgrano 2	89.14	175	P	P	22 33 16.9	-0.8	
SZCU	Shurtz Canyon	89.43	51	P	P	22 33 21.1	+1.0	
SZCU				IAmb	IAmb	22 33 22.4		
	comp=Z,10nm,1.2s							
NEW	Newport	89.77	40	P	P	22 33 21.0	-0.2	
NEW				IAmb	IAmb	22 33 22.7		
	comp=Z,14nm,0.9s							
NEW	Newport	89.77	40	P	P	22 33 21.5	+0.3	
	baz=251,SNR=11							
TUC	Tucson	89.87	57	P	P	22 33 23.4	+1.3	
TUC	Tucson	89.87	57	P	P	22 33 22.6	+0.5	
	baz=255							
X16A	Lo Mia Camp, P	89.87	55	P	P	22 33 23.2	+0.9	
X16A				IAmb	IAmb	22 33 24.6		
	comp=Z,6.7nm,0.9s							
HLID	Hailey	90.14	45	P	P	22 33 23.9	+0.7	
HLID				IAmb	IAmb	22 33 25.3		
	comp=Z,9.8nm,0.8s							
HLID	Hailey	90.14	45	P	P	22 33 23.1	-0.1	
	baz=253,SNR=15							
WUAZ	Wupatki	90.21	54	P	P	22 33 24.5	+0.7	
	baz=255							
DUG	Dugway, Tooele	90.34	49	P	P	22 33 24.3	+0.1	
DUG	Dugway, Tooele	90.34	49	P	P	22 33 24.4	+0.2	
	baz=254,SNR=5.9							
WMQ	Urumqi	90.97	315	eP	P	22 33 28.1	+1.2	
WMQ				pmax	pmax			
	comp=Z,11nm,1.1s							
SMAI	San Martin Ant	91.00	162	P	P	22 33 26.7	+0.2	
BCYI	Bear Canyon	91.05	45	P	P	22 33 28.3	+0.8	
MSO	Missoula	91.39	42	P	P	22 33 28.7	-0.2	
	baz=254							
MCMT	McKenzie Canyo	91.57	45	P	P	22 33 30.4	+0.4	
WALA	Waterton Lakes	92.04	40	P	P	22 33 32.5	+0.7	
WALA				IAmb	IAmb	22 33 33.8		
	comp=Z,9.7nm,1.1s							
121A	Cookes Peak, D	92.39	57	P	P	22 33 33.8	-0.1	
	baz=257							
BOZ	Bozeman (W)	92.61	44	P	P	22 33 35.0	+0.5	
BOZ				IAmb	IAmb	22 33 36.5		
	comp=Z,9.4nm,1.2s							
BOZ	Bozeman (W)	92.61	44	P	P	22 33 34.6	0.0	
	baz=255,SNR=7.3							
PV23	Carpenter Ridg	92.76	51	P	P	22 33 35.5	-0.1	
PV23				IAmb	IAmb	22 33 37.2		
	comp=Z,10.0nm,0.8s							
PDAR	Pinedale Array	93.36	47	P	P	22 33 37.7	-0.5	
	comp=Z,0.8nm,0.7s,baz=171,slow=3.8,SNR=6.9							
	comp=Z,0.8nm,0.7s							
PDAR	Pinedale Array	93.36	47	P	P	22 33 37.9	-0.3	
BNM	Barren Site	93.69	56	P	P	22 33 39.4	-0.5	
O20A	White River Ci	93.72	50	P	P	22 33 39.2	-0.7	
	baz=257							
ANMO	Albuquerque	93.99	55	P	P	22 33 40.2	-1.0	
	baz=258							
RLMT	Red Lodge	94.11	45	P	P	22 33 40.8	-0.7	
	baz=257							
MNTX	Cornudas Mount	94.20	59	P	P	22 33 42.5	+0.5	
	baz=258							
S22A	4UR Ranch, Cre	94.28	52	P	P	22 33 43.3	+0.6	
	baz=258							
EGMT	Eagleton	94.44	42	P	P	22 33 44.1	+1.3	
	baz=257							
TX32	Lajitas Array	95.19	61	P	P	22 33 46.7	0.0	
TXAR	Lajitas Array	95.19	61	P	P	22 33 47.3	+0.6	
	comp=Z,1.8nm,0.8s,baz=224,slow=5.9,SNR=21							
TXAR				pP	pP	22 34 47.9	+0.3	
	comp=Z,0.3nm,0.7s,baz=227,slow=6.1,SNR=2.3							
	comp=Z,1.8nm,0.8s							
TROLL	Troll, Antarti	95.27	185	P	P	22 33 45.8	-0.5	
ZAA0	Zalesovo Array	95.39	324	P	P	22 33 45.6	-1.2	
ZAA0				IAmb	IAmb	22 33 46.9		
	comp=Z,6.4nm,1.4s							
ZALV	Zalesovo Beam	95.39	324	P	P	22 33 46.3	-0.5	
	comp=Z,1.3nm,0.8s,baz=113,slow=3.9,SNR=7.5							
ZALV				PKKP	PKKPdf	22 50 36.4	-4.0	
	comp=Z,1.1nm,0.5s,baz=285,slow=3.2,SNR=5.7							
	comp=Z,1.3nm,0.8s							
ZALV	Zalesovo Beam	95.39	324	P	P	22 33 45.8	-1.0	
MK31	Makanchi Array	95.40	317	P	P	22 33 47.1	0.0	
MKAR	Makanchi Array	95.40	317	P	P	22 33 47.2	0.0	
	comp=Z,10nm,0.7s,baz=95,slow=6.5,SNR=96							
MKAR				PKiKP	PKiKP	22 38 25.8	-0.5	
	comp=Z,0.3nm,0.5s,baz=100,slow=0.6,SNR=5.8							
MKAR				PKKP	PKKPdf	22 50 37.3	-3.0	
	comp=Z,0.8nm,0.6s,baz=280,slow=3.6,SNR=8.7							
	comp=Z,10nm,0.7s							
MKAR	Makanchi Array	95.40	317	P	P	22 33 46.9	-0.3	
YKA	Yellowknife Ar	95.43	27	P	P	22 33 46.0	-0.9	
	comp=Z,3.4nm,0.6s,baz=258,slow=4.5,SNR=12							
	comp=Z,3.4nm,0.6s							
N23A	Red Feather La	95.59	50	P	P	22 33 48.7	+0.2	
	baz=259							
MAKZ	Makanchi	95.61	317	P	P	22 33 47.5	-0.6	
MAKZ				IAmb	IAmb	22 33 49.1		
	comp=Z,12nm,1.1s							
ISCO	Idaho Springs	95.63	51	P	P	22 33 48.8	+0.1	
	baz=259							
Q24A	Divide	95.82	52	P	P	22 33 49.8	+0.1	
	baz=259							
SNAA	Sanae	95.96	183	P	P	22 33 48.2	-1.1	
SNAA	Sanae	95.96	183	P	P	22 33 48.3	-1.1	
SNAA				IAmb	IAmb	22 33 48.9		
	comp=Z,3.8nm,0.8s							
VNA3	Neumayer Olymp	96.63	181	P	P	22 33 51.3	-1.0	
VNA1	Neumayer--Stat	97.19	182	P	P	22 33 53.9	-0.9	
SPA0	Spitsbergen Ar	112.52	354	ePP	PP	22 39 44.4	-2.8	
HAMF	Hammerfest	117.48	347	ePKPdf	PKiKP	22 39 06.5	+0.2	
ARCES	ARCESS Array B	117.89	346	PKP	PKPdf	22 39 07.0	-0.2	
	comp=Z,7.4nm,0.5s,baz=75,slow=1.8,SNR=60							
LPAZ	La Paz	118.37	116	PKP	PKPdf	22 39 10.2	-0.2	
	comp=Z,0.4nm,0.3s,baz=280,slow=2.0,SNR=3.9							
KLMR	Klimovskoe	118.48	334	ePKPdf	PKPdf	22 39 06.8	-1.7	
KLMR				AMP		22 39 08.6		
	comp=Z,7.0nm,0.8s							
KTK1	Kautokeino	118.82	346	ePKPdf	PKPdf	22 39 08.5	-0.5	
TRO	Tromso	119.29	348	ePKPdf	PKPdf	22 39 09.3	-0.6	
SCHQ	Schefferville	120.32	33	PKP	PKPdf	22 39 11.9	-0.4	
	comp=Z,4.6nm,0.7s,baz=260,slow=2.0,SNR=7.9							
FAUS	Fauske	121.91	348	ePKPdf	PKPdf	22 39 14.7	-0.2	
PKME	Peaks-Kenny Pk	122.07	44	P	PKPdf	22 39 15.4	-0.5	
	baz=286							
CPUP	Villa Florida	122.14	132	PKP	PKPdf	22 39 15.7	-1.0	
	comp=Z,2.0nm,0.6s,baz=44,slow=7.4,SNR=4.4							
AKH	Akhalkalaki	123.18	312	⇑P	PKiKP	22 39 19.6	+0.9	
FINES	FINESS Array B	123.44	339	PKP	PKPdf	22 39 18.0	0.0	
	comp=Z,8.1nm,0.8s,baz=39,slow=2.3,SNR=36							
FINES				PKKPab	PKKPab	22 49 08.1	+0.4	
	comp=Z,1.3nm,0.6s,baz=158,slow=2.1,SNR=7.3							
FINES	FINESS Array B	123.44	339	PKPdf	PKPdf	22 39 17.8	-0.3	
SIV	San Ignacio	124.60	119	PKP	PKPdf	22 39 21.2	-0.5	
	comp=Z,0.9nm,0.4s,baz=188,slow=7.1,SNR=8.1							
NSS	Namsos	125.06	347	ePKPdf	PKPdf	22 39 20.8	-0.2	
BOSA	Boshof	125.15	222	PKP	PKPdf	22 39 22.0	-0.6	
	comp=Z,4.7nm,1.2s,baz=164,slow=7.4,SNR=4.1							
VSU	Vasula	125.18	336	eP	PKiKP	22 39 21.9	+0.1	
RAF	Rauma	125.22	340	eP	PKPdf	22 39 21.4	0.0	
MTSE	Matsula	126.14	337	eP	PKiKP	22 39 23.9	+0.1	
IDID	Didziasalis	127.19	333	eP	PKiKP	22 39 26.8	+0.9	
IIGN	Ignalina	127.39	333	eP	PKiKP	22 39 27.0	+0.6	
NACGM	Naroch	127.42	332	⇑ePKP	PKiKP	22 39 26.6	+0.2	
DOMB	Dombas	127.88	347	ePKPdf	PKiKP	22 39 27.2	0.0	
VSVD	Vaisvydziai	127.97	335	eP	PKiKP	22 39 27.6	+0.1	
NB2	NORSAR Subarra	128.26	345	PKPdf	PKPdf	22 39 27.4	0.0	
	baz=31,slow=1.9							
NB2	NORSAR Subarra	128.26	345	PKPdf	PKPdf	22 39 27.4	0.0	
	comp=Z,1.9nm,0.6s,baz=31,slow=1.9							
NOA	NORSAR Array B	128.26	345	PKP	PKiKP	22 39 27.7	-0.3	
	comp=Z,2.5nm,0.7s,baz=31,slow=2.0,SNR=18							
PABE	Paberze	128.27	334	eP	PKiKP	22 39 28.6	+0.5	
NC602	NORSAR Array S	128.45	345	ePKPdf	PKiKP	22 39 28.0	-0.3	
AKASG	Malin Array Be	128.68	327	PKP	PKPdf	22 39 28.4	0.0	
	comp=Z,2.7nm,0.9s,baz=51,slow=2.7,SNR=11							
PBUR	Paburge	128.76	336	eP	PKiKP	22 39 29.1	+0.1	
SKAR	Skarslia	129.27	347	ePKPdf	PKiKP	22 39 31.0	+1.0	
SUW	Suwalki	129.61	333	eP	PKiKP	22 39 31.5	+0.7	
SORM	Soroca	130.54	325	⇑P	PKPdf	22 39 32.2	+0.3	
BLS5	Blasjo	130.81	347	ePKPdf	PKPdf	22 39 32.5	+0.3	
BRTR	Keskin Array B	130.85	312	PKP	PKPdf	22 39 33.4	+0.3	
	comp=Z,1.1nm,0.5s,baz=153,slow=4.5,SNR=4.5							
MILM	Milestii Mici	130.91	323	⇑P	PKPdf	22 39 32.7	-0.1	
DEL	Delary	131.35	341	eP	PKiKP	22 39 33.8	-0.4	
TLCR		131.78	321	⇑P	PKPdf	22 39 34.3	-0.1	
BSD	Bornholm Skovb	132.09	339	eP	PKPdf	22 39 35.2	+0.5	
CFR	Carcaliu	132.20	321	⇑P	PKPdf	22 39 35.0	-0.2	
BIZ	Bicaz	132.47	324	⇓P	PKiKP	22 39 37.0	+0.1	
HARR	Harsova	132.57	321	⇑P	PKiKP	22 39 37.2	+0.1	
BURAR	Bucovina Array	132.59	326	⇓P	PKiKP	22 39 37.8	+0.6	
KWP	Kalwaria Pacla	132.69	329	ePKPdf	PKiKP	22 39 36.5	+0.4	
VRI	Vrincioaia	132.69	323	⇓P	PKPdf	22 39 35.7	-0.5	
MLR	Muntele Rosu	133.35	323	⇑P	PKPdf	22 39 37.4	-0.3	
DOPR	Dopca	133.42	324	⇑P	PKiKP	22 39 38.3	-0.5	
CRVS	Cervenica-Dubn	133.78	329	ePKP	PKiKP	22 39 40.3	+0.8	
NIE	Niedzica	134.02	330	ePKPdf	PKiKP	22 39 40.1	+0.1	
ARR	Arges	134.19	323	⇑P	PKiKP	22 39 40.7	+0.2	
HUMR	Humele	134.45	322	⇑P	PKPdf	22 39 39.7	+0.2	
LANS	Liptovska Anna	134.60	330	ePKP	PKiKP	22 39 41.2	0.0	
MORC	Moravsky Berou	135.06	332	⇑P	PKiKP	22 39 42.7	+0.6	
MORC	Moravsky Berou	135.06	332	ePKP	PKiKP	22 39 41.6	-0.5	
OSTC	Ostas	135.08	334	ePKPDF	PKiKP	22 39 41.3	-0.8	
CHVC	Chvalec	135.12	334	ePKPDF	PKiKP	22 39 42.8	+0.6	
DPC	Dobruska-Polom	135.19	334	ePKPDF	PKiKP	22 39 43.1	+0.8	
KRLC	Kraliky	135.19	333	ePKPDF	PKPdf	22 39 41.2	+0.4	
VYHS	Vyhne	135.35	330	ePKP	PKiKP	22 39 41.9	-0.8	
BDFB	Brasilia	135.46	128	PKP	PKPdf	22 39 41.8	-0.5	
	comp=Z,3.3nm,0.7s,baz=40,slow=2.8,SNR=5.2							
KOLL	Kolacno	135.50	331	ePKP	PKiKP	22 39 42.2	-0.8	
JAVC	Velka Javorina	135.66	331	ePKP	PKiKP	22 39 42.9	-0.4	
BZS	Buzias	135.77	325	⇑P	PKPdf	22 39 42.3	+0.3	
PVCC	Panska Ves	135.79	335	ePKPDF	PKiKP	22 39 42.7	-0.8	
CLL	Collm	135.81	337	i PKPdf	PKPdf	22 39 42.2	+0.4	
	comp=Z,4.0nm,0.8s							
CLL				i PKiKP	PKiKP	22 39 43.8	+0.3	
	comp=Z,7.0nm,0.7s							
CLL				L	L	23 05 00.0		
	comp=Z,100nm,19.5s							
VRAC	Vranov	135.83	333	ePKP	PKiKP	22 39 43.1	-0.5	
KRUC	Moravsky	136.10	332	ePKP	PKPdf	22 39 42.6	+0.2	
MODS	Modra-Piesok	136.18	331	ePKP	PKPdf	22 39 43.2	+0.5	
PRU	Pruhonice	136.22	335	ePKPDF	PKPdf	22 39 43.3	+0.7	
PRU				AMS	AMS	23 14 40.0		
	comp=Z,100nm,12.8s							
MORH	Mrgy, Hungar	136.99	328	⇑P	PKPdf	22 39 44.9	+0.8	
RONA	Rosalia, Austr	137.12	331	eP	PKPdf	22 39 44.6	+0.2	
	comp=Z,4.1nm,0.7s							
CONA	Conrad Observa	137.16	332	eP	PKPdf	22 39 43.0	-1.6	
	comp=Z,6.8nm,0.9s							
CKRC	Cesky Krumlov	137.20	334	ePKPDF	PKPdf	22 39 45.0	+0.5	
KHC	Kasperske Hory	137.28	335	ePKPDF	PKPdf	22 39 45.1	+0.4	
GERES	GERESS Array B	137.44	334	PKiKP	PKPpre	22 39 39.0		
	comp=Z,0.4nm,0.6s,baz=48,slow=2.0,SNR=4.6							
GERES				PKP	PKPdf	22 39 45.7	+0.6	
	comp=Z,2.5nm,0.6s,baz=62,slow=3.2,SNR=21							
GERES				SKP		22 42 58.9		
	comp=Z,0.4nm,0.7s,baz=353,slow=2.3,SNR=5.3							
GERES	GERESS Array B	137.44	334		PKPdf	22 39 45.5	+0.4	
MOA	Molln	137.95	333	eP	PKPdf	22 39 45.6	-0.4	
	comp=Z,2.7nm,0.7s							
BIOA	Bad Ischl, Aus	138.35	333	eP	PKPdf	22 39 46.5	-0.2	
	comp=Z,1.8nm,0.8s							
SOKA	Soboth	138.46	331	eP	PKPdf	22 39 47.6	+0.6	
	comp=Z,4.8nm,1.0s							
BTNL	Ternell	138.79	342	dPKiKP	PKPdf	22 39 47.9	+0.5	
MEM	Membach	138.81	342	dPKiKP	PKPdf	22 39 48.0	+0.6	
KBA	Koelnbreinsper	138.94	333	eP	PKPdf	22 39 47.9	-0.1	
	comp=Z,3.7nm,0.9s							
BCLA	Clavier	139.19	342	dPKiKP	PKiKP	22 39 50.0	-0.4	
BMRD	Maredsous	139.45	343	dPKiKP	PKPdf	22 39 49.0	+0.4	
WATA	Walderalm	139.51	334	eP	PKPdf	22 39 49.3	+0.3	
	comp=Z,5.9nm,0.7s							
WTTA	Wattenberg	139.54	334	eP	PKPdf	22 39 47.6	-1.5	
	comp=Z,3.9nm,0.8s							
ABTA	Abfaltersbach	139.56	333	eP	PKPdf	22 39 47.9	-1.2	
	comp=Z,5.2nm,0.8s							
DOU	Dourbes	139.69	343	dPKiKP	PKPdf	22 39 49.6	+0.6	
MOTA	Moosalm	139.70	335	eP	PKPdf	22 39 49.3	0.0	
	comp=Z,6.8nm,1.0s							

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**2.64**	**260**	P	**Pn**	**22 54 54.7**	**+1.3**
TNTI	**Ternate**	**3.44**	**193**	Pn	**Pn**	**22 55 04.4**	**0.0**
TNTI	**Ternate**	**3.44**	**193**	P	**Pb**	**22 55 09.9**	**-1.8**
DAV	**Davao City (W)**	**3.86**	**319**		**Pn**	**22 55 12.9**	**+2.8**
KCP	**Kidapawan**	**4.16**	**313**	*eP*	**Pn**	**22 55 18.5**	**+4.2**
KCP				*i* S	**Sb**	**22 56 15.6**	**+1.3**
LBMI	**Labuha**	**4.80**	**188**	P	**Pn**	**22 55 27.8**	**+4.8**
KMSI	**Cibinong**	**5.46**	**230**	P	**Pn**	**22 55 33.7**	**+1.5**
MRSI	**Marisa** 0.4nm1μm107nm,0.5s	**7.18**	**240**	P	**Pn**	**22 55 58.6**	**+2.8**
LUWI	**Luwuk**	**7.44**	**226**		**Pn**	**22 56 00.8**	**+1.5**
LUWI	**Luwuk** 0.3nm2μm62nm,0.6s	**7.44**	**226**	P	**Pn**	**22 56 01.7**	**+2.4**
TOLI2	**Tolitoli**	**7.94**	**248**		**Pn**	**22 56 06.4**	**+0.1**
APSI	**Ampana** 0.2nm1μm507nm41nm,0.6s	**8.20**	**232**	P	**Pn**	**22 56 12.8**	**+3.0**
MPSI	**Mapaga** 14nm,0.7s	**9.06**	**246**	P	**Pn**	**22 56 22.7**	**+1.1**
TTSI	**Tana Toraja**	**10.96**	**229**	P	**Pn**	**22 56 49.3**	**+1.6**
SPSI	**Sidrap Palu** 501nm13nm,0.6s	**11.61**	**226**	P	**Pn**	**22 56 58.3**	**+1.7**
BNSI	**Bone** 12nm,1.4s	**11.68**	**223**	P	**Pn**	**22 56 59.0**	**+1.5**
BSSI	**Bau Bau, Buton**	**12.76**	**217**	P	**Pn**	**22 57 13.8**	**+1.5**
PLAI	**Plampang**	**16.52**	**219**	P	**P**	**22 58 05.5**	**+0.2**
TWSI	**Taliwang, Sumb**	**17.02**	**221**	P	**P**	**22 58 13.0**	**+2.1**
MTN	**Manton Dam**	**17.14**	**170**	P	**P**	**22 58 11.9**	**-0.2**
MTN	comp=Z,27nm,1.4s			IAmb	IAmb	22 58 22.9	
KNRA	**Kununurra**	**19.71**	**178**	P	**Pn**	**22 58 41.2**	**-0.6**
KNRA	comp=Z,16nm,1.1s			IAmb	IAmb	22 58 41.4	
WRA	**Warramunga Arr** comp=Z,2.6nm,0.7s,baz=344,slow=10,SNR=43 comp=Z,2.6nm,0.7s	**24.70**	**166**	P	**P**	**22 59 33.2**	**+1.0**
WRA	**Warramunga Arr**	**24.70**	**166**	P	**P**	**22 59 32.2**	**0.0**
WR0	**Warramunga Arr**	**24.77**	**166**	P	**P**	**22 59 33.3**	**+0.6**
WR0	comp=Z,17nm,1.4s			IAmb	IAmb	22 59 46.6	
PSA00	**Pilbara Seismi**	**26.82**	**197**	P	**P**	**22 59 51.1**	**-0.2**
MJAR	**Matsushiro Arr** comp=Z,33nm,20.1s,baz=206,slow=32	**33.54**	**15**	LR	LR	23 11 56.3	
STKA	**Stephens Creek** comp=Z,1.0nm,0.4s,baz=0.0,slow=8.1,SNR=1.0 comp=Z,1.0nm,0.4s	**38.05**	**161**	P	**P**	**23 01 27.9**	**-1.5**
STKA	**Stephens Creek**	**38.05**	**161**	P	**P**	**23 01 28.0**	**-1.4**
H11S3	**WAKE ISLAND Hy** baz=253,slow=75,SNR=9.9	**40.28**	**66**	T	T	23 45 07.1	
H11S1	**WAKE ISLAND Hy** baz=253,slow=75,SNR=7.1	**40.29**	**66**	T	T	23 44 58.5	
H11S2	**WAKE ISLAND Hy** baz=253,slow=75,SNR=12	**40.29**	**66**	T	T	23 45 08.2	
SHL	**Shillong**	**40.77**	**305**	P	**P**	**23 01 51.7**	**-0.8**
ULN	**Ulaanbaatar**	**47.17**	**341**	P	**P**	**23 02 43.6**	**0.0**
ULN	comp=Z,2.1nm,0.6s			IAmb	IAmb	23 02 56.6	
SONM	**Songino Array** comp=Z,0.6nm,0.5s,baz=155,slow=9.1,SNR=4.7 comp=Z,0.6nm,0.5s	**47.37**	**340**	P	**P**	**23 02 44.7**	**-0.3**
SONM	**Songino Array**	**47.37**	**340**	P	**P**	**23 02 45.0**	**0.0**
MK31	**Makanchi Array**	**58.02**	**324**	P	**P**	**23 04 03.8**	**-0.1**
MK31	comp=Z,2.6nm,0.8s			IAmb	IAmb	23 04 04.6	
MKAR	**Makanchi Array** comp=Z,4.1nm,0.7s,baz=115,slow=7.9,SNR=36 comp=Z,4.1nm,0.7s	**58.02**	**324**	P	**P**	**23 04 03.8**	**-0.1**
MKAR	**Makanchi Array**	**58.02**	**324**	P	**P**	**23 04 03.5**	**-0.4**
MAKZ	**Makanchi**	**58.21**	**324**	P	**P**	**23 04 04.8**	**-0.4**
MAKZ	comp=Z,4.4nm,0.8s			IAmb	IAmb	23 04 05.9	
KDJ	**Kajisay**	**58.98**	**318**	P	**P**	**23 04 11.0**	**+0.2**
KURK	**Kurchatov**	**62.15**	**327**	P	**P**	**23 04 31.6**	**-0.4**
KKAR	**Karatay Array**	**63.89**	**316**	P	**P**	**23 04 43.2**	**-0.6**
KKAR	**Karatay Array**	**63.89**	**316**	P	**P**	**23 04 43.2**	**-0.6**
KKAR	comp=Z,2.9nm,0.8s			IAmb	IAmb	23 04 55.0	
BRVK	**Borovoye**	**67.81**	**327**	P	**P**	**23 05 07.2**	**-1.6**
BRVK	comp=Z,4.6nm,1.1s			IAmb	IAmb	23 05 09.5	
ABKAR	**Akbulak array**	**72.72**	**320**	P	**P**	**23 05 37.4**	**-1.6**
ABKAR	**Akbulak array**	**72.72**	**320**	P	**P**	**23 05 37.5**	**-1.5**
ABKAR	comp=Z,1.7nm,0.8s			IAmb	IAmb	23 05 38.8	
ARU	**Arti**	**75.34**	**327**	P	**P**	**23 05 53.0**	**-1.2**
ARU	comp=Z,2.6nm,0.7s			IAmb	IAmb	23 05 53.2	
IMAR	**Indian Mountai**	**81.39**	**24**	P	**P**	**23 06 28.1**	**+0.6**
BMAR	**Burnt Mountain**	**85.15**	**23**	P	**P**	**23 06 47.9**	**+1.0**

MOS ***22*** *23:14:24.2±1.1,33.05N×47.37E,h19km,mb4.5/17,Error ellipse: s-maj=6.5km s-min=4.1km az=112.7*
TEH ***22*** *23:14:25.2,33.23N×47.44E,h11km,ML4.3*
NEIC ***22*** *23:14:25.6±1.8,33.17N±0.04×47.41E±0.06,h10km±1km, mb4.4/53,mb_Lg4.3(TEH),Error ellipse: s-maj=8.4km s-min=6.1km az=96.0*
ISN ***22*** *23:14:25.4±0.6,33.21N×47.49E,h14km±4km,ML3.9*
IDC ***22*** *23:14:28.6±3.3,33.16N×47.40E,h35km±26km,mb3.8/22, mbtmp3.9/32,ML3.5/9,MS3.1/7,Error ellipse: s-maj=18.2km s-min=11.6km az=161.0*
GII ***22*** *23:14:30.4±0.0,33.13N×47.40E,h5km*
OMAN ***22*** *23:14:33.9±0.1,32.58N×47.50E,h78km±1km,mb5.2/22, Error ellipse: s-maj=3.0km s-min=1.3km az=43.0*

ISC 22 23:14:24.8±0.8,33.14N±0.02×47.46E±0.02,h12km±5km, n390,σ2s01/418,mb4.3/78,18C-14D,Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DHL1	**Dehloran**	**0.48**	**198**	*ePg*	**Pb**	**23 14 36.3**	**+1.0**
DHL1				*eSg*	**Sn**	**23 14 45.1**	**+4.4**
IKFM	**Kafar-mosalman**	**0.50**	**40**	Pg	**Pg**	**23 14 34.6**	**-0.1**
IKFM				Sg	**Sg**	**23 14 41.5**	**+0.2**
IKFM	**Kafar-mosalman**	**0.50**	**40**	*ePg*	**Pg**	**23 14 34.6**	**-0.1**
IKFM				*eSg*	**Sg**	**23 14 41.5**	**+0.2**
IKFM	comp=Z,1433μm,0.4s			*e*		23 14 42.9	
IDOB	**Doab**	**0.88**	**43**	Pg	**Pg**	**23 14 41.6**	**-0.3**
IDOB				Sg	**Sg**	**23 14 53.7**	**+0.3**
IDOB	**Doab**	**0.88**	**43**	*ePg*	**Pg**	**23 14 41.6**	**-0.3**
IDOB				*eSg*	**Sg**	**23 14 53.8**	**+0.3**
IKOM	**Komasi**	**1.03**	**2**	Pg	**Pb**	**23 14 43.7**	**-1.0**
IKOM				Sg	**Sb**	**23 14 58.2**	**-0.2**
IKOM	**Komasi**	**1.03**	**2**	*ePg*	**Pb**	**23 14 43.8**	**-1.0**
IKOM				*eSg*	**Sb**	**23 14 58.2**	**-0.2**
IKOM	comp=E,85μm,0.6s			*e*		23 15 01.4	
KCHF	**Cheshme Sefid,**	**1.18**	**343**	Pg	**Pb**	**23 14 46.2**	**-1.2**
KCHF				Sg	**Sb**	**23 15 01.7**	**-1.0**
KCHF	**Cheshme Sefid,**	**1.18**	**343**	*ePg*	**Pb**	**23 14 46.2**	**-1.2**
KCHF				*eSg*	**Sb**	**23 15 01.8**	**-1.0**
KCHF	comp=E,63μm,0.8s			*e*		23 15 07.9	
KER	**Kermanshah**	**1.27**	**348**		**Pn**	**23 14 48.1**	**-0.5**
KER	**Kermanshah**	**1.27**	**348**	P	**Pn**	**23 14 48.1**	**-0.5**
KER	**Kermanshah**	**1.27**	**348**	*ePg*	**Pn**	**23 14 48.2**	**-0.4**
IBDR	**Badra**	**1.28**	**269**	*ePg*	**Pg**	**23 14 50.0**	**+0.5**
IBDR				*eSg*	**Sg**	**23 15 07.0**	**+0.8**
IBDR	comp=E,2μm,0.7s			AML	AML	23 15 25.8	
IBZA	**Bozab**	**1.37**	**14**		**Pn**	**23 14 50.5**	**+0.5**
IBZA	**Bozab**	**1.37**	**14**	*ePg*	**Pn**	**23 14 50.5**	**+0.5**
IBZA	comp=E,38μm,0.7s			*e*		23 15 14.7	
IGHG	**Ghaleghazi**	**1.40**	**328**		**Pb**	**23 14 51.0**	**-0.1**
IGHG	**Ghaleghazi**	**1.40**	**328**	*ePg*	**Pb**	**23 14 51.0**	**-0.1**
IGHG	comp=E,48μm,0.9s			*e*		23 15 22.8	
HSAM	**Samen**	**1.43**	**41**		**Pn**	**23 14 51.3**	**+0.4**
HSAM	**Samen**	**1.43**	**41**	*ePg*	**Pn**	**23 14 51.3**	**+0.4**
IDHR	**Dehrash**	**1.79**	**330**	Pn	**Pb**	**23 14 57.5**	**-0.3**
IDHR	**Dehrash**	**1.79**	**330**	*ePn*	**Pb**	**23 14 57.5**	**-0.3**
IDHR	comp=Z,29μm,0.5s			*e*		23 15 04.1	
RAFI	**Al-Rafai**	**1.81**	**219**	*ePg*	**Pg**	**23 14 59.6**	**-0.1**
RAFI				*eSg*	**Sg**	**23 15 25.0**	**+1.8**
RAFI	comp=E,2μm,0.6s			AML	AML	23 15 43.1	
ILIN	**Lien**	**1.82**	**347**	*ePn*	**Pb**	**23 14 58.1**	**-0.2**
ILIN	comp=Z,26μm,0.6s			*e*		23 15 24.0	
SNGE	**Sanandaj**	**1.95**	**357**	*ePn*	**Pb**	**23 15 00.2**	**-0.3**
AHWZ	**Ahwaz**	**2.07**	**151**	Pn	**Pb**	**23 15 03.7**	**+1.5**
AHWZ	**Ahwaz**	**2.07**	**151**	*ePn*	**Pb**	**23 15 03.8**	**+1.5**
AMIS	**Naft Sefid**	**2.13**	**133**	*ePn*	**Pb**	**23 15 03.2**	**-0.3**
KHMZ	**Khomeyn**	**2.17**	**73**	*ePn*	**Pb**	**23 15 04.5**	**+0.2**
HAGD	**Aghdareh** comp=Z,29μm,0.8s	**2.18**	**39**	*e*		23 15 34.7	
HAGD				*ePn*	**Pb**	**23 15 04.1**	**-0.3**
ASAO	**Ashtian**	**2.56**	**56**	*ePn*	**Pb**	**23 15 10.1**	**-0.7**
BHD	**Baghdad**	**2.58**	**274**	*ePn*	**Pb**	**23 15 09.0**	**-2.1**
BHD				*eSn*	**Sb**	**23 15 41.0**	**-1.9**
BHD	comp=E,801nm,0.6s			AML	AML	23 16 05.1	
IPIR	**Pirpir**	**2.92**	**98**	*ePn*	**Pn**	**23 15 14.8**	**+3.3**
IPIR	comp=Z,9μm,0.3s			*e*		23 15 55.4	
SHK1	**Shahrekord**	**3.00**	**105**	*ePn*	**Pn**	**23 15 15.0**	**+2.6**
SHK1	comp=Z,9μm,0.6s			*e*		23 16 21.6	
IRAZ	**Razeghan** comp=Z,9μm,0.8s	**3.05**	**41**	*ePn*	**Pn**	**23 15 16.5**	**+3.4**
IRAZ				*e*		23 16 24.8	
QAMS	**Qamsar**	**3.34**	**79**	*ePn*	**Pn**	**23 15 20.5**	**+3.3**
IKRK	**Kirkuk**	**3.43**	**312**	*ePn*	**Pn**	**23 15 20.0**	**+1.9**
IKRK				*eSn*	**Sn**	**23 16 00.0**	**+1.3**
IKRK	comp=N,392nm,0.9s			AML	AML	23 16 19.0	
IKRK	comp=E,479nm,0.7s			AML	AML	23 16 29.2	
IBRJ	**Brojen**	**3.44**	**110**	*ePn*	**Pn**	**23 15 20.9**	**+2.4**
IBRJ	comp=Z,4μm,1.0s			*e*		23 16 27.8	
IQOM	**Qom**	**3.45**	**60**	*ePn*	**Pn**	**23 15 21.3**	**+2.7**
IQOM	comp=Z,7μm,0.6s			*e*		23 16 27.8	
IKLH	**Kolahrood** comp=Z,9μm,0.8s	**3.46**	**86**	*ePn*	**Pn**	**23 15 21.9**	**+3.1**
IKLH				*e*		23 16 37.0	
GHVR	**GHOM**	**3.46**	**66**	*ePn*	**Pn**	**23 15 22.0**	**+3.3**
ABEH	**Behbahan**	**3.47**	**136**	*ePn*	**Pn**	**23 15 22.1**	**+3.3**
ZNJK	**Zanjan**	**3.66**	**16**	*ePn*	**Pn**	**23 15 23.9**	**+2.3**
IMHD	**Mahdasht** comp=Z,4μm,0.8s	**3.67**	**45**	*ePn*	**Pn**	**23 15 23.7**	**+2.1**
IMHD				*e*		23 16 32.3	
QCNT	**Qazvin**	**3.78**	**33**	*ePn*	**Pn**	**23 15 24.8**	**+1.7**
MAHB	**Mahabad**	**3.89**	**339**	*ePn*	**Pn**	**23 15 26.4**	**+1.7**
IHSB	**Hasanabad**	**3.90**	**53**	*ePn*	**Pn**	**23 15 27.0**	**+2.2**
IGAR	**Gharneh** comp=Z,5μm,0.5s	**3.93**	**100**	*ePn*	**Pn**	**23 15 28.1**	**+2.9**
IGAR				*e*		23 16 19.4	
IGZV	**Ghazvin** comp=Z,4μm,0.8s	**3.95**	**34**	*ePn*	**Pn**	**23 15 28.0**	**+2.4**
IGZV				*e*		23 15 49.4	
KRSH	**Karshahi**	**3.99**	**77**	*ePn*	**Pn**	**23 15 29.2**	**+3.2**
IVRN	**Varamin** comp=Z,4μm,0.6s	**4.00**	**61**	*ePn*	**Pn**	**23 15 28.8**	**+2.8**
IVRN				*e*		23 16 43.6	
CHTH	**Charan**	**4.10**	**47**	*ePn*	**Pn**	**23 15 30.0**	**+2.4**
IZEF	**Zefreh**	**4.10**	**92**	*ePn*	**Pn**	**23 15 30.5**	**+2.9**
KLNJ	**Kolanjah**	**4.10**	**120**	*ePn*	**Pn**	**23 15 29.8**	**+2.1**
IHSH	**Hashtrud**	**4.16**	**358**	*ePn*	**Pn**	**23 15 30.4**	**+1.9**
ISFB	**Sefidab**	**4.16**	**72**	*ePn*	**Pn**	**23 15 30.4**	**+2.1**
QALM	**Alamut, Qazvin**	**4.20**	**38**	*ePn*	**Pn**	**23 15 31.0**	**+2.0**
IRAM	**Ramesheh** comp=Z,3μm,1.0s	**4.37**	**106**	*ePn*	**Pn**	**23 15 33.4**	**+2.2**
IRAM				*e*		23 17 15.0	
DAMV	**Damavand**	**4.48**	**55**	*ePn*	**Pn**	**23 15 35.1**	**+2.3**
IDMV	**Damavand**	**4.50**	**56**	*ePn*	**Pn**	**23 15 35.5**	**+2.4**
NASN	**Na'in**	**4.51**	**93**	*ePn*	**Pn**	**23 15 35.8**	**+2.5**
LHJ2	**Lahijan - Gila**	**4.55**	**27**	*ePn*	**Pn**	**23 15 35.7**	**+2.2**
IBST	**Bostanabad**	**4.57**	**354**	*ePn*	**Pn**	**23 15 36.2**	**+2.1**
CSN1	**Caspian**	**4.61**	**16**	*ePn*	**Pn**	**23 15 37.3**	**+2.9**
ISRB	**Sarab**	**4.68**	**2**	*ePn*	**Pn**	**23 15 37.8**	**+2.3**
IAZR	**Azarshahr**	**4.69**	**345**	*ePn*	**Pn**	**23 15 37.8**	**+2.1**
KAZ1	**Kazerun**	**5.00**	**133**	*ePn*	**Pn**	**23 15 42.9**	**+3.0**
IFIR	**Firoozkooh**	**5.04**	**59**	*ePn*	**Pn**	**23 15 42.8**	**+2.3**
IPRN	**Peran**	**5.07**	**51**	*ePn*	**Pn**	**23 15 43.4**	**+2.6**
ILAS	**Lasjerd**	**5.07**	**62**	*ePn*	**Pn**	**23 15 42.8**	**+1.8**
IHRS	**Heris**	**5.18**	**356**	*ePn*	**Pn**	**23 15 44.7**	**+2.3**
ITBZ	**Tabriz**	**5.19**	**348**	*ePn*	**Pn**	**23 15 43.5**	**+1.0**
ANAR	**Anarak**	**5.26**	**88**	*ePn*	**Pn**	**23 15 45.3**	**+1.9**
AHBU	**AHRAM**	**5.39**	**141**	*ePn*	**Pn**	**23 15 47.5**	**+2.5**
TVRZ	**Varzaqan**	**5.39**	**353**	*ePn*	**Pn**	**23 15 47.6**	**+2.3**
ISAD	**Sadrabad** comp=Z,1μm,0.4s	**5.40**	**101**	*ePn*	**Pn**	**23 15 47.9**	**+2.4**
ISAD				*e*		23 15 53.6	
ISHM	**Shahmirzad**	**5.50**	**59**	*ePn*	**Pn**	**23 15 48.9**	**+2.0**
SHI	**Shiraz**	**5.55**	**128**	*ePn*	**Pn**	**23 15 50.2**	**+2.7**
GRMI	**Germi**	**5.67**	**3**	*ePn*	**Pn**	**23 15 52.0**	**+3.0**
IMRD	**Marand**	**5.74**	**346**	*ePn*	**Pn**	**23 15 52.2**	**+2.1**
IANJ	**Anjilo**	**5.82**	**65**	*ePn*	**Pn**	**23 15 53.5**	**+2.2**
YZKH	**Yazd**	**6.05**	**95**	*ePn*	**Pn**	**23 15 56.4**	**+2.1**
IGLO	**Ghaloghah**	**6.22**	**56**	*ePn*	**Pn**	**23 15 59.4**	**+2.7**
GEVA	**Gevas**	**6.28**	**326**	Pn	**Pn**	**23 15 58.7**	**+1.3**
IMEH	**Mehriz**	**6.30**	**104**	*ePn*	**Pn**	**23 15 59.5**	**+1.6**
QIR1	**Qir**	**6.68**	**133**	*ePn*	**Pn**	**23 16 04.3**	**+1.3**
MARD	**Mardin**	**6.87**	**309**		**Pn**	**23 16 06.2**	**+0.6**
JHRM	**Jahrom**	**7.00**	**130**	*ePn*	**Pn**	**23 16 10.0**	**+2.7**
IBAF	**Bafgh**	**7.03**	**101**	*ePn*	**Pn**	**23 16 10.0**	**+2.2**
GNI	**Garni** comp=Z,3.9nm,0.7s,baz=192,slow=5.3,SNR=4.8	**7.33**	**343**	Pn	**Pn**	**23 16 16.5**	**+4.7**
GNI				Lg	Lg	23 18 19.1	
GNI	comp=Z,0.2nm,0.3s,baz=168,slow=22,SNR=1.7			LR	LR	23 19 45.5	
GNI	comp=Z,63nm,21.6s,baz=154,slow=43 **Garni**	**7.33**	**343**		**Pn**	**23 16 14.5**	**+2.6**
GNI	**Garni**	**7.33**	**343**	P	**Pn**	**23 16 14.5**	**+2.6**
GNI	**Garni**	**7.33**	**343**	Pn	Pn	23 16 16.9	+5.0
SHRO	**Shahrood**	**7.60**	**66**	*ePn*	**Pn**	**23 16 18.8**	**+3.2**
TNSJ	**Nastanj**	**7.68**	**81**	*ePn*	**Pn**	**23 16 19.2**	**+2.5**
TPRV	**Parvadeh(Tabas**	**7.74**	**88**	*ePn*	**Pn**	**23 16 20.1**	**+2.6**
TABS	**Tabas**	**8.09**	**84**	*ePn*	**Pn**	**23 16 24.4**	**+2.1**
TKDS	**Koohdasht(Taba**	**8.10**	**84**	*ePn*	**Pn**	**23 16 24.1**	**+1.7**
MRVT	**Maraveh tapeh**	**8.36**	**55**	*ePn*	**Pn**	**23 16 28.8**	**+2.8**
KRBR	**Kerman**	**8.54**	**109**	*ePn*	**Pn**	**23 16 32.6**	**+4.0**
NGRK	**Negar Kerman**	**8.66**	**111**	*ePn*	**Pn**	**23 16 32.6**	**+2.3**
SBZV	**Sabzevar**	**8.96**	**66**	*ePn*	**Pn**	**23 16 36.4**	**+2.1**
ASF	**Jabal al Asfar** comp=Z,0.5nm,0.3s,baz=72,slow=11,SNR=3.6	**8.96**	**267**	Pn	**Pn**	**23 16 34.5**	**+0.3**
ASF				Sn	**Sn**	**23 18 10.4**	**-4.7**
ASF	comp=Z,0.9nm,0.3s,baz=94,slow=19,SNR=1.5			Lg	Lg	23 19 06.7	
BJRD	comp=Z,0.6nm,0.3s,baz=36,slow=8.7,SNR=3.6 comp=Z,1.3nm,0.3s **Bojnurd**	**9.30**	**58**	*ePn*	**Pn**	**23 16 42.4**	**+3.5**
GENO	**Geno**	**9.46**	**125**	*ePn*	**Pn**	**23 16 42.4**	**+1.3**
RAYN	**Ar Rayn**	**9.74**	**191**		**Pn**	**23 16 44.7**	**-0.1**
RAYN	**Ar Rayn**	**9.74**	**191**	P	**Pn**	**23 16 44.7**	**-0.1**
RAYN	**Ar Rayn** SNR=16	**9.74**	**191**	*i* Pn	**Pn**	**23 16 44.9**	**+0.1**
IKOO	**Kooshah**	**9.75**	**91**	*ePn*	**Pn**	**23 16 47.2**	**+2.1**
MAK	**Makhachkala**	**9.80**	**0**	*eP*	**Pn**	**23 16 43.2**	**-2.4**
MAK				*eS*	**Sn**	**23 18 34.1**	**-1.5**
MAK	comp=Z,28nm,0.8s			pmax	pmax		
MAK	comp=Z,123nm,8.0s			MLR	MLR		
NATI	**Neve Ativ**	**9.82**	**274**	Pn	Pn	23 16 52.5	+6.6
NATI				Sn	**Sn**	**23 18 42.4**	**+6.2**
GEM	**Giv'at Ha'Em**	**9.89**	**274**	Pn	Pn	23 16 52.5	+5.7
GEYT	**Alibeck** comp=Z,0.3nm,0.3s,baz=225,slow=39,SNR=2.9	**9.91**	**58**	Pn	**Pn**	**23 16 50.5**	**+3.4**
GEYT				LR	LR	23 21 22.2	
GEYT	comp=Z,103nm,21.0s,baz=272,slow=42 comp=Z,2.5nm,0.8s **Alibeck**	**9.91**	**58**	Pn	**Pn**	**23 16 50.4**	**+3.2**
GYA0	**ALIBECK ARRAY**	**9.91**	**58**	P	**Pn**	**23 16 50.6**	**+3.4**
GYA0B	**ALIBECK ARRAY**	**9.91**	**58**	Pn	**Pn**	**23 16 50.1**	**+3.0**
BSRN	**Basiran**	**9.92**	**94**	*ePn*	**Pn**	**23 16 48.4**	**+1.0**
ONI	**Oni**	**9.95**	**343**	Pn	**Pn**	**23 16 50.1**	**+2.4**
ONI	**Oni**	**9.95**	**343**	P	**Pn**	**23 16 56.3**	**+6.6**
HMDT	**Nahal Hemdat**	**10.10**	**268**	Pn	Pn	**23 18 48.6**	**+5.7**
HMDT				Sn	**Sn**	**23 16 51.9**	**+1.8**
MMAI	**Mount Meron Ar** comp=Z,0.2nm,0.3s,baz=79,slow=15,SNR=3.6	**10.12**	**273**	Pn	**Pn**		
MMAI				Lg	Lg	23 19 39.5	
GHAJ	comp=Z,0.5nm,0.3s,baz=111,slow=36,SNR=1.4 comp=Z,1.6nm,0.8s **Ghor Haditha**	**10.24**	**263**	Pn	**Pn**	**23 16 51.9**	**+0.3**
SHME	**Shamm** SNR=9.9	**10.34**	**131**	*i* Pn	**Pn**	**23 16 53.2**	**+0.1**
SHME				Sn	**Sn**	**23 18 43.4**	**-5.6**
BANOM	**Banah**	**10.53**	**131**	P	**Pn**	**23 16 56.9**	**+1.2**
BANOM				S	**Sn**	**23 18 50.3**	**-3.4**
BANOM	**Banah** SNR=10	**10.53**	**131**	*i* Pn	**Pn**	**23 16 55.8**	**0.0**
NAZ	**Nazwa, Dubai**	**10.83**	**136**	P	**Pn**	**23 17 02.1**	**+2.3**
NAZ				S	**Sn**	**23 19 00.7**	**-0.3**
NAZ	**Nazwa, Dubai** SNR=23	**10.83**	**136**	*i* Pn	**Pn**	**23 17 00.8**	**+1.0**
MASF	**Masafi**	**10.84**	**133**	P	**Pn**	**23 17 01.4**	**+1.5**
MASF				S	**Sn**	**23 18 57.7**	**-3.6**
MSFE	**Esma-Masafi**	**10.85**	**133**	Pn	**Pn**	**23 17 00.3**	**+0.3**
TBJM	**Torbat-e-JAM**	**10.87**	**75**	*ePn*	**Pn**	**23 17 02.8**	**+2.4**
ASUD	**Al Ashush, Dub** SNR=24	**10.93**	**139**	P	**Pn**	**23 17 03.1**	**+2.0**
ASUD				S	**Sn**	**23 19 00.4**	**-3.0**
ASUD	**Al Ashush, Dub** SNR=24	**10.93**	**139**	*i* Pn	**Pn**	**23 17 02.5**	**+1.4**
PRNI	**Paran**	**10.96**	**259**	Pn	Pn	23 17 08.2	+6.6
FAQ	**Al Faqa, Dubai**	**10.98**	**138**	P	**Pn**	**23 17 03.4**	**+1.6**
FAQ				S	**Sn**	**23 18 59.8**	**-4.8**
FAQ	**Al Faqa, Dubai**	**10.98**	**138**	Pn	**Pn**	**23 17 02.9**	**+1.0**
KBZ	**Khabaz** comp=Z,0.1nm,0.3s,baz=173,slow=8.1,SNR=1.6 comp=Z,0.4nm,0.3s	**11.16**	**343**	Pn	**Pn**	**23 17 08.9**	**+4.8**
UOSS	**Minazif**	**11.19**	**135**		**Pn**	**23 17 04.8**	**+0.2**
UOSS	**Minazif**	**11.19**	**135**	P	**Pn**	**23 17 04.8**	**+0.2**
UOSS				S	**Sn**	**23 19 04.6**	**-5.0**
UOSS	**Minazif**	**11.19**	**135**	Pn	**Pn**	**23 17 04.7**	**0.0**
HATD	**Hatta, Dubai**	**11.23**	**135**	P	**Pn**	**23 17 05.4**	**+0.1**
HATD				S	**Sn**	**23 19 05.9**	**-4.9**
HATD	**Hatta, Dubai** SNR=11	**11.23**	**135**	*i* Pn	**Pn**	**23 17 05.8**	**+0.5**
EIL	**Elat** comp=Z,0.3nm,0.3s,baz=54,slow=7.6,SNR=5.3	**11.23**	**255**	Pn	**Pn**	**23 17 07.2**	**+2.0**
EIL	comp=Z,0.4nm,0.3s,baz=108,slow=20,SNR=1.9			Lg	Lg	23 20 19.2	
EIL	comp=Z,149nm,20.2s,baz=88,slow=43 comp=Z,6.4nm,0.9s			LR	LR	23 22 25.5	
KRMI	**Paran Flat**	**11.27**	**258**	Pn	Pn	23 17 11.3	+5.6
ASHO	**Ashiyiah** SNR=26	**11.30**	**136**	P	**Pn**	**23 17 06.5**	**+0.3**
ASHO				S	**Sn**	**23 19 06.0**	**-6.4**
ASHO	**Ashiyiah** SNR=26	**11.30**	**136**	*i* Pn	**Pn**	**23 17 06.4**	**+0.3**
MZR	**Muzera** SNR=23	**11.41**	**151**	P	**Pn**	**23 17 09.7**	**+2.0**
MZR				S	**Sn**	**23 19 12.9**	**-2.2**
MZR	**Muzera** SNR=103	**11.41**	**151**	*i* Pn	**Pn**	**23 17 09.1**	**+1.4**
KIV	**Kislovodsk** comp=Z,2.0nm,1.1s	**11.42**	**342**	*eP*	**Pn**	**23 17 07.1**	**-0.8**
KIV				pmax	pmax		
ALNE	**Al Ain**	**11.61**	**139**	P	**Pn**	**23 17 10.7**	**+0.2**
ALNE				S	**Sn**	**23 19 15.9**	**-4.3**
ALNE	**Al Ain** SNR=6.6	**11.61**	**139**	*i* Pn	**Pn**	**23 17 10.7**	**+0.2**
SOC	**Sochi**	**12.06**	**332**	*eP*	**Pn**	**23 17 15.7**	**-0.8**
SOC				*e*		23 19 31.8	
SOC	comp=Z,105nm,14.0s			MLR	MLR		
UMZA	**Um Al Zommool**	**12.41**	**145**	P	**Pn**	**23 17 21.6**	**+0.1**
UMZA				S	**Sn**	**23 19 32.8**	**-6.9**
HOQ	**Hoqain**	**12.87**	**135**	P	**Pn**	**23 17 25.5**	**-2.3**
HOQ				S	**Sn**	**23 19 45.9**	**-5.1**
BR131	**Keskin Array S**	**12.92**	**304**	Pn	**Pn**	**23 17 30.8**	**+2.4**
BR131	**Keskin Array S**	**12.92**	**304**	P	**Pn**	**23 17 30.8**	**+2.4**
BRTR	**Keskin Array B** comp=Z,0.1nm,0.3s,baz=126,slow=12,SNR=6.9 comp=Z,2.2nm,0.8s	**12.92**	**304**	Pn	**Pn**	**23 17 31.8**	**+3.4**
BRTR	**Keskin Array B**	**12.92**	**304**	Pn	**Pn**	**23 17 30.7**	**+2.4**
BRTR	**Keskin Array B**	**12.92**	**304**	P	**Pn**	**23 17 30.7**	**+2.4**
BIDO	**Bidbid**	**13.41**	**133**	P	**Pn**	**23 17 35.1**	**0.0**
BIDO				S	**Sn**

KK31	**Karatay Array**	**20.62**	**55**	*i* P		Pn	23 19 07.3	+0.9	
KK31				pmax		pmax			
	comp=Z,7.0nm,0.9s								
KKAR	**Karatay Array**	**20.62**	**55**	P		**P**	**23 19 05.1**	**+1.0**	
KKAR				IAmb		IAmb	23 19 11.4		
	comp=Z,14nm,1.4s								
KKAR	**Karatay Array**	**20.62**	**55**	P		**P**	**23 19 05.7**	**+1.6**	
KKAR	**Karatay Array**	**20.62**	**55**	P		**P**	**23 19 05.7**	**+1.6**	
KKAR				pmax		pmax			
	comp=Z,15nm,1.4s								
MLR	**Muntele Rosu**	**20.64**	**313**	⇓P		Pn	23 19 05.7	-1.0	
MLR	**Muntele Rosu**	**20.64**	**313**	P		Pn	23 19 06.0	-0.6	
	comp=Z,2.0nm,0.8s,baz=135,slow=5.7								
	comp=Z,2.0nm,0.8s								
MLR	**Muntele Rosu**	**20.64**	**313**	P		**P**	**23 19 04.7**	**+0.3**	
MLR	**Muntele Rosu**	**20.64**	**313**	P		**P**	**23 19 04.7**	**+0.3**	
MLR				pmax		pmax			
	comp=Z,6.0nm,0.8s								
COVR	**Voineasa-Covas**	**20.66**	**314**	⇑P		**P**	**23 19 04.7**	**+0.2**	
TESR	**Tescani**	**20.75**	**316**	⇑P		**P**	**23 19 04.9**	**-0.4**	
SORM	**Soroca**	**20.76**	**322**	⇑P		**P**	**23 19 04.1**	**-1.3**	
OZUR		**21.04**	**314**	⇓P		**P**	**23 19 09.0**	**+0.5**	
AGG	**Agios Georgios**	**21.11**	**293**	P		**P**	**23 19 08.8**	**-0.6**	
AGG	**Agios Georgios**	**21.11**	**293**	P		**P**	**23 19 08.8**	**-0.6**	
LIT	**Litokhoron**	**21.17**	**296**	P		**P**	**23 19 09.4**	**-0.6**	
LIT	**Litokhoron**	**21.17**	**296**	P		**P**	**23 19 09.5**	**-0.6**	
LIT				pmax		pmax			
	comp=Z,7.0nm,1.0s								
VOIR		**21.17**	**312**	⇑P		**P**	**23 19 11.3**	**+1.3**	
VOIR		**21.17**	**312**	P		**P**	**23 19 11.4**	**+1.3**	
VOIR				pmax		pmax			
	comp=Z,28nm,1.1s								
DOPR	**Dopca**	**21.21**	**314**	⇓P		**P**	**23 19 11.3**	**+0.9**	
ITM	**Ithomi**	**21.24**	**288**	P		**P**	**23 19 10.3**	**-0.4**	
ITM				IAmb		IAmb	23 19 24.2		
	comp=Z,15nm,0.7s								
BIZ	**Bicaz**	**21.29**	**317**	⇑P		**P**	**23 19 11.3**	**+0.1**	
ARR	**Arges**	**21.40**	**311**	⇓P		**P**	**23 19 13.8**	**+1.3**	
SOCY	**Socotra**	**21.70**	**163**	P		**P**	**23 19 12.4**	**-3.5**	
LOT	**Lotru**	**21.98**	**311**	⇓P		**P**	**23 19 20.5**	**+1.7**	
AKASG	**Malin Array Be**	**22.08**	**328**	P		**P**	**23 19 19.9**	**+0.3**	
	comp=Z,2.1nm,0.7s,baz=136,slow=9.8,SNR=6.4								
	comp=Z,2.1nm,0.7s								
AKASG	**Malin Array Be**	**22.08**	**328**	*ce*P		**P**	**23 19 21.3**	**+1.7**	
AKASG				pmax		pmax			
	comp=Z,2.0nm,0.6s								
AKBB	**Malin Array Si**	**22.08**	**328**	⇑*e*P		**P**	**23 19 22.6**	**+3.0**	
AKBB				pmax		pmax			
	comp=Z,7.0nm,0.8s								
FNA	**Florina**	**22.14**	**298**	P		**P**	**23 19 19.9**	**-0.6**	
FNA	**Florina**	**22.14**	**298**	P		**P**	**23 19 19.9**	**-0.6**	
FNA				pmax		pmax			
	comp=Z,6.0nm,0.8s								
BURAR	**Bucovina Array**	**22.17**	**317**	⇑P		**P**	**23 19 21.3**	**+0.6**	
BURAR	**Bucovina Array**	**22.17**	**317**	P		**P**	**23 19 20.4**	**-0.3**	
BURAR				IAmb		IAmb	23 19 36.7		
	comp=Z,6.1nm,0.6s								
BURAR	**Bucovina Array**	**22.17**	**317**	P		**P**	**23 19 20.4**	**-0.3**	
BURAR				pmax		pmax			
	comp=Z,6.0nm,0.6s								
BUR08	**Bucovina Ar. S**	**22.19**	**317**	P		**P**	**23 19 20.8**	**-0.2**	
HERR	**Herculane**	**22.62**	**309**	⇑P		**P**	**23 19 26.1**	**+0.6**	
BOVS	**Bovan**	**22.66**	**305**	⇑P		**P**	**23 19 27.2**	**+1.2**	
MDVR	**Moldovita**	**23.05**	**308**	⇑P		**P**	**23 19 30.7**	**+0.7**	
DRGR		**23.24**	**313**	⇑P		**P**	**23 19 32.4**	**+0.4**	
DRGR		**23.24**	**313**	P		**P**	**23 19 32.7**	**+0.7**	
OBN	**Obninsk**	**23.26**	**344**	*e*P		**P**	**23 19 31.0**	**-1.0**	
OBN				*e**PP		**pP**	**23 19 34.5**	**-1.2**	
OBN				*e*			23 23 21.5		
OBN				pmax		pmax			
	comp=Z,15nm,0.9s								
AAK	**Ala-Archa**	**23.26**	**58**	P		**P**	**23 19 35.0**	**+2.6**	
	comp=Z,1.4nm,0.3s,baz=236,slow=7.3,SNR=1.7								
	comp=Z,1.4nm,0.3s								
BZS	**Buzias**	**23.43**	**310**	⇓P		**P**	**23 19 34.2**	**+0.4**	
MOS	**Moscow**	**23.61**	**346**	*e*P		**P**	**23 19 35.7**	**+0.2**	
SIRR	**Siria**	**23.66**	**311**	⇑P		**P**	**23 19 37.6**	**+1.4**	
KSH	**Kashi**	**23.78**	**66**	P		**P**	**23 19 36.0**	**-1.5**	
KSH				pP		pP	23 19 38.8	-2.4	
KSH				sP		sP	23 19 44.6	+1.7	
KSH				pmax		pmax			
	comp=Z,4.0nm,0.7s								
BOOM	**Boomskoye usch**	**24.26**	**59**	P		**P**	**23 19 44.5**	**+2.4**	
BOOM				IAmb		IAmb	23 19 58.7		
	comp=Z,11nm,0.9s								
BOOM	**Boomskoye usch**	**24.26**	**59**	P		**P**	**23 19 44.5**	**+2.4**	
BOOM				pmax		pmax			
	comp=Z,11nm,1.0s								
ARU	**Arti**	**24.52**	**15**	P		**P**	**23 19 43.6**	**-0.4**	
	comp=Z,1.2nm,0.4s,baz=193,slow=7.8,SNR=2.2								
	comp=Z,1.2nm,0.4s								
ARU	**Arti**	**24.52**	**15**	P		**P**	**23 19 46.8**	**+2.8**	
ARU				IAmb		IAmb	23 20 09.0		
	comp=Z,6.6nm,1.0s								
ARU	**Arti**	**24.52**	**15**	*c i*P		**P**	**23 19 45.2**	**+1.2**	
ARU				PPP		PPP	23 20 23.8		
ARU				S		**S**	**23 24 08.1**	**+4.0**	
ARU				pmax		pmax			
	comp=Z,7.0nm,1.2s								
KOLS	**Kolonicke sedl**	**24.53**	**317**	*e*P		**P**	**23 19 46.1**	**+1.9**	
KOLS				pmax		pmax			
	comp=Z,10.0nm,0.7s								
KOLS	**Kolonicke sedl**	**24.53**	**317**	*e*P		**P**	**23 19 46.1**	**+1.9**	
KWP	**Kalwaria Pacla**	**24.66**	**319**	P		**P**	**23 19 45.5**	**+0.2**	
KWP	**Kalwaria Pacla**	**24.66**	**319**	P		**P**	**23 19 45.6**	**+0.2**	
KWP				pmax		pmax			
	comp=Z,68nm,0.9s								
CRVS	**Cervenica-Dubn**	**24.98**	**317**	*e*P		**P**	**23 19 49.6**	**+1.3**	
CRVS	**Cervenica-Dubn**	**24.98**	**317**	*e*P		**P**	**23 19 49.6**	**+1.3**	
SVE	**Sverdlovsk**	**25.36**	**17**	*e*P		**P**	**23 19 53.5**	**+1.9**	
TIP	**Timpagrande**	**25.43**	**292**	P		**P**	**23 19 52.6**	**0.0**	
PSZ	**Piszkesteto**	**25.45**	**314**	⇑P		**P**	**23 19 53.4**	**+0.8**	
PSZ	**Piszkesteto**	**25.45**	**314**	P		**P**	**23 19 52.7**	**+0.1**	
PSZ				IAmb		IAmb	23 20 11.0		
	comp=Z,4.6nm,0.8s								
PSZ	**Piszkesteto**	**25.45**	**314**	P		**P**	**23 19 52.7**	**+0.1**	
PSZ				pmax		pmax			
	comp=Z,5.0nm,0.8s								
PSZ	**Piszkesteto**	**25.45**	**314**	P		**P**	**23 19 52.7**	**+0.1**	
TARG	**Taragay, Kyrgy**	**25.47**	**62**	P		**P**	**23 19 55.1**	**+1.8**	
TARG				IAmb		IAmb	23 20 03.7		
	comp=Z,8.3nm,0.8s								
TARG	**Taragay, Kyrgy**	**25.47**	**62**	P		**P**	**23 19 55.1**	**+1.8**	
TARG				pmax		pmax			
	comp=Z,8.0nm,0.8s								
KIRV	**Kirov**	**25.48**	**2**	P		**P**	**23 19 52.5**	**-0.1**	
	comp=Z,8.6nm,0.5s,baz=214,slow=6.6,SNR=2.7								
	comp=Z,8.6nm,0.5s								
KIRV	**Kirov**	**25.48**	**2**	*de*P		**P**	**23 19 52.9**	**+0.3**	
MORH	**Mrgy, Hungar**	**25.58**	**309**	⇑P		**P**	**23 19 54.4**	**+0.8**	
MORH	**Mrgy, Hungar**	**25.58**	**309**	P		**P**	**23 19 54.5**	**+0.8**	
BRVK	**Borovoye**	**25.76**	**33**	P		**P**	**23 19 56.5**	**+1.2**	
BRVK				IAmb		IAmb	23 20 00.3		
	comp=Z,6.6nm,0.9s								
BRVK	**Borovoye**	**25.76**	**33**	P		**P**	**23 19 56.5**	**+1.2**	
BRVK				pmax		pmax			
	comp=Z,7.0nm,0.9s								
KOVH	**Kovagotottos**	**25.89**	**309**	P		**P**	**23 19 56.5**	**0.0**	
NACGM	**Naroch**	**26.16**	**332**	*e*P		**P**	**23 20 00.8**	**+2.0**	
CSKK	**Cskako**	**26.24**	**311**	P		**P**	**23 20 01.5**	**+1.8**	
LANS	**Liptovska Anna**	**26.25**	**316**	*e*P		**P**	**23 20 01.4**	**+1.5**	
LANS	**Liptovska Anna**	**26.25**	**316**	*e*P		**P**	**23 20 01.4**	**+1.5**	
SRO2	**Moca**	**26.31**	**312**	*e*P		**P**	**23 20 00.7**	**+0.4**	
SRO2	**Moca**	**26.31**	**312**	*e*P		**P**	**23 20 00.7**	**+0.4**	
VYHS	**Vyhne**	**26.34**	**314**	*e*P		**P**	**23 20 02.1**	**+1.5**	
VYHS				pmax		pmax			
	comp=Z,3.0nm,0.8s								
VYHS	**Vyhne**	**26.34**	**314**	*e*P		**P**	**23 20 02.1**	**+1.5**	
SRO	**Srobarova**	**26.38**	**312**	*e*P		**P**	**23 20 02.1**	**+1.1**	
SRO	**Srobarova**	**26.38**	**312**	*e*P		**P**	**23 20 02.1**	**+1.1**	
OJC	**Ojcow**	**26.57**	**318**	P		**P**	**23 20 02.4**	**-0.3**	
OJC	**Ojcow**	**26.57**	**318**	P		**P**	**23 20 02.4**	**-0.3**	
OJC				pmax		pmax			
	comp=Z,19nm,1.4s								
MPLH	**Magyarpolny**	**26.63**	**311**	P		**P**	**23 20 03.0**	**-0.2**	
KOLL	**Kolacno**	**26.64**	**314**	*e*P		**P**	**23 20 04.5**	**+1.2**	
SUW	**Suwalki**	**27.05**	**328**	P		**P**	**23 20 08.8**	**+1.9**	
SUW	**Suwalki**	**27.05**	**328**	P		**P**	**23 20 08.8**	**+1.9**	
SUW				pmax		pmax			
	comp=Z,24nm,1.1s								
JAVC	**Velka Javorina**	**27.20**	**314**	*e*P		**P**	**23 20 09.2**	**+0.8**	
MODS	**Modra-Piesok**	**27.24**	**313**	*e*P		**P**	**23 20 09.6**	**+0.8**	
MODS	**Modra-Piesok**	**27.24**	**313**	*e*P		**P**	**23 20 09.5**	**+0.8**	

RONA	**Rosalia, Austr**	**27.60**	**311**	*e*P		**P**	**23 20 12.7**	**+0.6**	
	comp=Z,1.5nm,0.6s								
MORC	**Moravsky Berou**	**27.66**	**316**	⇓P		**P**	**23 20 12.6**	**0.0**	
MORC	**Moravsky Berou**	**27.66**	**316**	P		**P**	**23 20 12.5**	**0.0**	
MORC	**Moravsky Berou**	**27.66**	**316**	*e*P		**P**	**23 20 12.3**	**-0.2**	
CONA	**Conrad Observa**	**27.96**	**311**	*e*P		P	23 20 24.9	+10	
	comp=Z,3.4nm,0.9s								
VRAC	**Vranov**	**28.02**	**314**	P		**P**	**23 20 15.9**	**+0.2**	
	comp=Z,1.9nm,0.8s,baz=114,slow=12,SNR=2.4								
	comp=Z,1.9nm,0.8s								
VRAC	**Vranov**	**28.02**	**314**	*e*P		**P**	**23 20 15.5**	**-0.2**	
KRUC	**Moravsky**	**28.05**	**314**	*e*P		**P**	**23 20 16.2**	**+0.3**	
SOKA	**Soboth**	**28.09**	**308**	*e*P		**P**	**23 20 20.5**	**+4.1**	
	comp=Z,3.1nm,1.0s								
KLMR	**Klimovskoe**	**28.21**	**352**	*e*P		**P**	**23 20 13.5**	**-3.6**	
KLMR				pmax		pmax			
	comp=Z,12nm,1.3s								
KLMR	**Klimovskoe**	**28.21**	**352**	*e*P		**P**	**23 20 13.6**	**-3.6**	
KLMR				AMP			23 20 27.8		
	comp=Z,12nm,1.3s								
KRLC	**Kraliky**	**28.23**	**316**	*e*P		**P**	**23 20 17.1**	**-0.5**	
KRLC	**Kraliky**	**28.23**	**316**	*e*P		**P**	**23 20 17.1**	**-0.5**	
OBKA	**Obir**	**28.36**	**308**	*e*P		**P**	**23 20 20.5**	**+1.7**	
	comp=Z,5.0nm,1.3s								
DPC	**Dobruska-Polom**	**28.61**	**316**	*e*P		**P**	**23 20 21.3**	**+0.3**	
DPC	**Dobruska-Polom**	**28.61**	**316**	*e*P		**P**	**23 20 21.3**	**+0.3**	
KURBB	**Kurchatov Arra**	**28.69**	**43**	P		**P**	**23 20 23.1**	**+1.5**	
	comp=Z,0.8nm,0.6s,baz=248,slow=9.0,SNR=9.5								
	comp=Z,0.8nm,0.6s								
KURK	**Kurchatov**	**28.78**	**43**	P		**P**	**23 20 23.8**	**+1.4**	
KURK	**Kurchatov**	**28.78**	**43**	⇓*e*P		**P**	**23 20 24.1**	**+1.7**	
KURK				pmax		pmax			
	comp=Z,5.0nm,1.3s								
CHVC	**Chvalec**	**28.87**	**317**	*e*P		**P**	**23 20 23.7**	**+0.4**	
VSU	**Vasula**	**28.91**	**337**	⇓*e*P		**P**	**23 20 25.2**	**+1.7**	
MOA	**Molln**	**28.95**	**310**	*e*P		**P**	**23 20 24.4**	**+0.4**	
	comp=Z,4.0nm,0.9s								
CKRC	**Cesky Krumlov**	**29.24**	**312**	*e*P		**P**	**23 20 26.5**	**0.0**	
BIOA	**Bad Ischl, Aus**	**29.30**	**310**	*e*P		**P**	**23 20 27.5**	**+0.4**	
	comp=Z,5.2nm,0.7s								
KBA	**Koelnbreinsper**	**29.31**	**308**	*e*P		**P**	**23 20 28.2**	**+0.8**	
	comp=Z,5.1nm,0.8s								
MAKZ	**Makanchi**	**29.51**	**52**	P		**P**	**23 20 30.8**	**+1.8**	
MAKZ	**Makanchi**	**29.51**	**52**	P		**P**	**23 20 30.8**	**+1.8**	
MAKZ				pmax		pmax			
	comp=Z,3.0nm,1.2s								
GERES	**GERESS Array B**	**29.62**	**312**	P		**P**	**23 20 30.1**	**0.0**	
	comp=Z,0.6nm,0.5s,baz=101,slow=7.2,SNR=6.0								
	comp=Z,0.6nm,0.5s								
GERES	**GERESS Array B**	**29.62**	**312**	P		**P**	**23 20 29.2**	**-0.8**	
MK31	**Makanchi Array**	**29.71**	**52**	P		**P**	**23 20 31.6**	**+0.8**	
MK31	**Makanchi Array**	**29.71**	**52**	P		**P**	**23 20 31.6**	**+0.8**	
MK31				pmax		pmax			
	comp=Z,2.0nm,0.8s								
MKAR	**Makanchi Array**	**29.71**	**52**	P		**P**	**23 20 31.9**	**+1.1**	
	comp=Z,1.4nm,0.7s,baz=244,slow=7.2,SNR=10								
	comp=Z,1.4nm,0.7s								
ABTA	**Abfaltersbach**	**29.78**	**308**	*e*P		**P**	**23 20 32.4**	**+1.0**	
	comp=Z,2.8nm,0.8s								
KHC	**Kasperske Hory**	**29.80**	**313**	*e*P		**P**	**23 20 33.3**	**+1.8**	
KHC	**Kasperske Hory**	**29.80**	**313**	*e*P		**P**	**23 20 33.3**	**+1.8**	
CTI	**Castel Tesino**	**30.19**	**306**	P		**P**	**23 20 35.0**	**-0.2**	
CTI				IAmb		IAmb	23 20 44.1		
	comp=Z,4.8nm,0.8s								
CTI	**Castel Tesino**	**30.19**	**306**	P		**P**	**23 20 35.0**	**-0.2**	
CTI				pmax		pmax			
	comp=Z,5.0nm,0.8s								
WTTA	**Wattenberg**	**30.49**	**308**	*e*P		**P**	**23 20 37.6**	**-0.2**	
	comp=Z,4.2nm,0.7s								
WATA	**Walderalm**	**30.55**	**308**	*e*P		**P**	**23 20 37.9**	**-0.4**	
	comp=Z,7.9nm,0.8s								
SQTA	**Sankt Quirin**	**30.76**	**308**	*e*P		**P**	**23 20 40.2**	**+0.1**	
	comp=Z,7.9nm,0.8s								
MOTA	**Moosalm**	**30.86**	**308**	*e*P		**P**	**23 20 40.3**	**-0.8**	
	comp=Z,6.5nm,0.8s								
CLL	**Collm**	**30.93**	**316**	*i* P		**P**	**23 20 41.3**	**-0.1**	
CLL				pmax		pmax			
	comp=Z,4.0nm,1.3s								
CLL	**Collm**	**30.93**	**316**	*i* P		**P**	**23 20 41.3**	**-0.1**	
	comp=Z,4.0nm,1.3s								
FETA	**Feichten**	**31.03**	**307**	*e*P		**P**	**23 20 42.9**	**+0.3**	
	comp=Z,5.5nm,0.8s								
RETA	**Reutte**	**31.12**	**308**	*e*P		**P**	**23 20 42.2**	**-1.1**	
	comp=Z,1.7nm,0.6s								
MSSA	**Maissana**	**31.37**	**302**	P		**P**	**23 20 45.0**	**-0.5**	
MSSA				IAmb		IAmb	23 20 57.7		
	comp=Z,6.8nm,0.9s								
KEST	**Kesra**	**31.41**	**286**	P		**P**	**23 20 46.5**	**+0.5**	
	comp=Z,1.8nm,0.8s,baz=52,slow=11,SNR=2.1								
	comp=Z,1.8nm,0.8s								
GRA1	**Grafenberg Arr**	**31.43**	**313**	P		**P**	**23 20 45.9**	**-0.1**	
GRA1				IAmb		IAmb	23 20 47.2		
	comp=Z,8.2nm,1.0s								
GRF	**Grafenberg Arr**	**31.43**	**313**	P		**P**	**23 20 45.9**	**-0.1**	
GRF				pmax		pmax			
	comp=Z,8.0nm,1.0s								
GRFO	**Grafenberg**	**31.43**	**313**	P		**P**	**23 20 45.9**	**0.0**	
GRFO				IAmb		IAmb	23 20 57.3		
	comp=Z,6.3nm,0.9s								
GRFO	**Grafenberg**	**31.43**	**313**	P		**P**	**23 20 45.9**	**0.0**	
GRFO				pmax		pmax			
	comp=Z,6.0nm,0.9s								
FIA1	**FINESS Array S**	**31.51**	**340**	P		**P**	**23 20 46.1**	**-0.2**	
FINES	**FINESS Array B**	**31.51**	**340**	P		**P**	**23 20 46.1**	**-0.2**	
	comp=Z,3.7nm,0.8s,baz=142,slow=9.2,SNR=25								
	comp=Z,3.7nm,0.8s								
FINES	**FINESS Array B**	**31.51**	**340**	P		**P**	**23 20 45.8**	**-0.5**	
FINES	**FINESS Array B**	**31.51**	**340**	*i* P		**P**	**23 20 46.0**	**-0.4**	
FINES				pmax		pmax			
	comp=Z,4.0nm,0.8s								
DAVA	**Damuels**	**31.66**	**308**	*e*P		**P**	**23 20 47.6**	**-0.5**	
	comp=Z,7.3nm,0.8s								
LODK	**Lodwar**	**31.66**	**203**	P		**P**	**23 20 48.1**	**-0.2**	
LODK				IAmb		IAmb	23 21 05.3		
	comp=Z,3.9nm,1.2s								
WMQ	**Urumqi**	**32.96**	**59**	*e*P		P	23 21 04.3	+4.8	
SENIN	**Lac Senin/Sane**	**33.22**	**305**	P		**P**	**23 21 01.6**	**-0.3**	
SENIN				IAmb		IAmb	23 21 18.1		
	comp=Z,7.3nm,1.2s								
BNI	**Bardonecchia**	**33.47**	**303**	P		**P**	**23 21 03.9**	**-0.1**	
BNI	**Bardonecchia**	**33.47**	**303**	P		**P**	**23 21 03.9**	**-0.1**	
BNI				pmax		pmax			
	comp=Z,16nm,0.8s								
LPL	**La Plagne**	**33.49**	**304**	*e*P		**P**	**23 21 04.0**	**-0.3**	
LPL				pmax		pmax			
	comp=Z,16nm,1.0s								
ZAA0	**Zalesovo Array**	**33.58**	**40**	P		**P**	**23 21 05.6**	**+0.9**	
ZAA0				IAmb		IAmb	23 21 14.1		
	comp=Z,2.6nm,0.7s								
ZALV	**Zalesovo Beam**	**33.58**	**40**	P		**P**	**23 21 05.7**	**+1.0**	
	comp=Z,1.4nm,0.4s,baz=265,slow=11,SNR=4.1								
	comp=Z,1.4nm,0.4s								
ZALV	**Zalesovo Beam**	**33.58**	**40**	P		**P**	**23 21 05.4**	**+0.7**	
SSF	**Saint Saulge**	**35.90**	**306**	*e*P		**P**	**23 21 24.1**	**-0.7**	
SSF				pmax		pmax			
	comp=Z,12nm,1.3s								
NC602	**NORSAR Array S**	**36.12**	**331**	P		**P**	**23 21 26.5**	**0.0**	
NB2	**NORSAR Subarra**	**36.42**	**331**	P		**P**	**23 21 27.9**	**-1.2**	
	comp=Z,2.9nm,1.1s,baz=124,slow=8.6								
NOA	**NORSAR Array B**	**36.42**	**331**	P		**P**	**23 21 27.7**	**-1.4**	
	comp=Z,1.0nm,0.8s,baz=124,slow=8.5,SNR=6.3								
	comp=Z,1.0nm,0.8s								
ARCES	**ARCESS Array B**	**38.46**	**348**	P		**P**	**23 21 47.1**	**+0.8**	
	comp=Z,0.9nm,0.7s,baz=146,slow=8.3,SNR=1.1								
	comp=Z,0.9nm,0.7s								
SHL	**Shillong**	**39.22**	**89**	P		**P**	**23 21 53.0**	**-0.3**	
SHL				IAmb		IAmb	23 21 56.7		
	comp=Z,6.6nm,0.5s								
SHL	**Shillong**	**39.22**	**89**	P		**P**	**23 21 53.0**	**-0.3**	
SHL				pmax		pmax			
	comp=Z,7.0nm,0.5s								
ESDC	**Sonseca Array**	**41.43**	**294**	P		**P**	**23 22 11.8**	**+0.4**	
	comp=Z,0.7nm,0.8s,baz=70,slow=8.1,SNR=5.0								
ESDC				PcP		**PcP**	**23 24 08.7**	**-0.6**	
	comp=Z,0.6nm,0.8s,baz=73,slow=4.3,SNR=3.5								
	comp=Z,0.7nm,0.8s								
GTA	**Gaotai**	**42.18**	**66**	*e*P		**P**	**23 22 21.1**	**+3.5**	
GTA				sP		sP	23 22 27.4	+4.3	
GTA				pmax		pmax			
	comp=Z,3.0nm,0.8s								
GTA				pmax		pmax			
	comp=Z,85nm,4.7s								
GTA				LR		LR			
	comp=N,54nm,14.5s								
GTA				LR		LR			
	comp=E,100nm,16.7s								
GTA				LR		LR			
	comp=Z,63nm,16.4s								
DSB	**Dublin**	**42.91**	**315**	P		**P**	**23 22 23.3**	**+0.2**	
LZH	**Lanzhou**	**45.95**	**70**	*e*P		**P**	**23 22 44.8**	**-3.1**	
LZH				pP		pP	23 22 51.3	-0.5	
LZH				sP		sP	23 22 53.3	-0.2	
LZH				pmax		pmax			
	comp=Z,15nm,1.0s								
SONM	**Songino Array**	**46.07**	**53**	P		**P**	**23 22 48.5**	**-0.2**	
	comp=Z,0.5nm,0.6s,baz=280,slow=9.5,SNR=4.2								
SONM				PcP		**PcP**	**23 24 24.5**	**-0.4**	
	comp=Z,0.2nm,0.3s,baz=299,slow=5.9,SNR=2.2								
	comp=Z,0.5nm,0.6s								
SONM	**Songino Array**	**46.07**	**53**	P		**P**	**23 22 50.2**	**+1.5**	
SONM	**Songino Array**	**46.07**	**53**	P		**P**	**23 22 50.2**	**+1.5**	
SONM				pmax		pmax			
	comp=Z,1.0nm,1.1s								
TOA0	**Torodi Ar. Sit**	**46.12**	**256**	P		**P**	**23 22 49.1**	**-0.2**	
TOA0				IAmb		IAmb	23 22 54.4		
	comp=Z,5.3nm,1.1s								
TORD	**Torodi Ar. Bea**	**46.12**	**256**	P		**P**	**23 22 49.2**	**-0.1**	
	comp=Z,1.7nm,0.8s,baz=54,slow=5.1,SNR=9.9								
TORD				PcP		**PcP**	**23 24 25.9**	**+0.5**	
	comp=Z,0.6nm,0.7s,baz=57,slow=2.4,SNR=2.2								
	comp=Z,1.7nm,0.8s								
TORD	**Torodi Ar. Bea**	**46.12**	**256**	P		**P**	**23 22 49.0**	**-0.3**	
TORD				IAmb		IAmb	23 22 56.8		
	comp=Z,5.5nm,1.5s								
ULN	**Ulaanbaatar**	**46.51**	**53**	P		**P**	**23 22 52.7**	**+0.5**	
ULN				IAmb		IAmb	23 23 02.4		
	comp=Z,2.8nm,0.6s								
ULN	**Ulaanbaatar**	**46.51**	**53**	⇓*e*P		**P**	**23 22 52.4**	**+0.2**	
ULN				pmax		pmax			
	comp=Z,2.0nm,0.6s								
SPB2	**Spitsbergen Ar**	**47.11**	**352**	P		**P**	**23 22 56.3**	**+0.1**	
SPITS	**Spitsbergen Ar**	**47.11**	**352**	P		**P**	**23 22 56.6**	**+0.3**	
SPITS				pmax		pmax			
	comp=Z,12nm,1.1s								
PZH	**PanZhiHua**	**47.12**	**83**	P		**P**	**23 22 59.3**	**+2.1**	
PZH				pmax		pmax			
	comp=Z,10.0nm,0.7s								
PZH				pmax		pmax			
	comp=Z,100nm,5.0s								
CMAR	**Chiang Mai Arr**	**48.15**	**94**	P		**P**	**23 23 05.6**	**+0.4**	
	comp=Z,0.6nm,0.3s,baz=294,slow=6.8,SNR=1.5								
CMAR				LR		LR	23 48 28.5		
	comp=Z,12nm,20.1s,baz=235,slow=42								
	comp=Z,0.6nm,0.3s								
XAN	**Xi'an**	**50.50**	**71**	P		**P**	**23 23 23.8**	**+0.8**	
XAN				pP		pP	23 23 27.4	+0.4	
XAN				sP		sP	23 23 30.9	+2.3	
XAN				pmax		pmax			
	comp=Z,7.0nm,0.7s								
HHC	**Hu-ho-hao-te**	**50.77**	**62**	*e*P		**P**	**23 23 27.1**	**+2.1**	
HHC				pmax		pmax			
	comp=Z,13nm,0.9s								
HHC				pmax		pmax			
	comp=Z,86nm,5.7s								
KSRS	**Korea Array**	**63.89**	**61**	P		**P**	**23 24 56.5**	**-1.0**	
	comp=Z,0.8nm,0.4s,baz=288,slow=7.1,SNR=2.8								

AC02	**Maricunga**	**3.73**	**205**	Pn	**Pn**	**23 17 44.0**	**+0.3**
TA01	**Diego Aracena**	**3.90**	**317**	Pn	**Pn**	**23 17 46.3**	**+0.9**
HMBC	**Humberstone**	**3.94**	**323**	⇓*i*P	**Pn**	**23 17 45.5**	**-0.7**
HMBC				*i* S	**S**	**23 18 32.2**	**-1.8**
HMBC				IAML		23 18 34.6	
	comp=E,170nm,0.3s						
AC01	**Pan de Azucar**	**3.98**	**227**	Pn	**Pn**	**23 17 45.7**	**-0.7**
AC01	**Pan de Azucar**	**3.98**	**227**	⇑*i*P	**Pn**	**23 17 45.8**	**-0.6**
AC01				*e*S	**S**	**23 18 31.4**	**-3.2**
AC01				IAML		23 18 39.1	
	comp=N,91nm,0.8s						
TA02	**Huaiquique**	**4.09**	**320**	Pn	**Pn**	**23 17 49.0**	**+1.2**
GO01	**Chusmiza**	**4.14**	**335**		**Pn**	**23 17 49.9**	**+0.9**
PB11	**IPOC Station P**	**4.26**	**329**	Pn	**Pn**	**23 17 49.7**	**-0.4**
PB11	**IPOC Station P**	**4.26**	**329**	⇑*i*P	**Pn**	**23 17 49.6**	**-0.4**
PB11				*i* S	**S**	**23 18 39.3**	**-1.9**
PB11				IAML		23 18 41.0	
	comp=N,172nm,0.4s						
GO03	**Copiap**	**4.87**	**212**	Pn	**Pn**	**23 17 56.1**	**-1.6**
GO03	**Copiap**	**4.87**	**212**	IAML		23 18 54.1	
	comp=N,54nm,0.3s						
PB16	**IPOC Station P**	**5.48**	**338**		**Pn**	**23 18 06.6**	**+0.5**
PB12	**IPOC Station P**	**5.56**	**329**	Pn	**Pn**	**23 18 06.1**	**-0.6**
AC04	**Llanos de Chal**	**5.79**	**215**	Pn	**Pn**	**23 18 06.8**	**-2.6**
LC0	**Las Campanas**	**6.29**	**208**	Pn	**Pn**	**23 18 13.6**	**-2.6**
CO01	**Juntas del Tor**	**6.94**	**200**	Pn	**Pn**	**23 18 22.3**	**-2.3**
LPAZ	**La Paz**	**7.17**	**354**	P	**Pn**	**23 18 28.5**	**+0.4**
	comp=N,2.5nm,0.4s,baz=186,slow=10,SNR=19						
LPAZ				S	**S**	**23 19 48.0**	**-1.7**
	comp=N,0.7nm,0.5s,baz=127,slow=10,SNR=2.0						
GO04	**Tololo Observa**	**7.36**	**204**	Pn	Pn	23 18 27.1	-3.1
CO03	**El Pedregal**	**7.93**	**201**	Pn	**Pn**	**23 18 34.8**	**-2.5**
ITAB	**Concordia**	**14.27**	**108**	Pn	**Pn**	**23 19 58.1**	**-0.3**
PLTB	**Pedras Altas**	**14.72**	**127**	Pn	**Pn**	**23 20 03.0**	**-0.9**
TRQA	**Tornquist**	**15.26**	**164**		**P**	**23 20 11.9**	**+0.9**
TRQA				IAmb	IAmb	23 20 36.5	
	comp=Z,9.8nm,1.4s						
BDFB	**Brasilia**	**19.80**	**70**	P	**P**	**23 20 59.8**	**-1.0**
	comp=Z,7.3nm,0.7s,baz=231,slow=9.3,SNR=8.9						
BDFB	**Brasilia**	**19.80**	**70**	P	**P**	**23 20 59.0**	**-1.8**
BDFB				IAmb	IAmb	23 21 00.2	
	comp=Z,6.6nm,0.7s						
TXAR	**Lajitas Array**	**63.05**	**325**	P	P	23 26 55.0	+3.4
	comp=Z,0.1nm,0.4s,baz=145,slow=10.0,SNR=2.0						
	comp=Z,0.1nm,0.4s						
QSPA	**South Pole Qui**	**66.74**	**180**	P	**P**	**23 27 17.4**	**+2.4**
QSPA				IAmb	IAmb	23 27 21.5	
	comp=Z,3.8nm,1.4s						
TOA0	**Torodi Ar. Sit**	**76.68**	**69**	P	**P**	**23 28 14.8**	**0.0**
TORD	**Torodi Ar. Bea**	**76.68**	**69**	P	**P**	**23 28 15.1**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=254,slow=6.6,SNR=11						
	comp=Z,0.6nm,0.5s						
TORD	**Torodi Ar. Bea**	**76.68**	**69**	P	**P**	**23 28 14.8**	**0.0**

MAN 22 23:20:27.4, 7°.17N×126°.90E, h20km, mb4.3, ML3.1, MS2.8, 1C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.68**	**251**	⇓*e*P	Pn	23 20 41.0	+0.1
MATI				*e*S		23 20 51.5	
BIPH	**Bislig**	**1.14**	**332**	⇑*i*P	Pb	23 20 48.1	+0.7
BIPH				*i* S		23 21 04.0	
DDMP	**Don Marcelino,**	**1.59**	**228**	⇓*e*P	Pn	23 20 53.7	+0.1
DDMP				*e*S		23 21 14.7	
BUTP	**Butuan**	**2.19**	**325**	⇓*e*P	Pb	23 21 05.6	+0.3
BUTP				*e*S		23 21 33.8	
GLSP	**General Luna,**	**2.67**	**344**	⇓*e*P	Pn	23 21 09.0	+0.8

*DDA **22** 23:35:59.6±0.0, 40°.69N×29°.20E, h7km±2km, MW3.5*
*ISK **22** 23:35:59.7, 40°.71N×29°.22E, h8km, ML3.6/50*
*IDC **22** 23:36:01.2±1.6, 40°.83N×29°.32E, h0km, mb3.4/3, mbtmp3.4/5, ML3.0/3, Error ellipse: s-maj=28.6km s-min=9.0km az=43.0*

ISC 22 23:36:00.5±0.8, 40°.71N±0°.02×29°.22E±0°.02, h8km±6km, n126, σ1°02/167, 21C-14D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRML	**Termal-Yalova**	**0.10**	**198**	PG	**Pg**	**23 36 02.8**	**-0.2**
KURT	**Yalova, Merkez**	**0.12**	**183**	P	**Pg**	**23 36 02.2**	**-1.0**
TSVK	**Tesvikiye-Yalo**	**0.13**	**230**	PG	**Pg**	**23 36 03.2**	**-0.1**
TSVK				SG	**Sg**	**23 36 05.3**	**0.0**
YLV	**Yalova**	**0.18**	**140**	PG	**Pg**	**23 36 04.1**	**-0.3**
YLV				SG	**Sg**	**23 36 07.1**	**+0.1**
ESNK	**Esenkӧy**	**0.20**	**246**	P	**Pg**	**23 36 04.5**	**-0.1**
GEMT	**Gemlik**	**0.27**	**184**	PG	**Pg**	**23 36 05.6**	**-0.4**
GEMT				SG	**Sg**	**23 36 09.6**	**0.0**
ARMT	**Armutlu**	**0.30**	**242**	PG	**Pg**	**23 36 06.2**	**-0.4**
ARMT				SG	**Sg**	**23 36 10.9**	**+0.3**
KAVV	**Kandilli-Istan**	**0.37**	**342**	PG	**Pg**	**23 36 07.9**	**0.0**
KAVV				SG	**Sg**	**23 36 13.4**	**+0.6**
ISK	**Istanbul-Kandi**	**0.38**	**342**	PG	**Pg**	**23 36 07.8**	**-0.1**
ISK				SG	**Sg**	**23 36 13.2**	**+0.3**
IZI	**Iznik**	**0.42**	**152**	PG	**Pg**	**23 36 08.4**	**-0.3**
MDNY	**Mudanya-Bursa**	**0.42**	**217**	PG	**Pg**	**23 36 08.7**	**-0.1**
IGD	**Bursa**	**0.44**	**181**	P	**Pg**	**23 36 09.1**	**-0.1**
IGD				*i* AML	AML	23 36 15.0	
	comp=N,2μm,0.2s						
IGD				*i* AML	AML	23 36 15.0	
	comp=E,2μm,0.4s						
IGD				S	**Sg**	**23 36 15.0**	**+0.1**
ADVT	**Abdulvahap**	**0.48**	**124**	PG	**Pg**	**23 36 09.6**	**-0.3**
ADVT				SG	**Sg**	**23 36 16.5**	**+0.3**
SILT	**Sile**	**0.55**	**36**	PG	**Pg**	**23 36 11.1**	**-0.1**
SILT				SG	**Sg**	**23 36 18.9**	**+0.5**
KLYT	**Kilyos**	**0.56**	**346**	PG	**Pg**	**23 36 11.3**	**-0.1**
KLYT				SG	**Sg**	**23 36 19.2**	**+0.5**
ULDT	**Uludag**	**0.57**	**186**	P	**Pg**	**23 36 11.4**	**-0.2**
ULDT				S	**Sg**	**23 36 18.4**	**-0.7**
ULDT				*i* AML	AML	23 36 19.0	
	comp=N,881nm,0.6s						
ULDT				*i* AML	AML	23 36 20.0	
	comp=E,810nm,0.3s						
BGKT	**Bogazkoy**	**0.58**	**325**	PG	**Pg**	**23 36 11.6**	**-0.1**
BGKT				SG	**Sg**	**23 36 19.6**	**+0.3**
ORLT	**Orhaneli**	**0.70**	**200**	PG	**Pg**	**23 36 13.9**	**-0.2**
ELBA	**Catalca**	**0.74**	**307**	P	**Pg**	**23 36 13.8**	**-1.0**
ELBA				S	**Sg**	**23 36 23.0**	**-1.4**
ELBA				*i* AML	AML	23 36 24.0	
	comp=N,980nm,0.3s						
ELBA				*i* AML	AML	23 36 27.0	
	comp=E,641nm,0.3s						
BILE	**Bilecik/Merkez**	**0.74**	**137**	P	**Pg**	**23 36 14.4**	**-0.5**
CTKS	**Kestanelik-??a**	**0.75**	**315**	PG	**Pg**	**23 36 14.4**	**-0.6**
KAND	**Kocaeli-Kandir**	**0.83**	**62**	P	**Pg**	**23 36 16.2**	**-0.4**
KAND				S	**Sg**	**23 36 25.5**	**-1.9**
KAND				*i* AML	AML	23 36 34.0	
	comp=N,502nm,0.3s						
GEYV	**SAKARYA_Geyve**	**0.85**	**105**	P	**Pg**	**23 36 15.6**	**-1.3**
KAYN	**Sakarya, Kayna**	**0.89**	**73**	P	**Pg**	**23 36 16.9**	**-0.8**
KAYN				S	**Sg**	**23 36 27.4**	**-1.9**
KAYN				*i* AML	AML	23 36 32.0	
	comp=E,538nm,0.2s						
SLVT	**Silivri**	**0.92**	**305**	PG	**Pg**	**23 36 18.1**	**-0.2**
SLVT				SG	**Sb**	**23 36 31.1**	**-0.1**
GPA	**Golpazari**	**0.93**	**116**	PG	**Pg**	**23 36 17.9**	**-0.6**
AUBOZ	**BOZOYUK**	**1.01**	**142**	PG	**Pg**	**23 36 19.3**	**-0.7**
AUBOZ	**BOZOYUK**	**1.01**	**142**	P	**Pg**	**23 36 19.9**	**-0.1**
AUBOZ				S	**Sn**	**23 36 35.1**	**-0.4**
AUBOZ				*i* AML	AML	23 36 36.0	
	comp=E,691nm,0.7s						
GULT	**Gulveren**	**1.03**	**105**	PG	**Pg**	**23 36 19.7**	**-0.6**
CTYL	**Yalikoy Yolu**	**1.04**	**318**	PG	**Pg**	**23 36 19.6**	**-0.9**
EDC	**Edincik**	**1.09**	**251**	PN	**Pb**	**23 36 20.8**	**-0.8**
DST	**Dursunbey**	**1.19**	**203**	PN	**Pb**	**23 36 22.8**	**-0.6**
CRLT	**Corlu**	**1.20**	**291**	PN	**Pb**	**23 36 23.4**	**0.0**
DURS	**Dursunbey**	**1.24**	**207**	P	**Pn**	**23 36 22.9**	**-1.3**
DURS				S	**Sb**	**23 36 39.7**	**-0.8**
DURS				*i* AML	AML	23 36 42.0	
	comp=E,926nm,0.4s						
DURS				*i* AML	AML	23 36 45.0	
	comp=N,2μm,0.8s						
SAHE	**Sakarya_HENDEK**	**1.25**	**83**	P	**Pn**	**23 36 23.5**	**-0.8**
SAHE				S	**Sb**	**23 36 38.5**	**-2.1**
SAHE				*i* AML	AML	23 36 42.0	
	comp=E,546nm,0.7s						
SAHE				*i* AML	AML	23 36 44.0	
	comp=N,734nm,1.1s						
BORA	**Eskisehir**	**1.26**	**131**	PN	**Pn**	**23 36 23.8**	**-0.6**
BORA	**Eskisehir**	**1.26**	**131**	P	**Pn**	**23 36 23.2**	**-1.2**
SRCK	**Saricakaya, Es**	**1.27**	**121**	PN	**Pn**	**23 36 23.8**	**-0.7**
SRCK				SN	**Sn**	**23 36 41.7**	**0.0**
TVSB	**Tavsanli**	**1.27**	**171**	PN	**Pn**	**23 36 24.0**	**-0.6**
TKR	**Tekirdag**	**1.30**	**283**	PN	**Pn**	**23 36 24.5**	**-0.5**
ANDZ	**Kutahya, Merke**	**1.31**	**156**	P	**Pn**	**23 36 24.8**	**-0.3**
GONE	**Gonen-Balikesi**	**1.34**	**241**	PN	**Pn**	**23 36 24.6**	**-0.9**
VIZE	**Kirklareli, Vi**	**1.35**	**310**	P	**Pn**	**23 36 25.0**	**-0.7**
VIZE				S	**Sb**	**23 36 42.0**	**-1.7**
VIZE				*i* AML	AML	23 36 45.0	
	comp=E,1μm,0.3s						
VIZE				*i* AML	AML	23 36 45.0	
	comp=N,1μm,0.3s						
KNL	**Balıkesir**	**1.36**	**252**	P	**Pn**	**23 36 26.0**	**+0.2**
KNL				S	**Sg**	**23 36 44.7**	**+0.4**
KNL				*i* AML	AML	23 36 47.0	
	comp=N,456nm,0.6s						
KNL				*i* AML	AML	23 36 48.0	
	comp=E,982nm,0.5s						
BTAS	**Taskesti**	**1.36**	**95**	P	**Pn**	**23 36 25.8**	**-0.1**
GZKV	**Gazikoy-Tekird**	**1.44**	**272**	PN	**Pn**	**23 36 26.7**	**-0.1**
KRBG	**Karabiga-Canak**	**1.50**	**258**	PN	**Pn**	**23 36 28.2**	**+0.6**
MDUB	**Mudurnu**	**1.53**	**98**	PN	**Pn**	**23 36 28.4**	**+0.2**
SART	**Tekirdag**	**1.55**	**270**	P	**Pn**	**23 36 27.9**	**-0.5**
SART				*i* AML	AML	23 36 45.0	
	comp=E,349nm,1.3s						
SART				S	**Sn**	**23 36 47.8**	**-0.9**
SART				*i* AML	AML	23 36 52.0	
	comp=N,340nm,0.4s						
RKY	**Sarkoy-Tekirda**	**1.55**	**270**	PN	**Pn**	**23 36 28.6**	**+0.2**
BALY	**Balya**	**1.56**	**232**	P	**Pn**	**23 36 28.0**	**-0.6**
BALY				S	**Sn**	**23 36 47.8**	**-1.1**
BALY				*i* AML	AML	23 36 52.0	
	comp=N,794nm,0.4s						
PHSR	**Pinarhisar**	**1.57**	**306**	PN	**Pb**	**23 36 29.7**	**-0.2**
SMAA	**Simav-Kutahya**	**1.62**	**187**	PN	**Pn**	**23 36 29.3**	**-0.1**
GDZ	**Gediz**	**1.63**	**173**	P	**Pn**	**23 36 28.9**	**-0.8**
SIMA	**Simav-Kutahya**	**1.63**	**186**	PN	**Pn**	**23 36 29.3**	**-0.3**
GEDZ	**Gediz**	**1.67**	**175**	PN	**Pn**	**23 36 30.2**	**+0.1**
SGAZ	**Eskisehir, Sey**	**1.71**	**133**	P	**Pn**	**23 36 30.5**	**-0.2**
SGAZ				S	**Sn**	**23 36 52.4**	**-0.4**
SGAZ				*i* AML	AML	23 36 59.0	
	comp=E,175nm,0.7s						
YIGI	**Dzce**	**1.71**	**81**	P	**Pn**	**23 36 31.1**	**+0.5**
YIGI				S	**Sn**	**23 36 53.2**	**+0.5**
YIGI				*i* AML	AML	23 36 57.0	
	comp=N,358nm,0.8s						
YIGI				*i* AML	AML	23 36 58.0	
	comp=E,553nm,1.0s						
STEP	**BALIKESIR_Sava**	**1.76**	**221**	P	**Pn**	**23 36 30.5**	**-0.7**
STEP				S	**Sn**	**23 36 53.2**	**-0.6**
STEP				*i* AML	AML	23 37 01.0	
	comp=E,808nm,0.9s						
ARMN	**Kirklareli, Me**	**1.77**	**311**	P	**Pn**	**23 36 31.7**	**+0.2**
ARMN				S	**Sn**	**23 36 54.4**	**+0.2**
ARMN				*i* AML	AML	23 36 58.0	
	comp=N,357nm,0.7s						
KDZE	**Karadeniz Ereo**	**1.79**	**70**	PN	**Pn**	**23 36 31.8**	**+0.1**
YUVA	**Yuva-Kibriscik**	**1.91**	**99**	PN	**Pn**	**23 36 33.4**	**0.0**
KIRK	**Kırklareli**	**1.92**	**305**	P	**Pn**	**23 36 32.8**	**-0.7**
AUMIH	**MIHALICIK**	**1.93**	**115**	PN	**Pn**	**23 36 33.5**	**-0.2**
AUMIH	**MIHALICIK**	**1.93**	**115**	P	**Pn**	**23 36 33.6**	**-0.1**
CIFT	**Cifteler, Eski**	**1.96**	**133**	PN	**Pn**	**23 36 33.5**	**-0.5**
USAK	**Uak-Merkez**	**2.00**	**184**	P	**Pn**	**23 36 33.9**	**-0.7**
USAK				S	**Sb**	**23 01.2**	**-0.9**
USAK				*i* AML	AML	23 37 04.0	
	comp=N,249nm,0.3s						
KIBS	**BOLU**	**2.03**	**97**	P	**Pn**	**23 36 33.8**	**-1.3**
KIBS				S	**Sb**	**23 37 03.9**	**+0.8**
BUHA	**Balikesir, Bur**	**2.04**	**234**	P	**Pn**	**23 36 34.3**	**-0.7**
BUHA				S	**Sn**	**23 36 57.7**	**-3.0**
BUHA				*i* AML	AML	23 37 06.0	
	comp=E,760nm,0.5s						
ERIK	**Erikli-Kesan**	**2.06**	**270**	PN	**Pn**	**23 36 35.4**	**+0.1**
GELI	**Tayfur-Gelibol**	**2.11**	**262**	PN	**Pn**	**23 36 36.6**	**+0.5**
SVRH	**Sivrihisar-ESK**	**2.17**	**125**	PN	**Pn**	**23 36 36.9**	**-0.1**
EDRB	**Edirne**	**2.18**	**302**	PN	**Pn**	**23 36 36.8**	**-0.3**
AUSIV	**SIVRIHISAR**	**2.19**	**125**	PN	**Pn**	**23 36 37.1**	**-0.1**
AUSIV	**SIVRIHISAR**	**2.19**	**125**	P	**Pn**	**23 36 35.5**	**-1.7**
BAYC	**CANAKKALE_Bayr**	**2.26**	**246**	P	**Pn**	**23 36 38.6**	**+0.4**
ENEZ	**Enez**	**2.33**	**272**	PN	**Pn**	**23 36 39.4**	**+0.3**
SHUT	**Suhut-Afyon**	**2.39**	**154**	PN	**Pn**	**23 36 40.3**	**+0.3**
ALN	**Alexandroupoli**	**2.41**	**276**	PN	**Pn**	**23 36 41.1**	**+0.9**
BTIN	**Bartın**	**2.47**	**67**	P	**Pn**	**23 36 40.0**	**-1.1**
BOZC	**Bozcaada**	**2.57**	**251**	PN	**Pn**	**23 36 43.3**	**+0.9**
KOCA	**Canakkale, Ayv**	**2.65**	**244**	P	**Pn**	**23 36 42.6**	**-0.9**
KOCA				S	**Sb**	**23 37 22.5**	**+1.6**
KOCA				*i* AML	AML	23 37 30.0	
	comp=E,262nm,0.5s						
KIZT	**Kizilcal**	**2.75**	**131**	PN	**Pn**	**23 36 44.8**	**-0.2**
RDO	**Rodhopi**	**2.82**	**280**	PN	**Pn**	**23 36 46.8**	**+1.0**
BASM	**Basmaki-Afyon**	**2.86**	**167**	PN	**Pn**	**23 36 46.9**	**+0.4**
AYDB	**Zeytinkoy-Aydi**	**2.94**	**201**	PN	**Pn**	**23 36 46.7**	**-1.0**
MANR	**Mangalia**	**3.14**	**352**	⇑S	**Sn**	**23 37 26.6**	**-1.3**
AFSR	**Afar-Bala (An**	**3.21**	**112**	PN	**Pn**	**23 36 51.8**	**+0.4**
BCK	**Bucak**	**3.41**	**161**	PN	**Pn**	**23 36 54.3**	**+0.2**
SUTC	**Sutluce-Ispart**	**3.51**	**156**	PN	**Pn**	**23 36 55.8**	**+0.3**
MFTR	**Murfatlar**	**3.52**	**351**	⇑P	**Pn**	**23 36 54.0**	**-1.4**
MFTR				⇑S	**Sn**	**23 37 35.4**	**-1.7**
BRTR	**Keskin Array B**	**3.53**	**105**	Pn	**Pn**	**23 36 56.1**	**+0.4**
	0.2nm,0.3s,baz=287,slow=11,SNR=7.8						
BRTR				Pg	**Pb**	**23 37 05.2**	**+1.9**
	1.2nm,0.3s,baz=285,slow=16,SNR=18						
BRTR				Sn	**Sn**	**23 37 36.6**	**-1.0**
	0.6nm,0.3s,baz=290,slow=21,SNR=5.0						
BRTR				Lg	Lg	23 37 54.6	
	0.5nm,0.3s,baz=287,slow=25,SNR=8.1						
BRTR	**Keskin Array B**	**3.53**	**105**	PN	**Pn**	**23 36 56.4**	**+0.7**
ICOR	**Ion Corvin**	**3.56**	**343**	⇑S	**Sn**	**23 37 37.1**	**-1.3**
TIRR	**Tirgusor**	**3.79**	**351**	⇑P	**Pn**	**23 36 59.3**	**+0.1**
TIRR				⇓S	**Sn**	**23 37 42.3**	**-1.7**
BZK	**Bozkurt**	**3.81**	**69**	⇓P	**Pn**	**23 37 00.3**	**+0.8**
TLBR	**Topalu**	**3.93**	**348**	⇑P	**Pn**	**23 37 01.2**	**+0.1**
TLBR				⇓S	**Sn**	**23 37 45.9**	**-1.4**
TPGR	**Topolog**	**4.19**	**352**	⇑P	**Pn**	**23 37 04.3**	**-0.4**
TPGR				⇑S	**Sn**	**23 37 52.0**	**-1.8**
TLCR		**4.49**	**356**	⇓P	**Pn**	**23 37 09.0**	**+0.3**
TLCR				⇓S	**Sn**	**23 37 59.6**	**-1.4**
COPA	**Copaceanca**	**4.53**	**320**	⇑P	**Pn**	**23 37 08.9**	**-0.4**
CFR	**Carcaliu**	**4.54**	**350**	⇓P	**Pn**	**23 37 09.0**	**-0.4**
GIUM	**Giurgiulesti**	**4.83**	**352**	⇑P	**Pn**	**23 37 13.7**	**+0.3**
VTS	**Vitosha**	**4.87**	**295**	⇓P	**Pn**	**23 37 14.7**	**+0.5**
SCTR	**Scanteiesti**	**5.04**	**350**	⇓P	**Pn**	**23 37 17.4**	**+1.0**
VLDR	**Vladesti**	**5.20**	**351**	⇓P	**Pn**	**23 37 19.3**	**+0.7**
ODBI	**Odobesti**	**5.29**	**343**	⇑P	**Pn**	**23 37 20.9**	**+1.1**
MLR	**Muntele Rosu**	**5.35**	**334**	⇑P	**Pn**	**23 37 21.7**	**+1.0**
MLR	**Muntele Rosu**	**5.35**	**334**	Pn	**Pn**	**23 37 21.7**	**+1.0**
	0.5nm,0.3s,baz=146,slow=11,SNR=9.3						
MLR				Sn	**Sn**	**23 38 18.0**	**-4.5**
	0.4nm,0.3s,baz=119,slow=18,SNR=1.3						
MLR				Lg	Lg	23 38 48.8	
	0.8nm,0.3s,baz=100,slow=17,SNR=1.6						
	1.7nm,0.4s						
VRI	**Vrincioaia**	**5.47**	**341**	⇓P	**Pn**	**23 37 23.1**	**+0.9**
PLOR	**Plostina**	**5.47**	**341**	⇑P	**Pn**	**23 37 23.2**	**+0.9**
GHRR		**5.51**	**347**	⇓P	**Pn**	**23 37 23.9**	**+1.1**
COVR	**Voineasa-Covas**	**5.58**	**338**	⇑P	**Pn**	**23 37 24.9**	**+1.0**
VOIR		**5.62**	**329**	⇓P	**Pn**	**23 37 24.7**	**+0.2**
ARR	**Arges**	**5.74**	**326**	⇑P	**Pn**	**23 37 26.7**	**+0.7**
LEOM	**Leova**	**5.81**	**353**	⇑P	**Pn**	**23 37 27.6**	**+0.8**
VASR	**Vaslui**	**6.02**	**351**	⇑P	**Pn**	**23 37 30.6**	**+0.8**
TESR	**Tescani**	**6.09**	**343**	⇑P	**Pn**	**23 37 30.6**	**-0.3**
MILM	**Milestii Mici**	**6.21**	**357**	⇓P	**Pn**	**23 37 32.4**	**-0.1**
BIZ	**Bicaz**	**6.62**	**341**	⇑P	**Pn**	**23 37 39.0**	**+1.0**
SORM	**Soroca**	**7.45**	**356**	⇑P	**Pn**	**23 37 48.6**	**-0.8**
BURAR	**Bucovina Array**	**7.48**	**339**	⇑P	**Pn**	**23 37 51.3**	**+1.4**
AKASG	**Malin Array Be**	**9.99**	**0**	Pn	**Pn**	**23 38 22.2**	**-2.0**
	0.5nm,0.3s,baz=185,slow=13,SNR=4.1						
AKASG				Sn	**Sn**	**23 40 11.5**	**-5.0**
	0.6nm,0.3s,baz=187,slow=22,SNR=4.2						
	0.2nm,0.3s						
NACGM	**Naroch**	**14.30**	**354**	⇓*e*P	**Pn**	**23 39 23.9**	**+0.9**
	baz=172						
FINES	**FINESS Array B**	**20.85**	**356**	P	**P**	**23 40 41.9**	**-0.5**
	0.7nm,0.6s,baz=186,slow=9.6,SNR=5.5						
	0.7nm,0.6s						
NOA	**NORSAR Array B**	**23.16**	**338**	P	**P**	**23 41 09.7**	**+2.6**
	0.3nm,0.8s,baz=142,slow=10,SNR=3.6						
	0.3nm,0.8s						
SCHQ	**Schefferville**	**61.08**	**319**	P	**P**	**23 46 17.7**	**+3.1**
	3.1nm,0.9s,baz=56,slow=9.7,SNR=3.0						
	3.1nm,0.9s						

MAN 22 23:36:35.2, 6°.29N×125°.70E, h32km, mb4.7, ML3.6, MS3.6, Mindanao

*IDC **22** 23:54:23.0±1.9, 51°.35N×176°.87W, h0km, mb3.3/4, mbtmp3.6/5, ML3.4/1, Error ellipse: s-maj=88.6km s-min=30.6km az=143.0*
*AEIC **22** 23:54:30.1±1.6, 51°.50N±0°.09×176°.80W±0°.08, h58km±7km, Error ellipse: s-maj=14.2km s-min=5.2km az=159.0*
*NEIC **22** 23:54:30.4±0.8, 51°.36N±0°.07×176°.79W±0°.07, h42km±19km, mb3.6/11, ML3.5(AEIC), Error ellipse: s-maj=11.2km s-min=4.6km az=150.0*

ISC 22 23:54:30.1±0.9, 51°.36N±0°.09×176°.79W±0°.04, h48km, n56, σ1°04/49, mb3.6/4, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIMD	**Kanaga Island**	**0.49**	**326**		**Pn**	**23 54 41.1**	**0.0**
ADK	**Adak**	**0.53**	**7**		**Pn**	**23 54 41.0**	**-0.6**
ADK				Sn	**Sn**	**23 54 49.0**	**-0.8**
KIWB	**Kanaga Island**	**0.54**	**336**		**Pn**	**23 54 41.7**	**0.0**
KIKV	**Kanaga Island**	**0.57**	**336**		**Pn**	**23 54 42.1**	**0.0**
KIRH	**Kanaga Island**	**0.57**	**341**		**Pn**	**23 54 42.2**	**+0.1**
KICM	**Kanaga Island**	**0.61**	**336**		**Pn**	**23 54 42.7**	**0.0**
GSCK	**Great Sitkin C**	**0.76**	**31**		**Pn**	**23 54 44.5**	**-0.1**
TAPA	**Tanaga Point A**	**0.78**	**306**		**Pn**	**23 54 44.9**	**0.0**
GSTD	**Great Sitkin T**	**0.81**	**30**		**Pn**	**23 54 45.0**	**-0.2**
GSMY	**Great Sitkin M**	**0.82**	**34**		**Pn**	**23 54 45.2**	**-0.2**
GSTR	**Great Sitkin T**	**0.87**	**32**		**Pn**	**23 54 46.0**	**0.0**
TASE	**Tanaga Southea**	**0.91**	**302**		**Pn**	**23 54 47.0**	**+0.3**
TAFP	**Tanaga Falls P**	**0.92**	**307**		**Pn**	**23 54 46.8**	**+0.1**
GAEA	**Gareloi East**	**1.29**	**290**		**Pn**	**23 54 52.1**	**+0.4**
GALAA	**Gareloi Lava P**	**1.30**	**289**		**Pn**	**23 54 52.4**	**+0.6**
GASW	**Gareloi Southw**	**1.35**	**289**		**Pn**	**23 54 52.9**	**+0.4**
ATKA	**Atka Island**	**1.82**	**61**		**Pn**	**23 54 59.2**	**+0.3**
KOKL	**Mount Kliuchef**	**1.88**	**58**		**Pn**	**23 55 00.8**	**+1.1**
CERAA	**Semis' Rag'd T**	**2.26**	**285**		**Pn**	**23 55 05.2**	**+0.2**
CESW	**Semis' Southwe**	**2.33**	**285**		**Pn**	**23 55 06.1**	**+0.1**
CEAP	**Semis' Anvil P**	**2.35**	**287**		**Pn**	**23 55 06.2**	**0.0**
AMKA	**Amchitka**	**2.45**	**272**		**Pn**	**23 55 07.6**	**+0.1**
AMKA				Sn	**Sn**	**23 55 36.5**	**+0.3**
LSPA	**Little Sitkin**	**2.95**	**284**		**Pn**	**23 55 14.9**	**+0.5**
LSNW	**Little Sitkin**	**2.98**	**284**		**Pn**	**23 55 15.1**	**+0.3**
NIKH	**Nikolski High**	**5.15**	**69**	Pn	**Pn**	**23 55 45.7**	**+1.2**
UNV	**Unalaska Valle**	**6.74**	**64**	Pn	**Pn**	**23 56 09.0**	**+2.6**
SPIA	**Saint Paul Isl**	**6.97**	**31**	Pn	**Pn**	**23 56 11.0**	**+1.5**
CNBA	**Chernabura Isl**	**10.91**	**65**	Pn	**Pn**	**23 57 01.4**	**-1.9**
P18K	**Big Mountain,**	**14.61**	**48**	Pn	**Pn**	**23 57 56.1**	**+2.5**
O18K	**Koktuh Hills**	**14.81**	**47**	Pn	**Pn**	**23 57 58.6**	**+2.3**
N18K	**Kilae Creek**	**14.89**	**43**	Pn	**Pn**	**23 57 59.5**	**+2.2**
Q19K	**Cape Douglas,**	**15.19**	**51**		**P**	**23 58 05.0**	**-0.5**
KDAK

IDOB					*e*Sg		**Sb**	**00 15 42.2**	**-1.0**
IKOM	**Komasi**	**0.97**	**3**	*e*Pg		**Pg**	**00 15 32.7**	**+0.3**
IKOM					*e*Sg		**Sn**	**00 15 47.4**	**-1.6**
KCHF	**Cheshme Sefid,**	**1.12**	**343**	*e*Pg		**Pg**	**00 15 35.5**	**+0.2**
KCHF				*e*			00 15 57.2		
	comp=Z,16μm,0.4s								
KER	**Kermanshah**	**1.20**	**348**	*e*Pg		**Pb**	**00 15 37.0**	**-0.4**
IBDR	**Badra**	**1.28**	**266**	*e*Pg		**Pn**	**00 15 38.0**	**-0.7**
IBDR					*e*Sg	**Sb**	**00 15 55.0**	**-0.4**
IBZA	**Bozab**	**1.31**	**15**	*e*Pg		**Pg**	**00 15 39.3**	**+0.4**
IBZA				*e*			00 15 42.1		
	comp=Z,5μm,0.3s								
IGHG	**Ghaleghazi**	**1.34**	**327**	*e*Pg		**Pg**	**00 15 39.9**	**+0.4**
IGHG				*e*			00 16 11.5		
	comp=Z,7μm,0.7s								
HSAM	**Samen**	**1.39**	**44**	*e*Pg		**Pn**	**00 15 40.1**	**-0.4**
IDHR	**Dehrash**	**1.73**	**330**	*e*Pg		**Pg**	**00 15 47.3**	**+0.3**
IDHR				*e*			00 15 48.4		
	comp=Z,6μm,0.5s								
ILIN	**Lien**	**1.75**	**347**	*e*Pg		**Pg**	**00 15 47.2**	**-0.3**
ILIN				*e*			00 16 12.7		
	comp=Z,3μm,0.6s								
RAFI	**Al-Rafai**	**1.86**	**218**	*e*Pn		**Pn**	**00 15 47.0**	**+0.3**
RAFI				*e*Sn		**Sb**	**00 16 12.0**	**-0.2**
RAFI				AML		AML	00 16 22.5		
	comp=E,203nm,0.3s								
SNGE	**Sanandaj**	**1.88**	**358**	*e*Pg		**Pg**	**00 15 49.8**	**-0.1**
HAGD	**Aghdareh**	**2.14**	**41**	*e*Pn		**Pb**	**00 15 52.7**	**-0.7**
KHMZ	**Khomeyn**	**2.17**	**75**	*e*Pn		**Pb**	**00 15 53.8**	**-0.1**
AMIS	**Naft Sefid**	**2.19**	**134**	*e*Pn		**Pb**	**00 15 52.7**	**-1.4**
ASAO	**Ashtian**	**2.53**	**57**	*e*Pn		**Pb**	**00 15 58.8**	**-1.3**
BHD	**Baghdad**	**2.57**	**272**	*e*Pn		**Pn**	**00 15 57.0**	**+0.5**
BHD				*e*Sn		**Sn**	**00 16 29.0**	**+0.7**
IPIR	**Pirpir**	**2.94**	**99**	*e*Pn		**Pb**	**00 16 04.3**	**-2.9**
IPIR				*e*			00 16 50.6		
	comp=Z,865nm,0.8s								
IRAZ	**Razeghan**	**3.00**	**42**	*e*Pn		**Pb**	**00 16 05.2**	**-3.0**
IRAZ				*e*			00 17 01.6		
	comp=Z,691nm,1.0s								
SHK1	**Shahrekord**	**3.03**	**106**	*e*Pn		**Pn**	**00 16 04.0**	**+1.0**
QABG	**Abgarm-Qazvin**	**3.06**	**35**	*e*Pn		**Pn**	**00 16 04.1**	**+0.7**
QAMS	**Qamsar**	**3.34**	**80**	*e*			00 16 53.3		
	comp=Z,849nm,0.5s								
QAMS				*e*Pn		**Pn**	**00 16 08.7**	**+1.3**
IKRK	**Kirkuk**	**3.38**	**311**	*e*Pn		**Pn**	**00 16 09.0**	**+1.4**
IKRK				*e*Sn		**Sn**	**00 16 49.5**	**+1.3**
IKRK				AML		AML	00 16 55.8		
	comp=N,68nm,0.4s								
IKRK				AML		AML	00 17 17.8		
	comp=E,70nm,0.8s								
IQOM	**Qom**	**3.42**	**61**	*e*Pn		**Pn**	**00 16 09.5**	**+1.0**
GHVR	**GHOM**	**3.45**	**67**	*e*Pn		**Pn**	**00 16 10.9**	**+2.3**
IKLH	**Kolahrood**	**3.46**	**87**	*e*Pn		**Pn**	**00 16 11.3**	**+2.3**
IBRJ	**Brojen**	**3.47**	**111**	*e*Pn		**Pn**	**00 16 09.7**	**+0.6**
IBRJ				*e*			00 17 16.4		
	comp=Z,366nm,0.5s								
ZNJK	**Zanjan**	**3.60**	**16**	*e*Pn		**Pn**	**00 16 13.6**	**+2.7**
KRSH	**Karshahi**	**3.99**	**78**	*e*Pn		**Pn**	**00 16 17.9**	**+1.8**
CHTH	**Charan**	**4.06**	**47**	*e*Pn		**Pn**	**00 16 19.1**	**+1.9**
IZEF	**Zefreh**	**4.11**	**93**	*e*Pn		**Pn**	**00 16 19.6**	**+1.7**
KLNJ	**Kolanjah**	**4.14**	**121**	*e*Pn		**Pn**	**00 16 20.1**	**+1.6**
ISFB	**Sefidab**	**4.15**	**73**	*e*Pn		**Pn**	**00 16 19.7**	**+1.4**
IRAM	**Ramesheh**	**4.40**	**107**	*e*Pn		**Pn**	**00 16 22.2**	**+0.4**
IRAM				*e*			00 17 27.8		
	comp=Z,138nm,0.5s								
NASN	**Na'in**	**4.52**	**94**	*e*Pn		**Pn**	**00 16 26.7**	**+3.1**
ISRB	**Sarab**	**4.61**	**2**	*e*Pn		**Pn**	**00 16 26.5**	**+1.8**
IAZR	**Azarshahr**	**4.62**	**345**	*e*Pn		**Pn**	**00 16 26.8**	**+1.9**
ANAR	**Anarak**	**5.27**	**88**	*e*Pn		**Pn**	**00 16 35.1**	**+1.4**

ASRS ***23*** *00:18:19.4±0.2,52˚N±2˚×9˚7E±˚, h5km, MLh4.3/6, Error ellipse: s-maj=4.3km s-min=2.4km az=31.5, confirmed*
MOS ***23*** *00:18:26.8±3.2,52˚33N×96˚52E, h10km, mb3.9/1, Error ellipse: s-maj=14.8km s-min=9.8km az=44.9*
IDC ***23*** *00:18:38.7±2.6,51˚75N×95˚20E, h0km, mbtmp3.1/4, ML2.8/4, Error ellipse: s-maj=39.9km s-min=22.4km az=18.0.*

ISC 23 00:18:25.2±0.7,**52˚37N**±0˚04×**96˚72E**±0˚03,**h10**km,**n30,** σ1⁰**68**/36,**3C-2D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time h m s	Res ISC
KNGR	**Kungurtug, Tuv**	**1.84**	**164**	PN		**Pn**	**00 18 56.7**	**-0.2**
KNGR							00 19 19.9	
KNGR	**Kungurtug, Tuv**	**1.84**	**164**	Pg		**Pn**	**00 18 56.8**	**-0.2**
KNGR				Sg		**Sn**	**00 19 19.9**	**-0.3**
ORL	**Orlik**	**1.90**	**84**	*e*PN		**Pb**	**00 18 59.3**	**-0.7**
ORL				*e*			00 19 24.0	
ORL				pmax	pmax			
	comp=Z,181nm,0.3s							
ORL				smax	smax			
	comp=N,705nm,0.7s							
ARDR	**Aradan**	**2.02**	**277**	Pg		**Pb**	**00 19 01.0**	**-1.1**
ARDR				Sg		**Sn**	**00 19 25.0**	**+0.2**
ERNS	**Erzin**	**2.33**	**206**	Pg		**Pn**	**00 19 02.9**	**-0.7**
ERNS				Sg		**Sn**	**00 19 31.4**	**-0.8**
MOY	**Mondy**	**2.73**	**103**	*e*PN		**Pb**	**00 19 13.5**	**-0.8**
MOY				*e*			00 19 49.1	
MOY				pmax	pmax			
	comp=Z,88nm,0.5s							
MOY				smax	smax			
	comp=N,1μm,1.0s							
MOY	**Mondy**	**2.73**	**103**	Pg		**Pb**	**00 19 13.5**	**-0.8**
MOY				Sg		**Sb**	**00 19 49.5**	**+1.6**
ORY	**Orie**	**2.81**	**341**	*i* PN		**Pb**	**00 19 12.5**	**-2.9**
ORY	**Orie**	**2.81**	**341**	Sg		**Sg**	**00 19 53.4**	**-1.9**
ORY	**Orie**	**2.81**	**341**	Pg		**Pb**	**00 19 14.9**	**-0.5**
CERR	**Cheremushki**	**3.27**	**281**	PN		**Pb**	**00 19 23.1**	**-0.1**
CERR							00 20 04.5	
CERR	**Cheremushki**	**3.27**	**281**	Pg		**Pb**	**00 19 23.1**	**-0.1**
CERR				Sg		**Sb**	**00 20 04.5**	**+1.4**
DJO	**Djoy, Khakassi**	**3.38**	**279**	PN		**Pb**	**00 19 23.7**	**-1.4**
DJO							00 20 08.9	
DJO	**Djoy, Khakassi**	**3.38**	**279**	Pg		**Pb**	**00 19 23.8**	**-1.4**
DJO				Sg		**Sb**	**00 20 08.9**	**+2.6**
ABNR	**Abakan**	**3.46**	**295**⇓	*e*PN		**Pn**	**00 19 20.2**	**+1.1**
ABNR	**Abakan**	**3.46**	**295**	Pg		**Pb**	**00 19 24.5**	**-2.1**
ABNR	**Abakan**	**3.46**	**295**	Sg		**Sg**	**00 20 12.3**	**-4.0**
ARS	**Arshan**	**3.54**	**95**	*e*PN		**Pb**	**00 19 28.0**	**0.0**
ARS				*e*			00 20 13.6	
ARS				pmax	pmax			
	comp=Z,91nm,0.3s							
ARS				smax	smax			
	comp=E,1μm,0.8s							
KRAR	**Krasnoyarsk**	**4.29**	**330**⇑	*e*PN		**Pn**	**00 19 30.2**	**-0.3**
ZAK	**Zakamensk**	**4.57**	**113**	*e*PN		**Pb**	**00 19 44.1**	**-1.4**
ZAK				*e*			00 20 44.2	
ZAK				pmax	pmax			
	comp=Z,24nm,0.5s							
ZAK				smax	smax			
	comp=N,202nm,0.8s							
ZAK	**Zakamensk**	**4.57**	**113**	Pg		**Pb**	**00 19 46.7**	**+1.2**
ZAK				Sg		**Sg**	**00 20 48.7**	**-3.1**
ZALV	**Zalesovo Beam**	**7.33**	**287**	Pn		Pn	00 20 18.4	+6.3
	comp=N,0.3nm,0.3s,baz=99,slow=13,SNR=3.4							
ZALV				Sn		**Sn**	**00 21 37.1**	**+1.8**
	comp=N,0.5nm,0.3s,baz=110,slow=14,SNR=2.1							
ZALV				Lg		Lg	00 22 09.2	
	comp=N,2.6nm,0.3s,baz=103,slow=24,SNR=15							
	comp=N,0.6nm,0.3s							
SONM	**Songino Array**	**7.70**	**122**	Pn		**Pb**	**00 20 39.9**	**+1.1**
	comp=N,0.5nm,0.3s,baz=298,slow=18,SNR=5.7							
SONM				Sn		Sg	00 22 22.3	-10
	comp=N,1.5nm,0.3s,baz=301,slow=29,SNR=6.3							
	comp=N,0.7nm,0.4s							
ULN	**Ulaanbaatar**	**8.03**	**120**⇑	*e*P		Pn	00 20 26.8	+4.9
MKAR	**Makanchi Array**	**10.89**	**245**	Pn		**Pn**	**00 21 00.6**	**-0.5**
	comp=N,0.1nm,0.3s,baz=53,slow=15,SNR=6.1							
MKAR				Lg		Lg	00 23 52.5	
	comp=N,0.1nm,0.3s,baz=61,slow=12,SNR=1.7							
	comp=N,0.3nm,0.3s							
MKAR	**Makanchi Array**	**10.89**	**245**	*i* P		**Pn**	**00 21 02.2**	**+1.1**
KURK	**Kurchatov**	**11.39**	**269**	P		**Pn**	**00 21 10.5**	**+2.7**
KURBB	**Kurchatov Arra**	**11.47**	**268**	Pn		**Pn**	**00 21 10.5**	**+1.6**
	baz=76,slow=16,SNR=4.8							
KURBB				Lg		Lg	00 24 19.6	
	comp=N,0.1nm,0.3s,baz=71,slow=33,SNR=9.1							
	comp=N,0.3nm,0.6s							
BRVK	**Borovoye**	**16.00**	**283**⇑	*e*P		**Pn**	**00 22 09.1**	**-1.1**
BRVK				pmax	pmax			
	comp=Z,5.0nm,2.5s							
TIXI	**Tiksi**	**23.97**	**25**⇓	*e*P		**P**	**00 23 42.4**	**+3.1**
TIXI				pmax	pmax			
	comp=Z,4.0nm,1.4s							

SFS ***23*** *00:22:22.0,35˚59N×3˚81W, ML2.7, ALBORAN SUR*
MDD ***23*** *00:22:22.4±0.4,35˚59N×3˚81W, h0km, mb_Lg2.7/17, Error ellipse: s-maj=3.1km s-min=2.3km az=2.0*
CNRM ***23*** *00:22:22.8,35˚52N×3˚82W, h42km, ml2.5*
INMG ***23*** *00:22:23.0±1.2,35˚61N×3˚80W, h2km±3km, ML2.1, Error ellipse: s-maj=2.3km s-min=1.8km az=141.0*
IGIL ***23*** *00:22:23.2,35˚59N×3˚81W, h0km, ML2.0*

ISC 23 00:22:22.5±1.0,**35˚53N**±0˚02×**3˚77W**±0˚02,**h26**km±11km, **n56,** σ1⁰**26**/98,**Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.34**	**204**	P		**Pb**	**00 22 30.5**	**+0.2**
PALE				S		**Sn**	**00 22 37.6**	**-0.2**
WMELI	**Melilla**	**0.70**	**107**	P		**Pb**	**00 22 35.8**	**-0.4**
WMELI				S		**Sb**	**00 22 44.9**	**-0.5**
EMEL	**Melilla**	**0.70**	**109**	Pg		**Pb**	**00 22 36.6**	**+0.4**
EMEL				Sg		**Sb**	**00 22 45.8**	**+0.3**
EMEL				*i* Vmb_Lg			00 22 47.1	
GOG	**Mont Gurugu**	**0.70**	**115**	P		**Pb**	**00 22 36.1**	**-0.1**
GOG				S		**Sb**	**00 22 44.7**	**-0.9**
EALB	**Alboran**	**0.73**	**55**	Pg		**Pb**	**00 22 35.8**	**-0.8**
EALB				Sg		**Sb**	**00 22 45.8**	**-0.4**
EALB				*i* Vmb_Lg			00 22 47.3	
AKLM	**AKL**	**1.02**	**184**	P		**Pn**	**00 22 43.1**	**+1.9**
AKLM				S		**Sn**	**00 22 56.8**	**+2.1**
CHAS	**Isla Isabel II**	**1.15**	**107**	P		**Pn**	**00 22 41.8**	**-1.2**
CHAS				S		**Sb**	**00 22 56.9**	**-1.3**
EMIJ	**Mijas**	**1.31**	**322**	Pg		**Pn**	**00 22 44.3**	**-0.9**
EMIJ				Sg		**Sb**	**00 23 02.4**	**-0.7**
EMIJ				*i* Vmb_Lg			00 23 06.0	
SMIR	**Smir Dam**	**1.32**	**277**	P		**Pn**	**00 22 44.7**	**-0.6**
SMIR				S		**Sn**	**00 22 59.5**	**-2.6**
TAF	**Taforalt**	**1.32**	**122**	P		**Pn**	**00 22 45.5**	**+0.1**
TAF				S		**Sn**	**00 23 02.2**	**0.0**
ELGU	**Los Guajares,**	**1.34**	**5**	Pg		**Pn**	**00 22 45.0**	**-0.7**
ELGU				Sg		**Sb**	**00 23 03.5**	**-0.4**
ELGU				*i* Vmb_Lg			00 23 05.5	
CHEFC	**Chefchaouen**	**1.35**	**252**	P		**Pb**	**00 22 47.7**	**+0.5**
CHEFC				S		**Sn**	**00 23 01.4**	**-1.5**
CEU	**Ceuta**	**1.35**	**286**	P		**Pn**	**00 22 44.2**	**-1.5**
CEU				S		**Sn**	**00 22 59.5**	**-3.3**
EBER	**Berja**	**1.54**	**27**	Pn		**Pn**	**00 22 48.2**	**-0.4**
EBER				Sg		**Sb**	**00 23 09.7**	**-0.1**
EBER				*i* Vmb_Lg			00 23 28.8	
JBK	**JBK**	**1.55**	**140**	P		**Pn**	**00 22 48.8**	**+0.2**
JBK				S		**Sn**	**00 23 07.3**	**-0.7**
EGOR	**Sierra Gorda,**	**1.60**	**350**	Pn		**Pn**	**00 22 49.4**	**+0.1**
EGOR				Sg		**Sb**	**00 23 11.4**	**0.0**
EGOR				*i* Vmb_Lg			00 23 20.9	
EQUE	**Quentar**	**1.70**	**9**	Pn		**Pn**	**00 22 51.4**	**+0.8**
EQUE				Sg		**Sb**	**00 23 14.1**	**0.0**
EQUE				*i* Vmb_Lg			00 23 16.7	
ENIJ	**Nijar**	**1.92**	**41**	Pn		**Pn**	**00 22 54.0**	**+0.4**
ENIJ				Sn		**Sn**	**00 23 16.9**	**0.0**
ENIJ				*i* Vmb_Lg			00 23 28.9	
ESPR	**Espera**	**2.15**	**309**	Sg		**Sb**	**00 23 28.9**	**+1.9**
IFR	**Ifrane**	**2.30**	**210**	P		**Pb**	**00 23 01.3**	**-2.1**
IFR				S		**Sn**	**00 23 28.6**	**+2.2**
EQES	**Quesada**	**2.34**	**14**	Pn		**Pn**	**00 23 00.1**	**+0.6**
EQES				Sn		**Sn**	**00 23 28.7**	**+1.3**
EQES				*i* Vmb_Lg			00 23 32.3	
CZD	**Col de Zad**	**2.70**	**203**	P		**Pn**	**00 23 04.9**	**+0.3**
CZD				S		**Sn**	**00 23 34.5**	**-2.0**
MD31	**MD31**	**2.78**	**197**	P		**Pn**	**00 23 07.1**	**+1.7**
MD31				S		**Sn**	**00 23 37.4**	**-0.8**
MDT	**Midelt**	**2.79**	**195**	P		**Pn**	**00 23 07.7**	**+2.0**
MDT				S		**Sn**	**00 23 37.4**	**-1.2**
ECAB	**El Cabril**	**2.87**	**333**	Pn		**Pn**	**00 23 07.6**	**+1.0**
ECAB				*i* Vmb_Lg			00 23 17.3	
ECAB				Sn		**Sn**	**00 23 40.4**	**+0.1**
TDRA	**Tendrara**	**2.87**	**149**	P		**Pn**	**00 23 07.3**	**+0.5**
TDRA				S		**Sn**	**00 23 39.0**	**-1.6**
EZAR	**Zarzadilla de**	**2.88**	**35**	Pn		**Pn**	**00 23 07.5**	**+0.7**
EZAR				Sn		**Sn**	**00 23 41.4**	**+0.7**
EMUR	**La Murta**	**3.08**	**41**	Sn		**Sn**	**00 23 45.6**	**+0.1**
ZHG	**ZHG**	**3.15**	**230**	P		**Pn**	**00 23 10.6**	**+0.1**
ZHG				S		**Sn**	**00 23 48.1**	**+0.8**
EMIN	**Mina Concepcio**	**3.23**	**315**	Pn		**Pn**	**00 23 12.0**	**+0.4**
EMIN				*i* Vmb_Lg			00 23 28.7	
EMIN				Sn		**Sn**	**00 23 49.6**	**+0.4**
ETOB	**Tobarra**	**3.58**	**29**	Pn		**Pn**	**00 23 17.4**	**+0.9**
ETOB				Sn		**Sn**	**00 23 49.8**	**+0.3**
ETOB				*i* Vmb_Lg			00 25 38.9	
EGRO	**El Granado**	**3.60**	**305**	Pn		**Pn**	**00 23 17.6**	**+1.0**
EGRO				Sn		**Sn**	**00 23 56.9**	**-1.3**
EGRO				*i* Vmb_Lg			00 23 56.9	
PVAQ	**Vaqueiros**	**3.69**	**302**	*e*Pn		**Pn**	**00 23 19.1**	**+1.2**
PVAQ				*e*Sn		**Sn**	**00 24 00.8**	**+0.3**
PVAQ				A	A		00 24 04.4	
	3.3nm,0.5s							
PBDV	**Barranco-do-Ve**	**3.77**	**298**	*e*Pn		**Pn**	**00 23 19.9**	**+0.9**
PBDV				*e*Sn		**Sn**	**00 24 02.7**	**+0.2**
PBDV				A	A		00 24 06.2	
	3.5nm,0.9s							
GOLM	**Goulmima**	**3.94**	**195**	S		**Sn**	**00 24 08.3**	**+1.4**
PCVE	**Castro Verde**	**4.02**	**303**	*e*Pn		**Pn**	**00 23 24.4**	**+1.9**
PCVE				A	A		00 24 17.4	
	3.1nm,0.4s							
EBAD	**Badajoz**	**4.13**	**322**	Pn		**Pn**	**00 23 24.8**	**+0.8**
EBAD				Sn		**Sn**	**00 24 10.2**	**-1.2**
EBAD				*i* Vmb_Lg			00 24 13.1	
MESJ	**Messejana**	**4.25**	**304**	*e*P		**Pn**	**00 23 26.4**	**+0.7**
MESJ				*e*S		**Sn**	**00 24 12.8**	**-1.6**
MESJ				IAML			00 24 17.1	
	comp=N,2.8nm,0.2s							
MESJ	**Messejana**	**4.25**	**304**	*e*Pn		**Pn**	**00 23 27.4**	**+1.8**
MESJ				*e*Sn		**Sn**	**00 24 14.0**	**-0.4**
MESJ				A	A		00 24 15.9	
	comp=N,2.7nm,0.4s							
PTEO	**Sao Teotonio**	**4.47**	**298**	*e*Sn		**Sn**	**00 24 20.3**	**+0.6**
PESTR	**Estremoz**	**4.52**	**319**	*e*Sn		**Sn**	**00 24 20.8**	**-0.1**
PESTR	**Estremoz**	**4.52**	**319**	P		**Pn**	**00 23 28.4**	**-0.9**
PESTR				S		**Sn**	**00 24 19.1**	**-1.8**
EVO	**Evora**	**4.53**	**313**	P		**Pn**	**00 23 30.6**	**+1.2**
EVO				S		**Sn**	**00 24 19.4**	**-1.8**
EVO	**Evora**	**4.53**	**313**	*e*Pn		**Pn**	**00 23 30.7**	**+1.3**
EVO				*e*Sn		**Sn**	**00 24 20.0**	**-1.2**
EVO				A	A		00 24 25.3	
	comp=N,2.0nm,0.5s							
PNCL	**Nicolau / Gran**	**4.61**	**305**	*e*Pn		**Pn**	**00 23 31.4**	**+1.0**
PNCL				*e*Sn		**Sn**	**00 24 22.6**	**-0.5**
PMRV	**Marv??o**	**4.84**	**325**	*e*Pn		**Pn**	**00 23 35.1**	**+1.4**
EPLA	**Plasencia**	**4.88**	**339**	Pn		**Pn**	**00 23 35.1**	**+0.8**
EPLA				*i* Vmb_Lg			00 25 31.2	
TZRR	**Tazzarine**	**4.96**	**198**	P		**Pn**	**00 23 35.6**	**+0.1**
TZRR				S		**Sn**	**00 24 29.1**	**-3.0**
PMTG	**Montargil**	**5.01**	**316**	*e*Pn		**Pn**	**00 23 37.8**	**+1.8**
PMTG				*e*Sn		**Sn**	**00 24 32.7**	**-0.3**
PMTG				A	A		00 24 34.7	
	comp=N,2.2nm,0.7s							
PCBR	**Castelo Branco**	**5.21**	**327**	*e*Pn		**Pn**	**00 23 40.4**	**+1.6**
OUZM	**OUZ**	**5.24**	**209**	P		**Pn**	**00 23 41.2**	**+1.9**
OUZM				S		**Sn**	**00 24 40.0**	**+1.0**
PSBE	**So Bento**	**5.64**	**316**	*e*Pn		**Pn**	**00 23 46.7**	**+2.0**
MVO	**Moncorvo**	**6.18**	**337**	*e*Pn		**Pn**	**00 23 54.3**	**+2.1**
POLO	**Lamas de Olo**	**6.63**	**333**	*e*Pn		**Pn**	**00 24 00.2**	**+1.8**
PBRG	**Braganca**	**6.68**	**341**	*e*Pn		**Pn**	**00 24 01.5**	**+2.5**
PCAB	**Cabril**	**7.01**	**333**	*e*Pn		**Pn**	**00 24 05.4**	**+1.8**

IDC ***23*** *00:37:33.6±1.0, 40˚85N×114˚24E, h0km, mb3.7/9, mbtmp3.8/13, ML3.5/4, MS3.1/12, Error ellipse: s-maj=23.8km s-min=19.4km az=33.0*
BJI ***23*** *00:37:34.2±0.0, 40˚95N×114˚20E, h14km, mb4.3/13, mB4.2/8, ML4.3/16, Ms3.8/16, Ms7 3.5/18*
NEIC ***23*** *00:37:36.5±2.0, 40˚99N±0˚07×114˚24E±0˚05, h14km±4km, mb4.3/9, Error ellipse: s-maj=10.0km s-min=5.7km az=185.0*

ISC 23 00:37:35.2±0.5,**40˚98N**±0˚03×**114˚25E**±0˚03,**h10**km,**n59,** σ2⁰**00**/81,**mb4.0**/14,**MS3.1**/10,**5C-2D, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time h m s	Res ISC
				Op				
BJI	**Beijing**	**1.74**	**122**	Pn		**Pn**	**00 38 05.3**	**-0.2**
BJI				Pg		**Pb**	**00 38 06.3**	**-0.9**
BJI				Sn		**Sb**	**00 38 29.6**	**+0.5**
BJI				Sg		**Sg**	**00 38 31.6**	**+0.5**
BJI				smax	smax			
	comp=N,440nm,0.6s							
BJI				smax	smax			
	comp=E,2μm,0.6s							
BJI	**Beijing**	**1.74**	**122**	Pn		**Pn**	**00 38 05.2**	**-0.2**
BJI				Pg		**Pb**	**00 38 06.3**	**-0.9**
BJI				Sn		**Sb**	**00 38 29.6**	**+0.5**
BJI				Sg		**Sg**	**00 38 31.6**	**+0.5**
BJI				smax	smax			
	comp=E,440nm,0.6s							
BJI				smax	smax			
	comp=E,2μm,0.6s							
BJT	**Baijiatuan**	**1.75**	**123**			**Pn**	**00 38 05.3**	**-0.3**
BJT				Sn		**Sb**	**00 38 29.9**	**+0.6**
XLT	**XiLinHaoTe**	**3.21**	**24**	*e*Pg		**Pn**	**00 38 28.9**	**+3.1**
XLT				Sg		**Sb**	**00 39 15.8**	**+4.1**
XLT				smax	smax			
	comp=E,970nm,0.7s							
BTO	**Baotou**	**3.24**	**265**	*e*Pn		**Pn**	**00 38 27.6**	**+1.5**
BTO				*e*Pg		**Pb**	**00 38 33.2**	**+0.4**
BTO				Sn		**Sn**	**00 39 07.9**	**+3.2**
BTO				Sg		**Sb**	**00 39 13.7**	**+1.4**
BTO				smax	smax			
	comp=E,8μm,0.4s							
BTO				smax	smax			
	comp=E,6μm,0.6s							
TIY	**Taiyuan**	**3.56**	**204**	Pn		**Pn**	**00 38 30.4**	**-0.1**
TIY				Pg		**Pb**	**00 38 37.8**	**-0.4**
TIY				Sg		**Sb**	**00 39 22.9**	**+1.5**
TIY				smax	smax			
	comp=E,440nm,0.7s							
TIY				smax	smax			
	comp=E,1μm,0.8s							
HNS	**HongShan**	**3.59**	**174**⇓	Pn		**Pn**	**00 38 30.0**	**-0.9**
HNS				Pg		**Pb**	**00 38 39.3**	**+0.5**
HNS				Sn		**Sn**	**00 39 11.0**	**-2.4**
HNS				Sg		**Sb**	**00 39 23.7**	**+1.3**
HNS				smax	smax			
	comp=E,2μm,0.7s							
HNS				smax	smax			
	comp=E,3μm,0.7s							
TIA	**Tai'an**	**5.27**	**154**	Pn		Pb	00 39 01.6	-5.7
TIA				Pg		Pg	00 39 09.3	-6.7
TIA				Sg		**Sb**	**00 40 16.6**	**+6.0**
TIA				smax	smax			
	comp=N,260nm,0.7s							
TIA				smax	smax			
	comp=E,270nm,0.6s							
DL2	**Dalian**	**6.03**	**108**	Pn		**Pn**	**00 39 05.4**	**+1.0**
DL2				Sg		**Sg**	**00 40 47.2**	**-1.6**
DL2				smax	smax			
	comp=E,160nm,1.1s							
DL2				smax	smax			
	comp=E,110nm,0.6s							
DL2				LR	LR			
	comp=E,240nm,4.6s							
DL2				LR	LR			
	comp=E,320nm,8.2s							
LYN	**LuoYang**	**6.57**	**193**⇑	*i*Pn		**Pn**	**00 39 11.3**	**-0.6**
LYN				Sn		**Sn**	**00 40 31.1**	**+4.2**
LYN				LR	LR			
	comp=E,890nm,7.1s							
LYN				LR	LR			
	comp=E,520nm,10.6s							
SNY	**Shenyang**	**7.06**	**80**⇑	Pg		Pb	00 39 44.0	+6.2
SNY				Sg		**Sg**	**00 41 16.6**	**-5.1**
SNY				smax	smax			
	comp=E,240nm,0.8s							
SNY				smax	smax			
	comp=E,120nm,0.7s							
XAN	**Xi'an**	**8.12**	**213**⇑	*i*P		**Pn**	**00 39 32.1**	**-1.1**
XAN				S		**Sn**	**00 40 59.2**	**-5.8**
XAN				smax	smax			
	comp=E,83nm,0.8s							
XAN				smax	smax			
	comp=E,85nm,1.0s							
ULN	**Ulaanbaatar**	**8.60**	**326**			**Pn**	**00 39 38.4**	**-1.4**
SONM	**Songino Array**	**8.86**	**323**	Pn		**Pn**	**00 39 42.4**	**-1.0**
	comp=E,4.2nm,0.3s,baz=144,slow=13,SNR=64							
SONM				Sn		**Sn**	**00 41 21.2**	**-2.1**
	comp=E,2.3nm,0.3s,baz=162,slow=28,SNR=2.5							
SONM				Lg		Lg	00 42 16.2	
	comp=E,4.8nm,0.3s,baz

PZH					LR	LR			
	comp=Z,250nm,15.1s								
PZH					LR	LR			
	comp=Z,280nm,15.7s								
PZH					LR	LR			
	comp=Z,330nm,15.8s								
WMQ	**Urumqi**	**19.79**	**287**	*e*P	**P**		**00 42 05.9**	**+0.3**	
LSA	**Lhasa**	**21.89**	**246**	P	**P**		**00 42 29.3**	**+0.6**	
LSA				IAmb	IAmb		00 42 35.6		
	comp=Z,7.2nm,0.7s								
QIZ	**Qiongzhong**	**22.20**	**191**	P	**P**		**00 42 31.8**	**0.0**	
QIZ				S	**S**		**00 46 36.5**	**+0.3**	
QIZ				LR	LR				
	comp=N,100nm,10.2s								
QIZ				LR	LR				
	comp=E,180nm,12.7s								
QIZ				LR	LR				
	comp=Z,79nm,7.9s								
QIZ	**Qiongzhong**	**22.20**	**191**	P	**P**		**00 42 31.7**	**0.0**	
QIZ				S	**S**		**00 46 36.5**	**+0.3**	
QIZ				LR	LR				
	comp=Z,100nm,10.2s								
QIZ				LR	LR				
	comp=Z,180nm,12.7s								
QIZ				LR	LR				
	comp=Z,79nm,7.9s								
ZALV	**Zalesovo Beam**	**23.55**	**313**	P	**P**		**00 42 48.1**	**+2.7**	
	comp=Z,0.9nm,0.8s,baz=106,slow=7.7,SNR=4.2								
	comp=Z,0.9nm,0.8s								
ZALV	**Zalesovo Beam**	**23.55**	**313**	P	**P**		**00 42 45.8**	**+0.3**	
MK31	**Makanchi Array**	**23.65**	**295**	P	**P**		**00 42 47.3**	**+0.7**	
MKAR	**Makanchi Array**	**23.65**	**295**	P	**P**		**00 42 47.3**	**+0.7**	
	comp=Z,1.0nm,0.7s,baz=90,slow=11,SNR=6.8								
	comp=Z,1.0nm,0.7s								
MKAR	**Makanchi Array**	**23.65**	**295**	P	**P**		**00 42 46.8**	**+0.2**	
SHL	**Shillong**	**24.11**	**237**	P	**P**		**00 42 50.2**	**-1.1**	
CMAR	**Chiang Mai Arr**	**26.01**	**215**	P	**P**		**00 43 08.1**	**-0.3**	
	comp=Z,1.4nm,0.3s,baz=24,slow=8.9,SNR=6.2								
CMAR				LR	LR		00 54 27.8		
	comp=Z,50nm,18.5s,baz=5.0,slow=39								
	comp=Z,1.4nm,0.3s								
CMAR	**Chiang Mai Arr**	**26.01**	**215**	P	**P**		**00 43 07.7**	**-0.7**	
KURK	**Kurchatov**	**26.43**	**304**	P	**P**		**00 43 12.7**	**+0.8**	
KURBB	**Kurchatov Arra**	**26.48**	**303**	P	**P**		**00 43 12.5**	**+0.2**	
	comp=Z,0.8nm,0.6s,baz=97,slow=9.4,SNR=10								
KURBB				LR	LR		00 54 09.8		
	comp=Z,64nm,20.7s,baz=25,slow=38								
	comp=Z,0.8nm,0.6s								
MA2	**Magadan**	**29.30**	**38**	LR	LR		00 56 05.0		
	comp=Z,24nm,18.3s,baz=331,slow=38								
SEY	**Seymchan**	**31.42**	**33**	LR	LR		00 57 45.9		
	comp=Z,59nm,19.4s,baz=250,slow=38								
BVAR	**Borovoye Array**	**31.75**	**307**	LR	LR		00 57 43.1		
	comp=Z,26nm,20.1s,baz=290,slow=38								
DAV	**Davao City (W)**	**35.25**	**160**	LR	LR		01 00 23.1		
	comp=Z,35nm,18.1s,baz=333,slow=39								
ABKAR	**Akbulak array**	**38.47**	**301**	P	**P**		**00 44 57.9**	**+0.8**	
ARU	**Arti**	**38.72**	**313**	P	**P**		**00 44 59.8**	**+0.8**	
ARU				IAmb	IAmb		00 45 02.9		
	comp=Z,2.5nm,0.6s								
AKTO	**Aktyubinsk**	**39.53**	**303**	LR	LR		01 01 27.5		
	comp=Z,18nm,21.4s,baz=71,slow=36								
BELG	**Belogornoye**	**45.55**	**308**	LR	LR		01 04 18.5		
	comp=Z,31nm,18.5s,baz=59,slow=35								
FINES	**FINESS Array B**	**54.23**	**324**	P	**P**		**00 47 00.5**	**-0.2**	
	comp=Z,1.9nm,0.9s,baz=72,slow=6.2,SNR=7.6								
	comp=Z,1.9nm,0.9s								
FINES	**FINESS Array B**	**54.23**	**324**	P	**P**		**00 47 00.8**	**+0.1**	
H23K	**Yukon River**	**55.83**	**30**	P	**P**		**00 47 13.0**	**+0.8**	
H23K				IAmb	IAmb		00 47 17.1		
	comp=Z,3.1nm,1.1s								
H24K	**Noodor Dome**	**56.45**	**29**	P	**P**		**00 47 18.0**	**+1.3**	
H24K				IAmb	IAmb		00 47 28.1		
	comp=Z,6.5nm,1.5s								
BMAR	**Burnt Mountain**	**56.90**	**27**	P	**P**		**00 47 20.5**	**+0.6**	
ILAR	**Eielson Array**	**57.30**	**30**	P	**P**		**00 47 24.6**	**+2.0**	
	comp=Z,0.7nm,0.8s,baz=285,slow=6.3,SNR=7.0								
	comp=Z,0.7nm,0.8s								
BRTR	**Keskin Array B**	**59.27**	**298**	P	**P**		**00 47 37.9**	**+0.9**	
	comp=Z,0.7nm,0.7s,baz=123,slow=4.1,SNR=2.2								
	comp=Z,0.7nm,0.7s								
BRTR	**Keskin Array B**	**59.27**	**298**	P	**P**		**00 47 37.1**	**+0.1**	
NOA	**NORSAR Array B**	**60.82**	**327**	P	**P**		**00 47 46.2**	**-0.9**	
	comp=Z,1.0nm,0.9s,baz=97,slow=5.2,SNR=3.3								
	comp=Z,1.0nm,0.9s								
WRA	**Warramunga Arr**	**63.42**	**159**	P	**P**		**00 48 03.3**	**-1.7**	
	comp=Z,0.5nm,0.9s,baz=344,slow=7.5,SNR=2.7								
	comp=Z,0.5nm,0.9s								
WB2	**Warramunga Arr**	**63.42**	**159**	P	**P**		**00 48 05.2**	**+0.2**	
WB2				IAmb	IAmb		00 48 12.7		
	comp=Z,8.1nm,1.2s								
SFJD	**Kangerlussuaq**	**71.73**	**354**	LR	LR		01 22 25.3		
	comp=Z,47nm,19.0s,baz=329,slow=38								

IDC 23 01:21:30.4±428.0, 50°.62N×45°.51E, h0km, Error ellipse: s-maj=150.0km s-min=87.5km az=154.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**7.84**	**324**	*i*		02 10 50.0	
	baz=134,slow=330,SNR=1.2						
I31KZ	**AKTYUBINSK INF**	**7.99**	**87**	*i*		02 08 10.0	
	baz=278,slow=319,SNR=1.3						
I37NO	**I37NO**	**22.56**	**335**	*i*		03 41 10.0	
	baz=132,slow=322,SNR=3.6						

KRSC 23 01:24:39.8±1.9, 50°.24N×157°.06E, h118km±22km, ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**0.75**	**307**	P	Pn	01 25 00.1	+0.8
SKR				S	Sn	01 25 14.1	+0.1
PAU	**Pauzhetka**	**1.24**	**353**	P	Pn	01 25 05.8	+1.7
PAU				S	Sn	01 25 23.7	+1.1
KDTR	**Khodutka, Kamc**	**1.70**	**22**	P	Pn	01 25 11.8	+2.4
KDTR				S	Sn	01 25 34.5	+2.5
ASAK	**Asacha**	**2.21**	**13**	P	Pn	01 25 17.8	+2.0
ASAK				S	Sn	01 25 46.2	+2.7
MTVR	**Mutnovka**	**2.36**	**17**	P	Pn	01 25 19.7	+2.0
MTVR				S	Sn	01 25 49.0	+2.2
RUS	**Russkaya**	**2.38**	**22**	P	Pn	01 25 19.7	+1.8
RUS				S	Sn	01 25 48.1	+1.0
GRL	**Gorelyy**	**2.40**	**15**	P	Pn	01 25 20.3	+2.0
GRL				S	Sn	01 25 50.4	+2.5
APC	**Apacha**	**2.69**	**1**	P	Pn	01 25 21.5	-0.4
PET	**Petropavlovsk**	**2.96**	**19**	S	Sn	01 26 02.5	+1.9
DALK	**Dalny**	**2.99**	**20**	P	Pn	01 25 27.7	+1.9
DALK				S	Sn	01 26 02.7	+1.4
UGLR	**Uglovaya**	**3.17**	**20**	P	Pn	01 25 30.8	+2.5
UGLR				S	Sn	01 26 07.1	+1.4
AVH	**Avacha**	**3.21**	**18**	P	Pn	01 25 31.5	+2.8
AVH				S	Sn	01 26 09.0	+2.5
KOK	**Koryaka**	**3.21**	**17**	P	Pn	01 25 31.1	+2.3
KOK				S	Sn	01 26 08.9	+2.2
SMAR	**Somma**	**3.22**	**19**	P	Pn	01 25 31.0	+2.0
KRER	**Koryakskii**	**3.25**	**18**	P	Pn	01 25 31.5	+2.2
KRER				S	Sn	01 26 09.0	+1.4
SDLR	**Sedlovina**	**3.25**	**20**	P	Pn	01 25 31.3	+2.0
SDLR				S	Sn	01 26 08.0	+0.4
KRX	**Arik**	**3.28**	**17**	P	Pn	01 25 31.8	+2.1
SPN	**Mys Shipunski**	**3.41**	**32**	P	Pn	01 25 33.5	+2.2
SPN				S	Sn	01 26 11.7	+0.6
MKZ	**Mys Kozlova**	**5.18**	**32**	P	Pn	01 25 56.1	+1.1
MKZ				S	Sn	01 26 51.6	-2.0

IDC 23 01:47:56.8±1.3, 13°.15N×120°.17E, h0km, mb3.9/4, mbtmp3.9/4, Error ellipse: s-maj=25.8km s-min=14.7km az=123.0
MAN 23 01:48:00.9, 13°.27N×120°.40E, h4km, mb4.5, ML3.4, MS3.2
ISC 23 01:48:00.1±1.6, 13°.31N±0°.04×120°.27E±0°.07, h17km±10km, n11, σ1°26/16, mb4.0/4, 2C-4D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.42**	**357**	*i*	P	**01 48 10.6**	**-0.8**
LUBP				*i*	S	**01 48 21.1**	**+2.3**
PGP	**Puerto Galera**	**0.69**	**74**	*e*	P	**01 48 12.7**	**-1.0**
PGP				*i*	S	**01 48 22.3**	**-0.6**
TGY	**Tagaytay City**	**1.02**	**39**	Pg		**01 48 20.3**	**+0.4**
	350nm,0.3s,baz=225,slow=2.9,SNR=22						
TGY				Lg	Lg	01 48 36.1	
	1µm,0.3s,baz=163,slow=19,SNR=20						
MACP	**Maragondon, Ca**	**1.04**	**25**	*e*	P	**01 48 20.4**	**+0.1**
MACP				*e*	S	**01 48 35.2**	**+1.1**
SJMP	**San Jose**	**1.18**	**135**	*e*	P	**01 48 21.4**	**-0.4**
SJMP				*e*	S	**01 48 40.4**	**+2.1**
BOAC	**Boac**	**1.54**	**84**	*e*	P	**01 48 26.9**	**+0.2**
BOAC				*e*	S	**01 48 47.9**	**+0.5**
CUYO	**Cuyo Island**	**2.55**	**163**	*e*	P	**01 48 49.2**	**+0.2**
WRA	**Warramunga Arr**	**35.83**	**157**	P		**01 54 57.2**	**-1.7**
	1.4nm,0.6s,baz=333,slow=10.0,SNR=17						
	1.4nm,0.6s						
SONM	**Songino Array**	**36.31**	**344**	P		**01 55 02.4**	**-0.6**
	1.0nm,0.6s,baz=167,slow=12,SNR=6.8						
	1.0nm,0.6s						
MKAR	**Makanchi Array**	**46.10**	**324**	P		**01 56 24.7**	**+1.4**
	0.8nm,0.8s,baz=130,slow=6.0,SNR=4.3						
	0.8nm,0.8s						
ZALV	**Zalesovo Beam**	**49.21**	**333**	P		**01 56 46.8**	**-0.5**
	0.7nm,0.4s,baz=136,slow=7.3,SNR=1.7						
	0.7nm,0.4s						

MOS 23 01:48:48.6±1.3, 57°.47N×33°.19W, h10km, mb4.9/72, MS4.3/16, Error ellipse: s-maj=7.0km s-min=5.7km az=47.2
IDC 23 01:48:49.2±0.4, 57°.42N×33°.12W, h0km, mb4.5/31, mbtmp4.5/35, ML3.8/4, MS4.1/77, Error ellipse: s-maj=13.1km s-min=9.3km az=179.0
NEIC 23 01:48:49.8±1.5, 57°.52N±0°.09×33°.1W±0°.1, h10km±1km, mb4.8/355, Error ellipse: s-maj=14.8km s-min=12.9km az=169.0
GCMT 23 01:48:49.8±0.2, 57°.59N±0°.02×33°.04W±0°.03, h12km, MW5.0/110, Moment Tensor Solution. s35,c37; s110,c175; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=3.65±.20; Mθθ 0.65±.13; Mϕϕ 3.00±.14; Mrθ 1.16±.39; Mθϕ 1.77±.07; Mϕr 0.66±.34; Best double couple: Mo=4.03300×10^16 NP1:ϕs17.00000°, δ38.00000°, λ-107.00000°. NP2:ϕs219.00000°, δ54.00000°, λ-77.00000°. Principal axes: T 4.1170, Plg8.0000°, Azm300.0000°; N -0.1630, Plg11.0000°, Azm31.0000°; P -3.9490, Plg76.0000°, Azm172.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
DNK 23 01:48:55.2±3.6, 57°.71N×33°.10W, h35km±64km, ML3.6, Ms4.2
ISC 23 01:48:51.4±0.3, 57°.54N±0°.05×33°.15W±0°.04, h15km, n789, σ1°43/649, mb4.8/285, MS4.2/97, 26C-36D, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANGG	**Ammassalik, Gr**	**8.38**	**347**	Pn	**Pn**	**01 50 51.0**	**-1.1**
ANGG	**Ammassalik, Gr**	**8.38**	**347**	*i* P	**Pn**	**01 50 51.3**	**-0.9**
ANGG				IAMs_20	IAMs_20	01 53 12.6	
	comp=Z,2µm,14.5s						
ISOG	**Isortoq, Green**	**8.50**	**343**	*i* P	**Pn**	**01 50 51.7**	**-2.1**
ISOG				IAMs_20	IAMs_20	01 53 24.6	
	comp=Z,3µm,16.4s						
IVI	**Ivigtut**	**8.50**	**302**		**Pn**	**01 50 53.9**	**+0.1**
DY2G	**Dye2**	**10.85**	**331**	*i* P	**Pn**	**01 51 28.1**	**+2.0**
DY2G				IAML		01 51 30.1	
	comp=Z,16nm,0.8s						
DY2G				IAMs_20	IAMs_20	01 54 38.6	
	comp=Z,3µm,23.0s						
ICESG	**Greenland Ices**	**11.95**	**349**	*i* P	**Pn**	**01 51 42.7**	**+1.5**
ICESG				IAML		01 51 46.9	
	comp=Z,7.5nm,1.0s						
ICESG				IAMs_20	IAMs_20	01 55 10.2	
	comp=Z,2µm,18.1s						
SFJD	**Kangerlussuaq**	**12.44**	**327**	Pn	**Pn**	**01 51 49.3**	**+1.7**
	comp=Z,0.6nm,0.3s,baz=104,slow=4.9,SNR=2.8						
SFJD				Sn	**Sn**	**01 53 57.9**	**-7.8**
	comp=Z,0.3nm,0.3s,baz=247,slow=13,SNR=2.3						
SFJD				LR	LR	01 55 53.9	
	comp=Z,3µm,18.6s,baz=142,slow=34						
	comp=Z,13nm,0.8s						
SFJD	**Kangerlussuaq**	**12.44**	**327**	Pn	**Pn**	**01 51 46.7**	**-0.9**
SFJD	**Kangerlussuaq**	**12.44**	**327**	P	**Pn**	**01 51 46.7**	**-0.9**
ILULI	**Ilulissat**	**14.12**	**333**		**Pn**	**01 52 10.8**	**+0.2**
ILULI	**Ilulissat**	**14.12**	**333**	P	**Pn**	**01 52 10.8**	**+0.2**
ILULI	**Ilulissat**	**14.12**	**333**	*i* P	**Pn**	**01 52 10.0**	**-0.5**
ILULI				IAMs_20	IAMs_20	01 56 38.7	
	comp=Z,3µm,15.8s						
SUMG	**Summit**	**15.25**	**354**	Pn	**Pn**	**01 52 24.4**	**-1.9**
SUMG	**Summit**	**15.25**	**354**	P	**Pn**	**01 52 24.4**	**-1.9**
SUMG				pmax	pmax		
	comp=Z,32nm,1.1s						
SUMG	**Summit**	**15.25**	**354**	*i* P	**Pn**	**01 52 26.0**	**-0.3**
SUMG				IAML		01 52 32.9	
	comp=Z,8.8nm,0.9s						
SUMG				IAMs_20	IAMs_20	01 57 12.0	
	comp=Z,1µm,13.6s						
DSB	**Dublin**	**15.75**	**94**		**P**	**01 52 33.4**	**-3.0**
DSB				IAmb	IAmb	01 52 42.2	
	comp=Z,58nm,1.3s						
ESK	**Eskdalemuir**	**16.65**	**85**		**P**	**01 52 44.0**	**-2.3**
ESK	**Eskdalemuir**	**16.65**	**85**	P	**P**	**01 52 44.0**	**-2.3**
ESK				pmax	pmax		
	comp=Z,34nm,1.2s						
DRLN	**Deer Lake**	**16.65**	**251**	Pn	**Pn**	**01 52 42.5**	**-1.5**
DRLN				IAmb	IAmb	01 52 47.2	
	comp=Z,62nm,1.1s						
EKA	**Eskdalemuir Ar**	**16.66**	**85**	Pn	**Pn**	**01 52 43.6**	**-0.5**
	baz=285,slow=9.4						
EKA				LR	LR	01 58 04.3	
	comp=Z,1µm,18.7s,baz=272,slow=33						
	comp=Z,4.3nm,0.7s						
JMIC	**Jan Mayen**	**17.01**	**28**	LR	LR	01 56 48.9	
	comp=Z,91nm,19.2s,baz=260,slow=28						
FRB	**Frobisher Bay**	**18.24**	**305**	P	**P**	**01 53 03.6**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=104,slow=11,SNR=7.4						
FRB				LR	LR	01 59 02.1	
	comp=Z,1µm,21.0s,baz=68,slow=34						
	comp=Z,27nm,1.0s						
SCHQ	**Schefferville**	**18.83**	**276**	P	**Pn**	**01 53 10.3**	**-0.6**
	comp=Z,1.1nm,0.3s,baz=73,slow=8.5,SNR=33						
SCHQ				LR	LR	01 59 19.2	
	comp=Z,2µm,18.3s,baz=78,slow=33						
	comp=Z,34nm,0.8s						
SCHQ	**Schefferville**	**18.83**	**276**	P	**Pn**	**01 53 09.9**	**-1.0**
SCHQ				IAmb	IAmb	01 53 13.9	
	comp=Z,37nm,0.8s						
GBN	**Guysborough**	**21.25**	**247**	P	**P**	**01 53 36.4**	**-0.4**
LDF	**La Druitiere**	**21.57**	**100**	*e* P	**P**	**01 53 42.1**	**+1.9**
LDF				pmax	pmax		
	comp=Z,48nm,1.2s						
KONO	**Kongsberg**	**22.09**	**66**	P	**P**	**01 53 43.9**	**-1.7**
KONO				IAmb	IAmb	01 53 49.4	
	comp=Z,34nm,1.2s						
KONO	**Kongsberg**	**22.09**	**66**	*d* P	**P**	**01 53 48.0**	**+2.3**
KONO				pmax	pmax		
	comp=Z,29nm,1.3s						
PGAV	**Gavieira, Arco**	**22.20**	**124**	*e* P	**P**	**01 53 44.9**	**-2.2**
	comp=Z,62nm,1.7s						
PGAV				eLR	LR	01 58 58.6	
	comp=Z,1µm,20.0s						
NC204	**NORSAR Array S**	**22.33**	**62**	P	**P**	**01 53 48.1**	**-0.1**
NC204				IAmb	IAmb	01 53 51.9	
	comp=Z,56nm,1.1s						
BATG	**Bathurst New B**	**22.33**	**257**	P	**P**	**01 53 46.9**	**-1.4**
BATG				IAmb	IAmb	01 53 52.5	
	comp=Z,38nm,1.1s						
NBO00	**NORSAR Array S**	**22.38**	**63**	P	**P**	**01 53 49.1**	**+0.3**
NAO01	**NORSAR Array S**	**22.47**	**63**	P	**P**	**01 53 48.5**	**-1.1**
PCAB	**Cabril**	**22.51**	**124**	*e* P	**P**	**01 53 52.2**	**+1.9**
	comp=Z,86nm,1.4s						
NB2	**NORSAR Subarra**	**22.59**	**62**	P	**P**	**01 53 50.8**	**-0.2**
	comp=Z,33nm,1.4s,baz=281,slow=11						
NOA	**NORSAR Array B**	**22.59**	**62**	P	**P**	**01 53 50.7**	**-0.2**
	comp=Z,4.4nm,0.9s,baz=280,slow=9.4,SNR=14						
NOA				LR	LR	02 01 15.8	
	comp=Z,320nm,21.5s,baz=280,slow=33						
	comp=Z,4.4nm,0.9s						
LMN	**Caledonia Moun**	**22.61**	**253**	P	**P**	**01 53 49.7**	**-1.7**
LMN				IAmb	IAmb	01 53 55.4	
	comp=Z,51nm,1.1s						
NB201	**NORSAR Array S**	**22.62**	**62**	P	**P**	**01 53 51.3**	**-0.1**
NC303	**NORSAR Array S**	**22.62**	**62**	P	**P**	**01 53 51.0**	**-0.3**
NC303				IAmb	IAmb	01 53 55.0	
	comp=Z,39nm,1.1s						
GOET	**G??ttrup**	**22.64**	**73**	*i* P	**P**	**01 53 52.2**	**+0.7**
GOET				IAMs_20	IAMs_20	02 02 24.1	
	comp=Z,628nm,14.1s						
PTO	**Porto**	**22.72**	**126**	*e* P	**P**	**01 53 55.1**	**+2.6**
	comp=Z,64nm,1.5s						
NC602	**NORSAR Array S**	**22.80**	**63**	P	**P**	**01 53 50.2**	**-3.0**
MUD	**Monsted U'grnd**	**22.81**	**75**	*i* P	**P**	**01 53 53.0**	**-0.3**
NC405	**NORSAR Array S**	**22.81**	**62**	P	**P**	**01 53 49.6**	**-3.7**
MFF	**Saint Martin d**	**22.81**	**104**	*e* P	**P**	**01 53 54.7**	**+1.3**
MFF				pmax	pmax		
	comp=Z,35nm,1.2s						
POLO	**Lamas de Olo**	**22.89**	**124**	*e* P	**P**	**01 53 56.8**	**+2.4**
	comp=Z,24nm,1.2s						
PVRL	**Vila Real**	**23.00**	**124**	*e* P	**P**	**01 53 58.2**	**+2.7**
	comp=Z,42nm,1.7s						
PBRG	**Braganca**	**23.02**	**122**	*e* P	**P**	**01 53 57.3**	**+1.6**
	comp=Z,41nm,1.6s						
OVD	**Ostervraa, Den**	**23.05**	**72**	*i* P	**P**	**01 53 57.6**	**+1.8**
OVD				IAMs_20	IAMs_20	02 02 44.9	
	comp=Z,489nm,7.2s						
CLF	**Chambon-Foret**	**23.18**	**99**	P	**P**	**01 53 55.2**	**-2.1**
BMRD	**Maredsous**	**23.22**	**92**	*d* P	**P**	**01 53 58.5**	**+0.9**
	comp=Z,16nm,1.1s						
DOU	**Dourbes**	**23.24**	**92**	*d* P	**P**	**01 53 59.0**	**+1.2**
	comp=Z,12nm,1.1s						
PVIS	**Viseu**	**23.37**	**125**	*e* P	**P**	**01 54 00.2**	**+0.9**
	comp=Z,46nm,1.6s						
MVO	**Moncorvo**	**23.40**	**123**	*e* P	**P**	**01 54 00.0**	**+0.5**
	comp=Z,67nm,1.2s						
MVO				*e*S	**S**	**01 58 18.1**	**+6.1**
MVO				*e*LR	LR	01 59 47.1	
	comp=Z,1µm,18.0s						
BCLA	**Clavier**	**23.45**	**91**	*d* P	**P**	**01 54 00.1**	**+0.2**
BSTI	**Sart Tilman**	**23.50**	**90**	*d* P	**P**	**01 54 02.0**	**+1.6**
RCHB	**Rochefort**	**23.55**	**92**	*d* P	**P**	**01 54 02.4**	**+1.6**
	comp=Z,14nm,1.1s						
PCAS	**Casmilo, Conde**	**23.66**	**127**	*e* P	**P**	**01 54 02.4**	**+0.4**
	comp=Z,55nm,1.4s						
PQI	**Presque Isle**	**23.75**	**258**	P	**P**	**01 54 01.7**	**-1.1**
PQI				IAmb	IAmb	01 54 03.9	
	comp=Z,20nm,0.9s						
MTE	**Manteigas**	**23.79**	**125**	*e* P	**P**	**01 54 03.8**	**+0.5**
	comp=Z,49nm,1.2s						
MTE				*e*S	**S**	**01 58 26.0**	**+7.8**
MTE				*e*LR	LR	01 59 45.1	
	comp=Z,1µm,18.0s						
MTE	**Manteigas**	**23.79**	**125**	P	**P**	**01 54 02.4**	**-0.9**
MTE				IAmb	IAmb	01 54 08.9	
	comp=Z,36nm,1.1s						
BTNL	**Ternell**	**23.80**	**90**	*d* P	**P**	**01 54 03.4**	**0.0**
	comp=Z,13nm,1.1s						
BHOU	**Houvegnez**	**23.86**	**91**	*d* P	**P**	**01 54 04.1**	**+0.2**
	comp=Z,9.6nm,1.1s						
BHOU				*d*PP	**PnPn**	**01 54 29.6**	**-2.3**
HFS	**Hagfors**	**23.98**	**64**	P	**P**	**01 54 05.3**	**+0.4**
	comp=Z,21nm,1.0s,baz=270,slow=10,SNR=21						
HFS				LR	LR	02 02 17.6	
	comp=Z,308nm,18.9s,baz=278,slow=34						
	comp=Z,21nm,1.0s						
D62A	**Allapoint, All**	**24.03**	**260**	P	**P**	**01 54 04.9**	**-0.7**
D62A				IAmb	IAmb	01 54 07.2	
	comp=Z,21nm,0.8s						
GGN	**Saint George**	**24.16**	**254**	P	**P**	**01 54 06.7**	**0.0**
GGN				IAmb	IAmb	01 54 16.4	
	comp=Z,35nm,1.1s						
PMAFR	**Mafra**	**24.24**	**130**	*e* P	**P**	**01 54 09.4**	**+1.9**
PCBR	**Castelo Branco**	**24.27**	**126**	*e* P	**P**	**01 54 08.3**	**+0.5**
	comp=Z,51nm,1.6s						
WLF	**Walferdange**	**24.32**	**92**	P	**P**	**01 54 07.6**	**-0.6**
WLF	**Walferdange**	**24.32**	**92**	P	**P**	**01 54 07.6**	**-0.6**
WLF				pmax	pmax		
	comp=Z,17nm,1.1s						
SSF	**Saint Saulge**	**24.45**	**100**	*e* P	**P**	**01 54 09.2**	**-0.1**
SSF				pmax	pmax		
	comp=Z,20nm,1.0s						
F64A	**Sherman**	**24.45**	**257**	P	**P**	**01 54 08.4**	**-0.9**
PMST	**Lisbon--Monsan**	**24.47**	**130**	*e* P	**P**	**01 54 11.7**	**+2.1**
	comp=Z,94nm,1.4s						
E62A	**Clayton Lake**	**24.58**	**259**	P	**P**	**01 54 10.2**	**-0.4**
E62A				IAmb	IAmb	01 54 19.5	
	comp=Z,20nm,1.2s						
NOR	**Nord**	**24.63**	**6**	*i* P	**P**	**01 54 10.2**	**-0.5**
NOR				IAML		01 54 19.5	
	comp=Z,3.6nm,1.0s						
NOR				IAMs_20	IAMs_20	02 02 41.4	
	comp=Z,743nm,13.5s						
PMRV	**Marv??o**	**24.65**	**126**	*e* P	**P**	**01 54 12.5**	**+1.2**
	comp=Z,33nm,1.5s						
PMRV				*e*LR	LR	02 00 11.0	
	comp=Z,786nm,20.0s						
COP	**Copenhagen**	**24.79**	**75**	*i* P	**P**	**01 54 13.0**	**+0.6**
COP				IAMs_20	IAMs_20	02 03 07.1	
	comp=Z,725nm,15.6s						
LLD	**Lille Linde**	**24.82**	**76**	*i* P	**P**	**01 54 11.4**	**-1.2**
LLD				IAMs_20	IAMs_20	02 03 40.8	
	comp=Z,391nm,17.3s						
F63A	**Nahmakanta, Br**	**24.95**	**257**	P	**P**	**01 54 13.4**	**-0.5**
F63A				IAmb	IAmb	01 54 35.7	
	comp=Z,28nm,1.2s						
PESTR	**Estremoz**	**25.03**	**127**	*e* P	**P**	**01 54 14.9**	**+0.2**
	comp=Z,47nm,1.2s						
PESTR	**Estremoz**	**25.03**	**127**	P	**P**	**01 54 13.6**	**-1.1**
PESTR				IAmb	IAmb	01 54 23.6	
	comp=Z,18nm,1.2s						
EVO	**Evora**	**25.13**	**128**	*e* P	**P**	**01 54 16.2**	**+0.6**
	comp=Z,29nm,2.2s						
DEL	**Delary**	**25.23**	**72**	*e* P	**P**	**01 54 16.4**	**+0.1**
PNCL	**Nicolau / Gran**	**25.27**	**130**	*e* P	**P**

BFO Black Forest 26.26 93 P **P** **01 54 24.0 -1.8**
BFO pmax pmax
comp=Z,12nm,1.1s
MOX Moxa 26.73 86 P **P** **01 54 30.7 +0.7**
MOX pmax pmax
comp=Z,12nm,1.1s
SENIN Lac Senin/Sane 26.91 97 P **P** **01 54 30.1 -1.7**
PMOZ Porto Moniz, M 27.01 149 *e*LR LR 02 01 20.2
comp=Z,631nm,20.0s
GRFO Grafenberg 27.04 88 P **P** **01 54 30.5 -2.2**
GRFO lAmb lAmb 01 54 36.3
comp=Z,22nm,1.1s
GRFO Grafenberg 27.04 88 P **P** **01 54 30.5 -2.2**
GRFO pmax pmax
comp=Z,23nm,1.1s
GRA1 Grafenberg Arr 27.04 88 P **P** **01 54 31.3 -1.5**
GRA1 lAmb lAmb 01 54 36.3
comp=Z,22nm,1.1s
GRF Grafenberg Arr 27.04 88 P **P** **01 54 31.3 -1.5**
GRF pmax pmax
comp=Z,22nm,1.1s
CLL Collm 27.12 83 P **P** **01 54 31.4 -2.1**
CLL Collm 27.12 83 P **P** **01 54 31.4 -2.1**
CLL pmax pmax
comp=Z,7.0nm,0.8s
CLL Collm 27.12 83 *i* P **P** **01 54 32.6 -0.9**
comp=Z,8.0nm,1.0s
CLL *i* sP **sP** **01 54 37.7 -1.4**
CLL *i* x x 01 55 59.7
CLL LmV 02 05 00.0
comp=Z,900nm,18.5s
LPL La Plagne 27.15 99 *e*P **P** **01 54 34.1 0.0**
LPL pmax pmax
comp=Z,23nm,1.2s
NKC Novy Kostel 27.40 86 *e*P **P** **01 54 36.3 +0.3**
NKC MLR MLR
comp=Z,600nm,18.1s
NKC Novy Kostel 27.40 86 *e*P **P** **01 54 36.3 +0.3**
NKC AMS AMS 02 04 20.0
comp=Z,600nm,18.1s
BNI Bardonecchia 27.43 100 P **P** **01 54 35.0 -1.5**
BNI Bardonecchia 27.43 100 P **P** **01 54 35.0 -1.5**
BNI pmax pmax
comp=Z,12nm,1.2s
ARCES ARCESS Array B 27.50 41 P **P** **01 54 37.0 +0.3**
comp=Z,3.0nm,0.6s,baz=269,slow=7.9,SNR=23
ARCES LR LR 02 03 24.2
comp=Z,248nm,19.6s,baz=280,slow=32
comp=Z,3.0nm,0.6s
ARCES ARCESS Array B 27.50 41 P **P** **01 54 36.6 -0.2**
ARCES lAmb lAmb 01 54 39.4
comp=Z,26nm,1.4s
ARCES ARCESS Array B 27.50 41 P **P** **01 54 36.6 -0.2**
ARCES pmax pmax
comp=Z,26nm,1.4s
TRQ Mont Tremblant 27.51 264 P **P** **01 54 36.6 -0.5**
RAF Rauma 27.57 59 *e*P **P** **01 54 37.5 +0.2**
DAVA Damuels 27.72 93 *i* P P 01 54 45.4 +6.3
comp=Z,8.7nm,1.2s
BRG Berggiesshubel 27.85 83 *e*P **P** **01 54 40.3 +0.3**
BRG Amp 01 54 47.6
comp=Z,9.7nm,1.4s
BRG Amp 02 06 06.0
comp=N,0.7nm,14.5s
BRG Amp 02 06 07.0
comp=E,0.7nm,19.0s
BRG Amp 02 06 11.0
comp=Z,1.0nm,17.7s
BRG Berggiesshubel 27.85 83 *e*P **P** **01 54 40.3 +0.3**
BRG pmax pmax
comp=Z,10.0nm,1.4s
BRG MLR MLR
comp=N,650nm,14.5s
BRG MLR MLR
comp=E,660nm,19.0s
BRG MLR MLR
comp=Z,980nm,17.7s
VLDQ Val d'Or 27.91 270 P **P** **01 54 41.2 +0.6**
VLDQ lAmb lAmb 01 54 47.2
comp=Z,15nm,1.1s
TUE Stuetta 27.94 95 P **P** **01 54 40.3 -0.8**
TUE lAmb lAmb 01 54 51.9
comp=Z,25nm,1.0s
DAVOX Davos/Dischmat 28.03 94 P **P** **01 54 42.9 +1.0**
comp=Z,2.6nm,0.8s,baz=313,slow=12,SNR=2.3
DAVOX LR LR 02 05 23.4
comp=Z,1μm,18.9s,baz=301,slow=36
comp=Z,2.6nm,0.8s
RETA Reutte 28.07 92 *e*P **P** **01 54 44.3 +2.2**
comp=Z,5.2nm,1.1s
FETA Feichten 28.34 93 *e*P **P** **01 54 47.1 +2.4**
comp=Z,13nm,1.1s
PVCC Panska Ves 28.37 84 AMS AMS 02 06 30.0
comp=Z,1μm,15.7s
RES Resolute Bay 28.40 331 LR LR 02 05 37.9
comp=Z,400nm,18.6s,baz=100,slow=35
SQTA Sankt Quirin 28.48 92 *e*P **P** **01 54 47.7 +1.9**
comp=Z,7.6nm,1.3s
KHC Kasperske Hory 28.62 87 *e*P P 01 54 51.7 +4.7
KHC MLR MLR
comp=Z,600nm,16.0s
KHC Kasperske Hory 28.62 87 *e*P P 01 54 51.7 +4.7
KHC AMS AMS 02 05 40.0
comp=Z,600nm,16.0s
PRU Pruhonice 28.66 84 *e*P **P** **01 54 47.5 +0.3**
PRU MLR MLR
comp=Z,600nm,19.8s
PRU Pruhonice 28.66 84 *e*P **P** **01 54 47.5 +0.3**
PRU AMS AMS 02 05 20.0
comp=Z,600nm,19.8s
GERES GERESS Array B 28.85 87 P **P** **01 54 47.7 -1.4**
comp=Z,0.5nm,0.6s,baz=310,slow=6.3,SNR=2.6
GERES LR LR 02 06 11.7
comp=Z,440nm,18.5s,baz=300,slow=36
comp=Z,0.5nm,0.6s
CHVC Chvalec 29.14 82 *e*P **P** **01 54 51.6 +0.1**
CHVC AMS AMS 02 07 00.0
comp=Z,900nm,14.9s
UPC Upice 29.16 83 *e*P **P** **01 54 53.2 +1.5**
UPC MLR MLR
comp=Z,1μm,15.2s
UPC Upice 29.16 83 *e*P **P** **01 54 53.2 +1.5**
UPC AMS AMS 02 07 10.0
comp=Z,1μm,15.2s
CKRC Cesky Krumlov 29.20 87 *e*P **P** **01 54 51.7 -0.3**
OSTC Ostas 29.24 82 *e*P **P** **01 54 52.2 -0.2**
OSTC AMS AMS 02 07 10.0
comp=Z,900nm,15.0s
DPC Dobruska-Polom 29.41 83 *e*P **P** **01 54 54.3 +0.3**
DPC MLR MLR
comp=Z,900nm,15.0s
DPC Dobruska-Polom 29.41 83 *e*P **P** **01 54 54.3 +0.3**
DPC AMS AMS 02 07 10.0
comp=Z,900nm,15.0s
FIA1 FINESS Array S 29.41 57 P **P** **01 54 51.7 -2.1**
FINES FINESS Array B 29.41 57 P **P** **01 54 53.9 +0.1**
comp=Z,5.3nm,0.7s,baz=289,slow=5.3,SNR=17
FINES LR LR 02 06 37.1
comp=Z,270nm,18.0s,baz=280,slow=36
comp=Z,5.3nm,0.7s
FINES FINESS Array B 29.41 57 P **P** **01 54 53.5 -0.3**
BIOA Bad Ischl, Aus 29.50 89 *e*P **P** **01 54 57.0 +2.2**
comp=Z,2.6nm,0.7s
TREC Trest 29.55 85 AMS AMS 02 06 00.0
comp=Z,700nm,18.0s
KBA Koelnbreinsper 29.72 90 *e*P **P** **01 54 58.6 +1.7**
comp=Z,5.6nm,0.9s
MOA Molln 29.75 88 *e*P P 01 55 01.1 +4.2
comp=Z,4.7nm,1.3s
KRLC Kraliky 29.81 83 *e*P **P** **01 54 58.0 +0.5**
KRLC MLR MLR
comp=Z,900nm,15.9s
KRLC Kraliky 29.81 83 *e*P **P** **01 54 58.0 +0.5**
KRLC AMS AMS 02 07 10.0
comp=Z,900nm,15.9s
VRAC Vranov 30.14 84 LR LR 02 06 48.5
comp=Z,705nm,19.6s,baz=304,slow=36
VRAC Vranov 30.14 84 *e*P **P** **01 55 00.9 +0.5**
MYKA Terra Mystica 30.15 91 *e*P **P** **01 55 01.8 +1.2**
comp=Z,7.2nm,1.1s
KRUC Moravsky 30.18 85 *e*P **P** **01 54 58.4 -2.3**
MORC Moravsky Berou 30.38 83 P **P** **01 55 01.2 -1.4**
MORC Moravsky Berou 30.38 83 P **P** **01 55 01.2 -1.4**
MORC pmax pmax
comp=Z,7.0nm,1.2s
MORC Moravsky Berou 30.38 83 *e*P **P** **01 55 03.0 +0.4**

CONA Conrad Observa 30.56 87 *e*P **P** **01 55 05.0 +0.8**
comp=Z,5.4nm,1.1s
OKC Ostrava-Krasne 30.67 82 AMS AMS 02 08 00.0
comp=Z,1μm,16.5s
APA Apatity 30.68 44 ⇓ *i*P **P** **01 55 03.7 -1.3**
APA pmax pmax
comp=Z,13nm,0.8s
MAUC Maruska 30.77 83 *e*P **P** **01 55 07.0 +1.0**
MAUC AMS AMS 02 06 40.0
comp=Z,1μm,21.4s
PABE Paberze 30.78 69 P **P** **01 55 03.8 -2.1**
PABE Paberze 30.78 69 *e*P **P** **01 55 06.2 +0.3**
VSU Vasula 30.84 63 *d*/*i*P **P** **01 55 06.0 -0.4**
VSU pmax pmax
comp=Z,51nm,1.0s
VSU Vasula 30.84 63 *e*P **P** **01 55 06.8 +0.5**
SADO Sadowa 30.91 266 LR LR 02 06 14.6
comp=Z,1μm,18.9s,baz=58,slow=34
SADO Sadowa 30.91 266 P **P** **01 55 07.6 +0.4**
RONA Rosalia, Austr 30.93 87 *e*P **P** **01 55 08.5 +1.1**
comp=Z,4.3nm,1.0s
BINY Binghamton 30.97 259 P **P** **01 55 07.4 -0.4**
baz=45
JAVC Velka Javorina 30.98 84 *e*P **P** **01 55 09.0 +1.1**
SMOL Smolenice 31.05 85 *e*P **P** **01 55 08.6 +0.2**
SMOL pmax pmax
comp=Z,3.0nm,1.2s
SMOL Smolenice 31.05 85 *e*P **P** **01 55 08.6 +0.2**
MODS Modra-Piesok 31.05 85 *e*P **P** **01 55 09.5 +1.0**
MODS pmax pmax
comp=Z,27nm,1.7s
MODS Modra-Piesok 31.05 85 *e*P **P** **01 55 09.5 +1.0**
ZST Bratislava 31.07 85 *e*P **P** **01 55 10.9 +2.4**
ZST Bratislava 31.07 85 *e*P **P** **01 55 10.9 +2.4**
SUW Suwalki 31.10 72 *e*P **P** **01 55 09.1 +0.4**
FCC Fort Churchill 31.21 298 P **P** **01 55 10.0 +0.3**
FCC lAmb lAmb 01 55 16.4
comp=Z,16nm,0.9s
FCC Fort Churchill 31.21 298 P **P** **01 55 10.0 +0.3**
FCC pmax pmax
comp=Z,17nm,1.0s
OJC Ojcow 31.34 80 *e*P **P** **01 55 10.7 -0.2**
OJC Ojcow 31.34 80 P **P** **01 55 09.6 -1.3**
OJC Ojcow 31.34 80 P **P** **01 55 09.6 -1.3**
OJC pmax pmax
comp=Z,10.0nm,1.2s
MDT Midelt 31.45 130 LR LR 02 06 19.6
comp=Z,282nm,19.6s,baz=344,slow=34
KOLL Kolacno 31.54 84 *e*P **P** **01 55 12.5 -0.2**
MMNY Mt. Morris Dam 31.62 262 P **P** **01 55 12.3 -1.2**
LANS Liptovska Anna 31.77 82 *e*P **P** **01 55 16.0 +1.2**
LANS pmax pmax
comp=Z,6.0nm,1.1s
LANS Liptovska Anna 31.77 82 *e*P **P** **01 55 16.0 +1.2**
VYHS Vyhne 31.82 84 *e*P **P** **01 55 16.4 +1.2**
VYHS pmax pmax
comp=Z,4.0nm,1.3s
VYHS Vyhne 31.82 84 *e*P **P** **01 55 16.4 +1.2**
MPLH Magyarpolny 31.92 87 P **P** **01 55 18.6 +2.6**
NIE Niedzica 32.06 81 *e*P **P** **01 55 18.1 +0.8**
CSKK Cskako 32.19 86 P **P** **01 55 19.1 +0.7**
WVNY West Valley, N 32.22 262 P **P** **01 55 17.1 -1.7**
WVNY lAmb lAmb 01 55 22.7
comp=Z,13nm,0.9s
TIH Tihany 32.28 87 P **P** **01 55 20.4 +1.2**
NACGM Naroch 32.48 69 ⇑ *e*P **P** **01 55 21.5 +0.6**
baz=299
E46A Sault Ste Mari 32.67 272 P **P** **01 55 21.5 -1.2**
PSZ Piszkesteto 32.73 84 ⇓P **P** **01 55 23.9 +0.6**
PSZ Piszkesteto 32.73 84 P **P** **01 55 21.7 -1.6**
PSZ lAmb lAmb 01 55 25.2
comp=Z,10.0nm,0.9s
PSZ Piszkesteto 32.73 84 P **P** **01 55 21.7 -1.6**
PSZ pmax pmax
comp=Z,10.0nm,0.9s
PSZ Piszkesteto 32.73 84 P **P** **01 55 23.3 0.0**
KOVH Kovagotottos 32.90 88 P **P** **01 55 24.0 -0.7**
MORH Mrgy, Hungar 33.11 87 ⇑P **P** **01 55 26.9 +0.5**
MORH Mrgy, Hungar 33.11 87 P **P** **01 55 27.5 +1.1**
MNK Minsk 33.24 69 *i* P **P** **01 55 25.2 -2.3**
MNK *i* 01 56 34.7
MNK *i* 01 58 06.3
MNK *i* S **S** **02 00 46.2 -0.5**
MNK *i* SS **SnSn** **02 02 47.4 +1.0**
MNK pmax pmax
comp=N,6.0nm,1.0s
MNK pmax pmax
comp=Z,24nm,1.0s
MNK pmax pmax
comp=E,2.0nm,1.0s
MNK MLR MLR
comp=E,17nm,17.0s
MNK MLR MLR
comp=N,221nm,17.0s
MNK MLR MLR
comp=Z,5μm,17.0s
MNK Minsk 33.24 69 *i* P **P** **01 55 25.2 -2.3**
comp=E,2.0nm,1.0s
MNK *i* P **P** **01 55 25.2 -2.3**
comp=N,6.0nm,1.0s
MNK *i* P **P** **01 55 25.2 -2.3**
comp=Z,24nm,1.0s,baz=301
MNK *i* PP **PnPn** **01 56 34.7 -2.8**
MNK *i* PPP PPP 01 56 46.2
MNK *i* S **S** **02 00 46.2 -0.5**
MNK *i* SS **SnSn** **02 02 47.4 +1.0**
MNK *i* LR LR 02 06 42.3
MNK *i* LRM MLR 02 09 31.5
comp=E,17nm,17.1s
MNK *i* LRM MLR 02 09 39.4
comp=N,221nm,17.1s
MNK *i* LRM MLR 02 09 39.4
comp=Z,5μm,17.1s
UZH Uzhgorod 33.59 81 *e*P **P** **01 55 29.8 -0.8**
UZH *i* 01 55 33.4
UZH *e*S **S** **02 00 49.8 -2.3**
UZH MLR MLR
comp=N,70nm,16.0s
UZH MLR MLR
comp=E,120nm,16.0s
UZH MLR MLR
comp=Z,100nm,16.0s
M53A WI Miller and 34.00 263 P **P** **01 55 34.7 +0.4**
baz=45
E43A Lone Tree Farm 34.12 275 P **P** **01 55 33.7 -1.6**
E43A lAmb lAmb 01 55 43.4
comp=Z,15nm,0.9s
FRGS Fruska Gora 34.42 88 ⇑P **P** **01 55 38.6 +0.7**
D41A Chassel 34.53 277 P **P** **01 55 37.8 -1.0**
N53A Lisbon 34.53 262 P **P** **01 55 39.5 +0.6**
SIRR Siria 34.70 85 ⇑P **P** **01 55 40.7 +0.3**
BZS Buzias 35.09 86 ⇓P **P** **01 55 44.6 +0.9**
BZS Buzias 35.09 86 ⇓P **P** **01 55 44.6 +0.9**
O53A New Philadelph 35.13 262 P **P** **01 55 44.9 +0.8**
baz=44
DIVS Divibare 35.21 89 P **P** **01 55 42.8 -2.1**
COWI Conover 35.44 276 P **P** **01 55 46.2 -0.5**
EYMN Ely 35.54 280 P **P** **01 55 47.4 -0.2**
EYMN Ely 35.54 280 P **P** **01 55 47.3 -0.3**
baz=52,SNR=19
O52A Adamsville 35.56 262 P **P** **01 55 47.7 -0.1**
O52A lAmb lAmb 01 55 57.7
comp=Z,23nm,1.2s
KEST Kesra 35.60 109 P **P** **01 55 47.7 -0.5**
comp=Z,9.7nm,0.8s,baz=312,slow=4.3,SNR=9.8
KEST LR LR 02 08 39.4
comp=Z,473nm,21.4s,baz=238,slow=34
comp=Z,9.7nm,0.8s
KEST Kesra 35.60 109 P **P** **01 55 47.5 -0.7**
KEST lAmb lAmb 01 55 51.5
comp=Z,14nm,0.9s
KLMR Klimovskoe 35.61 53 *e*P **P** **01 55 45.8 -2.2**
KLMR *e* 01 58 15.8
KLMR pmax pmax
comp=Z,99nm,1.3s
KLMR Klimovskoe 35.61 53 *e*P **P** **01 55 45.9 -2.1**
KLMR AMP 01 55 50.9
comp=Z,99nm,1.3s
KLMR *e*PcP **PcP** **01 58 15.8 -0.4**
MDVR Moldovita 35.69 87 ⇑P **P** **01 55 50.3 +1.4**
BUR08 Bucovina Ar. S 35.73 80 P **P** **01 55 47.6 -1.7**
BURAR Bucovina Array 35.76 80 ⇓P **P** **01 55 50.5 +0.9**
BURAR Bucovina Array 35.76 80 P **P** **01 55 48.0 -1.6**
BURAR lAmb lAmb 01 55 52.2
comp=Z,9.1nm,0.9s
BURAR Bucovina Array 35.76 80 ⇓P **P** **01 55 50.5 +0.9**
P53A Whipple 35.78 261 P **P** **01 55 49.1 -0.5**
P53A lAmb lAmb 01 56 02.5
comp=Z,12nm,1.1s
HERR Herculane 36.00 86 ⇓P **P** **01 55 51.8 +0.4**
AKASG Malin Array Be 36.01 73 P **P** **01 55 50.9 -0.6**
comp=Z,5.3nm,0.6s,baz=308,slow=8.5,SNR=38
AKASG PcP **PcP** **01 58 16.5 -1.1**
comp=Z,0.3nm,0.5s,baz=298,slow=2.0,SNR=4.7
AKASG LR LR 02 10 19.4
comp=Z,335nm,19.2s,baz=286,slow=36
comp=Z,5.3nm,0.6s
AKBB Malin Array Si 36.01 73 *c*/*e*P **P** **01 55 51.1 -0.4**
AKBB pmax pmax
comp=Z,16nm,0.9s
P52A Corning 36.07 262 P **P** **01 55 52.3 +0.2**
baz=44
ACSO Alum Creek Sta 36.09 263 P **P** **01 55 51.7 -0.7**
ACSO lAmb lAmb 01 56 00.7
comp=Z,13nm,0.9s
ACSO Alum Creek Sta 36.09 263 P **P** **01 55 52.5 +0.1**
baz=44
N49A Columbus Grove 36.25 265 P **P** **01 55 52.0 -1.6**
N49A lAmb lAmb 01 56 00.7
comp=Z,19nm,1.1s
LOT Lotru 36.36 84 ⇑P **P** **01 55 55.6 +0.9**
ULM Lac du Bonnet 36.45 286 P **P** **01 55 55.0 -0.3**
comp=Z,9.2nm,0.9s,baz=55,slow=9.0,SNR=8.4
ULM LR LR 02 09 31.9
comp=Z,890nm,19.0s,baz=55,slow=34
comp=Z,9.2nm,0.9s
ULM Lac du Bonnet 36.45 286 P **P** **01 55 54.6 -0.7**
ULM lAmb lAmb 01 56 00.7
comp=Z,13nm,0.9s
ULM Lac du Bonnet 36.45 286 P **P** **01 55 54.6 -0.7**
ULM pmax pmax
comp=Z,13nm,1.0s
B35A Bob, Littlefor 36.47 282 P **P** **01 55 55.3 -0.2**
B35A lAmb lAmb 01 56 01.3
comp=Z,13nm,0.8s
G40A Rib Lake 36.55 276 P **P** **01 55 55.8 -0.3**
G40A lAmb lAmb 01 56 02.3
comp=Z,10nm,0.8s
BIZ Bicaz 36.65 81 ⇑P **P** **01 55 58.8 +1.8**
O49A Covington 36.85 264 P **P** **01 55 59.1 +0.3**
O49A lAmb lAmb 01 56 07.0
comp=Z,16nm,1.1s
ARR Arges 36.87 84 ⇑P **P** **01 55 58.7 -0.3**
DOPR Dopca 36.89 82 ⇓P **P** **01 56 00.1 +1.0**
VAE Valguarnera 36.90 102 LR LR 02 09 30.5
comp=Z,517nm,20.3s,baz=327,slow=34
SORM Soroca 37.09 77 ⇓P **P** **01 56 00.2 -0.6**
SORM Soroca 37.09 77 ⇓P **P** **01 56 00.2 -0.6**
Q51A Peebles 37.15 262 P **P** **01 56 00.5 -0.9**
Q51A lAmb lAmb 01 56 04.9
comp=Z,9.9nm,0.6s
OBN Obninsk 37.19 63 LR LR 02 10 30.3
comp=Z,72nm,19.7s,baz=320,slow=35
OBN Obninsk 37.19 63 *c*/*i*P **P** **01 56 02.3 +0.9**
OBN *i* 01 56 06.4
OBN *i* 01 57 28.5
OBN *i* SS SS 02 04 19.7 -10
OBN pmax pmax
comp=Z,30nm,1.3s
OBN MLR MLR
comp=Z,263nm,18.0s
O48B Farmland 37.24 265 P **P** **01 56 02.7 +0.6**
baz=44
MLR Muntele Rosu 37.49 83 ⇑P P 01 56 09.5 +5.2
MLR Muntele Rosu 37.49 83 LR LR 02 12 32.7
comp=Z,672nm,18.4s,baz=307,slow=38
MLR Muntele Rosu 37.49 83 P **P** **01 56 02.4 -2.0**
MLR Muntele Rosu 37.49 83 P **P** **01 56 02.4 -2.0**
MLR pmax pmax
comp=Z,6.0nm,1.0s
P49A Miami Univ. Ec 37.52 264 P **P** **01 56 05.3 +0.8**
baz=44
AGMN Agassiz Nation 37.63 284 P **P** **01 56 04.5 -0.9**
AGMN Agassiz Nation 37.63 284 P **P** **01 56 05.7 +0.4**
baz=52
PLOR Plostina 37.64 82 ⇓P P 01 56 12.3 +6.8
PLOR Plostina 37.64 82 ⇓P P 01 56 12.3 +6.8
VRI Vrincioaia 37.67 81 ⇑P **P** **01 56 06.5 +0.9**
VRI Vrincioaia 37.67 81 ⇑P **P** **01 56 06.6 +0.9**
PRGR Permogore 37.81 50 *e*P **P** **01 56 08.7 +2.0**
PRGR *e* 01 58 19.4
F36A Milaca 37.94 279 P **P** **01 56 08.2 +0.2**
VTS Vitosha 37.95 88 ⇑P P 01 56 03.5 -4.8
VTS Vitosha 37.95 88 ⇑P P 01 56 03.5 -4.8
P48A Milroy 37.95 265 P **P** **01 56 07.6 -0.5**
P48A lAmb lAmb 01 56 14.9
comp=Z,15nm,1.1s
SPMN Marine on St. 37.97 278 P **P** **01 56 07.5 -0.7**
SPMN lAmb lAmb 01 56 14.6
comp=Z,16nm,0.8s
SPMN Marine on St. 37.97 278 P **P** **01 56 08.6 +0.4**
baz=49,SNR=7.9
KBN Korca 38.02 93 P **P** **01 56 07.3 -1.5**
KBN lAmb lAmb 01 56 12.4
comp=Z,22nm,1.0s
KBN Korca 38.02 93 P **P** **01 56 07.3 -1.5**
KBN pmax pmax
comp=Z,22nm,1.0s
JFWS Jewell Farm 38.14 273 P **P** **01 56 08.8 -0.9**
JFWS Jewell Farm 38.14 273 P **P** **01 56 08.8 -0.9**
JFWS pmax pmax
comp=Z,11nm,0.9s
SFIN Lafayette 38.20 267 P **P** **01 56 09.1 -1.1**
SFIN Lafayette 38.20 267 P **P** **01 56 11.0 +0.8**
baz=45
FNA Florina 38.22 92 P **P** **01 56 08.9 -1.6**
FNA lAmb lAmb 01 56 12.7
comp=Z,21nm,0.8s
FNA Florina 38.22 92 P **P** **01 56 08.9 -1.6**
FNA pmax pmax
comp=Z,21nm,0.8s
S51A Beattyville 38.30 261 P **P** **01 56 11.0 -0.1**
L42A Oliver, Polo 38.45 271 P **P** **01 56 11.2 -1.1**
L42A lAmb lAmb 01 56 20.6
comp=Z,27nm,1.2s
YKA Yellowknife Ar 38.46 312 P **P** **01 56 12.9 +0.7**
comp=Z,6.5nm,0.8s,baz=60,slow=9.2,SNR=7.5
YKA LR LR 02 11 28.1
comp=Z,2μm,18.5s,baz=88,slow=35
comp=Z,6.5nm,0.8s
YKA Yellowknife Ar 38.46 312 P **P** **01 56 11.9 -0.2**
CFR Carcaliu 38.87 81 ⇑P **P** **01 56 14.9 -0.9**
CFR Carcaliu 38.87 81 ⇑P **P** **01 56 14.9 -0.9**
I37A Lemond, Waseca 39.09 277 P **P** **01 56 16.5 -1.1**
TZTN Tazewell 39.10 260 P **P** **01 56 16.2 -1.6**
TZTN Tazewell 39.10 260 P **P** **01 56 18.8 +0.9**
baz=41
L40A Anamosa 39.24 273 P **P** **01 56 17.7 -1.2**
LIT Litokhoron 39.31 92 P **P** **01 56 17.9 -1.6**
LIT lAmb lAmb 01 56 28.2
comp=Z,16nm,1.0s
LIT Litokhoron 39.31 92 P **P** **01 56 17.9 -1.6**
LIT pmax pmax
comp=Z,16nm,1.0s
F33A 5 Mile Ranch, 39.42 281 P **P** **01 56 18.4 -2.0**
K38A Parkersburg 39.68 274 P **P** **01 56 20.9 -1.7**
K38A lAmb lAmb 01 56 28.9
comp=Z,23nm,0.8s
LPSR Galich'ya Gora 39.77 65 *e*P **P** **01 56 23.0 -0.2**
LPSR pmax pmax
comp=Z,10.0nm,1.0s
TKL Tuckaleechee C 39.88 259 LR LR 02 11 55.1
comp=Z,885nm,19.0s,baz=45,slow=35
BG3 Lake Jocassee 39.95 258 P **P** **01 56 23.0 -1.9**
BG3 lAmb lAmb 01 56 33.3
comp=Z,19nm,1.2s
NHSC New Hope 39.98 253 P **P** **01 56 26.1 +1.0**
baz=38
HODGE Hodges 40.18 256 P **P** **01 56 25.4 -1.4**
RDO Rodhopi 40.21 88 P **P** **01 56 26.8 -0.2**
RDO lAmb lAmb 01 56 35.4
comp=Z,16nm,1.1s
Q44A Meyer Farm, Va 40.29 267 P **P** **01 56 26.5 -1.1**
U49A Red Boiling Sp 40.31 262 P **P** **01 56 26.0 -1.8**
CPCT Cooper Cave 40.44 260 P **P** **01 56 27.4 -1.6**
VORR Voronezh 40.47 66 *e*P **P** **01 56 28.9 -0.1**
VORR pmax pmax
comp=Z,10.0nm,0.4s
ALN Alexandroupoli 40.66 88 P **P** **01 56 29.9 -0.8**

ALN IAmb IAmb 01 56 36.3
comp=Z,21nm,1.2s
ALN Alexandroupoli 40.66 88 P **P** **01 56 29.9 -0.8**
ALN pmax pmax
comp=Z,21nm,1.2s
T47A Sharon Grove 40.66 264 P **P** **01 56 29.7 -1.0**
VSR Storozhevoye 40.73 67 *e*P **P** **01 56 28.4 -2.8**
VSR pmax pmax
comp=Z,10.0nm,1.3s
ECSD EROS Data Cent 40.99 279 P **P** **01 56 31.4 -2.1**
ECSD IAmb IAmb 01 56 40.1
comp=Z,14nm,0.8s
ECSD EROS Data Cent 40.99 279 P **P** **01 56 34.0 +0.5**
baz=47,SNR=16
W50A Signal Mountai 41.05 260 P **P** **01 56 32.4 -1.6**
KIRV Kirov 41.07 52 LR LR 02 13 45.2
comp=Z,164nm,18.2s,baz=300,slow=36
KIRV Kirov 41.07 52 *de*P **P** **01 56 34.6 +0.8**
ITM Ithomi 41.12 95 P **P** **01 56 32.1 -2.5**
ITM IAmb IAmb 01 56 43.8
comp=Z,21nm,1.1s
SIUC Southern Illin 41.26 266 P **P** **01 56 34.4 -1.3**
SIUC IAmb IAmb 01 56 38.6
comp=Z,13nm,0.8s
S44A Carbondale 41.30 266 P **P** **01 56 34.1 -1.8**
S44A IAmb IAmb 01 56 38.7
comp=Z,14nm,0.8s
SWET Sewanee 41.37 261 P **P** **01 56 34.6 -2.0**
V48A Smith Brothers 41.44 262 P **P** **01 56 35.9 -1.3**
GOGA Godfrey 41.45 257 P **P** **01 56 36.8 -0.5**
GOGA Godfrey 41.45 257 P **P** **01 56 36.8 -0.5**
GOGA pmax pmax
comp=Z,8.0nm,0.8s
GOGA Godfrey 41.45 257 P **P** **01 56 38.2 +0.9**
baz=39
P40A Paris 41.47 270 P **P** **01 56 35.7 -1.7**
WVT Waverly 41.69 263 P **P** **01 56 37.6 -1.6**
WVT Waverly 41.69 263 P **P** **01 56 37.7 -1.6**
WVT pmax pmax
comp=Z,7.0nm,1.1s
WVT Waverly 41.69 263 P **P** **01 56 39.6 +0.3**
baz=41
FVM French Village 41.71 267 P **P** **01 56 37.7 -1.7**
FVM French Village 41.71 267 P **P** **01 56 37.7 -1.7**
FVM pmax pmax
comp=Z,7.0nm,0.8s
INK Inuvik 41.78 327 P **P** **01 56 40.0 +0.4**
comp=Z,2.6nm,0.7s,baz=95,slow=5.5,SNR=4.6
INK LR LR 02 13 12.8
comp=Z,471nm,21.3s,baz=46,slow=35
comp=Z,2.6nm,0.7s
INK Inuvik 41.78 327 P **P** **01 56 38.3 -1.3**
INK Inuvik 41.78 327 P **P** **01 56 38.3 -1.3**
INK pmax pmax
comp=Z,14nm,1.4s
INK Inuvik 41.78 327 P **P** **01 56 40.1 +0.4**
baz=53
DGMT Dagmar 41.83 289 P **P** **01 56 40.1 -0.2**
baz=50,SNR=6.1
VRH Novokhopyorsk 42.00 65 *e*P **P** **01 56 40.8 -0.8**
VRH pmax pmax
comp=Z,10.0nm,1.0s
CCM Cathedral Cave 42.10 268 P **P** **01 56 41.5 -1.1**
CCM Cathedral Cave 42.10 268 P **P** **01 56 41.5 -1.1**
CCM pmax pmax
comp=Z,6.0nm,0.8s
CCM Cathedral Cave 42.10 268 P **P** **01 56 42.6 0.0**
baz=43
R40A Maddies Statio 42.48 269 P **P** **01 56 43.1 -2.5**
X48A Hartselle 42.54 261 P **P** **01 56 44.3 -1.9**
PBMO Poplar Bluff 42.60 266 P **P** **01 56 45.1 -1.6**
EDM Edmonton 43.27 300 P **P** **01 56 51.5 -0.5**
EDM IAmb IAmb 01 56 58.4
comp=Z,22nm,0.9s
EDM Edmonton 43.27 300 P **P** **01 56 51.5 -0.5**
EDM pmax pmax
comp=Z,21nm,0.9s
MGMO Mountain Grove 43.32 268 P **P** **01 56 50.4 -2.0**
S39A Bolivar 43.49 270 P **P** **01 56 52.2 -1.6**
LRAL Lakeview Retre 43.60 260 P **P** **01 56 55.1 +0.3**
baz=39
EPYK Eagle Plains 43.97 326 IAmb IAmb 01 57 07.0
comp=Z,14nm,1.1s
EPYK Eagle Plains 43.97 326 P **P** **01 56 58.0 +0.5**
baz=49,SNR=10
ANN Anapa 44.03 75 *e*P **P** **01 56 56.9 -1.1**
ANN *e*'PP **pP** **01 56 59.8 -2.3**
ANN *e* 01 58 41.6
ANN *e*S **S** **02 03 27.6 -1.8**
ANN *e*SS **SS** **02 06 47.2 +1.2**
ANN pmax pmax
comp=Z,25nm,0.8s
ANN MLR MLR
comp=Z,429nm,13.0s
LAO LASA Array 44.04 289 P **P** **01 56 56.6 -1.6**
LAO LASA Array 44.04 289 P **P** **01 56 59.9 +1.6**
baz=48,SNR=12
Z47A Carrollton 44.05 261 IAmb IAmb 01 57 00.3
comp=Z,10.0nm,0.8s
BELG Belogornoye 44.07 60 LR LR 02 14 14.9
comp=Z,212nm,19.6s,baz=326,slow=35
IDI Anoyia 44.12 94 LR LR 02 17 07.4
comp=Z,280nm,18.1s,baz=281,slow=38
KSU1 Kansas State U 44.24 274 P **P** **01 56 59.6 -0.2**
baz=44,SNR=5.8
MMPY Sheldon Lake, 44.64 319 P **P** **01 57 02.9 0.0**
baz=49,SNR=14
W41B Gary Mavity, V 44.78 266 IAmb IAmb 01 57 06.7
comp=Z,7.9nm,0.9s
W41B Gary Mavity, V 44.78 266 P **P** **01 57 03.7 -0.5**
baz=41
EGMT Eagleton 44.92 292 P **P** **01 57 04.2 -1.2**
EGMT IAmb IAmb 01 57 12.1
comp=Z,20nm,1.2s
EGMT Eagleton 44.92 292 P **P** **01 57 05.7 +0.3**
baz=48
I29M Ogilvie Camp, 45.13 325 IAmb IAmb 01 57 17.0
comp=Z,11nm,0.8s
I29M Ogilvie Camp, 45.13 325 P **P** **01 57 07.8 +1.1**
baz=47
D24K Happy Valley 45.36 333 P **P** **01 57 09.7 +1.3**
baz=43
BMAR Burnt Mountain 45.51 330 P **P** **01 57 09.4 -0.2**
BR131 Keskin Array S 45.57 83 IAmb IAmb 01 57 17.4
comp=Z,13nm,0.9s
BRTR Keskin Array B 45.57 83 P **P** **01 57 11.9 +1.3**
comp=Z,4.4nm,0.7s,baz=310,slow=5.8,SNR=21
BRTR LR LR 02 17 28.7
comp=Z,181nm,19.3s,baz=307,slow=38
comp=Z,4.4nm,0.7s
BRTR Keskin Array B 45.57 83 *i* P **P** **01 57 12.6 +1.9**
BRTR pmax pmax
comp=Z,6.0nm,0.8s
W39A Magazine 45.59 268 P **P** **01 57 10.7 0.0**
baz=41
T35A Sooner Cattle 45.78 272 IAmb IAmb 01 57 13.2
comp=Z,6.1nm,0.8s
TOLK Toolik Lake Re 45.92 333 P **P** **01 57 14.0 +1.1**
baz=42,SNR=12
D23K Nanushuk River 45.95 334 P **P** **01 57 13.7 +0.6**
baz=42,SNR=10
MIAR Mount Ida 45.97 267 IAmb IAmb 01 57 28.3
comp=Z,18nm,1.4s
MIAR Mount Ida 45.97 267 P **P** **01 57 13.9 +0.3**
baz=40,SNR=7.2
M31M Drury Creek, Y 46.01 320 P **P** **01 57 14.4 +0.7**
baz=47
SOC Sochi 46.05 75 *e*P **P** **01 57 13.8 -0.4**
SOC *e* 01 58 57.7
SOC *e*S **S** **02 04 00.3 +1.5**
SOC *e*SS **SS** **02 07 21.3 -2.0**
SOC *e*SSS SSS 02 08 21.1
SOC MLR MLR
comp=Z,175nm,16.0s
TUL1 Leonard 46.14 270 IAmb IAmb 01 57 15.8
comp=Z,9.5nm,0.8s
TUL1 Leonard 46.14 270 P **P** **01 57 14.6 -0.3**
baz=42
ARU Arti 46.27 50 LR LR 02 15 12.7
comp=Z,140nm,20.3s,baz=301,slow=34
ARU Arti 46.27 50 P **P** **01 57 15.2 -0.5**
ARU Arti 46.27 50 *d i*P **P** **01 57 16.8 +1.1**
ARU 01 58 48.0
ARU 01 59 03.3
ARU S **S** **02 04 06.3 +4.7**
ARU pmax pmax
comp=Z,25nm,1.2s
ARU MLR MLR
comp=Z,156nm,16.0s
SJG San Juan 46.34 226 LR LR 02 12 52.4
comp=Z,46nm,21.2s,baz=68,slow=31
DAWY Dawson 46.37 324 P **P** **01 57 17.4 +0.9**
baz=46,SNR=13
Z41A Richland Creek 46.53 265 P **P** **01 57 18.1 0.0**
baz=40
M30M Minto, Yukon 46.56 322 IAmb IAmb 01 57 28.0
comp=Z,14nm,1.5s
M30M Minto, Yukon 46.56 322 P **P** **01 57 19.5 +1.4**
baz=46,SNR=7.3
I26K Coal Creek Min 46.63 327 IAmb IAmb 01 57 28.2
comp=Z,12nm,1.4s
I26K Coal Creek Min 46.63 327 P **P** **01 57 19.2 +0.8**
baz=44
RLMT Red Lodge 46.66 289 IAmb IAmb 01 57 25.5
comp=Z,10nm,1.0s
RLMT Red Lodge 46.66 289 P **P** **01 57 20.1 +0.9**
baz=46
GOF Gofitskoye 46.74 71⇑ *e*P **P** **01 57 21.0 +1.4**
GOF pmax pmax
comp=Z,43nm,0.8s
P33M Teslin, Yukon 46.81 318 P **P** **01 57 20.2 +0.1**
baz=47
SVE Sverdlovsk 46.85 49 *e*P **P** **01 57 21.7 +1.4**
X37A Clayton 46.90 269 IAmb IAmb 01 57 24.0
comp=Z,6.7nm,0.8s
K22A Casper 46.98 285 P **P** **01 57 22.1 +0.5**
baz=45
N31M Braeburn, Yuko 46.98 320 P **P** **01 57 23.0 +1.7**
baz=46,SNR=11
DLBC Dease Lake 46.98 314 LR LR 02 16 46.0
comp=Z,2µm,19.1s,baz=59,slow=36
DLBC Dease Lake 46.98 314 IAmb IAmb 01 57 33.8
comp=Z,11nm,1.1s
COLD Coldfoot 47.14 332 P **P** **01 57 23.1 +0.7**
baz=41
K27K Chicken 47.23 325 IAmb IAmb 01 57 34.3
comp=Z,7.6nm,1.0s
K27K Chicken 47.23 325 P **P** **01 57 25.3 +2.2**
baz=44
WHY Whitehorse 47.24 319 P **P** **01 57 25.0 +1.6**
baz=46
KIV Kislovodsk 47.33 72⇑ P **P** **01 57 25.3 +1.0**
KIV Kislovodsk 47.33 72 P **P** **01 57 23.9 -0.4**
KIV Kislovodsk 47.33 72⇑ P **P** **01 57 25.3 +1.0**
KIV Kislovodsk 47.33 72 P **P** **01 57 25.0 +0.6**
J26L Joseph Creek 47.33 327 IAmb IAmb 01 57 33.6
comp=Z,8.6nm,1.1s
J26L Joseph Creek 47.33 327 P **P** **01 57 25.2 +1.1**
baz=43
JTMT Jette 47.35 295 IAmb IAmb 01 57 30.2
comp=Z,8.6nm,0.9s
PHWY Pilot Hill 47.38 283 IAmb IAmb 01 57 32.4
comp=Z,8.3nm,0.8s
N30M Aishikik Lake 47.45 321 P **P** **01 57 26.9 +1.9**
baz=45
BOZ Bozeman (W) 47.52 291 IAmb IAmb 01 57 34.0
comp=Z,8.2nm,0.9s
BOZ Bozeman (W) 47.52 291 P **P** **01 57 26.7 +0.8**
baz=46,SNR=20
H24K Noodor Dome 47.58 330 IAmb IAmb 01 57 36.3
comp=Z,8.1nm,0.9s
H24K Noodor Dome 47.58 330 P **P** **01 57 27.3 +1.4**
baz=42,SNR=10
O30N Mendenhall 47.59 320 P **P** **01 57 27.8 +1.7**
baz=45,SNR=18
KBZ Khabaz 47.60 72 P **P** **01 57 27.5 +1.3**
comp=Z,7.6nm,1.0s,baz=311,slow=8.3,SNR=16
KBZ LR LR 02 18 28.9
comp=Z,212nm,18.6s,baz=316,slow=37
comp=Z,7.6nm,1.0s
KBZ Khabaz 47.60 72 *d i*P **P** **01 57 28.1 +1.9**
J25K Salcha River, 47.78 327 IAmb IAmb 01 57 37.3
comp=Z,8.1nm,1.0s
J25K Salcha River, 47.78 327 P **P** **01 57 29.0 +1.5**
baz=42,SNR=12
YHL Hebgen Lake 47.82 290 IAmb IAmb 01 57 35.1
comp=Z,7.5nm,1.1s
H17A Grant Village 47.83 289 IAmb IAmb 01 57 37.0
comp=Z,10nm,1.1s
H17A Grant Village 47.83 289 P **P** **01 57 29.6 +1.2**
baz=45
SCRK Sand Creek 47.84 326 P **P** **01 57 30.3 +2.2**
baz=43,SNR=21
L27K Beaver Creek, 47.85 324 IAmb IAmb 01 57 38.2
comp=Z,16nm,1.4s
L27K Beaver Creek, 47.85 324 P **P** **01 57 29.8 +1.7**
baz=44,SNR=9.4
N23A Red Feather La 47.92 283 IAmb IAmb 01 57 38.0
comp=Z,11nm,0.9s
N23A Red Feather La 47.92 283 P **P** **01 57 30.2 +1.0**
baz=44,SNR=6.1
POKR Poker Plat Res 47.99 329 P **P** **01 57 30.5 +1.4**
baz=41
H23K Yukon River 48.03 330 IAmb IAmb 01 57 39.6
comp=Z,14nm,1.1s
H23K Yukon River 48.03 330 P **P** **01 57 31.4 +1.9**
baz=40,SNR=15
YPP Pitchstone Pla 48.04 289 IAmb IAmb 01 57 44.8
comp=Z,7.1nm,1.1s
HYT Haines Junctio 48.04 320 P **P** **01 57 31.2 +1.5**
baz=45,SNR=7.8
YUK4 Talbot Arm 48.06 321 P **P** **01 57 31.0 +1.2**
baz=44,SNR=7.5
ILAR Eielson Array 48.10 328 P **P** **01 57 31.9 +2.0**
comp=Z,8.3nm,1.0s,baz=37,slow=5.7,SNR=28
ILAR PcP **PcP** **01 58 58.2 +1.0**
comp=Z,2.6nm,0.9s,baz=5.5,slow=2.5,SNR=4.5
ILAR LR LR 02 17 16.7
comp=Z,220nm,21.8s,baz=54,slow=35
comp=Z,8.3nm,1.0s
NCK Nalchik 48.12 72⇑ *i*P **P** **01 57 32.9 +2.5**
NCK pmax pmax
comp=Z,43nm,2.8s
YUK6 Outpost Mounta 48.25 321 P **P** **01 57 32.7 +1.3**
baz=44
RIDG Independent Ri 48.28 326 IAmb IAmb 01 57 40.2
comp=Z,10nm,0.9s
RIDG Independent Ri 48.28 326 P **P** **01 57 33.2 +1.8**
baz=42,SNR=11
YUK3 Moose Creek 48.35 323 P **P** **01 57 32.5 +0.4**
baz=44,SNR=10.0
P30M Million Dollar 48.35 319 P **P** **01 57 33.5 +1.5**
baz=44
NEW Newport 48.37 297 LR LR 02 16 59.4
comp=Z,803nm,19.0s,baz=42,slow=35
NEW Newport 48.37 297 IAmb IAmb 01 57 38.3
comp=Z,5.1nm,0.8s
NEW Newport 48.37 297 P **P** **01 57 32.8 +0.5**
baz=46
M27K Edge Creek, AK 48.38 324 IAmb IAmb 01 57 44.5
comp=Z,8.9nm,1.2s
M27K Edge Creek, AK 48.38 324 P **P** **01 57 33.4 +1.2**
baz=43
HDA Harding Lake 48.39 328 IAmb IAmb 01 57 39.7
comp=Z,8.1nm,0.8s
HDA Harding Lake 48.39 328 P **P** **01 57 33.0 +0.9**
baz=41
BW06 Boulder Array 48.47 287 IAmb IAmb 01 57 38.7
comp=Z,8.2nm,0.9s
BW06 Boulder Array 48.47 287 P **P** **01 57 32.4 -0.9**
baz=44,SNR=13
PD31 Pinedale Array 48.47 287 IAmb IAmb 01 57 38.7
comp=Z,7.3nm,0.9s
PDAR Pinedale Array 48.47 287 P **P** **01 57 33.5 +0.2**
comp=Z,5.2nm,0.7s,baz=66,slow=7.9,SNR=29
PDAR LR LR 02 16 58.5
comp=Z,689nm,18.5s,baz=42,slow=35
comp=Z,5.2nm,0.7s
YUK8 Steele Glacier 48.48 322 P **P** **01 57 32.9 -0.2**
baz=44
I23K Minto, Yukon-K 48.50 330 IAmb IAmb 01 57 43.5
comp=Z,11nm,1.1s
I23K Minto, Yukon-K 48.50 330 P **P** **01 57 34.5 +1.5**
baz=40,SNR=7.8
K24K Donnelly Dome 48.51 327 P **P** **01 57 34.4 +1.3**
baz=42,SNR=18
ISCO Idaho Springs 48.54 281 IAmb IAmb 01 57 41.0
comp=Z,11nm,1.0s
ISCO Idaho Springs 48.54 281 P **P** **01 57 33.4 -0.7**
baz=43,SNR=14
SNOW Snow King Moun 48.59 289 IAmb IAmb 01 57 42.3
comp=Z,7.8nm,0.9s
PLBC Pleasant Camp 48.62 318 P **P** **01 57 35.4 +1.4**
baz=44
WMOK Wichita Mounta 48.63 272 IAmb IAmb 01 57 46.4
comp=Z,7.6nm,0.9s
WMOK Wichita Mounta 48.63 272 P **P** **01 57 34.8 +0.4**
baz=41
TPAW Teton Pass 48.66 289 IAmb IAmb 01 57 41.7
comp=Z,9.3nm,0.9s
WRH Wood River Hil 48.67 328 IAmb IAmb 01 57 44.6
comp=Z,8.0nm,1.0s
ONI Oni 48.69 73 IAmb IAmb 01 57 38.1
comp=Z,8.3nm,1.0s
M26K Nabesna, AK 48.70 324 IAmb IAmb 01 57 44.8
comp=Z,14nm,1.1s
M26K Nabesna, AK 48.70 324 P **P** **01 57 36.5 +1.9**
baz=42
REDW Red Top Meadow 48.71 288 IAmb IAmb 01 57 41.4
comp=Z,6.4nm,0.8s
ZEI Tsey 48.78 73 *e*P **P** **01 57 36.4 +0.7**
ZEI pmax pmax
comp=Z,8.0nm,1.3s
NEA2 Nenana 48.85 329 IAmb IAmb 01 57 45.1
comp=Z,14nm,1.2s
NEA2 Nenana 48.85 329 P **P** **01 57 37.9 +2.2**
baz=40
CSS Mathiatis 48.92 88 P **P** **01 57 35.3 -1.3**
MLY Manley 48.97 330 IAmb IAmb 01 57 46.1
comp=Z,10.0nm,1.2s
MLY Manley 48.97 330 P **P** **01 57 37.5 +0.9**
baz=39,SNR=8.5
H21K Melozitna Rive 49.02 332 IAmb IAmb 01 57 46.1
comp=Z,11nm,1.2s
H21K Melozitna Rive 49.02 332 P **P** **01 57 38.9 +1.9**
baz=38
PAX Paxson 49.04 326 IAmb IAmb 01 57 49.5
comp=Z,13nm,1.1s
PAX Paxson 49.04 326 P **P** **01 57 38.0 +0.7**
baz=41
I21K Tanana 49.18 331 IAmb IAmb 01 57 47.8
comp=Z,12nm,1.1s
I21K Tanana 49.18 331 P **P** **01 57 39.7 +1.5**
baz=39
AHID Auburn Hatcher 49.26 288 IAmb IAmb 01 57 50.9
comp=Z,9.2nm,0.9s
B08A Colville Reser 49.35 299 IAmb IAmb 01 57 45.8
comp=Z,8.4nm,0.9s
MCK McKinley 49.47 328 P **P** **01 57 41.7 +1.2**
baz=40
DHY Denali Highway 49.53 327 IAmb IAmb 01 57 51.4
comp=Z,6.3nm,0.9s
DHY Denali Highway 49.53 327 P **P** **01 57 42.3 +1.2**
baz=40
GRNC Granite Creek 49.54 322 IAmb IAmb 01 57 51.7
comp=Z,14nm,1.1s
AKH Akhalkalaki 49.56 74⇑ P **P** **01 57 43.9 +2.2**
AKH Akhalkalaki 49.56 74 P **P** **01 57 43.8 +2.2**
O20A White River Ci 49.68 284 IAmb IAmb 01 57 49.2
comp=Z,9.4nm,1.0s
O20A White River Ci 49.68 284 P **P** **01 57 42.6 0.0**
baz=43
SMCO Snowmass 49.71 282 IAmb IAmb 01 57 54.4
comp=Z,7.5nm,1.0s
BPAW Bear Paw Mtn. 49.76 329 IAmb IAmb 01 57 52.1
comp=Z,16nm,1.5s
BPAW Bear Paw Mtn. 49.76 329 P **P** **01 57 43.1 +0.4**
baz=39,SNR=8.9
N25K Chitina, Valde 49.80 324 P **P** **01 57 43.3 +0.2**
baz=41,SNR=14
T25A Trinidad 49.86 278 IAmb IAmb 01 57 50.8
comp=Z,11nm,1.1s
T25A Trinidad 49.86 278 P **P** **01 57 44.5 +0.5**
baz=42,SNR=8.9
SDCO Great Sand Dun 49.99 279 P **P** **01 57 45.0 0.0**
baz=42
WAT6 Susitna Watana 50.02 327 P **P** **01 57 45.9 +1.1**
baz=40
F10A Beach Ranch, E 50.03 295 IAmb IAmb 01 57 56.3
comp=Z,9.0nm,1.1s
WAT1 Susitna Watana 50.06 327 P **P** **01 57 46.6 +1.6**
baz=39
PLID Pearl Lake 50.06 294 IAmb IAmb 01 57 59.5
comp=Z,12nm,1.1s
TRF Thorofare Moun 50.08 329 IAmb IAmb 01 57 54.7
comp=Z,21nm,1.3s
TRF Thorofare Moun 50.08 329 P **P** **01 57 46.4 +1.1**
baz=39
KTH Kantishna Hill 50.17 329 IAmb IAmb 01 57 56.3
comp=Z,14nm,1.1s
AKTO Aktyubinsk 50.18 56 LR LR 02 19 10.3
comp=Z,184nm,18.6s,baz=318,slow=36
BMRM Bremner River 50.29 324 P **P** **01 57 47.4 +0.7**
baz=41
CHUM Lake Minchumin 50.30 330 P **P** **01 57 48.1 +1.4**
baz=38
KLU Klutina 50.30 325 IAmb IAmb 01 57 57.4
comp=Z,16nm,1.0s
KLU Klutina 50.30 325 P **P** **01 57 48.4 +1.5**
baz=40
HWUT Hardware Ranch 50.34 287 IAmb IAmb 01 57 53.7
comp=Z,14nm,0.8s
HLID Hailey 50.37 291 P **P** **01 57 49.3 +1.5**
baz=44
SCM Sheep Creek Mo 50.47 326 P **P** **01 57 49.2 +1.1**
baz=40
TIXI Tiksi 50.48 7 LR LR 02 16 25.5
comp=Z,67nm,22.0s,baz=359,slow=33
TIXI Tiksi 50.48 7 P **P** **01 57 47.9 -0.1**
TIXI IAmb IAmb 01 57 51.1
comp=Z,14nm,1.1s
TIXI Tiksi 50.48 7 *de*P **P** **01 57 49.8 +1.8**
TIXI pmax pmax
comp=Z,11nm,1.3s
MAK Makhachkala 50.50 70 *e*P **P** **01 57 45.1 -3.4**
MAK *e*S **S** **02 04 57.2 -4.3**
MAK pmax pmax
comp=Z,109nm,1.1s
MAK MLR MLR
comp=Z,262nm,16.0s
J20K Nowinta River 50.55 331 P **P** **01 57 50.3 +1.7**
baz=37,SNR=9.1
BBB Bella Bella 50.59 307 LR LR 02 18 58.6
comp=Z,404nm,18.4s,baz=43,slow=36
CAST Castle Rocks 50.60 329 P **P** **01 57 50.0 +1.0**
baz=38
S22A 4UR Ranch, Cre 50.69 281 IAmb IAmb 01 57 59.5
comp=Z,10nm,1.1s
S22A 4UR Ranch, Cre 50.69 281 P **P** **01 57 51.9 +1.4**
baz=42
HKT Hockley 50.72 265⇓ *e*P **P** **01 57 50.5 +0.2**
HKT pmax pmax
comp=Z,13nm,2.1s
LTY Liberty 50.77 299 IAmb IAmb 01 58 10.6
comp=Z,9.7nm,0.6s
SML Sawmill 50.79 326 P **P** **01 57 51.9 +1.3**
baz=39
BMO Blue Mountains 50.88 294 IAmb IAmb 01 57 59.1
comp=Z,8.7nm,1.1s
ZKTA Zakatala 51.01 72 P **P** **01 57 50.6 -1.8**
JLU Jordanelle 51.01 286 IAmb IAmb 01 58 00.6
comp=Z,8.9nm,0.9s
PPLA Purkeypile 51.05 329 IAmb IAmb 01 58 04.8
comp=Z,24nm,1.4s
PPLA Purkeypile 51.05 329 P **P** **01 57 54.5 +2.0**
baz=37
PV15 Paradox Valley 51.12 282 IAmb IAmb 01 58 00.6
comp=Z,8.7nm,0.8s
GNI Garni 51.13 74 LR LR 02 20 06.2
comp=Z,129nm,18.9s,baz=320,slow=37
GNI Garni 51.13 74 P **P** **01 57 51.9 -1.6**
GNI Garni 51.13 74 *d i*P **P** **01 57 55.5 +2.0**
GNI pmax pmax
comp=Z,39nm,1.1s
GNI Garni 51.13 74 P **P** **01 57 55.7 +2.2**
KNK Knik Glacier 51.14 326 P **P** **01 57 55.2 +2.1**
baz=39
GLI Glacier Island 51.14 325 P **P** **01 57 55.6 +2.5**
baz=39
MARD Mardin 51.15 80 P **P** **01 57 55.0 +1.4**
K20K Telida 51.19 330 IAmb IAmb 01 58 03.8
comp=Z,12nm,1.1s
K20K Telida 51.19 330 P **P** **01 57 55.0 +1.5**
baz=36
PV23 Carpenter Ridg 51.32 283 IAmb IAmb 01 58 01.4
comp=Z,7.8nm,0.9s
MMAI Mount Meron Ar 51.51 88 LR LR 02 21 12.1
comp=Z,298nm,20.9s,baz=100,slow=38
TOA0 Torodi Ar. Sit 51.58 135 P **P** **01 57 55.5 -1.4**
TOA0 IAmb IAmb 01 58 00.8
comp=Z,9.1nm,1.1s
TORD Torodi Ar. Bea 51.58 135 P **P** **01 57 55.5 -1.3**

comp=Z,3.7nm,0.7s,baz=342,slow=7.3,SNR=27
TORD LR LR 02 17 33.1
comp=Z,304nm,19.3s,baz=12,slow=34
comp=Z,3.7nm,0.7s
TORD Torodi Ar. Bea 51.58 135 P **P** **01 57 55.6 -1.3**
GANJ Ganja 51.58 73 P **P** **01 57 53.4 -3.3**
SKT Skwentna 51.59 328 IAmb IAmb 01 58 05.9
comp=Z,18nm,1.1s
SKT Skwentna 51.59 328 P **P** **01 57 57.5 +1.0**
baz=37
SEKA Sheki 51.62 72 P **P** **01 57 53.9 -3.1**
RC01 Rabbit Creek A 51.78 326 IAmb IAmb 01 58 06.6
comp=Z,17nm,1.0s
RC01 Rabbit Creek A 51.78 326 P **P** **01 57 59.5 +1.6**
baz=38
SUA Susitna One 51.78 327 P **P** **01 57 58.3 +0.3**
baz=37,SNR=16
NLU North Lily Min 51.81 286 IAmb IAmb 01 58 05.7
comp=Z,15nm,1.0s
TMUT Trail Mountain 51.85 285 IAmb IAmb 01 58 05.7
comp=Z,8.4nm,0.7s
L20K Farewell, AK 51.85 329 P **P** **01 57 58.8 +0.4**
baz=36
MNGR Mingechevir, A 51.88 72 P **P** **01 57 57.2 -1.7**
MVCO Mesa Verde 51.98 281 P **P** **01 58 00.5 +0.6**
baz=41
DUG Dugway, Tooele 52.01 287 P **P** **01 58 00.6 +0.5**
baz=42
TTA Tatalina 52.05 331 P **P** **01 57 59.4 -0.6**
TTA Tatalina 52.05 331 P **P** **01 57 59.4 -0.6**
TTA pmax pmax
comp=Z,8.0nm,1.1s
TTA Tatalina 52.05 331 P **P** **01 58 01.3 +1.3**
baz=35
Q16A Castle Valley 52.11 285 IAmb IAmb 01 58 23.0
comp=Z,9.0nm,1.1s
M20K Styx River 52.12 329 P **P** **01 58 02.1 +1.5**
baz=36
NAX Nakhchivan 52.24 75 P **P** **01 58 00.4 -1.3**
L19K White Mountain 52.36 330 P **P** **01 58 02.6 +0.4**
baz=35
JCT Junction City 52.45 269 IAmb IAmb 01 58 17.9
comp=Z,13nm,0.9s
JCT Junction City 52.45 269 P **P** **01 58 04.1 +0.8**
baz=38
M19K Big River Lodg 52.46 329 P **P** **01 58 04.1 +1.1**
baz=36
SEW Seward 52.47 326 P **P** **01 58 04.0 +1.0**
baz=38
J08A Circle Bar Ran 52.54 294 IAmb IAmb 01 58 10.2
comp=Z,12nm,0.9s
ANMO Albuquerque 52.59 278 LR LR 02 19 34.9
comp=Z,939nm,18.6s,baz=48,slow=35
ANMO Albuquerque 52.59 278 P **P** **01 58 03.5 -1.0**
ANMO Albuquerque 52.59 278 P **P** **01 58 03.5 -1.0**
ANMO pmax pmax
comp=Z,5.0nm,1.3s
ANMO Albuquerque 52.59 278 P **P** **01 58 05.5 +1.0**
baz=40
ELK Elko 52.85 289 LR LR 02 19 50.9
comp=Z,798nm,18.3s,baz=50,slow=35
BRSE Bradley Lake S 53.15 326 P **P** **01 58 09.2 +1.0**
baz=37
WVOR Wild Horse Val 53.31 293 IAmb IAmb 01 58 17.8
comp=Z,9.4nm,1.0s
N19K Bonanza Creek 53.38 329 IAmb IAmb 01 58 19.5
comp=Z,11nm,1.1s
N19K Bonanza Creek 53.38 329 P **P** **01 58 10.7 +0.9**
baz=35
BRVK Borovoye 53.43 47 P **P** **01 58 09.8 -0.4**
BRVK IAmb IAmb 01 58 12.7
comp=Z,13nm,1.1s
BRVK Borovoye 53.43 47*d i*P **P** **01 58 11.3 +1.1**
BRVK pmax pmax
comp=Z,15nm,1.3s
PINE Pine Mountain 53.43 296 IAmb IAmb 01 58 17.4
comp=Z,12nm,0.9s
BVAR Borovoye Array 53.50 47 LR LR 02 20 52.5
comp=Z,76nm,18.8s,baz=190,slow=36
EIL Elat 53.86 91 LR LR 02 24 01.2
comp=Z,70nm,18.9s,baz=333,slow=39
N18K Kilae Creek 53.88 329 P **P** **01 58 15.3 +1.9**
baz=34
833A Chaparral WMA, 53.91 267 P **P** **01 58 15.7 +1.6**
baz=38
BILL Bilibino 53.91 351⇓*eP* **P** **01 58 15.3 +1.8**
BILL *e* 01 58 20.0
BILL *eS* **S** **02 05 55.2 +7.4**
BILL SS **SS** **02 09 27.0 -1.0**
BILL SSS SSS 02 11 16.0
BILL pmax pmax
comp=Z,6.0nm,1.2s
BILL MLR MLR
comp=Z,155nm,16.0s
J05D Fort Rock, OR 53.95 295 P **P** **01 58 15.3 +1.0**
baz=42
SZCU Shurtz Canyon 54.09 285 IAmb IAmb 01 58 24.0
comp=Z,6.4nm,0.9s
I04A Tendick Farm, 54.14 297 P **P** **01 58 16.8 +1.2**
baz=42
W18A Petrified Fore 54.21 281 P **P** **01 58 17.4 +1.0**
baz=40
LKRN Lenkeran, Azer 54.29 73 P **P** **01 58 14.1 -2.5**
O18K Koktuh Hills 54.37 328 P **P** **01 58 18.0 +1.0**
baz=34
MNTX Cornudas Mount 54.51 274 P **P** **01 58 19.5 +1.1**
baz=39
MOD Modoc Plateau 54.53 294 IAmb IAmb 01 58 24.9
comp=Z,11nm,0.9s
U15A North Rim 54.56 284 IAmb IAmb 01 58 25.1
comp=Z,8.5nm,0.9s
LCMT Little Creek M 54.62 285 IAmb IAmb 01 58 27.4
comp=Z,7.6nm,0.9s
I03D Drain, OR 54.66 297 P **P** **01 58 20.2 +0.9**
baz=41
Q19K Cape Douglas, 54.69 327 P **P** **01 58 21.0 +1.6**
baz=35
WUAZ Wupatki 54.77 282 IAmb IAmb 01 58 28.1
comp=Z,9.5nm,1.0s
WUAZ Wupatki 54.77 282 P **P** **01 58 21.7 +1.3**
baz=40
R11A Troy Canyon, C 54.82 288 P **P** **01 58 21.1 +0.3**
baz=41
N16K Nishlik Lake 54.83 330 P **P** **01 58 21.1 +0.7**
baz=32
O17K Koliganek Bris 54.97 329 P **P** **01 58 22.8 +1.6**
baz=33
121A Cookes Peak, D 55.15 277 P **P** **01 58 24.4 +1.1**
baz=39
PRN Pahroc Range 55.26 286 IAmb IAmb 01 58 30.8
comp=Z,8.1nm,1.0s
L04D Klamath Falls 55.27 295 P **P** **01 58 25.0 +1.0**
baz=41
KDAK Kodiak Island 55.31 325 LR LR 02 22 05.7
comp=Z,291nm,20.7s,baz=74,slow=36
DBIC Dimbokro 55.33 145 P **P** **01 58 22.5 -1.9**
comp=Z,6.1nm,0.8s,baz=354,slow=8.1,SNR=5.0
DBIC LR LR 02 18 57.9
comp=Z,558nm,21.1s,baz=352,slow=33
comp=Z,6.1nm,0.8s
O16K Kokwok River B 55.39 330 P **P** **01 58 26.4 +2.0**
baz=32
TX31 Lajitas Ar. Si 55.42 271 IAmb IAmb 01 58 39.3
comp=Z,19nm,1.4s
TXAR Lajitas Array 55.42 271 P **P** **01 58 25.2 0.0**
comp=Z,1.3nm,0.8s,baz=63,slow=5.1,SNR=16
TXAR LR LR 02 21 10.8
comp=Z,166nm,19.8s,baz=30,slow=35
comp=Z,1.3nm,0.8s
BAUV El Baul 55.45 223 P **P** **01 58 23.4 -1.9**
K02D Willamette Mer 55.57 297 P **P** **01 58 27.1 +1.1**
baz=41
KVN Kaiserville 55.57 290 IAmb IAmb 01 58 32.7
comp=Z,11nm,0.9s
X16A Lo Mia Camp, P 55.65 281 IAmb IAmb 01 58 34.5
comp=Z,6.4nm,0.9s
PAHR Pah Rah Range 55.72 291 IAmb IAmb 01 58 36.7
comp=Z,14nm,1.1s
YBH Yreka Blue Hor 55.84 295 LR LR 02 21 20.5
comp=Z,475nm,21.0s,baz=30,slow=35
L02F Cave Junction 55.96 296 P **P** **01 58 29.2 +0.5**
baz=40
NVAR Mina Array Bea 56.15 290 P **P** **01 58 30.1 -0.2**
comp=Z,1.8nm,0.8s,baz=52,slow=6.1,SNR=10
NVAR LR LR 02 22 04.3
comp=Z,707nm,18.1s,baz=76,slow=36
comp=Z,1.8nm,0.8s
TPNV Topopah Spring 56.23 287 IAmb IAmb 01 58 40.1
comp=Z,6.3nm,0.8s
TPNV Topopah Spring 56.23 287 P **P** **01 58 31.8 +1.0**
baz=40
SDV Santo Domingo 56.49 226 LR LR 02 20 59.1
comp=Z,32nm,21.0s,baz=82,slow=34
SDV Santo Domingo 56.49 226 *eP* **P** **01 58 36.5 +3.5**
FURC Furnace Creek, 56.91 287 P **P** **01 58 37.0 +1.5**
baz=40
TUC Tucson 56.92 279 P **P** **01 58 35.1 -0.7**
TUC Tucson 56.92 279 P **P** **01 58 35.1 -0.7**
TUC pmax pmax
comp=Z,5.0nm,1.1s
TUC Tucson 56.92 279 P **P** **01 58 37.0 +1.2**
baz=39
GWY Greenwater Val 57.03 287 IAmb IAmb 01 58 43.7
comp=Z,10nm,0.9s
QSM Queen of Sheba 57.30 287 IAmb IAmb 01 58 46.6
comp=Z,9.0nm,1.0s
MPMC Manual Prospec 57.55 287 P **P** **01 58 41.3 +0.9**
baz=39
CWC Cottonwood Cre 57.56 288 P **P** **01 58 41.6 +1.3**
baz=39
GMRC Granite Mounta 57.58 285 P **P** **01 58 40.7 +0.2**
baz=39
GSC Goldstone, Bar 57.78 286 IAmb IAmb 01 58 51.0
comp=Z,9.4nm,1.1s
GSC Goldstone, Bar 57.78 286 P **P** **01 58 42.4 +0.6**
baz=39
BLYC Blythe 57.79 283 IAmb IAmb 01 58 45.8
comp=Z,12nm,1.2s
ZALV Zalesovo Beam 58.01 38 P **P** **01 58 43.4 +0.3**
comp=Z,1.0nm,0.5s,baz=318,slow=7.0,SNR=5.1
ZALV PcP **PcP** **01 59 35.2 +0.3**
comp=Z,2.2nm,0.7s,baz=343,slow=5.6,SNR=7.2
ZALV LR LR 02 23 38.7
comp=Z,42nm,20.6s,baz=316,slow=36
comp=Z,1.0nm,0.5s
ZALV Zalesovo Beam 58.01 38 P **P** **01 58 42.7 -0.3**
ZALV Zalesovo Beam 58.01 38 *i* P **P** **01 58 44.0 +1.0**
ZALV pmax pmax
comp=Z,1.0nm,0.5s
113A Mohawk Valley, 58.15 282 IAmb IAmb 01 58 51.5
comp=Z,7.1nm,0.9s
214A Organ Pipe Nat 58.28 281 IAmb IAmb 01 58 49.1
comp=Z,13nm,1.4s
214A Organ Pipe Nat 58.28 281 P **P** **01 58 46.0 +0.7**
baz=38
BC3 Big Chuckawall 58.35 284 P **P** **01 58 47.5 +1.7**
baz=39
ISA Isabella, Lake 58.36 288 P **P** **01 58 47.0 +1.1**
baz=39
BELC Belle Mtn. Jos 58.36 284 P **P** **01 58 47.2 +1.2**
baz=39
KURK Kurchatov 58.47 44 P **P** **01 58 46.0 -0.3**
KURK IAmb IAmb 01 58 47.6
comp=Z,9.2nm,0.8s
KURK Kurchatov 58.47 44*d i*P **P** **01 58 46.7 +0.4**
KURK pmax pmax
comp=Z,13nm,1.0s
GLA Glamis 58.49 283 P **P** **01 58 48.0 +1.2**
baz=39
VES Vestal, Richgr 58.53 288 P **P** **01 58 46.7 -0.2**
baz=39
EDW2 Edwards Air Fo 58.72 287 P **P** **01 58 48.9 +0.5**
baz=39
PFO Pinyon Flats O 58.91 285 LR LR 02 23 20.2
comp=Z,405nm,20.9s,baz=42,slow=35
PFO Pinyon Flats O 58.91 285 P **P** **01 58 49.2 -0.5**
PFO IAmb IAmb 01 58 57.1
comp=Z,8.8nm,0.9s
PFO Pinyon Flats O 58.91 285 P **P** **01 58 49.2 -0.5**
PFO pmax pmax
comp=Z,9.0nm,0.9s
PFO Pinyon Flats O 58.91 285 P **P** **01 58 49.7 0.0**
baz=39
TPFO Pinon Flats 58.91 285 P **P** **01 58 50.0 +0.2**
baz=38
BFSC Mount Baldy Ra 59.04 286 P **P** **01 58 50.9 +0.2**
baz=39
SWSC Sam W. Stewart 59.08 284 P **P** **01 58 51.3 +0.5**
baz=38
MONP2 Monument Peak 59.45 284 P **P** **01 58 54.3 +0.7**
baz=38
ZARC Zaragoza, Cauc 59.45 230 P **P** **01 58 52.4 -1.1**
ZARC IAmb IAmb 01 59 01.7
comp=Z,6.4nm,0.9s
GEYT Alibeck 59.60 66 P **P** **01 58 54.8 +0.4**
comp=Z,8.5nm,1.0s,baz=354,slow=7.2,SNR=12
GEYT LR LR 02 26 22.6
comp=Z,99nm,18.4s,baz=337,slow=38
comp=Z,8.5nm,1.0s
GEYT Alibeck 59.60 66 IAmb IAmb 01 58 57.1
comp=Z,11nm,1.1s
BAR Barrett 59.74 284 IAmb IAmb 01 59 02.4
comp=Z,9.1nm,1.1s
SEY Seymchan 59.78 357 LR LR 02 26 43.8
comp=Z,123nm,18.6s,baz=0.5,slow=38
SEY Seymchan 59.78 357⇑*eP* **P** **01 58 57.0 +1.8**
SEY pmax pmax
comp=Z,11nm,1.7s
YAK Yakutsk 60.02 9 LR LR 02 22 37.6
comp=Z,56nm,21.6s,baz=90,slow=34
ZAIG Zacatecas 60.06 266 P **P** **01 58 57.0 -1.0**
ZAIG IAmb IAmb 01 59 09.4
comp=Z,8.8nm,1.1s
MTO3 Montecristo 60.09 248 P **P** **01 58 57.2 -0.9**
MTO3 IAmb IAmb 01 59 02.2
comp=Z,7.0nm,0.9s
PTBC PUERTO BERRIO, 60.15 229 *eP* **P** **01 58 58.6 +0.2**
RUSC La Rusia 60.18 227 *eP* **P** **01 58 58.9 -0.2**
DBBC Dabeiba 60.44 231 *eP* **P** **01 59 01.8 +1.4**
CMIG Matias Romero 60.65 255 LR LR 02 24 55.9
comp=Z,145nm,18.7s,baz=20,slow=36
SPBC San Pablo de B 60.80 228 *eP* **P** **01 59 03.4 +0.5**
HELC Santa Helena 60.90 230 *eP* **P** **01 59 04.4 +0.5**
NORC Norcasia 61.20 229 *eP* **P** **01 59 05.9 +0.3**
KKAR Karakorum Array 61.31 54 IAmb IAmb 01 59 08.0
comp=Z,6.1nm,1.0s
PTGC Puerto Gaitan, 61.36 226 *eP* **P** **01 59 07.3 +0.7**
CBOC Ciudad Bolivar 61.40 230 *eP* **P** **01 59 07.8 +0.8**
JTS Las Juntas de 61.47 242 LR LR 02 24 15.3
comp=Z,125nm,19.4s,baz=62,slow=35
CHIC Chingaza 61.59 227 *eP* **P** **01 59 08.3 -0.3**
MALB Monte Alegre 61.59 204 *eP* **P** **01 59 09.5 +1.5**
ROSC El Rosal 61.63 228 P **P** **01 59 10.0 +1.1**
comp=Z,18nm,0.5s,baz=27,slow=4.5,SNR=14
ROSC LR LR 02 26 54.5
comp=Z,52nm,18.1s,baz=333,slow=37
comp=Z,18nm,0.5s
GUY2C Guyana, Caldas 61.71 229 *eP* **P** **01 59 10.5 +1.0**
PLMC San Jos del P 62.38 230 *eP* **P** **01 59 15.1 +1.6**
PRAC Prado 62.89 228 *eP* **P** **01 59 17.6 +0.8**
MAKZ Makanchi 62.95 44 P **P** **01 59 16.3 -0.6**
MAKZ Makanchi 62.95 44 P **P** **01 59 16.3 -0.6**
MAKZ pmax pmax
comp=Z,17nm,1.5s
MK31 Makanchi Array 63.08 44 IAmb IAmb 01 59 19.1
comp=Z,4.7nm,0.8s
MKAR Makanchi Array 63.08 44 P **P** **01 59 18.6 +0.8**
comp=Z,4.5nm,0.7s,baz=335,slow=5.9,SNR=30
MKAR LR LR 02 26 57.1
comp=Z,51nm,18.1s,baz=314,slow=36
comp=Z,4.5nm,0.7s
LPIG La Paz 63.16 273 LR LR 02 26 11.3
comp=Z,115nm,18.1s,baz=28,slow=36
MA2 Magadan 63.19 358 LR LR 02 25 55.9
comp=Z,114nm,20.8s,baz=355,slow=35
RCBR Riachuelo 63.19 183 LR LR 02 19 56.5
comp=Z,76nm,19.2s,baz=137,slow=30
YOTC Yotoco, Valle 63.24 230 *eP* **P** **01 59 17.4 -1.8**
AAK Ala-Archa 63.40 52 P **P** **01 59 21.9 +1.8**
comp=Z,4.8nm,0.7s,baz=343,slow=7.6,SNR=7.7
comp=Z,4.8nm,0.7s
AAK Ala-Archa 63.40 52 P **P** **01 59 19.5 -0.7**
AAK Ala-Archa 63.40 52 P **P** **01 59 19.5 -0.7**
AAK pmax pmax
comp=Z,10.0nm,1.0s
RAYN Ar Rayn 64.43 86 P **P** **01 59 26.2 -0.8**
RAYN IAmb IAmb 01 59 28.5
comp=Z,6.7nm,0.9s
RAYN Ar Rayn 64.43 86 P **P** **01 59 26.2 -0.8**
RAYN pmax pmax
comp=Z,7.0nm,1.0s
KNGR Kungurtug, Tuv 64.84 32⇑*i*P **P** **01 59 31.3 +1.9**
NBMA Muriti-CE 64.84 186 *eP* **P** **01 59 30.4 +0.7**
MOY Mondy 64.85 30 *eP* **P** **01 59 31.3 +1.8**
MOY pmax pmax
comp=Z,19nm,1.1s
BBAC Balboa, Cauca 65.38 230 *eP* **P** **01 59 32.5 -0.9**
KSH Kashi 66.61 53 P **P** **01 59 44.0 +3.0**
KSH pP pwP 01 59 49.3 +1.6
KSH sP sP 01 59 51.6 +4.7
KSH pmax pmax
comp=Z,17nm,1.1s
ZAK Zakamensk 66.62 29 *eP* **P** **01 59 41.5 +0.6**
ZAK pmax pmax
comp=Z,7.0nm,1.3s
H10N2 ASCENSION HYDR 66.90 160 T T 03 11 47.9
baz=350,slow=75
H10N3 ASCENSION HYDR 66.91 160 T T 03 11 48.7
baz=350,slow=75
H10N1 ASCENSION HYDR 66.92 160 T T 03 11 49.3
baz=350,slow=75
OTAV Otavalo 67.49 230 P **P** **01 59 45.8 -1.5**
OTAV IAmb IAmb 01 59 50.4
comp=Z,12nm,1.2s
OTAV Otavalo 67.49 230 P **P** **01 59 45.8 -1.5**
OTAV pmax pmax
comp=Z,12nm,1.2s
OTAV Otavalo 67.49 230 *eP* **P** **01 59 46.4 -0.8**
OTAV Otavalo 67.49 230 *eP* **P** **01 59 49.3 +2.1**
WMQ Urumqi 67.61 42 *eP* P 01 59 51.0 +3.8
SHEM Shemya Is, Ala 67.86 343 LR LR 02 29 32.3
comp=Z,104nm,21.6s,baz=282,slow=36
ZEA Zeya 67.94 12 *eP* **P** **01 59 50.9 +1.9**
ZEA pmax pmax
comp=Z,10.0nm,1.4s
SHME Shamm 68.05 76 P **P** **01 59 50.1 0.0**
BANOM Banah 68.23 76 P **P** **01 59 51.6 +0.2**
MSFE Esma-Masafi 68.62 76 P **P** **01 59 54.4 +0.6**
UOSS Minazif 68.98 77 P **P** **01 59 55.0 -1.0**
UOSS Minazif 68.98 77 P **P** **01 59 55.8 -0.1**
HATD Hatta, Dubai 69.04 77 P **P** **01 59 56.3 0.0**
ASHO Ashiyiah 69.11 77 P **P** **01 59 56.9 0.0**
PETK Petropavlovsk- 69.36 353 LR LR 02 32 16.2
comp=Z,81nm,18.3s,baz=19,slow=38
SONM Songino Array 69.77 28 P **P** **02 00 01.6 +0.9**
comp=Z,7.9nm,0.9s,baz=329,slow=6.4,SNR=38
comp=Z,7.9nm,0.9s
SONM Songino Array 69.77 28 P **P** **02 00 00.5 -0.2**
SONM IAmb IAmb 02 00 02.9
comp=Z,11nm,1.0s
SONM Songino Array 69.77 28 P **P** **02 00 00.5 -0.2**
SONM pmax pmax
comp=Z,11nm,1.0s
ULN Ulaanbaatar 69.90 27 P **P** **02 00 00.9 -0.7**
ULN Ulaanbaatar 69.90 27*d i*P **P** **02 00 02.9 +1.4**
ULN pmax pmax
comp=Z,21nm,1.1s
SAML Samuel 70.66 212 P **P** **02 00 04.8 -1.5**
SAML Samuel 70.66 212 P **P** **02 00 04.8 -1.5**
SAML pmax pmax
comp=Z,4.0nm,1.1s
CLDB Colider 70.67 204 *eP* **P** **02 00 07.6 +1.3**
GDU01 Guandu, BA 71.20 187 *eP* **P** **02 00 09.0 -0.5**
PDRB Porto dos Gac 71.59 204 *eP* **P** **02 00 12.3 +0.4**
WSAR Wadi Sarin 71.64 76 LR LR 02 34 38.5
comp=Z,94nm,21.2s,baz=340,slow=38
ATD Arta Tunnel 72.83 96 LR LR 02 35 17.9
comp=Z,48nm,18.0s,baz=288,slow=38
KLR Kul'dur 72.86 10 LR LR 02 30 20.7
comp=Z,49nm,21.9s,baz=18,slow=34
KLR Kul'dur 72.86 10*de*P **P** **02 00 20.3 +1.1**
KLR pmax pmax
comp=Z,5.0nm,0.9s
BDFB Brasilia 73.95 195 P **P** **02 00 25.2 -0.8**
comp=Z,5.4nm,0.8s,baz=33,slow=7.8,SNR=6.4
comp=Z,5.4nm,0.8s
ATAH Atahualpa 74.17 227 LR LR 02 35 41.8
comp=Z,44nm,18.3s,baz=328,slow=38
GTA Gaotai 75.65 36 *eP* **P** **02 00 36.5 +0.7**
GTA pP pwP 02 00 44.4 +1.8
GTA sP PcP 02 00 47.3 -1.3
GTA pmax pmax
comp=Z,11nm,1.2s
GTA pmax pmax
comp=Z,94nm,5.3s
GTA LR LR
comp=N,140nm,20.0s
GTA LR LR
comp=E,230nm,23.3s
GTA LR LR
comp=Z,120nm,20.7s
LODK Lodwar 75.69 107 P **P** **02 00 35.4 -0.9**
BNX BinXian 75.82 14⇓P **P** **02 00 36.9 +0.5**
BNX pmax pmax
comp=Z,13nm,0.8s
BNX pmax pmax
comp=Z,89nm,5.4s
POCN Pocone 76.44 203 *eP* **P** **02 00 41.2 +1.0**
MBAR Mbarara 76.79 113 LR LR 02 35 49.3
comp=Z,312nm,18.1s,baz=312,slow=37
MBAR Mbarara 76.79 113*ceP* **P** **02 00 44.5 +2.0**
MBAR pmax pmax
comp=Z,4.0nm,1.3s
SIV San Ignacio 76.84 208 LR LR 02 29 27.0
comp=Z,100nm,20.6s,baz=299,slow=32
GOMU GeErMu 76.89 41 P **P** **02 00 44.5 +1.3**
GOMU pP sP 02 00 48.1 -1.0
GOMU sP PcP 02 00 51.8 -2.5
GOMU pmax pmax
comp=Z,5.0nm,0.8s
GOMU pmax pmax
comp=Z,28nm,3.8s
CN2 Changchun 77.45 16 *eP* **P** **02 00 46.4 +0.7**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
HHC Hu-ho-hao-te 77.60 27 *eP* **P** **02 00 46.3 -0.4**
HHC pmax pmax
comp=Z,16nm,0.9s
HHC pmax pmax
comp=Z,280nm,6.1s
USRK Ussuriysk Ar. 77.87 11 P **P** **02 00 48.8 +0.8**
comp=Z,2.3nm,0.8s,baz=31,slow=12,SNR=5.2
USRK LR LR 02 36 41.3
comp=Z,54nm,18.8s,baz=288,slow=37
comp=Z,2.3nm,0.8s
NNA Nana 78.01 224 LR LR 02 34 40.3
comp=Z,64nm,20.0s,baz=353,slow=35
LPAZ La Paz 79.07 214 P **P** **02 00 56.0 +0.4**
comp=Z,2.7nm,0.9s,baz=19,slow=12,SNR=5.8
comp=Z,2.7nm,0.9s
LPAZ La Paz 79.07 214 P **P** **02 00 56.0 +0.4**
LZH Lanzhou 79.95 34 *eP* **P** **02 01 00.3 +0.5**
LZH sP PcP 02 01 09.4 +2.1
LZH pmax pmax
comp=Z,22nm,1.0s
LZH LR LR
comp=N,110nm,17.3s
LZH LR LR
comp=E,110nm,18.2s
LZH LR LR
comp=Z,170nm,17.7s
PB16 IPOC Station P 81.42 215 IAmb IAmb 02 01 10.7
comp=Z,13nm,1.1s
HNS HongShan 81.62 25⇓P **P** **02 01 10.1 +1.6**
HNS pmax pmax
comp=Z,14nm,1.2s
PB08 IPOC Station P 83.01 214 IAmb IAmb 02 01 18.8
comp=Z,9.5nm,1.1s
KSRS Korea Array 84.03 15 P **P** **02 01 21.6 +0.6**
comp=Z,7.4nm,0.8s,baz=348,slow=5.1,SNR=29
comp=Z,7.4nm,0.8s
KSAR Wonju Array Be 84.04 15 P **P** **02 01 20.5 -0.5**
KSAR Wonju Array Be 84.04 15 P **P** **02 01 20.5 -0.5**
TJN Taejon 85.01 16⇓*eP* **P** **02 01 27.5 +1.6**
LVC Limon Verde 85.27 213 P **P** **02 01 26.9 -0.7**
LVC Limon Verde 85.27 213 P **P** **02 01 26.9 -0.7**
LVC pmax pmax
comp=Z,16nm,1.1s
LVC Limon Verde 85.27 213 *eP* **P** **02 01 28.5 +0.9**
CPUP Villa Florida 85.99 202 P **P** **02 01 29.2 -1.4**
comp=Z,3.7nm,0.8s,baz=44,slow=3.7,SNR=6.9
CPUP LR LR 02 39 34.3
comp=Z,15nm,18.0s,baz=339,slow=36
comp=Z,3.7nm,0.8s
CPUP Villa Florida 85.99 202 IAmb IAmb 02 01 34.6
comp=Z,6.4nm,1.1s
TSUM Tsumeb 87.29 133 LR LR 02 40 12.2
comp=Z,158nm,18.9s,baz=332,slow=35
NJ2 Nanjing 87.68 24 *eP* **P** **02 01 37.1 -2.1**
NJ2 pmax pmax
comp=Z,11nm,0.5s

PZH	**PanZhiHua**	**88.12**	**39**	P	**P**	**02 01 41.9**	**+0.4**		
PZH				pmax	pmax				
	comp=Z,10.0nm,0.7s								
PZH				pmax	pmax				
	comp=Z,100nm,5.3s								
GYA	**Guiyang**	**89.78**	**35**	⇑P	**P**	**02 01 50.3**	**+1.0**		
GYA				pmax	pmax				
	comp=Z,18nm,1.3s								
CMAR	**Chiang Mai Arr**	**94.48**	**45**	*i* P	**P**	**02 02 12.8**	**+1.8**		
CMAR				pmax	pmax				
	comp=Z,2.0nm,0.3s								
BOSA	**Boshof**	**98.79**	**131**	LR	LR	02 45 57.5			
	comp=Z,127nm,20.0s,baz=352,slow=35								
VNA1	**Neumayer--Stat**	**129.12**	**170**	PKPdf	**PKiKP**	**02 07 57.3**	**-0.3**		
VNA3	**Neumayer Olymp**	**129.56**	**170**	PKPdf	**PKPdf**	**02 07 57.1**	**-0.8**		
SNAA	**Sanae**	**130.66**	**168**	PKPdf	**PKiKP**	**02 08 00.3**	**-0.6**		
TROLL	**Troll, Antarti**	**131.63**	**166**	PKPdf	**PKiKP**	**02 08 02.5**	**-0.5**		
WRA	**Warramunga Arr**	**141.34**	**19**	PKhKP	PKPpre	02 08 11.7			
	comp=Z,0.3nm,0.9s,baz=33,slow=30,SNR=1.3								
WRA				PKP	**PKPdf**	**02 08 20.1**	**-1.2**		
	comp=Z,1.3nm,0.9s,baz=342,slow=2.5,SNR=7.8								
WRA	**Warramunga Arr**	**141.34**	**19**		**PKPdf**	**02 08 20.5**	**-0.9**		
WRA	**Warramunga Arr**	**141.34**	**19**	PKIKP	**PKPdf**	**02 08 20.5**	**-0.9**		
MAW	**Mawson**	**143.08**	**141**	PKhKP	PKPpre	02 08 17.7			
	comp=Z,5.1nm,0.8s,baz=72,slow=3.7,SNR=7.2								
MAW	**Mawson**	**143.08**	**141**	PKPdf	PKPab	02 08 17.5	-0.8		
MAW	**Mawson**	**143.08**	**141**	PKHKP	PKPpre	02 08 17.5			
VNDA	**Vanda**	**159.27**	**189**	PKP	**PKPdf**	**02 08 47.3**	**+0.2**		
	comp=Z,1.1nm,1.1s,baz=289,slow=3.4,SNR=3.8								
VNDA				PKPab	**PKPab**	**02 09 25.1**	**+0.4**		
	comp=Z,2.6nm,1.1s,baz=148,slow=4.8,SNR=5.2								

IDC ***23*** *01:52:19.3±0.8, 57°.27N×32°.97W, h0km, mb3.9/17, mbtmp3.9/19, ML3.0/2, Error ellipse: s-maj=25.9km s-min=13.7km az=9.0*
NEIC ***23*** *01:52:22.5±1.6, 57°.6N±0°.1×32°.83W±0°.09, h10km±1km, mb4.5/42, Error ellipse: s-maj=17.8km s-min=5.8km az=198.0*

ISC 23 01:52:22.2±0.6, 57°.4N±0°.1×32°.90W±0°.07, h15km, n78, σ1°07/75, mb4.4/40, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANGG	**Ammassalik, Gr**	**8.53**	**347**	Pn	**Pn**	**01 54 24.2**	**-0.8**
SUMG	**Summit**	**15.39**	**354**	Pn	**Pn**	**01 55 57.5**	**-1.3**
EKA	**Eskdalemuir Ar**	**16.54**	**85**	Pn	**Pn**	**01 56 14.3**	**+0.8**
	baz=294,slow=9.2 0.4nm,0.6s						
SCHQ	**Schefferville**	**18.97**	**277**	P	**P**	**01 56 40.9**	**-1.8**
	0.2nm,0.3s,baz=75,slow=9.8,SNR=5.8 9.0nm,0.9s						
SCHQ	**Schefferville**	**18.97**	**277**	P	**P**	**01 56 42.4**	**-0.4**
NC204	**NORSAR Array S**	**22.27**	**62**	P	**P**	**01 57 15.6**	**-2.9**
NC204				IAmb	IAmb	01 57 22.8	
	comp=Z,18nm,1.1s						
NBO00	**NORSAR Array S**	**22.32**	**62**	P	**P**	**01 57 18.5**	**-0.4**
NBO00				IAmb	IAmb	01 57 22.4	
	comp=Z,28nm,1.4s						
NB2	**NORSAR Subarra**	**22.53**	**62**	P	**P**	**01 57 21.7**	**+0.6**
	comp=Z,19nm,1.7s,baz=281,slow=11						
NOA	**NORSAR Array B**	**22.53**	**62**	P	**P**	**01 57 21.3**	**+0.2**
	comp=Z,2.1nm,1.1s,baz=281,slow=9.5,SNR=5.0 comp=Z,2.1nm,1.1s						
NB201	**NORSAR Array S**	**22.56**	**62**	P	**P**	**01 57 22.1**	**+0.6**
NC303	**NORSAR Array S**	**22.57**	**62**	P	**P**	**01 57 21.8**	**+0.2**
NC405	**NORSAR Array S**	**22.75**	**62**	P	**P**	**01 57 23.4**	**-0.1**
CLF	**Chambon-Foret**	**23.04**	**99**	P	**P**	**01 57 26.7**	**+0.2**
HFS	**Hagfors**	**23.92**	**64**	P	**P**	**01 57 34.4**	**-0.7**
	comp=Z,7.6nm,0.9s,baz=252,slow=7.6,SNR=8.2 comp=Z,7.6nm,0.9s						
ECH	**Echery**	**25.55**	**94**	P	**P**	**01 57 50.7**	**+0.5**
ESDC	**Sonseca Array**	**25.82**	**121**	P	**P**	**01 57 50.7**	**-1.9**
	comp=Z,1.4nm,1.0s,baz=320,slow=5.7,SNR=4.2 comp=Z,1.4nm,1.0s						
ESDC	**Sonseca Array**	**25.82**	**121**	P	**P**	**01 57 54.2**	**+1.5**
FINES	**FINESS Array B**	**29.36**	**57**	P	**P**	**01 58 24.5**	**+0.4**
	comp=Z,2.6nm,1.0s,baz=258,slow=7.0,SNR=4.0 comp=Z,2.6nm,1.0s						
FINES	**FINESS Array B**	**29.36**	**57**	P	**P**	**01 58 24.2**	**+0.1**
PSZ	**Piszkesteto**	**32.61**	**84**	P	**P**	**01 58 53.4**	**+0.4**
PSZ				IAmb	IAmb	01 59 00.9	
	comp=Z,4.3nm,1.0s						
KEST	**Kesra**	**35.43**	**109**	P	**P**	**01 59 16.5**	**-1.1**
	comp=Z,3.3nm,1.0s,baz=321,slow=13,SNR=3.1 comp=Z,3.3nm,1.0s						
KLMR	**Klimovskoe**	**35.58**	**53**	*e*	**P**	**01 59 18.9**	**+0.4**
KLMR				AMP		01 59 21.1	
	comp=Z,16nm,1.1s						
BURAR	**Bucovina Array**	**35.65**	**80**	P	**P**	**01 59 19.9**	**+0.5**
AKASG	**Malin Array Be**	**35.91**	**73**	P	**P**	**01 59 21.3**	**-0.2**
	comp=Z,1.6nm,0.7s,baz=307,slow=8.5,SNR=8.4 comp=Z,1.6nm,0.7s						
FNA	**Florina**	**38.09**	**92**	P	**P**	**01 59 41.3**	**+1.2**
FNA				IAmb	IAmb	01 59 43.5	
	comp=Z,10nm,0.9s						
YKA	**Yellowknife Ar**	**38.64**	**313**	P	**P**	**01 59 45.1**	**+0.7**
	comp=Z,1.3nm,0.7s,baz=58,slow=8.7,SNR=3.3 comp=Z,1.3nm,0.7s						
I29M	**Ogilvie Camp,**	**45.31**	**325**	P	**P**	**02 00 39.6**	**+0.7**
I29M				IAmb	IAmb	02 00 47.2	
	comp=Z,3.4nm,0.9s						
BRTR	**Keskin Array B**	**45.46**	**83**	P	**P**	**02 00 41.7**	**+1.2**
	comp=Z,2.1nm,0.8s,baz=301,slow=5.0,SNR=5.9 comp=Z,2.1nm,0.8s						
BRTR	**Keskin Array B**	**45.46**	**83**	P	**P**	**02 00 41.5**	**+1.0**
BMAR	**Burnt Mountain**	**45.68**	**330**	P	**P**	**02 00 41.9**	**+0.1**
ARU	**Arti**	**46.24**	**50**	P	**P**	**02 00 46.0**	**-0.3**
ARU				IAmb	IAmb	02 00 49.9	
	comp=Z,4.7nm,0.9s						
WALA	**Waterton Lakes**	**46.45**	**296**	P	**P**	**02 00 47.9**	**-0.3**
WALA				IAmb	IAmb	02 00 55.0	
	comp=Z,5.2nm,1.1s						
DAWY	**Dawson**	**46.54**	**324**	P	**P**	**02 00 49.0**	**+0.3**
DAWY				IAmb	IAmb	02 00 59.4	
	comp=Z,9.2nm,1.3s						
BNN	**Bunyan**	**47.27**	**82**	P	**P**	**02 00 54.8**	**0.0**
KBZ	**Khabaz**	**47.51**	**72**	P	**P**	**02 00 57.3**	**+0.9**
	comp=Z,3.5nm,0.9s,baz=270,slow=3.0,SNR=4.3 comp=Z,3.5nm,0.9s						
BCAR	**Beaver Creek A**	**48.01**	**325**	P	**P**	**02 01 01.2**	**+1.1**
SCRK	**Sand Creek**	**48.02**	**326**	P	**P**	**02 01 01.0**	**+0.7**
SCRK				IAmb	IAmb	02 01 08.3	
	comp=Z,7.0nm,1.2s						
IL31		**48.27**	**328**	P	**P**	**02 01 03.4**	**+1.4**
IL31				IAmb	IAmb	02 01 10.7	
	comp=Z,3.9nm,1.0s						
ILAR	**Eielson Array**	**48.27**	**328**	P	**P**	**02 01 02.3**	**+0.3**
	comp=Z,1.6nm,0.8s,baz=38,slow=6.3,SNR=4.5 comp=Z,1.6nm,0.8s						
ILAR	**Eielson Array**	**48.27**	**328**	P	**P**	**02 01 01.8**	**-0.2**
MDM	**Murphy Dome**	**48.51**	**329**	P	**P**	**02 01 04.4**	**+0.5**
MDM				IAmb	IAmb	02 01 12.7	
	comp=Z,4.0nm,1.0s						
PDAR	**Pinedale Array**	**48.63**	**287**	P	**P**	**02 01 03.9**	**-1.5**
	comp=Z,0.7nm,0.7s,baz=30,slow=7.5,SNR=2.8 comp=Z,0.7nm,0.7s						
PDAR	**Pinedale Array**	**48.63**	**287**	P	**P**	**02 01 07.0**	**+1.7**
M26K	**Nabesna, AK**	**48.88**	**325**	P	**P**	**02 01 06.3**	**-0.5**
M26K				IAmb	IAmb	02 01 18.4	
	comp=Z,7.1nm,1.3s						
IMAR	**Indian Mountai**	**49.17**	**332**	P	**P**	**02 01 09.4**	**+0.5**
N25K	**Chitina, Valde**	**49.98**	**325**	P	**P**	**02 01 15.9**	**+0.7**
N25K				IAmb	IAmb	02 01 24.6	
	comp=Z,8.0nm,1.1s						
ISLE	**Juniper Island**	**50.01**	**323**	P	**P**	**02 01 16.1**	**+0.5**
HWUT	**Hardware Ranch**	**50.50**	**288**	P	**P**	**02 01 18.9**	**-0.7**
HWUT				IAmb	IAmb	02 01 24.0	
	comp=Z,2.4nm,0.7s						
TIXI	**Tiksi**	**50.59**	**7**	P	**P**	**02 01 19.7**	**+0.1**
TIXI				IAmb	IAmb	02 01 21.0	
	comp=Z,3.5nm,0.8s						
LTY	**Liberty**	**50.94**	**299**	P	**P**	**02 01 21.8**	**-0.9**
BMO	**Blue Mountains**	**51.05**	**294**	P	**P**	**02 01 22.9**	**-0.6**
TORD	**Torodi Ar. Bea**	**51.40**	**135**	P	**P**	**02 01 25.1**	**-1.2**
	comp=Z,0.8nm,0.6s,baz=336,slow=6.2,SNR=7.3 comp=Z,0.8nm,0.6s						
TORD	**Torodi Ar. Bea**	**51.40**	**135**	P	**P**	**02 01 26.2**	**-0.1**
PV13	**Radium Mtn., P**	**51.59**	**283**	P	**P**	**02 01 28.9**	**+1.0**
PV13				IAmb	IAmb	02 01 34.1	
	comp=Z,5.0nm,1.0s						
ABKAR	**Akbulak array**	**51.85**	**56**	P	**P**	**02 01 27.8**	**-1.6**
ABKAR	**Akbulak array**	**51.85**	**56**	P	**P**	**02 01 27.7**	**-1.7**
ABKAR				IAmb	IAmb	02 01 31.6	
	comp=Z,4.2nm,0.9s						
SUA	**Susitna One**	**51.95**	**327**	P	**P**	**02 01 31.1**	**+1.0**
SUA				IAmb	IAmb	02 01 39.3	
	comp=Z,7.4nm,1.0s						
J08A	**Circle Bar Ran**	**52.71**	**294**	P	**P**	**02 01 36.5**	**+0.5**
PINE	**Pine Mountain**	**53.60**	**296**	P	**P**	**02 01 43.0**	**+0.4**
PINE				IAmb	IAmb	02 01 50.1	
	comp=Z,4.9nm,1.1s						
TXAR	**Lajitas Array**	**55.56**	**272**	P	**P**	**02 01 56.5**	**-0.5**
	comp=Z,0.2nm,0.8s,baz=16,slow=7.7,SNR=2.3 comp=Z,0.2nm,0.8s						
TXAR	**Lajitas Array**	**55.56**	**272**	P	**P**	**02 01 58.1**	**+1.2**
KVN	**Kaiserville**	**55.74**	**290**	P	**P**	**02 02 00.6**	**+2.4**
KVN				IAmb	IAmb	02 02 01.9	
	comp=Z,3.1nm,1.0s						
NVAR	**Mina Array Bea**	**56.31**	**290**	P	**P**	**02 02 02.4**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=42,slow=11,SNR=1.8 comp=Z,0.2nm,0.5s						
NVAR	**Mina Array Bea**	**56.31**	**290**	P	**P**	**02 02 03.6**	**+1.3**
MKAR	**Makanchi Array**	**63.08**	**44**	P	**P**	**02 02 48.5**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=320,slow=5.3,SNR=5.8 comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**63.08**	**44**	P	**P**	**02 02 47.6**	**-0.9**
BTK	**Batken**	**63.86**	**56**	P	**P**	**02 02 52.5**	**-1.4**
GAR	**Garm**	**64.49**	**57**	P	**P**	**02 02 56.9**	**-1.2**
H10N2	**ASCENSION HYDR**	**66.74**	**160**	T	T	03 15 29.8	
	baz=350,slow=75						
H10N3	**ASCENSION HYDR**	**66.75**	**160**	T	T	03 15 18.8	
	baz=350,slow=75						
H10N1	**ASCENSION HYDR**	**66.76**	**160**	T	T	03 15 31.2	
	baz=350,slow=75						
WMQ	**Urumqi**	**67.61**	**42**	*e*P	**P**	**02 03 21.1**	**+3.1**
WMQ				LR	LR		
	comp=N,190nm,14.9s						
WMQ				LR	LR		
	comp=Z,54nm,18.7s						
SONM	**Songino Array**	**69.81**	**28**	P	**P**	**02 03 32.1**	**+0.4**
	comp=Z,2.2nm,0.8s,baz=307,slow=5.6,SNR=8.9 comp=Z,2.2nm,0.8s						
SONM	**Songino Array**	**69.81**	**28**	P	**P**	**02 03 31.0**	**-0.8**
SONM				IAmb	IAmb	02 03 33.2	
	comp=Z,3.1nm,1.0s						
ULN	**Ulaanbaatar**	**69.95**	**27**	P	**P**	**02 03 32.3**	**-0.3**
ULN				IAmb	IAmb	02 03 36.2	
	comp=Z,6.6nm,1.2s						
HHC	**Hu-ho-hao-te**	**77.65**	**27**	*e*P	**P**	**02 04 16.3**	**-1.5**
HHC				pmax	pmax		
	comp=Z,33nm,0.9s						
HHC				pmax	pmax		
	comp=Z,120nm,5.9s						
KSRS	**Korea Array**	**84.11**	**15**	P	**P**	**02 04 52.1**	**-0.1**
	comp=Z,1.7nm,0.6s,baz=348,slow=4.6,SNR=8.1 comp=Z,1.7nm,0.6s						
PZH	**PanZhiHua**	**88.13**	**40**	P	**P**	**02 05 14.3**	**+1.9**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,100nm,5.8s						

MEX ***23*** *01:55:34.4±0.6, 14°.18N×92°.25W, h111km±59km, MD3.7*
GCG ***23*** *01:55:38.5±0.8, 14°.16N×91°.88W, h50km±15km, MD3.4*

ISC 23 01:55:34.0±4.2, 14°.0N±0°.1×92°.10W±0°.08, h25km±25km, n9, σ0°94/16, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG3	**Santiaguito 3,**	**0.90**	**35**	*e*P	**Pn**	**01 55 51.2**	**0.0**
STG3				*e*S	**Sb**	**01 56 02.5**	**-0.1**
CHUJ	**Union Juarez**	**1.11**	**360**	*i* P	**Pn**	**01 55 53.8**	**-0.5**
CHUJ				*e*S	**Sn**	**01 56 09.2**	**+0.2**
PATR	**El Naranjo**	**1.15**	**353**	*e*P	**Pn**	**01 55 53.8**	**-0.9**
PATR				*e*S	**Sn**	**01 56 09.4**	**-0.3**
PAVE	**Pavencul**	**1.22**	**356**	*e*P	**Pn**	**01 55 55.2**	**-0.5**
PAVE				*i* S	**Sn**	**01 56 10.5**	**-1.0**
FUG	**Fuego 3**	**1.31**	**69**	*e*P	**Pn**	**01 55 56.2**	**-0.7**
PCG	**Pacaya**	**1.51**	**74**	*e*S	**Sn**	**01 56 17.7**	**-1.0**
NBG	**Las Nubes**	**1.81**	**70**	*e*P	**Pn**	**01 56 04.8**	**+1.0**
NBG				*e*S	**Sn**	**01 56 26.6**	**+0.5**
PCIG		**2.03**	**328**	*e*P	**Pn**	**01 56 07.3**	**+0.6**
PCIG				*i* S	**Sn**	**01 56 30.5**	**-0.9**
CCIG	**Comitan**	**2.30**	**359**	*e*P	**Pn**	**01 56 11.8**	**+1.2**
CCIG				*i* S	**Sn**	**01 56 39.7**	**+1.6**

IDC 23 02:04:34.9±2.6, 19°.19S×177°.64W, h0km, mb4.0/3, mbtmp4.0/3, Error ellipse: s-maj=171.6km s-min=33.6km az=150.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.67**	**243**	P	P	02 12 00.1	-0.4
	2.4nm,0.5s,baz=99,slow=11,SNR=5.1 2.4nm,0.5s						
WRA	**Warramunga Arr**	**45.13**	**261**	P	P	02 12 53.6	+0.1
	2.2nm,0.7s,baz=96,slow=7.7,SNR=129 2.2nm,0.7s						
NVAR	**Mina Array Bea**	**79.85**	**43**	P	P	02 16 45.7	0.0
	0.3nm,0.5s,baz=207,slow=5.8,SNR=2.6 0.3nm,0.5s						

TUL ***23*** *02:08:58.3±0.4, 36°.22N±0°.01×97°.29W±0°.01, h7km±3km, ML2.4, mb_Lg2.2/22(NEIC), Error ellipse: s-maj=1.6km s-min=1.4km az=204.0*

NEIC 23 02:08:58.8±0.3, 36°.218N±0°.010×97°.29W±0°.01, h3km±6km, Error ellipse: s-maj=1.6km s-min=1.1km az=134.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKCFA	**Oklahoma City**	**0.81**	**189**	Pg	Pg	02 09 13.4	-0.9
OKCSW	**OKLAHOMA CITY**	**0.82**	**188**	Pg	Pg	02 09 13.9	-0.6
T35A	**Sooner Cattle**	**0.94**	**42**	Pg	Pg	02 09 15.9	-0.9
FNO	**Franklin**	**0.96**	**185**	Pg	Pg	02 09 16.4	-0.9
TUL1	**Leonard**	**1.25**	**104**	Pg	Pg	02 09 21.0	-1.9
X34A	**Smith Ranch, M**	**1.67**	**195**	Pn	Pn	02 09 28.9	-0.1
WMOK	**Wichita Mounta**	**1.91**	**220**	Pn	Pn	02 09 31.9	-0.4
X37A	**Clayton**	**2.26**	**135**	Pn	Pn	02 09 37.2	+0.2
R32A	**Long Quarter,**	**2.47**	**333**	lAmb_Lg		02 10 15.7	
	comp=Z,7.6nm,0.7s						
W39A	**Magazine**	**3.03**	**109**	lAmb_Lg		02 10 38.5	
	comp=Z,6.8nm,0.7s						
MIAR	**Mount Ida**	**3.47**	**118**	Pn	Pn	02 09 53.3	-0.2
MIAR				lAmb_Lg		02 10 54.3	
	comp=Z,7.5nm,0.8s						
S39A	**Bolivar**	**3.50**	**64**	Pn	Pn	02 09 55.6	+1.5
AMTX	**Amarillo**	**3.82**	**251**	lAmb_Lg		02 10 57.9	
	comp=Z,5.4nm,1.1s						
ABTX	**Abilene, Hawle**	**4.08**	**209**	lAmb_Lg		02 11 13.6	
	comp=Z,6.8nm,0.8s						
MGMO	**Mountain Grove**	**4.14**	**75**	lAmb_Lg		02 11 12.0	
	comp=Z,8.9nm,0.8s						
WHAR	**Wooly Hollow**	**4.17**	**101**	lAmb_Lg		02 11 15.9	
	comp=Z,9.7nm,1.1s						
FCAR	**Ozark Folk Cen**	**4.20**	**93**	lAmb_Lg		02 11 14.2	
	comp=Z,4.4nm,0.8s						
R40A	**Maddies Statio**	**4.51**	**61**	lAmb_Lg		02 11 26.4	
	comp=Z,4.5nm,0.8s						
P38A	**Dawn**	**4.52**	**40**	lAmb_Lg		02 11 34.0	
	comp=Z,3.9nm,0.7s						
Z41A	**Richland Creek**	**4.73**	**127**	lAmb_Lg		02 11 25.5	
	comp=Z,5.4nm,0.8s						

IDC ***23*** *02:17:40.4±1.1, 7°.75S×126°.12E, h0km, mb4.1/3, mbtmp4.2/4, ML4.6/1, Error ellipse: s-maj=84.4km s-min=24.8km az=70.0*
NEIC ***23*** *02:17:49.2±1.9, 7°.66S±0°.08×126°.87E±0°.10, h57km±9km, mb4.2/6, Error ellipse: s-maj=16.2km s-min=7.2km az=124.0*

ISC 23 02:17:47.3±0.7, 7°.61S±0°.08×126°.88E±0°.07, h50km, n26, σ1°62/26, mb4.1/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**3.35**	**230**	Pn	**Pn**	**02 18 39.0**	**+1.7**
SOEI				Sn	**Sn**	**02 19 17.2**	**+1.2**
SAUI	**Saumlaki**	**4.39**	**95**	Pn	**Pn**	**02 18 53.5**	**+1.9**
MTN	**Manton Dam**	**6.68**	**142**	Pn	**Pn**	**02 19 26.5**	**+3.7**
FAKI	**Fak Fak**	**7.09**	**49**	Pn	**Pn**	**02 19 29.7**	**+1.2**
KNRA	**Kununurra**	**8.23**	**167**	Pn	Pn	02 19 52.5	+8.4
WB0	**Warramunga Arr**	**14.11**	**150**	Pn	**Pn**	**02 21 04.2**	**-0.4**
WRAB	**Tennant Creek**	**14.23**	**150**		**Pn**	**02 21 05.1**	**-1.1**
WRA	**Warramunga Arr**	**14.23**	**150**	Pn	**Pn**	**02 21 05.8**	**-0.3**
	2.8nm,0.3s,baz=324,slow=14,SNR=116						
WRA				Sn	Sn	02 23 32.2	-11
	5.1nm,0.3s,baz=324,slow=24,SNR=11 17nm,0.6s						
WRA	**Warramunga Arr**	**14.23**	**150**		**Pn**	**02 21 03.8**	**-2.4**
WB2	**Warramunga Arr**	**14.24**	**150**		**Pn**	**02 21 05.3**	**-0.9**
WR0	**Warramunga Arr**	**14.35**	**150**	Pn	**Pn**	**02 21 06.4**	**-1.3**
PSA00	**Pilbara Seismi**	**15.46**	**205**		**P**	**02 21 24.8**	**-1.0**
PSA00				lAmb	IAmb	02 21 40.5	
	comp=Z,28nm,1.3s						
COEN	**Coen**	**17.20**	**113**	Pn	**Pn**	**02 21 40.6**	**-3.6**
AS31	**Alice Springs**	**17.33**	**158**		**P**	**02 21 47.1**	**+0.5**
AS31				lAmb	IAmb	02 21 51.1	
	comp=Z,9.8nm,0.6s						
ASAR	**Alice Springs**	**17.33**	**158**		**Pn**	**02 21 46.2**	**+0.4**
BBOO	**Buckleboo**	**26.49**	**162**	P	**P**	**02 23 20.1**	**+0.2**
STKA	**Stephens Creek**	**27.77**	**152**	P	**P**	**02 23 34.1**	**+2.6**
	comp=Z,2.5nm,0.7s,baz=325,slow=17,SNR=3.1 comp=Z,2.5nm,0.7s						
STKA	**Stephens Creek**	**27.77**	**152**	P	**P**	**02 23 31.9**	**+0.4**
STKA				lAmb	IAmb	02 24 11.5	
	comp=Z,5.9nm,1.4s						
KSRS	**Korea Array**	**44.84**	**1**	P	**P**	**02 25 57.4**	**+0.9**
	comp=Z,2.1nm,0.6s,baz=176,slow=9.9,SNR=10 comp=Z,2.1nm,0.6s						
MKAR	**Makanchi Array**	**67.08**	**328**	P	**P**	**02 28 34.0**	**-1.5**
	comp=Z,0.6nm,0.6s,baz=148,slow=8.5,SNR=6.1 comp=Z,0.6nm,0.6s						
MKAR	**Makanchi Array**	**67.08**	**328**	P	**P**	**02 28 35.3**	**-0.2**
ABKAR	**Akbulak array**	**81.08**	**322**	P	**P**	**02 29 58.1**	**+1.0**
QSPA	**South Pole Qui**	**82.37**	**180**	P	**P**	**02 30 03.1**	**-0.7**
QSPA				lAmb	IAmb	02 30 29.8	
	comp=Z,7.8nm,1.4s						
TORD	**Torodi Ar. Bea**	**125.89**	**281**	PKP	**PKPdf**	**02 36 44.3**	**-0.4**
	comp=Z,0.6nm,1.0s,baz=150,slow=1.6,SNR=1.9						
CPUP	**Villa Florida**	**146.02**	**173**	PKPbc	**PKPdf**	**02 37 20.9**	**-0.7**
	comp=Z,0.6nm,0.4s,baz=124,slow=4.0,SNR=4.0						
CPUP	**Villa Florida**	**146.02**	**173**	PKPdf	**PKPdf**	**02 37 21.2**	**-0.4**

MAN 23 02:51:44.0, 9°.26N×123°.11E, h1km, mb4.0, ML2.8, MS2.5, Negros

IDC ***23*** *02:53:46.2±0.7, 29°.39S×60°.95E, h0km, mb4.0/8, mbtmp4.0/9, ML4.1/1, MS3.4/2, Error ellipse: s-maj=31.4km s-min=20.7km az=80.0*
NEIC ***23*** *02:53:48.5±1.8, 29°.4S±0°.1×60°.9E±0°.1, h10km±1km, mb4.4/11, Error ellipse: s-maj=26.7km s-min=7.5km az=228.0*

ISC 23 02:53:48.5±0.6, 29°.3S±0°.1×60°.9E±0°.1, h14km, n39, σ1°21/31, mb4.2/10, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	**Riviere de l'E**	**9.37**	**329**		**Pn**	**02 55 60.0**	**-3.2**
FOMA	**Nahampoana Res**	**13.15**	**286**	Pn	**Pn**	**02 56 53.6**	**-1.2**
VOI	**Vohitsoka**	**14.72**	**297**		**Pn**	**02 57 17.4**	**+0.9**
ABPO	**Ambohimpanom**	**16.15**	**306**	Pn	**Pn**	**02 57 34.8**	**-0.5**
OPO	**Ambohidratompo**	**16.48**	**307**	Pn	**Pn**	**02 57 38.5**	**-1.0**
	0.1nm,0.3s,baz=112,slow=16,SNR=6.2						
OPO				Sn	Sn	03 00 30.5	-12
	0.1nm,0.3s,baz=202,slow=19,SNR=1.9 1.5nm,0.3s						
H08S1	**Diego Garcia H**	**24.12**	**29**	T	T	03 23 45.8	
	baz=204,slow=76						
H08S2	**Diego Garcia H**	**24.13**	**29**	T	T	03 23 46.5	
	baz=204,slow=76						
H08S3	**Diego Garcia H**	**24.14**	**29**	T	T	03 23 49.1	
	baz=204,slow=76						
KMBO	**Kilima Mbogo**	**35.98**	**317**	LR	LR	03 12 47.3	
	comp=Z,50nm,20.4s,baz=102,slow=32						
ATD	**Arta Tunnel**	**44.19**	**334**	LR	LR	03 17 12.7	
	comp=Z,24nm,21.1s,baz=176,slow=32						
H01W2	**Cape Leeuwin H**	**44.98**	**111**	T	T	03 49 40.8	
	baz=261,slow=75						
H01W3	**Cape Leeuwin H**	**44.98**	**111**	T	T	03 49 41.1	
	baz=261,slow=75						
H01W1	**Cape Leeuwin H**	**44.99**	**111**	T	T	03 49 42.1	
	baz=261,slow=75						
SNAA	**Sanae**	**54.27**	**200**	P	**P**	**03 03 11.8**	**-1.9**
	1.1nm,0.7s,baz=42,slow=16,SNR=2.2 1.1nm,0.7s						
SNAA	**Sanae**	**54.27**	**200**	P	**P**	**03 03 13.7**	**-0.1**
SNAA				lAmb	IAmb	03 03 33.2	
	comp=Z,3.3nm,1.1s						
QSPA	**South Pole Qui**	**60.86**	**180**	P	**P**	**03 03 59.6**	**-0.7**
	comp=Z,2.5nm,1.0s,baz=266,slow=3.1,SNR=6.1 comp=Z,2.5nm,1.0s						
QSPA	**South Pole Qui**	**60.86**	**180**	P	**P**	**03 03 59.6**	**-0.7**
QSPA				lAmb	IAmb	03 04 06.6	
	comp=Z,8.0nm,1.2s						
VNDA	**Vanda**	**63.95**	**166**	P	**P**	**03 04 20.9**	**+0.2**
	comp=Z,1.4nm,0.8s,baz=266,slow=6.9,SNR=9.0 comp=Z,1.4nm,0.8s						
VNDA	**Vanda**	**63.95**	**166**	P	**P**	**03 04 20.7**	**+0.1**
VNDA				lAmb	IAmb	03 04 22.4	
	comp=Z,3.2nm,1

	baz=69							
KPKS	**Kokpek**	**1.42**	**304**	*e*P		**Pn**	**02 59 13.5**	**-0.9**
	16nm,0.1s							
KPKS				*e*S		**Sn**	**02 59 33.7**	**+0.6**
	49nm,0.1s							
SATY	**Saty**	**1.44**	**286**	*e*P		**Pn**	**02 59 14.0**	**-0.7**
	4.6nm,0.1s							
SATY				*e*S		**Sb**	**02 59 34.4**	**+0.5**
	67nm,0.1s							
ZHN	**Zhinishke**	**1.45**	**290**	*e*P		**Pn**	**02 59 13.9**	**-0.9**
	6.8nm,0.1s							
ZHN				*e*S		**Sn**	**02 59 34.2**	**+0.2**
	28nm,0.0s							
DJR	**Jarkent**	**1.70**	**348**	*e*P		**Pn**	**02 59 18.6**	**+0.5**
	3.8nm,0.2s							
DJR				*e*S		**Sb**	**02 59 42.3**	**+1.1**
	22nm,0.2s							
ANVS	**Anan'yevo**	**1.94**	**274**	⇑*i*P		**Pn**	**02 59 22.5**	**+0.9**
	baz=77							
ANVS				⇑*i*S		**Sg**	**02 59 51.0**	**+0.1**
	baz=77							
TARG	**Taragay, Kyrgy**	**2.08**	**244**	⇓*i*P		**Pn**	**02 59 23.5**	**-0.2**
	baz=49							
TARG				⇓*i*S		**Sb**	**02 59 52.6**	**+0.1**
	baz=49							
ARXS	**Arharly**	**2.37**	**311**	*e*P		**Pb**	**02 59 30.1**	**-1.1**
	3.3nm,0.4s							
ARXS				*e*S		**Sb**	**03 00 02.1**	**+1.7**
	15nm,0.3s							
KDJ	**Kajisay**	**2.37**	**258**	⇓*i*P		**Pn**	**02 59 27.8**	**+0.3**
	baz=61							
KDJ				⇓*i*S		**Sb**	**03 00 00.3**	**-0.4**
	baz=61							
TNSS	**Tian-Shan**	**2.49**	**279**	*e*P		**Pb**	**02 59 32.4**	**-1.1**
	4.4nm,0.2s							
TNSS				*e*S		**Sb**	**03 00 05.9**	**+1.6**
	8.2nm,0.3s							
CHKK	**Chushkaly**	**2.69**	**297**	*e*P		**Pb**	**02 59 35.2**	**-1.5**
	1.1nm,0.2s							
CHKK				*e*S		**Sb**	**03 00 11.1**	**+1.4**
	27nm,0.3s							
IZV	**Izvestkoviy**	**2.73**	**279**	*e*P		**Pb**	**02 59 36.6**	**-0.9**
	55nm,0.1s							
IZV				*e*S		**Sb**	**03 00 13.1**	**+2.0**
	14nm,0.2s							
KTBS	**Karatobe**	**2.84**	**293**	*e*P		**Pb**	**02 59 38.2**	**-1.1**
	0.9nm,0.1s							
KTBS				*e*S		**Sb**	**03 00 15.8**	**+1.8**
	37nm,0.1s							
MTBS	**Maitube**	**2.88**	**280**	*e*P		**Pb**	**02 59 38.4**	**-1.5**
	3.5nm,0.0s							
MTBS				*e*S		**Sb**	**03 00 16.6**	**+1.5**
	11nm,0.3s							
ULHL	**Ulahol**	**3.03**	**263**	⇑*e*P		**Pn**	**02 59 37.3**	**+0.7**
	baz=66							
ULHL				⇑*i*S		**Sb**	**03 00 16.6**	**-3.1**
	baz=66							
KUU	**Kurty**	**3.13**	**294**	*e*P		**Pb**	**02 59 43.2**	**-1.0**
	0.8nm,0.2s							
KUU				*e*S		**Sb**	**03 00 24.6**	**+2.1**
	8.7nm,0.2s							
KST	**Kastek**	**3.21**	**278**	*e*P		**Pb**	**02 59 44.7**	**-0.8**
	2.4nm,0.3s							
KST				*e*S		**Sb**	**03 00 27.6**	**+2.9**
	6.2nm,0.3s							
BOOM	**Boomskoye usch**	**3.22**	**268**	⇓*i*P		**Pn**	**02 59 40.1**	**+0.9**
	baz=70							
BOOM				⇓*i*S		**Sb**	**03 00 21.4**	**-3.8**
	baz=70							
DGS	**Degeres**	**3.37**	**281**	*e*P		**Pb**	**02 59 47.7**	**-0.6**
	1.2nm,0.0s							
DGS				*e*S		**Sb**	**03 00 32.1**	**+2.7**
	4.8nm,0.5s							
TKM2	**Tokmak 2**	**3.47**	**276**	⇑Pg		**Pb**	**02 59 48.6**	**-1.4**
	0.8nm,0.7s							
TKM2				⇑Lg		Lg	03 00 35.5	
	2.9nm,0.5s							
KRBS	**Karabastau**	**3.53**	**288**	*e*P		**Pb**	**02 59 49.9**	**-1.2**
	4.3nm,0.2s							
KRBS				*e*S		**Sb**	**03 00 35.9**	**+1.9**
	3.6nm,0.2s							
MAKZ	**Makanchi**	**4.30**	**16**	⇓Pn		**Pn**	**02 59 54.6**	**+0.6**
	0.5nm,0.4s							
MAKZ				⇓Lg		Lg	03 01 05.1	
	0.6nm,0.5s							
MK31	**Makanchi Array**	**4.36**	**18**	⇓Pn		**Pn**	**02 59 55.0**	**+0.3**
	0.1nm,0.1s,baz=202,slow=13,SNR=16							
MK31				⇑Lg		Lg	03 01 06.9	
	0.7nm,0.6s,baz=191,slow=28,SNR=2.5							

IDC 23 03:02:35.6±28.0, 0°41N×102°80E, h250km±272km, mb2.8/2, mbtmp3.4/2, Error ellipse: s-maj=388.1km s-min=30.2km az=53.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**36.93**	**125**	P		P	03 09 21.0	-0.2
	0.3nm,0.7s,baz=303,slow=9.0,SNR=4.9							
	0.3nm,0.7s							
MKAR	**Makanchi Array**	**49.56**	**342**	P		P	03 11 01.4	-0.1
	0.5nm,0.7s,baz=134,slow=8.3,SNR=4.4							
	0.5nm,0.7s							
TXAR	**Lajitas Array**	**141.10**	**38**	PKP		PKPdf	03 21 37.1	0.0
	0.3nm,0.6s,baz=300,slow=2.0,SNR=4.7							

IDC ***23*** *03:05:37.7±0.4, 60.63S×42.55W, h0km, mb5.0/24, mbtmp5.0/27, ML4.6/3, MS4.7/44, Error ellipse: s-maj=15.8km s-min=10.3km az=50.0*

MOS ***23*** *03:05:38.5±1.4, 60.56S×42.61W, h12km, mb5.4/22, MS4.8/6, Error ellipse: s-maj=24.4km s-min=8.7km az=102.1*

NEIC ***23*** *03:05:39.5±1.4, 60.67S±0.09×42.91W±0.08, h10km±1km, mb5.4/122, Ms_20 5.0/126, Mwb5.4/16, Mww5.5, Error ellipse: s-maj=14.8km s-min=6.9km az=177.0*

NEIC ***23*** *03:05:39.9, 60.66S×42.94W, h7km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr=0.45; Mθθ1.14; Mϕϕ-0.69; Mrθ-0.10; Mrϕ0.49; Mθϕ0.79; Fault plane solution: M₀1.36000×10¹⁷ NP1:ϕs217.44000°, δ66.74000°, λ-147.90000°. NP2:ϕs113.53000°, δ60.77000°, λ-26.90000°. Principal axes: T 1.2696, Plg4.0000°, Azm344.0000°; N 0.1723, Plg51.0000°, Azm250.0000°; P -1.4418, Plg39.0000°, Azm77.0000°;*

GCMT ***23*** *03:05:43.5±0.1, 60.97S±0.01×42.91W±0.01, h16km, MW5.5/147, Moment Tensor Solution. s119,c191; s147,c289; Duration: 1ˢ4 Moment tensor: Scale 10¹⁷ Nm; Mrr-0.10±.02; Mθθ1.56±.02; Mϕϕ-1.46±.02; Mrθ-0.00±.06; Mrϕ1.00±.02; Mθϕ1.21±.09; Best double couple: M₀2.14600×10¹⁷ NP1:ϕs115.00000°, δ62.00000°, λ-12.00000°. NP2:ϕs210.00000°, δ79.00000°, λ-152.00000°. Principal axes: T 1.9310, Plg12.0000°, Azm340.0000°; N 0.4300, Plg60.0000°, Azm229.0000°; P -2.3620, Plg27.0000°, Azm76.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***23*** *03:05:45, 60.87S×42.95W, h18km, Moment Tensor Solution. Duration: 12ˢ0 Moment tensor: Scale 10¹⁷Nm; Mrr-0.10; Mθθ1.60; Mϕϕ-1.50; Mrθ0.19; Mrϕ1.12; Mθϕ1.22; Fault plane solution: M₀2.28000×10¹⁷ NP1: ϕs114.00000°, δ59.00000°, λ-7.00000°. NP2:ϕs208.00000°, δ83.00000°, λ-149.00000°. Principal axes: T 2.1237, Plg16.0000°, Azm337.0000°; N 0.2861, Plg59.0000°, Azm219.0000°; P -2.4098, Plg26.0000°, Azm76.0000°;*

ISC 23 03:05:39.0±0.2, 60.64S±0.04×42.73W±0.04, h10km, n558, σ1s28/462, mb5.3/93, MS5.0/129, 40C-29D, Fault plane solution: NP1:ϕs17.18828°, δ86.27079°, λ170.09459°. NP2:ϕs107.83901°, δ80.11578°, λ3.78548°. Principal axes: T Plg9.6350°, Azm332.1418°; N Plg79.4224°, Azm176.7599°; P Plg4.3236°, Azm62.8772°; **Fault plane solution: NP1:ϕs32.06148°, δ88.52890°, λ124.21272°. NP2:ϕs124.22384°, δ34.24049°, λ2.61513°. Principal axes:** T Plg37.0640°, Azm331.9456°; N Plg34.1999°, Azm211.0615°; P Plg34.4996°, Azm93.2174°; **Scotia Sea**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ORCD	**Orcadas**	**0.99**	**263**	Pg		**Pb**	**03 05 56.6**	**-1.6**
ORCD				Sg		**Sb**	**03 06 08.5**	**-2.8**
ORCD	**Orcadas**	**0.99**	**263**	*i* P		**Pb**	**03 05 56.6**	**-1.6**
ORCD				*i* S		**Sn**	**03 06 17.3**	**+4.4**
ORCD				IAML			03 06 19.3	
	comp=Z,65μm,1.7s							
HOPE	**Hope Point**	**7.21**	**31**	Pn		**Pn**	**03 07 22.4**	**-1.9**
HOPE	**Hope Point**	**7.21**	**31**	P		**Pn**	**03 07 22.4**	**-1.9**
ESPZ	**Base Esperanza**	**7.25**	**241**	*i* P		Pn	03 07 19.5	-5.4
ESPZ				IAML			03 09 10.3	
	comp=Z,314nm,1.8s							
PMSA	**Palmer Station**	**10.60**	**238**	Pn		**Pn**	**03 08 11.9**	**+1.2**
	comp=Z,3.1nm,0.3s,baz=59,slow=13,SNR=2.2							
PMSA				Sn		**Sn**	**03 10 11.1**	**+1.8**
	baz=167,slow=18							
PMSA				LR		LR	03 11 46.8	
	comp=Z,5μm,20.1s,baz=81,slow=34							
	comp=Z,33nm,0.9s							
EFI	**East Falkland**	**12.37**	**310**	Pn		**Pn**	**03 08 35.5**	**+0.6**
EFI	**East Falkland**	**12.37**	**310**	*ce*P		**Pn**	**03 08 38.5**	**+3.6**
SMAI	**San Martin Ant**	**12.85**	**224**	Pn		**Pn**	**03 08 41.2**	**-0.2**
MG01	**Puerto William**	**14.40**	**282**			**Pn**	**03 09 02.5**	**-0.2**
USHA	**Ushuaia**	**14.84**	**282**	Pn		**Pn**	**03 09 10.3**	**+1.7**
	comp=Z,3.2nm,0.3s,baz=160,slow=1.3,SNR=2.6							
USHA				LR		LR	03 13 44.7	
	comp=Z,7μm,18.8s,baz=121,slow=33							
	comp=Z,18nm,0.6s							
DSPA	**Despedida**	**15.27**	**285**	P		**Pn**	**03 09 14.1**	**-0.3**
MG03	**Isla Dawson**	**16.38**	**282**	Pn		**Pn**	**03 09 28.1**	**-0.7**
MG02	**Cerro Sombrero**	**16.44**	**287**	Pn		**Pn**	**03 09 29.0**	**-0.4**
VNA3	**Neumayer Olymp**	**16.87**	**143**	P		**Pn**	**03 09 31.0**	**-3.9**
VNA3				S		Sn	03 12 26.7	-15
GO10	**Punta Arenas**	**17.08**	**283**	P		**Pn**	**03 09 37.0**	**-0.6**
VNA1	**Neumayer--Stat**	**17.10**	**140**	P		**Pn**	**03 09 34.4**	**-3.3**
VNA1				S		Sn	03 12 35.7	-12
MG04	**Isla Riesco**	**17.51**	**284**	P		**Pn**	**03 09 42.5**	**-0.4**
BELA	**Belgrano 2**	**17.52**	**174**	P		**Pn**	**03 09 42.6**	**-0.3**
MG05	**Puerto Natales**	**18.70**	**285**	P		**Pn**	**03 09 56.8**	**-0.8**
GO09	**Cerro Castillo**	**18.88**	**286**	P		**Pn**	**03 09 59.2**	**-0.6**
GO09				IAmb		IAmb	03 10 01.9	
	comp=Z,202nm,1.0s							
SNAA	**Sanae**	**19.08**	**142**	P		**Pn**	**03 10 01.9**	**-0.2**
SNAA				S		Sn	03 13 21.5	-14
SNAA	**Sanae**	**19.08**	**142**	*e*P		**Pn**	**03 10 02.1**	**0.0**
SNAA	**Sanae**	**19.08**	**142**	P		**P**	**03 10 01.3**	**-0.1**
	comp=Z,1.9nm,0.3s,baz=289,slow=9.6,SNR=158							
SNAA				S		Sn	03 13 20.6	-15
	comp=Z,8.2nm,0.8s,baz=307,slow=18,SNR=2.1							
SNAA				LR		LR	03 15 34.5	
	comp=Z,3μm,21.6s,baz=288,slow=31							
	comp=Z,212nm,1.0s							
SNAA	**Sanae**	**19.08**	**142**			**P**	**03 10 01.2**	**-0.1**
SNAA				IAmb		IAmb	03 10 05.6	
	comp=Z,281nm,1.0s							
SNAA	**Sanae**	**19.08**	**142**	*d*	*i* P	**Pn**	**03 10 01.6**	**-0.5**
SNAA				pmax		pmax		
	comp=Z,381nm,1.2s							
TROLL	**Troll, Antarti**	**20.80**	**142**	P		**P**	**03 10 20.4**	**+0.4**
TROLL				S		**S**	**03 14 05.0**	**-6.8**
NVL	**N'lazarevskaya**	**23.70**	**138**	⇑*i* P		**P**	**03 10 50.3**	**-0.2**
NVL				*e*S		**S**	**03 15 11.6**	**+6.6**
NVL				pmax		pmax		
	comp=Z,82nm,1.0s							
NVL				MLR		MLR		
	comp=Z,1μm,16.0s							
AY01	**Puyuhuapi**	**24.07**	**299**	P		**P**	**03 10 54.2**	**-0.1**
AY01				IAmb		IAmb	03 11 03.0	
	comp=Z,106nm,0.8s							
LL02	**Futaleuf**	**24.73**	**302**	P		**P**	**03 10 59.1**	**-1.2**
LL02				IAmb		IAmb	03 11 03.0	
	comp=Z,73nm,0.8s							
GO07	**Milladeo Hill,**	**25.56**	**299**	P		**P**	**03 11 06.8**	**-1.0**
TRQA	**Tornquist**	**25.65**	**323**	P		**P**	**03 11 08.3**	**-0.3**
TRQA	**Tornquist**	**25.65**	**323**	P		**P**	**03 11 08.4**	**-0.3**
TRQA				pmax		pmax		
	comp=Z,41nm,0.8s							
TRQA	**Tornquist**	**25.65**	**323**	*e*P		**P**	**03 11 08.2**	**-0.3**
PLCA	**Paso Flores**	**26.26**	**307**	P		**P**	**03 11 13.8**	**-0.5**
	comp=Z,71nm,0.8s,baz=157,slow=8.2,SNR=12							
PLCA				LR		LR	03 21 40.0	
	comp=Z,2μm,19.1s,baz=148,slow=37							
	comp=Z,71nm,0.8s							
PLCA	**Paso Flores**	**26.26**	**307**	P		**P**	**03 11 12.2**	**-2.0**
PLCA				IAmb		IAmb	03 11 17.6	
	comp=Z,78nm,0.8s							
LL03	**Petrohue**	**26.66**	**304**	P		**P**	**03 11 15.9**	**-1.8**
LL03				IAmb		IAmb	03 11 27.8	
	comp=Z,96nm,0.9s							
LL04	**Puerto Octay**	**26.86**	**304**	P		**P**	**03 11 17.0**	**-2.5**
LPA	**La Plata**	**27.56**	**332**	*e*P		P	03 11 38.1	+12
LPA				sP		sP	03 11 45.0	+15
LPA				PP		**PnPn**	**03 12 04.5**	**-6.1**
LPA				PPP		PPP	03 12 21.2	
LPA				PCP		PcP	03 14 12.8	-31
LPA				S		**S**	**03 16 02.2**	**-4.6**
LPA				sS		sS	03 16 11.2	+0.1
LPA				PS		**PgS**	**03 16 24.1**	**-0.9**
LPA				SS		**SnSn**	**03 17 13.6**	**-3.5**
LPA				SSS		SSS	03 17 28.7	
LPA				SCS		**ScS**	**03 22 12.8**	**-2.5**
LPA				PKIKP		**PKiKP**	**03 22 18.6**	**-1.2**
LPA				SKIKS			03 25 46.5	
LPA				PKIKS			03 25 51.1	
LPA				SKIKS			03 29 27.6	
LR03	**Panguipulli**	**27.91**	**305**	IAmb		IAmb	03 11 29.9	
	comp=Z,62nm,0.7s							
QSPA	**South Pole Qui**	**29.60**	**180**	P		**P**	**03 11 44.8**	**+0.8**
	comp=Z,27nm,1.0s,baz=157,slow=2.6,SNR=47							
	comp=Z,27nm,1.0s							
QSPA	**South Pole Qui**	**29.60**	**180**	P		**P**	**03 11 44.2**	**+0.3**
QSPA				IAmb		IAmb	03 12 40.1	
	comp=Z,91nm,1.3s							
PLTB	**Pedras Altas**	**29.77**	**341**	P		**P**	**03 11 46.0**	**+0.5**
PLTB				IAmb		IAmb	03 11 48.2	
	comp=Z,49nm,0.9s							
PLTB	**Pedras Altas**	**29.77**	**341**	*e*P		**P**	**03 11 44.9**	**-0.6**
ML02	**Panimavida**	**30.92**	**311**	P		**P**	**03 11 54.4**	**-1.3**
ML02				IAmb		IAmb	03 12 10.2	
	comp=Z,34nm,0.7s							
CPSB	**Cacapava Do Su**	**31.07**	**342**	*e*P		**P**	**03 11 57.0**	**0.0**
GO05	**Huala**	**31.78**	**311**	P		**P**	**03 12 02.0**	**-1.2**
GO05				IAmb		IAmb	03 12 23.7	
	comp=Z,48nm,0.9s							
MRA	**San Martin**	**32.01**	**321**	*e*P		**P**	**03 12 05.2**	**-0.2**
BO01	**Tunca**	**32.02**	**312**	P		**P**	**03 12 03.6**	**-1.8**
BO01				IAmb		IAmb	03 12 05.6	
	comp=Z,39nm,0.7s							
LMEL	**Las Melosas**	**32.19**	**314**	P		**P**	**03 12 06.9**	**-0.1**
LMEL				IAmb		IAmb	03 12 17.0	
	comp=Z,23nm,0.7s							
BO04	**La Punta**	**32.21**	**313**	P		**P**	**03 12 06.4**	**-0.7**
ITQB	**Itaqui**	**32.34**	**337**	P		**P**	**03 12 09.1**	**+0.9**
ITQB	**Itaqui**	**32.34**	**337**	*e*P		**P**	**03 12 09.4**	**+1.2**
MT09	**Talagante**	**32.53**	**313**	P		**P**	**03 12 09.7**	**-0.4**
MT03	**Universidad Ad**	**32.62**	**314**	P		**P**	**03 12 10.4**	**-0.3**
MT03				IAmb		IAmb	03 12 19.8	
	comp=Z,59nm,0.8s							
ARCO	**CERRO ARCO**	**32.66**	**316**	*e*P		**P**	**03 12 11.7**	**+0.5**
TCA	**Tanti**	**32.68**	**324**	*e*P		**P**	**03 12 11.0**	**-0.3**
MT05	**Renca**	**32.79**	**314**	P		**P**	**03 12 12.0**	**-0.2**
ASAL	**Salagasta**	**32.86**	**317**	*e*P		**P**	**03 12 12.4**	**-0.4**
VA05	**Santo Domingo**	**32.87**	**312**	P		**P**	**03 12 12.5**	**-0.3**
PEL	**Peldehue**	**33.00**	**314**	P		**P**	**03 12 14.2**	**+0.2**
PEL	**Peldehue**	**33.00**	**314**	P		**P**	**03 12 14.2**	**+0.2**
PEL				pmax		pmax		
	comp=Z,112nm,0.9s							
MT02	**Curacav**	**33.05**	**313**	P		**P**	**03 12 14.3**	**-0.1**
ROC1	**El Roble**	**33.27**	**313**	P		**P**	**03 12 16.5**	**-0.1**
ROC1				IAmb		IAmb	03 12 33.8	
	comp=Z,38nm,0.6s							
ROC1	**El Roble**	**33.27**	**313**	*e*P		**P**	**03 12 16.4**	**-0.2**
VA03	**San Esteban**	**33.29**	**314**	P		**P**	**03 12 17.2**	**+0.5**
ACHE	**Chepes**	**33.47**	**321**	*e*P		**P**	**03 12 16.9**	**-1.4**
RTLS	**Leoncito**	**33.74**	**317**	*e*P		**P**	**03 12 20.1**	**-0.7**
VA06	**Catapilco**	**33.74**	**313**	P		**P**	**03 12 20.4**	**0.0**
VA06				IAmb		IAmb	03 12 23.1	
	comp=Z,48nm,0.7s							
APLL	**PUNTA DE LOS L**	**34.14**	**322**	*e*P		**P**	**03 12 23.2**	**-0.8**
AVFE	**Valle Fertil**	**34.18**	**320**	*e*P		**P**	**03 12 24.3**	**-0.1**
ACCO	**Cerro Coronel**	**34.77**	**318**	*e*P		**P**	**03 12 30.8**	**+1.0**
CO02	**Combarbal**	**34.87**	**315**	P		**P**	**03 12 30.5**	**+0.2**
CO02				IAmb		IAmb	03 12 34.0	
	comp=Z,57nm,0.8s							
CO03	**El Pedregal**	**35.09**	**315**	P		**P**	**03 12 32.3**	**+0.1**
CO03				IAmb		IAmb	03 12 33.6	
	comp=Z,35nm,0.8s							
ACDV	**Cuesta del Vie**	**35.17**	**318**	*e*P		**P**	**03 12 33.9**	**+0.8**
ACLC	**CERRO LA CRUZ**	**35.17**	**322**	*e*P		**P**	**03 12 33.8**	**+0.7**
AROD	**Rodeo**	**35.29**	**318**	*e*P		**P**	**03 12 35.2**	**+1.0**
TIJ01	**Guaruva-PR**	**35.56**	**350**	*e*P		**P**	**03 12 37.0**	**+0.6**
CO06	**Fray Jorge**	**35.57**	**314**	P		**P**	**03 12 36.2**	**-0.1**
CO06				IAmb		IAmb	03 12 37.2	
	comp=Z,61nm,0.8s							
CO01	**Juntas del Tor**	**35.68**	**317**	P		**P**	**03 12 36.6**	**-0.9**
CPUP	**Villa Florida**	**35.72**	**337**	P		**P**	**03 12 38.7**	**+1.1**
	comp=Z,45nm,0.8s,baz=168,slow=7.9,SNR=98							
CPUP				LR		LR	03 25 24.9	
	comp=Z,1μm,21.8s,baz=172,slow=33							
	comp=Z,45nm,0.8s							
CPUP	**Villa Florida**	**35.72**	**337**	P		**P**	**03 12 38.1**	**+0.5**
CPUP				IAmb		IAmb	03 12 39.7	
	comp=Z,46nm,0.8s							
CPUP	**Villa Florida**	**35.72**	**337**	P		**P**	**03 12 38.1**	**+0.5**
CPUP				pmax		pmax		
	comp=Z,47nm,0.9s							
CPUP	**Villa Florida**	**35.72**	**337**	*e*P		**P**	**03 12 38.4**	**+0.8**
GO04	**Tololo Observa**	**35.74**	**316**	P		**P**	**03 12 37.5**	**-0.5**
CO05	**La Serena**	**36.12**	**315**	P		**P**	**03 12 41.0**	**+0.1**
LCO	**Las Campanas**	**36.77**	**317**	P		**P**	**03 12 46.6**	**-0.2**
LCO				IAmb		IAmb	03 12 47.7	
	comp=Z,60nm,0.7s							
LCO	**Las Campanas**	**36.77**	**317**	P		**P**	**03 12 46.6**	**-0.2**
LCO				pmax		pmax		
	comp=Z,60nm,0.7s							
LCO				MLR		MLR		
	comp=Z,4μm,19.0s							
AC04	**Llanos de Chal**	**37.64**	**317**	P		**P**	**03 12 54.1**	**+0.2**
VAO	**Valinhos**	**37.73**	**354**	*e*P		**P**	**03 12 55.2**	**+0.4**
GO03	**Copiap**	**37.92**	**318**	P		**P**	**03 12 54.9**	**-1.5**
AC02	**Maricunga**	**38.27**	**320**	P		**P**	**03 12 58.9**	**-0.9**
DUB01	**Fribugo-RJ**	**38.53**	**1**	*e*P		**P**	**03 13 03.6**	**+2.1**
AMBA	**Amambai (Brazi**	**38.65**	**342**	*e*P		**P**	**03 13 03.5**	**+1.0**
CAM01	**Campos-RJ**	**38.79**	**2**	*e*P		**P**	**03 13 03.5**	**-0.1**
AC01	**Pan de Azucar**	**39.38**	**319**	P		**P**	**03 13 08.3**	**-0.2**
AC01				IAmb		IAmb	03 13 09.8	
	comp=Z,59nm,0.9s							
PCMB	**Pacaembu**	**39.46**	**347**	*e*P		**P**	**03 13 10.2**	**+1.0**
ANTJ	**Antonio Joao (**	**39.72**	**341**	*e*P		**P**	**03 13 12.2**	**+0.8**
BB19B	**Bebedouro**	**39.75**	**352**	*e*P		**P**	**03 13 12.3**	**+0.6**
GO02	**Mina Guanaco**	**39.97**	**320**	P		**P**	**03 13 13.0**	**-0.9**
ALF01	**Guarapari-ES**	**40.01**	**3**	*e*P		**P**	**03 13 15.7**	**+1.9**
SBA	**Scott Base**	**40.58**	**189**	P		**P**	**03 13 18.5**	**+0.6**
SBA	**Scott Base**	**40.58**	**189**	IAMs_20		IAMs_20	03 32 43.1	
	comp=Z,2μm,19.0s							
SBA	**Scott Base**	**40.58**	**189**	P		**P**	**03 13 18.5**	**+0.6**
SBA				pmax		pmax		
	comp=Z,35nm,1.1s							
SBA				MLR		MLR		
	comp=Z,2μm,19.0s							
PB14	**IPOC Station P**	**40.73**	**320**	P		**P**	**03 13 19.4**	**-0.8**
MAW	**Mawson**	**41.16**	**146**	P		**P**	**03 13 23.5**	**+0.6**
	comp=Z,22nm,1.0s,baz=227,slow=9.1,SNR=18							
MAW				LR		LR	03 29 12.0	
	comp=Z,1μm,18.5s,baz=240,slow=34							
	comp=Z,22nm,1.0s							
MAW	**Mawson**	**41.16**	**146**	P		**P**	**03 13 23.4**	**+0.6**
MAW	**Mawson**	**41.16**	**146**	P		**P**	**03 13 23.4**	**+0.6**
MAW				pmax		pmax		
	comp=Z,10.0nm,1.3s							
AQDB	**Aquidauana**	**41.16**	**341**	*e*P		**P**	**03 13 23.2**	**-0.2**
ITRB	**Iturama**	**41.25**	**349**	*e*P		**P**	**03 13 25.0**	**+0.9**
VNDA	**Vanda**	**41.25**	**188**	P		**P**	**03 13 25.3**	**+1.8**
	comp=Z,16nm,1.1s,baz=172,slow=7.0,SNR=34							
VNDA				LR		LR	03 29 29.3	
	comp=Z,1μm,21.7s,baz=158,slow=35							
	comp=Z,16nm,1.1s							
VNDA	**Vanda**	**41.25**	**188**	P		**P**	**03 13 22.7**	**-0.8**
VNDA	**Vanda**	**41.25**	**188**	P		**P**	**03 13 22.7**	**-0.8**
VNDA				pmax		pmax		
	comp=Z,28nm,0.8s							
RIB01	**Linhares ES**	**41.31**	**3**	*e*P		**P**	**03 13 26.3**	**+1.7**
AF01	**San Pedro de A**	**41.62**	**323**	P		**P**	**03 13 26.6**	**-0.8**
AF01				IAmb		IAmb	03 13 29.8	
	comp=Z,112nm,0.9s							
PB15	**IPOC Station P**	**41.77**	**322**	P		**P**	**03 13 28.6**	**+0.1**
PB15				IAmb		IAmb	03 13 36.0	
	comp=Z,74nm,0.7s							
BSFB	**Barra de Sao F**	**41.78**	**3**	*e*P		**P**	**03 13 29.5**	**+1.1**
PB10	**IPOC Station P**	**41.82**	**320**	P		**P**	**03 13 28.8**	**+0.1**
PB10				IAmb		IAmb	03 13 30.5	
	comp=Z,65nm,0.7s							
SJMB	**Sao Joao De Ma**	**41.90**	**2**	*e*P		**P**	**03 13 29.9**	**+0.5**
PMNB	**Patos De Minas**	**42.14**	**355**	*e*P		**P**	**03 13 31.9**	**+0.4**
LVC	**Limon Verde**	**42.16**	**323**	P		**P**	**03 13 32.8**	**+0.9**
	comp=Z,29nm,0.8s,baz=169,slow=6.5,SNR=24							
LVC				LR		LR	03 32 55.6	
	comp=Z,850nm,18.4s,baz=178,slow=39							
	comp=Z,29nm,0.8s							
LVC	**Limon Verde**	**42.16**	**323**	P		**P**	**03 13 31.3**	**-0.6**
LVC	**Limon Verde**	**42.16**	**323**	P		**P**	**03 13 31.3**	**-0.6**
LVC				pmax		pmax		
	comp=Z,27nm,0.8s							
**L

LPAZ La Paz 47.93 326 P **P** **03 14 18.9 +0.7**
comp=Z,12nm,0.7s,baz=145,slow=6.5,SNR=55
LPAZ LR LR 03 35 52.8
comp=Z,980nm,20.2s,baz=176,slow=38
comp=Z,12nm,0.7s
LPAZ La Paz 47.93 326 P **P** **03 14 16.8 -1.4**
LPAZ La Paz 47.93 326 P **P** **03 14 16.8 -1.4**
LPAZ pmax pmax
comp=Z,19nm,0.9s
LPAZ La Paz 47.93 326 *eP* **P** **03 14 18.6 +0.5**
CER Ceres 47.95 84 *eP* **P** **03 14 17.8 +0.3**
CER IAmb IAmb 03 14 27.3
comp=Z,396nm,4.3s
SDBA SAO DESIDERIO 48.17 357 *eP* **P** **03 14 19.3 -0.1**
PEXB Peixe 48.62 353 *eP* **P** **03 14 23.0 +0.2**
MATJ Matjiesfontein 48.66 86 *eP* **P** **03 14 23.4 +0.3**
MATJ IAmb IAmb 03 15 06.3
comp=Z,157nm,2.0s
SNDB Serra Nova Dou 48.99 349 *eP* **P** **03 14 25.9 +0.4**
VILB Vilhena 49.30 337 *eP* **P** **03 14 28.5 +0.4**
SUR Sutherland 49.49 85 P **P** **03 14 29.5 -0.1**
comp=Z,10nm,0.8s,baz=201,slow=10,SNR=13
SUR LR LR 03 31 10.6
comp=Z,2µm,18.8s,baz=208,slow=31
comp=Z,10nm,0.8s
SUR Sutherland 49.49 85 P **P** **03 14 30.4 +0.8**
SUR IAmb IAmb 03 15 31.3
comp=Z,41nm,1.4s
SUR IAMs_20 IAMs_20 03 30 35.3
comp=Z,2µm,20.0s
NBLA Lagarto - SE 49.69 6 *eP* **P** **03 14 32.1 +1.2**
PDRB Porto dos Gac 50.02 342 *eP* **P** **03 14 34.0 +0.5**
GRAN Grantham 50.23 86 *eP* **P** **03 14 35.4 +0.4**
GRAN IAmb IAmb 03 14 35.9
comp=Z,9.6nm,0.7s
CLDB Colider 50.61 343 *eP* **P** **03 14 38.1 +0.1**
NBAN Anadia - AL 51.10 8 *eP* **P** **03 14 43.4 +1.8**
SOE Somerset East 51.56 90 *eP* **P** **03 14 44.0 -1.1**
SOE IAmb IAmb 03 15 05.3
comp=Z,55nm,1.4s
SMTB Santa Maria do 51.80 354 *eP* **P** **03 14 46.6 -0.2**
CASY Casey 51.85 167 P **P** **03 14 47.2 +0.6**
CASY IAmb IAmb 03 14 48.8
comp=Z,34nm,0.9s
KEIM Keimoes 52.59 83 *eP* **P** **03 14 52.6 -0.1**
KEIM IAmb IAmb 03 15 12.5
comp=Z,26nm,1.2s
UPI Upington 53.01 83 *eP* **P** **03 14 56.0 +0.2**
UPI IAmb IAmb 03 14 57.1
comp=Z,6.4nm,0.7s
NBMA Muriti-CE 53.24 5 *eP* **P** **03 14 59.0 +1.4**
ETMB Extrema 53.64 331 *eP* **P** **03 15 00.9 +0.4**
SAML Samuel 53.80 335 P **P** **03 15 02.0 +0.4**
SAML IAmb IAmb 03 15 03.4
comp=Z,36nm,0.8s
SAML Samuel 53.80 335 P **P** **03 15 02.0 +0.4**
SAML pmax pmax
comp=Z,36nm,0.8s
NPGB Novo Progresso 54.32 345 *eP* **P** **03 15 05.7 +0.2**
PRPB Parauapebas 54.61 351 *eP* **P** **03 15 07.8 +0.2**
NNA Nana 54.63 318 P **P** **03 15 08.8 +1.0**
comp=Z,10nm,0.6s,baz=148,slow=6.6
NNA LR LR 03 36 47.3
comp=Z,355nm,21.9s,baz=166,slow=34
comp=Z,10nm,0.6s
NNA Nana 54.63 318 P **P** **03 15 08.0 +0.2**
NNA Nana 54.63 318 P **P** **03 15 08.0 +0.2**
NNA pmax pmax
comp=Z,24nm,0.9s
BOSA Boshof 54.76 86‖ *iP* **P** **03 15 08.1 -0.6**
BOSA IAmb IAmb 03 15 18.4
comp=Z,37nm,1.4s
BOSA Boshof 54.76 86 P **P** **03 15 08.2 -0.5**
comp=Z,12nm,0.8s,baz=233,slow=7.8,SNR=20
BOSA LR LR 03 33 45.0
comp=Z,2µm,20.7s,baz=212,slow=31
comp=Z,12nm,0.8s
BOSA Boshof 54.76 86 P **P** **03 15 08.5 -0.3**
BOSA Boshof 54.76 86 P **P** **03 15 08.5 -0.3**
BOSA pmax pmax
comp=Z,34nm,1.4s
BOSA Boshof 54.76 86 *iP* **P** **03 15 07.9 -0.9**
BOSA Boshof 54.76 86 *iP* **P** **03 15 07.9 -0.9**
BOSA Boshof 54.76 86 *iP* **P** **03 15 07.9 -0.9**
RCBR Riachuelo 54.93 8 LR LR 03 36 50.2
comp=Z,523nm,18.5s,baz=325,slow=34
NBPB Pedra_Branca-C 55.02 4 *eP* **P** **03 15 11.7 +1.2**
RPN Rapa Nui 55.31 276 LR LR 03 33 37.2
comp=Z,453nm,18.1s,baz=146,slow=30
SNKL Senekal, Frees 56.28 88‖ *iP* **P** **03 15 19.6 -0.2**
SNKL IAmb IAmb 03 15 20.5
comp=Z,32nm,0.7s
ITTB Itaituba 57.00 344 *eP* **P** **03 15 24.8 +0.1**
PRYS Parys 57.20 87 *eP* **P** **03 15 24.6 -1.7**
PRYS IAmb IAmb 03 15 26.3
comp=Z,24nm,0.8s
CZSB Cruzeiro do Su 57.36 324 *eP* **P** **03 15 26.2 -1.1**
NWCL Newcastle 57.77 90 *eP* **P** **03 15 30.1 -0.1**
NWCL IAmb IAmb 03 15 30.3
comp=Z,18nm,1.0s
KSR Koster 57.86 86 *eP* **P** **03 15 30.3 -0.6**
KSR IAmb IAmb 03 15 31.3
comp=Z,22nm,0.7s
LBTB Lobatse 57.93 84‖ *iP* **P** **03 15 30.8 -0.5**
LBTB IAmb IAmb 03 15 31.8
comp=Z,23nm,0.7s
LBTB Lobatse 57.93 84 P **P** **03 15 30.9 -0.5**
comp=Z,20nm,0.7s,baz=206,slow=7.7,SNR=38
LBTB LR LR 03 36 09.7
comp=Z,794nm,19.6s,baz=207,slow=32
comp=Z,20nm,0.7s
LBTB Lobatse 57.93 84 P **P** **03 15 31.2 -0.1**
LBTB IAmb IAmb 03 15 31.9
comp=Z,24nm,0.7s
LBTB Lobatse 57.93 84 P **P** **03 15 31.2 -0.1**
LBTB pmax pmax
comp=Z,24nm,0.7s
LBTB Lobatse 57.93 84 *iP* **P** **03 15 30.2 -1.1**
LBTB Lobatse 57.93 84 *iP* **P** **03 15 30.2 -1.1**
LBTB Lobatse 57.93 84 *iP* **P** **03 15 30.2 -1.1**
HRAO HartRAO 58.22 87 *eP* **P** **03 15 32.9 -0.5**
HRAO IAmb IAmb 03 15 33.5
comp=Z,23nm,0.7s
TMAB Tom-Au,PA,Br 58.27 354 *eP* **P** **03 15 33.8 +0.2**
SLR Silverton 58.64 87 *eP* **P** **03 15 34.6 -1.8**
SLR IAmb IAmb 03 15 37.1
comp=Z,44nm,1.5s
MACA Manacapuru-AM 58.95 339 *eP* **P** **03 15 38.4 +0.1**
POGA Pongola 58.99 91 *eP* **P** **03 15 37.6 -1.0**
POGA IAmb IAmb 03 15 38.7
comp=Z,14nm,0.8s
TSUM Tsumeb 58.99 73 LR LR 03 36 41.9
comp=Z,608nm,19.6s,baz=194,slow=32
MALB Monte Alegre 59.30 347 *eP* **P** **03 15 41.0 +0.2**
ATAH Atahualpa 59.69 318 P **P** **03 15 45.6 +1.6**
comp=Z,13nm,0.8s,baz=69,slow=8.8,SNR=8.0
ATAH LR LR 03 42 43.2
comp=Z,373nm,18.9s,baz=167,slow=37
comp=Z,13nm,0.8s
MCPB Macapa, AP 60.55 349 *eP* **P** **03 15 49.6 +0.2**
MOPA Mopani 62.03 89 *eP* **P** **03 15 58.7 -0.7**
MOPA IAmb IAmb 03 16 09.7
comp=Z,28nm,1.6s
MOPA Mopani 62.03 89 *iP* **P** **03 15 58.4 -1.0**
MOPA Mopani 62.03 89 *iP* **P** **03 15 58.4 -1.0**
MOPA Mopani 62.03 89 *iP* **P** **03 15 58.4 -1.0**
MUSN Musina, Limpop 62.31 86 *eP* **P** **03 16 01.2 -0.1**
MUSN IAmb IAmb 03 16 02.0
comp=Z,17nm,0.9s
MUSN Musina, Limpop 62.31 86 *iP* **P** **03 15 59.8 -1.5**
MUSN Musina, Limpop 62.31 86 *iP* **P** **03 15 59.8 -1.5**
MUSN Musina, Limpop 62.31 86 *iP* **P** **03 15 59.8 -1.5**
MATP Matopo 63.22 84 *eP* **P** **03 16 05.5 -2.0**
MATP Matopo 63.22 84 LR LR 03 39 01.2
comp=Z,901nm,21.1s,baz=240,slow=32
MATP Matopo 63.22 84 *iP* **P** **03 16 07.1 -0.4**
MATP Matopo 63.22 84 *iP* **P** **03 16 07.1 -0.4**
MATP Matopo 63.22 84 *iP* **P** **03 16 07.1 -0.4**
BOSC San Juan Bosco 63.46 319 IAmb IAmb 03 16 40.2
comp=Z,23nm,1.0s
BLWY Bulawayo 63.52 84‖ *iP* **P** **03 16 08.8 -0.7**
BLWY IAmb IAmb 03 16 09.7
comp=Z,87nm,0.8s
BLWY Bulawayo 63.52 84 *iP* **P** **03 16 08.5 -1.0**
BLWY Bulawayo 63.52 84 *iP* **P** **03 16 08.5 -1.0**
BLWY Bulawayo 63.52 84 *iP* **P** **03 16 08.5 -1.0**
ARNL Arenillas 63.60 317 IAmb IAmb 03 16 19.7
comp=Z,33nm,0.9s
BOAV Boa Vista 64.36 340 *eP* **P** **03 16 14.6 -0.2**
PORT Chimborazo Vol 65.14 320 P **P** **03 16 20.3 -0.3**
PORT IAmb IAmb 03 16 41.8
comp=Z,23nm,0.8s
PTLC Puerto Leguiza 65.48 324 *eP* **P** **03 16 20.4 -1.7**
MDP Montagnes des 66.00 349 P **P** **03 16 24.6 -0.9**
comp=Z,24nm,0.7s,baz=182,slow=7.6,SNR=5.3
MDP LR LR 03 43 57.9
comp=Z,306nm,21.6s,baz=171,slow=35
comp=Z,24nm,0.7s
OTAV Otavalo 66.64 321 P **P** **03 16 30.7 +0.6**
OTAV Otavalo 66.64 321 P **P** **03 16 30.7 +0.6**
OTAV pmax pmax
comp=Z,70nm,1.2s
OTAV Otavalo 66.64 321 *eP* **P** **03 16 31.4 +1.2**
OTAV Otavalo 66.64 321 *eP* **P** **03 16 31.8 +1.6**
TULM Tulcn-Chalpat 66.89 321 P **P** **03 16 30.0 -1.8**
FLOC Florencia 67.07 324 *eP* **P** **03 16 33.2 +0.8**
MACC Macarena, Meta 67.09 326 *eP* **P** **03 16 32.3 -0.2**
CMBC Cumbal 67.11 321 *eP* **P** **03 16 35.6 +2.5**
GUVC San Jose del G 67.14 327 *eP* **P** **03 16 33.2 +0.4**
GCUF Volcan Galeras 67.23 322 *eP* **P** **03 16 35.6 +1.7**
LSZ Lusaka 67.46 81 LR LR 03 43 03.4
comp=Z,723nm,18.4s,baz=202,slow=33
LSZ Lusaka 67.46 81 P **P** **03 16 35.3 +0.3**
LSZ IAmb IAmb 03 16 50.5
comp=Z,41nm,1.2s
LSZ Lusaka 67.46 81 IAMs_20 IAMs_20 03 43 20.4
comp=Z,787nm,18.0s
LSZ Lusaka 67.46 81 P **P** **03 16 35.3 +0.3**
LSZ pmax pmax
comp=Z,41nm,1.2s
GARC Garzon, Huila 67.60 324 *eP* **P** **03 16 36.8 +0.8**
SOTA Rioblanco 67.87 323 *eP* **P** **03 16 39.3 +1.3**
BBAC Balboa, Cauca 67.96 322 *eP* **P** **03 16 39.2 +1.0**
PCON Cinco Dias 67.99 323 *eP* **P** **03 16 41.3 +2.5**
POPC Popayan, Colom 68.28 323 *eP* **P** **03 16 41.1 +0.8**
PTGC Puerto Gaitan, 68.60 328 *eP* **P** **03 16 41.7 -0.2**
PRAC Prado 68.88 325 *eP* **P** **03 16 44.4 +0.7**
VILC Villavicencio, 68.93 327 *eP* **P** **03 16 45.0 +0.8**
ORTC Ortega, Tolima 69.17 325 *eP* **P** **03 16 46.2 +0.7**
CHIC Chingaza 69.43 327 *eP* **P** **03 16 47.0 -0.6**
YOTC Yotoco, Valle 69.55 324 *eP* **P** **03 16 47.8 -0.2**
ANIL Santa Ana 69.76 325 *eP* **P** **03 16 49.5 -0.1**
ROSC El Rosal 69.80 326 P **P** **03 16 51.1 +1.3**
comp=Z,15nm,0.6s,baz=147,slow=8.0,SNR=12
ROSC LR LR 03 48 28.0
comp=Z,486nm,20.1s,baz=190,slow=37
comp=Z,15nm,0.6s
ROSC El Rosal 69.80 326 IAmb IAmb 03 16 52.7
comp=Z,17nm,0.7s
ROSC El Rosal 69.80 326 *eP* **P** **03 16 50.7 +0.9**
PLMC San Jos del P 70.41 324 *eP* **P** **03 16 53.9 +0.7**
GUY2C Guyana, Caldas 70.45 325 *eP* **P** **03 16 54.1 +0.2**
RUSC La Rusia 70.47 328 *eP* **P** **03 16 53.3 -0.8**
SPBC San Pablo de B 70.50 327 *eP* **P** **03 16 53.0 -0.8**
NORC Norcasia 70.64 326 *eP* **P** **03 16 53.0 -1.6**
BARC Barichara 71.17 328 *eP* **P** **03 16 56.3 -1.7**
CBOC Ciudad Bolivar 71.24 325 *eP* **P** **03 16 57.8 -0.6**
HELC Santa Helena 71.42 325 *eP* **P** **03 16 59.3 -0.4**
PTBC PUERTO BERRIO, 71.46 327 *eP* **P** **03 16 57.7 -1.7**
BRRC Barranca, Sant 71.80 327 *eP* **P** **03 16 59.6 -1.9**
BAUV El Baul 72.20 334 P **P** **03 17 03.8 -0.1**
DBBC Dabeiba 72.40 325 *eP* **P** **03 17 01.1 -4.1**
RPZ Rata Peaks 72.41 205 LR LR 03 46 19.4
comp=Z,664nm,19.6s,baz=147,slow=34
ZARC Zaragoza, Cauc 72.48 326 IAmb IAmb 03 17 06.0
comp=Z,26nm,0.9s
ZARC Zaragoza, Cauc 72.48 326 *eP* **P** **03 17 05.0 -0.6**
SDV Santo Domingo 72.73 331 P **P** **03 17 08.0 +0.6**
comp=Z,18nm,0.5s,baz=223,slow=4.6,SNR=7.1
SDV LR LR 03 52 25.6
comp=Z,392nm,18.8s,baz=176,slow=39
comp=Z,18nm,0.5s
SDV Santo Domingo 72.73 331 P **P** **03 17 07.0 -0.3**
SDV IAmb IAmb 03 17 25.3
comp=Z,21nm,0.8s
SDV Santo Domingo 72.73 331 IAMs_20 IAMs_20 03 47 45.0
comp=Z,1µm,22.0s
SDV Santo Domingo 72.73 331 *eP* **P** **03 17 08.2 +0.9**
LIC Lamto 72.91 40⇑ *eP* **P** **03 17 10.0 +1.8**
comp=Z,19nm,0.9s
KIC Kosan Boka 73.13 40⇑ *eP* **P** **03 17 08.2 -1.3**
comp=Z,7.6nm,0.7s
TIC Toumodi 73.31 39⇑ *eP* **P** **03 17 11.8 +1.3**
comp=Z,1.4nm,0.2s
DBIC Dimbokro 73.38 40 P **P** **03 17 11.2 +0.3**
comp=Z,8.6nm,1.1s,baz=204,slow=12,SNR=3.2
DBIC LR LR 03 43 21.2
comp=Z,306nm,19.4s,baz=204,slow=31
comp=Z,8.6nm,1.1s
DBIC Dimbokro 73.38 40 P **P** **03 17 10.6 -0.4**
DBIC Dimbokro 73.38 40 P **P** **03 17 10.6 -0.4**
DBIC pmax pmax
comp=Z,32nm,1.3s
OPO Ambohidratompo 73.97 99 LR LR 03 44 28.7
comp=Z,382nm,18.3s,baz=358,slow=32
AZU Azuero 74.34 321 *eP* **P** **03 17 17.4 +0.9**
ARGC Ariguani, Magd 74.57 328 *eP* **P** **03 17 18.2 +0.3**
SJCC San Jacinto, C 74.86 327 IAmb IAmb 03 17 35.6
comp=Z,44nm,1.0s
SJCC San Jacinto, C 74.86 327 *eP* **P** **03 17 19.5 -0.1**
BCIP Isla Barro Col 75.50 322 IAMs_20 IAMs_20 03 56 05.9
comp=Z,643nm,19.0s
HATO Hato, Curacao 75.53 333 IAMs_20 IAMs_20 03 51 18.4
comp=Z,852nm,21.0s
URZ Urewera 76.19 211 LR LR 03 46 58.9
comp=Z,596nm,19.6s,baz=211,slow=32
DRK0 Durika 76.66 319 IAmb IAmb 03 17 40.1
comp=Z,50nm,1.0s
SRBA San Rafael, Bu 76.67 319 P **P** **03 17 29.5 -0.6**
SRBA IAmb IAmb 03 17 44.7
comp=Z,34nm,1.4s
TBI Tubuai 77.73 244 *eLR* LR 03 41 37.6
comp=Z,2µm,26.0s
JTS Las Juntas de 78.19 317 P **P** **03 17 38.8 +0.4**
comp=Z,16nm,0.8s,baz=156,slow=1.7,SNR=15
comp=Z,16nm,0.8s
JTS Las Juntas de 78.19 317 P **P** **03 17 37.0 -1.4**
JTS IAmb IAmb 03 17 49.8
comp=Z,30nm,1.1s
JTS Las Juntas de 78.19 317 *c iP* **P** **03 17 39.3 +0.9**
JTS pmax pmax
comp=Z,35nm,1.6s
ORTG Ortega, Santa 78.42 317 IAmb IAmb 03 17 55.4
comp=Z,29nm,1.0s
SEUS St. Eustatius 79.56 340 IAMs_20 IAMs_20 03 57 26.4
comp=Z,808nm,21.0s
BOAB BOACO BROADBA 80.44 318 IAmb IAmb 03 17 51.6
comp=Z,47nm,0.9s
SJG San Juan 80.72 337 LR LR 03 54 42.9
comp=Z,170nm,21.0s,baz=167,slow=36
CUPR Culebra, Puert 80.75 338 IAmb IAmb 03 17 54.0
comp=Z,26nm,0.8s
MLPR Magueyes Islan 80.76 337 P **P** **03 17 51.9 -0.3**
MLPR IAmb IAmb 03 18 01.0
comp=Z,48nm,0.9s
CRPR Cabo Rojo, PR 80.81 337 IAmb IAmb 03 18 00.8
comp=Z,33nm,0.9s
MATN Matagalpa 80.98 317 IAmb IAmb 03 17 57.8
comp=Z,32nm,1.0s
MBAR Mbarara 81.42 76 LR LR 03 50 32.4
comp=Z,805nm,19.9s,baz=194,slow=33
TOA0 Torodi Ar. Sit 81.60 44 P **P** **03 17 57.0 +0.2**
TORD Torodi Ar. Bea 81.60 44 P **P** **03 17 57.2 +0.4**
comp=Z,19nm,1.1s,baz=206,slow=4.7,SNR=32
TORD LR LR 03 46 01.4
comp=Z,279nm,21.8s,baz=206,slow=30
comp=Z,19nm,1.1s
TORD Torodi Ar. Bea 81.60 44 P **P** **03 17 57.5 +0.6**
SDDR Presa de Saban 82.63 333 IAMs_20 IAMs_20 03 52 30.5
comp=Z,673nm,22.0s
PPT2 Papeete2 82.81 247 *e*LR LR 03 43 58.8
comp=Z,4µm,27.2s
PPT Papeete 82.83 247 LR LR 03 45 27.2
comp=Z,847nm,21.6s,baz=158,slow=29
RAO Raoul Island 83.25 218 LR LR 03 48 29.9
comp=Z,346nm,22.0s,baz=168,slow=31
MTO3 Montecristo 83.52 315 IAmb IAmb 03 18 27.0
comp=Z,22nm,0.8s
RAR Rarotonga 84.03 237 LR LR 03 53 24.2
comp=Z,422nm,18.0s,baz=135,slow=34
KMBO Kilima Mbogo 84.11 82 P **P** **03 18 11.1 +0.8**
comp=Z,1.6nm,0.7s,baz=263,slow=12,SNR=1.9
KMBO LR LR 03 51 38.0
comp=Z,735nm,21.6s,baz=192,slow=33
comp=Z,1.6nm,0.7s
KMBO Kilima Mbogo 84.11 82 P **P** **03 18 10.5 +0.2**
KMBO Kilima Mbogo 84.11 82 IAMs_20 IAMs_20 03 51 26.4
comp=Z,735nm,21.0s
KMBO Kilima Mbogo 84.11 82 P **P** **03 18 10.5 +0.2**
KMBO pmax pmax
comp=Z,26nm,1.8s
LODK Lodwar 87.14 78 P **P** **03 18 24.4 -0.8**
LODK IAMs_20 IAMs_20 03 54 29.9
comp=Z,550nm,19.0s
STKA Stephens Creek 87.75 184 P **P** **03 18 27.5 -0.4**
comp=Z,1.8nm,0.5s,baz=209,slow=13,SNR=2.0
STKA LR LR 03 55 28.6
comp=Z,679nm,21.6s,baz=170,slow=34
comp=Z,1.8nm,0.5s
STKA Stephens Creek 87.75 184 P **P** **03 18 27.8 -0.1**
STKA Stephens Creek 87.75 184 P **P** **03 18 27.8 -0.1**
STKA pmax pmax
comp=Z,9.0nm,1.6s
CMIG Matias Romero 87.99 311 P **P** **03 18 29.3 +0.3**
comp=Z,12nm,0.9s,baz=141,slow=3.0,SNR=8.4
CMIG LR LR 03 52 27.7
comp=Z,323nm,18.7s,baz=164,slow=32
comp=Z,12nm,0.9s
FURI Furi 93.50 78 IAMs_20 IAMs_20 03 57 48.4
comp=Z,571nm,19.0s
DZM Mont Dzumac 94.25 207 LR LR 03 56 51.0
comp=Z,917nm,20.4s,baz=180,slow=33
DZM Mont Dzumac 94.25 207 *e*LR LR 03 49 17.0
comp=Z,1µm,21.1s
MSVF Nonsavu 95.29 219 LR LR 03 54 45.7
comp=Z,528nm,21.7s,baz=170,slow=31
H08S1 Diego Garcia H 95.34 116 T T 05 05 38.8
baz=206,slow=76
H08S2 Diego Garcia H 95.35 116 T T 05 05 38.1
baz=206,slow=76
H08S3 Diego Garcia H 95.36 116 T T 05 05 35.5
baz=206,slow=76
AFI Afiamalu 95.37 229 LR LR 03 54 59.4
comp=Z,356nm,20.4s,baz=153,slow=31
ATD Arta Tunnel 97.79 80 LR LR 04 02 07.1
comp=Z,808nm,18.8s,baz=182,slow=35
MDT Midelt 98.21 32 LR LR 03 58 23.3
comp=Z,289nm,18.9s,baz=214,slow=32
CTA Charters Tower 99.23 189 LR LR 04 00 45.8
comp=Z,302nm,21.2s,baz=177,slow=33
WRA Warramunga Arr 99.67 177 P **Pdif** **03 19 21.3 -1.5**
comp=Z,0.6nm,0.8s,baz=177,slow=4.3,SNR=6.7
WRA LR LR 04 04 54.5
comp=Z,507nm,19.0s,baz=232,slow=36
comp=Z,0.6nm,0.8s
CNNC Cliffs of the 99.79 331 IAMs_20 IAMs_20 04 03 18.8
comp=Z,425nm,20.0s
BLA Blacksburg 102.28 330 IAMs_20 IAMs_20 04 04 06.6
comp=Z,537nm,21.0s
TXAR Lajitas Array 102.42 309 P **Pdif** **03 19 33.9 -0.8**
comp=Z,0.3nm,0.9s,baz=138,slow=7.1,SNR=3.0
ACSO Alum Creek Sta 105.78 329 IAMs_20 IAMs_20 04 05 54.2
comp=Z,365nm,19.0s
BINY Binghamton 106.03 335 IAMs_20 IAMs_20 04 00 27.2
comp=Z,377nm,19.0s
TRY Troy 106.07 337 IAMs_20 IAMs_20 04 06 50.4
comp=Z,581nm,21.0s
TUC Tucson 107.87 304 IAMs_20 IAMs_20 04 02 08.6
comp=Z,331nm,18.0s
HNR Honiara 107.88 204 IAMs_20 IAMs_20 04 14 17.4
comp=Z,541nm,20.0s
OGNE Ogallala 112.18 315 IAMs_20 IAMs_20 04 08 35.0
comp=Z,448nm,18.0s
CSS Mathiatis 113.51 60 IAMs_20 IAMs_20 04 07 52.7
comp=Z,369nm,21.0s
TUE Stuetta 114.81 37 IAMs_20 IAMs_20 04 08 29.4
comp=Z,463nm,20.0s
MYKOM Kota Tinggi 115.98 142 IAMs_20 IAMs_20 04 07 21.5
comp=Z,347nm,20.0s
NVAR Mina Array Bea 116.24 302 PKP **PKiKP** **03 24 23.0 +1.0**
comp=Z,0.2nm,0.5s,baz=176,slow=3.6,SNR=1.7
PDAR Pinedale Array 116.48 311 PKP **PKiKP** **03 24 23.0 +0.7**
comp=Z,0.3nm,0.6s,baz=101,slow=4.7,SNR=2.3
PDAR PP **PP** **03 25 31.5 +1.5**
comp=Z,0.6nm,0.8s,baz=152,slow=4.1,SNR=4.0
LUWI Luwuk 117.47 164 IAMs_20 IAMs_20 04 12 24.1
comp=Z,387nm,22.0s
IPM Ipoh 117.63 138 IAMs_20 IAMs_20 04 20 48.4
comp=Z,321nm,20.0s
GERES GERESS Array B 118.25 39 PKP **PKPdf** **03 24 24.4 -0.9**
comp=Z,0.3nm,0.7s,baz=124,slow=5.2,SNR=2.2
KULM Kulim 118.27 138 IAMs_20 IAMs_20 04 05 26.3
comp=Z,373nm,19.0s
CKRC Cesky Krumlov 118.41 39 *e*PS PS 03 35 30.8 +2.5
KHC Kasperske Hory 118.46 38 *e*PKKP 03 35 15.8
KHC AMS AMS 04 10 10.0
comp=Z,300nm,21.9s
SBUM Sibu 118.88 151 IAMs_20 IAMs_20 04 17 55.5
comp=Z,374nm,20.0s
NKC Novy Kostel 119.10 37 AMS AMS 04 08 30.0
comp=Z,300nm,21.5s
TREC Trest 119.20 40 AMS AMS 04 12 20.0
comp=Z,300nm,17.7s
PRU Pruhonice 119.51 39 *e*PS PS 03 35 42.5 +4.3
PRU AMS AMS 04 09 40.0
comp=Z,200nm,19.5s
PVCC Panska Ves 120.00 38 AMS AMS 04 13 10.0
comp=Z,200nm,18.1s
MAUC Maruska 120.01 41 AMS AMS 04 09 40.0
comp=Z,500nm,23.1s
CLL Collm 120.21 37 *e*PKPdf **PKiKP** **03 24 33.0 +4.1**
CLL *i* x x 03 24 37.9
CLL *i* x x 03 24 46.7
comp=Z,8.0nm,1.5s
CLL *e*PP **PP** **03 25 59.0 +3.6**
CLL *e*PS **PS** **03 35 50.0 +5.6**
CLL L L 04 11 00.0
comp=Z,200nm,19.9s
KRLC Kraliky 120.29 40 AMS AMS 04 11 30.0
comp=Z,200nm,19.8s
DPC Dobruska-Polom 120.38 40 *e*PS PS 03 35 41.3 -4.8
DPC AMS AMS 04 11 20.0
comp=Z,300nm,20.0s
UPC Upice 120.42 39 *e*PS PS 03 35 50.1 +3.7
UPC AMS AMS 04 13 30.0
comp=Z,200nm,18.4s
CHVC Chvalec 120.51 39 AMS AMS 04 10 30.0
comp=Z,200nm,21.6s
OKC Ostrava-Krasne 120.52 41 AMS AMS 04 12 00.0
comp=Z,200nm,23.3s
OSTC Ostas 120.53 39 *e*PKKP 03 36 00.3
OSTC AMS AMS 04 10 50.0
comp=Z,300nm,23.0s
BMO Blue Mountains 121.22 307 IAMs_20 IAMs_20 04 14 44.1
comp=Z,282nm,18.0s
SIM Simferopol' 122.21 55 *i* PKIKP PKPpre 03 24 16.0
SIM pmax pmax
comp=Z,19nm,0.8s
GNI Garni 122.83 66 IAMs_20 IAMs_20 04 16 21.6
comp=Z,391nm,20.0s
KIV Kislovodsk 124.99 61 *i* PKIKP **PKiKP** **03 24 40.5 +1.7**
KIV pmax pmax
comp=Z,3.0nm,1.0s
KIV MLR MLR
comp=Z,199nm,23.0s
AKASG Malin Array Be 125.06 48 PKP **PKPdf** **03 24 37.4 -0.8**
comp=Z,0.6nm,0.5s,baz=252,slow=0.8,SNR=4.6
AKASG PP **PP** **03 26 28.1 -0.1**
comp=Z,0.1nm,0.3s,baz=220,slow=7.1,SNR=5.1
AKBB Malin Array Si 125.06 48‖ *e*PKIKP **PKPdf** **03 24 37.5 -0.7**
KLNR Kaliningrad 125.26 39‖ *e*PKIKP **PKiKP** **03 24 39.3 +0.5**
MAK Makhachkala 126.33 66 *i* P **Pdif** **03 21 25.0 +4.5**
MAK *i* 03 24 38.3
MAK *e* 03 26 35.5
MAK *e* 03 31 39.7
MAK *e*SS SS 03 43 40.5 +0.3
MAK *e*SSS SSS 03 48 18.7
MAK pmax pmax
comp=Z,104nm,1.1s
NACGM Naroch 127.64 43‖ *e*PKIKP **PKiKP** **03 24 45.2 +1.7**
baz=215
NB2 NORSAR Subarra 128.24 30 PKPdf **PKiKP** **03 24 44.8 +0.2**
baz=211,slow=2.0
NB2 NORSAR Subarra 128.24 30 PKPdf **PKiKP** **03 24 44.8 +0.2**
comp=Z,16nm,1.7s,baz=211,slow=2.0
NOA NORSAR Array B 128.24 30 PKP **PKPdf** **03 24 43.5 -0.5**
comp=Z,1.0nm,0.9s,baz=213,slow=1.9,SNR=3.8
VORR Voronezh 129.63 53 *e*PKIKP **PKiKP** **03 24 47.9 +0.3**

VORR						pmax	pmax			
	comp=Z,40nm,0.4s									
CMAR	**Chiang Mai Arr**	**129.85**	**130**		PKP	**PKPdf**		**03 24 47.6**	**-0.8**	
	comp=Z,1.6nm,0.3s,baz=217,slow=4.4,SNR=1.3									
VSU	**Vasula**	**130.50**	**40**	⇓	*e*PKIKP	**PKPdf**		**03 24 48.6**	**+0.3**	
OBN	**Obninsk**	**131.27**	**49**	⇓	*e*PKIKP	**PKPdf**		**03 24 48.8**	**-1.0**	
OBN					pmax	pmax				
	comp=Z,6.0nm,0.9s									
FINES	**FINESS Array B**	**132.65**	**38**		PKP	**PKPdf**		**03 24 50.9**	**-1.4**	
	comp=Z,0.9nm,0.7s,baz=172,slow=3.9,SNR=4.3									
SUMG	**Summit**	**132.97**	**2**			**PKiKP**		**03 24 54.1**	**-0.2**	
SUMG					IAMs_20	IAMs_20		04 08 56.9		
	comp=Z,271nm,18.0s									
SUMG	**Summit**	**132.97**	**2**		PKIKP	**PKiKP**		**03 24 54.1**	**-0.2**	
QIZ	**Qiongzhong**	**134.09**	**143**		PKP	**PKPdf**		**03 24 56.5**	**+0.1**	
QIZ					PP	**PP**		**03 27 27.0**	**+0.3**	
QIZ					SS	SS		03 45 17.3	+2.5	
QIZ					LR	LR				
	comp=Z,230nm,18.8s									
QIZ					LR	LR				
	comp=Z,140nm,13.7s									
QIZ					LR	LR				
	comp=Z,230nm,18.9s									
KLMR	**Klimovskoe**	**136.57**	**45**		*e*PKIKP	**PKPdf**		**03 24 59.4**	**-0.2**	
KLMR					*e*			03 27 43.4		
KLMR					pmax	pmax				
	comp=Z,11nm,1.2s									
KLMR	**Klimovskoe**	**136.57**	**45**		*e*PKPdf	**PKPdf**		**03 24 59.5**	**-0.2**	
KLMR					AMP			03 25 17.0		
	comp=Z,11nm,1.2s									
KLMR					*e*PP	**PP**		**03 27 43.5**	**+0.9**	
AKTO	**Aktyubinsk**	**136.70**	**66**		PKP	**PKPdf**		**03 25 00.2**	**0.0**	
	comp=Z,0.4nm,0.4s,baz=159,slow=10.0,SNR=3.6									
KSH	**Kashi**	**137.27**	**91**		PKP	**PKPdf**		**03 25 00.9**	**-0.9**	
PZH	**PanZhiHua**	**138.21**	**129**		PKP	**PKiKP**		**03 25 05.6**	**-0.4**	
PZH					PP	**PP**		**03 27 54.9**	**+2.0**	
PZH					AMB	AMB				
	comp=Z,80nm,5.1s									
PZH					LR	LR				
	comp=Z,400nm,22.1s									
PZH					LR	LR				
	comp=Z,490nm,19.2s									
PZH					LR	LR				
	comp=Z,480nm,19.6s									
ARCES	**ARCESS Array B**	**138.62**	**30**		PKhKP	PKPpre		03 24 52.5		
	comp=Z,2.3nm,0.8s,baz=15,slow=5.0,SNR=5.9									
ARCES					PKP	**PKPdf**		**03 25 03.0**	**-0.2**	
	comp=Z,1.8nm,0.7s,baz=197,slow=2.8,SNR=6.2									
AAK	**Ala-Archa**	**138.91**	**87**	⇓	*i*PKIKP	**PKiKP**		**03 25 07.0**	**0.0**	
P33M	**Teslin, Yukon**	**138.96**	**310**		PKPdf	**PKiKP**		**03 25 05.5**	**-1.0**	
APA	**Apatity**	**139.31**	**35**	⇓	*i*PKIKP	**PKPdf**		**03 24 58.8**	**-5.7**	
APA					pmax	pmax				
	comp=Z,6.0nm,1.0s									
M31M	**Drury Creek, Y**	**140.83**	**312**		IAMs_20	IAMs_20		04 26 27.8		
	comp=Z,346nm,22.0s									
ARU	**Arti**	**141.00**	**60**	*i*	PKIKP	**PKPdf**		**03 25 08.3**	**+0.4**	
ARU								03 28 09.6		
ARU					SS	SS		03 46 36.8	-0.6	
ARU					MLR	MLR				
	comp=Z,276nm,19.0s									
CD2	**Chengdu**	**142.93**	**128**		PKP	**PKPdf**		**03 25 12.5**	**+0.2**	
WAX	**Waxell Ridge**	**143.00**	**306**		IAMs_20	IAMs_20		04 38 18.0		
	comp=Z,292nm,20.0s									
GOMU	**GeErMu**	**143.68**	**113**		PKP	**PKiKP**		**03 25 16.4**	**-0.9**	
GOMU					SS	SS		03 47 14.8	+5.5	
GOMU					LR	LR				
	comp=Z,88nm,18.2s									
GOMU					LR	LR				
	comp=Z,87nm,17.9s									
GOMU					LR	LR				
	comp=Z,83nm,18.4s									
M27K	**Edge Creek, AK**	**143.73**	**309**		IAMs_20	IAMs_20		04 28 37.4		
	comp=Z,308nm,19.0s									
BRVK	**Borovoye**	**144.10**	**71**		IAMs_20	IAMs_20		04 27 23.7		
	comp=Z,336nm,21.0s									
BRVK	**Borovoye**	**144.10**	**71**	⇑	*e*PKIKP	PKPbc		03 25 11.7	+0.1	
L27K	**Beaver Creek,**	**144.11**	**310**		IAMs_20	IAMs_20		04 30 29.4		
	comp=Z,306nm,21.0s									
INK	**Inuvik**	**144.13**	**321**		PKP	PKPbc		03 25 11.1	-0.1	
	comp=Z,15nm,0.8s,baz=114,slow=3.1,SNR=20									
ENH	**Enshi**	**144.45**	**136**		IAMs_20	IAMs_20		04 22 06.4		
	comp=Z,317nm,21.0s									
FID	**Port Fidalgo**	**144.64**	**304**		IAMs_20	IAMs_20		04 32 11.2		
	comp=Z,328nm,21.0s									
K27K	**Chicken**	**144.74**	**311**		P	**PKPdf**		**03 25 14.1**	**-0.2**	
	baz=123									
KLU	**Klutina**	**144.83**	**306**		IAMs_20	IAMs_20		04 29 07.3		
	comp=Z,298nm,21.0s									
KLU	**Klutina**	**144.83**	**306**		P	**PKPdf**		**03 25 14.4**	**-0.2**	
	baz=124,SNR=16									
GLI	**Glacier Island**	**144.96**	**304**		P	**PKPdf**		**03 25 14.5**	**-0.3**	
	baz=124,SNR=20									
HARP	**HAARP**	**145.02**	**307**		P	**PKPdf**		**03 25 14.6**	**-0.2**	
	baz=123									
M24K	**Tolsona, Glenn**	**145.26**	**307**		P	**PKPdf**		**03 25 15.9**	**+0.5**	
	baz=123,SNR=25									
SCRK	**Sand Creek**	**145.42**	**310**		IAMs_20	IAMs_20		04 31 32.1		
	comp=Z,340nm,21.0s									
SCRK	**Sand Creek**	**145.42**	**310**		P	**PKPab**		**03 25 16.1**	**+0.2**	
	baz=122,SNR=18									
PAX	**Paxson**	**145.45**	**308**		P	**PKPab**		**03 25 15.8**	**-0.2**	
	baz=122,SNR=69									
SEW	**Seward**	**145.50**	**302**		P	**PKPab**		**03 25 16.2**	**+0.1**	
	baz=124									
OHAK	**Old Harbor**	**145.51**	**296**			**PKiKP**		**03 25 17.6**	**-2.1**	
OHAK	**Old Harbor**	**145.51**	**296**		P	**PKPab**		**03 25 16.2**	**0.0**	
	baz=126									
SII	**Sitkinak Islan**	**145.53**	**294**		P	**PKPab**		**03 25 16.5**	**+0.1**	
	baz=126									
KDAK	**Kodiak Island**	**145.53**	**297**		PKPbc	**PKPab**		**03 25 15.8**	**-0.5**	
	comp=Z,5.6nm,0.6s,baz=257,slow=5.6,SNR=7.6									
KDAK	**Kodiak Island**	**145.53**	**297**			**PKPab**		**03 25 16.4**	**+0.1**	
KDAK	**Kodiak Island**	**145.53**	**297**		PKIKP	**PKPab**		**03 25 16.4**	**+0.1**	
KDAK	**Kodiak Island**	**145.53**	**297**		P	**PKPab**		**03 25 16.2**	**-0.1**	
	baz=125									
J26L	**Joseph Creek**	**145.54**	**311**		IAMs_20	IAMs_20		04 25 26.2		
	comp=Z,269nm,22.0s									
J26L	**Joseph Creek**	**145.54**	**311**		P	**PKPab**		**03 25 16.5**	**+0.2**	
	baz=121									
SCM	**Sheep Creek Mo**	**145.58**	**306**		P	**PKPab**		**03 25 16.7**	**+0.2**	
	baz=123,SNR=24									
MAKZ	**Makanchi**	**145.60**	**88**			**PKPdf**		**03 25 16.2**	**-0.2**	
MAKZ	**Makanchi**	**145.60**	**88**		PKIKP	**PKPdf**		**03 25 16.2**	**-0.2**	
RIDG	**Independent Ri**	**145.62**	**310**		P	**PKPab**		**03 25 16.8**	**+0.2**	
	baz=122,SNR=69									
M23K	**Glacier View**	**145.71**	**305**		P	**PKPab**		**03 25 16.5**	**-0.4**	
	baz=122,SNR=9.5									
MKAR	**Makanchi Array**	**145.75**	**88**		PKPbc	**PKPdf**		**03 25 16.3**	**-0.4**	
	comp=Z,12nm,0.7s,baz=228,slow=2.1,SNR=66									
MKAR	**Makanchi Array**	**145.75**	**88**			**PKPdf**		**03 25 16.6**	**0.0**	
MKAR	**Makanchi Array**	**145.75**	**88**		PKIKP	**PKPdf**		**03 25 16.6**	**0.0**	
I26K	**Coal Creek Min**	**145.80**	**313**		IAMs_20	IAMs_20		04 32 16.2		
	comp=Z,275nm,19.0s									
I26K	**Coal Creek Min**	**145.80**	**313**		P	**PKPab**		**03 25 16.8**	**-0.3**	
	baz=121									
KNK	**Knik Glacier**	**145.81**	**305**		P	**PKPab**		**03 25 17.1**	**-0.2**	
	baz=123									
O22K	**Cooper Landing**	**145.82**	**303**		IAMs_20	IAMs_20		04 31 25.5		
	comp=Z,235nm,20.0s									
BRSE	**Bradley Lake S**	**145.84**	**301**		P	**PKPab**		**03 25 17.2**	**-0.3**	
	baz=124									
Q20K	**Shuyak Island**	**145.92**	**298**		P	**PKPab**		**03 25 17.5**	**-0.2**	
	baz=124									
SML	**Sawmill**	**145.97**	**305**		IAMs_20	IAMs_20		04 30 14.4		
	comp=Z,294nm,22.0s									
SML	**Sawmill**	**145.97**	**305**		P	**PKPab**		**03 25 17.7**	**-0.2**	
	baz=122,SNR=13									
K24K	**Donnelly Dome**	**146.01**	**309**		P	**PKPab**		**03 25 17.8**	**-0.2**	
	baz=121,SNR=17									
WAT6	**Susitna Watana**	**146.14**	**307**		P	**PKPab**		**03 25 18.3**	**-0.4**	
	baz=122									
RC01	**Rabbit Creek A**	**146.15**	**303**		P	**PKPab**		**03 25 18.2**	**-0.3**	
	baz=122,SNR=5.2									
PMR	**Palmer**	**146.17**	**305**		P	**PKPab**		**03 25 18.4**	**-0.2**	
	baz=122									
HOM	**Homer**	**146.18**	**300**		P	**PKPab**		**03 25 18.3**	**-0.3**	
	baz=123									
DHY	**Denali Highway**	**146.25**	**308**		P	**PKPab**		**03 25 18.6**	**-0.5**	
	baz=121									
WHN	**Wuhan**	**146.26**	**143**		PKPbc	**PKPbc**		**03 25 18.3**	**-0.8**	
J25K	**Salcha River,**	**146.26**	**311**		P	**PKPab**		**03 25 18.9**	**-0.1**	
	baz=120,SNR=37									
WMQ	**Urumqi**	**146.27**	**97**	*e*	PKPbc	**PKPab**		**03 25 19.3**	**-0.4**	
WMQ					LR	LR				
	comp=Z,210nm,21.9s									
KURK	**Kurchatov**	**146.58**	**80**			**PKPbc**		**03 25 18.7**	**-0.7**	
KURK	**Kurchatov**	**146.58**	**80**		PKP2	**PKPbc**		**03 25 18.7**	**-0.7**	
WAT1	**Susitna Watana**	**146.59**	**307**		P	**PKPbc**		**03 25 19.0**	**-0.1**	
	baz=121									
Q19K	**Cape Douglas,**	**146.64**	**298**		IAMs_20	IAMs_20		04 25 48.0		
	comp=Z,320nm,20.0s									
Q19K	**Cape Douglas,**	**146.64**	**298**		P	**PKPbc**		**03 25 19.4**	**0.0**	
	baz=123									
M22K	**Willow**	**146.66**	**304**		P	**PKPab**		**03 25 19.6**	**-0.9**	
	baz=121,SNR=19									
SUA	**Susitna One**	**146.77**	**304**		P	**PKPab**		**03 25 20.2**	**-0.9**	
	baz=121,SNR=16									
O20K	**Slope Mountain**	**146.82**	**301**		P	**PKPbc**		**03 25 19.9**	**-0.1**	
	baz=122									
ILAR	**Eielson Array**	**146.91**	**310**		PKPbc	**PKPbc**		**03 25 20.2**	**+0.2**	
	comp=Z,12nm,0.8s,baz=156,slow=2.8,SNR=101									
RND	**Reindeer**	**146.99**	**307**		IAMs_20	IAMs_20		04 28 52.7		
	comp=Z,346nm,22.0s									
CUT	**Chulitna**	**147.06**	**305**		IAMs_20	IAMs_20		04 32 10.2		
	comp=Z,286nm,20.0s									
Q18K	**Katmai Hardscr**	**147.08**	**297**		P	**PKPbc**		**03 25 20.4**	**-0.3**	
	baz=123									
R17K	**Ugashik Creek**	**147.13**	**295**		P	**PKPbc**		**03 25 20.8**	**+0.1**	
	baz=124									
MCK	**McKinley**	**147.19**	**308**		IAMs_20	IAMs_20		04 33 24.8		
	comp=Z,261nm,20.0s									
MCK	**McKinley**	**147.19**	**308**		P	**PKPbc**		**03 25 21.0**	**+0.2**	
	baz=119									
POKR	**Poker Flat Res**	**147.28**	**311**		IAMs_20	IAMs_20		04 31 47.3		
	comp=Z,313nm,21.0s									
POKR	**Poker Flat Res**	**147.28**	**311**		P	**PKPbc**		**03 25 20.7**	**-0.4**	
	baz=118,SNR=7.2									
COLA	**College**	**147.32**	**310**			**PKPbc**		**03 25 20.7**	**-0.4**	
COLA	**College**	**147.32**	**310**		IAMs_20	IAMs_20		04 31 54.5		
	comp=Z,256nm,21.0s									
COLA	**College**	**147.32**	**310**		PKP2	**PKPbc**		**03 25 20.7**	**-0.4**	
COLA					MLR	MLR				
	comp=Z,300nm,21.0s									
TCOL	**CIGO, UAF Yank**	**147.33**	**310**		IAMs_20	IAMs_20		04 31 54.5		
	comp=Z,272nm,21.0s									
SKT	**Skwentna**	**147.35**	**304**		IAMs_20	IAMs_20		04 31 14.1		
	comp=Z,306nm,21.0s									
SKT	**Skwentna**	**147.35**	**304**		P	**PKPbc**		**03 25 21.4**	**+0.1**	
	baz=120,SNR=28									
LZH	**Lanzhou**	**147.50**	**124**	*e*	PKPbc	**PKPbc**		**03 25 23.0**	**+0.3**	
LZH					SS	SS		03 47 51.3	-0.9	
LZH					LR	LR				
	comp=Z,220nm,13.9s									
LZH					LR	LR				
	comp=Z,140nm,12.8s									
LZH					LR	LR				
	comp=Z,260nm,15.4s									
MDM	**Murphy Dome**	**147.51**	**310**		IAMs_20	IAMs_20		04 31 49.2		
	comp=Z,266nm,22.0s									
P18K	**Big Mountain,**	**147.57**	**298**		IAMs_20	IAMs_20		04 30 05.8		
	comp=Z,277nm,21.0s									
P18K	**Big Mountain,**	**147.57**	**298**		P	**PKPbc**		**03 25 21.4**	**-0.6**	
	baz=122									
TRF	**Thorofare Moun**	**147.58**	**307**		IAMs_20	IAMs_20		04 32 13.1		
	comp=Z,327nm,22.0s									
TRF	**Thorofare Moun**	**147.58**	**307**		P	**PKPbc**		**03 25 22.2**	**+0.1**	
	baz=119,SNR=10									
O19K	**Port Alsworth**	**147.60**	**300**		IAMs_20	IAMs_20		04 33 43.7		
	comp=Z,248nm,20.0s									
NEA2	**Nenana**	**147.65**	**309**		IAMs_20	IAMs_20		04 32 36.1		
	comp=Z,248nm,19.0s									
NEA2	**Nenana**	**147.65**	**309**		P	**PKPbc**		**03 25 21.9**	**-0.2**	
	baz=118,SNR=52									
XAN	**Xi'an**	**147.67**	**133**	⇓	*i*PKPbc	**PKPbc**		**03 25 22.0**	**-1.1**	
XAN					AMB	AMB				
	comp=Z,160nm,6.9s									
XAN					LR	LR				
	comp=Z,250nm,20.6s									
XAN					LR	LR				
	comp=Z,130nm,22.7s									
XAN					LR	LR				
	comp=Z,280nm,19.6s									
H24K	**Noodor Dome**	**147.78**	**312**		P	**PKPbc**		**03 25 22.5**	**+0.1**	
	baz=117									
O18K	**Koktuh Hills**	**147.81**	**299**		P	**PKPbc**		**03 25 22.5**	**-0.1**	
	baz=122									
S14K	**Fog Glacier**	**147.81**	**291**		P	**PKPbc**		**03 25 22.5**	**-0.3**	
	baz=124									
M20K	**Styx River**	**147.96**	**303**		IAMs_20	IAMs_20		04 34 21.1		
	comp=Z,338nm,22.0s									
M20K	**Styx River**	**147.96**	**303**		P	**PKPbc**		**03 25 22.6**	**-0.4**	
	baz=120									
N19K	**Bonanza Creek**	**147.99**	**301**		P	**PKPbc**		**03 25 22.6**	**-0.6**	
	baz=120									
P17K	**Kvichak River**	**148.00**	**297**		P	**PKPbc**		**03 25 23.1**	**+0.1**	
	baz=122									
I23K	**Minto, Yukon-K**	**148.02**	**310**		IAMs_20	IAMs_20		04 31 56.8		
	comp=Z,307nm,20.0s									
I23K	**Minto, Yukon-K**	**148.02**	**310**		P	**PKPbc**		**03 25 22.7**	**-0.2**	
	baz=117,SNR=14									
PPLA	**Purkeypile**	**148.07**	**305**		P	**PKPbc**		**03 25 23.0**	**-0.4**	
	baz=119,SNR=17									
BPAW	**Bear Paw Mtn.**	**148.16**	**308**		IAMs_20	IAMs_20		04 33 39.5		
	comp=Z,257nm,20.0s									
BPAW	**Bear Paw Mtn.**	**148.16**	**308**		P	**PKPbc**		**03 25 23.2**	**-0.3**	
	baz=118,SNR=44									
CAST	**Castle Rocks**	**148.28**	**306**		P	**PKPbc**		**03 25 23.3**	**-0.4**	
	baz=118,SNR=48									
H23K	**Iron River**	**148.39**	**311**		P	**PKPbc**		**03 25 23.9**	**-0.1**	
	baz=116									
MLY	**Manley**	**148.49**	**309**		P	**PKPbc**		**03 25 23.7**	**-0.6**	
	baz=116,SNR=17									
M19K	**Big River Lodg**	**148.49**	**303**		P	**PKPbc**		**03 25 24.0**	**-0.3**	
	baz=119									
N18K	**Kilae Creek**	**148.52**	**300**		PKPdf	**PKPdf**		**03 25 22.2**	**+1.4**	
N18K	**Kilae Creek**	**148.52**	**300**		P	**PKPbc**		**03 25 23.9**	**-0.6**	
	baz=120									
L20K	**Farewell, AK**	**148.56**	**304**		P	**PKPbc**		**03 25 23.5**	**-1.0**	
	baz=118,SNR=15									
GTA	**Gaotai**	**148.57**	**115**	⇑	PKPbc	**PKPbc**		**03 25 25.6**	**+0.2**	
GTA					LR	LR				
	comp=Z,130nm,20.4s									
GTA					LR	LR				
	comp=Z,210nm,20.7s									
GTA					LR	LR				
	comp=Z,210nm,22.9s									
CHUM	**Lake Minchumin**	**148.58**	**307**		P	**PKPbc**		**03 25 24.5**	**0.0**	
	baz=117,SNR=12									
O17K	**Koliganek Bris**	**148.58**	**298**		P	**PKPbc**		**03 25 24.2**	**-0.4**	
	baz=121									
L19K	**White Mountain**	**148.82**	**303**		P	**PKPbc**		**03 25 24.8**	**-0.4**	
	baz=118									
NJ2	**Nanjing**	**148.94**	**149**	*e*	PKPbc	**PKPdf**		**03 25 22.3**	**-0.1**	
I21K	**Tanana**	**149.03**	**309**		IAMs_20	IAMs_20		04 33 08.4		
	comp=Z,312nm,20.0s									
I21K	**Tanana**	**149.03**	**309**		P	**PKPbc**		**03 25 25.6**	**+0.1**	
	baz=116									
K20K	**Telida**	**149.04**	**305**		IAMs_20	IAMs_20		04 34 35.7		
	comp=Z,278nm,19.0s									
K20K	**Telida**	**149.04**	**305**		P	**PKPbc**		**03 25 25.6**	**-0.1**	
	baz=117,SNR=10									
COLD	**Coldfoot**	**149.22**	**313**		P	**PKiKP**		**03 25 26.8**	**-0.4**	
	baz=114									
LYN	**LuoYang**	**149.37**	**137**	*e*	PKPbc	**PKPbc**		**03 25 26.0**	**-1.4**	
LYN					SS	SS		03 48 14.8	+2.3	
LYN					LR	LR				
	comp=Z,510nm,21.1s									
LYN					LR	LR				
	comp=Z,390nm,20.1s									
J20K	**Nowinta River**	**149.44**	**307**		IAMs_20	IAMs_20		04 32 58.2		
	comp=Z,264nm,20.0s									
J20K	**Nowinta River**	**149.44**	**307**		P	**PKPbc**		**03 25 26.6**	**0.0**	
	baz=116									
D24K	**Happy Valley**	**149.47**	**317**		P	**PKPbc**		**03 25 26.6**	**+0.1**	
	baz=111									
TOLK	**Toolik Lake Re**	**149.54**	**316**		P	**PKiKP**		**03 25 27.3**	**-0.6**	
	baz=112									
H21K	**Melozitna Rive**	**149.54**	**310**		P	**PKiKP**		**03 25 27.3**	**-0.7**	
	baz=114									
TTA	**Tatalina**	**149.64**	**304**		P	**PKiKP**		**03 25 27.7**	**-0.6**	
	baz=117									
N16K	**Nishlik Lake**	**149.66**	**298**		P	**PKiKP**		**03 25 28.1**	**-0.2**	
	baz=119									
UNV	**Unalaska Valle**	**149.68**	**283**		P	**PKiKP**		**03 25 28.2**	**-0.3**	
	baz=126									
ZALV	**Zalesovo Beam**	**151.57**	**80**		PKPbc	**PKPbc**		**03 25 30.4**	**-1.6**	
	comp=Z,1.3nm,0.4s,baz=230,slow=3.7,SNR=4.8									
ZALV					PKPab	**PKPab**		**03 25 40.1**	**-0.6**	
	comp=Z,3.4nm,0.7s,baz=252,slow=2.6,SNR=7.0									
TIA	**Tai'an**	**152.37**	**143**		PKPbc	**PKPbc**		**03 25 33.4**	**-1.0**	
HNS	**HongShan**	**152.71**	**138**	*e*	PKPbc	**PKPbc**		**03 25 34.0**	**-1.1**	
HNS					PKPab	**PKPab**		**03 25 45.0**	**-0.9**	
HNS					SS	SS		03 48 55.3	+5.9	
HNS					LR	LR				
	comp=Z,190nm,20.7s									
HNS					LR	LR				
	comp=Z,96nm,16.7s									
HNS					LR	LR				
	comp=Z,220nm,21.6s									
BTO	**Baotou**	**153.86**	**128**	*e*	P	**PKPab**		**03 25 51.3**	**+0.4**	
ANM	**Nome**	**154.11**	**304**		IAMs_20	IAMs_20		04 34 08.6		
	comp=Z,308nm,21.0s									
HHC	**Hu-ho-hao-te**	**154.66**	**130**	*e*	PKPbc	**PKPdf**		**03 25 27.6**	**-3.3**	
BJT	**Baijiatuan**	**155.56**	**138**		IAMs_20	IAMs_20		04 29 37.2		
	comp=Z,216nm,21.0s									
MJAR	**Matsushiro Arr**	**155.88**	**182**		PKPab	**PKPab**		**03 25 58.2**	**-1.2**	
	comp=Z,1.9nm,0.8s,baz=155,slow=7.3,SNR=3.1									
KSRS	**Korea Array**	**156.05**	**161**		PKPab	**PKPab**		**03 25 59.0**	**-1.0**	
	comp=Z,1.8nm,0.9s,baz=218,slow=2.9,SNR=4.7									
SONM	**Songino Array**	**158.12**	**112**		PKPab	**PKPab**		**03 26 08.2**	**-0.8**	
	comp=Z,2.6nm,0.8s,baz=218,slow=4.8,SNR=11									
ULN	**Ulaanbaatar**	**158.44**	**113**		IAMs_20	IAMs_20		04 42 35.3		
	comp=Z,254nm,21.0s									
XLT	**XiLinHaoTe**	**158.97**	**133**	*e*	PKP	**PKPdf**		**03 25 37.3**	**+1.0**	
XLT					PP	**PP**		**03 29 54.3**	**+0.5**	
XLT					LR	LR				
	comp=Z,210nm,22.0s									
XLT					LR	LR				
	comp=Z,290nm,23.1s									
BILL	**Bilibino**	**165.55**	**313**	⇓	*e*PKP2	**PKPab**		**03 26 46.6**	**+5.8**	
BILL					pmax	pmax				
	comp=Z,11nm,1.1s									
ZEA	**Zeya**	**171.21**	**137**	*i*	PKIKP	**PKPdf**		**03 25 52.9**	**+6.7**	
ZEA					pmax	pmax				
	comp=E,10.0nm,0.3s									
ZEA					pmax	pmax				
	comp=Z,10.0nm,0.4s									

NEIC ***23*** *03:33:56.3±1.9,59.99N±0.07×56.1W±0.1,h11km±5km*
Error ellipse: s-maj=10.9km s-min=9.3km az=131.0
IDC ***23*** *03:33:58.3±0.8,59.94N×55.66W,h0km,mb3.7/9,*
mbtmp3.9/11,ML4.3/3,MS4.2/5,Error ellipse:
s-maj=21.8km s-min=15.3km az=157.0
OTT ***23*** *03:33:59.5±0.2,59.98N×56.01W,h18km,ML4.3/14,*
441km northeast from Nutak, NI LAlbertaRADOR Sea
Seismic Zone.
DNK ***23*** *03:34:05.2±3.5,60.31N×55.51W,h19km±105km,ML2.6*

ISC 23 03:33:56.1±0.5, 60.00N±0.05×56.37W±0.05, h10km, n76, σ2.5 70/79, mb3.6/7, MS4.4/5, Labrador Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
				Op		ISC	h	m	s	ISC
IVI	**Ivigtut**	**4.22**	**70**			**Pn**	**03**	**35**	**00.8**	**+0.4**
IVI	**Ivigtut**	**4.22**	**70**	*i*	P	**Pn**	**03**	**35**	**00.4**	**0.0**
IVI				*i*	S	**Sn**	**03**	**35**	**42.2**	**-7.4**
NANL	**Nain**	**4.46**	**221**		PN	**Pn**	**03**	**35**	**07.5**	**+3.7**
NANL					Trac		03	35	59.4	
	comp=Z,16nm,0.1s									
NUUK	**Nuuk**	**4.73**	**25**	*i*	P	**Pn**	**03**	**35**	**08.6**	**+1.3**
NUUK				*i*	S	**Sn**	**03**	**35**	**55.9**	**-6.3**
NUUK					IAML		03	35	58.4	
	comp=Z,53nm,0.3s									
NRS	**Narsarsuaq**	**5.52**	**73**			**Pn**	**03**	**35**	**18.7**	**+0.4**
NRS	**Narsarsuaq**	**5.52**	**73**	*i*	P	**Pn**	**03**	**35**	**19.0**	**+0.7**
NRS					IAML		03	36	27.9	
	comp=Z,26nm,0.4s									
FRB	**Frobisher Bay**	**6.87**	**308**		Pn	Pn	03	35	43.5	+6.7
	comp=Z,5.2nm,0.3s,baz=118,slow=12,SNR=32									
FRB					Sn	**Sn**	**03**	**36**	**57.3**	**+2.4

PKME				IAmb	IAmb	03 37 56.3			
	comp=Z,20nm,1.4s								
VIMO	**Victor Mine**	**16.67**	**257**	PN	**Pn**	**03 37 51.3**	**+1.7**		
VIMO				SN	**Sn**	**03 40 47.9**	**-6.6**		
VIMO				Trac		03 40 52.3			
	comp=Z,27nm,1.0s								
VLDQ	**Val d'Or**	**17.07**	**235**	Pn	**Pn**	**03 37 55.1**	**+0.5**		
VLDQ				IAmb	IAmb	03 37 57.1			
	comp=Z,9.3nm,0.6s								
TRQ	**Mont Tremblant**	**17.50**	**226**	P	**Pn**	**03 38 01.2**	**+1.0**		
I63A	**Otisfield**	**18.14**	**215**	Pn	**Pn**	**03 38 08.7**	**+0.8**		
I63A				IAmb	IAmb	03 38 26.7			
	comp=Z,17nm,1.1s								
LBNH	**Lisbon**	**18.37**	**218**	P	**Pn**	**03 38 11.3**	**+0.7**		
LBNH				IAmb	IAmb	03 38 42.1			
	comp=Z,30nm,1.4s								
FCC	**Fort Churchill**	**19.09**	**283**	PN	**Pn**	**03 38 23.9**	**+4.6**		
FCC				SN	Sn	03 41 45.3	-7.4		
RES	**Resolute Bay**	**20.29**	**331**	P	Pn	03 38 36.5	+3.0		
	comp=Z,3.5nm,0.9s,baz=142,slow=11,SNR=4.1								
RES				S	**S**	**03 42 12.7**	**-5.9**		
	comp=Z,3.3nm,1.0s,baz=33,slow=17,SNR=1.8								
	comp=Z,3.5nm,0.9s								
RES	**Resolute Bay**	**20.29**	**331**	PN	Pn	03 38 36.3	+2.7		
RES				SN	**S**	**03 42 13.3**	**-5.3**		
RES				Trac		03 42 46.2			
	comp=Z,55nm,1.9s								
SADO	**Sadowa**	**20.47**	**232**	P	Pn	03 38 38.7	+2.9		
	comp=Z,1.7nm,0.3s,baz=240,slow=7.2,SNR=3.1								
	comp=Z,1.7nm,0.3s								
SADO	**Sadowa**	**20.47**	**232**	P	**P**	**03 38 34.8**	**+1.1**		
SADO				IAmb	IAmb	03 38 40.8			
	comp=Z,13nm,1.3s								
ARCES	**ARCESS Array B**	**33.46**	**39**	P	**P**	**03 40 37.8**	**+3.0**		
	comp=Z,2.1nm,1.0s,baz=294,slow=8.8,SNR=1.4								
	comp=Z,2.1nm,1.0s								
ARCES	**ARCESS Array B**	**33.46**	**39**	P	**P**	**03 40 33.4**	**-1.4**		
PDAR	**Pinedale Array**	**36.23**	**266**	P	P	03 41 04.8	+5.6		
	comp=Z,0.6nm,0.7s,baz=53,slow=8.0,SNR=6.7								
	comp=Z,0.6nm,0.7s								
PDAR	**Pinedale Array**	**36.23**	**266**	P	**P**	**03 40 58.9**	**-0.3**		
ILAR	**Eielson Array**	**38.81**	**317**	P	P	03 41 27.5	+6.9		
	comp=Z,0.5nm,0.9s,baz=78,slow=9.3,SNR=4.4								
	comp=Z,0.5nm,0.9s								
ILAR	**Eielson Array**	**38.81**	**317**	P	**P**	**03 41 21.4**	**+0.8**		
NVAR	**Mina Array Bea**	**43.88**	**269**	P	P	03 42 09.8	+7.1		
	comp=Z,0.4nm,0.7s,baz=68,slow=5.3,SNR=2.2								
	comp=Z,0.4nm,0.7s								
NVAR	**Mina Array Bea**	**43.88**	**269**	P	**P**	**03 42 03.2**	**+0.5**		
TXAR	**Lajitas Array**	**44.03**	**247**	P	P	03 42 10.0	+6.2		
	comp=Z,0.8nm,0.8s,baz=57,slow=6.5,SNR=9.4								
TXAR				PcP	**PcP**	**03 43 53.8**	**+4.5**		
	comp=Z,0.2nm,0.5s,baz=47,slow=4.3,SNR=5.4								
TXAR				LR	LR	04 02 35.0			
	comp=Z,388nm,18.3s,baz=144,slow=39								
	comp=Z,0.8nm,0.8s								
TXAR	**Lajitas Array**	**44.03**	**247**	P	**P**	**03 42 05.5**	**+1.7**		
AKASG	**Malin Array Be**	**46.23**	**61**	P	**P**	**03 42 22.7**	**+1.8**		
	comp=Z,0.3nm,0.4s,baz=314,slow=7.7,SNR=5.1								
	comp=Z,0.3nm,0.4s								
PFO	**Pinyon Flats O**	**46.73**	**263**	LR	LR	04 01 53.1			
	comp=Z,146nm,19.0s,baz=156,slow=36								
TORD	**Torodi Ar. Bea**	**62.98**	**112**	P	**P**	**03 44 23.9**	**+1.0**		
	comp=Z,2.2nm,0.8s,baz=328,slow=7.2,SNR=22								
	comp=Z,2.2nm,0.8s								
TORD	**Torodi Ar. Bea**	**62.98**	**112**	P	**P**	**03 44 22.2**	**-0.7**		
TORD				IAmb	IAmb	03 44 24.8			
	comp=Z,1.8nm,0.9s								
GEYT	**Alibeck**	**68.62**	**51**	LR	LR	04 17 22.5			
	comp=Z,168nm,20.4s,baz=226,slow=38								
JCJ	**Chichijima**	**91.89**	**344**	LR	LR	04 29 22.3			
	comp=Z,123nm,19.0s,baz=204,slow=36								
JOW	**Kunigami**	**93.41**	**356**	LR	LR	04 30 14.3			
	comp=Z,133nm,21.9s,baz=146,slow=36								
WRA	**Warramunga Arr**	**139.26**	**344**	PKhKP	PKPpre	03 53 20.7			
	comp=Z,0.3nm,0.9s,baz=50,slow=51,SNR=2.1								
WRA				PKP	**PKiKP**	**03 53 25.8**	**+0.4**		
	comp=Z,0.5nm,0.9s,baz=4.5,slow=2.6,SNR=2.5								

IDC 23 03:54:35.2±422.0, **50°63N**×**46°23E**, **h0**km, **Error ellipse: s-maj=145.8km s-min=116.9km az=145.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I31KZ	**AKTYUBINSK INF**	**7.53**	**87**	*i*		04 38 20.0	
	baz=279,slow=315,SNR=1.2						
I43RU	**DUBNA INFRASON**	**8.11**	**322**	*i*		04 44 10.0	
	baz=135,slow=329,SNR=1.5						
I37NO	**I37NO**	**22.75**	**334**	*i*		06 16 00.0	
	baz=131,slow=320,SNR=2.8						

*GUC **23** 04:06:51.8±0.7, 20°.50S×69°.26W, h90km±3km, ML3.0*
*IDC **23** 04:06:54.7±1.9, 20°.07S×66°.40W, h0km, mb3.4/2, mbtmp3.4/3, ML2.8/1, Error ellipse: s-maj=53.6km s-min=28.8km az=77.0*
ISC 23 04:06:51.6±1.1, **20°.53S**±0°.03×**69°.39W**±0°.07, **h100**km, **n20, σ1§12/31, 7C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**0.45**	**29**	⇓*iP*	**Pn**	**04 07 05.7**	**-1.8**
PB08				*i* S	**Sn**	**04 07 16.7**	**-2.6**
PB08				IAML		04 07 17.6	
	comp=E,1μm,0.2s						
PB01	**IPOC Station P**	**0.52**	**190**	⇑*iP*	**Pn**	**04 07 06.6**	**-1.1**
PB01				*i* S	**Sn**	**04 07 18.5**	**-1.1**
PB01				IAML		04 07 18.9	
	comp=N,2μm,0.3s						
TA01	**Diego Aracena**	**0.74**	**267**	⇑*iP*	**Pn**	**04 07 09.0**	**-0.4**
TA01				IAML		04 07 23.7	
	comp=E,286nm,0.2s						
TA02	**Huaiquique**	**0.74**	**290**	*eP*	**Pn**	**04 07 09.1**	**-0.3**
TA02				*i* S	**Sn**	**04 07 22.5**	**-0.3**
TA02				IAML		04 07 25.8	
	comp=N,1μm,0.2s						
PATCX	**Punta Patache**	**0.77**	**248**	⇑*iP*	**Pn**	**04 07 09.6**	**-0.2**
PATCX				*i* S	**Sn**	**04 07 23.8**	**+0.3**
PATCX				IAML		04 07 24.9	
	comp=E,473nm,0.2s						
PB11	**IPOC Station P**	**0.81**	**342**	⇑*iP*	**Pn**	**04 07 09.4**	**-0.9**
PB11				*i* S	**Sn**	**04 07 23.3**	**-0.9**
PB11				IAML		04 07 24.5	
	comp=E,2μm,0.7s						
GO01	**Chusmiza**	**0.88**	**12**	⇓*iP*	**Pn**	**04 07 10.2**	**-1.2**
GO01				*i* S	**Sn**	**04 07 24.4**	**-1.6**
PB02	**IPOC Station P**	**0.92**	**211**	⇑*iP*	**Pn**	**04 07 11.1**	**-0.1**
PB02				*i* S	**Sn**	**04 07 26.3**	**+0.3**
PB02				IAML		04 07 27.6	
	comp=N,2μm,0.3s						
PB09	**IPOC Station P**	**1.26**	**174**	⇑*iP*	**Pn**	**04 07 14.8**	**-0.4**
PB09				*i* S	**Sn**	**04 07 33.2**	**+0.2**
PB09				IAML		04 07 35.3	
	comp=E,227nm,0.5s						
PB07	**IPOC Station P**	**1.27**	**201**	⇑*iP*	**Pn**	**04 07 15.2**	**-0.2**
PB07				*i* S	**Sn**	**04 07 33.1**	**-0.2**
PB07				IAML		04 07 36.9	
	comp=E,257nm,0.2s						
PB04	**IPOC Station P**	**1.93**	**201**	*eP*	**Pn**	**04 07 24.1**	**+0.7**
PB04				IAML		04 07 56.8	
	comp=E,110nm,0.3s						
PB12	**IPOC Station P**	**2.10**	**335**	*eP*	**Pn**	**04 07 25.2**	**-0.4**
PB12				*i* S	**Sn**	**04 07 50.9**	**-0.7**
PB12				IAML		04 07 56.1	
	comp=E,159nm,0.4s						
LVC	**Limon Verde**	**2.11**	**168**	*eP*	**Pn**	**04 07 26.0**	**0.0**
LVC				*i* S	**Sn**	**04 07 52.7**	**+0.4**
PB06	**IPOC Station P**	**2.17**	**184**	*eP*	**Pn**	**04 07 26.1**	**-0.4**
PB06				IAML		04 07 60.0	
	comp=N,103nm,0.5s						
PB16	**IPOC Station P**	**2.19**	**357**	*eP*	**Pn**	**04 07 28.0**	**+0.7**
PB16				*i* S	**Sn**	**04 07 54.7**	**+0.3**
PB16				IAML		04 08 00.2	
	comp=E,60nm,0.3s						
AF01	**San Pedro de A**	**2.66**	**155**	IAML		04 08 29.9	
	comp=E,67nm,0.5s						
PB15	**IPOC Station P**	**2.66**	**182**	*eP*	**Pn**	**04 07 33.5**	**+0.5**
LPAZ	**La Paz**	**4.39**	**16**	Pn	**Pn**	**04 07 59.2**	**+2.6**
	comp=E,0.4nm,0.3s,baz=158,slow=6.4,SNR=18						
LPAZ				Sn	**Sn**	**04 08 49.6**	**+2.6**
	comp=E,0.1nm,0.3s,baz=162,slow=7.0,SNR=4.4						
	comp=E,1.2nm,0.4s						
PLCA	**Paso Flores**	**20.16**	**183**	P	Pn	04 11 38.8	+18
	comp=E,2.1nm,1.0s,baz=301,slow=11,SNR=2.0						
	comp=E,2.1nm,1.0s						
TORD	**Torodi Ar. Bea**	**77.46**	**71**	P	**P**	**04 18 36.5**	**0.0**
	comp=E,0.2nm,0.4s,baz=254,slow=5.9,SNR=4.3						
	comp=E,0.2nm,0.4s						

*CNRM **23** 04:14:15.4, 37°.33N×0°.20W, h0km, ml2.9*
*MDD **23** 04:14:15.3±0.5, 37°.90N×0°.31W, h11km, mb_Lg2.4/13, Error ellipse: s-maj=4.8km s-min=2.2km az=141.0*
*SFS **23** 04:14:15.0, 37°.89N×0°.26W, h11km, ML2.2, MEDITERRANEO CABO DE PALOS*
ISC 23 04:14:13.3±1.5, **37°.85N**±0°.04×**0°.29W**±0°.04, **h18**km±8km, **n22, σ1§42/44, Spain**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETRV	**Los Montesinos**	**0.41**	**295**	Pg	**Pb**	**04 14 23.0**	**+1.0**
ETRV				Sg	**Sb**	**04 14 28.0**	**0.0**
CART	**Cartagena**	**0.62**	**245**	P	**Pn**	**04 14 26.9**	**-0.4**
CART				S	**Sn**	**04 14 35.9**	**-0.9**
CART	**Cartagena**	**0.62**	**245**	P	**Pn**	**04 14 27.8**	**+0.5**
CART				S	**Sn**	**04 14 38.1**	**+1.3**
EMUR	**La Murta**	**0.75**	**270**	Pg	**Pg**	**04 14 28.7**	**+0.7**
EMUR				Sg	**Sg**	**04 14 38.7**	**+0.6**
EMUR				*i* Vmb_Lg		04 14 43.0	
AFON	**Font Roja**	**0.84**	**346**	Pg	**Pb**	**04 14 29.7**	**+0.3**
AFON				Sg	**Sb**	**04 14 40.2**	**-0.3**
AFON				*i* Vmb_Lg		04 14 46.1	
EZAR	**Zarzadilla de**	**1.11**	**272**	Pg	**Pn**	**04 14 34.5**	**+0.3**
EZAR				Sg	**Sg**	**04 14 50.3**	**+0.9**
ETOB	**Tobarra**	**1.27**	**309**	Pg	**Pb**	**04 14 37.2**	**+0.4**
ETOB				Sg	**Sb**	**04 14 52.8**	**0.0**
ETOB				*i* Vmb_Lg		04 15 00.4	
EIBI	**Ibiza**	**1.74**	**47**	Pn	**Pn**	**04 14 43.4**	**+0.7**
EIBI				Sn	**Sn**	**04 15 04.2**	**-0.3**
EIBI				*i* Vmb_Lg		04 15 06.2	
ECHE	**Chera**	**1.82**	**343**	Pn	**Pn**	**04 14 44.7**	**+0.9**
ECHE				Pg	**Pb**	**04 14 47.2**	**+1.1**
ECHE				Sn	**Sn**	**04 15 05.2**	**-1.2**
ECHE				*i* Vmb_Lg		04 15 10.3	
ECOL	**Islas Columbre**	**2.18**	**20**	Pn	**Pn**	**04 14 49.0**	**+0.2**
ECOL				Sn	**Sn**	**04 15 15.4**	**+0.1**
EQES	**Quesada**	**2.20**	**270**	Pn	**Pn**	**04 14 50.3**	**+1.2**
EQES				Sn	**Sn**	**04 15 17.9**	**+1.8**
EQES				*i* Vmb_Lg		04 15 22.9	
EBER	**Berja**	**2.28**	**246**	Pn	**Pb**	**04 14 53.1**	**-1.0**
EBER				*i* Vmb_Lg		04 15 36.2	
EMOS	**Mosqueruela**	**2.52**	**357**	Pn	**Pn**	**04 14 55.0**	**+1.5**
EMOS				Sn	**Sn**	**04 15 23.1**	**-0.8**
EMOS				*i* Vmb_Lg		04 15 28.8	
EQUE	**Quentar**	**2.58**	**257**	Pn	**Pn**	**04 14 56.8**	**+2.4**
EQUE				Sn	**Sn**	**04 15 27.8**	**+2.3**
EQUE				*i* Vmb_Lg		04 15 34.9	
ELGU	**Los Guajares,**	**2.83**	**251**	Pn	**Pn**	**04 15 00.0**	**+2.2**
ELGU				*i* Vmb_Lg		04 15 45.0	
ETOS	**Mallorca**	**3.09**	**51**	Pn	**Pn**	**04 15 02.5**	**+1.2**
ETOS				Sn	**Sn**	**04 15 38.1**	**+0.3**
ETOR	**Torete**	**3.27**	**336**	Pg	**Pg**	**04 15 14.7**	**-1.2**
ETOR				Sn	**Sn**	**04 15 41.2**	**-1.1**
ETOR				Sg	**Sg**	**04 15 56.6**	**-1.7**
ETOR				*i* Vmb_Lg		04 16 09.3	
UCM	**Universidad Co**	**3.36**	**318**	P	**Pg**	**04 15 18.3**	**+0.5**
UCM				S	**Sb**	**04 15 54.8**	**+1.7**
GOG	**Mont Gurugu**	**3.41**	**221**	P	**Pn**	**04 15 07.6**	**+1.9**
GOG				S	**Sn**	**04 15 45.4**	**-0.4**
JBK	**JBK**	**3.96**	**208**	P	**Pn**	**04 15 14.6**	**+1.1**
JBK				S	**Sn**	**04 15 56.9**	**-2.6**
ECAB	**El Cabril**	**4.06**	**275**	Pn	**Pn**	**04 15 14.2**	**-0.5**
ECAB				Sn	**Sn**	**04 15 59.2**	**-2.5**
ECAB				Sg	**Sg**	**04 16 20.7**	**-2.9**
ECAB				*i* Vmb_Lg		04 16 26.7	
MDT	**Midelt**	**6.14**	**216**	P	**Pn**	**04 15 40.3**	**-3.0**

*IDC **23** 04:14:55.7±1.7, 36°.24N×28°.61E, h0km, mb3.6/2, mbtmp3.5/3, ML2.8/1, Error ellipse: s-maj=190.8km s-min=22.9km az=141.0*
*ATH **23** 04:15:01.2, 36°.28N×27°.83E, h132km±4km, ML3.3/4, Error ellipse: s-maj=7.3km s-min=3.0km az=95.0*
*NIC **23** 04:15:01.4±0.0, 36°.00N×28°.79E, h16km±2km, Ml3.8/3*
*ISK **23** 04:15:02.8, 36°.20N×28°.68E, h46km±2km, ML3.3/26*
*HLW **23** 04:15:03.9, 35°.77N×28°.74E, h10km±19km, Md3.7*
*DDA **23** 04:15:04.8±0.0, 36°.54N×28°.56E, h49km±1km, MW3.4*
*THE **23** 04:15:06.0, 36°.31N×28°.58E, h26km±6km, ML3.5/1, Error ellipse: s-maj=7.2km s-min=1.1km az=154.0*
*GII **23** 04:15:07.2±0.4, 35°.74N×29°.08E, h40km, Mm3.4/4*
ISC 23 04:15:01.5±0.9, **36°.12N**±0°.03×**28°.74E**±0°.03, **h52**km±9km, **n92, σ1§94/128, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.50**	**282**	P	**Pn**	**04 15 13.9**	**+0.9**
ARG				S	**Sn**	**04 15 20.6**	**-0.5**
ARG	**Arkhangelos**	**0.50**	**282**	PG	**Pn**	**04 15 13.8**	**+0.9**
ARG				SG	**Sn**	**04 15 21.4**	**+0.3**
ARG	**Arkhangelos**	**0.50**	**282**	P	**Pn**	**04 15 13.8**	**+0.9**
ARG				S	**Sn**	**04 15 21.8**	**+0.7**
FETY	**Fethiye**	**0.59**	**28**	PG	**Pn**	**04 15 14.2**	**+0.2**
FETY				SG	**Sn**	**04 15 23.6**	**+0.6**
FETY	**Fethiye**	**0.59**	**28**	P	**Pn**	**04 15 16.7**	**+2.7**
FETY				S	**Sn**	**04 15 23.9**	**+0.9**
DALY	**Dalyan (Mula)**	**0.70**	**355**	PG	**Pn**	**04 15 15.8**	**+0.5**
DALY				SG	**Sn**	**04 15 25.5**	**+0.1**
AKAS	**Kas**	**0.71**	**80**	PG	**Pn**	**04 15 17.3**	**+1.7**
AKAS				SG	**Sn**	**04 15 28.3**	**+2.4**
TURN	**Turunc**	**0.77**	**329**	PG	**Pn**	**04 15 16.9**	**+0.7**
TURN				SG	**Sn**	**04 15 26.5**	**-0.4**
CAME	**Cameli-Denizli**	**0.94**	**29**	PG	**Pn**	**04 15 19.6**	**+0.9**
YER	**Yerkesik**	**1.08**	**340**	P	**Pn**	**04 15 21.5**	**+1.1**
YER				S	**Sn**	**04 15 32.2**	**-2.2**
YER	**Yerkesik**	**1.08**	**340**	PG	**Pn**	**04 15 21.6**	**+1.1**
CAEL	**Denizli, Camel**	**1.11**	**25**	P	**Pn**	**04 15 21.7**	**+0.8**
CAEL				S	**Sn**	**04 15 34.4**	**-0.9**
CAEL				*i* AML	AML	04 15 37.0	
	comp=E,1μm,0.7s						
CAEL				*i* AML	AML	04 15 46.0	
	comp=N,899nm,0.5s						
DAT	**Datca**	**1.12**	**304**	P	**Pn**	**04 15 21.8**	**+0.8**
DAT				S	**Sn**	**04 15 34.0**	**-1.3**
DAT	**Datca**	**1.12**	**304**	PG	**Pn**	**04 15 21.9**	**+1.0**
DAT	**Datca**	**1.12**	**304**	P	**Pn**	**04 15 21.7**	**+0.8**
DAT				S	**Sn**	**04 15 33.5**	**-1.9**
DAT				*i* AML	AML	04 15 37.0	
	comp=N,769nm,0.5s						
DAT				*i* AML	AML	04 15 37.0	
	comp=E,595nm,0.2s						
ELL	**Elmali**	**1.14**	**56**	PN	**Pn**	**04 15 23.2**	**+1.9**
ELL	**Elmali**	**1.14**	**56**	P	**Pn**	**04 15 23.2**	**+1.9**
ELL				S	**Sn**	**04 15 39.7**	**+3.8**
MULA	**Mugla, Merkez-**	**1.19**	**344**	P	**Pn**	**04 15 22.6**	**+0.8**
AKUM	**Antalya-Kumluc**	**1.32**	**81**	P	**Pn**	**04 15 25.4**	**+1.9**
NIS1	**Nisyros Isl.**	**1.35**	**292**	P	**Pn**	**04 15 24.7**	**+0.7**
NIS1				S	**Sn**	**04 15 40.7**	**-0.1**
NIS1				AML	AML	04 15 44.3	
	comp=N,4010μm,0.4s						
NIS1				AML	AML	04 15 50.5	
	comp=E,3508μm,0.4s						
NIS1	**Nisyros Isl.**	**1.35**	**292**	P	**Pn**	**04 15 25.0**	**+1.0**
NIS1				S	**Sn**	**04 15 40.1**	**-0.7**
	comp=E,2μm,0.3s						
NIS1	**Nisyros Isl.**	**1.35**	**292**	PN	**Pn**	**04 15 24.9**	**+1.0**
TAVA	**DENIZLI_Tavas**	**1.35**	**6**	P	**Pn**	**04 15 25.0**	**+0.9**
TAVA				S	**Sn**	**04 15 40.3**	**-0.8**
KARP	**Karpathos**	**1.40**	**247**	P	**Pn**	**04 15 26.4**	**+1.8**
KARP				AML	AML	04 15 46.5	
	comp=E,2179μm,0.2s						
KARP				AML	AML	04 15 47.2	
	comp=N,1781μm,0.2s						
KARP	**Karpathos**	**1.40**	**247**	PN	**Pn**	**04 15 26.7**	**+2.0**
KARP	**Karpathos**	**1.40**	**247**	P	**Pn**	**04 15 26.3**	**+1.6**
KARP				S	**Sn**	**04 15 44.2**	**+2.2**
MLSB	**Milas**	**1.41**	**327**	PN	**Pn**	**04 15 26.2**	**+1.4**
APMY	**Acipayam-Deniz**	**1.43**	**18**	PN	**Pn**	**04 15 26.2**	**+1.1**
APMY				SN	**Sn**	**04 15 43.1**	**+0.3**
BODT	**Bodrum**	**1.48**	**310**	P	**Pn**	**04 15 26.4**	**+0.6**
BODT				S	**Sn**	**04 15 42.8**	**-1.3**
BODT	**Bodrum**	**1.48**	**310**	PN	**Pn**	**04 15 26.4**	**+0.6**
KOSK	**Kos Island**	**1.55**	**295**	PN	**Pn**	**04 15 27.5**	**+0.8**
KORT	**Korkueli**	**1.57**	**55**	PN	**Pn**	**04 15 29.4**	**+2.3**
ANTB	**Antalya**	**1.73**	**63**	PN	**Pn**	**04 15 31.7**	**+2.5**

DDIM	**Aydin, Didim**	**1.80**	**319**	P	**Pn**	**04 15 29.1**	**-0.9**
DDIM				S	**Sn**	**04 15 48.3**	**-3.4**
DDIM				*i* AML	AML	04 15 52.0	
	comp=N,188nm,0.9s						
DDIM				*i* AML	AML	04 15 53.0	
	comp=N,223nm,0.5s						
BRDR	**BURDUR-Merkez**	**1.90**	**34**	P	**Pn**	**04 15 33.3**	**+1.7**
BRDR				S	**Sn**	**04 15 53.9**	**-0.5**
BRDR				*i* AML	AML	04 15 56.0	
	comp=N,193nm,0.3s						
BRDR				*i* AML	AML	04 15 56.0	
	comp=N,154nm,0.6s						
AYDB	**Zeytinkoy-Aydi**	**1.95**	**340**	PN	**Pn**	**04 15 32.3**	**0.0**
BCK	**Bucak**	**2.00**	**47**	PN	**Pn**	**04 15 35.9**	**+2.9**
BASM	**Basmaki-Afyon**	**2.08**	**30**	PN	**Pn**	**04 15 35.6**	**+1.5**
SMG	**Samos**	**2.20**	**317**	P	**Pn**	**04 15 35.9**	**+0.3**
SMG				AML	AML	04 16 01.4	
	comp=N,928μm,0.3s						
SMG				AML	AML	04 16 02.0	
	comp=E,1053μm,0.4s						
ISP	**Isparta**	**2.23**	**40**	PN	**Pn**	**04 15 38.0**	**+2.0**
SUTC	**Sutluce-Ispart**	**2.27**	**53**	PN	**Pn**	**04 15 38.9**	**+2.3**
ZKR	**Zakros**	**2.28**	**245**	PN	**Pn**	**04 15 39.1**	**+2.4**
ZKR	**Zakros**	**2.28**	**245**	P	**Pn**	**04 15 38.2**	**+1.5**
KULA	**Kula-Manisa**	**2.40**	**359**	PN	**Pn**	**04 15 38.4**	**+0.1**
USAK	**Uak-Merkez**	**2.60**	**5**	P	**Pn**	**04 15 38.7**	**-2.4**
USAK				S	**Sn**	**04 16 08.5**	**-3.1**
SANT	**Santorini**	**2.66**	**276**	PN	**Pn**	**04 15 42.8**	**+0.9**
APE	**Apeiranthos**	**2.75**	**291**	PN	**Pn**	**04 15 44.2**	**+1.1**
SEDI	**Konya, Seydise**	**2.77**	**60**	P	**Pn**	**04 15 44.9**	**+1.5**
ZEYE	**Izmir, Urla-Ze**	**2.77**	**321**	P	**Pn**	**04 15 42.1**	**-1.2**
ZEYE				S	**Sn**	**04 16 09.4**	**-6.2**
ZEYE				*i* AML	AML	04 16 14.0	
	comp=E,101nm,0.2s						
ZEYE				*i* AML	AML	04 16 15.0	
	comp=E,70nm,0.2s						
URLA	**Izmir**	**2.82**	**323**	PN	**Pn**	**04 15 44.4**	**+0.4**
GDZ	**Gediz**	**3.03**	**11**	P	**Pn**	**04 15 46.1**	**-0.9**
GDZ				*i* AML	AML	04 16 20.0	
	comp=E,35nm,0.2s						
GDZ				*i* AML	AML	04 16 20.0	
	comp=E,47nm,0.6s						
DOGA	**KONYA_Doganhis**	**3.07**	**49**	P	**Pn**	**04 15 48.6**	**+1.0**
DOGA				S	**Sn**	**04 16 23.0**	**-0.2**
CHOS	**Chios island**	**3.12**	**317**	P	**Pn**	**04 15 48.7**	**+0.5**
AKMS	**Akamas**	**3.13**	**109**	P	**Pn**	**04 15 49.2**	**+0.9**
AKMS				AML	AML	04 16 23.1	
	comp=E,1.0nm,0.7s						
AKMS				AML	AML	04 16 24.4	
	comp=E,1.5nm,0.6s						
IDI	**Anoyia**	**3.24**	**256**	P	**Pn**	**04 15 50.6**	**+0.8**
IDI				AML	AML	04 16 29.1	
	comp=N,217μm,0.5s						
IDI				AML	AML	04 16 29.4	
	comp=E,173μm,0.4s						
ALFC	**Alefka**	**3.29**	**106**	P	**Pn**	**04 15 51.0**	**+0.4**
ALFC				AML	AML	04 16 28.8	
	comp=E,0.7nm,0.1s						
ALFC				AML	AML	04 16 29.0	
	comp=E,0.6nm,0.1s						
OSC1	**CSNet OBS 1**	**3.34**	**141**	P	**Pn**	**04 15 51.7**	**+0.5**
STEP	**BALIKESIR_Sava**	**3.35**	**346**	P	**Pn**	**04 15 49.9**	**-1.5**
STEP				*i* AML	AML	04 16 49.0	
	comp=E,28nm,0.6s						
STEP				*i* AML	AML	04 16 56.0	
	comp=E,22nm,0.9s						
NATA	**Nata**	**3.40**	**112**	P	**Pn**	**04 15 53.2**	**+1.2**
NATA				AML	AML	04 16 32.9	
	comp=E,2.4nm,0.3s						
NATA				AML	AML	04 16 34.0	
	comp=E,2.0nm,0.4s						
SZAC	**Souni**	**3.65**	**111**	P	**Pn**	**04 15 56.6**	**+1.1**
ASGA	**Asgata**	**3.92**	**108**	P	**Pn**	**04 16 00.1**	**+1.0**
CSS	**Mathiatis**	**3.92**	**106**	P	**Pn**	**04 16 00.4**	**+1.2**
BAYC	**CANAKKALE_Bayr**	**4.01**	**335**	P	**Pn**	**04 15 58.8**	**-1.6**
BAYC				S	**Sn**	**04 16 40.4**	**-5.8**
BAYC				*i* AML	AML	04 16 45.0	
	comp=E,12nm,0.7s						
BAYC				*i* AML	AML	04 16 48.0	
	comp=E,13nm,0.2s						
OSC2	**CSNet OBS 4**	**4.21**	**135**	P	**Pn**	**04 16 03.8**	**+0.8**
ANKY	**Antikythira Is**	**4.41**	**268**	P	**Pn**	**04 16 06.6**	**+0.7**
KTHR	**Kythira**	**4.64**	**273**	P	**Pn**	**04 16 10.2**	**+1.2**
VLI	**Veliai**	**4.71**	**279**	P	**Pn**	**04 16 11.5**	**+1.4**
BRTR	**Keskin Array B**	**5.29**	**46**	Pn	**Pn**	**04 16 18.9**	**+0.8**
	comp=E,0.3nm,0.3s,baz=233,slow=12,SNR=8

	baz=305							
NACB	**Ninganchiao**	**0.98**	**288**	P		**Pb**	**04 22 43.0**	**-0.1**
	baz=288							
NACB				S		**Sb**	**04 22 55.5**	**-0.1**
	baz=288							
TWC	**Suao**	**1.01**	**317**	*i* P		**Pb**	**04 22 43.6**	**-0.1**
	baz=316							
TWC				*e*S		**Sb**	**04 22 56.4**	**-0.1**
	baz=316							
ETM	**Tongmen**	**1.03**	**275**	P		**Pb**	**04 22 43.8**	**-0.2**
	baz=275							
ETM				S		**Sb**	**04 22 57.1**	**+0.1**
	baz=275							
ETLH	**Xiulin Townshi**	**1.08**	**288**	P		**Pb**	**04 22 44.5**	**-0.4**
	baz=287							
ETLH				*e*S		**Sb**	**04 22 58.5**	**-0.3**
	baz=287							
HATJ	**Hateruma jima**	**1.11**	**80**	P		**Pb**	**04 22 45.4**	**+0.1**
HATJ				*e*S		**Sb**	**04 23 00.1**	**+0.8**
NDS	**Dongshan**	**1.11**	**313**	P		**Pb**	**04 22 45.9**	**+0.5**
	baz=312							
NDS				*e*S		**Sb**	**04 23 01.9**	**+2.4**
	baz=312							
IRIF	**Iriomote-Funau**	**1.12**	**66**	*e*P		**Pb**	**04 22 45.6**	**0.0**
IRIF				*e*S		**Sn**	**04 22 59.7**	**+0.4**
LATG	**Datong**	**1.19**	**304**	P		**Pb**	**04 22 46.4**	**-0.4**
	baz=303							
NTC	**Toucheng**	**1.21**	**324**	P		**Pb**	**04 22 47.0**	**-0.1**
	baz=323							
NTC				S		**Sb**	**04 23 02.9**	**+0.7**
	baz=323							
EHY	**Hungye**	**1.24**	**253**	*i* P		**Pb**	**04 22 47.2**	**-0.3**
	baz=252							
EHY				*i* S		**Sb**	**04 23 03.2**	**+0.1**
	baz=252							
NNSH	**Datong**	**1.25**	**296**	P		**Pb**	**04 22 47.4**	**-0.4**
	baz=296							
NNSH				*e*S		**Sb**	**04 23 02.9**	**-0.7**
	baz=296							
WHF	**Hehuan Shan**	**1.26**	**283**	P		**Pb**	**04 22 47.7**	**-0.4**
	baz=282							
WHF				S		**Sb**	**04 23 03.4**	**-0.8**
	baz=282							
YULB	**Yu-li**	**1.30**	**249**	P		**Pb**	**04 22 48.4**	**-0.1**
	baz=248							
YULB				S		**Sb**	**04 23 04.6**	**-0.2**
	baz=248							
FUSS	**Fushou**	**1.30**	**287**	P		**Pb**	**04 22 48.4**	**-0.4**
	baz=286							
FUSS				S		**Sb**	**04 23 04.7**	**-0.6**
	baz=286							
TIPB	**Shuangxi**	**1.31**	**327**	*e*P		**Pb**	**04 22 49.2**	**+0.5**
	baz=326							
TWF1	**Yuli**	**1.31**	**247**	P		**Pb**	**04 22 48.9**	**+0.1**
	baz=246							
TWF1				S		**Sb**	**04 23 05.4**	**+0.2**
	baz=246							
OWD	**Renai**	**1.32**	**274**	P		**Pb**	**04 22 48.6**	**-0.4**
	baz=273							
OWD				*e*S		**Sb**	**04 23 04.1**	**-1.3**
	baz=273							
CHGB	**Renai**	**1.33**	**278**	P		**Pb**	**04 22 48.8**	**-0.4**
	baz=278							
CHGB				S		**Sb**	**04 23 05.2**	**-0.6**
	baz=278							
JKRS	**Kuro-shima**	**1.33**	**74**	*e*P		**Pb**	**04 22 49.0**	**-0.1**
JKRS				*e*S		**Sb**	**04 23 06.0**	**+0.3**
VWDT	**VWDT**	**1.35**	**265**	P		**Pb**	**04 22 49.2**	**-0.2**
	baz=265							
VWDT				S		**Sb**	**04 23 06.0**	**-0.3**
	baz=265							
NWLT	**Wulai**	**1.35**	**312**	P		**Pb**	**04 22 49.6**	**+0.1**
	baz=311							
NWLT				*e*S		**Sb**	**04 23 06.8**	**+0.4**
	baz=311							
WUSB	**Renai**	**1.37**	**275**	P		**Pb**	**04 22 49.6**	**-0.3**
	baz=275							
WUSB				*e*S		**Sb**	**04 23 05.9**	**-1.1**
	baz=275							
YHNB	**Yeheng**	**1.38**	**305**	*i* P		**Pb**	**04 22 49.3**	**-0.6**
	baz=305							
SXI1	**Grass Mountain**	**1.39**	**331**	*e*P		**Pn**	**04 22 48.9**	**+0.4**
	baz=331							
NSK	**Sanguang**	**1.40**	**305**	*i* P		**Pb**	**04 22 49.4**	**-0.8**
	baz=305							
JIJ	**Ishigaki jima**	**1.48**	**70**	*e*S		**Sn**	**04 23 07.8**	**-0.4**
LDUT	**Ludao**	**1.59**	**222**	P		**Pn**	**04 22 51.9**	**+0.7**
	baz=221							
LDUT				S		**Sn**	**04 23 10.5**	**-0.4**
	baz=221							
PCYT	**Pengchaiyu**	**1.82**	**344**	*e*P		**Pn**	**04 22 53.8**	**-0.5**
	baz=344							
PCYT				S		**Sn**	**04 23 17.1**	**+0.6**
	baz=344							
LYUB	**Lan-yu**	**2.09**	**207**	*e*S		**Sn**	**04 23 24.4**	**+1.1**
	baz=206							

*TUL **23** 04:38:10.4±1.3,36°.94N±0°.02×97°.71W±0°.03, h4km±6km, ML2.9, mb_Lg2.7/58(NEIC), Error ellipse: s-maj=3.1km s-min=2.3km az=61.0*
*ANF **23** 04:38:10.9±0.3,36°.93N×97°.69W, h5km, ML3.3/6, Error ellipse: s-maj=4.1km s-min=2.6km az=49.0*
NEIC 23 04:38:10.7±1.3,36°.90N±0°.02×97°.72W±0°.03, h5km±7km, Error ellipse: s-maj=3.1km s-min=2.6km az=74.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T35A	**Sooner Cattle**	**0.97**	**89**	Pg	Pg	04 38 28.6	-0.7
T35B	**Sooner Cattle**	**0.97**	**89**	P	Pg	04 38 28.5	-0.8
	baz=270,SNR=69						
T35B				S	Sg	04 38 41.1	-0.7
	baz=270						
OKCFA	**Oklahoma City**	**1.50**	**172**		Pn	04 38 38.5	+0.1
OKCFA	**Oklahoma City**	**1.50**	**172**	P	Pb	04 38 38.8	-0.3
	baz=352,SNR=8.6						
OKCFA				Sb	Sg	04 38 59.9	+0.9
	baz=352						
OKCSW	**OKLAHOMA CITY**	**1.51**	**171**		Pb	04 38 39.0	-0.2
FNO	**Franklin**	**1.66**	**171**		Pb	04 38 41.2	-0.6
R32A	**Long Quarter,**	**1.71**	**333**		Pn	04 38 41.3	+0.1
R32A	**Long Quarter,**	**1.71**	**333**	P	Pn	04 38 41.5	+0.3
	baz=152,SNR=44						
R32A				S	Sn	04 39 03.8	+0.3
	baz=152						
TUL1	**Leonard**	**1.84**	**122**		Pn	04 38 43.3	+0.2
TUL1				IAmb_Lg		04 39 12.0	
	comp=Z,35nm,1.0s						
TUL1	**Leonard**	**1.84**	**122**	P	Pn	04 38 43.8	+0.7
	baz=303,SNR=41						
TUL1				S	Sb	04 39 08.8	+0.5
	baz=303						
X34A	**Smith Ranch, M**	**2.30**	**182**		Pn	04 38 50.7	+1.4
X34A				IAmb_Lg		04 39 30.8	
	comp=Z,30nm,0.8s						
WMOK	**Wichita Mounta**	**2.33**	**202**		Pn	04 38 50.5	+0.8
KSU1	**Kansas State U**	**2.36**	**21**		Pn	04 38 50.2	0.0
KSU1				IAmb_Lg		04 39 24.2	
	comp=Z,24nm,0.7s						
KSU1	**Kansas State U**	**2.36**	**21**	P	Pn	04 38 50.3	+0.1
	baz=202						
CBKS	**Cedar Bluff**	**2.49**	**321**	Pn	Pn	04 38 51.3	-0.7
CBKS	**Cedar Bluff**	**2.49**	**321**	S	Sn	04 39 23.6	+0.9
	baz=139						
U38A	**Gravette**	**2.72**	**99**		Pn	04 38 56.0	+1.0
X37A	**Clayton**	**3.00**	**140**	Pn	Pn	04 39 00.0	+1.1
X37A				IAmb_Lg		04 39 51.2	
	comp=Z,25nm,0.9s						
HHAR	**Hobbs**	**3.10**	**100**		Pn	04 39 01.5	+1.1
S39A	**Bolivar**	**3.59**	**76**		Pn	04 39 07.3	+0.2
S39A	**Bolivar**	**3.59**	**76**	P	Pn	04 39 07.4	+0.3
	baz=259,SNR=16						
W39A	**Magazine**	**3.61**	**117**	IAmb_Lg		04 40 14.5	
	comp=Z,22nm,0.9s						
AMTX	**Amarillo**	**3.80**	**239**	Pn	Pn	04 39 09.1	-0.9
AMTX				IAmb_Lg		04 40 17.2	
	comp=Z,18nm,0.9s						
MIAR	**Mount Ida**	**4.11**	**124**	Pn	Pn	04 39 14.2	0.0
MIAR				IAmb_Lg		04 40 30.1	
	comp=Z,12nm,0.8s						
P38A	**Dawn**	**4.27**	**49**	Pn	Pn	04 39 17.4	+1.0
P38A				IAmb_Lg		04 40 31.1	
	comp=Z,13nm,0.7s						
N35A	**Tabor**	**4.27**	**22**	Pn	Pn	04 39 17.3	+0.9
MGMO	**Mountain Grove**	**4.37**	**85**		Pn	04 39 16.9	-0.8
MGMO				IAmb_Lg		04 40 32.5	
	comp=Z,14nm,0.7s						
KSCO	**Kaye Shedlock'**	**4.41**	**300**	Pn	Pn	04 39 17.7	-0.8
KSCO				IAmb_Lg		04 40 41.3	
	comp=Z,12nm,1.0s						
BGNE	**Belgrade**	**4.51**	**356**	Pn	Pn	04 39 19.1	-0.6
R40A	**Maddies Statio**	**4.54**	**71**	Pn	Pn	04 39 20.0	-0.1
WHAR	**Wooly Hollow**	**4.68**	**109**	Pn	Pn	04 39 22.7	+0.7
UALR	**University of**	**4.86**	**114**	IAmb_Lg		04 40 53.5	
	comp=Z,17nm,1.1s						
MSTX	**Muleshoe**	**5.06**	**236**	Pn	Pn	04 39 27.7	+0.4
L34A	**Svendsen Farm,**	**5.16**	**11**	IAmb_Lg		04 41 02.0	
	comp=Z,17nm,0.8s						
N38A	**Joes South For**	**5.23**	**41**	IAmb_Lg		04 41 01.8	
	comp=Z,14nm,0.8s						
OGNE	**Ogallala**	**5.25**	**321**	IAmb_Lg		04 41 02.6	
	comp=Z,14nm,0.7s						
CCM	**Cathedral Cave**	**5.28**	**75**	IAmb_Lg		04 41 03.5	
	comp=Z,11nm,0.9s						
T25A	**Trinidad**	**5.36**	**275**	Pn	Pn	04 39 30.8	-0.8
Z41A	**Richland Creek**	**5.43**	**131**	IAmb_Lg		04 41 17.8	
	comp=Z,9.6nm,0.8s						
K31A	**O'Neill**	**5.77**	**352**	IAmb_Lg		04 41 18.5	
	comp=Z,14nm,0.7s						
PBMO	**Poplar Bluff**	**5.85**	**89**	IAmb_Lg		04 41 27.3	
	comp=Z,9.2nm,0.8s						
FVM	**French Village**	**5.90**	**77**	IAmb_Lg		04 41 17.4	
	comp=Z,9.2nm,0.9s						
435B	**Jarrell**	**6.11**	**179**	IAmb_Lg		04 41 28.9	
	comp=Z,11nm,0.8s						
JCT	**Junction City**	**6.64**	**196**	IAmb_Lg		04 41 56.1	
	comp=Z,8.5nm,1.0s						
L40A	**Anamosa**	**7.19**	**42**	IAmb_Lg		04 42 03.2	
	comp=Z,8.9nm,0.8s						
N23A	**Red Feather La**	**7.55**	**304**	IAmb_Lg		04 42 20.0	
	comp=Z,9.8nm,0.8s						
JFWS	**Jewell Farm**	**8.30**	**41**	IAmb_Lg		04 42 34.6	
	comp=Z,8.0nm,0.7s						
RSSD	**Black Hills**	**8.66**	**328**	IAmb_Lg		04 42 54.8	
	comp=Z,5.5nm,1.1s						
I40A	**Norwalk**	**8.83**	**36**	IAmb_Lg		04 42 58.8	
	comp=Z,5.1nm,0.7s						
K22A	**Casper**	**8.88**	**313**	IAmb_Lg		04 43 05.9	
	comp=Z,5.5nm,0.8s						
I42A	**Draeger Farm,**	**9.68**	**41**	IAmb_Lg		04 43 23.1	
	comp=Z,5.3nm,0.9s						

*DDA **23** 04:50:50.8±0.0,38°.50N×44°.91E, h7km±2km, ML2.6*
*ISK **23** 04:50:56.8,38°.66N×44°.49E, h11km, ML2.8/5*
ISC 23 04:50:52.0±1.8,38°.49N±0°.04×44°.78E±0°.08, h10km±12km, n11,σ1§11/16, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OZAP	**Van, Ozalp-Mer**	**0.64**	**285**	P	**Pb**	**04 51 05.6**	**+0.2**
OZAP				S	**Sn**	**04 51 16.0**	**-1.7**
CLDR	**Caldiran**	**0.94**	**314**	PG	**Pg**	**04 51 10.1**	**0.0**
CLDR	**Caldiran**	**0.94**	**314**	P	**Pg**	**04 51 10.2**	**0.0**
CLDR				S	**Sn**	**04 51 24.1**	**-1.0**
CLDR				*i* AML	AML	04 51 26.0	
	comp=N,130nm,0.3s						
CLDR				*i* AML	AML	04 51 35.0	
	comp=E,171nm,0.4s						
YOVA	**Hakkari_Yksek**	**0.98**	**203**	P	**Pg**	**04 51 10.5**	**-0.5**
VANB	**Van**	**1.10**	**276**	PG	**Pb**	**04 51 13.7**	**+0.6**
VANB				SG	**Sg**	**04 51 26.3**	**-1.1**
HAKT	**HAKKARI**	**1.26**	**223**	P	**Pn**	**04 51 14.9**	**-1.0**
HAKT				S	**Sn**	**04 51 35.4**	**+2.4**
GEVA	**Gevas**	**1.37**	**263**	P	**Pn**	**04 51 17.6**	**+0.3**
AKDM	**Akdamar-Van**	**1.43**	**264**	PN	**Pg**	**04 51 20.4**	**+1.0**
AKDM				SN	**Sg**	**04 51 37.8**	**-0.1**
TASB	**TASBURUN-IGDIR**	**1.55**	**344**	PN	**Pg**	**04 51 21.9**	**+0.2**
GNI	**Garni**	**1.66**	**359**	PN	**Pg**	**04 51 24.5**	**+0.7**
KOTA	**Agri, Merkez-K**	**1.79**	**317**	P	**Pg**	**04 51 27.3**	**+0.9**

*IDC **23** 05:23:59.2±14.0, 13°.56N×90°.25W, h0km, mb3.3/3, mbtmp3.4/3, Error ellipse: s-maj=303.2km s-min=121.0km az=7.0*
*NEIC **23** 05:24:37.9±1.7, 15°.44N±0°.06×92°.04W±0°.05, h202km±5km, mb4.0/9, Md4.3/22(MEX), Error ellipse: s-maj=9.0km s-min=6.5km az=174.0*
*MEX **23** 05:24:38.2±1.1, 15°.57N×91°.97W, h203km±8km, MD4.3*
ISC 23 05:24:37.8±0.8,15°.43N±0°.07×92°.10W±0°.05, h200km±6km, n36,σ1§38/53, mb4.0/5, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAVE	**Pavencul**	**0.25**	**198**	*e*P	**Pn**	**05 25 04.3**	**-0.3**
PAVE				*e*S	**S**	**05 25 24.2**	**-1.2**
CHUJ	**Union Juarez**	**0.34**	**182**	*e*P	**Pn**	**05 25 04.2**	**-0.6**
CHUJ				*e*S	**S**	**05 25 25.2**	**-0.6**
PATR	**El Naranjo**	**0.34**	**203**	*e*P	**Pn**	**05 25 04.0**	**-0.8**
PATR				*i* S	**S**	**05 25 25.1**	**-0.7**
THIG		**0.55**	**197**		**Pn**	**05 25 05.5**	**+0.3**
THIG				*e*S	**S**	**05 25 26.9**	**+0.5**
THIG		**0.55**	**197**	*i* P	**Pn**	**05 25 05.5**	**+0.3**
THIG				*e*S	**S**	**05 25 26.9**	**+0.5**
HUEH	**Huehuetenango**	**0.59**	**101**	Pn	**Pn**	**05 25 05.5**	**-0.1**
HUEH				Sn	**S**	**05 25 26.1**	**-0.9**
CCIG	**Comitan**	**0.85**	**357**		**Pn**	**05 25 07.3**	**+0.4**
CCIG				Sn	**S**	**05 25 28.9**	**-0.6**
CCIG	**Comitan**	**0.85**	**357**	*i* P	**Pn**	**05 25 06.3**	**-0.6**
CCIG				*e*S	**S**	**05 25 26.2**	**-3.3**
RTAL	**Retalhuleu**	**0.98**	**157**		**Pn**	**05 25 07.1**	**-0.4**
PCIG		**1.11**	**284**		**Pn**	**05 25 08.8**	**+0.4**
PCIG					**S**	**05 25 32.1**	**+0.3**
PCIG		**1.11**	**284**	*i* P	**Pn**	**05 25 08.8**	**+0.4**
PCIG				*e*S	**S**	**05 25 32.1**	**+0.3**
TGIG		**1.66**	**324**		**Pn**	**05 25 13.7**	**+0.6**
TGIG					**S**	**05 25 40.0**	**0.0**
TGIG		**1.66**	**324**	*e*P	**Pn**	**05 25 13.7**	**+0.6**
TGIG				*e*S	**S**	**05 25 40.0**	**0.0**
PETF	**Flores**	**2.60**	**55**		**Pn**	**05 25 21.7**	**-1.2**
UXUV	**UXUV**	**2.72**	**314**	*e*P	**Pn**	**05 25 24.7**	**+0.6**
UXUV				*e*S	**S**	**05 25 56.9**	**-2.9**
MTO3	**Montecristo**	**2.84**	**111**		**Pn**	**05 25 25.2**	**-0.6**
CMIG	**Matias Romero**	**3.14**	**302**		**Pn**	**05 25 29.6**	**+0.5**
CMIG					**S**	**05 26 07.2**	**-1.5**
CMIG	**Matias Romero**	**3.14**	**302**	*e*P	**Pn**	**05 25 29.6**	**+0.5**
CMIG				*e*S	**S**	**05 26 07.2**	**-1.5**
HUIG	**Huatulco**	**3.88**	**275**		**Pn**	**05 25 37.7**	**-0.4**
HUIG					**S**	**05 26 21.6**	**-3.1**
HUIG	**Huatulco**	**3.88**	**275**	*e*P	**Pn**	**05 25 37.7**	**-0.4**
HUIG				*i* S	**S**	**05 26 21.6**	**-3.1**
VHO	**Vista Hermosa**	**4.74**	**291**	*e*P	**Pn**	**05 25 51.4**	**+2.2**
VHO				*e*S	**S**	**05 26 42.6**	**-2.1**
TLIG	**Tlapa**	**6.56**	**290**	Pn	**Pn**	**05 26 12.3**	**-0.2**
ORTG	**Ortega, Santa**	**8.20**	**127**	Pn	**Pn**	**05 26 33.8**	**0.0**
DUNO	**Dulce Nombre,**	**8.35**	**129**	Pn	**Pn**	**05 26 35.7**	**0.0**
TXAR	**Lajitas Array**	**17.47**	**324**	P	**Pn**	**05 28 34.1**	**+4.3**
	0.3nm,0.6s,baz=138,slow=11,SNR=5.3 0.3nm,0.6s						
Z47A	**Carrollton**	**18.06**	**11**	P	**P**	**05 28 33.9**	**-0.4**
LRAL	**Lakeview Retre**	**18.13**	**14**	P	**P**	**05 28 34.3**	**-0.7**
ZARC	**Zaragoza, Cauc**	**18.64**	**113**	P	**P**	**05 28 39.3**	**-1.4**
Y49A	**Blount Mountai**	**19.05**	**15**	P	**Pn**	**05 28 47.2**	**-1.0**
Y49A				IAmb	IAmb	05 28 47.5	
	comp=Z,2.5nm,0.6s						
X48A	**Hartselle**	**19.48**	**13**	P	**Pn**	**05 28 51.2**	**-2.1**
X48A				IAmb	IAmb	05 28 51.2	
	comp=Z,3.1nm,0.8s						
AMTX	**Amarillo**	**21.20**	**338**	P	**P**	**05 29 09.8**	**+1.8**
AMTX				IAmb	IAmb	05 29 11.1	
	comp=Z,2.9nm,0.7s						
PBMO	**Poplar Bluff**	**21.31**	**4**	P	**P**	**05 29 09.5**	**+0.5**
U49A	**Red Boiling Sp**	**21.74**	**14**	P	**P**	**05 29 13.8**	**+0.4**
U49A				IAmb	IAmb	05 29 14.7	
	comp=Z,6.6nm,1.0s						
T50A	**Nancy**	**22.45**	**15**	P	**P**	**05 29 20.6**	**+0.4**
T50A				IAmb	IAmb	05 29 51.8	
	comp=Z,6.0nm,1.4s						
NVAR	**Mina Array Bea**	**32.51**	**320**	P	P	05 30 54.2	+4.1
	comp=Z,0.3nm,0.6s,baz=140,slow=7.1,SNR=3.8 comp=Z,0.3nm,0.6s						
YKA	**Yellowknife Ar**	**49.62**	**347**	P	**P**	**05 33 09.0**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=146,slow=9.1,SNR=2.9 comp=Z,0.7nm,0.6s						

DJA 23 05:26:03.7±0.3,9°.5±6°×117°.6E±°, h71km±6km, M4.1/17, mb4.5/4, MLv4.0/17, South of Bali

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DNP	**Denpasar**	**0.56**	**307**	P	Pn	05 26 17.5	+0.3
SRBI	**Singaraja**	**1.03**	**335**	P	Pn	05 26 23.1	+0.5
SRBI				S	Sn	05 26 37.7	+1.0
TWSI	**Taliwang, Sumb**	**1.24**	**77**	P	Pn	05 26 25.7	+0.4
TWSI				S	Sn	05 26 42.8	+1.3
JAGI	**Jajag, Banyuwa**	**1.59**	**290**	P	Pn	05 26 30.1	+0.2
JAGI				S	Sn	05 26 50.2	+0.5
ABJI	**Asem Bagus**	**1.86**	**311**	P	Pn	05 26 34.1	+0.6
PLAI	**Plampang**	**2.10**	**85**	P	Pn	05 26 37.0	+0.3
GMJI	**Gumukmas**	**2.31**	**289**	P	Pn	05 26 39.8	+0.2
BLJI	**Banyuglugur**	**2.40**	**302**	P	Pn	05 26 41.0	+0.2
KMMI	**Kalianget**	**2.58**	**319**	P	Pn	05 26 43.6	+0.4
WBSI	**Waikabubak, Su**	**3.73**	**100**	P	Pn	05 26 59.2	+0.2
PWJI	**Pagerwojo**	**3.94**	**284**	P	Pn	05 27 02.0	+0.2
PCJI	**Pacitan**	**4.51**	**280**	P	Pn	05 27 09.2	-0.3
WOJI	**Wonogiri, Jawa**	**4.83**	**284**	P	Pn	05 27 14.3	+0.4
UGM	**Wanagama**	**5.20**	**282**	P	Pn	05 27 19.0	0.0
	0.6nm122nm,1.5s						
BKSI	**Bulukumba**	**5.75**	**51**	P	Pn	05 27 26.2	-0.4
	0.1nm13nm,0.5s						
EDFI	**Ende, Flores**	**5.96**	**88**	P	Pn	05 27 29.2	-0.4
	0.0nm7.2nm,1.1s						

*IDC **23** 05:26:17.1±1.1, 55°.43S×26°.72W, h0km, mb4.0/3, mbtmp4.0/3, MS3.4/1, Error ellipse: s-maj=46.8km s-min=29.7km az=90.0*
*NEIC **23** 05:26:18.7±1.6, 55°.6S±0°.1×26°.88W±0°.08, h10km±1km, mb4.5/14, Error ellipse: s-maj=21.9km s-min=7.2km az=170.0*
ISC 23 05:26:20.7±0.9, 55°.6S±0°.1×27°.0W±0°.1, h25km, n21, σ1§18/21, mb4.3/9, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.62**	**280**	Pn	**Pn**	**05 27 43.1**	**+0.5**
HOPE				Sn	**Sn**	**05 28 44.3**	**-1.9**
SNAA	**Sanae**	**19.10**	**157**	P	**P**	**05 30 39.1**	**-2.2**
BELA	**Belgrano 2**	**22.52**	**184**	P	**P**	**05 31 17.3**	**-0.8**
TRQA	**Tornquist**	**29.25**	**292**	P	**P**	**05 32 20.2**	**-0.2**
TRQA				IAmb	IAmb	05 32 22.5	
	comp=Z,5.0nm,1.2s						
QSPA	**South Pole Qui**	**34.63**	**180**	P	**P**	**05 33 08.4**	**+0.7**
QSPA				IAmb	IAmb	05 33 21.5	
	comp=Z,4.4nm,1.1s						
MT09	**Talagante**	**37.27**	**287**	P	**P**	**05 33 29.9**	**-0.6**
MT09				IAmb	IAmb	05 33 47.2	
	comp=Z,21nm,1.4s						
PEL	**Peldehue**	**37.59**	**288**	P	**P**	**05 33 33.9**	**+0.8**
PEL				IAmb	IAmb	05 34 11.7	
	comp=Z,32nm,1.4s						
MT02	**Curacav**	**37.74**	**288**	P	**P**	**05 33 34.3**	**-0.1**
CO01	**Juntas del Tor**	**39.74**	**292**	P	**P**	**05 33 53.8**	**+2.4**
CO01				IAmb	IAmb	05 34 18.8	
	comp=Z,9.9nm,1.1s						
GO02	**Mina Guanaco**	**43.38**	**297**	P	**P**	**05 34 22.3**	**+1.0**
GO02				IAmb	IAmb	05 34 28.6	
	comp=Z,25nm,1.4s						
PB01	**IPOC Station P**	**46.78**	**300**	P	**P**	**05 34 48.8**	**+0.7**
VNDA	**Vanda**	**47.01**	**183**	P	**P**	**05 34 50.9**	**+1.7**
	comp=Z,1.2nm,0.6s,baz=186,slow=8.2,SNR=17 comp=Z,1.2nm,0.6s						
VNDA	**Vanda**	**47.01**	**183**	P	**P**	**05 34 50.2**	**+1.0**
VNDA				IAmb	IAmb	05 34 58.0	
	comp=Z,3.9nm,1.2s						
PATCX	**Punta Patache**	**47.29**	**299**	P	**P**	**05 34 52.3**	**+0.2**
TSUM	**Tsumeb**	**49.38**	**61**	LR	LR	05 51 28.9	
	comp=Z,41nm,21.4s,baz=326,slow=31						
LPAZ	**La Paz**	**50.21**	**305**	P	**P**	**05 35 15.7**	**+0.6**
	comp=Z,1.3nm,0.6s,baz=180,slow=8.1,SNR=7.3 comp=Z,1.3nm,0.6s						
LPAZ	**La Paz**	**50.21**	**305**	P	**P**	**05 35 16.0**	**+0.9**
LPAZ				IAmb	IAmb	05 35 23.2	
	comp=Z,1.8nm,0.8s						
TORD	**Torodi Ar. Bea**	**72.63**	**29**	P	**P**	**05 37 44.9**	**-0.9**
	comp=Z,0.8nm,0.5s,baz=198,slow=5.7,SNR=12 comp=Z,0.8nm,0.5s						
TORD	**Torodi Ar. Bea**	**72.63**	**29**	P	**P**	**05 37 45.4**	**-0.5**
ILAR	**Eielson Array**	**149.90**	**312**	PKPbc	**PKPbc**	**05 46 06.6**	**-0.5**
	comp=Z,0.7nm,0.7s,baz=122,slow=2.2,SNR=6.1						
ILAR	**Eielson Array**	**149.90**	**312**		**PKPbc**	**05 46 07.1**	**-0.1**

*DRS **23** 05:35:22.6±0.0, 40°.89N×48°.72E, h19km*
*MOS **23** 05:35:23.1±0.0, 41°.02N×48°.33E, h12km, MPVA3.6*
ISC 23 05:35:22.0±3.0, 40°.9N±0°.1×48°.4E±0°.1, h9km±12km, n12, σ0§74/23, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKT	**Akhty**	**0.81**	**319**	*i* Pg	**Pg**	**05 35 37.7**	**+0.1**
AKT				*e*Sg	**Sg**	**05 35 48.3**	**+0.2**
DRN	**Derbent**	**1.16**	**356**	*e*Pg	**Pb**	**05 35 43.5**	**-0.7**
DRN				*e*Sg	**Sn**	**05 35 59.9**	**-0.5**
URKR	**Urkarakh**	**1.43**	**336**	*e*Pg	**Pn**	**05 35 48.1**	**-0.1**
URKR				*e*Sg	**Sb**	**05 36 07.1**	**-0.1**
KMKR	**Kumukh**	**1.61**	**322**	*e*Pg	**Pb**	**05 35 51.7**	**-0.3**
KMKR				*e*Sg	**Sb**	**05 36 12.1**	**-0.4**
SGKR	**Sergokala**	**1.69**	**340**	*e*Pg	**Pb**	**05 35 52.4**	**-0.9**
SGKR				*e*Sg	**Sb**	**05 36 14.5**	**-0.1**
DDFL	**Dedoflistskaro**	**1.84**	**289**	P	**Pg**	**05 35 57.3**	**+0.1**
GNBR	**Gunib**	**1.88**	**325**	*i* Pg	**Pb**	**05 35 55.6**	**-0.8**
GNBR				*e*Sg	**Sb**	**05 36 20.4**	**+0.5**
LGD	**Lagodekhi**	**1.91**	**301**	P	**Pb**	**05 35 56.2**	**-0.8**
LGD				S	**Sn**	**05 36 18.1**	**-0.7**
ARKR	**Arakani**	**2.04**	**329**	*e*Pg	**Pb**	**05

comp=Z,3µm,0.3s
TAMC Tame, Arauca 1.32 106 ⇓ *i*P Pn 05 36 06.7 +0.8
TAMC ⇓ *i*P **Pn 05 36 06.7 +0.8**
TAMC *e*S **Sn 05 36 27.5 -0.1**
TAMC *e*S **Sn 05 36 27.5 -0.1**
TAMC *i* 05 36 28.8
comp=Z,3µm,0.5s
TAMC IAML 05 36 28.8
comp=Z,3µm,0.5s
PTBC PUERTO BERRIO, 1.41 259 *e*P Pn 05 36 04.8 -1.8
PTBC *e*P **Pn 05 36 04.8 -1.8**
PTBC *e*S **Sn 05 36 26.1 -3.0**
PTBC *e*S **Sn 05 36 26.1 -3.0**
PTBC *i* 05 36 29.4
comp=Z,4µm,0.3s
PTBC IAML 05 36 29.4
comp=Z,4µm,0.3s
SPBC San Pablo de B 1.53 221 ⇓ *i*P Pn 05 36 07.3 -0.7
SPBC ⇓ *i*P **Pn 05 36 07.3 -0.7**
SPBC *e*S **Sn 05 36 29.2 -2.3**
SPBC *e*S **Sn 05 36 29.2 -2.3**
SPBC *i* 05 36 31.7
comp=Z,2µm,0.2s
SPBC IAML 05 36 31.7
comp=Z,2µm,0.2s
ZARC Zaragoza, Cauc 1.90 291 Pn 05 36 11.0 -0.9
ZARC Zaragoza, Cauc 1.90 291 ⇑ *i*P Pn 05 36 11.1 -0.9
ZARC ⇑ *i*P **Pn 05 36 11.1 -0.9**
ZARC *e*S **Sn 05 36 37.0 -1.5**
ZARC *e*S **Sn 05 36 37.0 -1.5**
ZARC *i* 05 36 43.3
comp=Z,4µm,0.3s
ZARC IAML 05 36 43.3
comp=Z,4µm,0.3s
NORC Norcasia 2.18 235 *e*P Pn 05 36 14.3 -0.9
NORC *e*P **Pn 05 36 14.3 -0.9**
NORC *e*S **Sn 05 36 42.1 -2.2**
NORC *e*S **Sn 05 36 42.1 -2.2**
NORC IAML 05 36 45.0
comp=Z,1µm,0.4s
NORC *i* 05 36 45.0
comp=Z,1µm,0.4s
CHIC Chingaza 2.27 197 *e*P Pn 05 36 16.4 -0.2
CHIC *e*P **Pn 05 36 16.4 -0.2**
CHIC *e*S **Sn 05 36 45.3 -1.5**
CHIC *e*S **Sn 05 36 45.3 -1.5**
CHIC *i* 05 36 51.8
comp=Z,611nm,0.7s
CHIC IAML 05 36 51.8
comp=Z,611nm,0.7s
ROSC El Rosal 2.32 213 P Pn 05 36 18.2 +1.0
comp=Z,391nm,0.3s,baz=326,slow=11,SNR=269
ROSC S **Sn 05 36 47.0 -0.9**
comp=Z,2µm,0.4s,baz=201,slow=22,SNR=23
ROSC El Rosal 2.32 213 Pn 05 36 17.9 +0.7
ROSC El Rosal 2.32 213 ⇑ *i*P Pn 05 36 18.2 +1.0
ROSC ⇑ *i*P **Pn 05 36 18.2 +1.0**
ROSC *e*S **Sn 05 36 47.1 -0.9**
ROSC *e*S **Sn 05 36 47.1 -0.9**
ROSC IAML 05 36 54.7
comp=Z,2µm,0.5s
ROSC *i* 05 36 54.7
comp=Z,2µm,0.5s
HELC Santa Helena 2.52 256 *e*P Pn 05 36 18.8 -0.9
HELC *e*P **Pn 05 36 18.8 -0.9**
HELC *e*S **Sn 05 36 49.8 -2.3**
HELC *e*S **Sn 05 36 49.8 -2.3**
HELC *i* 05 36 58.1
comp=Z,1µm,0.4s
HELC IAML 05 36 58.1
comp=Z,1µm,0.4s
UREC San Jos de Ur 2.62 291 *e*P Pn 05 36 18.6 -1.8
UREC *e*P **Pn 05 36 18.6 -1.8**
UREC *e*S **Sn 05 36 50.9 -2.8**
UREC *e*S **Sn 05 36 50.9 -2.8**
UREC *i* 05 37 00.1
comp=Z,2µm,0.3s
UREC IAML 05 37 00.1
comp=Z,2µm,0.3s
LL1C La Loma 1 Cana 2.75 350 *e*P Pn 05 36 23.3 +1.2
LL1C *e*P **Pn 05 36 23.3 +1.2**
LL1C *e*S **Sn 05 36 58.0 +1.4**
LL1C *e*S **Sn 05 36 58.0 +1.4**
PTGC Puerto Gaitan, 2.76 160 ⇑ *i*P Pn 05 36 21.5 -0.6
PTGC ⇑ *i*P **Pn 05 36 21.5 -0.6**
PTGC *e*S **Sn 05 36 53.6 -3.1**
PTGC *e*S **Sn 05 36 53.6 -3.1**
PTGC *i* 05 36 56.7
comp=Z,2µm,0.3s
PTGC IAML 05 36 56.7
comp=Z,2µm,0.3s
GUY2C Guyana, Caldas 2.78 236 *e*P Pn 05 36 22.9 +0.1
GUY2C *e*P **Pn 05 36 22.9 +0.1**
GUY2C *e*S **Sn 05 36 55.9 -2.0**
GUY2C *e*S **Sn 05 36 55.9 -2.0**
GUY2C *i* 05 37 03.8
comp=Z,1µm,0.3s
GUY2C IAML 05 37 03.8
comp=Z,1µm,0.3s
LL6C La Loma 6 Bece 2.91 356 ⇑ *i*P Pn 05 36 23.4 -0.7
LL6C ⇑ *i*P **Pn 05 36 23.4 -0.7**
LL6C *e*S **Sn 05 36 57.9 -2.2**
LL6C *e*S **Sn 05 36 57.9 -2.2**
LL6C IAML 05 37 00.3
comp=Z,699nm,0.5s
LL6C *i* 05 37 00.3
comp=Z,699nm,0.5s
LL5C La Loma 5 El P 2.99 347 *e*P Pn 05 36 25.5 +0.5
LL5C *e*P **Pn 05 36 25.5 +0.5**
LL5C *e*S **Sn 05 37 02.1 +0.2**
LL5C *e*S **Sn 05 37 02.1 +0.2**
LL5C IAML 05 37 15.8
comp=Z,1µm,0.5s
LL5C *i* 05 37 15.8
comp=Z,1µm,0.5s
CMAN1 Manizales, Cal 3.00 235 *e*P Pn 05 36 30.1 +4.7
CMAN1 *e*P Pn 05 36 30.1 +4.7
CMAN1 *e*S **Sn 05 37 05.2 +2.8**
CMAN1 *e*S **Sn 05 37 05.2 +2.8**
CBOC Ciudad Bolivar 3.08 252 *e*P Pn 05 36 26.4 +0.1
CBOC *e*P **Pn 05 36 26.4 +0.1**
CBOC *e*S **Sn 05 37 02.4 -1.7**
CBOC *e*S **Sn 05 37 02.4 -1.7**
CBOC *i* 05 37 14.4
comp=Z,864nm,0.5s
CBOC IAML 05 37 14.4
comp=Z,864nm,0.5s
DBBC Dabeiba 3.13 274 ⇑ *i*P Pn 05 36 26.4 -0.4
DBBC ⇑ *i*P **Pn 05 36 26.4 -0.4**
DBBC *e*S **Sn 05 37 04.0 -1.1**
DBBC *e*S **Sn 05 37 04.0 -1.1**
SDV Santo Domingo 3.17 49 P Pn 05 36 27.9 +0.5
comp=Z,839nm,0.4s,baz=243,slow=13,SNR=216
SDV S **Sn 05 37 05.6 -0.7**
comp=Z,1µm,0.4s,baz=277,slow=19,SNR=28
SDV Santo Domingo 3.17 49 Pn 05 36 27.3 -0.2
SDV Santo Domingo 3.17 49 ⇓ *i*P Pn 05 36 28.0 +0.5
SDV ⇓ *i*P **Pn 05 36 28.0 +0.5**
SDV *e*S **Sn 05 37 04.6 -1.6**
SDV *e*S **Sn 05 37 04.6 -1.6**
SDV *i* 05 37 08.3
comp=Z,1µm,0.4s
SDV IAML 05 37 08.3
comp=Z,1µm,0.4s
SDV Santo Domingo 3.17 49 *e*P Pn 05 36 27.9 +0.5
SDV *e*S **Sn 05 37 06.3 +0.1**
ARGC Ariguani, Magd 3.24 339 ⇑ *e*P Pn 05 36 28.9 +0.7
ARGC ⇑ *e*P **Pn 05 36 28.9 +0.7**
ARGC *e*S **Sn 05 37 07.5 -0.2**
ARGC *e*S **Sn 05 37 07.5 -0.2**
ARGC *i* 05 37 18.3
comp=Z,504nm,0.4s
ARGC IAML 05 37 18.3
comp=Z,504nm,0.4s
ANIL Santa Ana 3.28 225 *e*P Pn 05 36 29.4 +0.4
ANIL *e*P **Pn 05 36 29.4 +0.4**
ANIL *e*S **Sn 05 37 07.8 -0.9**
ANIL *e*S **Sn 05 37 07.8 -0.9**
ANIL *i* 05 37 16.4
comp=Z,2µm,0.4s
ANIL IAML 05 37 16.4
comp=Z,2µm,0.4s
PRAC Prado 3.57 211 *e*P Pn 05 36 31.8 -0.7
PRAC *e*P **Pn 05 36 31.8 -0.7**
PRAC *e*S **Sn 05 37 13.3 -1.9**
PRAC *e*S **Sn 05 37 13.3 -1.9**
PRAC *i* 05 37 20.2
comp=Z,1µm,0.3s
PRAC IAML 05 37 20.2
comp=Z,1µm,0.3s
ORTC Ortega, Tolima 3.61 217 *e*P Pn 05 36 32.6 -0.4
ORTC *e*P **Pn 05 36 32.6 -0.4**
ORTC *e*S **Sn 05 37 14.7 -1.4**
ORTC *e*S **Sn 05 37 14.7 -1.4**
ORTC IAML 05 37 21.4
comp=Z,769nm,0.5s
ORTC *i* 05 37 21.4
comp=Z,769nm,0.5s
SJCC San Jacinto, C 3.71 326 Pn Pn 05 36 32.8 -1.4
SJCC San Jacinto, C 3.71 326 ⇑ *i*P Pn 05 36 32.7 -1.6
SJCC ⇑ *i*P **Pn 05 36 32.7 -1.6**
SJCC *e*S **Sn 05 37 14.0 -4.4**
SJCC *e*S **Sn 05 37 14.0 -4.4**
SJCC IAML 05 37 18.0
comp=Z,1µm,0.4s
SJCC *i* 05 37 18.0
comp=Z,1µm,0.4s
PLMC San Jos del P 3.72 240 *e*P Pn 05 36 34.5 +0.1
PLMC *e*P **Pn 05 36 34.5 +0.1**
PLMC *e*S **Sn 05 37 16.5 -2.1**
PLMC *e*S **Sn 05 37 16.5 -2.1**
PLMC IAML 05 37 26.5
comp=Z,497nm,0.4s
PLMC *i* 05 37 26.5
comp=Z,497nm,0.4s
LCBC Los crdobas, 3.85 302 *e*P Pn 05 36 34.5 -1.6
LCBC *e*P **Pn 05 36 34.5 -1.6**
LCBC *e*S **Sn 05 37 21.9 +0.3**
LCBC *e*S **Sn 05 37 21.9 +0.3**
LCBC IAML 05 37 27.1
comp=Z,633nm,0.3s
LCBC *i* 05 37 27.1
comp=Z,633nm,0.3s
CRJC Cerrejon, Guaj 4.18 2 *e*P Pn 05 36 39.1 -1.3
CRJC *e*P **Pn 05 36 39.1 -1.3**
CRJC *e*S **Sn 05 37 25.1 -4.4**
CRJC *e*S **Sn 05 37 25.1 -4.4**
CRJC IAML 05 37 31.8
comp=Z,674nm,0.4s
CRJC *i* 05 37 31.8
comp=Z,674nm,0.4s
GUVC San Jose del G 4.26 174 ⇑ *i*P Pn 05 36 40.2 -1.2
GUVC ⇑ *i*P **Pn 05 36 40.2 -1.2**
GUVC *e*S **Sn 05 37 27.6 -3.6**
GUVC *e*S **Sn 05 37 27.6 -3.6**
GUVC *i* 05 37 34.1
comp=Z,968nm,0.3s
GUVC *i* 05 37 34.1
comp=Z,968nm,0.3s
YOTC Yotoco, Valle 4.31 229 ⇓ *e*P Pn 05 36 41.1 -1.0
YOTC *e*S **Sn 05 37 33.1 +0.7**
SOLC Bahia Solano 4.36 263 *e*P Pn 05 36 43.0 +0.4
SOLC *e*P **Pn 05 36 43.0 +0.4**
SOLC *e*S Sn 05 37 24.8 -8.5
SOLC *e*S Sn 05 37 24.8 -8.5
SMRC Santa Marta, M 4.47 345 *e*P Pn 05 36 43.3 -0.8
SMRC *e*P **Pn 05 36 43.3 -0.8**
SMRC *e*S **Sn 05 37 32.2 -3.9**
SMRC *e*S **Sn 05 37 32.2 -3.9**
SMRC *i* 05 37 36.3
comp=Z,347nm,0.4s
SMRC *i* 05 37 36.3
comp=Z,347nm,0.4s
CAPC Capurgana 4.62 293 *e*P Pn 05 36 43.1 -2.9
CAPC *e*P **Pn 05 36 43.1 -2.9**
CAPC *e*S **Sn 05 37 33.0 -6.4**
CAPC *e*S **Sn 05 37 33.0 -6.4**
CAPC *i* 05 37 44.5
comp=Z,339nm,0.3s
CAPC *i* 05 37 44.5
comp=Z,339nm,0.3s
PIZC Pizarro, Choco 4.65 247 *e*P Pn 05 36 47.6 +1.2
PIZC *e*P **Pn 05 36 47.6 +1.2**
PIZC *e*S **Sn 05 37 38.6 -1.6**
PIZC *e*S **Sn 05 37 38.6 -1.6**
PIZC *i* 05 37 49.6
comp=Z,260nm,0.6s
PIZC *i* 05 37 49.6
comp=Z,260nm,0.6s
MACC Macarena, Meta 4.70 190 ⇑ *i*P Pn 05 36 45.5 -1.7
MACC ⇑ *i*P **Pn 05 36 45.5 -1.7**
MACC *e*S **Sn 05 37 36.5 -5.1**
MACC *e*S **Sn 05 37 36.5 -5.1**
MACC *i* 05 37 42.1
comp=Z,250nm,0.7s
MACC *i* 05 37 42.1
comp=Z,250nm,0.7s
PTAC Punta Ardita, 4.72 274 *e*P Pn 05 36 46.9 -0.5
PTAC *e*P **Pn 05 36 46.9 -0.5**
PTAC *e*S **Sn 05 37 39.0 -2.9**
PTAC *e*S **Sn 05 37 39.0 -2.9**
PTAC *i* 05 37 41.6
comp=Z,170nm,0.3s
PTAC *i* 05 37 41.6
comp=Z,170nm,0.3s
BETC Betania 4.74 210 *e*P Pn 05 36 46.5 -1.2
BETC *e*P **Pn 05 36 46.5 -1.2**
BETC *e*S **Sn 05 37 40.8 -1.7**
BETC *e*S **Sn 05 37 40.8 -1.7**
BETC *i* 05 37 43.4
comp=Z,127nm,0.6s
BETC *i* 05 37 43.4
comp=Z,127nm,0.6s
MARP Paez Belalcaza 4.88 216 *e*P Pn 05 36 49.6 -0.2
MARP *e*P **Pn 05 36 49.6 -0.2**
MARP *e*S **Sn 05 37 42.0 -4.2**
MARP *e*S **Sn 05 37 42.0 -4.2**
URIC Uribia, Colomb 4.97 12 Pn 05 36 48.5 -2.1
URIC Uribia, Colomb 4.97 12 *e*P Pn 05 36 49.3 -1.4
URIC *e*P **Pn 05 36 49.3 -1.4**
URIC *e*S **Sn 05 37 42.7 -5.2**
URIC *e*S **Sn 05 37 42.7 -5.2**
URIC *i* 05 37 47.4
comp=Z,240nm,0.5s
URIC *i* 05 37 47.4
comp=Z,240nm,0.5s
MALC Bahia Malaga 5.08 237 *e*P Pn 05 36 53.4 +1.3
MALC *e*P **Pn 05 36 53.4 +1.3**
MALC *e*S **Sn 05 37 50.1 -0.3**
MALC *e*S **Sn 05 37 50.1 -0.3**
MALC *i* 05 37 58.1
comp=Z,126nm,0.6s
MALC *i* 05 37 58.1
comp=Z,126nm,0.6s
GARC Garzon, Huila 5.19 208 *e*P Pn 05 36 52.6 -1.3
GARC *e*P **Pn 05 36 52.6 -1.3**
GARC *e*S **Sn 05 37 47.7 -5.8**
GARC *e*S **Sn 05 37 47.7 -5.8**
GARC *i* 05 37 53.3
comp=Z,203nm,0.3s
GARC *i* 05 37 53.3
comp=Z,203nm,0.3s
BAUV El Baul 5.41 67 Pn Pn 05 36 54.8 -1.6
PCON Cinco Dias 5.56 217 *e*P Pn 05 37 00.2 +1.3
PCON *e*P **Pn 05 37 00.2 +1.3**
PCON *e*S **Sn 05 38 03.2 +0.7**
PCON *e*S **Sn 05 38 03.2 +0.7**
POPC Popayan, Colom 5.56 220 ⇓ *i*P Pn 05 36 58.3 -0.4
POPC ⇓ *i*P **Pn 05 36 58.3 -0.4**
POPC *e*S **Sn 05 37 58.1 -4.2**
POPC *e*S **Sn 05 37 58.1 -4.2**
FLOC Florencia 5.80 207 *e*P Pn 05 37 00.6 -1.1
FLOC *e*P **Pn 05 37 00.6 -1.1**
FLOC *e*S **Sn 05 38 03.2 -4.4**
FLOC *e*S **Sn 05 38 03.2 -4.4**
FLOC *i* 05 38 36.7
comp=Z,190nm,0.9s
FLOC *i* 05 38 36.7
comp=Z,190nm,0.9s
SOTA Rioblanco 5.84 217 *e*P Pn 05 37 03.4 +0.8
SOTA *e*P **Pn 05 37 03.4 +0.8**
SOTA *e*S Sn 05 37 59.6 -10
SOTA *e*S Sn 05 37 59.6 -10
SOTA *i* 05 38 20.5
comp=Z,116nm,0.8s
SOTA *i* 05 38 20.5
comp=Z,116nm,0.8s
BBAC Balboa, Cauca 6.33 221 *e*P Pn 05 37 08.1 -0.7
BBAC *e*P **Pn 05 37 08.1 -0.7**
BBAC *e*S **Sn 05 38 16.1 -4.3**
BBAC *e*S **Sn 05 38 16.1 -4.3**
BBAC *i* 05 38 24.6
comp=Z,81nm,0.4s
BBAC *i* 05 38 24.6
comp=Z,81nm,0.4s
GR1C Gorgona, Isla 6.34 234 *e*P Pn 05 37 07.0 -1.7
GR1C *e*P **Pn 05 37 07.0 -1.7**
GR1C *e*S **Sn 05 38 15.7 -4.7**
GR1C *e*S **Sn 05 38 15.7 -4.7**
GR1C *i* 05 38 28.0
comp=Z,474nm,0.5s
GR1C *i* 05 38 28.0
comp=Z,474nm,0.5s
CRUC La Cruz 6.49 217 *e*P Pn 05 37 12.3 +1.1
CRUC *e*P **Pn 05 37 12.3 +1.1**
CRUC *e*S **Sn 05 38 27.7 +3.1**
CRUC *e*S **Sn 05 38 27.7 +3.1**
UPA Univ. de Panam 6.76 289 *e*P Pn 05 37 11.9 -2.5
UPA *e*P **Pn 05 37 11.9 -2.5**
UPA *e*S **Sn 05 38 23.9 -6.5**
UPA *e*S **Sn 05 38 23.9 -6.5**
PTLC Puerto Leguiza 6.82 195 *e*P Pn 05 37 17.6 +2.3
PTLC *e*P **Pn 05 37 17.6 +2.3**
PTLC *e*S Sn 05 38 49.8 +18
PTLC *e*S Sn 05 38 49.8 +18
PTLC *i* 05 39 17.4
comp=Z,80nm,0.6s
PTLC *i* 05 39 17.4
comp=Z,80nm,0.6s
CCUFI Cufio, Nario 7.00 218 *e*P Pn 05 37 18.6 +0.5
CCUFI *e*P **Pn 05 37 18.6 +0.5**
CCUFI *e*S **Sn 05 38 36.4 -0.6**
CCUFI *e*S **Sn 05 38 36.4 -0.6**
GCUF Volcan Galeras 7.00 218 *e*P Pn 05 37 18.9 +0.8
GCUF *e*P **Pn 05 37 18.9 +0.8**
GCUF *e*S **Sn 05 38 34.1 -2.9**
GCUF *e*S **Sn 05 38 34.1 -2.9**
GCUF *i* 05 38 40.1
comp=Z,57nm,0.6s
GCUF *i* 05 38 40.1
comp=Z,57nm,0.6s
CPAS1 Pasto 7.02 217 *e*P Pn 05 37 19.9 +1.7
CPAS1 *e*P **Pn 05 37 19.9 +1.7**
CPAS1 *e*S **Sn 05 38 35.1 -2.2**
CPAS1 *e*S **Sn 05 38 35.1 -2.2**
BCIP Isla Barro Col 7.10 290 Pn 05 37 16.4 -2.6
BCIP Isla Barro Col 7.10 290 *e*P Pn 05 37 16.7 -2.2
BCIP *e*P **Pn 05 37 16.7 -2.2**
BCIP *e*S **Sn 05 38 32.8 -5.8**
BCIP *e*S **Sn 05 38 32.8 -5.8**
BCIP *i* 05 38 40.1
comp=Z,36nm,0.6s
BCIP *i* 05 38 40.1
comp=Z,36nm,0.6s
AZU Azuero 7.22 278 *e*P Pn 05 37 18.9 -1.6
AZU *e*P **Pn 05 37 18.9 -1.6**
AZU *e*S **Sn 05 38 34.9 -6.5**
AZU *e*S **Sn 05 38 34.9 -6.5**
AZU *i* 05 38 43.4
comp=Z,63nm,0.6s
AZU *i* 05 38 43.4
comp=Z,63nm,0.6s
CMBC Cumbal 7.52 219 *e*P Pn 05 37 25.9 +0.9
CMBC *e*P **Pn 05 37 25.9 +0.9**
CMBC *e*S **Sn 05 38 46.8 -2.6**
CMBC *e*S **Sn 05 38 46.8 -2.6**
BIRV Birongo 7.64 61 Pn Pn 05 37 24.0 -2.1
TULM Tulcn-Chalpat 7.67 218 Pn 05 37 28.1 +1.1
TULM Tulcn-Chalpat 7.67 218 *e*P Pn 05 37 28.8 +1.8
TULM *e*P **Pn 05 37 28.8 +1.8**
TULM *e*S **Sn 05 38 51.5 -1.6**
TULM *e*S **Sn 05 38 51.5 -1.6**
CUSE Cuicocha Este 8.37 220 *e*P Pn 05 37 38.2 +2.0
CUSE *e*P **Pn 05 37 38.2 +2.0**
CUSE *e*S **Sn 05 39 09.6 -0.2**
CUSE *e*S **Sn 05 39 09.6 -0.2**
CUSE *i* 05 39 29.9
comp=Z,61nm,0.3s
CUSE *i* 05 39 29.9
comp=Z,61nm,0.3s
OTAV Otavalo 8.46 220 Pn 05 37 36.2 -1.2
OTAV Otavalo 8.46 220 *e*P Pn 05 37 36.4 -1.0
OTAV *e*P **Pn 05 37 36.4 -1.0**
OTAV *e*S **Sn 05 39 10.3 -1.6**
OTAV *e*S **Sn 05 39 10.3 -1.6**
OTAV Otavalo 8.46 220 *e*P Pn 05 37 36.6 -0.8
OTAV *e*S **Sn 05 39 10.1 -1.8**
SLOR San Lorenzo - 9.25 216 Pn 05 37 48.2 +0.8
BRU2 Volcan 9.74 282 Pn 05 37 54.0 -0.2
CDITO Canoas 9.88 281 Pn 05 37 57.0 +1.2
PORT Chimborazo Vol 10.00 215 Pn 05 37 58.0 0.0
DRK0 Durika 10.37 284 Pn 05 38 02.9 +0.4
SRBA San Rafael, Bu 10.47 284 Pn 05 38 03.8 0.0
PEZE Perez Zeledon, 10.81 284 Pn Pn 05 38 08.8 +0.6
RIMA Rio Macho 11.08 286 Pn 05 38 12.5 +0.7
COHC Cochancay 11.10 214 Pn 05 38 12.0 +0.2
BOSC San Juan Bosco 11.29 209 Pn 05 38 14.5 0.0
TBTG Tabatinga, AM 11.37 164 *e*P Pn 05 38 14.3 -1.2
HDC Heredia 11.38 287 Pn Pn 05 38 16.1 +0.4
MTDJ Mount Denham 12.15 339 Pn Pn 05 38 27.6 +1.9
SDDR Presa de Saban 12.22 8 Pn 05 38 28.5 +2.1
JTS Las Juntas de 12.25 287 P Pn 05 38 29.3 +2.4
comp=Z,8.2nm,0.6s,baz=131,slow=19,SNR=7.2
JTS Las Juntas de 12.25 287 Pn 05 38 29.0 +2.0
ESPN Las Esperanzas 12.30 297 Pn 05 38 26.3 -1.2
ARNL Arenillas 12.44 214 Pn 05 38 27.1 -2.2
ICMP Isla Caja de M 12.72 29 Pn Pn 05 38 31.7 -1.2
ORTG Ortega, Santa 12.75 287 Pn Pn 05 38 36.7 +3.3
OBIP Obispado Ponce 12.82 29 Pn Pn 05 38 32.9 -1.2
CELP Cerrillos 12.86 29 Pn Pn 05 38 32.8 -1.8
ACON Acoyapa 13.00 294 Pn Pn 05 38 37.2 +0.8
SJG San Juan 13.10 30 P Pn 05 38 37.3 -0.4
comp=Z,9.1nm,0.4s,baz=208,slow=19,SNR=6.5
SJG San Juan 13.10 30 Pn Pn 05 38 35.6 -2.1
BOAV Boa Vista 13.25 109 *e*P Pn 05 38 37.7 -2.0
GCPR Guaynabo City 13.30 30 Pn Pn 05 38 38.3 -2.0
BOAB BOACO BROADBAN 13.62 295 Pn 05 38 45.9 +1.4
STVI Saint Thomas 13.93 34 Pn Pn 05 38 47.6 -0.6
CZSB Cruzeiro do Su 14.45 179 *e*P Pn 05 38 54.4 -0.4
ATAH Atahualpa 14.84 201 P Pn 05 39 01.4 +1.3
comp=Z,3.8nm,0.5s,baz=9.3,slow=12,SNR=4.2
MACA Manacapuru-AM 15.84 128 *e*P Pn 05 39 11.0 -1.1
ETMB Extrema 17.87 157 *e*P P 05 39 34.8 -0.2
SAML Samuel 18.50 148 P P 05 39 41.4 -0.3
SAML IAmb IAmb 05 39 42.8
comp=Z,20nm,0.8s
PAYG Puerto Ayora 18.72 247 P P 05 39 45.2 +0.9
NNA Nana 19.05 191 P P 05 39 48.6 +0.8
NNA IAmb IAmb 05 40 15.3
comp=Z,18nm,1.1s
MDP Montagnes des 20.38 94 P P 05 40 02.5 +0.4
comp=Z,10nm,1.0s,baz=262,slow=12,SNR=6.0
comp=Z,10nm,1.0s
ITTB Itaituba 20.56 122 *e*P P 05 40 04.5 +0.4
MALB Monte Alegre 20.64 114 *e*P P 05 40 04.8 -0.2
MCPB Macapa, AP 22.14 108 *e*P P 05 40 21.1 +0.4
NPGB Novo Progresso 22.39 128 *e*P P 05 40 23.1 0.0
VILB Vilhena 23.43 147 *e*P P 05 40 33.0 +0.3
LPAZ La Paz 23.47 168 P P 05 40 32.8 -0.8
comp=Z,2.3nm,0.4s,baz=358,slow=5.3,SNR=23
comp=Z,2.3nm,0.4s
LPAZ La Paz 23.47 168 P P 05 40 32.9 -0.7
LPAZ La Paz 23.47 168 *e*P P 05 40 33.9 +0.3
PDRB Porto dos Gac 24.48 138 *e*P P 05 40 42.0 -0.2
PB18 Visviri 24.50 172 P P 05 40 41.4 -1.5
PB18 IAmb IAmb 05 40 44.6
comp=Z,12nm,1.1s
CLDB Colider 24.58 135 *e*P P 05 40 42.7 -0.4
PB16 IPOC Station P 25.23 172 P P 05 40 47.5 -2.1
PB16 IAmb IAmb 05 40 49.9
comp=Z,10.0nm,1.4s
SIV San Ignacio 25.58 152 P P 05 40 51.4 -0.8
comp=Z,1.6nm,0.8s,baz=314,slow=6.9,SNR=5.4
comp=Z,1.6nm,0.8s
PTLB Pontes e Lacer 26.07 148 *e*P P 05 40 55.9 -0.6
PRPB Parauapebas 26.55 119 *e*P P 05 41 01.3 +0.4
GO01 Chusmiza 26.59 172 P P 05 40 59.4 -2.3
PB11 IPOC Station P 26.62 173 P P 05 40 59.1 -2.5

PB11 IAmb IAmb 05 41 05.1
comp=Z,10.0nm,0.9s
PB08 IPOC Station P 27.06 172 P **P** **05 41 03.4 -2.4**
PB08 IAmb IAmb 05 41 22.3
comp=Z,6.8nm,1.2s
PB01 IPOC Station P 27.90 173 P **P** **05 41 11.0 -2.0**
PB01 IAmb IAmb 05 41 14.5
comp=Z,13nm,1.5s
SALV Santo Antonio 28.38 143 *eP* **P** **05 41 16.8 -0.3**
SNDB Serra Nova Dou 28.59 131 *eP* **P** **05 41 18.7 -0.4**
SMTB Santa Maria do 29.79 121 *eP* **P** **05 41 30.3 +0.6**
ROSB Rosrio 30.46 108 *eP* **P** **05 41 37.0 +1.4**
PEXB Peixe 30.98 127 *eP* **P** **05 41 40.7 +0.5**
BDFB Brasilia 33.37 132 P **P** **05 42 01.5 +0.4**
comp=Z,5.6nm,0.6s,baz=297,slow=6.8,SNR=16
comp=Z,5.6nm,0.6s
BDFB Brasilia 33.37 132 P **P** **05 42 01.6 +0.4**
BDFB Brasilia 33.37 132 *eP* **P** **05 42 01.8 +0.7**
WHAR Wooly Hollow 33.40 331 P **P** **05 42 02.0 +1.0**
WHAR IAmb IAmb 05 42 11.9
comp=Z,6.3nm,1.4s
AC02 Maricunga 33.66 174 P **P** **05 42 03.3 -0.7**
AC02 IAmb IAmb 05 42 31.7
comp=Z,7.3nm,1.2s
SDBA SAO DESIDERIO 33.89 124 *eP* **P** **05 42 05.5 -0.1**
KSPA Keystone Colle 34.68 356 P **P** **05 42 12.0 -0.1**
KSPA IAmb IAmb 05 42 27.7
comp=Z,11nm,1.3s
IPMB Ipameri, GO 34.77 135 *eP* **P** **05 42 13.4 +0.2**
MGMO Mountain Grove 34.90 333 P **P** **05 42 15.4 +1.3**
MGMO IAmb IAmb 05 42 20.2
comp=Z,2.6nm,0.7s
CCM Cathedral Cave 35.20 335 P **P** **05 42 17.9 +1.4**
L56A Greenwood 35.40 354 P **P** **05 42 18.3 0.0**
PCMB Pacaembu 35.43 143 *eP* **P** **05 42 18.5 -0.2**
NBPB Pedra_Branca-C 35.60 109 *eP* **P** **05 42 20.2 0.0**
LCO Las Campanas 35.69 176 P **P** **05 42 21.2 +0.1**
JANB Januaria 35.84 127 *eP* **P** **05 42 21.3 -1.1**
R40A Maddies Statio 35.84 334 P **P** **05 42 22.2 +0.2**
PMNB Patos De Minas 36.39 134 *eP* **P** **05 42 26.9 -0.2**
TXAR Lajitas Array 36.51 312 P **P** **05 42 29.0 +1.0**
comp=Z,1.1nm,0.4s,baz=131,slow=8.9,SNR=25
TXAR pP **pP** **05 43 02.2 +0.4**
comp=Z,0.8nm,0.8s,baz=120,slow=6.4,SNR=3.3
TXAR PcP **PcP** **05 44 49.9 +1.6**
comp=Z,0.9nm,0.6s,baz=127,slow=6.0,SNR=8.6
TXAR ScP **ScP** **05 48 22.7 +2.3**
comp=Z,0.3nm,0.8s,baz=123,slow=4.4,SNR=2.7
comp=Z,1.1nm,0.4s
TXAR Lajitas Array 36.51 312 P **P** **05 42 29.2 +1.3**
TX31 Lajitas Ar. Si 36.51 312 P **P** **05 42 29.3 +1.3**
TX31 IAmb IAmb 05 42 29.6
comp=Z,4.8nm,0.6s
TX32 Lajitas Array 36.51 312 P **P** **05 42 29.4 +1.5**
CO01 Juntas del Tor 36.69 176 P **P** **05 42 25.6 -4.0**
CO01 IAmb IAmb 05 42 33.8
comp=Z,6.9nm,1.2s
BB19B Bebedouro 36.72 140 *eP* **P** **05 42 30.0 +0.3**
P40A Paris 36.78 335 P **P** **05 42 30.9 +0.9**
P40A IAmb IAmb 05 42 32.6
comp=Z,3.6nm,0.8s
NBMA Muriti-CE 37.00 112 *eP* **P** **05 42 32.6 +0.5**
HAL Halifax 38.58 11 P **P** **05 42 44.3 -0.6**
GDU01 Guandu, BA 39.01 122 *eP* **P** **05 42 48.5 -0.4**
MNTX Cornudas Mount 39.02 314 P **P** **05 42 50.4 +1.5**
MNTX IAmb IAmb 05 42 51.6
comp=Z,4.2nm,0.8s
JFWS Jewell Farm 39.02 340 P **P** **05 42 49.4 +0.7**
RCBR Riachuelo 39.16 108 P **P** **05 42 50.2 -0.1**
comp=Z,21nm,1.0s,baz=293,slow=1.5,SNR=4.5
comp=Z,21nm,1.0s
RCBR Riachuelo 39.16 108 P **P** **05 42 49.8 -0.5**
NBLA Lagarto - SE 39.31 116 *eP* **P** **05 42 50.9 -0.7**
VA03 San Esteban 39.43 177 P **P** **05 42 51.6 -0.7**
LMN Caledonia Moun 39.55 9 P **P** **05 42 54.3 +1.3**
ITQB Itaqui 39.57 157 P **P** **05 42 50.0 -3.4**
E62A Clayton Lake 39.78 4 P **P** **05 42 56.2 +1.3**
E62A IAmb IAmb 05 43 18.0
comp=Z,13nm,1.4s
CMC01 Camacan, BA 39.88 124 *eP* **P** **05 42 56.0 -0.1**
NBAN Anadia - AL 40.14 114 *eP* **P** **05 42 58.5 +0.1**
D62A Allapoint, All 40.27 4 P **P** **05 43 01.2 +2.3**
D62A IAmb IAmb 05 43 12.6
comp=Z,7.4nm,1.2s
GUA01 Guaratinga, BA 40.28 126 *eP* **P** **05 42 59.2 -0.3**
MT09 Talagante 40.41 177 P **P** **05 42 60.0 -0.5**
E46A Sault Ste Mari 40.58 348 P **P** **05 43 03.4 +1.9**
E46A IAmb IAmb 05 43 29.4
comp=Z,6.9nm,1.3s
BATG Bathurst New B 40.76 7 P **P** **05 43 04.8 +1.8**
BATG IAmb IAmb 05 43 12.2
comp=Z,11nm,1.2s
CRNM Carthage 41.19 316 P **P** **05 43 08.7 +1.8**
RIB01 Linhares ES 41.35 129 *eP* **P** **05 43 07.7 -0.4**
ECSD EROS Data Cent 42.18 334 P **P** **05 43 15.1 +0.4**
SDCO Great Sand Dun 42.59 321 P **P** **05 43 20.6 +2.2**
TUC Tucson 43.30 311 P **P** **05 43 25.8 +1.9**
S22A 4UR Ranch, Cre 43.43 320 P **P** **05 43 27.3 +2.2**
EYMN Ely 43.90 342 P **P** **05 43 29.0 +0.7**
EYMN IAmb IAmb 05 43 29.6
comp=Z,4.8nm,0.6s
ISCO Idaho Springs 43.95 323 P **P** **05 43 31.4 +2.1**
PV15 Paradox Valley 44.83 320 P **P** **05 43 38.5 +2.2**
PV15 IAmb IAmb 05 43 39.2
comp=Z,11nm,1.1s
PV13 Radium Mtn., P 44.95 319 P **P** **05 43 39.3 +2.2**
PV13 IAmb IAmb 05 43 39.7
comp=Z,4.9nm,0.7s
B35A Bob, Littlefor 44.97 341 P **P** **05 43 37.2 +0.3**
WUAZ Wupatki 45.27 315 P **P** **05 43 39.9 +0.3**
WUAZ IAmb IAmb 05 43 42.9
comp=Z,6.9nm,0.8s
AGMN Agassiz Nation 45.65 339 IAmb IAmb 05 43 43.2
comp=Z,2.5nm,0.6s
AGMN P **P** **05 43 43.2 +1.0**
TRQA Tornquist 45.82 168 P **P** **05 43 41.1 -2.6**
TRQA IAmb IAmb 05 43 51.7
comp=Z,9.5nm,1.4s
U15A North Rim 46.36 315 IAmb IAmb 05 43 51.2
comp=Z,6.0nm,1.2s
ULM Lac du Bonnet 47.31 340 P **P** **05 43 55.3 +0.2**
comp=Z,2.2nm,0.3s,baz=141,slow=7.4,SNR=5.8
comp=Z,2.2nm,0.3s
ULM Lac du Bonnet 47.31 340 P **P** **05 43 55.5 +0.4**
LCMT Little Creek M 47.32 315 IAmb IAmb 05 43 58.9
comp=Z,5.9nm,1.0s
PLCA Paso Flores 47.37 177 P **P** **05 43 53.8 -1.8**
comp=Z,0.3nm,0.3s,baz=328,slow=11,SNR=6.3
comp=Z,0.3nm,0.3s
PLCA Paso Flores 47.37 177 P **P** **05 43 53.9 -1.8**
TCRU Three Creeks R 47.58 318 IAmb IAmb 05 44 00.5
comp=Z,8.0nm,1.0s
BW06 Boulder Array 48.12 324 P **P** **05 44 02.7 +1.0**
PD31 Pinedale Array 48.12 324 P **P** **05 44 02.9 +1.1**
PDAR Pinedale Array 48.12 324 P **P** **05 44 02.8 +1.0**
comp=Z,1.0nm,0.5s,baz=127,slow=9.5,SNR=13
PDAR pP **pP** **05 44 38.0 +0.8**
comp=Z,0.3nm,0.5s,baz=110,slow=8.0,SNR=1.8
PDAR PcP **PcP** **05 45 27.3 +0.4**
comp=Z,0.4nm,0.7s,baz=154,slow=6.7,SNR=1.9
PDAR ScP **ScP** **05 49 07.1 +0.4**
comp=Z,0.2nm,0.6s,baz=119,slow=5.6,SNR=2.3
comp=Z,1.0nm,0.5s
PDAR Pinedale Array 48.12 324 P **P** **05 44 03.0 +1.3**
SCHQ Schefferville 48.15 5 P **P** **05 44 02.7 +1.2**
comp=Z,1.2nm,0.4s,baz=197,slow=11,SNR=7.1
SCHQ pP **pP** **05 44 39.0 +1.1**
comp=Z,2.2nm,0.5s,baz=202,slow=9.8,SNR=3.5
SCHQ ScP **ScP** **05 49 06.8 +0.5**
comp=Z,1.8nm,0.7s,baz=137,slow=2.1,SNR=4.0
comp=Z,1.2nm,0.4s
SCHQ Schefferville 48.15 5 P **P** **05 44 03.0 +1.6**
SCHQ IAmb IAmb 05 44 24.9
comp=Z,6.5nm,1.4s
HWUT Hardware Ranch 48.64 322 **P** **05 44 06.8 +1.1**
BGU Big Grassy Mou 49.19 320 P **P** **05 44 11.1 +1.2**
BGU IAmb IAmb 05 44 11.8
comp=Z,5.0nm,0.6s
REDW Red Top Meadow 49.23 324 P **P** **05 44 11.7 +1.5**
REDW IAmb IAmb 05 44 12.3
comp=Z,4.4nm,0.6s
LOHW Long Hollow 49.24 324 P **P** **05 44 12.2 +1.9**
LOHW IAmb IAmb 05 44 12.3
comp=Z,2.9nm,0.6s
TPAW Teton Pass 49.37 324 P **P** **05 44 13.0 +1.7**
TPAW IAmb IAmb 05 44 13.7
comp=Z,2.5nm,0.7s
GCMT Greycliff 50.06 327 P **P** **05 44 17.9 +1.6**
YHL Hebgen Lake 50.32 325 P **P** **05 44 20.7 +2.2**
YHL IAmb IAmb 05 44 21.6
comp=Z,8.8nm,1.4s
BOZ Bozeman (W) 51.02 326 P **P** **05 44 25.1 +1.6**
MCMT McKenzie Canyo 51.26 324 P **P** **05 44 27.7 +2.3**
NVAR Mina Array Bea 51.53 315 P **P** **05 44 28.7 +1.1**
comp=Z,1.1nm,0.6s,baz=110,slow=6.8,SNR=1.0
NVAR PcP **PcP** **05 45 40.8 +1.3**
comp=Z,1.1nm,0.6s,baz=130,slow=5.5,SNR=3.3
comp=Z,1.1nm,0.6s
MFID Camas Ranch 52.27 321 IAmb IAmb 05 44 35.7
comp=Z,3.6nm,0.6s
WVOR Wild Horse Val 53.57 319 IAmb IAmb 05 44 44.3
comp=Z,3.1nm,0.6s
JTMT Jette 53.77 327 IAmb IAmb 05 44 46.0
comp=Z,2.7nm,0.9s
F10A Beach Ranch, E 54.46 323 IAmb IAmb 05 44 50.0
comp=Z,3.4nm,0.5s
I07A Izee 54.91 320 IAmb IAmb 05 44 54.0
comp=Z,2.3nm,0.8s
PINE Pine Mountain 55.69 319 P **P** **05 44 60.0 +2.2**
YBH Yreka Blue Hor 55.98 317 P **P** **05 44 59.3 -0.4**
YBH IAmb IAmb 05 45 00.5
comp=Z,1.8nm,0.6s
EDM Edmonton 56.66 332 P **P** **05 45 04.9 +0.7**
H04A Detroit Lake 56.89 320 P **P** **05 45 07.2 +1.2**
H04A IAmb IAmb 05 45 10.4
comp=Z,4.1nm,0.9s
B08A Colville Reser 56.93 325 IAmb IAmb 05 45 07.7
comp=Z,2.4nm,0.7s
YKA Yellowknife Ar 63.29 340 P **P** **05 45 49.7 +0.5**
comp=Z,3.2nm,0.6s,baz=133,slow=6.9,SNR=19
YKA pP **PcP** **05 46 27.2 +2.3**
comp=Z,1.0nm,0.5s,baz=127,slow=7.2,SNR=2.6
comp=Z,3.2nm,0.6s
DBIC Dibolkro 67.68 86 P **P** **05 46 17.0 -1.3**
comp=Z,2.9nm,0.8s,baz=295,slow=9.0,SNR=1.4
comp=Z,2.9nm,0.8s
TORD Torodi Ar. Bea 73.69 78 P **P** **05 46 53.3 -1.4**
comp=Z,0.2nm,0.5s,baz=276,slow=4.8,SNR=1.9
TORD pP **pP** **05 47 33.0 -1.0**
comp=Z,0.4nm,0.6s,baz=302,slow=7.9,SNR=2.6
comp=Z,0.2nm,0.5s
ILAR Eielson Array 76.99 335 P **P** **05 47 13.2 +0.6**
comp=Z,0.6nm,0.7s,baz=104,slow=4.8,SNR=5.3
ILAR pP **pP** **05 47 52.9 +1.5**
comp=Z,0.3nm,0.6s,baz=104,slow=4.7,SNR=2.8
comp=Z,0.6nm,0.7s
NOA NORSAR Array B 81.31 29 P **P** **05 47 37.1 +1.0**
comp=Z,0.2nm,0.5s,baz=237,slow=12,SNR=1.7
NOA pP **pP** **05 48 15.7 -0.6**
comp=Z,0.7nm,0.8s,baz=268,slow=5.4,SNR=2.6
comp=Z,0.2nm,0.5s
ARCES ARCESS Array B 86.66 20 P **P** **05 48 03.4 +0.4**
comp=Z,1.8nm,0.8s,baz=282,slow=4.3,SNR=3.8
comp=Z,1.8nm,0.8s
ARCES ARCESS Array B 86.66 20 P **P** **05 48 03.6 +0.6**
VNA3 Neumayer Olymp 88.15 163 P **P** **05 48 09.0 -1.0**
SNAA Sanae 90.31 163 P **P** **05 48 19.4 -0.8**
TROLL Troll, Antarti 92.02 162 P **P** **05 48 27.3 -0.9**
MKAR Makanchi Array 122.31 20 PKP **PKPdf** **05 54 13.8 -0.2**
comp=Z,0.3nm,0.4s,baz=300,slow=2.2,SNR=6.1
MKAR Makanchi Array 122.31 20 **PKPdf** **05 54 14.0 0.0**
SONM Songino Array 125.59 0 PKP **PKPdf** **05 54 20.7 +0.3**
comp=Z,0.4nm,0.5s,baz=50,slow=2.3,SNR=1.7
SONM Songino Array 125.59 0 **PKPdf** **05 54 20.1 -0.4**
PZH PanZhiHua 146.50 8 PKPbc **PKPdf** **05 54 58.8 -0.7**
CMAR Chiang Mai Arr 153.68 17 PKPbc **PKPbc** **05 55 17.9 -0.7**
comp=Z,1.0nm,0.3s,baz=311,slow=2.2,SNR=5.3
CMAR Chiang Mai Arr 153.68 17 **PKPbc** **05 55 19.1 +0.4**

*REN **23** 05:42:38.5±1.0,38°.30N±0°.03×116°.67W±0°.01,h5km±7km, ML2.6/4,ML2.1/28(NEIC),Error ellipse: s-maj=4.4km s-min=1.4km az=187.0*
NEIC 23 05:42:38.4±0.5,38°.33N±0°.02×116°.66W±0°.02,h8km±9km, Error ellipse: s-maj=3.0km s-min=1.9km az=165.0, Nevada

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TPH	**Tonopah**	**0.51**	**241**		Pg	05 42 48.3	0.0
TPH					Sg	05 42 55.1	+0.2
R11A	**Troy Canyon, C**	**0.85**	**88**		Pg	05 42 54.8	0.0
R11A				Sg	Sg	05 43 05.7	-0.1
S11A	**Rachel**	**0.99**	**133**		Pg	05 42 57.3	-0.2
S11A				Sg	Sb	05 43 10.9	-0.4
NV11	**Mina Array Sit**	**1.18**	**276**		Pg	05 43 00.9	-0.2
NV11				Sg	Sb	05 43 16.6	-0.1
NV11				IAML		05 43 19.4	
	comp=N,27nm,0.5s						
NV11				IAML		05 43 19.7	
	comp=E,35nm,0.7s						
NVAR	**Mina Array Bea**	**1.29**	**275**		Pn	05 43 03.0	0.0
KVN	**Kaiserville**	**1.34**	**303**	Pn	Pb	05 43 04.0	0.0
LCH	**Last Change Ra**	**1.34**	**216**		Pn	05 43 03.6	-0.1
LCH				IAML		05 43 23.8	
	comp=N,30nm,0.4s						
LCH				IAML		05 43 24.5	
	comp=E,24nm,0.3s						
TPNV	**Topopah Spring**	**1.41**	**166**		Pn	05 43 04.7	0.0
TPNV				IAML		05 43 24.4	
	comp=E,30nm,0.5s						
TPNV				IAML		05 43 24.4	
	comp=E,34nm,0.4s						
LHV	**Little Huntoon**	**1.45**	**268**		Pb	05 43 05.8	+0.1
LHV				IAML		05 43 31.1	
	comp=N,41nm,0.6s						
RYN	**Ryan**	**1.49**	**282**	Pn	Pn	05 43 05.6	-0.1
PRN	**Pahroc Range**	**1.57**	**125**	Pn	Pn	05 43 06.4	-0.4
PRN				IAML		05 43 39.7	
	comp=E,26nm,0.7s						
GWY	**Greenwater Val**	**2.14**	**180**		Pn	05 43 14.3	-0.3

MAN 23 05:46:43.6,11°.57N×125°.73E,h10km,mb4.0,ML2.7, MS2.3,Samar

*IDC **23** 05:50:55.2±0.6,3°.17S×130°.86E,h0km,mb4.4/15, mbtmp4.4/16,ML4.0/1,MS3.5/24,Error ellipse: s-maj=27.2km s-min=14.4km az=73.0*
*NEIC **23** 05:50:56.4±1.5,3°.29S±0°.06×130°.53E±0°.06,h10km±1km, mb4.7/65, Error ellipse: s-maj=10.8km s-min=10.0km az=185.0*
*DJA **23** 05:50:59.8±0.2,3°.5S±3°×13°1E±°,h44km±33km,M4.7/11, mb4.9/8,mB5.2/7,MLv4.6/11,Mw(mB)4.6/7*
ISC 23 05:50:57.9±0.3,3°.25S±0°.05×130°.67E±0°.05,h24km,n190, σ1s59/165,**mb4.7**/54,**MS3.4**/21,**1C-1D,Seram**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**1.61**	**78**	Pn	**Pb**	**05 51 26.3**	**-0.6**
FAKI	**Fak Fak**	**1.61**	**78**	P	**Pb**	**05 51 25.9**	**-1.0**
FAKI				S	**Sb**	**05 51 44.7**	**-2.1**
FAKI	**Fak Fak**	**1.61**	**78**	P	**Pb**	**05 51 26.5**	**-0.4**
MSAI	**Masohi**	**1.74**	**267**	P	**Pn**	**05 51 28.2**	**+1.6**
SWI	**Sorong**	**2.44**	**14**	P	**Pn**	**05 51 36.1**	**-0.1**
AAI	**Ambon**	**2.51**	**260**	P	**Pn**	**05 51 39.0**	**+1.8**
NLAI	**Namlea**	**3.56**	**270**	P	**Pn**	**05 51 53.8**	**+2.1**
LBMI	**Labuha**	**4.09**	**309**	P	**Pn**	**05 51 59.4**	**+0.4**
SAUI	**Saumlaki**	**4.75**	**172**	Pn	**Pn**	**05 52 06.8**	**-1.3**
SAUI	**Saumlaki**	**4.75**	**172**	P	**Pn**	**05 52 10.4**	**+2.4**
SANI	**Sanana**	**4.83**	**284**	P	**Pn**	**05 52 08.5**	**-0.6**
SANI	**Sanana**	**4.83**	**284**	P	**Pn**	**05 52 09.6**	**+0.5**
TNTI	**Ternate**	**5.18**	**320**	Pn	**Pn**	**05 52 11.8**	**-2.2**
TNTI	**Ternate**	**5.18**	**320**	P	**Pn**	**05 52 14.2**	**+0.2**
	0.2nm39nm,0.9s						
BAKI	**Biak**	**5.80**	**70**	P	**Pn**	**05 52 22.9**	**+0.4**
	4µm370nm,0.6s						
SMPI	**Sarmi**	**8.13**	**81**	P	**Pn**	**05 52 55.4**	**+0.9**
	955nm30nm,0.9s						
LUWI	**Luwuk**	**8.19**	**285**	Pn	**Pn**	**05 52 53.1**	**-2.2**
LUWI	**Luwuk**	**8.19**	**285**	P	**Pn**	**05 52 56.4**	**+1.1**
	7µm141nm,0.4s						
SOEI	**Soe**	**9.07**	**224**	Pn	**Pn**	**05 53 04.9**	**-2.6**
SOEI	**Soe**	**9.07**	**224**	P	**Pn**	**05 53 09.9**	**+2.4**
	78nm,0.9s						
APSI	**Ampana**	**9.31**	**284**	P	**Pn**	**05 53 11.8**	**+1.1**
	1µm98nm,0.8s						
MTN	**Manton Dam**	**9.55**	**177**	P	**Pn**	**05 53 13.1**	**-0.9**
	baz=9.5,SNR=107						
MTN	**Manton Dam**	**9.55**	**177**	Pn	**Pn**	**05 53 12.6**	**-1.3**
MTN	**Manton Dam**	**9.55**	**177**	P	**Pn**	**05 53 13.7**	**-0.3**
KDU	**Kakadu**	**9.55**	**169**	P	**Pn**	**05 53 12.2**	**-1.8**
	baz=9.5,SNR=165						
KDU	**Kakadu**	**9.55**	**169**	P	**Pn**	**05 53 12.8**	**-1.2**
BKSI	**Bulukumba**	**10.72**	**259**	P	**Pn**	**05 53 33.2**	**+3.2**
	650nm56nm,1.1s						
TOLI2	**Tolitoli**	**10.79**	**293**	Pn	**Pn**	**05 53 30.2**	**-0.8**
TOLI2	**Tolitoli**	**10.79**	**293**	P	**Pn**	**05 53 32.6**	**+1.6**
KAPI	**Kappang**	**11.03**	**260**	Pn	**Pn**	**05 53 38.8**	**+4.5**
	1.0nm,0.3s,baz=83,slow=16,SNR=4.1						
KAPI				LR	LR	05 59 05.4	
	comp=Z,308nm,18.3s,baz=84,slow=44						
	8.1nm,0.8s						
KAPI	**Kappang**	**11.03**	**260**	Pn	**Pn**	**05 53 33.3**	**-1.0**
MPSI	**Mapaga**	**11.34**	**288**	P	**Pn**	**05 53 39.6**	**+1.1**
DAV	**Davao City (W)**	**11.44**	**334**	LR	LR	05 58 52.7	
	comp=Z,260nm,19.2s,baz=133,slow=42						
KNRA	**Kununurra**	**12.50**	**189**	P	**Pn**	**05 53 51.7**	**-2.6**
	baz=12,SNR=26						
KNRA	**Kununurra**	**12.50**	**189**	Pn	**Pn**	**05 53 51.8**	**-2.6**
KNRA	**Kununurra**	**12.50**	**189**	P	**Pn**	**05 53 51.6**	**-2.7**
PLAI	**Plampang**	**13.97**	**246**	P	**Pn**	**05 54 13.9**	**-0.6**
MYLDM	**Lahad Datu**	**14.76**	**304**	Pn	**Pn**	**05 54 23.7**	**-1.6**
COEN	**Coen**	**16.30**	**132**	P	**Pn**	**05 54 45.2**	**-0.2**
	baz=16,SNR=8.6						
COEN	**Coen**	**16.30**	**132**	Pn	**Pn**	**05 54 45.0**	**-0.5**
COEN	**Coen**	**16.30**	**132**	P	**Pn**	**05 54 44.9**	**-0.5**
WB0	**Warramunga Arr**	**16.82**	**168**	Pn	**Pn**	**05 54 48.8**	**-3.2**
WB0				IAmb	IAmb	05 55 04.5	
	comp=Z,34nm,0.7s						
WRAB	**Tennant Creek**	**16.97**	**168**		**Pn**	**05 54 51.2**	**-2.6**
WRA	**Warramunga Ar**	**16.98**	**168**	Pn	**Pn**	**05 54 51.2**	**-2.8**
	comp=Z,1.8nm,0.3s,baz=349,slow=12,SNR=74						
WRA				Sn	Sn	05 57 50.8	-11
	comp=Z,1.1nm,0.3s,baz=355,slow=22,SNR=3.7						
WB2	**Warramunga Ar**	**16.98**	**168**	Pn	**Pn**	**05 54 50.7**	**-3.3**
WB2				IAmb	IAmb	05 55 05.8	
	comp=Z,38nm,0.8s						
WR0	**Warramunga Arr**	**17.04**	**167**		**Pn**	**05 54 52.3**	**-2.4**
JAGI	**Jajag, Banyuwa**	**17.23**	**252**	P	**Pn**	**05 54 55.6**	**-1.5**
PMG	**Port Moresby**	**17.49**	**111**	LR	LR	06 03 23.2	
	comp=Z,278nm,18.7s,baz=298,slow=43						
QIS	**Mount Isa**	**19.29**	**154**	P	**P**	**05 55 21.6**	**+0.4**
	baz=19,SNR=10						
QIS	**Mount Isa**	**19.29**	**154**	P	**Pn**	**05 55 22.8**	**+0.5**
SBUM	**Sibu**	**19.29**	**287**	P	**P**	**05 55 19.8**	**-1.4**
MTSU	**Mount Surprise**	**19.94**	**139**	P	**Pn**	**05 55 30.5**	**+0.3**
	baz=20,SNR=19						
MTSU	**Mount Surprise**	**19.94**	**139**	P	**Pn**	**05 55 30.7**	**+0.6**
SMRI	**Semarang**	**20.50**	**259**	P	**P**	**05 55 32.5**	**-1.9**
SMRI				IAmb	IAmb	05 55 41.1	
	comp=Z,82nm,1.2s						
AS31	**Alice Springs**	**20.54**	**172**	P	**P**	**05 55 35.1**	**+0.3**
AS31				IAmb	IAmb	05 55 43.0	
	comp=Z,33nm,0.5s						
ASAR	**Alice Springs**	**20.54**	**172**	P	**P**	**05 55 35.5**	**+0.7**
MBWA	**Marble Bar**	**20.75**	**210**	P	**P**	**05 55 35.6**	**-1.4**
MBWA	**Marble Bar**	**20.75**	**210**	P	**P**	**05 55 35.6**	**-1.4**
KSM	**Kuching**	**20.89**	**283**	P	**P**	**05 55 37.0**	**-1.6**
KSM				IAmb	IAmb	05 55 50.7	
	comp=Z,18nm,0.7s						
PSA00	**Pilbara Seismi**	**21.04**	**209**	P	**P**	**05 55 38.7**	**-1.5**
PSA00				IAmb	IAmb	05 56 03.7	
	comp=Z,29nm,1.1s						
PSA00	**Pilbara Seismi**	**21.04**	**209**	P	**P**	**05 55 39.0**	**-1.2**
	comp=Z,25nm,2.9s						
WRKA	**Warakurna**	**21.79**	**186**	P	**P**	**05 55 47.9**	**-0.4**
	baz=22,SNR=15						
WRKA	**Warakurna**	**21.79**	**186**	P	**P**	**05 55 48.2**	**0.0**
GUMO	**Guam**	**21.87**	**40**	LR	LR	06 03 56.1	
	comp=Z,71nm,19.9s,baz=114,slow=36						
CTA	**Charters Tower**	**22.61**	**139**	P	**P**	**05 55 58.1**	**+1.0**
	comp=Z,12nm,0.9s,baz=13,SNR=15						
	comp=Z,12nm,0.9s						
CTAO	**Charters Tower**	**22.61**	**139**	P	**P**	**05 55 56.4**	**-0.7**
OOD	**Oodnadatta**	**24.88**	**169**	P	**P**	**05 56 20.1**	**+1.2**
QLP	**Quilpie**	**26.60**	**152**	P	**P**	**05 56 34.9**	**+0.4**
	baz=27,SNR=3.8						
MULG	**Mulgathing**	**27.08**	**174**	P	**P**	**05 56 39.8**	**+1.0**
FORT	**Forrest**	**27.50**	**185**	P	**P**	**05 56 38.9**	**-3.6**
FORT	**Forrest**	**27.50**	**185**	P	**P**	**05 56 43.4**	**+0.9**
LCRK	**Leigh Creek**	**27.98**	**166**	P	**P**	**05 56 49.0**	**+2.1**
NACB	**Ninganchiao**	**28.65**	**343**	P	**P**	**05 56 52.5**	**-0.3**
MORW	**Morawa**	**29.20**	**207**	P	**P**	**05 56 56.4**	**-1.4**
BBOO	**Buckleboo**	**29.84**	**171**	P	**P**	**05 57 02.2**	**-1.2**
BBOO	**Buckleboo**	**29.84**	**171**	P	**P**	**05 57 04.1**	**+0.7**
JOW	**Kunigami**	**29.99**	**356**	LR	LR	06 10 28.9	
	comp=Z,27nm,19.1s,baz=156,slow=39						
HKPS	**Hong Kong Po S**	**30.07**	**328**	P	**P**	**05 57 05.4**	**-0.2**
QIZ	**Qiongzhong**	**30.16**	**318**	P	**P**	**05 57 06.0**	**-0.4**
BLDU	**Ballidu**	**30.25**	**204**	P	**P**	**05 57 07.1**	**0.0**
	comp=Z,27nm,2.9s						
STKA	**Stephens Creek**	**30.28**	**161**	P	**P**	**05 57 08.0**	**+0.7**
	comp=Z,5.3nm,0.7s,baz=331,slow=11,SNR=6.9						
	comp=Z,5.3nm,0.7s						
STKA	**Stephens Creek**	**30.28**	**161**	P	**P**	**05 57 08.1**	**+0.8**
	baz=30,SNR=4.4						
STKA	**Stephens Creek**	**30.28**	**161**	P	**P**	**05 57 07.0**	**-0.3**
KLBR	**Kellerberrin**	**30.71**	**202**	P	**P**	**05 57 10.5**	**-0.5**
	baz=31,SNR=6.4						
KLBR	**Kellerberrin**	**30.71**	**202**	P	**P**	**05 57 10.6**	**-0.5**
CMSA	**Cobar Meteorol**	**31.50**	**155**	P	**P**	**05 57 19.3**	**+1.3**
	baz=32,SNR=11						
CMSA	**Cobar Meteorol**	**31.50**	**155**	P	**P**	**05 57 19.7**	**+1.7**
NWAO	**Narrogin (SRO)**	**32.10**	**202**	P	**P**	**05 57 22.5**	**-0.8**
JCJ	**Chichijima**	**32.15**	**20**	LR	LR	06 09 07.7	
	comp=Z,84nm,20.5s,baz=129,slow=34						
JCJ	**Chichijima**	**32.15**	**20**	P	**P**	**05 57 22.9**	**-0.8**
GSI	**Gunungsitoli**	**33.39**	**277**	P	**P**	**05 57 31.7**	**-3.1**
ARMA	**Armidale**	**33.52**	**146**	P	**P**	**05 57 34.6**	**-1.2**
ARMA				IAmb	IAmb	05 57 39.1	
	comp=Z,15nm,1.1s						
ARPS	**Mount Arapiles**	**34.91**	**164**	P	**P**	**05 57 48.7**	**+1.0**
CAN	**Canberra**	**36.16**	**154**	P	**P**	**05 58 00.4**	**+1.8**
CAN				IAmb	IAmb	05 58 01.4	
	comp=Z,12nm,0.9s						
CAN	**Canberra**	**36.16**	**154**	P	**P**	**05 58 00.5**	**+2.0**
JNU	**Nakatsue**	**36.17**	**0**	P	**P**	**05 58 01.4**	**+2.8**
GYA	**Guiyang**	**37.56**	**323**	⇓P	P	05 58 16.6	+5.9
GYA				pmax	pmax		
	comp=Z,21nm,0.8s						
CMAR	**Chiang Mai Arr**	**37.97**	**306**	P	**P**	**05 58 16.2**	**+2.2**
	comp=Z,2.4nm,0.3s,baz=134,slow=7.9,SNR=8.2						
	comp=Z,2.4nm,0.3s						
CMAR	**Chiang Mai Arr**	**37.97**	**306**	P	**P**	**05 58 14.2**	**+0.1**
JHS	**Saijyo**	**38.11**	**3**		**P**	**05 58 14.4**	**-0.6**
JHS				IAmb	IAmb	05 58 39.4	
	comp=Z,41nm,1.5s						
CHTO	**Chiang Mai**	**38.15**	**306**	P	**P**	**05 58 17.1**	**+1.5**

BJT	**Baijiatuau**	**45.06**	**344**	P	**P**	**05 59 11.4**	**-0.6**
BJT				IAmb	IAmb	05 59 28.1	
	comp=Z,9,6nm,1.0s						
HHC	**Hu-ho-hao-te**	**47.23**	**340**	*e*P	P	05 59 34.4	+5.2
HHC				pmax	pmax		
	comp=Z,19nm,1.0s						
HHC				pmax	pmax		
	comp=Z,86nm,5.3s						
USRK	**Ussuriysk Ar.**	**47.25**	**1**	P	**P**	**05 59 29.6**	**+0.6**
	comp=Z,3.5nm,0.5s,baz=180,slow=8.4,SNR=7.2						
	comp=Z,3.5nm,0.5s						
USRK	**Ussuriysk Ar.**	**47.25**	**1**	P	**P**	**05 59 29.9**	**+0.8**
ASAJ	**Asahikawa**	**48.35**	**11**	LR	LR	06 21 24.1	
	comp=Z,16nm,18.1s,baz=180,slow=38						
XLT	**XiLinHaoTe**	**48.73**	**346**	*e*P	P	05 59 49.1	+8.4
XLT				pP	sP	05 59 58.4	+7.4
XLT				sP	pP	06 00 04.0	+16
XLT				pmax	pmax		
	comp=Z,13nm,0.5s						
XLT				pmax	pmax		
	comp=Z,46nm,3.7s						
GTA	**Gaotai**	**51.06**	**329**	*e*P	P	06 00 06.4	+7.8
GTA				pP	sP	06 00 10.5	+1.6
GTA				sP	pP	06 00 14.0	+8.0
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TAPN	**Taplejung**	**51.38**	**309**	*e*P	**P**	**06 00 01.8**	**+0.5**
	comp=Z,13nm,0.4s						
RAMN	**Ramite**	**52.05**	**308**	*e*P	**P**	**06 00 07.2**	**+0.9**
	comp=Z,41nm,0.5s						
KLR	**Kul'dur**	**52.27**	**1**	LR	LR	06 21 49.5	
	comp=Z,12nm,20.2s,baz=216,slow=36						
JIRN	**Jiri**	**52.71**	**309**	*e*P	**P**	**06 00 11.8**	**+0.5**
	comp=Z,15nm,0.6s						
GUN	**Gumba**	**53.07**	**309**	*e*P	**P**	**06 00 14.6**	**+0.6**
	comp=Z,22nm,0.5s						
PKI	**Pulchoki**	**53.28**	**308**	*e*P	**P**	**06 00 15.6**	**+0.1**
GKN	**Gorkha**	**54.08**	**308**	*e*P	**P**	**06 00 21.5**	**+0.3**
	comp=Z,19nm,0.5s						
KOLN	**Koldanda**	**54.79**	**307**	*e*Pg	**P**	**06 00 27.1**	**+0.7**
DANN	**Dangsing**	**54.93**	**308**	*e*P	**P**	**06 00 27.7**	**+0.2**
	comp=Z,21nm,0.7s						
ULN	**Ulaanbaatar**	**54.94**	**341**	P	**P**	**06 00 27.4**	**+0.4**
ULN				IAmb	IAmb	06 00 29.7	
	comp=Z,6.5nm,0.8s						
SONM	**Songino Array**	**55.13**	**340**	P	**P**	**06 00 29.6**	**+1.2**
	comp=Z,2.6nm,0.7s,baz=160,slow=7.1,SNR=15						
	comp=Z,2.6nm,0.7s						
SONM	**Songino Array**	**55.13**	**340**	P	**P**	**06 00 28.4**	**0.0**
PYUN	**Piuhan**	**55.42**	**308**	*e*P	**P**	**06 00 31.6**	**+0.6**
PETK	**Petropavlovsk-**	**60.57**	**18**	P	**P**	**06 01 07.1**	**+0.8**
	comp=Z,1.8nm,0.4s,baz=209,slow=12,SNR=2.1						
PETK				LR	LR	06 22 30.3	
	comp=Z,24nm,21.3s,baz=188,slow=31						
	comp=Z,1.8nm,0.4s						
WMQ	**Urumqi**	**60.66**	**326**	*e*P	**P**	**06 01 10.6**	**+3.4**
MA2	**Magadan**	**64.61**	**11**	LR	LR	06 28 15.1	
	comp=Z,31nm,21.4s,baz=121,slow=35						
YAK	**Yakutsk**	**65.10**	**359**	LR	LR	06 30 34.0	
	comp=Z,22nm,20.2s,baz=258,slow=37						
MK31	**Makanchi Array**	**65.50**	**326**	P	**P**	**06 01 40.2**	**+1.0**
MK31				IAmb	IAmb	06 01 41.0	
	comp=Z,3.8nm,0.7s						
MKAR	**Makanchi Array**	**65.50**	**326**	P	**P**	**06 01 40.4**	**+1.1**
	comp=Z,5.5nm,0.5s,baz=115,slow=8.5,SNR=56						
	comp=Z,5.5nm,0.5s						
MKAR	**Makanchi Array**	**65.50**	**326**	P	**P**	**06 01 40.0**	**+0.8**
MAKZ	**Makanchi**	**65.68**	**326**	P	**P**	**06 01 41.2**	**+0.8**
SHEM	**Shemya Is, Ala**	**66.65**	**27**	LR	LR	06 25 57.0	
	comp=Z,37nm,19.8s,baz=142,slow=32						
SEY	**Seymchan**	**68.02**	**11**	LR	LR	06 30 23.5	
	comp=Z,25nm,21.3s,baz=178,slow=35						
AAK	**Ala-Archa**	**68.15**	**319**	LR	LR	06 36 39.0	
	comp=Z,17nm,18.1s,baz=146,slow=40						
AAK	**Ala-Archa**	**68.15**	**319**	P	**P**	**06 01 56.1**	**-0.3**
AAK				IAmb	IAmb	06 02 08.3	
	comp=Z,3.6nm,0.7s						
ZAA0	**Zalesovo Array**	**68.55**	**333**	P	**P**	**06 01 58.7**	**+0.3**
ZALV	**Zalesovo Beam**	**68.55**	**333**	P	**P**	**06 01 58.9**	**+0.5**
	comp=Z,2.0nm,0.5s,baz=104,slow=6.3,SNR=11						
	comp=Z,2.0nm,0.5s						
ZALV	**Zalesovo Beam**	**68.55**	**333**	P	**P**	**06 01 58.5**	**0.0**
GAR	**Garm**	**69.54**	**314**	P	**P**	**06 02 05.0**	**-0.1**
KURK	**Kurchatov**	**69.70**	**328**	P	**P**	**06 02 06.6**	**+0.9**
KURK				IAmb	IAmb	06 02 08.8	
	comp=Z,6.8nm,0.8s						
KK31	**Karatay Array**	**71.00**	**318**	P	**P**	**06 02 14.4**	**+0.6**
KKAR	**Karatay Array**	**71.00**	**318**	P	**P**	**06 02 14.7**	**+0.9**
TIXI	**Tiksi**	**74.77**	**359**	LR	LR	06 35 28.9	
	comp=Z,39nm,20.5s,baz=184,slow=36						
VNDA	**Vanda**	**76.07**	**173**	P	**P**	**06 02 44.0**	**+1.0**
	comp=Z,0.8nm,0.6s,baz=326,slow=8.5,SNR=7.5						
VNDA				LR	LR	06 35 52.8	
	comp=Z,53nm,20.2s,baz=349,slow=35						
	comp=Z,0.8nm,0.6s						
VNDA	**Vanda**	**76.07**	**173**	P	**P**	**06 02 43.9**	**+0.9**
SBA	**Scott Base**	**76.95**	**173**	P	**P**	**06 02 50.2**	**+2.2**
GEYT	**Alibeck**	**78.33**	**310**	P	**P**	**06 02 58.0**	**+1.5**
	comp=Z,3.9nm,0.6s,baz=91,slow=13,SNR=3.8						
	comp=Z,3.9nm,0.6s						
GEYT	**Alibeck**	**78.33**	**310**	P	**P**	**06 02 56.2**	**-0.3**
GEYT				IAmb	IAmb	06 02 59.2	
	comp=Z,4.5nm,0.9s						
MAW	**Mawson**	**78.67**	**201**	P	**P**	**06 02 59.1**	**+1.4**
	comp=Z,2.2nm,0.7s,baz=51,slow=6.5,SNR=3.1						
MAW				LR	LR	06 35 19.4	
	comp=Z,57nm,20.1s,baz=43,slow=34						
	comp=Z,2.2nm,0.7s						
ABKAR	**Akbulak array**	**80.01**	**321**	P	**P**	**06 03 06.2**	**+0.9**
TTA	**Tatalina**	**85.35**	**26**	IAmb	IAmb	06 03 36.6	
	comp=Z,5.2nm,1.0s						
N19K	**Bonanza Creek**	**85.47**	**28**	P	**P**	**06 03 35.5**	**+1.9**
N19K				IAmb	IAmb	06 03 36.5	
	comp=Z,7.2nm,0.9s						
L19K	**White Mountain**	**85.66**	**27**	P	**P**	**06 03 34.9**	**+0.5**
L19K				IAmb	IAmb	06 03 37.8	
	comp=Z,9.1nm,1.1s						
M19K	**Big River Lodg**	**85.80**	**27**	IAmb	IAmb	06 03 41.3	
	comp=Z,6.3nm,1.0s						
K20K	**Telida**	**86.31**	**26**	P	**P**	**06 03 39.2**	**+1.5**
K20K				IAmb	IAmb	06 03 56.4	
	comp=Z,4.1nm,0.9s						
M20K	**Styx River**	**86.37**	**27**	IAmb	IAmb	06 03 56.5	
	comp=Z,7.7nm,0.9s						
QSPA	**South Pole Qui**	**86.71**	**180**	LR	LR	06 42 02.2	
	comp=Z,51nm,19.8s,baz=20,slow=35						
QSPA	**South Pole Qui**	**86.71**	**180**	P	**P**	**06 03 40.3**	**+0.6**
QSPA				IAmb	IAmb	06 03 42.2	
	comp=Z,8.0nm,1.2s						
RAYN	**Ar Rayn**	**86.85**	**294**	P	**P**	**06 03 42.2**	**+1.0**
RAYN				IAmb	IAmb	06 04 00.8	
	comp=Z,5.0nm,0.8s						
SUA	**Susitna One**	**87.39**	**28**	P	**P**	**06 03 44.0**	**+1.0**
RC01	**Rabbit Creek A**	**87.79**	**29**	P	**P**	**06 03 45.9**	**+1.0**
MLY	**Manley**	**88.11**	**25**	P	**P**	**06 03 47.5**	**+1.1**
MLY				IAmb	IAmb	06 03 49.7	
	comp=Z,3.6nm,1.0s						
BELG	**Belogornoye**	**88.30**	**323**	LR	LR	06 46 15.7	
	comp=Z,14nm,20.5s,baz=149,slow=38						
WRH	**Wood River Hil**	**89.13**	**25**	P	**P**	**06 03 50.8**	**-0.3**
WRH				IAmb	IAmb	06 04 10.6	
	comp=Z,4.3nm,1.2s						
CCB	**Clear Creek Bu**	**89.28**	**25**	P	**P**	**06 03 52.5**	**+0.7**
CCB				IAmb	IAmb	06 04 09.1	
	comp=Z,3.8nm,1.1s						
IL31		**89.69**	**25**	P	**P**	**06 03 54.5**	**+0.8**
ILAR	**Eielson Array**	**89.69**	**25**	P	**P**	**06 03 53.6**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=255,slow=5.0,SNR=8.9						
ILAR				LR	LR	06 43 11.7	
	comp=Z,20nm,19.5s,baz=144,slow=35						
	comp=Z,0.4nm,0.5s						
BMAR	**Burnt Mountain**	**90.95**	**23**	P	**P**	**06 04 01.2**	**+1.6**
K27K	**Chicken**	**91.69**	**26**	IAmb	IAmb	06 04 23.5	
	comp=Z,3.7nm,1.0s						
L27K	**Beaver Creek,**	**91.73**	**27**	P	**P**	**06 04 04.0**	**+0.7**
L27K				IAmb	IAmb	06 04 22.0	
	comp=Z,4.0nm,0.9s						
BCAR	**Beaver Creek A**	**91.75**	**27**	P	**P**	**06 04 04.0**	**+0.5**
DAWY	**Dawson**	**92.87**	**26**	P	**P**	**06 04 09.0**	**+0.4**
DAWY				IAmb	IAmb	06 04 27.1	
	comp=Z,3.6nm,1.0s						
KMBO	**Kilima Mbogo**	**93.35**	**269**	LR	LR	06 43 07.7	
	comp=Z,39nm,20.0s,baz=106,slow=34						
TROLL	**Troll, Antarti**	**97.94**	**194**	P	**P**	**06 04 30.5**	**-1.2**
ARCES	**ARCESS Array B**	**98.31**	**340**	P	Pdif	06 04 35.2	+2.0
	comp=Z,2.4nm,0.9s,baz=83,slow=7.4,SNR=4.4						
	comp=Z,2.4nm,0.9s						
SNAA	**Sanae**	**99.45**	**193**	LR	LR	06 49 42.8	
	comp=Z,52nm,19.2s,baz=71,slow=35						
NACGM	**Naroch**	**100.62**	**325**	*e*P	**Pdif**	**06 04 35.1**	**-8.6**
	baz=81						
TORD	**Torodi Ar. Bea**	**128.64**	**284**	PKP	**PKiKP**	**06 10 05.1**	**+0.3**
	comp=Z,0.9nm,0.9s,baz=56,slow=2.3,SNR=4.7						
CPUP	**Villa Florida**	**149.60**	**166**	PKPbc	**PKiKP**	**06 10 48.0**	**+0.7**
	comp=Z,3.3nm,1.0s,baz=236,slow=1.8,SNR=6.1						
CPUP	**Villa Florida**	**149.60**	**166**		**PKPdf**	**06 10 40.1**	**-1.6**

*IDC **23** 06:02:19.3±2.3, 14.°88S×167.°43E, h126km±19km, mb4.0/11, mbtmp4.4/13, MS3.6/2, Error ellipse: s-maj=22.6km s-min=13.8km az=83.0*
*NOU **23** 06:02:19.1, 14.°73S×167.°57E, h133km, mb4.7/33, Vanuatu Islands*
*NEIC **23** 06:02:20.2±2.1, 14.°92S±0.°09×167.°6E±0.°1, h130km±6km, mb4.4/38, Error ellipse: s-maj=19.0km s-min=13.1km az=79.0*

ISC 23 06:02:19.9±0.5, **14.°88S**±0.°06×**167.°47E**±0.°08, **h129**km, **n109**, σ1§**04**/110, **mb4.3**/29, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**2.91**	**166**	P	**Pn**	**06 03 06.4**	**+1.0**
DVP	**Devils Point**	**2.91**	**166**	P	**Pn**	**06 03 06.0**	**+0.6**
RTV	**Rentapao**	**3.04**	**163**	P	**Pn**	**06 03 07.9**	**+0.9**
LIFNC	**LIFOU**	**5.87**	**182**		**Pn**	**06 03 43.6**	**-1.1**
LIFNC	**LIFOU**	**5.87**	**182**	P	**Pn**	**06 03 44.0**	**-0.7**
KOUNC	**Koumac, New Ca**	**6.40**	**208**	Pn	**Pn**	**06 03 52.8**	**+0.9**
KOUNC	**Koumac, New Ca**	**6.40**	**208**	P	**Pn**	**06 03 53.0**	**+1.1**
KOUNC	**Koumac, New Ca**	**6.40**	**208**	P	**Pn**	**06 03 52.9**	**+1.1**
MARNC	**Mare, Loyalty**	**6.59**	**175**	Pn	**Pn**	**06 03 52.7**	**-1.6**
MARNC	**Mare, Loyalty**	**6.59**	**175**	P	**Pn**	**06 03 53.4**	**-0.9**
MARNC	**Mare, Loyalty**	**6.59**	**175**	P	**Pn**	**06 03 53.5**	**-0.9**
YATNC	**Mamie plateau,**	**7.16**	**184**	P	**Pn**	**06 04 02.0**	**-0.2**
YATNC	**Mamie plateau,**	**7.16**	**184**	P	**Pn**	**06 04 01.9**	**-0.2**
DZM	**Mont Dzumac**	**7.22**	**188**	P	**Pn**	**06 04 03.7**	**+0.8**
	30nm,0.4s,baz=30,slow=14,SNR=120						
DZM				S	**Sn**	**06 05 21.3**	**-2.3**
	19nm,0.4s,baz=323,slow=22,SNR=4.7						
NOUC	**Port Laguerre**	**7.27**	**189**	P	**Pn**	**06 04 04.9**	**+1.4**
NOUC	**Port Laguerre**	**7.27**	**189**	P	**Pn**	**06 04 04.5**	**+1.0**
ONTNC	**Ouen Toro**	**7.45**	**187**	Pn	**Pn**	**06 04 07.5**	**+1.5**
ONTNC	**Ouen Toro**	**7.45**	**187**	P	**Pn**	**06 04 07.9**	**+1.9**
OUENC	**Ouen Island, N**	**7.52**	**184**	Pn	**Pn**	**06 04 08.7**	**+1.8**
OUENC	**Ouen Island, N**	**7.52**	**184**	P	**Pn**	**06 04 08.3**	**+1.4**
PINNC	**Pines Island,**	**7.69**	**180**	Pn	**Pn**	**06 04 10.1**	**+0.9**
PINNC	**Pines Island,**	**7.69**	**180**	P	**Pn**	**06 04 10.9**	**+1.7**
HNR	**Honiara**	**9.13**	**306**	P	**Pn**	**06 04 29.6**	**+0.9**
	73nm,0.3s,baz=98,slow=7.1,SNR=2.2						
HNR				S	**Sn**	**06 06 06.8**	**-3.0**
	172nm,1.0s,baz=232,slow=7.0,SNR=1.7						
HNR	**Honiara**	**9.13**	**306**	Pn	**Pn**	**06 04 31.7**	**+3.0**
EIDS	**Eidsvold**	**18.57**	**233**	P	**Pn**	**06 06 29.0**	**+0.2**
EIDS	**Eidsvold**	**18.57**	**233**	P	**Pn**	**06 06 29.0**	**+0.2**
PMG	**Port Moresby**	**20.58**	**283**	P	**P**	**06 06 49.4**	**+0.6**
PMG				IAmb	IAmb	06 07 21.0	
	comp=Z,24nm,1.1s						
RMQ	**Roma**	**20.94**	**234**	P	**P**	**06 06 53.7**	**+1.1**
ARMA	**Armidale**	**21.24**	**221**	P	**P**	**06 06 57.2**	**+1.3**
ARMA				IAmb	IAmb	06 06 58.7	
	comp=Z,28nm,1.2s						
ARMA	**Armidale**	**21.24**	**221**	P	**P**	**06 06 57.3**	**+1.4**
MGCD	**Mangrove Creek**	**23.52**	**216**	P	**P**	**06 07 19.6**	**+1.2**
COEN	**Coen**	**23.55**	**269**	P	**P**	**06 07 19.0**	**+0.2**
COEN				IAmb	IAmb	06 07 39.1	
	comp=Z,12nm,1.2s						
COEN	**Coen**	**23.55**	**269**	P	**P**	**06 07 18.7**	**-0.1**
QLP	**Quilpie**	**24.61**	**238**	P	**P**	**06 07 28.8**	**+0.5**
BKZ	**Black Stump Fm**	**25.46**	**164**	P	**P**	**06 07 36.4**	**+0.4**
BKZ	**Black Stump Fm**	**25.46**	**164**	P	**P**	**06 07 36.2**	**+0.2**
CMSA	**Cobar Meteorol**	**25.91**	**226**	P	**P**	**06 07 40.1**	**0.0**
CNB	**Canberra Magne**	**26.05**	**215**	P	**P**	**06 07 42.0**	**+0.6**
STKA	**Stephens Creek**	**29.04**	**230**	P	**P**	**06 08 08.5**	**+0.4**
	comp=Z,19nm,0.5s,baz=45,slow=8.9,SNR=41						
	comp=Z,19nm,0.5s						
STKA	**Stephens Creek**	**29.04**	**230**	P	**P**	**06 08 08.7**	**+0.6**
LBZ	**Lake Benmore**	**29.50**	**176**	P	**P**	**06 08 12.9**	**+1.0**
WHZ	**Wether Hill Ro**	**30.92**	**179**	P	**P**	**06 08 24.5**	**+0.1**
HTT	**Hallett**	**31.77**	**229**	P	**P**	**06 08 32.5**	**+0.4**
WR0	**Warramunga Arr**	**31.79**	**256**	P	**P**	**06 08 30.4**	**-2.0**
WR0				IAmb	IAmb	06 08 30.8	
	comp=Z,18nm,1.5s						
WB0	**Warramunga Arr**	**31.91**	**256**	P	**P**	**06 08 31.9**	**-1.6**
WB0				IAmb	IAmb	06 08 47.0	
	comp=Z,11nm,1.4s						
WB2	**Warramunga Arr**	**31.96**	**256**	P	**P**	**06 08 32.2**	**-1.7**
WB2				IAmb	IAmb	06 09 06.9	
	comp=Z,9.2nm,1.3s						
WRAB	**Tennant Creek**	**31.97**	**256**	P	**P**	**06 08 32.0**	**-1.9**
WRAB				IAmb	IAmb	06 08 44.8	
	comp=Z,12nm,1.4s						
WRAB	**Tennant Creek**	**31.97**	**256**	P	**P**	**06 08 32.6**	**-1.4**
WRA	**Warramunga Arr**	**31.98**	**256**	P	**P**	**06 08 31.8**	**-2.3**
	comp=Z,1.7nm,0.7s,baz=84,slow=8.8,SNR=31						
WRA				PcP	**PcP**	**06 11 20.5**	**-0.8**
	comp=Z,0.5nm,0.7s,baz=92,slow=3.3,SNR=3.2						
WRA				ScP	**ScP**	**06 14 53.2**	**+0.2**
	comp=Z,0.7nm,0.9s,baz=80,slow=4.2,SNR=4.6						
	comp=Z,1.7nm,0.7s						
OOD	**Oodnadatta**	**32.16**	**241**	P	**P**	**06 08 35.4**	**-0.2**
AS31	**Alice Springs**	**32.80**	**249**	P	**P**	**06 08 39.8**	**-1.4**
ASAR	**Alice Springs**	**32.80**	**249**	P	**P**	**06 08 39.7**	**-1.5**
BBOO	**Buckleboo**	**33.64**	**232**	P	**P**	**06 08 48.6**	**+0.2**
BBOO	**Buckleboo**	**33.64**	**232**	P	**P**	**06 08 48.5**	**+0.2**
MULG	**Mulgathing**	**34.29**	**238**	P	**P**	**06 08 53.4**	**-0.6**
KNRA	**Kununurra**	**37.31**	**264**	P	**P**	**06 09 18.9**	**-1.1**
KNRA				IAmb	IAmb	06 09 20.4	
	comp=Z,7.8nm,0.8s						
KNRA	**Kununurra**	**37.31**	**264**	P	**P**	**06 09 18.8**	**-1.1**
WRKA	**Warakurna**	**38.06**	**248**	P	**P**	**06 09 25.3**	**-1.0**
FORT	**Forrest**	**39.39**	**239**	P	**P**	**06 09 37.0**	**-0.1**
FORT	**Forrest**	**39.39**	**239**	P	**P**	**06 09 36.9**	**-0.3**
MBWA	**Marble Bar**	**45.69**	**255**	P	**P**	**06 10 28.0**	**-0.3**
MBWA				IAmb	IAmb	06 10 46.8	
	comp=Z,27nm,1.4s						
MORW	**Morawa**	**49.38**	**244**	P	**P**	**06 10 56.3**	**-0.4**
MTKI	**Muara Teweh, K**	**53.72**	**280**	P	P	06 11 43.2	+14
UGM	**Wanagama**	**56.13**	**270**	P	**P**	**06 11 47.3**	**+0.7**
JOW	**Kunigami**	**56.29**	**317**	LR	LR	06 31 30.5	
	comp=Z,61nm,21.5s,baz=211,slow=31						
VNDA	**Vanda**	**62.72**	**181**	P	**P**	**06 12 30.6**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=1.6,slow=8.7,SNR=20						
	comp=Z,0.9nm,0.5s						
VNDA	**Vanda**	**62.72**	**181**	P	**P**	**06 12 30.9**	**+0.2**
VNDA				IAmb	IAmb	06 12 33.5	
	comp=Z,6.3nm,1.5s						
SBA	**Scott Base**	**62.99**	**180**	P	**P**	**06 12 33.7**	**+1.2**
CASY	**Casey**	**63.46**	**202**	P	**P**	**06 12 36.2**	**+0.5**
CASY				IAmb	IAmb	06 13 13.6	
	comp=Z,9.0nm,1.4s						
KSRS	**Korea Array**	**63.97**	**326**	P	**P**	**06 12 39.7**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=144,slow=6.9,SNR=2.3						
	comp=Z,0.5nm,0.3s						
PETK	**Petropavlovsk-**	**68.23**	**354**	P	**P**	**06 13 06.8**	**+0.3**
	comp=Z,4.0nm,0.9s,baz=161,slow=9.2,SNR=6.6						
	comp=Z,4.0nm,0.9s						
PETK	**Petropavlovsk-**	**68.23**	**354**	P	**P**	**06 13 07.0**	**+0.6**
QSPA	**South Pole Qui**	**75.15**	**180**	P	**P**	**06 13 47.6**	**-0.3**
CMAR	**Chiang Mai Arr**	**75.19**	**294**	P	**P**	**06 13 49.6**	**+0.8**
	comp=Z,1.2nm,0.3s,baz=124,slow=4.9,SNR=1.4						
	comp=Z,1.2nm,0.3s						
Q19K	**Cape Douglas,**	**80.09**	**19**	P	**P**	**06 14 15.3**	**+0.1**
MAW	**Mawson**	**81.82**	**202**	P	**P**	**06 14 24.9**	**+0.6**
L19K	**White Mountain**	**82.32**	**17**	P	**P**	**06 14 27.3**	**+0.4**
ULN	**Ulaanbaatar**	**82.37**	**324**	P	**P**	**06 14 27.8**	**+0.1**
ULN				IAmb	IAmb	06 14 30.0	
	comp=Z,5.2nm,0.9s						
SONM	**Songino Array**	**82.73**	**324**	P	**P**	**06 14 29.1**	**-0.4**
	comp=Z,1.6nm,0.9s,baz=131,slow=5.9,SNR=7.3						
	comp=Z,1.6nm,0.9s						
SONM	**Songino Array**	**82.73**	**324**	P	**P**	**06 14 29.2**	**-0.3**
CAST	**Castle Rocks**	**84.08**	**17**	P	**P**	**06 14 35.1**	**-0.8**
CAST				IAmb	IAmb	06 14 36.3	
	comp=Z,7.1nm,0.7s						
KTH	**Kantishna Hill**	**84.52**	**17**	P	**P**	**06 14 38.1**	**-0.1**
KTH				IAmb	IAmb	06 14 38.4	
	comp=Z,3.0nm,0.8s						
TRF	**Thorofare Moun**	**84.62**	**18**	P	**P**	**06 14 38.5**	**-0.3**
TRF				IAmb	IAmb	06 14 40.0	
	comp=Z,4.1nm,0.9s						
BPAW	**Bear Paw Mtn.**	**84.92**	**17**	P	**P**	**06 14 40.6**	**+0.5**
BPAW				IAmb	IAmb	06 14 42.0	
	comp=Z,4.7nm,1.4s						
RND	**Reindeer**	**85.02**	**18**	P	**P**	**06 14 40.8**	**+0.2**
RND				IAmb	IAmb	06 14 41.7	
	comp=Z,3.7nm,1.0s						
I21K	**Tanana**	**85.48**	**16**	P	**P**	**06 14 43.5**	**+0.6**
I21K				IAmb	IAmb	06 14 44.2	
	comp=Z,5.1nm,0.8s						
H21K	**Melozitna Rive**	**85.64**	**15**	P	**P**	**06 14 44.3**	**+0.7**
IMAR	**Indian Mountai**	**85.66**	**15**	P	**P**	**06 14 44.4**	**+0.6**
WRH	**Wood River Hil**	**86.03**	**18**	P	**P**	**06 14 45.1**	**-0.5**
WRH				IAmb	IAmb	06 14 46.7	
	comp=Z,4.7nm,1.2s						
CCB	**Clear Creek Bu**	**86.25**	**18**	P	**P**	**06 14 46.0**	**-0.6**
IL31		**86.61**	**18**	P	**P**	**06 14 47.5**	**-0.9**
ILAR	**Eielson Array**	**86.61**	**18**	P	**P**	**06 14 46.5**	**-1.9**
	comp=Z,1.5nm,0.7s,baz=240,slow=5.4,SNR=19						
	comp=Z,1.5nm,0.7s						
ILAR	**Eielson Array**	**86.61**	**18**	P	**P**	**06 14 47.0**	**-1.4**
J25K	**Salcha River,**	**86.95**	**18**	P	**P**	**06 14 50.9**	**+0.7**
NVAR	**Mina Array Bea**	**87.22**	**49**	P	**P**	**06 14 52.7**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=230,slow=7.0,SNR=2.2						
	comp=Z,0.2nm,0.6s						
ANMO	**Albuquerque**	**95.23**	**55**	LR	LR	06 52 15.0	
	comp=Z,28nm,19.2s,baz=214,slow=31						
MK31	**Makanchi Array**	**97.45**	**316**	P	**P**	**06 15 39.1**	**0.0**
MK31				IAmb	IAmb	06 15 40.8	
	comp=Z,1.5nm,0.8s						
MKAR	**Makanchi Array**	**97.45**	**316**	P	**P**	**06 15 38.5**	**-0.6**
	comp=Z,1.7nm,0.8s,baz=101,slow=5.7,SNR=9.7						
	comp=Z,1.7nm,0.8s						
MKAR	**Makanchi Array**	**97.45**	**316**	P	Pdif	06 15 40.2	+1.0
ZALV	**Zalesovo Beam**	**97.63**	**324**	P	**P**	**06 15 38.0**	**-1.7**
	comp=Z,1.5nm,0.6s,baz=119,slow=5.1,SNR=6.6						
	comp=Z,1.5nm,0.6s						
ZALV	**Zalesovo Beam**	**97.63**	**324**	P	**P**	**06 15 38.6**	**-1.0**
ARCES	**ARCESS Array B**	**120.45**	**345**	PKP	**PKPdf**	**06 20 54.6**	**-0.9**
	comp=Z,1.8nm,0.5s,baz=64,slow=2.1,SNR=18						
ARCES	**ARCESS Array B**	**120.45**	**345**		**PKPdf**	**06 20 54.8**	**-0.8**
FINES	**FINESS Array B**	**125.93**	**338**	PKP	**PKPdf**	**06 21 05.8**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=88,slow=3.3,SNR=1.2						
FINES	**FINESS Array B**	**125.93**	**338**		**PKPdf**	**06 21 06.0**	**-0.3**
NOA	**NORSAR Array B**	**130.82**	**345**	PKP	**PKPdf**	**06 21 15.4**	**-0.3**
	comp=Z,0.1nm,0.6s,baz=32,slow=2.6,SNR=1.1						
ESDC	**Sonseca Array**	**154.18**	**345**	PKPab	**PKPab**	**06 22 19.6**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=2.5,slow=4.8,SNR=7.2						
TORD	**Torodi Ar. Bea**	**166.09**	**265**	PKP	**PKPdf**	**06 22 09.2**	**-1.5**
TORD				PKPab	**PKPab**	**06 23 11.1**	**-0.7**
	comp=Z,0.5nm,0.9s,baz=82,slow=4.6,SNR=2.1						
TORD	**Torodi Ar. Bea**	**166.09**	**265**	PKPdf	**PKPdf**	**06 22 10.0**	**-0.6**

*TUL **23** 06:08:32.1±1.1, 36.°94N±0.°01×97.°71W±0.°02, h4km±7km, ML2.5, mb_Lg2.4/33(NEIC), Error ellipse: s-maj=2.8km s-min=1.4km az=121.0*

NEIC 23 06:08:32.4±0.9, **36.°92N**±0.°02×**97.°71W**±0.°03, **h8**km±5km, **Error ellipse: s-maj=3.1km s-min=2.2km az=69.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T35A	**Sooner Cattle**	**0.96**	**90**	Pg	Pg	06 09 50.5	-0.4
OKCFA	**Oklahoma City**	**1.51**	**172**

comp=Z,16nm,18.1s,baz=145,slow=41
STKA Stephens Creek 37.48 156 P P 07 38 43.2 -0.4
3.8nm,1.0s,baz=333,slow=14,SNR=2.9
3.8nm,1.0s
ASAJ Asahikawa 44.84 19 LR LR 07 58 27.9
comp=Z,34nm,19.3s,baz=158,slow=36
MKAR Makanchi Array 57.65 327 P P 07 41 19.8 -0.5
0.8nm,0.7s,baz=128,slow=8.0,SNR=7.8
0.8nm,0.7s
KIRV Kirov 80.46 329 LR LR 08 19 51.7
comp=Z,35nm,21.5s,baz=46,slow=36

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*NOU **23** 07:44:30.5,28˚.17S×175˚.82W,h57km,mb5.2/44, Kermadec Islands Region*
*BJI **23** 07:44:31.1±0.0,27˚.20S×176˚.22W,h24km,mb5.3/33, mB5.4/17,Ms4.7/7,Ms7 4.4/7*
*MOS **23** 07:44:36.4±0.9,27˚.83S×177˚.10W,h61km,mb5.5/36, Error ellipse: s-maj=10.8km s-min=8.4km az=91.8*
*IDC **23** 07:44:36.3±2.3,27˚.74S×177˚.03W,h51km±19km,mb4.7/16, mbtmp4.9/16,MS4.2/49,Error ellipse: s-maj=17.7km s-min=14.1km az=97.0*
*NEIC **23** 07:44:37.0±1.3,27˚.88S±0˚.08×177˚.0W±0˚.1,h54km±5km, mb5.2/77,Error ellipse: s-maj=15.5km s-min=11.1km az=110.0*
*GCMT **23** 07:44:37.0±0.2,27˚.78S±0˚.02×176˚.68W±0˚.02,h42km, MW5.1/89,Moment Tensor Solution. s77,c98; s89,c119; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.43±.22; $M_{\theta\theta}$0.51±.17; $M_{\phi\phi}$-5.94±.14; $M_{r\theta}$0.96±.15; $M_{\theta\phi}$0.07±.14; $M_{r\phi}$2.44±.13; Best double couple: M_o6.26900×10^{16} NP1:ϕ_s169.00000°,δ34.00000°,λ73.00000°. NP2: ϕ_s9.00000°,δ57.00000°,λ101.00000°. Principal axes: T 6.0940, Plg75.0000°, Azm311.0000°; N 0.3510, Plg9.0000°, Azm183.0000°; P -6.4440, Plg12.0000°, Azm91.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 23 07:44:34.1±0.3,27˚.98S±0˚.05×176˚.78W±0˚.05,h38km±2km, h39km:pP-P,n690,σ1$58/653,mb5.3/103,MS4.3/55, 65C-19D,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
RAO	**Raoul Island**	**1.61**	**218**	P	P		**Pn 07 45 03.1**	**+3.1**
	18μm,0.3s,baz=41,slow=2.2,SNR=192							
RAO				S			**Sn 07 45 24.3**	**+4.8**
	33μm,0.3s,baz=158,slow=23,SNR=32							
RAO				LR	LR		07 45 43.5	
	comp=Z,5μm,20.2s,baz=357,slow=40							
RAO	**Raoul Island**	**1.61**	**218**	Pn			**Pn 07 45 03.4**	**+3.5**
RAO	**Raoul Island**	**1.61**	**218**	P			**Pn 07 45 03.5**	**+3.5**
GLKZ	**Green Lake**	**1.62**	**218**	P			**Pn 07 45 02.9**	**+2.8**
GLKZ				S			**Sn 07 45 23.9**	**+4.2**
NIUE	**Niue**	**10.87**	**37**	P			Pn 07 47 01.7	-5.3
	baz=11,SNR=4.3							
NIUE	**Niue**	**10.87**	**37**	P			Pn 07 46 59.6	-7.5
MSVF	**Nonsavu**	**11.26**	**334**	P			**Pn 07 47 14.0**	**+1.5**
	51nm,0.8s,baz=150,slow=12,SNR=17							
MSVF				LR	LR		07 50 50.0	
	comp=Z,3μm,21.4s,baz=171,slow=34							
MSVF	**Nonsavu**	**11.26**	**334**	Pn			**Pn 07 47 13.8**	**+1.3**
MSVF	**Nonsavu**	**11.26**	**334**	P			**Pn 07 47 13.8**	**+1.3**
MSVF	**Nonsavu**	**11.26**	**334**	P			Pn 07 47 15.7	+3.2
URZ	**Urewera**	**11.45**	**205**	P			**Pn 07 47 10.7**	**-4.3**
	5.6nm,0.4s,baz=266,slow=4.4,SNR=7.4							
URZ				S			**Sn 07 49 17.4**	**-4.2**
	59nm,0.4s,baz=201,slow=23,SNR=8.3							
URZ	**Urewera**	**11.45**	**205**	P			**Pn 07 47 13.0**	**-2.0**
TAVE	**Taveuni**	**11.59**	**345**	P			Pn 07 47 21.0	+4.1
RIGZ	**Rimuhau**	**11.62**	**202**	P			Pn 07 47 12.8	-4.6
RIGZ				S			**Sn 07 49 20.7**	**-5.1**
SNGZ	**Shannon Statio**	**11.83**	**203**	P			Pn 07 47 15.6	-4.7
SNGZ				S			**Sn 07 49 27.4**	**-3.6**
KNZ	**Kokohu**	**11.94**	**201**	P			Pn 07 47 15.8	-5.8
KNZ				S			Sn 07 49 25.4	-8.0
BKZ	**Black Stump Fm**	**12.48**	**205**	P			**Pn 07 47 27.3**	**-1.8**
HIZ	**Hauiti**	**12.61**	**212**	P			**Pn 07 47 28.9**	**-1.9**
MOVZ	**Moawhango**	**12.97**	**207**	P			**Pn 07 47 35.0**	**-0.9**
MRZ	**Mangatainoka R**	**14.12**	**204**	P			**Pn 07 47 47.5**	**-3.9**
HOWZ	**Holdsworth Sta**	**14.36**	**204**	P			Pn 07 47 48.6	-6.0
TMWZ	**Te Maipa**	**14.41**	**203**	P			Pn 07 47 49.7	-5.7
OGWZ	**Otaki Gorge**	**14.41**	**205**	P			Pn 07 47 49.6	-5.8
AFI	**Afiamalu**	**14.76**	**19**	P			Pn 07 47 53.4	-6.9
	43nm,0.7s,baz=236,slow=4.2,SNR=6.9							
AFI				S			Sn 07 50 22.3	-20
	40nm,0.7s,baz=262,slow=22,SNR=1.9							
AFI	**Afiamalu**	**14.76**	**19**	P			Pn 07 47 54.9	-5.3
MSWZ	**Moikau Station**	**14.91**	**204**	P			**Pn 07 47 58.6**	**-3.4**
SNZO	**South Karori**	**15.02**	**205**	P			**Pn 07 48 01.8**	**-1.6**
	164m,1.3s							
BHW	**Baring Head**	**15.04**	**205**	P			**Pn 07 47 59.5**	**-4.2**
PLWZ	**Palliser**	**15.04**	**204**	P			**Pn 07 48 00.7**	**-3.1**
TCW	**Tory Channel**	**15.10**	**207**	P			**Pn 07 47 59.2**	**-5.4**
PINNC	**Pines Island,**	**15.23**	**287**				**P 07 48 09.8**	**-1.0**
PINNC					IAmb		IAmb 07 48 25.0	
	comp=Z,105nm,0.9s							
MARNC	**Mare, Loyalty**	**15.23**	**292**				**P 07 48 10.1**	**-0.8**
MARNC	**Mare, Loyalty**	**15.23**	**292**	P			**P 07 48 13.2**	**+2.3**
TUWZ	**Tuamarina**	**15.42**	**207**	P			**Pn 07 48 02.4**	**-6.2**
NNZ	**Nelson**	**15.47**	**209**	P			**Pn 07 48 04.9**	**-4.5**
TKNZ	**Takaka Hill**	**15.51**	**210**	P			**Pn 07 48 05.8**	**-4.1**
QRZ	**Quartz Range**	**15.54**	**212**	P			**Pn 07 48 08.6**	**-1.7**
QRZ	**Quartz Range**	**15.54**	**212**	P			**Pn 07 48 10.4**	**+0.1**
BSWZ	**Blackbirch Sta**	**15.68**	**207**	Pn			**P 07 48 14.9**	**-0.8**
BSWZ	**Blackbirch Sta**	**15.68**	**207**	P			**Pn 07 48 10.3**	**-1.8**
OUENC	**Ouen Island, N**	**15.82**	**287**	P			**P 07 48 21.1**	**+3.7**
MRNZ	**Matariki Terra**	**15.89**	**210**	P			**Pn 07 48 11.8**	**-3.0**
YATNC	**Mamie plateau,**	**15.93**	**288**	P			**P 07 48 21.0**	**+2.4**
THZ	**Tophouse**	**16.12**	**209**	P			**Pn 07 48 13.3**	**-4.6**
ONTNC	**Ouen Toro**	**16.19**	**287**				**Pn 07 48 17.7**	**-1.0**
LIFNC	**LIFOU**	**16.22**	**293**	P			**P 07 48 26.5**	**+4.7**
DZM	**Mont Dzumac**	**16.30**	**287**	P			**P 07 48 23.7**	**+0.9**
	comp=Z,47nm,0.7s,baz=108,slow=15,SNR=57							
DZM				LR	LR		07 53 15.2	
	comp=Z,2μm,21.9s,baz=138,slow=32							
DZM	**Mont Dzumac**	**16.30**	**287**	*e*P			**Pn 07 48 20.4**	**+0.2**
	comp=Z,294nm,1.5s							
DZM				eLR	LR		07 52 03.8	
NOUC	**Port Laguerre**	**16.40**	**287**	P			**P 07 48 27.5**	**+3.7**
KHZ	**Kahutara**	**16.41**	**206**	P			**Pn 07 48 15.4**	**-6.0**
KHZ	**Kahutara**	**16.41**	**206**	P			**Pn 07 48 19.7**	**-1.7**
RAR	**Rarotonga**	**16.86**	**70**	P			**Pn 07 48 23.5**	**-3.8**
	comp=Z,48nm,0.6s,baz=253,slow=10.0,SNR=7.6							
RAR				S			Sn 07 51 16.5	-17
	comp=Z,26nm,0.6s,baz=118,slow=19,SNR=3.4							
RAR				LR	LR		07 53 35.0	
	comp=Z,707nm,19.9s,baz=282,slow=32							
RAR	**Rarotonga**	**16.86**	**70**	IAmb			IAmb 07 48 30.9	
	comp=Z,67nm,0.8s							
RAR	**Rarotonga**	**16.86**	**70**	P			**Pn 07 48 23.5**	**-3.8**
RAR				pmax	pmax			
	comp=Z,67nm,0.8s							
RTV	**Rentapao**	**16.97**	**304**	P			**P 07 48 34.0**	**+3.8**
GVZ	**Greta Valley S**	**17.07**	**206**	P			**Pn 07 48 23.3**	**-6.5**
DVP	**Devils Point**	**17.19**	**303**	P			**P 07 48 36.0**	**+3.4**
LTZ	**Lake Taylor**	**17.23**	**208**	P			**Pn 07 48 27.3**	**-4.5**
OXZ	**Oxford**	**17.77**	**208**	P			**Pn 07 48 34.4**	**-4.0**
MQZ	**McQueen's Vall**	**17.85**	**206**	P			Pn 07 48 32.0	-7.3
RACZ	**Rakaia**	**18.07**	**207**	P			**Pn 07 48 36.2**	**-5.8**
WVZ	**Waitaha Valley**	**18.13**	**211**	P			**Pn 07 48 40.2**	**-2.5**
RPZ	**Rata Peaks**	**18.50**	**209**	P			**P 07 48 43.5**	**-3.4**
	comp=Z,20nm,0.5s,baz=45,slow=16,SNR=20							
RPZ				S			Sn 07 51 56.2	-17
	comp=Z,4.9nm,0.4s,baz=49,slow=13,SNR=2.1							
RPZ	**Rata Peaks**	**18.50**	**209**	P			**P 07 48 44.8**	**-2.2**
RPZ	**Rata Peaks**	**18.50**	**209**	P			**P 07 48 44.6**	**-2.3**
	comp=Z,156nm,0.9s							
ARCZ	**Arundel**	**18.64**	**208**	P			**P 07 48 44.3**	**-4.1**
KOUNC	**Koumac, New Ca**	**18.77**	**289**	P			**Pn 07 48 52.3**	**+1.6**
KOUNC	**Koumac, New Ca**	**18.77**	**289**	P			**Pn 07 48 54.4**	**+3.8**
TMZ	**Timaru**	**19.07**	**208**	P			**P 07 48 49.1**	**-4.0**
LBZ	**Lake Benmore**	**19.42**	**209**	P			**P 07 48 53.7**	**-3.3**
ODZ	**Otahua Downs**	**19.76**	**207**	P			**P 07 48 59.0**	**-1.6**
ODZ	**Otahua Downs**	**19.76**	**207**	P			**P 07 48 59.1**	**-1.5**
	comp=Z,30nm,1.8s							
MLZ	**Mavora Lakes**	**21.10**	**211**	P			**P 07 49 15.4**	**+0.3**
LHI	**Lord Howe Isla**	**21.25**	**255**	P			**P 07 49 16.9**	**0.0**
	baz=22,SNR=6.1							
LHI	**Lord Howe Isla**	**21.25**	**255**	P			**P 07 49 17.0**	**0.0**
TBI	**Tubuai**	**25.03**	**86**	*e*S			**S 07 54 18.9**	**+2.6**
	comp=Z,597nm,28.0s							
TBI				*e*LR	LR		07 56 18.0	
	comp=Z,1μm,23.8s							
TBI	**Tubuai**	**25.03**	**86**	*e*T	T		08 15 41.7	
	comp=Z,72nm,0.4s							
PAE	**Paea**	**27.04**	**74**	*e*T	T		08 18 04.0	
	comp=Z,39nm,0.4s							
PPT2	**Papeete2**	**27.07**	**73**	*e*S	**S**		**07 54 50.9**	**+2.0**
	comp=Z,91nm,22.5s							
PPT2				*e*LR	LR		07 57 14.3	
	comp=Z,1μm,23.8s							
PPT	**Papeete2**	**27.07**	**73**	*e*T	T		08 18 09.0	
	comp=Z,19nm,0.3s							
PPT	**Papeete**	**27.08**	**73**	LR	LR		07 57 58.3	
	comp=Z,587nm,21.4s,baz=255,slow=30							
TVO	**Taravao**	**27.26**	**74**	*e*T	T		08 18 24.9	
	comp=Z,8.2nm,0.4s							
TIAR	**Tiarei**	**27.28**	**74**	*e*T	T		08 18 15.9	
	comp=Z,2.5nm,0.3s							
ARMA	**Armidale**	**27.64**	**257**	P	**P**		**07 50 19.6**	**+1.3**
	baz=28,SNR=4.7							
ARMA	**Armidale**	**27.64**	**257**	P	**P**		**07 50 18.9**	**+0.6**
ARMA	**Armidale**	**27.64**	**257**	P	**P**		**07 50 20.3**	**+2.0**
	comp=Z,20nm,2.6s							
MGCD	**Mangrove Creek**	**28.06**	**251**	P	**P**		**07 50 23.4**	**+1.5**
	baz=28,SNR=6.1							
MGCD	**Mangrove Creek**	**28.06**	**251**	P	**P**		**07 50 23.1**	**+1.2**
MEH	**Mehetia**	**28.23**	**75**	*e*T	T		08 19 34.6	
	comp=Z,21nm,0.3s							
HNR	**Honiara**	**28.65**	**306**	LR	LR		08 00 30.9	
	comp=Z,463nm,18.6s,baz=162,slow=34							
EIDS	**Eidsvold**	**28.79**	**268**	P	**P**		**07 50 29.2**	**+0.7**
	baz=29,SNR=5.3							
EIDS	**Eidsvold**	**28.79**	**268**	P	**P**		**07 50 28.8**	**+0.3**
CNB	**Canberra Magne**	**29.63**	**247**	P	**P**		**07 50 36.4**	**+0.5**
	baz=30,SNR=12							
CNB	**Canberra Magne**	**29.63**	**247**	P	**P**		**07 50 37.4**	**+1.5**
	comp=Z,23nm,1.3s							
RK1H	**Rockhampton Ha**	**29.79**	**271**	P	**P**		**07 50 40.5**	**+3.2**
	comp=Z,28nm,0.7s							
CAN	**Canberra**	**29.93**	**247**	P	**P**		**07 50 38.6**	**+0.1**
CAN	**Canberra**	**29.93**	**247**	P	**P**		**07 50 38.6**	**+0.1**
CAN				pmax	pmax			
	comp=Z,23nm,0.9s							
CAN	**Canberra**	**29.93**	**247**	P	**P**		**07 50 40.3**	**+1.8**
	comp=Z,42nm,1.3s							
CAN	**Canberra**	**29.93**	**247**	P	**P**		**07 50 39.3**	**+0.8**
CAN				pP	**sP**		**07 50 56.7**	**+3.7**
RMQ	**Roma**	**30.62**	**265**	P	**P**		**07 50 45.0**	**+0.3**
	baz=31,SNR=23							
CMSA	**Cobar Meteorol**	**32.67**	**254**	P	**P**		**07 51 03.0**	**+0.4**
	baz=33,SNR=5.7							
CMSA	**Cobar Meteorol**	**32.67**	**254**	P	**P**		**07 51 03.5**	**+0.9**
	comp=Z,20nm,1.0s							
TOO	**Toolangi**	**32.94**	**243**	P	**P**		**07 51 04.5**	**-0.5**
TOO				IAmb	IAmb		07 51 09.1	
	comp=Z,61nm,1.4s							
TOO	**Toolangi**	**32.94**	**243**	P	**P**		**07 51 04.5**	**-0.5**
TOO				pmax	pmax			
	comp=Z,61nm,1.5s							
BRAT	**Ballarat**	**34.18**	**244**	P	**P**		**07 51 17.3**	**+1.6**
	comp=Z,21nm,0.7s							
CTA	**Charters Tower**	**34.56**	**275**	LR	LR		08 04 16.7	
	comp=Z,960nm,18.2s,baz=102,slow=34							
CTAO	**Charters Tower**	**34.56**	**275**	P	**P**		**07 51 19.3**	**+0.1**
CTAO	**Charters Tower**	**34.56**	**275**	P	**P**		**07 51 19.3**	**+0.1**
CTAO				pmax	pmax			
	comp=Z,33nm,0.7s							
CTAO	**Charters Tower**	**34.56**	**275**	P	**P**		**07 51 19.6**	**+0.4**
CTAO				pP	**sP**		**07 51 35.0**	**+0.8**
CTAO				pwP	**pwP**		**07 51 38.3**	**+5.3**
CTAO				sP	pP		07 51 41.6	+12
QLP	**Quilpie**	**34.58**	**263**	P	**P**		**07 51 19.3**	**0.0**
	baz=35,SNR=5.5							
QLP	**Quilpie**	**34.58**	**263**	P	**P**		**07 51 20.9**	**+1.6**
ARPS	**Mount Arapiles**	**35.80**	**245**	P	**P**		**07 51 30.3**	**+0.6**
	baz=36,SNR=7.8							
ARPS	**Mount Arapiles**	**35.80**	**245**	P	**P**		**07 51 30.2**	**+0.5**
	comp=Z,36nm,1.1s							
STKA	**Stephens Creek**	**36.12**	**253**	P	**P**		**07 51 31.8**	**-0.8**
	comp=Z,8.0nm,0.7s,baz=92,slow=12,SNR=11							
STKA				LR	LR		08 04 53.5	
	comp=Z,566nm,19.1s,baz=87,slow=34							
	comp=Z,8.0nm,0.7s							
STKA	**Stephens Creek**	**36.12**	**253**	P	**P**		**07 51 32.4**	**-0.2**
	baz=36,SNR=7.8							
STKA	**Stephens Creek**	**36.12**	**253**	P	**P**		**07 51 34.3**	**+1.8**
MTSU	**Mount Surprise**	**36.98**	**277**	P	**P**		**07 51 39.7**	**-0.2**
	baz=37,SNR=16							
HTT	**Hallett**	**38.25**	**251**	P	**P**		**07 51 50.1**	**-0.6**
	baz=38,SNR=8.1							
HTT	**Hallett**	**38.25**	**251**	P	**P**		**07 51 52.1**	**+1.4**
	comp=Z,39nm,0.8s							
PMG	**Port Moresby**	**38.62**	**291**	P	**P**		**07 51 54.2**	**+0.4**
	comp=Z,35nm,0.8s,baz=94,slow=5.1,SNR=7.6							
PMG				LR	LR		08 04 32.0	
	comp=Z,493nm,21.8s,baz=121,slow=31							
	comp=Z,35nm,0.8s							
PMG	**Port Moresby**	**38.62**	**291**	P	**P**		**07 51 54.1**	**+0.2**
PMG				IAmb	IAmb		07 51 55.9	
	comp=Z,44nm,0.9s							
PMG	**Port Moresby**	**38.62**	**291**	P	**P**		**07 51 54.1**	**+0.2**
PMG				pmax	pmax			
	comp=Z,44nm,0.9s							
PMG	**Port Moresby**	**38.62**	**291**	P	**P**		**07 51 54.9**	**+1.0**
PMG				pP	**pwP**		**07 52 06.8**	**-0.8**
PMG				sP	sP		07 52 14.2	+5.4
NAPP	**Napperby**	**38.92**	**251**	P	**P**		**07 51 58.2**	**+2.0**
	comp=Z,36nm,0.9s							
LCRK	**Leigh Creek**	**39.16**	**255**	P	**P**		**07 51 58.3**	**+0.1**
TAOE	**Nuku Hiva Isla**	**39.40**	**68**	*e*LR	LR		08 02 56.0	
	comp=Z,719nm,24.0s							
COEN	**Coen**	**39.72**	**282**	P	**P**		**07 52 02.8**	**-0.3**
	baz=40,SNR=8.4							
COEN	**Coen**	**39.72**	**282**	P	**P**		**07 52 02.9**	**-0.1**
COEN				IAmb	IAmb		07 52 05.4	
	comp=Z,24nm,0.8s							
COEN	**Coen**	**39.72**	**282**	P	**P**		**07 52 03.2**	**+0.2**
	comp=Z,31nm,1.1s							
QIS	**Mount Isa**	**40.27**	**271**	P	**P**		**07 52 06.9**	**-0.7**
	baz=40,SNR=7.5							
QIS	**Mount Isa**	**40.27**	**271**	P	**P**		**07 52 07.2**	**-0.4**
BBOO	**Buckleboo**	**40.70**	**251**	P	**P**		**07 52 10.0**	**-1.0**
BBOO				IAmb	IAmb		07 52 11.1	
	comp=Z,57nm,1.1s							
BBOO	**Buckleboo**	**40.70**	**251**	P	**P**		**07 52 12.0**	**+1.0**
	comp=Z,46nm,1.5s							
OOD	**Oodnadatta**	**41.80**	**259**	P	**P**		**07 52 21.0**	**+1.0**
MULG	**Mulgathing**	**42.74**	**255**	P	**P**		**07 52 26.8**	**-0.9**
AS31	**Alice Springs**	**44.36**	**264**	P	**P**		**07 52 40.0**	**-0.9**
ASAR	**Alice Springs**	**44.36**	**264**	P	**P**		**07 52 40.2**	**-0.7**
ASAR	**Alice Springs**	**44.36**	**264**	P	**P**		**07 52 40.2**	**-0.7**
WR0	**Warramunga Arr**	**44.95**	**269**	P	**P**		**07 52 44.4**	**-1.2**
WRAB	**Tennant Creek**	**45.13**	**269**	*ce*P	**P**		**07 52 45.8**	**-1.2**
WRAB				pmax	pmax			
	comp=Z,42nm,1.3s							
WRAB	**Tennant Creek**	**45.13**	**269**	P	**P**		**07 52 46.2**	**-0.8**
WRAB	**Tennant Creek**	**45.13**	**269**	P	**P**		**07 52 45.6**	**-1.4**
WRAB				pP	**pwP**		**07 53 00.6**	**-0.3**
WRAB				PP	**PcP**		**07 54 27.4**	**+0.3**
WRA	**Warramunga Arr**	**45.14**	**269**	P	**P**		**07 52 45.5**	**-1.6**
	comp=Z,24nm,0.8s,baz=108,slow=7.5,SNR=128							
WRA				PcP	**PcP**		**07 54 27.1**	**-0.1**
	comp=Z,18nm,1.0s,baz=105,slow=3.5,SNR=12							
WRA				ScP	**ScP**		**07 58 16.4**	**-0.4**
	comp=Z,1.6nm,1.0s,baz=103,slow=5.0,SNR=4.6							
WRA				PKiKP	**PKiKP**		**08 01 24.1**	**-1.6**
	comp=Z,0.3nm,0.5s,baz=91,slow=0.5,SNR=7.0							
WRA				LR	LR		08 11 13.6	
	comp=Z,344nm,19.1s,baz=80,slow=36							
	comp=Z,24nm,0.8s							
WRA	**Warramunga Arr**	**45.14**	**269**	P	**P**		**07 52 45.5**	**-1.6**
DRV	**Dumont d'Urvil**	**46.77**	**202**	P	**P**		**07 52 59.9**	**+0.7**
DRV				sP	pwP		07 53 20.8	+7.0
FORT	**Forrest**	**47.74**	**253**	P	**P**		**07 53 05.4**	**-1.9**
	baz=48,SNR=13							
FORT	**Forrest**	**47.74**	**253**	P	**P**		**07 53 05.5**	**-1.9**
FORT	**Forrest**	**47.74**	**253**	P	**P**		**07 53 07.2**	**-0.2**
WRKA	**Warakurna**	**48.89**	**260**	P	**P**		**07 53 14.4**	**-2.0**
	baz=49,SNR=12							
KDU	**Kakadu**	**49.61**	**277**	P	**P**		**07 53 19.5**	**-2.4**
	baz=50,SNR=6.4							
SBA	**Scott Base**	**50.52**	**184**	P	**P**		**07 53 32.4**	**+4.5**
SBA	**Scott Base**	**50.52**	**184**	P	**P**		**07 53 32.4**	**+4.5**
SBA				pmax	pmax			
	comp=Z,108nm,1.3s							
SBA	**Scott Base**	**50.52**	**184**	P	P		07 53 33.3	+5.4
VNDA	**Vanda**	**50.60**	**186**	P	**P**		**07 53 32.0**	**+3.4**
	comp=Z,6.5nm,0.7s,baz=4.7,slow=8.2,SNR=48							
VNDA				LR	LR		08 12 06.9	
	comp=Z,38nm,20.3s,baz=4.5,slow=32							
	comp=Z,6.5nm,0.7s							
VNDA	**Vanda**	**50.60**	**186**	P	**P**		**07 53 31.8**	**+3.3**
VNDA				IAmb	IAmb		07 53 33.8	
	comp=Z,23nm,1.4s							
VNDA	**Vanda**	**50.60**	**186**	P	**P**		**07 53 31.8**	**+3.3**
VNDA				pmax	pmax			
	comp=Z,23nm,1.4s							
VNDA	**Vanda**	**50.60**	**186**	P	**P**		**07 53 32.5**	**+3.9**
KNRA	**Kununurra**	**51.64**	**272**	P	**P**		**07 53 36.1**	**-1.1**
	baz=52,SNR=5.3							
KNRA	**Kununurra**	**51.64**	**272**	P	**P**		**07 53 36.2**	**-1.1**
KIP	**Kipapa**	**52.36**	**22**	*ce*P	**P**		**07 53 43.9**	**+1.6**
KIP				pmax	pmax			
	comp=Z,215nm,2.5s							
KIP	**Kipapa**	**52.36**	**22**	P	**P**		**07 53 43.4**	**+1.1**
KIP				pP	**pwP**		**07 53 57.7**	**+0.9**
KIP				sP	sP		07 54 03.5	+6.9
CCD	**Concordia, Ant**	**55.56**	**196**	P	**P**		**07 54 07.9**	**+2.3**
CCD				sP	pwP		07 54 33.5	+13
GUMO	**Guam**	**55.57**	**313**	LR	LR		08 15 01.5	
	comp=Z,218nm,21.0s,baz=118,slow=33							
SWI	**Sorong**	**56.50**	**289**	P	**P**		**07 54 11.2**	**-1.5**
	comp=Z,1μmcomp=Z,91nm,1.0s							
MBWA	**Marble Bar**	**57.59**	**262**	P	**P**		**07 54 18.3**	**-2.0**
MBWA				IAmb	IAmb		07 54 19.4	
	comp=Z,28nm,1.1s							
MBWA	**Marble Bar**	**57.59**	**262**	P	**P**		**07 54 18.3**	**-2.0**
MBWA				pP	**pwP**		**07 54 32.4**	**-2.4**
MBWA				sP	sP		07 54 39.9	+4.8
CASY	**Casey**	**57.77**	**207**	P	**P**		**07 54 21.2**	**+0.3**
CASY				IAmb	IAmb		07 54 25.4	
	comp=Z,23nm,0.8s							
CASY	**Casey**	**57.77**	**207**	P	**P**		**07 54 21.5**	**+0.6**
CASY				pP	**pwP**		**07 54 36.5**	**+1.0**
CASY				sP	sP		07 54 45.1	+10
SOEI	**Soe**	**58.12**	**276**	P	**P**		**07 54 23.7**	**-0.6**
	comp=Z,57nm,1.0s							
MORW	**Morawa**	**58.27**	**252**	P	**P**		**07 54 23.0**	**-2.0**
	baz=58,SNR=3.4							
MORW	**Morawa**	**58.27**	**252**	P	**P**		**07 54 23.1**	**-2.0**
MORW				IAmb	IAmb		07 54 48.7	
	comp=Z,34nm,1.4s							
RPN	**Rapa Nui**	**59.07**	**106**	LR	LR		08 13 24.4	
	comp=Z,246nm,21.0s,baz=259,slow=29							
GIRL	**Giralia**	**61.86**	**258**	P	**P**		**07 54 49.5**	**-0.2**
QSPA	**South Pole Qui**	**62.12**	**180**	LR	LR		08 16 53.4	
	comp=Z,111nm,21.6s,baz=30,slow=31							
QSPA	**South Pole Qui**	**62.12**	**180**	P	**P**		**07 54 53.1**	**+2.1**
QSPA	**South Pole Qui**	**62.12**	**180**	P	**P**		**07 54 53.7**	**+2.7**
QSPA				pP	**pwP**		**07 55 06.3**	**+0.5**
BKSI	**Bulukumba**	**63.80**	**278**	P	**P**		**07 55 00.4**	**-2.3**
	comp=Z,19nm,1.0s							
KAPI	**Kappang**	**64.27**	**278**	LR	LR		08 24 17.9	
	comp=Z,190nm,19.2s,baz=140,slow=37							
DAV	**Davao City (W)**	**65.62**	**293**	LR	LR		08 22 39.2	
	comp=Z,84nm,19.8s,baz=128,slow=35							
JCJ	**Chichijima**	**67.46**	**321**	LR	LR		08 23 21.7	
	comp=Z,51nm,18.5s,baz=110,slow=35							
PCJI	**Pacitan**	**70.36**	**271**	P	**P**		**07 55 43.6**	**-0.8**
	comp=Z,86nm,1.2s							
WOJI	**Wonogiri, Jawa**	**70.75**	**271**	P	**P**		**07 55 45.2**	**-1.6**
	comp=Z,39nm,1.1s							
KPJI	**Karang Pucung**	**72.74**	**271**	P	**P**		**07 55 56.1**	**-2.6**
	comp=Z,40nm,1.2s							
PMSA	**Palmer Station**	**74.02**	**156**	LR	LR		08 24 42.2	
	comp=Z,220nm,18.1s,baz=215,slow=32							
CNJI	**Cibinong**	**74.34**	**270**	P	**P**		**07 56 05.6**	**-2.5**
	comp=Z,86nm,0.9s							
MAW	**Mawson**	**74.94**	**200**	P	**P**		**07 56 12.9**	**+2.3**
	comp=Z,54nm,

baz=231
BFSC Mount Baldy Ra 83.42 46 P P 07 56 59.0 +1.4
baz=230
PET Petropavlovsk 83.46 345 P P 07 56 57.2 +0.1
PET IAmb IAmb 07 56 58.4
comp=Z,24nm,0.9s
PET Petropavlovsk 83.46 345 *i* P P 07 56 56.6 -0.5
PET pmax pmax
comp=Z,21nm,1.0s
VES Vestal, Richgr 83.58 44 P P 07 56 59.8 +1.6
baz=229
SEHB SEOHWA 83.58 320 P P 07 56 57.8 -0.5
SEHB IAmb IAmb 07 57 04.3
comp=Z,23nm,1.1s
EDW2 Edwards Air Fo 83.62 45 P P 07 57 00.3 +1.8
baz=230,SNR=5.5
PEA0B Petropavlovsk- 83.75 345 P P 07 56 58.3 -0.4
PEA0B Petropavlovsk- 83.75 345 P P 07 56 58.3 -0.4
PEA0B pmax pmax
comp=Z,78nm,1.2s
PETK Petropavlovsk- 83.75 345 P P 07 56 58.1 -0.6
comp=Z,32nm,0.9s,baz=137,slow=7.4,SNR=40
PETK LR LR 08 30 34.7
comp=Z,114nm,19.3s,baz=147,slow=33
comp=Z,32nm,0.9s
PETK Petropavlovsk- 83.75 345 P P 07 56 58.9 +0.2
PETK Petropavlovsk- 83.75 345 P P 07 56 58.9 +0.2
TPFO Pinon Flats 83.79 47 P P 07 57 01.1 +1.6
baz=231,SNR=5.1
PFO Pinyon Flats O 83.79 47 LR LR 08 30 38.6
comp=Z,184nm,18.1s,baz=232,slow=33
PFO Pinyon Flats O 83.79 47 P P 07 57 01.1 +1.6
baz=231
KMPM Mount Pierce 83.80 38 P P 07 57 01.5 +2.2
SWSC Sam W. Stewart 83.80 48 P P 07 57 01.1 +1.7
baz=231
ISA Isabella, Lake 83.83 44 P P 07 57 01.1 +1.5
ISA IAmb IAmb 07 57 02.7
comp=Z,37nm,1.5s
ISA Isabella, Lake 83.83 44 P P 07 57 01.1 +1.5
ISA pmax pmax
comp=Z,37nm,1.5s
ISA Isabella, Lake 83.83 44 P P 07 57 01.2 +1.6
baz=229,SNR=6.8
LRMC Laurel Mtn Rad 84.20 45 P P 07 57 03.2 +1.6
baz=230
EFI East Falkland 84.23 147 *ce* P P 07 57 02.2 +0.8
EFI pmax pmax
comp=Z,34nm,1.1s
RRX Edison Barstow 84.25 46 P P 07 57 03.4 +1.7
baz=230
CMB Columbia Colle 84.25 41 P P 07 57 03.1 +1.4
CMB IAmb IAmb 07 57 04.3
comp=Z,18nm,1.2s
CMB Columbia Colle 84.25 41 P P 07 57 03.1 +1.4
CMB pmax pmax
comp=Z,18nm,1.2s
BELC Belle Mtn. Jos 84.33 47 P P 07 57 04.0 +1.7
baz=231,SNR=12
BC3 Big Chuckawall 84.47 47 P P 07 57 05.0 +2.0
baz=231,SNR=8.2
GLA Glamis 84.50 48 P P 07 57 04.7 +1.7
GLA Glamis 84.50 48 P P 07 57 04.7 +1.7
GLA pmax pmax
comp=Z,13nm,1.0s
GLA Glamis 84.50 48 P P 07 57 05.1 +2.1
baz=232
CWC Cottonwood Cre 84.58 44 P P 07 57 04.9 +1.3
baz=230
HEC Hector,Ludlow 84.64 46 P P 07 57 04.9 +1.2
baz=231
GSC Goldstone, Bar 84.64 45 P P 07 57 05.1 +1.3
GSC IAmb IAmb 07 57 06.7
comp=Z,32nm,1.4s
GSC Goldstone, Bar 84.64 45 P P 07 57 05.1 +1.3
GSC pmax pmax
comp=Z,32nm,1.5s
GSC Goldstone, Bar 84.64 45 P P 07 57 05.2 +1.3
baz=230
MPMC Manual Prospec 84.70 44 P P 07 57 05.8 +1.6
baz=230,SNR=11
HSIG 84.73 53 P P 07 57 05.1 +0.9
HSIG IAmb IAmb 07 57 06.7
comp=Z,12nm,0.9s
MLAC Mammoth, Mammo 84.90 42 P P 07 57 07.0 +1.8
baz=229
IRM Iron Mountain 84.98 47 P P 07 57 07.5 +2.0
baz=231,SNR=11
MSHR Mys Shultsa 85.01 324 *i* P P 07 57 04.2 -1.1
MSHR pmax pmax
comp=Z,26nm,1.1s
QSM Queen of Sheba 85.02 45 P P 07 57 07.2 +1.6
QSM IAmb IAmb 07 57 08.3
comp=Z,18nm,1.1s
GMRC Granite Mounta 85.04 46 P P 07 57 07.5 +1.7
baz=231,SNR=8.3
UGL Uglegorsk 85.05 334 *e* P P 07 57 06.0 +0.7
214A Organ Pipe Nat 85.18 50 P P 07 57 08.5 +2.0
baz=233
GWY Greenwater Val 85.29 45 P P 07 57 08.2 +1.1
GWY IAmb IAmb 07 57 09.1
comp=Z,9.7nm,0.8s
L02F Cave Junction 85.29 37 P P 07 57 08.6 +1.9
baz=225
FURC Furnace Creek, 85.35 44 P P 07 57 08.8 +1.7
baz=230
SHOC Shoshone, Teco 85.35 45 P P 07 57 08.7 +1.5
baz=231,SNR=8.7
GRAC Grapevine Rang 85.38 44 P P 07 57 09.0 +1.7
GRAC IAmb IAmb 07 57 09.9
comp=Z,15nm,0.9s
GRAC Grapevine Rang 85.38 44 P P 07 57 09.1 +1.7
baz=230,SNR=10
YBH Yreka Blue Hor 85.48 37 LR LR 08 29 02.3
comp=Z,66nm,20.0s,baz=224,slow=31
YBH Yreka Blue Hor 85.48 37 P P 07 57 09.2 +1.5
YBH IAmb IAmb 07 57 10.7
comp=Z,17nm,1.1s
YBH Yreka Blue Hor 85.48 37 P P 07 57 09.3 +1.5
YBH pmax pmax
comp=Z,17nm,1.2s
NJ2 Nanjing 85.50 310 *e* P P 07 57 09.3 +1.3
NJ2 pmax pmax
comp=Z,13nm,0.5s
K02D Willamette Mer 85.64 36 P P 07 57 10.3 +1.7
baz=225
PDMCI Parker Dam,Lak 85.72 48 P P 07 57 10.4 +1.3
baz=232
NVAR Mina Array Bea 85.74 42 P P 07 57 10.8 +1.4
comp=Z,8.4nm,0.8s,baz=223,slow=8.4,SNR=60
NVAR PKKPbc **PKKPbc** 08 15 12.8 +0.4
comp=Z,0.3nm,0.6s,baz=79,slow=4.7,SNR=3.9
NVAR LR LR 08 26 57.0
comp=Z,208nm,21.7s,baz=225,slow=30
comp=Z,8.4nm,0.8s
NVAR Mina Array Bea 85.74 42 P P 07 57 10.5 +1.1
RYN Ryan 85.74 42 P P 07 57 10.4 +1.1
USA0B Ussuriysk Arra 85.75 326 P P 07 57 08.8 -0.2
USA0B Ussuriysk Arra 85.75 326 P P 07 57 08.8 -0.2
USA0B pmax pmax
comp=Z,45nm,1.2s
USRK Ussuriysk Ar. 85.75 326 P P 07 57 09.1 +0.1
comp=Z,18nm,0.9s,baz=141,slow=3.5,SNR=28
USRK LR LR 08 29 10.8
comp=Z,143nm,21.5s,baz=128,slow=31
comp=Z,18nm,0.9s
USRK Ussuriysk Ar. 85.75 326 P P 07 57 08.9 -0.1
J01E Myrtle Point 85.83 36 P P 07 57 10.9 +1.5
baz=225
L04D Klamath Falls 86.03 37 P P 07 57 11.8 +1.2
baz=226
TPNV Topopah Spring 86.03 44 P P 07 57 11.7 +0.9
TPNV IAmb IAmb 07 57 13.7
comp=Z,13nm,1.0s
TPNV Topopah Spring 86.03 44 P P 07 57 11.7 +0.9
TPNV pmax pmax
comp=Z,13nm,1.0s
TPNV Topopah Spring 86.03 44 P P 07 57 12.5 +1.7
baz=231,SNR=12
TPH Tonopah 86.16 43 P P 07 57 12.2 +0.8
TPH Tonopah 86.16 43 P P 07 57 12.2 +0.8
TPH pmax pmax
comp=Z,113nm,1.3s
TYV Tymovskoe 86.29 336 *e* P P 07 57 11.7 +0.3
TYV *e*S S 08 07 41.2 -2.5
TYV pmax pmax
comp=Z,33nm,0.9s
TYV pmax pmax
comp=Z,400nm,7.0s
TYV smax smax
comp=N,500nm,9.4s
TYV smax smax
comp=E,1μm,9.4s
W13A Hualapai Mount 86.38 47 P P 07 57 13.8 +1.2
W13A IAmb IAmb 07 57 15.7
comp=Z,14nm,1.3s
I03D Drain, OR 86.51 36 P P 07 57 14.2 +1.4
baz=226
I02E Swisshome, OR 86.55 35 P P 07 57 14.8 +1.9
baz=225
TUC Tucson 86.77 51 P P 07 57 16.0 +1.6
TUC IAmb IAmb 07 57 18.0
comp=Z,19nm,1.2s
TUC Tucson 86.77 51 P P 07 57 16.0 +1.6
TUC pmax pmax
comp=Z,19nm,1.3s
TUC Tucson 86.77 51 P P 07 57 16.6 +2.1
baz=234
J04D Umpqua Nationa 86.84 37 P P 07 57 16.4 +1.8
baz=226
PRN Pahroc Range 87.07 45 P P 07 57 17.2 +1.4
PRN IAmb IAmb 07 57 19.1
comp=Z,24nm,1.1s
I04A Tendick Farm, 87.07 36 P P 07 57 16.4 +0.9
baz=226
MDJ Mudanjiang 87.26 325 P P 07 57 15.9 -0.4
MDJ Mudanjiang 87.26 325 P P 07 57 16.6 +0.3
MDJ pmax pmax
comp=Z,34nm,1.0s
MDJ pmax pmax
comp=Z,160nm,6.1s
R11A Troy Canyon, C 87.33 44 P P 07 57 18.2 +1.1
baz=231
J05D Fort Rock, OR 87.34 37 P P 07 57 18.4 +1.4
baz=227
H04D Lennon 87.41 35 P P 07 57 18.5 +1.4
baz=226
X16A Lo Mia Camp, P 87.57 49 P P 07 57 19.6 +1.3
X16A IAmb IAmb 07 57 21.8
comp=Z,13nm,0.9s
KDAK Kodiak Island 87.82 13 LR LR 08 29 29.4
comp=Z,102nm,21.8s,baz=227,slow=31
PINE Pine Mountain 87.84 37 P P 07 57 20.5 +1.0
PINE IAmb IAmb 07 57 22.3
comp=Z,24nm,1.2s
Q16K King Salmon 87.95 10 P P 07 57 19.0 -0.3
baz=198
I05D Terrebonne, OR 88.00 36 P P 07 57 21.0 +1.0
baz=227
WUAZ Wupatki 88.27 48 P P 07 57 23.7 +2.0
baz=234
P17K Kvichak River 88.48 10 P P 07 57 21.5 -0.3
baz=198
O16K Kokwok River B 88.61 9 P P 07 57 21.4 -1.0
baz=197
GRNR Gornyy 88.63 332 ⇓ *i* P P 07 57 22.7 -0.1
GRNR pmax pmax
comp=Z,30nm,0.9s
Q20K Shuyak Island 88.63 12 P P 07 57 22.4 -0.1
baz=202
P18K Big Mountain, 88.86 11 P P 07 57 23.1 -0.5
P18K IAmb IAmb 07 57 24.4
comp=Z,12nm,0.9s
P18K Big Mountain, 88.86 11 P P 07 57 23.0 -0.6
baz=199
CN2 Changchun 88.88 322 *e* P P 07 57 22.8 -1.3
CN2 *e*S S 08 08 07.8 -1.0
CN2 pmax pmax
comp=Z,10.0nm,1.4s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=Z,100nm,17.0s
CN2 LR LR
comp=Z,100nm,17.0s
CN2 LR LR
comp=Z,100nm,13.0s
O17K Koliganek Bris 88.93 10 P P 07 57 22.9 -1.0
baz=198
121A Cookes Peak, D 88.97 52 P P 07 57 27.3 +2.2
baz=236
121A Cookes Peak, D 88.97 52 P P 07 57 27.2 +2.2
baz=236
ELK Elko 89.04 42 LR LR 08 29 31.4
comp=Z,220nm,21.1s,baz=222,slow=30
W18A Petrified Fore 89.12 49 P P 07 57 27.5 +1.9
baz=235
TIA Tai'an 89.12 312 ⇑ P P 07 57 25.8 +0.4
TIA pmax pmax
comp=Z,27nm,1.0s
BNX BinXian 89.15 325 ⇑ P P 07 57 24.3 -1.0
BNX pmax pmax
comp=Z,23nm,0.9s
BNX pmax pmax
comp=Z,94nm,4.3s
O18K Koktuh Hills 89.30 11 P P 07 57 25.5 -0.2
baz=199
N16K Nishlik Lake 89.36 9 P P 07 57 26.7 +0.8
baz=196,SNR=6.3
KLR Kul'dur 89.50 329 LR LR 08 36 49.6
comp=Z,75nm,18.0s,baz=188,slow=35
KLR Kul'dur 89.50 329 *ce* P P 07 57 27.3 +0.4
KLR pmax pmax
comp=Z,28nm,0.8s
O19K Port Alsworth 89.77 11 P P 07 57 27.6 -0.2
O19K Port Alsworth 89.77 11 P P 07 57 27.7 -0.1
baz=200
BRSE Bradley Lake S 90.00 13 P P 07 57 29.3 +0.3
baz=203,SNR=7.4
DUG Dugway, Tooele 90.16 43 P P 07 57 32.0 +1.7
baz=233
TX31 Lajitas Ar. Si 90.18 57 P P 07 57 32.5 +1.8
baz=238
TXAR Lajitas Array 90.18 57 P P 07 57 32.7 +2.0
comp=Z,3.7nm,1.0s,baz=216,slow=6.2,SNR=26
TXAR PKKPbc **PKKPbc** 08 15 01.7 +0.9
comp=Z,0.1nm,0.5s,baz=123,slow=3.3,SNR=4.1
TXAR LR LR 08 29 13.2
comp=Z,92nm,21.4s,baz=220,slow=30
comp=Z,3.7nm,1.0s
TXAR Lajitas Array 90.18 57 P P 07 57 32.1 +1.4
MNTX Cornudas Mount 90.21 54 P P 07 57 32.2 +1.5
baz=237
MNTX Cornudas Mount 90.21 54 P P 07 57 32.1 +1.5
baz=237
E07A Sunnyside 90.28 35 P P 07 57 31.6 +1.0
Y22A Socorro 90.33 51 P P 07 57 33.2 +1.8
baz=236
HAWA Hanford 90.33 36 P P 07 57 32.0 +1.2
N19K Bonanza Creek 90.33 11 P P 07 57 30.0 -0.6
baz=200,SNR=5.4
LTY Liberty 90.33 34 P P 07 57 31.4 +0.5
BBB Bella Bella 90.47 28 LR LR 08 29 32.3
comp=Z,85nm,21.3s,baz=208,slow=30
SEW Seward 90.59 13 P P 07 57 31.6 -0.1
baz=204
Q23K Middleton Isla 90.65 15 P P 07 57 34.1 +2.2
baz=207
CMIG Matias Romero 90.98 71 LR LR 08 32 17.1
comp=Z,103nm,18.3s,baz=233,slow=31
N20K Mount Spurr 91.08 12 P P 07 57 33.1 -0.9
baz=202
ENH Enshi 91.13 304 P P 07 57 34.8 -0.2
MVCO Mesa Verde 91.14 48 P P 07 57 36.6 +1.4
baz=235
HVU Hansel Valley 91.14 42 P P 07 57 35.9 +1.0
HVU Hansel Valley 91.14 42 P P 07 57 35.9 +1.0
HVU pmax pmax
comp=Z,23nm,1.4s
ANMO Albuquerque 91.23 51 LR LR 08 29 57.7
comp=Z,159nm,22.0s,baz=238,slow=30
ANMO Albuquerque 91.23 51 P P 07 57 37.1 +1.6
baz=236
ANMO Albuquerque 91.23 51 P P 07 57 37.4 +1.8
baz=236
MA2 Magadan 91.26 344 LR LR 08 34 51.2
comp=Z,51nm,19.1s,baz=148,slow=33
MA2 Magadan 91.26 344 *ce* P P 07 57 33.4 -1.4
MA2 pmax pmax
comp=Z,23nm,1.1s
HLID Hailey 91.28 40 P P 07 57 36.6 +1.0
baz=232,SNR=11
PLID Pearl Lake 91.35 38 P P 07 57 36.6 +0.7
HNS HongShan 91.39 312 ⇑ P P 07 57 36.4 +0.5
HNS PP **PP** 08 01 11.8 -2.5
HNS *e*S **S** 08 08 35.0 +2.7
HNS pmax pmax
comp=Z,24nm,1.1s
HNS LR LR
comp=Z,100nm,24.3s
HNS LR LR
comp=Z,170nm,22.6s
RC01 Rabbit Creek A 91.44 13 P P 07 57 35.6 0.0
baz=204,SNR=6.5
M20K Styx River 91.56 11 P P 07 57 35.3 -1.0
baz=201
L19K White Mountain 91.57 10 P P 07 57 36.3 0.0
baz=199,SNR=10.0
SUA Susitna One 91.59 12 P P 07 57 36.1 -0.4
baz=203,SNR=5.2
SIT Sitka 91.65 21 P P 07 57 37.4 +0.8
baz=216
EYAK Cordova Ski Ar 91.79 15 P P 07 57 37.4 +0.2
baz=207
GLI Glacier Island 91.79 14 P P 07 57 37.1 -0.1
baz=206,SNR=8.4
BJT Baijiatuau 91.95 315 P P 07 57 38.5 0.0
BJT IAmb IAmb 07 57 39.6
comp=Z,13nm,1.0s
BJT Baijiatuau 91.95 315 P P 07 57 38.5 0.0
BJT pmax pmax
comp=Z,13nm,1.0s
BJI Beijing 91.96 315 P P 07 57 38.5 0.0
BJI pmax pmax
comp=Z,13nm,0.9s
M22K Willow 91.98 12 P P 07 57 37.8 -0.2
baz=204
KNK Knik Glacier 91.99 13 P P 07 57 37.9 -0.3
baz=205
L20K Farewell, AK 92.00 10 P P 07 57 37.9 -0.3
baz=200
PMR Palmer 92.02 13 P P 07 57 38.2 0.0
baz=204,SNR=5.5
TTA Tatalina 92.11 9 P P 07 57 38.8 0.0
baz=198
GHO Glory Hole Cre 92.23 13 P P 07 57 39.1 -0.2
GHO IAmb IAmb 07 57 40.5
comp=Z,9.8nm,0.8s
WAX Waxell Ridge 92.39 16 P P 07 57 40.6 +0.5
WAX IAmb IAmb 07 57 41.6
comp=Z,10nm,0.7s
BMRM Bremner River 92.42 15 P P 07 57 40.7 +0.4
baz=208,SNR=6.1
S22A 4UR Ranch, Cre 92.53 48 P P 07 57 43.1 +1.5
baz=236
KLU Klutina 92.60 14 P P 07 57 41.0 -0.1
baz=207
SCM Sheep Creek Mo 92.61 14 P P 07 57 41.3 +0.2
baz=206,SNR=5.9
PNL Peninsula 92.61 18 P P 07 57 41.9 +0.8
baz=213
AHID Auburn Hatcher 92.73 42 P P 07 57 42.7 +0.4
AHID IAmb IAmb 07 57 44.8
comp=Z,12nm,1.0s
PINM Pinnacle 92.74 17 P P 07 57 41.7 0.0
baz=212
NEW Newport 92.80 35 LR LR 08 33 18.7
comp=Z,90nm,20.1s,baz=232,slow=32
K20K Telida 92.80 10 P P 07 57 41.6 -0.2
baz=200
MCMT McKenzie Canyo 92.95 40 P P 07 57 44.1 +0.7
O20A White River Ci 92.96 46 P P 07 57 44.3 +0.8
baz=236
N25K Chitina, Valde 92.99 15 P P 07 57 43.3 +0.4
baz=208,SNR=8.7
NNA Nana 93.04 105 LR LR 08 29 18.6
comp=Z,80nm,21.7s,baz=218,slow=29
MCARA McCarthy VSAT 93.16 16 P P 07 57 43.9 +0.4
baz=210
CAST Castle Rocks 93.17 11 P P 07 57 44.6 +1.0
baz=202
WAT6 Susitna Watana 93.20 13 P P 07 57 43.7 -0.2
baz=206
CTG Chitna Glacier 93.21 16 P P 07 57 44.4 +0.4
baz=211
REDW Red Top Meadow 93.23 42 P P 07 57 45.5 +0.9
REDW IAmb IAmb 07 57 47.0
comp=Z,20nm,1.3s
MSTX Muleshoe 93.28 53 P P 07 57 46.0 +1.1
baz=238
MSTX Muleshoe 93.28 53 P P 07 57 45.8 +0.9
baz=238
PLBC Pleasant Camp 93.29 19 P P 07 57 45.2 +1.0
baz=215
SDCO Great Sand Dun 93.41 49 P P 07 57 46.3 +0.6
baz=237
SDCO Great Sand Dun 93.41 49 P P 07 57 46.4 +0.6
baz=237
TNA Tin City 93.49 4 P P 07 57 45.3 +0.3
baz=186
TRF Thorofare Moun 93.51 12 P P 07 57 44.5 -0.9
baz=203
XAN Xi'an 93.51 307 P P 07 57 45.1 -0.8
XAN pP PcP 07 57 51.1 +4.6
XAN sP pP 07 57 55.5 -1.4
XAN pmax pmax
comp=Z,6.0nm,1.2s
J20K Nowinta River 93.56 10 P P 07 57 45.4 0.0
baz=200
MSO Missoula 93.56 38 P P 07 57 46.1 +0.2
baz=232
CHUM Lake Minchumin 93.57 11 P P 07 57 43.6 -1.8
baz=202
HARP HAARP 93.57 14 P P 07 57 46.3 +0.8
baz=208
SKAG Skagway 93.60 20 P P 07 57 46.7 +1.1
baz=216
CMAR Chiang Mai Arr 93.62 289 P P 07 57 47.5 +0.8
comp=Z,2.3nm,0.3s,baz=137,slow=3.4,SNR=9.3
comp=Z,2.3nm,0.3s
JCT Junction City 93.64 57 P P 07 57 47.2 +0.5
baz=240
BW06 Boulder Array 93.65 43 P P 07 57 47.2 +0.6
baz=235
PDAR Pinedale Array 93.65 43 P P 07 57 47.4 +0.8
comp=Z,2.2nm,0.8s,baz=208,slow=3.4,SNR=21
PDAR LR LR 08 31 50.7
comp=Z,142nm,21.9s,baz=254,slow=30
comp=Z,2.2nm,0.8s
P30M Million Dollar 93.67 19 P P 07 57 47.1 +1.1
baz=215
GCSA Galena City Sc 93.72 8 P P 07 57 46.3 +0.3
baz=198
QLMT Earthquake Lak 93.76 40 P P 07 57 48.2 +1.2
T25A Trinidad 93.82 50 P P 07 57 48.0 +0.5
baz=238
YFT Old Faithful 93.88 41 P P 07 57 48.2 +0.6
YFT IAmb IAmb 07 57 51.1
comp=Z,5.5nm,0.8s
SEY Seymchan 93.88 346 LR LR 08 35 06.0
comp=Z,141nm,21.1s,baz=157,slow=32
SEY Seymchan 93.88 346 *ce* P P 07 57 46.9 +0.1
SEY pmax pmax
comp=Z,22nm,1.0s
YUK8 Steele Glacier 93.88 17 P P 07 57 47.9 +0.7
baz=212
YUK6 Outpost Mounta 93.96 18 P P 07 57 48.8 +1.2
baz=214
H17A Grant Village 93.99 41 P P 07 57 49.6 +1.4
baz=234
PAX Paxson 94.01 14 P P 07 57 47.5 -0.1
baz=208
MCK McKinley 94.02 12 P P 07 57 47.1 -0.4
baz=205
ATAH Atahualpa 94.04 100 LR LR 08 30 32.0
comp=Z,255nm,21.0s,baz=251,slow=29
M26K Nabesna, AK 94.06 15 P P 07 57 46.7 -1.1
baz=210
BOZ Bozeman (W) 94.10 40 P P 07 57 49.4 +1.0
baz=234,SNR=9.6
HYT Haines Junctio 94.10 18 P P 07 57 48.7 +0.6
baz=214
YUK3 Moose Creek 94.12 16 P P 07 57 48.7 +0.4
baz=212,SNR=6.7
LVC Limon Verde 94.15 118 LR LR 08 30 42.5
comp=Z,166nm,21.1s,baz=234,slow=29
P32M Atlin 94.20 20 P P 07 57 49.2 +0.7
baz=217
XLT XiLinHaoTe 94.25 318 *e* P P 07 57 50.8 +1.7
XLT pP pwP 07 58 08.6 +4.4
XLT sP sP 07 58 14.1 +10

XLT pmax pmax
comp=Z,111nm,0.9s
XLT pmax pmax
comp=Z,130nm,4.4s
M27K Edge Creek, AK 94.28 16 P P 07 57 49.5 +0.6
baz=211,SNR=6.1
DLBC Dease Lake 94.49 23 LR LR 08 35 10.1
comp=Z,48nm,19.6s,baz=186,slow=32
DLBC Dease Lake 94.49 23 P **P 07 57 50.9 +1.0**
baz=220
K24K Donnelly Dome 94.69 13 P **P 07 57 50.9 +0.3**
baz=207,SNR=6.6
WHY Whitehorse 94.71 19 P **P 07 57 51.0 +0.2**
baz=216
N30M Aishikik Lake 94.74 18 P **P 07 57 51.0 +0.1**
baz=215
RIDG Independent Ri 94.83 14 P **P 07 57 51.0 -0.2**
baz=208
I21K Tanana 94.83 10 P **P 07 57 50.7 -0.5**
baz=202
ABTX Abilene, Hawle 94.84 56 P **P 07 57 52.2 +0.1**
baz=240
N23A Red Feather La 94.84 46 P **P 07 57 51.8 -0.3**
baz=237
WRH Wood River Hil 94.85 12 P **P 07 57 51.0 -0.2**
WRH IAmb IAmb 07 57 51.9
comp=Z,7.6nm,0.9s
MLY Manley 94.90 11 P **P 07 57 50.4 -1.1**
baz=203
L27K Beaver Creek, 94.90 15 P **P 07 57 51.8 +0.3**
baz=211
P33M Teslin, Yukon 94.97 20 P **P 07 57 51.5 -0.5**
baz=218
HDA Harding Lake 95.00 13 P **P 07 57 51.5 -0.5**
baz=206
N31M Braeburn, Yuko 95.12 18 P **P 07 57 53.1 +0.5**
baz=216
PZH PanZhiHua 95.14 297 P **P 07 57 55.3 +1.6**
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,100nm,5.5s
H21K Melozitna Rive 95.15 10 P **P 07 57 52.8 +0.1**
baz=201
RLMT Red Lodge 95.17 41 P **P 07 57 54.0 +0.5**
baz=235
SCRK Sand Creek 95.22 14 P **P 07 57 53.4 +0.2**
baz=209
I23K Minto, Yukon-K 95.24 11 P **P 07 57 53.4 +0.4**
baz=204
COLA College 95.26 12 *i* P **P 07 57 52.6 -0.5**
COLA pmax pmax
comp=Z,6.0nm,0.9s
IMAR Indian Mountai 95.32 9 P **P 07 57 53.3 -0.1**
HHC Hu-ho-hao-te 95.33 314 *eP* **P 07 57 56.0 +1.8**
HHC pmax pmax
comp=Z,34nm,0.8s
HHC pmax pmax
comp=Z,95nm,4.7s
ILAR Eielson Array 95.34 12 P **P 07 57 52.9 -0.6**
comp=Z,1.9nm,0.8s,baz=219,slow=5.2,SNR=24
ILAR PKKPbc **PKKPbc 08 14 45.7 -3.0**
comp=Z,0.2nm,0.5s,baz=30,slow=1.9,SNR=4.5
ILAR LR LR 08 33 47.4
comp=Z,56nm,21.9s,baz=162,slow=31
comp=Z,1.9nm,0.8s
ILAR Eielson Array 95.34 12 P **P 07 57 53.4 -0.1**
ILAR Eielson Array 95.34 12 P **P 07 57 53.4 -0.1**
K22A Casper 95.43 44 P **P 07 57 55.7 +1.0**
baz=237
K22A Casper 95.43 44 P **P 07 57 55.1 +0.4**
baz=237
J25K Salcha River, 95.50 13 P **P 07 57 53.9 -0.4**
baz=208
H22K Ishtalitna Cre 95.59 10 P **P 07 57 54.2 -0.4**
baz=203
K27K Chicken 95.68 15 P **P 07 57 55.6 +0.5**
baz=211
CD2 Chengdu 95.71 302 *eP* **P 07 57 56.5 +0.4**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
M30M Minto, Yukon 95.74 17 P **P 07 57 55.2 -0.2**
baz=215
J26L Joseph Creek 95.77 14 P **P 07 57 56.2 +0.6**
baz=209
M31M Drury Creek, Y 96.09 19 P **P 07 57 57.6 +0.6**
baz=217
DAWY Dawson 96.33 16 P **P 07 57 57.9 -0.2**
baz=213
JTS Las Juntas de 96.35 82 LR LR 08 30 42.3
comp=Z,169nm,21.0s,baz=335,slow=29
HKT Hockley 96.38 60 *i* P **P 07 57 59.5 +0.5**
HKT pmax pmax
comp=Z,3.0nm,1.1s
I26K Coal Creek Min 96.56 14 P **P 07 57 59.2 +0.1**
baz=210
BILL Bilibino 96.56 354 *de*P **P 07 57 58.5 -0.5**
BILL *SS S 08 09 01.0 -15
BILL pmax pmax
comp=Z,7.0nm,1.3s
BILL MLR MLR
comp=Z,72nm,19.0s
RSSD Black Hills 97.75 44 P **P 07 58 05.4 +0.2**
RSSD IAmb IAmb 07 58 07.0
comp=Z,10.0nm,1.0s
RSSD Black Hills 97.75 44 P **P 07 58 05.4 +0.2**
RSSD pmax pmax
comp=Z,10.0nm,1.0s
RSSD Black Hills 97.75 44 P Pdif 07 58 06.3 +1.0
baz=239
RSSD Black Hills 97.75 44 P Pdif 07 58 06.0 +0.7
baz=239
LPAZ La Paz 98.14 113 P Pdif 07 58 10.7 +2.5
comp=Z,1.3nm,1.0s,baz=265,slow=5.6,SNR=3.5
LPAZ LR LR 08 33 55.2
comp=Z,102nm,21.3s,baz=257,slow=30
comp=Z,1.3nm,1.0s
LZH Lanzhou 98.14 306 *eP* Pdif 07 58 08.0 +0.8
LZH pmax pmax
comp=Z,16nm,1.0s
D23K Nanushuk River 98.54 9 P Pdif 07 58 08.4 +0.4
baz=203
EPYK Eagle Plains 98.88 15 P Pdif 07 58 09.9 +0.4
baz=215
YAK Yakutsk 99.43 337 LR LR 08 43 55.8
comp=Z,57nm,18.4s,baz=89,slow=36
SONM Songino Array 102.07 318 Pdiff **Pdif 07 58 23.6 -0.7**
comp=Z,0.7nm,0.6s,baz=94,slow=4.3,SNR=2.2
WMQ Urumqi 112.56 309 *e*PKP **PKiKP 08 03 06.6 +0.4**
ZALV Zalesovo Beam 116.93 319 PKP **PKPdf 08 03 12.8 -1.3**
comp=Z,3.8nm,0.7s,baz=80,slow=0.6,SNR=16
MKAR Makanchi Array 117.02 311 PKP **PKPdf 08 03 13.6 -1.0**
comp=Z,8.6nm,0.8s,baz=122,slow=0.6,SNR=43
MKAR Makanchi Array 117.02 311 *c i* PKIKP **PKPdf 08 03 13.8 -0.8**
MKAR pmax pmax
comp=Z,9.0nm,0.9s
BOSA Boshof 119.89 202 PKP **PKiKP 08 03 21.7 +0.6**
comp=Z,5.4nm,0.7s,baz=179,slow=2.1,SNR=12
KSH Kashi 119.91 302 PKP **PKiKP 08 03 21.0 +0.4**
KURK Kurchatov 120.13 315 *c i* PKIKP **PKPdf 08 03 19.6 -0.8**
KURK pmax pmax
comp=Z,31nm,1.7s
AAK Ala-Archa 121.63 305 *c i* PKIKP **PKPdf 08 03 23.8 0.0**
AAK pmax pmax
comp=Z,6.0nm,1.3s
NOR Nord 125.73 4 *i* P **PKiKP 08 03 31.8 +1.0**
SUMG Summit 130.10 15 *i* P **PKPdf 08 03 39.0 -0.4**
DY2G Dye2 131.16 24 *i* P **PKPdf 08 03 40.4 -1.0**
ARU Arti 131.87 322 *i* PKIKP **PKPdf 08 03 42.7 0.0**
ARU 08 05 59.6
ICESG Greenland Ices 131.94 19 *i* P **PKPdf 08 03 40.8 -2.1**
DBG Daneborg 132.06 8 *i* P **PKPdf 08 03 40.8 -1.7**
GEYT Alibeck 133.46 297 PKP **PKiKP 08 03 47.4 -0.1**
comp=Z,7.1nm,0.6s,baz=235,slow=10,SNR=6.8
KIRV Kirov 135.91 327 *c i* PKIKP **PKiKP 08 03 51.1 -0.6**
PRGR Permogore 136.21 332 *e*PKHKP PKPpre 08 03 42.5
KMBO Kilima Mbogo 136.35 234 PKP **PKPdf 08 03 53.1 +0.4**
comp=Z,2.1nm,0.7s,baz=161,slow=3.6,SNR=3.5
ARA0 ARCESS Array S 136.45 349 *eP* **PKPdf 08 03 50.5 -0.4**
ARCES ARCESS Array B 136.45 349 PKP **PKPdf 08 03 49.6 -1.3**
comp=Z,6.7nm,0.8s,baz=54,slow=2.3,SNR=9.3
KLMR Klimovskoe 139.10 334 *e*PKIKP **PKPdf 08 03 52.0 -3.9**
KLMR *e* 08 06 46.2
KLMR *e* 08 11 04.7
KLMR pmax pmax
comp=Z,27nm,1.1s
KLMR Klimovskoe 139.10 334 *e*PKPdf **PKPdf 08 03 52.1 -3.9**
KLMR AMP 08 03 58.1
comp=Z,27nm,1.1s
KLMR *e*PP **PP** 08 06 46.2 -3.0
KLMR *e*SKPab **SKPab** 08 07 36.1 -1.8
KLMR *e*SKSac **SKSdf** 08 11 04.7 +1.6
KLMR *e*SKSac **SKSdf** 08 11 04.7 +1.6
BELG Belogornoye 139.11 319 *i* PKIKP **PKPdf** 08 03 55.6 -0.6
BELG pmax pmax
comp=Z,9.0nm,1.0s
H10N3 ASCENSION HYDR 140.48 152 T T 10 42 05.2
baz=205,slow=74,SNR=25
H10N1 ASCENSION HYDR 140.49 152 T T 10 42 02.5
baz=205,slow=74,SNR=40
H10N2 ASCENSION HYDR 140.50 152 T T 10 42 11.5
baz=205,slow=74,SNR=102
VRH Novokhopyorsk 142.96 319 *e*PKHKP PKPpre 08 03 57.7
VRH pmax pmax
comp=Z,7.0nm,0.5s
FINES FINESS Array B 143.22 342 PKhKP PKPpre 08 03 59.5
comp=Z,5.2nm,0.5s,baz=46,slow=4.0,SNR=27
OBN Obninsk 143.75 328 *i* PKIKP PKPab 08 04 01.2 -0.2
OBN pmax pmax
comp=Z,62nm,1.5s
LPSR Galich'ya Gora 143.89 323 *e*PKIKP PKPab 08 04 01.2 -0.8
LPSR pmax pmax
comp=Z,20nm,0.8s
ZEI Tsey 144.06 305 *i* PKIKP PKPab 08 04 02.3 -1.0
ZEI pmax pmax
comp=Z,18nm,1.4s
VORR Voronezh 144.18 321 *e*PKIKP PKPbc 08 04 03.8 +0.3
VORR pmax pmax
comp=Z,50nm,0.4s
VSR Storozhevoye 144.41 321 *e*PKIKP **PKPab 08 04 03.5 -0.5**
VSR pmax pmax
comp=Z,30nm,0.6s
ONI Oni 144.42 305 PKIKP PKPbc 08 04 05.5 +0.8
KBZ Khabaz 144.58 307 PKP **PKPab 08 04 04.2 -0.6**
comp=Z,11nm,0.8s,baz=124,slow=1.6,SNR=13
KIV Kislovodsk 144.68 307 ⇑P **PKPab 08 04 05.0 -0.4**
KIV Kislovodsk 144.68 307 *i* PKIKP **PKPab 08 04 04.8 -0.6**
KIV pmax pmax
comp=Z,31nm,1.1s
KIV MLR MLR
comp=Z,73nm,25.0s
RAF Rauma 144.68 344 *eP* **PKPab 08 04 03.2 -1.5**
SHA1 Shidzhatmaz 144.75 307 *i* PKIKP **PKPab 08 04 04.9 -1.0**
KARS Kars 145.03 302 **PKPbc 08 04 06.9 +0.1**
KARS Kars 145.03 302 PKIKP **PKPbc 08 04 06.9 +0.1**
CHVG Ch'k'valeri 145.38 306 ⇓P **PKPab 08 04 08.3 +0.4**
CHVG Ch'k'valeri 145.38 306 ⇓PKIKP **PKPab 08 04 08.3 +0.4**
VSU Vasula 145.42 338 *c* PKP2 **PKPdf 08 04 06.2 -1.1**
VSU pmax pmax
comp=Z,513nm,0.8s
VSU Vasula 145.42 338 *eP* **PKPdf 08 04 06.5 -0.8**
AKN Aaknes 145.71 357 *eP* **PKPdf 08 04 08.1 +0.4**
AKN IAmb IAmb 08 04 08.9
comp=Z,97nm,1.0s
DOMB Dombas 145.72 355 *eP* **PKPdf 08 04 07.9 +0.1**
BATM Batumi 145.89 304 ⇑P **PKPbc 08 04 09.1 -0.2**
BATM Batumi 145.89 304 ⇑PKP2 **PKPbc 08 04 09.1 -0.2**
GURO Guroymak-BITLI 146.10 298 **PKPbc 08 04 10.2 -0.1**
MTSE Matsula 146.12 341 *eP* **PKPdf 08 04 08.9 +0.5**
NC303 NORSAR Array S 146.31 353 *eP* **PKPdf 08 04 09.3 +0.6**
NB2 NORSAR Subarra 146.51 353 PKPab **PKPdf 08 04 09.5 +0.3**
baz=12,slow=4.1
NB2 NORSAR Subarra 146.51 353 PKP **PKPdf 08 04 09.5 +0.3**
comp=Z,22nm,0.8s,baz=12,slow=4.1
NOA NORSAR Array B 146.51 353 PKPbc **PKPdf 08 04 08.4 -0.7**
comp=Z,20nm,0.8s,baz=14,slow=2.8,SNR=74
SOC Sochi 146.85 308 *e*PKIKP **PKPdf 08 04 08.8 -1.4**
SOC *e* 08 07 33.2
SOC *e*SS SS 08 26 29.3 -4.6
SOC *e*SSS SSS 08 32 03.8
SUE Sulen 146.91 359 *eP* **PKPbc 08 04 11.2 -0.5**
SKAR Skarslia 147.13 355 *eP* **PKPbc 08 04 12.3 -0.1**
KTUT Trabzon 147.44 303 ⇑P **PKPbc 08 04 13.8 -0.1**
SLIT Slitere, Latvi 147.47 341 *eP* **PKPdf 08 04 12.0 +1.3**
BER Bergen 147.57 358 *eP* **PKPbc 08 04 13.7 +0.1**
BER IAmb IAmb 08 04 14.2
comp=Z,35nm,0.9s
LRW Lerwick 147.71 4 *eP* **PKPbc 08 04 13.7 -0.3**
IDID Didziasalis 147.84 335 *eP* **PKPbc 08 04 15.2 +0.8**
ISAL Salakas 147.87 335 *eP* **PKPbc 08 04 15.2 +0.7**
MNK Minsk 147.98 333 *i* PKP2 **PKPbc 08 04 15.3 +0.5**
MNK *i* 08 07 45.6
MNK *i* PPP PPP 08 11 03.2
MNK *i* SS SS 08 26 46.4 +1.2
MNK *i* SSS SSS 08 32 22.1
MNK pmax pmax
comp=E,1.0nm,0.5s
MNK pmax pmax
comp=N,20nm,1.0s
MNK pmax pmax
comp=Z,132nm,1.0s
MNK MLR MLR
comp=E,4.0nm,16.0s
MNK MLR MLR
comp=N,149nm,16.0s
MNK MLR MLR
comp=Z,4μm,16.0s
MNK Minsk 147.98 333 *i* PKP **PKPbc 08 04 15.3 +0.5**
comp=E,1.0nm,0.5s
MNK *i* PKP **PKPbc 08 04 15.3 +0.5**
comp=N,20nm,1.1s
MNK *i* PKP **PKPbc 08 04 15.3 +0.5**
comp=Z,132nm,1.1s,baz=44
MNK *i* pPKP **sPKPbc 08 04 30.8 +0.8**
MNK *i* PP **PP 08 07 45.6 +3.1**
MNK *i* PPP PPP 08 11 03.2
MNK *i* SKS SKSdf 08 11 40.8 +24
MNK *i* SPP SPP 08 24 12.8
MNK *i* PPS PPS 08 24 26.4
MNK *i* SS **SS 08 26 46.4 +1.2**
MNK *i* SSS SSS 08 32 22.2
MNK *i* LR LR 09 02 40.2
MNK *i* LRM MLR 09 10 21.5
comp=E,4.0nm,15.9s
MNK *i* LRM MLR 09 10 21.5
comp=N,149nm,15.9s
MNK *i* LRM MLR 09 10 52.4
comp=Z,4μm,15.9s
IIGN Ignalina 148.00 335 *eP* **PKPbc 08 04 14.8 -0.1**
KONO Kongsberg 148.04 354 **PKPbc 08 04 14.1 -0.8**
KONO Kongsberg 148.04 354 *c* PKP2 **PKPbc 08 04 14.0 -0.8**
KONO pmax pmax
comp=Z,43nm,0.8s
KONO Kongsberg 148.04 354 *eP* **PKPbc 08 04 14.8 -0.1**
ANN Anapa 148.04 311 *c* PKP2 **PKPbc 08 04 15.0 -0.3**
ANN pmax pmax
comp=Z,129nm,0.8s
NACGM Naroch 148.13 334 *i* PKP **PKPbc 08 04 15.1 -0.1**
baz=41
VSVD Vaisvydziai 148.32 338 *eP* **PKPbc 08 04 16.2 +0.5**
BLS5 Blasjo 148.49 357 *eP* **PKPbc 08 04 16.4 +0.3**
BLS5 IAmb IAmb 08 04 39.1
comp=Z,70nm,1.6s
PABE Paberze 148.69 337 **PKPbc 08 04 15.5 -1.1**
PABE Paberze 148.69 337 *eP* **PKPbc 08 04 16.5 -0.1**
KMY Karmoy 148.75 358 *eP* **PKPbc 08 04 16.8 +0.2**
LEWI Lewis, Hebride 149.03 10 *eP* **PKPbc 08 04 17.4 0.0**
HOMB Homborsund 149.50 354 *eP* **PKPbc 08 04 19.0 +0.4**
SNART Snartemo 149.53 356 *eP* **PKPbc 08 04 19.0 +0.4**
KAC Achnashellach 149.89 9 *eP* **PKPbc 08 04 19.3 -0.3**
AKASG Malin Array Be 149.96 326 PKPbc **PKPbc 08 04 18.9 -1.1**
comp=Z,80nm,1.0s,baz=43,slow=3.0,SNR=44
AKBB Malin Array Si 149.96 326 *c* PKP2 **PKPbc 08 04 19.3 -0.7**
KPL Plockton 150.00 10 *eP* **PKPbc 08 04 19.6 -0.2**
SUW Suwalki 150.16 336 *e*PKP **PKPbc 08 04 20.0 -0.3**
SUW Suwalki 150.16 336 *eP* **PKPbc 08 04 19.6 -0.7**
SIM Simferopol' 150.17 313 *i* PKP2 **PKPbc 08 04 21.0 +0.3**
SIM pmax pmax
comp=Z,99nm,1.0s
DEL Delary 150.53 348 *eP* **PKPbc 08 04 20.4 -0.7**
DRUM Mains of Drumt 150.80 6 *eP* **PKPbc 08 04 21.2 -0.5**
INVG Invergeldie, C 151.10 8 *eP* **PKPbc 08 04 22.5 0.0**
EAB Aberfoyle 151.30 9 *eP* **PKPbc 08 04 21.0 -2.0**
BZK Bozkurt 151.35 307 ⇑P **PKPbc 08 04 22.3 -1.2**
COP Copenhagen 151.53 349 *i* P **PKPbc 08 04 21.9 -1.6**
BSD Bornholm Skovb 151.59 346 *eP* **PKPbc 08 04 23.2 -0.5**
BSD Bornholm Skovb 151.59 346 *eP* **PKPbc 08 04 23.1 -0.5**
BSD Bornholm Skovb 151.59 346 *i* P **PKPbc 08 04 21.9 -1.7**
ESY Stoneypath 151.77 7 *eP* **PKPbc 08 04 23.8 -0.2**
EBL Broad Law 151.87 8 *eP* **PKPbc 08 04 24.0 -0.3**
SORM Soroca 151.99 323 ⇑P **PKPbc 08 04 24.2 -0.6**
SORM Soroca 151.99 323 ⇑PKIKP **PKPbc 08 04 24.2 -0.6**
BRTR Keskin Array B 152.28 303 PKP **PKPdf 08 04 18.3 -0.9**
comp=Z,1.3nm,0.8s,baz=64,slow=3.4,SNR=2.8
BRTR PKPbc **PKPbc 08 04 25.3 -0.7**
comp=Z,14nm,0.6s,baz=136,slow=4.0,SNR=31
MILM Milestii Mici 152.45 320 ⇑*i* PKP **PKPbc 08 04 25.0 -0.9**
comp=Z,750nm,1.0s
MILM Milestii Mici 152.45 320 ⇑P **PKPbc 08 04 25.2 -0.6**
MILM Milestii Mici 152.45 320 *c i* PKIKP **PKPbc 08 04 25.0 -0.9**
MILM pmax pmax
comp=Z,150nm,3.6s
GAL1 Galloway 152.53 10 *eP* **PKPbc 08 04 25.2 -0.5**
BEL Belsk 152.77 336 *e*PKP **PKiKP 08 04 27.1 +0.4**
EDMD Edmundbyers 152.91 7 *eP* **PKPbc 08 04 25.9 -0.8**
TLCR 153.39 317 ⇑P **PKPbc 08 04 28.1 +0.1**
TLCR 153.39 317 ⇑PKIKP **PKPbc 08 04 28.1 +0.1**
CFR Carcaliu 153.80 318 ⇓P **PKPbc 08 04 28.4 -0.5**
CFR Carcaliu 153.80 318 ⇓PKIKP **PKPbc 08 04 28.4 -0.5**
TPGR Topolog 153.80 317 ⇓P **PKPbc 08 04 28.8 -0.1**
BIZ Bicaz 153.93 323 ⇑P **PKiKP 08 04 29.9 +0.7**
BURAR Bucovina Array 153.96 325 ⇑P **PKiKP 08 04 29.8 +0.4**
BURAR Bucovina Array 153.96 325 ⇑PKIKP **PKiKP 08 04 29.8 +0.4**
VRI Vrincioaia 154.23 320 ⇑P **PKPab 08 04 44.7 +0.9**
VRI Vrincioaia 154.23 320 ⇑PKP2 **PKPab 08 04 44.7 +0.9**
PLOR Plostina 154.28 320 ⇑P **PKPab 08 04 43.7 -0.4**
PLOR Plostina 154.28 320 ⇑PKP2 **PKPab 08 04 43.7 -0.4**
KOLS Kolonicke sedl 154.44 330 *e*PKP2 **PKPab 08 04 44.5 -0.1**
OJC Ojcow 154.45 335 *e*PKP **PKPbc 08 04 30.1 -0.1**
COVR Voineasa-Covas 154.54 321 ⇑P **PKPab 08 04 44.7 -0.4**
UZH Uzhgorod 154.65 330 ⇑*i* PKP2 **PKPab 08 04 45.0 -0.4**
CRVS Cervenica-Dubn 154.82 331 *e*PKIKP **PKiKP 08 04 31.5 +0.5**
CRVS *e* 08 04 46.2
CRVS Cervenica-Dubn 154.82 331 *e*PKP **PKiKP 08 04 31.5 +0.5**
CRVS *e* 08 04 46.2
MLR Muntele Rosu 154.90 320 ⇑P **PKPab 08 04 46.7 -0.1**
MLR Muntele Rosu 154.90 320 ⇑PKP2 **PKPab 08 04 46.7 -0.1**
DOPR Dopca 154.92 322 ⇑P **PKPab 08 04 47.0 +0.2**
OKC Ostrava-Krasne 155.37 336 *e*PKP2 **PKPab 08 04 48.1 -0.3**
OKC Ostrava-Krasne 155.37 336 *e*PKPAB **PKPab 08 04 48.1 -0.3**
OSTC Ostas 155.39 340 *e*PKPDF **PKPdf 08 04 23.7 +0.6**
OSTC ⇑*e*PKP **pPKPdf 08 04 33.1 -1.2**
CHVC Chvalec 155.41 340 ⇑*e*PKP PKPab 08 04 37.8 -11
CHVC *e*PKPAB sPKPbc 08 04 50.6 +3.4
VOIR 155.43 321 ⇑P **PKPab 08 04 48.5 -0.5**
VOIR 155.43 321 ⇑PKP2 **PKPab 08 04 48.5 -0.5**
LANS Liptovska Anna 155.44 334 *e*PKP2 **PKPab 08 04 49.2 +0.3**
UPC Upice 155.49 340 *e*PKIKP PKPdf 08 04 32.4 +9.2
UPC *e* 08 04 49.2
UPC Upice 155.49 340 ⇑*e*PKP PKPdf 08 04 32.4 +9.2
UPC *e*PKPAB **PKPab 08 04 49.2 +0.2**
DPC Dobruska-Polom 155.53 339 *e*PKIKP PKPdf 08 04 32.5 +9.2
DPC *e* 08 04 49.1
DPC Dobruska-Polom 155.53 339 ⇑*e*PKP PKPdf 08 04 32.5 +9.2
DPC *e*PKPAB **PKPab 08 04 49.1 -0.1**
KECS Kecovo 155.55 331 *e*PKP2 **PKPab 08 04 49.7 +0.4**
CLL Collm 155.56 345 *i* PKIKP **PKPdf 08 04 22.4 -0.8**
CLL *i* 08 04 48.4
CLL pmax pmax
comp=Z,22nm,2.1s
CLL pmax pmax
comp=Z,28nm,1.2s
CLL Collm 155.56 345 *i* PKPdf **PKPdf 08 04 22.4 -0.8**
comp=Z,22nm,2.1s
CLL *i* PKPdif **pPKPdf 08 04 32.8 -1.6**
comp=Z,19nm,1.3s
CLL *i* PKPab **PKPab 08 04 48.4 -0.8**
comp=Z,28nm,1.2s
CLL *e*PP **PP 08 08 28.0 +2.5**
CLL L L 09 13 00.0
comp=Z,100nm,21.3s
KRLC Kraliky 155.63 339 *e*PKIKP PKPdf 08 04 32.7 +9.3
KRLC *e* 08 04 49.0
KRLC Kraliky 155.63 339 ⇑*e*PKP PKPdf 08 04 32.7 +9.3
KRLC *e*PKPAB **PKPab 08 04 49.0 -0.6**
MORC Moravsky Berou 155.63 337 ⇑P **PKPab 08 04 49.0 -0.7**
MORC Moravsky Berou 155.63 337 ⇑PKP2 **PKPab 08 04 49.0 -0.7**
MORC Moravsky Berou 155.63 337 *e*PKP **PKPdf 08 04 23.2 -0.3**
MORC *e* 08 04 49.3
ARR Arges 155.71 321 ⇓P **PKPab 08 04 50.5 +0.3**
BRG Berggiesshubel 155.74 343 ⇓*e*PKPf 08 04 24.1
BRG Amp 08 04 25.0
comp=Z,5.1nm,1.1s
⇑PKP PKPdf 08 04 33.0 +9.5
BRG Amp 08 04 34.3
comp=Z,8.4nm,1.0s
BRG PKPab **PKPab 08 04 49.7 -0.2**
BRG Amp 08 04 50.4
comp=Z,23nm,1.2s
BRG *ex* x 08 05 04.0
BRG Amp 08 05 05.1
comp=Z,6.0nm,0.8s
BRG Berggiesshubel 155.74 343 *e*PKIKP **PKPdf 08 04 24.1 +0.6**
BRG pmax pmax
comp=Z,5.0nm,1.1s
DRGR 155.78 326 ⇑P **PKPab 08 04 44.4 -6.0**
MAUC Maruska 155.88 336 *e*PKPDF **PKPdf 08 04 24.5 +0.7**
MAUC ⇑*e*PKP **pPKPdf 08 04 33.9 -1.1**
MAUC *e*PKPAB **PKPab 08 04 51.0 +0.3**
LOT Lotru 156.13 322 ⇑P **PKPab 08 04 51.4 -0.7**
VYHS Vyhne 156.22 334 *e*PKIKP **PKPdf 08 04 26.5 +2.3**
VYHS *e* 08 04 52.4
VYHS Vyhne 156.22 334 *e*PKP **PKPdf 08 04 26.5 +2.3**
VYHS *e* 08 04 52.4
PSZ Piszkesteto 156.24 331 ⇓P **PKPab 08 04 51.6 -0.8**
PSZ Piszkesteto 156.24 331 ⇓PKP2 **PKPab 08 04 51.6 -0.8**
VRAC Vranov 156.35 338 ⇓P **PKPab 08 04 53.1 +0.4**
VRAC Vranov 156.35 338 ⇓PKP2 **PKPab 08 04 53.1 +0.4**
VRAC Vranov 156.35 338 *e*PKP **PKPdf 08 04 23.5 -0.9**
VRAC *e* 08 04 53.1
JAVC Velka Javorina 156.36 336 *e*PKP **PKPdf 08 04 25.5 +1.0**
JAVC *e* 08 04 53.7
PRU Pruhonice 156.38 342 ⇑*e*PKP PKPab 08 04 39.0 -14
PRU *e*PKPAB pPKPab 08 04 52.2 -12
KRUC Moravsky 156.63 338 *e*PKP **PKPdf 08 04 24.7 0.0**
KRUC *e* 08 04 54.0
MODS Modra-Piesok 156.91 336 *e*PKP2 **PKPab 08 04 55.5 +0.4**
ZST Bratislava 157.12 336 *e*PKP2 **PKPab 08 04 56.4 +0.4**
BZS Buzias 157.14 325 ⇓P **PKPab 08 04 54.8 -1.4**
BZS Buzias 157.14 325 ⇓PKP2 **PKPab 08 04 54.8 -1.4**
HERR Herculane 157.22 323 ⇑P **PKPab 08 04 55.9 -0.7**
BTNL Ternell 157.32 355 *d*PKP **PKPab 08 04 56.7 -0.1**
KHC Kasperske Hory 157.43 342 *e*PKP PKPdf 08 04 40.5 +15
KHC *e*PKPAB **PKPab 08 04 57.0 -0.4**
CKRC Cesky Krumlov 157.50 341 ⇑*e*PKP PKPab 08 04 42.2 -15
CKRC *e*PKPAB pPKPab 08 04 57.6 -11
BCLA Clavier 157.54 357 *d*PKP **PKPab 08 04 56.8 -0.9**
GERES GERESS Array B 157.65 342 PKP **PKPdf 08 04 26.7 +0.5**
comp=Z,0.7nm,0.7s,baz=69,slow=9.1,SNR=5.9
GERES PKPab **PKPab 08 04 57.9 -0.5**
comp=Z,3.0nm,0.8s,baz=46,slow=4.2,SNR=6.3
MDVR Moldovita 157.66 324 ⇑P **PKPab 08 04 56.8 -1.8**
BMRD Maredsous 157.68 357 *d*PKP **PKPab 08 04 57.8 -0.6**
CONA Conrad Observa 157.79 337 *i* P **PKPab 08 04 59.2 +0.2**
comp=Z,22nm,0.9s,SNR=10
RONA Rosalia, Austr 157.83 336 *i* P **PKPab 08 04 59.4 +0.2**
comp=Z,33nm,1.1s,SNR=13
DOU Dourbes 157.89 358 *d*PKP **PKPab 08 04 57.4 -1.9**
FRGS Fruska Gora 158.36 327 ⇑P **PKPab 08 05 00.9 -0.6**
MOA Molln 158.38 339 *i* P **PKPab 08 05 01.7 +0.2**
comp=Z,17nm,1.1s,SNR=7.8
BIOA Bad Ischl, Aus 158.71 340 *i* P **PKPab 08 05 03.3 +0.3**
comp=Z,40nm,1.5s,SNR=5.3
SOKA Soboth 159.15 337 *i* P **PKPab 08 05 04.6 -0.3**
comp=Z,22nm,1.1s,SNR=8.3
PERS Pernice 159.16 336 *i* PKPab **PKPab 08 05 04.5 -0.4**
GROS Grobnik 159.17 336 *e*PKPab **PKPab 08 05 04.4 -0.6**
KBA Koelnbreinsper 159.35 340 *eP* **PKPab 08 05 05.5 -0.4**
comp=Z,9.4nm,1.0s
OBKA Obir 159.46 337 *eP* **PKPab 08 05 05.8 -0.6**
comp=Z,14nm,0.8s
WATA Walderalm 159.60 344 *i* P **PKPab 08 05 07.4 +0.5**
comp=Z,17nm,1.0s,SNR=5.6
WTTA Wattenberg 159.65 343 *eP* **PKPab 08 05 07.2 0.0**
comp=Z,14nm,0.7s,SNR=6.2
RETA Reutte 159.66 345 *eP* **PKPab 08 05 07.3 +0.2**
comp=Z,23nm,1.6s
MYKA Terra Mystica 159.66 339 *eP* **PKPab 08 05 06.5 -0.6**
comp=Z,9.9nm,0.7s
MOTA Moosalm 159.71 344 *i* P **PKPab 08 05 07.1 -0.3**
comp=Z,18nm,1.0s,SNR=6.1
SQTA Sankt Quirin 159.80 344 *eP* **PKPab 08 05 07.5 -0.3**

comp=Z,9.1nm,1.1s
LJU Ljubljana 159.88 337 *i* PKPab **PKPab 08 05 07.2 -0.8**
ABTA Abfaltersbach 159.89 341 *i* P **PKPab 08 05 07.1 -1.1**
comp=Z,11nm,0.8s,SNR=5.0
DAVA Damuels 160.03 347 *eP* **PKPab 08 05 09.5 +0.7**
comp=Z,7.5nm,0.6s
FETA Feichten 160.10 345 *i* P **PKPab 08 05 08.8 -0.4**
comp=Z,9.9nm,1.3s
TIP Timpagrande 164.15 318 ⇑PKP **PKPab 08 05 27.2 +0.1**
TORD Torodi Ar. Bea 165.17 174 PKP **PKPdf 08 04 34.2 -0.7**
comp=Z,5.0nm,1.1s,baz=52,slow=0.6,SNR=14
TORD PKPab **PKPab 08 05 33.2 +1.3**
comp=Z,4.1nm,0.7s,baz=185,slow=3.3,SNR=7.7
PAB San Pablo 166.87 27 ⇑PKIKP **PKPdf 08 04 35.8 +0.1**
ESDC Sonseca Array 166.91 25 PKP **PKPdf 08 04 35.4 -0.3**
comp=Z,1.1nm,0.8s,baz=349,slow=2.4,SNR=8.5
ESDC PKPab **PKPab 08 05 39.2 0.0**
comp=Z,1.3nm,0.9s,baz=323,slow=3.6,SNR=5.5
ESDC PP **PP 08 09 25.1 -1.5**
comp=Z,0.6nm,0.9s,baz=345,slow=2.9,SNR=4.4

*JMA **23** 07:53:01.3±0.1,24.°0N±0.°6×121.°7E±0.°8,h19km, TAIWAN REGION*
*TAP **23** 07:53:02.3,24.°23N×121.°74E,h9km,ML3.1,B*
ISC 23 07:53:02.6±0.8,**24.°22N**±0.°02×**121.°75E**±0.°03,**h13**km±5km, **n68,σ0°40/95,Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.09**	**357**	P	**Pg**	**07 53 05.3**	**-0.2**
	baz=9.0						
EHP				*e*S	**Sg**	**07 53 07.7**	**+0.2**
	baz=9.0						
ETL	**Fush Village**	**0.13**	**240**	*i* P	**Pg**	**07 53 05.9**	**-0.1**
	baz=235						
ETL				*i* S	**Sg**	**07 53 08.5**	**+0.1**
	baz=235						
NACB	**Ninganchiao**	**0.15**	**250**	P	**Pg**	**07 53 06.0**	**-0.2**
	baz=247						
NACB				S	**Sg**	**07 53 08.8**	**0.0**
	baz=247						
TWD	**Chiawan**	**0.20**	**224**	*e*P	**Pg**	**07 53 06.8**	**-0.3**
	baz=219						
TWD				*e*S	**Sg**	**07 53 10.2**	**+0.2**
	baz=219						
ENA	**Nanau**	**0.20**	**359**	P	**Pg**	**07 53 07.2**	**0.0**
	baz=3.0						
ENA				*e*S	**Sg**	**07 53 10.7**	**+0.4**
	baz=3.0						
EWUT	**Wuta**	**0.22**	**8**	*e*P	**Pg**	**07 53 07.4**	**-0.1**
	baz=10.0						
EWUT				S	**Sg**	**07 53 11.1**	**+0.3**
	baz=10.0						
ETLH	**Xiulin Townshi**	**0.24**	**266**	P	**Pg**	**07 53 07.8**	**0.0**
	baz=264						
ETLH				S	**Sg**	**07 53 11.8**	**+0.4**
	baz=264						
HWA	**Hwalien**	**0.28**	**208**	*e*P	**Pb**	**07 53 09.2**	**-0.2**
	baz=203						
ETM	**Tongmen**	**0.34**	**222**	*e*P	**Pg**	**07 53 09.5**	**-0.2**
	baz=220						
LATG	**Datong**	**0.37**	**327**	*i* P	**Pb**	**07 53 10.5**	**-0.7**
	baz=328						
TEYL	**Yanliau Villag**	**0.38**	**201**	*e*P	**Pb**	**07 53 10.9**	**-0.3**
	baz=200						
NNSB	**Datong**	**0.39**	**302**	P	**Pb**	**07 53 11.0**	**-0.5**
	baz=301						
NNSH	**Datong**	**0.39**	**302**	P	**Pb**	**07 53 10.9**	**-0.5**
	baz=301						
TWC	**Suao**	**0.40**	**14**	*e*P	**Pg**	**07 53 10.6**	**0.0**
	baz=16						
NNS	**Nan Shan**	**0.40**	**302**	*e*P	**Pb**	**07 53 11.2**	**-0.5**
	baz=302						
NDS	**Dongshan**	**0.41**	**356**	P	**Pb**	**07 53 11.1**	**-0.7**
	baz=357						
NDS				*e*S	**Sb**	**07 53 17.0**	**-0.9**
	baz=357						
WHF	**Hehuan Shan**	**0.45**	**260**	*i* P	**Pb**	**07 53 11.7**	**-0.9**
	baz=258						
WHF				*e*S	**Sb**	**07 53 18.2**	**-1.1**
	baz=258						
FUSS	**Fushou**	**0.46**	**273**	P	**Pb**	**07 53 12.2**	**-0.5**
	baz=272						
FUSS				*i* S	**Sb**	**07 53 19.3**	**-0.3**
	baz=272						
ESL	**Shilin**	**0.50**	**215**	*e*P	**Pg**	**07 53 12.2**	**-0.3**
	baz=212						
TWE	**Neicheng**	**0.50**	**352**	P	**Pb**	**07 53 12.9**	**-0.4**
	baz=354						
TWE				*e*S	**Sb**	**07 53 20.1**	**-0.4**
	baz=354						
TWT	**Tachien**	**0.52**	**273**	*e*P	**Pb**	**07 53 13.8**	**0.0**
	baz=272						
TWT				*e*S	**Sb**	**07 53 22.0**	**+0.8**
	baz=272						
TDCB	**Techi**	**0.54**	**273**	*e*P	**Pb**	**07 53 13.7**	**-0.3**
	baz=272						
TDCB				*i* S	**Sb**	**07 53 21.6**	**0.0**
	baz=272						
CHGB	**Renai**	**0.55**	**253**	*i* P	**Pb**	**07 53 13.8**	**-0.5**
	baz=251						
CHGB				*e*S	**Sb**	**07 53 21.5**	**-0.6**
	baz=251						
FUSB	**Fushanzhiwuyua**	**0.55**	**345**	*e*P	**Pb**	**07 53 14.1**	**-0.2**
	baz=345						
FUSB				*e*S	**Sb**	**07 53 21.8**	**-0.3**
	baz=345						
YHNB	**Yeheng**	**0.56**	**323**	*e*P	**Pb**	**07 53 14.4**	**+0.1**
	baz=323						
YHNB				S	**Sb**	**07 53 22.4**	**+0.2**
	baz=323						
NSK	**Sanguang**	**0.57**	**322**	*e*P	**Pb**	**07 53 14.5**	**-0.1**
	baz=322						
NSK				*i* S	**Sb**	**07 53 22.6**	**0.0**
	baz=322						
OWD	**Renai**	**0.58**	**243**	*i* P	**Pb**	**07 53 14.4**	**-0.5**
	baz=241						
NWLT	**Wulai**	**0.59**	**338**	*e*P	**Pb**	**07 53 14.8**	**-0.1**
	baz=338						
NWLT				*e*S	**Sb**	**07 53 22.8**	**-0.4**
	baz=338						
WUSB	**Renai**	**0.62**	**248**	P	**Pb**	**07 53 15.1**	**-0.3**
	baz=247						
WUSB				*e*S	**Sb**	**07 53 23.8**	**-0.3**
	baz=247						
EGFH	**Guangfu**	**0.62**	**208**	*e*P	**Pg**	**07 53 14.8**	**0.0**
	baz=206						
EGFH				*i* S	**Sb**	**07 53 24.7**	**+0.7**
	baz=206						
NTC	**Toucheng**	**0.63**	**7**	*e*P	**Pb**	**07 53 15.2**	**-0.4**
	baz=7.0						
EGS		**0.64**	**15**	*e*P	**Pb**	**07 53 15.8**	**+0.1**
	baz=17						
NFF	**Wufeng Townshi**	**0.70**	**306**	*e*P	**Pb**	**07 53 17.1**	**+0.3**
	baz=305						
VWDT	**VWDT**	**0.72**	**230**	*e*P	**Pb**	**07 53 16.9**	**-0.2**
	baz=228						
WHP	**Taichung City**	**0.73**	**274**	*e*P	**Pb**	**07 53 17.6**	**+0.3**
	baz=273						
TIPB	**Shuangxi**	**0.75**	**6**	*e*P	**Pb**	**07 53 17.5**	**-0.1**
	baz=6.0						
WPL	**Puli Township**	**0.75**	**254**	*e*P	**Pb**	**07 53 17.6**	**+0.1**
	baz=253						
NHDH	**Xindian Distri**	**0.76**	**345**	*e*P	**Pn**	**07 53 19.5**	**+0.4**
	baz=345						
TWA	**Mucha**	**0.77**	**349**	*e*P	**Pb**	**07 53 18.4**	**+0.6**
	baz=350						
DPDB	**Guoxing**	**0.77**	**256**	*e*P	**Pb**	**07 53 18.1**	**+0.1**
	baz=255						
DPDB				*e*S	**Sb**	**07 53 28.7**	**+0.4**
	baz=255						
WCS	**Beigang Elemen**	**0.78**	**258**	*e*P	**Pb**	**07 53 18.2**	**+0.2**
	baz=257						
WCS				*e*S	**Sb**	**07 53 29.1**	**+0.6**
	baz=257						
TATO	**Taipei**	**0.79**	**343**	*e*P	**Pb**	**07 53 18.6**	**+0.4**
	baz=343						
NSTT	**Nanjuang**	**0.79**	**301**	*e*P	**Pn**	**07 53 19.0**	**-0.4**
	baz=301						
TWB1	**Santiao Chiao**	**0.81**	**16**	*e*P	**Pn**	**07 53 19.6**	**-0.1**
	baz=17						
EHY	**Hungye**	**0.81**	**209**	*e*P	**Pg**	**07 53 18.2**	**-0.2**
	baz=207						
SSLB	**Suanglung**	**0.84**	**239**	*e*P	**Pb**	**07 53 19.1**	**-0.1**
	baz=238						
NWF	**Wu-fen Shan**	**0.84**	**2**	*e*P	**Pn**	**07 53 20.0**	**-0.3**
	baz=2.0						
NWF				*e*S	**Sb**	**07 53 30.8**	**+0.2**
	baz=2.0						
WFSB	**Wu-fen Shan**	**0.84**	**2**	*e*P	**Pn**	**07 53 20.0**	**-0.2**
	baz=2.0						
WFSB				*e*S	**Sb**	**07 53 30.7**	**+0.3**
	baz=2.0						
TYC	**Yuchr**	**0.87**	**249**	*e*P	**Pb**	**07 53 19.9**	**+0.2**
	baz=247						
TYC				*e*S	**Sb**	**07 53 31.7**	**+0.6**
	baz=247						
SXI1	**Grass Mountain**	**0.88**	**8**	*e*P	**Pb**	**07 53 20.0**	**+0.3**
	baz=8.0						
TNOU	**National Taiwa**	**0.92**	**2**	*e*P	**Pn**	**07 53 21.1**	**-0.2**
	baz=2.0						
YULB	**Yu-li**	**0.92**	**206**	*e*P	**Pg**	**07 53 20.0**	**-0.5**
	baz=205						
YM01	**YM01**	**0.93**	**350**	*e*P	**Pn**	**07 53 21.3**	**-0.2**
	baz=350						
EYUL	**Yuli**	**0.96**	**204**	*e*P	**Pn**	**07 53 21.9**	**+0.2**
	baz=203						
TWF1	**Yuli**	**0.96**	**205**	*e*P	**Pg**	**07 53 20.5**	**-0.7**
	baz=204						
YM08	**YM08**	**0.97**	**352**	*e*P	**Pb**	**07 53 21.5**	**+0.2**
	baz=352						
WJS	**Zhushan**	**1.01**	**247**	*e*P	**Pn**	**07 53 22.3**	**-0.2**
	baz=246						
YUS	**Yu-Shan**	**1.03**	**225**	*e*P	**Pb**	**07 53 22.6**	**0.0**
	baz=223						
YUS				*e*S	**Sb**	**07 53 37.1**	**+0.8**
	baz=223						
FULB	**Fuli**	**1.10**	**202**	*e*P	**Pb**	**07 53 23.6**	**0.0**
	baz=201						
ALS	**Alishan**	**1.12**	**231**	*e*P	**Pn**	**07 53 24.2**	**0.0**
	baz=229						
CHN5	**Tsauling**	**1.16**	**238**	*e*P	**Pn**	**07 53 25.3**	**+0.7**
	baz=237						
YOJ	**Yonaguni jima**	**1.18**	**78**	*e*P	**Pb**	**07 53 24.6**	**-0.2**
	baz=78						
YOJ	**Yonaguni jima**	**1.18**	**78**	*e*P	**Pb**	**07 53 24.5**	**-0.3**
YOJ				S	**Sn**	**07 53 41.0**	**+0.3**
WRL	**Guolierlin Hig**	**1.29**	**256**	*e*P	**Pb**	**07 53 26.7**	**-0.1**
	baz=255						
EDH	**Donghe**	**1.31**	**198**	*e*P	**Pn**	**07 53 25.9**	**-0.7**
	baz=197						
IRIF	**Iriomote-Funau**	**1.81**	**86**	*e*S	**Sn**	**07 53 57.4**	**+1.0**
JIJ	**Ishigaki jima**	**2.19**	**86**	*e*S	**Sn**	**07 54 05.7**	**-0.1**
JISG	**Ishigakijimahi**	**2.37**	**81**	S	**Sn**	**07 54 10.0**	**0.0**

*NEIC **23** 07:54:42.5±1.4, 16.°95S±0.°09×174.°09W±0.°10, h91km±7km, mb4.6/13, Error ellipse: s-maj=14.0km s-min=11.9km az=117.0*
*IDC **23** 07:54:44.0±3.0, 16.°87S×174.°28W, h101km±27km, mb3.8/6, mbtmp4.1/8, Error ellipse: s-maj=38.5km s-min=19.3km az=128.0*
ISC 23 07:54:44.9±0.6,**16.°91S**±0.°08×**174.°05W**±0.°09,**h124**km, **n29,σ1°40/30,mb4.3/13,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.70**	**37**	P	**Pn**	**07 55 40.6**	**-0.1**
	61nm,0.5s,baz=154,slow=2.1,SNR=12						
AFI				S	**Sn**	**07 56 19.9**	**-4.0**
	355nm,0.5s,baz=60,slow=18,SNR=21						
AFI	**Afiamalu**	**3.70**	**37**		**Pn**	**07 55 40.1**	**-0.6**
NIUE	**Niue**	**4.48**	**119**		**Pn**	**07 55 49.0**	**-2.0**
MSVF	**Nonsavu**	**7.59**	**263**		**Pn**	**07 56 29.7**	**-3.2**
DZM	**Mont Dzumac**	**19.09**	**251**	P	**P**	**07 58 57.6**	**-0.5**
	3.3nm,0.8s,baz=42,slow=15,SNR=3.2						
BKZ	**Black Stump Fm**	**23.66**	**199**	P	**P**	**07 59 46.1**	**+1.0**
BKZ				IAmb	IAmb	08 00 00.8	
	comp=Z,47nm,1.5s						
THZ	**Tophouse**	**27.19**	**202**	P	**P**	**08 00 16.4**	**-0.5**
ARMA	**Armidale**	**34.04**	**240**	P	**P**	**08 01 17.8**	**+0.3**
ARMA				IAmb	IAmb	08 01 33.7	
	comp=Z,17nm,1.5s						
STKA	**Stephens Creek**	**42.75**	**241**	P	**P**	**08 02 30.2**	**0.0**
	comp=Z,5.4nm,0.7s,baz=91,slow=9.6,SNR=7.3 comp=Z,5.4nm,0.7s						
STKA	**Stephens Creek**	**42.75**	**241**	IAmb	IAmb	08 02 31.8	
	comp=Z,4.0nm,1.1s						
WB0	**Warramunga Arr**	**48.87**	**258**	P	**P**	**08 03 17.2**	**-1.2**
WB0				IAmb	IAmb	08 03 54.1	
	comp=Z,7.6nm,1.3s						
WRA	**Warramunga Arr**	**48.91**	**258**	P	**P**	**08 03 18.0**	**-0.7**
	comp=Z,2.3nm,0.5s,baz=96,slow=7.1,SNR=49						
WRA				PcP	**PcP**	**08 04 42.0**	**+0.7**
	comp=Z,0.6nm,0.5s,baz=98,slow=3.3,SNR=3.2 comp=Z,2.3nm,0.5s						
WRA	**Warramunga Arr**	**48.91**	**258**	P	**P**	**08 03 17.6**	**-1.0**
AS31	**Alice Springs**	**49.06**	**253**	P	**P**	**08 03 19.4**	**-0.5**
AS31				IAmb	IAmb	08 03 20.5	
	comp=Z,7.3nm,0.6s						
ASAR	**Alice Springs**	**49.06**	**253**	P	**P**	**08 03 19.5**	**-0.4**
KNRA	**Kununurra**	**54.73**	**263**	P	**P**	**08 04 02.0**	**0.0**
KNRA				IAmb	IAmb	08 04 27.6	
	comp=Z,16nm,1.5s						
VNDA	**Vanda**	**61.82**	**186**	P	**P**	**08 04 52.0**	**+1.7**
	comp=Z,0.4nm,0.6s,baz=45,slow=2.9,SNR=3.7 comp=Z,0.4nm,0.6s						
PSA00	**Pilbara Seismi**	**62.18**	**254**	P	**P**	**08 04 53.1**	**-0.5**
MBWA	**Marble Bar**	**62.35**	**255**	P	**P**	**08 04 54.4**	**-0.4**
QSPA	**South Pole Qui**	**73.14**	**180**	P	**P**	**08 06 02.8**	**+1.0**
PETK	**Petropavlovsk-**	**73.87**	**343**	P	**P**	**08 06 07.8**	**+1.9**
	comp=Z,2.9nm,0.7s,baz=149,slow=5.9,SNR=4.6 comp=Z,2.9nm,0.7s						
PETK	**Petropavlovsk-**	**73.87**	**343**	P	**P**	**08 06 07.5**	**+1.6**
KSRS	**Korea Array**	**76.80**	**316**	P	**P**	**08 06 23.4**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=125,slow=6.4,SNR=4.9 comp=Z,1.0nm,0.7s						
WRH	**Wood River Hil**	**83.54**	**11**	P	**P**	**08 06 59.7**	**+1.1**
WRH				IAmb	IAmb	08 07 01.6	
	comp=Z,3.4nm,0.8s						
CCB	**Clear Creek Bu**	**83.75**	**11**	P	**P**	**08 07 00.9**	**+1.2**
CCB				IAmb	IAmb	08 07 01.8	
	comp=Z,3.0nm,1.0s						
ILAR	**Eielson Array**	**84.04**	**11**	P	**P**	**08 07 02.5**	**+1.3**
	comp=Z,0.7nm,0.7s,baz=229,slow=6.1,SNR=8.6 comp=Z,0.7nm,0.7s						
CLL	**Collm**	**145.22**	**352**	*i* PKPbc	**PKPab**	**08 14 08.9**	**+1.0**
BRTR	**Keskin Array B**	**146.90**	**319**	PKPbc	**PKPab**	**08 14 14.9**	**0.0**
	comp=Z,1.5nm,0.7s,baz=154,slow=2.6,SNR=5.4						
GERES	**GERESS Array B**	**147.53**	**350**	PKPbc	**PKPbc**	**08 14 15.4**	**+0.7**
	comp=Z,0.3nm,0.4s,baz=353,slow=4.1,SNR=1.8						

*THE **23** 08:12:32.8,38.°17N×20.°37E,h16km,ML3.0/5,Error ellipse: s-maj=1.4km s-min=0.7km az=243.0*
*ATH **23** 08:12:32.4,38.°14N×20.°33E,h17km±1km,ML3.4/2,Error ellipse: s-maj=2.9km s-min=1.1km az=55.0*
ISC 23 08:12:32.5±1.3,**38.°15N**±0.°05×**20.°34E**±0.°07,**h18**km±4km, **n29,σ0°55/44,Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEF3	**Kipouria, Keph**	**0.05**	**4**	P	**Pg**	**08 12 35.9**	**+0.1**
KEF3				S	**Sg**	**08 12 38.0**	**0.0**
LXRA	**Lixouri, Kepha**	**0.09**	**58**	P	**Pg**	**08 12 36.0**	**0.0**
LXRA				S	**Sg**	**08 12 38.5**	**+0.1**
DMLN	**Damoulianata-K**	**0.09**	**15**	P	**Pg**	**08 12 36.0**	**-0.2**
DMLN				S	**Sg**	**08 12 38.7**	**+0.1**
DMLN	**Damoulianata-K**	**0.09**	**15**	P	**Pg**	**08 12 35.9**	**-0.2**
DMLN				S	**Sg**	**08 12 38.5**	**0.0**
	16μm,0.5s						
KEF4	**Livadi, Kephal**	**0.12**	**31**	P	**Pg**	**08 12 36.2**	**-0.2**
KEF4				S	**Sb**	**08 12 39.0**	**+2.2**
PSDA	**Pessada-Kefalo**	**0.19**	**102**	P	**Pg**	**08 12 37.0**	**-0.3**
PSDA				S	**Sg**	**08 12 40.4**	**-0.2**
PSDA	**Pessada-Kefalo**	**0.19**	**102**	P	**Pg**	**08 12 37.0**	**-0.3**
PSDA				S	**Sg**	**08 12 40.1**	**-0.5**
VLS	**Valsamata**	**0.20**	**83**	P	**Pg**	**08 12 37.0**	**-0.4**
VLS				S	**Sg**	**08 12 40.4**	**-0.4**
VLS				AML	AML	08 12 40.5	
	comp=E,42869μm,0.1s						
VLS				AML	AML	08 12 40.6	
VLS	**Valsamata**	**0.20**	**83**	P	**Pg**	**08 12 37.0**	**-0.4**
VLS				S	**Sg**	**08 12 40.0**	**-0.7**
	comp=E,40μm,0.2s						
FSK	**Fiskardo**	**0.35**	**29**	P	**Pb**	**08 12 40.2**	**-0.1**
FSK				S	**Sb**	**08 12 45.6**	**+0.1**
FSK				AML	AML	08 12 49.2	
	comp=N,5834μm,0.7s						
FSK				AML	AML	08 12 49.3	
	comp=E,5269μm,0.2s						
FSK	**Fiskardo**	**0.35**	**29**	P	**Pg**	**08 12 39.7**	**-0.2**
FSK				S	**Sg**	**08 12 45.1**	**+0.2**
	comp=E,3μm,0.4s						
EVGI	**Lefkada island**	**0.53**	**28**	P	**Pg**	**08 12 42.7**	**-0.4**
EVGI	**Lefkada island**	**0.53**	**28**	P	**Pg**	**08 12 42.5**	**-0.6**
EVGI				S	**Sb**	**08 12 50.9**	**+0.5**
	comp=E,532nm,0.2s						
DRAG	**Dragano-Lefkad**	**0.56**	**19**	P	**Pg**	**08 12 43.0**	**-0.7**
DRAG				S	**Sb**	**08 12 51.9**	**+0.5**
DRAG	**Dragano-Lefkad**	**0.56**	**19**	P	**Pg**	**08 12 43.0**	**-0.7**
DRAG				S	**Sg**	**08 12 51.2**	**0.0**
NYDR	**Nydri-Lefkada**	**0.62**	**26**	P	**Pg**	**08 12 44.2**	**-0.6**
NYDR	**Nydri-Lefkada**	**0.62**	**26**	P	**Pg**	**08 12 44.1**	**-0.8**
LKD2	**Lefkada island**	**0.68**	**21**	P	**Pg**	**08 12 45.0**	**-0.9**
TSLK	**Tsoukalades, L**	**0.71**	**20**	P	**Pg**	**08 12 45.9**	**-0.6**
TSLK	**Tsoukalades, L**	**0.71**	**20**	P	**Pg**	**08 12 45.7**	**-0.8**
RLS	**Riolos of Patr**	**0.89**	**96**	P	**Pb**	**08 12 49.5**	**+0.1**
RLS	**Riolos of Patr**	**0.89**	**96**	P	**Pb**	**08 12 49.4**	**0.0**
RLS				S	**Sn**	**08 13 02.5**	**0.0**
	comp=E,2μm,0.5s						
PVO	**Paravola**	**1.04**	**63**	P	**Pb**	**08 12 52.0**	**+0.2**
EFP	**Efpalio**	**1.26**	**77**	P	**Pn**	**08 12 55.5**	**+0.3**
LAKA	**Lakka**	**1.29**	**86**	P	**Pn**	**08 12 55.9**	**+0.3**
ANX	**Ano Chora**	**1.31**	**70**	P	**Pb**	**08 12 56.7**	**0.0**
KLV	**Kalavryta, Ach**	**1.43**	**94**	P	**Pn**	**08 12 58.2**	**+0.6**
ITM	**Ithomi**	**1.59**	**127**	P	**Pb**	**08 13 00.8**	**-0.5**
KEK	**Kerkira**	**1.61**	**345**	P	**Pb**	**08 13 01.2**	**-0.5**

MAN 23 08:18:12.7,14.°91N×123.°66E,h102km,mb4.1,ML2.9, MS2.6,Luzon

IDC 23 08:35:25.2±2.5,**53.°71N×86.°87E,h0km,mbtmp3.1/2, ML2.5/2,Error ellipse: s-maj=23.2km s-min=14.0km az=69.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVINFRA**	**1.24**	**282**	*i*		08 43 00.0	
	baz=99,slow=312,SNR=1.8						
ZALV	**Zalesovo Beam**	**1.24**	**282**	Pg	Pg	08 35 48.0	-1.0
	1.4nm,0.3s,baz=98,slow=18,SNR=14						
ZALV				Lg	Lg	08 36 06.0	
	1.6nm,0.3s,baz=103,slow=26,SNR=14						
KURBB	**Kurchatov Arra**	**5.99**	**242**	Pn	Pn	08 36 55.8	+0.7
	0.1nm,0.3s,baz=59,slow=14,SNR=6.6						
KURBB				Lg	Lg	08 38 34.1	
	0.1nm,0.3s,baz=62,slow=30,SNR=3.1 1.8nm,0.8s						
MKAR	**Makanchi Array**	**7.51**	**205**	Pn	Pn	08 37 17.4	+1.4
	0.1nm,0.3s,baz=22,slow=11,SNR=7.5						
MKAR				Lg	Lg	08 39 21.6	
	0.1nm,0.3s,baz=18,slow=29,SNR=5.0 0.5nm,0.4s						

IDC 23 08:42:27.7±3.0,**53.°45N×87.°35E,h0km,mbtmp2.9/2, ML2.6/2,Error ellipse: s-maj=29.3km s-min=15.5km az=56.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVINFRA**	**1.58**	**289**	*i*		08 52 07.6	
	baz=108,slow=312,SNR=2.2						
ZALV	**Zalesovo Beam**	**1.58**	**289**	Pg	Pn	08 42 55.4	-1.6
	0.8nm,0.3s,baz=108,slow=18,SNR=8.5						
ZALV				Lg	Lg	08 43 18.2	
	1.0nm,0.3s,baz=111,slow=23,SNR=7.8						
KURBB	**Kurchatov Arra**	**6.13**	**246**	Pn	Pn	08 44 00.5	+1.0
	0.1nm,0.3s,baz=62,slow=14,SNR=2.7						
KURBB				Lg	Lg	08 45 42.5	
	baz=50,slow=26,SNR=2.9 0.4nm,0.3s						
MKAR	**Makanchi Array**	**7.41**	**208**	Pn	Pn	08 44 18.2	+1.2
	0.2nm,0.3s,baz=28,slow=15,SNR=10 0.2nm,0.3s						

*IDC **23** 08:46:07.3±2.8,53.°65N×88.°16E,h0km,mbtmp3.0/3, ML2.6/3,Error ellipse: s-maj=23.7km s-min=16.6km az=59.0*
*NNC **23** 08:46:08.7±2.5,53.°55N×87.°98E,h0km,mb3.1,mpv2.8, Error ellipse: s-maj=20.2km s-min=12.2km az=47.0, Suspected Mining explosion.*
ISC 23 08:46:08.5±3.8,**53.°7N**±0.°1×**88.°0E**±0.°2,**h0**km,**n8,σ1°03/12, 2C-7D,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVINFRA**	**1.89**	**278**	*i*		08 57 50.0	
	0.2nm,1.1s,baz=96,slow=314,SNR=2.6						
ZAA0	**Zalesovo Array**	**1.89**	**278**	⇑P	**Pn**	**08 46 41.7**	**-0.3**
	0.5nm,0.3s						
ZAA0				⇓S	**Sb**	**08 47 08.6**	**+0.7**
	6.3nm,0.8s						
ZALV	**Zalesovo Beam**	**1.89**	**278**	Pn	**Pn**	**08 46 42.0**	**0.0**
	3.3nm,0.3s,baz=101,slow=12,SNR=19						
ZALV				Lg	Lg	08 47 10.3	
	7.3nm,0.3s,baz=102,slow=30,SNR=21 6.6nm,0.3s						
KURK	**Kurchatov**	**6.49**	**246**	⇓Pn	**Pn**	**08 47 44.9**	**-0.3**
	2.5nm,1.4s						
KURK				⇓Sn	**Sn**	**08 48 59.5**	**-0.4**
	2.2nm,0.7s						
KURK				⇓Lg	Lg	08 49 32.2	
	7.2nm,0.9s						
KURBB	**Kurchatov Arra**	**6.58**	**246**	Pn	**Pn**	**08 47 46.5**	**0.0**
	0.1nm,0.3s,baz=60,slow=14,SNR=9.1						
KURBB				Sn	**Sn**	**08 49 04.2**	**+2.0**
	baz=354,slow=29,SNR=4.5						
KURBB				Lg	Lg	08 49 35.7	
	0.1nm,0.3s,baz=64,slow=32,SNR=7.6 1.1nm,0.5s						
KURBB	**Kurchatov Arra**	**6.58**	**246**	⇓Pn	**Pn**	**08 47 46.1**	**-0.4**
	1.0nm,0.4s						
KURBB				⇓Sn	**Sn**	**08 49 00.5**	**-1.8**
	6.8nm,0.7s						
KURBB				⇑Lg	Lg	08 49 34.1	
	5.4nm,0.6s						
MK31	**Makanchi Array**	**7.83**	**210**	Pn	**Pn**	**08 48 04.5**	**+0.9**
	0.1nm,0.2s,baz=30,slow=13,SNR=13						
MK31				⇓Lg	Lg	08 50 10.7	
	3.0nm,0.9s,baz=33,slow=31,SNR=3.6						
MKAR	**Makanchi Array**	**7.83**	**210**	Pn	**Pn**	**08 48 03.5**	**-0.1**
	0.2nm,0.3s,baz=26,slow=12,SNR=8.4						
MKAR				Sn	**Sn**	**08 49 32.1**	**-0.8**
	0.1nm,0.3s,baz=33,slow=23,SNR=4.0						
MKAR				Lg	Lg	08 50 13.8	
	0.2nm,0.3s,baz=29,slow=30,SNR=3.5 0.3nm,0.4s						

*IDC **23** 08:49:20.4±0.7,55.°47S×26.°67W,h0km,mb4.4/8, mbtmp4.3/9,ML3.6/1,MS3.9/15,Error ellipse: s-maj=25.2km s-min=

BELA IAmb IAmb 08 54 36.6
comp=Z,95nm,2.0s
MG02 Cerro Sombrero 24.73 258 P **P** **08 54 42.3 -0.8**
MG05 Puerto Natales 27.02 259 P **P** **08 55 02.4 -1.5**
MG05 IAmb IAmb 08 55 29.6
comp=Z,90nm,1.9s
GO09 Cerro Castillo 27.11 260 P **P** **08 55 02.7 -2.0**
TRQA Tornquist 29.32 292 P **P** **08 55 25.1 +0.6**
QSPA South Pole Qui 34.76 180 LR LR 09 09 59.2
comp=Z,239nm,19.9s,baz=196,slow=36
QSPA South Pole Qui 34.76 180 P **P** **08 56 12.1 0.0**
QSPA IAmb IAmb 08 56 49.4
comp=Z,19nm,1.4s
QSPA South Pole Qui 34.76 180 P **P** **08 56 12.2 +0.1**
CPUP Villa Florida 36.62 310 P **P** **08 56 27.7 -0.5**
comp=Z,4.3nm,1.0s,baz=149,slow=7.6,SNR=4.7
CPUP LR LR 09 13 04.5
comp=Z,170nm,18.0s,baz=156,slow=39
comp=Z,4.3nm,1.0s
CPUP Villa Florida 36.62 310 IAmb IAmb 08 56 28.6
comp=Z,21nm,1.6s
CPUP Villa Florida 36.62 310 P **P** **08 56 28.4 +0.2**
CPUP pP **pP** **08 56 35.1 -1.1**
CPUP sP **sP** **08 56 40.4 +0.9**
MT09 Talagante 37.36 287 P **P** **08 56 33.8 -0.8**
PEL Peldehue 37.68 288 P **P** **08 56 37.6 +0.4**
PEL pP **pP** **08 56 42.3 -2.9**
MT02 Curacav 37.83 287 P **P** **08 56 38.2 -0.2**
VA03 San Esteban 37.89 288 P **P** **08 56 40.2 +1.1**
VA03 IAmb IAmb 08 56 47.6
comp=Z,14nm,0.8s
SUR Sutherland 40.27 75 LR LR 09 09 59.8
comp=Z,126nm,18.6s,baz=206,slow=31
MAW Mawson 40.46 144 P **P** **08 57 00.7 +0.7**
comp=Z,2.5nm,0.9s,baz=248,slow=11,SNR=3.6
MAW LR LR 09 11 34.4
comp=Z,82nm,21.3s,baz=251,slow=33
comp=Z,2.5nm,0.9s
MAW Mawson 40.46 144 IAmb IAmb 08 57 02.8
comp=Z,4.7nm,1.6s
LCO Las Campanas 40.91 292 P **P** **08 57 05.0 +0.6**
LCO pP **sP** **08 57 14.8 -1.0**
LCO sP **pwP** **08 57 21.2 -0.6**
BDFB Brasilia 43.00 329 LR LR 09 12 43.8
comp=Z,180nm,19.1s,baz=149,slow=33
LVC Limon Verde 45.22 299 LR LR 09 19 27.4
comp=Z,106nm,18.5s,baz=241,slow=40
LVC Limon Verde 45.22 299 P **P** **08 57 40.4 +0.9**
LVC IAmb IAmb 08 57 42.7
comp=Z,12nm,0.7s
LVC Limon Verde 45.22 299 P **P** **08 57 40.7 +1.2**
LVC pP **pP** **08 57 47.8 +0.1**
LVC sP **sP** **08 57 53.5 +2.5**
BOSA Boshof 45.61 76 P **P** **08 57 41.9 -0.3**
comp=Z,2.9nm,1.0s,baz=187,slow=6.0,SNR=2.2
BOSA LR LR 09 13 44.3
comp=Z,174nm,18.2s,baz=191,slow=32
comp=Z,2.9nm,1.0s
SBA Scott Base 46.65 184 P **P** **08 57 52.2 +2.6**
SBA IAmb IAmb 08 58 03.9
comp=Z,41nm,1.9s
SBA Scott Base 46.65 184 P **P** **08 57 51.0 +1.4**
SBA pP **sP** **08 58 01.4 0.0**
SBA sP **pwP** **08 58 08.4 +1.8**
VNDA Vanda 47.14 183 P **P** **08 57 53.7 +0.3**
comp=Z,3.0nm,0.7s,baz=189,slow=5.7,SNR=34
VNDA LR LR 09 16 31.9
comp=Z,74nm,18.9s,baz=176,slow=35
comp=Z,3.0nm,0.7s
VNDA Vanda 47.14 183 P **P** **08 57 53.9 +0.4**
VNDA Vanda 47.14 183 P **P** **08 57 53.8 +0.3**
VNDA pP **pP** **08 58 01.1 -0.8**
VNDA sP **sP** **08 58 07.6 +2.4**
GO01 Chusmiza 47.85 301 P **P** **08 58 01.6 +1.3**
GO01 IAmb IAmb 08 58 02.4
comp=Z,11nm,0.9s
CCD Concordia, Ant 48.18 170 P **P** **08 58 01.6 -0.5**
H10N1 ASCENSION HYDR 48.52 16 T T 09 51 01.8
baz=189
H10N3 ASCENSION HYDR 48.52 16 T T 09 50 52.4
baz=189
H10N2 ASCENSION HYDR 48.54 16 T T 09 51 33.8
baz=189
LBTB Lobatse 48.63 73 P **P** **08 58 04.4 -1.3**
comp=Z,3.2nm,0.9s,baz=196,slow=7.0,SNR=2.9
comp=Z,3.2nm,0.9s
LBTB Lobatse 48.63 73 IAmb IAmb 08 58 07.1
comp=Z,44nm,1.9s
RCBR Riachuelo 50.06 348 LR LR 09 16 51.3
comp=Z,74nm,18.3s,baz=342,slow=33
LPAZ La Paz 50.25 304 P **P** **08 58 19.8 +1.0**
comp=Z,6.9nm,0.8s,baz=136,slow=6.3,SNR=30
LPAZ LR LR 09 18 27.8
comp=Z,92nm,21.8s,baz=223,slow=35
comp=Z,6.9nm,0.8s
LPAZ La Paz 50.25 304 P **P** **08 58 19.6 +0.9**
LPAZ IAmb IAmb 08 58 20.8
comp=Z,11nm,0.9s
LPAZ La Paz 50.25 304 P **P** **08 58 19.8 +1.0**
CASY Casey 54.35 160 P **P** **08 58 39.1 -8.8**
SAML Samuel 54.58 314 P **P** **08 58 50.2 +0.1**
SAML IAmb IAmb 08 58 51.3
comp=Z,5.7nm,1.1s
SAML Samuel 54.58 314 P **P** **08 58 50.4 +0.3**
SAML pP **pP** **08 58 59.4 +1.0**
SAML sP **pwP** **08 59 06.6 -1.1**
MDP Montagnes des 64.06 331 LR LR 09 28 33.0
comp=Z,154nm,18.1s,baz=178,slow=37
DBIC Dimbokro 64.56 24 P **P** **08 59 58.4 -0.4**
comp=Z,5.2nm,0.9s,baz=192,slow=5.7,SNR=2.3
comp=Z,5.2nm,0.9s
DBIC Dimbokro 64.56 24 P **P** **08 59 59.6 +0.7**
TOA0 Torodi Ar. Sit 72.46 29 P **P** **09 00 49.0 +0.9**
TOA0 IAmb IAmb 09 00 50.0
comp=Z,14nm,0.9s
TORD Torodi Ar. Bea 72.46 29 P **P** **09 00 48.9 +0.8**
comp=Z,10nm,0.8s,baz=199,slow=6.5,SNR=40
comp=Z,10nm,0.8s
TORD Torodi Ar. Bea 72.46 29 P **P** **09 00 48.9 +0.8**
TORD IAmb IAmb 09 00 49.9
comp=Z,11nm,0.9s
SDV Santo Domingo 73.78 315 LR LR 09 37 04.2
comp=Z,192nm,18.1s,baz=99,slow=39
RPZ Rata Peaks 80.01 193 LR LR 09 35 38.2
comp=Z,56nm,18.2s,baz=96,slow=35
FINES FINESS Array B 123.78 27 PKP **PKPdf** **09 08 17.6 -0.4**
comp=Z,0.9nm,0.8s,baz=197,slow=4.2,SNR=3.3
CMAR Chiang Mai Arr 125.04 110 PKP **PKiKP** **09 08 22.1 0.0**
comp=Z,3.3nm,0.3s,baz=212,slow=3.2,SNR=4.0
KSH Kashi 128.19 74 PKP **PKiKP** **09 08 27.8 -0.1**
PZH PanZhiHua 133.05 106 PKP **PKiKP** **09 08 37.4 -0.7**
YKA Yellowknife Ar 135.91 318 PKP **PKPdf** **09 08 40.3 -0.6**
comp=Z,0.6nm,0.7s,baz=119,slow=1.3,SNR=2.4
WMQ Urumqi 137.56 78 *e*PKP **PKiKP** **09 08 46.1 -0.5**
HYT Haines Junctio 144.63 308 P **PKPdf** **09 08 56.9 0.0**
baz=113,SNR=6.6
N30M Aishikik Lake 144.69 309 P PKPbc 09 08 56.3 +0.4
baz=113,SNR=9.1
M30M Minto, Yukon 144.99 311 P **PKPdf** **09 08 57.4 0.0**
baz=111,SNR=19
PNL Peninsula 145.04 305 P **PKPdf** **09 08 58.0 +0.5**
baz=114
YUK6 Outpost Mounta 145.07 308 P **PKPdf** **09 08 58.1 +0.3**
baz=113
YUK4 Talbot Arm 145.35 308 P **PKPab** **09 08 58.5 +0.1**
baz=112
INK Inuvik 145.52 321 PKPdf **PKPab** **09 08 59.0 +0.4**
INK Inuvik 145.52 321 P **PKPab** **09 08 58.5 -0.1**
baz=106
PCA Pinnacle 145.61 306 PKPdf **PKPab** **09 08 59.8 +0.5**
YUK8 Steele Glacier 145.83 308 P **PKPab** **09 09 00.1 -0.2**
baz=111
EPYK Eagle Plains 146.18 317 P **PKPab** **09 09 00.8 -0.4**
baz=106
YUK3 Moose Creek 146.31 308 P **PKPbc** **09 09 01.4 +0.2**
baz=110
MESA MESA 146.43 305 P **PKPbc** **09 09 01.3 -0.2**
baz=112
CTG Chitna Glacier 146.43 307 P **PKPbc** **09 09 01.6 +0.1**
baz=111
I29M Ogilvie Camp, 146.52 315 P **PKPbc** **09 09 01.8 +0.4**
baz=106
DAWY Dawson 146.59 313 P **PKPbc** **09 09 02.0 +0.2**
baz=108,SNR=13
BVCY Beaver Creek 146.70 309 P **PKPbc** **09 09 02.1 +0.1**
baz=109

M27K Edge Creek, AK 147.13 309 P **PKPbc** **09 09 03.3 -0.1**
baz=108
L27K Beaver Creek, 147.33 310 P **PKPbc** **09 09 03.6 -0.2**
baz=107
M26K Nabesna, AK 147.64 309 P **PKPbc** **09 09 04.7 0.0**
baz=108
K27K Chicken 147.71 312 P **PKPbc** **09 09 05.4 +0.6**
baz=106
BMRM Bremner River 147.93 306 P **PKPbc** **09 09 06.1 +0.5**
baz=109
L26K Log Cabin Wild 147.98 310 P **PKPbc** **09 09 05.6 0.0**
baz=106
N25K Chitina, Valde 148.12 307 P **PKPbc** **09 09 06.1 +0.1**
baz=108
EYAK Cordova Ski Ar 148.33 305 P **PKPbc** **09 09 06.9 +0.5**
baz=109
J26L Joseph Creek 148.46 312 P **PKPbc** **09 09 07.0 +0.2**
baz=104,SNR=7.9
I26K Coal Creek Min 148.47 314 P **PKPbc** **09 09 07.4 +0.7**
baz=103
SCRK Sand Creek 148.51 311 P **PKiKP** **09 09 08.0 -0.5**
baz=104,SNR=5.9
KLU Klutina 148.70 306 P **PKiKP** **09 09 08.5 -0.4**
baz=107,SNR=6.0
RIDG Independent Ri 148.82 311 P **PKiKP** **09 09 08.9 -0.2**
baz=104,SNR=16
PAX Paxson 148.90 309 P **PKPbc** **09 09 08.4 +0.4**
baz=105,SNR=5.8
M24K Tolsona, Glenn 148.98 307 P **PKPbc** **09 09 08.4 +0.2**
baz=106
GLI Glacier Island 149.06 305 P **PKiKP** **09 09 09.0 -0.6**
baz=107
HHC Hu-ho-hao-te 149.13 101 *e*PKPbc **PKPbc** **09 09 07.3 -2.0**
K24K Donnelly Dome 149.24 311 P **PKPbc** **09 09 09.1 +0.3**
baz=103
J25K Salcha River, 149.24 312 P **PKiKP** **09 09 09.7 -0.3**
baz=102
SCM Sheep Creek Mo 149.44 307 P **PKiKP** **09 09 10.3 -0.2**
baz=106
M23K Glacier View 149.61 306 P **PKiKP** **09 09 10.2 -0.5**
baz=105
DHY Denali Highway 149.77 309 P **PKiKP** **09 09 10.9 -0.3**
baz=104
WAT6 Susitna Watana 149.81 308 P **PKiKP** **09 09 11.2 -0.1**
baz=104,SNR=7.6
KNK Knik Glacier 149.84 305 P **PKiKP** **09 09 11.1 -0.1**
baz=106
HDA Harding Lake 149.87 312 P **PKiKP** **09 09 11.0 -0.2**
baz=102
SML Sawmill 149.89 306 P **PKiKP** **09 09 11.1 -0.1**
baz=105
ILAR Eielson Array 149.91 312 PKPbc **PKPbc** **09 09 10.7 +0.3**
comp=Z,7.1nm,1.0s,baz=126,slow=1.6,SNR=46
SEW Seward 149.95 303 P **PKiKP** **09 09 11.0 -0.4**
baz=107
RC01 Rabbit Creek A 150.35 304 P **PKiKP** **09 09 12.0 -0.2**
baz=105
SONM Songino Array 150.46 85 PKPbc **PKPbc** **09 09 12.3 0.0**
comp=Z,4.0nm,1.0s,baz=215,slow=1.9,SNR=16
SONM Songino Array 150.46 85 **PKPbc** **09 09 11.9 -0.4**
BRSE Bradley Lake S 150.46 302 P **PKiKP** **09 09 12.2 -0.3**
baz=107
H24K Noodor Dome 150.50 314 PKPdf **PKPdf** **09 09 07.4 +1.0**
H24K **PKiKP** **09 09 12.8 +0.3**
H24K Noodor Dome 150.50 314 P **PKiKP** **09 09 12.3 -0.2**
baz=98
MCK McKinley 150.59 310 P **PKiKP** **09 09 12.5 -0.2**
baz=101
M22K Willow 150.70 306 P **PKiKP** **09 09 13.1 +0.3**
baz=104
KDAK Kodiak Island 150.77 297 P **PKPbc** **09 09 12.4 -0.1**
baz=109
NEA2 Nenana 150.81 312 P **PKPbc** **09 09 12.5 0.0**
baz=100
HOM Homer 150.88 301 P **PKPbc** **09 09 12.5 -0.2**
baz=106
I23K Minto, Yukon-K 151.01 313 P **PKPbc** **09 09 13.0 +0.1**
baz=98
TRF Thorofare Moun 151.13 309 P **PKPbc** **09 09 13.6 +0.1**
baz=101
H23K Yukon River 151.18 314 P **PKiKP** **09 09 13.7 -0.2**
baz=97
SKT Skwentna 151.40 306 P **PKiKP** **09 09 14.6 +0.1**
baz=102
TOLK Toolik Lake Re 151.41 320 P **PKiKP** **09 09 14.6 +0.3**
baz=92
BPAW Bear Paw Mtn. 151.55 310 P **PKiKP** **09 09 14.4 -0.2**
baz=99
MLY Manley 151.58 312 P **PKiKP** **09 09 14.9 +0.2**
baz=98
D23K Nanushuk River 151.81 321 P **PKPbc** **09 09 14.7 0.0**
baz=90
CAST Castle Rocks 151.92 309 P **PKPbc** **09 09 15.0 -0.1**
baz=99
H22K Ishtalitna Cre 151.94 314 P **PKiKP** **09 09 15.3 -0.2**
baz=95
CHUM Lake Minchumin 152.10 310 P **PKPbc** **09 09 15.4 -0.1**
baz=98
I21K Tanana 152.12 312 P **PKiKP** **09 09 15.6 -0.1**
baz=96
M20K Styx River 152.12 305 P **PKiKP** **09 09 15.5 -0.2**
baz=102
H21K Melozitna Rive 152.50 313 P **PKiKP** **09 09 16.5 0.0**
baz=95
N19K Bonanza Creek 152.54 303 P **PKiKP** **09 09 16.8 -0.1**
baz=103
P18K Big Mountain, 152.56 300 P **PKPbc** **09 09 16.4 -0.3**
baz=105
L20K Farewell, AK 152.58 306 P **PKiKP** **09 09 16.7 -0.1**
baz=100
O18K Koktuh Hills 152.67 301 P **PKiKP** **09 09 17.0 -0.1**
baz=104
K20K Telida 152.80 308 P **PKiKP** **09 09 17.5 +0.3**
baz=98
J20K Nowinta River 152.93 310 P **PKiKP** **09 09 18.0 +0.5**
baz=96

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*JMA **23** 09:02:01.8±0.2, 30°N±1°×14°0E±°, h441km, MV3.7/44, NEAR TORISHIMA IS*
*IDC **23** 09:02:03.1±1.2, 29.77N×139.21E, h416km±17km, mb3.1/7, mbtmp4.0/11, Error ellipse: s-maj=48.6km s-min=17.2km az=71.0*
ISC 23 09:02:02.2±0.7, 29.71N±0.08×139.1E±0.1, h400km, n24, σ1§59/29, mb3.4/7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	3.45	10	P	**Pn**	**09 03 11.9**	**+2.8**
	90nm,0.3s,baz=88,slow=21,SNR=8.4						
JHJ				S	**S**	**09 04 03.4**	**0.0**
	82nm,0.3s,baz=87,slow=24,SNR=6.3						
CBIJ	**Chichi jima**	3.76	133	P	**Pn**	**09 03 13.0**	**+0.9**
CBIJ				*e*S	**S**	**09 04 08.7**	**-0.1**
JCJ	**Chichijima**	3.76	133	P	**Pn**	**09 03 13.0**	**+0.9**
	53nm,0.3s,baz=356,slow=18,SNR=46						
JCJ				S	**S**	**09 04 08.7**	**-0.1**
	132nm,0.4s,baz=294,slow=22,SNR=16						
JHH2	**Haha-jima-NKT2**	4.09	138	P	**Pn**	**09 03 16.1**	**+0.9**
JHH2				*e*S	**S**	**09 04 14.4**	**0.0**
JIE	**Ise**	5.09	337	P	**Pn**	**09 03 28.9**	**+3.9**
JKN2	**Miekihoku**	5.12	333	P	**Pn**	**09 03 28.5**	**+3.2**
BSO1	**Boso 1**	5.18	17	*e*P	**Pn**	**09 03 27.4**	**+2.0**
HMMJ	**Hamamatsu 2**	5.26	348	*e*P	**Pn**	**09 03 29.8**	**+2.9**
JOD2	**Odawara 2**	5.54	360	P	**Pn**	**09 03 31.2**	**+1.5**
JNY	**Yasuok**	5.73	350	P	**Pn**	**09 03 34.6**	**+2.7**
JHU	**Hanno**	6.13	1	P	**Pn**	**09 03 36.3**	**+0.2**
JRY	**Ryogami san**	6.29	359	P	**Pn**	**09 03 39.1**	**+1.2**
JAG	**Ashikaga**	6.70	2	P	**P**	**09 03 42.2**	**-0.9**
MJAR	**Matsushiro Arr**	6.86	354	P	**P**	**09 03 43.7**	**-1.0**
	4.8nm,0.4s,baz=172,slow=11,SNR=21						
JHO	**Hitachi**	6.99	10	P	**P**	**09 03 45.9**	**-0.4**
KSRS	**Korea Array**	12.10	313	P	**Pn**	**09 04 44.5**	**+0.2**
	1.2nm,0.4s,baz=125,slow=10,SNR=2.9						
ZALV	**Zalesovo Beam**	45.74	318	P	**P**	**09 09 44.1**	**-1.1**
	0.8nm,0.4s,baz=111,slow=7.9,SNR=2.5						
	0.8nm,0.4s						
MKAR	**Makanchi Array**	46.73	308	P	**P**	**09 09 52.6**	**-0.5**
	0.5nm,0.6s,baz=92,slow=7.8,SNR=2.4						
MKAR				PcP	**PcP**	**09 11 18.3**	**-0.7**
	0.2nm,0.3s,baz=92,slow=4.6,SNR=3.1						
	0.5nm,0.6s						
KURBB	**Kurchatov Arra**	49.28	313	P	**P**	**09 10 11.7**	**-0.5**
	0.8nm,0.5s,baz=96,slow=6.8,SNR=10.0						
	0.8nm,0.5s						
WRA	**Warramunga Arr**	49.58	186	P	**P**	**09 10 15.0**	**+0.2**
	0.3nm,0.2s,baz=4.0,slow=8.1,SNR=4.5						

0.3nm,0.2s
ARCES ARCESS Array B 70.18 340 P **P** **09 12 31.7 -0.8**
0.9nm,0.5s,baz=69,slow=7.9,SNR=9.9
0.9nm,0.5s
KBZ Khabaz 74.25 312 P **P** **09 12 56.7 0.0**
2.1nm,0.8s,baz=26,slow=1.5,SNR=4.0
2.1nm,0.8s
NB2 NORSAR Subarra 80.17 337 P **P** **09 13 28.3 -0.7**
comp=Z,0.4nm,0.5s,baz=47,slow=4.8
NOA NORSAR Array B 80.17 337 P **P** **09 13 28.3 -0.7**
comp=Z,0.8nm,0.7s,baz=46,slow=5.1,SNR=4.6
comp=Z,0.8nm,0.7s

IDC 23 09:05:09.1±3.0, 53.49N×87.66E, h0km, mbtmp3.0/2, ML2.6/2, Error ellipse: s-maj=27.2km s-min=15.5km az=58.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.75**	**286**	*I*		09 16 00.0	
	0.3nm,1.1s,baz=101,slow=312,SNR=9.0						
ZALV	**Zalesovo Beam**	1.75	286	Pg	Pn	09 05 40.6	0.0
	0.8nm,0.3s,baz=102,slow=15,SNR=10						
ZALV				Lg	Lg	09 06 04.9	
	1.0nm,0.3s,baz=107,slow=26,SNR=10						
KURBB	**Kurchatov Arra**	6.32	247	Pn	Pn	09 06 43.3	-0.1
	baz=61,slow=14,SNR=5.7						
KURBB				Lg	Lg	09 08 30.6	
	baz=63,slow=32,SNR=11						
	0.6nm,0.5s						
MKAR	**Makanchi Array**	7.54	209	Pn	Pn	09 07 02.0	+1.9
	0.2nm,0.3s,baz=29,slow=13,SNR=7.6						
MKAR				Lg	Lg	09 09 05.3	
	0.2nm,0.3s,baz=38,slow=32,SNR=9.0						
	0.4nm,0.3s						

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*IDC **23** 09:17:04.8±1.4, 17.04N×148.49E, h0km, mb3.9/10, mbtmp4.0/11, ML5.2/1, MS3.1/12, Error ellipse: s-maj=38.6km s-min=22.1km az=92.0*
*NEIC **23** 09:17:07.5±1.9, 17.03N±0.08×148.35E±0.08, h10km±1km, mb4.4/22, Error ellipse: s-maj=13.1km s-min=12.7km az=11.0*
ISC 23 09:17:11.1±0.8, 17.02N±0.06×148.0E±0.1, h35km, n43, σ1§90/32, mb4.3/21, MS2.9/11, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	4.56	222	Pn	**Pn**	**09 18 16.5**	**-1.0**
	7.8nm,0.3s,baz=280,slow=4.5,SNR=4.1						
GUMO				Sn	**Sn**	**09 19 06.3**	**-3.0**
	10nm,0.3s,baz=23,slow=21,SNR=6.1						
GUMO				LR	LR	09 20 22.4	
	comp=Z,184nm,19.1s,baz=66,slow=40						
JCJ	**Chichijima**	11.38	333	Pn	**Pn**	**09 19 49.7**	**-1.5**
	15nm,0.3s,baz=281,slow=22,SNR=9.3						
JCJ				Sn	**Sn**	**09 21 51.7**	**-5.5**
	2.3nm,0.3s,baz=290,slow=22,SNR=1.5						
	35nm,0.4s						
PATS	**Pohnpei**	14.28	134		Pn	09 20 22.8	-8.1
H11N1	**WAKE ISLAND Hy**	18.13	79	T	T	09 37 51.0	
	baz=265						
H11N2	**WAKE ISLAND Hy**	18.14	79	T	T	09 37 48.9	
	baz=265,slow=74						
H11N3	**WAKE ISLAND Hy**	18.15	79	T	T	09 37 52.2	
	baz=265,slow=74						
MJAR	**Matsushiro Arr**	21.30	338	P	**P**	**09 21 54.8**	**+0.1**
	2.2nm,0.6s,baz=160,slow=11,SNR=3.0						
	2.2nm,0.6s						
MAJO	**Matsushiro**	21.30	338	P	**P**	**09 21 55.2**	**+0.5**
MAJO				IAmb	IAmb	09 22 14.4	
	comp=Z,9.4nm,0.7s						
MJB9	**Matsu-Tunnel**	21.30	338	P	**P**	**09 21 55.4**	**+0.6**
MJB9				IAmb	IAmb	09 22 14.4	
	comp=Z,9.4nm,0.7s						
RABL	**Rabaul**	21.47	169	P	**P**	**09 21 55.4**	**-1.3**
JMM	**Marumori**	21.72	344	P	**P**	**09 22 01.0**	**+1.9**
JNU	**Nakatsue**	22.26	319	P	**P**	**09 22 08.0**	**+2.9**
JNU				IAmb	IAmb	09 22 35.6	
	comp=Z,18nm,1.0s						
DAV	**Davao City (W)**	24.03	248	LR	LR	09 29 57.4	
	comp=Z,43nm,21.1s,baz=138,slow=32						
YHNB	**Yeheng**	25.99	291	P	**P**	**09 22 40.8**	**-0.1**
SSLB	**Suanglung**	26.20	289	P	**P**	**09 22 43.1**	**+0.4**
SSLB				IAmb	IAmb	09 22 44.5	
	comp=Z,8.5nm,0.6s						
PMG	**Port Moresby**	26.27	182	LR	LR	09 32 01.1	
	comp=Z,70nm,20.3s,baz=68,slow=34						
TPUB	**Ta-pu**	26.42	288	P	**P**	**09 22 48.4**	**+3.7**
TPUB				IAmb	IAmb	09 23 30.0	
	comp=Z,14nm,1.1s						
KSRS	**Korea Array**	26.97	323	P	**P**	**09 22 50.6**	**+1.2**
	comp=Z,0.8nm,0.5s,baz=146,slow=9.0,SNR=5.3						
KSRS				LR	LR	09 32 44.2	
	comp=Z,32nm,21.5s,baz=130,slow=34						
	comp=Z,0.8nm,0.5s						
ASAJ	**Asahikawa**	27.40	352	LR	LR	09 32 56.7	
	comp=Z,16nm,20.6s,baz=158,slow=35						
KLR	**Kul'dur**	34.74	341	P	**P**	**09 23 57.4**	**-0.4**
	comp=Z,1.2nm,0.5s,baz=190,slow=1.8,SNR=4.2						
KLR				LR	LR	09 38 00.9	
	comp=Z,14nm,21.0s,baz=59,slow=36						
	comp=Z,1.2nm,0.5s						
PETK	**Petropavlovsk-**	36.81	10	LR	LR	09 37 32.2	
	comp=Z,40nm,21.1s,baz=170,slow=33						
WB0	**Warramunga Arr**	38.92	201	P	**P**	**09 24 33.5**	**-0.2**
WR0	**Warramunga Arr**	39.05	200	P	**P**	**09 24 34.8**	**0.0**
WRAB	**Tennant Creek**	39.09	201	P	**P**	**09 24 35.2**	**+0.1**
WRAB				IAmb	IAmb	09 24 47.2	
	comp=Z,12nm,1.3s						
WB2	**Warramunga Arr**	39.10	201	P	**P**	**09 24 35.7**	**+0.6**
WB2				IAmb	IAmb	09 24 48.3	
	comp=Z,13nm,1.4s						
WRA	**Warramunga Arr**	39.10	201	P	**P**	**09 24 35.3**	**+0.1**
	comp=Z,1.4nm,0.9s,baz=206,slow=9.8,SNR=29						
	comp=Z,1.4nm,0.9s						
MA2	**Magadan**	42.55	2	LR	LR	09 40 37.3	
	comp=Z,16nm,19.9s,baz=173,slow=33						
DZM	**Mont Dzumac**	42.84	154	LR	LR	09 42 30.3	
	comp=Z,103nm,18.1s,baz=354,slow=36						
SONM	**Songino Array**	45.82	321	P	**P**	**09 25 31.2**	**+1.5**
	comp=Z,1.2nm,0.7s,baz=129,slow=8.4,SNR=6.7						
SONM				LR	LR	09 46 20.6	
	comp=Z,23nm,18.1s,baz=62,slow=38						
	comp=Z,1.2nm,0.7s						
SONM	**Songino Array**	45.82	321	IAmb	IAmb	09 25 32.0	
	comp=Z,4.1nm,1.4s						
SEY	**Seymchan**	45.97	3	LR	LR	09 45 04.0	
	comp=Z,12nm,18.9s,baz=206,slow=37						
CMAR	**Chiang Mai Arr**	46.64	280	P	**P**	**09 25 38.7**	**+2.3**
	comp=Z,3.0nm,0.7s,baz=72,slow=6.3,SNR=15						
	comp=Z,3.0nm,0.7s						
ARMA	**Armidale**	47.29	176	P	**P**	**09 25 40.8**	**-0.5**
STKA	**Stephens Creek**	49.00	187	LR	LR	09 46 23.3	
	comp=Z,108nm,18.4s,baz=202,slow=36						
STKA	**Stephens Creek**	49.00	187	P	**P**	**09 25 54.8**	**+0.4**
ZALV	**Zalesovo Beam**	60.67	323	P	**P**	**09 27 19.4**	**+0.8**
	comp=Z,1.2nm,0.6s,baz=102,slow=8.8,SNR=5.3						
	comp=Z,1.2nm,0.6s						
MKAR	**Makanchi Array**	61.20	314	P	**P**	**09 27 25.1**	**+2.6**
	comp=Z,0.3nm,0.5s,baz=120,slow=8.5,SNR=1.6						
	comp=Z,0.3nm,0.5s						
I23K	**Minto, Yukon-K**	63.29	25	P	**P**	**09 27 33.3**	**-2.7**
I23K				IAmb	IAmb	09 27 50.5	
	comp=Z,4.8nm,1.4s						
MDM	**Murphy Dome**	63.69	25	P	**P**	**09 27 38.2**	**-0.5**
MDM				IAmb	IAmb	09 27 48.7	
	comp=Z,4.2nm,1.5s						
KURK	**Kurchatov**	63.98	319	P	**P**	**09 27 42.6**	**+1.8**
KURK				IAmb	IAmb	09 27 54.0	
	comp=Z,4.6nm,1.1s						
H24K	**Noodor Dome**	64.09	24	P	**P**	**09 27 40.9**	**-0.5**
H24K				IAmb	IAmb	09 27 55.5	
	comp=Z,1.9nm,1.0s						
ILAR	**Eielson Array**	64.19	26	P	**P**	**09 27 39.9**	**-2.1**
	comp=Z,0.5nm,0.8s,baz=251,slow=5.6,SNR=5.4						
	comp=Z,0.5nm,0.8s						
FINES	**FINESS Array B**	89.31	336	P	**P**	**09 30 02.9**	**-0.7**
	comp=Z,2.2nm,1.0s,baz=64,slow=9.4,SNR=2.8						
	comp=Z,2.2nm,1.0s						

IDC 23 09:26:01.4±1.6, 17.33S×179.90W, h628km±16km, mb2.7/6, mbtmp3.7/6, Error ellipse: s-maj=88.7km s-min=18.5km az=150.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.00**	**258**	P	P	09 27 18.3	-0.1
	68nm,0.7s,baz=98,slow=1.4,SNR=43						
STKA	**Stephens Creek**	**37.67**	**240**	P	P	09 32 25.4	-0.1
	1.3nm,0.4s,baz=91,slow=11,SNR=8.7						
	1.3nm,0.4s						
WRA	**Warramunga Arr**	**43.34**	**259**	P	P	09 33 10.6	+0.1
	0.8nm,0.5s,baz=97,slow=7.0,SNR=36						
	0.8nm,0.5s						
NVAR	**Mina Array Bea**	**80.00**	**45**	P	P	09 37 07.7	+0.2
	0.4nm,0.7s,baz=225,slow=11,SNR=4.4						
	0.4nm,0.7s						
ILAR	**Eielson Array**	**85.65**	**14**	P	P	09 37 34.5	-0.2
	0.1nm,0.5s,baz=232,slow=4.4,SNR=1.7						
	0.1nm,0.5s						
TXAR	**Lajitas Array**	**86.89**	**58**	P	P	09 37 41.9	+0.3
	0.5nm,0.9s,baz=224,slow=5.2,SNR=4.7						
	0.5nm,0.9s						
PDAR	**Pinedale Array**	**87.92**	**44**	P	P	09 37 45.9	-0.3
	0.3nm,0.8s,baz=177,slow=5.9,SNR=3.7						
	0.3nm,0.8s						

IDC ***23*** *09:59:26.5±0.9, 33˚.98N×25˚.11E, h0km, mb4.2/18, mbtmp4.1/26, ML4.0/7, MS3.4/13, Error ellipse: s-maj=17.9km s-min=13.5km az=177.0*
ISK ***23*** *09:59:27.6, 33˚.98N×25˚.20E, h5km, ML3.9/23*
THE ***23*** *09:59:30.4, 33˚.90N×25˚.06E, h5km±2km, ML3.3/7, Error ellipse: s-maj=3.8km s-min=1.4km az=182.0*
HLW ***23*** *09:59:30.1, 34˚.02N×25˚.19E, h30km±26km, Md4.3*
MOS ***23*** *09:59:31.6±1.2, 34˚.03N×25˚.01E, h46km, mb4.5/16, Error ellipse: s-maj=7.8km s-min=4.6km az=82.8*
NEIC ***23*** *09:59:31.5±2.2, 33˚.93N±0˚.08×25˚.10E±0˚.07, h34km±7km, mb4.2/18, ML3.8(ISK), Error ellipse: s-maj=11.7km s-min=8.2km az=182.0*
GII ***23*** *09:59:38.1±0.0, 33˚.51N×25˚.89E, h10km, mb4.3/4, MD4.1/4, Mm4.1/3*

ISC 23 09:59:30.8±1.0, 33˚.83N±0˚.04×25˚.23E±0˚.04, h34km±2km, n200, σ1§65/219, mb4.2/28, MS3.2/9, 6C-3D, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**1.23**	**344**	P	**Pn**	**09 59 51.3**	**-0.4**
TMBK	**Timbaki Herakl**	**1.30**	**343**	P	**Pn**	**09 59 52.0**	**-0.5**
TMBK				S	**Sn**	**10 00 09.8**	**+1.1**
	1μm,1.1s						
GVD	**Gavdhos**	**1.38**	**317**	P	**Pn**	**09 59 52.5**	**-1.2**
GVD				S	**Sn**	**10 00 10.8**	**+0.1**
	2μm,0.7s						
GVD	**Gavdhos**	**1.38**	**317**	PN	**Pn**	**09 59 52.7**	**-1.0**
GVD				SN	**Sn**	**10 00 11.2**	**+0.5**
GVDS	**Gavdos**	**1.38**	**317**	P	**Pn**	**09 59 52.8**	**-0.9**
GVDS				S	**Sn**	**10 00 10.6**	**-0.2**
	1μm,0.9s						
NPS	**Neapolis**	**1.47**	**12**	P	**Pn**	**09 59 55.8**	**+0.9**
NPS				S	**Sn**	**10 00 14.5**	**+1.6**
KSTL	**Kastelli Herak**	**1.48**	**355**	P	**Pn**	**09 59 55.0**	**0.0**
HRKL	**Herakleio**	**1.48**	**356**	PN	**Pn**	**09 59 54.1**	**-1.0**
IDI	**Anoyia**	**1.48**	**349**	Pn	**Pn**	**09 59 54.5**	**-0.6**
	8.8nm,0.3s,baz=174,slow=14,SNR=40						
IDI	**Anoyia**	**1.48**	**349**	P	**Pn**	**09 59 54.5**	**-0.6**
IDI				S	**Sn**	**10 00 13.4**	**+0.1**
	668nm,0.6s						
IDI	**Anoyia**	**1.48**	**349**	PN	**Pn**	**09 59 54.1**	**-1.0**
IDI	**Anoyia**	**1.48**	**349**	Pn	**Pn**	**09 59 54.7**	**-0.4**
ZKR	**Zakros**	**1.52**	**32**	P	**Pn**	**09 59 56.7**	**+1.1**
ZKR				S	**Sb**	**10 00 18.4**	**+0.9**
	1μm,1.1s						
ZKR	**Zakros**	**1.52**	**32**	PN	**Pn**	**09 59 56.1**	**+0.5**
PRNS	**Prines Rethymn**	**1.65**	**339**	P	**Pn**	**09 59 56.4**	**-0.9**
PRNS				S	**Sn**	**10 00 17.2**	**0.0**
	512nm,1.0s						
KNDR	**Palaiochora Ch**	**1.89**	**318**	PN	**Pn**	**10 00 01.2**	**+0.5**
KNDR				SN	**Sn**	**10 00 25.8**	**+2.5**
IMMV	**Iera Moni Meta**	**1.93**	**328**	P	**Pn**	**10 00 00.4**	**-0.8**
IMMV				S	**Sn**	**10 00 24.7**	**+0.5**
	1μm,1.4s						
IMMV	**Iera Moni Meta**	**1.93**	**328**	PN	**Pn**	**10 00 00.8**	**-0.4**
SLUM	**Salum**	**2.33**	**180**	P	**Pn**	**10 00 08.9**	**+2.2**
	baz=179						
SLUM				S	**Sn**	**10 00 36.3**	**+2.1**
	baz=179						
KARP	**Karpathos**	**2.34**	**42**	P	**Pn**	**10 00 09.1**	**+2.2**
KARP				S	**Sb**	**10 00 39.0**	**-1.9**
KARP	**Karpathos**	**2.34**	**42**	PN	**Pn**	**10 00 07.2**	**+0.3**
KARP				SN	**Sn**	**10 00 36.9**	**+2.4**
KARP	**Karpathos**	**2.34**	**42**	Pn	**Pn**	**10 00 09.1**	**+2.2**
SANT	**Santorini**	**2.54**	**4**	PN	**Pn**	**10 00 09.6**	**-0.1**
SANT	**Santorini**	**2.54**	**4**	Pn	**Pn**	**10 00 09.5**	**-0.2**
ANKY	**Antikythira Is**	**2.58**	**323**	P	**Pn**	**10 00 10.7**	**+0.6**
THR8	**Santorini-Mono**	**2.58**	**5**	P	**Pn**	**10 00 09.8**	**-0.3**
NIS1	**Nisyros Isl.**	**3.20**	**29**	PN	**Pn**	**10 00 19.2**	**+0.6**
APE	**Apeiranthos**	**3.24**	**4**	PN	**Pn**	**10 00 19.5**	**+0.2**
APE	**Apeiranthos**	**3.24**	**4**	*i* P	**Pn**	**10 00 19.3**	**0.0**
KOSK	**Kos Island**	**3.25**	**26**	PN	**Pn**	**10 00 19.8**	**+0.5**
ARG	**Arkhangelos**	**3.37**	**44**	P	**Pn**	**10 00 23.3**	**+2.3**
ARG	**Arkhangelos**	**3.37**	**44**	PN	**Pn**	**10 00 22.0**	**+1.0**
ARG	**Arkhangelos**	**3.37**	**44**		**Pn**	**10 00 22.7**	**+1.7**
ARG	**Arkhangelos**	**3.37**	**44**	P	**Pn**	**10 00 22.7**	**+1.7**
BODT	**Bodrum**	**3.65**	**27**	PN	**Pn**	**10 00 25.5**	**+0.7**
TURN	**Turunc**	**3.84**	**39**	PN	**Pn**	**10 00 28.6**	**+1.2**
MLSB	**Milas**	**4.04**	**30**	PN	**Pn**	**10 00 31.2**	**+1.0**
DALY	**Dalyan (Mula)**	**4.09**	**42**	PN	**Pn**	**10 00 32.4**	**+1.5**
YER	**Yerkesik**	**4.13**	**36**	PN	**Pn**	**10 00 32.8**	**+1.2**
YER	**Yerkesik**	**4.13**	**36**	P	**Pn**	**10 00 32.7**	**+1.2**
FETY	**Fethiye**	**4.22**	**47**	PN	**Pn**	**10 00 34.4**	**+1.7**
ITM	**Ithomi**	**4.29**	**322**	Pn	**Pn**	**10 00 33.1**	**-0.6**
AKAS	**Kas**	**4.32**	**55**	PN	**Pn**	**10 00 35.9**	**+1.7**
AKAS	**Kas**	**4.32**	**55**		**Pn**	**10 00 35.2**	**+1.1**
DEMR	**Demre-Antalya**	**4.53**	**57**	PN	**Pn**	**10 00 39.0**	**+2.1**
CAME	**Cameli-Denizli**	**4.55**	**46**	PN	**Pn**	**10 00 39.1**	**+1.7**
SWA2		**4.58**	**177**	P	**Pn**	**10 00 39.5**	**+1.9**
	baz=177						
SWA2				S	**Sn**	**10 01 31.4**	**+1.9**
	baz=177						
URLA	**Izmir**	**4.66**	**13**	PN	**Pn**	**10 00 38.8**	**+0.1**
ELL	**Elmali**	**4.81**	**51**	PN	**Pn**	**10 00 42.9**	**+2.0**
ELL	**Elmali**	**4.81**	**51**	Pn	**Pn**	**10 00 43.2**	**+2.3**
ELL	**Elmali**	**4.81**	**51**	P	**Pn**	**10 00 43.2**	**+2.3**
APMY	**Acipayam-Deniz**	**4.92**	**41**	PN	**Pn**	**10 00 44.1**	**+1.7**
KORT	**Korkueli**	**5.25**	**51**	PN	**Pn**	**10 00 48.9**	**+2.0**
KULA	**Kula-Manisa**	**5.44**	**30**	PN	**Pn**	**10 00 50.6**	**+1.1**
SUTC	**Sutluce-Ispart**	**5.94**	**51**	PN	**Pn**	**10 00 58.9**	**+2.4**
HNAT	**Natroun**	**6.21**	**131**	P	**Pn**	**10 01 02.8**	**+2.8**
	baz=132						
HMYD	**Mayadein**	**6.22**	**129**	P	**Pn**	**10 01 02.2**	**+2.1**
	baz=129						
RYAN	**Fayoum**	**6.40**	**136**	P	**Pn**	**10 01 05.2**	**+2.5**
	baz=137						
RYAN				S	**Sn**	**10 02 12.7**	**-1.9**
	baz=137						
TVSB	**Tavsanli**	**6.56**	**30**	PN	**Pn**	**10 01 06.9**	**+1.9**
LIT	**Litokhoron**	**6.63**	**342**	Pn	**Pn**	**10 01 06.0**	**+0.1**
LIT	**Litokhoron**	**6.63**	**342**	P	**Pn**	**10 01 06.0**	**+0.1**
CSS	**Mathiatis**	**6.79**	**78**	Pn	**Pn**	**10 01 09.2**	**+1.1**
KOT	**Kottamia**	**6.83**	**123**	P	**Pn**	**10 01 11.1**	**+2.5**
	baz=124						
HSAF	**As Saff**	**6.83**	**126**	P	**Pn**	**10 01 10.7**	**+2.1**
	baz=127						
GLL	**Jalalah**	**6.96**	**126**	P	**Pn**	**10 01 12.0**	**+1.6**
	baz=126						
HFRF	**Wahat Farafira**	**7.17**	**157**	P	**Pn**	**10 01 14.9**	**+1.7**
	baz=157						
KEK	**Kerkira**	**7.31**	**325**	Pn	**Pn**	**10 01 14.0**	**-1.1**
FNA	**Florina**	**7.59**	**337**		**Pn**	**10 01 18.0**	**-1.0**
FNA	**Florina**	**7.59**	**337**	P	**Pn**	**10 01 18.0**	**-1.0**
TAMRE	**El Minia**	**7.84**	**140**	P	**Pn**	**10 01 24.7**	**+2.2**
	baz=140						
SCTE	**Santa Cesarea**	**8.25**	**321**	Pn	**Pn**	**10 01 25.0**	**-3.0**
KZIT	**Kziot**	**8.29**	**108**	Pn	**Pn**	**10 01 30.0**	**+1.4**
KZIT				Sn	**Sn**	**10 02 56.9**	**-4.0**
GRB	**Gharib**	**8.53**	**128**	P	**Pn**	**10 01 33.8**	**+1.9**
	baz=129						
MMA0B	**Mount Meron ar**	**8.55**	**93**	Pn	**Pn**	**10 01 33.6**	**+1.4**
MMA0B				Sn	**Sn**	**10 03 05.6**	**-1.8**
MMAI	**Mount Meron Ar**	**8.55**	**93**	Pn	**Pn**	**10 01 32.1**	**-0.1**
	6.0nm,0.3s,baz=259,slow=14,SNR=7.9						
MMAI				Sn	**Sn**	**10 03 05.1**	**-2.3**
	12nm,0.3s,baz=249,slow=26,SNR=3.7						
	2.7nm,0.3s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIP	**Timpagrande**	**8.66**	**310**	Pn	**Pn**	**10 01 31.4**	**-2.3**
MMLI	**Mount Malkishu**	**8.66**	**96**	Pn	**Pn**	**10 01 35.5**	**+1.8**
MMLI				Sn	**Sn**	**10 03 06.6**	**-3.6**
GEM	**Giv'at Ha'Em**	**8.74**	**91**	Pn	**Pn**	**10 01 36.5**	**+1.8**
HMDT	**Nahal Hemdat**	**8.79**	**97**	Pn	**Pn**	**10 01 37.2**	**+1.8**
HMDT				Sn	**Sn**	**10 03 10.6**	**-2.7**
NATI	**Neve Ativ**	**8.79**	**91**	Pn	**Pn**	**10 01 37.1**	**+1.6**
NATI				Sn	**Sn**	**10 03 11.4**	**-1.9**
DSI	**Dead Sea**	**8.85**	**102**	Pn	**Pn**	**10 01 38.2**	**+1.9**
DSI				Sn	**Sn**	**10 03 10.6**	**-4.1**
KRMI	**Paran Flat**	**8.88**	**112**	Pn	**Pn**	**10 01 37.5**	**+0.8**
KRMI				Sn	**Sn**	**10 03 11.6**	**-3.9**
MSBI	**Mazada**	**8.91**	**104**	Pn	**Pn**	**10 01 38.8**	**+1.7**
MSBI				Sn	**Sn**	**10 03 13.4**	**-2.8**
BR131	**Keskin Array S**	**8.95**	**46**	*i* P	**Pn**	**10 01 41.7**	**+3.9**
BRTR	**Keskin Array B**	**8.95**	**46**	Pn	**Pn**	**10 01 40.0**	**+2.2**
	0.2nm,0.3s,baz=220,slow=14,SNR=8.2						
BRTR				Sn	**Sn**	**10 03 17.1**	**-0.3**
	0.3nm,0.3s,baz=274,slow=14,SNR=1.3						
BRTR				LR	LR	10 06 12.5	
	comp=Z,409nm,19.9s,baz=232,slow=46						
	1.7nm,0.6s						
BRTR	**Keskin Array B**	**8.95**	**46**		**Pn**	**10 01 38.4**	**+0.6**
PRNI	**Paran**	**8.99**	**110**	Pn	**Pn**	**10 01 39.8**	**+1.6**
PRNI				Sn	**Sn**	**10 03 14.4**	**-3.9**
ZFRI	**Zfri**	**9.04**	**108**	Pn	**Pn**	**10 01 39.9**	**+1.9**
ZFRI				Sn	Sn	10 03 13.4	-6.1
GHAJ	**Ghor Haditha**	**9.08**	**103**	Pn	**Pn**	**10 01 41.6**	**+2.2**
GHAJ	**Ghor Haditha**	**9.08**	**103**	Pn	**Pn**	**10 01 41.3**	**+1.9**
HRFI	**Mount Harif**	**9.15**	**112**	Pn	**Pn**	**10 01 42.2**	**+1.7**
HRFI				Sn	**Sn**	**10 03 18.7**	**-3.6**
EIL	**Elat**	**9.26**	**114**	Pn	**Pn**	**10 01 42.9**	**+1.0**
	2.5nm,0.3s,baz=345,slow=2.1,SNR=26						
EIL				Sn	**Sn**	**10 03 22.6**	**-2.2**
	7.5nm,0.3s,baz=171,slow=6.1,SNR=7.3						
	8.5nm,0.4s						
EIL	**Elat**	**9.26**	**114**	Pn	**Pn**	**10 01 43.6**	**+1.7**
EIL				Sn	**Sn**	**10 03 20.2**	**-4.6**
CUC	**Castrocucco**	**9.72**	**312**		**Pn**	**10 01 47.2**	**-1.1**
HHRG	**Al Ghardaqah**	**9.75**	**130**	P	**Pn**	**10 01 53.0**	**+4.4**
	baz=131						
BNN	**Bunyan**	**9.92**	**57**		**Pn**	**10 01 53.0**	**+1.9**
ASF	**Jabal al Asfar**	**9.94**	**96**	Pn	**Pn**	**10 01 51.5**	**+0.2**
	0.5nm,0.3s,baz=268,slow=8.4,SNR=3.1						
ASF				Sn	**Sn**	**10 03 39.8**	**-1.9**
	2.4nm,0.3s,baz=3.8,slow=23,SNR=6.3						
	1.2nm,0.4s						
SGRT	**San Giovanni R**	**10.90**	**319**	Pn	**Pn**	**10 02 01.2**	**-3.1**
MLR	**Muntele Rosu**	**11.66**	**3**	LR	LR	10 07 44.9	
	comp=Z,350nm,18.4s,baz=170,slow=43						
NRCA	**Norcia**	**13.07**	**317**		**Pn**	**10 02 32.2**	**-1.9**
SOKA	**Soboth**	**14.99**	**332**	*e*P	**P**	**10 03 04.6**	**-0.7**
	5.6nm,1.1s						
RONA	**Rosalia, Austr**	**15.40**	**337**	*e*Pn	**Pn**	**10 03 05.5**	**-0.1**
	4.2nm,1.2s						
CONA	**Conrad Observa**	**15.75**	**336**	*e*Pn	**P**	**10 03 12.8**	**-0.8**
	5.8nm,1.1s						
ABTA	**Abfaltersbach**	**16.11**	**327**	*e*Pn	**Pn**	**10 03 13.3**	**-1.4**
	1.8nm,0.5s						
KRUC	**Moravsky**	**16.58**	**339**	*e*P	**Pn**	**10 03 21.2**	**+0.7**
VRAC	**Vranov**	**16.74**	**340**	Pn	**Pn**	**10 03 21.7**	**-0.9**
	10nm,0.9s,baz=154,slow=10.0,SNR=4.7						
VRAC	**Vranov**	**16.74**	**340**	*e*P	**Pn**	**10 03 22.8**	**+0.2**
ONI	**Oni**	**16.76**	**53**	P	**P**	**10 03 24.8**	**0.0**
ONI	**Oni**	**16.76**	**53**	P	**P**	**10 03 24.8**	**0.0**
ONI				pmax	pmax		
	comp=Z,14nm,1.3s						
SHA1	**Shidzhatmaz**	**16.78**	**49**	*i* P	**P**	**10 03 25.9**	**+0.7**
GNI	**Garni**	**16.81**	**62**	LR	LR	10 11 34.3	
	comp=Z,137nm,18.5s,baz=268,slow=43						
GNI	**Garni**	**16.81**	**62**	*ce*P	**P**	**10 03 27.5**	**+2.0**
GNI				pmax	pmax		
	comp=Z,7.0nm,0.7s						
WTTA	**Wattenberg**	**16.90**	**327**	*e*Pn	**Pn**	**10 03 23.6**	**-1.2**
	comp=Z,2.0nm,0.5s						
KIV	**Kislovodsk**	**16.91**	**48**	*e*P	**P**	**10 03 28.0**	**+1.5**
KIV				pmax	pmax		
	comp=Z,13nm,1.0s						
KIV				MLR	MLR		
	comp=Z,37nm,14.0s						
KBZ	**Khabaz**	**16.93**	**49**	Pn	**P**	**10 03 26.9**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=272,slow=8.1,SNR=11						
	comp=Z,8.6nm,1.0s						
CKRC	**Cesky Krumlov**	**17.05**	**335**	*e*P	**Pn**	**10 03 27.5**	**+1.1**
CKRC				*ex*	x	10 03 40.3	
AKASG	**Malin Array Be**	**17.11**	**9**	Pn	**Pn**	**10 03 25.2**	**-2.0**
	comp=Z,1.7nm,0.3s,baz=202,slow=10,SNR=21						
AKASG				LR	LR	10 10 49.4	
	comp=Z,104nm,18.4s,baz=224,slow=40						
	comp=Z,0.9nm,0.5s						
AKBB	**Malin Array Si**	**17.11**	**9**	*ce*P	**Pn**	**10 03 26.8**	**-0.4**
ZEI	**Tsey**	**17.14**	**53**	*e*P	**P**	**10 03 30.9**	**+1.7**
ZEI				pmax	pmax		
	comp=Z,12nm,1.0s						
FETA	**Feichten**	**17.15**	**324**	*e*Pn	**Pn**	**10 03 28.0**	**+0.1**
	comp=Z,2.6nm,1.0s						
GEC2	**GERESS Array S**	**17.29**	**334**	P	**Pn**	**10 03 30.3**	**+0.8**
GEC2				IAmb	IAmb	10 03 47.3	
	comp=Z,18nm,1.1s						
GERES	**GERESS Array B**	**17.29**	**334**	P	**Pn**	**10 03 28.6**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=146,slow=12,SNR=36						
	comp=Z,7.4nm,0.8s						
GERES	**GERESS Array B**	**17.29**	**334**	P	**Pn**	**10 03 29.1**	**-0.4**
GERES	**GERESS Array B**	**17.29**	**334**	P	**Pn**	**10 03 29.1**	**-0.4**
KRLC	**Kraliky**	**17.39**	**342**	*e*P	**Pn**	**10 03 30.1**	**-0.6**
KRLC	**Kraliky**	**17.39**	**342**	*e*P	**Pn**	**10 03 30.1**	**-0.6**
DAVOX	**Davos/Dischmat**	**17.41**	**323**	LR	LR	10 13 32.5	
	comp=Z,54nm,18.2s,baz=93,slow=49						
ISO	**Isola**	**17.47**	**312**	P	**Pn**	**10 03 30.3**	**-1.5**
TUE	**Stuetta**	**17.48**	**321**	P	**Pn**	**10 03 33.0**	**+0.1**
KHC	**Kasperske Hory**	**17.57**	**334**	P	**Pn**	**10 03 32.3**	**-0.6**
KHC				IAmb	IAmb	10 03 34.3	
	comp=Z,13nm,1.0s						
KHC	**Kasperske Hory**	**17.57**	**334**	*e*P	**Pn**	**10 03 33.3**	**+0.4**
KHC	**Kasperske Hory**	**17.57**	**334**	*e*P	**Pn**	**10 03 33.3**	**+0.4**
KHC				*ex*	x	10 03 46.7	
DAVA	**Damuels**	**17.75**	**324**	*e*Pn	**Pn**	**10 03 34.6**	**-0.7**
	comp=Z,7.5nm,1.4s						
DPC	**Dobruska-Polom**	**17.76**	**341**	*e*P	**Pn**	**10 03 35.1**	**-0.2**
DPC	**Dobruska-Polom**	**17.76**	**341**	*e*P	**Pn**	**10 03 35.1**	**-0.2**
PRU	**Pruhonice**	**17.97**	**337**	*e*P	**Pn**	**10 03 37.1**	**-0.7**
PRU	**Pruhonice**	**17.97**	**337**	*e*P	**Pn**	**10 03 37.1**	**-0.7**
GRA1	**Grafenberg Arr**	**18.93**	**331**	P	**P**	**10 03 46.1**	**-2.6**
GRA1				IAmb	IAmb	10 04 06.6	
	comp=Z,28nm,1.1s						
GRF	**Grafenberg Arr**	**18.93**	**331**	P	**P**	**10 03 46.1**	**-2.6**
GRF				pmax	pmax		
	comp=Z,28nm,1.1s						
GRFO	**Grafenberg**	**18.93**	**331**	P	**P**	**10 03 46.6**	**-2.0**
GRFO	**Grafenberg**	**18.93**	**331**	P	**P**	**10 03 46.6**	**-2.0**
GRFO				pmax	pmax		
	comp=Z,30nm,1.1s						
CLL	**Collm**	**19.61**	**337**	P	**P**	**10 03 54.2**	**-1.7**
CLL				IAmb	IAmb	10 03 56.3	
	comp=Z,20nm,1.3s						
CLL	**Collm**	**19.61**	**337**	*i* P	**P**	**10 03 54.5**	**-1.5**
CLL				pmax	pmax		
	comp=Z,12nm,1.0s						
CLL	**Collm**	**19.61**	**337**	*i* P	**P**	**10 03 54.5**	**-1.5**
	comp=Z,12nm,1.0s						
CLL				*i* sP	**pwP**	**10 04 07.6**	**0.0**
ECH	**Echery**	**19.74**	**322**	P	**Pn**	**10 03 59.6**	**+0.4**
ECH	**Echery**	**19.74**	**322**	P	**Pn**	**10 03 59.6**	**+0.4**
ECH				pmax	pmax		
	comp=Z,8.0nm,1.1s						
SUW	**Suwalki**	**20.23**	**357**	P	**P**	**10 04 00.6**	**-2.2**
SUW	**Suwalki**	**20.23**	**357**	P	**P**	**10 04 00.6**	**-2.2**
SUW				pmax	pmax		
	comp=Z,44nm,1.0s						
RAYN	**Ar Rayn**	**20.51**	**115**	P	Pn	10 04 09.9	+1.5
RAYN				IAmb	IAmb	10 04 14.5	
	comp=Z,8.1nm,1.1s						
RAYN	**Ar Rayn**	**20.51**	**115**	P	Pn	10 04 09.9	+1.5
RAYN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
NACGM	**Naroch**	**21.10**	**2**	⇓*e*P	**P**	**10 04 11.7**	**-0.5**
	baz=184						
WLF	**Walferdange**	**21.19**	**324**	P	**P**	**10 04 13.0**	**-0.2**
WLF				IAmb	IAmb	10 04 27.4	
	comp=Z,14nm,0.8s						
WLF	**Walferdange**	**21.19**	**324**	P	**P**	**10 04 13.0**	**-0.2**
WLF				pmax	pmax		
	comp=Z,14nm,0.8s						
OBN	**Obninsk**	**22.71**	**17**	P	**P**	**10 04 29.5**	**+0.2**
	comp=Z,4.8nm,0.4s,baz=264,slow=19,SNR=3.6						
OBN				LR	LR	10 14 10.6	
	comp=Z,27nm,20.6s,baz=202,slow=39						
	comp=Z,4.8nm,0.4s						
OBN	**Obninsk**	**22.71**	**17**	*i* P	**P**	**10 04 29.0**	**-0.4**
OBN				*i*		10 04 53.2	
OBN				pmax	pmax		
	comp=Z,14nm,0.7s						
OBN				MLR	MLR		
	comp=Z,92nm,17.0s						
ESDC	**Sonseca Array**	**24.04**	**293**	P	**P**	**10 04 41.6**	**-1.2**
	comp=Z,2.4nm,0.9s,baz=84,slow=8.7,SNR=15						
	comp=Z,2.4nm,0.9s						
BELG	**Belogornoye**	**24.56**	**34**	P	**P**	**10 04 47.6**	**+0.4**
	comp=Z,20nm,0.9s,baz=270,slow=4.0,SNR=4.9						
	comp=Z,20nm,0.9s						
BELG	**Belogornoye**	**24.56**	**34**	*i* P	**P**	**10 04 47.1**	**-0.1**
BELG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
VSU	**Vasula**	**24.66**	**2**	*i* P	**P**	**10 04 46.3**	**-1.8**
VSU				pmax	pmax		
	comp=Z,15nm,0.7s						
MDT	**Midelt**	**24.91**	**276**	P	**P**	**10 04 51.1**	**+0.3**
	comp=Z,1.4nm,0.7s,baz=81,slow=14,SNR=4.0						
	comp=Z,1.4nm,0.7s						
HFS	**Hagfors**	**27.38**	**347**	P	**P**	**10 05 11.1**	**-1.6**
	comp=Z,1.5nm,0.4s,baz=153,slow=10.0,SNR=6.9						
	comp=Z,1.5nm,0.4s						
FINES	**FINESS Array B**	**27.64**	**1**	P	**P**	**10 05 12.9**	**-2.0**
	comp=Z,1.3nm,0.6s,baz=167,slow=9.6,SNR=4.3						
FINES				LR	LR	10 17 19.7	
	comp=Z,54nm,18.1s,baz=179,slow=39						
	comp=Z,1.3nm,0.6s						
FINES	**FINESS Array B**	**27.64**	**1**	*ce*P	**P**	**10 05 13.3**	**-1.6**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KLMR	**Klimovskoe**	**28.59**	**15**	*e*P	P	10 05 18.7	-4.6
KLMR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KLMR	**Klimovskoe**	**28.59**	**15**	*e*P	P	10 05 18.8	-4.6
KLMR				AMP		10 05 22.5	
	comp=Z,9.0nm,0.8s						
NAO01	**NORSAR Array S**	**28.59**	**345**	P	**P**	**10 05 21.4**	**-2.0**
NB2	**NORSAR Subarra**	**28.70**	**346**	P	**P**	**10 05 23.2**	**-1.3**
	comp=Z,1.2nm,0.6s,baz=157,slow=11						
NOA	**NORSAR Array B**	**28.70**	**346**	P	**P**	**10 05 22.8**	**-1.7**
	comp=Z,2.5nm,0.9s,baz=172,slow=10,SNR=9.4						
	comp=Z,2.5nm,0.9s						
AKTO	**Aktyubinsk**	**29.13**	**45**	P	**P**	**10 05 28.9**	**+0.5**
	comp=Z,1.2nm,0.6s,baz=244,slow=9.6,SNR=5.6						
AKTO				LR	LR	10 21 03.2	
	comp=Z,60nm,19.7s,baz=260,slow=45						
	comp=Z,1.2nm,0.6s						
EKA	**Eskdalemuir Ar**	**29.17**	**326**	P	**P**	**10 05 27.4**	**-1.2**
	comp=Z,3.8nm,0.8s,baz=125,slow=9.4,SNR=14						
	comp=Z,3.8nm,0.8s						
TORD	**Torodi Ar. Bea**	**29.69**	**232**	P	**P**	**10 05 35.0**	**+1.3**
	comp=Z,0.9nm,0.5s,baz=34,slow=8.8,SNR=14						
	comp=Z,0.9nm,0.5s						
TORD	**Torodi Ar. Bea**	**29.69**	**232**	IAmb	IAmb	10 05 50.2	
	comp=Z,3.3nm,1.1s						
PRGR	**Permogore**	**30.75**	**19**	*e*P	**P**	**10 05 40.2**	**-2.3**
ARU	**Arti**	**32.10**	**35**	LR	LR	10 19 12.9	
	comp=Z,34nm,20.2s,baz=200,slow=37						
ARU	**Arti**	**32.10**	**35**	*d* P	P	10 05 45.5	-9.0
ARU				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ARCES	**ARCESS Array B**	**35.76**	**0**	P	**P**	**10 06 24.2**	**-1.9**
	comp=Z,1.2nm,0.7s,baz=174,slow=10.0,SNR=5.5						
	comp=Z,1.2nm,0.7s						
AAK	**Ala-Archa**	**39.21**	**62**	*i* P	**P**	**10 06 58.5**	**+2.6**
AAK				pmax	pmax		

1.1nm,0.2s,baz=173,slow=31,SNR=6.0
MAKZ Makanchi 2.98 344 ⇑Pg Pb 10 04 48.3 0.0
0.9nm,0.5s
MAKZ ⇓Lg Lg 10 05 27.7
2.3nm,0.5s
KPKS Kokpek 3.32 263 *eP* **Pb 10 04 54.2 +0.2**
2.3nm,0.1s
KPKS *eS* **Sb 10 05 36.2 +1.8**
24nm,0.6s
ZHN Zhinishke 3.56 259 *eP* **Pb 10 04 59.0 +0.8**
5.5nm,0.2s
ZHN *eS* **Sb 10 05 44.4 +2.9**
13nm,0.2s
SATY Saty 3.61 257 *eP* **Pb 10 04 58.9 -0.1**
1.6nm,0.1s
SATY *eS* **Sb 10 05 44.1 +1.3**
12nm,0.0s
ZSN Zaisan 3.68 18 *eP* **Pb 10 05 00.3 +0.1**
4.4nm,0.1s
ZSN *eS* **Sb 10 05 46.2 +1.2**
4.6nm,0.1s
ARXS Arharly 3.89 276 *eP* **Pb 10 05 04.8 +1.1**
4.6nm,0.7s
ARXS *eS* **Sb 10 05 54.2 +3.4**
6.7nm,0.5s
CHKK Chushkaly 4.50 271 *eP* **Pg 10 05 18.2 -3.0**
2.3nm,0.2s
CHKK *eS* **Sg 10 06 17.0 -2.4**
10nm,0.2s

*UCR **23** 10:04:29.6±0.8, 13°.55N×90°.37W, h44km±11km, ML3.9*
*SNET **23** 10:04:29.6±1.0, 13°.49N×90°.35W, h31km±4km, ML3.9*
*GCG **23** 10:04:31.9±0.5, 13°.73N×90°.45W, h63km±12km, MD3.6*
*INET **23** 10:04:33.1±0.3, 13°.68N×90°.11W, h57km±10km, MW2.8*
ISC 23 10:04:28.9±2.0, **13°.48N**±0°.09×**90°.39W**±0°.06, **h28**km±13km, **n44,** σ**8°37**/59, **3C-17D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NUBE	**Las Nubes**	**0.73**	**55**	⇓*iP*	**Pb**	**10 04 43.0**	**-0.2**
NUBE				*eS*	**Sb**	**10 04 53.1**	**+0.2**
NUBE	**Las Nubes**	**0.73**	**55**	⇓*iP*	**Pb**	**10 04 43.0**	**-0.2**
NUBE				*eS*	**Sb**	**10 04 53.1**	**+0.2**
SLOZ	**Alcaldia de Sa**	**0.80**	**47**	⇓*iP*	**Pb**	**10 04 44.0**	**-0.4**
SLOZ				*eS*	**Sb**	**10 04 55.5**	**+0.5**
CEVE	**Cerro Verde**	**0.82**	**65**	⇓*iP*	**Pb**	**10 04 44.6**	**-0.3**
CEVE				*eS*	**Sb**	**10 04 56.4**	**+0.7**
CEVE	**Cerro Verde**	**0.82**	**65**	⇓*iP*	**Pb**	**10 04 44.6**	**-0.3**
CEVE				*eS*	**Sb**	**10 04 56.4**	**+0.7**
SBLS	**San Blas**	**0.83**	**64**	⇓*iP*	**Pb**	**10 04 44.7**	**-0.3**
SBLS	**San Blas**	**0.83**	**64**	⇓*iP*	**Pb**	**10 04 44.7**	**-0.3**
RTR	**El Retiro**	**0.84**	**60**	⇓*iP*	**Pb**	**10 04 45.0**	**-0.1**
RTR	**El Retiro**	**0.84**	**60**	⇓*iP*	**Pb**	**10 04 45.0**	**-0.1**
SNJE	**San Jose**	**0.86**	**63**	⇓*iP*	**Pb**	**10 04 45.0**	**-0.4**
SNJE	**San Jose**	**0.86**	**63**	⇓*iP*	**Pb**	**10 04 45.0**	**-0.4**
PCG	**Pacaya**	**0.93**	**347**	*eP*	**Pn**	**10 04 46.8**	**+0.4**
JAYA	**Jayaque - finc**	**0.93**	**79**	⇓*iP*	**Pn**	**10 04 45.9**	**-0.4**
JAYA				*eS*	**Sb**	**10 04 58.5**	**-0.3**
JAYA				IAML		10 05 04.0	
	comp=Z,6μm,0.2s						
JAYA	**Jayaque - finc**	**0.93**	**79**	⇓*iP*	**Pn**	**10 04 45.9**	**-0.4**
JAYA				*eS*	**Sb**	**10 04 58.5**	**-0.3**
JAYA				IAML		10 05 04.0	
	comp=Z,6μm,0.2s						
CEDA	**San Andres**	**1.02**	**72**	⇓*iP*	**Pn**	**10 04 47.2**	**-0.2**
CEDA				*eS*	**Sn**	**10 05 00.8**	**0.0**
CEDA				IAML		10 05 04.4	
	comp=Z,3μm,0.3s						
CEDA	**San Andres**	**1.02**	**72**	⇓*iP*	**Pn**	**10 04 47.2**	**-0.2**
CEDA				*eS*	**Sn**	**10 05 00.8**	**0.0**
CEDA				IAML		10 05 04.4	
	comp=Z,3μm,0.3s						
FUG	**Fuego 3**	**1.06**	**336**	*eP*	**Pn**	**10 04 48.1**	**+0.1**
NBG	**Las Nubes**	**1.10**	**2**	*eP*	**Pn**	**10 04 49.7**	**+1.0**
NBG				*eS*	**Sn**	**10 05 02.7**	**-0.5**
SNET	**Serv Nac Est T**	**1.15**	**79**	*eP*	**Pn**	**10 04 49.2**	**0.0**
SNET				*eS*	**Sn**	**10 05 03.9**	**-0.1**
SNET				IAML		10 05 05.9	
	comp=Z,2μm,0.3s						
SNET	**Serv Nac Est T**	**1.15**	**79**	*eP*	**Pn**	**10 04 49.2**	**0.0**
SNET				*eS*	**Sn**	**10 05 03.9**	**-0.1**
SNET				IAML		10 05 05.9	
	comp=Z,2μm,0.3s						
SNET	**Serv Nac Est T**	**1.15**	**79**	*eP*	**Pn**	**10 04 49.2**	**0.0**
SJTE	**Alcalda de S**	**1.35**	**84**	*eP*	**Pn**	**10 04 52.1**	**0.0**
SJTE				*eS*	**Sn**	**10 05 09.7**	**+0.6**
SJTE	**Alcalda de S**	**1.35**	**84**	*eP*	**Pn**	**10 04 52.1**	**0.0**
SJTE				*eS*	**Sn**	**10 05 09.7**	**+0.6**
MTO3	**Montecristo**	**1.36**	**47**	⇓*iP*	**Pn**	**10 04 51.6**	**-0.6**
MTO3	**Montecristo**	**1.36**	**47**	⇓*iP*	**Pn**	**10 04 51.6**	**-0.6**
MTO3	**Montecristo**	**1.36**	**47**	*eP*	**Pn**	**10 04 51.5**	**-0.6**
PAVA	**Las Pavas**	**1.43**	**80**	*eP*	**Pn**	**10 04 53.1**	**0.0**
PAVA	**Las Pavas**	**1.43**	**80**	*eP*	**Pn**	**10 04 53.1**	**0.0**
PAVA	**Las Pavas**	**1.43**	**80**	*eP*	**Pn**	**10 04 53.1**	**0.0**
COEG	**Centro de Oper**	**1.48**	**84**	*eP*	**Pn**	**10 04 54.1**	**+0.4**
COEG				IAML		10 05 18.4	
	comp=Z,1μm,0.3s						
COEG	**Centro de Oper**	**1.48**	**84**	*eP*	**Pn**	**10 04 54.1**	**+0.4**
COEG				IAML		10 05 18.4	
	comp=Z,1μm,0.3s						
COEG	**Centro de Oper**	**1.48**	**84**	*eP*	**Pn**	**10 04 53.9**	**+0.2**
SCLA	**Alcaldia de Sa**	**1.63**	**82**	*eP*	**Pn**	**10 04 55.9**	**0.0**
SCLA	**Alcaldia de Sa**	**1.63**	**82**	*eP*	**Pn**	**10 04 55.9**	**0.0**
STG3	**Santiaguito 3,**	**1.68**	**317**	*eP*	**Pn**	**10 04 56.8**	**+0.2**
STG3				*eS*	**Sn**	**10 05 16.4**	**-0.8**
MRL	**Marmol**	**1.73**	**23**	⇑*eP*	**Pn**	**10 04 58.0**	**+0.6**
PQSS	**Presa 15 de Se**	**1.79**	**85**	*eP*	**Pn**	**10 04 58.0**	**0.0**
PQSS	**Presa 15 de Se**	**1.79**	**85**	*eP*	**Pn**	**10 04 58.0**	**0.0**
COEB	**Comit de Eme**	**1.81**	**89**	*eP*	**Pn**	**10 04 58.5**	**+0.1**
COEB	**Comit de Eme**	**1.81**	**89**	*eP*	**Pn**	**10 04 58.5**	**+0.1**
COEB	**Comit de Eme**	**1.81**	**89**	*eP*	**Pn**	**10 04 58.4**	**+0.1**
CNCH	**Conchagua**	**2.50**	**94**	⇑*eP*	**Pn**	**10 05 08.1**	**+0.3**
CNCH	**Conchagua**	**2.50**	**94**	⇑*eP*	**Pn**	**10 05 08.1**	**+0.3**
PETF	**Flores**	**3.46**	**8**	*eP*	**Pn**	**10 05 21.0**	**+0.1**

*IDC **23** 10:37:57.5±3.4, 37°.82N×72°.47E, h85km±29km, mb3.4/5, mbtmp3.7/11, MS3.4/1, Error ellipse: s-maj=32.3km s-min=24.7km az=170.0*
*NNC **23** 10:38:06.5±3.4, 38°.63N×72°.38E, h195km±42km, mb2.8, mpv3.6, Error ellipse: s-maj=35.2km s-min=18.0km az=13.0*
ISC 23 10:37:59.7±0.9, **38°.12N**±0°.07×**72°.23E**±0°.07, **h100**km, **n23,** σ**25°24/29, mb3.5/5, 4C-2D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**4.16**	**15**	P	**Pn**	**10 39 02.8**	**+1.4**
	SNR=20						
UCH	**Uchtor**	**4.46**	**22**	P	**Pn**	**10 39 06.5**	**+0.9**
	SNR=42						
EKS2	**Erkin-Say**	**4.69**	**14**	P	**Pn**	**10 39 10.3**	**+2.0**
	SNR=9.9						
AAK	**Ala-Archa**	**4.84**	**20**	P	**Pn**	**10 39 11.6**	**+1.3**
	SNR=13						
AAK	**Ala-Archa**	**4.84**	**20**	P	**Pn**	**10 39 11.8**	**+1.5**
	13nm,0.4s,baz=185,slow=5.6,SNR=22						
AAK				S	**Sn**	**10 40 04.1**	**-1.1**
	23nm,0.4s,baz=334,slow=20,SNR=27						
ULHL	**Ulahol**	**5.14**	**35**	P	**Pn**	**10 39 15.1**	**+0.6**
	SNR=22						
KK31	**Karatay Array**	**5.15**	**346**	P	**Pn**	**10 39 16.7**	**+2.3**
	2.7nm,0.2s,baz=155,slow=12,SNR=171						
KK31				S	**Sn**	**10 40 12.9**	**+0.4**
	15nm,0.3s,baz=173,slow=24,SNR=21						
CHMS	**Chumysh**	**5.24**	**21**	⇑P	**Pn**	**10 39 16.6**	**+0.9**
	5.7nm,0.4s						
CHMS				⇓S	**Sn**	**10 40 13.3**	**-1.5**
	9.8nm,0.7s						
TKM2	**Tokmak 2**	**5.44**	**27**	⇓P	**Pn**	**10 39 19.5**	**+0.9**
	2.6nm,0.5s						
TKM2				⇑S	**Sn**	**10 40 19.1**	**-0.9**
	5.6nm,0.6s						
GEYT	**Alibeck**	**11.13**	**273**	P	**Pn**	**10 40 35.7**	**-0.1**
	3.2nm,0.3s,baz=116,slow=13,SNR=12						
GEYT				S	**Sn**	**10 42 36.4**	**-1.8**
	2.6nm,0.3s,baz=288,slow=28,SNR=2.6						
MKAR	**Makanchi Array**	**11.41**	**37**	P	**Pn**	**10 40 38.8**	**-0.6**
	0.4nm,0.6s,baz=226,slow=14,SNR=2.1						
KURBB	**Kurchatov Arra**	**13.28**	**18**	P	**Pn**	**10 41 07.4**	**+3.3**
	0.2nm,0.6s,baz=210,slow=9.1,SNR=3.9						
AB31	**Akbulak array**	**14.22**	**325**	P	**Pn**	**10 41 16.6**	**+0.3**
	2.1nm,0.4s,baz=131,slow=14,SNR=64						
AB31				S	Sn	10 43 45.3	-7.6
	3.4nm,0.6s,baz=134,slow=25,SNR=12						
AKTO	**Aktyubinsk**	**15.94**	**325**	P	**P**	**10 41 40.0**	**+0.4**
	2.8nm,0.5s,baz=122,slow=13,SNR=9.8						
AKTO				S	**Sn**	**10 44 28.2**	**-6.0**
	2.5nm,0.6s,baz=180,slow=20,SNR=6.3						
AKTO	**Aktyubinsk**	**15.94**	**325**	⇑P	**Pn**	**10 41 39.2**	**+1.2**
	4.5nm,0.8s						
AKTO				⇑S	**Sn**	**10 44 28.6**	**-5.7**
	2.3nm,0.6s						
ZALV	**Zalesovo Beam**	**18.04**	**25**	P	**P**	**10 42 02.2**	**-0.5**
	0.7nm,0.4s,baz=218,slow=12,SNR=4.6						
POO	**Poona**	**19.57**	**175**	*eP*	**P**	**10 42 18.0**	**-1.8**
FINES	**FINESS Array B**	**36.71**	**325**	P	**P**	**10 44 58.9**	**+2.2**
	1.4nm,0.3s,baz=116,slow=9.3,SNR=3.8						
	1.4nm,0.3s						
ARCES	**ARCESS Array B**	**40.04**	**337**	P	**P**	**10 45 26.5**	**+2.0**
	1.2nm,0.7s,baz=106,slow=8.9,SNR=6.8						
	1.2nm,0.7s						
NOA	**NORSAR Array B**	**43.70**	**322**	P	**P**	**10 45 56.3**	**+1.9**
	0.3nm,0.5s,baz=101,slow=7.3,SNR=2.2						
	0.3nm,0.5s						
JCJ	**Chichijima**	**58.70**	**79**	LR	LR	11 13 19.9	
	comp=Z,35nm,21.9s,baz=112,slow=36						
TORD	**Torodi Ar. Bea**	**66.73**	**269**	P	**P**	**10 48 41.8**	**+1.4**
	0.3nm,0.5s,baz=47,slow=6.9,SNR=1.7						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**82.03**	**123**	P	**P**	**10 50 06.5**	**-2.4**
	0.4nm,1.1s,baz=330,slow=5.0,SNR=2.1						
	0.4nm,1.1s						

*IDC **23** 10:42:44.3±1.1, 55°.50S×26°.73W, h0km, mb4.3/2, mbtmp4.3/2, Error ellipse: s-maj=86.1km s-min=30.3km az=102.0*
*NEIC **23** 10:42:53.6±0.9, 55°.65S±0°.08×27°.0W±0°.2, h64km±8km, mb4.3/9, Error ellipse: s-maj=17.6km s-min=11.5km az=97.0*
ISC 23 10:42:51.1±0.7, **55°.6S**±0°.1×**26°.9W**±0°.1, **h50**km, **n32,** σ**0°87/32, mb4.3/6, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.71**	**279**	Pn	**Pn**	**10 44 14.7**	**+1.4**
VNA3	**Neumayer Olymp**	**17.34**	**161**	P	**P**	**10 46 50.7**	**+0.7**
SNAA	**Sanae**	**19.07**	**157**	P	**P**	**10 47 09.1**	**+0.1**
SNAA	**Sanae**	**19.07**	**157**	P	**P**	**10 47 09.3**	**+0.3**
TROLL	**Troll, Antarti**	**20.56**	**154**	P	**P**	**10 47 25.5**	**+0.3**
BELA	**Belgrano 2**	**22.53**	**184**	P	**P**	**10 47 44.6**	**-1.6**
BELA				IAmb	IAmb	10 47 47.8	
	comp=Z,4.2nm,0.8s						
MG05	**Puerto Natales**	**26.97**	**259**	P	**P**	**10 48 25.2**	**-2.4**
MG05				IAmb	IAmb	10 48 51.6	
	comp=Z,30nm,1.4s						
GO09	**Cerro Castillo**	**27.06**	**260**	P	**P**	**10 48 26.1**	**-2.4**
QSPA	**South Pole Qui**	**34.64**	**180**	P	**P**	**10 49 36.0**	**+0.6**
QSPA				IAmb	IAmb	10 49 52.0	
	comp=Z,3.1nm,1.0s						
CO02	**Combarbal**	**39.35**	**290**	P	**P**	**10 50 15.6**	**0.0**
VNDA	**Vanda**	**47.02**	**183**	P	**P**	**10 51 17.4**	**+0.7**
	comp=Z,1.4nm,0.6s,baz=186,slow=5.8,SNR=18						
	comp=Z,1.4nm,0.6s						
VNDA	**Vanda**	**47.02**	**183**	P	**P**	**10 51 17.8**	**+1.0**
TOA0	**Torodi Ar. Sit**	**72.58**	**29**	P	**P**	**10 54 12.5**	**-0.3**
TOA0				IAmb	IAmb	10 54 13.4	
	comp=Z,4.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**72.58**	**29**	P	**P**	**10 54 12.5**	**-0.3**
	comp=Z,4.1nm,0.7s,baz=198,slow=6.5,SNR=20						
	comp=Z,4.1nm,0.7s						
TORD	**Torodi Ar. Bea**	**72.58**	**29**	P	**P**	**10 54 12.6**	**-0.3**
TORD				IAmb	IAmb	10 54 13.4	
	comp=Z,3.4nm,0.8s						
MKAR	**Makanchi Array**	**136.56**	**71**	PKP	**PKiKP**	**11 02 08.3**	**0.0**
	comp=Z,0.2nm,0.3s,baz=243,slow=0.6,SNR=0.8						
HYT	**Haines Junctio**	**144.68**	**308**		**PKPdf**	**11 02 21.2**	**+0.4**
M30M	**Minto, Yukon**	**145.03**	**311**		**PKPab**	**11 02 21.1**	**+0.2**
DAWY	**Dawson**	**146.64**	**312**	PKPdf	**PKPbc**	**11 02 25.6**	**-0.1**
BCAR	**Beaver Creek A**	**147.36**	**310**		**PKPbc**	**11 02 28.1**	**+0.3**
L27K	**Beaver Creek,**	**147.38**	**310**		**PKPbc**	**11 02 28.2**	**+0.3**
K27K	**Chicken**	**147.76**	**312**		**PKPbc**	**11 02 29.6**	**+0.8**
DOT	**Dot Lake**	**148.51**	**311**		**PKPbc**	**11 02 31.0**	**+0.2**
J26L	**Joseph Creek**	**148.51**	**312**		**PKPbc**	**11 02 31.4**	**+0.5**
I26K	**Coal Creek Min**	**148.53**	**314**		**PKPbc**	**11 02 31.3**	**+0.6**
RIDG	**Independent Ri**	**148.87**	**311**		**PKiKP**	**11 02 32.9**	**-0.1**
ILAR	**Eielson Array**	**149.97**	**312**	PKPbc	**PKPbc**	**11 02 34.4**	**+0.1**
	comp=Z,1.8nm,0.8s,baz=120,slow=1.9,SNR=16						
ILAR	**Eielson Array**	**149.97**	**312**		**PKPbc**	**11 02 33.9**	**-0.5**
SONM	**Songino Array**	**150.50**	**85**	PKPbc	**PKPbc**	**11 02 35.6**	**-0.8**
	comp=Z,0.7nm,0.4s,baz=225,slow=1.8,SNR=3.4						
SKT	**Skwentna**	**151.44**	**306**		**PKiKP**	**11 02 38.8**	**+0.4**
TOLK	**Toolik Lake Re**	**151.47**	**320**		**PKPbc**	**11 02 38.0**	**+0.1**
BPAW	**Bear Paw Mtn.**	**151.60**	**310**		**PKPbc**	**11 02 38.5**	**+0.3**

*SOME **23** 10:45:04.7, 44°.68N×82°.05E, h15km*
*NNC **23** 10:45:07.9±0.8, 44°.73N×81°.97E, h0km, mb3.3, mpv2.8, Error ellipse: s-maj=12.8km s-min=1.9km az=117.0*
ISC 23 10:45:04.0±2.1, **44°.68N**±0°.07×**82°.1E**±0°.1, **h0**km±16km, **n9,** σ**0°80/18, 3C-2D, northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DJR	**Jarkent**	**1.70**	**259**	*eP*	**Pb**	**10 45 35.8**	**-0.4**
	6.9nm,0.2s						
DJR				*eS*	**Sg**	**10 45 58.7**	**0.0**
	8.4nm,0.2s						
KTMS	**Ketmen**	**1.78**	**226**	*eP*	**Pb**	**10 45 37.4**	**-0.1**
	0.4nm,0.1s						
KTMS				*eS*	**Sg**	**10 46 01.2**	**+0.2**
	4.6nm,0.1s						
MK31	**Makanchi Array**	**2.11**	**3**	Pn	**Pg**	**10 45 44.4**	**-0.1**
	1.9nm,0.3s,baz=185,slow=15,SNR=149						
MK31				⇑Sn	**Sg**	**10 46 11.6**	**-0.3**
	0.6nm,0.1s,baz=187,slow=28,SNR=13						
MAKZ	**Makanchi**	**2.13**	**357**	⇓Pn	**Pb**	**10 45 44.0**	**+0.6**
	2.3nm,0.3s						
MAKZ				⇓Sn	**Sg**	**10 46 11.6**	**-0.7**
	3.2nm,0.3s						
PDGK	**Podgornoye**	**2.33**	**235**	⇑Pn	**Pb**	**10 45 46.4**	**-0.6**
	6.9nm,0.8s						
PDGK				⇑Sn	**Sb**	**10 46 16.7**	**+0.4**
	3.4nm,0.4s						
SHLS	**Shalkode**	**2.45**	**232**	*eP*	**Pn**	**10 45 45.3**	**-0.1**
	7.9nm,0.2s						
SHLS				*eS*	**Sn**	**10 46 14.7**	**-1.4**
	12nm,0.3s						
KPKS	**Kokpek**	**2.76**	**245**	*eP*	**Pb**	**10 45 54.2**	**0.0**
	9.7nm,0.2s						
KPKS				*eS*	**Sb**	**10 46 29.7**	**+1.1**
	15nm,0.2s						
ARXS	**Arharly**	**3.11**	**263**	*eP*	**Pb**	**10 45 59.8**	**-0.4**
	2.8nm,0.1s						
ARXS				*eS*	**Sb**	**10 46 39.3**	**+0.6**
	9.2nm,0.4s						
SATY	**Saty**	**3.14**	**240**	*eP*	**Pb**	**10 46 01.0**	**+0.3**
	2.5nm,0.1s						
SATY				*eS*	**Sb**	**10 46 41.4**	**+1.9**
	9.1nm,0.2s						

*VAO **23** 10:47:48.4±0.5, 20°.37S×68°.87W, h99km±4km, mb4.5*
*NEIC **23** 10:47:48.9±2.5, 20°.47S±0°.04×68°.91W±0°.07, h102km±5km, mb4.4/28, ML4.3(GUC), Error ellipse: s-maj=9.2km s-min=6.5km az=87.0*
*IDC **23** 10:47:49.1±0.6, 20°.48S×68°.75W, h108km±5km, mb3.8/9, mbtmp4.2/12, Error ellipse: s-maj=18.0km s-min=8.2km az=94.0*
*GUC **23** 10:47:49.6±0.7, 20°.47S×68°.89W, h107km±4km, ML4.3*
ISC 23 10:47:48.6±0.5, **20°.47S**±0°.03×**68°.88W**±0°.05, **h106**km±4km, **n133,** σ**0°99**/143, **mb4.3**/14, **10C-2D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**0.42**	**321**		**Pn**	**10 48 05.9**	**+0.9**
PB08	**IPOC Station P**	**0.42**	**321**	⇓*iP*	**Pn**	**10 48 05.9**	**+0.9**
PB08				*iS*	**Sn**	**10 48 18.3**	**+1.0**
PB01	**IPOC Station P**	**0.81**	**225**		**Pn**	**10 48 08.2**	**+0.4**
PB01	**IPOC Station P**	**0.81**	**225**	⇑*iP*	**Pn**	**10 48 08.1**	**+0.4**
PB01				*iS*	**Sn**	**10 48 22.3**	**+0.2**
PB01				IAML		10 48 23.8	
	comp=E,13μm,0.1s						
GO01	**Chusmiza**	**0.85**	**339**		**Pn**	**10 48 09.5**	**+0.9**
GO01	**Chusmiza**	**0.85**	**339**	⇓*iP*	**Pn**	**10 48 09.5**	**+0.9**
GO01				*iS*	**Sn**	**10 48 24.6**	**+1.1**
PB11	**IPOC Station P**	**1.02**	**314**		**Pn**	**10 48 10.5**	**+0.6**
PB11	**IPOC Station P**	**1.02**	**314**	⇑*iP*	**Pn**	**10 48 10.3**	**+0.4**
PB11				*iS*	**Sn**	**10 48 26.3**	**+0.4**
PB11				IAML		10 48 27.4	
	comp=N,24μm,0.5s						
TA02	**Huaiquique**	**1.19**	**279**		**Pn**	**10 48 11.9**	**+0.3**
TA02	**Huaiquique**	**1.19**	**279**	⇑*iP*	**Pn**	**10 48 11.8**	**+0.3**
TA02				*iS*	**Sn**	**10 48 29.2**	**+0.2**
TA01	**Diego Aracena**	**1.23**	**265**		**Pn**	**10 48 11.8**	**-0.1**
TA01	**Diego Aracena**	**1.23**	**265**	⇑*iP*	**Pn**	**10 48 11.8**	**-0.1**
TA01				*iS*	**Sn**	**10 48 28.7**	**-1.0**
TA01				IAML		10 48 29.8	
	comp=E,3μm,0.2s						
PATCX	**Punta Patache**	**1.25**	**253**		**Pn**	**10 48 12.4**	**+0.1**
PATCX	**Punta Patache**	**1.25**	**253**	⇑*iP*	**Pn**	**10 48 12.3**	**+0.1**
PATCX				*iS*	**Sn**	**10 48 30.2**	**0.0**
PATCX				IAML		10 48 36.0	
	comp=N,8μm,0.6s						
PB02	**IPOC Station P**	**1.27**	**228**		**Pn**	**10 48 13.1**	**+0.4**
PB02	**IPOC Station P**	**1.27**	**228**	⇑*iP*	**Pn**	**10 48 12.9**	**+0.3**
PB02				*iS*	**Sn**	**10 48 31.4**	**+0.5**
PB09	**IPOC Station P**	**1.36**	**194**		**Pn**	**10 48 15.0**	**+1.2**
PB09	**IPOC Station P**	**1.36**	**194**	⇑*iP*	**Pn**	**10 48 14.7**	**+1.0**
PB09				*iS*	**Sn**	**10 48 34.1**	**+1.3**
PB09				IAML		10 48 38.8	
	comp=E,4μm,0.5s						
PB07	**IPOC Station P**	**1.57**	**217**		**Pn**	**10 48 16.4**	**+0.1**
PB07	**IPOC Station P**	**1.57**	**217**	⇑*iP*	**Pn**	**10 48 16.3**	**+0.1**
PB07				*iS*	**Sn**	**10 48 36.6**	**-0.6**
PB07				IAML		10 48 38.6	
	comp=E,4μm,0.3s						
LVC	**Limon Verde**	**2.13**	**181**	P	**Pn**	**10 48 24.9**	**+1.4**
	comp=E,204nm,0.3s,baz=5.3,slow=10,SNR=292						
LVC				S	**Sn**	**10 48 50.8**	**+0.7**
	comp=E,669nm,0.4s,baz=120,slow=23,SNR=29						
LVC	**Limon Verde**	**2.13**	**181**	⇑*iP*	**Pn**	**10 48 24.9**	**+1.4**
LVC				*iS*	**Sn**	**10 48 50.8**	**+0.7**
LVC	**Limon Verde**	**2.13**	**181**	*eP*	**Pn**	**10 48 24.2**	**+0.7**
PB04	**IPOC Station P**	**2.20**	**212**		**Pn**	**10 48 24.4**	**+0.2**
PB04	**IPOC Station P**	**2.20**	**212**	*eP*	**Pn**	**10 48 24.2**	**0.0**
PB04				IAML		10 48 57.8	
	comp=E,2μm,0.7s						
PB16	**IPOC Station P**	**2.21**	**344**		**Pn**	**10 48 26.3**	**+1.6**
PB16	**IPOC Station P**	**2.21**	**344**	*eP*	**Pn**	**10 48 26.3**	**+1.6**
PB12	**IPOC Station P**	**2.30**	**323**	Pn	**Pn**	**10 48 25.4**	**0.0**
PB12	**IPOC Station P**	**2.30**	**323**	*eP*	**Pn**	**10 48 25.1**	**-0.3**
PB12				IAML		10 48 59.4	
	comp=E,1μm,0.4s						
PB06	**IPOC Station P**	**2.32**	**196**		**Pn**	**10 48 26.0**	**+0.3**
PB06	**IPOC Station P**	**2.32**	**196**	⇑*eP*	**Pn**	**10 48 25.8**	**+0.1**
PB06				*iS*	**Sn**	**10 48 53.3**	**-0.8**
PB06				IAML		10 49 01.3	
	comp=E,2μm,0.7s						
PB18	**Visviri**	**2.92**	**349**		**Pn**	**10 48 36.7**	**+2.7**
LPAZ	**La Paz**	**4.22**	**10**	P	**Pn**	**10 48 54.4**	**+2.9**
	comp=E,26nm,0.4s,baz=187,slow=5.6,SNR=104						
LPAZ				S	**Sn**	**10 49 39.0**	**-1.1**
	comp=E,25nm,0.6s,baz=205,slow=13,SNR=4.8						
PB14	**IPOC Station P**	**4.37**	**199**	Pn	**Pn**	**10 48 51.5**	**-1.7**
GO02	**Mina Guanaco**	**4.72**	**188**	Pn	**Pn**	**10 48 57.3**	**-0.5**
AC01	**Pan de Azucar**	**5.87**	**195**	Pn	**Pn**	**10 49 10.6**	**-2.6**
AC02	**Maricunga**	**6.34**	**182**	Pn	**Pn**	**10 49 19.6**	**-0.4**
AC04	**Llanos de Chal**	**7.96**	**194**	Pn	**Pn**	**10 49 36.8**	**-4.7**
SIV	**San Ignacio**	**8.65**	**60**	P	**Pn**	**10 49 49.2**	**-1.8**
	comp=E,29nm,0.5s,baz=247,slow=10,SNR=151						
VBST	**Vila Bela da S**	**10.31**	**56**	*eP*	**Pn**	**10 50 11.8**	**-1.7**
PTLB	**Pontes e Lacer**	**10.53**	**63**	*eP*	**Pn**	**10 50 15.3**	**-1.2**
ETMB	**Extrema**	**10.90**	**14**	*eP*	**Pn**	**10 50 20.9**	**-0.6**
VILB	**Vilhena**	**11.17**	**49**	*eP*	**Pn**	**10 50 24.1**	**-1.2**
CPUP	**Villa Florida**	**12.10**	**121**	P	**Pn**	**10 50 36.5**	**-0.9**
	comp=E,3.3nm,0.8s,baz=306,slow=15,SNR=6.1						
CPUP	**Villa Florida**	**12.10**	**121**	*eP*	**Pn**	**10 50 36.9**	**-0.5**
ANTJ	**Antonio Joao (**	**12.10**	**100**	*eP*	**Pn**	**10 50 37.1**	**-0.5**
POCN	**Pocone**	**12.13**	**74**	*eP*	**Pn**	**10 50 35.9**	**-2.1**
PTET	**Porto Estrela**	**12.24**	**67**	*eP*	**Pn**	**10 50 38.3**	**-1.2**
AQDB	**Aquidauana**	**12.35**	**92**	*eP*	**Pn**	**10 50 41.1**	**+0.3**
SAMI	**Samuel**	**12.71**	**26**	Pn	**Pn**	**10 50

TROLL	**Troll, Antarti**	**64.95**	**161**	P		**P**		**10 58 18.0**	**+1.2**
DBIC	**Dimbokro**	**68.42**	**74**	P		**P**		**10 58 39.1**	**-0.4**
	comp=Z,3.1nm,0.4s,baz=261,slow=7.6,SNR=6.8								
	comp=Z,3.1nm,0.4s								
TPNV	**Topopah Spring**	**72.50**	**322**	P		**P**		**10 59 06.5**	**+2.4**
PDAR	**Pinedale Array**	**73.24**	**330**	P		**P**		**10 59 08.5**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=109,slow=7.7,SNR=2.7								
	comp=Z,0.3nm,0.7s								
FLWY	**Flagg Ranch**	**74.78**	**330**	IAmb		IAmb		10 59 19.4	
	comp=Z,4.0nm,0.7s								
RLMT	**Red Lodge**	**74.93**	**332**	IAmb		IAmb		10 59 20.2	
	comp=Z,2.5nm,0.7s								
SCHQ	**Schefferville**	**75.01**	**1**	P		**P**		**10 59 17.9**	**-0.2**
	comp=Z,1.9nm,0.6s,baz=207,slow=9.0,SNR=4.1								
	comp=Z,1.9nm,0.6s								
SCHQ	**Schefferville**	**75.01**	**1**	IAmb		IAmb		10 59 41.6	
	comp=Z,9.6nm,1.4s								
TOA0	**Torodi Ar. Sit**	**76.98**	**71**	P		**P**		**10 59 29.9**	**-0.4**
TOA0				IAmb		IAmb		11 00 01.4	
	comp=Z,4.4nm,0.9s								
TORD	**Torodi Ar. Bea**	**76.98**	**71**	P		**P**		**10 59 29.9**	**-0.3**
	comp=Z,2.4nm,0.3s,baz=253,slow=5.8,SNR=66								
TORD				pP		**pP**		**10 59 57.6**	**-1.0**
	comp=Z,2.9nm,0.8s,baz=246,slow=5.3,SNR=4.4								
	comp=Z,2.4nm,0.3s								
TORD	**Torodi Ar. Bea**	**76.98**	**71**	P		**P**		**10 59 29.8**	**-0.4**
TORD				IAmb		IAmb		11 00 01.3	
	comp=Z,3.8nm,0.9s								
EDM	**Edmonton**	**82.85**	**335**	P		**P**		**11 00 00.8**	**-0.2**
MAW	**Mawson**	**85.30**	**163**	P		**P**		**11 00 14.4**	**+1.0**
	comp=Z,1.0nm,0.5s,baz=194,slow=3.5,SNR=7.3								
	comp=Z,1.0nm,0.5s								
YKA	**Yellowknife Ar**	**90.23**	**341**	P		**P**		**11 00 37.1**	**+0.4**
	comp=Z,3.3nm,0.8s,baz=132,slow=4.5,SNR=11								
YKA				pP		**pP**		**11 01 06.8**	**+0.8**
	comp=Z,2.7nm,0.8s,baz=137,slow=4.8,SNR=6.4								
YKA				sP		**sP**		**11 01 17.6**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=137,slow=4.3,SNR=1.1								
	comp=Z,3.3nm,0.8s								
WRA	**Warramunga Arr**	**133.85**	**211**	PKP		**PKPdf**		**11 06 54.3**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=161,slow=1.8,SNR=13								
ZALV	**Zalesovo Beam**	**141.01**	**25**	PKP		**PKPdf**		**11 07 06.0**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=282,slow=1.3,SNR=2.2								
MKAR	**Makanchi Array**	**144.78**	**35**	PKP		**PKPdf**		**11 07 12.9**	**-0.1**
	comp=Z,1.4nm,0.7s,baz=322,slow=4.1,SNR=8.2								
USRK	**Ussuriysk Ar.**	**150.66**	**328**	PKPbc		**PKiKP**		**11 07 29.0**	**+0.1**
	comp=Z,0.4nm,0.2s,baz=80,slow=3.7,SNR=6.3								
SONM	**Songino Array**	**152.43**	**7**	PKPbc		**PKiKP**		**11 07 33.2**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=337,slow=3.2,SNR=5.2								

IDC ***23*** *11:10:16.2±1.2,54˚.12N×169˚.36E, h0km, mb3.5/7, mbtmp3.6/9, ML3.2/2, MS3.6/2, Error ellipse: s-maj=32.8km s-min=21.5km az=176.0*

KRSC ***23*** *11:10:19.9±0.7,53˚.91N×168˚.74E, h39km±19km, ML3.9*

ISC 23 11:10:19.3±0.8, 54˚.1N±0˚.1×169˚.18E±0˚.05, h25km, n29, σ1§20/26, mb3.6/7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**2.18**	**302**	P	**Pn**	**11 10 54.0**	**+0.1**
SHEM	**Shemya Is, Ala**	**3.24**	**113**	Pn	**Pn**	**11 11 06.7**	**-1.7**
	11nm,0.3s,baz=287,slow=19,SNR=19						
SHEM				Sn	**Sn**	**11 11 45.7**	**-0.5**
	5.8nm,0.3s,baz=270,slow=21,SNR=2.4						
	27nm,0.4s						
MKZ	**Mys Kozlova**	**4.39**	**279**	P	**Pn**	**11 11 24.3**	**+0.1**
MKZ				S	**Sn**	**11 12 13.4**	**-1.1**
TUMR	**Tumrok**	**5.38**	**287**	P	**Pn**	**11 11 39.4**	**+1.4**
SPN	**Mys Shipunski**	**5.54**	**263**	P	**Pn**	**11 11 40.7**	**+0.6**
SPN				S	**Sn**	**11 12 40.3**	**-2.6**
SDLR	**Sedlovina**	**6.17**	**267**	P	**Pn**	**11 11 49.5**	**+0.7**
UGLR	**Uglovaya**	**6.22**	**266**	P	**Pn**	**11 11 50.3**	**+0.8**
SMAR	**Somma**	**6.22**	**267**	P	**Pn**	**11 11 50.4**	**+0.8**
KRER	**Koryakskii**	**6.25**	**267**	P	**Pn**	**11 11 50.8**	**+0.9**
AVH	**Avacha**	**6.26**	**267**	P	**Pn**	**11 11 50.6**	**+0.6**
KRX	**Arik**	**6.29**	**268**	P	**Pn**	**11 11 51.7**	**+1.2**
KOK	**Koryaka**	**6.31**	**267**	P	**Pn**	**11 11 51.5**	**+0.7**
RUS	**Russkaya**	**6.61**	**260**	P	**Pn**	**11 11 55.4**	**+0.7**
GNL	**Ganaly**	**6.66**	**271**	P	**Pn**	**11 11 57.0**	**+1.5**
PETK	**Petropavlovsk-**	**6.90**	**267**	Pn	**Pn**	**11 12 00.1**	**+1.4**
	0.4nm,0.3s,baz=84,slow=29,SNR=9.3						
PETK				Sn	**Sn**	**11 13 14.8**	**-1.6**
	0.2nm,0.3s,baz=114,slow=11,SNR=1.3						
	1.1nm,0.5s						
KDAK	**Kodiak Island**	**21.54**	**65**	P	**P**	**11 15 04.1**	**-2.1**
	6.0nm,0.9s,baz=116,slow=10,SNR=2.0						
	6.0nm,0.9s						
ILAR	**Eielson Array**	**24.24**	**46**	P	**P**	**11 15 32.9**	**-0.9**
	0.4nm,0.6s,baz=254,slow=7.1,SNR=12						
ILAR				LR	LR	11 25 16.2	
	comp=Z,38nm,19.3s,baz=252,slow=37						
	0.4nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**34.33**	**184**	T	T	11 53 25.4	
	baz=2.5,slow=76,SNR=82						
H11N3	**WAKE ISLAND Hy**	**34.34**	**184**	T	T	11 53 29.1	
	baz=2.5,slow=76,SNR=77						
H11N1	**WAKE ISLAND Hy**	**34.35**	**184**	T	T	11 53 30.1	
	baz=2.5,slow=76,SNR=64						
H11S1	**WAKE ISLAND Hy**	**35.55**	**184**	T	T	11 55 01.5	
	baz=2.5,slow=76,SNR=98						
H11S3	**WAKE ISLAND Hy**	**35.57**	**184**	T	T	11 55 01.4	
	baz=2.5,slow=76,SNR=21						
H11S2	**WAKE ISLAND Hy**	**35.57**	**184**	T	T	11 55 02.1	
	baz=2.5,slow=76,SNR=50						
NVAR	**Mina Array Bea**	**50.27**	**77**	P	**P**	**11 19 13.8**	**+0.3**
	0.6nm,0.9s,baz=292,slow=8.3,SNR=3.9						
	0.6nm,0.9s						
PDAR	**Pinedale Array**	**52.23**	**67**	P	**P**	**11 19 28.6**	**+0.4**
	0.2nm,0.5s,baz=287,slow=6.1,SNR=2.7						
	0.2nm,0.5s						
NOA	**NORSAR Array B**	**63.90**	**348**	P	**P**	**11 20 49.9**	**+0.5**
	0.4nm,0.7s,baz=16,slow=6.5,SNR=2.0						
	0.4nm,0.7s						
TXAR	**Lajitas Array**	**65.21**	**74**	P	**P**	**11 20 59.1**	**+0.6**
	0.5nm,0.6s,baz=306,slow=4.6,SNR=10						
	0.5nm,0.6s						
MLR	**Muntele Rosu**	**75.98**	**334**	LR	LR	11 57 53.3	
	comp=Z,131nm,18.8s,baz=144,slow=38						
WRA	**Warramunga Arr**	**79.57**	**213**	P	**P**	**11 22 25.0**	**+1.1**
	0.6nm,1.1s,baz=27,slow=4.9,SNR=2.7						
	0.6nm,1.1s						

IDC 23 11:13:25.1±1.1, 55˚.80S×27˚.24W, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=47.4km s-min=32.4km az=74.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**46.82**	**183**	P	P	11 21 55.9	0.0
	0.5nm,1.0s,baz=189,slow=7.1,SNR=1.7						
	0.5nm,1.0s						
LPAZ	**La Paz**	**50.21**	**305**	P	P	11 22 23.3	-0.1
	1.0nm,0.8s,baz=135,slow=7.1,SNR=2.2						
	1.0nm,0.8s						
TORD	**Torodi Ar. Bea**	**72.85**	**30**	P	P	11 24 55.7	+0.1
	0.9nm,0.6s,baz=200,slow=6.4,SNR=5.8						
	0.9nm,0.6s						
ILAR	**Eielson Array**	**149.93**	**312**	PKPbc	PKPbc	11 33 15.2	-0.6
	0.2nm,0.6s,baz=126,slow=2.3,SNR=4.9						
MJAR	**Matsushiro Arr**	**158.34**	**147**	PKPab	PKPab	11 33 57.5	-0.5
	1.2nm,0.5s,baz=221,slow=5.2,SNR=5.6						

TUL ***23*** *11:35:02.5±1.0,36˚.48N±0˚.02×98˚.74W±0˚.04, h8km±4km, ML3.0, mb_Lg2.7/51(NEIC), Error ellipse: s-maj=4.1km s-min=2.8km az=76.0*

NEIC 23 11:35:02.6±0.7, 36˚.49N±0˚.02×98˚.73W±0˚.03, h8km±5km, Error ellipse: s-maj=3.9km s-min=3.0km az=100.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKCFA	**Oklahoma City**	**1.50**	**136**	Pn	Pn	11 35 29.5	-0.3
FNO	**Franklin**	**1.64**	**138**		Pn	11 35 32.0	+0.2
WMOK	**Wichita Mounta**	**1.75**	**181**		Pn	11 35 32.9	-0.5
T35A	**Sooner Cattle**	**1.83**	**76**		Pn	11 35 35.1	+0.7
R32A	**Long Quarter,**	**1.93**	**0**		Pn	11 35 36.8	+1.0
X34A	**Smith Ranch, M**	**2.03**	**159**		Pn	11 35 38.0	+0.9
TUL1	**Leonard**	**2.45**	**103**		Pn	11 35 43.0	+0.1
TUL1				IAmb_Lg		11 36 20.3	
	comp=Z,26nm,0.8s						
CBKS	**Cedar Bluff**	**2.45**	**341**	Pn	Pb	11 35 45.2	-1.8
AMTX	**Amarillo**	**2.89**	**237**	Pn	Pn	11 35 49.9	+0.8
X37A	**Clayton**	**3.33**	**124**	Pn	Pn	11 35 55.5	+0.4
X37A				IAmb_Lg		11 36 55.2	
	comp=Z,25nm,0.8s						
U38A	**Gravette**	**3.50**	**90**	Pn	Pn	11 35 58.4	+0.9
U38A				IAmb_Lg		11 36 53.6	
	comp=Z,18nm,0.8s						
W39A	**Magazine**	**4.22**	**106**	IAmb_Lg		11 37 22.4	
	comp=Z,23nm,0.8s						
Z38A	**Mt. Pleasant**	**4.46**	**135**	IAmb_Lg		11 37 25.1	
	comp=Z,19nm,0.8s						
S39A	**Bolivar**	**4.48**	**73**	Pn	Pn	11 36 10.1	-0.8
S39A				IAmb_Lg		11 37 25.9	
	comp=Z,12nm,0.7s						
T25A	**Trinidad**	**4.60**	**280**	Pn	Pn	11 36 12.8	+0.1
T25A				IAmb_Lg		11 37 33.4	
	comp=Z,18nm,0.8s						
OGNE	**Ogallala**	**5.14**	**331**	IAmb_Lg		11 37 46.0	
	comp=Z,12nm,0.7s						
P38A	**Dawn**	**5.16**	**51**	IAmb_Lg		11 37 56.1	
	comp=Z,11nm,0.8s						
WHAR	**Wooly Hollow**	**5.37**	**101**	IAmb_Lg		11 37 57.1	
	comp=Z,14nm,0.9s						
FCAR	**Ozark Folk Cen**	**5.38**	**94**	IAmb_Lg		11 37 55.0	
	comp=Z,10nm,0.7s						
WLAR	**White Oak Lake**	**5.39**	**120**	IAmb_Lg		11 38 07.5	
	comp=Z,17nm,1.1s						
W41B	**Gary Mavity, V**	**5.43**	**102**	IAmb_Lg		11 37 56.6	
	comp=Z,9.0nm,0.8s						
R40A	**Maddies Statio**	**5.45**	**69**	IAmb_Lg		11 37 59.5	
	comp=Z,12nm,0.7s						
UALR	**University of**	**5.48**	**106**	IAmb_Lg		11 38 10.2	
	comp=Z,20nm,1.2s						
Q24A	**Divide**	**5.65**	**298**	IAmb_Lg		11 38 03.6	
	comp=Z,11nm,0.7s						
435B	**Jarrell**	**5.78**	**170**	IAmb_Lg		11 38 09.9	
	comp=Z,11nm,0.7s						
Z41A	**Richland Creek**	**5.84**	**122**	IAmb_Lg		11 38 10.8	
	comp=Z,10.0nm,0.8s						
JCT	**Junction City**	**6.07**	**189**	IAmb_Lg		11 38 21.4	
	comp=Z,10.0nm,0.8s						
K31A	**O'Neill**	**6.12**	**360**	IAmb_Lg		11 38 33.3	
	comp=Z,12nm,0.7s						
PBMO	**Poplar Bluff**	**6.68**	**85**	IAmb_Lg		11 38 37.0	
	comp=Z,13nm,0.8s						
FVM	**French Village**	**6.79**	**75**	IAmb_Lg		11 38 41.9	
	comp=Z,9.7nm,0.7s						
PHWY	**Pilot Hill**	**7.11**	**315**	IAmb_Lg		11 38 48.3	
	comp=Z,10nm,1.0s						
S44A	**Carbondale**	**7.67**	**78**	IAmb_Lg		11 39 08.3	
	comp=Z,10nm,0.8s						
RSSD	**Black Hills**	**8.63**	**334**	IAmb_Lg		11 39 42.9	
	comp=Z,5.6nm,0.9s						
JFWS	**Jewell Farm**	**9.15**	**43**	IAmb_Lg		11 40 02.2	
	comp=Z,7.2nm,0.7s						

MOS ***23*** *11:35:36.9±0.9,36˚.44N×70˚.78E, h213km, mb5.4/69, Error ellipse: s-maj=4.1km s-min=3.1km az=99.7*

BJI ***23*** *11:35:36.3±0.0,36˚.52N×70˚.67E, h207km, mb5.3/78, mB5.0/44*

NEIC ***23*** *11:35:38.4±2.0,36˚.47N±0˚.05×70˚.69E±0˚.08, h210km±1km, mb5.5/399, Mwb5.3/29, Mww5.3, Error ellipse: s-maj=10.6km s-min=8.8km az=116.0*

NNC ***23*** *11:35:38.1±1.5,36˚.63N×70˚.56E, h204km±15km, mb5.0, mpv6.3, Error ellipse: s-maj=15.9km s-min=7.8km az=157.0*

NEIC ***23*** *11:35:38.4,36˚.46N×70˚.67E, h213km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr0.94; Mθθ-1.03; Mϕϕ0.09; Mrθ0.60; Mrϕ0.14; Mθϕ0.13; Fault plane solution: M₀1.17000×10¹⁷ NP1:ϕs288.89000°, δ30.94000°, λ109.54000°. NP2:ϕs86.41000°, δ61.02000°, λ78.66000°. Principal axes: T 1.1330, Plg72.0000°, Azm330.0000°; N 0.0686, Plg10.0000°, Azm92.0000°; P -1.2016, Plg15.0000°, Azm185.0000°;*

GCMT ***23*** *11:35:38.4±0.1,36˚.40N±0˚.01×70˚.56E±0˚.01, h214km±1km, MW5.3/137, Moment Tensor Solution. s88,c117; s137,c240; Duration: 1§1 Moment tensor: Scale 10¹⁷ Nm; Mrr0.91±.02; Mθθ-0.91±.02; Mϕϕ0.00±.02; Mrθ0.91±.02; Mϕθ0.00±.02; Mϕr0.23±.02; Best double couple: M₀1.30900×10¹⁷ NP1:ϕs280.00000°, δ23.00000°, λ108.00000°. NP2:ϕs80.00000°, δ68.00000°, λ83.00000°. Principal axes: T 1.3200, Plg66.0000°, Azm337.0000°; N -0.0210, Plg7.0000°, Azm83.0000°; P -1.2990, Plg23.0000°, Azm176.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***23*** *11:35:39,36˚.43N×70˚.55E, h220km, Moment Tensor Solution. Duration: 2§0 Moment tensor: Scale 10¹⁷Nm; Mrr0.80; Mθθ-0.93; Mϕϕ0.13; Mrθ0.74; Mϕθ0.03; Mϕr0.24; Fault plane solution: M₀1.17000×10¹⁷ NP1: ϕs287.00000°, δ26.00000°, λ116.00000°. NP2: ϕs78.00000°, δ66.00000°, λ78.00000°. Principal axes: T 1.1264, Plg66.0000°, Azm326.0000°; N 0.0764, Plg11.0000°, Azm83.0000°; P -1.2029, Plg21.0000°, Azm177.0000°;*

IDC ***23*** *11:35:39.2±0.8,36˚.37N×70˚.80E, h224km±6km, mb5.1/55, mbtmp5.7/60 Error ellipse: s-maj=6.9km s-min=4.9km az=1.0*

ISC 23 11:35:37.3±0.2, 36˚.40N±0˚.02×70˚.74E±0˚.02, h209km±1km, h209km:pP-P, n1520, σ1§54/1687, mb5.5/471, 776C-145D, Fault plane solution: NP1:ϕs311.94980°, δ39.25924°, λ127.43250°. **NP2:**ϕs87.27851°, δ59.83370°, λ63.58281°. **Principal axes:** T Plg64.5333°, Azm310.2545°; N Plg22.6221°, Azm101.2952°; P Plg11.0798°, Azm195.9759°; **Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.32**	**217**	Pn	Pn	**11 36 20.5**	**+0.5**
KBL				Sn	**S**	**11 36 51.3**	**-1.5**
KBL	**Kabul**	**2.32**	**217**	PN	**Pn**	**11 36 20.5**	**+0.5**
KBL						11 36 51.3	
KBL	**Kabul**	**2.32**	**217**	P	**Pn**	**11 36 20.5**	**+0.5**
	SNR=1021						
KBL				S	**S**	**11 36 52.6**	**-0.2**
CHGR	**Chuyangaron**	**2.58**	**331**		**Pn**	**11 36 22.7**	**0.0**
CHGR				Sn	**S**	**11 36 55.2**	**-2.7**
GAR	**Garm**	**2.62**	**353**	Pn	**Pn**	**11 36 23.6**	**+0.5**
GAR				Sn	**S**	**11 36 56.6**	**-2.1**
CEP	**Cherat**	**2.74**	**159**	⇑P	**Pn**	**11 36 25.7**	**+1.1**
CEP				S	**S**	**11 37 01.0**	**-0.1**
DRK	**Karamyk**	**3.19**	**15**		**Pn**	**11 36 30.6**	**+0.8**
CHCP	**Chirah Chowk**	**3.43**	**142**	P	**Pn**	**11 36 34.0**	**+1.5**
BTK	**Batken**	**3.65**	**1**	Pn	**Pn**	**11 36 34.4**	**+1.3**
BTK	**Batken**	**3.65**	**1**	PN	**Pn**	**11 36 34.4**	**+1.3**
THW	**Thamme Wali**	**3.69**	**167**	P	**Pn**	**11 36 34.4**	**+0.7**
SARP	**Sargodha**	**4.74**	**160**	P	**Pn**	**11 36 48.9**	**+0.2**
JMU	**Jammu**	**5.03**	**136**	*e*S	**S**	**11 37 44.5**	**-6.5**
TAS	**Tashkent**	**5.05**	**347**	Pn	**Pn**	**11 36 53.0**	**+0.6**
TAS				Sn	**S**	**11 37 48.8**	**-2.8**
KSH	**Kashi**	**5.17**	**51**	P	**Pn**	**11 36 49.6**	**-4.5**
KSH				S	S	11 37 42.5	-12
KSH				pmax	pmax		
	comp=Z,2μm,0.8s						
KSH				smax	smax		
	comp=N,4μm,1.1s						
KSH				smax	smax		
	comp=E,4μm,1.0s						
IUG	**luzhnay**	**5.77**	**355**	*d* iPN	**Pn**	**11 37 02.1**	**+0.5**
IUG				*e*S	**S**	**11 38 05.5**	**-2.8**
IUG	**luzhnay**	**5.77**	**355**	⇓*i*P	**Pn**	**11 37 02.2**	**+0.5**
	baz=354						
IUG				*e*S	**S**	**11 38 05.6**	**-2.8**
	baz=354						
CHM	**Chimkent**	**5.98**	**352**	*e*PN	**Pn**	**11 37 04.2**	**0.0**
CHM				*e*S	**S**	**11 38 11.6**	**-1.5**
CHM	**Chimkent**	**5.98**	**352**	*e*P	**Pn**	**11 37 04.2**	**0.0**
	baz=351						
CHM				*e*S	**S**	**11 38 11.6**	**-1.5**
	baz=351						
AML	**Almayashu**	**6.16**	**21**	P	**Pn**	**11 37 07.2**	**+0.1**
	SNR=1863						
AML	**Almayashu**	**6.16**	**21**	*i* P	**Pn**	**11 37 07.2**	**+0.1**
	SNR=708						
UCH	**Uchtor**	**6.51**	**26**	P	**Pn**	**11 37 11.8**	**+0.2**
	SNR=1331						
BRLS	**Borolday**	**6.66**	**354**	*e*PN	**Pn**	**11 37 09.0**	**-4.0**
BRLS	**Borolday**	**6.66**	**354**	*e*P	**Pn**	**11 37 09.0**	**-4.0**
	baz=352						
BRLS				*e*S	**S**	**11 38 21.5**	**-7.6**
	baz=352						

EKS2	**Erkin-Say**	**6.68**	**20**	P	**Pn**	**11 37 13.7**	**+0.3**
	SNR=651						
KK31	**Karatay Array**	**6.70**	**359**	Pn	**Pn**	**11 37 13.4**	**-0.1**
KK31				Sn	**S**	**11 38 25.1**	**-4.9**
KK31	**Karatay Array**	**6.70**	**359**	*e*PN	**Pn**	**11 37 13.4**	**-0.1**
KK31	**Karatay Array**	**6.70**	**359**	⇓P	**Pn**	**11 37 13.4**	**-0.1**
	676nm,0.6s,baz=188,slow=13,SNR=4931						
KK31				⇑S	**S**	**11 38 25.6**	**-4.4**
	399nm,0.4s,baz=252,slow=75,SNR=4.3						
KKAR	**Karatay Array**	**6.70**	**359**	Pn	**Pn**	**11 37 13.3**	**-0.3**
KKAR	**Karatay Array**	**6.70**	**359**		**Pn**	**11 37 13.5**	**0.0**
KKAR	**Karatay Array**	**6.70**	**359**	PN	**Pn**	**11 37 13.5**	**0.0**
AAK	**Ala-Archa**	**6.87**	**24**	P	**Pn**	**11 37 16.3**	**+0.4**
	SNR=136						
AAK	**Ala-Archa**	**6.87**	**24**	P	**Pn**	**11 37 16.3**	**+0.4**
	855nm,0.5s,baz=204,slow=7.6,SNR=900						
AAK				S	**S**	**11 38 31.0**	**-3.2**
	553nm,0.7s,baz=174,slow=22,SNR=7.8						
AAK	**Ala-Archa**	**6.87**	**24**	*i* P	**Pn**	**11 37 16.3**	**+0.4**
	SNR=200						
KBK	**Karagaybulak**	**7.04**	**26**	P	**Pn**	**11 37 18.5**	**+0.3**
	SNR=527						
ULHL	**Ulahol**	**7.23**	**34**	P	**Pn**	**11 37 20.6**	**0.0**
	SNR=251						
HRA	**Herat**	**7.23**	**256**	Pn	**Pn**	**11 37 21.2**	**+0.6**
CHMS	**Chumysh**	**7.28**	**24**	P	**Pn**	**11 37 21.5**	**+0.5**
	SNR=68						
CHMS	**Chumysh**	**7.28**	**24**	PN	**Pn**	**11 37 20.7**	**-0.4**
CHMS				S	**S**	**11 38 41.8**	**-1.9**
CHMS	**Chumysh**	**7.28**	**24**	⇓P	**Pn**	**11 37 20.7**	**-0.4**
	785nm,0.7s						
CHMS				⇓S	**S**	**11 38 41.1**	**-2.6**
	247nm,0.6s						
USP	**Ospenovka**	**7.44**	**22**	P	**Pn**	**11 37 22.9**	**-0.3**
	SNR=58						
TKM2	**Tokmak 2**	**7.51**	**28**	P	**Pn**	**11 37 24.5**	**+0.3**
	SNR=37						
TKM2	**Tokmak 2**	**7.51**	**28**	PN	**Pn**	**11 37 24.1**	**-0.1**
TKM2				S	**S**	**11 38 46.3**	**-3.1**
TKM2	**Tokmak 2**	**7.51**	**28**	⇑P	**Pn**	**11 37 24.2**	**-0.1**
	2μm,0.8s						
TKM2				⇓S	**S**	**11 38 46.4**	**-3.1**
	401nm,0.8s						
KDJ	**Kajisay**	**7.59**	**39**		**Pn**	**11 37 24.5**	**-0.8**
KDJ	**Kajisay**	**7.59**	**39**	PN	**Pn**	**11 37 24.5**	**-0.8**
TARG	**Taragay, Kyrgy**	**7.65**	**44**		**Pn**	**11 37 25.9**	**-0.3**
TARG	**Taragay, Kyrgy**	**7.65**	**44**	PN	**Pn**	**11 37 25.9**	**-0.3**
SGDS	**Sogindy**	**7.65**	**22**	*d* iPN	**Pn**	**11 37 25.2**	**-0.7**
SGDS				*e*S	**S**	**11 38 49.2**	**-3.3**
SGDS				pmax	pmax		
	comp=Z,128nm,0.6s						
SGDS	**Sogindy**	**7.65**	**22**	⇓*i*P	**Pn**	**11 37 25.2**	**-0.7**
	comp=Z,128nm,0.6s,baz=22						
SGDS				*e*S	**S**	**11 38 49.2**	**-3.3**
	baz=22						
AAA	**Alma-Ata**	**8.29**	**33**	*d* iPN	**Pn**	**11 37 35.2**	**+1.0**
AAA				*e*S	**S**	**11 39 06.0**	**-1.7**
AAA	**Alma-Ata**	**8.29**	**33**	⇓*i*P	**Pn**	**11 37 35.3**	**+1.0**
	baz=33						
AAA				*e*S	**S**	**11 39 06.0**	**-1.7**
	baz=33						
KNDC	**Almaty**	**8.32**	**33**	PN	**Pn**	**11 37 35.4**	**+0.8**
KNDC				S	**S**	**11 39 08.7**	**+0.3**
KNDC	**Almaty**	**8.32**	**33**	⇑P	**Pn**	**11 37 35.4**	**+0.8**
	comp=Z,3μm,0.8s						
KNDC				⇓S	**S**	**11 39 08.7**	**+0.3**
	comp=Z,726nm,1.1s						
PRZ	**Przheval'sk**	**8.48**	**42**		**Pn**	**11 37 37.6**	**+0.8**
PRZ	**Przheval'sk**	**8.48**	**42**	PN	**Pn**	**11 37 37.6**	**+0.8**
DDI	**Dehra Dun**	**8.61**	**133**	*e*P	**Pn**	**11 37 38.4**	**0.0**
DDI				*e*S	**S**	**11 39 08.8**	**-6.6**
DDI				*e*S	S	11 39 09.3	-6.1
DDI				IAML		11 39 13.2	
	comp=N,4μm,0.3s						
DDI				IAML		11 39 25.6	
	comp=E,6μm,0.7s						
KUU	**Kurty**	**8.62**	**28**	*d* iPN	**Pn**	**11 37 37.4**	**-1.0**
KUU				*e*S	**S**	**11 39 14.7**	**-0.7**
KUU				pmax	pmax		
	comp=Z,125nm,0.5s						
KUU	**Kurty**	**8.62**	**28**	⇓*i*P	**Pn**	**11 37 37.4**	**-1.0**
	comp=Z,124nm,0.5s,baz=28						
KUU				*e*S	**S**	**11 39 14.8**	**-0.7**
	baz=28						
CHKK	**Chushkaly**	**8.85**	**31**	*e*PN	**Pn**	**11 37 40.4**	**-0.9**
CHKK	**Chushkaly**	**8.85**	**31**	*e*P	**Pn**	**11 37 40.5**	**-0.9**
	baz=31						
SATY	**Saty**	**8.89**	**39**	*d* iPN	**Pn**	**11 37 41.5**	**-0.5**
SATY				pmax	pmax		
	comp=Z,148nm,1.1s						
SATY	**Saty**	**8.89**	**39**	⇓*i*P	**Pn**	**11 37 41.6**	**-0.5**
	comp=Z,148nm,1.1s,baz=40						
SATY				*e*S	**S**	**11 39 19.7**	**-2.3**
	baz=40						
ZHN	**Zhinishke**	**8.98**	**39**	*e*PN	**Pn**	**11 37 42.8**	**-0.4**
ZHN				pmax	pmax		
	comp=Z,86nm,1.1s						
ZHN	**Zhinishke**	**8.98**

comp=Z,167nm,0.8s,baz=212,slow=11,SNR=158
MKAR S **S** **11 41 06.7 -3.3**
comp=Z,5.8nm,0.8s,baz=229,slow=30,SNR=1.1
MKAR PcP **PcP** **11 43 50.8 +0.5**
comp=Z,15nm,0.6s,baz=298,slow=2.6,SNR=4.2
MKAR ScP **ScP** **11 47 01.3 -2.5**
comp=Z,10nm,0.9s,baz=240,slow=2.8,SNR=4.6
MKAR Makanchi Array 13.49 36 P **Pn** **11 38 39.8 -0.6**
MKAR Makanchi Array 13.49 36 P **Pn** **11 38 39.8 -0.6**
DANN Dangsing 13.61 122 *e*P **Pn** **11 38 41.6 -0.7**
comp=Z,1μm,0.7s
KOLN Koldanda 13.87 125 *e*P **Pn** **11 38 43.8 -1.7**
BHPL Bhopal 14.33 154 *e*P **Pn** **11 38 50.9 -0.1**
BHPL *e*S S 11 41 19.2 -11
BHPL *e*S S 11 41 21.2 -8.7
GKN Gorkha 14.43 122 *e*P **Pn** **11 38 52.2 -0.1**
WMQ Urumqi 14.92 55 P **P** **11 38 59.6 +0.9**
WMQ S **S** **11 41 41.0 -2.3**
WMQ pmax pmax
comp=Z,290nm,0.7s
WMQ pmax pmax
comp=Z,870nm,3.7s
DMN Daman 14.99 122 *e*P **Pn** **11 38 59.3 0.0**
comp=Z,624nm,0.4s
KKN Kakani 15.00 121 *e*P **Pn** **11 38 59.0 -0.4**
AB31 Akbulak array 15.07 332 P **Pn** **11 38 59.0 -0.8**
AB31 S **S** **11 41 43.7 -2.9**
AB31 Akbulak array 15.07 332 ⇑P **Pn** **11 38 59.0 -0.8**
comp=Z,367nm,0.8s,baz=145,slow=12,SNR=1778
AB31 ⇑S **S** **11 41 43.7 -2.9**
comp=Z,252nm,1.2s,baz=136,slow=23,SNR=6.3
ABKAR Akbulak array 15.07 332 P **Pn** **11 38 59.9 +0.1**
ABKAR Akbulak array 15.07 332 P **Pn** **11 38 59.3 -0.5**
JASK Jask - Hormozg 15.21 230 P **P** **11 39 02.1 +0.2**
SNR=25
JASK S **S** **11 41 47.1 -3.0**
ZSN Zaisan 15.22 39 *e*P **P** **11 39 02.8 +1.0**
ZSN *e*S **S** **11 41 45.6 -4.4**
ZSN Zaisan 15.22 39 *e*P **P** **11 39 02.8 +1.0**
baz=39
ZSN *e*S **S** **11 41 45.6 -4.4**
baz=39
PKI Pulchoki 15.23 121 *e*P **Pn** **11 39 01.9 -0.3**
comp=Z,3μm,0.8s
KURBB Kurchatov Arra 15.28 19 P **Pn** **11 39 01.9 -0.4**
comp=Z,73nm,0.9s,baz=211,slow=10,SNR=145
KURBB S **S** **11 41 46.0 -5.4**
comp=Z,26nm,1.0s,baz=181,slow=16,SNR=2.0
KURBB PcP **PcP** **11 43 53.4 +0.7**
comp=Z,17nm,0.6s,baz=213,slow=2.0,SNR=5.9
KURBB ScP **ScP** **11 47 05.7 -1.0**
comp=Z,8.7nm,0.9s,baz=218,slow=1.8,SNR=5.2
KURBB Kurchatov Arra 15.28 19 P **Pn** **11 38 59.8 -2.5**
KURBB S **S** **11 41 50.8 -0.6**
KURBB Kurchatov Arra 15.28 19 ⇓P **Pn** **11 38 59.8 -2.5**
comp=Z,168nm,1.0s
KURBB ⇓S **S** **11 41 50.8 -0.6**
comp=Z,217nm,1.1s
KURK Kurchatov 15.39 19 P **Pn** **11 39 02.2 -1.4**
KURK Kurchatov 15.39 19 **PcP** **11 43 53.4 +0.6**
KURK Kurchatov 15.39 19 P **Pn** **11 39 01.1 -2.5**
KURK S **S** **11 41 52.7 -1.2**
KURK Kurchatov 15.39 19 ⇓P **Pn** **11 39 01.1 -2.5**
comp=Z,147nm,1.0s
KURK ⇓S **S** **11 41 52.7 -1.2**
comp=Z,354nm,1.2s
JBP Jabalpur 15.42 146 *e*P **Pn** **11 39 03.5 -0.7**
JBP *e*S **S** **11 41 45.6 -9.5**
SEM Semipalatinsk 15.59 23 *e*P **P** **11 39 05.4 -0.7**
SEM *e*S **S** **11 41 57.5 -1.3**
SEM pmax pmax
comp=Z,129nm,1.0s
SEM Semipalatinsk 15.59 23 *e*P **P** **11 39 05.4 -0.7**
comp=Z,129nm,1.0s,baz=23
SEM *e*S **S** **11 41 57.6 -1.3**
baz=23
JIRN Jiri 15.72 119 *e*P **Pn** **11 39 08.5 +0.3**
comp=Z,2μm,0.6s
BANOM Banah 16.16 234 P **P** **11 39 12.5 0.0**
SNR=31
BANOM S **S** **11 42 06.6 -4.9**
BANOM Banah 16.16 234 *i* P **P** **11 39 12.6 +0.1**
SNR=184
SHME Shamm 16.18 234 P **Pn** **11 39 13.4 0.0**
SNR=28
SHME S **S** **11 42 07.2 -4.6**
SHME Shamm 16.18 234 *i* P **Pn** **11 39 13.0 -0.4**
SNR=151
RAMN Ramite 16.44 120 *e*P **Pn** **11 39 16.5 -0.2**
comp=Z,899nm,0.6s
MASF Masafi 16.64 233 P **Pn** **11 39 19.1 +0.2**
SNR=62
MSFE Esma-Masafi 16.65 233 *i* P **P** **11 39 17.7 -0.1**
SNR=109
AKTO Aktyubinsk 16.77 331 P **Pn** **11 39 20.4 +0.4**
comp=Z,909nm,0.8s,baz=141,slow=10,SNR=1453
AKTO S **S** **11 42 19.1 -3.9**
comp=Z,56nm,0.9s,baz=29,slow=22,SNR=2.7
AKTO Aktyubinsk 16.77 331 P **Pn** **11 39 19.7 -0.4**
AKTO S **S** **11 42 18.6 -4.4**
AKTO Aktyubinsk 16.77 331 ⇑P **P** **11 39 19.1 +0.3**
comp=Z,1μm,0.8s
AKTO ⇑S **S** **11 42 18.6 -4.4**
comp=Z,444nm,1.5s
WSAR Wadi Sarin 16.79 222 P **Pn** **11 39 20.5 -0.1**
comp=Z,278nm,0.8s,baz=73,slow=4.8,SNR=140
WSAR S **S** **11 42 21.2 -2.8**
comp=Z,19nm,0.6s,baz=113,slow=10,SNR=1.6
WSAR Wadi Sarin 16.79 222 P **Pn** **11 39 21.2 +0.6**
SNR=29
WSAR S **S** **11 42 25.6 +1.7**
BIDO Bidbid 16.84 224 P **Pn** **11 39 21.4 +0.2**
SNR=24
BIDO S **S** **11 42 26.4 +1.5**
UMQ Umm Al-Quwin 16.85 234 P **Pn** **11 39 23.3 +2.0**
SNR=12
UMQ S **S** **11 42 27.5 +2.3**
UMQ Umm Al-Quwin 16.85 234 *i* P **Pn** **11 39 21.2 -0.2**
SNR=14
UOSS Minazif 16.91 232 P **P** **11 39 19.7 -0.9**
UOSS Minazif 16.91 232 P **P** **11 39 20.1 -0.5**
UOSS Minazif 16.91 232 *i* P **P** **11 39 19.8 -0.9**
SNR=32
TAPN Taplejung 16.98 117 *e*P **Pn** **11 39 23.5 +0.3**
comp=Z,346nm,0.6s
HATD Hatta, Dubai 17.04 231 P **Pn** **11 39 23.3 -0.3**
SNR=51
HATD S **S** **11 42 31.1 +2.2**
HATD Hatta, Dubai 17.04 231 *i* P **P** **11 39 22.5 +0.4**
SNR=87
ODAN Odare 17.05 119 *e*P **Pn** **11 39 23.9 0.0**
comp=Z,164nm,0.8s
WBK Wadi Bani Khal 17.12 220 P **Pn** **11 39 25.1 +0.5**
SNR=33
WBK P **Pn** **11 39 25.1 +0.5**
SNR=33
ASHO Ashiyiah 17.19 231 P **Pn** **11 39 25.4 0.0**
SNR=113
ASHO Ashiyiah 17.19 231 *i* P **Pn** **11 39 25.0 -0.4**
SNR=340
NAZ Nazwa, Dubai 17.23 233 P **Pn** **11 39 25.5 -0.2**
SNR=55
NAZ Nazwa, Dubai 17.23 233 *i* P **P** **11 39 24.7 +0.6**
SNR=53
SMDO Samad 17.25 223 P **Pn** **11 39 26.5 +0.4**
SNR=21
HOQ Hoqain 17.25 226 P **P** **11 39 25.2 +0.8**
SNR=11
HOQ P **P** **11 39 25.2 +0.8**
SNR=11
HOQ S **S** **11 42 33.0 -0.2**
HOQ S **S** **11 42 33.0 -0.2**
JLN Jalan Bani Buh 17.28 218 P **Pn** **11 39 27.0 +0.6**
SNR=38
JLN S **S** **11 42 37.4 +3.7**
SOHO SOHO 17.30 229 *i* P **P** **11 39 24.1 -0.7**
SNR=25
FAQ Al Faqa, Dubai 17.44 232 P **Pn** **11 39 27.5 -0.8**
SNR=39
FAQ S **S** **11 42 39.0 +2.1**
FAQ Al Faqa, Dubai 17.44 232 *i* P **P** **11 39 26.8 +0.4**
SNR=49
LKRN Lenkeran, Azer 17.57 284 P **Pn** **11 39 30.3 +0.7**
GTK Tadong 17.64 116 *e*P **Pn** **11 39 31.5 +0.7**
GTK IAmb IAmb 11 39 36.8
comp=Z,148nm,0.6s
GTK *e*S **S** **11 42 37.5 -3.7**
ASUD Al Ashush, Dub 17.70 233 P **Pn** **11 39 30.9 -0.4**
SNR=31
ASUD Al Ashush, Dub 17.70 233 *i* P **P** **11 39 30.0 +0.8**
SNR=58
JMDO Jabal Madar 17.77 222 P **Pn** **11 39 32.4 +0.2**
SNR=24
ALNE Al Ain 17.84 231 P **Pn** **11 39 32.2 -0.7**
SNR=56
ALNE S **S** **11 42 43.3 -1.5**
ALNE Al Ain 17.84 231 *i* P **P** **11 39 31.8 +1.0**
SNR=26
AJN Ajban 17.96 233 P **Pn** **11 39 33.3 -1.0**
SNR=42
AJN S **S** **11 42 44.4 -2.8**
AJN Ajban 17.96 233 *i* P **P** **11 39 32.7 +0.6**
SNR=37
POO Poona 18.01 170 IAmb IAmb 11 39 38.2
comp=Z,721nm,1.1s
BOK Bokaro 18.12 130 *e*P **Pn** **11 39 35.6 -0.7**
BOK IAmb IAmb 11 39 37.8
comp=Z,800nm,1.0s
BOK *e*S **S** **11 42 46.5 -4.0**
LSA Lhasa 18.35 105 P **Pn** **11 39 39.4 0.0**
LSA Lhasa 18.35 105 P **Pn** **11 39 40.3 +0.9**
LSA LR LR
comp=Z,210nm,6.1s
LSA LR LR
comp=Z,290nm,8.2s
LSA LR LR
comp=Z,310nm,10.0s
LSA Lhasa 18.35 105 P **Pn** **11 39 39.4 0.0**
LSA Lhasa 18.35 105 P **Pn** **11 39 40.0 +0.6**
SEKA Sheki 18.95 292 P **P** **11 39 43.9 +1.2**
MHTO MHTO 18.98 219 P **Pn** **11 39 45.2 -1.1**
SNR=30
MNGR Mingechevir, A 18.99 290 P **P** **11 39 44.5 +1.5**
MAK Makhachkala 19.02 297 *e*P **P** **11 39 43.3 0.0**
MAK *e*S **S** **11 43 09.7 +1.9**
MAK pmax pmax
comp=Z,218nm,1.0s
MAK MLR MLR
comp=Z,755nm,17.0s
JRN Qarnain Island 19.13 238 P **P** **11 39 44.5 -0.2**
SNR=9.3
JRN S **S** **11 43 05.1 -5.3**
GOMU GeErMu 19.39 83 P **P** **11 39 49.6 +1.7**
GOMU pP Pn 11 39 53.1 +1.5
GOMU S **S** **11 43 17.8 +1.7**
GOMU pmax pmax
comp=Z,130nm,1.2s
GOMU pmax pmax
comp=Z,340nm,6.6s
GOMU LR LR
comp=Z,250nm,9.5s
GOMU LR LR
comp=Z,190nm,9.7s
GOMU LR LR
comp=Z,120nm,9.4s
DHUB DHUBRi 19.41 117 *e*P **Pn** **11 39 49.8 -1.7**
DHUB IAmb IAmb 11 39 50.9
comp=Z,212nm,1.1s
ZKTA Zakatala 19.43 293 P **P** **11 39 49.0 +1.1**
GANJ Ganja 19.55 290 P **P** **11 39 49.6 +0.4**
MZR Muzera 20.04 233 P **P** **11 39 53.9 -0.6**
SNR=24
MZR S **S** **11 43 23.9 -4.3**
MZR Muzera 20.04 233 *i* P **P** **11 39 53.7 -0.8**
SNR=46
DQM DQM 20.08 219 P **P** **11 39 56.3 +1.4**
SNR=9.0
DQM S **S** **11 43 31.7 +2.7**
ZAA0 Zalesovo Array 20.09 25 P **P** **11 39 55.4 +0.7**
ZAA0 Zalesovo Array 20.09 25 ⇑P **P** **11 39 54.4 -0.3**
comp=Z,99nm,1.1s
ZALV Zalesovo Beam 20.09 25 P **P** **11 39 55.3 +0.6**
comp=Z,318nm,0.6s,baz=220,slow=11,SNR=721
ZALV S **S** **11 43 28.1 -0.4**
comp=Z,58nm,0.8s,baz=200,slow=20,SNR=7.2
ZALV ScP **ScP** **11 47 15.6 -1.2**
comp=Z,4.3nm,0.7s,baz=209,slow=2.6,SNR=2.4
ZALV PKiKP **PKiKP** **11 51 46.9 -1.9**
comp=Z,6.1nm,0.4s,baz=178,slow=1.3,SNR=18
comp=Z,318nm,0.6s
ZALV Zalesovo Beam 20.09 25 P **P** **11 39 55.4 +0.7**
NAX Nakhchivan 20.13 286 P **P** **11 39 57.2 +1.8**
HYBB Hyderabad (bro 20.13 158 *e*P **P** **11 39 56.6 +1.1**
HYBB IVmB_BB 11 39 59.2
comp=Z,4μm,0.8s
HYBB *e*pP **pP** **11 40 31.9 +1.8**
HYBB *e*sP **sP** **11 40 58.8 +2.2**
HYBB *e*S **S** **11 43 30.5 +0.5**
HYBB IVMs_BB IVMs_BB 11 46 07.5
comp=Z,1μm,5.2s
HYB Hyderabad 20.13 158 *e*P **P** **11 39 56.7 +1.1**
HYB IAmb IAmb 11 39 59.9
comp=Z,640nm,0.8s
GROC Groznyy 20.29 297 *e*P **P** **11 39 58.6 +1.6**
GROC *e**PP **pP** **11 40 34.3 +2.7**
GROC *e*S **S** **11 43 34.6 +1.9**
GROC pmax pmax
comp=Z,186nm,0.6s
GUWA GUWAHATI 20.55 114 *e*P **P** **11 40 01.0 +1.1**
GUWA IAmb IAmb 11 40 03.5
comp=Z,83nm,0.6s
GUWA *e*S **S** **11 43 38.5 +0.6**
GNI Garni 20.73 288 P **P** **11 40 04.1 +2.2**
comp=Z,120nm,0.6s,baz=148,slow=2.0,SNR=40
comp=Z,120nm,0.6s
GNI Garni 20.73 288 P **P** **11 40 04.4 +2.6**
GNI Garni 20.73 288 *ce*P **P** **11 40 04.4 +2.6**
GNI pmax pmax
comp=Z,393nm,1.4s
GNI Garni 20.73 288 P **P** **11 40 04.2 +2.4**
GOA Goa 21.00 172 *e*P **P** **11 40 06.4 +1.7**
GOA IAmb IAmb 11 40 08.9
comp=Z,552nm,0.9s
SHL Shillong 21.05 115 P **P** **11 40 06.3 +0.9**
SHL Shillong 21.05 115 P **P** **11 40 06.3 +0.9**
SHL Shillong 21.05 115 P **P** **11 40 06.9 +1.5**
SNR=101
SHL Shillong 21.05 115 *e*P **P** **11 40 06.6 +1.2**
SHL IAmb IAmb 11 40 08.8
comp=Z,312nm,0.8s
TEZP TEZPUR 21.14 111 *e*P **P** **11 40 07.3 +1.2**
SVE Sverdlovsk 21.54 345 *d* P **P** **11 40 10.8 +1.0**
SVE *e*S **S** **11 43 58.6 +4.4**
SVE pmax pmax
comp=Z,655nm,1.4s
ITAN ITANAGAR 21.56 109 *e*P **P** **11 40 12.4 +2.0**
ITAN *e*S **S** **11 43 57.5 +2.2**
ZEI Tsey 21.59 295 *e*P **P** **11 40 10.8 0.0**
ZEI pmax pmax
comp=Z,59nm,0.7s
ARU Arti 21.66 341 P **P** **11 40 12.1 +1.0**
comp=Z,478nm,0.5s,baz=151,slow=7.8,SNR=338
ARU S **S** **11 43 57.1 +0.8**
comp=Z,24nm,0.8s,baz=357,slow=22,SNR=1.6
comp=Z,478nm,0.5s
ARU Arti 21.66 341 P **P** **11 40 12.0 +0.9**
ARU Arti 21.66 341 *c* P **P** **11 40 12.2 +1.1**
ARU *PP **pP** **11 40 44.8 -2.2**
ARU 11 40 55.6
ARU S **S** **11 43 59.6 +3.4**
ARU pmax pmax
comp=Z,1μm,1.0s
AKH Akhalkalaki 21.75 292 ⇑P **P** **11 40 14.9 +2.6**
AKH Akhalkalaki 21.75 292 P **P** **11 40 14.9 +2.6**
KBZ Khabaz 22.46 298 P **P** **11 40 19.3 +0.5**
comp=Z,48nm,0.7s,baz=122,slow=8.8,SNR=94
KBZ S S 11 44 25.5 +16
comp=Z,11nm,0.9s,baz=217,slow=22,SNR=4.4
comp=Z,48nm,0.7s
KBZ Khabaz 22.46 298 *ce*P **P** **11 40 19.1 +0.3**
KBZ pmax pmax
comp=Z,52nm,0.8s
MOKO MOKOCHONG 22.60 110 *e*P **P** **11 40 22.7 +2.3**
MOKO IAmb IAmb 11 40 23.8
comp=Z,162nm,0.6s
MOKO *e*S **S** **11 44 14.3 +2.2**
KOHI KOHIMA 22.61 112 ⇑ *e*P **P** **11 40 22.6 +2.1**
KOHI IAmb IAmb 11 40 30.6
comp=Z,110nm,0.5s
GOF Gofitskoye 22.62 301 ⇑ *e*P **P** **11 40 21.4 +1.2**
GOF *e*S **S** **11 44 10.5 -1.4**
GOF pmax pmax
comp=Z,293nm,1.0s
GOF smax smax
comp=E,108nm,1.3s
SHA1 Shidzhatmaz 22.64 298 *c* P **P** **11 40 21.6 +0.9**
KIV Kislovodsk 22.65 298 ⇑P **P** **11 40 21.7 +1.1**
KIV Kislovodsk 22.65 298 P **P** **11 40 20.9 +0.3**
KIV Kislovodsk 22.65 298 *e*P **P** **11 40 21.4 +0.8**
KIV *e*S **S** **11 44 14.6 +1.9**
KIV pmax pmax
comp=Z,75nm,1.0s
KIV MLR MLR
comp=Z,144nm,14.0s
KIV Kislovodsk 22.65 298 *i* P **P** **11 40 21.4 +0.8**
SNR=7.7
SHAO Shalim 22.66 220 *i* P **P** **11 40 22.0 +1.2**
SNR=16
BELG Belogornoye 22.84 322 P **P** **11 40 23.0 +0.9**
comp=Z,632nm,0.7s,baz=342,slow=1.5,SNR=228
BELG S **S** **11 44 22.5 +7.3**
comp=Z,92nm,0.9s,baz=128,slow=22,SNR=3.7
comp=Z,632nm,0.7s
BELG Belogornoye 22.84 322 *c* P **P** **11 40 22.9 +0.9**
BELG pmax pmax
comp=Z,171nm,0.9s
CHVG Ch'k'valeri 22.91 295 ⇑P **P** **11 40 25.8 +2.9**
DOK Doka 22.98 224 P **P** **11 40 25.0 +1.3**
IMP Imphal 23.00 114 *e*P **P** **11 40 26.6 +2.7**
IMP IAmb IAmb 11 40 28.7
comp=Z,135nm,0.6s
IMP *e*S **S** **11 44 20.8 +2.3**
GTA Gaotai 23.09 74 ⇑P **P** **11 40 26.9 +2.2**
GTA pP pP 11 41 10.1 +6.6
GTA PcP **PcP** **11 44 07.6 +0.7**
GTA S **S** **11 44 25.3 +5.4**
GTA SS SS 11 45 31.3 -33
GTA ScS **ScS** **11 51 08.8 -2.4**
GTA pmax pmax
comp=Z,290nm,1.0s
BATM Batumi 23.11 292 ⇑P **P** **11 40 27.0 +2.4**
WHFO Wadi Hawf 23.74 224 P **P** **11 40 31.5 +0.9**
RBK Rabkut 23.84 222 P **P** **11 40 32.5 +0.9**
KTUT Trabzon 24.54 290 ⇑P **P** **11 40 39.7 +2.1**
SOC Sochi 24.73 296 *e*P **P** **11 40 40.2 +0.8**
SOC *e*S **S** **11 44 48.7 +3.1**
SOC pmax pmax
comp=Z,42nm,0.8s
RAYN Ar Rayn 25.27 246 P **P** **11 40 44.9 +0.4**
RAYN IAmb IAmb 11 40 51.2
comp=Z,80nm,0.8s
RAYN Ar Rayn 25.27 246 P **P** **11 40 44.9 +0.4**
RAYN pmax pmax
comp=Z,80nm,0.8s
RAYN Ar Rayn 25.27 246 *i* P **P** **11 40 45.1 +0.6**
SNR=123
VRH Novokhopyorsk 25.43 315 *e*P **P** **11 40 45.4 -0.2**
VRH pmax pmax
comp=Z,180nm,1.4s
KIRV Kirov 26.24 334 P **P** **11 40 54.3 +1.6**
comp=Z,506nm,0.6s,baz=136,slow=3.9,SNR=220
comp=Z,506nm,0.6s
MOY Mondy 26.32 45 *e*P **P** **11 40 55.9 +2.2**
MOY pmax pmax
comp=Z,88nm,1.5s
ANN Anapa 26.50 299 *c* P **P** **11 40 55.5 +0.3**
ANN *e**PP **pP** **11 41 36.6 -0.6**
ANN pmax pmax
comp=Z,89nm,0.8s
LZH Lanzhou 26.63 81 *e*P **P** **11 40 59.3 +2.6**
LZH pP pP 11 41 40.3 +0.4
LZH sP sP 11 42 05.3 +0.8
LZH PcP **PcP** **11 44 16.0 +1.0**
LZH S **S** **11 45 18.0 +1.9**
LZH sS sS 11 46 31.3 -1.6
LZH SS SS 11 46 48.8 -28
LZH ScP **ScP** **11 47 34.5 -0.5**
LZH ScS **ScS** **11 51 24.5 -1.5**
LZH pmax pmax
comp=Z,88nm,1.0s
LZH pmax pmax
comp=Z,280nm,4.0s
VSR Storozhevoye 26.92 313 *e*P **P** **11 40 58.3 -0.6**
VSR pmax pmax
comp=Z,130nm,1.0s
VORR Voronezh 27.06 314 *e*P **P** **11 41 00.6 +0.4**
VORR pmax pmax
comp=Z,90nm,0.4s
ZAK Zakamensk 27.21 49 *e*P **P** **11 41 02.9 +1.3**
ZAK *e* 11 41 49.1
ZAK pmax pmax
comp=Z,49nm,1.4s
LPSR Galich'ya Gora 27.58 316 *e*P **P** **11 41 04.7 0.0**
LPSR pmax pmax
comp=Z,210nm,1.0s
BNN Bunyan 27.65 286 IAmb IAmb 11 41 08.9
comp=Z,80nm,1.0s
CD2 Chengdu 27.93 92 P **P** **11 41 10.5 +2.3**
CD2 S **S** **11 45 39.3 +2.8**
CD2 pmax pmax
comp=Z,150nm,0.6s
CD2 LR LR
comp=Z,290nm,10.6s
CD2 LR LR
comp=Z,300nm,8.8s
PZH PanZhiHua 28.12 102 P **P** **11 41 11.8 +1.8**
PZH pP **pP** **11 41 53.1 -0.3**
PZH sP **sP** **11 42 18.6 +0.5**
PZH S **S** **11 45 40.8 +1.2**
PZH sS **sS** **11 46 51.9 -4.8**
PZH SS ScP 11 47 21.8 -18
PZH ScS **ScS** **11 51 29.6 -3.3**
PZH pmax pmax
comp=Z,20nm,1.1s
PZH pmax pmax
comp=Z,130nm,5.3s
ASF Jabal al Asfar 28.20 271 P **P** **11 41 11.3 +0.8**
comp=Z,16nm,0.8s,baz=76,slow=1.7,SNR=23
comp=Z,16nm,0.8s
HWQ Hawqa 28.38 276 *e*P **P** **11 41 14.2 +2.0**
IRK Irkutsk 28.42 46 *e*P **P** **11 41 13.8 +1.6**
IRK pmax pmax
comp=Z,127nm,1.5s
SONM Songino Array 28.56 55 P **P** **11 41 15.2 +1.5**
comp=Z,19nm,0.6s,baz=258,slow=9.9,SNR=152
SONM PcP **PcP** **11 44 19.7 +0.3**
comp=Z,7.7nm,0.6s,baz=239,slow=4.4,SNR=9.2
SONM ScP **ScP** **11 47 39.7 -0.9**
comp=Z,6.3nm,1.0s,baz=223,slow=3.4,SNR=7.1
SONM SKKS **SKKSdf** **12 13 26.2 -7.7**
comp=Z,1.1nm,0.5s,baz=116,slow=3.3,SNR=5.3
comp=Z,19nm,0.6s
SONM Songino Array 28.56 55 P **P** **11 41 14.8 +1.1**
SONM IAmb IAmb 11 41 16.8
comp=Z,67nm,1.2s
SONM Songino Array 28.56 55 P **P** **11 41 14.8 +1.1**
SONM pmax pmax
comp=Z,67nm,1.2s
BHL Bhannes 28.71 275 *e*P **P** **11 41 16.9 +1.9**
SHBL Chebaa 28.78 274 *e*P **P** **11 41 18.0 +2.2**
SIM Simferopol' 28.86 299 *e*P **P** **11 41 16.8 +0.6**
SIM *e* 11 42 16.0
SIM *e* 11 44 20.0
SIM pmax pmax
comp=Z,41nm,1.2s
BZK Bozkurt 28.86 292 ⇑P **P** **11 41 17.3 +1.1**
ULN Ulaanbaatar 29.00 55 P **P** **11 41 19.1 +1.5**
ULN Ulaanbaatar 29.00 55 *ce*P **P** **11 41 19.1 +1.5**
ULN pmax pmax
comp=Z,41nm,1.0s
ULN Ulaanbaatar 29.00 55 P **P** **11 41 19.3 +1.7**
ULN Ulaanbaatar 29.00 55 P **P** **11 41 19.4 +1.7**
ULN sP **sP** **11 42 24.6 -1.3**
ULN x **PcP** **11 44 20.6 0.0**
ULN ScP **ScP** **11 47 41.3 -0.8**
ILGA Ilgaz 29.11 291 **PcP** **11 44 21.5 +0.5**
MMAI Mount Meron Ar 29.15 274 P **P** **11 41 20.5 +1.5**
comp=Z,10nm,0.6s,baz=74,slow=9.6,SNR=21
MMAI PcP **PcP** **11 44 21.8 +0.7**
comp=Z,25nm,0.5s,baz=60,slow=4.9,SNR=17
MMAI ScP **ScP** **11 47 42.7 0.0**
comp=Z,1.5nm,0.2s,baz=81,slow=4.7,SNR=1.8
comp=Z,10nm,0.6s
BR131 Keskin Array S 29.27 288 IAmb IAmb 11 41 22.5
comp=Z,280nm,1.8s
BR131 Keskin Array S 29.27 288 P **P** **11 41 21.4 +1.3**

SNR=23
BRTR Keskin Array B 29.27 288 P P 11 41 21.4 +1.3
comp=Z,22nn,0.7s,baz=106,slow=8.9,SNR=80
BRTR PcP **PcP 11 44 21.2 -0.1**
comp=Z,11nn,0.6s,baz=142,slow=4.1,SNR=10
comp=Z,22nn,0.7s
GHAJ Ghor Haditha 29.55 270 P P 11 41 24.1 +1.7
GHAJ lAmb lAmb 11 41 25.6
comp=Z,127nn,1.3s
KMI Kunming 29.57 103 ⇑P P 11 41 25.5 +2.5
KMI PP **PnPn 11 42 26.3 -2.2**
KMI S **S 11 46 03.4 +0.8**
KMI sS sS 11 47 17.9 -1.9
KMI ScP **ScP 11 47 43.3 -1.1**
KMI pmax pmax
comp=Z,35nn,0.5s
KMI LR LR
comp=Z,180nn,15.7s
KMI LR LR
comp=Z,220nn,14.1s
KMI LR LR
comp=Z,140nn,14.7s
KMI Kunming 29.57 103 P P **11 41 25.4 +2.5**
KMI ScP **ScP 11 47 43.7 -0.7**
PRGR Permogore 29.78 336 ⇑*iP* **P 11 41 25.3 +1.3**
PRGR *e* 11 42 29.9
OBN Obninsk 29.88 320 ⇑P **P 11 41 26.2 +1.2**
OBN Obninsk 29.88 320 P **P 11 41 26.1 +1.2**
comp=Z,72nn,0.5s,baz=68,slow=2.6,SNR=74
OBN PP **PP 11 42 35.3 -1.4**
comp=Z,42nn,0.8s,baz=59,slow=8.3,SNR=4.0
comp=Z,72nn,0.5s
OBN Obninsk 29.88 320 P **P 11 41 26.2 +1.2**
OBN Obninsk 29.88 320*c iP* **P 11 41 25.9 +0.9**
OBN *i* *PP **pP 11 42 09.1 +1.6**
OBN *i* 11 42 29.7
OBN *i* 11 44 21.8
OBN pmax pmax
comp=Z,290nm,0.6s
OBN Obninsk 29.88 320 P **P 11 41 26.1 +1.1**
OBN PP **PP 11 42 38.8 +2.0**
ANTO Ankara 29.90 288 PcP 11 44 23.5 +0.6
CSS Mathiatis 30.30 279 P **P 11 41 28.4 -0.7**
CSS PcP **PcP 11 44 23.9 -0.1**
CHTO Chiang Mai 30.36 118 P **P 11 41 30.7 +1.1**
CHTO Chiang Mai 30.36 118 P **P 11 41 30.7 +1.1**
CHTO pmax pmax
comp=Z,17nm,0.7s
CHTO Chiang Mai 30.36 118 P **P 11 41 31.7 +2.1**
CHTO Chiang Mai 30.36 118 P **P 11 41 31.6 +1.9**
PALK Pallekele 30.39 160 P **P 11 41 30.8 +0.8**
comp=Z,55nm,0.6s,baz=87,slow=9.7,SNR=42
PALK ScP **ScP 11 47 44.8 -2.1**
comp=Z,30nm,0.9s,baz=11,slow=9.9,SNR=5.0
comp=Z,55nm,0.6s
PALK Pallekele 30.39 160 P **P 11 41 30.6 +0.6**
PALK lAmb lAmb 11 41 32.6
comp=Z,68nm,0.7s
PALK Pallekele 30.39 160 P **P 11 41 30.6 +0.6**
PALK pmax pmax
comp=Z,68nm,0.7s
PALK Pallekele 30.39 160 ⇓P **P 11 41 31.8 +1.8**
PALK pP **pP 11 42 08.4 -4.4**
PALK x x 11 42 20.5
PALK ScP **ScP 11 47 45.6 -1.2**
CM31 Chiang Mai Arr 30.59 118 P **P 11 41 34.2 +2.5**
SNR=13
CMAR Chiang Mai Arr 30.59 118 P **P 11 41 32.4 +0.7**
comp=Z,27nn,0.8s,baz=296,slow=8.0,SNR=111
CMAR PcP **PcP 11 44 25.4 +0.4**
comp=Z,23nn,0.9s,baz=293,slow=4.3,SNR=11
CMAR ScP **ScP 11 47 45.6 -1.8**
comp=Z,7.7nm,0.8s,baz=295,slow=4.8,SNR=8.9
CMAR PKiKP **PKiKP 11 51 54.8 -0.9**
comp=Z,1.4nm,0.3s,baz=287,slow=1.8,SNR=6.6
comp=Z,27nn,0.8s
CMAR Chiang Mai Arr 30.59 118 P **P 11 41 32.8 +1.1**
CMAR PcP **PcP 11 44 25.3 +0.4**
CMAR Chiang Mai Arr 30.59 118 *i* P **P 11 41 33.2 +1.5**
CMAR pmax pmax
comp=Z,34nn,0.8s
EIL Elat 30.62 268 P **P 11 41 33.6 +1.7**
comp=Z,103nm,0.9s,baz=38,slow=4.0,SNR=48
comp=Z,103nm,0.9s
BTO Baotou 30.85 70 *eP* **P 11 41 34.1 +0.2**
BTO S **S 11 46 24.4 +2.4**
BTO LR LR
comp=Z,760nm,6.9s
BTO LR LR
comp=Z,930nm,9.6s
MDUB Mudurnu 31.06 290 PcP 11 44 25.8 -0.2
XAN Xi'an 31.15 83 *iP* **P 11 41 37.8 +1.3**
XAN S **S 11 46 28.6 +1.9**
XAN pmax pmax
comp=Z,87nm,1.1s
XAN pmax pmax
comp=Z,320nm,4.5s
XAN LR LR
comp=Z,330nm,7.6s
XAN LR LR
comp=Z,290nm,9.0s
XAN LR LR
comp=Z,230nm,6.1s
XAN Xi'an 31.15 83 P **P 11 41 37.9 +1.3**
XAN x **PcP 11 44 26.4 +0.2**
XAN ScP **ScP 11 47 48.0 -1.2**
KLMR Klimovskoe 31.47 331 *eP* **P 11 41 36.9 -2.0**
KLMR *e* 11 42 50.1
KLMR *e* 11 44 25.4
KLMR pmax pmax
comp=Z,635nm,1.2s
KLMR Klimovskoe 31.47 331 *eP* **P 11 41 36.9 -2.0**
KLMR AMP 11 41 41.4
comp=Z,635nm,1.2s
KLMR *e*PP **PnPn 11 42 50.1 -1.3**
KLMR *e*PcP **PcP 11 44 25.5 -1.0**
PBA Port Blair 31.63 136 P **P 11 41 43.5 +2.7**
PURM Purcari 31.94 301 ⇑P **P 11 41 44.7 +1.5**
HHC Hu-ho-hao-te 31.99 69 *eP* **P 11 41 46.0 +2.1**
HHC sP PP 11 42 56.9 -3.6
HHC S **S 11 46 43.8 +4.0**
HHC sS sS 11 47 55.3 -2.0
HHC pmax pmax
comp=Z,76nm,1.1s
HHC pmax pmax
comp=Z,280nm,5.4s
GYA Guiyang 32.05 98 ⇓*iP* **P 11 41 46.6 +2.0**
GYA sP sP 11 42 55.6 +2.5
GYA S **S 11 46 41.6 +0.5**
GYA pmax pmax
comp=Z,110nm,1.0s
GYA pmax pmax
comp=Z,210nm,3.5s
GYA LR LR
comp=Z,250nm,9.1s
GYA LR LR
comp=Z,140nm,6.3s
GYA LR LR
comp=Z,120nm,8.2s
ELL Elmali 32.62 283 P **P 11 41 51.1 +1.6**
ELL Elmali 32.62 283 P **P 11 41 51.1 +1.6**
MILM Milestii Mici 32.69 302 ⇑*iP* **P 11 41 50.0 +0.3**
comp=Z,250nm,0.8s
MILM *ep*P **pP 11 42 34.0 +1.5**
MILM Milestii Mici 32.69 302 ⇓*iP*P PP 11 43 06.0 -2.0
MILM *e*S **S 11 46 51.0 +0.8**
MILM *e*LR LR 11 51 34.0
comp=Z,300nm,11.0s
MILM Milestii Mici 32.69 302 ⇑P **P 11 41 50.6 +0.9**
MILM Milestii Mici 32.69 302*c iP* **P 11 41 50.0 +0.3**
MILM *e**PP **pP 11 42 34.0 +1.5**
MILM *i* 11 43 06.0
MILM *e*S **S 11 46 51.0 +0.8**
MILM pmax pmax
comp=Z,250nm,0.8s
KIS Kishinev 32.69 302 ⇑*iP* **P 11 41 50.0 +0.3**
comp=Z,160nm,1.0s
KIS *ep*P **pP 11 42 36.0 +3.5**
KIS Kishinev 32.69 302 *e*PP PP 11 43 10.0 +2.0
KIS Kishinev 32.69 302*c iP* **P 11 41 50.0 +0.3**
KIS *e**PP **pP 11 42 36.0 +3.5**
KIS *e* 11 43 10.0
KIS pmax pmax
comp=Z,160nm,1.0s
ENH Enshi 32.78 89 lAmb lAmb 11 41 53.7
comp=Z,153nm,0.9s
ENH **PcP 11 44 30.6 -0.2**
ENH Enshi 32.78 89 P **P 11 41 52.7 +1.9**
ENH pP **pP 11 42 32.7 -2.1**
ENH x **PcP 11 44 30.8 0.0**
ENH ScP **ScP 11 47 53.5 -1.3**
AKASG Malin Array Be 32.85 309 P **P 11 41 51.4 +0.4**
comp=Z,108nm,0.7s,baz=81,slow=7.3,SNR=487
AKASG PP **PP 11 43 10.9 +1.3**
comp=Z,36nn,0.9s,baz=94,slow=11,SNR=12
AKASG PcP **PcP 11 44 29.5 -1.1**
comp=Z,5.2nn,0.5s,baz=76,slow=3.5,SNR=5.1
AKASG ScP **ScP 11 47 52.6 -2.0**
comp=Z,3.9nm,0.7s,baz=72,slow=4.3,SNR=4.4
comp=Z,108nm,0.7s
AKASG Malin Array Be 32.85 309 *i* P **P 11 41 51.4 +0.4**
AKASG pmax pmax
comp=Z,99nm,0.5s
AKBB Malin Array Si 32.85 309*ce*P **P 11 41 51.2 +0.2**
TPGR Topolog 32.91 298 ⇑P **P 11 41 52.9 +1.2**
MFTR Murfatlar 32.91 297 ⇑P **P 11 41 53.2 +1.5**
TIRR Tirgusor 32.91 297 ⇑P **P 11 41 52.7 +1.0**
AKAS Kas 32.97 282 PcP 11 44 31.2 -0.2
SORM Soroca 33.09 304 ⇑P **P 11 41 53.5 +0.4**
TIY Taiyuan 33.10 75 *eP* **P 11 41 55.3 +1.8**
TIY S **S 11 46 57.4 +0.4**
TIY pmax pmax
comp=Z,43nm,0.7s
CFR Carcaliu 33.11 299 ⇑P **P 11 41 54.3 +1.0**
VLDR Vladesti 33.15 300 ⇑P **P 11 41 55.4 +1.6**
HARR Harsova 33.25 298 ⇑P **P 11 41 56.4 +1.8**
VASR Vaslui 33.38 301 ⇑P **P 11 41 57.0 +1.3**
TUDR 33.44 300 ⇑P **P 11 41 58.7 +2.4**
GHRR 33.63 300 ⇑P **P 11 41 60.0 +2.2**
PRD Provadia 33.69 295 P **P 11 41 59.0 +0.6**
LYN LuoYang 33.84 81 ⇑*iP* **P 11 42 02.0 +2.1**
LYN pP pP 11 42 47.3 +3.4
LYN sP sP 11 43 08.5 0.0
LYN S **S 11 47 12.1 +3.8**
LYN sS sS 11 48 24.9 -1.2
LYN SS **SS 11 49 29.1 -11**
LYN pmax pmax
comp=Z,100nm,1.2s
VRI Vrincioaia 34.10 300 ⇓P **P 11 42 04.2 +2.2**
PLOR Plostina 34.15 300 ⇑P **P 11 42 04.7 +2.3**
RAZG Razgrad 34.32 296 ⇓P **P 11 42 05.6 +1.8**
NEHR Nehoiu 34.40 299 ⇑P **P 11 42 07.4 +2.8**
MNK Minsk 34.43 315 *i* P **P 11 42 06.5 +1.9**
MNK *i* *PP **pP 11 42 50.8 +3.1**
MNK *i* *SP **sP 11 43 14.2 +2.4**
MNK *i* 11 43 28.8
MNK *i* 11 44 36.8
MNK *i* S **S 11 47 19.5 +2.8**
MNK pmax pmax
comp=N,24nm,0.7s
MNK pmax pmax
comp=E,10.0nm,0.7s
MNK pmax pmax
comp=Z,163nm,0.7s
MNK MLR MLR
comp=E,31nm,18.0s
MNK MLR MLR
comp=N,299nm,14.0s
MNK MLR MLR
comp=Z,5μm,20.0s
MNK Minsk 34.43 315 *i* P **P 11 42 06.5 +1.9**
comp=E,10.0nm,0.7s
MNK *i* P **P 11 42 06.5 +1.9**
comp=N,24nm,0.7s
MNK *i* P **P 11 42 06.5 +1.9**
comp=Z,163nm,0.7s,baz=104
MNK *i* pP **pP 11 42 50.8 +3.1**
MNK *i* sP **sP 11 43 14.2 +2.4**
MNK *i* PP **PnPn 11 43 28.8 +1.2**
MNK *i* S **S 11 47 19.6 +2.8**
MNK *i* SS **SS 11 49 56.3 +3.0**
MNK *i* LR LR 11 54 33.9
MNK *i* LRM MLR 11 57 29.7
comp=E,31nm,18.4s
MNK *i* LRM MLR 11 57 40.8
comp=N,299nm,14.4s
MNK *i* LRM MLR 11 57 51.3
comp=Z,5μm,20.3s
COVR Voineasa-Covas 34.47 300 ⇑P **P 11 42 07.1 +2.0**
BIZ Bicaz 34.55 302 ⇑P **P 11 42 07.1 +1.3**
MLR Muntele Rosu 34.65 299 ⇑P **P 11 42 09.5 +2.7**
MLR Muntele Rosu 34.65 299 P **P 11 42 09.3 +2.4**
comp=Z,240nm,0.8s,baz=80,slow=2.8,SNR=239
MLR PP **PnPn 11 43 33.1 +2.5**
comp=Z,66nm,1.0s,baz=81,slow=11,SNR=4.0
MLR PcP **PcP 11 44 35.8 -0.2**
comp=Z,32nm,0.7s,baz=176,slow=3.2,SNR=3.3
comp=Z,240nm,0.8s
SZH Strazhica 34.75 295 P **P 11 42 08.0 +0.4**
PUL Pulkovo 34.88 325*ce*P **P 11 42 09.8 +1.4**
PUL pmax pmax
comp=Z,498nm,0.6s
ALN Alexandroupoli 34.91 291 P **P 11 42 09.2 +0.3**
ALN Alexandroupoli 34.91 291 lAmb lAmb 11 42 11.4
comp=Z,100nm,1.2s
ALN Alexandroupoli 34.91 291 P **P 11 42 09.8 +0.9**
HNS HongShan 34.94 75 ⇑P **P 11 42 11.1 +1.9**
HNS pP **pP 11 42 53.4 -0.2**
HNS sP **sP 11 43 16.1 -2.2**
HNS PP **PnPn 11 43 38.5 +4.5**
HNS PcP **PcP 11 44 37.1 +0.3**
HNS S **S 11 47 28.8 +3.9**
HNS ScP **ScP 11 48 01.0 -1.2**
HNS PcS **PcS 11 48 21.0 -2.8**
HNS sS **sS 11 48 44.0 +1.0**
HNS ScS **ScS 11 52 05.3 -1.1**
HNS pmax pmax
comp=Z,61nm,1.0s
HNS LR LR
comp=Z,250nm,10.8s
HNS LR LR
comp=Z,160nm,14.3s
HNS LR LR
comp=Z,200nm,18.6s
DOPR Dopca 35.03 300 ⇓P **P 11 42 11.7 +1.7**
XLT XiLinHaoTe 35.09 63 ⇑*iP* **P 11 42 13.1 +2.5**
XLT pP pP 11 42 55.3 +0.6
XLT sP sP 11 43 19.0 -0.2
XLT S **S 11 47 31.0 +3.6**
XLT sS sS 11 48 43.5 -2.0
XLT SS **SS 11 49 55.9 -13**
XLT pmax pmax
comp=Z,28nm,1.2s
XLT pmax pmax
comp=Z,210nm,3.7s
NACGM Naroch 35.14 316 *i* P **P 11 42 11.6 +0.9**
baz=104
BURAR Bucovina Array 35.17 303 ⇑P **P 11 42 12.4 +1.2**
BURAR Bucovina Array 35.17 303 lAmb lAmb 11 42 13.6
comp=Z,96nm,0.8s
BURAR Bucovina Array 35.17 303 P **P 11 42 12.3 +1.2**
BUR08 Bucovina Ar. S 35.18 303 lAmb lAmb 11 42 13.4
comp=Z,55nm,0.8s
IDID Didziasalis 35.26 317 *eP* **P 11 42 13.0 +1.2**
VOIR 35.28 299 ⇑P **P 11 42 13.6 +1.4**
VOIR 35.28 299 P **P 11 42 13.5 +1.4**
KDZ Kurdzhali 35.29 293 P **P 11 42 13.0 +0.8**
ATD Arta Tunnel 35.30 233 P **P 11 42 14.5 +1.9**
comp=Z,30nm,0.8s,baz=41,slow=9.8,SNR=5.9
comp=Z,30nm,0.8s
ATD Arta Tunnel 35.30 233 P **P 11 42 15.4 +2.8**
ATD x x 11 43 07.6
ATD sP **sP 11 43 14.9 -6.3**
HUMR Humele 35.37 298 ⇓P **P 11 42 14.2 +1.5**
BOD Bodaibo 35.56 39 *eP* **P 11 42 14.8 +0.6**
BOD pmax pmax
comp=Z,114nm,1.2s
IIGN Ignalina 35.56 316 *eP* **P 11 42 15.6 +1.3**
ARR Arges 35.58 299 ⇑P **P 11 42 16.2 +1.5**
BJT Baijiatuau 35.58 70 P **PcP 11 44 39.4 +0.7**
BJT Baijiatuau 35.58 70 P **P 11 42 16.7 +2.0**
BJT x **PcP 11 44 39.4 +0.7**
BJT ScP **ScP 11 48 03.5 -1.1**
BJI Beijing 35.58 70 P **P 11 42 16.5 +1.8**
BJI PcP **PcP 11 44 39.1 +0.5**
BJI S **S 11 47 38.5 +3.7**
BJI ScP **ScP 11 48 03.5 -1.0**
BJI PcS **PcS 11 48 27.3 +1.3**
BJI sS **sS 11 48 56.0 +3.0**
BJI ScS **ScS 11 52 09.8 0.0**
BJI pmax pmax
comp=Z,18nm,0.9s
BJI pmax pmax
comp=Z,170nm,5.2s
ISAL Salakas 35.66 317 *eP* **P 11 42 16.5 +1.3**
MDB Medias 35.73 300 ⇑P **P 11 42 18.5 +2.7**
ARCR ARCALIA 35.74 302 ⇑P **P 11 42 18.3 +2.3**
KAAM Kaadhehdhoo 35.79 176 P **P 11 42 18.2 +1.6**
ZKR Zakros 35.92 281 P **P 11 42 16.5 -1.1**
APE Apeiranthos 35.98 285 ⇑P **P 11 42 19.3 +1.1**
LVV L'vov 36.06 307 *eP* **P 11 42 19.0 +0.4**
LVV *e* 11 43 46.5
LVV *e* 11 44 39.5
LVV *eS* **S 11 47 42.0 +0.2**
VSU Vasula 36.13 322*c iP* **P 11 42 19.6 +0.5**
VSU pmax pmax
comp=Z,1μm,1.4s
VSU Vasula 36.13 322 *eP* **P 11 42 19.8 +0.8**
LOT Lotru 36.18 299 ⇑P **P 11 42 21.3 +1.4**
THR6 Thira Island, 36.25 284 P **P 11 42 18.7 -1.7**
CJR Cluj-Napoca 36.27 301 ⇑P **P 11 42 22.6 +2.1**
THR9 Santorini-Faro 36.28 284 P **P 11 42 18.5 -2.1**
BMR Baia Mare 36.33 303 ⇑P **P 11 42 22.8 +1.9**
CNSH ChangSha 36.36 91 ⇑P **P 11 42 22.6 +1.2**
CNSH pmax pmax
comp=Z,150nm,0.9s
CNSH LR LR
comp=Z,250nm,11.7s
CNSH LR LR
comp=Z,170nm,17.9s
NVR Nevrokopi 36.48 292 P **P 11 42 22.4 0.0**
MMB Musomiste 36.55 293 P **P 11 42 23.0 +0.1**
WHN Wuhan 36.60 86 ⇑P **P 11 42 23.8 +0.4**
WHN pP **pP 11 43 08.9 +1.1**
WHN PcP **PcP 11 44 41.9 0.0**
WHN S **S 11 47 52.9 +2.4**
WHN ScP **ScP 11 48 07.0 -1.5**
WHN pmax pmax
comp=Z,370nm,1.2s
SRE Strehaia 36.62 298 ⇑P **P 11 42 24.1 +0.6**
MESR Meseseni 36.70 302 ⇓P **P 11 42 26.4 +2.3**
HRKL Herakleio 36.75 282 P P 11 42 19.4 -5.2
DEV Deva 36.77 300 ⇑P **P 11 42 26.5 +1.8**
VTS Vitosha 36.79 295 P **P 11 42 26.0 +1.0**
PAIG Paliouri 36.84 290 P **P 11 42 23.1 -2.2**
PUNG Punghina 36.85 297 ⇑P **P 11 42 26.5 +1.2**
PABE Paberze 36.85 316 *eP* **P 11 42 26.0 +0.9**
DRGR 36.87 302 ⇑P **P 11 42 27.2 +1.6**
DRGR 36.87 302 P **P 11 42 27.2 +1.6**
DRGR pmax pmax
comp=Z,86nm,0.9s
KWP Kalwaria Pacla 36.90 306 *eP* **P 11 42 27.0 +1.3**
IDI Anoyia 36.92 282 ⇑P **P 11 42 26.1 -0.1**
IDI Anoyia 36.92 282 P **P 11 42 25.6 -0.5**
IDI Anoyia 36.92 282 lAmb lAmb 11 42 28.2
comp=Z,76nm,0.7s
VSVD Vaisvydziai 36.97 317 *eP* **P 11 42 27.3 +1.2**
KKB Krupnik 36.99 293 P **P 11 42 27.0 +0.4**
SUW Suwalki 37.04 314 *eP* **P 11 42 27.1 +0.3**
SUW Suwalki 37.04 314 *eP* **P 11 42 27.1 +0.3**
PTL Penteli 37.06 287 P **P 11 42 26.4 -0.8**
TIA Tai'an 37.09 76 ⇑P **P 11 42 29.3 +1.8**
TIA pP **pP 11 43 17.6 +5.3**
TIA sP **sP 11 43 39.1 +2.5**
TIA S **S 11 48 01.3 +3.5**
TIA pmax pmax
comp=Z,39nm,0.8s
TIA pmax pmax
comp=Z,290nm,3.5s
TIA LR LR
comp=Z,150nm,7.9s
TIA LR LR
comp=Z,150nm,13.1s
TIA LR LR
comp=Z,250nm,11.4s
DJES Djerdap 37.11 298 ⇑P **P 11 42 27.8 +0.2**
UZH Uzhgorod 37.15 305 ⇓*iP* **P 11 42 28.6 +0.8**
UZH *i* 11 43 58.5
VLY Voula,Athens 37.16 287 P **P 11 42 28.3 +0.3**
KOLS Kolonicke sedl 37.16 305 *eP* **P 11 42 29.5 +1.5**
KOLS pmax pmax
comp=Z,96nm,0.7s
KOLS Kolonicke sedl 37.16 305 *eP* **P 11 42 29.5 +1.5**
KOLS *e*PP **PP 11 43 56.7 -0.5**
ATH Athens Observa 37.19 287 P **P 11 42 27.2 -1.1**
XOR Xorichti 37.31 289 P **P 11 42 27.8 -1.5**
FINES FINESS Array B 37.45 326 P **P 11 42 31.2 +1.1**
comp=Z,82nm,0.4s,baz=120,slow=9.6,SNR=913
FINES PP **PP 11 44 01.0 +1.0**
comp=Z,31nm,0.8s,baz=106,slow=14,SNR=4.3
FINES PcP **PcP 11 44 44.3 +0.5**
comp=Z,8.0nm,0.5s,baz=114,slow=3.4,SNR=1.2
FINES PKiKP **PKiKP 11 51 58.7 -0.8**
comp=Z,1.7nm,0.6s,baz=92,slow=3.3,SNR=1.4
comp=Z,82nm,0.4s
FINES FINESS Array B 37.45 326 *i* P **P 11 42 31.2 +1.1**
FINES pmax pmax
comp=Z,81nm,0.4s
LVZ Lovozero 37.48 339 P **P 11 42 31.3 +0.9**
LVZ Lovozero 37.48 339*ce*P **P 11 42 31.2 +0.9**
LVZ pmax pmax
comp=Z,544nm,1.3s
LVZ Lovozero 37.48 339 P **P 11 42 31.3 +0.9**
LVZ sP **sP 11 43 33.5 -5.2**
IMMV Iera Moni Meta 37.59 283 P **P 11 42 31.5 -0.2**
LKR Lokris 37.60 288 P **P 11 42 29.7 -2.0**
SIRR Siria 37.62 301 ⇓P **P 11 42 33.8 +2.0**
APA Apatity 37.65 338 ⇓*iP* **P 11 42 31.5 -0.2**
APA *i* *PP **pP 11 43 16.0 +0.1**
APA *i* 11 44 43.0
APA *i* S **S 11 48 01.0 -4.4**
APA pmax pmax
comp=Z,10.0nm,1.0s
APA MLR MLR
comp=Z,500nm,13.0s
GVDS Gavdos 37.67 282 P **P 11 42 32.5 +0.1**
MTSE Matsula 37.67 321 *eP* **P 11 42 32.9 +0.9**
GVD Gavdhos 37.67 282 P **P 11 42 32.1 -0.3**
MDVR Moldovita 37.68 298 ⇑P **P 11 42 33.8 +1.4**
BZS Buzias 37.68 300 ⇑P **P 11 42 33.8 +1.5**
CRVS Cervenica-Dubn 37.70 305 *eP* **P 11 42 33.8 +1.3**
CRVS pmax pmax
comp=Z,46nm,0.7s
CRVS Cervenica-Dubn 37.70 305 *eP* **P 11 42 33.8 +1.3**
CRVS *ep*PP **PP 11 44 02.5 -0.5**
LIT Litokhoron 37.71 291 lAmb lAmb 11 42 34.2
comp=Z,80nm,1.1s
RODP Rodopos 37.74 283 P **P 11 42 33.7 +0.8**
BOVS Bovan 37.79 297 ⇑P **P 11 42 33.7 +0.5**
STHS Stebnicka Huta 37.85 306 *eP* **P 11 42 37.9 +4.2**
STHS *e*PP **PnPn 11 44 09.9 +1.4**
ANKY Antikythira Is 38.02 284 P **P 11 42 31.8 -3.4**
AGG Agios Georgios 38.03 289 P **P 11 42 34.9 -0.5**
AGG Agios Georgios 38.03 289 P **P 11 42 35.6 +0.2**
PBUR Paburge 38.08 317 *eP* **P 11 42 36.3 +0.8**
VLI Veliai 38.08 285 P **P 11 42 34.4 -1.4**
KTHA Kythira Island 38.10 284 P **P 11 42 33.9 -2.1**
SRIT Nakonsritamara 38.14 129 lAmb lAmb 11 42 38.9
comp=Z,50nm,0.6s
KTHR Kythira 38.15 284 P **P 11 42 35.3 -1.0**
THL Klokotos Trika 38.17 290 P **P 11 42 35.7 -0.8**
MAKR Makrakomi, Fth 38.19 289 P **P 11 42 36.0 -0.7**
SLIT Slitere, Latvi 38.20 319 *eP* **P 11 42 36.4 0.0**
BEL Belsk 38.24 310 *eP* **P 11 42 37.8 +0.9**
KECS Kecovo 38.35 304 *eP* **P 11 42 39.4 +1.6**
KECS pmax pmax
comp=Z,52nm,0.6s
KECS Kecovo 38.35 304 *eP* **P 11 42 39.4 +1.6**
KECS *e*PP **PnPn 11 44 14.9 +0.5**
KLV Kalavryta, Ach 38.38 287 P **P 11 42 36.4 -1.9**
QIZ Qiongzhong 38.39 106 P **P 11 42 39.3 +0.8**
QIZ S **S 11 48 17.6 0.0**
QIZ sS **sS 11 49 37.3 +0.7**
QIZ pmax pmax
comp=Z,99nm,4.2s
ANX Ano Chora 38.44 288 P **P 11 42 35.9 -2.9**
EVR Evrytania 38.45 289 P **P 11 42 38.3 -0.7**
NIE Niedzica 38.47 306 *eP* **P 11 42 40.9 +2.0**
EFP Efpalio 38.48 288 P **P 11 42 38.1 -1.0**
PENT Pentalofos 38.71 291 P **P 11 42 40.5 -0.6**

PVO Paravola 38.73 289 P **P** **11 42 41.5 +0.3**
ITM Ithomi 38.76 286 P **P** **11 42 39.5 -1.9**
PSZ Piszkesteto 38.76 304 ⇑P **P** **11 42 42.8 +1.5**
PSZ Piszkesteto 38.76 304 P **P** **11 42 42.9 +1.6**
OJC Ojcow 38.80 307 *e*P **P** **11 42 42.2 +0.6**
OJC Ojcow 38.80 307 IAmb IAmb 11 42 43.4
comp=Z,144nm,1.1s
OJC Ojcow 38.80 307 P **P** **11 42 41.5 -0.1**
KLNR Kaliningrad 38.84 314*c* *i*P **P** **11 42 42.3 +0.5**
KLNR pmax pmax
comp=Z,251nm,0.6s
DIVS Divibare 38.97 297⇑*i*P **P** **11 42 44.1 +0.9**
PYL PYLOS 38.97 286 P **P** **11 42 41.1 -2.1**
FRGS Fruska Gora 38.99 299 ⇑P **P** **11 42 44.5 +1.3**
FRGS Fruska Gora 38.99 299⇑*i*P **P** **11 42 44.2 +1.0**
LANS Liptovska Anna 39.01 306 *e*P **P** **11 42 45.5 +2.1**
LANS pmax pmax
comp=Z,24nm,0.6s
LANS Liptovska Anna 39.01 306 *e*P **P** **11 42 45.5 +2.1**
LANS *e*PP **PP** **11 44 18.1 +0.8**
JAN Janina 39.03 290 P **P** **11 42 42.1 -1.6**
SJES Sjenica 39.09 296⇑*i*P **P** **11 42 45.4 +1.2**
LSK Leskovik 39.12 291 P **P** **11 42 45.2 +0.7**
IVA Berane 39.20 296 *e*P **P** **11 42 46.4 +1.3**
TEKS Tekeris 39.25 298⇑*i*P **P** **11 42 45.8 +0.4**
RAF Rauma 39.30 325 *e*P **P** **11 42 45.7 +0.3**
NYDR Nydri-Lefkada 39.35 289 P **P** **11 42 45.5 -0.7**
TSLK Tsoukalades, L 39.35 289 P **P** **11 42 46.5 +0.2**
LKD2 Lefkada island 39.36 289 P **P** **11 42 44.4 -2.0**
BUD Budapest 39.36 303 P **P** **11 42 47.9 +1.6**
EVGI Lefkada island 39.40 289 P **P** **11 42 45.2 -1.5**
BBLS Lazići 39.42 297⇑*i*P **P** **11 42 47.7 +0.8**
VYHS Vyhne 39.44 305 *e*P **P** **11 42 48.1 +1.1**
VYHS pmax pmax
comp=Z,13nm,1.2s
VYHS Vyhne 39.44 305 *e*P **P** **11 42 48.1 +1.1**
VYHS *e*PP **PnPn** **11 44 27.6 +0.5**
IGT Igoumenitsa 39.45 290 P **P** **11 42 46.0 -1.1**
RUDO Rudo 39.47 297 *e*P **P** **11 42 47.5 +0.2**
KOME Kolasin 39.48 296⇑*i*P **P** **11 42 47.7 +0.3**
PSDA Pessada-Kefalo 39.57 288 P **P** **11 42 45.8 -2.3**
NJ2 Nanjing 39.69 82⇑*i*P **P** **11 42 50.8 +1.6**
NJ2 PcP **PcP** **11 44 51.6 +0.1**
NJ2 ScP **ScP** **11 48 18.6 -1.6**
NJ2 pmax pmax
comp=Z,76nm,0.8s
DMLN Damoulianata-K 39.70 288 P **P** **11 42 48.1 -1.1**
MORH Mrgy, Hungar 39.71 301 ⇑P **P** **11 42 50.3 +1.2**
MORH Mrgy, Hungar 39.71 301⇑*i*P **P** **11 42 50.1 +1.0**
MORH Mrgy, Hungar 39.71 301 P **P** **11 42 49.9 +0.8**
PDG Podgorica 39.73 295 ⇑P **P** **11 42 49.7 +0.4**
PDG Podgorica 39.73 295⇑*i*P **P** **11 42 49.4 +0.1**
TTG Podgorica 39.73 295⇑*i*P **P** **11 42 49.5 +0.1**
KEF3 Kipouria, Keph 39.73 288 P **P** **11 42 48.3 -1.1**
KOLL Kolacno 39.73 305 *e*P **P** **11 42 50.9 +1.6**
SRO2 Moca 39.77 303 *e*P **P** **11 42 50.8 +1.2**
SRO2 pmax pmax
comp=Z,242nm,0.7s
SRO2 Moca 39.77 303 *e*P **P** **11 42 50.8 +1.2**
ULC Ulcinj 39.81 294 *e*P **P** **11 42 49.7 -0.4**
KEK Kerkira 39.82 291 P P 11 42 44.2 -5.9
DRME Dracevica, Mon 39.82 295⇑*i*P **P** **11 42 50.0 -0.1**
DRME Dracevica, Mon 39.82 295⇑*i*P **P** **11 42 50.2 +0.1**
SRO Srobarova 39.82 303 *e*P **P** **11 42 52.3 +2.3**
SRO pmax pmax
comp=Z,174nm,0.8s
SRO Srobarova 39.82 303 *e*P **P** **11 42 52.3 +2.3**
OKC Ostrava-Krasne 39.86 307 *e*P **P** **11 42 51.2 +0.8**
OKC *e*SS SS 11 51 45.3 +1.2
OKC Ostrava-Krasne 39.86 307 *e*P **P** **11 42 51.2 +0.8**
OKC *e*SS SS 11 51 45.3 +1.2
UPM Unac-Piva 39.87 296 *e*P **P** **11 42 51.5 +0.8**
UPM Unac-Piva 39.87 296 *e*P **P** **11 42 51.6 +0.8**
CSKK Cskako 39.89 303 P **P** **11 42 51.9 +1.3**
VLO Vlora 39.89 292 IAmb IAmb 11 42 52.5
comp=Z,274nm,1.2s
NKME Niksic 39.90 296 *e*P **P** **11 42 51.1 +0.3**
DL2 Dalian 39.94 71 P **P** **11 42 52.4 +1.3**
DL2 pmax pmax
comp=Z,76nm,0.7s
CEME Cevo 39.96 295⇑*i*P **P** **11 42 51.4 +0.1**
BUM Brajici-Budva 40.01 295⇑*i*P **P** **11 42 51.9 +0.1**
MAUC Maruska 40.08 306 *e*P **P** **11 42 53.7 +1.5**
KOVH Kovagotottos 40.10 301 P **P** **11 42 52.8 +0.5**
TIH Tihany 40.17 302 P **P** **11 42 54.1 +1.2**
BRY Bratogost 40.18 296⇑*i*P **P** **11 42 53.6 +0.8**
BRY Bratogost 40.18 296 *e*P **P** **11 42 53.7 +0.5**
JAVC Velka Javorina 40.20 305⇑*i*P **P** **11 42 55.2 +2.0**
JAVC *e*PP **PP** **11 44 29.6 -0.6**
MORC Moravsky Berou 40.26 307 ⇑P **P** **11 42 55.0 +1.4**
MORC Moravsky Berou 40.26 307 IAmb IAmb 11 42 56.0
comp=Z,81nm,0.6s
MORC Moravsky Berou 40.26 307⇑*i*P **P** **11 42 54.9 +1.2**
MORC *e*PP **PP** **11 44 31.5 +0.8**
TREB Trebinje 40.34 296 *e*P **P** **11 42 54.4 0.0**
SMOL Smolenice 40.38 305 *e*P **P** **11 42 56.1 +1.4**
SMOL pmax pmax
comp=Z,25nm,0.7s
SMOL Smolenice 40.38 305 *e*P **P** **11 42 56.0 +1.4**
MPLH Magyarpolny 40.39 303 P **P** **11 42 55.5 +0.8**
GKP Gorka Klasztor 40.48 312 *e*P **P** **11 42 56.2 +0.8**
GKP Gorka Klasztor 40.48 312 *e*P **P** **11 42 55.8 +0.4**
MODS Modra-Piesok 40.49 304 *e*P **P** **11 42 56.7 +1.2**
MODS pmax pmax
comp=Z,87nm,1.1s
MODS Modra-Piesok 40.49 304 *e*P **P** **11 42 56.7 +1.2**
MODS *e*PP **PP** **11 44 35.9 +2.7**
ZST Bratislava 40.61 304 *e*P **P** **11 42 57.7 +1.2**
ZST pmax pmax
comp=Z,74nm,0.9s
ZST Bratislava 40.61 304 *e*P **P** **11 42 57.7 +1.2**
ZST *e*PP **PP** **11 44 37.5 +3.0**
KRLC Kraliky 40.74 307 *e*P **P** **11 42 58.5 +0.9**
KRLC *e* 11 44 38.8
KRLC Kraliky 40.74 307 *e*P **P** **11 42 58.5 +0.9**
KRLC *e*PP **PP** **11 44 38.8 +2.9**
STON Ston 40.79 296⇑*i*P **P** **11 42 57.5 -0.5**
KEV Kevo 40.82 338 P **P** **11 42 59.0 +1.1**
KEV IAmb IAmb 11 43 00.1
comp=Z,219nm,0.8s
KEV Kevo 40.82 338 P **P** **11 42 59.0 +1.1**
KEV pmax pmax
comp=Z,219nm,0.8s
KEV Kevo 40.82 338 ⇑P **P** **11 42 59.1 +1.1**
KEV pP **pP** **11 43 41.4 -1.0**
KEV x **PP** **11 44 36.2 -0.2**
BLY Banja Luka 40.89 299⇑*i*P **P** **11 42 59.7 +1.0**
VRAC Vranov 40.89 306 ⇑P **P** **11 43 00.6 +1.8**
VRAC Vranov 40.89 306 P **P** **11 43 00.1 +1.3**
comp=Z,67nm,0.7s,baz=92,slow=8.5,SNR=77
VRAC PP **PP** **11 44 38.9 +1.4**
comp=Z,13nm,1.0s,baz=86,slow=11,SNR=4.7
comp=Z,67nm,0.7s
VRAC Vranov 40.89 306⇑*i*P **P** **11 43 00.2 +1.4**
VRAC *e*PP **PP** **11 44 38.2 +0.7**
BEHE Becsehely 40.97 302⇑*i*P **P** **11 43 00.7 +1.2**
BEHE Becsehely 40.97 302 P **P** **11 43 00.4 +0.9**
SRKY Kupres RS 40.99 298 *e*P **P** **11 43 00.5 +0.7**
MGRS Mrkonjic Grad 41.00 298⇑*i*P **P** **11 43 01.1 +1.3**
SOP Sopron 41.01 303 P **P** **11 43 00.6 +0.6**
DPC Dobruska-Polom 41.03 307 *e*P **P** **11 43 01.3 +1.3**
DPC *e* 11 44 42.8
DPC *e*SS SS 11 52 01.2 -5.9
DPC Dobruska-Polom 41.03 307 *e*P **P** **11 43 01.3 +1.3**
DPC *e*PP **PnPn** **11 44 42.8 -2.7**
DPC *e*SS SS 11 52 01.2 -5.9
KRUC Moravsky 41.03 305⇑*i*P **P** **11 43 01.1 +1.2**
KRUC *e*PP **PP** **11 44 38.2 -0.8**
KSP Ksiaz 41.04 308 *e*P **P** **11 43 00.9 +1.0**
OSTC Ostas 41.09 308 *e*P **P** **11 43 01.5 +1.1**
OSTC *e*SS SS 11 52 03.0 -5.2
KCSI Kotacane, Aceh 41.11 136 P **P** **11 43 00.7 -0.3**
comp=Z,48nm,0.6s
ARA0 ARCESS Array S 41.16 338 *e*P **P** **11 43 02.1 +1.4**
ARA0 IAmb IAmb 11 43 03.0
comp=Z,329nm,0.8s
ARCES ARCESS Array B 41.16 338 P **P** **11 43 02.1 +1.4**
comp=Z,229nm,0.7s,baz=112,slow=7.2,SNR=674
ARCES PP **PP** **11 44 41.5 +1.4**
comp=Z,58nm,0.9s,baz=106,slow=9.5,SNR=7.1
ARCES PKiKP **PKiKP** **11 52 02.5 -0.1**
comp=Z,1.5nm,0.8s,baz=156,slow=2.4,SNR=6.3
comp=Z,229nm,0.7s
RONA Rosalia, Austr 41.19 303 *i*P **P** **11 43 02.4 +1.1**
comp=Z,30nm,0.5s,SNR=27
CHVC Chvalec 41.19 308 *e*P **P** **11 43 02.3 +1.0**
UPC Upice 41.22 308 *e*P **P** **11 43 02.6 +1.1**
UPC *e* 11 44 49.6
UPC *e*SS SS 11 52 05.8 -5.0
UPC Upice 41.22 308 *e*P **P** **11 43 02.6 +1.1**
UPC *e*PP **PnPn** **11 44 49.6 +1.9**
UPC *e*SS SS 11 52 05.8 -5.0
KOGS Kog 41.34 302 *i*P **P** **11 43 03.4 +0.9**
KULM Kulim 41.36 131 P **P** **11 43 04.1 +1.1**
CONA Conrad Observa 41.46 304 *i*P **P** **11 43 04.8 +1.2**
comp=Z,74nm,0.8s,SNR=87
TREC Trest 41.62 306 *e*P **P** **11 43 05.8 +1.1**
TREC Trest 41.62 306 *e*P **P** **11 43 05.8 +1.1**
KTK1 Kautokeino 41.63 336 *e*P **P** **11 43 05.4 +0.9**
KTK1 IAmb IAmb 11 43 06.2
comp=Z,216nm,0.7s
CN2 Changchun 41.84 62 *e*P **P** **11 43 04.4 -2.1**
CN2 S **S** **11 49 01.4 -6.8**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 pmax pmax
comp=Z,100nm,8.2s
CN2 LR LR
comp=Z,100nm,12.0s
CN2 LR LR
comp=Z,200nm,12.0s
CN2 LR LR
comp=Z,100nm,14.4s
GROS Grobnik 41.85 302 *i*P **P** **11 43 07.6 +0.9**
BSD Bornholm Skovb 41.93 315 *e*P **P** **11 43 06.6 -0.5**
BSD Bornholm Skovb 41.93 315 *i*P **P** **11 43 05.0 -2.1**
BSD *i*P **P** **11 43 05.0 -2.1**
BSD IAmb IAmb 11 43 06.9
comp=Z,60nm,0.6s
MATE Matera 41.94 293 ⇑P **P** **11 43 07.6 +0.2**
CRES Cresnjev 41.96 301⇑*i*P **P** **11 43 08.5 +1.0**
PVCC Panska Ves 42.14 308 *e*P **P** **11 43 09.8 +0.9**
PVCC Panska Ves 42.14 308 *e*P **P** **11 43 09.8 +0.9**
SOKA Soboth 42.15 302 *i*P **P** **11 43 10.4 +1.3**
comp=Z,94nm,0.6s,SNR=77
SOKA *e*P **PcP** **11 44 60.0 +0.6**
comp=Z,12nm,0.6s
PRU Pruhonice 42.19 307 *e*P **P** **11 43 10.5 +1.2**
PRU *e*SS SS 11 52 30.5 +0.9
PRU Pruhonice 42.19 307 *e*P **P** **11 43 10.5 +1.2**
PRU *e*PP **PP** **11 44 44.5 -6.8**
PRU *e*SS SS 11 52 30.5 +0.9
IPM Ipoh 42.23 132 IAmb IAmb 11 43 11.9
comp=Z,128nm,0.9s
IPM Ipoh 42.23 132 P **P** **11 43 11.3 +1.3**
TIP Timpagrande 42.23 291 ⇑P **P** **11 43 10.3 +0.4**
TIP Timpagrande 42.23 291 IAmb IAmb 11 43 11.4
comp=Z,110nm,1.1s
HAMF Hammerfest 42.24 339 *e*P **P** **11 43 11.1 +1.7**
HAMF IAmb IAmb 11 43 11.9
comp=Z,450nm,0.7s
ZEA Zeya 42.29 47*ce*P **P** **11 43 12.4 +2.4**
ZEA *e* 11 44 20.8
ZEA *e*S **S** **11 49 20.0 +5.4**
ZEA *e* 11 50 40.0
ZEA *e*SS **ScS** **11 52 43.5 -5.1**
ZEA pmax pmax
comp=E,40nm,0.7s
ZEA pmax pmax
comp=N,30nm,0.6s
ZEA pmax pmax
comp=Z,90nm,0.8s
ZEA smax smax
comp=E,100nm,9.3s
QZH Quanzhou 42.33 92⇑*i*P **P** **11 43 11.6 +0.9**
QZH PcP **PcP** **11 45 00.3 +0.1**
QZH S **S** **11 49 16.8 +1.0**
QZH sS **sS** **11 50 35.3 -0.5**
QZH ScS **ScS** **11 52 49.3 -0.5**
QZH pmax pmax
comp=E,67nm,0.6s
PSI Prapat 42.35 136 P **P** **11 43 11.5 +0.4**
PSI pmax pmax
comp=Z,61nm,0.5s
PSI Prapat 42.35 136 P **P** **11 43 12.5 +1.4**
KNMB Chin-men Tao 42.38 93 P **P** **11 43 12.3 +1.2**
KNMB IAmb IAmb 11 43 13.4
comp=Z,169nm,0.9s
SGRT San Giovanni R 42.42 295 IAmb IAmb 11 43 12.7
comp=Z,102nm,0.5s
CKRC Cesky Krumlov 42.42 305 *e*P **P** **11 43 12.0 +0.8**
CKRC *e*PP **PcP** **11 44 59.2 -1.0**
CKRC *e*SS SS 11 52 30.2 -4.1
RPSI Rantau Prapat 42.44 136 P **P** **11 43 11.5 -0.2**
RPSI IAmb IAmb 11 43 13.4
comp=Z,61nm,0.5s
OBKA Obir 42.50 302 *i*P **P** **11 43 13.3 +1.4**
comp=Z,32nm,0.9s,SNR=9.6
BRG Berggiesshubel 42.52 308⇑*i*P **P** **11 43 13.1 +1.1**
BRG Amp 11 43 13.8
comp=Z,86nm,0.7s
BRG pP **pP** **11 43 59.4 +2.8**
BRG Amp 11 44 01.3
comp=Z,15nm,0.7s
BRG sP **sP** **11 44 21.8 +1.5**
BRG Amp 11 44 24.1
comp=Z,8.1nm,0.8s
BRG PP PP 11 44 46.7 -8.2
BRG Amp 11 45 08.2
comp=Z,32nm,1.2s
BRG *ex* x 11 46 23.9
BRG Amp 11 46 27.5
comp=Z,16nm,1.1s
BRG Berggiesshubel 42.52 308 sS sS 11 50 42.0 +3.9
BRG Berggiesshubel 42.52 308 SS SS 11 52 37.0 +0.9
BRG Berggiesshubel 42.52 308⇑*i*P **P** **11 43 13.1 +1.1**
BRG 11 43 59.4
BRG SP 11 44 21.7
BRG pmax pmax
comp=Z,86nm,0.7s
MOA Molln 42.54 304 *i*P **P** **11 43 13.1 +0.9**
SNR=43
MOA *e*P **PcP** **11 44 59.8 -0.8**
comp=Z,9.2nm,0.6s
LJU Ljubljana 42.57 301⇑*i*P **P** **11 43 13.6 +1.1**
LJU Ljubljana 42.57 301 *i*P **P** **11 43 13.8 +1.3**
DEL Delary 42.59 317 *e*P **P** **11 43 12.8 +0.4**
DEL Delary 42.59 317 *i*P **P** **11 43 13.0 +0.6**
CEY Cerknica 42.68 301⇑*i*P **P** **11 43 14.2 +0.8**
CUC Castrocucco 42.75 292 IAmb IAmb 11 43 17.2
comp=Z,215nm,0.8s
JETT Jettan, Norway 42.77 337 *e*P **P** **11 43 14.9 +1.2**
JETT IAmb IAmb 11 43 15.4
comp=Z,156nm,0.8s
GERES GERESS Array B 42.82 305 P **P** **11 43 15.3 +0.8**
comp=Z,11nm,0.5s,baz=86,slow=8.4,SNR=89
GERES PP **PP** **11 44 58.5 +0.3**
comp=Z,6.1nm,0.7s,baz=76,slow=5.6,SNR=6.8
GERES ScP **ScP** **11 48 31.5 -1.0**
comp=Z,1.3nm,0.6s,baz=95,slow=6.2,SNR=3.4
comp=Z,11nm,0.5s
GSI Gunungsitoli 42.85 138 P **P** **11 43 16.5 +1.5**
GSI Gunungsitoli 42.85 138 P **P** **11 43 16.5 +1.5**
comp=Z,310nm,0.6s
GSI Gunungsitoli 42.85 138 P **P** **11 43 17.3 +2.3**
KHC Kasperske Hory 42.88 306*c* *i*P **P** **11 43 15.4 +0.6**
KHC pmax pmax
comp=Z,92nm,1.7s
KHC Kasperske Hory 42.88 306 *e*P **P** **11 43 15.5 +0.6**
KHC *ex* x 11 43 43.0
KHC *e*PP **PP** **11 44 57.5 -1.2**
KHC *e*SS SS 11 52 46.0 +2.9
BNX BinXian 42.92 59 ⇑P **P** **11 43 16.3 +1.1**
BNX PcP **PcP** **11 45 01.3 -0.6**
BNX S **S** **11 49 24.3 +0.3**
BNX sS **sS** **11 50 43.8 -0.4**
BNX pmax pmax
comp=Z,25nm,1.4s
BNX pmax pmax
comp=Z,250nm,9.7s
BIOA Bad Ischl, Aus 42.98 304 *i*P **P** **11 43 16.5 +0.8**
comp=Z,38nm,0.5s,SNR=15
SKDS Skadanscina 43.00 301⇑*i*P **P** **11 43 16.1 +0.2**
HFS Hagfors 43.02 322 P **P** **11 43 16.3 +0.5**
comp=Z,174nm,0.5s,baz=103,slow=11,SNR=1196
HFS PP **PcP** **11 45 02.1 +0.2**
comp=Z,28nm,0.7s,baz=94,slow=12,SNR=3.6
comp=Z,174nm,0.5s
CLL Collm 43.09 309 *i*P **P** **11 43 17.1 +0.6**
CLL *e**SP **sP** **11 44 25.0 0.0**
CLL pmax pmax
comp=Z,49nm,0.8s
CLL Collm 43.09 309 *i*P **P** **11 43 17.1 +0.6**
comp=Z,49nm,0.8s
CLL *e*sP **sP** **11 44 25.0 0.0**
CLL *e*PP **PP** **11 45 01.0 +0.1**
comp=Z,43nm,1.2s
CLL *e*SS SS 11 52 54.0 +7.0
CLL *e*sSS 11 54 18.0
MYKA Terra Mystica 43.10 302 *i*P **P** **11 43 17.7 +0.9**
comp=Z,27nm,0.6s,SNR=13
MYKA *e*P **PcP** **11 45 02.7 +0.2**
comp=Z,6.2nm,0.4s
CEL Celeste 43.11 290 IAmb IAmb 11 43 18.9
comp=Z,255nm,1.4s
ROBS Robic 43.25 302 *i*P **P** **11 43 18.5 +0.6**
KBA Koelnbreinsper 43.25 303 *i*P **P** **11 43 18.8 +0.8**
comp=Z,34nm,0.5s,SNR=25
KBA *e*P **PP** **11 45 02.9 0.0**
comp=Z,9.1nm,0.5s
TRO Tromso 43.28 336 *e*P **P** **11 43 18.8 +1.1**
TRO IAmb IAmb 11 43 20.2
comp=Z,347nm,1.3s
COP Copenhagen 43.37 315 *i*P **P** **11 43 18.2 -0.4**
PAOL Paolisi 43.44 294 IAmb IAmb 11 43 21.4
comp=Z,180nm,1.5s
LLD Lille Linde 43.49 315 *i*P **P** **11 43 18.8 -0.8**
NKC Novy Kostel 43.52 307 *e*P **P** **11 43 21.5 +1.5**
NKC Novy Kostel 43.52 307 *e*P **P** **11 43 21.5 +1.5**
STAL STALIGIAL 43.79 302 IAmb IAmb 11 43 23.0
comp=Z,78nm,0.6s
FAUS Fauske 43.80 333 *e*P **P** **11 43 22.9 +1.0**
FAUS IAmb IAmb 11 43 23.8
comp=Z,372nm,1.0s
MOR8 Moi Rana 43.80 331 *e*P **P** **11 43 22.2 +0.2**
MOR8 IAmb IAmb 11 43 23.0
comp=Z,815nm,1.3s
ABTA Abfaltersbach 43.86 302 *i*P **P** **11 43 22.9 0.0**
comp=Z,35nm,1.1s,SNR=17
ABTA *i*P **PcP** **11 45 04.7 -0.5**
comp=Z,13nm,0.8s,SNR=4.5
STEI Steigen 43.97 333 *e*P **P** **11 43 24.1 +0.9**
STEI IAmb IAmb 11 43 25.1
comp=Z,392nm,1.3s
INCN Inchon 44.12 71 P **P** **11 43 26.1 +1.2**
INCN Inchon 44.12 71 P **P** **11 43 26.1 +1.2**
INCN pmax pmax
comp=Z,67nm,1.0s
INCN Inchon 44.12 71 P **P** **11 43 26.7 +1.8**
INCN Inchon 44.12 71 P **P** **11 43 26.6 +1.8**
INCN x **PcP** **11 45 06.1 0.0**
NC602 NORSAR Array S 44.15 323 IAmb IAmb 11 43 26.2
comp=Z,332nm,1.1s
NC602 NORSAR Array S 44.15 323 *e*P **P** **11 43 24.9 +0.1**
NC602 IAmb IAmb 11 43 25.9
comp=Z,178nm,1.1s
YAK Yakutsk 44.17 35 P **P** **11 43 25.2 +0.3**
comp=Z,73nm,0.5s,baz=170,slow=0.3,SNR=45
YAK ScP **ScP** **11 48 36.1 -1.5**
comp=Z,16nm,0.5s,baz=194,slow=1.3,SNR=5.8
comp=Z,73nm,0.5s
YAK Yakutsk 44.17 35 P **P** **11 43 25.1 +0.3**
YAK IAmb IAmb 11 43 26.4
comp=Z,196nm,0.7s
YAK Yakutsk 44.17 35*c* *i*P **P** **11 43 25.4 +0.6**
YAK *e**PP **pP** **11 44 09.8 -1.0**
YAK *e* 11 45 05.3
YAK *e*S **S** **11 49 42.0 +0.4**
YAK *e**SS **sS** **11 50 57.8 -4.3**
YAK *e* 11 52 55.9
YAK pmax pmax
comp=Z,172nm,0.9s
YAK pmax pmax
comp=N,17nm,0.9s
YAK pmax pmax
comp=E,30nm,1.0s
YAK smax smax
comp=E,99nm,1.5s
YAK smax smax
comp=N,46nm,1.3s
YAK Yakutsk 44.17 35⇑P **P** **11 43 25.5 +0.6**
NC303 NORSAR Array S 44.28 323 IAmb IAmb 11 43 26.8
comp=Z,212nm,0.8s
NB2 NORSAR Subarra 44.34 323 P **P** **11 43 26.4 0.0**
baz=97,slow=7.9
NB2 NORSAR Subarra 44.34 323 P **P** **11 43 26.4 0.0**
comp=Z,119nm,0.6s,baz=97,slow=7.9
NOA NORSAR Array B 44.34 323 P **P** **11 43 26.3 0.0**
comp=Z,97nm,0.6s,baz=104,slow=7.3,SNR=726
NOA PP **PP** **11 45 14.1 +0.1**
comp=Z,50nm,1.0s,baz=94,slow=10.0,SNR=6.4
comp=Z,97nm,0.6s
GRA1 Grafenberg Arr 44.35 307 IAmb IAmb 11 43 29.9
comp=Z,292nm,1.7s
WTTA Wattenberg 44.38 303 *i*P **P** **11 43 27.2 +0.1**
comp=Z,34nm,0.5s,SNR=22
WTTA *i*P **PcP** **11 45 07.2 +0.1**
comp=Z,17nm,0.5s,SNR=4.8
KONS Konsvik 44.40 331 *e*P **P** **11 43 27.6 +1.0**
KONS IAmb IAmb 11 43 27.8
comp=Z,90nm,0.6s
WATA Walderalm 44.41 303 *i*P **P** **11 43 27.3 0.0**
comp=Z,39nm,0.8s,SNR=13
WATA *e*P **PcP** **11 45 07.1 0.0**
comp=Z,4.5nm,0.3s
MURB Monte Urbino 44.45 298 IAmb IAmb 11 43 30.6
comp=Z,200nm,0.8s
VAE Valguarnera 44.45 289 P **P** **11 43 29.8 +2.1**
comp=Z,54nm,0.6s,baz=168,slow=0.6,SNR=13
comp=Z,54nm,0.6s
NSS Namsos 44.47 328 *e*P **P** **11 43 27.4 +0.1**
NSS IAmb IAmb 11 43 27.9
comp=Z,52nm,0.8s
NAO01 NORSAR Array S 44.48 323 *e*P **P** **11 43 28.1 +0.7**
OSL Oslo 44.48 322 *e*P **P** **11 43 28.0 +0.6**
OSL IAmb IAmb 11 43 28.1
comp=Z,94nm,0.9s
CTI Castel Tesino 44.55 302 IAmb IAmb 11 43 29.7
comp=Z,78nm,0.6s
MDJ Mudanjiang 44.63 60 P **P** **11 43 30.8 +1.9**
MDJ pmax pmax
comp=Z,25nm,1.9s
MDJ pmax pmax
comp=Z,220nm,5.7s
MDJ Mudanjiang 44.63 60 P **P** **11 43 30.2 +1.3**
MDJ Mudanjiang 44.63 60 P **P** **11 43 29.4 +0.5**
MDJ x **PcP** **11 45 07.7 0.0**
OVD Ostervraa, Den 44.63 318 *i*P **P** **11 43 28.9 +0.2**
OVD IAmb IAmb 11 43 29.9
comp=Z,301nm,0.5s
LOF Lofoten 44.64 333 *e*P **P** **11 43 28.7 +0.1**
LOF IAmb IAmb 11 43 29.7
comp=Z,123nm,1.0s
TATO Taipei 44.65 90 P **P** **11 43 31.3 +2.1**
SQTA Sankt Quirin 44.67 303 *i*P **P** **11 43 29.3 0.0**
comp=Z,48nm,0.5s,SNR=26
SQTA *i*P **PcP** **11 45 08.4 +0.4**
comp=Z,16nm,0.5s,SNR=4.3
YHNB Yeheng 44.70 90 IAmb IAmb 11 43 32.8
comp=Z,129nm,0.9s
YHNB Yeheng 44.70 90 P **P** **11 43 32.0 +2.3**
MOTA Moosalm 44.73 304 *i*P **P** **11 43 29.6 -0.2**
comp=Z,56nm,0.7s,SNR=28
MOTA *e*P **PcP** **11 45 08.4 +0.2**
comp=Z,16nm,0.6s
TPUB Ta-pu 44.74 93 IAmb IAmb 11 43 33.8
comp=Z,77nm,0.6s
TPUB Ta-pu 44.74 93 P **P** **11 43 31.9 +1.9**
SSLB Suanglung 44.77 92 P **P** **11 43 32.6 +2.3**
SSLB IAmb IAmb 11 43 33.6
comp=Z,258nm,0.7s
SSLB Suanglung 44.77 92 P **P** **11 43 32.9 +2.6**
RETA Reutte 44.93 304 *i*P **P** **11 43 31.4 0.0**
comp=Z,13nm,0.6s,SNR=5.9
RETA *e*P **PcP** **11 45 09.1 +0.3**
comp=Z,11nm,0.5s
TJN Taejon 45.00 72 IAmb IAmb 11 43 33.1
comp=Z,97nm,0.5s
TJN Taejon 45.00 72*ce*P **P** **11 43 30.7 -1.1**
TJN Taejon 45.00 72 P **P** **11 43 32.4 +0.6**
FETA Feichten 45.03 303 *i*P **P** **11 43 32.1 0.0**
comp=Z,30nm,0.5s,SNR=34

FETA *i* P **PcP** **11 45 10.0 +0.7**
comp=Z,48nm,0.9s,SNR=15

TBLU Trondheim **45.03 326** *eP* **P** **11 43 31.8 +0.1**
TBLU IAmb IAmb 11 43 32.8
comp=Z,92nm,0.9s

KONO Kongsberg **45.03 321** P **P** **11 43 32.1 +0.3**
KONO IAmb IAmb 11 43 33.3
comp=Z,142nm,1.1s

KONO Kongsberg **45.03 321** P **P** **11 43 32.1 +0.3**
KONO pmax pmax
comp=Z,142nm,1.1s

KONO Kongsberg **45.03 321** *eP* **P** **11 43 32.1 +0.3**
KONO IAmb IAmb 11 43 32.5
comp=Z,88nm,0.6s

KONO Kongsberg **45.03 321** P **P** **11 43 32.1 +0.3**
HOPEN Hopen **45.05 346** *eP* **P** **11 43 34.1 +2.4**
HOPEN IAmb IAmb 11 43 34.9
comp=Z,583nm,1.3s

KSAR Wonju Array Be **45.08 71** P **P** **11 43 33.1 +0.6**
KSAR Wonju Array Be **45.08 71** P **P** **11 43 33.1 +0.6**
KSRS Korea Array **45.11 71** P **P** **11 43 33.1 +0.4**
comp=Z,13nm,0.5s,baz=274,slow=7.1,SNR=105
KSRS PcP **PcP** **11 45 09.6 +0.1**
comp=Z,27nm,0.8s,baz=288,slow=3.4,SNR=21
KSRS ScP **ScP** **11 48 39.6 -2.3**
comp=Z,5.8nm,0.8s,baz=281,slow=3.9,SNR=9.4
comp=Z,13nm,0.5s

GOET G??ttrup **45.17 317** *i* P **P** **11 43 32.6 -0.3**
MUD Monsted U'grnd **45.20 317** *i* P **P** **11 43 32.6 -0.5**
YULB Yu-li **45.23 92** IAmb IAmb 11 43 37.5
comp=Z,160nm,0.7s

BJO1 Bjornoya **45.30 343** *eP* **P** **11 43 35.1 +1.4**
BJO1 IAmb IAmb 11 43 35.8
comp=Z,400nm,0.8s

CLTB Caltabellotta **45.34 290** IAmb IAmb 11 43 35.7
comp=Z,131nm,0.7s

KLR Kul'dur **45.37 54** P **P** **11 43 35.6 +1.0**
comp=Z,26nm,0.7s,baz=283,slow=9.2,SNR=92
KLR PcP **PcP** **11 45 10.4 +0.2**
comp=Z,14nm,0.6s,baz=275,slow=3.3,SNR=5.3
KLR ScP **ScP** **11 48 42.0 -0.8**
comp=Z,1.4nm,0.6s,baz=265,slow=5.6,SNR=4.2
comp=Z,26nm,0.7s

KLR Kul'dur **45.37 54***ce* **P** **11 43 35.5 +0.9**
KLR pmax pmax
comp=Z,33nm,0.7s

SALO Salr **45.40 301** P **P** **11 43 35.9 +0.9**
SALO IAmb IAmb 11 43 36.6
comp=Z,118nm,0.7s

DOMB Dombas **45.45 324** *eP* **P** **11 43 35.4 +0.3**
DOMB IAmb IAmb 11 43 36.5
comp=Z,173nm,1.2s

DAVA Damuels **45.56 304** *i* P **P** **11 43 36.5 +0.2**
comp=Z,177nm,0.5s,SNR=72
DAVA *i* P **PcP** **11 45 11.7 +0.6**
comp=Z,19nm,0.7s,SNR=4.3

HOMB Homborsund **45.56 319** *i* P **P** **11 43 35.0 -0.9**
HOMB Homborsund **45.56 319** *eP* **P** **11 43 36.1 +0.3**
HOMB IAmb IAmb 11 43 36.8
comp=Z,76nm,0.6s

BKNI Bangkinang **45.58 135** IAmb IAmb 11 43 38.9
comp=Z,186nm,0.8s

BKNI Bangkinang **45.58 135** P **P** **11 43 37.3 +0.7**
comp=Z,3µcomp=Z,254nm,0.8s

BKNI Bangkinang **45.58 135** P **P** **11 43 37.6 +1.0**
DAVOX Davos/Dischmat **45.64 303** P **P** **11 43 36.8 -0.2**
comp=Z,55nm,0.6s,baz=107,slow=7.0,SNR=90
DAVOX PcP **PcP** **11 45 11.4 -0.1**
comp=Z,28nm,0.6s,baz=100,slow=6.3,SNR=9.0
DAVOX ScP **ScP** **11 48 41.5 -2.8**
comp=Z,6.4nm,0.8s,baz=174,slow=3.6,SNR=4.3
comp=Z,55nm,0.6s

SKAR Skarslia **45.73 322** *eP* **P** **11 43 38.5 +1.1**
SKAR IAmb IAmb 11 43 38.7
comp=Z,91nm,1.2s

TIXI Tiksi **45.94 22** P **P** **11 43 39.8 +1.1**
comp=Z,169nm,0.4s,baz=90,slow=21,SNR=601
comp=Z,169nm,0.4s

TIXI Tiksi **45.94 22** P **P** **11 43 39.8 +1.1**
TIXI IAmb IAmb 11 43 40.7
comp=Z,280nm,0.8s

TIXI Tiksi **45.94 22***ce* **P** **11 43 39.5 +0.8**
TIXI pmax pmax
comp=Z,352nm,1.0s

TIXI Tiksi **45.94 22** ⇑P **P** **11 43 39.8 +1.1**
TIXI pP **pP** **11 44 27.3 +2.2**
TIXI x **PcP** **11 45 11.8 0.0**

TUE Stuetta **46.06 303** P **P** **11 43 40.0 -0.3**
YOJ Yonaguni jima **46.11 90** P **P** **11 43 40.8 +0.1**
YOJ IAmb IAmb 11 43 42.0
comp=Z,324nm,1.5s

YOJ Yonaguni jima **46.11 90** P **P** **11 43 40.8 +0.1**
YOJ pmax pmax
comp=Z,324nm,1.5s

MOL Molde **46.20 325** *eP* **P** **11 43 41.9 +1.1**
MOL IAmb IAmb 11 43 42.1
comp=Z,65nm,1.1s

LODK Lodwar **46.24 233** P **P** **11 43 43.9 +2.0**
LODK Lodwar **46.24 233** P **P** **11 43 44.5 +2.6**
SNR=20

SNART Snartemo **46.24 319** *i* P **P** **11 43 40.0 -1.2**
SNART Snartemo **46.24 319** *eP* **P** **11 43 42.0 +0.8**
SNART IAmb IAmb 11 43 42.6
comp=Z,274nm,1.1s

USRK Ussuriysk Ar. **46.40 61** P **P** **11 43 42.7 0.0**
comp=Z,19nm,0.9s,baz=277,slow=6.1,SNR=16
USRK PcP **PcP** **11 45 13.5 -0.4**
comp=Z,10nm,0.5s,baz=309,slow=3.3,SNR=14
comp=Z,19nm,0.9s

USRK Ussuriysk Ar. **46.40 61** P **P** **11 43 43.1 +0.4**
BFO Black Forest **46.42 305** P **P** **11 43 43.0 +0.2**
BFO Black Forest **46.42 305** P **P** **11 43 43.0 +0.2**
BFO pmax pmax
comp=Z,17nm,0.7s

BFO Black Forest **46.42 305** P **P** **11 43 43.1 +0.2**
BFO pP **pP** **11 44 28.5 +0.3**
BFO x **PcP** **11 45 14.1 +0.1**

ODD1 Odda **46.54 321** *eP* **P** **11 43 44.8 +1.2**
ODD1 IAmb IAmb 11 43 45.8
comp=Z,128nm,1.3s

BLS5 Blasjo **46.63 321** *eP* **P** **11 43 45.5 +1.2**
BLS5 IAmb IAmb 11 43 46.5
comp=Z,243nm,1.3s

HYA Hoyanger **46.78 323** *eP* **P** **11 43 46.0 +0.7**
HYA IAmb IAmb 11 43 47.1
comp=Z,78nm,0.9s

CDF Champ du Feu **47.10 306** *eP* **P** **11 43 47.6 -0.6**
CDF pmax pmax
comp=Z,17nm,0.8s

HSPB Hornsund (broa **47.18 345** *eP* **P** **11 43 50.2 +2.0**
BER Bergen **47.19 322** *eP* **P** **11 43 49.4 +0.9**
BER IAmb IAmb 11 43 49.8
comp=Z,99nm,0.6s

ECH Echery **47.21 305** P **P** **11 43 49.2 +0.3**
KMY Karmoy **47.25 320** *eP* **P** **11 43 50.1 +1.0**
KMY IAmb IAmb 11 43 50.9
comp=Z,61nm,0.8s

ASK Askoy **47.26 322** *eP* **P** **11 43 49.8 +0.7**
ASK IAmb IAmb 11 43 50.2
comp=Z,171nm,0.7s

FOO Floro **47.34 324** *eP* **P** **11 43 50.6 +0.9**
FOO IAmb IAmb 11 43 51.2
comp=Z,95nm,1.0s

SENIN Lac Senin/Sane **47.47 303** IAmb IAmb 11 43 52.3
comp=Z,78nm,0.6s

SUE Sulen **47.47 323** *eP* **P** **11 43 51.1 +0.4**
SUE IAmb IAmb 11 43 52.1
comp=Z,147nm,1.0s

BTNL Ternell **47.49 309** *dP* **P** **11 43 51.9 +0.8**
comp=Z,35nm,0.9s

BTNL *d*PcP **PcP** **11 45 18.1 +0.4**
SPB2 Spitsbergen Ar **47.54 347** IAmb IAmb 11 43 54.0
comp=Z,184nm,0.8s

SPA0 Spitsbergen Ar **47.54 347** *eP* **P** **11 43 53.1 +2.0**
SPITS Spitsbergen Ar **47.54 347** P **P** **11 43 52.7 +1.6**
comp=Z,118nm,0.6s,baz=116,slow=11,SNR=191
SPITS PcP **PcP** **11 45 18.0 +0.6**
comp=Z,5.7nm,0.4s,baz=101,slow=7.1,SNR=1.7
comp=Z,118nm,0.6s

MEM Membach **47.56 309** *dP* **P** **11 43 52.2 +0.6**
comp=Z,37nm,0.9s

BHOU Houvegnez **47.60 308** *dP* **P** **11 43 53.0 +1.0**
WLF Walferdange **47.62 307** P **P** **11 43 52.6 +0.5**
WLF Walferdange **47.62 307** *dP* **P** **11 43 53.2 +1.2**
comp=Z,49nm,0.9s

JMJ Miyako jima 2 **47.79 88** P **P** **11 43 55.5 +1.8**

KRJI Kerinci **47.80 136** P **P** **11 43 55.2 +1.3**
comp=Z,6µcomp=Z,298nm,0.8s

BSTI Sart Tilman **47.85 309** *dP* **P** **11 43 54.7 +0.9**
LPL La Plagne **48.03 302** *eP* **P** **11 43 54.9 -0.7**
LPL pmax pmax
comp=Z,50nm,0.7s

BCLA Clavier **48.04 309** *dP* **P** **11 43 55.3 +0.1**
comp=Z,34nm,0.7s

BCLA *dx* x 11 44 02.7
BCLA *d*PcP **PcP** **11 45 19.8 +0.1**
RCHB Rochefort **48.13 308** *bP* **P** **11 43 56.8 +0.8**
comp=Z,24nm,0.7s

RCHB *d*PcP **PcP** **11 45 19.9 -0.1**
GRNR Gornyy **48.13 51** ⇑*i*P **P** **11 43 57.4 +1.4**
GRNR pmax pmax
comp=E,20nm,0.9s

GRNR pmax pmax
comp=Z,40nm,0.9s

DSRI Dabo **48.30 132** P **P** **11 43 59.0 +1.4**
comp=Z,46nm,0.8s

BMRD Maredsous **48.40 308** *dP* **P** **11 43 58.8 +0.9**
comp=Z,36nm,0.0s

BMRD *d*pP **pP** **11 44 45.1 +1.4**
BMRD *d*sP **sP** **11 45 08.7 +1.6**
BMRD *d*PcP **PcP** **11 45 21.3 +0.4**
DOU Dourbes **48.54 308** *dP* **P** **11 44 00.1 +1.0**
comp=Z,28nm,1.2s

DOU *d*PcP **PcP** **11 45 21.4 0.0**
KMBO Kilima Mbogo **48.61 227** P **P** **11 44 02.2 +1.9**
comp=Z,34nm,0.6s,baz=34,slow=11,SNR=86
comp=Z,34nm,0.6s

KMBO Kilima Mbogo **48.61 227** P **P** **11 44 02.4 +2.1**
KMBO Kilima Mbogo **48.61 227** P **P** **11 44 02.4 +2.1**
KMBO pmax pmax
comp=Z,35nm,0.6s

KMBO Kilima Mbogo **48.61 227** *i* P **P** **11 44 02.5 +2.1**
SNR=28

KMBO Kilima Mbogo **48.61 227** ⇑P **P** **11 44 02.5 +2.1**
KBS Kingsbay **48.66 347** P **P** **11 44 01.4 +1.8**
KBS IAmb IAmb 11 44 02.4
comp=Z,240nm,0.8s

KBS Kingsbay **48.66 347***ce* **P** **11 44 01.6 +2.0**
KBS pmax pmax
comp=Z,406nm,1.3s

KBS Kingsbay **48.66 347** *i* P **P** **11 44 00.2 +0.6**
KBS Kingsbay **48.66 347** *eP* **P** **11 44 01.4 +1.8**
KBS Kingsbay **48.66 347** ⇑P **P** **11 44 01.4 +1.8**
SNF Seneffe **48.67 309** *bP* **P** **11 44 00.9 +0.9**
comp=Z,42nm,1.0s

JNU Nakatsue **48.82 75** P **P** **11 44 01.9 +0.4**
comp=Z,65nm,0.8s,baz=301,slow=2.6,SNR=17
comp=Z,65nm,0.8s

JNU Nakatsue **48.82 75** P **P** **11 44 03.0 +1.5**
KEST Kesra **48.87 288** P **P** **11 44 03.3 +1.3**
comp=Z,130nm,0.6s,baz=4.4,slow=1.2,SNR=202
comp=Z,130nm,0.6s

KEST Kesra **48.87 288** IAmb IAmb 11 44 04.3
comp=Z,502nm,1.5s

KEST Kesra **48.87 288** P **P** **11 44 03.6 +1.7**
SNR=32

KIBK Kibwezi **49.12 226** P **P** **11 44 06.2 +2.2**
SNR=6.2

JOW Kunigami **49.29 84** P **P** **11 44 05.5 +0.4**
comp=Z,97nm,0.6s,baz=291,slow=4.5,SNR=50
comp=Z,97nm,0.6s

JOW Kunigami **49.29 84** IAmb IAmb 11 44 06.3
comp=Z,113nm,0.6s

JOW Kunigami **49.29 84** P **P** **11 44 05.7 +0.6**
SSB Saint Sauveur **49.59 302** ⇑P **P** **11 44 07.8 +0.6**
SSB x **PcP** **11 45 25.0 -0.5**
TGY Tagaytay City **49.89 103** P **P** **11 44 11.1 +1.2**
comp=Z,142nm,0.3s,baz=307,slow=2.0,SNR=7.2
comp=Z,142nm,0.3s

ELMS Elmsett, Ipswi **50.41 311** *eP* **P** **11 44 13.5 +0.3**
ELMS IAmb IAmb 11 44 14.5
comp=Z,146nm,0.6s

LRW Lerwick **50.45 322** *eP* **P** **11 44 13.6 +0.3**
LRW IAmb IAmb 11 44 14.5
comp=Z,195nm,0.8s

CLF Chambon-Foret **50.47 306** IAmb IAmb 11 44 15.1
comp=Z,131nm,1.3s

CLF Chambon-Foret **50.47 306** P **P** **11 44 13.9 +0.3**
CLF x **PcP** **11 45 29.2 +0.6**
ELSH Elham, Standar **50.51 310** *eP* **P** **11 44 14.5 +0.6**
ELSH IAmb IAmb 11 44 15.4
comp=Z,154nm,0.7s

PPBI Pangkal Pinang **50.57 131** P **P** **11 44 16.1 +1.3**
GDLE Glaisdale, N Y **51.05 315** *eP* **P** **11 44 17.7 -0.2**
GDLE IAmb IAmb 11 44 19.0
comp=Z,75nm,1.0s

CAF Calviac **51.38 302** *eP* **P** **11 44 20.0 -0.5**
CAF pmax pmax
comp=Z,44nm,0.8s

DRUM Mains of Drumt **51.56 318** ⇑*eP* **P** **11 44 21.7 +0.1**
DRUM IAmb IAmb 11 44 22.7
comp=Z,79nm,0.9s

HPK Haverah Park **51.61 314** *eP* **P** **11 44 21.9 -0.1**
HPK IAmb IAmb 11 44 24.4
comp=Z,107nm,0.5s

EDMD Edmundbyers **51.64 315** ⇑*eP* **P** **11 44 22.3 +0.1**
EDMD IAmb IAmb 11 44 23.4
comp=Z,112nm,0.8s

LWLI Liwa **51.66 136** P **P** **11 44 21.1 -1.9**
comp=Z,7µcomp=Z,95nm,0.5s

LBWR Ladybower, Pea **51.78 313** ⇑*eP* **P** **11 44 23.2 -0.1**
LBWR IAmb IAmb 11 44 23.7
comp=Z,52nm,1.0s

MLA1 Latheron **51.80 320** ⇑*eP* **P** **11 44 23.6 +0.2**
ESY Stoneypath **51.80 317** ⇑*eP* **P** **11 44 23.5 +0.1**
MCD Coleburn Disti **51.86 319** ⇑*eP* **P** **11 44 24.3 +0.5**
EDU Dundee **51.91 317** ⇑*eP* **P** **11 44 24.2 0.0**
WOL Wolverton **51.92 311** *eP* **P** **11 44 24.3 -0.1**
TYV Tymovskoe **51.99 50** *eP* **P** **11 44 26.8 +1.9**
TYV pmax pmax
comp=Z,32nm,0.8s

TYV pmax pmax
comp=Z,500nm,8.7s

BIGH Upper Bighouse **52.05 320** ⇑*eP* **P** **11 44 25.6 +0.4**
BIGH IAmb IAmb 11 44 26.6
comp=Z,182nm,1.1s

EBL Broad Law **52.07 317** ⇑*eP* **P** **11 44 25.3 -0.1**
EDI Edinburgh **52.12 317** *eP* **P** **11 44 25.9 +0.2**
EDI IAmb IAmb 11 44 26.7
comp=Z,116nm,1.0s

SWN1 Swindon **52.23 311** ⇑*eP* **P** **11 44 26.9 +0.3**
SWN1 IAmb IAmb 11 44 27.9
comp=Z,247nm,1.1s

ESK Eskdalemuir **52.24 316** ⇑*eP* **P** **11 44 26.5 -0.2**
ESK IAmb IAmb 11 44 27.6
comp=Z,78nm,1.0s

ESK Eskdalemuir **52.24 316** P **P** **11 44 26.7 0.0**
ESK IAmb IAmb 11 44 27.9
comp=Z,77nm,0.9s

ESK Eskdalemuir **52.24 316** P **P** **11 44 26.7 0.0**
ESK pmax pmax
comp=Z,77nm,1.0s

ESK Eskdalemuir **52.24 316** P **P** **11 44 26.8 +0.1**
ESK x **PcP** **11 45 34.7 -0.4**
STKI Sintang **52.26 124** P **P** **11 44 28.6 +1.2**
LFF La Frestale **52.27 302** *eP* **P** **11 44 26.4 -0.7**
LFF pmax pmax
comp=Z,24nm,0.4s

MBAR Mbarara **52.28 234***ce* **P** **11 44 28.8 +1.1**
MBAR pmax pmax
comp=Z,73nm,0.6s

MBAR Mbarara **52.28 234** P **P** **11 44 29.1 +1.4**
KASI Kota Agung **52.32 136** P **P** **11 44 27.5 -0.2**
comp=Z,48nm,0.5s

KESW Keswick, Cumbr **52.33 315** ⇑*eP* **P** **11 44 27.6 +0.3**
KESW IAmb IAmb 11 44 28.1
comp=Z,92nm,1.0s

STRD Stroud **52.39 311** *eP* **P** **11 44 27.6 -0.2**
STRD IAmb IAmb 11 44 28.4
comp=Z,74nm,0.8s

MFF Saint Martin d **52.41 305** *eP* **P** **11 44 27.2 -0.8**
MFF pmax pmax
comp=Z,73nm,1.1s

MDO Dochfour **52.47 319** ⇑*eP* **P** **11 44 28.4 +0.1**
INVG Invergeldie, C **52.49 317** ⇑*eP* **P** **11 44 28.2 -0.3**
INVG IAmb IAmb 11 44 29.4
comp=Z,78nm,1.0s

JMIC Jan Mayen **52.59 336** P **P** **11 44 30.8 +1.8**
comp=Z,87nm,0.8s,baz=86,slow=6.5,SNR=7.8
comp=Z,87nm,0.8s

JSD Sado **52.69 67** IAmb IAmb 11 44 31.1
comp=Z,190nm,1.6s

EAB Aberfoyle **52.70 317** ⇑*eP* **P** **11 44 30.0 -0.1**
INU Inuyama **52.72 70** P **P** **11 44 31.2 +0.7**
INU Inuyama **52.72 70** P **P** **11 44 31.0 +0.5**
INU sP **PcP** **11 45 37.3 0.0**
FOEL Foel Wylfa **52.76 313** ⇑*eP* **P** **11 44 30.6 +0.1**
FOEL IAmb IAmb 11 44 31.7
comp=Z,215nm,1.7s

MONM Monmouth **52.76 312** ⇑*eP* **P** **11 44 30.1 -0.4**
MONM IAmb IAmb 11 44 32.0
comp=Z,125nm,1.0s

LINV Loch Inver, As **52.78 320** ⇑*eP* **P** **11 44 30.8 +0.3**
LINV IAmb IAmb 11 44 32.0
comp=Z,184nm,1.0s

MCH1 Michaelchurch **52.84 312** ⇑*eP* **P** **11 44 30.9 -0.2**
MCH1 IAmb IAmb 11 44 31.9
comp=Z,156nm,0.9s

PGBU Glenifferbraes **52.86 317** ⇑*eP* **P** **11 44 31.4 +0.2**
PGBU IAmb IAmb 11 44 32.4
comp=Z,124nm,0.9s

NEWG New Galloway **52.86 316** ⇑*eP* **P** **11 44 31.5 +0.3**
NEWG IAmb IAmb 11 44 32.5
comp=Z,128nm,0.9s

KAC Achnashellach **52.96 319** ⇑*eP* **P** **11 44 32.1 +0.2**
YSS Yuzh-Sakhalins **53.05 55** P **P** **11 44 33.5 +0.8**
YSS IAmb IAmb 11 44 35.2
comp=Z,117nm,0.6s

YSS Yuzh-Sakhalins **53.05 55** *eP* **P** **11 44 33.3 +0.6**
YSS pmax pmax
comp=Z,400nm,3.1s

YSS pmax pmax
comp=Z,140nm,1.3s

YSS Yuzh-Sakhalins **53.05 55** P **P** **11 44 33.9 +1.2**
YSS Yuzh-Sakhalins **53.05 55** P **P** **11 44 33.5 +0.8**
KPL Plockton **53.18 319** ⇑*eP* **P** **11 44 33.6 +0.2**
KPL IAmb IAmb 11 44 34.5
comp=Z,135nm,0.9s

MAJO Matsushiro **53.18 68** P **P** **11 44 33.9 0.0**
MAJO Matsushiro **53.18 68** P **P** **11 44 33.9 0.0**
MAJO pmax pmax
comp=Z,48nm,0.8s

MAJO Matsushiro **53.18 68** P **P** **11 44 34.3 +0.4**
MAJO Matsushiro **53.18 68** P **P** **11 44 34.2 +0.3**
MAJO x x 11 45 29.8
MAJO sP **PcP** **11 45 38.6 -0.5**
MJAR Matsushiro Arr **53.18 68** P **P** **11 44 33.3 -0.6**
comp=Z,36nm,1.1s,baz=294,slow=7.7,SNR=28
MJAR PcP **PcP** **11 45 38.7 -0.3**
comp=Z,12nm,0.8s,baz=275,slow=4.2,SNR=8.2
MJAR ScP **ScP** **11 49 13.1 -3.4**
comp=Z,3.7nm,0.8s,baz=302,slow=2.5,SNR=5.4
comp=Z,36nm,1.1s

GAL1 Galloway **53.19 316** ⇑*eP* **P** **11 44 33.4 -0.2**
GAL1 IAmb IAmb 11 44 34.6
comp=Z,62nm,1.0s

IOMK Kirk Michael **53.24 315** ⇑*eP* **P** **11 44 34.1 +0.2**
IOMK IAmb IAmb 11 44 35.3
comp=Z,327nm,1.1s

LAWE Loch Awe, Argy **53.27 317** *eP* **P** **11 44 34.3 +0.2**
LAWE IAmb IAmb 11 44 35.4
comp=Z,124nm,1.0s

YLL Llanberis **53.27 313** ⇑*eP* **P** **11 44 34.2 0.0**
WIM Isle of Man **53.33 315** ⇑*eP* **P** **11 44 35.0 +0.4**
WLF1 Llynfaes **53.37 314** *eP* **P** **11 44 34.5 -0.4**
WLF1 IAmb IAmb 11 44 35.5
comp=Z,93nm,0.9s

JEW Eniwo **53.39 60** IAmb IAmb 11 44 37.4
comp=Z,176nm,0.8s

LEWI Lewis, Hebride **53.65 320** *eP* **P** **11 44 37.0 0.0**
LEWI IAmb IAmb 11 44 38.4
comp=Z,96nm,0.8s

DYA Yadsworthy **53.80 310** ⇑*eP* **P** **11 44 37.7 -0.4**
DYA IAmb IAmb 11 44 39.5
comp=Z,39nm,0.9s

NOR Nord **53.86 350** *i* P **P** **11 44 38.0 -0.2**
RSBS Rosebush, Pemb **53.90 312** ⇑*eP* **P** **11 44 38.6 -0.2**
RSBS IAmb IAmb 11 44 39.5
comp=Z,48nm,0.9s

CLGH Cloghs, Cushen **53.92 316** *eP* **P** **11 44 38.8 -0.1**
CLGH IAmb IAmb 11 44 40.1
comp=Z,55nm,0.9s

HTL Hartland **53.99 311** *eP* **P** **11 44 38.7 -0.8**
HTL IAmb IAmb 11 44 40.2
comp=Z,37nm,0.6s

GMM Mts of Mourne **54.03 315** ⇑*eP* **P** **11 44 39.5 -0.2**
ILTH Belurgan, Co L **54.30 315** *eP* **P** **11 44 41.3 -0.4**
MA2 Magadan **54.57 38** P **P** **11 44 44.4 +0.9**
comp=Z,50nm,1.0s,baz=206,slow=7.5,SNR=14
MA2 PcP **PcP** **11 45 44.5 +0.6**
comp=Z,12nm,0.5s,baz=345,slow=3.0,SNR=5.0
comp=Z,50nm,1.0s

MA2 Magadan **54.57 38** P **P** **11 44 44.2 +0.6**
MA2 IAmb IAmb 11 44 45.7
comp=Z,93nm,1.2s

MA2 Magadan **54.57 38***ce* **P** **11 44 44.7 +1.1**
MA2 pmax pmax
comp=Z,129nm,1.7s

MA2 Magadan **54.57 38** P **P** **11 44 44.4 +0.9**
MA2 Magadan **54.57 38** P **P** **11 44 44.6 +1.1**
MA2 x **PcP** **11 45 43.9 0.0**

SEY Seymchan **54.62 34** P **P** **11 44 45.2 +1.4**
comp=Z,68nm,0.9s,baz=275,slow=9.2,SNR=75
SEY PcP **PcP** **11 45 44.4 +0.4**
comp=Z,12nm,0.6s,baz=117,slow=22,SNR=4.6
comp=Z,68nm,0.9s

SEY Seymchan **54.62 34***ce* **P** **11 44 45.4 +1.6**
SEY pmax pmax
comp=Z,145nm,1.3s

JMM Marumori **54.62 66** IAmb IAmb 11 44 46.2
comp=Z,81nm,0.7s

CCA1 Carnmenellis **54.67 310** ⇑*eP* **P** **11 44 44.1 -0.2**
CCA1 IAmb IAmb 11 44 45.1
comp=Z,63nm,0.7s

IDGL Inch Island, C **54.70 316** *eP* **P** **11 44 44.8 +0.3**
DAG Danmarks Havn **54.77 344** *i* P **P** **11 44 44.9 +0.2**
DAG IAmb IAmb 11 44 46.1
comp=Z,109nm,0.8s

JYT Yasato **54.78 68** IAmb IAmb 11 44 46.6
comp=Z,126nm,0.9s

IWEX Carrickbyrne, **54.99 313** *eP* **P** **11 44 46.9 +0.2**
MTKI Muara Teweh, K **55.31 122** P **P** **11 44 50.6 +1.2**
comp=Z,3µcomp=Z,19nm,0.6s

DBG Daneborg **55.61 341** *i* P **P** **11 44 51.8 +1.1**
DBG IAmb IAmb 11 44 53.4
comp=Z,32nm,0.6s

CART Cartagena **55.97 294** P **P** **11 44 54.4 +0.5**
SCO Scoresbysund **57.06 336** *i* P **P** **11 45 01.7 +0.6**
SCO IAmb IAmb 11 45 03.6
comp=Z,21nm,0.7s

BBKI Banjar Baru **57.12 124** P **P** **11 45 03.4 +1.2**
comp=Z,2µcomp=Z,59nm,1.1s

VAL Valentia **57.16 313** P **P** **11 45 02.4 +0.4**
ESBB Sonseca Array **57.32 298** IAmb IAmb 11 45 04.8
comp=Z,66nm,0.8s

ESDC Sonseca Array **57.32 298** P **P** **11 45 03.6 +0.2**
comp=Z,62nm,0.8s,baz=60,slow=7.2,SNR=368
ESDC ScP **ScP** **11 49 33.9 -0.8**
comp=Z,0.7nm,0.3s,baz=55,slow=4.9,SNR=3.0
ESDC PKPPKP **P'P'df** **12 14 48.9 -2.1**
comp=Z,0.9nm,0.8s,baz=264,slow=2.6,SNR=2.4
comp=Z,62nm,0.8s

ESDC Sonseca Array **57.32 298** IAmb IAmb 11 45 04.8
comp=Z,74nm,0.8s

TAM Tamanrasset **57.34 276** P P 11 44 55.7 -8.2
PAB San Pablo **57.65 298** P **P** **11 45 05.9 +0.2**
PAB IAmb IAmb 11 45 07.2
comp=Z,144nm,1.4s

PAB San Pablo **57.65 298** P **P** **11 45 05.9 +0.2**
PAB pmax pmax
comp=Z,144nm,1.4s

PAB San Pablo **57.65 298** P **P** **11 45 05.9 +0.2**
PAB San Pablo **57.65 298** P **P** **11 45 05.9 +0.2**
MPSI Mapaga **57.92 117** P **P** **11 45 08.9 +1.1**
comp=Z,73nm,0.6s

TOLI2 Tolitoli **58.03 115** P **P** **11 45 09.4 +0.8**
TAF Taforalt **58.12 292** P **P** **11 45 10.0 +0.9**
FIGM Figuig **58.39 289** P **P** **11 45 11.0 -0.1**
GOG Mont Gurugu **58.39 293** P **P** **11 45 11.1 +0.2**
JBK JBK **58.44 292** P **P** **11 45 12.2 +0.8**
PBRG Braganca **58.46 301** ⇑*eP* **P** **11 45 11.3 0.0**
comp=Z,62nm,1.6s

TDRA Tendrara **58.58 290** P **P** **11 45 13.1 +0.7**
BORG Borgarnes **58.59 330** P **P** **11 45 14.3 +2.6**
comp=Z,84nm,0.7s,baz=90,slow=4.8,SNR=86
comp=Z,84nm,0.7s

BORG Borgarnes 58.59 330 P **P** 11 45 13.1 +1.4
BORG IAmb IAmb 11 45 15.5
comp=Z,93nm,0.7s
BORG Borgarnes 58.59 330 P **P** 11 45 13.1 +1.4
BORG pmax pmax
comp=Z,93nm,0.7s
BORG Borgarnes 58.59 330 P **P** 11 45 14.5 +2.8
BORG pP **pP** 11 46 02.8 +3.2
BILL Bilibino 58.79 26 P **P** 11 45 14.6 +1.5
BILL Bilibino 58.79 26 *de*P **P** 11 45 14.5 +1.5
BILL *e* 11 46 05.9
BILL *e**SP **sP** 11 46 26.2 +1.3
BILL *i* 11 47 23.0
BILL *e*PPP PPP 11 48 50.4
BILL *e*S **S** 11 53 03.5 +2.3
BILL *i* *SS **ScS** 11 54 35.5 -5.8
BILL pmax pmax
comp=Z,215nm,1.3s
BILL MLR MLR
comp=Z,79nm,18.0s
BILL Bilibino 58.79 26 P **P** 11 45 14.7 +1.7
BILL pP **pP** 11 46 01.3 -0.2
BILL x **PP** 11 47 22.3 -2.7
MVO Moncorvo 58.91 300⇑ *i*P **P** 11 45 14.9 +0.5
comp=Z,82nm,1.1s
PALE Palemas 59.09 293 P **P** 11 45 16.0 +0.3
MRSI Marisa 59.31 115 P **P** 11 45 18.5 +1.1
comp=Z,2µmcomp=Z,262nm,1.1s
AKLM AKL 59.33 292 P **P** 11 45 18.0 +0.5
PVRL Vila Real 59.34 301 *e*P **P** 11 45 18.1 +0.7
comp=Z,56nm,1.5s
POLO Lamas de Olo 59.36 301⇑ *e*P **P** 11 45 17.9 +0.4
comp=Z,22nm,1.4s
PCAB Cabril 59.38 301⇑ *i*P **P** 11 45 18.2 +0.6
comp=Z,117nm,1.1s
ABPO Ambohimpanom 59.43 206 P **P** 11 45 19.7 +1.5
ABPO IAmb IAmb 11 45 26.0
comp=Z,110nm,1.4s
ABPO Ambohimpanom 59.43 206 P **P** 11 45 19.7 +1.5
ABPO pmax pmax
comp=Z,110nm,1.4s
PGAV Gavieira, Arco 59.45 302⇑ *i*P **P** 11 45 18.6 +0.4
comp=Z,86nm,1.3s
MTE Manteigas 59.57 300⇑ *i*P **P** 11 45 19.8 +0.8
comp=Z,141nm,1.0s
MTE Manteigas 59.57 300 IAmb IAmb 11 45 21.0
comp=Z,105nm,0.9s
PVIS Viseu 59.69 300⇑ *e*P **P** 11 45 20.4 +0.7
comp=Z,137nm,0.9s
PCBR Castelo Branco 59.75 299⇑ *e*P **P** 11 45 20.6 +0.5
comp=Z,62nm,1.1s
PMRV Marv??o 59.85 299⇑ *i*P **P** 11 45 21.3 +0.5
comp=Z,86nm,1.3s
SMIR Smir Dam 59.96 294 P **P** 11 45 22.0 +0.4
APSI Ampana 60.04 116 P **P** 11 45 23.5 +1.1
comp=Z,1µmcomp=Z,132nm,1.3s
CHEFC Chefchaouen 60.18 293 P **P** 11 45 23.0 -0.2
SKR Severo-Kuril's 60.18 47 *ce*P **P** 11 45 22.7 -0.1
PEA0B Petropavlovsk- 60.18 44 P **P** 11 45 22.8 0.0
PEA0B IAmb IAmb 11 45 23.7
comp=Z,132nm,1.8s
PEA0B Petropavlovsk- 60.18 44 P **P** 11 45 22.8 0.0
PEA0B pmax pmax
comp=Z,132nm,1.8s
PETK Petropavlovsk- 60.18 44 P **P** 11 45 21.8 -1.1
comp=Z,7.1nm,0.6s,baz=316,slow=6.0,SNR=17
comp=Z,7.1nm,0.6s
PETK Petropavlovsk- 60.18 44 P **P** 11 45 22.1 -0.7
PETK Petropavlovsk- 60.18 44 P **P** 11 45 22.1 -0.7
JCJ Chichijima 60.22 77 P **P** 11 45 21.6 -1.9
JCJ IAmb IAmb 11 45 22.3
comp=Z,115nm,1.1s
PESTR Estremoz 60.23 298⇑ *i*P **P** 11 45 23.5 +0.1
comp=Z,108nm,1.2s
PESTR Estremoz 60.23 298 P **P** 11 45 23.5 +0.1
PESTR Estremoz 60.23 298 P **P** 11 45 23.6 +0.3
TTSI Tana Toraja 60.23 120 P **P** 11 45 24.6 +1.0
comp=Z,32nm,0.8s
COI Coimbra 60.25 300 *e*P **P** 11 45 24.4 +0.9
comp=Z,172nm,0.8s
COI Coimbra 60.25 300 IAmb IAmb 11 45 25.4
comp=Z,163nm,1.1s
PCAS Casmilo, Conde 60.38 300⇑ *e*P **P** 11 45 24.8 +0.4
comp=Z,55nm,1.0s
LCRM LCR 60.43 292 P **P** 11 45 26.0 +0.9
PMTG Montargil 60.59 299⇑ *i*P **P** 11 45 25.8 0.0
comp=Z,55nm,1.3s
MDT Midelt 60.63 291 P **P** 11 45 26.9 +0.6
EVO Evora 60.66 298⇑ *i*P **P** 11 45 26.9 +0.6
comp=Z,115nm,1.2s
KMSI Cibinong 60.74 113 P **P** 11 45 28.2 +1.1
comp=Z,158nm,0.9s
PET Petropavlovsk 60.75 44 P **P** 11 45 25.4 -1.1
PET IAmb IAmb 11 45 26.6
comp=Z,67nm,1.2s
PET Petropavlovsk 60.75 44⇑ *i*P **P** 11 45 25.5 -1.1
PET *e**SP **sP** 11 46 38.4 -0.4
PET *e* 11 47 43.3
PET *e*S **S** 11 53 21.3 -5.3
PET *e**SS **sS** 11 54 50.4 -1.5
PET pmax pmax
comp=Z,66nm,1.1s
PET pmax pmax
comp=Z,100nm,12.4s
PET pmax pmax
comp=Z,100nm,13.5s
PET Petropavlovsk 60.75 44 P **P** 11 45 25.8 -0.8
PET Petropavlovsk 60.75 44 P **P** 11 45 25.5 -1.1
PBEJ Beja 60.77 297⇑ *i*P **P** 11 45 27.5 +0.4
comp=Z,88nm,1.4s
PSBE So Bento 60.81 299⇑ *i*P **P** 11 45 28.2 +0.9
comp=Z,153nm,1.0s
CZD Col de Zad 60.86 291 P **P** 11 45 29.2 +1.1
PVAQ Vaqueiros 60.93 297⇑ *i*P **P** 11 45 28.5 +0.4
comp=Z,121nm,0.9s
PVAQ Vaqueiros 60.93 297 P **P** 11 45 28.2 +0.1
PVAQ IAmb IAmb 11 45 29.6
comp=Z,69nm,0.8s
PVAQ Vaqueiros 60.93 297 P **P** 11 45 28.3 +0.1
ARF Arif 60.95 289 P **P** 11 45 29.0 +0.5
SOEG Soedalen 61.00 335 *i*P **P** 11 45 29.5 +1.5
PCVE Castro Verde 61.06 297⇑ *e*P **P** 11 45 29.4 +0.4
comp=Z,72nm,1.2s
SUMG Summit 61.09 341 P **P** 11 45 29.8 +0.7
SUMG Summit 61.09 341 P **P** 11 45 29.8 +0.7
SUMG pmax pmax
comp=Z,249nm,0.7s
SUMG Summit 61.09 341 *i*P **P** 11 45 29.0 -0.1
SUMG IAmb IAmb 11 45 31.4
comp=Z,179nm,0.7s
MESJ Messejana 61.10 297 *e*P **P** 11 45 29.8 +0.5
MESJ IAmb IAmb 11 45 31.2
comp=Z,85nm,0.9s
MESJ Messejana 61.10 297⇑ *i*P **P** 11 45 29.8 +0.5
comp=Z,98nm,1.0s
MESJ Messejana 61.10 297 *e*P **P** 11 45 29.7 +0.5
PACT Alcochete 61.15 299⇑ *e*P **P** 11 45 30.2 +0.7
comp=Z,243nm,1.7s
PBDV Barranco-do-Ve 61.15 297⇑ *i*P **P** 11 45 30.2 +0.5
comp=Z,181nm,1.1s
PNCL Nicolau / Gran 61.21 298 *e*P **P** 11 45 30.4 +0.4
comp=Z,83nm,1.6s
BNSI Bone 61.39 120 P **P** 11 45 31.1 -0.3
comp=Z,9.7nm,0.6s
GOLM Goulmima 61.39 290 P **P** 11 45 32.5 +1.1
PMAFR Mafra 61.39 299 *e*P **P** 11 45 31.7 +0.5
comp=Z,147nm,1.0s
LIS Lisbon 61.39 299 *e*P **P** 11 45 31.6 +0.4
LIS IAmb IAmb 11 45 32.5
comp=Z,80nm,0.7s
LIS Lisbon 61.39 299 *e*P **P** 11 45 31.6 +0.4
PMST Lisbon--Monsan 61.41 299 *e*P **P** 11 45 31.9 +0.6
comp=Z,153nm,1.2s
KAPI Kappang 61.58 121 P **P** 11 45 30.9 -1.8
comp=Z,4.4nm,0.3s,baz=16,slow=11,SNR=2.2
comp=Z,4.4nm,0.3s
PTEO Sao Teotonio 61.59 297⇑ *e*P **P** 11 45 33.2 +0.7
comp=Z,113nm,0.9s
MORF Marmelete 61.64 297 *e*P **P** 11 45 33.3 +0.3
MORF Marmelete 61.64 297 *e*P **P** 11 45 34.0 +1.0
MORF Marmelete 61.64 297 *e*P **P** 11 45 33.3 +0.3
PFVI Vila Bisbo 61.84 297⇑ *e*P **P** 11 45 34.9 +0.6
comp=Z,173nm,1.7s
PFVI Vila Bisbo 61.84 297 IAmb IAmb 11 45 36.0
comp=Z,141nm,1.1s
PFVI Vila Bisbo 61.84 297 P **P** 11 45 35.3 +1.0
ZHG ZHG 61.87 292 P **P** 11 45 35.0 +0.4
BKSI Bulukumba 62.06 121 P **P** 11 45 37.2 +1.3
comp=Z,415nmcomp=Z,28nm,0.7s
VOI Vohitsoka 62.25 205 P **P** 11 45 38.7 +1.5
VOI IAmb IAmb 11 45 44.5
comp=Z,100nm,0.8s
VOI Vohitsoka 62.25 205 P **P** 11 45 38.9 +1.7
SNR=5.2
VOI Vohitsoka 62.25 205 P **P** 11 45 40.4 +3.2
TZRR Tazzarine 62.28 289 P **P** 11 45 37.7 +0.3
AVE Averroes 62.52 292 P **P** 11 45 38.6 -0.2
AVE Averroes 62.52 292 P **P** 11 45 38.8 0.0
ZGR Zagora 62.63 289 P **P** 11 45 40.1 +0.4
BSSI Bau Bau, Buton 62.90 122 P **P** 11 45 42.7 +1.2
comp=Z,503nmcomp=Z,30nm,0.7s
EUNU Eureka 63.09 356 P **P** 11 45 43.5 +1.6
EUNU IAmb IAmb 11 45 44.7
comp=Z,69nm,0.8s
OUZM OUZ 63.13 290 P **P** 11 45 44.0 +1.0
TNTI Ternate 63.15 111 P **P** 11 45 43.6 +0.6
TNTI Ternate 63.15 111 P **P** 11 45 43.8 +0.7
comp=Z,2µmcomp=Z,192nm,1.1s
TNTI Ternate 63.15 111 P **P** 11 45 43.7 +0.6
ICESG Greenland Ices 63.22 338 *i*P **P** 11 45 43.7 +0.4
ICESG IAmb IAmb 11 45 45.3
comp=Z,121nm,0.7s
OUK Oukaimeden 63.82 291 P **P** 11 45 48.2 +0.4
SANI Sanana 63.98 114 P **P** 11 45 48.5 0.0
comp=Z,1µmcomp=Z,120nm,0.8s
SANI Sanana 63.98 114 P **P** 11 45 48.6 0.0
LBMI Labuha 64.17 112 P **P** 11 45 50.6 +0.8
comp=Z,1µmcomp=Z,91nm,0.9s
ANGG Amassalik, Gr 64.41 334 *i*P **P** 11 45 51.9 +1.3
TTIG Tnine Tigouga, 64.57 290 P **P** 11 45 53.0 +0.6
WBSI Waikabubak, Su 64.70 125 P **P** 11 45 52.7 -0.6
comp=Z,138nm,0.7s
EAH EAH 64.91 292 P **P** 11 45 56.0 +1.6
ISOG Isortoq, Green 64.92 334 *i*P **P** 11 45 54.5 +0.7
FOMA Nahampoana Res 65.04 204 IAmb IAmb 11 46 01.8
comp=Z,106nm,0.8s
UPNV Upernavik 65.18 345 *i*P **P** 11 45 55.6 +0.2
UPNV IAmb IAmb 11 45 57.1
comp=Z,109nm,0.6s
LSZ Lusaka 65.24 226 ⇑P **P** 11 45 57.8 +1.0
NUUG Nuugaatsiaq 65.39 343 *e*P **P** 11 45 57.7 +0.9
TORD Torodi Ar. Bea 65.51 269 P **P** 11 45 57.4 -1.1
comp=Z,181nm,0.5s,baz=50,slow=6.0,SNR=1675
TORD PKPPKP **P'P'df** 12 14 33.8 -3.4
comp=Z,1.5nm,1.1s,baz=264,slow=1.7,SNR=3.9
comp=Z,181nm,0.5s
EDFI Ende, Flores 65.59 123 P **P** 11 45 57.9 -1.2
comp=Z,2µmcomp=Z,18nm,0.5s
NLAI Namlea 65.60 114 P **P** 11 46 00.2 +1.2
comp=Z,32nm,0.9s
CGR Cap Guir 65.62 291 P **P** 11 45 59.4 +0.4
BASI Baing, Sumba 65.91 125 P **P** 11 46 01.5 +0.5
comp=Z,2µmcomp=Z,169nm,0.8s
ILULI Ilulissat 66.43 341 *i*P **P** 11 46 03.5 +0.1
ILULI IAmb IAmb 11 46 05.0
comp=Z,198nm,0.6s
SFNM Sidi Ifni 66.47 290 P **P** 11 46 04.4 0.0
AAI Ambon 66.71 114 P **P** 11 46 05.8 -0.2
comp=Z,83nm,0.6s
DY2G Dye2 66.79 337 *i*P **P** 11 46 06.7 +0.6
DY2G IAmb IAmb 11 46 07.6
comp=Z,171nm,0.6s
MSAI Masohi 67.02 113 P **P** 11 46 08.4 +0.3
comp=Z,546nmcomp=Z,28nm,0.8s
SWI Sorong 67.16 109 P **P** 11 46 09.3 +0.4
comp=Z,2µmcomp=Z,206nm,0.9s
A21K Barrow 67.47 15 P **P** 11 46 11.1 +1.2
baz=320,SNR=6.6
TANT Tantan 67.74 290 P **P** 11 46 13.0 +0.5
SFJD Kangerlussuaq 67.78 339 P **P** 11 46 12.3 +0.4
SFJD IAmb IAmb 11 46 13.5
comp=Z,116nm,1.0s
SFJD Kangerlussuaq 67.78 339 P **P** 11 46 12.4 +0.4
SFJD pmax pmax
comp=Z,116nm,1.0s
SFJD Kangerlussuaq 67.78 339 *i*P **P** 11 46 13.7 +1.7
SFJD Kangerlussuaq 67.78 339 P **P** 11 46 12.6 +0.6
SOEI Soe 68.08 121 IAmb IAmb 11 46 21.2
comp=Z,120nm,1.1s
SOEI Soe 68.08 121 P **P** 11 46 14.1 -0.7
comp=Z,1µmcomp=Z,100nm,0.8s
SOEI Soe 68.08 121 P **P** 11 46 14.3 -0.5
BNDI Bandanaira 68.53 113 P **P** 11 46 17.0 -0.4
GAMB Gambell 68.68 25 IAmb IAmb 11 46 19.8
comp=Z,79nm,1.2s
GAMB Gambell 68.68 25 P **P** 11 46 18.7 +1.1
baz=310
TNA Tin City 68.73 22 IAmb IAmb 11 46 20.3
comp=Z,85nm,1.2s
TNA Tin City 68.73 22 P **P** 11 46 19.2 +1.3
baz=312,SNR=8.1
BLWY Bulalawayo 68.90 223 *i*P **P** 11 46 18.6 -1.1
BLWY Bulawayo 68.90 223 *i*P **P** 11 46 18.6 -1.1
PMPST Porto Santo, M 69.18 296 *e*P **P** 11 46 21.9 +0.6
MATP Matopo 69.20 222 *i*P **P** 11 46 20.3 -1.2
MATP Matopo 69.20 222 *i*P **P** 11 46 20.3 -1.2
FAKI Fak Fak 69.23 110 IAmb IAmb 11 46 23.3
comp=Z,171nm,1.0s
FAKI Fak Fak 69.23 110 P **P** 11 46 22.5 +0.7
comp=Z,2µmcomp=Z,171nm,0.9s
FAKI Fak Fak 69.23 110 P **P** 11 46 22.2 +0.4
PMAR Madeira 69.78 296 *e*P **P** 11 46 26.0 +0.8
comp=Z,228nm,1.2s
NRS Narsarsuaq 69.86 332 IAmb IAmb 11 46 26.6
comp=Z,116nm,0.9s
NRS Narsarsuaq 69.86 332 *i*P **P** 11 46 25.4 +0.5
PMOZ Porto Moniz, M 69.93 296 *e*P **P** 11 46 26.7 +0.7
comp=Z,167nm,2.7s
NUUK Nuuk 70.03 337 *i*P **P** 11 46 26.4 +0.5
ANM Nome 70.20 22 IAmb IAmb 11 46 29.7
comp=Z,92nm,0.9s
ANM Nome 70.20 22 P **P** 11 46 28.5 +1.6
baz=315,SNR=14
MOPA Mopani 70.23 218 *i*P **P** 11 46 27.7 +0.1
MOPA Mopani 70.23 218 *i*P **P** 11 46 27.7 +0.1
D23K Nanushuk River 70.58 15 P **P** 11 46 30.4 +1.2
baz=326,SNR=119
D24K Happy Valley 70.79 14 P **P** 11 46 31.6 +1.2
baz=327,SNR=38
IVI Ivigtut 70.85 333 IAmb IAmb 11 46 42.4
comp=Z,78nm,1.2s
IVI Ivigtut 70.85 333 *i*P **P** 11 46 31.4 +0.5
IVI Ivigtut 70.85 333 P **P** 11 46 31.2 +0.4
TOLK Toolik Lake Re 71.07 15 P **P** 11 46 33.4 +1.2
baz=327,SNR=188
BAKI Biak 71.09 106 P **P** 11 46 34.0 +0.9
comp=Z,2µmcomp=Z,196nm,1.2s
A36M Sachs Harbour 71.32 5 P **P** 11 46 34.8 +1.2
baz=346,SNR=285
SAUI Saumlaki 71.86 115 P **P** 11 46 39.9 +2.3
comp=Z,8µmcomp=Z,816nm,0.7s
SAUI Saumlaki 71.86 115 P **P** 11 46 39.1 +1.5
COLD Coldfoot 72.12 16 P **P** 11 46 39.6 +1.2
baz=326,SNR=46
GCSA Galena City Sc 72.52 19 P **P** 11 46 41.8 +1.1
baz=321,SNR=116
H21K Melozitna Rive 72.82 17 IAmb IAmb 11 46 44.7
comp=Z,171nm,1.1s
H21K Melozitna Rive 72.82 17 P **P** 11 46 43.4 +0.8
baz=324,SNR=177
H22K Ishtalitna Cre 72.97 17 P **P** 11 46 44.5 +1.0
baz=326,SNR=84
I21K Tanana 73.41 17 IAmb IAmb 11 46 48.3
comp=Z,103nm,0.9s
I21K Tanana 73.41 17 P **P** 11 46 47.1 +1.0
baz=325,SNR=28
H23K Yukon River 73.44 16 IAmb IAmb 11 46 48.9
comp=Z,136nm,0.8s
H23K Yukon River 73.44 16 P **P** 11 46 47.8 +1.5
baz=327,SNR=164
MBWA Marble Bar 73.61 133 P **P** 11 46 48.4 +0.7
MBWA Marble Bar 73.61 133 P **P** 11 46 48.1 +0.4
J20K Nowinta River 73.69 19 P **P** 11 46 48.8 +1.1
baz=324,SNR=186
H24K Noodor Dome 73.80 16 IAmb IAmb 11 46 50.9
comp=Z,98nm,0.8s
H24K Noodor Dome 73.80 16 P **P** 11 46 49.7 +1.4
baz=328,SNR=175
MLY Manley 73.83 17 IAmb IAmb 11 46 50.6
comp=Z,99nm,0.9s
MLY Manley 73.83 17 P **P** 11 46 49.4 +0.8
baz=326,SNR=157
PSA00 Pilbara Seismi 74.00 133 IAmb IAmb 11 46 51.2
comp=Z,15nm,1.0s
PSA00 Pilbara Seismi 74.00 133 P **P** 11 46 50.2 +0.2
C36M Paulatuk 74.00 5 P **P** 11 46 49.9 +0.6
baz=348,SNR=533
INK Inuvik 74.04 9 P **P** 11 46 50.8 +1.3
comp=Z,187nm,0.7s,baz=351,slow=7.5,SNR=406
comp=Z,187nm,0.7s
INK Inuvik 74.04 9 P **P** 11 46 50.8 +1.3
baz=340,SNR=276
I23K Minto, Yukon-K 74.06 16 IAmb IAmb 11 46 52.2
comp=Z,155nm,0.9s
I23K Minto, Yukon-K 74.06 16 P **P** 11 46 50.9 +1.1
baz=327,SNR=137
TTA Tatalina 74.19 20 P **P** 11 46 51.8 +1.2
baz=322
K20K Telida 74.38 19 P **P** 11 46 52.8 +1.2
baz=324,SNR=202
CHUM Lake Minchumin 74.40 18 P **P** 11 46 53.0 +1.2
baz=325,SNR=84
LBTB Lobatse 74.47 222 IAmb IAmb 11 46 57.6
comp=Z,95nm,0.7s
LBTB Lobatse 74.47 222 *i*P **P** 11 46 52.6 -0.2
LBTB Lobatse 74.47 222 *i*P **P** 11 46 52.6 -0.2
DBIC Dimbokro 74.49 267 P **P** 11 46 52.3 -0.7
comp=Z,41nm,0.6s,baz=60,slow=6.7,SNR=60
comp=Z,41nm,0.6s
DBIC Dimbokro 74.49 267 P **P** 11 46 52.4 -0.7
DBIC IAmb IAmb 11 46 53.3
comp=Z,88nm,1.1s
DBIC Dimbokro 74.49 267 P **P** 11 46 52.4 -0.7
DBIC pmax pmax
comp=Z,88nm,1.1s
POKR Poker Plat Res 74.51 16 P **P** 11 46 53.7 +1.3
baz=329,SNR=90
BPAW Bear Paw Mtn. 74.55 18 IAmb IAmb 11 46 54.3
comp=Z,136nm,1.0s
BPAW Bear Paw Mtn. 74.55 18 P **P** 11 46 53.1 +0.5
baz=326,SNR=121
KIC Kosan Boka 74.57 267⇑ *i*P **P** 11 46 52.9 -0.7
comp=Z,129nm,0.6s
NEA2 Nenana 74.59 17 P **P** 11 46 53.4 +0.6
baz=328,SNR=156
TCOL CIGO, ULAF Yank 74.63 16 P **P** 11 46 53.9 +0.9
baz=329,SNR=80
COLA College 74.63 16 P **P** 11 46 53.9 +0.9
COLA College 74.63 16 P **P** 11 46 53.9 +0.9
COLA pmax pmax
comp=Z,302nm,0.8s
COLA College 74.63 16 P **P** 11 46 53.9 +0.9
baz=329
TIC Toumodi 74.63 267⇑ *i*P **P** 11 46 53.1 -0.8
comp=Z,30nm,0.3s
TSUM Tsumeb 74.69 232 P **P** 11 46 54.9 +0.7
TSUM IAmb IAmb 11 46 56.2
comp=Z,137nm,1.2s
CCB Clear Creek Bu 74.83 16 IAmb IAmb 11 46 56.5
comp=Z,49nm,0.8s
CAST Castle Rocks 74.84 18 P **P** 11 46 55.3 +0.9
baz=326,SNR=290
LIC Lamto 74.88 267⇑ *i*P **P** 11 46 55.1 -0.3
comp=Z,64nm,0.5s
WRH Wood River Hil 74.92 16 IAmb IAmb 11 46 56.0
comp=Z,78nm,0.8s
IL31 74.93 16 IAmb IAmb 11 46 56.1
comp=Z,126nm,1.1s
ILAR Eielson Array 74.93 16 P **P** 11 46 54.8 0.0
comp=Z,73nm,0.8s,baz=318,slow=4.3,SNR=531
ILAR PP **PP** 11 49 46.2 +1.5
comp=Z,11nm,1.0s,baz=319,slow=7.3,SNR=7.0
ILAR PKKPbc **PKKPbc** 12 06 15.6 -1.5
comp=Z,0.2nm,0.5s,baz=187,slow=2.2,SNR=2.2
ILAR PKPPKP **P'P'df** 12 14 18.9 -2.5
comp=Z,0.3nm,0.8s,baz=204,slow=2.0,SNR=4.2
comp=Z,73nm,0.8s
MTN Manton Dam 75.03 119 P **P** 11 46 55.5 -0.6
L19K White Mountain 75.11 20 IAmb IAmb 11 46 58.3
comp=Z,103nm,1.1s
L19K White Mountain 75.11 20 P **P** 11 46 57.0 +1.1
baz=324,SNR=44
GENI Genyem 75.12 105 P **P** 11 46 57.3 +0.6
comp=Z,4µmcomp=Z,410nm,0.9s
GENI Genyem 75.12 105 P **P** 11 46 57.4 +0.7
L20K Farewell, AK 75.14 20 P **P** 11 46 57.1 +1.0
baz=324,SNR=53
HDA Harding Lake 75.23 16 IAmb IAmb 11 46 57.8
comp=Z,68nm,0.8s
HDA Harding Lake 75.23 16 P **P** 11 46 56.0 -0.5
baz=329,SNR=87
I26K Coal Creek Min 75.23 14 P **P** 11 46 57.6 +1.1
baz=332
PPLA Purkeypile 75.25 19 IAmb IAmb 11 46 58.3
comp=Z,81nm,0.5s
PPLA Purkeypile 75.25 19 P **P** 11 46 57.3 +0.4
baz=326,SNR=54
TRF Thorofare Moun 75.27 18 IAmb IAmb 11 46 59.5
comp=Z,42nm,0.7s
TRF Thorofare Moun 75.27 18 P **P** 11 46 56.8 -0.1
baz=327,SNR=33
N16K Nishlik Lake 75.30 23 P **P** 11 46 59.0 +2.0
baz=321,SNR=61
KNRA Kununurra 75.35 122 P **P** 11 46 58.1 +0.3
MCK McKinley 75.36 17 IAmb IAmb 11 46 58.9
comp=Z,105nm,0.6s
MCK McKinley 75.36 17 P **P** 11 46 57.2 0.0
baz=328,SNR=57
EPYK Eagle Plains 75.40 11 IAmb IAmb 11 46 59.2
comp=Z,195nm,1.2s
EPYK Eagle Plains 75.40 11 P **P** 11 46 58.0 +0.5
baz=338,SNR=95
J25K Salcha River, 75.40 15 P **P** 11 46 57.8 +0.3
baz=331,SNR=274
M19K Big River Lodg 75.46 20 IAmb IAmb 11 47 00.4
comp=Z,120nm,1.4s
M19K Big River Lodg 75.46 20 P **P** 11 46 59.1 +1.2
baz=324
SVW2 Sparrevohn 75.77 21 IAmb IAmb 11 47 02.3
comp=Z,55nm,1.0s
M20K Styx River 75.83 20 P **P** 11 47 00.6 +0.6
baz=325,SNR=18
J26L Joseph Creek 75.87 15 P **P** 11 47 01.0 +0.8
baz=332,SNR=295
KDU Kakadu 75.88 118 P **P** 11 47 00.6 -0.3
K24K Donnelly Dome 76.01 16 P **P** 11 47 01.3 +0.3
baz=330,SNR=268
N18K Kilae Creek 76.02 22 P **P** 11 47 02.5 +1.5
N18K IAmb IAmb 11 47 09.5
comp=Z,41nm,0.8s
N18K Kilae Creek 76.02 22 P **P** 11 47 02.6 +1.5
baz=323,SNR=20
I29M Ogilvie Camp, 76.07 12 P **P** 11 47 01.7 +0.5
baz=336,SNR=239
CUT Chulitna 76.15 18 P **P** 11 47 01.6 -0.1
baz=327,SNR=22
SKT Skwentna 76.18 19 P **P** 11 47 02.0 0.0
baz=326
O16K Kokwok River B 76.20 23 P **P** 11 47 03.8 +1.8
baz=321,SNR=45
WAT1 Susitna Watana 76.22 17 P **P** 11 47 01.8 -0.4
baz=328
SCRK Sand Creek 76.25 15 P **P** 11 47 03.3 +0.9
baz=332,SNR=302
RIDG Independent Ri 76.27 15 P **P** 11 47 02.6 +0.1
baz=331,SNR=132
DHY Denali Highway 76.28 17 P **P** 11 47 02.6 -0.1
baz=329,SNR=176
N19K Bonanza Creek 76.32 21 IAmb IAmb 11 47 06.7
comp=Z,57nm,0.9s
N19K Bonanza Creek 76.32 21 P **P** 11 47 04.0 +1.2
baz=324,SNR=29
O17K Koliganek Bris 76.37 23 P **P** 11 47 04.5 +1.5
baz=322,SNR=20
DOT Dot Lake 76.52 15 IAmb IAmb 11 47 05.4
comp=Z,107nm,0.8s
K27K Chicken 76.59 14 P **P** 11 47 05.5 +1.4
baz=333
WAT6 Susitna Watana 76.62 17 P **P** 11 47 04.5 -0.1
baz=329,SNR=58
P16K Nushagak River 76.67 24 P **P** 11 47 06.2 +1.5
baz=322,SNR=13
M22K Willow 76.74 19 P **P** 11 47 05.0 0.0
baz=327,SNR=16
PAX Paxson 76.81 16 P **P** 11 47 06.0 +0.4
baz=331,SNR=261
SUA Susitna One 76.82 19 IAmb IAmb 11 47 07.0
comp=Z,97nm,0.8s
SUA Susitna One 76.82 19 P **P** 11 47 05.9 +0.2

baz=327
O19K **Port Alsworth** 76.87 21 IAmb IAmb 11 47 08.1
comp=Z,74nm,0.8s
O19K **Port Alsworth** 76.87 21 P **P** **11 47 06.8 +1.0**
baz=324,SNR=12
O18K **Koktuh Hills** 76.88 22 P **P** **11 47 07.4 +1.4**
baz=324,SNR=62
J29M **Klondike Camp** 76.92 12 IAmb IAmb 11 47 08.5
comp=Z,129nm,0.8s
J29M **Klondike Camp** 76.92 12 P **P** **11 47 07.6 +1.4**
baz=336,SNR=5.4
P17K **Kvichak River** 77.03 23 P **P** **11 47 08.5 +1.8**
baz=323,SNR=64
DAWY **Dawson** 77.07 13 IAmb IAmb 11 47 08.8
comp=Z,188nm,1.1s
DAWY **Dawson** 77.07 13 P **P** **11 47 07.7 +0.7**
baz=336,SNR=243
PMR **Palmer** 77.13 18 IAmb IAmb 11 47 08.6
comp=Z,104nm,0.8s
PMR **Palmer** 77.13 18 P **P** **11 47 07.4 +0.2**
baz=328,SNR=56
SML **Sawmill** 77.14 18 P **P** **11 47 07.9 +0.5**
baz=329,SNR=111
MENT **Mentasta** 77.22 15 IAmb IAmb 11 47 10.3
comp=Z,49nm,0.6s
L26K **Log Cabin Wild** 77.22 15 IAmb IAmb 11 47 10.0
comp=Z,83nm,0.8s
L26K **Log Cabin Wild** 77.22 15 P **P** **11 47 08.8 +1.0**
baz=332,SNR=111
P18K **Big Mountain,** 77.25 22 P **P** **11 47 09.0 +0.9**
baz=324,SNR=46
M23K **Glacier View** 77.31 18 P **P** **11 47 08.7 +0.5**
baz=329,SNR=119
SCM **Sheep Creek Mo** 77.37 17 P **P** **11 47 09.2 +0.5**
baz=329,SNR=73
Q16K **King Salmon** 77.38 23 P **P** **11 47 10.0 +1.4**
baz=323,SNR=44
HARP **HAARP** 77.38 16 P **P** **11 47 10.4 +1.7**
baz=331,SNR=159
RC01 **Rabbit Creek A** 77.40 19 P **P** **11 47 09.0 +0.2**
baz=328,SNR=53
M24K **Tolsona, Glenn** 77.40 17 P **P** **11 47 10.3 +1.5**
baz=330,SNR=91
UNV **Unalaska Valle** 77.45 31 P **P** **11 47 08.0 -1.1**
KNK **Knik Glacier** 77.45 18 P **P** **11 47 09.8 +0.7**
baz=329,SNR=45
O20K **Slope Mountain** 77.45 21 P **P** **11 47 09.0 -0.1**
baz=326
L27K **Beaver Creek,** 77.51 15 P **P** **11 47 10.7 +1.3**
baz=334,SNR=246
BOSA **Boshof** 77.54 220 P **P** **11 47 10.8 +0.8**
comp=Z,101nm,0.7s,baz=30,slow=4.8,SNR=178
BOSA PKKPbc **PKKPbc** **12 06 12.5 -0.2**
comp=Z,0.7nm,0.4s,baz=248,slow=2.2,SNR=5.2
comp=Z,101nm,0.7s
BOSA **Boshof** 77.54 220 IAmb IAmb 11 47 11.7
comp=Z,122nm,0.8s
BOSA **Boshof** 77.54 220 *i* P **P** **11 47 11.6 +1.6**
BOSA **Boshof** 77.54 220 *i* P **P** **11 47 11.6 +1.6**
MORW **Morawa** 77.80 140 P **P** **11 47 11.3 -0.1**
M26K **Nabesna, AK** 77.86 15 IAmb IAmb 11 47 13.6
comp=Z,86nm,1.1s
M26K **Nabesna, AK** 77.86 15 P **P** **11 47 12.4 +1.1**
baz=333,SNR=76
O22K **Cooper Landing** 77.92 19 IAmb IAmb 11 47 16.7
comp=Z,94nm,0.6s
O22K **Cooper Landing** 77.92 19 P **P** **11 47 11.8 +0.3**
baz=328,SNR=9.0
FALS **False Pass** 77.94 29 P **P** **11 47 11.3 -0.5**
baz=318
KLU **Klutina** 78.00 17 P **P** **11 47 13.3 +1.1**
baz=331,SNR=63
Q19K **Cape Douglas,** 78.11 22 IAmb IAmb 11 47 14.0
comp=Z,51nm,0.5s
Q19K **Cape Douglas,** 78.11 22 P **P** **11 47 11.8 -0.9**
baz=325,SNR=6.4
M27K **Edge Creek, AK** 78.13 15 P **P** **11 47 14.5 +1.6**
baz=334,SNR=268
N25K **Chitina, Valde** 78.21 16 IAmb IAmb 11 47 16.4
comp=Z,77nm,0.6s
N25K **Chitina, Valde** 78.21 16 P **P** **11 47 14.4 +1.1**
baz=332,SNR=48
GLI **Glacier Island** 78.25 18 P **P** **11 47 14.0 +0.6**
baz=330,SNR=55
BRSE **Bradley Lake S** 78.27 20 P **P** **11 47 13.5 -0.1**
baz=327,SNR=21
BVCY **Beaver Creek** 78.29 14 P **P** **11 47 15.2 +1.5**
baz=334,SNR=82
S14K **Fog Glacier** 78.29 26 P **P** **11 47 13.8 0.0**
baz=321
R17K **Ugashik Creek** 78.29 24 P **P** **11 47 13.8 +0.1**
baz=323,SNR=11
CNPM **China Poot** 78.31 20 IAmb IAmb 11 47 14.5
comp=Z,62nm,0.8s
SEW **Seward** 78.31 19 IAmb IAmb 11 47 15.1
comp=Z,205nm,1.5s
SEW **Seward** 78.31 19 P **P** **11 47 13.9 +0.2**
baz=328,SNR=24
GLB **Gilahina Butte** 78.53 16 IAmb IAmb 11 47 17.1
comp=Z,66nm,1.1s
SDPT **Sand Point** 78.68 27 P **P** **11 47 16.3 +0.4**
baz=320
Q20K **Shuyak Island** 78.74 21 P **P** **11 47 15.8 -0.3**
baz=326,SNR=16
MCARA **McCarthy VSAT** 78.76 16 IAmb IAmb 11 47 18.4
comp=Z,92nm,0.9s
MCARA **McCarthy VSAT** 78.76 16 P **P** **11 47 17.2 +1.0**
baz=333,SNR=27
BMRM **Bremner River** 78.77 17 P **P** **11 47 17.4 +1.1**
baz=332,SNR=69
VRDI **Verde Repeater** 78.80 16 IAmb IAmb 11 47 18.7
comp=Z,151nm,1.1s
HIN **Hinchinbrook I** 78.81 18 IAmb IAmb 11 47 18.5
comp=Z,110nm,0.6s
EYAK **Cordova Ski Ar** 78.87 17 P **P** **11 47 18.1 +1.3**
baz=331,SNR=75
M30M **Minto, Yukon** 78.90 13 IAmb IAmb 11 47 18.5
comp=Z,38nm,0.7s
M30M **Minto, Yukon** 78.90 13 P **P** **11 47 18.0 +0.9**
baz=338,SNR=78
YUK3 **Moose Creek** 78.95 15 P **P** **11 47 18.5 +1.0**
baz=335,SNR=136
TGL **Tana Glacier** 79.36 16 IAmb IAmb 11 47 22.2
comp=Z,100nm,0.8s
KDAK **Kodiak Island** 79.37 22 P **P** **11 47 20.0 +0.5**
KDAK **Kodiak Island** 79.37 22 P **P** **11 47 20.0 +0.5**
KDAK pmax pmax
comp=Z,265nm,0.9s
KDAK **Kodiak Island** 79.37 22 P **P** **11 47 20.3 +0.8**
baz=326
BLDU **Ballidu** 79.39 141 P **P** **11 47 19.3 -0.7**
CHNA **Chernabura Isl** 79.40 27 P **P** **11 47 19.7 -0.1**
baz=321,SNR=8.3
HMT **Hamilton** 79.41 17 IAmb IAmb 11 47 21.9
comp=Z,99nm,0.6s
CNBA **Chernabura Isl** 79.41 27 IAmb IAmb 11 47 20.8
comp=Z,99nm,0.8s
CTG **Chitna Glacier** 79.50 15 P **P** **11 47 21.6 +1.2**
baz=334,SNR=97
YUK8 **Steele Glacier** 79.53 14 P **P** **11 47 21.6 +0.8**
baz=336,SNR=65
ISLE **Juniper Island** 79.61 16 IAmb IAmb 11 47 22.9
comp=Z,79nm,0.9s
OHAK **Old Harbor** 79.61 23 P **P** **11 47 21.6 +0.8**
baz=325,SNR=27
GRNC **Granite Creek** 79.62 16 IAmb IAmb 11 47 23.2
comp=Z,102nm,0.8s
M31M **Drury Creek, Y** 79.66 12 IAmb IAmb 11 47 23.1
comp=Z,139nm,0.9s
M31M **Drury Creek, Y** 79.66 12 P **P** **11 47 22.1 +1.0**
baz=340,SNR=162
Q23K **Middleton Isla** 79.69 18 P **P** **11 47 22.4 +1.2**
baz=330
LOGN **Logan Glacier** 79.70 15 IAmb IAmb 11 47 23.7
comp=Z,132nm,0.8s
YUK4 **Talbot Arm** 79.70 14 P **P** **11 47 22.5 +0.9**
baz=336,SNR=218
MMPY **Sheldon Lake,** 79.74 10 P **P** **11 47 23.0 +1.4**
baz=342,SNR=124
BGLC **Bering Glacier** 79.83 17 P **P** **11 47 24.2 +2.2**
baz=333,SNR=9.8
SNH **Sunshine Point** 79.87 16 IAmb IAmb 11 47 25.3
comp=Z,188nm,1.0s
SII **Sitkinak Islan** 79.88 23 IAmb IAmb 11 47 24.3
comp=Z,210nm,1.2s
SII **Sitkinak Islan** 79.88 23 P **P** **11 47 23.4 +1.0**
baz=325,SNR=7.0
SII **Sitkinak Islan** 79.88 23 P **P** **11 47 21.8 -0.6**

N30M **Aishikik Lake** 79.89 13 P **P** **11 47 23.7 +1.3**
baz=338,SNR=129
CHIR **Chirikof Islan** 80.00 25 P **P** **11 47 23.7 +0.7**
baz=324
TABL **Table Mountain** 80.01 15 IAmb IAmb 11 47 25.1
comp=Z,45nm,0.8s
MESA **MESA** 80.07 16 P **P** **11 47 25.0 +1.4**
baz=334,SNR=37
N31M **Braeburn, Yuko** 80.10 13 P **P** **11 47 24.3 +0.8**
baz=339,SNR=173
YUK6 **Outpost Mounta** 80.12 14 P **P** **11 47 25.1 +1.2**
baz=337,SNR=79
HYT **Haines Junctio** 80.40 14 P **P** **11 47 26.6 +1.4**
baz=337,SNR=291
PINM **Pinnacle** 80.52 15 P **P** **11 47 27.1 +1.3**
baz=335,SNR=66
O30N **Mendenhall** 80.71 13 P **P** **11 47 27.7 +1.0**
baz=338,SNR=161
BCPM **Bancas Point** 80.78 15 IAmb IAmb 11 47 28.9
comp=Z,85nm,0.7s
WHY **Whitehorse** 81.03 12 P **P** **11 47 28.8 +0.3**
baz=339,SNR=133
PNL **Peninsula** 81.08 15 P **P** **11 47 30.1 +1.4**
baz=336,SNR=50
P30M **Million Dollar** 81.15 14 P **P** **11 47 30.4 +1.2**
baz=338,SNR=89
TGTN **Hyland Airport** 81.20 9 P **P** **11 47 30.9 +1.5**
baz=345,SNR=25
YKA **Yellowknife Ar** 81.35 3 P **P** **11 47 30.6 +0.5**
comp=Z,132nm,0.5s,baz=352,slow=5.4,SNR=759
YKA PP **PP** **11 50 38.6 +0.6**
comp=Z,20nm,0.9s,baz=355,slow=8.0,SNR=11
YKA PKKPbc **PKKPbc** **12 06 00.9 -2.2**
comp=Z,2.1nm,0.7s,baz=133,slow=3.1,SNR=14
comp=Z,132nm,0.5s
YKA **Yellowknife Ar** 81.35 3 *i* P **P** **11 47 30.6 +0.5**
YKA pmax pmax
comp=Z,142nm,0.5s
WRKA **Warakurna** 81.72 129 P **P** **11 47 32.4 -0.1**
P33M **Teslin, Yukon** 81.80 12 P **P** **11 47 33.2 +0.6**
baz=341,SNR=474
PLBC **Pleasant Camp** 81.88 14 P **P** **11 47 34.3 +1.4**
baz=338,SNR=309
SKAG **Skagway** 82.07 13 IAmb IAmb 11 47 36.4
comp=Z,103nm,0.8s
SKAG **Skagway** 82.07 13 P **P** **11 47 35.2 +1.4**
baz=339,SNR=79
SCHQ **Schefferville** 82.11 337 P **P** **11 47 34.4 +0.3**
comp=Z,37nm,0.6s,baz=26,slow=4.6,SNR=92
SCHQ PKKPbc **PKKPbc** **12 05 59.2 -2.0**
comp=Z,0.9nm,0.8s,baz=234,slow=19,SNR=3.6
comp=Z,37nm,0.6s
SCHQ **Schefferville** 82.11 337 IAmb IAmb 11 47 35.0
comp=Z,40nm,0.7s
WRA **Warrenga Arr** 82.11 122 P **P** **11 47 34.0 -0.6**
comp=Z,47nm,0.7s,baz=326,slow=5.0,SNR=1099
WRA PKiKP **PKiKP** **11 52 54.4 -1.0**
comp=Z,0.4nm,0.4s,baz=303,slow=1.8,SNR=2.1
WRA PKKP **PKKPdf** **12 05 52.5 -0.2**
comp=Z,0.7nm,1.0s,baz=145,slow=1.2,SNR=4.7
WRA PKKPbc **PKKPbc** **12 06 02.3 +0.8**
comp=Z,2.2nm,0.4s,baz=119,slow=2.2,SNR=55
WRA PKPPKP **P'P'df** **12 14 07.2 +0.9**
comp=Z,2.0nm,1.1s,baz=122,slow=2.0,SNR=5.8
comp=Z,47nm,0.7s
WRA **Warramunga Arr** 82.11 122 *i* P **P** **11 47 34.0 -0.6**
WRA pmax pmax
comp=Z,33nm,0.4s
WRAB **Tennant Creek** 82.11 122 P **P** **11 47 34.1 -0.5**
WRAB IAmb IAmb 11 47 35.0
comp=Z,86nm,0.9s
WRAB **Tennant Creek** 82.11 122 P **P** **11 47 34.1 -0.5**
WRAB pmax pmax
comp=Z,86nm,1.0s
WRAB **Tennant Creek** 82.11 122 P **P** **11 47 34.2 -0.5**
WB2 **Warramunga Arr** 82.12 122 IAmb IAmb 11 47 35.1
comp=Z,106nm,1.0s
P32M **Atlin** 82.24 12 P **P** **11 47 35.5 +0.7**
baz=340,SNR=69
WR0 **Warramunga Arr** 82.26 122 IAmb IAmb 11 47 35.6
comp=Z,48nm,0.9s
SUR **Sutherland** 82.85 221 P **P** **11 47 39.9 +1.5**
SUR IAmb IAmb 11 47 40.8
comp=Z,69nm,0.8s
BESE **Bessie Mountai** 82.99 13 IAmb IAmb 11 47 41.2
comp=Z,90nm,0.8s
DRLN **Deer Lake** 83.16 329 IAmb IAmb 11 47 41.4
comp=Z,118nm,1.2s
JIS **Juneau Island** 83.36 13 IAmb IAmb 11 47 43.2
comp=Z,84nm,1.0s
DLBC **Dease Lake** 83.93 11 IAmb IAmb 11 47 45.8
comp=Z,186nm,1.3s
DLBC **Dease Lake** 83.93 11 P **P** **11 47 44.9 +1.3**
baz=343,SNR=100
SIT **Sitka** 84.33 14 IAmb IAmb 11 47 47.9
comp=Z,71nm,0.8s
SIT **Sitka** 84.33 14 P **P** **11 47 47.0 +1.6**
baz=339,SNR=16
FCC **Fort Churchill** 84.35 352 IAmb IAmb 11 47 47.4
comp=Z,148nm,1.4s
COEN **Coen** 84.56 112 P **P** **11 47 46.8 -0.4**
COEN IAmb IAmb 11 47 47.6
comp=Z,58nm,0.8s
COEN **Coen** 84.56 112 P **P** **11 47 46.8 -0.4**
PMG **Port Moresby** 84.78 106 P **P** **11 47 48.2 0.0**
comp=Z,59nm,0.9s,baz=307,slow=7.8,SNR=8.6
comp=Z,59nm,0.9s
PMG **Port Moresby** 84.78 106 P **P** **11 47 48.1 -0.2**
PMG IAmb IAmb 11 47 49.2
comp=Z,72nm,1.0s
PMG **Port Moresby** 84.78 106 P **P** **11 47 48.1 -0.2**
PMG pmax pmax
comp=Z,72nm,1.0s
PMG **Port Moresby** 84.78 106 P **P** **11 47 48.4 +0.1**
PMG **Port Moresby** 84.78 106 P **P** **11 47 48.3 0.0**
T35M **Bob Quinn** 85.30 11 P **P** **11 47 51.8 +1.6**
baz=343
WRAK **Wrangell Islan** 85.48 13 IAmb IAmb 11 47 53.5
comp=Z,82nm,0.8s
WRAK **Wrangell Islan** 85.48 13 P **P** **11 47 52.4 +1.3**
baz=342,SNR=45
RABL **Rabaul** 85.57 98 IAmb IAmb 11 47 55.3
comp=Z,53nm,0.6s
RABL **Rabaul** 85.57 98 P **P** **11 47 52.6 +0.2**
FORT **Forrest** 85.75 133 IAmb IAmb 11 47 53.4
comp=Z,76nm,0.8s
FORT **Forrest** 85.75 133 P **P** **11 47 52.7 0.0**
QIS **Mount Isa** 86.19 119 P **P** **11 47 54.3 -0.9**
CRAG **Craig** 86.24 13 P **P** **11 47 56.0 +1.1**
baz=341,SNR=5.1
RUBB **Prince Rupert** 87.84 12 IAmb IAmb 11 48 04.2
comp=Z,29nm,0.7s
GBN **Guysborough** 87.87 329 IAmb IAmb 11 48 05.1
comp=Z,40nm,0.8s
MTSU **Mount Surprise** 88.04 114 P **P** **11 48 03.8 -0.3**
GRNB **Grenville Isla** 88.35 12 IAmb IAmb 11 48 07.2
comp=Z,67nm,0.7s
OOD **Oodnadatta** 88.36 127 P **P** **11 48 04.7 -0.6**
D62A **Allapoint, All** 89.41 334 P **P** **11 48 09.4 -0.8**
baz=31,SNR=7.7
D62A P **P** **11 48 09.4 -0.8**
baz=31,SNR=7.7
E63A **Oxbow** 89.75 333 P **P** **11 48 12.4 +0.7**
baz=32
E63A P **P** **11 48 12.4 +0.7**
baz=32
BBB **Bella Bella** 90.26 11 IAmb IAmb 11 48 15.3
comp=Z,32nm,0.9s
CTA **Charters Tower** 90.69 114 P **P** **11 48 15.9 -0.5**
CTAO **Charters Tower** 90.69 114 P **P** **11 48 15.9 -0.5**
CTAO IAmb IAmb 11 48 16.9
comp=Z,47nm,0.8s
CTAO **Charters Tower** 90.69 114 P **P** **11 48 15.9 -0.5**
CTAO pmax pmax
comp=Z,47nm,0.8s
CTAO **Charters Tower** 90.69 114 P **P** **11 48 15.9 -0.5**
PKME **Peaks-Kenny Pk** 91.05 333 IAmb IAmb 11 49 55.0
comp=Z,94nm,1.9s
PKME **Peaks-Kenny Pk** 91.05 333 P **P** **11 48 18.3 +0.5**
baz=31
VLDQ **Val d'Or** 91.20 339 IAmb IAmb 11 48 20.2
comp=Z,24nm,0.8s
TLCB **Telegraph Cove** 92.05 11 IAmb IAmb 11 48 24.4
comp=Z,59nm,0.8s
LLLB **Lillooet** 92.65 8 IAmb IAmb 11 48 27.6
comp=Z,79nm,1.2s
CBB **Campbell River** 92.77 10 IAmb IAmb 11 48 28.2

comp=Z,111nm,1.6s
LBNH **Lisbon** 92.89 334 P **P** **11 48 26.6 +0.3**
baz=29
ULM **Lac du Bonnet** 92.92 351 P **P** **11 48 25.9 -0.4**
comp=Z,22nm,0.8s,baz=3.2,slow=4.8,SNR=27
comp=Z,22nm,0.8s
ULM **Lac du Bonnet** 92.92 351 IAmb IAmb 11 48 27.1
comp=Z,85nm,1.5s
QLP **Quilpie** 93.31 121 P **P** **11 48 27.9 -0.4**
LONY **Lake Ozonia** 93.45 336 P **P** **11 48 29.3 +0.4**
baz=27
J61A **Chester** 93.89 334 IAmb IAmb 11 48 32.7
comp=Z,21nm,0.7s
J61A **Chester** 93.89 334 P **P** **11 48 31.9 +1.0**
baz=29
J61A P **P** **11 48 31.9 +1.0**
baz=29
CLRS **Cowichan Lake** 94.13 10 IAmb IAmb 11 48 34.1
comp=Z,55nm,1.6s
HRV **Adam Dziewonsk** 94.26 333 P **P** **11 48 33.1 +0.5**
baz=30
K62A **Royalston** 94.37 334 IAmb IAmb 11 50 04.9
comp=Z,71nm,1.9s
K62A **Royalston** 94.37 334 P **P** **11 48 34.1 +1.0**
baz=29
K62A P **P** **11 48 34.1 +1.0**
baz=29
WCNY **West Carthage** 94.37 336 P **P** **11 48 33.3 +0.2**
baz=27
J59A **Piesco** 94.45 335 P **P** **11 48 33.7 +0.1**
baz=27
J59A P **P** **11 48 33.7 +0.1**
baz=27
B35A **Bob, Littlefor** 94.48 350 IAmb IAmb 11 48 34.6
comp=Z,51nm,1.7s
B35A **Bob, Littlefor** 94.48 350 P **P** **11 48 33.4 -0.2**
baz=12,SNR=9.9
DELO **Deloro Mine** 94.51 338 IAmb IAmb 11 48 35.0
comp=Z,20nm,0.7s
EYMN **Ely** 94.54 348 IAmb IAmb 11 48 35.1
comp=Z,63nm,1.5s
EYMN **Ely** 94.54 348 P **P** **11 48 34.0 +0.2**
baz=14,SNR=21
EYMN **Ely** 94.54 348 P **P** **11 48 33.9 +0.1**
baz=14,SNR=21
E46A **Sault Ste Mari** 94.61 343 IAmb IAmb 11 48 34.9
comp=Z,26nm,0.6s
E46A **Sault Ste Mari** 94.61 343 P **P** **11 48 34.5 +0.4**
baz=20,SNR=22
L61B **Northampton** 94.72 334 P **P** **11 48 35.2 +0.5**
baz=29
L61B **Northampton** 94.72 334 P **P** **11 48 34.9 +0.2**
baz=29
B06A **Marblemount** 94.76 8 IAmb IAmb 11 48 36.9
comp=Z,23nm,0.7s
WALA **Waterton Lakes** 94.81 3 IAmb IAmb 11 48 36.5
comp=Z,36nm,0.8s
AGMN **Agassiz Nation** 94.83 351 IAmb IAmb 11 48 36.3
comp=Z,46nm,1.4s
AGMN **Agassiz Nation** 94.83 351 P **P** **11 48 33.9 -1.3**
baz=11,SNR=16
AGMN **Agassiz Nation** 94.83 351 P **P** **11 48 35.1 0.0**
baz=11,SNR=16
D41A **Chassel** 94.87 346 IAmb IAmb 11 48 37.2
comp=Z,22nm,0.6s
D41A **Chassel** 94.87 346 P **P** **11 48 35.6 +0.3**
baz=17,SNR=8.6
STKA **Stephens Creek** 94.90 126 P **P** **11 48 34.3 -1.2**
comp=Z,4.0nm,0.4s,baz=331,slow=5.3,SNR=17
comp=Z,4.0nm,0.4s
B04A **Port Angeles** 94.96 10 IAmb IAmb 11 48 38.2
comp=Z,30nm,0.9s
B08A **Colville Reser** 95.14 7 IAmb IAmb 11 48 38.3
comp=Z,70nm,1.6s
E43A **Lone Tree Farm** 95.20 345 IAmb IAmb 11 48 38.0
comp=Z,50nm,1.6s
E43A **Lone Tree Farm** 95.20 345 P **P** **11 48 36.9 0.0**
baz=18,SNR=8.4
DGMT **Dagmar** 95.39 357 IAmb IAmb 11 48 40.0
comp=Z,48nm,1.2s
DGMT **Dagmar** 95.39 357 P **P** **11 48 38.4 +0.7**
baz=4.1,SNR=7.3
DGMT **Dagmar** 95.39 357 P **P** **11 48 38.7 +1.0**
baz=4.1,SNR=7.3
J56A **Wolcott** 95.39 337 IAmb IAmb 11 48 38.3
comp=Z,14nm,0.8s
NEW **Newport** 95.42 5 IAmb IAmb 11 48 39.7
comp=Z,40nm,1.2s
NEW **Newport** 95.42 5 P **P** **11 48 38.5 +0.7**
baz=354,SNR=14
NLWA **Neilton Lookou** 95.56 10 IAmb IAmb 11 48 41.1
comp=Z,27nm,1.0s
MDND **Maddock** 95.68 353 P **P** **11 48 39.5 +0.5**
baz=7.8,SNR=7.2
MDND **Maddock** 95.68 353 P **P** **11 48 39.3 +0.3**
baz=7.8,SNR=7.2
K57A **Scipio Center** 95.77 336 P **P** **11 48 39.6 +0.1**
baz=26
C09A **Chrisman Ranch** 95.79 6 IAmb IAmb 11 48 41.4
comp=Z,38nm,1.2s
RK1H **Rockhampton Ha** 95.81 115 P **P** **11 48 38.8 -1.1**
NPNY **Mohonk Preserv** 95.84 334 P **P** **11 48 39.7 -0.1**
baz=28
E38A **The Farm, Brul** 95.85 348 IAmb IAmb 11 48 41.4
comp=Z,18nm,0.8s
E38A **The Farm, Brul** 95.85 348 P **P** **11 48 39.7 -0.1**
baz=14,SNR=9.0
COWI **Conover** 95.90 346 P **P** **11 48 39.9 -0.1**
baz=16
EGMT **Eagleton** 95.95 0 P **P** **11 48 40.7 +0.3**
baz=360,SNR=18
D05A **Enumclaw** 96.01 9 IAmb IAmb 11 48 42.9
comp=Z,47nm,1.2s
F42A **Maple Grove Fa** 96.03 345 IAmb IAmb 11 48 41.5
comp=Z,15nm,0.7s
F42A **Maple Grove Fa** 96.03 345 P **P** **11 48 40.5 -0.1**
baz=17
BINY **Binghamton** 96.08 336 IAmb IAmb 11 48 41.7
comp=Z,11nm,0.7s
BINY **Binghamton** 96.08 336 P **P** **11 48 41.0 +0.1**
baz=26
BINY **Binghamton** 96.08 336 P **P** **11 48 40.7 -0.2**
baz=26
JTMT **Jette** 96.11 3 IAmb IAmb 11 48 43.0
comp=Z,49nm,1.5s
PAL **Palisades** 96.42 334 P **P** **11 48 41.7 -0.8**
baz=28
L56A **Greenwood** 96.64 337 IAmb IAmb 11 48 45.6
comp=Z,12nm,0.8s
L56A **Greenwood** 96.64 337 P **P** **11 48 42.4 -1.1**
baz=25
L56A P **P** **11 48 42.4 -1.1**
baz=25
WVNY **West Valley, N** 96.72 338 IAmb IAmb 11 52 34.5
comp=Z,25nm,1.4s
F36A **Milaca** 96.89 349 IAmb IAmb 11 48 45.5
comp=Z,21nm,1.4s
F36A **Milaca** 96.89 349 P **P** **11 48 44.2 -0.3**
baz=13,SNR=8.0
G40A **Rib Lake** 96.90 347 IAmb IAmb 11 48 45.2
comp=Z,11nm,0.7s
G40A **Rib Lake** 96.90 347 P **P** **11 48 44.7 +0.1**
baz=15,SNR=13
E08A **Dider Farm, El** 97.02 7 IAmb IAmb 11 48 47.0
comp=Z,14nm,1.0s
MSO **Missoula** 97.04 3 IAmb IAmb 11 48 46.8
comp=Z,26nm,1.4s
MSO **Missoula** 97.04 3 P Pdif 11 48 45.4 +0.1
baz=356,SNR=9.7
E28A **Huff** 97.04 354 P Pdif 11 48 46.0 +0.7
baz=7.0,SNR=7.3
E09A **Wood Farm, Sta** 97.08 6 IAmb IAmb 11 48 47.1
comp=Z,25nm,1.2s
F04A **Amboy** 97.19 9 IAmb IAmb 11 48 48.0
comp=Z,32nm,1.1s
M57A **Sunshine Farm,** 97.22 336 IAmb IAmb 11 48 46.5
comp=Z,10nm,0.6s
M57A **Sunshine Farm,** 97.22 336 P **P** **11 48 45.3 -0.8**
baz=26
M57A P **P** **11 48 45.3 -0.8**
baz=26
LAO **LASA Array** 97.24 358 IAmb IAmb 11 48 48.7
comp=Z,27nm,0.8s
LAO **LASA Array** 97.24 358 P Pdif 11 48 47.5 +1.3
baz=2.5,SNR=8.8
LAO **LASA Array** 97.24 358 P Pdif 11 48 47.4 +1.2
baz=2.5,SNR=8.8
F33A **5 Mile Ranch,** 97.31 351 IAmb IAmb 11 48 47.7
comp=Z,33nm,1.5s

F33A	**5 Mile Ranch,** baz=10,SNR=5.5	**97.31**	**351**	P		Pdif	11 48 46.6	+0.2
SPMN	**Marine on St.** baz=13	**97.40**	**348**	P		**P**	**11 48 46.5**	**-0.3**
M55A	**Ridgway** comp=Z,56nm,1.9s	**97.63**	**337**	IAmb		IAmb	11 52 44.0	
F10A	**Beach Ranch, E** comp=Z,13nm,1.1s	**97.69**	**6**	IAmb		IAmb	11 52 46.6	
SSPA	**Standing Stone** baz=25	**98.10**	**336**	P		**P**	**11 48 49.6**	**-0.5**
I40A	**Norwalk** comp=Z,12nm,0.8s	**98.31**	**346**	IAmb		IAmb	11 48 53.6	
BOZ	**Bozeman (W)** baz=358,SNR=13	**98.35**	**2**	P		Pdif	11 48 51.9	+0.6
H04D	**Lebanon** baz=349	**98.53**	**10**	P		Pdif	11 48 52.4	+0.5
DLMT	**Dillon** comp=Z,33nm,1.6s	**98.56**	**2**	IAmb		IAmb	11 48 55.2	
I02E	**Swisshome, OR** baz=348	**98.78**	**11**	P		Pdif	11 48 53.9	+0.9
RLMT	**Red Lodge** comp=Z,35nm,1.5s	**98.85**	**0**	IAmb		IAmb	11 48 56.0	
RLMT	**Red Lodge** baz=0.1,SNR=9.1	**98.85**	**0**	P		Pdif	11 48 54.1	+0.5
I05D	**Terrebonne, OR** baz=350	**98.89**	**9**	P		**P**	**11 48 53.3**	**-0.3**
JFWS	**Jewell Farm** baz=15	**99.18**	**346**	P		**Pdif**	**11 48 54.6**	**-0.2**
I03D	**Drain, OR** baz=349	**99.25**	**10**	P		**Pdif**	**11 48 55.2**	**+0.1**
I04A	**Tendick Farm,** baz=349	**99.29**	**10**	P		**Pdif**	**11 48 55.3**	**-0.1**
ECSD	**EROS Data Cent** baz=10	**99.42**	**351**	P		**Pdif**	**11 48 56.2**	**+0.4**
ECSD	**EROS Data Cent** baz=10	**99.42**	**351**	P		**Pdif**	**11 48 56.3**	**+0.4**
J01E	**Myrtle Point** baz=348	**99.69**	**11**	P		**Pdif**	**11 48 57.8**	**+0.7**
RSSD	**Black Hills** baz=4.3,SNR=7.4	**99.72**	**356**	P		**Pdif**	**11 48 58.0**	**+0.5**
RSSD	**Black Hills** baz=4.3	**99.72**	**356**	P		**Pdif**	**11 48 58.0**	**+0.5**
J04D	**Umpqua Nationa** baz=350	**99.88**	**9**	P		**Pdif**	**11 48 58.9**	**+0.8**
J05D	**Fort Rock, OR** baz=350	**99.94**	**9**	P		**Pdif**	**11 48 58.4**	**0.0**
K02D	**Willamette Mer** baz=348	**100.19**	**11**	P		**Pdif**	**11 48 59.7**	**+0.2**
HLID	**Hailey** baz=356	**100.28**	**4**	P		**Pdif**	**11 49 00.3**	**+0.4**
P52A	**Corning** baz=22	**100.32**	**339**	P		**Pdif**	**11 48 59.5**	**-0.5**
O48B	**Farmland** baz=20	**100.56**	**341**	P		**Pdif**	**11 49 00.9**	**-0.1**
L04D	**Klamath Falls** baz=349	**100.85**	**10**	P		**Pdif**	**11 49 02.2**	**-0.3**
BW06	**Boulder Array** baz=360	**101.21**	**0**	P		**Pdif**	**11 49 03.7**	**-0.5**
PDAR	**Pinedale Array** comp=Z,1.3nm,0.5s,baz=41,slow=3.3,SNR=14	**101.21**	**0**	P		**Pdif**	**11 49 04.8**	**+0.6**
PDAR				PP		**PP**	**11 53 13.7**	**-0.8**
PDAR	comp=Z,2.2nm,0.8s,baz=12,slow=2.6,SNR=6.3			PKiKP		**PKiKP**	**11 53 27.4**	**-0.3**
PDAR	comp=Z,1.6nm,0.5s,baz=79,slow=2.9,SNR=14			PKKPbc		**PKKPbc**	**12 05 11.5**	**-1.7**
K22A	**Casper** comp=Z,0.6nm,0.4s,baz=136,slow=3.4,SNR=6.3	**101.29**	**358**	P		**Pdif**	**11 49 04.0**	**-0.4**
DUG	**Dugway, Tooele** baz=357	**103.71**	**3**	P		**Pdif**	**11 49 14.7**	**-0.6**
O20A	**White River Ci** baz=0.9	**103.83**	**359**	P		**Pdif**	**11 49 15.4**	**-0.4**
MAW	**Mawson** comp=Z,1.6nm,0.9s,baz=74,slow=19,SNR=2.0	**103.86**	**183**	Pdiff		**Pdif**	**11 49 14.8**	**+0.1**
MAW				PKKPbc		**PKKPbc**	**12 05 05.1**	**-1.2**
NVAR	**Mina Array Bea** comp=Z,2.3nm,0.8s,baz=352,slow=3.8,SNR=19	**105.07**	**7**	Pdiff		**Pdif**	**11 49 22.4**	**+0.9**
NVAR				PKiKP		**PKiKP**	**11 53 35.9**	**+1.0**
NVAR	comp=Z,1.6nm,0.6s,baz=346,slow=3.0,SNR=9.0			PKKPbc		**PKKPbc**	**12 05 00.6**	**-1.2**
S22A	**4UR Ranch, Cre** baz=2.1	**106.19**	**358**	P		**PKiKP**	**11 53 37.4**	**+0.4**
DZM	**Mont Dzumac** comp=Z,2.0nm,0.3s,baz=269,slow=9.5,SNR=10	**107.16**	**105**	PKiKP		**PKiKP**	**11 53 39.2**	**+0.4**
WMOK	**Wichita Mounta** baz=8.9	**108.56**	**351**	P		**PKiKP**	**11 53 41.0**	**-0.2**
MONP2	**Monument Peak** baz=354	**110.74**	**6**	P		**PKiKP**	**11 53 46.4**	**+0.8**
121A	**Cookes Peak, D** baz=1.3	**111.41**	**359**	P		**PKiKP**	**11 53 46.9**	**+0.1**
TUC	**Tucson** baz=359	**111.63**	**1**	P		**PKiKP**	**11 53 47.5**	**+0.4**
MNTX	**Cornudas Mount** baz=3.4	**112.16**	**356**	P		**PKiKP**	**11 53 48.4**	**+0.4**
JCT	**Junction City** baz=8.3	**112.88**	**351**	P		**PKiKP**	**11 53 49.5**	**0.0**
MSVF	**Nonsavu** comp=Z,6.4nm,0.5s,baz=270,slow=20,SNR=3.1	**114.05**	**95**	PKP		PKPdf	11 53 51.8	-0.1
TXAR	**Lajitas Array** comp=Z,0.5nm,0.6s,baz=40,slow=2.8,SNR=7.1	**114.40**	**355**	Pdiff		**Pdif**	**11 50 04.6**	**+1.7**
TXAR				PKP		**PKiKP**	**11 53 52.0**	**-0.5**
TXAR	comp=Z,1.1nm,0.5s,baz=54,slow=2.7,SNR=20			PKKPbc		**PKKPbc**	**12 04 31.0**	**-0.8**
TXAR	comp=Z,1.0nm,0.6s,baz=183,slow=6.7,SNR=12			PKPPKP		**P'P'df**	**12 13 04.1**	**-3.4**
TXAR	**Lajitas Array** comp=Z,0.1nm,0.8s,baz=179,slow=6.6,SNR=3.8	**114.40**	**355**	PKiKP		**PKiKP**	**11 53 52.0**	**-0.5**
NVL	**N'lazarevskaya** comp=Z,9.0nm,0.6s	**114.80**	**198**	*e*PKiKP		PKPdf	11 53 50.7	-0.9
NVL				pmax		pmax		
TROLL	**Troll, Antarti**	**117.94**	**199**	PKPdf		**PKiKP**	**11 53 58.2**	**+0.2**
TROLL	**Troll, Antarti**	**117.94**	**199**	pPKPdf		pPKPdf	11 54 54.8	+1.5
SNAA	**Sanae**	**119.23**	**200**	PKPdf		**PKPdf**	**11 53 59.5**	**-0.8**
SNAA	**Sanae**	**119.23**	**200**	pPKPdf		pPKPdf	11 54 56.9	+1.3
SNAA	**Sanae** comp=Z,2.8nm,0.4s,baz=234,slow=7.0,SNR=39	**119.23**	**200**	PKKPab		PKKPab	12 04 14.4	+0.5
SNAA	**Sanae**	**119.23**	**200**	PKPdf		**PKPdf**	**11 53 59.4**	**-0.9**
SNAA	**Sanae** comp=Z,20nm,1.3s	**119.23**	**200**	*c i*PKIKP		**PKPdf**	**11 54 00.0**	**-0.3**
SNAA				pmax		pmax		
CAM01	**Campos-RJ**	**120.27**	**264**	*e*P		**PKPdf**	**11 54 03.7**	**0.0**
VNA1	**Neumayer--Stat**	**120.38**	**202**	PKPdf		**PKPdf**	**11 54 02.1**	**-0.3**
PEXB	**Peixe**	**120.41**	**277**	*e*P		**PKPdf**	**11 54 03.7**	**-0.5**
BOAV	**Boa Vista**	**120.47**	**299**	*e*P		**PKPdf**	**11 54 04.4**	**0.0**
ZAIG	**Zacatecas**	**120.81**	**353**	PKPdf		**PKiKP**	**11 54 05.8**	**+0.4**
DUB01	**Friburgo-RJ**	**120.97**	**264**	*e*P		**PKPdf**	**11 54 04.1**	**-1.0**
VNA3	**Neumayer Olymp**	**121.04**	**202**	PKPdf		**PKPdf**	**11 54 03.5**	**-0.2**
VNA3	**Neumayer Olymp**	**121.04**	**202**	SKPdf		**SKPdf**	**11 57 18.5**	**-0.5**
VNA3	**Neumayer Olymp**	**121.04**	**202**	pPKPdf		pPKPdf	11 54 59.5	+0.4
ITTB	**Itaituba**	**121.53**	**290**	*e*P		**PKPdf**	**11 54 05.6**	**-0.8**
SDV	**Santo Domingo**	**122.15**	**313**	*e*P		**PKPdf**	**11 54 06.4**	**-1.4**
BDFB	**Brasilia** comp=Z,5.5nm,0.4s,baz=16,slow=2.4,SNR=6.5	**122.16**	**274**	PKP		**PKPdf**	**11 54 07.2**	**-0.4**
BDFB				PP		**PP**	**11 55 46.3**	**+0.5**
BDFB	comp=Z,12nm,1.0s,baz=36,slow=5.2,SNR=6.2			PKKPab		**PKKPbc**	**12 04 04.1**	**+0.8**
BDFB	**Brasilia** comp=Z,7.8nm,0.7s,baz=220,slow=5.8,SNR=9.2	**122.16**	**274**	*e*P		**PKPdf**	**11 54 07.2**	**-0.4**
BSCB	**Bom Sucesso**	**122.36**	**267**	*e*P		**PKPdf**	**11 54 06.9**	**-1.0**
PMNB	**Patos De Minas**	**122.44**	**270**	*e*P		**PKiKP**	**11 54 08.2**	**0.0**
MAN01	**Angra dos Reis**	**122.64**	**264**	*e*P		**PKPdf**	**11 54 07.9**	**-0.4**
SNDB	**Serra Nova Dou**	**122.72**	**280**	*e*P		**PKPdf**	**11 54 07.9**	**-0.7**
BKZ	**Black Stump Fm**	**122.81**	**117**	PKPdf		**PKPdf**	**11 54 06.8**	**-1.3**
NPGB	**Novo Progresso**	**122.94**	**287**	*e*P		**PKPdf**	**11 54 08.7**	**-0.4**
ESAR	**Angra dos Reis**	**123.10**	**264**	*e*P		**PKPdf**	**11 54 08.7**	**-0.3**
IPMB	**Ipameri, GO**	**123.58**	**272**	*e*P		**PKPdf**	**11 54 09.6**	**-0.6**
SLP01	**Ubatuba-SP**	**123.82**	**264**	*e*P		**PKPdf**	**11 54 10.1**	**-0.5**
PARB	**Paraibuna**	**124.20**	**265**	*e*P		**PKPdf**	**11 54 11.3**	**0.0**
MACA	**Manacapuru-AM**	**124.43**	**295**	*e*P		**PKPdf**	**11 54 11.5**	**-0.4**
VAO	**Valinhos**	**125.12**	**266**	*e*P		**PKPdf**	**11 54 12.4**	**-0.7**
ARAG	**Araguaiana, MT**	**125.25**	**276**	*e*P		**PKPdf**	**11 54 13.0**	**-0.4**
RCLB	**Rio Claro- Sao**	**125.29**	**267**	*e*P		**PKPdf**	**11 54 12.6**	**-0.8**
BB19B	**Bebedouro**	**125.42**	**269**	*e*P		**PKPdf**	**11 54 12.8**	**-0.9**
VNDA	**Vanda** comp=Z,5.9nm,0.7s,baz=287,slow=4.6,SNR=36	**125.46**	**165**	PKP		**PKPdf**	**11 54 11.5**	**-0.5**
CLDB	**Colider**	**125.63**	**284**	*e*P		**PKPdf**	**11 54 13.2**	**-1.0**
PET01	**Itanhaem-SP**	**125.98**	**265**	*e*P		**PKPdf**	**11 54 14.3**	**-0.2**
DVLD	**Doverlandia**	**126.04**	**276**	*e*P		**PKPdf**	**11 54 14.3**	**-0.6**
QSPA	**South Pole Qui** comp=Z,38nm,0.8s,baz=293,slow=0.4,SNR=21	**126.20**	**180**	PKP		**PKPdf**	**11 54 13.2**	**-0.5**
QSPA				PKKP		**PKKPdf**	**12 04 31.1**	**-1.9**
QSPA	comp=Z,0.7nm,0.6s,baz=77,slow=0.1,SNR=8.9 **South Pole Qui**	**126.20**	**180**			**PKPdf**	**11 54 12.1**	**-1.7**
ITRB	**Iturama**	**126.21**	**271**	*e*P		**PKPdf**	**11 54 14.8**	**-0.4**
SBA	**Scott Base**	**126.53**	**165**	PKPdf		**PKiKP**	**11 54 14.8**	**+0.2**
SBA	**Scott Base**	**126.53**	**165**	PKIKP		**PKiKP**	**11 54 14.8**	**+0.2**
PDRB	**Porto dos Gac**	**126.81**	**284**	*e*P		**PKPdf**	**11 54 16.0**	**-0.5**
FRTB	**Fartura**	**127.37**	**267**	*e*P		**PKPdf**	**11 54 17.5**	**+0.2**
ROSC	**El Rosal** comp=Z,18nm,0.3s,baz=10.0,slow=22,SNR=7.2	**127.56**	**314**	PKhKP		PKPpre	11 54 10.9	
ROSC				PKP		**PKiKP**	**11 54 19.0**	**0.0**
NBRS	**Nobres** comp=Z,76nm,0.7s,baz=137,slow=5.4,SNR=21	**127.64**	**280**	*e*P		**PKPdf**	**11 54 17.5**	**-0.5**
TIJ01	**Guaruva-PR**	**127.85**	**264**	*e*P		**PKPdf**	**11 54 17.7**	**-0.6**
PCMB	**Pacaembu**	**127.90**	**270**	*e*P		**PKPdf**	**11 54 17.9**	**-0.5**
SALV	**Santo Antonio**	**128.46**	**279**	*e*P		**PKPdf**	**11 54 19.0**	**-0.5**
PP1B	**Ponte de Pedra**	**128.74**	**276**	*e*P		**PKPdf**	**11 54 19.4**	**-0.6**
PTET	**Porto Estrela**	**129.34**	**280**	*e*P		**PKPdf**	**11 54 20.3**	**-0.9**
TER01	**Tubaro-SC**	**129.37**	**261**	*e*P		**PKPdf**	**11 54 20.4**	**-0.6**
TRCB	**Terra Rica**	**129.59**	**269**	*e*P		**PKPdf**	**11 54 21.1**	**-0.5**
PTGB	**Pitanga**	**130.03**	**267**	*e*P		**PKPdf**	**11 54 21.9**	**-0.5**
AQDB	**Aquidauana**	**130.91**	**274**	*e*P		**PKPdf**	**11 54 23.5**	**-0.5**
PTLB	**Pontes e Lacer**	**130.94**	**282**	*e*P		**PKPdf**	**11 54 23.8**	**-0.4**
CNLB	**Canela**	**131.07**	**261**	*e*P		**PKPdf**	**11 54 23.9**	**-0.3**
ITAB	**Concordia**	**131.22**	**264**	*e*P		**PKPdf**	**11 54 24.2**	**-0.2**
FRBT	**Francisco Belt**	**131.41**	**266**	*e*P		**PKPdf**	**11 54 24.2**	**-0.7**
MCR1	**Marechal Candi**	**131.50**	**268**	*e*P		**PKPdf**	**11 54 24.2**	**-0.9**
TBTG	**Tabatinga, AM**	**131.69**	**302**	*e*P		**PKPdf**	**11 54 25.5**	**-0.3**
ANTJ	**Antonio Joao (**	**131.92**	**272**	*e*P		**PKPdf**	**11 54 25.2**	**-0.8**
ALGR	**Alto Alegre (B**	**132.59**	**262**	*e*P		**PKPdf**	**11 54 27.2**	**+0.1**
SIV	**San Ignacio** comp=Z,8.2nm,0.5s,baz=136,slow=0.9,SNR=26	**132.78**	**282**	PKP		**PKPdf**	**11 54 27.7**	**0.0**
SIV				PP		**PP**	**11 56 54.0**	**-1.2**
SIV	comp=Z,4.7nm,0.8s,baz=66,slow=7.6,SNR=6.8			SKPbc		**SKPbc**	**11 57 34.4**	**-1.0**
CRSM	**Crissiumal (Br** comp=Z,4.3nm,1.0s,baz=124,slow=3.4,SNR=3.6	**132.86**	**264**	*e*P		**PKPdf**	**11 54 27.1**	**-0.5**
ETMB	**Extrema**	**132.94**	**293**	*e*P		**PKPdf**	**11 54 27.6**	**-0.5**
CPSB	**Cacapava Do Su**	**133.56**	**261**	*e*P		**PKPdf**	**11 54 28.4**	**-0.4**
OTAV	**Otavalo**	**133.67**	**315**	*e*P		**PKPdf**	**11 54 29.2**	**-0.9**
PLTB	**Pedras Altas**	**134.21**	**259**	*e*P		**PKPdf**	**11 54 29.6**	**-0.4**
RODS	**Rosario do Sul**	**134.94**	**261**	*e*P		**PKPdf**	**11 54 31.0**	**-0.4**
CPUP	**Villa Florida** comp=Z,1.6nm,0.5s,baz=129,slow=4.0,SNR=4.6	**135.00**	**268**	PKhKP		PKPpre	11 54 22.3	
CPUP				PKP		**PKPdf**	**11 54 31.0**	**-0.6**
CPUP	comp=Z,25nm,0.6s,baz=63,slow=2.1,SNR=56			PP		**PP**	**11 57 07.0**	**-2.4**
CPUP	comp=Z,2.8nm,0.5s,baz=57,slow=9.8,SNR=2.9			SKPbc		**SKPbc**	**11 57 39.5**	**-2.8**
CPUP	comp=Z,1.0nm,0.4s,baz=83,slow=8.1,SNR=1.7 **Villa Florida**	**135.00**	**268**	PKIKP		**PKPdf**	**11 54 31.0**	**-0.6**
CPUP	**Villa Florida**	**135.00**	**268**	*e*P		**PKPdf**	**11 54 31.2**	**-0.4**
ITQB	**Itaqui**	**135.82**	**263**	PKPdf		**PKPdf**	**11 54 32.9**	**-0.1**
ITQB	**Itaqui**	**135.82**	**263**	*e*P		**PKPdf**	**11 54 32.7**	**-0.3**
CZSB	**Cruzeiro do Su**	**136.16**	**302**	*e*P		**PKPdf**	**11 54 33.4**	**-0.8**
LPAZ	**La Paz** comp=Z,1.0nm,0.5s,baz=32,slow=8.5,SNR=2.6	**138.45**	**288**	PKhKP		PKPpre	11 54 29.4	
LPAZ				PKP		**PKPdf**	**11 54 38.6**	**-0.4**
LPAZ	comp=Z,4.6nm,0.6s,baz=27,slow=5.2,SNR=12			PP		**PP**	**11 57 28.9**	**-2.5**
LPAZ	comp=Z,3.3nm,0.9s,baz=41,slow=4.5,SNR=5.1 **La Paz**	**138.45**	**288**	*e*P		**PKPdf**	**11 54 37.8**	**-1.2**
ATAH	**Atahualpa** comp=Z,3.7nm,0.7s,baz=182,slow=5.7,SNR=2.5	**139.48**	**308**	PKhKP		PKPpre	11 54 34.3	
ATAH				PKP		**PKPdf**	**11 54 41.5**	**+0.7**
ATAH	comp=Z,8.8nm,0.7s,baz=76,slow=5.0,SNR=5.1			SKPbc		**SKPbc**	**11 57 54.8**	**-1.6**
PB16	comp=Z,6.3nm,0.7s,baz=53,slow=10,SNR=3.3 **IPOC Station P**	**140.71**	**286**	PKPdf		**PKPdf**	**11 54 37.3**	**-5.7**
NNA	**Nana** comp=Z,11nm,0.5s,baz=5.6,slow=6.6,SNR=2.5	**142.03**	**302**	PKhKP		PKPpre	11 54 41.8	
NNA	**Nana**	**142.03**	**302**	*i* PKIKP		**PKPdf**	**11 54 46.0**	**+1.1**
LVC	**Limon Verde** comp=Z,16nm,0.7s,baz=51,slow=2.4,SNR=14	**142.57**	**280**	PKhKP		PKPpre	11 54 41.7	
LVC				PP		**PP**	**11 57 57.3**	**+1.0**
LVC	comp=Z,3.8nm,0.7s,baz=74,slow=9.9,SNR=3.8 **Limon Verde**	**142.57**	**280**	*e*P		**PKPdf**	**11 54 42.0**	**-4.0**
TRQA	**Tornquist**	**142.64**	**253**	*e*P		**PKPdf**	**11 54 44.6**	**-0.6**
ACLC	**CERRO LA CRUZ**	**144.03**	**269**	*e*P		**PKPab**	**11 54 46.0**	**-0.2**
APLL	**PUNTA DE LOS L**	**144.05**	**267**	*i*e*P*		**PKPab**	**11 54 45.7**	**-0.4**
MRA	**San Martin**	**144.09**	**263**	*e*P		**PKPab**	**11 54 46.2**	**0.0**
ACHE	**Chepes**	**144.43**	**266**	*e*P		**PKPab**	**11 54 47.2**	**-0.4**
GO03	**Copiap**	**145.95**	**274**	*e*P		**PKPdf**	**11 54 51.7**	**+0.3**
ACDV	**Cuesta del Vie**	**146.06**	**269**	*e*P		**PKPbc**	**11 54 52.5**	**-0.4**
ACCO	**Cerro Coronel**	**146.16**	**268**	*e*P		**PKPbc**	**11 54 52.8**	**-0.6**
AROD	**Rodeo**	**146.34**	**269**	*e*P		**PKPbc**	**11 54 53.3**	**-0.6**
USHA	**Ushuaia** baz=31,slow=3.9	**146.63**	**223**	PKPbc		**PKPbc**	**11 54 53.8**	**+0.3**
ASAL	**Salagasta**	**146.64**	**264**	*e*P		**PKPbc**	**11 54 53.7**	**-0.7**
RTLS	**Leoncito**	**146.76**	**266**	*e*P		**PKPdf**	**11 54 53.9**	**+1.0**
AAGR	**Agrelo**	**146.78**	**264**	*e*P		**PKPdf**	**11 54 53.7**	**+1.0**
ARCO	**CERRO ARCO**	**146.79**	**264**	*e*P		**PKPdf**	**11 54 53.5**	**+0.8**
LCO	**Las Campanas**	**146.90**	**272**	PKPdf		**PKPdf**	**11 54 53.9**	**+0.7**
LCO	**Las Campanas**	**146.90**	**272**	PKIKP		**PKPdf**	**11 54 53.9**	**+0.7**
RFA	**San Rafael**	**146.96**	**261**	*e*P		**PKPdf**	**11 54 53.5**	**+0.7**
MG02	**Cerro Sombrero**	**147.63**	**227**			**PKPdf**	**11 54 53.8**	**+0.6**
ROC1	**El Roble**	**148.51**	**265**	*e*P		**PKPdf**	**11 54 56.1**	**+0.4**
PLCA	**Paso Flores** comp=Z,60nm,0.9s,baz=129,slow=1.4,SNR=11	**149.60**	**250**	PKP		**PKPdf**	**11 54 57.3**	**+0.3**
PLCA				PKPbc		**PKPbc**	**11 55 02.2**	**+0.4**
PLCA	comp=Z,56nm,0.8s,baz=12,slow=2.1,SNR=19 **Paso Flores**	**149.60**	**250**	*e*P		**PKPdf**	**11 54 56.0**	**-0.9**

IDC ***23*** *12:10:13.5±0.8, 7°.69S×107°.98E, h0km, mb4.1/9, mbtmp4.1/9, MS2.7/1 Error ellipse: s-maj=33.3km s-min=21.4km az=50.0*

DJA ***23*** *12:10:20.3±0.6, 8°.5±3°×10°.8E±°, h18km±5km, M4.5/18, mb4.6/4, mB5.6/2, MLv4.5/18, Mw(mB)5.1/2*

NEIC ***23*** *12:10:23.2±2.0, 7°.96S±0°.10×107°.86E±0°.07, h68km±9km, mb4.2/16, Error ellipse: s-maj=14.4km s-min=10.2km az=168.0*

ISC 23 12:10:22.7±0.6, 7°.9S±0°.1×107°.9E±0°.05, h70km, n55, σ1°18/50, mb4.2/15, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMJI	**Cimerak**	**0.49**	**77**	P	**Pn**	**12 10 34.3**	**-1.1**
CMJI				S	**Sn**	**12 10 43.2**	**-1.5**
CNJI	**Cibinong**	**1.02**	**305**	P	**Pn**	**12 10 41.0**	**-0.4**
CNJI				S	**Sn**	**12 10 54.5**	**-0.8**
SKJI	**Sukabumi**	**1.66**	**302**	P	**Pn**	**12 10 50.7**	**+1.0**
DBJI	**Dramaga**	**1.80**	**318**	P	**Pn**	**12 10 53.5**	**+1.8**
YOGI	**Yogyakarta**	**2.31**	**88**	P	**Pn**	**12 10 58.9**	**+0.4**
UGM	**Wanagama**	**2.53**	**91**		**Pn**	**12 11 01.3**	**-0.3**
UGM	**Wanagama**	**2.53**	**91**	P	**Pn**	**12 11 01.2**	**-0.3**
SMRI	**Semarang**	**2.59**	**71**		**Pn**	**12 11 04.3**	**+2.0**
SMRI	**Semarang**	**2.59**	**71**	P	**Pn**	**12 11 04.0**	**+1.6**
WOJI	**Wonogiri, Jawa**	**2.93**	**89**	P	**Pn**	**12 11 06.6**	**-0.3**
PCJI	**Pacitan**	**3.19**	**96**	P	**Pn**	**12 11 10.7**	**+0.2**
UWJI	**Ujung Watu**	**3.30**	**64**	P	**Pn**	**12 11 13.6**	**+1.6**
XMIS	**Christmas Isla**	**3.44**	**222**	Pn	Pn	12 11 09.4	-4.5
PWJI	**Pagerwojo**	**3.80**	**92**	P	**Pn**	**12 11 19.0**	**+0.2**
GRJI	**Gresik**	**4.58**	**78**	P	**Pn**	**12 11 30.4**	**+1.0**
BWJI	**Bawean** 0.6nm111nm,1.0s	**5.08**	**67**	P	**Pn**	**12 11 37.7**	**+1.4**
GMJI	**Gumukmas** 0.3nm35nm,0.6s	**5.43**	**94**	P	**Pn**	**12 11 41.6**	**+0.5**
PPBI	**Pangkal Pinang**	**5.98**	**342**	P	**Pn**	**12 11 51.7**	**+3.0**
KMMI	**Kalianget** 0.1nm26nm,1.1s	**6.01**	**82**	P	**Pn**	**12 11 48.2**	**-0.8**
MNAI	**Manna**	**6.10**	**305**	Pn	**Pn**	**12 11 50.3**	**+0.1**
JAGI	**Jajag, Banyuwa**	**6.15**	**96**		**Pn**	**12 11 53.3**	**+2.4**
JAGI	**Jajag, Banyuwa** 0.4nm2µm43nm,0.8s	**6.15**	**96**	P	**Pn**	**12 11 51.1**	**+0.2**
SOEI	**Soe**	**16.21**	**98**		**P**	**12 14 08.4**	**+0.2**
SOEI				IAmb	IAmb	12 14 36.2	
PSA00	comp=Z,30nm,1.2s **Pilbara Seismi**	**17.78**	**141**	P	**Pn**	**12 14 26.7**	**+1.2**
KNRA	**Kununurra**	**21.76**	**113**	P	**P**	**12 15 09.9**	**+1.3**
KNRA				IAmb	IAmb	12 15 25.2	
MTN	comp=Z,8.8nm,1.0s **Manton Dam**	**23.30**	**104**	P	**P**	**12 15 24.8**	**+0.1**
MTN				IAmb	IAmb	12 16 03.2	
FAKI	comp=Z,7.2nm,0.8s **Fak Fak**	**24.66**	**80**	P	**P**	**12 15 37.6**	**+0.4**
H01W3	**Cape Leeuwin H** baz=348	**27.45**	**169**	T	T	12 45 57.7	
H01W1	**Cape Leeuwin H** baz=348	**27.46**	**169**	T	T	12 45 56.3	
H01W2	**Cape Leeuwin H** baz=348	**27.46**	**169**	T	T	12 45 53.3	
CMAR	**Chiang Mai Arr** comp=Z,15nm,18.8s,baz=185,slow=40	**27.66**	**341**	LR	LR	12 28 36.1	
WB0	**Warramunga Arr**	**28.19**	**117**	P	**P**	**12 16 10.6**	**+1.7**
WB0				IAmb	IAmb	12 16 20.9	
	comp=Z,13nm,1.4s						
WRA	**Warramunga Arr** comp=Z,0.2nm,0.4s,baz=294,slow=12,SNR=13	**28.20**	**118**	P	**P**	**12 16 09.1**	**0.0**
WRAB	comp=Z,0.2nm,0.4s **Tennant Creek**	**28.21**	**118**	P	**P**	**12 16 09.8**	**+0.7**
WB2	**Warramunga Arr**	**28.21**	**118**	P	**P**	**12 16 09.7**	**+0.6**
WR0	**Warramunga Arr**	**28.39**	**118**	P	**P**	**12 16 11.0**	**+0.3**
WR0	comp=Z,13nm,1.5s			IAmb	IAmb	12 16 40.0	
AS31	**Alice Springs**	**29.39**	**125**	P	**P**	**12 16 22.2**	**+2.6**
H08S2	**Diego Garcia H** baz=92,slow=75,SNR=123	**35.15**	**268**	T	T	12 54 20.9	
H08S3	**Diego Garcia H** baz=92,slow=75,SNR=200	**35.16**	**268**	T	T	12 54 24.6	
H08S1	**Diego Carcia H** baz=92,slow=75,SNR=86	**35.16**	**268**	T	T	12 54 25.8	
STKA	**Stephens Creek** comp=Z,1.6nm,0.3s,baz=305,slow=9.2,SNR=3.6	**39.33**	**132**	P	**P**	**12 17 45.8**	**+0.5**
STKA	comp=Z,1.6nm,0.3s **Stephens Creek**	**39.33**	**132**	P	**P**	**12 17 46.0**	**+0.8**
STKA				IAmb	IAmb	12 17 47.1	
SONM	comp=Z,4.4nm,1.5s **Songino Array**	**55.51**	**359**	P	**P**	**12 19 49.1**	**-1.5**
SONM	comp=Z,0.8nm,0.5s,baz=175,slow=7.4,SNR=3.8			PcP	**PcP**	**12 20 49.5**	**-0.3**
TARG	comp=Z,1.2nm,0.5s,baz=152,slow=2.0,SNR=5.2 **Taragay, Kyrgy**	**56.59**	**333**	P	**P**	**12 19 59.5**	**+0.7**
BOOM	**Boomskoye usch**	**58.04**	**332**	P	**P**	**12 20 08.3**	**-0.4**
MK31	**Makanchi Array**	**59.05**	**340**	P	**P**	**12 20 13.9**	**-1.6**
MK31	comp=Z,1.3nm,0.5s			IAmb	IAmb	12 20 15.8	
MKAR	**Makanchi Array** comp=Z,2.2nm,0.5s,baz=144,slow=7.6,SNR=14	**59.05**	**340**	P	**P**	**12 20 14.2**	**-1.2**
KURK	comp=Z,2.2nm,0.5s **Kurchatov**	**63.67**	**340**	P	**P**	**12 20 46.0**	**-0.5**
KURK	comp=Z,2.6nm,1.1s			IAmb	IAmb	12 21 04.8	
ZALV	**Zalesovo Beam** comp=Z,0.5nm,0.4s,baz=140,slow=5.1,SNR=2.4	**64.64**	**345**	P	**P**	**12 20 51.5**	**-1.3**
ABKAR	comp=Z,0.5nm,0.4s **Akbulak array**	**70.67**	**329**	P	**P**	**12 21 30.3**	**-0.6**
MATP	**Matopo** comp=Z,2.9nm,0.6s,baz=94,slow=7.4,SNR=6.4	**77.46**	**251**	P	**P**	**12 22 12.0**	**+0.7**
BOSA	comp=Z,2.9nm,0.6s **Boshof** comp=Z,1.1nm,0.5s,baz=45,slow=2.9,SNR=2.4	**79.89**	**242**	P	**P**	**12 22 25.9**	**+1.3**
BRTR	comp=Z,1.1nm,0.5s **Keskin Array B** comp=Z,0.9nm,0.8s,baz=95,slow=4.3,SNR=2.4	**83.14**	**312**	P	**P**	**12 22 41.3**	**-0.1**
FINES	comp=Z,0.9nm,0.8s **FINESS Array B** comp=Z,0.9nm,0.6s,baz=99,slow=4.3,SNR=2.9	**93.01**	**332**	P	**P**	**12 23 27.

AGG	**Agios Georgios**	**0.88**	**340**	PG	**Pn**	**12 11 14.7**	**0.0**
AGG				SG	**Sn**	**12 11 26.8**	**-0.5**
ATHU	**Athens Univers**	**0.88**	**105**	P	**Pn**	**12 11 14.1**	**-0.5**
ATHU				S	**Sn**	**12 11 26.1**	**-1.1**
ATHU				AML	AML	12 11 28.7	
	comp=N,1977μm,0.3s						
ATHU				AML	AML	12 11 28.7	
	comp=E,769μm,0.4s						
ATHU	**Athens Univers**	**0.88**	**105**	P	**Pn**	**12 11 14.7**	**0.0**
ATHU				S	**Sn**	**12 11 26.9**	**-0.3**
	comp=E,688nm,0.4s						
KRND	**KRANIDI**	**0.88**	**157**	P	**Pb**	**12 11 13.6**	**-0.3**
KRND	**KRANIDI**	**0.88**	**157**	P	**Pb**	**12 11 13.6**	**-0.3**
KRND				S	**Sg**	**12 11 26.6**	**+1.2**
	comp=E,3μm,0.3s						
PTL	**Penteli**	**0.92**	**99**	P	**Pn**	**12 11 15.3**	**0.0**
PTL	**Penteli**	**0.92**	**99**	P	**Pn**	**12 11 15.3**	**0.0**
VLY	**Voula,Athens**	**0.92**	**112**	P	**Pg**	**12 11 14.6**	**0.0**
VLY	**Voula,Athens**	**0.92**	**112**	P	**Pn**	**12 11 14.9**	**-0.4**
VLY				S	**Sn**	**12 11 27.9**	**-0.4**
	comp=E,2μm,0.3s						
MAKR	**Makrakomi, Fth**	**0.93**	**331**	P	**Pn**	**12 11 15.4**	**0.0**
MAKR				AML	AML	12 11 32.4	
	comp=E,6894μm,0.3s						
MAKR				AML	AML	12 11 32.6	
	comp=N,7320μm,0.6s						
MAKR	**Makrakomi, Fth**	**0.93**	**331**	P	**Pn**	**12 11 15.3**	**-0.2**
DION	**Dionisos Attik**	**0.97**	**97**	P	**Pn**	**12 11 15.8**	**-0.2**
DION	**Dionisos Attik**	**0.97**	**97**	P	**Pn**	**12 11 15.8**	**-0.2**
DION				S	**Sn**	**12 11 29.7**	**+0.1**
	comp=N,5μm,0.4s						
RLS	**Riolos of Patr**	**0.99**	**262**	P	**Pb**	**12 11 15.3**	**-0.4**
RLS	**Riolos of Patr**	**0.99**	**262**	P	**Pb**	**12 11 15.5**	**-0.2**
EVR	**Evrytania**	**1.01**	**316**	P	**Pn**	**12 11 16.6**	**0.0**
EVR	**Evrytania**	**1.01**	**316**	P	**Pn**	**12 11 16.6**	**0.0**
PVO	**Paravola**	**1.02**	**294**	P	**Pg**	**12 11 16.9**	**+0.4**
PVO	**Paravola**	**1.02**	**294**	P	**Pg**	**12 11 16.9**	**+0.4**
KYMI	**Kymi, Euboea I**	**1.17**	**68**	P	**Pg**	**12 11 19.3**	**-0.1**
KYMI	**Kymi, Euboea I**	**1.17**	**68**	P	**Pg**	**12 11 19.0**	**-0.3**
NEO	**Neokhori**	**1.18**	**20**	P	**Pg**	**12 11 19.5**	**+0.1**
NEO	**Neokhori**	**1.18**	**20**	P	**Pg**	**12 11 19.5**	**+0.1**
ITM	**Ithomi**	**1.19**	**212**	P	**Pn**	**12 11 18.5**	**-0.5**
ITM				AML	AML	12 11 38.4	
	comp=N,1334μm,0.6s						
ITM				AML	AML	12 11 42.8	
	comp=E,962μm,0.4s						
ITM	**Ithomi**	**1.19**	**212**	P	**Pn**	**12 11 18.4**	**-0.6**
ITM	**Ithomi**	**1.19**	**212**	PN	**Pn**	**12 11 19.1**	**+0.1**
ITM				SN	**Sg**	**12 11 36.8**	**+1.5**
XOR	**Xorichti**	**1.23**	**18**	P	**Pg**	**12 11 20.3**	**0.0**
XOR	**Xorichti**	**1.23**	**18**	P	**Pg**	**12 11 20.3**	**0.0**
ALNA	**Alonissos**	**1.31**	**43**	P	**Pb**	**12 11 21.1**	**-0.1**
THL	**Klokotos Trika**	**1.47**	**338**	P	**Pb**	**12 11 24.1**	**+0.3**
VLI	**Veliai**	**1.49**	**173**	P	**Pn**	**12 11 22.9**	**-0.2**
VLI	**Veliai**	**1.49**	**173**	P	**Pn**	**12 11 23.3**	**+0.2**
PYL	**PYLOS**	**1.51**	**211**	P	**Pb**	**12 11 24.5**	**-0.1**
PSDA	**Pessada-Kefalo**	**1.68**	**268**	P	**Pb**	**12 11 27.8**	**+0.4**
FSK	**Fiskardo**	**1.71**	**279**	P	**Pg**	**12 11 29.4**	**-0.2**
LKD2	**Lefkada island**	**1.72**	**291**	P	**Pb**	**12 11 28.4**	**+0.3**
TSLK	**Tsoukalades, L**	**1.73**	**292**	P	**Pb**	**12 11 29.5**	**+1.2**
DRAG	**Dragano-Lefkad**	**1.75**	**287**	P	**Pb**	**12 11 29.4**	**+0.8**
KEF4	**Livadi, Kephal**	**1.80**	**273**	P	**Pb**	**12 11 29.8**	**+0.3**
DMLN	**Damoulianata-K**	**1.84**	**272**	P	**Pb**	**12 11 30.1**	**-0.1**
KEF3	**Kipouria, Keph**	**1.86**	**271**	P	**Pb**	**12 11 30.6**	**0.0**
LIT	**Litokhoron**	**1.91**	**355**	P	**Pb**	**12 11 30.0**	**-1.4**
KTHR	**Kythira**	**1.95**	**173**	P	**Pb**	**12 11 31.0**	**-1.0**
KTHA	**Kythira Island**	**1.96**	**172**	P	**Pn**	**12 11 30.7**	**+1.1**
OUR	**Ouranopolis**	**2.35**	**24**	PN	**Pn**	**12 11 35.6**	**+0.7**
OUR				SN	**Sn**	**12 12 03.4**	**-0.1**
ANKY	**Antikythira Is**	**2.37**	**168**	P	**Pn**	**12 11 36.0**	**+0.8**
HORT	**Hortiatis**	**2.42**	**7**	PN	**Pn**	**12 11 36.6**	**+0.7**
HORT				SN	**Sn**	**12 12 05.4**	**+0.1**
APE	**Apeiranthos**	**2.50**	**116**	PN	**Pn**	**12 11 37.7**	**+0.6**
CHOS	**Chios island**	**2.64**	**85**	PN	**Pn**	**12 11 40.1**	**+1.2**
KEK	**Kerkira**	**2.73**	**305**	P	**Pb**	**12 11 42.9**	**-2.4**
GRG	**Griva**	**2.77**	**355**	PN	**Pn**	**12 11 41.9**	**+1.2**
FNA	**Florina**	**2.78**	**339**	PN	**Pn**	**12 11 42.7**	**+1.8**
KNT	**Kendrikon**	**2.96**	**3**	PN	**Pn**	**12 11 44.7**	**+1.3**
URLA	**Izmir**	**3.06**	**86**	PN	**Pn**	**12 11 46.1**	**+1.4**
VAY	**Valandovo**	**3.12**	**358**	*i* Pn	**Pn**	**12 11 47.4**	**+1.9**
VAY				*e*Sn	**Sn**	**12 12 21.6**	**-1.0**
OHR	**Ohrid**	**3.26**	**334**	*i* Pn	**Pb**	**12 11 51.2**	**-3.3**
OHR				*e*Sn	**Sb**	**12 12 31.2**	**-2.8**
MMB	**Musomiste**	**3.48**	**13**	P	**Pn**	**12 11 51.1**	**+0.7**
GELI	**Tayfur-Gelibol**	**3.65**	**52**	PN	**Pn**	**12 11 53.4**	**+0.6**
ALN	**Alexandroupoli**	**3.73**	**43**	PN	**Pn**	**12 11 55.2**	**+1.3**
RZN	**Rozhen**	**3.81**	**23**	P	**Pn**	**12 11 56.2**	**+1.0**
KDZ	**Kurdzhali**	**4.03**	**30**	P	**Pn**	**12 11 57.9**	**-0.1**
ESDC	**Sonseca Array**	**20.78**	**282**	P	**P**	**12 15 37.9**	**+0.5**
	comp=E,1.7nm,0.8s,baz=75,slow=11,SNR=14						
	comp=E,1.7nm,0.8s						
MDT	**Midelt**	**22.84**	**265**	LR	LR	12 25 41.3	
	comp=E,68nm,18.8s,baz=152,slow=39						
TORD	**Torodi Ar. Bea**	**31.17**	**222**	P	**P**	**12 17 15.8**	**+0.4**
	comp=E,0.4nm,0.8s,baz=28,slow=9.6,SNR=2.4						
	comp=E,0.4nm,0.8s						
MKAR	**Makanchi Array**	**43.82**	**59**	P	**P**	**12 19 02.6**	**+0.5**
	comp=E,0.4nm,0.3s,baz=273,slow=7.9,SNR=5.2						
	comp=E,0.4nm,0.3s						
ZALV	**Zalesovo Beam**	**44.39**	**48**	P	**P**	**12 19 06.2**	**-0.4**
	comp=E,0.7nm,0.4s,baz=262,slow=7.1,SNR=3.9						
	comp=E,0.7nm,0.4s						

*IDC **23** 12:30:08.0±0.8,35°.26′N×142°.64′E,h0km,mb3.9/9, mbtmp3.9/14,ML3.0/4,MS2.9/3,Error ellipse: s-maj=21.0km s-min=18.8km az=160.0*
*JMA **23** 12:30:11.1±0.3,35°.3′N±0°.8×14°.3′E, h66km,MV3.9/34, FAR E OFF CENTRAL HONSHU*
*NIED **23** 12:30:11.1,35°.30′N×142°.58′E,h66km,MW4.0,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.87; $M_{\theta\theta}$0.19; $M_{\phi\phi}$0.68; $M_{r\theta}$-0.38; $M_{\theta\phi}$0.24; $M_{\phi r}$0.53; Fault plane solution: $M_0$1.03000×10^{15} NP1:ϕ_s38.00000°, δ36.00000°, λ-53.00000°. NP2:ϕ_s175.00000°, δ62.00000°, λ-113.00000°.*

ISC 23 12:30:08.7±3.0,35°.30′N±0°.05×142°.58′E±0°.07,h5km±18km, n37,σ1^{s}79/40,mb3.9/9,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.46**	**287**	P		**Pn**	**12 30 36.1**	**+0.4**
CHOJ				*e*S		**Sg**	**12 30 54.5**	**-1.3**
BSO1	**Boso 1**	**1.47**	**245**	P		**Pn**	**12 30 35.5**	**+0.2**
BSO1				*e*S		**Sn**	**12 30 53.5**	**-1.0**
BSO2	**Boso 2**	**1.59**	**251**	*e*S		**Sn**	**12 30 57.5**	**-0.6**
BSO3	**Boso 3**	**1.77**	**254**	P		**Pn**	**12 30 40.4**	**+0.6**
JIHU	**Itakohorinouch**	**1.80**	**292**	*e*S		**Sn**	**12 31 02.4**	**-1.2**
JFK	**Kawauchi**	**2.48**	**327**	P		**Pn**	**12 30 49.2**	**-0.6**
JFK				*e*S		**Sn**	**12 31 16.5**	**-4.1**
JIM2	**Oshima 3**	**2.65**	**258**	P		**Pn**	**12 30 51.9**	**-0.2**
JAG	**Ashikaga**	**2.78**	**295**	P		**Pn**	**12 30 54.2**	**+0.3**
JAG				*e*S		**Sn**	**12 31 26.0**	**-1.7**
JOD2	**Odawara 2**	**2.86**	**270**	P		**Pn**	**12 30 55.3**	**+0.3**
JOD2				*e*S		**Sn**	**12 31 27.7**	**-2.1**
JFT	**Otama**	**2.86**	**321**	P		**Pn**	**12 30 55.4**	**+0.4**
JFT				*e*S		**Sn**	**12 31 27.1**	**-2.7**
JRY	**Ryogami san**	**3.08**	**285**	*e*P		**Pn**	**12 30 59.0**	**+1.0**
JHJ	**Hachijo jima 2**	**3.18**	**228**	Pn		**Pn**	**12 30 59.5**	**+0.2**
	9.5nm,0.3s,baz=328,slow=18,SNR=14							
JHJ						**Sn**	**12 31 31.2**	**-6.4**
	70nm,0.3s,baz=74,slow=17,SNR=4.7							
	57nm,0.5s							
JFNN	**Fujinakano**	**3.19**	**269**	*e*S		**Sn**	**12 31 37.0**	**-0.9**
JYN	**Shimob**	**3.31**	**275**	*e*P		**Pn**	**12 31 01.6**	**+0.5**
JYN				*e*S		**Sn**	**12 31 40.2**	**-0.7**
MJAR	**Matsushiro Arr**	**3.76**	**291**	Pn		**Pn**	**12 31 07.7**	**+0.3**
	0.8nm,0.3s,baz=295,slow=18,SNR=33							
MJAR						**Sn**	**12 31 52.4**	**+0.4**
	0.8nm,0.3s,baz=97,slow=19,SNR=2.1							
MJAR						LR	LR	12 32 53.3
	comp=Z,170nm,18.0s,baz=145,slow=43							
	2.8nm,0.3s							
MAT	**Matsushiro**	**3.76**	**291**	*e*P		**Pn**	**12 31 10.0**	**+2.6**
JMK	**Ichinoseki**	**3.81**	**344**	*e*P		**Pn**	**12 31 07.7**	**-0.3**
JMK				*e*S		**Sn**	**12 31 49.3**	**-3.8**
JCJ	**Chichijima**	**8.18**	**182**	Pn		**Pn**	**12 32 06.0**	**-2.2**
	16nm,0.3s,baz=22,slow=23,SNR=16							
JCJ						Sn	Sn	12 33 27.1 -14
	1.3nm,0.3s,baz=273,slow=20,SNR=1.2							
KSRS	**Korea Array**	**12.01**	**285**	Pn		**Pn**	**12 33 01.1**	**+0.6**
	0.1nm,0.3s,baz=99,slow=14,SNR=1.8							
KSRS						LR	LR	12 37 39.3
	comp=Z,44nm,21.4s,baz=100,slow=37							
	0.4nm,0.5s							
USRK	**Ussuriysk Ar.**	**12.05**	**321**	Pn		**Pn**	**12 33 02.3**	**+1.2**
	0.3nm,0.3s,baz=128,slow=14,SNR=2.5							
	1.4nm,0.7s							
KLR	**Kul'dur**	**16.04**	**334**	LR		LR	12 39 41.4	
	comp=Z,52nm,19.2s,baz=61,slow=36							
H11N2	**WAKE ISLAND Hy**	**26.46**	**119**	T		T	13 04 24.1	
	baz=311							
H11N1	**WAKE ISLAND Hy**	**26.47**	**120**	T		T	13 03 59.7	
	baz=311							
H11N3	**WAKE ISLAND Hy**	**26.48**	**119**	T		T	13 03 52.3	
	baz=311							
H11S1	**WAKE ISLAND Hy**	**27.13**	**122**	T		T	13 05 04.2	
	baz=313							
H11S3	**WAKE ISLAND Hy**	**27.13**	**122**	T		T	13 05 21.0	
	baz=313							
H11S2	**WAKE ISLAND Hy**	**27.15**	**122**	T		T	13 05 11.5	
	baz=313							
SONM	**Songino Array**	**29.56**	**306**	P		**P**	**12 36 16.1**	**+1.7**
	0.6nm,0.7s,baz=108,slow=9.3,SNR=2.4							
	0.6nm,0.7s							
KDAK	**Kodiak Island**	**47.77**	**41**	P		**P**	**12 38 47.0**	**+0.4**
	7.7nm,1.0s,baz=294,slow=10.0,SNR=2.3							
	7.7nm,1.0s							
ILAR	**Eielson Array**	**50.46**	**32**	P		**P**	**12 39 05.8**	**-1.3**
	0.7nm,0.8s,baz=272,slow=6.8,SNR=6.0							
	0.7nm,0.8s							
WRA	**Warramunga Arr**	**55.49**	**189**	P		**P**	**12 39 44.8**	**+0.2**
	0.8nm,0.6s,baz=4.4,slow=7.6,SNR=4.9							
	0.8nm,0.6s							
KBZ	**Khabaz**	**72.75**	**312**	P		**P**	**12 41 38.1**	**+0.2**
	2.8nm,0.8s,baz=41,slow=2.3,SNR=4.8							
	2.8nm,0.8s							
NVAR	**Mina Array Bea**	**75.27**	**53**	P		**P**	**12 41 54.2**	**+1.2**
	0.8nm,0.7s,baz=278,slow=6.0,SNR=7.5							
	0.8nm,0.7s							
NOA	**NORSAR Array B**	**76.15**	**338**	P		**P**	**12 41 57.9**	**+0.5**
	0.7nm,0.6s,baz=38,slow=5.8,SNR=4.1							
	0.7nm,0.6s							
AKASG	**Malin Array Be**	**76.25**	**323**	P		**P**	**12 41 58.3**	**+0.2**
	0.6nm,0.4s,baz=42,slow=6.0,SNR=4.9							
	0.6nm,0.4s							
PDAR	**Pinedale Array**	**78.20**	**46**	P		**P**	**12 42 09.4**	**-0.1**
	0.5nm,0.9s,baz=310,slow=7.0,SNR=2.6							
	0.5nm,0.9s							
LPAZ	**La Paz**	**146.69**	**63**	PKPbc		**PKPdf**	**12 49 51.9**	**+0.7**
	0.9nm,0.6s,baz=101,slow=5.2,SNR=2.1							

*IDC **23** 12:34:03.8±0.7,44°.21′N×84°.34′E,h0km,mb3.8/14, mbtmp3.9/20,ML3.6/5,MS2.9/4,Error ellipse: s-maj=16.8km s-min=9.8km az=61.0*
*SOME **23** 12:34:04.8,44°.22′N×84°.15′E,h5km,MS3.6*
*MOS **23** 12:34:05.3±1.2,44°.31′N×84°.47′E,h16km,mb4.4/4,Error ellipse: s-maj=7.4km s-min=6.2km az=30.9*
*NNC **23** 12:34:11.2±2.0,44°.39′N×84°.04′E,h17km±8km,mb4.4, mpv4.2,Error ellipse: s-maj=16.1km s-min=7.2km az=111.0*

ISC 23 12:34:05.2±0.4,44°.24′N±0°.03×84°.50′E±0°.03,h10km,n97, σ2^{s}36/132,mb3.9/16,MS3.1/3,19C-10D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**2.34**	**99**	*e*Pn		**Pg**	**12 34 48.5**	**-1.6**
WMQ				Sn		**Sg**	**12 35 19.9**	**-0.6**
WMQ				Sg		**Sb**	**12 35 22.9**	**+6.3**
WMQ				smax		smax		
	comp=N,510nm,0.7s							
WMQ				smax		smax		
	comp=E,530nm,0.7s							
MK31	**Makanchi Array**	**2.99**	**329**	PN		**Pn**	**12 34 54.9**	**+2.3**
MK31	**Makanchi Array**	**2.99**	**329**	⇓Pn		**Pn**	**12 34 54.9**	**+2.3**
	comp=E,5.4nm,0.4s,baz=144,slow=14,SNR=1106							
MK31				⇓Pg		**Pb**	**12 34 59.7**	**+1.2**
	comp=E,23nm,0.3s,baz=139,slow=17,SNR=9.5							
MK31				⇑Lg		Lg	12 35 38.4	
	comp=E,130nm,0.3s,baz=145,slow=28,SNR=11							
MKAR	**Makanchi Array**	**2.99**	**329**	Pn		**Pn**	**12 34 54.8**	**+2.2**
	comp=E,13nm,0.3s,baz=153,slow=14,SNR=334							
MKAR				Sn		**Sn**	**12 35 31.2**	**+2.7**
	comp=E,229nm,0.3s,baz=147,slow=22,SNR=9.8							
MKAR				Lg		Lg	12 35 38.3	
	comp=E,229nm,0.3s,baz=150,slow=29,SNR=18							
	comp=E,15nm,0.3s							
KTMS	**Ketmen**	**3.10**	**257**	*e*P		**Pb**	**12 35 00.5**	**-0.1**
	comp=E,69nm,0.3s							
KTMS				*e*S		**Sb**	**12 35 41.6**	**+3.0**
	comp=E,752nm,0.2s							
MAKZ	**Makanchi**	**3.12**	**326**	PN		**Pn**	**12 34 56.4**	**+1.9**
MAKZ				PG		**Pb**	**12 35 02.8**	**+2.0**
MAKZ				LG		Lg	12 35 42.6	
MAKZ	**Makanchi**	**3.12**	**326**	⇑Pn		**Pn**	**12 34 56.4**	**+1.9**
	comp=E,16nm,0.5s							
MAKZ				⇑Pg		**Pb**	**12 35 02.8**	**+2.0**
	comp=E,54nm,0.5s							
MAKZ				⇑Lg		Lg	12 35 42.6	
	comp=E,333nm,0.6s							
ZSN	**Zaisan**	**3.22**	**4**	*e*PN		**Pn**	**12 34 59.0**	**+3.2**
ZSN				*e*			12 35 06.1	
ZSN				*e*			12 35 47.1	
ZSN	**Zaisan**	**3.22**	**4**	*e*P		**Pg**	**12 35 06.2**	**-0.6**
	comp=E,281nm,0.4s							
ZSN				*e*S		**Sg**	**12 35 50.5**	**+2.0**
	comp=E,569nm,0.7s							
ZSN	**Zaisan**	**3.22**	**4**	*e*Pn		**Pn**	**12 34 59.0**	**+3.2**
	baz=6.9							
ZSN				*e*Pg		**Pg**	**12 35 06.1**	**-0.7**
	baz=6.9							
ZSN				*e*Lg		Lg	12 35 47.2	
	baz=6.9							
DJR	**Jarkent**	**3.38**	**273**	*e*P		**Pb**	**12 35 05.3**	**0.0**
	comp=E,128nm,0.4s							
DJR				*e*S		**Sb**	**12 35 49.1**	**+2.6**
	comp=E,502nm,0.5s							
PDGK	**Podgornoye**	**3.74**	**258**	PN		**Pn**	**12 35 04.8**	**+1.7**
PDGK							12 35 13.5	
PDGK	**Podgornoye**	**3.74**	**258**	⇓Pn		**Pn**	**12 35 04.5**	**+1.4**
	comp=E,32nm,0.4s							
PDGK				⇑Pg		**Pb**	**12 35 13.5**	**+2.1**
	comp=E,181nm,0.8s							
PDGK				⇑Lg		Lg	12 35 57.7	
	comp=E,542nm,0.8s							
SHLS	**Shalkode**	**3.81**	**255**	*e*PN		**Pn**	**12 35 02.9**	**-1.1**
SHLS				*e*			12 35 11.1	
SHLS				*e*			12 35 46.9	
SHLS	**Shalkode**	**3.81**	**255**	*e*P		**Pn**	**12 35 06.9**	**+2.8**
	comp=E,97nm,0.3s							
SHLS				*e*S		**Sn**	**12 35 51.6**	**+2.6**
	comp=E,1μm,0.5s							
SHLS	**Shalkode**	**3.81**	**255**	*e*Pn		**Pn**	**12 35 03.0**	**-1.1**
	baz=251							
SHLS				*e*Pg		**Pb**	**12 35 11.2**	**-1.5**
	baz=251							
SHLS				*e*Sn		**Sn**	**12 35 47.0**	**-2.1**
	baz=251							
KPKS	**Kokpek**	**4.28**	**262**	*e*PN		**Pn**	**12 35 11.7**	**+1.2**
KPKS				*e*			12 35 23.9	
KPKS				*e*			12 36 01.2	
KPKS	**Kokpek**	**4.28**	**262**	*e*P		**Pb**	**12 35 19.3**	**-1.2**
	comp=E,124nm,0.3s							
KPKS				*e*S		**Sb**	**12 36 12.8**	**+0.6**
	comp=E,683nm,0.4s							
KPKS	**Kokpek**	**4.28**	**262**	*e*Pn		**Pn**	**12 35 11.7**	**+1.2**
	baz=260							
KPKS				*e*Pg		**Pb**	**12 35 23.9**	**+3.3**
	baz=260							
KPKS				*e*Sn		**Sn**	**12 36 01.3**	**+0.8**
	baz=260							
BLB	**Baldybastay**	**4.33**	**270**	*e*P		**Pb**	**12 35 21.4**	**-0.1**
	comp=E,191nm,0.2s							
BLB				*e*S		**Sb**	**12 36 16.8**	**+2.8**
	comp=E,377nm,0.1s							
TDK	**Taldyqorghan**	**4.42**	**282**	*e*P		**Pb**	**12 35 25.7**	**+2.8**
	comp=E,190nm,0.2s							
TDK				*e*S		**Sg**	**12 36 24.0**	**-2.9**
	comp=E,1μm,0.5s							
TDK	**Taldyqorghan**	**4.42**	**282**	*e*Pg		**Pb**	**12 35 27.0**	**+4.2**
	baz=281							
TDK				*e*Sn		**Sn**	**12 36 06.0**	**+2.3**
	baz=281							
TDK				*e*Lg		Lg	12 36 23.6	
	baz=281							
ZHN	**Zhinishke**	**4.53**	**258**	*e*PN		**Pn**	**12 35 15.5**	**+1.6**
ZHN				*e*			12 35 28.5	
ZHN				*e*			12 36 07.8	
ZHN	**Zhinishke**	**4.53**	**258**	*e*Pn		**Pn**	**12 35 15.5**	**+1.6**
	baz=256							
ZHN				*e*Pg		**Pb**	**12 35 28.5**	**+3.7**
	baz=256							
ZHN				*e*Sn		**Sn**	**12 36 07.8**	**+1.2**
	baz=256							
SATY	**Saty**	**4.58**	**257**	*e*PN		**Pn**	**12 35 16.4**	**+1.8**
SATY				*e*			12 36 10.4	
SATY	**Saty**	**4.58**	**257**	*e*P		**Pb**	**12 35 24.9**	**-0.8**
SATY	comp=E,51nm,0.1s							
	comp=E,277nm,0.0s							
SATY	**Saty**	**4.58**	**257**	*e*Pn		**Pn**	**12 35 16.4**	**+1.8**
	baz=255							
SATY				*e*Sn		**Sn**	**12 36 10.4**	**+2.5**
	baz=255							
ARXS	**Arharly**	**4.80**	**272**	*e*PN		**Pn**	**12 35 19.1**	**+1.5**
ARXS	**Arharly**	**4.80**	**272**	*e*P		**Pb**	**12 35 31.6**	**+2.3**
ARXS	comp=E,128nm,0.5s							
	comp=E,596nm,0.5s							
CHKK	**Chushkaly**	**5.43**	**269**	*e*PN		**Pn**	**12 35 26.7**	**+0.5**
CHKK	**Chushkaly**	**5.43**	**269**	*e*P		**Pb**	**12 35 41.9**	**+1.8**
CHKK	comp=E,26nm,0.1s							
	comp=E,201nm,0.1s							
CHKK	**Chushkaly**	**5.43**	**269**	*e*Pn		**Pn**	**12 35 26.7**	**+0.5**
	baz=267							
KNDC	**Almaty**	**5.55**	**262**	PN		**Pn**	**12 35 31.5**	**+3.5**
KNDC	**Almaty**	**5.55**	**262**	⇑Pn		**Pn**	**12 35 29.7**	**+1.7**
KNDC	comp=E,37nm,0.3s							
	comp=E,290nm,0.6s							
AAA	**Alma-Ata**	**5.59**	**262**	*e*PN		**Pn**	**12 35 33.3**	**+4.8**
AAA	**Alma-Ata**	**5.59**	**262**	*e*Pn		**Pn**	**12 35 32.0**	**+3.5**
	baz=260							
TNSS	**Tian-Shan**	**5.61**	**260**	*e*PN		**Pn**	**12 35 30.5**	**+1.5**
TNSS				*e*			12 36 37.4	
TNSS	**Tian-Shan**	**5.61**	**260**	*e*P		**Pb**	**12 35 43.8**	**+0.3**
TNSS	comp=E,27nm,0.0s							
	comp=E,65nm,0.5s							
TNSS	**Tian-Shan**	**5.61**	**260**	*e*Pn		**Pn**	**12 35 30.6**	**+1.5**
	baz=259							
TNSS				*e*Sn		**Sn**	**12 36 37.5**	**+3.7**
	baz=259							
KUU	**Kurty**	**5.89**	**269**	*e*PN		**Pn**	**12 35 33.1**	**+0.6**
KUU				*e*			12 35 54.1	
KUU	**Kurty**	**5.89**	**269**	*e*P		**Pb**	**12 35 49.3**	**+1.3**
KUU	comp=E,28nm,0.4s							
	comp=E,201nm,0.6s							
KUU	**Kurty**	**5.89**	**269**	*e*Pn		**Pn**	**12 35 33.2**	**+0.6**
	baz=268							
KUU				*e*Pg		Pb	12 35 54.1	+6.1
	baz=268							
KUU				*e*Lg		Lg	12 37 10.9	
	baz=268							
MTBS	**Maitube**	**5.96**	**262**	*e*P		**Pb**	**12 35 52.5**	**+3.4**
	comp=E,34nm,0.3s							
MTBS				*e*S		Sb	12 37 10.5	+10
	comp=E,150nm,0.2s							
KST	**Kastek**	**6.31**	**262**	*e*P		**Pb**	**12 35 56.7**	**+1.5**
	comp=E,55nm,0.1s							
KST				*e*S		**Sb**	**12 37 16.8**	**+6.1**
	comp=E,93nm,0.2s							
TKM2	**Tokmak 2**	**6.60**	**262**	PN		**Pn**	**12 35 46.0**	**+3.5**
TKM2	**Tokmak 2**	**6.60**	**262**	⇑Pn		**Pn**	**12 35 46.0**	**+3.5**
	comp=E,24nm,0.5s							
TKM2				⇑Lg		Lg	12 37 29.5	
	comp=E,72nm,0.6s							
SEM	**Semipalatinsk**	**6.81**	**336**	*e*PN		**Pn**	**12 35 45.0**	**-0.3**
SEM				*e*			12 37 02.0	
SEM	**Semipalatinsk**	**6.81**	**336**	*e*P		Pb	12 36 09.5	+5.7
	comp=E,17nm,0.1s							
SEM				*e*S		**Sg**	**12 37 39.3**	**-4.4**
	comp=E,98nm,0.3s							
SEM	**Semipalatinsk**	**6.81**	**336**	*e*Pn		**Pn**	**12 35 45.0**	**-0.3**
	baz=337							
SEM				*e*Sn		**Sn**	**12 37 02.0**	**-1.0**
	baz=337							
SGDS	**Sogindy**	**7.18**	**267**	*e*PN		**Pn**	**12 35 49.6**	**-0.7**
SGDS	**Sogindy**	**7.18**	**267**	*e*P		**Pb**	**12 36 13.3**	**+3.3**
	comp=E,8.1nm,0.1s							
SGDS				*e*S		Sb	12 37 45.7	+10
	comp=E,38nm,0.1s							
SGDS	**Sogindy**	**7.18**	**267**	*e*P		**Pn**	**12 35 49.7**	**-0.7**
	baz=

comp=Z,6.0nm,0.5s
GOMU pmax pmax
comp=Z,43nm,5.5s
GOMU LR LR
comp=N,63nm,7.3s
GOMU LR LR
comp=E,81nm,7.8s
GOMU LR LR
comp=Z,110nm,8.0s
GTA Gaotai 12.40 108 *e*P Pn 12 37 07.3 +5.5
GTA sP 12 37 19.0
GTA pmax pmax
comp=Z,5.0nm,0.9s
CEP Cherat 14.27 227 P **Pn** **12 37 26.4 -1.0**
THW Thamme Wali 15.16 225 P **Pn** **12 37 38.8 -0.5**
SONM Songino Array 15.61 69 Pn **P** **12 37 48.2 -1.4**
comp=Z,0.7nm,0.6s,baz=264,slow=12,SNR=2.1
SONM Lg Lg 12 42 14.0
baz=267,slow=29
AB31 Akbulak array 17.53 295 *i*P **Pn** **12 38 09.7 +0.2**
AB31 Akbulak array 17.53 295 Pn **Pn** **12 38 07.4 -2.1**
comp=Z,1.9nm,0.6s,baz=103,slow=9.4,SNR=22
AKTO Aktyubinsk 18.93 298 P **P** **12 38 26.2 +0.1**
comp=Z,0.1nm,0.3s,baz=112,slow=17,SNR=1.6
AKTO S Sn 12 41 45.1 -13
comp=Z,1.3nm,0.8s,baz=278,slow=23,SNR=1.9
AKTO Lg Lg 12 44 05.2
comp=Z,0.1nm,0.3s,baz=5.5,slow=22,SNR=2.5
AKTO LR LR 12 46 45.4
comp=Z,25nm,21.6s,baz=127,slow=40
comp=Z,0.4nm,0.3s
ARU Arti 20.41 316 P **P** **12 38 41.8 -0.4**
comp=Z,2.2nm,0.3s,baz=92,slow=17,SNR=2.8
comp=Z,2.2nm,0.3s
ARU Arti 20.41 316*c* *i*P Pn 12 38 44.8 +0.5
ARU 12 39 01.3
ARU S Sn 12 42 35.7 +1.5
ARU SS **SnSn** **12 42 53.1 +4.5**
ARU pmax pmax
comp=Z,2.0nm,0.5s
ARU MLR MLR
comp=Z,70nm,10.0s
GEYT Alibeck 20.81 261 P **P** **12 38 45.9 -0.9**
comp=Z,4.5nm,0.7s,baz=86,slow=11,SNR=2.3
comp=Z,4.5nm,0.7s
XAN Xi'an 21.43 110 P P 12 39 03.8 +10
XAN pmax pmax
comp=Z,7.0nm,1.3s
CMAR Chiang Mai Arr 28.42 150 P **P** **12 40 00.1 0.0**
comp=Z,1.8nm,0.8s,baz=322,slow=8.7,SNR=10
comp=Z,1.8nm,0.8s
CMAR Chiang Mai Arr 28.42 150 *i*P **P** **12 40 01.9 +1.9**
CMAR pmax pmax
comp=Z,1.0nm,0.7s
NJ2 Nanjing 29.42 103 *e*P **P** **12 40 08.3 -0.5**
NJ2 pmax pmax
comp=Z,14nm,0.5s
OBN Obninsk 32.25 307 *i*P **P** **12 40 35.1 +1.6**
OBN pmax pmax
comp=Z,14nm,0.5s
KLR Kul'dur 32.34 64 *i*P P 12 40 40.2 +5.8
KLR pmax pmax
comp=Z,3.0nm,1.5s
TIXI Tiksi 34.69 23 P **P** **12 40 55.5 +0.9**
comp=Z,0.9nm,0.3s,baz=269,slow=23,SNR=2.4
TIXI LR LR 12 56 01.5
comp=Z,37nm,20.1s,baz=185,slow=38
comp=Z,0.9nm,0.3s
AKASG Malin Array Be 37.16 300 P **P** **12 41 14.1 -1.9**
comp=Z,0.1nm,0.3s,baz=63,slow=8.9,SNR=1.3
comp=Z,0.1nm,0.3s
BRTR Keskin Array B 37.58 281 P **P** **12 41 19.2 -0.7**
comp=Z,0.7nm,0.7s,baz=83,slow=6.1,SNR=2.5
comp=Z,0.7nm,0.7s
FINES FINESS Array B 37.76 318 P **P** **12 41 21.1 +0.2**
comp=Z,1.2nm,0.8s,baz=73,slow=10,SNR=2.7
FINES PcP **PcP** **12 43 38.0 +0.5**
comp=Z,0.9nm,0.5s,baz=102,slow=4.7,SNR=2.4
comp=Z,1.2nm,0.8s
ARCES ARCESS Array B 38.64 331 P **P** **12 41 28.6 +0.3**
comp=Z,1.2nm,0.8s,baz=88,slow=8.6,SNR=1.4
ARCES PcP **PcP** **12 43 41.0 +0.9**
comp=Z,0.7nm,0.5s,baz=99,slow=4.7,SNR=1.5
comp=Z,1.2nm,0.8s
ASF Jabal al Asfar 38.79 268 P **P** **12 41 29.8 -0.3**
comp=Z,3.2nm,0.8s,baz=290,slow=17,SNR=4.4
comp=Z,2.3nm,0.8s
NB2 NORSAR Subarra 44.93 319 P **P** **12 42 20.4 +0.5**
comp=Z,0.8nm,0.4s,baz=77,slow=8.6
NOA NORSAR Array B 44.93 319 P **P** **12 42 20.3 +0.5**
comp=Z,0.8nm,0.4s,baz=77,slow=7.9,SNR=11
NOA LR LR 13 02 50.4
comp=Z,9.1nm,18.3s,baz=350,slow=38
comp=Z,0.8nm,0.4s
ESDC Sonseca Array 62.81 300 P **P** **12 44 30.5 -0.4**
comp=Z,0.6nm,0.8s,baz=46,slow=8.2,SNR=5.1
comp=Z,0.6nm,0.8s
ILAR Eielson Array 64.15 22 P **P** **12 44 38.9 -0.5**
comp=Z,0.2nm,0.7s,baz=313,slow=5.1,SNR=2.3
comp=Z,0.2nm,0.7s
TORD Torodi Ar. Bea 75.83 275 P **P** **12 45 51.1 -0.6**
comp=Z,0.8nm,0.6s,baz=52,slow=5.9,SNR=8.2
comp=Z,0.8nm,0.6s
WRA Warramunga Arr 78.44 133 P **P** **12 46 06.3 +0.1**
comp=Z,1.4nm,0.6s,baz=334,slow=5.3,SNR=19
comp=Z,1.4nm,0.6s

MAN 23 12:48:46.4, 13°.93N×122°.96E, h2km, mb4.0, ML2.8, MS2.4, 1C-4D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JCNP	**Jose Panganiba**	**0.43**	**324**	↑	*e*P		Pb	12 48 56.1	+0.3
JCNP					*i* S			12 49 04.0	
GQP	**Guinayangan**	**0.50**	**267**	↓	*e*P		Pg	12 48 55.6	+0.4
GQP					eS			12 49 03.6	
BOAC	**Boac**	**1.18**	**247**	↓	*e*P		Pn	12 49 08.6	+0.8
BOAC					eS			12 49 27.2	
PVCP	**Virac**	**1.21**	**106**	↓	*e*P		Pn	12 49 08.7	+1.2
PVCP					eS			12 49 24.0	
BALP	**Baler**	**2.24**	**324**	↓	*e*P		Pb	12 49 25.8	+1.4

*IDC **23** 12:50:04.0±8.2, 14°.11S×13°.73W, h0km, mb3.9/6, mbtmp3.9/6, MS3.4/12, Error ellipse: s-maj=357.9km s-min=33.7km az=143.0*
ISC 23 12:50:06.2±7.4, 14°S±2°×1°4W±°, h10km, n15, σ0§63/6, mb3.8/6, MS3.4/12, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DBIC	**Dimbokro**	**22.36**	**24**	LR		LR	LR	13 01 27.8	
	comp=Z,59nm,19.4s,baz=208,slow=30								
TSUM	**Tsumeb**	**30.54**	**104**	LR		LR	LR	13 06 18.8	
	comp=Z,40nm,21.1s,baz=180,slow=32								
TORD	**Torodi Ar. Bea**	**31.02**	**30**	P		**P**	**P**	**12 56 23.5**	**-0.8**
	0.6nm,0.7s,baz=220,slow=8.9,SNR=2.8								
TORD				LR		LR	LR	13 07 03.5	
	comp=Z,46nm,18.6s,baz=199,slow=33								
	0.6nm,0.7s								
SUR	**Sutherland**	**36.53**	**126**	LR		LR	LR	13 09 03.2	
	comp=Z,47nm,20.8s,baz=314,slow=31								
LBTB	**Lobatse**	**38.64**	**113**	LR		LR	LR	13 11 53.0	
	comp=Z,39nm,18.1s,baz=276,slow=34								
BOSA	**Boshof**	**39.05**	**118**	LR		LR	LR	13 10 57.5	
	comp=Z,58nm,21.4s,baz=332,slow=32								
CPUP	**Villa Florida**	**42.45**	**246**	LR		LR	LR	13 12 28.4	
	comp=Z,78nm,21.6s,baz=155,slow=32								
KMBO	**Kilima Mbogo**	**52.10**	**80**	LR		LR	LR	13 20 26.6	
	comp=Z,37nm,18.7s,baz=82,slow=35								
LPAZ	**La Paz**	**52.33**	**260**	P		**P**	**P**	**12 59 19.2**	**-0.2**
	0.4nm,0.4s,baz=118,slow=14,SNR=1.9								
	0.4nm,0.4s								
KEST	**Kesra**	**54.08**	**23**	P		**P**	**P**	**12 59 31.6**	**+0.4**
	4.5nm,0.8s,baz=331,slow=3.4,SNR=4.6								
KEST				LR		LR	LR	13 21 39.7	
	comp=Z,34nm,20.2s,baz=258,slow=35								
	4.5nm,0.8s								
ATAH	**Atahualpa**	**63.67**	**269**	LR		LR	LR	13 27 41.1	
	comp=Z,88nm,19.5s,baz=339,slow=35								
AKASG	**Malin Array Be**	**74.58**	**27**	P		**P**	**P**	**13 01 45.2**	**0.0**
	1.2nm,0.7s,baz=226,slow=6.4,SNR=6.0								
AKASG				LR		LR	LR	13 35 42.8	
	comp=Z,17nm,18.3s,baz=306,slow=37								
	1.2nm,0.7s								
NOA	**NORSAR Array B**	**77.37**	**12**	P		**P**	**P**	**13 02 01.4**	**+0.4**
	0.8nm,0.9s,baz=204,slow=6.2,SNR=3.1								
	0.8nm,0.9s								
FINES	**FINESS Array B**	**81.52**	**18**	P		**P**		**13 02 24.0**	**+0.5**
	1.0nm,0.9s,baz=198,slow=4.1,SNR=1.3								
	1.0nm,0.9s								
ARCES	**ARCESS Array B**	**87.73**	**13**	LR		LR	LR	13 42 51.4	
	comp=Z,14nm,18.7s,baz=332,slow=36								

MAN 23 12:59:49.2, 18°.44N×118°.41E, h12km, mb4.6, ML3.5, MS3.4, 5D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SJPP	**Brgy, Tapao**	**2.01**	**104**	↓	*e*P		Pn	13 00 23.0	+1.5
SJPP					eS			13 00 53.0	
SAMP	**Sagada Mountai**	**2.73**	**119**	↓	*e*P		Pn	13 00 33.5	+1.8
SAMP					eS			13 01 06.2	
APYP	**Conner**	**2.75**	**102**	↓	*e*P		Pn	13 00 33.5	+2.0
APYP					eS			13 01 04.4	
SMPP	**San Manuel, Pa**	**3.14**	**136**	↓	*e*P		Pn	13 00 39.9	+2.1
SMPP					eS			13 01 16.3	
SGCP	**Gonzaga**	**3.46**	**93**	↓	*e*P		Pn	13 00 44.3	+3.1
SGCP					eS			13 01 23.2	

NNC 23 13:01:40.2±5.3, 37°.25N×69°.27E, h0km, mb3.7, mpv3.3, 1D, Error ellipse: s-maj=73.0km s-min=29.0km az=121.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.92**	**9**	Pn		Pn	Pn	13 03 09.4	+0.2
KK31	0.9nm,0.3s,baz=175,slow=12,SNR=22					Sn	Sn	13 04 18.9	+1.1
	2.5nm,0.4s,baz=186,slow=20,SNR=16								
AB31	**Akbulak array**	**13.77**	**334**	Pn		Pn	Pn	13 04 57.1	+0.5
	0.4nm,0.5s,baz=142,slow=12,SNR=6.0								
AKTO	**Aktyubinsk**	**15.45**	**332**	↓	Pn		Pn	13 05 18.2	-1.2
	1.3nm,0.5s								

*IDC **23** 13:05:40.1±2.1, 21°.61S×179°.35W, h604km±21km, mb3.1/7, mbtmp4.0/9, Error ellipse: s-maj=31.1km s-min=22.3km az=128.0*
ISC 23 13:05:40.5±1.0, 21°.6S±0°.2×179°.5W±0°.1, h604km, n12, σ1§69/13, mb3.6/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.48**	**329**	P		**P**	**P**	**13 07 10.0**	**0.0**
	12nm,0.4s,baz=229,slow=22,SNR=43								
DZM	**Mont Dzumac**	**13.02**	**265**	P		**P**	**P**	**13 08 30.4**	**+0.8**
	3.1nm,0.5s,baz=235,slow=8.2,SNR=2.4								
STKA	**Stephens Creek**	**36.01**	**245**	P		**P**	**P**	**13 11 53.8**	**+1.2**
	2.0nm,0.4s,baz=89,slow=10.0,SNR=4.0								
	2.0nm,0.4s								
WRA	**Warramunga Arr**	**43.03**	**264**	P		**P**	**P**	**13 12 49.0**	**+0.2**
	2.3nm,0.3s,baz=96,slow=7.7,SNR=297								
WRA						PcP	**PcP**	**13 14 24.5**	**-0.4**
	0.3nm,0.7s,baz=108,slow=2.1,SNR=1.6								
WRA				S		**S**	**S**	**13 18 28.0**	**-4.2**
	0.2nm,0.6s,baz=101,slow=12,SNR=1.5								
	2.3nm,0.3s								
VNDA	**Vanda**	**56.68**	**185**	P		**P**	**P**	**13 14 27.4**	**+0.1**
	0.4nm,0.7s,baz=174,slow=18,SNR=1.6								
	0.4nm,0.7s								
KSRS	**Korea Array**	**76.78**	**320**	P		**P**	**P**	**13 16 32.7**	**+1.5**
	0.4nm,0.5s,baz=141,slow=6.0,SNR=2.0								
	0.4nm,0.5s								
PETK	**Petropavlovsk-**	**76.99**	**346**	P		**P**	**P**	**13 16 31.6**	**-0.4**
	1.7nm,0.7s,baz=114,slow=6.6,SNR=3.6								
	1.7nm,0.7s								
TXAR	**Lajitas Array**	**88.87**	**58**	P		**P**	**P**	**13 17 31.0**	**-1.0**
	0.5nm,0.8s,baz=219,slow=3.2,SNR=3.7								
	0.5nm,0.8s								
CMAR	**Chiang Mai Arr**	**89.14**	**290**	P		**P**	**P**	**13 17 34.8**	**+1.5**
	1.1nm,0.7s,baz=138,slow=3.2,SNR=8.3								
	1.1nm,0.7s								
ARCES	**ARCESS Array B**	**129.74**	**349**	PKP		**PKPdf**		**13 23 40.0**	**-1.4**
	1.2nm,0.8s,baz=20,slow=2.9,SNR=3.8								
AKASG	**Malin Array Be**	**143.26**	**329**	PKP		PKPab		13 24 03.8	-1.3
	2.6nm,0.5s,baz=44,slow=4.5,SNR=14								
BRTR	**Keskin Array B**	**146.49**	**310**	PKPbc		**PKPbc**		**13 24 14.5**	**-1.0**
	0.8nm,0.5s,baz=77,slow=3.7,SNR=2.7								

*INET **23** 13:17:45.9±0.4, 9°.34N×84°.50W, h16km±24km, MW3.4*
*UCR **23** 13:17:46.8±1.4, 9°.37N×84°.53W, h13km±7km, MW4.1, Fault plane solution: NP1,φs71.1400°, δ42.06000°, λ31.11000°.*
ISC 23 13:17:44.2±1.7, 9°.31N±0°.07×84°.55W±0°.04, h5km±12km, n34, σ0§50/43, 4C-13D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JACO	**JACO, Garabito**	**0.37**	**343**	↓	*e*P		**Pb**	**13 17 53.3**	**+0.1**
JACO					eS		**Sb**	**13 17 58.2**	**-1.2**
LAFE	**Finca La Fe, P**	**0.61**	**324**	↓	*e*P		**Pb**	**13 17 58.2**	**+0.8**
LAFE					eS		**Sb**	**13 18 07.3**	**+1.0**
LAFE	**Finca La Fe, P**	**0.61**	**324**		*e*P		**Pb**	**13 17 58.2**	**+0.8**
EDDO	**Dominical**	**0.68**	**95**		*e*P		**Pn**	**13 17 59.7**	**-0.8**
LCR2	**La Lucha 2**	**0.69**	**51**	↓	*e*P		**Pb**	**13 17 58.6**	**-0.2**
SRA1	**San Ramn**	**0.78**	**5**		*e*P		**Pg**	**13 17 59.6**	**+0.5**
HDC	**Heredia**	**0.81**	**32**		*e*P		**Pb**	**13 18 00.6**	**-0.3**
CDM	**Cerro de Muert**	**0.81**	**72**		*e*P		**Pb**	**13 18 01.4**	**+0.4**
CDM	**Cerro de Muert**	**0.81**	**72**		*e*P		**Pb**	**13 18 01.5**	**+0.4**
HDC3	**Heredia 3**	**0.81**	**32**		*e*P		**Pb**	**13 18 00.6**	**-0.3**
RIMA	**Rio Macho**	**0.81**	**56**	↓	*e*P		**Pb**	**13 18 00.8**	**-0.2**
RIMA	**Rio Macho**	**0.81**	**56**		*e*P		**Pb**	**13 18 00.8**	**-0.2**
CRPO	**Crater poas**	**0.94**	**20**	↓	*e*P		**Pg**	**13 18 02.6**	**+0.3**
JTS	**Las Juntas de**	**1.05**	**338**	↓	*e*P		**Pg**	**13 18 04.3**	**-0.2**
JTS	**Las Juntas de**	**1.05**	**338**		*e*P		**Pg**	**13 18 04.3**	**-0.2**
INDI	**Punta indio, G**	**1.09**	**301**		*e*P		**Pg**	**13 18 05.4**	**+0.2**
CASO	**Castillo**	**1.13**	**351**		*i* P		**Pg**	**13 18 06.0**	**0.0**
CASO					eS		**Sb**	**13 18 21.0**	**+0.5**
ARE1	**Arenal 1**	**1.16**	**352**	↓	*e*P		**Pb**	**13 18 06.7**	**-0.1**
FORC	**Fortuna**	**1.16**	**354**	↓	*e*P		**Pg**	**13 18 06.5**	**+0.1**
FORC					eS		**Sg**	**13 18 21.0**	**-0.4**
SRBA	**San Rafael, Bu**	**1.18**	**94**	↑	*e*P		**Pn**	**13 18 08.3**	**+0.8**
CEDE	**Laguna Cedeo**	**1.18**	**353**	↓	*i*P		**Pb**	**13 18 07.2**	**0.0**
DUNO	**Dulce Nombre,**	**1.21**	**310**		*e*P		**Pg**	**13 18 07.0**	**-0.4**
PLVR	**Palo Verde**	**1.30**	**323**	↑	*e*P		**Pn**	**13 18 08.6**	**-0.7**
GUAI	**GUAI**	**1.35**	**315**		*e*P		**Pn**	**13 18 09.2**	**-0.5**
SAJU	**San Juanillo,**	**1.37**	**303**		*e*P		**Pn**	**13 18 09.1**	**-1.0**
ORTG	**Ortega, Santa**	**1.38**	**319**		*e*P		**Pn**	**13 18 09.7**	**-0.5**
PTEN	**Parque Tenorio**	**1.46**	**343**	↓	*e*P		**Pn**	**13 18 11.5**	**+0.1**
PTEN					eS		**Sg**	**13 18 31.4**	**+0.1**
CUI	**Cuipilapa**	**1.47**	**336**	↓	*e*P		**Pn**	**13 18 11.6**	**+0.1**
COLC	**Colonia**	**1.50**	**334**	↓	*e*P		**Pn**	**13 18 11.9**	**+0.1**
HORNC	**Hornillas**	**1.53**	**336**	↓	*i*P		**Pn**	**13 18 12.3**	**0.0**
HORNC					eS		**Sn**	**13 18 32.1**	**-0.5**
GUAB	**Guayabo de Bag**	**1.54**	**334**		*e*P		**Pn**	**13 18 12.8**	**+0.3**
GUAB					eS		**Sn**	**13 18 33.8**	**+0.3**
VMAR	**Armenia, Volca**	**1.60**	**339**		*e*P		**Pn**	**13 18 13.7**	**+0.5**
GPS2	**Hotel Rincn d**	**1.64**	**331**	↑	*e*P		**Pn**	**13 18 14.4**	**+0.6**
GPS2					eS		**Sn**	**13 18 35.5**	**+0.2**
GB1A	**Borinquen Arri**	**1.72**	**331**	↑	*e*P		**Pn**	**13 18 15.4**	**+0.5**
GB1A					eS		**Sb**	**13 18 38.1**	**-0.2**

*IDC **23** 13:29:13.3±3.9, 41°.04N×141°.34E, h0km, mb3.4/3, mbtmp3.3/4, ML2.1/1, Error ellipse: s-maj=103.8km s-min=31.9km az=72.0*
*JMA **23** 13:29:15.8±0.1, 40°.5N±0°.3×142°.1E±0°.7, h58km, MV3.3/39, E OFF AOMORI PREF*
JMA Felt I J1 at E OFF AOMORI PREF .
ISC 23 13:29:10.7±2.1, 40°.57N±0°.03×142°.30E±0°.09, h11km±10km, n24, σ1§96/30, mb3.5/3, 2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JKEN	**Kujiedanarisaw**	**0.58**	**231**	P		P	**Pn**	**13 29 26.5**	**+1.6**
JKEN				S		S	**Sb**	**13 29 34.2**	**+3.1**
JANG	**Nango**	**0.63**	**252**	P		P	**Pn**	**13 29 26.9**	**+1.2**
JANG				S		S	**Sb**	**13 29 34.6**	**+2.1**
JTH	**Tanohata**	**0.71**	**208**	P		P	**Pn**	**13 29 28.4**	**+1.6**
JTH				S		S	**Sb**	**13 29 37.5**	**+2.5**
JARK	**Aomorirokkasho**	**0.83**	**302**	P		P	**Pn**	**13 29 30.0**	**+1.6**
JARK				eS		S	**Sb**	**13 29 39.9**	**+1.5**
JKZ	**Kuzumaki**	**0.94**	**232**	*i* P		P	**Pb**	**13 29 30.7**	**+1.6**
JKZ				S		S	**Sg**	**13 29 41.3**	**+0.1**
JTM	**Tenmabayashi**	**0.96**	**283**	*i* P		P	**Pb**	**13 29 30.9**	**+1.5**
JTM				S		S	**Sg**	**13 29 41.5**	**-0.2**
JOT	**Ohata**	**1.25**	**311**	*i* P		P	**Pn**	**13 29 35.6**	**+1.5**
JOT				S		S	**Sg**	**13 29 49.8**	**-1.0**
JAH	**Hinai**	**1.32**	**254**	↓	*i*P	P	**Pn**	**13 29 35.4**	**+0.2**
JAH				↓	S	S	**Sg**	**13 29 49.9**	**-3.5**
JOM	**Ohasama**	**1.34**	**215**	*i* P		P	**Pn**	**13 29 36.2**	**+0.8**
JOM				S		S	**Sg**	**13 29 50.9**	**-3.0**
JKB	**Kayabe**	**1.62**	**324**	P		P	**Pg**	**13 29 41.6**	**-0.2**
JKB				S		S	**Sn**	**13 30 00.9**	**+0.7**
JSR	**Shiriuchi**	**1.71**	**305**	P		P	**Pn**	**13 29 42.1**	**+1.5**
JSR				S		S	**Sn**	**13 30 02.0**	**-0.5**
JRG	**Rokugo**	**1.73**	**228**	P		P	**Pn**	**13 29 41.8**	**+0.9**
JRG				eS		S	**Sn**	**13 30 01.4**	**-1.6**
JIW	**Iwasaki**	**1.74**	**271**	P		P	**Pn**	**13 29 41.5**	**+0.5**
JMK	**Ichinoseki**	**1.82**	**208**	P		P	**Pn**	**13 29 43.2**	**+1.2**
MJAR	**Matsushiro Arr**	**5.14**	**220**	Pn		**Pn**	**Pn**	**13 30 30.6**	**+2.9**
	0.1nm,0.3s,baz=15,slow=34,SNR=4.1								
MJAR						Sn	**Sn**	**13 31 25.1**	**-2.0**
	baz=61,slow=24,SNR=1.6								
	0.8nm,0.5s								
H11N2	**WAKE ISLAND Hy**	**29.56**	**127**	T		T	T	14 06 14.9	
	baz=319,slow=75,SNR=18								
H11N1	**WAKE ISLAND Hy**	**29.57**	**127**	T		T	T	14 06 20.0	
	baz=319,slow=75,SNR=16								
H11N3	**WAKE ISLAND Hy**	**29.57**	**127**	T		T	T	14 06 09.2	
	baz=319,slow=75,SNR=13								
H11S1	**WAKE ISLAND Hy**	**30.38**	**129**	T		T	T	14 07 20.7	
	baz=321,slow=74								
H11S3	**WAKE ISLAND Hy**	**30.38**	**129**	T		T	T	14 07 17.2	
	baz=321,slow=74								
H11S2	**WAKE ISLAND Hy**	**30.40**	**129**	T		T	T	14 07 22.0	
	baz=321								
MKAR	**Makanchi Array**	**42.91**	**299**	P		**P**	**P**	**13 37 06.8**	**-2.6**
	0.3nm,0.5s,baz=69,slow=7.9,SNR=2.8								
	0.3nm,0.5s								
KURBB	**Kurchatov Arra**	**44.45**	**305**	P		**P**	**P**	**13 37 18.3**	**-3.3**
	0.5nm,0.7s,baz=81,slow=8.1,SNR=5.3								
	0.5nm,0.7s								
WRA	**Warramunga Arr**	**60.66**	**189**	P		P	P	13 39 28.8	+7.0
	0.3nm,0.8s,baz=19,slow=7.5,SNR=2.0								
	0.3nm,0.8s								

DJA 23 13:40:27.3±1.3, 0°.S±3°×127°.5E±°, h15km±11km, M3.8/10, mb4.1/1, MLv3.6/10, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**1.01**	**323**	P		P	Pb	13 40 46.5	-0.1
LUWI	**Luwuk**	**1.98**	**246**	P		P	Pn	13 41 00.8	+0.4
SANI	**Sanana**	**2.28**	**142**	P		P	Pn	13 41 03.2	-1.2
MRSI	**Marisa**	**2.74**	**285**	P		P	Pn	13 41 08.4	-2.4
LBMI	**Labuha**	**2.94**	**98**	P		P	Pn	13 41 13.5	0.0
APSI	**Ampana**	**3.02**	**257**	P		P	Pn	13 41 15.4	+0.8
APSI				S		S	Sg	13 42 06.3	+2.0
NLAI	**Namlea**	**3.89**	**140**	P		P	Pn	13 41 26.8	+0.2
MPSI	**Mapaga**	**4.73**	**277**	P		P	Pn	13 41 38.4	+0.3
TTSI	**Tana Toraja**	**5.52**	**240**	P		P	Pn	13 41 50.2	+1.1

MAN 23 13:43:56.1, 14°.54N×119°.17E, h14km, mb4.1, ML2.9, MS2.6, Luzon

*SOF **23** 13:59:34.5, 41°.28N×24°.50E, h13km, MD2.8*
*ATH **23** 13:59:35.3, 41°.32N×24°.50E, h8km±3km, ML2.7/9, Error ellipse: s-maj=3.2km s-min=1.0km az=184.0*
*THE **23** 13:59:35.6, 41°.29N×24°.50E, h2km±1km, ML2.7/10, Error ellipse: s-maj=1.4km s-min=0.4km az=208.0*
*ISK **23** 13:59:35.3, 41°.26N×24°.51E, h7km, ML2.8/12*
*BEO **23** 13:59:36.9±0.7, 41°.31N×24°.49E, h10km±3km, ML2.8/8*
ISC 23 13:59:35.6±1.0, 41°.29N±0°.02×24°.50E±0°.02, h9km±8km, n75, σ0§90/99, 5C-5D, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KAVA	**Kavala**	**0.29**	**178**	P		**P**	**Pg**	**13 59 41.6**	**+0.1**
KAVA				S		S	**Sg**	**13 59 46.1**	**+0.8**
KAVA				AML		AML	AML	13 59 46.6	
	comp=E,4652μm,0.3s								
KAVA				AML		AML	AML	13 59 46.6	
	comp=N,3808μm,0.3s								
KAVA	**Kavala**	**0.29**	**178**	P		**P**	**Pg**	**13 59 41.6**	**+0.1**
KAVA				S		S	**Sg**	**13 59 46.2**	**+0.8**
	comp=N,2μm,0.2s								
KVLA	**Kavala**	**0.36**	**194**	P		P	**Pg**	**13 59 42.8**	**0.0**
KVLA				S		S	**Sg**	**13 59 48.1**	**+0.6**
KVLA				AML		AML	AML	13 59 48.3	
	comp=E,2766μm,0.2s								
KVLA				AML		AML	AML	13 59 49.0	
	comp=N,1612μm,0.2s								
RZN	**Rozhen**	**0.43**	**22**	P		**P**	**Pg**	**13 59 44.0**	**-0.1**
NVR	**Nevrokopi**	**0.48**	**277**	P		**P**	**Pg**	**13 59 44.5**	**-0.6**
NVR				S		S	**Sg**	**13 59 50.7**	**-0.7**
NVR				AML		AML	AML	13 59 52.3	
	comp=E,1044μm,0.2s								
NVR				AML		AML	AML	13 59 52.9	
	comp=N,700μm,0.3s								
NVR	**Nevrokopi**	**0.48**	**277**	P		**P**	**Pg**	**13 59 44.6**	**-0.5**
NVR				S		S	**Sg**	**13 59 51.3**	**-0.1**
	comp=N,465nm,0.2s								
KOKK	**Kokkinochori,**	**0.60**	**219**	P		P	**Pg**	**13 59 46.8**	**-0.5**
KOKK				S		S	**Sb**	**13 59 56.0**	**-1.0**
KOKK	**Kokkinochori,**	**0.60**	**219**	P		P	**Pg**	**13 59 46.8**	**-0.5**
KOKK				S		S	**Sb**	**13 59 56.0**	**-1.0**
	comp=N,998nm,0.2s								
MMB	**Musomiste**	**0.65**	**298**	P		P	**Pg**	**13 59 47.1**	**-1.2**
THAS	**Thassos island**	**0.70**	**166**	P		P	**Pg**	**13 59 49.1**	**-0.1**
THAS				S		S	**Sg**	**13 59 58.7**	**+0.4**
	comp=N,2μm,0.2s								
SRS	**Serrai**	**0.70**	**256**	*e*Pg		**Pg**	**Pg**	**13 59 48.6**	**-0.7**
SRS				*e*Sg		**Sb**	**Sb**	**13 59 59.4**	**-0.5**
SRS	**Serrai**	**0.70**	**256**	P		**Pg**	**Pg**	**13 59 48.5**	**-0.7**
SRS				AML	

PLG	**Polygyros**	**1.21**	**222**	P	**Pb**	**13 59 58.4**	**-0.4**
PLG				AML	AML	14 00 17.8	
	comp=N,554μm,0.5s						
PLG				AML	AML	14 00 18.9	
	comp=E,522μm,0.3s						
PLG	**Polygyros**	**1.21**	**222**	P	**Pb**	**13 59 58.4**	**-0.4**
ALN	**Alexandroupoli**	**1.23**	**108**	P	**Pn**	**13 59 58.6**	**-0.4**
ALN	**Alexandroupoli**	**1.23**	**108**	P	**Pn**	**13 59 58.6**	**-0.4**
ALN	**Alexandroupoli**	**1.23**	**108**	PN	**Pg**	**13 59 59.0**	**-0.3**
HORT	**Hortiatis**	**1.27**	**237**	P	**Pn**	**13 59 59.0**	**-0.5**
HORT	**Hortiatis**	**1.27**	**237**	P	**Pn**	**13 59 59.0**	**-0.5**
HORT	**Hortiatis**	**1.27**	**237**	PN	**Pn**	**13 59 59.4**	**-0.1**
PGB	**Panagyurishte**	**1.28**	**349**	P	**Pn**	**13 59 58.5**	**-1.3**
THE	**Thessaloniki**	**1.33**	**241**	P	**Pb**	**14 00 00.5**	**-0.3**
ENEZ	**Enez**	**1.37**	**113**	P	**Pb**	**14 00 01.1**	**-0.3**
ENEZ	**Enez**	**1.37**	**113**	PN	**Pb**	**14 00 01.1**	**-0.3**
VAY	**Valandovo**	**1.45**	**272**	*e*Pg	**Pg**	**14 00 03.7**	**+0.2**
VAY				*e*Sg	**Sg**	**14 00 23.8**	**+1.4**
VAY	**Valandovo**	**1.45**	**272**	*i* Pn	**Pg**	**14 00 03.5**	**0.0**
VAY				*i* Sg	**Sg**	**14 00 24.4**	**+2.1**
LIA	**Limnos Island**	**1.48**	**159**	P	**Pb**	**14 00 03.0**	**-0.4**
LIA	**Limnos Island**	**1.48**	**159**	P	**Pn**	**14 00 02.5**	**0.0**
PAIG	**Paliouri**	**1.50**	**205**	P	**Pn**	**14 00 01.9**	**-0.7**
PAIG				AML	AML	14 00 24.6	
	comp=N,261μm,0.7s						
PAIG				AML	AML	14 00 25.6	
	comp=E,229μm,0.3s						
PAIG	**Paliouri**	**1.50**	**205**	P	**Pn**	**14 00 01.9**	**-0.7**
PAIG				S	**Sg**	**14 00 23.3**	**-0.4**
	comp=E,130nm,0.4s						
GADA	**Gvkgeada**	**1.53**	**135**	PN	**Pn**	**14 00 03.2**	**+0.1**
GRG	**Griva**	**1.62**	**259**	P	**Pn**	**14 00 04.6**	**+0.3**
GRG	**Griva**	**1.62**	**259**	P	**Pn**	**14 00 04.7**	**+0.3**
GRG	**Griva**	**1.62**	**259**	PN	**Pb**	**14 00 05.3**	**-0.4**
VTS	**Vitosha**	**1.63**	**325**	⇓S	**Sg**	**14 00 27.0**	**-1.0**
VTS	**Vitosha**	**1.63**	**325**	P	**Pn**	**14 00 05.0**	**+0.4**
ERIK	**Erikli-Kesan**	**1.65**	**111**	PN	**Pn**	**14 00 04.8**	**+0.1**
GELI	**Tayfur-Gelibol**	**1.74**	**120**	PN	**Pn**	**14 00 05.9**	**-0.1**
EDRB	**Edirne**	**1.77**	**71**	P	**Pn**	**14 00 06.7**	**+0.2**
EDRB	**Edirne**	**1.77**	**71**	PN	**Pb**	**14 00 08.5**	**+0.2**
BOSS	**Bosilegrad**	**1.93**	**309**	*e*Pn	**Pb**	**14 00 10.0**	**-1.0**
BOSS				*e*Sn	**Sn**	**14 00 33.5**	**+0.5**
PRVS	**Prvonek**	**2.18**	**305**	*e*Pn	**Pn**	**14 00 13.1**	**+1.0**
PRVS				*e*Sn	**Sn**	**14 00 39.5**	**+0.3**
BARS	**Barje**	**2.52**	**308**	*e*Pn	**Pn**	**14 00 17.6**	**+0.9**
BARS				*e*Sn	**Sn**	**14 00 47.9**	**+0.5**
RAZG	**Razgrad**	**2.72**	**32**	⇓P	**Pb**	**14 00 23.9**	**-0.6**
ZAGS	**Zajecar**	**3.03**	**327**	*e*Pn	**Pn**	**14 00 24.1**	**+0.4**
BOVS	**Bovan**	**3.12**	**320**	⇑P	**Pn**	**14 00 27.6**	**+2.5**
GRUS	**Gruza**	**3.81**	**314**	*e*Pn	**Pn**	**14 00 35.4**	**+0.9**
HERR	**Herculane**	**3.90**	**338**	⇑P	**Pb**	**14 00 42.0**	**-2.6**
IVAS	**Ivanjica**	**3.95**	**307**	*e*Pn	**Pn**	**14 00 37.3**	**+0.9**
MDVR	**Moldovita**	**4.04**	**331**	⇓P	**Pn**	**14 00 38.9**	**+1.2**
VOIR		**4.17**	**5**	⇓P	**Pn**	**14 00 40.9**	**+1.5**
MLR	**Muntele Rosu**	**4.33**	**14**	⇑P	**Pn**	**14 00 39.1**	**-2.7**
CFR	**Carcaliu**	**4.71**	**33**	⇓P	**Pb**	**14 01 01.2**	**+2.9**
BZS	**Buzias**	**4.81**	**335**	⇑P	**Pb**	**14 01 01.8**	**+1.7**
VRI	**Vrincioaia**	**4.85**	**19**	⇑P	**Pn**	**14 00 51.5**	**+2.6**

*JMA **23** 14:17:44.0±0.1,23°.8N±0°.2×121°.5E±0°.6,h8km±1km,*
MV3.1/14,TAIWAN REGION
*TAP **23** 14:17:45.1,23°.83N×121°.44E,h21km,ML3.8,B*
ISC 23 14:17:44.6±0.7,**23°.81N**±0°.01×**121°.47E**±0°.01,**h14**km,**n129,**
σ0s71/228,**16C-18D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ESL	**Shilin**	**0.03**	**280**	⇓*i*P			**Pg**	**14 17 48.9**	**+1.7**
ESL	baz=171			*i* S			**Sg**	**14 17 51.1**	**+2.1**
TEGC	**Jichi Village**	**0.12**	**146**	⇓*i*P			**Pb**	**14 17 50.3**	**+1.6**
TEGC	baz=140			*e*S			**Sb**	**14 17 54.6**	**+3.2**
TEYL	**Yanliau Villag**	**0.13**	**63**	*e*P			**Pb**	**14 17 50.3**	**+1.4**
TEYL	baz=60			*e*S			**Sb**	**14 17 54.1**	**+2.3**
EGFH	**Guangfu**	**0.14**	**195**	⇓*i*P			**Pb**	**14 17 49.8**	**+0.7**
EGFH	baz=183			S			**Sb**	**14 17 53.1**	**+1.0**
ETM	**Tongmen**	**0.16**	**8**	P			**Pb**	**14 17 49.8**	**+0.4**
ETM	baz=21			S			**Sb**	**14 17 52.8**	**+0.2**
HWA	**Hwalien**	**0.21**	**37**	⇑P			**Pb**	**14 17 51.1**	**+0.8**
HWA	baz=45			*e*S			**Sb**	**14 17 55.2**	**+1.2**
TWD	**Chiawan**	**0.29**	**23**	⇑*i*P			**Pb**	**14 17 51.6**	**-0.1**
TWD	baz=32			S			**Sb**	**14 17 56.1**	**-0.4**
OWD	**Renai**	**0.30**	**299**	⇑*i*P			**Pb**	**14 17 51.7**	**-0.3**
OWD	baz=302			S			**Sg**	**14 17 55.7**	**+0.3**
VWDT	**VWDT**	**0.30**	**260**	⇑*i*P			**Pb**	**14 17 52.1**	**+0.2**
VWDT	baz=248			S			**Sg**	**14 17 56.0**	**+0.8**
HGSD	**Ruisui**	**0.32**	**187**	P			**Pb**	**14 17 52.4**	**+0.3**
HGSD	baz=186			*e*S			**Sn**	**14 17 58.9**	**-2.4**
EHY	**Hungye**	**0.33**	**204**	⇓*i*P			**Pb**	**14 17 51.9**	**-0.4**
EHY	baz=197			S			**Sb**	**14 17 57.7**	**+0.2**
CHGB	**Renai**	**0.37**	**313**	⇑*i*P			**Pb**	**14 17 52.9**	**-0.2**
CHGB	baz=317			S			**Sg**	**14 17 57.8**	**+0.5**
WUSB	**Renai**	**0.37**	**300**	⇑*i*P			**Pb**	**14 17 52.8**	**-0.3**
WUSB	baz=298			S			**Sg**	**14 17 57.5**	**+0.1**
ETL	**Fush Village**	**0.38**	**22**	⇓*i*P			**Pb**	**14 17 52.8**	**-0.4**
ETL	baz=27			S			**Sg**	**14 17 58.0**	**+0.5**
NACB	**Ninganchiao**	**0.38**	**18**	⇑*i*P			**Pg**	**14 17 52.7**	**+0.3**
NACB	baz=24			S			**Sg**	**14 17 57.7**	**+0.1**
WHF	**Hehuan Shan**	**0.38**	**331**	⇓*i*P			**Pg**	**14 17 52.9**	**+0.3**
WHF	baz=334			S			**Sg**	**14 17 57.9**	**-0.1**
ETLH	**Xiulin Townshi**	**0.40**	**2**	⇓*i*P			**Pb**	**14 17 53.2**	**-0.4**
ETLH	baz=14			S			**Sg**	**14 17 58.5**	**+0.3**
YULB	**Yu-li**	**0.44**	**201**	*e*P			**Pg**	**14 17 53.4**	**-0.1**
YULB	baz=193			*e*S			**Sb**	**14 18 00.5**	**-0.2**
SSLB	**Suanglung**	**0.47**	**268**	⇑*i*P			**Pg**	**14 17 54.2**	**+0.2**
SSLB	baz=269			S			**Sg**	**14 17 59.8**	**-0.5**
EYUL	**Yuli**	**0.48**	**197**	P			**Pb**	**14 17 55.0**	**+0.2**
EYUL	baz=195			S			**Sb**	**14 18 02.4**	**+0.6**
TWF1	**Yuli**	**0.48**	**199**	P			**Pg**	**14 17 54.0**	**-0.2**
TWF1	baz=197			*e*S			**Sb**	**14 18 02.2**	**+0.4**
FUSS	**Fushou**	**0.48**	**335**	⇓*i*P			**Pb**	**14 17 54.9**	**-0.2**
FUSS	baz=331			S			**Sg**	**14 18 00.9**	**0.0**
WPL	**Puli Township**	**0.51**	**294**	*e*P			**Pg**	**14 17 55.0**	**+0.3**
WPL	baz=297			*e*S			**Sg**	**14 18 01.3**	**-0.2**
TWT	**Tachien**	**0.52**	**329**	P			**Pb**	**14 17 55.5**	**-0.1**
TWT	baz=329			S			**Sg**	**14 18 01.6**	**-0.3**
SMLT	**Sun Moon Lake**	**0.53**	**278**	⇑*i*P			**Pb**	**14 17 55.4**	**-0.3**
SMLT	baz=275			*i* S			**Sg**	**14 18 02.2**	**+0.1**
TDCB	**Techi**	**0.53**	**327**	⇓*i*P			**Pb**	**14 17 55.6**	**-0.1**
TDCB	baz=326			*i* S			**Sg**	**14 18 01.5**	**-0.6**
DPDB	**Guoxing**	**0.54**	**294**	*e*P			**Pb**	**14 17 55.8**	**-0.2**
EHP	**Heping Village**	**0.56**	**26**	*e*P			**Pb**	**14 17 55.9**	**-0.4**
EHP	baz=22			*e*S			**Sg**	**14 18 03.4**	**+0.3**
WCS	**Beigang Elemen**	**0.57**	**296**	⇓*i*P			**Pg**	**14 17 56.1**	**+0.3**
WCS	baz=294			S			**Sg**	**14 18 03.1**	**-0.2**
TYC	**Yuchr**	**0.57**	**280**	⇑*i*P			**Pg**	**14 17 55.9**	**+0.1**
TYC	baz=282			*i* S			**Sg**	**14 18 02.9**	**-0.5**
YUS	**Yu-Shan**	**0.57**	**236**	⇑*i*P			**Pb**	**14 17 56.7**	**0.0**
YUS	baz=224			S			**Sg**	**14 18 04.1**	**+0.4**
NNSB	**Datong**	**0.62**	**353**	⇓*i*P			**Pb**	**14 17 57.2**	**-0.2**
NNSB	baz=3.0			*i* S			**Sg**	**14 18 05.0**	**-0.2**
FULB	**Fuli**	**0.63**	**195**	P			**Pn**	**14 17 58.4**	**-0.8**
FULB	baz=200			S			**Sn**	**14 18 08.8**	**-0.2**
NNS	**Nan Shan**	**0.64**	**352**	⇓*i*P			**Pb**	**14 17 57.4**	**-0.2**
NNS	baz=3.0			*i* S			**Sg**	**14 18 05.8**	**+0.2**
ENA	**Nanau**	**0.67**	**22**	⇑*i*P			**Pg**	**14 17 57.2**	**-0.4**
ENA	baz=26			*e*S			**Sg**	**14 18 06.3**	**-0.2**
WHP	**Taichung City**	**0.67**	**314**	⇓*i*P			**Pg**	**14 17 58.0**	**+0.2**
WHP	baz=314			S			**Sg**	**14 18 06.6**	**0.0**
ALS	**Alishan**	**0.68**	**244**	⇑*i*P			**Pb**	**14 17 58.5**	**+0.1**
ALS	baz=233			S			**Sg**	**14 18 06.8**	**-0.1**
WJS	**Zhushan**	**0.68**	**271**	P			**Pb**	**14 17 59.0**	**+0.7**
WJS	baz=268			S			**Sb**	**14 18 08.7**	**+1.2**
EWUT	**Wuta**	**0.69**	**24**	*e*P			**Pg**	**14 17 57.6**	**-0.6**
EWUT	baz=28			*e*S			**Sg**	**14 18 06.8**	**-0.6**
WNT	**Mingjian**	**0.72**	**276**	⇓*i*P			**Pn**	**14 17 59.8**	**-0.6**
WNT	baz=273			S			**Sb**	**14 18 10.0**	**+1.3**
LATG	**Datong**	**0.73**	**4**	⇑*i*P			**Pg**	**14 17 58.4**	**-0.4**
LATG	baz=7.0			S			**Sg**	**14 18 08.4**	**-0.1**
ELDTW	**Lidau**	**0.74**	**214**	⇓*i*P			**Pg**	**14 17 58.3**	**-0.8**
ELDTW	baz=216			S			**Sb**	**14 18 09.0**	**-0.5**
TCU	**Taichung**	**0.80**	**295**	P			**Pn**	**14 18 01.2**	**-0.3**
TCU	baz=294			S			**Sn**	**14 18 12.9**	**-0.3**
TWQ1	**Liyutan**	**0.83**	**310**	⇓*i*P			**Pn**	**14 18 01.5**	**-0.5**
TWQ1	baz=310			S			**Sb**	**14 18 12.3**	**+0.3**
EDH	**Donghe**	**0.84**	**190**	*e*P			**Pg**	**14 18 00.0**	**-1.0**
EDH	baz=188			*e*S			**Sb**	**14 18 13.0**	**+0.6**
NDS	**Dongshan**	**0.85**	**15**	*e*P			**Pg**	**14 18 00.7**	**-0.5**
NDS	baz=27			*e*S			**Sg**	**14 18 11.9**	**-0.4**
WDLH	**Douliu**	**0.86**	**262**	P			**Pn**	**14 18 01.9**	**-0.5**
WDLH	baz=260			S			**Sb**	**14 18 13.5**	**+0.8**
YHNB	**Yeheng**	**0.86**	**354**	P			**Pg**	**14 18 01.2**	**-0.2**
YHNB	baz=350			S			**Sg**	**14 18 12.1**	**-0.6**
NSK	**Sanguang**	**0.87**	**353**	⇑*i*P			**Pg**	**14 18 01.5**	**-0.1**
NSK	baz=349			S			**Sg**	**14 18 12.2**	**-0.8**
TWC	**Suao**	**0.87**	**23**	P			**Pg**	**14 18 00.5**	**-1.0**
TWC	baz=27			*e*S			**Sg**	**14 18 12.7**	**-0.3**
WCHH	**Zhanghua**	**0.88**	**288**	P			**Pn**	**14 18 02.5**	**-0.1**
NFF	**Wufeng Townshi**	**0.88**	**339**	P			**Pg**	**14 18 01.7**	**0.0**
NSY	**Sanyi**	**0.89**	**313**	⇓*i*P			**Pn**	**14 18 02.9**	**+0.2**
NSY	baz=313			S			**Sb**	**14 18 14.4**	**+0.9**
STYH	**Taoyuan**	**0.90**	**225**	*e*P			**Pg**	**14 18 02.1**	**0.0**
STYH	baz=216			*e*S			**Sb**	**14 18 14.1**	**+0.2**
TPUB	**Ta-pu**	**0.92**	**237**	P			**Pn**	**14 18 03.1**	**-0.1**
TPUB	baz=224			S			**Sn**	**14 18 15.3**	**-1.0**
CHN4	**Tsaushan**	**0.92**	**241**	⇑*i*P			**Pn**	**14 18 03.2**	**0.0**
CHN4	baz=228			S			**Sn**	**14 18 16.0**	**-0.2**
NSTT	**Nanjuang**	**0.92**	**333**	⇓*i*P			**Pg**	**14 18 02.9**	**+0.3**
NSTT	baz=334			S			**Sb**	**14 18 14.0**	**-0.6**
TWE	**Neicheng**	**0.93**	**11**	*e*P			**Pb**	**14 18 01.2**	**-1.3**
WDJ	**Dajia District**	**0.93**	**306**	*e*P			**Pn**	**14 18 03.6**	**+0.3**
WDJ	baz=317			*e*S			**Sn**	**14 18 16.7**	**+0.3**
LONT	**Longtian**	**0.95**	**199**	*e*P			**Pn**	**14 18 03.8**	**+0.2**
LONT	baz=197			*e*S			**Sn**	**14 18 17.4**	**+0.4**
CHN2	**Minshiung**	**0.95**	**253**	*e*P			**Pn**	**14 18 04.9**	**+1.3**
CHN2	baz=251			*e*S			**Sn**	**14 18 16.9**	**-0.1**
FUSB	**Fushanzhiwuyua**	**0.95**	**7**	P			**Pb**	**14 18 02.3**	**-0.7**
FUSB	baz=9.0			S			**Sb**	**14 18 15.3**	**-0.2**
NMLH	**Miaoli**	**0.95**	**320**	P			**Pn**	**14 18 03.5**	**-0.1**
NMLH	baz=320			S			**Sg**	**14 18 15.9**	**+0.3**
WTP	**Ta-pu**	**0.96**	**235**	P			**Pn**	**14 18 04.0**	**+0.1**
WTP	baz=231			S			**Sn**	**14 18 17.0**	**-0.3**
NWLT	**Wulai**	**0.96**	**2**	P			**Pb**	**14 18 02.6**	**-0.6**
NWLT	baz=14			S			**Sb**	**14 18 14.6**	**-1.2**
WTK	**Tuku**	**1.00**	**263**	*e*P			**Pn**	**14 18 04.0**	**-0.2**
WTK	baz=261			*e*S			**Sg**	**14 18 17.4**	**+0.5**
WRL	**Guolierlin Hig**	**1.00**	**276**	*e*P			**Pb**	**14 18 03.8**	**-0.1**
WRL	baz=273			*e*S			**Sb**	**14 18 17.1**	**+0.2**
CHY	**Chiayi**	**1.01**	**252**	*e*P			**Pn**	**14 18 04.4**	**+0.1**
CHY	baz=249			S			**Sn**	**14 18 17.8**	**-0.5**
TWG	**Pinlang**	**1.05**	**200**	*e*P			**Pb**	**14 18 03.1**	**-1.5**
TWGBT	**Beinan**	**1.05**	**200**	*e*P			**Pb**	**14 18 02.5**	**-2.1**
TWK	**Hsinying**	**1.05**	**239**	P			**Pn**	**14 18 05.2**	**+0.2**
TWK	baz=236			S			**Sn**	**14 18 19.4**	**0.0**
CHN1	**Nanshi**	**1.06**	**234**	P			**Pg**	**14 18 05.7**	**+0.5**
CHN1	baz=232			S			**Sn**	**14 18 20.7**	**+0.9**
SNST	**Tainan City**	**1.07**	**237**	*e*P			**Pg**	**14 18 05.9**	**+0.7**
SNST	baz=234			*e*S			**Sn**	**14 18 20.6**	**+0.7**
SBCB	**Hsinchu**	**1.07**	**336**	P			**Pg**	**14 18 06.4**	**+1.0**
SBCB	baz=337			*e*S			**Sn**	**14 18 20.4**	**+0.4**
SGST	**Jiashian**	**1.09**	**229**	P			**Pb**	**14 18 05.0**	**-0.3**
SGST	baz=226			S			**Sn**	**14 18 20.8**	**+0.4**
HSN	**Hsinchu**	**1.09**	**335**	P			**Pg**	**14 18 06.6**	**+0.9**
HSN	baz=339			S			**Sn**	**14 18 21.4**	**+1.0**
NTC	**Toucheng**	**1.09**	**17**	P			**Pb**	**14 18 05.2**	**-0.2**
EGS	baz=20	**1.11**	**22**	*e*P			**Pg**	**14 18 06.2**	**0.0**
LDUT	baz=25 **Ludao**	**1.13**	**180**	*e*P			**Pb**	**14 18 03.8**	**-2.2**
NHDH	baz=176 **Xindian Distri**	**1.15**	**3**	*e*P			**Pg**	**14 18 07.3**	**+0.4**
NHDH	baz=11			*e*S			**Sg**	**14 18 22.7**	**+0.8**
WSF	**Szhu**	**1.16**	**262**	P			**Pg**	**14 18 06.6**	**-0.3**
WSF	baz=259			S			**Sg**	**14 18 22.6**	**+0.6**
TWA	**Mucha**	**1.17**	**5**	*e*P			**Pg**	**14 18 07.7**	**+0.4**
TWA	baz=8.0			*e*S			**Sg**	**14 18 23.3**	**+0.7**
WSL	**Shuilin Townsh**	**1.17**	**256**	*e*P			**Pg**	**14 18 07.2**	**0.0**
ICHU	baz=254 **Yijhu**	**1.18**	**248**	*e*P			**Pg**	**14 18 07.3**	**-0.1**
ICHU	baz=246			*e*S			**Sg**	**14 18 23.0**	**+0.3**
NCUH	**Zhongli**	**1.18**	**347**	P			**Pg**	**14 18 07.6**	**+0.1**
NCUH	baz=349			S			**Sg**	**14 18 24.3**	**+1.4**
NCU	**National Centr**	**1.19**	**348**	*e*P			**Pg**	**14 18 07.7**	**+0.2**
NCU	baz=350			*e*S			**Sg**	**14 18 24.8**	**+1.8**
TIPB	baz=350 **Shuangxi**	**1.20**	**16**	*e*P			**Pn**	**14 18 07.0**	**-0.2**
TIPB	baz=18			*e*S			**Sn**	**14 18 23.1**	**-0.2**
TAP	baz=18 **Taipei**	**1.23**	**2**	*e*P			**Pg**	**14 18 08.9**	**+0.6**
TAP	baz=17			*e*S			**Sg**	**14 18 25.7**	**+1.4**
SCST	baz=17 **Cishan**	**1.28**	**224**	*e*P			**Pg**	**14 18 10.0**	**+0.7**
TWB1	baz=220 **Santiao Chiao**	**1.28**	**22**	*e*P			**Pg**	**14 18 09.7**	**+0.2**
TWB1	baz=24			*e*S			**Sg**	**14 18 26.8**	**+0.6**
TWS1	baz=24 **Kuangyinshan**	**1.29**	**358**	P			**Pg**	**14 18 09.4**	**0.0**
TWS1	baz=11			S			**Sg**	**14 18 27.6**	**+1.4**
NWF	baz=11 **Wu-fen Shan**	**1.29**	**13**	*e*P			**Pg**	**14 18 09.3**	**-0.2**
NWF	baz=27			*e*S			**Sg**	**14 18 26.6**	**+0.3**
SHHT	baz=27 **Tainan City**	**1.29**	**233**	*e*P			**Pg**	**14 18 10.6**	**+1.0**
SSD	baz=230 **Sandimen**	**1.31**	**216**	P			**Pg**	**14 18 09.3**	**-0.5**
SXI1	baz=224 **Grass Mountain**	**1.33**	**16**	*e*P			**Pn**	**14 18 08.4**	**-0.5**
SXI1	baz=18			*e*S			**Sg**	**14 18 27.3**	**-0.4**
TSMG	baz=18 **Majia**	**1.33**	**215**	*e*P			**Pg**	**14 18 09.9**	**-0.4**
YM01	baz=222 **YM01**	**1.34**	**4**	*e*P			**Pb**	**14 18 09.5**	**-0.1**
YM01	baz=6.0			*e*S			**Sg**	**14 18 28.4**	**+0.7**
NTST	baz=6.0 **Danshui**	**1.35**	**359**	*e*P			**Pb**	**14 18 09.7**	**0.0**
NTST	baz=13			*e*S			**Sg**	**14 18 28.5**	**+0.3**
TWM1	baz=13 **Shoushan**	**1.37**	**225**	*e*P			**Pg**	**14 18 12.7**	**+1.6**
MASBT	baz=220 **Mashibuluo**	**1.42**	**213**	*e*P			**Pn**	**14 18 10.2**	**+0.2**
MASBT	baz=211			*e*S			**Sg**	**14 18 30.6**	**+0.2**
JYNG	**Yonagunijimaku**	**1.49**	**64**	P			**Pn**	**14 18 10.9**	**-0.1**
JYNG				*e*S			**Sb**	**14 18 30.5**	**-0.5**
EAST	**Anshuo**	**1.53**	**202**	*e*P			**Pg**	**14 18 14.0**	**-0.1**
TAW	baz=186 **Tawu**	**1.54**	**200**	*e*P			**Pg**	**14 18 13.3**	**-0.9**
YOJ	baz=186 **Yonaguni jima**	**1.55**	**65**	P			**Pn**	**14 18 11.4**	**-0.5**
YOJ	baz=66			*e*S			**Sn**	**14 18 31.6**	**-0.2**
YOJ	**Yonaguni jima**	**1.55**	**65**	P			**Pn**	**14 18 11.9**	**0.0**
YOJ				S			**Sb**	**14 18 32.0**	**-0.7**
TAWH	**Dawu Township**	**1.56**	**200**	*e*P			**Pb**	**14 18 13.5**	**+0.3**
SSPT	baz=186 **Xinbi**	**1.56**	**212**	*e*P			**Pg**	**14 18 14.2**	**-0.4**
SCZT	baz=206 **Fangliau**	**1.63**	**209**	*e*P			**Pb**	**14 18 14.9**	**+0.5**
SLIU	baz=185 **Shizi**	**1.70**	**201**	*e*P			**Pb**	**14 18 15.7**	**0.0**
WDGT	baz=184 **Dungji**	**1.75**	**252**	P			**Pn**	**14 18 14.7**	**+0.1**
WDGT	baz=250			*e*S			**Sb**	**14 18 37.5**	**-0.8**
LAY	baz=250 **Lan-yu**	**1.76**	**178**	*e*P			**Pn**	**14 18 13.0**	**-1.8**
PHUB	baz=173 **P'eng-hu**	**1.76**	**261**	*e*P			**Pn**	**14 18 14.9**	**+0.1**
PHUB	baz=259			*e*S			**Sn**	**14 18 37.2**	**+0.2**
PNG	**Penghu**	**1.77**	**263**	*e*P			**Pn**	**14 18 15.2**	**+0.3**
PNG	baz=261			*e*S			**Sn**	**14 18 37.2**	**0.0**
VCHM	**Qimei**	**1.96**	**253**	*e*P			**Pn**	**14 18 17.9**	**+0.4**
VCHM	baz=251			*e*S			**Sb**	**14 18 43.2**	**-1.3**
IRIF	baz=251 **Iriomote-Funau**	**2.13**	**75**	P			**Pn**	**14 18 20.1**	**+0.2**
IRIF				*e*S			**Sn**	**14 18 45.3**	**-0.8**
HATJ	**Hateruma jima**	**2.15**	**83**	P			**Pn**	**14 18 20.6**	**+0.5**
HATJ				*e*S			**Sn**	**14 18 46.1**	**-0.5**
VWUC	**VWUC**	**2.19**	**303**	*e*P			**Pn**	**14 18 19.6**	**-1.0**
JKRS	baz=306 **Kuro-shima**	**2.36**	**79**	P			**Pn**	**14 18 23.7**	**+0.7**
JKRS				*e*S			**Sn**	**14 18 51.9**	**+0.1**
PTMZ	**Houxiangcun**	**2.47**	**300**	*e*P			**Pn**	**14 18 23.9**	**-0.5**
JIJ	baz=303 **Ishigaki jima**	**2.51**	**77**	P			**Pn**	**14 18 24.7**	**-0.3**
JIJ				S			**Sn**	**14 18 54.1**	**-1.2**
JISG	**Ishigakijimahi**	**2.71**	**73**	P			**Pn**	**14 18 27.4**	**-0.4**
JISG				*e*S			**Sn**	**14 18 59.1**	**-1.2**
JTJ	**Tarama**	**3.07**	**74**	P			**Pn**	**14 18 33.1**	**+0.4**
LYJJ	**Jianjiangzhen**	**3.14**	**331**	*e*P			**Pn**	**14 18 33.4**	**-0.3**
XPSS	baz=338 **Dashiqiu**	**3.32**	**340**	*e*P			**Pn**	**14 18 35.7**	**-0.5**
AXDP	baz=334 **Jialang**	**3.37**	**290**	*e*P			**Pn**	**14 18 36.3**	**-0.6**
ZPLA	baz=292 **Ao Xicun**	**3.41**	**273**	*e*P			**Pn**	**14 18 37.3**	**0.0**
JIRB	baz=271 **Irabujima**	**3.53**	**73**	P			**Pn**	**14 18 39.1**	**+0.1**
JIRB				*e*S			**Sn**	**14 19 21.4**	**+0.9**

JMJ2	**Miyako jima3**	**3.64**	**74**	P		**Pn**	**14 18 41.4**	**+0.8**
JMJ2				S		**Sn**	**14 19 23.4**	**0.0**
JOGS	**Gusukube**	**3.72**	**74**	*eP*		**Pn**	**14 18 41.9**	**+0.3**

*IDC **23** 14:32:12.8±4.1, 17.°40N× 101.°86W, h0km, mb3.8/4, mbtmp3.6/6, ML3.2/1, MS3.7/1, Error ellipse: s-maj=101.6km s-min=33.8km az=29.0*
*MEX **23** 14:32:17.7±1.5, 17.°61N× 101.°65W, h28km±29km, MD4.4*
ISC 23 14:32:15.9±1.5**, 17.°51N**±0.°05×**101.°69W**±0.°03**, h17**km±9km**, n44**, σ2≥29/69, mb3.9/4, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.24**	**66**	*i* P	**Pb**	**14 32 22.0**	**+0.2**
ZIIG				*i* S	**Sg**	**14 32 25.8**	**+0.8**
CAIG	**El Cayaco**	**1.44**	**108**	*eP*	**Pn**	**14 32 39.7**	**-1.5**
CAIG				*eS*	**Sn**	**14 32 58.1**	**-1.6**
ARIG	**Puente Sto Nin**	**1.49**	**59**	*eP*	**Pn**	**14 32 39.1**	**-2.8**
ARIG				*eS*	**Sn**	**14 32 56.6**	**-4.5**
MMIG	**Aquila**	**1.75**	**296**	*i* P	**Pn**	**14 32 45.1**	**-0.5**
MMIG				*i* S	**Sg**	**14 33 11.3**	**-1.1**
DAIG	**Los Arroyos**	**2.01**	**104**	*eP*	**Pn**	**14 32 48.3**	**-0.8**
DAIG				*eS*	**Sn**	**14 33 12.4**	**-1.5**
MEIG	**Mezcala**	**2.02**	**78**	*i* P	**Pn**	**14 32 48.1**	**-1.1**
MEIG				*eS*	**Sn**	**14 33 11.6**	**-2.6**
MOIG	**Morelia**	**2.21**	**12**	*i* P	**Pn**	**14 32 50.1**	**-2.0**
MOIG				*i* S	**Sn**	**14 33 16.2**	**-2.9**
PLIG	**Platanillo**	**2.26**	**67**	*eP*	**Pn**	**14 32 51.1**	**-1.5**
PLIG				*eS*	**Sn**	**14 33 17.4**	**-2.8**
COIG	**Colima**	**2.52**	**312**	*eP*	**Pn**	**14 32 56.6**	**+0.4**
COIG				*eS*	**Sb**	**14 33 28.2**	**-3.4**
CRIG	**Cruz Grande**	**2.57**	**107**	*eP*	**Pn**	**14 32 55.2**	**-1.5**
CRIG				*eS*	**Sn**	**14 33 26.2**	**-1.4**
CDAR	**Ciudad de Arme**	**2.62**	**303**	*eP*	**Pn**	**14 32 57.0**	**-0.4**
CDAR				*eS*	**Sb**	**14 33 32.9**	**-1.5**
EZ5V		**2.67**	**318**	*eP*	**Pn**	**14 32 58.9**	**+0.6**
EZ5V				*eS*	**Sn**	**14 33 31.1**	**+0.7**
MNGA	**Volcan de Coli**	**2.67**	**317**	*eP*	**Pn**	**14 32 59.1**	**+0.8**
MNGA				*eS*	**Sn**	**14 33 31.1**	**+0.6**
JUBC	**Volcan de Coli**	**2.67**	**319**	*eP*	**Pn**	**14 32 59.5**	**+1.0**
JUBC				*eS*	**Sn**	**14 33 31.6**	**+1.0**
INCO	**Volcan de Coli**	**2.70**	**318**	*eP*	**Pn**	**14 32 59.3**	**+0.3**
INCO				*eS*	**Sn**	**14 33 32.9**	**+1.4**
R15V		**2.73**	**308**	*eP*	**Pn**	**14 32 59.1**	**0.0**
R15V				*eS*	**Sb**	**14 33 33.9**	**-3.6**
YAIG	**Yautepec**	**2.84**	**61**	*eP*	**Pn**	**14 32 57.9**	**-2.6**
YAIG				*eS*	**Sn**	**14 33 31.9**	**-2.6**
MGIG	**Malinaltepec**	**2.93**	**95**	*eP*	**Pn**	**14 33 00.5**	**-1.4**
MGIG				*eS*	**Sn**	**14 33 36.8**	**-0.1**
TLIG	**Tlapa**	**2.98**	**89**	*eP*	**Pn**	**14 33 01.1**	**-1.5**
TLIG				*eS*	**Sn**	**14 33 37.1**	**-0.9**
UNM	**Universidad Na**	**3.00**	**52**	*eP*	**Pn**	**14 33 06.0**	**+3.1**
UNM				*eS*	**Sn**	**14 33 39.4**	**+0.9**
JRQG	**Juriquilla Cam**	**3.39**	**20**	*eP*	**Pn**	**14 33 06.1**	**-2.1**
JRQG				*eS*	**Sn**	**14 33 44.9**	**-3.3**
FTIG	**Fresnillo de T**	**3.42**	**83**	*eP*	**Pn**	**14 33 07.2**	**-1.3**
FTIG				*eS*	**Sn**	**14 33 51.4**	**+2.7**
PNIG	**Pinotepa**	**3.59**	**108**	*eP*	**Pn**	**14 33 09.8**	**-1.0**
PNIG				*eS*	**Sn**	**14 33 53.1**	**+0.3**
HLIG	**Huajuapan de L**	**3.72**	**85**	*eP*	**Pn**	**14 33 09.9**	**-2.9**
HLIG				*eS*	**Sn**	**14 33 54.7**	**-1.7**
CJM	**Chamela**	**3.75**	**302**	*eP*	**Pn**	**14 33 11.3**	**-1.7**
CJM				*eS*	**Sn**	**14 33 53.5**	**-3.1**
DEIG	**Demacu**	**3.75**	**42**	*eP*	**Pn**	**14 33 15.4**	**+2.2**
DEIG				*eS*	**Sn**	**14 34 00.8**	**+3.7**
TXIG	**Tlaxiaco**	**3.76**	**93**	*eP*	**Pn**	**14 33 12.6**	**-0.7**
TXIG				*eS*	**Sn**	**14 33 57.0**	**-0.3**
YOIG	**Yosondua**	**4.02**	**99**	*eP*	**Pn**	**14 33 16.5**	**-0.5**
YOIG				*eS*	**Sn**	**14 34 10.2**	**+6.4**
TPIG	**Tehuac#an**	**4.22**	**77**	*eP*	**Pn**	**14 33 24.2**	**+4.6**
TPIG				*eS*	**Sn**	**14 34 12.7**	**+4.0**
TOIG	**Toxpalan**	**4.45**	**82**	*eP*	**Pn**	**14 33 23.9**	**+1.2**
TOIG				*eS*	**Sn**	**14 34 18.5**	**+4.3**
AAIG	**Aguscalientes**	**4.48**	**352**	*eP*	**Pn**	**14 33 23.1**	**-0.2**
AAIG				*eS*	**Sn**	**14 34 19.7**	**+4.6**
CMIG	**Matias Romero** 0.4nm,0.3s,baz=331,slow=12,SNR=1.8	**6.52**	**93**	Pn	**Pn**	**14 33 50.7**	**-0.3**
CMIG	0.9nm,0.3s,baz=27,slow=21,SNR=1.8			Sn	**Sn**	**14 35 06.5**	**+1.4**
CMIG	3.0nm,0.3s,baz=17,slow=18,SNR=5.6 0.9nm,0.3s			Lg	Lg	14 35 36.4	
TXAR	**Lajitas Array** 0.2nm,0.5s,baz=172,slow=15,SNR=3.4	**11.91**	**352**	Pn	**Pn**	**14 35 08.3**	**+3.2**
TXAR	baz=164,slow=30			Lg	Lg	14 38 32.3	
TXAR	comp=Z,35nm,20.7s,baz=154,slow=35			LR	LR	14 39 13.7	
NVAR	**Mina Array Bea** 2.0nm,0.7s,baz=153,slow=10,SNR=16 2.0nm,0.7s	**25.41**	**328**	P	**P**	**14 37 43.1**	**+0.3**
PDAR	**Pinedale Array** 0.4nm,0.4s,baz=165,slow=12,SNR=4.0 0.4nm,0.4s	**26.05**	**347**	P	**P**	**14 37 47.4**	**-1.3**
DLBC	**Dease Lake** comp=Z,76nm,18.4s,baz=116,slow=40	**45.88**	**340**	LR	LR	15 02 46.6	
H03N2	**Juan Fernandez** baz=335,slow=77,SNR=159	**55.13**	**157**	T	T	15 41 08.8	
H03N1	**Juan Fernandez** baz=335,slow=77,SNR=130	**55.14**	**157**	T	T	15 41 11.2	
H03N3	**Juan Fernandez** baz=335,slow=77,SNR=133	**55.15**	**157**	T	T	15 41 19.7	
H03S3	**Juan Fernandez** baz=328	**55.48**	**157**	T	T	15 41 27.5	
H03S2	**Juan Fernandez** baz=328	**55.48**	**157**	T	T	15 41 19.0	
H03S1	**Juan Fernandez** baz=328	**55.50**	**157**	T	T	15 41 34.0	
ILAR	**Eielson Array** 1.0nm,0.9s,baz=150,slow=6.5,SNR=9.8 1.0nm,0.9s	**56.06**	**338**	P	**P**	**14 41 52.6**	**-1.0**
NOA	**NORSAR Array B** 0.7nm,0.8s,baz=303,slow=4.9,SNR=2.8 0.7nm,0.8s	**85.39**	**27**	P	**P**	**14 44 54.5**	**+2.3**

*NEIC **23** 14:34:24.6±1.6, 56.°6N±0.°1×34.°5W±0.°2, h10km±1km, mb4.4/12, Error ellipse: s-maj=19.8km s-min=15.7km az=175.0*
*IDC **23** 14:34:24.2±0.8, 56.°62N×34.°41W, h0km, mb3.9/17, mbtmp3.9/19, ML3.1/2, MS3.5/15, Error ellipse: s-maj=22.6km s-min=13.8km az=13.0*
ISC 23 14:34:27.2±0.7**, 56.°7N**±0.°1×**34.°48W**±0.°07**, h22**km**, n44, σ1≥23/34, mb4.1/22, MS3.5/9, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRS	**Narsarsuaq**	**7.21**	**313**	Pn	**Pn**	**14 36 09.1**	**-2.0**
BORG	**Borgarnes** 0.8nm,0.3s,baz=190,slow=10,SNR=2.1	**10.31**	**33**	Pn	**Pn**	**14 36 55.5**	**+2.0**
BORG	comp=Z,293nm,19.0s,baz=256,slow=31 2.8nm,0.5s			LR	LR	14 39 45.0	
BORG	**Borgarnes**	**10.31**	**33**		**Pn**	**14 36 53.4**	**-0.2**
SFJD	**Kangerlussuaq** comp=Z,145nm,18.5s,baz=112,slow=34	**12.79**	**330**	LR	LR	14 41 38.3	
SUMG	**Summit**	**16.04**	**356**	Pn	**Pn**	**14 38 08.9**	**-2.4**
EKA	**Eskdalemuir Ar** comp=Z,186nm,18.9s,baz=267,slow=34	**17.49**	**81**	LR	LR	14 44 10.7	
JMIC	**Jan Mayen** comp=Z,311nm,18.8s,baz=254,slow=32	**18.10**	**28**	LR	LR	14 43 57.3	
FRB	**Frobisher Bay** comp=Z,113nm,21.8s,baz=135,slow=32	**18.15**	**307**	LR	LR	14 44 07.6	
SCHQ	**Schefferville** 0.3nm,0.3s,baz=75,slow=5.8,SNR=4.6	**18.21**	**278**	P	**P**	**14 38 37.9**	**-0.5**
SCHQ	comp=Z,148nm,18.2s,baz=91,slow=32 4.4nm,1.0s			LR	LR	14 44 16.8	
SCHQ	**Schefferville**	**18.21**	**278**	P	**Pn**	**14 38 36.6**	**-1.7**
NOA	**NORSAR Array B** 0.7nm,0.7s,baz=292,slow=9.0,SNR=3.4 0.7nm,0.7s	**23.63**	**60**	P	**P**	**14 39 36.4**	**0.0**
CLF	**Chambon-Foret**	**23.80**	**96**		**P**	**14 39 36.1**	**-2.0**
ESDC	**Sonseca Array** 0.7nm,0.8s,baz=314,slow=8.6,SNR=5.1	**26.21**	**117**	P	**P**	**14 39 59.8**	**-0.4**
ESDC	comp=Z,99nm,18.5s,baz=306,slow=33 0.7nm,0.8s			LR	LR	14 48 39.4	
ARCES	**ARCESS Array B** 1.8nm,0.9s,baz=270,slow=7.3,SNR=5.3	**28.62**	**39**	P	**P**	**14 40 21.5**	**+0.1**
ARCES	comp=Z,62nm,20.6s,baz=289,slow=32 1.8nm,0.9s			LR	LR	14 49 30.0	

DAVOX	**Davos/Dischmat** comp=Z,140nm,19.7s,baz=263,slow=35	**28.72**	**91**	LR	LR	14 51 15.7		
SADO	**Sadowa** comp=Z,123nm,19.2s,baz=51,slow=34	**30.13**	**266**	LR	LR	14 51 28.1		
FINES	**FINESS Array B** 1.5nm,0.9s,baz=272,slow=15,SNR=4.4 1.5nm,0.9s	**30.49**	**56**	P	**P**	**14 40 38.5**	**+0.5**
VRAC	**Vranov** comp=Z,96nm,18.1s,baz=311,slow=36	**30.97**	**82**	LR	LR	14 53 12.8		
MDT	**Midelt** 2.7nm,1.0s,baz=31,slow=7.5,SNR=3.8 2.7nm,1.0s	**31.49**	**127**	P	**P**	**14 40 47.9**	**+0.6**
ULM	**Lac du Bonnet** comp=Z,92nm,21.2s,baz=55,slow=34	**36.00**	**286**	LR	LR	14 54 44.8		
AKASG	**Malin Array Be** comp=Z,51nm,19.4s,baz=304,slow=37	**36.96**	**71**	LR	LR	14 56 59.6		
OBN	**Obninsk** 7.9nm,0.5s,baz=321,slow=6.5,SNR=1.9 7.9nm,0.5s	**38.23**	**61**	P	**P**	**14 41 44.3**	**-0.6**
YKA	**Yellowknife Ar** 0.8nm,0.9s,baz=65,slow=10,SNR=2.0	**38.50**	**313**	P	**P**	**14 41 48.0**	**+0.9**
YKA	comp=Z,81nm,21.5s,baz=156,slow=33 0.8nm,0.9s			LR	LR	14 55 52.7		
TKL	**Tuckaleechee C** comp=Z,74nm,18.4s,baz=55,slow=35	**39.01**	**259**	LR	LR	14 57 04.9		
BRTR	**Keskin Array B** 3.1nm,0.8s,baz=311,slow=6.3,SNR=6.4 3.1nm,0.8s	**46.41**	**81**	P	**P**	**14 42 53.4**	**+1.4**
BOZ	**Bozeman (W)** comp=Z,2.5nm,1.1s	**47.15**	**291**	P IAmb	**P** IAmb	**14 42 57.9** 14 43 09.2	**+0.2**
N31M	**Braeburn, Yuko**	**47.17**	**320**	P	**P**	**14 42 59.2**	**+1.8**
ARU	**Arti** comp=Z,5.6nm,0.9s	**47.37**	**49**	P IAmb	**P** IAmb	**14 42 58.4** 14 43 00.9	**-0.7**
PDAR	**Pinedale Array** comp=Z,0.5nm,0.5s,baz=72,slow=5.8,SNR=1.7 comp=Z,0.5nm,0.5s	**48.02**	**287**	P	**P**	**14 43 04.7**	**+0.1**
HYT	**Haines Junctio** comp=Z,4.4nm,1.0s	**48.23**	**320**	P IAmb	**P** IAmb	**14 43 08.0** 14 43 10.9	**+2.2**
KVAR	**Kislovodsk Arr** comp=Z,2.3nm,0.4s,baz=9.5,slow=6.1,SNR=1.7 comp=Z,2.3nm,0.4s	**48.29**	**71**	P	**P**	**14 43 07.5**	**+1.0**
ILAR	**Eielson Array** comp=Z,1.5nm,0.9s,baz=41,slow=6.0,SNR=11 comp=Z,1.5nm,0.9s	**48.44**	**328**	P	**P**	**14 43 09.0**	**+1.8**
TORD	**Torodi Ar. Bea** comp=Z,2.6nm,1.0s,baz=316,slow=8.7,SNR=9.4 comp=Z,2.6nm,1.0s	**51.51**	**133**	P	**P**	**14 43 30.0**	**-1.0**
TORD	**Torodi Ar. Bea**	**51.51**	**133**	P IAmb	**P** IAmb	**14 43 29.4** 14 43 30.6	**-1.7**
ABKAR	**Akbulak array** comp=Z,3.2nm,1.1s	**52.97**	**55**	P	**P**	**14 43 41.8**	**+0.2**
TXAR	**Lajitas Array** comp=Z,0.3nm,0.8s,baz=15,slow=3.7,SNR=2.4 comp=Z,0.3nm,0.8s	**54.71**	**271**	P	**P**	**14 43 56.5**	**+1.8**
KDAK	**Kodiak Island** comp=Z,3.4nm,0.5s,baz=28,slow=9.1,SNR=9.6 comp=Z,3.4nm,0.5s	**55.60**	**325**	P	**P**	**14 44 01.7**	**+1.2**
NVAR	**Mina Array Bea** comp=Z,0.6nm,0.9s,baz=68,slow=3.1,SNR=3.0 comp=Z,0.6nm,0.9s	**55.74**	**289**	P	**P**	**14 44 02.4**	**+0.2**
KURK	**Kurchatov** comp=Z,3.2nm,0.9s	**59.59**	**43**	P IAmb	**P** IAmb	**14 44 28.4** 14 44 34.2	**-0.3**
MKAR	**Makanchi Array** comp=Z,1.3nm,0.8s,baz=330,slow=7.1,SNR=9.5 comp=Z,1.3nm,0.8s	**64.20**	**43**	P	**P**	**14 45 00.1**	**+0.2**
MKAR	**Makanchi Array**	**64.20**	**43**	P	**P**	**14 44 59.8**	**-0.1**
BTK	**Batken**	**64.98**	**55**	P	**P**	**14 45 05.0**	**-0.2**
TARG	**Taragay, Kyrgy** comp=Z,5.0nm,0.9s	**66.64**	**49**	P IAmb	**P** IAmb	**14 45 15.8** 14 45 19.8	**-0.5**	
SONM	**Songino Array** comp=Z,0.5nm,0.6s,baz=327,slow=2.4,SNR=2.5 comp=Z,0.5nm,0.6s	**70.86**	**27**	P	**P**	**14 45 41.8**	**-0.2**

*MOS **23** 14:37:55.5±1.0, 44.°13N×9.°94E, h16km, mb4.2/12, Error ellipse: s-maj=6.3km s-min=3.5km az=72.3*
*ROM **23** 14:37:56.2±0.0, 44.°160N±0.°003×9.°923E±0.°003, h9km, ML4.0/55, Mw3.7, Error ellipse: s-maj=0.2km s-min=0.2km az=185.0, Moment Tensor Solution. Moment tensor: Scale 10^14^Nm; Mrr-1.06; Mθθ 3.23; Mφφ-2.17; Mrθ 1.46; Mθφ-3.88; Mφr 0.38; Fault plane solution: M0 4.97788×10^14^ NP1:φs 162.00000°, δ 71.00000°, λ-5.00000°. NP2:φs 254.00000°, δ 85.00000°, λ-161.00000°.*
*LDG **23** 14:37:56.1±0.1, 44.°18N×9.°94E, h10km, Md4.3/8, Ml4.2/39 Error ellipse: s-maj=3.0km s-min=2.0km az=178.0*
*IDC **23** 14:37:56.1±0.8, 44.°15N×9.°95E, h0km, mb3.9/14, mbtmp3.8/23, ML4.1/8, MS3.1/5, Error ellipse: s-maj=15.0km s-min=10.5km az=112.0*
*NEIC **23** 14:37:56.7±1.4, 44.°09N±0.°04×9.°92E±0.°05, h10km±2km, mb4.2/12, ML4.0(ROM), Error ellipse: s-maj=6.5km s-min=4.5km az=45.0*
*MED_RC **23** 14:37:56.0±0.4, 44.°17N×9.°91E, h10km, MW4.2/6, Moment Tensor Solution.Mantle waves: s6,c10; Duration: 1≥0 Moment tensor: Scale 10^15^Nm; Mrr-0.83±.12; Mθθ 0.97±.08; Mφφ-0.15±.14; Mrθ-1.14±.22; Mθφ-1.19±.08; Mφr 1.30±.28; Best double couple: M0 2.20000×10^15^ NP1:φs 143.00000°, δ 75.00000°, λ-69.00000°. NP2: φs 267.00000°, δ 26.00000°, λ-143.00000°. Principal axes: T 2.5600, Plg27.0000°, Azm216.0000°; N -0.7100, Plg21.0000°, Azm317.0000°; P -1.8500, Plg55.0000°, Azm80.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*
*GEN **23** 14:37:56.4, 44.°16N×9.°93E, h10km, Ml4.1*
*PRU **23** 14:37:57.2±0.0, 44.°13N×9.°88E, h10km, M4.2*
*BGR **23** 14:37:58.3±0.6, 44.°16N×9.°86E, h10km, ML4.3/22, Error ellipse: s-maj=8.9km s-min=7.8km az=10.0*
*STR **23** 14:37:58.9±1.1, 44.°N±6.°×1.°0E±.°, h9km, MLv4.1/25, Error ellipse: s-maj=0.0km s-min=0.0km az=64.7, preliminary*
*BNS **23** 14:37:58.4±0.3, 44.°15N×10.°05E, h10km, ML4.0*
ISC 23 14:37:56.6±0.7**, 44.°16N**±0.°01×**9.°88E**±0.°01**, h11**km±4km**, n600, σ1≥79/738, mb4.0/23, 40C-49D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLMA	**Palmaria, Port**	**0.11**	**193**	P	**Pg**	**14 37 59.7**	**+0.2**
PLMA				S	**Sg**	**14 38 01.9**	**+0.5**
PLMA	**Palmaria, Port**	**0.11**	**193**	P	**Pg**	**14 37 59.6**	**+0.2**
PLMA				S	**Sg**	**14 38 01.7**	**+0.2**
PLMA	comp=E,77050μm,0.3s			AML	AML		
PLMA				AML	AML		
PLMA				AML	AML		
PLMA	comp=E,77100μm,0.3s						
FIVI	**Fivizzano**	**0.19**	**65**	P	**Pg**	**14 38 00.4**	**-0.4**
FIVI				S	**Sg**	**14 38 03.1**	**-0.6**
FIVI	**Fivizzano**	**0.19**	**65**	⇑P	**Pg**	**14 38 00.4**	**-0.4**
FIVI				S	**Sg**	**14 38 03.1**	**-0.6**
FIVI				AML	AML		
FIVI				AML	AML		
EQUI	**Equi**	**0.19**	**87**	P	**Pg**	**14 38 00.3**	**-0.5**
EQUI				S	**Sg**	**14 38 02.8**	**-0.8**
EQUI	**Equi**	**0.19**	**87**	⇓P	**Pg**	**14 38 00.3**	**-0.5**
EQUI				S	**Sg**	**14 38 02.9**	**-0.8**
MSSA	**Maissana**	**0.31**	**301**		**Pg**	**14 38 02.9**	**0.0**
MSSA				Sg	**Sg**	**14 38 08.2**	**+1.1**
MSSA	**Maissana**	**0.31**	**301**	P	**Pg**	**14 38 03.0**	**+0.1**
MSSA				S	**Sg**	**14 38 08.1**	**+1.1**
MSSA	**Maissana**	**0.31**	**301**	⇓P	**Pg**	**14 38 03.0**	**+0.1**
GRAM	**Graiana**	**0.36**	**21**	P	**Pg**	**14 38 03.6**	**-0.2**
GRAM				S	**Sg**	**14 38 08.8**	**+0.2**
GRAM	**Graiana**	**0.36**	**21**	⇑P	**Pg**	**14 38 03.6**	**-0.2**
GRAM	comp=N,69250μm,0.2s			AML	AML		
GRAM	comp=N,69300μm,0.2s			AML	AML		
GRAM	comp=E,81600μm,1.1s			AML	AML		
SARO	**Sassorosso**	**0.37**	**86**	P	**Pg**	**14 38 03.6**	**-0.5**
SARO				S	**Sg**	**14 38 08.8**	**-0.2**
CARD	**Cardoso**	**0.45**	**107**	P	**Pg**	**14 38 05.0**	**-0.5**
CARD				S	**Sg**	**14 38 10.8**	**-0.6**
CARD	**Cardoso**	**0.45**	**107**	⇓P	**Pg**	**14 38 05.0**	**-0.5**
CARD				S	**Sg**	**14 38 10.9**	**-0.5**
CARD	comp=E,64900μm,0.5s			AML	AML		
CARD	comp=N,53950μm,0.6s			AML	AML		
MAIM	**Mastiano**	**0.50**	**119**	P	**Pg**	**14 38 06.0**	**-0.4**
MAIM				S	**Sg**	**14 38 12.4**	**-0.7**
MAIM	**Mastiano**	**0.50**	**119**	P	**Pg**	**14 38 06.0**	**-0.4**
MAIM				S	**Sg**	**14 38 12.3**	**-0.7**
MAIM	comp=E,19750μm,1.4s			AML	AML		
MAIM	comp=N,18000μm,0.2s			AML	AML		
BDI	**Bagni Di Lucca**	**0.52**	**100**	⇓P	**Pg**	**14 38 06.2**	**-0.6**
BDI				S	**Sg**	**14 38 13.3**	**-0.5**
BDI				AML	AML		
BDI	comp=E,33700μm,0.4s			AML	AML		
BDI	comp=N,27850μm,0.6s			AML	AML		
BDI	comp=N,12340μm,0.6s			AML	AML		
BDI	comp=N,27850μm,0.6s			AML	AML		
BDI	comp=E,33700μm,0.4s			AML	AML		
BDI	comp=E,12750μm,0.4s			AML	AML		
NEVI	**Neviano degli**	**0.53**	**36**	P	**Pb**	**14 38 07.4**	**-0.5**
NEVI	**Neviano degli**	**0.53**	**36**	P	**Pb**	**14 38 07.4**	**-0.5**
NEVI				AML	AML		
NEVI	comp=E,52550μm,0.3s			AML	AML		
NEVI	comp=N,52750μm,1.2s			AML	AML		
GSCL	**Gusciola**	**0.54**	**69**	P	**Pg**	**14 38 07.0**	**-0.2**
GSCL				S	**Sb**	**14 38 14.8**	**-1.2**
GSCL	**Gusciola**	**0.54**	**69**	⇑P	**Pg**	**14 38 07.0**	**-0.2**
GSCL				S	**Sb**	**14 38 14.5**	**-1.5**
GSCL	comp=N,57750μm,1.5s			AML	AML		
GSCL	comp=E,63050μm,0.4s			AML	AML		
GORR	**Gorreto**	**0.62**	**317**	P	**Pg**	**14 38 08.4**	**-0.2**
GORR				S	**Sb**	**14 38 18.5**	**+0.3**
GORR	**Gorreto**	**0.62**	**317**	P	**Pg**	**14 38 08.5**	**-0.2**
GORR				S	**Sg**	**14 38 17.7**	**+0.9**
GORR	comp=E,33550μm,0.4s			AML	AML		
GORR	comp=N,54500μm,1.2s			AML	AML		
A306A	**Viano (RE)**	**0.64**	**53**	P	**Pb**	**14 38 10.0**	**+0.3**
PII	**Pisa**	**0.64**	**133**	P	**Pg**	**14 38 08.6**	**-0.4**
PII				S	**Sb**	**14 38 17.1**	**-1.5**
PII	**Pisa**	**0.64**	**133**	⇓P	**Pg**	**14 38 08.5**	**-0.4**
PII	comp=N,39600μm,0.3s			AML	AML		
PII	comp=E,33350μm,1.2s			AML	AML		
PRMA	**PARMA**	**0.68**	**27**		**Pb**	**14 38 10.7**	**+0.2**
PRMA	**PARMA**	**0.68**	**27**	P	**Pb**	**14 38 10.6**	**+0.2**
PRMA				S	**Sn**	**14 38 22.5**	**-0.2**
PRMA	**PARMA**	**0.68**	**27**	AML	AML		
PRMA	comp=N,22750μm,0.7s			AML	AML		
PRMA	comp=E,30500μm,0.7s			AML	AML		
BOB	**Bobbio (Coli)**	**0.69**	**333**	P	**Pg**	**14 38 09.8**	**-0.1**
BOB				S	**Sb**	**14 38 20.5**	**+0.3**
BOB	**Bobbio (Coli)**	**0.69**	**333**	⇑P	**Pg**	**14 38 09.8**	**-0.1**
BOB				S	**Sg**	**14 38 19.9**	**+1.0**
BOB	comp=E,42950μm,0.5s			AML	AML		
BOB	comp=N,32950μm,1.0s			AML	AML		
BOB	comp=E,42900μm,0.5s			AML	AML		
BOB	comp=N,37050μm,1.0s			AML	AML		
BOB	comp=E,52550μm,0.4s			AML	AML		
GROG	**Isola di Gorgo**	**0.73**	**180**	P	**Pb**	**14 38 10.7**	**-0.7**
GROG				S	**Sb**	**14 38 22.1**	**+0.8**
GROG	**Isola di Gorgo**	**0.73**	**180**	⇑P	**Pb**	**14 38 10.7**	**-0.7**
GROG	comp=N,24150μm,0.4s			AML	AML		
GROG	comp=E,29350μm,0.6s			AML	AML		
RNCA	**Ronca, Sant'Ol**	**0.74**	**295**	P	**Pg**	**14 38 10.8**	**-0.1**
RNCA				S	**Sg**	**14 38 21.2**	**+0.6**
RNCA	**Ronca, Sant'Ol**	**0.74**	**295**	P	**Pg**	**14 38 11.0**	**+0.1**
RNCA				S	**Sg**	**14 38 21.2**	**+0.6**
RNCA	comp=E,10800μm,1.2s			AML	AML		
RNCA	comp=N,8285μm,0.9s			AML	AML		
ZCCA	**Zocca**	**0.81**	**76**		**Pb**	**14 38 12.7**	**0.0**
ZCCA	**Zocca**	**0.81**	**76**	P	**Pn**	**14 38 13.2**	**-0.8**
ZCCA	**Zocca**	**0.81**	**76**	AML	AML		
ZCCA	comp=N,15400μm,0.4s			AML	AML		
ZCCA	comp=E,12550μm,0.7s			AML	AML		
ZCCA	comp=E,11850μm,0.7s			AML	AML		
ZCCA	comp=N,15500μm,0.4s			AML	AML		
MTCR	**Monte La Croce**	**0.81**	**99**	P	**Pg**	**14 38 11.5**	**-0.8**
MTCR				S	**Sb**	**14 38 23.2**	**-0.7**
MTCR	**Monte La Croce**	**0.81**	**99**	⇓P	**Pg**	**14 38 11.6**	**-0.8**
MTCR	comp=E,13200μm,0.3s			AML	AML		
MTCR	comp=N,20250μm,0.6s			AML	AML		
CRMI	**Carmignano**	**0.87**	**115**	P	**Pg**	**14 38 12.7**	**-0.6**
CRMI				S	**Sb**	**14 38 24.2**	**-1.1**
CRMI	**Carmignano**	**0.87**	**115**	P	**Pg**	**14 38 12.8**	**-0.6**
CRMI				S	**Sg**	**14 38 23.5**	**-1.1**
CRMI	comp=N,7520μm,0.3s			AML	AML		
CRMI	comp=E,988μm,0.5s			AML	AML		
CRMI	comp=N,1095μm,1.3s			AML	AML		
CRMI	comp=E,7075μm,0.6s			AML	AML		
FNVD	**Fontana Vidola**	**0.89**	**89**	P	**Pg**	**14 38 13.2**	**-0.6**
FNVD				S	**Sb**	**14 38 25.6**	**-0.5**
FNVD	**Fontana Vidola**	**0.89**	**89**	P	**Pg**	**14 38 13.2**	**-0.6**
FNVD	comp=N,18900μm,0.9s			AML	AML		
FNVD	comp=E,16450μm,0.9s			AML	AML		
MPPT	**Montemurlo**	**0.89**	**103**	P	**Pg**	**14 38 13.0**	**-0.8**
MPPT	comp=N,7950μm,1.1s			AML	AML		
MPPT	comp=E,6220μm,0.6s			AML	AML		
SARZ	**Sarezzano**	**0.99**	**316**	P	**Pn**	**14 38 16.7**	**+0.2**
SARZ	**Sarezzano**	**0.99**	**316**	AML	AML		
SARZ	comp=E,24750μm,0.5s			AML	AML		
SARZ	comp=N,21600μm,1.2s			AML	AML		
SARZ	comp=E,25400μm,0.5s			AML	AML		
SARZ	comp=N,21050μm,1.2s			AML	AML		
NDIM	**Novi di Modena**	**1.03**	**44**	AML	AML		
NDIM	comp=N,20400μm,0.5s			AML	AML		
NDIM	comp=E,22500μm,0.4s			AML	AML		
PCP	**Piancastagn**	**1.03**	**292**	P	**Pg**	**14 38 15.8**	**-0.7**
PCP				S	**Sg**	**14 38 29.4**	**-0.6**
PCP	**Piancastagn**	**1.03**	**292**	P	**Pg**	**14 38 15.9**	**-0.7**
PCP				S	**Sg**	**14 38 29.4**	**-0.6**
PCP	comp=N,6265μm,0.4s			AML	AML		
PCP	comp=E,6010μm,0.5s			AML	AML		
FIR	**Firenze**	**1.06**	**111**	P	**Pg**	**14 38 16.0**	**-1.0**
SEI	**Scarperia**	**1.07**	**95**	P	**Pg**	**14 38 16.2**	**-0.9**
SEI	**Scarperia**	**1.07**	**95**	P	**Pb**	**14

CAVE	**Cavezzo**	**1.07**	**48**	P	**Pn**	**14 38 19.1**	**+1.6**
CAVE	**Cavezzo**	**1.07**	**48**	AML	AML		
	comp=N,25600µm,0.7s						
CAVE				AML	AML		
	comp=E,25000µm,0.9s						
QLNO	**Quiliano**	**1.12**	**279**	P	**Pb**	**14 38 17.4**	**-0.5**
QLNO				S	**Sb**	**14 38 33.1**	**+0.5**
QLNO	**Quiliano**	**1.12**	**279**	P	**Pb**	**14 38 17.5**	**-0.5**
A318A	**Donoratico (LI**	**1.15**	**154**	P	**Pb**	**14 38 17.2**	**-1.3**
MTRZ	**Monterenzio**	**1.16**	**79**	AML	AML		
	comp=E,15900µm,0.6s						
MTRZ				AML	AML		
	comp=N,15550µm,1.0s						
MTRZ				AML	AML		
	comp=E,16350µm,0.6s						
MTRZ				AML	AML		
	comp=N,15150µm,1.1s						
SBPO	**S.Benedetto Po**	**1.16**	**39**	AML	AML		
	comp=E,31750µm,0.6s						
SBPO				AML	AML		
	comp=N,27350µm,0.6s						
BRIS	**BRISIGHELLA**	**1.17**	**90**	AML	AML		
	comp=N,10350µm,0.6s						
BRIS				AML	AML		
	comp=E,6255µm,1.6s						
BRIS				AML	AML		
	comp=N,6425µm,1.6s						
BRIS				AML	AML		
	comp=E,3910µm,1.1s						
OSSC	**Osservatorio P**	**1.17**	**122**		**Pb**	**14 38 17.9**	**-1.0**
OSSC	**Osservatorio P**	**1.17**	**122**	P	**Pb**	**14 38 18.0**	**-0.9**
OSSC	**Osservatorio P**	**1.17**	**122**	P	**Pb**	**14 38 17.9**	**-0.9**
OSSC				AML	AML		
	comp=E,6550µm,0.4s						
OSSC				AML	AML		
	comp=N,6475µm,0.4s						
OSSC				AML	AML		
	comp=E,6545µm,0.4s						
OSSC				AML	AML		
	comp=N,6100µm,1.3s						
OSSC				AML	AML		
	comp=E,6150µm,1.3s						
EUCT	**Pavia**	**1.17**	**333**	AML	AML		
	comp=N,18150µm,1.0s						
EUCT				AML	AML		
	comp=E,19100µm,0.6s						
EUCT				AML	AML		
	comp=E,19150µm,0.6s						
CANO	**Canova, Maglio**	**1.19**	**273**	P	**Pn**	**14 38 18.0**	**-1.2**
CANO				S	**Sb**	**14 38 34.0**	**-0.6**
CANO	**Canova, Maglio**	**1.19**	**273**	P	**Pn**	**14 38 18.2**	**-1.0**
CANO				AML	AML		
	comp=E,25150µm,0.4s						
CANO				AML	AML		
	comp=N,27400µm,0.3s						
RUFI	**Rufina**	**1.22**	**105**	P	**Pb**	**14 38 18.2**	**-1.5**
RUFI	**Rufina**	**1.22**	**105**	P	**Pb**	**14 38 18.3**	**-1.3**
RUFI				AML	AML		
	comp=E,4790µm,1.1s						
RUFI				AML	AML		
	comp=N,4480µm,0.6s						
CSNT	**Castellina Chi**	**1.23**	**123**	P	**Pb**	**14 38 18.7**	**-1.2**
CSNT	**Castellina Chi**	**1.23**	**123**	P	**Pb**	**14 38 18.6**	**-1.2**
CSNT				AML	AML		
	comp=E,3655µm,0.5s						
CSNT				AML	AML		
	comp=N,4415µm,0.6s						
FIU	**Minerbio Fiu**	**1.25**	**67**	AML	AML		
	comp=E,51350µm,0.7s						
FIU				AML	AML		
	comp=N,22450µm,0.7s						
TRIF	**Trifonti**	**1.28**	**144**	P	**Pn**	**14 38 19.4**	**-1.0**
TRIF				AML	AML		
	comp=E,3645µm,0.7s						
TRIF				AML	AML		
	comp=N,3415µm,0.4s						
A313A	**Volta Mantovan**	**1.28**	**25**	P	**Pn**	**14 38 19.6**	**-0.9**
ROTM	**Rocchetta Tana**	**1.30**	**303**	P	**Pg**	**14 38 21.7**	**+0.2**
ROTM	**Rocchetta Tana**	**1.30**	**303**	AML	AML		
	comp=E,30400µm,0.5s						
ROTM				AML	AML		
	comp=N,32300µm,0.5s						
RORO	**Rocca Rossa**	**1.31**	**269**	P	**Pn**	**14 38 19.5**	**-1.4**
RORO	**Rocca Rossa**	**1.31**	**269**	P	**Pn**	**14 38 19.9**	**-1.0**
RORO				AML	AML		
	comp=N,4280µm,0.6s						
RORO				AML	AML		
	comp=E,5310µm,0.3s						
LEOD	**Capriano del C**	**1.31**	**7**	P	**Pn**	**14 38 20.3**	**-0.6**
LMD	**Lutirano**	**1.32**	**93**	P	**Pn**	**14 38 19.9**	**-1.0**
LMD	**Lutirano**	**1.32**	**93**	P	**Pn**	**14 38 19.9**	**-1.1**
LMD				AML	AML		
	comp=N,4815µm,0.8s						
LMD				AML	AML		
	comp=E,3975µm,0.4s						
SERM	**Sermide**	**1.32**	**49**	P	**Pg**	**14 38 23.0**	**+1.1**
SERM	**Sermide**	**1.32**	**49**	AML	AML		
	comp=N,9700µm,0.7s						
SERM				AML	AML		
	comp=E,7130µm,1.4s						
SERM				AML	AML		
	comp=E,12450µm,0.9s						
SERM				AML	AML		
	comp=N,6800µm,0.4s						
FROS	**Frosini**	**1.32**	**135**	P	**Pn**	**14 38 20.1**	**-1.0**
FROS	**Frosini**	**1.32**	**135**	P	**Pn**	**14 38 19.8**	**-1.3**
FROS				AML	AML		
	comp=N,5195µm,0.7s						
FROS				AML	AML		
	comp=E,4960µm,1.2s						
IMOL	**Imola, Italy**	**1.35**	**81**	⇑P	**Pg**	**14 38 26.0**	**+3.4**
MILN	**Milano**	**1.40**	**341**	AML	AML		
	comp=E,11200µm,1.2s						
MILN				AML	AML		
	comp=N,16300µm,1.0s						
MILN				AML	AML		
	comp=N,9740µm,0.3s						
MILN				AML	AML		
	comp=E,6765µm,1.1s						
ASQU	**Asqua**	**1.42**	**104**	P	**Pn**	**14 38 20.8**	**-1.6**
ASQU	**Asqua**	**1.42**	**104**	P	**Pn**	**14 38 20.9**	**-1.5**
ASQU				AML	AML		
	comp=E,2380µm,0.3s						
ASQU				AML	AML		
	comp=N,2895µm,0.4s						
SFI	**Santa Sofia**	**1.44**	**99**	P	**Pn**	**14 38 21.1**	**-1.6**
SFI				AML	AML		
	comp=E,3575µm,1.3s						
SFI				AML	AML		
	comp=N,2735µm,1.5s						
SFI				AML	AML		
	comp=E,3560µm,1.3s						
SFI				AML	AML		
	comp=N,2760µm,0.6s						
GBOS	**Grotte di Boss**	**1.47**	**274**	P	**Pn**	**14 38 22.4**	**-0.8**
GBOS	**Grotte di Boss**	**1.47**	**274**	P	**Pn**	**14 38 22.4**	**-0.8**
MGRO	**Montegrosso**	**1.50**	**266**	P	**Pn**	**14 38 22.5**	**-1.1**
MGRO				S	**Sn**	**14 38 41.7**	**-1.6**
MGRO	**Montegrosso**	**1.50**	**266**	P	**Pn**	**14 38 22.6**	**-1.0**
MGRO				AML	AML		
	comp=E,5110µm,1.3s						
MGRO				AML	AML		
	comp=N,5910µm,0.4s						
SALO	**Salr**	**1.53**	**17**	Pn	**Pb**	**14 38 25.0**	**0.0**
SALO	**Salr**	**1.53**	**17**	P	**Pg**	**14 38 25.6**	**-0.4**
SALO	**Salr**	**1.53**	**17**	AML	AML		
	comp=E,6610µm,1.2s						
SALO				AML	AML		
	comp=N,12650µm,1.0s						
SALO				AML	AML		
	comp=N,12000µm,1.0s						
SALO				AML	AML		
	comp=E,7115µm,1.2s						
CASP	**Castiglione de**	**1.54**	**152**	Pn	**Pn**	**14 38 22.9**	**-1.1**
CASP	**Castiglione de**	**1.54**	**152**	P	**Pn**	**14 38 23.0**	**-1.1**
CASP				AML	AML		
	comp=E,3125µm,0.4s						
CASP				AML	AML		
	comp=N,3560µm,0.4s						
VOBA	**Vobarno**	**1.55**	**16**	AML	AML		
	comp=E,9410µm,0.8s						
VOBA				AML	AML		
	comp=N,8795µm,0.5s						
MERA	**Merate**	**1.55**	**348**	P	**Pg**	**14 38 26.5**	**+0.1**
CRE	**Caprese Michel**	**1.59**	**109**	P	**Pn**	**14 38 23.8**	**-1.0**
CRE				AML	AML		
	comp=E,3000µm,0.3s						
CRE				AML	AML		
	comp=N,3320µm,1.5s						
ZEN8	**San Zeno di Mo**	**1.60**	**22**	P	**Pb**	**14 38 25.6**	**-0.6**
ZONE	**Zone**	**1.61**	**6**	AML	AML		
	comp=N,4170µm,0.3s						
ZONE				AML	AML		
	comp=E,1092µm,0.6s						
ZONE				AML	AML		
	comp=E,4600µm,0.6s						
ZONE				AML	AML		
	comp=N,1037µm,0.4s						
TREG	**Tregnago**	**1.64**	**33**	AML	AML		
	comp=E,13200µm,0.3s						
TREG				AML	AML		
	comp=N,9590µm,1.3s						
BALD	**Monte Baldo**	**1.66**	**23**	P	**Pb**	**14 38 27.1**	**-0.3**
MONC	**Moncucco Torin**	**1.67**	**304**	AML	AML		
	comp=N,10450µm,0.5s						
MONC				AML	AML		
	comp=E,13900µm,0.5s						
SAOF	**Saorge**	**1.69**	**265**	⇑Pn	**Pn**	**14 38 25.6**	**-0.5**
SAOF				Sn	**Sn**	**14 38 45.9**	**-1.8**
SAOF	**Saorge**	**1.69**	**265**	P	**Pn**	**14 38 25.6**	**-0.5**
SAOF				AML	AML		
	comp=N,5415µm,0.8s						
SAOF				AML	AML		
	comp=E,5935µm,0.7s						
A309A	**Martorano (FC)**	**1.70**	**89**	P	**Pn**	**14 38 24.6**	**-1.6**
MAGA	**Magasa**	**1.70**	**18**	AML	AML		
	comp=E,14600µm,1.5s						
MAGA				AML	AML		
	comp=N,9780µm,0.3s						
ROVR	**Rover Verones**	**1.71**	**29**	AML	AML		
	comp=N,4850µm,0.3s						
ROVR				AML	AML		
	comp=E,8195µm,0.4s						
ROVR				AML	AML		
	comp=E,3150µm,0.4s						
ROVR				AML	AML		
	comp=N,11950µm,1.1s						
BAG8	**Bagolino**	**1.72**	**14**	P	**Pn**	**14 38 27.0**	**+0.5**
CAFI	**Castiglion Fio**	**1.72**	**118**	P	**Pn**	**14 38 25.6**	**-0.9**
CAFI				AML	AML		
	comp=E,1245µm,0.6s						
CAFI				AML	AML		
	comp=N,1144µm,0.7s						
BURY	**Giardini Botan**	**1.72**	**258**	P	**Pn**	**14 38 25.4**	**-1.1**
SSP9	**Sansepolcro**	**1.73**	**109**	P	**Pn**	**14 38 25.9**	**-0.7**
ZOVE	**Zovencedo**	**1.73**	**41**	P	**Pb**	**14 38 27.3**	**-1.1**
PGF	**Pioggiola**	**1.73**	**202**	*e*Pn	**Pn**	**14 38 25.9**	**-0.9**
PGF	**Pioggiola**	**1.73**	**202**	*e*P	**Pn**	**14 38 27.3**	**+0.5**
PGF				*e*Sn	**Sn**	**14 38 46.0**	**-2.9**
	comp=N,670nm,0.4s						
PGF	**Pioggiola**	**1.73**	**202**	⇑Pn	**Pn**	**14 38 25.9**	**-0.9**
PGF	**Pioggiola**	**1.73**	**202**	Sn	**Sn**	**14 38 46.6**	**-2.3**
ARCI	**Arcidosso**	**1.75**	**138**	P	**Pn**	**14 38 25.9**	**-1.0**
ARCI				AML	AML		
	comp=E,618µm,1.5s						
ARCI				AML	AML		
	comp=N,583µm,1.5s						
TEOL	**Teolo**	**1.75**	**46**		**Pb**	**14 38 27.8**	**-1.0**
TEOL	**Teolo**	**1.75**	**46**	P	**Pb**	**14 38 27.6**	**-1.1**
TEOL				AML	AML		
	comp=E,18350µm,0.6s						
TEOL				AML	AML		
	comp=N,15400µm,0.6s						
MARN	**Marana (Italy)**	**1.75**	**32**	P	**Pb**	**14 38 27.7**	**-1.2**
ENR	**Entracque**	**1.77**	**273**	P	**Pn**	**14 38 27.1**	**-0.2**
ENR				AML	AML		
	comp=N,3525µm,0.7s						
ENR				AML	AML		
	comp=E,1845µm,1.5s						
PARC	**Parchiule**	**1.78**	**106**	P	**Pn**	**14 38 26.2**	**-1.1**
PARC				AML	AML		
	comp=E,1385µm,0.5s						
PARC				AML	AML		
	comp=N,1420µm,0.5s						
SBF	**Sospel**	**1.79**	**261**	*e*Pn	**Pn**	**14 38 26.5**	**-1.0**
SBF	**Sospel**	**1.79**	**261**	*e*Pg	**Pb**	**14 38 29.6**	**+0.1**
SBF				*e*Sn	**Sn**	**14 38 47.3**	**-3.0**
	comp=N,613nm,0.2s						
SBF				*e*Sg	**Sg**	**14 38 53.9**	**-0.3**
CPGN	**Carpegna, Ital**	**1.79**	**101**	P	**Pn**	**14 38 26.0**	**-1.6**
CPGN				AML	AML		
	comp=E,61550µm,1.0s						
CPGN				AML	AML		
	comp=N,94900µm,0.8s						
TURF	**col de Turini**	**1.81**	**265**	⇑Pn	**Pn**	**14 38 27.3**	**-0.5**
TURF				Pg	**Pb**	**14 38 29.6**	**-0.2**
TURF				Sn	**Sn**	**14 38 50.7**	**-0.1**
ATMC	**Monte Cedrone**	**1.82**	**112**	P	**Pn**	**14 38 27.1**	**-0.8**
ESCA	**l'Escarene**	**1.84**	**261**	Pn	**Pn**	**14 38 27.4**	**-0.8**
STV	**Sant Anna di V**	**1.84**	**274**	P	**Pn**	**14 38 27.9**	**-0.4**
STV				AML	AML		
	comp=N,1405µm,0.7s						
STV				AML	AML		
	comp=E,1225µm,0.4s						
MUGIO	**Muggio**	**1.86**	**342**	P	**Pb**	**14 38 29.9**	**-0.8**
MUGIO				AML	AML		
	comp=N,2370µm,0.5s						
MUGIO				AML	AML		
	comp=E,2695µm,0.8s						
VARE	**Varese**	**1.88**	**336**	P	**Pb**	**14 38 30.5**	**-0.6**
VARE				AML	AML		
	comp=N,3340µm,0.9s						
VARE				AML	AML		
	comp=E,3400µm,1.2s						
ATMI	**Monte Miggiano**	**1.91**	**115**	P	**Pn**	**14 38 28.4**	**-0.8**
ATMI				AML	AML		
	comp=N,4040µm,0.5s						
ATMI				AML	AML		
	comp=E,2670µm,0.4s						
CORF	**Corte**	**1.93**	**196**	Pn	**Pn**	**14 38 29.0**	**-0.4**
CORF	**Corte**	**1.93**	**196**	P	**Pn**	**14 38 29.1**	**-0.4**
CORF				AML	AML		
	comp=E,596µm,1.4s						
CORF				AML	AML		
	comp=N,524µm,0.3s						
MABI	**Malga Bissina**	**1.95**	**13**	⇑P	**Pb**	**14 38 31.0**	**-1.3**
MABI				AML	AML		
	comp=E,2065µm,0.8s						
MABI				AML	AML		
	comp=N,1445µm,0.7s						
LUSI	**Trento, Gardas**	**1.95**	**22**	⇑P	**Pb**	**14 38 30.9**	**-1.4**
LUSI				AML	AML		
	comp=E,4935µm,0.5s						
LUSI				AML	AML		
	comp=N,7085µm,1.5s						
ATPI	**Pietralunga -**	**1.96**	**110**	P	**Pn**	**14 38 28.8**	**-1.0**
ATPI				AML	AML		
	comp=N,1062µm,0.4s						
ATPI				AML	AML		
	comp=E,1058µm,0.5s						
DOSS	**Dosso del Somm**	**1.96**	**28**	P	**Pn**	**14 38 30.7**	**+0.8**
DOSS				AML	AML		
	comp=E,5110µm,0.7s						
DOSS				AML	AML		
	comp=N,6770µm,1.6s						
DOSS				AML	AML		
	comp=N,5230µm,0.6s						
DOSS				AML	AML		
	comp=E,7070µm,1.6s						
ATVO	**AVT- Monte Val**	**1.98**	**112**	P	**Pn**	**14 38 29.6**	**-0.6**
ATVO				AML	AML		
	comp=N,1325µm,0.9s						
ATVO				AML	AML		
	comp=E,1425µm,1.1s						
BHB	**Bricherasio**	**2.00**	**291**	P	**Pg**	**14 38 35.1**	**+0.2**
PIEI	**Pieia**	**2.02**	**107**	P	**Pn**	**14 38 29.7**	**-0.9**
PIEI				AML	AML		
	comp=E,824µm,0.3s						
PIEI				AML	AML		
	comp=N,650µm,0.5s						
PZZ	**Stroppo**	**2.02**	**281**	P	**Pn**	**14 38 30.1**	**-0.6**
PZZ				AML	AML		
	comp=E,2690µm,1.4s						
PZZ				AML	AML		
	comp=N,3250µm,0.8s						
NARO	**Abbazia di Nar**	**2.02**	**105**	P	**Pn**	**14 38 30.2**	**-0.5**
NARO				AML	AML		
	comp=N,622µm,1.0s						
NARO				AML	AML		
	comp=E,694µm,0.4s						
TRAV	**Traversella**	**2.04**	**312**	P	**Pn**	**14 38 31.9**	**+0.9**
TRAV				AML	AML		
	comp=E,3215µm,0.3s						
TRAV				AML	AML		
	comp=N,2710µm,1.5s						
ISO	**Isola**	**2.04**	**272**	Pn	**Pn**	**14 38 31.0**	**0.0**
MGAB	**Montegabbione**	**2.04**	**127**	P	**Pn**	**14 38 30.2**	**-0.8**
MGAB				AML	AML		
	comp=E,897µm,0.4s						
MGAB				AML	AML		
	comp=N,1020µm,0.6s						
MGAB				AML	AML		
	comp=E,824µm,1.6s						
MGAB				AML	AML		
	comp=N,900µm,0.5s						
GAGG	**Gaggia**	**2.07**	**21**	⇑P	**Pn**	**14 38 32.6**	**+1.1**
GAGG				AML	AML		
	comp=N,3685µm,1.2s						
GAGG				AML	AML		
	comp=E,2765µm,0.3s						
GAGG				AML	AML		
	comp=N,2860µm,0.4s						
GAGG				AML	AML		
	comp=E,3855µm,1.2s						
LATE	**Laterza**	**2.08**	**137**		**Pn**	**14 38 31.0**	**-0.5**
ATFO	**Monte Foce - G**	**2.10**	**111**	⇑P	**Pn**	**14 38 31.0**	**-0.8**
ATFO				AML	AML		
	comp=N,1113µm,0.5s						
ATFO				AML	AML		
	comp=E,1545µm,0.5s						
SMPL	**Sampolo**	**2.11**	**192**	Pn	**Pn**	**14 38 31.9**	**0.0**
SMPL				Sn	**Sn**	**14 38 57.0**	**-1.0**
SMPL	**Sampolo**	**2.11**	**192**	P	**Pn**	**14 38 31.8**	**0.0**
SMPL				AML	AML		
	comp=N,779µm,0.6s						
SMPL				AML	AML		
	comp=E,1135µm,0.8s						
MURB	**Monte Urbino**	**2.11**	**114**		**Pn**	**14 38 31.0**	**-0.9**
RSP	**Reno Superiore**	**2.12**	**299**	P	**Pn**	**14 38 32.7**	**+0.6**
RSP				AML	AML		
	comp=E,1805µm,1.6s						
RSP				AML	AML		
	comp=N,1450µm,0.5s						
FSSB	**Fossombrone**	**2.14**	**102**	P	**Pn**	**14 38 32.7**	**+0.4**
FSSB				AML	AML		
	comp=E,2120µm,0.4s						
FSSB				AML	AML		
	comp=N,3160µm,0.4s						
PESA	**Pesaro**	**2.14**	**95**	P	**Pb**	**14 38 33.6**	**-1.8**
PESA				AML	AML		
	comp=N,2070µm,0.5s						
PESA				AML	AML		
	comp=E,1950µm,0.6s						
MPAG	**Monte Paganucc**	**2.15**	**103**	P	**Pn**	**14 38 32.3**	**-0.2**
MPAG				AML	AML		
	comp=E,902µm,0.4s						
MPAG				AML	AML		
	comp=N,1190µm,0.5s						
FRON	**Frontone**	**2.15**	**106**	P	**Pn**	**14 38 31.8**	**-0.7**
FRON				AML	AML		
	comp=N,1115µm,1.4s						
FRON				AML	AML		
	comp=E,958µm,0.7s						
CALF	**Calern**	**2.18**	**260**	⇑Pn	**Pn**	**14 38 32.5**	**-0.4**
CIRO	**Champorcher**	**2.19**	**312**	P	**Pn**	**14 38 33.1**	**-0.1**
CIRO				AML	AML		
	comp=E,1535µm,0.8s						
CIRO				AML	AML		
	comp=N,2675µm,0.7s						
CGRP	**Cima Grappa**	**2.19**	**38**	P	**Pn**	**14 38 33.5**	**+0.3**
CGRP				AML	AML		
	comp=N,3310µm,0.6s						
CGRP				AML	AML		
	comp=E,3920µm,0.7s						
CGRP				AML	AML		
	comp=N,3275µm,0.4s						
CGRP				AML	AML		
	comp=E,3980µm,0.6s						
SSFR	**Montelago di S**	**2.22**	**108**	P	**Pn**	**14 38 32.7**	**-0.7**
SSFR				AML	AML		
	comp=E,2090µm,0.3s						
SSFR				AML	AML		
	comp=N,1645µm,0.3s						
SSFR				AML	AML		
	comp=N,1710µm,1.5s						
SSFR				AML	AML		
	comp=E,2335µm,0.3s						
ATCC	**AVT- Casa Cast**	**2.22**	**115**	P	**Pn**	**14 38 32.6**	**-0.9**
ATCC				AML	AML		
	comp=N,1640µm,0.3s						
ATCC				AML	AML		
	comp=E,2420µm,0.7s						
SURF	**Saint Ours**	**2.23**	**279**	Pn	**Pn**	**14 38 33.4**	**-0.2**
SURF				Pg	**Pb**	**14 38 38.3**	**+1.3**
FOSV	**Fossato di Vic**	**2.26**	**111**	⇑P	**Pn**	**14 38 33.3**	**-0.6**
FOSV				AML	AML		
	comp=N,653µm,0.5s						
FOSV				AML	AML		
	comp=E,589µm,0.6s						
BERNI	**Berninapass**	**2.26**	**2**	P	**Pn**	**14 38 35.7**	**+1.5**
BERNI				AML	AML		
	comp=N,1395µm,1.5s						
BERNI				AML	AML		
	comp=E,1575µm,0.5s						
CTI	**Castel Tesino**	**2.27**	**33**	Pn	**Pn**	**14 38 35.0**	**+0.9**
CTI	**Castel Tesino**	**2.27**	**33**	P	**Pn**	**14 38 35.0**	**+0.9**
CTI	**Castel Tesino**	**2.27**	**33**	P	**Pn**	**14 38 34.8**	**+0.7**
CTI				AML	AML		
	comp=E,4170µm,0.3s						
CTI				AML	AML		
	comp=N,3725µm,0.4s						
MBDF	**Montbardon**	**2.30**	**285**	*e*P	**Pn**	**14 38 34.9**	**+0.3**
MBDF	**Montbardon**	**2.30**	**285**	*e*Pg	**Pb**	**14 38 39.7**	**+1.5**
MBDF				*e*Sn	**Sn**	**14 38 59.7**	**-3.3**
	comp=N,203nm,0.3s						
MBDF				*e*Sg	**Sg**	**14 39 10.1**	**-0.5**
	comp=N,707nm,0.5s						
ARVD	**Arcevia**	**2.31**	**106**	P	**Pn**	**14 38 34.6**	**0.0**
ARVD				AML	AML		
	comp=N,660µm,1.4s						
ARVD				AML	AML		
	comp=E,540µm,1.2s						
MMK	**Mattmark**	**2.33**	**325**	P	**Pn**	**14 38 36.4**	**+1.2**
MMK				AML	AML		
	comp=N,1515µm,0.4s						
MMK				AML	AML		
	comp=E,1365µm,0.5s						
RRL	**Rocca Remolon**	**2.34**	**290**	P	**Pn**	**14 38 35.8**	**+0.6**
BRMO	**Bormio**	**2.34**	**8**	P	**Pn**	**14 38 36.9**	**+1.7**
BRMO				AML	AML		
	comp=E,768µm,1.1s						
BRMO				AML	AML		
	comp=N,574µm,0.7s						
TUE	**Stuetta**	**2.34**	**351**	Pn	**Pn**	**14 38 36.9**	**+1.6**
TUE	**Stuetta**	**2.34**	**351**	⇑P	**Pb**	**14 38 37.4**	**-1.6**
TUE				AML	AML		
	comp=N,1405µm,1.2s						
TUE				AML	AML		
	comp=E,2745µm,0.4s						
TUE				AML	AML		
	comp=N,1835µm,1.2s						
TUE				AML	AML		
	comp=E,2145µm,0.4s						
LSD	**Lago del Serru**	**2.35**	**305**	P	**Pn**	**14 38 35.7**	**+0.3**
LSD				AML	AML		
	comp=N,962µm,0.4s						
LSD				AML	AML		
	comp=E,808µm,0.8s						
AJAC	**Base Areonaval**	**2.38**	**201**	Pn	**Pn**	**14 38 35.4**	**-0.1**
AJAC				Sn	**Sn**	**14 39 03.6**	**-0.9**
AJAC	**Base Areonaval**	**2.38**	**201**	P	**Pn**	**14 38 35.1**	**-0.4**
AJAC				AML	AML		
	comp=E,1535µm,0.3s						
AJAC				AML	AML		
	comp=N,1048µm,0.3s						
SNTG	**Esanatoglia**	**2.39**	**111**	P	**Pn**	**14 38 35.1**	**-0.7**
SNTG				AML	AML		
	comp=E,533µm,0.5s						
SNTG				AML	AML		
	comp=N,545µm,0.6s						
VARN	**Col Varnada, M**	**2.42**	**40**	P	**Pn**	**14 38 36.4**	**+0.2**
VARN				AML	AML		
	comp=N,3345µm,0.4s						
VARN				AML	AML		
	comp=E,4035µm,0.5s						
VARN				AML	AML		
	comp=N,3400µm,0.4s						
VARN				AML	AML		

comp=E,3995µm,0.5s
OGAG Argentiere 2.42 278 Pn **Pn 14 38 38.0 +1.8**
FUSIO Fusio 2.45 340 P **Pn 14 38 38.1 +1.3**
FUSIO AML AML
comp=E,1450µm,0.9s
FUSIO AML AML
comp=N,864µm,0.6s
BNI Bardonecchia 2.46 292 Pn **Pn 14 38 37.4 +0.6**
BNI Bardonecchia 2.46 292 P **Pn 14 38 37.4 +0.6**
BNI Bardonecchia 2.46 292 P **Pn 14 38 37.6 +0.9**
BNI AML AML
comp=E,316µm,0.7s
BNI AML AML
comp=N,412µm,1.1s
BNI AML AML
comp=E,250µm,0.7s
BNI AML AML
comp=N,364µm,1.2s
EL6 Elcito 2.47 108 P **Pn 14 38 36.8 -0.1**
EL6 AML AML
comp=N,1424µm,0.5s
EL6 AML AML
comp=E,1054µm,0.6s
CESI CESI - Serrava 2.48 117 P **Pn 14 38 36.2 -0.8**
CESI AML AML
comp=N,583µm,0.5s
CESI AML AML
comp=E,648µm,0.6s
MOSI Grossmontoni 2.50 11 P **Pn 14 38 39.1 +1.7**
MOSI AML AML
comp=E,2790µm,1.6s
MOSI AML AML
comp=N,3600µm,0.8s
APPI Appiano 2.51 22 ⇑P **Pn 14 38 39.1 +1.7**
APPI AML AML
comp=N,3825µm,0.4s
APPI AML AML
comp=E,3685µm,0.3s
OGMO Fort Saint-Gob 2.51 296 Pn **Pn 14 38 39.7 +2.2**
EMBD Embd, Matterta 2.52 326 Pn **Pn 14 38 39.5 +1.9**
KOSI Kohlern 2.54 24 P **Pn 14 38 39.4 +1.6**
KOSI AML AML
comp=E,2085µm,0.7s
KOSI AML AML
comp=N,2015µm,0.9s
TRIGF Trigance 2.54 262 ⇑Pn **Pn 14 38 38.1 +0.1**
MRGE Morge 2.57 310 P **Pn 14 38 39.7 +1.4**
MRGE AML AML
comp=N,954µm,0.6s
MRGE AML AML
comp=E,900µm,0.6s
LMR La Mourre 2.58 253 *e*Pn **Pn 14 38 37.3 -1.0**
LMR La Mourre 2.58 253 *e*P **Pn 14 38 39.6 +1.3**
LMR *e*Sn **Sn 14 39 06.3 -3.4**
comp=E,299nm,0.2s
FDMO Fiordimonte 2.58 115 P **Pn 14 38 37.4 -0.9**
FDMO AML AML
comp=N,390µm,0.7s
FDMO AML AML
comp=E,442µm,0.5s
DIX Grande Dixence 2.60 319 P **Pn 14 38 40.2 +1.3**
DIX AML AML
comp=N,1500µm,0.5s
DIX AML AML
comp=E,822µm,0.5s
LPG La Plagne 2.60 302 *e*P **Pn 14 38 40.7 +1.8**
LPG La Plagne 2.60 302 *e*Pg **Pg 14 38 45.5 -1.0**
LPG *e*Sg **Sg 14 39 19.1 -1.1**
comp=E,276nm,0.4s
TOLF Tolfa 2.60 143 P **Pn 14 38 38.5 -0.2**
TOLF AML AML
comp=E,320µm,0.8s
TOLF AML AML
comp=N,312µm,0.5s
AGOR Agordo 2.62 35 P **Pn 14 38 40.0 +1.1**
AGOR AML AML
comp=E,1825µm,0.4s
AGOR AML AML
comp=N,1685µm,0.3s
AGOR AML AML
comp=E,1475µm,0.4s
AGOR AML AML
comp=N,1430µm,0.4s
LPL La Plagne 2.62 302 *e*P **Pn 14 38 41.0 +1.9**
LPL *e*Sg **Sg 14 39 19.2 -1.6**
comp=N,420nm,0.5s
LPL La Plagne 2.62 302 P **Pn 14 38 40.8 +1.7**
DAVOX Davos/Dischmat 2.62 360 Pg **Pb 14 38 42.1 -1.6**
comp=N,48nm,0.3s,baz=197,slow=8.1,SNR=148
DAVOX Sn **Sn 14 39 13.5 +2.5**
comp=N,88nm,0.3s,baz=143,slow=20,SNR=6.2
DAVOX Davos/Dischmat 2.62 360 P **Pn 14 38 41.1 +2.0**
DAVOX AML AML
comp=E,880µm,1.1s
DAVOX AML AML
comp=N,1170µm,0.4s
ARRO Arrone 2.63 126 P **Pn 14 38 39.0 0.0**
ARRO AML AML
comp=E,360µm,0.3s
ARRO AML AML
comp=N,392µm,0.7s
CSP1 Cessapalombo 2.64 113 ⇑P **Pn 14 38 39.1 -0.1**
NRCA Norcia 2.70 118 **Pn 14 38 39.0 -1.0**
NRCA Norcia 2.70 118 P **Pn 14 38 39.4 -0.7**
NRCA AML AML
comp=E,518µm,0.6s
NRCA AML AML
comp=N,354µm,1.1s
FLAF Flassans-sur-I 2.74 255 ⇑Pn **Pn 14 38 40.2 -0.3**
ABSI Aberstueckl 2.76 21 ⇓P **Pn 14 38 42.5 +1.4**
ABSI AML AML
comp=E,2450µm,0.9s
ABSI AML AML
comp=N,2430µm,0.7s
RSL Roselend 2.77 305 Pn **Pb 14 38 44.8 -1.5**
LNSS Leonessa 2.78 123 ⇑P **Pn 14 38 41.6 +0.4**
LNSS AML AML
comp=E,940µm,0.5s
LNSS AML AML
comp=N,815µm,0.5s
CIMO Cimolais 2.81 39 P **Pn 14 38 41.8 +0.2**
CIMO AML AML
CIMO AML AML
comp=E,628µm,1.6s
CIMO AML AML
CIMO AML AML
comp=N,684µm,0.7s
PP3 Marolino 2.81 105 AML AML
comp=E,1510µm,0.7s
PP3 AML AML
comp=N,1390µm,1.2s
PP3 AML AML
comp=E,1495µm,0.7s
PP3 AML AML
comp=N,1325µm,1.2s
SENIN Lac Senin/Sane 2.86 321 Pn **Pn 14 38 45.0 +2.6**
BRJN Brijuni 2.86 74 P **Pn 14 38 42.4 +0.2**
BNALP Bannalp 2.90 340 P **Pn 14 38 44.8 +2.0**
BNALP AML AML
comp=E,886µm,0.5s
BNALP AML AML
comp=N,1140µm,0.7s
STAL STALIGIAL 2.90 43 **Pn 14 38 42.7 0.0**
STAL STALIGIAL 2.90 43 P **Pn 14 38 42.9 +0.1**
STAL AML AML
comp=E,2215µm,1.6s
STAL AML AML
comp=N,2135µm,0.3s
STAL AML AML
comp=E,2730µm,1.3s
STAL AML AML
comp=N,2745µm,0.2s
PLONS Plons/SG 2.91 353 P **Pn 14 38 45.5 +2.5**
PLONS AML AML
comp=N,784µm,0.5s
PLONS AML AML
comp=E,904µm,0.7s
PLONS Plons/SG 2.91 353 *e*Pn **Pn 14 38 45.5 +2.5**
FETA Feichten 2.92 11 *i* Pn **Pb 14 38 46.1 -2.8**
comp=E,23nm,0.2s,SNR=65
FETA *e*Sn **Sb 14 39 26.4 +1.7**
comp=E,145nm,0.6s
FETA Feichten 2.92 11 **Pb 14 38 46.1 -2.8**
FETA **Sb 14 39 26.4 +1.7**
OGSI Sixt 2.92 312 Pn **Pn 14 38 46.1 +3.0**
RM33 Pellescritta (2.94 123 P **Pn 14 38 43.2 -0.1**
RM33 AML AML
comp=N,370µm,0.9s
RM33 AML AML
comp=N,390µm,0.5s
RM33 AML AML
comp=E,424µm,1.3s
RM33 AML AML
comp=E,444µm,1.3s
ORIF Oris-en-Rattie 2.96 286 *e*P **Pn 14 38 45.7 +2.0**
ORIF *e*Sn **Sn 14 39 15.2 -4.1**
comp=E,269nm,0.4s
ORIF *e*Sg **Sg 14 39 30.1 -1.7**
comp=E,294nm,0.5s
ORIF Oris-en-Rattie 2.96 286 Pn **Pn 14 38 45.6 +1.9**
ROSI Rosskopf 2.97 21 P **Pn 14 38 45.0 +1.1**
ROSI AML AML
comp=E,1965µm,0.7s
ROSI AML AML
comp=N,2835µm,0.7s
ARTF Artigues 3.00 260 Pn **Pn 14 38 44.0 -0.2**
MPRI Monte Prat 3.03 45 P **Pn 14 38 45.0 +0.5**
MPRI AML AML
comp=E,1230µm,0.6s
MPRI AML AML
comp=E,1610µm,0.6s
MPRI AML AML
comp=N,1815µm,0.5s
MPRI AML AML
comp=N,2380µm,0.5s
ASEAF Site Antares, 3.03 245 ⇑Pn **Pn 14 38 44.0 -0.2**
ASEAF Sn **Sn 14 39 18.4 -1.9**
CAMP Campotosto 3.04 121 P **Pn 14 38 44.8 +0.1**
CAMP AML AML
comp=E,274µm,0.5s
CAMP AML AML
comp=N,276µm,0.6s
BSTF la Bastide-des 3.07 266 ⇑Pn **Pn 14 38 45.7 +0.6**
SMRF Simiane la Rot 3.11 268 *e*P **Pn 14 38 46.8 +1.1**
SMRF *e*Sg **Sg 14 39 35.0 -1.5**
comp=N,322nm,0.4s
TERO Teramo 3.12 118 ⇓P **Pn 14 38 44.9 -0.9**
TERO AML AML
comp=E,424µm,0.5s
TERO AML AML
comp=N,417µm,0.4s
TERO AML AML
comp=N,396µm,0.4s
TERO AML AML
comp=E,406µm,0.5s
CLUD Cludinico 3.12 42 P **Pn 14 38 46.0 +0.1**
CLUD AML AML
comp=N,821µm,0.8s
CLUD AML AML
comp=E,992µm,1.4s
CLUD AML AML
comp=E,988µm,1.4s
CLUD AML AML
comp=N,844µm,0.8s
DAVA Damuels 3.13 360 *i* Pn **Pn 14 38 49.2 +3.1**
comp=N,73nm,0.2s,SNR=89
DAVA *e*Sn **Sb 14 39 28.5 -2.1**
comp=N,321nm,0.3s
DAVA Damuels 3.13 360 **Pn 14 38 49.2 +3.1**
DAVA **Sb 14 39 28.5 -2.1**
DAVA Damuels 3.13 360 *e*Pn **Pn 14 38 49.0 +3.0**
GRN Grenoble 3.14 292 Pn **Pn 14 38 49.2 +3.1**
TRI Trieste 3.16 59 **Pn 14 38 46.4 +0.1**
TRI Trieste 3.16 59 P **Pn 14 38 46.4 +0.1**
FVI Forni Avoltri 3.18 39 P **Pn 14 38 47.5 +0.9**
FVI AML AML
comp=E,418µm,0.9s
FVI AML AML
comp=N,520µm,0.4s
RUSF Rustrel 3.18 268 ⇑Pn **Pn 14 38 47.3 +0.7**
ABTA Abfaltersbach 3.18 35 *i* Pn **Pn 14 38 49.2 +2.5**
comp=N,100nm,0.3s,SNR=99
ABTA *e*Sn **Sn 14 39 27.8 +3.1**
comp=N,184nm,0.6s
ABTA Abfaltersbach 3.18 35 **Pn 14 38 49.2 +2.5**
ABTA **Sn 14 39 27.8 +3.1**
RISI Rein 3.19 28 P **Pn 14 38 48.9 +2.1**
RISI AML AML
comp=E,3045µm,0.5s
RISI AML AML
comp=N,3255µm,0.4s
SQTA Sankt Quirin 3.20 16 *i* Pn **Pn 14 38 49.9 +2.9**
comp=N,154nm,0.2s,SNR=125
SQTA *e*Sn **Sb 14 39 31.1 -1.4**
comp=N,374nm,0.6s
SQTA Sankt Quirin 3.20 16 **Pn 14 38 49.9 +2.9**
SQTA **Sb 14 39 31.1 -1.4**
SQTA Sankt Quirin 3.20 16 P **Pn 14 38 49.9 +2.9**
SQTA 14 39 31.1
SABO M.te Sabotino 3.20 54 P **Pn 14 38 47.6 +0.7**
SABO AML AML
comp=N,2195µm,0.5s
SABO AML AML
comp=N,8055µm,1.1s
SABO AML AML
comp=E,11150µm,0.5s
SABO AML AML
comp=E,2920µm,0.5s
SKDS Skadanscina 3.25 63 *e*Pn **Pn 14 38 47.5 0.0**
SKDS Skadanscina 3.25 63 *i* Pn **Pn 14 38 47.6 0.0**
SKDS *i* Sn **Sn 14 39 25.2 -1.0**
OBER Oberstdorf 3.26 5 *e*Pn **Pn 14 38 50.8 +3.0**
FAGN Fagnano 3.30 124 ⇓P **Pn 14 38 50.9 +2.6**
FAGN AML AML
comp=N,648µm,0.4s
FAGN AML AML
comp=E,734µm,0.5s
MOTA Moosalm 3.30 15 *i* Pn **Pb 14 38 51.7 -3.6**
comp=E,104nm,0.2s,SNR=161
MOTA *e*Sn **Sb 14 39 32.2 -3.3**
comp=E,102nm,0.3s
MOTA Moosalm 3.30 15 **Pb 14 38 51.7 -3.6**
MOTA **Sb 14 39 32.2 -3.3**
OGSM Saint Maurice 3.31 297 Pn **Pn 14 38 50.5 +2.1**
PTCC Patocco-Chiusa 3.32 46 P **Pn 14 38 48.7 +0.1**
PTCC AML AML
comp=E,892µm,0.9s
PTCC AML AML
comp=N,738µm,0.4s
WILA Wila 3.33 348 *e*Pn **Pn 14 38 50.8 +2.1**
ZUR Degenried 3.34 345 Pn **Pn 14 38 51.0 +2.2**
WTTA Wattenberg 3.34 21 *i* Pn **Pn 14 38 51.7 +2.8**
comp=N,398nm,0.2s,SNR=131
WTTA *e*Sn **Sb 14 39 33.1 -3.5**
comp=N,358nm,0.6s
WTTA Wattenberg 3.34 21 **Pn 14 38 51.7 +2.8**
WTTA **Sb 14 39 33.1 -3.5**
WTTA Wattenberg 3.34 21 P **Pn 14 38 51.1 +2.2**
WTTA AML AML
comp=E,1161µm,0.8s
WTTA AML AML
comp=N,832µm,0.7s
WTTA Wattenberg 3.34 21 *e*Pn **Pn 14 38 50.8 +1.8**
PTQR Pietraquaria 3.34 128 P **Pn 14 38 49.6 +0.7**
PTQR AML AML
comp=E,131µm,1.2s
PTQR AML AML
comp=N,107µm,1.1s
ZUGS Zugspitze, Sch 3.35 13 *e*Pn **Pn 14 38 52.3 +3.1**
VCEL Villa Celiera 3.38 120 ⇓P **Pn 14 38 51.1 +1.6**
VCEL AML AML
comp=N,363µm,1.0s
VCEL AML AML
comp=E,464µm,1.0s
RETA Reutte 3.39 10 *i* Pn **Pn 14 38 52.4 +2.9**
comp=E,34nm,0.2s,SNR=30
RETA *e*Sn **Sb 14 39 34.5 -3.3**
comp=E,73nm,0.3s
RETA Reutte 3.39 10 **Pn 14 38 52.4 +2.9**
RETA **Sb 14 39 34.5 -3.3**
WATA Walderalm 3.39 20 *i* Pn **Pn 14 38 52.8 +3.2**
comp=E,135nm,0.2s,SNR=85
WATA *e*Sn **Sb 14 39 35.7 -2.4**
comp=E,261nm,0.3s
WATA Walderalm 3.39 20 **Pn 14 38 52.8 +3.2**
WATA **Sb 14 39 35.7 -2.4**
WATA Walderalm 3.39 20 P **Pn 14 38 52.8 +3.2**
WATA 14 39 35.7
CADS Cadrg 3.42 51 *i* Pn **Pn 14 38 50.3 +0.4**
JAVS Javornik 3.44 58 *i* Pn **Pn 14 38 50.5 +0.3**
JAVS *e*Sn **Sn 14 39 30.4 -0.5**
JAVS IAML 14 39 32.6
comp=Z,257nm,0.3s
T0110 Collepietro 3.44 123 ⇑P **Pn 14 38 51.4 +1.2**
T0110 AML AML
comp=N,452µm,0.5s
T0110 AML AML
comp=E,578µm,0.5s
PART Garmisch-Parte 3.45 14 *e*Pn **Pn 14 38 53.2 +2.9**
SAUF chteau de Sau 3.45 268 Pn **Pn 14 38 51.3 +1.0**
GIMEL St. Georges / 3.49 314 Pn **Pn 14 38 53.5 +2.6**
ACOM Acomizza, Ital 3.50 46 P **Pn 14 38 51.7 +0.6**
ACOM AML AML
comp=E,1366µm,0.7s
ACOM AML AML
comp=N,1130µm,0.8s
ACOM AML AML
comp=N,1138µm,1.4s
ACOM AML AML
comp=E,1325µm,1.3s
UBR Ueberruh 3.53 2 *e*Pn **Pn 14 38 53.8 +2.4**
BALST Balsthal 3.53 335 *e*Pn **Pn 14 38 53.6 +2.2**
VVLD Villa Vallelon 3.57 129 P **Pn 14 38 54.1 +2.1**
VVLD AML AML
comp=E,234µm,0.6s
VVLD AML AML
comp=N,222µm,0.8s
SULZ Cheisacher 3.59 340 *e*Pn **Pn 14 38 54.1 +1.8**
CEY Cerknica 3.59 62 *e*Pn **Pn 14 38 52.5 +0.2**
MYKA Terra Mystica 3.62 46 *i* Pn **Pn 14 38 55.4 +2.7**
comp=N,15nm,0.2s,SNR=12
MYKA *e*Sn **Sn 14 39 36.8 +1.3**
comp=N,159nm,0.3s
MYKA Terra Mystica 3.62 46 **Pn 14 38 55.4 +2.7**
MYKA **Sn 14 39 36.8 +1.3**
CABF La Chapelle 3.63 314 *e*P **Pn 14 38 54.4 +1.6**
CABF *e*Sn **Sn 14 39 30.9 -4.8**
comp=N,139nm,0.4s
CABF *e*Sg **Sg 14 39 50.9 -2.2**
comp=N,224nm,0.7s
WALHA Wallhausen, DE 3.63 352 *e*Pn **Pn 14 38 54.4 +1.6**
INTR Introdacqua 3.64 125 ⇑P **Pn 14 38 54.6 +1.5**
INTR AML AML
comp=N,423µm,0.8s
INTR AML AML
comp=E,192µm,1.0s
METMA Mettma DE 3.73 343 *e*Pn **Pn 14 38 55.4 +1.2**
SLE Schleitheim 3.74 345 *e*Pn **Pn 14 38 55.4 +1.2**
LJU Ljubljana 3.79 59 *e*Pn **Pn 14 38 56.1 +1.1**
LJU Ljubljana 3.79 59 ⇓P **Pn 14 38 56.5 +1.5**
LJU S **Sn 14 39 42.0 +2.5**
LJU AML AML
comp=E,6195µm,0.2s
LJU AML AML
comp=N,10335µm,0.5s
VIVF Saint-Julien-I 3.79 282 *e*Pn **Pn 14 38 52.9 -2.1**
VIVF Saint-Julien-I 3.79 282 *e*P **Pn 14 38 55.9 +0.9**
VIVF Saint-Julien-I 3.79 282 *e*Pg **Pg 14 39 07.1 -2.2**
VIVF *e*Sn **Sn 14 39 35.6 -4.0**
comp=N,58nm,0.4s
KBA Koelnbreinsper 3.80 39 *i* Pn **Pn 14 38 57.4 +2.1**
comp=N,26nm,0.2s,SNR=31
KBA *e*Sn **Sn 14 39 42.7 +2.7**
comp=N,114nm,0.4s
KBA Koelnbreinsper 3.80 39 **Pn 14 38 57.4 +2.1**
KBA **Sn 14 39 42.7 +2.7**
KBA Koelnbreinsper 3.80 39 P **Pn 14 38 57.4 +2.1**
KBA 14 39 42.7
KBA Koelnbreinsper 3.80 39 *e*Pn **Pn 14 38 56.9 +1.6**
EMING Emmingen-Lipti 3.81 349 *e*Pn **Pn 14 38 56.4 +1.2**
SSB Saint Sauveur 3.97 288 **Pn 14 38 58.1 +0.7**
SSB Saint Sauveur 3.97 288 P **Pn 14 38 58.2 +0.7**
OBKA Obir 4.04 53 *i* Pn **Pn 14 38 59.7 +1.2**
comp=N,10nm,0.1s,SNR=22
OBKA *e*Sn **Sn 14 39 48.0 +2.1**
comp=N,119nm,0.3s
OBKA Obir 4.04 53 **Pn 14 38 59.7 +1.2**
OBKA **Sn 14 39 48.0 +2.1**
OBKA Obir 4.04 53 *e*Pn **Pn 14 38 59.5 +1.0**
BOJS Bojanci 4.05 69 *i* Pn **Pn 14 38 59.2 +0.8**
BOJS *e*Sn **Sn 14 39 44.9 -1.0**
BOJS Bojanci 4.05 69 ⇓P **Pn 14 38 59.3 +0.8**
BOJS AML AML
comp=N,1091µm,0.3s
BOJS AML AML
comp=E,1865µm,0.4s
RJOB Jochberg 4.12 29 *e*Pn **Pn 14 39 01.8 +2.3**
FUR Furstenfeldbru 4.12 13 *e*Pn **Pn 14 39 01.5 +1.9**
HINF Hinteralfeld 4.22 331 *e*P **Pn 14 39 02.6 +1.6**
HINF *e*Sn **Sn 14 39 45.5 -4.8**
comp=E,172nm,0.3s
CRES Cresnjev 4.29 65 *e*Pn **Pn 14 39 02.6 +0.8**
BFO Black Forest 4.31 346 **Pn 14 39 02.7 +0.6**
BFO Black Forest 4.31 346 P **Pn 14 39 02.7 +0.6**
BFO Black Forest 4.31 346 *e*Pn **Pn 14 39 03.0 +0.8**
BFO *e*Sn **Sn 14 39 51.3 -1.1**
LASF Ste Croix 4.34 271 *e*Pn **Pn 14 39 02.2 -0.3**
LASF Ste Croix 4.34 271 *e*P **Pn 14 39 04.5 +2.0**
LASF *e*Sn **Sn 14 39 48.6 -4.5**
comp=E,27nm,0.3s
LASF *e*Sg **Sg 14 40 14.2 -1.8**
comp=E,72nm,0.6s
BIOA Bad Ischl, Aus 4.40 35 *i* Pn **Pn 14 39 05.5 +2.1**
comp=E,24nm,0.3s,SNR=17
BIOA *i* Sn **Sn 14 39 58.3 +3.7**
comp=E,113nm,0.4s
BIOA Bad Ischl, Aus 4.40 35 **Pn 14 39 05.5 +2.1**
BIOA **Sn 14 39 58.3 +3.7**
SOKA Soboth 4.42 53 *i* Pn **Pn 14 39 04.9 +1.3**
comp=E,10nm,0.2s,SNR=24
SOKA *e*Sn **Sn 14 39 55.4 +0.4**
comp=E,90nm,0.6s
SOKA Soboth 4.42 53 **Pn 14 39 04.9 +1.3**
SOKA **Sn 14 39 55.4 +0.4**
ECH Echery 4.48 336 **Pn 14 39 05.3 +0.9**
ECH Echery 4.48 336 P **Pn 14 39 05.3 +0.9**
ECH Echery 4.48 336 *e*Pn **Pn 14 39 05.9 +1.5**
ECH *e*Sn **Sn 14 39 55.6 -1.0**
HAU Haudompre 4.57 329 *e*P **Pn 14 39 07.2 +1.5**
HAU *e*Sn **Sn 14 39 53.6 -5.1**
comp=E,410nm,0.4s
TREM Isole Tremiti 4.59 114 ⇓P **Pn 14 39 07.7 +1.7**
TREM AML AML
comp=N,414µm,0.9s
TREM AML AML
comp=E,464µm,1.1s
NORI Noerdlinger Ri 4.59 6 *e*Pn **Pn 14 39 06.3 +0.4**
NORI *e*Sn **Sn 14 39 59.1 -0.2**
CDF Champ du Feu 4.62 338 *e*P **Pn 14 39 07.9 +1.4**
CDF *e*Sn **Sn 14 39 55.0 -5.2**
comp=E,216nm,0.4s
CDF Champ du Feu 4.62 338 P **Pn 14 39 08.3 +1.8**
STU Stuttgart 4.64 354 **Pn 14 39 07.2 +0.6**
STU Stuttgart 4.64 354 P **Pn 14 39 07.2 +0.6**
STU Stuttgart 4.64 354 *e*Pn **Pn 14 39 07.9 +1.2**
VSL Villasalto 4.67 185 P **Pn 14 39 06.9 -0.2**
VSL AML AML
VSL AML AML
VSL AML AML
MOA Molln 4.79 38 *i* Pn **Pn 14 39 10.5 +1.8**
comp=E,27nm,0.2s,SNR=19
MOA *e*Sn **Sn 14 40 06.6 +2.4**
comp=E,62nm,0.3s
MOA Molln 4.79 38 **Pn 14 39 10.5 +1.8**
MOA **Sn 14 40 06.6 +2.4**
MOA Molln 4.79 38 *e*Pn **Pn 14 39 10.7 +2.0**
APRC Apricena 4.80 118 ⇑P **Pn 14 39 09.6 +0.8**
CGL Cagliari Serpe 4.81 185 P **Pn 14 39 09.8 +0.7**
HVAR Hvar 4.86 99 ⇑P **Pn 14 39 10.2 +0.5**
SGRT San Giovanni R 4.92 117 **Pn 14 39 10.4 -0.2**
SGRT San Giovanni R 4.92 117 ⇑P **Pn 14 39 10.9 +0.2**
SGRT AML AML
comp=N,134µm,0.5s
SGRT AML AML
comp=E,134µm,0.9s
SMF Signal de Mont 4.93 302 *e*P **Pn 14 39 12.0 +1.4**
SMF *e*Sn **Sn 14 40 02.4 -5.2**
comp=E,130nm,0.5s
KOGS Kog 5.04 61 P **Pn 14 39 13.9 +1.8**
MSAG Monte S. Angel 5.05 117 ⇑P **Pn 14 39 13.1 +0.7**
PYM Petit Puy Mans 5.13 290 Pn **Pn 14 39 14.7 +1.2**
MGRS Mrkonjic Grad 5.18 85 *e*Pn **Pn 14 39 15.6 +1.6**
LOR Lormes 5.24 309 *e*Pn **Pn 14 39 12.8 -2.1**
baz=127
LOR Lormes 5.24 309 *e*P **Pn 14 39 16.7 +1.8**

baz=126
LOR eSn Sn 14 40 09.8 -5.5
comp=E,111nm,0.4s
SRKY Kupres RS 5.24 88 ePn Pn 14 39 16.6 +1.6
PAGF Fort de Pagny 5.26 328 eP Pn 14 39 17.4 +2.3
PAGF eSn Sn 14 40 09.9 -5.7
comp=E,147nm,0.4s
BLY Banja Luka 5.26 81 ePn Pn 14 39 15.8 +0.7
SFTF Sexfontaines 5.26 322 eP Pn 14 39 17.6 +2.4
baz=129
SFTF eSn Sn 14 40 10.7 -5.1
comp=E,90nm,0.5s
SFTF eSg Sg 14 40 41.4 -4.1
comp=E,64nm,0.5s
AVF Avril sur Loir 5.29 302 eP Pn 14 39 17.0 +1.4
AVF eSn Sn 14 40 11.5 -5.1
comp=E,24nm,0.4s
SSF Saint Saulge 5.33 305 ePn Pn 14 39 14.1 -2.1
SSF Saint Saulge 5.33 305 eP Pn 14 39 18.1 +1.9
SSF eSn Sn 14 40 11.8 -5.8
comp=E,42nm,0.4s
SSF Saint Saulge 5.33 305 P Pn 14 39 16.9 +0.7
GEC2 GERESS Array S 5.38 28 Pn 14 39 17.1 +0.2
GEC2 GERESS Array S 5.38 28 ePn Pn 14 39 17.5 +0.7
GEC2 eSn Sn 14 40 18.6 -0.2
GERES GERESS Array B 5.38 28 Pn Pn 14 39 17.6 +0.7
comp=E,17nm,0.3s,baz=203,slow=13,SNR=298
GERES Sn Sn 14 40 18.3 -0.5
comp=E,24nm,0.3s,baz=204,slow=24,SNR=12
GERES Lg Lg 14 40 46.8
baz=219,slow=27
GERES GERESS Array B 5.38 28 Pn 14 39 16.9 +0.1
BEHE Becsehely 5.38 62 S Sn 14 40 18.8 +0.1
WET Wettzell 5.40 21 ePn Pn 14 39 17.7 +0.7
WET eSn Sn 14 40 18.4 -0.8
MEZF Maizieres J'vi 5.48 324 eP Pn 14 39 20.8 +2.6
baz=144
MEZF eSn Sn 14 40 14.8 -6.4
comp=E,60nm,0.4s
MEZF eSg Sg 14 40 48.6 -4.0
comp=E,127nm,0.8s
BGF Bois d'Agland 5.51 298 eP Pn 14 39 20.8 +2.2
BGF eSn Sn 14 40 16.3 -5.6
comp=E,116nm,0.4s
SAVF Savonnieres en 5.54 325 eP Pn 14 39 21.5 +2.5
baz=147
SAVF eSn Sn 14 40 17.2 -5.5
comp=E,83nm,0.5s
CKRC Cesky Krumlov 5.58 32 ePN Pn 14 39 20.3 +0.8
CKRC eSN Sn 14 40 22.6 -0.9
KHC Kasperske Hory 5.59 26 Pn 14 39 20.3 +0.6
KHC Kasperske Hory 5.59 26 eP Pn 14 39 20.3 +0.6
KHC e 14 40 22.8
KHC MLR MLR
comp=Z,200nm,7.0s
KHC Kasperske Hory 5.59 26 ePN Pn 14 39 20.3 +0.6
KHC eSN Sn 14 40 22.8 -1.0
KHC eSG Sg 14 40 56.0 +0.1
KHC AMS AMS 14 42 10.0
comp=Z,200nm,7.0s
GRFO Grafenberg 5.61 9 Pn 14 39 19.1 -0.9
GRFO Grafenberg 5.61 9 P Pn 14 39 19.1 -0.9
GRA1 Grafenberg Arr 5.61 9 Pn 14 39 18.9 -1.1
GRF Grafenberg Arr 5.61 9 P Pn 14 39 18.9 -1.1
MTLF Montolieu 5.61 264 ePn Pn 14 39 19.0 -1.0
MTLF Montolieu 5.61 264 eP Pn 14 39 21.8 +1.8
MTLF eSn Sn 14 40 19.1 -5.4
comp=Z,12nm,0.2s
MTLF Montolieu 5.61 264 ⇑Pn Pn 14 39 20.1 +0.1
CONA Conrad Observa 5.62 46 i Pn Pn 14 39 21.4 +1.3
comp=Z,30nm,0.3s,SNR=60
CONA eSn Sn 14 40 25.9 +1.3
comp=Z,46nm,0.4s
CONA Conrad Observa 5.62 46 Pn 14 39 21.4 +1.3
CONA Sn 14 40 25.9 +1.3
CAF Calviac 5.64 281 eP Pn 14 39 21.4 +1.0
CAF Calviac 5.64 281 P Pn 14 39 21.4 +1.0
MILB Miltenberg 5.69 356 ePn Pn 14 39 21.8 +0.8
RONA Rosalia, Austr 5.71 49 i Pn Pn 14 39 22.8 +1.5
comp=Z,28nm,0.2s,SNR=25
RONA eSn Sn 14 40 26.6 -0.2
comp=Z,65nm,0.5s
RONA Rosalia, Austr 5.71 49 Pn 14 39 22.8 +1.5
RONA Sn 14 40 26.6 -0.2
FNEB Nbias 5.79 260 ⇓Pn Pn 14 39 23.0 +0.5
MGR Morigerati 5.82 132 P Pn 14 39 24.6 +1.7
TCF Toulx Ste Croi 5.82 294 eP Pn 14 39 25.3 +2.4
TCF eSn Sn 14 40 22.6 -7.1
comp=Z,15nm,0.4s
STON Ston 5.83 100 ePn Pn 14 39 23.0 +0.1
SOP Sopron 5.84 51 P Pn 14 39 23.9 +0.8
SOP S Sn 14 40 29.2 -0.9
HYF Humbligny 5.95 304 eP Pn 14 39 26.5 +1.9
MAHO Mahon 5.97 226 Pn 14 39 25.6 +0.8
RJF Les Rejaudoux 6.07 284 ePn Pn 14 39 23.7 -2.6
RJF Les Rejaudoux 6.07 284 eP Pn 14 39 28.3 +2.0
WLF Walferdange 6.07 336 Pn 14 39 25.9 -0.4
WLF Walferdange 6.07 336 P Pn 14 39 25.9 -0.4
WLF Walferdange 6.07 336 dPn Pn 14 39 27.6 +1.4
WLF dPP PnPn 14 39 34.7 +0.9
WLF dSn Sn 14 40 38.7 +3.0
KOVH Kovagotottos 6.12 69 P Pn 14 39 29.0 +2.0
MATE Matera 6.15 122 ⇑Pn Pn 14 39 29.1 +1.8
TNS Taunus Mts 6.15 351 ePn Pn 14 39 28.8 +1.4
TNS eSn Sn 14 40 39.1 +1.5
MPLH Magyarpolny 6.15 58 P Pn 14 39 27.4 0.0
MPLH S Sn 14 40 35.9 -1.8
NAST IGS Nastaetten 6.20 348 ePn Pn 14 39 29.2 +1.2
MONQ Montcuq 6.24 275 Pn 14 39 29.3 +0.6
BGG Burgeitz 6.29 345 ePn Pn 14 39 30.7 +1.4
NKC Novy Kostel 6.32 15 eP Pn 14 39 29.7 -0.1
NKC e 14 40 39.2
NKC MLR MLR
comp=Z,300nm,5.3s
NKC Novy Kostel 6.32 15 ePN Pn 14 39 29.7 -0.1
NKC eSN Sn 14 40 39.2 -2.8
NKC AMS AMS 14 41 40.0
comp=Z,300nm,5.3s
TREB Trebinje 6.33 100 ePn Pn 14 39 29.8 0.0
BRY Bratogost 6.42 98 ePn Pn 14 39 31.7 +0.5
ZST Bratislava 6.43 49 eP Pn 14 39 32.4 +1.1
ZST e 14 40 42.8
ZST MLR MLR
comp=Z,100nm,0.5s
ZST Bratislava 6.43 49 ePN Pn 14 39 32.4 +1.1
ZST eSN Sn 14 40 42.8 -1.9
ZST eLG Lg 14 40 45.4
KOE Koeppel 6.44 348 ePn Pn 14 39 32.7 +1.4
MLS Moulis 6.50 262 ⇓Pn Pn 14 39 32.6 +0.4
HCY Herceg Novi 6.51 102 ePn Pn 14 39 32.3 0.0
MORH Mrgy, Hungar 6.52 69 ⇓P Pn 14 39 32.4 0.0
MORH Mrgy, Hungar 6.52 69 ePn Pn 14 39 32.4 0.0
MORH Mrgy, Hungar 6.52 69 P Pn 14 39 32.8 +0.3
MORH S Sn 14 40 41.6 -5.2
LFF La Frestale 6.58 280 eP Pn 14 39 35.4 +2.1
MOX Moxa 6.60 10 P Pn 14 39 35.9 +2.4
MOX Moxa 6.60 10 ePn Pn 14 39 32.9 -0.6
MOX eSn Sn 14 40 46.2 -2.4
UPM Unac-Piva 6.61 95 ePn Pn 14 39 35.5 +1.6
MODS Modra-Piesok 6.63 48 eP Pn 14 39 34.5 +0.5
MODS e 14 40 47.8
MODS MLR MLR
comp=Z,100nm,0.5s
MODS Modra-Piesok 6.63 48 ePN Pn 14 39 34.5 +0.5
MODS eSN Sn 14 40 47.8 -1.8
MODS eLG Lg 14 40 49.7
PRU Pruhonice 6.64 27 eP Pn 14 39 34.4 +0.3
PRU e 14 40 48.3
PRU MLR MLR
comp=Z,100nm,10.9s
PRU Pruhonice 6.64 27 ePN Pn 14 39 34.4 +0.3
PRU eSN Sn 14 40 48.3 -1.5
PRU AMS AMS 14 42 40.0
comp=Z,100nm,10.9s
KRUC Moravsky 6.64 40 ePN Pn 14 39 34.1 0.0
KRUC eSN Sn 14 40 47.6 -2.2
CSKK Cskako 6.68 58 P Pn 14 39 36.2 +1.6
CSKK S Sn 14 40 49.4 -1.3
BHOU Houvegnez 6.74 338 dPn Pn 14 39 37.3 +1.9
BHOU dPP PnPn 14 39 44.0 +1.0
STB Steinbach 6.76 343 ePn Pn 14 39 36.9 +1.2
RCHB Rochefort 6.79 334 dPn Pn 14 39 37.8 +1.7
SMOL Smolenice 6.80 48 eP Pn 14 39 37.7 +1.4
SMOL e 14 40 52.6
SMOL Smolenice 6.80 48 ePN Pn 14 39 37.7 +1.4
SMOL eSN Sn 14 40 52.6 -1.1
SMOL eLG Lg 14 40 54.2
CAR1 CAROLEI 6.81 134 ⇓P Pb 14 39 53.3 -1.7
BBLS Lazići 6.87 89 ePn Pn 14 39 37.9 +0.5
GIVF Givet 6.88 332 ePn Pn 14 39 34.9 -2.4
GIVF Givet 6.88 332 eP Pn 14 39 39.9 +2.6
RUDO Rudo 6.88 91 ePn Pn 14 39 37.5 +0.2
MMGO Monte Magaggia 6.90 159 ⇓P Pn 14 39 41.9 +4.2
VRAC Vranov 6.91 39 ⇓P Pn 14 39 37.3 -0.5
VRAC Vranov 6.91 39 Pn Pn 14 39 37.4 -0.4
comp=Z,1.4nm,0.3s,baz=246,slow=16,SNR=5.9
VRAC Sn Sn 14 40 52.0 -4.5
comp=Z,2.5nm,0.3s,baz=324,slow=16,SNR=5.0
VRAC Lg Lg 14 41 35.9
comp=Z,1.4nm,0.3s,baz=147,slow=23,SNR=4.5
VRAC LR LR 14 42 56.3
comp=Z,74nm,20.5s,baz=238,slow=44
comp=Z,4.3nm,0.3s
VRAC Vranov 6.91 39 ePN Pn 14 39 32.6 -5.2
VRAC Vranov 6.91 39 ePN Pn 14 39 37.9 +0.1
VRAC eSN Sn 14 40 55.6 -0.8
VRAC eSG Sg 14 41 36.3 -2.0
SRO Srobarova 6.92 55 eP Pn 14 39 38.1 +0.2
SRO e 14 40 55.0
SRO Srobarova 6.92 55 ePN Pn 14 39 38.1 +0.2
SRO eSN Sn 14 40 54.9 -1.6
BTNL Ternell 6.92 340 dPn Pn 14 39 40.2 +2.3
TEKS Tekeris 6.93 83 ePn Pn 14 39 37.1 -0.9
KLL Kalltalsperre 6.93 341 ePn Pn 14 39 39.4 +1.3
DOU Dourbes 6.95 331 dPn Pn 14 39 39.7 +1.4
DOU dPP PnPn 14 39 47.6 +1.8
DOU dSn Sn 14 40 55.2 -2.0
DOU dSnSn SnSn 14 41 10.0 +1.3
DREG Dreilaegerbach 6.96 340 ePn Pn 14 39 40.2 +1.7
MEM Membach 6.97 339 dPn Pn 14 39 40.0 +1.4
MEM dSn Sn 14 40 55.6 -2.2
BCLA Clavier 7.00 335 dPn Pn 14 39 41.0 +2.1
BCLA dP Pb 14 39 58.2 +0.1
BCLA dSn Sn 14 40 56.8 -1.7
BCLA dS Sb 14 41 23.0 +1.5
EPF Esparros 7.02 264 ePn Pn 14 39 36.9 -2.5
EPF Esparros 7.02 264 eP Pn 14 39 41.6 +2.2
HOBG Hohbusch 7.04 347 ePn Pn 14 39 41.2 +1.6
HOBG eSn Sn 14 40 59.2 -0.4
comp=Z,72nm,0.8s
PDG Podgorica 7.05 101 ⇑P Pn 14 39 41.1 +1.4
PDG Podgorica 7.05 101 Pn 14 39 40.1 +0.4
PDG Podgorica 7.05 101 ePn Pn 14 39 40.9 +1.2
BAIF Baives 7.06 329 ePn Pn 14 39 37.4 -2.4
BAIF Baives 7.06 329 eP Pn 14 39 42.5 +2.7
BAIF eSn Sn 14 40 56.7 -3.3
comp=Z,46nm,0.6s
BMRD Maredsous 7.06 332 dPn Pn 14 39 41.7 +1.9
BMRD dPP PnPn 14 39 49.2 +1.8
BSTI Sart Tilman 7.06 337 dPn Pn 14 39 42.3 +2.4
DRME Dracevica, Mon 7.08 103 ePn Pn 14 39 40.8 +0.7
PVCC Panska Ves 7.12 25 eP Pn 14 39 41.5 +0.8
PVCC MLR MLR
comp=Z,200nm,7.3s
PVCC Panska Ves 7.12 25 ePN Pn 14 39 41.5 +0.8
PVCC AMS AMS 14 43 00.0
comp=Z,200nm,7.3s
JAVC Velka Javorina 7.14 46 ePN Pn 14 39 29.0 -12
FRGS Fruska Gora 7.15 79 ⇑P Pn 14 39 41.3 +0.2
FRGS Fruska Gora 7.15 79 ePn Pn 14 39 41.1 0.0
BRG Berggiesshubel 7.26 21 Pn Pn 14 39 42.9 +0.3
BRG Amp 14 39 43.3
comp=Z,18nm,0.5s
BRG ex x 14 41 02.5
BRG Amp 14 42 04.8
comp=Z,13nm,0.7s
BRG Amp 15 10 22.0
comp=E,0.2nm,19.0s
BRG Amp 15 10 32.0
comp=N,0.2nm,15.7s
BRG Amp 15 10 36.0
comp=Z,0.4nm,14.7s
BRG Berggiesshubel 7.26 21 P Pn 14 39 42.8 +0.3
BRG e 14 41 02.4
BRG pmax pmax
comp=Z,19nm,0.5s
BRG Berggiesshubel 7.26 21 ePn Pn 14 39 42.9 +0.3
BRG eSn Sn 14 41 03.7 -1.1
DIVS Divibare 7.27 87 Pn 14 39 42.2 -0.7
DIVS Divibare 7.27 87 ePn Pn 14 39 43.1 +0.2
KOLL Kolacno 7.37 50 ePN Pn 14 39 45.0 +1.0
KOLL eSN Sn 14 41 04.2 -3.3
SJES Sjenica 7.37 93 ePn Pn 14 39 45.2 +1.0
SNF Seneffe 7.40 331 dPn Pn 14 39 47.4 +2.9
CLL Collm 7.46 15 Pn Pn 14 39 45.7 +0.4
CLL Collm 7.46 15 i P Pn 14 39 45.3 0.0
CLL pmax pmax
comp=Z,16nm,1.1s
CLL Collm 7.46 15 i Pn Pn 14 39 45.3 0.0
comp=Z,16nm,1.1s
CLL eSn Sn 14 41 04.0 -5.7
CLL eSg Sg 14 42 07.0 +11
comp=Z,93nm,1.2s
CLL Lm MLR 14 51 00.0
comp=Z,100nm,18.8s
CLL Collm 7.46 15 ePn Pn 14 39 45.5 +0.3
MFF Saint Martin d 7.47 293 eP Pn 14 39 48.4 +2.9
MFF eSg Sn 14 41 03.3 -6.9
comp=Z,26nm,0.8s
MFF Saint Martin d 7.47 293 P Pn 14 39 47.9 +2.4
KRLC Kraliky 7.56 36 eP Pn 14 39 46.9 +0.2
KRLC e 14 41 09.9
KRLC MLR MLR
comp=Z,200nm,7.6s
KRLC Kraliky 7.56 36 ePN Pn 14 39 46.9 +0.2
KRLC eSN Sn 14 41 09.9 -2.5
KRLC AMS AMS 14 43 10.0
comp=Z,200nm,7.6s
VYHS Vyhne 7.56 52 eP Pn 14 39 46.4 -0.3
VYHS e 14 41 07.3
VYHS Vyhne 7.56 52 ePN Pn 14 39 46.4 -0.3
VYHS eSN Sn 14 41 07.3 -5.1
VYHS eLG Lg 14 41 12.8
DPC Dobruska-Polom 7.58 33 eP Pn 14 39 47.2 +0.1
DPC e 14 41 10.0
DPC MLR MLR
comp=Z,200nm,5.0s
DPC Dobruska-Polom 7.58 33 ePN Pn 14 39 47.2 +0.1
DPC eSN Sn 14 41 10.0 -3.0
DPC AMS AMS 14 41 40.0
comp=Z,200nm,5.0s
UPC Upice 7.59 31 eP Pn 14 39 47.4 +0.2
UPC e 14 41 10.3
UPC MLR MLR
comp=Z,200nm,6.2s
UPC Upice 7.59 31 ePN Pn 14 39 47.4 +0.2
UPC eSN Sn 14 41 10.3 -2.8
UPC AMS AMS 14 41 50.0
comp=Z,200nm,6.2s
CHVC Chvalec 7.67 31 ePN Pn 14 39 48.4 +0.1
CHVC eSN Sn 14 41 12.8 -2.4
CHVC AMS AMS 14 43 10.0
comp=Z,200nm,8.1s
ETSF Etsaut 7.69 264 ePN Pn 14 39 46.7 -1.9
ETSF Etsaut 7.69 264 eP Pn 14 39 51.4 +2.8
ETSF eSn Sn 14 41 09.5 -6.3
comp=Z,9.5nm,0.4s
OSTC Ostas 7.71 32 ePN Pn 14 39 49.1 +0.3
OSTC eSN Sn 14 41 13.5 -2.5
OSTC AMS AMS 14 41 50.0
comp=Z,200nm,6.2s
TIR Tirane 7.86 107 Pn 14 39 50.4 -0.5
TIR Tirane 7.86 107 P Pn 14 39 50.4 -0.5
PSZ Piszkesteto 7.91 58 ⇑P Pn 14 39 52.4 +0.7
PSZ Piszkesteto 7.91 58 ⇑P Pn 14 39 52.4 +0.7
PSZ Piszkesteto 7.91 58 P Pn 14 39 52.5 +0.9
PSZ S Sn 14 41 18.3 -2.8
SJPF Ste Jean 8.13 266 ePn Pn 14 39 51.9 -2.6
SJPF Ste Jean 8.13 266 eP Pn 14 39 57.8 +3.3
LDF La Druitiere 8.22 306 ePn Pn 14 39 53.2 -2.5
LDF La Druitiere 8.22 306 eP Pn 14 39 58.6 +2.9
KEST Kesra 8.43 183 Pn Pn 14 40 00.6 +1.9
comp=Z,0.5nm,0.3s,baz=28,slow=17,SNR=4.2
KEST LR LR 14 43 12.6
comp=Z,124nm,20.3s,baz=346,slow=38
comp=Z,2.7nm,0.5s
KEST Kesra 8.43 183 Pn 14 39 58.6 -0.1
BZS Buzias 8.46 76 ⇑P Pn 14 40 00.4 +1.3
BZS Buzias 8.46 76 ⇑P Pn 14 40 00.4 +1.3
MDVR Moldovita 8.48 82 ⇓P Pn 14 39 59.5 +0.1
FLN La Foliniere 8.51 306 ePn Pn 14 39 56.7 -3.0
baz=127
FLN La Foliniere 8.51 306 eP Pn 14 40 02.5 +2.8
BOVS Bovan 8.55 89 ⇓P Pn 14 40 00.2 -0.1
GRR Gorron 8.56 303 ePn Pn 14 39 57.9 -2.5
GRR Gorron 8.56 303 eP Pn 14 40 03.1 +2.7
GRR eSg Sn 14 41 29.2 -7.7
comp=Z,19nm,0.6s
SIRR Siria 8.58 72 ⇓P Pn 14 40 01.6 +0.9
KEK Kerkira 8.62 118 Pn Pn 14 40 00.5 -0.8
HERR Herculane 8.98 81 ⇓P Pn 14 40 06.8 +0.6
FNA Florina 9.14 108 Pn 14 40 08.6 +0.2
FNA Florina 9.14 108 P Pn 14 40 08.6 +0.2
DRGR 9.39 69 ⇓P Pn 14 40 11.8 -0.1
DRGR 9.39 69 ⇓P Pn 14 40 11.8 -0.1
SGMF Saint Gilles 9.55 300 eP Pn 14 40 17.2 +3.3
QUIF Quistinic 9.82 297 eP Pn 14 40 21.0 +3.3
ROSF Rostrenen 10.03 299 ePn Pn 14 40 18.4 -2.1
ROSF Rostrenen 10.03 299 eP Pn 14 40 23.7 +3.2
KWP Kalwaria Pacla 10.34 54 Pn 14 40 25.9 +1.1
KWP Kalwaria Pacla 10.34 54 P Pn 14 40 25.9 +1.1
VOIR 10.86 78 ⇑P Pn 14 40 31.8 -0.2
VOIR 10.86 78 ⇑P Pn 14 40 31.8 -0.2
BUR01 Bucovina Ar. S 11.23 67 ⇓P Pn 14 40 38.1 +1.0
ESDC Sonseca Array 11.25 251 Pn Pn 14 40 37.9 +0.6
comp=Z,0.2nm,0.3s,baz=55,slow=14,SNR=7.3
comp=Z,0.7nm,0.4s
MLR Muntele Rosu 11.49 78 LR LR 14 45 25.7
comp=Z,81nm,20.3s,baz=257,slow=39
PAB San Pablo 11.57 251 Pn Pn 14 40 42.4 +0.7
PAB San Pablo 11.57 251 P Pn 14 40 42.4 +0.7
APE Apeiranthos 13.82 115 i P Pn 14 41 12.2 -0.3
EKA Eskdalemuir Ar 13.98 328 Pn Pn 14 41 13.9 -0.5
baz=142,slow=14
comp=Z,1.0nm,0.3s
EKA Eskdalemuir Ar 13.98 328 P Pn 14 41 14.0 -0.5
ESK Eskdalemuir 13.98 328 Pn Pn 14 41 14.3 -0.2
ESK Eskdalemuir 13.98 328 P Pn 14 41 14.3 -0.2
AKASG Malin Array Be 14.61 57 Pn Pn 14 41 23.6 +0.4
comp=Z,0.8nm,0.3s,baz=252,slow=13,SNR=2.3
comp=Z,0.6nm,0.3s
AKBB Malin Array Si 14.61 57 i P Pn 14 41 22.4 -0.8
NACGM Naroch 15.32 39 ⇓eP Pn 14 41 33.9 +1.3
baz=233
HFS Hagfors 16.17 7 Pn Pn 14 41 43.3 -0.3
comp=Z,2.8nm,0.6s,baz=186,slow=12,SNR=2.2
NB2 NORSAR Subarra 16.93 2 P P 14 41 56.9 +1.6
comp=Z,1.5nm,0.7s,baz=183,slow=14
NOA NORSAR Array B 16.93 2 Pn Pn 14 41 52.8 -0.5
comp=Z,0.4nm,0.5s,baz=184,slow=12,SNR=9.9
NC405 NORSAR Array S 17.02 3 P P 14 41 56.3 +0.1
NC405 IAmb IAmb 14 41 58.9
comp=Z,9.7nm,0.8s
VSU Vasula 17.70 30 i P P 14 42 03.6 -0.1
VSU pmax pmax
comp=Z,61nm,0.9s
BRTR Keskin Array B 18.20 96 P P 14 42 10.6 +1.1
comp=Z,0.2nm,0.3s,baz=270,slow=8.6,SNR=6.3
BRTR LR LR 14 50 06.4
comp=Z,80nm,19.3s,baz=304,slow=40
comp=Z,1.5nm,0.7s
BRTR Keskin Array B 18.20 96 i P P 14 42 11.8 +2.3
BRTR pmax pmax
comp=Z,2.0nm,0.9s
FINES FINESS Array B 19.79 23 P Pn 14 42 27.6 -0.5
comp=Z,0.9nm,0.3s,baz=188,slow=10,SNR=39
comp=Z,4.0nm,0.5s
FINES FINESS Array B 19.79 23 P Pn 14 42 28.1 0.0
FINES FINESS Array B 19.79 23 P Pn 14 42 28.1 0.0
FIA1 FINESS Array S 19.79 23 P Pn 14 42 28.4 +0.2
FIA1 IAmb IAmb 14 42 30.4
comp=Z,5.8nm,0.6s
BNN Bunyan 20.11 96 P P 14 42 29.9 -0.6
OBN Obninsk 20.33 48 i P P 14 42 31.9 -0.7
OBN pmax pmax
comp=Z,17nm,0.5s
MMAI Mount Meron Ar 22.75 111 P P 14 42 59.4 +0.5
comp=Z,1.9nm,0.6s,baz=305,slow=10,SNR=5.5
comp=Z,1.9nm,0.6s
KIV Kislovodsk 23.49 79 eP P 14 43 06.3 -0.1
KIV pmax pmax
comp=Z,6.0nm,1.1s
KBZ Khabaz 23.69 79 i P P 14 43 08.5 +0.3
KBZ pmax pmax
comp=Z,2.0nm,0.9s
ASF Jabal al Asfar 24.26 110 P P 14 43 14.2 +0.4
comp=Z,2.2nm,0.7s,baz=332,slow=8.3,SNR=4.2
comp=Z,2.2nm,0.7s
KLMR Klimovskoe 24.27 36 eP P 14 43 15.9 +2.4
KLMR pmax pmax
comp=Z,10.0nm,1.2s
KLMR Klimovskoe 24.27 36 eP P 14 43 16.0 +2.4
KLMR AMP 14 43 28.6
comp=Z,10.0nm,1.2s
GNI Garni 26.03 87 i P P 14 43 29.4 -0.5
GNI pmax pmax
comp=Z,6.0nm,0.9s
ARCES ARCESS Array B 26.66 12 P P 14 43 35.2 +0.1
comp=Z,0.5nm,0.6s,baz=208,slow=7.2,SNR=1.3
comp=Z,0.5nm,0.6s
ARCES ARCESS Array B 26.66 12 P P 14 43 34.6 -0.5
ARCES IAmb IAmb 14 43 46.0
comp=Z,7.1nm,1.3s
ARCES ARCESS Array B 26.66 12 P P 14 43 34.6 -0.5
ARCES pmax pmax
comp=Z,7.0nm,1.3s
TORD Torodi Ar. Bea 31.69 195 P P 14 44 21.0 +0.8
comp=Z,0.3nm,0.4s,baz=12,slow=8.6,SNR=5.8
comp=Z,0.3nm,0.4s
ARU Arti 32.73 51 d i P P 14 44 29.7 +0.7
ARU 14 45 34.4
ARU S S 14 49 48.5 +3.4
ARU SS SnSn 14 51 42.5 +2.2
ARU pmax pmax
comp=Z,1.0nm,0.4s
ABKAR Akbulak array 34.19 63 P P 14 44 41.7 -0.1
SPITS Spitsbergen Ar 34.23 2 P P 14 44 42.2 +0.3
comp=Z,1.1nm,1.1s,baz=248,slow=15,SNR=1.6
comp=Z,1.1nm,1.1s
GEYT Alibeck 36.48 83 P P 14 45 02.0 +0.3
comp=Z,3.8nm,0.7s,baz=301,slow=6.4,SNR=3.2
comp=Z,3.8nm,0.7s
DBIC Dimbokro 39.51 203 LR LR 15 04 20.9
comp=Z,41nm,18.4s,baz=338,slow=40
KK31 Karatay Array 43.01 69 P P 14 45 55.9 0.0
KK31 Karatay Array 43.01 69 P P 14 45 55.9 0.0
KK31 pmax pmax
comp=Z,2.0nm,0.9s
DRLN Deer Lake 45.11 301 P P 14 46 13.8 +1.2
KURK Kurchatov 45.43 56 i P P 14 46 14.0 -1.1
KURK pmax pmax
comp=Z,1.0nm,1.0s
ZALV Zalesovo Beam 47.89 50 P P 14 46 35.5 +1.1
comp=Z,0.3nm,0.3s,baz=298,slow=5.7,SNR=2.2
comp=Z,0.3nm,0.3s
SCHQ Schefferville 48.55 311 P P 14 46 41.0 +1.4
comp=Z,0.9nm,0.3s,baz=58,slow=3.3,SNR=5.8
comp=Z,0.9nm,0.3s
SCHQ Schefferville 48.55 311 P P 14 46 38.9 -0.7
SCHQ IAmb IAmb 14 46 56.2
comp=Z,3.5nm,1.1s
MK31 Makanchi Array 49.16 60 P P 14 46 44.6 +0.2
MK31 Makanchi Array 49.16 60 P P 14 46 44.6 +0.2
MK31 pmax pmax
comp=Z,1.0nm,0.7s
MKAR Makanchi Array 49.16 60 P P 14 46 45.0 +0.6
comp=Z,1.9nm,0.6s,baz=286,slow=6.4,SNR=18
comp=Z,1.9nm,0.6s
MKAR Makanchi Array 49.16 60 P P 14 46 44.1 -0.3
MKAR Makanchi Array 49.16 60 i P P 14 46 45.0 +0.6
MKAR pmax pmax
comp=Z,2.0nm,0.6s
WMQ Urumqi 53.91 61 eP P 14 47 23.3 +3.3
SONM Songino Array 62.74 49 P P 14 48 22.9 +1.2
comp=Z,0.8nm,0.8s,baz=310,slow=7.6,SNR=5.1
comp=Z,0.8nm,0.8s
SONM Songino Array 62.74 49 P P 14 48 19.5 -2.2
SONM IAmb IAmb 14 48 26.9
comp=Z,1.4nm,1.0s
SONM Songino Array 62.74 49 P P 14 48 19.5 -2.2
SONM pmax pmax
comp=Z,1.0nm,1.0s

YKA	**Yellowknife Ar**	**64.81**	**335**	P	**P**	**14 48 38.0**	**+3.1**
	comp=Z,0.5nm,0.5s,baz=57,slow=9.1,SNR=2.6						
	comp=Z,0.5nm,0.5s						
ILAR	**Eielson Array**	**69.89**	**350**	P	**P**	**14 49 07.3**	**+0.2**
	comp=Z,0.3nm,0.8s,baz=354,slow=7.6,SNR=2.2						
	comp=Z,0.3nm,0.8s						
HHC	**Hu-ho-hao-te**	**70.01**	**52**	*e*P	**P**	**14 49 07.0**	**-1.4**
HHC				pmax	pmax		
	comp=Z,28nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,4.9s						
PZH	**PanZhiHua**	**73.31**	**69**	P	**P**	**14 49 28.3**	**-0.1**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,100nm,5.4s						
TXAR	**Lajitas Array**	**85.00**	**307**	P	**P**	**14 50 35.3**	**+3.0**
	comp=Z,0.3nm,0.6s,baz=62,slow=2.5,SNR=3.1						
	comp=Z,0.3nm,0.6s						
TXAR	**Lajitas Array**	**85.00**	**307**	P	**P**	**14 50 31.8**	**-0.5**
MJAR	**Matsushiro Anr**	**87.01**	**39**	P	**P**	**14 50 41.6**	**-0.4**
	comp=Z,1.0nm,0.8s,baz=308,slow=9.6,SNR=5.0						
	comp=Z,1.0nm,0.8s						

NEIC ***23*** *14:42:42.2±0.9, 62.81N±0.02×149.46W±0.04, h72km±6km, Error ellipse: s-maj=4.4km s-min=0.4km az=138.0*
AEIC ***23*** *14:42:42±0.9, 62.82N±0.03×149.47W±0.06, h72km±6km, ML2.8, ML3.0/134(NEIC), Error ellipse: s-maj=4.4km s-min=3.9km az=135.0*
ANF ***23*** *14:42:42.3±0.1, 62.84N×149.51W, h68km±2km, ML3.2/62, ML3.2/61, Error ellipse: s-maj=1.2km s-min=1.1km az=92.0*

ISC 23 14:42:42.2±1.2, 62.84N±0.02×149.50W±0.02, h73km±7km, n204, σ0=65/214, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WAT1	**Susitna Watana**	**0.43**	**91**		**Pn**	**14 42 54.4**	**-0.4**
WAT1					**Sn**	**14 43 03.9**	**-0.1**
WAT1	**Susitna Watana**	**0.43**	**91**	P	**Pn**	**14 42 54.4**	**-0.4**
	baz=269						
WAT1				S	**Sn**	**14 43 03.8**	**-0.2**
	baz=269						
CUT	**Chulitna**	**0.56**	**219**		**Pn**	**14 42 55.8**	**-0.1**
CUT					**Sn**	**14 43 06.4**	**+0.4**
CUT	**Chulitna**	**0.56**	**219**	P	**Pn**	**14 42 55.8**	**-0.1**
	baz=41,SNR=40						
CUT				S	**Sn**	**14 43 06.2**	**+0.2**
	baz=41						
RND	**Reindeer**	**0.64**	**27**		**Pn**	**14 42 56.9**	**+0.1**
RND					**Sn**	**14 43 08.3**	**+0.8**
RND	**Reindeer**	**0.64**	**27**	IAML		14 43 08.8	
	comp=E,626nm,0.3s						
TRF	**Thorofare Moun**	**0.71**	**330**		**Pn**	**14 42 58.1**	**+0.5**
TRF					**Sn**	**14 43 10.1**	**+1.1**
TRF	**Thorofare Moun**	**0.71**	**330**	P	**Pn**	**14 42 58.1**	**+0.5**
	baz=149,SNR=22						
TRF				S	**Sn**	**14 43 09.6**	**+0.6**
	baz=149						
WAT6	**Susitna Watana**	**0.85**	**107**		**Pn**	**14 42 58.3**	**-0.9**
WAT6					**Sn**	**14 43 10.7**	**-1.1**
WAT6	**Susitna Watana**	**0.85**	**107**	P	**Pn**	**14 42 58.3**	**-0.9**
	baz=288,SNR=72						
WAT6				S	**Sn**	**14 43 10.6**	**-1.3**
	baz=288						
MCK	**McKinley**	**0.93**	**16**		**Pn**	**14 43 00.4**	**+0.4**
MCK	**McKinley**	**0.93**	**16**	IAML		14 43 15.5	
	comp=N,360nm,0.4s						
MCK	**McKinley**	**0.93**	**16**	P	**Pn**	**14 43 00.4**	**+0.4**
	baz=195,SNR=12						
MCK				S	**Sn**	**14 43 13.9**	**+0.6**
	baz=195						
KTH	**Kantishna Hill**	**0.96**	**319**		**Pn**	**14 43 01.1**	**+0.7**
KTH	**Kantishna Hill**	**0.96**	**319**	IAML		14 43 16.2	
	comp=E,285nm,0.7s						
DHY	**Denali Highway**	**1.00**	**75**		**Pn**	**14 43 00.5**	**-0.4**
DHY					**Sn**	**14 43 15.4**	**+0.4**
DHY	**Denali Highway**	**1.00**	**75**	IAML		14 43 15.9	
	comp=E,292nm,0.5s						
DHY	**Denali Highway**	**1.00**	**75**	P	**Pn**	**14 43 00.6**	**-0.4**
	baz=256,SNR=18						
DHY				S	**Sn**	**14 43 14.9**	**0.0**
	baz=256						
GHO	**Glory Hole Cre**	**1.11**	**166**		**Pn**	**14 43 01.8**	**-0.4**
GHO	**Glory Hole Cre**	**1.11**	**166**	IAML		14 43 19.2	
	comp=E,495nm,0.5s						
GHO				IAML		14 43 19.5	
	comp=N,603nm,0.4s						
M22K	**Willow**	**1.13**	**195**		**Pn**	**14 43 02.4**	**-0.1**
M22K	**Willow**	**1.13**	**195**	P	**Pn**	**14 43 02.3**	**-0.1**
	baz=16						
M22K				S	**Sn**	**14 43 17.4**	**-0.1**
	baz=16						
SML	**Sawmill**	**1.17**	**152**		**Pn**	**14 43 02.5**	**-0.5**
SML					**Sn**	**14 43 19.3**	**+0.6**
SML	**Sawmill**	**1.17**	**152**	IAML		14 43 20.3	
	comp=N,497nm,0.7s						
SML				IAML		14 43 20.4	
	comp=E,466nm,0.7s						
SML	**Sawmill**	**1.17**	**152**	P	**Pn**	**14 43 02.5**	**-0.5**
	baz=333,SNR=69						
SML				S	**Sn**	**14 43 19.3**	**+0.6**
	baz=333						
PPLA	**Purkeypile**	**1.23**	**274**		**Pn**	**14 43 04.2**	**+0.2**
PPLA	**Purkeypile**	**1.23**	**274**	P	**Pn**	**14 43 04.1**	**+0.2**
	baz=92,SNR=20						
PPLA				S	**Sn**	**14 43 20.5**	**+0.3**
	baz=92						
PMR	**Palmer**	**1.27**	**172**		**Pn**	**14 43 03.9**	**-0.2**
PMR	**Palmer**	**1.27**	**172**	IAML		14 43 21.8	
	comp=N,185nm,0.4s						
PMR				IAML		14 43 22.4	
	comp=E,326nm,0.3s						
PMR	**Palmer**	**1.27**	**172**	P	**Pn**	**14 43 03.9**	**-0.2**
	baz=353,SNR=18						
PMR				S	**Sn**	**14 43 21.0**	**+0.4**
	baz=353						
SKT	**Skwentna**	**1.28**	**229**		**Pn**	**14 43 04.1**	**-0.3**
SKT					**Sn**	**14 43 20.9**	**-0.1**
SKT	**Skwentna**	**1.28**	**229**	IAML		14 43 23.3	
	comp=N,396nm,0.3s						
SKT				IAML		14 43 24.0	
	comp=E,258nm,0.3s						
SKT	**Skwentna**	**1.28**	**229**	P	**Pn**	**14 43 04.1**	**-0.3**
	baz=48,SNR=22						
SKT				S	**Sn**	**14 43 21.0**	**-0.1**
	baz=48						
CAST	**Castle Rocks**	**1.31**	**297**		**Pn**	**14 43 04.7**	**-0.1**
CAST	**Castle Rocks**	**1.31**	**297**	P	**Pn**	**14 43 04.7**	**-0.1**
	baz=116,SNR=14						
CAST				S	**Sn**	**14 43 21.2**	**-0.6**
	baz=116						
BWN	**Browne**	**1.34**	**1**		**Pn**	**14 43 05.5**	**+0.4**
BWN	**Browne**	**1.34**	**1**	IAML		14 43 29.5	
	comp=E,123nm,0.5s						
M23K	**Glacier View**	**1.34**	**141**		**Pn**	**14 43 04.7**	**-0.5**
M23K					**Sn**	**14 43 22.6**	**+0.2**
M23K	**Glacier View**	**1.34**	**141**	P	**Pn**	**14 43 04.7**	**-0.5**
	baz=323,SNR=96						
M23K				S	**Sn**	**14 43 22.9**	**+0.5**
	baz=323						
BPAW	**Bear Paw Mtn.**	**1.43**	**333**		**Pn**	**14 43 06.5**	**+0.2**
BPAW	**Bear Paw Mtn.**	**1.43**	**333**	P	**Pn**	**14 43 06.5**	**+0.2**
	baz=151,SNR=35						
BPAW				S	**Sn**	**14 43 24.2**	**-0.4**
	baz=151						
SCM	**Sheep Creek Mo**	**1.43**	**134**		**Pn**	**14 43 06.1**	**-0.3**
SCM	**Sheep Creek Mo**	**1.43**	**134**	IAML		14 43 27.1	
	comp=E,219nm,1.1s						
SCM				IAML		14 43 28.0	
	comp=N,250nm,0.9s						
SCM	**Sheep Creek Mo**	**1.43**	**134**	P	**Pn**	**14 43 06.2**	**-0.3**
	baz=316,SNR=106						
SCM				S	**Sn**	**14 43 25.0**	**+0.4**
	baz=316						
SUA	**Susitna One**	**1.50**	**204**		**Pn**	**14 43 07.6**	**+0.3**
SUA					**Sn**	**14 43 28.2**	**+1.9**
SUA	**Susitna One**	**1.50**	**204**	IAML		14 43 31.6	
	comp=N,182nm,0.4s						
SUA	**Susitna One**	**1.50**	**204**	P	**Pn**	**14 43 07.3**	**-0.1**
	baz=23,SNR=8.4						
SUA				S	**Sn**	**14 43 26.6**	**+0.3**
	baz=23						
KNK	**Knik Glacier**	**1.51**	**161**		**Pn**	**14 43 07.5**	**+0.1**
KNK	**Knik Glacier**	**1.51**	**161**	IAML		14 43 30.9	
	comp=N,254nm,0.4s						
KNK	**Knik Glacier**	**1.51**	**161**	P	**Pn**	**14 43 07.5**	**+0.1**
	baz=342,SNR=42						
KNK				S	**Sn**	**14 43 27.1**	**+0.6**
	baz=342						
CHUM	**Lake Minchumin**	**1.65**	**311**		**Pn**	**14 43 09.6**	**+0.4**
CHUM	**Lake Minchumin**	**1.65**	**311**	P	**Pn**	**14 43 09.6**	**+0.4**
	baz=128,SNR=49						
CHUM				S	**Sn**	**14 43 29.1**	**-0.4**
	baz=128						
M24K	**Tolsona, Glenn**	**1.71**	**114**		**Pn**	**14 43 10.6**	**+0.6**
M24K					**Sn**	**14 43 31.5**	**+0.3**
M24K	**Tolsona, Glenn**	**1.71**	**114**	P	**Pn**	**14 43 10.7**	**+0.6**
	baz=297,SNR=38						
M24K				S	**Sn**	**14 43 33.0**	**+1.8**
	baz=297						
STLK	**Strandline Lak**	**1.74**	**220**		**Pn**	**14 43 10.5**	**+0.1**
WRH	**Wood River Hil**	**1.75**	**20**		**Pn**	**14 43 10.6**	**0.0**
RC01	**Rabbit Creek A**	**1.76**	**184**		**Pn**	**14 43 10.8**	**+0.1**
RC01	**Rabbit Creek A**	**1.76**	**184**	IAML		14 43 38.3	
	comp=E,191nm,0.3s						
RC01	**Rabbit Creek A**	**1.76**	**184**	P	**Pn**	**14 43 11.1**	**+0.4**
	baz=4.1,SNR=12						
RC01				S	**Sn**	**14 43 30.9**	**-1.4**
	baz=4.1						
NEA2	**Nenana**	**1.77**	**6**		**Pn**	**14 43 10.7**	**-0.2**
NEA2	**Nenana**	**1.77**	**6**	IAML		14 43 32.8	
	comp=E,81nm,0.5s						
NEA2				IAML		14 43 32.9	
	comp=N,92nm,0.3s						
NEA2	**Nenana**	**1.77**	**6**	P	**Pn**	**14 43 10.6**	**-0.2**
	baz=186,SNR=12						
NEA2				S	**Sn**	**14 43 31.0**	**-1.5**
	baz=186						
PS10	**TAPS Pump St10**	**1.79**	**69**		**Pn**	**14 43 12.4**	**+1.3**
PS10					**Sn**	**14 43 35.2**	**+2.2**
PAX	**Paxson**	**1.85**	**84**		**Pn**	**14 43 12.6**	**+0.7**
PAX	**Paxson**	**1.85**	**84**	P	**Pn**	**14 43 12.6**	**+0.7**
	baz=267,SNR=61						
PAX				S	**Sn**	**14 43 35.0**	**+0.5**
	baz=267						
K24K	**Donnelly Dome**	**1.94**	**58**		**Pn**	**14 43 14.0**	**+0.9**
K24K	**Donnelly Dome**	**1.94**	**58**	P	**Pn**	**14 43 13.7**	**+0.7**
	baz=241,SNR=57						
HDA	**Harding Lake**	**1.94**	**35**		**Pn**	**14 43 13.0**	**-0.1**
HDA					**Sn**	**14 43 36.2**	**-0.5**
HDA	**Harding Lake**	**1.94**	**35**	IAML		14 43 40.4	
	comp=N,86nm,0.4s						
HDA				IAML		14 43 41.8	
	comp=E,91nm,0.4s						
HDA	**Harding Lake**	**1.94**	**35**	P	**Pn**	**14 43 13.0**	**-0.1**
	baz=216,SNR=50						
HDA				S	**Sn**	**14 43 35.9**	**-0.7**
	baz=216						
HDA				S	**Sn**	**14 43 35.9**	**-0.7**
	baz=216						
M20K	**Styx River**	**1.95**	**242**		**Pn**	**14 43 13.0**	**-0.2**
M20K	**Styx River**	**1.95**	**242**	IAML		14 43 37.2	
	comp=E,162nm,0.3s						
M20K				IAML		14 43 38.3	
	comp=N,165nm,0.5s						
M20K	**Styx River**	**1.95**	**242**	P	**Pn**	**14 43 13.1**	**-0.2**
	baz=60,SNR=46						
M20K				S	**Sn**	**14 43 36.7**	**-0.1**
	baz=60						
SPCG	**Spurr Capps Gl**	**1.96**	**218**		**Pn**	**14 43 12.7**	**-0.7**
CCB	**Clear Creek Bu**	**1.96**	**22**		**Pn**	**14 43 13.2**	**-0.2**
SPCP	**Crater Peak Br**	**2.02**	**220**		**Pn**	**14 43 14.4**	**+0.2**
PS11	**TAPS Pump St11**	**2.02**	**110**		**Pn**	**14 43 15.2**	**+1.1**
HARP	**HAARP**	**2.06**	**101**		**Pn**	**14 43 15.4**	**+0.8**
HARP	**HAARP**	**2.06**	**101**	P	**Pn**	**14 43 15.1**	**+0.5**
	baz=284,SNR=10						
L20K	**Farewell, AK**	**2.06**	**262**		**Pn**	**14 43 14.4**	**-0.2**
L20K	**Farewell, AK**	**2.06**	**262**	P	**Pn**	**14 43 14.5**	**-0.2**
	baz=78,SNR=20						
L20K				S	**Sn**	**14 43 39.2**	**-0.2**
	baz=78						
SPU	**Mount Spurr**	**2.06**	**217**		**Pn**	**14 43 14.9**	**+0.2**
CKN	**Chakachatna No**	**2.06**	**219**		**Pn**	**14 43 16.1**	**+1.4**
PS08	**TAPS Pump Stn8**	**2.08**	**34**		**Pn**	**14 43 14.9**	**-0.1**
SPBG	**Spurr Blockage**	**2.08**	**222**		**Pn**	**14 43 16.4**	**+1.3**
SPWE	**Spurr West**	**2.13**	**224**		**Pn**	**14 43 16.8**	**+1.0**
K20K	**Telida**	**2.14**	**286**		**Pn**	**14 43 15.8**	**0.0**
K20K	**Telida**	**2.14**	**286**	P	**Pn**	**14 43 15.8**	**0.0**
	baz=102,SNR=6.3						
K20K				S	**Sn**	**14 43 40.3**	**-1.2**
	baz=102						
KLU	**Klutina**	**2.15**	**127**		**Pn**	**14 43 15.5**	**-0.5**
KLU	**Klutina**	**2.15**	**127**	IAML		14 43 48.7	
	comp=E,131nm,0.2s						
KLU	**Klutina**	**2.15**	**127**	P	**Pn**	**14 43 15.3**	**-0.7**
	baz=310,SNR=29						
TCOL	**CIGO, UAF Yank**	**2.17**	**19**		**Pn**	**14 43 16.2**	**+0.1**
TCOL	**CIGO, UAF Yank**	**2.17**	**19**	P	**Pn**	**14 43 16.2**	**+0.1**
	baz=200,SNR=24						
TCOL				S	**Sn**	**14 43 40.8**	**-1.1**
	baz=200						
COLA	**College**	**2.17**	**19**		**Pn**	**14 43 16.2**	**+0.1**
COLA	**College**	**2.17**	**19**	P	**Pn**	**14 43 16.2**	**+0.1**
	baz=200						
COLA				S	**Sn**	**14 43 41.0**	**-0.9**
	baz=200						
MDM	**Murphy Dome**	**2.20**	**14**		**Pn**	**14 43 16.5**	**-0.1**
MDM	**Murphy Dome**	**2.20**	**14**	IAML		14 43 43.1	
	comp=N,61nm,0.4s						
CAPN	**Captain Cook N**	**2.22**	**201**	P	**Pn**	**14 43 20.0**	**+3.1**
	baz=20						
JPK	**Jack Peak**	**2.26**	**141**		**Pn**	**14 43 16.3**	**-1.1**
IL31		**2.26**	**30**		**Pn**	**14 43 17.1**	**-0.1**
ILAR	**Eielson Array**	**2.26**	**30**		**Pn**	**14 43 17.1**	**-0.3**
MLY	**Manley**	**2.27**	**347**		**Pn**	**14 43 17.9**	**+0.4**
MLY	**Manley**	**2.27**	**347**	P	**Pn**	**14 43 17.6**	**+0.1**
	baz=165,SNR=14						
MLY				S	**Sn**	**14 43 43.2**	**-1.3**
	baz=165						
GLI	**Glacier Island**	**2.27**	**149**		**Pn**	**14 43 16.7**	**-0.8**
GLI	**Glacier Island**	**2.27**	**149**	IAML		14 43 50.9	
	comp=N,123nm,0.6s						
RIDG	**Independent Ri**	**2.29**	**65**		**Pn**	**14 43 18.8**	**+1.0**
RIDG	**Independent Ri**	**2.29**	**65**	IAML		14 43 49.7	
	comp=N,128nm,0.8s						
RIDG	**Independent Ri**	**2.29**	**65**	P	**Pn**	**14 43 19.0**	**+1.2**
	baz=248,SNR=82						
I23K	**Minto, Yukon-K**	**2.32**	**1**		**Pn**	**14 43 18.4**	**+0.3**
I23K	**Minto, Yukon-K**	**2.32**	**1**	P	**Pn**	**14 43 18.3**	**+0.2**
	baz=181,SNR=7.4						
SLKM	**Skilak Lake**	**2.37**	**189**		**Pn**	**14 43 19.4**	**+0.5**
DIV	**Divide**	**2.46**	**133**		**Pn**	**14 43 18.8**	**-1.4**
POKR	**Poker Plat Res**	**2.46**	**21**	Pn	**Pn**	**14 43 19.8**	**-0.3**
POKR	**Poker Plat Res**	**2.46**	**21**	P	**Pn**	**14 43 20.2**	**+0.1**
	baz=202						
M19K	**Big River Lodg**	**2.47**	**250**		**Pn**	**14 43 19.8**	**-0.4**
M19K				IAML		14 43 53.4	
	comp=E,79nm,0.3s						
M19K				IAML		14 43 53.8	
	comp=N,70nm,0.3s						
J20K	**Nowinta River**	**2.48**	**305**		**Pn**	**14 43 20.6**	**+0.3**
J20K	**Nowinta River**	**2.48**	**305**	IAML		14 43 50.1	
	comp=E,42nm,0.5s						
J20K	**Nowinta River**	**2.48**	**305**	P	**Pn**	**14 43 20.6**	**+0.3**
	baz=121,SNR=10						
FID	**Port Fidalgo**	**2.54**	**144**		**Pn**	**14 43 20.4**	**-0.7**
FID	**Port Fidalgo**	**2.54**	**144**	IAML		14 44 01.8	
	comp=N,104nm,0.3s						
J25K	**Salcha River,**	**2.56**	**44**		**Pn**	**14 43 21.2**	**-0.2**
J25K	**Salcha River,**	**2.56**	**44**	IAML		14 43 55.5	
	comp=N,58nm,0.5s						
J25K				IAML		14 43 57.3	
	comp=E,45nm,0.5s						
J25K	**Salcha River,**	**2.56**	**44**	P	**Pn**	**14 43 21.2**	**-0.2**
	baz=227,SNR=29						
L19K	**White Mountain**	**2.57**	**257**		**Pn**	**14 43 21.4**	**-0.2**
L19K	**White Mountain**	**2.57**	**257**	IAML		14 43 53.3	
	comp=E,76nm,0.6s						
L19K				IAML		14 43 54.5	
	comp=N,45nm,0.7s						
L19K	**White Mountain**	**2.57**	**257**	P	**Pn**	**14 43 21.2**	**-0.4**
	baz=73,SNR=12						
I21K	**Tanana**	**2.59**	**336**		**Pn**	**14 43 22.5**	**+0.7**
I21K	**Tanana**	**2.59**	**336**	P	**Pn**	**14 43 22.4**	**+0.7**
	baz=154,SNR=7.6						
N25K	**Chitina, Valde**	**2.61**	**116**		**Pn**	**14 43 21.9**	**-0.2**
N25K	**Chitina, Valde**	**2.61**	**116**	IAML		14 43 59.0	
	comp=E,53nm,0.8s						
N25K				IAML		14 44 00.9	
	comp=N,76nm,0.5s						
N25K	**Chitina, Valde**	**2.61**	**116**	P	**Pn**	**14 43 22.2**	**0.0**
	baz=300						
MENT	**Mentasta**	**2.65**	**85**		**Pn**	**14 43 22.8**	**+0.2**
DFR	**Drift River**	**2.72**	**215**		**Pn**	**14 43 24.5**	**+0.9**
SCRK	**Sand Creek**	**2.73**	**63**		**Pn**	**14 43 24.2**	**+0.4**
SCRK	**Sand Creek**	**2.73**	**63**	IAML		14 43 58.9	
	comp=N,39nm,0.3s						
SCRK				IAML		14 43 59.1	
	comp=E,50nm,0.5s						
SCRK	**Sand Creek**	**2.73**	**63**	P	**Pn**	**14 43 24.2**	**+0.4**
	baz=247,SNR=18						
SEW	**Seward**	**2.75**	**180**		**Pn**	**14 43 24.3**	**+0.3**
SEW	**Seward**	**2.75**	**180**	P	**Pn**	**14 43 24.2**	**+0.3**
	baz=360						
NCT	**North Crescent**	**2.81**	**217**		**Pn**	**14 43 26.2**	**+1.3**
L26K	**Log Cabin Wild**	**2.82**	**83**		**Pn**	**14 43 25.8**	**+0.8**
L26K	**Log Cabin Wild**	**2.82**	**83**	P	**Pn**	**14 43 25.3**	**+0.4**
	baz=268,SNR=21						
HIN	**Hinchinbrook I**	**2.84**	**148**		**Pn**	**14 43 24.1**	**-1.1**
HIN	**Hinchinbrook I**	**2.84**	**148**	IAML		14 44 15.8	
	comp=E,82nm,0.5s						
HIN				IAML		14 44 18.0	
	comp=N,60nm,0.5s						
RDWB	**Redoubt West**	**2.85**	**216**		**Pn**	**14 43 26.2**	**+0.8**
RSO	**Redoubt South**	**2.85**	**215**		**Pn**	**14 43 26.6**	**+1.1**
RED	**Redoubt Volcan**	**2.89**	**214**		**Pn**	**14 43 26.9**	**+0.9**
BMRM	**Bremner River**	**2.98**	**127**		**Pn**	**14 43 25.9**	**-1.3**
BMRM	**Bremner River**	**2.98**	**127**	P	**Pn**	**14 43 26.0**	**-1.2**
	baz=311						
TTA	**Tatalina**	**2.98**	**275**		**Pn**	**14 43 26.2**	**-1.0**
TTA				IAML		14 44 01.4	
	comp=N,23nm,0.4s						
TTA				IAML		14 44 01.4	
	comp=E,35nm,0.8s						
TTA	**Tatalina**	**2.98**	**275**	P	**Pn**	**14 43 27.0**	**-0.3**
	baz=89						
TT01	**Tatalina**	**2.99**	**274**		**Pn**	**14 43 27.1**	**-0.2**
H23K	**Yukon River**	**3.00**	**360**		**Pn**	**14 43 28.2**	**+0.9**
H23K	**Yukon River**	**3.00**	**360**	P	**Pn**	**14 43 27.9**	**+0.6**
	baz=179						
GLB	**Gilahina Butte**	**3.02**	**115**		**Pn**	**14 43 27.4**	**-0.3**
GLB	**Gilahina Butte**	**3.02**	**115**	IAML		14 44 13.0	
	comp=N,44nm,0.8s						
GLB				IAML		14 44 15.0	
	comp=E,37nm,0.7s						
H24K	**Noodor Dome**	**3.09**	**12**		**Pn**	**14 43 29.4**	**+0.8**
H24K	**Noodor Dome**	**3.09**	**12**	P	**Pn**	**14 43 29.0**	**+0.4**
	baz=194						
N19K	**Bonanza Creek**	**3.12**	**232**		**Pn**	**14 43 29.1**	**0.0**
N19K	**Bonanza Creek**	**3.12**	**232**	IAML		14 45 24.9	
	comp=N,40nm,0.7s						
N19K	**Bonanza Creek**	**3.12**	**232**	P	**Pn**	**14 43 28.7**	**-0.4**
	baz=48						
J26L	**Joseph Creek**	**3.13**	**55**		**Pn**	**14 43 29.4**	**+0.3**
J26L	**Joseph Creek**	**3.13**	**55**	IAML		14 44 09.6	
	comp=E,48nm,0.3s						
J26L	**Joseph Creek**	**3.13**	**55**	P	**Pn**	**14 43 29.5**	**+0.3**
	baz=240,SNR=46						
BRLK	**Bradley Lake**	**3.16**	**193**		**Pn**	**14 43 30.1**	**+0.5**
BRSE	**Bradley Lake S**	**3.17**	**191**	P	**Pn**	**14 43 29.4**	**-0.3**
	baz=11						
H22K	**Ishtalitna Cre**	**3.17**	**346**	P	**Pn**	**14 43 30.0**	**+0.3**
	baz=164						
H21K	**Melozitna Rive**	**3.17**	**334**		**Pn**	**14 43 30.1**	**+0.4**
H21K	**Melozitna Rive**	**3.17**	**334**	P	**Pn**	**14 43 30.1**	**+0.4**
	baz=151,SNR=27						
VRDI	**Verde Repeater**	**3.28**	**117**		**Pn**	**14 43 30.4**	**-0.9**
VRDI	**Verde Repeater**	**3.28**	**117**	IAML		14 44 21.6	
	comp=E,24nm,0.8s						
VRDI				IAML		14 44 23.3	
	comp=N,34nm,0.6s						
SVW2	**Sparrevohn**	**3.36**	**241**		**Pn**	**14 43 32.0**	**-0.3**
SVW2	**Sparrevohn**	**3.36**	**241**	IAML		14 45 04.7	
	comp=E,48nm,0.4s						
MCARA	**McCarthy VSAT**	**3.38**	**113**	P	**Pn**	**14 43 32.4**	**0.0**
	baz=298						
CNPM	**China Poot**	**3.43**	**195**		**Pn**	**14 43 33.2**	**-0.1**
L27K	**Beaver Creek,**	**3.51**	**83**		**Pn**	**14 43 33.9**	**-0.4**
L27K	**Beaver Creek,**	**3.51**	**83**	IAML		14 44 35.2	
	comp=N,16nm,1.1s						
L27K	**Beaver Creek,**	**3.51**	**83**	P	**Pn**	**14 43 34.0**	**-0.4**
	baz=269,SNR=10						
BC03		**3.53**	**83**		**Pn**	**14 43 34.2**	**-0.3**
BCAR	**Beaver Creek A**	**3.53**	**83**	Pn	**Pn**	**14 43 34.2**	**-0.4**
K27K	**Chicken**	**3.54**	**67**		**Pn**	**14 43 34.8**	**+0.1**
K27K				IAML		14 44 18.6	
	comp=E,15nm,0.5s						
K27K				IAML		14 44 20.2	
	comp=N,15nm,0.8s						
BC05	**Beaver Creek A**	**3.54**	**83**		**Pn**	**14 43 34.4**	**-0.4**
HMT	**Hamilton**	**3.55**	**133**		**Pn**	**14 43 33.8**	**-1.0**
M27K	**Edge Creek, AK**	**3.56**	**94**		**Pn**	**14 43 35.3**	**+0.2**
M27K				IAML		14 44 33.4	
	comp=N,24nm,1.3s						
M27K				IAML		14 44 36.7	
	comp=E,20nm,1.1s						
M27K	**Edge Creek, AK**	**3.56**	**94**	P	**Pn**	**14 43 35.3**	**+0.2**
	baz=281						
IM03		**3.65**	**332**		**Pn**	**14 43 36.6**	**+0.5**
IMAR	**Indian Mountai**	**3.65**	**332**		**Pn**	**14 43 36.4**	**+0.2**
I26K	**Coal Creek Min**	**3.73**	**46**		**Pn**	**14 43 37.6**	**+0.3**
I26K				IAML		14 44 24.3	
	comp=N,21nm,0.4s						
I26K				IAML		14 44 26.5	
	comp=E,20nm,0.8s						
N18K	**Kilae Creek**	**3.73**	**237**		**Pn**	**14 43 36.9**	**-0.4**
N18K	**Kilae Creek**	**3.73**	**237**	P	**Pn**	**14 43 36.9**	**-0.4**
	baz=52						
O18K	**Koktuh Hills**	**4.07**	**225**	Pn	**Pn**	**14 43 41.8**	**-0.1**
O18K	**Koktuh Hills**	**4.07**	**225**	P	**Pn**	**14 43 41.6**	**-0.3**
	baz=40						
YUK3	**Moose Creek**	**4.35**	**100**	P	**Pn**	**14 43 46.1**	**+0.1**
	baz=

M22K	**Willow**	**0.50**	**91**	P		**Pn**	**14 44 43.1**	**0.0**
	baz=272								
M22K				S		**Sn**	**14 44 53.9**	**+0.5**
	baz=272								
SPCG	**Spurr Capps Gl**	**0.62**	**221**			**Pn**	**14 44 44.0**	**-0.4**
SPCG						**Sn**	**14 44 55.1**	**-0.7**
SPCP	**Crater Peak Br**	**0.69**	**224**			**Pn**	**14 44 44.7**	**-0.3**
SPCP						**Sn**	**14 44 56.5**	**-0.4**
CKN	**Chakachatna No**	**0.73**	**222**			**Pn**	**14 44 45.1**	**-0.3**
SPBG	**Spurr Blockage**	**0.76**	**229**			**Pn**	**14 44 45.5**	**-0.4**
SPBG						**Sn**	**14 44 58.3**	**+0.1**
BGL	**Barrier Glacie**	**0.77**	**230**			**Pn**	**14 44 45.6**	**-0.3**
FIS	**Fire Island**	**0.77**	**143**			**Pn**	**14 44 46.9**	**+1.2**
FIS						**Sn**	**14 44 59.9**	**+1.9**
FIS	**Fire Island**	**0.77**	**143**	IAML			14 45 02.8	
	comp=E,655nm,0.4s								
CUT	**Chulitna**	**0.77**	**33**			**Pn**	**14 44 46.1**	**+0.3**
CUT	**Chulitna**	**0.77**	**33**	P		**Pn**	**14 44 46.1**	**+0.3**
	baz=215,SNR=14								
CUT				S		**Sn**	**14 44 58.9**	**+0.8**
	baz=215								
SPWE	**Spurr West**	**0.82**	**234**			**Pn**	**14 44 46.4**	**-0.2**
M20K	**Styx River**	**0.94**	**278**			**Pn**	**14 44 47.6**	**-0.1**
M20K	**Styx River**	**0.94**	**278**	IAML			14 45 01.7	
	comp=E,211nm,0.5s								
M20K				IAML			14 45 03.0		
	comp=N,204nm,0.6s								
M20K	**Styx River**	**0.94**	**278**	P		**Pn**	**14 44 47.6**	**-0.1**
	baz=96,SNR=11								
M20K				S		**Sn**	**14 45 01.1**	**-0.5**
	baz=96								
RC01	**Rabbit Creek A**	**0.97**	**134**			**Pn**	**14 44 47.9**	**-0.1**
RC01	**Rabbit Creek A**	**0.97**	**134**	IAML			14 45 04.2		
	comp=N,365nm,0.3s								
RC01				IAML			14 45 06.4		
	comp=E,259nm,0.3s								
RC01	**Rabbit Creek A**	**0.97**	**134**	P		**Pn**	**14 44 47.8**	**-0.1**
	baz=315								
RC01				S		**Sn**	**14 45 01.9**	**-0.1**
	baz=315								
PMR	**Palmer**	**0.99**	**99**			**Pn**	**14 44 47.8**	**-0.4**
PMR						**Sn**	**14 45 01.9**	**-0.5**
PMR	**Palmer**	**0.99**	**99**	IAML			14 45 03.6		
	comp=N,301nm,0.2s								
PMR				IAML			14 45 04.1		
	comp=E,207nm,0.4s								
PMR	**Palmer**	**0.99**	**99**	P		**Pn**	**14 44 47.7**	**-0.4**
	baz=281,SNR=14								
PMR				S		**Sn**	**14 45 02.0**	**-0.5**
	baz=281								
CAPN	**Captain Cook N**	**1.00**	**179**			**Pn**	**14 44 50.0**	**+1.7**
GHO	**Glory Hole Cre**	**1.07**	**88**			**Pn**	**14 44 49.3**	**0.0**
GHO	**Glory Hole Cre**	**1.07**	**88**	IAML			14 45 06.9		
	comp=N,283nm,0.5s								
PPLA	**Purkeypile**	**1.23**	**338**			**Pn**	**14 44 51.5**	**+0.1**
PPLA						**Sn**	**14 45 07.8**	**-0.2**
PPLA	**Purkeypile**	**1.23**	**338**	P		**Pn**	**14 44 51.4**	**0.0**
	baz=157								
PPLA				S		**Sn**	**14 45 07.6**	**-0.3**
	baz=157								
RDT	**Redoubt**	**1.33**	**207**			**Pn**	**14 44 52.5**	**-0.1**
SLKM	**Skilak Lake**	**1.34**	**159**			**Pn**	**14 44 52.5**	**-0.1**
KNK	**Knik Glacier**	**1.34**	**104**			**Pn**	**14 44 52.4**	**-0.3**
KNK						**Sn**	**14 45 10.6**	**+0.3**
KNK	**Knik Glacier**	**1.34**	**104**	IAML			14 45 16.2		
	comp=N,270nm,0.5s								
KNK	**Knik Glacier**	**1.34**	**104**	P		**Pn**	**14 44 52.4**	**-0.3**
	baz=286,SNR=9.5								
KNK				S		**Sn**	**14 45 10.3**	**0.0**
	baz=286								
SML	**Sawmill**	**1.35**	**87**			**Pn**	**14 44 52.4**	**-0.3**
SML	**Sawmill**	**1.35**	**87**	IAML			14 45 11.4		
	comp=N,255nm,0.5s								
SML	**Sawmill**	**1.35**	**87**	P		**Pn**	**14 44 52.5**	**-0.3**
	baz=270,SNR=13								
SML				S		**Sn**	**14 45 10.2**	**-0.3**
	baz=270								
DFR	**Drift River**	**1.39**	**213**			**Pn**	**14 44 53.1**	**-0.1**
L20K	**Farewell, AK**	**1.46**	**301**			**Pn**	**14 44 54.1**	**-0.1**
L20K						**Sn**	**14 45 13.1**	**+0.1**
L20K	**Farewell, AK**	**1.46**	**301**	P		**Pn**	**14 44 54.1**	**-0.1**
	baz=118								
L20K				S		**Sn**	**14 45 12.6**	**-0.3**
	baz=118								
NCT	**North Crescent**	**1.48**	**216**			**Pn**	**14 44 54.5**	**+0.1**
RDWB	**Redoubt West**	**1.51**	**213**			**Pn**	**14 44 54.9**	**0.0**
RDWB						**Sn**	**14 45 14.9**	**+0.6**
M19K	**Big River Lodg**	**1.53**	**277**			**Pn**	**14 44 55.0**	**-0.1**
M19K	**Big River Lodg**	**1.53**	**277**	IAML			14 45 15.1		
	comp=N,136nm,0.5s								
M19K				IAML			14 45 15.6		
	comp=E,167nm,0.8s								
RED	**Redoubt Volcan**	**1.56**	**211**			**Pn**	**14 44 55.4**	**0.0**
WAT1	**Susitna Watana**	**1.63**	**48**			**Pn**	**14 44 56.5**	**+0.2**
WAT1	**Susitna Watana**	**1.63**	**48**	P		**Pn**	**14 44 56.5**	**+0.2**
	baz=230								
WAT1				S		**Sn**	**14 45 16.9**	**+0.1**
	baz=230								
M23K	**Glacier View**	**1.64**	**87**			**Pn**	**14 44 56.0**	**-0.4**
M23K						**Sn**	**14 45 17.4**	**+0.4**
M23K	**Glacier View**	**1.64**	**87**	P		**Pn**	**14 44 56.0**	**-0.4**
	baz=271,SNR=16								
M23K				S		**Sn**	**14 45 16.7**	**-0.3**
	baz=271								
CAST	**Castle Rocks**	**1.71**	**346**			**Pn**	**14 44 57.6**	**+0.2**
CAST	**Castle Rocks**	**1.71**	**346**	IAML			14 45 20.5		
	comp=E,164nm,0.5s								
CAST				IAML			14 45 20.9		
	comp=N,136nm,0.3s								
CAST	**Castle Rocks**	**1.71**	**346**	P		**Pn**	**14 44 57.5**	**+0.1**
	baz=166								
CAST				S		**Sn**	**14 45 18.4**	**-0.4**
	baz=166								
TRF	**Thorofare Moun**	**1.74**	**13**			**Pn**	**14 44 58.2**	**+0.3**
TRF	**Thorofare Moun**	**1.74**	**13**	IAML			14 45 25.3		
	comp=E,90nm,0.4s								
TRF	**Thorofare Moun**	**1.74**	**13**	P		**Pn**	**14 44 58.2**	**+0.3**
	baz=194,SNR=9.4								
TRF				S		**Sn**	**14 45 19.6**	**0.0**
	baz=194								
L19K	**White Mountain**	**1.79**	**285**			**Pn**	**14 44 58.7**	**+0.3**
L19K						**Sn**	**14 45 20.7**	**+0.2**
L19K	**White Mountain**	**1.79**	**285**	IAML			14 45 22.1		
	comp=N,76nm,0.8s								
L19K				IAML			14 45 22.2		
	comp=E,100nm,0.7s								
L19K	**White Mountain**	**1.79**	**285**	P		**Pn**	**14 44 58.7**	**+0.3**
	baz=102,SNR=23								
L19K				S		**Sn**	**14 45 20.4**	**-0.2**
	baz=102								
KTH	**Kantishna Hill**	**1.80**	**4**			**Pn**	**14 44 59.1**	**+0.5**
KTH	**Kantishna Hill**	**1.80**	**4**	IAML			14 45 23.1		
	comp=E,173nm,1.2s								
WAT6	**Susitna Watana**	**1.81**	**61**			**Pn**	**14 44 58.8**	**0.0**
WAT6	**Susitna Watana**	**1.81**	**61**	P		**Pn**	**14 44 58.7**	**0.0**
	baz=245,SNR=13								
WAT6				S		**Sn**	**14 45 20.8**	**-0.4**
	baz=245								
SCM	**Sheep Creek Mo**	**1.83**	**86**			**Pn**	**14 44 58.6**	**-0.3**
SCM						**Sn**	**14 45 22.0**	**+0.5**
SCM	**Sheep Creek Mo**	**1.83**	**86**	P		**Pn**	**14 44 58.6**	**-0.3**
	baz=270,SNR=12								
SCM				S		**Sn**	**14 45 21.7**	**+0.2**
	baz=270								
O20K	**Slope Mountain**	**1.83**	**203**			**Pn**	**14 44 59.5**	**+0.6**
O20K	**Slope Mountain**	**1.83**	**203**	P		**Pn**	**14 44 59.4**	**+0.4**
	baz=22								
O20K				S		**Sn**	**14 45 21.9**	**+0.4**
	baz=22								
N19K	**Bonanza Creek**	**1.86**	**241**			**Pn**	**14 44 59.5**	**+0.1**
N19K	**Bonanza Creek**	**1.86**	**241**	IAML			14 45 27.6		
	comp=E,42nm,0.7s								
N19K				IAML			14 45 41.9		
	comp=N,42nm,0.8s								
N19K	**Bonanza Creek**	**1.86**	**241**	P		**Pn**	**14 44 59.5**	**+0.1**
	baz=57								
SEW	**Seward**	**1.86**	**152**			**Pn**	**14 45 00.7**	**+1.4**
RND	**Reindeer**	**1.97**	**32**			**Pn**	**14 45 00.8**	**0.0**
RND						**Sn**	**14 45 26.2**	**+1.4**
IVE	**Iliamna Volcan**	**1.97**	**208**			**Pn**	**14 45 00.7**	**-0.1**
BRLK	**Bradley Lake**	**2.01**	**176**			**Pn**	**14 45 01.5**	**+0.2**
BRLK	**Bradley Lake**	**2.01**	**176**	IAML			14 45 31.2		
	comp=E,88nm,0.5s								
BRLK				IAML			14 45 31.8		
	comp=N,105nm,0.7s								
BRSE	**Bradley Lake S**	**2.04**	**174**			**Pn**	**14 45 02.5**	**+0.9**
BRSE	**Bradley Lake S**	**2.04**	**174**	P		**Pn**	**14 45 02.4**	**+0.7**
	baz=354								
K20K	**Telida**	**2.09**	**321**			**Pn**	**14 45 02.5**	**+0.2**
K20K	**Telida**	**2.09**	**321**	P		**Pn**	**14 45 02.5**	**+0.2**
	baz=139								
GLI	**Glacier Island**	**2.16**	**112**			**Pn**	**14 45 01.7**	**-1.5**
GLI	**Glacier Island**	**2.16**	**112**	P		**Pn**	**14 45 01.8**	**-1.5**
	baz=296								
GLI				S		**Sn**	**14 45 27.6**	**-1.6**
	baz=296								
CHUM	**Lake Minchumin**	**2.19**	**347**			**Pn**	**14 45 04.2**	**+0.4**
CHUM						**Sn**	**14 45 29.5**	**-0.5**
CHUM	**Lake Minchumin**	**2.19**	**347**	P		**Pn**	**14 45 04.1**	**+0.4**
	baz=166,SNR=15								
CHUM				S		**Sn**	**14 45 29.5**	**-0.5**
	baz=166								
O19K	**Port Alsworth**	**2.20**	**226**			**Pn**	**14 45 04.0**	**+0.2**
O19K	**Port Alsworth**	**2.20**	**226**	P		**Pn**	**14 45 03.9**	**+0.2**
	baz=43,SNR=8.2								
DHY	**Denali Highway**	**2.20**	**52**			**Pn**	**14 45 04.1**	**+0.1**
DHY	**Denali Highway**	**2.20**	**52**	IAML			14 45 32.7		
	comp=N,72nm,0.6s								
DHY				IAML			14 45 50.1		
	comp=E,52nm,0.9s								
DHY	**Denali Highway**	**2.20**	**52**	P		**Pn**	**14 45 04.0**	**0.0**
	baz=235								
SVW2	**Sparrevohn**	**2.22**	**254**			**Pn**	**14 45 03.8**	**-0.3**
MCK	**McKinley**	**2.23**	**27**			**Pn**	**14 45 04.8**	**+0.6**
MCK	**McKinley**	**2.23**	**27**	IAML			14 45 32.7		
	comp=E,48nm,0.3s								
MCK				IAML			14 45 51.9		
	comp=N,41nm,0.6s								
MCK	**McKinley**	**2.23**	**27**	P		**Pn**	**14 45 04.7**	**+0.5**
	baz=209								
MCK				S		**Sn**	**14 45 31.1**	**+0.2**
	baz=209								
CNPM	**China Poot**	**2.25**	**181**			**Pn**	**14 45 04.7**	**+0.3**
CNPM	**China Poot**	**2.25**	**181**	IAML			14 45 37.8		
	comp=E,117nm,0.6s								
CNPM				IAML			14 45 38.2		
	comp=N,168nm,0.5s								
BPAW	**Bear Paw Mtn.**	**2.35**	**2**			**Pn**	**14 45 05.7**	**-0.1**
BPAW	**Bear Paw Mtn.**	**2.35**	**2**	IAML			14 45 34.1		
	comp=E,53nm,0.3s								
BPAW				IAML			14 45 34.4		
	comp=N,50nm,0.6s								
BPAW	**Bear Paw Mtn.**	**2.35**	**2**	P		**Pn**	**14 45 05.6**	**-0.2**
	baz=182								
BPAW				S		**Sn**	**14 45 32.2**	**-1.5**
	baz=182								
M24K	**Tolsona, Glenn**	**2.39**	**79**			**Pn**	**14 45 06.8**	**+0.5**
M24K	**Tolsona, Glenn**	**2.39**	**79**	IAML			14 45 52.9		
	comp=N,75nm,1.1s								
M24K	**Tolsona, Glenn**	**2.39**	**79**	P		**Pn**	**14 45 06.8**	**+0.5**
	baz=264,SNR=5.4								
M24K				S		**Sn**	**14 45 35.7**	**+0.9**
	baz=264								
FID	**Port Fidalgo**	**2.48**	**112**			**Pn**	**14 45 05.7**	**-1.9**
KLU	**Klutina**	**2.52**	**94**			**Pn**	**14 45 07.5**	**-0.7**
KLU	**Klutina**	**2.52**	**94**	IAML			14 45 37.9		
	comp=E,60nm,0.4s								
KLU				IAML			14 45 38.0		
	comp=N,75nm,0.5s								
KLU	**Klutina**	**2.52**	**94**	P		**Pn**	**14 45 07.2**	**-1.0**
	baz=279								
KLU				S		**Sn**	**14 45 37.2**	**-0.8**
	baz=279								
N18K	**Kilae Creek**	**2.53**	**247**			**Pn**	**14 45 08.1**	**-0.2**
N18K	**Kilae Creek**	**2.53**	**247**	P		**Pn**	**14 45 08.0**	**-0.2**
	baz=62,SNR=8.6								
TT01	**Tatalina**	**2.54**	**299**			**Pn**	**14 45 08.3**	**+0.1**
TTA	**Tatalina**	**2.54**	**300**	P		**Pn**	**14 45 08.4**	**-0.1**
	baz=115								
HIN	**Hinchinbrook I**	**2.65**	**119**			**Pn**	**14 45 08.3**	**-1.5**
HIN	**Hinchinbrook I**	**2.65**	**119**	IAML			14 45 42.5		
	comp=E,64nm,0.7s								
HIN				IAML			14 45 46.8		
	comp=N,55nm,0.7s								
DIV	**Divide**	**2.67**	**101**			**Pn**	**14 45 08.8**	**-1.4**
PS11	**TAPS Pump St11**	**2.71**	**81**			**Pn**	**14 45 10.4**	**-0.3**
O18K	**Koktuh Hills**	**2.75**	**228**			**Pn**	**14 45 11.5**	**+0.3**
O18K	**Koktuh Hills**	**2.75**	**228**	IAML			14 45 45.2		
	comp=N,35nm,0.7s								
O18K	**Koktuh Hills**	**2.75**	**228**	P		**Pn**	**14 45 11.5**	**+0.3**
	baz=44,SNR=8.2								
J20K	**Nowinta River**	**2.78**	**332**	Pn		**Pn**	**14 45 11.5**	**0.0**
J20K	**Nowinta River**	**2.78**	**332**	P		**Pn**	**14 45 11.6**	**0.0**
	baz=150								
J20K				S		**Sn**	**14 45 43.2**	**-0.9**
	baz=150								
EYAK	**Cordova Ski Ar**	**2.90**	**112**	P		**Pn**	**14 45 12.6**	**-0.5**
	baz=297								
HARP	**HAARP**	**2.90**	**75**			**Pn**	**14 45 14.0**	**+0.8**
HARP	**HAARP**	**2.90**	**75**	P		**Pn**	**14 45 13.8**	**+0.5**
	baz=260								
PAX	**Paxson**	**2.92**	**63**			**Pn**	**14 45 14.0**	**+0.4**
PAX	**Paxson**	**2.92**	**63**	P		**Pn**	**14 45 13.9**	**+0.4**
	baz=248,SNR=9.4								
NEA2	**Nenana**	**3.00**	**18**			**Pn**	**14 45 14.1**	**-0.4**
NEA2	**Nenana**	**3.00**	**18**	P		**Pn**	**14 45 14.0**	**-0.5**
	baz=200								
WRH	**Wood River Hil**	**3.06**	**26**			**Pn**	**14 45 15.2**	**-0.1**
P18K	**Big Mountain,**	**3.11**	**222**			**Pn**	**14 45 16.3**	**+0.3**
P18K	**Big Mountain,**	**3.11**	**222**	P		**Pn**	**14 45 16.1**	**+0.1**
	baz=38								
N25K	**Chitina, Valde**	**3.14**	**90**			**Pn**	**14 45 16.0**	**-0.5**
N25K	**Chitina, Valde**	**3.14**	**90**	IAML			14 45 52.8		
	comp=E,21nm,0.5s								
N25K				IAML			14 45 54.9		
	comp=N,32nm,0.6s								
N25K	**Chitina, Valde**	**3.14**	**90**	P		**Pn**	**14 45 15.9**	**-0.5**
	baz=276								
K24K	**Donnelly Dome**	**3.21**	**48**			**Pn**	**14 45 19.2**	**+1.7**
Q20K	**Shuyak Island**	**3.22**	**191**	P		**Pn**	**14 45 17.0**	**-0.5**
	baz=10								
BMRM	**Bremner River**	**3.26**	**101**			**Pn**	**14 45 16.7**	**-1.4**
BMRM	**Bremner River**	**3.26**	**101**	IAML			14 45 59.3		
	comp=E,28nm,0.4s								
BMRM				IAML			14 46 18.1		
	comp=N,26nm,0.6s								
CCB	**Clear Creek Bu**	**3.27**	**26**			**Pn**	**14 45 17.9**	**-0.2**
HDA	**Harding Lake**	**3.28**	**34**			**Pn**	**14 45 18.5**	**+0.2**
HDA	**Harding Lake**	**3.28**	**34**	IAML			14 45 57.9		
	comp=E,23nm,0.5s								
HDA				IAML			14 46 19.5		
	comp=N,31nm,0.8s								
HDA	**Harding Lake**	**3.28**	**34**	P		**Pn**	**14 45 18.4**	**+0.2**
	baz=218								
MLY	**Manley**	**3.29**	**3**			**Pn**	**14 45 18.6**	**+0.2**
MLY	**Manley**	**3.29**	**3**	IAML			14 46 09.8		
	comp=N,18nm,0.4s								
MLY				IAML			14 46 10.2		
	comp=E,17nm,0.5s								
MLY	**Manley**	**3.29**	**3**	P		**Pn**	**14 45 18.7**	**+0.2**
	baz=184								
PS08	**TAPS Pump Stn8**	**3.42**	**33**			**Pn**	**14 45 20.5**	**+0.3**
I21K	**Tanana**	**3.45**	**354**	P		**Pn**	**14 45 21.4**	**+0.8**
	baz=174								
TCOL	**CIGO, UAF Yank**	**3.46**	**24**			**Pn**	**14 45 20.9**	**+0.1**
TCOL	**CIGO, UAF Yank**	**3.46**	**24**	P		**Pn**	**14 45 20.9**	**+0.1**
	baz=207								
COLA	**College**	**3.46**	**24**			**Pn**	**14 45 20.9**	**+0.1**
COLA	**College**	**3.46**	**24**	P		**Pn**	**14 45 20.9**	**+0.1**
	baz=207								
MDM	**Murphy Dome**	**3.47**	**21**			**Pn**	**14 45 21.1**	**+0.1**
I23K	**Minto, Yukon-K**	**3.50**	**13**			**Pn**	**14 45 21.3**	**+0.1**
I23K	**Minto, Yukon-K**	**3.50**	**13**	IAML			14 46 26.5		
	comp=N,18nm,0.9s								
I23K	**Minto, Yukon-K**	**3.50**	**13**	P		**Pn**	**14 45 21.3**	**+0.1**
	baz=194								
RIDG	**Independent Ri**	**3.52**	**53**			**Pn**	**14 45 22.8**	**+1.2**
RIDG	**Independent Ri**	**3.52**	**53**	IAML			14 46 13.8		
	comp=N,24nm,0.7s								
RIDG				IAML			14 46 17.6		
	comp=E,30nm,0.6s								
RIDG	**Independent Ri**	**3.52**	**53**	P		**Pn**	**14 45 22.6**	**+0.9**
	baz=239								
O17K	**Koliganek Bris**	**3.52**	**238**			**Pn**	**14 45 22.0**	**+0.4**
O17K	**Koliganek Bris**	**3.52**	**238**	P		**Pn**	**14 45 22.0**	**+0.4**
	baz=53,SNR=8.9								
GLB	**Gilahina Butte**	**3.53**	**92**			**Pn**	**14 45 21.3**	**-0.5**
GLB	**Gilahina Butte**	**3.53**	**92**	IAML			14 46 03.7		
	comp=E,18nm,0.5s								
GLB				IAML			14 46 20.2		
	comp=N,17nm,0.6s								
IL31		**3.59**	**31**			**Pn**	**14 45 22.4**	**0.0**
ILAR	**Eielson Array**	**3.59**	**31**	Pn		**Pn**	**14 45 22.5**	**0.0**
P17K	**Kvichak River**	**3.66**	**228**			**Pn**	**14 45 24.4**	**+0.9**
P17K	**Kvichak River**	**3.66**	**228**	P		**Pn**	**14 45 24.4**	**+0.9**
	baz=43,SNR=9.9								
MENT	**Mentasta**	**3.67**	**68**	Pn		**Pn**	**14 45 24.3**	**+0.7**
MENT				IAML			14 46 29.8		
	comp=N,31nm,0.5s								
POKR	**Poker Plat Res**	**3.76**	**25**			**Pn**	**14 45 24.9**	**0.0**
POKR	**Poker Plat Res**	**3.76**	**25**	P		**Pn**	**14 45 25.1**	**+0.3**
	baz=208								
L26K	**Log Cabin Wild**	**3.86**	**67**	Pn		**Pn**	**14 45 26.4**	**+0.2**
L26K				IAML			14 45 59.4		
	comp=E,27nm,0.4s								
L26K				IAML			14 46 24.4		
	comp=N,26nm,0.4s								
J25K	**Salcha River,**	**3.88**	**40**			**Pn**	**14 45 26.9**	**+0.3**
J25K	**Salcha River,**	**3.88**	**40**	IAML			14 45 57.3		
	comp=N,13nm,0.6s								
J25K				IAML			14 46 21.2		
	comp=E,14nm,0.5s								
J25K	**Salcha River,**	**3.88**	**40**	P		**Pn**	**14 45 26.9**	**+0.3**
	baz=225,SNR=17								
M26K	**Nabesna, AK**	**3.90**	**77**			**Pn**	**14 45 26.5**	**-0.3**
M26K	**Nabesna, AK**	**3.90**	**77**	IAML			14 46 34.2		
	comp=E,11nm,0.5s								
M26K				IAML			14 46 43.9		
	comp=N,20nm,0.6s								
M26K	**Nabesna, AK**	**3.90**	**77**	P		**Pn**	**14 45 26.5**	**-0.3**
	baz=264								
MCARA	**McCarthy VSAT**	**3.92**	**92**	P		**Pn**	**14 45 27.1**	**+0.1**
	baz=279								
SCRK	**Sand Creek**	**3.97**	**53**			**Pn**	**14 45 27.9**	**+0.2**
SCRK	**Sand Creek**	**3.97**	**53**	IAML			14 46 12.6		
	comp=N,11nm,0.4s								
SCRK				IAML			14 46 19.3		
	comp=E,11nm,0.6s								
SCRK	**Sand Creek**	**3.97**	**53**	P		**Pn**	**14 45 27.8**	**0.0**
	baz=239								
H21K	**Melozitna Rive**	**3.98**	**350**	Pn		**Pn**	**14 45 28.1**	**+0.4**
H21K				IAML			14 46 13.7		
	comp=N,9.9nm,0.5s								
H21K				IAML			14 46 30.1		
	comp=E,14nm,0.5s								
H21K	**Melozitna Rive**	**3.98**	**350**	P		**Pn**	**14 45 28.2**	**+0.4**
	baz=169								
O16K	**Kokwok River B**	**4.04**	**240**	P		**Pn**	**14 45 28.7**	**+0.1**
	baz=54								
Q16K	**King Salmon**	**4.13**	**224**	P		**Pn**	**14 45 30.6**	**+0.8**
	baz=39								
H23K	**Yukon River**	**4.14**	**9**			**Pn**	**14 45 30.5**	**+0.5**
H23K	**Yukon River**	**4.14**	**9**	P		**Pn**	**14 45 30.6**	**+0.5**
	baz=191								
H22K	**Ishtalitna Cre**	**4.15**	**359**	P		**Pn**	**14 45 30.9**	**+0.8**
	baz=179								
TGL	**Tana Glacier**	**4.15**	**100**			**Pn**	**14 45 30.7**	**+0.4**
TGL	**Tana Glacier**	**4.15**	**100**	IAML			14 46 20.1		
	comp=E,18nm,0.5s								
PTPK	**Patty Peak**	**4.22**	**94**			**Pn**	**14 45 30.4**	**-0.8**
WAX	**Waxell Ridge**	**4.25**	**104**	Pn		**Pn**	**14 45 31.9**	**+0.4**
BALM	**Baldy**	**4.31**	**96**			**Pn**	**14 45 32.1**	**-0.3**
KIAG	**Kiagna River**	**4.33**	**97**			**Pn**	**14 45 32.3**	**-0.4**
H24K	**Noodor Dome**	**4.34**	**18**	P		**Pn**	**14 45 33.2**	**+0.5**
	baz=201								
P16K	**Nushagak River**	**4.35**	**234**	P		**Pn**	**14 45 33.7**	**+0.9**
	baz=48								
IM03		**4.39**	**346**			**Pn**	**14 45 33.7**	**+0.4**
IMAR	**Indian Mountai**	**4.39**	**346**	Pn		**Pn**	**14 45 33.7**	**+0.4**
J26L	**Joseph Creek**	**4.41**	**48**			**Pn**	**14 45 34.4**	**+0.6**
J26L	**Joseph Creek**	**4.41**	**48**	IAML			14 46 29.6		
	comp=N,12nm,0.6s								
J26L				IAML			14 46 31.8		
	comp=E,10nm,0.5s								
J26L	**Joseph Creek**	**4.41**	**48**	P		**Pn**	**14 45 34.3**	**+0.5**
	baz=235,SNR=6.0								
M27K	**Edge Creek, AK**	**4.41**	**78**	Pn		**Pn**	**14 45 33.9**	**0.0**
M27K				IAML			14 46 59.5		
	comp=E,6.7nm,1.2s								
M27K				IAML			14 47 15.4		
	comp=N,7.0nm,0.9s								
M27K	**Edge Creek, AK**	**4.41**	**78**	P		**Pn**	**14 45 33.8**	**0.0**
	baz=266								
L27K	**Beaver Creek,**	**4.54**	**69**	Pn		**Pn**	**14 45 35.3**	**-0.1**
L27K	**Beaver Creek,**	**4.54**	**69**	P		**Pn**	**14 45 35.4**	**-0.1**
	baz=258								
BAGL	**Bagley Icefiel**	**4.58**	**102**			**Pn**	**14 45 35.8**	**-0.2**
BARN	**Barnard Glacie**	**4.62**	**95**			**Pn**	**14 45 36.7**	**0.0**
BARN	**Barnard Glacie**	**4.62**	**95**	IAML			14 46 31.2		
	comp=N,8.3nm,0.6s								
BARN				IAML			14 46 31.6		
	comp=E,9.9nm,0.6s								
GRNC	**Granite Creek**	**4.67**	**99**			**Pn**	**14 45 36.7**	**-0.6**
GRNC	**Granite Creek**	**4.67**	**99**	IAML			14 46 32.2		
	comp=E,7.4nm,0.4s								
GRNC		

BATG	**Bathurst New B**	**21.39**	**258**	P	**P**	**14 57 58.5**	**+0.1**
BATG				IAmb	IAmb	14 58 04.5	
	comp=Z,34nm,1.3s						
LMN	**Caledonia Moun**	**21.61**	**253**	P	**P**	**14 58 00.8**	**0.0**
LMN				IAmb	IAmb	14 58 05.1	
	comp=Z,22nm,0.9s						
D62A	**Allapoint, All**	**23.14**	**261**	P	**P**	**14 58 18.0**	**+1.1**
D62A				IAmb	IAmb	14 58 20.8	
	comp=Z,16nm,1.0s						
F64A	**Sherman**	**23.51**	**258**	P	**P**	**14 58 21.5**	**+0.8**
F64A				IAmb	IAmb	14 58 31.5	
	comp=Z,15nm,1.0s						
NOA	**NORSAR Array B**	**23.72**	**60**	P	**P**	**14 58 22.1**	**-0.6**
	comp=Z,0.8nm,1.0s,baz=281,slow=9.5,SNR=2.8						
	comp=Z,0.8nm,1.0s						
F63A	**Nahmakanta, Br**	**24.02**	**258**	P	**P**	**14 58 26.3**	**+0.7**
F63A				IAmb	IAmb	14 58 29.6	
	comp=Z,24nm,1.4s						
F62A	**Pittston Farm,**	**24.37**	**259**	P	**P**	**14 58 30.1**	**+1.4**
BTNL	**Ternell**	**24.56**	**87**	*d*P	**P**	**14 58 32.1**	**+1.7**
	comp=Z,6.1nm,1.2s						
G62A	**West of Eustis**	**25.10**	**259**	P	**P**	**14 58 36.6**	**+1.2**
G62A				IAmb	IAmb	14 58 37.4	
	comp=Z,10nm,0.7s						
HFS	**Hagfors**	**25.10**	**62**	P	**P**	**14 58 36.1**	**+0.8**
	comp=Z,13nm,1.3s,baz=224,slow=12,SNR=6.2						
HFS				LR	LR	15 06 45.8	
	comp=Z,208nm,20.7s,baz=286,slow=32						
	comp=Z,13nm,1.3s						
ESDC	**Sonseca Array**	**26.12**	**117**	P	**P**	**14 58 45.6**	**+0.9**
	comp=Z,1.4nm,0.9s,baz=321,slow=8.8,SNR=8.9						
ESDC				LR	LR	15 07 15.9	
	comp=Z,282nm,18.2s,baz=318,slow=32						
	comp=Z,1.4nm,0.9s						
ESDC	**Sonseca Array**	**26.12**	**117**	P	**P**	**14 58 45.5**	**+0.8**
SENIN	**Lac Senin/Sane**	**27.54**	**94**	P	**P**	**14 58 59.3**	**+1.7**
CLL	**Collm**	**27.99**	**80**	*e*P	**P**	**14 59 00.0**	**-1.3**
CLL				L	L	15 09 00.0	
	comp=Z,300nm,20.7s						
EUNU	**Eureka**	**28.48**	**343**	P	**P**	**14 59 05.6**	**0.0**
EUNU				IAmb	IAmb	14 59 12.4	
	comp=Z,5.8nm,0.5s						
DAVOX	**Davos/Dischmat**	**28.72**	**91**	LR	LR	15 10 19.5	
	comp=Z,510nm,18.3s,baz=262,slow=36						
ARCES	**ARCESS Array B**	**28.77**	**39**	P	**P**	**14 59 08.3**	**+0.2**
	comp=Z,1.3nm,0.8s,baz=274,slow=8.1,SNR=5.6						
ARCES				LR	LR	15 08 15.0	
	comp=Z,229nm,19.5s,baz=288,slow=32						
	comp=Z,1.3nm,0.8s						
RES	**Resolute Bay**	**28.95**	**331**	LR	LR	15 10 22.9	
	comp=Z,110nm,18.3s,baz=85,slow=36						
GERES	**GERESS Array B**	**29.66**	**84**	P	**P**	**14 59 16.9**	**+0.6**
	comp=Z,0.2nm,0.4s,baz=327,slow=6.4,SNR=4.0						
GERES				LR	LR	15 10 33.7	
	comp=Z,218nm,18.3s,baz=281,slow=35						
	comp=Z,0.2nm,0.4s						
GERES	**GERESS Array B**	**29.66**	**84**	P	**P**	**14 59 17.3**	**+1.0**
FINES	**FINESS Array B**	**30.59**	**55**	P	**P**	**14 59 25.0**	**+0.7**
	comp=Z,1.0nm,0.8s,baz=283,slow=9.2,SNR=4.5						
FINES				LR	LR	15 11 01.3	
	comp=Z,104nm,18.2s,baz=292,slow=35						
	comp=Z,1.0nm,0.8s						
FINES	**FINESS Array B**	**30.59**	**55**	P	**P**	**14 59 22.8**	**-1.5**
VRAC	**Vranov**	**30.99**	**81**	LR	LR	15 11 58.3	
	comp=Z,334nm,18.2s,baz=296,slow=36						
MDT	**Midelt**	**31.38**	**126**	LR	LR	15 10 53.9	
	comp=Z,82nm,19.3s,baz=342,slow=34						
COWI	**Conover**	**34.83**	**276**	P	**P**	**15 00 01.7**	**+0.2**
P53A	**Whipple**	**34.90**	**261**	P	**P**	**15 00 04.2**	**+2.0**
EYMN	**Ely**	**35.02**	**281**	P	**P**	**15 00 03.8**	**+0.6**
EYMN				IAmb	IAmb	15 00 06.6	
	comp=Z,10nm,1.1s						
KEST	**Kesra**	**35.97**	**106**	P	**P**	**15 00 09.5**	**-2.0**
	comp=Z,2.3nm,0.7s,baz=130,slow=4.2,SNR=4.1						
KEST				LR	LR	15 14 20.9	
	comp=Z,98nm,18.1s,baz=268,slow=35						
	comp=Z,2.3nm,0.7s						
B35A	**Bob, Littlefor**	**35.99**	**283**	P	**P**	**15 00 10.9**	**-0.5**
BLA	**Blacksburg**	**36.01**	**257**	P	**P**	**15 00 12.1**	**+0.3**
ULM	**Lac du Bonnet**	**36.05**	**287**	P	**P**	**15 00 11.2**	**-0.8**
	comp=Z,2.0nm,0.5s,baz=80,slow=9.2,SNR=3.2						
	comp=Z,2.0nm,0.5s						
BURAR	**Bucovina Array**	**36.67**	**78**	P	**P**	**15 00 15.9**	**-1.5**
KLMR	**Klimovskoe**	**36.82**	**52**	*e*	**P**	**15 00 16.9**	**-1.5**
KLMR				AMP		15 00 20.1	
	comp=Z,29nm,1.5s						
AKASG	**Malin Array Be**	**37.01**	**71**	P	**P**	**15 00 19.6**	**-0.5**
	comp=Z,1.3nm,0.7s,baz=309,slow=8.0,SNR=8.7						
AKASG				LR	LR	15 15 25.9	
	comp=Z,141nm,19.7s,baz=253,slow=36						
	comp=Z,1.3nm,0.7s						
VAE	**Valguarnera**	**37.41**	**99**	LR	LR	15 14 11.4	
	comp=Z,115nm,19.2s,baz=331,slow=34						
OBN	**Obninsk**	**38.31**	**61**	LR	LR	15 15 18.4	
	comp=Z,48nm,19.6s,baz=359,slow=35						
MLR	**Muntele Rosu**	**38.37**	**80**	LR	LR	15 16 37.8	
	comp=Z,319nm,19.0s,baz=310,slow=37						
YKA	**Yellowknife Ar**	**38.63**	**313**	P	**P**	**15 00 33.2**	**-0.5**
	comp=Z,1.4nm,0.9s,baz=58,slow=8.9,SNR=3.6						
	comp=Z,1.4nm,0.9s						
CPCT	**Cooper Cave**	**39.53**	**259**	P	**P**	**15 00 42.3**	**+0.8**
CPCT				IAmb	IAmb	15 00 49.2	
	comp=Z,12nm,1.3s						
ECSD	**EROS Data Cent**	**40.44**	**279**	P	**P**	**15 00 49.1**	**+0.2**
SIUC	**Southern Illin**	**40.47**	**266**	P	**P**	**15 00 49.7**	**+0.4**
S44A	**Carbondale**	**40.50**	**266**	P	**P**	**15 00 50.1**	**+0.6**
CCM	**Cathedral Cave**	**41.35**	**268**	P	**P**	**15 00 56.5**	**0.0**
PBMO	**Poplar Bluff**	**41.81**	**266**	P	**P**	**15 00 59.4**	**-0.9**
PBMO				IAmb	IAmb	15 01 03.3	
	comp=Z,8.9nm,0.8s						
INK	**Inuvik**	**42.26**	**327**	P	**P**	**15 01 04.3**	**+0.7**
	comp=Z,1.2nm,0.3s,baz=22,slow=8.3,SNR=2.5						
INK				LR	LR	15 19 27.6	
	comp=Z,62nm,18.1s,baz=20,slow=37						
	comp=Z,1.2nm,0.3s						
INK	**Inuvik**	**42.26**	**327**	P	**P**	**15 01 03.1**	**-0.4**
MGMO	**Mountain Grove**	**42.56**	**268**	P	**P**	**15 01 06.3**	**-0.2**
LCAR	**Lake Charles**	**42.73**	**266**	P	**P**	**15 01 07.8**	**0.0**
WHAR	**Wooly Hollow**	**43.92**	**266**	P	**P**	**15 01 17.7**	**+0.3**
WHAR				IAmb	IAmb	15 01 24.1	
	comp=Z,11nm,1.2s						
W41B	**Gary Mavity, V**	**43.99**	**266**	P	**P**	**15 01 16.9**	**-1.1**
W41B				IAmb	IAmb	15 01 20.3	
	comp=Z,6.5nm,0.9s						
EPYK	**Eagle Plains**	**44.42**	**326**	P	**P**	**15 01 21.6**	**+0.5**
EPYK				IAmb	IAmb	15 01 29.4	
	comp=Z,12nm,1.4s						
EGMT	**Eagleton**	**44.65**	**293**	IAmb	IAmb	15 01 31.3	
	comp=Z,9.8nm,1.1s						
IDI	**Anoyia**	**44.79**	**92**	LR	LR	15 21 51.8	
	comp=Z,82nm,19.2s,baz=260,slow=38						
W39A	**Magazine**	**44.82**	**268**	P	**P**	**15 01 25.0**	**+0.4**
SJG	**San Juan**	**45.09**	**225**	LR	LR	15 16 28.3	
	comp=Z,39nm,20.6s,baz=92,slow=31						
BELG	**Belogornoye**	**45.23**	**59**	LR	LR	15 19 05.3	
	comp=Z,134nm,20.9s,baz=341,slow=34						
I29M	**Ogilvie Camp,**	**45.58**	**325**	P	**P**	**15 01 29.4**	**-0.9**
GCMT	**Greycliff**	**46.07**	**290**	P	**P**	**15 01 35.7**	**+1.1**
WALA	**Waterton Lakes**	**46.08**	**296**	P	**P**	**15 01 35.7**	**+1.1**
WALA				IAmb	IAmb	15 01 41.6	
	comp=Z,8.7nm,1.2s						
RLMT	**Red Lodge**	**46.31**	**289**	P	**P**	**15 01 36.4**	**-0.2**
RLMT				IAmb	IAmb	15 01 47.4	
	comp=Z,6.9nm,1.4s						
M31M	**Drury Creek, Y**	**46.34**	**320**	P	**P**	**15 01 37.4**	**+1.0**
M31M				IAmb	IAmb	15 01 46.4	
	comp=Z,6.5nm,1.4s						
BRTR	**Keskin Array B**	**46.44**	**81**	P	**P**	**15 01 37.1**	**-0.4**
	comp=Z,3.2nm,0.7s,baz=311,slow=5.1,SNR=11						
BRTR				LR	LR	15 23 33.5	
	comp=Z,66nm,18.6s,baz=322,slow=39						
	comp=Z,3.2nm,0.7s						
BRTR	**Keskin Array B**	**46.44**	**81**	P	**P**	**15 01 36.9**	**-0.6**
DAWY	**Dawson**	**46.79**	**324**	P	**P**	**15 01 40.6**	**+0.7**
DAWY				IAmb	IAmb	15 01 43.8	
	comp=Z,8.3nm,1.1s						
M30M	**Minto, Yukon**	**46.93**	**322**	P	**P**	**15 01 41.7**	**+0.7**
BOZ	**Bozeman (W)**	**47.22**	**291**	P	**P**	**15 01 44.6**	**+0.9**
BOZ				IAmb	IAmb	15 01 51.0	
	comp=Z,4.1nm,1.2s						
ARU	**Arti**	**47.50**	**49**	LR	LR	15 20 24.6	
	comp=Z,118nm,18.7s,baz=312,slow=34						
ARU	**Arti**	**47.50**	**49**	P	**P**	**15 01 45.8**	**+0.4**
J26L	**Joseph Creek**	**47.80**	**326**	P	**P**	**15 01 47.9**	**+0.1**
ISCO	**Idaho Springs**	**48.03**	**281**	P	**P**	**15 01 50.4**	**+0.2**
ISCO				IAmb	IAmb	15 01 53.8	
	comp=Z,2.9nm,0.7s						
PD31	**Pinedale Array**	**48.08**	**287**	P	**P**	**15 01 48.8**	**-1.6**
PDAR	**Pinedale Array**	**48.08**	**287**	P	**P**	**15 01 50.2**	**-0.2**
	comp=Z,1.7nm,0.6s,baz=73,slow=7.4,SNR=10						
PDAR				LR	LR	15 20 57.4	
	comp=Z,240nm,19.0s,baz=56,slow=35						
	comp=Z,1.7nm,0.6s						
H24K	**Noodor Dome**	**48.10**	**330**	P	**P**	**15 01 49.7**	**-0.3**
H24K				IAmb	IAmb	15 01 59.2	
	comp=Z,5.1nm,1.1s						
NEW	**Newport**	**48.20**	**297**	LR	LR	15 21 08.2	
	comp=Z,265nm,18.1s,baz=38,slow=35						
BCAR	**Beaver Creek A**	**48.26**	**324**	P	**P**	**15 01 51.9**	**+0.6**
J25K	**Salcha River,**	**48.27**	**327**	P	**P**	**15 01 51.9**	**+0.5**
L27K	**Beaver Creek,**	**48.27**	**324**	P	**P**	**15 01 53.0**	**+1.6**
L27K				IAmb	IAmb	15 01 55.8	
	comp=Z,3.7nm,1.0s						
SCRK	**Sand Creek**	**48.30**	**326**	P	**P**	**15 01 53.1**	**+1.4**
HYT	**Haines Junctio**	**48.38**	**320**	P	**P**	**15 01 53.9**	**+1.6**
HYT				IAmb	IAmb	15 01 56.7	
	comp=Z,7.1nm,1.1s						
POKR	**Poker Plat Res**	**48.51**	**329**	P	**P**	**15 01 53.1**	**0.0**
IL31		**48.60**	**328**	P	**P**	**15 01 54.2**	**+0.5**
IL31				IAmb	IAmb	15 01 57.5	
	comp=Z,5.4nm,0.9s						
ILAR	**Eielson Array**	**48.60**	**328**	P	**P**	**15 01 54.2**	**+0.4**
	comp=Z,2.9nm,0.9s,baz=38,slow=6.2,SNR=31						
ILAR				PcP	**PcP**	**15 03 18.3**	**-0.8**
	comp=Z,0.6nm,0.8s,baz=11,slow=2.1,SNR=4.8						
ILAR				LR	LR	15 22 36.3	
	comp=Z,90nm,18.7s,baz=48,slow=36						
	comp=Z,2.9nm,0.9s						
KBZ	**Khabaz**	**48.62**	**71**	LR	LR	15 23 10.2	
	comp=Z,68nm,19.5s,baz=356,slow=37						
MDM	**Murphy Dome**	**48.85**	**329**	P	**P**	**15 01 57.0**	**+1.2**
MDM				IAmb	IAmb	15 01 59.4	
	comp=Z,5.2nm,0.8s						
HDA	**Harding Lake**	**48.89**	**328**	P	**P**	**15 01 56.7**	**+0.7**
HDA				IAmb	IAmb	15 01 59.6	
	comp=Z,4.5nm,0.7s						
NEA2	**Nenana**	**49.37**	**329**	P	**P**	**15 02 00.1**	**+0.4**
NEA2				IAmb	IAmb	15 02 07.7	
	comp=Z,11nm,1.3s						
MLY	**Manley**	**49.51**	**330**	P	**P**	**15 02 01.8**	**+0.9**
MLY				IAmb	IAmb	15 02 04.3	
	comp=Z,4.5nm,1.0s						
IMAR	**Indian Mountai**	**49.58**	**332**	P	**P**	**15 02 01.9**	**+0.6**
MCK	**McKinley**	**49.98**	**328**	P	**P**	**15 02 05.0**	**+0.6**
MCK				IAmb	IAmb	15 02 12.3	
	comp=Z,8.7nm,1.0s						
HLID	**Hailey**	**50.07**	**291**	P	**P**	**15 02 06.7**	**+1.2**
S22A	**4UR Ranch, Cre**	**50.17**	**280**	P	**P**	**15 02 06.9**	**+0.4**
RND	**Reindeer**	**50.20**	**328**	P	**P**	**15 02 06.3**	**+0.2**
RND				IAmb	IAmb	15 02 13.8	
	comp=Z,12nm,1.4s						
BBB	**Bella Bella**	**50.65**	**307**	LR	LR	15 22 11.7	
	comp=Z,96nm,19.2s,baz=114,slow=34						
SML	**Sawmill**	**51.26**	**326**	P	**P**	**15 02 14.7**	**+0.6**
AKTO	**Aktyubinsk**	**51.36**	**55**	LR	LR	15 23 17.3	
	comp=Z,84nm,19.3s,baz=328,slow=35						
TORD	**Torodi Ar. Bea**	**51.38**	**133**	P	**P**	**15 02 14.9**	**-0.6**
	comp=Z,2.4nm,0.9s,baz=322,slow=3.7,SNR=9.0						
TORD				LR	LR	15 21 50.2	
	comp=Z,95nm,21.7s,baz=209,slow=34						
	comp=Z,2.4nm,0.9s						
TIXI	**Tiksi**	**51.60**	**7**	P	**P**	**15 02 16.8**	**+0.3**
	comp=Z,2.1nm,0.8s,baz=86,slow=22,SNR=4.5						
TIXI				LR	LR	15 22 55.2	
	comp=Z,29nm,18.4s,baz=359,slow=35						
	comp=Z,2.1nm,0.8s						
TIXI	**Tiksi**	**51.60**	**7**	P	**P**	**15 02 15.3**	**-1.1**
ANMO	**Albuquerque**	**52.02**	**278**	LR	LR	15 23 38.4	
	comp=Z,305nm,18.1s,baz=49,slow=35						
GNI	**Garni**	**52.12**	**73**	LR	LR	15 25 13.3	
	comp=Z,56nm,19.6s,baz=338,slow=37						
SUA	**Susitna One**	**52.26**	**327**	P	**P**	**15 02 21.8**	**+0.2**
MMAI	**Mount Meron Ar**	**52.30**	**86**	LR	LR	15 27 06.3	
	comp=Z,83nm,18.1s,baz=76,slow=39						
ELK	**Elko**	**52.51**	**289**	LR	LR	15 23 41.2	
	comp=Z,221nm,19.1s,baz=50,slow=35						
TTA	**Tatalina**	**52.60**	**331**	P	**P**	**15 02 24.6**	**+0.5**
ABKAR	**Akbulak array**	**53.08**	**55**	P	**P**	**15 02 27.7**	**0.0**
ABKAR	**Akbulak array**	**53.08**	**55**	P	**P**	**15 02 27.9**	**+0.1**
ABKAR				IAmb	IAmb	15 02 29.9	
	comp=Z,9.7nm,1.4s						
MDP	**Montagnes des**	**53.25**	**203**	LR	LR	15 20 32.8	
	comp=Z,42nm,19.1s,baz=252,slow=31						
EIL	**Elat**	**54.59**	**89**	LR	LR	15 30 50.8	
	comp=Z,28nm,18.2s,baz=267,slow=41						
TXAR	**Lajitas Array**	**54.72**	**271**	P	**P**	**15 02 41.3**	**+1.2**
	comp=Z,0.3nm,0.6s,baz=79,slow=6.5,SNR=4.5						
TXAR				PcP	**PcP**	**15 03 42.5**	**0.0**
	comp=Z,0.2nm,0.5s,baz=46,slow=6.4,SNR=1.6						
TXAR				LR	LR	15 24 28.4	
	comp=Z,62nm,18.1s,baz=80,slow=34						
	comp=Z,0.3nm,0.6s						
TXAR	**Lajitas Array**	**54.72**	**271**	P	**P**	**15 02 39.5**	**-0.5**
BVAR	**Borovoye Array**	**54.74**	**46**	LR	LR	15 25 59.7	
	comp=Z,38nm,19.7s,baz=204,slow=36						
DBIC	**Dimbokro**	**54.91**	**143**	P	**P**	**15 02 41.8**	**+0.3**
	comp=Z,5.4nm,0.9s,baz=0.0,slow=6.1,SNR=2.5						
DBIC				LR	LR	15 23 38.3	
	comp=Z,69nm,18.1s,baz=7.0,slow=33						
	comp=Z,5.4nm,0.9s						
DBIC	**Dimbokro**	**54.91**	**143**	P	**P**	**15 02 42.5**	**+1.1**
YBH	**Yreka Blue Hor**	**55.62**	**295**	LR	LR	15 25 47.7	
	comp=Z,208nm,19.0s,baz=38,slow=35						
NVAR	**Mina Array Bea**	**55.81**	**289**	P	**P**	**15 02 48.4**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=50,slow=5.1,SNR=6.1						
NVAR				LR	LR	15 25 35.7	
	comp=Z,218nm,20.7s,baz=29,slow=35						
	comp=Z,0.5nm,0.6s						
PFO	**Pinyon Flats O**	**58.46**	**284**	LR	LR	15 27 03.3	
	comp=Z,207nm,20.1s,baz=51,slow=35						
ZALV	**Zalesovo Beam**	**59.28**	**37**	LR	LR	15 28 40.6	
	comp=Z,37nm,18.1s,baz=338,slow=36						
CMIG	**Matias Romero**	**59.67**	**254**	LR	LR	15 28 37.8	
	comp=Z,132nm,21.2s,baz=14,slow=36						
KURK	**Kurchatov**	**59.73**	**43**	P	**P**	**15 03 14.3**	**-0.7**
KURK				IAmb	IAmb	15 03 15.8	
	comp=Z,7.2nm,1.2s						
JTS	**Las Juntas de**	**60.33**	**241**	LR	LR	15 30 09.4	
	comp=Z,50nm,18.2s,baz=36,slow=37						
GEYT	**Alibeck**	**60.69**	**65**	P	**P**	**15 03 23.1**	**+1.2**
	comp=Z,2.8nm,0.8s,baz=352,slow=9.2,SNR=1.9						
GEYT				LR	LR	15 30 44.2	
	comp=Z,64nm,18.9s,baz=354,slow=37						
	comp=Z,2.8nm,0.8s						
RCBR	**Riachuelo**	**62.12**	**182**	LR	LR	15 25 06.6	
	comp=Z,12nm,20.2s,baz=81,slow=31						
LPIG	**La Paz**	**62.49**	**273**	LR	LR	15 30 28.9	
	comp=Z,140nm,18.1s,baz=78,slow=36						
KKAR	**Karatay Array**	**62.51**	**53**	P	**P**	**15 03 34.0**	**-0.1**
MAKZ	**Makanchi**	**64.20**	**43**	P	**P**	**15 03 45.4**	**+0.2**
MAKZ				IAmb	IAmb	15 03 46.2	
	comp=Z,7.2nm,1.3s						
MK31	**Makanchi Array**	**64.33**	**43**	P	**P**	**15 03 45.0**	**-1.1**
MK31				IAmb	IAmb	15 03 46.9	
	comp=Z,6.4nm,1.4s						
MKAR	**Makanchi Array**	**64.33**	**43**	P	**P**	**15 03 45.6**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=350,slow=6.2,SNR=9.3						
	comp=Z,0.8nm,0.6s						
MKAR	**Makanchi Array**	**64.33**	**43**	P	**P**	**15 03 45.7**	**-0.4**
BTK	**Batken**	**65.09**	**55**	P	**P**	**15 03 52.4**	**+1.2**
TARG	**Taragay, Kyrgy**	**66.77**	**49**	P	**P**	**15 04 03.7**	**+1.3**
KSH	**Kashi**	**67.82**	**52**	P	**P**	**15 04 11.3**	**+2.6**
KSH				pmax	pmax		
	comp=Z,12nm,1.2s						
WMQ	**Urumqi**	**68.87**	**41**	*e*P	**P**	**15 04 18.5**	**+3.4**
SONM	**Songino Array**	**71.02**	**27**	P	**P**	**15 04 27.8**	**-0.6**
	comp=Z,0.8nm,0.8s,baz=343,slow=4.6,SNR=4.6						
	comp=Z,0.8nm,0.8s						
GTA	**Gaotai**	**76.92**	**35**	*e*P	**P**	**15 05 02.9**	**-0.1**
GTA				pP	pP	15 05 08.3	-1.2
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,73nm,4.7s						
GTA				LR	LR		
	comp=N,96nm,18.5s						
GTA				LR	LR		
	comp=E,210nm,22.2s						
GTA				LR	LR		
	comp=Z,96nm,21.4s						
HHC	**Hu-ho-hao-te**	**78.85**	**26**	*e*P	**P**	**15 05 12.0**	**-1.7**
HHC				pmax	pmax		
	comp=Z,22nm,1.1s						
HHC				pmax	pmax		
	comp=Z,190nm,6.0s						
PZH	**PanZhiHua**	**89.39**	**38**	P	**P**	**15 06 05.3**	**-2.2**
PZH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,90nm,4.4s						

NOU ***23*** *14:55:44.3, 30.˙63S×176.˙09W, h83km, mb5.4/52, Kermadec Islands Region*
BJI ***23*** *14:55:48.9±0.0, 29.˙99S×177.˙62W, h42km, mb5.1/25, mB5.2/13, Ms5.2/8, Ms7 4.7/7*
NEIC ***23*** *14:55:48.4±1.7, 30.˙15S±0.˙08×177.˙8W±0.˙2, h25km±4km, mb5.3/52, Error ellipse: s-maj=21.1km s-min=10.8km az=94.0*
MOS ***23*** *14:55:48.1±1.4, 30.˙16S×177.˙92W, h30km, mb5.2/21, MS5.6/8, Error ellipse: s-maj=14.0km s-min=10.1km az=97.3*
IDC ***23*** *14:55:51.5±1.6, 30.˙03S×177.˙86W, h50km±12km, mb4.4/12, mbtmp4.6/13, ML3.5/1, MS3.9/23, Error ellipse: s-maj=18.9km s-min=15.6km az=110.0*
GCMT ***23*** *14:55:52.4±0.5, 30.˙14S±0.˙04×177.˙54W±0.˙04, h55km±2km, MW5.0/48, Moment Tensor Solution. s38,c47; s48,c62; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr2.76±.26; Mθθ0.49±.21; Mϕϕ-3.25±.16; Mrθ-0.02±.15; Mrϕ-0.91±.14; Mθϕ1.83±.17; Best double couple: M₀3.61800×10¹⁶ NP1:ϕs204.00000°, δ31.00000°, λ107.00000°. NP2: ϕs5.00000°, δ60.00000°, λ80.00000°. Principal axes: T 3.2990, Plg73.0000°, Azm251.0000°; N 0.6370, Plg8.0000°, Azm9.0000°; P -3.9370, Plg15.0000°, Azm102.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 14:55:50.5±0.3, 30.˙31S±0.˙04×177.˙78W±0.˙07, h46km, n498, σ1§74/463, mb5.2/65, MS4.3/40, 13C-11D, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.06**	**354**	P	**Pn**	**14 56 06.3**	**-2.6**
	4μm,0.3s,baz=100,slow=9.3,SNR=97						
RAO				S	**Sn**	**14 56 17.9**	**-4.6**
	27μm,0.3s,baz=60,slow=22,SNR=21						
RAO	**Raoul Island**	**1.06**	**354**	Pn	**Pn**	**14 56 05.6**	**-3.3**
RAO	**Raoul Island**	**1.06**	**354**	P	**Pn**	**14 56 05.6**	**-3.3**
RUGZ	**Raukumara Rang**	**8.51**	**205**	P	**Pn**	**14 57 49.9**	**-1.4**
OUZ	**Omahuta**	**8.76**	**234**	P	Pn	14 58 01.9	+7.4
URZ	**Urewera**	**8.98**	**207**	P	**Pn**	**14 57 54.2**	**-3.4**
	8.2nm,0.3s,baz=18,slow=19,SNR=22						
URZ				S	**Sn**	**14 59 36.1**	**-1.3**
	160nm,0.5s,baz=251,slow=1.0,SNR=15						
URZ	**Urewera**	**8.98**	**207**	P	**Pn**	**14 57 54.7**	**-2.9**
URZ	**Urewera**	**8.98**	**207**	P	**Pn**	**14 57 56.0**	**-1.6**
MUGZ	**Murupara**	**9.31**	**207**	P	**Pn**	**14 57 59.0**	**-3.0**
MUGZ				S	**Sn**	**14 59 43.3**	**-2.0**
PRRZ	**Plateau Road**	**9.48**	**209**	P	**Pn**	**14 58 03.3**	**-1.0**
RAHZ	**Arahi**	**9.57**	**205**	P	**Pn**	**14 58 03.3**	**-2.4**
RAHZ				S	**Sn**	**14 59 49.8**	**-2.0**
MTHZ	**Maungataniwha**	**9.61**	**206**	P	**Pn**	**14 58 04.0**	**-2.2**
MTHZ				S	**Sn**	**14 59 50.2**	**-2.5**
MRHZ	**Matea Rd**	**9.76**	**208**	P	**Pn**	**14 58 05.4**	**-2.8**
MRHZ				S	**Sn**	**14 59 52.7**	**-3.7**
NMHZ	**Naumai**	**9.83**	**205**	P	**Pn**	**14 58 07.5**	**-1.7**
NMHZ				S	**Sn**	**14 59 56.3**	**-2.0**
ARHZ	**Aropaoanui**	**9.91**	**204**	P	**Pn**	**14 58 06.9**	**-3.4**
ARHZ				S	**Sn**	**14 59 57.4**	**-2.7**
BKZ	**Black Stump Fm**	**10.01**	**206**	P	**Pn**	**14 58 09.3**	**-2.4**
BKZ				S	**Sn**	**14 59 59.2**	**-3.4**
MCHZ	**McNeill Hill**	**10.18**	**205**	P	**Pn**	**14 58 10.3**	**-3.6**
MCHZ				S	**Sn**	**15 00 04.2**	**-2.5**
ETVZ	**East Tongariro**	**10.30**	**210**	P	**Pn**	**14 58 17.3**	**+1.6**
KAHZ	**Kahuranaki**	**10.43**	**203**	P	**Pn**	**14 58 13.4**	**-3.9**
KAHZ				S	**Sn**	**15 00 08.8**	**-4.0**
BHHZ	**Black Hill Sta**	**10.46**	**207**	P	**Pn**	**14 58 15.1**	**-2.7**
KRHZ	**Kereru**	**10.47**	**206**	P	**Pn**	**14 58 13.3**	**-4.7**
KRHZ				S	**Sn**	**15 00 08.1**	**-5.8**
MOVZ	**Moawhango**	**10.51**	**209**	P	**Pn**	**14 58 16.4**	**-2.1**
PXZ	**Pawanui**	**10.64**	**203**	P	**Pn**	**14 58 16.4**	**-3.8**
VRZ	**Vera Road**	**10.72**	**213**	P	Pn	14 58 29.4	+8.1
PNHZ	**Pukenui**	**10.77**	**206**	P	**Pn**	**14 58 17.4**	**-4.7**
WPHZ

CAN Canberra 28.28 251 P P 15 01 39.1 -0.5
CAN IAmb IAmb 15 01 43.1
comp=Z,57nm,0.7s
CAN Canberra 28.28 251 P P 15 01 39.1 -0.5
CAN pmax pmax
comp=Z,57nm,0.7s
CAN Canberra 28.28 251 P P 15 01 41.4 +1.8
PAE Paea 28.59 70 eT T 15 32 11.9
comp=Z,34nm,0.3s
PPT2 Papeete2 28.63 70 eLR LR 15 09 07.5
comp=Z,578nm,24.0s
PPT2 Papeete2 28.63 70 eT T 15 32 11.7
comp=Z,22nm,0.3s
PPT Papeete 28.64 70 LR LR 15 12 48.7
comp=Z,61nm,19.1s,baz=248,slow=36
TVO Taravao 28.79 71 eT T 15 32 09.7
comp=Z,11nm,0.3s
TIAR Tiarei 28.83 70 eT T 15 32 32.9
comp=Z,2.5nm,0.3s
RK1H Rockhampton Ha 29.07 276 P P 15 01 48.6 +2.0
comp=Z,204nm,0.6s
RMQ Roma 29.62 269 P P 15 01 54.3 +2.8
baz=30,SNR=120
RMQ Roma 29.62 269 P P 15 01 55.0 +3.5
MEH Mehetia 29.72 72 eT T 15 33 36.0
comp=Z,55nm,0.3s
MOO Moorlands 30.48 237 P P 15 02 00.8 +1.8
baz=31,SNR=3.8
TOO Toolangi 31.17 247 P P 15 02 07.3 +2.1
baz=32,SNR=24
TOO Toolangi 31.17 247 P P 15 02 07.2 +2.1
TOO IAmb IAmb 15 02 09.8
comp=Z,35nm,0.8s
TOO Toolangi 31.17 247 P P 15 02 07.2 +2.1
TOO pmax pmax
comp=Z,35nm,0.8s
TOO Toolangi 31.17 247 P P 15 02 06.8 +1.6
CMSA Cobar Meteorol 31.27 258 P P 15 02 07.5 +1.5
baz=32,SNR=56
CMSA Cobar Meteorol 31.27 258 P P 15 02 08.7 +2.7
VAH Vaihoa 31.46 68 eT T 15 35 56.5
comp=Z,115nm,0.2s
BRAT Ballarat 32.41 247 P P 15 02 18.2 +2.2
QLP Quilpie 33.50 267 P P 15 02 27.1 +1.5
baz=34,SNR=46
QLP Quilpie 33.50 267 P P 15 02 28.0 +2.4
CTA Charters Tower 33.97 279 LR LR 15 14 58.9
comp=Z,430nm,18.8s,baz=116,slow=34
CTA Charters Tower 33.97 279 P P 15 02 31.6 +1.8
CTA Charters Tower 33.97 279 P P 15 02 31.8 +2.0
CTAO Charters Tower 33.97 279 P P 15 02 30.9 +1.1
CTAO PcP PcP 15 05 06.8 -0.4
CTAO Charters Tower 33.97 279 P P 15 02 31.6 +1.8
ARPS Mount Arapiles 34.08 248 P P 15 02 32.7 +2.2
baz=35,SNR=11
STKA Stephens Creek 34.68 257 P P 15 02 37.0 +1.2
comp=Z,91nm,0.7s,baz=100,slow=11,SNR=132
STKA LR LR 15 15 52.9
comp=Z,407nm,18.4s,baz=60,slow=35
STKA Stephens Creek 34.68 257 P P 15 02 37.8 +1.9
baz=35,SNR=133
STKA Stephens Creek 34.68 257 P P 15 02 36.9 +1.0
STKA Stephens Creek 34.68 257 P P 15 02 36.9 +1.0
STKA pmax pmax
comp=Z,20nm,0.8s
STKA Stephens Creek 34.68 257 P P 15 02 38.3 +2.5
MTSU Mount Surprise 36.46 281 P P 15 02 52.5 +1.2
baz=37,SNR=178
MTSU Mount Surprise 36.46 281 P P 15 02 53.0 +1.7
HTT Hallett 36.71 254 P P 15 02 54.5 +1.3
baz=37,SNR=50
HTT Hallett 36.71 254 P P 15 02 54.9 +1.6
LCRK Leigh Creek 37.78 258 P P 15 03 03.6 +1.3
WHYH Whyalla 37.88 254 P P 15 03 05.2 +2.1
comp=Z,45nm,0.7s
RABL Rabaul 38.46 307 P P 15 03 07.2 -1.0
RABL IAmb IAmb 15 03 09.3
comp=Z,22nm,0.6s
PMG Port Moresby 38.74 295 LR LR 15 16 00.3
comp=Z,331nm,21.6s,baz=130,slow=31
BBOO Buckleboo 39.17 254 P P 15 03 14.5 +0.5
baz=40,SNR=24
BBOO Buckleboo 39.17 254 P P 15 03 13.1 -0.9
BBOO IAmb IAmb 15 03 16.6
comp=Z,60nm,1.1s
BBOO PcP PcP 15 05 21.6 -1.1
COEN Coen 39.43 286 P P 15 03 17.5 +1.3
baz=40,SNR=10
COEN Coen 39.43 286 P P 15 03 16.8 +0.6
COEN IAmb IAmb 15 03 18.0
comp=Z,21nm,0.5s
COEN Coen 39.43 286 P P 15 03 18.0 +1.7
comp=Z,30nm,0.7s
QIS Mount Isa 39.49 274 P P 15 03 16.9 +0.1
baz=40,SNR=38
QIS Mount Isa 39.49 274 P P 15 03 17.6 +0.8
OOD Oodnadatta 40.54 262 P P 15 03 26.8 +1.5
AS31 Alice Springs 43.30 267 P P 15 03 47.5 -0.6
AS31 IAmb IAmb 15 03 49.0
comp=Z,18nm,0.5s
ASAR Alice Springs 43.30 267 P P 15 03 47.2 -0.9
ASAR Alice Springs 43.30 267 P P 15 03 47.2 -0.9
WR0 Warramunga Arr 44.10 272 P P 15 03 53.8 -0.6
WC3 Warramunga Arr 44.25 272 P P 15 03 55.1 -0.6
baz=45
WRAB Tennant Creek 44.28 272 P P 15 03 55.5 -0.4
WRAB Tennant Creek 44.28 272 ceP P 15 03 55.7 -0.2
WRAB pmax pmax
comp=Z,98nm,0.8s
WRAB Tennant Creek 44.28 272 P P 15 03 55.9 0.0
WRA Warramunga Arr 44.28 272 P P 15 03 55.3 -0.6
comp=Z,64nm,0.3s,baz=110,slow=8.1,SNR=1535
WRA ScP ScP 15 09 26.8 -1.2
comp=Z,1.2nm,0.8s,baz=107,slow=3.6,SNR=3.9
WRA PKIKP PKiKP 15 12 39.0 -1.2
comp=Z,0.3nm,0.5s,baz=98,slow=0.5,SNR=7.5
WRA LR LR 15 20 45.8
comp=Z,317nm,21.4s,baz=40,slow=34
WRA Warramunga Arr 44.28 272 P P 15 03 55.1 -0.8
WRA Warramunga Arr 44.28 272 P P 15 03 55.1 -0.8
WRA pmax pmax
comp=Z,11nm,0.8s
FORT Forrest 46.25 255 P P 15 04 10.8 -0.6
baz=47,SNR=18
FORT Forrest 46.25 255 P P 15 04 10.4 -1.0
FORT Forrest 46.25 255 P P 15 04 11.7 +0.3
comp=Z,96nm,0.7s
WRKA Warakurna 47.68 263 P P 15 04 21.1 -1.6
baz=48,SNR=55
WRKA Warakurna 47.68 263 P P 15 04 21.5 -1.2
SBA Scott Base 48.14 184 P P 15 04 30.2 +4.8
SBA IAmb IAmb 15 04 35.3
comp=Z,22nm,0.8s
SBA Scott Base 48.14 184 P P 15 04 30.2 +4.8
SBA pmax pmax
comp=Z,22nm,0.8s
VNDA Vanda 48.21 186 P P 15 04 29.8 +3.8
comp=Z,5.7nm,0.6s,baz=5.9,slow=7.4,SNR=52
VNDA LR LR 15 21 18.6
comp=Z,60nm,21.9s,baz=28,slow=32
comp=Z,5.7nm,0.6s
VNDA Vanda 48.21 186 P P 15 04 29.7 +3.8
VNDA Vanda 48.21 186 P P 15 04 29.7 +3.8
VNDA pmax pmax
comp=Z,7.0nm,0.7s
GENI Genyem 48.39 296 P P 15 04 27.8 -0.3
comp=Z,51nm,0.8s
GENI Genyem 48.39 296 P P 15 04 30.4 +2.3
KDU Kakadu 49.09 280 P P 15 04 32.3 -1.2
baz=50,SNR=14
KDU Kakadu 49.09 280 P P 15 04 33.1 -0.4
MTN Manton Dam 50.16 279 P P 15 04 40.7 -0.9
baz=51,SNR=18
MTN Manton Dam 50.16 279 P P 15 04 40.5 -1.2
MTN IAmb IAmb 15 04 41.9
comp=Z,22nm,0.9s
MTN Manton Dam 50.16 279 P P 15 04 42.0 +0.3
KNRA Kununurra 50.89 274 P P 15 04 46.7 -0.4
baz=51,SNR=71
KNRA Kununurra 50.89 274 P P 15 04 46.3 -0.9
KNRA IAmb IAmb 15 04 54.0
comp=Z,23nm,0.6s
KNRA Kununurra 50.89 274 P P 15 04 48.0 +0.8
FAKI Fak Fak 54.48 290 P P 15 05 12.2 -1.6
FAKI IAmb IAmb 15 06 11.1
comp=Z,65nm,1.2s

KLBR Kellerberrin 54.56 251 P P 15 05 13.0 -1.2
baz=55,SNR=17
KLBR Kellerberrin 54.56 251 P P 15 05 13.6 -0.6
comp=Z,94nm,0.7s
CASY Casey 55.31 208 P P 15 05 19.0 0.0
BLDU Ballidu 55.70 252 P P 15 05 20.9 -1.5
baz=56,SNR=6.4
MUN Mundaring 55.71 250 P P 15 05 21.5 -0.9
baz=56,SNR=5.3
PSA00 Pilbara Seismi 56.16 263 P P 15 05 23.8 -2.0
PSA00 IAmb IAmb 15 05 25.4
comp=Z,29nm,1.3s
PSA00 PcP PcP 15 06 20.7 -2.6
MBWA Marble Bar 56.42 264 P P 15 05 26.1 -1.6
MBWA IAmb IAmb 15 05 27.4
comp=Z,26nm,0.8s
MBWA Marble Bar 56.42 264 P P 15 05 26.4 -1.3
SWI Sorong 56.48 291 P P 15 05 28.3 +0.2
comp=Z,70nm,0.7s
GUMO Guam 56.55 315 LR LR 15 26 44.3
comp=Z,78nm,21.4s,baz=126,slow=33
MORW Morawa 56.74 253 P P 15 05 28.6 -1.3
baz=57,SNR=14
SOEI Soe 57.53 278 P P 15 05 35.3 -0.4
SOEI IAmb IAmb 15 05 37.9
comp=Z,36nm,0.8s
SOEI Soe 57.53 278 P P 15 05 35.4 -0.3
SOEI Soe 57.53 278 P P 15 05 36.2 +0.5
RPN Rapa Nui 59.28 105 LR LR 15 24 45.9
comp=Z,91nm,21.1s,baz=254,slow=29
QSPA South Pole Qui 59.80 180 LR LR 15 30 29.5
comp=Z,61nm,18.0s,baz=44,slow=35
QSPA South Pole Qui 59.80 180 P P 15 05 53.9 +3.0
MMRI Maumere 59.82 278 P P 15 05 51.1 -0.4
MMRI Maumere 59.82 278 P P 15 05 52.6 +1.1
SANI Sanana 60.12 287 P P 15 05 53.1 -0.4
GIRL Giralia 60.55 260 P P 15 05 56.6 +0.2
baz=61,SNR=5.4
GIRL Giralia 60.55 260 P P 15 05 55.8 -0.6
TNTI Ternate 60.59 290 P P 15 05 57.7 +1.0
comp=Z,18nm,0.7s
KAPI Kappang 63.78 280 LR LR 15 34 37.5
comp=Z,97nm,18.0s,baz=126,slow=36
DAV Davao City (W) 65.76 295 LR LR 15 34 13.9
comp=Z,24nm,20.5s,baz=120,slow=35
JCJ Chichijima 68.73 322 LR LR 15 31 05.3
comp=Z,61nm,21.6s,baz=111,slow=31
BELA Belgrano 2 69.85 172 P P 15 06 56.7 +0.8
BELA IAmb IAmb 15 06 58.0
comp=Z,22nm,1.3s
MYLDM Lahad Datu 70.35 289 P P 15 07 00.9 +1.1
MYLDM IAmb IAmb 15 07 36.1
comp=Z,18nm,0.9s
PMSA Palmer Station 72.27 156 LR LR 15 34 57.5
comp=Z,97nm,19.1s,baz=242,slow=32
MAW Mawson 72.46 201 P P 15 07 13.2 +1.5
comp=Z,12nm,0.7s,baz=131,slow=7.8,SNR=23
MAW LR LR 15 37 48.8
comp=Z,158nm,20.0s,baz=114,slow=35
comp=Z,12nm,0.7s
MAW Mawson 72.46 201 P P 15 07 13.0 +1.4
baz=73,SNR=20
MAW Mawson 72.46 201 P P 15 07 13.1 +1.4
MAW Mawson 72.46 201 P P 15 07 13.1 +1.4
MAW pmax pmax
comp=Z,3.0nm,0.9s
JHJ Hachijo jima 2 74.78 324 LR LR 15 36 58.0
comp=Z,36nm,19.3s,baz=72,slow=33
KSM Kuching 75.19 281 P P 15 07 27.3 -1.3
KSM IAmb IAmb 15 07 28.6
comp=Z,22nm,0.7s
JGF Kuroka 77.96 324 P P 15 07 43.1 -0.6
JGF IAmb IAmb 15 07 59.7
comp=Z,90nm,2.0s
TROLL Troll, Antarti 77.97 180 P P 15 07 45.2 +1.7
SNAA Sanae 78.24 178 P P 15 07 46.2 +1.2
SNAA Sanae 78.24 178 LR LR 15 37 59.4
comp=Z,43nm,21.8s,baz=143,slow=32
SNAA Sanae 78.24 178 P P 15 07 46.3 +1.3
SNAA Sanae 78.24 178 P P 15 07 46.3 +1.3
SNAA pmax pmax
comp=Z,13nm,0.7s
MJAR Matsushiro Arr 78.27 325 P P 15 07 44.5 -0.9
comp=Z,4.2nm,0.8s,baz=168,slow=5.2,SNR=8.1
MJAR LR LR 15 36 28.2
comp=Z,43nm,20.4s,baz=123,slow=31
comp=Z,4.2nm,0.8s
MJAR Matsushiro Arr 78.27 325 P P 15 07 44.6 -0.9
MJAR Matsushiro Arr 78.27 325 P P 15 07 44.6 -0.9
MJAR pmax pmax
comp=Z,8.0nm,1.1s
VNA3 Neumayer Olymp 78.38 176 P P 15 07 46.8 +1.1
NVL N'lazarevskaya 78.98 183 eP P 15 07 52.8 +3.9
NVL pmax pmax
comp=Z,23nm,1.0s
VNA1 Neumayer--Stat 79.05 176 P P 15 07 50.8 +1.6
VNA1 Neumayer--Stat 79.05 176 PcP PcP 15 07 58.4 +0.8
JHS Saijyo 79.74 321 P P 15 07 53.2 -0.4
JHS IAmb IAmb 15 07 54.9
comp=Z,18nm,0.9s
H03S2 Juan Fernandez 80.36 123 T T 16 37 11.5
baz=237
H03S1 Juan Fernandez 80.37 123 T T 16 37 12.7
baz=237
H03S3 Juan Fernandez 80.38 123 T T 16 37 11.5
baz=237
H03N3 Juan Fernandez 80.55 123 T T 16 37 25.7
baz=241,slow=72,SNR=104
H03N2 Juan Fernandez 80.55 123 T T 16 37 26.8
baz=241,slow=72,SNR=124
H03N1 Juan Fernandez 80.56 123 T T 16 37 22.8
baz=241,slow=72,SNR=175
ADK Adak 81.84 1 P P 15 08 04.1 -0.2
ADK Adak 81.84 1 P P 15 08 04.1 -0.2
ADK pmax pmax
comp=Z,48nm,0.9s
DLV T Lat 82.31 289 P P 15 08 07.7 -0.1
PLCA Paso Flores 82.43 133 P P 15 08 10.2 +2.1
comp=Z,4.6nm,0.9s,baz=236,slow=5.4,SNR=6.7
PLCA LR LR 15 35 50.4
comp=Z,141nm,21.2s,baz=272,slow=29
comp=Z,4.6nm,0.9s
ASAJ Asahikawa 82.45 332 LR LR 15 41 07.0
comp=Z,110nm,18.9s,baz=130,slow=33
NIKH Nikolski High 83.29 5 P P 15 08 11.8 0.0
baz=188
TJN Taejon 83.96 318 ceP P 15 08 13.8 -1.8
UNV Unalaska Valle 84.37 7 P P 15 08 17.5 +0.2
baz=190
KSRS Korea Array 84.40 320 P P 15 08 17.9 0.0
comp=Z,4.1nm,0.8s,baz=146,slow=5.8,SNR=16
comp=Z,4.1nm,0.8s
IPM Ipoh 84.66 278 P P 15 08 17.7 -2.1
IPM IAmb IAmb 15 08 19.9
comp=Z,15nm,0.7s
YSS Yuzh-Sakhalins 84.75 334 eP P 15 08 20.2 +0.9
YSS pmax pmax
comp=Z,20nm,0.8s
PKM Mcpherson Peak 84.77 44 P P 15 08 21.4 +1.4
baz=228
KULM Kulim 85.39 279 P P 15 08 21.9 -1.6
KULM IAmb IAmb 15 08 23.5
comp=Z,14nm,0.8s
ARVC Arvin 85.53 45 P P 15 08 26.3 +2.7
baz=228
MONP2 Monument Peak 85.56 48 P P 15 08 25.8 +1.7
baz=230
IKP In-Ko-Pah, Jac 85.61 48 P P 15 08 26.0 +1.8
baz=230
BFSC Mount Baldy Ra 85.66 46 P P 15 08 25.8 +1.4
baz=229
PEA0B Petropavlovsk- 85.77 345 P P 15 08 24.6 +0.2
PEA0B IAmb IAmb 15 08 34.7
comp=Z,18nm,0.8s
PEA0B Petropavlovsk- 85.77 345 P P 15 08 24.6 +0.2
PEA0B pmax pmax
comp=Z,18nm,0.9s
PETK Petropavlovsk- 85.77 345 P P 15 08 24.1 -0.3
comp=Z,9.0nm,0.5s,baz=86,slow=40,SNR=21
comp=Z,9.0nm,0.5s
EDW2 Edwards Air Fo 85.88 45 P P 15 08 27.0 +1.6
baz=229
SWSC Sam W. Stewart 86.00 48 P P 15 08 27.9 +1.9
baz=230
PFO Pinyon Flats O 86.00 47 P P 15 08 26.9 +0.8
baz=230

GSI Gunungsitoli 86.02 274 P P 15 08 25.7 -0.9
ISA Isabella, Lake 86.10 45 P P 15 08 28.3 +1.8
baz=228
NJ2 Nanjing 86.33 310 eP P 15 08 24.8 -2.8
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
LRMC Laurel Mtn Rad 86.46 45 P P 15 08 29.2 +0.8
baz=229
BELC Belle Mtn. Jos 86.55 47 P P 15 08 30.5 +1.6
baz=230
SDPT Sand Point 86.59 10 P P 15 08 28.6 +0.3
SDPT Sand Point 86.59 10 P P 15 08 28.6 +0.3
baz=195
BC3 Big Chuckawall 86.67 48 P P 15 08 31.2 +1.8
baz=230
GLA Glamis 86.69 49 P P 15 08 31.9 +2.4
baz=230
CWC Cottonwood Cre 86.85 44 P P 15 08 31.8 +1.5
baz=228
HEC Hector,Ludlow 86.87 46 P P 15 08 31.9 +1.6
baz=230
GSC Goldstone, Bar 86.89 46 P P 15 08 31.6 +1.1
baz=229
MPMC Manual Prospec 86.96 45 P P 15 08 32.1 +1.2
baz=229
USRK Ussuriysk Ar. 87.19 326 P P 15 08 31.2 -0.3
comp=Z,4.2nm,0.7s,baz=93,slow=3.6,SNR=5.7
comp=Z,4.2nm,0.7s
IRM Iron Mountain 87.19 48 P P 15 08 33.4 +1.6
baz=230
GMRC Granite Mounta 87.27 47 P P 15 08 34.0 +1.6
baz=230
214A Organ Pipe Nat 87.33 50 P P 15 08 34.0 +1.4
baz=232
S14K Fog Glacier 87.64 10 P P 15 08 35.0 +1.5
baz=196
GRAC Grapevine Rang 87.65 44 P P 15 08 35.7 +1.6
baz=229
K02D Willamette Mer 88.03 37 P P 15 08 37.0 +1.3
baz=225
NVAR Mina Array Bea 88.04 43 P P 15 08 36.8 +0.8
comp=Z,4.4nm,0.8s,baz=222,slow=8.3,SNR=32
NVAR PKKPbc PKKPbc 15 26 22.1 0.0
comp=Z,1.0nm,0.9s,baz=119,slow=2.8,SNR=5.3
comp=Z,4.4nm,0.8s
NVAR Mina Array Bea 88.04 43 P P 15 08 36.6 +0.5
L04D Klamath Falls 88.40 38 P P 15 08 39.2 +1.7
baz=226
KVN Kaiserville 88.58 42 P P 15 08 38.9 +0.4
KVN Kaiserville 88.58 42 P P 15 08 38.9 +0.4
KVN pmax pmax
comp=Z,5.0nm,0.9s
R17K Ugashik Creek 89.44 11 P P 15 08 43.1 +1.2
baz=198
I04A Tendick Farm, 89.45 37 P P 15 08 42.9 +0.5
baz=225
OHAK Old Harbor 89.61 13 P P 15 08 43.7 +1.1
baz=201
J05D Fort Rock, OR 89.71 38 P P 15 08 44.6 +0.9
baz=226
TIA Tai'an 90.05 313 ⇑P P 15 08 45.1 -0.1
TIA pmax pmax
comp=Z,10.0nm,0.8s
CN2 Changchun 90.18 323 eP P 15 08 44.8 -0.9
CN2 pmax pmax
comp=Z,10.0nm,0.7s
GRNR Gornyy 90.29 333 ⇑iP P 15 08 49.2 +3.2
GRNR pmax pmax
comp=Z,8.0nm,1.1s
I05D Terrebonne, OR 90.38 37 P P 15 08 48.0 +1.4
baz=226
Q16K King Salmon 90.39 11 P P 15 08 47.0 +0.8
baz=198
BNX BinXian 90.54 325 ⇑P P 15 08 45.9 -1.4
BNX pmax pmax
comp=Z,7.0nm,1.1s
BNX pmax pmax
comp=Z,81nm,3.9s
P17K Kvichak River 90.92 11 P P 15 08 48.5 -0.2
baz=198
O16K Kokwok River B 91.04 10 P P 15 08 50.0 +0.8
baz=197
KLR Kul'dur 91.05 330 ceP P 15 08 48.5 -1.1
KLR pmax pmax
comp=Z,4.0nm,0.9s
Q19K Cape Douglas, 91.14 12 P P 15 08 50.5 +0.7
baz=201
P18K Big Mountain, 91.30 11 P P 15 08 50.6 0.0
baz=200
O17K Koliganek Bris 91.36 10 P P 15 08 50.4 -0.3
baz=198
GYA Guiyang 91.67 300 ⇓P P 15 08 54.3 +1.1
GYA pmax pmax
comp=Z,14nm,0.7s
O18K Koktuh Hills 91.74 11 P P 15 08 52.5 -0.1
O18K Koktuh Hills 91.74 11 P P 15 08 52.7 +0.2
baz=200
N16K Nishlik Lake 91.79 9 P P 15 08 53.9 +1.2
baz=196
TXAR Lajitas Array 92.18 57 P P 15 08 56.5 +1.0
comp=Z,1.3nm,1.0s,baz=224,slow=3.5,SNR=7.8
comp=Z,1.3nm,1.0s
O19K Port Alsworth 92.22 11 P P 15 08 54.8 +0.1
baz=200
N19K Bonanza Creek 92.77 11 P P 15 08 57.4 +0.1
baz=200
SEW Seward 93.05 14 P P 15 09 00.0 +1.5
baz=204
ANMO Albuquerque 93.37 51 ceP P 15 09 02.2 +1.2
ANMO pmax pmax
comp=Z,5.0nm,1.4s
CMAR Chiang Mai Arr 93.55 289 P P 15 09 02.5 +0.6
comp=Z,1.5nm,0.8s,baz=144,slow=3.8,SNR=7.7
comp=Z,1.5nm,0.8s
CMAR Chiang Mai Arr 93.55 289 iP P 15 09 04.4 +2.5
CMAR pmax pmax
comp=Z,2.0nm,0.8s
M19K Big River Lodg 93.81 11 P P 15 09 02.2 +0.1
baz=200
RC01 Rabbit Creek A 93.90 13 P P 15 09 01.9 -0.6
baz=204
L19K White Mountain 94.00 11 P P 15 09 04.2 +1.2
L19K IAmb IAmb 15 09 04.2
comp=Z,10nm,1.1s
L19K White Mountain 94.00 11 P P 15 09 03.1 +0.1
baz=200
M20K Styx River 94.00 11 P P 15 09 02.7 -0.4
baz=201
SUA Susitna One 94.05 13 P P 15 09 03.6 +0.3
baz=203
SKT Skwentna 94.38 12 P P 15 09 04.4 -0.3
baz=203
M22K Willow 94.43 13 P P 15 09 05.7 +0.9
baz=204
L20K Farewell, AK 94.44 11 P P 15 09 04.6 -0.3
baz=201
S22A 4UR Ranch, Cre 94.72 49 P P 15 09 08.8 +1.6
baz=235
SCM Sheep Creek Mo 95.06 14 P P 15 09 08.5 +0.6
baz=206
PNL Peninsula 95.08 18 P P 15 09 08.0 0.0
baz=213
K20K Telida 95.23 10 P P 15 09 07.2 -1.3
baz=200
XLT XiLinHaoTe 95.40 318 eP P 15 09 13.1 +3.2
XLT pP pP 15 09 22.8 +0.2
XLT sP sP 15 09 27.6 +0.2
XLT pmax pmax
comp=Z,10.0nm,0.8s
XLT pmax pmax
comp=Z,130nm,5.3s
PZH PanZhiHua 95.43 297 P P 15 09 11.8 +1.3
PZH pmax pmax
comp=Z,8.0nm,0.7s
PZH pmax pmax
comp=Z,90nm,4.7s
CAST Castle Rocks 95.62 11 P P 15 09 09.5 -0.8
baz=202
TNA Tin City 95.86 4 P P 15 09 11.9 +0.6
baz=189
PDAR Pinedale Array 95.94 43 P P 15 09 12.4 -0.2
comp=Z,0.4nm,0.4s,baz=180,slow=3.0,SNR=3.8
PDAR PKKPbc PKKPbc 15 26 01.4 -0.5
comp=Z,1.2nm,0.7s,baz=86,slow=4.0,SNR=7.4
comp=Z,0.4nm,0.4s
TRF Thorofare Moun 95.96 12 P P 15 09 12.0 -0.1
TRF IAmb IAmb 15 09 16.9
comp=Z,8.6nm,0.9s

J20K	**Nowinta River**	**95.99**	**10**	P		**P**	**15 09 11.9**	**0.0**	
	baz=200								
CD2	**Chengdu**	**96.20**	**302**	P		**P**	**15 09 14.5**	**+0.7**	
CD2				pmax		pmax			
	comp=Z,10.0nm,0.5s								
ZEA	**Zeya**	**96.26**	**331**	*e*P		**P**	**15 09 16.5**	**+3.1**	
HHC	**Hu-ho-hao-te**	**96.31**	**314**	*e*P		**P**	**15 09 15.3**	**+1.2**	
HHC				pmax		pmax			
	comp=Z,28nm,0.9s								
HHC				pmax		pmax			
	comp=Z,110nm,4.8s								
PAX	**Paxson**	**96.47**	**14**	P		**P**	**15 09 14.1**	**-0.2**	
	baz=208								
M26K	**Nabesna, AK**	**96.52**	**16**	P		**P**	**15 09 14.7**	**+0.3**	
	baz=210								
M27K	**Edge Creek, AK**	**96.75**	**16**	P		**P**	**15 09 16.6**	**+1.0**	
	baz=211								
MLY	**Manley**	**97.34**	**11**	P		Pdif	15 09 18.8	+0.6	
	baz=203								
L27K	**Beaver Creek,**	**97.36**	**16**	P		Pdif	15 09 20.9	+2.6	
	baz=211								
CCB	**Clear Creek Bu**	**97.51**	**13**	P		**P**	**15 09 17.9**	**-0.9**	
H21K	**Melozitna Rive**	**97.59**	**10**	P		Pdif	15 09 20.7	+1.5	
	baz=202								
SCRK	**Sand Creek**	**97.68**	**14**	P		Pdif	15 09 20.7	+0.9	
	baz=209								
I23K	**Minto, Yukon-K**	**97.68**	**12**	P		Pdif	15 09 21.6	+2.0	
	baz=205								
TCOL	**CIGO, UAF Yank**	**97.70**	**12**	P		Pdif	15 09 20.8	+1.1	
	baz=206								
COLA	**College**	**97.70**	**12**	*i* P		Pdif	15 09 22.4	+2.7	
COLA				pmax		pmax			
	comp=Z,5.0nm,0.9s								
ILAR	**Eielson Array**	**97.80**	**13**	P		**P**	**15 09 19.5**	**-0.6**	
	comp=Z,0.8nm,0.8s,baz=224,slow=5.2,SNR=10.0								
	comp=Z,0.8nm,0.8s								
ILAR	**Eielson Array**	**97.80**	**13**	P		**P**	**15 09 18.4**	**-1.7**	
ILAR	**Eielson Array**	**97.80**	**13**	P		**P**	**15 09 18.4**	**-1.7**	
J25K	**Salcha River,**	**97.95**	**13**	P		Pdif	15 09 21.2	+0.2	
J25K	**Salcha River,**	**97.95**	**13**	P		**P**	**15 09 20.7**	**-0.2**	
	baz=208								
H22K	**Ishtalitna Cre**	**98.03**	**11**	P		Pdif	15 09 22.3	+1.1	
	baz=203								
K27K	**Chicken**	**98.14**	**15**	P		**P**	**15 09 21.8**	**+0.1**	
	baz=211								
J26L	**Joseph Creek**	**98.23**	**14**	P		Pdif	15 09 23.1	+0.9	
J26L	**Joseph Creek**	**98.23**	**14**	P		Pdif	15 09 22.9	+0.7	
	baz=210								
G21K	**Allakaket**	**98.28**	**10**	P		Pdif	15 09 23.7	+1.4	
	baz=201								
BILL	**Bilibino**	**98.77**	**354**[1]	*e*P		**P**	**15 09 24.4**	**0.0**	
BILL				*e**PP		Pdif	15 09 30.3	+5.9	
BILL				*SP		**pwP**	**15 09 40.0**	**-1.5**	
BILL				*e*			15 20 46.1		
BILL				pmax		pmax			
	comp=Z,2.0nm,0.9s								
D23K	**Nanushuk River**	**100.97**	**10**	P		**Pdif**	**15 09 36.3**	**+2.1**	
	baz=204								
YAK	**Yakutsk**	**101.23**	**338**	*i* P		**Pdif**	**15 09 36.8**	**+1.3**	
YAK				pmax		pmax			
	comp=Z,5.0nm,0.9s								
YKA	**Yellowknife Ar**	**105.28**	**25**	PKKPbc		PKKPbc	15 25 33.5	-1.6	
	comp=Z,1.3nm,0.8s,baz=40,slow=3.3,SNR=4.6								
YKA				PKKP		**PKKPdf**	**15 25 44.7**	**-1.5**	
	comp=Z,0.3nm,0.4s,baz=118,slow=5.3,SNR=1.9								
ULM	**Lac du Bonnet**	**107.87**	**42**	PKKP			15 25 40.0		
	comp=Z,4.4nm,0.8s,baz=41,slow=2.0,SNR=6.3								
WMQ	**Urumqi**	**113.32**	**308**	*e*PKP		**PKiKP**	**15 14 24.8**	**+1.8**	
WMQ				LR		LR			
	comp=Z,390nm,16.5s								
				LR		LR			
	comp=Z,300nm,16.1s								
WMQ				LR		LR			
	comp=Z,190nm,18.9s								
BOSA	**Boshof**	**117.42**	**203**	PKP		**PKPdf**	**15 14 31.4**	**-0.3**	
	comp=Z,3.1nm,0.9s,baz=49,slow=9.9,SNR=2.7								
MK31	**Makanchi Array**	**117.86**	**310**	PKPdf		**PKPdf**	**15 14 30.6**	**-1.0**	
MK31	**Makanchi Array**	**117.86**	**310**	PKiKP		**PKPdf**	**15 14 30.6**	**-1.0**	
MKAR	**Makanchi Array**	**117.86**	**310**	PKP		**PKPdf**	**15 14 30.6**	**-1.1**	
	comp=Z,2.3nm,0.5s,baz=192,slow=0.9,SNR=26								
ZALV	**Zalesovo Beam**	**118.09**	**318**	PKP		**PKPdf**	**15 14 30.3**	**-1.5**	
	comp=Z,2.3nm,0.6s,baz=139,slow=0.9,SNR=13								
KSH	**Kashi**	**120.36**	**301**	PKP		**PKiKP**	**15 14 37.0**	**+0.1**	
KSH				LR		LR			
	comp=Z,190nm,15.0s								
KSH				LR		LR			
	comp=Z,300nm,16.0s								
KSH				LR		LR			
	comp=Z,480nm,18.2s								
KURK	**Kurchatov**	**121.12**	**314**	PKPdf		**PKPdf**	**15 14 36.9**	**-0.8**	
KURK	**Kurchatov**	**121.12**	**314***c*	*i*PKiKP		**PKPdf**	**15 14 36.7**	**-1.0**	
KURK				pmax		pmax			
	comp=Z,13nm,0.7s								
KURBB	**Kurchatov Arra**	**121.16**	**314**	PKiKP		**PKPdf**	**15 14 35.6**	**-2.2**	
TKM2	**Tokmak 2**	**121.50**	**304**	P		**PKPdf**	**15 14 37.9**	**-1.1**	
	SNR=8.0								
TKM2	**Tokmak 2**	**121.50**	**304**	PKiKP		**PKPdf**	**15 14 37.0**	**-2.0**	
UCH	**Uchtor**	**122.11**	**303**	P		**PKPdf**	**15 14 40.4**	**-0.1**	
	SNR=18								
CHMS	**Chumysh**	**122.12**	**304**	P		**PKPdf**	**15 14 39.0**	**-1.0**	
	SNR=6.4								
AAK	**Ala-Archa**	**122.22**	**304***c*	*i*PKiKP		**PKPdf**	**15 14 40.3**	**0.0**	
AAK				pmax		pmax			
	comp=Z,10.0nm,1.3s								
USP	**Ospenovka**	**122.36**	**305**	P		**PKPdf**	**15 14 40.1**	**-0.4**	
	SNR=6.2								
AML	**Almayashu**	**122.68**	**303**	P		**PKPdf**	**15 14 41.3**	**-0.2**	
	SNR=10								
EKS2	**Erkin-Say**	**122.74**	**304**	P		**PKiKP**	**15 14 41.3**	**-0.2**	
	SNR=5.5								
KK31	**Karatay Array**	**125.18**	**304**	*i* PKiKP		**PKPdf**	**15 14 45.2**	**-0.6**	
KKAR	**Karatay Array**	**125.18**	**304**	PKPdf		**PKPdf**	**15 14 45.8**	**0.0**	
KKAR	**Karatay Array**	**125.18**	**304**	PKiKP		**PKPdf**	**15 14 45.8**	**0.0**	
FRB	**Frobisher Bay**	**125.20**	**31**	PKP		**PKPdf**	**15 14 43.5**	**-1.6**	
	comp=Z,2.1nm,0.3s,baz=72,slow=6.6,SNR=2.1								
SCHQ	**Schefferville**	**126.05**	**42**	PKP		**PKPdf**	**15 14 45.8**	**-1.3**	
	comp=Z,2.5nm,0.7s,baz=244,slow=5.3,SNR=6.7								
AB31	**Akbulak array**	**132.99**	**311**	*i* PKiKP		**PKPdf**	**15 15 00.1**	**-0.3**	
ARU	**Arti**	**133.14**	**321**	*i* PKiKP		**PKiKP**	**15 15 01.2**	**-0.5**	
ARU							15 17 24.4		
GEYT	**Alibeck**	**133.69**	**295**	PKP		**PKPdf**	**15 15 00.9**	**-1.2**	
	comp=Z,6.0nm,0.8s,baz=241,slow=3.1,SNR=6.7								
GEYT				SKPbc		**SKPbc**	**15 18 26.5**	**-0.7**	
	comp=Z,1.9nm,0.4s,baz=258,slow=33,SNR=3.1								
AKTO	**Aktyubinsk**	**134.18**	**312**	PKiKP		**PKPdf**	**15 15 01.1**	**-1.5**	
KMBO	**Kilima Mbogo**	**134.28**	**233**	PKP		**PKPdf**	**15 15 03.6**	**-0.7**	
	comp=Z,1.6nm,0.6s,baz=158,slow=2.6,SNR=4.8								
KIRV	**Kirov**	**137.35**	**325**	PKP		**PKPdf**	**15 15 06.5**	**-1.7**	
	comp=Z,10nm,0.6s,baz=41,slow=3.8,SNR=2.1								
KIRV	**Kirov**	**137.35**	**325***c*	*i*PKiKP		**PKiKP**	**15 15 10.3**	**+0.2**	
ARCES	**ARCESS Array B**	**138.54**	**348**	PKhKP		PKPpre	15 15 01.9		
	comp=Z,3.1nm,0.8s,baz=73,slow=2.4,SNR=9.2								
ARCES				PKP		**PKPdf**	**15 15 11.1**	**+0.9**	
	comp=Z,4.1nm,0.6s,baz=79,slow=1.4,SNR=10.0								
H10N3	**ASCENSION HYDR**	**138.81**	**154**	T		T	17 50 58.3		
	baz=204,slow=75,SNR=1638								
H10N1	**ASCENSION HYDR**	**138.81**	**154**	T		T	17 50 57.8		
	baz=204,slow=75,SNR=2350								
H10N2	**ASCENSION HYDR**	**138.83**	**154**	T		T	17 50 58.8		
	baz=204,slow=75,SNR=2282								
KLMR	**Klimovskoe**	**140.77**	**332**	*e*PKiKP		**PKPdf**	**15 15 12.4**	**-2.0**	
KLMR				pmax		pmax			
	comp=Z,15nm,1.0s								
KLMR	**Klimovskoe**	**140.77**	**332**	*e*PKPdf		**PKPdf**	**15 15 12.4**	**-2.0**	
KLMR				AMP			15 15 19.6		
	comp=Z,15nm,1.0s								
MOS	**Moscow**	**144.37**	**326**	*e*PKHKP		PKPpre	15 15 17.0		
ZEI	**Tsey**	**144.62**	**302**	*i* PKiKP		**PKPab**	**15 15 20.0**	**-0.8**	
ZEI				pmax		pmax			
	comp=Z,11nm,0.6s								
FIA1	**FINESS Array S**	**145.12**	**340**			**PKPbc**	**15 15 20.8**	**-0.9**	
FINES	**FINESS Array B**	**145.12**	**340**	PKP		**PKPbc**	**15 15 20.9**	**-0.7**	
	comp=Z,85nm,0.7s,baz=58,slow=3.4,SNR=484								
FINES	**FINESS Array B**	**145.12**	**340**			**PKPbc**	**15 15 20.8**	**-0.9**	
FINES	**FINESS Array B**	**145.12**	**340**	PKiKP		**PKPbc**	**15 15 20.8**	**-0.9**	
OBN	**Obninsk**	**145.20**	**325***c*	*i*PKP2		**PKPbc**	**15 15 20.8**	**-1.3**	
OBN				*i*			15 15 23.8		
OBN				pmax		pmax			
	comp=Z,35nm,1.0s								
NSS	**Namsos**	**145.21**	**353**	*e*P		**PKPbc**	**15 15 20.9**	**-0.9**	
NSS				IAmb		IAmb	15 15 21.8		
	comp=Z,107nm,0.8s								
KBZ	**Khabaz**	**145.22**	**304**	PKPbc		**PKPbc**	**15 15 22.4**	**-0.1**	
	comp=Z,9.8nm,0.7s,baz=151,slow=2.2,SNR=16								
KBZ	**Khabaz**	**145.22**	**304***c*	*i*PKiKP		**PKPbc**	**15 15 22.3**	**-0.2**	
KIV	**Kislovodsk**	**145.33**	**305**	*e*PKiKP		**PKPab**	**15 15 23.2**	**-0.1**	
KIV				pmax		pmax			
	comp=Z,16nm,1.0s								
VORR	**Voronezh**	**145.39**	**319**	*e*PKiKP		**PKPdf**	**15 15 22.5**	**-0.4**	
VORR				pmax		pmax			
	comp=Z,90nm,0.5s								
TBLU	**Trondheim**	**146.64**	**353**	*e*P		**PKPbc**	**15 15 25.8**	**-0.5**	
TBLU				IAmb		IAmb	15 15 26.9		
	comp=Z,36nm,0.9s								
RAF	**Rauma**	**146.66**	**343**	*e*P		**PKPdf**	**15 15 25.1**	**+0.4**	
VSU	**Vasula**	**147.22**	**336**	*e*P		**PKPbc**	**15 15 27.5**	**-0.5**	
SOC	**Sochi**	**147.51**	**305**	*i* PKP2		**PKiKP**	**15 15 31.3**	**-0.2**	
SOC				*e*			15 18 56.0		
SOC				*e*PPP		PPP	15 22 13.2		
SOC				*e*SS		SS	15 37 54.4	-2.0	
MOL	**Molde**	**147.54**	**355**	*e*P		**PKPbc**	**15 15 28.9**	**+0.1**	
MOL				IAmb		IAmb	15 15 31.7		
	comp=Z,30nm,1.0s								
DOMB	**Dombas**	**147.94**	**354**	*e*P		**PKPbc**	**15 15 29.5**	**-0.5**	
DOMB				IAmb		IAmb	15 15 30.0		
	comp=Z,13nm,0.7s								
AKN	**Aaknes**	**147.97**	**356**	*e*P		**PKPbc**	**15 15 30.0**	**0.0**	
AKN				IAmb		IAmb	15 15 30.6		
	comp=Z,36nm,0.8s								
MTSE	**Matsula**	**147.99**	**339**	*e*P		**PKPbc**	**15 15 29.6**	**-0.6**	
NC303	**NORSAR Array S**	**148.49**	**352**			**PKPbc**	**15 15 31.2**	**-0.2**	
NC204	**NORSAR Array S**	**148.51**	**352**			**PKPbc**	**15 15 31.2**	**-0.3**	
NC405	**NORSAR Array S**	**148.55**	**351**			**PKPbc**	**15 15 31.4**	**-0.2**	
FOO	**Floro**	**148.65**	**357**	*e*P		**PKPbc**	**15 15 31.5**	**-0.3**	
FOO				IAmb		IAmb	15 15 32.1		
	comp=Z,26nm,0.8s								
NB201	**NORSAR Array S**	**148.67**	**352**			**PKPbc**	**15 15 31.5**	**-0.4**	
NB2	**NORSAR Subarra**	**148.69**	**352**	PKP		**PKPbc**	**15 15 31.1**	**-0.9**	
	baz=16,slow=2.9								
NB2	**NORSAR Subarra**	**148.69**	**352**	PKP		**PKPbc**	**15 15 31.1**	**-0.9**	
	comp=Z,26nm,0.8s,baz=16,slow=2.9								
NOA	**NORSAR Array B**	**148.69**	**352**	PKPbc		**PKPbc**	**15 15 31.3**	**-0.7**	
	comp=Z,17nm,0.7s,baz=15,slow=4.3,SNR=58								
ANN	**Anapa**	**148.83**	**308**	*i* PKiKP		**PKPbc**	**15 15 31.8**	**-1.0**	
ANN				*e*			15 22 36.8		
ANN				pmax		pmax			
	comp=Z,90nm,0.8s								
NAO01	**NORSAR Array S**	**148.92**	**352**	*e*P		**PKPbc**	**15 15 32.0**	**-0.5**	
NAO01				IAmb		IAmb	15 15 36.9		
	comp=Z,26nm,0.8s								
HYA	**Hoyanger**	**149.03**	**356**	*e*P		**PKPbc**	**15 15 32.5**	**-0.2**	
HYA				IAmb		IAmb	15 15 33.1		
	comp=Z,15nm,0.9s								
HFS	**Hagfors**	**149.19**	**349**	PKPbc		**PKPbc**	**15 15 32.1**	**-1.1**	
	comp=Z,27nm,0.8s,baz=68,slow=4.0,SNR=50								
SUE	**Sulen**	**149.20**	**358**	*e*P		**PKPbc**	**15 15 33.1**	**-0.1**	
SUE				IAmb		IAmb	15 15 38.3		
	comp=Z,43nm,0.9s								
SKAR	**Skarslia**	**149.35**	**354**	*e*P		**PKPbc**	**15 15 33.6**	**-0.1**	
SKAR				IAmb		IAmb	15 15 34.4		
	comp=Z,30nm,0.8s								
IDID	**Didziasalis**	**149.51**	**332**	*e*P		**PKPbc**	**15 15 34.1**	**-0.1**	
ISAL	**Salakas**	**149.58**	**333**	*e*P		**PKPbc**	**15 15 34.3**	**0.0**	
IIGN	**Ignalina**	**149.70**	**333**	*e*P		**PKPbc**	**15 15 34.7**	**+0.1**	
ASK	**Askoy**	**149.76**	**357**	*e*P		**PKPbc**	**15 15 34.6**	**+0.1**	
ASK				IAmb		IAmb	15 15 35.1		
	comp=Z,62nm,0.8s								
NACGM	**Naroch**	**149.79**	**332**	*i* PKP		**PKPbc**	**15 15 34.4**	**-0.4**	
BER	**Bergen**	**149.85**	**357**	*e*P		**PKPbc**	**15 15 34.9**	**+0.1**	
BER				IAmb		IAmb	15 15 40.4		
	comp=Z,29nm,0.9s								
LRW	**Lerwick**	**150.08**	**3**	*e*P		**PKPbc**	**15 15 34.8**	**-0.6**	
VSVD	**Vaisvydziai**	**150.10**	**335**	*e*P		**PKPbc**	**15 15 35.5**	**-0.1**	
KONO	**Kongsberg**	**150.24**	**352**	*e*P		**PKPbc**	**15 15 35.3**	**-0.5**	
KONO				IAmb		IAmb	15 15 36.1		
	comp=Z,28nm,0.8s								
ODD1	**Odda**	**150.25**	**356**	*e*P		**PKPbc**	**15 15 36.0**	**+0.1**	
ODD1				IAmb		IAmb	15 15 36.6		
	comp=Z,25nm,0.7s								
PABE	**Paberze**	**150.45**	**335**	*e*P		**PKPbc**	**15 15 36.2**	**-0.2**	
STRU	**Stroemstad**	**150.63**	**351**	*i* P		**PKPdf**	**15 15 33.1**	**+1.9**	
BLS5	**Blasjo**	**150.74**	**356**	*e*P		**PKPbc**	**15 15 37.3**	**+0.3**	
BLS5				IAmb		IAmb	15 15 44.2		
	comp=Z,23nm,0.8s								
PBUR	**Paburge**	**150.76**	**337**	*e*P		**PKPbc**	**15 15 36.8**	**-0.3**	
KMY	**Karmoy**	**151.02**	**357**	*e*P		**PKPbc**	**15 15 37.8**	**+0.2**	
KMY				IAmb		IAmb	15 15 45.4		
	comp=Z,33nm,0.8s								
SIM	**Simferopol'**	**151.03**	**309**	*i* PKiKP		**PKPbc**	**15 15 37.6**	**-0.6**	
SIM				*e*			15 15 41.0		
SIM				pmax		pmax			
	comp=Z,56nm,1.1s								
SIM				pmax		pmax			
	comp=Z,17nm,0.5s								
AKASG	**Malin Array Be**	**151.34**	**323**	PKPbc		**PKPbc**	**15 15 37.9**	**-0.7**	
	comp=Z,28nm,0.6s,baz=48,slow=3.1,SNR=6.2								
LEWI	**Lewis, Hebride**	**151.47**	**10**	*e*P		**PKPbc**	**15 15 38.2**	**-0.5**	
LEWI				IAMs_20		IAMs_20	15 31 57.0		
	comp=Z,2µm,15.2s								
BIGH	**Upper Bighouse**	**151.50**	**7**	*e*P		**PKPbc**	**15 15 38.2**	**-0.6**	
BIGH				IAMs_20		IAMs_20	15 32 01.3		
	comp=Z,2µm,25.3s								
LINV	**Loch Inver, As**	**151.70**	**8**	*e*P		**PKPbc**	**15 15 38.7**	**-0.5**	
LINV				IAMs_20		IAMs_20	15 32 47.5		
	comp=Z,2µm,16.2s								
HOMB	**Homborsund**	**151.71**	**353**	*e*P		**PKPbc**	**15 15 38.9**	**-0.3**	
HOMB				IAmb		IAmb	15 15 40.0		
	comp=Z,52nm,0.8s								
BORU	**Boraas**	**151.71**	**348**	*i* P		**PKPbc**	**15 15 36.7**	**-2.6**	
SNART	**Snartemo**	**151.76**	**354**	*i* P		**PKPbc**	**15 15 38.5**	**-0.9**	
SNART	**Snartemo**	**151.76**	**354**	*e*P		**PKPbc**	**15 15 39.5**	**+0.1**	
SNART				IAmb		IAmb	15 15 43.8		
	comp=Z,161nm,1.4s								
SUW	**Suwalki**	**151.88**	**333**	*e*P		**PKPbc**	**15 15 39.3**	**-0.4**	
KAC	**Achnashellach**	**152.32**	**9**	*e*P		**PKPbc**	**15 15 40.3**	**-0.4**	
KPL	**Plockton**	**152.42**	**9**	*e*P		**PKPbc**	**15 15 40.5**	**-0.4**	
KPL				IAMs_20		IAMs_20	15 32 20.9		
	comp=Z,2µm,15.4s								
DEL	**Delary**	**152.59**	**346**	*e*P		**PKPbc**	**15 15 40.9**	**-0.4**	
DEL	**Delary**	**152.59**	**346**	*i* P		**PKPbc**	**15 15 40.0**	**-1.3**	
BRTR	**Keskin Array B**	**152.72**	**299**	PKPbc		**PKPbc**	**15 15 41.5**	**-0.8**	
	comp=Z,7.4nm,0.8s,baz=134,slow=3.6,SNR=19								
BJUU	**Bjuv**	**153.13**	**347**	*i* P		**PKPbc**	**15 15 40.9**	**-1.6**	
BSD	**Bornholm Skovb**	**153.60**	**344**	*e*P		**PKPbc**	**15 15 43.2**	**-0.3**	
BSD	**Bornholm Skovb**	**153.60**	**344**	*i* P		**PKPbc**	**15 15 43.0**	**-0.5**	
ESY	**Stoneypath**	**154.17**	**6**	*e*P		**PKPbc**	**15 15 44.5**	**-0.3**	
EBL	**Broad Law**	**154.27**	**7**	*e*P		**PKiKP**	**15 15 45.0**	**0.0**	
EKA	**Eskdalemuir Ar**	**154.69**	**7**	PKPab		**PKPab**	**15 15 59.5**	**-1.4**	
	comp=Z,9.5nm,0.8s,baz=348,slow=3.0,SNR=20								
ESK	**Eskdalemuir**	**154.71**	**7**	*e*P		**PKiKP**	**15 15 46.4**	**+0.5**	
ESK				IAMs_20		IAMs_20	15 33 43.1		
	comp=Z,2µm,15.0s								
CRVS	**Cervenica-Dubn**	**156.35**	**327**	*e*PKP2		**PKPab**	**15 16 11.2**	**+2.9**	
CRVS	**Cervenica-Dubn**	**156.35**	**327**	*e*PKP		**PKPab**	**15 16 11.2**	**+2.9**	
OKC	**Ostrava-Krasne**	**157.09**	**333**	AMS		AMS	15 43 00.0		
	comp=Z,1µm,16.7s								
OSTC	**Ostas**	**157.21**	**337**	*e*PKPAB		**PKPab**	**15 16 11.4**	**-0.5**	
OSTC				AMS		AMS	15 42 10.0		
	comp=Z,1µm,16.5s								
CHVC	**Chvalec**	**157.24**	**337**	*e*PKPAB		**PKPab**	**15 16 12.1**	**+0.1**	
CHVC				AMS		AMS	15 42 00.0		
	comp=Z,1µm,17.4s								
UPC	**Upice**	**157.32**	**337**	*e*PKP2		**PKPab**	**15 16 12.1**	**-0.2**	
UPC				MLR		MLR			
	comp=Z,1µm,17.4s								
UPC	**Upice**	**157.32**	**337**	*e*PKPAB		**PKPab**	**15 16 12.1**	**-0.2**	
UPC				AMS		AMS	15 41 50.0		
	comp=Z,1µm,17.4s								
DPC	**Dobruska-Polom**	**157.35**	**336**	*e*PKP2		**PKPab**	**15 16 11.8**	**-0.7**	
DPC				MLR		MLR			
	comp=Z,1µm,17.5s								
DPC	**Dobruska-Polom**	**157.35**	**336**	*e*PKPAB		**PKPab**	**15 16 11.8**	**-0.7**	
DPC				AMS		AMS	15 42 10.0		
	comp=Z,1µm,17.5s								
MORC	**Moravsky Berou**	**157.37**	**334**	*e*PKP		**PKPab**	**15 16 14.3**	**+1.7**	
KRLC	**Kraliky**	**157.41**	**335**	*e*PKP2		**PKPab**	**15 16 11.5**	**-1.3**	
KRLC				MLR		MLR			
	comp=Z,1µm,17.0s								
KRLC	**Kraliky**	**157.41**	**335**	*e*PKPAB		**PKPab**	**15 16 11.5**	**-1.3**	
KRLC				*ex*		x	15 16 15.1		
KRLC				AMS		AMS	15 42 20.0		
	comp=Z,1µm,17.0s								
CLL	**Collm**	**157.54**	**342**	*i* PKP2		**PKPab**	**15 16 12.5**	**-0.7**	
CLL				pmax		pmax			
	comp=Z,13nm,0.8s								
CLL	**Collm**	**157.54**	**342**	*e*PKPdf		**PKPdf**	**15 15 43.0**	**+1.8**	
CLL				*i* PKPdif		**pPKPdf**	**15 15 52.1**	**-2.2**	
	comp=Z,4.0nm,0.9s								
CLL				*i* PKPab		**PKPab**	**15 16 12.5**	**-0.7**	
	comp=Z,13nm,0.8s								
MAUC	**Maruska**	**157.59**	**333**	AMS		AMS	15 42 30.0		
	comp=Z,2µm,17.6s								
BRG	**Berggiesshubel**	**157.66**	**340**	*e*PKP		**PKPab**	**15 16 13.2**	**-0.5**	
BRG				Amp			15 16 17.6		
	comp=Z,10nm,0.8s								
BRG				Amp			15 40 50.0		
	comp=E,1.0nm,18.1s								
BRG				Amp			15 40 54.0		
	comp=Z,1.3nm,17.0s								
BRG				Amp			15 40 56.0		
	comp=N,0.6nm,15.6s								
BRG	**Berggiesshubel**	**157.66**	**340**	*e*PKP2		**PKPab**	**15 16 13.2**	**-0.6**	
BRG				pmax		pmax			
	comp=Z,10.0nm,0.8s								
PVCC	**Panska Ves**	**157.78**	**339**	AMS		AMS	15 41 10.0		
	comp=Z,1µm,17.2s								
VYHS	**Vyhne**	**157.84**	**330**	*e*PKP2		**PKPab**	**15 16 17.7**	**+3.0**	
VYHS	**Vyhne**	**157.84**	**330**	*e*PKP		**PKPab**	**15 16 17.7**	**+3.0**	
JAVC	**Velka Javorina**	**158.05**	**332**	*e*PKP		**PKPab**	**15 16 15.7**	**+0.1**	
VRAC	**Vranov**	**158.11**	**334**	*e*PKP		**PKPab**	**15 16 15.3**	**-0.5**	
PRU	**Pruhonice**	**158.26**	**338**	*e*PKP2		**PKPab**	**15 16 15.9**	**-0.5**	
PRU				MLR		MLR			
	comp=Z,1µm,20.1s								
PRU	**Pruhonice**	**158.26**	**338**	*e*PKPAB		**PKPab**	**15 16 15.9**	**-0.5**	
PRU				AMS		AMS	15 40 50.0		
	comp=Z,1µm,20.1s								
KRUC	**Moravsky**	**158.39**	**334**	*e*PKP		**PKPab**	**15 16 16.7**	**-0.3**	
TREC	**Trest**	**158.53**	**336**	AMS		AMS	15 41 50.0		
	comp=Z,1µm,17.0s								
NKC	**Novy Kostel**	**158.66**	**342**	*e*PKP2		**PKPab**	**15 16 17.8**	**-0.3**	
NKC				MLR		MLR			
	comp=Z,1µm,16.2s								
NKC	**Novy Kostel**	**158.66**	**342**	*e*PKPAB		**PKPab**	**15 16 17.8**	**-0.3**	
NKC				AMS		AMS	15 40 30.0		
	comp=Z,1µm,16.2s								
KHC	**Kasperske Hory**	**159.31**	**339**	*e*PKP2		**PKPab**	**15 16 20.9**	**-0.1**	
KHC				MLR		MLR			
	comp=Z,1µm,14.7s								
KHC	**Kasperske Hory**	**159.31**	**339**	*e*PKPAB		**PKPab**	**15 16 20.9**	**-0.1**	
KHC				*ex*		x	15 16 24.5		
KHC				AMS		AMS	15 42 30.0		
	comp=Z,1µm,14.7s								
CKRC	**Cesky Krumlov**	**159.34**	**337**	*e*PKPAB		**PKPab**	**15 16 21.0**	**-0.1**	
CKRC				*ex*		x	15 16 23.9		
CONA	**Conrad Observa**	**159.52**	**333**	*e*P		**PKPab**	**15 16 22.2**	**+0.2**	
	comp=Z,3.6nm,0.8s								
GERES	**GERESS Array B**	**159.52**	**338**	PKPab		**PKPab**	**15 16 21.1**	**-0.9**	
	comp=Z,2.0nm,0.6s,baz=46,slow=5.8,SNR=9.0								
RONA	**Rosalia, Austr**

0.4nm,0.9s
MKAR Makanchi Array 64.19 43 P P 15 16 36.7 +0.1
0.5nm,0.6s,baz=318,slow=7.7,SNR=3.0
0.5nm,0.6s

DJA 23 15:10:05.2±0.3, 9°S±5′×11°2E±°, h98km±4km, M3.9/20, mb4.1/5, MLv3.8/20, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PWJI	**Pagerwojo**	**0.55**	**340**	P	Pn	15 10 21.9	+0.7
PWJI				S	Sn	15 10 35.2	+2.2
PCJI	**Pacitan**	**0.87**	**293**	P	Pn	15 10 25.2	+1.1
PCJI				S	Sn	15 10 39.7	+1.3
WOJI	**Wonogiri, Jawa**	**1.27**	**303**	P	Pn	15 10 29.1	+0.6
WOJI				S	Sn	15 10 46.9	+0.8
GMJI	**Gumukmas**	**1.46**	**80**	P	Pn	15 10 31.7	+0.8
UGM	**Wanagama**	**1.58**	**293**	P	Pn	15 10 33.2	+0.8
GRJI	**Gresik**	**1.69**	**17**	P	Pn	15 10 33.6	-0.1
TBJI	**Tambak Boyo**	**1.72**	**355**	P	Pn	15 10 33.9	-0.2
BLJI	**Banyuglugur**	**1.77**	**64**	P	Pn	15 10 35.4	+0.6
SMRI	**Semarang**	**2.13**	**314**	P	Pn	15 10 39.5	0.0
JAGI	**Jajag, Banyuwa**	**2.14**	**88**	P	Pn	15 10 40.3	+0.8
ABJI	**Asem Bagus**	**2.34**	**72**	P	Pn	15 10 42.6	+0.4
UWJI	**Ujung Watu**	**2.35**	**334**	P	Pn	15 10 41.7	-0.6
KMMI	**Kalianget**	**2.46**	**53**	P	Pn	15 10 42.7	-1.0
IGBI	**Denpasar**	**3.13**	**95**	P	Pn	15 10 52.5	-0.2
SRBI	**Singaraja**	**3.22**	**82**	P	Pn	15 10 54.0	+0.1
CMJI	**Cimerak**	**3.59**	**282**	P	Pn	15 10 58.8	0.0
TWSI	**Taliwang, Sumb**	**4.84**	**93**	P	Pn	15 11 16.1	+0.3
CNJI	**Cibinong**	**4.97**	**284**	P	Pn	15 11 18.3	+0.8
PLAI	**Plampang**	**5.73**	**93**	P	Pn	15 11 28.3	+0.5
	0.2nm25nm,1.1s						
WBSI	**Waikabubak, Su**	**7.39**	**99**	P	Pn	15 11 49.2	-1.3
	0.2nm28nm,1.3s						
EDFI	**Ende, Flores**	**9.59**	**92**	P	Pn	15 12 19.9	-0.7
	5.1nm,0.4s						

*IDC **23** 15:12:30.9±0.9, 56°.60N×34°.08W, h0km, mb3.8/11, mbtmp3.8/13, ML2.7/1, MS3.6/6, Error ellipse: s-maj=29.1km s-min=15.3km az=8.0*
*NEIC **23** 15:12:32.3±1.5, 56°.6N±0°.1×34°.2W±0°.1, h16km±4km, mb4.5/84, Error ellipse: s-maj=16.0km s-min=11.6km az=176.0*

ISC 23 15:12:31.5±0.5, 56°.54N±0°.10×34°.24W±0°.06, h10km, n109, σ1§00/104, mb4.5/51, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRS	**Narsarsuaq**	**7.42**	**313**	Pn	**Pn**	**15 14 21.3**	**+1.7**
BORG	**Borgarnes**	**10.37**	**32**	Pn	**Pn**	**15 15 02.4**	**+2.5**
	1.2nm,0.3s,baz=216,slow=6.6,SNR=5.6						
BORG				LR	LR	15 17 51.0	
	comp=Z,431nm,18.6s,baz=233,slow=31						
BORG	**Borgarnes**	**10.37**	**32**		**Pn**	**15 15 01.2**	**+1.3**
SFJD	**Kangerlussuaq**	**12.98**	**330**	LR	LR	15 19 43.3	
	comp=Z,219nm,18.6s,baz=150,slow=33						
SUMG	**Summit**	**16.20**	**355**	Pn	**Pn**	**15 16 17.4**	**-1.7**
EKA	**Eskdalemuir Ar**	**17.38**	**81**	P	**Pn**	**15 16 33.7**	**-0.1**
	0.6nm,0.6s,baz=287,slow=9.6,SNR=1.7						
EKA				LR	LR	15 22 06.9	
	comp=Z,257nm,18.1s,baz=203,slow=33						
JMIC	**Jan Mayen**	**18.17**	**27**	LR	LR	15 22 03.3	
	comp=Z,167nm,19.6s,baz=246,slow=32						
FRB	**Frobisher Bay**	**18.34**	**307**	LR	LR	15 22 23.8	
	comp=Z,128nm,19.5s,baz=183,slow=32						
SCHQ	**Schefferville**	**18.36**	**278**	P	**Pn**	**15 16 47.6**	**+1.7**
	0.2nm,0.3s,baz=74,slow=11,SNR=7.3						
SCHQ				LR	LR	15 22 22.3	
	comp=Z,187nm,18.8s,baz=85,slow=32						
	3.9nm,0.7s						
SCHQ	**Schefferville**	**18.36**	**278**	P	**P**	**15 16 43.8**	**-2.1**
BATG	**Bathurst New B**	**21.53**	**258**	P	**P**	**15 17 19.6**	**-0.8**
BATG				IAmb	IAmb	15 17 25.4	
	comp=Z,39nm,1.5s						
D62A	**Allapoint, All**	**23.27**	**261**	P	**P**	**15 17 39.5**	**+0.5**
D62A				IAmb	IAmb	15 17 45.1	
	comp=Z,23nm,1.4s						
NBO00	**NORSAR Array S**	**23.38**	**60**	P	**P**	**15 17 39.3**	**-0.7**
NBO00				IAmb	IAmb	15 17 47.5	
	comp=Z,18nm,1.1s						
CLF	**Chambon-Foret**	**23.65**	**96**	P	**P**	**15 17 42.1**	**-0.5**
EMMW	**East Machias**	**23.91**	**255**	P	**P**	**15 17 43.8**	**-1.4**
F63A	**Nahmakanta, Br**	**24.16**	**258**	P	**P**	**15 17 48.9**	**+1.4**
F63A				IAmb	IAmb	15 18 10.4	
	comp=Z,20nm,1.5s						
F62A	**Pittston Farm,**	**24.50**	**260**	P	**P**	**15 17 50.2**	**-0.5**
F62A				IAmb	IAmb	15 17 51.7	
	comp=Z,24nm,1.4s						
WLF	**Walferdange**	**24.91**	**89**	P	**P**	**15 17 54.6**	**+0.3**
WLF				IAmb	IAmb	15 18 23.2	
	comp=Z,21nm,1.5s						
HFS	**Hagfors**	**24.97**	**62**	P	**P**	**15 17 56.4**	**+1.7**
	comp=Z,4.1nm,0.9s,baz=254,slow=5.4,SNR=4.5						
	comp=Z,4.1nm,0.9s						
PAB	**San Pablo**	**25.93**	**118**	P	**P**	**15 18 04.0**	**+0.3**
PAB				IAmb	IAmb	15 18 19.6	
	comp=Z,12nm,1.4s						
ESBB	**Sonseca Array**	**26.02**	**118**	P	**P**	**15 18 04.5**	**0.0**
ESDC	**Sonseca Array**	**26.02**	**118**	P	**P**	**15 18 05.2**	**+0.6**
	comp=Z,1.1nm,0.9s,baz=316,slow=9.1,SNR=6.7						
	comp=Z,1.1nm,0.9s						
ESDC	**Sonseca Array**	**26.02**	**118**	IAmb	IAmb	15 18 09.5	
	comp=Z,3.5nm,1.4s						
GRA1	**Grafenberg Arr**	**27.70**	**85**	P	**P**	**15 18 21.0**	**+1.6**
GRA1				IAmb	IAmb	15 18 28.5	
	comp=Z,5.7nm,0.9s						
GRFO	**Grafenberg**	**27.70**	**85**	P	**P**	**15 18 21.3**	**+1.8**
UCCT	**U. Connecticut**	**28.45**	**255**	P	**P**	**15 18 26.4**	**+0.2**
ARCES	**ARCESS Array B**	**28.65**	**39**	P	**P**	**15 18 27.2**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=269,slow=9.0,SNR=1.9						
	comp=Z,0.8nm,0.6s						
PECO	**Prince Edward**	**29.60**	**263**	P	**P**	**15 18 36.6**	**+0.2**
PECO				IAmb	IAmb	15 18 51.3	
	comp=Z,6.8nm,1.0s						
FINES	**FINESS Array B**	**30.46**	**55**	P	**P**	**15 18 42.0**	**-1.8**
FIA1	**FINESS Array S**	**30.46**	**55**	P	**P**	**15 18 43.2**	**-0.7**
FIA1				IAmb	IAmb	15 18 58.5	
	comp=Z,9.2nm,1.1s						
STAL	**STALIGIAL**	**30.46**	**89**	P	**P**	**15 18 45.0**	**+0.9**
STAL				IAmb	IAmb	15 19 01.5	
	comp=Z,8.3nm,1.2s						
PABE	**Paberze**	**31.71**	**67**	P	**P**	**15 18 53.9**	**-1.0**
E46A	**Sault Ste Mari**	**32.13**	**273**	P	**P**	**15 18 59.0**	**+0.3**
E46A				IAmb	IAmb	15 19 05.4	
	comp=Z,6.4nm,1.1s						
T59A	**Double "B" Far**	**34.78**	**254**	P	**P**	**15 19 23.0**	**+1.2**
O52A	**Adamsville**	**34.84**	**262**	P	**P**	**15 19 22.7**	**+0.3**
O52A				IAmb	IAmb	15 19 24.9	
	comp=Z,5.6nm,0.8s						
EYMN	**Ely**	**35.14**	**281**	P	**P**	**15 19 25.1**	**+0.2**
EYMN				IAmb	IAmb	15 19 31.8	
	comp=Z,7.1nm,1.2s						
DIVS	**Divibare**	**35.84**	**87**	P	**P**	**15 19 31.5**	**+0.4**
B35A	**Bob, Littlefor**	**36.11**	**283**	P	**P**	**15 19 33.2**	**0.0**
I42A	**Draeger Farm,**	**36.22**	**273**	P	**P**	**15 19 34.6**	**+0.5**
I42A				IAmb	IAmb	15 19 46.5	
	comp=Z,12nm,1.3s						
N47A	**Urbana**	**36.44**	**267**	P	**P**	**15 19 36.7**	**+0.7**
BURAR	**Bucovina Array**	**36.53**	**78**	P	**P**	**15 19 36.4**	**-0.5**
AKASG	**Malin Array Be**	**36.88**	**71**	P	**P**	**15 19 39.3**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=297,slow=6.1,SNR=1.8						
	comp=Z,0.1nm,0.3s						
AGMN	**Agassiz Nation**	**37.29**	**284**	P	**P**	**15 19 43.5**	**+0.2**
FNA	**Florina**	**38.80**	**90**	P	**P**	**15 19 56.2**	**+0.1**
CPCT	**Cooper Cave**	**39.67**	**260**	P	**P**	**15 20 03.5**	**+0.1**
T47A	**Sharon Grove**	**39.96**	**264**	P	**P**	**15 20 06.2**	**+0.4**
T47A				IAmb	IAmb	15 20 27.2	
	comp=Z,11nm,1.4s						
ECSD	**EROS Data Cent**	**40.56**	**279**	P	**P**	**15 20 10.7**	**0.0**
SIUC	**Southern Illin**	**40.60**	**266**	P	**P**	**15 20 10.8**	**-0.2**
P40A	**Paris**	**40.89**	**271**	P	**P**	**15 20 12.2**	**-1.2**
P40A				IAmb	IAmb	15 20 19.9	
	comp=Z,13nm,1.4s						
E28A	**Huff**	**40.94**	**285**	P	**P**	**15 20 12.8**	**-1.1**
FPAL	**Fort Paine**	**40.94**	**260**	P	**P**	**15 20 13.3**	**-0.7**
WVT	**Waverly**	**40.98**	**263**	P	**P**	**15 20 13.7**	**-0.5**
FVM	**French Village**	**41.08**	**268**	P	**P**	**15 20 15.7**	**+0.7**
LRAL	**Lakeview Retre**	**42.84**	**260**	P	**P**	**15 20 30.3**	**+0.9**
LCAR	**Lake Charles**	**42.86**	**266**	P	**P**	**15 20 28.7**	**-0.8**
S39A	**Bolivar**	**42.89**	**270**	P	**P**	**15 20 28.8**	**-1.0**
S39A				IAmb	IAmb	15 20 30.9	
	comp=Z,9.4nm,1.4s						
RSSD	**Black Hills**	**44.33**	**285**	P	**P**	**15 20 41.4**	**-0.2**
U38A	**Gravette**	**44.38**	**269**	P	**P**	**15 20 39.0**	**-2.8**
U38A				IAmb	IAmb	15 20 40.4	
	comp=Z,4.9nm,0.7s						
EPYK	**Eagle Plains**	**44.47**	**326**	P	**P**	**15 20 41.1**	**-1.0**
EPYK				IAmb	IAmb	15 20 45.9	
	comp=Z,11nm,1.5s						
W39A	**Magazine**	**44.95**	**268**	P	**P**	**15 20 47.2**	**+0.8**
W39A				IAmb	IAmb	15 20 53.0	
	comp=Z,4.6nm,0.8s						
T35A	**Sooner Cattle**	**45.21**	**272**	P	**P**	**15 20 46.8**	**-1.7**
SJG	**San Juan**	**45.21**	**225**	P	**P**	**15 20 44.6**	**-3.9**
MIAR	**Mount Ida**	**45.32**	**267**	P	**P**	**15 20 48.5**	**-0.9**
MIAR				IAmb	IAmb	15 20 55.5	
	comp=Z,8.5nm,1.4s						
I29M	**Ogilvie Camp,**	**45.62**	**325**	P	**P**	**15 20 50.2**	**-1.2**
I29M				IAmb	IAmb	15 20 58.0	
	comp=Z,7.6nm,1.2s						
BMAR	**Burnt Mountain**	**46.08**	**330**	P	**P**	**15 20 54.2**	**-0.8**
WALA	**Waterton Lakes**	**46.18**	**296**	P	**P**	**15 20 55.3**	**-0.8**
BRTR	**Keskin Array B**	**46.30**	**81**	P	**P**	**15 20 58.6**	**+1.4**
	comp=Z,1.9nm,0.8s,baz=287,slow=6.9,SNR=3.5						
	comp=Z,1.9nm,0.8s						
RLMT	**Red Lodge**	**46.42**	**289**	P	**P**	**15 20 58.0**	**-0.2**
RLMT				IAmb	IAmb	15 21 20.0	
	comp=Z,7.0nm,1.4s						
TOLK	**Toolik Lake Re**	**46.54**	**333**	P	**P**	**15 20 58.5**	**-0.1**
I26K	**Coal Creek Min**	**47.15**	**327**	P	**P**	**15 21 03.4**	**0.0**
I26K				IAmb	IAmb	15 21 11.4	
	comp=Z,5.8nm,1.4s						
BOZ	**Bozeman (W)**	**47.33**	**291**	P	**P**	**15 21 05.0**	**-0.2**
BOZ				IAmb	IAmb	15 21 11.3	
	comp=Z,5.3nm,1.2s						
K27K	**Chicken**	**47.72**	**325**	P	**P**	**15 21 07.2**	**-0.5**
K27K				IAmb	IAmb	15 21 15.2	
	comp=Z,4.2nm,1.2s						
H24K	**Noodor Dome**	**48.14**	**330**	P	**P**	**15 21 10.9**	**-0.1**
H24K				IAmb	IAmb	15 21 18.3	
	comp=Z,4.0nm,0.9s						
PDAR	**Pinedale Array**	**48.19**	**287**	P	**P**	**15 21 13.9**	**+1.9**
	comp=Z,0.4nm,0.3s,baz=82,slow=11,SNR=4.1						
	comp=Z,0.4nm,0.3s						
BCAR	**Beaver Creek A**	**48.30**	**324**	P	**P**	**15 21 11.8**	**-0.6**
J25K	**Salcha River,**	**48.31**	**327**	P	**P**	**15 21 12.4**	**0.0**
J25K				IAmb	IAmb	15 21 20.6	
	comp=Z,5.3nm,1.2s						
L27K	**Beaver Creek,**	**48.32**	**324**	P	**P**	**15 21 12.9**	**+0.4**
L27K				IAmb	IAmb	15 21 19.5	
	comp=Z,3.3nm,1.1s						
SCRK	**Sand Creek**	**48.35**	**326**	P	**P**	**15 21 12.9**	**+0.1**
H23K	**Yukon River**	**48.61**	**330**	P	**P**	**15 21 14.9**	**+0.3**
H23K				IAmb	IAmb	15 21 22.3	
	comp=Z,7.1nm,1.1s						
ILAR	**Eielson Array**	**48.64**	**328**	P	**P**	**15 21 14.9**	**+0.1**
	comp=Z,1.6nm,0.8s,baz=36,slow=6.2,SNR=15						
	comp=Z,1.6nm,0.8s						
ILAR	**Eielson Array**	**48.64**	**328**	P	**P**	**15 21 14.1**	**-0.8**
RIDG	**Independent Ri**	**48.78**	**326**	P	**P**	**15 21 15.8**	**-0.3**
MDM	**Murphy Dome**	**48.89**	**329**	P	**P**	**15 21 15.9**	**-0.9**
MDM				IAmb	IAmb	15 21 23.8	
	comp=Z,5.9nm,1.0s						
HDA	**Harding Lake**	**48.92**	**328**	P	**P**	**15 21 16.3**	**-0.8**
HDA				IAmb	IAmb	15 21 25.0	
	comp=Z,5.0nm,1.0s						
I23K	**Minto, Yukon-K**	**49.07**	**330**	P	**P**	**15 21 18.0**	**-0.1**
IMAR	**Indian Mountai**	**49.61**	**332**	P	**P**	**15 21 22.0**	**-0.3**
H21K	**Melozitna Rive**	**49.62**	**331**	P	**P**	**15 21 22.2**	**-0.2**
H21K				IAmb	IAmb	15 21 29.5	
	comp=Z,4.2nm,1.1s						
HLID	**Hailey**	**50.17**	**291**	P	**P**	**15 21 26.4**	**-0.7**
TRF	**Thorofare Moun**	**50.62**	**329**	P	**P**	**15 21 30.0**	**-0.2**
TRF				IAmb	IAmb	15 21 39.8	
	comp=Z,8.4nm,1.2s						
KLU	**Klutina**	**50.78**	**325**	P	**P**	**15 21 31.1**	**-0.2**
PV13	**Radium Mtn., P**	**51.07**	**282**	P	**P**	**15 21 33.1**	**-0.9**
PV13				IAmb	IAmb	15 21 41.4	
	comp=Z,4.8nm,1.0s						
J20K	**Nowinta River**	**51.13**	**331**	P	**P**	**15 21 33.1**	**-0.7**
TORD	**Torodi Ar. Bea**	**51.31**	**133**	P	**P**	**15 21 35.5**	**-0.3**
	comp=Z,1.6nm,0.9s,baz=342,slow=8.0,SNR=6.6						
	comp=Z,1.6nm,0.9s						
TORD	**Torodi Ar. Bea**	**51.31**	**133**	P	**P**	**15 21 35.2**	**-0.5**
TORD				IAmb	IAmb	15 21 36.3	
	comp=Z,8.9nm,1.4s						
TIXI	**Tiksi**	**51.55**	**7**	P	**P**	**15 21 35.7**	**-1.1**
K20K	**Telida**	**51.76**	**330**	P	**P**	**15 21 37.6**	**-1.0**
K20K				IAmb	IAmb	15 21 45.3	
	comp=Z,6.0nm,1.1s						
SUA	**Susitna One**	**52.30**	**327**	P	**P**	**15 21 41.4**	**-1.3**
ABKAR	**Akbulak array**	**52.95**	**55**		**P**	**15 21 46.8**	**-0.7**
TXAR	**Lajitas Array**	**54.85**	**271**	P	**P**	**15 22 03.4**	**+1.6**
	comp=Z,0.5nm,0.8s,baz=47,slow=5.5,SNR=4.8						
	comp=Z,0.5nm,0.8s						
KVN	**Kaiserville**	**55.35**	**290**	P	**P**	**15 22 03.6**	**-1.8**
KVN				IAmb	IAmb	15 22 12.1	
	comp=Z,5.6nm,1.2s						
NVAR	**Mina Array Bea**	**55.92**	**289**	P	**P**	**15 22 11.8**	**+2.2**
	comp=Z,0.5nm,0.8s,baz=43,slow=6.7,SNR=4.2						
	comp=Z,0.5nm,0.8s						
KURK	**Kurchatov**	**59.61**	**43**		**P**	**15 22 34.4**	**-0.6**
KURK				IAmb	IAmb	15 22 38.8	
	comp=Z,3.5nm,0.8s						
KKAR	**Karatay Array**	**62.38**	**53**	P	**P**	**15 22 53.6**	**-0.4**
MAKZ	**Makanchi**	**64.09**	**43**	P	**P**	**15 23 04.5**	**-0.8**
MAKZ				IAmb	IAmb	15 23 09.8	
	comp=Z,4.8nm,1.1s						
MKAR	**Makanchi Array**	**64.22**	**43**	P	**P**	**15 23 06.0**	**-0.1**
	comp=Z,1.4nm,0.7s,baz=333,slow=5.7,SNR=8.9						
	comp=Z,1.4nm,0.7s						
MKAR	**Makanchi Array**	**64.22**	**43**		**P**	**15 23 05.0**	**-1.2**
BTK	**Batken**	**64.96**	**55**		**P**	**15 23 10.3**	**-0.9**
GAR	**Garm**	**65.58**	**56**		**P**	**15 23 14.9**	**-0.4**
TARG	**Taragay, Kyrgy**	**66.64**	**49**		**P**	**15 23 20.6**	**-1.7**

*IDC **23** 15:17:59.4±8.9, 30°.68S×179°.76E, h357km±94km, mb3.3/2, mbtmp4.2/3, Error ellipse: s-maj=115.6km s-min=35.7km az=12.0*
*NEIC **23** 15:18:06.7±1.6, 31°.3S±0°.1×179°.6E±0°.2, h432km±10km, mb4.2/11, Error ellipse: s-maj=22.4km s-min=17.6km az=113.0*
*WEL **23** 15:19:23.6, 37°S×48°×17°7E±4°2, h46km±69km, M3.4/6, ML3.5/7, MLv3.4/6, Error ellipse: s-maj=0.1km s-min=0.1km az=144.2*

ISC 23 15:18:06.4±0.8, 31°.34S±0°.10×179°.7E±0°.1, h451km, n44, σ1§52/38, mb4.1/9, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.92**	**45**	P	**P**	**15 19 12.0**	**-1.1**
RAO				S	S	15 19 58.2	-8.8
MXZ	**Matakaoa Point**	**6.32**	**190**	P	**P**	**15 19 42.6**	**-1.2**
MXZ				S	S	15 20 54.7	-8.9
MXZ	**Matakaoa Point**	**6.32**	**190**	P	**P**	**15 19 42.9**	**-0.9**
KUZ	**Kuaotunu**	**6.33**	**211**	P	**P**	**15 19 46.5**	**+2.5**
WMGZ	**Waiomatatini S**	**6.55**	**189**	P	**P**	**15 19 45.8**	**-0.5**
PKGZ	**Pakihiroa**	**6.67**	**191**	P	**P**	**15 19 46.5**	**-1.1**
RUGZ	**Raukumara Rang**	**6.82**	**194**	P	**P**	**15 19 47.9**	**-1.3**
PUZ	**Puketiti**	**6.82**	**190**	P	**P**	**15 19 48.3**	**-0.9**
ETAZ	**East Tamaki Re**	**6.86**	**214**	P	**P**	**15 19 51.3**	**+1.7**
TWGZ	**Tauwhareparae**	**6.97**	**191**	P	**P**	**15 19 50.5**	**-0.2**
URZ	**Urewera**	**7.23**	**197**	P	**P**	**15 19 51.8**	**-1.6**
	34nm,0.4s,baz=258,slow=3.9,SNR=47						
URZ				S	S	15 21 14.1	-7.1
	42nm,0.3s,baz=211,slow=23,SNR=23						
URZ	**Urewera**	**7.23**	**197**	P	P	15 19 50.3	-3.1
URZ				S	S	15 21 11.6	-10
URZ	**Urewera**	**7.23**	**197**	P	**P**	**15 19 50.7**	**-2.7**
CNGZ	**Carnagh Statio**	**7.23**	**189**	P	**P**	**15 19 53.2**	**-0.3**
TKGZ	**Te Karaka**	**7.25**	**192**	P	**P**	**15 19 52.6**	**-1.0**
HIZ	**Hauiti**	**8.19**	**208**	P	**P**	**15 20 03.4**	**-0.4**
BKZ	**Black Stump Fm**	**8.24**	**198**	P	P	15 19 59.9	-4.5
BFZ	**Birch Farm**	**9.73**	**196**	P	P	15 20 17.6	-2.9
MSWZ	**Moikau Station**	**10.68**	**198**	P	P	15 20 27.6	-3.2
KHZ	**Kahutara**	**12.11**	**202**	P	**P**	**15 20 43.4**	**-2.8**
PINNC	**Pines Island,**	**13.96**	**306**	P	**P**	**15 21 03.8**	**-2.8**
FOZ	**Fox Glacier**	**14.47**	**210**	P	**P**	**15 21 09.9**	**-1.8**
WKZ	**Wanaka**	**15.86**	**209**	P	**P**	**15 21 24.3**	**-2.2**
BBOO	**Buckleboo**	**36.83**	**256**	P	**P**	**15 24 35.0**	**+0.2**
BBOO				IAmb	IAmb	15 25 16.9	
	comp=Z,52nm,1.4s						
RABL	**Rabaul**	**37.42**	**311**	P	**P**	**15 24 38.9**	**-1.0**
RABL				IAmb	IAmb	15 24 43.3	
	comp=Z,15nm,0.6s						
WR0	**Warramunga Arr**	**42.01**	**275**	P	**P**	**15 25 17.4**	**+0.4**
WR0				IAmb	IAmb	15 25 38.8	
	comp=Z,8.6nm,1.4s						
WB2	**Warramunga Arr**	**42.18**	**274**	P	**P**	**15 25 18.5**	**+0.1**
WB2				IAmb	IAmb	15 25 55.9	
	comp=Z,10nm,1.4s						
WRA	**Warramunga Arr**	**42.19**	**274**	P	**P**	**15 25 18.8**	**+0.3**
	comp=Z,8.9nm,0.3s,baz=112,slow=7.9,SNR=52						
	comp=Z,0.8nm,0.3s						
WRA	**Warramunga Arr**	**42.19**	**274**	P	**P**	**15 25 16.8**	**-1.6**
WB0	**Warramunga Arr**	**42.22**	**275**	P	**P**	**15 25 18.3**	**-0.4**
WB0				IAmb	IAmb	15 25 38.8	
	comp=Z,7.8nm,1.4s						
SBA	**Scott Base**	**46.96**	**184**	P	**P**	**15 25 56.1**	**+1.6**
KNRA	**Kununurra**	**48.84**	**276**	P	**P**	**15 26 10.1**	**+0.6**
KNRA				IAmb	IAmb	15 26 23.1	
	comp=Z,8.9nm,1.2s						
NWAO	**Narrogin (SRO)**	**52.23**	**251**	P	**P**	**15 26 35.5**	**+1.2**
NWAO				IAmb	IAmb	15 26 35.6	
	comp=Z,21nm,1.1s						
KEKH	**Kekaha**	**56.57**	**23**	P	**P**	**15 27 05.0**	**0.0**
KSRS	**Korea Array**	**83.82**	**321**	P	**P**	**15 29 45.8**	**-1.4**
	comp=Z,0.7nm,0.6s,baz=140,slow=6.1,SNR=2.6						
	comp=Z,0.7nm,0.6s						
MKAR	**Makanchi Array**	**116.88**	**310**	PKP	**PKPdf**	**15 36 00.0**	**+1.4**
	comp=Z,0.2nm,0.6s,baz=108,slow=1.6,SNR=1.5						
ARCES	**ARCESS Array B**	**139.07**	**346**	PKHKP	PKPpre	15 36 35.3	
	comp=Z,1.8nm,1.0s,baz=51,slow=1.6,SNR=6.3						
KBZ	**Khabaz**	**143.98**	**302**	PKP	PKPbc	15 36 50.2	+1.8
	comp=Z,1.1nm,0.7s,baz=125,slow=2.1,SNR=3.6						
FINES	**FINESS Array B**	**145.32**	**338**	PKP	**PKPbc**	**15 36 53.8**	**+1.7**
	comp=Z,4.8nm,0.5s,baz=46,slow=4.3,SNR=75						
NB2	**NORSAR Subarra**	**149.34**	**349**	PKP	**PKPbc**	**15 37 04.6**	**+1.8**
	comp=Z,0.6nm,0.6s,baz=17,slow=2.7						
NOA	**NORSAR Array B**	**149.34**	**349**	PKPbc	**PKPbc**	**15 37 04.4**	**+1.5**
	comp=Z,1.0nm,0.6s,baz=19,slow=4.2,SNR=5.7						
HFS	**Hagfors**	**149.73**	**346**	PKPbc	**PKPbc**	**15 37 05.0**	**+1.3**
	comp=Z,0.8nm,0.4s,baz=169,slow=1.5,SNR=11						
AKASG	**Malin Array Be**	**150.81**	**320**	PKPbc	**PKPbc**	**15 37 07.3**	**+0.8**
	comp=Z,0.8nm,0.4s,baz=46,slow=2.7,SNR=5.0						
CLL	**Collm**	**157.76**	**338**	*e*PKPab	**PKPab**	**15 37 48.0**	**+2.6**

MAN 23 15:21:07.7, 14°.42N×119°.02E, h83km, mb4.1, ML2.9, MS2.6, 2C-7D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**1.38**	**120**	*e*P	Pn	15 21 32.7	+0.5
LUBP				*e*S		15 21 50.0	
MACP	**Maragondon, Ca**	**1.66**	**95**	*e*P	Pn	15 21 36.6	+1.3
MACP				*e*S		15 21 55.1	
PGP	**Puerto Galera**	**2.09**	**116**	*e*P	Pn	15 21 44.3	+2.5
PGP				*i* S		15 22 08.4	
PCPH	**Palayan**	**2.31**	**60**	*e*P	Pn	15 21 44.4	+1.2
SMPP	**San Manuel, Pa**	**2.35**	**43**	*e*P	Pn	15 21 44.6	+0.9
SMPP				*e*S		15 22 12.3	
BALP	**Baler**	**2.80**	**62**	*e*P	Pn	15 21 52.1	+2.1
BALP				*e*S		15 22 24.4	
SJMP	**San Jose**	**2.83**	**133**	*e*P	Pn	15 21 53.8	+1.5
SAMP	**Sagada Mountai**	**3.20**	**34**	*e*P	Pn	15 21 57.5	+2.3
SAMP				*e*S		15 22 33.0	
CAUP	**Cauayan**	**3.69**	**47**	*e*P	Pn	15 22 04.8	+2.9
CAUP				*e*S		15 22 43.0	

*NEIC **23** 15:23:54.9±1.5, 56°.58N±0°.08×34°.4W±0°.1, h10km±1km, mb4.8/223, Error ellipse: s-maj=14.1km s-min=13.4km az=167.0*
*IDC **23** 15:23:54.8±0.4, 56°.59N×34°.37W, h0km, mb4.1/31, mbtmp4.2/35, ML3.7/4, MS4.3/75, Error ellipse: s-maj=13.5km s-min=10.1km az=8.0*
*GCMT **23** 15:23:56.9±0.2, 56°.53N±0°.03×34°.29W±0°.02, h12km, MW5.0/108, Moment Tensor Solution. s31,c37; s108,c173; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=4.42±.12; $M_{\theta\theta}$0.30±.13; $M_{\phi\phi}$4.12±.09; $M_{r\theta}$-1.00±.53; $M_{\theta\phi}$-0.38±.10; $M_{\phi r}$-0.77±.41; Best double couple: M_o4.45600×10^{16} NP1:ϕ_s163.00000°, δ42.00000

comp=Z,118nm,3.3s,baz=282,slow=11
NOA NORSAR Array B 23.71 60 P **P** **15 29 07.4 +0.2**
comp=Z,3.7nm,1.1s,baz=280,slow=10.0,SNR=4.1
NOA LR LR 15 36 51.5
comp=Z,658nm,21.6s,baz=275,slow=33
comp=Z,3.7nm,1.1s
NB201 NORSAR Array S 23.75 60 P **P** **15 29 06.7 -0.9**
EMMW East Machias 23.77 254 P **P** **15 29 07.9 +0.1**
EMMW IAmb IAmb 15 29 14.6
comp=Z,34nm,1.2s
CLF Chambon-Foret 23.82 95 P **P** **15 29 07.2 -1.1**
MTE Manteigas 23.91 121 *e*P **P** **15 29 10.4 +1.1**
comp=Z,32nm,1.7s
MTE *e*S **S** **15 33 30.6 +5.2**
MTE *e*LQ LQ 15 33 31.1
MTE *e*LR LR 15 34 54.3
comp=Z,970nm,18.0s
MTE Manteigas 23.91 121 P **P** **15 29 06.5 -2.8**
MTE IAmb IAmb 15 29 20.3
comp=Z,24nm,1.2s
NC602 NORSAR Array S 23.92 61 P **P** **15 29 07.5 -1.8**
NC405 NORSAR Array S 23.94 60 P **P** **15 29 07.7 -1.7**
NC405 IAmb IAmb 15 29 18.1
comp=Z,50nm,1.4s
DOU Dourbes 23.99 89 *d*P **P** **15 29 09.1 -0.9**
DOU *d*x x 15 29 28.3
F63A Nahmakanta, Br 24.00 258 P **P** **15 29 08.9 -1.2**
BCLA Clavier 24.22 88 *d*PP P 15 29 34.8 +23
BSTI Sart Tilman 24.28 87 *d*P **P** **15 29 11.1 -1.6**
RCHB Rochefort 24.31 88 *d*P **P** **15 29 11.1 -1.8**
F62A Pittston Farm, 24.35 259 P **P** **15 29 12.9 -0.4**
PCBR Castelo Branco 24.38 122 *e*P **P** **15 29 14.7 +1.1**
comp=Z,61nm,1.7s
PKME Peaks-Kenny Pk 24.38 257 P **P** **15 29 12.8 -0.8**
PKME Peaks-Kenny Pk 24.38 257 P **P** **15 29 13.3 -0.3**
baz=50
MEM Membach 24.51 87 κP **P** **15 29 14.6 -0.2**
BTNL Ternell 24.59 87 *d*P **P** **15 29 14.6 -1.0**
BHOU Houvegnez 24.64 87 *d*P **P** **15 29 15.9 0.0**
PMTG Montargil 24.65 124 *e*P **P** **15 29 17.3 +1.2**
comp=Z,49nm,2.2s
PMRV Marv??o 24.75 122 *e*P **P** **15 29 18.4 +1.4**
comp=Z,33nm,1.8s
PMRV *e*S S 15 33 53.7 +15
PMRV *e*LR LR 15 35 16.3
comp=Z,939nm,18.0s
WLF Walferdange 25.08 89 *d*P **P** **15 29 20.0 +0.2**
G62A West of Eustis 25.08 258 P **P** **15 29 20.3 +0.3**
G62A IAmb IAmb 15 29 25.8
comp=Z,36nm,1.1s
HFS Hagfors 25.09 62 P **P** **15 29 19.4 -0.5**
comp=Z,2.8nm,0.9s,baz=268,slow=8.7,SNR=5.1
HFS LR LR 15 38 11.6
comp=Z,593nm,18.3s,baz=286,slow=34
comp=Z,2.8nm,0.9s
PNCL Nicolau / Gran 25.29 126 *e*P **P** **15 29 21.8 0.0**
comp=Z,35nm,1.8s
MESJ Messejana 25.65 126 *e*P **P** **15 29 24.8 -0.4**
MESJ IAmb IAmb 15 29 28.6
comp=Z,24nm,1.2s
MESJ *e*S **S** **15 33 53.6 +0.3**
H62A Milan 25.84 258 P **P** **15 29 25.3 -1.5**
MORF Marmelete 25.90 127 *e*P **P** **15 29 27.3 -0.2**
MORF IAmb IAmb 15 29 29.9
comp=Z,34nm,1.2s
MORF Marmelete 25.90 127 *e*P **P** **15 29 27.6 +0.1**
comp=Z,51nm,1.8s
PAB San Pablo 26.11 118 P **P** **15 29 26.8 -2.6**
ESDC Sonseca Array 26.20 117 P **P** **15 29 29.9 -0.3**
comp=Z,1.4nm,0.8s,baz=319,slow=9.0,SNR=9.8
ESDC LR LR 15 38 02.0
comp=Z,904nm,18.3s,baz=322,slow=32
comp=Z,1.4nm,0.8s
ESDC Sonseca Array 26.20 117 P **P** **15 29 28.7 -1.4**
PVAQ Vaqueiros 26.24 126 *e*LR LR 15 36 00.0
comp=Z,1μm,20.0s
ECH Echery 26.42 91 P **P** **15 29 28.1 -4.0**
LBNH Lisbon 26.48 258 P **P** **15 29 32.9 +0.3**
baz=49
PMOZ Porto Moniz, M 26.62 146 *e*S S 15 34 21.1 +12
PMOZ *e*LQ LQ 15 34 31.9
PMOZ *e*LR LR 15 36 11.3
comp=Z,249nm,20.0s
TRQ Mont Tremblant 26.66 264 P **P** **15 29 33.1 -1.1**
KBS Kingsbay 27.00 18 P **P** **15 29 35.7 -1.3**
KBS IAmb IAmb 15 30 00.6
comp=Z,37nm,1.3s
BFO Black Forest 27.00 89 P **P** **15 29 35.3 -2.1**
VLDQ Val d'Or 27.15 270 P **P** **15 29 38.8 +0.3**
VLDQ IAmb IAmb 15 29 46.2
comp=Z,29nm,1.4s
HRV Adam Dziewonsk 27.45 255 P **P** **15 29 41.2 -0.1**
baz=46
LONY Lake Ozonia 27.68 262 P **P** **15 29 43.0 -0.3**
baz=50
CLL Collm 28.01 80 *i*P **P** **15 29 45.6 -0.7**
comp=Z,8.0nm,1.2s
CLL *i*sP **pwP** **15 29 50.4 -1.0**
CLL Lm MLR 15 40 00.0
comp=N,500nm,19.3s
CLL Lm MLR 15 40 00.0
comp=E,900nm,19.9s
CLL Lm MLR 15 40 00.0
comp=Z,1μm,19.7s
L61B Northampton 28.09 256 P **P** **15 29 47.0 -0.1**
baz=47
TUE Stuetta 28.65 92 P **P** **15 29 50.2 -2.0**
TUE IAmb IAmb 15 30 18.4
comp=Z,16nm,1.2s
ARCES ARCESS Array B 28.72 39 P **P** **15 29 51.8 -0.6**
comp=Z,1.4nm,0.6s,baz=280,slow=7.0,SNR=11
ARCES LR LR 15 39 10.8
comp=Z,827nm,18.3s,baz=276,slow=32
comp=Z,1.4nm,0.6s
ARCES ARCESS Array B 28.72 39 P **P** **15 29 51.5 -0.9**
DAVOX Davos/Dischmat 28.76 91 LR LR 15 40 56.7
comp=Z,2μm,18.6s,baz=262,slow=36
RES Resolute Bay 28.86 331 LR LR 15 41 09.6
comp=Z,303nm,18.3s,baz=86,slow=36
KEV Kevo 29.23 39 P **P** **15 29 55.7 -1.2**
KEV IAmb IAmb 15 29 57.0
comp=Z,25nm,1.3s
CART Cartagena 29.28 116 P **P** **15 29 54.7 -3.0**
DELO Deloro Mine 29.41 264 P **P** **15 29 58.5 -0.2**
DELO IAmb IAmb 15 30 05.0
comp=Z,15nm,1.2s
GERES GERESS Array B 29.68 84 P **P** **15 30 01.4 +0.1**
comp=Z,0.4nm,0.6s,baz=272,slow=6.4,SNR=4.7
GERES LR LR 15 41 20.2
comp=Z,754nm,18.5s,baz=296,slow=35
comp=Z,0.4nm,0.6s
GERES GERESS Array B 29.68 84 P **P** **15 30 00.2 -1.1**
PAL Palisades 29.75 255 P **P** **15 30 00.5 -1.4**
baz=45
SADO Sadowa 30.09 266 LR LR 15 40 59.8
comp=Z,2μm,19.2s,baz=68,slow=34
SADO Sadowa 30.09 266 P **P** **15 30 02.9 -1.9**
SADO IAmb IAmb 15 30 10.8
comp=Z,20nm,1.2s
J55A Hilton 30.33 263 P **P** **15 30 04.4 -2.5**
J55A IAmb IAmb 15 30 12.9
comp=Z,16nm,1.0s
FINES FINESS Array B 30.57 55 P **P** **15 30 08.8 -0.1**
comp=Z,2.4nm,0.8s,baz=207,slow=7.9,SNR=7.2
FINES LR LR 15 41 38.7
comp=Z,230nm,19.8s,baz=283,slow=35
comp=Z,2.4nm,0.8s
FINES FINESS Array B 30.57 55 P **P** **15 30 06.7 -2.2**
FIA1 FINESS Array S 30.57 55 P **P** **15 30 06.5 -2.4**
STAL STALIGIAL 30.63 89 P **P** **15 30 06.9 -2.8**
MEDO Medina 30.75 263 P **P** **15 30 09.2 -1.4**
MEDO IAmb IAmb 15 30 12.1
comp=Z,12nm,0.8s
VRAC Vranov 31.02 82 LR LR 15 42 44.6
comp=Z,1μm,18.1s,baz=300,slow=36
VRAC Vranov 31.02 82 *e*P **P** **15 30 16.3 +3.3**
MORC Moravsky Berou 31.28 80 *e*P **P** **15 30 15.6 +0.3**
MDT Midelt 31.46 126 P **P** **15 30 17.6 +0.4**
comp=Z,3.3nm,0.9s,baz=309,slow=8.5,SNR=7.6
MDT LR LR 15 41 19.4
comp=Z,186nm,20.5s,baz=345,slow=33
comp=Z,3.3nm,0.9s
PABE Paberze 31.84 67 P **P** **15 30 19.6 -0.5**
E46A Sault Ste Mari 31.95 273 P **P** **15 30 19.5 -1.7**
SSPA Standing Stone 32.16 259 P **P** **15 30 20.5 -2.5**
SSPA IAmb IAmb 15 30 29.4
comp=Z,12nm,1.2s
SSPA Standing Stone 32.16 259 P **P** **15 30 22.3 -0.8**
baz=48
ERPA Erie 32.29 263 P **P** **15 30 23.4 -0.8**
baz=48
NRCA Norcia 33.03 94 P **P** **15 30 29.3 -1.4**
M53A WI Miller and 33.12 263 P **P** **15 30 30.6 -0.9**
baz=47
AQU L'Aquila 33.51 94 P **P** **15 30 31.6 -3.3**
AQU IAmb IAmb 15 30 32.5
comp=Z,16nm,1.1s
O54A Avella 33.83 261 P **P** **15 30 37.0 -0.7**
D41A Chassel 33.89 277 P **P** **15 30 37.0 -1.1**
D41A IAmb IAmb 15 30 45.4
comp=Z,12nm,1.1s
MCWV Mont Chateau 33.91 260 P **P** **15 30 38.2 -0.2**
baz=45
O53A New Philadelph 34.24 262 P **P** **15 30 40.3 -0.9**
baz=46
COWI Conover 34.78 276 P **P** **15 30 45.7 -0.2**
COWI IAmb IAmb 15 30 51.8
comp=Z,17nm,1.1s
EYMN Ely 34.96 280 P **P** **15 30 47.9 +0.5**
EYMN Ely 34.96 280 P **P** **15 30 47.0 -0.5**
baz=54,SNR=18
P52A Corning 35.18 262 P **P** **15 30 49.0 -0.4**
baz=45
P51A Williamsport 35.79 262 P **P** **15 30 53.2 -1.4**
P51A IAmb IAmb 15 31 00.9
comp=Z,14nm,0.9s
B35A Bob, Littlefor 35.93 283 P **P** **15 30 54.4 -1.3**
B35A IAmb IAmb 15 31 00.8
comp=Z,11nm,0.9s
BLA Blacksburg 35.99 257 P **P** **15 30 56.8 +0.4**
baz=42
ULM Lac du Bonnet 35.99 287 P **P** **15 30 58.0 +1.8**
comp=Z,6.7nm,1.0s,baz=68,slow=8.7,SNR=7.1
ULM LR LR 15 44 16.3
comp=Z,846nm,21.0s,baz=69,slow=34
comp=Z,6.7nm,1.0s
ULM Lac du Bonnet 35.99 287 P **P** **15 30 55.5 -0.7**
ULM IAmb IAmb 15 31 01.4
comp=Z,20nm,1.4s
R53A Hurricane 36.01 260 P **P** **15 30 55.7 -0.8**
R53A IAmb IAmb 15 31 03.2
comp=Z,22nm,1.1s
KEST Kesra 36.03 106 P **P** **15 30 56.6 -0.2**
comp=Z,4.9nm,1.0s,baz=295,slow=7.2,SNR=3.2
KEST LR LR 15 44 29.5
comp=Z,362nm,18.7s,baz=246,slow=34
comp=Z,4.9nm,1.0s
KEST Kesra 36.03 106 P **P** **15 30 54.9 -1.9**
KEST IAmb IAmb 15 31 09.8
comp=Z,17nm,1.2s
O48B Farmland 36.40 265 P **P** **15 30 59.3 -0.5**
baz=46
BUR08 Bucovina Ar. S 36.66 78 P **P** **15 30 59.4 -2.7**
BURAR Bucovina Array 36.69 78 P **P** **15 31 00.6 -1.7**
KLMR Klimovskoe 36.80 52 *e*P **P** **15 31 01.9 -1.0**
KLMR AMP 15 31 07.9
comp=Z,23nm,1.1s
KLMR *e*PcP **PcP** **15 33 26.8 +2.1**
AKASG Malin Array Be 37.02 71 P **P** **15 31 04.1 -0.8**
comp=Z,1.7nm,0.7s,baz=306,slow=8.4,SNR=11
AKASG LR LR 15 46 22.5
comp=Z,552nm,19.8s,baz=286,slow=36
comp=Z,1.7nm,0.7s
P48A Milroy 37.11 265 P **P** **15 31 05.2 -0.6**
P48A IAmb IAmb 15 31 30.9
comp=Z,14nm,0.8s
AGMN Agassiz Nation 37.12 284 P **P** **15 31 05.5 -0.4**
baz=54
M44A Midewin, Midew 37.22 269 P **P** **15 31 04.0 -2.8**
M44A IAmb IAmb 15 31 06.2
comp=Z,27nm,1.2s
F36A Milaca 37.33 279 P **P** **15 31 04.9 -2.8**
R50A Paris 37.34 262 P **P** **15 31 06.1 -1.7**
R50A IAmb IAmb 15 31 14.2
comp=Z,15nm,1.0s
SFIN Lafayette 37.39 267 P **P** **15 31 08.0 -0.2**
baz=46
S51A Beattyville 37.40 261 P **P** **15 31 07.0 -1.4**
S51A IAmb IAmb 15 31 14.8
comp=Z,16nm,1.0s
VAE Valguarnera 37.47 99 LR LR 15 44 57.1
comp=Z,362nm,19.1s,baz=329,slow=34
L42A Oliver, Polo 37.70 271 P **P** **15 31 09.8 -1.1**
R49A Shelbyville 37.79 263 P **P** **15 31 10.5 -1.2**
R49A IAmb IAmb 15 31 37.8
comp=Z,15nm,0.7s
A36M Sachs Harbour 37.85 330 P **P** **15 31 10.4 -1.3**
A36M Sachs Harbour 37.85 330 P **P** **15 31 11.2 -0.5**
baz=64
TZTN Tazewell 38.18 260 P **P** **15 31 14.0 -0.9**
baz=42
OBN Obninsk 38.30 61 LR LR 15 46 05.1
comp=Z,174nm,19.6s,baz=312,slow=35
MLR Muntele Rosu 38.39 80 LR LR 15 48 02.2
comp=Z,1μm,18.3s,baz=306,slow=38
V53A Saluda 38.42 258 P **P** **15 31 16.7 -0.4**
HDIL Hopedale 38.48 269 P **P** **15 31 16.8 -0.6**
baz=46
L40A Anamosa 38.52 273 P **P** **15 31 17.5 -0.3**
L40A IAmb IAmb 15 31 24.2
comp=Z,30nm,1.3s
T50A Nancy 38.53 261 P **P** **15 31 17.7 -0.2**
T50A IAmb IAmb 15 31 21.5
comp=Z,32nm,1.5s
YKA Yellowknife Ar 38.54 313 P **P** **15 31 18.4 +0.8**
comp=Z,3.7nm,0.9s,baz=61,slow=9.3,SNR=7.5
YKA LR LR 15 45 48.0
comp=Z,374nm,21.8s,baz=84,slow=34
comp=Z,3.7nm,0.9s
YKA Yellowknife Ar 38.54 313 P **P** **15 31 17.1 -0.6**
C36M Paulatuk 38.69 325 P **P** **15 31 17.1 -1.7**
C36M Paulatuk 38.69 325 P **P** **15 31 18.1 -0.8**
baz=62
F33A 5 Mile Ranch, 38.85 281 P **P** **15 31 18.8 -1.7**
TKL Tuckaleechee C 38.95 259 LR LR 15 46 35.7
comp=Z,1μm,18.9s,baz=36,slow=35
V51A Loudon 39.16 260 P **P** **15 31 21.4 -1.8**
CPCT Cooper Cave 39.52 259 P **P** **15 31 25.6 -0.5**
CPCT IAmb IAmb 15 31 32.9
comp=Z,17nm,1.0s
LIT Litokhoron 40.06 89 P **P** **15 31 28.1 -2.6**
W50A Signal Mountai 40.13 260 P **P** **15 31 29.7 -1.6**
X51A Calhoun 40.36 259 P **P** **15 31 31.7 -1.5**
X51A IAmb IAmb 15 31 39.1
comp=Z,15nm,0.9s
ECSD EROS Data Cent 40.38 279 P **P** **15 31 32.3 -1.0**
ECSD IAmb IAmb 15 31 40.7
comp=Z,24nm,1.3s
ECSD EROS Data Cent 40.38 279 P **P** **15 31 32.5 -0.8**
baz=49
SIUC Southern Illin 40.44 266 P **P** **15 31 33.5 -0.3**
SWET Sewanee 40.46 260 P **P** **15 31 33.1 -0.9**
S44A Carbondale 40.47 266 P **P** **15 31 34.3 +0.3**
GOGA Godfrey 40.48 256 P **P** **15 31 33.7 -0.5**
baz=40
V48A Smith Brothers 40.55 262 P **P** **15 31 33.6 -1.2**
V48A IAmb IAmb 15 31 41.2
comp=Z,16nm,1.1s
P40A Paris 40.72 270 P **P** **15 31 35.7 -0.4**
P40A IAmb IAmb 15 31 42.8
comp=Z,36nm,1.4s
FPAL Fort Paine 40.79 259 P **P** **15 31 36.1 -0.7**
WVT Waverly 40.82 263 P **P** **15 31 36.4 -0.5**
WVT Waverly 40.82 263 P **P** **15 31 37.0 +0.1**
baz=43
CCM Cathedral Cave 41.31 268 P **P** **15 31 41.1 +0.1**
baz=44
DGMT Dagmar 41.42 289 P **P** **15 31 39.7 -2.2**
DGMT IAmb IAmb 15 31 48.7
comp=Z,22nm,1.1s
DGMT Dagmar 41.42 289 P **P** **15 31 41.5 -0.3**
baz=52
R40A Maddies Statio 41.71 269 P **P** **15 31 42.8 -1.4**
PBMO Poplar Bluff 41.78 266 P **P** **15 31 44.3 -0.5**
PLAL Pickwick Lake 41.80 262 P **P** **15 31 44.8 -0.2**
INK Inuvik 42.16 327 P **P** **15 31 49.7 +2.2**
comp=Z,2.6nm,0.8s,baz=49,slow=11,SNR=2.7
INK LR LR 15 48 55.8
comp=Z,302nm,19.1s,baz=24,slow=36
comp=Z,2.6nm,0.8s
INK Inuvik 42.16 327 P **P** **15 31 47.7 +0.1**
INK Inuvik 42.16 327 P **P** **15 31 47.3 -0.2**
baz=54
KIRV Kirov 42.26 51 LR LR 15 48 08.3
comp=Z,327nm,18.4s,baz=288,slow=34
W45A Hickory Valley 42.28 263 P **P** **15 31 49.0 +0.1**
MGMO Mountain Grove 42.52 268 P **P** **15 31 50.3 -0.6**
MGMO IAmb IAmb 15 31 57.0
comp=Z,16nm,1.1s
LRAL Lakeview Retre 42.68 259 P **P** **15 31 51.4 -0.8**
LRAL Lakeview Retre 42.68 259 P **P** **15 31 51.9 -0.3**
baz=40
LCAR Lake Charles 42.70 266 P **P** **15 31 52.2 -0.1**
LCAR IAmb IAmb 15 31 58.0
comp=Z,15nm,0.9s
S39A Bolivar 42.72 270 P **P** **15 31 52.4 -0.2**
S39A IAmb IAmb 15 31 59.2
comp=Z,20nm,1.4s
OXF Oxford 42.88 263 P **P** **15 31 53.8 -0.1**
OXF Oxford 42.88 263 P **P** **15 31 54.0 +0.2**
baz=42
250A Grady 43.09 258 P **P** **15 31 55.4 -0.2**
EDM Edmonton 43.09 300 P **P** **15 31 55.6 +0.2**
EDM IAmb IAmb 15 32 01.4
comp=Z,21nm,1.1s
LAO LASA Array 43.62 289 P **P** **15 32 00.5 +0.7**
baz=50
WHAR Wooly Hollow 43.89 266 P **P** **15 32 01.4 -0.5**
WHAR IAmb IAmb 15 32 07.8
comp=Z,22nm,1.0s
W41B Gary Mavity, V 43.96 266 P **P** **15 32 01.9 -0.6**
W41B IAmb IAmb 15 32 08.3
comp=Z,20nm,0.9s
W41B Gary Mavity, V 43.96 266 P **P** **15 32 02.7 +0.3**
baz=42,SNR=12
U38A Gravette 44.21 269 P **P** **15 32 04.1 -0.4**
U38A IAmb IAmb 15 32 10.1
comp=Z,16nm,1.3s
EPYK Eagle Plains 44.33 326 P **P** **15 32 04.0 -1.1**
EPYK IAmb IAmb 15 32 17.1
comp=Z,26nm,1.4s
EPYK Eagle Plains 44.33 326 P **P** **15 32 05.8 +0.6**
baz=51
EGMT Eagleton 44.58 292 P **P** **15 32 06.4 -1.1**
EGMT IAmb IAmb 15 32 14.6
comp=Z,22nm,1.1s
EGMT Eagleton 44.58 292 P **P** **15 32 07.6 +0.1**
baz=50,SNR=6.1
W39A Magazine 44.79 267 P **P** **15 32 08.4 -0.7**
W39A IAmb IAmb 15 32 15.2
comp=Z,19nm,1.0s
W39A Magazine 44.79 267 P **P** **15 32 09.7 +0.6**
baz=42
IDI Anoyia 44.83 92 LR LR 15 52 38.2
comp=Z,240nm,19.5s,baz=258,slow=38
MMPY Sheldon Lake, 44.86 319 P **P** **15 32 10.0 +0.4**
baz=51,SNR=14
SJG San Juan 45.13 225 LR LR 15 47 36.7
comp=Z,99nm,20.9s,baz=76,slow=32
MIAR Mount Ida 45.15 267 P **P** **15 32 12.0 -0.1**
MIAR IAmb IAmb 15 32 18.2
comp=Z,20nm,1.1s
MIAR Mount Ida 45.15 267 P **P** **15 32 12.8 +0.8**
baz=42
BELG Belogornoye 45.21 59 LR LR 15 49 51.6
comp=Z,503nm,20.8s,baz=322,slow=34
I29M Ogilvie Camp, 45.48 325 P **P** **15 32 15.5 +1.2**
baz=49
C23K Itkillik River 45.80 334 P **P** **15 32 17.4 +0.7**
baz=44
D24K Happy Valley 45.86 333 P **P** **15 32 18.2 +1.0**
baz=45
344A Westbrook Farm 45.92 261 P **P** **15 32 16.6 -1.6**
BMAR Burnt Mountain 45.95 330 P **P** **15 32 18.8 +0.8**
WALA Waterton Lakes 46.00 296 P **P** **15 32 17.9 -0.8**
GCMT Greycliff 46.01 290 P **P** **15 32 17.8 -1.1**
RLMT Red Lodge 46.25 289 P **P** **15 32 21.4 +0.5**
baz=48,SNR=5.4
M31M Drury Creek, Y 46.25 320 P **P** **15 32 21.7 +1.3**
baz=49
TOLK Toolik Lake Re 46.41 333 P **P** **15 32 22.0 +0.3**
TOLK Toolik Lake Re 46.41 333 P **P** **15 32 22.7 +1.0**
baz=44,SNR=7.2
D23K Nanushuk River 46.45 333 P **P** **15 32 22.8 +0.9**
baz=43,SNR=9.3
BR131 Keskin Array S 46.46 81 P **P** **15 32 22.3 -0.2**
BR131 IAmb IAmb 15 32 31.5
comp=Z,9.6nm,0.8s
BRTR Keskin Array B 46.46 81 P **P** **15 32 23.9 +1.4**
comp=Z,5.1nm,0.8s,baz=310,slow=5.9,SNR=13
BRTR LR LR 15 54 10.8
comp=Z,203nm,18.7s,baz=327,slow=39
comp=Z,5.1nm,0.8s
BRTR Keskin Array B 46.46 81 P **P** **15 32 22.0 -0.5**
N32M Quiet Lake 46.47 319 P **P** **15 32 22.4 +0.1**
baz=49
K22A Casper 46.48 285 P **P** **15 32 23.2 +0.6**
baz=46
DAWY Dawson 46.69 324 P **P** **15 32 25.2 +1.2**
baz=47,SNR=12
M30M Minto, Yukon 46.84 322 P **P** **15 32 26.3 +1.2**
M30M IAmb IAmb 15 32 31.4
comp=Z,7.4nm,1.0s
M30M Minto, Yukon 46.84 322 P **P** **15 32 25.8 +0.8**
baz=48,SNR=5.4
P33M Teslin, Yukon 46.99 317 P **P** **15 32 27.5 +1.1**
P33M Teslin, Yukon 46.99 317 P **P** **15 32 27.4 +1.1**
baz=48
I26K Coal Creek Min 47.01 327 P **P** **15 32 27.6 +1.3**
I26K Coal Creek Min 47.01 327 P **P** **15 32 26.5 +0.1**
baz=46
JTMT Jette 47.06 295 P **P** **15 32 26.8 -0.3**
DLBC Dease Lake 47.10 314 LR LR 15 51 52.5
comp=Z,710nm,19.2s,baz=58,slow=36
BOZ Bozeman (W) 47.15 291 P **P** **15 32 27.4 -0.5**
BOZ Bozeman (W) 47.15 291 P **P** **15 32 28.6 +0.8**
baz=47,SNR=18
N31M Braeburn, Yuko 47.22 320 P **P** **15 32 26.4 -1.7**
N31M Braeburn, Yuko 47.22 320 P **P** **15 32 28.6 +0.6**
baz=48,SNR=7.3
N23A Red Feather La 47.39 282 P **P** **15 32 28.1 -1.8**
N23A IAmb IAmb 15 32 37.5
comp=Z,16nm,1.3s
N23A Red Feather La 47.39 282 P **P** **15 32 29.8 -0.1**
baz=45
LRM Limekiln Ridge 47.42 292 P **P** **15 32 29.4 -0.7**
WHY Whitehorse 47.45 319 P **P** **15 32 30.4 +0.4**
baz=48
ARU Arti 47.47 49 LR LR 15 51 11.0
comp=Z,385nm,18.4s,baz=306,slow=34
ARU Arti 47.47 49 P **P** **15 32 28.6 -1.3**
MSO Missoula 47.50 294 P **P** **15 32 30.1 -0.4**
baz=48
RWWY Rawlins 47.51 284 P **P** **15 32 29.7 -1.1**
RWWY IAmb IAmb 15 32 37.0
comp=Z,10nm,0.9s
COLD Coldfoot 47.61 332 P **P** **15 32 30.3 -0.7**
baz=42
N30M Aishikik Lake 47.70 321 P **P** **15 32 32.5 +0.7**
baz=47
J26L Joseph Creek 47.70 326 P **P** **15 32 31.2 -0.7**
J26L IAmb IAmb 15 32 38.1
comp=Z,5.9nm,0.9s
J26L Joseph Creek 47.70 326 P **P** **15 32 32.5 +0.7**
baz=45,SNR=9.5
FLWY Flagg Ranch 47.70 289 P **P** **15 32 30.6 -1.7**
FLWY IAmb IAmb 15 32 56.0
comp=Z,6.5nm,0.9s
P32M Atlin 47.75 317 P **P** **15 32 33.1 +0.9**
baz=48
O30N Mendenhall 47.82 320 P **P** **15 32 34.2 +1.5**
baz=47
WMOK Wichita Mounta 47.89 271 P **P** **15 32 33.4 -0.2**
WMOK Wichita Mounta 47.89 271 P **P** **15 32 34.7 +1.1**
baz=42,SNR=5.7
ISCO Idaho Springs 47.98 281 P **P** **15 32 34.7 +0.1**
baz=45
H24K Noodor Dome 48.01 329 P **P** **15 32 35.2 +1.1**
H24K IAmb IAmb 15 32 40.6
comp=Z,8.4nm,0.8s
H24K Noodor Dome 48.01 329 P **P** **15 32 34.8 +0.7**
baz=43,SNR=6.0
BW06 Boulder Array 48.01 287 P **P** **15 32 33.0 -1.7**
BW06 Boulder Array 48.01 287 P **P** **15 32 35.0 +0.3**
baz=46
PD31 Pinedale Array 48.01 287 P **P** **15 32 34.1 -0.6**
PDAR Pinedale Array 48.01 287 P **P** **15 32 35.0 +0.3**
comp=Z,1.2nm,0.5s,baz=67,slow=7.6,SNR=11

PDAR LR LR 15 51 44.4
comp=Z,807nm,19.8s,baz=40,slow=35
comp=Z,1.2nm,0.5s
PDAR Pinedale Array 48.01 287 P P 15 32 33.9 -0.8
NEW Newport 48.12 297 LR LR 15 51 55.1
comp=Z,1µm,18.2s,baz=42,slow=35
NEW Newport 48.12 297 P P **15 32 35.7 +0.5**
baz=47
BCAR Beaver Creek A 48.16 324 P P 15 32 35.8 +0.5
T35M Bob Quinn 48.16 313 P P **15 32 36.6 +1.2**
baz=48
J25K Salcha River, 48.17 327 P P **15 32 36.3 +0.9**
J25K IAmb IAmb 15 32 47.5
comp=Z,11nm,1.1s
J25K Salcha River, 48.17 327 P P **15 32 36.6 +1.2**
baz=44
L27K Beaver Creek, 48.18 324 P P **15 32 36.5 +1.0**
L27K IAmb IAmb 15 32 42.5
comp=Z,13nm,1.1s
L27K Beaver Creek, 48.18 324 P P **15 32 36.7 +1.2**
baz=45,SNR=12
SCRK Sand Creek 48.21 326 P P **15 32 37.1 +1.4**
SCRK Sand Creek 48.21 326 P P **15 32 36.5 +0.8**
baz=44,SNR=17
TPAW Teton Pass 48.24 289 P P **15 32 35.8 -0.7**
HYT Haines Junctio 48.28 320 P P **15 32 37.3 +0.8**
HYT Haines Junctio 48.28 320 P P **15 32 37.0 +0.6**
baz=46,SNR=10
MCMT McKenzie Canyo 48.31 291 P P **15 32 37.6 +0.6**
BVCY Beaver Creek 48.32 323 P P **15 32 37.9 +1.3**
baz=45
Q24A Divide 48.32 280 P P **15 32 37.0 -0.3**
Q24A IAmb IAmb 15 32 44.3
comp=Z,8.8nm,1.1s
Q24A Divide 48.32 280 P P **15 32 37.8 +0.6**
baz=44
YUK4 Talbot Arm 48.32 321 P P **15 32 37.0 +0.2**
baz=46
KVAR Kislovodsk Arr 48.36 70 LR LR 15 53 31.6
comp=Z,226nm,18.7s,baz=291,slow=37
POKR Poker Plat Res 48.41 329 P P **15 32 37.3 +0.1**
POKR Poker Plat Res 48.41 329 P P **15 32 38.7 +1.6**
baz=43
H23K Yukon River 48.48 330 P P **15 32 38.6 +0.9**
H23K IAmb IAmb 15 32 44.5
comp=Z,12nm,1.1s
H23K Yukon River 48.48 330 P P **15 32 38.4 +0.7**
baz=42,SNR=7.9
IL31 48.50 328 P P **15 32 38.4 +0.6**
IL31 IAmb IAmb 15 32 55.1
comp=Z,13nm,1.1s
ILAR Eielson Array 48.50 328 P P **15 32 39.6 +1.7**
comp=Z,5.0nm,0.8s,baz=37,slow=6.5,SNR=24
ILAR LR LR 15 53 22.4
comp=Z,285nm,18.4s,baz=52,slow=36
comp=Z,5.0nm,0.8s
ILAR Eielson Array 48.50 328 P P **15 32 38.8 +0.9**
YUK6 Outpost Mounta 48.50 321 P P **15 32 38.5 +0.3**
baz=46
P30M Million Dollar 48.58 319 P P **15 32 38.7 +0.1**
baz=46
KBZ Khabaz 48.62 71 P P **15 32 40.3 +1.3**
comp=Z,0.9nm,0.5s,baz=315,slow=7.1,SNR=2.3
KBZ LR LR 15 54 06.5
comp=Z,258nm,18.8s,baz=334,slow=37
comp=Z,0.9nm,0.5s
YUK3 Moose Creek 48.64 322 P P **15 32 39.8 +0.5**
baz=45,SNR=5.6
RIDG Independent Ri 48.64 326 P P **15 32 39.8 +0.7**
RIDG IAmb IAmb 15 32 57.4
comp=Z,15nm,1.1s
RIDG Independent Ri 48.64 326 P P **15 32 39.8 +0.7**
baz=44
L26K Log Cabin Wild 48.69 325 P P **15 32 40.9 +1.5**
baz=44
M27K Edge Creek, AK 48.70 324 P P **15 32 41.0 +1.4**
baz=45
YUK8 Steele Glacier 48.75 322 P P **15 32 36.1 -4.1**
baz=45
MDM Murphy Dome 48.75 329 P P **15 32 40.9 +1.1**
HDA Harding Lake 48.79 328 P P **15 32 41.2 +1.1**
HDA IAmb IAmb 15 32 47.3
comp=Z,12nm,0.8s
HDA Harding Lake 48.79 328 P P **15 32 40.6 +0.5**
baz=43,SNR=5.9
PLBC Pleasant Camp 48.82 318 P P **15 32 41.6 +1.1**
baz=46
CCB Clear Creek Bu 48.86 328 P P **15 32 41.4 +0.8**
K24K Donnelly Dome 48.88 327 P P **15 32 41.7 +0.8**
baz=43,SNR=14
H22K Ishtalitna Cre 48.93 331 P P **15 32 41.9 +0.8**
baz=41,SNR=5.5
I23K Minto, Yukon-K 48.93 329 P P **15 32 40.7 -0.5**
I23K IAmb IAmb 15 32 58.8
comp=Z,13nm,1.1s
I23K Minto, Yukon-K 48.93 329 P P **15 32 41.7 +0.6**
baz=42
M26K Nabesna, AK 49.03 324 P P **15 32 43.0 +0.9**
baz=44
WRH Wood River Hil 49.08 328 P P **15 32 42.1 -0.2**
WRH IAmb IAmb 15 32 48.4
comp=Z,9.9nm,1.0s
B08A Colville Reser 49.14 299 P P **15 32 41.8 -1.3**
B08A IAmb IAmb 15 32 48.6
comp=Z,10nm,1.1s
T25A Trinidad 49.23 278 P P **15 32 43.8 -0.3**
T25A IAmb IAmb 15 32 50.9
comp=Z,13nm,1.0s
T25A Trinidad 49.23 278 P P **15 32 44.8 +0.6**
baz=43,SNR=5.4
NEA2 Nenana 49.27 329 P P **15 32 44.3 +0.5**
NEA2 IAmb IAmb 15 32 50.1
comp=Z,11nm,1.0s
NEA2 Nenana 49.27 329 P P **15 32 45.0 +1.2**
baz=42
AMTX Amarillo 49.38 274 P P **15 32 45.4 +0.3**
baz=42
SDCO Great Sand Dun 49.39 279 P P **15 32 46.2 +0.8**
baz=44,SNR=5.5
WRAK Wrangell Islan 49.39 314 P P **15 32 46.0 +1.2**
baz=46
PAX Paxson 49.40 326 P P **15 32 45.5 +0.6**
baz=43
MLY Manley 49.41 330 P P **15 32 45.4 +0.5**
baz=41
IMAR Indian Mountai 49.48 332 P P **15 32 45.8 +0.4**
H21K Melozitna Rive 49.49 331 P P **15 32 45.7 +0.3**
H21K IAmb IAmb 15 32 55.9
comp=Z,9.4nm,1.1s
H21K Melozitna Rive 49.49 331 P P **15 32 46.8 +1.3**
baz=40,SNR=5.9
CTG Chitna Glacier 49.52 322 P P **15 32 47.0 +1.1**
baz=44
BARN Barnard Glacie 49.55 322 P P **15 32 46.0 -0.2**
I21K Tanana 49.63 331 P P **15 32 47.9 +1.3**
baz=40
BWN Browne 49.70 329 P P **15 32 46.7 -0.3**
HARP HAARP 49.72 325 P P **15 32 48.2 +1.0**
baz=43
PLID Pearl Lake 49.74 293 P P **15 32 47.7 -0.2**
PLID IAmb IAmb 15 32 53.6
comp=Z,13nm,1.1s
PCA Pinnacle 49.77 321 P P **15 32 47.4 -0.3**
MCARA McCarthy VSAT 49.78 323 P P **15 32 47.3 -0.4**
MCARA IAmb IAmb 15 33 15.3
comp=Z,9.9nm,0.9s
TABL Table Mountain 49.83 322 P P **15 32 47.2 -1.1**
TABL IAmb IAmb 15 32 50.4
comp=Z,21nm,1.3s
MCK McKinley 49.88 328 P P **15 32 47.3 -1.1**
MCK IAmb IAmb 15 33 06.1
comp=Z,15nm,1.0s
MCK McKinley 49.88 328 P P **15 32 49.9 +1.5**
baz=41,SNR=6.4
HWUT Hardware Ranch 49.89 287 P P **15 32 48.3 -0.8**
HWUT IAmb IAmb 15 32 54.5
comp=Z,7.8nm,0.8s
RDOG Red Dog Mine 49.99 337 P P **15 32 49.6 +0.4**
baz=34
HLID Hailey 50.00 291 P P **15 32 51.5 +1.7**
baz=45
RND Reindeer 50.10 328 P P **15 32 50.6 +0.4**
RND IAmb IAmb 15 32 56.0
comp=Z,8.0nm,1.0s
S22A 4UR Ranch, Cre 50.11 280 P P **15 32 52.2 +1.2**
baz=43
ISLE Juniper Island 50.12 322 P P **15 32 51.1 +0.6**

N25K Chitina, Valde 50.13 324 P P **15 32 50.1 -0.3**
N25K IAmb IAmb 15 32 56.9
comp=Z,17nm,1.1s
N25K Chitina, Valde 50.13 324 P P **15 32 52.7 +2.2**
baz=42
TGL Tana Glacier 50.17 323 P P **15 32 50.2 -0.6**
BPAW Bear Paw Mtn. 50.19 329 P P **15 32 51.4 +0.6**
BPAW Bear Paw Mtn. 50.19 329 P P **15 32 52.8 +1.9**
baz=40
M24K Tolsona, Glenn 50.26 325 P P **15 32 52.2 +0.8**
baz=42
WAT6 Susitna Watana 50.39 326 P P **15 32 53.9 +1.4**
baz=41
WAX Waxell Ridge 50.40 322 P P **15 32 52.8 +0.3**
HVU Hansel Valley 50.40 288 P P **15 32 51.9 -1.0**
WAT1 Susitna Watana 50.45 327 P P **15 32 54.0 +1.2**
baz=41
TRF Thorofare Moun 50.49 328 P P **15 32 53.5 +0.3**
TRF Thorofare Moun 50.49 328 P P **15 32 55.0 +1.7**
baz=40,SNR=6.7
BBB Bella Bella 50.56 307 LR LR 15 53 45.8
comp=Z,287nm,18.1s,baz=42,slow=35
BMO Blue Mountains 50.57 294 P P **15 32 53.2 -0.8**
PV15 Paradox Valley 50.58 282 P P **15 32 54.0 -0.4**
PV15 IAmb IAmb 15 33 00.8
comp=Z,10nm,1.0s
KTH Kantishna Hill 50.59 329 P P **15 32 54.2 +0.3**
SNH Sunshine Point 50.59 322 P P **15 32 53.4 -0.5**
BMRM Bremner River 50.60 324 P P **15 32 53.4 -0.7**
BMRM IAmb IAmb 15 33 00.1
comp=Z,13nm,1.1s
BMRM Bremner River 50.60 324 P P **15 32 54.7 +0.7**
baz=42
KLU Klutina 50.64 325 P P **15 32 54.4 0.0**
KLU IAmb IAmb 15 33 00.6
comp=Z,14nm,1.2s
KLU Klutina 50.64 325 P P **15 32 55.5 +1.2**
baz=42
PV11 David Mesa, Pa 50.82 282 P P **15 32 55.3 -0.9**
PV11 IAmb IAmb 15 33 02.7
comp=Z,20nm,1.1s
PV13 Radium Mtn., P 50.89 282 P P **15 32 56.6 -0.2**
J20K Nowinta River 51.00 331 P P **15 32 57.5 +0.6**
J20K Nowinta River 51.00 331 P P **15 32 57.8 +0.8**
baz=38,SNR=8.2
CAST Castle Rocks 51.03 329 P P **15 32 57.3 +0.2**
CAST IAmb IAmb 15 33 02.7
comp=Z,9.6nm,0.9s
CAST Castle Rocks 51.03 329 P P **15 32 58.2 +1.1**
baz=39,SNR=5.8
G08A Pilot Rock 51.09 295 P P **15 32 58.0 0.0**
SRU San Rafael Swe 51.12 284 P P **15 32 58.0 -0.4**
SML Sawmill 51.16 326 P P **15 32 57.9 -0.3**
SML Sawmill 51.16 326 P P **15 32 58.9 +0.8**
baz=40
NLU North Lily Min 51.34 286 P P **15 32 59.7 -0.4**
NLU IAmb IAmb 15 33 06.3
comp=Z,13nm,1.0s
AKTO Aktyubinsk 51.34 55 LR LR 15 54 03.8
comp=Z,346nm,19.3s,baz=322,slow=35
TMUT Trail Mountain 51.35 285 P P **15 33 00.2 0.0**
FID Port Fidalgo 51.38 324 P P **15 32 59.7 0.0**
FID IAmb IAmb 15 33 06.6
comp=Z,18nm,1.0s
MVCO Mesa Verde 51.41 281 P P **15 32 60.0 -0.7**
MVCO Mesa Verde 51.41 281 P P **15 33 02.2 +1.5**
baz=43
PPLA Purkeypile 51.46 329 P P **15 33 00.0 -0.5**
PPLA IAmb IAmb 15 33 09.9
comp=Z,25nm,1.4s
PPLA Purkeypile 51.46 329 P P **15 33 00.6 +0.1**
baz=39
TOA0 Torodi Ar. Sit 51.47 133 P P **15 32 59.5 -1.5**
TOA0 IAmb IAmb 15 33 03.6
comp=Z,16nm,1.4s
TORD Torodi Ar. Bea 51.47 133 P P **15 32 60.0 -1.0**
comp=Z,5.0nm,0.9s,baz=340,slow=5.8,SNR=21
TORD LR LR 15 52 37.7
comp=Z,236nm,21.0s,baz=320,slow=34
comp=Z,5.0nm,0.9s
TORD Torodi Ar. Bea 51.47 133 P P **15 32 59.2 -1.7**
GLI Glacier Island 51.48 325 P P **15 33 01.4 +0.9**
baz=41
KNK Knik Glacier 51.50 326 P P **15 33 01.7 +1.0**
baz=40
TIXI Tiksi 51.52 7 LR LR 15 51 57.9
comp=Z,74nm,20.9s,baz=0.0,slow=33
TIXI Tiksi 51.52 7 P P **15 33 00.2 -0.5**
PMR Palmer 51.57 326 P P **15 33 02.4 +1.3**
baz=40
K20K Telida 51.63 330 P P **15 33 02.4 +0.7**
K20K IAmb IAmb 15 33 07.7
comp=Z,12nm,0.9s
K20K Telida 51.63 330 P P **15 33 02.7 +1.1**
baz=38,SNR=7.4
JCT Junction City 51.66 268 P P **15 33 02.1 -0.2**
JCT IAmb IAmb 15 33 07.8
comp=Z,16nm,1.0s
JCT Junction City 51.66 268 P P **15 33 03.1 +0.8**
baz=40
DIB Dawson Inlet, 51.72 311 P P **15 33 01.4 -0.9**
DIB IAmb IAmb 15 33 18.7
comp=Z,23nm,1.3s
M22K Willow 51.74 327 P P **15 33 03.7 +1.2**
baz=39
ANMO Albuquerque 51.97 278 LR LR 15 54 24.9
comp=Z,1µm,18.2s,baz=57,slow=35
ANMO Albuquerque 51.97 278 P P **15 33 04.0 -0.8**
ANMO Albuquerque 51.97 278 P P **15 33 05.9 +1.2**
baz=42
SKT Skwentna 51.99 328 P P **15 33 04.0 -0.3**
SKT IAmb IAmb 15 33 23.8
comp=Z,14nm,1.2s
SKT Skwentna 51.99 328 P P **15 33 05.6 +1.2**
baz=39
GNI Garni 52.13 73 LR LR 15 55 10.6
comp=Z,232nm,20.9s,baz=315,slow=36
RC01 Rabbit Creek A 52.14 326 P P **15 33 04.7 -0.7**
RC01 Rabbit Creek A 52.14 326 P P **15 33 06.1 +0.6**
baz=39
SUA Susitna One 52.16 327 P P **15 33 04.9 -0.8**
SUA Susitna One 52.16 327 P P **15 33 07.0 +1.2**
baz=39
J08A Circle Bar Ran 52.22 293 P P **15 33 05.1 -1.4**
J08A IAmb IAmb 15 33 12.5
comp=Z,15nm,1.0s
L20K Farewell, AK 52.28 329 P P **15 33 07.5 +1.0**
baz=38
MMAI Mount Meron Ar 52.33 86 LR LR 15 57 43.5
comp=Z,236nm,19.1s,baz=101,slow=39
ELK Elko 52.44 289 LR LR 15 54 27.4
comp=Z,710nm,19.3s,baz=51,slow=35
ELK Elko 52.44 289 P P **15 33 08.4 +0.1**
MSU Marysvale 52.44 285 P P **15 33 09.1 +0.8**
TTA Tatalina 52.51 331 P P **15 33 08.4 +0.1**
baz=36
BNM Barren Site 52.65 277 P P **15 33 08.6 -1.3**
SPU Mount Spurr 52.77 327 P P **15 33 10.6 +0.4**
M19K Big River Lodg 52.88 329 P P **15 33 10.7 -0.2**
baz=37
WVOR Wild Horse Val 52.97 293 P P **15 33 11.5 -0.6**
WVOR IAmb IAmb 15 33 18.2
comp=Z,10nm,1.1s
ABKAR Akbulak array 53.06 55 P P **15 33 12.3 -0.1**
ABKAR Akbulak array 53.06 55 P P **15 33 11.0 -1.4**
ABKAR IAmb IAmb 15 33 17.9
comp=Z,16nm,1.3s
PINE Pine Mountain 53.15 295 P P **15 33 12.1 -1.3**
PINE IAmb IAmb 15 33 19.8
comp=Z,17nm,1.1s
MDP Montagnes des 53.32 203 LR LR 15 50 27.9
comp=Z,203nm,21.3s,baz=36,slow=30
BRSE Bradley Lake S 53.51 326 P P **15 33 15.4 -0.2**
baz=38
J05D Fort Rock, OR 53.67 295 P P **15 33 17.5 +0.3**
baz=43,SNR=5.5
MNTX Cornudas Mount 53.81 274 P P **15 33 17.6 -0.6**
MNTX IAmb IAmb 15 33 25.6
comp=Z,10nm,1.2s
MNTX Cornudas Mount 53.81 274 P P **15 33 18.8 +0.6**
baz=40
U15A North Rim 54.04 283 P P **15 33 20.0 -0.1**
LCMT Little Creek M 54.12 284 P P **15 33 20.1 -0.4**
MOD Modoc Plateau 54.21 293 P P **15 33 21.3 +0.2**
MOD IAmb IAmb 15 33 27.1
comp=Z,14nm,1.1s

BAUV El Baul 54.24 222 P P **15 33 20.3 -1.1**
R11A Troy Canyon, C 54.38 287 P P **15 33 22.5 +0.1**
R11A Troy Canyon, C 54.38 287 P P **15 33 23.0 +0.5**
baz=42,SNR=5.6
121A Cookes Peak, D 54.51 277 P P **15 33 24.2 +0.8**
baz=40
EIL Elat 54.63 89 LR LR 15 59 30.9
comp=Z,81nm,19.4s,baz=286,slow=39
TX31 Lajitas Ar. Si 54.68 271 P P **15 33 24.5 -0.1**
TXAR Lajitas Array 54.68 271 P P **15 33 26.0 +1.3**
comp=Z,1.1nm,0.8s,baz=57,slow=5.7,SNR=9.9
TXAR PcP PcP **15 34 29.3 +2.0**
comp=Z,1.0nm,0.9s,baz=65,slow=4.3,SNR=2.3
TXAR LR LR 15 56 24.3
comp=Z,502nm,18.6s,baz=72,slow=36
comp=Z,1.1nm,0.8s
TXAR Lajitas Array 54.68 271 P P **15 33 24.7 +0.1**
BVAR Borovoye Array 54.70 46 LR LR 15 55 06.1
comp=Z,225nm,20.7s,baz=192,slow=34
DBIC Dimbokro 55.01 143 P P **15 33 27.6 +0.6**
comp=Z,6.7nm,0.8s,baz=7.9,slow=7.0,SNR=6.1
DBIC LR LR 15 54 24.3
comp=Z,202nm,19.1s,baz=358,slow=33
comp=Z,6.7nm,0.8s
KVN Kaiserville 55.17 290 P P **15 33 28.1 -0.1**
SDV Santo Domingo 55.28 225 LR LR 15 55 13.8
comp=Z,101nm,21.3s,baz=20,slow=34
PAHR Pah Rah Range 55.35 291 P P **15 33 28.4 -1.1**
PAHR IAmb IAmb 15 33 36.1
comp=Z,13nm,1.0s
TPH Tonopah 55.44 288 P P **15 33 29.4 -0.8**
YBH Yreka Blue Hor 55.55 295 LR LR 15 56 24.8
comp=Z,691nm,19.4s,baz=42,slow=35
KDAK Kodiak Island 55.66 325 LR LR 15 58 32.2
comp=Z,217nm,18.6s,baz=79,slow=37
NV11 Mina Array Sit 55.66 289 P P **15 33 32.6 +0.8**
L02F Cave Junction 55.69 296 P P **15 33 31.3 -0.4**
baz=42
RYN Ryan 55.71 289 P P **15 33 32.3 +0.2**
RYN IAmb IAmb 15 33 37.7
comp=Z,9.3nm,0.9s
NVAR Mina Array Bea 55.74 289 P P **15 33 33.8 +1.4**
comp=Z,1.6nm,0.8s,baz=55,slow=5.7,SNR=9.7
NVAR LR LR 15 56 21.9
comp=Z,674nm,20.6s,baz=43,slow=35
comp=Z,1.6nm,0.8s
NVAR Mina Array Bea 55.74 289 P P **15 33 32.1 -0.3**
TPNV Topopah Spring 55.77 286 P P **15 33 32.1 -0.4**
TPNV Topopah Spring 55.77 286 P P **15 33 32.7 +0.2**
baz=41
PNTR Pine Nut 55.93 291 P P **15 33 33.4 -0.3**
PNTR IAmb IAmb 15 33 39.6
comp=Z,8.8nm,0.8s
LHV Little Huntoon 55.98 289 P P **15 33 34.1 +0.4**
LHV IAmb IAmb 15 33 39.9
comp=Z,7.8nm,1.1s
TUC Tucson 56.32 279 P P **15 33 35.6 -0.8**
TUC IAmb IAmb 15 33 43.3
comp=Z,12nm,1.4s
TUC Tucson 56.32 279 P P **15 33 36.7 +0.3**
baz=40
GRAC Grapevine Rang 56.32 287 P P **15 33 36.7 +0.4**
baz=41,SNR=5.5
KHMM Horse Mountain 56.70 295 P P **15 33 38.2 -0.9**
KHMM IAmb IAmb 15 33 44.3
comp=Z,13nm,1.1s
GMRC Granite Mounta 57.08 284 P P **15 33 42.8 +0.9**
baz=40
MPMC Manual Prospec 57.09 287 P P **15 33 42.9 +0.9**
baz=41
LRMC Laurel Mtn Rad 57.63 286 P P **15 33 45.9 +0.2**
baz=40
214A Organ Pipe Nat 57.70 280 P P **15 33 46.8 +0.7**
baz=40
BC3 Big Chuckawall 57.83 283 P P **15 33 46.1 -1.0**
baz=40
BELC Belle Mtn. Jos 57.86 284 P P **15 33 48.6 +1.3**
baz=40
ISA Isabella, Lake 57.91 287 P P **15 33 49.3 +1.7**
baz=40
GLA Glamis 57.95 282 P P **15 33 47.7 -0.2**
GLA IAmb IAmb 15 33 54.6
comp=Z,13nm,0.9s
GLA Glamis 57.95 282 P P **15 33 49.1 +1.2**
baz=40
EDW2 Edwards Air Fo 58.25 286 P P **15 33 51.4 +1.4**
baz=40
PFO Pinyon Flats O 58.40 284 LR LR 15 58 47.4
comp=Z,260nm,19.1s,baz=56,slow=36
PFO Pinyon Flats O 58.40 284 P P **15 33 50.5 -0.7**
PFO IAmb IAmb 15 33 57.8
comp=Z,7.8nm,0.9s
PFO Pinyon Flats O 58.40 284 P P **15 33 52.0 +0.9**
baz=40
TPFO Pinon Flats 58.41 284 P P **15 33 51.7 +0.5**
baz=40
SWSC Sam W. Stewart 58.56 283 P P **15 33 52.4 +0.4**
baz=40
BFSC Mount Baldy Ra 58.56 285 P P **15 33 51.6 -0.7**
baz=40
PAGB Antelope Grade 58.80 288 P P **15 33 52.6 -1.1**
MONP2 Monument Peak 58.93 283 P P **15 33 54.8 -0.2**
baz=40
S14K Fog Glacier 59.03 328 P P **15 33 54.9 -0.3**
baz=32
PKM Mcpherson Peak 59.21 288 P P **15 33 57.0 +0.2**
baz=40
ZALV Zalesovo Beam 59.23 37 P P **15 33 57.0 +0.6**
comp=Z,0.6nm,0.5s,baz=324,slow=7.1,SNR=2.5
comp=Z,0.6nm,0.5s
ZALV Zalesovo Beam 59.23 37 P P **15 33 55.8 -0.6**
CMIG Matias Romero 59.66 254 LR LR 15 59 13.1
comp=Z,448nm,21.4s,baz=16,slow=35
KURK Kurchatov 59.69 43 P P **15 33 59.0 -0.6**
KURBB Kurchatov Arra 59.73 43 LR LR 16 00 10.6
comp=Z,240nm,18.1s,baz=309,slow=36
JTS Las Juntas 60.34 241 LR LR 16 00 27.9
comp=Z,234nm,18.3s,baz=62,slow=36
ROSC El Rosal 60.43 227 LR LR 15 58 05.2
comp=Z,131nm,21.2s,baz=42,slow=34
GEYT Alibeck 60.68 65 LR LR 16 02 29.7
comp=Z,216nm,18.3s,baz=352,slow=38
SEY Seymchan 60.69 356 LR LR 15 58 57.9
comp=Z,109nm,21.7s,baz=44,slow=35
LPIG La Paz 62.44 272 LR LR 16 00 45.6
comp=Z,238nm,19.1s,baz=18,slow=35
KKAR Karatay Array 62.48 53 P P **15 34 18.3 -0.5**
MA2 Magadan 64.10 357 LR LR 16 00 46.0
comp=Z,84nm,21.8s,baz=39,slow=34
MAKZ Makanchi 64.16 43 P P **15 34 29.1 -0.7**
MAKZ IAmb IAmb 15 34 34.8
comp=Z,11nm,1.2s
MK31 Makanchi Array 64.29 43 P P **15 34 30.2 -0.5**
MK31 IAmb IAmb 15 34 35.5
comp=Z,7.2nm,1.2s
MKAR Makanchi Array 64.29 43 P P **15 34 30.7 0.0**
comp=Z,3.2nm,0.9s,baz=334,slow=5.8,SNR=18
comp=Z,3.2nm,0.9s
MKAR Makanchi Array 64.29 43 P P **15 34 30.3 -0.4**
AAK Ala-Archa 64.59 51 LR LR 16 01 52.8
comp=Z,232nm,18.4s,baz=328,slow=35
AAK Ala-Archa 64.59 51 P P **15 34 32.9 +0.1**
AAK IAmb IAmb 15 34 39.2
comp=Z,11nm,1.2s
BTK Batken 65.07 55 P P **15 34 35.0 -0.9**
KSH Kashi 67.79 51 P P **15 34 55.6 +2.2**
KSH pP pwP 15 34 59.9 +1.3
KSH pmax pmax
comp=Z,14nm,1.0s
SHEM Shemya Is, Ala 68.53 342 LR LR 16 05 32.4
comp=Z,67nm,20.4s,baz=101,slow=36
WMQ Urumqi 68.83 41 *eP* P **15 35 01.1 +1.4**
WMQ LR LR
comp=N,370nm,17.3s
WMQ LR LR
comp=E,300nm,15.3s
WMQ LR LR
comp=Z,190nm,17.3s
PETK Petropavlovsk- 70.20 352 P P **15 35 09.5 +1.5**
comp=Z,2.2nm,1.0s,baz=256,slow=6.0,SNR=3.5
PETK LR LR 16 06 24.4
comp=Z,112nm,19.4s,baz=10,slow=36
comp=Z,2.2nm,1.0s
PETK Petropavlovsk- 70.20 352 P P **15 35 07.5 -0.4**
SONM Songino Array 70.96 27 P P **15 35 13.6 +0.7**
comp=Z,0.7nm,0.6s,baz=328,slow=5.3,SNR=4.4
comp=Z,0.7nm,0.6s

SONM	**Songino Array**	**70.96**	**27**	P		**P**		**15 35 12.1**	**-0.8**
BDFB	**Brasilia**	**72.84**	**194**	P		**P**		**15 35 26.0**	**+1.7**
	comp=Z,2.9nm,0.7s,baz=94,slow=7.1,SNR=4.2								
BDFB				LR		LR		16 02 02.4	
	comp=Z,290nm,19.7s,baz=12,slow=31								
	comp=Z,2.9nm,0.7s								
BDFB	**Brasilia**	**72.84**	**194**	IAmb		IAmb		15 35 34.6	
	comp=Z,8.9nm,1.1s								
KLR	**Kul'dur**	**73.93**	**9**	P		**P**		**15 35 31.4**	**+1.0**
	comp=Z,1.0nm,0.7s,baz=333,slow=4.5,SNR=2.5								
KLR				LR		LR		16 08 28.0	
	comp=Z,109nm,19.5s,baz=28,slow=36								
	comp=Z,1.0nm,0.7s								
SIV	**San Ignacio**	**75.65**	**206**	P		**P**		**15 35 42.5**	**+1.9**
	comp=Z,4.3nm,0.9s,baz=45,slow=5.7,SNR=12								
SIV				LR		LR		16 04 42.6	
	comp=Z,284nm,18.1s,baz=32,slow=32								
	comp=Z,4.3nm,0.9s								
NNA	**Nana**	**76.80**	**223**	LR		LR		16 08 51.9	
	comp=Z,146nm,21.0s,baz=332,slow=35								
GTA	**Gaotai**	**76.87**	**35**	*e*P		**P**		**15 35 47.5**	**-0.1**
GTA				pP		pwP		15 35 52.0	-0.8
GTA				pmax		pmax			
	comp=Z,3.0nm,1.2s								
GTA				pmax		pmax			
	comp=Z,46nm,5.1s								
GTA				LR		LR			
	comp=N,190nm,18.5s								
GTA				LR		LR			
	comp=E,160nm,20.7s								
GTA				LR		LR			
	comp=Z,230nm,19.6s								
LPAZ	**La Paz**	**77.86**	**213**	P		**P**		**15 35 55.0**	**+1.2**
	comp=Z,1.0nm,0.7s,baz=305,slow=4.6,SNR=4.0								
	comp=Z,1.0nm,0.7s								
GOMU	**GeErMu**	**78.11**	**40**	P		**P**		**15 35 58.1**	**+3.2**
GOMU				pP		pwP		15 36 01.4	+1.3
GOMU				sP		PcP		15 36 05.3	+0.8
GOMU				S		S		15 45 37.3	-12
GOMU				pmax		pmax			
	comp=Z,4.0nm,0.5s								
GOMU				pmax		pmax			
	comp=Z,86nm,8.9s								
GOMU				LR		LR			
	comp=N,44nm,14.4s								
GOMU				LR		LR			
	comp=E,120nm,14.4s								
GOMU				LR		LR			
	comp=Z,55nm,14.5s								
HHC	**Hu-ho-hao-te**	**78.79**	**26**	*e*P		**P**		**15 35 55.6**	**-2.6**
HHC				pmax		pmax			
	comp=Z,29nm,1.0s								
HHC				pmax		pmax			
	comp=Z,150nm,5.4s								
HHC				LR		LR			
	comp=N,300nm,17.4s								
HHC				LR		LR			
	comp=Z,420nm,18.2s								
USRK	**Ussuriysk Ar.**	**78.94**	**10**	LR		LR		16 09 53.3	
	comp=Z,90nm,21.5s,baz=348,slow=35								
CPUP	**Villa Florida**	**84.83**	**200**	P		**P**		**15 36 30.8**	**+1.0**
	comp=Z,1.5nm,0.6s,baz=24,slow=7.5,SNR=4.4								
CPUP				LR		LR		16 09 26.7	
	comp=Z,135nm,21.6s,baz=7.0,slow=32								
	comp=Z,1.5nm,0.6s								
KSRS	**Korea Array**	**85.14**	**14**	P		**P**		**15 36 32.7**	**+1.2**
	comp=Z,1.4nm,0.9s,baz=350,slow=4.5,SNR=5.3								
	comp=Z,1.4nm,0.9s								
TSUM	**Tsumeb**	**87.22**	**132**	LR		LR		16 17 18.3	
	comp=Z,79nm,18.0s,baz=318,slow=37								
NJ2	**Nanjing**	**88.86**	**22**	*e*P		**P**		**15 36 48.6**	**-1.1**
NJ2				pmax		pmax			
	comp=Z,11nm,0.5s								
PZH	**PanZhiHua**	**89.34**	**38**	P		**P**		**15 36 51.3**	**-0.9**
PZH				pmax		pmax			
	comp=Z,10.0nm,0.7s								
PZH				pmax		pmax			
	comp=Z,100nm,4.8s								
JOW	**Kunigami**	**95.63**	**15**	LR		LR		16 21 46.7	
	comp=Z,49nm,21.9s,baz=244,slow=36								
CMAR	**Chiang Mai Arr**	**95.69**	**44**	P		**P**		**15 37 22.1**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=314,slow=5.3,SNR=4.3								
	comp=Z,0.3nm,0.3s								
VNA3	**Neumayer Olymp**	**128.75**	**170**	PKPdf		**PKiKP**		**15 43 02.5**	**+0.5**
SNAA	**Sanae**	**129.90**	**167**	PKPdf		**PKiKP**		**15 43 05.7**	**+1.4**

IDC 23 15:26:30.1±2.1, 56°50N×34°34W, h0km, mb3.8/4, mbtmp3.8/4, Error ellipse: s-maj=57.5km s-min=35.0km az=57.0, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARCES	**ARCESS Array B**	**28.72**	**39**	P	P	15 32 28.6	+0.1
	0.5nm,0.5s,baz=280,slow=11,SNR=1.7						
	0.5nm,0.5s						
ILAR	**Eielson Array**	**48.64**	**328**	P	P	15 35 15.1	-0.1
	0.8nm,0.8s,baz=44,slow=6.7,SNR=4.2						
	0.8nm,0.8s						
TORD	**Torodi Ar. Bea**	**51.33**	**133**	P	P	15 35 36.0	-0.1
	1.2nm,0.8s,baz=343,slow=6.8,SNR=3.8						
	1.2nm,0.8s						
MKAR	**Makanchi Array**	**64.28**	**43**	P	P	15 37 06.7	-0.1
	0.7nm,0.7s,baz=320,slow=4.7,SNR=4.7						
	0.7nm,0.7s						

*IDC **23** 15:28:31.9±0.8, 56°56N×34°33W, h0km, mb3.8/16, mbtmp3.8/16, Error ellipse: s-maj=23.2km s-min=15.7km az=173.0*
*NEIC **23** 15:28:34.2±1.7, 56°5N±0°1×34°3W±0°1, h15km±2km, mb4.5/57, Error ellipse: s-maj=15.9km s-min=11.3km az=185.0*

ISC 23 15:28:35.0±0.5, 56°5N±0°1×34°30W±0°06, h22km, n84, σ1§04/82, mb4.4/45, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRS	**Narsarsuaq**	**7.39**	**313**	Pn	**Pn**	**15 30 19.5**	**-1.8**
IVI	**Ivigtut**	**8.56**	**309**	Pn	**Pn**	**15 30 36.2**	**-1.2**
SUMG	**Summit**	**16.19**	**356**	Pn	**Pn**	**15 32 19.1**	**-2.0**
EKA	**Eskdalemuir Ar**	**17.41**	**81**	P	**P**	**15 32 39.0**	**+1.6**
	1.6nm,0.7s,baz=289,slow=10,SNR=5.4						
BATG	**Bathurst New B**	**21.50**	**258**	P	**P**	**15 33 19.7**	**-2.4**
BATG				IAmb	IAmb	15 33 28.1	
	comp=Z,19nm,1.2s						
LMN	**Caledonia Moun**	**21.72**	**253**	P	**P**	**15 33 20.9**	**-3.6**
LMN				IAmb	IAmb	15 33 28.9	
	comp=Z,22nm,1.0s						
D62A	**Allapoint, All**	**23.25**	**261**	P	**P**	**15 33 41.1**	**+0.6**
D62A				IAmb	IAmb	15 33 49.1	
	comp=Z,14nm,1.2s						
NBO00	**NORSAR Array S**	**23.41**	**60**	P	**P**	**15 33 40.8**	**-1.2**
F64A	**Sherman**	**23.61**	**258**	P	**P**	**15 33 44.9**	**+0.8**
F64A				IAmb	IAmb	15 33 46.0	
	comp=Z,14nm,1.0s						
NOA	**NORSAR Array B**	**23.62**	**60**	P	**P**	**15 33 44.2**	**+0.1**
	comp=Z,0.7nm,0.9s,baz=290,slow=9.1,SNR=3.8						
	comp=Z,0.7nm,0.9s						
CLF	**Chambon-Foret**	**23.68**	**95**	P	**P**	**15 33 43.7**	**-1.1**
NC602	**NORSAR Array S**	**23.83**	**61**	P	**P**	**15 33 46.8**	**+0.7**
NC405	**NORSAR Array S**	**23.84**	**60**	P	**P**	**15 33 45.8**	**-0.5**
NC405				IAmb	IAmb	15 34 00.2	
	comp=Z,15nm,1.3s						
EMMW	**East Machias**	**23.89**	**254**	P	**P**	**15 33 47.0**	**+0.3**
EMMW				IAmb	IAmb	15 33 58.4	
	comp=Z,20nm,1.2s						
F63A	**Nahmakanta, Br**	**24.12**	**258**	P	**P**	**15 33 49.9**	**+1.0**
F63A				IAmb	IAmb	15 34 07.3	
	comp=Z,15nm,1.2s						
F62A	**Pittston Farm,**	**24.47**	**259**	P	**P**	**15 33 52.5**	**+0.4**
PKME	**Peaks-Kenny Pk**	**24.51**	**258**	P	**P**	**15 33 53.2**	**+0.7**
HFS	**Hagfors**	**25.00**	**62**	P	**P**	**15 33 57.9**	**+1.2**
	comp=Z,2.1nm,0.9s,baz=180,slow=40,SNR=3.0						
	comp=Z,2.1nm,0.9s						
G62A	**West of Eustis**	**25.21**	**259**	P	**P**	**15 33 58.9**	**+0.1**
G62A				IAmb	IAmb	15 34 01.9	
	comp=Z,11nm,0.9s						
H62A	**Milan**	**25.96**	**258**	P	**P**	**15 34 06.4**	**+0.7**
H62A				IAmb	IAmb	15 34 17.0	
	comp=Z,18nm,1.4s						
PAB	**San Pablo**	**25.96**	**118**	P	**P**	**15 34 05.0**	**-0.8**
PAB				IAmb	IAmb	15 34 18.1	
	comp=Z,12nm,1.4s						
ESBB	**Sonseca Array**	**26.05**	**117**	P	**P**	**15 34 05.9**	**-0.7**
ESDC	**Sonseca Array**	**26.05**	**117**	P	**P**	**15 34 07.0**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=324,slow=8.6,SNR=2.3						
	comp=Z,0.5nm,0.7s						
ESDC	**Sonseca Array**	**26.05**	**117**	P	**P**	**15 34 05.5**	**-1.0**
VLDQ	**Val d'Or**	**27.28**	**271**	P	**P**	**15 34 18.7**	**+1.2**
VLDQ				IAmb	IAmb	15 34 27.3	
	comp=Z,12nm,1.4s						
GRFO	**Grafenberg**	**27.73**	**85**	P	**P**	**15 34 21.3**	**-0.2**
GRA1	**Grafenberg Arr**	**27.73**	**85**	P	**P**	**15 34 21.1**	**-0.5**
GRA1				IAmb	IAmb	15 34 38.5	
	comp=Z,7.4nm,1.0s						
LONY	**Lake Ozonia**	**27.80**	**262**	P	**P**	**15 34 22.0**	**-0.3**
CLL	**Collm**	**27.88**	**81**	*e*P	**P**	**15 34 21.0**	**-1.8**
CLL				*ex*	x	15 34 28.0	
CLL				Lm	MLR	15 44 00.0	
	comp=Z,500nm,18.9s						
QUA2	**Belchertown**	**28.15**	**256**	P	**P**	**15 34 26.6**	**+1.3**
ARCES	**ARCESS Array B**	**28.67**	**39**	P	**P**	**15 34 30.0**	**+0.3**
	comp=Z,2.5nm,0.8s,baz=280,slow=7.3,SNR=7.9						
	comp=Z,2.5nm,0.8s						
ARCES	**ARCESS Array B**	**28.67**	**39**	P	**P**	**15 34 28.8**	**-0.9**
FINES	**FINESS Array B**	**30.49**	**55**	P	**P**	**15 34 45.7**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=325,slow=5.3,SNR=3.3						
	comp=Z,1.2nm,0.7s						
FINES	**FINESS Array B**	**30.49**	**55**	P	**P**	**15 34 46.1**	**+0.3**
FIA1	**FINESS Array S**	**30.49**	**55**	P	**P**	**15 34 46.2**	**+0.4**
FIA1				IAmb	IAmb	15 34 55.2	
	comp=Z,13nm,1.4s						
EYMN	**Ely**	**35.11**	**281**	P	**P**	**15 35 26.5**	**+0.1**
EYMN				IAmb	IAmb	15 35 35.2	
	comp=Z,10nm,1.2s						
E38A	**The Farm, Brul**	**35.94**	**279**	P	**P**	**15 35 33.0**	**-0.5**
E38A				IAmb	IAmb	15 35 42.4	
	comp=Z,7.8nm,1.2s						
B35A	**Bob, Littlefor**	**36.07**	**283**	P	**P**	**15 35 33.4**	**-1.3**
B35A				IAmb	IAmb	15 35 43.1	
	comp=Z,8.3nm,1.4s						
KLMR	**Klimovskoe**	**36.72**	**52**	*e*	**P**	**15 35 39.3**	**-0.7**
KLMR				AMP		15 35 47.6	
	comp=Z,16nm,1.3s						
AKASG	**Malin Array Be**	**36.91**	**71**	P	**P**	**15 35 41.5**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=306,slow=8.5,SNR=2.3						
	comp=Z,0.5nm,0.5s						
W57A	**Gilead**	**37.42**	**255**	P	**P**	**15 35 45.0**	**-1.1**
W57A				IAmb	IAmb	15 35 47.1	
	comp=Z,10nm,1.1s						
A36M	**Sachs Harbour**	**37.96**	**330**	P	**P**	**15 35 51.5**	**+1.1**
JSC	**Jenkinsville**	**38.76**	**255**	P	**P**	**15 35 56.8**	**-0.7**
FNA	**Florina**	**38.84**	**90**	P	**P**	**15 35 56.9**	**-1.3**
FNA				IAmb	IAmb	15 36 10.2	
	comp=Z,6.7nm,0.9s						
ECSD	**EROS Data Cent**	**40.53**	**279**	P	**P**	**15 36 13.0**	**+0.8**
S44A	**Carbondale**	**40.60**	**266**	P	**P**	**15 36 13.7**	**+0.8**
PBMO	**Poplar Bluff**	**41.91**	**266**	P	**P**	**15 36 23.1**	**-0.5**
PBMO				IAmb	IAmb	15 36 27.0	
	comp=Z,8.2nm,0.8s						
MGMO	**Mountain Grove**	**42.66**	**268**	P	**P**	**15 36 29.2**	**-0.5**
LRAL	**Lakeview Retre**	**42.80**	**260**	P	**P**	**15 36 30.9**	**0.0**
LCAR	**Lake Charles**	**42.83**	**266**	P	**P**	**15 36 31.4**	**+0.3**
WHAR	**Wooly Hollow**	**44.03**	**266**	P	**P**	**15 36 42.0**	**+1.3**
WHAR				IAmb	IAmb	15 36 44.4	
	comp=Z,9.9nm,1.1s						
BRTR	**Keskin Array B**	**46.33**	**81**	P	**P**	**15 37 01.0**	**+1.9**
	comp=Z,1.9nm,0.8s,baz=308,slow=6.1,SNR=4.9						
	comp=Z,1.9nm,0.8s						
M30M	**Minto, Yukon**	**46.96**	**322**	P	**P**	**15 37 04.9**	**+1.2**
M30M				IAmb	IAmb	15 37 11.9	
	comp=Z,3.3nm,0.9s						
BOZ	**Bozeman (W)**	**47.30**	**291**	P	**P**	**15 37 07.8**	**+1.1**
BOZ				IAmb	IAmb	15 37 16.0	
	comp=Z,5.7nm,1.2s						
N31M	**Braeburn, Yuko**	**47.34**	**320**	P	**P**	**15 37 08.0**	**+1.4**
N31M				IAmb	IAmb	15 37 09.1	
	comp=Z,5.8nm,1.1s						
PD31	**Pinedale Array**	**48.16**	**287**	P	**P**	**15 37 13.4**	**-0.1**
PDAR	**Pinedale Array**	**48.16**	**287**	P	**P**	**15 37 13.3**	**-0.1**
	comp=Z,0.6nm,0.2s,baz=68,slow=7.2,SNR=4.3						
	comp=Z,0.6nm,0.2s						
SCRK	**Sand Creek**	**48.33**	**326**	P	**P**	**15 37 16.1**	**+1.8**
H23K	**Yukon River**	**48.59**	**330**	P	**P**	**15 37 17.9**	**+1.7**
ILAR	**Eielson Array**	**48.62**	**328**	P	**P**	**15 37 15.9**	**-0.5**
	comp=Z,2.0nm,0.9s,baz=36,slow=6.3,SNR=8.5						
	comp=Z,2.0nm,0.9s						
ILAR	**Eielson Array**	**48.62**	**328**	P	**P**	**15 37 17.7**	**+1.2**
MDM	**Murphy Dome**	**48.87**	**329**	P	**P**	**15 37 19.8**	**+1.4**
MDM				IAmb	IAmb	15 37 24.0	
	comp=Z,5.2nm,0.9s						
HDA	**Harding Lake**	**48.90**	**328**	P	**P**	**15 37 18.4**	**-0.3**
HDA				IAmb	IAmb	15 37 28.5	
	comp=Z,4.3nm,0.9s						
IMAR	**Indian Mountai**	**49.59**	**332**	P	**P**	**15 37 25.4**	**+1.5**
HWUT	**Hardware Ranch**	**50.03**	**287**		**P**	**15 37 27.6**	**-0.2**
HWUT				IAmb	IAmb	15 37 36.2	
	comp=Z,3.9nm,1.0s						
TGL	**Tana Glacier**	**50.29**	**323**		pP	15 37 34.4	-1.2
BMO	**Blue Mountains**	**50.72**	**294**	P	**P**	**15 37 33.1**	**+0.3**
TORD	**Torodi Ar. Bea**	**51.34**	**133**	P	**P**	**15 37 36.9**	**-0.7**
	comp=Z,1.3nm,0.8s,baz=344,slow=8.4,SNR=5.7						
	comp=Z,1.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**51.34**	**133**	IAmb	IAmb	15 37 37.8	
	comp=Z,2.7nm,1.1s						
K20K	**Telida**	**51.74**	**330**	P	**P**	**15 37 40.8**	**+0.6**
K20K				IAmb	IAmb	15 37 47.1	
	comp=Z,4.7nm,1.1s						
SKT	**Skwentna**	**52.10**	**328**	P	**P**	**15 37 43.7**	**+0.8**
SKT				IAmb	IAmb	15 37 48.3	
	comp=Z,6.3nm,1.0s						
ABKAR	**Akbulak array**	**52.97**	**55**	P	**P**	**15 37 49.3**	**-0.1**
TXAR	**Lajitas Array**	**54.82**	**271**	P	**P**	**15 38 04.8**	**+1.5**
	comp=Z,0.5nm,0.8s,baz=66,slow=7.0,SNR=4.5						
	comp=Z,0.5nm,0.8s						
TXAR	**Lajitas Array**	**54.82**	**271**	P	**P**	**15 38 03.8**	**+0.5**
KVN	**Kaiserville**	**55.32**	**290**	P	**P**	**15 38 06.9**	**-0.1**
KVN				IAmb	IAmb	15 38 09.6	
	comp=Z,4.4nm,1.0s						
NVAR	**Mina Array Bea**	**55.89**	**289**	P	**P**	**15 38 10.8**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=45,slow=6.7,SNR=4.2						
	comp=Z,0.6nm,0.7s						
NVAR	**Mina Array Bea**	**55.89**	**289**	P	**P**	**15 38 11.3**	**+0.2**
ZALV	**Zalesovo Beam**	**59.18**	**37**	P	**P**	**15 38 34.0**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=325,slow=7.2,SNR=1.6						
	comp=Z,0.5nm,0.7s						
MKAR	**Makanchi Array**	**64.24**	**43**	P	**P**	**15 39 08.1**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=324,slow=6.0,SNR=6.5						
	comp=Z,0.8nm,0.7s						
BTK	**Batken**	**64.98**	**55**	P	**P**	**15 39 12.8**	**-0.2**
GAR	**Garm**	**65.61**	**56**	P	**P**	**15 39 17.2**	**+0.1**
TARG	**Taragay, Kyrgy**	**66.66**	**49**	P	**P**	**15 39 25.2**	**+1.0**
SONM	**Songino Array**	**70.94**	**27**	P	**P**	**15 39 50.4**	**0.0**
	comp=Z,0.5nm,0.8s,baz=338,slow=3.4,SNR=1.9						
	comp=Z,0.5nm,0.8s						
SIV	**San Ignacio**	**75.66**	**207**	P	**P**	**15 40 18.7**	**+0.4**
	comp=Z,1.7nm,0.8s,baz=33,slow=7.8,SNR=4.9						
	comp=Z,1.7nm,0.8s						

IDC 23 15:46:47.7±9.5, 56°41N×34°17W, h0km, mb3.7/4, mbtmp3.7/4, MS3.3/1, Error ellipse: s-maj=228.8km s-min=170.0km az=156.0, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	**10.46**	**32**	LR	LR	15 52 09.6	
	comp=Z,178nm,19.6s,baz=206,slow=31						
ARCES	**ARCESS Array B**	**28.73**	**39**	P	P	15 52 46.1	-0.2
	0.5nm,0.5s,baz=255,slow=8.7,SNR=6.0						
	0.5nm,0.5s						
FINES	**FINESS Array B**	**30.51**	**55**	P	P	15 53 02.1	+0.1
	0.9nm,0.8s,baz=278,slow=9.7,SNR=1.7						
	0.9nm,0.8s						
KURBB	**Kurchatov Array**	**59.72**	**43**	P	P	15 56 54.0	+0.3
	0.4nm,0.5s,baz=328,slow=6.7,SNR=4.3						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**64.29**	**43**	P	P	15 57 24.2	-0.3
	0.4nm,0.5s,baz=342,slow=5.3,SNR=5.4						
	0.4nm,0.5s						

*IDC **23** 16:29:19.5±3.8, 14°18N×92°58W, h0km, mb3.7/3, mbtmp3.4/5, ML3.1/2, Error ellipse: s-maj=143.8km s-min=57.5km az=45.0*
*MEX **23** 16:29:22.7±0.8, 14°53N×92°42W, h152km±60km, MD4.1*
ISC 23 16:29:24.6±2.9, 14°2N±0°1×92°84W±0°08, h32km±16km, n14, σ1§81/20, mb3.7/3, 1D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PATR	**El Naranjo**	**1.11**	**32**	*e*P	**Pn**	**16 29 43.5**	**-0.6**
PATR				*e*S	**Sb**	**16 30 00.5**	**+0.9**
CHUJ	**Union Juarez**	**1.16**	**38**	*e*P	**Pn**	**16 29 43.7**	**-1.1**
CHUJ				*e*S	**Sn**	**16 30 00.1**	**+0.4**
PAVE	**Pavencul**	**1.20**	**32**	*e*P	**Pn**	**16 29 44.6**	**-0.7**
PAVE				*e*S	**Sn**	**16 30 00.7**	**0.0**
PCIG		**1.56**	**347**	*e*P	**Pn**	**16 29 49.9**	**-0.3**
PCIG				*i* S	**Sn**	**16 30 03.5**	**-5.9**
CCIG	**Comitan**	**2.20**	**18**	*e*P	**Pb**	**16 30 02.6**	**-1.3**
CCIG				*e*S	**Sb**	**16 30 32.9**	**+2.0**
TGIG		**2.60**	**354**	*e*P	**Pn**	**16 30 06.0**	**+1.4**
TGIG				*e*S	**Sn**	**16 30 36.5**	**+1.4**
UXUV	**UXUV**	**3.37**	**338**	*e*P	**Pn**	**16 30 16.8**	**+1.8**
UXUV				*e*S	Sn	16 30 44.8	-9.1
CMIG	**Matias Romero**	**3.50**	**326**	Pn	**Pn**	**16 30 17.2**	**+0.3**
	0.7nm,0.3s,baz=139,slow=14,SNR=6.4						
	3.3nm,0.5s						
CMIG	**Matias Romero**	**3.50**	**326**	*e*P	**Pn**	**16 30 16.0**	**-0.9**
CMIG				*e*S	Sn	16 30 47.3	-10
TXAR	**Lajitas Array**	**18.11**	**328**	P	**Pn**	**16 33 34.0**	**+0.1**
	baz=136,slow=13,SNR=2.6						
	0.2nm,0.6s						
NVAR	**Mina Array Bea**	**33.03**	**322**	P	**P**	**16 35 57.9**	**+0.6**
	0.4nm,0.7s,baz=148,slow=9.0,SNR=1.8						
	0.4nm,0.7s						
YKA	**Yellowknife Ar**	**50.67**	**347**	P	**P**	**16 38 20.9**	**+0.3**
	1.6nm,0.8s,baz=142,slow=8.1,SNR=6.7						
	1.6nm,0.8s						
ILAR	**Eielson Array**	**62.36**	**337**	P	**P**	**16 39 44.3**	**+0.5**
	0.4nm,0.7s,baz=107,slow=4.8,SNR=3.2						
	0.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**145.56**	**340**	PKPbc	**PKPdf**	**16 49 00.0**	**-0.5**
	0.6nm,0.8s,baz=329,slow=2.4,SNR=4.3						

*ISK **23** 16:40:21.7, 41°26N×24°48E, h3km, ML2.8/9*
*ATH **23** 16:40:21.9, 41°30N×24°50E, h7km±3km, ML2.5/6, Error ellipse: s-maj=3.2km s-min=0.9km az=182.0*
*SOF **23** 16:40:21.0, 41°28N×24°50E, h10km, MD2.8*
*THE **23** 16:40:22.1, 41°28N×24°49E, h8km±1km, ML2.5/11, Error ellipse: s-maj=1.2km s-min=0.5km az=184.0*
*BEO **23** 16:40:23.6±0.7, 41°31N×24°44E, h7km±3km, ML2.5/9*
*DDA **23** 16:40:27.4±0.0, 41°30N×24°86E, h2km±4km, ML2.4*
ISC 23 16:40:22.4±1.0, 41°28N±0°02×24°48E±0°01, h7km±9km, n66, σ0§82/100, 2C-3D, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAVA	**Kavala**	**0.28**	**175**	P	**Pg**	**16 40 27.9**	**0.0**
KAVA				S	**Sg**	**16 40 32.0**	**+0.3**
KAVA				AML	AML	16 40 32.5	
	comp=E,1736μm,0.2s						
KAVA				AML	AML	16 40 33.7	
	comp=N,1783μm,0.2s						
KAVA	**Kavala**	**0.28**	**175**	P	**Pg**	**16 40 27.9**	**0.0**
KAVA				S	**Sg**	**16 40 32.4**	**+0.8**
	comp=N,700nm,0.2s						
KVLA	**Kavala**	**0.35**	**192**	P	**Pg**	**16 40 29.1**	**0.0**
KVLA				S	**Sg**	**16 40 33.7**	**0.0**
RZN	**Rozhen**	**0.45**	**23**	*i* P	**Pg**	**16 40 30.1**	**-1.0**
NVR	**Nevrokopi**	**0.47**	**279**	P	**Pg**	**16 40 30.9**	**-0.6**
NVR				S	**Sg**	**16 40 37.6**	**-0.1**
NVR				AML	AML	16 40 38.5	
	comp=E,565μm,0.3s						
NVR				AML	AML	16 40 39.7	
	comp=N,394μm,0.4s						
NVR	**Nevrokopi**	**0.47**	**279**	P	**Pg**	**16 40 30.9**	**-0.6**
NVR				S	**Sg**	**16 40 38.0**	**+0.3**
	comp=N,242nm,0.3s						
KOKK	**Kokkinochori,**	**0.58**	**219**	P	**Pg**	**16 40 33.1**	**-0.5**
KOKK				S	**Sg**	**16 40 42.6**	**+1.3**
KOKK	**Kokkinochori,**	**0.58**	**219**	P	**Pg**	**16 40 33.1**	**-0.5**
KOKK				S	**Sg**	**16 40 42.4**	**+1.1**
	comp=N,565nm,0.3s						
MMB	**Musomiste**	**0.65**	**299**	*i* P	**Pg**	**16 40 33.7**	**-1.1**
SRS	**Serrai**	**0.69**	**257**	*e*Pg	**Pg**	**16 40 34.9**	**-0.7**
SRS				*e*Sg	**Sg**	**16 40 45.5**	**+0.9**
SRS	**Serrai**	**0.69**	**257**	P	**Pg**	**16 40 35.0**	**-0.7**
SRS				S	**Sg**	**16 40 45.6**	**+1.1**
SRS	**Serrai**	**0.69**	**257**	P	**Pg**	**16 40 34.9**	**-0.7**
THAS	**Thassos island**	**0.69**	**165**	P	**Pg**	**16 40 35.6**	**-0.2**
THAS				S	**Sg**	**16 40 45.1**	**+0.4**
THAS				AML	AML	16 40 48.7	
	comp=E,3326μm,0.3s						
THAS				AML	AML	16 40 48.8	
	comp=N,2109μm,0.3s						
THAS	**Thassos island**	**0.69**	**165**	P	**Pg**	**16 40 35.5**	**-0.2**
THAS				S	**Sg**	**16 40 45.0**	**+0.3**
	comp=N,1μm,0.3s						
RDO	**Rodhopi**	**0.81**	**99**	P	**Pg**	**16 40 36.7**	**-1.2**
RDO				S	**Sg**	**16 40 48.1**	**-0.3**
RDO				AML	AML	16 40 51.4	
	comp=N,842μm,0.2s						
RDO				AML	AML	16 40 52.5	
	comp=E,1207μm,0.2s						
RDO	**Rodhopi**	**0.81**	**99**	P	**Pg**	**16 40 37.2**	**-0.7**
RDO				S	**Sg**	**16 40 48.0**	**-0.4**
	comp=E,518nm,0.2s						
RDO	**Rodhopi**	**0.81**	**99**	PG	**Pg**	**16 40 37.3**	**-0.7**
RDO				SG	**Sb**	**16 40 49.5**	**-0.3**

KESN				S	Sb	16 41 15.8	-0.8	
KESN				*i* AML	AML	16 41 21.0		
	comp=N,92nm,0.3s							
KESN				*i* AML	AML	16 41 27.0		
	comp=N,74nm,0.3s							
GELI	**Tayfur-Gelibol**	**1.75**	**119**	PN	**Pb**	**16 40 54.4**	**-0.4**	
EDRB	**Edirne**	**1.79**	**71**	P	**Pn**	**16 40 53.4**	**-0.3**	
EDRB	**Edirne**	**1.79**	**71**	PN	**Pb**	**16 40 54.8**	**-0.7**	
LIT	**Litokhoron**	**1.92**	**233**	P	**Pn**	**16 40 55.6**	**+0.2**	
BOSS	**Bosilegrad**	**1.93**	**310**	*e*Pn	**Pb**	**16 40 57.0**	**-0.8**	
BOSS				*e*Sn	**Sn**	**16 41 20.4**	**+0.3**	
KIRK	**Kırklareli**	**2.03**	**75**	P	Pg	16 41 11.0	+10	
KIRK				S	**Sb**	**16 41 24.6**	**-0.4**	
PRVS	**Prvonek**	**2.18**	**305**	*e*Pn	**Pn**	**16 40 59.7**	**+0.7**	
PRVS				*e*Sn	**Sn**	**16 41 26.1**	**-0.1**	
ARMN	**Kirklareli, Me**	**2.29**	**74**	P	**Pb**	**16 41 02.0**	**-2.0**	
ARMN				S	**Sb**	**16 41 32.9**	**+0.4**	
ARMN				*i* AML	AML	16 41 40.0		
	comp=N,37nm,0.8s							
ARMN				*i* AML	AML	16 41 40.0		
	comp=N,32nm,0.4s							
BARS	**Barje**	**2.51**	**309**	*e*Pn	**Pn**	**16 41 04.0**	**+0.4**	
BARS	**Barje**	**2.51**	**309**	*e*Pn	Pg	16 41 15.8	+5.3	
BARS				*e*Sn	**Sn**	**16 41 34.5**	**0.0**	
VIZE	**Kirklareli, Vi**	**2.54**	**82**	P	**Pb**	**16 41 08.8**	**+0.4**	
VIZE				S	**Sb**	**16 41 39.6**	**-0.2**	
VIZE				*i* AML	AML	16 41 45.0		
	comp=N,24nm,0.3s							
VIZE				*i* AML	AML	16 41 46.0		
	comp=N,27nm,0.7s							
VIZE				*i* AML	AML	16 41 47.0		
	comp=N,28nm,0.3s							
ZAGS	**Zajecar**	**3.03**	**328**	*e*Pn	**Pn**	**16 41 11.4**	**+0.7**	
SELS	**Selova**	**3.16**	**309**	*e*Pn	**Pn**	**16 41 12.7**	**+0.1**	
MDVR	**Moldovita**	**4.05**	**331**	⇑P	**Pn**	**16 41 28.6**	**+3.9**	
VOIR		**4.18**	**6**	⇓P	**Pg**	**16 41 42.4**	**-0.1**	
MLR	**Muntele Rosu**	**4.35**	**14**	⇓P	**Pn**	**16 41 28.7**	**-0.3**	
TPGR	**Topolog**	**4.60**	**38**	⇓P	**Pn**	**16 41 45.2**	**+1.9**	
VRI	**Vrincioaia**	**4.87**	**19**	⇑P	**Pn**	**16 41 38.1**	**+2.0**	

*HEL **23** 17:01:03.9±0.1,66°.98N×20°.88E, h0km, ML2.2, ML1.7(UPP), Explosion*
*IDC **23** 17:01:05.0±1.0, 67°.08N×21°.01E, h0km, mbtmp2.5/3, ML1.9/3, Error ellipse: s-maj=14.4km s-min=8.0km az=124.0*
*UPP **23** 17:01:04.0±0.1, 67°.05N×20°.95E, h0km, ML1.7, Explosion*
*KOLA **23** 17:01:05.9, 67°.22N×20°.48E, h0km, ML2.4*
*BER **23** 17:01:07.5±1.9, 67°.05N×21°.12E, h0km, ML1.6, Suspected explosion*

ISC 23 17:01:04.2±0.7, **67°.06N**±0°.02×**20°.98E**±0°.02, **h0km, n51, σ1°08/71, Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DUNU	**Dundret**	**0.17**	**291**	P	**Pg**	**17 01 07.5**	**0.0**
DUNU				S	**Sg**	**17 01 09.9**	**+0.1**
DUNU	**Dundret**	**0.17**	**291**	*i* P	**Pg**	**17 01 07.5**	**0.0**
DUNU				*i* S	**Sg**	**17 01 09.9**	**+0.1**
MASU	**Masugnsbyn**	**0.56**	**44**	P	**Pg**	**17 01 15.1**	**+0.1**
MASU	**Masugnsbyn**	**0.56**	**44**	*i* P	**Pg**	**17 01 15.1**	**+0.1**
ERTU	**Ertsjaerv**	**0.70**	**136**	P	**Pg**	**17 01 17.2**	**-0.4**
ERTU	**Ertsjaerv**	**0.70**	**136**	*e*PB	**Pg**	**17 01 17.0**	**-0.6**
	baz=303						
ERTU				*e*S	**Sg**	**17 01 27.1**	**+0.5**
PAJU	**Pajala**	**0.84**	**92**	P	**Pg**	**17 01 19.8**	**-0.4**
PAJU	**Pajala**	**0.84**	**92**	*e*P	**Pg**	**17 01 19.5**	**-0.7**
PAJU				*e*SB	**Sg**	**17 01 32.3**	**+1.3**
KUA	**Kurravaara**	**0.93**	**345**	P	**Pg**	**17 01 21.4**	**-0.7**
KUA				S	**Sg**	**17 01 34.1**	**0.0**
KUA	**Kurravaara**	**0.93**	**345**	*e*P	**Pg**	**17 01 21.4**	**-0.7**
KUA				*e*S	**Sg**	**17 01 34.1**	**0.0**
LANU	**Lannavaara**	**1.07**	**21**	*e*P	**Pg**	**17 01 23.7**	**-0.9**
LANU				*e*SB	**Sb**	**17 01 40.1**	**0.0**
KLF	**Kolari**	**1.18**	**80**	*e*P	**Pg**	**17 01 26.0**	**-0.8**
	baz=260						
KLF				*e*SN	**Sn**	**17 01 47.8**	**+3.2**
KOVU	**Salmi**	**1.21**	**345**	P	**Pg**	**17 01 26.6**	**-0.8**
KOVU	**Salmi**	**1.21**	**345**	*e*P	**Pg**	**17 01 26.6**	**-0.8**
KALU	**Kalix**	**1.54**	**141**	*e*PN	**Pn**	**17 01 31.9**	**-0.9**
	baz=315						
TOF	**Tornio**	**1.66**	**125**	*e*PN	**Pn**	**17 01 34.4**	**-0.1**
TOF				MSG		17 01 55.3	
	comp=Z,36nm,0.2s						
TOF				*e*SN	**Sg**	**17 01 57.7**	**+0.2**
HEF	**Hetta**	**1.69**	**36**	*e*P	**Pn**	**17 01 35.1**	**0.0**
HEF				*e*S	**Sn**	**17 01 56.8**	**-0.6**
HEF	**Hetta**	**1.69**	**36**	*e*P	**Pn**	**17 01 34.8**	**-0.2**
HEF				MSG		17 01 56.8	
	comp=Z,18nm,0.2s						
HEF				*e*SN	**Sg**	**17 01 59.2**	**+0.6**
KIF	**Kilpisjarvi**	**1.96**	**358**	*e*P	**Pb**	**17 01 40.4**	**-0.3**
RNF	**Rovaniemi**	**2.04**	**101**	*e*PG	**Pn**	**17 01 40.6**	**+0.8**
RNF				*e*SG	**Sg**	**17 02 10.2**	**+0.5**
KTK1	**Kautokeino**	**2.14**	**22**	*e*P	**Pb**	**17 01 43.1**	**-0.7**
KTK1				IAML		17 02 16.7	
	comp=Z,6.6nm,0.2s						
KTK1	**Kautokeino**	**2.14**	**22**	*e*PB	**Pb**	**17 01 43.1**	**-0.7**
KTK1				*e*SG	**Sg**	**17 02 12.1**	**-0.6**
SGF	**Sodankyl**	**2.19**	**77**	*e*PB	**Pn**	**17 01 43.0**	**+1.2**
I37NO	**I37NO**	**2.21**	**337**	*i*		17 14 51.9	
	baz=157,slow=323,SNR=1.6						
FAUS	**Fauske**	**2.24**	**281**	*e*P	**Pb**	**17 01 44.6**	**-0.9**
STEI	**Steigen**	**2.38**	**294**	*e*P	**Pn**	**17 01 45.8**	**+1.4**
JETT	**Jettan, Norway**	**2.52**	**355**	*e*P	**Pb**	**17 01 49.8**	**-0.4**
TRO	**Tromso**	**2.69**	**345**	*e*P	**Pn**	**17 01 50.7**	**+1.9**
TRO				IAML		17 02 35.3	
	comp=Z,7.8nm,0.2s						
MOR8	**Moi Rana**	**2.76**	**254**	*e*P	**Pn**	**17 01 50.1**	**+0.5**
MOR8				IAML		17 02 32.7	
	comp=Z,4.9nm,0.2s						
OBF4	**Vikkela, Lumij**	**2.82**	**141**	*e*PB	**Pn**	**17 01 51.6**	**+1.2**
OUL	**Oulu**	**2.82**	**132**	*e*PB	**Pn**	**17 01 51.7**	**+1.2**
OUL				*e*		17 02 34.2	
OBF0	**Syolatti, Pyha**	**2.90**	**151**	*e*PB	**Pn**	**17 01 52.5**	**+1.0**
OBF8	**Ulkokalla**	**2.92**	**158**	*e*PB	**Pn**	**17 01 52.8**	**+0.9**
	baz=335						
ARA0	**ARCESS Array S**	**3.00**	**32**	*e*P	**Pn**	**17 01 53.6**	**+0.7**
ARCES	**ARCESS Array B**	**3.00**	**32**	Pn	**Pn**	**17 01 53.4**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=213,slow=13,SNR=22						
ARCES				Sn	**Sn**	**17 02 30.1**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=208,slow=23,SNR=6.4						
	comp=Z,0.6nm,0.2s						
ARCES	**ARCESS Array B**	**3.00**	**32**	P	**Pn**	**17 01 53.8**	**+0.8**
ARCES				S	**Sn**	**17 02 29.1**	**-0.5**
LOF	**Lofoten**	**3.05**	**294**	*e*P	**Pn**	**17 01 54.1**	**+0.6**
LOF				IAML		17 02 32.7	
	comp=Z,2.9nm,0.5s						
OUF	**Merijarvi**	**3.12**	**148**	*e*PB	**Pn**	**17 01 55.7**	**+1.2**
OUF				MSG		17 02 35.7	
	comp=Z,3.1nm,0.2s						
KONS	**Konsvik**	**3.17**	**263**	*e*P	**Pn**	**17 01 58.0**	**+2.8**
KONS				IAML		17 02 55.9	
	comp=Z,5.7nm,0.2s						
UMAU	**Umeaa**	**3.19**	**182**	*e*PB	**Pn**	**17 01 56.1**	**+0.5**
	baz=1.0						
UMAU				*e*SG	**Sb**	**17 02 39.8**	**-1.3**
VRF	**Varrio**	**3.40**	**74**	*e*P	**Pn**	**17 01 59.7**	**+1.2**
VRF				*e*SG	**Sg**	**17 02 50.7**	**-2.6**
OLKF	**Oulanka, Finla**	**3.43**	**99**	*e*P	**Pn**	**17 01 59.7**	**+0.8**
MSF	**Maaselka**	**3.43**	**106**	*e*P	**Pn**	**17 01 59.9**	**+1.0**
KEV	**Kevo**	**3.50**	**37**	*e*P	**Pn**	**17 02 01.1**	**+1.3**
KEV	**Kevo**	**3.50**	**37**	*e*P	**Pn**	**17 02 01.2**	**+1.4**
KU6	**Riekki**	**3.71**	**102**	*e*P	**Pn**	**17 02 03.4**	**+0.7**
	baz=289						
APA0	**Apatity Array**	**4.68**	**78**	P	**Pn**	**17 02 19.3**	**+3.3**
APA0				S	**Sn**	**17 03 12.8**	**+1.9**
PRVG	**Vayda Guba**	**4.94**	**52**	P	**Pn**	**17 02 20.4**	**+0.9**
PRVG				S	**Sn**	**17 03 18.3**	**+1.1**
TERR	**Teriberka**	**5.70**	**61**	S	**Sn**	**17 03 35.8**	**-0.1**
FINES	**FINESS Array B**	**6.06**	**156**	Pn	**Pn**	**17 02 35.8**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=348,slow=13,SNR=12						
FINES				Sn	**Sn**	**17 03 44.6**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=348,slow=23,SNR=9.8						
	comp=Z,0.4nm,0.4s						
NOA	**NORSAR Array B**	**7.40**	**220**	Pn	**Pn**	**17 02 53.9**	**+0.6**
	baz=38,slow=9.1,SNR=1.4						
NOA				Sn	**Sn**	**17 04 17.5**	**-0.4**
	baz=314,slow=26,SNR=4.3						
	comp=Z,0.1nm,0.4s						

IDC 23 17:06:40.1±4.8, **19°.56S**×**179°.34W**, **h606km**±29km, **mb2.8/3, mbtmp3.7/5, Error ellipse: s-maj=155.8km s-min=25.9km az=149.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.07**	**306**	P	P	17 08 00.5	+0.1
	3.9nm,0.4s,baz=166,slow=17,SNR=7.3						
DZM	**Mont Dzumac**	**13.53**	**257**	P	P	17 09 32.8	-1.5
	3.7nm,0.8s,baz=76,slow=19,SNR=2.0						
WRA	**Warramunga Arr**	**43.49**	**261**	P	P	17 13 51.9	+0.1
	0.3nm,0.3s,baz=96,slow=7.5,SNR=40						
WRA				PcP	PcP	17 15 25.7	-0.3
	0.5nm,1.1s,baz=94,slow=4.8,SNR=1.6						
	0.3nm,0.3s						
ILAR	**Eielson Array**	**87.68**	**13**	P	P	17 18 25.2	+0.2
	0.5nm,0.7s,baz=217,slow=5.6,SNR=4.6						
	0.5nm,0.7s						
PDAR	**Pinedale Array**	**89.14**	**44**	P	P	17 18 32.2	-0.3
	0.3nm,0.5s,baz=223,slow=4.6,SNR=2.2						
	0.3nm,0.5s						
ARCES	**ARCESS Array B**	**127.77**	**349**	PKP	PKPdf	17 24 36.9	-0.2
	0.7nm,0.4s,baz=88,slow=4.7,SNR=9.4						
FINES	**FINESS Array B**	**134.51**	**343**	PKhKP	PKPpre	17 24 45.5	
	1.1nm,0.8s,baz=76,slow=3.1,SNR=3.3						
AKASG	**Malin Array Be**	**141.58**	**331**	PKP	PKPdf	17 25 00.7	-2.5
	1.2nm,0.4s,baz=43,slow=4.3,SNR=11						

MAN 23 17:11:10.7, 13°.76N×120°.48E, h66km, mb4.0, ML2.8, MS2.4, 2C-4D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.23**	**263**	⇓*e*P	Pn	17 11 23.4	+2.7
LUBP				*e*S		17 11 32.0	
PGP	**Puerto Galera**	**0.53**	**119**	⇑*e*P	Pn	17 11 25.3	+2.3
PGP				*i* S		17 11 36.3	
MACP	**Maragondon, Ca**	**0.55**	**25**	⇓*e*P	Pn	17 11 25.6	+2.5
MACP				*e*S		17 11 36.5	
TGY	**Tagaytay City**	**0.56**	**52**	⇑*e*P	Pn	17 11 27.2	+3.9
TGY				*e*S		17 11 36.3	
SJMP	**San Jose**	**1.43**	**154**	⇓*e*P	Pn	17 11 36.2	+2.1
SJMP				*e*S		17 11 55.0	
ENPP	**El Nido**	**2.74**	**202**	⇓*e*P	Pn	17 11 50.8	+1.0
ENPP				*e*S		17 12 23.1	

*IDC **23** 17:11:54.0±0.9, 11°.17N×125°.80E, h0km, mb3.8/8, mbtmp3.8/8, MS3.2/2, Error ellipse: s-maj=52.5km s-min=18.9km az=67.0*
*NEIC **23** 17:12:00.3±1.2, 11°.1N±0°.1×125°.7E±0°.2, h35km±2km, mb4.4/17, Error ellipse: s-maj=37.7km s-min=6.5km az=63.0*
*MAN **23** 17:12:01.5, 11°.21N×125°.76E, h54km, mb4.9, ML3.8, MS3.7*

ISC 23 17:12:02.4±0.9, **11°.17N**±0°.04×**125°.76E**±0°.06, **h63km**±8km, **n48, σ1°26/52, mb4.2/16, 4C-9D, Samar**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BESP	**Borongan**	**0.53**	**324**	⇓*e*P	**Pn**	**17 12 15.2**	**+0.2**
BESP				*e*S	**Sn**	**17 12 24.3**	**+0.2**
OCLP	**Ormoc**	**1.14**	**264**	⇓*e*P	**Pn**	**17 12 22.3**	**0.0**
MSLP	**Maasin**	**1.36**	**221**	⇓*e*P	**Pn**	**17 12 26.1**	**+0.8**
MSLP				*e*S	**Sn**	**17 12 44.2**	**+1.7**
SCPH	**Surigao**	**1.41**	**191**	⇓*e*P	**Pn**	**17 12 26.1**	**+0.2**
SCPH				*e*S	**Sn**	**17 12 43.7**	**+0.2**
GLSP	**General Luna,**	**1.43**	**165**	⇓*e*P	**Pn**	**17 12 26.1**	**-0.1**
GLSP				*e*S	**Sn**	**17 12 43.0**	**-1.0**
LLP	**Lapu-Lapu**	**1.96**	**244**	⇓*i*P	**Pn**	**17 12 32.6**	**-0.8**
LLP				*i* S	**Sn**	**17 12 53.9**	**-3.0**
BUTP	**Butuan**	**2.19**	**184**	⇓*e*P	Pn	17 12 30.1	-6.5
BUTP				*e*S	**Sn**	**17 13 05.2**	**+2.6**
TBP	**Tagbilaran**	**2.38**	**232**	*e*P	**Pn**	**17 12 39.6**	**+0.6**
TBP				*i* S	**Sn**	**17 13 08.4**	**+1.2**
PVCP	**Virac**	**2.88**	**327**	⇓*e*P	**Pn**	**17 12 45.1**	**-0.7**
PVCP				*e*S	**Sn**	**17 13 19.9**	**+0.6**
RCP	**Roxas**	**2.98**	**278**	⇑*e*P	**Pn**	**17 12 48.1**	**+0.8**
RCP				*e*S	**Sn**	**17 13 22.0**	**+0.1**
BIPH	**Bislig**	**3.03**	**169**	⇑*i*P	**Pn**	**17 12 47.7**	**-0.2**
BIPH				*i* S	**Sn**	**17 13 19.0**	**-4.0**
GUIM	**Jordan**	**3.16**	**260**	⇓*e*P	**Pn**	**17 12 49.2**	**-0.6**
GUIM				*e*S	**Sn**	**17 13 22.9**	**-3.4**
KALP	**Kalibo**	**3.39**	**279**	*e*P	Pn	17 12 42.2	-11
JAP	**San Jose, Anti**	**3.77**	**264**	⇑*e*P	**Pn**	**17 12 58.8**	**+0.8**
PCPH	**Palayan**	**6.30**	**314**	⇑*e*P	**Pn**	**17 13 31.5**	**-1.1**
ENH	**Enshi**	**24.29**	**324**	P	**P**	**17 17 12.9**	**-1.1**
MTN	**Manton Dam**	**24.45**	**167**		**P**	**17 17 15.3**	**-0.2**
MTN				IAmb	IAmb	17 17 23.2	
	comp=Z,8.0nm,1.2s						
KSRS	**Korea Array**	**26.24**	**4**	P	**P**	**17 17 30.6**	**-1.0**
	comp=Z,0.4nm,0.5s,baz=187,slow=8.6,SNR=1.7						
KSRS				LR	LR	17 28 23.3	
	comp=Z,13nm,19.5s,baz=240,slow=38						
	comp=Z,0.4nm,0.5s						
KNRA	**Kununurra**	**26.84**	**174**	P	**P**	**17 17 36.0**	**-1.1**
KNRA				IAmb	IAmb	17 18 04.5	
	comp=Z,10nm,1.2s						
CMAR	**Chiang Mai Arr**	**26.89**	**289**	P	**P**	**17 17 37.3**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=93,slow=7.7,SNR=3.2						
	comp=Z,0.5nm,0.7s						
WRAB	**Tennant Creek**	**32.05**	**165**	P	**P**	**17 18 22.5**	**-0.8**
WRAB				IAmb	IAmb	17 18 33.7	
	comp=Z,10nm,1.4s						
WRA	**Warramunga Arr**	**32.05**	**165**	P	**P**	**17 18 22.0**	**-1.4**
	comp=Z,0.4nm,0.5s,baz=333,slow=11,SNR=7.4						
	comp=Z,0.4nm,0.5s						
WB2	**Warramunga Arr**	**32.05**	**165**	P	**P**	**17 18 21.9**	**-1.5**
WB2				IAmb	IAmb	17 18 41.1	
	comp=Z,7.9nm,1.4s						
WR0	**Warramunga Arr**	**32.12**	**164**	P	**P**	**17 18 23.1**	**-0.9**
WR0				IAmb	IAmb	17 18 34.3	
	comp=Z,9.8nm,1.4s						
AS31	**Alice Springs**	**35.53**	**167**	P	**P**	**17 18 53.5**	**-0.1**
ASAR	**Alice Springs**	**35.53**	**167**	P	**P**	**17 18 53.2**	**-0.4**
H11N1	**WAKE ISLAND Hy**	**40.46**	**73**	T	T	18 02 59.8	
	baz=265,slow=75,SNR=61						
H11N2	**WAKE ISLAND Hy**	**40.47**	**73**	T	T	18 03 00.7	
	baz=265,slow=75,SNR=47						
H11N3	**WAKE ISLAND Hy**	**40.48**	**73**	T	T	18 03 01.2	
	baz=265,slow=75,SNR=68						
FORT	**Forrest**	**41.77**	**177**	P	**P**	**17 19 46.0**	**+0.4**
BBOO	**Buckleboo**	**44.83**	**168**	P	**P**	**17 20 10.5**	**+0.2**
STKA	**Stephens Creek**	**45.41**	**161**	P	**P**	**17 20 14.6**	**-0.4**
	comp=Z,6.9nm,1.0s,baz=341,slow=5.3,SNR=8.2						
	comp=Z,6.9nm,1.0s						
STKA	**Stephens Creek**	**45.41**	**161**	IAmb	IAmb	17 20 36.9	
	comp=Z,4.8nm,1.5s						
MK31	**Makanchi Array**	**51.01**	**323**	P	**P**	**17 20 57.9**	**-0.2**
MKAR	**Makanchi Array**	**51.01**	**323**	P	**P**	**17 20 58.3**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=116,slow=8.5,SNR=8.7						
	comp=Z,0.8nm,0.6s						
MKAR	**Makanchi Array**	**51.01**	**323**	P	**P**	**17 20 57.9**	**-0.2**
ZALV	**Zalesovo Beam**	**53.60**	**331**	P	**P**	**17 21 15.8**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=99,slow=8.9,SNR=2.3						
	comp=Z,0.3nm,0.3s						
KURK	**Kurchatov**	**55.05**	**325**	P	**P**	**17 21 27.9**	**+0.3**
KURK				IAmb	IAmb	17 21 44.0	
	comp=Z,3.4nm,0.9s						
GAR	**Garm**	**56.33**	**310**	P	**P**	**17 21 37.4**	**+0.1**
KKAR	**Karatay Array**	**57.27**	**314**	P	**P**	**17 21 44.3**	**+0.6**
AFI	**Afiamalu**	**66.76**	**110**	LR	LR	17 46 01.3	
	comp=Z,61nm,21.1s,baz=168,slow=31						
MSEY	**Mahe Island**	**71.67**	**261**	P	**P**	**17 23 18.5**	**+0.3**
BMAR	**Burnt Mountain**	**79.64**	**23**	P	**P**	**17 24 05.0**	**+2.2**
RIDG	**Independent Ri**	**79.80**	**27**	P	**P**	**17 24 05.3**	**+1.5**
RIDG				IAmb	IAmb	17 24 24.1	
	comp=Z,5.3nm,1.4s						
ISLE	**Juniper Island**	**81.29**	**30**	P	**P**	**17 24 12.8**	**+0.9**
ISLE				IAmb	IAmb	17 24 14.0	
	comp=Z,6.3nm,0.8s						
ARCES	**ARCESS Array B**	**83.18**	**340**	P	**P**	**17 24 22.1**	**+0.7**
	comp=Z,0.6nm,0.6s,baz=66,slow=7.0,SNR=1.2						
	comp=Z,0.6nm,0.6s						
FINES	**FINESS Array B**	**84.86**	**332**	P	**P**	**17 24 31.1**	**+1.0**
	comp=Z,1.1nm,0.8s,baz=46,slow=5.5,SNR=4.3						
	comp=Z,1.1nm,0.8s						
PLCA	**Paso Flores**	**147.23**	**157**	PKPbc	**PKPbc**	**17 31 39.0**	**0.0**
	comp=Z,1.4nm,0.9s,baz=256,slow=4.2,SNR=4.6						

NEIC 23 17:20:29.4±1.5, **30°.00N**±0°.03×**79°.45W**±0°.08, **h0km**±2km, **mb_Lg3.0/60, ML3.8/40, Error ellipse: s-maj=12.0km**

s-min=4.5km az=77.0, Off east coast of United States

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
456A	**Hilliard**	**2.34**	**289**		Pn	17 21 08.7	-0.5
456A				IAmb_Lg		17 21 46.5	
	comp=Z,89nm,0.9s						
456A				IAML		17 22 14.6	
	comp=E,472nm,0.9s						
456A				IAML		17 22 14.7	
	comp=N,414nm,0.8s						
257A	**Skidaway Islan**	**2.39**	**326**	Pg	Pb	17 21 12.6	-0.8
257A				IAML		17 21 59.9	
	comp=N,498nm,0.6s						
257A				IAML		17 22 16.0	
	comp=E,643nm,0.6s						
DWPF	**Disney Wildern**	**2.56**	**223**		Pn	17 21 11.1	-1.1
DWPF				IAML		17 22 02.8	
	comp=E,315nm,0.6s						
DWPF				IAML		17 22 26.4	
	comp=E,338nm,0.6s						
656A	**Willston**	**2.76**	**258**		Pn	17 21 16.0	+1.1
NHSC	**New Hope**	**3.16**	**349**	Pn	Pn	17 21 20.4	-0.1
NHSC				IAML		17 22 55.4	
	comp=E,208nm,1.4s						
255A	**Hazlehurst**	**3.23**	**307**		Pn	17 21 21.4	-0.1
255A				IAML		17 22 39.1	
	comp=E,235nm,1.3s						
255A				IAML		17 22 49.7	
	comp=N,197nm,1.4s						
Y58A	**Scranton**	**3.90**	**357**	Pn	Pn	17 21 30.1	-0.6
Y58A				IAML		17 23 24.8	
	comp=E,101nm,1.4s						
Y58A				IAML		17 23 28.0	
	comp=N,105nm,1.5s						
154A	**Montrose**	**4.08**	**311**		Pn	17 21 32.8	-0.3
Y57A	**Sumter**	**4.09**	**349**	Pn	Pn	17 21 31.3	-1.9
Y57A				IAML		17 22 57.0	
	comp=N,151nm,1.0s						
Y60A	**Bolivia**	**4.13**	**14**	Pn	Pn	17 21 34.4	+0.6
Y60A				IAML		17 23 08.0	
	comp=N,111nm,2.0s						
Y60A				IAML		17 23 08.7	
	comp=E,89nm,2.0s						
061Z	**Ochoppi**	**4.31**	**198**	Pn	Pn	17 21 36.4	+0.1
553A	**Crawfordville**	**4.32**	**274**		Pn	17 21 36.6	+0.2
553A				IAML		17 23 01.1	
	comp=N,126nm,0.5s						
JSC	**Jenkinsville**	**4.54**	**341**	Pn	Pn	17 21 39.6	+0.2
JSC				IAML		17 22 28.8	
	comp=N,76nm,4.0s						
X58A	**Rowland**	**4.55**	**1**	IAmb_Lg		17 22 56.8	
	comp=Z,22nm,0.8s						
BIRD	**Birdtown, Kers**	**4.71**	**350**		Pn	17 21 41.3	-0.6
BIRD				IAML		17 22 39.5	
	comp=E,89nm,0.2s						
BIRD				IAML		17 22 44.2	
	comp=N,61nm,0.3s						
GOGA	**Godfrey**	**4.83**	**316**	Pn	Pn	17 21 43.3	-0.1
HODGE	**Hodges**	**4.85**	**331**	Pn	Pn	17 21 44.2	+0.5
352A	**Blakely**	**4.94**	**289**		Pn	17 21 42.8	-2.1
352A				IAmb_Lg		17 23 20.1	
	comp=Z,20nm,0.8s						
W57A	**Gilead**	**5.16**	**355**	Pn	Pn	17 21 46.9	-1.1
W57A				IAmb_Lg		17 23 20.5	
	comp=Z,26nm,0.9s						
W57A				IAML		17 24 05.4	
	comp=N,41nm,1.2s						
W57A				IAML		17 24 06.4	
	comp=E,53nm,1.3s						
PAULI	**Pauline**	**5.21**	**338**	Pn	Pn	17 21 48.0	-0.7
PAULI				IAmb_Lg		17 23 22.4	
	comp=Z,37nm,1.2s						
KMSC	**Kings Mountain**	**5.37**	**343**	IAmb_Lg		17 23 25.0	
	comp=Z,28nm,0.8s						
Y52A	**Lilburn**	**5.50**	**316**	Pn	Pn	17 21 52.3	-0.4
BG3	**Lake Jocassee**	**5.79**	**330**	Pn	Pn	17 21 56.0	-0.6
BG3				IAmb_Lg		17 23 48.8	
	comp=Z,17nm,0.9s						
V58A	**Windy Hill, Pi**	**5.79**	**3**	Pn	Pn	17 21 55.7	-0.9
Z51A	**Franklin**	**5.90**	**306**	IAmb_Lg		17 23 45.1	
	comp=Z,22nm,0.9s						
V55A	**Taylorsville**	**6.03**	**346**	Pn	Pn	17 21 59.3	-0.5
250A	**Grady**	**6.18**	**290**	Pn	Pn	17 22 02.2	+0.2
V53A	**Saluda**	**6.33**	**334**	Pn	Pn	17 22 03.3	-0.7
V53A				IAmb_Lg		17 24 02.3	
	comp=Z,29nm,1.2s						
U56A	**King**	**6.38**	**353**		Pn	17 22 04.5	-0.2
U56A				IAmb_Lg		17 24 07.3	
	comp=Z,18nm,0.8s						
X51A	**Calhoun**	**6.46**	**316**	Pn	Pn	17 22 04.7	-1.2
U59A	**Littleton**	**6.49**	**12**	Pn

W45A	**Hickory Valley**	**9.69**	**305**	Pn	Pn	17 22 51.0	+0.9
O52A	**Adamsville**	**10.29**	**350**	Pn	Pn	17 22 57.4	-0.9
O53A	**New Philadelph**	**10.33**	**352**	Pn	Pn	17 22 59.1	+0.2
P48A	**Milroy**	**10.64**	**334**	Pn	Pn	17 23 01.6	-1.6
SSPA	**Standing Stone**	**10.69**	**6**	Pn	Pn	17 23 02.4	-1.5
O49A	**Covington**	**10.93**	**340**	Pn	Pn	17 23 05.9	-1.2
S44A	**Carbondale**	**11.19**	**316**	Pn	Pn	17 23 09.4	-1.3
GRTK	**Grand Turk**	**11.29**	**137**	Pn	Pn	17 23 12.2	+0.1
N49A	**Columbus Grove**	**11.56**	**342**	Pn	Pn	17 23 14.4	-1.4
SFIN	**Lafayette**	**12.10**	**331**	Pn	Pn	17 23 21.0	-2.1
FCAR	**Ozark Folk Cen**	**12.16**	**302**	Pn	Pn	17 23 23.2	-0.7
CCM	**Cathedral Cave**	**12.65**	**313**	Pn	Pn	17 23 29.8	-0.9
P40A	**Paris**	**14.05**	**316**	Pn	Pn	17 23 47.0	-2.7

*NEIC **23** 17:25:58.8±1.5, 47°.48N±0°.02×92°.56W±0°.02, h0km±2km, mb_Lg2.5/13, Error ellipse: s-maj=3.8km s-min=3.1km az=338.0*
*IDC **23** 17:26:03.5±4.3, 47°.61N×92°.54W, h0km, mbtmp2.5/1, ML1.2/1, Error ellipse: s-maj=72.0km s-min=28.5km az=52.0*
ISC 23 17:25:58.6±0.9, **47°.48N**±0°.04×**92°.53W**±0°.04, **h0km, n18, σ0s99/19, Minnesota**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EYMN	**Ely**	**0.84**	**56**		**Pb**	**17 26 15.4**	**-0.7**
EYMN				Sg	**Sg**	**17 26 26.2**	**+0.6**
EYMN					**Sb**	**17 26 27.4**	**-0.5**
E38A	**The Farm, Brul**	**1.10**	**142**		**Pb**	**17 26 20.6**	**0.0**
B35A	**Bob, Littlefor**	**1.19**	**318**	Pg	**Pg**	**17 26 20.6**	**-0.8**
B35A				Sg	**Sb**	**17 26 37.3**	**-0.6**
F36A	**Milaca**	**1.76**	**203**		**Pb**	**17 26 31.6**	**-0.1**
SPMN	**Marine on St.**	**2.27**	**185**		**Pg**	**17 26 42.5**	**+0.4**
SPMN				IAmb_Lg		17 27 14.4	
	comp=Z,34nm,0.9s						
AGMN	**Agassiz Nation**	**2.38**	**291**		**Pn**	**17 26 38.9**	**0.0**
AGMN				IAmb_Lg		17 27 16.4	
	comp=Z,22nm,0.9s						
COWI	**Conover**	**2.71**	**119**		**Pn**	**17 26 43.4**	**-0.1**
COWI				IAmb_Lg		17 27 30.0	
	comp=Z,18nm,0.8s						
D41A	**Chassel**	**2.73**	**97**		**Pn**	**17 26 44.3**	**+0.6**
D41A				IAmb_Lg		17 27 33.0	
	comp=Z,15nm,0.9s						
G40A	**Rib Lake**	**2.74**	**143**		**Pb**	**17 26 48.8**	**+0.3**
G40A				IAmb_Lg		17 27 31.3	
	comp=Z,14nm,0.9s						
F33A	**5 Mile Ranch,**	**3.07**	**239**		**Pg**	**17 26 56.6**	**-0.8**
I37A	**Lemond, Waseca**	**3.52**	**190**	Pn	**Pn**	**17 26 53.9**	**-0.7**
ULM	**Lac du Bonnet**	**3.54**	**323**	Pn	**Pn**	**17 26 56.7**	**+1.9**
	comp=Z,0.3nm,0.3s,baz=145,slow=12,SNR=1.6						
ULM				Pg	**Pg**	**17 27 04.8**	**-1.6**
	comp=Z,0.4nm,0.3s,baz=140,slow=13,SNR=2.4						
ULM				Sn	**Sn**	**17 27 39.6**	**+2.3**
	comp=Z,0.7nm,0.3s,baz=165,slow=15,SNR=2.6						
ULM				Lg	Lg	17 27 48.9	
	comp=Z,3.0nm,0.3s,baz=56,slow=21,SNR=12						
ULM				Rg	Rg	17 28 07.6	
	comp=Z,12nm,0.8s,baz=246,slow=9.6,SNR=8.5						
	comp=Z,0.8nm,0.3s						
ULM	**Lac du Bonnet**	**3.54**	**323**	IAmb_Lg		17 27 56.0	
	comp=Z,14nm,0.9s						
I10CA	**LAC DU BONNET**	**3.57**	**321**	*i*		17 46 20.0	
	comp=Z,0.2nm,0.9s,baz=137,slow=317,SNR=12						
I40A	**Norwalk**	**3.83**	**159**	Pn	**Pn**	**17 26 58.1**	**-0.7**
E43A	**Lone Tree Farm**	**3.95**	**104**	Pn	**Pn**	**17 27 00.3**	**-0.2**
ECSD	**EROS Data Cent**	**4.72**	**219**	IAmb_Lg		17 28 40.2	
	comp=Z,10nm,1.1s						
I56US	**NEWPORT INFRASTR**	**6.50**	**282**	*i*		19 09 30.0	
	baz=84,slow=314,SNR=9.1						

DJA 23 17:29:25.0±0.2, **3°S**±2°×**12°7E**±°, **h10**km, **M4.0**/20, **mb4.2**/11, **mB4.8**/3, **MLv3.9**/20, **Mw(mB)4.1/3, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NLAI	**Namlea**	**0.66**	**147**	P	Pg	17 29 33.1	-4.7
NLAI				S	Sg	17 29 40.1	-6.4
SANI	**Sanana**	**0.98**	**310**	P	Pg	17 29 42.5	-1.3
SANI				S	Sg	17 29 56.7	+0.1
AAI	**Ambon**	**1.76**	**125**	P	Pn	17 29 55.0	-0.6
LBMI	**Labuha**	**2.17**	**21**	P	Pn	17 30 01.8	+0.6
LBMI				Pg	Pb	17 30 04.0	-0.3
LBMI				S	Sb	17 30 30.0	-1.3
MSAI	**Masohi**	**2.28**	**107**	P	Pn	17 30 02.9	+0.1
KMSI	**Cibinong**	**4.25**	**319**	P	Pn	17 30 30.3	+0.5
LUWI	**Luwuk**	**4.29**	**292**	P	Pn	17 30 29.9	-0.5
BBSI	**Bau Bau**	**5.01**	**236**	P	Pn	17 30 40.5	+0.2
	0.0nm2.8nm,0.7s						
APSI	**Ampana**	**5.38**	**289**	P	Pn	17 30 45.5	+0.1
	0.2nm696nm40nm,0.5s						
FAKI	**Fak Fak**	**5.51**	**93**	P	Pn	17 30 46.9	-0.3
MRSI	**Marisa**	**5.73**	**303**	P	Pn	17 30 50.4	+0.2
	0.2nm33nm,0.5s						
BNSI	**Bone**	**6.84**	**255**	P	Pn	17 31 05.2	-0.2
	0.1nm9.6nm,1.4s						
SPSI	**Sidrap Palu**	**7.08**	**259**	P	Pn	17 31 09.1	+0.4
	0.1nm14nm,0.7s						
BKSI	**Bulukumba**	**7.10**	**248**	P	Pn	17 31 09.5	+0.4
	0.1nm13nm,0.6s						
BSSI	**Bau Bau, Buton**	**7.12**	**241**	P	Pn	17 31 08.2	-1.1
	0.1nm460nm11nm,0.9s						
MPSI	**Mapaga**	**7.47**	**294**	P	Pn	17 31 14.2	+0.1
	0.1nm18nm,1.1s						
EDFI	**Ende, Flores**	**7.85**	**220**	P	Pn	17 31 19.9	+0.5
	0.0nm7.0nm,0.7s						

*JMA **23** 17:30:20.9±0.3, 34°.4N±0°.6×140°.3E±0°.8, h66km±2km, MV3.1/33, FAR S OFF BOSO PENINSULA*
*IDC **23** 17:30:24.5±4.7, 35°.61N×140°.47E, h208km±34km, mb3.1/2, mbtmp3.4/3, Error ellipse: s-maj=90.3km s-min=22.5km az=81.0*
ISC 23 17:30:20.4±1.2, **34°38N**±0°.05×**140°27E**±0°.06, **h75**km±10km, **n22, σ0s64/25, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSO3	**Boso 3**	**0.47**	**25**	*i* P	**Pn**	**17 30 33.3**	**+0.2**
BSO3				X		17 30 44.0	
BSO4	**Boso 4**	**0.61**	**5**	*i* P	**Pn**	**17 30 35.1**	**+0.4**
BSO4				X		17 30 47.0	
BSO1	**Boso 1**	**0.64**	**64**	P	**Pn**	**17 30 34.6**	**+0.1**
BSO1				X		17 30 46.2	
TATJ	**Tateyama 2**	**0.72**	**334**	*i* P	**Pn**	**17 30 36.5**	**+0.5**
TATJ				S	**Sn**	**17 30 47.8**	**+0.4**
JMKN	**Mikurajimanish**	**0.74**	**230**	P	**Pn**	**17 30 36.2**	**0.0**
JMKN				S	**Sn**	**17 30 47.8**	**0.0**
JIM2	**Oshima 3**	**0.77**	**296**	*i* P	**Pn**	**17 30 36.2**	**-0.4**
JIM2				S	**Sn**	**17 30 47.5**	**-1.0**
JTHY	**Toshimahigashi**	**0.83**	**280**	P	**Pn**	**17 30 37.4**	**+0.3**
JKO	**Kozu shima**	**0.96**	**259**	P	**Pn**	**17 30 39.0**	**+0.3**
JKO				*eS*	**Sn**	**17 30 53.1**	**+0.8**
KTJ3	**Kamata3**	**1.14**	**300**	P	**Pn**	**17 30 40.5**	**-0.4**
KTJ3				S	**Sn**	**17 30 55.4**	**-0.8**
JIZS	**Izushimoda**	**1.20**	**287**	P	**Pn**	**17 30 41.9**	**+0.2**
JIZS				S	**Sn**	**17 30 58.0**	**+0.4**
JOD2	**Odawara 2**	**1.32**	**313**	*i* P	**Pn**	**17 30 42.9**	**-0.2**
JOD2				S	**Sn**	**17 30 59.7**	**-0.6**
JHJ2	**Mitsune**	**1.32**	**197**	P	**Pn**	**17 30 43.8**	**+0.6**
JHJ2				S	**Sn**	**17 31 00.8**	**+0.5**
JFNN	**Fujinakano**	**1.54**	**302**	P	**Pn**	**17 30 46.8**	**+0.7**
JFNN				S	**Sn**	**17 31 06.7**	**+1.2**
MJAR	**Matsushiro Arr**	**2.74**	**323**	P	**Pn**	**17 31 02.9**	**+0.7**
	1.9nm,0.3s,baz=149,slow=13,SNR=49						
MJAR				S	**Sn**	**17 31 35.2**	**+0.9**
	7.2nm,0.5s,baz=124,slow=19,SNR=14						
H11N2	**WAKE ISLAND Hy**	**27.73**	**115**	T	T	18 05 51.9	
	baz=308,slow=75,SNR=4.2						
H11N1	**WAKE ISLAND Hy**	**27.74**	**115**	T	T	18 05 53.2	
	baz=308,slow=75,SNR=3.6						
H11N3	**WAKE ISLAND Hy**	**27.75**	**115**	T	T	18 05 54.0	
	baz=308,slow=75,SNR=4.1						
H11S3	**WAKE ISLAND Hy**	**28.34**	**117**	T	T	18 06 39.1	
	baz=309						
H11S1	**WAKE ISLAND Hy**	**28.34**	**117**	T	T	18 06 39.1	
	baz=309,slow=74						
H11S2	**WAKE ISLAND Hy**	**28.35**	**117**	T	T	18 06 40.2	
	baz=309,slow=74						
WRA	**Warramunga Arr**	**54.31**	**187**	P	**P**	**17 39 38.4**	**-0.8**
	0.6nm,0.7s,baz=1.3,slow=7.4,SNR=12						
	0.6nm,0.7s						
FINES	**FINESS Array B**	**70.73**	**332**	P	P	17 41 11.3	-17
	0.3nm,0.4s,baz=53,slow=5.9,SNR=8.2						
	0.3nm,0.4s						

*IDC **23** 17:33:13.4±4.7, 36°.33N×70°.27E, h0km, mb3.5/4, mbtmp3.5/4, MS2.7/1, Error ellipse: s-maj=109.2km s-min=38.5km az=131.0*
*NNC **23** 17:33:38.3±4.8, 36°.95N×70°.88E, h188km±63km, mb2.7, mpv3.6, Error ellipse: s-maj=45.9km s-min=22.7km az=9.0*
ISC 23 17:33:35.4±1.8, **36°.7N**±0°.2×**70°.9E**±0°.2, **h200**km, **n8, σ1s43/10, mb3.3/3, 2C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.36**	**358**	P	**Pn**	**17 35 07.3**	**+0.1**
	2.2nm,0.4s,baz=176,slow=13,SNR=31						
KK31				⇓S	**Sn**	**17 36 18.6**	**-1.6**
	6.1nm,0.5s,baz=179,slow=21,SNR=5.8						
TKM2	**Tokmak 2**	**7.17**	**29**	⇓P	**Pn**	**17 35 18.4**	**+0.5**
	2.4nm,0.5s						
TKM2				⇑S	**Sn**	**17 36 37.4**	**-1.9**
	1.5nm,0.6s						
AB31	**Akbulak array**	**14.82**	**331**	P	**P**	**17 36 57.6**	**+1.5**
	0.2nm,0.3s,baz=140,slow=11,SNR=18						
AKTO	**Aktyubinsk**	**16.52**	**330**	⇑P	**Pn**	**17 37 15.8**	**+0.1**
	4.2nm,0.8s						
ZALV	**Zalesovo Beam**	**19.75**	**25**	P	**P**	**17 37 50.9**	**+1.1**
	0.4nm,0.4s,baz=214,slow=10,SNR=2.6						
	0.4nm,0.4s						
ARCES	**ARCESS Array B**	**40.88**	**338**	P	**P**	**17 40 58.2**	**+0.8**
	1.6nm,0.8s,baz=110,slow=7.8,SNR=4.2						
	1.6nm,0.8s						
NOA	**NORSAR Array B**	**44.12**	**323**	P	**P**	**17 41 23.4**	**-0.2**
	0.4nm,0.7s,baz=97,slow=7.7,SNR=3.3						
NOA				LR	LR	18 00 27.8	
	comp=Z,8.5nm,20.1s,baz=320,slow=37						
	0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**65.61**	**268**	P	**P**	**17 43 56.3**	**-1.9**
	0.3nm,0.5s,baz=52,slow=6.7,SNR=5.7						
	0.3nm,0.5s						

*IDC **23** 17:43:22.9±1.2, 2°.96S×137°.54E, h0km, mb3.8/4, mbtmp4.0/6, ML4.0/2, MS3.3/15, Error ellipse: s-maj=67.6km s-min=21.8km az=63.0*
*DJA **23** 17:43:24.0±0.7, 3°.5S±3°×13°.8E±°, h11km±6km, M4.2/7, mb4.5/6, MLv4.1/7*
*NEIC **23** 17:43:31.9±1.1, 3°.02S±0°.08×137°.6E±0°.1, h67km±8km, mb4.2/11, Error ellipse: s-maj=17.3km s-min=10.0km az=70.0*
ISC 23 17:43:27.9±0.7, **2°.85S**±0°.08×**137°.95E**±0°.05, **h50**km, **n40, σ1s79/27, mb3.9/5, MS3.4/10, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMPI	**Sarmi**	**1.14**	**41**	P	**Pn**	**17 43 44.7**	**-2.9**
SRPI	**Serui, Papua**	**1.97**	**300**	P	**Pn**	**17 43 57.4**	**-1.5**
SRPI				S	**Sn**	**17 44 22.9**	**+0.5**
GENI	**Genyem**	**2.23**	**83**	P	**Pn**	**17 44 00.8**	**-1.6**
BAKI	**Biak**	**2.47**	**312**	P	**Pn**	**17 44 03.0**	**-2.8**
FAKI	**Fak Fak**	**5.70**	**269**	Pn	**Pn**	**17 44 48.7**	**-1.3**
FAKI	**Fak Fak**	**5.70**	**269**	P	**Pn**	**17 44 49.2**	**-0.9**
	0.2nm33nm,1.1s						
FAKI				S	**Sn**	**17 45 54.6**	**+0.4**
	0.2nm33nm,1.1s						
PMG	**Port Moresby**	**11.23**	**126**	LR	LR	17 51 39.8	
	comp=Z,116nm,18.0s,baz=312,slow=43						
PMG	**Port Moresby**	**11.23**	**126**	Pn	Pn	17 46 13.5	+7.6
MTN	**Manton Dam**	**12.01**	**214**	Pn	**Pn**	**17 46 15.6**	**-0.9**
COEN	**Coen**	**12.18**	**155**	Pn	Pn	17 46 14.9	-4.0
KNRA	**Kununurra**	**15.63**	**215**		**Pn**	**17 47 02.6**	**-2.5**
KNRA				IAmb	IAmb	17 47 09.0	
	comp=Z,16nm,0.8s						
DAV	**Davao City (W)**	**15.80**	**309**	LR	LR	17 54 01.9	
	comp=Z,21nm,18.8s,baz=182,slow=41						
WB0	**Warramunga Arr**	**17.17**	**191**		**Pn**	**17 47 22.5**	**-2.0**
WB0				IAmb	IAmb	17 47 41.6	
	comp=Z,8.9nm,0.9s						
WR0	**Warramunga Arr**	**17.33**	**191**	P	**Pn**	**17 47 23.0**	**-3.4**
WR0				IAmb	IAmb	17 47 40.0	
	comp=Z,10.0nm,0.8s						
WRAB	**Tennant Creek**	**17.34**	**191**		**Pn**	**17 47 25.0**	**-1.5**
WRAB				IAmb	IAmb	17 47 48.1	
	comp=Z,12nm,0.7s						
WB2	**Warramunga Arr**	**17.35**	**191**		**Pn**	**17 47 24.2**	**-2.5**
WB2				IAmb	IAmb	17 47 48.3	
	comp=Z,12nm,0.8s						
WRA	**Warramunga Arr**	**17.35**	**191**	P	**Pn**	**17 47 25.0**	**-1.7**
	comp=Z,0.5nm,0.3s,baz=16,slow=12,SNR=37						
WRA				S	Sn	17 50 29.4	-10
	comp=Z,2.2nm,0.7s,baz=11,slow=23,SNR=4.5						
WRA				LR	LR	17 54 34.5	
	comp=Z,276nm,18.6s,baz=4.5,slow=39						
	comp=Z,3.7nm,0.5s						
WRA	**Warramunga Arr**	**17.35**	**191**		**Pn**	**17 47 24.6**	**-2.1**
GUMO	**Guam**	**17.71**	**23**	LR	LR	17 54 23.1	
	comp=Z,34nm,21.3s,baz=160,slow=37						
CTA	**Charters Tower**	**18.95**	**155**	P	**Pn**	**17 47 47.4**	**+1.1**
	comp=Z,0.5nm,0.3s,baz=339,slow=11,SNR=9.6						
CTA				LR	LR	17 54 57.4	
	comp=Z,121nm,20.1s,baz=344,slow=36						
	comp=Z,7.4nm,0.9s						
CTAO	**Charters Tower**	**18.95**	**155**	P	**Pn**	**17 47 47.3**	**+1.1**
AS31	**Alice Springs**	**21.06**	**190**	P	**P**	**17 48 07.0**	**-1.0**
AS31				IAmb	IAmb	17 48 21.7	
	comp=Z,7.1nm,0.5s						
ASAR	**Alice Springs**	**21.06**	**190**	P	**P**	**17 48 07.5**	**-0.5**
STKA	**Stephens Creek**	**29.08**	**174**	LR	LR	18 02 04.5	
	comp=Z,185nm,21.1s,baz=28,slow=39						
JCJ	**Chichijima**	**30.05**	**8**	LR	LR	17 58 52.2	
	comp=Z,42nm,21.9s,baz=115,slow=31						
JOW	**Kunigami**	**30.95**	**343**	LR	LR	18 00 27.0	
	comp=Z,73nm,21.0s,baz=187,slow=33						
JHJ	**Hachijo jima 2**	**35.82**	**3**	LR	LR	18 02 43.7	
	comp=Z,42nm,20.9s,baz=105,slow=32						
KSRS	**Korea Array**	**41.17**	**348**	LR	LR	18 06 25.8	
	comp=Z,29nm,21.4s,baz=165,slow=34						
CMAR	**Chiang Mai Arr**	**43.85**	**300**	P	**P**	**17 51 29.1**	**-0.6**
	comp=Z,1.0nm,1.1s,baz=131,slow=6.6,SNR=5.3						
	comp=Z,1.0nm,1.1s						
USRK	**Ussuriysk Ar.**	**47.14**	**354**	LR	LR	18 09 20.1	
	comp=Z,39nm,21.2s,baz=149,slow=33						
KLR	**Kul'dur**	**52.15**	**355**	LR	LR	18 11 45.2	
	comp=Z,46nm,21.4s,baz=164,slow=33						
SONM	**Songino Array**	**57.53**	**335**	LR	LR	18 16 38.4	
	comp=Z,43nm,21.8s,baz=111,slow=35						
YAK	**Yakutsk**	**65.01**	**356**	LR	LR	18 19 50.7	
	comp=Z,36nm,20.7s,baz=90,slow=34						
MKAR	**Makanchi Array**	**69.44**	**323**	P	**P**	**17 54 32.1**	**+1.1**
	comp=Z,1.0nm,0.7s,baz=115,slow=8.3,SNR=6.5						
	comp=Z,1.0nm,0.7s						
ZALV	**Zalesovo Beam**	**71.68**	**330**	P	**P**	**17 54 45.5**	**+1.1**
	comp=Z,0.5nm,0.5s,baz=101,slow=7.7,SNR=3.7						
	comp=Z,0.5nm,0.5s						
VNDA	**Vanda**	**75.71**	**175**	P	**P**	**17 55 08.7**	**+1.0**
	comp=Z,1.0nm,0.7s,baz=328,slow=7.2,SNR=7.6						
VNDA				LR	LR	18 28 23.2	
	comp=Z,61nm,18.5s,baz=17,slow=36						
	comp=Z,1.0nm,0.7s						
VNDA	**Vanda**	**75.71**	**175**	IAmb	IAmb	17 55 32.8	
	comp=Z,3.7nm,1.4s						
CRQM	**Cirque**	**87.06**	**29**	P	**P**	**17 56 10.9**	**+2.6**
QSPA	**South Pole Qui**	**87.10**	**180**	P	**P**	**17 56 09.0**	**+0.7**
LPAZ	**La Paz**	**147.97**	**127**	PKPbc	**PKPab**	**18 03 12.6**	**+0.3**
	comp=Z,1.6nm,0.6s,baz=287,slow=3.7,SNR=5.6						

*HLW **23** 18:03:08.0, 34°.64N×27°.32E, h30km±16km, Md3.5*
*NIC **23** 18:03:10.4±0.0, 34°.44N×27°.47E, h34km±32km, MI3.6/3*
*ISK **23** 18:03:12.8, 34°.78N×27°.13E, h72km±1km, ML2.8/10*
*DDA **23** 18:03:12.7±0.0, 34°.99N×27°.46E, h7km±2km, ML2.5*
*THE **23** 18:03:12.3, 34°.63N×27°.07E, h0km±5km, ML2.0/2, Error ellipse: s-maj=10.5km s-min=1.4km az=159.0*
*GII **23** 18:03:14.4±0.0, 33°.90N×27°.84E, h1km*
ISC 23 18:03:05.3±1.7, **34°.48N**±0°.03×**27°.46E**±0°.03, **h5**km±13km, **n50, σ2s28/72, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**1.09**	**347**	P	**Pn**	**18 03 29.9**	**+2.6**
KARP				S	**Sn**	**18 03 45.0**	**+2.3**
	140nm,0.0s						
KARP	**Karpathos**	**1.09**	**347**	PG	**Pn**	**18 03 29.1**	**+1.8**
KARP					SG	**Sn**	**18 03 41.3**	**-1.4**
KARP	**Karpathos**	**1.09**	**347**	P	**Pn**	**18 03 29.8**	**+2.6**
KARP				S	**Sn**	**18 03 44.9**	**+2.1**
ZKR	**Zakros**	**1.20**	**302**	P	**Pb**	**18 03 29.8**	**+1.2**
ZKR				S	**Sb**	**18 03 42.4**	**-1.9**
	75nm,0.4s						
ZKR	**Zakros**	**1.20**	**302**	PG	**Pb**	**18 03 29.7**	**+1.2**
ZKR				SG	**Sb**	**18 03 42.4**	**-1.9**
ARG	**Arkhangelos**	**1.81**	**17**	PN	**Pg**	**18 03 40.8**	**+0.7**
ARG				SN	**Sg**	**18 04 01.3**	**-2.3**
DAT	**Datca**	**2.24**	**2**	P	**Pb**	**18 03 45.3**	**-1.1**
DAT	**Datca**	**2.24**	**2**	PN	**Pb**	**18 03 45.4**	**-0.9**
DAT	**Datca**	**2.24**	**2**	P	**Pb**	**18 03 45.5**	**-0.9**
DAT				S	**Sn**	**18 04 08.8**	**-2.5**
IDI	**Anoyia**	**2.26**	**292**	P	**Pn**	**18 03 44.8**	**+1.4**
IDI	**Anoyia**	**2.26**	**292**	PN	**Pn**	**18 03 44.5**	**+1.1**
TURN	**Turunc**	**2.38**	**15**	PN	**Pb**	**18 03 48.5**	**-0.1**
TURN	**Turunc**	**2.38**	**15**	P	**Pb**	**18 03 48.2**	**-0.3**
TURN				S	**Sb**	**18 04 14.7**	**-3.5**
TURN				*i* AML	AML	18 04 29.0	
	comp=Z,36nm,1.8s						
AKAS	**Kas**	**2.48**	**45**	P	**Pb**	**18 03 49.9**	**-0.4**
AKAS				S	**Sn**	**18 04 15.9**	**-1.2**
AKAS				*i* AML	AML	18 04 20.0	
	comp=N,66nm,0.6s						
AKAS				*i* AML	AML	18 04 20.0	
	comp=E,30nm,0.4s						
FETY	**Fethiye**	**2.52**	**31**	P	**Pb**	**18 03 51.8**	**+0.6**
FETY				S	**Sb**	**18 04 21.3**	**-1.2**
YER	**Yerkesik**	**2.73**	**14**	P	**Pb**	**18 03 52.5**	**-2.1**
YER	**Yerkesik**	**2.73**	**14**	PN	**Pb**	**18 03 52.9**	**-1.7**
GVD	**Gavdhos**	**2.80**	**278**	PN	**Pn**	**18 03 52.9**	**+2.2**
AKUM	**Antalya-Kumluc**	**2.99**	**51**	P	**Pn**	**18 03 56.4**	**+3.1**
AKUM				S	**Sn**	**18 04 27.2**	**-2.3**
AKUM				*i* AML	AML	18 04 33.0	
	comp=E,21nm,0.3s						
AKUM				*i* AML	AML	18 04 40.0	
	comp=N,16nm,0.8s						
IMMV	**Iera Moni Meta**	**3.02**	**290**	P	**Pn**	**18 03 55.2**	**+1.5**
IMMV	**Iera Moni Meta**	**3.02**	**290**	PN	**Pn**	**18 03 55.3**	**+1.5**
APE	**Apeiranthos**	**3.02**	**329**	PN	**Pn**	**18 03 54.4**	**+0.6**
CAEL	**Denizli, Camel**	**3.04**	**29**	P	**Pb**	**18 03 58.6**	**-1.3**
CAEL				S	**Sn**	**18 04 32.6**	**+1.6**
CAEL				*i* AML	AML	18 04 39.0	
	comp=E,32nm,0.8s						
CAEL				*i* AML	AML	18 04 41.0	
	comp=Z,18nm,1.1s						
CAEL				*i* AML	AML	18 04 43.0	
	comp=N,44nm,1.3s						
TAVA	**DENIZLI_Tavas**	**3.20**	**21**	P	**Pn**	**18 03 59.2**	**+2.9**
TAVA				S	**Sn**	**18 04 33.3**	**-1.6**
GOLH	**Golhisar**	**3.24**	**31**	P	**Pb**	**18 04 00.9**	**-2.4**
GOLH				S	**Sn**	**18 04 37.1**	**+1.3**
GOLH				*i* AML	AML	18 04 42.0	
	comp=E,22nm,0.8s						
GOLH				*i* AML	AML	18 04 59.0	
	comp=Z,17nm,2.2s						
OSC1	**CSNet OBS 1**	**3.32**	**106**	P	**Pn**	**18 03 59.7**	**+1.8**
OSC1				S	**Sn**	**18 04 38.4**	**+0.7**
KORT	**Korkueli**	**3.44**	**42**	P	**Pn**	**18 04 03.6**	**+3.9**
KORT				S	**Sn**	**18 04 43.8**	**+2.8**
KORT				*i* AML	AML	18 04 58.0	
	comp=E,11nm,0.9s						
SLUM	**Salum**	**3.53**	**213**	P	**Pn**	**18 04 02.5**	**+1.7**
	baz=210						
SLUM				S	**Sn**	**18 04 39.5**	**-3.4**
	baz=210						
AKMS	**Akamas**	**4.05**	**81**	P	**Pn**	**18 04 10.5**	**+2.6**
AKMS				AML	AML	18 04 56.2	
	0.3nm,0.2s						
AKMS				AML	AML	18 04 56.4	
	0.2nm,0.2s						
KEPZ	**Antalya-Kepez**	**4.15**	**53**	P	**Pn**	**18 04 12.7**	**+3.4**
KEPZ				S	**Sn**	**18 04 55.9**	**-2.3**
KEPZ				*i* AML	AML	18 05 05.0	
	comp=N,8.5nm,0.6s						
NATA	**Nata**	**4.23**	**85**	P	**Pn**	**18 04 13.2**	**+2.9**
OSC2	**CSNet OBS 4**	**4.25**	**108**	P	**Pn**	**18 04 13.1**	**+2.6**
OSC2				S	**Sn**	**18 05 01.8**	**+1.3**
ALFC	**Alefka**	**4.28**	**80**	P	**Pn**	**18 04 13.6**	**+2.4**
ALFC				AML	AML	18 05 01.7	
	0.2nm,0.1s						
ALFC				AML	AML	18 05 02.1	
	0.4nm,0.2s						
SZAC	**Souni**	**4.48**	**85**	P	**Pn**	**18 04 17.4**	**+3.5**
SZAC				AML	AML	18 05 08.8	
	0.2nm,0.2s						
SZAC				AML	AML	18 05 10.0	
	0.2nm,0.2s						
ASGA	**Asgata**	**4.78**	**85**	P	**Pn**	**18 04 20.9**	**+2.9**
CSS	**Mathiatis**	**4.86**	**83**	P	**Pn**	**18 04 22.7**	**+3.6**
MVOU	**Mavrovouni**	**5.11**	**82**	P	**Pn**	**18 04 26.1**	**+3.6**
HMYD	**Mayadein**	**5.47**	**148**	P	**Pn**	**18 04 29.9**	**+2.5**
	baz=147			

0.2nm,0.3s
TXAR Lajitas Array 95.12 49 P **P** **18 16 08.8 +0.6**
0.2nm,0.7s,baz=18,slow=33,SNR=2.4
0.2nm,0.7s

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*KRNET **23** 18:07:55.0±0.1,39°23N×77°75E,mb2.7*
SOME 23 18:07:53.6,42°53N×81°22E,h10km,4C-4D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**1.43**	**296**	*eP*	Pn	18 08 15.3	-4.5
	2.9nm,0.1s						
SHLS				*eS*	Sn	18 08 30.7	-8.0
	4.2nm,0.1s						
KPKS	**Kokpek**	**2.08**	**298**	*eP*	Pb	18 08 31.7	+0.2
	2.8nm,0.1s						
KPKS				*eS*	Sg	18 08 59.1	-1.3
	5.5nm,0.4s						
BLB	**Baldybastay**	**2.54**	**309**	*eP*	Pb	18 08 40.5	+1.2
	1.5nm,0.1s						
BLB				*eS*	Sg	18 09 14.5	-0.6
	4.1nm,0.1s						
TARG	**Taragay, Kyrgy**	**2.66**	**254**	⇑*iP*	Pn	18 08 39.2	+2.3
	baz=1.0						
TARG				⇑*iS*	Sn	18 09 11.4	+1.9
	baz=1.0						
KDJ	**Kajisay**	**3.02**	**264**	⇓*iP*	Pb	18 08 44.9	-2.7
	baz=52						
KDJ				⇓*iS*	Sb	18 09 21.6	-3.0
	baz=52						
ULHL	**Ulahol**	**3.70**	**267**	⇓*iP*	Pn	18 08 49.3	-1.7
	baz=40						
ULHL				⇓*iS*	Sn	18 09 29.0	-5.7
	baz=40						
BOOM	**Boomskoye usch**	**3.90**	**271**	⇑*iP*	Pn	18 08 54.0	+0.2
	baz=38						
BOOM				⇑*iS*	Sn	18 09 36.5	-3.2
	baz=38						

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*TUL **23** 18:22:29.7±0.7,35°67N±0°01×97°41W±0°01,h6km±2km, ML2.4,mb_Lg2.1/7(NEIC),Error ellipse: s-maj=1.6km s-min=1.3km az=141.0*
NEIC 23 18:22:30.4±0.6,35°683N±0°010×97°417W±0°009, h4km±4km,Error ellipse: s-maj=1.6km s-min=0.8km az=148.0,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK009	**Oakdale Elemen**	**0.10**	**183**		Pg	18 22 32.0	-0.5
OK009				Sg	Sg	18 22 33.8	-0.1
OK005	**Luther M Schoo**	**0.19**	**99**	Pg	Pg	18 22 33.8	-0.3
OK005				Sg	Sg	18 22 36.9	+0.3
OKCFA	**Oklahoma City**	**0.27**	**186**	Pg	Pg	18 22 35.0	-0.6
OKCFA				Sg	Sg	18 22 39.2	0.0
FNO	**Franklin**	**0.42**	**178**	Pg	Pg	18 22 38.0	-0.6
FNO				Sg	Sg	18 22 44.2	0.0
X34A	**Smith Ranch, M**	**1.13**	**198**	Pg	Pg	18 22 51.4	-0.7
X34A				Sg	Sg	18 23 07.2	+0.4
TUL1	**Leonard**	**1.34**	**80**		Pn	18 22 53.8	-2.3
T35A	**Sooner Cattle**	**1.43**	**30**		Pn	18 22 56.0	-1.2
WMOK	**Wichita Mounta**	**1.46**	**230**		Pn	18 22 56.2	-1.4
U38A	**Gravette**	**2.57**	**72**		Pn	18 23 12.6	-0.4
HHAR	**Hobbs**	**2.88**	**77**	Pn	Pn	18 23 17.0	-0.3
WHAR	**Wooly Hollow**	**4.20**	**94**	IAmb_Lg		18 24 50.5	
	comp=Z,4.6nm,0.8s						
W41B	**Gary Mavity, V**	**4.25**	**95**	IAmb_Lg		18 24 52.4	
	comp=Z,3.9nm,0.7s						
R40A	**Maddies Statio**	**4.87**	**56**	IAmb_Lg		18 25 11.8	
	comp=Z,3.4nm,0.9s						

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*IDC **23** 18:44:29.9±1.2,37°74N×145°02E,h0km,mb3.6/7, mbtmp3.8/11,ML3.4/4,MS2.5/1,Error ellipse: s-maj=29.4km s-min=22.5km az=92.0*
*NEIC **23** 18:44:31.6±1.5,37°75N±0°08×144°9E±0°1,h11km±5km, mb4.6/6,Error ellipse: s-maj=12.3km s-min=11.1km az=108.0*
*JMA **23** 18:44:34.7±0.2,37°9N±0°8×144°6E±1°0,h49km,MV4.2/30, FAR E OFF NORTH HONSHU*
*NIED **23** 18:44:34.7,37°90N×144°60E,h49km,MW3.7,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr=4.47; Mθθ1.25; Mϕϕ3.22; Mrθ-1.08; Mθϕ-1.00; Mϕr1.70; Fault plane solution: M₀4.53000×10¹⁴ NP1: ϕs=340.00000°,δ32.00000°,λ-84.00000°. NP2: ϕs=153.00000°,δ58.00000°,λ-93.00000°.*
ISC 23 18:44:34.8±0.8,37°86N±0°05×144°73E±0°07,h35km,n53, σ1s92/61,mb3.7/11,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakibobu**	**2.62**	**281**	P	**Pn**	**18 45 14.1**	**-0.5**
JIKH				S	**Sn**	**18 45 43.1**	**-2.0**
OFUJ	**Ofunato**	**2.69**	**298**	P	**Pn**	**18 45 15.4**	**-0.2**
OFUJ				*eS*	**Sn**	**18 45 46.0**	**-1.0**
JIO	**Ouri**	**2.73**	**284**	P	**Pn**	**18 45 15.8**	**-0.3**
JIO				S	**Sn**	**18 45 46.1**	**-1.8**
JKMT	**Kesennumamotoy**	**2.73**	**291**	P	**Pn**	**18 45 15.9**	**-0.3**
JKMT				*eS*	**Sn**	**18 45 46.7**	**-1.2**
JMK	**Ichinoseki**	**2.96**	**293**	P	**Pn**	**18 45 19.4**	**+0.1**
JMK				*eS*	**Sn**	**18 45 53.5**	**-0.2**
JMM	**Marumori**	**3.12**	**271**		**Pn**	**18 45 21.2**	**-0.2**
JOM	**Ohasama**	**3.14**	**302**	P	**Pn**	**18 45 21.9**	**+0.1**
JOM				*eS*	**Sn**	**18 45 57.6**	**-0.3**
JFT	**Otama**	**3.50**	**266**	P	**Pn**	**18 45 27.3**	**+0.6**
JFT				S	**Sn**	**18 46 06.4**	**-0.6**
JANG	**Nango**	**3.54**	**316**	*eP*	**Pn**	**18 45 27.2**	**-0.1**
JYT	**Yasato**	**3.98**	**247**		**Pn**	**18 45 32.3**	**-1.0**
JTM	**Tenmabayashi**	**4.07**	**317**	Pn	**Pn**	**18 45 34.3**	**-0.3**
ERM	**Erimo**	**4.32**	**344**	Pn	**Pn**	**18 45 37.5**	**-0.4**
JOT	**Ohata**	**4.52**	**322**	*eP*	**Pn**	**18 45 41.2**	**+0.5**
JOT				*eS*	**Sn**	**18 46 29.5**	**-2.5**
JCH	**Churui**	**4.86**	**348**	P	**Pn**	**18 45 44.3**	**-1.1**
JCH				S	**Sn**	**18 46 36.6**	**-3.8**
JRY	**Ryogami san**	**5.02**	**250**	P	**Pn**	**18 45 47.4**	**-0.2**
JRY				S	**Sn**	**18 46 41.2**	**-3.3**
JSD	**Sado**	**5.12**	**274**		**Pn**	**18 45 49.4**	**+0.5**
JOD2	**Odawara 2**	**5.23**	**242**	P	**Pn**	**18 45 50.6**	**+0.1**
JOD2				*eS*	**Sn**	**18 46 45.6**	**-4.0**
MJAR	**Matsushiro Arr**	**5.37**	**258**	Pn	**Pn**	**18 45 54.1**	**+1.6**
	0.5nm,0.3s,baz=83,slow=15,SNR=14						
MJAR				Sn	**Sn**	**18 46 52.3**	**-0.8**
	0.4nm,0.3s,baz=81,slow=25,SNR=6.2						
MJAR				LR	LR	18 48 39.0	
	comp=Z,42nm,19.7s,baz=150,slow=45 3.5nm,0.4s						
MAJO	**Matsushiro**	**5.37**	**258**		**Pn**	**18 45 53.7**	**+1.2**
MJB9	**Matsu-Tunnel**	**5.37**	**258**		**Pn**	**18 45 53.7**	**+1.2**
NEM2	**Nemuro 2**	**5.55**	**8**	P	**Pn**	**18 45 52.0**	**-2.8**
NEM2				*eS*	**Sn**	**18 46 50.4**	**-7.0**
JEW	**Eniwo**	**5.57**	**334**		**Pn**	**18 45 56.0**	**+0.8**
JOSM	**Okushiri--Mats**	**5.84**	**318**	*eP*	**Pn**	**18 45 59.2**	**+0.5**
JTKR	**Abashiri--Toko**	**6.13**	**354**	P	**Pn**	**18 46 01.5**	**-1.3**
JTKR				S	**Sn**	**18 47 07.6**	**-4.2**
JHJ2	**Mitsune**	**6.21**	**222**	Pn	**Pn**	**18 46 02.6**	**-1.3**
JHJ	**Hachijo jima 2**	**6.22**	**222**	Pn	**Pn**	**18 46 03.4**	**-0.7**
	5.8nm,0.3s,baz=353,slow=20,SNR=11						
JHJ				Sn	**Sn**	**18 47 07.8**	**-6.2**
	32nm,0.3s,baz=284,slow=23,SNR=11 24nm,0.3s						
JHR	**Hokuryu**	**6.30**	**340**	P	**Pn**	**18 46 06.3**	**+1.1**
JHR				S	**Sn**	**18 47 15.1**	**-0.8**
JGF	**Kuroka**	**6.34**	**251**		**Pn**	**18 46 07.6**	**+1.8**
JKA	**Kamikawa-asahi**	**6.45**	**346**	Pn	**Pn**	**18 46 06.7**	**-0.5**
INU	**Inuyama**	**6.69**	**250**	Pn	**Pn**	**18 46 11.0**	**+0.4**
JCJ	**Chichijima**	**10.95**	**192**	Pn	**Pn**	**18 47 07.2**	**-1.7**
	1.7nm,0.3s,baz=262,slow=15,SNR=1.8						
JCJ				Sn	Sn	18 48 59.7	-10
	1.8nm,0.3s,baz=292,slow=20,SNR=1.2 26nm,0.7s						
USRK	**Ussuriysk Ar.**	**11.51**	**307**	Pn	Pn	18 47 20.0	+3.4
	0.4nm,0.3s,baz=108,slow=16,SNR=4.8 1.6nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**26.41**	**127**	T	T	19 17 35.9	
	baz=319,slow=73,SNR=9.4						
H11N1	**WAKE ISLAND Hy**	**26.42**	**127**	T	T	19 17 28.7	
	baz=319,slow=73,SNR=5.7						
H11N3	**WAKE ISLAND Hy**	**26.43**	**127**	T	T	19 17 29.3	
	baz=319,slow=73,SNR=18						
H11S1	**WAKE ISLAND Hy**	**27.21**	**129**	T	T	19 18 44.4	
	baz=320						
H11S3	**WAKE ISLAND Hy**	**27.21**	**129**	T	T	19 18 45.8	
	baz=320						
H11S2	**WAKE ISLAND Hy**	**27.22**	**129**	T	T	19 18 44.2	
	baz=320						
SONM	**Songino Array**	**29.55**	**302**	P	P	18 50 38.7	+2.6
	0.3nm,0.5s,baz=95,slow=8.0,SNR=2.5 0.3nm,0.5s						
ZALV	**Zalesovo Beam**	**43.32**	**312**	P	**P**	**18 52 35.3**	**+2.3**
	0.5nm,0.4s,baz=109,slow=6.6,SNR=2.0						
ZALV				PcP	**PcP**	**18 54 22.4**	**+1.0**
	1.0nm,0.5s,baz=81,slow=2.8,SNR=5.6 0.5nm,0.4s						
MKAR	**Makanchi Array**	**45.92**	**302**	P	**P**	**18 52 56.0**	**+2.0**
	0.4nm,0.7s,baz=75,slow=12,SNR=4.3 0.4nm,0.7s						
SCM	**Sheep Creek Mo**	**47.23**	**37**	P	**P**	**18 53 03.7**	**-0.4**
SCM				IAmb	IAmb	18 53 06.5	
	comp=Z,6.4nm,0.7s						
KURK	**Kurchatov**	**47.50**	**308**	P	**P**	**18 53 07.8**	**+1.6**
KURK				IAmb	IAmb	18 53 08.6	
	comp=Z,2.3nm,0.7s						
WB0	**Warramunga Arr**	**58.14**	**191**	P	**P**	**18 54 24.4**	**-0.6**
WB0				IAmb	IAmb	18 54 33.1	
	comp=Z,13nm,1.4s						
WR0	**Warramunga Arr**	**58.31**	**191**	P	**P**	**18 54 25.4**	**-0.8**
WR0				IAmb	IAmb	18 54 45.6	
	comp=Z,6.2nm,1.2s						
WRA	**Warramunga Arr**	**58.32**	**192**	P	**P**	**18 54 25.9**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=11,slow=7.1,SNR=5.3 comp=Z,0.3nm,0.5s						
ABKAR	**Akbulak array**	**59.41**	**311**	P	**P**	**18 54 34.5**	**+0.9**
B08A	**Colville Reser**	**66.37**	**46**		**P**	**18 55 21.4**	**+1.4**
FINES	**FINESS Array B**	**69.29**	**333**	P	**P**	**18 55 39.3**	**+1.3**
	comp=Z,0.7nm,0.8s,baz=22,slow=10,SNR=4.2 comp=Z,0.7nm,0.8s						
LRM	**Limekiln Ridge**	**71.69**	**46**	P	**P**	**18 55 53.4**	**0.0**
NOA	**NORSAR Array B**	**74.41**	**339**	P	**P**	**18 56 10.1**	**+1.2**
	comp=Z,0.3nm,0.6s,baz=37,slow=5.9,SNR=1.9 comp=Z,0.3nm,0.6s						
PDAR	**Pinedale Array**	**75.19**	**47**	P	**P**	**18 56 14.7**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=319,slow=3.6,SNR=2.2 comp=Z,0.3nm,0.6s						
CLL	**Collm**	**81.66**	**332**	*eP*	P	18 56 52.0	+2.9

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*IDC **23** 19:05:48.2±0.6,55°46S×26°74W,h0km,mb4.4/7, mbtmp4.4/8,ML4.2/1,MS4.1/27,Error ellipse: s-maj=25.5km s-min=17.6km az=47.0*
*NEIC **23** 19:05:49.7±0.9,55°5S±0°1×27°0W±0°2,h10km±4km, mb4.8/33,Error ellipse: s-maj=14.7km s-min=13.9km az=200.0*
ISC 23 19:05:51.7±0.4,55°51S±0°08×27°09W±0°07,h25km,n80, σ0s99/62,mb4.7/18,MS4.2/26,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.56**	**279**		**Pn**	**19 07 12.1**	**-0.7**
HOPE				Sn	**Sn**	**19 08 12.4**	**-3.4**
ORCD	**Orcadas**	**10.69**	**233**	Pn	**Pn**	**19 08 23.1**	**+0.2**
VNA1	**Neumayer--Stat**	**17.28**	**159**	P	**P**	**19 09 51.6**	**-0.6**
VNA3	**Neumayer Olymp**	**17.49**	**161**	P	**P**	**19 09 54.6**	**0.0**
SNAA	**Sanae**	**19.22**	**157**	P	**P**	**19 10 13.5**	**-0.1**
SNAA	**Sanae**	**19.22**	**157**	PcP	**PcP**	**19 14 36.7**	**+1.0**
SNAA	**Sanae**	**19.22**	**157**	P	**P**	**19 10 13.1**	**-0.5**
	0.7nm,0.3s,baz=298,slow=12,SNR=26						
SNAA				LR	LR	19 16 16.3	
	comp=Z,378nm,20.6s,baz=314,slow=33 4.5nm,0.5s						
SNAA	**Sanae**	**19.22**	**157**	P	**P**	**19 10 12.2**	**-1.4**
PMSA	**Palmer Station**	**20.30**	**228**	LR	LR	19 17 05.1	
	comp=Z,395nm,20.0s,baz=63,slow=33						
TROLL	**Troll, Antarti**	**20.71**	**154**	P	**P**	**19 10 29.1**	**-0.8**
BELA	**Belgrano 2**	**22.62**	**184**	P	**P**	**19 10 48.9**	**-1.4**
DSPA	**Despedida**	**23.58**	**257**	P	**P**	**19 10 59.9**	**-0.2**
MG02	**Cerro Sombrero**	**24.56**	**259**	P	**P**	**19 11 09.5**	**+0.4**
MG05	**Puerto Natales**	**26.85**	**259**	P	**P**	**19 11 29.7**	**-0.2**
MG05				IAmb	IAmb	19 11 45.7	
	comp=Z,36nm,1.2s						
TRQA	**Tornquist**	**29.16**	**292**	P	**P**	**19 11 50.6**	**-0.1**
TRQA				IAmb	IAmb	19 11 53.6	
	comp=Z,22nm,1.4s						
PLCA	**Paso Flores**	**31.96**	**279**	P	**P**	**19 12 17.4**	**+1.8**
	comp=Z,1.0nm,0.7s,baz=84,slow=7.6,SNR=2.8						
PLCA				PcP	**PcP**	**19 15 06.0**	**+0.9**
	comp=Z,0.7nm,0.8s,baz=228,slow=2.9,SNR=3.0						
PLCA				LR	LR	19 26 43.9	
	comp=Z,239nm,18.6s,baz=150,slow=39 comp=Z,1.0nm,0.7s						
QSPA	**South Pole Qui**	**34.75**	**180**	P	**P**	**19 12 39.7**	**+0.1**
QSPA				IAmb	IAmb	19 12 45.7	
	comp=Z,7.2nm,0.8s						
CPUP	**Villa Florida**	**36.50**	**311**	P	**P**	**19 12 55.6**	**+0.9**
	comp=Z,3.4nm,0.6s,baz=152,slow=7.8,SNR=9.8						
CPUP				LR	LR	19 28 16.2	
	comp=Z,248nm,18.7s,baz=175,slow=37 comp=Z,3.4nm,0.6s						
CPUP	**Villa Florida**	**36.50**	**311**	P	**P**	**19 12 55.6**	**+0.9**
SUR	**Sutherland**	**40.45**	**75**	LR	LR	19 26 50.0	
	comp=Z,392nm,18.1s,baz=231,slow=31						
SUR	**Sutherland**	**40.45**	**75**	P	**P**	**19 13 27.6**	**-0.6**
MAW	**Mawson**	**40.55**	**144**	P	**P**	**19 13 28.1**	**-0.2**
	comp=Z,2.3nm,0.6s,baz=223,slow=6.6,SNR=7.4						
MAW				PcP	**PcP**	**19 15 30.6**	**+0.5**
	comp=Z,1.8nm,0.7s,baz=243,slow=4.5,SNR=2.2						
MAW				LR	LR	19 29 24.8	
	comp=Z,203nm,19.4s,baz=253,slow=35 comp=Z,2.3nm,0.6s						
MAW	**Mawson**	**40.55**	**144**	P	**P**	**19 13 28.6**	**+0.2**
LCO	**Las Campanas**	**40.75**	**292**	P	**P**	**19 13 29.6**	**-1.2**
LCO				IAmb	IAmb	19 13 45.7	
	comp=Z,18nm,1.1s						
AC04	**Llanos de Chal**	**41.59**	**293**	P	**P**	**19 13 37.2**	**-0.2**
AC02	**Maricunga**	**41.69**	**296**	P	**P**	**19 13 38.8**	**0.0**
SHEL	**Horse Pasture**	**42.74**	**31**	P	**P**	**19 13 46.5**	**-0.4**
GO02	**Mina Guanaco**	**43.29**	**297**	P	**P**	**19 13 52.9**	**+1.2**
GO02				IAmb	IAmb	19 13 54.1	
	comp=Z,16nm,0.7s						
LVC	**Limon Verde**	**45.08**	**300**	LR	LR	19 32 46.1	
	comp=Z,145nm,20.9s,baz=200,slow=36						
LVC	**Limon Verde**	**45.08**	**300**	P	**P**	**19 14 06.7**	**+0.7**
BOSA	**Boshof**	**45.78**	**76**	P	**P**	**19 14 09.6**	**-1.7**
	comp=Z,3.5nm,0.8s,baz=214,slow=8.0,SNR=5.4						
BOSA				LR	LR	19 30 15.4	
	comp=Z,520nm,18.3s,baz=194,slow=32 comp=Z,3.5nm,0.8s						
BOSA	**Boshof**	**45.78**	**76**	P	**P**	**19 14 09.4**	**-1.8**
PB09	**IPOC Station P**	**45.93**	**300**	P	**P**	**19 14 14.5**	**+2.0**
PB09				IAmb	IAmb	19 14 15.9	
	comp=Z,13nm,0.8s						
PB07	**IPOC Station P**	**46.30**	**299**	P	**P**	**19 14 16.6**	**+1.1**
SBA	**Scott Base**	**46.63**	**184**	P	**P**	**19 14 18.6**	**+1.4**
SBA				IAmb	IAmb	19 14 19.6	
	comp=Z,7.1nm,1.1s						
PB01	**IPOC Station P**	**46.68**	**300**	P	**P**	**19 14 20.3**	**+1.9**
VNDA	**Vanda**	**47.12**	**183**	P	**P**	**19 14 21.4**	**+0.4**
	comp=Z,3.9nm,0.6s,baz=187,slow=7.4,SNR=45 comp=Z,3.9nm,0.6s						
VNDA	**Vanda**	**47.12**	**183**	P	**P**	**19 14 21.0**	**0.0**
VNDA				IAmb	IAmb	19 14 23.3	
	comp=Z,5.6nm,0.8s						
SIV	**San Ignacio**	**47.24**	**313**	LR	LR	19 33 01.3	
	comp=Z,124nm,21.8s,baz=118,slow=34						
PB08	**IPOC Station P**	**47.28**	**301**	P	**P**	**19 14 25.2**	**+1.8**
PB08				IAmb	IAmb	19 14 50.3	
	comp=Z,14nm,1.2s						
GO01	**Chusmiza**	**47.71**	**301**	P	**P**	**19 14 26.9**	**+0.1**
GO01				IAmb	IAmb	19 14 29.6	
	comp=Z,11nm,0.8s						
LBTB	**Lobatse**	**48.80**	**74**	LR	LR	19 32 52.8	
	comp=Z,127nm,18.2s,baz=220,slow=33						
TSUM	**Tsumeb**	**49.37**	**61**	LR	LR	19 32 03.8	
	comp=Z,155nm,18.4s,baz=162,slow=32						
LPAZ	**La Paz**	**50.11**	**305**	P	**P**	**19 14 47.0**	**+1.6**
	comp=Z,7.5nm,0.6s,baz=178,slow=8.1,SNR=32 comp=Z,7.5nm,0.6s						
LPAZ	**La Paz**	**50.11**	**305**	P	**P**	**19 14 47.1**	**+1.6**
LPAZ				IAmb	IAmb	19 14 47.9	
	comp=Z,9.1nm,0.8s						
SAML	**Samuel**	**54.46**	**314**	P	**P**	**19 15 17.8**	**+0.8**
LSZ	**Lusaka**	**58.12**	**69**	LR	LR	19 38 10.2	
	comp=Z,255nm,18.1s,baz=208,slow=34						
DBIC	**Dimbokro**	**64.65**	**25**	LR	LR	19 38 37.0	
	comp=Z,174nm,18.4s,baz=204,slow=30						
DBIC	**Dimbokro**	**64.65**	**25**	P	**P**	**19 16 26.8**	**-0.3**
OPO	**Ambohidratompo**	**66.01**	**88**	LR	LR	19 40 20.9	
	comp=Z,167nm,19.0s,baz=348,slow=32						
ROSC	**El Rosal**	**71.58**	**310**	LR	LR	19 49 52.5	
	comp=Z,124nm,20.7s,baz=222,slow=37						
MBAR	**Mbarara**	**71.85**	**63**	LR	LR	19 45 53.0	
	comp=Z,109nm,18.6s,baz=192,slow=34						
TOA0	**Torodi Ar. Sit**	**72.55**	**29**	P	**P**	**19 17 16.2**	**-0.2**
TOA0				IAmb	IAmb	19 17 17.0	
	comp=Z,6.9nm,0.6s						
TORD	**Torodi Ar. Bea**	**72.55**	**29**	P	**P**	**19 17 16.2**	**-0.2**
	comp=Z,5.5nm,0.6s,baz=197,slow=6.4,SNR=54						
TORD				LR	LR	19 44 57.8	
	comp=Z,104nm,18.3s,baz=225,slow=32 comp=Z,5.5nm,0.6s						
TORD	**Torodi Ar. Bea**	**72.55**	**29**	P	**P**	**19 17 16.2**	**-0.2**
TORD				IAmb	IAmb	19 17 28.7	
	comp=Z,4.6nm,0.8s						
SDV	**Santo Domingo**	**73.66**	**315**	LR	LR	19 51 37.7	
	comp=Z,99nm,19.4s,baz=216,slow=37						
KMBO	**Kilima Mbogo**	**74.79**	**69**	LR	LR	19 47 49.3	
	comp=Z,166nm,19.8s,baz=93,slow=34						
RPZ	**Rata Peaks**	**79.96**	**193**	LR	LR	19 53 05.9	
	comp=Z,69nm,18.3s,baz=101,slow=35						
URZ	**Urewera**	**84.34**	**199**	LR	LR	19 53 26.2	
	comp=Z,45nm,18.2s,baz=31,slow=34						
MTO3	**Montecristo**	**86.95**	**301**	P	**P**	**19 18 34.6**	**-0.1**
MTO3				IAmb	IAmb	19 18 49.9	
	comp=Z,6.9nm,1.0s						
ATD	**Arta Tunnel**	**88.40**	**67**	LR	LR	19 57 58.0	
	comp=Z,83nm,18.2s,baz=183,slow=36						
MDT	**Midelt**	**90.05**	**19**	LR	LR	19 55 52.6	
	comp=Z,173nm,18.5s,baz=176,slow=33						
STKA	**Stephens Creek**	**92.43**	**170**	LR	LR	19 59 32.5	
	comp=Z,84nm,19.9s,baz=203,slow=35						
KEST	**Kesra**	**96.07**	**29**	LR	LR	19 58 27.5	
	comp=Z,80nm,18.1s,baz=228,slow=33						
ESDC	**Sonseca Array**	**96.84**	**18**	LR	LR	19 59 44.9	
	comp=Z,62nm,18.6s,baz=191,slow=34						
EIL	**Elat**	**99.96**	**51**	LR	LR	20 01 25.9	
	comp=Z,138nm,19.7s,baz=268,slow=34						
FINES	**FINESS Array B**	**123.87**	**28**	PKP	**PKPdf**	**19 24 45.9**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=174,slow=1.9,SNR=6.2						
CMAR	**Chiang Mai Arr**	**125.20**	**110**	PKP	**PKPdf**	**19 24 49.9**	**0.0**
	comp=Z,0.8nm,0.6s,baz=228,slow=3.7,SNR=5.8						
KSH	**Kashi**	**128.37**	**74**	PKP	**PKiKP**	**19 24 55.8**	**-0.3**
ARCES	**ARCESS Array B**	**130.41**	**22**	PKP	**PKPdf**	**19 24 58.2**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=318,slow=1.6,SNR=6.3						
PZH	**PanZhiHua**	**133.21**	**107**	PKP	**PKPdf**	**19 25 05.6**	**+0.5**
YKA	**Yellowknife Ar**	**135.80**	**318**	PKP	**PKPdf**	**19 25 08.8**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=123,slow=1.9,SNR=3.7						
MKAR	**Makanchi Array**	**136.66**	**71**	PKP	**PKPdf**	**19 25 11.5**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=132,slow=1.2,SNR=2.7						
ZALV	**Zalesovo Beam**	**142.08**	**63**	PKP	**PKiKP**	**19 25 22.2**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=224,slow=4.0,SNR=1.4						
HYT	**Haines Junctio**	**144.50**	**308**	PKPdf	**PKPdf**	**19 25 24.8**	**+0.2**
M30M	**Minto, Yukon**	**144.86**	**311**	PKPdf	**PKPab**	**19 25 24.8**	**+0.6**
INK	**Inuvik**	**145.42**	**321**		**PKPbc**	**19 25 26.2**	**+0.5**
ILAR	**Eielson Array**	**149.79**	**312**	PKPbc	**PKPbc**	**19 25 38.4**	**+0.5**
	comp=Z,7.8nm,0.8s,baz=135,slow=2.6,SNR=44						
ILAR	**Eielson Array**	**149.79**	**312**		**PKPbc**	**19 25 37.6**	**-0.3**
SONM	**Songino Array**	**150.63**	**85**	PKPbc	**PKPbc**	**19 25 40.3**	**-0.4**
	comp=Z,2.1nm,0.7s,baz=215,slow=3.8,SNR=12						

IDC 23 19:31:24.1±5.6,2°03S×99°35E,h0km,mb3.6/3, mbtmp3.6/3,Error ellipse: s-maj=196.7km s-min=80.2km az=55.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**27.32**	**257**	T	T	20 05 36.8	
	baz=80,slow=75,SNR=113						
H08S3	**Diego Garcia H**	**27.33**	**257**	T	T	20 05 42.4	
	baz=80,slow=75,SNR=107						
H08S1	**Diego Carcia H**	**27.34**	**257**	T	T	20 05 43.5	
	baz=80,slow=75,SNR=113						
H01W3	**Cape Leeuwin H**	**35.47**	**159**	T	T	20 15 25.0	
	baz=336,slow=76,SNR=12						
H01W2	**Cape Leeuwin H**	**35.48**	**159**	T	T	20 15 26.6	
	baz=336,slow=76,SNR=14						
H01W1	**Cape Leeuwin H**	**35.48**	**159**	T	T	20 15 33.3	
	baz=336,slow=76,SNR=9.3						
SONM	**Songino Array**	**50.04**	**6**	P	P	19 40 20.6	-0.1
	0.5nm,0.7s,baz=188,slow=9.1,SNR=4.1 0.5nm,0.7s						
MKAR	**Makanchi Array**	**50.89**	**345**	P	P	19 40 27.0	+0.1
	0.5nm,0.6s,baz=161,slow=8.5,SNR=4.8 0.5nm,0.6s						
ZALV	**Zalesovo Beam**	**57.08**	**350**	P	P	19 41 11.6	-0.4
	0.4nm,0.4s,baz=164,slow=5.8,SNR=2.2 0.4nm,0.4s						
TXAR	**Lajitas Array**	**145.12**	**37**	PKPbc	PKPbc	19 51 03.1	-0.8
	0.1nm,0.4s,baz=275,slow=1.4,SNR=4.6						

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*ISK **23** 19:33:34.1,38°09N×38°55E,h5km,ML3.5/14*
*DDA **23** 19:33:35.9±0.0,38°16N×38°58E,h11km±2km,MW3.7*
ISC 23 19:33:35.9±1.1,38°13N±0°02×38°60E±0°02,h2km±10km, n56,σ1s02/95,Turkey

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

SAIM				S		**Sg**	**19 34 41.6**	**+1.5**
YEDI	**Yedisu-Bingol**	**2.00**	**49**	PN		**Pn**	**19 34 10.6**	**-0.2**
SVAN	**Silvan-Diyarba**	**2.05**	**89**	PN		**Pn**	**19 34 10.8**	**-0.6**
SVAN	**Silvan-Diyarba**	**2.05**	**89**	P		**Pb**	**19 34 13.0**	**-0.8**
SVAN				S		**Sb**	**19 34 40.7**	**+1.0**
SLHN	**Bingol, Solhan**	**2.07**	**66**	P		**Pb**	**19 34 14.8**	**+0.5**
SLHN				S		**Sb**	**19 34 41.1**	**+0.7**
KELT	**Kelkit**	**2.08**	**14**	P		**Pn**	**19 34 13.0**	**+1.0**
KELT				S		**Sn**	**19 34 39.0**	**+0.5**
SUSE	**Susehri**	**2.10**	**352**	P		**Pn**	**19 34 13.5**	**+1.3**
SUSE				S		**Sg**	**19 34 45.3**	**+2.0**
BTMN	**Batman**	**2.12**	**96**	P		**Pn**	**19 34 13.0**	**+0.6**
BTMN				S		**Sg**	**19 34 43.2**	**-0.8**
SVSK	**Karacayir**	**2.18**	**325**	PN		**Pn**	**19 34 12.3**	**-0.8**
ALUC	**Giresun/Alucra**	**2.21**	**3**	P		**Pn**	**19 34 15.0**	**+1.2**
ALUC				S		**Sg**	**19 34 47.6**	**+0.7**
KARO	**Karliova-Bingo**	**2.25**	**58**	PN		**Pn**	**19 34 13.8**	**-0.5**
CUSAR	**Sarkisla-SIVAS**	**2.25**	**306**	P		**Pn**	**19 34 15.7**	**+1.4**
CUSAR				S		**Sg**	**19 34 49.0**	**+0.9**
MIDY	**Mardin/Midyat-**	**2.33**	**107**	P		**Pb**	**19 34 17.8**	**-0.9**
MIDY				S		**Sb**	**19 34 49.0**	**+1.1**
MUSM	**Mu-Merkez**	**2.36**	**75**	P		**Pn**	**19 34 16.5**	**+0.8**
MUSM				S		**Sb**	**19 34 49.3**	**+0.5**
RSDY	**Resadiye-TOKAT**	**2.47**	**337**	PN		**Pn**	**19 34 16.4**	**-0.8**
AKO	**Adana**	**2.59**	**256**	P		**Pn**	**19 34 18.8**	**0.0**
AKO				S		**Sg**	**19 35 01.6**	**+2.6**
ESPY	**Espiye-Giresun**	**2.78**	**2**	PN		**Pn**	**19 34 21.2**	**-0.3**
HWQ	**Hawqa**	**4.41**	**210**	*e*P		**Pn**	**19 34 44.5**	**+0.6**
BHL	**Bhannes**	**4.85**	**210**	*e*P		**Pn**	**19 34 51.0**	**+1.0**
DQRL	**Deir Qamar**	**5.06**	**210**	*e*P		**Pn**	**19 34 54.0**	**+1.1**
QRWL	**Qaraoun**	**5.15**	**208**	*e*P		**Pn**	**19 34 55.2**	**+1.1**
SHBL	**Chebaa**	**5.31**	**207**	*e*P		**Pn**	**19 34 57.2**	**+0.8**

MOS ***23*** *20:27:26.0±1.5, 48°.59N×154°.94E, h78km, mb4.0/1, Error ellipse: s-maj=32.6km s-min=5.7km az=72.2*
KRSC ***23*** *20:27:27.7±3.2, 48°.69N×156°.83E, h6km±43km, ML4.3*
IDC ***23*** *20:27:27.8±4.2, 48°.64N×154°.81E, h74km±37km, mb3.3/6, mbtmp3.6/7, ML2.2/1, MS3.0/1, Error ellipse: s-maj=35.1km s-min=22.5km az=143.0*
SKHL ***23*** *20:27:28.1±0.8, 48°.70N×154°.90E, h85km±3km, mb4.4/5, msha5.3/3*
ISC 23 20:27:25.6±0.7,**48°.52N**±0°.09×**155°.2E**±0°.1**, h50**km**, n58,** σ1=**97**/60**, mb3.5**/6**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.26**	**16**	*e*P	N	**Pn**	**20 28 02.8**	**+2.4**
SKR				*e*S		**Sn**	**20 28 25.9**	**-1.1**
SKR	comp=Z,26nm,0.8s			pmax		pmax		
SKR	comp=N,84nm,0.3s			smax		smax		
SKR	comp=E,137nm,0.4s			smax		smax		
SKR	**Severo-Kuril's**	**2.26**	**16**	*e*P		**Pn**	**20 28 00.3**	**-0.1**
SKR				*e*S		**Sn**	**20 28 26.4**	**-0.6**
SKR	**Severo-Kuril's**	**2.26**	**16**	*e*P		**Pn**	**20 28 01.7**	**+1.3**
SKR	comp=E,40nm,0.4s			AMB		AMB	20 28 03.2	
SKR				*e*S		**Sn**	**20 28 26.6**	**-0.4**
SKR	comp=E,150nm,0.3s			A		A	20 28 30.4	
SKR	comp=E,240nm,0.3s			A		A	20 28 30.4	
PAU	**Pauzhetka**	**3.14**	**19**	PN		**Pn**	**20 28 14.9**	**+2.4**
PAU				S		**Sn**	**20 28 49.5**	**+0.8**
PAU	**Pauzhetka**	**3.14**	**19**	*e*P		**Pn**	**20 28 14.9**	**+2.4**
PAU				*e*S		**Sn**	**20 28 49.5**	**+0.8**
PAU	**Pauzhetka**	**3.14**	**19**	*e*P		**Pn**	**20 28 14.8**	**+2.3**
PAU	comp=E,30nm,0.3s			AMB		AMB	20 28 16.0	
PAU				*e*S		**Sn**	**20 28 49.5**	**+0.8**
PAU	comp=E,190nm,0.4s			A		A	20 28 53.0	
PAU	comp=E,180nm,0.4s			A		A	20 28 53.0	
KDTR	**Khodutka, Kamc**	**3.79**	**29**	PN		**Pn**	**20 28 21.5**	**+0.1**
KDTR				S		**Sn**	**20 29 02.8**	**-1.9**
KDTR	**Khodutka, Kamc**	**3.79**	**29**	*e*P		**Pn**	**20 28 21.5**	**+0.1**
KDTR				*e*S		**Sn**	**20 29 02.8**	**-1.9**
ASAK	**Asacha**	**4.25**	**23**	PN		**Pn**	**20 28 29.5**	**+1.7**
ASAK	**Asacha**	**4.25**	**23**	*e*P		**Pn**	**20 28 29.5**	**+1.7**
MTVR	**Mutnovka**	**4.42**	**25**	PN		**Pn**	**20 28 31.6**	**+1.5**
MTVR				S		**Sn**	**20 29 20.6**	**+0.3**
MTVR	**Mutnovka**	**4.42**	**25**	*e*P		**Pn**	**20 28 31.6**	**+1.5**
MTVR				*e*S		**Sn**	**20 29 20.6**	**+0.3**
GRL	**Gorelyy**	**4.45**	**24**	PN		**Pn**	**20 28 32.6**	**+2.1**
GRL	**Gorelyy**	**4.45**	**24**	*e*P		**Pn**	**20 28 32.6**	**+2.1**
RUS	**Russkaya**	**4.47**	**27**	PN		**Pn**	**20 28 30.6**	**-0.1**
RUS				S		**Sn**	**20 29 20.1**	**-1.2**
RUS	**Russkaya**	**4.47**	**27**	*e*P		**Pn**	**20 28 30.6**	**-0.1**
RUS				*e*S		**Sn**	**20 29 20.1**	**-1.2**
PETK	**Petropavlovsk-**	**4.87**	**18**	P		**Pn**	**20 28 38.2**	**+2.0**
	comp=E,0.5nm,0.3s,baz=178,slow=12,SNR=4.8 comp=E,2.0nm,0.4s							
PET	**Petropavlovsk**	**5.03**	**25**	*e*P		**Pn**	**20 28 40.5**	**+2.1**
PET	comp=E,10.0nm,0.4s			AMB		AMB	20 28 41.5	
PET				*e*S		**Sn**	**20 29 35.5**	**+0.4**
PET	comp=E,60nm,0.6s			A		A	20 29 51.4	
UGLR	**Uglovaya**	**5.24**	**25**	PN		**Pn**	**20 28 43.6**	**+2.2**
UGLR	**Uglovaya**	**5.24**	**25**	*e*P		**Pn**	**20 28 43.6**	**+2.2**
KOK	**Koryaka**	**5.26**	**23**	PN		**Pn**	**20 28 44.5**	**+2.8**
KOK	**Koryaka**	**5.26**	**23**	*e*P		**Pn**	**20 28 44.5**	**+2.8**
KOK	**Koryaka**	**5.26**	**23**	*e*P		**Pn**	**20 28 44.5**	**+2.8**
AVH	**Avacha**	**5.27**	**24**	PN		**Pn**	**20 28 44.4**	**+2.7**
AVH	**Avacha**	**5.27**	**24**	*e*P		**Pn**	**20 28 44.4**	**+2.7**
SMAR	**Somma**	**5.28**	**25**	PN		**Pn**	**20 28 45.4**	**+3.3**
SMAR	**Somma**	**5.28**	**25**	*e*P		**Pn**	**20 28 45.4**	**+3.3**
SDLR	**Sedlovina**	**5.32**	**25**	PN		**Pn**	**20 28 43.9**	**+1.4**
SDLR	**Sedlovina**	**5.32**	**25**	*e*P		**Pn**	**20 28 43.9**	**+1.4**
KRX	**Arik**	**5.33**	**23**	PN		**Pn**	**20 28 46.1**	**+3.5**
KRX	**Arik**	**5.33**	**23**	*e*P		**Pn**	**20 28 46.1**	**+3.5**
GNL	**Ganaly**	**5.47**	**18**	PN		**Pn**	**20 28 47.6**	**+3.0**
GNL	**Ganaly**	**5.47**	**18**	*e*P		**Pn**	**20 28 47.6**	**+3.0**
SPN	**Mys Shipunski**	**5.53**	**32**	PN		**Pn**	**20 28 46.6**	**+1.4**
SPN	**Mys Shipunski**	**5.53**	**32**	*e*P		**Pn**	**20 28 46.6**	**+1.4**
KUR	**Kuril'sk**	**5.98**	**239**	*e*P		**Pn**	**20 28 54.7**	**+3.3**
KUR	comp=E,20nm,0.5s			AMB		AMB	20 28 55.2	
MKZ	**Mys Kozlova**	**7.30**	**32**	PN		**Pn**	**20 29 08.9**	**-0.6**
MKZ	**Mys Kozlova**	**7.30**	**32**	*e*P		**Pn**	**20 29 08.9**	**-0.6**
SHO	**Shikotan**	**7.41**	**234**	*e*P		**Pn**	**20 29 13.3**	**+2.2**
SHO	comp=E,20nm,0.6s			AMB		AMB	20 29 15.4	
TUMR	**Tumrok**	**7.45**	**23**	PN		Pn	20 29 16.6	+5.0
TUMR	**Tumrok**	**7.45**	**23**	*e*P		Pn	20 29 16.6	+5.0
KLR	**Kul'dur**	**15.41**	**281**	LR		LR	20 36 27.1	
	comp=E,57nm,18.2s,baz=3.5,slow=36							
KSRS	**Korea Array**	**22.66**	**251**	P		**P**	**20 32 20.9**	**-1.6**
	comp=E,0.8nm,0.4s,baz=50,slow=11,SNR=4.7 comp=E,0.8nm,0.4s							
H11N2	**WAKE ISLAND Hy**	**30.24**	**158**	T		T	21 05 49.6	
	baz=342,slow=76,SNR=19							
H11N1	**WAKE ISLAND Hy**	**30.26**	**158**	T		T	21 05 51.9	
	baz=342,slow=76,SNR=18							
H11N3	**WAKE ISLAND Hy**	**30.26**	**158**	T		T	21 05 54.5	
	baz=342,slow=76,SNR=12							
H11S1	**WAKE ISLAND Hy**	**31.37**	**159**	T		T	21 06 48.1	
	baz=345,slow=76,SNR=90							
H11S3	**WAKE ISLAND Hy**	**31.38**	**159**	T		T	21 07 18.5	
	baz=345,slow=76,SNR=92							
H11S2	**WAKE ISLAND Hy**	**31.39**	**159**	T		T	21 06 48.2	
	baz=345,slow=76,SNR=69							
MKAR	**Makanchi Array**	**47.37**	**297**	P		**P**	**20 35 51.8**	**-2.6**
MKAR	comp=E,0.5nm,0.7s,baz=62,slow=8.4,SNR=4.2 PcP					**PcP**	**20 37 22.7**	**-1.7**
	comp=E,0.7nm,0.9s,baz=55,slow=3.6,SNR=3.0 comp=E,0.5nm,0.7s							
CMAR	**Chiang Mai Arr**	**54.12**	**257**	P		**P**	**20 36 44.6**	**-0.9**
	comp=E,1.5nm,0.7s,baz=33,slow=7.3,SNR=9.2 comp=E,1.5nm,0.7s							
FINES	**FINESS Array B**	**63.02**	**335**	P		**P**	**20 37 44.6**	**-2.2**
	comp=E,0.3nm,0.6s,baz=32,slow=11,SNR=4.6 comp=E,0.3nm,0.6s							
WRA	**Warramunga Arr**	**70.64**	**201**	P		**P**	**20 38 35.2**	**-0.6**
	comp=E,0.3nm,0.5s,baz=18,slow=6.4,SNR=5.7 comp=E,0.3nm,0.5s							
TXAR	**Lajitas Array**	**75.43**	**62**	P		**P**	**20 39 05.0**	**+0.7**
	comp=E,0.2nm,0.4s,baz=301,slow=5.7,SNR=4.9 comp=E,0.2nm,0.4s							
TXAR	**Lajitas Array**	**75.43**	**62**	P		**P**	**20 39 05.0**	**+0.7**
H03N2	**Juan Fernandez**	**137.37**	**90**	T		T	23 19 55.4	
	baz=311,slow=77,SNR=5.3							
H03N1	**Juan Fernandez**	**137.39**	**90**	T		T	23 19 55.3	
	baz=311,slow=77,SNR=6.8							
H03N3	**Juan Fernandez**	**137.39**	**90**	T		T	23 19 48.6	
	baz=311,slow=77,SNR=6.9							

TUL ***23*** *20:42:02.9±0.7, 36°.53N±0°.01×98°.96W±0°.04, h6km±4km, ML3.0, mb_Lg2.8/42(NEIC), Error ellipse: s-maj=4.2km s-min=0.9km az=71.0*
NEIC 23 20:42:03.6±0.8,**36°.52N**±0°.02×**98°.95W**±0°.04**, h8**km±3km**, Error ellipse: s-maj=5.0km s-min=2.2km az=78.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
OKCFA	**Oklahoma City**	**1.64**	**132**		Pn	Pn	20 42 32.5	-0.3
FNO	**Franklin**	**1.78**	**135**		Pn	Pn	20 42 33.2	-1.5
FNO					Pg	Pb	20 42 35.5	-1.0
WMOK	**Wichita Mounta**	**1.79**	**175**			Pn	20 42 34.1	-0.6
WMOK	comp=Z,42nm,0.8s				IAmb_Lg		20 43 04.0	
R32A	**Long Quarter,**	**1.91**	**6**		Pn	Pn	20 42 36.7	+0.2
T35A	**Sooner Cattle**	**2.00**	**78**			Pn	20 42 37.7	-0.1
X34A	**Smith Ranch, M**	**2.12**	**154**		Pg	Pn	20 42 40.8	+1.4
X34A	comp=Z,48nm,0.8s				IAmb_Lg		20 43 14.6	
CBKS	**Cedar Bluff**	**2.37**	**345**			Pn	20 42 44.0	+1.1
TUL1	**Leonard**	**2.63**	**102**			Pn	20 42 46.2	-0.1
AMTX	**Amarillo**	**2.76**	**234**			Pn	20 42 48.0	-0.2
KSU1	**Kansas State U**	**3.17**	**35**		IAmb_Lg		20 43 49.0	
	comp=Z,26nm,0.7s							
X37A	**Clayton**	**3.50**	**122**			Pn	20 42 58.3	0.0
U38A	**Gravette**	**3.68**	**90**			Pb	20 43 09.0	+0.1
U38A	comp=Z,20nm,0.7s				IAmb_Lg		20 44 02.4	
KSCO	**Kaye Shedlock'**	**3.83**	**312**		IAmb_Lg		20 44 13.4	
	comp=Z,26nm,0.7s							
ABTX	**Abilene, Hawle**	**3.93**	**189**		Pn	Pn	20 43 03.6	-0.7
HHAR	**Hobbs**	**4.05**	**92**			Pb	20 43 14.3	-0.9
HHAR	comp=Z,15nm,0.8s				IAmb_Lg		20 44 15.3	
T25A	**Trinidad**	**4.42**	**280**			Pn	20 43 10.4	-0.8
S39A	**Bolivar**	**4.65**	**74**			Pn	20 43 13.7	-0.4
MIAR	**Mount Ida**	**4.81**	**113**			Pn	20 43 16.5	+0.2
MIAR	comp=Z,15nm,0.8s				IAmb_Lg		20 44 44.1	
P38A	**Dawn**	**5.28**	**52**		IAmb_Lg		20 44 57.0	
	comp=Z,22nm,0.8s							
SDCO	**Great Sand Dun**	**5.37**	**285**		Pn	Pn	20 43 24.6	+0.3
SDCO	comp=Z,16nm,1.1s				IAmb_Lg		20 44 59.7	
MGMO	**Mountain Grove**	**5.40**	**81**		IAmb_Lg		20 44 53.8	
	comp=Z,18nm,0.8s							
Q24A	**Divide**	**5.48**	**298**		IAmb_Lg		20 45 02.4	
	comp=Z,15nm,0.8s							
WHAR	**Wooly Hollow**	**5.55**	**101**		IAmb_Lg		20 45 03.4	
	comp=Z,19nm,0.9s							
FCAR	**Ozark Folk Cen**	**5.56**	**94**		Pn	Pn	20 43 25.7	-0.9
WLAR	**White Oak Lake**	**5.56**	**119**		IAmb_Lg		20 45 12.3	
	comp=Z,17nm,0.9s							
R40A	**Maddies Statio**	**5.61**	**70**			Pn	20 43 26.8	-0.5
R40A	comp=Z,12nm,0.7s				IAmb_Lg		20 45 00.2	
W41B	**Gary Mavity, V**	**5.61**	**102**		IAmb_Lg		20 45 14.3	
	comp=Z,13nm,0.8s							
UALR	**University of**	**5.66**	**106**		IAmb_Lg		20 45 09.9	
	comp=Z,10nm,0.8s							
435B	**Jarrell**	**5.84**	**168**		IAmb_Lg		20 45 18.5	
	comp=Z,16nm,0.8s							
JCT	**Junction City**	**6.07**	**187**		IAmb_Lg		20 45 28.3	
	comp=Z,13nm,0.8s							
K31A	**O'Neill**	**6.10**	**1**		IAmb_Lg		20 45 16.2	
	comp=Z,16nm,0.8s							
ISCO	**Idaho Springs**	**6.18**	**304**		IAmb_Lg		20 45 21.3	
	comp=Z,10nm,0.8s							
P40A	**Paris**	**6.22**	**59**		Pn	Pn	20 43 35.5	-0.2
PHWY	**Pilot Hill**	**6.96**	**315**		IAmb_Lg		20 45 50.2	
	comp=Z,13nm,0.7s							
N23A	**Red Feather La**	**7.00**	**311**		IAmb_Lg		20 45 51.0	
	comp=Z,16nm,0.8s							

IDC ***23*** *21:01:15.7±1.7, 34°.54N×26°.02E, h0km, mb3.4/5, mbtmp3.4/5, Error ellipse: s-maj=52.4km s-min=26.0km az=150.0*
ATH ***23*** *21:01:17.0, 34°.12N×26°.11E, h10km±31km, ML2.7/2, Error ellipse: s-maj=31.6km s-min=3.1km az=0.0*
DDA ***23*** *21:01:20.9±0.0, 34°.54N×26°.51E, h9km±4km, ML2.9*
THE ***23*** *21:01:21.4, 34°.41N×26°.18E, h3km±2km, ML2.2/2, Error ellipse: s-maj=3.0km s-min=1.1km az=94.0*
GII ***23*** *21:01:22.5±0.0, 33°.63N×26°.76E, h1km*
ISC 23 21:01:17.6±1.9,**34°.36N**±0°.08×**26°.43E**±0°.04**, h13**km±12km**, n40,** σ2=**54**/51**, mb3.3**/5**, Crete**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.77**	**347**	P		**Pn**	**21 01 35.9**	**+1.7**
ZKR				AML		AML	21 01 56.1	
ZKR	comp=E,787μm,0.5s			AML		AML	21 02 02.1	
ZKR	comp=N,377μm,0.4s			P		**Pn**	**21 01 34.9**	**+0.6**
ZKR	**Zakros**	**0.77**	**347**	S		**Sn**	**21 01 46.3**	**+0.6**
	comp=N,292nm,0.4s							
STIA	**Sitia Lasithi**	**0.89**	**342**	P		**Pb**	**21 01 36.4**	**+1.5**
STIA				S		**Sn**	**21 01 52.2**	**+3.7**
STIA	comp=N,912μm,0.5s			AML		AML	21 01 58.0	
STIA	comp=E,908μm,0.7s			AML		AML	21 02 06.4	
STIA	**Sitia Lasithi**	**0.89**	**342**	P		**Pb**	**21 01 36.5**	**+1.6**
STIA				S		**Sn**	**21 01 48.9**	**+0.4**
NPS	**Neapolis**	**1.12**	**323**	P		**Pg**	**21 01 39.3**	**0.0**
NPS	**Neapolis**	**1.12**	**323**	P		**Pg**	**21 01 39.7**	**+0.4**
KARP	**Karpathos**	**1.32**	**27**	P		**Pn**	**21 01 46.1**	**+4.2**
KSTL	**Kastelli Herak**	**1.46**	**310**	P		Pn	21 01 39.4	-4.3
KSTL	**Kastelli Herak**	**1.46**	**310**	P		Pn	21 01 41.6	-2.1
SIVA	**Sivas**	**1.49**	**297**	P		**Pn**	**21 01 43.0**	**-1.0**
SIVA	**Sivas**	**1.49**	**297**	P		**Pn**	**21 01 44.7**	**+0.6**
IDI	**Anoyia**	**1.57**	**306**	P		**Pn**	**21 01 45.6**	**+0.3**
IDI				S		**Sn**	**21 02 04.9**	**-0.6**
IDI	**Anoyia**	**1.57**	**306**	P		**Pn**	**21 01 46.1**	**+0.8**
IDI	comp=E,62nm,0.6s			S		**Sn**	**21 02 04.6**	**-0.9**
GVD	**Gavdhos**	**1.99**	**284**	P		Pn	21 01 49.8	-1.2
IMMV	**Iera Moni Meta**	**2.29**	**299**	P		**Pn**	**21 01 55.6**	**+0.4**
DAT	**Datca**	**2.54**	**21**	P		**Pb**	**21 02 01.7**	**-1.5**
DAT				S		**Sb**	**21 02 33.0**	**-1.3**
TURN	**Turunc**	**2.83**	**31**	P		**Pb**	**21 02 07.4**	**-0.5**
TURN				S		**Sb**	**21 02 40.5**	**-1.9**
FETY	**Fethiye**	**3.13**	**43**	P		**Pb**	**21 02 11.6**	**-1.6**
FETY				S		**Sb**	**21 02 50.8**	**-0.5**
AKAS	**Kas**	**3.20**	**53**	P		**Pn**	**21 02 11.5**	**+3.8**
AKAS				S		**Sn**	**21 02 49.0**	**+3.3**
AKAS	comp=E,52nm,1.1s			*i* AML		AML	21 02 50.0	
AYDN	**Tasoluk**	**3.50**	**19**	P		**Pn**	**21 02 14.8**	**+3.1**
CAEL	**Denizli, Camel**	**3.62**	**40**	P		Pn	21 02 18.4	+4.8
CAEL				S		**Sb**	**21 03 01.7**	**-3.7**
CAEL	comp=E,38nm,1.1s			*i* AML		AML	21 03 06.0	
CAEL	comp=E,24nm,0.5s			*i* AML		AML	21 03 20.0	
CAEL	comp=E,47nm,2.0s			*i* AML		AML	21 03 41.0	
TAVA	**DENIZLI_Tavas**	**3.69**	**32**	P		**Pn**	**21 02 18.2**	**+3.7**
TAVA				S		**Sn**	**21 03 00.7**	**+2.7**
AKUM	**Antalya-Kumluc**	**3.75**	**57**	P		**Pn**	**21 02 18.7**	**+3.6**
AKUM				S		**Sb**	**21 03 04.1**	**-4.8**
GOLH	**Golhisar**	**3.83**	**41**	P		**Pn**	**21 02 21.1**	**+4.7**
GOLH				S		**Sb**	**21 03 05.9**	**-5.6**
KORT	**Korkueli**	**4.13**	**49**	P		Pn	21 02 25.9	+5.3
KORT				S		**Sn**	**21 03 13.8**	**+4.9**
KEPZ	**Antalya-Kepez**	**4.92**	**57**	P		**Pn**	**21 02 35.3**	**+4.0**
KEPZ				S		**Sn**	**21 03 27.9**	**0.0**
GAZI	**Gazipasa**	**5.16**	**67**	P		**Pn**	**21 02 36.5**	**+1.9**
GAZI				S		**Sn**	**21 03 32.9**	**-1.1**
GAZI	comp=E,16nm,0.4s			*i* AML		AML	21 03 39.0	
GAZI				*i* AML		AML	21 04 27.0	
	comp=E,11nm,1.8s							
GULN	**MERSIN_Gulnar**	**6.09**	**71**	P		**Pn**	**21 02 50.9**	**+3.5**
GULN				S		**Sn**	**21 03 57.0**	**+0.1**
GULN	comp=E,5.5nm,0.8s			*i* AML		AML	21 04 20.0	
GULN	comp=E,7.2nm,1.8s			*i* AML		AML	21 05 34.0	
GULN	comp=E,5.3nm,2.0s			*i* AML		AML	21 05 38.0	
MMLI	**Mount Malkishu**	**7.76**	**102**	P		**Pn**	**21 03 12.1**	**+1.8**
GEM	**Giv'at Ha'Em**	**7.77**	**96**	P		**Pn**	**21 03 12.1**	**+1.7**
NATI	**Neve Ativ**	**7.82**	**95**	P		**Pn**	**21 03 13.5**	**+2.4**
NATI				S		**Sn**	**21 04 40.2**	**+0.8**
HMDT	**Nahal Hemdat**	**7.90**	**103**	P		**Pn**	**21 03 12.7**	**+0.6**
HMDT				S		**Sn**	**21 04 40.7**	**-0.6**
KRMI	**Paran Flat**	**8.20**	**119**	P		Pn	21 03 15.7	-0.6
KRMI				S		Sn	21 04 42.4	-6.4
PRNI	**Paran**	**8.28**	**117**	P		**Pn**	**21 03 16.9**	**-0.5**
PRNI				S		Sn	21 04 45.2	-5.6
HRFI	**Mount Harif**	**8.47**	**118**	P		Pn	21 03 18.9	-1.1
HRFI				S		Sn	21 04 49.7	-5.8
ESDC	**Sonseca Array**	**24.77**	**291**	P		**P**	**21 06 36.7**	**-2.5**
	comp=E,0.2nm,0.6s,baz=76,slow=9.6,SNR=1.9 comp=E,0.2nm,0.6s							
TORD	**Torodi Ar. Bea**	**30.81**	**233**	P		P	21 07 31.3	-2.0
	comp=E,0.2nm,0.5s,baz=42,slow=8.4,SNR=2.6 comp=E,0.2nm,0.5s							
ARCES	**ARCESS Array B**	**35.23**	**359**	P		**P**	**21 08 08.9**	**-2.4**
	comp=E,0.8nm,0.8s,baz=168,slow=8.9,SNR=1.5 comp=E,0.8nm,0.8s							
MKAR	**Makanchi Array**	**43.34**	**56**	P		**P**	**21 09 21.1**	**+1.7**
	comp=E,0.3nm,0.6s,baz=280,slow=5.8,SNR=4.8 comp=E,0.3nm,0.6s							
ZALV	**Zalesovo Beam**	**44.81**	**46**	P		**P**	**21 09 32.1**	**+1.1**
	comp=E,0.4nm,0.5s,baz=256,slow=7.9,SNR=2.2 comp=E,0.4nm,0.5s							

BJI ***23*** *21:05:26.3±0.0, 23°.52N×123°.53E, h10km, mb5.4/79, mB5.6/56, Ms6.0/91, Ms7 5.8/86*
TAP ***23*** *21:05:30.7, 23°.53N×123°.42E, h47km±1km, ML6.1, D*
JMA ***23*** *21:05:30.6±0.2, 23°.5N±0°.9×123°.3E±0°.4, h54km±2km, MD6.2/15, MW5.8/15, NEAR ISHIGAKIJIMA ISLAND*
JMA Felt II J1 at NEAR ISHIGAKIJIMA ISLAND.
NEIC ***23*** *21:05:30.6±2.0, 23°.69N±0°.05×123°.37E±0°.06, h10km±1km, mb5.9/456, Ms_20 5.6/363, Mwb5.7/68, Mww5.8, ML6.0(TAP), Error ellipse: s-maj=9.1km s-min=8.4km az=132.0*
MOS ***23*** *21:05:30.5±1.1, 23°.70N×123°.37E, h25km, mb5.9/47, MS5.6/73, Error ellipse: s-maj=5.4km s-min=3.4km az=111.0*
NEIC ***23*** *21:05:30.5, 23°.65N×123°.37E, h15km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.41; $M_{\theta\theta}$3.67; $M_{\phi\phi}$-5.08; $M_{r\theta}$1.87; $M_{\theta\phi}$-0.67; $M_{\phi r}$1.60; Fault plane solution: $M_0$5.21000×10^{17} NP1:ϕ_s141.50000°, δ57.96000°, λ11.88000°. NP2:ϕ_s45.13000°, δ79.95000°, λ147.39000°. Principal axes: T 4.7321, Plg30.0000°, Azm359.0000°; N 0.8557, Plg56.0000°, Azm210.0000°; P -5.5878, Plg15.0000°, Azm97.0000°;*
NIED ***23*** *21:05:30.6, 23°.50N×123°.33E, h54km, MW5.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.18; $M_{\theta\theta}$8.38; $M_{\phi\phi}$-7.20; $M_{r\theta}$3.05; $M_{\theta\phi}$-0.09; $M_{\phi r}$2.91; Fault plane solution: $M_0$8.88000×10^{17} NP1: ϕ_s135.00000°, δ61.00000°, λ-5.00000°. NP2:ϕ_s227.00000°, δ86.00000°, λ-151.00000°.*
IDC ***23*** *21:05:31.5±2.5, 23°.71N×123°.37E, h18km±15km, mb5.3/52, mbtmp5.4/58, ML5.0/7, MS5.4/74 Error ellipse: s-maj=9.9km s-min=8.7km az=47.0*
GCMT ***23*** *21:05:32.6±0.1, 23°.52N±0°.01×123°.33E±0°.01, h20km, MW5.8/159, Moment Tensor Solution. s133, c267; s159, c425; Duration: 1s9 Moment tensor: Scale 10^{17} Nm; M_{rr}1.04±.05; $M_{\theta\theta}$5.23±.05; $M_{\phi\phi}$-6.27±.05; $M_{r\theta}$1.96±.11; $M_{\theta\phi}$-0.57±.04; $M_{\phi r}$1.45±.10; Best double couple: $M_0$6.31300×10^{17} NP1:ϕ_s139.00000°, δ66.00000°, λ7.00000°. NP2:ϕ_s46.00000°, δ83.00000°, λ156.00000°. Principal axes: T 6.0040, Plg22.0000°, Azm0.0000°; N 0.6190, Plg65.0000°, Azm212.0000°; P -6.6230, Plg12.0000°, Azm95.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
NEIC ***23*** *21:05:34, 23°.21N×123°.39E, h14km, Moment Tensor Solution. Duration: 10s0 Moment tensor: Scale 10^{17}Nm; M_{rr}1.52; $M_{\theta\theta}$3.48; $M_{\phi\phi}$-5.00; $M_{r\theta}$2.76; $M_{\theta\phi}$-0.39; $M_{\phi r}$1.93; Fault plane solution: $M_0$5.59000×10^{17} NP1: ϕ_s142.00000°, δ51.00000°, λ15.00000°. NP2:ϕ_s42.00000°, δ78.00000°, λ140.00000°. Principal axes: T 5.4978, Plg36.0000°, Azm354.0000°; N 0.1785, Plg

TWD	**Chiawan**	**1.68 288**	⇓*i*P	**Pn**	**21 05 57.9**	**-1.9**
	baz=278							
TWD			*i*S	**Sn**	**21 06 18.5**	**-2.3**
	baz=278							
ETL	**Fush Village**	**1.68 291**	P	**Pn**	**21 05 58.2**	**-1.6**
	baz=291							
ETL			*e*S	**Sn**	**21 06 18.0**	**-2.9**
	baz=291							
ENA	**Nanau**	**1.70 300**	⇑*i*P	**Pn**	**21 05 59.4**	**-0.6**
	baz=312							
ENA			S	**Sn**	**21 06 20.4**	**-0.8**
	baz=312							
NACB	**Ninganchiao**	**1.71 291**		**Pn**	**21 05 58.4**	**-1.8**
NACB	**Ninganchiao**	**1.71 291**	⇓*i*P	**Pn**	**21 05 58.5**	**-1.8**
	baz=291							
NACB			*e*S	**Sn**	**21 06 19.2**	**-2.4**
	baz=291							
TWC	**Suao**	**1.71 307**	⇓*i*P	**Pn**	**21 05 59.4**	**-0.8**
	baz=307							
TWC			*e*S	**Sn**	**21 06 21.0**	**-0.6**
	baz=307							
ETM	**Tongmen**	**1.74 283**	P	**Pn**	**21 05 58.5**	**-2.1**
	baz=276							
ETM			*e*S	**Sn**	**21 06 18.6**	**-3.7**
	baz=276							
ECBN	**Changbin**	**1.76 262**	P	**Pn**	**21 05 58.8**	**-2.1**
	baz=263							
ECBN			S	**Sn**	**21 06 19.1**	**-3.7**
	baz=263							
EGFH	**Guangfu**	**1.76 273**	P	**Pn**	**21 05 59.1**	**-1.9**
	baz=274							
EGFH			S	**Sn**	**21 06 20.0**	**-2.9**
	baz=274							
HGSD	**Ruisui**	**1.77 268**	⇓P	**Pn**	**21 05 58.6**	**-2.4**
	baz=269							
HGSD			*e*S	**Sn**	**21 06 18.9**	**-4.1**
	baz=269							
ESL	**Shilin**	**1.77 278**	⇓*i*P	**Pn**	**21 05 58.7**	**-2.3**
	baz=279							
ESL			*e*S	**Sn**	**21 06 17.9**	**-5.1**
	baz=279							
EGS		**1.81 315**	*e*P	**Pn**	**21 06 02.3**	**+0.7**
	baz=314							
ETLH	**Xiulin Townshi**	**1.82 291**	P	**Pn**	**21 06 00.4**	**-1.4**
	baz=291							
ETLH			S	**Sn**	**21 06 22.1**	**-2.2**
	baz=291							
NDS	**Dongshan**	**1.82 306**	P	**Pn**	**21 06 01.6**	**-0.2**
	baz=305							
NDS			*e*S	**Sn**	**21 06 23.9**	**-0.4**
	baz=305							
EHY	**Hungye**	**1.86 268**	⇓*i*P	**Pn**	**21 06 00.3**	**-1.9**
	baz=260							
EHY			S	**Sn**	**21 06 22.8**	**-2.4**
	baz=260							
EYUL	**Yuli**	**1.88 263**	P	**Pn**	**21 06 00.5**	**-2.0**
	baz=264							
EYUL			*e*S	**Sn**	**21 06 21.0**	**-4.7**
	baz=264							
ILA	**Ilan**	**1.88 309**	*e*P	**Pn**	**21 06 03.2**	**+0.7**
	baz=309							
NTC	**Toucheng**	**1.88 313**	*e*P	**Pn**	**21 06 02.6**	**+0.1**
	baz=312							
TWB1	**Santiao Chiao**	**1.89 319**	⇓P	**Pn**	**21 06 02.5**	**-0.2**
	baz=328							
TWB1			*e*S	**Sn**	**21 06 25.0**	**-1.0**
	baz=328							
YULB	**Yu-li**	**1.89 265**		**Pn**	**21 06 00.3**	**-2.4**
YULB	**Yu-li**	**1.89 265**	P	**Pn**	**21 06 00.8**	**-1.8**
	baz=266							
YULB			*e*S	**Sn**	**21 06 23.2**	**-2.9**
	baz=266							
TWF1	**Yuli**	**1.90 264**	⇓*i*P	**Pn**	**21 06 00.7**	**-2.1**
	baz=264							
TWF1			S	**Sn**	**21 06 22.9**	**-3.2**
	baz=264							
TWE	**Neicheng**	**1.91 307**	⇓*i*P	**Pn**	**21 06 02.7**	**-0.2**
	baz=307							
TWE			S	**Sn**	**21 06 26.4**	**-0.1**
	baz=307							
LATG	**Datong**	**1.92 300**	*e*P	**Pn**	**21 06 02.5**	**-0.7**
	baz=300							
FULB	**Fuli**	**1.92 259**	⇓*i*P	**Pn**	**21 06 00.7**	**-2.5**
	baz=260							
FULB			S	**Sn**	**21 06 22.4**	**-4.4**
	baz=260							
LDUT	**Ludao**	**1.95 243**	⇓*i*P	**Pn**	**21 06 00.8**	**-2.7**
	baz=244							
LDUT			*e*S	**Sn**	**21 06 22.3**	**-5.1**
	baz=244							
TIPB	**Shuangxi**	**1.96 315**	P	**Pn**	**21 06 03.8**	**0.0**
	baz=315							
TIPB			*e*S	**Sn**	**21 06 27.1**	**-0.8**
	baz=315							
EDH	**Donghe**	**1.97 253**	P	**Pn**	**21 06 01.3**	**-2.5**
	baz=262							
EDH			*e*S	**Sn**	**21 06 23.6**	**-4.4**
	baz=262							
NNSB	**Datong**	**1.99 296**	⇓*i*P	**Pn**	**21 06 03.4**	**-0.7**
	baz=286							
NNSB			S	**Sn**	**21 06 26.4**	**-2.2**
	baz=286							
NNSH	**Datong**	**1.99 296**	P	**Pn**	**21 06 03.4**	**-0.7**
	baz=287							
NNSH			S	**Sn**	**21 06 26.6**	**-1.9**
	baz=287							
WHF	**Hehuan Shan**	**1.99 287**	⇓*i*P	**Pn**	**21 06 02.7**	**-1.7**
	baz=278							
WHF			S	**Sn**	**21 06 26.7**	**-2.3**
	baz=278							
FUSB	**Fushanzhiwuyua**	**1.99 307**	⇓*i*P	**Pn**	**21 06 04.3**	**+0.1**
	baz=306							
NNS	**Nan Shan**	**2.00 296**	⇓*i*P	**Pn**	**21 06 03.5**	**-0.8**
	baz=286							
NNS			S	**Sn**	**21 06 26.7**	**-2.2**
	baz=286							
ECS	**Chishang**	**2.01 257**	P	**Pn**	**21 06 02.5**	**-1.9**
	baz=258							
ECS			S	**Sn**	**21 06 26.8**	**-2.2**
	baz=258							
SXI1	**Grass Mountain**	**2.02 319**	*e*P	**Pn**	**21 06 04.2**	**-0.4**
	baz=318							
OWD	**Renai**	**2.02 281**	P	**Pn**	**21 06 03.0**	**-1.6**
	baz=281							
OWD			*e*S	**Sn**	**21 06 26.4**	**-3.1**
	baz=281							
VWDT	**VWDT**	**2.03 275**	⇓*i*P	**Pn**	**21 06 03.4**	**-1.2**
	baz=276							
FUSS	**Fushou**	**2.04 290**	⇓*i*P	**Pn**	**21 06 04.0**	**-0.9**
	baz=290							
FUSS			*e*S	**Sn**	**21 06 27.9**	**-2.1**
	baz=290							
CHGB	**Renai**	**2.05 284**	⇓*i*P	**Pn**	**21 06 03.7**	**-1.3**
	baz=277							
NWF	**Wu-fen Shan**	**2.06 317**	P	**Pn**	**21 06 05.0**	**-0.1**
	baz=303							
WFSB	**Wu-fen Shan**	**2.06 317**	*e*P	**Pn**	**21 06 05.2**	**+0.2**
	baz=303							
NWLT	**Wulai**	**2.07 306**	P	**Pn**	**21 06 05.5**	**+0.3**
	baz=305							
NWLT			S	**Sn**	**21 06 30.4**	**+0.1**
	baz=305							
JIRB	**Irabujima**	**2.08 53**	⇓P	**Pn**	**21 06 04.7**	**-0.6**
JIRB			⇓*e*S	**Sn**	**21 06 30.2**	**-0.5**
JIRB	**Irabujima**	**2.08 53**	A	A	21 06 04.7	
	comp=E,355nm,6.6s,comp=E,448nm,4.0s							
WUSB	**Renai**	**2.08 282**	⇓P	**Pn**	**21 06 04.2**	**-1.3**
	baz=282							
WUSB			*e*S	**Sn**	**21 06 28.8**	**-2.1**
	baz=282							
TWT	**Tachien**	**2.10 289**	⇓P	**Pn**	**21 06 05.2**	**-0.5**
	baz=289							
TWT			S	**Sn**	**21 06 29.8**	**-1.6**
	baz=289							
YHNB	**Yeheng**	**2.10 302**		**Pn**	**21 06 05.5**	**-0.2**
YHNB	**Yeheng**	**2.10 302**	P	**Pn**	**21 06 05.9**	**+0.2**
YHNB	**Yeheng**	**2.10 302**	⇓*i*P	**Pn**	**21 06 05.4**	**-0.2**
	baz=290							
TDCB	**Techi**	**2.11 289**	⇓*i*P	**Pn**	**21 06 05.1**	**-0.8**
	baz=289							
TDCB			S	**Sn**	**21 06 30.0**	**-1.7**
	baz=289							
NSK	**Sanguang**	**2.12 301**	⇓*i*P	**Pn**	**21 06 05.6**	**-0.3**
	baz=290							
NSK			S	**Sn**	**21 06 30.2**	**-1.6**
	baz=290							
TNOU	**National Taiwa**	**2.13 318**	*e*P	**Pn**	**21 06 05.7**	**-0.2**
	baz=305							
TWA	**Mucha**	**2.13 311**	P	**Pn**	**21 06 05.7**	**-0.3**
	baz=311							
TWA			*e*S	**Sn**	**21 06 31.0**	**-1.0**
	baz=311							
LONT	**Longtian**	**2.15 252**	P	**Pn**	**21 06 04.2**	**-2.0**
	baz=261							
LONT			S	**Sn**	**21 06 29.2**	**-3.1**
	baz=261							
JMJ2	**Miyako jima3**	**2.15 57**	⇓P	**Pn**	**21 06 05.6**	**-0.6**
JMJ2			⇓*e*S	**Sn**	**21 06 31.3**	**-1.0**
JMJ2	**Miyako jima3**	**2.15 57**	A	A	21 06 05.6	
	comp=E,650nm,4.2s,comp=E,664nm,5.8s							
NHDH	**Xindian Distri**	**2.16 310**	*e*P	**Pn**	**21 06 06.9**	**+0.5**
	baz=309							
NHDH			*e*S	**Sn**	**21 06 32.5**	**-0.2**
	baz=309							
JMJ	**Miyako jima 2**	**2.16 55**	P	**Pn**	**21 06 06.7**	**+0.3**
JMJ	**Miyako jima 2**	**2.16 55**	*e*P	**Pn**	**21 06 06.2**	**-0.3**
	baz=53							
JMJ			*e*S	**Sn**	**21 06 31.4**	**-1.3**
	baz=53							
ELDTW	**Lidau**	**2.17 260**	⇓*i*P	**Pn**	**21 06 04.5**	**-2.2**
	baz=261							
ELDTW			S	**Sn**	**21 06 29.6**	**-3.5**
	baz=261							
NHY	**Taipei**	**2.18 312**	*e*P	**Pn**	**21 06 06.6**	**-0.1**
	baz=312							
TTN	**Taitung**	**2.18 248**	⇓*i*P	**Pn**	**21 06 04.9**	**-1.8**
	baz=257							
TTN			S	**Sn**	**21 06 29.8**	**-3.4**
	baz=257							
JIKM	**Ikemajima**	**2.19 52**	⇓P	**Pn**	**21 06 06.5**	**-0.3**
JIKM			⇓S	**Sn**	**21 06 33.2**	**-0.3**
JIKM	**Ikemajima**	**2.19 52**	A	A	21 06 06.5	
	comp=E,525nm,3.5s,comp=E,367nm,4.3s							
TATO	**Taipei**	**2.20 310**		**Pn**	**21 06 06.3**	**-0.6**
TATO	**Taipei**	**2.20 310**	*e*P	**Pn**	**21 06 06.8**	**-0.1**
	baz=309							
SSLB	**Suanglung**	**2.20 276**		**Pn**	**21 06 05.7**	**-1.4**
SSLB	**Suanglung**	**2.20 276**	P	**Pn**	**21 06 05.9**	**-1.1**
SSLB	**Suanglung**	**2.20 276**	⇓P	**Pn**	**21 06 05.7**	**-1.4**
	baz=276							
SSLB			*e*S	**Sn**	**21 06 31.5**	**-2.3**
	baz=276							
TWGBT	**Beinan**	**2.22 251**	⇓*i*P	**Pn**	**21 06 04.9**	**-2.3**
	baz=259							
TWGBT			*e*S	**Sn**	**21 06 31.5**	**-2.6**
	baz=259							
JOGS	**Gusukube**	**2.22 57**	P	**Pn**	**21 06 06.8**	**-0.4**
JOGS	**Gusukube**	**2.22 57**	A	A	21 06 06.8	
	comp=E,798nm,3.4s,comp=E,831nm,3.3s							
TAP	**Taipei**	**2.22 311**	*e*P	**Pn**	**21 06 07.5**	**+0.2**
	baz=311							
TWG	**Pinlang**	**2.22 251**		**Pn**	**21 06 04.9**	**-2.4**
TWG	**Pinlang**	**2.22 251**	⇓*i*P	**Pn**	**21 06 04.8**	**-2.4**
	baz=259							
TWG			*e*S	**Sn**	**21 06 31.4**	**-2.9**
	baz=259							
YM01	**YM01**	**2.25 314**	P	**Pn**	**21 06 07.3**	**-0.4**
	baz=314							
YM01			S	**Sn**	**21 06 34.0**	**-1.0**
	baz=314							
LAY	**Lan-yu**	**2.25 228**	P	**Pn**	**21 06 04.8**	**-2.9**
	baz=238							
LAY			*e*S	**Sn**	**21 06 29.6**	**-5.4**
	baz=238							
LYUB	**Lan-yu**	**2.26 226**	*e*P	**Pn**	**21 06 05.1**	**-2.7**
	baz=238							
DPDB	**Guoxing**	**2.26 282**	*e*P	**Pn**	**21 06 07.3**	**-0.6**
	baz=275							
SMLT	**Sun Moon Lake**	**2.26 278**	⇓*i*P	**Pn**	**21 06 07.1**	**-0.8**
	baz=278							
SMLT			S	**Sn**	**21 06 33.4**	**-2.0**
	baz=278							
WCS	**Beigang Elemen**	**2.28 283**	P	**Pn**	**21 06 07.5**	**-0.6**
	baz=275							
NFF	**Wufeng Townshi**	**2.29 298**	P	**Pn**	**21 06 08.5**	**+0.2**
	baz=297							
NFF			*e*S	**Sn**	**21 06 34.9**	**-1.2**
	baz=297							
TYC	**Yuchr**	**2.31 279**	⇓*i*P	**Pn**	**21 06 07.6**	**-0.7**
	baz=279							
TYC			S	**Sn**	**21 06 34.4**	**-1.8**
	baz=279							
WHP	**Taichung City**	**2.31 288**	P	**Pn**	**21 06 08.6**	**+0.1**
	baz=288							
WHP			*e*S	**Sn**	**21 06 36.2**	**-0.2**
	baz=288							
TWS1	**Kuangyinshan**	**2.33 311**	*e*P	**Pn**	**21 06 08.9**	**+0.3**
	baz=311							
TWS1			*e*S	**Sn**	**21 06 37.1**	**+0.4**
	baz=311							
TWY	**Chenhua**	**2.33 317**	*e*P	**Pn**	**21 06 09.4**	**+0.8**
	baz=304							
ALS	**Alishan**	**2.33 269**	⇓*i*P	**Pn**	**21 06 08.5**	**-0.6**
	baz=269							
ALS			*e*S	**Sn**	**21 06 36.0**	**-1.4**
	baz=269							
NTST	**Danshui**	**2.34 313**	*e*P	**Pn**	**21 06 08.7**	**-0.2**
	baz=312							
PCYT	**Pengchaiyu**	**2.35 331**	P	**Pn**	**21 06 09.4**	**+0.4**
	baz=319							
NSTT	**Nanjuang**	**2.39 297**	⇓*i*P	**Pn**	**21 06 10.2**	**+0.6**
	baz=287							
NSTT			*e*S	**Sn**	**21 06 38.4**	**+0.1**
	baz=287							
STYH	**Taoyuan**	**2.40 261**	P	**Pn**	**21 06 08.6**	**-1.0**
	baz=262							
ECL	**Taimali**	**2.41 247**	⇓*i*P	**Pn**	**21 06 07.4**	**-2.4**
	baz=258							
ECL			*e*S	**Sn**	**21 06 34.3**	**-4.5**
	baz=258							
NCU	**National Centr**	**2.41 306**	P	**Pn**	**21 06 10.6**	**+0.7**
	baz=305							
NCU			*e*S	**Sn**	**21 06 38.9**	**+0.1**
	baz=305							
NCUH	**Zhongli**	**2.41 306**	*e*P	**Pn**	**21 06 10.1**	**+0.2**
	baz=305							
NCUH			*e*S	**Sn**	**21 06 40.7**	**+1.8**
	baz=305							
WJS	**Zhushan**	**2.41 276**	P	**Pn**	**21 06 10.2**	**+0.3**
	baz=277							
WJS			*e*S	**Sn**	**21 06 40.0**	**+1.1**
	baz=277							
CHN5	**Tsauling**	**2.45 271**	P	**Pn**	**21 06 11.2**	**+0.8**
	baz=265							
CHN5			*e*S	**Sn**	**21 06 40.8**	**+0.9**
	baz=265							
WNT	**Mingjian**	**2.46 278**	⇓*i*P	**Pn**	**21 06 11.0**	**+0.5**
	baz=278							
WNT			S	**Sn**	**21 06 40.2**	**+0.2**
	baz=278							
SBCB	**Hsinchu**	**2.47 300**	*e*P	**Pn**	**21 06 11.5**	**+0.8**
	baz=299							
SBCB			*e*S	**Sn**	**21 06 40.6**	**+0.2**
	baz=299							
HSN	**Hsinchu**	**2.49 300**	*e*P	**Pn**	**21 06 12.0**	**+1.1**
	baz=313							
NSY	**Sanyi**	**2.51 290**	⇓*i*P	**Pn**	**21 06 12.1**	**+0.9**
	baz=290							
NSY			S	**Sn**	**21 06 41.9**	**+0.6**
	baz=290							
TCU	**Taichung**	**2.51 284**	⇓*i*P	**Pn**	**21 06 12.1**	**+0.9**
	baz=279							
TCU			S	**Sn**	**21 06 43.0**	**+1.7**
	baz=279							
TPUB	**Ta-pu**	**2.51 264**		**Pn**	**21 06 10.7**	**-0.5**
TPUB	**Ta-pu**	**2.51 264**	P	**Pn**	**21 06 12.1**	**+0.9**
NMLH	**Miaoli**	**2.52 293**	P	**Pn**	**21 06 12.5**	**+1.1**
	baz=292							
NMLH			*e*S	**Sn**	**21 06 42.4**	**+0.8**
	baz=292							
WTP	**Ta-pu**	**2.53 263**	⇓*i*P	**Pn**	**21 06 11.3**	**-0.2**
	baz=263							
WTP			*e*S	**Sn**	**21 06 42.7**	**+0.8**
	baz=263							
CHN4	**Tsaushan**	**2.54 266**	⇓*i*P	**Pn**	**21 06 11.8**	**+0.2**
	baz=266							
CHN4			*e*S	**Sn**	**21 06 43.6**	**+1.6**
	baz=266							
TAW	**Tawu**	**2.56 242**	P	**Pn**	**21 06 10.0**	**-2.0**
	baz=253							
TAW			*e*S	**Sn**	**21 06 38.9**	**-3.7**
	baz=253							
TAWH	**Dawu Township**	**2.58 242**	*e*P	**Pn**	**21 06 10.3**	**-1.9**
	baz=252							
TAWH			*e*S	**Sn**	**21 06 39.4**	**-3.5**
	baz=252							
WDLH	**Douliu**	**2.58 273**	P	**Pn**	**21 06 12.3**	**+0.2**
	baz=273							
WDLH			*e*S	**Sn**	**21 06 45.0**	**+2.0**
	baz=273							
SGST	**Jiashian**	**2.59 260**	⇓*i*P	**Pn**	**21 06 11.1**	**-1.1**
	baz=260							
SGST			*e*S	**Sn**	**21 06 42.2**	**-1.0**
	baz=260							
EAST	**Anshuo**	**2.59 243**	⇓*i*P	**Pn**	**21 06 10.4**	**-1.9**
	baz=253							
EAST			S	**Sn**	**21 06 39.9**	**-3.5**
	baz=253							
WDJ	**Dajia District**	**2.59 288**	*e*P	**Pn**	**21 06 13.0**	**+0.7**
	baz=300							
WDJ			*e*S	**Sn**	**21 06 44.3**	**+1.0**
	baz=300							
WCHH	**Zhanghua**	**2.60 282**	P	**Pn**	**21 06 13.3**	**+0.9**
	baz=281							
WCHH			S	**Sn**	**21 06 44.8**	**+1.3**
	baz=281							
CHN1	**Nanshi**	**2.62 262**	⇓*i*P	**Pn**	**21 06 13.0**	**+0.2**
	baz=257							
CHN1			*e*S	**Sn**	**21 06 44.4**	**+0.4**
	baz=257							
SSD	**Sandimen**	**2.63 252**	⇓*i*P	**Pn**	**21 06 11.4**	**-1.5**
	baz=259							
TSMG	**Majia**	**2.63 251**	*e*P	**Pn**	**21 06 11.5**	**-1.4**
	baz=259							
CHN2	**Minshiung**	**2.64 270**	⇓*i*P	**Pn**	**21 06 13.9**	**+0.9**
	baz=270							
CHN2			*e*S	**Sn**	**21 06 46.2**	**+1.8**
	baz=270							
SNST	**Tainan City**	**2.64 263**	P	**Pn**	**21 06 13.3**	**+0.3**
	baz=263							
SNST			*e*S	**Sn**	**21 06 46.0**	**+1.5**
	baz=263							
TWK	**Hsinying**	**2.64 264**	⇓*i*P	**Pn**	**21 06 13.2**	**+0.1**
	baz=264							
TWK			*e*S	**Sn**	**21 06 45.5**	**+0.9**
	baz=264							
MASBT	**Mashibuluo**	**2.68 250**	⇓P	**Pn**	**21 06 12.1**	**-1.4**
	baz=256							
CHY	**Chiayi**	**2.68 269**	P	**Pn**	**21 06 14.5**	**+0.9**
	baz=269							
CHY			*e*S	**Sn**	**21 06 47.4**	**+1.8**
	baz=269							
SLIU	**Shizi**	**2.71 241**	P	**Pn**	**21 06 12.2**	**-1.7**
	baz=250							
SLIU			*e*S	**Sn**	**21 06 43.5**	**-2.7**
	baz=250							
SCST	**Cishan**	**2.71 256**	*e*P	**Pn**	**21 06 14.8**	**+0.8**
	baz=261							
SCST			*e*S	**Sn**	**21 06 46.2**	**0.0**
	baz=261							
WTK	**Tuku**	**2.72 273**	P	**Pn**	**21 06 14.8**	**+0.8**
	baz=273							
WTK			S	**Sn**	**21 06 47.1**	**+0.8**
	baz=273							
WRL	**Guolierlin Hig**	**2.74 277**	P	**Pn**	**21 06 14.7**	**+0.3**
	baz=277							
WRL			*e*S	**Sn**	**21 06 48.7**	**+1.7**
	baz=277							
SGLT	**Jiouru**	**2.76 253**	P	**Pn**	**21 06 15.1**	**+0.5**
	baz=253							
SSPT	**Xinbi**	**2.78 248**	*e*P	**Pn**	**21 06 14.2**	**-0.7**
	baz=243							
SSPT			*e*S	**Sn**	**21 06 46.9**	**-1.1**
	baz=243							
SCZT	**Fangliau**	**2.78 245**	*e*P	**Pn**	**21 06 13.6**	**-1.3**
	baz=245							
SCZT			*e*S	**Sn**	**21 06 46.0**	**-2.0**
	baz=245							
SMST	**Manzhou Townsh**	**2.79 237**	*e*P	**Pn**	**21 06 13.8**	**-1.2**
	baz=237							
CHN3	**Shinhua**	**2.79 260**	⇓P	**Pn**	**21 06 16.3**	**+1.3**
	baz=272							
CHN3			*e*S	**Sb**	**21 06 52.9**	**-1.4**
	baz=272							
TWM1	**Shoushan**	**2.79 255**	⇓*i*P	**Pn**	**21 06 16.4**	**+1.3**
	baz=255							
TWM1			*e*S	**Sn**	**21 06 50.4**	**+2.1**
	baz=255							
TSEB	**Hengchuen, Pin**	**2.81 234**	P	**Pn**	**21 06 14.5**	**-0.7**
	baz=235							
TSEB			S	**Sn**	**21 06 47.7**	**-0.9**
	baz=235							
SHHT	**Tainan City**	**2.81 259**	P	**Pn**	**21 06 17.4**	**+2.0**
	baz=271							
SHHT			*e*S	**Sn**	**21 06 51.5**	**+2.8**
	baz=271							
ICHU	**Yijhu**	**2.83 266**	*e*P	**Pn**	**21 06 16.0**	**+0.5**
	baz=266							
ICHU			*e*S	**Sn**	**21 06 49.1**	**+0.1**
	baz=266							
TWKBT	**Hengchun**	**2.85 236**	*e*P	**Pn**	**21 06 14.4**	**-1.4**
	baz=236							
TWK1	**Hengchun**	**2.85 236**	P	**Pn**	**21 06 14.6**	**-1.3**
	baz=236							
TWK1			S	**Sn**	**21 06 46.8**	**-2.9**
	baz=236							
WSL	**Shuilin Townsh**	**2.86 270**	*e*P	**Pn**	**21 06 16.1**	**+0.1**
	baz=270							
WSF	**Szhu**	**2.87 272**	P	**Pn**	**21 06 16.3**	**+0.2**
	baz=272							
WSF			*e*S	**Sn**	**21 06 50.9**	**+0.8**
	baz=272							
HEN	**Hengchun**	**2.87 238**	⇓*i*P	**Pn**	**21 06 15.2**	**-0.9**
	baz=230							
HEN			S	**Sn**	**21 06 47.2**	**-2.9**
	baz=230							
CHN8	**Yiju**	**2.89 266**	⇓P	**Pn**	**21 06 16.7**	**+0.3**
	baz=266							
CHN8			S	**Sn**	**21 06 51.1**	**+0.5**
	baz=266							
SNJT	**Kaohsiung City**	**2.89 254**	*e*P	**Pn**	**21 06 17.3**	**+0.9**
	baz=255							
TAI1	**Yung-k'ang**	**2.92 260**	*e*P	**Pn**	**21 06 18.0**	**+1.3**
	baz=260							
TAI1			*e*S	**Sn**	**21 06 53.3**	**+2.1**
	baz=260							
SCLT	**Jiali**	**2.92 263**	P	**Pn**	**21 06 17.8**	**+0.9**
	baz=273							
SCLT			S	**Sn**	**21 06 52.1**	**+0.7**
	baz=273							
KAU	**Kaohsiung**	**2.97 251**	*e*P	**Pn**	**21 06 19.8**	**+2.2**
	baz=251							
KAU			*e*S	**Sn**	**21 06 55.5**	**+2.8**
	baz=251							
WLCH	**Liuqiu**	**3.00 247**	⇑*e*P	**Pn**	**21 06 20.3**	**+2.5**
	baz=242							
WLCH			*e*S	**Sn**	**21 06 55.7**	**+2.5**
	baz=242							
WDGT	**Dungji**	**3.40 265**	⇓*i*P	**Pn**	**21 06 23.2**	**-0.3**
	baz=265							
WDGT			*e*S	**Sn**	**21 07 00.2**	**-3.1**
	baz=265							
PHUB	**P'eng-hu**	**3.46 270**	P	**Pn**	**21 06 24.1**	**-0.2**
	baz=270							
PNG	**Penghu**	**3.48 271**	⇓*i*P	**Pn**	**21 06 24.4**	**-0.2**
	baz=282							
PNG			S	**Sn**	**21 07 04.5**	**-0.7**
	baz=282							
VCHM	**Qimei**	**3.62 265**	*e*P	**Pn**	**21 06 25.8**	**-0.7**
	baz=265							
VWUC	**VWUC**	**3.83 292**	⇓P	**Pn**	**21 06 28.3**	**-1.0**
	baz=292							
MSUT	**Lienchiang**	**4.04 310**	*e*P	**Pn**	**21 06 31.8**	**-0.4**
	baz=309							
PTMZ	**Houxiangcun**	**4.12 292**	P	**Pn**	**21 06 32.2**	**-1.1**
	baz=291							
PTMZ			*e*S	**Sn**	**21 07 17.0**	**-4.1**
	baz=291							
JKE	**Kume jima 2**	**4.15 48**	A	A	21 06 34.0	
	comp=E,45nm,4.6s,comp=E,42nm,4.3s							
XPSS	**Dashiqiu**	**4.40 320**	*e*P	**Pn**	**21 06 36.5**	**-0.6**
	baz=311							
LYJJ	**Jianjiangzhen**	**4.40 313**	*e*P	**Pn**	**21 06 36.5**	**-0.7**
	baz=302							
QZH	**Quanzhou**	**4.55 288**	⇓*i*Pn	**Pn**	**21 06 38.0**	**-1.2**
QZH			Sn	**Sn**	**21 07 26.8**	**-4.8**
QZH			LR	LR		
	comp=N,91μm,10.9s							
QZH			LR	LR		
	comp=E,78μm,10.0s							
QZH			LR	LR		
	comp=Z,105μm,10.5s							
KNM	**Kinmen**	**4.57 282**	P

KNM eS Sn 21 07 31.4 -0.8
baz=280
KNMB Chin-men Tao 4.62 282 Pn Pn 21 06 39.0 -1.2
KNMB Chin-men Tao 4.62 282 eP Pn 21 06 39.0 -1.2
baz=281
JAGN Aguni-jima 4.63 49 A A 21 06 40.7
comp=E,64nm,6.4s,comp=E,76nm,5.5s
MHZQ Yeshan 4.66 304 eP Pn 21 06 39.9 -0.9
baz=303
JJT3 Tamagusuku3 4.77 57 A A 21 06 42.6
comp=E,159nm,4.2s,comp=E,314nm,4.1s
AXDP Jialang 5.08 286 eP Pn 21 06 45.6 -1.0
baz=285
ZPLA Ao Xicun 5.14 275 eP Pn 21 06 46.3 -1.1
baz=274
JNTH Nagotoyohara 5.15 54 A A 21 06 47.9
comp=E,65nm,5.5s,comp=E,54nm,12.3s
JIH Iheya 5.42 50 A A 21 06 51.7
comp=E,64nm,9.6s,comp=E,41nm,4.3s
JOW Kunigami 5.52 53 Pn Pn 21 06 50.1 -2.4
70nm,0.3s,baz=156,slow=17,SNR=110
JOW Sn Sn 21 07 51.8 -3.6
38nm,0.3s,baz=128,slow=25,SNR=1.6
209nm,0.3s
JOW Kunigami 5.52 53 Pn Pn 21 06 49.8 -2.8
JOW Kunigami 5.52 53 P Pn 21 06 50.8 -1.8
JOW Kunigami 5.52 53 eP Pn 21 06 49.5 -3.0
baz=53
JOW Kunigami 5.52 53 A A 21 06 53.0
comp=E,71nm,8.3s,comp=E,61nm,7.5s
JYRO Yoronjima 5.76 52 A A 21 06 56.4
comp=E,70nm,10.2s,comp=E,43nm,8.0s
SXFK Yanhouchang 5.89 300 eP Pn 21 06 56.4 -1.3
baz=298
JOKE Okinoerabujima 6.04 50 A A 21 07 00.4
comp=E,37nm,9.3s,comp=E,35nm,4.8s
JTK Tokunoshima 6.57 49 A A 21 07 07.7
comp=E,24nm,5.3s,comp=E,19nm,16.8s
VDOS Pratas Island 6.77 246 eP Pn 21 07 09.7 -0.1
baz=246
JAMN Amaminishikomi 7.01 47 A A 21 07 13.9
comp=E,21nm,5.4s,comp=E,16nm,8.7s
JAM Amami Oshima 7.41 48 A A 21 07 19.4
comp=E,26nm,6.5s,comp=E,25nm,9.8s
JMZ Minamidaito 2 7.50 71 A A 21 07 20.4
comp=E,41nm,5.6s,comp=E,48nm,6.3s
JKDJ Kitadaitoujima 7.60 70 A A 21 07 21.8
comp=E,25nm,5.8s,comp=E,31nm,8.3s
JZK Kikaishima 7.60 50 A A 21 07 22.1
comp=E,95nm,8.3s,comp=E,152nm,5.8s
JTAJ Takarajima 7.64 42 A A 21 07 22.7
comp=E,24nm,6.5s,comp=E,26nm,5.2s
SSE Sheshan 7.73 346 Pn Pn 21 07 23.1 +0.1
JNN Nakanoshima 8.54 42 A A 21 07 35.2
comp=E,19nm,9.3s,comp=E,26nm,6.5s
MCO Taipa Grande 9.14 263 P Pn 21 07 43.0 +0.6
JKC Kuchinoerabu 9.18 40 A A 21 07 44.0
comp=E,14nm,8.7s,comp=E,16nm,6.8s
GZH Guangzhou 9.21 269 P Pn 21 07 38.5 -4.7
GZH S Sn 21 09 22.4 -3.9
GZH smax smax
comp=N,1μm,1.1s
GZH smax smax
comp=E,910nm,0.8s
JYAK Yakushimahirau 9.21 42 A A 21 07 44.3
comp=E,8.0nm,24.2s,comp=E,11nm,10.7s
NJ2 Nanjing 9.33 336 ⇓iP Pn 21 07 44.6 -0.3
NJ2 pP 21 07 47.8
NJ2 S Sn 21 09 27.4 -1.9
NJ2 sS 21 09 35.5
NJ2 pmax pmax
comp=Z,280nm,0.7s
NJ2 LR LR
comp=N,70μm,14.3s
NJ2 LR LR
comp=E,51μm,14.7s
NJ2 LR LR
comp=Z,66μm,14.8s
JMTN Minamitane 9.57 43 A A 21 07 49.2
comp=E,13nm,21.8s,comp=E,14nm,6.7s
GQP Guinayangan 9.66 185⇓eP Pn 21 07 49.4 0.0
TGY Tagaytay City 9.70 194 Pn Pn 21 07 52.3 +2.3
124nm,0.3s,baz=45,slow=3.0,SNR=49
TGY Sn Sn 21 09 36.6 -1.9
88nm,0.3s,baz=353,slow=11,SNR=2.2
TGY LR LR 21 11 35.1
comp=Z,22μm,21.7s,baz=24,slow=37
JTN Tanegashima 3 9.79 42 A A 21 07 52.3
comp=E,12nm,5.9s,comp=E,11nm,7.9s
JSJ Shimokoshiki 9.85 34 A A 21 07 53.1
comp=E,5.0nm,6.6s,comp=E,8.0nm,8.5s
JSU Suzuyama 10.11 37 Pn Pn 21 07 52.8 -2.8
JSU Suzuyama 10.11 37 A A 21 07 56.6
comp=E,7.0nm,12.8s,comp=E,7.0nm,10.1s
JTSR Tashiro 2 10.12 40 A A 21 07 56.7
comp=E,6.0nm,7.1s,comp=E,8.0nm,11.9s
JFU Fukue jima 2 10.22 27 A A 21 07 58.2
comp=E,6.0nm,8.4s,comp=E,7.0nm,11.3s
PGP Puerto Galera 10.27 193⇑iP Pn 21 07 57.3 -0.6
CNSH ChangSha 10.44 298 ⇓P Pn 21 07 56.9 -3.2
CNSH S Sn 21 09 54.3 -2.2
CNSH LR LR
comp=N,42μm,14.9s
CNSH LR LR
comp=E,87μm,15.3s
CNSH LR LR
comp=Z,71μm,16.1s
JNAR Kushima--Naru 10.59 40 A A 21 08 03.0
comp=E,9.0nm,14.5s,comp=E,10.0nm,6.8s
WHN Wuhan 10.60 313 ⇓P Pn 21 08 04.3 +2.0
WHN S Sn 21 10 01.6 +1.1
WHN pmax pmax
comp=Z,96nm,0.9s
WHN LR LR
comp=N,105μm,13.4s
WHN LR LR
comp=E,94μm,13.2s
WHN LR LR
comp=Z,112μm,16.5s
NGSJ Nagasakinomoza 10.67 31 A A 21 08 04.2
comp=E,6.0nm,10.0s,comp=E,7.0nm,8.3s
JZO Okuchi 10.67 35 A A 21 08 04.2
comp=E,7.0nm,11.4s,comp=E,5.0nm,9.4s
JHD Hondo 10.69 33 A A 21 08 04.5
comp=E,7.0nm,7.8s,comp=E,8.0nm,8.8s
JNKG Nichinankitago 10.75 40 A A 21 08 05.2
comp=E,9.0nm,8.0s,comp=E,7.0nm,6.2s
JTZ Takazaki 10.76 38 A A 21 08 05.3
comp=E,4.0nm,10.7s,comp=E,5.0nm,10.2s
JIU3 Izumi3 11.10 35 A A 21 08 10.0
comp=E,4.0nm,11.9s,comp=E,4.0nm,13.3s
JUR Ureshino 11.12 30 A A 21 08 10.3
comp=E,8.0nm,11.1s,comp=E,6.0nm,9.7s
JTSN Tsuno 11.25 38 A A 21 08 11.9
comp=E,8.0nm,6.5s,comp=E,7.0nm,6.2s
JTA Tamana 11.29 32 A A 21 08 12.6
comp=E,7.0nm,17.6s,comp=E,6.0nm,6.5s
JHHC Hyugahichiya 11.47 38 A A 21 08 14.9
comp=E,8.0nm,7.8s,comp=E,5.0nm,7.5s
JKIT Kitakata 11.51 37 A A 21 08 15.4
comp=E,11nm,7.1s,comp=E,4.0nm,6.2s
JNU Nakatsue 11.59 33 Pn Pn 21 08 14.8 -1.1
3.5nm,0.3s,baz=226,slow=5.0,SNR=10
33nm,0.7s
JNU Nakatsue 11.59 33 Pn 21 08 13.8 -2.1
JNU Nakatsue 11.59 33 P Pn 21 08 17.0 +1.1
JNU Nakatsue 11.59 33 A A 21 08 16.6
comp=E,5.0nm,11.6s,comp=E,4.0nm,15.0s
JFI Itaya 11.60 31 A A 21 08 16.7
comp=E,8.0nm,10.0s,comp=E,7.0nm,9.5s
JII Iki 11.62 27 A A 21 08 17.0
comp=E,5.0nm,8.9s,comp=E,4.0nm,11.3s
JSKE Saikikamae 11.88 37 A A 21 08 20.4
comp=E,6.0nm,9.2s,comp=E,3.0nm,26.9s
GULI GuiLin 11.95 281 ⇓P Pn 21 08 11.6 -9.2
JTSM Tsushimamitsus 11.95 25 A A 21 08 21.4
comp=E,6.0nm,18.2s,comp=E,4.0nm,15.4s
RCP Roxas 11.96 183⇑eP Pn 21 08 22.5 +1.4
JUS Usuki 12.00 36 A A 21 08 22.0
comp=E,13nm,7.3s,comp=E,8.0nm,7.3s
JFA Akaike 12.03 31 A A 21 08 22.4
comp=E,5.0nm,16.3s,comp=E,6.0nm,17.3s
JBEP Beppuamama 12.03 34 A A 21 08 22.4
comp=E,14nm,7.2s,comp=E,10.0nm,5.5s
JTU Tsushima 12.12 24 Pn Pn 21 08 24.4 +1.3
JTU Tsushima 12.12 24 A A 21 08 23.7
comp=E,5.0nm,18.9s,comp=E,5.0nm,13.7s

NAWB Namwon 12.32 16 Pn Pn 21 08 26.7 +0.9
JKI Kunimi 12.35 34 A A 21 08 26.6
comp=E,9.0nm,8.1s,comp=E,6.0nm,12.0s
UWA2 Uwa jima 2 12.60 38 A A 21 08 29.9
comp=E,3.0nm,16.0s,comp=E,5.0nm,6.4s
JTY Toyota 12.61 31 A A 21 08 30.1
comp=E,6.0nm,8.0s,comp=E,5.0nm,21.5s
JNA Nagahama 12.77 37 A A 21 08 32.3
comp=E,3.0nm,12.7s,comp=E,4.0nm,15.1s
JKD Kudamatsu 12.83 34 A A 21 08 33.1
comp=E,6.0nm,6.6s,comp=E,4.0nm,15.9s
JHGM Hagimishima 13.07 30 A A 21 08 36.3
comp=E,8.0nm,11.9s,comp=E,7.0nm,7.3s
TJN Taejon 13.22 14 Pn Pn 21 08 37.2 -0.9
TJN Taejon 13.22 14 P Pn 21 08 37.2 -0.9
TJN Taejon 13.22 14 P Pn 21 08 40.4 +2.3
JHIK Hikimi 13.24 33 A A 21 08 38.5
comp=E,6.0nm,8.6s,comp=E,5.0nm,14.3s
JHM Kurahashi 13.24 35 A A 21 08 38.4
comp=E,4.0nm,7.6s,comp=E,4.0nm,15.4s
QIZ Qiongzhong 13.37 253 Pn Pn 21 08 42.1 +1.8
QIZ Qiongzhong 13.37 253 P Pn 21 08 41.0 +0.7
QIZ S Sn 21 11 10.3 +1.8
QIZ pmax pmax
comp=Z,74nm,0.9s
QIZ pmax pmax
comp=Z,1μm,8.0s
QIZ LR LR
comp=N,41μm,18.9s
QIZ LR LR
comp=E,15μm,16.5s
QIZ LR LR
comp=Z,22μm,18.9s
QIZ Qiongzhong 13.37 253 P Pn 21 08 42.9 +2.6
JHT Toyohira 13.59 34 A A 21 08 43.0
comp=E,7.0nm,6.7s,comp=E,4.0nm,17.1s
JMN Monobe 13.70 40 A A 21 08 44.3
comp=E,3.0nm,10.5s,comp=E,3.0nm,9.3s
TIA Tai'an 13.70 338 ⇓P Pn 21 08 45.3 +0.7
TIA sP P 21 08 57.8 +4.6
TIA S Sn 21 11 22.1 +5.9
TIA pmax pmax
comp=Z,79nm,0.9s
TIA pmax pmax
comp=Z,4μm,5.7s
TIA LR LR
comp=N,29μm,14.1s
TIA LR LR
comp=E,34μm,12.9s
TIA LR LR
comp=Z,48μm,16.0s
TBP Tagbilaran 13.82 178⇑iP Pn 21 08 46.3 0.0
TBP iS S 21 11 41.7 +0.3
KSCHJ Chungju 13.84 16 Pn Pn 21 08 46.5 -0.1
JGT2 ShimaneMisato 13.95 33 A A 21 08 47.7
comp=E,7.0nm,14.4s,comp=E,4.0nm,12.6s
JJG Jouge 13.96 36 A A 21 08 47.8
comp=E,3.0nm,14.9s,comp=E,4.0nm,13.3s
ENH Enshi 14.04 301 Pn Pn 21 08 50.8 +1.4
INCN Inchon 14.15 11 Pn Pn 21 08 50.1 -0.7
INCN Inchon 14.15 11 P Pn 21 08 50.1 -0.7
INCN Inchon 14.15 11 P Pn 21 08 54.0 +3.2
JJS Sakaide 14.19 38 A A 21 08 50.7
comp=E,2.0nm,6.8s,comp=E,4.0nm,7.0s
JHS Saijyo 14.21 35 Pn Pn 21 08 49.6 -2.1
KSRS Korea Array 14.38 15 Pn Pn 21 08 54.0 0.0
3.1nm,0.3s,baz=197,slow=10,SNR=77
KSRS LR LR 21 15 13.6
comp=Z,30μm,18.3s,baz=195,slow=41
42nm,0.7s
KSRS Korea Array 14.38 15 P Pn 21 08 54.0 0.0
PPR Puerto Princes 14.41 199⇓iP Pn 21 08 52.0 -2.5
JISK Izumosakaura 14.47 33 A A 21 08 54.4
comp=E,5.0nm,14.1s,comp=E,4.0nm,6.9s
LYN LuoYang 14.48 321 ⇑P Pn 21 08 55.8 +0.4
LYN sP P 21 09 02.8 +0.8
LYN S Sn 21 11 42.0 +6.6
LYN pmax pmax
comp=Z,20nm,0.9s
LYN pmax pmax
comp=Z,2μm,4.5s
LYN LR LR
comp=N,48μm,13.7s
LYN LR LR
comp=E,16μm,16.2s
LYN LR LR
comp=Z,36μm,17.2s
JNM Ikuma 14.55 33 A A 21 08 55.5
comp=E,5.0nm,18.1s
JKR Kurayoshi 14.87 35 A A 21 08 59.6
comp=E,4.0nm,7.9s,comp=E,5.0nm,9.2s
DL2 Dalian 15.35 355 P P 21 09 10.1 -1.5
DL2 S Sn 21 12 04.4 +7.8
DL2 pmax pmax
comp=Z,260nm,0.9s
DL2 pmax pmax
comp=Z,4μm,7.7s
DL2 LR LR
comp=N,30μm,15.8s
DL2 LR LR
comp=E,18μm,13.2s
DL2 LR LR
comp=Z,28μm,15.6s
GYA Guiyang 15.39 284 ⇓P Pn 21 09 09.5 +1.7
GYA S Sn 21 12 02.9 +5.0
GYA PcP PcP 21 14 11.0 -0.6
GYA pmax pmax
comp=Z,62nm,1.4s
GYA pmax pmax
comp=Z,3μm,8.1s
GYA LR LR
comp=N,28μm,9.0s
GYA LR LR
comp=E,25μm,11.9s
GYA LR LR
comp=Z,36μm,16.7s
BIPH Bislig 15.57 169⇑⇑eP Pn 21 09 08.9 -1.1
HNS HongShan 15.65 334 ⇑⇑P Pn 21 09 11.6 +0.7
HNS PP pwP 21 09 28.0 +3.1
HNS S Sn 21 12 07.5 +3.7
HNS SS S 21 12 22.1 +3.4
HNS pmax pmax
comp=Z,260nm,1.3s
HNS pmax pmax
comp=Z,4μm,8.6s
HNS LR LR
comp=N,28μm,13.5s
HNS LR LR
comp=E,36μm,16.7s
HNS LR LR
comp=Z,43μm,16.9s
JKY Yasaka 15.76 38 A A 21 09 11.0
comp=E,3.0nm,7.5s,comp=E,3.0nm,11.4s
CTBH Cotabato--PC H 16.28 177⇑eP P 21 09 20.6 -1.4
XAN Xi'an 16.37 313 eP Pn 21 09 20.8 +0.6
XAN S Sn 21 12 21.5 +0.1
XAN pmax pmax
comp=Z,280nm,1.5s
XAN pmax pmax
comp=Z,2μm,10.3s
XAN LR LR
comp=N,53μm,14.4s
XAN LR LR
comp=E,31μm,18.6s
XAN LR LR
comp=Z,39μm,16.5s
DAV Davao City (W) 16.55 172 Pn P 21 09 24.0 -1.0
36nm,0.3s,baz=1.5,slow=10.0,SNR=13
DAV LR LR 21 15 28.7
comp=Z,15μm,21.2s,baz=334,slow=36
248nm,0.5s
DAV Davao City (W) 16.55 172 Pn 21 09 23.5 +0.9
KCP Kidapawan 16.56 174 ⇓iP P 21 09 25.9 +0.7
INU Inuyama 16.69 42 Pn Pn 21 09 23.1 -1.1
INU Inuyama 16.69 42 P P 21 09 27.3 +0.8
139nm,0.9s
TIY Taiyuan 16.91 329 ⇑P P 21 09 30.3 +1.3
TIY S Sn 21 12 37.5 +2.9
TIY pmax pmax
comp=Z,110nm,0.9s
TIY pmax pmax
comp=Z,4μm,5.3s
TIY LR LR
comp=N,35μm,15.5s
TIY LR LR
comp=E,9μm,14.9s

TIY LR LR
comp=Z,34μm,15.5s
JAOM Aogashimamukai 16.97 55 A A 21 09 26.1
comp=E,22nm,4.9s,comp=E,17nm,6.1s
JGF Kuroka 17.07 42 Pn Pn 21 09 27.6 -1.4
JHCJ Hachijojimakas 17.28 53 A A 21 09 30.0
comp=E,8.0nm,5.7s,comp=E,11nm,6.5s
JHJ Hachijo jima 2 17.29 53 Pn P 21 09 34.5 +1.4
5.7nm,0.3s,baz=218,slow=12,SNR=9.0
JHJ LR LR 21 15 48.8
comp=Z,9μm,20.6s,baz=247,slow=36
JHJ2 Mitsune 17.31 53 Pn Pn 21 09 28.7 -3.4
JHJ2 IAmb IAmb 21 09 40.3
comp=Z,1μm,1.0s
JHJ2 Mitsune 17.31 53 P P 21 09 36.0 +2.6
JHJ2 Mitsune 17.31 53 A A 21 09 30.4
comp=Z,13nm,5.2s,comp=Z,16nm,6.3s
JHH2 Haha-jima-NKT2 17.32 76 A A 21 09 30.2
comp=Z,6.0nm,9.3s,comp=Z,6.0nm,6.8s
CBIJ Chichi jima 17.39 74 A A 21 09 31.0
comp=Z,8.0nm,11.4s,comp=Z,5.0nm,5.9s
JCJ Chichijima 17.39 74 P Pn 21 09 32.5 -0.5
comp=Z,11nm,0.3s,baz=250,slow=4.5,SNR=31
JCJ LR LR 21 15 24.9
comp=Z,7μm,21.5s,baz=262,slow=34
comp=Z,606nm,0.9s
JCJ Chichijima 17.39 74 Pn Pn 21 09 30.9 -2.1
JCJ Chichijima 17.39 74 P P 21 09 34.5 +0.3
GSPH General Santos 17.46 175⇑eP P 21 09 37.7 +2.5
BJT Baijiatuau 17.48 341 Pn 21 09 33.4 -0.7
BJT Baijiatuau 17.48 341 P Pn 21 09 33.4 -0.7
BJT pmax pmax
comp=Z,211nm,1.0s
BJI Beijing 17.50 341 P Pn 21 09 34.6 +0.3
BJI S Sn 21 12 51.3 +2.7
BJI pmax pmax
comp=Z,170nm,1.2s
BJI pmax pmax
comp=Z,4μm,9.6s
BJI LR LR
comp=Z,6μm,15.2s
BJI LR LR
comp=Z,9μm,16.3s
BJI LR LR
comp=Z,33μm,14.9s
JSKK Shikinejimakit 17.52 49 A A 21 09 33.0
comp=Z,10.0nm,12.2s,comp=Z,11nm,7.6s
JMKN Mikurajimanish 17.55 51 A A 21 09 33.3
comp=Z,14nm,8.5s,comp=Z,12nm,8.7s
JNIO Niijimaoohara 17.57 49 A A 21 09 33.7
comp=Z,13nm,5.7s
JIM2 Oshima 3 17.88 48 A A 21 09 37.5
comp=Z,8.0nm,7.1s,comp=Z,8.0nm,8.7s
JOD2 Odawara 2 17.96 46 A A 21 09 42.0
comp=Z,4.0nm,6.3s,comp=Z,3.0nm,9.1s
MAJO Matsushiro 18.20 41 P Pn 21 09 41.7 -1.4
MAJO Matsushiro 18.20 41 iP Pn 21 09 42.1 -1.0
MAJO pmax pmax
comp=Z,134nm,0.8s
MAJO Matsushiro 18.20 41 P P 21 09 44.1 +0.9
SNY Shenyang 18.20 1 ⇓P Pn 21 09 42.9 -0.1
SNY S Sn 21 13 08.3 +2.7
SNY pmax pmax
comp=Z,200nm,0.8s
SNY pmax pmax
comp=Z,4μm,6.4s
SNY LR LR
comp=Z,9μm,10.6s
SNY LR LR
comp=Z,33μm,14.5s
SNY LR LR
comp=Z,29μm,19.1s
MJAR Matsushiro Arr 18.20 41 P Pn 21 09 42.6 -0.5
comp=Z,1.4nm,0.3s,baz=217,slow=8.7,SNR=59
MJAR LR LR 21 16 55.7
comp=Z,17μm,21.8s,baz=218,slow=38
comp=Z,55nm,0.8s
MJAR Matsushiro Arr 18.20 41 P Pn 21 09 42.0 -1.1
MJB9 Matsu-Tunnel 18.20 41 P Pn 21 09 41.7 -1.4
DLV T Lat 18.26 233 P 21 09 44.4 +0.3
DLV T Lat 18.26 233 P P 21 09 47.3 +3.2
JHU Hanno 18.44 45 A A 21 09 45.7
comp=Z,2.0nm,11.2s,comp=Z,2.0nm,10.0s
JGK Kuni 18.48 42 A A 21 09 46.1
comp=Z,3.0nm,8.1s,comp=Z,3.0nm,4.9s
KMI Kunming 18.84 279 ⇓P Pn 21 09 52.3 +1.2
KMI pP pP 21 09 53.9 -1.0
KMI S Sn 21 13 21.3 -0.4
KMI pmax pmax
comp=Z,62nm,0.8s
KMI pmax pmax
comp=Z,6μm,7.7s
KMI LR LR
comp=Z,36μm,17.2s
KMI LR LR
comp=Z,20μm,18.1s
KMI LR LR
comp=Z,24μm,21.3s
CD2 Chengdu 18.87 297 P P 21 09 51.1 +0.4
CD2 sP sP 21 09 57.8 +0.4
CD2 S Sn 21 13 15.0 -7.1
CD2 sS sS 21 13 32.8 +1.2
CD2 pmax pmax
comp=Z,300nm,0.8s
CD2 LR LR
comp=Z,52μm,14.0s
CD2 LR LR
comp=Z,60μm,15.5s
MYLDM Lahad Datu 18.88 195 Pn 21 09 51.8 +0.5
JAG Ashikaga 18.90 44 A A 21 09 49.9
comp=Z,2.0nm,6.6s
JSD Sado 19.25 38 P 21 09 54.1 -0.6
JYT Yasato 19.26 45 P P 21 09 53.3 -1.5
PZH PanZhiHua 19.79 283 ⇓P P 21 10 02.0 +1.2
PZH pP pP 21 10 05.3 +0.1
PZH PP PnPn 21 10 24.3 +8.0
PZH S S 21 13 41.3 -1.9
PZH sS Sn 21 13 46.3 +1.9
PZH pmax pmax
comp=Z,80nm,1.2s
PZH pmax pmax
comp=Z,1μm,6.7s
PZH LR LR
comp=Z,32μm,15.7s
PZH LR LR
comp=Z,28μm,14.5s
PZH LR LR
comp=Z,31μm,15.6s
HHC Hu-ho-hao-te 19.87 333 eP P 21 10 01.8 +0.3
HHC PP PnPn 21 10 18.8 +1.5
HHC S S 21 13 45.8 +1.3
HHC SS SnSn 21 14 06.4 +5.8
HHC pmax pmax
comp=Z,540nm,1.4s
HHC pmax pmax
comp=Z,4μm,5.4s
HHC LR LR
comp=Z,40μm,17.5s
HHC LR LR
comp=Z,46μm,15.4s
HHC LR LR
comp=Z,77μm,15.8s
SGSI Sangihe 19.89 174 P P 21 10 02.3 +0.5
comp=Z,4μmcomp=Z,442nm,0.8s
SPMM Sapulut 19.90 201 P Pn 21 10 03.0 -0.6
MSHR Mys Shultsa 20.03 17 iP P 21 10 02.4 -0.8
MSHR pmax pmax
comp=Z,35nm,0.7s
MSHR MLR MLR
comp=Z,7μm,15.0s
CN2 Changchun 20.25 4 eP P 21 10 03.4 -2.1
CN2 S S 21 13 46.8 -5.0
CN2 pmax pmax
comp=Z,1μm,13.1s
CN2 LR LR
comp=Z,22μm,14.0s
CN2 LR LR
comp=Z,32μm,14.0s
CN2 LR LR
comp=Z,12μm,17.0s
BTO Baotou 20.35 330 eP P 21 10 07.9 +1.1
BTO S Sn 21 13 58.3 +0.7
BTO LR LR
comp=Z,107μm,15.9s
BTO LR LR
comp=Z,101μm,15.3s

JMM	**Marumori**	**20.63**	**42**	P	**P**	**21 10 07.1**	**-2.6**
VLA	**Vladivostok**	**20.73**	**18**	*i* P	**P**	**21 10 10.0**	**-0.8**
VLA				pmax	pmax		
	comp=Z,77nm,1.0s						
VLA				MLR	MLR		
	comp=Z,17μm,19.0s						
LZH	**Lanzhou**	**20.97**	**311**	*e*P	**P**	**21 10 15.0**	**+1.4**
LZH				sP	pwP	21 10 23.3	+0.7
LZH				S	**S**	**21 14 04.6**	**-2.0**
LZH				sS	pS	21 14 17.3	+0.8
LZH				pmax	pmax		
	comp=Z,470nm,1.2s						
LZH				LR	LR		
	comp=Z,25μm,13.2s						
LZH				LR	LR		
	comp=Z,44μm,12.6s						
LZH				LR	LR		
	comp=Z,52μm,16.8s						
JOG3	**Oga3**	**21.03**	**36**	A	A	21 10 16.6	
	comp=Z,3.0nm,6.1s						
JYK	**Kaneyama**	**21.05**	**39**	A	A	21 10 12.9	
	comp=Z,3.0nm,3.9s,comp=Z,2.0nm,8.5s						
XLT	**XiLinHaoTe**	**21.14**	**345**	⇑ *i* P	**P**	**21 10 14.3**	**-0.9**
XLT				pP	pP	21 10 18.5	-1.0
XLT				sP	sP	21 10 20.9	-1.0
XLT				PP	**PnPn**	**21 10 35.6**	**+0.9**
XLT				SS	Sn	21 14 35.5	+19
XLT				pmax	pmax		
	comp=Z,110nm,1.3s						
XLT				LR	LR		
	comp=Z,3μm,15.1s						
XLT				LR	LR		
	comp=Z,11μm,14.7s						
XLT				LR	LR		
	comp=Z,35μm,15.3s						
JYW	**Yuwa**	**21.38**	**38**	A	A	21 10 16.2	
	comp=Z,4.0nm,6.7s,comp=Z,6.0nm,3.4s						
JRG	**Rokugo**	**21.53**	**39**	A	A	21 10 17.6	
	comp=Z,3.0nm,6.3s,comp=Z,4.0nm,3.9s						
JMK	**Ichinoseki**	**21.58**	**41**	A	A	21 10 18.1	
	comp=Z,4.0nm,4.7s						
MDJ	**Mudanjiang**	**21.60**	**12**	P	**P**	**21 10 19.8**	**-0.4**
MDJ				pP	pP	21 10 22.8	-1.6
MDJ				sP	sP	21 10 24.0	-2.7
MDJ				S	**S**	**21 14 19.6**	**+1.0**
MDJ				sS	pS	21 14 25.0	-1.7
MDJ				pmax	pmax		
	comp=Z,85nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,430nm,7.3s						
MDJ				LR	LR		
	comp=Z,22μm,19.9s						
MDJ				LR	LR		
	comp=Z,39μm,13.5s						
MDJ				LR	LR		
	comp=Z,34μm,19.1s						
MDJ	**Mudanjiang**	**21.60**	**12**	P	**P**	**21 10 19.7**	**-0.4**
USA0B	**Ussuriysk Arra**	**21.76**	**17**	P	**P**	**21 10 19.9**	**-1.9**
USA0B	**Ussuriysk Arra**	**21.76**	**17**	P	**P**	**21 10 19.9**	**-1.9**
USA0B				pmax	pmax		
	comp=Z,49nm,1.0s						
USRK	**Ussuriysk Ar.**	**21.76**	**17**	P	**P**	**21 10 19.9**	**-2.0**
	comp=Z,21nm,0.7s,baz=197,slow=9.3,SNR=26 comp=Z,21nm,0.7s						
USRK	**Ussuriysk Ar.**	**21.76**	**17**	P	**P**	**21 10 19.6**	**-2.2**
JNTW	**Noshirotokiwa**	**21.86**	**36**	A	A	21 10 20.9	
	comp=Z,7.0nm,4.9s						
OFUJ	**Ofunato**	**21.93**	**41**	A	A	21 10 21.6	
	comp=Z,5.0nm,5.1s,comp=Z,3.0nm,12.6s						
JSZI	**Iwateshizukuis**	**21.94**	**39**	A	A	21 10 21.7	
	comp=Z,5.0nm,3.2s,comp=Z,9.0nm,2.8s						
JOM	**Ohasama**	**21.96**	**40**	A	A	21 10 21.9	
	comp=Z,4.0nm,6.5s,comp=Z,2.0nm,3.0s						
PBKT	**Sadao Pong**	**22.13**	**256**	P	**P**	**21 10 24.8**	**-1.2**
PBKT				IAmb	IAmb	21 10 29.1	
	comp=Z,362nm,1.0s						
BNX	**BinXian**	**22.36**	**7**	⇓ P	**P**	**21 10 25.5**	**-2.7**
BNX				pP	**pP**	**21 10 29.3**	**-3.2**
BNX				S	**S**	**21 14 26.5**	**-6.5**
BNX				sS	**pS**	**21 14 39.5**	**+0.6**
BNX				pmax	pmax		
	comp=Z,340nm,0.8s						
BNX				pmax	pmax		
	comp=Z,1μm,6.2s						
BNX				LR	LR		
	comp=Z,16μm,16.3s						
BNX				LR	LR		
	comp=Z,25μm,14.6s						
BNX				LR	LR		
	comp=Z,20μm,17.7s						
TOLI2	**Tolitoli**	**22.47**	**187**	P	**P**	**21 10 29.8**	**+0.1**
TOLI2				IAmb	IAmb	21 10 49.1	
	comp=Z,623nm,1.2s						
TOLI2	**Tolitoli**	**22.47**	**187**	P	**P**	**21 10 30.8**	**+1.2**
GUMO	**Guam**	**22.66**	**112**	P	**P**	**21 10 31.9**	**+0.2**
	comp=Z,1μm,1.0s,baz=209,slow=5.1,SNR=28						
GUMO				LR	LR	21 19 30.6	
	comp=Z,6μm,19.2s,baz=288,slow=37 comp=Z,1μm,1.0s						
GUMO	**Guam**	**22.66**	**112**	P	**P**	**21 10 33.6**	**+1.9**
GUMO	**Guam**	**22.66**	**112**	P	**P**	**21 10 33.6**	**+1.9**
GUMO				pmax	pmax		
	comp=Z,1μm,1.0s						
GUMO				MLR	MLR		
	comp=Z,9μm,18.0s						
JANG	**Nango**	**22.69**	**38**	A	A	21 10 29.0	
	comp=Z,1.0nm,5.7s,comp=Z,2.0nm,5.2s						
JTM	**Tenmabayashi**	**22.72**	**37**	P	**P**	**21 10 29.6**	**-2.5**
JTM				IAmb	IAmb	21 10 47.2	
	comp=Z,325nm,0.8s						
KMSI	**Cibinong**	**22.87**	**178**	P	**P**	**21 10 34.4**	**+0.5**
	comp=Z,6μmcomp=Z,560nm,0.9s						
MRSI	**Marisa**	**23.00**	**184**	P	**P**	**21 10 34.4**	**-0.8**
	comp=Z,10μmcomp=Z,7μmcomp=Z,458nm,1.0s						
TNTI	**Ternate**	**23.00**	**170**	P	**P**	**21 10 34.2**	**-1.1**
TNTI	**Ternate**	**23.00**	**170**	P	**P**	**21 10 35.9**	**+0.7**
	comp=Z,5μmcomp=Z,12μmcomp=Z,849nm,1.0s						
TNTI	**Ternate**	**23.00**	**170**	P	**P**	**21 10 36.6**	**+1.4**
CHTO	**Chiang Mai**	**23.23**	**263**	P	**P**	**21 10 36.6**	**-1.0**
CHTO				IAmb	IAmb	21 11 02.6	
	comp=Z,308nm,1.1s						
CHTO	**Chiang Mai**	**23.23**	**263**	P	**P**	**21 10 36.6**	**-1.0**
CHTO				pmax	pmax		
	comp=Z,308nm,1.2s						
CHTO				MLR	MLR		
	comp=Z,11μm,19.0s						
CHTO	**Chiang Mai**	**23.23**	**263**	P	**P**	**21 10 39.0**	**+1.4**
CM31	**Chiang Mai Arr**	**23.33**	**262**	P	**P**	**21 10 38.5**	**-0.1**
CM31				IAmb	IAmb	21 10 58.5	
	comp=Z,293nm,1.2s						
CM31	**Chiang Mai Arr**	**23.33**	**262**	P	**P**	**21 10 40.3**	**+1.7**
	SNR=34						
CM31				S	**S**	**21 14 57.4**	**+6.9**
CMAR	**Chiang Mai Arr**	**23.33**	**262**	P	**P**	**21 10 39.7**	**+1.1**
	comp=Z,19nm,0.7s,baz=66,slow=6.9,SNR=72						
CMAR				PcP	**PcP**	**21 14 25.8**	**+0.2**
	comp=Z,5.2nm,0.9s,baz=64,slow=1.3,SNR=6.6						
CMAR				LR	LR	21 19 56.0	
	comp=Z,11μm,20.4s,baz=80,slow=37 comp=Z,19nm,0.7s						
CMAR	**Chiang Mai Arr**	**23.33**	**262**	P	**P**	**21 10 38.4**	**-0.2**
MPSI	**Mapaga**	**23.34**	**189**	P	**P**	**21 10 39.5**	**+0.8**
	comp=Z,9μmcomp=Z,4μmcomp=Z,309nm,1.2s						
TEY	**Ternei**	**23.98**	**24**	*e*P	P	21 10 30.6	-14
TEY				*e*		21 10 42.5	
TEY				*e*		21 14 45.4	
TEY				MLR	MLR		
	comp=E,200nm,15.0s						
JEW	**Eniwo**	**24.37**	**34**	P	**P**	**21 10 46.8**	**-1.4**
JEW				IAmb	IAmb	21 11 09.5	
	comp=Z,488nm,1.1s						
APSI	**Ampana**	**24.39**	**184**	P	**P**	**21 10 48.4**	**-0.3**
	comp=Z,5μmcomp=Z,8μmcomp=Z,987nm,1.1s						
LBMI	**Labuha**	**24.40**	**170**	P	**P**	**21 10 50.6**	**+1.8**
	comp=Z,6μmcomp=Z,12μmcomp=Z,1μm,1.2s						
LUWI	**Luwuk**	**24.48**	**181**	P	**P**	**21 10 48.1**	**-1.3**
LUWI	**Luwuk**	**24.48**	**181**	P	**P**	**21 10 49.1**	**-0.3**
	comp=Z,7μmcomp=Z,11μmcomp=Z,735nm,1.1s						
LUWI	**Luwuk**	**24.48**	**181**	P	**P**	**21 10 50.2**	**+0.8**
SMKI	**Samarinda**	**24.61**	**195**	P	P	21 11 00.9	+10
ERM	**Erimo**	**24.70**	**37**	P	**P**	**21 10 50.3**	**-1.0**
ERM				IAmb	IAmb	21 11 08.1	
	comp=Z,264nm,0.8s						
ERM	**Erimo**	**24.70**	**37**	IAMs_20	IAMs_20	21 21 23.7	
	comp=Z,14μm,19.0s						
ERM	**Erimo**	**24.70**	**37**	P	**P**	**21 10 50.3**	**-1.0**
ERM				pmax	pmax		
	comp=Z,264nm,0.8s						
ERM				MLR	MLR		
	comp=Z,14μm,19.0s						
ERM	**Erimo**	**24.70**	**37**	P	**P**	**21 10 50.7**	**-0.6**
LKP	**Lekhapani**	**25.09**	**284**	*e*P	**P**	**21 10 56.2**	**+1.2**
LKP				IAmb	IAmb	21 11 13.1	
	comp=Z,607nm,0.9s						
KSM	**Kuching**	**25.35**	**212**	P	**P**	**21 10 56.9**	**-0.5**
KSM				IAmb	IAmb	21 11 12.4	
	comp=Z,467nm,1.2s						
KSM	**Kuching**	**25.35**	**212**	P	**P**	**21 10 58.0**	**+0.7**
KSM	**Kuching**	**25.35**	**212**	P	**P**	**21 10 58.1**	**+0.7**
GTA	**Gaotai**	**25.42**	**314**	⇑ P	**P**	**21 10 57.3**	**-0.7**
GTA				sP	pwP	21 11 11.8	+4.4
GTA				S	**S**	**21 15 25.3**	**+1.3**
GTA				pmax	pmax		
	comp=Z,170nm,1.2s						
GTA				pmax	pmax		
	comp=Z,760nm,5.3s						
GTA				LR	LR		
	comp=Z,16μm,20.7s						
GTA				LR	LR		
	comp=Z,12μm,22.5s						
GTA				LR	LR		
	comp=Z,19μm,18.9s						
BKB	**Balikpapan**	**25.47**	**195**	P	**P**	**21 10 56.1**	**-2.3**
BKB				IAmb	IAmb	21 11 18.3	
	comp=Z,474nm,1.0s						
SANI	**Sanana**	**25.60**	**174**	P	**P**	**21 10 59.5**	**-0.1**
	comp=Z,8μmcomp=Z,8μmcomp=Z,696nm,1.0s						
SANI	**Sanana**	**25.60**	**174**	P	**P**	**21 10 59.0**	**-0.6**
MTKI	**Muara Teweh, K**	**25.72**	**200**	P	**P**	**21 11 01.8**	**+1.1**
	comp=Z,3μmcomp=Z,6μmcomp=Z,433nm,1.3s						
HIA	**Hailar**	**25.80**	**355**	IAmb	IAmb	21 11 15.6	
	comp=Z,195nm,1.1s						
HIA	**Hailar**	**25.80**	**355**	IAMs_20	IAMs_20	21 22 46.7	
	comp=Z,18μm,18.0s						
ASAJ	**Asahikawa**	**25.87**	**33**	LR	LR	21 23 04.8	
	comp=Z,8μm,18.0s,baz=242,slow=41						
JKA	**Kamikawa-asahi**	**25.87**	**33**	P	**P**	**21 11 00.9**	**-1.0**
JKA				IAmb	IAmb	21 11 05.3	
	comp=Z,114nm,0.7s						
STKI	**Sintang**	**26.06**	**208**	P	**P**	**21 11 05.2**	**+1.4**
	comp=Z,2μmcomp=Z,117nm,1.4s						
KLR	**Kul'dur**	**26.45**	**12**	P	**P**	**21 11 04.7**	**-2.4**
	comp=Z,93nm,0.9s,baz=222,slow=7.3,SNR=133						
KLR				LR	LR	21 21 59.6	
	comp=Z,15μm,20.9s,baz=192,slow=38 comp=Z,93nm,0.9s						
KLR	**Kul'dur**	**26.45**	**12**	*c i* P	**P**	**21 11 06.5**	**-0.5**
KLR				MLR	MLR		
	comp=Z,11μm,13.0s						
KOHI	**KOHIMA**	**26.64**	**281**	*e*P	**P**	**21 11 08.7**	**-0.5**
KOHI				IAmb	IAmb	21 11 33.0	
	comp=Z,113nm,1.2s						
TTSI	**Tana Toraja**	**26.68**	**188**	P	**P**	**21 11 10.0**	**+0.6**
	comp=Z,5μmcomp=Z,3μmcomp=Z,240nm,1.3s						
ZIRO	**ZIRO**	**26.87**	**285**	*e*P	**P**	**21 11 13.8**	**+2.5**
NLAI	**Namlea**	**26.90**	**172**	P	**P**	**21 11 13.3**	**+1.9**
	comp=Z,9μmcomp=Z,1μm,0.9s						
SRIT	**Nakonsritamara**	**27.18**	**241**	P	**P**	**21 11 14.8**	**+0.9**
MSAI	**Masohi**	**27.30**	**168**	P	**P**	**21 11 16.9**	**+1.9**
	comp=Z,776nmcomp=Z,94nm,1.0s						
ULN	**Ulaanbaatar**	**27.50**	**336**	P	**P**	**21 11 15.0**	**-1.7**
ULN	**Ulaanbaatar**	**27.50**	**336**	IAMs_20	IAMs_20	21 23 24.3	
	comp=Z,19μm,20.0s						
ULN	**Ulaanbaatar**	**27.50**	**336**	P	**P**	**21 11 15.0**	**-1.7**
ULN				pmax	pmax		
	comp=Z,64nm,1.1s						
ULN				MLR	MLR		
	comp=Z,19μm,20.0s						
AAI	**Ambon**	**27.51**	**169**	P	**P**	**21 11 15.1**	**-1.7**
	comp=Z,3μmcomp=Z,218nm,0.9s						
YUK	**Yuzh-Kuril'sk**	**27.53**	**37**	*i* P	**P**	**21 11 16.3**	**-0.5**
BAKI	**Biak**	**27.57**	**152**	P	**P**	**21 11 18.2**	**+0.8**
	comp=Z,3μmcomp=Z,130nm,1.0s						
SPSI	**Sidrap Palu**	**27.59**	**188**	P	**P**	**21 11 17.8**	**+0.2**
	comp=Z,4μmcomp=Z,2μmcomp=Z,176nm,1.2s						
GOMU	**GeErMu**	**27.64**	**304**	P	**P**	**21 11 19.3**	**+0.9**
GOMU				pP	pP	21 11 22.6	-0.6
GOMU				sP	sP	21 11 26.1	+0.8
GOMU				S	**S**	**21 15 56.1**	**-3.5**
GOMU				pmax	pmax		
	comp=Z,37nm,1.1s						
GOMU				pmax	pmax		
	comp=Z,340nm,5.3s						
GOMU				LR	LR		
	comp=Z,25μm,17.3s						
GOMU				LR	LR		
	comp=Z,8μm,17.3s						
GOMU				LR	LR		
	comp=Z,9μm,17.9s						
SONM	**Songino Array**	**27.72**	**335**	P	**P**	**21 11 16.9**	**-1.8**
	comp=Z,134nm,1.1s,baz=147,slow=8.3,SNR=290						
SONM				PcP	**PcP**	**21 14 36.0**	**+0.8**
	comp=Z,2.4nm,0.5s,baz=168,slow=4.0,SNR=1.9						
SONM				ScP	**ScP**	**21 18 12.7**	**-2.3**
	comp=Z,9.1nm,1.1s,baz=151,slow=3.3,SNR=5.8						
SONM				LR	LR	21 23 42.4	
	comp=Z,24μm,19.9s,baz=143,slow=40 comp=Z,134nm,1.1s						
SONM	**Songino Array**	**27.72**	**335**	P	**P**	**21 11 16.6**	**-2.1**
SONM				IAmb	IAmb	21 11 20.6	
	comp=Z,481nm,1.7s						
FAKI	**Fak Fak**	**27.73**	**161**	P	**P**	**21 11 17.8**	**-1.0**
FAKI				IAmb	IAmb	21 11 30.9	
	comp=Z,244nm,1.0s						
FAKI	**Fak Fak**	**27.73**	**161**	P	**P**	**21 11 18.5**	**-0.3**
	comp=Z,4μmcomp=Z,3μmcomp=Z,261nm,1.1s						
FAKI	**Fak Fak**	**27.73**	**161**	P	**P**	**21 11 19.2**	**+0.4**
TEZP	**TEZPUR**	**27.80**	**283**	*e*P	**P**	**21 11 19.8**	**+0.4**
TEZP				IAmb	IAmb	21 11 38.1	
	comp=Z,354nm,1.3s						
BNSI	**Bone**	**27.98**	**187**	P	**P**	**21 11 22.6**	**+1.5**
	comp=Z,2μmcomp=Z,108nm,1.6s						
YSS	**Yuzh-Sakhalins**	**28.05**	**29**	P	**P**	**21 11 20.6**	**-0.9**
YSS				IAmb	IAmb	21 11 45.1	
	comp=Z,138nm,0.8s						
YSS				IAMs_20	IAMs_20	21 23 12.4	
	comp=Z,15μm,19.0s						
YSS	**Yuzh-Sakhalins**	**28.05**	**29**	*e*P	**P**	**21 11 20.9**	**-0.5**
YSS				*e*S	**S**	**21 16 04.5**	**-0.5**
YSS				pmax	pmax		
	comp=Z,700nm,7.2s						
YSS				pmax	pmax		
	comp=Z,130nm,1.0s						
YSS	**Yuzh-Sakhalins**	**28.05**	**29**	P	**P**	**21 11 21.1**	**-0.3**
AZL	**Aizawl**	**28.06**	**277**	*e*P	**P**	**21 11 21.9**	**0.0**
AZL				IAmb	IAmb	21 11 37.3	
	comp=Z,165nm,1.4s						
BBKI	**Banjar Baru**	**28.12**	**198**	P	**P**	**21 11 19.8**	**-2.6**
SRPI	**Serui, Papua**	**28.23**	**152**	P	**P**	**21 11 24.0**	**+0.6**
	comp=Z,126nm,1.1s						
KULM	**Kulim**	**28.44**	**234**	P	**P**	**21 11 24.6**	**-0.6**
KULM	**Kulim**	**28.44**	**234**	P	**P**	**21 11 28.0**	**+2.8**
PBKI	**Pangkalan Bun**	**28.49**	**205**	P	**P**	**21 11 26.7**	**+1.1**
	comp=Z,2μmcomp=Z,76nm,1.2s						
KAPI	**Kappang**	**28.63**	**187**	P	**P**	**21 11 26.6**	**-0.3**
	comp=Z,12nm,0.7s,baz=15,slow=6.3,SNR=10						
KAPI				LR	LR	21 23 25.7	
	comp=Z,2μm,18.8s,baz=360,slow=37 comp=Z,12nm,0.7s						
KAPI	**Kappang**	**28.63**	**187**	P	**P**	**21 11 26.1**	**-0.8**
KAPI				IAmb	IAmb	21 11 41.6	
	comp=Z,226nm,1.2s						
KAPI	**Kappang**	**28.63**	**187**	P	**P**	**21 11 26.1**	**-0.8**
KAPI				pmax	pmax		
	comp=Z,226nm,1.2s						
KAPI				MLR	MLR		
	comp=Z,2μm,21.0s						
KAPI	**Kappang**	**28.63**	**187**	P	**P**	**21 11 27.2**	**+0.3**
BNDI	**Bandanaira**	**28.65**	**166**	P	**P**	**21 11 29.1**	**+2.1**
SHL	**Shillong**	**28.65**	**281**	P	**P**	**21 11 26.9**	**-0.4**
SHL	**Shillong**	**28.65**	**281**	P	**P**	**21 11 26.9**	**-0.4**
SHL				pmax	pmax		
	comp=Z,99nm,0.8s						
SHL	**Shillong**	**28.65**	**281**	P	**P**	**21 11 28.9**	**+1.7**
	SNR=40						
SHL	**Shillong**	**28.65**	**281**	*e*P	**P**	**21 11 27.5**	**+0.2**
SHL				IAmb	IAmb	21 11 42.1	
	comp=Z,179nm,1.3s						
IPM	**Ipoh**	**28.71**	**232**	P	**P**	**21 11 27.1**	**-0.5**
IPM	**Ipoh**	**28.71**	**232**	P	**P**	**21 11 28.0**	**+0.3**
IPM	**Ipoh**	**28.71**	**232**	P	**P**	**21 11 28.0**	**+0.3**
MYKOM	**Kota Tinggi**	**28.74**	**224**	P	**P**	**21 11 27.4**	**-0.5**
MYKOM				IAmb	IAmb	21 11 43.3	
	comp=Z,204nm,0.8s						
MYKOM	**Kota Tinggi**	**28.74**	**224**	P	**P**	**21 11 30.0**	**+2.1**
GUWA	**GUWAHATI**	**28.80**	**282**	*e*P	**P**	**21 11 30.2**	**+1.8**
GUWA				IAmb	IAmb	21 11 45.6	
	comp=Z,232nm,1.2s						
BKSI	**Bulukumba**	**28.89**	**187**	P	**P**	**21 11 25.7**	**-3.5**
BBSI	**Bau Bau**	**28.89**	**182**	P	**P**	**21 11 29.1**	**-0.1**
	comp=Z,290nmcomp=Z,22nm,0.9s						
GRNR	**Gornyy**	**28.99**	**17**	*e*P	**P**	**21 11 27.0**	**-2.7**
GRNR				MLR	MLR		
	comp=E,3μm,17.0s						
GRNR				MLR	MLR		
	comp=N,10μm,14.0s						
GRNR				MLR	MLR		
	comp=Z,13μm,15.0s						
TPRI	**Tanjung Pinang**	**28.99**	**222**	P	**P**	**21 11 30.5**	**+0.4**
	comp=Z,5μmcomp=Z,531nm,0.8s						
LSA	**Lhasa**	**29.36**	**289**	P	**P**	**21 11 34.7**	**+0.8**
LSA	**Lhasa**	**29.36**	**289**	P	**P**	**21 11 35.6**	**+1.8**
LSA				pmax	pmax		
	comp=Z,33nm,0.7s						
LSA				LR	LR		
	comp=Z,5μm,13.5s						
LSA				LR	LR		
	comp=Z,3μm,9.6s						
LSA				LR	LR		
	comp=Z,5μm,11.0s						
LSA	**Lhasa**	**29.36**	**289**	P	**P**	**21 11 34.7**	**+0.8**
LSA				pmax	pmax		
	comp=Z,113nm,1.1s						
LSA				MLR	MLR		
	comp=Z,25μm,18.0s						
LSA	**Lhasa**	**29.36**	**289**	P	**P**	**21 11 35.4**	**+1.5**
CIT	**Chita**	**29.38**	**348**	*e*P	**P**	**21 11 32.8**	**-0.5**
CIT				*e*		21 12 27.3	
CIT				*e*		21 12 45.9	
CIT				*e*		21 14 38.0	
CIT				pmax	pmax		
	comp=Z,159nm,2.0s						
KUR	**Kuril'sk**	**29.39**	**37**	*e*P	**P**	**21 11 31.9**	**-1.5**
KUR				*e*S	**S**	**21 16 26.4**	**+0.2**
KUR				MLR	MLR		
	comp=Z,13μm,21.0s						
KUR				MLR	MLR		
	comp=N,12μm,20.0s						
KUR				MLR	MLR		
	comp=E,6μm,20.0s						
UGL	**Uglegorsk**	**29.42**	**25**	*e*P	**P**	**21 11 30.5**	**-3.1**
UGL				*e*S	**S**	**21 16 19.0**	**-7.5**
UGL				smax	smax		
	comp=E,100nm,0.4s						
UGL				smax	smax		
	comp=N,100nm,0.5s						
SMPI	**Sarmi**	**29.48**	**147**	P	**P**	**21 11 34.2**	**-0.3**
	comp=N,2μmcomp=N,2μmcomp=N,115nm,1.5s						
BSSI	**Bau Bau, Buton**	**29.67**	**186**	P	**P**	**21 11 32.9**	**-3.2**
DSRI	**Dabo**	**30.07**	**220**	P	**P**	**21 11 40.5**	**+0.8**
	comp=N,783nmcomp=N,70nm,1.0s						
ZEA	**Zeya**	**30.26**	**5**	*e*P	**P**	**21 11 39.8**	**-1.2**
ZEA				*e*		21 12 36.6	
ZEA				*e*S	**S**	**21 16 34.0**	**-5.7**
ZEA				pmax	pmax		
	comp=N,300nm,1.5s						
ZEA				pmax	pmax		
	comp=Z,300nm,1.3s						
ZEA				pmax	pmax		
	comp=E,40nm,1.5s						
ZEA				pmax	pmax		
	comp=N,110nm,1.3s						
ZEA				pmax	pmax		
	comp=Z,200nm,1.1s						
ZEA				pmax	pmax		
	comp=E,100nm,5.3s						
ZEA				pmax	pmax		
	comp=N,600nm,7.6s						
ZEA				pmax	pmax		
	comp=Z,800nm,7.7s						
ZEA				smax	smax		
	comp=E,800nm,16.5s						
ZEA				MLR	MLR		
	comp=E,8μm,15.0s						
ZEA				MLR	MLR		
	comp=N,10μm,14.0s						
ZEA				MLR	MLR		
	comp=Z,9μm,16.0s						
PPBI	**Pangkal Pinang**	**30.58**	**216**	P	**P**	**21 11 43.2**	**-1.0**
	comp=Z,5μmcomp=Z,122nm,1.4s						
GENI	**Genyem**	**30.74**	**146**	P	**P**	**21 11 46.3**	**+0.7**
	comp=Z,3μmcomp=Z,3μmcomp=Z,130nm,1.2s						
ZAK	**Zakamensk**	**30.99**	**335**	*e*P	**P**	**21 11 44.6**	**-3.0**
ZAK				pmax	pmax		
	comp=Z,40nm,1.4s						
TYV	**Tymovskoe**	**31.09**	**24**	*e*P	**P**	**21 11 48.1**	**-0.2**
TYV				*e*S	**S**	**21 16 56.4**	**+3.8**
TYV				pmax	pmax		
	comp=Z,36nm,0.8s						
TYV				pmax	pmax		
	comp=Z,400nm,8.1s						
TYV				smax	smax		
	comp=N,600nm,7.6s						
TYV				smax	smax		
	comp=E,400nm,7.6s						
TYV				smax	smax		
	comp=E,19nm,1.2s						
TSI	**Tuntungan**	**31.17**	**234**	P	**P**	**21 11 49.3**	**-0.1**
	comp=E,157nm,1.3s						
LHMI	**Lhok Sumawe**	**31.30**	**238**	P	**P**	**21 11 48.8**	**-1.8**
LHMI				IAmb	IAmb	21 12 06.4	
	comp=Z,185nm,0.7s						
LHMI	**Lhok Sumawe**	**31.30**	**238**	P	**P**	**21 11 50.7**	**+0.1**
	comp=Z,3μmcomp=Z,270nm,0.7s						
LHMI	**Lhok Sumawe**	**31.30**	**238**	P	**P**	**21 11 51.7**	**+1.1**
PSI	**Prapat**	**31.38**	**232**	P	**P**	**21 11 51.5**	**+0.1**
PSI				pmax	pmax		
	comp=Z,86nm,1.0s						
PSI				MLR	MLR		
	comp=Z,4μm,20.0s						
PSI	**Prapat**	**31.38**	**232**	P	**P**	**21 11 52.4**	**+1.0**
RPSI	**Rantau Prapat**	**31.45**	**232**	P	**P**	**21 11 51.5**	**-0.4**
GTK	**Tadong**	**31.53**	**284**	*e*P	**P**	**21 11 54.5**	**+1.7**
GTK				IAmb	IAmb	21 12 09.5	
	comp=Z,101nm,0.9s						
JMBI	**JAMBI**	**31.55**	**220**	P	**P**	**21 11 53.6**	**+0.9**
	comp=Z,6μmcomp=Z,694nm,0.9s						
BKNI	**Bangkinang**	**31.67**	**226**	P	**P**	**21 11 55.2**	**+1.4**
BKNI	**Bangkinang**	**31.67**	**226**	P	**P**	**21 11 54.8**	**+1.0**
	comp=Z,3μmcomp=Z,340nm,0.9s						
KCSI	**Kotacane, Aceh**	**31.75**	**235**	P	**P**	**21 11 54.1**	**-0.5**
	comp=Z,59nm,0.8s						
PMBI	**Palembang**	**31.96**	**217**	P	**P**	**21 11 57.2**	**+0.9**
PMBI	**Palembang**	**31.96**	**217**	P	P	21 12 11.9	+16
MMRI	**Maumere**	**32.03**	**182**	P	**P**	**21 11 56.8**	**-0.1**
MMRI	**Maumere**	**32.03**	**182**	P	**P**	**21 11 57.6**	**+0.7**
	comp=Z,3μmcomp=Z,13μmcomp=Z,1μm,1.4s						
MMRI	**Maumere**	**32.03**

MOY	**Mondy**	**32.90**	**334**	*e*P		**P**	**21 12 02.3**	**-2.1**
MOY				pmax		pmax			
	comp=Z,190nm,1.5s								
SMRI	**Semarang**	**32.95**	**204**	P		**P**	**21 12 05.5**	**+0.5**
SMRI	**Semarang**	**32.95**	**204**	P		**P**	**21 12 06.8**	**+1.8**
	comp=Z,211nm,1.3s								
SMRI	**Semarang**	**32.95**	**204**	P		**P**	**21 12 08.1**	**+3.1**
DNP	**Denpasar**	**33.03**	**195**	P		P	21 12 20.8	+15
JAGI	**Jajag, Banyuwa**	**33.09**	**197**	P		**P**	**21 12 06.3**	**+0.1**
JAGI	**Jajag, Banyuwa**	**33.09**	**197**	P		**P**	**21 12 08.0**	**+1.8**
KRJI	**Kerinci**	**33.24**	**223**	P		**P**	**21 12 08.6**	**+1.0**
	comp=Z,11μmcomp=Z,1μm,1.1s								
WBSI	**Waikabubak, Su**	**33.24**	**187**	P		**P**	**21 12 06.7**	**-0.8**
	comp=Z,3μmcomp=Z,302nm,0.7s								
JCJI	**Jatiwangi**	**33.31**	**208**	P		**P**	**21 12 11.0**	**+2.8**
	comp=Z,408nm,1.1s								
RAMN	**Ramite**	**33.33**	**284**	*e*P		**P**	**21 12 09.5**	**+0.9**
	comp=Z,134nm,0.9s								
PWJI	**Pagerwojo**	**33.37**	**201**	P		**P**	**21 12 09.2**	**+0.6**
	comp=Z,2μmcomp=Z,114nm,0.8s								
GSI	**Gunungsitoli**	**33.38**	**232**	P		**P**	**21 12 07.0**	**-1.8**
GSI	**Gunungsitoli**	**33.38**	**232**	P		**P**	**21 12 08.2**	**-0.6**
	comp=Z,114nm,1.0s								
GSI	**Gunungsitoli**	**33.38**	**232**	P		**P**	**21 12 08.3**	**-0.6**
WOJI	**Wonogiri, Jawa**	**33.50**	**203**	P		**P**	**21 12 10.9**	**+1.1**
	comp=Z,2μmcomp=Z,271nm,1.2s								
KLI	**Kotabumi**	**33.53**	**215**	P		**P**	**21 12 11.6**	**+1.5**
	comp=Z,6μmcomp=Z,653nm,1.1s								
JIRN	**Jiri**	**33.67**	**285**	*e*P		**P**	**21 12 12.5**	**+0.8**
	comp=Z,118nm,0.8s								
BASI	**Baing, Sumba**	**33.70**	**185**	P		**P**	**21 12 11.7**	**+0.2**
	comp=Z,1μmcomp=Z,4μmcomp=Z,416nm,0.8s								
YOGI	**Yogyakarta**	**33.71**	**204**	P		**P**	**21 12 12.5**	**+0.9**
	comp=Z,5μmcomp=Z,467nm,1.4s								
UGM	**Wanagama**	**33.71**	**203**	P		**P**	**21 12 11.1**	**-0.5**
UGM	**Wanagama**	**33.71**	**203**	P		**P**	**21 12 07.6**	**-4.1**
UGM	**Wanagama**	**33.71**	**203**	P		**P**	**21 12 13.8**	**+2.1**
BLSI	**Bandar Lampung**	**33.76**	**214**	P		P	21 12 25.9	+14
GUN	**Gumba**	**33.94**	**285**	*e*P		**P**	**21 12 14.9**	**+0.9**
	comp=Z,172nm,0.9s								
SBJI	**Serang**	**33.97**	**212**	P		P	21 12 28.1	+14
DBJI	**Dramaga**	**34.05**	**210**	P		**P**	**21 12 15.6**	**+1.0**
	comp=Z,5μmcomp=Z,293nm,1.4s								
LWLI	**Liwa**	**34.09**	**216**	P		**P**	**21 12 16.8**	**+1.7**
	comp=Z,3μmcomp=Z,282nm,0.9s								
MNAI	**Manna**	**34.15**	**218**	P		**P**	**21 12 14.8**	**-0.7**
SISI	**Saibi**	**34.19**	**227**	P		**P**	**21 12 16.4**	**+0.5**
	comp=Z,125nm,1.1s								
BOK	**Bokaro**	**34.24**	**278**	*e*P		**P**	**21 12 17.4**	**+1.1**
BOK				IAmb		IAmb	21 12 32.2		
	comp=Z,210nm,1.3s								
KASI	**Kota Agung**	**34.28**	**215**	P		**P**	**21 12 18.2**	**+1.6**
	comp=Z,2μmcomp=Z,241nm,1.0s								
PKI	**Pulchoki**	**34.36**	**285**	*e*P		**P**	**21 12 17.5**	**-0.2**
PKIN	**Phulchoki**	**34.38**	**285**	*e*P		**P**	**21 12 18.8**	**+1.1**
CMJI	**Cimerak**	**34.40**	**207**	P		**P**	**21 12 18.4**	**+0.8**
	comp=Z,64nm,0.8s								
CNJI	**Cibinong**	**34.55**	**209**	P		**P**	**21 12 19.7**	**+0.8**
	comp=Z,2μmcomp=Z,293nm,1.0s								
MANU	**Manus Island**	**34.57**	**134**	P		**P**	**21 12 18.9**	**-0.3**
DMN	**Daman**	**34.63**	**285**	*e*P		**P**	**21 12 20.1**	**+0.2**
BOD	**Bodaibo**	**34.87**	**351**	*e*P		**P**	**21 12 19.1**	**-2.1**
BOD				pmax		pmax			
	comp=Z,36nm,1.6s								
GKN	**Gorkha**	**35.03**	**286**	*e*P		**P**	**21 12 23.2**	**-0.1**
	comp=Z,61nm,0.6s								
WMQ	**Urumqi**	**35.51**	**313**	⇓P		**P**	**21 12 27.4**	**+0.3**
WMQ				sP		sP	21 12 34.8	+0.8
WMQ				S		**S**	**21 18 00.4**	**-1.2**
WMQ				pmax		pmax			
	comp=Z,38nm,1.3s								
WMQ				pmax		pmax			
	comp=Z,830nm,6.5s								
WMQ				LR		LR			
	comp=Z,14μm,22.7s								
WMQ				LR		LR			
	comp=Z,7μm,19.1s								
WMQ				LR		LR			
	comp=Z,5μm,16.7s								
DANN	**Dangsing**	**35.80**	**286**	*e*P		**P**	**21 12 31.1**	**+1.1**
	comp=Z,106nm,0.7s								
PYUN	**Piuthan**	**36.48**	**286**	*e*P		**P**	**21 12 36.5**	**+0.7**
	comp=Z,60nm,0.5s								
MTN	**Manton Dam**	**36.99**	**167**	IAmb		IAmb	21 12 52.2		
	comp=Z,554nm,1.6s								
MTN	**Manton Dam**	**36.99**	**167**	P		**P**	**21 12 38.5**	**-1.3**
SKR	**Severo-Kuril's**	**37.09**	**35**	*e*P		**P**	**21 12 39.5**	**-0.9**
SKR				pmax		pmax			
	comp=Z,192nm,0.7s								
SKR				pmax		pmax			
	comp=Z,200nm,6.3s								
SKR				MLR		MLR			
	comp=Z,5μm,18.0s								
KDU	**Kakadu**	**37.13**	**165**	P		**P**	**21 12 39.6**	**-1.4**
PATS	**Pohnpei**	**37.47**	**111**	P		**P**	**21 12 43.0**	**-1.1**
PATS				IAMs_20		IAMs_20	21 24 39.9		
	comp=Z,7μm,21.0s								
PATS	**Pohnpei**	**37.47**	**111**	P		**P**	**21 12 44.4**	**+0.4**
VIS	**Vishakhapatnam**	**37.81**	**269**	*e*P		**P**	**21 12 50.7**	**+3.8**
BLSP	**Bilaspur**	**37.92**	**276**	*e*P		**P**	**21 12 47.9**	**+0.2**
XMIS	**Christmas Isla**	**38.02**	**209**	P		**P**	**21 12 47.7**	**-0.8**
YAK	**Yakutsk**	**38.68**	**5**	P		**P**	**21 12 51.7**	**-2.0**
YAK	comp=Z,207nm,0.7s,baz=218,slow=0.3,SNR=148			LR		LR	21 31 12.7		
	comp=Z,8μm,19.5s,baz=186,slow=40								
YAK	**Yakutsk**	**38.68**	**5**	P		**P**	**21 12 51.4**	**-2.2**
YAK	comp=Z,207nm,0.7s			IAMs_20		IAMs_20	21 30 59.2		
	comp=Z,12μm,22.0s								
YAK	**Yakutsk**	**38.68**	**5**	*e*P		**P**	**21 12 51.6**	**-2.0**
YAK				*e**PP		**pwP**	**21 13 03.1**	**+0.2**
YAK				*e*			21 14 19.0		
YAK				*e*S		**S**	**21 18 47.8**	**-1.4**
YAK				*e**SS		**sS**	**21 19 00.2**	**+3.9**
YAK				*e*			21 22 56.4		
YAK				pmax		pmax			
	comp=Z,307nm,0.7s								
YAK				pmax		pmax			
	comp=N,112nm,0.9s								
YAK				pmax		pmax			
	comp=E,35nm,0.9s								
YAK				pmax		pmax			
	comp=Z,106nm,2.0s								
YAK				pmax		pmax			
	comp=N,52nm,1.7s								
YAK				pmax		pmax			
	comp=E,49nm,1.8s								
YAK				smax		smax			
	comp=N,276nm,2.8s								
YAK				smax		smax			
	comp=E,51nm,2.2s								
YAK				MLR		MLR			
	comp=Z,13μm,16.0s								
YAK				MLR		MLR			
	comp=N,8μm,19.0s								
YAK				MLR		MLR			
	comp=E,5μm,19.0s								
ZSN	**Zaisan**	**38.78**	**318**	*e*P		**P**	**21 12 52.4**	**-2.3**
ZSN	**Zaisan**	**38.78**	**318**	*e*P		**P**	**21 12 52.4**	**-2.3**
	baz=318								
LGTI	**Lohaghat**	**38.84**	**288**	*e*P		**P**	**21 12 57.5**	**+2.0**
PTH	**Pithoragarh**	**38.87**	**288**	*e*P		**P**	**21 12 56.9**	**+1.0**
PEA0B	**Petropavlovsk-**	**39.29**	**32**	*ce*P		**P**	**21 12 57.9**	**-1.0**
PETK	**Petropavlovsk-**	**39.29**	**32**	P		**P**	**21 12 57.2**	**-1.7**
PETK	comp=E,48nm,0.7s,baz=218,slow=17,SNR=88			LR		LR	21 31 17.2		
	comp=E,6μm,19.1s,baz=233,slow=40								
	comp=E,48nm,0.7s								
KNRA	**Kununurra**	**39.37**	**172**	IAmb		IAmb	21 13 13.1		
	comp=Z,184nm,0.8s								
KNRA	**Kununurra**	**39.37**	**172**	P		**P**	**21 12 59.3**	**-0.5**
KRVT	**Keravat (AS076**	**39.37**	**131**	P		**P**	**21 13 01.0**	**+1.0**
	comp=Z,83nm,1.0s,baz=323,slow=1.4,SNR=12								
KRVT				LR		LR	21 28 39.6		
	comp=Z,2μm,18.7s,baz=100,slow=35								
	comp=Z,83nm,1.0s								
RABL	**Rabaul**	**39.38**	**131**	P		**P**	**21 13 00.5**	**+0.4**
RABL				IAmb		IAmb	21 13 23.4		
	comp=Z,555nm,1.4s								
RABL	**Rabaul**	**39.38**	**131**	P		**P**	**21 13 01.0**	**+0.9**
PET	**Petropavlovsk**	**39.71**	**33**	P		**P**	**21 13 01.1**	**-1.3**
PET				IAmb		IAmb	21 13 03.5		
	comp=Z,306nm,0.6s								
PET				IAMs_20		IAMs_20	21 31 19.7		
	comp=Z,8μm,19.0s								
PET	**Petropavlovsk**	**39.71**	**33**	*c i*P		**P**	**21 13 01.1**	**-1.3**
PET				*e**PP		**pwP**	**21 13 16.3**	**+4.4**
PET				*e*S		**S**	**21 19 00.2**	**-4.8**
PET				pmax		pmax			
	comp=Z,1μm,6.1s								
PET				pmax		pmax			
	comp=Z,536nm,0.6s								
PET				pmax		pmax			
	comp=Z,500nm,9.5s								
PET				MLR		MLR			
	comp=Z,11μm,19.0s								
PET	**Petropavlovsk**	**39.71**	**33**	P		**P**	**21 13 01.6**	**-0.8**
MKAR	**Makanchi Array**	**40.15**	**316**	P		**P**	**21 13 05.0**	**-1.2**
	comp=Z,40nm,0.7s,baz=98,slow=9.2,SNR=265								
MKAR				PcP		**PcP**	**21 15 08.9**	**-1.5**
	comp=Z,11nm,0.9s,baz=95,slow=4.7,SNR=1.8								
MKAR				ScP		**ScP**	**21 18 57.9**	**-0.7**
	comp=Z,4.9nm,1.1s,baz=86,slow=4.8,SNR=3.0								
MKAR				LR		LR	21 31 17.6		
	comp=Z,8μm,18.5s,baz=108,slow=39								
	comp=Z,40nm,0.7s								
MKAR	**Makanchi Array**	**40.15**	**316**	P		**P**	**21 13 04.4**	**-1.8**
MKAR	**Makanchi Array**	**40.15**	**316**	*i* P		**P**	**21 13 05.0**	**-1.2**
MKAR				pmax		pmax			
	comp=Z,42nm,0.7s								
PMG	**Port Moresby**	**40.21**	**142**	P		**P**	**21 13 07.4**	**+0.5**
	comp=Z,37nm,0.8s,baz=28,slow=3.6,SNR=7.4								
PMG				LR		LR	21 29 03.9		
	comp=Z,3μm,19.0s,baz=329,slow=35								
	comp=Z,37nm,0.8s								
PMG	**Port Moresby**	**40.21**	**142**	P		**P**	**21 13 05.2**	**-1.7**
PMG				IAmb		IAmb	21 13 21.6		
	comp=Z,173nm,1.0s								
PMG	**Port Moresby**	**40.21**	**142**	P		**P**	**21 13 05.2**	**-1.7**
PMG				pmax		pmax			
	comp=Z,173nm,1.0s								
PMG				MLR		MLR			
	comp=Z,3μm,21.0s								
PMG	**Port Moresby**	**40.21**	**142**	P		**P**	**21 13 08.0**	**+1.1**
MAKZ	**Makanchi**	**40.36**	**315**	P		**P**	**21 13 07.3**	**-0.6**
MAKZ				IAmb		IAmb	21 13 24.1		
	comp=Z,331nm,1.6s								
MAKZ				IAMs_20		IAMs_20	21 31 14.3		
	comp=Z,10μm,19.0s								
MAKZ	**Makanchi**	**40.36**	**315**	P		**P**	**21 13 07.3**	**-0.6**
MAKZ				pmax		pmax			
	comp=Z,331nm,1.7s								
MAKZ				MLR		MLR			
	comp=Z,10μm,19.0s								
WAKE	**Wake Island**	**40.43**	**88**	P		**P**	**21 13 09.7**	**+0.9**
WAKE				IAmb		IAmb	21 13 11.7		
	comp=Z,511nm,1.3s								
H11N1	**WAKE ISLAND Hy**	**40.54**	**87**	P		**P**	**21 13 09.9**	**+0.4**
	baz=262,slow=10,SNR=8.1								
H11N1				T		T	21 56 42.0		
	baz=284,slow=74,SNR=7.5								
H11N2	**WAKE ISLAND Hy**	**40.55**	**87**	P		**P**	**21 13 09.5**	**0.0**
	baz=262,slow=10,SNR=3.2								
H11N2				T		T	21 56 51.7		
	baz=284,slow=74,SNR=6.3								
H11N3	**WAKE ISLAND Hy**	**40.56**	**87**	P		**P**	**21 13 11.3**	**+1.7**
	baz=262,slow=10,SNR=4.0								
H11N3				T		T	21 56 47.8		
	baz=284,slow=74,SNR=6.7								
H11S3	**WAKE ISLAND Hy**	**40.65**	**89**	T		T	21 57 29.9		
	baz=277								
H11S1	**WAKE ISLAND Hy**	**40.66**	**89**	T		T	21 56 51.0		
	baz=277,slow=74								
JHNI	**Jhansi**	**40.67**	**282**	*e*P		**P**	**21 13 09.4**	**-1.3**
H11S2	**WAKE ISLAND Hy**	**40.67**	**89**	T		T	21 57 04.1		
	baz=277,slow=74								
DDI	**Dehra Dun**	**40.72**	**290**	*e*P		**P**	**21 13 12.2**	**+1.0**
DDI				IAmb		IAmb	21 13 28.1		
	comp=Z,262nm,0.7s								
MA2	**Magadan**	**40.81**	**21**	P		**P**	**21 13 09.8**	**-1.7**
	comp=Z,22nm,0.7s,baz=214,slow=7.9,SNR=6.4								
MA2				LR		LR	21 32 41.9		
	comp=Z,10μm,18.1s,baz=220,slow=40								
	comp=Z,22nm,0.7s								
MA2	**Magadan**	**40.81**	**21**	P		**P**	**21 13 09.2**	**-2.2**
MA2				IAMs_20		IAMs_20	21 32 30.8		
	comp=Z,10μm,18.0s								
MA2	**Magadan**	**40.81**	**21**	*i* P		**P**	**21 13 10.0**	**-1.4**
MA2				pmax		pmax			
	comp=Z,30nm,0.9s								
MA2				MLR		MLR			
	comp=Z,11μm,17.0s								
MA2	**Magadan**	**40.81**	**21**	P		**P**	**21 13 09.6**	**-1.8**
SHLS	**Shalkode**	**40.98**	**309**	*e*P		**P**	**21 13 09.7**	**-3.5**
SHLS				*e*S		**S**	**21 19 20.2**	**-4.3**
SHLS	**Shalkode**	**40.98**	**309**	*e*P		**P**	**21 13 09.8**	**-3.5**
	baz=309								
SHLS				*e*S		**S**	**21 19 20.2**	**-4.3**
	baz=309								
SMLA	**Simla**	**41.47**	**291**	*e*P		**P**	**21 13 17.8**	**+0.6**
SMLA				IAmb		IAmb	21 13 33.9		
	comp=Z,236nm,0.9s								
NDI	**New Delhi**	**41.53**	**287**	*e*P		**P**	**21 13 19.0**	**+1.2**
KPKS	**Kokpek**	**41.60**	**310**	*e*P		**P**	**21 13 17.5**	**-0.8**
KPKS				*e*S		**S**	**21 19 32.1**	**-1.6**
KPKS	**Kokpek**	**41.60**	**310**	*e*P		**P**	**21 13 17.5**	**-0.8**
	baz=310								
KPKS				*e*S		**S**	**21 19 32.2**	**-1.6**
	baz=310								
SONA	**Sohna**	**41.68**	**287**	*e*P		**P**	**21 13 18.2**	**-0.8**
ZHN	**Zhinishke**	**41.71**	**309**	*e*P		**P**	**21 13 17.8**	**-1.4**
ZHN				*e*S		**S**	**21 19 33.8**	**-1.5**
ZHN	**Zhinishke**	**41.71**	**309**	*e*P		**P**	**21 13 17.8**	**-1.4**
	baz=309								
ZHN				*e*S		**S**	**21 19 33.9**	**-1.5**
	baz=309								
ZAA0	**Zalesovo Array**	**41.84**	**326**	P		**P**	**21 13 17.5**	**-2.4**
ZAA0				IAmb		IAmb	21 13 21.2		
	comp=Z,222nm,1.4s								
ZALV	**Zalesovo Beam**	**41.84**	**326**	P		**P**	**21 13 17.6**	**-2.4**
	comp=Z,66nm,0.8s,baz=112,slow=7.4,SNR=201								
ZALV				ScP		**ScP**	**21 19 02.6**	**-2.4**
	comp=Z,4.7nm,1.0s,baz=97,slow=7.4,SNR=3.4								
ZALV				LR		LR	21 32 04.2		
	comp=Z,8μm,20.4s,baz=123,slow=38								
	comp=Z,66nm,0.8s								
ZALV	**Zalesovo Beam**	**41.84**	**326**	P		**P**	**21 13 17.4**	**-2.5**
TARG	**Taragay, Kyrgy**	**41.86**	**307**	P		**P**	**21 13 20.2**	**-0.7**
TARG	**Taragay, Kyrgy**	**41.86**	**307**	P		**P**	**21 13 20.2**	**-0.7**
TARG				pmax		pmax			
	comp=Z,84nm,0.9s								
BHPL	**Bhopal**	**42.00**	**279**	*e*P		**P**	**21 13 22.6**	**+0.9**
BHPL				IAmb		IAmb	21 13 33.1		
	comp=Z,32nm,1.1s								
COEN	**Coen**	**42.04**	**151**	P		**P**	**21 13 21.2**	**-0.8**
COEN				IAmb		IAmb	21 13 41.5		
	comp=Z,151nm,0.8s								
COEN	**Coen**	**42.04**	**151**	P		**P**	**21 13 22.8**	**+0.8**
BHK	**Bhakra**	**42.10**	**291**	*e*P		**P**	**21 13 23.8**	**+1.3**
TDK	**Taldyqorghan**	**42.18**	**312**	*e*P		**P**	**21 13 22.3**	**-0.6**
TDK				*e*S		**S**	**21 19 39.3**	**-2.7**
TDK				pmax		pmax			
	comp=Z,64nm,0.6s								
TDK				MLR		MLR			
	comp=Z,5μm,16.0s								
TDK	**Taldyqorghan**	**42.18**	**312**	*e*P		**P**	**21 13 22.4**	**-0.6**
	comp=Z,64nm,0.6s,baz=312								
TDK				*e*S		**S**	**21 19 39.3**	**-2.7**
	baz=312								
TDK				*e*LR		LR	21 31 00.8		
	comp=Z,5μm,16.0s,baz=312								
KUDL	**Kundal**	**42.21**	**286**	*e*P		**P**	**21 13 21.9**	**-1.4**
HYBB	**Hyderabad (bro**	**42.27**	**270**	IVmB_BB			21 13 22.7		
	comp=Z,127nm,2.3s								
HYBB				*e*P		**P**	**21 13 23.0**	**-1.0**
HYBB				*es*P		pP	21 13 27.8	-1.2
HYBB				*e*PP		**PP**	**21 15 07.7**	**+5.6**
HYBB				*e*S		**S**	**21 19 43.6**	**-0.5**
HYBB				IVMs_BB		IVMs_BB	21 36 27.3		
	comp=Z,806nm,14.0s								
ARXS	**Arharly**	**42.38**	**310**	*i* P		**P**	**21 13 24.4**	**-0.3**
KDJ	**Kajisay**	**42.40**	**307**	P		**P**	**21 13 24.7**	**-0.3**
KDJ	**Kajisay**	**42.40**	**307**	P		**P**	**21 13 24.7**	**-0.3**
KDJ				pmax		pmax			
	comp=Z,110nm,1.0s								
TNSS	**Tian-Shan**	**42.75**	**309**	*e*P		**P**	**21 13 27.2**	**-0.8**
TNSS	**Tian-Shan**	**42.75**	**309**	*e*P		**P**	**21 13 27.2**	**-0.8**
	baz=308								
SEM	**Semipalatinsk**	**42.75**	**320**	*e*P		**P**	**21 13 24.7**	**-3.0**
SEM				pmax		pmax			
	comp=Z,61nm,0.9s								
SEM	**Semipalatinsk**	**42.75**	**320**	*e*P		**P**	**21 13 24.7**	**-3.0**
	comp=Z,61nm,0.9s,baz=320								
AAA	**Alma-Ata**	**42.80**	**309**	*e*P		**P**	**21 13 25.7**	**-2.4**
AAA				*e*S		**S**	**21 19 49.8**	**-1.6**
AAA				pmax		pmax			
	comp=Z,228nm,1.8s								
AAA				MLR		MLR			
	comp=Z,7μm,16.0s								
AAA	**Alma-Ata**	**42.80**	**309**	*e*P		**P**	**21 13 25.7**	**-2.4**
	comp=Z,228nm,1.8s,baz=309								
AAA				*e*S		**S**	**21 19 49.8**	**-1.6**
	baz=309								
AAA				*e*LR		LR	21 31 22.9		
	comp=Z,7μm,16.0s,baz=309								
AKL	**Akola**	**42.87**	**276**	*e*P		**P**	**21 13 30.1**	**+1.3**
KSH	**Kashi**	**42.89**	**303**	P		**P**	**21 13 32.3**	**+3.4**
KSH				sP		pwP	21 13 43.0	+4.3
KSH				PP		**PcP**	**21 15 18.5**	**-1.1**
KSH				S		**S**	**21 19 55.9**	**+3.1**
KSH				ScS		**ScS**	**21 23 27.3**	**-1.8**
KSH				pmax		pmax			
	comp=Z,160nm,1.3s								
KSH				LR		LR			
	comp=Z,15μm,22.0s								
KSH				LR		LR			
	comp=Z,6μm,22.7s								
KSH				LR		LR			
	comp=Z,9μm,22.0s								
CHKK	**Chushkaly**	**42.89**	**310**	*e*P		**P**	**21 13 27.6**	**-1.1**
CHKK	**Chushkaly**	**42.89**	**310**	*e*P		**P**	**21 13 27.6**	**-1.1**
	baz=310								
ULHL	**Ulahol**	**43.11**	**307**	P		**P**	**21 13 32.4**	**+1.7**
	SNR=14								
KUU	**Kurty**	**43.36**	**310**	*e*P		**P**	**21 13 30.0**	**-2.5**
KUU				*e*S		**S**	**21 19 57.8**	**-1.6**
KUU				pmax		pmax			
	comp=Z,35nm,0.7s								
KUU	**Kurty**	**43.36**	**310**	*e*P		**P**	**21 13 30.1**	**-2.5**
	comp=Z,35nm,0.7s,baz=310								
KUU				*e*S		**S**	**21 19 57.8**	**-1.6**
	baz=310								
JMU	**Jammu**	**43.37**	**293**	*e*P		**P**	**21 13 34.1**	**+1.4**
BOOM	**Boomskoye usch**	**43.37**	**308**	P		**P**	**21 13 32.3**	**-0.5**
BOOM	**Boomskoye usch**	**43.37**	**308**	P		**P**	**21 13 32.3**	**-0.5**
BOOM				pmax		pmax			
	comp=Z,87nm,1.2s								
TKM2	**Tokmak 2**	**43.70**	**308**	P		**P**	**21 13 36.0**	**+0.5**
	SNR=76								
KURK	**Kurchatov**	**43.83**	**320**	P		**P**	**21 13 34.6**	**-1.5**
KURK	**Kurchatov**	**43.83**	**320**	IAMs_20		IAMs_20	21 34 02.6		
	comp=Z,8μm,18.0s								
KURK	**Kurchatov**	**43.83**	**320**	*ce*P		**P**	**21 13 34.6**	**-1.5**
KURK				pmax		pmax			
	comp=Z,88nm,1.0s								
KURBB	**Kurchatov Arra**	**43.85**	**320**	P		**P**	**21 13 34.7**	**-1.6**
	comp=Z,58nm,0.9s,baz=110,slow=8.1,SNR=228								
KURBB				LR		LR	21 34 16.4		
	comp=Z,7μm,18.2s,baz=93,slow=39								
	comp=Z,58nm,0.9s								
SEY	**Seymchan**	**43.89**	**19**	P		**P**	**21 13 34.7**	**-1.8**
	comp=Z,56nm,0.7s,baz=226,slow=6.7,SNR=93								
SEY				PcP		**PcP**	**21 15 23.5**	**+1.1**
	comp=Z,11nm,0.7s,baz=210,slow=4.4,SNR=2.7								
	comp=Z,56nm,0.7s								
SEY	**Seymchan**	**43.89**	**19**	*ce*P		**P**	**21 13 35.3**	**-1.2**
SEY				pmax		pmax			
	comp=Z,45nm,0.6s								
SEY				MLR		MLR			
	comp=Z,8μm,21.0s								
PALK	**Pallekele**	**43.98**	**255**	LR		LR	21 32 14.2		
	comp=Z,3μm,21.9s,baz=168,slow=36								
PALK	**Pallekele**	**43.98**	**255**	P		**P**	**21 13 37.3**	**-0.6**
PALK	**Pallekele**	**43.98**	**255**	IAMs_20		IAMs_20	21 31 30.5		
	comp=Z,6μm,21.0s								
PALK	**Pallekele**	**43.98**	**255**	P		**P**	**21 13 37.3**	**-0.6**
PALK				pmax		pmax			
	comp=Z,77nm,1.1s								
PALK				MLR		MLR			
	comp=Z,6μm,21.0s								
COCO	**West Island**	**44.00**	**219**	P		**P**	**21 13 38.1**	**+0.3**
COCO	**West Island**	**44.00**	**219**	P		**P**	**21 13 38.1**	**+0.3**
COCO				pmax		pmax			
	comp=Z,890nm,1.5s								
AJM	**Ajmer**	**44.02**	**284**	*e*P		**P**	**21 13 37.9**	**-0.2**
KBK	**Karagaybulak**	**44.12**	**308**	P		**P**	**21 13 39.9**	**+1.1**
	SNR=27								
CHMS	**Chumysh**	**44.32**	**308**	P		**P**	**21 13 40.5**	**+0.3**
	SNR=58								
UCH	**Uchtor**	**44.37**	**307**	P		**P**	**21 13 42.3**	**+1.1**
	SNR=209								
WB0	**Warramunga Arr**	**44.41**	**165**	IAmb		IAmb	21 13 58.8		
	comp=Z,238nm,1.0s								
AAK	**Ala-Archa**	**44.45**	**307**	P		**P**	**21 13 42.2**	**+0.8**
	SNR=18								
AAK	**Ala-Archa**	**44.45**	**307**	P		**P**	**21 13 41.6**	**+0.2**
	comp=Z,22nm,1.0s,baz=105,slow=5.0,SNR=24								
AAK				PcP		**PcP**	**21 15 25.0**	**+0.1**
	comp=Z,10nm,0.8s,baz=110,slow=8.8,SNR=1.4								
AAK				LR		LR	21 35 06.3		
	comp=Z,11μm,19.7s,baz=88,slow=40								
	comp=Z,22nm,1.0s								
AAK	**Ala

BTK Batken 46.89 303 IAmb IAmb 21 14 24.9
comp=Z,203nm,1.4s
GAR Garm 47.22 302 P **P** **21 14 03.6 +0.3**
KK31 Karatay Array 47.41 308 P **P** **21 14 04.7 +0.1**
KK31 IAmb IAmb 21 14 09.5
comp=Z,211nm,1.8s
KK31 Karatay Array 47.41 308 P **P** **21 14 04.7 +0.1**
KK31 pmax pmax
comp=Z,211nm,1.8s
KKAR Karatay Array 47.41 308 P **P** **21 14 04.2 -0.5**
KKAR Karatay Array 47.41 308 P **P** **21 14 04.3 -0.3**
KKAR IAmb IAmb 21 14 09.5
comp=Z,211nm,1.8s
KKAR Karatay Array 47.41 308 P **P** **21 14 04.3 -0.3**
KKAR pmax pmax
comp=Z,211nm,1.8s
IUG luznay 47.66 306 *e*P **P** **21 14 05.3 -1.4**
IUG *e*S **S** **21 21 00.7 -1.0**
IUG luznay 47.66 306 *e*P **P** **21 14 05.4 -1.4**
baz=306
IUG *e*S **S** **21 21 00.7 -1.0**
baz=306
SHEM Shemya Is, Ala 48.03 39 P **P** **21 14 10.1 +0.9**
comp=Z,63nm,0.4s,baz=56,slow=4.1,SNR=12
SHEM LR LR 21 34 57.9
comp=Z,2µm,21.4s,baz=263,slow=37
comp=Z,63nm,0.4s
SMY Shemya 48.03 39 P **P** **21 14 09.9 +0.7**
SMY Shemya 48.03 39 P **P** **21 14 09.9 +0.7**
SMY pmax pmax
comp=Z,618nm,1.5s
CHGR Chuyangaron 48.11 301 P **P** **21 14 09.9 -0.3**
CHGR Chuyangaron 48.11 301 P **P** **21 14 09.9 -0.3**
CHGR pmax pmax
comp=Z,188nm,0.9s
TAS Tashkent 48.14 305 P **P** **21 14 10.8 +0.5**
TAS IAmb IAmb 21 14 27.6
comp=Z,171nm,1.0s
TAS Tashkent 48.14 305 P **P** **21 14 10.8 +0.5**
TAS pmax pmax
comp=Z,171nm,1.0s
TIXI Tiksi 48.20 2 LR LR 21 37 09.3
comp=Z,16µm,20.0s,baz=180,slow=40
TIXI Tiksi 48.20 2 P **P** **21 14 08.3 -2.0**
TIXI IAmb IAmb 21 14 10.7
comp=Z,116nm,1.0s
TIXI Tiksi 48.20 2*ce*P **P** **21 14 07.8 -2.5**
TIXI pmax pmax
comp=Z,163nm,1.3s
TIXI MLR MLR
comp=Z,8µm,19.0s
KBL Kabul 48.21 296 P **P** **21 14 11.8 +0.6**
KBL Kabul 48.21 296 P **P** **21 14 11.8 +0.6**
KBL pmax pmax
comp=Z,307nm,1.0s
KBL Kabul 48.21 296 P **P** **21 14 12.2 +1.1**
SNR=97
KBL P **P** **21 14 12.2 +1.1**
SNR=97
KBL S **S** **21 21 08.5 -1.4**
KBL S **S** **21 21 08.5 -1.4**
HNR Honiara 48.55 128 LR LR 21 36 27.6
comp=Z,508nm,18.0s,baz=309,slow=38
HNR Honiara 48.55 128 P **P** **21 14 13.6 -0.1**
HNR Honiara 48.55 128 P **P** **21 14 13.6 -0.1**
HNR pmax pmax
comp=Z,317nm,1.1s
WRKA Warakurna 48.56 174 P **P** **21 14 13.3 -0.3**
CTA Charters Tower 48.81 151 LR LR 21 34 17.3
comp=Z,2µm,19.5s,baz=330,slow=35
CTA Charters Tower 48.81 151 P **P** **21 14 16.9 +1.3**
comp=Z,72nm,1.6s
CTAO Charters Tower 48.81 151 P **P** **21 14 14.7 -0.9**
CTAO IAmb IAmb 21 14 34.4
comp=Z,224nm,1.7s
CTAO Charters Tower 48.81 151 P **P** **21 14 14.7 -0.9**
CTAO pmax pmax
comp=Z,224nm,1.7s
CTAO MLR MLR
comp=Z,2µm,20.0s
CTAO Charters Tower 48.81 151 P **P** **21 14 16.9 +1.3**
BVAR Borovoye Array 49.40 321 LR LR 21 36 01.5
comp=Z,3µm,19.3s,baz=344,slow=37
AMKA Amchitka 50.81 42 P **P** **21 14 30.6 +0.1**
BILL Bilibino 51.60 19 P **P** **21 14 34.7 -1.5**
BILL **pP** **21 14 34.8 -6.3**
BILL IAMs_20 IAMs_20 21 36 47.4
comp=Z,7µm,22.0s
BILL Bilibino 51.60 19*de*P **P** **21 14 34.2 -1.9**
BILL *e**SP **pP** **21 14 41.1 -0.1**
BILL *e* 21 15 52.2
BILL PPP PPP 21 17 30.0
BILL *i* S **S** **21 21 57.0 +1.2**
BILL *e*SS SS 21 25 19.8 -12
BILL *e*SSS SSS 21 27 07.7
BILL pmax pmax
comp=Z,92nm,1.3s
BILL MLR MLR
comp=Z,7µm,21.0s
OOD Oodnadatta 52.44 166 P **P** **21 14 43.2 +0.4**
MORW Morawa 52.81 188 P **P** **21 14 45.0 -0.6**
TARA Tarawa 52.83 107 P **P** **21 14 42.7 -3.4**
TARA IAmb IAmb 21 16 02.2
comp=Z,157nm,1.0s
KIWB Kanaga Island 53.08 42 P **P** **21 14 46.9 -0.5**
MIDW Midway 53.08 72 P **P** **21 14 46.7 -1.1**
MIDW IAmb IAmb 21 14 49.7
comp=Z,193nm,1.1s
MIDW Midway 53.08 72 P **P** **21 14 49.5 +1.7**
RK1H Rockhampton Ha 53.62 149 P **P** **21 14 51.9 +0.3**
GSTR Great Sitkin T 53.78 42 P **P** **21 14 51.6 -0.9**
QLP Quilpie 53.80 157 P **P** **21 14 53.1 +0.2**
HRA Herat 53.83 296 P **P** **21 14 53.2 -0.2**
KAAM Kaadhehdhoo 53.93 252 P **P** **21 14 54.5 +0.3**
FORT Forrest 54.23 175 IAmb IAmb 21 15 27.7
comp=Z,162nm,0.9s
FORT Forrest 54.23 175 P **P** **21 14 56.8 +0.8**
BLDU Ballidu 54.26 187 P **P** **21 14 56.6 +0.4**
MULG Mulgathing 54.53 169 P **P** **21 14 58.7 +0.6**
ATKA Atka Island 54.93 42 P **P** **21 15 01.7 +0.8**
KLBR Kellerberrin 55.12 186 P **P** **21 15 01.9 -0.5**
ABKAR Akbulak array 55.28 315 P **P** **21 15 03.0 -0.5**
ABKAR IAmb IAmb 21 15 20.4
comp=Z,80nm,0.9s
RMQ Roma 55.50 152 P **P** **21 15 06.3 +1.0**
LCRK Leigh Creek 55.58 164 P **P** **21 15 06.5 +0.8**
EIDS Eidsvold 55.58 149 P **P** **21 15 06.0 +0.1**
MUN Mundaring 55.66 187 P **P** **21 15 08.3 +2.0**
SVE Sverdlovsk 55.70 324*de*P **P** **21 15 05.3 -1.1**
SVE *e*S **S** **21 22 52.0 +0.3**
SVE pmax pmax
comp=Z,155nm,1.0s
SVE MLR MLR
comp=Z,7µm,18.0s
NWAO Narrogin (SRO) 56.49 186 P **P** **21 15 13.8 +1.6**
NWAO Narrogin (SRO) 56.49 186 P **P** **21 15 13.8 +1.6**
NWAO pmax pmax
comp=Z,314nm,1.1s
NWAO Narrogin (SRO) 56.49 186 P **P** **21 15 13.1 +0.9**
AKTO Aktyubinsk 56.59 316 P **P** **21 15 12.0 -0.8**
comp=Z,48nm,1.3s,baz=91,slow=7.4,SNR=42
AKTO LR LR 21 41 08.5
comp=Z,5µm,20.6s,baz=95,slow=38
comp=Z,48nm,1.3s
ARU Arti 56.78 323 P **P** **21 15 12.9 -1.2**
comp=Z,27nm,0.4s,baz=86,slow=3.2,SNR=4.2
ARU LR LR 21 42 42.7
comp=Z,6µm,18.6s,baz=94,slow=39
comp=Z,27nm,0.4s
ARU Arti 56.78 323 P **P** **21 15 12.6 -1.5**
ARU IAmb IAmb 21 15 29.0
comp=Z,162nm,1.2s
ARU IAMs_20 IAMs_20 21 42 21.0
comp=Z,6µm,20.0s
ARU Arti 56.78 323*c i*P **P** **21 15 12.7 -1.4**
ARU 21 16 07.4
ARU 21 17 17.5
ARU PPP PPP 21 18 35.1
ARU S **S** **21 23 07.4 +1.3**
ARU 21 25 02.6
ARU SSS SSS 21 29 01.1
ARU pmax pmax
comp=Z,156nm,1.5s
ARU MLR MLR
comp=Z,5µm,18.0s
GEYT Alibeck 56.81 301 P **P** **21 15 16.1 +1.5**
comp=Z,86nm,1.0s,baz=240,slow=12,SNR=56
GEYT LR LR 21 43 28.5
comp=Z,7µm,20.5s,baz=86,slow=40
comp=Z,86nm,1.0s
GEYT Alibeck 56.81 301 P **P** **21 15 15.7 +1.0**
GYA0B ALIBECK ARRAY 56.81 301 P **P** **21 15 15.5 +0.8**
GYA0B IAmb IAmb 21 15 32.2
comp=Z,97nm,0.8s
BBOO Buckleboo 57.37 167 P **P** **21 15 19.5 +1.0**
BBOO IAmb IAmb 21 15 38.1
comp=Z,126nm,1.0s
BBOO Buckleboo 57.37 167 P **P** **21 15 19.3 +0.9**
SPIA Saint Paul Isl 57.75 36 P **P** **21 15 20.9 0.0**
SPIA Saint Paul Isl 57.75 36 P **P** **21 15 21.4 +0.5**
baz=264
STKA Stephens Creek 57.84 162 P **P** **21 15 22.3 +0.5**
comp=Z,20nm,0.8s,baz=342,slow=6.3,SNR=23
STKA LR LR 21 41 58.2
comp=Z,2µm,19.9s,baz=335,slow=38
comp=Z,20nm,0.8s
STKA Stephens Creek 57.84 162 P **P** **21 15 22.3 +0.5**
GAMB Gambell 58.07 28 P **P** **21 15 23.4 +0.4**
GAMB IAmb IAmb 21 15 27.8
comp=Z,301nm,1.8s
GAMB IAMs_20 IAMs_20 21 42 03.8
comp=Z,3µm,20.0s
GAMB Gambell 58.07 28 P **P** **21 15 23.6 +0.5**
baz=258
GAMB S **S** **21 23 21.9 -0.8**
baz=258
NIKH Nikolski High 58.24 41 P **P** **21 15 22.8 -1.6**
baz=268
HTT Hallett 58.60 165 P **P** **21 15 29.0 +1.9**
WBK Wadi Bani Khal 58.76 283 P **P** **21 15 31.6 +3.0**
SNR=7.3
WBK P **P** **21 15 31.6 +3.0**
SNR=7.3
WBK S **S** **21 23 36.5 +3.5**
WBK S **S** **21 23 36.5 +3.5**
CMSA Cobar Meteorol 58.83 158 P **P** **21 15 30.4 +1.7**
WSAR Wadi Sarin 58.90 284 P **P** **21 15 31.1 +1.5**
comp=Z,20nm,1.1s
WSAR LR LR 21 43 41.7
comp=Z,6µm,21.6s,baz=82,slow=39
comp=Z,20nm,1.1s
WSAR Wadi Sarin 58.90 284 P **P** **21 15 32.5 +2.9**
SNR=18
WSAR S **S** **21 23 35.7 +0.8**
JASK Jask - Hormozg 58.96 287 P **P** **21 15 31.9 +2.0**
SNR=5.7
BIDO Bidbid 59.28 284 P **P** **21 15 35.8 +3.6**
SNR=24
BIDO P **P** **21 15 35.8 +3.6**
SNR=24
BIDO S **S** **21 23 41.2 +1.5**
BIDO S **S** **21 23 41.2 +1.5**
KOUNC Koumac, New Ca 59.29 134 P **P** **21 15 33.2 +1.2**
KOUNC Koumac, New Ca 59.29 134 P **P** **21 15 33.6 +1.5**
comp=Z,256nm,1.2s
SMDO Samad 59.47 284 P **P** **21 15 37.1 +3.6**
SMDO P **P** **21 15 37.1 +3.6**
SMDO S **S** **21 23 42.7 +0.4**
SMDO S **S** **21 23 42.7 +0.4**
JMDO Jabal Madar 59.59 283 P **P** **21 15 36.6 +2.3**
JMDO P **P** **21 15 36.6 +2.3**
UNV Unalaska Valle 59.67 40 P **P** **21 15 32.9 -1.4**
baz=269
TNA Tin City 59.99 27 P **P** **21 15 36.6 +0.3**
TNA IAmb IAmb 21 15 46.7
comp=Z,102nm,1.3s
TNA Tin City 59.99 27 P **P** **21 15 36.6 +0.3**
baz=261,SNR=9.9
TNA S **S** **21 23 47.4 -0.2**
baz=261
HOQ Hoqain 59.99 284 P **P** **21 15 40.0 +2.9**
SNR=28
HOQ P **P** **21 15 40.0 +2.9**
SNR=28
HOQ S **S** **21 23 50.2 +1.3**
HOQ S **S** **21 23 50.2 +1.3**
DVP Devils Point 60.02 129 P **P** **21 15 38.6 +1.5**
TWOA Tennyson Woods 60.05 166 P **P** **21 15 39.6 +2.5**
MHTO MHTO 60.08 281 P **P** **21 15 38.1 +0.4**
SNR=6.5
MHTO P **P** **21 15 38.1 +0.4**
SNR=6.5
ARMA Armidale 60.16 152 P **P** **21 15 38.7 +0.7**
ARMA Armidale 60.16 152 P **P** **21 15 40.1 +2.1**
BANOM Banah 60.32 287 P **P** **21 15 40.8 +1.4**
BANOM P **P** **21 15 40.8 +1.4**
BANOM S **S** **21 23 56.1 +2.9**
BANOM S **S** **21 23 56.1 +2.9**
BANOM Banah 60.32 287 P **P** **21 15 40.0 +0.7**
SHME Shamm 60.43 288 P **P** **21 15 43.6 +3.6**
SNR=5.7
SHME P **P** **21 15 43.6 +3.6**
SNR=5.7
SHME Shamm 60.43 288 P **P** **21 15 39.9 -0.2**
MASF Masafi 60.58 287 P **P** **21 15 45.1 +4.0**
MASF P **P** **21 15 45.1 +4.0**
MSFE Esma-Masafi 60.58 287 P **P** **21 15 42.5 +1.4**
UOSS Minazif 60.64 286 P **P** **21 15 42.3 +0.8**
UOSS Minazif 60.64 286 P **P** **21 15 44.0 +2.5**
UOSS P **P** **21 15 44.0 +2.5**
UOSS S **S** **21 23 56.5 -0.6**
UOSS S **S** **21 23 56.5 -0.6**
UOSS Minazif 60.64 286 P **P** **21 15 42.5 +1.0**
HATD Hatta, Dubai 60.73 286 P **P** **21 15 44.6 +2.4**
HATD P **P** **21 15 44.6 +2.4**
HATD Hatta, Dubai 60.73 286 P **P** **21 15 43.0 +0.9**
ASHO Ashiyiah 60.83 286 P **P** **21 15 44.7 +1.8**
SNR=23
ASHO P **P** **21 15 44.7 +1.8**
SNR=23
ASHO Ashiyiah 60.83 286 *i* P **P** **21 15 43.7 +0.9**
SNR=15
ANM Nome 60.93 28 IAmb IAmb 21 15 47.3
comp=Z,72nm,0.8s
ANM IAMs_20 IAMs_20 21 44 44.4
comp=Z,4µm,18.0s
ANM Nome 60.93 28 P **P** **21 15 43.0 +0.2**
baz=264,SNR=15
ANM S **S** **21 24 00.7 +1.0**
baz=264
NAZ Nazwa, Dubai 61.10 286 P **P** **21 15 46.0 +1.3**
SNR=13
NAZ P **P** **21 15 46.0 +1.3**
SNR=13
NAZ Nazwa, Dubai 61.10 286 *i* P **P** **21 15 45.8 +1.1**
SNR=10
FAQ Al Faqa, Dubai 61.23 286 P **P** **21 15 47.3 +1.8**
FAQ P **P** **21 15 47.3 +1.8**
FAQ Al Faqa, Dubai 61.23 286 P **P** **21 15 46.0 +0.6**
ALNE Al Ain 61.26 285 P **P** **21 15 48.9 +3.1**
SNR=23
ALNE P **P** **21 15 48.9 +3.1**
SNR=23
LIFNC LIFOU 61.41 132 P **P** **21 15 47.2 +0.6**
LIFNC LIFOU 61.41 132 P **P** **21 15 48.2 +1.6**
FALS False Pass 61.48 39 P **P** **21 15 46.9 +0.3**
FALS IAmb IAmb 21 16 03.2
comp=Z,98nm,0.8s
FALS False Pass 61.48 39 P **P** **21 15 45.1 -1.5**
baz=271
ASUD Al Ashush, Dub 61.49 286 P **P** **21 15 49.0 +1.8**
SNR=15
ASUD P **P** **21 15 49.0 +1.8**
SNR=15
ASUD Al Ashush, Dub 61.49 286 P **P** **21 15 48.5 +1.3**
NOUC Port Laguerre 61.71 134 P **P** **21 15 49.9 +1.3**
DZM Mont Dzumac 61.78 134 LR LR 21 38 32.2
comp=Z,1µm,21.7s,baz=333,slow=32
DZM Mont Dzumac 61.78 134 *e*P **P** **21 15 50.4 +1.2**
comp=Z,367nm,1.2s
DZM *e*S **S** **21 24 11.3 -0.4**
comp=Z,2µm,25.5s
DZM *e*LR LR 21 34 04.3
comp=Z,9µm,28.9s
DZM Mont Dzumac 61.78 134 IAmb IAmb 21 16 06.6
comp=Z,145nm,1.1s
DZM Mont Dzumac 61.78 134 P **P** **21 15 50.3 +1.1**
KIRV Kirov 61.85 325 P **P** **21 15 47.9 -1.2**
comp=Z,124nm,0.6s,baz=90,slow=3.5,SNR=75
KIRV LR LR 21 45 15.2
comp=Z,16µm,18.2s,baz=94,slow=39
comp=Z,124nm,0.6s
KIRV Kirov 61.85 325*ce*P **P** **21 15 47.7 -1.4**
ONTNC Ouen Toro 61.95 134 P **P** **21 15 49.9 -0.4**
ONTNC IAmb IAmb 21 16 06.0
comp=Z,211nm,1.5s
ONTNC Ouen Toro 61.95 134 P **P** **21 15 52.1 +1.9**
YATNC Mamie plateau, 62.07 134 P **P** **21 15 52.9 +1.9**
UMZA Um Al Zommool 62.13 284 P **P** **21 15 52.1 +0.5**
UMZA P **P** **21 15 52.1 +0.5**
OUENC Ouen Island, N 62.28 134 P **P** **21 15 53.3 +0.8**
OUENC Ouen Island, N 62.28 134 P **P** **21 15 54.2 +1.7**
RDOG Red Dog Mine 62.28 24 P **P** 21 15 47.0 -4.9
RDOG IAMs_20 IAMs_20 21 46 14.1
comp=Z,3µm,18.0s
RDOG Red Dog Mine 62.28 24 P P 21 15 46.3 -5.6
baz=264
NTLH Newcastle Hard 62.34 153 P **P** **21 15 55.2 +2.6**
MARNC Mare, Loyalty 62.43 132 P **P** **21 15 53.7 +0.2**
ARPS Mount Arapiles 62.51 163 P **P** **21 15 54.5 +0.8**
SYDH Sydney Hard Ro 62.70 154 P **P** **21 15 58.2 +3.2**
PINNC Pines Island, 62.82 134 P **P** **21 15 56.4 +0.4**
PINNC Pines Island, 62.82 134 P **P** **21 15 57.9 +1.9**
SHAO Shalim 63.05 279 P **P** 21 16 04.1 +6.3
SHAO P **P** 21 16 04.1 +6.3
BELG Belogornoye 63.07 318 P **P** **21 15 56.7 -0.6**
comp=Z,266nm,1.0s,baz=86,slow=0.5,SNR=104
BELG LR LR 21 46 16.1
comp=Z,5µm,21.3s,baz=79,slow=39
comp=Z,266nm,1.0s
BELG Belogornoye 63.07 318 *i* P **P** **21 15 56.1 -1.2**
BELG pmax pmax
comp=Z,75nm,1.3s
BELG MLR MLR
comp=Z,645nm,20.0s
SDPT Sand Point 63.15 38 P **P** **21 15 57.0 -0.8**
baz=273,SNR=23
CAN Canberra 63.42 157 IAmb IAmb 21 16 19.3
comp=Z,85nm,1.0s
CAN Canberra 63.42 157 P **P** **21 16 03.1 +3.2**
CAN Canberra 63.42 157 P **P** **21 16 01.6 +1.7**
MZR Muzera 63.54 285 P **P** **21 16 01.4 +0.3**
SNR=28
MZR P **P** **21 16 01.4 +0.3**
SNR=28
MZR Muzera 63.54 285 *i* P **P** **21 16 01.6 +0.5**
SNR=16
CNB Canberra Magne 63.55 156 P **P** **21 16 02.3 +1.6**
JRN Qarnain Island 63.59 287 P **P** **21 16 00.7 -0.6**
SNR=14
JRN P **P** **21 16 00.7 -0.6**
SNR=14
S14K Fog Glacier 63.62 37 P **P** **21 16 00.7 -0.4**
baz=273
S14K S **S** **21 24 31.3 -2.7**
baz=273
CHNA Chernabura Isl 63.69 39 P **P** **21 16 00.9 -0.5**
baz=274,SNR=16
CHNA S **S** **21 24 33.5 -1.2**
baz=274
CNBA Chernabura Isl 63.69 39 P **P** **21 16 00.9 -0.5**
PRGR Permogore 63.73 329 *i* P **P** **21 16 00.4 -1.1**
PRGR *e* 21 16 11.0
PRGR *e* 21 16 38.0
DMTO DMTO 63.75 279 P **P** **21 16 03.8 +1.4**
DMTO P **P** **21 16 03.8 +1.4**
BRAT Ballarat 63.81 162 P **P** **21 16 04.4 +2.1**
N16K Nishlik Lake 63.84 33 P **P** **21 16 02.2 -0.1**
baz=272,SNR=88
N16K S **S** **21 24 36.4 -0.1**
baz=272
LKRN Lenkeran, Azer 63.98 303 P **P** **21 16 04.5 +0.9**
O16K Kokwok River B 64.22 34 P **P** **21 16 05.0 +0.2**
baz=273,SNR=35
O16K S **S** **21 24 40.6 -0.5**
baz=273
DOK Doka 64.22 280 P **P** **21 16 05.8 +0.3**
SNR=5.0
DOK P **P** **21 16 05.8 +0.3**
SNR=5.0
MAK Makhachkala 64.23 308 *e*P P 21 15 59.1 -6.1
MAK *e*S **S** **21 24 34.8 -7.0**
MAK pmax pmax
comp=Z,117nm,1.3s
MAK MLR MLR
comp=Z,3µm,14.0s
TOO Toolangi 64.29 161 P **P** **21 16 06.4 +0.9**
TOO IAmb IAmb 21 16 24.1
comp=Z,83nm,0.9s
TOO Toolangi 64.29 161 P **P** **21 16 06.4 +0.9**
TOO pmax pmax
comp=Z,83nm,0.9s
TOO Toolangi 64.29 161 P **P** **21 16 06.9 +1.4**
P16K Nushagak River 64.30 34 P **P** **21 16 05.4 0.0**
baz=273
P16K S **S** **21 24 42.2 +0.1**
baz=273
RBK Rabkut 64.49 279 P **P** **21 16 08.0 +0.6**
RBK P **P** **21 16 08.0 +0.6**
GCSA Galena City Sc 64.59 28 P **P** **21 16 06.6 -0.6**
baz=272,SNR=15
GCSA S **S** **21 24 45.8 +0.3**
baz=272
A21K Barrow 64.68 21 P **P** **21 16 06.8 -0.8**
A21K IAmb IAmb 21 16 10.2
comp=Z,131nm,0.9s
A21K Barrow 64.68 21 P **P** **21 16 07.5 -0.1**
baz=269,SNR=7.5
A21K S **S** **21 24 47.8 +1.3**
baz=269
O17K Koliganek Bris 64.71 33 P **P** **21 16 08.4 +0.4**
baz=274,SNR=30
O17K S **S** **21 24 47.7 +0.5**
baz=274
SEKA Sheki 64.74 306 P **P** **21 16 09.1 +0.4**
WHFO Wadi Hawf 64.76 279 P **P** **21 16 10.5 +1.4**
WHFO P **P** **21 16 10.5 +1.4**
MNGR Mingechevir, A 64.90 305 P **P** **21 16 10.4 +0.8**
SHMA Al-Shehemyia 64.99 289 P **P** **21 16 10.4 -0.1**
Q16K King Salmon 65.02 35 P **P** **21 16 10.1 +0.1**
baz=275,SNR=13
Q16K S **S** **21 24 50.8 -0.2**
baz=275
TTA Tatalina 65.05 30 P **P** **21 16 10.9 +0.6**
TTA Tatalina 65.05 30 P **P** **21 16 10.9 +0.6**
TTA pmax pmax
comp=Z,264nm,1.6s
TTA Tatalina 65.05 30 P **P** **21 16 10.3 +0.1**
baz=273,SNR=61
TTA S **S** **21 24 51.4 -0.1**
baz=273
P17K Kvichak River 65.09 34 P **P** **21 16 10.5 0.0**
baz=275,SNR=27
P17K S **S** **21 24 52.7 +0.9**
baz=275
ZKTA Zakatala 65.09 306 P **P** **21 16 11.2 +0.3**
R17K Ugashik Creek 65.25 36 P **P** **21 16 10.4 -1.2**
baz=275,SNR=23
R17K S **S** **21 24 52.3 -1.6**
baz=275
N18K Kilae Creek 65.25 32 P **P** **21 16 12.1 +0.5**
N18K IAmb IAmb 21 16 17.2
comp=Z,118nm,1.4s
N18K Kilae Creek 65.25 32 P **P** **21 16 11.1 -0.5**
baz=274,SNR=24
N18K S **S** **21 24 55.3 +1.4**
baz=274
SAKB Bahrain 65.33 289 P **P** **21 16 12.8 +0.1**
ABTO Aybut 65.36 279 P **P** **21 16 13.5 +0.4**
ABTO P **P** **21 16 13.5 +0.4**
SVW2 Sparrevohn 65.37 32 IAmb IAmb 21 16 16.5
comp=Z,63nm,0.8s
SMRA Abu-Samra 65.41 287 P **P** **21 16 13.4 +0.2**
GROC Groznyy 65.42 308 *e*P **P** **21 16 13.1 +0.1**
GROC *e* 21 16 45.1
GROC *e* 21 18 36.4
GROC *e*S **S** **21 24 57.4 +0.9**
GROC pmax pmax
comp=Z,38nm,0.6s
Q17K Contact Creek 65.45 35 P **P** **21 16 12.3 -0.7**
baz=275
GANJ Ganja 65.49 305 P **P** **21 16 14.1 +0.6**
L19K White Mountain 65.63 31 IAMs_20 IAMs_20 21 43 33.8
comp=Z,3µm,22.0s
L19K White Mountain 65.63 31 P **P** **21 16 14.3 +0.3**

baz=274,SNR=78
L19K S **S** **21 24 59.0 +0.5**
baz=274
O18K Koktuh Hills 65.66 33 IAmb IAmb 21 16 18.3
comp=Z,123nm,0.8s
O18K Koktuh Hills 65.66 33 P **P** **21 16 14.4 +0.2**
baz=275,SNR=50
O18K S **S** **21 24 59.8 +1.0**
baz=275
P18K Big Mountain, 65.69 34 IAmb IAmb 21 16 17.5
comp=Z,67nm,0.8s
P18K Big Mountain, 65.69 34 P **P** **21 16 14.5 0.0**
baz=276
P18K S **S** **21 24 58.6 -0.8**
baz=276
J20K Nowinta River 65.80 28 IAMs_20 IAMs_20 21 47 01.1
comp=Z,3µm,19.0s
J20K Nowinta River 65.80 28 P **P** **21 16 15.8 +0.7**
baz=274,SNR=130
J20K S **S** **21 25 01.8 +1.4**
baz=274
CHIR Chirikof Islan 65.86 38 P **P** **21 16 14.9 -0.6**
CHIR Chirikof Islan 65.86 38 P **P** **21 16 15.5 -0.1**
baz=277
CHIR S **S** **21 25 02.4 +1.1**
baz=277
M19K Big River Lodg 65.87 31 P **P** **21 16 15.8 +0.2**
M19K Big River Lodg 65.87 31 P **P** **21 16 16.2 +0.7**
baz=275,SNR=64
M19K S **S** **21 25 02.5 +1.1**
baz=275
Q18K Katmai Hardscr 65.88 35 P **P** **21 16 15.2 -0.5**
baz=276
Q18K S **S** **21 25 01.0 -0.8**
baz=276
K20K Telida 65.90 29 IAmb IAmb 21 16 34.0
comp=Z,102nm,0.8s
K20K IAMs_20 IAMs_20 21 46 07.7
comp=Z,3µm,20.0s
K20K Telida 65.90 29 P **P** **21 16 16.6 +0.9**
baz=275,SNR=80
K20K S **S** **21 25 04.0 +2.2**
baz=275
N19K Bonanza Creek 65.93 32 P **P** **21 16 16.4 +0.4**
N19K IAmb IAmb 21 16 46.3
comp=Z,99nm,1.1s
N19K Bonanza Creek 65.93 32 P **P** **21 16 16.4 +0.4**
baz=276,SNR=35
N19K S **S** **21 25 03.9 +1.6**
baz=276
L20K Farewell, AK 66.06 30 P **P** **21 16 17.8 +1.0**
baz=275,SNR=48
L20K S **S** **21 25 05.4 +1.7**
baz=275
O19K Port Alsworth 66.07 33 P **P** **21 16 17.3 +0.5**
baz=276
O19K S **S** **21 25 05.5 +1.7**
baz=276
H21K Melozitna Rive 66.25 27 IAmb IAmb 21 16 22.7
comp=Z,170nm,1.1s
H21K IAMs_20 IAMs_20 21 46 22.1
comp=Z,3µm,21.0s
H21K Melozitna Rive 66.25 27 P **P** **21 16 18.7 +0.7**
baz=275,SNR=213
H21K S **S** **21 25 07.6 +1.6**
baz=275
NAX Nakhchivan 66.40 304 P **P** **21 16 20.2 +0.7**
M20K Styx River 66.47 31 P **P** **21 16 19.9 +0.4**
M20K IAmb IAmb 21 16 42.5
comp=Z,98nm,1.1s
M20K Styx River 66.47 31 P **P** **21 16 20.5 +1.0**
baz=276,SNR=38
M20K S **S** **21 25 09.8 +0.9**
baz=276
Q19K Cape Douglas, 66.55 34 P **P** **21 16 19.9 -0.1**
Q19K Cape Douglas, 66.55 34 P **P** **21 16 19.0 -1.0**
baz=277,SNR=9.3
SII Sitkinak Islan 66.56 37 P **P** **21 16 20.0 -0.1**
SII Sitkinak Islan 66.56 37 P **P** **21 16 19.8 -0.3**
baz=278,SNR=9.6
SII S **S** **21 25 09.7 -0.3**
baz=278
SII Sitkinak Islan 66.56 37 P **P** **21 16 21.9 +1.8**
CHUM Lake Minchumin 66.63 29 P **P** **21 16 21.3 +1.0**
baz=276,SNR=43
CHUM S **S** **21 25 11.9 +1.4**
baz=276
I21K Tanana 66.64 27 IAmb IAmb 21 16 36.8
comp=Z,147nm,1.1s
I21K Tanana 66.64 27 P **P** **21 16 21.5 +1.1**
baz=276,SNR=111
I21K S **S** **21 25 11.7 +1.1**
baz=276
KLMR Klimovskoe 66.73 328 *e*P **P** **21 16 17.9 -3.1**
KLMR *e* 21 16 46.2
KLMR *e* 21 18 43.7
KLMR *e*S **S** **21 25 11.3 -0.5**
KLMR *e*SS **SS** **21 29 34.2 +5.1**
KLMR pmax pmax
comp=Z,475nm,1.1s
KLMR MLR MLR
comp=Z,7µm,16.0s
KLMR Klimovskoe 66.73 328 *e*P **P** **21 16 17.9 -3.1**
KLMR AMP 21 16 22.3
comp=Z,475nm,1.1s
KLMR *e*PcP **PcP** **21 16 46.2 -3.7**
KLMR *e*PP **PP** **21 18 43.8 -4.0**
KLMR *e*S **S** **21 25 11.3 -0.5**
KLMR *e*S **S** **21 25 11.3 -0.5**
KLMR *e*SS **SS** **21 29 34.2 +5.1**
KLMR *e*SS **SS** **21 29 34.2 +5.1**
KLMR LQ LQ 21 39 54.2
KLMR LQ LQ 21 39 54.2
KLMR LR LR 21 45 45.3
KLMR AMP 21 48 27.2
comp=Z,7µm,16.1s
C23K Itkillik River 66.73 22 P **P** **21 16 21.3 +0.4**
baz=275,SNR=58
C23K S **S** **21 25 11.1 -0.6**
baz=275
GNI Garni 66.77 305 P **P** **21 16 23.2 +1.3**
comp=Z,93nm,1.3s,baz=135,slow=1.7,SNR=18
GNI LR LR 21 49 56.5
comp=Z,3µm,18.4s,baz=86,slow=40
comp=Z,93nm,1.3s
GNI Garni 66.77 305 P **P** **21 16 22.6 +0.7**
GNI Garni 66.77 305 IAMs_20 IAMs_20 21 49 53.6
comp=Z,3µm,18.0s
GNI Garni 66.77 305 P **P** **21 16 22.6 +0.7**
GNI pmax pmax
comp=Z,228nm,1.4s
GNI MLR MLR
comp=Z,3µm,18.0s
GNI Garni 66.77 305 P **P** **21 16 23.2 +1.3**
CAST Castle Rocks 66.78 29 IAmb IAmb 21 16 24.7
comp=Z,116nm,0.8s
CAST IAMs_20 IAMs_20 21 47 53.1
comp=Z,3µm,19.0s
CAST Castle Rocks 66.78 29 P **P** **21 16 21.7 +0.3**
baz=276,SNR=101
D23K Nanushuk River 66.79 23 P **P** **21 16 22.1 +0.8**
baz=275,SNR=222
D23K S **S** **21 25 13.5 +1.2**
baz=275
PPLA Purkeypile 66.79 30 IAmb IAmb 21 16 44.7
comp=Z,144nm,1.0s
PPLA Purkeypile 66.79 30 P **P** **21 16 22.0 +0.4**
baz=276,SNR=50
PPLA S **S** **21 25 13.3 +0.5**
baz=276
RSO Redoubt South 66.81 32 P **P** **21 16 22.5 +0.7**
H22K Ishtalitna Cre 66.82 26 P **P** **21 16 22.6 +1.1**
baz=276,SNR=279
H22K S **S** **21 25 13.9 +1.1**
baz=276
VRH Novokhopyorsk 66.85 317 *e*P **P** **21 16 20.9 -1.0**
VRH *e*S **S** **21 25 06.7 -6.8**
VRH pmax pmax
comp=Z,570nm,1.0s
VRH pmax pmax
comp=Z,640nm,1.1s
VRH smax smax
comp=N,850nm,11.4s
VRH MLR MLR
comp=Z,3µm,15.0s
ZEI Tsey 66.87 308 *e*P **P** **21 16 21.6 -0.9**
ZEI pmax pmax
comp=Z,141nm,1.3s
O20K Slope Mountain 66.92 33 P **P** **21 16 21.1 -1.3**
baz=277
O20K S **S** **21 25 13.8 -0.6**
baz=277
OHAK Old Harbor 66.96 36 P **P** **21 16 22.2 -0.4**
baz=278,SNR=23
OHAK S **S** **21 25 13.8 -0.9**
baz=278
N20K Mount Spurr 66.98 32 P **P** **21 16 22.7 -0.1**
baz=277
N20K S **S** **21 25 15.2 +0.1**
baz=277
GOF Gofitskoye 67.04 311 ⇑*i*P **P** **21 16 23.9 +0.6**
GOF pmax pmax
comp=Z,304nm,1.1s
SPU Mount Spurr 67.06 32 P **P** **21 16 23.3 +0.1**
COLD Coldfoot 67.14 25 P **P** **21 16 23.8 +0.2**
COLD IAmb IAmb 21 16 39.8
comp=Z,140nm,1.3s
COLD Coldfoot 67.14 25 P **P** **21 16 24.0 +0.4**
baz=276,SNR=36
COLD S **S** **21 25 18.1 +1.5**
baz=276
MLY Manley 67.18 27 P **P** **21 16 24.1 +0.2**
MLY IAmb IAmb 21 16 28.5
comp=Z,161nm,1.1s
MLY IAMs_20 IAMs_20 21 48 38.5
comp=Z,2µm,18.0s
MLY Manley 67.18 27 P **P** **21 16 24.6 +0.6**
baz=277,SNR=196
MLY S **S** **21 25 17.5 +0.2**
baz=277
BPAW Bear Paw Mtn. 67.19 28 IAMs_20 IAMs_20 21 47 25.8
comp=Z,2µm,19.0s
BPAW Bear Paw Mtn. 67.19 28 P **P** **21 16 24.3 +0.3**
baz=277,SNR=96
BPAW S **S** **21 25 18.4 +1.1**
baz=277
SKT Skwentna 67.21 31 IAmb IAmb 21 16 26.4
comp=Z,52nm,0.8s
SKT IAMs_20 IAMs_20 21 44 23.4
comp=Z,3µm,22.0s
SKT Skwentna 67.21 31 P **P** **21 16 23.4 -0.7**
baz=278,SNR=30
SKT S **S** **21 25 17.5 -0.2**
baz=278
TOLK Toolik Lake Re 67.22 23 IAmb IAmb 21 16 27.2
comp=Z,105nm,0.8s
TOLK IAMs_20 IAMs_20 21 50 55.6
comp=Z,4µm,18.0s
TOLK Toolik Lake Re 67.22 23 P **P** **21 16 24.4 +0.3**
baz=276,SNR=119
TOLK S **S** **21 25 16.7 -1.0**
baz=276
ONI Oni 67.23 308 P **P** **21 16 25.6 +1.0**
ONI Oni 67.23 308 P **P** **21 16 25.6 +1.0**
ONI pmax pmax
comp=Z,184nm,1.1s
Q20K Shuyak Island 67.24 34 P **P** **21 16 23.0 -1.3**
baz=278,SNR=14
Q20K S **S** **21 25 17.0 -1.0**
baz=278
KDAK Kodiak Island 67.26 35 P **P** **21 16 25.0 +0.6**
comp=Z,122nm,0.6s,baz=271,slow=3.9,SNR=87
KDAK LR LR 21 47 34.7
comp=Z,2µm,20.4s,baz=289,slow=38
comp=Z,122nm,0.6s
KDAK Kodiak Island 67.26 35 P **P** **21 16 25.3 +0.9**
KDAK Kodiak Island 67.26 35 IAMs_20 IAMs_20 21 49 54.1
comp=Z,2µm,19.0s
KDAK Kodiak Island 67.26 35 P **P** **21 16 25.3 +0.9**
KDAK pmax pmax
comp=Z,133nm,0.7s
KDAK MLR MLR
comp=Z,2µm,19.0s
KDAK Kodiak Island 67.26 35 P **P** **21 16 24.4 0.0**
baz=278
KDAK S **S** **21 25 17.8 -0.5**
baz=278
KTH Kantishna Hill 67.28 29 IAMs_20 IAMs_20 21 46 50.4
comp=Z,4µm,21.0s
MSVF Nonsavu 67.36 123 LR LR 21 41 48.0
comp=Z,740nm,21.9s,baz=330,slow=32
MSVF Nonsavu 67.36 123 P **P** **21 16 25.7 -0.1**
MSVF IAmb IAmb 21 16 42.0
comp=Z,146nm,0.9s
MSVF Nonsavu 67.36 123 P **P** **21 16 25.7 -0.1**
MSVF pmax pmax
comp=Z,145nm,1.0s
MSVF Nonsavu 67.36 123 P **P** **21 16 27.6 +1.8**
KBZ Khabaz 67.40 309 P **P** **21 16 26.2 +0.6**
comp=Z,111nm,1.1s,baz=100,slow=4.4,SNR=99
KBZ LR LR 21 49 44.4
comp=Z,7µm,19.0s,baz=70,slow=39
comp=Z,111nm,1.1s
KBZ Khabaz 67.40 309 *e*P **P** **21 16 26.1 +0.5**
KBZ pmax pmax
comp=Z,181nm,1.2s
D24K Happy Valley 67.43 23 P **P** **21 16 26.1 +0.7**
baz=277,SNR=99
D24K S **S** **21 25 20.0 -0.1**
baz=277
HOM Homer 67.47 33 P **P** **21 16 25.9 +0.1**
HOM Homer 67.47 33 P **P** **21 16 25.2 -0.6**
baz=278
KIV Kislovodsk 67.50 310 ⇓P **P** **21 16 27.0 +0.6**
KIV Kislovodsk 67.50 310 P **P** **21 16 26.8 +0.4**
KIV IAMs_20 IAMs_20 21 49 34.5
comp=Z,4µm,20.0s
KIV Kislovodsk 67.50 310 *e*P **P** **21 16 27.0 +0.6**
KIV *e* 21 18 55.9
KIV *e*S **S** **21 25 24.2 +2.2**
KIV *e*SS **SS** **21 29 46.1 +4.0**
KIV pmax pmax
comp=Z,358nm,1.1s
KIV pmax pmax
comp=Z,47nm,3.3s
KIV MLR MLR
comp=Z,3µm,17.0s
KIV Kislovodsk 67.50 310 *i* P **P** **21 16 26.9 +0.5**
SNR=121
SHA1 Shidzhatmaz 67.57 309 *c i*P **P** **21 16 27.4 +0.4**
H23K Yukon River 67.58 26 P **P** **21 16 27.3 +0.9**
H23K IAMs_20 IAMs_20 21 50 10.0
comp=Z,2µm,18.0s
H23K Yukon River 67.58 26 P **P** **21 16 27.3 +0.9**
baz=278,SNR=324
H23K S **S** **21 25 23.3 +1.3**
baz=278
TRF Thorofare Moun 67.58 29 IAmb IAmb 21 16 48.2
comp=Z,91nm,1.0s
TRF IAMs_20 IAMs_20 21 48 38.2
comp=Z,3µm,20.0s
TRF Thorofare Moun 67.58 29 P **P** **21 16 26.2 -0.4**
baz=278,SNR=10
TRF S **S** **21 25 22.6 +0.3**
baz=278
SUA Susitna One 67.65 31 P **P** **21 16 27.3 +0.3**
SUA Susitna One 67.65 31 P **P** **21 16 26.6 -0.4**
baz=278,SNR=41
SUA S **S** **21 25 21.6 -1.6**
baz=278
CNPM China Poot 67.69 33 P **P** **21 16 27.7 +0.5**
CNPM IAmb IAmb 21 16 45.2
comp=Z,64nm,0.7s
CUT Chulitna 67.73 30 P **P** **21 16 27.6 +0.2**
CUT IAMs_20 IAMs_20 21 46 45.4
comp=Z,3µm,20.0s
CUT Chulitna 67.73 30 P **P** **21 16 26.7 -0.6**
baz=278,SNR=16
CUT S **S** **21 25 22.8 -1.1**
baz=278
I23K Minto, Yukon-K 67.74 27 IAMs_20 IAMs_20 21 46 35.5
comp=Z,2µm,21.0s
I23K Minto, Yukon-K 67.74 27 P **P** **21 16 27.9 +0.5**
baz=278,SNR=38
I23K S **S** **21 25 24.3 +0.4**
baz=278
BWN Browne 67.84 28 P **P** **21 16 28.5 +0.5**
BWN IAMs_20 IAMs_20 21 51 14.9
comp=Z,3µm,18.0s
DGTI Dogotuki 67.86 120 P **P** **21 16 30.7 +1.8**
M22K Willow 67.90 31 P **P** **21 16 28.0 -0.4**
baz=279,SNR=20
M22K S **S** **21 25 25.5 -0.3**
baz=279
BRSE Bradley Lake S 67.91 33 P **P** **21 16 27.8 -0.8**
baz=279,SNR=9.8
BRSE S **S** **21 25 23.6 -2.5**
baz=279
LVZ Lovozero 67.91 336 P **P** **21 16 27.3 -1.1**
LVZ IAmb IAmb 21 16 33.2
comp=Z,101nm,0.9s
LVZ Lovozero 67.91 336 *ce*P **P** **21 16 27.4 -1.1**
LVZ pmax pmax
comp=Z,221nm,1.7s
KARS Kars 67.91 306 P **P** **21 16 29.8 +0.7**
KARS Kars 67.91 306 P **P** **21 16 29.8 +0.7**
KARS pmax pmax
comp=Z,434nm,1.0s
NEA2 Nenana 67.95 28 IAMs_20 IAMs_20 21 47 48.9
comp=Z,2µm,20.0s
NEA2 Nenana 67.95 28 P **P** **21 16 28.9 +0.1**
baz=278,SNR=129
NEA2 S **S** **21 25 26.9 +0.5**
baz=278
MCK McKinley 68.14 29 IAMs_20 IAMs_20 21 51 24.9
comp=Z,3µm,18.0s
MCK McKinley 68.14 29 P **P** **21 16 29.6 -0.4**
baz=279,SNR=64
MCK S **S** **21 25 26.3 -2.4**
baz=279
RC01 Rabbit Creek A 68.19 32 IAmb IAmb 21 16 47.6
comp=Z,55nm,0.7s
RC01 Rabbit Creek A 68.19 32 P **P** **21 16 29.5 -0.8**
baz=279,SNR=11
RC01 S **S** **21 25 28.2 -1.2**
baz=279
RND Reindeer 68.22 29 IAMs_20 IAMs_20 21 47 19.1
comp=Z,3µm,21.0s
H24K Noodor Dome 68.25 26 P **P** **21 16 31.8 +1.1**
baz=279,SNR=126
H24K S **S** **21 25 32.2 +2.1**
baz=279
O22K Cooper Landing 68.29 32 IAMs_20 IAMs_20 21 49 11.2
comp=Z,2µm,19.0s
O22K Cooper Landing 68.29 32 P **P** **21 16 30.6 -0.3**
baz=280,SNR=9.3
O22K S **S** **21 25 30.1 -0.5**
baz=280
LPSR Galich'ya Gora 68.31 319 *e*P **P** **21 16 30.4 -0.8**
LPSR *e*S **S** **21 25 23.8 -7.3**
LPSR pmax pmax
comp=Z,470nm,0.9s
LPSR pmax pmax
comp=Z,530nm,1.0s
LPSR smax smax
comp=N,680nm,10.3s
LPSR MLR MLR
comp=Z,2µm,21.0s
VORR Voronezh 68.31 318 *e*P **P** **21 16 30.7 -0.5**
VORR pmax pmax
comp=Z,590nm,1.2s
WRH Wood River Hil 68.38 28 P **P** **21 16 31.5 +0.1**
WRH IAMs_20 IAMs_20 21 49 44.4
comp=Z,3µm,18.0s
PMR Palmer 68.39 31 IAmb IAmb 21 16 46.6
comp=Z,60nm,0.9s
PMR Palmer 68.39 31 P **P** **21 16 30.9 -0.7**
baz=280,SNR=12
PMR S **S** **21 25 29.9 -1.8**
baz=280
TCOL CIGO, UAF Yank 68.41 27 P **P** **21 16 31.7 +0.1**
TCOL IAmb IAmb 21 16 54.6
comp=Z,90nm,0.8s
TCOL CIGO, UAF Yank 68.41 27 P **P** **21 16 31.8 +0.1**
baz=280,SNR=9.6
TCOL S **S** **21 25 33.0 +1.1**
baz=280
COLA College 68.42 27 P **P** **21 16 31.1 -0.5**
COLA IAmb IAmb 21 16 54.6
comp=Z,92nm,0.8s
COLA College 68.42 27 P **P** **21 16 31.1 -0.5**
COLA pmax pmax
comp=Z,92nm,0.8s
COLA MLR MLR
comp=Z,2µm,20.0s
COLA College 68.42 27 P **P** **21 16 31.6 -0.1**
baz=280
COLA S **S** **21 25 33.0 +1.1**
baz=280
VSR Storozhevoye 68.43 318 *e*P **P** **21 16 31.0 -0.9**
VSR *e*S **S** **21 25 25.7 -6.8**
VSR pmax pmax
comp=Z,420nm,1.1s
VSR pmax pmax
comp=Z,570nm,1.3s
VSR smax smax
comp=N,540nm,10.1s
VSR MLR MLR
comp=Z,4µm,20.0s
APA Apatity 68.43 336 ⇓*i*P **P** **21 16 30.0 -1.7**
APA *i* 21 19 43.0
APA *i*S **S** **21 25 29.0 -3.0**
APA *i* 21 26 24.0
APA pmax pmax
comp=Z,126nm,0.9s
APA MLR MLR
comp=Z,8µm,16.0s
GEVA Gevas 68.45 304 P **P** **21 16 31.9 -0.7**
GEVA IAmb IAmb 21 16 50.9
comp=Z,75nm,1.0s
WAT1 Susitna Watana 68.45 30 P **P** **21 16 31.1 -0.9**
baz=280
GHO Glory Hole Cre 68.46 31 IAmb IAmb 21 17 13.4
comp=Z,70nm,0.8s
CCB Clear Creek Bu 68.48 28 IAMs_20 IAMs_20 21 51 04.9
comp=Z,2µm,18.0s
MOS Moscow 68.49 323 *e*P **P** **21 16 29.1 -3.1**
MOS *e* 21 16 41.8
MOS *e* 21 19 04.9
MOS *e*S **S** **21 25 30.0 -3.1**
MOS pmax pmax
comp=Z,600nm,1.5s
MOS pmax pmax
comp=Z,436nm,1.4s
MOS MLR MLR
comp=Z,5µm,18.0s
MOS MLR MLR
comp=N,4µm,19.0s
MOS MLR MLR
comp=E,4µm,18.0s
SEW Seward 68.49 33 IAmb IAmb 21 16 51.9
comp=Z,127nm,0.9s
SEW Seward 68.49 33 P **P** **21 16 31.0 -1.1**
baz=280,SNR=12
SEW S **S** **21 25 32.0 -0.9**
baz=280
POKR Poker Plat Res 68.55 27 IAMs_20 IAMs_20 21 47 53.9
comp=Z,2µm,21.0s
POKR Poker Plat Res 68.55 27 P **P** **21 16 32.9 +0.4**
baz=280,SNR=37
POKR S **S** **21 25 33.2 -0.4**
baz=280
BATM Batumi 68.72 307 ⇑P **P** **21 16 34.9 +0.9**
SML Sawmill 68.73 31 IAmb IAmb 21 16 54.4
comp=Z,89nm,0.8s
SML Sawmill 68.73 31 P **P** **21 16 33.2 -0.6**
baz=280,SNR=47
SML S **S** **21 25 36.1 +0.1**
baz=280
KNK Knik Glacier 68.74 31 P **P** **21 16 33.9 +0.1**
KNK Knik Glacier 68.74 31 P **P** **21 16 33.5 -0.3**
baz=280,SNR=25
KNK S **S** **21 25 36.4 +0.3**
baz=280
ILAR Eielson Array 68.84 27 P **P** **21 16 33.6 -0.7**
comp=Z,10nm,0.9s,baz=271,slow=3.0,SNR=71
ILAR PKP2bc 21 44 51.3
comp=Z,1.8nm,0.9s,baz=112,slow=1.2,SNR=4.6
ILAR LR LR 21 47 30.8
comp=Z,2µm,21.4s,baz=288,slow=37
comp=Z,10nm,0.9s
WAT6 Susitna Watana 68.86 30 P **P** **21 16 34.1 -0.6**
baz=280,SNR=77
WAT6 S **S** **21 25 38.4 +0.7**
baz=280
HDA Harding Lake 68.88 28 IAmb IAmb 21 16 36.4
comp=Z,87nm,0.8s
HDA Harding Lake 68.88 28 P **P** **21 16 33.7 -0.9**
baz=280,SNR=90
HDA S **S** **21 25 36.6 -1.0**
baz=280

HDA S **S** **21 25 36.6 -1.0**
baz=280
DHY **Denali Highway** **68.94 29** IAmb IAmb 21 16 59.3
comp=Z,49nm,0.8s
DHY IAMs_20 IAMs_20 21 47 43.1
comp=Z,3µm,22.0s
DHY **Denali Highway** **68.94 29** P **P** **21 16 34.7 -0.4**
baz=281,SNR=39
M23K **Glacier View** **69.02 31** P **P** **21 16 35.1 -0.4**
baz=281,SNR=21
M23K S **S** **21 25 40.2 +1.0**
baz=281
GURO **Guroymak-BITLI** **69.18 304** P **P** **21 16 36.9 -0.1**
SCM **Sheep Creek Mo** **69.19 31** P **P** **21 16 36.3 -0.4**
baz=281,SNR=54
SCM S **S** **21 25 41.7 +0.3**
baz=281
OBN **Obninsk** **69.20 322** ⇑P **P** **21 16 36.3 -0.4**
OBN **Obninsk** **69.20 322** P **P** **21 16 35.4 -1.3**
comp=Z,14nm,0.4s,baz=41,slow=2.3,SNR=56
OBN LR LR 21 50 08.9
comp=Z,1µm,18.8s,baz=73,slow=39
comp=Z,14nm,0.4s
OBN **Obninsk** **69.20 322** P **P** **21 16 35.6 -1.0**
OBN **Obninsk** **69.20 322** *c* *i*P **P** **21 16 35.3 -1.3**
OBN *i* 21 16 47.2
OBN *i* 21 16 58.7
OBN *i* S **S** **21 25 37.0 -4.5**
OBN pmax pmax
comp=Z,337nm,1.3s
OBN MLR MLR
comp=Z,4µm,17.0s
GLI **Glacier Island** **69.49 31** P **P** **21 16 38.6 +0.1**
GLI **Glacier Island** **69.49 31** P **P** **21 16 38.5 +0.1**
baz=282,SNR=17
GLI S **S** **21 25 45.9 +1.1**
baz=282
K24K **Donnelly Dome** **69.50 28** P **P** **21 16 38.0 -0.5**
baz=282,SNR=99
K24K S **S** **21 25 43.0 -2.0**
baz=282
J25K **Salcha River,** **69.51 27** IAMs_20 IAMs_20 21 48 45.3
comp=Z,3µm,21.0s
J25K **Salcha River,** **69.51 27** P **P** **21 16 37.6 -1.0**
baz=282,SNR=63
J25K S **S** **21 25 42.6 -2.5**
baz=282
M24K **Tolsona, Glenn** **69.67 30** IAMs_20 IAMs_20 21 49 55.6
comp=Z,3µm,21.0s
M24K **Tolsona, Glenn** **69.67 30** P **P** **21 16 39.9 +0.3**
baz=282,SNR=54
M24K S **S** **21 25 48.1 +1.1**
baz=282
SOC **Sochi** **69.69 310** *e*P **P** **21 16 37.8 -2.1**
SOC *e* 21 19 11.8
SOC *e*PPP PPP 21 20 53.2
SOC *e*S **S** **21 25 46.7 -1.0**
SOC *e*SSS SSS 21 33 23.9
SOC pmax pmax
comp=Z,146nm,1.3s
SOC MLR MLR
comp=Z,3µm,17.0s
TAU **Tasmania Unive** **69.75 161** P **P** **21 16 42.2 +2.2**
PAX **Paxson** **69.81 29** IAmb IAmb 21 16 44.6
comp=Z,68nm,0.8s
PAX **Paxson** **69.81 29** P **P** **21 16 40.1 -0.4**
baz=282,SNR=85
PAX S **S** **21 25 48.3 -0.4**
baz=282
HIN **Hinchinbrook I** **69.88 32** IAMs_20 IAMs_20 21 50 15.1
comp=Z,2µm,19.0s
KLU **Klutina** **69.92 31** IAmb IAmb 21 16 57.8
comp=Z,73nm,0.6s
KLU IAMs_20 IAMs_20 21 46 13.2
comp=Z,3µm,22.0s
KLU **Klutina** **69.92 31** P **P** **21 16 40.9 -0.3**
baz=282,SNR=33
KLU S **S** **21 25 50.1 0.0**
baz=282
RIDG **Independent Ri** **69.92 28** P **P** **21 16 40.4 -0.7**
RIDG IAmb IAmb 21 16 44.6
comp=Z,178nm,1.2s
RIDG IAMs_20 IAMs_20 21 52 20.1
comp=Z,3µm,18.0s
RIDG **Independent Ri** **69.92 28** P **P** **21 16 40.7 -0.4**
baz=282,SNR=77
RIDG S **S** **21 25 49.7 -0.3**
baz=282
DIV **Divide** **70.07 31** P **P** **21 16 42.2 +0.2**
HARP **HAARP** **70.08 30** P **P** **21 16 42.9 +0.9**
baz=283,SNR=37
HARP S **S** **21 25 51.7 0.0**
baz=283
Q23K **Middleton Isla** **70.16 33** P **P** **21 16 43.3 +0.8**
Q23K IAmb IAmb 21 16 45.6
comp=Z,125nm,0.8s
Q23K **Middleton Isla** **70.16 33** P **P** **21 16 42.4 -0.1**
baz=283
MID **Middleton Isla** **70.17 33** P **P** **21 16 41.9 -0.6**
MID IAmb IAmb 21 16 45.6
comp=Z,122nm,0.8s
MID **Middleton Isla** **70.17 33** P **P** **21 16 41.9 -0.6**
MID pmax pmax
comp=Z,122nm,0.8s
EYAK **Cordova Ski Ar** **70.21 32** P **P** **21 16 43.4 +0.6**
EYAK IAmb IAmb 21 16 59.8
comp=Z,75nm,0.8s
EYAK **Cordova Ski Ar** **70.21 32** P **P** **21 16 43.6 +0.8**
baz=283,SNR=16
EYAK S **S** **21 25 55.1 +1.9**
baz=283
SCRK **Sand Creek** **70.24 28** IAmb IAmb 21 17 00.6
comp=Z,76nm,0.8s
SCRK IAMs_20 IAMs_20 21 49 10.4
comp=Z,3µm,19.0s
SCRK **Sand Creek** **70.24 28** P **P** **21 16 42.5 -0.6**
baz=283,SNR=128
SCRK S **S** **21 25 54.2 +0.4**
baz=283
KEV **Kevo** **70.27 338** P **P** **21 16 42.2 -0.8**
KEV IAmb IAmb 21 16 44.0
comp=Z,159nm,0.9s
KEV IAMs_20 IAMs_20 21 50 55.6
comp=Z,4µm,21.0s
KEV **Kevo** **70.27 338** P **P** **21 16 42.2 -0.8**
KEV pmax pmax
comp=Z,159nm,0.9s
KEV MLR MLR
comp=Z,4µm,21.0s
KTUT **Trabzon** **70.28 307** ⇑P **P** **21 16 44.0 +0.4**
DOT **Dot Lake** **70.28 28** IAmb IAmb 21 16 45.6
comp=Z,76nm,0.8s
I26K **Coal Creek Min** **70.28 26** IAmb IAmb 21 16 47.4
comp=Z,313nm,1.8s
I26K IAMs_20 IAMs_20 21 52 00.7
comp=Z,3µm,18.0s
I26K **Coal Creek Min** **70.28 26** P **P** **21 16 43.1 -0.1**
baz=283
I26K S **S** **21 25 53.4 -0.6**
baz=283
J26L **Joseph Creek** **70.30 27** IAmb IAmb 21 16 45.6
comp=Z,113nm,0.8s
J26L IAMs_20 IAMs_20 21 52 50.0
comp=Z,2µm,18.0s
J26L **Joseph Creek** **70.30 27** P **P** **21 16 42.6 -0.8**
baz=283,SNR=173
J26L S **S** **21 25 53.5 -0.9**
baz=283
RAYN **Ar Rayn** **70.42 288** P **P** **21 16 44.6 -0.2**
RAYN IAmb IAmb 21 17 01.5
comp=Z,118nm,1.4s
RAYN **Ar Rayn** **70.42 288** IAMs_20 IAMs_20 21 51 35.4
comp=Z,3µm,21.0s
RAYN **Ar Rayn** **70.42 288** P **P** **21 16 44.6 -0.2**
RAYN pmax pmax
comp=Z,118nm,1.4s
RAYN MLR MLR
comp=Z,3µm,21.0s
RAYN **Ar Rayn** **70.42 288** *i* P **P** **21 16 44.7 -0.1**
SNR=34
SPB2 **Spitsbergen Ar** **70.49 348** IAmb IAmb 21 17 00.1
comp=Z,92nm,0.7s
SPITS **Spitsbergen Ar** **70.49 348** LR LR 21 51 33.1
comp=Z,5µm,19.9s,baz=19,slow=39
N25K **Chitina, Valde** **70.51 30** IAmb IAmb 21 16 50.4
comp=Z,80nm,0.8s
N25K IAMs_20 IAMs_20 21 48 57.8
comp=Z,2µm,22.0s
N25K **Chitina, Valde** **70.51 30** P **P** **21 16 45.5 +0.8**
baz=284,SNR=85
N25K S **S** **21 25 56.7 -0.3**
baz=284
MENT **Mentasta** **70.60 29** IAmb IAmb 21 17 04.2
comp=Z,93nm,0.8s
BMRM **Bremner River** **70.66 31** IAmb IAmb 21 17 03.2
comp=Z,110nm,0.8s
BMRM IAMs_20 IAMs_20 21 46 47.7
comp=Z,3µm,22.0s
BMRM **Bremner River** **70.66 31** P **P** **21 16 45.4 -0.2**
baz=284,SNR=51
BMRM S **S** **21 25 58.9 +0.3**
baz=284
L26K **Log Cabin Wild** **70.74 29** IAmb IAmb 21 16 49.5
comp=Z,62nm,0.7s
L26K IAMs_20 IAMs_20 21 50 46.8
comp=Z,4µm,20.0s
L26K **Log Cabin Wild** **70.74 29** P **P** **21 16 45.9 -0.2**
baz=284,SNR=77
L26K S **S** **21 26 00.3 +0.8**
baz=284
ARA0 **ARCESS Array S** **70.84 338** *e*P **P** **21 16 45.7 -0.8**
ARA0 IAmb IAmb 21 16 47.3
comp=Z,109nm,0.9s
ARCES **ARCESS Array B** **70.84 338** P **P** **21 16 45.6 -0.9**
comp=Z,100nm,0.9s,baz=74,slow=6.4,SNR=144
comp=Z,100nm,0.9s
ARCES **ARCESS Array B** **70.84 338** IAmb IAmb 21 16 47.5
comp=Z,101nm,0.9s
GLB **Gilahina Butte** **70.92 31** IAmb IAmb 21 17 04.5
comp=Z,96nm,0.8s
GLB IAMs_20 IAMs_20 21 49 10.5
comp=Z,3µm,22.0s
HMT **Hamilton** **70.98 32** P **P** **21 16 47.4 -0.2**
HMT IAmb IAmb 21 17 18.0
comp=Z,77nm,0.9s
HMT IAMs_20 IAMs_20 21 52 41.1
comp=Z,3µm,18.0s
ANN **Anapa** **70.98 311** *c* *i*P **P** **21 16 47.4 -0.4**
ANN *e*S **S** **21 25 59.8 -3.0**
ANN pmax pmax
comp=Z,400nm,1.3s
ANN MLR MLR
comp=Z,3µm,19.0s
KBS **Kingsbay** **71.01 349** P **P** **21 16 47.1 -0.3**
KBS **Kingsbay** **71.01 349** P **P** **21 16 47.1 -0.3**
KBS pmax pmax
comp=Z,66nm,1.3s
KBS MLR MLR
comp=Z,8µm,18.0s
KBS **Kingsbay** **71.01 349** *e*P **P** **21 16 47.3 -0.1**
K27K **Chicken** **71.04 28** IAmb IAmb 21 16 51.4
comp=Z,107nm,0.8s
K27K IAMs_20 IAMs_20 21 53 21.9
comp=Z,3µm,18.0s
K27K **Chicken** **71.04 28** P **P** **21 16 48.3 +0.4**
baz=285
K27K S **S** **21 26 02.5 -0.4**
baz=285
M26K **Nabesna, AK** **71.05 29** IAMs_20 IAMs_20 21 50 19.1
comp=Z,3µm,20.0s
M26K **Nabesna, AK** **71.05 29** P **P** **21 16 48.1 +0.1**
baz=285,SNR=283
M26K S **S** **21 26 02.6 -0.6**
baz=285
HSPB **Hornsund (broa** **71.11 347** *e*P **P** **21 16 46.7 -1.3**
HSPB *e*L L 21 53 49.5
comp=Z,18µm,18.1s
HAMF **Hammerfest** **71.12 340** IAmb IAmb 21 16 48.7
comp=Z,134nm,0.9s
VRDI **Verde Repeater** **71.14 31** IAmb IAmb 21 17 06.2
comp=Z,88nm,0.8s
BJO1 **Bjornoya** **71.22 344** *e*P **P** **21 16 48.0 -0.8**
BJO1 IAmb IAmb 21 16 48.6
comp=Z,74nm,0.9s
SUCK **Suckling Hills** **71.28 32** P **P** **21 16 50.0 +0.7**
SUCK IAmb IAmb 21 17 06.5
comp=Z,80nm,0.9s
SUCK IAMs_20 IAMs_20 21 53 09.0
comp=Z,3µm,18.0s
MCARA **McCarthy VSAT** **71.30 30** P **P** **21 16 49.9 +0.4**
MCARA IAmb IAmb 21 17 08.2
comp=Z,124nm,0.8s
MCARA IAMs_20 IAMs_20 21 49 21.6
comp=Z,2µm,22.0s
MCARA **McCarthy VSAT** **71.30 30** P **P** **21 16 49.7 +0.3**
baz=285,SNR=46
MCARA S **S** **21 26 06.9 +0.9**
baz=285
L27K **Beaver Creek,** **71.40 29** IAmb IAmb 21 16 53.9
comp=Z,70nm,0.8s
L27K IAMs_20 IAMs_20 21 50 00.3
comp=Z,3µm,19.0s
L27K **Beaver Creek,** **71.40 29** P **P** **21 16 50.6 +0.5**
baz=285,SNR=175
L27K S **S** **21 26 07.3 +0.1**
baz=285
PUL **Pulkovo** **71.42 328** *ce*P **P** **21 16 50.2 0.0**
PUL pmax pmax
comp=Z,658nm,1.3s
PUL MLR MLR
comp=Z,12µm,17.0s
TGL **Tana Glacier** **71.55 31** IAMs_20 IAMs_20 21 47 13.4
comp=Z,2µm,22.0s
M27K **Edge Creek, AK** **71.57 29** IAmb IAmb 21 16 54.6
comp=Z,80nm,0.8s
M27K IAMs_20 IAMs_20 21 49 36.7
comp=Z,4µm,22.0s
M27K **Edge Creek, AK** **71.57 29** P **P** **21 16 51.5 +0.2**
baz=286,SNR=128
M27K S **S** **21 26 08.5 -0.8**
baz=286
WAX **Waxell Ridge** **71.62 31** IAmb IAmb 21 17 09.2
comp=Z,126nm,0.7s
WAX IAMs_20 IAMs_20 21 51 50.2
comp=Z,3µm,20.0s
SNH **Sunshine Point** **71.70 32** IAMs_20 IAMs_20 21 50 47.3
comp=Z,2µm,20.0s
KTK1 **Kautokeino** **71.76 338** *e*P **P** **21 16 51.9 -0.2**
KTK1 IAmb IAmb 21 16 52.8
comp=Z,131nm,0.9s
MSEY **Mahe Island** **71.80 256** IAMs_20 IAMs_20 21 44 47.7
comp=Z,2µm,22.0s
ISLE **Juniper Island** **71.83 31** IAmb IAmb 21 17 10.1
comp=Z,86nm,0.7s
BVCY **Beaver Creek** **72.01 29** P **P** **21 16 54.1 +0.4**
baz=286
BARN **Barnard Glacie** **72.02 31** IAmb IAmb 21 17 11.5
comp=Z,113nm,0.7s
BARN IAMs_20 IAMs_20 21 49 45.7
comp=Z,3µm,22.0s
GRNC **Granite Creek** **72.07 31** IAmb IAmb 21 17 12.5
comp=Z,60nm,0.8s
MESA **MESA** **72.13 32** IAmb IAmb 21 17 12.7
comp=Z,99nm,1.0s
MESA IAMs_20 IAMs_20 21 51 28.6
comp=Z,2µm,19.0s
MESA **MESA** **72.13 32** P **P** **21 16 55.3 +0.6**
baz=286,SNR=11
MESA S **S** **21 26 16.4 +0.4**
baz=286
DAWY **Dawson** **72.17 27** IAmb IAmb 21 16 58.3
comp=Z,76nm,0.8s
DAWY **Dawson** **72.17 27** P **P** **21 16 54.5 -0.2**
baz=287,SNR=77
DAWY S **S** **21 26 16.8 +0.8**
baz=287
CTG **Chitna Glacier** **72.20 31** P **P** **21 16 55.1 +0.1**
baz=286,SNR=111
CTGM **Chitina Glacie** **72.20 31** IAMs_20 IAMs_20 21 49 51.4
comp=Z,3µm,22.0s
I29M **Ogilvie Camp,** **72.23 26** IAmb IAmb 21 17 10.3
comp=Z,90nm,1.1s
I29M IAMs_20 IAMs_20 21 54 33.0
comp=Z,3µm,19.0s
I29M **Ogilvie Camp,** **72.23 26** P **P** **21 16 55.3 +0.3**
baz=288,SNR=64
I29M S **S** **21 26 17.1 +0.6**
baz=288
YUK3 **Moose Creek** **72.37 30** P **P** **21 16 56.3 +0.1**
baz=287,SNR=62
YUK3 S **S** **21 26 20.2 +1.4**
baz=287
LOGN **Logan Glacier** **72.40 31** IAmb IAmb 21 17 19.5
comp=Z,123nm,0.8s
LOGN IAMs_20 IAMs_20 21 49 56.6
comp=Z,3µm,21.0s
TABL **Table Mountain** **72.44 31** IAmb IAmb 21 17 11.2
comp=Z,96nm,0.9s
EPYK **Eagle Plains** **72.53 25** IAMs_20 IAMs_20 21 51 22.0
comp=Z,3µm,21.0s
EPYK **Eagle Plains** **72.53 25** P **P** **21 16 56.2 -0.6**
baz=289,SNR=172
EPYK S **S** **21 26 19.6 -0.5**
baz=289
JETT **Jettan, Norway** **72.53 339** *e*P **P** **21 16 56.8 0.0**
JETT IAmb IAmb 21 16 58.2
comp=Z,238nm,0.9s
J29M **Klondike Camp** **72.54 27** P **P** **21 16 57.9 +1.0**
J29M IAMs_20 IAMs_20 21 53 13.3
comp=Z,2µm,21.0s
J29M **Klondike Camp** **72.54 27** P **P** **21 16 57.6 +0.7**
baz=288,SNR=6.4
J29M S **S** **21 26 22.5 +2.2**
baz=288
YUK8 **Steele Glacier** **72.84 30** P **P** **21 16 59.8 +0.8**
baz=288,SNR=52
FIA0 **FINESS Array S** **72.96 330** P **P** **21 16 59.5 +0.1**
FIA0 **FINESS Array S** **72.96 330** P **P** **21 16 59.5 +0.1**
FINES **FINESS Array B** **72.96 330** P **P** **21 16 58.8 -0.6**
comp=Z,245nm,0.9s,baz=72,slow=6.2,SNR=436
FINES LR LR 21 52 52.7
comp=Z,14µm,19.1s,baz=74,slow=39
comp=Z,245nm,0.9s
PINM **Pinnacle** **72.97 31** P **P** **21 16 59.7 +0.2**
baz=288,SNR=95
PINM S **S** **21 26 26.5 +1.2**
baz=288
TRO **Tromso** **72.99 339** *e*P **P** **21 16 58.7 -0.6**
INK **Inuvik** **73.04 22** P **P** **21 16 60.0 +0.3**
comp=Z,122nm,0.7s,baz=295,slow=5.3,SNR=99
INK LR LR 21 53 07.3
comp=Z,2µm,18.3s,baz=274,slow=39
comp=Z,122nm,0.7s
INK **Inuvik** **73.04 22** IAmb IAmb 21 17 02.2
comp=Z,135nm,0.8s
INK **Inuvik** **73.04 22** P **P** **21 17 00.0 +0.3**
INK **Inuvik** **73.04 22** P **P** **21 16 59.4 -0.3**
baz=291,SNR=90
INK S **S** **21 26 27.1 +1.5**
baz=291
NOR **Nord** **73.14 354** *i* P **P** **21 16 58.5 -1.6**
NOR IAmb IAmb 21 17 00.4
comp=Z,55nm,0.8s
SIM **Simferopol'** **73.22 312** *e*P **P** **21 17 00.8 -0.4**
SIM *e* 21 17 14.0
SIM pmax pmax
comp=Z,223nm,1.6s
BCPM **Bancas Point** **73.31 31** P **P** **21 17 02.6 +1.1**
BCPM IAmb IAmb 21 17 05.1
comp=Z,85nm,0.8s
YUK4 **Talbot Arm** **73.33 30** P **P** **21 17 02.5 +0.7**
baz=289,SNR=83
DIKM **Dikmen** **73.37 309** ⇓P **P** **21 17 01.9 -0.3**
PNL **Peninsula** **73.51 32** P **P** **21 17 03.3 +0.7**
baz=288,SNR=60
PNL S **SKiKP** **21 26 32.5 +0.2**
baz=288
AFI **Afiamalu** **73.54 114** LR LR 21 49 40.6
comp=Z,1µm,18.0s,baz=297,slow=36
AFI **Afiamalu** **73.54 114** P **P** **21 17 04.0 +0.4**
AFI IAmb IAmb 21 17 14.8
comp=Z,207nm,1.6s
AFI **Afiamalu** **73.54 114** P **P** **21 17 04.0 +0.4**
AFI pmax pmax
comp=Z,207nm,1.6s
VSU **Vasula** **73.57 327** *c* *i*P **P** **21 17 02.3 -0.7**
VSU **Vasula** **73.57 327** *e*P **P** **21 17 03.1 +0.1**
YUK6 **Outpost Mounta** **73.59 30** P **P** **21 17 04.5 +1.1**
baz=289,SNR=65
YUK6 S **SKiKP** **21 26 36.0 +3.3**
baz=289
M30M **Minto, Yukon** **73.75 28** IAmb IAmb 21 17 27.3
comp=Z,80nm,1.1s
M30M IAMs_20 IAMs_20 21 51 21.4
comp=Z,3µm,19.0s
M30M **Minto, Yukon** **73.75 28** P **P** **21 17 05.1 +1.0**
baz=290,SNR=102
M30M S **S** **21 26 37.6 +3.5**
baz=290
N30M **Aishikik Lake** **74.00 30** P **P** **21 17 06.6 +1.0**
baz=290,SNR=58
N30M S **S** **21 26 39.4 +2.5**
baz=290
HYT **Haines Junctio** **74.03 30** IAmb IAmb 21 17 09.7
comp=Z,58nm,0.8s
HYT **Haines Junctio** **74.03 30** P **P** **21 17 06.4 +0.5**
baz=290,SNR=82
HYT S **S** **21 26 38.9 +1.6**
baz=290
A36M **Sachs Harbour** **74.11 18** IAmb IAmb 21 17 22.4
comp=Z,176nm,0.8s
A36M IAMs_20 IAMs_20 21 55 10.4
comp=Z,3µm,19.0s
A36M **Sachs Harbour** **74.11 18** P **P** **21 17 05.4 -0.6**
baz=297,SNR=54
A36M S **S** **21 26 36.4 -1.2**
baz=297
BZK **Bozkurt** **74.17 309** ⇑P **P** **21 17 07.3 +0.4**
BZK **Bozkurt** **74.17 309** P **P** **21 17 06.8 0.0**
MNK **Minsk** **74.21 323** *i* P **P** **21 17 06.7 -0.1**
MNK *i* 21 17 21.1
MNK *i* 21 19 52.1
MNK *i* PPP PPP 21 21 32.4
MNK *i* S **S** **21 26 40.1 +0.8**
MNK *i* SS **SS** **21 31 25.7 +1.5**
MNK *i* SSS SSS 21 34 39.1
MNK pmax pmax
comp=Z,349nm,1.0s
MNK pmax pmax
comp=E,52nm,1.1s
MNK pmax pmax
comp=N,104nm,1.1s
MNK MLR MLR
comp=E,487nm,16.0s
MNK MLR MLR
comp=Z,4µm,18.0s
MNK MLR MLR
comp=N,3µm,17.0s
MNK **Minsk** **74.21 323** *i* P **P** **21 17 06.8 -0.1**
comp=E,52nm,1.1s
MNK *i* P **P** **21 17 06.8 -0.1**
comp=N,104nm,1.1s
MNK *i* P **P** **21 17 06.8 -0.1**
comp=Z,349nm,1.0s,baz=72
MNK *i* PcP **PcP** **21 17 21.1 -0.6**
MNK *i* PP **PP** **21 19 52.1 -0.1**
MNK *i* PPP PPP 21 21 32.4
MNK *i* S **S** **21 26 40.1 +0.8**
MNK *i* SS **SS** **21 31 25.8 +1.5**
MNK *i* SSS SSS 21 34 39.1
MNK *i* LQ LQ 21 44 30.1
MNK *i* LR LR 21 47 50.0
MNK *i* LRM MLR 21 54 24.7
comp=E,487nm,16.1s
MNK *i* LRM MLR 21 54 35.7
comp=Z,4µm,18.1s
MNK *i* LRM MLR 21 54 38.2
comp=N,3µm,16.8s
KHLU **Kahalu`u** **74.25 75** P **P** **21 17 06.6 -1.2**
KHLU IAmb IAmb 21 17 14.4
comp=Z,140nm,1.0s
P30M **Million Dollar** **74.52 31** P **P** **21 17 09.6 +1.0**
baz=290
P30M S **S** **21 26 44.2 +1.4**
baz=290
IDID **Didziasalis** **74.58 324** *e*P **P** **21 17 09.1 +0.1**
N31M **Braeburn, Yuko** **74.58 29** IAmb IAmb 21 17 12.9
comp=Z,84nm,0.8s
N31M IAMs_20 IAMs_20 21 51 29.3
comp=Z,3µm,21.0s
N31M **Braeburn, Yuko** **74.58 29** P **P** **21 17 09.6 +0.7**
baz=291,SNR=81
N31M S **S** **21 26 46.3 +2.9**
baz=291
KHU **Kahuku** **74.61 75** P **P** **21 17 10.4 +0.3**
KHU IAmb IAmb 21 17 26.1
comp=Z,199nm,1.0s
KHU **Kahuku** **74.61 75** P **P** **21 17 10.4 +0.3**
KHU pmax pmax
comp=Z,199nm,1.0s
AKASG **Malin Array Be** **74.63 319** P **P** **21 17 08.4 -0.9**
comp=Z,58nm,0.7s,baz=58,slow=6.3,SNR=270

comp=Z,58nm,0.7s
AKASG **Malin Array Be** 74.63 319 *i* P P 21 17 08.5 -0.9
AKASG pmax pmax
comp=Z,102nm,0.9s
AKBB **Malin Array Si** 74.63 319 *ce* P P 21 17 07.6 -1.8
ILGA **Ilgaz** 74.65 308 P P 21 17 10.4 +0.5
NACGM **Naroch** 74.69 323 *i* P P 21 17 09.1 -0.5
baz=71
O30N **Mendenhall** 74.69 30 P P 21 17 09.9 +0.3
baz=291,SNR=64
O30N S S 21 26 47.3 +2.7
baz=291
ISAL **Salakas** 74.82 324 *e* P P 21 17 10.4 0.0
IIGN **Ignalina** 74.84 324 *e* P P 21 17 10.6 +0.1
STEI **Steigen** 74.90 338 *e* P P 21 17 10.2 -0.4
MTSE **Matsula** 74.93 328 *e* P P 21 17 11.0 0.0
M31M **Drury Creek, Y** 74.93 28 IAmb IAmb 21 17 14.8
comp=Z,74nm,0.7s
M31M IAMs_20 IAMs_20 21 55 25.6
comp=Z,3µm,18.0s
M31M **Drury Creek, Y** 74.93 28 P P 21 17 11.0 0.0
baz=292,SNR=149
M31M S S 21 26 49.8 +2.5
baz=292
ASF **Jabal al Asfar** 74.99 299 P P 21 17 12.7 +0.8
comp=Z,23nm,1.0s,baz=73,slow=3.2,SNR=23
comp=Z,23nm,1.0s
PLBC **Pleasant Camp** 75.03 31 P P 21 17 12.5 +0.9
baz=291,SNR=33
RAF **Rauma** 75.07 330 *e* P P 21 17 11.2 -0.5
BR131 **Keskin Array S** 75.12 307 IAmb IAmb 21 17 30.3
comp=Z,321nm,1.6s
BR131 **Keskin Array S** 75.12 307 P P 21 17 13.0 +0.4
SNR=28
BR131 P P 21 17 13.0 +0.4
SNR=28
BRTR **Keskin Array B** 75.12 307 P P 21 17 12.7 +0.1
comp=Z,38nm,1.1s,baz=102,slow=5.2,SNR=73
BRTR LR LR 21 54 07.0
comp=Z,2µm,19.9s,baz=74,slow=39
comp=Z,38nm,1.1s
BRTR **Keskin Array B** 75.12 307 *i* P P 21 17 12.6 0.0
BRTR pmax pmax
comp=Z,37nm,1.1s
FAUS **Fauske** 75.12 338 *e* P P 21 17 11.3 -0.6
FAUS IAmb IAmb 21 17 12.8
comp=Z,211nm,0.9s
WHY **Whitehorse** 75.29 30 IAmb IAmb 21 17 16.9
comp=Z,75nm,0.8s
WHY **Whitehorse** 75.29 30 P P 21 17 13.7 +0.6
baz=292,SNR=90
WHY S S 21 26 54.2 +2.8
baz=292
EUNU **Eureka** 75.33 5 P P 21 17 12.4 -0.7
EUNU IAmb IAmb 21 17 14.1
comp=Z,96nm,0.8s
LOF **Lofoten** 75.39 339 *e* P P 21 17 12.4 -1.0
LOF IAmb IAmb 21 17 14.6
comp=Z,105nm,1.0s
SKAG **Skagway** 75.53 31 P P 21 17 15.1 +0.8
SKAG IAmb IAmb 21 17 34.9
comp=Z,99nm,1.0s
SKAG **Skagway** 75.53 31 P P 21 17 14.7 +0.4
baz=292,SNR=12
SKAG S S 21 26 56.2 +2.4
baz=292
PURM **Purcari** 75.56 315 ⇓P P 21 17 15.1 +0.3
ANTO **Ankara** 75.69 307 ⇓P P 21 17 16.2 +0.4
ANTO **Ankara** 75.69 307 P P 21 17 15.9 +0.1
ANTO **Ankara** 75.69 307 P P 21 17 15.9 +0.1
ANTO pmax pmax
comp=Z,463nm,1.7s
ANTO MLR MLR
comp=Z,1µm,22.0s
C36M **Paulatuk** 75.71 20 IAMs_20 IAMs_20 21 52 49.8
comp=Z,2µm,22.0s
C36M **Paulatuk** 75.71 20 P P 21 17 14.5 -0.7
baz=299,SNR=112
C36M S S 21 26 53.6 -1.9
baz=299
BR231 **Keskin MP Arra** 75.72 307 P P 21 17 16.0 0.0
VSVD **Vaisvydziai** 75.84 325 *e* P P 21 17 16.1 -0.2
N32M **Quiet Lake** 75.91 29 P P 21 17 17.0 +0.4
baz=293
N32M S S 21 27 00.4 +2.2
baz=293
MMAI **Mount Meron Ar** 75.92 300 P P 21 17 17.9 +0.7
comp=Z,5.4nm,0.7s,baz=84,slow=7.6,SNR=26
MMAI LR LR 21 57 12.6
comp=Z,4µm,19.3s,baz=222,slow=41
comp=Z,5.4nm,0.7s
PABE **Paberze** 76.00 325 *e* P P 21 17 17.2 +0.1
SORM **Soroca** 76.01 317 ⇑P P 21 17 17.4 +0.1
SLIT **Slitere, Latvi** 76.08 327 *e* P P 21 17 16.9 -0.6
BESE **Bessie Mountai** 76.08 32 IAmb IAmb 21 17 42.2
comp=Z,85nm,1.1s
KIS **Kishinev** 76.09 315 ⇑ *e* P P 21 17 17.0 -0.8
comp=Z,120nm,1.6s
KIS *e* L L 21 45 19.0
KIS LQM 21 50 22.0
comp=Z,1µm,20.5s
KIS LRM MLR 21 53 11.0
comp=Z,1µm,23.0s
KIS **Kishinev** 76.09 315 *ce* P P 21 17 17.0 -0.8
KIS *e* 21 17 31.0
KIS pmax pmax
comp=Z,120nm,1.6s
MMPY **Sheldon Lake,** 76.11 27 P P 21 17 18.6 +0.9
baz=294,SNR=34
MMPY S S 21 27 02.3 +2.0
baz=294
MILM **Milestii Mici** 76.12 315 ⇑ *i* P P 21 17 16.7 -1.3
comp=Z,80nm,1.2s
MILM *i* S S 21 26 52.0 -8.8
MILM *e* L L 21 43 46.0
MILM LQM 21 49 39.0
comp=Z,3µm,18.0s
MILM LRM MLR 21 53 19.0
comp=Z,3µm,22.0s
MILM **Milestii Mici** 76.12 315 ⇑P P 21 17 17.6 -0.4
MILM **Milestii Mici** 76.12 315 *c* P P 21 17 16.7 -1.3
MILM *i* 21 17 25.0
MILM *i* S S 21 26 52.0 -8.8
MILM pmax pmax
comp=Z,380nm,2.8s
P32M **Atlin** 76.24 31 P P 21 17 19.2 +0.7
baz=293,SNR=42
P32M S S 21 27 03.9 +2.1
baz=293
KONS **Konsvik** 76.28 337 *e* P P 21 17 18.2 -0.3
KONS IAmb IAmb 21 17 19.3
comp=Z,91nm,1.0s
GHAJ **Ghor Haditha** 76.35 298 P P 21 17 19.4 -0.1
GHAJ IAmb IAmb 21 17 38.6
comp=Z,75nm,0.8s
GHAJ IAMs_20 IAMs_20 21 55 52.6
comp=Z,3µm,21.0s
P33M **Teslin, Yukon** 76.41 30 IAMs_20 IAMs_20 21 50 18.8
comp=Z,3µm,22.0s
P33M **Teslin, Yukon** 76.41 30 P P 21 17 19.8 +0.3
baz=294,SNR=73
P33M S S 21 27 06.4 +2.7
baz=294
JIS **Juneau Island** 76.43 32 P P 21 17 20.0 +0.5
JIS IAmb IAmb 21 17 43.7
comp=Z,122nm,1.2s
JIS IAMs_20 IAMs_20 21 55 08.3
comp=Z,2µm,20.0s
SIT **Sitka** 76.43 33 IAmb IAmb 21 17 24.9
comp=Z,106nm,0.9s
SIT **Sitka** 76.43 33 P P 21 17 20.2 +0.7
baz=292,SNR=18
SIT S S 21 27 06.3 +2.5
baz=292
TLCR 76.71 314 ⇓P P 21 17 21.5 +0.2
JURR **Jurilovca** 76.81 313 ⇑P P 21 17 21.6 -0.3
IAS **Iasi** 76.83 316 ⇑P P 21 17 22.4 +0.4
ATD **Arta Tunnel** 76.86 277 P P 21 17 22.9 +0.1
ATD IAmb IAmb 21 17 39.8
comp=Z,72nm,1.1s
PBUR **Paburge** 76.87 326 *e* P P 21 17 21.9 -0.1
VASR **Vaslui** 76.88 315 ⇓P P 21 17 22.9 +0.6
CSS **Mathiatis** 76.90 303 IAmb IAmb 21 17 40.3
comp=Z,124nm,0.9s
CSS IAMs_20 IAMs_20 21 56 52.8
comp=Z,2µm,20.0s
VLDR **Vladesti** 76.97 314 ⇑P P 21 17 23.1 +0.3
SUW **Suwalki** 76.97 323 *e* P P 21 17 22.4 -0.3
SUW *e* L L 21 55 22.1
comp=Z,6µm,22.2s
SUW **Suwalki** 76.97 323 *e* P P 21 17 22.2 -0.5
NOD **Norderasen** 77.03 334 *e* P P 21 17 22.5 -0.4
TPGR **Topolog** 77.08 313 ⇑P P 21 17 23.8 +0.3
VARL **Varlezi** 77.10 315 ⇓P P 21 17 23.9 +0.4
CFR **Carcaliu** 77.16 314 ⇑P P 21 17 23.8 -0.1
TIRR **Tirgusor** 77.23 313 ⇓P P 21 17 24.6 +0.3
TIRR **Tirgusor** 77.23 313 ⇓P P 21 17 24.6 +0.3
TIRR **Tirgusor** 77.23 313 IAmb IAmb 21 17 39.5
comp=Z,170nm,1.1s
SCHL **Schela** 77.25 314 ⇑P P 21 17 24.6 +0.2
DAG **Danmarks Havn** 77.26 352 *i* P P 21 17 22.0 -1.9
DAG IAmb IAmb 21 17 24.1
comp=Z,65nm,0.8s
IZVR **Izvoarele** 77.28 314 ⇑P P 21 17 24.7 +0.2
GHRR 77.33 315 ⇓P P 21 17 25.5 +0.7
BORA **Eskisehir** 77.39 308 IAmb IAmb 21 17 43.2
comp=Z,91nm,1.0s
EIL **Elat** 77.40 297 P P 21 17 25.3 -0.3
comp=Z,11nm,1.0s,baz=266,slow=1.8,SNR=9.7
EIL LR LR 21 57 24.9
comp=Z,3µm,19.4s,baz=76,slow=40
comp=Z,11nm,1.0s
TLBR **Topalu** 77.44 313 ⇑P P 21 17 26.3 +0.8
HARR **Harsova** 77.47 313 ⇑P P 21 17 25.7 0.0
PANC **Panciu** 77.57 315 ⇑P P 21 17 27.1 +0.9
NSS **Namsos** 77.64 336 *e* P P 21 17 25.2 -1.0
ODBI **Odobesti** 77.67 315 ⇑P P 21 17 27.5 +0.8
ICOR **Ion Corvin** 77.76 313 ⇑P P 21 17 27.7 +0.5
VRI **Vrincioaia** 77.84 315 ⇑P P 21 17 28.6 +0.8
VRI **Vrincioaia** 77.84 315 P P 21 17 28.5 +0.8
TGTN **Hyland Airport** 77.85 28 P P 21 17 27.9 +0.4
baz=297,SNR=16
TGTN S S 21 27 20.1 +0.7
baz=297
BIZ **Bicaz** 77.86 316 ⇑P P 21 17 28.0 +0.2
GRER 77.86 314 ⇑P P 21 17 28.8 +1.0
AMRR **Amara** 77.89 313 ⇓P P 21 17 28.2 +0.2
PLOR **Plostina** 77.90 315 ⇑P P 21 17 28.4 +0.2
PLOR **Plostina** 77.90 315 P P 21 17 28.3 +0.2
BISRR **Bisoca** 77.97 314 ⇑P P 21 17 28.8 +0.3
ISP **Isparta** 78.05 306 P P 21 17 28.9 -0.3
ISP IAmb IAmb 21 17 44.4
comp=Z,66nm,1.0s
ISP IAMs_20 IAMs_20 21 57 45.0
comp=Z,2µm,21.0s
ISP **Isparta** 78.05 306 P P 21 17 28.9 -0.3
ISP pmax pmax
comp=Z,66nm,1.0s
ISP MLR MLR
comp=Z,2µm,21.0s
LVV **L'vov** 78.07 319 *e* P P 21 17 28.9 0.0
LVV *e* 21 17 43.3
LVV *e* S S 21 27 18.1 -3.8
BUR08 **Bucovina Ar. S** 78.17 317 IAmb IAmb 21 17 46.9
comp=Z,253nm,1.6s
BURAR **Bucovina Array** 78.17 317 ⇓P P 21 17 29.4 -0.3
BURAR **Bucovina Array** 78.17 317 IAmb IAmb 21 17 45.3
comp=Z,108nm,1.1s
BURAR **Bucovina Array** 78.17 317 P P 21 17 29.3 -0.3
CRAG **Craig** 78.19 34 P P 21 17 30.3 +0.9
CRAG **Craig** 78.19 34 P P 21 17 29.5 +0.1
baz=294
CRAG S S 21 27 25.2 +2.2
baz=294
COVR **Voineasa-Covas** 78.19 315 ⇓P P 21 17 30.2 +0.5
WRAK **Wrangell Islan** 78.19 33 IAMs_20 IAMs_20 21 51 39.8
comp=Z,2µm,22.0s
WRAK **Wrangell Islan** 78.19 33 P P 21 17 29.6 +0.2
baz=295,SNR=7.6
WRAK S S 21 27 25.0 +2.0
baz=295
ISR **Istrita** 78.23 314 ⇓P P 21 17 30.9 +0.9
NEHR **Nehoiu** 78.28 314 ⇑P P 21 17 31.1 +0.8
LEHL **Lehliu** 78.29 313 ⇓P P 21 17 31.1 +0.9
PRD **Provadia** 78.36 312 *i* P P 21 17 30.5 -0.1
OZUR 78.37 315 ⇑P P 21 17 31.3 +0.6
HIZ **Hauiti** 78.38 141 P P 21 17 30.5 -0.1
DLBC **Dease Lake** 78.45 31 LR LR 21 53 37.7
comp=Z,2µm,21.3s,baz=307,slow=37
DLBC **Dease Lake** 78.45 31 P P 21 17 31.0 +0.1
DLBC **Dease Lake** 78.45 31 P P 21 17 32.2 +1.2
baz=296,SNR=35
DLBC S S 21 27 30.3 +4.3
baz=296
MLR **Muntele Rosu** 78.49 315 ⇑P P 21 17 31.5 0.0
MLR **Muntele Rosu** 78.49 315 P P 21 17 31.6 +0.1
comp=Z,33nm,0.8s,baz=35,slow=3.3,SNR=32
MLR LR LR 21 56 46.3
comp=Z,4µm,19.4s,baz=62,slow=39
comp=Z,33nm,0.8s
MLR **Muntele Rosu** 78.49 315 IAmb IAmb 21 17 49.7
comp=Z,70nm,0.7s
SECR 78.58 314 ⇑P P 21 17 33.0 +1.1
SULR 78.59 314 ⇑P P 21 17 32.7 +0.8
DOPR **Dopca** 78.67 315 ⇓P P 21 17 32.7 +0.4
RAZG **Razgrad** 78.83 313 ⇑P P 21 17 33.3 0.0
ELL **Elmali** 78.89 305 P P 21 17 33.2 -0.7
ELL **Elmali** 78.89 305 P P 21 17 33.2 -0.7
ELL pmax pmax
comp=Z,472nm,1.2s
ARCR **ARCALIA** 78.91 317 ⇓P P 21 17 34.1 +0.5
KWP **Kalwaria Pacla** 78.93 319 *e* P P 21 17 34.0 +0.3
KWP *e* S S 21 27 26.9 -4.3
KWP *e* L L 21 58 17.9
comp=Z,4µm,20.3s
RES **Resolute Bay** 78.94 10 LR LR 21 53 49.5
comp=Z,4µm,21.8s,baz=316,slow=37
RES **Resolute Bay** 78.94 10 IAmb IAmb 21 17 48.8
comp=Z,126nm,1.0s
TBLU **Trondheim** 78.94 335 *e* P P 21 17 33.1 -0.4
SGRR **Singureni** 78.94 313 ⇓P P 21 17 33.5 -0.3
T35M **Bob Quinn** 78.99 32 P P 21 17 34.9 +1.0
baz=296
T35M S S 21 27 34.1 +2.5
baz=296
HFS **Hagfors** 79.06 331 P P 21 17 33.7 -0.4
comp=Z,19nm,0.4s,baz=75,slow=6.1,SNR=132
HFS LR LR 21 56 22.2
comp=Z,19µm,18.6s,baz=62,slow=39
comp=Z,19nm,0.4s
VOIR 79.09 315 ⇑P P 21 17 35.1 +0.3
VOIR 79.09 315 P P 21 17 35.0 +0.3
BEL **Belsk** 79.16 322 *e* P P 21 17 35.2 +0.4
BEL *e* L L 21 58 52.7
comp=Z,5µm,19.4s
JMB **Yambol** 79.19 312 *i* P P 21 17 37.7 +2.5
BMR **Baia Mare** 79.22 317 ⇓P P 21 17 35.9 +0.6
XMAS **Kiritimati** 79.29 92 P P 21 17 36.0 -0.3
XMAS IAmb IAmb 21 18 08.2
comp=Z,113nm,1.0s
AKAS **Kas** 79.30 305 P P 21 17 35.3 -0.8
AKAS IAmb IAmb 21 17 57.9
comp=Z,82nm,0.9s
SZH **Strazhica** 79.33 313 *i* P P 21 17 35.8 -0.2
ARR **Arges** 79.39 315 ⇑P P 21 17 36.8 +0.4
NNZ **Nelson** 79.42 144 P P 21 17 36.1 -0.2
NNZ IAmb IAmb 21 17 50.6
comp=Z,88nm,0.8s
DCZ **Deep Cove** 79.43 150 P P 21 17 36.3 +0.2
DCZ IAmb IAmb 21 18 06.2
comp=Z,160nm,1.7s
KOLS **Kolonicke sedl** 79.47 319 *e* P P 21 17 36.6 -0.1
KOLS pmax pmax
comp=Z,39nm,1.0s
KOLS **Kolonicke sedl** 79.47 319 *e* P P 21 17 36.6 -0.1
COPA **Copaceanca** 79.48 314 ⇑P P 21 17 37.3 +0.6
DIB **Dawson Inlet,** 79.48 36 P P 21 17 37.2 +0.6
HUMR **Humele** 79.49 314 ⇑P P 21 17 36.5 -0.3
NC303 **NORSAR Array S** 79.52 333 IAmb IAmb 21 17 38.9
comp=Z,195nm,1.2s
NC303 **NORSAR Array S** 79.52 333 *e* P P 21 17 37.1 +0.4
DBG **Daneborg** 79.53 351 *i* P P 21 17 34.6 -1.8
DBG IAmb IAmb 21 17 37.0
comp=Z,55nm,0.9s
URZ **Urewera** 79.53 140 LR LR 21 52 50.6
comp=Z,956nm,18.6s,baz=31,slow=36
URZ **Urewera** 79.53 140 P P 21 17 37.0 0.0
URZ IAmb IAmb 21 17 52.8
comp=Z,101nm,1.0s
CJR **Cluj-Napoca** 79.53 316 ⇑P P 21 17 37.8 +0.7
THZ **Tophouse** 79.55 145 P P 21 17 36.3 -0.8
THZ IAmb IAmb 21 17 46.0
comp=Z,204nm,1.6s
UZH **Uzhgorod** 79.58 319 ⇑ *i* P P 21 17 37.7 +0.5
UZH *e* 21 17 46.2
UZH *i* 21 17 51.6
UZH *i* S S 21 27 35.0 -3.1
UZH *i* 21 27 55.0
NB2 **NORSAR Subarra** 79.68 333 P P 21 17 36.8 -0.8
baz=57,slow=5.3
NB2 **NORSAR Subarra** 79.68 333 P P 21 17 36.8 -0.8
comp=Z,135nm,1.0s,baz=57,slow=5.3
NOA **NORSAR Array B** 79.68 333 P P 21 17 37.0 -0.6
comp=Z,81nm,1.0s,baz=56,slow=5.7,SNR=112
NOA LR LR 21 56 41.7
comp=Z,5µm,18.6s,baz=90,slow=39
comp=Z,81nm,1.0s
NOA **NORSAR Array B** 79.68 333 P P 21 17 37.0 -0.6
NC602 **NORSAR Array S** 79.69 332 IAmb IAmb 21 17 52.0
comp=Z,220nm,1.2s
BKZ **Black Stump Fm** 79.77 141 P P 21 17 38.8 +0.5
BKZ IAmb IAmb 21 17 54.5
comp=Z,237nm,1.2s
MESR **Meseseni** 79.77 317 ⇓P P 21 17 38.9 +0.6
MLZ **Mavora Lakes** 79.80 150 P P 21 17 38.9 +0.6
TULEG **Thule** 79.83 3 P P 21 17 37.7 -0.4
TULEG IAmb IAmb 21 17 52.9
comp=Z,148nm,1.2s
NBO00 **NORSAR Array S** 79.87 333 IAmb IAmb 21 17 41.5
comp=Z,360nm,1.4s
TUWZ **Tuamarina** 79.87 144 P P 21 17 40.4 +1.6
NAO01 **NORSAR Array S** 79.92 333 IAmb IAmb 21 17 53.8
comp=Z,195nm,1.1s
JMIC **Jan Mayen** 79.92 346 LR LR 21 58 29.1
comp=Z,4µm,18.5s,baz=44,slow=40
LOT **Lotru** 79.92 315 ⇓P P 21 17 39.1 -0.2
CRVS **Cervenica-Dubn** 79.97 319 *e* P P 21 17 40.3 +0.9
CRVS pmax pmax
comp=Z,216nm,1.4s
CRVS **Cervenica-Dubn** 79.97 319 *e* P P 21 17 40.2 +0.9
RPZ **Rata Peaks** 79.99 147 LR LR 21 49 27.1
comp=Z,1µm,22.0s,baz=320,slow=33
RPZ **Rata Peaks** 79.99 147 IAmb IAmb 21 17 54.1
comp=Z,155nm,0.9s
BSWZ **Blackbirch Sta** 80.04 144 P P 21 17 39.2 -0.4
DOMB **Dombas** 80.04 334 *e* P P 21 17 40.1 +0.6
DOMB IAmb IAmb 21 17 56.1
comp=Z,140nm,0.8s
LBZ **Lake Benmore** 80.05 148 P P 21 17 39.7 0.0
DRGR 80.06 317 ⇓P P 21 17 40.1 +0.1
VLAD **Vladila** 80.08 314 ⇓P P 21 17 39.7 -0.3
WHZ **Wether Hill Ro** 80.12 150 P P 21 17 40.1 +0.1
ALN **Alexandroupoli** 80.16 310 P P 21 17 37.5 -3.0
ALN **Alexandroupoli** 80.16 310 P P 21 17 39.3 -1.2
ALN **Alexandroupoli** 80.16 310 P P 21 17 39.3 -1.2
ALN pmax pmax
comp=Z,86nm,1.2s
RUBB **Prince Rupert** 80.18 35 P P 21 17 40.9 +0.5
CMWZ **Cape Campbell** 80.24 144 P P 21 17 40.8 +0.1
KDZ **Kurdzhali** 80.30 311 *i* P P 21 17 41.4 +0.1
DEV **Deva** 80.31 316 ⇓P P 21 17 42.1 +0.9
LTVH **Ltavrtes, Hu** 80.33 317 ⇓P P 21 17 42.6 +1.3
KHZ **Kahutara** 80.34 145 IAmb IAmb 21 18 01.1
comp=Z,109nm,1.0s
MOL **Molde** 80.35 335 *e* P P 21 17 41.2 +0.1
OJC **Ojcow** 80.40 321 *e* P P 21 17 41.8 +0.1
OJC *e* S S 21 27 41.7 -5.1
OJC *e* L L 21 57 04.5
comp=Z,4µm,19.4s
RDO **Rodhopi** 80.41 311 P P 21 17 41.1 -0.8
RDO **Rodhopi** 80.41 311 IAmb IAmb 21 17 59.2
comp=Z,134nm,1.3s
ARG **Arkhangelos** 80.42 305 IAmb IAmb 21 17 57.0
comp=Z,145nm,1.1s
NIE **Niedzica** 80.45 320 *e* P P 21 17 42.7 +0.7
NIE *e* S S 21 27 43.6 -3.8
NIE *e* L L 21 56 01.1
comp=Z,2µm,21.5s
OSL **Oslo** 80.45 332 *e* P P 21 17 42.0 +0.3
GKP **Gorka Klasztor** 80.50 324 *e* P P 21 17 42.1 -0.1
GKP *e* S S 21 27 43.7 -3.9
GKP *e* L L 21 58 00.7
comp=Z,9µm,18.0s
GKP **Gorka Klasztor** 80.50 324 *e* P P 21 17 42.0 -0.1
BORR **Bors** 80.52 317 ⇑P P 21 17 42.6 +0.3
GRNB **Grenville Isla** 80.55 35 P P 21 17 42.9 +0.5
MSWZ **Moikau Station** 80.58 143 P P 21 17 42.4 -0.2
HG4B **Hotspring** 80.58 37 P P 21 17 41.1 -1.5
BFZ **Birch Farm** 80.64 142 P P 21 17 42.6 -0.3
PLWZ **Palliser** 80.69 143 P P 21 17 42.0 -1.2
DEL **Delary** 80.73 328 *e* P P 21 17 42.0 -1.3
KECS **Kecovo** 80.73 319 *e* P P 21 17 45.1 +1.6
KECS pmax pmax
comp=Z,113nm,1.8s
KECS **Kecovo** 80.73 319 *e* P P 21 17 45.1 +1.6
ODZ **Otahua Downs** 80.75 148 P P 21 17 43.6 +0.3
RZN **Rozhen** 80.77 311 *i* P P 21 17 43.9 -0.1
MQZ **McQueen's Vall** 80.79 146 P P 21 17 44.2 +0.6
MQZ IAmb IAmb 21 17 58.7
comp=Z,84nm,0.9s
PGB **Panagyurishte** 80.81 312 *i* P P 21 17 44.5 +0.4
BSD **Bornholm Skovb** 80.86 326 *e* P P 21 17 43.4 -0.5
BSD **Bornholm Skovb** 80.86 326 *i* P P 21 17 43.5 -0.5
BSD IAmb IAmb 21 17 50.2
comp=Z,26nm,0.8s
PUNG **Punghina** 80.94 314 ⇓P P 21 17 44.2 -0.4
SIRR **Siria** 80.94 317 ⇑P P 21 17 44.9 +0.2
HERR **Herculane** 81.03 315 ⇓P P 21 17 44.9 +0.2
DJES **Djerdap** 81.05 315 ⇑P P 21 17 45.7 +0.5
LANS **Liptovska Anna** 81.06 320 *e* P P 21 17 45.9 +0.7
LANS pmax pmax
comp=Z,57nm,1.8s
LANS **Liptovska Anna** 81.06 320 *e* P P 21 17 45.9 +0.7
SKAR **Skarslia** 81.08 333 *e* P P 21 17 45.9 +0.8
KONO **Kongsberg** 81.09 332 P P 21 17 45.0 -0.1
KONO **Kongsberg** 81.09 332 P P 21 17 45.0 -0.1
KONO pmax pmax
comp=Z,64nm,1.2s
KONO MLR MLR
comp=Z,13µm,18.0s
BZS **Buzias** 81.24 316 ⇓P P 21 17 45.7 -0.5
PSZ **Piszkesteto** 81.33 319 ⇑P P 21 17 47.0 +0.3
PSZ **Piszkesteto** 81.33 319 P P 21 17 46.4 -0.4
PSZ **pP** 21 17 46.6 -5.3
PSZ IAmb IAmb 21 18 02.9
comp=Z,219nm,1.4s
PSZ IAMs_20 IAMs_20 21 59 11.5
comp=Z,3µm,20.0s
PSZ **Piszkesteto** 81.33 319 P P 21 17 47.1 +0.3
BSZH **Besenyszg** 81.37 318 ⇓P P 21 17 47.6 +0.7
BSZH **Besenyszg** 81.37 318 P P 21 17 47.5 +0.7
KARP **Karpathos** 81.40 305 IAMs_20 IAMs_20 22 00 54.7
comp=Z,2µm,19.0s
VTS **Vitosha** 81.41 313 *i* P P 21 17 47.7 +0.3
MMB **Musomiste** 81.49 312 *i* P P 21 17 47.1 -0.6
NVR **Nevrokopi** 81.49 311 P P 21 17 47.0 -0.7
MDVR **Moldovita** 81.52 315 ⇑P P 21 17 48.0 +0.2
OKC **Ostrava-Krasne** 81.53 321 *e* P P 21 17 47.3 -0.4
OKC *e* 21 18 01.7
OKC MLR MLR
comp=Z,3µm,16.2s
OKC **Ostrava-Krasne** 81.53 321 *e* P P 21 17 47.3 -0.4
OKC *ex* x 21 18 01.7
OKC AMS AMS 21 58 10.0
comp=Z,3µm,16.2s
KOKK **Kokkinochori,** 81.61 311 P P 21 17 47.5 -0.8
FURI **Furi** 81.64 276 IAMs_20 IAMs_20 21 58 52.4
comp=Z,2µm,20.0s
HYA **Hoyanger** 81.67 334 *e* P P 21 17 49.3 +1.2
HYA IAmb IAmb 21 18 05.0
comp=Z,93nm,0.9s
VYHS **Vyhne** 81.72 319 *e* P P 21 17 49.2 +0.5
VYHS pmax pmax
comp=Z,42nm,0.7s
VYHS **Vyhne** 81.72 319 *e* P P 21 17 49.2 +0.5
SRS **Serrai** 81.77 311 P P 21 17 47.8 -1.4
KKB **Krupnik** 81.82 312 *i* P P 21 17 49.0 -0.4
COP **Copenhagen** 81.82 328 *i* P P 21 17 48.3 -0.7
FOO **Floro** 81.88 335 *e* P P 21 17 49.6 +0.4
FOO IAmb IAmb 21 18 03.8
comp=Z,77nm,1.1s
MORC **Moravsky Berou** 81.91 321 ⇑P P 21 17 50.0 +0.3
MORC **Moravsky Berou** 81.91 321 P P 21 17 49.0 -0.7

MORC pP 21 17 49.4 -5.4
MORC IAmb IAmb 21 18 06.0
comp=Z,116nm,1.3s
MORC Moravsky Berou 81.91 321 P P 21 17 49.0 -0.7
MORC pmax pmax
comp=Z,116nm,1.3s
MORC Moravsky Berou 81.91 321⇑ *i*P P 21 17 49.9 +0.2
MORC Moravsky Berou 81.91 321 *e*S S 21 27 58.3 -4.2
MAUC Maruska 81.93 320 *e*P P 21 17 48.9 -0.9
MAUC *e*S S 21 27 51.2 -12
MAUC AMS AMS 22 01 50.0
comp=Z,6µm,16.1s
RGN Rugen 81.94 326 P P 21 17 50.2 +0.5
BOVS Bovan 82.01 314⇓ P P 21 17 49.9 -0.4
BUD Budapest 82.05 318 P P 21 17 51.0 +0.5
KSP Ksiaz 82.13 322 *e*P P 21 17 51.1 +0.3
KSP *e*S S 21 28 00.5 -4.2
KSP *e*L L 21 58 53.6
comp=Z,5µm,20.8s
PLG Polygyros 82.18 311 P P 21 17 48.5 -2.8
ODD1 Odda 82.20 333 *e*P P 21 17 51.5 +0.5
KRLC Kraliky 82.21 321 *e*P P 21 17 50.9 -0.4
KRLC *e*S S 21 27 53.3 -12
KRLC MLR MLR
comp=Z,3µm,18.0s
KRLC Kraliky 82.21 321 *e*P P 21 17 50.9 -0.4
KRLC *e*S S 21 27 53.3 -12
KRLC AMS AMS 21 58 20.0
comp=Z,3µm,18.0s
KNT Kendrikon 82.23 311 P P 21 17 50.8 -0.8
JAVC Velka Javorina 82.25 320⇑ *i*P P 21 17 52.6 +1.0
JAVC Velka Javorina 82.25 320 *e*S S 21 28 04.7 -1.4
SUE Sulen 82.30 334 *e*P P 21 17 52.3 +0.9
OSTC Ostas 82.31 322 *e*P P 21 17 52.3 +0.5
OSTC *e*S S 21 28 01.9 -4.6
OSTC AMS AMS 21 58 40.0
comp=Z,5µm,17.9s
BBB Bella Bella 82.31 36 LR LR 21 55 10.8
comp=Z,970nm,20.5s,baz=314,slow=36
HORT Hortiatis 82.33 311 P P 21 17 51.2 -1.0
DPC Dobruska-Polom 82.34 322 *e*P P 21 17 51.4 -0.6
DPC *e* 21 18 06.7
DPC *e*S S 21 27 56.5 -10
DPC MLR MLR
comp=Z,3µm,15.3s
DPC Dobruska-Polom 82.34 322 *e*P P 21 17 51.4 -0.6
DPC *ex* x 21 18 06.7
DPC *e*S S 21 27 56.5 -10
DPC AMS AMS 21 59 20.0
comp=Z,3µm,15.3s
SANT Santorini 82.35 306⇓ P P 21 18 05.5 +13
SANT Santorini 82.35 306 P P 21 17 51.7 -0.6
SANT IAmb IAmb 21 18 07.0
comp=Z,166nm,1.2s
CHVC Chvalec 82.38 322 *e*P P 21 17 51.5 -0.7
CHVC *ex* x 21 18 06.7
CHVC AMS AMS 21 58 40.0
comp=Z,5µm,18.5s
VAY Valandovo 82.39 312 *i*P P 21 17 51.2 -1.1
UPC Upice 82.44 322 *e*P P 21 17 52.7 +0.2
UPC *e*S S 21 28 05.6 -2.3
UPC MLR MLR
comp=Z,5µm,18.2s
UPC Upice 82.44 322 *e*P P 21 17 52.7 +0.2
UPC *e*S S 21 28 05.6 -2.3
UPC AMS AMS 21 58 40.0
comp=Z,5µm,18.2s
ASK Askoy 82.46 334 *e*P P 21 17 52.7 +0.4
ASK IAmb IAmb 21 18 09.2
comp=Z,136nm,0.9s
BER Bergen 82.47 334 *e*P P 21 17 53.1 +0.8
BER IAmb IAmb 21 18 08.9
comp=Z,63nm,0.8s
SMOL Smolenice 82.55 320 *e*P P 21 17 53.7 +0.6
SMOL pmax pmax
comp=Z,33nm,1.4s
SMOL Smolenice 82.55 320 *e*P P 21 17 53.7 +0.6
BLS5 Blasjo 82.55 333 *e*P P 21 17 53.6 +0.7
BLS5 IAmb IAmb 21 18 09.9
comp=Z,162nm,1.1s
CSKK Cskako 82.57 319 P P 21 17 53.6 +0.4
FRGS Fruska Gora 82.58 316⇓ P P 21 17 53.1 -0.2
FRGS Fruska Gora 82.58 316⇑ *i*P P 21 17 53.3 0.0
GOET G??ttrup 82.65 330 *i*P P 21 17 53.2 -0.1
GOET IAmb IAmb 21 18 00.1
comp=Z,46nm,0.7s
GRG Griva 82.66 311 P P 21 17 52.4 -1.4
VRAC Vranov 82.67 321⇓ P P 21 17 53.9 +0.2
VRAC Vranov 82.67 321 P P 21 17 54.3 +0.6
comp=Z,34nm,0.8s,baz=70,slow=5.6,SNR=61
comp=Z,34nm,0.8s
VRAC Vranov 82.67 321⇑ *i*P P 21 17 53.9 +0.2
VRAC Vranov 82.67 321 *e*S S 21 28 07.2 -3.1
MODS Modra-Piesok 82.70 320 *e*P P 21 17 54.6 +0.7
MODS pmax pmax
comp=Z,280nm,1.6s
MODS Modra-Piesok 82.70 320 *e*P P 21 17 54.6 +0.7
YKA Yellowknife Ar 82.75 23 P P 21 17 53.6 -0.2
comp=Z,60nm,0.7s,baz=309,slow=4.9,SNR=81
YKA PKKPbc **PKKPbc** 21 36 20.9 +1.8
comp=Z,1.6nm,0.8s,baz=126,slow=2.4,SNR=3.9
YKA LR LR 21 58 42.2
comp=Z,1µm,19.1s,baz=306,slow=39
comp=Z,60nm,0.7s
SNART Snartemo 82.84 331 *e*P P 21 17 55.1 +0.8
MORH Mrgy, Hungar 82.85 317⇑⇑ P P 21 17 54.6 0.0
MORH Mrgy, Hungar 82.85 317⇑ *i*P P 21 17 54.5 -0.1
MORH Mrgy, Hungar 82.85 317 P P 21 17 54.6 0.0
SKO Skopje 82.89 313 *i*P P 21 17 55.0 0.0
KRUC Moravsky 82.90 321⇑ *i*P P 21 17 54.8 -0.1
KRUC Moravsky 82.90 321 *e*S S 21 28 08.7 -3.9
DIVS Divibare 82.93 315 IAmb IAmb 21 18 12.4
comp=Z,174nm,1.6s
DIVS IAMs_20 IAMs_20 21 59 23.4
comp=Z,2µm,21.0s
DIVS Divibare 82.93 315⇑ *i*P P 21 17 54.8 -0.4
LIT Litokhoron 82.96 311 P P 21 17 54.1 -1.3
LIT Litokhoron 82.96 311 IAmb IAmb 21 18 17.8
comp=Z,78nm,1.2s
MUD Monsted U'grnd 82.98 329 *i*P P 21 17 55.0 -0.1
MUD IAmb IAmb 21 17 56.3
comp=Z,16nm,0.7s
TIH Tihany 83.00 318 P P 21 17 55.5 +0.1
TEKS Tekeris 83.03 316⇑ *i*P P 21 17 55.9 +0.2
SCO Scoresbysund 83.05 349 *i*P P 21 17 55.0 -0.2
SCO IAmb IAmb 21 17 57.9
comp=Z,18nm,1.2s
BLJ Bijeljina 83.09 316 *e*P P 21 17 55.1 -0.8
MPLH Magyarpolny 83.09 319 P P 21 17 56.2 +0.2
EGYH Egyhazaskeszo 83.11 319 P P 21 17 56.6 +0.6
KMY Karmoy 83.18 333 *e*P P 21 17 56.5 +0.4
LKR Lokris 83.20 309 P P 21 17 53.9 -2.8
IDI Anoyia 83.20 305 P P 21 17 56.1 -0.7
comp=Z,12nm,0.7s,baz=73,slow=16,SNR=9.2
IDI LR LR 22 00 18.0
comp=Z,1µm,21.5s,baz=85,slow=40
comp=Z,12nm,0.7s
IDI Anoyia 83.20 305 P P 21 17 57.0 +0.2
IDI IAmb IAmb 21 18 18.4
comp=Z,56nm,1.0s
PVCC Panska Ves 83.24 323 *e*P P 21 17 56.7 +0.1
PVCC *e* 21 18 11.3
PVCC MLR MLR
comp=Z,4µm,19.1s
PVCC Panska Ves 83.24 323 *e*P P 21 17 56.7 +0.1
PVCC *ex* x 21 18 11.3
PVCC AMS AMS 21 59 30.0
comp=Z,4µm,19.1s
KOVH Kovagotottos 83.24 317 P P 21 17 56.8 +0.1
SUMG Summit 83.30 355 IAMs_20 IAMs_20 22 02 04.2
comp=Z,3µm,20.0s
SUMG Summit 83.30 355 *i*P P 21 17 57.0 0.0
SUMG IAmb IAmb 21 17 58.9
comp=Z,47nm,1.0s
SJES Sjenica 83.31 314⇑ *i*P P 21 17 57.6 +0.4
TREC Trest 83.32 321 *e*P P 21 17 57.2 +0.1
TREC *e* 21 18 08.5
TREC *e*S S 21 28 13.0 -3.9
TREC MLR MLR
comp=Z,4µm,18.2s
TREC Trest 83.32 321 *e*P P 21 17 57.2 +0.1
TREC *ex* x 21 18 08.5
TREC *e*SKS S 21 28 13.0 -3.9
TREC AMS AMS 22 07 30.0
comp=Z,4µm,18.2s
KZN Kozani 83.37 311 P P 21 17 56.3 -1.3
BBLS Lazići 83.41 315⇑ *i*P P 21 17 57.8 +0.1
BRG Berggiesshubel 83.42 323 *i*P P 21 17 57.5 0.0
BRG Amp 21 18 00.3
comp=Z,43nm,1.0s
BRG *ex* x 21 18 12.1
BRG Amp 21 18 13.6
comp=Z,77nm,1.1s
BRG *ex* x 21 18 25.3
BRG Amp 21 18 26.0
comp=Z,32nm,1.0s
BRG *ex* x 21 18 38.1
BRG Amp 21 18 40.6
comp=Z,52nm,1.4s
BRG PP **PP** 21 21 15.0 +5.9
BRG Amp 21 21 16.8
comp=Z,22nm,1.4s
BRG Berggiesshubel 83.42 323 SKS **S** 21 28 16.0 -1.8
BRG Berggiesshubel 83.42 323 *i*P P 21 17 57.5 0.0
e 21 18 12.1
21 21 15.0
21 28 16.0
BRG pmax pmax
comp=Z,43nm,1.0s
BRG pmax pmax
comp=Z,23nm,1.5s
BRG pmax pmax
comp=Z,8µm,17.4s
BRG MLR MLR
comp=N,4µm,16.2s
BRG MLR MLR
comp=E,3µm,16.8s
FNA Florina 83.44 312 P P 21 17 56.5 -1.4
FNA Florina 83.44 312 IAmb IAmb 21 18 15.9
comp=Z,92nm,1.5s
SOP Sopron 83.45 319 P P 21 17 57.7 0.0
PRU Pruhonice 83.52 322 *e*P P 21 17 57.8 -0.3
PRU *e* 21 18 06.5
PRU *e*S S 21 28 11.8 -7.1
PRU MLR MLR
comp=Z,3µm,21.7s
PRU Pruhonice 83.52 322 *e*P P 21 17 57.8 -0.3
PRU *ex* x 21 18 06.5
PRU *e*SKS S 21 28 11.8 -7.1
PRU AMS AMS 21 58 40.0
comp=Z,3µm,21.7s
IVA Berane 83.53 314 *e*P P 21 17 58.5 +0.1
RUDO Rudo 83.54 315⇑ *i*P P 21 17 57.6 -0.7
RONA Rosalia, Austr 83.60 319 *i*P P 21 17 58.7 +0.1
comp=Z,27nm,1.2s,SNR=20
PVY Plav 83.61 314 *e*P P 21 17 58.9 +0.1
PLE Pljevlja 83.66 315 *e*P P 21 17 59.5 +0.4
MAKR Makrakomi, Fth 83.67 310 P P 21 17 57.3 -1.8
PHP Peshkopia 83.69 313 P P 21 17 58.4 -0.8
OHR Ohrid 83.69 312 *i*P P 21 17 58.4 -0.8
CLL Collm 83.72 324 IAmb IAmb 21 18 14.8
comp=Z,160nm,1.2s
CLL Collm 83.72 324 *i*P P 21 17 58.9 -0.1
CLL *e*S S 21 28 18.0 -2.8
CLL pmax pmax
comp=Z,270nm,2.0s
CLL MLR MLR
comp=Z,6µm,19.0s
CLL Collm 83.72 324 *i*P P 21 17 58.9 -0.1
comp=Z,270nm,2.0s
CLL *i*x x 21 18 13.2
comp=Z,176nm,1.3s
CLL *e*Pmax 21 18 13.0
CLL *e*PP **PP** 21 21 12.0 +0.5
CLL *e*S S 21 28 18.0 -2.8
comp=N,700nm,21.0s
CLL *e*S S 21 28 18.0 -2.8
comp=E,700nm,19.9s
CLL *e*S S 21 28 18.0 -2.8
comp=Z,500nm,15.4s
CLL *e*SS SS 21 34 00.0 +13
CLL *e*SSS SSS 21 37 30.0
CLL *e*SSSS 21 40 12.0
CLL Lmax 21 59 00.0
CLL LmV 21 59 00.0
comp=Z,6µm,19.0s
CONA Conrad Observa 83.75 320 *i*P P 21 17 59.7 +0.3
comp=Z,136nm,1.6s,SNR=96
KOME Kolasin 83.79 314⇑ *i*P P 21 17 59.7 0.0
IMMV Iera Moni Meta 83.81 306 P P 21 18 00.5 +0.7
NEST Nestorio 83.82 311 P P 21 17 58.5 -1.4
BEHE Becsehely 83.88 318⇑ *i*P P 21 18 00.3 +0.3
BEHE Becsehely 83.88 318 P P 21 18 00.5 +0.6
UPNV Upernavik 83.89 360 *i*P P 21 17 58.5 -1.0
UPNV IAmb IAmb 21 18 02.5
comp=Z,42nm,0.8s
EVR Evrytania 83.94 310 P P 21 17 58.2 -2.3
GUR Goura 83.97 309 P P 21 17 58.8 -2.0
ANX Ano Chora 84.00 309 P P 21 17 59.4 -1.4
KLV Kalavryta, Ach 84.06 309 P P 21 17 59.0 -2.2
LAKA Lakka 84.10 309 P P 21 17 59.8 -1.5
PDG Podgorica 84.15 314⇓ P P 21 18 01.5 +0.1
PDG Podgorica 84.15 314 IAMs_20 IAMs_20 21 59 37.1
comp=Z,4µm,22.0s
PDG Podgorica 84.15 314⇑ *i*P P 21 18 01.0 -0.3
TTG Podgorica 84.15 314⇑ *i*P P 21 18 01.1 -0.3
NKME Niksic 84.20 314 *e*P P 21 18 01.4 -0.3
TIR Tirane 84.22 313⇓ P P 21 17 58.5 -3.3
TIR Tirane 84.22 313 IAmb IAmb 21 18 17.6
comp=Z,153nm,1.1s
TIR IAMs_20 IAMs_20 21 58 57.6
comp=Z,3µm,22.0s
CKRC Cesky Krumlov 84.22 321 *e*P P 21 18 01.0 -0.7
CKRC *ex* x 21 18 10.3
CKRC *e*S S 21 28 13.5 -13
LSK Leskovik 84.25 311 P P 21 18 01.1 -1.0
PVO Paravola 84.26 310 P P 21 18 00.9 -1.2
DRME Dracevica, Mon 84.31 314 *e*P P 21 18 02.0 -0.2
DRME Dracevica, Mon 84.31 314⇑ *i*P P 21 18 02.1 -0.2
CEME Cevo 84.32 314⇑ *i*P P 21 18 01.9 -0.5
ULC Ulcinj 84.36 313⇑ *i*P P 21 18 01.4 -1.2
BRY Bratogost 84.41 314 *e*P P 21 18 02.1 -0.8
BRY Bratogost 84.41 314 *e*P P 21 18 02.2 -0.7
BLY Banja Luka 84.43 317⇑ *i*P P 21 18 03.0 +0.2
KHC Kasperske Hory 84.49 322 IAmb IAmb 21 18 19.3
comp=Z,136nm,1.3s
KHC Kasperske Hory 84.49 322 *e*P P 21 18 02.3 -0.8
KHC *e* 21 18 17.2
KHC *e*S S 21 28 23.2 -5.5
KHC MLR MLR
comp=Z,4µm,15.4s
KHC Kasperske Hory 84.49 322 *e*P P 21 18 02.3 -0.8
KHC *ex* x 21 18 17.2
KHC *e*SKS S 21 28 23.2 -5.5
KHC AMS AMS 22 00 30.0
comp=Z,4µm,15.4s
GEC2 GERESS Array S 84.56 321 IAmb IAmb 21 18 19.4
comp=Z,154nm,1.2s
GERES GERESS Array B 84.56 321 P P 21 18 02.9 -0.6
comp=Z,28nm,0.9s,baz=57,slow=4.9,SNR=164
GERES PKKPbc **PKKPbc** 21 36 14.0 -0.6
comp=Z,0.4nm,0.7s,baz=158,slow=1.1,SNR=4.1
comp=Z,28nm,0.9s
NKC Novy Kostel 84.57 323 *e*P P 21 18 03.1 -0.3
NKC *e*S S 21 28 22.9 -6.5
NKC MLR MLR
comp=Z,7µm,17.1s
NKC Novy Kostel 84.57 323 *e*P P 21 18 03.1 -0.3
NKC *e*SKS S 21 28 22.9 -6.5
NKC AMS AMS 22 00 50.0
comp=Z,7µm,17.1s
ITM Ithomi 84.59 308 P P 21 18 02.4 -1.4
TREB Trebinje 84.62 314 *e*P P 21 18 03.6 -0.2
HCY Herceg Novi 84.64 314 *e*P P 21 18 04.5 +0.6
HCY Herceg Novi 84.64 314⇑ *i*P P 21 18 03.2 -0.7
MGRS Mrkonjic Grad 84.65 316⇑ *i*P P 21 18 04.6 +0.6
IGT Igoumenitsa 84.70 311 P P 21 18 02.9 -1.4
MOA Molln 84.73 320 *i*P P 21 18 04.3 0.0
comp=Z,40nm,0.8s,SNR=39
SRKY Kupres RS 84.76 316 *e*P P 21 18 03.3 -1.3
SOKA Soboth 84.84 319 *i*P P 21 18 04.2 -0.8
comp=Z,42nm,1.2s,SNR=32
PYL PYLOS 84.85 308 P P 21 18 01.1 -4.0
CBB Campbell River 84.89 37 P P 21 18 05.3 +0.3
STON Ston 84.97 315⇑ *i*P P 21 18 04.0 -1.5
KEK Kerkira 84.99 311 P P 21 18 04.5 -1.2
KEK Kerkira 84.99 311 IAmb IAmb 21 18 22.9
comp=Z,58nm,0.9s
CRES Cresnjev 85.00 318⇑ *i*P P 21 18 05.6 -0.1
FSK Fiskardo 85.01 310 P P 21 18 05.1 -0.8
LEGS Legarje 85.02 318 *e*P P 21 18 05.6 -0.2
VLS Valsamata 85.12 310 P P 21 18 05.1 -1.3
PSDA Pessada-Kefalo 85.15 309 P P 21 18 05.3 -1.2
BIOA Bad Ischl, Aus 85.17 320 *i*P P 21 18 06.7 +0.2
comp=Z,51nm,1.2s,SNR=24
OBKA Obir 85.22 319 *i*P P 21 18 06.5 -0.4
comp=Z,31nm,0.9s,SNR=12
DMLN Damoulianata-K 85.24 310 P P 21 18 06.1 -1.0
KEF3 Kipouria, Keph 85.28 310 P P 21 18 05.1 -2.1
ABPO Ambohimpanom 85.44 247 P P 21 18 09.1 +0.6
ABPO IAmb IAmb 21 18 23.9
comp=Z,71nm,0.9s
ABPO Ambohimpanom 85.44 247 P P 21 18 09.1 +0.6
ABPO pmax pmax
comp=Z,71nm,1.0s
ABPO MLR MLR
comp=Z,1µm,20.0s
LJU Ljubljana 85.46 319⇑ *i*P P 21 18 07.7 -0.3
GRFO Grafenberg 85.53 323 P P 21 18 08.8 +0.6
GRFO Grafenberg 85.53 323 P P 21 18 08.8 +0.6
GRFO pmax pmax
comp=Z,251nm,1.5s
GRFO MLR MLR
comp=Z,5µm,18.0s
GBAS Gorenja Brezov 85.56 319 *i*P P 21 18 08.2 -0.3
KBA Koelnbreinsper 85.65 320 *i*P P 21 18 08.6 -0.5
comp=Z,34nm,0.7s,SNR=24
CEY Cerknica 85.67 318⇑ *i*P P 21 18 08.7 -0.3
MYKA Terra Mystica 85.70 319 *i*P P 21 18 08.6 -0.7
comp=Z,15nm,1.0s
CADS Cadrg 85.84 319 *e*P P 21 18 08.9 -1.0
SKDS Skadanscina 86.02 318⇑ *i*P P 21 18 10.0 -0.8
ABTA Abfaltersbach 86.31 320 *i*P P 21 18 11.0 -1.3
comp=Z,26nm,1.0s,SNR=15
STAL STALIGIAL 86.44 319 IAmb IAmb 21 18 27.7
comp=Z,90nm,1.2s
WATA Walderalm 86.56 321 *i*P P 21 18 14.1 +0.6
comp=Z,31nm,1.1s,SNR=6.1
WTTA Wattenberg 86.56 321 *i*P P 21 18 13.1 -0.5
comp=Z,28nm,0.9s,SNR=17
KIBK Kibwezi 86.62 266 IAmb IAmb 21 18 31.8
comp=Z,102nm,1.3s
KIBK Kibwezi 86.62 266 P P 21 18 15.1 +0.7
SNR=6.2
ICESG Greenland Ices 86.78 354 *i*P P 21 18 14.3 -0.2
ICESG IAmb IAmb 21 18 22.5
comp=Z,25nm,1.0s
LODK Lodwar 86.80 272 IAMs_20 IAMs_20 22 01 19.0
comp=Z,2µm,20.0s
LODK Lodwar 86.80 272 P P 21 18 16.7 +1.5
SNR=12
MOTA Moosalm 86.83 321 *i*P P 21 18 15.0 +0.1
comp=Z,22nm,1.0s,SNR=11
SQTA Sankt Quirin 86.83 321 *i*P P 21 18 14.1 -0.7
comp=Z,39nm,1.1s,SNR=15
KMBO Kilima Mbogo 86.86 267 P P 21 18 16.0 +0.3
comp=Z,7.0nm,1.0s,baz=52,slow=8.1,SNR=8.2
KMBO LR LR 21 58 40.3
comp=Z,1µm,19.1s,baz=58,slow=37
comp=Z,7.0nm,1.0s
KMBO Kilima Mbogo 86.86 267 P P 21 18 16.2 +0.5
KMBO IAmb IAmb 21 18 33.3
comp=Z,67nm,1.2s
KMBO Kilima Mbogo 86.86 267 IAMs_20 IAMs_20 21 59 24.0
comp=Z,2µm,20.0s
KMBO Kilima Mbogo 86.86 267 P P 21 18 16.2 +0.5
KMBO pmax pmax
comp=Z,67nm,1.3s
KMBO MLR MLR
comp=Z,2µm,20.0s
KMBO Kilima Mbogo 86.86 267 *i*P P 21 18 16.8 +1.0
SNR=7.2
RETA Reutte 86.95 321 *e*P P 21 18 14.1 -1.2
comp=Z,5.5nm,0.8s
RAR Rarotonga 87.06 115 LR LR 21 51 18.3
comp=Z,1µm,20.8s,baz=288,slow=32
VOI Vohitsoka 87.10 245 IAMs_20 IAMs_20 21 56 24.5
comp=Z,2µm,19.0s
VOI Vohitsoka 87.10 245 P P 21 18 29.8 +13
STU Stuttgart 87.14 323 IAmb IAmb 21 18 32.0
comp=Z,81nm,1.1s
FETA Feichten 87.21 321 *i*P P 21 18 16.3 -0.5
comp=Z,39nm,1.3s,SNR=18
TIP Timpagrande 87.33 312⇑⇑ P P 21 18 16.3 -1.1
TIP Timpagrande 87.33 312 IAmb IAmb 21 18 48.4
comp=Z,59nm,1.1s
TIP IAMs_20 IAMs_20 22 03 17.1
comp=Z,2µm,20.0s
ILULI Ilulissat 87.39 358 IAmb IAmb 21 18 32.0
comp=Z,101nm,1.4s
ILULI IAMs_20 IAMs_20 22 02 12.8
comp=Z,2µm,18.0s
TEOL Teolo 87.53 319 IAmb IAmb 21 18 38.1
comp=Z,67nm,0.8s
DAVA Damuels 87.56 321 *i*P P 21 18 18.0 -0.5
comp=Z,29nm,1.1s,SNR=15
CUC Castrocucco 87.58 313 IAmb IAmb 21 18 34.0
comp=Z,73nm,1.5s
E03A Lebam 87.74 39 P P 21 18 19.3 +0.2
E03A IAmb IAmb 21 18 40.7
comp=Z,38nm,0.9s
BTNL Ternell 87.77 325 *d*PcP P 21 18 18.7 -0.5
BORG Borgarnes 87.81 346 LR LR 22 02 08.9
comp=Z,3µm,18.2s,baz=28,slow=39
MEM Membach 87.82 326 *d*PcP P 21 18 18.2 -1.2
DAVOX Davos/Dischmat 87.83 321 P P 21 18 19.3 -0.5
comp=Z,20nm,0.8s,baz=73,slow=6.5,SNR=29
DAVOX LR LR 22 01 06.7
comp=Z,3µm,19.4s,baz=46,slow=38
comp=Z,20nm,0.8s
B06A Marblemount 87.84 37 P P 21 18 20.7 +1.2
B06A IAmb IAmb 21 18 39.7
comp=Z,49nm,0.9s
BFO Black Forest 87.86 323 P P 21 18 18.2 -1.5
BFO IAmb IAmb 21 18 35.4
comp=Z,76nm,1.6s
BFO Black Forest 87.86 323 P P 21 18 18.2 -1.5
BFO pmax pmax
comp=Z,76nm,1.6s
BFO MLR MLR
comp=Z,6µm,18.0s
BEBN Eben Emael 87.88 326 *d*PcP P 21 18 19.9 +0.2
NRCA Norcia 87.94 316 IAmb IAmb 21 18 31.6
comp=Z,59nm,1.1s
BHOU Houvegnez 87.97 325 *d*PcP P 21 18 19.9 -0.3
AQU L'Aquila 88.00 316 IAmb IAmb 21 18 32.6
comp=Z,81nm,1.0s
AQU IAMs_20 IAMs_20 22 05 43.3
comp=Z,3µm,19.0s
BSTI Sart Tilman 88.06 326 *d*PcP P 21 18 20.7 +0.2
SALO Salr 88.08 320 IAmb IAmb 21 18 41.6
comp=Z,51nm,0.9s
WLF Walferdange 88.29 325 IAmb IAmb 21 18 38.0
comp=Z,72nm,1.1s
WLF Walferdange 88.29 325 *d*PcP P 21 18 21.6 0.0
BCLA Clavier 88.30 326 *d*PcP P 21 18 21.3 -0.3
D05A Enumclaw 88.30 38 IAmb IAmb 21 18 42.7
comp=Z,76nm,1.0s
TUE Stuetta 88.31 321 IAmb IAmb 21 18 37.2
comp=Z,157nm,1.6s
CEL Celeste 88.36 311 P P 21 18 22.4 +0.1
CEL IAmb IAmb 21 18 41.8
comp=Z,123nm,1.1s
CEL IAMs_20 IAMs_20 22 03 46.5
comp=Z,2µm,21.0s
CDF Champ du Feu 88.40 323 *e*P P 21 18 20.3 -2.0
CDF pmax pmax
comp=Z,66nm,1.2s
ZCCA Zocca 88.48 318 P P 21 18 22.9 +0.1
ZCCA IAmb IAmb 21 18 55.1
comp=Z,107nm,1.2s
RCHB Rochefort 88.49 325 *b*P P 21 18 22.1 -0.5
KAC Achnashellach 88.54 335 *e*P P 21 18 21.9 -0.8
ECH Echery 88.58 323 IAmb IAmb 21 18 38.5
comp=Z,65nm,1.3s
G03D McMinnville, O 88.63 40 S S 21 29 09.6 +0.6
baz=303
BMRD Maredsous 88.64 326 *d*PcP P 21 18 22.8 -0.5
F04A Amboy 88.74 40 P P 21 18 23.9 0.0
F04A IAmb IAmb 21 18 30.3
comp=Z,45nm,0.8s
GDLE Glaisdale, N Y 88.76 331 *e*P P 21 18 23.2 -0.6
SNF Seneffe 88.77 326 *d*PcP P 21 18 23.7 -0.1
INVG Invergeldie, C 88.79 334 *e*P P 21 18 23.6 -0.2

EBL Broad Law 88.82 333 eP P 21 18 23.2 -0.8
DOU Dourbes 88.85 326 dPcP P 21 18 23.7 -0.6
LTY Liberty 89.00 38 P P 21 18 25.4 +0.2
EAB Aberfoyle 89.07 334 eP P 21 18 25.3 +0.1
B08A Colville Reser 89.11 36 IAmb IAmb 21 18 46.0
comp=Z,62nm,1.0s
EDM Edmonton 89.15 30 P P 21 18 25.9 +0.2
EDM IAmb IAmb 21 18 30.6
comp=Z,54nm,0.7s
EDM Edmonton 89.15 30 P P 21 18 25.9 +0.2
EDM pmax pmax
comp=Z,54nm,0.7s
LMK Market Rasen 89.17 330 eP P 21 18 25.3 -0.4
LMK IAmb IAmb 21 18 26.6
comp=Z,98nm,1.0s
ESK Eskdalemuir 89.20 333 eP P 21 18 24.9 -0.9
ESK IAmb IAmb 21 18 26.7
comp=Z,52nm,1.5s
ESK Eskdalemuir 89.20 333 P P 21 18 25.5 -0.3
ESK Eskdalemuir 89.20 333 P P 21 18 25.5 -0.3
ESK pmax pmax
comp=Z,30nm,1.0s
ESK MLR MLR
comp=Z,5µm,18.0s
H04D Lebanon 89.32 41 S S 21 29 14.1 -1.4
baz=303
ELMS Elmsett, Ipswi 89.42 329 eP P 21 18 26.0 -0.9
ELMS IAmb IAmb 21 18 26.9
comp=Z,28nm,1.0s
HPK Haverah Park 89.42 331 eP P 21 18 26.2 -0.7
HOOD Mount Hood Mea 89.53 40 P P 21 18 28.1 +0.3
HOOD IAmb IAmb 21 18 51.4
comp=Z,81nm,1.2s
H04A Detroit Lake 89.56 40 P P 21 18 28.1 +0.3
SFJD Kangerlussuaq 89.59 358 P P 21 18 28.5 +1.1
SFJD Kangerlussuaq 89.59 358 P P 21 18 28.5 +1.1
SFJD pmax pmax
comp=Z,44nm,1.0s
SFJD MLR MLR
comp=Z,4µm,19.0s
SFJD Kangerlussuaq 89.59 358 eP P 21 18 25.2 -2.2
VAE Valguarnera 89.77 311 P P 21 18 30.0 +1.1
comp=Z,9.7nm,1.0s,baz=49,slow=18,SNR=2.0
comp=Z,9.7nm,1.0s
LBWR Ladybower, Pea 89.84 331 eP P 21 18 28.0 -0.9
LBWR IAmb IAmb 21 18 29.7
comp=Z,71nm,1.0s
E07A Sunnyside 89.86 38 P P 21 18 30.0 +0.8
E07A IAmb IAmb 21 18 56.1
comp=Z,45nm,1.0s
DY2G Dye2 89.89 356 iP P 21 18 29.7 +0.6
DY2G IAmb IAmb 21 18 33.7
comp=Z,26nm,0.7s
ANGG Ammassalik, Gr 89.90 352 IAmb IAmb 21 18 44.7
ANGG IAMs_20 IAMs_20 22 04 10.9
comp=Z,3µm,19.0s
ANGG Ammassalik, Gr 89.90 352 eP P 21 18 28.2 -0.7
RAFF Raffo Rosso 89.93 311 IAmb IAmb 21 18 55.6
comp=Z,129nm,1.1s
C09A Chrisman Ranch 90.02 36 P P 21 18 30.1 +0.3
C09A IAmb IAmb 21 18 48.3
comp=Z,148nm,1.8s
KSXB Camp Six Broad 90.07 44 P P 21 18 29.8 -0.5
CWF Charnwood Fore 90.08 330 eP P 21 18 28.5 -1.5
CWF IAmb IAmb 21 18 30.6
comp=Z,43nm,1.1s
D08A Wollman Farm, 90.10 37 P P 21 18 31.1 +0.8
CASY Casey 90.10 185 P P 21 18 30.2 +0.7
CASY IAmb IAmb 21 18 45.6
comp=Z,130nm,1.2s
HAWA Hanford 90.14 38 IAmb IAmb 21 18 48.3
comp=Z,61nm,1.3s
I05D Terrebonne, OR 90.26 40 P P 21 18 30.7 -0.4
baz=304
LPL La Plagne 90.36 321 eP P 21 18 30.8 -0.9
LPL pmax pmax
comp=Z,58nm,0.9s
NEW Newport 90.36 36 LR LR 22 00 05.3
comp=Z,1µm,20.8s,baz=331,slow=36
NEW Newport 90.36 36 IAmb IAmb 21 18 52.0
comp=Z,44nm,0.9s
NEW Newport 90.36 36 IAMs_20 IAMs_20 22 06 38.1
comp=Z,2µm,19.0s
NEW Newport 90.36 36 P P 21 18 31.9 +0.4
baz=307
NEW S S 21 29 24.3 -0.9
baz=307
J04D Umpqua Nationa 90.40 42 P P 21 18 32.9 +0.9
BNI Bardonecchia 90.65 321 IAmb IAmb 21 18 49.2
comp=Z,89nm,1.5s
PINE Pine Mountain 90.80 41 P P 21 18 34.4 +0.5
PINE IAmb IAmb 21 18 52.8
comp=Z,110nm,1.4s
FOEL Foel Wylfa 90.84 331 eP P 21 18 32.2 -1.4
FOEL IAmb IAmb 21 18 38.4
comp=Z,72nm,1.0s
L04D Klamath Falls 90.84 43 P P 21 18 33.2 -0.8
L04D IAmb IAmb 21 18 52.4
comp=Z,105nm,1.4s
L04D Klamath Falls 90.84 43 P P 21 18 34.8 +0.9
baz=303
E09A Wood Farm, Sta 90.85 37 P P 21 18 34.4 +0.7
E09A IAmb IAmb 21 18 51.7
comp=Z,68nm,1.2s
YBH Yreka Blue Hor 90.86 43 LR LR 21 54 41.6
comp=Z,505nm,21.6s,baz=312,slow=32
YBH Yreka Blue Hor 90.86 43 P P 21 18 33.5 -0.5
YBH Yreka Blue Hor 90.86 43 P P 21 18 33.5 -0.5
YBH pmax pmax
comp=Z,38nm,1.5s
J05D Fort Rock, OR 90.91 41 P P 21 18 34.8 +0.5
baz=304
K04D Chiloquin, OR 90.96 42 P P 21 18 34.6 +0.1
baz=304
WME Myndd Eilian 90.98 332 IAmb IAmb 21 18 29.5
comp=Z,20nm,0.9s
WLF1 Llynfaes 91.10 332 eP P 21 18 34.1 -0.6
WLF1 IAmb IAmb 21 18 36.4
comp=Z,170nm,1.4s
G08A Pilot Rock 91.11 39 P P 21 18 34.9 -0.2
STRD Stroud 91.12 330 eP P 21 18 33.8 -1.0
STRD IAmb IAmb 21 18 36.9
comp=Z,141nm,1.3s
IDGL Inch Island, C 91.14 334 eP P 21 18 35.0 +0.1
SSF Saint Saulge 91.25 324 eP P 21 18 34.3 -1.3
SSF pmax pmax
comp=Z,22nm,1.1s
CLF Chambon-Foret 91.33 325 P P 21 18 35.0 -0.8
CLF IAmb IAmb 21 18 50.5
comp=Z,40nm,1.1s
MCH1 Michaelchurch 91.35 330 eP P 21 18 35.1 -0.8
MCH1 IAmb IAmb 21 18 40.5
comp=Z,57nm,1.0s
MONM Monmouth 91.37 330 eP P 21 18 35.0 -1.0
MONM IAmb IAmb 21 18 40.3
comp=Z,18nm,1.0s
K05A Summer Lake 91.43 42 IAmb IAmb 21 18 55.5
comp=Z,63nm,1.2s
I07A Izee 91.49 40 P P 21 18 37.0 +0.1
WALA Waterton Lakes 91.54 34 IAmb IAmb 21 18 56.3
comp=Z,107nm,1.3s
F10A Beach Ranch, E 91.68 37 P P 21 18 37.2 -0.6
SSB Saint Sauveur 91.75 322 IAmb IAmb 21 18 53.5
comp=Z,69nm,1.2s
JTMT Jette 92.18 35 P P 21 18 40.7 +0.7
MOD Modoc Plateau 92.26 42 P P 21 18 40.8 +0.3
MOD IAmb IAmb 21 18 58.9
comp=Z,39nm,1.1s
FCC Fort Churchill 92.31 18 IAmb IAmb 21 18 54.8
comp=Z,30nm,0.8s
FRB Frobisher Bay 92.47 5 LR LR 22 03 16.2
comp=Z,4µm,21.1s,baz=339,slow=38
J08A Circle Bar Ran 92.52 40 P P 21 18 41.5 -0.2
J08A IAmb IAmb 21 19 03.4
comp=Z,67nm,1.2s
MBAR Mbarara 92.63 270 LR LR 22 02 16.5
comp=Z,928nm,19.8s,baz=32,slow=37
MBAR Mbarara 92.63 270 P P 21 18 42.1 -0.6
MBAR Mbarara 92.63 270 P P 21 18 42.1 -0.6
MBAR pmax pmax
comp=Z,24nm,1.3s
MBAR MLR MLR
comp=Z,1µm,19.0s
ORV Oroville 92.82 44 P P 21 18 43.0 0.0
ORV Oroville 92.82 44 P P 21 18 43.0 0.0
ORV pmax pmax
comp=Z,12nm,1.0s
ORV MLR MLR
comp=Z,800nm,19.0s
PLID Pearl Lake 92.91 38 P P 21 18 43.5 0.0
MSO Missoula 92.94 35 P P 21 18 43.3 -0.3
MSO IAMs_20 IAMs_20 22 01 15.5
comp=Z,2µm,21.0s
MSO Missoula 92.94 35 P P 21 18 43.6 +0.1
baz=310
WVOR Wild Horse Val 92.96 41 P P 21 18 43.8 0.0
WVOR Wild Horse Val 92.96 41 P P 21 18 43.8 0.0
CAF Calviac 93.36 323 eP P 21 18 44.8 -0.6
CAF pmax pmax
comp=Z,59nm,1.3s
MFID Camas Ranch 94.03 39 P P 21 18 48.4 -0.2
MFID IAmb IAmb 21 19 07.1
comp=Z,52nm,1.2s
LFF La Frestale 94.08 323 eP P 21 18 49.4 +0.7
LFF pmax pmax
comp=Z,25nm,1.3s
PAHR Pah Rah Range 94.08 43 P P 21 18 48.1 -0.9
HRY Holter Researc 94.13 34 P P 21 18 48.9 -0.1
KEST Kesra 94.15 312 P P 21 18 49.4 +0.1
comp=Z,18nm,0.8s,baz=330,slow=3.9,SNR=15
KEST LR LR 22 05 60.0
comp=Z,2µm,19.4s,baz=342,slow=39
comp=Z,18nm,0.8s
KEST Kesra 94.15 312 IAmb IAmb 21 19 05.5
comp=Z,40nm,0.9s
KEST Kesra 94.15 312 P P 21 18 50.0 +0.7
SNR=7.3
KEST P P 21 18 50.0 +0.7
SNR=7.3
PPT Papeete 94.28 107 LR LR 21 54 15.9
comp=Z,2µm,21.1s,baz=286,slow=31
PPT2 Papeete2 94.29 107 eLR LR 21 49 07.9
comp=Z,3µm,21.8s
EGMT Eagleton 94.30 33 IAMs_20 IAMs_20 21 59 34.1
comp=Z,2µm,22.0s
EGMT Eagleton 94.30 33 P P 21 18 49.2 -0.5
baz=313
LRM Limekiln Ridge 94.38 35 P P 21 18 51.0 +0.6
CMB Columbia Colle 94.39 45 P P 21 18 50.0 -0.3
CMB Columbia Colle 94.39 45 P P 21 18 50.0 -0.3
CMB pmax pmax
comp=Z,18nm,1.0s
CMB MLR MLR
comp=Z,1µm,20.0s
HLID Hailey 94.74 38 P P 21 18 52.1 +0.1
HLID IAMs_20 IAMs_20 22 07 30.4
comp=Z,2µm,19.0s
HLID Hailey 94.74 38 P P 21 18 53.1 +1.1
baz=309
MCMT McKenzie Canyo 94.81 36 P P 21 18 52.1 -0.2
BOZ Bozeman (W) 94.96 35 IAMs_20 IAMs_20 22 09 43.8
comp=Z,2µm,18.0s
BOZ Bozeman (W) 94.96 35 P P 21 18 53.9 +0.9
baz=311
BMN Battle Mountai 95.00 42 P P 21 18 52.8 -0.4
BMN Battle Mountai 95.00 42 P P 21 18 52.8 -0.4
BMN pmax pmax
comp=Z,30nm,1.4s
MAHO Mahon 95.11 318 IAMs_20 IAMs_20 22 08 45.4
comp=Z,3µm,20.0s
RYN Ryan 95.25 44 P P 21 18 53.4 -1.0
KVN Kaiserville 95.28 43 P P 21 18 52.5 -2.0
KVN Kaiserville 95.28 43 P P 21 18 52.5 -2.0
KVN pmax pmax
comp=Z,17nm,0.9s
LHV Little Huntoon 95.49 44 P P 21 18 53.9 -1.3
NVAR Mina Array Bea 95.51 44 P P 21 18 56.9 +1.2
comp=Z,5.8nm,0.8s,baz=291,slow=4.5,SNR=17
NVAR PP PP 21 22 46.1 +0.1
comp=Z,4.4nm,1.1s,baz=304,slow=7.6,SNR=4.9
NVAR LR LR 21 58 08.2
comp=Z,908nm,20.2s,baz=305,slow=33
comp=Z,5.8nm,0.8s
OMMB Old Mammoth Mi 95.53 45 P P 21 18 55.3 -0.6
NV11 Mina Array Sit 95.60 44 P P 21 18 55.8 -0.2
ELK Elko 96.01 41 P P 21 18 57.5 -0.4
ELK Elko 96.01 41 P P 21 18 57.5 -0.4
ELK pmax pmax
comp=Z,29nm,1.7s
ELK MLR MLR
comp=Z,1µm,18.0s
TPH Tonopah 96.41 44 P P 21 18 57.1 -2.6
TPH Tonopah 96.41 44 P P 21 18 57.1 -2.6
TPH pmax pmax
comp=Z,89nm,0.9s
RLMT Red Lodge 96.52 34 IAMs_20 IAMs_20 22 05 29.0
comp=Z,2µm,20.0s
RLMT Red Lodge 96.52 34 P P 21 18 58.6 -1.5
baz=313
FXWY Fox Creek 96.58 36 IAMs_20 IAMs_20 22 00 12.6
comp=Z,3µm,22.0s
DGMT Dagmar 96.62 30 IAMs_20 IAMs_20 22 06 59.3
comp=Z,2µm,20.0s
DGMT Dagmar 96.62 30 P P 21 18 59.6 -0.7
baz=317
TBI Tubuai 96.63 112 eLQ LQ 21 46 08.0
comp=Z,2µm,29.8s
TBI eLR LR 21 50 15.5
comp=Z,2µm,33.0s
LCH Last Change Ra 96.63 45 P P 21 19 00.6 -0.1
TPAW Teton Pass 96.72 37 IAMs_20 IAMs_20 22 10 57.3
comp=Z,2µm,18.0s
LOHW Long Hollow 96.82 36 IAMs_20 IAMs_20 22 11 08.1
comp=Z,1µm,18.0s
REDW Red Top Meadow 96.86 37 IAMs_20 IAMs_20 22 11 03.0
comp=Z,1µm,18.0s
LAO LASA Array 96.96 32 IAMs_20 IAMs_20 22 07 42.3
comp=Z,2µm,20.0s
AHID Auburn Hatcher 97.11 37 IAMs_20 IAMs_20 22 11 09.0
comp=Z,2µm,18.0s
R11A Troy Canyon, C 97.27 43 P P 21 19 02.7 -0.9
R11A Troy Canyon, C 97.27 43 P P 21 19 03.6 0.0
baz=308
MPMC Manual Prospec 97.43 46 P Pdif 21 19 04.6 +0.1
baz=306
HWUT Hardwarde Ranch 97.61 38 IAMs_20 IAMs_20 22 07 46.1
comp=Z,2µm,21.0s
TPNV Topopah Spring 97.70 44 P P 21 19 04.6 -0.9
TPNV Topopah Spring 97.70 44 P P 21 19 04.6 -0.9
TPNV pmax pmax
comp=Z,8.0nm,0.8s
EDW2 Edwards Air Fo 97.78 47 P P 21 19 05.2 -0.6
baz=306
DUG Dugway, Tooele 97.80 40 IAMs_20 IAMs_20 22 09 19.3
comp=Z,1µm,19.0s
DUG Dugway, Tooele 97.80 40 P Pdif 21 19 07.1 +1.1
baz=310
GWY Greenwater Val 97.88 45 P P 21 19 06.1 -0.3
PDAR Pinedale Array 97.96 36 P P 21 19 06.7 0.0
comp=Z,1.0nm,0.8s,baz=285,slow=3.5,SNR=7.4
PDAR PP PP 21 23 01.2 -3.5
comp=Z,1.2nm,0.8s,baz=318,slow=4.2,SNR=2.8
PDAR LR LR 22 05 08.5
comp=Z,556nm,20.7s,baz=347,slow=37
comp=Z,1.0nm,0.8s
PASC Pasadena Art C 98.06 47 IAMs_20 IAMs_20 21 59 17.0
comp=Z,2µm,21.0s
GSC Goldstone, Bar 98.32 46 P Pdif 21 19 08.9 +0.6
baz=307
ULM Lac du Bonnet 98.71 24 P P 21 19 08.5 -1.1
comp=Z,3.2nm,0.7s,baz=290,slow=7.3,SNR=3.5
ULM LR LR 22 09 35.8
comp=Z,2µm,18.5s,baz=342,slow=39
comp=Z,3.2nm,0.7s
TUQ Turquoise Moun 98.82 45 P Pdif 21 19 11.2 +0.7
baz=307
TAOE Nuku Hiva Isla 99.41 96 eLR LR 21 51 29.3
comp=Z,2µm,22.9s
PFO Pinyon Flats O 99.55 47 LR LR 22 01 44.4
comp=Z,825nm,19.1s,baz=319,slow=34
TPFO Pinon Flats 99.56 47 P Pdif 21 19 14.4 +0.6
baz=307
BELC Belle Mtn. Jos 99.63 46 P Pdif 21 19 14.5 +0.3
baz=307
CART Cartagena 99.77 318 IAMs_20 IAMs_20 22 12 35.0
comp=Z,1µm,22.0s
RSSD Black Hills 99.88 33 IAMs_20 IAMs_20 22 11 20.6
comp=Z,2µm,18.0s
RWWY Rawlins 99.97 36 IAMs_20 IAMs_20 22 12 28.3
comp=Z,2µm,18.0s
ESDC Sonseca Array 100.16 321 P Pdif 21 19 15.0 -1.3
comp=Z,0.8nm,1.0s,baz=30,slow=4.8,SNR=5.5
ESDC PP PP 21 23 18.2 -3.1
comp=Z,3.8nm,1.0s,baz=36,slow=8.5,SNR=4.5
ESDC PKKPbc PKKPbc 21 35 35.0 +0.6
comp=Z,1.1nm,0.9s,baz=214,slow=2.4,SNR=6.1
AGMN Agassiz Nation 100.29 25 IAMs_20 IAMs_20 22 12 23.1
comp=Z,2µm,18.0s
LSZ Lusaka 100.59 258 IAMs_20 IAMs_20 22 01 43.6
comp=Z,2µm,21.0s
MVO Moncorvo 100.83 324 eP Pdif 21 19 19.2 -0.1
MVO Moncorvo 100.83 324 ePP PP 21 23 32.5 +6.1
MVO eSKSac SKSac 21 30 02.3 +4.5
MVO eSS SS 21 38 08.9 +16
MVO Moncorvo 100.83 324 eLQ LQ 21 50 38.6
MVO eLR LR 21 55 35.3
comp=Z,4µm,20.0s
PGAV Gavieira, Arco 100.92 325 eP Pdif 21 19 23.4 +3.7
PGAV Gavieira, Arco 100.92 325 ePP PP 21 23 30.3 +3.3
PGAV eSKSac SKSac 21 30 19.7 +21
PGAV eSS SS 21 38 05.7 +12
PGAV Gavieira, Arco 100.92 325 eLQ LQ 21 50 40.0
PGAV eLR LR 21 56 15.8
comp=Z,4µm,18.0s
POLO Lamas de Olo 101.09 325 ePP PP 21 23 29.7 +1.3
POLO eSKSac SKSac 21 30 07.2 +8.1
POLO eSS SS 21 38 19.5 +23
PHWY Pilot Hill 101.17 35 IAMs_20 IAMs_20 22 14 07.2
comp=Z,2µm,19.0s
MAW Mawson 101.19 200 PKKPbc PKKPbc 21 35 28.7 -3.9
comp=Z,10nm,1.3s,baz=250,slow=6.7,SNR=3.6
SCHQ Schefferville 101.43 6 P Pdif 21 19 21.7 +0.1
comp=Z,3.2nm,0.8s,baz=45,slow=11,SNR=3.1
SCHQ PKKPbc PKKPbc 21 35 27.6 -3.6
comp=Z,2.8nm,1.0s,baz=220,slow=12,SNR=2.5
MTE Manteigas 101.65 324 eP Pdif 21 19 23.4 +0.4
MTE Manteigas 101.65 324 ePP PP 21 23 35.2 +2.7
MTE eSKSac SKSac 21 30 05.1 +3.4
MTE eSS SS 21 38 24.7 +20
MTE Manteigas 101.65 324 eLQ LQ 21 50 50.7
MTE eLR LR 21 56 02.0
comp=Z,3µm,20.0s
ISCO Idaho Springs 102.15 36 IAMs_20 IAMs_20 22 09 13.2
comp=Z,2µm,20.0s
PMRV Marv??o 102.25 323 eP Pdif 21 19 31.6 +6.0
PMRV Marv??o 102.25 323 ePP PP 21 23 41.1 +4.1
PMRV eSKSac SKSac 21 30 22.6 +18
PMRV Marv??o 102.25 323 eLR LR 21 57 07.0
comp=Z,4µm,20.0s
COI Coimbra 102.25 324 ePP PP 21 23 40.5 +3.5
COI eSKSac SKSac 21 30 09.0 +4.6
PCAS Casmilo, Conde 102.41 324 ePP PP 21 23 40.6 +2.4
PCAS eSKSac SKSac 21 30 08.6 +3.4
PCAS eSS SS 21 38 38.2 +24
PESTR Estremoz 102.75 323 eP Pdif 21 19 29.8 +2.0
PESTR Estremoz 102.75 323 ePP PKiKP 21 23 46.9 -1.6
PESTR eSKSac SKSac 21 30 12.0 +5.1
PSBE So Bento 102.96 324 eP Pdif 21 19 35.1 +6.4
PSBE So Bento 102.96 324 ePP PP 21 23 44.4 +2.1
PSBE eSKSac SKSac 21 30 10.4 +2.6
PMTG Montargil 102.96 323 ePP PP 21 23 43.9 +1.6
OGNE Ogallala 103.21 34 IAMs_20 IAMs_20 22 09 23.0
comp=Z,2µm,20.0s
EVO Evora 103.22 323 ePP PKiKP 21 23 50.4 +1.1
VNDA Vanda 103.41 172 Pdiff Pdif 21 19 35.6 +5.9
comp=Z,1.2nm,1.0s,baz=314,slow=9.3,SNR=4.1
VNDA PKiKP PKiKP 21 23 52.7 +4.3
comp=Z,5.2nm,0.9s,baz=336,slow=7.1,SNR=7.8
VNDA PKKPbc PKKPbc 21 35 26.4 +0.1
comp=Z,1.3nm,1.0s,baz=255,slow=2.9,SNR=4.4
PMAFR Mafra 103.62 324 ePP PKiKP 21 23 53.7 +3.6
PMAFR eSKSac SKSac 21 30 17.5 +6.6
ECSD EROS Data Cent 103.64 29 IAMs_20 IAMs_20 22 15 18.9
comp=Z,2µm,20.0s
SDCO Great Sand Dun 103.66 38 IAMs_20 IAMs_20 22 15 33.3
comp=Z,2µm,19.0s
PNCL Nicolau / Gran 103.81 323 eSKSac SKSac 21 30 23.6 +12
MESJ Messejana 103.83 322 ePdif Pdif 21 19 32.0 -0.6
MESJ eSKSac SKSac 21 30 12.1 +0.2
MESJ eSS SS 21 38 37.5 +3.2
MESJ IAMs_20 IAMs_20 22 10 13.7
comp=N,4µm,14.0s
MESJ Messejana 103.83 322 eP Pdif 21 19 38.9 +6.3
MESJ Messejana 103.83 322 ePP PKiKP 21 23 55.9 +5.5
MESJ Messejana 103.83 322 eP Pdif 21 19 32.0 -0.6
MESJ e 21 30 12.1
MESJ eSS SS 21 38 37.4 +3.2
PVAQ Vaqueiros 103.85 322 eP Pdif 21 19 39.2 +6.5
PVAQ Vaqueiros 103.85 322 ePP PKiKP 21 23 54.0 +3.5
PVAQ eSKSac SKSac 21 30 19.7 +7.7
PVAQ Vaqueiros 103.85 322 eLR LR 21 57 06.9
comp=N,2µm,20.0s
PCVE Castro Verde 103.87 322 eP Pdif 21 19 33.9 +1.1
PCVE Castro Verde 103.87 322 ePP PKiKP 21 23 57.8 +7.3
PCVE eSKSac SKSac 21 30 21.8 +10
TAM Tamanrasset 104.01 303 IAMs_20 IAMs_20 22 13 19.1
comp=Z,2µm,20.0s
PBDV Barranco-do-Ve 104.09 322 ePP PKiKP 21 23 53.3 +2.3
PBDV eSKSac SKSac 21 30 24.6 +11
TUC Tucson 104.10 45 IAMs_20 IAMs_20 22 03 12.7
comp=Z,2µm,20.0s
MORF Marmelete 104.45 322 eSKSac SKSac 21 30 15.1 +0.2
MORF eSS SS 21 38 46.0 +3.1
MORF IAMs_20 IAMs_20 22 14 28.6
comp=Z,5µm,16.1s
MORF Marmelete 104.45 322 eSKSac SKSac 21 30 21.8 +6.9
ANMO Albuquerque 105.05 41 IAMs_20 IAMs_20 22 13 30.3
comp=Z,1µm,20.0s
Y22D IRIS PASSCAL I 105.37 41 IAMs_20 IAMs_20 22 13 06.8
comp=Z,1µm,20.0s
CBKS Cedar Bluff 105.98 34 IAMs_20 IAMs_20 22 17 57.2
comp=Z,2µm,18.0s
AVE Averroes 106.52 319 IAMs_20 IAMs_20 22 17 33.7
comp=Z,2µm,19.0s
JFWS Jewell Farm 106.96 25 IAMs_20 IAMs_20 22 15 17.4
comp=Z,2µm,20.0s
EPT El Paso 107.19 43 IAMs_20 IAMs_20 22 07 39.1
comp=Z,1µm,20.0s
GLMI Grayling 107.30 20 IAMs_20 IAMs_20 22 13 01.2
comp=Z,2µm,20.0s
KSU1 Kansas State U 107.30 32 IAMs_20 IAMs_20 22 13 50.1
comp=Z,2µm,21.0s
BOSA Boshof 107.64 246 PKiKP PKiKP 21 24 03.7 +5.9
comp=Z,1.9nm,0.8s,baz=135,slow=7.1,SNR=1.7
AMTX Amarillo 107.86 38 IAMs_20 IAMs_20 22 16 12.4
comp=Z,1µm,20.0s
MNTX Cornudas Mount 107.93 42 IAMs_20 IAMs_20 22 18 58.8
comp=Z,2µm,18.0s
PQI Presque Isle 109.33 8 IAMs_20 IAMs_20 22 11 11.5
comp=Z,2µm,22.0s
WMOK Wichita Mounta 109.56 36 IAMs_20 IAMs_20 22 18 51.3
comp=Z,2µm,18.0s
TUL1 Leonard 110.21 33 IAMs_20 IAMs_20 22 18 13.2
comp=Z,1µm,19.0s
CCM Cathedral Cave 110.62 29 IAMs_20 IAMs_20 22 11 54.5
comp=Z,2µm,22.0s
TXAR Lajitas Array 110.64 43 Pdiff Pdif 21 20 07.7 +4.5
comp=Z,0.5nm,0.7s,baz=0.0,slow=5.1,SNR=3.8
TXAR PKiKP PKiKP 21 24 03.9 +0.4
comp=Z,0.8nm,0.6s,baz=252,slow=0.9,SNR=6.6
TXAR PKKPbc PKKPab 21 35 12.3 -2.6
comp=Z,0.9nm,0.8s,baz=156,slow=9.6,SNR=4.8
EMMW East Machias 111.33 8 IAMs_20 IAMs_20 22 16 05.5
comp=Z,2µm,20.0s
TSUM Tsumeb 111.44 258 IAMs_20 IAMs_20 22 15 22.1
comp=Z,2µm,20.0s
W39A Magazine 111.77 32 IAMs_20 IAMs_20 22 20 21.4
comp=Z,2µm,20.0s
W39A Magazine 111.77 32 P PKiKP 21 24 05.1 -0.2
baz=324
ACSO Alum Creek Sta 111.94 21 IAMs_20 IAMs_20 22 14 44.1
comp=Z,2µm,20.0s
P49A Miami Univ. Ec 111.96 23 IAMs_20 IAMs_20 22 17 56.7
comp=Z,2µm,20.0s
JCT Junction City 112.16 40 IAMs_20 IAMs_20 22 20 05.4
comp=Z,2µm,20.0s
TORD Torodi Ar. Bea 112.28 296 Pdiff Pdif 21 20 12.1 +1.5
comp=Z,0.1nm,0.4s,baz=230,slow=3.7,SNR=1.9
TORD PKiKP PKiKP 21 24 06.4 -0.4
comp=Z,1.0nm,1.0s,baz=36,slow=3.0,SNR=5.1
TORD PKKPbc PKKPbc 21 34 56.3 -0.2
comp=Z,0.5nm,0.7s,baz=247,slow=5.5,SNR=2.5
CMLA Cha da Macela 112.33 334 IAMs_20 IAMs_20 22 17 13.3
comp=Z,2µm,20.0s
PMAR Madeira 112.38 324 ePP PP 21 24 57.4 +5.9
MIAR Mount Ida 112.39 32 IAMs_20 IAMs_20 22 17 47.9
comp=Z,2µm,19.0s

PMOZ	Porto Moniz, M	112.45	325	*e*PP	PP	21	24	58.7	+6.8
PMOZ	Porto Moniz, M	112.45	325	*e*LQ	LQ	21	56	48.0	
PMOZ				*e*LR	LR	22	01	22.1	
	comp=Z,2µm,20.0s								
O53A	New Philadelph	112.50	20	IAMs_20	IAMs_20	22	15	13.9	
	comp=Z,2µm,22.0s								
SSPA	Standing Stone	113.13	17	IAMs_20	IAMs_20	22	17	13.3	
	comp=Z,2µm,19.0s								
SSPA	Standing Stone	113.13	17	P	PKiKP	21	24	07.5	-0.3
	baz=339								
435B	Jarrell	113.21	38	IAMs_20	IAMs_20	22	20	04.9	
	comp=Z,2µm,19.0s								
QSPA	South Pole Qui	113.37	180	IAMs_20	IAMs_20	22	14	49.4	
	comp=Z,1µm,20.0s								
WVT	Waverly	113.71	27	IAMs_20	IAMs_20	22	19	22.2	
	comp=Z,2µm,20.0s								
NATX	Nacogdoches	114.05	35	IAMs_20	IAMs_20	22	21	06.0	
	comp=Z,2µm,19.0s								
OXF	Oxford	114.39	29	IAMs_20	IAMs_20	22	21	30.4	
	comp=Z,2µm,20.0s								
HKT	Hockley	114.82	37	IAMs_20	IAMs_20	22	19	37.2	
	comp=Z,1µm,20.0s								
TZTN	Tazewell	115.04	24	IAMs_20	IAMs_20	22	18	31.1	
	comp=Z,2µm,20.0s								
BRAL	Brewton	118.27	30	IAMs_20	IAMs_20	22	22	59.1	
	comp=Z,1µm,22.0s								
NVL	N'lazarevskaya	119.13	201	*e*PKiKP	PKPdf	21	24	16.2	-2.0
NVL				MLR	MLR				
	comp=Z,897nm,20.0s								
DBIC	Dimbokro	121.18	294	PKP	PKiKP	21	24	24.7	+0.7
	comp=Z,4.2nm,1.0s,baz=246,slow=7.7,SNR=1.7								
DBIC				PP	PP	21	25	57.3	+3.4
	comp=Z,6.5nm,0.9s,baz=326,slow=2.7,SNR=2.6								
KIC	Kosan Boka	121.25	294⇑	*e*PKP1	PKiKP	21	24	24.9	+0.7
	comp=Z,2.8nm,0.6s								
TIC	Toumodi	121.33	294⇑	*e*PKP1	PKPdf	21	24	24.2	0.0
	comp=Z,1.0nm,0.2s								
LIC	Lamto	121.56	294⇑	*e*PKP1	PKiKP	21	24	25.6	+0.8
	comp=Z,2.7nm,0.4s								
TROLL	Troll, Antarti	121.61	198	PKPdf	PKPdf	21	24	23.2	0.0
SNAA	Sanae	123.28	198	PKPdf	PKPdf	21	24	26.3	0.0
SNAA	Sanae	123.28	198	PKPdf	PKPdf	21	24	25.9	-0.4
SNAA	Sanae	123.28	198	PKiKP	PKPdf	21	24	25.9	-0.4
SNAA				MLR	MLR				
	comp=Z,800nm,22.0s								
VNA1	Neumayer--Stat	125.31	198	PKPdf	PKPdf	21	24	30.3	+0.2
VNA3	Neumayer Olymp	125.37	197	PKPdf	PKPdf	21	24	29.8	-0.4
GRTK	Grand Turk	133.02	19	IAMs_20	IAMs_20	22	26	44.2	
	comp=Z,2µm,22.0s								
JTS	Las Juntas de	136.42	43	IAMs_20	IAMs_20	22	21	08.6	
	comp=Z,1µm,18.0s								
SJG	San Juan	137.54	13	IAMs_20	IAMs_20	22	30	48.6	
	comp=Z,1µm,20.0s								
SMRT	St. Maarten	138.16	9	IAMs_20	IAMs_20	22	28	01.6	
	comp=Z,2µm,22.0s								
PMSA	Palmer Station	138.53	175	*e*P	PKPdf	21	24	52.4	-2.8
ANWB	Willy Bob	138.70	7	IAMs_20	IAMs_20	22	28	01.1	
	comp=Z,2µm,21.0s								
GDSD	La Desirade Is	140.12	7	IAMs_20	IAMs_20	22	26	45.7	
	comp=Z,1µm,22.0s								
BCIP	Isla Barro Col	140.34	38	IAMs_20	IAMs_20	22	33	24.8	
	comp=Z,1µm,19.0s								
ILAM	Ilet Lapin Mar	141.66	7	IAMs_20	IAMs_20	22	28	58.5	
	comp=Z,1µm,22.0s								
BIM	Bigot	141.90	7	IAMs_20	IAMs_20	22	32	58.7	
	comp=Z,2µm,21.0s								
MPOM	Morne Pois Mar	141.99	7	IAMs_20	IAMs_20	22	33	00.2	
	comp=Z,1µm,20.0s								
SVB	Belmont	143.10	7	*e*	PKiKP	21	25	08.6	+0.3
DBBC	Dabeiba	144.09	35	*e*P	PKPab	21	24	58.4	-5.9
GRGR	Grenville	144.18	8	*e*	PKPdf	21	25	08.4	+1.5
ZARC	Zaragoza, Cauc	144.36	32	*e*P	PKPdf	21	25	08.7	+1.5
SDV	Santo Domingo	144.96	25	PKP	PKPab	21	25	07.6	0.0
	comp=Z,81nm,0.8s,baz=352,slow=2.1,SNR=30								
SDV	Santo Domingo	144.96	25	PKPdf	PKPab	21	25	07.5	-0.2
SDV	Santo Domingo	144.96	25	*e*P	PKPab	21	24	58.4	-9.2
SDV	Santo Domingo	144.96	25	*e*P	PKPab	21	25	04.1	-3.6
BRRC	Barranca, Sant	145.25	31	*e*P	PKPbc	21	24	58.4	-10
PTBC	PUERTO BERRIO	145.38	32	*e*P	PKPbc	21	25	03.6	-5.3
PAMC	Pamplona, Colo	145.50	29	*e*P	PKPbc	21	24	58.4	-11
TRN	Trinidad (W)	145.67	8	*e*	PKPab	21	25	10.4	+0.4
PLMC	San Jos del P	145.82	37	*e*P	PKPdf	21	25	03.6	-6.3
TBH	Brigand Hill	145.88	8	*e*	PKPab	21	25	10.7	0.0
BARC	Barichara	145.94	30	*e*P	PKPdf	21	25	03.6	-6.7
NORC	Norcasia	146.01	34	*e*P	PKPdf	21	25	08.7	-1.5
GUY2C	Guyana, Caldas	146.05	35	*e*P	PKPdf	21	24	58.4	-12
GR1C	Gorgona, Isla	146.28	41	*e*P	PKPdf	21	24	58.4	-12
SPBC	San Pablo de B	146.34	33	*e*P	PKPdf	21	25	08.7	-2.1
YOTC	Yotoco, Valle	146.55	38	*e*P	PKPdf	21	25	03.6	-7.6
RUSC	La Rusia	146.61	31	*e*P	PKPdf	21	25	03.6	-8.1
ANIL	Santa Ana	146.64	36	*e*P	PKPdf	21	24	58.4	-13
TAMC	Tame, Arauca	146.71	28	*e*P	PKPab	21	25	13.8	-0.2
ROSC	El Rosal	146.91	34	PKPbc	PKPbc	21	25	14.4	+0.5
	comp=Z,16nm,0.6s,baz=284,slow=1.2,SNR=7.1								
ROSC	El Rosal	146.91	34	*e*P	PKPdf	21	25	03.6	-8.5
ORTC	Ortega, Tolima	147.21	36	*e*P	PKPdf	21	25	03.6	-8.6
CHIC	Chingaza	147.39	33	*e*P	PKPdf	21	25	13.8	+0.9
POPC	Popayan, Colom	147.53	43	*e*P	PKPdf	21	25	03.6	-9.4
USHA	Ushuaia	147.57	167	PKPbc	PKPbc	21	25	14.1	0.0
	comp=Z,40nm,0.9s,baz=305,slow=3.7,SNR=3.9								
MARP	Paez Belalcaza	147.70	38	*e*P	PKPab	21	25	19.0	+0.7
VILC	Villavicencio,	147.85	33	*e*P	PKPdf	21	25	13.8	+0.5
SOTA	Rioblanco	147.90	40	*e*P	PKPdf	21	25	03.6	-10
MG03	Isla Dawson	148.03	165		PKiKP	21	25	16.2	-0.9
BETC	Betania	148.13	38	*e*P	PKPdf	21	25	13.8	+0.1
GCUF	Volcan Galeras	148.18	42	*e*P	PKPdf	21	25	03.6	-11
OTAV	Otavalo	148.24	45		PKPbc	21	25	17.2	-0.5
OTAV	Otavalo	148.24	45	PKP2	PKPbc	21	25	17.2	-0.5
OTAV	Otavalo	148.24	45	*e*P	PKPdf	21	25	11.0	-3.4
GARC	Garzon, Huila	148.50	38	*e*P	PKPdf	21	25	03.6	-11
FLOC	Florencia	148.90	39	*e*P	PKPdf	21	25	08.7	-6.2
MACC	Macarena, Meta	149.44	36	*e*P	PKPdf	21	25	13.8	-2.0
GUVC	San Jose del G	149.73	33	*e*P	PKPdf	21	25	13.8	-2.4
PTLC	Puerto Leguiza	150.54	39	*e*P	PKPdf	21	25	19.0	+1.4
MDP	Montagnes des	151.23	352	PKPbc	PKiKP	21	25	25.0	0.0
	comp=Z,29nm,0.9s,baz=37,slow=1.8,SNR=7.7								
MDP				PKPab	PKPab	21	25	32.3	+0.2
	comp=Z,40nm,0.9s,baz=41,slow=1.5,SNR=11								
EFI	East Falkland	151.93	178		PKiKP	21	25	25.5	+0.3
EFI	East Falkland	151.93	178	PKiKP	PKiKP	21	25	25.5	+0.3
RCBR	Riachuelo	153.35	308	PKPbc	PKiKP	21	25	30.5	+1.1
	comp=Z,12nm,0.8s,baz=302,slow=6.8,SNR=2.2								
RCBR	Riachuelo	153.35	308	IAMs_20	IAMs_20	22	35	32.5	
	comp=Z,1µm,20.0s								
RCBR	Riachuelo	153.35	308	*e*P	PKPdf	21	25	20.7	-1.0
ATAH	Atahualpa	153.48	55	PKPbc	PKPbc	21	25	29.4	-0.6
	comp=Z,24nm,1.0s,baz=210,slow=1.0,SNR=6.4								
ATAH				PKPab	PKPab	21	25	41.8	-0.4
	comp=Z,35nm,0.8s,baz=84,slow=2.7,SNR=7.4								
BOAV	Boa Vista	153.91	9	*e*P	PKPdf	21	25	21.2	-1.3
COYC	Coyhaique	154.73	154		PKiKP	21	25	32.5	+1.3
NBCA	Caruaru-PE	155.02	304	*e*P	PKPdf	21	25	23.4	-0.6
NBPB	Pedra_Branca-C	155.67	315	*e*P	PKPdf	21	25	23.9	-1.0
NBAN	Anadia - AL	156.12	302	*e*P	PKPdf	21	25	24.2	-1.3
ROSB	Rosrio	156.13	328	*e*P	PKPdf	21	25	24.2	-1.3
NBMA	Muriti-CE	156.45	310	*e*P	PKPdf	21	25	22.7	-3.3
MCPB	Macapa, AP	156.50	348	*e*P	PKPdf	21	25	24.2	-1.8
TBTG	Tabatinga, AM	156.86	36	*e*P	PKPdf	21	25	22.4	-4.1
CZSB	Cruzeiro do Su	157.97	47	*e*P	PKPdf	21	25	27.4	-0.4
NBLA	Lagarto - SE	158.10	302	*e*P	PKPdf	21	25	25.8	-2.2
MALB	Monte Alegre	158.28	354	*e*P	PKPdf	21	25	25.9	-2.3
PLCA	Paso Flores	159.28	149	PKP	PKPdf	21	25	29.3	+0.5
	comp=Z,5.6nm,1.2s,baz=228,slow=6.6,SNR=3.7								
PLCA				PKPab	PKPab	21	26	05.8	-0.2
	comp=Z,4.5nm,0.8s,baz=224,slow=5.3,SNR=6.8								
PLCA	Paso Flores	159.28	149	*e*P	PKPdf	21	25	26.1	-2.7
MACA	Manacapuru-AM	159.34	11	*e*P	PKPdf	21	25	28.5	-1.0
ITTB	Itaituba	160.88	357	*e*P	PKPdf	21	25	30.0	-1.2
GDU01	Guandu, BA	161.10	298	*e*P	PKPdf	21	25	30.0	-1.4
PRPB	Paraupebas	161.49	338	*e*P	PKPdf	21	25	29.7	-2.2
CMC01	Camacan, BA	161.91	294	*e*P	PKPdf	21	25	31.5	-0.7
ML02	Panimavida	162.36	197		PKPdf	21	25	30.4	-1.7
GUA01	Guaratinga, BA	162.72	291	*e*P	PKPdf	21	25	31.5	-1.5
SMTB	Santa Maria do	162.99	328	*e*P	PKPdf	21	25	32.1	-1.3
NPGB	Novo Progresso	163.52	355	*e*P	PKPdf	21	25	32.4	-1.5
NAN01	Guarapari, ES	163.53	287	*e*P	PKPdf	21	25	32.1	-1.6
ETMB	Extrema	163.55	35	*e*P	PKPdf	21	25	32.4	-1.4
SDBA	SAO DESIDERIO	164.26	313	*e*P	PKPdf	21	25	33.3	-1.2
RIB01	Linhares ES	164.28	283	*e*P	PKPdf	21	25	33.3	-1.1
BSFB	Barra de Sao F	164.53	285	*e*P	PKPdf	21	25	33.6	-1.0
SJMB	Sao Joao De Ma	164.78	286	*e*P	PKPdf	21	25	33.9	-0.9
TRQA	Tornquist	164.86	164	*e*P	PKPdf	21	25	33.3	-1.1
ALF01	Guarapari-ES	164.95	278	*e*P	PKPdf	21	25	33.9	-1.0
JANB	Januaria	165.60	304	*e*P	PKPdf	21	25	34.9	-0.8
CAM01	Campos-RJ	166.05	274	*e*P	PKPdf	21	25	33.6	-2.2
PEXB	Peixe	166.10	324	*e*P	PKPdf	21	25	34.9	-1.2
DUB01	Friburgo-RJ	166.75	274	*e*P	PKPdf	21	25	34.9	-1.6
DIAM	Diamantina, MG	166.79	291	*e*P	PKPdf	21	25	34.4	-2.3
LPAZ	La Paz	167.00	58	PKP	PKPdf	21	25	39.0	+1.5
	comp=Z,16nm,1.0s,baz=20,slow=5.0,SNR=26								
LPAZ	La Paz	167.00	58	*e*P	PKPdf	21	25	35.1	-2.3
CLDB	Colider	167.34	356	*e*P	PKPdf	21	25	35.5	-1.6
SNDB	Serra Nova Dou	167.39	335	*e*P	PKPdf	21	25	36.7	-0.4
VAS01	Vassouras-RJ	167.76	273	*e*P	PKPdf	21	25	36.1	-1.1
PDRB	Porto dos Gac	168.10	0	*e*P	PKPdf	21	25	36.4	-1.2
MAN01	Angra dos Reis	168.31	271	*e*P	PKPdf	21	25	36.4	-1.2
BDFB	Brasilia	168.67	313	PKP	PKPdf	21	25	38.3	+0.3
	comp=Z,1.4nm,0.4s,baz=67,slow=6.6,SNR=3.1								
BDFB				PKPab	PKPab	21	26	47.8	-0.1
	comp=Z,7.1nm,0.9s,baz=160,slow=4.6,SNR=2.7								
BDFB				PP	PP	21	30	36.3	-0.3
	comp=Z,2.0nm,0.7s,baz=154,slow=12,SNR=1.9								
LVC	Limon Verde	168.68	88	PKP	PKPdf	21	25	39.5	+1.3
	comp=Z,9.7nm,0.8s,baz=312,slow=3.2,SNR=7.7								
LVC				PKPab	PKPab	21	26	48.6	+0.3
	comp=Z,16nm,1.1s,baz=349,slow=15,SNR=1.9								
LVC	Limon Verde	168.68	88	*e*P	PKPdf	21	25	36.4	-1.8
VILB	Vilhena	168.91	18	*e*P	PKPdf	21	25	36.4	-1.7
PARB	Paraibuna	169.87	269	*e*P	PKPdf	21	25	37.6	-0.9
IPMB	Ipameri, GO	170.34	304	*e*P	PKPdf	21	25	37.9	-1.0
VAO	Valinhos	171.08	272	*e*P	PKPdf	21	25	36.9	-2.3
SIV	San Ignacio	171.39	30	PKP	PKPdf	21	25	40.0	+0.6
	comp=Z,4.6nm,0.6s,baz=88,slow=1.2,SNR=19								
SIV				PKPab	PKPab	21	27	01.0	+1.3
	comp=Z,6.1nm,0.7s,baz=8.3,slow=2.4,SNR=3.7								
SIV				PP	PP	21	30	49.7	+0.2
	comp=Z,4.1nm,0.8s,baz=347,slow=9.4,SNR=4.9								
PLTB	Pedras Altas	171.41	198	*e*P	PKPdf	21	25	38.2	-0.9
RCLB	Rio Claro- Sao	171.52	276	*e*P	PKPdf	21	25	37.1	-2.3
PTLB	Pontes e Lacer	171.58	17	*e*P	PKPdf	21	25	38.2	-1.3
TER01	Tubaro-SC	171.63	232	*e*P	PKPdf	21	25	38.5	-0.8
DVLD	Doverlandia	171.91	328	*e*P	PKPdf	21	25	37.2	-2.5
BB19B	Bebedouro	172.07	287	*e*P	PKPdf	21	25	40.0	+0.3
SALV	Santo Antonio	172.31	353	*e*P	PKPdf	21	25	38.8	-1.1
CPSB	Cacapava Do Su	172.62	202	*e*P	PKPdf	21	25	38.8	-0.8
TIJ01	Guaruva-PR	172.82	254	*e*P	PKPdf	21	25	39.1	-0.9
ITRB	Iturama	172.99	302	*e*P	PKPdf	21	25	38.0	-2.1
POCN	Pocone	173.08	1	*e*P	PKPdf	21	25	38.0	-2.1
RODS	Rosario do Sul	173.13	191	*e*P	PKPdf	21	25	37.8	-2.0
FRTB	Fartura	173.49	271	*e*P	PKPdf	21	25	38.1	-2.1
PP1B	Ponte de Pedra	173.83	344	*e*P	PKPdf	21	25	38.3	-2.1
ALGR	Alto Alegre (B	173.86	211	*e*P	PKPdf	21	25	38.0	-2.2
PCMB	Pacaembu	174.65	290	*e*P	PKPdf	21	25	39.4	-1.2
TRCB	Terra Rica	176.22	281	*e*P	PKPdf	21	25	39.0	-2.0
AQDB	Aquidauana	176.79	344	*e*P	PKPdf	21	25	39.0	-2.1
CPUP	Villa Florida	177.19	168	PKP	PKPdf	21	25	41.0	-0.1
	comp=Z,4.9nm,0.9s,baz=113,slow=0.7,SNR=5.2								
CPUP				PKPab	PKPab	21	27	27.2	+2.1
	comp=Z,2.6nm,0.6s,baz=155,slow=3.5,SNR=4.1								
CPUP				PP	PP	21	31	21.6	+4.6
	comp=Z,1.6nm,0.7s,baz=332,slow=18,SNR=1.9								
CPUP	Villa Florida	177.19	168	*e*P	PKPdf	21	25	39.1	-1.9
ANTJ	Antonio Joao (	178.32	339	*e*P	PKPdf	21	25	39.3	-2.1
AMBA	Amambai (Brazi	178.34	293	*e*P	PKPdf	21	25	39.3	-2.0

SOME ***23*** *21:23:34.6, 39˚.28N×73˚.77E, h10km*
IDC ***23*** *21:23:37.9±9.8, 38˚.48N×73˚.89E, h168km±68km, mb2.8/1, mbtmp3.5/5, Error ellipse: s-maj=151.1km s-min=47.1km az=147.0*

ISC 23 21:23:37.0±1.9, 38˚.4N±0˚.1×73˚.96E±0˚.09, h150km±19, σ2s25/27, 2C, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	3.71	357	P		Pn	21 24 35.6	+1.8
	SNR=9.0							
UCH	Uchtor	3.83	6	P		Pn	21 24 36.9	+1.6
	SNR=16							
ULHL	Ulahol	4.20	24	P		Pn	21 24 40.5	+0.5
	SNR=8.6							
AAK	Ala-Archa	4.23	5	P		Pn	21 24 41.7	+1.3
	2.0nm,0.3s,baz=180,slow=9.1,SNR=2.9							
AAK				S		Sn	21 25 22.7	-7.0
	3.4nm,0.4s,baz=205,slow=9.0,SNR=5.2							
EKS2	Erkin-Say	4.24	358	P		Pn	21 24 43.7	+3.3
	SNR=5.9							
KBK	Karagaybulak	4.30	10	P		Pn	21 24 43.1	+1.9
	SNR=7.2							
CHMS	Chumysh	4.61	7	P		Pn	21 24 47.2	+2.0
	SNR=6.2							
TKM2	Tokmak 2	4.66	15	P		Pn	21 24 47.4	+1.3
	SNR=6.1							
TKM2	Tokmak 2	4.66	15	⇑Pn		Pn	21 24 47.0	+1.0
	6.6nm,0.7s							
TKM2				⇑Sn		Sn	21 25 39.2	-0.7
	13nm,0.6s							
IUG	Iuzhnay	4.78	322	*e*P		Pn	21 24 49.6	+2.1
	94nm,0.1s							
IUG				*e*S		Sn	21 25 43.6	+1.1
	47nm,0.1s							
KST	Kastek	4.86	18	*e*P		Pn	21 24 50.9	+2.3
	3.3nm,0.1s							
KST				*e*S		Sn	21 25 46.0	+1.5
	14nm,0.1s							
DGS	Degeres	5.01	15	*e*P		Pn	21 24 52.9	+2.4
	4.6nm,0.8s							
DGS				*e*S		Sn	21 25 49.2	+1.3
	7.1nm,0.2s							
SGDS	Sogindy	5.05	6	*e*P		Pn	21 24 52.4	+1.4
	1.5nm,0.2s							
SGDS				*e*S		Sn	21 25 48.4	-0.5
	3.5nm,0.7s							
KK31	Karatay Array	5.36	332	Pn		Pn	21 24 57.0	+1.9
	0.4nm,0.2s,baz=128,slow=13,SNR=27							
KK31				Sn		Sn	21 25 56.3	+0.2
	5.9nm,0.3s,baz=133,slow=21,SNR=15							
BRLS	Borolday	5.57	327	*e*P		Pn	21 24 57.9	+0.1
	2.4nm,0.1s							
BRLS				*e*S		Sn	21 25 57.9	-3.2
	15nm,0.0s							
MKAR	Makanchi Array	10.37	34	P		Pn	21 26 02.2	+0.4
	1.1nm,0.7s,baz=212,slow=15,SNR=6.3							
KURBB	Kurchatov Arra	12.62	13	P		Pn	21 26 28.9	-2.2
	0.2nm,0.4s,baz=200,slow=12,SNR=2.2							
ZALV	Zalesovo Beam	17.22	22	P		P	21 27 27.8	+0.4
	2.7nm,0.5s,baz=214,slow=13,SNR=14							
TORD	Torodi Ar. Bea	68.10	270	P		P	21 34 19.4	-1.4
	0.3nm,0.8s,baz=43,slow=4.7,SNR=1.2							
	0.3nm,0.8s							

IDC ***23*** *22:01:44.0±2.0, 17˚.98N×104˚.82W, h0km, mb3.5/5, mbtmp3.7/8, ML3.7/3, Error ellipse: s-maj=60.7km s-min=23.1km az=54.0*
MEX ***23*** *22:01:47.8±1.1, 18˚.20N×104˚.92W, h9km±87km, MD4.2*
NEIC ***23*** *22:01:50.9±2.0, 18˚.37N±0˚.06×104˚.45W±0˚.05, h10km±1km, mb4.1/96, Md4.2/33(MEX), Error ellipse: s-maj=11.4km s-min=6.8km az=206.0*

ISC 23 22:01:49.6±2.1, 18˚.24N±0˚.06×104˚.64W±0˚.06, h25km±14km, n128, σ1s45/134, mb4.1/22, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CDAR	Ciudad de Arme	0.92	41	*e*P		Pb	22 02 05.2	-1.7
CDAR				*i* S		Sn	22 02 20.2	+0.8
R15V		1.11	34			Pn	22 02 08.1	-1.7
R15V		1.11	34	*i* P		Pn	22 02 08.1	-1.7
R15V				*i* S		Sb	22 02 25.3	+0.9
MMIG	Aquila	1.23	88			Pn	22 02 09.2	-2.1
MMIG						Sn	22 02 26.4	-0.8
MMIG	Aquila	1.23	88	*i* P		Pn	22 02 09.2	-2.1
MMIG				*e*S		Sn	22 02 26.4	-0.8
COIG	Colima	1.30	44	*e*P		Pn	22 02 11.1	-1.2
COIG				*e*S		Sn	22 02 28.4	-0.5
CJM	Chamela	1.31	343	*i* P		Pn	22 02 08.0	-4.3
CJM				*e*S		Sn	22 02 24.3	-4.6
MNGA	Volcan de Coli	1.56	38	*e*P		Pn	22 02 15.6	-0.4
MNGA				*e*S		Sn	22 02 35.9	+0.4
EZ5V		1.58	39			Pn	22 02 15.9	-0.4
EZ5V		1.58	39	*e*P		Pn	22 02 15.9	-0.4
EZ5V				*e*S		Sn	22 02 37.5	+1.4
INCO	Volcan de Coli	1.61	37	*e*P		Pn	22 02 16.5	-0.4
INCO				*e*S		Sn	22 02 37.6	+0.5
JUBC	Volcan de Coli	1.62	39	*e*P		Pn	22 02 16.8	-0.1
JUBC				*e*S		Sb	22 02 39.3	0.0
ANIG	Ahuacatlan	2.80	2			Pn	22 02 33.7	+0.7
ANIG						Sn	22 03 06.2	+0.3
ANIG	Ahuacatlan	2.80	2	*e*P		Pn	22 02 33.7	+0.7
ANIG				*e*S		Sn	22 03 06.2	+0.3
MOIG	Morelia	3.57	66	Pn		Pn	22 02 43.0	-0.7
ARIG	Puente Sto Nin	4.08	89			Pn	22 02 51.4	+0.9
ARIG						Sn	22 03 38.6	+1.0
ARIG	Puente Sto Nin	4.08	89	*e*P		Pn	22 02 51.4	+0.9
ARIG				*e*S		Sn	22 03 38.6	+1.0
MEIG	Mezcala	4.79	93			Pn	22 03 01.2	+0.9
MEIG						Sn	22 03 56.3	+1.2
MEIG	Mezcala	4.79	93	*e*P		Pn	22 03 01.2	+0.9
MEIG				*i* S		Sn	22 03 56.3	+1.2
PLIG	Platanillo	4.89	87			Pn	22 03 03.2	+1.5
PLIG	Platanillo	4.89	87	*i* P		Pn	22 03 03.2	+1.5
ZAIG	Zacatecas	4.91	23	Pn		Pn	22 03 02.5	+0.4
DAIG	Los Arroyos	4.91	104			Pn	22 03 02.3	+0.4
DAIG	Los Arroyos	4.91	104	*e*P		Pn	22 03 02.3	+0.4
UNM	Universidad Na	5.29	77	Pn		Pn	22 03 06.0	-1.4
MGIG	Malinaltepec	5.81	99	*e*P		Pn	22 03 15.6	+1.1
TLIG	Tlapa	5.83	96			Pn	22 03 14.7	+0.1
SLBS	Sierra La Lagu	7.34	318	Pn		Pn	22 03 38.4	+3.1
CMIG	Matias Romero	9.37	96	Pn		Pn	22 04 02.0	-1.2
	2.1nm,0.3s,baz=287,slow=9.7,SNR=18							
	5.5nm,0.4s							
TXAR	Lajitas Array	11.08	4	Pn		Pn	22 04 30.2	+3.6
	0.1nm,0.3s,baz=187,slow=14,SNR=20							
	2.7nm,0.8s							
TXAR	Lajitas Array	11.08	4			Pn	22 04 27.5	+0.9
TX31	Lajitas

RIMA	**Rio Macho**	**21.83**	**110**	P		**P**	**22 06 42.1**	**+1.5**
553A	**Crawfordville**	**21.90**	**53**	P		**P**	**22 06 41.0**	**0.0**
R11A	**Troy Canyon, C**	**22.19**	**337**	P		**P**	**22 06 46.2**	**+2.0**
MPU	**Maple Canyon**	**22.52**	**346**	P		**P**	**22 06 49.4**	**+1.5**
MPU				IAmb		IAmb	22 06 52.3	
	comp=Z,12nm,1.5s							
TPH	**Tonopah**	**22.61**	**333**	P		**P**	**22 06 51.0**	**+2.2**
R40A	**Maddies Statio**	**22.71**	**26**	P		**P**	**22 06 50.3**	**+0.7**
R40A				IAmb		IAmb	22 06 55.6	
	comp=Z,7.7nm,0.8s							
DUG	**Dugway, Tooele**	**22.99**	**344**	P		**P**	**22 06 55.3**	**+2.7**
DUG				IAmb		IAmb	22 07 02.7	
	comp=Z,7.4nm,1.4s							
PHWY	**Pilot Hill**	**22.99**	**358**	P		**P**	**22 06 52.7**	**-0.1**
OMMB	**Old Mammoth Mi**	**23.04**	**330**	P		**P**	**22 06 55.4**	**+2.0**
OMMB				IAmb		IAmb	22 07 06.0	
	comp=Z,6.2nm,1.2s							
NV11	**Mina Array Sit**	**23.32**	**332**	P		**P**	**22 06 57.4**	**+1.4**
NV11				IAmb		IAmb	22 07 13.6	
	comp=Z,18nm,1.9s							
NVAR	**Mina Array Bea**	**23.38**	**332**	P		**P**	**22 06 57.0**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=139,slow=8.4,SNR=1.0							
	comp=Z,0.5nm,0.6s							
BGU	**Big Grassy Mou**	**23.73**	**344**	P		**P**	**22 07 00.2**	**+0.2**
KVN	**Kaiserville**	**23.81**	**333**	P		**P**	**22 07 03.1**	**+2.3**
KVN				IAmb		IAmb	22 07 04.8	
	comp=Z,9.6nm,1.6s							
P40A	**Paris**	**23.86**	**25**	P		**P**	**22 06 57.8**	**-3.2**
P40A				IAmb		IAmb	22 07 08.5	
	comp=Z,9.9nm,0.8s							
PDAR	**Pinedale Array**	**24.80**	**351**	P		**P**	**22 07 10.1**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=161,slow=9.5,SNR=2.6							
	comp=Z,0.5nm,0.7s							
TPAW	**Teton Pass**	**25.73**	**349**	P		**P**	**22 07 20.3**	**+2.0**
TPAW				IAmb		IAmb	22 07 21.4	
	comp=Z,4.2nm,0.8s							
LOHW	**Long Hollow**	**25.79**	**350**	P		**P**	**22 07 20.7**	**+1.9**
LOHW				IAmb		IAmb	22 07 22.1	
	comp=Z,3.9nm,0.8s							
FXWY	**Fox Creek**	**25.89**	**349**	P		**P**	**22 07 22.7**	**+3.0**
YHL	**Hebgen Lake**	**27.09**	**350**	P		**P**	**22 07 33.2**	**+2.6**
EYMN	**Ely**	**31.51**	**17**	P		**P**	**22 08 09.7**	**+0.1**
EYMN				IAmb		IAmb	22 08 10.7	
	comp=Z,4.6nm,0.8s							
R61A	**Willards**	**32.44**	**46**	P		**P**	**22 08 18.5**	**+0.7**
YKA	**Yellowknife Ar**	**44.75**	**353**	P		**P**	**22 09 59.5**	**-1.2**
	comp=Z,0.9nm,0.8s,baz=165,slow=8.3,SNR=4.6							
	comp=Z,0.9nm,0.8s							
LPAZ	**La Paz**	**49.70**	**131**	P		**P**	**22 10 38.8**	**-1.8**
	comp=Z,1.0nm,0.7s,baz=335,slow=9.1,SNR=4.2							
	comp=Z,1.0nm,0.7s							
ILAR	**Eielson Array**	**54.36**	**339**	P		**P**	**22 11 13.0**	**-1.0**
	comp=Z,0.4nm,0.7s,baz=153,slow=8.1,SNR=4.6							
	comp=Z,0.4nm,0.7s							
H03N2	**Juan Fernandez**	**56.95**	**154**	T		T	23 14 25.2	
	baz=332							
H03N1	**Juan Fernandez**	**56.96**	**154**	T		T	23 14 26.1	
	baz=332							
H03N3	**Juan Fernandez**	**56.97**	**154**	T		T	23 14 26.3	
	baz=332							

NEIC ***23*** *22:28:55.5±2.0, 6.83N±0.05×73.02W±0.05, h149km±5km, mb4.4/278, Error ellipse: s-maj=7.7km s-min=7.2km az=139.0*

IDC ***23*** *22:28:55.3±0.4, 6.76N×72.94W, h162km±4km, mb3.7/19, mbtmp4.3/21, Error ellipse: s-maj=9.8km s-min=6.6km az=122.0*

RSNC ***23*** *22:28:56.2±0.8, 6.82N×73.16W, h149km±3km, ML4.7, Mw4.7, Fault plane solution: NP1:ϕ≈31.00000°, δ51.00000°, λ18.00000°.*

ISC 23 22:28:54.9±0.4, 6.82N±0.03×73.09W±0.03, h155km±4km, h156km:pP-P,n572,σ1938/623, mb4.4/148, 7C-12D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
BARC	**Barichara**	**0.24**	**203**	⇑*i*	P		**Pn**	**22 29 16.4**	**+0.1**
BARC					eS		**Sn**	**22 29 31.6**	**-0.9**
BARC					*i*			22 29 34.2	
	comp=Z,12μm,0.4s								
PAMC	**Pamplona, Colo**	**0.65**	**37**	⇑*i*	P		**Pn**	**22 29 19.2**	**+0.9**
PAMC					eS		**Sn**	**22 29 36.1**	**+0.1**
PAMC					*i*			22 29 38.6	
	comp=Z,16μm,0.5s								
BRRC	**Barranca, Sant**	**0.68**	**295**	⇑*i*	P		**Pn**	**22 29 18.2**	**+0.3**
BRRC					eS		**Sn**	**22 29 34.6**	**-0.8**
BRRC					*i*			22 29 38.6	
	comp=Z,9μm,0.3s								
RUSC	**La Rusia**	**0.92**	**180**	*e*P			**Pn**	**22 29 20.3**	**+0.1**
RUSC					eS		**Sn**	**22 29 38.9**	**-0.5**
RUSC					*i*			22 29 40.3	
	comp=Z,13μm,0.3s								
TAMC	**Tame, Arauca**	**1.34**	**106**	⇑*i*	P		**Pn**	**22 29 24.8**	**+1.5**
TAMC					eS		**Sn**	**22 29 46.6**	**+1.5**
TAMC					*i*			22 29 47.7	
	comp=Z,2μm,0.5s								
PTBC	**PUERTO BERRIO,**	**1.39**	**259**	⇓*i*	P		**Pn**	**22 29 22.7**	**-1.0**
PTBC					eS		**Sn**	**22 29 43.7**	**-2.1**
PTBC					*i*			22 29 49.8	
	comp=Z,6μm,0.4s								
SPBC	**San Pablo de B**	**1.52**	**220**	⇓*i*	P		**Pn**	**22 29 25.1**	**-0.1**
SPBC					eS		**Sn**	**22 29 47.3**	**-1.1**
SPBC					*i*			22 29 50.0	
	comp=Z,16μm,0.3s								
ZARC	**Zaragoza, Cauc**	**1.88**	**291**				**Pn**	**22 29 28.3**	**-0.7**
ZARC						Sn	**Sn**	**22 29 55.9**	**+0.6**
ZARC	**Zaragoza, Cauc**	**1.88**	**291**	*e*P			**Pn**	**22 29 28.5**	**-0.5**
ZARC					eS		**Sn**	**22 29 53.7**	**-1.5**
ZARC					*i*			22 30 00.1	
	comp=Z,8μm,0.3s								
NORC	**Norcasia**	**2.17**	**235**	*e*P			**Pn**	**22 29 31.9**	**-0.4**
NORC					eS		**Sn**	**22 30 00.1**	**-1.1**
NORC					*i*			22 30 06.0	
	comp=Z,6μm,0.2s								
CHIC	**Chingaza**	**2.27**	**196**	⇓*i*	P		**Pn**	**22 29 34.1**	**+0.2**
CHIC					eS		**Sn**	**22 30 03.9**	**-0.1**
CHIC					*i*			22 30 13.8	
	comp=Z,4μm,0.4s								
ROSC	**El Rosal**	**2.31**	**212**	P			**Pn**	**22 29 35.7**	**+1.3**
	comp=Z,5μm,0.4s,baz=80,slow=14,SNR=1513								
ROSC					S		**Sn**	**22 30 07.4**	**+2.4**
	comp=Z,10μm,0.4s,baz=141,slow=21,SNR=9.6								
ROSC	**El Rosal**	**2.31**	**212**				**Pn**	**22 29 35.5**	**+1.0**
ROSC	**El Rosal**	**2.31**	**212**	⇓*i*	P		**Pn**	**22 29 35.9**	**+1.4**
ROSC					eS		**Sn**	**22 30 05.3**	**+0.4**
ROSC					*i*			22 30 11.1	
	comp=Z,9μm,0.4s								
HELC	**Santa Helena**	**2.50**	**256**	*e*P			**Pn**	**22 29 36.0**	**-0.7**
HELC					eS		**Sn**	**22 30 05.0**	**-3.9**
HELC					*i*			22 30 16.7	
	comp=Z,2μm,0.3s								
UREC	**San Jos de Ur**	**2.60**	**291**	*e*P			**Pn**	**22 29 36.0**	**-1.5**
UREC					eS		**Sn**	**22 30 07.7**	**-2.6**
UREC					*i*			22 30 17.8	
	comp=Z,4μm,0.3s								
LL1C	**La Loma 1 Cana**	**2.75**	**350**	*e*P			**Pn**	**22 29 40.6**	**+1.3**
LL1C					eS		**Sn**	**22 30 16.0**	**+2.2**
VILC	**Villavicencio,**	**2.75**	**193**	⇓*e*P			**Pn**	**22 29 39.6**	**0.0**
VILC					eS		**Sn**	**22 30 13.7**	**-0.4**
GUY2C	**Guyana, Caldas**	**2.76**	**235**	*e*P			**Pn**	**22 29 40.3**	**+0.3**
GUY2C					eS		**Sn**	**22 30 13.9**	**-0.9**
GUY2C					*i*			22 30 26.6	
	comp=Z,4μm,0.4s								
PTGC	**Puerto Gaitan,**	**2.77**	**160**	⇓*i*	P		**Pn**	**22 29 39.5**	**-0.1**
PTGC					eS		**Sn**	**22 30 12.0**	**-2.3**
PTGC					*i*			22 30 17.9	
	comp=Z,5μm,0.3s								
LL6C	**La Loma 6 Bece**	**2.91**	**356**	⇓*i*	P		**Pn**	**22 29 40.9**	**-0.4**
LL6C					eS		**Sn**	**22 30 14.7**	**-2.6**
LL6C					*i*			22 30 30.2	
	comp=Z,1μm,0.5s								
CMAN1	**Manizales, Cal**	**2.98**	**235**	*e*P			Pn	22 29 47.6	+5.1
CMAN1					eS		**Sn**	**22 30 22.8**	**+3.5**
LL5C	**La Loma 5 El P**	**2.98**	**348**	*e*P			**Pn**	**22 29 43.0**	**+0.8**
LL5C					eS		**Sn**	**22 30 19.4**	**+0.5**
LL5C					*i*			22 30 27.5	
	comp=Z,1μm,0.5s								
CBOC	**Ciudad Bolivar**	**3.06**	**252**	*e*P			**Pn**	**22 29 43.8**	**+0.4**
CBOC					eS		**Sn**	**22 30 20.9**	**+0.1**
CBOC					*i*			22 30 36.4	
	comp=Z,924nm,0.5s								
DBBC	**Dabeiba**	**3.11**	**274**	⇑*i*	P		**Pn**	**22 29 43.7**	**-0.2**
DBBC					eS		**Sn**	**22 30 16.1**	**-5.7**
SDV	**Santo Domingo**	**3.18**	**50**	P			**Pn**	**22 29 45.8**	**+0.8**
	comp=Z,701nm,0.3s,baz=202,slow=3.7,SNR=220								
SDV					S		**Sn**	**22 30 23.2**	**-0.6**
	comp=Z,1μm,0.4s,baz=59,slow=22,SNR=30								
SDV	**Santo Domingo**	**3.18**	**50**	Pn			**Pn**	**22 29 45.6**	**+0.6**
SDV					Sn		**Sn**	**22 30 23.7**	**-0.1**
SDV	**Santo Domingo**	**3.18**	**50**	⇑*i*	P		**Pn**	**22 29 45.8**	**+0.8**
SDV					eS		**Sn**	**22 30 22.9**	**-0.9**
SDV					*i*			22 30 28.9	
	comp=Z,970nm,0.7s								
ARGC	**Ariguani, Magd**	**3.23**	**339**	⇓*e*P			**Pn**	**22 29 46.3**	**+0.9**
ARGC					eS		**Sn**	**22 30 24.4**	**-0.2**
ARGC					*i*			22 30 34.4	
	comp=Z,954nm,0.4s								
ANIL	**Santa Ana**	**3.26**	**225**	*e*P			**Pn**	**22 29 46.6**	**+0.5**
ANIL					eS		**Sn**	**22 30 27.6**	**+1.8**
PRAC	**Prado**	**3.56**	**210**	*e*P			**Pn**	**22 29 49.1**	**-0.6**
PRAC					eS		**Sn**	**22 30 32.0**	**-0.4**
PRAC					*i*			22 30 38.6	
	comp=Z,4μm,0.5s								
ORTC	**Ortega, Tolima**	**3.60**	**217**	*e*P			**Pn**	**22 29 50.1**	**-0.1**
ORTC					eS		**Sn**	**22 30 34.1**	**+0.9**
ORTC					*i*			22 30 40.2	
	comp=Z,3μm,0.4s								
SJCC	**San Jacinto, C**	**3.69**	**326**	Pn			**Pn**	**22 29 50.5**	**-0.9**
SJCC					Sn		**Sn**	**22 30 31.1**	**-4.2**
SJCC	**San Jacinto, C**	**3.69**	**326**	⇓*i*	P		**Pn**	**22 29 49.9**	**-1.5**
SJCC					eS		**Sn**	**22 30 31.4**	**-3.9**
SJCC					*i*			22 30 35.8	
	comp=Z,986nm,0.5s								
PLMC	**San Jos del P**	**3.70**	**239**	*e*P			**Pn**	**22 29 51.6**	**0.0**
PLMC					eS		**Sn**	**22 30 34.6**	**-0.9**
PLMC					*i*			22 30 38.0	
	comp=Z,1μm,0.2s								
LCBC	**Los crdobas,**	**3.83**	**302**	*e*P			**Pn**	**22 29 52.1**	**-1.0**
LCBC					eS		**Sn**	**22 30 38.7**	**+0.4**
LCBC					*i*			22 30 46.6	
	comp=Z,1μm,0.3s								
CRJC	**Cerrejon, Guaj**	**4.18**	**3**	⇓*i*	P		**Pn**	**22 29 56.5**	**-1.3**
CRJC					eS		**Sn**	**22 30 44.6**	**-2.2**
CRJC					*i*			22 30 54.0	
	comp=Z,968nm,0.3s								
GUVC	**San Jose del G**	**4.27**	**174**	*e*P			**Pn**	**22 29 58.1**	**-0.8**
GUVC					eS		**Sn**	**22 30 49.1**	**+0.4**
GUVC					*i*			22 30 54.1	
	comp=Z,3μm,0.2s								
YOTC	**Yotoco, Valle**	**4.29**	**229**	*e*P			**Pn**	**22 29 58.9**	**-0.4**
YOTC					*i*			22 31 01.0	
	comp=Z,1μm,1.0s								
SOLC	**Bahia Solano**	**4.33**	**262**	*e*P			**Pn**	**22 30 00.1**	**+0.5**
SMRC	**Santa Marta, M**	**4.46**	**346**	*e*P			**Pn**	**22 30 00.8**	**-0.5**
SMRC					eS		**Sn**	**22 30 49.1**	**-4.1**
SMRC					*i*			22 30 54.4	
	comp=Z,654nm,0.4s								
CAPC	**Capurgana**	**4.59**	**293**	*e*P			**Pn**	**22 30 00.6**	**-2.5**
CAPC					eS		**Sn**	**22 30 51.2**	**-5.0**
CAPC					*i*			22 30 55.9	
	comp=Z,553nm,0.5s								
PIZC	**Pizarro, Choco**	**4.63**	**247**	*e*P			**Pn**	**22 30 04.7**	**+1.1**
PIZC					eS		**Sn**	**22 30 56.5**	**-0.5**
PIZC					*i*			22 31 11.8	
	comp=Z,388nm,0.6s								
PTAC	**Punta Ardita,**	**4.70**	**274**	*e*P			**Pn**	**22 30 03.3**	**-1.2**
PTAC					*i*			22 30 58.4	
	comp=Z,226nm,0.7s								
MACC	**Macarena, Meta**	**4.70**	**189**	⇓*i*	P		**Pn**	**22 30 03.1**	**-1.5**
MACC					eS		**Sn**	**22 30 56.0**	**-2.9**
MACC					*i*			22 31 00.3	
	comp=Z,783nm,0.3s								
BETC	**Betania**	**4.73**	**210**	*e*P			**Pn**	**22 30 04.3**	**-0.7**
BETC					eS		**Sn**	**22 30 57.1**	**-2.5**
BETC					*i*			22 31 02.1	
	comp=Z,541nm,0.5s								
MARP	**Paez Belalcaza**	**4.87**	**216**	*e*P			**Pn**	**22 30 06.8**	**-0.3**
MARP					eS		**Sn**	**22 31 01.3**	**-2.0**
URIC	**Uribia, Colomb**	**4.97**	**12**				**Pn**	**22 30 06.9**	**-1.1**
URIC						Sn	**Sn**	**22 31 02.4**	**-2.8**
URIC	**Uribia, Colomb**	**4.97**	**12**	*e*P			**Pn**	**22 30 06.8**	**-1.2**
URIC					eS		**Sn**	**22 31 01.8**	**-3.4**
URIC					*i*			22 31 05.3	
	comp=Z,271nm,0.7s								
MALC	**Bahia Malaga**	**5.06**	**237**	*e*P			**Pn**	**22 30 10.6**	**+1.3**
MALC					eS		**Sn**	**22 31 09.6**	**+2.3**
MALC					*i*			22 31 22.1	
	comp=Z,317nm,0.6s								
GARC	**Garzon, Huila**	**5.19**	**208**	*e*P			**Pn**	**22 30 10.3**	**-0.8**
GARC					eS		**Sn**	**22 31 07.5**	**-3.2**
GARC					*i*			22 31 12.8	
	comp=Z,1μm,0.2s								
BAUV	**El Baul**	**5.43**	**67**	Pn			**Pn**	**22 30 12.3**	**-1.8**
BAUV					Sn		**Sn**	**22 31 12.4**	**-3.5**
PCON	**Cinco Dias**	**5.55**	**217**	*e*P			**Pn**	**22 30 17.3**	**+1.1**
PCON					eS		**Sn**	**22 31 20.4**	**+0.7**
PCON					*i*			22 31 50.0	
	comp=Z,286nm,0.4s								
POPC	**Popayan, Colom**	**5.55**	**220**	⇑*i*	P		**Pn**	**22 30 16.3**	**+0.3**
POPC					eS		**Sn**	**22 31 15.2**	**-4.2**
FLOC	**Florencia**	**5.79**	**206**	⇓*i*	P		**Pn**	**22 30 18.4**	**-0.6**
FLOC					eS		**Sn**	**22 31 24.5**	**-0.3**
FLOC					*i*			22 31 36.6	
	comp=Z,184nm,0.4s								
SOTA	**Rioblanco**	**5.83**	**217**	*e*P			**Pn**	**22 30 21.1**	**+1.3**
SOTA					eS		**Sn**	**22 31 26.0**	**-0.2**
SOTA					*i*			22 31 37.8	
	comp=Z,175nm,0.5s								
BBAC	**Balboa, Cauca**	**6.32**	**221**	*e*P			**Pn**	**22 30 27.3**	**+1.2**
BBAC					eS		**Sn**	**22 31 36.7**	**-0.8**
BBAC					*i*			22 31 43.3	
	comp=Z,109nm,0.3s								
GR1C	**Gorgona, Isla**	**6.32**	**233**	*e*P			**Pn**	**22 30 25.7**	**-0.3**
GR1C					eS		**Sn**	**22 31 35.4**	**-2.0**
CRUC	**La Cruz**	**6.48**	**217**	*e*P			**Pn**	**22 30 30.3**	**+1.9**
HATO	**Hato, Curacao**	**6.71**	**37**	Pn			**Pn**	**22 30 29.3**	**-1.7**
UPA	**Univ. de Panam**	**6.74**	**289**	*e*P			**Pn**	**22 30 29.2**	**-2.3**
PTLC	**Puerto Leguiza**	**6.82**	**195**	*e*P			**Pn**	**22 30 35.1**	**+2.5**
PTLC					*i*			22 32 37.2	
	comp=Z,181nm,0.5s								
CPAS2	**Pasto**	**6.94**	**217**	*e*P			**Pn**	**22 30 37.0**	**+2.5**
CCUFI	**Cufio, Nario**	**6.99**	**218**	*e*P			**Pn**	**22 30 37.4**	**+2.0**
CCUFI					eS		**Sn**	**22 31 54.6**	**+0.5**
GCUF	**Volcan Galeras**	**6.99**	**218**	*e*P			**Pn**	**22 30 36.6**	**+1.2**
GCUF					eS		**Sn**	**22 31 52.7**	**-1.4**
GCUF					*i*			22 31 59.2	
	comp=Z,75nm,0.3s								
CPAS1	**Pasto**	**7.01**	**217**	*e*P			**Pn**	**22 30 38.8**	**+3.3**
BCIP	**Isla Barro Col**	**7.08**	**290**	Pn			**Pn**	**22 30 34.4**	**-1.6**
BCIP	**Isla Barro Col**	**7.08**	**290**	*e*P			**Pn**	**22 30 34.0**	**-2.1**
BCIP					eS		**Sn**	**22 31 56.1**	**+0.7**
AZU	**Azuero**	**7.19**	**278**	*e*P			**Pn**	**22 30 36.3**	**-1.3**
AZU					eS		**Sn**	**22 31 53.3**	**-4.9**
AZU					*i*			22 31 55.5	
	comp=Z,71nm,0.6s								
BIRV	**Birongo**	**7.66**	**61**	Pn			**Pn**	**22 30 42.0**	**-1.8**
TULM	**Tulcn-Chalpat**	**7.66**	**218**	Pn			**Pn**	**22 30 45.3**	**+1.0**
TULM	**Tulcn-Chalpat**	**7.66**	**218**	*e*P			**Pn**	**22 30 45.8**	**+1.5**
CACAO	**El Cacao, Vera**	**7.73**	**274**	*e*P			**Pn**	**22 30 44.0**	**-0.7**
GMAL	**Guarumal, Vera**	**8.13**	**277**	*i* Pg			**Pn**	**22 30 46.3**	**-3.8**
OTAV	**Otavalo**	**8.45**	**220**				**Pn**	**22 30 54.5**	**-0.3**
OTAV	**Otavalo**	**8.45**	**220**	*e*P			**Pn**	**22 30 54.4**	**-0.3**
OTAV					eS		**Sn**	**22 32 27.0**	**-2.0**
SLOR	**San Lorenzo -**	**9.24**	**216**				**Pn**	**22 31 05.2**	**-0.1**
BRU2	**Volcan**	**9.71**	**282**	Pn			**Pn**	**22 31 10.5**	**-0.7**
CDITO	**Canoas**	**9.85**	**281**	Pn			**Pn**	**22 31 12.8**	**-0.1**
PORT	**Chimborazo Vol**	**9.99**	**215**	Pn			**Pn**	**22 31 14.9**	**-0.5**
DRK0	**Durika**	**10.35**	**284**				**Pn**	**22 31 19.8**	**+0.2**
PRVC	**Isla de Provid**	**10.43**	**309**	eS			**Sn**	**22 33 08.6**	**-7.6**
PRVC				*i*				22 33 15.1	
	comp=Z,75nm,0.4s								
SRBA	**San Rafael, Bu**	**10.45**	**284**				**Pn**	**22 31 21.1**	**+0.1**
RIMA	**Rio Macho**	**11.06**	**286**				**Pn**	**22 31 28.7**	**-0.4**
COHC	**Cochancay**	**11.09**	**214**	Pn			**Pn**	**22 31 29.7**	**+0.5**
BOSC	**San Juan Bosco**	**11.28**	**209**				**Pn**	**22 31 31.2**	**-0.7**
JAKH	**Jacmel**	**11.37**	**3**	Pn			**Pn**	**22 31 32.4**	**-0.4**
HOJ	**Hope**	**11.68**	**343**	*i* P			**Pn**	**22 31 39.3**	**+2.4**
CMJ	**Castle Mountai**	**11.70**	**344**	*i* P			**Pn**	**22 31 39.4**	**+2.2**
STH	**Stony Hill**	**11.77**	**342**	*i* P			**Pn**	**22 31 40.0**	**+1.9**
MCJ	**Malvern**	**11.92**	**338**	*i* P			**Pn**	**22 31 42.6**	**+2.5**
MCJ				*i* S			Sn	22 33 40.7	-11
CVJ	**Coleyville**	**12.14**	**339**	*i* P			**Pn**	**22 31 42.7**	**-0.3**
MTDJ	**Mount Denham**	**12.14**	**339**	Pn			**Pn**	**22 31 44.4**	**+1.4**
TRN	**Trinidad (W)**	**12.16**	**71**	*e*			**Pn**	**22 31 43.1**	**0.0**
SDDR	**Presa de Saban**	**12.22**	**8**				**Pn**	**22 31 44.4**	**+0.5**
JTS	**Las Juntas de**	**12.23**	**287**	P			**P**	**22 31 52.4**	**+2.3**
	comp=Z,44nm,0.5s,baz=152,slow=3.9,SNR=29								
JTS	**Las Juntas de**	**12.23**	**287**	Pn			**P**	**22 31 48.5**	**-1.5**
GRGR	**Grenville**	**12.45**	**64**	*e*			**Pn**	**22 31 47.5**	**+0.6**
MLPR	**Magueyes Islan**	**12.55**	**27**	Pn			**Pn**	**22 31 46.9**	**-1.4**
CRPR	**Cabo Rojo, PR**	**12.56**	**27**	Pn			**Pn**	**22 31 46.9**	**-1.4**
DUNO	**Dulce Nombre,**	**12.69**	**286**	P			**P**	**22 31 56.6**	**+1.4**
ICMP	**Isla Caja de M**	**12.73**	**30**	Pn			**Pn**	**22 31 49.6**	**-0.9**
ORTG	**Ortega, Santa**	**12.73**	**287**				**Pn**	**22 31 52.0**	**+1.4**
SC01	**Santiago de lo**	**12.74**	**10**	P			**P**	**22 31 55.6**	**-0.1**
GCMP	**Grenada, Carri**	**12.80**	**63**	*e*			**P**	**22 31 55.4**	**-0.9**
OBIP	**Obispado Ponce**	**12.82**	**29**	Pn			**Pn**	**22 31 49.2**	**-2.5**
CELP	**Cerrillos**	**12.86**	**29**	Pn			**Pn**	**22 31 50.4**	**-1.8**
HZTE	**Horizontes, Gu**	**12.95**	**288**	P			**P**	**22 31 59.8**	**+1.7**
AGPR	**Aguadilla, PR**	**12.96**	**26**	Pn			**Pn**	**22 31 52.0**	**-1.4**
ACON	**Acoyapa**	**12.97**	**294**	Pn			**Pn**	**22 31 54.4**	**+0.8**
AOPR	**Arecibo Observ**	**13.02**	**28**				**Pn**	**22 31 54.0**	**-0.1**
PDPR	**Patillas Dam,**	**13.09**	**31**				**Pn**	**22 31 54.3**	**-0.8**
SJG	**San Juan**	**13.11**	**30**	P			**Pn**	**22 31 54.3**	**-1.0**
	comp=Z,20nm,0.4s,baz=190,slow=13,SNR=12								
SJG	**San Juan**	**13.11**	**30**	*e*P			**Pn**	**22 31 54.6**	**-0.7**
TOSP	**Speyside**	**13.17**	**69**	P			**Pn**	**22 31 57.9**	**+1.8**
TOSP	**Speyside**	**13.17**	**69**	*e*			**P**	**22 31 59.9**	**-0.6**
GTBY	**Guantanamo Bay**	**13.18**	**352**				**P**	**22 31 59.8**	**-0.7**
HUMP	**Col San Antoni**	**13.29**	**31**	Pn			**Pn**	**22 31 56.8**	**-0.8**
SVB	**Belmont**	**13.30**	**60**	Pn			**Pn**	**22 31 56.8**	**-1.0**
SVB	**Belmont**	**13.30**	**60**	*e*			**Pn**	**22 31 57.9**	**+0.1**
GCPR	**Guaynabo City**	**13.31**	**30**				**Pn**	**22 31 57.2**	**-0.6**
CBYP	**Canovanas**	**13.39**	**31**				**Pn**	**22 31 58.4**	**-0.6**
CDVI	**St. Croix**	**13.57**	**36**				**Pn**	**22 32 00.8**	**-0.4**
BOAB	**BOACO BROADBAN**	**13.60**	**295**	P			**P**	**22 32 04.2**	**-1.1**
CUPR	**Culebra, Puert**	**13.72**	**33**	Pn			**Pn**	**22 32 02.3**	**-0.8**
MCLT	**Moule a Chique**	**13.77**	**59**	P			**P**	**22 32 09.8**	**+2.6**
SLBI	**Saint Lucia, B**	**13.89**	**58**	*e*			**P**	**22 32 10.6**	**+2.0**
STVI	**Saint Thomas**	**13.94**	**34**	Pn			**Pn**	**22 32 05.1**	**-0.7**
MATN	**Matagalpa**	**14.03**	**297**				**Pn**	**22 32 07.9**	**+0.8**
BIM	**Bigot**	**14.06**	**56**	P			**Pn**	**22 32 08.9**	**+1.3**
FDF	**Fort de France**	**14.12**	**55**	Pn			**Pn**	**22 32 06.9**	**-1.3**
MPOM	**Morne Pois Mar**	**14.20**	**57**	P			**P**	**22 32 12.3**	**+0.3**
MPOM	**Morne Pois Mar**	**14.20**	**57**	*e*			**P**	**22 32 13.1**	**+1.1**
ILAM	**Ilet Lapin Mar**	**14.36**	**56**	Pn			**Pn**	**22 32 10.4**	**-0.8**
LCCY	**Blossom Villag**	**14.47**	**333**	P			**P**	**22 32 15.4**	**+0.5**
CBE	**Ff, Capester**	**14.52**	**50**	P			**P**	**22 32 16.3**	**+0.8**
MAGL	**Barre de l'ile**	**14.70**	**51**	P			**P**	**22 32 16.7**	**-0.8**
BBGH	**Gun Hill**	**14.73**	**64**	Pn			**Pn**	**22 32 14.6**	**-1.2**
GRTK	**Grand Turk**	**14.73**	**7**	Pn			**Pn**	**22 32 15.1**	**-0.6**
ATAH	**Atahualpa**	**14.84**	**201**	P			**P**	**22 32 19.4**	**-0.1**
	comp=Z,6.5nm,0.4s

PAL	Palisades	34.05	359	P		P		22 35 26.0	+1.8
	baz=178								
W39A	Magazine	34.06	329	P		P		22 35 25.4	+1.1
W39A				IAmb		IAmb		22 35 26.4	
	comp=Z,8.7nm,0.7s								
W39A	Magazine	34.06	329	P		P		22 35 25.5	+1.1
	baz=141,SNR=6.9								
S44A	Carbondale	34.07	337	P		P		22 35 25.1	+0.7
S44A				IAmb		IAmb		22 35 26.6	
	comp=Z,7.6nm,0.7s								
O52A	Adamsville	34.07	348	P		P		22 35 25.8	+1.3
O52A				IAmb		IAmb		22 35 27.2	
	comp=Z,13nm,1.1s								
SIUC	Southern Illin	34.07	337	P		P		22 35 25.1	+0.6
O53A	New Philadelph	34.08	349	P		P		22 35 26.3	+1.8
O53A				IAmb		IAmb		22 35 43.3	
	comp=Z,4.4nm,0.8s								
O53A	New Philadelph	34.08	349	P		P		22 35 26.5	+2.0
	baz=165								
ODNJ	Ogdensburg	34.15	358	P		P		22 35 26.3	+1.3
WSPT	Westport, CT	34.21	360	P		P		22 35 26.8	+1.2
M63A	Gales Ferry	34.45	1	P		P		22 35 29.5	+1.9
M63A				IAmb		IAmb		22 35 44.7	
	comp=Z,6.2nm,1.0s								
M57A	Sunshine Farm,	34.56	355	P		P		22 35 31.1	+2.4
M57A				IAmb		IAmb		22 35 33.2	
	comp=Z,3.3nm,0.8s								
KSPA	Keystone Colle	34.68	356	P		P		22 35 31.6	+1.9
KSPA				IAmb		IAmb		22 35 32.8	
	comp=Z,5.1nm,0.5s								
FVM	French Village	34.79	336	P		P		22 35 32.0	+1.4
FVM				IAmb		IAmb		22 35 32.5	
	comp=Z,6.1nm,0.6s								
M55A	Ridgway	34.87	353	P		P		22 35 33.4	+2.1
M55A				IAmb		IAmb		22 35 37.8	
	comp=Z,3.8nm,0.8s								
HHAR	Hobbs	34.99	330	P		P		22 35 32.1	-0.2
HHAR				IAmb		IAmb		22 35 33.1	
	comp=Z,3.7nm,0.7s								
CCM	Cathedral Cave	35.19	335	P		P		22 35 34.8	+0.7
CCM	Cathedral Cave	35.19	335	P		P		22 35 34.8	+0.7
	baz=148								
L59A	Walton	35.27	357	P		P		22 35 37.3	+2.6
L56A	Greenwood	35.40	354	P		P		22 35 37.9	+2.1
L56A				IAmb		IAmb		22 35 39.8	
	comp=Z,9.7nm,1.1s								
HRV	Adam Dziewonsk	35.57	2	P		P		22 35 39.1	+1.8
HRV				IAmb		IAmb		22 35 53.4	
	comp=Z,7.9nm,0.9s								
HRV	Adam Dziewonsk	35.57	2	P		P		22 35 39.0	+1.8
	baz=182								
ABTX	Abilene, Hawle	35.62	320	P		P		22 35 38.3	+0.4
	baz=130								
TUL1	Leonard	35.66	327	P		P		22 35 38.0	-0.1
TUL1				IAmb		IAmb		22 35 38.8	
	comp=Z,6.7nm,0.6s								
TUL1	Leonard	35.66	327	P		P		22 35 38.2	+0.1
	baz=139								
LCO	Las Campanas	35.70	176	P		P		22 35 38.0	-0.7
LCO				IAmb		IAmb		22 35 54.0	
	comp=Z,8.9nm,1.1s								
SFIN	Lafayette	35.70	342	IAmb		IAmb		22 35 40.6	
	comp=Z,7.2nm,0.6s								
SFIN	Lafayette	35.70	342	P		P		22 35 39.0	+0.7
	baz=156,SNR=5.7								
WVNY	West Valley, N	35.78	353	P		P		22 35 40.9	+1.8
WVNY				IAmb		IAmb		22 35 42.0	
	comp=Z,5.2nm,0.7s								
S39A	Bolivar	35.81	332	P		P		22 35 39.8	+0.4
S39A				IAmb		IAmb		22 35 41.6	
	comp=Z,5.1nm,0.6s								
R40A	Maddies Statio	35.83	334	IAmb		IAmb		22 35 43.6	
	comp=Z,5.2nm,0.6s								
K57A	Scipio Center	35.90	356	P		P		22 35 42.1	+2.1
K57A				IAmb		IAmb		22 35 45.2	
	comp=Z,9.9nm,1.1s								
MMNY	Mt. Morris Dam	36.02	354	P		P		22 35 42.9	+1.9
MMNY				IAmb		IAmb		22 35 52.7	
	comp=Z,11nm,1.2s								
FNO	Franklin	36.06	325	P		P		22 35 41.6	0.0
TX31	Lajitas Ar. Si	36.49	312	P		P		22 35 45.7	+0.3
TX31						PcP		22 38 07.0	+1.0
TX32	Lajitas Array	36.49	312	P		P		22 35 45.9	+0.4
TX32				IAmb		IAmb		22 35 46.8	
	comp=Z,5.2nm,0.7s								
TX32						PcP		22 38 07.3	+1.3
TXAR	Lajitas Array	36.49	312	P		P		22 35 46.1	+0.7
	comp=Z,4.7nm,0.6s,baz=127,slow=9.3,SNR=70								
TXAR				PcP		PcP		22 38 07.2	+1.2
	comp=Z,2.9nm,0.7s,baz=138,slow=6.1,SNR=13								
	comp=Z,4.7nm,0.6s								
TXAR	Lajitas Array	36.49	312	P		P		22 35 45.9	+0.5
WMOK	Wichita Mounta	36.50	323	IAmb		IAmb		22 35 45.7	
	comp=Z,4.2nm,0.6s								
WMOK	Wichita Mounta	36.50	323	P		P		22 35 45.1	-0.2
	baz=134								
MEDO	Medina	36.51	353	P		P		22 35 46.7	+1.5
MEDO				IAmb		IAmb		22 35 53.4	
	comp=Z,8.6nm,0.8s								
J59A	Piesco	36.52	358	P		P		22 35 47.0	+1.6
J57A	Williamstown	36.53	356	IAmb		IAmb		22 35 53.3	
	comp=Z,4.8nm,0.7s								
J55A	Hilton	36.54	354	P		P		22 35 47.1	+1.6
J55A				IAmb		IAmb		22 35 47.9	
	comp=Z,5.1nm,0.8s								
HDIL	Hopedale	36.59	339	P		P		22 35 46.5	+0.5
	baz=152								
NCB	Newcomb	37.02	359	P		P		22 35 50.8	+1.2
NCB				IAmb		IAmb		22 35 54.2	
	comp=Z,3.9nm,0.8s								
PECO	Prince Edward	37.13	355	P		P		22 35 52.0	+1.5
PECO				IAmb		IAmb		22 35 53.1	
	comp=Z,3.8nm,0.8s								
I63A	Otisfield	37.15	3	P		P		22 35 52.5	+1.9
I63A				IAmb		IAmb		22 36 10.9	
	comp=Z,9.6nm,1.1s								
LBNH	Lisbon	37.29	1	P		P		22 35 53.3	+1.4
LBNH				IAmb		IAmb		22 35 54.7	
	comp=Z,5.1nm,0.8s								
LBNH	Lisbon	37.29	1	P		P		22 35 53.7	+1.9
	baz=182								
P38A	Dawn	37.48	334	P		P		22 35 53.7	+0.2
LONY	Lake Ozonia	37.68	358	P		P		22 35 57.0	+1.9
	baz=178								
DELO	Deloro Mine	37.76	355	P		P		22 35 57.1	+1.3
EMMW	East Machias	38.06	7	P		P		22 35 59.8	+1.6
SADO	Sadowa	38.17	353	P		P		22 36 00.7	+1.5
SADO				IAmb		IAmb		22 36 01.1	
	comp=Z,7.1nm,1.1s								
AMTX	Amarillo	38.38	321	P		P		22 36 02.1	+0.9
AMTX	Amarillo	38.38	321	P		P		22 36 02.2	+0.9
	baz=130								
PKME	Peaks-Kenny Pk	38.44	4	P		P		22 36 02.8	+1.3
PKME				IAmb		IAmb		22 36 11.6	
	comp=Z,4.9nm,1.1s								
MSTX	Muleshoe	38.51	319	P		P		22 36 02.5	+0.2
	baz=128								
KSU1	Kansas State U	38.51	330	P		P		22 36 01.9	-0.2
KSU1	Kansas State U	38.51	330	P		P		22 36 01.6	-0.5
	baz=140								
G65A	Princeton	38.54	6	P		P		22 36 04.1	+1.9
GGN	Saint George	38.54	7	P		P		22 36 04.0	+1.7
F63A	Nahmakanta, Br	38.89	4	P		P		22 36 06.7	+1.4
F63A				IAmb		IAmb		22 36 20.9	
	comp=Z,5.3nm,1.0s								
MNTX	Cornudas Mount	39.00	314	P		P		22 36 07.3	+1.0
MNTX	Cornudas Mount	39.00	314	P		P		22 36 07.1	+0.8
	baz=123,SNR=21								
JFWS	Jewell Farm	39.01	340	P		P		22 36 06.5	+0.3
	baz=152								
F64A	Sherman	39.12	5	P		P		22 36 08.5	+1.5
F64A				IAmb		IAmb		22 36 08.5	
	comp=Z,3.6nm,0.8s								
SLBS	Sierra La Lagu	39.15	299	P		P		22 36 09.4	+1.6
SLBS				IAmb		IAmb		22 36 10.4	
	comp=Z,8.3nm,0.8s								
RCBR	Riachuelo	39.18	108	P		P		22 36 07.4	-0.7
TRQ	Mont Tremblant	39.28	358	P		P		22 36 10.0	+1.5
I42A	Draeger Farm,	39.45	342	P		P		22 36 10.8	+1.0
I42A				IAmb		IAmb		22 36 14.8	
	comp=Z,5.8nm,0.5s								
LMN	Caledonia Moun	39.54	9	P		P		22 36 11.6	+1.0
LMN				IAmb		IAmb		22 36 15.8	
	comp=Z,10.0nm,1.0s								
GBN	Guysborough	39.74	13	P		P		22 36 12.6	+0.4
E62A	Clayton Lake	39.77	4	P		P		22 36 14.5	+2.0
E62A				IAmb		IAmb		22 36 14.9	
	comp=Z,8.2nm,0.8s								
PQI	Presque Isle	39.95	5	P		P		22 36 13.3	-0.6
PQI				IAmb		IAmb		22 36 15.4	
	comp=Z,7.1nm,0.8s								
D62A	Allapoint, All	40.27	4	P		P		22 36 18.4	+1.9
D62A				IAmb		IAmb		22 36 18.8	
	comp=Z,8.4nm,0.7s								
LMEL	Las Melosas	40.53	176	P		P		22 36 20.5	+1.4
LMEL				IAmb		IAmb		22 36 23.3	
	comp=Z,9.6nm,0.9s								
E46A	Sault Ste Mari	40.57	348	P		P		22 36 20.4	+1.4
E46A				IAmb		IAmb		22 36 21.8	
	comp=Z,8.7nm,0.9s								
LMQ	La Malbaie	40.65	3	P		P		22 36 21.5	+1.8
LMQ				IAmb		IAmb		22 36 32.7	
	comp=Z,8.3nm,0.9s								
BATG	Bathurst New B	40.76	7	P		P		22 36 22.0	+1.4
G40A	Rib Lake	41.09	342	P		P		22 36 24.7	+1.4
121A	Cookes Peak, D	41.17	313	P		P		22 36 26.1	+1.7
121A	Cookes Peak, D	41.17	313	P		P		22 36 25.2	+0.8
	baz=121								
E43A	Lone Tree Farm	41.20	345	P		P		22 36 25.5	+1.3
VLDQ	Val d'Or	41.32	356	P		P		22 36 27.0	+1.9
T25A	Trinidad	41.52	321	P		P		22 36 28.4	+1.2
T25A	Trinidad	41.52	321	P		P		22 36 28.6	+1.4
	baz=129								
COWI	Conover	41.52	343	P		P		22 36 28.0	+1.2
ANMO	Albuquerque	41.54	317	P		P		22 36 29.1	+1.7
ANMO	Albuquerque	41.54	317	P		P		22 36 29.0	+1.6
	baz=125								
319A	Douglas	41.71	311	P		P		22 36 30.3	+1.6
319A				IAmb		IAmb		22 36 31.1	
	comp=Z,10.0nm,0.8s								
ECSD	EROS Data Cent	42.16	334	P		P		22 36 32.3	+0.2
ECSD	EROS Data Cent	42.16	334	P		P		22 36 32.5	+0.4
	baz=144								
SDCO	Great Sand Dun	42.57	321	IAmb		IAmb		22 36 38.0	
	comp=Z,4.0nm,0.7s								
SDCO	Great Sand Dun	42.57	321	P		P		22 36 37.0	+1.2
	baz=128,SNR=9.9								
TUC	Tucson	43.27	311	P		P		22 36 42.3	+1.0
TUC				IAmb		IAmb		22 36 43.2	
	comp=Z,5.7nm,0.8s								
TUC	Tucson	43.27	311	P		P		22 36 42.3	+1.0
	baz=118								
S22A	4UR Ranch, Cre	43.41	320	P		P		22 36 43.8	+1.1
S22A	4UR Ranch, Cre	43.41	320	P		P		22 36 44.0	+1.4
	baz=127,SNR=5.6								
EYMN	Ely	43.88	342	P		P		22 36 46.2	+0.4
EYMN				IAmb		IAmb		22 36 47.3	
	comp=Z,8.8nm,0.6s								
EYMN	Ely	43.88	342	P		P		22 36 46.1	+0.2
	baz=153								
W18A	Petrified Fore	43.89	315	IAmb		IAmb		22 36 48.8	
	comp=Z,11nm,0.8s								
W18A	Petrified Fore	43.89	315	P		P		22 36 47.7	+1.3
	baz=121,SNR=5.9								
ISCO	Idaho Springs	43.93	323	P		P		22 36 47.9	+1.1
	baz=130,SNR=5.8								
MVCO	Mesa Verde	44.18	318	P		P		22 36 49.6	+0.9
	baz=134								
DRLN	Deer Lake	44.29	15	P		P		22 36 48.9	-0.1
214A	Organ Pipe Nat	44.66	309	P		P		22 36 53.5	+1.2
214A				IAmb		IAmb		22 36 54.3	
	comp=Z,5.7nm,0.8s								
214A	Organ Pipe Nat	44.66	309	P		P		22 36 53.5	+1.2
	baz=116								
PV15	Paradox Valley	44.81	320	P		P		22 36 55.3	+1.6
PV15				IAmb		IAmb		22 36 56.1	
	comp=Z,12nm,0.8s								
N23A	Red Feather La	44.82	324	P		P		22 36 55.1	+1.3
	baz=130								
PV13	Radium Mtn., P	44.93	319	P		P		22 36 56.0	+1.4
B35A	Bob, Littlefor	44.96	341	IAmb		IAmb		22 36 55.6	
	comp=Z,4.0nm,0.7s								
PV07	Paradox Valley	44.98	320	P		P		22 36 50.6	-4.4
PV11	David Mesa, Pa	45.04	319	IAmb		IAmb		22 36 57.4	
	comp=Z,6.0nm,0.7s								
WUAZ	Wupatki	45.25	315	P		P		22 36 58.5	+1.4
WUAZ	Wupatki	45.25	315	P		P		22 36 58.4	+1.3
	baz=120,SNR=9.0								
PV21	Cone Mtn., Par	45.26	320	P		P		22 36 58.0	+0.8
AGMN	Agassiz Nation	45.64	339	IAmb		IAmb		22 37 00.8	
	comp=Z,4.8nm,0.6s								
AGMN	Agassiz Nation	45.64	339	P		P		22 36 59.6	-0.1
	baz=148								
Y14A	Wickenburg	45.67	312	P		P		22 37 01.7	+1.4
O20A	White River Ci	45.72	322	P		P		22 37 02.0	+1.3
O20A	White River Ci	45.72	322	P		P		22 37 01.9	+1.1
	baz=127								
TRQA	Tornquist	45.83	168	P		P		22 36 59.4	-1.9
RSSD	Black Hills	45.96	329	P		P		22 37 03.6	+1.0
RSSD	Black Hills	45.96	329	P		P		22 37 03.6	+1.0
	baz=135								
U15A	North Rim	46.34	315	P		P		22 37 07.2	+1.4
U15A				IAmb		IAmb		22 37 08.2	
	comp=Z,8.6nm,0.9s								
SRU	San Rafael Swe	46.56	319	P		P		22 37 08.6	+1.2
SRU				IAmb		IAmb		22 37 09.2	
	comp=Z,5.1nm,0.8s								
GLA	Glamis	46.66	310	P		P		22 37 09.1	+1.0
GLA				IAmb		IAmb		22 37 09.9	
	comp=Z,10.0nm,0.7s								
GLA	Glamis	46.66	310	P		P		22 37 09.0	+1.0
	baz=115								
P18A	Preston Nutter	46.68	320	P		P		22 37 09.7	+1.3
RDMU	Red Mountain	46.80	322	P		P		22 37 09.8	+0.6
PKCU	Pink Cliffs	46.87	316	P		P		22 37 10.3	+0.4
PKCU				IAmb		IAmb		22 37 14.7	
	comp=Z,7.8nm,1.0s								
P17A	Butcher Ranch,	46.91	320	IAmb		IAmb		22 37 11.8	
	comp=Z,6.9nm,0.9s								
MTPU	Mount Pierson	47.09	317	IAmb		IAmb		22 37 13.2	
	comp=Z,3.4nm,0.6s								
LCMT	Little Creek M	47.30	315	IAmb		IAmb		22 37 15.8	
	comp=Z,2.9nm,0.9s								
ULM	Lac du Bonnet	47.30	340	P		P		22 37 12.4	-0.3
	comp=Z,6.4nm,0.6s,baz=134,slow=11,SNR=7.3								
	comp=Z,6.4nm,0.6s								
ULM	Lac du Bonnet	47.30	340	P		P		22 37 12.3	-0.3
ULM				IAmb		IAmb		22 37 14.1	
	comp=Z,5.6nm,0.7s								
SWSC	Sam W. Stewart	47.36	309	P		P		22 37 14.3	+0.9
	baz=114								
IRM	Iron Mountain	47.37	311	P		P		22 37 14.5	+1.0
	baz=115								
PLCA	Paso Flores	47.37	177	P		P		22 37 10.9	-2.5
	comp=Z,0.9nm,0.7s,baz=5.1,slow=23,SNR=1.9								
	comp=Z,0.9nm,0.7s								
PLCA	Paso Flores	47.37	177	P		P		22 37 11.1	-2.3
BC3	Big Chuckawall	47.39	310	P		P		22 37 14.6	+0.9
	baz=115								
SZCU	Shurtz Canyon	47.48	316	P		P		22 37 15.8	+1.2
SZCU				IAmb		IAmb		22 37 30.7	
	comp=Z,6.6nm,0.9s								
IKP	In-Ko-Pah, Jac	47.48	309	P		P		22 37 15.2	+0.8
	baz=113								
CCUT	Cedar City	47.65	316	P		P		22 37 16.5	+0.7
MPU	Maple Canyon	47.78	320	P		P		22 37 17.3	+0.5
MPU				IAmb		IAmb		22 37 18.5	
	comp=Z,5.1nm,0.7s								
CBX	Cerro Bola	47.79	308	P		P		22 37 18.4	+1.5
CBX				IAmb		IAmb		22 37 18.8	
	comp=Z,2.9nm,0.6s								
MONP2	Monument Peak	47.82	309	P		P		22 37 18.2	+1.0
	baz=113								
BELC	Belle Mtn. Jos	47.94	310	P		P		22 37 19.0	+0.9
	baz=114								
GMRC	Granite Mounta	48.02	311	P		P		22 37 19.4	+0.8
	baz=115								
BW06	Boulder Array	48.10	324	P		P		22 37 19.4	+0.1
BW06	Boulder Array	48.10	324	P		P		22 37 19.6	+0.4
	baz=128								
PDAR	Pinedale Array	48.10	324	P		P		22 37 19.7	+0.5
	comp=Z,2.1nm,0.5s,baz=128,slow=9.2,SNR=19								
PDAR				PcP		PcP		22 38 43.1	-1.4
	comp=Z,1.0nm,0.7s,baz=130,slow=4.9,SNR=3.5								
	comp=Z,2.1nm,0.5s								
TPFO	Pinon Flats	48.13	310	P		P		22 37 20.1	+0.6
	baz=114								
SCHQ	Schefferville	48.14	5	P		P		22 37 19.6	+0.6
	comp=Z,6.6nm,0.6s,baz=193,slow=6.3,SNR=14								
	comp=Z,6.6nm,0.6s								
SCHQ	Schefferville	48.14	5	P		P		22 37 19.8	+0.7
SCHQ				IAmb		IAmb		22 37 20.6	
	comp=Z,7.0nm,0.8s								
PSUT	Pine Spring	48.47	317	IAmb		IAmb		22 37 27.6	
	comp=Z,4.7nm,0.7s								
TUQ	Turquoise Moun	48.49	312	P		P		22 37 22.8	+0.5
	baz=116								
HEC	Hector,Ludlow	48.54	311	P		P		22 37 23.6	+1.0
	baz=115								
HWUT	Hardware Ranch	48.62	322	P		P		22 37 23.9	+0.7
HWUT				IAmb		IAmb		22 37 25.1	
	comp=Z,4.0nm,0.7s								
DUG	Dugway, Tooele	48.64	319	P		P		22 37 24.5	+1.2
DUG				IAmb		IAmb		22 37 25.3	
	comp=Z,3.3nm,0.8s								
DUG	Dugway, Tooele	48.64	319	P		P		22 37 24.2	+0.9
	baz=122,SNR=5.3								
GSC	Goldstone, Bar	49.09	312	P		P		22 37 27.9	+1.1
GSC				IAmb		IAmb		22 37 28.6	
	comp=Z,7.6nm,0.8s								
GSC	Goldstone, Bar	49.09	312	P		P		22 37 27.4	+0.6
	baz=115,SNR=6.1								
BGU	Big Grassy Mou	49.17	320	P		P		22 37 28.1	+0.8
DGMT	Dagmar	49.17	333	P		P		22 37 28.1	+1.1
DGMT	Dagmar	49.17	333	P		P		22 37 27.9	+0.8
	baz=137,SNR=7.7								
SNOW	Snow King Moun	49.22	324	P		P		22 37 29.7	+1.9
LOHW	Long Hollow	49.22	324	P		P		22 37 29.2	+1.4
LOHW				IAmb		IAmb		22 37 29.6	
	comp=Z,4.9nm,0.7s								
TPAW	Teton Pass	49.35	324	IAmb		IAmb		22 37 31.0	
	comp=Z,5.0nm,0.7s								
GWY	Greenwater Val	49.36	313	P		P		22 37 29.8	+0.8
GWY				IAmb		IAmb		22 37 30.4	
	comp=Z,4.0nm,0.7s								
MOOW	Moose Ponds	49.38	324	IAmb		IAmb		22 37 31.4	
	comp=Z,3.3nm,0.7s								
TPNV	Topopah Spring	49.39	314	P		P		22 37 30.3	+1.2
TPNV	Topopah Spring	49.39	314	P		P		22 37 30.4	+1.2
	baz=117,SNR=6.8								
QSM	Queen of Sheba	49.41	312	P		P		22 37 30.1	+1.0
HVU	Hansel Valley	49.47	321	P		P		22 37 30.6	+1.0
HVU				IAmb		IAmb		22 37 32.6	
	comp=Z,3.0nm,0.7s								
CIS	Catalina Islan	49.56	309	P		P		22 37 31.2	+0.9
	baz=112								
R11A	Troy Canyon, C	49.57	316	P		P		22 37 31.3	+0.9
	baz=118,SNR=5.1								
MPMC	Manual Prospec	49.91	312	P		P		22 37 33.5	+0.4
	baz=115								
CWC	Cottonwood Cre	50.50	312	P		P		22 37 38.9	+1.4
	baz=115								
ELK	Elko	50.50	319	P		P		22 37 38.2	+0.7
LCH	Last Change Ra	50.52	313	P		P		22 37 38.7	+1.1
BOZ	Bozeman (W)	51.00	326	IAmb		IAmb		22 37 42.6	
	comp=Z,4.5nm,0.7s								
BOZ	Bozeman (W)	51.00	326	P		P		22 37 41.8	+0.7
	baz=127,SNR=5.6								
HLID	Hailey	51.46	322	P		P		22 37 45.5	+1.0
HLID	Hailey	51.46	322	P		P		22 37 45.8	+1.3
	baz=123								
NVAR	Mina Array Bea	51.51	315	P		P		22 37 45.9	+0.9
	comp=Z,2.4nm,0.7s,baz=121,slow=7.8,SNR=13								
NVAR				PcP		PcP		22 38 58.0	+0.9
	comp=Z,1.1nm,0.5s,baz=131,slow=4.8,SNR=5.5								
	comp=Z,2.4nm,0.7s								
NVAR	Mina Array Bea	51.51	315	P		P		22 37 46.6	+1.5
EGMT	Eagleton	51.53	329	P		P		22 37 46.2	+1.3
EGMT				IAmb		IAmb		22 38 02.3	
	comp=Z,3.5nm,0.8s								
LRM	Limekiln Ridge	51.60	326	P		P		22 37 46.6	+1.0
KVN	Kaiserville	51.64	315	P		P		22 37 46.8	+0.8
KVN				IAmb		IAmb		22 37 47.4	
	comp=Z,4.2nm,0.9s								
BMN	Battle Mountai	51.67	317	P		P		22 37 46.8	+0.7
BMN				IAmb		IAmb		22 37 47.5	
	comp=Z,5.9nm,1.1s								
MFID	Camas Ranch	52.25	321	P		P		22 37 51.4	+1.0
MFID				IAmb		IAmb		22 37 53.3	
	comp=Z,7.0nm,0.8s								
PNTR	Pine Nut	52.71	315	P		P		22 37 55.6	+1.7
PAHR	Pah Rah Range	52.82	316	P		P		22 37 55.7	+1.0
PAHR				IAmb		IAmb		22 37 56.0	
	comp=Z,3.8nm,0.7s								
MSO	Missoula	53.02	326	P		P		22 37 56.6	+0.7
MSO	Missoula	53.02	326	P		P		22 37 56.3	+0.3
	baz=126								
PLID	Pearl Lake	53.24	323	P		P		22 37 58.4	+0.7
PLID				IAmb		IAmb		22 37 58.5	
	comp=Z,4.2nm,0.8s								
JTMT	Jette	53.75	327	P		P		22 38 02.5	+1.2
JTMT				IAmb		IAmb		22 38 03.0	
	comp=Z,5.6nm,0.7s								
BMO	Blue Mountains	53.91	322	P		P		22 38 06.6	+4.2
FCC	Fort Churchill	54.28	347	P		P		22 38 05.9	+1.2
FCC				IAmb		IAmb		22 38 06.8	
	comp=Z,6.9nm,1.1s								
MOD	Modoc Plateau	54.41	318	P		P		22 38 06.7	+0.5
MOD				IAmb		IAmb		22 38 07.2	
	comp=Z,3.6nm,0.6s								
I07A	Izee	54.89	320	P		P		22 38 10.4	+0.9
I07A				IAmb		IAmb		22 38 11.1	
	comp=Z,5.4nm,0.8s								
G08A	Pilot Rock	55.14	322	P		P		22 38 12.2	+0.9
K05A	Summer Lake	55.17	318	P		P		22 38 13.2	+1.6

comp=Z,1.6nm,0.6s,baz=131,slow=6.9,SNR=1.9
comp=Z,6.5nm,0.6s
ICESG Greenland Ices 65.95 13 *i* P **P** **22 39 23.4 -1.0**
ICESG IAmb IAmb 22 39 25.4
comp=Z,10nm,1.0s
T35M Bob Quinn 66.83 330 P **P** **22 39 31.1 +1.3**
baz=115
DLBC Dease Lake 67.34 331 P **P** **22 39 34.2 +1.1**
DLBC IAmb IAmb 22 39 34.9
comp=Z,3.5nm,0.9s
DLBC Dease Lake 67.34 331 P **P** **22 39 34.1 +1.0**
baz=116
DBIC Dimbokro 67.70 86 P **P** **22 39 34.5 -1.6**
comp=Z,3.5nm,0.5s,baz=284,slow=6.5,SNR=7.4
DBIC pP **pP** **22 40 14.4 +0.3**
comp=Z,4.8nm,0.7s,baz=306,slow=5.6,SNR=2.5
comp=Z,3.5nm,0.5s
DBIC Dimbokro 67.70 86 P **P** **22 39 34.9 -1.1**
DBIC IAmb IAmb 22 39 40.3
comp=Z,7.8nm,1.1s
SUMG Summit 68.99 11 P **P** **22 39 43.9 +0.5**
SUMG Summit 68.99 11 *i* P **P** **22 39 43.0 -0.5**
P33M Teslin, Yukon 69.38 333 P **P** **22 39 47.1 +1.3**
P33M Teslin, Yukon 69.38 333 P **P** **22 39 46.7 +1.0**
baz=114
ESDC Sonseca Array 69.63 50 pP pP 22 40 26.1 +0.2
comp=Z,0.4nm,0.3s,baz=264,slow=5.2,SNR=3.6
M31M Drury Creek, Y 70.87 334 P **P** **22 39 55.9 +1.2**
M31M IAmb IAmb 22 39 56.8
comp=Z,4.0nm,0.7s
M31M Drury Creek, Y 70.87 334 P **P** **22 39 55.9 +1.2**
baz=113
O30N Mendenhall 71.10 332 P **P** **22 39 57.2 +1.1**
baz=111,SNR=7.9
N31M Braeburn, Yuko 71.21 333 P **P** **22 39 58.5 +1.7**
N31M Braeburn, Yuko 71.21 333 P **P** **22 39 58.0 +1.2**
baz=111
P30M Million Dollar 71.28 332 P **P** **22 39 58.8 +1.6**
baz=110
HYT Haines Junctio 71.77 332 P **P** **22 40 01.5 +1.3**
HYT Haines Junctio 71.77 332 P **P** **22 40 01.6 +1.4**
baz=109
N30M Aishikik Lake 71.79 333 P **P** **22 40 01.8 +1.5**
baz=110,SNR=6.2
M30M Minto, Yukon 72.05 334 P **P** **22 40 02.9 +1.1**
M30M IAmb IAmb 22 40 03.4
comp=Z,6.4nm,0.7s
M30M Minto, Yukon 72.05 334 P **P** **22 40 02.4 +0.6**
baz=111,SNR=14
YUK6 Outpost Mounta 72.20 332 P **P** **22 40 04.4 +1.5**
baz=109
A36M Sachs Harbour 72.45 345 P **P** **22 40 04.2 +0.3**
A36M Sachs Harbour 72.45 345 P **P** **22 40 03.8 -0.1**
baz=125,SNR=14
YUK8 Steele Glacier 72.95 332 P **P** **22 40 08.8 +1.3**
baz=108
INK Inuvik 73.05 340 P **P** **22 40 08.4 +1.0**
INK IAmb IAmb 22 40 09.4
comp=Z,4.8nm,0.8s
INK Inuvik 73.05 340 P **P** **22 40 08.0 +0.5**
baz=115
YUK3 Moose Creek 73.42 333 P **P** **22 40 11.1 +1.0**
baz=107,SNR=8.8
CTGM Chitina Glacie 73.59 332 P **P** **22 40 12.2 +1.1**
CTGM IAmb IAmb 22 40 15.3
comp=Z,3.6nm,0.7s
CTG Chitna Glacier 73.59 332 P **P** **22 40 12.4 +1.3**
baz=106
TOA0 Torodi Ar. Sit 73.71 78 P **P** **22 40 11.1 -1.3**
TORD Torodi Ar. Bea 73.71 78 P **P** **22 40 10.1 -2.3**
comp=Z,0.4nm,0.4s,baz=282,slow=6.5,SNR=9.3
TORD pP **pP** **22 40 50.9 -0.2**
comp=Z,0.6nm,0.5s,baz=282,slow=6.2,SNR=3.2
comp=Z,0.4nm,0.4s
TORD Torodi Ar. Bea 73.71 78 P **P** **22 40 10.5 -1.9**
TORD **pP** **22 40 48.9 -2.3**
GRNC Granite Creek 73.73 332 P **P** **22 40 13.7 +1.8**
GRNC IAmb IAmb 22 40 14.4
comp=Z,3.7nm,0.8s
BVCY Beaver Creek 73.78 333 P **P** **22 40 13.2 +1.2**
baz=107
M27K Edge Creek, AK 74.22 333 P **P** **22 40 16.2 +1.5**
M27K IAmb IAmb 22 40 16.9
comp=Z,5.2nm,0.7s
M27K Edge Creek, AK 74.22 333 P **P** **22 40 15.9 +1.2**
baz=106,SNR=6.0
BCAR Beaver Creek A 74.38 334 P **P** **22 40 16.8 +1.3**
L27K Beaver Creek, 74.40 334 P **P** **22 40 17.0 +1.5**
L27K Beaver Creek, 74.40 334 P **P** **22 40 16.6 +1.1**
baz=106,SNR=6.0
MCARA McCarthy VSAT 74.49 332 P **P** **22 40 17.7 +1.6**
baz=104
VRDI Verde Repeater 74.65 332 P **P** **22 40 18.2 +0.9**
M26K Nabesna, AK 74.74 333 P **P** **22 40 18.9 +1.3**
baz=105
K27K Chicken 74.77 335 P **P** **22 40 19.5 +1.8**
K27K Chicken 74.77 335 P **P** **22 40 19.1 +1.5**
baz=106
L26K Log Cabin Wild 75.06 334 P **P** **22 40 20.5 +1.1**
baz=105
BMRM Bremner River 75.14 331 P **P** **22 40 20.7 +0.9**
baz=103
N25K Chitina, Valde 75.28 332 P **P** **22 40 22.2 +1.5**
N25K Chitina, Valde 75.28 332 P **P** **22 40 21.4 +0.7**
baz=103
I26K Coal Creek Min 75.57 336 P **P** **22 40 22.6 +0.5**
I26K Coal Creek Min 75.57 336 P **P** **22 40 22.4 +0.2**
baz=105
SCRK Sand Creek 75.57 335 P **P** **22 40 23.6 +1.3**
SCRK Sand Creek 75.57 335 P **P** **22 40 23.6 +1.3**
baz=104
RIDG Independent Ri 75.88 334 P **P** **22 40 25.0 +1.0**
RIDG IAmb IAmb 22 40 25.9
comp=Z,6.1nm,0.8s
RIDG Independent Ri 75.88 334 P **P** **22 40 25.1 +1.0**
baz=103
PAX Paxson 75.98 333 P **P** **22 40 25.6 +0.9**
baz=103
K24K Donnelly Dome 76.30 334 P **P** **22 40 27.3 +0.9**
baz=103
J25K Salcha River, 76.31 335 P **P** **22 40 27.3 +0.8**
J25K Salcha River, 76.31 335 P **P** **22 40 27.0 +0.6**
baz=103
SCM Sheep Creek Mo 76.60 332 P **P** **22 40 29.2 +1.0**
SCM IAmb IAmb 22 40 30.2
comp=Z,6.6nm,0.8s
SCM Sheep Creek Mo 76.60 332 P **P** **22 40 28.8 +0.6**
baz=101
BMAR Burnt Mountain 76.68 338 P **P** **22 40 29.2 +0.7**
DHY Denali Highway 76.86 333 P **P** **22 40 30.1 +0.5**
baz=101
HDA Harding Lake 76.93 335 P **P** **22 40 31.0 +1.1**
HDA Harding Lake 76.93 335 P **P** **22 40 30.1 +0.2**
baz=102
IL31 76.98 335 P **P** **22 40 29.6 -0.5**
ILAR Eielson Array 76.98 335 P **P** **22 40 30.1 0.0**
comp=Z,1.2nm,0.7s,baz=109,slow=4.3,SNR=12
ILAR pP **pP** **22 41 08.8 +0.4**
comp=Z,0.7nm,0.6s,baz=112,slow=4.0,SNR=2.8
comp=Z,1.2nm,0.7s
ILAR Eielson Array 76.98 335 P **P** **22 40 30.4 +0.2**
CCB Clear Creek Bu 77.34 335 P **P** **22 40 32.4 +0.2**
WRH Wood River Hil 77.43 335 P **P** **22 40 34.0 +1.3**
RND Reindeer 77.57 333 P **P** **22 40 34.6 +1.1**
MDM Murphy Dome 77.58 335 P **P** **22 40 33.9 +0.3**
H24K Noodor Dome 77.60 336 P **P** **22 40 33.8 +0.2**
H24K Noodor Dome 77.60 336 P **P** **22 40 34.6 +1.0**
baz=101
RC01 Rabbit Creek A 77.61 331 P **P** **22 40 35.5 +1.8**
NEA2 Nenana 77.87 335 P **P** **22 40 35.0 -0.1**
NEA2 Nenana 77.87 335 P **P** **22 40 35.3 +0.2**
baz=100
I23K Minto, Yukon-K 78.08 335 P **P** **22 40 36.7 +0.5**
baz=100
CNPM China Poot 78.15 329 P **P** **22 40 37.3 +0.6**
SUA Susitna One 78.15 331 P **P** **22 40 37.9 +1.0**
SUA IAmb IAmb 22 40 38.2
comp=Z,8.3nm,0.8s
SUA Susitna One 78.15 331 P **P** **22 40 37.3 +0.5**
baz=98
TRF Thorofare Moun 78.22 333 P **P** **22 40 38.3 +1.1**
TRF IAmb IAmb 22 40 40.4
comp=Z,4.4nm,1.0s
TRF Thorofare Moun 78.22 333 P **P** **22 40 37.7 +0.5**
baz=98
H23K Yukon River 78.27 336 P **P** **22 40 37.9 +0.6**
baz=100
SKT Skwentna 78.59 332 P **P** **22 40 39.1 0.0**
SKT IAmb IAmb 22 40 40.4
comp=Z,4.6nm,0.6s
SKT Skwentna 78.59 332 P **P** **22 40 39.6 +0.5**
baz=97
BPAW Bear Paw Mtn. 78.62 334 P **P** **22 40 39.7 +0.4**
BPAW Bear Paw Mtn. 78.62 334 P **P** **22 40 39.4 +0.2**
baz=98
MLY Manley 78.64 335 P **P** **22 40 39.8 +0.4**
MLY Manley 78.64 335 P **P** **22 40 39.6 +0.2**
baz=98
KDAK Kodiak Island 78.66 328 P **P** **22 40 39.4 -0.1**
KDAK IAmb IAmb 22 40 40.0
comp=Z,9.7nm,1.0s
COLD Coldfoot 78.77 337 P **P** **22 40 41.0 +1.0**
baz=99
TOLK Toolik Lake Re 78.77 339 P **P** **22 40 40.9 +0.9**
baz=100
O20K Slope Mountain 78.91 330 P **P** **22 40 41.3 +0.4**
baz=96
PPLA Purkeypile 79.00 333 P **P** **22 40 41.7 +0.2**
baz=97,SNR=5.3
CAST Castle Rocks 79.01 333 P **P** **22 40 42.0 +0.6**
baz=97
H22K Ishtalitna Cre 79.03 336 P **P** **22 40 41.8 +0.4**
baz=98
I21K Tanana 79.19 335 P **P** **22 40 42.4 +0.2**
baz=97
D23K Nanushuk River 79.22 339 P **P** **22 40 43.4 +1.0**
baz=99
Q19K Cape Douglas, 79.32 329 P **P** **22 40 43.4 +0.2**
M20K Styx River 79.33 332 P **P** **22 40 43.3 +0.1**
baz=96
H21K Melozitna Rive 79.58 336 P **P** **22 40 44.8 +0.3**
H21K Melozitna Rive 79.58 336 P **P** **22 40 45.0 +0.6**
baz=96
L20K Farewell, AK 79.73 332 P **P** **22 40 45.2 -0.2**
baz=95,SNR=5.7
K20K Telida 79.90 333 P **P** **22 40 46.1 -0.1**
baz=95
M19K Big River Lodg 79.92 332 P **P** **22 40 46.4 0.0**
baz=94
J20K Nowinta River 80.00 334 P **P** **22 40 46.8 +0.1**
baz=95,SNR=10
IMAR Indian Mountai 80.01 336 P **P** **22 40 47.4 +0.7**
Q18K Katmai Hardscr 80.01 328 P **P** **22 40 47.0 0.0**
baz=93
L19K White Mountain 80.16 332 P **P** **22 40 47.7 0.0**
L19K White Mountain 80.16 332 P **P** **22 40 47.4 -0.3**
baz=94
P18K Big Mountain, 80.17 329 P **P** **22 40 46.9 -0.9**
P18K IAmb IAmb 22 40 58.0
comp=Z,6.6nm,1.1s
P18K Big Mountain, 80.17 329 P **P** **22 40 47.6 -0.1**
baz=93
O18K Koktuh Hills 80.18 330 P **P** **22 40 47.9 +0.1**
O18K IAmb IAmb 22 40 48.3
comp=Z,6.5nm,0.7s
O18K Koktuh Hills 80.18 330 P **P** **22 40 47.5 -0.3**
baz=93
SVW2 Sparrevohn 80.44 331 P **P** **22 40 49.1 0.0**
SVW2 IAmb IAmb 22 40 49.4
comp=Z,3.8nm,0.6s
N18K Kilae Creek 80.57 330 P **P** **22 40 49.9 0.0**
N18K IAmb IAmb 22 40 50.0
comp=Z,6.7nm,0.7s
N18K Kilae Creek 80.57 330 P **P** **22 40 49.7 -0.1**
baz=93
R17K Ugashik Creek 80.69 327 P **P** **22 40 50.4 -0.1**
baz=92
TTA Tatalina 80.75 333 P **P** **22 40 51.0 +0.1**
TTA Tatalina 80.75 333 P **P** **22 40 50.9 +0.1**
baz=93
P17K Kvichak River 80.78 329 P **P** **22 40 50.7 -0.2**
baz=92
NC204 NORSAR Array S 81.10 29 P **P** **22 40 56.0 +3.2**
NC204 IAmb IAmb 22 41 00.6
comp=Z,6.2nm,1.1s
O17K Koliganek Bris 81.13 329 P **P** **22 40 52.5 -0.3**
baz=92
NB2 NORSAR Subarra 81.32 29 P **P** **22 40 53.6 -0.2**
comp=Z,0.8nm,0.6s,baz=269,slow=5.6
NOA NORSAR Array B 81.32 29 P **P** **22 40 54.0 +0.2**
comp=Z,0.7nm,0.7s,baz=268,slow=5.3,SNR=5.0
comp=Z,0.7nm,0.7s
GERES GERESS Array B 82.80 42 P **P** **22 41 00.9 -1.0**
comp=Z,0.3nm,0.5s,baz=247,slow=2.8,SNR=5.2
GERES pP **pP** **22 41 41.8 +0.3**
comp=Z,0.6nm,0.9s,baz=357,slow=2.9,SNR=2.7
comp=Z,0.3nm,0.5s
ARCES ARCESS Array B 86.66 20 P **P** **22 41 21.2 +0.6**
comp=Z,0.5nm,0.4s,baz=266,slow=3.2,SNR=10
comp=Z,0.5nm,0.4s
VNA3 Neunaver Olymp 88.16 163 P **P** **22 41 25.9 -1.8**
FINES FINESS Array B 88.43 28 P **P** **22 41 28.6 -0.6**
comp=Z,1.7nm,0.9s,baz=236,slow=2.1,SNR=5.1
comp=Z,1.7nm,0.9s
SNAA Sanae 90.33 163 P **P** **22 41 36.3 -1.6**
TROLL Troll, Antarti 92.03 162 P **P** **22 41 44.1 -1.8**
ZALV Zalesovo Beam 116.66 14 PKP **PKPdf** **22 47 19.7 -0.9**
comp=Z,1.0nm,0.4s,baz=310,slow=3.3,SNR=5.8
ZALV Zalesovo Beam 116.66 14 **PKPdf** **22 47 20.2 -0.4**
MKAR Makanchi Array 122.31 20 PKP **PKPdf** **22 47 30.9 -0.9**
comp=Z,0.9nm,0.4s,baz=303,slow=2.8,SNR=19
SONM Songino Array 125.58 0 PKP **PKPdf** **22 47 37.7 -0.5**
comp=Z,0.5nm,0.4s,baz=334,slow=2.3,SNR=5.9
STKA Stephens Creek 139.17 228 PKP **PKPdf** **22 48 03.8 -0.1**
comp=Z,2.0nm,0.7s,baz=88,slow=5.9,SNR=3.6
WRA Warramunga Arr 150.36 241 PKPbc **PKPbc** **22 48 27.9 -1.0**
comp=Z,8.6nm,0.4s,baz=108,slow=2.5,SNR=35
CMAR Chiang Mai Arr 153.68 17 PKPbc **PKiKP** **22 48 36.5 +0.1**
comp=Z,2.0nm,0.4s,baz=321,slow=3.7,SNR=5.9

*JMA **23** 23:22:49.4±0.2,25°N±2°×122°8E±0°7,h121km±2km,*
MV3.4/14,NW OFF ISHIGAKIJIMA IS
*TAP **23** 23:22:49.3,24°67N×122°77E,h127km,ML4.3,B*
*IDC **23** 23:22:53.5±7.4,24°80N×122°73E,h174km±76km,mb3.1/6,*
mbtmp3.7/7,Error ellipse: s-maj=79.4km s-min=18.2km
az=69.0

ISC 23 23:22:48.8±0.7,**24°68N**±0°06×**122°78E**±0°03,**h129**km±6km,
n68,σ0**s67**/121,**mb3.5/6,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
JYNG	**Yonagunijimaku**	**0.27**	**145**	P	**Pn**	**23 23 06.8**	**+0.1**
JYNG				*e*S	**Sn**	**23 23 19.9**	**-0.3**
YOJ	**Yonaguni jima**	**0.30**	**135**	P	**Pn**	**23 23 06.9**	**+0.1**
baz=133							
YOJ				S	**Sn**	**23 23 20.5**	**+0.1**
baz=133							
YOJ	**Yonaguni jima**	**0.30**	**135**	P	**Pn**	**23 23 06.9**	**+0.1**
YOJ				S	**Sn**	**23 23 20.4**	**-0.1**
EGS		**0.78**	**282**	P	**Pn**	**23 23 10.6**	**+0.9**
baz=282							
EGS				*i* S	**Sn**	**23 23 25.4**	**-0.1**
baz=282							
TWB1	**Santiao Chiao**	**0.79**	**295**	P	**Pn**	**23 23 10.0**	**+0.3**
baz=295							
TWB1				S	**Sn**	**23 23 25.0**	**-0.6**
baz=295							
TWC	**Suao**	**0.84**	**266**	P	**Pn**	**23 23 10.5**	**+0.3**
baz=265							
TWC				S	**Sn**	**23 23 25.7**	**-0.7**
baz=265							
NTC	**Toucheng**	**0.88**	**282**	P	**Pn**	**23 23 10.8**	**+0.3**
baz=281							
NTC				S	**Sn**	**23 23 26.9**	**+0.1**
baz=281							
TIPB	**Shuangxi**	**0.91**	**289**	*i* P	**Pn**	**23 23 11.3**	**+0.5**
baz=289							
TIPB				S	**Sn**	**23 23 27.0**	**-0.5**
baz=289							
SXI1	**Grass Mountain**	**0.92**	**297**	*i* P	**Pn**	**23 23 11.3**	**+0.4**
baz=297							
SXI1				S	**Sn**	**23 23 27.7**	**0.0**
baz=297							
IRIF	**Iriomote-Funau**	**0.94**	**111**	P	**Pn**	**23 23 11.4**	**+0.4**
IRIF				S	**Sn**	**23 23 27.1**	**-0.7**
EWUT	**Wuta**	**0.94**	**256**	*i* P	**Pn**	**23 23 11.5**	**+0.6**
baz=255							
EWUT				S	**Sn**	**23 23 28.0**	**+0.2**
baz=255							
ILA	**Ilan**	**0.94**	**276**	*i* P	**Pn**	**23 23 11.5**	**+0.6**
baz=275							
ILA				S	**Sn**	**23 23 28.0**	**+0.2**
baz=275							
NDS	**Dongshan**	**0.96**	**268**	*i* P	**Pn**	**23 23 11.8**	**+0.6**
baz=267							
NDS				S	**Sn**	**23 23 27.6**	**-0.7**
baz=267							
ENA	**Nanau**	**0.97**	**255**	P	**Pn**	**23 23 12.0**	**+0.7**
baz=255							
ENA				S	**Sn**	**23 23 29.0**	**+0.5**
baz=255							
NWF	**Wu-fen Shan**	**0.98**	**294**	*i* P	**Pn**	**23 23 12.0**	**+0.5**
baz=293							
NWF				*e*S	**Sn**	**23 23 29.4**	**+0.6**
baz=293							
WFSB	**Wu-fen Shan**	**0.98**	**294**	P	**Pn**	**23 23 12.1**	**+0.7**
baz=293							
WFSB				*e*S	**Sn**	**23 23 29.8**	**+1.2**
baz=293							
TWE	**Neicheng**	**1.01**	**273**	P	**Pn**	**23 23 12.3**	**+0.7**
baz=272							
TWE				S	**Sn**	**23 23 28.9**	**-0.1**
baz=272							
EHP	**Heping Village**	**1.01**	**249**	*e*S	**Sn**	**23 23 29.5**	**+0.4**
baz=248							
TNOU	**National Taiwa**	**1.02**	**298**	P	**Pn**	**23 23 12.0**	**+0.2**
baz=297							
TNOU				S	**Sn**	**23 23 29.4**	**+0.2**
baz=297							
FUSB	**Fushanzhiwuyua**	**1.08**	**275**	*i* P	**Pn**	**23 23 12.9**	**+0.5**
baz=274							
FUSB				S	**Sn**	**23 23 29.7**	**-0.7**
baz=274							
TWA	**Mucha**	**1.12**	**286**	*i* P	**Pn**	**23 23 13.2**	**+0.5**
baz=285							
TWA				S	**Sn**	**23 23 30.4**	**-0.6**
baz=285							
HATJ	**Hateruma jima**	**1.12**	**123**	P	**Pn**	**23 23 13.8**	**+1.0**
HATJ				*e*S	**Sn**	**23 23 31.1**	**+0.1**
PCYT	**Pengchaiyu**	**1.14**	**326**	P	**Pn**	**23 23 13.8**	**+0.8**
baz=326							
LATG	**Datong**	**1.15**	**263**	P	**Pn**	**23 23 14.1**	**+1.0**
baz=263							
LATG				*e*S	**Sn**	**23 23 32.4**	**+0.9**
baz=263							
NHY	**Taipei**	**1.15**	**288**	P	**Pn**	**23 23 13.8**	**+0.7**
baz=288							
NWLT	**Wulai**	**1.16**	**275**	P	**Pn**	**23 23 13.6**	**+0.4**
baz=275							
ETL	**Fush Village**	**1.17**	**244**	P	**Pn**	**23 23 13.3**	**0.0**
baz=243							
ETL				S	**Sn**	**23 23 31.7**	**-0.2**
baz=243							
NHDH	**Xindian Distri**	**1.17**	**284**	P	**Pn**	**23 23 13.5**	**+0.3**
baz=284							
NHDH				*e*S	**Sn**	**23 23 30.7**	**-1.1**
baz=284							
NACB	**Ninganchiao**	**1.19**	**245**	P	**Pn**	**23 23 13.7**	**+0.3**
baz=245							
NACB				S	**Sn**	**23 23 31.7**	**-0.4**
baz=245							
YM01	**YM01**	**1.19**	**293**	P	**Pn**	**23 23 13.9**	**+0.4**
baz=293							
YM01				S	**Sn**	**23 23 32.4**	**+0.1**
baz=293							
YM08	**YM08**	**1.19**	**296**	*e*P	**Pn**	**23 23 12.8**	**-0.7**
baz=295							
YM08				S	**Sn**	**23 23 31.6**	**-0.6**
baz=295							
TATO	**Taipei**	**1.21**	**285**	P	**Pn**	**23 23 13.9**	**+0.3**
baz=284							
TATO				*e*S	**Sn**	**23 23 31.3**	**-1.2**
baz=284							
JKRS	**Kuro-shima**	**1.21**	**111**	P	**Pn**	**23 23 14.6**	**+1.0**
JKRS				S	**Sn**	**23 23 32.5**	**+0.1**
TAP	**Taipei**	**1.21**	**288**	P	**Pn**	**23 23 13.9**	**+0.3**
baz=287							
TAP				S	**Sn**	**23 23 31.9**	**-0.6**
baz=287							
TWY	**Chenhua**	**1.22**	**299**	P	**Pn**	**23 23 14.4**	**+0.7**
baz=299							
TWD	**Chiawan**	**1.23**	**241**	P	**Pn**	**23 23 14.2**	**+0.4**
baz=240							
TWD				S	**Sn**	**23 23 32.7**	**-0.2**
baz=240							
ETLH	**Xiulin Townshi**	**1.27**	**249**	P	**Pn**	**23 23 14.8**	**+0.4**
baz=248							
ETLH				S	**Sn**	**23 23 33.5**	**-0.4**
baz=248							
YHNB	**Yeheng**	**1.27**	**270**	P	**Pn**	**23 23 15.3**	**+0.9**
baz=269							
YHNB				S	**Sn**	**23 23 33.9**	**+0.1**
baz=269							
JIJ	**Ishigaki jima**	**1.28**	**104**	P	**Pn**	**23 23 14.9**	**+0.5**
JIJ				S	**Sn**	**23 23 32.8**	**-1.1**
NSK	**Sanguang**	**1.29**	**270**	P	**Pn**	**23 23 15.4**	**+0.8**
baz=269							
NSK				S	**Sn**	**23 23 34.0**	**-0.2**
baz=269							
NNSH	**Datong**	**1.29**	**259**	P	**Pn**	**23 23 15.3**	**+0.7**
baz=259							
NNSH				S	**Sn**	**23 23 34.2**	**-0.1**
baz=259							
NTST	**Danshui**	**1.30**	**292**	P	**Pn**	**23 23 15.3**	**+0.8**
baz=292							
NTST				S	**Sn**	**23 23 34.3**	**+0.1**
baz=292							
TWS1	**Kuangyinshan**	**1.30**	**289**	P	**Pn**	**23 23 15.1**	**+0.5**
baz=289							
TWS1				S	**Sn**	**23 23 34.0**	**-0.3**
baz=289							
ETM	**Tongmen**	**1.37**	**239**	P	**Pn**	**23 23 15.6**	**+0.3**
baz=238							
ETM				S	**Sn**	**23 23 35.2**	**-0.4**
baz=238							
NTY	**Taoyuan**	**1.38**	**284**	P	**Pn**	**23 23 16.1**	**+0.6**
baz=283							
NTY				S	**Sn**	**23 23 35.8**	**+0.1**
baz=283							
JISG	**Ishigakijimahi**	**1.40**	**93**	P	**Pn**	**23 23 16.1**	**+0.4**
JISG				*e*S	**Sn**	**23 23 35.1**	**-1.0**
FUSS	**Fushou**	**1.46**	**253**	*e*P	**Pn**	**23 23 17.8**	**+1.2**
baz=253							
NCU	**National Centr**	**1.47**	**282**	P	**Pn**	**23 23 17.4**	**+1.0**
baz=281							
NCU				S	**Sn**	**23 23 38.3**	**+0.7**
baz=281							
NCUH	**Zhongli**	**1.47**	**282**	P	**Pn**	**23 23 17.5**	**+1.0**
baz=281							
NCUH				S	**Sn**	**23 23 38.0**	**+0.4**
baz=281							
WHF	**Hehuan Shan**	**1.48**	**249**	P	**Pn**	**23 23 17.8**	**+0.8**
baz=248							
WHF				*e*S	**Sn**	**23 23 38.5**	**+0.2**
baz=248							
NFF	**Wufeng Townshi**	**1.51**	**269**	*e*P	**Pn**	**23 23 17.8**	**+0.8**
baz=268							
NFF				*e*S	**Sn**	**23 23 38.2**	**-0.2**
baz=268							
HSN1	**Hsinchu**	**1.60**	**274**	P	**Pn**	**23 23 19.0**	**+1.1**
baz=273							
HSN1				S	**Sn**	**23 23 40.7**	**+0.5**
baz=273							
NHW	**Xinwu Township**	**1.60**	**282**	P	**Pn**	**23 23 18.9**	**+1.0**
baz=281							
NHW				S	**Sn**	**23 23 41.1**	**+0.9**
baz=281							
NSTT	**Nanjuang**	**1.61**	**269**	P	**Pn**	**23 23 19.0**	**+0.9**
baz=268							
NSTT				S	**Sn**	**23 23 40.5**	**+0.1**
baz=268							
SBCB	**Hsinchu**	**1.63**	**274**	P	**Pn**	**23 23 19.3**	**+1.0**
baz=274							
SBCB				S	**Sn**	**23 23 41.2**	**+0.4**
baz=274							
HSN	**Hsinchu**	**1.65**	**275**	P	**Pn**	**23 23 19.0**	**+0.6**
baz=275							
HSN				S	**Sn**	**23 23 40.9**	**-0.2**
baz=275							
JTJ	**Tarama**	**1.75**	**91**	P	**Pn**	**23 23 20.6**	**+0.9**
JTJ				S	**Sn**	**23 23 42.9**	**-0.5**
JIRB	**Irabujima**	**2.19**	**86**	P	**Pn**	**23 23 25.9**	**+0.9**
JIRB				*e*S	**Sn**	**23 23 51.8**	**-0.9**
JIKM	**Ikemajima**	**2.26**	**83**	*e*S	**Sn**	**23 23 54.0**	**-0.3**
JMJ	**Miyako jima 2**	**2.29**	**86**	P	**Pn**	**23 23 27.4**	**+1.2**
baz=86							
JMJ				*e*S	**Sn**	**23 23 56.6**	**+1.4**
baz=86							

JMJ2	**Miyako jima3**	**2.32**	**88**	P		**Pn**	**23 23 28.0**	**+1.3**
KSRS	**Korea Array**	**13.47**	**18**	P		**Pn**	**23 25 56.0**	**+1.4**
	3.2nm,0.7s,baz=201,slow=12,SNR=6.3							
SONM	**Songino Array**	**26.51**	**335**	P		**P**	**23 28 13.7**	**-0.5**
	1.1nm,1.0s,baz=141,slow=8.5,SNR=4.9							
	1.1nm,1.0s							
MKAR	**Makanchi Array**	**39.01**	**315**	P		**P**	**23 30 01.9**	**-0.7**
	0.1nm,0.4s,baz=109,slow=8.8,SNR=2.4							
	0.1nm,0.4s							
WRA	**Warramunga Arr**	**45.76**	**165**	P		**P**	**23 30 58.5**	**+1.1**
	0.6nm,0.5s,baz=347,slow=8.6,SNR=12							
	0.6nm,0.5s							
ARCES	**ARCESS Array B**	**69.62**	**338**	P		**P**	**23 33 43.0**	**-0.7**
	0.5nm,0.7s,baz=72,slow=8.6,SNR=1.5							
	0.5nm,0.7s							
FINES	**FINESS Array B**	**71.75**	**330**	P		**P**	**23 33 55.5**	**-1.1**
	0.6nm,0.4s,baz=60,slow=6.6,SNR=3.0							
	0.6nm,0.4s							
NOA	**NORSAR Array B**	**78.46**	**332**	P		**P**	**23 34 34.0**	**-1.2**
	0.3nm,0.7s,baz=53,slow=6.1,SNR=2.7							
	0.3nm,0.7s							

IDC ***23*** *23:32:44.4±1.6, 72°.81N×70°.56W, h0km, mb3.6/2, mbtmp3.6/4, ML3.2/2, Error ellipse: s-maj=52.5km s-min=28.5km az=115.0*

OTT ***23*** *23:32:45.6±0.9, 73°.13N×72°.74W, h18km, ML3.8/4, Baffin Bay Seismic Zone. 179km east from Pond Inlet, Nu*

DNK ***23*** *23:32:48.5±4.2, 73°.48N×71°.92W, h11km±107km, ML2.3*

ISC 23 23:32:40.9±0.8, 73°.09N±0°.05×72°.79W±0°.07, h10km, n15, σ2ŝ77/19, Baffin Bay

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
CLRN	**Clyde River**	**2.94**	**151**	PN		**Pb**	**23 33 32.1**	**-1.1**
CLRN				SN		**Sn**	**23 34 03.7**	**+0.9**
CLRN				Trac			23 34 06.5	
	comp=Z,170nm,0.1s							
TULEG	**Thule**	**3.62**	**15**	*e*		**Pn**	**23 33 38.5**	**+1.5**
	baz=208,slow=18							
TULEG				*i*	P	Pb	23 33 38.9	-6.1
TULEG				*i*	S	**Sn**	**23 34 16.5**	**-3.2**
TULEG				IAML			23 34 17.1	
	comp=Z,188nm,0.3s							
UPNV	**Upernavik**	**4.91**	**86**	*i*	P	**Pn**	**23 33 58.1**	**+3.4**
UPNV				*i*	S	**Sn**	**23 34 49.0**	**-2.4**
UPNV				IAML			23 34 52.5	
	comp=Z,16nm,0.4s							
NUUG	**Nuugaatsiaq**	**6.16**	**95**	*e*	P	**Pn**	**23 34 15.7**	**+4.0**
NUUG				*i*	S	**Sn**	**23 35 18.9**	**-3.1**
NUUG				IAML			23 35 23.1	
	comp=Z,4.0nm,0.3s							
RES	**Resolute Bay**	**6.34**	**295**	PN		**Pn**	**23 34 17.1**	**+2.8**
RES				SN		**Sn**	**23 35 24.2**	**-2.3**
RES				Trac			23 35 29.0	
	comp=Z,8.1nm,0.2s							
FRB	**Frobisher Bay**	**9.51**	**169**	PN		**Pn**	**23 35 00.2**	**+2.5**
FRB				SN		**Sn**	**23 36 41.8**	**-2.6**
FRB				Trac			23 37 10.4	
	comp=Z,15nm,0.4s							
SUMG	**Summit**	**10.07**	**76**	*i*	P	**Pn**	**23 35 07.4**	**+1.7**
SUMG				*i*			23 36 50.6	
SUMG				IAML			23 36 55.2	
	comp=Z,6.2nm,0.4s							
ICESG	**Greenland Ices**	**11.35**	**94**	*i*	P	**Pn**	**23 35 25.6**	**+2.4**
ICESG				*i*			23 37 21.9	
ICESG				IAML			23 37 25.1	
	comp=Z,2.2nm,0.3s							
KNGQ	**Kangiqsujuaq**	**11.56**	**178**	PN		**Pn**	**23 35 27.0**	**+1.3**
KNGQ				SN		**Sn**	**23 37 29.3**	**-5.3**
KNGQ				Trac			23 37 35.9	
	comp=Z,0.7nm,0.0s							
DAG	**Danmarks Havn**	**14.07**	**50**	*e*	P	**Pn**	**23 35 59.8**	**-0.1**
DAG				*i*			23 38 24.3	
DAG				IAML			23 38 39.8	
	comp=Z,1.2nm,0.4s							
NOR	**Nord**	**14.12**	**30**	*e*	P	**Pn**	**23 35 59.7**	**-0.8**
NOR				*i*	P	P	23 35 59.9	-8.3
NOR				*i*			23 38 23.0	
NOR				IAML			23 38 37.2	
	comp=Z,460nm,0.3s							
SCHQ	**Schefferville**	**18.49**	**169**	P		**Pn**	**23 36 56.5**	**-0.4**
	comp=Z,0.9nm,0.3s,baz=354,slow=13,SNR=14							
SCHQ				S		Sn	23 40 09.5	-14
	comp=Z,1.6nm,0.8s,baz=84,slow=19,SNR=1.1							
	comp=Z,2.5nm,0.4s							
YKA	**Yellowknife Ar**	**18.52**	**257**	P		Pn	23 37 07.9	+11
	comp=Z,0.1nm,0.3s,baz=30,slow=11,SNR=1.6							
	comp=Z,0.3nm,0.6s							
TXAR	**Lajitas Array**	**46.73**	**218**	P		P	23 41 17.0	+7.1
	comp=Z,0.2nm,0.7s,baz=16,slow=6.7,SNR=2.4							
	comp=Z,0.2nm,0.7s							
ZALV	**Zalesovo Beam**	**52.32**	**17**	P		P	23 41 57.6	+5.5
	comp=Z,2.1nm,0.7s,baz=352,slow=7.3,SNR=7.5							
	comp=Z,2.1nm,0.7s							

IDC ***23*** *23:33:37.8±1.3, 34°.29S×72°.28W, h0km, mb3.5/2, mbtmp3.5/4, ML3.5/2, MS3.1/1, Error ellipse: s-maj=60.6km s-min=32.3km az=84.0*

GUC ***23*** *23:33:42.2±0.8, 34°.28S×72°.15W, h36km±3km, ML3.6*

ISC 23 23:33:41.8±1.3, 34°.28S±0°.04×72°.24W±0°.06, h25km±9km, n30, σ0ŝ96/44, 12C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
BO03	**Pichilemu**	**0.32**	**133**	⇓*eP*		**Pb**	**23 33 48.9**	**-0.1**
BO03				*eS*		**Sb**	**23 33 54.2**	**+0.2**
BO03				IAML			23 33 54.9	
	comp=E,18μm,0.3s							
GO05	**Huala**	**0.77**	**161**	⇑*eP*		**Pn**	**23 33 56.1**	**-1.0**
GO05				*i* S		**Sn**	**23 34 06.6**	**-1.2**
GO05				IAML			23 34 09.0	
	comp=E,9μm,0.4s							
VA05	**Santo Domingo**	**0.81**	**40**	⇑*eP*		**Pn**	**23 33 56.5**	**-1.0**
VA05				*i* S		**Sn**	**23 34 07.3**	**-1.6**
VA05				IAML			23 34 12.3	
	comp=E,4μm,0.4s							
BO01	**Tunca**	**0.96**	**97**	⇓*eP*		**Pn**	**23 33 58.4**	**-1.3**
BO01				*eS*		**Sn**	**23 34 10.3**	**-2.3**
MT09	**Talagante**	**1.16**	**64**	*eP*		**Pn**	**23 34 01.6**	**-0.9**
MT09				*i* S		**Sn**	**23 34 15.9**	**-1.7**
MT09				IAML			23 34 21.2	
	comp=E,2μm,0.6s							
MT02	**Curacav**	**1.37**	**42**	⇑*eP*		**Pn**	**23 34 04.7**	**-0.7**
MT02				*eS*		**Sn**	**23 34 22.4**	**-0.3**
BO04	**La Punta**	**1.39**	**78**	⇑*eP*		**Pn**	**23 34 05.3**	**-0.2**
BO04				*eS*		**Sn**	**23 34 22.4**	**-0.6**
BO04				IAML			23 34 31.7	
	comp=N,2μm,0.5s							
MT05	**Renca**	**1.54**	**55**	⇑*eP*		**Pn**	**23 34 07.8**	**+0.2**
MT05				*eS*		**Sn**	**23 34 27.2**	**+0.5**
MT05				IAML			23 34 36.8	
	comp=E,1μm,0.5s							
ML02	**Panimavida**	**1.62**	**156**	⇑*eP*		**Pn**	**23 34 10.3**	**+1.5**
ML02				*eS*		**Sn**	**23 34 30.8**	**+1.9**
ML02				IAML			23 34 37.6	
	comp=N,2μm,0.7s							
MT03	**Universidad Ad**	**1.64**	**62**	⇑*eP*		**Pn**	**23 34 09.3**	**+0.2**
MT03				*eS*		**Sn**	**23 34 30.1**	**+0.6**
MT03				IAML			23 34 34.0	
	comp=E,998nm,0.3s							
MT03				IAML			23 34 41.1	
	comp=N,978nm,0.6s							
ROCH	**El Roble**	**1.66**	**38**	⇑*eP*		**Pn**	**23 34 09.8**	**+0.3**
ROCH				⇑*eP*		**Pn**	**23 34 09.8**	**+0.3**
ROCH				*i* S		**Sn**	**23 34 30.8**	**+0.6**
ROCH				*i* S		**Sn**	**23 34 31.3**	**+1.1**
ROCH				IAML			23 34 45.1	
	comp=N,1μm,0.5s							
ROCH				IAML			23 34 45.1	
	comp=N,1μm,0.5s							
PEL	**Peldehue**	**1.72**	**49**	*eP*		**Pn**	**23 34 10.8**	**+0.6**
PEL				*i* S		**Sn**	**23 34 32.8**	**+1.3**
PEL				IAML			23 34 42.0	
	comp=E,564nm,0.7s							
LMEL	**Las Melosas**	**1.75**	**76**	⇑*eP*		**Pn**	**23 34 11.2**	**+0.5**
LMEL				*eS*		**Sn**	**23 34 33.2**	**+1.0**
LMEL				IAML			23 34 39.4	
	comp=N,1μm,0.3s							
FCH	**Farellones**	**1.88**	**60**	*eP*		**Pn**	**23 34 13.1**	**+0.5**
FCH				*eS*		**Sn**	**23 34 37.5**	**+1.8**
FCH				IAML			23 34 43.0	
	comp=E,576nm,0.5s							

VA06	**Catapilco**	**1.89**	**25**	⇑*eP*		**Pn**	**23 34 11.7**	**-0.7**
VA06				*eS*		**Sn**	**23 34 35.7**	**+0.3**
VA06				IAML			23 34 51.0	
	comp=E,860nm,0.6s							
VA03	**San Esteban**	**2.07**	**43**	⇑*eP*		**Pn**	**23 34 15.6**	**+0.5**
VA03				*eS*		**Sn**	**23 34 41.0**	**+1.0**
VA03				IAML			23 34 50.6	
	comp=E,1μm,0.4s							
H03S1	**Juan Fernandez**	**5.55**	**273**	T		T	23 40 54.7	
	baz=97,SNR=464							
H03S3	**Juan Fernandez**	**5.55**	**273**	T		T	23 40 55.9	
	baz=97,SNR=359							
H03S2	**Juan Fernandez**	**5.57**	**273**	T		T	23 40 55.1	
	baz=97,SNR=690							
H03N1	**Juan Fernandez**	**5.61**	**277**	Pn		**Pn**	**23 35 02.9**	**-0.5**
H03N1				T		T	23 41 07.3	
	baz=107,slow=75,SNR=42							
H03N3	**Juan Fernandez**	**5.62**	**277**	Pn		**Pn**	**23 35 03.0**	**-0.5**
H03N3				T		T	23 41 14.4	
	baz=107,slow=75,SNR=18							
H03N2	**Juan Fernandez**	**5.63**	**277**	Pn		**Pn**	**23 35 03.0**	**-0.6**
H03N2				T		T	23 41 12.6	
	baz=107,slow=75,SNR=19							
PLCA	**Paso Flores**	**6.58**	**169**	Pn		**Pn**	**23 35 17.3**	**+0.4**
	comp=E,0.2nm,0.3s,baz=343,slow=13,SNR=4.4							
PLCA				Lg		Lg	23 37 03.8	
	comp=E,0.1nm,0.3s,baz=290,slow=13,SNR=3.2							
	comp=E,1.5nm,0.6s							
CPUP	**Villa Florida**	**15.11**	**62**	LR		LR	23 44 01.7	
	comp=E,67nm,20.3s,baz=240,slow=41							
LPAZ	**La Paz**	**18.30**	**13**	P		**P**	**23 37 54.7**	**+0.1**
	comp=E,0.1nm,0.3s,baz=185,slow=8.9,SNR=4.8							
	comp=E,1.4nm,0.7s							
TXAR	**Lajitas Array**	**69.90**	**331**	P		**P**	**23 44 51.0**	**+0.4**
	comp=E,0.3nm,0.5s,baz=150,slow=9.4,SNR=3.2							
	comp=E,0.3nm,0.5s							
TORD	**Torodi Ar. Bea**	**84.46**	**70**	P		**P**	**23 46 12.5**	**-0.1**
	comp=E,0.4nm,0.9s,baz=239,slow=4.7,SNR=1.7							
	comp=E,0.4nm,0.9s							
WRA	**Warramunga Arr**	**120.43**	**209**	PKP		**PKPdf**	**23 52 30.6**	**-0.9**
	comp=E,0.2nm,0.5s,baz=153,slow=1.4,SNR=1.3							
ZALV	**Zalesovo Beam**	**154.55**	**32**	PKPbc		**PKPbc**	**23 53 40.0**	**+0.4**
	comp=E,0.6nm,0.6s,baz=276,slow=1.3,SNR=1.8							
MKAR	**Makanchi Array**	**157.08**	**49**	PKPab		**PKPab**	**23 54 05.4**	**0.0**
	comp=E,0.2nm,0.6s,baz=358,slow=4.3,SNR=2.3							

IDC ***24*** *00:02:59.1±2.0, 15°.75S×174°.35W, h169km±18km, mb3.7/9, mbtmp4.2/11, MS2.8/1, Error ellipse: s-maj=29.7km s-min=12.8km az=140.0*

NEIC ***24*** *00:03:00.6±2.4, 15°.74S±0°.08×174°.15W±0°.03, h176km±8km, mb4.5/39, Error ellipse: s-maj=11.4km s-min=3.6km az=182.0*

NOU ***24*** *00:03:02.7, 15°.86S×174°.02W, h152km, MLv4.7/10, Tonga Islands*

ISC 24 00:03:02.0±0.5, 15°.81S±0°.07×174°.10W±0°.06, h200km, n77, σ1ŝ44/76, mb4.2/26, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
AFI	**Afiamalu**	**2.93**	**50**	P		**Pn**	**00 03 48.3**	**-2.6**
	1μm,0.4s,baz=232,slow=12,SNR=246							
AFI				S		Sn	00 04 22.9	-6.3
	682nm,0.6s,baz=208,slow=23,SNR=9.5							
AFI				LR		LR	00 04 44.8	
	comp=Z,142nm,19.8s,baz=103,slow=34							
AFI	**Afiamalu**	**2.93**	**50**			**Pn**	**00 03 48.4**	**-2.5**
AFI						**Sn**	**00 04 24.6**	**-4.6**
AFI	**Afiamalu**	**2.93**	**50**	P		**Pn**	**00 03 48.6**	**-2.4**
NIUE	**Niue**	**5.14**	**130**	Pn		**Pn**	**00 04 17.9**	**-0.2**
NIUE						**Sn**	**00 05 15.8**	**-2.5**
TAVE	**Taveuni**	**5.65**	**260**	P		**Pn**	**00 04 25.7**	**+1.0**
MSVF	**Nonsavu**	**7.76**	**255**	P		**Pn**	**00 04 52.8**	**+0.5**
	21nm,0.8s,baz=111,slow=12,SNR=11							
MSVF	**Nonsavu**	**7.76**	**255**			**Pn**	**00 04 51.2**	**-1.0**
MSVF	**Nonsavu**	**7.76**	**255**	P		**Pn**	**00 04 53.4**	**+1.2**
FUNA	**Funafuti**	**9.76**	**317**	Pn		**Pn**	**00 05 17.2**	**-1.0**
KNTN	**Kanton**	**13.16**	**10**	P		**Pn**	**00 06 02.9**	**+1.3**
MARNC	**Mare, Loyalty**	**17.84**	**249**	P		**Pn**	**00 06 57.8**	**-0.5**
LIFNC	**LIFOU**	**18.39**	**252**	P		**Pn**	**00 07 03.3**	**-1.4**
PINNC	**Pines Island,**	**18.69**	**246**	P		**P**	**00 07 05.1**	**-0.2**
PINNC				IAmb		IAmb	00 07 10.7	
	comp=Z,55nm,1.1s							
YATNC	**Mamie plateau,**	**19.02**	**248**	P		**Pn**	**00 07 13.3**	**+1.2**
OUENC	**Ouen Island, N**	**19.16**	**247**	P		**Pn**	**00 07 12.2**	**-1.6**
OUENC				IAmb		IAmb	00 07 16.3	
	comp=Z,81nm,1.4s							
DZM	**Mont Dzumac**	**19.42**	**248**	P		**P**	**00 07 10.8**	**-2.5**
	comp=Z,3.0nm,0.8s,baz=76,slow=19,SNR=2.4							
DZM	**Mont Dzumac**	**19.42**	**248**	P		**P**	**00 07 13.3**	**-0.1**
DZM				IAmb		IAmb	00 07 19.0	
	comp=Z,13nm,0.9s							
DZM	**Mont Dzumac**	**19.42**	**248**	P		**Pn**	**00 07 18.2**	**+1.2**
	comp=Z,24nm,1.5s							
URZ	**Urewera**	**23.67**	**197**	P		**P**	**00 07 55.5**	**+0.2**
	comp=Z,10nm,0.3s,baz=90,slow=10,SNR=16							
	comp=Z,10nm,0.3s							
URZ	**Urewera**	**23.67**	**197**	P		**P**	**00 07 57.9**	**+2.6**
URZ				IAmb		IAmb	00 07 59.5	
	comp=Z,54nm,1.4s							
QRZ	**Quartz Range**	**27.50**	**202**	P		**P**	**00 08 29.5**	**-0.2**
NNZ	**Nelson**	**27.54**	**201**	P		**P**	**00 08 30.7**	**+0.6**
TUWZ	**Tuamarina**	**27.55**	**200**	P		**P**	**00 08 31.1**	**+1.0**
BSWZ	**Blackbirch Sta**	**27.82**	**200**	P		**P**	**00 08 33.5**	**+0.8**
THZ	**Tophouse**	**28.19**	**201**	P		**P**	**00 08 35.9**	**0.0**
KHZ	**Kahutara**	**28.57**	**199**	P		**P**	**00 08 41.3**	**+2.1**
LTZ	**Lake Taylor**	**29.31**	**201**	P		**P**	**00 08 45.5**	**-0.3**
LTZ				IAmb		IAmb	00 09 03.4	
	comp=Z,36nm,1.4s							
ARMA	**Armidale**	**34.55**	**239**	P		**P**	**00 09 30.4**	**-1.4**
ARMA				IAmb		IAmb	00 09 41.6	
	comp=Z,16nm,1.3s							
H11S2	**WAKE ISLAND Hy**	**38.97**	**330**	T		T	00 52 35.5	
	baz=151							
H11S3	**WAKE ISLAND Hy**	**38.99**	**330**	T		T	00 51 49.9	
	baz=151							
H11S1	**WAKE ISLAND Hy**	**38.99**	**330**	T		T	00 52 18.6	
	baz=151							
COEN	**Coen**	**41.28**	**267**	P		**P**	**00 10 27.4**	**-0.7**
COEN				IAmb		IAmb	00 11 04.2	
	comp=Z,24nm,1.4s							
TOO	**Toolangi**	**41.69**	**231**	P		**P**	**00 10 30.6**	**-0.6**
TOO				IAmb		IAmb	00 10 59.7	
	comp=Z,45nm,1.5s							
STKA	**Stephens Creek**	**43.25**	**240**	P		**P**	**00 10 42.5**	**-1.4**
	comp=Z,6.1nm,0.8s,baz=80,slow=5.4,SNR=4.8							
	comp=Z,6.1nm,0.8s							
STKA	**Stephens Creek**	**43.25**	**240**	P		**P**	**00 10 43.1**	**-0.7**
BBOO	**Buckleboo**	**48.03**	**240**	P		**P**	**00 11 22.0**	**+0.8**
WR0	**Warramunga Arr**	**48.91**	**257**	P		**P**	**00 11 27.6**	**-0.5**
WR0				IAmb		IAmb	00 11 30.1	
	comp=Z,9.2nm,1.4s							
WB0	**Warramunga Arr**	**49.06**	**257**	P		**P**	**00 11 28.2**	**-1.0**
WB0				IAmb		IAmb	00 12 12.3	
	comp=Z,23nm,0.6s							
WB2	**Warramunga Arr**	**49.09**	**257**	P		**P**	**00 11 28.3**	**-1.2**
WB2				IAmb		IAmb	00 12 12.9	
	comp=Z,6.6nm,0.6s							
WRA	**Warramunga Arr**	**49.10**	**257**	P		**P**	**00 11 27.5**	**-2.1**
	comp=Z,2.4nm,0.6s,baz=92,slow=6.9,SNR=46							
	comp=Z,2.4nm,0.6s							
WRA	**Warramunga Arr**	**49.10**	**257**	P		**P**	**00 11 27.5**	**-2.1**
FORT	**Forrest**	**54.63**	**243**	P		**P**	**00 12 09.2**	**-1.1**
PSA00	**Pilbara Seismi**	**62.44**	**254**	P		**P**	**00 13 03.0**	**-1.4**
PSA00				IAmb		IAmb	00 13 42.8	
	comp=Z,12nm,1.5s							
MBWA	**Marble Bar**	**62.60**	**254**	P		**P**	**00 13 04.3**	**-1.1**
SBA	**Scott Base**	**62.79**	**184**	P		**P**	**00 13 08.1**	**+2.4**
SAO	**San Andreas Ge**	**72.08**	**42**	P		**P**	**00 14 04.7**	**+0.2**
SAO				IAmb		IAmb	00 14 07.6	
	comp=Z,12nm,0.9s							
YBH	**Yreka Blue Hor**	**74.33**	**37**	P		**P**	**00 14 19.4**	**+1.8**
	comp=Z,0.7nm,0.5s,baz=186,slow=5.5,SNR=2.4							
	comp=Z,0.7nm,0.5s							
YBH	**Yreka Blue Hor**	**74.33**	**37**	P		**P**	**00 14 19.5**	**+1.8**
NVAR	**Mina Array Bea**	**75.08**	**42**	P		**P**	**00 14 23.7**	**+1.5**
	comp=Z,0.6nm,0.5s,baz=225,slow=9.8,SNR=5.8							
	comp=Z,0.6nm,0.5s							
NVAR	**Mina Array Bea**	**75.08**	**42**	P		**P**	**00 14 22.7**	**+0.5**
TPH	**Tonopah**	**75.59**	**43**	P		**P**	**00 14 25.8**	**+0.6**
TPH				IAmb		IAmb	00 14 28.2	
	comp=Z,26nm,1.4s							
U15A	**North Rim**	**78.07**	**47**	P		**P**	**00 14 39.7**	**+0.6**
U15A				IAmb		IAmb	00 14 42.2	
	comp=Z,4.3nm,1.1s							

PKCU	**Pink Cliffs**	**78.56**	**46**	P		**P**	**00 14 43.4**	**+1.5**
PKCU				IAmb		IAmb	00 14 44.9	
	comp=Z,4.2nm,0.7s							
GLB	**Gilahina Butte**	**80.68**	**14**	P		**P**	**00 14 52.1**	**-0.2**
J20K	**Nowinta River**	**81.20**	**9**	P		**P**	**00 14 56.9**	**+1.9**
RND	**Reindeer**	**81.37**	**11**	P		**P**	**00 14 57.3**	**+1.3**
RND				IAmb		IAmb	00 15 16.7	
	comp=Z,6.9nm,1.2s							
TX31	**Lajitas Ar. Si**	**81.40**	**56**	P		**P**	**00 14 58.8**	**+1.9**
TX31				IAmb		IAmb	00 15 00.6	
	comp=Z,3.9nm,0.9s							
TXAR	**Lajitas Array**	**81.40**	**56**	P		**P**	**00 14 58.9**	**+2.0**
	comp=Z,0.9nm,0.9s,baz=212,slow=7.1,SNR=6.3							
	comp=Z,0.9nm,0.9s							
TXAR	**Lajitas Array**	**81.40**	**56**	P		**P**	**00 14 58.1**	**+1.2**
ANMO	**Albuquerque**	**81.58**	**50**	P		**P**	**00 14 59.6**	**+1.7**
	comp=Z,0.7nm,0.5s,baz=229,slow=4.4,SNR=3.6							
	comp=Z,0.7nm,0.5s							
ANMO	**Albuquerque**	**81.58**	**50**	P		**P**	**00 14 59.4**	**+1.5**
MCMT	**McKenzie Canyo**	**81.99**	**39**	P		**P**	**00 15 01.2**	**+1.3**
L26K	**Log Cabin Wild**	**82.17**	**14**	P		**P**	**00 15 01.4**	**+1.3**
S22A	**4JR Ranch, Cre**	**82.54**	**48**	P		**P**	**00 15 03.9**	**+0.9**
MDM	**Murphy Dome**	**82.90**	**11**	P		**P**	**00 15 04.7**	**+0.9**
IMAR	**Indian Mountai**	**82.97**	**8**	P		**P**	**00 15 05.2**	**+1.1**
IL31		**82.97**	**11**	P		**P**	**00 15 05.0**	**+0.9**
IL31				IAmb		IAmb	00 15 05.6	
	comp=Z,6.0nm,1.4s							
ILAR	**Eielson Array**	**82.97**	**11**	P		**P**	**00 15 04.2**	**0.0**
	comp=Z,1.0nm,0.5s,baz=225,slow=5.4,SNR=13							
	comp=Z,1.0nm,0.5s							
PDAR	**Pinedale Array**	**83.02**	**42**	P		**P**	**00 15 06.1**	**+0.9**
	comp=Z,1.3nm,0.7s,baz=219,slow=3.1,SNR=11							
	comp=Z,1.3nm,0.7s							
PDAR	**Pinedale Array**	**83.02**	**42**	P		**P**	**00 15 06.3**	**+1.0**
POKR	**Poker Plat Res**	**83.19**	**11**	P		**P**	**00 15 05.5**	**+0.2**
POKR				IAmb		IAmb	00 15 06.8	
	comp=Z,5.6nm,1.0s							
J26L	**Joseph Creek**	**83.41**	**13**	P		**P**	**00 15 08.2**	**+1.7**
J26L				IAmb		IAmb	00 15 09.6	
	comp=Z,7.8nm,1.4s							
ARCES	**ARCESS Array B**	**124.92**	**352**	PKP		**PKPdf**	**00 21 37.5**	**0.0**
	comp=Z,0.7nm,0.8s,baz=60,slow=2.2,SNR=3.8							
GERES	**GERESS Array B**	**146.44**	**351**	PKPbc		**PKPbc**	**00 22 20.1**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=34,slow=5.0,SNR=7.4							
MMAI	**Mount Meron Ar**	**148.29**	**308**	PKPbc		**PKPbc**	**00 22 24.9**	**-0.2**
	comp=Z,1.2nm,0.7s,baz=101,slow=1.5,SNR=2.6							
ESDC	**Sonseca Array**	**154.71**	**18**	PKPab		**PKPab**	**00 22 56.4**	**+1.2**
	comp=Z,1.2nm,1.1s,baz=332,slow=3.9,SNR=6.1							
TORD	**Torodi Ar. Bea**	**175.14**	**122**	PKPab		**PKPab**	**00 24 25.8**	**+0.2**
	comp=Z,3.6nm,1.3s,baz=251,slow=3.2,SNR=7.4							

BJI ***24*** *00:07:10.1±0.0, 1°.29N×126°.35E, h19km, mb4.6/40, mB4.8/17, Ms4.5/1, Ms7 4.2/1*

NEIC ***24*** *00:07:12.7±2.0, 1°.45N±0°.08×126°.48E±0°.06, h20km±5km, mb4.7/60, Error ellipse: s-maj=11.8km s-min=7.7km az=209.0*

DJA ***24*** *00:07:15.8±0.3, 1°.N±3°×12°.7E±°, h48km±5km, M4.6/20, mB5.3/6, mb4.6/20, MLv4.5/17, Mw(mB)4.7/6*

IDC ***24*** *00:07:16.1±2.5, 1°.40N×126°.47E, h51km±21km, mb4.1/21, mbtmp4.3/22, ML4.4/1, MS3.5/4, Error ellipse: s-maj=21.2km s-min=10.3km az=82.0*

ISC 24 00:07:15.6±0.3, 1°.43N±0°.04×126°.48E±0°.05, h47km, n143, σ1ŝ31/146, mb4.6/57, MS3.6/3, 3C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**1.10**	**126**			**Pn**	**00 07 33.1**	**-1.5**
TNTI	**Ternate**	**1.10**	**126**	P		**Pn**	**00 07 33.3**	**-1.3**
TNTI				S		**Sn**	**00 07 48.3**	**-0.4**
TNTI	**Ternate**	**1.10**	**126**	P		**Pn**	**00 07 33.8**	**-0.8**
LBMI	**Labuha**	**2.29**	**154**	P		**Pn**	**00 07 50.8**	**-0.2**
LBMI				S		**Sn**	**00 08 17.7**	**-0.3**
SGSI	**Sangihe**	**2.44**	**337**	P		**Pn**	**00 07 53.5**	**+0.5**
KMSI	**Cibinong**	**2.64**	**251**	P		**Pn**	**00 07 55.8**	**0.0**
SANI	**Sanana**	**3.49**	**188**	P		**Pn**	**00 08 07.7**	**+0.3**
SANI	**Sanana**	**3.49**	**188**	P		**Pn**	**00 08 08.1**	**+0.7**
LUWI	**Luwuk**	**4.45**	**237**			**Pn**	**00 08 19.6**	**-1.0**
LUWI	**Luwuk**	**4.45**	**237**	P		**P

WR0					IAmb	IAmb	00 12 17.0		
	comp=Z,17nm,0.8s								
SSLB	**Suanglung**	**22.86**	**347**	P	**P**		**00 12 12.8**	**-2.4**	
SSLB					IAmb	IAmb	00 12 18.0		
	comp=Z,17nm,0.9s								
PSA00	**Pilbara Seismi**	**23.76**	**195**	P	**P**		**00 12 23.8**	**-0.1**	
PSA00	**Pilbara Seismi**	**23.76**	**195**	P	**P**		**00 12 26.2**	**+2.3**	
	comp=Z,15nm,1.6s								
QIS	**Mount Isa**	**25.35**	**150**	P	**P**		**00 12 40.2**	**+1.7**	
RPSI	**Rantau Prapat**	**27.57**	**273**	P	**P**		**00 12 55.9**	**-2.7**	
RPSI					IAmb	IAmb	00 12 59.0		
	comp=Z,24nm,1.2s								
CTA	**Charters Tower**	**28.86**	**139**	LR	LR		00 27 59.2		
	comp=Z,117nm,18.2s,baz=264,slow=43								
GYA	**Guiyang**	**31.34**	**324**	⇑P	**P**		**00 13 32.0**	**0.0**	
GYA				pmax	pmax				
	comp=Z,16nm,1.1s								
CMAR	**Chiang Mai Arr**	**31.88**	**304**	P	**P**		**00 13 38.2**	**+1.5**	
	comp=Z,0.8nm,0.3s,baz=108,slow=6.0,SNR=5.1								
CMAR				PcP	**PcP**		**00 16 27.9**	**+1.2**	
	comp=Z,0.7nm,0.3s,baz=106,slow=2.0,SNR=4.7								
	comp=Z,0.8nm,0.3s								
CMAR	**Chiang Mai Arr**	**31.88**	**304**	P	**P**		**00 13 35.2**	**-1.5**	
CHTO	**Chiang Mai**	**32.05**	**304**	P	**P**		**00 13 37.7**	**-0.6**	
ENH	**Enshi**	**32.91**	**332**	P	**P**		**00 13 44.7**	**-1.0**	
ENH					IAmb	IAmb	00 13 46.4		
	comp=Z,20nm,1.1s								
PZH	**PanZhiHua**	**34.45**	**318**	P	**P**		**00 14 02.1**	**+2.9**	
PZH				pmax	pmax				
	comp=Z,10.0nm,1.0s								
PZH				pmax	pmax				
	comp=Z,120nm,4.9s								
KSRS	**Korea Array**	**35.88**	**2**	P	**P**		**00 14 11.9**	**+0.8**	
	comp=Z,1.6nm,0.7s,baz=182,slow=10,SNR=6.8								
	comp=Z,1.6nm,0.7s								
STKA	**Stephens Creek**	**36.09**	**158**	P	**P**		**00 14 12.9**	**-0.2**	
	comp=Z,8.6nm,0.8s,baz=326,slow=9.7,SNR=8.5								
	comp=Z,8.6nm,0.8s								
STKA	**Stephens Creek**	**36.09**	**158**	P	**P**		**00 14 12.4**	**-0.6**	
XAN	**Xi'an**	**36.37**	**335**	P	**P**		**00 14 14.8**	**-0.7**	
XAN				pP	pP		00 14 22.4	-5.2	
XAN				sP	sP		00 14 26.9	-6.1	
XAN				pmax	pmax				
	comp=Z,13nm,0.9s								
MJAR	**Matsushiro Arr**	**36.59**	**16**	P	**P**		**00 14 16.7**	**-0.6**	
	comp=Z,0.8nm,0.3s,baz=172,slow=9.9,SNR=5.7								
	comp=Z,0.8nm,0.3s								
JSD	**Sado**	**38.01**	**15**	P	**P**		**00 14 28.6**	**-0.7**	
JSD					IAmb	IAmb	00 14 33.4		
	comp=Z,8.1nm,0.9s								
ARMA	**Armidale**	**39.71**	**145**	P	**P**		**00 14 44.9**	**+1.1**	
LZH	**Lanzhou**	**40.37**	**331**	*e*P	**P**		**00 14 50.6**	**+1.4**	
LZH				pP	pP		00 14 57.3	-4.2	
LZH				sP	sP		00 14 59.8	-7.0	
LZH				pmax	pmax				
	comp=Z,15nm,1.5s								
HHC	**Hu-ho-hao-te**	**41.50**	**343**	*e*P	**P**		**00 15 00.3**	**+1.9**	
HHC				pmax	pmax				
	comp=Z,24nm,0.9s								
HHC				pmax	pmax				
	comp=Z,100nm,8.2s								
USA0B	**Ussuriysk Arra**	**42.87**	**6**	P	**P**		**00 15 08.5**	**-0.8**	
USA0B					IAmb	IAmb	00 15 13.8		
	comp=Z,10nm,1.0s								
USRK	**Ussuriysk Ar.**	**42.87**	**6**	P	**P**		**00 15 10.0**	**+0.7**	
	comp=Z,3.3nm,0.7s,baz=195,slow=11,SNR=4.5								
	comp=Z,3.3nm,0.7s								
USRK	**Ussuriysk Ar.**	**42.87**	**6**	P	**P**		**00 15 09.6**	**+0.2**	
LSA	**Lhasa**	**43.80**	**313**	P	**P**		**00 15 17.7**	**0.0**	
LSA					IAmb	IAmb	00 15 19.1		
	comp=Z,11nm,1.2s								
BNX	**BinXian**	**44.14**	**1**	⇑P	**P**		**00 15 21.1**	**+1.6**	
BNX				pmax	pmax				
	comp=Z,6.0nm,0.8s								
BNX				pmax	pmax				
	comp=Z,95nm,6.2s								
GOMU	**GeErMu**	**45.35**	**323**	P	P		00 15 24.3	-5.5	
GOMU				pP	pP		00 15 27.8	-14	
GOMU				sP	sP		00 15 32.4	-15	
GOMU				pmax	pmax				
	comp=Z,2.0nm,0.6s								
GOMU				pmax	pmax				
	comp=Z,120nm,4.9s								
DZM	**Mont Dzumac**	**45.45**	**123**	P	**P**		**00 15 31.0**	**+0.5**	
DZM					IAmb	IAmb	00 15 35.1		
	comp=Z,16nm,1.5s								
KLR	**Kul'dur**	**47.84**	**5**	P	**P**		**00 15 48.7**	**+0.1**	
	comp=Z,3.2nm,0.6s,baz=184,slow=5.0,SNR=8.4								
	comp=Z,3.2nm,0.6s								
SONM	**Songino Array**	**49.40**	**342**	P	**P**		**00 16 00.3**	**-0.4**	
	comp=Z,3.1nm,0.8s,baz=160,slow=8.0,SNR=14								
SONM				PcP	**PcP**		**00 17 23.3**	**+0.7**	
	comp=Z,0.8nm,0.8s,baz=153,slow=4.5,SNR=1.9								
SONM				LR	LR		00 38 39.8		
	comp=Z,72nm,21.0s,baz=150,slow=38								
	comp=Z,3.1nm,0.8s								
SONM	**Songino Array**	**49.40**	**342**	P	**P**		**00 16 01.4**	**+0.6**	
WMQ	**Urumqi**	**54.47**	**326**	*e*P	**P**		**00 16 41.8**	**+3.2**	
PEA0B	**Petropavlovsk-**	**57.65**	**22**	P	**P**		**00 17 01.9**	**+0.9**	
PEA0B					IAmb	IAmb	00 17 06.3		
	comp=Z,9.8nm,1.0s								
PETK	**Petropavlovsk-**	**57.65**	**22**	P	**P**		**00 17 01.7**	**+0.7**	
	comp=Z,1.3nm,0.5s,baz=188,slow=5.8,SNR=6.6								
	comp=Z,1.3nm,0.5s								
PETK	**Petropavlovsk-**	**57.65**	**22**	P	**P**		**00 17 02.2**	**+1.2**	
TARG	**Taragay, Kyrgy**	**59.30**	**319**	P	**P**		**00 17 13.8**	**+0.5**	
TARG					IAmb	IAmb	00 17 16.9		
	comp=Z,8.4nm,0.9s								
MK31	**Makanchi Array**	**59.31**	**326**	IAmb	IAmb		00 17 14.4		
	comp=Z,4.1nm,0.8s								
MKAR	**Makanchi Array**	**59.31**	**326**	P	**P**		**00 17 11.4**	**-1.3**	
	comp=Z,3.3nm,0.5s,baz=118,slow=7.6,SNR=45								
MKAR				PcP	**PcP**		**00 18 00.3**	**-0.2**	
	comp=Z,2.0nm,0.8s,baz=122,slow=4.4,SNR=3.9								
	comp=Z,3.3nm,0.5s								
MKAR	**Makanchi Array**	**59.31**	**326**	P	**P**		**00 17 11.7**	**-1.0**	
MAKZ	**Makanchi**	**59.49**	**326**	P	**P**		**00 17 13.2**	**-0.8**	
MAKZ					IAmb	IAmb	00 17 16.2		
	comp=Z,14nm,1.2s								
KSH	**Kashi**	**59.51**	**316**	P	**P**		**00 17 15.3**	**+0.9**	
KSH				pP	pP		00 17 18.9	-8.3	
KSH				pmax	pmax				
	comp=Z,5.0nm,0.8s								
KDJ	**Kajisay**	**59.91**	**319**	P	**P**		**00 17 17.5**	**+0.3**	
LBZ	**Lake Benmore**	**59.94**	**145**	P	**P**		**00 17 17.5**	**+0.4**	
TUWZ	**Tuamarina**	**60.53**	**140**	P	**P**		**00 17 20.7**	**-0.5**	
BKZ	**Black Stump Fm**	**61.06**	**137**	P	**P**		**00 17 25.6**	**+0.6**	
ZAA0	**Zalesovo Array**	**62.52**	**334**	P	**P**		**00 17 33.2**	**-1.2**	
ZALV	**Zalesovo Beam**	**62.52**	**334**	P	**P**		**00 17 32.6**	**-1.8**	
	comp=Z,1.5nm,0.4s,baz=118,slow=6.4,SNR=10								
	comp=Z,1.5nm,0.4s								
KBL	**Kabul**	**62.73**	**308**	P	**P**		**00 17 34.9**	**-1.6**	
KBL					IAmb	IAmb	00 17 37.3		
	comp=Z,14nm,1.2s								
GAR	**Garm**	**63.31**	**314**	P	**P**		**00 17 39.9**	**-0.2**	
BTK	**Batken**	**63.34**	**315**	P	**P**		**00 17 39.6**	**-0.6**	
BTK					IAmb	IAmb	00 17 41.8		
	comp=Z,13nm,1.2s								
KURK	**Kurchatov**	**63.55**	**328**	P	**P**		**00 17 40.3**	**-0.9**	
CHGR	**Chuyangaron**	**64.03**	**313**	P	**P**		**00 17 43.7**	**-1.1**	
KK31	**Karatay Array**	**64.75**	**318**	P	**P**		**00 17 48.3**	**-1.1**	
KK31					IAmb	IAmb	00 17 50.7		
	comp=Z,7.4nm,1.2s								
KKAR	**Karatay Array**	**64.75**	**318**	P	**P**		**00 17 48.3**	**-1.1**	
KKAR					IAmb	IAmb	00 17 50.7		
	comp=Z,7.4nm,1.2s								
KKAR	**Karatay Array**	**64.75**	**318**	P	**P**		**00 17 49.0**	**-0.4**	
CASY	**Casey**	**68.52**	**187**	P	**P**		**00 18 13.2**	**+0.4**	
CASY					IAmb	IAmb	00 18 20.5		
	comp=Z,6.5nm,1.3s								
TIXI	**Tiksi**	**70.13**	**1**	LR	LR		00 52 27.2		
	comp=Z,37nm,18.4s,baz=181,slow=39								
TIXI	**Tiksi**	**70.13**	**1**	P	**P**		**00 18 22.5**	**-0.2**	
MSEY	**Mahe Island**	**71.19**	**265**	P	**P**		**00 18 30.5**	**0.0**	
ABKAR	**Akbulak array**	**73.77**	**321**	P	**P**		**00 18 44.2**	**-0.8**	
AKTO	**Aktyubinsk**	**75.31**	**322**	P	**P**		**00 18 53.4**	**-0.6**	
	comp=Z,4.2nm,0.8s,baz=73,slow=11,SNR=3.6								
	comp=Z,4.2nm,0.8s								
ARU	**Arti**	**76.74**	**328**	P	**P**		**00 19 01.1**	**-0.8**	
ARU					IAmb	IAmb	00 19 02.7		
	comp=Z,7.5nm,0.9s								
RAYN	**Ar Rayn**	**81.16**	**293**	P	**P**		**00 19 26.5**	**-0.4**	
RAYN					IAmb	IAmb	00 19 29.9		
	comp=Z,6.7nm,1.2s								
VNDA	**Vanda**	**81.19**	**173**	P	**P**		**00 19 26.1**	**+0.2**	
	comp=Z,0.9nm,0.5s,baz=318,slow=6.8,SNR=15								
	comp=Z,0.9nm,0.5s								
VNDA	**Vanda**	**81.19**	**173**	P	**P**		**00 19 26.4**	**+0.5**	
MAW	**Mawson**	**81.52**	**200**	P	**P**		**00 19 28.3**	**+0.6**	
	comp=Z,3.9nm,1.1s,baz=71,slow=5.1,SNR=2.8								
	comp=Z,3.9nm,1.1s								
MAW	**Mawson**	**81.52**	**200**	P	**P**		**00 19 28.5**	**+0.7**	
TTA	**Tatalina**	**83.05**	**27**	P	**P**		**00 19 37.9**	**+1.8**	
L19K	**White Mountain**	**83.45**	**28**	P	**P**		**00 19 38.5**	**+0.4**	
L19K					IAmb	IAmb	00 19 40.4		
	comp=Z,5.7nm,1.1s								
GEVA	**Gevas**	**83.95**	**308**	P	**P**		**00 19 41.9**	**+0.5**	
KDAK	**Kodiak Island**	**83.96**	**32**	P	**P**		**00 19 41.8**	**+1.2**	
	comp=Z,4.5nm,0.8s,baz=270,slow=5.1,SNR=1.7								
	comp=Z,4.5nm,0.8s								
J20K	**Nowinta River**	**84.09**	**26**	P	**P**		**00 19 42.0**	**+0.8**	
J20K					IAmb	IAmb	00 19 43.6		
	comp=Z,6.2nm,1.4s								
KBZ	**Khabaz**	**84.38**	**314**	P	**P**		**00 19 43.9**	**+0.8**	
	comp=Z,1.5nm,0.6s,baz=110,slow=8.8,SNR=3.6								
	comp=Z,1.5nm,0.6s								
GURO	**Guroymak-BITLI**	**84.77**	**308**	P	**P**		**00 19 45.3**	**-0.1**	
ILAR	**Eielson Array**	**87.28**	**25**	P	**P**		**00 19 56.3**	**-0.8**	
	comp=Z,0.4nm,0.7s,baz=236,slow=4.9,SNR=3.0								
	comp=Z,0.4nm,0.7s								
KLMR	**Klimovskoe**	**87.28**	**331**	*e*P	**P**		**00 19 54.8**	**-2.3**	
KLMR				AMP			00 20 01.1		
	comp=Z,7.0nm,0.7s								
MESA	**MESA**	**89.56**	**30**	P	**P**		**00 20 07.4**	**-0.8**	
GHAJ	**Ghor Haditha**	**90.05**	**301**	P	**P**		**00 20 11.3**	**+0.5**	
BRTR	**Keskin Array B**	**91.29**	**310**	P	**P**		**00 20 16.1**	**-0.5**	
	comp=Z,1.3nm,0.8s,baz=140,slow=4.7,SNR=4.7								
	comp=Z,1.3nm,0.8s								
ARCES	**ARCESS Array B**	**92.51**	**340**	P	**P**		**00 20 20.9**	**-0.5**	
	comp=Z,1.8nm,0.9s,baz=87,slow=6.2,SNR=7.3								
	comp=Z,1.8nm,0.9s								
AKASG	**Malin Array Be**	**93.51**	**321**	P	**P**		**00 20 27.0**	**+0.6**	
	comp=Z,0.2nm,0.4s,baz=57,slow=3.9,SNR=5.0								
	comp=Z,0.2nm,0.4s								
FINES	**FINESS Array B**	**93.73**	**332**	P	**P**		**00 20 27.4**	**+0.2**	
	comp=Z,1.5nm,0.6s,baz=47,slow=5.0,SNR=11								
	comp=Z,1.5nm,0.6s								
BURAR	**Bucovina Array**	**96.54**	**318**	IAmb	IAmb		00 20 45.8		
	comp=Z,3.6nm,0.8s								
BUR08	**Bucovina Ar. S**	**96.55**	**318**	P	**P**		**00 20 40.8**	**+0.3**	
BUR08					IAmb	IAmb	00 20 45.0		
	comp=Z,4.9nm,1.1s								
SCHQ	**Schefferville**	**122.86**	**9**	PKP	**PKPdf**		**00 26 06.5**	**-0.1**	
	comp=Z,0.7nm,0.3s,baz=40,slow=0.9,SNR=5.4								
TXAR	**Lajitas Array**	**123.18**	**53**	PKP	**PKiKP**		**00 26 09.3**	**+0.9**	
	comp=Z,0.1nm,0.5s,baz=230,slow=4.2,SNR=2.3								
TORD	**Torodi Ar. Bea**	**123.37**	**287**	PKP	**PKPdf**		**00 26 08.7**	**0.0**	
	comp=Z,0.9nm,0.7s,baz=58,slow=2.2,SNR=5.5								

*IDC **24** 00:21:00.6±9.4, 37.00N×70.49E, h182km±65km, mb2.9/3, mbtmp3.4/7, Error ellipse: s-maj=92.9km s-min=53.0km az=168.0*
ISC 24 00:21:01.0±2.2, 37.0N±0.2×70.9E±0.1, h200km, n9, σ1§09/12, mb3.2/3, 1C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.14**	**358**	⇑Pn	**Pn**		**00 22 29.8**	**-0.1**
	1.5nm,0.2s,baz=164,slow=13,SNR=43							
KK31				⇓Sn	**Sn**		**00 23 40.0**	**-0.4**
	4.9nm,0.6s,baz=173,slow=24,SNR=9.7							
AAK	**Ala-Archa**	**6.32**	**25**	P	**Pn**		**00 22 32.8**	**+0.3**
	3.0nm,0.3s,baz=185,slow=8.8,SNR=4.5							
AAK				S	**Sn**		**00 23 46.6**	**+1.6**
	2.7nm,0.4s,baz=332,slow=23,SNR=5.8							
TKM2	**Tokmak 2**	**6.98**	**30**	⇓Pn	**Pn**		**00 22 40.1**	**-0.9**
	3.8nm,0.5s							
TKM2				⇓Sn	**Sn**		**00 23 58.5**	**-2.0**
	3.9nm,1.1s							
MKAR	**Makanchi Array**	**12.99**	**37**	P	**P**		**00 24 01.9**	**+0.4**
	0.5nm,0.7s,baz=212,slow=13,SNR=3.7							
KURBB	**Kurchatov Arra**	**14.73**	**20**	P	**P**		**00 24 21.5**	**+0.9**
	0.1nm,0.5s,baz=212,slow=12,SNR=2.8							
ZALV	**Zalesovo Beam**	**19.55**	**25**	P	**P**		**00 25 14.3**	**+1.1**
	1.3nm,0.3s,baz=225,slow=11,SNR=8.7							
FINES	**FINESS Array B**	**37.03**	**326**	P	**P**		**00 27 50.7**	**-0.5**
	0.7nm,0.9s,baz=119,slow=8.1,SNR=3.6							
	0.7nm,0.9s							
ARCES	**ARCESS Array B**	**40.67**	**337**	P	**P**		**00 28 21.7**	**+0.4**
	0.6nm,0.8s,baz=106,slow=9.5,SNR=5.0							
	0.6nm,0.8s							
NOA	**NORSAR Array B**	**43.94**	**323**	P	**P**		**00 28 46.9**	**-0.8**
	0.2nm,0.5s,baz=96,slow=7.8,SNR=3.8							
	0.2nm,0.5s							

*MOS **24** 00:29:27.4±0.0, 41.21N×46.31E, h13km, MPVA3.3*
*TIF **24** 00:29:27.9, 41.15N×46.24E, h26km±1km*
*DDA **24** 00:29:28.6±0.0, 41.22N×45.90E, h8km±6km, ML2.8*
*DRS **24** 00:29:29.2±0.0, 41.13N×46.20E, h18km*
ISC 24 00:29:29.1±1.2, 41.13N±0.03×46.21E±0.02, h24km±14km, n38, σ1§54/74, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
DDFL	**Dedoflistskaro**	**0.32**	**348**	P	**Pn**		**00 29 37.8**	**-0.4**
DDFL				S	**Sn**		**00 29 45.9**	**+1.7**
DDFL	**Dedoflistskaro**	**0.32**	**348**	P	**Pn**		**00 29 37.9**	**-0.4**
DDFL				*i* AML	AML		00 29 46.0	
	comp=N,1μm,0.3s							
DDFL				*i* AML	AML		00 29 46.0	
	comp=E,1μm,0.4s							
DDFL				S	**Sn**		**00 29 46.1**	**+1.8**
LGD	**Lagodekhi**	**0.70**	**2**	P	**Pb**		**00 29 41.5**	**-1.2**
LGD				S	**Sb**		**00 29 51.9**	**0.0**
BTNK	**Botanikuri**	**1.19**	**298**	P	Pn		00 29 45.2	-5.1
BTNK				S	**Sn**		**00 30 01.4**	**-4.3**
BTNK	**Botanikuri**	**1.19**	**298**	P	Pn		00 29 45.2	-5.0
BTNK				S	**Sn**		**00 30 00.9**	**-4.8**
BTNK				*i* AML	AML		00 30 01.0	
	comp=Z,726nm,0.2s							
BTNK				*i* AML	AML		00 30 01.0	
	comp=E,2μm,0.2s							
BTNK				*i* AML	AML		00 30 26.0	
	comp=N,254nm,58.7s							
AKT	**Akhty**	**1.20**	**73**	*i* Pg	**Pn**		**00 29 49.8**	**-0.6**
AKT				*e*Sg	**Sb**		**00 30 05.7**	**-0.6**
KMKR	**Kumukh**	**1.20**	**34**	*e*Pg	**Pn**		**00 29 50.0**	**-0.5**
KMKR				*e*Sg	**Sb**		**00 30 06.0**	**-0.5**
SEAG	**Tbilisi Sea**	**1.23**	**301**	P	**Pn**		**00 29 51.0**	**+0.2**
SEAG				S	**Sb**		**00 30 07.6**	**+0.5**
GNBR	**Gunib**	**1.38**	**24**	*e*Pg	**Pn**		**00 29 53.1**	**+0.2**
GNBR				*e*Sg	**Sb**		**00 30 12.1**	**+0.7**
KZRT	**Kazreti**	**1.39**	**281**	P	**Pn**		**00 29 51.9**	**-1.1**
KZRT				S	**Sn**		**00 30 09.6**	**-0.9**
XNZR	**Khunzakh**	**1.46**	**15**	*e*Pg	**Pb**		**00 29 54.6**	**-1.0**
XNZR				*e*Sg	**Sb**		**00 30 14.0**	**+0.3**
URKR	**Urkarakh**	**1.49**	**46**	*e*Pg	**Pb**		**00 29 55.3**	**-0.8**
URKR				*e*Sg	**Sb**		**00 30 15.5**	**+0.9**
KSMR	**Kasumkent**	**1.52**	**71**	*e*Pg	**Pn**		**00 29 55.0**	**+0.2**
KSMR				*e*Sg	**Sb**		**00 30 15.9**	**+0.4**
BTLR	**Botlikh**	**1.53**	**0**	*e*Pg	**Pn**		**00 29 55.6**	**+0.7**
BTLR				*e*Sg	**Sb**		**00 30 16.1**	**+0.4**
DMNI	**Dmanisi**	**1.53**	**278**	P	**Pn**		**00 29 54.4**	**-0.6**
DMNI				S	**Sn**		**00 30 14.6**	**+0.3**
ARKR	**Arakani**	**1.58**	**22**	*e*Pg	**Pb**		**00 29 56.8**	**-0.9**
ARKR				*e*Sg	**Sb**		**00 30 17.9**	**+0.6**
UNCR	**Uncukul**	**1.64**	**15**	*e*Pg	**Pb**		**00 29 57.6**	**-1.0**
UNCR				*e*Sg	**Sb**		**00 30 19.6**	**+0.7**
SGKR	**Sergokala**	**1.71**	**39**	*e*Pg	**Pb**		**00 29 58.7**	**-1.1**
SGKR				*e*Sg	**Sb**		**00 30 21.6**	**+0.6**
BUJR	**Buynaksk**	**1.82**	**21**	*e*Pg	**Pn**		**00 29 59.9**	**+1.0**
BUJR				*e*Sg	**Sb**		**00 30 23.9**	**-0.1**
DVE	**Vedeno**	**1.82**	**358**	*e*Pg	**Pb**		**00 30 00.9**	**-0.9**
DVE				*e*Sg	**Sb**		**00 30 25.2**	**+1.0**
DRN	**Derbent**	**1.83**	**60**	*e*Pg	**Pb**		**00 30 01.9**	**+0.1**
DRN				*e*Sg	**Sb**		**00 30 26.8**	**+2.6**
GUDG	**Gudauri**	**1.85**	**316**	P	**Pn**		**00 30 00.3**	**+0.8**
GUDG				S	**Sb**		**00 30 24.7**	**-0.6**
PNSH	**Pansheti**	**1.91**	**322**	P	**Pn**		**00 30 01.0**	**+0.7**
PNSH				S	**Sb**		**00 30 26.1**	**-0.8**
DBC	**Dubki**	**1.94**	**14**	*e*Pg	**Pb**		**00 30 02.9**	**-0.9**
DBC				*e*Sg	**Sb**		**00 30 28.7**	**+1.0**
DLMR	**Dylym**	**1.96**	**9**	*e*Pg	**Pb**		**00 30 03.1**	**-0.9**
DLMR				*e*Sg	**Sb**		**00 30 29.4**	**+1.3**
MTEO	**Meteo**	**1.99**	**322**	P	**Pn**		**00 30 02.7**	**+1.1**
MTEO				S	**Sb**		**00 30 27.9**	**-1.3**
EAK	**Akyaka**	**2.02**	**258**	P	**Pn**		**00 30 03.2**	**+1.5**
EAK				S	**Sb**		**00 30 29.6**	**-0.4**
IGDI	**IGDIR**	**2.06**	**233**	P	**Pn**		**00 30 03.8**	**+1.6**
IGDI				S	**Sb**		**00 30 30.9**	**0.0**
GROC	**Groznyy**	**2.09**	**352**	*e*Pg	**Pb**		**00 30 07.8**	**+1.6**
GROC				*i* Sg	**Sb**		**00 30 34.6**	**+2.8**
BKRG	**Bakuriani**	**2.11**	**288**	P	**Pn**		**00 30 03.9**	**+0.9**
BKRG				S	**Sb**		**00 30 32.1**	**-0.5**
KMGR	**Komgaron**	**2.17**	**333**	*e*Pg	**Pb**		**00 30 09.8**	**+2.2**
KMGR				*e*Sg	**Sb**		**00 30 38.5**	**+4.5**
LACR	**Lac**	**2.21**	**321**	*e*Pg	**Pb**		**00 30 07.0**	**-1.4**
LACR				*i* Sg	**Sb**		**00 30 36.6**	**+1.2**
DIGO	**Kars**	**2.27**	**252**	P	**Pb**		**00 30 08.8**	**-0.7**
DIGO				S	**Sb**		**00 30 37.4**	**+0.2**
DIGO				*i* AML	AML		00 30 45.0	
	comp=E,61nm,0.5s							
ZEI	**Tsey**	**2.38**	**315**	*e*Pn	**Pn**		**00 30 07.8**	**+1.0**
ZEI				*i* Sn	**Sb**		**00 30 38.8**	**-1.7**
ARNR	**Ardon**	**2.50**	**326**	*e*Pn	**Pb**		**00 30 14.3**	**+1.1**
ARNR				*e*Sn	**Sb**		**00 30 46.4**	**+3.0**
EPOS	**Posof**	**2.65**	**279**	P	**Pb**		**00 30 14.4**	**-1.4**
EPOS				S	**Sb**		**00 30 48.1**	**+0.1**
KOTA	**Agri, Merkez-K**	**2.65**	**241**	P	**Pn**		**00 30 13.0**	**+2.6**
KOTA				S	**Sb**		**00 30 51.3**	**+3.3**
TKB	**Tkibuli**	**2.69**	**298**	P	**Pn**		**00 30 13.6**	**+2.7**
TKB				S	**Sb**		**00 30 48.6**	**-0.6**

*IDC **24** 00:41:31.8±0.5, 2.70S×110.09E, h0km, mb4.3/18, mbtmp4.3/18, MS3.7/17, Error ellipse: s-maj=23.3km s-min=13.2km az=64.0*
*DJA **24** 00:41:34.1±0.1, 3.3S±2.3×11.0E±.1°, h10km, M5.0/34, mB5.4/12, mb4.9/34, MLv5.4/33, Mw(mB)4.8/12*
*NEIC **24** 00:41:35±1.2, 2.67S±0.06×110.12E±0.07, h15km, mb4.7/56, Error ellipse: s-maj=10.0km s-min=8.7km az=58.0*
ISC 24 00:41:34.0±0.3, 2.62S±0.04×110.20E±0.04, h10km, n160, σ1§21/151, mb4.6/50, MS3.7/21, 1C-1D, Borneo

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PBKI	**Pangkalan Bun**	**1.47**	**93**	P	**Pn**		**00 41 59.5**	**-1.2**
PBKI				S	**Sg**		**00 42 20.9**	**-0.6**
TPI	**Tanjungpandan**	**2.54**	**267**	P	**Pn**		**00 42 14.1**	**-1.3**
STKI	**Sintang**	**2.96**	**26**	P	**Pn**		**00 42 19.2**	**-1.9**
STKI				Pg	**Pb**		**00 42 26.2**	**-0.6**
STKI				S	**Sb**		**00 43 04.0**	**+0.9**
UWJI	**Ujung Watu**	**3.85**	**169**	P	**Pn**		**00 42 35.5**	**+2.1**
UWJI				Pg	**Pg**		**00 42 47.9**	**0.0**
BWJI	**Bawean**	**4.04**	**143**	P	**Pn**		**00 42 37.9**	**+1.9**
KSM	**Kuching**	**4.06**	**2**	Pn	**Pn**		**00 42 37.1**	**+0.8**
PPBI	**Pangkai Pinang**	**4.08**	**276**	P	**Pn**		**00 42 35.7**	**-0.9**
PPBI				Pg	**Pb**		**00 42 48.8**	**+2.7**
SMRI	**Semarang**	**4.41**	**177**	P	**Pn**		**00 42 40.5**	**-0.6**
SMRI	**Semarang**	**4.41**	**177**	P	**Pn**		**00 42 42.2**	**+1.1**
TBJI	**Tambak Boyo**	**4.49**	**159**	P	**Pn**		**00 42 42.4**	**+0.3**
BBKI	**Banjar Baru**	**4.71**	**100**	P	**Pn**		**00 42 44.8**	**-0.5**
BBKI				Pg	**Pb**		**00 42 59.2**	**+2.4**
GRJI	**Gresik**	**4.84**	**152**	P	**Pn**		**00 42 48.8**	**+1.8**
MTKI	**Muara Teweh, K**	**4.98**	**71**	P	**Pn**		**00 42 49.1**	**+0.1**
DBJI	**Dramaga**	**5.21**	**221**	P	**Pn**		**00 42 51.4**	**-0.7**
	4.9nm587nm,1.1s							
WOJI	**Wonogiri, Jawa**	**5.24**	**172**	P	**P

KDU Kakadu 24.21 116 P **P** **00 46 51.6 +0.4**
baz=24,SNR=3.5
WRKA Warakurna 28.30 144 P **P** **00 47 28.1 0.0**
baz=28,SNR=3.9
KMI Kunming 28.51 346 ⇑P **P** **00 47 25.5 -4.6**
KMI pmax pmax
comp=Z,12nm,0.6s
KMI LR LR
comp=N,320nm,12.3s
KMI LR LR
comp=E,410nm,9.6s
KMI LR LR
comp=Z,330nm,13.5s
GYA Guiyang 29.11 353 ⇓P P 00 47 42.1 +6.8
GYA pmax pmax
comp=Z,25nm,0.6s
WB0 Warramunga Arr 29.14 128 P **P** **00 47 34.0 -1.6**
WRA Warramunga Arr 29.19 128 P **P** **00 47 34.4 -1.7**
comp=Z,4.7nm,0.7s,baz=307,slow=9.4,SNR=40
WRA LR LR 01 00 34.8
comp=Z,127nm,18.9s,baz=89,slow=39
comp=Z,4.7nm,0.7s
WRA Warramunga Arr 29.19 128 P **P** **00 47 34.7 -1.3**
WRAB Tennant Creek 29.20 128 P **P** **00 47 35.6 -0.5**
WB2 Warramunga Arr 29.20 128 P **P** **00 47 35.0 -1.1**
WB2 IAmb IAmb 00 47 36.5
comp=Z,9.4nm,0.8s
WR0 Warramunga Arr 29.36 128 P **P** **00 47 36.2 -1.4**
WR0 IAmb IAmb 00 47 38.0
comp=Z,9.2nm,0.8s
PZH PanZhiHua 30.08 345 P **P** **00 47 46.9 +3.0**
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,100nm,4.7s
ASAR Alice Springs 31.05 134 P **P** **00 47 51.6 -0.9**
FORT Forrest 32.71 151 P **P** **00 48 06.4 -0.5**
QIS Mount Isa 33.76 124 P **P** **00 48 15.4 -0.9**
baz=34,SNR=4.8
JOW Kunigami 34.08 30 LR LR 01 02 41.5
comp=Z,98nm,20.0s,baz=313,slow=37
NJ2 Nanjing 35.44 13 *eP* **P** **00 48 31.5 +0.9**
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
MTSU Mount Surprise 36.82 117 P **P** **00 48 42.6 -0.1**
baz=37,SNR=6.8
LSA Lhasa 36.94 332 P **P** **00 48 44.1 +0.1**
LSA IAmb IAmb 00 48 47.5
comp=Z,9.1nm,1.0s
GUMO Guam 37.97 64 LR LR 01 06 32.6
comp=Z,41nm,18.7s,baz=98,slow=39
LZH Lanzhou 38.96 352 *eP* **P** **00 49 03.3 +2.7**
LZH pP sP 00 49 08.8 +3.8
LZH pmax pmax
comp=Z,22nm,1.5s
LZH LR LR
comp=N,160nm,11.3s
LZH LR LR
comp=E,240nm,12.0s
LZH LR LR
comp=Z,130nm,12.4s
CTA Charters Tower 39.23 119 P **P** **00 49 02.8 -0.3**
comp=Z,1.3nm,0.4s,baz=270,slow=11,SNR=4.4
CTA LR LR 01 06 02.7
comp=Z,141nm,21.2s,baz=270,slow=37
comp=Z,1.3nm,0.4s
GOMU GeErMu 41.20 341 P P 00 49 07.9 -12
GOMU pP pP 00 49 11.5 -11
GOMU sP sP 00 49 15.4 -8.4
GOMU S S 00 55 18.5 -15
GOMU pmax pmax
comp=Z,2.0nm,0.5s
GOMU pmax pmax
comp=Z,49nm,5.0s
GOMU LR LR
comp=N,100nm,16.3s
GOMU LR LR
comp=E,300nm,16.4s
GOMU LR LR
comp=Z,130nm,15.9s
STKA Stephens Creek 41.47 138 P **P** **00 49 20.2 -1.2**
comp=Z,4.7nm,0.7s,baz=313,slow=11,SNR=5.5
STKA LR LR 01 08 02.4
comp=Z,103nm,18.1s,baz=4.7,slow=38
comp=Z,4.7nm,0.7s
STKA Stephens Creek 41.47 138 IAmb IAmb 00 49 22.4
comp=Z,1.6nm,0.9s
GTA Gaotai 42.90 348 P **P** **00 49 35.8 +2.8**
GTA pP sP 00 49 40.8 +3.4
GTA pmax pmax
comp=Z,4.0nm,1.0s
GTA pmax pmax
comp=Z,43nm,5.3s
GTA LR LR
comp=N,160nm,16.7s
GTA LR LR
comp=E,290nm,17.4s
GTA LR LR
comp=Z,120nm,16.4s
KSRS Korea Array 43.13 21 P **P** **00 49 35.8 +1.0**
comp=Z,0.8nm,0.5s,baz=199,slow=10,SNR=4.8
KSRS LR LR 01 09 45.6
comp=Z,39nm,18.6s,baz=170,slow=39
comp=Z,0.8nm,0.5s
JHS Saijyo 43.16 28 P **P** **00 49 35.2 +0.1**
JHS IAmb IAmb 00 49 40.2
comp=Z,12nm,1.1s
HHC Hu-ho-hao-te 43.28 2 *eP* P 00 49 40.3 +4.3
HHC pmax pmax
comp=Z,20nm,1.1s
HHC pmax pmax
comp=Z,130nm,8.8s
TOO Toolangi 47.52 142 P **P** **00 50 09.8 +0.1**
ARMA Armidale 47.95 130 P **P** **00 50 13.3 +0.1**
baz=48,SNR=5.2
SONM Songino Array 50.35 357 P **P** **00 50 31.6 +0.3**
comp=Z,0.6nm,0.6s,baz=168,slow=7.4,SNR=5.2
comp=Z,0.6nm,0.6s
WMQ Urumqi 50.45 339 *eP* **P** **00 50 34.4 +2.3**
USRK Ussuriysk Ar. 50.53 20 P **P** **00 50 32.9 +0.3**
comp=Z,7.0nm,0.9s,baz=199,slow=7.6,SNR=7.6
comp=Z,7.0nm,0.9s
USRK Ussuriysk Ar. 50.53 20 P **P** **00 50 32.5 -0.1**
KSH Kashi 52.40 327 P **P** **00 50 44.9 -1.9**
KSH pmax pmax
comp=Z,4.0nm,1.4s
KBL Kabul 53.47 317 P **P** **00 50 53.7 -1.2**
KBL IAmb IAmb 00 50 54.9
comp=Z,9.1nm,1.1s
LHI Lord Howe Isla 54.21 128 P **P** **00 50 58.1 -2.1**
baz=54,SNR=3.1
DRK Karamyk 54.74 324 P **P** **00 51 04.5 +0.2**
ASAJ Asahikawa 54.83 28 LR LR 01 15 58.4
comp=Z,18nm,19.9s,baz=236,slow=38
MK31 Makanchi Array 55.00 337 P **P** **00 51 05.5 -0.1**
MK31 IAmb IAmb 00 51 07.4
comp=Z,5.2nm,0.8s
MKAR Makanchi Array 55.00 337 P **P** **00 51 05.1 -0.6**
comp=Z,5.1nm,0.7s,baz=144,slow=7.4,SNR=41
comp=Z,5.1nm,0.7s
MKAR Makanchi Array 55.00 337 P **P** **00 51 05.5 -0.2**
MAKZ Makanchi 55.13 337 P **P** **00 51 06.9 +0.3**
GAR Garm 55.33 323 P **P** **00 51 07.6 -0.7**
AAK Ala-Archa 55.39 328 LR LR 01 17 14.9
comp=Z,64nm,20.6s,baz=148,slow=39
AAK Ala-Archa 55.39 328 P **P** **00 51 08.9 +0.2**
AAK IAmb IAmb 00 51 10.9
comp=Z,5.7nm,1.0s
BTK Batken 55.70 324 P **P** **00 51 10.1 -0.8**
BTK IAmb IAmb 00 51 11.9
comp=Z,6.3nm,0.8s
WSAR Wadi Sarin 56.40 300 LR LR 01 15 29.7
comp=Z,40nm,18.2s,baz=122,slow=36
KK31 Karatay Array 57.85 326 P **P** **00 51 25.4 -0.7**
KK31 IAmb IAmb 00 51 28.2
comp=Z,3.9nm,0.9s
KKAR Karatay Array 57.85 326 P **P** **00 51 25.4 -0.6**
KURK Kurchatov 59.60 337 P **P** **00 51 37.8 -0.2**
ZAA0 Zalesovo Array 60.20 343 P **P** **00 51 41.5 -0.6**
ZALV Zalesovo Beam 60.20 343 P **P** **00 51 41.1 -1.0**
comp=Z,14nm,0.7s,baz=147,slow=5.0,SNR=54
ZALV LR LR 01 19 13.7
comp=Z,47nm,19.1s,baz=198,slow=38
comp=Z,14nm,0.7s
GEYT Alibeck 62.76 315 P **P** **00 51 58.6 -1.2**
comp=Z,6.4nm,0.8s,baz=126,slow=8.6,SNR=9.1
GEYT LR LR 01 24 39.2
comp=Z,41nm,19.2s,baz=171,slow=41
comp=Z,6.4nm,0.8s
GEYT Alibeck 62.76 315 P **P** **00 51 58.9 -0.9**
GEYT IAmb IAmb 00 52 00.6
comp=Z,8.2nm,1.1s
GYA0B ALIBECK ARRAY 62.76 315 P **P** **00 51 58.6 -1.2**
GYA0B IAmb IAmb 00 52 00.0
comp=Z,6.7nm,0.9s
CASY Casey 63.54 180 P **P** **00 52 04.3 0.0**
VOI Vohitsoka 64.40 247 P **P** **00 52 10.5 -0.6**
VOI IAmb IAmb 00 52 28.2
comp=Z,8.2nm,1.0s
ABKAR Akbulak array 67.40 327 P **P** **00 52 28.9 -0.8**
ODZ Otahua Downs 67.59 138 P **P** **00 52 30.6 -0.4**
ODZ IAmb IAmb 00 52 46.3
comp=Z,6.3nm,0.9s
MSVF Nonsavu 68.12 108 LR LR 01 23 44.9
comp=Z,188nm,18.1s,baz=99,slow=37
CMWZ Cape Campbell 69.05 134 P **P** **00 52 39.8 -0.4**
KIBK Kibwezi 72.08 268 P **P** **00 52 58.6 -0.7**
KIBK IAmb IAmb 00 53 00.5
comp=Z,6.2nm,1.1s
ARU Arti 72.14 333 P **P** **00 52 58.5 -0.2**
ARU IAmb IAmb 00 52 59.8
comp=Z,6.6nm,1.0s
MAW Mawson 72.46 197 P **P** **00 52 59.9 -0.6**
comp=Z,1.5nm,0.8s,baz=63,slow=9.0,SNR=1.8
comp=Z,1.5nm,0.8s
KMBO Kilima Mbogo 72.91 270 P **P** **00 53 04.2 -0.4**
comp=Z,2.0nm,0.8s,baz=63,slow=10,SNR=3.7
comp=Z,2.0nm,0.8s
KMBO Kilima Mbogo 72.91 270 IAmb IAmb 00 53 07.2
comp=Z,3.2nm,1.1s
GNI Garni 73.20 313 P **P** **00 53 05.5 -0.2**
GNI IAmb IAmb 00 53 07.6
comp=Z,3.7nm,0.8s
KARS Kars 74.56 313 P **P** **00 53 12.7 -0.9**
GURO Guroymak-BITLI 74.74 311 P **P** **00 53 13.6 -1.0**
GURO IAmb IAmb 00 53 15.3
comp=Z,7.2nm,1.0s
TIXI Tiksi 75.12 6 P **P** **00 53 15.5 -0.5**
MARD Mardin 75.37 310 P **P** **00 53 17.1 -1.2**
KBZ Khabaz 75.63 316 P **P** **00 53 19.4 0.0**
comp=Z,3.7nm,0.8s,baz=136,slow=6.2,SNR=7.1
comp=Z,3.7nm,0.8s
SMY Shemya 76.63 34 P **P** **00 53 25.1 +0.2**
MBAR Mbarara 79.44 270 P **P** **00 53 40.6 -1.1**
MBAR IAmb IAmb 00 53 43.0
comp=Z,5.3nm,1.0s
BNN Bunyan 79.51 310 P **P** **00 53 40.0 -1.5**
VNDA Vanda 79.68 170 P **P** **00 53 40.7 -0.8**
comp=Z,1.2nm,0.7s,baz=308,slow=8.1,SNR=7.9
VNDA LR LR 01 28 12.7
comp=Z,72nm,19.4s,baz=100,slow=35
comp=Z,1.2nm,0.7s
VNDA Vanda 79.68 170 IAmb IAmb 00 53 50.0
comp=Z,2.4nm,1.1s
CSS Mathiatis 80.76 306 P **P** **00 53 46.7 -1.4**
CSS IAmb IAmb 00 53 50.9
comp=Z,8.5nm,1.0s
BR131 Keskin Array S 81.36 311 P **P** **00 53 49.8 -1.6**
BR131 IAmb IAmb 00 53 51.8
comp=Z,5.1nm,0.8s
BRTR Keskin Array B 81.36 311 P **P** **00 53 49.7 -1.8**
comp=Z,2.8nm,0.8s,baz=130,slow=7.5,SNR=11
comp=Z,2.8nm,0.8s
BRTR Keskin Array B 81.36 311 P **P** **00 53 49.8 -1.6**
KLMR Klimovskoe 82.98 332 *eP* **P** **00 53 58.2 -1.0**
KLMR AMP 00 54 03.1
comp=Z,4.0nm,0.9s
ELL Elmali 83.78 307 P **P** **00 54 03.4 -0.7**
LBTB Lobatse 84.01 245 P **P** **00 54 05.1 -0.4**
LBTB IAmb IAmb 00 54 06.0
comp=Z,5.3nm,0.8s
BOSA Boshof 84.32 242 P **P** **00 54 05.1 -1.9**
comp=Z,2.1nm,0.5s,baz=90,slow=4.8,SNR=11
comp=Z,2.1nm,0.5s
AKASG Malin Array Be 86.29 321 P **P** **00 54 14.8 -1.3**
comp=Z,0.4nm,0.4s,baz=89,slow=4.3,SNR=7.2
comp=Z,0.4nm,0.4s
QSPA South Pole Qui 87.34 180 P **P** **00 54 20.6 -0.6**
baz=313,slow=2.0
MLR Muntele Rosu 87.81 316 P **P** **00 54 22.9 -1.0**
MLR IAmb IAmb 00 54 28.8
comp=Z,2.8nm,1.0s
BUR08 Bucovina Ar. S 88.54 318 P **P** **00 54 26.5 -0.7**
FINES FINESS Array B 89.46 331 P **P** **00 54 31.3 +0.2**
comp=Z,0.9nm,0.8s,baz=91,slow=7.0,SNR=3.6
comp=Z,0.9nm,0.8s
HFS Hagfors 95.50 330 LR LR 01 42 48.5
comp=Z,133nm,21.8s,baz=285,slow=38
NOA NORSAR Array B 96.63 331 LR LR 01 42 15.5
comp=Z,53nm,21.1s,baz=290,slow=38
LPAZ La Paz 161.14 185 PKPab **PKPab** **01 02 20.0 +0.4**
comp=Z,1.2nm,0.8s,baz=153,slow=4.5,SNR=4.3

*IDC **24** 00:44:17.9±0.9, 4.°04S×104.°38W, h0km, mb4.1/15, mbtmp4.1/15, MS4.6/49, Error ellipse: s-maj=30.1km s-min=15.4km az=52.0*
*NEIC **24** 00:44:23.4±1.7, 4.°0S±0.°1×103.°9W±0.°1, h10km±1km, mb4.6/199, Error ellipse: s-maj=22.4km s-min=17.6km az=241.0*
*GCMT **24** 00:44:24.4±0.2, 3.°85S±0.°01×104.°21W±0.°01, h15km, MW5.2/134, Moment Tensor Solution. s81,c112; s134,c228; Duration: 1s0 Moment tensor: Scale 10^{16} Nm; M_{rr}-0.18±.14; $M_{\theta\theta}$ 1.49±.13; $M_{\phi\phi}$ -1.31±.14; $M_{r\theta}$ 1.60±.42; $M_{\theta\phi}$ 7.19±.13; $M_{r\theta}$ 0.20±.42; Best double couple: $M_0$7.49700×10^{16} NP1:$\phi_0$5.00000°, δ78.00000°, λ178.00000°. NP2:$\phi_0$96.00000°, δ88.00000°, λ12.00000°. Principal axes: T 7.6530, Plg10.0000°, Azm321.0000°; N -0.3080, Plg78.0000°, Azm105.0000°; P -7.3420, Plg7.0000°, Azm230.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 24 00:44:22.4±0.7, 4.°06S±0.°09×104.°0W±0.°1, h18km, n302, σ1$9 31/240, mb4.5/102, MS4.5/53, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PAYG	**Puerto Ayora**	**14.14**	**77**	Op Pn		**Pn**	**00 47 42.3**	**+0.4**
RTAL	**Retalhuleu**	**22.15**	**33**	P		**P**	**00 49 17.8**	**+0.4**
TLIG	**Tlapa**	**22.15**	**14**	P		**P**	**00 49 16.2**	**-1.3**
TLIG				IAmb	IAmb	IAmb	00 49 31.7	
	comp=Z,22nm,1.3s							
CMIG	**Matias Romero**	**22.88**	**23**	P		**P**	**00 49 25.4**	**+0.3**
	comp=Z,4.8nm,0.9s,baz=185,slow=10,SNR=4.8							
CMIG				LR	LR		00 56 19.1	
	comp=Z,2μm,20.3s,baz=202,slow=31							
	comp=Z,4.8nm,0.9s							
CCIG	**Comitan**	**23.38**	**30**	P		**P**	**00 49 31.1**	**+0.5**
ORTG	**Ortega, Santa**	**23.39**	**52**	P		**P**	**00 49 29.4**	**-1.2**
MTO3	**Montecristo**	**23.41**	**38**	P		**P**	**00 49 31.1**	**+0.3**
MTO3				IAmb	IAmb	IAmb	00 49 50.2	
	comp=Z,20nm,1.2s							
ESQI	**Esquipulas**	**23.54**	**38**	P		**P**	**00 49 32.7**	**+0.6**
CRIN	**San Cristobal**	**23.70**	**45**	P		**P**	**00 49 35.3**	**+1.7**
JTS	**Las Juntas de**	**23.75**	**53**	P		**P**	**00 49 34.5**	**+0.5**
	comp=Z,8.2nm,0.8s,baz=251,slow=14,SNR=2.0							
JTS				LR	LR		00 56 24.1	
	comp=Z,3μm,21.0s,baz=335,slow=30							
	comp=Z,8.2nm,0.8s							
ARNL	**Arenillas**	**23.91**	**90**	P		**P**	**00 49 36.2**	**+0.6**
PEZE	**Perez Zeledon,**	**24.28**	**57**	P		**P**	**00 49 38.1**	**-1.0**
RIMA	**Rio Macho**	**24.34**	**56**	P		**P**	**00 49 39.4**	**-0.3**
RIMA				IAmb	IAmb	IAmb	00 49 50.4	
	comp=Z,18nm,1.2s							
SRBA	**San Rafael, Bu**	**24.47**	**57**	P		**P**	**00 49 41.6**	**+0.8**
SRBA				IAmb	IAmb	IAmb	00 50 03.2	
	comp=Z,26nm,1.4s							
TGUH	**Tegucigalpa,Un**	**24.50**	**42**	P		**P**	**00 49 41.8**	**+0.7**
BOAB	**BOACO BROADBAN**	**24.54**	**48**	P		**P**	**00 49 41.5**	**+0.3**
CVTR	**Volcan Turrial**	**24.56**	**55**	P		**P**	**00 49 42.2**	**+0.2**
DRK0	**Durika**	**24.58**	**57**	P		**P**	**00 49 41.9**	**0.0**
ACON	**Acoyapa**	**24.60**	**49**	P		**P**	**00 49 42.0**	**+0.1**
MATN	**Matagalpa**	**24.66**	**47**	P		**P**	**00 49 41.4**	**-1.1**
MATN				IAmb	IAmb	IAmb	00 49 44.2	
	comp=Z,9.6nm,1.1s							
COHC	**Cochancay**	**24.78**	**87**	P		**P**	**00 49 42.3**	**-1.2**
BRU2	**Volcan**	**24.81**	**59**	P		**P**	**00 49 43.8**	**-0.2**
PORT	**Chimborazo Vol**	**25.36**	**85**	P		**P**	**00 49 48.9**	**-0.5**
BOSC	**San Juan Bosco**	**25.50**	**89**	P		**P**	**00 49 51.4**	**+1.2**
BOSC				IAmb	IAmb	IAmb	00 50 06.5	
	comp=Z,20nm,1.1s							
ATAH	**Atahualpa**	**25.69**	**98**	P		**P**	**00 49 54.5**	**+2.3**
	comp=Z,3.4nm,0.6s,baz=280,slow=12,SNR=2.8							
	comp=Z,3.4nm,0.6s							
SLOR	**San Lorenzo -**	**25.72**	**83**	P		**P**	**00 49 54.1**	**+1.5**
SLOR				IAmb	IAmb	IAmb	00 50 17.4	
	comp=Z,19nm,1.2s							
OTAV	**Otavalo**	**25.91**	**81**	P		**P**	**00 49 54.0**	**-0.3**
OTAV				IAmb	IAmb	IAmb	00 49 58.6	
	comp=Z,24nm,1.4s							
ZAIG	**Zacatecas**	**26.70**	**3**	P		**P**	**00 50 02.6**	**+1.5**
BBAC	**Balboa, Cauca**	**27.44**	**78**	*eP*		**P**	**00 50 08.8**	**+1.0**
NNA	**Nana**	**28.03**	**108**	LR	LR		00 58 12.9	
	comp=Z,1μm,21.5s,baz=290,slow=29							
SLBS	**Sierra La Lagu**	**28.17**	**348**	P		**P**	**00 50 13.7**	**-0.4**
LPIG	**La Paz**	**28.65**	**348**	LR	LR		00 58 43.4	
	comp=Z,1μm,21.3s,baz=176,slow=30							
CBOC	**Ciudad Bolivar**	**29.66**	**71**	*eP*		**P**	**00 50 28.2**	**+0.6**
ORTC	**Ortega, Tolima**	**29.83**	**75**	*eP*		**P**	**00 50 28.6**	**-0.3**
GUY2C	**Guyana, Caldas**	**30.08**	**72**	*eP*		**P**	**00 50 32.7**	**+1.0**
NORC	**Norcasia**	**30.65**	**72**	*eP*		**P**	**00 50 35.2**	**-1.0**
ROSC	**El Rosal**	**30.97**	**74**	P		**P**	**00 50 41.1**	**+1.7**
	comp=Z,6.5nm,0.3s,baz=184,slow=14,SNR=3.6							
ROSC				LR	LR		01 00 53.6	
	comp=Z,738nm,21.6s,baz=234,slow=32							
	comp=Z,6.5nm,0.3s							
ROSC	**El Rosal**	**30.97**	**74**	P		**P**	**00 50 40.0**	**+0.6**
ZARC	**Zaragoza, Cauc**	**31.29**	**69**	P		**P**	**00 50 41.7**	**-0.1**
ZARC				IAmb	IAmb	IAmb	00 50 43.1	
	comp=Z,5.6nm,1.1s							
ZARC	**Zaragoza, Cauc**	**31.29**	**69**	*eP*		**P**	**00 50 41.5**	**-0.2**
CZSB	**Cruzeiro do Su**	**31.36**	**98**	*eP*		**P**	**00 50 43.8**	**+1.3**
SJCC	**San Jacinto, C**	**31.91**	**64**	P		**P**	**00 50 47.4**	**+0.2**
RUSC	**La Rusia**	**32.45**	**72**	*eP*		**P**	**00 50 53.2**	**+0.7**
833A	**Chaparral WMA,**	**32.50**	**8**	P		**P**	**00 50 53.5**	**+1.3**
833A				IAmb	IAmb	IAmb	00 51 20.5	
	comp=Z,5.4nm,0.8s							
TX31	**Lajitas Ar. Si**	**33.20**	**1**			**P**	**00 50 59.9**	**+1.5**
TX31				IAmb	IAmb	IAmb	00 51 11.8	
	comp=Z,10nm,1.4s							
TX32	**Lajitas Array**	**33.20**	**1**	P		**P**	**00 51 00.6**	**+2.2**
TXAR	**Lajitas Array**	**33.20**	**1**	P		**P**	**00 50 55.1**	**-3.4**
	comp=Z,0.2nm,0.7s,baz=182,slow=12,SNR=2.3							
TXAR				LR	LR		01 02 52.4	
	comp=Z,464nm,18.1s,baz=178,slow=34							
	comp=Z,0.2nm,0.7s							
TXAR	**Lajitas Array**	**33.20**	**1**	P		**P**	**00 50 59.9**	**+1.5**
TBTG	**Tabatinga, AM**	**34.03**	**91**	*eP*		**P**	**00 51 06.5**	**+0.7**
JCT	**Junction City**	**34.58**	**6**	P		**P**	**00 51 11.5**	**+1.1**
JCT				IAmb	IAmb	IAmb	00 51 21.1	
	comp=Z,16nm,1.4s							
HKT	**Hockley**	**34.72**	**13**	P		**P**	**00 51 11.6**	**+0.2**
MNTX	**Cornudas Mount**	**35.58**	**358**	P		**P**	**00 51 20.1**	**+1.2**
MNTX				IAmb	IAmb	IAmb	00 51 29.1	
	comp=Z,6.7nm,1.4s							
319A	**Douglas**	**35.59**	**352**	P		**P**	**00 51 19.9**	**+0.7**
319A				IAmb	IAmb	IAmb	00 51 28.5	
	comp=Z,7.3nm,0.9s							
SDV	**Santo Domingo**	**35.69**	**69**	LR	LR		01 03 31.7	
	comp=Z,846nm,20.3s,baz=243,slow=32							
SDV	**Santo Domingo**	**35.69**	**69**	P		**P**	**00 51 19.9**	**-0.5**
TAOE	**Nuku Hiva Isla**	**36.19**	**261**	*e*LR		LR	01 00 17.5	
	comp=Z,1μm,25.4s							
121A	**Cookes Peak, D**	**36.56**	**355**	P		**P**	**00 51 29.6**	**+2.0**
PB16	**IPOC Station P**	**36.62**	**116**	P		**P**	**00 51 29.3**	**+0.6**
PB16				IAmb	IAmb	IAmb	00 51 36.8	
	comp=Z,12nm,0.8s							
ABTX	**Abilene, Hawle**	**36.72**	**6**	P		**P**	**00 51 30.8**	**+2.1**
NATX	**Nacogdoches**	**36.72**	**13**	P		**P**	**00 51 29.2**	**+0.6**
TUC	**Tucson**	**36.73**	**350**	P		**P**	**00 51 30.5**	**+1.6**
PB11	**IPOC Station P**	**36.96**	**118**	P		**P**	**00 51 31.1**	**0.0**
PB11				IAmb	IAmb	IAmb	00 51 39.4	
	comp=Z,14nm,0.9s							
LPAZ	**La Paz**	**37.28**	**112**	P		**P**	**00 51 34.9**	**+0.5**
	comp=Z,3.5nm,1.1s,baz=298,slow=6.0,SNR=7.7							
LPAZ				LR	LR		01 04 04.6	
	comp=Z,620nm,19.2s,baz=284,slow=32							
	comp=Z,3.5nm,1.1s							
LPAZ	**La Paz**	**37.28**	**112**	P		**P**	**00 51 34.7**	**+0.2**
LPAZ				IAmb	IAmb	IAmb	00 51 45.0	
	comp=Z,10.0nm,1.3s							
LPAZ	**La Paz**	**37.28**	**112**	*eP*		**P**	**00 51 34.6**	**+0.2**
LPAZ	**La Paz**	**37.28**	**112**	*eP*		**P**	**00 51 34.1**	**-0.3**
H03N2	**Juan Fernandez**	**37.45**	**144**	T		T	01 31 36.1	
	baz=318,slow=77,SNR=75							
H03N1	**Juan Fernandez**	**37.46**	**144**	T		T	01 31 28.9	
	baz=318,slow=77,SNR=86							
H03N3	**Juan Fernandez**	**37.46**	**144**	T		T	01 31 34.5	
	baz=318,slow=77,SNR=67							
PB01	**IPOC Station P**	**37.57**	**120**	P		**P**	**00 51 36.8**	**+0.7**
PB01				IAmb	IAmb	IAmb	00 51 44.1	
	comp=Z,9.5nm,0.8s							
113A	**Mohawk Valley,**	**37.77**	**347**	P		**P**	**00 51 39.9**	**+2.3**
ETMB	**Extrema**	**37.95**	**101**	*eP*		**P**	**00 51 38.5**	**-0.9**
BNM	**Barren Site**	**38.08**	**357**	P		**P**	**00 51 41.5**	**+1.0**
Z38A	**Mt. Pleasant**	**38.09**	**12**	P		**P**	**00 51 40.4**	**+0.2**
Z38A				IAmb	IAmb	IAmb	00 52 05.3	
	comp=Z,16nm,1.1s							
BAUV	**El Baul**	**38.13**	**70**	P		**P**	**00 51 39.8**	**-1.1**
143A	**Socs Landing,**	**38.47**	**17**	P		**P**	**00 51 43.5**	**0.0**
Z41A	**Richland Creek**	**38.61**	**15**	P		**P**	**00 51 44.3**	**-0.2**
Z41A				IAmb	IAmb	IAmb	00 51 56.0	
	comp=Z,16nm,1.3s							
LVC	**Limon Verde**	**38.66**	**122**	LR	LR		01 03 35.9	
	comp=Z,833nm,20.0s,baz=289,slow=30							
LVC	**Limon Verde**	**38.66**	**122**	*eP*		**P**	**00 51 46.1**	**+0.4**
Y14A	**Wickenburg**	**38.73**	**348**	P		**P**	**00 51 47.0**	**+1.2**
X18A	**Snowflake**	**38.79**	**352**	P		**P**	**00 51 46.8**	**+0.5**
ANMO	**Albuquerque**	**38.87**	**357**	LR	LR		01 06 26.3	
	comp=Z,201nm,18.4s,baz=184,slow=34							
BLYC	**Blythe**	**38.89**	**346**	P		**P**	**00 51 47.5**	**+0.5**
X16A	**Lo Mia Camp, P**	**38.90**	**350**	P		**P**	**00 51 49.5**	**+2.2**
WLAR	**White Oak Lake**	**38.94**	**15**	P		**P**	**00 51 48.1**	**+0.7**
WLAR				IAmb	IAmb	IAmb	00 51 58.6	
	comp=Z,27nm,1.4s							
146A	**Union**	**39.16**	**20**	P		**P**	**00 51 48.7**	**-0.6**
146A				IAmb	IAmb	IAmb	00 51 51.2	
	comp=Z,17nm,0.8s							
GO02	**Mina Guanaco**	**39.17**	**126**	P		**P**	**00 51 50.5**	**+0.6**
GO02				IAmb	IAmb	IAmb	00 51 53.0	
	comp=Z,30nm,1.4s							
PFO	**Pinyon Flats O**	**39.27**	**344**	LR	LR		01 04 05.3	
	comp=Z,1μm,20.9s,baz=154,slow=30							
X37A	**Clayton**	**39.30**	**11**	P		**P**	**00 51 52.6**	**+2.2**
250A	**Grady**	**39.62**	**24**	P		**P**	**00 51 53.5**	**+0.4**
250A				IAmb	IAmb	IAmb	00 52 02.1	
	comp=Z,19nm,1.2s							
MIAR	**Mount Ida**	**39.64**	**14**	P		**P**	**00 51 52.2**	**-1.0**
MIAR				IAmb	IAmb	IAmb	00 52 06.2	
	comp=Z,11nm,1.2s							
352A	**Blakely**	**39.75**	**26**	P		**P**	**00 51 55.4**	**+1.2**
352A				IAmb	IAmb	IAmb	00 51 57.0	
	comp=Z,12nm,1.1s							
W39A	**Magazine**	**40.22**	**13**	P		**P**	**00 51 57.9**	**-0.2**
W39A				IAmb	IAmb	IAmb	00 52 09.1	
	comp=Z,16nm,1.4s							
TUL1	**Leonard**	**40.50**	**10**	P		**P**	**00 52 00.6**	**+0.2**
SAML	**Samuel**	**40.85**	**99**	P		**P**	**00 52 03.0**	**-0.6**
SAML				IAmb	IAmb	IAmb	00 52 05.6	
	comp=Z,19nm,1.1s							
152A	**Waverly Hall**	**40.87**	**25**	IAmb	IAmb	IAmb	00 52 17.1	
	comp=Z,12nm,1.2s							
GSC	**Goldstone, Bar**	**40.95**	**344**	P		**P**	**00 52 05.6**	**+1.4**
T25A	**Trinidad**	**40.99**	**360**	P		**P**	**00 52 04.5**	**-0.2**
T25A				IAmb	IAmb	IAmb	00 52 15.5	
	comp=Z,11nm,1.4s							
U15A	**North Rim**	**41.01**	**350**	P		**P**	**00 52 06.5**	**+1.5**
QSM	**Queen of Sheba**	**41.59**	**344**	P		**P**	**00 52 10.6**	**+1.2**
QSM				IAmb	IAmb	IAmb	00 52 18.7	
	comp=Z,11nm,1.3s							
SDCO	**Great Sand Dun**	**41.61**	**358**	P		**P**	**00 52 11.7**	**+1.9**
PLAL	**Pickwick Lake**	**41.63**	**20**	P		**P**	**00 52 08.4**	**-1.2**
PLAL				IAmb	IAmb	IAmb	00 52 20.2	
	comp=Z,8.0nm,0.7s							
S22A	**4UR Ranch, Cre**	**41.67**	**357**	P		**P**	**00 52 11.8**	**+1.5**
SHPR	**Sheep Range**	**41.67**	**346**	P		**P**	**00 52 12.2**	**+2.0**
LCAR	**Lake Charles**	**41.70**	**16**	P		**P**	**00 52 10.2**	**0.0**
GWY	**Greenwater Val**	**41.75**	**345**	P		**P**	**00 52 10.3**	**-0.5**
FPAL	**Fort Paine**	**42.13**	**23**	P		**P**	**00 52 13.3**	**-0.6**
FPAL				IAmb	IAmb	IAmb	00 52 22

PV11 David Mesa, Pa 42.38 354 P **P** **00 52 17.2 +1.2**
PV11 lAmb lAmb 00 52 25.3
comp=Z,11nm,1.4s
PV15 Paradox Valley 42.39 355 P **P** **00 52 17.6 +1.4**
MGMO Mountain Grove 42.44 14 P **P** **00 52 18.3 +2.0**
MGMO lAmb lAmb 00 52 27.8
comp=Z,11nm,1.3s
X51A Calhoun 42.45 24 P **P** **00 52 17.5 +1.1**
X51A lAmb lAmb 00 52 24.5
comp=Z,9.3nm,0.9s
PV07 Paradox Valley 42.50 355 P **P** **00 52 17.2 +0.2**
PRN Pahroc Range 42.51 347 P **P** **00 52 18.5 +1.5**
PV23 Carpenter Ridg 42.55 354 P **P** **00 52 19.0 +1.5**
PBMO Poplar Bluff 42.56 16 lAmb lAmb 00 52 28.0
comp=Z,8.2nm,0.8s
MTPU Mount Pierson 42.57 350 P **P** **00 52 18.6 +0.9**
SWET Sewanee 42.61 22 P **P** **00 52 16.9 -0.8**
GRAC Grapevine Rang 42.70 344 P **P** **00 52 20.2 +1.8**
GRAC lAmb lAmb 00 52 46.4
comp=Z,18nm,1.4s
S39A Bolivar 42.71 13 lAmb lAmb 00 52 28.8
comp=Z,9.3nm,1.2s
V48A Smith Brothers 42.75 21 P **P** **00 52 20.4 +1.6**
V48A lAmb lAmb 00 52 32.1
comp=Z,12nm,1.2s
WVT Waverly 42.76 19 P **P** **00 52 17.4 -1.4**
WVT lAmb lAmb 00 52 41.6
comp=Z,20nm,1.5s
W50A Signal Mountai 42.83 23 P **P** **00 52 19.5 0.0**
LMEL Las Melosas 43.23 137 P **P** **00 52 24.2 +1.3**
LMEL lAmb lAmb 00 52 34.5
comp=Z,12nm,0.8s
CLTN Cedars of Leba 43.24 21 P **P** **00 52 23.8 +1.0**
MACA Manacapuru-AM 43.27 90 eP **P** **00 52 22.4 -1.0**
HODGE Hodges 43.27 27 P **P** **00 52 23.0 0.0**
HODGE lAmb lAmb 00 52 36.6
comp=Z,13nm,1.3s
Q16A Castle Valley 43.27 352 P **P** **00 52 25.3 +2.1**
W52A Murphy 43.29 24 P **P** **00 52 23.3 +0.1**
W52A lAmb lAmb 00 52 31.9
comp=Z,19nm,1.3s
PSUT Pine Spring 43.34 349 P **P** **00 52 25.4 +1.5**
SJG San Juan 43.36 58 LR LR 01 07 33.8
comp=Z,324nm,18.6s,baz=257,slow=32
CPCT Cooper Cave 43.36 23 lAmb lAmb 00 52 32.1
comp=Z,9.1nm,1.2s
SRU San Rafael Swe 43.37 353 P **P** **00 52 26.1 +2.1**
KSU1 Kansas State U 43.49 8 P **P** **00 52 26.5 +1.8**
KSU1 lAmb lAmb 00 52 35.8
comp=Z,22nm,1.4s
R40A Maddies Stadio 43.52 13 P **P** **00 52 26.1 +1.0**
R40A lAmb lAmb 00 52 35.3
comp=Z,12nm,1.4s
R11A Troy Canyon, C 43.53 347 P **P** **00 52 27.5 +2.1**
CCM Cathedral Cave 43.55 15 P **P** **00 52 26.7 +1.5**
CCM lAmb lAmb 00 52 35.6
comp=Z,16nm,1.5s
ML02 Panimavida 43.59 141 P **P** **00 52 26.7 +1.0**
ISCO Idaho Springs 43.67 358 P **P** **00 52 28.7 +2.1**
TPH Tonopah 43.67 345 P **P** **00 52 28.5 +2.0**
FVM French Village 43.70 16 P **P** **00 52 27.5 +1.1**
FVM lAmb lAmb 00 52 36.7
comp=Z,14nm,1.4s
V51A Loudon 43.73 23 P **P** **00 52 27.5 +0.7**
V51A lAmb lAmb 00 52 40.2
comp=Z,11nm,1.1s
S44A Carbondale 43.75 17 P **P** **00 52 27.7 +0.9**
S44A lAmb lAmb 00 52 40.1
comp=Z,6.5nm,0.8s
P17A Butcher Ranch, 43.76 352 P **P** **00 52 29.9 +2.8**
P17A lAmb lAmb 00 52 36.6
comp=Z,13nm,1.3s
JSC Jenkinsville 43.77 28 P **P** **00 52 27.0 0.0**
JSC lAmb lAmb 00 52 35.4
comp=Z,13nm,1.1s
T47A Sharon Grove 43.78 20 P **P** **00 52 29.4 +2.3**
T47A lAmb lAmb 00 52 45.1
comp=Z,9.8nm,1.2s
SIV San Ignacio 43.83 109 LR LR 01 08 39.2
comp=Z,1µm,18.2s,baz=296,slow=33
TKL Tuckaleechee C 43.84 24 LR LR 01 11 02.5
comp=Z,329nm,18.5s,baz=216,slow=36
TKL Tuckaleechee C 43.84 24 lAmb lAmb 00 52 35.8
comp=Z,11nm,1.2s
P18A Preston Nutter 43.85 353 P **P** **00 52 28.5 +0.5**
BOAV Boa Vista 43.95 82 eP **P** **00 52 27.3 -1.5**
Y57A Sumter 43.96 29 P **P** **00 52 28.0 -0.6**
PAULI Pauline 43.96 27 P **P** **00 52 28.2 -0.4**
PAULI lAmb lAmb 00 52 37.1
comp=Z,18nm,1.2s
O20A White River Ci 44.15 355 P **P** **00 52 32.1 +1.8**
O20A lAmb lAmb 00 52 40.1
comp=Z,12nm,1.2s
VILB Vilhena 44.17 104 eP **P** **00 52 32.1 +1.4**
LHV Little Huntoon 44.19 344 P **P** **00 52 31.6 +1.3**
LHV lAmb lAmb 00 52 40.2
comp=Z,6.5nm,1.1s
V53A Saluda 44.25 25 lAmb lAmb 00 52 30.9
comp=Z,14nm,1.2s
NVAR Mina Array Bea 44.30 344 P **P** **00 52 30.6 -0.9**
comp=Z,0.3nm,0.3s,baz=182,slow=11,SNR=1.9
NVAR LR LR 01 06 54.2
comp=Z,719nm,21.2s,baz=145,slow=31
comp=Z,0.3nm,0.3s
MPU Maple Canyon 44.41 352 P **P** **00 52 34.2 +1.8**
CMB Columbia Colle 44.55 342 P **P** **00 52 35.1 +1.8**
CMB lAmb lAmb 00 52 47.0
comp=Z,7.5nm,1.4s
VBST Vila Bela da S 44.58 107 eP **P** **00 52 33.9 0.0**
P40A Paris 44.76 13 P **P** **00 52 34.4 -0.5**
P40A lAmb lAmb 00 52 44.9
comp=Z,12nm,1.2s
N23A Red Feather La 44.77 358 P **P** **00 52 36.5 +1.1**
N23A lAmb lAmb 00 52 47.1
comp=Z,7.6nm,1.3s
DUG Dugway, Tooele 44.77 350 P **P** **00 52 36.5 +1.4**
Q44A Meyer Farm, Va 44.95 17 P **P** **00 52 37.8 +1.4**
CTU Camp Tracy 45.09 352 P **P** **00 52 37.6 -0.2**
PTLB Pontes e Lacer 45.57 108 eP **P** **00 52 41.4 -0.3**
R49A Shelbyville 45.62 21 P **P** **00 52 42.1 +0.3**
ELK Elko 45.76 348 LR LR 01 08 55.4
comp=Z,594nm,18.7s,baz=164,slow=32
HWUT Hardware Ranch 45.97 352 lAmb lAmb 00 52 54.0
comp=Z,6.6nm,1.1s
O44A Mansfield 46.26 17 P **P** **00 52 49.0 +2.2**
PPT Papeete 46.57 250 LR LR 01 07 12.8
comp=Z,519nm,18.5s,baz=110,slow=30
PPT2 Papeete2 46.57 250 eLR LR 01 05 15.0
comp=Z,2µm,26.8s
P48A Milroy 46.58 20 P **P** **00 52 51.3 +2.0**
P48A lAmb lAmb 00 52 56.0
comp=Z,7.6nm,0.9s
S54A Dingess, Beckl 46.69 25 P **P** **00 52 51.6 +1.3**
SFIN Lafayette 46.87 18 P **P** **00 52 52.3 +0.7**
BW06 Boulder Array 46.88 354 P **P** **00 52 53.3 +1.4**
PD31 Pinedale Array 46.88 354 P **P** **00 52 53.0 +1.1**
PDAR Pinedale Array 46.88 354 P **P** **00 52 49.9 -2.0**
comp=Z,0.5nm,0.5s,baz=171,slow=6.4,SNR=6.4
PDAR LR LR 01 10 17.6
comp=Z,304nm,18.8s,baz=182,slow=33
comp=Z,0.5nm,0.5s
PDAR Pinedale Array 46.88 354 P **P** **00 52 53.2 +1.3**
R53A Hurricane 46.88 24 P **P** **00 52 50.9 -0.8**
P49A Miami Univ. Ec 46.89 21 P **P** **00 52 51.8 0.0**
PLCA Paso Flores 47.31 145 P **P** **00 52 55.7 +0.5**
comp=Z,2.9nm,1.1s,baz=333,slow=11,SNR=4.2
PLCA LR LR 01 08 00.3
comp=Z,1µm,19.4s,baz=328,slow=30
comp=Z,2.9nm,1.1s
PLCA Paso Flores 47.31 145 lAmb lAmb 00 53 11.0
comp=Z,5.7nm,1.0s
PLCA Paso Flores 47.31 145 eP **P** **00 52 55.1 0.0**
L40A Anamosa 47.36 13 P **P** **00 52 56.4 +1.0**
PDRB Porto dos Gac 47.40 102 eP **P** **00 52 55.2 -0.9**
PTET Porto Estrela 47.44 107 eP **P** **00 52 55.7 -0.7**
TPAW Teton Pass 47.74 353 P **P** **00 53 00.9 +2.3**
TPAW lAmb lAmb 00 53 09.6
comp=Z,3.7nm,1.0s
TBI Tubuai 47.85 242 eLR LR 01 05 57.9
comp=Z,1µm,28.2s
RSSD Black Hills 47.96 360 P **P** **00 53 02.0 +1.7**
RSSD lAmb lAmb 00 53 09.2
comp=Z,4.7nm,1.0s
POCN Pocone 48.04 109 eP **P** **00 53 00.8 -0.3**
ECSD EROS Data Cent 48.04 7 P **P** **00 53 03.0 +2.3**
ECSD lAmb lAmb 00 53 10.1
comp=Z,5.6nm,1.3s
MOD Modoc Plateau 48.09 344 P **P** **00 53 03.4 +2.2**
MOD lAmb lAmb 00 53 10.5
comp=Z,7.0nm,1.1s
ITTB Itaituba 48.16 92 eP **P** **00 53 01.0 -1.1**
CLDB Colider 48.25 101 eP **P** **00 53 01.4 -1.4**
LL02 Futaleuf 48.28 149 P **P** **00 53 03.0 +0.4**
FLWY Flagg Ranch 48.30 354 P **P** **00 53 04.1 +1.2**
HLID Hailey 48.32 350 P **P** **00 53 04.6 +1.6**
HLID lAmb lAmb 00 53 12.1
comp=Z,7.5nm,1.4s
MFID Camas Ranch 48.44 349 P **P** **00 53 04.3 +0.5**
MFID lAmb lAmb 00 53 08.7
comp=Z,5.6nm,1.2s
YPP Pitchstone Pla 48.49 354 P **P** **00 53 07.2 +2.6**
NPGB Novo Progresso 48.52 96 eP **P** **00 53 03.2 -1.6**
PANT Pantanal (Braz 48.59 112 eP **P** **00 53 05.3 0.0**
L46A Eue Claire 48.61 18 P **P** **00 53 07.0 +2.0**
NBRS Nobres 48.62 105 eP **P** **00 53 04.9 -0.7**
YBH Yreka Blue Hor 48.65 341 P **P** **00 53 03.4 -2.1**
comp=Z,1.1nm,0.6s,baz=125,slow=5.4,SNR=4.6
YBH LR LR 01 09 06.4
comp=Z,585nm,21.4s,baz=170,slow=31
comp=Z,1.1nm,0.6s
YBH Yreka Blue Hor 48.65 341 P **P** **00 53 05.9 +0.4**
YBH lAmb lAmb 00 53 19.8
comp=Z,3.7nm,1.0s
SALV Santo Antonio 48.91 107 eP **P** **00 53 07.9 0.0**
J08A Circle Bar Ran 48.97 346 P **P** **00 53 10.4 +2.4**
K05A Summer Lake 49.01 344 P **P** **00 53 10.8 +2.4**
MCMT McKenzie Canyo 49.30 352 P **P** **00 53 10.9 +0.3**
AQDB Aquidauana 49.74 113 eP **P** **00 53 13.6 -0.5**
MALB Monte Alegre 49.74 89 eP **P** **00 53 12.1 -2.1**
ANTJ Antonio Joao (49.81 115 eP **P** **00 53 14.5 -0.2**
CPUP Villa Florida 49.84 121 P **P** **00 53 14.8 0.0**
comp=Z,4.4nm,0.8s,baz=293,slow=9.7,SNR=8.6
CPUP LR LR 01 11 05.5
comp=Z,490nm,20.4s,baz=284,slow=32
comp=Z,4.4nm,0.8s
CPUP Villa Florida 49.84 121 P **P** **00 53 15.0 +0.2**
CPUP lAmb lAmb 00 53 21.2
comp=Z,10nm,1.1s
CPUP Villa Florida 49.84 121 eP **P** **00 53 15.0 +0.2**
GCMT Greycliff 49.88 355 P **P** **00 53 14.2 -0.7**
I07A Izee 49.90 345 lAmb lAmb 00 53 21.4
comp=Z,6.0nm,1.0s
PP1B Ponte de Pedra 49.95 110 eP **P** **00 53 15.6 -0.2**
PINE Pine Mountain 50.01 344 P **P** **00 53 17.1 +1.1**
PINE lAmb lAmb 00 53 18.8
comp=Z,11nm,1.2s
PLID Pearl Lake 50.09 349 P **P** **00 53 18.4 +1.9**
PLID lAmb lAmb 00 53 20.8
comp=Z,6.4nm,1.3s
AMBA Amambai (Brazi 50.94 116 eP **P** **00 53 23.1 -0.1**
ITQB Itaqui 51.52 125 P **P** **00 53 28.5 +1.0**
ITQB Itaqui 51.52 125 eP **P** **00 53 27.5 0.0**
MCPB Macapa, AP 52.05 87 eP **P** **00 53 30.2 -1.4**
HAWA Hanford 52.08 346 P **P** **00 53 33.1 +1.9**
HAWA lAmb lAmb 00 53 40.2
comp=Z,6.7nm,1.1s
MDP Montagnes des 52.13 80 LR LR 01 13 49.0
comp=Z,479nm,20.6s,baz=265,slow=34
MMNY Mt. Morris Dam 52.24 24 P **P** **00 53 32.0 -0.5**
MMNY lAmb lAmb 00 53 34.4
comp=Z,11nm,1.0s
DGMT Dagmar 52.31 360 P **P** **00 53 35.8 +2.8**
DGMT lAmb lAmb 00 53 41.1
comp=Z,15nm,1.3s
DVLD Doverlandia 52.37 108 eP **P** **00 53 33.5 -0.5**
ARAG Araguaiana, MT 52.59 107 eP **P** **00 53 35.1 -0.4**
SNDB Serra Nova Dou 52.73 102 eP **P** **00 53 35.6 -1.1**
RODS Rosario do Sul 52.92 125 eP **P** **00 53 37.9 0.0**
B35A Bob, Littlefor 52.98 9 P **P** **00 53 39.2 +1.3**
B35A lAmb lAmb 00 53 47.3
comp=Z,7.3nm,1.2s
NEW Newport 53.35 349 LR LR 01 13 38.6
comp=Z,757nm,18.8s,baz=173,slow=33
FRBT Francisco Belt 53.41 119 eP **P** **00 53 41.4 -0.2**
SADO Sadowa 53.47 22 LR LR 01 16 28.0
comp=Z,205nm,18.1s,baz=36,slow=36
PTGB Pitanga 53.97 118 eP **P** **00 53 45.6 -0.2**
ALGR Alto Alegre (B 54.22 123 eP **P** **00 53 47.2 -0.3**
CPSB Cacapava Do Su 54.37 125 eP **P** **00 53 47.9 -0.6**
ITRB Iturama 54.52 111 eP **P** **00 53 49.5 -0.3**
ULM Lac du Bonnet 54.55 6 P **P** **00 53 46.7 -2.7**
comp=Z,4.3nm,0.8s,baz=206,slow=6.5,SNR=5.3
ULM LR LR 01 15 50.9
comp=Z,647nm,18.9s,baz=192,slow=35
comp=Z,4.3nm,0.8s
PEXB Peixe 55.66 102 eP **P** **00 53 57.4 -0.7**
BDFB Brasilia 56.22 106 P **P** **00 54 02.9 +0.7**
comp=Z,9.5nm,1.0s,baz=305,slow=8.8,SNR=5.6
BDFB LR LR 01 16 23.1
comp=Z,335nm,19.7s,baz=317,slow=34
comp=Z,9.5nm,1.0s
BDFB Brasilia 56.22 106 P **P** **00 54 02.5 +0.4**
BDFB Brasilia 56.22 106 eP **P** **00 54 01.9 -0.2**
SMTB Santa Maria do 56.24 98 eP **P** **00 54 03.0 +0.8**
IPMB Ipameri, GO 56.29 109 eP **P** **00 54 02.4 -0.1**
TRQ Mont Tremblant 56.47 24 P **P** **00 54 02.5 -0.8**
TRQ lAmb lAmb 00 54 02.6
comp=Z,4.3nm,1.0s
RAR Rarotonga 56.69 247 LR LR 01 13 10.4
comp=Z,297nm,18.1s,baz=100,slow=31
BBB Bella Bella 59.65 343 LR LR 01 17 10.9
comp=Z,228nm,18.7s,baz=151,slow=33
DLBC Dease Lake 65.68 345 LR LR 01 20 52.1
comp=Z,332nm,18.9s,baz=148,slow=34
SCHQ Schefferville 66.27 22 LR LR 01 23 25.3
comp=Z,627nm,19.6s,baz=220,slow=35
YKA Yellowknife Ar 66.86 355 P **P** **00 55 10.0 -3.0**
comp=Z,0.9nm,0.8s,baz=162,slow=6.4,SNR=4.4
YKA LR LR 01 22 10.9
comp=Z,397nm,18.9s,baz=168,slow=34
comp=Z,0.9nm,0.8s
PMSA Palmer Station 66.98 163 LR LR 01 17 07.4
comp=Z,851nm,19.4s,baz=283,slow=29
AFI Afiamalu 67.44 257 LR LR 01 16 19.0
comp=Z,251nm,20.0s,baz=99,slow=29
RCBR Riachuelo 67.86 95 LR LR 01 23 49.8
comp=Z,526nm,20.3s,baz=60,slow=35
M26K Nabesna, AK 72.60 342 lAmb lAmb 00 55 53.5
comp=Z,3.7nm,1.0s
FRB Frobisher Bay 72.65 16 LR LR 01 28 58.9
comp=Z,232nm,18.5s,baz=200,slow=37
BCAR Beaver Creek A 72.75 343 P **P** **00 55 51.6 +2.2**
KDAK Kodiak Island 72.88 335 LR LR 01 19 51.0
comp=Z,658nm,21.1s,baz=159,slow=29
K27K Chicken 73.58 344 lAmb lAmb 00 56 15.6
comp=Z,5.8nm,1.1s
RIDG Independent Ri 74.17 342 lAmb lAmb 00 56 14.7
comp=Z,13nm,1.4s
INK Inuvik 75.08 349 LR LR 01 27 16.2
comp=Z,594nm,18.0s,baz=140,slow=34
RND Reindeer 75.19 341 P **P** **00 56 04.1 +0.5**
RND lAmb lAmb 00 56 14.7
comp=Z,6.2nm,1.0s
ILAR Eielson Array 75.53 342 P **P** **00 56 03.5 -2.0**
comp=Z,1.3nm,0.9s,baz=154,slow=4.8,SNR=9.3
ILAR LR LR 01 26 35.7
comp=Z,203nm,18.8s,baz=120,slow=34
comp=Z,1.3nm,0.9s
WRH Wood River Hil 75.69 342 P **P** **00 56 07.2 +0.8**
WRH lAmb lAmb 00 56 23.9
comp=Z,7.3nm,1.2s
KTH Kantishna Hill 75.97 340 lAmb lAmb 00 56 13.7
comp=Z,6.2nm,1.0s
H24K Noodor Dome 76.58 343 P **P** **00 56 11.6 +0.1**
BMAR Burnt Mountain 76.84 345 P **P** **00 56 15.5 +2.6**
MLY Manley 76.90 342 lAmb lAmb 00 56 38.0
comp=Z,5.5nm,1.2s
K20K Telida 76.94 339 P **P** **00 56 15.6 +2.1**
K20K lAmb lAmb 00 56 51.7
comp=Z,6.6nm,1.3s
I21K Tanana 77.39 341 P **P** **00 56 18.8 +2.8**
I21K lAmb lAmb 00 56 33.1
comp=Z,8.9nm,1.5s
J20K Nowinta River 77.47 340 P **P** **00 56 18.3 +1.8**
J20K lAmb lAmb 00 56 36.0
comp=Z,7.9nm,1.4s
URZ Urewera 78.75 232 LR LR 01 23 09.2
comp=Z,338nm,18.4s,baz=30,slow=30
RES Resolute Bay 78.82 2 LR LR 01 30 28.6
comp=Z,378nm,18.2s,baz=168,slow=35
SFJD Kangerlussuaq 80.27 19 LR LR 01 30 57.2
comp=Z,318nm,21.2s,baz=234,slow=35
TNA Tin City 83.19 338 P **P** **00 56 48.9 +1.8**
RPZ Rata Peaks 83.54 227 LR LR 01 27 25.9
comp=Z,520nm,18.1s,baz=82,slow=31
QSPA South Pole Qui 85.99 180 P **P** **00 57 03.3 +1.7**
DZM Mont Dzumac 88.06 248 eLR LR 01 24 30.3
comp=Z,308nm,29.4s
SHEM Shemya Is, Ala 88.28 323 LR LR 01 28 23.2
comp=Z,579nm,21.1s,baz=112,slow=30
H11N3 WAKE ISLAND Hy 90.47 290 T T 02 37 11.8
baz=96,slow=74,SNR=61
H11N2 WAKE ISLAND Hy 90.48 290 T T 02 37 14.0
baz=96,slow=74,SNR=82
H11N1 WAKE ISLAND Hy 90.49 290 T T 02 37 05.7
baz=96,slow=74,SNR=49
BORG Borgarnes 90.53 25 LR LR 01 36 26.0
comp=Z,150nm,19.3s,baz=264,slow=34
H11S2 WAKE ISLAND Hy 90.58 288 T T 02 37 12.1
baz=94,slow=75,SNR=159
H11S1 WAKE ISLAND Hy 90.58 288 T T 02 37 19.0
baz=94,slow=75,SNR=181
H11S3 WAKE ISLAND Hy 90.59 288 T T 02 37 21.3
baz=94,slow=75,SNR=174
JMIC Jan Mayen 95.62 19 LR LR 01 39 20.5
comp=Z,266nm,22.0s,baz=262,slow=34
PETK Petropavlovsk- 98.20 323 LR LR 01 33 46.5
comp=Z,325nm,20.9s,baz=85,slow=30
EKA Eskdalemuir Ar 99.51 35 LR LR 01 42 08.8
comp=Z,111nm,18.8s,baz=278,slow=35
DBIC Dimbokro 99.56 84 LR LR 01 42 14.5
comp=Z,141nm,18.6s,baz=269,slow=35
SEY Seymchan 99.77 333 LR LR 01 38 03.3
comp=Z,222nm,18.3s,baz=84,slow=32
WRA Warramunga Arr 117.93 245 PKP **PKPdf** **01 03 07.3 -1.7**
comp=Z,0.4nm,1.0s,baz=97,slow=2.3,SNR=1.6
BRTR Keskin Array B 127.84 41 PKP **PKPdf** **01 03 25.4 -2.3**
comp=Z,0.8nm,0.9s,baz=306,slow=3.4,SNR=2.8
SONM Songino Array 129.16 334 PKP **PKPdf** **01 03 27.5 -2.4**
comp=Z,0.2nm,0.4s,baz=343,slow=4.5,SNR=1.8
MKAR Makanchi Array 137.08 354 PKP **PKPdf** **01 03 44.9 +0.3**
comp=Z,0.3nm,0.8s,baz=62,slow=3.4,SNR=1.8
CMAR Chiang Mai Arr 153.37 304 PKPbc **PKPbc** **01 04 17.7 -3.0**
comp=Z,1.4nm,0.3s,baz=318,slow=1.2,SNR=1.6

ISK ***24*** *00:47:18.4, 35°.49N×29°.44E, h24km, ML2.2/8*
NIC ***24*** *00:47:18.5±0.0, 35°.40N×29°.52E, h29km±2km, Ml2.8/5*
DDA ***24*** *00:47:20.3±0.0, 35°.60N×29°.72E, h51km±2km, ML2.2*
GII ***24*** *00:47:23.1±0.0, 35°.08N×29°.84E, h20km, Mm2.3/3*

ISC 24 00:47:17.9±1.5**, 35°.42N**±0°.03×**29°.52E**±0°.04**, h31**km±15km**,**
n42,σ1°45/68, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKAS	**Kas**	**0.82**	**5**	PG	**Pn**	**00 47 33.9**	**+0.5**
AKAS	**Kas**	**0.82**	**5**	P	**Pn**	**00 47 33.8**	**+0.3**
AKAS				S	**Sn**	**00 47 44.6**	**+0.1**
AKAS				*i* AML	AML	00 47 48.0	
	comp=E,104nm,0.4s						
AKAS				*i* AML	AML	00 48 00.0	
	comp=N,161nm,0.7s						
AKUM	**Antalya-Kumluc**	**1.13**	**36**	P	**Pn**	**00 47 37.7**	**+0.2**
AKUM				S	**Sn**	**00 47 50.3**	**-1.6**
FETY	**Fethiye**	**1.27**	**344**	PN	**Pn**	**00 47 39.3**	**-0.2**
FETY				SN	**Sn**	**00 47 55.4**	**-0.1**
FETY	**Fethiye**	**1.27**	**344**	P	**Pb**	**00 47 41.6**	**+0.4**
FETY				S	**Sn**	**00 47 57.2**	**+1.7**
ELL	**Elmali**	**1.37**	**13**	PN	**Pn**	**00 47 41.8**	**+0.8**
ELL	**Elmali**	**1.37**	**13**	P	**Pn**	**00 47 42.2**	**+1.2**
ELL				S	**Sn**	**00 47 59.9**	**+1.8**
ARG	**Arkhangelos**	**1.39**	**306**	PN	**Pn**	**00 47 41.4**	**+0.3**
ARG	**Arkhangelos**	**1.39**	**306**	P	**Pn**	**00 47 41.4**	**+0.3**
CAME	**Cameli-Denizli**	**1.54**	**353**	PN	**Pn**	**00 47 44.1**	**+0.8**
CAME				SN	**Sn**	**00 48 02.3**	**0.0**
DALY	**Dalyan (Mula)**	**1.56**	**334**	PN	**Pn**	**00 47 44.0**	**+0.5**
TURN	**Turunc**	**1.71**	**323**	PN	**Pn**	**00 47 46.0**	**+0.6**
TURN	**Turunc**	**1.71**	**323**	P	**Pn**	**00 47 46.1**	**+0.6**
TURN				S	**Sn**	**00 48 06.1**	**-0.1**
TURN				*i* AML	AML	00 48 20.0	
	comp=Z,20nm,1.5s						
CAEL	**Denizli, Camel**	**1.71**	**355**	P	**Pn**	**00 47 47.0**	**+1.2**
CAEL				S	**Sn**	**00 48 06.6**	**-0.1**
CAEL				*i* AML	AML	00 48 09.0	
	comp=E,41nm,1.0s						
CAEL				*i* AML	AML	00 48 37.0	
	comp=Z,26nm,0.8s						
CAEL				*i* AML	AML	00 48 45.0	
	comp=N,40nm,1.6s						
KORT	**Korkueli**	**1.72**	**23**	PN	**Pn**	**00 47 46.9**	**+1.1**
KORT	**Korkueli**	**1.72**	**23**	P	**Pn**	**00 47 47.0**	**+1.2**
KORT				S	**Sb**	**00 48 10.2**	**+0.1**
GOLH	**Golhisar**	**1.82**	**1**	P	**Pn**	**00 47 48.7**	**+1.6**
GOLH				S	**Sn**	**00 48 10.5**	**+1.3**
DAT	**Datca**	**2.05**	**310**	P	**Pn**	**00 47 51.1**	**+0.8**
DAT				S	**Sn**	**00 48 14.0**	**-0.9**
DAT				*i* AML	AML	00 48 19.0	
	comp=N,13nm,0.2s						
DAT				*i* AML	AML	00 48 58.0	
	comp=E,20nm,2.2s						
DAT				*i* AML	AML	00 48 59.0	
	comp=Z,15nm,1.8s						
APMY	**Acipayam-Deniz**	**2.06**	**355**	PN	**Pn**	**00 47 51.5**	**+1.0**
MULA	**Mugla, Merkez-**	**2.08**	**333**	P	**Pn**	**00 47 52.0**	**+1.3**
MULA				S	**Sn**	**00 48 12.4**	**-3.2**
MULA				*i* AML	AML	00 48 22.0	
	comp=E,19nm,0.8s						
BUCA	**Burdur, Bucak-**	**2.08**	**23**	P	**Pb**	**00 47 54.3**	**-0.8**
BUCA				S	**Sn**	**00 48 15.2**	**-0.6**
TAVA	**DENIZLI_Tavas**	**2.10**	**347**	P	**Pn**	**00 47 47.4**	**-3.7**
TAVA				S	**Sn**	**00 48 14.5**	**-1.7**
KEPZ	**Antalya-Kepez**	**2.25**	**48**	P	**Pn**	**00 47 54.1**	**+1.1**
KEPZ				S	**Sn**	**00 48 18.8**	**-0.9**
BRDR	**BURDUR-Merkez**	**2.32**	**11**	P	**Pb**	**00 47 57.6**	**-1.4**
BRDR				S	**Sn**	**00 48 20.2**	**-1.3**
AKMS	**Akamas**	**2.34**	**99**	P	**Pn**	**00 47 55.1**	**+0.9**
AKMS				S	**Sn**	**00 48 22.8**	**+0.9**
AKMS				AML	AML	00 48 23.8	
	0.2nm,1.0s						
AKMS				AML	AML	00 48 23.8	
	0.2nm,1.0s						
OSC1	**CSNet OBS 1**	**2.40**	**142**	S	**Sn**	**00 48 25.0**	**+1.6**
GAZI	**Gazipasa**	**2.42**	**69**	P	**Pn**	**00 47 55.0**	**-0.2**
GAZI				S	**Sn**	**00 48 22.8**	**-1.0**
GAZI				*i* AML	AML	00 48 24.0	
	comp=Z,14nm,0.4s						
GAZI				*i* AML	AML	00 48 24.0	
	comp=N,18nm,0.4s						
GAZI				*i* AML	AML	00 48 24.0	
	comp=E,15nm,0.2s						
ALFC	**Alefka**	**2.53**	**95**	P	**Pn**	**00 47 57.6**	**+0.7**
ALFC				S	**Sn**	**00 48 27.9**	**+1.2**
ALFC				AML	AML	00 48 28.2	
	0.1nm,0.4s						
ALFC				AML	AML	00 48 28.2	
	0.1nm,0.4s						
ALFC				AML	AML	00 48 28.9	
	0.1nm,0.4s						
ALFC				AML	AML	00 48 28.9	
	0.1nm,0.4s						
NATA	**Nata**	**2.58**	**103**	P	**Pn**	**00 47 58.5**	**+1.0**
NATA				AML	AML	00 48 27.8	
	0.2nm,0.7s						
NATA				AML	AML	00 48 31.9	
	0.2nm,0.6s						
LEF	**Lefka**	**2.77**	**95**	P	**Pn**	**00 48 01.2**	**+1.0**
SZAC	**Souni**	**2.83**	**102**	P	**Pn**	**00 48 02.2**	**+1.2**
SZAC				S	**Sn**	**00 48 36.1**	**+1.9**
SZAC				AML	AML	00 48 36.2	
	0.1nm,0.4s						
SZAC				AML	AML	00 48 36.2	
	0.1nm,0.4s						
SZAC				AML	AML	00 48 42.8	
	0.1nm,0.9s						
SZAC				AML	AML	00 48 42.8	
	0.1nm,0.9s						
ASGA	**Asgata**	**3.12**	**101**	P	**Pn**	**00 48 06.2**	**+1.2**
ASGA				AML	AML	00 48 42.8	
	0.1nm,0.3s						
CSS	**Mathiatis**	**3.15**	**97**	P	**Pn**	**00 48 06.3**	**+0.9**
DOGA	**KONYA_Doganhis**	**3.19**	**32**	P	**Pn**	**00 48 08.7**	**+2.6**
DOGA				S	**Sn**	**00 48 43.7**	**+0.5**
DOGA				*i* AML	AML	00 48 46.0	
	comp=N,11nm,0.4s						
DOGA				*i* AML	AML	00 48 49.0	

	comp=E,9.1nm,0.4s							
DOGA				*i*	AML	AML	00 49 54.0	
	comp=Z,8.9nm,3.1s							
OSC2	**CSNet OBS 4**	**3.26**	**135**	S		**Sn**	**00 48 46.2**	**+1.6**
MVOU	**Mavrovouni**	**3.39**	**96**	P		**Pn**	**00 48 09.3**	**+0.6**
GEM	**Giv'at Ha'Em**	**5.54**	**112**	Pn		**Pn**	**00 48 39.1**	**+0.9**
GEM				Sn		**Sn**	**00 49 39.4**	**-1.4**
NATI	**Neve Ativ**	**5.57**	**111**	Pn		**Pn**	**00 48 39.9**	**+1.3**
NATI				Sn		**Sn**	**00 49 40.6**	**-1.0**
HMDT	**Nahal Hemdat**	**5.91**	**121**	Pn		**Pn**	**00 48 44.7**	**+1.4**
KZIT	**Kziot**	**6.08**	**136**	Pn		**Pn**	**00 48 46.9**	**+1.3**
KZIT				Sn		**Sn**	**00 49 50.6**	**-3.5**
PRNI	**Paran**	**6.84**	**136**	Pn		**Pn**	**00 48 57.3**	**+1.2**
PRNI				Sn		**Sn**	**00 50 08.6**	**-4.3**
MBRI	**Mt Berech**	**7.22**	**139**	Pn		**Pn**	**00 49 02.7**	**+1.4**
MBRI				Sn		**Sn**	**00 50 19.9**	**-2.4**

*TUL **24** 01:30:50.1±1.5,36.˚50N±0.˚03×99.˚03W±0.˚05, h5km±7km, ML2.7, mb_Lg2.7/62(NEIC), Error ellipse: s-maj=5.3km s-min=3.6km az=98.0*

*NEIC **24** 01:30:51.0±1.3,**36.˚50N**±0.˚02×**99.˚00W**±0.˚03, **h5**km±2km,* **Error ellipse: s-maj=4.7km s-min=3.0km az=223.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKCFA	**Oklahoma City**	**1.66**	**130**	IAmb_Lg		01 31 46.7	
	comp=Z,39nm,0.7s						
WMOK	**Wichita Mounta**	**1.77**	**174**		Pn	01 31 21.8	-0.4
FNO	**Franklin**	**1.80**	**133**	Pn	Pn	01 31 23.1	+0.5
FNO				IAmb_Lg		01 31 50.8	
	comp=Z,55nm,0.8s						
R32A	**Long Quarter,**	**1.93**	**7**	Pn	Pn	01 31 24.7	+0.1
T35A	**Sooner Cattle**	**2.04**	**78**		Pn	01 31 26.5	+0.5
X34A	**Smith Ranch, M**	**2.12**	**153**		Pn	01 31 27.5	+0.4
X34A				IAmb_Lg		01 32 00.1	
	comp=Z,42nm,0.7s						
CBKS	**Cedar Bluff**	**2.38**	**346**		Pn	01 31 31.9	+1.2
CBKS				IAmb_Lg		01 32 11.0	
	comp=Z,36nm,0.9s						
TUL1	**Leonard**	**2.66**	**102**	Pn	Pn	01 31 35.2	+0.7
AMTX	**Amarillo**	**2.71**	**234**	Pn	Pn	01 31 35.8	+0.4
AMTX				IAmb_Lg		01 32 17.2	
	comp=Z,35nm,0.7s						
KSU1	**Kansas State U**	**3.21**	**35**	Pn	Pn	01 31 41.5	-0.6
KSU1	**Kansas State U**	**3.21**	**35**	IAmb_Lg		01 32 36.4	
	comp=Z,19nm,0.8s						
X37A	**Clayton**	**3.52**	**122**	Pn	Pn	01 31 45.7	-0.6
U38A	**Gravette**	**3.72**	**90**	Pn	Pn	01 31 48.7	-0.4
ABTX	**Abilene, Hawle**	**3.91**	**188**	Pn	Pn	01 31 52.1	+0.5
HHAR	**Hobbs**	**4.09**	**92**	Pn	Pn	01 31 53.8	-0.4
HHAR				IAmb_Lg		01 32 59.8	
	comp=Z,13nm,0.9s						
T25A	**Trinidad**	**4.39**	**280**	Pn	Pn	01 31 58.4	-0.1
T25A				IAmb_Lg		01 33 08.5	
	comp=Z,18nm,0.8s						
W39A	**Magazine**	**4.43**	**106**	IAmb_Lg		01 33 19.7	
	comp=Z,19nm,0.8s						
Z38A	**Mt. Pleasant**	**4.62**	**133**	IAmb_Lg		01 33 21.5	
	comp=Z,21nm,1.2s						
S39A	**Bolivar**	**4.69**	**74**	IAmb_Lg		01 33 19.3	
	comp=Z,13nm,0.8s						
MIAR	**Mount Ida**	**4.83**	**112**	Pn	Pn	01 32 04.5	+0.1
MIAR				IAmb_Lg		01 33 37.7	
	comp=Z,11nm,0.8s						
237A	**Washetta, Mont**	**5.21**	**149**	IAmb_Lg		01 33 46.6	
	comp=Z,14nm,0.8s						
P38A	**Dawn**	**5.32**	**52**	IAmb_Lg		01 33 50.9	
	comp=Z,14nm,0.8s						
SDCO	**Great Sand Dun**	**5.34**	**285**	Pn	Pn	01 32 11.5	-0.1
WHAR	**Wooly Hollow**	**5.58**	**101**	Pn	Pn	01 32 15.8	+1.2
WHAR				IAmb_Lg		01 33 56.6	
	comp=Z,16nm,0.9s						
WLAR	**White Oak Lake**	**5.58**	**118**	IAmb_Lg		01 33 55.5	
	comp=Z,10nm,0.7s						
FCAR	**Ozark Folk Cen**	**5.59**	**94**	IAmb_Lg		01 33 53.4	
	comp=Z,14nm,0.8s						
W41B	**Gary Mavity, V**	**5.64**	**102**	Pn	Pn	01 32 15.6	+0.2
W41B				IAmb_Lg		01 33 52.2	
	comp=Z,9.0nm,0.8s						
R40A	**Maddies Statio**	**5.65**	**70**	Pn	Pn	01 32 15.6	0.0
UALR	**University of**	**5.69**	**106**	IAmb_Lg		01 34 04.0	
	comp=Z,12nm,1.0s						
435B	**Jarrell**	**5.82**	**168**	IAmb_Lg		01 34 07.3	
	comp=Z,14nm,0.9s						
Z41A	**Richland Creek**	**6.03**	**121**	IAmb_Lg		01 34 12.2	
	comp=Z,10.0nm,0.8s						
ISCO	**Idaho Springs**	**6.17**	**304**	IAmb_Lg		01 34 16.1	
	comp=Z,7.4nm,0.8s						
P40A	**Paris**	**6.26**	**59**	IAmb_Lg		01 34 21.7	
	comp=Z,12nm,0.8s						
CCM	**Cathedral Cave**	**6.38**	**74**	IAmb_Lg		01 34 19.1	
	comp=Z,9.1nm,1.0s						
PBMO	**Poplar Bluff**	**6.90**	**85**	IAmb_Lg		01 34 32.2	
	comp=Z,8.7nm,0.8s						
FVM	**French Village**	**7.00**	**75**	IAmb_Lg		01 34 41.5	
	comp=Z,7.8nm,0.8s						
MNTX	**Cornudas Mount**	**7.14**	**230**	IAmb_Lg		01 34 39.9	
	comp=Z,9.4nm,0.7s						
S44A	**Carbondale**	**7.88**	**78**	IAmb_Lg		01 34 59.3	
	comp=Z,8.6nm,0.8s						
SIUC	**Southern Illin**	**7.91**	**78**	IAmb_Lg		01 34 59.3	
	comp=Z,7.8nm,0.8s						
L40A	**Anamosa**	**8.20**	**45**	IAmb_Lg		01 35 11.1	
	comp=Z,10nm,0.8s						
I37A	**Lemond, Waseca**	**8.64**	**28**	IAmb_Lg		01 35 45.1	
	comp=Z,8.6nm,1.0s						

*IDC **24** 01:31:14.8±2.4,7.˚47S×124.˚23E, h0km, mb3.7/2, mbtmp3.8/3, ML4.3/1, Error ellipse: s-maj=161.7km s-min=42.7km az=57.0*

*DJA **24** 01:31:30.0±0.6,8.˚5±7.˚1×12.˚4E±.˚, h170km±5km, M4.0/9, mb4.2/3, mB4.8/4, MLv3.9/9, Mw(mB)4.1/4*

*NEIC **24** 01:31:31.3±2.2,8.˚4S±0.˚1×123.˚9E±0.˚1, h185km±8km, mb4.1/6, Error ellipse: s-maj=21.9km s-min=6.7km az=45.0*

ISC 24 01:31:31.4±0.7,**8.˚32S**±0.˚07×**123.˚94E**±0.˚08,**h185**km,**n31,** σ2**s15/33, mb3.6/3, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**1.46**	**167**		**Pn**	**01 32 03.9**	**+0.2**
SOEI				Sn	**Sn**	**01 32 29.5**	**+0.8**
SOEI	**Soe**	**1.46**	**167**	P	**Pn**	**01 32 03.7**	**0.0**
MMRI	**Maumere**	**1.72**	**259**		**Pn**	**01 32 04.8**	**-1.1**
EDFI	**Ende, Flores**	**2.27**	**259**	P	**Pn**	**01 32 10.7**	**-1.2**
BASI	**Baing, Sumba**	**3.82**	**240**	P	**Pn**	**01 32 29.4**	**-1.1**
WBSI	**Waikabubak, Su**	**4.69**	**253**	P	**Pn**	**01 32 40.4**	**-1.1**
BKSI	**Bulukumba**	**4.82**	**308**	P	**Pn**	**01 32 40.7**	**-2.6**
PLAI	**Plampang**	**6.12**	**265**	P	**Pn**	**01 32 59.0**	**-1.1**
PLAI	**Plampang**	**6.12**	**265**	P	**Pn**	**01 32 59.2**	**-0.9**
TWSI	**Taliwang, Sumb**	**7.00**	**266**	P	**Pn**	**01 33 10.1**	**-1.5**
	0.1nm544nm8.7nm,0.5s						
MTN	**Manton Dam**	**8.38**	**123**		**Pn**	**01 33 28.7**	**-1.0**
MTN	**Manton Dam**	**8.38**	**123**	P	**Pn**	**01 33 30.1**	**+0.4**
KNRA	**Kununurra**	**8.70**	**148**		**Pn**	**01 33 32.4**	**-1.6**
KNRA	**Kununurra**	**8.70**	**148**	P	**Pn**	**01 33 33.7**	**-0.2**
KDU	**Kakadu**	**9.44**	**118**	P	**Pn**	**01 33 43.1**	**-0.6**
JAGI	**Jajag, Banyuwa**	**9.69**	**268**	P	**Pn**	**01 33 46.9**	**0.0**
	22nm,1.8s						
FAKI	**Fak Fak**	**9.85**	**57**	Pn	**Pn**	**01 33 49.2**	**+0.1**
FAKI	**Fak Fak**	**9.85**	**57**	P	**Pn**	**01 33 50.0**	**+0.9**
WB0	**Warramunga Arr**	**15.23**	**139**		**Pn**	**01 34 56.5**	**-0.7**
WB0				IAmb	IAmb	01 35 08.6	
	comp=Z,15nm,1.5s						
WRA	**Warramunga Arr**	**15.32**	**140**	Pn	**P**	**01 34 58.9**	**-0.1**
	comp=Z,1.2nm,0.3s,baz=318,slow=14,SNR=38						
WRA				Sn	**S**	**01 37 40.1**	**-10**
	comp=Z,0.9nm,0.3s,baz=317,slow=24,SNR=9.1						
	comp=Z,1.6nm,0.5s						
WRAB	**Tennant Creek**	**15.32**	**140**	P	**P**	**01 35 00.4**	**+1.4**
WB2	**Warramunga Arr**	**15.33**	**140**		**P**	**01 34 59.0**	**-0.1**
WB2				IAmb	IAmb	01 35 13.7	
	comp=Z,11nm,1.2s						
WR0	**Warramunga Arr**	**15.46**	**140**		**Pn**	**01 34 59.7**	**-0.4**
WRKA	**Warakurna**	**17.14**	**166**	P	**Pn**	**01 35 23.3**	**+3.1**
QIS	**Mount Isa**	**19.42**	**130**	P	**Pn**	**01 35 47.5**	**+0.4**
COEN	**Coen**	**19.68**	**108**	P	**P**	**01 35 47.8**	**+1.2**
COEN				IAmb	IAmb	01 35 51.7	
	comp=Z,13nm,1.2s						
COEN	**Coen**	**19.68**	**108**	P	**Pn**	**01 35 49.0**	**-1.2**

MTSU	**Mount Surprise**	**22.08**	**118**	P		**P**	**01 36 14.8**	**+3.0**
SONM	**Songino Array**	**58.03**	**346**	P		**P**	**01 41 05.0**	**0.0**
	comp=Z,0.4nm,0.5s,baz=159,slow=8.8,SNR=3.2							
	comp=Z,0.4nm,0.5s							
MKAR	**Makanchi Array**	**66.20**	**330**	P		**P**	**01 42 00.2**	**+0.9**
	comp=Z,0.5nm,0.4s,baz=142,slow=7.2,SNR=11							
	comp=Z,0.5nm,0.4s							
ABKAR	**Akbulak array**	**79.88**	**323**	P		**P**	**01 43 19.1**	**-0.4**
ABKAR				IAmb		IAmb	01 43 22.4	
	comp=Z,2.0nm,1.4s							

*NOU **24** 01:43:37.4,20.˚77S×169.˚26E, h7km, MLv4.9/14, Vanuatu Islands*

*IDC **24** 01:43:40.2±2.6,20.˚78S×169.˚34E, h50km±18km, mb4.3/10, mbtmp4.6/11, ML4.1/1, MS3.7/19, Error ellipse: s-maj=27.9km s-min=26.0km az=105.0*

*NEIC **24** 01:43:42.1±1.7,20.˚92S±0.˚09×169.˚14E±0.˚08, h53km±2km, mb4.7/19, Error ellipse: s-maj=12.7km s-min=11.1km az=161.0*

ISC 24 01:43:38.0±0.6,**20.˚83S**±0.˚06×**169.˚34E**±0.˚08,**h30**km,**n88,** σ1**s33/74, mb4.7/20, MS3.7**/16,**1C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**1.38**	**242**	Pn	**Pn**	**01 44 01.5**	**+0.2**
MARNC	**Mare, Loyalty**	**1.38**	**242**	P	**Pn**	**01 44 01.6**	**+0.3**
LIFNC	**LIFOU**	**1.96**	**271**		**Pn**	**01 44 08.6**	**-0.4**
LIFNC	**LIFOU**	**1.96**	**271**	P	**Pn**	**01 44 08.9**	**-0.4**
PINNC	**Pines Island,**	**2.50**	**224**	Pn	**Pn**	**01 44 17.3**	**+0.7**
PINNC	**Pines Island,**	**2.50**	**224**	P	**Pn**	**01 44 17.5**	**+0.9**
YATNC	**Mamie plateau,**	**2.59**	**241**	P	**Pn**	**01 44 18.4**	**+0.5**
OUENC	**Ouen Island, N**	**2.81**	**235**	Pn	**Pn**	**01 44 21.5**	**+0.5**
OUENC	**Ouen Island, N**	**2.81**	**235**	P	**Pn**	**01 44 23.1**	**+2.2**
DZM	**Mont Dzumac**	**2.97**	**245**	P	**Pn**	**01 44 23.3**	**+0.1**
	25nm,0.3s,baz=66,slow=17,SNR=180							
DZM				S	**Sn**	**01 44 56.6**	**-1.2**
	404nm,0.4s,baz=165,slow=19,SNR=7.0							
DZM				LR	LR	01 45 29.7		
	comp=Z,894nm,18.9s,baz=70,slow=37							
	160nm,0.6s							
DZM	**Mont Dzumac**	**2.97**	**245**	*e*P	**Pn**	**01 44 25.0**	**+1.8**
	408nm,0.9s							
DZM				*e*S	**Sn**	**01 44 56.4**	**-1.4**
	2μm,24.9s							
DZM	**Mont Dzumac**	**2.97**	**245**		**Pn**	**01 44 23.4**	**+0.3**
DZM	**Mont Dzumac**	**2.97**	**245**	P	**Pn**	**01 44 25.0**	**+1.8**
ONTNC	**Ouen Toro**	**3.06**	**241**	Pn	**Pn**	**01 44 25.5**	**+1.2**
ONTNC	**Ouen Toro**	**3.06**	**241**	P	**Pn**	**01 44 26.3**	**+1.9**
NOUC	**Port Laguerre**	**3.10**	**245**	P	**Pn**	**01 44 26.8**	**+1.9**
RTV	**Rentapao**	**3.14**	**344**	P	**Pn**	**01 44 26.8**	**+1.3**
DVP	**Devils Point**	**3.27**	**340**	P	**Pn**	**01 44 27.5**	**+0.2**
KOUNC	**Koumac, New Ca**	**4.74**	**272**	Pn	**Pn**	**01 44 49.0**	**+1.6**
KOUNC	**Koumac, New Ca**	**4.74**	**272**	P	**Pn**	**01 44 49.1**	**+1.6**
MSVF	**Nonsavu**	**8.79**	**71**	LR	LR	01 48 29.4	
	comp=Z,999nm,19.4s,baz=210,slow=33							
MSVF	**Nonsavu**	**8.79**	**71**	Pn	Pn	01 45 51.4	+8.3
RAO	**Raoul Island**	**14.27**	**129**	LR	LR	01 51 22.4	
	comp=Z,346nm,20.4s,baz=356,slow=32							
HNR	**Honiara**	**14.50**	**320**	Pn	**Pn**	**01 47 03.2**	**+1.9**
EIDS	**Eidsvold**	**17.39**	**251**		**P**	**01 47 40.0**	**+0.4**
ARMA	**Armidale**	**18.59**	**236**	P	**Pn**	**01 47 53.3**	**0.0**
URZ	**Urewera**	**18.63**	**161**	LR	LR	01 53 45.6	
	comp=Z,249nm,19.8s,baz=31,slow=32							
AFI	**Afiamalu**	**19.28**	**72**	LR	LR	01 54 05.2		
	comp=Z,184nm,21.2s,baz=222,slow=32							
CTA	**Charters Tower**	**21.64**	**268**	P	**P**	**01 48 27.4**	**+1.3**
	17nm,0.7s,baz=96,slow=11,SNR=30							
CTA				LR	LR	01 56 09.3		
	comp=Z,309nm,20.7s,baz=82,slow=35							
	17nm,0.7s							
CTAO	**Charters Tower**	**21.64**	**268**	P	**P**	**01 48 26.6**	**+0.5**
CTAO				IAmb	IAmb	01 48 30.3		
	comp=Z,18nm,0.8s							
RPZ	**Rata Peaks**	**22.87**	**177**	LR	LR	01 56 02.8		
	comp=Z,117nm,19.7s,baz=44,slow=32							
KRVT	**Keravat (AS076**	**23.52**	**312**	P	**P**	**01 48 45.4**	**-0.3**
	comp=Z,21nm,0.4s,baz=190,slow=18,SNR=6.7							
	comp=Z,21nm,0.4s							
PMG	**Port Moresby**	**24.20**	**295**	P	**P**	**01 48 52.1**	**0.0**
	comp=Z,11nm,0.5s,baz=131,slow=6.6,SNR=4.8							
PMG				LR	LR	01 56 50.2		
	comp=Z,147nm,19.8s,baz=105,slow=33							
	comp=Z,11nm,0.5s							
PMG	**Port Moresby**	**24.20**	**295**	IAmb	IAmb	01 48 54.0		
	comp=Z,18nm,0.8s							
STKA	**Stephens Creek**	**27.11**	**240**	P	**P**	**01 49 19.6**	**+1.2**
	comp=Z,9.0nm,0.6s,baz=83,slow=8.1,SNR=7.7							
STKA				LR	LR	01 59 57.7		
	comp=Z,146nm,18.5s,baz=38,slow=36							
	comp=Z,9.0nm,0.6s							
STKA	**Stephens Creek**	**27.11**	**240**	P	**P**	**01 49 18.1**	**-0.3**
RAR	**Rarotonga**	**28.82**	**96**	LR	LR	01 58 54.8		
	comp=Z,262nm,19.8s,baz=281,slow=32							
WR0	**Warramunga Arr**	**32.59**	**265**	P	**P**	**01 50 05.2**	**-1.9**
WR0				IAmb	IAmb	01 50 07.0		
	comp=Z,12nm,1.1s							
WB2	**Warramunga Arr**	**32.77**	**265**	P	**P**	**01 50 08.0**	**-0.7**
WB2				IAmb	IAmb	01 50 08.2		
	comp=Z,6.9nm,0.8s							
WRA	**Warramunga Arr**	**32.78**	**265**	P	**P**	**01 50 07.3**	**-1.5**
	comp=Z,5.8nm,0.8s,baz=90,slow=8.0,SNR=67							
WRA				LR	LR	02 03 08.2		
	comp=Z,330nm,19.9s,baz=58,slow=36							
	comp=Z,5.8nm,0.8s							
AS31	**Alice Springs**	**32.87**	**258**	P	**P**	**01 50 08.6**	**-1.0**
AS31				IAmb	IAmb	01 50 10.6		
	comp=Z,6.0nm,0.6s							
ASAR	**Alice Springs**	**32.87**	**258**	P	**P**	**01 50 08.7**	**-0.8**
MTN	**Manton Dam**	**37.34**	**276**	P	**P**	**01 50 47.2**	**-0.9**
TBI	**Tubuai**	**38.17**	**102**	*e*LR	LR	02 01 30.0		
	comp=Z,179nm,29.2s							
KNRA	**Kununurra**	**38.80**	**271**	P	**P**	**01 50 59.4**	**-1.0**
KNRA				IAmb	IAmb	01 51 00.7		
	comp=Z,14nm,0.9s							
PPT2	**Papeete2**	**38.86**	**92**	*e*LR	LR	02 01 53.2		
	comp=Z,352nm,25.8s							
PPT	**Papeete**	**38.87**	**92**	LR	LR	02 03 05.7		
	comp=Z,182nm,21.2s,baz=288,slow=30							
GUMO	**Guam**	**41.81**	**323**	LR	LR	02 06 25.6		
	comp=Z,97nm,20.4s,baz=114,slow=33							
KAPI	**Kappang**	**50.59**	**281**	P	**P**	**01 52 34.9**	**+0.5**
	comp=Z,11nm,0.6s,baz=114,slow=6.4,SNR=8.0							
KAPI				LR	LR	02 14 37.3		
	comp=Z,42nm,21.1s,baz=139,slow=37							
	comp=Z,11nm,0.6s							
KAPI	**Kappang**	**50.59**	**281**	P	**P**	**01 52 33.1**	**-1.4**
TOLI2	**Tolitoli**	**52.25**	**289**	P	**P**	**01 52 45.7**	**-1.2**
VNDA	**Vanda**	**56.85**	**182**	P	**P**	**01 53 20.3**	**+0.9**
	comp=Z,0.2nm,0.6s,baz=0.3,slow=5.5,SNR=1.9							
SBA	**Scott Base**	**57.08**	**181**	P	**P**	**01 53 21.9**	**+0.9**
SBA				IAmb	IAmb	01 53 33.8		
	comp=Z,7.7nm,0.8s							
KSM	**Kuching**	**61.82**	**283**	P	**P**	**01 53 54.2**	**-0.5**
ASAJ	**Asahikawa**	**69.11**	**340**	LR	LR	02 18 31.6		
	comp=Z,43nm,21.4s,baz=187,slow=30							
QSPA	**South Pole Qui**	**69.23**	**180**	P	**P**	**01 54 42.6**	**+0.7**
QSPA				IAmb	IAmb	01 54 56.5		
	comp=Z,15nm,1.1s							
USRK	**Ussuriysk Ar.**	**73.19**	**333**	P	**P**	**01 55 06.0**	**+0.1**
	comp=Z,2.3nm,0.7s,baz=127,slow=6.2,SNR=2.6							
	comp=Z,2.3nm,0.7s							
GYA	**Guiyang**	**76.80**	**305**	⇑P	**P**	**01 55 28.8**	**+1.5**
GYA				pmax	pmax			
	comp=Z,12nm,0.6s							
CMAR	**Chiang Mai Arr**	**79.24**	**294**	P	**P**	**01 55 42.0**	**+1.1**
	comp=Z,1.2nm,0.3s,baz=143,slow=4.3,SNR=6.1							
	comp=Z,1.2nm,0.3s							
CMAR	**Chiang Mai Arr**	**79.24**	**294**	P	**P**	**01 55 41.1**	**+0.2**
BELA	**Belgrano 2**	**80.52**	**175**	P	**P**	**01 55 46.1**	**-0.7**
BELA				IAmb	IAmb	01 55 47.2		
	comp=Z,6.3nm,0.6s							
HHC	**Hu-ho-hao-te**	**81.48**	**320**	*e*P	**P**	**01 55 55.8**	**+3.2**
HHC				pmax	pmax			
	comp=Z,34nm,1.2s							
HHC				pmax	pmax			
	comp=Z,180nm,9.6s							
MA2	**Magadan**	**81.55**	**351**	LR	LR	02 27 10.6		
	comp=Z,57nm,21.4s,baz=148,slow=32							
SEY	**Seymchan**	**84.55**	**352**	LR	LR	02 29 23.8		
	comp=Z,51nm,20.1s,baz=168,slow=32							
TROLL	**Troll, Antarti**	**86.97**	**184**	P	**P**	**01 56 20.0**	**0.0**
SNAA	**Sanae**	**87.59**	**182**	P	**P**	**01 56 22.6**	**-0.4**
VNA3	**Neumayer Olymp**	**88.17**	**180**	P	**P**	**01 56 25.3**	**-0.5**
YBH	**Yreka Blue Hor**	**88.37**	**44**	LR	LR	02 30 08.0		

	comp=Z,58nm,19.4s,baz=214,slow=32							
YAK	**Yakutsk**	**88.41**	**342**	LR		LR	02 30 53.8	
	comp=Z,33nm,21.6s,baz=276,slow=32							
SONM	**Songino Array**	**88.54**	**323**	P		**P**	**01 56 27.3**	**-0.5**
	comp=Z,1.1nm,0.8s,baz=114,slow=4.8,SNR=7.4							
	comp=Z,1.1nm,0.8s							
SONM	**Songino Array**	**88.54**	**323**	P		**P**	**01 56 26.9**	**-0.9**
SONM				IAmb		IAmb	01 56 28.3	
	comp=Z,2.4nm,1.0s							
VNA1	**Neumayer--Stat**	**88.75**	**181**	P		**P**	**01 56 31.2**	**+2.7**
NVAR	**Mina Array Bea**	**89.78**	**48**	P		**P**	**01 56 33.3**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=220,slow=6.9,SNR=2.2							
	comp=Z,0.5nm,0.6s							
WMQ	**Urumqi**	**98.36**	**314**	*e*P		Pdif	01 57 14.5	+1.4
ARCES	**ARCESS Array B**	**126.62**	**345**	PKP		**PKPdf**	**02 02 35.6**	**-2.1**
	comp=Z,0.9nm,0.9s,baz=26,slow=2.3,SNR=4.0							
ARCES				pPKP		**sPKPdf**	**02 02 52.6**	**+2.8**
	comp=Z,0.4nm,0.6s,baz=22,slow=3.9,SNR=1.2							
FINES	**FINESS Array B**	**132.08**	**337**	PKP		**PKPdf**	**02 02 47.4**	**-0.8**
	comp=Z,0.8nm,0.9s,baz=96,slow=2.8,SNR=4.2							
FINES				SKPbc		**SKPbc**	**02 06 08.5**	**-3.9**
	comp=Z,1.3nm,0.7s,baz=58,slow=3.4,SNR=7.4							
DPC	**Dobruska-Polom**	**143.65**	**331**	*e*PKP		PKPab	02 03 06.4	-0.2
BRG	**Berggiesshubel**	**144.33**	**333**	*e*PKP		**PKPab**	**02 03 08.5**	**-0.6**
BRG				Amp			02 03 09.7	
	comp=Z,4.0nm,0.8s							
BRG				*ex*		x	02 03 22.2	
BRG				Amp			02 03 23.3	
	comp=Z,5.2nm,1.0s							
RONA	**Rosalia, Austr**	**145.47**	**327**	*e*P		**PKPbc**	**02 03 12.8**	**-0.4**
	comp=Z,5.1nm,1.1s							
CONA	**Conrad Observa**	**145.54**	**328**	*e*P		**PKPdf**	**02 03 13.2**	**-0.1**
	comp=Z,4.1nm,0.8s							
CKRC	**Cesky Krumlov**	**145.66**	**330**	*e*PKP		**PKPdf**	**02 03 12.8**	**-0.6**
CKRC				*ex*		x	02 03 24.4	
KHC	**Kasperske Hory**	**145.77**	**331**			**PKPdf**	**02 03 13.4**	**-0.3**
KHC	**Kasperske Hory**	**145.77**	**331**	*e*PKP		**PKPdf**	**02 03 13.3**	**-0.3**
KHC				*ex*		x	02 03 26.5	
GERES	**GERESS Array B**	**145.92**	**331**	PKPbc		**PKPdf**	**02 03 13.4**	**-0.5**
	comp=Z,1.1nm,0.6s,baz=31,slow=4.0,SNR=12							
GERES				pPKPbc		sPKPbc	02 03 26.9	+0.2
	comp=Z,2.1nm,0.8s,baz=46,slow=3.9,SNR=9.2							
GERES				SKPbc		**SKPbc**	**02 06 48.5**	**-3.3**
	comp=Z,0.2nm,0.4s,baz=134,slow=2.8,SNR=4.5							
GERES	**GERESS Array B**	**145.92**	**331**			**PKPdf**	**02 03 12.8**	**-1.1**
MOTA	**Moosalm**	**148.21**	**331**	*e*P		**PKPdf**	**02 03 19.6**	**+1.7**
	comp=Z,4.4nm,1.1s							
BFO	**Black Forest**	**148.60**	**335**	PKPbc		**PKiKP**	**02 03 23.4**	**-0.1**
TORD	**Torodi Ar. Bea**	**165.93**	**239**	PKPab		**PKPab**	**02 04 40.2**	**-0.6**
	comp=Z,0.2nm,0.5s,baz=107,slow=5.1,SNR=1.8							

*IDC **24** 02:06:13.8±1.4,8.˚03S×107.˚45E, h0km, mb3.8/4, mbtmp3.8/4, MS3.5/2, Error ellipse: s-maj=69.5km s-min=26.2km az=57.0*

*DJA **24** 02:06:18.1±0.3,8.˚5±3.˚1×10.˚8E±.˚, h10km, M4.3/14, mb4.4/2, MLv4.2/14*

ISC 24 02:06:21.0±1.9,**8.˚1S**±0.˚2×**107.˚64E**±0.˚07,**h45**km±21km, **n20,** σ1**s01/22, mb3.8/4, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMJI	**Cimerak**	**0.88**	**66**	P	**Pn**	**02 06 36.2**	**-0.8**
CMJI				S	**Sn**	**02 06 47.1**	**-1.6**
CNJI	**Cibinong**	**0.97**	**329**	P	**Pn**	**02 06 37.9**	**-0.3**
CNJI				S	**Sn**	**02 06 50.2**	**-0.6**
KPJI	**Karang Pucung**	**1.51**	**58**	P	**Pn**	**02 06 46.3**	**+0.6**
KPJI				S	**Sn**	**02 07 05.7**	**+1.5**
SKJI	**Sukabumi**	**1.56**	**316**	P	**Pn**	**02 06 46.2**	**-0.1**
SKJI				S	**Sn**	**02 07 05.7**	**+0.4**
DBJI	**Dramaga**	**1.81**	**331**	P	**Pn**	**02 06 50.3**	**+0.6**
DBJI			

JOT	Ohata	0.48	346	∥iP		Pn	03 15 13.4	+0.3
JOT				∥S		Sn	03 15 25.1	+0.5
JANG	Nango	0.59	156	∥P		Pn	03 15 14.0	-0.1
JANG				∥S		Sn	03 15 25.8	-0.4
JAH	Hinai	0.84	211	P		Pn	03 15 16.8	+0.4
JAH				S		Sn	03 15 31.1	+0.8
JSR	Shiriuchi	0.85	316	∥P		Pn	03 15 16.5	+0.2
JIW	Iwasaki	0.96	251	∥P		Pn	03 15 17.9	+0.3
JKB	Kayabe	0.98	353	S		Sn	03 15 33.2	+0.5
JOMM	Oshimamatsumae	1.08	304	∥iP		Pn	03 15 19.0	+0.1
JYM2	Yakumo 2	1.35	333	∥P		Pn	03 15 22.6	+0.6
JOM	Ohasama	1.44	177	P		Pn	03 15 23.8	+0.6
JOM				eS		Sn	03 15 42.9	+0.5
JNB	Noboribetsu	1.56	356	P		Pn	03 15 25.3	+0.8
JOSM	Okushiri--Mats	1.74	313	∥P		Pn	03 15 26.6	-0.2
JNBK	Urakawa-nobuka	1.79	40	P		Pn	03 15 28.0	+0.5
ERM	Erimo	1.83	53			Pn	03 15 28.9	+0.8
JEW	Eniwo	1.93	5			Pn	03 15 29.8	+0.5
JMM	Marumori	3.06	186			Pn	03 15 44.5	+0.3
JKA	Kamikawa-asahi	3.36	17			Pn	03 15 48.5	+0.2
JSD	Sado	3.67	219			Pn	03 15 52.8	+0.4
JYT	Yasato	4.75	190			Pn	03 16 07.3	+0.3
MJB9	Matsu-Tunnel	4.95	209			Pn	03 16 10.5	+0.7
MAJO	Matsushiro	4.96	209			Pn	03 16 10.0	+0.2
MJAR	Matsushiro Arr	4.96	209	P		Pn	03 16 10.5	+0.7
	22nm,0.5s,baz=18,slow=14,SNR=47							
MJAR	Matsushiro Arr	4.96	209			Pn	03 16 07.9	-1.9
JGF	Kuroka	6.11	211			Pn	03 16 25.9	+0.4
INU	Inuyama	6.46	212			Pn	03 16 31.5	+1.2
USA0B	Ussuriysk Arra	7.55	299			Pn	03 16 45.5	+0.6
USRK	Ussuriysk Ar.	7.55	299	P		Pn	03 16 46.3	+1.3
	7.4nm,0.6s,baz=106,slow=14,SNR=14							
USRK				S		Sn	03 18 08.8	-0.1
	1.0nm,0.6s,baz=138,slow=20,SNR=1.2							
USRK	Ussuriysk Ar.	7.55	299	Pn		Pn	03 16 44.9	-0.1
JHJ	Hachijo jima 2	7.87	189	P		Pn	03 16 46.2	-3.1
	24nm,0.3s,baz=319,slow=19,SNR=9.2							
JHJ				S		Sn	03 18 08.1	-8.6
	18nm,0.3s,baz=68,slow=23,SNR=1.4							
KSRS	Korea Array	10.87	256	P		Pn	03 17 34.6	+4.5
	1.6nm,0.6s,baz=64,slow=14,SNR=5.9							
KSRS				LR		LR	03 21 19.7	
	comp=Z,16nm,21.8s,baz=50,slow=35							
SEY	Seymchan	23.03	13	P		P	03 19 52.8	-1.4
	1.1nm,0.3s,baz=207,slow=18,SNR=4.1							
SONM	Songino Array	25.66	297	P		P	03 20 18.2	-0.1
	0.3nm,0.4s,baz=95,slow=8.2,SNR=2.5							
	0.3nm,0.4s							
H11N2	WAKE ISLAND Hy	30.43	126	T		T	03 52 09.5	
	baz=318,slow=75,SNR=70							
H11N1	WAKE ISLAND Hy	30.44	126	T		T	03 52 10.2	
	baz=318,slow=75,SNR=58							
H11N3	WAKE ISLAND Hy	30.45	126	T		T	03 52 13.2	
	baz=318,slow=75,SNR=87							
ZAA0	Zalesovo Array	39.26	309	P		P	03 22 15.3	-1.2
ZAA0				IAmb		IAmb	03 22 17.3	
	comp=Z,2.4nm,0.6s							
ZALV	Zalesovo Beam	39.26	309	P		P	03 22 16.1	-0.3
	comp=Z,2.3nm,0.5s,baz=85,slow=8.8,SNR=8.1							
ZALV				PcP		PcP	03 24 23.3	-0.1
	comp=Z,1.1nm,0.3s,baz=92,slow=4.3,SNR=3.0							
	comp=Z,2.3nm,0.5s							
MK31	Makanchi Array	42.02	298	P		P	03 22 38.4	-0.9
MKAR	Makanchi Array	42.02	298	P		P	03 22 39.0	-0.3
	comp=Z,1.0nm,0.6s,baz=86,slow=9.9,SNR=16							
	comp=Z,1.0nm,0.6s							
MAKZ	Makanchi	42.22	299	P		P	03 22 40.1	-0.9
MAKZ				IAmb		IAmb	03 22 42.2	
	comp=Z,1.7nm,0.8s							
IMAR	Indian Mountai	43.44	33	P		P	03 22 51.0	+0.6
KURK	Kurchatov	43.49	305	P		P	03 22 50.9	-0.2
H21K	Melozitna Rive	43.82	33	P		P	03 22 53.2	-0.3
H21K				IAmb		IAmb	03 22 59.9	
	comp=Z,2.8nm,1.1s							
IL31		46.34	34	P		P	03 23 14.0	+0.6
IL31				IAmb		IAmb	03 23 30.7	
	comp=Z,5.1nm,1.4s							
ILAR	Eielson Array	46.34	34	P		P	03 23 14.7	+1.1
	comp=Z,1.0nm,0.7s,baz=267,slow=6.1,SNR=18							
	comp=Z,1.0nm,0.7s							
SCRK	Sand Creek	47.69	35	P		P	03 23 24.5	+0.3
SCRK				IAmb		IAmb	03 23 25.5	
	comp=Z,2.5nm,0.9s							
INK	Inuvik	51.03	28	P		P	03 23 50.6	+1.3
	comp=Z,1.6nm,0.3s,baz=309,slow=11,SNR=5.3							
	comp=Z,1.6nm,0.3s							
INK	Inuvik	51.03	28	IAmb		IAmb	03 23 51.3	
	comp=Z,3.5nm,1.1s							
HYT	Haines Junctio	51.32	38	P		P	03 23 53.1	+1.4
ABKAR	Akbulak array	55.36	308	P		P	03 24 20.3	-1.0
ARCES	ARCESS Array B	60.32	339	P		P	03 24 55.3	-0.4
	comp=Z,0.9nm,0.8s,baz=50,slow=8.4,SNR=3.7							
	comp=Z,0.9nm,0.8s							
ARCES	ARCESS Array B	60.32	339	IAmb		IAmb	03 25 00.5	
	comp=Z,9.3nm,1.4s							
YKA	Yellowknife Ar	60.56	31	P		P	03 24 58.0	+0.6
	comp=Z,0.6nm,0.6s,baz=309,slow=5.3,SNR=4.9							
	comp=Z,0.6nm,0.6s							
WRA	Warramunga Arr	60.88	187	P		P	03 24 58.6	-1.4
	comp=Z,0.6nm,0.4s,baz=4.3,slow=7.1,SNR=17							
	comp=Z,0.6nm,0.4s							
FINES	FINESS Array B	65.32	331	P		P	03 25 28.4	-0.5
	comp=Z,0.7nm,0.5s,baz=39,slow=8.4,SNR=14							
	comp=Z,0.7nm,0.5s							
NOA	NORSAR Array B	70.55	337	P		P	03 26 01.6	-0.2
	comp=Z,0.2nm,0.7s,baz=38,slow=6.2,SNR=1.3							
	comp=Z,0.2nm,0.7s							
NVAR	Mina Array Bea	72.82	54	P		P	03 26 17.3	+1.4
	comp=Z,0.6nm,0.6s,baz=292,slow=6.1,SNR=5.3							
	comp=Z,0.6nm,0.6s							
NVAR	Mina Array Bea	72.82	54	P		P	03 26 14.6	-1.4
PDAR	Pinedale Array	75.08	46	P		P	03 26 29.6	+0.5
	comp=Z,0.8nm,0.6s,baz=275,slow=2.5,SNR=7.1							
	comp=Z,0.8nm,0.6s							
TXAR	Lajitas Array	87.88	52	P		P	03 27 37.2	+0.6
	comp=Z,0.2nm,0.5s,baz=301,slow=4.2,SNR=4.4							
	comp=Z,0.2nm,0.5s							
QSPA	South Pole Qui	130.65	180	PKP		PKPdf	03 33 56.5	+0.4
	comp=Z,0.5nm,0.7s,baz=94,slow=2.5,SNR=3.3							
SNAA	Sanae	144.39	199	PKP		PKPab	03 34 19.4	-0.3
	comp=Z,2.4nm,0.7s,baz=159,slow=5.8,SNR=14							
H03N2	Juan Fernandez	147.39	90	T		T	06 19 36.1	
	baz=300,slow=77							
H03N3	Juan Fernandez	147.40	90	T		T	06 19 38.5	
	baz=300,slow=77							
H03N1	Juan Fernandez	147.40	90	T		T	06 19 38.0	
	baz=300,slow=77							

IDC ***24*** *03:29:41.4±0.6,55°.33S×128°.33W,h0km,mb4.2/10, mbtmp4.2/10,MS4.5/40,Error ellipse: s-maj=23.5km s-min=18.4km az=146.0*

NEIC ***24*** *03:29:43.8±1.9,55°.5S±0°.1×128°.1W±0°.2,h10km±1km, mb4.8/35,Error ellipse: s-maj=23.0km s-min=19.0km az=335.0*

BJI ***24*** *03:29:44.0±0.0,55°.40S×128°.40W,h15km,mB5.4/2, Ms5.1/3,Ms7 4.7/4*

GCMT ***24*** *03:29:46.8±0.2,55°.56S±0°.01×128°.15W±0°.02,h17km±1km, MW5.2/127,Moment Tensor Solution. s70,c90; s127,c206; Duration: 1ŝ0 Moment tensor: Scale 10^16 Nm; Mrr-0.89±.17; Mθθ4.83±.19; Mϕϕ-3.94±.15; Mrθ-1.25±.40; Mrϕ5.95±.13; Mθϕ-1.10±.36; Best double couple: Mo7.55000×10^16 NP1:φs289.00000°,δ80.00000°, λ4.00000°. NP2:φs198.00000°,δ86.00000°,λ170.00000°. Principal axes: T 8.1250, Plg10.0000°, Azm153.0000°; N -1.1500, Plg79.0000°, Azm355.0000°; P -6.9760, Plg4.0000°, Azm244.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 03:29:43.2±0.4, 55°.43S±0°.09×128°.2W±0°.1, h10km, n130, σ1ŝ26/79, mb4.7/23, MS4.6/45, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
SBA	Scott Base	31.35	202	P	P	03 36 04.4		+1.1
SBA				IAmb	IAmb	03 36 25.8		
	comp=Z,13nm,1.5s							
RPN	Rapa Nui	31.42	34	LR	LR	03 45 30.3		
	comp=Z,531nm,20.9s,baz=20,slow=30							
PMSA	Palmer Station	31.91	133	LR	LR	03 45 16.5		
	comp=Z,1µm,20.4s,baz=264,slow=29							
VNDA	Vanda	32.38	202	P	P	03 36 14.4		+2.1
	comp=Z,1.4nm,0.8s,baz=98,slow=7.7,SNR=8.3							
VNDA				LR	LR	03 45 13.6		
	comp=Z,401nm,21.1s,baz=82,slow=29							
	comp=Z,1.4nm,0.8s							
VNDA	Vanda	32.38	202	P	P	03 36 14.2		+1.8
QSPA	South Pole Qui	34.74	180	P	P	03 36 33.7		+0.5
	comp=Z,3.0nm,0.8s,baz=108,slow=4.0,SNR=10.0							
QSPA				LR	LR	03 49 30.3		
	comp=Z,2µm,18.1s,baz=90,slow=34							
	comp=Z,3.0nm,0.8s							
QSPA	South Pole Qui	34.74	180	P	P	03 36 34.2		+0.9
QSPA				IAmb	IAmb	03 36 44.4		
	comp=Z,11nm,1.1s							
TBI	Tubuai	35.71	325	eLR	LR	03 46 16.2		
	comp=Z,2µm,26.2s							
TBI	Tubuai	35.71	325	eT	T	04 14 09.8		
	comp=Z,58nm,0.3s							
BELA	Belgrano 2	37.29	160	P	P	03 36 54.1		-0.5
RPZ	Rata Peaks	39.85	261	LR	LR	03 49 40.1		
	comp=Z,1µm,20.6s,baz=124,slow=30							
URZ	Urewera	40.00	272	LR	LR	03 50 29.9		
	comp=Z,902nm,18.2s,baz=210,slow=31							
PLCA	Paso Flores	40.01	93	P	P	03 37 18.6		+0.5
	comp=Z,6.1nm,1.3s,baz=234,slow=9.6,SNR=3.2							
PLCA				LR	LR	03 50 27.7		
	comp=Z,381nm,18.5s,baz=224,slow=31							
	comp=Z,6.1nm,1.3s							
H03S2	Juan Fernandez	40.10	78	T	T	04 19 55.3		
	baz=219							
H03S1	Juan Fernandez	40.10	78	T	T	04 19 56.6		
	baz=219							
H03S3	Juan Fernandez	40.11	78	T	T	04 19 57.1		
	baz=219							
H03N3	Juan Fernandez	40.38	78	T	T	04 20 19.8		
	baz=223,slow=72,SNR=129							
H03N2	Juan Fernandez	40.39	78	T	T	04 20 19.6		
	baz=223,slow=72,SNR=99							
H03N1	Juan Fernandez	40.40	78	T	T	04 20 11.8		
	baz=223,slow=72,SNR=180							
PPT2	Papeete2	41.15	328	eLR	LR	03 48 46.6		
	comp=Z,2µm,24.0s							
PPT	Papeete	41.17	328	LR	LR	03 50 01.0		
	comp=Z,865nm,18.0s,baz=136,slow=30							
RAR	Rarotonga	41.53	313	LR	LR	03 49 42.3		
	comp=Z,460nm,19.9s,baz=108,slow=29							
ORCD	Orcadas	41.62	133	P	P	03 37 30.8		-0.1
ORCD				IAmb	IAmb	03 37 39.5		
	comp=Z,26nm,1.1s							
VAH	Vaihoa	42.83	332	eT	T	04 23 09.9		
	comp=Z,59nm,0.2s							
PMOR	Pomariorio Ree	43.12	332	eT	T	04 23 40.6		
	comp=Z,7.7nm,0.3s							
RAO	Raoul Island	43.83	286	LR	LR	03 52 16.3		
	comp=Z,188nm,21.1s,baz=157,slow=31							
VNA3	Neumayer Olymp	46.41	157	P	P	03 38 09.5		+0.2
TRQA	Tornquist	46.70	97	P	P	03 38 12.4		+0.5
TRQA				IAmb	IAmb	03 38 13.7		
	comp=Z,13nm,1.4s							
VNA1	Neumayer--Stat	47.16	157	P	P	03 38 15.9		+0.8
TAOE	Nuku Hiva Isla	47.42	344	eS	S	03 45 12.8		+0.9
	comp=Z,378nm,29.9s							
TAOE				eLR	LR	03 51 40.3		
	comp=Z,2µm,25.2s							
SNAA	Sanae	47.53	160	P	P	03 38 17.7		-0.4
SNAA	Sanae	47.53	160	PP	PP	03 40 07.0		-2.1
SNAA	Sanae	47.53	160	P	P	03 38 17.6		-0.4
	comp=Z,0.7nm,0.5s,baz=211,slow=9.8,SNR=12							
SNAA				LR	LR	03 57 57.7		
	comp=Z,1µm,18.9s,baz=242,slow=36							
	comp=Z,0.7nm,0.5s							
SNAA	Sanae	47.53	160	P	P	03 38 17.7		-0.4
SNAA				IAmb	IAmb	03 38 26.5		
	comp=Z,9.6nm,1.4s							
ZON	Zonda	47.57	85	P	P	03 38 19.0		+0.2
ZON				IAmb	IAmb	03 38 21.0		
	comp=Z,6.9nm,0.9s							
TROLL	Troll, Antarti	48.28	162	P	P	03 38 24.7		+0.7
TROLL	Troll, Antarti	48.28	162	PcP	PcP	03 39 48.0		-2.6
LVC	Limon Verde	54.33	78	P	P	03 39 09.2		-0.9
PLTB	Pedras Altas	55.98	98	P	P	03 39 20.7		-0.9
PB08	IPOC Station P	56.17	76	P	P	03 39 22.9		-0.6
PB08				IAmb	IAmb	03 39 27.6		
	comp=Z,8.8nm,1.0s							
PB11	IPOC Station P	56.20	75	P	P	03 39 24.1		+0.7
MAW	Mawson	57.00	185	P	P	03 39 28.2		-0.1
	comp=Z,7.0nm,1.2s,baz=142,slow=5.3,SNR=4.7							
MAW				LR	LR	04 01 58.5		
	comp=Z,268nm,18.9s,baz=166,slow=34							
	comp=Z,7.0nm,1.2s							
MAW	Mawson	57.00	185	IAmb	IAmb	03 39 31.1		
	comp=Z,2.5nm,1.2s							
PB16	IPOC Station P	57.43	74	P	P	03 39 31.1		-1.6
PB16				IAmb	IAmb	03 39 39.7		
	comp=Z,17nm,1.3s							
CPUP	Villa Florida	57.98	91	P	P	03 39 35.1		-0.6
	comp=Z,1.7nm,0.8s,baz=218,slow=5.5,SNR=3.4							
CPUP				LR	LR	04 01 14.4		
	comp=Z,834nm,18.4s,baz=228,slow=33							
	comp=Z,1.7nm,0.8s							
CPUP	Villa Florida	57.98	91	P	P	03 39 34.8		-1.0
CPUP				IAmb	IAmb	03 39 41.7		
	comp=Z,18nm,1.5s							
DZM	Mont Dzumac	58.17	277	LR	LR	03 59 03.9		
	comp=Z,402nm,21.5s,baz=156,slow=30							
DZM	Mont Dzumac	58.17	277	eLR	LR	03 56 44.2		
	comp=Z,718nm,22.7s							
NNA	Nana	58.81	63	LR	LR	03 56 31.3		
	comp=Z,60nm,20.7s,baz=220,slow=27							
LPAZ	La Paz	59.86	74	P	P	03 39 49.5		-0.1
	comp=Z,6.1nm,1.1s,baz=183,slow=5.0,SNR=12							
LPAZ				LR	LR	03 59 26.2		
	comp=Z,284nm,21.3s,baz=206,slow=30							
	comp=Z,6.1nm,1.1s							
LPAZ	La Paz	59.86	74	P	P	03 39 50.0		+0.4
ATAH	Atahualpa	62.20	59	LR	LR	04 00 33.4		
	comp=Z,698nm,18.6s,baz=240,slow=30							
SIV	San Ignacio	64.02	80	LR	LR	04 03 10.1		
	comp=Z,217nm,20.9s,baz=266,slow=31							
STKA	Stephens Creek	64.53	250	P	P	03 40 19.9		-0.2
	comp=Z,3.4nm,0.9s,baz=121,slow=12,SNR=3.1							
	comp=Z,3.4nm,0.9s							
BOSC	San Juan Bosco	65.61	57	P	P	03 40 27.8		+0.4
BOSC				IAmb	IAmb	03 40 33.1		
	comp=Z,8.2nm,0.9s							
OTAV	Otavalo	68.60	55	P	P	03 40 47.2		+0.4
OTAV				IAmb	IAmb	03 40 53.1		
	comp=Z,15nm,1.5s							
SAML	Samuel	68.60	74	P	P	03 40 45.7		-0.6
SAML				IAmb	IAmb	03 40 51.9		
	comp=Z,14nm,1.4s							
CTA	Charters Tower	71.21	262	LR	LR	04 06 58.6		
	comp=Z,279nm,20.9s,baz=98,slow=31							
BDFB	Brasilia	71.71	91	LR	LR	04 08 59.4		
	comp=Z,508nm,20.5s,baz=213,slow=33							
ROSC	El Rosal	74.58	57	LR	LR	04 08 20.2		
	comp=Z,455nm,18.4s,baz=230,slow=31							
ROSC	El Rosal	74.58	57	P	P	03 41 23.4		+0.7
JTS	Las Juntas de	74.77	44	LR	LR	04 06 17.0		
	comp=Z,256nm,19.7s,baz=283,slow=29							
ASAR	Alice Springs	75.16	250	P	P	03 41 25.1		-0.6
H01W1	Cape Leeuwin H	75.49	229	T	T	05 05 18.9		
	baz=147,slow=75,SNR=78							
H01W2	Cape Leeuwin H	75.50	229	T	T	05 05 22.4		
	baz=147,slow=75,SNR=70							
H01W3	Cape Leeuwin H	75.51	229	T	T	05 05 21.1		
	baz=147,slow=75,SNR=68							
WRA	Warramunga Arr	77.94	253	P	P	03 41 40.4		-1.0
	comp=Z,2.5nm,0.7s,baz=144,slow=5.0,SNR=28							
WRA				LR	LR	04 12 04.1		
	comp=Z,327nm,20.2s,baz=122,slow=33							
	comp=Z,2.5nm,0.7s							
WRA	Warramunga Arr	77.94	253	IAmb	IAmb	03 41 45.5		
	comp=Z,0.2nm,1.1s							
PMG	Port Moresby	79.29	269	LR	LR	04 13 27.3		
	comp=Z,218nm,18.2s,baz=139,slow=33							
SDV	Santo Domingo	79.86	58	LR	LR	04 12 14.4		
	comp=Z,203nm,18.0s,baz=233,slow=32							
LPIG	La Paz	80.68	17	LR	LR	04 09 41.9		
	comp=Z,166nm,19.1s,baz=201,slow=30							
MDP	Montagnes des	86.04	75	LR	LR	04 17 47.5		
	comp=Z,129nm,20.3s,baz=222,slow=34							
RCBR	Riachuelo	86.55	95	LR	LR	04 18 37.6		
	comp=Z,229nm,18.5s,baz=358,slow=34							
TX31	Lajitas Ar. Si	87.00	21	P	P	03 42 29.2		+0.9
TX32	Lajitas Array	87.00	21	P	P	03 42 28.5		+0.2
TXAR	Lajitas Array	87.00	21	P	P	03 42 28.4		+0.1
	comp=Z,1.3nm,0.9s,baz=188,slow=7.6,SNR=12							
	comp=Z,1.3nm,0.9s							
SUR	Sutherland	88.59	154	LR	LR	04 20 29.2		
	comp=Z,231nm,18.0s,baz=174,slow=34							
TUC	Tucson	88.66	15	P	P	03 42 37.6		+1.4
TUC				IAmb	IAmb	03 42 39.5		
	comp=Z,6.8nm,1.3s							
MNTX	Cornudas Mount	88.96	19	P	P	03 42 38.3		+0.8
MNTX				IAmb	IAmb	03 42 47.8		
	comp=Z,5.3nm,1.3s							
PFO	Pinyon Flats O	89.26	10	LR	LR	04 14 56.1		
	comp=Z,232nm,18.1s,baz=196,slow=30							
SJG	San Juan	89.99	57	LR	LR	04 17 58.8		
	comp=Z,150nm,21.2s,baz=240,slow=32							
X18A	Snowflake	90.96	15	P	P	03 42 48.7		+1.6
X18A				IAmb	IAmb	03 42 57.9		
	comp=Z,11nm,1.4s							
ANMO	Albuquerque	91.93	18	LR	LR	04 15 33.2		
	comp=Z,82nm,20.5s,baz=194,slow=30							
ANMO	Albuquerque	91.93	18	P	P	03 42 52.4		+0.9
ANMO				IAmb	IAmb	03 42 54.0		
	comp=Z,4.2nm,1.1s							
H11N3	WAKE ISLAND Hy	92.74	301	T	T	05 26 00.7		
	baz=147,slow=76,SNR=23							
H11N1	WAKE ISLAND Hy	92.74	301	T	T	05 25 47.8		
	baz=147,slow=76,SNR=22							
H11N2	WAKE ISLAND Hy	92.76	301	T	T	05 25 54.9		
	baz=147,slow=76,SNR=25							
BOSA	Boshof	93.25	157	LR	LR	04 21 42.7		
	comp=Z,450nm,19.0s,baz=194,slow=33							
NVAR	Mina Array Bea	93.88	8	LR	LR	04 17 25.3		
	comp=Z,231nm,18.1s,baz=158,slow=30							
ELK	Elko	96.44	10	LR	LR	04 17 35.9		
	comp=Z,148nm,20.8s,baz=236,slow=30							
LBTB	Lobatse	96.80	156	LR	LR	04 22 59.1		
	comp=Z,320nm,19.5s,baz=191,slow=33							
YBH	Yreka Blue Hor	96.91	4	LR	LR	04 16 49.8		
	comp=Z,344nm,21.3s,baz=180,slow=29							
KAPI	Kappang	98.16	249	LR	LR	04 23 54.3		
	comp=Z,228nm,20.7s,baz=150,slow=33							
TKL	Tuckaleechee C	98.36	35	LR	LR	04 19 43.3		
	comp=Z,102nm,21.4s,baz=196,slow=30							
PDAR	Pinedale Array	99.10	14	LR	LR	04 20 02.9		
	comp=Z,204nm,19.1s,baz=202,slow=30							
CCB	Clear Creek Bu	120.70	350		PKiKP	03 48 34.8		+1.0
IL31		120.73	351	PKPdf	PKiKP	03 48 34.2		+0.4
ILAR	Eielson Array	120.73	351	PKP	PKPdf	03 48 32.7		-1.1
	comp=Z,2.2nm,0.7s,baz=202,slow=2.1,SNR=19							
TORD	Torodi Ar. Bea	122.80	117	PKP	PKPdf	03 48 38.2		-1.1
	comp=Z,0.4nm,0.6s,baz=236,slow=1.9,SNR=2.6							
A36M	Sachs Harbour	127.14	1	PKPdf	PKPdf	03 48 45.6		-0.2
NJ2	Nanjing	128.51	272	ePKP	PKPdf	03 48 46.8		-2.9
CMAR	Chiang Mai Arr	128.80	243	PKPdf	PKPdf	03 48 50.6		-0.1
TAM	Tamanrasset	132.84	115	PKPdf	PKPdf	03 48 56.5		-2.0
PZH	PanZhiHua	133.90	252	PKP	PKPdf	03 49 00.1		-0.2
CD2	Chengdu	136.21	258	PKP	PKPdf	03 49 04.5		+0.1
EUNU	Eureka	137.33	10		PKPdf	03 49 06.1		+1.1
HHC	Hu-ho-hao-te	138.86	275	ePKP	PKPdf	03 49 06.3		-2.7
ESDC	Sonseca Array	140.35	89	PKP	PKPdf	03 49 12.6		+0.9
	comp=Z,1.3nm,1.1s,baz=234,slow=1.4,SNR=4.8							
GTA	Gaotai	144.58	264	ePKP	PKPbc	03 49 18.5		+0.4
GTA				PKPab	PKiKP	03 49 24.8		+1.8
GTA				LR	LR			
	comp=Z,77nm,20.0s							
GTA				LR	LR			
	comp=Z,190nm,22.2s							
GTA				LR	LR			
	comp=Z,88nm,18.9s							
TIXI	Tiksi	145.06	327	PKP	PKPbc	03 49 17.3		-1.1
	comp=Z,14nm,0.8s,baz=90,slow=20,SNR=38							
TIXI	Tiksi	145.06	327	PKPbc	PKPbc	03 49 18.4		-0.1
KEST	Kesra	145.07	106	PKPbc	PKPdf	03 49 21.0		+0.8
	comp=Z,9.0nm,1.1s,baz=253,slow=10,SNR=5.4							
KEST	Kesra	145.07	106	PKPdf	PKPdf	03 49 20.7		+0.5
GOMU	GeErMu	145.11	255	PKPbc	PKiKP	03 49 23.3		-1.2
GOMU				AMB	AMB			
	comp=Z,130nm,4.1s							
MAHO	Mahon	145.18	96		PKPbc	03 49 19.8		0.0
ULN	Ulaanbaatar	145.72	281		PKPdf	03 49 20.9		-0.1
SONM	Songino Array	146.07	280	PKPbc	PKPdf	03 49 20.7		-0.9
	comp=Z,0.7nm,0.6s,baz=129,slow=3.2,SNR=4.8							
SONM	Songino Array	146.07	280	PKPdf	PKPdf	03 49 21.3		-0.3
RAYN	Ar Rayn	147.79	169		PKPbc	03 49 28.4		+0.4
SENIN	Lac Senin/Sane	150.96	89		PKPdf	03 49 30.3		+0.6
ZCCA	Zocca	151.86	96		PKPbc	03 49 37.0		-0.4
ECH	Echery	151.89	86	PKPbc	PKPbc	03 49 36.7		-0.6
TUE	Stuetta	152.19	91	PKPbc	PKPbc	03 49

0.3nm,0.7s,baz=243,slow=5.4,SNR=7.6
0.3nm,0.7s
TORD Torodi Ar. Bea 148.45 289 PKPbc PKPbc 04 30 00.5 -1.4
0.4nm,0.7s,baz=102,slow=2.4,SNR=2.2

*IDC **24** 04:18:27.1±0.9, 15°.24S×175°.47W, h0km, mb3.6/6, mbtmp3.6/8, ML3.4/2, MS3.9/37, Error ellipse: s-maj=48.0km s-min=22.2km az=146.0*
ISC 24 04:18:28.9±0.7, 15°.3S±0°.3×175°.4W±0°.1, h10km, n45, σ1°90/12, mb3.7/6, MS3.9/34, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.72**	**69**	Pn	**Pn**	**04 19 27.0**	**+0.5**
	3.2nm,0.3s,baz=291,slow=22,SNR=2.1						
AFI				Sn	**Sn**	**04 20 09.9**	**-0.6**
	5.2nm,0.3s,baz=141,slow=22,SNR=1.7						
AFI				LR	LR	04 20 38.5	
	comp=Z,1μm,21.5s,baz=218,slow=34						
AFI				T	T	04 23 04.2	
	54nm,0.5s,baz=79,slow=20,SNR=6.0						
	21nm,0.5s						
MSVF	**Nonsavu**	**6.78**	**248**	LR	LR	04 22 29.6	
	comp=Z,2μm,19.3s,baz=65,slow=36						
DZM	**Mont Dzumac**	**18.51**	**246**	P	**P**	**04 22 42.4**	**-3.3**
	0.1nm,0.3s,baz=356,slow=23,SNR=1.2						
DZM				LR	LR	04 28 45.3	
	comp=Z,428nm,22.0s,baz=63,slow=34						
	1.0nm,0.6s						
DZM	**Mont Dzumac**	**18.51**	**246**	*e*P	**Pn**	**04 22 49.0**	**+3.2**
	64nm,1.2s						
DZM				*e*LR	LR	04 27 52.3	
	comp=Z,983nm,25.1s						
URZ	**Urewera**	**23.84**	**195**	LR	LR	04 32 27.3	
	comp=Z,404nm,19.2s,baz=31,slow=35						
PPT	**Papeete**	**24.83**	**99**	LR	LR	04 32 09.9	
	comp=Z,126nm,18.7s,baz=96,slow=33						
CTA	**Charters Tower**	**36.83**	**257**	LR	LR	04 38 13.8	
	comp=Z,111nm,21.4s,baz=80,slow=32						
PMG	**Port Moresby**	**37.04**	**275**	LR	LR	04 38 36.0	
	comp=Z,142nm,19.5s,baz=129,slow=33						
H11N3	**WAKE ISLAND Hy**	**38.90**	**333**	T	T	05 07 40.6	
	baz=151,slow=76,SNR=16						
H11N1	**WAKE ISLAND Hy**	**38.90**	**333**	T	T	05 07 40.8	
	baz=151,slow=76,SNR=24						
H11N2	**WAKE ISLAND Hy**	**38.92**	**333**	T	T	05 07 42.6	
	baz=151,slow=76,SNR=12						
STKA	**Stephens Creek**	**42.47**	**239**	LR	LR	04 42 53.3	
	comp=Z,121nm,18.1s,baz=38,slow=35						
WRA	**Warramunga Arr**	**48.03**	**257**	P	**P**	**04 27 07.5**	**-1.3**
	1.4nm,0.9s,baz=89,slow=8.3,SNR=8.6						
WRA				LR	LR	04 44 40.7	
	comp=Z,136nm,21.8s,baz=203,slow=33						
	1.4nm,0.9s						
GUMO	**Guam**	**48.69**	**304**	LR	LR	04 44 57.8	
	comp=Z,80nm,20.0s,baz=122,slow=33						
JCJ	**Chichijima**	**58.92**	**315**	LR	LR	04 49 49.4	
	comp=Z,143nm,20.0s,baz=185,slow=32						
VNDA	**Vanda**	**63.32**	**185**	P	**P**	**04 28 57.8**	**+0.1**
	1.1nm,1.1s,baz=60,slow=0.5,SNR=4.0						
VNDA				LR	LR	04 55 27.5	
	comp=Z,50nm,18.4s,baz=111,slow=35						
	1.1nm,1.1s						
JHJ	**Hachijo jima 2**	**64.42**	**319**	LR	LR	04 57 37.9	
	comp=Z,35nm,18.6s,baz=84,slow=37						
KAPI	**Kappang**	**64.49**	**272**	LR	LR	04 57 05.3	
	comp=Z,23nm,18.2s,baz=120,slow=36						
MJAR	**Matsushiro Arr**	**67.64**	**321**	LR	LR	04 54 18.2	
	comp=Z,75nm,20.6s,baz=128,slow=32						
SHEM	**Shemya Is, Ala**	**68.33**	**353**	LR	LR	04 52 48.1	
	comp=Z,110nm,21.1s,baz=198,slow=30						
JOW	**Kunigami**	**68.89**	**307**	LR	LR	04 54 05.2	
	comp=Z,128nm,21.9s,baz=316,slow=31						
ASAJ	**Asahikawa**	**70.45**	**329**	LR	LR	04 56 11.5	
	comp=Z,71nm,20.5s,baz=164,slow=32						
PETK	**Petropavlovsk-**	**71.95**	**343**	LR	LR	04 56 02.2	
	comp=Z,58nm,21.6s,baz=153,slow=31						
PFO	**Pinyon Flats O**	**74.23**	**48**	LR	LR	04 55 37.0	
	comp=Z,71nm,19.0s,baz=205,slow=30						
LPIG	**La Paz**	**74.59**	**59**	LR	LR	04 55 49.8	
	comp=Z,86nm,19.3s,baz=162,slow=30						
KSRS	**Korea Array**	**74.75**	**316**	LR	LR	04 59 54.3	
	comp=Z,34nm,19.7s,baz=100,slow=33						
QSPA	**South Pole Qui**	**74.77**	**180**	LR	LR	04 56 56.8	
	comp=Z,64nm,21.2s,baz=105,slow=31						
KDAK	**Kodiak Island**	**75.19**	**12**	LR	LR	04 58 25.4	
	comp=Z,56nm,19.3s,baz=217,slow=32						
NVAR	**Mina Array Bea**	**75.51**	**43**	P	**P**	**04 30 12.2**	**-1.7**
	0.1nm,0.4s,baz=218,slow=8.6,SNR=2.1						
	0.1nm,0.4s						
USRK	**Ussuriysk Ar.**	**76.16**	**324**	LR	LR	04 57 39.2	
	comp=Z,167nm,20.9s,baz=133,slow=31						
KLR	**Kul'dur**	**79.39**	**328**	LR	LR	05 00 32.1	
	comp=Z,35nm,21.2s,baz=160,slow=32						
MA2	**Magadan**	**79.48**	**343**	LR	LR	04 59 43.0	
	comp=Z,85nm,21.6s,baz=132,slow=31						
SEY	**Seymchan**	**81.92**	**346**	LR	LR	05 02 39.5	
	comp=Z,74nm,20.7s,baz=146,slow=32						
TXAR	**Lajitas Array**	**82.12**	**52**	P	**P**	**04 30 49.5**	**-0.8**
	0.4nm,1.1s,baz=186,slow=1.7,SNR=2.1						
TXAR				LR	LR	05 01 41.7	
	comp=Z,71nm,18.7s,baz=213,slow=32						
	0.4nm,1.1s						
ANMO	**Albuquerque**	**82.17**	**51**	LR	LR	05 00 46.3	
	comp=Z,103nm,19.9s,baz=197,slow=31						
ILAR	**Eielson Array**	**82.70**	**12**	P	**P**	**04 30 53.1**	**+0.7**
	0.3nm,0.9s,baz=200,slow=4.7,SNR=2.5						
	0.3nm,0.9s						
PDAR	**Pinedale Array**	**83.44**	**43**	P	**P**	**04 30 58.5**	**+1.4**
	0.8nm,1.0s,baz=192,slow=2.7,SNR=1.8						
PDAR				LR	LR	05 00 44.6	
	comp=Z,38nm,20.6s,baz=236,slow=30						
	0.8nm,1.0s						
CMIG	**Matias Romero**	**85.62**	**71**	LR	LR	05 01 21.2	
	comp=Z,89nm,19.8s,baz=172,slow=30						
MAW	**Mawson**	**87.30**	**199**	LR	LR	05 09 45.9	
	comp=Z,103nm,18.4s,baz=182,slow=35						
CMAR	**Chiang Mai Arr**	**90.78**	**289**	LR	LR	05 07 40.1	
	comp=Z,20nm,21.6s,baz=200,slow=33						
JTS	**Las Juntas de**	**93.05**	**80**	LR	LR	05 06 49.5	
	comp=Z,93nm,18.1s,baz=356,slow=31						
SNAA	**Sanae**	**93.12**	**178**	LR	LR	05 07 46.2	
	comp=Z,70nm,21.9s,baz=127,slow=32						
SONM	**Songino Array**	**93.50**	**319**	LR	LR	05 09 29.4	
	comp=Z,78nm,19.1s,baz=12,slow=33						
BRTR	**Keskin Array B**	**144.85**	**320**	PKP	**PKPab**	**04 38 06.3**	**+0.6**
	2.3nm,1.1s,baz=101,slow=1.5,SNR=2.2						
TORD	**Torodi Ar. Bea**	**176.45**	**126**	PKP	**PKPdf**	**04 38 42.2**	**+1.7**
	1.5nm,1.1s,baz=101,slow=0.7,SNR=5.0						

TRN 24 04:39:03.5, 11°.21N×60°.04W, h57km, MD3.8, 1D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOSP	**Speyside**	**0.50**	**281**	⇓*i*P	Pn	04 39 14.9	-0.3
TOSP				*e*S	Sn	04 39 24.0	+0.3
BOT	**Bacolet**	**0.67**	**267**	*e*P	Pn	04 39 17.2	0.0
TRN	**Trinidad (W)**	**1.45**	**248**	*e*P	Pn	04 39 28.3	+0.8
TRN				*e*S	Sn	04 39 45.7	+0.2
GRGR	**Grenville**	**1.83**	**300**	*e*P	Pn	04 39 33.4	+0.8
GRGR				*e*S	Sn	04 39 54.3	-0.5
GCMP	**Grenada, Carri**	**1.86**	**313**	*e*P	Pn	04 39 32.4	-0.6
GCMP				*e*S	Sn	04 39 54.9	-0.6
GRFF	**Grenada Fort F**	**1.86**	**297**	*e*P	Pn	04 39 33.3	+0.3
GRFF				*e*S	Sn	04 39 55.9	+0.4
BCHC	**Barbados, Cave**	**1.96**	**12**	*e*S	Sn	04 39 56.8	-1.0
BBGH	**Gun Hill**	**1.98**	**14**	*e*P	Pn	04 39 35.9	+1.2
BBGH				*e*S	Sn	04 39 58.8	+0.4
SVOC	**Richmond Hill,**	**2.25**	**329**	*e*P	Pn	04 39 38.4	0.0
SVOC				*e*S	Sn	04 40 04.9	-0.1
SVB	**Belmont**	**2.37**	**330**	*e*P	Pn	04 39 39.9	-0.1
SVB				*e*S	Sn	04 40 07.5	-0.5
SVV	**Soufriere Volc**	**2.39**	**331**	*e*P	Pn	04 39 40.8	+0.5
SVV				*e*S	Sn	04 40 09.2	+0.7
MCLT	**Moule a Chique**	**2.64**	**341**	*e*P	Pn	04 39 44.6	+0.9
MCLT				*e*S	Sn	04 40 13.3	-1.2
SLB	**Belfond**	**2.78**	**339**	*e*P	Pn	04 39 46.5	+0.8
SLB				*e*S	Sn	04 40 16.6	-1.5
SLBI	**Saint Lucia, B**	**2.94**	**342**	*e*P	Pn	04 39 47.9	0.0
SLBI				*e*S	Sn	04 40 21.5	-0.5
MPOM	**Morne Pois Mar**	**3.32**	**346**	*e*P	Pn	04 39 52.7	-0.3
MPOM				*e*S	Sn	04 40 29.7	-1.4
BIM	**Bigot**	**3.44**	**343**	*e*P	Pn	04 39 54.9	+0.3
BIM				*e*S	Sn	04 40 32.9	-1.4
LPMF	**Morne Lapointe**	**3.47**	**345**	*e*P	Pn	04 39 55.3	+0.3
ZAM	**Aeronautique**	**3.48**	**344**	*e*P	Pn	04 39 55.5	+0.3
FDF	**Fort de France**	**3.67**	**343**	*e*P	Pn	04 39 58.8	+1.0
FDF				*e*S	Sn	04 40 38.6	-1.3
PCM	**Pelee Case Pet**	**3.76**	**342**	*e*P	Pn	04 40 00.9	+1.8
MDN	**Morne-Daniel**	**4.29**	**342**	*e*P	Pn	04 40 06.4	0.0
DSLB	**Salisbury**	**4.42**	**342**	*e*P	Pn	04 40 09.4	+1.4
DSLB	**Salisbury**	**4.42**	**342**	*e*S	Sn	04 40 56.0	-2.2
MAGL	**Barre de l'ile**	**4.87**	**346**	*e*P	Pn	04 40 14.9	+0.7
MAGL	**Barre de l'ile**	**4.87**	**346**	*e*S	Sn	04 41 07.3	-1.9
CBE	**Ff, Capester**	**5.07**	**343**	*e*P	Pn	04 40 16.6	-0.4
CBE	**Ff, Capester**	**5.07**	**343**	*e*S	Sn	04 41 12.9	-1.4
ABD	**La Joyeuse, An**	**5.42**	**345**	*e*P	Pn	04 40 22.9	+1.1
ANBD	**Bethesda, Anti**	**6.04**	**344**	*e*P	Pn	04 40 30.9	+0.6
ANBD	**Bethesda, Anti**	**6.04**	**344**	*e*S	Sn	04 41 34.9	-3.3
BPA	**Boggy Peak**	**6.07**	**343**	*e*P	Pn	04 40 31.0	+0.3
BPA	**Boggy Peak**	**6.07**	**343**	*e*S	Sn	04 41 34.7	-4.0

*ATH **24** 04:41:27.1, 34°.01N×25°.10E, h10km±31km, ML2.7/3, Error ellipse: s-maj=31.6km s-min=4.4km az=0.0*
*HLW **24** 04:41:28.4, 34°.16N×25°.26E, h30km±19km, Md3.5*
*IDC **24** 04:41:29.1±2.9, 34°.17N×25°.09E, h31km±18km, mb3.3/7, mbtmp3.5/9, ML3.6/2, Error ellipse: s-maj=26.2km s-min=21.7km az=83.0*
*THE **24** 04:41:32.9, 34°.21N×24°.90E, h31km±36km, ML2.5/4, Error ellipse: s-maj=36.2km s-min=1.4km az=334.0*
*GII **24** 04:41:36.0±0.0, 33°.74N×25°.80E, h20km, Mm3.1/3*
ISC 24 04:41:29.3±1.1, 34°.02N±0°.04×25°.07E±0°.06, h40km±15km, n39, σ1°40/46, mb3.4/7, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**1.16**	**316**	P	**Pn**	**04 41 49.5**	**+0.5**
GVD				AML	AML	04 42 23.9	
	comp=E,754μm,0.5s						
GVD				AML	AML	04 42 27.1	
	comp=N,872μm,0.4s						
GVD	**Gavdhos**	**1.16**	**316**	P	**Pn**	**04 41 49.4**	**+0.4**
GVD				S	**Sn**	**04 42 00.8**	**-2.8**
	comp=N,305nm,0.5s						
GVDS	**Gavdos**	**1.16**	**316**	P	**Pn**	**04 41 49.4**	**+0.4**
GVDS				S	**Sn**	**04 42 01.3**	**-2.3**
	comp=N,282nm,0.4s						
IDI	**Anoyia**	**1.28**	**353**	Pg	**Pn**	**04 41 50.6**	**-0.1**
	comp=N,14nm,0.3s,baz=186,slow=16,SNR=34						
IDI				Lg	Lg	04 42 05.7	
	comp=N,16nm,0.3s,baz=337,slow=16,SNR=11						
IDI	**Anoyia**	**1.28**	**353**	P	**Pn**	**04 41 50.8**	**+0.1**
IDI				S	**Sn**	**04 42 07.6**	**+1.0**
IDI				AML	AML	04 42 15.9	
	comp=E,405μm,0.4s						
IDI				AML	AML	04 42 17.8	
	comp=N,210μm,0.6s						
IDI	**Anoyia**	**1.28**	**353**	P	**Pn**	**04 41 50.9**	**+0.2**
IDI				S	**Sn**	**04 42 05.3**	**-1.4**
	comp=N,175nm,0.5s						
NPS	**Neapolis**	**1.32**	**20**	P	**Pn**	**04 41 52.2**	**+1.0**
ZKR	**Zakros**	**1.45**	**40**	P	**Pn**	**04 41 54.9**	**+1.9**
ZKR				S	**Sn**	**04 42 13.5**	**+2.8**
	comp=N,140nm,0.5s						
STIA	**Sitia Lasithi**	**1.45**	**35**	P	**Pn**	**04 41 54.2**	**+1.2**
IMMV	**Iera Moni Meta**	**1.70**	**328**	P	**Pn**	**04 41 57.0**	**+0.6**
IMMV				AML	AML	04 42 41.8	
	comp=E,620μm,0.9s						
IMMV				AML	AML	04 42 42.8	
	comp=N,289μm,0.6s						
KARP	**Karpathos**	**2.30**	**48**	P	**Pn**	**04 42 06.7**	**+1.9**
SLUM	**Salum**	**2.52**	**177**	P	**Pn**	**04 42 09.3**	**+1.6**
	baz=181						
SLUM				S	**Sn**	**04 42 38.6**	**+1.4**
	baz=181						
SWA2		**4.77**	**176**	P	**Pn**	**04 42 39.9**	**+1.3**
	baz=177						
SWA2				S	**Sn**	**04 43 31.6**	**-1.0**
	baz=177						
HMYD	**Mayadein**	**6.43**	**129**	P	**Pn**	**04 43 01.9**	**+0.4**
	baz=131						
RYAN	**Fayoum**	**6.63**	**137**	P	**Pn**	**04 43 04.2**	**+0.1**
	baz=138						
RYAN				S	**Sn**	**04 44 13.5**	**-4.9**
	baz=138						
HSAF	**As Saff**	**7.04**	**127**	P	**Pn**	**04 43 10.0**	**+0.1**
	baz=128						
GLL	**Jalalah**	**7.17**	**126**	P	**Pn**	**04 43 11.8**	**+0.1**
	baz=128						
ASUT		**8.64**	**138**	P	**Pn**	**04 43 32.5**	**+0.7**
	baz=139						
GRB	**Gharib**	**8.74**	**129**	P	**Pn**	**04 43 33.0**	**-0.2**
	baz=130						
HMDT	**Nahal Hemdat**	**8.94**	**98**	Pn	**Pn**	**04 43 35.1**	**-0.8**
HMDT				Sn	Sn	04 45 08.9	-6.4
DSI	**Dead Sea**	**9.01**	**103**	Pn	**Pn**	**04 43 36.6**	**-0.3**
DSI				Sn	Sn	04 45 10.9	-6.2
KRMI	**Paran Flat**	**9.06**	**113**	Pn	**Pn**	**04 43 36.7**	**-0.9**
KRMI				Sn	Sn	04 45 10.9	-7.5
PRNI	**Paran**	**9.18**	**111**	Pn	**Pn**	**04 43 39.0**	**-0.1**
PRNI				Sn	Sn	04 45 14.6	-6.5
GHAJ	**Ghor Haditha**	**9.25**	**104**	Pn	**Pn**	**04 43 40.8**	**+0.7**
TR2	**Tor 2**	**9.29**	**125**	P	**Pn**	**04 43 40.0**	**-0.7**
	baz=126						
MBRI	**Mt Berech**	**9.36**	**114**	Pn	**Pn**	**04 43 41.3**	**-0.4**
MBRI				Sn	Sn	04 45 19.9	-5.9
HKAT	**Jabal Katrina**	**9.39**	**123**	P	**Pn**	**04 43 41.8**	**-0.4**
	baz=124						
EIL	**Elat**	**9.45**	**115**	Pn	**Pn**	**04 43 42.0**	**-0.9**
	comp=N,1.2nm,0.3s,baz=323,slow=2.2,SNR=25						
EIL				Sn	Sn	04 45 19.9	-7.9
	comp=N,1.1nm,0.3s,baz=215,slow=14,SNR=7.0						
	comp=N,3.4nm,0.5s						
EIL	**Elat**	**9.45**	**115**	Pn	**Pn**	**04 43 42.1**	**-0.8**
EIL				Sn	Sn	04 45 20.7	-7.1
HHRG	**Al Ghardaqah**	**9.97**	**131**	P	**Pn**	**04 43 51.4**	**+1.4**
	baz=132						
ASF	**Jabal al Asfar**	**10.09**	**97**	Pn	Pn	04 43 46.4	-5.3
	comp=N,0.1nm,0.3s,baz=120,slow=7.7,SNR=1.5						
ASF				Sn	Sn	04 45 38.2	-5.4
	comp=N,0.3nm,0.3s,baz=182,slow=21,SNR=1.7						
GERES	**GERESS Array B**	**17.06**	**334**	Pn	**P**	**04 45 26.2**	**0.0**
	comp=N,0.1nm,0.3s,baz=136,slow=16,SNR=4.4						
	comp=N,0.4nm,0.5s						
HFS	**Hagfors**	**27.17**	**348**	P	**P**	**04 47 08.0**	**-0.6**
	comp=N,1.6nm,0.9s,baz=156,slow=11,SNR=2.1						
	comp=N,1.6nm,0.9s						
FINES	**FINESS Array B**	**27.45**	**1**	P	**P**	**04 47 09.4**	**-1.7**
	comp=N,0.2nm,0.3s,baz=163,slow=9.9,SNR=5.9						
	comp=N,0.2nm,0.3s						
NOA	**NORSAR Array B**	**28.49**	**346**	P	**P**	**04 47 20.0**	**-0.5**
	comp=N,0.1nm,0.4s,baz=169,slow=11,SNR=1.7						
	comp=N,0.1nm,0.4s						
EKA	**Eskdalemuir Ar**	**28.94**	**326**	P	**P**	**04 47 24.2**	**-0.2**
	comp=N,0.1nm,0.4s,baz=118,slow=9.0,SNR=1.6						
	comp=N,0.1nm,0.4s						
TORD	**Torodi Ar. Bea**	**29.71**	**231**	P	**P**	**04 47 33.5**	**+1.8**
	comp=N,0.3nm,0.4s,baz=35,slow=9.0,SNR=7.8						
	comp=N,0.3nm,0.4s						
ARCES	**ARCESS Array B**	**35.57**	**0**	P	**P**	**04 48 20.9**	**-1.5**
	comp=N,0.4nm,0.6s,baz=171,slow=8.4,SNR=5.5						
	comp=N,0.4nm,0.6s						
MKAR	**Makanchi Array**	**44.47**	**56**	P	**P**	**04 49 37.5**	**+1.0**
	comp=N,0.4nm,0.4s,baz=269,slow=7.9,SNR=7.9						
	comp=N,0.4nm,0.4s						

*NEIC **24** 05:09:50.0±2.2, 42°.01N±0°.06×126°.2W±0°.1, h10km±2km, ML3.0/66, Error ellipse: s-maj=17.0km s-min=10.1km az=265.0*
*NCEDC **24** 05:09:51.1, 42°.03N×126°.31W, h24km*
*ANF **24** 05:09:52.2±1.7, 42°.09N×125°.91W, h10km, ML3.0/9, Error ellipse: s-maj=17.7km s-min=8.5km az=89.0*
*IDC **24** 05:09:55.8±13.0, 42°.15N×125°.35W, h0km, mb2.9/2, mbtmp3.1/3, ML3.3/1, Error ellipse: s-maj=286.3km s-min=27.1km az=63.0*
ISC 24 05:09:52.6±1.7, 42°.01N±0°.05×126°.0W±0°.1, h11km, n53, σ1°26/59, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBO	**Bosley Butte**	**1.30**	**80**		**Pn**	**05 10 15.6**	**-1.3**
KBO				IAML		05 10 35.4	
	comp=N,98nm,0.3s						
KBO				IAML		05 10 35.7	
	comp=E,154nm,0.2s						
KEBM	**Edson Butte**	**1.48**	**54**		**Pn**	**05 10 17.6**	**-1.6**
KEBM				IAML		05 10 37.7	
	comp=N,277nm,0.8s						
KEBM				IAML		05 10 38.4	
	comp=E,229nm,0.6s						
KSXB	**Camp Six Broad**	**1.56**	**96**	Pn	**Pn**	**05 10 18.9**	**-1.5**
KRPM	**Rodgers**	**1.68**	**120**		**Pn**	**05 10 20.8**	**-1.2**
KRPM				IAML		05 10 45.2	
	comp=E,84nm,0.7s						
KRPM				IAML		05 10 52.0	
	comp=N,67nm,0.9s						
L02F	**Cave Junction**	**1.78**	**86**	P	**Pn**	**05 10 22.0**	**-1.3**
	baz=268						
K02D	**Willamette Mer**	**1.83**	**67**	P	**Pn**	**05 10 22.8**	**-1.4**
	baz=252,SNR=135						
K02D				S	**Sn**	**05 10 46.3**	**-1.1**
	baz=252						
JCC	**Jacoby Creek,**	**1.88**	**129**		**Pn**	**05 10 22.6**	**-2.0**
J01E	**Myrtle Point**	**1.89**	**52**		**Pn**	**05 10 23.1**	**-1.7**
J01E				IAML		05 10 47.6	
	comp=N,149nm,0.6s						
J01E	**Myrtle Point**	**1.89**	**52**	P	**Pn**	**05 10 22.6**	**-2.2**
	baz=238,SNR=31						
J01E				S	**Sn**	**05 10 46.5**	**-2.1**
	baz=238						
KHMM	**Horse Mountain**	**2.02**	**123**		**Pn**	**05 10 25.5**	**-1.3**
KHMM				IAML		05 10 53.9	
	comp=N,49nm,0.9s						
KMPM	**Mount Pierce**	**2.11**	**138**	Pn	**Pn**	**05 10 25.9**	**-2.0**
KMPM				IAML		05 10 55.8	
	comp=N,81nm,0.5s						
KMPM				IAML		05 10 57.8	
	comp=E,100nm,0.7s						
DBO	**Dodson Butte**	**2.29**	**60**		**Pn**	**05 10 29.2**	**-1.3**
DBO				IAML		05 11 00.2	
	comp=N,36nm,0.8s						
HUMO	**Hull Mountain**	**2.31**	**74**	Pn	**Pn**	**05 10 29.7**	**-0.9**
YBH	**Yreka Blue Hor**	**2.44**	**95**	Pn	**Pn**	**05 10 33.0**	**+0.5**
KMRM	**Mail Ridge**	**2.46**	**136**		**Pn**	**05 10 31.9**	**-0.9**
KMRM				IAML		05 11 07.0	
	comp=E,51nm,0.9s						
KMRM				IAML		05 11 14.8	
	comp=N,45nm,0.8s						
I03D	**Drain, OR**	**2.56**	**48**	P	**Pn**	**05 10 32.3**	**-1.7**
	baz=234,SNR=35						
I03D				S	**Sn**	**05 11 03.5**	**-1.5**
	baz=234						
I02E	**Swisshome, OR**	**2.61**	**36**	Pn	**Pn**	**05 10 33.5**	**-1.1**
I02E				IAML		05 11 06.6	
	comp=N,70nm,0.8s						
I02E				IAML		05 11 10.7	
	comp=E,83nm,1.2s						
I02E	**Swisshome, OR**	**2.61**	**36**	P	**Pn**	**05 10 33.2**	**-1.5**
	baz=222,SNR=32						
I02E				S	**Sn**	**05 11 04.1**	**-2.2**
	baz=222						
L04D	**Klamath Falls**	**2.73**	**84**		**Pn**	**05 10 36.5**	**+0.1**
L04D				IAML		05 10 54.4	
	comp=E,23nm,0.5s						
L04D	**Klamath Falls**	**2.73**	**84**	P	**Pn**	**05 10 36.6**	**+0.1**
	baz=268						
KCPM	**Cahto Peak**	**2.94**	**141**		**Pn**	**05 10 37.5**	**-1.8**
KCPM				IAML		05 11 14.0	
	comp=E,74nm,0.6s						
KCPM				IAML		05 11 15.8	
	comp=N,56nm,0.4s						
BUCK	**Buck Mountain**	**3.08**	**44**	Pn	**Pn**	**05 10 40.4**	**-1.0**
BUCK				IAML		05 11 25.5	
	comp=N,36nm,0.9s						
BUCK				IAML		05 11 51.5	
	comp=E,40nm,2.3s						
J04D	**Umpqua Nationa**	**3.10**	**65**	Pn	**Pn**	**05 10 42.5**	**+0.9**
I04A	**Tendick Farm,**	**3.16**	**54**	P	**Pn**	**05 10 41.6**	**-0.7**
	baz=240,SNR=8.7						
I04A				S	**Sn**	**05 11 19.9**	**-0.1**
	baz=240						
COR	**Corvallis**	**3.22**	**36**	Pn	**Pn**	**05 10 42.9**	**-0.3**
COR				IAML		05 11 25.1	
	comp=E,66nm,0.6s						
H04D	**Lebanon**	**3.44**	**42**		**Pn**	**05 10 45.1**	**-1.1**
H04D				IAML		05 11 29.5	
	comp=N,41nm,0.9s						
H04D				IAML		05 11 38.0	
	comp=E,53nm,0.9s						
H04D	**Lebanon**	**3.44**	**42**	P	**Pn**	**05 10 45.3**	**-0.9**
	baz=227,SNR=8.1						
H04D				S	**Sn**	**05 11 25.7**	**-1.2**
	baz=227						
HEBO	**Mount Hebo**	**3.58**	**26**	Pn	**Pn**	**05 10 47.5**	**-0.6**
J05D	**Fort Rock, OR**	**3.71**	**68**	P	**Pn**	**05 10 49.6**	**-0.4**
	baz=253,SNR=17						
HOPS	**Hopland Field**	**3.73**	**143**	Pn	**Pn**	**05 10 48.4**	**-1.8**
HOPS				IAML		05 11 50.3	
	comp=N,31nm,2.1s						
HOPS				IAML		05 12 58.4	
	comp=E,24nm,2.0s						
G03D	**McMinnville, O**	**3.75**	**31**	Pn	**Pn**	**05 10 50.7**	**+0.3**
G03D				IAML		05 11 42.8	
	comp=E,44nm,1.1s						
G03D	**McMinnville, O**	**3.75**	**31**	S	**Sn**	**05 11 32.1**	**-2.4**
	baz=216						
K05A	**Summer Lake**	**3.82**	**78**	Pn	**Pn**	**05 10 51.1**	**-0.4**
K05A				IAML		05 11 45.0	
	comp=E,9.0nm,2.9s						
K05A				IAML		05 13 14.9	
	comp=N,9.9nm,3.8s						
H04A	**Detroit Lake**	**3.84**	**45**	Pn	**Pn**	**05 10 51.3**	**-0.3**
H04A				IAML		05 11 42.0	
	comp=N,40nm,0.4s						
PINE	**Pine Mountain**	**4.09**	**63**	Pn	**Pn**	**05 10 55.0**	**-0.4**
PINE				IAML		05 12 40.7	
	comp=E,9.9nm,2.4s						

	baz=15							
SGST				S		Sg	05 34 11.7	-0.5
	baz=15							
SGLT	**Jiouru**	**0.19**	**190**	*e*P		Pg	05 34 09.3	+0.2
	baz=186							
SGLT				S		Sg	05 34 14.6	+2.2
	baz=186							
SSD	**Sandimen**	**0.19**	**149**	⇓*i*P		Pb	05 34 08.5	-0.3
	baz=143							
SSD				*i* S		Sg	05 34 12.1	-0.4
	baz=143							
SHHT	**Tainan City**	**0.20**	**304**	*i* P		Pg	05 34 10.1	+0.9
	baz=310							
SHHT				S		Sg	05 34 15.5	+2.8
	baz=310							
CHN3	**Shinhua**	**0.22**	**318**	*e*P		Pb	05 34 09.4	-0.1
	baz=322							
CHN3				*e*S		Sg	05 34 16.9	+3.6
	baz=322							
TSMG	**Majia**	**0.23**	**152**	⇓P		Pb	05 34 09.0	-0.7
	baz=148							
TSMG				*i* S		Sg	05 34 13.4	-0.2
	baz=148							
SNJT	**Kaohsiung City**	**0.24**	**228**	*e*P		Pb	05 34 09.4	-0.4
	baz=232							
SNJT				*e*S		Sg	05 34 16.3	+2.7
	baz=232							
CHN1	**Nanshi**	**0.27**	**0**	⇑*i*P		Pg	05 34 10.3	-0.2
	baz=358							
CHN1				S		Sg	05 34 15.5	+0.8
	baz=358							
TAI1	**Yung-k'ang**	**0.30**	**295**	*e*P		Pn	05 34 12.9	-0.9
	baz=296							
SNST	**Tainan City**	**0.31**	**355**	⇑P		Pg	05 34 11.0	0.0
	baz=353							
SNST				S		Sb	05 34 16.5	+0.5
	baz=353							
MASBT	**Mashibuluo**	**0.31**	**162**	⇑*i*P		Pg	05 34 10.6	-0.6
	baz=152							
MASBT				*i* S		Sg	05 34 15.6	-0.1
	baz=152							
WTP	**Ta-pu**	**0.34**	**14**	⇓*i*P		Pg	05 34 11.6	-0.1
	baz=13							
WTP				*e*S		Sb	05 34 17.9	+0.8
	baz=13							
STYH	**Taoyuan**	**0.35**	**42**	⇓P		Pg	05 34 11.5	-0.2
	baz=46							
STYH				*e*S		Sb	05 34 17.7	+0.5
	baz=46							
TWK	**Hsinying**	**0.35**	**354**	⇑*i*P		Pg	05 34 11.9	0.0
	baz=355							
TWK				*e*S		Sb	05 34 17.9	+0.4
	baz=355							
KAU	**Kaohsiung**	**0.40**	**210**	*e*P		Pb	05 34 13.5	+0.6
	baz=223							
TPUB	**Ta-pu**	**0.40**	**14**	⇑*i*P		Pg	05 34 12.3	-0.3
	baz=12							
TPUB				*i* S		Sb	05 34 18.8	0.0
	baz=12							
SCLT	**Jiali**	**0.40**	**311**	*e*P		Pb	05 34 13.0	0.0
	baz=311							
SSPT	**Xinbi**	**0.43**	**175**	⇑*i*P		Pg	05 34 13.0	-0.1
	baz=164							
SSPT				*e*S		Sb	05 34 20.2	+0.7
	baz=164							
CHN4	**Tsaushan**	**0.44**	**8**	⇑*i*P		Pg	05 34 13.1	-0.3
	baz=6.0							
CHN4				*e*S		Sb	05 34 20.4	+0.4
	baz=6.0							
ICHU	**Yijhu**	**0.50**	**333**	*e*P		Pb	05 34 14.7	+0.1
	baz=333							
ICHU				*e*S		Sn	05 34 23.9	-0.9
	baz=333							
TWGBT	**Beinan**	**0.52**	**100**	⇓*i*P		Pb	05 34 14.1	-0.8
	baz=98							
TWGBT				*e*S		Sg	05 34 21.4	-0.4
	baz=98							
CHN8	**Yiju**	**0.52**	**326**	*e*P		Pb	05 34 14.4	-0.5
	baz=328							
CHN8				*e*S		Sn	05 34 24.3	-0.9
	baz=328							
ELDTW	**Lidau**	**0.53**	**59**	⇑*i*P		Pb	05 34 14.6	-0.5
	baz=46							
ELDTW				S		Sb	05 34 22.9	+0.5
	baz=46							
SCZT	**Fangliau**	**0.54**	**171**	⇑*i*P		Pb	05 34 14.6	-0.7
	baz=160							
SCZT				*e*S		Sb	05 34 22.4	-0.3
	baz=160							
LONT	**Longtian**	**0.56**	**90**	*e*P		Pb	05 34 14.8	-0.6
	baz=89							
LONT				*e*S		Sg	05 34 23.1	+0.1
	baz=89							
WLCH	**Liuqiu**	**0.57**	**194**	*e*P		Pn	05 34 17.8	+0.2
	baz=195							
WLCH				*e*S		Sn	05 34 29.4	+2.9
	baz=195							
CHY	**Chiayi**	**0.59**	**351**	P		Pb	05 34 16.0	-0.1
	baz=351							
CHY				*e*S		Sn	05 34 26.8	-0.2
	baz=351							
TTN	**Taitung**	**0.59**	**105**	*e*P		Pg	05 34 16.4	+0.2
	baz=104							
EAST	**Anshuo**	**0.60**	**150**	⇑*i*P		Pb	05 34 15.8	-0.5
	baz=145							
EAST				*e*S		Sb	05 34 24.4	-0.1
	baz=145							
CHN2	**Minshiung**	**0.62**	**356**	*e*P		Pg	05 34 16.9	+0.2
	baz=355							
CHN2				*e*S		Sn	05 34 27.2	-0.5
	baz=355							
ALS	**Alishan**	**0.65**	**23**	⇑*i*P		Pb	05 34 16.7	-0.5
	baz=22							
ALS				*e*S		Sg	05 34 26.9	+0.8
	baz=22							
TAW	**Tawu**	**0.65**	**148**	*e*P		Pb	05 34 16.3	-0.8
	baz=146							
TAWH	**Dawu Township**	**0.66**	**149**	⇑*i*P		Pb	05 34 16.6	-0.6
	baz=145							
TAWH				*e*S		Sb	05 34 25.3	-0.7
	baz=145							
WSL	**Shuilin Townsh**	**0.67**	**336**	*e*P		Pb	05 34 17.1	-0.3
	baz=336							
WSL				*e*S		Sg	05 34 27.1	+0.6
	baz=336							
YUS	**Yu-Shan**	**0.70**	**34**	⇑*i*P		Pb	05 34 17.7	-0.5
	baz=33							
YUS				*e*S		Sg	05 34 28.0	+0.4
	baz=33							
EDH	**Donghe**	**0.72**	**85**	⇑*e*P		Pg	05 34 18.8	+0.3
	baz=75							
EDH				*e*S		Sn	05 34 29.5	-0.7
	baz=75							
SLIU	**Shizi**	**0.74**	**160**	⇑*i*P		Pb	05 34 18.1	-0.5
	baz=154							
SLIU				*e*S		Sn	05 34 29.6	-0.9
	baz=154							
FULB	**Fuli**	**0.76**	**68**	⇑P		Pb	05 34 19.1	0.0
	baz=66							
FULB				*e*S		Sb	05 34 28.8	-0.4
	baz=66							
WDLH	**Douliu**	**0.77**	**1**	*e*P		Pb	05 34 19.1	-0.1
	baz=360							
WDLH				S		Sg	05 34 30.8	+0.9
	baz=360							
WSF	**Szhu**	**0.78**	**339**	*e*P		Pb	05 34 19.1	-0.2
	baz=339							
WSF				*e*S		Sn	05 34 31.0	-0.5
	baz=339							
WTK	**Tuku**	**0.78**	**351**	*e*P		Pb	05 34 19.0	-0.4
	baz=350							
WTK				*e*S		Sn	05 34 31.8	+0.1
	baz=350							
YULB	**Yu-li**	**0.86**	**56**	⇑*i*P		Pb	05 34 20.1	-0.6
	baz=47							
YULB				*e*S		Sb	05 34 31.3	-0.5
	baz=47							
WDGT	**Dungji**	**0.87**	**294**	⇓*i*P		Pb	05 34 19.6	-1.2
	baz=295							
WDGT				*e*S		Sb	05 34 31.4	-0.7
	baz=295							
LDUT	**Ludao**	**0.90**	**105**	*e*P		Pb	05 34 20.7	-0.7
	baz=92							
HEN	**Hengchun**	**0.92**	**168**	*e*P		Pn	05 34 22.1	-0.2
	baz=156							
HEN				*e*S		Sn	05 34 35.5	+0.4
	baz=156							
WJS	**Zhushan**	**0.93**	**12**	*e*P		Pb	05 34 21.4	-0.5
	baz=357							
WJS				*e*S		Sn	05 34 35.7	+0.5
	baz=357							
SMST	**Manzhou Townsh**	**0.93**	**162**	*e*P		Pb	05 34 21.6	-0.4
	baz=162							
SMST				*e*S		Sn	05 34 36.4	+1.1
	baz=162							
EHY	**Hungye**	**0.94**	**51**	⇑*i*P		Pb	05 34 21.6	-0.5
	baz=49							
EHY				*e*S		Sg	05 34 35.5	+0.3
	baz=49							
SSLB	**Suanglung**	**0.96**	**24**	⇑*i*P		Pb	05 34 21.7	-0.7
	baz=22							
SSLB				*e*S		Sg	05 34 35.5	-0.1
	baz=22							
WNT	**Mingjian**	**0.97**	**9**	*e*P		Pb	05 34 22.5	-0.1
	baz=355							
WRL	**Guolierlin Hig**	**0.99**	**352**	*e*P		Pb	05 34 22.5	-0.5
	baz=352							
WRL				*e*S		Sb	05 34 35.6	-0.1
	baz=352							
TWK1	**Hengchun**	**1.00**	**165**	*e*P		Pb	05 34 22.7	-0.3
	baz=165							
TWKBT	**Hengchun**	**1.00**	**165**	*e*P		Pb	05 34 22.4	-0.8
	baz=165							
HGSD	**Ruisui**	**1.01**	**55**	⇑*i*P		Pb	05 34 23.2	0.0
	baz=48							
HGSD				*e*S		Sb	05 34 36.7	+0.5
	baz=48							
VWDT	**VWDT**	**1.01**	**34**	*e*P		Pb	05 34 22.5	-0.8
	baz=25							
VWDT				*e*S		Sg	05 34 37.5	+0.1
	baz=25							
TYC	**Yuchr**	**1.03**	**17**	*e*P		Pb	05 34 23.4	-0.3
	baz=5.0							
TYC				*e*S		Sg	05 34 38.4	+0.4
	baz=5.0							
VCHM	**Qimei**	**1.05**	**287**	*i* P		Pb	05 34 22.3	-1.7
	baz=289							
PHUB	**P'eng-hu**	**1.06**	**305**	*e*P		Pb	05 34 22.1	-2.0
	baz=318							
PHUB				*e*S		Sb	05 34 36.5	-1.2
	baz=318							
TSEB	**Hengchuen, Pin**	**1.06**	**161**	*e*P		Pb	05 34 23.9	-0.3
	baz=160							
PNG	**Penghu**	**1.11**	**306**	*e*P		Pn	05 34 23.0	-1.9
	baz=320							
PNG				*e*S		Sb	05 34 37.5	-1.4
	baz=320							
EGFH	**Guangfu**	**1.12**	**48**	*e*P		Pn	05 34 24.4	-0.7
	baz=45							
EGFH				*e*S		Sn	05 34 40.2	+0.2
	baz=45							
WCHH	**Zhanghua**	**1.16**	**1**	*e*P		Pn	05 34 24.9	-0.7
	baz=1.0							
WCHH				*e*S		Sn	05 34 41.2	+0.1
	baz=1.0							
WCS	**Beigang Elemen**	**1.19**	**17**	⇑P		Pn	05 34 25.8	-0.3
	baz=16							
WCS				*e*S		Sg	05 34 42.9	-0.2
	baz=16							
OWD	**Renai**	**1.20**	**30**	*e*P		Pn	05 34 26.3	0.0
	baz=17							
OWD				*e*S		Sg	05 34 42.9	-0.4
	baz=17							
WUSB	**Renai**	**1.21**	**27**	⇑*i*P		Pn	05 34 26.1	-0.3
	baz=25							
WUSB				*e*S		Sn	05 34 42.9	+0.5
	baz=25							
ESL	**Shilin**	**1.23**	**43**	*e*P		Pb	05 34 26.9	-0.1
	baz=41							
ESL				*e*S		Sg	05 34 43.7	-0.5
	baz=41							
TCU	**Taichung**	**1.24**	**6**	*e*P		Pn	05 34 26.1	-0.6
	baz=355							
TCU				*e*S		Sn	05 34 43.8	+0.9
	baz=355							
LAY	**Lan-yu**	**1.29**	**132**	*e*P		Pn	05 34 26.2	-1.2
	baz=131							
CHGB	**Renai**	**1.29**	**27**	*i* P		Pn	05 34 27.4	-0.2
	baz=26							
CHGB				*e*S		Sg	05 34 46.6	+0.4
	baz=26							
LYUB	**Lan-yu**	**1.33**	**133**	*e*P		Pn	05 34 25.6	-2.5
	baz=131							
WHF	**Hehuan Shan**	**1.40**	**29**	*e*P		Pn	05 34 29.6	+0.3
	baz=18							
WHF				*e*S		Sg	05 34 49.2	-0.6
	baz=18							
WHP	**Taichung City**	**1.41**	**16**	*e*P		Pn	05 34 29.2	0.0
	baz=14							
WHP				*e*S		Sg	05 34 50.6	+0.4
	baz=14							
TWQ1	**Liyutan**	**1.45**	**9**	*e*P		Pn	05 34 29.7	+0.1
	baz=8.0							
TWQ1				*e*S		Sg	05 34 50.5	-0.7
	baz=8.0							
TDCB	**Techi**	**1.46**	**23**	*e*P		Pn	05 34 29.7	-0.1
	baz=22							
TDCB				*e*S		Sb	05 34 50.1	+0.9
	baz=22							
TWT	**Tachien**	**1.46**	**24**	*e*P		Pb	05 34 30.6	-0.5
	baz=22							
TWT				*e*S		Sg	05 34 51.2	-0.5
	baz=22							
FUSS	**Fushou**	**1.48**	**26**	*e*P		Pn	05 34 30.1	-0.2
	baz=24							
FUSS				*e*S		Sg	05 34 52.1	-0.3
	baz=24							
NSY	**Sanyi**	**1.51**	**8**	*e*P		Pn	05 34 30.6	+0.1
	baz=7.0							
NSY				*e*S		Sb	05 34 51.9	+1.1
	baz=7.0							
TWD	**Chiawan**	**1.52**	**40**	*e*P		Pn	05 34 30.6	-0.1
	baz=38							
TWD				*e*S		Sb	05 34 51.9	+0.9
	baz=38							
ETLH	**Xiulin Townshi**	**1.56**	**34**	*e*P		Pn	05 34 31.7	+0.4
	baz=32							
NACB	**Ninganchiao**	**1.59**	**38**	*e*P		Pn	05 34 31.5	-0.1
	baz=36							
NACB				*e*S		Sb	05 34 54.0	+0.9
	baz=36							
ETL	**Fush Village**	**1.60**	**39**	*e*P		Pb	05 34 32.7	-0.7
	baz=37							
NNSB	**Datong**	**1.70**	**27**	*e*P		Pn	05 34 33.8	+0.6
	baz=12							
NNSB				*e*S		Sn	05 34 55.5	+0.9
	baz=12							
NNS	**Nan Shan**	**1.71**	**27**	*e*P		Pn	05 34 33.4	+0.1
	baz=12							
NNS				*e*S		Sb	05 34 56.6	+0.2
	baz=12							
NSTT	**Nanjuang**	**1.77**	**14**	*e*P		Pn	05 34 33.7	-0.3
	baz=14							
NFF	**Wufeng Townshi**	**1.80**	**17**	*e*P		Pn	05 34 34.7	+0.2
	baz=1.0							
LATG	**Datong**	**1.86**	**29**	*e*P		Pn	05 34 36.0	+0.6
	baz=13							
ENA	**Nanau**	**1.88**	**36**	*e*P		Pn	05 34 36.0	+0.5
	baz=35							
EWUT	**Wuta**	**1.91**	**37**	*e*P		Pn	05 34 37.3	+1.3
	baz=35							
NSK	**Sanguang**	**1.92**	**23**	*e*P		Pb	05 34 37.9	-0.8
	baz=23							
YHNB	**Yeheng**	**1.92**	**24**	*e*P		Pn	05 34 35.8	-0.3
	baz=23							
NDS	**Dongshan**	**2.03**	**32**	*e*P		Pb	05 34 39.4	-1.3
	baz=49							
NWLT	**Wulai**	**2.06**	**26**	*e*P		Pb	05 34 40.2	-1.0
	baz=25							
TWC	**Suao**	**2.08**	**35**	*e*P		Pn	05 34 39.1	+0.9
	baz=34							
FUSB	**Fushanzhiwuyua**	**2.08**	**28**	*e*P		Pn	05 34 39.5	+1.1
	baz=12							
TWE	**Neicheng**	**2.08**	**30**	*e*P		Pb	05 34 40.1	-1.4
	baz=13							
EGS		**2.32**	**33**	*e*P		Pb	05 34 43.6	-1.9
	baz=33							
TIPB	**Shuangxi**	**2.37**	**30**	*e*P		Pn	05 34 43.3	+0.9
	baz=13							
PTMZ	**Houxiangcun**	**2.48**	**329**	*e*P		Pn	05 34 42.7	-1.0
	baz=344							
TWB1	**Santiao Chiao**	**2.48**	**32**	*e*P		Pn	05 34 45.5	+1.7
	baz=31							
KNMB	**Chin-men Tao**	**2.50**	**309**	*e*P		Pn	05 34 43.9	-0.1
	baz=312							
SXI1	**Grass Mountain**	**2.50**	**29**	*e*P		Pn	05 34 45.3	+1.2
	baz=14							
JYNG	**Yonagunijimaku**	**2.70**	**55**	P		Pn	05 34 48.0	+1.3
JYNG				S		Sn	05 35 21.6	+2.6
YOJ	**Yonaguni jima**	**2.75**	**55**	*e*P		Pn	05 34 48.2	+0.6
	baz=54							
YOJ	**Yonaguni jima**	**2.75**	**55**	P		Pn	05 34 48.8	+1.2
YOJ				*e*S		Sb	05 35 23.6	-2.8
AXDP	**Jialang**	**3.06**	**311**	*e*P		Pn	05 34 51.3	-0.5
	baz=314							
HATJ	**Hateruma jima**	**3.22**	**69**	P		Pn	05 34 54.7	+0.8
HATJ				S		Sn	05 35 34.0	+2.2
IRIF	**Iriomote-Funau**	**3.26**	**64**	*e*P		Pn	05 34 56.2	+1.6
JKRS	**Kuro-shima**	**3.46**	**67**	*e*P		Pn	05 34 58.5	+1.3
JKRS				*e*S		Sn	05 35 40.4	+2.6
JIJ	**Ishigaki jima**	**3.62**	**66**	*e*P		Pn	05 35 00.4	+0.9
JIJ				S		Sn	05 35 42.8	+1.1
JISG	**Ishigakijimahi**	**3.85**	**64**	S		Sn	05 35 49.1	+1.8
JTJ	**Tarama**	**4.20**	**65**	*e*P		Pn	05 35 07.4	0.0
JTJ				S		Sn	05 35 54.8	-1.1

IDC 24 05:41:18.3±3.4, 54°28N×87°28E, h0km, mbtmp2.7/2, ML2.3/2, Error ellipse: s-maj=30.0km s-min=21.3km az=46.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.49**	**258**	*i*		05 50 24.4	
	0.1nm,0.9s,baz=77,slow=308,SNR=7.2						
ZALV	**Zalesovo Beam**	**1.49**	**258**	Pg	Pn	05 41 45.5	-0.7
	1.0nm,0.3s,baz=72,slow=16,SNR=9.7						
ZALV				Lg	Lg	05 42 05.4	
	1.0nm,0.3s,baz=77,slow=23,SNR=2.2						
KURBB	**Kurchatov Arra**	**6.48**	**239**	Pn	Pn	05 42 55.3	+0.5
	baz=52,slow=14,SNR=4.8						
KURBB				Lg	Lg	05 44 44.3	
	baz=45,slow=31,SNR=1.8						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**8.14**	**205**	Pn	Pn	05 43 18.6	+1.0
	0.1nm,0.3s,baz=29,slow=13,SNR=2.0						
	0.5nm,0.9s						

INET ***24*** *05:44:19.8±0.8, 12°92N×87°05W, h1km±6km, ML4.2*
UCR ***24*** *05:44:22.8±1.5, 12°92N×87°07W, h5km, ML3.3*
SNET ***24*** *05:44:23.1±1.2, 12°88N×87°04W, h14km±7km, ML3.4*
ISC 24 05:44:21.5±1.4, 12°99N±0°04×87°00W±0°03, h2km±12km, n42, σ0°58/55, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.29**	**191**	*e*P	**Pg**	**05 44 27.1**	**-0.1**
CRIN				*e*S	**Sg**	**05 44 31.5**	**+0.5**
CRIN				IAML		05 44 35.4	
	comp=N,55µm,0.8s						
CSGN	**Cosiguina Volc**	**0.55**	**268**	*e*P	**Pg**	**05 44 32.5**	**+0.4**
CNGN	**Cerro Negro**	**0.57**	**149**	*e*P	**Pg**	**05 44 32.8**	**+0.4**
MOMN	**Momotombo**	**0.73**	**143**	*e*P	**Pg**	**05 44 36.1**	**+0.6**
CNCH	**Conchagua**	**0.86**	**289**	*e*P	**Pg**	**05 44 38.6**	**+0.5**
CNCH				*e*P	**Pb**	**05 44 38.9**	**-0.4**
CNCH				*e*S	**Sb**	**05 44 52.0**	**+0.6**
CNCH	**Conchagua**	**0.86**	**289**	*e*P	**Pg**	**05 44 38.6**	**+0.5**
CNCH				*e*P	**Pb**	**05 44 38.9**	**-0.4**
CNCH				*e*S	**Sb**	**05 44 52.0**	**+0.6**
COPN	**Copaltepe**	**0.90**	**154**	*e*P	**Pg**	**05 44 38.2**	**-0.5**
LCND	**La Caada**	**0.93**	**290**	*e*P	**Pg**	**05 44 39.1**	**-0.2**
LCND				*e*S	**Sb**	**05 44 53.1**	**0.0**
LCND				IAML		05 44 55.5	
	comp=Z,850nm,0.3s						
LCND	**La Caada**	**0.93**	**290**	*e*P	**Pg**	**05 44 39.1**	**-0.2**
LCND				*e*S	**Sb**	**05 44 53.1**	**0.0**
LCND				*e*S	**Sn**	**05 44 53.3**	**-2.1**
LCND				IAML		05 44 55.5	
	comp=Z,850nm,0.3s						
RCON	**San Juan de Ri**	**0.95**	**59**	*e*P	**Pn**	**05 44 41.7**	**-0.3**
HUEN		**1.03**	**129**	*e*P	**Pg**	**05 44 41.5**	**+0.2**
MATN	**Matagalpa**	**1.04**	**93**	*e*P	**Pg**	**05 44 41.2**	**-0.4**
TGUH	**Tegucigalpa,Un**	**1.09**	**346**	*e*P	**Pn**	**05 44 44.0**	**+0.1**
TGUH				*e*S	**Sn**	**05 45 00.5**	**+0.7**
TGUH	**Tegucigalpa,Un**	**1.09**	**346**	*e*P	**Pn**	**05 44 44.0**	**+0.1**
TGUH				*e*S	**Sn**	**05 45 00.5**	**+0.7**
TISN	**Laguna Tiscapa**	**1.10**	**140**	*e*P	**Pg**	**05 44 42.2**	**-0.4**
MGAN	**Managua**	**1.11**	**139**	*e*P	**Pg**	**05 44 42.4**	**-0.5**
PACA	**Pacayal**	**1.38**	**290**	*e*P	**Pn**	**05 44 47.6**	**-0.3**
PACA	**Pacayal**	**1.38**	**290**	*e*P	**Pn**	**05 44 47.6**	**-0.3**
BOAB	**BOACO BROADBAN**	**1.40**	**112**	*e*P	**Pn**	**05 44 47.5**	**-0.6**
PQSS	**Presa 15 de Se**	**1.65**	**293**	*e*P	**Pn**	**05 44 51.6**	**+0.1**
PQSS	**Presa 15 de Se**	**1.65**	**293**	*e*P	**Pn**	**05 44 51.6**	**+0.1**
SCLA	**Alcaldia de Sa**	**1.83**	**293**	*e*P	**Pb**	**05 44 55.0**	**-0.8**
SCLA				*e*S	**Sn**	**05 45 18.1**	**+0.3**
SCLA	**Alcaldia de Sa**	**1.83**	**293**	*e*P	**Pb**	**05 44 55.0**	**-0.8**
SCLA				*e*S	**Sn**	**05 45 18.1**	**+0.3**
PAVA	**Las Pavas**	**2.02**	**291**	*e*P	**Pn**	**05 44 56.9**	**+0.2**
PAVA				IAML		05 45 06.7	
	comp=Z,295nm,0.5s						
PAVA	**Las Pavas**	**2.02**	**291**	*e*P	**Pn**	**05 44 56.9**	**+0.2**
PAVA				IAML		05 45 06.7	
	comp=Z,295nm,0.5s						
ACON	**Acoyapa**	**2.05**	**120**	*e*P	**Pn**	**05 44 57.0**	**0.0**
ACON				*e*S	**Sb**	**05 45 26.5**	**+1.1**
SJTE	**Alcalda de S**	**2.05**	**288**	*e*P	**Pn**	**05 44 56.9**	**-0.2**
SJTE	**Alcalda de S**	**2.05**	**288**	*e*P	**Pn**	**05 44 56.9**	**-0.2**
LFRS	**El Faro**	**2.11**	**288**	*e*P	**Pn**	**05 44 57.8**	**-0.1**
LFRS				IAML		05 45 32.3	
	comp=Z,514nm,0.5s						
LFRS	**El Faro**	**2.11**	**288**	*e*P	**Pn**	**05 44 57.8**	**-0.1**
LFRS				IAML		05 45 32.3	
	comp=Z,514nm,0.5s						
JAYA	**Jayaque - finc**	**2.48**	**286**	*e*P	**Pn**	**05 45 03.5**	**+0.5**
JAYA				IAML		05 45 08.7	
	comp=Z,138nm,0.3s						
JAYA	**Jayaque - finc**	**2.48**	**286**	*e*P	**Pn**	**05 45 03.5**	**+0.5**
JAYA				IAML		05 45 08.7	
	comp=Z,138nm,0.3s						
BUAI	**Buenos Aires**	**2.66**	**142**	*e*P	**Pn**	**05 45 05.7**	**+0.3**
GBS3	**Finca Las Img**	**2.66**	**145**	*e*P	**Pn**	**05 45 06.1**	**+0.6**
GB1A	**Borinquen Arri**	**2.67**	**144**	*e*P	**Pn**	**05 45 06.0**	**+0.4**
BUEV	**Buena Vista**	**2.68**	**144**	*e*P	**Pn**	**05 45 06.4**	**+0.7**
LAPC	**Finca la Perla**	**2.69**	**145**	*e*P	**Pn**	**05 45 05.3**	**-0.5**
ESPN	**Las Esperanzas**	**2.75**	**106**	*e*P	**Pn**	**05 45 06.6**	**0.0**
COLC	**Colonia**	**2.90**	**143**	*e*P	**Pn**	**05 45 08.5**	**-0.3**
CUI	**Cuipilapa**	**2.93**	**142**	*e*P	**Pn**	**05 45 09.4**	**+0.2**
ACAL	**Aguas Claras**	**3.03**	**140**	*e*P	**Pn**	**05 45 12.0**	**+1.4**
NICO	**Nicoya**	**3.22**	**152**	*e*P	**Pn**	**05 45 12.4**	**-0.7**

IDC 24 06:01:01.3±1.4, 3°87S×151°27E, h0km, mb3.5/2, mbtmp3.5/2, Error ellipse: s-maj=35.2km s-min=19.6km az=26.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**0.87**	**120**	Pn	Pn	06 01 21.6	+0.8
	65nm,0.3s,baz=210,slow=0.7,SNR=13						
KRVT				Sn	Sn	06 01 33.6	-0.6
	39nm,0.3s,baz=319,slow=3.8,SNR=12						
WRA	**Warramunga Arr**	**22.97**	**225**	P	P	06 06 07.2	-0.5
	1.0nm,1.1s,baz=49,slow=9.

ULHL				⇓*i*S		**Sg**	**06 06 45.6**	**0.0**
	baz=36								
PRZ	**Przheval'sk**	**2.29**	**21**	⇑*i*P		**Pn**	**06 06 18.0**	**+0.8**
PRZ	baz=16			⇑*i*S		**Sb**	**06 06 49.5**	**+0.3**
	baz=16								
BOOM	**Boomskoye usch**	**2.38**	**335**	⇑*e*P		**Pn**	**06 06 20.5**	**+2.1**
BOOM	baz=34			⇑*i*S		**Sb**	**06 06 53.1**	**+1.4**
	baz=34								
ANVS	**Anan'yevo**	**2.46**	**6**	⇑*i*P		**Pn**	**06 06 21.0**	**+1.6**
ANVS	baz=3.0			⇑*i*S		**Sb**	**06 06 54.0**	**+0.1**
	baz=3.0								
ARLS	**Aral**	**2.72**	**305**	⇑*e*P		**Pn**	**06 06 25.3**	**+2.3**
ARLS	baz=6.0			⇑*i*S		**Sb**	**06 07 01.5**	**0.0**
	baz=6.0								
IZV	**Izvestkoviy**	**2.75**	**349**	*e*P		**Pg**	**06 06 31.1**	**-0.6**
IZV	7.3nm,0.1s			*e*S		**Sg**	**06 07 08.1**	**+0.8**
	49nm,0.6s								
IZV	**Izvestkoviy**	**2.75**	**349**	Pg		**Pg**	**06 06 31.0**	**-0.7**
IZV	7.3nm,0.3s			Lg		Lg	06 07 09.5		
	64nm,0.5s								
UCH	**Uchtor**	**2.83**	**313**	P		**Pb**	**06 06 29.3**	**-0.6**
	SNR=5.5								
UCH	**Uchtor**	**2.83**	**313**	⇑*i*P		**Pn**	**06 06 26.8**	**+2.0**
UCH	baz=14			⇑*i*S		**Sb**	**06 07 04.6**	**-0.2**
	baz=14								
SATY	**Saty**	**2.84**	**16**	*e*P		**Pg**	**06 06 32.3**	**-1.2**
SATY	9.5nm,0.4s			*e*S		**Sg**	**06 07 09.9**	**-0.4**
	29nm,0.2s								
SATY	**Saty**	**2.84**	**16**	Pg		**Pb**	**06 06 30.8**	**+0.9**
SATY	16nm,0.6s			Lg		Lg	06 07 09.9		
	32nm,0.6s								
MTBS	**Maitube**	**2.87**	**347**	*e*P		**Pg**	**06 06 32.8**	**-1.2**
MTBS	7.4nm,0.3s			*e*S		**Sg**	**06 07 10.8**	**-0.3**
	21nm,0.3s								
MTBS	**Maitube**	**2.87**	**347**	Pg		**Pb**	**06 06 31.7**	**+1.3**
MTBS	7.5nm,0.4s			Lg		Lg	06 07 10.8		
	20nm,0.3s								
TKM2	**Tokmak 2**	**2.88**	**334**	P		**Pb**	**06 06 30.9**	**+0.2**
	SNR=5.7								
TKM2	**Tokmak 2**	**2.88**	**334**	⇑Pg		**Pb**	**06 06 30.3**	**-0.4**
TKM2	4.1nm,0.6s			⇑Lg		Lg	06 07 11.2		
	27nm,0.5s								
KST	**Kastek**	**2.88**	**340**	*e*P		**Pg**	**06 06 32.9**	**-1.5**
KST	4.7nm,0.5s			*e*S		**Sg**	**06 07 11.2**	**-0.5**
	38nm,0.5s								
KST	**Kastek**	**2.88**	**340**	Pg		**Pb**	**06 06 32.1**	**+1.4**
KST	4.9nm,0.3s			Lg		Lg	06 07 11.2		
	38nm,0.5s								
KBK	**Karagaybulak**	**2.92**	**323**	P		**Pb**	**06 06 31.3**	**0.0**
	SNR=7.5								
KBK	**Karagaybulak**	**2.92**	**323**	⇑*e*P		**Pn**	**06 06 28.0**	**+2.3**
KBK	baz=23			⇑*i*S		**Sb**	**06 07 06.4**	**-0.7**
	baz=23								
ZHN	**Zhinishke**	**2.95**	**16**	*e*P		**Pg**	**06 06 34.9**	**-0.7**
ZHN	12nm,0.2s			*e*S		**Sg**	**06 07 14.3**	**+0.5**
	54nm,0.2s								
ZHN	**Zhinishke**	**2.95**	**16**	Pg		**Pb**	**06 06 33.4**	**+1.5**
ZHN	7.9nm,0.2s			Lg		Lg	06 07 14.3		
	54nm,0.2s								
DGS	**Degeres**	**3.12**	**339**	*e*P		**Pg**	**06 06 37.4**	**-1.5**
DGS	5.5nm,0.3s			*e*S		**Sg**	**06 07 18.7**	**-0.6**
	20nm,0.9s								
DGS	**Degeres**	**3.12**	**339**	Pg		**Pb**	**06 06 36.4**	**+1.7**
DGS	4.6nm,0.3s			Lg		Lg	06 07 18.9		
	14nm,0.4s								
AAK	**Ala-Archa**	**3.12**	**318**	⇑*e*P		**Pn**	**06 06 30.9**	**+2.4**
AAK	baz=19			⇑*i*S		**Sb**	**06 07 11.4**	**-1.6**
	baz=19								
KURS	**Kuram**	**3.21**	**11**	*e*P		**Pg**	**06 06 39.5**	**-1.2**
KURS	4.8nm,0.7s			*e*S		**Sg**	**06 07 22.2**	**-0.1**
	17nm,0.5s								
KURS	**Kuram**	**3.21**	**11**	Pg		**Pb**	**06 06 37.4**	**+1.2**
KURS	9.6nm,0.7s			Lg		Lg	06 07 20.4		
	17nm,0.7s								
CHMS	**Chumysh**	**3.28**	**325**	P		**Pb**	**06 06 35.9**	**-1.5**
	SNR=5.0								
CHMS	**Chumysh**	**3.28**	**325**	⇓*i*P		**Pn**	**06 06 33.0**	**+2.5**
CHMS	baz=25			⇓*i*S		**Sb**	**06 07 15.2**	**-2.1**
	baz=25								
CHMS	**Chumysh**	**3.28**	**325**	⇑Pg		**Pb**	**06 06 35.4**	**-1.9**
CHMS	10.0nm,0.6s			⇑Lg		Lg	06 07 21.7		
	32nm,0.6s								
KPKS	**Kokpek**	**3.29**	**18**	*e*P		**Pb**	**06 06 39.0**	**+1.4**
KPKS	6.0nm,0.3s			*e*S		**Sg**	**06 07 21.9**	**-2.9**
	30nm,0.5s								
KPKS	**Kokpek**	**3.29**	**18**	Pg		**Pb**	**06 06 38.7**	**+1.1**
KPKS	6.4nm,0.3s			Lg		Lg	06 07 23.1		
	28nm,0.3s								
KTBS	**Karatobe**	**3.40**	**352**	*e*P		**Pg**	**06 06 42.5**	**-1.7**
KTBS	5.1nm,0.4s			*e*S		**Sg**	**06 07 27.9**	**-0.4**
	32nm,0.3s								
KTBS	**Karatobe**	**3.40**	**352**	Pg		**Pb**	**06 06 41.7**	**+2.2**
KTBS	5.1nm,0.4s			Lg		Lg	06 07 27.7		
	32nm,0.3s								
PDGK	**Podgornoye**	**3.40**	**28**	Pg		**Pb**	**06 06 40.7**	**+1.1**
PDGK	3.5nm,0.3s			Lg		Lg	06 07 26.5		
	12nm,0.6s								
PDGK	**Podgornoye**	**3.40**	**28**	⇑Pg		**Pb**	**06 06 40.2**	**+0.6**
PDGK	3.6nm,0.4s			⇑Lg		Lg	06 07 28.6		
	19nm,0.7s								
CHKK	**Chushkaly**	**3.52**	**356**	*e*P		**Pg**	**06 06 44.8**	**-1.7**
CHKK	4.1nm,0.4s			*e*S		**Sg**	**06 07 31.6**	**-0.6**
	42nm,0.3s								
CHKK	**Chushkaly**	**3.52**	**356**	Pg		**Pb**	**06 06 43.9**	**+2.4**
CHKK	5.0nm,0.4s			Lg		Lg	06 07 31.6		
	42nm,0.3s								
USP	**Ospenovka**	**3.60**	**325**	P		**Pb**	**06 06 43.3**	**+0.4**
	SNR=5.1								
KUU	**Kurty**	**3.62**	**349**	*e*P		**Pb**	**06 06 45.9**	**+2.6**
KUU	2.7nm,0.4s			*e*S		**Sg**	**06 07 33.5**	**-2.0**
	32nm,0.4s								
KUU	**Kurty**	**3.62**	**349**	Pg		**Pb**	**06 06 45.1**	**+1.8**
KUU	2.9nm,0.7s			Lg		Lg	06 07 33.5		
	32nm,0.4s								
SGDS	**Sogindy**	**3.70**	**328**	*e*P		**Pb**	**06 06 46.8**	**+2.3**
SGDS	2.3nm,0.4s			*e*S		**Sg**	**06 07 34.8**	**-3.0**
	9.5nm,0.4s								
SGDS	**Sogindy**	**3.70**	**328**	Pg		**Pb**	**06 06 45.5**	**+1.0**
SGDS	3.3nm,0.6s			Lg		Lg	06 07 34.8		
	15nm,1.1s								
KTMS	**Ketmen**	**3.85**	**35**	*e*P		**Pg**	**06 06 50.5**	**-2.3**
KTMS	0.8nm,0.3s			*e*S		**Sg**	**06 07 41.5**	**-1.2**
	6.0nm,0.7s								
KTMS	**Ketmen**	**3.85**	**35**	Pg		**Pg**	**06 06 49.7**	**-3.0**
KTMS	1.0nm,0.5s			Lg		Lg	06 07 41.5		
	7.7nm,0.6s								
BLB	**Baldybastay**	**3.85**	**13**	*e*P		**Pg**	**06 06 50.3**	**-2.6**
BLB	8.5nm,0.2s			*e*S		**Sg**	**06 07 41.0**	**-1.9**
	28nm,0.3s								
BLB	**Baldybastay**	**3.85**	**13**	Pg		**Pb**	**06 06 49.0**	**+1.8**
BLB	11nm,0.3s			Lg		Lg	06 07 40.4		
	23nm,0.3s								
ARXS	**Arharly**	**3.89**	**5**	*e*P		**Pg**	**06 06 51.5**	**-2.2**
ARXS	3.6nm,0.8s			*e*S		**Sg**	**06 07 42.9**	**-1.1**
	15nm,0.5s								
ARXS	**Arharly**	**3.89**	**5**	Pg		**Pb**	**06 06 50.4**	**+2.6**
ARXS	9.2nm,0.8s			Lg		Lg	06 07 42.8		
	14nm,0.5s								
BTLS	**Baital**	**5.28**	**334**	*e*P		**Pg**	**06 07 17.3**	**-2.9**
BTLS	0.9nm,0.2s			*e*S		**Sg**	**06 08 27.4**	**-1.1**
	5.9nm,0.8s								
BTLS	**Baital**	**5.28**	**334**	Pg		**Pb**	**06 07 14.7**	**+3.3**
BTLS	2.4nm,0.7s			Lg		Lg	06 08 24.5		
	6.2nm,0.9s								
KK31	**Karatay Array**	**5.79**	**301**	⇑Pg		**Pb**	**06 07 21.6**	**+1.5**
KK31	0.7nm,0.7s			⇓Lg		Lg	06 08 40.5		
	1.0nm,0.6s,baz=129,slow=27,SNR=3.7								
ZSN	**Zaisan**	**8.96**	**35**	Pg		Pg	06 08 18.5	-12	
ZSN	2.7nm,0.3s			Lg		Lg	06 10 14.1		
	6.4nm,0.8s								

NNC ***24*** *06:06:17.3±2.7,54.2°N×87.2°E,h0km,mb3.4,mpv3.1, Error ellipse: s-maj=22.9km s-min=13.6km az=10.0, Suspected Mining explosion.*

IDC ***24*** *06:06:22.8±2.8,54.33°N×86.61°E,h0km,mbtmp3.3/2, ML3.0/2,Error ellipse: s-maj=22.1km s-min=15.0km az=51.0*

ISC 24 06:06:22.8±4.5,**54.2°N**±0.2°×**86.7°E**±0.2°,**h0**km,**n9,σ1s34**/14, **6C-7D,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.17**	**256**	*i*			06 13 55.0	
	baz=68,slow=317,SNR=7.5							
ZAA0	**Zalesovo Array**	**1.17**	**256**	⇓P		**Pg**	**06 06 43.4**	**-1.7**
ZAA0	0.8nm,0.6s			⇑S		**Sn**	**06 07 04.8**	**+1.8**
	11nm,0.9s							
ZALV	**Zalesovo Beam**	**1.17**	**256**	Pg		**Pg**	**06 06 43.7**	**-1.5**
	2.8nm,0.3s,baz=68,slow=16,SNR=25							
ZALV				Lg		Lg	06 06 59.2	
	4.9nm,0.3s,baz=66,slow=17,SNR=6.1							
KURK	**Kurchatov**	**6.09**	**238**	⇓Pn		**Pn**	**06 07 54.3**	**+0.4**
KURK	4.8nm,1.2s			⇓Sn		**Sn**	**06 09 05.0**	**+0.8**
	1.8nm,0.6s							
KURK				⇓Lg		Lg	06 09 36.9	
	14nm,1.2s							
KURBB	**Kurchatov Arra**	**6.19**	**237**	Pn		**Pn**	**06 07 56.3**	**+1.0**
	0.3nm,0.3s,baz=53,slow=13,SNR=27							
KURBB				Sn		**Sn**	**06 09 05.9**	**-0.9**
	0.1nm,0.3s,baz=48,slow=21,SNR=4.9							
KURBB				Lg		Lg	06 09 39.3	
	baz=60,slow=33,SNR=4.1							
	2.8nm,0.5s							
KURBB	**Kurchatov Arra**	**6.19**	**237**	⇑Pn		**Pn**	**06 07 56.5**	**+1.2**
	4.1nm,0.6s							
KURBB				⇓Sn		**Sn**	**06 09 08.1**	**+1.3**
	6.2nm,0.6s							
KURBB				⇓Lg		Lg	06 09 42.8	
	30nm,1.3s							
MK31	**Makanchi Array**	**7.98**	**203**	⇑Pn		**Pn**	**06 08 19.7**	**-0.3**
	1.2nm,0.8s,baz=27,slow=13,SNR=7.0							
MK31				⇓Sn		**Sn**	**06 09 49.6**	**-1.2**
	0.8nm,0.5s,baz=22,slow=24,SNR=4.7							
MK31				⇑Lg		Lg	06 10 38.9	
	9.9nm,1.1s,baz=22,slow=31,SNR=4.8							
MKAR	**Makanchi Array**	**7.98**	**203**	Pn		**Pn**	**06 08 21.4**	**+1.5**
	0.2nm,0.3s,baz=22,slow=12,SNR=7.3							
MKAR				Sn		**Sn**	**06 09 51.1**	**+0.3**
	0.4nm,0.3s,baz=24,slow=25,SNR=6.5							
MKAR				Lg		Lg	06 10 38.8	
	0.1nm,0.3s,baz=22,slow=32,SNR=6.7							
	0.4nm,0.4s							
MAKZ	**Makanchi**	**8.04**	**204**	⇑Sn		**Sn**	**06 09 53.7**	**+1.4**
	2.2nm,1.1s							
MAKZ				⇑Lg		Lg	06 10 36.0	
	5.2nm,1.1s							

IDC ***24*** *06:12:18.6±8.9,3.48°N×97.68°E,h101km±76km,mb3.8/12, mbtmp4.2/13,ML4.4/1,MS3.3/1,Error ellipse: s-maj=54.9km s-min=16.0km az=52.0*

NEIC ***24*** *06:12:22.2±1.6,3.56°N±0.06°×97.89°E±0.07°,h127km±8km, mb4.2/13,Error ellipse: s-maj=11.4km s-min=8.5km az=60.0*

DJA ***24*** *06:12:23.6±0.6,3°N±4°×98°E±°,h113km±5km,M3.8/9, MLv3.8/9*

ISC 24 06:12:21.8±0.7,**3.52N**±0.05°×**97.88E**±0.06°,**h130**km±5km, **n46,σ0s73/45,mb4.2**/17,**Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KCSI	**Kotacane, Aceh**	**0.10**	**272**	P		**Pn**	**06 12 39.6**	**+0.1**
KCSI				S		**Sn**	**06 12 52.2**	**-0.6**
TSI	**Tuntungan**	**0.69**	**91**	P		**Pn**	**06 12 43.1**	**+1.0**
TSI				S		**Sn**	**06 12 56.8**	**-0.6**
RPSI	**Rantau Prapat**	**1.33**	**128**			**Pn**	**06 12 48.5**	**+0.4**
LHMI	**Lhok Sumawe**	**1.94**	**331**			**Pn**	**06 12 56.6**	**+1.6**
LHMI	**Lhok Sumawe**	**1.94**	**331**	P		**Pn**	**06 12 56.6**	**+1.6**
GSI	**Gunungsitoli**	**2.22**	**188**			**Pn**	**06 12 58.9**	**+0.4**
GSI	**Gunungsitoli**	**2.22**	**188**	P		**Pn**	**06 12 59.0**	**+0.4**
KULM	**Kulim**	**3.28**	**57**			**Pn**	**06 13 11.8**	**-0.3**
IPM	**Ipoh**	**3.28**	**73**			**Pn**	**06 13 12.5**	**+0.3**
SISI	**Saibi**	**4.96**	**166**	P		**Pn**	**06 13 34.4**	**-0.1**
SRIT	**Nakonsritamara**	**5.33**	**19**	Pn		**Pn**	**06 13 39.1**	**-0.3**
SBUM	**Sibu**	**14.36**	**94**	Pn		**Pn**	**06 15 39.2**	**-0.1**
CMAR	**Chiang Mai Arr**	**14.88**	**4**	P		**Pn**	**06 15 46.4**	**+0.5**
	0.6nm,0.3s,baz=198,slow=11,SNR=0.9							
	1.2nm,0.3s							
CHTO	**Chiang Mai**	**15.24**	**4**	Pn		**Pn**	**06 15 49.4**	**-0.8**
CHTO				IAmb		IAmb	06 16 01.9	
	comp=Z,2.6nm,0.6s							
MYLDM	**Lahad Datu**	**20.63**	**85**	P		**P**	**06 16 52.5**	**+1.3**
MYLDM				IAmb		IAmb	06 16 56.4	
	comp=Z,17nm,0.8s							
KAPI	**Kappang**	**23.44**	**111**	P		**P**	**06 17 20.9**	**+1.3**
	comp=Z,8.7nm,0.4s,baz=280,slow=2.6,SNR=6.0							
	comp=Z,8.7nm,0.4s							
KAPI	**Kappang**	**23.44**	**111**	IAmb		IAmb	06 17 21.4	
	comp=Z,10nm,0.5s							
DGAR	**Diego Garcia**	**27.60**	**247**	P		**P**	**06 17 56.9**	**-0.3**
H08S2	**Diego Garcia H**	**27.65**	**246**	T		T	06 45 30.7	
	baz=68,slow=74							
H08S3	**Diego Garcia H**	**27.65**	**246**	T		T	06 45 28.0	
	baz=68,slow=74							
H08S1	**Diego Carcia H**	**27.67**	**246**	T		T	06 45 38.1	
	baz=68							
WB0	**Warramunga Arr**	**42.69**	**124**	P		**P**	**06 20 06.2**	**0.0**
WB0				IAmb		IAmb	06 20 09.1	
	comp=Z,11nm,1.4s							
WRA	**Warramunga Arr**	**42.73**	**125**	P		**P**	**06 20 06.9**	**+0.4**
	comp=Z,3.4nm,0.4s,baz=304,slow=9.3,SNR=81							
WRA				PcP		**PcP**	**06 21 56.5**	**+0.5**
	comp=Z,0.5nm,0.8s,baz=323,slow=2.7,SNR=4.7							
	comp=Z,3.4nm,0.4s							
WRA	**Warramunga Arr**	**42.73**	**125**	IAmb		IAmb	06 20 13.1	
	comp=Z,0.3nm,1.4s							
KSRS	**Korea Array**	**43.57**	**35**	P		**P**	**06 20 12.9**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=230,slow=12,SNR=1.8							
	comp=Z,0.6nm,0.3s							
AS31	**Alice Springs**	**44.29**	**129**	P		**P**	**06 20 19.4**	**+0.3**
ASAR	**Alice Springs**	**44.29**	**129**	P		**P**	**06 20 19.6**	**+0.6**
SONM	**Songino Array**	**44.75**	**8**	P		**P**	**06 20 22.3**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=190,slow=7.3,SNR=4.0							
SONM				PcP		**PcP**	**06 22 03.2**	**+0.8**
	comp=Z,0.6nm,0.4s,baz=212,slow=4.6,SNR=5.1							
	comp=Z,0.5nm,0.3s							
MKAR	**Makanchi Array**	**45.18**	**345**	P		**P**	**06 20 25.1**	**-0.6**
	comp=Z,0.6nm,0.5s,baz=152,slow=9.0,SNR=12							
MKAR				pP		**pP**	**06 20 55.1**	**-0.3**
	comp=Z,1.4nm,0.8s,baz=169,slow=8.7,SNR=2.7							
	comp=Z,0.6nm,0.5s							
MAKZ	**Makanchi**	**45.28**	**345**	P		**P**	**06 20 26.0**	**-0.5**
MAKZ				IAmb		IAmb	06 21 05.1	
	comp=Z,2.6nm,1.1s							
COEN	**Coen**	**48.16**	**112**	P		**P**	**06 20 49.6**	**+0.2**
KURBB	**Kurchatov Arra**	**49.69**	**344**	PcP		**PcP**	**06 22 20.4**	**+0.7**
	comp=Z,0.4nm,0.4s,baz=150,slow=3.4,SNR=3.1							
ZAA0	**Zalesovo Array**	**51.40**	**350**	P		**P**	**06 21 12.4**	**-0.7**
ZAA0				IAmb		IAmb	06 21 13.2	
	comp=Z,2.7nm,0.6s							
ZALV	**Zalesovo Beam**	**51.40**	**350**	P		**P**	**06 21 12.7**	**-0.5**
	comp=Z,3.4nm,0.4s,baz=176,slow=6.9,SNR=19							
	comp=Z,3.4nm,0.4s							
ZALV	**Zalesovo Beam**	**51.40**	**350**	P		**P**	**06 21 12.6**	**-0.6**
ABKAR	**Akbulak array**	**55.81**	**331**	P		**P**	**06 21 44.9**	**-0.6**
AKTO	**Aktyubinsk**	**57.53**	**331**	P		**P**	**06 21 56.4**	**-1.2**
	comp=Z,1.2nm,0.6s,baz=104,slow=8.3,SNR=3.4							
AKTO				LR		LR	06 49 54.2	
	comp=Z,24nm,18.9s,baz=340,slow=39							
	comp=Z,1.2nm,0.6s							
AKASG	**Malin Array Be**	**73.85**	**322**	P		**P**	**06 23 40.7**	**-1.6**
	comp=Z,0.3nm,0.4s,baz=90,slow=5.1,SNR=5.4							
	comp=Z,0.3nm,0.4s							
FIA1	**FINESS Array S**	**78.27**	**332**	P		**P**	**06 24 06.9**	**-0.2**
FIA1				IAmb		IAmb	06 24 09.6	
	comp=Z,12nm,1.5s							
FINES	**FINESS Array B**	**78.27**	**332**	P		**P**	**06 24 07.2**	**+0.1**
	comp=Z,1.8nm,0.4s,baz=103,slow=5.5,SNR=32							
	comp=Z,1.8nm,0.4s							
HFS	**Hagfors**	**84.06**	**330**	P		**P**	**06 24 38.8**	**+1.0**
	comp=Z,1.3nm,0.7s,baz=144,slow=16,SNR=2.6							
	comp=Z,1.3nm,0.7s							
SPITS	**Spitsbergen Ar**	**84.83**	**348**	P		**P**	**06 24 40.6**	**-0.8**
	comp=Z,2.9nm,0.7s,baz=135,slow=14,SNR=1.7							
	comp=Z,2.9nm,0.7s							
NOA	**NORSAR Array B**	**85.32**	**331**	P		**P**	**06 24 44.4**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=90,slow=5.0,SNR=2.8							
	comp=Z,0.3nm,0.6s							
IMAR	**Indian Mountai**	**94.19**	**23**	P		**P**	**06 25 25.9**	**+0.1**
H21K	**Melozitna Rive**	**94.67**	**23**	P		**P**	**06 25 28.3**	**+0.4**
H21K				IAmb		IAmb	06 25 36.1	
	comp=Z,3.1nm,1.4s							
TXAR	**Lajitas Array**	**141.35**	**31**	PKhKP		PKPpre	06 31 33.2	
	comp=Z,0.3nm,0.5s,baz=336,slow=2.0,SNR=5.3							

GUC 24 06:44:57.8±0.8,**35.03S**×**71.12W,h94**km±4km,**ML3.7, 4C-6D,Central Chile**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BO01	**Tunca**	**0.63**	**2**	⇓*i*P		Pn	06 45 13.5	-0.5
BO01				*i*S		Sn	06 45 25.5	-0.7
BO01				IAML			06 45 26.2	
	comp=E,4μm,0.2s							
GO05	**Huala**	**0.67**	**271**	*e*P		Pn	06 45 13.9	-0.5
GO05				*i*S		Sn	06 45 26.3	-0.4
GO05				IAML			06 45 27.1	
	comp=N,2μm,0.1s							
ML02	**Panimavida**	**0.78**	**198**	⇑*i*P		Pn	06 45 15.3	-0.1
ML02				IAML			06 45 30.1	
	comp=E,2μm,0.4s							
BO03	**Pichilemu**	**0.87**	**307**	⇑*i*P		Pn	06 45 16.7	+0.3
BO03				*i*S		Sn	06 45 30.3	0.0
BO03				IAML			06 45 32.8	
	comp=N,1μm,0.3s							
BO04	**La Punta**	**1.12**	**22**	⇓*i*P		Pn	06 45 18.9	-0.2
BO04				*i*S		Sn	06 45 35.2	-0.1
BO04				IAML			06 45 37.6	
	comp=N,2μm,0.3s							
MT09	**Talagante**	**1.25**	**5**	⇓*i*P		Pn	06 45 20.5	-0.3
MT09				*i*S		Sn	06 45 37.7	-0.5
MT09				IAML			06 45 38.9	
	comp=E,2μm,0.1s							
LMEL	**Las Melosas**	**1.40**	**33**	*e*P		Pn	06 45 22.8	+0.1
LMEL				*i*S		Sn	06 45 42.7	+1.3
LMEL				IAML			06 45 45.4	
	comp=N,2μm,0.1s							
VA05	**Santo Domingo**	**1.43**	**343**	⇓*i*P		Pn	06 45 22.5	-0.3
VA05				*i*S		Sn	06 45 41.7	0.0
VA05				IAML			06 45 44.0	
	comp=N,2μm,0.5s							
MT03	**Universidad Ad**	**1.61**	**18**	*e*P		Pn	06 45 25.3	0.0
MT03				*i*S		Sn	06 45 46.5	+0.5
MT03				IAML			06 45 48.4	
	comp=E,1μm,0.1s							
MT05	**Renca**	**1.66**	**11**	*e*P		Pn	06 45 25.8	0.0
MT05				*i*S		Sn	06 45 47.2	+0.1
MT05				IAML			06 45 49.9	
	comp=E,2μm,0.2s							
MT02	**Curacav**	**1.76**	**359**	⇓*i*P		Pn	06 45 26.8	-0.3
MT02				*i*S		Sn	06 45 48.5	-0.8
MT02				IAML			06 45 49.2	
	comp=N,459nm,0.2s							
FCH	**Farellones**	**1.83**	**22**	⇑*i*P		Pn	06 45 28.1	-0.1
FCH				*i*S		Sn	06 45 51.1	-0.3
FCH				IAML			06 45 53.4	
	comp=E,1μm,0.4s							
PEL	**Peldehue**	**1.91**	**11**	⇓*i*P		Pn	06 45 29.0	0.0
PEL				*i*S		Sn	06 45 52.6	-0.2
PEL				IAML			06 45 57.0	
	comp=E,712nm,0.6s							
VA01	**Torpederas**	**2.05**	**347**	IAML			06 45 56.6	
	comp=E,494nm,0.1s							
ROCH	**El Roble**	**2.05**	**3**	*e*P		Pn	06 45 31.0	0.0
ROCH				*i*S		Sn	06 45 56.4	0.0
ROCH				IAML			06 46 00.2	
	comp=N,732nm,0.3s							
ROCH				IAML			06 46 00.4	
	comp=N,1μm,0.7s							
VA03	**San Esteban**	**2.31**	**12**	⇑*i*P		Pn	06 45 34.1	-0.2
VA03				*i*S		Sn	06 46 01.8	-0.3
VA03				IAML			06 46 06.8	
	comp=E,665nm,0.6s							
BI05	**Punta Hualpn**	**2.41**	**224**	IAML			06 46 02.7	
	comp=E,300nm,0.2s							
VA06	**Catapilco**	**2.46**	**356**	*e*P		Pn	06 45 35.9	-0.3
VA06				*i*S		Sn	06 46 05.0	-0.7
VA06				IAML			06 46 07.4	
	comp=E,515nm,0.2s							
CO02	**Combarbal**	**3.81**	**2**	*e*P		Pn	06 45 53.6	-0.9
CO06	**Fray Jorge**	**4.36**	**354**	*e*P		Pn	06 46 00.6	-1.2

IDC ***24*** *06:54:53.2±9.5,37.58°N×71.77°E,h149km±65km,mb3.2/3, mbtmp3.6/5,MS3.4/1,Error ellipse: s-maj=98.2km s-min=63.4km az=147.0*

ISC 24 06:54:53.7±2.3,**37.7°N**±0.2°×**71.6°E**±0.1°,**h150**km,**n9,** σ0s90/10,**mb3.5/3,1C-2D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AAK	**Ala-Archa**	**5.44**	**23**	P		**Pn**	**06 56 13.0**	**-0.1**
	2.6

n65,σ2^{s}06/100, mb3.6/3, 21C-14D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen** 28nm,0.2s	**0.96**	**295**	*eP*	**Pn**	**07 16 14.5**	**+1.0**
KTMS				*eS*	**Sn**	**07 16 29.4**	**+2.2**
	70nm,0.4s						
KTMS	**Ketmen** 28nm,0.2s	**0.96**	**295**	P	**Pn**	**07 16 14.5**	**+1.0**
KTMS				S	**Sn**	**07 16 29.4**	**+2.2**
	63nm,0.2s						
PDGK	**Podgornoye** 26nm,0.3s	**1.53**	**281**	P	**Pb**	**07 16 23.0**	**+0.6**
PDGK				S	**Sg**	**07 16 45.5**	**+2.3**
	255nm,0.3s						
PDGK	**Podgornoye** 40nm,0.4s	**1.53**	**281**	⇑P	**Pb**	**07 16 23.0**	**+0.6**
PDGK				⇓S	**Sg**	**07 16 45.5**	**+2.3**
	77nm,0.3s						
SHLS	**Shalkode** 37nm,0.3s	**1.53**	**275**	*eP*	**Pn**	**07 16 18.0**	**-3.3**
SHLS				*eS*	**Sn**	**07 16 36.8**	**-4.5**
	247nm,0.3s						
SHLS	**Shalkode** 88nm,0.3s	**1.53**	**275**	P	**Pn**	**07 16 18.0**	**-3.3**
SHLS				S	**Sn**	**07 16 36.8**	**-4.5**
	229nm,0.3s						
DJR	**Jarkent** 61nm,0.3s	**1.81**	**316**	*eP*	**Pb**	**07 16 27.4**	**+0.3**
DJR				*eS*	**Sg**	**07 16 52.4**	**+0.5**
	385nm,0.4s						
DJR	**Jarkent** 61nm,0.3s	**1.81**	**316**	P	**Pb**	**07 16 27.5**	**+0.4**
DJR				S	**Sg**	**07 16 52.4**	**+0.5**
	385nm,0.4s						
KPKS	**Kokpek** 130nm,0.2s	**2.13**	**282**	*eP*	**Pb**	**07 16 33.2**	**+0.6**
KPKS				*eS*	**Sg**	**07 17 02.9**	**+0.4**
	1μm,0.3s						
KPKS	**Kokpek** 130nm,0.2s	**2.13**	**282**	Pg	**Pb**	**07 16 33.3**	**+0.7**
KPKS				Lg	Lg	07 17 02.4	
	1μm,0.3s						
KNOS	**Konyrlen** 81nm,0.5s	**2.16**	**308**	*eP*	**Pb**	**07 16 34.0**	**+1.0**
KNOS				*eS*	**Sg**	**07 17 03.7**	**+0.4**
	1μm,0.4s						
ZHN	**Zhinishke** 60nm,0.3s	**2.28**	**274**	*eP*	**Pb**	**07 16 36.9**	**+1.7**
ZHN				*eS*	**Sg**	**07 17 08.6**	**+1.3**
	420nm,0.2s						
ZHN	**Zhinishke** 92nm,0.3s	**2.28**	**274**	Pg	**Pb**	**07 16 37.0**	**+1.8**
ZHN				Lg	Lg	07 17 08.6	
	420nm,0.2s						
SATY	**Saty** 28nm,0.3s	**2.30**	**271**	*eP*	**Pb**	**07 16 37.2**	**+1.6**
SATY				*eS*	**Sg**	**07 17 09.6**	**+1.7**
	343nm,0.1s						
SATY	**Saty** 42nm,0.3s	**2.30**	**271**	Pg	**Pb**	**07 16 37.2**	**+1.6**
SATY				Lg	Lg	07 17 09.6	
	343nm,0.1s						
BLB	**Baldybastay** 126nm,0.5s	**2.46**	**296**	*eP*	**Pb**	**07 16 38.4**	**+0.1**
BLB				*eS*	**Sb**	**07 17 11.2**	**+2.6**
	208nm,0.5s						
KURS	**Kuram** 30nm,0.5s	**2.50**	**281**	*eP*	**Pb**	**07 16 41.0**	**+2.0**
KURS				*eS*	**Sg**	**07 17 15.4**	**+1.0**
	276nm,0.7s						
KURS	**Kuram** 30nm,0.5s	**2.50**	**281**	Pg	**Pb**	**07 16 40.9**	**+2.0**
KURS				Lg	Lg	07 17 15.4	
	276nm,0.7s						
ANVS	**Anan'yevo** baz=54	**2.86**	**266**	⇓*iP*	Pg	07 16 59.9	+11
ANVS				⇓*iS*	**Sn**	**07 17 13.6**	**-0.7**
	baz=54						
ARXS	**Arharly** 27nm,0.5s	**2.94**	**294**	*eP*	**Pb**	**07 16 47.8**	**+1.4**
ARXS				*eS*	**Sg**	**07 17 27.0**	**-1.3**
	162nm,0.6s						
TDK	**Taldyqorghan** 112nm,0.5s	**2.99**	**312**	*eP*	**Pb**	**07 16 47.3**	**+0.1**
TDK				*eS*	**Sb**	**07 17 26.2**	**+2.6**
	257nm,0.4s						
KDJ	**Kajisay** baz=97	**3.35**	**255**	⇓*iP*	**Pn**	**07 16 50.2**	**+3.7**
KDJ				⇓*iS*	**Pg**	**07 16 57.0**	**-1.2**
	baz=97						
TNSS	**Tian-Shan** 25nm,0.1s	**3.37**	**271**	*eP*	**Pb**	**07 16 55.9**	**+1.9**
TNSS				*eS*	**Sg**	**07 17 40.9**	**-1.3**
	56nm,0.4s						
TNSS	**Tian-Shan** 25nm,0.1s	**3.37**	**271**	Pg	**Pb**	**07 16 55.9**	**+1.9**
TNSS				Lg	Lg	07 17 40.9	
	56nm,0.4s						
AAA	**Alma-Ata** 49nm,0.3s	**3.39**	**274**	*eP*	**Pg**	**07 16 57.3**	**-1.6**
AAA				*eS*	**Sg**	**07 17 43.8**	**+0.9**
	169nm,0.3s						
AAA	**Alma-Ata** 49nm,0.3s	**3.39**	**274**	Pg	**Pg**	**07 16 57.3**	**-1.6**
AAA				Lg	Lg	07 17 43.8	
	169nm,0.3s						
CHKK	**Chushkaly** 13nm,0.5s	**3.42**	**285**	*eP*	**Pb**	**07 16 56.4**	**+1.9**
CHKK				*eS*	**Sg**	**07 17 41.9**	**-1.7**
	66nm,0.3s						
CHKK	**Chushkaly** 13nm,0.5s	**3.42**	**285**	Pg	**Pb**	**07 16 56.4**	**+1.9**
CHKK				Lg	Lg	07 17 41.8	
	66nm,0.3s						
KTBS	**Karatobe** 14nm,0.3s	**3.61**	**282**	*eP*	**Pb**	**07 16 59.8**	**+2.1**
KTBS				*eS*	**Sg**	**07 17 48.2**	**-1.5**
	78nm,0.3s						
KTBS	**Karatobe** 14nm,0.3s	**3.61**	**282**	Pg	**Pb**	**07 16 59.8**	**+2.1**
KTBS				Lg	Lg	07 17 48.2	
	78nm,0.3s						
IZV	**Izvestkoviy**	**3.62**	**271**	*eP*	**Pg**	**07 17 01.4**	**-1.8**
IZV				*eS*	**Sg**	**07 17 51.5**	**+1.4**
IZV	**Izvestkoviy**	**3.62**	**271**	Pg	**Pg**	**07 17 01.4**	**-1.8**
IZV				Lg	Lg	07 17 51.5	
MTBS	**Maitube** 18nm,0.3s	**3.75**	**273**	*eP*	**Pb**	**07 17 02.9**	**+2.7**
MTBS				*eS*	**Sg**	**07 17 53.0**	**-1.3**
	65nm,0.3s						
MTBS	**Maitube** 18nm,0.3s	**3.75**	**273**	Pg	**Pb**	**07 17 02.9**	**+2.7**
MTBS				Lg	Lg	07 17 53.0	
	65nm,0.3s						
MAKZ	**Makanchi** 7.3nm,0.6s	**3.77**	**4**	⇓Pn	**Pn**	**07 16 52.9**	**+1.0**
MAKZ				⇓Pg	**Pb**	**07 17 02.6**	**+2.2**
	11nm,0.6s						
MAKZ				⇑Lg	Lg	07 17 49.6	
	23nm,0.7s						
MK31	**Makanchi Array** 0.4nm,0.2s,baz=190,slow=13,SNR=130	**3.78**	**8**	⇑Pn	**Pn**	**07 16 52.8**	**+0.7**
MK31				⇑Pg	**Pb**	**07 17 01.7**	**+1.1**
	3.0nm,0.3s,baz=180,slow=13,SNR=20						
MK31				⇓Lg	Lg	07 17 48.5	
	23nm,0.5s,baz=184,slow=28,SNR=5.5						
MKAR	**Makanchi Array** 3.1nm,0.3s,baz=184,slow=13,SNR=81	**3.78**	**8**	Pn	**Pn**	**07 16 53.0**	**+0.9**
MKAR				Pg	**Pb**	**07 17 01.6**	**+1.0**
	3.5nm,0.3s,baz=182,slow=14,SNR=15						
MKAR				Sn	**Sn**	**07 17 33.3**	**-3.3**
	2.8nm,0.3s,baz=193,slow=21,SNR=6.3						
MKAR				Lg	Lg	07 17 49.5	
	7.1nm,0.3s,baz=186,slow=32,SNR=11						
	3.6nm,0.3s						
KUU	**Kurty** 9.8nm,0.3s	**3.88**	**284**	*eP*	**Pb**	**07 17 04.8**	**+2.4**
KUU				*eS*	**Sg**	**07 17 56.3**	**-2.3**
	66nm,0.4s						
KUU	**Kurty** 9.8nm,0.3s	**3.88**	**284**	Pg	**Pb**	**07 17 04.8**	**+2.4**
KUU				Lg	Lg	07 17 56.3	
	66nm,0.4s						
ULHL	**Ulahol** baz=85	**4.00**	**260**	*i* P	Pn	07 16 45.4	-10
ULHL				*i* S	Pn	07 16 48.9	-6.4
	baz=85						
KST	**Kastek** 22nm,0.3s	**4.09**	**272**	*eP*	**Pb**	**07 17 09.3**	**+3.2**
KST				*eS*	**Sg**	**07 18 04.1**	**-1.2**
	56nm,0.5s						
KST	**Kastek** 22nm,0.3s	**4.09**	**272**	Pg	**Pb**	**07 17 09.3**	**+3.2**
KST				Lg	Lg	07 18 04.1	
	56nm,0.5s						
BOOM	**Boomskoye usch** baz=5.0	**4.17**	**264**	⇑*iP*	Pn	07 16 50.8	-6.8
BOOM				⇑*iS*	**Pn**	**07 16 58.2**	**+0.6**
	baz=5.0						
DGS	**Degeres** 12nm,0.4s	**4.23**	**275**	*eP*	**Pb**	**07 17 11.0**	**+2.6**
DGS				*eS*	**Sg**	**07 18 07.0**	**-2.8**
	67nm,0.4s						
DGS	**Degeres** 12nm,0.4s	**4.23**	**275**	Pg	**Pb**	**07 17 11.0**	**+2.6**
DGS				Lg	Lg	07 18 07.0	
	67nm,0.4s						
KRBS	**Karabastau** 4.2nm,0.4s	**4.33**	**281**	*eP*	**Pb**	**07 17 11.8**	**+1.7**
KRBS				*eS*	**Sg**	**07 18 09.1**	**-3.8**
	37nm,0.4s						
TKM2	**Tokmak 2** baz=17	**4.37**	**270**	⇑*iP*	**Pn**	**07 16 59.4**	**-1.0**
TKM2				⇑*iS*	**Pb**	**07 17 13.0**	**+2.2**
	baz=17						
TKM2	**Tokmak 2** 2.3nm,0.5s	**4.37**	**270**	⇑Pn	**Pn**	**07 17 01.6**	**+1.2**
TKM2				⇑Pg	**Pb**	**07 17 14.3**	**+3.5**
	10nm,0.5s						
TKM2				⇓Lg	Lg	07 18 17.5	
	52nm,0.8s						
ZSN	**Zaisan** 3.9nm,0.4s	**4.98**	**27**	*eP*	**Pb**	**07 17 21.5**	**+0.3**
ZSN				*eS*	**Sb**	**07 18 25.3**	**+4.3**
	34nm,0.7s						
CHMS	**Chumysh** baz=2.0	**4.98**	**272**	⇑*iP*	**Pn**	**07 17 08.6**	**-0.1**
CHMS				⇑*iS*	Pb	07 17 29.2	+8.0
	baz=2.0						
CHMS	**Chumysh** 6.8nm,0.7s	**4.98**	**272**	⇑Pg	**Pg**	**07 17 29.1**	**-0.2**
CHMS				⇓Lg	Lg	07 18 35.5	
	20nm,0.6s						
SGDS	**Sogindy** 2.6nm,0.2s	**5.07**	**277**	*eP*	**Pg**	**07 17 27.6**	**-3.4**
SGDS				*eS*	**Sg**	**07 18 35.7**	**-0.9**
	8.5nm,0.3s						
AAK	**Ala-Archa** 1.2nm,0.3s,baz=90,slow=20,SNR=3.1	**5.20**	**268**	Pg	**Pb**	**07 17 28.5**	**+3.5**
AAK				Lg	Lg	07 18 35.4	
	1.4nm,0.3s,baz=106,slow=18,SNR=1.6						
UCH	**Uchtor** baz=72	**5.25**	**263**	⇑*iP*	Pn	07 17 08.0	-4.8
UCH				⇑*iS*	**Pb**	**07 17 27.9**	**+1.8**
	baz=72						
ARLS	**Aral** baz=59	**5.48**	**260**	⇑*iP*	**Pn**	**07 17 11.4**	**-4.2**
ARLS				⇑*iS*	**Pb**	**07 17 33.4**	**+3.7**
	baz=59						
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=170,slow=12,SNR=9.9	**7.85**	**346**	Pn	**Pn**	**07 17 48.4**	**+0.4**
KURBB				Lg	Lg	07 19 59.6	
	0.2nm,0.3s,baz=171,slow=31,SNR=2.6						
	0.4nm,0.3s						
KURBB	**Kurchatov Arra** 1.3nm,0.4s	**7.85**	**346**	⇑Pn	**Pn**	**07 17 48.4**	**+0.4**
KURBB				⇑Sn	**Sn**	**07 19 17.0**	**+0.3**
	6.2nm,0.5s						
KURBB				⇓Lg	Lg	07 20 00.2	
	23nm,0.7s						
KURK	**Kurchatov** 4.9nm,1.0s	**7.92**	**346**	⇑Pn	**Pn**	**07 17 48.9**	**-0.1**
KURK				⇑Sn	**Sn**	**07 19 18.5**	**0.0**
	7.7nm,1.0s						
KURK				⇓Lg	Lg	07 20 01.0	
	13nm,0.7s						
KK31	**Karatay Array** 1.4nm,0.6s,baz=77,slow=17,SNR=7.9	**8.08**	**274**	⇓Pg	Pg	07 18 22.1	-6.4
KK31				⇓Lg	Lg	07 20 11.6	
	12nm,0.9s,baz=77,slow=28,SNR=6.0						
ZALV	**Zalesovo Beam** 1.8nm,0.3s,baz=202,slow=14,SNR=2.1	**11.11**	**10**	Pn	**Pn**	**07 18 32.4**	**-0.2**
	0.9nm,0.3s						
SONM	**Songino Array** 0.3nm,0.3s,baz=268,slow=12,SNR=8.1	**18.05**	**66**	P	**Pn**	**07 20 03.1**	**-1.6**
	1.5nm,0.7s						
ARCES	**ARCESS Array B** 0.8nm,0.6s,baz=94,slow=11,SNR=7.7	**38.67**	**332**	P	**P**	**07 23 17.5**	**+0.4**
	0.8nm,0.6s						
SEY	**Seymchan** comp=Z,42nm,18.6s,baz=216,slow=38	**44.36**	**38**	LR	LR	07 43 53.9	
TORD	**Torodi Ar. Bea** 0.2nm,0.4s,baz=41,slow=4.6,SNR=2.8	**73.77**	**273**	P	**P**	**07 27 28.1**	**-0.4**
	0.2nm,0.4s						
WRA	**Warramunga Arr** 0.5nm,0.8s,baz=333,slow=5.7,SNR=5.7	**79.26**	**130**	P	**P**	**07 27 58.4**	**-0.9**
	0.5nm,0.8s						

IDC 24 07:20:25.9±3.4, 54°23N×86°58E, h0km, mbtmp2.7/2, ML2.6/1, Error ellipse: s-maj=27.4km s-min=16.7km az=51.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA** baz=75,slow=314,SNR=1.0	**1.07**	**256**	*i*		07 26 50.0	
ZALV	**Zalesovo Beam** 0.7nm,0.3s,baz=73,slow=20,SNR=3.3	**1.07**	**256**	Pg	Pg	07 20 45.2	-1.3
ZALV				Lg	Lg	07 21 02.0	
	2.2nm,0.3s,baz=75,slow=28,SNR=7.3						
KURBB	**Kurchatov Arra** 0.6nm,0.7s,baz=54,slow=12,SNR=1.0	**6.10**	**237**	Pn	Pn	07 21 57.8	+0.5
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=23,slow=13,SNR=1.3	**7.93**	**202**	Pn	Pn	07 22 23.7	+1.4
	0.2nm,0.3s						

*IDC **24** 07:24:42.6±1.1, 56°49N×34°40W, h0km, mb3.5/9, mbtmp3.7/12, ML2.9/3, MS3.4/23, Error ellipse: s-maj=31.4km s-min=18.1km az=175.0*

ISC 24 07:24:46.0±0.9, 56°5N±0°1×34°40W±0°09, h22km, n29, σ1^{s}15/13, mb3.6/9, MS3.3/18, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes** 0.2nm,0.3s,baz=184,slow=16,SNR=1.7	**10.46**	**32**	Pn	**Pn**	**07 27 14.4**	**0.0**
BORG				LR	LR	07 30 12.3	
	comp=Z,357nm,18.1s,baz=232,slow=32						
	12nm,1.0s						
SFJD	**Kangerlussuaq** 0.4nm,0.3s,baz=250,slow=7.4,SNR=2.3	**12.98**	**331**	Pn	**Pn**	**07 27 49.5**	**+0.6**
	6.6nm,0.6s						
EKA	**Eskdalemuir Ar** 0.4nm,0.4s,baz=285,slow=8.7,SNR=2.1	**17.48**	**81**	P	**P**	**07 28 50.4**	**+1.3**
EKA				LR	LR	07 34 28.9	
	comp=Z,119nm,18.2s,baz=260,slow=34						
JMIC	**Jan Mayen** comp=Z,38nm,22.0s,baz=250,slow=31	**18.26**	**27**	LR	LR	07 34 05.8	
SCHQ	**Schefferville** 0.1nm,0.3s,baz=53,slow=12,SNR=2.9	**18.28**	**278**	P	**P**	**07 28 57.9**	**-0.1**
SCHQ				LR	LR	07 35 20.6	
	comp=Z,48nm,19.3s,baz=98,slow=35						
	2.2nm,0.8s						
FRB	**Frobisher Bay** comp=Z,60nm,19.0s,baz=246,slow=32	**18.30**	**307**	LR	LR	07 34 36.0	
NOA	**NORSAR Array B** 0.5nm,0.9s,baz=278,slow=14,SNR=1.9	**23.70**	**60**	P	**P**	**07 29 57.4**	**+1.6**
NOA				LR	LR	07 37 48.0	
	comp=Z,34nm,19.4s,baz=240,slow=33						
	0.5nm,0.9s						
HFS	**Hagfors** 1.0nm,0.8s,baz=236,slow=10,SNR=1.8	**25.07**	**62**	P	**P**	**07 30 10.1**	**+1.7**
HFS				LR	LR	07 37 55.3	
	comp=Z,56nm,21.9s,baz=296,slow=32						
	1.0nm,0.8s						
ESDC	**Sonseca Array** comp=Z,52nm,19.0s,baz=295,slow=32	**26.08**	**117**	LR	LR	07 38 47.3	
DAVOX	**Davos/Dischmat** comp=Z,102nm,18.9s,baz=266,slow=35	**28.68**	**91**	LR	LR	07 41 33.6	
ARCES	**ARCESS Array B** 0.5nm,0.7s,baz=272,slow=7.1,SNR=4.2	**28.75**	**39**	P	**P**	**07 30 39.9**	**-1.5**
ARCES				LR	LR	07 39 48.9	
	comp=Z,53nm,20.3s,baz=280,slow=32						
	0.5nm,0.7s						
SADO	**Sadowa** comp=Z,129nm,18.5s,baz=56,slow=34	**30.16**	**266**	LR	LR	07 42 03.0	
FINES	**FINESS Array B** comp=Z,34nm,20.0s,baz=341,slow=32	**30.57**	**55**	LR	LR	07 41 16.0	
VRAC	**Vranov** comp=Z,56nm,18.2s,baz=296,slow=36	**30.95**	**81**	LR	LR	07 43 31.4	
MDT	**Midelt** comp=Z,39nm,18.8s,baz=248,slow=34	**31.34**	**126**	LR	LR	07 42 27.8	
ULM	**Lac du Bonnet** comp=Z,43nm,19.7s,baz=122,slow=35	**36.10**	**287**	LR	LR	07 45 45.4	
MLR	**Muntele Rosu** comp=Z,55nm,18.7s,baz=8.5,slow=38	**38.33**	**80**	LR	LR	07 48 39.1	
YKA	**Yellowknife Ar** comp=Z,64nm,21.2s,baz=44,slow=33	**38.67**	**313**	LR	LR	07 45 59.6	
TKL	**Tuckaleechee C** comp=Z,65nm,20.5s,baz=68,slow=35	**39.01**	**259**	LR	LR	07 47 13.4	
PDAR	**Pinedale Array** 0.4nm,0.5s,baz=74,slow=7.6,SNR=3.8	**48.12**	**287**	P	**P**	**07 33 23.4**	**-0.8**
PDAR				LR	LR	07 52 30.4	
	comp=Z,54nm,18.7s,baz=189,slow=35						
	0.4nm,0.5s						
NEW	**Newport** comp=Z,74nm,18.1s,baz=310,slow=35	**48.24**	**297**	LR	LR	07 52 49.1	
ILAR	**Eielson Array** 1.4nm,0.7s,baz=42,slow=5.3,SNR=8.4	**48.63**	**328**	P	**P**	**07 33 27.1**	**-0.5**
	1.4nm,0.7s						
TORD	**Torodi Ar. Bea** 1.3nm,1.0s,baz=319,slow=4.3,SNR=3.6	**51.34**	**133**	P	**P**	**07 33 48.1**	**-0.6**
	1.3nm,1.0s						
ANMO	**Albuquerque** comp=Z,68nm,18.2s,baz=174,slow=36	**52.06**	**278**	LR	LR	07 56 01.4	
BVAR	**Borovoye Array** comp=Z,22nm,18.1s,baz=194,slow=36	**54.72**	**46**	LR	LR	07 57 23.6	
TXAR	**Lajitas Array** 0.2nm,0.6s,baz=50,slow=3.9,SNR=2.9	**54.76**	**271**	P	**P**	**07 34 14.9**	**+1.0**
	0.2nm,0.6s						
YBH	**Yreka Blue Hor** comp=Z,82nm,18.7s,baz=94,slow=35	**55.66**	**295**	LR	LR	07 57 09.8	
NVAR	**Mina Array Bea** 0.4nm,0.6s,baz=48,slow=7.6,SNR=4.4	**55.85**	**289**	P	**P**	**07 34 22.2**	**+0.4**
	0.4nm,0.6s						
MKAR	**Makanchi Array** 0.7nm,0.8s,baz=341,slow=6.9,SNR=4.0	**64.32**	**43**	P	**P**	**07 35 18.3**	**-1.2**
	0.7nm,0.8s						

TAP 24 07:34:55.5, 24°41N×121°80E, h13km, ML1.6, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EWUT	**Wuta** baz=335	**0.04**	**336**	P	Pg	07 34 58.0	+0.1
EWUT				S	Sg	07 34 59.5	0.0
	baz=335						
ENA	**Nanau** baz=293	**0.06**	**292**	P	Pg	07 34 58.2	+0.2
ENA				*eS*	Sg	07 34 59.5	-0.3
	baz=293						
TWC	**Suao** baz=9.0	**0.21**	**13**	P	Pg	07 35 00.4	+0.4
TWC				S	Sg	07 35 03.4	+0.2
	baz=9.0						
NDS	**Dongshan** baz=342	**0.24**	**342**	P	Pg	07 35 01.1	+0.5
NDS				S	Sg	07 35 04.4	+0.4
	baz=342						
LATG	**Datong** baz=297	**0.28**	**297**	P	Pg	07 35 01.7	+0.3
LATG				*eS*	Sg	07 35 06.0	+0.7
	baz=297						
ETL	**Fush Village** baz=213	**0.29**	**213**	*eP*	Pg	07 35 01.9	+0.4
ETL				*eS*	Sg	07 35 06.3	+0.6
	baz=213						
NACB	**Ninganchiao** baz=209	**0.30**	**219**	*eP*	Pg	07 35 01.5	-0.1
NACB				*eS*	Sg	07 35 06.4	+0.7
	baz=209						
ETLH	**Xiulin Townshi** baz=235	**0.35**	**235**	*eP*	Pg	07 35 02.8	+0.2
ETLH				*eS*	Sg	07 35 07.6	+0.2
	baz=235						
TWD	**Chiawan** baz=208	**0.37**	**209**	*eP*	Pg	07 35 03.3	+0.3
NNSB	**Datong** baz=273	**0.38**	**273**	P	Pb	07 35 03.8	-0.4
NNSB				*eS*	Sg	07 35 08.7	+0.4
	baz=273						
FUSB	**Fushanzhiwuyua** baz=322	**0.40**	**332**	*eP*	Pb	07 35 04.2	-0.3
FUSB				*eS*	Sg	07 35 09.5	+0.6
	baz=322						
NWLT	**Wulai** baz=317	**0.46**	**324**	*eP*	Pb	07 35 05.4	-0.1
NWLT				*eS*	Sg	07 35 10.9	+0.3
	baz=317						
YHNB	**Yeheng** baz=304	**0.46**	**304**	*eP*	Pb	07 35 05.5	-0.1
YHNB				*eS*	Sg	07 35 11.1	+0.2
	baz=304						
NSK	**Sanguang** baz=304	**0.48**	**304**	*eP*	Pb	07 35 05.8	0.0
NSK				*eS*	Sg	07 35 10.4	-1.1
	baz=304						
WHF	**Hehuan Shan** baz=241	**0.55**	**242**	*eP*	Pg	07 35 06.6	+0.2
WHF				*eS*	Sg	07 35 13.9	+0.1
	baz=241						
OWD	**Renai** baz=221	**0.72**	**232**	*eP*	Pg	07 35 09.6	0.0
WUSB	**Renai** baz=228	**0.75**	**236**	*eP*	Pb	07 35 10.5	+0.1

JMA 24 07:35:18.7±0.2, 24°N±1°×123°4E±0°6, h50km±2km, MV2.5/8, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HATJ	**Hateruma jima**	**0.64**	**35**	P	Pn	07 35 31.7	0.0
HATJ				S	Sn	07 35 41.2	+0.1
IRIF	**Iriomote-Funau**	**0.86**	**21**	P	Pn	07 35 34.8	+0.3
IRIF				S	Sn	07 35 46.3	+0.2
JKRS	**Kuro-shima**	**0.90**	**38**	P	Pn	07 35 35.5	+0.4
JKRS				S	Sn	07 35 47.7	+0.7
YOJ	**Yonaguni jima**	**0.99**	**339**	P	Pn	07 35 36.7	+0.3
YOJ				*eS*	Sn	07 35 49.3	0.0
JYNG	**Yonagunijimaku**	**1.01**	**336**	P	Pn	07 35 36.7	+0.2
JYNG				*eS*	Sn	07 35 49.8	+0.1
JIJ	**Ishigaki jima**	**1.07**	**39**	P	Pn	07 35 37.6	+0.2
JIJ				*eS*	Sn	07 35 51.1	-0.1
JISG	**Ishigakijimahi**	**1.34**	**38**	P	Pn	07 35 41.3	+0.3
JISG				*eS*	Sn	07 35 58.5	+0.7

*GUC **24** 07:35:41.3±0.9, 19°.89S×70°.94W, h40km±6km, ML3.6*
*IDC **24** 07:35:49.1±5.7, 20°.16S×68°.06W, h0km, mb3.8/1, mbtmp3.4/2, ML3.2/1, MS3.3/2, Error ellipse: s-maj=162.1km s-min=53.0km az=67.0*

ISC 24 07:35:39.8±3.6, 19°.93S±0°.04×70°.91W±0°.08, h11km±23km, n20, σ1^{s}38/28, 5C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TA02	**Huaiquique**	**0.81**	**115**	*eP*	**Pb**	**07 35 56.0**	**+0.1**
TA02				*i* S	**Sb**	**07 36 08.1**	**+1.3**
TA02				IAML		07 36 09.8	
	comp=E,2μm,0.7s						
TA01	**Diego Aracena**	**0.93**	**133**	*i* P	**Pb**	**07 35 58.0**	**0.0**
TA01				*i* S	**Sb**	**07 36 10.6**	**+0.2**
TA01				IAML		07 36 16.6	
	comp=E,2μm,0.3s						
PATCX	**Punta Patache**	**1.14**	**141**	⇑*iP*	**Pn**	**07 36 00.9**	**-0.8**
PATCX				*i* S	**Sb**	**07 36 16.3**	**0.0**
PATCX				IAML		07 36 22.1	
	comp=E,1μm,0.6s						
PB11	**IPOC Station P**	**1.20**	**82**	⇓*iP*	**Pn**	**07 36 01.4**	**-1.2**
PB11				*i* S	**Sb**	**07 36 17.1**	**-1.0**
PB11				IAML		07 36 22.6	
	comp=N,2μm,0.4s						
PB12	**IPOC Station P**	**1.42**	**23**	⇑*iP*	**Pn**	**07 36 04.1**	**-1.6**
PB12				*i* S	**Sn**	**07 36 22.6**	**-1.7**
PB12				IAML		07 36 26.1	
	comp=N,2μm,0.4s						
GO01	**Chusmiza**	**1.64**	**81**	⇑*iP*	**Pn**	**07 36 08.6**	**-0.4**
GO01				*i* S	**Sn**	**07 36 30.2**	**-0.1**

GO01					IAML		07 36 32.1	
	comp=N,2µm,0.3s							
PB08	**IPOC Station P**	**1.67**	**98**	*e*P	**Pn**	**07 36 09.2**	**-0.1**	
PB08				*i* S	**Sn**	**07 36 30.8**	**-0.1**	
PB08				IAML		07 36 39.9		
	comp=N,627nm,0.4s							
PB02	**IPOC Station P**	**1.68**	**146⇑**	*i*P	**Pn**	**07 36 08.9**	**-0.3**	
PB02				IAML		07 36 39.8		
	comp=E,2µm,0.4s							
PB01	**IPOC Station P**	**1.74**	**130⇓**	*i*P	**Pn**	**07 36 10.0**	**+0.1**	
PB01				IAML		07 36 39.0		
	comp=E,735nm,0.6s							
PB07	**IPOC Station P**	**2.03**	**152**	*e*P	**Pn**	**07 36 13.5**	**-0.5**	
PB07				*i* S	**Sn**	**07 36 39.6**	**+0.1**	
PB07				IAML		07 36 50.9		
	comp=E,442nm,0.5s							
PB16	**IPOC Station P**	**2.07**	**40**	*e*P	**Pn**	**07 36 14.3**	**-0.7**	
PB16				*i* S	**Sn**	**07 36 41.0**	**0.0**	
PB16				IAML		07 36 47.6		
	comp=E,740nm,0.4s							
PB09	**IPOC Station P**	**2.43**	**140⇑**	*i*P	**Pn**	**07 36 20.3**	**+0.8**	
PB09				IAML		07 37 02.2		
	comp=E,773nm,0.6s							
PB04	**IPOC Station P**	**2.50**	**164**	*e*P	**Pn**	**07 36 19.5**	**-1.0**	
PB04				IAML		07 37 14.9		
	comp=N,246nm,0.4s							
PB18	**Visviri**	**2.70**	**30**	*e*P	**Pn**	**07 36 24.9**	**+1.3**	
PB06	**IPOC Station P**	**3.03**	**156**	*e*P	**Pn**	**07 36 27.1**	**-0.7**	
PB06				IAML		07 37 19.7		
	comp=E,178nm,0.5s							
PB15	**IPOC Station P**	**3.53**	**158**	*e*P	**Pn**	**07 36 34.5**	**-0.2**	
LPAZ	**La Paz**	**4.49**	**37**	Pn	**Pn**	**07 36 50.3**	**+2.0**	
	comp=E,1.1nm,0.3s,baz=226,slow=5.6,SNR=31							
LPAZ				LR	LR	07 38 34.8		
	comp=E,79nm,19.6s,baz=268,slow=43							
	comp=E,1.3nm,0.4s							
VNDA	**Vanda**	**78.06**	**190**	LR	LR	08 21 00.2		
	comp=E,81nm,18.6s,baz=144,slow=35							
TORD	**Torodi Ar. Bea**	**78.62**	**71**	P	**P**	**07 47 39.7**	**-2.5**	
	comp=E,0.5nm,0.6s,baz=249,slow=5.6,SNR=4.2							
	comp=E,0.5nm,0.6s							
MKAR	**Makanchi Array**	**145.41**	**33**	PKP	**PKiKP**	**07 55 26.3**	**+4.5**	
	comp=E,0.5nm,0.6s,baz=309,slow=3.6,SNR=4.7							

ISC 24 08:09:57.9±1.2, 49°66N±0°07×17°78E±0°08, h10km, n6, σ0s80/9, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MORC	**Moravsky Berou**	**0.19**	**307**	*e*PG	**Pg**	**08 10 01.4**	**-0.6**
MORC				*e*SG	**Sg**	**08 10 03.6**	**-1.2**
JAVC	**Velka Javorina**	**0.81**	**185**	*e*PG	**Pn**	**08 10 15.0**	**-0.5**
VRAC	**Vranov**	**0.85**	**246**	*e*PG	**Pb**	**08 10 15.1**	**+0.3**
KRUC	**Moravsky**	**1.09**	**237**	*e*PG	**Pb**	**08 10 19.4**	**+0.6**
VYHS	**Vyhne**	**1.36**	**149**	*e*PG	**Pb**	**08 10 23.4**	**-0.1**
VYHS				*e*SG	**Sg**	**08 10 42.4**	**+0.7**
KSP	**Ksiaz**	**1.52**	**322**	*e*Pg	**Pn**	**08 10 25.6**	**+0.5**
KSP				*e*Sg	**Sb**	**08 10 46.3**	**+0.8**

IDC 24 08:16:18.7±1.0, 39°67N×140°91E, h0km, mb3.6/7, mbtmp3.6/8, ML2.6/2, MS2.7/1, Error ellipse: s-maj=32.9km s-min=19.3km az=124.0

JMA 24 08:16:18.7±0.0, 39°8N±0°1×140°8E±0°2, h3km, MV3.0/20, NORTHERN IWATE PREF

JMA Felt I J1 at NORTHERN IWATE PREF .

ISC 24 08:16:19.2±1.2, 39°82N±0°03×140°86E±0°04, h1km±9km, n22, σ0s92/22, mb3.8/7, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSZI	**Iwateshizukuis**	**0.11**	**138**	P	**Pg**	**08 16 21.7**	**+0.4**
JSZI				S	**Sg**	**08 16 23.8**	**+1.1**
JKZ	**Kuzumaki**	**0.40**	**66**	P	**Pg**	**08 16 26.6**	**-0.2**
JAH	**Hinai**	**0.40**	**335**	*i* P	**Pg**	**08 16 26.6**	**-0.4**
JAH				S	**Sg**	**08 16 32.2**	**0.0**
JRG	**Rokugo**	**0.46**	**202**	*i* P	**Pg**	**08 16 28.3**	**+0.3**
JRG				S	**Sg**	**08 16 35.3**	**+1.4**
JOM	**Ohasama**	**0.48**	**136**	*i* P	**Pg**	**08 16 28.0**	**-0.4**
JOM				*e*S	**Sg**	**08 16 35.0**	**+0.3**
JANG	**Nango**	**0.75**	**42**	P	**Pg**	**08 16 33.5**	**0.0**
JANG				S	**Sg**	**08 16 43.6**	**+0.4**
MJAR	**Matsushiro Arr**	**3.88**	**213**	Pn	**Pn**	**08 17 18.0**	**-2.1**
	0.1nm,0.3s,baz=62,slow=13,SNR=1.8						
MJAR				Pg	**Pb**	**08 17 27.2**	**-1.3**
	baz=29,slow=13,SNR=6.6						
KSRS	**Korea Array**	**10.39**	**261**	Pn	**Pn**	**08 18 50.4**	**+1.1**
	0.2nm,0.3s,baz=69,slow=13,SNR=7.6						
KSRS				LR	LR	08 22 43.6	
	comp=Z,36nm,18.2s,baz=55,slow=37						
	2.4nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**30.01**	**124**	T	T	08 53 01.5	
	baz=320,slow=75						
H11N1	**WAKE ISLAND Hy**	**30.02**	**124**	T	T	08 53 02.2	
	baz=320,slow=75						
H11N3	**WAKE ISLAND Hy**	**30.03**	**124**	T	T	08 53 02.9	
	baz=320,slow=75						
H11S1	**WAKE ISLAND Hy**	**30.80**	**126**	T	T	08 53 59.4	
	baz=317						
H11S3	**WAKE ISLAND Hy**	**30.80**	**126**	T	T	08 54 05.8	
	baz=317						
H11S2	**WAKE ISLAND Hy**	**30.81**	**126**	T	T	08 54 03.2	
	baz=317						
MKAR	**Makanchi Array**	**42.32**	**299**	P	**P**	**08 24 15.4**	**+1.0**
	0.4nm,0.7s,baz=90,slow=7.2,SNR=3.6						
	0.4nm,0.7s						
ILAR	**Eielson Array**	**47.40**	**34**	P	**P**	**08 24 54.9**	**+0.2**
	0.3nm,0.7s,baz=279,slow=7.2,SNR=4.4						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	**59.76**	**187**	P	**P**	**08 26 24.6**	**-1.2**
	0.7nm,0.9s,baz=2.7,slow=7.2,SNR=3.3						
	0.7nm,0.9s						
YKA	**Yellowknife Ar**	**61.63**	**31**	P	**P**	**08 26 38.8**	**+0.8**
	0.6nm,0.8s,baz=310,slow=5.9,SNR=3.0						
	0.6nm,0.8s						
FINES	**FINESS Array B**	**66.15**	**332**	P	**P**	**08 27 08.6**	**+0.8**
	0.7nm,0.7s,baz=22,slow=6.8,SNR=3.9						
	0.7nm,0.7s						
NB2	**NORSAR Subarra**	**71.45**	**337**	P	**P**	**08 27 40.5**	**-0.5**
	comp=Z,0.4nm,0.7s,baz=36,slow=6.5						
NOA	**NORSAR Array B**	**71.45**	**337**	P	**P**	**08 27 40.8**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=38,slow=6.1,SNR=4.6						
	comp=Z,0.7nm,0.8s						
PDAR	**Pinedale Array**	**76.03**	**46**	P	**P**	**08 28 08.8**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=284,slow=6.0,SNR=4.2						
	comp=Z,0.4nm,0.7s						

IDC 24 08:23:54.7±3.3, 21°77N×144°77E, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=149.6km s-min=31.7km az=83.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**42.69**	**195**	P	P	08 31 53.4	-0.1
	0.6nm,0.3s,baz=15,slow=8.8,SNR=19						
	0.6nm,0.3s						
MKAR	**Makanchi Array**	**55.73**	**312**	P	P	08 33 33.4	+0.2
	0.4nm,0.7s,baz=88,slow=9.7,SNR=2.5						
	0.4nm,0.7s						
FINES	**FINESS Array B**	**83.75**	**335**	P	P	08 36 25.3	-0.2
	0.6nm,0.8s,baz=52,slow=3.1,SNR=5.6						
	0.6nm,0.8s						

IDC 24 08:32:50.8±2.4, 11°49S×163°34E, h0km, mb3.9/5, mbtmp3.9/5, MS3.0/5, Error ellipse: s-maj=84.1km s-min=31.3km az=124.0

NEIC 24 08:32:52.7±2.1, 11°3S±0°1×163°4E±0°1, h10km±1km, mb4.4/11, Error ellipse: s-maj=23.9km s-min=6.7km az=45.0

ISC 24 08:32:56.7±0.9, 11°4S±0°1×163°3E±0°1, h35km, n31, σ0s91/21, mb4.1/11, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.84**	**301**	LR	LR	08 35 22.9	
	comp=Z,216nm,20.8s,baz=108,slow=39						
HNR	**Honiara**	**3.84**	**301**	Pn	**Pn**	**08 33 53.7**	**+0.4**
KOUNC	**Koumac, New Ca**	**9.11**	**174**	Pn	**Pn**	**08 35 05.8**	**+0.1**
LIFNC	**LIFOU**	**10.03**	**158**	Pn	**Pn**	**08 35 16.7**	**-1.7**
DZM	**Mont Dzumac**	**10.99**	**164**		**Pn**	**08 35 30.5**	**-1.1**
OUENC	**Ouen Island, N**	**11.43**	**163**	Pn	**Pn**	**08 35 37.9**	**+0.4**
PINNC	**Pines Island,**	**11.80**	**161**	Pn	**Pn**	**08 35 43.5**	**+0.9**
KRVT	**Keravat (AS076**	**13.20**	**302**	LR	LR	08 41 30.9	
	comp=Z,100nm,20.9s,baz=258,slow=39						
PMG	**Port Moresby**	**15.98**	**276**	LR	LR	08 41 30.1	
	comp=Z,52nm,20.6s,baz=86,slow=32						
CTA	**Charters Tower**	**18.48**	**240**	LR	LR	08 43 04.7	
	comp=Z,32nm,19.2s,baz=80,slow=33						
COEN	**Coen**	**19.77**	**261**	P	**Pn**	**08 37 25.3**	**-0.4**
COEN				IAmb	IAmb	08 38 06.4	
	comp=Z,28nm,1.4s						
STKA	**Stephens Creek**	**28.52**	**221**	P	**P**	**08 38 48.5**	**-0.6**
	comp=Z,4.3nm,1.0s,baz=29,slow=10,SNR=2.8						
STKA				LR	LR	08 48 42.2	
	comp=Z,41nm,18.9s,baz=55,slow=33						
	comp=Z,4.3nm,1.0s						
WR0	**Warramunga Arr**	**28.89**	**249**	P	**P**	**08 38 52.2**	**-0.3**
WR0				IAmb	IAmb	08 39 14.7	
	comp=Z,9.7nm,1.5s						
WRA	**Warramunga Arr**	**29.07**	**250**	P	**P**	**08 38 53.4**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=80,slow=8.7,SNR=17						
	comp=Z,0.5nm,0.4s						
H11S2	**WAKE ISLAND Hy**	**29.94**	**7**	T	T	09 10 40.9	
	baz=187,slow=76,SNR=18						
H11S3	**WAKE ISLAND Hy**	**29.94**	**6**	T	T	09 10 40.4	
	baz=187,slow=76,SNR=22						
H11S1	**WAKE ISLAND Hy**	**29.95**	**7**	T	T	09 10 36.1	
	baz=187,slow=76,SNR=16						
AS31	**Alice Springs**	**30.45**	**243**	P	**P**	**08 39 05.7**	**-0.6**
AS31				IAmb	IAmb	08 39 06.3	
	comp=Z,1.6nm,0.6s						
ASAR	**Alice Springs**	**30.45**	**243**	P	**P**	**08 39 05.0**	**-1.3**
H11N1	**WAKE ISLAND Hy**	**31.16**	**7**	T	T	09 12 10.2	
	baz=188,slow=76,SNR=6.9						
H11N3	**WAKE ISLAND Hy**	**31.17**	**7**	T	T	09 12 15.7	
	baz=188,slow=76,SNR=7.1						
H11N2	**WAKE ISLAND Hy**	**31.18**	**7**	T	T	09 12 02.1	
	baz=188,slow=76,SNR=7.7						
BBOO	**Buckleboo**	**32.81**	**225**	P	**P**	**08 39 26.9**	**0.0**
KNRA	**Kununurra**	**33.79**	**259**	P	**P**	**08 39 35.2**	**-0.4**
KNRA				IAmb	IAmb	08 40 04.8	
	comp=Z,8.9nm,1.1s						
MBWA	**Marble Bar**	**42.77**	**251**	P	**P**	**08 40 51.4**	**+0.2**
MBWA				IAmb	IAmb	08 40 52.2	
	comp=Z,9.2nm,0.9s						
SONM	**Songino Array**	**77.57**	**325**	P	**P**	**08 44 50.0**	**+0.7**
	comp=Z,0.6nm,0.7s,baz=126,slow=6.8,SNR=2.9						
	comp=Z,0.6nm,0.7s						
QSPA	**South Pole Qui**	**78.56**	**180**	P	**P**	**08 44 56.5**	**+2.0**
QSPA				IAmb	IAmb	08 45 06.4	
	comp=Z,6.8nm,1.2s						
PAX	**Paxson**	**83.97**	**21**	P	**P**	**08 45 22.1**	**-1.0**
PAX				IAmb	IAmb	08 45 22.9	
	comp=Z,1.9nm,0.8s						
ILAR	**Eielson Array**	**84.67**	**19**	P	**P**	**08 45 26.0**	**-0.5**
	comp=Z,0.4nm,0.8s,baz=243,slow=4.0,SNR=3.3						
	comp=Z,0.4nm,0.8s						
MKAR	**Makanchi Array**	**92.16**	**317**	P	**P**	**08 46 02.4**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=114,slow=5.4,SNR=3.8						
	comp=Z,0.5nm,0.7s						
SNAA	**Sanae**	**96.55**	**184**	P	**P**	**08 46 22.8**	**+0.3**

IASPEI 24 08:38:33.8±0.9, 47°28N±0°02×122°29W±0°02, h26km±4km, Error ellipse: s-maj=2.9km s-min=2.4km az=81.3, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009

NEIC 24 08:38:33.8±1.7, 47°29N±0°02×122°29W±0°03, h26km±7km, Error ellipse: s-maj=3.2km s-min=2.9km az=59.0

PNSN 24 08:38:34.3, 47°29N×122°28W, h21km, MD3.0, Fault plane solution: NP1:φ=85.00000°, δ=50.00000°, λ=70.00000°.

SEA 24 08:38:34.3±2.2, 47°29N±0°02×122°28W±0°03, h21km±5km, ML2.9/143, ML2.8/32(NEIC), Error ellipse: s-maj=2.9km s-min=2.8km az=106.0

ANF 24 08:38:36.6±1.6, 47°17N×122°31W, h20km, ML3.0/5, Error ellipse: s-maj=14.9km s-min=9.4km az=48.0

ISC 24 08:38:34.0±0.9, 47°29N±0°01×122°30W±0°02, h26km±3km, n147, σ0s82/181, Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBPA	**Tacoma Substat**	**0.06**	**234**		**Pb**	**08 38 37.9**	**-0.5**
TBPA					**Sb**	**08 38 41.7**	**+0.4**
KNEL	**Kent Elementar**	**0.10**	**20**		**Pb**	**08 38 38.2**	**-0.4**
KNEL					**Sb**	**08 38 42.2**	**+0.4**
SMNR	**Sumner High Sc**	**0.10**	**152**		**Pb**	**08 38 38.0**	**-0.7**
SMNR					**Sb**	**08 38 41.9**	**0.0**
HICC	**Highline Commu**	**0.10**	**0**		**Pb**	**08 38 38.2**	**-0.5**
HICC					**Sb**	**08 38 41.8**	**-0.1**
PAYL	**Puyallup Schoo**	**0.10**	**186**		**Pb**	**08 38 38.0**	**-0.6**
PAYL					**Sb**	**08 38 41.8**	**0.0**
UPS	**University of**	**0.13**	**258**		**Pb**	**08 38 38.6**	**-0.3**
UPS					**Sb**	**08 38 42.6**	**+0.4**
VVHS	**Vashon High Sc**	**0.17**	**322**		**Pb**	**08 38 39.0**	**-0.3**
VVHS					**Sb**	**08 38 42.4**	**-0.5**
PCEP	**Pierce County**	**0.18**	**178**		**Pb**	**08 38 38.8**	**-0.6**
PCEP					**Sb**	**08 38 42.8**	**-0.3**
MPL	**Maple valley S**	**0.19**	**24**		**Pb**	**08 38 39.2**	**-0.4**
MPL					**Sb**	**08 38 43.5**	**0.0**
BSFP	**Boeing Fire Pr**	**0.23**	**0**		**Pb**	**08 38 39.5**	**-0.5**
BSFP					**Sb**	**08 38 44.9**	**+0.7**
D05A	**Enumclaw**	**0.24**	**116**		**Pb**	**08 38 39.9**	**-0.3**
D05A	**Enumclaw**	**0.24**	**116**	IAML		08 38 44.6	
	comp=E,1µm,0.6s						
D05A				IAML		08 38 44.8	
	comp=N,1µm,0.5s						
TKCO	**King County**	**0.25**	**360**		**Pb**	**08 38 40.2**	**-0.1**
TKCO					**Sb**	**08 38 45.4**	**+0.8**
GHW	**Garrison Hill**	**0.25**	**176**		**Pb**	**08 38 39.6**	**-0.7**
GHW					**Sb**	**08 38 43.9**	**-0.8**
RAW	**Raver**	**0.26**	**79**		**Pb**	**08 38 40.0**	**-0.4**
RAW					**Sb**	**08 38 44.7**	**-0.1**
GTWN	**Georgetown Pla**	**0.26**	**357**		**Pb**	**08 38 40.5**	**0.0**
GTWN					**Sb**	**08 38 45.9**	**+1.0**
HOLY	**Holy Rosary Sc**	**0.28**	**348**		**Pb**	**08 38 40.7**	**-0.1**
ALKI	**Alki Wastewate**	**0.29**	**344**		**Pb**	**08 38 40.9**	**-0.1**
KDKW	**Coast Env Seat**	**0.30**	**356**		**Pb**	**08 38 41.8**	**+0.7**
B941	**Kapowsin**	**0.31**	**170**		**Pb**	**08 38 40.3**	**-0.9**
B941					**Sb**	**08 38 44.9**	**-1.2**
PCFR	**Pierce County**	**0.32**	**198**		**Pb**	**08 38 40.7**	**-0.5**
PCFR					**Sb**	**08 38 46.0**	**-0.2**
MNWA	**Manchester**	**0.32**	**330**		**Pb**	**08 38 40.9**	**-0.5**
WISC	**Wilburton Inst**	**0.33**	**15**		**Pb**	**08 38 42.1**	**+0.6**
PNLK	**Pine Lake Midd**	**0.34**	**32**		**Pb**	**08 38 41.7**	**0.0**
PNLK					**Sb**	**08 38 47.9**	**+1.0**
BABE	**Bainbridge Sch**	**0.35**	**333**		**Pn**	**08 38 42.6**	**-0.9**
ELW	**Echo Lake**	**0.35**	**55**		**Pb**	**08 38 41.2**	**-0.7**
GSM	**Grass Mountain**	**0.36**	**104**		**Pb**	**08 38 41.4**	**-0.6**
RATT	**Rattlesnake La**	**0.36**	**68**		**Pb**	**08 38 41.3**	**-0.7**
RATT					**Sb**	**08 38 47.0**	**-0.5**
SEA	**Seattle**	**0.36**	**359**		**Pn**	**08 38 42.9**	**-0.7**
LAWT	**Lawton Element**	**0.37**	**351**		**Pn**	**08 38 43.0**	**-0.7**
KIMR	**Kitsap County**	**0.38**	**304**		**Pb**	**08 38 42.0**	**-0.3**
KIMR					**Sb**	**08 38 48.3**	**+0.4**
CDMR	**Cedar Moraine**	**0.39**	**70**		**Pb**	**08 38 41.8**	**-0.6**
CDMR					**Sb**	**08 38 47.9**	**-0.4**
MARYW	**Marymoor Park**	**0.39**	**18**		**Pb**	**08 38 43.0**	**+0.6**
NOWS	**NOAA--Sand Poi**	**0.40**	**4**		**Pn**	**08 38 43.3**	**-0.7**
ALCT	**Alcott Element**	**0.40**	**26**		**Pb**	**08 38 42.7**	**+0.2**
RVC	**Mount Rainier-**	**0.41**	**147**		**Pb**	**08 38 42.2**	**-0.6**
GMW	**Gold Mountain**	**0.42**	**308**		**Pb**	**08 38 42.3**	**-0.6**
GMW					**Sb**	**08 38 49.1**	**+0.2**
FINN	**Finn Hill Juni**	**0.43**	**6**		**Pn**	**08 38 43.9**	**-0.7**
GNW	**Green Mountain**	**0.45**	**308**		**Pb**	**08 38 42.6**	**-0.8**
GNW					**Sb**	**08 38 49.4**	**-0.3**
SCCW	**Shoreline CC**	**0.46**	**355**		**Pn**	**08 38 44.2**	**-0.8**
SCCW					**Sn**	**08 38 52.7**	**+0.4**
BRKS	**Brookside Elem**	**0.47**	**1**		**Pb**	**08 38 44.1**	**+0.5**
EARN	**East Ridge Ele**	**0.48**	**21**		**Pb**	**08 38 44.1**	**+0.2**
LEOT	**Leota Junior H**	**0.49**	**15**		**Pb**	**08 38 44.3**	**+0.2**
EGRN	**Evergreen Coll**	**0.51**	**245**		**Pb**	**08 38 44.1**	**-0.2**
OBSR	**Observation Ro**	**0.51**	**140**		**Pb**	**08 38 43.9**	**-0.7**
KINR	**Kitsap County**	**0.52**	**333**		**Pb**	**08 38 44.6**	**+0.2**
LYNC	**Lynnwood City**	**0.54**	**0**		**Pb**	**08 38 44.9**	**+0.1**
FMW	**Mount Fremont**	**0.56**	**130**		**Pb**	**08 38 44.5**	**-0.8**
REMR	**Mount Rainier-**	**0.57**	**146**		**Pb**	**08 38 44.5**	**-0.9**
EVGW	**Everett Gatewa**	**0.57**	**10**		**Pb**	**08 38 45.4**	**-0.1**
RCS	**Mount Rainier-**	**0.57**	**137**		**Pb**	**08 38 44.7**	**-0.9**
C05A	**Tolt Reservoir**	**0.58**	**45**		**Pb**	**08 38 44.7**	**-0.9**
TTW	**Tolt Reservoir**	**0.58**	**45**		**Pb**	**08 38 44.7**	**-0.9**
TTW					**Sb**	**08 38 52.6**	**-0.8**
RCM	**Mount Rainier-**	**0.60**	**139**		**Pb**	**08 38 45.2**	**-0.9**
RCM					**Sb**	**08 38 53.2**	**-1.1**
PANH	**Panhandle Gap,**	**0.62**	**134**		**Pb**	**08 38 45.5**	**-0.9**
C04A	**Brinnon**	**0.62**	**313**		**Pb**	**08 38 45.6**	**-0.7**
C04A					**Sb**	**08 38 54.6**	**0.0**
HDW	**Hoodsport**	**0.62**	**305**		**Pb**	**08 38 45.7**	**-0.7**
HTW	**Haystack Looko**	**0.63**	**35**		**Pb**	**08 38 45.4**	**-1.0**
BEVT	**Boeing Everett**	**0.63**	**2**		**Pb**	**08 38 46.5**	**+0.2**
BEVT					**Sn**	**08 38 56.5**	**0.0**
LON	**Longmire**	**0.64**	**148**		**Pb**	**08 38 45.5**	**-1.0**
LON					**Sb**	**08 38 53.8**	**-1.2**
CPW	**Capitol Peak**	**0.65**	**241**		**Pb**	**08 38 46.4**	**-0.4**
CPW					**Sb**	**08 38 55.9**	**+0.3**
B013	**Quilcene**	**0.67**	**322**		**Pb**	**08 38 46.2**	**-0.8**
B013					**Sb**	**08 38 55.6**	**-0.2**
B013	**Quilcene**	**0.67**	**322**		**Pb**	**08 38 46.2**	**-0.8**
SMW	**South Mountain**	**0.71**	**273**		**Pn**	**08 38 48.0**	**-0.4**
BLN	**Blyn Mountain**	**0.85**	**328**		**Pb**	**08 38 49.2**	**-0.9**
B017	**Montesano**	**0.91**	**251**		**Pb**	**08 38 51.0**	**0.0**
SQM	**Sequim**	**0.93**	**327**		**Pn**	**08 38 50.9**	**-0.5**
TDL	**Tradedollar La**	**0.94**	**176**		**Pn**	**08 38 50.8**	**-0.9**
ERK	**Elk Rock**	**0.99**	**182**		**Pn**	**08 38 51.3**	**-1.0**
WISH	**Wishkah**	**1.02**	**261**		**Pb**	**08 38 53.1**	**+0.3**
JRO	**Jston Ridge Ob**	**1.02**	**177**		**Pn**	**08 38 51.9**	**-0.8**
SVOH	**Skagit Valley**	**1.02**	**347**		**Pn**	**08 38 52.2**	**-0.5**
BMW	**Boistfort Moun**	**1.03**	**218**		**Pn**	**08 38 52.5**	**-0.5**
SOSW	**Source of Smit**	**1.05**	**174**		**Pn**	**08 38 52.7**	**-0.5**
STD	**Studebaker Rid**	**1.05**	**177**		**Pn**	**08 38 52.6**	**-0.6**
NLWA	**Neilton Lookou**	**1.07**	**276**	Pn	**Pn**	**08 38 53.5**	**+0.1**
NLWA				IAML		08 39 11.7	
	comp=N,206nm,0.4s						
NLWA				IAML		08 39 12.2	
	comp=N,192nm,0.7s						
BOLM	**Sugar Bowl**	**1.08**	**175**		**Pn**	**08 38 53.6**	**-0.1**
VALT	**Mount Saint He**	**1.08**	**176**		**Pn**	**08 38 53.4**	**-0.3**
SEPW	**September Lobe**	**1.09**	**176**		**Pn**	**08 38 53.7**	**-0.1**
FL2	**Flat Top 2**	**1.10**	**182**		**Pn**	**08 38 53.2**	**-0.6**
ESD	**East Dome**	**1.10**	**175**		**Pb**	**08 38 54.1**	**-0.3**
SHW	**Mount Saint He**	**1.10**	**178**		**Pn**	**08 38 53.6**	**-0.3**
LTY	**Liberty**	**1.11**	**91**		**Pn**	**08 38 53.8**	**-0.1**
WRW	**Wenatchee Ridg**	**1.11**	**59**		**Pn**	**08 38 54.0**	**-0.1**
B04A	**Port Angeles**	**1.12**	**314**		**Pn**	**08 38 53.8**	**-0.2**
B04A				IAML		08 39 10.0	
	comp=E,138nm,0.7s						
B04A	**Port Angeles**	**1.12**	**314**		**Pn**	**08 38 53.8**	**-0.2**
HSR	**South Ridge**	**1.12**	**176**		**Pb**	**08 38 54.5**	**-0.3**
B203	**Quarry, Mount**	**1.12**	**181**		**Pn**	**08 38 53.5**	**-0.5**
B019	**Raymond**	**1.12**	**236**		**Pb**	**08 38 54.5**	**-0.2**
CMW	**Cultus Mountai**	**1.14**	**6**		**Pn**	**08 38 54.3**	**-0.1**
GPW	**Glacier Peak**	**1.14**	**43**		**Pn**	**08 38 54.2**	**-0.3**
E03A	**Lebam**	**1.14**	**230**		**Pn**	**08 38 53.6**	**-0.6**
E03A				IAML		08 39 16.2	
	comp=N,310nm,0.4s						
NAC	**Naches**	**1.15**	**118**		**Pb**	**08 38 54.9**	**-0.3**
TBM	**Table Mountain**	**1.17**	**95**		**Pb**	**08 38 55.3**	**-0.2**
RVW	**Rose Valley**	**1.18**	**195**		**Pn**	**08 38 54.9**	**0.0**
CDFW	**Cedar Flats**	**1.19**	**171**		**Pn**	**08 38 55.0**	**0.0**
EBB	**Ellensburg**	**1.24**	**107**		**Pb**	**08 38 56.7**	**-0.1**
MTMW	**Mount Mitchell**	**1.27**	**177**		**Pn**	**08 38 56.4**	**+0.2**
RPW	**Rockport**	**1.27**	**24**		**Pn**	**08 38 56.5**	**+0.4**
F04D	**Rainier, OR**	**1.30**	**202**		**Pb**	**08 38 57.1**	**-0.7**
F04D	**Rainier, OR**	**1.30**	**202**	P	**Pb**	**08 38 57.0**	**-0.7**
	baz=22,SNR=15						
F04D				S	**Sb**	**08 39 13.4**	**-0.7**
	baz=22						
VGZ	**Gonzales**	**1.32**	**329**		**Pn**	**08 38 56.1**	**-0.6**
B06A	**Marblemount**	**1.34**	**24**		**Pn**	**08 38 56.8**	**-0.3**
F04A	**Amboy**	**1.36**	**184**		**Pn**	**08 38 57.4**	**0.0**
F04A				IAML		08 39 20.5	
	comp=N,189nm,0.4s						
ETW	**Entiat**	**1.37**	**76**		**Pb**	**08 38 59.6**	**+0.5**
OBC	**Olympics--Boni**	**1.41**	**302**		**Pb**	**08 39 00.3**	**+0.6**
MCW	**Mount Constitu**	**1.44**	**346**		**Pn**	**08 38 58.9**	**+0.5**
P403	**Sandy Floe Qua**	**1.46**	**302**		**Pb**	**08 39 01.1**	**+0.6**
MBW	**Mount Baker**	**1.52**	**10**		**Pb**	**08 39 00.7**	**-0.9**
NLW	**Nelson Butte**	**1.54**	**59**		**Pb**	**08 39 01.4**	**-0.5**
B011	**North Sa

0.7nm,0.5s,baz=92,slow=6.9,SNR=24
0.7nm,0.5s

YBH Yreka Blue Hor 78.39 39 P **P** **08 50 50.2 +0.1**
1.2nm,0.8s,baz=186,slow=18,SNR=4.9
1.2nm,0.8s

NVAR Mina Array Bea 79.35 44 P **P** **08 50 55.6 +0.2**
0.9nm,0.8s,baz=230,slow=6.9,SNR=5.9
0.9nm,0.8s

SEY Seymchan 83.13 347 P **P** **08 51 14.7 +0.7**
1.3nm,0.6s,baz=170,slow=18,SNR=4.1
1.3nm,0.6s

ILAR Eielson Array 85.45 13 P **P** **08 51 24.8 -0.5**
0.4nm,0.4s,baz=224,slow=5.3,SNR=9.9
0.4nm,0.4s

TXAR Lajitas Array 86.09 58 P **P** **08 51 29.9 +0.6**
0.7nm,0.7s,baz=216,slow=6.2,SNR=11
0.7nm,0.7s

PDAR Pinedale Array 87.27 44 P **P** **08 51 34.4 -0.4**
0.7nm,0.6s,baz=226,slow=2.4,SNR=4.6
0.7nm,0.6s

INK Inuvik 91.47 15 P **P** **08 51 52.8 -0.5**
1.6nm,1.0s,baz=225,slow=5.7,SNR=3.7
1.6nm,1.0s

ARCES ARCESS Array B 125.69 350 PKP **PKPdf** **08 57 43.8 -0.9**
0.6nm,0.8s,baz=356,slow=1.2,SNR=1.5

GERES GERESS Array B 146.95 345 PKPbc **PKPbc** **08 58 27.1 -0.1**
0.7nm,0.5s,baz=33,slow=3.8,SNR=6.2

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*AEIC **24** 08:42:36±2.0, 51.°05N±0.°05×179.°41E±0.°04, h21km±6km, ML3.5,mb3.7/8(NEIC), Error ellipse: s-maj=7.5km s-min=3.1km az=170.0*

*NEIC **24** 08:42:39.1±1.5, 51.°21N±0.°08×179.°42E±0.°04, h52km±8km, Error ellipse: s-maj=12.6km s-min=1.7km az=193.0*

*IDC **24** 08:42:40.9±3.4, 51.°45N×179.°64E, h58km±25km, mb3.5/11, mbtmp3.8/13, ML4.2/2, MS2.8/2, Error ellipse: s-maj=40.7km s-min=12.7km az=177.0*

ISC 24 08:42:37.1±1.4, 51.°13N±0.°09×179.°47E±0.°03, h33km±4km, n55, σ1s69/56, mb3.8/11, Rat Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AMKA	**Amchitka**	**0.27**	**338**		**Pb**	**08 42 44.0**	**-0.5**
AMKA					**Sb**	**08 42 50.5**	**+0.9**
CESW	**Semis' Southwe**	**0.78**	**4**		**Pn**	**08 42 52.7**	**+0.9**
CERAA	**Semis' Rag'd T**	**0.79**	**10**		**Pn**	**08 42 52.9**	**+0.9**
CERB	**Semis' Cerberu**	**0.81**	**7**		**Pn**	**08 42 53.0**	**+0.8**
CERB					**Sb**	**08 43 06.8**	**+3.2**
CEAP	**Semis' Anvil P**	**0.88**	**4**		**Pn**	**08 42 54.3**	**+1.2**
LSSE	**Little Sitkin**	**0.98**	**326**		**Pn**	**08 42 55.1**	**+0.6**
LSPA	**Little Sitkin**	**1.00**	**326**		**Pn**	**08 42 55.4**	**+0.5**
LSPA					**Sb**	**08 43 10.8**	**+1.9**
LSSA	**Little Sitkin**	**1.02**	**325**		**Pn**	**08 42 55.3**	**+0.2**
LSNW	**Little Sitkin**	**1.03**	**325**		**Pn**	**08 42 55.4**	**+0.1**
GASW	**Gareloi Southw**	**1.24**	**57**		**Sb**	**08 43 16.3**	**+0.7**
GALAA	**Gareloi Lava P**	**1.27**	**59**		**Pn**	**08 42 59.8**	**+1.3**
GALAA					**Sb**	**08 43 17.9**	**+1.3**
GANE	**Gareloi Northe**	**1.30**	**57**		**Pn**	**08 43 00.2**	**+1.3**
TASE	**Tanaga Southea**	**1.71**	**65**		**Pn**	**08 43 06.3**	**+1.6**
TAFP	**Tanaga Falls P**	**1.77**	**63**		**Pn**	**08 43 07.1**	**+1.6**
TAFP					**Sb**	**08 43 31.8**	**+1.0**
TAPA	**Tanaga Point A**	**1.84**	**67**		**Pn**	**08 43 08.2**	**+1.8**
KIMD	**Kanaga Island**	**2.16**	**72**		**Pn**	**08 43 12.8**	**+2.0**
KIKV	**Kanaga Island**	**2.23**	**69**		**Pn**	**08 43 13.6**	**+1.9**
KIWB	**Kanaga Island**	**2.24**	**70**		**Pn**	**08 43 13.8**	**+2.0**
KINC	**Kanaga Island**	**2.27**	**68**		**Pn**	**08 43 14.3**	**+2.0**
GSCK	**Great Sitkin C**	**2.87**	**70**		**Pn**	**08 43 22.5**	**+2.0**
GSTD	**Great Sitkin T**	**2.89**	**70**		**Pn**	**08 43 22.4**	**+1.6**
GSMY	**Great Sitkin M**	**2.94**	**70**		**Pn**	**08 43 23.0**	**+1.6**
SHEM	**Shemya Is, Ala**	**3.69**	**298**	P	**Pn**	**08 43 34.6**	**+2.9**
	17nm,0.3s,baz=85,slow=4.5,SNR=19						
SHEM				S	**Sn**	**08 44 18.0**	**+4.0**
	22nm,0.6s,baz=110,slow=13,SNR=0.9						
SHEM				LR	LR	08 45 06.8	
	comp=Z,124nm,18.6s,baz=144,slow=40 57nm,0.4s						
SMY	**Shemya**	**3.69**	**298**		**Pn**	**08 43 32.4**	**+0.7**
ATKA	**Atka Island**	**4.09**	**72**		**Pn**	**08 43 38.9**	**+1.7**
KOKL	**Mount Kliuchef**	**4.12**	**71**		**Pn**	**08 43 39.9**	**+2.3**
PETK	**Petropavlovsk-**	**13.52**	**287**	P	**P**	**08 45 53.3**	**-1.8**
	1.6nm,0.5s,baz=84,slow=14,SNR=5.9						
PETK				LR	LR	08 52 05.0	
	comp=Z,38nm,18.4s,baz=74,slow=42						
SII	**Sitkinak Islan**	**16.41**	**60**	P	**Pn**	**08 46 25.3**	**+0.6**
N18K	**Kilae Creek**	**16.70**	**46**	P	**Pn**	**08 46 29.7**	**+1.4**
O18K	**Koktuh Hills**	**16.70**	**49**	P	**P**	**08 46 31.2**	**+0.8**
O18K				IAmb	IAmb	08 46 39.2	
	comp=Z,6.4nm,1.0s						
SVW2	**Sparrevohn**	**17.01**	**44**	P	**P**	**08 46 35.4**	**+1.6**
SVW2				IAmb	IAmb	08 46 45.4	
	comp=Z,6.7nm,1.1s						
KDAK	**Kodiak Island**	**17.47**	**57**	P	**Pn**	**08 46 35.9**	**-2.0**
	comp=Z,0.8nm,0.3s,baz=284,slow=11,SNR=22						
KDAK				S	**Sn**	**08 49 45.3**	**-5.8**
	comp=Z,2.1nm,0.8s,baz=278,slow=16,SNR=1.2 comp=Z,1.8nm,0.3s						
L19K	**White Mountain**	**17.80**	**42**	P	**Pn**	**08 46 42.6**	**+0.7**
L19K				IAmb	IAmb	08 47 20.6	
	comp=Z,8.8nm,1.4s						
CNPM	**China Poot**	**18.53**	**52**	P	**P**	**08 46 51.1**	**+0.5**
J20K	**Nowinta River**	**19.04**	**37**	P	**Pn**	**08 46 57.7**	**+0.7**
KTH	**Kantishna Hill**	**20.02**	**40**	P	**Pn**	**08 47 08.4**	**-0.3**
KTH				IAmb	IAmb	08 47 13.2	
	comp=Z,6.2nm,1.0s						
IMAR	**Indian Mountai**	**20.17**	**32**	P	**P**	**08 47 08.5**	**+0.2**
ILAR	**Eielson Array**	**22.12**	**39**	P	**P**	**08 47 27.9**	**-1.5**
	comp=Z,0.4nm,0.7s,baz=248,slow=9.6,SNR=6.3 comp=Z,0.4nm,0.7s						
KLR	**Kul'dur**	**30.20**	**285**	P	**P**	**08 48 44.8**	**+0.7**
	comp=Z,3.3nm,0.5s,baz=69,slow=9.0,SNR=16 comp=Z,3.3nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**32.86**	**202**	T	T	09 24 12.0	
	baz=11,slow=76,SNR=4.1						
H11N3	**WAKE ISLAND Hy**	**32.87**	**202**	T	T	09 24 20.4	
	baz=11,slow=76,SNR=4.1						
H11N1	**WAKE ISLAND Hy**	**32.88**	**202**	T	T	09 24 16.5	
	baz=11,slow=76,SNR=5.0						
YKA	**Yellowknife Ar**	**36.19**	**46**	P	**P**	**08 49 35.2**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=281,slow=8.0,SNR=4.2 comp=Z,0.5nm,0.5s						
SONM	**Songino Array**	**45.78**	**296**	P	**P**	**08 50 55.7**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=60,slow=8.5,SNR=2.2 comp=Z,0.4nm,0.6s						
PDAR	**Pinedale Array**	**47.42**	**71**	P	**P**	**08 51 08.2**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=308,slow=3.3,SNR=15 comp=Z,1.1nm,0.6s						
SPITS	**Spitsbergen Ar**	**50.55**	**356**	P	**P**	**08 51 30.3**	**-1.2**
	comp=Z,5.1nm,0.5s,baz=46,slow=8.3,SNR=23 comp=Z,5.1nm,0.5s						
ARCES	**ARCESS Array B**	**58.15**	**350**	P	**P**	**08 52 26.0**	**-0.9**
	comp=Z,1.4nm,1.0s,baz=24,slow=8.9,SNR=4.9 comp=Z,1.4nm,1.0s						
MKAR	**Makanchi Array**	**59.33**	**308**	P	**P**	**08 52 35.3**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=49,slow=6.7,SNR=13 comp=Z,0.5nm,0.3s						
TXAR	**Lajitas Array**	**59.77**	**80**	P	**P**	**08 52 39.3**	**+0.4**
	comp=Z,0.1nm,0.4s,baz=307,slow=5.3,SNR=2.6 comp=Z,0.1nm,0.4s						
FINES	**FINESS Array B**	**65.78**	**346**	P	**P**	**08 53 17.1**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=29,slow=3.2,SNR=3.6 comp=Z,0.4nm,0.6s						
NB2	**NORSAR Subarra**	**67.79**	**354**	P	**P**	**08 53 30.6**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=8.6,slow=6.5						
NOA	**NORSAR Array B**	**67.79**	**354**	P	**P**	**08 53 30.4**	**-0.7**
	comp=Z,0.8nm,0.8s,baz=8.4,slow=6.4,SNR=4.6 comp=Z,0.8nm,0.8s						
H03N2	**Juan Fernandez**	**122.13**	**105**	T	T	11 15 44.2	
	baz=315,slow=78						
H03N1	**Juan Fernandez**	**122.14**	**105**	T	T	11 15 46.0	
	baz=315,slow=78						
H03N3	**Juan Fernandez**	**122.14**	**105**	T	T	11 15 44.3	
	baz=315,slow=78						

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*IDC **24** 08:48:50.2±0.9, 36.°34N×144.°24E, h0km, mb3.7/6, mbtmp3.8/10, ML3.1/4, Error ellipse: s-maj=25.0km s-min=21.7km az=119.0*

*JMA **24** 08:48:54.9±0.3, 36.°6N±0.°6×144.°4E±.°, h57km, MV3.9/29, FAR E OFF CENTRAL HONSHU*

*NIED **24** 08:48:54.9, 36.°63N×143.°72E, h57km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-2.95; $M_{\theta\theta}$1.33; $M_{\phi\phi}$ 1.62; $M_{r\theta}$1.46; $M_{\theta\phi}$1.73; $M_{\phi r}$1.03; Fault plane solution: $M_0$3.56000×10^{14} NP1:ϕ_s36.00000°, δ31.00000°, λ-102.00000°. NP2:ϕ_s229.00000°, δ60.00000°, λ-83.00000°.*

ISC 24 08:48:56.7±1.9, 36.°63N±0.°07×143.°67E±0.°09, h45km±22km, n33, σ1s34/27, mb3.7/6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**2.35**	**282**	P	Pn	08 49 32.7	-0.1
ONAJ				S	**Sn**	**08 50 00.3**	**-0.2**
JFK	**Kawauchi**	**2.35**	**289**	P	Pn	08 49 32.8	-0.1
JFK				S	**Sn**	**08 50 00.7**	**+0.1**
JIKH	**Ishinomakikobu**	**2.43**	**314**	P	Pn	08 49 33.3	-0.5
JIKH				*eS*	**Sn**	**08 50 01.4**	**-0.9**
CHOJ	**Chosi**	**2.46**	**249**	P	**Pn**	**08 49 34.2**	**0.0**
JMST	**Minamisoumatoc**	**2.48**	**297**	P	Pn	08 49 34.3	-0.2
JMST				*eS*	**Sn**	**08 50 03.8**	**+0.3**
JFT	**Otama**	**2.81**	**289**	P	**Pn**	**08 49 39.9**	**+0.8**
JFT				S	**Sn**	**08 50 12.9**	**+1.2**
BSO1	**Boso 1**	**2.95**	**229**	P	Pn	08 49 39.6	-0.9
JMK	**Ichinoseki**	**3.02**	**321**	P	**Pn**	**08 49 41.7**	**-0.3**
JAG	**Ashikaga**	**3.40**	**268**	P	**Pn**	**08 49 47.7**	**+0.5**
JAG				S	**Sn**	**08 50 25.7**	**-0.6**
JOM	**Ohasama**	**3.40**	**327**	P	**Pn**	**08 49 46.8**	**-0.4**
JOM				*eS*	**Sn**	**08 50 25.5**	**-0.8**
JRY	**Ryogami san**	**3.90**	**262**	P	Pn	08 49 54.0	-0.1
JRY				S	**Sn**	**08 50 38.3**	**-0.3**
JOD2	**Odawara 2**	**3.96**	**251**	P	**Pn**	**08 49 55.1**	**+0.2**
JOD2				S	**Sn**	**08 50 39.5**	**-0.6**
MJAR	**Matsushiro Arr**	**4.39**	**270**	Pn	**Pn**	**08 50 02.1**	**+1.3**
	0.6nm,0.3s,baz=113,slow=9.2,SNR=25						
MJAR				Sn	**Sn**	**08 50 52.3**	**+1.5**
	0.3nm,0.3s,baz=349,slow=15,SNR=1.7 3.4nm,0.4s						
JHJ	**Hachijo jima 2**	**4.74**	**223**	Pn	Pn	08 50 03.8	-1.8
	5.7nm,0.3s,baz=67,slow=18,SNR=7.6						
JHJ				Sn	Sn	08 50 54.4	-4.9
	29nm,0.3s,baz=265,slow=22,SNR=6.8 18nm,0.2s						
JOT	**Ohata**	**5.17**	**338**	P	**Pn**	**08 50 11.0**	**-0.4**
JOT				*eS*	**Sn**	**08 51 06.6**	**-3.1**
JCH	**Churui**	**5.98**	**358**	P	Pn	08 50 19.5	-3.1
JCH				S	Sn	08 51 22.3	-7.5
NEM2	**Nemuro 2**	**6.91**	**13**	P	Pn	08 50 30.3	-5.1
JHR	**Hokuryu**	**7.26**	**349**	P	**Pn**	**08 50 39.6**	**-0.5**
JTKR	**Abashiri--Toko**	**7.33**	**1**	P	Pn	08 50 38.0	-3.1
JTKR				S	Sn	08 51 55.9	-7.1
USRK	**Ussuriysk Ar.**	**11.67**	**314**	Pn	**Pn**	**08 51 43.8**	**+3.3**
	0.4nm,0.3s,baz=120,slow=13,SNR=2.8 2.6nm,0.6s						
KLR	**Kul'dur**	**15.30**	**329**	Pn	**P**	**08 52 34.6**	**+1.1**
	0.1nm,0.3s,baz=126,slow=14,SNR=4.9 1.6nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**26.40**	**123**	T	T	09 21 32.5	
	baz=316,slow=75,SNR=8.2						
H11N1	**WAKE ISLAND Hy**	**26.41**	**123**	T	T	09 21 30.9	
	baz=316,slow=75,SNR=5.0						
H11N3	**WAKE ISLAND Hy**	**26.42**	**123**	T	T	09 21 36.2	
	baz=316,slow=75,SNR=5.8						
H11S1	**WAKE ISLAND Hy**	**27.14**	**126**	T	T	09 22 31.9	
	baz=317						
H11S3	**WAKE ISLAND Hy**	**27.14**	**126**	T	T	09 22 45.6	
	baz=317						
H11S2	**WAKE ISLAND Hy**	**27.15**	**126**	T	T	09 22 30.7	
	baz=317						
SONM	**Songino Array**	**29.51**	**304**	P	P	08 55 03.1	+6.4
	0.6nm,0.6s,baz=106,slow=8.8,SNR=3.9 0.6nm,0.6s						
ILAR	**Eielson Array**	**48.87**	**32**	P	**P**	**08 57 36.8**	**-0.6**
	0.2nm,0.6s,baz=252,slow=2.7,SNR=2.0 0.2nm,0.6s						
WRA	**Warramunga Arr**	**56.95**	**190**	P	**P**	**08 58 35.6**	**-1.8**
	0.5nm,0.5s,baz=12,slow=7.5,SNR=11 0.5nm,0.5s						
STKA	**Stephens Creek**	**68.18**	**182**	P	**P**	**08 59 51.4**	**-0.7**
	2.6nm,0.7s,baz=67,slow=3.9,SNR=3.8 2.6nm,0.7s						
NVAR	**Mina Array Bea**	**73.77**	**54**	P	**P**	**09 00 26.6**	**+0.1**
	0.4nm,0.6s,baz=289,slow=6.5,SNR=4.1 0.4nm,0.6s						
TXAR	**Lajitas Array**	**88.92**	**54**	P	**P**	**09 01 44.1**	**-2.6**
	0.4nm,0.5s,baz=310,slow=3.1,SNR=7.2 0.4nm,0.5s						

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*IDC **24** 09:06:20.1±3.5, 53.°65N×90.°76E, h0km, mbtmp3.0/3, ML3.1/2, Error ellipse: s-maj=31.7km s-min=24.3km az=66.0*

*NNC **24** 09:06:25.7±5.5, 53.°47N×90.°32E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=39.8km s-min=26.6km az=66.0, Suspected Mining explosion.*

ISC 24 09:06:23.0±4.1, 53.°6N±0.°1×90.°4E±0.°2, h0km, n10, σ0s98/13, 6C-7D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**3.35**	**278**	*i*		09 28 05.0	
	0.1nm,1.1s,baz=90,slow=315,SNR=8.2						
ZAA0	**Zalesovo Array**	**3.35**	**278**	⇓Pg	**Pg**	**09 07 27.0**	**-0.1**
	1.0nm,0.6s						
ZAA0				⇑Lg	Lg	09 08 13.2	
	4.6nm,0.7s						
ZALV	**Zalesovo Beam**	**3.35**	**278**	Pn	**Pn**	**09 07 16.8**	**+0.3**
	0.6nm,0.3s,baz=93,slow=13,SNR=2.2						
ZALV				Lg	Lg	09 08 12.7	
	1.9nm,0.3s,baz=93,slow=25,SNR=8.9						
KURK	**Kurchatov**	**7.82**	**253**	⇑Pn	**Pn**	**09 08 17.6**	**-0.3**
	2.6nm,0.9s						
KURK				⇓Sn	**Sn**	**09 09 48.0**	**+0.9**
	4.1nm,0.6s						
KURK				⇓Lg	Lg	09 10 33.4	
	13nm,0.8s						
KURBB	**Kurchatov Arra**	**7.91**	**253**	Pn	**Pn**	**09 08 18.6**	**-0.6**
	0.2nm,0.3s,baz=65,slow=15,SNR=10						
KURBB				Sn	**Sn**	**09 09 47.6**	**-1.8**
	0.1nm,0.3s,baz=66,slow=25,SNR=1.8						
KURBB				Lg	Lg	09 10 38.8	
	baz=64,slow=33 0.9nm,0.5s						
KURBB	**Kurchatov Arra**	**7.91**	**253**	⇓Pn	**Pn**	**09 08 19.6**	**+0.4**
	1.7nm,0.4s						
KURBB				⇑Sn	**Sn**	**09 09 50.2**	**+0.9**
	19nm,0.7s						
KURBB				⇓Lg	Lg	09 10 34.3	
	15nm,0.8s						
MK31	**Makanchi Array**	**8.59**	**221**	⇓Pn	**Pn**	**09 08 28.1**	**-0.3**
	0.2nm,0.4s,baz=26,slow=13,SNR=14						
MK31				⇓Sn	**Sn**	**09 10 05.2**	**-0.8**
	0.6nm,0.6s						
MK31				⇑Lg	Lg	09 10 55.1	
	2.2nm,0.8s,baz=30,slow=29						
MKAR	**Makanchi Array**	**8.59**	**221**	Pn	**Pn**	**09 08 28.7**	**+0.2**
	0.3nm,0.3s,baz=36,slow=12,SNR=13						
MKAR				Sn	**Sn**	**09 10 05.7**	**-0.3**
	baz=39,slow=31,SNR=2.6						
MKAR				Lg	Lg	09 10 57.1	
	0.1nm,0.3s,baz=50,slow=25,SNR=2.3 0.4nm,0.3s						
MAKZ	**Makanchi**	**8.70**	**222**	⇑Sn	**Sn**	**09 10 10.5**	**+1.8**
	1.1nm,0.7s						
MAKZ				⇑Lg	Lg	09 10 56.5	
	3.0nm,1.1s						
SONM	**Songino Array**	**11.64**	**113**	Lg	Lg	09 12 19.2	
	0.2nm,0.3s,baz=301,slow=29,SNR=5.4						

IDC 24 09:11:26.8±4.5, 53.°88N×88.°36E, h0km, mbtmp2.9/2, ML2.7/2, Error ellipse: s-maj=45.5km s-min=21.9km az=40.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**2.09**	**273**	*i*		09 23 53.4	
	baz=91,slow=320,SNR=2.2						
ZALV	**Zalesovo Beam**	**2.09**	**273**	Pg	Pb	09 12 04.5	-1.1
	1.8nm,0.3s,baz=87,slow=14,SNR=6.6						
ZALV				Lg	Lg	09 12 33.6	
	3.2nm,0.3s,baz=100,slow=28,SNR=7.2						
KURBB	**Kurchatov Arra**	**6.86**	**246**	Pn	Pn	09 13 09.0	+0.5
	0.2nm,0.3s,baz=60,slow=14,SNR=5.9 0.7nm,0.3s						
MKAR	**Makanchi Array**	**8.08**	**211**	Pn	Pn	09 13 26.5	+1.0
	0.1nm,0.3s,baz=28,slow=13,SNR=1.4 0.1nm,0.3s						

IDC 24 09:11:53.6±4.3, 54.°42N×86.°83E, h0km, mbtmp3.2/2, ML2.8/2, Error ellipse: s-maj=44.5km s-min=22.4km az=59.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.27**	**249**	*i*		09 19 57.4	
	0.1nm,1.2s,baz=67,slow=312,SNR=5.8						
ZALV	**Zalesovo Beam**	**1.27**	**249**	Pg	Pg	09 12 16.9	-1.1
	2.3nm,0.3s,baz=64,slow=17,SNR=6.4						
KURBB	**Kurchatov Arra**	**6.33**	**236**	Pn	Pn	09 13 29.4	+1.2
	0.2nm,0.3s,baz=54,slow=14,SNR=9.1						
KURBB				Lg	Lg	09 15 13.3	
	0.1nm,0.3s,baz=61,slow=13,SNR=2.7 2.2nm,0.5s						
MKAR	**Makanchi Array**	**8.16**	**203**	Pn	Pn	09 13 53.9	+0.6
	0.2nm,0.3s,baz=24,slow=14,SNR=7.4 0.2nm,0.2s						

IDC 24 09:13:16.6±3.2, 54.°27N×87.°44E, h0km, mbtmp2.8/2, ML2.6/2, Error ellipse: s-maj=27.7km s-min=20.3km az=48.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.58**	**259**	*i*		09 22 32.9	
	baz=80,slow=319,SNR=1.7						
ZALV	**Zalesovo Beam**	**1.58**	**259**	Pn	Pn	09 13 44.8	-1.1
	2.2nm,0.3s,baz=78,slow=13,SNR=5.8						
ZALV				Lg	Lg	09 14 06.6	
	3.2nm,0.3s,baz=80,slow=40,SNR=4.3						
KURBB	**Kurchatov Arra**	**6.56**	**240**	Pn	Pn	09 14 54.6	+0.3
	0.1nm,0.3s,baz=54,slow=14,SNR=2.7						
KURBB				Lg	Lg	09 16 45.8	
	baz=58,slow=32,SNR=2.5 0.3nm,0.3s						
MKAR	**Makanchi Array**	**8.17**	**206**	Pn	Pn	09 15 17.9	+1.5
	0.1nm,0.3s,baz=26,slow=13,SNR=4.3						
MKAR				Lg	Lg	09 17 39.4	
	baz=25,slow=12,SNR=2.5 0.2nm,0.3s						

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*ISK **24** 09:16:28.1, 36.°11N×31.°73E, h84km, ML3.3/44*

*DDA **24** 09:16:30.2±0.2, 36.°19N×31.°79E, h65km, ML2.8*

*NIC **24** 09:16:30.6±0.0, 36.°21N×32.°01E, h32km±30km, MI3.4/4*

*GII **24** 09:16:33.6±0.4, 35.°83N×31.°81E, h40km, Mm3.2/3*

*HLW **24** 09:16:34.7, 35.°79N×31.°28E, h21km±18km, Md3.8*

ISC 24 09:16:29.9±1.1, 36.°12N±0.°03×31.78E±0.°02, h71km±9km, n108, σ1s27/158, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAZI	**Gazipasa**	**0.45**	**75**	PG	**Pn**	**09 16 42.5**	**+0.1**
GAZI				SG	**Sn**	**09 16 51.7**	**+0.1**
GAZI	**Gazipasa**	**0.45**	**75**	P	**Pn**	**09 16 42.5**	**+0.1**
GAZI				S	**Sn**	**09 16 51.7**	**+0.1**
GAZI				*i* AML	AML	09 16 52.0	
	comp=E,2μm,0.3s						
GAZI				*i* AML	AML	09 16 52.0	
	comp=N,2μm,0.5s						
KEPZ	**Antalya-Kepez**	**0.79**	**350**	P	**Pn**	**09 16 46.0**	**0.0**
KEPZ				S	**Sn**	**09 16 57.8**	**-0.1**
KEPZ				*i* AML	AML	09 16 58.0	
	comp=E,270nm,0.6s						
KEPZ				*i* AML	AML	09 16 59.0	
	comp=N,285nm,0.2s						
HDMB	**Hadim**	**1.02**	**34**	PG	**Pn**	**09 16 48.7**	**-0.2**
HDMB				SG	**Sn**	**09 17 04.1**	**+1.1**
KEMT	**Kemer-ANTALYA**	**1.10**	**296**	PG	**Pn**	**09 16 48.9**	**-0.7**
ALFC	**Alefka**	**1.17**	**145**	P	**Pn**	**09 16 50.3**	**-0.4**
ALFC				S	**Sn**	**09 17 06.0**	**-0.2**
ALFC				AML	AML	09 17 07.1	
	3.6nm,0.2s						
ALFC				AML	AML	09 17 07.1	
	3.6nm,0.2s						
ALFC				AML	AML	09 17 07.7	
	2.6nm,0.3s						
ALFC				AML	AML	09 17 07.7	
	2.6nm,0.3s						
AKUM	**Antalya-Kumluc**	**1.18**	**280**	P	**Pn**	**09 16 51.1**	**+0.5**
AKUM				*i* AML	AML	09 17 14.0	
	comp=E,152nm,0.4s						
AKUM				*i* AML	AML	09 17 16.0	
	comp=N,170nm,0.6s						
BERE	**Bereket-Mersin**	**1.19**	**79**	PN	**Pn**	**09 16 51.2**	**+0.2**
BERE				SN	**Sn**	**09 17 07.6**	**+0.9**
AKMS	**Akamas**	**1.19**	**157**	P	**Pn**	**09 16 51.2**	**+0.4**
AKMS				S	**Sn**	**09 17 07.1**	**+0.6**
AKMS				AML	AML	09 17 14.5	
	2.9nm,0.4s						
AKMS				AML	AML	09 17 14.5	
	2.9nm,0.4s						
AKMS				AML	AML	09 17 15.2	
	2.3nm,0.4s						
AKMS				AML	AML	09 17 15.2	
	2.3nm,0.4s						
ANTB	**Antalya**	**1.19**	**311**	PN	**Pn**	**09 16 50.2**	**-0.6**
ANTB				SN	**Sn**	**09 17 06.4**	**-0.2**
AKDN	**Akdeniz- Kıbrı**	**1.27**	**130**	PN	**Pn**	**09 16 52.2**	**+0.4**
SEYD	**Seydisehir-KON**	**1.28**	**2**	PN	**Pn**	**09 16 51.9**	**-0.3**
YORU	**Yoruktepe-Mers**	**1.32**	**88**	PN	**Pn**	**09 16 52.7**	**+0.2**
SEDI	**Konya, Seydise**	**1.33**	**359**	P	**Pn**	**09 16 52.9**	**+0.2**
SEDI				S	**Sn**	**09 17 09.5**	**-0.4**
SEDI				*i* AML	AML	09 17 12.0	
	comp=N,197nm,0.5s						
SEDI				*i* AML	AML	09 17 14.0	
	comp=E,128nm,0.5s						
LEF	**Lefka**	**1.35**	**137**	PN	**Pn**	**09 16 52.5**	**-0.4**
LEF	**Lefka**	**1.35**	**137**	P	**Pn**	**09 16 53.1**	**+0.2**
LEF				S	**Sn**	**09 17 09.3**	**-0.8**
OREN	**Orenkoy-Mersin**	**1.36**	**86**	PN	**Pn**	**09 16 53.3**	**+0.3**
TEVE	**Tevekalti-Mers**	**1.38**	**76**	PN	**Pn**	**09 16 53.5**	**+0.1**
AKK1	**Akkuyu-Mersin**	**1.43**	**89**	PN	**Pn**	**09 16 54.1**	**+0.2**
GULN	**MERSIN_Gulnar**	**1.43**	**87**	P	**Pn**	**09 16 54.4**	**+0.5**
GULN				S	**Sn**	**09 17 12.3**	**+0.2**
GULN				*i* AML	AML	09 17 14.0	
	comp=E,85nm,0.5s						
GULN				*

KMER				*i* AML	AML	09 17 27.0						
	comp=N,70nm,0.3s											
CSS	**Mathiatis**	**1.71**	**132**	PN	**Pn**	**09 16 57.8**	**+0.1**					
CSS	**Mathiatis**	**1.71**	**132**	P	**Pn**	**09 16 57.2**	**-0.5**					
CSS				S	**Sn**	**09 17 17.5**	**-1.4**					
SILI	**Silifke-Mersin**	**1.75**	**81**	PN	**Pn**	**09 16 58.5**	**+0.3**					
AKAS	**Kas**	**1.76**	**274**	PN	**Pn**	**09 16 57.6**	**-0.9**					
AKAS	**Kas**	**1.76**	**274**	P	**Pn**	**09 16 58.4**	**-0.1**					
AKAS				S	**Sn**	**09 17 19.3**	**-0.8**					
AKAS				*i* AML	AML	09 17 25.0						
	comp=N,92nm,0.4s											
AKAS				*i* AML	AML	09 17 38.0						
	comp=E,69nm,0.6s											
AKIN	**Akıncılar- Kıb**	**1.76**	**128**	PN	**Pn**	**09 16 58.0**	**-0.4**					
ASGA	**Asgata**	**1.79**	**138**	S	**Sn**	**09 17 20.9**	**+0.2**					
MVOU	**Mavrovouni**	**1.87**	**126**	P	**Pn**	**09 16 59.2**	**-0.6**					
MVOU				S	**Sn**	**09 17 20.9**	**-1.6**					
MVOU				AML	AML	09 17 29.8						
	1.0nm,0.6s											
MVOU				AML	AML	09 17 29.8						
	1.0nm,0.6s											
MVOU				AML	AML	09 17 30.7						
	0.5nm,0.3s											
MVOU				AML	AML	09 17 30.7						
	0.5nm,0.3s											
KONT	**Konya--Tatoy**	**1.88**	**14**	PN	**Pn**	**09 17 00.1**	**+0.1**					
KONT	**Konya--Tatoy**	**1.88**	**14**	P	**Pn**	**09 17 00.3**	**+0.3**					
KIZK	**Mersin**	**1.94**	**79**	PN	**Pn**	**09 17 01.2**	**+0.4**					
KIZK	**Mersin**	**1.94**	**79**	P	**Pn**	**09 17 01.6**	**+0.8**					
KIZK				S	**Sn**	**09 17 24.9**	**+0.6**					
ISP	**Isparta**	**1.97**	**330**	PN	**Pn**	**09 17 01.2**	**-0.1**					
DOGA	**KONYA_Doganhis**	**1.98**	**357**	P	**Pn**	**09 17 01.4**	**0.0**					
DOGA				S	**Sn**	**09 17 24.6**	**-0.8**					
DOGA				*i* AML	AML	09 17 27.0						
	comp=E,71nm,0.6s											
DOGA				*i* AML	AML	09 17 27.0						
	comp=N,77nm,0.4s											
BAGO	**Egridir - ISPA**	**2.03**	**337**	P	**Pn**	**09 17 03.7**	**+1.7**					
BAGO				S	**Sn**	**09 17 26.0**	**-0.4**					
BAGO				*i* AML	AML	09 17 30.0						
	comp=N,49nm,0.4s											
BAGO				*i* AML	AML	09 17 32.0						
	comp=E,74nm,0.4s											
EREN	**Erenkoy**	**2.03**	**106**	PN	**Pn**	**09 17 02.3**	**+0.4**					
EREN	**Erenkoy**	**2.03**	**106**	P	**Pn**	**09 17 02.5**	**+0.6**					
EREN				S	**Sn**	**09 17 27.6**	**+1.2**					
EREN				*i* AML	AML	09 17 31.0						
	comp=N,88nm,0.5s											
EREN				*i* AML	AML	09 17 31.0						
	comp=E,89nm,0.6s											
GOLH	**Golhisar**	**2.10**	**303**	P	**Pn**	**09 17 04.5**	**+1.5**					
GOLH				S	**Sn**	**09 17 31.3**	**+3.1**					
GOLH				*i* AML	AML	09 17 36.0						
	comp=E,99nm,0.4s											
GOLH				*i* AML	AML	09 17 41.0						
	comp=N,106nm,0.4s											
LADK	**Ladik-KONYA**	**2.13**	**13**	PN	**Pn**	**09 17 02.9**	**-0.5**					
CAME	**Cameli-Denizli**	**2.16**	**293**	PN	**Pn**	**09 17 03.2**	**-0.6**					
YVAC	**Isparta, Yalva**	**2.19**	**349**	P	**Pn**	**09 17 04.1**	**0.0**					
YVAC				S	**Sn**	**09 17 29.9**	**-0.5**					
CAEL	**Denizli, Camel**	**2.22**	**298**	P	**Pn**	**09 17 06.6**	**+2.0**					
CAEL				S	**Sn**	**09 17 35.0**	**+4.0**					
CAEL				*i* AML	AML	09 17 42.0						
	comp=N,124nm,0.7s											
CAEL				*i* AML	AML	09 17 44.0						
	comp=E,111nm,0.4s											
FETY	**Fethiye**	**2.23**	**284**	P	**Pn**	**09 17 06.7**	**+2.0**					
FETY				S	**Sn**	**09 17 31.3**	**0.0**					
BASM	**Basmaki-Afyon**	**2.27**	**323**	PN	**Pn**	**09 17 04.9**	**-0.3**					
KERG	**Konya-Eregli**	**2.28**	**55**	P	**Pn**	**09 17 05.6**	**+0.1**					
KERG				*i* AML	AML	09 17 32.0						
	comp=E,94nm,0.4s											
KERG				S	**Sn**	**09 17 32.1**	**-0.6**					
KERG				*i* AML	AML	09 17 33.0						
	comp=N,98nm,0.6s											
YESY	**Yesilyurt**	**2.29**	**43**	PN	**Pn**	**09 17 05.8**	**+0.3**					
MERS	**Mersin**	**2.33**	**71**	PN	**Pn**	**09 17 06.2**	**+0.1**					
APMY	**Acipayam-Deniz**	**2.40**	**305**	PN	**Pn**	**09 17 06.6**	**-0.4**					
KDHN	**Kadinhani**	**2.41**	**6**	P	**Pn**	**09 17 06.3**	**-0.9**					
KDHN				S	**Sn**	**09 17 31.6**	**-4.2**					
SULT	**Sultanhani-AKS**	**2.50**	**33**	PN	**Pn**	**09 17 08.6**	**+0.3**					
KZIL	**AFYON_Kizioren**	**2.50**	**329**	P	**Pn**	**09 17 08.2**	**-0.2**					
KZIL				S	**Sn**	**09 17 37.8**	**-0.1**					
KZIL				*i* AML	AML	09 17 40.0						
	comp=E,33nm,0.7s											
TAVA	**DENIZLI_Tavas**	**2.66**	**301**	P	**Pn**	**09 17 10.8**	**+0.3**					
TAVA				S	**Sn**	**09 17 41.3**	**-0.5**					
TAVA				*i* AML	AML	09 17 51.0						
	comp=E,101nm,0.7s											
TAVA				*i* AML	AML	09 17 52.0						
	comp=N,139nm,0.7s											
GULE	**Gulek**	**2.67**	**63**	P	**Pn**	**09 17 12.4**	**+1.6**					
GULE				S	**Sn**	**09 17 44.6**	**+2.4**					
GULE				*i* AML	AML	09 17 46.0						
	comp=N,104nm,0.7s											
GULE				*i* AML	AML	09 17 46.0						
	comp=E,97nm,0.4s											
KARA	**Karaisali**	**2.87**	**66**	PN	**Pn**	**09 17 14.0**	**+0.7**					
PASA	**Karahalli, USA**	**2.88**	**321**	P	**Pn**	**09 17 13.2**	**-0.3**					
PASA				S	**Sn**	**09 17 46.3**	**-0.8**					
PASA				*i* AML	AML	09 17 47.0						
	comp=N,27nm,0.7s											
PASA				*i* AML	AML	09 17 52.0						
	comp=E,27nm,0.4s											
TURN	**Turunc**	**2.92**	**284**	P	**Pn**	**09 17 13.6**	**-0.4**					
TURN				S	**Sn**	**09 17 46.1**	**-1.9**					
TURN				*i* AML	AML	09 17 49.0						
	comp=N,30nm,0.5s											
TURN				*i* AML	AML	09 17 51.0						
	comp=E,22nm,0.3s											
CMRD	**Camardi-Nigde**	**3.00**	**58**	PN	**Pn**	**09 17 15.9**	**+0.7**					
OSC2	**CSNet OBS 4**	**3.07**	**172**	S	**Sn**	**09 17 54.7**	**+3.2**					
AKO	**Adana**	**3.23**	**64**	P	**Pn**	**09 17 19.5**	**+1.3**					
AKO				S	**Sn**	**09 17 55.9**	**+0.3**					
AKO				*i* AML	AML	09 17 58.0						
	comp=N,28nm,0.3s											
AKO				*i* AML	AML	09 18 01.0						
	comp=E,14nm,0.8s											
YAYL	**Yayladag**	**3.51**	**90**	PN	**Pn**	**09 17 22.7**	**+0.6**					
KOZT	**Kozan**	**3.52**	**66**	PN	**Pn**	**09 17 22.1**	**-0.1**					
TAHT	**Tahtakopru-Hat**	**3.57**	**85**	PN	**Pn**	**09 17 23.6**	**+0.8**					
HNTI	**Hanita**	**4.13**	**136**	Pn	**Pn**	**09 17 31.4**	**+1.0**					
HNTI				Sn	**Sn**	**09 18 15.9**	**-1.6**					
MMA0B	**Mount Meron ar**	**4.31**	**135**	Pn	**Pn**	**09 17 33.9**	**+0.9**					
MMA0B				Sn	**Sn**	**09 18 21.3**	**-0.7**					
GEM	**Giv'at Ha'Em**	**4.32**	**131**	Pn	**Pn**	**09 17 34.6**	**+1.5**					
GEM				Sn	**Sn**	**09 18 21.4**	**-0.8**					
NATI	**Neve Ativ**	**4.33**	**130**	Pn	**Pn**	**09 17 35.1**	**+1.9**					
NATI				Sn	**Sn**	**09 18 21.5**	**-0.9**					
OFRI	**`Ofer**	**4.38**	**142**	Pn	**Pn**	**09 17 35.9**	**+1.9**					
OFRI				Sn	**Sn**	**09 18 22.0**	**-1.8**					
MMLI	**Mount Malkishu**	**4.75**	**140**	Pn	**Pn**	**09 17 42.8**	**+3.8**					
MMLI				Sn	**Sn**	**09 18 31.4**	**-1.5**					
HMDT	**Nahal Hemdat**	**4.95**	**140**	Pn	**Pn**	**09 17 42.9**	**+1.2**					
HMDT				Sn	**Sn**	**09 18 37.0**	**-0.7**					
DSI	**Dead Sea**	**5.44**	**146**	Pn	**Pn**	**09 17 49.8**	**+1.4**					
DSI				Sn	**Sn**	**09 18 48.4**	**-1.2**					
YTIR	**Yattir**	**5.50**	**149**	Pn	**Pn**	**09 17 51.6**	**+2.3**					
YTIR				Sn	**Sn**	**09 18 50.1**	**-1.1**					
KZIT	**Kziot**	**5.64**	**156**	Pn	**Pn**	**09 17 51.1**	**-0.1**					
KZIT				Sn	**Sn**	**09 18 52.6**	**-2.0**					
HHAG	**Hagoal**	**6.16**	**177**	P	**Pn**	**09 18 00.9**	**+2.6**					
	baz=173											
KOT	**Kottamia**	**6.18**	**180**	P	**Pn**	**09 18 00.5**	**+1.9**					
	baz=175											
KOT				S	**Sn**	**09 19 02.9**	**-4.8**					
	baz=175											
PRNI	**Paran**	**6.36**	**154**	Pn	**Pn**	**09 18 01.4**	**+0.5**					
PRNI				Sn	**Sn**	**09 19 10.2**	**-1.9**					
HMYD	**Mayadein**	**6.36**	**188**	P	**Pn**	**09 18 01.7**	**+0.7**					
	baz=184											
HSAF	**As Saff**	**6.49**	**182**	P	**Pn**	**09 18 03.5**	**+0.7**					
	baz=177											
HNAT	**Natroun**	**6.54**	**189**	P	**Pn**	**09 18 05.4**	**+1.9**					
	baz=186											
HRFI	**Mount Harif**	**6.66**	**155**	Pn	**Pn**	**09 18 05.3**	**+0.3**					
HRFI				Sn	**Sn**	**09 19 17.3**	**-2.2**					
EIL	**Elat**	**6.96**	**157**	Pn	**Pn**	**09 18 09.4**	**+0.2**					
EIL				Sn	**Sn**	**09 19 24.9**	**-2.1**					
RYAN	**Fayoum**	**7.13**	**191**	P	**Pn**	**09 18 12.8**	**+1.3**					
	baz=188											
SLUM	**Salum**	**7.15**	**232**	P	**Pn**	**09 18 11.2**	**-0.6**					
	baz=232											
SLUM				S	**Sn**	**09 19 21.8**	**-10**					
	baz=232											
HKAT	**Jabal Katrina**	**7.80**	**165**	P	**Pn**	**09 18 20.9**	**0.0**					
	baz=161											
TAMRE	**El Minia**	**8.45**	**185**	P	**Pn**	**09 18 30.6**	**+1.1**					
	baz=183											
SWA2		**8.68**	**220**	P	**Pn**	**09 18 31.7**	**-1.0**					
	baz=219											
HDK1	**Dakhla**	**10.74**	**192**	P	**Pn**	**09 18 59.7**	**-1.1**					
	baz=190											

*IDC **24** 09:17:46.4±0.9,34°.28N×136°.39E,h357km±7km, mb3.3/15, mbtmp4.0/20, Error ellipse: s-maj=14.0km s-min=12.6km az=131.0*

*JMA **24** 09:17:47.6±0.3,34°N±1°×13°6E±°, h365km±2km, MV3.1/28, SHIMA PENINSULA REGION*

ISC 24 09:17:47.4±0.7,34°.31N±0°.09×136°.37E±0°.07, h368km±6km, n35, σ1°16/38, mb3.5/15, Western Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JKN2	**Miekihoku**	**0.10**	**229**	P		**Pn**	**09 18 33.2**	**0.0**
JIE	**Ise**	**0.29**	**73**	*eP*		**Pn**	**09 18 33.4**	**+0.1**
TSUJ	**Tsu 2**	**0.41**	**6**	*eP*		**Pn**	**09 18 33.5**	**+0.1**
JWY	**Kouya**	**0.65**	**263**	P		**Pn**	**09 18 34.3**	**+0.2**
JWY				*eS*		**S**	**09 19 10.7**	**-0.9**
JTNC	**Tanabenakahech**	**0.79**	**232**	*eP*		**Pn**	**09 18 34.5**	**+0.1**
JWT	**Wachi**	**1.26**	**321**	*eP*		**Pn**	**09 18 35.4**	**-0.6**
JYTA	**Yamagatataniai**	**1.32**	**13**	*eP*		**Pn**	**09 18 35.4**	**-0.9**
JAI	**Aioi**	**1.67**	**253**	*eP*		**Pn**	**09 18 38.1**	**-0.2**
JKG	**Kaga**	**1.97**	**359**	P		**Pn**	**09 18 39.5**	**-0.5**
JMN	**Monobe**	**2.14**	**255**	*eP*		**Pn**	**09 18 41.8**	**+0.4**
JYN	**Shimob**	**2.15**	**56**	*eP*		**Pn**	**09 18 40.8**	**-0.6**
JOD2	**Odawara 2**	**2.44**	**66**	P		**Pn**	**09 18 43.6**	**+0.2**
JRY	**Ryogami san**	**2.69**	**50**	P		**Pn**	**09 18 44.9**	**-0.5**
MAT	**Matsushiro**	**2.69**	**33**	*eP*		**Pn**	**09 18 44.7**	**-0.8**
MJAR	**Matsushiro Arr**	**2.69**	**33**	P		**Pn**	**09 18 42.8**	**-2.6**
	41nm,0.6s,baz=204,slow=8.3,SNR=88							
MJAR				S		**S**	**09 19 31.3**	**-1.0**
	2.4nm,0.4s,baz=177,slow=11,SNR=1.1							
JHJ	**Hachijo jima 2**	**3.08**	**112**	P		**Pn**	**09 18 45.3**	**-3.6**
	56nm,0.4s,baz=342,slow=20,SNR=1.6							
JHJ				S		**S**	**09 19 40.2**	**+1.8**
	31nm,0.3s,baz=59,slow=19,SNR=1.8							
JNU	**Nakatsue**	**4.72**	**257**	P		**Pn**	**09 19 01.6**	**-3.3**
	11nm,0.5s,baz=34,slow=11,SNR=2.2							
KSRS	**Korea Array**	**7.54**	**297**	P		**Pn**	**09 19 37.2**	**+0.9**
	5.7nm,0.5s,baz=111,slow=12,SNR=24							
USRK	**Ussuriysk Ar.**	**10.45**	**342**	P		**Pn**	**09 20 10.4**	**0.0**
	21nm,0.6s,baz=148,slow=10,SNR=40							
PETK	**Petropavlovsk-**	**24.15**	**32**	P		**P**	**09 22 31.9**	**+0.4**
	1.5nm,0.7s,baz=235,slow=10,SNR=2.8							
	1.5nm,0.7s							
SONM	**Songino Array**	**26.14**	**310**	P		**P**	**09 22 50.7**	**+1.2**
	0.7nm,0.6s,baz=113,slow=11,SNR=3.0							
	0.7nm,0.6s							
TIXI	**Tiksi**	**37.62**	**356**	P		**P**	**09 24 27.1**	**-0.8**
	2.2nm,0.4s,baz=278,slow=15,SNR=10							
	2.2nm,0.4s							
MKAR	**Makanchi Array**	**42.16**	**304**	P		**P**	**09 25 06.1**	**+0.9**
	0.3nm,0.4s,baz=88,slow=9.0,SNR=5.2							
	0.3nm,0.4s							
KURBB	**Kurchatov Arra**	**44.51**	**310**	P		**P**	**09 25 24.0**	**+0.4**
	3.2nm,0.2s,baz=70,slow=8.0,SNR=0.9							
	3.2nm,0.2s							
KDAK	**Kodiak Island**	**51.85**	**40**	P		**P**	**09 26 19.2**	**+0.2**
	3.9nm,0.7s,baz=319,slow=2.3,SNR=9.5							
	3.9nm,0.7s							
ILAR	**Eielson Array**	**53.97**	**31**	P		**P**	**09 26 33.9**	**-0.4**
	0.8nm,0.5s,baz=253,slow=5.6,SNR=15							
	0.8nm,0.5s							
WRA	**Warrnunga Arr**	**53.98**	**182**	P		**P**	**09 26 34.9**	**+0.1**
	0.6nm,0.3s,baz=2.0,slow=7.7,SNR=14							
	0.6nm,0.3s							
INK	**Inuvik**	**58.65**	**26**	P		**P**	**09 27 07.4**	**+0.6**
	1.9nm,0.6s,baz=282,slow=6.2,SNR=13							
	1.9nm,0.6s							
ARCES	**ARCESS Array B**	**65.07**	**339**	P		**P**	**09 27 49.0**	**-0.1**
	0.9nm,0.5s,baz=62,slow=8.8,SNR=14							
	0.9nm,0.5s							
YKA	**Yellowknife Ar**	**68.19**	**28**	P		**P**	**09 28 08.6**	**-0.1**
	0.6nm,0.6s,baz=299,slow=6.0,SNR=4.2							
	0.6nm,0.6s							
FINES	**FINESS Array B**	**69.26**	**331**	P		**P**	**09 28 15.1**	**-0.2**
	0.6nm,0.4s,baz=72,slow=5.2,SNR=12							
	0.6nm,0.4s							
NOA	**NORSAR Array B**	**75.04**	**336**	P		**P**	**09 28 48.6**	**-0.7**
	0.4nm,0.5s,baz=45,slow=5.7,SNR=3.4							
	0.4nm,0.5s							
PDAR	**Pinedale Array**	**82.48**	**43**	P		**P**	**09 29 30.5**	**+0.5**
	0.4nm,0.7s,baz=289,slow=4.5,SNR=4.3							
	0.4nm,0.7s							
TXAR	**Lajitas Array**	**95.03**	**49**	P		**P**	**09 30 30.6**	**+1.1**
	0.2nm,0.4s,baz=296,slow=2.8,SNR=6.5							
	0.2nm,0.4s							
PLCA	**Paso Flores**	**157.76**	**115**	PKP		**PKPdf**	**09 36 59.8**	**-0.6**
	1.5nm,0.9s,baz=227,slow=9.7,SNR=3.6							

*IDC **24** 09:18:20.4±5.2,6°.03S×105°.92E, h0km, mb3.9/2, mbtmp3.9/2, Error ellipse: s-maj=230.1km s-min=83.1km az=47.0*

*DJA **24** 09:18:39.0±0.4,7°S±3°×10°6E±°, h115km±4km, M4.0/12, mb4.2/1, MLv3.9/12*

*NEIC **24** 09:18:39.6±0.2,6°.84S±0°.09×106°.33E±0°.08, h110km±18km, mb4.2/8, Error ellipse: s-maj=12.7km s-min=11.8km az=171.0*

ISC 24 09:18:39.5±0.9,6°.77S±0°.07×106°.29E±0°.05, h126km±6km, n28, σ0°84/36, mb4.2/6, Jawa

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.35**	**131**	P		**Pn**	**09 18 58.0**	**+0.6**
SKJI				S		**Sn**	**09 19 11.8**	**+0.9**
DBJI	**Dramaga**	**0.51**	**65**	P		**Pn**	**09 18 57.7**	**-0.5**
DBJI				S		**Sn**	**09 19 11.5**	**-0.8**
CBJI	**Citeko**	**0.66**	**58**	P		**Pn**	**09 18 58.9**	**-0.2**
CBJI				S		**Sn**	**09 19 13.9**	**-0.1**
SBJI	**Serang**	**0.67**	**347**	P		**Pn**	**09 18 58.8**	**-0.4**
SBJI				S		**Sn**	**09 19 13.2**	**-0.9**
TNG	**Tangerang**	**0.69**	**31**	P			09 19 00.6	
TNG				P		**Pn**	**09 18 58.4**	**-1.0**
TNG				S		**Sn**	**09 19 15.3**	**+0.8**
CNJI	**Cibinong**	**0.99**	**123**	P		**Pn**	**09 19 01.6**	**-0.3**
CNJI				S		**Sn**	**09 19 18.1**	**-0.9**
JCJI	**Jatiwangi**	**1.99**	**82**	P		**Pn**	**09 19 12.1**	**-1.0**
KASI	**Kota Agung**	**2.17**	**305**	P		**Pn**	**09 19 15.7**	**+0.4**
KASI				S		**Sn**	**09 19 42.2**	**-0.6**
CMJI	**Cimerak**	**2.37**	**115**	P		**Pn**	**09 19 17.6**	**-0.2**
CMJI				S		**Sn**	**09 19 45.9**	**-1.4**
KPJI	**Karang Pucung**	**2.68**	**102**	P		**Pn**	**09 19 21.6**	**-0.3**
XMIS	**Christmas Isla**	**3.74**	**190**	Pn		**Pn**	**09 19 34.5**	**-1.2**
MNAI	**Manna**	**4.09**	**306**	Pn		**Pn**	**09 19 41.0**	**+0.7**
MNAI	**Manna**	**4.09**	**306**	P		**Pn**	**09 19 40.1**	**-0.3**
MNAI				S		**Sn**	**09 20 25.7**	**-1.9**
UGM	**Wanagama**	**4.35**	**105**	Pn		**Pn**	**09 19 43.5**	**-0.4**
UGM	**Wanagama**	**4.35**	**105**	P		**Pn**	**09 19 43.5**	**-0.4**
PCJI	**Pacitan**	**5.05**	**107**	P		**Pn**	**09 19 53.1**	**-0.1**
KNRA	**Kununurra**	**23.73**	**114**	P		**P**	**09 23 40.5**	**+0.2**
KNRA				IAmb		IAmb	09 23 41.3	
	comp=Z,7.4nm,0.8s							
MTN	**Manton Dam**	**25.20**	**106**	P		**P**	**09 23 53.9**	**+0.2**
MTN				IAmb		IAmb	09 23 57.7	
	comp=Z,5.9nm,0.6s							
WB0	**Warramunga Arr**	**30.19**	**118**	P		**P**	**09 24 37.4**	**-0.7**
WB0				IAmb		IAmb	09 24 38.3	
	comp=Z,9.8nm,1.5s							
WRA	**Warramunga Arr**	**30.20**	**118**	P		**P**	**09 24 38.8**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=287,slow=9.6,SNR=14							
	comp=Z,0.3nm,0.3s							
WRA	**Warramunga Arr**	**30.20**	**118**	P		**P**	**09 24 38.3**	**0.0**
WB2	**Warramunga Arr**	**30.21**	**118**	P		**P**	**09 24 38.6**	**+0.2**
WB2				IAmb		IAmb	09 24 41.5	
	comp=Z,4.9nm,1.1s							
WR0	**Warramunga Arr**	**30.39**	**118**	P		**P**	**09 24 39.9**	**0.0**
ASAR	**Alice Springs**	**31.40**	**125**	P		**P**	**09 24 47.5**	**-1.3**
COEN	**Coen**	**36.94**	**104**	P		**P**	**09 25 36.7**	**0.0**
STKA	**Stephens Creek**	**41.32**	**132**	P		**P**	**09 26 14.3**	**+1.4**
	comp=Z,1.3nm,0.3s,baz=313,slow=10,SNR=9.6							
	comp=Z,1.3nm,0.3s							
STKA	**Stephens Creek**	**41.32**	**132**	P		**P**	**09 26 14.6**	**+1.7**
TXAR	**Lajitas Array**	**143.94**	**48**	PKP		PKPab	09 37 57.7	-0.7
	comp=Z,0.1nm,0.4s,baz=243,slow=1.0,SNR=6.0							

*BJI **24** 09:22:59.0±0.0,51°.09N×179°.51E, h32km, mb5.1/60, mB5.0/34, Ms4.5/32, Ms7 4.3/31*

*AEIC **24** 09:23:00±2.2,50°.99N±0°.04×179°.40E±0°.06, h18km±3km, Error ellipse: s-maj=6.1km s-min=5.5km az=160.0*

*IDC **24** 09:23:01.7±1.8,51°.25N×179°.53E, h28km±11km, mb4.6/34, mbtmp4.8/37, ML4.8/2, MS4.1/71, Error ellipse: s-maj=15.6km s-min=9.4km az=175.0*

*MOS **24** 09:23:02.0±1.0,51°.24N×179°.49E, h46km, mb5.1/87, MS4.1/9, Error ellipse: s-maj=6.9km s-min=5.1km az=92.5*

*NEIC **24** 09:23:03.6±1.5,51°.22N±0°.07×179°.41E±0°.06, h47km±3km, mb4.9/439, ML4.7(AEIC), Error ellipse: s-maj=9.6km s-min=5.7km az=180.0*

*GCMT **24** 09:23:03.6±0.4,51°.14N±0°.02×179°.49E±0°.05, h21km±1km, MW5.0/70, Moment Tensor Solution. s32, c38; s70, c89; Duration: 0 Moment tensor: Scale 10^16^Nm; M_{rr}3.04±.24; $M_{\theta\theta}$-2.81±.15; $M_{\phi\phi}$-0.23±.14; $M_{r\theta}$1.90±.25; $M_{\theta\phi}$-0.78±.10; $M_{\phi r}$1.12±.27; Best double couple: $M_0$3.75000×10^16^ NP1:φ263.00000°, δ28.00000°, λ105.00000°. NP2: φ66.00000°, δ63.00000°, λ82.00000°. Principal axes: T 3.7910, Plg71.0000°, Azm319.0000°; N -0.0860, Plg7.0000°, Azm69.0000°; P -3.7080, Plg18.0000°, Azm162.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 09:23:03.7±0.4,51°.21N±0°.06×179°.45E±0°.03, h45km±2km, h45km:pP-P, n1016, σ1°31/947, mb4.9/304, MS4.2/91, 161C-128D, Fault plane solution: NP1:φ82.68441°, δ70.30573°, λ106.81889°. **NP2:**φ220.79347°, δ25.67971°, λ51.04894°. **Principal axes:** T Plg61.1116°, Azm17.7407°; N Plg15.8084°, Azm256.8679°; P Plg23.5138°, Azm159.7916°; **Rat Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.19**	**331**			**Pn**	**09 23 09.0**	**-2.4**
AMKA	**Amchitka**	**0.19**	**331**			**Sn**	**09 23 15.3**	**-1.6**
CESW	**Semis' Southwe**	**0.70**	**6**			**Pn**	**09 23 17.5**	**+0.3**
CERAA	**Semis' Rag'd T**	**0.71**	**12**			**Pn**	**09 23 17.7**	**+0.3**
CERB	**Semis' Cerberu**	**0.73**	**9**			**Pn**	**09 23 18.4**	**+0.7**
CEAP	**Semis' Anvil P**	**0.80**	**6**			**Pn**	**09 23 19.2**	**+0.6**
LSSE	**Little Sitkin**	**0.91**	**323**			**Pn**	**09 23 19.9**	**-0.2**
LSPA	**Little Sitkin**	**0.93**	**324**			**Pn**	**09 23 20.2**	**-0.1**
LSSA	**Little Sitkin**	**0.94**	**322**			**Pn**	**09 23 20.2**	**-0.4**
LSNW	**Little Sitkin**	**0.96**	**323**			**Pn**	**09 23 20.3**	**-0.5**
GALAA	**Gareloi Lava P**	**1.24**	**63**			**Pn**	**09 23 24.5**	**-0.1**
GAEA	**Gareloi East**	**1.27**	**62**			**Pn**	**09 23 25.5**	**+0.6**
TASE	**Tanaga Southea**	**1.69**	**67**			**Pn**	**09 23 30.7**	**0.0**
TAFP	**Tanaga Falls P**	**1.75**	**66**			**Pn**	**09 23 31.7**	**+0.2**
TAFP						**Sn**	**09 23 56.3**	**+3.8**
TAPA	**Tanaga Point A**	**1.81**	**69**			**Pn**	**09 23 32.5**	**0.0**
KIMD	**Kanaga Island**	**2.15**	**74**			**Pn**	**09 23 37.2**	**+0.2**
KICM	**Kanaga Island**	**2.21**	**70**			**Pn**	**09 23 38.8**	**+0.9**
KIKV	**Kanaga Island**	**2.21**	**71**			**Pn**	**09 23 38.2**	**+0.2**
KIWB	**Kanaga Island**	**2.22**	**72**	Pn		**Pn**	**09 23 37.9**	**-0.1**
KINC	**Kanaga Island**	**2.25**	**70**			**Pn**	**09 23 39.2**	**+0.8**
KINC						**Sn**	**09 24 08.8**	**+3.6**
ADK	**Adak**	**2.51**	**73**	Pn		**Pn**	**09 23 42.0**	**+0.1

Q19K IAmb IAmb 09 27 10.4
comp=Z,76nm,0.6s
Q19K Cape Douglas, 17.14 53 P **Pn 09 26 57.9 -1.9**
baz=254,SNR=12
O19K Port Alsworth 17.19 48 P **Pn 09 26 58.3 -2.0**
baz=250
N19K Bonanza Creek 17.34 46 Pn 09 27 01.8 -0.5
N19K IAmb IAmb 09 27 21.1
comp=Z,57nm,0.8s
N19K Bonanza Creek 17.34 46 P **Pn 09 27 00.5 -1.7**
baz=248,SNR=23
KDAK Kodiak Island 17.44 57 P **Pn 09 26 59.8 -3.6**
comp=Z,5.4nm,0.3s,baz=265,slow=3.3,SNR=86
KDAK S **Sn 09 30 09.3 -6.9**
comp=Z,6.5nm,0.8s,baz=288,slow=20,SNR=1.8
comp=Z,12nm,0.3s
KDAK Kodiak Island 17.44 57*c i* P **Pn 09 27 00.8 -2.5**
KDAK Kodiak Island 17.44 57 P **Pn 09 27 01.3 -2.1**
baz=259
TTA Tatalina 17.63 39 P **P 09 27 06.3 0.0**
TTA Tatalina 17.63 39 P **P 09 27 06.3 0.0**
TTA pmax pmax
comp=Z,45nm,1.0s
TTA Tatalina 17.63 39 P **Pn 09 27 03.8 -1.9**
baz=239,SNR=36
Q20K Shuyak Island 17.70 54 P **Pn 09 27 05.3 -1.2**
baz=257
L19K White Mountain 17.74 42 P **Pn 09 27 06.7 -0.4**
L19K White Mountain 17.74 42 P **Pn 09 27 06.5 -0.6**
baz=243,SNR=34
M19K Big River Lodg 17.82 43 P **P 09 27 08.1 -0.2**
M19K Big River Lodg 17.82 43 P **Pn 09 27 07.2 -0.8**
baz=245,SNR=12
O20K Slope Mountain 17.96 50 P **Pn 09 27 09.2 -0.7**
baz=252
BILL Bilibino 18.07 344 P **P 09 27 12.4 +1.3**
BILL IAmb IAmb 09 27 23.5
comp=Z,62nm,1.0s
BILL Bilibino 18.07 344*d i* P **P 09 27 13.0 +1.9**
BILL pmax pmax
comp=Z,35nm,1.1s
BILL MLR MLR
comp=Z,493nm,16.0s
MA2 Magadan 18.19 309 LR LR 09 33 58.4
comp=Z,888nm,19.1s,baz=112,slow=36
MA2 Magadan 18.19 309 P **P 09 27 11.5 -0.9**
MA2 IAmb IAmb 09 27 23.1
comp=Z,99nm,1.5s
MA2 Magadan 18.19 309⇑ *i* P **Pn 09 27 12.8 +0.2**
MA2 pmax pmax
comp=Z,25nm,1.1s
L20K Farewell, AK 18.28 42 P **P 09 27 12.9 -0.5**
baz=244,SNR=9.3
GCSA Galena City Sc 18.31 33 P **P 09 27 13.6 -0.1**
baz=233,SNR=36
HOM Homer 18.32 51 P **P 09 27 13.5 -0.4**
baz=255
M20K Styx River 18.35 44 P **P 09 27 13.8 -0.5**
M20K Styx River 18.35 44 P **P 09 27 13.5 -0.8**
baz=246
CNPM China Poot 18.49 52 P **P 09 27 14.3 -1.5**
CNPM IAmb IAmb 09 27 42.6
comp=Z,39nm,0.7s
N20K Mount Spurr 18.51 46 P **P 09 27 15.4 -0.6**
baz=250
SPU Mount Spurr 18.58 47 P **P 09 27 15.7 -1.0**
K20K Telida 18.61 39 P **P 09 27 17.2 +0.2**
K20K Telida 18.61 39 P **P 09 27 16.8 -0.2**
baz=241,SNR=15
SEY Seymchan 18.65 319 LR LR 09 33 57.4
comp=Z,770nm,20.5s,baz=118,slow=35
SEY Seymchan 18.65 319*eP* **P 09 27 17.1 -0.3**
SEY pmax pmax
comp=Z,11nm,1.7s
BRLK Bradley Lake 18.72 51 P **P 09 27 17.1 -1.2**
RDOG Red Dog Mine 18.97 21 P **P 09 27 16.7 -4.2**
baz=216,SNR=5.6
J20K Nowinta River 18.98 37 P **Pn 09 27 21.9 -0.2**
J20K IAmb IAmb 09 27 25.9
comp=Z,125nm,1.5s
J20K Nowinta River 18.98 37 P **Pn 09 27 21.5 -0.6**
baz=239,SNR=11
SKT Skwentna 19.09 44 P **P 09 27 22.3 0.0**
SKT IAmb IAmb 09 27 25.4
comp=Z,112nm,1.0s
SKT Skwentna 19.09 44 P **P 09 27 22.8 +0.5**
baz=248
PPLA Purkeypile 19.16 42 P **P 09 27 23.2 0.0**
PPLA IAmb IAmb 09 27 35.1
comp=Z,52nm,0.8s
PPLA Purkeypile 19.16 42 P **P 09 27 23.0 -0.2**
baz=245
SUA Susitna One 19.27 46 P **P 09 27 23.8 -0.5**
SUA IAmb IAmb 09 27 28.5
comp=Z,38nm,0.9s
SUA Susitna One 19.27 46 P **P 09 27 24.1 -0.2**
baz=251
CAST Castle Rocks 19.43 40 P **P 09 27 25.3 -0.7**
CAST IAmb IAmb 09 27 28.5
comp=Z,49nm,1.0s
CAST Castle Rocks 19.43 40 P **Pn 09 27 26.7 -0.8**
baz=244,SNR=27
O22K Cooper Landing 19.46 50 P **P 09 27 25.4 -0.8**
O22K Cooper Landing 19.46 50 P **P 09 27 25.5 -0.8**
baz=255
SEW Seward 19.50 51 P **P 09 27 25.1 -1.7**
SEW Seward 19.50 51 P **P 09 27 26.6 -0.1**
baz=256
CHUM Lake Minchumin 19.55 39 P **P 09 27 27.1 -0.1**
baz=242
RC01 Rabbit Creek A 19.62 48 P **P 09 27 27.1 -1.0**
M22K Willow 19.64 46 P **P 09 27 28.0 -0.2**
M22K IAmb IAmb 09 27 32.7
comp=Z,59nm,0.7s
M22K Willow 19.64 46 P **P 09 27 27.6 -0.6**
baz=251
CUT Chulitna 19.80 44 P **P 09 27 29.5 -0.4**
CUT IAmb IAmb 09 27 35.0
comp=Z,151nm,1.3s
CUT Chulitna 19.80 44 P **P 09 27 28.5 -1.4**
baz=249
KTH Kantishna Hill 19.96 40 P **P 09 27 32.0 +0.2**
KTH IAmb IAmb 09 27 37.5
comp=Z,87nm,0.8s
PMR Palmer 20.04 47 P **P 09 27 32.1 -0.5**
PMR Palmer 20.04 47 P **P 09 27 32.1 -0.5**
PMR pmax pmax
comp=Z,9.0nm,0.6s
PMR Palmer 20.04 47 P **P 09 27 31.5 -1.1**
baz=253
IMAR Indian Mountai 20.10 32 P **P 09 27 34.2 +0.9**
BPAW Bear Paw Mtn. 20.17 39 P **P 09 27 34.0 0.0**
BPAW IAmb IAmb 09 27 48.9
comp=Z,32nm,0.8s
BPAW Bear Paw Mtn. 20.17 39 P **P 09 27 34.5 +0.5**
baz=244,SNR=48
TRF Thorofare Moun 20.18 41 P **P 09 27 34.9 +0.6**
TRF IAmb IAmb 09 27 42.8
comp=Z,53nm,0.9s
TRF Thorofare Moun 20.18 41 P **P 09 27 34.4 +0.1**
baz=246,SNR=19
GHO Glory Hole Cre 20.19 46 P **P 09 27 34.0 -0.3**
H21K Melozitna Rive 20.25 34 P **P 09 27 35.4 +0.5**
H21K IAmb IAmb 09 27 37.4
comp=Z,57nm,0.9s
H21K Melozitna Rive 20.25 34 P **P 09 27 35.8 +1.0**
baz=238,SNR=53
I21K Tanana 20.29 36 P Pn 09 27 36.5 -1.1
I21K IAmb IAmb 09 27 37.9
comp=Z,64nm,1.1s
I21K Tanana 20.29 36 P **P 09 27 36.3 +1.0**
baz=240,SNR=29
KNK Knik Glacier 20.30 47 P **P 09 27 34.7 -0.8**
KNK IAmb IAmb 09 27 40.9
comp=Z,21nm,0.5s
KNK Knik Glacier 20.30 47 P **P 09 27 34.3 -1.2**
baz=254
SML Sawmill 20.47 46 P **P 09 27 36.4 -0.9**
SML IAmb IAmb 09 28 02.4
comp=Z,30nm,0.8s
SML Sawmill 20.47 46 P **P 09 27 36.1 -1.2**
baz=253,SNR=10
G21K Aliakaket 20.49 31 P **P 09 27 38.6 +1.1**
baz=235
MLY Manley 20.68 37 P **P 09 27 40.7 +1.1**
MLY IAmb IAmb 09 27 42.5
comp=Z,41nm,1.0s
MLY Manley 20.68 37 P **P 09 27 39.9 +0.3**
baz=242,SNR=45
WAT1 Susitna Watana 20.69 44 P **P 09 27 38.6 -1.1**
baz=250
M23K Glacier View 20.74 47 P **P 09 27 38.3 -2.0**
baz=254,SNR=12
RND Reindeer 20.76 42 P **P 09 27 40.5 0.0**
RND Reindeer 20.76 42 P **P 09 27 40.5 0.0**
RND pmax pmax
comp=Z,27nm,1.0s
BWN Browne 20.80 40 P **P 09 27 40.7 -0.1**
BWN IAmb IAmb 09 27 50.8
comp=Z,87nm,1.0s
GLI Glacier Island 20.81 49 P **P 09 27 39.2 -1.8**
GLI IAmb IAmb 09 27 57.8
comp=Z,37nm,0.7s
GLI Glacier Island 20.81 49 P **P 09 27 38.6 -2.4**
baz=257
MCK McKinley 20.85 41 P **P 09 27 40.9 -0.4**
MCK IAmb IAmb 09 27 45.6
comp=Z,37nm,1.0s
MCK McKinley 20.85 41 P **P 09 27 40.9 -0.4**
MCK pmax pmax
comp=Z,37nm,1.0s
MCK McKinley 20.85 41 P **P 09 27 39.8 -1.6**
baz=248,SNR=15
H22K Ishtalitna Cre 20.87 34 P **P 09 27 40.9 -0.7**
baz=239,SNR=29
F21K Alatna River 20.91 30 P **P 09 27 42.9 +0.9**
baz=233
Q23K Middleton Isla 20.92 54 P **P 09 27 40.8 -1.3**
baz=262
SCM Sheep Creek Mo 20.93 47 P **P 09 27 41.1 -1.3**
SCM IAmb IAmb 09 28 01.3
comp=Z,38nm,0.8s
SCM Sheep Creek Mo 20.93 47 P **P 09 27 41.1 -1.3**
SCM pmax pmax
comp=Z,38nm,0.8s
SCM Sheep Creek Mo 20.93 47 P **P 09 27 41.1 -1.3**
baz=254,SNR=19
WAT6 Susitna Watana 20.96 45 P **P 09 27 41.4 -1.4**
baz=252,SNR=34
FID Port Fidalgo 21.08 50 P **P 09 27 40.9 -3.0**
FID IAmb IAmb 09 27 47.2
comp=Z,34nm,0.8s
NEA2 Nenana 21.13 39 P **P 09 27 44.4 0.0**
NEA2 IAmb IAmb 09 27 46.3
comp=Z,54nm,0.8s
NEA2 Nenana 21.13 39 P **P 09 27 43.8 -0.6**
baz=245,SNR=22
I23K Minto, Yukon-K 21.26 37 P **P 09 27 46.0 +0.3**
I23K Minto, Yukon-K 21.26 37 P **P 09 27 46.1 +0.4**
baz=244,SNR=25
DHY Denali Highway 21.28 43 P **P 09 27 45.4 -0.8**
DHY IAmb IAmb 09 27 49.9
comp=Z,74nm,1.0s
DHY Denali Highway 21.28 43 P **P 09 27 45.2 -1.0**
baz=251,SNR=39
G22K Bettles 21.37 32 P **P 09 27 47.2 +0.2**
baz=237
EYAK Cordova Ski Ar 21.39 51 P **P 09 27 45.8 -1.4**
baz=259
WRH Wood River Hil 21.47 39 P **P 09 27 47.9 -0.1**
DIV Divide 21.50 49 P **P 09 27 47.7 -0.7**
DIV IAmb IAmb 09 28 14.1
comp=Z,26nm,0.8s
H23K Yukon River 21.50 35 P **P 09 27 48.5 +0.1**
H23K IAmb IAmb 09 27 51.2
comp=Z,41nm,1.2s
H23K Yukon River 21.50 35 P **P 09 27 48.2 -0.1**
baz=242,SNR=26
KLU Klutina 21.50 48 P **P 09 27 48.8 +0.3**
KLU Klutina 21.50 48 P **P 09 27 46.6 -1.9**
baz=257,SNR=10
M24K Tolsona, Glenn 21.53 46 P **P 09 27 47.5 -1.2**
M24K IAmb IAmb 09 28 11.6
comp=Z,57nm,0.7s
M24K Tolsona, Glenn 21.53 46 P **P 09 27 47.5 -1.2**
baz=255,SNR=11
MDM Murphy Dome 21.61 38 P **P 09 27 48.0 -1.5**
MDM IAmb IAmb 09 27 52.1
comp=Z,35nm,0.9s
CCB Clear Creek Bu 21.65 39 P **P 09 27 48.2 -1.8**
TCOL CIGO, UAF Yank 21.72 39 P **P 09 27 49.4 -1.3**
TCOL CIGO, UAF Yank 21.72 39 P **P 09 27 50.5 -0.2**
baz=246,SNR=6.1
COLA College 21.73 39 P **P 09 27 49.7 -1.0**
COLA College 21.73 39 P **P 09 27 49.7 -1.0**
COLA pmax pmax
comp=Z,29nm,1.1s
COLA College 21.73 39 P **P 09 27 49.6 -1.1**
baz=246
G23K Bananza Creek 21.76 33 P **P 09 27 51.5 +0.4**
baz=239
HDA Harding Lake 21.91 40 P **P 09 27 51.6 -1.1**
HDA Harding Lake 21.91 40 P **P 09 27 51.6 -1.1**
baz=249,SNR=12
COLD Coldfoot 21.97 32 P **P 09 27 52.5 -0.9**
COLD IAmb IAmb 09 27 57.0
comp=Z,42nm,1.1s
COLD Coldfoot 21.97 32 P **P 09 27 52.3 -1.1**
baz=238,SNR=6.5
POKR Poker Plat Res 21.98 38 P **P 09 27 51.6 -1.9**
POKR Poker Plat Res 21.98 38 P **P 09 27 52.4 -1.2**
baz=246,SNR=6.5
BMRM Bremner River 22.02 50 P **P 09 27 52.8 -1.3**
BMRM IAmb IAmb 09 27 59.1
comp=Z,30nm,0.8s
BMRM Bremner River 22.02 50 P **P 09 27 51.8 -2.3**
baz=260,SNR=12
HARP HAARP 22.07 46 P **P 09 27 53.2 -1.2**
baz=256,SNR=13
IL31 22.07 39 P **P 09 27 54.2 -0.1**
ILAR Eielson Array 22.07 39 P **P 09 27 52.2 -2.2**
comp=Z,5.2nm,0.6s,baz=237,slow=8.5,SNR=39
ILAR PcP **PcP 09 31 50.2 -0.2**
comp=Z,1.4nm,0.7s,baz=268,slow=3.4,SNR=6.2
ILAR ScP **ScP 09 35 23.9 +0.1**
comp=Z,0.2nm,0.6s,baz=252,slow=5.3,SNR=6.0
comp=Z,5.2nm,0.6s
ILAR Eielson Array 22.07 39 P **P 09 27 52.0 -2.4**
PAX Paxson 22.07 44 P **P 09 27 53.7 -0.9**
PAX Paxson 22.07 44 P **P 09 27 53.7 -0.9**
PAX pmax pmax
comp=Z,19nm,0.8s
PAX Paxson 22.07 44 P **P 09 27 53.7 -0.9**
baz=254,SNR=29
HMT Hamilton 22.09 52 P **P 09 27 53.9 -0.9**
HMT IAmb IAmb 09 28 19.3
comp=Z,25nm,0.8s
H24K Noodor Dome 22.11 36 P **P 09 27 54.3 -0.7**
H24K IAmb IAmb 09 28 11.6
comp=Z,31nm,0.8s
H24K Noodor Dome 22.11 36 P **P 09 27 54.9 -0.1**
baz=244,SNR=43
N25K Chitina, Valde 22.15 48 P **P 09 27 54.0 -1.4**
N25K IAmb IAmb 09 28 11.8
comp=Z,23nm,0.7s
N25K Chitina, Valde 22.15 48 P **P 09 27 54.8 -0.6**
baz=258,SNR=14
K24K Donnelly Dome 22.19 42 P **P 09 27 53.9 -1.8**
baz=252
GLB Gilahina Butte 22.49 49 P **P 09 27 58.0 -1.0**
GLB IAmb IAmb 09 28 01.4
comp=Z,49nm,1.2s
RIDG Independent Ri 22.56 43 P **P 09 27 58.4 -1.3**
RIDG Independent Ri 22.56 43 P **P 09 27 58.5 -1.3**
baz=253,SNR=11
VRDI Verde Repeater 22.62 49 P **P 09 27 59.3 -1.2**
VRDI IAmb IAmb 09 28 01.9
comp=Z,55nm,1.4s
J25K Salcha River, 22.62 40 P **P 09 27 58.9 -1.4**
J25K PcP **PcP 09 31 50.4 -1.3**
J25K Salcha River, 22.62 40 P **P 09 27 59.0 -1.4**
baz=250
CRQM Cirque 22.70 51 P **P 09 28 00.4 -1.0**
CRQE Cirque 22.72 51 P **P 09 28 00.1 -1.5**
baz=262,SNR=9.0
D23K Nanushuk River 22.80 28 P **P 09 28 01.2 -0.9**
baz=234,SNR=79
WAX Waxell Ridge 22.80 51 P **P 09 28 02.3 0.0**
WAX IAmb IAmb 09 28 31.2
comp=Z,38nm,1.2s
MENT Mentasta 22.84 45 P **P 09 28 01.5 -1.2**
MCARA McCarthy VSAT 22.85 49 P **P 09 28 01.8 -1.0**
baz=260,SNR=5.1
TGL Tana Glacier 22.85 51 P **P 09 28 00.9 -1.9**
DOT Dot Lake 22.87 43 P **P 09 28 01.5 -1.5**
DOT **PcP 09 31 53.2 +1.1**
A21K Barrow 22.90 20 P **P 09 28 03.3 +0.1**
A21K Barrow 22.90 20 P **P 09 28 02.4 -0.8**
baz=221,SNR=19
TOLK Toolik Lake Re 22.94 29 P **P 09 28 03.9 +0.2**
TOLK IAmb IAmb 09 28 05.0
comp=Z,29nm,0.7s
TOLK Toolik Lake Re 22.94 29 P **P 09 28 03.5 -0.2**
baz=236,SNR=33
TYV Tymovskoe 22.99 284*eP* **P 09 28 05.9 +1.6**
TYV pmax pmax
comp=Z,200nm,1.8s
TYV pmax pmax
comp=Z,32nm,1.0s
SCRK Sand Creek 23.00 42 P **P 09 28 03.1 -1.2**
SCRK Sand Creek 23.00 42 P **P 09 28 02.6 -1.7**
baz=253,SNR=32
L26K Log Cabin Wild 23.03 45 P **P 09 28 04.4 -0.2**
L26K IAmb IAmb 09 28 20.9
comp=Z,30nm,1.0s
L26K Log Cabin Wild 23.03 45 P **P 09 28 03.5 -1.1**
baz=256,SNR=18
M26K Nabesna, AK 23.05 46 P **P 09 28 03.4 -1.5**
M26K Nabesna, AK 23.05 46 P **P 09 28 03.4 -1.5**
baz=258,SNR=19
ISLE Juniper Island 23.07 51 P **P 09 28 03.4 -1.7**
MESA MESA 23.21 52 P **P 09 28 04.6 -2.1**
baz=264
J26L Joseph Creek 23.32 41 P **P 09 28 06.0 -1.6**
J26L Joseph Creek 23.32 41 P **P 09 28 05.6 -2.0**
baz=253,SNR=29
C23K Itkillik River 23.34 26 P **P 09 28 07.5 -0.1**
baz=232,SNR=82
GRNC Granite Creek 23.37 51 IAmb IAmb 09 28 09.0
comp=Z,25nm,1.0s
D24K Happy Valley 23.45 28 P **P 09 28 08.4 -0.2**
baz=236,SNR=38
M27K Edge Creek, AK 23.55 47 P **P 09 28 09.2 -0.6**
M27K Edge Creek, AK 23.55 47 P **P 09 28 08.8 -1.0**
baz=259,SNR=13
CTG Chitna Glacier 23.60 50 P **P 09 28 08.7 -1.6**
baz=263,SNR=8.0
CTGM Chitina Glacie 23.60 50 P **P 09 28 09.5 -0.8**
CTGM IAmb IAmb 09 28 17.6
comp=Z,15nm,0.6s
TABL Table Mountain 23.64 52 IAmb IAmb 09 28 11.6
comp=Z,43nm,1.3s
NKL Nikolayevsk 23.66 290*eP* **P 09 28 07.8 -2.9**
NKL *eS* **S 09 32 22.7 +0.7**
NKL smax smax
comp=E,6.0nm,1.5s
NKL smax smax
comp=N,795nm,1.4s
NKL MLR MLR
comp=E,25nm,15.0s
NKL MLR MLR
comp=N,6μm,14.0s
NKL MLR MLR
comp=Z,271nm,14.0s
L27K Beaver Creek, 23.71 45 P **P 09 28 10.5 -0.7**
L27K IAmb IAmb 09 28 12.1
comp=Z,25nm,1.0s
L27K Beaver Creek, 23.71 45 P **P 09 28 10.3 -0.9**
baz=258,SNR=41
BCAR Beaver Creek A 23.73 45 P **P 09 28 10.5 -0.9**
I26K Coal Creek Min 23.74 39 P **P 09 28 09.4 -2.0**
baz=251
K27K Chicken 23.82 43 P **P 09 28 11.4 -0.8**
K27K Chicken 23.82 43 P **P 09 28 11.2 -1.0**
baz=255
UGL Uglegorsk 23.89 280*eP* **P 09 28 13.0 +0.1**
UGL *e* 09 28 43.5
UGL pmax pmax
comp=Z,90nm,0.9s
BMAR Burnt Mountain 23.98 34 P **P 09 28 13.9 +0.2**
BVCY Beaver Creek 24.03 47 P **P 09 28 12.8 -1.4**
baz=260
PINM Pinnacle 24.06 53 P **P 09 28 12.9 -1.6**
baz=266,SNR=6.6
YUK3 Moose Creek 24.12 49 P **P 09 28 13.4 -1.8**
baz=262,SNR=70
YSS Yuzh-Sakhalins 24.24 274 P **P 09 28 17.0 +0.9**
YSS IAmb IAmb 09 28 20.8
comp=Z,63nm,1.0s
YSS Yuzh-Sakhalins 24.24 274*eP* **P 09 28 15.3 -0.8**
YSS *e*SP* **sP 09 28 30.4 -2.3**
YSS *e* 09 28 54.2
YSS *eS* **S 09 32 27.0 -4.5**
YSS *eSS* **SnSn 09 33 27.4 +11**
YSS pmax pmax
comp=Z,300nm,2.8s
YSS pmax pmax
comp=N,100nm,1.4s
YSS pmax pmax
comp=E,200nm,1.5s
YSS pmax pmax
comp=Z,60nm,1.0s
YSS MLR MLR
comp=Z,500nm,15.0s
YSS MLR MLR
comp=N,200nm,13.0s
D25K Kavik River 24.28 29 P **P 09 28 16.4 0.0**
baz=239
YUK8 Steele Glacier 24.39 50 P **P 09 28 16.7 -1.1**
baz=264,SNR=15
PNL Peninsula 24.47 54 P **P 09 28 17.1 -1.0**
baz=268
YUK4 Talbot Arm 24.94 50 P **P 09 28 21.3 -1.3**
baz=265,SNR=9.5
DAWY Dawson 24.98 43 P **P 09 28 22.1 -0.7**
DAWY Dawson 24.98 43 P **P 09 28 21.5 -1.3**
baz=258,SNR=22
YUK6 Outpost Mounta 25.04 51 P **P 09 28 22.2 -1.4**
baz=266
C27K Jago River 25.25 29 P **P 09 28 23.9 -1.2**
baz=242
HYT Haines Junctio 25.46 51 P **P 09 28 25.5 -1.7**
baz=267,SNR=6.7
ASAJ Asahikawa 25.60 268 LR LR 09 38 30.7
comp=N,214nm,20.8s,baz=87,slow=36
N30M Aishikik Lake 25.69 50 P **P 09 28 28.5 -0.8**
baz=266
P30M Million Dollar 25.70 53 P **P 09 28 28.6 -0.8**
baz=269
I29M Ogilvie Camp, 25.71 41 P **P 09 28 28.5 -0.9**
I29M Ogilvie Camp, 25.71 41 P **P 09 28 28.3 -1.1**
baz=257
M30M Minto, Yukon 25.92 47 P **P 09 28 30.5 -0.9**
baz=264,SNR=22
PLBC Pleasant Camp 26.01 54 P **P 09 28 32.0 -0.1**
baz=271
O30N Mendenhall 26.15 51 P **P 09 28 32.1 -1.3**
baz=268
N31M Braeburn, Yuko 26.32 50 P **P 09 28 34.7 -0.2**
N31M Braeburn, Yuko 26.32 50 P **P 09 28 33.7 -1.2**
baz=267
ERM Erimo 26.34 264 P **P 09 28 34.6 -0.6**
ERM IAmb IAmb 09 28 40.4
comp=Z,59nm,1.2s
ERM Erimo 26.34 264 P **P 09 28 34.6 -0.6**
ERM pmax pmax
comp=Z,59nm,1.3s
EPYK Eagle Plains 26.58 39 P **P 09 28 36.3 -0.9**
EPYK Eagle Plains 26.58 39 P **P 09 28 35.7 -1.5**
baz=257,SNR=12
WHY Whitehorse 26.74 52 P **P 09 28 36.8 -2.0**
baz=270
GRNR Gornyy 26.81 286⇑ *i* P **P 09 28 39.8 +0.4**
GRNR pmax pmax
comp=Z,30nm,1.0s
GRNR MLR MLR
comp=E,200nm,18.0s
GRNR MLR MLR
comp=N,100nm,12.0s
GRNR MLR MLR
comp=Z,150nm,15.0s
M31M Drury Creek, Y 27.01 48 P **P 09 28 41.1 0.0**
M31M Drury Creek, Y 27.01 48 P **P 09 28 40.5 -0.7**
baz=267,SNR=6.3
P32M Atlin 27.35 54 P **P 09 28 42.5 -1.8**
baz=273
N32M Quiet Lake 27.62 50 P **P 09 28 44.8 -1.7**

baz=270
P33M **Teslin, Yukon** 27.77 52 P P 09 28 46.9 -1.1
P33M **Teslin, Yukon** 27.77 52 P P 09 28 47.1 -1.0
baz=272,SNR=5.9
INK **Inuvik** 28.23 35 P P 09 28 51.1 -0.7
comp=Z,1.4nm,0.3s,baz=244,slow=12,SNR=34
INK PcP PcP 09 32 03.9 -0.2
comp=Z,3.1nm,0.7s,baz=308,slow=3.2,SNR=4.6
INK ScP ScP 09 35 43.5 +2.4
comp=Z,3.9nm,0.9s,baz=206,slow=13,SNR=9.6
INK LR LR 09 40 36.6
comp=Z,228nm,20.7s,baz=232,slow=38
comp=Z,1.4nm,0.3s
INK **Inuvik** 28.23 35 P P 09 28 50.9 -1.0
INK IAmb IAmb 09 28 58.3
comp=Z,26nm,1.2s
INK **Inuvik** 28.23 35 P P 09 28 50.9 -1.0
INK 09 32 03.9
INK pmax pmax
comp=Z,26nm,1.3s
INK **Inuvik** 28.23 35 P P 09 28 50.6 -1.3
baz=256,SNR=6.5
WRAK **Wrangell Islan** 28.44 60 P P 09 28 53.3 -0.6
baz=280
MMPY **Sheldon Lake,** 28.48 47 P P 09 28 52.9 -1.3
baz=269,SNR=16
YAK **Yakutsk** 28.70 311 P P 09 28 56.1 0.0
comp=Z,11nm,0.5s,baz=97,slow=0.8,SNR=6.1
YAK LR LR 09 40 23.0
comp=Z,472nm,19.6s,baz=89,slow=36
comp=Z,11nm,0.5s
YAK **Yakutsk** 28.70 311 P P 09 28 55.7 -0.5
YAK IAmb IAmb 09 28 57.6
comp=Z,46nm,1.0s
YAK **Yakutsk** 28.70 311 *e*P P 09 28 55.0 -1.2
YAK *e*'PP **sP** 09 29 12.9 -0.4
YAK *e* 09 29 46.9
YAK *e* 09 32 05.2
YAK *e*S **S** 09 33 38.1 -3.7
YAK *e* 09 39 32.2
YAK pmax pmax
comp=Z,40nm,0.9s
YAK pmax pmax
comp=E,18nm,1.1s
YAK pmax pmax
comp=N,4.0nm,1.0s
YAK pmax pmax
comp=Z,123nm,4.3s
YAK pmax pmax
comp=E,55nm,4.0s
YAK pmax pmax
comp=N,92nm,3.8s
YAK smax smax
comp=E,61nm,3.3s
YAK smax smax
comp=N,48nm,3.0s
YAK MLR MLR
comp=Z,645nm,19.0s
YAK MLR MLR
comp=E,409nm,19.0s
DLBC **Dease Lake** 29.36 56 LR LR 09 41 28.5
comp=E,456nm,20.9s,baz=279,slow=38
TGTN **Hyland Airport** 29.92 49 P P 09 29 06.6 -0.5
baz=274
KLR **Kul'dur** 30.17 285 P P 09 29 08.9 -0.3
comp=E,51nm,0.7s,baz=66,slow=7.9,SNR=104
comp=E,51nm,0.7s
KLR **Kul'dur** 30.17 285 *c* *i*P P 09 29 09.4 +0.1
KLR pmax pmax
comp=Z,64nm,0.8s
TIXI **Tiksi** 30.25 331 P P 09 29 09.2 -0.5
comp=Z,1.4nm,0.3s,baz=90,slow=20,SNR=8.1
TIXI PcP PcP 09 32 09.5 +0.3
comp=Z,1.7nm,0.4s,baz=88,slow=23,SNR=4.6
TIXI ScP ScP 09 35 48.4 +0.8
comp=Z,1.4nm,0.6s,baz=91,slow=24,SNR=3.3
TIXI LR LR 09 42 04.5
comp=Z,622nm,18.3s,baz=180,slow=38
comp=Z,1.4nm,0.3s
TIXI **Tiksi** 30.25 331 P P 09 29 09.3 -0.4
TIXI PcP PcP 09 32 09.3 +0.1
TIXI **Tiksi** 30.25 331 *c* *i*P P 09 29 09.4 -0.3
TIXI pmax pmax
comp=Z,6.0nm,1.1s
ZEA **Zeya** 31.31 295 *e*P P 09 29 18.5 -0.8
ZEA pmax pmax
comp=N,10.0nm,0.7s
ZEA pmax pmax
comp=E,20nm,0.7s
ZEA pmax pmax
comp=Z,30nm,0.9s
ZEA MLR MLR
comp=Z,200nm,18.0s
JSD **Sado** 31.70 262 P P 09 29 20.9 -2.0
JSD IAmb IAmb 09 29 24.2
comp=Z,24nm,1.0s
A36M **Sachs Harbour** 31.77 29 P P 09 29 23.1 0.0
A36M PcP 09 32 13.1 -0.2
A36M **Sachs Harbour** 31.77 29 P P 09 29 22.7 -0.4
baz=259,SNR=28
C36M **Paulatuk** 31.78 34 P P 09 29 23.5 +0.2
C36M IAmb IAmb 09 29 24.2
comp=Z,14nm,1.0s
C36M **Paulatuk** 31.78 34 P P 09 29 22.5 -0.7
baz=264
BBB **Bella Bella** 31.93 67 LR LR 09 40 28.6
comp=Z,175nm,20.5s,baz=288,slow=33
USA0B **Ussuriysk Arra** 32.22 276 *c* *i*P P 09 29 26.8 -0.6
USRK **Ussuriysk Ar.** 32.22 276 P P 09 29 26.7 -0.7
comp=Z,4.2nm,0.6s,baz=68,slow=8.3,SNR=6.9
USRK PcP PcP 09 32 15.7 +0.8
comp=Z,2.9nm,0.8s,baz=18,slow=6.8,SNR=4.3
USRK LR LR 09 42 07.0
comp=Z,185nm,21.0s,baz=60,slow=36
comp=Z,4.2nm,0.6s
USRK **Ussuriysk Ar.** 32.22 276 P P 09 29 26.4 -1.0
MJAR **Matsushiro Arr** 32.67 260 P P 09 29 31.6 +0.2
comp=Z,3.0nm,0.8s,baz=36,slow=20,SNR=9.4
MJAR PcP PcP 09 32 16.5 +0.1
comp=Z,2.3nm,1.0s,baz=86,slow=4.1,SNR=4.5
MJAR LR LR 09 40 46.4
comp=Z,235nm,20.8s,baz=56,slow=32
comp=Z,3.0nm,0.8s
MAJO **Matsushiro** 32.67 260 P P 09 29 30.6 -0.9
MAJO IAmb IAmb 09 29 33.0
comp=Z,16nm,0.9s
MAJO **Matsushiro** 32.67 260⇑ *i*P P 09 29 31.7 +0.2
MAJO pmax pmax
comp=Z,19nm,1.0s
MJB9 **Matsu-Tunnel** 32.67 260 P P 09 29 30.4 -1.0
MJB9 IAmb IAmb 09 29 33.0
comp=Z,16nm,0.9s
H11N2 **WAKE ISLAND Hy** 32.94 202 T T 10 04 40.5
baz=15,slow=76
H11N3 **WAKE ISLAND Hy** 32.95 202 T T 10 04 47.7
baz=15,slow=76
H11N1 **WAKE ISLAND Hy** 32.95 202 T T 10 04 35.0
baz=15,slow=76
MDJ **Mudanjiang** 33.51 279 P P 09 29 37.8 -0.9
MDJ pmax pmax
comp=Z,15nm,0.8s
MDJ pmax pmax
comp=Z,130nm,4.2s
MDJ LR LR
comp=Z,250nm,17.4s
MDJ LR LR
comp=Z,340nm,19.0s
MSHR **Mys Shultsa** 33.57 274 *e*P P 09 29 40.0 +0.8
MSHR pmax pmax
comp=Z,45nm,1.0s
JGF **Kuroka** 33.81 259 P P 09 29 41.6 +0.2
JGF IAmb IAmb 09 29 43.1
comp=Z,19nm,0.9s
H11S1 **WAKE ISLAND Hy** 34.16 202 T T 10 06 09.0
baz=20,slow=76,SNR=92
H11S2 **WAKE ISLAND Hy** 34.18 202 T T 10 06 12.5
baz=20,slow=76,SNR=47
H11S3 **WAKE ISLAND Hy** 34.18 202 T T 10 06 18.8
baz=20,slow=76,SNR=32
BNX **BinXian** 34.33 282 ⇑P P 09 29 44.8 -0.9
BNX pmax pmax
comp=Z,36nm,0.8s
BNX pmax pmax
comp=Z,81nm,2.6s
LLLB **Lillooet** 36.14 67 P P 09 30 00.9 -0.5
LLLB IAmb IAmb 09 30 06.7
comp=Z,5.9nm,0.7s

YKA **Yellowknife Ar** 36.14 46 P P 09 29 60.0 -1.2
comp=Z,9.7nm,0.7s,baz=281,slow=8.0,SNR=34
YKA PcP PcP 09 32 26.2 +0.4
comp=Z,4.1nm,0.9s,baz=290,slow=3.1,SNR=6.7
YKA ScP ScP 09 36 09.2 +1.0
comp=Z,2.1nm,0.9s,baz=299,slow=2.8,SNR=5.5
YKA LR LR 09 46 27.1
comp=Z,904nm,18.7s,baz=278,slow=39
comp=Z,9.7nm,0.7s
YKA **Yellowknife Ar** 36.14 46 P P 09 29 59.5 -1.6
YKA PcP 09 32 25.8 -0.1
YKA **Yellowknife Ar** 36.14 46 *ce*P P 09 30 00.6 -0.5
YKA pmax pmax
comp=Z,10.0nm,0.7s
NLWA **Neilton Lookou** 36.38 73 P P 09 30 04.0 +0.7
NLWA IAmb IAmb 09 30 05.6
comp=Z,16nm,0.9s
CN2 **Changchun** 36.50 280 *e*P P 09 30 04.3 -0.1
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 LR LR
comp=Z,300nm,18.0s
CN2 LR LR
comp=Z,300nm,18.0s
CN2 LR LR
comp=Z,300nm,20.0s
JCJ **Chichijima** 37.02 244 LR LR 09 42 32.6
comp=Z,122nm,20.5s,baz=90,slow=32
BOD **Bodaibo** 37.20 306 *e*P P 09 30 09.3 -0.8
BOD pmax pmax
comp=Z,57nm,1.0s
F04D **Rainier, OR** 37.52 75 P P 09 30 11.8 -1.2
baz=299
G03D **McMinnville, O** 37.80 76 P P 09 30 15.0 -0.4
baz=300
F04A **Amboy** 37.95 75 IAmb IAmb 09 30 18.5
comp=Z,18nm,0.7s
I02E **Swisshome, OR** 38.01 78 P P 09 30 15.8 -1.3
baz=301
LTY **Liberty** 38.36 72 P P 09 30 20.6 +0.5
LTY IAmb IAmb 09 30 21.1
comp=Z,9.2nm,0.8s
J01E **Myrtle Point** 38.45 79 P P 09 30 20.4 -0.5
baz=302
H04D **Lebanon** 38.47 77 P P 09 30 19.1 -1.9
baz=301
I03D **Drain, OR** 38.53 78 P P 09 30 20.0 -1.6
baz=302
KSRS **Korea Array** 38.54 270 P P 09 30 22.4 +0.8
comp=Z,9.5nm,0.9s,baz=61,slow=8.3,SNR=18
KSRS PcP PcP 09 32 34.5 +0.9
comp=Z,2.5nm,0.9s,baz=59,slow=3.7,SNR=5.5
KSRS LR LR 09 46 42.9
comp=Z,97nm,19.4s,baz=65,slow=37
comp=Z,9.5nm,0.9s
KSAR **Wonju Array Be** 38.57 270 P P 09 30 20.6 -1.4
KSAR **Wonju Array Be** 38.57 270 P P 09 30 20.6 -1.4
B08A **Colville Reser** 38.63 69 P P 09 30 21.9 -0.5
B08A IAmb IAmb 09 30 24.6
comp=Z,19nm,1.4s
H04A **Detroit Lake** 38.73 76 IAmb IAmb 09 30 25.3
comp=Z,18nm,0.9s
G05D **Wamic, OR** 38.97 75 P P 09 30 24.6 -0.6
baz=300
I04A **Tendick Farm,** 39.05 77 P P 09 30 24.8 -1.2
baz=302,SNR=5.8
E07A **Sunnyside** 39.19 72 IAmb IAmb 09 30 29.0
comp=Z,32nm,1.4s
L02F **Cave Junction** 39.24 80 P P 09 30 26.4 -1.2
baz=303
HUMO **Hull Mountain** 39.35 79 P P 09 30 28.4 -0.1
I05D **Terrebonne, OR** 39.42 76 P P 09 30 28.2 -0.9
baz=302
HAWA **Hanford** 39.46 72 P P 09 30 28.9 -0.4
HAWA IAmb IAmb 09 30 31.1
comp=Z,24nm,0.8s
F07A **Phinny Hill Vi** 39.48 73 P P 09 30 29.1 -0.4
F07A IAmb IAmb 09 30 31.3
comp=Z,16nm,0.7s
D08A **Wollman Farm,** 39.50 71 P P 09 30 29.1 -0.5
D08A IAmb IAmb 09 30 30.8
comp=Z,14nm,0.8s
C09A **Chrisman Ranch** 39.52 70 P P 09 30 30.2 +0.4
C09A IAmb IAmb 09 30 31.5
comp=Z,33nm,1.4s
J04D **Umpqua Nationa** 39.53 78 P P 09 30 29.7 -0.5
baz=302
TJN **Taejon** 39.56 269 *e*P P 09 30 30.7 +0.5
E08A **Dider Farm, El** 39.70 72 IAmb IAmb 09 30 32.7
comp=Z,16nm,0.9s
EDM **Edmonton** 39.85 60 P P 09 30 32.2 -0.4
EDM IAmb IAmb 09 30 54.5
comp=Z,17nm,0.8s
EDM **Edmonton** 39.85 60 P P 09 30 32.2 -0.4
EDM pmax pmax
comp=Z,17nm,0.8s
NEW **Newport** 39.97 68 LR LR 09 47 22.9
comp=Z,159nm,18.9s,baz=296,slow=37
NEW **Newport** 39.97 68 P P 09 30 32.4 -1.2
NEW IAmb IAmb 09 30 55.2
comp=Z,11nm,0.8s
NEW **Newport** 39.97 68 P P 09 30 32.4 -1.2
NEW pmax pmax
comp=Z,11nm,0.8s
NEW **Newport** 39.97 68 P P 09 30 32.0 -1.6
baz=299,SNR=10
L04D **Klamath Falls** 39.97 79 IAmb IAmb 09 30 49.9
comp=Z,23nm,1.2s
L04D **Klamath Falls** 39.97 79 P P 09 30 33.2 -0.6
baz=303
YBH **Yreka Blue Hor** 39.99 80 LR LR 09 44 04.9
comp=Z,221nm,21.8s,baz=308,slow=32
YBH **Yreka Blue Hor** 39.99 80 P P 09 30 34.9 +1.0
YBH **Yreka Blue Hor** 39.99 80 P P 09 30 34.9 +1.0
YBH pmax pmax
comp=Z,9.0nm,1.2s
J05D **Fort Rock, OR** 40.05 77 P P 09 30 32.9 -1.6
baz=303,SNR=7.5
E09A **Wood Farm, Sta** 40.23 71 IAmb IAmb 09 30 37.6
comp=Z,26nm,1.2s
RES **Resolute Bay** 40.35 24 LR LR 09 50 46.9
comp=Z,256nm,18.4s,baz=270,slow=41
G08A **Pilot Rock** 40.37 73 P P 09 30 37.5 +0.4
K05A **Summer Lake** 40.56 78 IAmb IAmb 09 30 41.8
comp=Z,29nm,1.2s
WALA **Waterton Lakes** 41.44 66 P P 09 30 45.0 -0.9
BMO **Blue Mountains** 41.59 73 P P 09 30 47.5 +0.4
BMO **Blue Mountains** 41.59 73 P P 09 30 47.5 +0.4
BMO pmax pmax
comp=Z,13nm,1.2s
WVOR **Wild Horse Val** 42.11 77 IAmb IAmb 09 30 53.6
comp=Z,15nm,1.0s
XLT **XiLinHaoTe** 42.19 286⇑ *i*P P 09 30 52.8 +0.9
XLT pP pP 09 31 04.4 +0.3
XLT S **S** 09 37 16.8 +8.1
XLT pmax pmax
comp=Z,49nm,1.1s
XLT pmax pmax
comp=Z,98nm,5.3s
XLT LR LR
comp=Z,21nm,17.9s
XLT LR LR
comp=Z,200nm,16.3s
XLT LR LR
comp=Z,300nm,14.8s
PLID **Pearl Lake** 42.25 72 P P 09 30 51.8 -0.8
MSO **Missoula** 42.55 69 IAmb IAmb 09 30 56.4
comp=Z,22nm,1.1s
MSO **Missoula** 42.55 69 P P 09 30 54.1 -0.8
baz=301,SNR=26
PNTR **Pine Nut** 43.46 82 P P 09 31 03.0 +0.6
PNTR IAmb IAmb 09 31 13.7
comp=Z,22nm,0.7s
YERR **Yerington** 43.74 81 P P 09 31 03.9 -0.8
HLID **Hailey** 44.04 73 P P 09 31 07.0 -0.1
HLID IAmb IAmb 09 31 08.6
comp=Z,17nm,0.9s
HLID **Hailey** 44.04 73 P P 09 31 06.8 -0.2
baz=304,SNR=33
MCMT **McKenzie Canyo** 44.27 71 P P 09 31 08.8 -0.2
EGMT **Eagleton** 44.35 65 IAmb IAmb 09 31 27.0
comp=Z,14nm,0.8s
EGMT **Eagleton** 44.35 65 P P 09 31 07.6 -1.8
baz=302,SNR=12
BOZ **Bozeman (W)** 44.57 69 IAmb IAmb 09 31 12.1
comp=Z,24nm,0.9s
BOZ **Bozeman (W)** 44.57 69 P P 09 31 10.3 -0.9

baz=303,SNR=44
LHV **Little Huntoon** 44.65 82 IAmb IAmb 09 31 20.3
comp=Z,23nm,1.5s
NVAR **Mina Array Bea** 44.66 81 P P 09 31 11.8 -0.3
comp=Z,4.8nm,0.9s,baz=286,slow=7.9,SNR=30
NVAR PcP PcP 09 32 54.4 +0.4
comp=Z,2.8nm,0.9s,baz=291,slow=2.5,SNR=4.1
NVAR ScP ScP 09 36 43.6 +1.2
comp=Z,0.7nm,0.8s,baz=264,slow=6.5,SNR=4.4
NVAR LR LR 09 46 08.9
comp=Z,170nm,21.6s,baz=295,slow=31
comp=Z,4.8nm,0.9s
NVAR **Mina Array Bea** 44.66 81 P P 09 31 10.8 -1.3
NV11 **Mina Array Sit** 44.75 81 P P 09 31 12.4 -0.4
PAGB **Antelope Grade** 45.13 86 IAmb IAmb 09 31 25.8
comp=Z,11nm,0.7s
ELK **Elko** 45.16 77 LR LR 09 46 56.2
comp=Z,267nm,20.7s,baz=302,slow=32
ELK **Elko** 45.16 77 IAmb IAmb 09 31 18.1
comp=Z,9.6nm,0.8s
ULN **Ulaanbaatar** 45.35 296 P P 09 31 16.1 -1.3
ULN IAmb IAmb 09 31 19.0
comp=Z,14nm,0.9s
ULN **Ulaanbaatar** 45.35 296 *c* *i*P P 09 31 17.8 +0.5
ULN pmax pmax
comp=Z,15nm,0.9s
ULN **Ulaanbaatar** 45.35 296 P P 09 31 18.2 +0.9
ULN sP **sP** 09 31 39.0 +4.3
YMR **Madison River** 45.48 70 P P 09 31 17.5 -1.0
SONM **Songino Array** 45.73 296 P P 09 31 21.0 +0.6
comp=Z,6.5nm,0.7s,baz=55,slow=9.7,SNR=42
SONM PcP PcP 09 32 57.7 +0.2
comp=Z,1.5nm,0.7s,baz=66,slow=3.6,SNR=3.5
SONM ScP ScP 09 36 46.7 +0.2
comp=Z,0.4nm,0.4s,baz=340,slow=3.8,SNR=1.9
comp=Z,6.5nm,0.7s
SONM **Songino Array** 45.73 296 P P 09 31 20.8 +0.4
SONM IAmb IAmb 09 31 21.7
comp=Z,9.4nm,0.9s
SONM PcP 09 32 57.1 -0.4
VES **Vestal, Richgr** 45.79 85 P P 09 31 20.0 -0.8
baz=309
YPP **Pitchstone Pla** 45.80 70 IAmb IAmb 09 31 36.7
comp=Z,11nm,1.0s
LCH **Last Change Ra** 45.81 82 P P 09 31 21.3 +0.2
H17A **Grant Village** 45.86 70 P P 09 31 21.4 -0.1
baz=304,SNR=30
LKWY **Lake** 45.87 70 IAmb IAmb 09 31 23.9
comp=Z,22nm,0.8s
FLWY **Flagg Ranch** 45.96 70 IAmb IAmb 09 31 24.1
comp=Z,24nm,0.8s
CWC **Cottonwood Cre** 46.04 83 P P 09 31 22.6 -0.3
baz=309
HVU **Hansel Valley** 46.05 74 P P 09 31 22.6 -0.4
HVU IAmb IAmb 09 31 50.8
comp=Z,9.1nm,0.8s
HVU **Hansel Valley** 46.05 74 P P 09 31 22.6 -0.4
HVU pmax pmax
comp=Z,9.0nm,0.8s
TIA **Tai'an** 46.09 276 ⇑P P 09 31 23.3 +0.1
TIA pmax pmax
comp=Z,30nm,0.9s
ZAK **Zakamensk** 46.10 300 *e*P P 09 31 23.3 +0.2
ZAK pmax pmax
comp=Z,20nm,1.4s
TPAW **Teton Pass** 46.16 71 P P 09 31 23.9 0.0
TPAW IAmb IAmb 09 31 26.3
comp=Z,10nm,0.9s
RLMT **Red Lodge** 46.22 68 P P 09 31 23.7 -0.6
baz=304,SNR=31
ISA **Isabella, Lake** 46.28 85 P P 09 31 24.3 -0.4
baz=310
REDW **Red Top Meadow** 46.29 71 P P 09 31 25.6 +0.7
REDW IAmb IAmb 09 31 26.6
comp=Z,10nm,1.0s
SNOW **Snow King Moun** 46.29 71 P P 09 31 23.5 -1.5
SNOW IAmb IAmb 09 31 48.0
comp=Z,13nm,1.1s
R11A **Troy Canyon, C** 46.40 80 P P 09 31 24.0 -1.8
baz=308,SNR=22
AHID **Auburn Hatcher** 46.48 72 IAmb IAmb 09 31 27.9
comp=Z,28nm,1.2s
MOY **Mondy** 46.64 303 *e*P P 09 31 28.2 +0.8
MOY pmax pmax
comp=Z,25nm,1.2s
MPMC **Manual Prospec** 46.65 83 P P 09 31 27.3 -0.5
baz=309,SNR=5.3
HHC **Hu-ho-hao-te** 46.67 285 *e*P P 09 31 28.8 +1.0
HHC pmax pmax
comp=Z,74nm,1.2s
HHC pmax pmax
comp=Z,190nm,8.1s
HHC LR LR
comp=Z,380nm,18.3s
HHC LR LR
comp=Z,440nm,16.8s
HHC LR LR
comp=Z,250nm,16.0s
S11A **Rachel** 46.73 81 IAmb IAmb 09 31 45.9
comp=Z,16nm,0.9s
GUMO **Guam** 46.76 229 LR LR 09 49 21.3
comp=Z,110nm,19.5s,baz=62,slow=34
FURC **Furnace Creek,** 46.78 83 P P 09 31 29.0 +0.5
baz=309
HNS **HongShan** 46.85 279 ⇑P P 09 31 30.0 +0.9
HNS pP **pP** 09 31 39.8 -1.2
HNS sP **sP** 09 31 44.3 -1.8
HNS PcP **PcP** 09 33 05.6 +4.2
HNS S **S** 09 38 20.9 +4.6
HNS pmax pmax
comp=Z,29nm,0.9s
HNS LR LR
comp=Z,170nm,19.1s
HNS LR LR
comp=Z,130nm,17.5s
HNS LR LR
comp=Z,260nm,24.0s
TPNV **Topopah Spring** 46.86 82 IAmb IAmb 09 31 45.1
comp=Z,20nm,0.8s
TPNV **Topopah Spring** 46.86 82 P P 09 31 28.7 -0.7
baz=309,SNR=25
FCC **Fort Churchill** 46.87 45 P P 09 31 28.3 -0.6
FCC IAmb IAmb 09 31 30.4
comp=Z,18nm,1.4s
FCC **Fort Churchill** 46.87 45 P P 09 31 28.3 -0.6
FCC pmax pmax
comp=Z,18nm,1.5s
HWUT **Hardware Ranch** 46.89 74 P P 09 31 29.5 -0.1
LRMC **Laurel Mtn Rad** 46.90 84 P P 09 31 28.8 -0.8
baz=310
DUG **Dugway, Tooele** 46.98 76 P P 09 31 29.7 -0.5
DUG IAmb IAmb 09 31 45.6
comp=Z,20nm,1.1s
DUG **Dugway, Tooele** 46.98 76 P P 09 31 29.7 -0.5
DUG pmax pmax
comp=Z,20nm,1.1s
DUG **Dugway, Tooele** 46.98 76 P P 09 31 29.7 -0.5
baz=307,SNR=21
EDW2 **Edwards Air Fo** 47.09 85 P P 09 31 30.5 -0.5
baz=310
LAO **LASA Array** 47.09 65 P P 09 31 30.9 0.0
LAO IAmb IAmb 09 31 33.0
comp=Z,18nm,1.1s
LAO **LASA Array** 47.09 65 P P 09 31 30.1 -0.8
baz=304,SNR=7.3
NOR **Nord** 47.15 3 *i* P P 09 31 30.6 -0.2
NOR IAmb IAmb 09 31 31.4
comp=Z,3.4nm,0.8s
DGMT **Dagmar** 47.23 62 P P 09 31 31.0 -1.0
baz=304
PRN **Pahroc Range** 47.31 80 IAmb IAmb 09 31 48.8
comp=Z,18nm,0.9s
CTU **Camp Tracy** 47.32 75 IAmb IAmb 09 31 44.7
comp=Z,11nm,1.1s
PSUT **Pine Spring** 47.35 78 P P 09 31 32.9 -0.3
PSUT IAmb IAmb 09 31 44.1
comp=Z,8.4nm,0.8s
BW06 **Boulder Array** 47.41 71 P P 09 31 33.6 0.0
BW06 **Boulder Array** 47.41 71 P P 09 31 33.2 -0.5
baz=306,SNR=56
PD31 **Pinedale Array** 47.41 71 P P 09 31 33.8 +0.1
PDAR **Pinedale Array** 47.41 71 P P 09 31 33.6 0.0
comp=Z,26nm,0.7s,baz=304,slow=4.2,SNR=151
PDAR ScP ScP 09 36 53.0 -0.7
comp=Z,0.1nm,0.4s,baz=338,slow=7.0,SNR=2.0
PDAR LR LR 09 49 14.9
comp=Z,121nm,21.9s,baz=323,slow=33

comp=Z,26nm,0.7s
SHOC Shoshone, Teco 47.51 83 P **P** 09 31 34.0 -0.3
baz=310,SNR=7.7
GSC Goldstone, Bar 47.56 84 P **P** 09 31 34.3 -0.5
GSC IAmb IAmb 09 31 55.9
comp=Z,9.2nm,0.9s
GSC Goldstone, Bar 47.56 84 P **P** 09 31 34.3 -0.5
GSC pmax pmax
comp=Z,9.0nm,1.0s
GSC Goldstone, Bar 47.56 84 P **P** 09 31 34.2 -0.5
baz=310,SNR=6.4
JLU Jordanelle 47.56 75 IAmb IAmb 09 31 36.5
comp=Z,13nm,1.2s
NLU North Lily Min 47.57 76 IAmb IAmb 09 31 49.4
comp=Z,10nm,0.9s
BFSC Mount Baldy Ra 47.71 85 P **P** 09 31 35.4 -0.6
baz=311,SNR=5.6
NJ2 Nanjing 47.72 271 *e*P **P** 09 31 32.8 -3.1
NJ2 pmax pmax
comp=Z,6.0nm,0.6s
BTO Baotou 47.76 286 *e*P **P** 09 31 37.4 +1.2
BTO S **S** 09 38 34.3 +4.9
BTO LR LR
comp=Z,750nm,14.7s
BTO LR LR
comp=Z,870nm,15.3s
MPU Maple Canyon 47.80 75 P **P** 09 31 34.2 -2.5
TIY Taiyuan 48.06 281 *e*P **P** 09 31 40.3 +1.7
TIY pmax pmax
comp=Z,30nm,0.7s
TIY pmax pmax
comp=Z,130nm,4.7s
TIY LR LR
comp=Z,130nm,14.3s
TIY LR LR
comp=Z,91nm,13.6s
TIY LR LR
comp=Z,220nm,18.4s
HEC Hector,Ludlow 48.16 84 P **P** 09 31 38.8 -0.5
baz=310
BBRC Big Bear Solar 48.16 85 P **P** 09 31 39.9 +0.3
baz=311
TCRU Three Creeks R 48.17 77 P **P** 09 31 38.0 -1.6
TCRU IAmb IAmb 09 32 07.5
comp=Z,17nm,1.2s
CCUT Cedar City 48.27 79 P **P** 09 31 39.6 -0.8
MSU Marysvale 48.40 77 P **P** 09 31 41.8 +0.5
MSU Marysvale 48.40 77 P **P** 09 31 41.8 +0.5
MURC Murrieta 48.42 86 P **P** 09 31 41.1 -0.2
baz=311
TMUT Trail Mountain 48.50 76 IAmb IAmb 09 31 56.9
comp=Z,12nm,0.8s
GMRC Granite Mounta 48.61 83 P **P** 09 31 42.5 -0.4
baz=310
P17A Butcher Ranch, 48.68 75 P **P** 09 31 42.7 -0.8
P17A IAmb IAmb 09 31 58.0
comp=Z,9.2nm,0.8s
LCMT Little Creek M 48.68 79 P **P** 09 31 43.8 +0.3
LCMT IAmb IAmb 09 31 45.0
comp=Z,9.7nm,0.9s
MTPU Mount Pierson 48.69 78 IAmb IAmb 09 31 45.6
comp=Z,8.9nm,0.9s
Q16A Castle Valley 48.76 76 P **P** 09 31 45.0 +0.9
Q16A IAmb IAmb 09 31 58.8
comp=Z,8.1nm,0.7s
PFO Pinyon Flats O 48.88 85 LR LR 09 50 27.7
comp=Z,191nm,18.2s,baz=306,slow=34
PFO Pinyon Flats O 48.88 85 P **P** 09 31 43.9 -1.0
PFO Pinyon Flats O 48.88 85*c* *i*P **P** 09 31 44.8 -0.2
PFO pmax pmax
comp=Z,8.0nm,0.9s
PFO Pinyon Flats O 48.88 85 P **P** 09 31 44.8 -0.2
baz=311
PFO Pinyon Flats O 48.88 85 P **P** 09 31 44.7 -0.2
PFO pP **pwP** 09 31 59.1 -0.7
TPFO Pinon Flats 48.88 85 P **P** 09 31 44.3 -0.7
baz=311
P18A Preston Nutter 48.88 75 P **P** 09 31 45.6 +0.4
P18A IAmb IAmb 09 32 09.4
comp=Z,14nm,1.0s
BELC Belle Mtn. Jos 48.91 84 P **P** 09 31 44.5 -0.7
baz=311
109C Camp Elliot, M 48.95 86 IAmb IAmb 09 31 46.4
comp=Z,12nm,0.6s
109C Camp Elliot, M 48.95 86 P **P** 09 31 45.4 +0.1
baz=312
SRU San Rafael Swe 49.04 76 IAmb IAmb 09 31 57.3
comp=Z,14nm,1.0s
KNGR Kungurtug, Tuv 49.05 303 ⇓*i*P **P** 09 31 47.3 +1.2
KNGR pmax pmax
comp=Z,19nm,0.9s
K22A Casper 49.27 69 IAmb IAmb 09 31 48.4
comp=Z,14nm,0.8s
K22A Casper 49.27 69 P **P** 09 31 47.0 -0.9
baz=307,SNR=9.9
NEE2 Needles Airpor 49.27 83 P **P** 09 31 47.5 -0.3
baz=311
IRM Iron Mountain 49.34 84 P **P** 09 31 47.8 -0.6
baz=311,SNR=5.7
BAR Barrett 49.36 86 P **P** 09 31 48.3 -0.2
BAR IAmb IAmb 09 31 49.5
comp=Z,9.2nm,0.8s
MONP2 Monument Peak 49.38 86 P **P** 09 31 48.1 -0.8
baz=312
RWWY Rawlins 49.45 71 IAmb IAmb 09 31 50.0
comp=Z,18nm,1.0s
BC3 Big Chuckawall 49.48 84 P **P** 09 31 49.0 -0.6
baz=311
W13A Hualapai Mount 49.51 82 P **P** 09 31 49.8 -0.1
U15A North Rim 49.64 79 IAmb IAmb 09 31 52.5
comp=Z,12nm,0.7s
IKP In-Ko-Pah, Jac 49.73 86 P **P** 09 31 51.4 0.0
baz=312
O20A White River Ci 49.78 73 P **P** 09 31 51.3 -0.6
baz=308,SNR=20
RSSD Black Hills 49.84 66 P **P** 09 31 50.8 -1.5
RSSD IAmb IAmb 09 31 53.4
comp=Z,14nm,1.4s
RSSD Black Hills 49.84 66 P **P** 09 31 50.8 -1.5
RSSD pmax pmax
comp=Z,14nm,1.5s
RSSD Black Hills 49.84 66 P **P** 09 31 51.6 -0.6
baz=307
PDMCI Parker Dam,Lak 49.87 83 P **P** 09 31 51.9 -0.4
baz=311
KBS Kingsbay 49.91 357 P **P** 09 31 52.4 +0.3
KBS Kingsbay 49.91 357*c* *i*P **P** 09 31 52.5 +0.4
KBS pmax pmax
comp=Z,37nm,0.7s
KBS Kingsbay 49.91 357 *i*P **P** 09 31 51.7 -0.4
KBS Kingsbay 49.91 357 *e*P **P** 09 31 52.7 +0.6
KBS Kingsbay 49.91 357 P **P** 09 31 52.5 +0.4
KBS x x 09 32 00.4
KBS sP **sP** 09 32 12.1 +2.5
BLYC Blythe 50.00 84 P **P** 09 31 51.1 -2.2
BLYC IAmb IAmb 09 32 08.3
comp=Z,8.4nm,0.8s
LYN LuoYang 50.07 278 ⇑P **P** 09 31 54.1 +0.2
LYN S **S** 09 39 05.8 +4.1
LYN pmax pmax
comp=Z,20nm,0.8s
LYN LR LR
comp=Z,150nm,17.3s
LYN LR LR
comp=Z,170nm,13.3s
LYN LR LR
comp=Z,150nm,16.5s
MDND Maddock 50.12 60 P **P** 09 31 52.3 -1.8
MDND Maddock 50.12 60 P **P** 09 31 53.2 -0.9
baz=306
GLA Glamis 50.27 85 P **P** 09 31 55.2 -0.2
baz=312
PV23 Carpenter Ridg 50.37 75 P **P** 09 31 54.9 -1.6
PV23 IAmb IAmb 09 32 10.4
comp=Z,8.9nm,0.8s
PV10 Paradox Valley 50.40 75 P **P** 09 31 55.8 -0.9
PV10 IAmb IAmb 09 32 21.9
comp=Z,16nm,0.8s
SPA0 Spitsbergen Ar 50.46 356 *e*P **P** 09 31 56.2 -0.1
SPITS Spitsbergen Ar 50.46 356 LR LR 09 53 22.1
comp=Z,187nm,19.9s,baz=338,slow=36
SPITS Spitsbergen Ar 50.46 356 P **P** 09 31 56.0 -0.3
SPITS pmax pmax
comp=Z,64nm,0.8s
SPB2 Spitsbergen Ar 50.47 356 P **P** 09 31 56.0 -0.4
PV13 Radium Mtn., P 50.67 75 P **P** 09 31 58.5 -0.2

N23A Red Feather La 50.69 71 P **P** 09 31 59.0 +0.2
N23A IAmb IAmb 09 32 00.8
comp=Z,24nm,1.3s
N23A Red Feather La 50.69 71 P **P** 09 31 58.3 -0.5
baz=308,SNR=11
ULM Lac du Bonnet 50.69 56 P **P** 09 31 56.9 -1.5
comp=Z,1.5nm,0.4s,baz=281,slow=6.4,SNR=2.0
ULM PcP **PcP** 09 33 14.2 -0.9
comp=Z,4.3nm,0.9s,baz=319,slow=3.5,SNR=3.6
ULM ScP **ScP** 09 37 10.0 +2.8
comp=Z,2.1nm,0.6s,baz=35,slow=2.8,SNR=3.4
ULM LR LR 09 53 34.9
comp=Z,297nm,20.7s,baz=306,slow=36
comp=Z,1.5nm,0.4s
PHWY Pilot Hill 50.72 70 IAmb IAmb 09 31 59.4
comp=Z,11nm,1.5s
PV15 Paradox Valley 50.76 75 IAmb IAmb 09 32 18.8
comp=Z,10.0nm,0.8s
WUAZ Wupatki 50.80 80 IAmb IAmb 09 32 01.0
comp=Z,11nm,0.8s
WUAZ Wupatki 50.80 80 P **P** 09 31 59.1 -0.5
baz=310,SNR=10.0
SMCO Snowmass 51.15 73 P **P** 09 32 01.2 -1.2
MVCO Mesa Verde 51.47 76 P **P** 09 32 03.5 -1.2
MVCO IAmb IAmb 09 32 20.3
comp=Z,9.1nm,0.8s
MVCO Mesa Verde 51.47 76 P **P** 09 32 04.0 -0.7
baz=310,SNR=6.1
ISCO Idaho Springs 51.57 72 IAmb IAmb 09 32 07.1
comp=Z,9.6nm,0.9s
ISCO Idaho Springs 51.57 72 P **P** 09 32 05.5 0.0
baz=309,SNR=10
HSPB Hornsund (broa 51.66 355 *e*P **P** 09 32 05.6 +0.4
HSPB Hornsund (broa 51.66 355 *e*P **P** 09 32 05.3 +0.1
DAG Danmarks Havn 51.77 5 *i*P **P** 09 32 05.0 -1.1
DAG IAmb IAmb 09 32 06.0
comp=Z,6.9nm,0.8s
AGMN Agassiz Nation 51.86 58 P **P** 09 32 05.8 -1.3
baz=307
S22A 4UR Ranch, Cre 52.15 75 IAmb IAmb 09 32 12.3
comp=Z,9.2nm,1.1s
S22A 4UR Ranch, Cre 52.15 75 P **P** 09 32 09.5 -0.3
baz=310,SNR=14
SSLB Suanglung 52.20 261 P **P** 09 32 08.2 -1.9
214A Organ Pipe Nat 52.26 84 P **P** 09 32 09.6 -0.8
baz=312
X18A Snowflake 52.33 80 P **P** 09 32 10.4 -0.6
XAN Xi'an 52.61 280 P **P** 09 32 12.8 -0.2
XAN pP pP 09 32 18.4 -6.7
XAN sP sP 09 32 22.0 -8.1
XAN pmax pmax
comp=Z,20nm,0.9s
SDCO Great Sand Dun 52.95 74 IAmb IAmb 09 32 17.4
comp=Z,9.6nm,1.1s
SDCO Great Sand Dun 52.95 74 P **P** 09 32 15.8 +0.1
baz=310,SNR=15
B35A Bob, Littlefor 52.95 57 IAmb IAmb 09 32 16.7
comp=Z,15nm,1.4s
OGNE Ogallala 52.96 68 P **P** 09 32 15.9 +0.3
baz=309
TUC Tucson 53.29 82 P **P** 09 32 17.4 -0.6
TUC Tucson 53.29 82 P **P** 09 32 17.4 -0.6
TUC pmax pmax
comp=Z,5.0nm,0.9s
TUC Tucson 53.29 82 P **P** 09 32 17.8 -0.3
baz=312
TUC Tucson 53.29 82 P **P** 09 32 18.4 +0.3
TUC pP **pwP** 09 32 32.9 -0.2
TUC sP **sP** 09 32 37.8 +3.2
ZAA0 Zalesovo Array 53.34 313 P **P** 09 32 17.2 -0.9
ZAA0 IAmb IAmb 09 32 20.3
comp=Z,7.9nm,1.1s
ZALV Zalesovo Beam 53.34 313 P **P** 09 32 17.6 -0.5
comp=Z,2.9nm,0.3s,baz=54,slow=6.9,SNR=14
ZALV PcP **PcP** 09 33 25.7 +0.8
comp=Z,5.4nm,0.7s,baz=28,slow=4.0,SNR=6.4
comp=Z,2.9nm,0.3s
ZALV Zalesovo Beam 53.34 313 P **P** 09 32 17.4 -0.6
ZALV **PcP** 09 33 24.2 -0.7
SUMG Summit 53.72 13 P **P** 09 32 21.2 +0.2
SUMG Summit 53.72 13 P **P** 09 32 21.2 +0.2
SUMG pmax pmax
comp=Z,28nm,1.0s
SUMG Summit 53.72 13 *i*P **P** 09 32 20.0 -1.0
SUMG IAmb IAmb 09 32 22.3
comp=Z,12nm,1.0s
KSCO Kaye Shedlock' 53.85 71 P **P** 09 32 21.8 -0.3
baz=310,SNR=10
BJO1 Bjornoya 53.89 354 *e*P **P** 09 32 21.7 0.0
T25A Trinidad 54.00 74 P **P** 09 32 22.3 -1.0
T25A IAmb IAmb 09 32 25.7
comp=Z,22nm,1.1s
T25A Trinidad 54.00 74 P **P** 09 32 23.5 +0.2
baz=311,SNR=20
DBG Daneborg 54.07 6 *i*P **P** 09 32 21.3 -1.7
DBG IAmb IAmb 09 32 22.4
comp=Z,9.2nm,0.7s
ANMO Albuquerque 54.20 77 LR LR 09 52 51.8
comp=Z,215nm,21.8s,baz=304,slow=33
ANMO Albuquerque 54.20 77 P **P** 09 32 23.1 -1.7
ANMO Albuquerque 54.20 77 ⇓*i*P **P** 09 32 25.3 +0.5
ANMO pmax pmax
comp=Z,4.0nm,1.0s
ANMO Albuquerque 54.20 77 P **P** 09 32 24.7 -0.2
baz=312
ANMO Albuquerque 54.20 77 P **P** 09 32 25.4 +0.5
ANMO pP **pwP** 09 32 39.9 +0.9
ECSD EROS Data Cent 54.29 63 P **P** 09 32 23.9 -1.2
ECSD EROS Data Cent 54.29 63 P **P** 09 32 23.8 -1.3
baz=310,SNR=5.3
LZH Lanzhou 54.37 285 ⇑P **P** 09 32 26.9 +0.9
LZH sP pP 09 32 39.6 +1.1
LZH PP **PP** 09 34 23.4 -4.6
LZH pmax pmax
comp=Z,36nm,1.5s
LZH pmax pmax
comp=Z,100nm,4.5s
LZH LR LR
comp=Z,210nm,15.8s
LZH LR LR
comp=Z,250nm,16.1s
LZH LR LR
comp=Z,240nm,16.8s
EYMN Ely 54.38 56 P **P** 09 32 24.4 -1.4
EYMN IAmb IAmb 09 32 27.5
comp=Z,11nm,1.2s
EYMN Ely 54.38 56 P **P** 09 32 24.3 -1.4
baz=309,SNR=7.2
GTA Gaotai 54.60 291 ⇑P **P** 09 32 28.3 +0.7
GTA pP pP 09 32 38.8 -1.3
GTA pmax pmax
comp=Z,19nm,1.0s
GTA pmax pmax
comp=Z,130nm,4.5s
GTA LR LR
comp=Z,200nm,17.1s
GTA LR LR
comp=Z,250nm,16.7s
GTA LR LR
comp=Z,350nm,17.8s
F36A Milaca 54.63 59 P **P** 09 32 27.8 +0.3
BNM Barren Site 54.63 78 P **P** 09 32 26.2 -1.8
ENH Enshi 54.80 276 P **P** 09 32 27.5 -1.5
ENH IAmb IAmb 09 32 29.5
comp=Z,14nm,0.9s
121A Cookes Peak, D 55.01 80 P **P** 09 32 30.6 -0.1
baz=313
E38A The Farm, Brul 55.20 57 IAmb IAmb 09 32 47.1
comp=Z,7.7nm,0.8s
CBKS Cedar Bluff 55.69 69 P **P** 09 32 34.2 -1.1
CBKS Cedar Bluff 55.69 69 P **P** 09 32 34.2 -1.1
CBKS pmax pmax
comp=Z,36nm,0.8s
CBKS Cedar Bluff 55.69 69 P **P** 09 32 34.5 -0.8
baz=311,SNR=7.9
ICESG Greenland Ices 56.61 16 *i*P **P** 09 32 40.2 -1.6
ICESG IAmb IAmb 09 32 41.2
comp=Z,11nm,0.7s
G40A Rib Lake 56.79 58 P **P** 09 32 42.3 -0.7
COWI Conover 56.80 56 P **P** 09 32 41.5 -1.7
MNTX Cornudas Mount 57.06 79 IAmb IAmb 09 33 02.7
comp=Z,7.2nm,0.9s
MNTX Cornudas Mount 57.06 79 P **P** 09 32 44.8 -0.4
baz=314,SNR=9.7
MSTX Muleshoe 57.11 75 IAmb IAmb 09 33 01.8
comp=Z,7.1nm,0.8s

MSTX Muleshoe 57.11 75 P **P** 09 32 45.0 -0.6
baz=313
K38A Parkersburg 57.13 61 P **P** 09 32 45.1 -0.3
K38A IAmb IAmb 09 32 47.4
comp=Z,9.4nm,1.1s
AMTX Amarillo 57.15 74 P **P** 09 32 45.6 -0.3
baz=313
HAMF Hammerfest 57.20 351 *e*P **P** 09 32 44.4 -1.1
KSU1 Kansas State U 57.32 67 P **P** 09 32 46.3 -0.6
baz=312
SCIA State Center 57.38 62 P **P** 09 32 47.1 -0.1
baz=312
I40A Norwalk 57.48 59 IAmb IAmb 09 32 49.5
comp=Z,10nm,1.1s
KEV Kevo 57.68 349 P **P** 09 32 47.6 -1.3
KEV IAmb IAmb 09 32 49.0
comp=Z,15nm,1.4s
KEV Kevo 57.68 349 P **P** 09 32 47.6 -1.3
KEV pmax pmax
comp=Z,15nm,1.4s
KEV Kevo 57.68 349 P **P** 09 32 47.8 -1.1
KEV sP **sP** 09 33 07.9 +1.3
E43A Lone Tree Farm 57.73 55 P **P** 09 32 48.8 -0.8
E43A IAmb IAmb 09 32 54.5
comp=Z,5.4nm,0.7s
CD2 Chengdu 57.93 281 *e*P **P** 09 32 50.0 -1.3
JMIC Jan Mayen 57.98 3 LR LR 09 59 47.9
comp=Z,50nm,18.5s,baz=1.0,slow=38
ARA0 ARCESS Array S 58.06 350 *e*P **P** 09 32 50.6 -1.1
ARA0 IAmb IAmb 09 32 51.5
comp=Z,15nm,1.0s
ARCES ARCESS Array B 58.06 350 P **P** 09 32 50.6 -1.0
comp=Z,7.4nm,0.8s,baz=24,slow=8.0,SNR=33
ARCES PcP **PcP** 09 33 43.0 0.0
comp=Z,2.9nm,0.8s,baz=14,slow=5.4,SNR=3.8
ARCES LR LR 10 00 40.2
comp=Z,157nm,18.5s,baz=334,slow=39
comp=Z,7.4nm,0.8s
ARCES ARCESS Array B 58.06 350 P **P** 09 32 50.6 -1.0
ARCES IAmb IAmb 09 32 51.7
comp=Z,13nm,1.0s
ARCES ARCESS Array B 58.06 350 P **P** 09 32 50.6 -1.0
ARCES pmax pmax
comp=Z,13nm,1.0s
N38A Joes South For 58.11 63 IAmb IAmb 09 33 13.0
comp=Z,12nm,0.7s
LVZ Lovozero 58.33 345 P **P** 09 32 52.4 -1.2
LVZ Lovozero 58.33 345 ⇑*i*P **P** 09 32 52.3 -1.2
LVZ pmax pmax
comp=Z,23nm,0.9s
LVZ Lovozero 58.33 345 P **P** 09 32 52.4 -1.2
LVZ sP **sP** 09 33 16.0 +4.7
JFWS Jewell Farm 58.33 60 P **P** 09 32 53.9 0.0
JFWS Jewell Farm 58.33 60 P **P** 09 32 53.9 0.0
JFWS pmax pmax
comp=Z,15nm,0.7s
JFWS Jewell Farm 58.33 60 P **P** 09 32 52.4 -1.5
baz=312,SNR=8.1
KURK Kurchatov 58.34 313 P **P** 09 32 53.6 -0.2
KURK Kurchatov 58.34 313*c* *e*P **P** 09 32 54.0 +0.2
KURK pmax pmax
comp=Z,55nm,1.0s
KURK Kurchatov 58.34 313 P **P** 09 32 54.2 +0.4
L40A Anamosa 58.37 61 P **P** 09 32 53.2 -1.0
I42A Draeger Farm, 58.39 58 IAmb IAmb 09 33 10.5
comp=Z,10nm,0.7s
KURBB Kurchatov Arra 58.44 313 P **P** 09 32 54.8 +0.3
comp=Z,33nm,0.7s,baz=42,slow=6.7,SNR=213
KURBB PcP **PcP** 09 33 45.3 +0.6
comp=Z,2.6nm,0.8s,baz=50,slow=7.7,SNR=4.2
comp=Z,33nm,0.7s
WMQ Urumqi 58.50 302 ⇑P **P** 09 32 55.9 +0.7
WMQ pP pP 09 33 08.6 +0.8
WMQ pmax pmax
comp=Z,30nm,0.9s
WMQ pmax pmax
comp=Z,130nm,4.3s
WMQ LR LR
comp=Z,660nm,16.9s
WMQ LR LR
comp=Z,550nm,19.7s
WMQ LR LR
comp=Z,570nm,18.3s
JETT Jettan, Norway 58.57 352 *e*P **P** 09 32 54.6 -0.6
TRO Tromso 58.63 352 *e*P **P** 09 32 54.7 -0.8
P38A Dawn 58.73 64 P **P** 09 32 55.9 -0.8
KTK1 Kautokeino 58.81 350 *e*P **P** 09 32 56.2 -0.6
T35A Sooner Cattle 58.85 69 IAmb IAmb 09 32 57.9
comp=Z,22nm,1.2s
WMOK Wichita Mounta 58.99 72 P **P** 09 32 58.9 +0.2
WMOK IAmb IAmb 09 32 59.9
comp=Z,12nm,0.8s
WMOK Wichita Mounta 58.99 72 P **P** 09 32 58.9 +0.2
WMOK pmax pmax
comp=Z,12nm,0.8s
WMOK Wichita Mounta 58.99 72 P **P** 09 32 57.6 -1.0
baz=313,SNR=8.3
E46A Sault Ste Mari 59.10 53 IAmb IAmb 09 33 09.0
comp=Z,9.1nm,0.8s
L42A Oliver, Polo 59.27 60 P **P** 09 32 59.4 -1.0
L42A IAmb IAmb 09 33 02.1
comp=Z,13nm,0.9s
MK31 Makanchi Array 59.27 308 P **P** 09 33 00.0 -0.4
MK31 IAmb IAmb 09 33 01.0
comp=Z,9.7nm,0.8s
MK31 Makanchi Array 59.27 308 P **P** 09 33 00.0 -0.4
MK31 pmax pmax
comp=Z,10.0nm,0.8s
MKAR Makanchi Array 59.27 308 P **P** 09 32 59.8 -0.6
comp=Z,4.5nm,0.3s,baz=54,slow=7.4,SNR=60
MKAR LR LR 10 00 03.9
comp=Z,233nm,19.6s,baz=40,slow=38
comp=Z,4.5nm,0.3s
MKAR Makanchi Array 59.27 308 P **P** 09 33 00.0 -0.4
MKAR Makanchi Array 59.27 308*c* *e*P **P** 09 33 00.0 -0.4
MKAR pmax pmax
comp=Z,5.0nm,0.3s
N41A Harden Midland 59.50 62 P **P** 09 33 01.4 -0.6
GOMU GeErMu 59.69 291 P **P** 09 33 03.8 -0.1
GOMU S **S** 09 41 15.3 +3.8
GOMU pmax pmax
comp=Z,10.0nm,0.9s
GOMU pmax pmax
comp=Z,24nm,4.3s
GOMU LR LR
comp=Z,160nm,15.6s
GOMU LR LR
comp=Z,130nm,15.4s
GOMU LR LR
comp=Z,110nm,15.6s
TX31 Lajitas Ar. Si 59.76 80 P **P** 09 33 04.2 +0.1
TX31 IAmb IAmb 09 33 28.3
comp=Z,14nm,0.9s
TX32 Lajitas Array 59.76 80 P **P** 09 33 03.6 -0.6
TXAR Lajitas Array 59.77 80 P **P** 09 33 03.8 -0.3
comp=Z,2.3nm,0.6s,baz=304,slow=5.4,SNR=40
TXAR PcP **PcP** 09 33 51.0 +0.5
comp=Z,1.3nm,0.7s,baz=298,slow=1.7,SNR=3.8
TXAR LR LR 09 58 57.7
comp=Z,159nm,18.2s,baz=272,slow=36
comp=Z,2.3nm,0.6s
ABTX Abilene, Hawle 59.93 74 P **P** 09 33 05.2 0.0
ABTX IAmb IAmb 09 33 20.0
comp=Z,12nm,1.1s
ABTX Abilene, Hawle 59.93 74 P **P** 09 33 04.7 -0.5
baz=314
TUL1 Leonard 59.96 69 P **P** 09 33 04.7 -0.5
TUL1 Leonard 59.96 69 P **P** 09 33 03.9 -1.4
baz=314,SNR=8.7
ANGG Ammassalik, Gr 60.07 17 P **P** 09 33 04.2 -1.3
KRVT Keravat (AS076 60.08 212 LR LR 09 53 58.8
comp=Z,138nm,21.4s,baz=203,slow=31
L44A Lake County Fo 60.10 59 P **P** 09 33 05.4 -0.7
baz=314
S39A Bolivar 60.17 66 P **P** 09 33 04.6 -2.1
BRVK Borovoye 60.32 319 P **P** 09 33 08.2 +0.8
BRVK pP **sP** 09 33 24.5 -0.8
R40A Maddies Statio 60.36 65 P **P** 09 33 07.1 -0.8
R40A IAmb IAmb 09 33 08.2
comp=Z,7.4nm,0.6s
U38A Gravette 60.42 68 IAmb IAmb 09 33 23.2
comp=Z,6.4nm,0.8s
HDIL Hopedale 60.46 61 P **P** 09 33 07.7 -0.9
baz=314
LOF Lofoten 60.52 354 *e*P **P** 09 33 08.1 -0.4
STEI Steigen 60.59 353 *e*P **P** 09 33 06.8 -2.3

HHAR Hobbs 60.79 68 P **P** 09 33 09.8 -1.1
HHAR IAmb IAmb 09 33 10.2
comp=Z,5.1nm,0.9s
SCHQ Schefferville 60.81 37 P **P** 09 33 09.8 -1.1
comp=Z,9.1nm,0.9s,baz=325,slow=7.3,SNR=9.7
SCHQ LR LR 10 01 01.2
comp=Z,207nm,21.3s,baz=308,slow=38
comp=Z,9.1nm,0.9s
SCHQ Schefferville 60.81 37 P **P** 09 33 10.2 -0.6
SCHQ IAmb IAmb 09 33 11.4
comp=Z,11nm,1.0s
CCM Cathedral Cave 61.10 64 P **P** 09 33 11.4 -1.6
CCM IAmb IAmb 09 33 32.6
comp=Z,5.3nm,0.8s
CCM Cathedral Cave 61.10 64 P **P** 09 33 11.4 -1.6
CCM pmax pmax
comp=Z,5.0nm,0.8s
CCM Cathedral Cave 61.10 64 P **P** 09 33 11.9 -1.1
baz=314
CCM Cathedral Cave 61.10 64 P **P** 09 33 11.9 -1.1
CCM x x 09 33 23.0
CCM pP **pP** 09 33 25.7 +0.4
CCM sP **sP** 09 33 30.1 -0.2
X37A Clayton 61.12 70 **P** 09 33 12.7 -0.5
X37A IAmb IAmb 09 33 14.3
comp=Z,15nm,0.9s
FAUS Fauske 61.13 353 *e*P **P** 09 33 12.2 -0.6
MGMO Mountain Grove 61.15 66 P **P** 09 33 12.3 -1.0
MGMO IAmb IAmb 09 33 13.3
comp=Z,7.1nm,0.8s
VLDQ Val d'Or 61.22 48 IAmb IAmb 09 33 11.7
comp=Z,5.8nm,0.9s
JCT Junction City 61.34 76 IAmb IAmb 09 33 15.0
comp=Z,10nm,1.3s
JCT Junction City 61.34 76 P **P** 09 33 14.0 -0.8
baz=315
W39A Magazine 61.63 68 P **P** 09 33 15.4 -1.2
baz=314,SNR=9.2
PRGR Permogore 61.64 337 *e*P **P** 09 33 15.5 -0.7
SFIN Lafayette 61.79 60 P **P** 09 33 15.4 -2.2
baz=314,SNR=8.4
FCAR Ozark Folk Cen 62.11 67 P **P** 09 33 18.8 -1.0
KONS Konsvik 62.16 354 *e*P **P** 09 33 19.1 -0.6
ARU Arti 62.16 327 P **P** 09 33 20.3 +0.4
comp=Z,17nm,0.2s,baz=36,slow=5.0,SNR=22
ARU LR LR 10 02 57.0
comp=Z,319nm,20.4s,baz=29,slow=38
comp=Z,17nm,0.2s
ARU Arti 62.16 327 P **P** 09 33 20.0 +0.2
ARU Arti 62.16 327 *d i*P **P** 09 33 20.7 +0.9
ARU 09 33 57.8
ARU 09 35 33.0
ARU S **S** **09 41 46.6 +5.0**
ARU SS **SS** **09 45 44.9 +0.9**
ARU pmax pmax
comp=Z,27nm,0.7s
ARU MLR MLR
comp=Z,324nm,21.0s
MIAR Mount Ida 62.21 69 P **P** 09 33 20.5 0.0
MIAR Mount Ida 62.21 69 P **P** 09 33 20.5 0.0
MIAR pmax pmax
comp=Z,35nm,1.1s
MIAR Mount Ida 62.21 69 P **P** 09 33 19.6 -0.9
baz=315,SNR=22
PZH PanZhiHua 62.29 279 P **P** 09 33 22.0 +0.7
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,100nm,5.3s
WHAR Wooly Hollow 62.44 67 P **P** 09 33 21.2 -0.8
PBMO Poplar Bluff 62.46 65 P **P** 09 33 21.3 -0.8
S44A Carbondale 62.48 63 IAmb IAmb 09 33 38.3
comp=Z,8.9nm,0.8s
SIUC Southern Illin 62.49 63 IAmb IAmb 09 33 23.1
comp=Z,9.6nm,0.7s
W41B Gary Mavity, V 62.54 67 IAmb IAmb 09 33 23.1
comp=Z,16nm,0.9s
W41B Gary Mavity, V 62.54 67 P **P** 09 33 21.2 -1.5
baz=315,SNR=12
LCAR Lake Charles 62.54 66 P **P** 09 33 21.3 -1.4
LCAR IAmb IAmb 09 33 38.5
comp=Z,8.5nm,0.9s
SADO Sadowa 62.81 52 LR LR 10 02 27.9
comp=Z,184nm,18.6s,baz=328,slow=38
O48B Farmland 62.93 59 P **P** 09 33 24.4 -0.8
baz=315
BLO Bloomington 62.95 61 P **P** 09 33 25.0 -0.4
BLO IAmb IAmb 09 33 26.3
comp=Z,9.5nm,0.7s
BLO Bloomington 62.95 61 P **P** 09 33 25.0 -0.4
BLO pmax pmax
comp=Z,10.0nm,0.7s
WLAR White Oak Lake 63.09 69 P **P** 09 33 26.8 +0.4
KIRV Kirov 63.24 333 LR LR 10 02 45.5
comp=Z,188nm,21.5s,baz=31,slow=38
BORG Borgarnes 63.26 10 LR LR 10 03 00.5
comp=Z,141nm,18.9s,baz=334,slow=38
P48A Milroy 63.35 60 IAmb IAmb 09 33 28.5
comp=Z,10nm,0.7s
Z41A Richland Creek 63.57 69 P **P** 09 33 29.2 -0.4
baz=315
P49A Miami Univ. Ec 63.68 59 IAmb IAmb 09 33 31.3
comp=Z,9.4nm,1.1s
P49A Miami Univ. Ec 63.68 59 P **P** 09 33 29.3 -0.9
baz=316
KLMR Klimovskoe 63.76 339 *e*P **P** 09 33 28.4 -1.9
KLMR pmax pmax
comp=Z,8.0nm,0.8s
KLMR Klimovskoe 63.76 339 *e*P **P** 09 33 28.4 -1.9
KLMR AMP 09 33 30.1
comp=Z,8.0nm,0.8s
ACSO Alum Creek Sta 64.11 58 P **P** 09 33 32.5 -0.5
baz=316
HKT Hockley 64.12 74 P **P** 09 33 33.7 +0.5
HKT IAmb IAmb 09 33 35.8
comp=Z,8.8nm,1.1s
HKT Hockley 64.12 74 P **P** 09 33 33.7 +0.5
HKT pmax pmax
comp=Z,9.0nm,1.2s
T47A Sharon Grove 64.19 63 P **P** 09 33 33.6 0.0
NSS Namsos 64.19 354 *e*P **P** 09 33 32.5 -0.6
WVT Waverly 64.39 64 P **P** 09 33 34.1 -0.8
WVT IAmb IAmb 09 33 55.7
comp=Z,9.9nm,0.8s
WVT Waverly 64.39 64 P **P** 09 33 34.1 -0.8
WVT pmax pmax
comp=Z,10.0nm,0.8s
WVT Waverly 64.39 64 P **P** 09 33 34.4 -0.5
baz=316
WVT Waverly 64.39 64 P **P** 09 33 34.8 -0.2
WVT sP **sP** 09 33 54.8 +2.5
M53A WI Miller and 64.44 55 P **P** 09 33 34.5 -0.7
baz=317
OXF Oxford 64.65 66 P **P** 09 33 35.6 -1.0
baz=316,SNR=7.6
Q51A Peebles 64.78 59 IAmb IAmb 09 33 38.9
comp=Z,11nm,0.9s
WVNY West Valley, N 64.79 53 P **P** 09 33 36.4 -1.1
WVNY IAmb IAmb 09 33 46.7
comp=Z,15nm,1.1s
P52A Corning 64.99 57 P **P** 09 33 37.8 -1.0
baz=317
VALR Valaam 65.00 344 *c i*P **P** 09 33 37.0 -1.4
VALR pmax pmax
comp=Z,20nm,1.1s
O53A New Philadelph 65.03 56 P **P** 09 33 38.1 -0.9
baz=317
TARG Taragay, Kyrgy 65.14 306 IAmb IAmb 09 34 05.0
comp=Z,7.2nm,1.0s
KDJ Kajisay 65.16 307 P **P** 09 33 39.2 -0.9
KDJ Kajisay 65.16 307 P **P** 09 33 39.2 -0.9
KDJ pmax pmax
comp=Z,23nm,0.9s
V48A Smith Brothers 65.24 63 IAmb IAmb 09 34 01.1
comp=Z,9.4nm,0.9s
CLTN Cedars of Leba 65.26 63 P **P** 09 33 40.2 -0.4
CLTN IAmb IAmb 09 34 01.7
comp=Z,17nm,0.9s
U49A Red Boiling Sp 65.27 62 IAmb IAmb 09 33 41.6
comp=Z,9.5nm,0.7s
AFI Afiamalu 65.29 171 LR LR 09 59 10.7
comp=Z,214nm,18.8s,baz=49,slow=33
TKM2 Tokmak 2 65.36 308 P **P** 09 33 42.2 +0.8
SNR=24
T50A Nancy 65.42 61 IAmb IAmb 09 33 42.8
comp=Z,10nm,0.7s

ULHL Ulahol 65.54 307 P **P** 09 33 43.8 +1.2
SNR=6.4
TBLU Trondheim 65.56 355 *e*P **P** 09 33 41.2 -0.9
USP Ospenovka 65.65 309 P **P** 09 33 44.2 +1.1
SNR=13
VBMS Vicksburg 65.66 68 P **P** 09 33 43.3 +0.1
VBMS Vicksburg 65.66 68 P **P** 09 33 41.5 -1.6
baz=316,SNR=5.2
FIA1 FINESS Array S 65.69 346 P **P** 09 33 41.9 -1.1
FIA1 IAmb IAmb 09 33 43.5
comp=Z,12nm,1.1s
FINES FINESS Array B 65.70 346 P **P** 09 33 41.5 -1.5
comp=Z,4.4nm,0.7s,baz=15,slow=7.9,SNR=28
FINES LR LR 10 03 28.6
comp=Z,122nm,21.2s,baz=13,slow=37
comp=Z,4.4nm,0.7s
FINES FINESS Array B 65.70 346 P **P** 09 33 41.7 -1.3
FINES FINESS Array B 65.70 346 *ce*P **P** 09 33 41.7 -1.3
FINES pmax pmax
comp=Z,5.0nm,0.7s
CHMS Chumysh 65.72 309 P **P** 09 33 44.0 +0.5
SNR=5.7
D62A Allapoint, All 65.80 44 IAmb IAmb 09 33 57.7
comp=Z,8.5nm,1.0s
KBK Karagaybulak 65.88 309 P **P** 09 33 45.7 +1.0
SNR=10
R53A Hurricane 66.03 58 IAmb IAmb 09 34 06.6
comp=Z,12nm,1.0s
X48A Hartselle 66.05 64 IAmb IAmb 09 33 45.8
comp=Z,8.7nm,0.7s
AAK Ala-Archa 66.12 309 P **P** 09 33 47.0 +0.8
comp=Z,12nm,0.7s,baz=66,slow=5.9,SNR=17
AAK LR LR 10 04 04.0
comp=Z,256nm,20.3s,baz=40,slow=37
comp=Z,12nm,0.7s
AAK Ala-Archa 66.12 309 P **P** 09 33 46.6 +0.4
AAK IAmb IAmb 09 33 48.2
comp=Z,16nm,0.8s
AAK Ala-Archa 66.12 309 *ce*P **P** 09 33 47.1 +0.8
AAK pmax pmax
comp=Z,18nm,0.9s
AAK Ala-Archa 66.12 309 P **P** 09 33 47.2 +0.9
SWET Sewanee 66.12 63 IAmb IAmb 09 33 46.6
comp=Z,7.9nm,0.6s
146A Union 66.21 67 P **P** 09 33 46.8 0.0
BINY Binghamton 66.25 52 P **P** 09 33 45.8 -1.1
baz=318
M57A Sunshine Farm, 66.32 53 IAmb IAmb 09 34 01.3
comp=Z,9.0nm,0.8s
MOL Molde 66.38 356 *e*P **P** 09 33 47.2 -0.1
UCH Uchtor 66.42 308 P **P** 09 33 49.5 +1.0
SNR=16
EKS2 Erkin-Say 66.45 309 P **P** 09 33 49.5 +1.2
SNR=16
LSA Lhasa 66.46 288 P **P** 09 33 50.6 +1.6
SSPA Standing Stone 66.46 54 P **P** 09 33 47.7 -0.4
SSPA IAmb IAmb 09 33 58.2
comp=Z,7.4nm,0.9s
SSPA Standing Stone 66.46 54 P **P** 09 33 47.3 -0.9
baz=318
SSPA Standing Stone 66.46 54 P **P** 09 33 47.8 -0.4
TZTN Tazewell 66.48 61 P **P** 09 33 47.4 -1.0
baz=317
W50A Signal Mountai 66.48 63 P **P** 09 33 48.2 -0.2
W50A IAmb IAmb 09 34 09.3
comp=Z,10nm,0.8s
PMG Port Moresby 66.52 215 LR LR 10 00 55.4
comp=Z,134nm,18.5s,baz=57,slow=34
RAF Rauma 66.69 348 *e*P **P** 09 33 49.2 -0.1
H62A Milan 66.77 47 IAmb IAmb 09 34 06.3
comp=Z,14nm,1.1s
FPAL Fort Paine 66.79 63 IAmb IAmb 09 34 10.9
comp=Z,15nm,1.0s
AKN Aaknes 66.80 356 *e*P **P** 09 33 50.4 +0.4
AKN IAmb IAmb 09 33 51.0
comp=Z,34nm,0.9s
DOMB Dombas 66.84 355 *e*P **P** 09 33 50.2 -0.1
Y49A Blount Mountai 66.84 65 IAmb IAmb 09 33 51.0
comp=Z,10nm,0.9s
AML Almayashu 66.89 309 P **P** 09 33 52.8 +1.3
SNR=6.8
N58A Sunbury 66.90 53 IAmb IAmb 09 34 04.8
comp=Z,7.2nm,0.8s
V52A Sevierville 66.96 61 P **P** 09 33 50.2 -1.3
V52A IAmb IAmb 09 34 12.4
comp=Z,6.4nm,0.8s
TKL Tuckaleechee C 67.00 61 LR LR 10 04 11.2
comp=Z,178nm,19.0s,baz=320,slow=37
LRAL Lakeview Retre 67.10 66 P **P** 09 33 52.1 -0.3
baz=317
AKTO Aktyubinsk 67.18 324 P **P** 09 33 53.0 +0.3
comp=Z,41nm,0.8s,baz=44,slow=6.5,SNR=78
comp=Z,41nm,0.8s
AKTO Aktyubinsk 67.18 324 P **P** 09 33 53.0 +0.3
ABKAR Akbulak array 67.40 322 P **P** 09 33 54.4 +0.3
U54A Nelsons Funny 67.44 60 P **P** 09 33 55.2 +0.6
U54A IAmb IAmb 09 34 14.0
comp=Z,10nm,1.0s
NC204 NORSAR Array S 67.50 354 P **P** 09 33 54.4 -0.2
NC303 NORSAR Array S 67.51 354 P **P** 09 33 54.3 -0.3
BLA Blacksburg 67.68 58 P **P** 09 33 55.5 -0.6
baz=318
KK31 Karatay Array 67.68 312 IAmb IAmb 09 33 57.1
comp=Z,14nm,0.8s
KKAR Karatay Array 67.68 312 P **P** 09 33 56.6 +0.7
KKAR IAmb IAmb 09 33 57.1
comp=Z,14nm,0.8s
KKAR Karatay Array 67.68 312 P **P** 09 33 56.7 +0.7
KKAR pmax pmax
comp=Z,14nm,0.8s
NB2 NORSAR Subarra 67.70 354 P **P** 09 33 55.1 -0.7
baz=8.7,slow=6.5
NB2 NORSAR Subarra 67.70 354 P **P** 09 33 55.1 -0.7
comp=Z,34nm,1.0s,baz=8.7,slow=6.5
NOA NORSAR Array B 67.70 354 P **P** 09 33 55.4 -0.5
comp=Z,19nm,0.8s,baz=8.0,slow=6.3,SNR=81
NOA LR LR 10 05 13.2
comp=Z,79nm,18.8s,baz=350,slow=37
comp=Z,19nm,0.8s
KSH Kashi 67.71 306 P **P** 09 34 00.3 +3.9
KSH pP pP 09 34 09.8 +0.6
KSH sP sP 09 34 13.0 -1.2
KSH pmax pmax
comp=Z,29nm,1.0s
KSH LR LR
comp=Z,270nm,15.4s
LUPA Lehigh Univers 67.76 53 P **P** 09 33 55.9 -0.6
LUPA IAmb IAmb 09 33 57.7
comp=Z,9.9nm,0.6s
HYA Hoyanger 67.84 356 *e*P **P** 09 33 56.5 -0.1
NAO01 NORSAR Array S 67.92 354 *e*P **P** 09 33 56.8 -0.4
Z51A Franklin 67.94 64 IAmb IAmb 09 33 57.7
comp=Z,6.4nm,0.7s
NC602 NORSAR Array S 67.98 354 P **P** 09 33 57.1 -0.4
Y52A Lilburn 68.16 63 IAmb IAmb 09 33 59.8
comp=Z,26nm,1.5s
SKAR Skarslia 68.23 355 *e*P **P** 09 33 59.2 0.0
HFS Hagfors 68.42 352 LR LR 10 05 02.7
comp=Z,108nm,19.3s,baz=352,slow=37
VSU Vasula 68.44 345 *e*P **P** 09 33 59.8 -0.5
BRAL Brewton 68.44 67 P **P** 09 34 01.1 +0.3
BRAL Brewton 68.44 67 P **P** 09 34 00.7 -0.1
baz=318
ASK Askoy 68.56 357 *e*P **P** 09 34 01.4 +0.3
MTSE Matsula 68.65 347 *e*P **P** 09 34 01.4 -0.3
KMSC Kings Mountain 68.72 60 IAmb IAmb 09 34 23.9
comp=Z,10nm,0.9s
KMSC Kings Mountain 68.72 60 P **P** 09 34 01.9 -0.7
baz=318
GOGA Godfrey 68.83 63 P **P** 09 34 02.7 -0.5
baz=318
HODGE Hodges 68.89 62 IAmb IAmb 09 34 04.9
comp=Z,8.7nm,0.7s
BELG Belogornoye 69.07 331 P **P** 09 34 04.2 -0.2
comp=Z,11nm,0.4s,baz=211,slow=1.8,SNR=6.4
comp=Z,11nm,0.4s
BELG Belogornoye 69.07 331 *c i*P **P** 09 34 04.2 -0.2
BELG pmax pmax
comp=Z,3.0nm,0.8s
KONO Kongsberg 69.19 355 P **P** 09 34 05.0 -0.1
KONO Kongsberg 69.19 355 P **P** 09 34 05.0 -0.1
KONO pmax pmax
comp=Z,43nm,1.0s
KONO Kongsberg 69.19 355 *e*P **P** 09 34 05.2 +0.2
KONO Kongsberg 69.19 355 P **P** 09 34 05.3 +0.2
TAOE Nuku Hiva Isla 69.24 137 *e*LR LR 09 55 08.0
comp=Z,566nm,23.3s
TAOE Nuku Hiva Isla 69.24 137 *e*T T 10 49 37.1
comp=Z,23nm,0.2s
JSC Jenkinsville 69.40 61 P **P** 09 34 06.9 +0.1
JSC IAmb IAmb 09 34 31.2
comp=Z,6.2nm,0.7s
JSC Jenkinsville 69.40 61 P **P** 09 34 06.9 +0.1
JSC pmax pmax
comp=Z,6.0nm,0.7s
OBN Obninsk 69.63 338 P **P** 09 34 08.0 +0.2
comp=Z,5.6nm,0.4s,baz=343,slow=12,SNR=5.2
OBN LR LR 10 09 19.2
comp=Z,94nm,18.0s,baz=1.0,slow=40
comp=Z,5.6nm,0.4s
OBN Obninsk 69.63 338 *d i*P **P** 09 34 07.4 -0.4
OBN *e* 09 34 30.1
OBN *e* 09 36 41.2
OBN *e*PPP PPP 09 38 23.5
OBN pmax pmax
comp=Z,23nm,1.0s
OBN MLR MLR
comp=Z,268nm,23.0s
CHTO Chiang Mai 69.67 275 P **P** 09 34 08.1 -0.6
CHTO IAmb IAmb 09 34 09.8
comp=Z,8.1nm,0.8s
CHTO Chiang Mai 69.67 275 P **P** 09 34 08.1 -0.6
CHTO pmax pmax
comp=Z,8.0nm,0.8s
CHTO Chiang Mai 69.67 275 P **P** 09 34 08.7 0.0
KMY Karmoy 69.83 357 *e*P **P** 09 34 09.2 +0.1
BTK Batken 69.87 309 P **P** 09 34 10.8 +1.0
BTK Batken 69.87 309 P **P** 09 34 10.8 +1.0
BTK pmax pmax
comp=Z,31nm,0.8s
CMAR Chiang Mai Arr 69.93 275 P **P** 09 34 09.8 -0.4
comp=Z,6.3nm,0.7s,baz=26,slow=6.9,SNR=23
CMAR LR LR 10 07 49.7
comp=Z,48nm,19.1s,baz=50,slow=38
comp=Z,6.3nm,0.7s
CMAR Chiang Mai Arr 69.93 275 P **P** 09 34 09.4 -0.9
CMAR Chiang Mai Arr 69.93 275 *ce*P **P** 09 34 10.3 0.0
CMAR pmax pmax
comp=Z,7.0nm,0.8s
GAR Garm 70.94 309 P **P** 09 34 17.3 +1.0
PABE Paberze 71.72 346 P **P** 09 34 19.7 -0.8
PABE IAmb IAmb 09 34 20.8
comp=Z,14nm,0.8s
PABE Paberze 71.72 346 *e*P **P** 09 34 19.9 -0.6
CHGR Chuyangaron 71.77 309 P **P** 09 34 22.0 +0.7
CHGR Chuyangaron 71.77 309 P **P** 09 34 22.0 +0.7
CHGR pmax pmax
comp=Z,77nm,0.8s
NACGM Naroch 71.83 344⇑ *e*P **P** 09 34 20.8 -0.4
baz=18
PMOR Pomariorio Ree 71.83 147 *e*T T 10 52 51.6
comp=Z,9.8nm,0.2s
DEL Delary 72.02 352 *e*P **P** 09 34 21.6 -0.7
VORR Voronezh 72.11 335 *e*P **P** 09 34 25.7 +2.7
PPT Papeete 73.66 149 LR LR 10 00 32.4
comp=Z,309nm,20.4s,baz=318,slow=30
PPT2 Papeete2 73.68 149 *e*LR LR 09 57 07.8
comp=Z,513nm,27.0s
PPT2 Papeete2 73.68 149 *e*T T 10 55 09.3
comp=Z,5.1nm,0.3s
EKA Eskdalemuir Ar 73.80 2 LR LR 10 08 59.1
comp=Z,43nm,18.7s,baz=348,slow=37
ESK Eskdalemuir 73.82 2 P **P** 09 34 33.1 +0.1
ESK IAmb IAmb 09 34 34.7
comp=Z,36nm,1.4s
ESK Eskdalemuir 73.82 2 P **P** 09 34 33.1 +0.1
ESK pmax pmax
comp=Z,36nm,1.4s
DZM Mont Dzumac 73.85 193 LR LR 09 59 34.5
comp=Z,248nm,21.6s,baz=16,slow=30
DZM Mont Dzumac 73.85 193 *e*LR LR 09 57 12.8
comp=Z,433nm,24.4s
CMIG Matias Romero 74.19 82 LR LR 10 07 04.1
comp=Z,161nm,18.6s,baz=202,slow=36
RAR Rarotonga 74.39 160 LR LR 10 00 44.8
comp=Z,351nm,19.0s,baz=288,slow=30
KBL Kabul 75.07 307 P **P** 09 34 40.6 -0.3
KBL Kabul 75.07 307 P **P** 09 34 40.6 -0.3
KBL pmax pmax
comp=Z,32nm,1.0s
AKASG Malin Array Be 75.36 341 P **P** 09 34 41.3 -0.7
comp=Z,2.6nm,0.3s,baz=24,slow=6.2,SNR=29
comp=Z,2.6nm,0.3s
AKBB Malin Array Si 75.36 341 *c i*P **P** 09 34 41.2 -0.8
AKBB pmax pmax
comp=Z,20nm,1.3s
KAPI Kappang 75.60 243 LR LR 10 02 42.4
comp=Z,43nm,21.6s,baz=62,slow=32
MTN Manton Dam 76.33 229 P **P** 09 34 46.6 -1.3
MTN IAmb IAmb 09 34 47.9
comp=Z,14nm,0.8s
CTA Charters Tower 76.74 212 LR LR 10 01 09.4
comp=Z,57nm,21.4s,baz=74,slow=30
GOF Gofitskoye 76.97 330⇑ *e*P **P** 09 34 51.4 +0.1
GOF pmax pmax
comp=Z,83nm,1.0s
LVV L'vov 77.19 344 *e*P **P** 09 34 52.6 +0.2
CLL Collm 77.21 351 *i*P **P** 09 34 51.8 -0.7
CLL pmax pmax
comp=Z,6.0nm,1.1s
CLL Collm 77.21 351 *i*P **P** 09 34 51.8 -0.7
comp=Z,6.0nm,1.1s
CLL *e*SS SS 09 50 18.0 +43
CLL LmV 09 53 00.0
comp=Z,100nm,20.3s
CLL Lm MLR 10 11 00.0
comp=Z,100nm,20.1s
GEYT Alibeck 77.46 316 P **P** 09 34 54.2 0.0
comp=Z,15nm,0.9s,baz=349,slow=3.0,SNR=13
GEYT LR LR 10 14 02.2
comp=Z,284nm,18.2s,baz=38,slow=40
comp=Z,15nm,0.9s
GEYT Alibeck 77.46 316 P **P** 09 34 53.9 -0.3
GEYT IAmb IAmb 09 34 56.3
comp=Z,22nm,1.1s
GYA0B ALIBECK ARRAY 77.46 316 P **P** 09 34 53.9 -0.3
OJC Ojcow 77.47 347 *e*P **P** 09 34 54.1 +0.1
OJC Ojcow 77.47 347 P **P** 09 34 53.0 -1.0
OJC IAmb IAmb 09 34 55.3
comp=Z,14nm,1.1s
OJC Ojcow 77.47 347 P **P** 09 34 53.0 -1.0
OJC pmax pmax
comp=Z,14nm,1.1s
BRG Berggiesshubel 77.55 351 *e*P **P** 09 34 54.6 +0.1
BRG Amp 09 34 57.5
comp=Z,5.3nm,0.9s
BRG Amp 10 12 24.0
comp=N,0.2nm,26.5s
BRG Amp 10 12 28.0
comp=Z,0.1nm,18.3s
BRG Amp 10 12 37.0
comp=E,0.1nm,19.0s
BRG Berggiesshubel 77.55 351 *e*P **P** 09 34 54.5 +0.1
BRG pmax pmax
comp=Z,5.0nm,1.0s
BRG MLR MLR
comp=N,150nm,26.5s
BRG MLR MLR
comp=Z,140nm,18.3s
BRG MLR MLR
comp=E,110nm,19.0s
KWP Kalwaria Pacla 77.59 345 *e*P **P** 09 34 55.2 +0.5
KWP *ep*P **PcP** 09 35 02.7 -2.1
KWP Kalwaria Pacla 77.59 345 P **P** 09 34 55.0 +0.3
KWP Kalwaria Pacla 77.59 345 P **P** 09 34 55.0 +0.3
KIV Kislovodsk 78.07 330 *c i*P **P** 09 34 58.2 +0.6
KIV *e* 09 35 06.3
KIV *e* 09 37 59.4
KIV *e*PPP PPP 09 39 40.9
KIV pmax pmax
comp=Z,9.0nm,0.8s
KIV MLR MLR
comp=Z,68nm,18.0s
NIE Niedzica 78.18 346 *e*P **P** 09 34 58.7 +0.7
KBZ Khabaz 78.20 329 P **P** 09 34 58.6 +0.5
comp=Z,6.1nm,0.8s,baz=43,slow=2.8,SNR=12
KBZ LR LR 10 13 37.2
comp=Z,222nm,21.6s,baz=22,slow=39
comp=Z,6.1nm,0.8s
KBZ Khabaz 78.20 329 *ce*P **P** 09 34 58.6 +0.5
KBZ pmax pmax
comp=Z,7.0nm,0.8s

KOLS	**Kolonicke sedl**	**78.34**	**345**	*eP*	**P**	**09 34 59.0**	**+0.1**
KOLS	**Kolonicke sedl**	**78.34**	**345**	*eP*	**P**	**09 34 59.0**	**+0.1**
MEM	**Membach**	**78.40**	**356**	*dP*	**P**	**09 34 59.6**	**+0.5**
BTNL	**Ternell**	**78.42**	**356**	*dP*	**P**	**09 34 59.6**	**+0.3**
	comp=Z,10nm,1.2s						
BSTI	**Sart Tilman**	**78.45**	**356**	*dP*	**P**	**09 34 59.9**	**+0.5**
CRVS	**Cervenica-Dubn**	**78.50**	**345**	*eP*	**P**	**09 35 00.0**	**+0.2**
CRVS				pmax	pmax		
	comp=Z,13nm,1.3s						
CRVS	**Cervenica-Dubn**	**78.50**	**345**	*eP*	**P**	**09 35 00.0**	**+0.2**
HRA	**Herat**	**78.51**	**311**	P	**P**	**09 35 00.1**	**-0.2**
LANS	**Liptovska Anna**	**78.56**	**347**	*eP*	**P**	**09 35 01.4**	**+1.3**
LANS				pmax	pmax		
	comp=Z,12nm,1.1s						
LANS	**Liptovska Anna**	**78.56**	**347**	*eP*	**P**	**09 35 01.4**	**+1.3**
SNF	**Seneffe**	**78.58**	**357**	*dP*	**P**	**09 35 00.1**	**+0.1**
BCLA	**Clavier**	**78.62**	**356**	*dP*	**P**	**09 34 59.7**	**-0.7**
	comp=Z,7.3nm,0.8s						
ZEI	**Tsey**	**78.72**	**328**	*eP*	**P**	**09 35 01.1**	**-0.2**
ZEI				pmax	pmax		
	comp=Z,23nm,1.0s						
BMRD	**Maredsous**	**78.76**	**357**	*dP*	**P**	**09 35 01.2**	**+0.1**
	comp=Z,11nm,1.2s						
VRAC	**Vranov**	**78.79**	**349**	LR	LR	10 11 06.9	
	comp=Z,76nm,20.8s,baz=15,slow=37						
VRAC	**Vranov**	**78.79**	**349**	*eP*	**P**	**09 35 01.3**	**-0.1**
RCHB	**Rochefort**	**78.89**	**356**	*dP*	**P**	**09 35 01.6**	**-0.2**
	comp=Z,6.9nm,1.1s						
DOU	**Dourbes**	**78.98**	**357**	*dP*	**P**	**09 35 02.3**	**0.0**
	comp=Z,6.5nm,1.2s						
ONI	**Oni**	**79.04**	**328**	P	**P**	**09 35 01.1**	**-1.8**
ONI	**Oni**	**79.04**	**328**	P	**P**	**09 35 01.1**	**-1.8**
ONI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KRUC	**Moravsky**	**79.06**	**349**	*eP*	**P**	**09 35 02.5**	**-0.3**
JAVC	**Velka Javorina**	**79.10**	**348**	*eP*	**P**	**09 35 04.1**	**+1.0**
TBI	**Tubuai**	**79.12**	**151**	*e*LR	LR	09 59 38.6	
	comp=Z,472nm,23.2s						
VYHS	**Vyhne**	**79.30**	**347**	*eP*	**P**	**09 35 05.0**	**+0.9**
VYHS				pmax	pmax		
	comp=Z,5.0nm,1.1s						
VYHS	**Vyhne**	**79.30**	**347**	*eP*	**P**	**09 35 05.0**	**+0.9**
KHC	**Kasperske Hory**	**79.31**	**351**	P	**P**	**09 35 04.4**	**+0.2**
KHC				IAmb	IAmb	09 35 05.4	
	comp=Z,10nm,1.2s						
KHC	**Kasperske Hory**	**79.31**	**351**	P	**P**	**09 35 04.4**	**+0.2**
KHC				pmax	pmax		
	comp=Z,10.0nm,1.2s						
SOC	**Sochi**	**79.32**	**331**	*eP*	**P**	**09 35 02.6**	**-1.7**
SOC				*e*		09 38 00.0	
SOC				*e*PPP	PPP	09 39 51.5	
SOC				*e*S	**S**	**09 45 00.7**	**-0.5**
SOC				*e*SS	**SS**	**09 50 06.8**	**-0.6**
SOC				MLR	MLR		
	comp=Z,212nm,18.0s						
SMOL	**Smolenice**	**79.47**	**348**	*eP*	**P**	**09 35 05.8**	**+0.8**
SMOL				pmax	pmax		
	comp=Z,7.0nm,1.2s						
SMOL	**Smolenice**	**79.47**	**348**	*eP*	**P**	**09 35 05.8**	**+0.8**
GERES	**GERESS Array B**	**79.58**	**350**	P	**P**	**09 35 05.3**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=35,slow=4.9,SNR=8.2						
	comp=Z,0.8nm,0.6s						
MODS	**Modra-Piesok**	**79.62**	**348**	*eP*	**P**	**09 35 07.0**	**+1.1**
MODS				pmax	pmax		
	comp=Z,27nm,1.2s						
MODS	**Modra-Piesok**	**79.62**	**348**	*eP*	**P**	**09 35 07.0**	**+1.1**
PSZ	**Piszkesteto**	**79.70**	**346**	P	**P**	**09 35 06.5**	**+0.1**
PSZ				IAmb	IAmb	09 35 08.8	
	comp=Z,9.9nm,1.0s						
PSZ	**Piszkesteto**	**79.70**	**346**	P	**P**	**09 35 06.5**	**+0.1**
PSZ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PSZ	**Piszkesteto**	**79.70**	**346**	P	**P**	**09 35 07.5**	**+1.1**
ZST	**Bratislava**	**79.82**	**348**	*eP*	**P**	**09 35 07.8**	**+0.8**
ZST				pmax	pmax		
	comp=Z,64nm,1.5s						
ZST	**Bratislava**	**79.82**	**348**	*eP*	**P**	**09 35 07.8**	**+0.8**
RAO	**Raoul Island**	**80.14**	**178**	LR	LR	10 05 36.1	
	comp=Z,172nm,20.5s,baz=102,slow=32						
CONA	**Conrad Observa**	**80.24**	**349**	*i* P	**P**	**09 35 10.1**	**+0.8**
	comp=Z,9.7nm,1.1s,SNR=5.7						
RONA	**Rosalia, Austr**	**80.41**	**349**	*eP*	**P**	**09 35 10.7**	**+0.5**
	comp=Z,6.5nm,1.0s						
BFO	**Black Forest**	**80.55**	**354**	P	**P**	**09 35 10.7**	**-0.2**
BFO				IAmb	IAmb	09 35 11.7	
	comp=Z,14nm,1.5s						
BFO	**Black Forest**	**80.55**	**354**	P	**P**	**09 35 10.7**	**-0.2**
BFO				pmax	pmax		
	comp=Z,14nm,1.5s						
LDF	**La Druitiere**	**80.58**	**360**	*eP*	**P**	**09 35 10.1**	**-0.9**
LDF				pmax	pmax		
	comp=Z,13nm,0.8s						
BIOA	**Bad Ischl, Aus**	**80.73**	**350**	*eP*	**P**	**09 35 12.7**	**+0.8**
	comp=Z,6.8nm,0.7s						
ECH	**Echery**	**80.73**	**355**	P	**P**	**09 35 11.2**	**-0.7**
ECH	**Echery**	**80.73**	**355**	P	**P**	**09 35 11.2**	**-0.7**
ECH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MPLH	**Magyarpolny**	**80.77**	**348**	P	**P**	**09 35 13.0**	**+1.0**
GNI	**Garni**	**80.79**	**327**	LR	LR	10 16 36.1	
	comp=Z,283nm,18.3s,baz=32,slow=40						
CLF	**Chambon-Foret**	**81.11**	**358**	P	**P**	**09 35 12.8**	**-1.0**
WRAB	**Tennant Creek**	**81.13**	**222**	*i* P	**P**	**09 35 13.2**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,8.0nm,1.1s						
WRA	**Warramunga Arr**	**81.14**	**222**	P	**P**	**09 35 12.6**	**-1.6**
	comp=Z,3.1nm,0.8s,baz=38,slow=6.2,SNR=19						
WRA				LR	LR	10 09 15.1	
	comp=Z,79nm,18.7s,baz=74,slow=34						
	comp=Z,3.1nm,0.8s						
WRA	**Warramunga Arr**	**81.14**	**222**	*i* P	**P**	**09 35 13.1**	**-1.2**
WRA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
RETA	**Reutte**	**81.20**	**352**	*eP*	**P**	**09 35 15.2**	**+0.8**
	comp=Z,3.0nm,0.6s						
WATA	**Walderalm**	**81.28**	**352**	*i* P	**P**	**09 35 15.0**	**0.0**
	comp=Z,19nm,1.1s,SNR=5.3						
MOTA	**Moosalm**	**81.31**	**352**	*i* P	**P**	**09 35 15.3**	**+0.1**
	comp=Z,18nm,1.2s,SNR=6.9						
WTTA	**Wattenberg**	**81.35**	**352**	*i* P	**P**	**09 35 15.6**	**+0.2**
	comp=Z,32nm,1.5s,SNR=6.8						
KBA	**Koelnbreinsper**	**81.36**	**350**	*i* P	**P**	**09 35 16.2**	**+0.7**
	comp=Z,34nm,1.1s,SNR=16						
SQTA	**Sankt Quirin**	**81.43**	**352**	*i* P	**P**	**09 35 15.4**	**-0.4**
	comp=Z,11nm,1.0s						
DAVA	**Damuels**	**81.47**	**353**	*eP*	**P**	**09 35 16.6**	**+0.6**
	comp=Z,8.8nm,1.1s						
MORH	**Mrgy, Hungar**	**81.55**	**347**	P	**P**	**09 35 15.8**	**-0.4**
SOKA	**Soboth**	**81.57**	**349**	*i* P	**P**	**09 35 16.9**	**+0.4**
	comp=Z,34nm,1.3s,SNR=19						
PERS	**Pernice**	**81.60**	**349**	*i* P	**P**	**09 35 16.7**	**+0.1**
FETA	**Feichten**	**81.67**	**352**	*i* P	**P**	**09 35 17.1**	**0.0**
	comp=Z,12nm,1.0s,SNR=7.1						
GROS	**Grobnik**	**81.73**	**349**	*i* P	**P**	**09 35 17.1**	**-0.1**
ABTA	**Abfaltersbach**	**81.78**	**351**	*i* P	**P**	**09 35 17.7**	**+0.1**
	comp=Z,16nm,1.1s,SNR=7.5						
OBKA	**Obir**	**81.79**	**350**	*eP*	**P**	**09 35 17.9**	**+0.3**
	comp=Z,8.2nm,0.7s						
DAVOX	**Davos/Dischmat**	**81.98**	**353**	LR	LR	10 13 41.6	
	comp=Z,55nm,19.7s,baz=265,slow=37						
SSF	**Saint Saulge**	**82.05**	**357**	*eP*	**P**	**09 35 19.5**	**+0.7**
SSF				pmax	pmax		
	comp=Z,12nm,1.1s						
ROBS	**Robic**	**82.17**	**350**	*eP*	**P**	**09 35 18.7**	**-0.8**
TUE	**Stuetta**	**82.32**	**353**	P	**P**	**09 35 20.3**	**-0.3**
TUE				IAmb	IAmb	09 35 24.4	
	comp=Z,11nm,0.9s						
MFF	**Saint Martin d**	**82.57**	**360**	*eP*	**P**	**09 35 21.2**	**-0.4**
MFF				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TEOL	**Teolo**	**83.23**	**351**	P	**P**	**09 35 24.6**	**-0.5**
DIVS	**Divibare**	**83.41**	**345**	P	**P**	**09 35 26.0**	**-0.1**
DIVS				IAmb	IAmb	09 35 27.1	
	comp=Z,10nm,1.0s						
LPL	**La Plagne**	**83.45**	**355**	*eP*	P	09 35 21.2	-5.2
LPL				pmax	pmax		
	comp=Z,3.0nm,0.4s						
BNI	**Bardonecchia**	**83.91**	**355**	P	**P**	**09 35 28.8**	**+0.1**
BNI				IAmb	IAmb	09 35 30.8	
	comp=Z,8.5nm,0.9s						
BNI	**Bardonecchia**	**83.91**	**355**	P	**P**	**09 35 28.8**	**+0.1**
BNI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LFF	**La Frestale**	**84.22**	**359**	*eP*	**P**	**09 35 29.8**	**-0.3**
LFF				pmax	pmax		
	comp=Z,29nm,1.3s						
ZCCA	**Zocca**	**84.30**	**352**	P	**P**	**09 35 30.0**	**-0.5**
BR131	**Keskin Array S**	**84.63**	**334**	P	**P**	**09 35 32.1**	**-0.4**
BR131				IAmb	IAmb	09 35 34.1	
	comp=Z,12nm,0.8s						
BR131	**Keskin Array S**	**84.63**	**334**	P	**P**	**09 35 32.1**	**-0.4**
BR131				pmax	pmax		
	comp=Z,12nm,0.8s						
BRTR	**Keskin Array B**	**84.63**	**334**	P	**P**	**09 35 32.5**	**0.0**
	comp=Z,6.5nm,0.8s,baz=55,slow=2.9,SNR=21						
BRTR				LR	LR	10 19 58.8	
	comp=Z,121nm,18.3s,baz=60,slow=40						
	comp=Z,6.5nm,0.8s						
BRTR	**Keskin Array B**	**84.63**	**334**	P	**P**	**09 35 31.3**	**-1.2**
BNN	**Bunyan**	**84.82**	**332**	P	**P**	**09 35 33.0**	**-0.4**
OSSC	**Osservatorio P**	**85.09**	**351**	P	**P**	**09 35 33.4**	**-1.2**
OSSC				IAmb	IAmb	09 35 35.1	
	comp=Z,13nm,0.8s						
POO	**Poona**	**85.12**	**293**	*ex*	x	09 35 29.0	
MURB	**Monte Urbino**	**85.22**	**350**	P	**P**	**09 35 35.1**	**-0.2**
BORA	**Eskisehir**	**85.32**	**337**	P	**P**	**09 35 35.6**	**-0.3**
BORA				IAmb	IAmb	09 35 38.0	
	comp=Z,16nm,1.1s						
NRCA	**Norcia**	**85.58**	**350**	P	**P**	**09 35 37.4**	**+0.3**
URZ	**Urewera**	**89.12**	**182**	LR	LR	10 09 38.8	
	comp=Z,214nm,21.0s,baz=31,slow=31						
STKA	**Stephens Creek**	**89.20**	**211**	LR	LR	10 14 22.0	
	comp=Z,120nm,18.3s,baz=27,slow=34						
ESDC	**Sonseca Array**	**89.44**	**3**	P	**P**	**09 35 54.5**	**-1.2**
	comp=Z,1.2nm,0.9s,baz=348,slow=4.9,SNR=7.4						
ESDC				LR	LR	10 17 15.0	
	comp=Z,74nm,19.5s,baz=340,slow=36						
	comp=Z,1.2nm,0.9s						
ESDC	**Sonseca Array**	**89.44**	**3**	P	**P**	**09 35 54.8**	**-0.9**
WSAR	**Wadi Sarin**	**89.51**	**308**	LR	LR	10 19 20.6	
	comp=Z,122nm,20.1s,baz=16,slow=38						
SJG	**San Juan**	**90.40**	**60**	LR	LR	10 19 34.6	
	comp=Z,77nm,18.9s,baz=272,slow=38						
STVI	**Saint Thomas**	**90.85**	**59**	P	**P**	**09 36 01.8**	**-0.7**
IDI	**Anoyia**	**91.01**	**339**	LR	LR	10 21 08.5	
	comp=Z,41nm,19.9s,baz=50,slow=38						
EIL	**Elat**	**93.60**	**330**	LR	LR	10 24 00.2	
	comp=Z,164nm,19.8s,baz=84,slow=39						
RPZ	**Rata Peaks**	**94.83**	**186**	LR	LR	10 13 31.6	
	comp=Z,183nm,19.6s,baz=48,slow=32						
RAYN	**Ar Rayn**	**95.29**	**318**	P	**P**	**09 36 21.4**	**-1.5**
RAYN				IAmb	IAmb	09 36 23.9	
	comp=Z,7.9nm,1.0s						
RAYN	**Ar Rayn**	**95.29**	**318**	P	**P**	**09 36 21.4**	**-1.5**
RAYN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SDV	**Santo Domingo**	**95.30**	**69**	LR	LR	10 21 55.2	
	comp=Z,89nm,18.9s,baz=270,slow=37						
MDT	**Midelt**	**96.26**	**3**	LR	LR	10 18 15.8	
	comp=Z,40nm,21.9s,baz=330,slow=34						
OTAV	**Otavalo**	**97.39**	**80**	*eP*	Pdif	09 36 35.7	+2.5
RPN	**Rapa Nui**	**99.91**	**121**	LR	LR	10 14 17.7	
	comp=Z,56nm,19.3s,baz=14,slow=31						
TORD	**Torodi Ar. Bea**	**115.89**	**358**	PKP	**PKiKP**	**09 41 40.0**	**-1.6**
	comp=Z,0.6nm,0.8s,baz=340,slow=2.3,SNR=4.4						
TORD				PP	**PP**	**09 42 42.8**	**-1.7**
	comp=Z,0.9nm,0.8s,baz=358,slow=6.9,SNR=4.1						
TORD				PKKP	**PKKPdf**	**09 52 31.7**	**-2.9**
	comp=Z,2.0nm,1.2s,baz=164,slow=4.6,SNR=3.7						
PDRB	**Porto dos Gac**	**119.90**	**70**	*eP*	**PKiKP**	**09 41 53.3**	**+3.9**
SIV	**San Ignacio**	**120.70**	**77**	PKP	**PKPdf**	**09 41 50.1**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=239,slow=5.9,SNR=4.5						
PTLB	**Pontes e Lacer**	**121.46**	**75**	*eP*	**PKiKP**	**09 41 55.5**	**+3.2**
NBMO	**Morrinhos-CE**	**121.95**	**48**	*eP*	**PKiKP**	**09 41 56.6**	**+3.2**
H03N2	**Juan Fernandez**	**122.16**	**105**	T	T	11 56 09.2	
	baz=315,slow=77,SNR=18						
H03N1	**Juan Fernandez**	**122.17**	**105**	T	T	11 56 10.5	
	baz=315,slow=77,SNR=17						
H03N3	**Juan Fernandez**	**122.18**	**105**	T	T	11 56 07.4	
	baz=315,slow=77,SNR=18						
SNDB	**Serra Nova Dou**	**123.35**	**65**	*eP*	**PKiKP**	**09 41 59.0**	**+2.9**
POCN	**Pocone**	**123.82**	**74**	*eP*	**PKiKP**	**09 41 59.8**	**+2.9**
NBPB	**Pedra_Branca-C**	**124.12**	**49**	*eP*	**PKiKP**	**09 42 00.4**	**+2.7**
PEXB	**Peixe**	**125.14**	**62**	*eP*	**PKiKP**	**09 42 02.5**	**+2.9**
RCBR	**Riachuelo**	**126.07**	**45**	*eP*	**PKiKP**	**09 42 04.1**	**+2.5**
SDBA	**SAO DESIDERIO**	**127.26**	**59**	*eP*	**PKiKP**	**09 42 06.9**	**+3.0**
NBCA	**Caruaru-PE**	**128.14**	**47**	*eP*	**PKiKP**	**09 42 08.0**	**+2.3**
BDFB	**Brasilia**	**128.17**	**65**	PKP	**PKPdf**	**09 42 05.4**	**+0.2**
	comp=Z,1.9nm,0.7s,baz=224,slow=8.4,SNR=3.8						
ANTJ	**Antonio Joao (**	**128.36**	**77**	*eP*	**PKiKP**	**09 42 08.6**	**+2.7**
VNDA	**Vanda**	**128.93**	**185**	PKP	**PKiKP**	**09 42 05.1**	**-0.2**
	comp=Z,0.7nm,0.9s,baz=69,slow=2.1,SNR=4.3						
NBRF	**Rio Formoso -**	**128.95**	**46**	*eP*	**PKiKP**	**09 42 09.5**	**+2.3**
NBAN	**Anadia - AL**	**129.29**	**48**	*eP*	**PKiKP**	**09 42 10.3**	**+2.3**
JANB	**Januaria**	**129.76**	**60**	*eP*	**PKiKP**	**09 42 11.4**	**+2.5**
CPUP	**Villa Florida**	**130.71**	**82**	PKP	**PKPdf**	**09 42 08.9**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=356,slow=4.2,SNR=4.3						
CPUP	**Villa Florida**	**130.71**	**82**	*eP*	**PKiKP**	**09 42 13.0**	**+2.6**
GDU01	**Guandu, BA**	**131.16**	**54**	*eP*	**PKiKP**	**09 42 14.1**	**+2.4**
PLCA	**Paso Flores**	**131.97**	**106**	PKP	**PKPdf**	**09 42 10.8**	**-0.8**
	comp=Z,0.9nm,0.6s,baz=315,slow=3.4,SNR=5.8						
CMC01	**Camacan, BA**	**132.57**	**55**	*eP*	**PKiKP**	**09 42 16.6**	**+2.2**
NAN01	**Guarapari, ES**	**134.31**	**58**	*eP*	**PKiKP**	**09 42 19.7**	**+1.7**
MAW	**Mawson**	**145.68**	**217**	PKPbc	**PKPdf**	**09 42 34.7**	**-0.8**
	comp=Z,1.0nm,0.4s,baz=88,slow=5.6,SNR=9.3						
MAW	**Mawson**	**145.68**	**217**		**PKPdf**	**09 42 35.1**	**-0.5**
MAW	**Mawson**	**145.68**	**217**	PKP2	**PKPdf**	**09 42 35.1**	**-0.5**
BOSA	**Boshof**	**150.26**	**310**	PKPbc	**PKPbc**	**09 42 50.0**	**+0.3**
	comp=Z,13nm,0.8s,baz=32,slow=1.9,SNR=22						
BOSA	**Boshof**	**150.26**	**310**	PKIKP	**PKPbc**	**09 42 50.0**	**+0.3**
TROLL	**Troll, Antarti**	**159.08**	**183**	PKPab	**PKPab**	**09 43 30.8**	**-1.6**
VNA3	**Neumayer Olymp**	**159.47**	**172**	PKPab	**PKPab**	**09 43 36.1**	**+2.2**
VNA1	**Neumayer--Stat**	**160.17**	**172**	PKPab	**PKPab**	**09 43 36.1**	**-0.9**

BUC 24 09:34:48.9±0.3, 46°12N×25°76E, h2km, ml1.2/6, 26C
Error ellipse: s-maj=2.9km s-min=1.2km az=177.0,
Romania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OZUR		**0.03**	**139**	⇑P	Pg	09 34 49.4	-0.2
OZUR				⇑S	Sg	09 34 50.9	+0.8
OZUR		**0.03**	**139**	⇑P	Pg	09 34 49.4	-0.2
OZUR				⇑S	Sg	09 34 50.9	+0.8
DOPR	**Dopca**	**0.30**	**239**	⇑P	Pg	09 34 54.6	0.0
DOPR				⇑S	Sg	09 34 59.2	+0.8
DOPR	**Dopca**	**0.30**	**239**	⇑P	Pg	09 34 54.6	0.0
DOPR				⇑S	Sg	09 34 59.2	+0.8
COVR	**Voineasa-Covas**	**0.42**	**131**	⇑P	Pg	09 34 56.8	0.0
COVR				⇑S	Sg	09 35 02.8	+0.5
COVR	**Voineasa-Covas**	**0.42**	**131**	⇑P	Pg	09 34 56.8	0.0
COVR				⇑S	Sg	09 35 02.8	+0.5
MLR	**Muntele Rosu**	**0.64**	**168**	⇑P	Pg	09 35 00.8	-0.4
MLR				⇑S	Sg	09 35 10.4	+0.9
MLR	**Muntele Rosu**	**0.64**	**168**	⇑P	Pg	09 35 00.8	-0.4
MLR				⇑S	Sg	09 35 10.4	+0.9
PLOR	**Plostina**	**0.68**	**113**	⇑P	Pg	09 35 01.9	0.0
PLOR				⇑S	Sg	09 35 11.6	+1.0
PLOR	**Plostina**	**0.68**	**113**	⇑P	Pg	09 35 01.9	0.0
PLOR				⇑S	Sg	09 35 11.6	+1.0
VRI	**Vrincioaia**	**0.72**	**110**	⇑P	Pg	09 35 02.8	0.0
VRI	**Vrincioaia**	**0.72**	**110**	⇑P	Pg	09 35 02.8	0.0
VRI				⇑S	Sg	09 35 13.0	+0.9
VRI	**Vrincioaia**	**0.72**	**110**	⇑P	Pg	09 35 02.8	0.0
VOIR		**0.84**	**216**	⇑P	Pg	09 35 03.2	-1.8
VOIR				⇑S	Sg	09 35 15.1	-0.9

*IDC **24** 09:37:59.1±0.9, 56°81N×34°02W, h0km, mb3.5/8, mbtmp3.5/8, MS3.3/3, Error ellipse: s-maj=30.6km s-min=19.9km az=19.0*
ISC 24 09:38:00.9±0.8, 56°8N±0°2×34°1W±0°1, h13km, n12, σ1s16/10, mb3.6/9, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	**10.09**	**33**	LR	LR	09 43 20.1	
	comp=Z,110nm,21.2s,baz=252,slow=32						
EKA	**Eskdalemuir Ar**	**17.24**	**82**	LR	LR	09 47 36.8	
	comp=Z,112nm,18.6s,baz=275,slow=34						
NOA	**NORSAR Array B**	**23.37**	**61**	P	**P**	**09 43 07.7**	**-1.2**
	0.1nm,0.3s,baz=288,slow=14,SNR=1.5						
	0.1nm,0.3s						
ESDC	**Sonseca Array**	**26.05**	**118**	P	**P**	**09 43 34.7**	**+0.9**
	0.4nm,0.8s,baz=294,slow=7.2,SNR=4.2						
ESDC				LR	LR	09 52 24.6	
	comp=Z,73nm,18.2s,baz=286,slow=33						
	0.4nm,0.8s						
ARCES	**ARCESS Array B**	**28.39**	**40**	P	**P**	**09 43 55.6**	**+1.1**
	0.8nm,0.8s,baz=257,slow=8.0,SNR=2.1						
	0.8nm,0.8s						
PDAR	**Pinedale Array**	**48.21**	**287**	P	**P**	**09 46 40.0**	**-1.2**
	0.5nm,0.8s,baz=46,slow=13,SNR=2.6						
	0.5nm,0.8s						
ILAR	**Eielson Array**	**48.47**	**328**	P	**P**	**09 46 43.0**	**+0.4**
	0.8nm,0.7s,baz=40,slow=6.3,SNR=9.2						
	0.8nm,0.7s						
TORD	**Torodi Ar. Bea**	**51.41**	**133**	P	**P**	**09 47 04.8**	**-0.7**
	1.1nm,0.9s,baz=332,slow=8.1,SNR=5.1						
	1.1nm,0.9s						
TXAR	**Lajitas Array**	**54.95**	**271**	P	**P**	**09 47 32.7**	**+1.2**
	0.5nm,0.9s,baz=35,slow=3.3,SNR=5.1						
	0.5nm,0.9s						
MKAR	**Makanchi Array**	**63.96**	**43**	P	**P**	**09 48 32.9**	**-0.5**
	0.6nm,0.8s,baz=328,slow=5.1,SNR=3.1						
	0.6nm,0.8s						
KMBO	**Kilima Mbogo**	**80.79**	**106**	P	**P**	**09 50 15.2**	**+0.7**
	3.2nm,0.4s,baz=304,slow=12,SNR=9.4						
WRA	**Warramunga Arr**	**142.20**	**18**	PKP	**PKPdf**	**09 57 31.5**	**-1.3**
	0.3nm,0.8s,baz=18,slow=1.3,SNR=1.7						

*IDC **24** 09:38:03.8±0.8, 0°85N×79°74W, h0km, mb3.6/8, mbtmp3.8/11, ML3.3/3, Error ellipse: s-maj=40.4km s-min=15.5km az=65.0*
*IGQ **24** 09:38:03±0.5, 1°N±3°×8°0W±°, h10km*
*NEIC **24** 09:38:06.4±2.4, 0°83N±0°03×79°5W±0°1, h10km±1km, mb4.3/4, Error ellipse: s-maj=17.7km s-min=4.7km az=269.0*
ISC 24 09:38:04.0±1.3, 0°85N±0°03×79°63W±0°05, h7km±9km, n105, σ1s60/110, mb3.7/8, 1C, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AMA1	**Acelerografo,**	**0.13**	**313**	P	**Pg**	**09 38 07.0**	**+0.1**
AV21	**Acelerografo,**	**0.20**	**156**	P	**Pg**	**09 38 09.0**	**+0.9**
AV18	**Acelerografo,**	**0.55**	**164**	P	**Pb**	**09 38 16.0**	**0.0**
BV15	**Puerto Quito-O**	**0.79**	**149**	P	**Pg**	**09 38 19.0**	**-0.3**
MAG1	**Magdalena**	**0.92**	**189**	P	Pn	09 38 30.0	+6.6
APR2	**Miler**	**1.01**	**139**	P	**Pg**	**09 38 23.0**	**-0.5**
ALIT	**Ecuador-Imbabu**	**1.27**	**92**	P	**Pn**	**09 38 25.0**	**-3.3**
OTAV	**Otavalo**	**1.32**	**117**		**Pn**	**09 38 27.4**	**-1.8**
OTAV	**Otavalo**	**1.32**	**117**	⇑*i*P	**Pn**	**09 38 27.5**	**-1.8**
CTUM2	**Tumaco**	**1.32**	**43**	*eP*	**Pn**	**09 38 27.2**	**-1.7**
TUMC	**Tumaco**	**1.32**	**43**	Pn	**Pn**	**09 38 28.5**	**-0.4**
TUMC	**Tumaco**	**1.32**	**43**	*eP*	**Pn**	**09 38 26.9**	**-2.0**
TUMC	**Tumaco**	**1.32**	**43**	P	**Pn**	**09 38 27.0**	**-2.0**
APR1	**Acelerografo,**	**1.35**	**131**	P	**Pn**	**09 38 27.0**	**-2.6**
COTA	**Cotacachi**	**1.39**	**111**	P	**Pn**	**09 38 29.0**	**-1.2**
YANA	**Yana**	**1.43**	**132**	P	**Pn**	**09 38 29.0**	**-1.8**
PINO	**Pino**	**1.43**	**134**	P	**Pn**	**09 38 29.0**	**-1.9**
TERV	**Terraza Guagua**	**1.44**	**135**	P	**Pn**	**09 38 30.0**	**-1.0**
GGPC	**Guagua Pichinc**	**1.45**	**135**	P	**Pn**	**09 38 30.0**	**-1.1**
JUA2	**San Juan 2**	**1.47**	**136**	P	**Pn**	**09 38 30.0**	**-1.3**
ECEN	**Cerro Negro**	**1.66**	**91**	P	**Pn**	**09 38 32.0**	**-2.0**
CHL1	**Volcın Chiles**	**1.68**	**92**	P	**Pn**	**09 38 32.0**	**-2.3**
CHL2	**Volcın Chiles**	**1.71**	**91**	P	**Pn**	**09 38 33.0**	**-1.7**
TOMA	**Boca Toma-Volc**	**1.79**	**138**	P	**Pn**	**09 38 36.0**	**+0.3**
ILLI	**Illinizas Sur**	**1.79**	**150**	P	**Pn**	**09 38 35.0**	**-0.8**
ANGU	**Angureal**	**1.80**	**116**	P	**Pn**	**09 38 36.0**	**-0.1**
CMBC	**Cumbal**	**1.81**	**87**	*eP*	**Pn**	**09 38 35.3**	**-0.7**
CMBC				*e*S	**Sn**	**

comp=Z,0.4nm,0.8s,baz=149,slow=7.2,SNR=2.1
comp=Z,0.4nm,0.8s
NVAR Mina Array Bea 51.53 321 P **P** **09 47 12.3 +1.4**
comp=Z,0.8nm,0.8s,baz=147,slow=7.3,SNR=5.7
comp=Z,0.8nm,0.8s
YKA Yellowknife Ar 66.84 343 P **P** **09 48 55.6 -0.6**
comp=Z,0.4nm,0.6s,baz=121,slow=8.9,SNR=2.9
comp=Z,0.4nm,0.6s
ILAR Eielson Array 79.69 336 P **P** **09 50 12.0 -0.1**
comp=Z,0.5nm,0.8s,baz=131,slow=4.2,SNR=4.4
comp=Z,0.5nm,0.8s
WRA Warramunga Arr 141.73 238 PKP **PKPdf** **09 57 36.2 -1.2**
comp=Z,0.6nm,0.8s,baz=112,slow=2.0,SNR=8.5

*IDC **24** 09:39:01.2±1.0, 1°.14N×79°.36W, h0km, mb3.6/7, mbtmp3.7/8, ML3.7/1, Error ellipse: s-maj=75.4km s-min=18.0km az=65.0*
ISC 24 09:39:04.2±0.8, 1°.01N±0°.07×79°.49W±0°.06, h20km, n23, σ1s70/25, mb3.7/6, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OTAV	**Otavalo**	**1.29**	**127**	*eP*	**Pn**	**09 39 26.5**	**-1.0**
OTAV				*eS*	**Sn**	**09 39 43.8**	**-0.6**
CMBC	**Cumbal**	**1.66**	**92**	*eS*	**Sb**	**09 39 54.5**	**-0.6**
CCUFI	**Cufio, Nario**	**2.15**	**84**	*eP*	**Pb**	**09 39 43.2**	**+0.5**
CCUFI				*eS*	**Sb**	**09 40 09.7**	**+0.6**
GCUF	**Volcan Galeras**	**2.15**	**84**	*eS*	**Sb**	**09 40 12.1**	**+2.9**
CPAS1	**Pasto**	**2.17**	**85**	*eP*	**Pb**	**09 39 42.7**	**-0.3**
CPAS1				*eS*	**Sb**	**09 40 12.8**	**+3.1**
CPAS2	**Pasto**	**2.24**	**85**	*eS*	**Sb**	**09 40 14.0**	**+2.3**
GR1C	**Gorgona, Isla**	**2.38**	**34**	*eS*	**Sb**	**09 40 19.3**	**+4.0**
BBAC	**Balboa, Cauca**	**2.45**	**66**	*eP*	Pb	09 39 58.6	+11
BBAC				*eS*	**Sb**	**09 40 18.2**	**+0.5**
SOTA	**Rioblanco**	**3.08**	**69**	*eS*	**Sb**	**09 40 36.7**	**+0.6**
POPC	**Popayan, Colom**	**3.19**	**62**	*eS*	**Sb**	**09 40 39.5**	**+0.5**
PCON	**Cinco Dias**	**3.35**	**67**	*eS*	**Sb**	**09 40 44.5**	**+0.6**
MARP	**Paez Belalcaza**	**3.97**	**63**	*eS*	**Sb**	**09 40 59.8**	**-1.6**
YOTC	**Yotoco, Valle**	**4.31**	**47**	*eS*	**Sb**	**09 41 12.3**	**+1.4**
ANIL	**Santa Ana**	**5.34**	**50**	*eS*	**Sb**	**09 41 37.5**	**-3.5**
ATAH	**Atahualpa**	**8.16**	**172**	Pn	**Pn**	**09 41 02.5**	**+0.4**
	0.9nm,0.3s,baz=10,slow=14,SNR=2.4 5.0nm,0.4s						
LPAZ	**La Paz**	**20.52**	**147**	P	Pn	09 43 44.0	-0.3
	2.0nm,0.7s,baz=325,slow=10,SNR=5.1 2.0nm,0.7s						
SIV	**San Ignacio**	**24.82**	**134**	P	**P**	**09 44 25.3**	**-0.1**
	0.9nm,0.7s,baz=314,slow=15,SNR=2.1 0.9nm,0.7s						
PLCA	**Paso Flores**	**42.34**	**170**	P	**P**	**09 46 57.3**	**+0.3**
	1.9nm,0.8s,baz=350,slow=9.5,SNR=8.0 1.9nm,0.8s						
PDAR	**Pinedale Array**	**49.53**	**331**	P	**P**	**09 47 54.2**	**+0.2**
	0.4nm,0.8s,baz=108,slow=5.9,SNR=2.4 0.4nm,0.8s						
NVAR	**Mina Array Bea**	**51.49**	**321**	P	**P**	**09 48 09.6**	**+0.8**
	1.0nm,0.9s,baz=134,slow=6.4,SNR=4.8 1.0nm,0.9s						
YKA	**Yellowknife Ar**	**66.72**	**343**	P	**P**	**09 49 52.1**	**-1.5**
	0.4nm,0.6s,baz=140,slow=6.5,SNR=2.9 0.4nm,0.6s						
ILAR	**Eielson Array**	**79.60**	**336**	P	**P**	**09 51 09.7**	**0.0**
	0.5nm,0.8s,baz=120,slow=5.1,SNR=4.8 0.5nm,0.8s						
WRA	**Warramunga Arr**	**141.94**	**238**	PKP	**PKPdf**	**09 58 35.8**	**+0.1**
	0.5nm,0.9s,baz=110,slow=1.8,SNR=5.5						

IDC 24 09:43:07.4±8.2, 5°.96S×127°.70E, h428km±111km, mb3.0/3, mbtmp4.0/4, Error ellipse: s-maj=107.8km s-min=36.4km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.32**	**156**	P	P	09 46 21.6	-1.0
	7.4nm,0.3s,baz=336,slow=11,SNR=208						
STKA	**Stephens Creek**	**28.87**	**155**	P	P	09 48 29.9	+0.5
	0.9nm,0.5s,baz=332,slow=9.3,SNR=4.0 0.9nm,0.5s						
SONM	**Songino Array**	**56.76**	**343**	P	P	09 52 10.2	+1.1
	1.6nm,1.0s,baz=140,slow=6.2,SNR=5.9 1.6nm,1.0s						
MKAR	**Makanchi Array**	**66.12**	**328**	P	P	09 53 09.2	-1.5
	0.2nm,0.4s,baz=113,slow=8.0,SNR=4.1 0.2nm,0.4s						

*TUL **24** 10:09:50.5±1.5, 36°.51N±0°.02×99°.03W±0°.02, h5km±6km, ML2.5, mb_Lg2.4/38(NEIC), Error ellipse: s-maj=3.1km s-min=2.1km az=131.0*
NEIC 24 10:09:50.7±1.5, 36°.52N±0°.02×99°.01W±0°.02, h5km±2km, Error ellipse: s-maj=3.3km s-min=3.0km az=328.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMOK	**Wichita Mounta**	**1.79**	**174**		Pn	10 10 22.1	-0.2
FNO	**Franklin**	**1.82**	**134**	Pn	Pn	10 10 23.0	+0.4
FNO				IAmb_Lg		10 10 51.0	
	comp=Z,30nm,0.8s						
R32A	**Long Quarter,**	**1.91**	**7**		Pn	10 10 25.0	+1.0
T35A	**Sooner Cattle**	**2.04**	**78**		Pn	10 10 25.1	-0.7
T35A				IAmb_Lg		10 10 59.5	
	comp=Z,23nm,1.0s						
X34A	**Smith Ranch, M**	**2.15**	**153**		Pn	10 10 27.7	+0.5
X34A				IAmb_Lg		10 10 56.7	
	comp=Z,15nm,1.1s						
CBKS	**Cedar Bluff**	**2.36**	**346**		Pn	10 10 29.9	-0.2
TUL1	**Leonard**	**2.67**	**102**	Pn	Pn	10 10 33.5	-0.9
AMTX	**Amarillo**	**2.72**	**234**	Pn	Pn	10 10 35.8	+0.7
KSU1	**Kansas State U**	**3.20**	**36**	Pn	Pn	10 10 41.9	+0.3
Z35A	**Perchaven, San**	**3.50**	**155**	Pn	Pn	10 10 46.3	+0.5
X37A	**Clayton**	**3.54**	**122**	Pn	Pn	10 10 46.4	+0.1
X37A				IAmb_Lg		10 11 45.8	
	comp=Z,12nm,0.7s						
U38A	**Gravette**	**3.73**	**90**	IAmb_Lg		10 11 51.7	
	comp=Z,9.0nm,0.9s						
KSCO	**Kaye Shedlock'**	**3.79**	**312**	IAmb_Lg		10 11 53.4	
	comp=Z,10nm,0.8s						
ABTX	**Abilene, Hawle**	**3.92**	**188**	IAmb_Lg		10 12 02.6	
	comp=Z,7.2nm,0.7s						
MSTX	**Muleshoe**	**4.00**	**231**	Pn	Pn	10 10 52.0	-0.7
HHAR	**Hobbs**	**4.10**	**92**	Pn	Pn	10 10 53.2	-0.8
T25A	**Trinidad**	**4.38**	**280**	IAmb_Lg		10 12 20.7	
	comp=Z,11nm,1.0s						
W39A	**Magazine**	**4.45**	**106**	IAmb_Lg		10 12 20.1	
	comp=Z,7.7nm,0.7s						
S39A	**Bolivar**	**4.69**	**74**	Pn	Pn	10 11 02.7	+0.5
S39A				IAmb_Lg		10 12 19.7	
	comp=Z,7.5nm,0.8s						
MIAR	**Mount Ida**	**4.85**	**112**	Pn	Pn	10 11 04.7	+0.4
MIAR				IAmb_Lg		10 12 34.1	
	comp=Z,6.1nm,0.8s						
BGNE	**Belgrade**	**4.92**	**8**	Pn	Pn	10 11 05.7	+0.3
OGNE	**Ogallala**	**5.01**	**333**	Pn	Pn	10 11 06.9	+0.3
P38A	**Dawn**	**5.32**	**53**	IAmb_Lg		10 12 51.4	
	comp=Z,7.6nm,0.7s						
SDCO	**Great Sand Dun**	**5.33**	**285**	Pn	Pn	10 11 10.2	-0.9
Q24A	**Divide**	**5.44**	**298**	IAmb_Lg		10 12 42.2	
	comp=Z,12nm,0.9s						
W41B	**Gary Mavity, V**	**5.66**	**102**	IAmb_Lg		10 12 57.3	
	comp=Z,5.7nm,0.8s						
P40A	**Paris**	**6.26**	**59**	IAmb_Lg		10 13 14.3	
	comp=Z,7.1nm,0.9s						
LCAR	**Lake Charles**	**6.36**	**92**	IAmb_Lg		10 13 17.8	
	comp=Z,4.0nm,0.8s						
PHWY	**Pilot Hill**	**6.93**	**315**	IAmb_Lg		10 13 46.0	
	comp=Z,5.1nm,1.0s						
FVM	**French Village**	**7.00**	**75**	IAmb_Lg		10 13 37.9	
	comp=Z,3.9nm,0.7s						
N41A	**Harden Midland**	**7.63**	**54**	IAmb_Lg		10 13 55.1	
	comp=Z,6.7nm,0.7s						

*NEIC **24** 10:50:36.1±2.0, 4°.57S±0°.10×153°.79E±0°.09, h90km±6km, mb4.3/17, Error ellipse: s-maj=14.2km s-min=12.8km az=179.0*
*IDC **24** 10:50:36.4±2.2, 4°.59S×153°.67E, h94km±18km, mb3.7/13, mbtmp4.0/14, MS3.0/3, Error ellipse: s-maj=22.9km s-min=13.3km az=84.0*
ISC 24 10:50:37.1±0.5, 4°.57S±0°.06×153°.65E±0°.07, h100km, n68, σ0s87/63, mb4.1/21, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**		**1.53**	**284**	Pn	**Pn**	**10 51 03.8**	**+0.1**
RABL					Sn	**Sn**	**10 51 25.0**	**+1.1**
RABL	**Rabaul**		**1.53**	**284**	P	**Pn**	**10 51 04.2**	**+0.5**
KRVT	**Keravat (AS076**		**1.64**	**279**	P	**Pn**	**10 51 05.0**	**-0.1**
	478nm,0.3s,baz=166,slow=2.9,SNR=75							
KRVT					S	**Sn**	**10 51 25.4**	**-0.9**
	811nm,0.6s,baz=150,slow=23,SNR=8.5							
HNR	**Honiara**		**7.90**	**128**	S	**Sn**	**10 53 57.8**	**+0.7**
	58nm,0.4s,baz=279,slow=16,SNR=1.9							
PMG	**Port Moresby**		**8.04**	**233**	P	**Pn**	**10 52 31.6**	**+0.5**
	228nm,0.7s,baz=46,slow=6.0,SNR=59							
PMG					S	**Sn**	**10 54 01.2**	**+0.7**
	122nm,0.8s,baz=332,slow=20,SNR=7.6							
PMG					LR	LR	10 56 01.6	
	comp=Z,61nm,19.4s,baz=352,slow=40							
PMG	**Port Moresby**		**8.04**	**233**		**Pn**	**10 52 31.4**	**+0.3**
PATS	**Pohnpei**		**12.24**	**22**	Pn	**Pn**	**10 53 26.9**	**-1.2**
PATS	**Pohnpei**		**12.24**	**22**	P	**Pn**	**10 53 30.1**	**+2.0**
COEN	**Coen**		**13.92**	**227**	Pn	**Pn**	**10 53 51.2**	**+1.1**
CTA	**Charters Tower**		**17.03**	**204**	P	**P**	**10 54 30.6**	**+1.2**
	1.7nm,0.6s,baz=58,slow=14,SNR=4.6							
CTA					LR	LR	10 59 43.9	
	comp=Z,59nm,21.1s,baz=86,slow=32							
EIDS	**Eidsvold**		**20.83**	**187**	P	**P**	**10 55 11.5**	**+0.7**
EIDS					IAmb	IAmb	10 55 13.8	
	comp=Z,8.0nm,0.7s							
QIS	**Mount Isa**		**20.96**	**219**	P	**P**	**10 55 11.7**	**-0.5**
DZM	**Mont Dzumac**		**21.37**	**146**	P	**P**	**10 55 16.1**	**-0.6**
	comp=Z,1.5nm,0.5s,baz=332,slow=15,SNR=2.0 comp=Z,1.5nm,0.5s							
DZM	**Mont Dzumac**		**21.37**	**146**	IAmb	IAmb	10 55 22.3	
	comp=Z,10.0nm,1.2s							
RMQ	**Roma**		**22.30**	**192**	P	**P**	**10 55 26.9**	**+0.6**
KDU	**Kakadu**		**22.42**	**248**	P	**P**	**10 55 27.7**	**-0.1**
QLP	**Quilpie**		**23.67**	**201**	P	**P**	**10 55 40.1**	**+0.4**
MTN	**Manton Dam**		**23.71**	**248**	P	**P**	**10 55 40.1**	**0.0**
MTN					IAmb	IAmb	10 56 08.5	
	comp=Z,14nm,1.0s							
WB0	**Warramunga Arr**		**24.09**	**230**	P	**P**	**10 55 43.5**	**0.0**
WR0	**Warramunga Arr**		**24.09**	**229**	P	**P**	**10 55 43.7**	**+0.2**
WR0					IAmb	IAmb	10 55 45.0	
	comp=Z,24nm,0.9s							
WRAB	**Tennant Creek**		**24.22**	**229**	P	**P**	**10 55 44.9**	**+0.3**
WRAB	**Tennant Creek**		**24.22**	**229**	P	**P**	**10 55 45.0**	**+0.3**
WB2	**Warramunga Arr**		**24.23**	**229**	P	**P**	**10 55 44.8**	**+0.1**
WRA	**Warramunga Arr**		**24.24**	**229**	P	**P**	**10 55 45.0**	**+0.1**
	comp=Z,31nm,0.7s,baz=55,slow=10.0,SNR=229							
WRA	**Warramunga Arr**		**24.24**	**229**	P	**P**	**10 55 44.2**	**-0.7**
INKA	**Innaminka**		**26.12**	**207**	P	**P**	**10 56 02.9**	**+1.1**
H11S3	**WAKE ISLAND Hy**		**26.27**	**29**	T	T	11 24 50.6	
	baz=208							
H11S2	**WAKE ISLAND Hy**		**26.28**	**29**	T	T	11 24 50.5	
	baz=208							
H11S1	**WAKE ISLAND Hy**		**26.29**	**29**	T	T	11 24 57.9	
	baz=208							
KNRA	**Kununurra**		**26.83**	**244**	P	**P**	**10 56 07.5**	**-0.9**
KNRA					IAmb	IAmb	10 56 33.7	
	comp=Z,17nm,1.3s							
KNRA	**Kununurra**		**26.83**	**244**	P	**P**	**10 56 07.8**	**-0.6**
AS31	**Alice Springs**		**26.89**	**223**	P	**P**	**10 56 08.1**	**-0.8**
ASAR	**Alice Springs**		**26.90**	**223**	P	**P**	**10 56 08.3**	**-0.6**
CMSA	**Cobar Meteorol**		**27.85**	**195**	P	**P**	**10 56 17.6**	**+0.3**
OOD	**Oodnadatta**		**28.75**	**215**	P	**P**	**10 56 25.0**	**-0.3**
	comp=Z,18nm,1.1s							
STKA	**Stephens Creek**		**29.43**	**201**	P	**P**	**10 56 30.8**	**-0.5**
	comp=Z,5.9nm,0.7s,baz=36,slow=14,SNR=12 comp=Z,5.9nm,0.7s							
STKA	**Stephens Creek**		**29.43**	**201**	IAmb	IAmb	10 56 31.5	
	comp=Z,1.6nm,0.8s							
STKA	**Stephens Creek**		**29.43**	**201**	P	**P**	**10 56 31.1**	**-0.2**
LCRK	**Leigh Creek**		**29.58**	**208**	P	**P**	**10 56 32.8**	**+0.2**
MULG	**Mulgathing**		**31.56**	**214**	P	**P**	**10 56 49.4**	**-0.7**
WRKA	**Warakurna**		**31.74**	**228**	P	**P**	**10 56 51.0**	**-0.8**
HTT	**Hallett**		**31.83**	**204**	P	**P**	**10 56 52.6**	**+0.1**
FORT	**Forrest**		**35.51**	**220**	P	**P**	**10 57 23.7**	**-0.7**
FORT	**Forrest**		**35.51**	**220**	P	**P**	**10 57 24.9**	**+0.5**
PSA00	**Pilbara Seismi**		**36.88**	**240**	P	**P**	**10 57 34.9**	**-1.3**
PSA00					IAmb	IAmb	10 57 36.5	
	comp=Z,5.5nm,0.8s							
PSA00	**Pilbara Seismi**		**36.88**	**240**	P	**P**	**10 57 35.1**	**-1.1**
	comp=Z,24nm,1.0s							
TAU	**Tasmania Unive**		**38.60**	**187**	P	**P**	**10 57 51.5**	**+1.2**
	comp=Z,46nm,2.9s							
BLDU	**Ballidu**		**43.37**	**229**	P	**P**	**10 58 28.4**	**-1.3**
KSRS	**Korea Array**		**48.18**	**332**	P	**P**	**10 59 08.2**	**+0.9**
	comp=Z,1.0nm,0.8s,baz=123,slow=10.0,SNR=2.2 comp=Z,1.0nm,0.8s							
PETK	**Petropavlovsk-**		**57.56**	**3**	P	**P**	**11 00 17.4**	**+1.3**
	comp=Z,1.6nm,0.7s,baz=94,slow=11,SNR=2.3 comp=Z,1.6nm,0.7s							
CMAR	**Chiang Mai Arr**		**58.55**	**295**	P	**P**	**11 00 25.1**	**+1.4**
	comp=Z,0.8nm,0.5s,baz=111,slow=6.4,SNR=5.7 comp=Z,0.8nm,0.5s							
SHEM	**Shemya Is, Ala**		**59.65**	**14**	LR	LR	11 21 31.5	
	comp=Z,25nm,21.2s,baz=126,slow=31							
SONM	**Songino Array**		**66.58**	**327**	P	**P**	**11 01 17.5**	**+0.7**
	comp=Z,0.7nm,0.4s,baz=125,slow=5.7,SNR=2.2 comp=Z,0.7nm,0.4s							
SONM	**Songino Array**		**66.58**	**327**	IAmb	IAmb	11 01 17.8	
	comp=Z,2.4nm,1.5s							
VNDA	**Vanda**		**73.03**	**178**	P	**P**	**11 01 55.5**	**-0.1**
	comp=Z,2.0nm,1.0s,baz=326,slow=6.8,SNR=8.2 comp=Z,2.0nm,1.0s							
VNDA	**Vanda**		**73.03**	**178**	IAmb	IAmb	11 01 57.4	
	comp=Z,1.5nm,0.8s							
SKT	**Skwentna**		**78.37**	**23**	P	**P**	**11 02 24.2**	**-2.1**
SKT					IAmb	IAmb	11 02 24.7	
	comp=Z,9.3nm,0.8s							
MKAR	**Makanchi Array**		**80.71**	**319**	P	**P**	**11 02 39.6**	**+0.3**
	comp=Z,1.9nm,1.0s,baz=100,slow=6.7,SNR=5.7 comp=Z,1.9nm,1.0s							
MKAR	**Makanchi Array**		**80.71**	**319**	P	**P**	**11 02 39.0**	**-0.3**
ZALV	**Zalesovo Beam**		**81.43**	**326**	P	**P**	**11 02 41.6**	**-1.3**
	comp=Z,0.8nm,0.4s,baz=132,slow=6.3,SNR=3.2 comp=Z,0.8nm,0.4s							
ILAR	**Eielson Array**		**81.62**	**22**	P	**P**	**11 02 42.4**	**-1.4**
	comp=Z,0.5nm,0.8s,baz=284,slow=4.3,SNR=4.2 comp=Z,0.5nm,0.8s							
MAW	**Mawson**		**86.11**	**203**	P	**P**	**11 03 06.0**	**-0.6**
	comp=Z,4.5nm,0.7s,baz=96,slow=6.8,SNR=12 comp=Z,4.5nm,0.7s							
MAW	**Mawson**		**86.11**	**203**	IAmb	IAmb	11 03 06.8	
	comp=Z,1.1nm,0.8s							
NVAR	**Mina Array Bea**		**91.28**	**52**	P	**P**	**11 03 33.0**	**+1.1**
	comp=Z,0.2nm,0.5s,baz=237,slow=8.2,SNR=1.8 comp=Z,0.2nm,0.5s							
YKA	**Yellowknife Ar**		**94.83**	**28**	P	**P**	**11 03 47.2**	**-0.1**
	comp=Z,0.7nm,0.8s,baz=277,slow=13,SNR=2.4 comp=Z,0.7nm,0.8s							
BDFB	**Brasilia**		**150.62**	**134**	PKPbc	**PKPbc**	**11 10 17.4**	**-1.2**
	comp=Z,0.9nm,0.3s,baz=210,slow=20,SNR=3.5							
TORD	**Torodi Ar. Bea**		**151.03**	**289**	PKPbc	**PKPbc**	**11 10 18.8**	**-0.7**
	comp=Z,2.6nm,0.8s,baz=74,slow=2.0,SNR=14							
TORD	**Torodi Ar. Bea**		**151.03**	**289**		**PKPbc**	**11 10 17.9**	**-1.6**
TORD					PKPab	**PKPab**	**11 10 26.9**	**-0.5**

NNC 24 10:58:06.2±3.6, 39°.94N×55°.54E, h0km, mb3.6, 4C-2D, Error ellipse: s-maj=53.8km s-min=10.7km az=68.0, Turkmenistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GYA0B	**ALIBECK ARRAY**	**2.84**	**134**	⇑Pn	Pn	10 58 53.2	+0.4
GYA0B				⇑Sn	Sn	10 59 28.3	+0.5
GYA0B				⇓Lg	Lg	10 59 38.1	
AB31	**Akbulak array**	**9.82**	**17**	Pn	Pn	11 00 30.2	+1.6
	0.3nm,0.3s,baz=204,slow=14,SNR=8.2						
AB31				⇓Sn	Sn	11 02 19.4	-0.2
	0.8nm,0.5s,baz=203,slow=25,SNR=6.4						
AKTO	**Aktyubinsk**	**10.64**	**9**	⇑Pn	Pn	11 00 40.2	+0.5
	1.5nm,0.8s						
AKTO				⇑Sn	Sn	11 02 40.2	+0.6
	2.4nm,0.6s						

*TUL **24** 11:03:55.1±1.4, 36°.51N±0°.03×99°.04W±0°.04, h5km±7km, ML2.5, mb_Lg2.8/73(NEIC), Error ellipse: s-maj=5.1km s-min=3.3km az=217.0*
NEIC 24 11:03:54.9±1.2, 36°.52N±0°.02×99°.05W±0°.02, h5km±1km, Error ellipse: s-maj=4.1km s-min=2.8km az=311.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKCFA	**Oklahoma City**	**1.71**	**130**		Pn	11 04 25.7	+0.4
OKCSW	**OKLAHOMA CITY**	**1.72**	**130**	Pn	Pn	11 04 25.7	+0.2
WMOK	**Wichita Mounta**	**1.79**	**173**		Pn	11 04 26.5	0.0
WMOK				IAmb_Lg		11 04 53.5	
	comp=Z,66nm,0.7s						
FNO	**Franklin**	**1.84**	**133**		Pn	11 04 27.9	+0.7
FNO				IAmb_Lg		11 04 57.5	
	comp=Z,70nm,0.8s						
R32A	**Long Quarter,**	**1.92**	**8**	Pn	Pn	11 04 28.2	0.0
T35A	**Sooner Cattle**	**2.08**	**78**	Pn	Pn	11 04 29.6	-0.9
T35A				IAmb_Lg		11 05 01.6	
	comp=Z,43nm,0.8s						
X34A	**Smith Ranch, M**	**2.16**	**152**		Pn	11 04 30.2	-1.3
CBKS	**Cedar Bluff**	**2.35**	**347**		Pn	11 04 34.4	+0.1
AMTX	**Amarillo**	**2.69**	**233**		Pn	11 04 39.2	+0.3
TUL1	**Leonard**	**2.71**	**102**	Pn	Pn	11 04 38.3	-0.7
KSU1	**Kansas State U**	**3.22**	**36**	Pn	Pn	11 04 46.0	-0.1
KSU1				IAmb_Lg		11 05 42.5	
	comp=Z,32nm,1.1s						
Z35A	**Perchaven, San**	**3.51**	**155**	Pn	Pn	11 04 49.6	-0.5
Z35A				IAmb_Lg		11 05 54.3	
	comp=Z,21nm,1.1s						
X37A	**Clayton**	**3.57**	**122**	Pn	Pn	11 04 50.9	+0.1
X37A				IAmb_Lg		11 05 52.7	
	comp=Z,36nm,0.8s						
U38A	**Gravette**	**3.76**	**90**	Pn	Pn	11 04 54.0	+0.4
U38A				IAmb_Lg		11 05 55.5	
	comp=Z,21nm,0.8s						
KSCO	**Kaye Shedlock'**	**3.77**	**312**	Pn	Pn	11 04 54.2	+0.5
KSCO				IAmb_Lg		11 05 58.6	
	comp=Z,25nm,0.7s						
ABTX	**Abilene, Hawle**	**3.92**	**187**	Pn	Pn	11 04 55.7	-0.1
ABTX				IAmb_Lg		11 06 02.1	
	comp=Z,23nm,0.8s						
MSTX	**Muleshoe**	**3.97**	**231**		Pn	11 04 56.2	-0.3
HHAR	**Hobbs**	**4.13**	**92**	IAmb_Lg		11 06 04.4	
	comp=Z,19nm,0.9s						
T25A	**Trinidad**	**4.34**	**280**		Pn	11 05 01.7	0.0
T25A				IAmb_Lg		11 06 24.2	
	comp=Z,29nm,0.9s						
N33A	**J Bar K, Exete**	**4.39**	**16**	Pn	Pn	11 05 02.1	-0.2
N33A				IAmb_Lg		11 06 15.6	
	comp=Z,19nm,0.8s						
W39A	**Magazine**	**4.48**	**106**	IAmb_Lg		11 06 24.9	
	comp=Z,23nm,0.8s						
Z38A	**Mt. Pleasant**	**4.67**	**133**	IAmb_Lg		11 06 28.5	
	comp=Z,15nm,0.8s						
S39A	**Bolivar**	**4.73**	**74**		Pn	11 05 05.6	-1.2
S39A				IAmb_Lg		11 06 25.3	
	comp=Z,21nm,0.8s						
MIAR	**Mount Ida**	**4.88**	**112**	Pn	Pn	11 05 07.7	-1.3
MIAR				IAmb_Lg		11 06 39.1	
	comp=Z,17nm,0.8s						
BGNE	**Belgrade**	**4.93**	**8**	Pn	Pn	11 05 09.0	-0.6
OGNE	**Ogallala**	**4.99**	**333**	Pn	Pn	11 05 09.7	-0.8
237A	**Washetta, Mont**	**5.25**	**148**	IAmb_Lg		11 06 54.9	
	comp=Z,24nm,0.9s						
SDCO	**Great Sand Dun**	**5.29**	**285**	Pn	Pn	11 05 14.8	0.0
SDCO				IAmb_Lg		11 06 52.1	
	comp=Z,14nm,1.1s						
P38A	**Dawn**	**5.35**	**53**	Pn	Pn	11 05 14.4	-0.9
MGMO	**Mountain Grove**	**5.48**	**81**	Pn	Pn	11 05 16.5	-0.7
WHAR	**Wooly Hollow**	**5.63**	**101**	Pn	Pn	11 05 21.2	+2.1
WHAR				IAmb_Lg		11 06 56.8	
	comp=Z,22nm,0.8s						
WLAR	**White Oak Lake**	**5.63**	**118**	IAmb_Lg		11 07 02.3	
	comp=Z,15nm,0.8s						
FCAR	**Ozark Folk Cen**	**5.64**	**94**	IAmb_Lg		11 06 58.6	
	comp=Z,17nm,0.8s						
R40A	**Maddies Statio**	**5.68**	**70**	Pn	Pn	11 05 21.1	+1.1
W41B	**Gary Mavity, V**	**5.69**	**102**	IAmb_Lg		11 07 00.9	
	comp=Z,15nm,0.9s						
UALR	**University of**	**5.74**	**106**	IAmb_Lg		11 07 05.8	
	comp=Z,18nm,1.0s						
Z41A	**Richland Creek**	**6.08**	**121**	IAmb_Lg		11 07 17.8	
	comp=Z,15nm,0.8s						
P40A	**Paris**	**6.29**	**59**	Pn	Pn	11 05 29.9	+1.5
P40A				IAmb_Lg		11 07 16.3	
	comp=Z,20nm,0.8s						
CCM	**Cathedral Cave**	**6.41**	**74**	IAmb_Lg		11 07 27.4	
	comp=Z,13nm,1.0s						
Y22D	**IRIS PASSCAL I**	**6.88**	**252**	IAmb_Lg		11 07 50.6	
	comp=Z,15nm,0.8s						
PHWY	**Pilot Hill**	**6.91**	**316**	IAmb_Lg		11 07 50.2	
	comp=Z,11nm,1.0s						
PBMO	**Poplar Bluff**	**6.94**	**85**	IAmb_Lg		11 07 35.8	
	comp=Z,12nm,0.7s						
SCIA	**State Center**	**7.03**	**38**	IAmb_Lg		11 07 55.0	
	comp=Z,13nm,0.7s						
FVM	**French Village**	**7.04**	**75**	IAmb_Lg		11 07 47.1	
	comp=Z,9.0nm,0.8s						
MNTX	**Cornudas Mount**	**7.12**	**229**	Pn	Pn	11 05 38.3	-1.4
MNTX				IAmb_Lg		11 07 45.0	
	comp=Z,12nm

OSC2	**CSNet OBS 4**	**3.65**	**112**	P	**Pn**	**11 26 36.9**	**+0.9**
OSC2				S	**Sn**	**11 27 19.0**	**+1.2**
SZAC	**Souni**	**3.84**	**85**	P	**Pn**	**11 26 39.8**	**+1.1**
SZAC				S	**Sn**	**11 27 23.1**	**+0.5**
SZAC				AML	AML	11 27 23.9	
	comp=E,0.2nm,0.2s						
SZAC				AML	AML	11 27 23.9	
	comp=E,0.2nm,0.2s						
SZAC				AML	AML	11 27 27.4	
	comp=E,0.3nm,0.3s						
SZAC				AML	AML	11 27 27.4	
	comp=E,0.3nm,0.3s						
SLUM	**Salum**	**3.94**	**221**	P	**Pn**	**11 26 42.7**	**+2.7**
	baz=222						
SLUM				S	**Sn**	**11 27 24.5**	**-0.4**
	baz=222						
MVOU	**Mavrovouni**	**4.47**	**82**	P	**Pn**	**11 26 49.2**	**+2.0**
HMYD	**Mayadein**	**5.18**	**154**	P	**Pn**	**11 26 59.1**	**+2.1**
	baz=154						
HNAT	**Natroun**	**5.27**	**157**	P	**Pn**	**11 27 00.0**	**+1.8**
	baz=157						
HNAT				S	**Sn**	**11 27 55.8**	**-1.8**
	baz=157						
KOT	**Kottamia**	**5.49**	**145**	P	**Pn**	**11 27 02.6**	**+1.3**
	baz=145						
KOT				S	**Sn**	**11 28 01.3**	**-1.8**
	baz=145						
HHAG	**Hagoal**	**5.60**	**143**	P	**Pn**	**11 27 04.5**	**+1.7**
	baz=143						
HHAG				S	**Sn**	**11 28 04.5**	**-1.3**
	baz=143						
HSAF	**As Saff**	**5.63**	**149**	P	**Pn**	**11 27 04.5**	**+1.3**
	baz=149						
GLL	**Jalalah**	**5.74**	**148**	P	**Pn**	**11 27 06.7**	**+2.0**
	baz=148						
SWA2		**5.76**	**205**	P	**Pn**	**11 27 07.3**	**+2.4**
	baz=206						
SWA2				S	**Sn**	**11 28 05.9**	**-3.8**
	baz=206						
SUZ	**Suez**	**6.07**	**139**	P	**Pn**	**11 27 11.5**	**+2.3**
	baz=139						
KZIT	**Kziot**	**6.32**	**123**	Pn	**Pn**	**11 27 12.9**	**+0.4**
KZIT				Sn	**Sn**	**11 28 20.4**	**-2.9**
AMAZ	**Amatzia**	**6.35**	**116**	Pn	**Pn**	**11 27 14.1**	**+1.1**
AMAZ				Sn	**Sn**	**11 28 22.4**	**-1.7**
HMDT	**Nahal Hemdat**	**6.50**	**108**	Pn	**Pn**	**11 27 15.8**	**+0.7**
HMDT				Sn	**Sn**	**11 28 27.9**	**+0.1**
YTIR	**Yattir**	**6.58**	**117**	Pn	**Pn**	**11 27 17.2**	**+1.0**
YTIR				Sn	**Sn**	**11 28 28.4**	**-1.5**
DSI	**Dead Sea**	**6.68**	**114**	Pn	**Pn**	**11 27 19.4**	**+1.9**
DSI				Sn	**Sn**	**11 28 31.6**	**-0.6**
MSBI	**Mazada**	**6.79**	**116**	Pn	**Pn**	**11 27 20.1**	**+1.2**
GHAJ	**Ghor Haditha**	**6.95**	**115**	Pn	**Pn**	**11 27 22.7**	**+1.6**
KRMI	**Paran Flat**	**7.03**	**127**	Pn	**Pn**	**11 27 22.9**	**+0.6**
KRMI				Sn	**Sn**	**11 28 36.4**	**-4.3**
PRNI	**Paran**	**7.07**	**124**	Pn	**Pn**	**11 27 23.6**	**+0.8**
PRNI				Sn	**Sn**	**11 28 38.4**	**-3.3**
EIL	**Elat**	**7.47**	**128**	Pn	**Pn**	**11 27 29.8**	**+1.5**
EIL				Sn	**Sn**	**11 28 47.9**	**-3.6**

IDC 24 12:06:22.2±4.3, 3°.24S×103°.61E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=176.7km s-min=29.8km az=53.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H01W3	**Cape Leeuwin H**	**32.97**	**164**	T	T	12 46 32.3	
	baz=339,slow=76,SNR=4.9						
H01W1	**Cape Leeuwin H**	**32.99**	**164**	T	T	12 46 36.2	
	baz=339,slow=76,SNR=4.3						
H01W2	**Cape Leeuwin H**	**32.99**	**164**	T	T	12 46 35.6	
	baz=339,slow=76,SNR=4.4						
WRA	**Warramunga Arr**	**34.27**	**121**	P	P	12 13 10.0	-0.4
	0.3nm,0.6s,baz=305,slow=8.5,SNR=5.4						
	0.3nm,0.6s						
SONM	**Songino Array**	**50.91**	**2**	P	P	12 15 26.9	+1.6
	0.8nm,0.6s,baz=181,slow=5.8,SNR=4.9						
	0.8nm,0.6s						
MKAR	**Makanchi Array**	**53.25**	**342**	P	P	12 15 41.8	-0.8
	0.4nm,0.6s,baz=148,slow=9.3,SNR=3.3						
	0.4nm,0.6s						
ZALV	**Zalesovo Beam**	**59.10**	**347**	P	P	12 16 23.4	-0.9
	0.4nm,0.3s,baz=162,slow=6.8,SNR=2.5						
	0.4nm,0.3s						

IDC 24 12:16:01.6±2.2, 19°.07N×145°.81E, h0km, mb3.6/3, mbtmp3.6/3, MS3.6/1, Error ellipse: s-maj=192.1km s-min=29.1km az=115.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**40.37**	**197**	P	P	12 23 41.2	-0.2
	0.4nm,0.5s,baz=21,slow=10.0,SNR=12						
	0.4nm,0.5s						
RAO	**Raoul Island**	**59.44**	**143**	LR	LR	12 48 21.0	
	comp=Z,53nm,21.1s,baz=87,slow=33						
ILAR	**Eielson Array**	**63.27**	**26**	P	P	12 26 31.5	-0.3
	0.2nm,0.5s,baz=261,slow=5.7,SNR=3.3						
	0.2nm,0.5s						
NVAR	**Mina Array Bea**	**82.83**	**52**	P	P	12 28 28.8	+0.3
	0.6nm,0.6s,baz=278,slow=5.6,SNR=6.1						
	0.6nm,0.6s						

*NEIC **24** 12:20:02.1±1.7, 14°.83S±0°.08×72°.88W±0°.08, h66km±9km, mb4.4/5, Error ellipse: s-maj=14.2km s-min=9.2km az=223.0*

*IDC **24** 12:20:03.0±1.5, 14°.80S×72°.87W, h85km±15km, mb3.6/2, mbtmp4.0/7, Error ellipse: s-maj=41.2km s-min=10.6km az=30.0*

ISC 24 12:20:03.3±0.6, 15°.05S±0°.06×73°.04W±0°.08, h101km, n48, σ1§65/59, mb4.0/4, 2C-1D, Southern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB12	**IPOC Station P**	**4.40**	**144**	Pn	**Pn**	**12 21 08.6**	**+0.7**
PB12	**IPOC Station P**	**4.40**	**144**	*e*P	**Pn**	**12 21 08.5**	**+0.5**
PB12				*i* S	**Sn**	**12 21 56.6**	**-1.5**
PB12				IAML		12 22 01.0	
	comp=N,190nm,0.5s						
PB12	**IPOC Station P**	**4.40**	**144**	*e*P	**Pn**	**12 21 08.5**	**+0.5**
PB12				*i* S	**Sn**	**12 21 56.6**	**-1.5**
PB16	**IPOC Station P**	**4.71**	**134**	*i* P	**Pn**	**12 21 14.4**	**+1.8**
PB16				*i* S	**Sn**	**12 22 09.0**	**+2.6**
PB16				IAML		12 22 17.7	
	comp=N,62nm,0.5s						
PB16	**IPOC Station P**	**4.71**	**134**	*i* P	**Pn**	**12 21 14.4**	**+1.8**
PB16				*i* S	**Sn**	**12 22 09.0**	**+2.6**
NNA	**Nana**	**4.79**	**309**	P	**Pn**	**12 21 14.1**	**+0.8**
	comp=N,17nm,0.3s,baz=116,slow=12,SNR=5.0						
NNA				S	**Sn**	**12 22 06.5**	**-1.1**
	comp=N,117nm,0.3s,baz=35,slow=19,SNR=19						
NNA	**Nana**	**4.79**	**309**		**Pn**	**12 21 11.3**	**-2.0**
LPAZ	**La Paz**	**4.89**	**105**	P	**Pn**	**12 21 15.3**	**+0.2**
	comp=N,8.4nm,0.4s,baz=291,slow=11,SNR=39						
LPAZ				S	**Sn**	**12 22 09.4**	**-1.5**
	comp=N,16nm,0.9s,baz=33,slow=14,SNR=5.0						
LPAZ	**La Paz**	**4.89**	**105**		**Pn**	**12 21 13.0**	**-2.1**
LPAZ	**La Paz**	**4.89**	**105**	*e*P	**Pn**	**12 21 16.0**	**+0.9**
PB11	**IPOC Station P**	**5.69**	**146**		**Pn**	**12 21 23.7**	**-1.9**
PB11	**IPOC Station P**	**5.69**	**146**	*e*P	**Pn**	**12 21 25.4**	**-0.2**
PB11				*i* S	**Sn**	**12 22 26.9**	**-2.8**
PB11				IAML		12 22 34.6	
	comp=E,107nm,0.2s						
PB11	**IPOC Station P**	**5.69**	**146**	*e*P	**Pn**	**12 21 25.4**	**-0.2**
PB11				*i* S	**Sn**	**12 22 26.9**	**-2.8**
GO01	**Chusmiza**	**5.88**	**142**		**Pn**	**12 21 29.2**	**+0.7**
GO01	**Chusmiza**	**5.88**	**142**	*e*P	**Pn**	**12 21 29.2**	**+0.7**
GO01				*i* S	**Sn**	**12 22 34.2**	**-0.6**
TA02	**Huaiquique**	**5.89**	**152**	Pn	**Pn**	**12 21 26.9**	**-1.2**
TA01	**Diego Aracena**	**6.13**	**154**	*i* S	**Sn**	**12 22 37.1**	**-3.0**
PB08	**IPOC Station P**	**6.28**	**144**		**Pn**	**12 21 34.0**	**+0.2**
PB08	**IPOC Station P**	**6.28**	**144**	*e*P	**Pn**	**12 21 33.9**	**+0.2**
PB08				*i* S	**Sn**	**12 22 41.7**	**-2.5**
PATCX	**Punta Patache**	**6.37**	**155**	Pn	**Pn**	**12 21 34.9**	**+0.2**
PB01	**IPOC Station P**	**6.85**	**151**		**Pn**	**12 21 40.6**	**-0.7**
PB01	**IPOC Station P**	**6.85**	**151**	*e*P	**Pn**	**12 21 40.9**	**-0.4**
PB01				*i* S	**Sn**	**12 22 53.2**	**-4.7**
PB02	**IPOC Station P**	**6.92**	**155**		**Pn**	**12 21 42.5**	**+0.3**
PB02	**IPOC Station P**	**6.92**	**155**	*e*P	**Pn**	**12 21 42.0**	**-0.2**
PB07	**IPOC Station P**	**7.29**	**156**	Pn	**Pn**	**12 21 47.1**	**-0.2**
PB07	**IPOC Station P**	**7.29**	**156**	*e*P	**Pn**	**12 21 47.4**	**+0.1**
PB09	**IPOC Station P**	**7.62**	**152**	Pn	**Pn**	**12 21 52.8**	**+1.0**
PB09	**IPOC Station P**	**7.62**	**152**	*e*P	**Pn**	**12 21 52.8**	**+1.0**
PB09				*i* S	**Sn**	**12 23 15.2**	**-1.5**
PB04	**IPOC Station P**	**7.75**	**160**	Pn	**Pn**	**12 21 53.4**	**-0.2**
PB06	**IPOC Station P**	**8.29**	**157**	Pn	**Pn**	**12 22 01.1**	**+0.2**
LVC	**Limon Verde**	**8.48**	**153**	P	**Pn**	**12 22 03.8**	**+0.2**
	comp=E,2.3nm,0.4s,baz=10,slow=9.3,SNR=8.6						
LVC				S	**Sn**	**12 23 35.5**	**-2.3**
	comp=E,9.6nm,0.3s,baz=106,slow=16,SNR=12						
LVC	**Limon Verde**	**8.48**	**153**	Pn	**Pn**	**12 22 04.0**	**+0.4**
PB15	**IPOC Station P**	**8.79**	**158**	Pn	**Pn**	**12 22 08.1**	**+0.3**
ATAH	**Atahualpa**	**9.46**	**326**	S	**Sn**	**12 24 02.5**	**+0.7**
	comp=E,8.4nm,1.2s,baz=213,slow=21,SNR=1.3						
SAML	**Samuel**	**11.39**	**59**		Pn	12 22 36.8	-6.1
SIV	**San Ignacio**	**11.57**	**96**	P	**Pn**	**12 22 41.7**	**-3.7**
	comp=E,2.9nm,0.5s,baz=289,slow=9.9,SNR=14						
CPUP	**Villa Florida**	**18.47**	**130**	P	**Pn**	**12 24 12.5**	**-0.2**
	comp=E,3.1nm,0.7s,baz=298,slow=10,SNR=6.4						
CPUP	**Villa Florida**	**18.47**	**130**	IAmb	IAmb	12 24 14.3	
	comp=Z,4.6nm,0.9s						
ITQB	**Itaqui**	**20.99**	**137**	P	**P**	**12 24 40.4**	**+1.7**
ITQB				IAmb	IAmb	12 24 43.9	
	comp=Z,17nm,0.7s						
BAUV	**El Baul**	**24.35**	**12**	P	**P**	**12 25 09.1**	**-2.8**
BAUV				IAmb	IAmb	12 25 12.7	
	comp=Z,14nm,0.9s						
D62A	**Allapoint, All**	**61.95**	**3**	P	**P**	**12 30 13.1**	**+0.8**
SNAA	**Sanae**	**69.62**	**161**	P	**P**	**12 31 05.0**	**+3.6**
SNAA				IAmb	IAmb	12 31 05.2	
	comp=Z,3.0nm,0.8s						
TORD	**Torodi Ar. Bea**	**79.08**	**73**	P	**P**	**12 31 55.8**	**-1.4**
	comp=Z,1.0nm,0.7s,baz=262,slow=5.0,SNR=4.8						
	comp=Z,1.0nm,0.7s						
ESDC	**Sonseca Array**	**84.13**	**46**	P	**P**	**12 32 23.6**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=264,slow=4.5,SNR=5.9						
	comp=Z,0.9nm,0.7s						
WRA	**Warramunga Arr**	**136.02**	**219**	PKP	**PKiKP**	**12 39 16.0**	**+0.9**
	comp=Z,0.4nm,0.8s,baz=130,slow=2.0,SNR=4.7						
ZALV	**Zalesovo Beam**	**137.48**	**19**	PKP	**PKiKP**	**12 39 17.2**	**+0.1**
	comp=Z,1.3nm,0.6s,baz=283,slow=3.1,SNR=5.9						
SONM	**Songino Array**	**147.31**	**1**	PKPbc	**PKPbc**	**12 39 36.4**	**+1.0**
	comp=Z,1.3nm,0.6s,baz=346,slow=2.4,SNR=8.0						
SONM	**Songino Array**	**147.31**	**1**		**PKPab**	**12 39 36.9**	**-0.4**

*TUL **24** 12:30:25.2±1.6, 35°.60N±0°.01×97°.28W±0°.02, h6km±4km, ML2.9, mb_Lg2.5/46(NEIC), Error ellipse: s-maj=2.1km s-min=1.6km az=141.0*

NEIC 24 12:30:25.4±1.6, 35°.62N±0°.01×97°.28W±0°.01, h5km±1km, Error ellipse: s-maj=2.9km s-min=2.2km az=227.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OK005	**Luther M Schoo**	**0.08**	**61**	Pg	Pg	12 30 27.7	+0.5
OK005				Sg	Sg	12 30 29.5	+1.1
OK009	**Oakdale Elemen**	**0.12**	**254**	Sg	Sg	12 30 30.3	+0.7
OKCFA	**Oklahoma City**	**0.25**	**215**	Pg	Pg	12 30 30.2	+0.1
OKCFA				Sg	Sg	12 30 33.9	+0.5
OKCSW	**OKLAHOMA CITY**	**0.25**	**212**		Pg	12 30 30.3	+0.1
FNO	**Franklin**	**0.37**	**196**	Pg	Pg	12 30 32.5	-0.1
FNO				Sg	Sg	12 30 37.9	+0.5
X34A	**Smith Ranch, M**	**1.11**	**204**	Pg	Pg	12 30 46.3	-0.4
X34A				Sg	Sb	12 31 02.0	+0.2
TUL1	**Leonard**	**1.24**	**76**	Pg	Pg	12 30 48.0	-1.2
T35A	**Sooner Cattle**	**1.44**	**25**	Pn	Pn	12 30 51.5	-0.6
WMOK	**Wichita Mounta**	**1.51**	**235**		Pn	12 30 52.3	-0.8
X37A	**Clayton**	**1.87**	**123**	Pn	Pn	12 30 57.4	-0.6
HHAR	**Hobbs**	**2.79**	**75**	Pn	Pn	12 31 10.5	-0.2
W39A	**Magazine**	**2.88**	**97**	IAmb_Lg		12 32 01.8	
	comp=Z,12nm,0.8s						
Z38A	**Mt. Pleasant**	**3.02**	**140**	Pn	Pn	12 31 13.5	-0.3
Z38A				IAmb_Lg		12 32 08.0	
	comp=Z,13nm,0.8s						
MIAR	**Mount Ida**	**3.22**	**108**	Pn	Pn	12 31 14.9	-1.6
KSU1	**Kansas State U**	**3.52**	**9**	Pn	Pn	12 31 19.7	-1.0
KSU1				IAmb_Lg		12 32 19.4	
	comp=Z,15nm,0.8s						
ABTX	**Abilene, Hawle**	**3.57**	**214**	Pn	Pn	12 31 20.9	-0.6
AMTX	**Amarillo**	**3.68**	**260**	Pn	Pn	12 31 21.5	-1.4
AMTX				IAmb_Lg		12 32 26.9	
	comp=Z,11nm,0.8s						
CBKS	**Cedar Bluff**	**3.75**	**329**	Pn	Pn	12 31 22.2	-1.7
CBKS				IAmb_Lg		12 32 34.5	
	comp=Z,9.5nm,1.0s						
S39A	**Bolivar**	**3.79**	**56**	Pn	Pn	12 31 23.4	-1.1
S39A				IAmb_Lg		12 32 27.1	
	comp=Z,11nm,0.8s						
WLAR	**White Oak Lake**	**3.94**	**118**	Pn	Pn	12 31 25.4	-1.0
WHAR	**Wooly Hollow**	**4.09**	**93**	Pn	Pn	12 31 26.2	-2.3
UALR	**University of**	**4.13**	**100**	IAmb_Lg		12 32 39.9	
	comp=Z,16nm,1.0s						
W41B	**Gary Mavity, V**	**4.13**	**95**	IAmb_Lg		12 32 38.5	
	comp=Z,13nm,0.8s						
FCAR	**Ozark Folk Cen**	**4.20**	**85**	Pn	Pn	12 31 27.0	-3.0
FCAR				IAmb_Lg		12 32 44.8	
	comp=Z,10nm,0.7s						
MGMO	**Mountain Grove**	**4.32**	**68**	IAmb_Lg		12 32 41.8	
	comp=Z,18nm,0.7s						
Z41A	**Richland Creek**	**4.38**	**121**	IAmb_Lg		12 32 42.9	
	comp=Z,8.2nm,0.7s						
MSTX	**Muleshoe**	**4.81**	**252**	IAmb_Lg		12 33 01.2	
	comp=Z,7.0nm,0.7s						
R40A	**Maddies Statio**	**4.82**	**55**	Pn	Pn	12 31 36.8	-1.8
R40A				IAmb_Lg		12 32 58.3	
	comp=Z,7.0nm,0.7s						
435B	**Jarrell**	**4.83**	**183**	IAmb_Lg		12 33 03.3	
	comp=Z,11nm,0.9s						
P38A	**Dawn**	**4.99**	**35**	Pn	Pn	12 31 39.0	-1.8
LCAR	**Lake Charles**	**5.00**	**83**	IAmb_Lg		12 33 09.3	
	comp=Z,9.0nm,0.9s						
CCM	**Cathedral Cave**	**5.42**	**62**	IAmb_Lg		12 33 23.6	
	comp=Z,12nm,0.9s						
JCT	**Junction City**	**5.54**	**203**	IAmb_Lg		12 33 30.7	
	comp=Z,9.3nm,0.8s						
PBMO	**Poplar Bluff**	**5.66**	**76**	IAmb_Lg		12 33 28.9	
	comp=Z,12nm,0.8s						
P40A	**Paris**	**5.70**	**45**	IAmb_Lg		12 33 33.6	
	comp=Z,9.3nm,0.7s						
T25A	**Trinidad**	**5.95**	**287**	IAmb_Lg		12 33 47.3	
	comp=Z,6.5nm,0.9s						
FVM	**French Village**	**5.98**	**65**	IAmb_Lg		12 33 39.9	
	comp=Z,6nm,0.9s						
OGNE	**Ogallala**	**6.50**	**326**	IAmb_Lg		12 33 54.4	
	comp=Z,10nm,0.7s						

*IDC **24** 12:30:48.6±2.8, 0°.89N×137°.00E, h0km, mb3.9/4, mbtmp3.9/4, MS3.4/2, Error ellipse: s-maj=97.4km s-min=30.7km az=78.0*

*NEIC **24** 12:30:56.4±0.7, 0°.49N±0°.07×134°.9E±0°.2, h10km±2km, mb4.2/11, Error ellipse: s-maj=33.6km s-min=8.9km az=105.0*

ISC 24 12:30:58.3±1.1, 0°.46N±0°.10×134°.9E±0°.2, h26km, n23, σ0§67/20, mb4.1/7, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**4.25**	**218**	Pn	**Pn**	**12 32 02.0**	**+0.7**
FAKI				Sn	**Sn**	**12 32 50.0**	**-0.1**
MTN	**Manton Dam**	**13.72**	**195**	Pn	**Pn**	**12 34 10.9**	**-0.4**
KNRA	**Kununurra**	**17.12**	**200**		**Pn**	**12 34 55.6**	**-0.4**
KNRA				IAmb	IAmb	12 35 08.2	
	comp=Z,15nm,1.3s						
WB0	**Warramunga Arr**	**20.10**	**181**	P	**P**	**12 35 29.0**	**-1.3**
WRAB	**Tennant Creek**	**20.27**	**181**	P	**P**	**12 35 30.2**	**-1.9**
WB2	**Warramunga Arr**	**20.28**	**181**	P	**P**	**12 35 32.2**	**0.0**
WB2				IAmb	IAmb	12 35 34.0	
	comp=Z,12nm,0.8s						
WRA	**Warramunga Arr**	**20.28**	**181**	P	**P**	**12 35 32.2**	**0.0**
	comp=Z,11nm,0.8s,baz=2.5,slow=11,SNR=106						
	comp=Z,11nm,0.8s						
WRA	**Warramunga Arr**	**20.28**	**181**	P	**P**	**12 35 31.8**	**-0.3**
WR0	**Warramunga Arr**	**20.29**	**181**	P	**P**	**12 35 32.0**	**-0.3**
WR0				IAmb	IAmb	12 35 34.1	
	comp=Z,8.7nm,0.8s						
CTA	**Charters Tower**	**23.27**	**152**	LR	LR	12 46 08.6	
	comp=Z,77nm,20.8s,baz=255,slow=40						
CTAO	**Charters Tower**	**23.27**	**152**	P	**P**	**12 36 04.8**	**+0.8**
CTAO				IAmb	IAmb	12 36 07.2	
	comp=Z,4.9nm,0.7s						
AS31	**Alice Springs**	**23.99**	**182**	P	**P**	**12 36 11.8**	**+0.8**
ASAR	**Alice Springs**	**24.00**	**182**	P	**P**	**12 36 11.1**	**+0.1**
DZM	**Mont Dzumac**	**38.08**	**128**	LR	LR	12 51 53.6	
	comp=Z,77nm,18.3s,baz=70,slow=34						
CMAR	**Chiang Mai Arr**	**39.54**	**299**	P	P	12 38 37.3	+10
	comp=Z,0.5nm,0.4s,baz=121,slow=6.5,SNR=4.5						
	comp=Z,0.5nm,0.4s						
MK31	**Makanchi Array**	**64.95**	**323**	P	**P**	**12 41 36.0**	**+0.1**
MK31				IAmb	IAmb	12 41 41.7	
	comp=Z,2.7nm,1.2s						
MKAR	**Makanchi Array**	**64.95**	**323**	P	**P**	**12 41 35.8**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=126,slow=7.6,SNR=6.7						
	comp=Z,0.6nm,0.6s						
MKAR	**Makanchi Array**	**64.95**	**323**	P	**P**	**12 41 35.8**	**-0.1**
KURK	**Kurchatov**	**68.94**	**326**	P	**P**	**12 42 00.8**	**-0.2**
KURK	**Kurchatov**	**68.94**	**326**	IAmb	IAmb	12 42 29.5	
	comp=Z,1.4nm,0.8s						
KURBB	**Kurchatov Arra**	**68.95**	**325**	P	**P**	**12 42 00.8**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=119,slow=5.7,SNR=5.6						
	comp=Z,0.7nm,0.6s						
KK31	**Karatay Array**	**71.19**	**316**	P	**P**	**12 42 14.9**	**-0.2**
KK31				IAmb	IAmb	12 42 16.3	
	comp=Z,3.3nm,1.2s						
KKAR	**Karatay Array**	**71.19**	**316**	P	**P**	**12 42 15.3**	**+0.2**

*WEL **24** 12:38:00,41°.56S×174°.42E, h23km, ML4.7, Mw4.3, Moment Tensor Solution. s6 Moment tensor: Scale 10^15 Nm; Mrr1.03; Mθθ2.26; Mϕϕ-3.28; Mrθ-0.83; Mθϕ0.78; Mϕr-0.34; Fault plane solution: M0.3.10000×10^15 NP1: ϕs310.00000°, δ70.00000°, λ17.00000°. NP2: ϕs214.00000°, δ74.00000°, λ159.00000°. Principal axes: T 279.1200, Plg26.0000°, Azm171.0000°; N 61.1500, Plg64.0000°, Azm358.0000°; P -340.2700, Plg3.0000°, Azm263.0000°;*

*IDC **24** 12:38:39.4±1.5, 41°.38S×174°.60E, h0km, mb4.0/1, mbtmp4.0/1, MS3.3/1 Error ellipse: s-maj=77.2km s-min=43.2km az=42.0*

*NOU **24** 12:38:42.5, 41°.75S×174°.66E, h14km, MLv5.0/10, Cook Strait, New Zealand*

*WEL **24** 12:38:43.7±0.3, 42°.5±3°×17°.4E±°, h13km±3km, M4.7/23, ML5.0/23, MLv4.7/23, Error ellipse: s-maj=0.0km s-min=0.0km az=162.5*

*NEIC **24** 12:38:43.3±1.3, 41°.63S±0°.04×174°.48E±0°.04, h22km±5km, mb4.5/12, Error ellipse: s-maj=6.4km s-min=3.9km az=157.0*

ISC 24 12:38:43.8±0.8, 41°.63S±0°.03×174°.50E±0°.02, h26km±5km, n203, σ1§34/210, mb4.5/9, Cook Strait

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMWZ	**Cape Campbell**	**0.25**	**241**	Pg	**Pb**	**12 38 50.1**	**-0.1**
CMWZ	**Cape Campbell**	**0.25**	**241**	P	**Pb**	**12 38 50.1**	**-0.1**
CMWZ				S	**Sb**	**12 38 55.4**	**+0.8**
SNZO	**South Karori**	**0.35**	**26**		**Pb**	**12 38 51.3**	**-0.4**
SNZO	**South Karori**	**0.35**	**26**	P	**Pb**	**12 38 51.7**	**0.0**
BHW	**Baring Head**	**0.35**	**52**	Pg	**Pn**	**12 38 52.0**	**-1.3**
BHW	**Baring Head**	**0.35**	**52**	P	**Pn**	**12 38 52.0**	**-1.3**
BHW				S	**Sn**	**12 38 58.1**	**-1.3**
WEL	**Wellington**	**0.40**	**30**	P	**Pb**	**12 38 52.3**	**-0.1**
WEL				S	**Sb**	**12 38 58.5**	**+0.2**
TCW	**Tory Channel**	**0.45**	**338**	P	**Pb**	**12 38 52.0**	**-1.3**
TUWZ	**Tuamarina**	**0.47**	**295**		**Pb**	**12 38 52.1**	**-1.4**
TUWZ	**Tuamarina**	**0.47**	**295**	P	**Pb**	**12 38 52.2**	**-1.4**
TUWZ				S	**Sb**	**12 38 58.0**	**-2.1**
BSWZ	**Blackbirch Sta**	**0.48**	**259**	Pg	**Pb**	**12 38 53.1**	**-0.6**
BSWZ	**Blackbirch Sta**	**0.48**	**259**	P	**Pb**	**12 38 53.1**	**-0.6**
BSWZ				S	**Sb**	**12 39 00.5**	**+0.1**
PLWZ	**Palliser**	**0.57**	**84**		**Pn**	**12 38 56.7**	**+0.4**
PLWZ	**Palliser**	**0.57**	**84**	P	**Pn**	**12 38 56.6**	**+0.4**
MSWZ	**Moikau Station**	**0.60**	**69**		**Pn**	**12 38 56.9**	**+0.3**
MSWZ	**Moikau Station**	**0.60**	**69**	P	**Pn**	**12 38 56.8**	**+0.2**
CAW	**Cannon Point**	**0.67**	**39**	P	**Pn**	**12 38 57.1**	**-0.6**
CAW				S	**Sn**	**12 39 06.5**	**-0.8**
PAWZ	**Paruwai Farm**	**0.74**	**71**	P	**Pn**	**12 38 59.2**	**+0.6**
PAWZ				S	**Sn**	**12 39 11.8**	**+2.9**
KIW	**Kapiti Island**	**0.83**	**22**	P	**Pb**	**12 38 59.3**	**-0.3**
KIW				S	**Sb**	**12 39 10.4**	**+0.1**
MTW	**Mount Morrison**	**0.89**	**58**	P	**Pn**	**12 39 01.2**	**+0.6**
MTW				S	**Sn**	**12 39 15.2**	**+2.6**
TRWZ	**Traveller**	**0.92**	**76**	P	**Pn**	**12 39 01.7**	**+0.6**
DUWZ	**D'Urville Isla**	**0.94**	**332**	P	**Pn**	**12 39 00.4**	**-0.8**
DUWZ				S	**Sb**	**12 39 12.1**	**-1.3**
NNZ	**Nelson**	**0.94**	**296**		**Pn**	**12 39 00.6**	**-0.7**
NNZ	**Nelson**	**0.94**	**296**	P	**Pn**	**12 39 00.4**	**-0.9**
NNZ				S	**Sb**	**12 39 12.4**	**-1.1**
OGWZ	**Otaki Gorge**	**0.96**	**32**	P	**Pb**	**12 39 01.6**	**-0.1**
HOWZ	**Holdsworth Sta**	**1.06**	**47**	P	**Pb**	**12 39 03.5**	**+0.1**
KHZ	**Kahutara**	**1.06**	**222**		**Pb**	**12 39 03.3**	**-0.2**
KHZ	**Kahutara**	**1.06**	**222**	P	**Pb

BKZ	Black Stump Fm	2.89	32	P		Pn	12 39 27.8	-0.4	
BKZ	Black Stump Fm	2.89	32	P		Pn	12 39 28.0	-0.2	
RATZ	Rangitukua	2.93	20	P		Pb	12 39 33.4	-1.9	
HATZ	Hinemaiaia	2.99	24	P		Pb	12 39 35.4	-1.1	
WACZ	Wakanui South	3.03	219	P		Pn	12 39 28.9	-1.1	
ARHZ	Aropaoanui	3.03	40	P		Pn	12 39 29.4	-0.7	
WATZ	Wairara	3.07	18	P		Pb	12 39 36.1	-1.6	
NMHZ	Naumai	3.08	36	P		Pn	12 39 30.4	-0.5	
HIZ	Hauiti	3.12	5			Pn	12 39 33.4	+2.1	
HIZ	Hauiti	3.12	5	P		Pn	12 39 33.8	+2.4	
HIZ	Hauiti	3.12	5	P		Pn	12 39 34.3	+2.9	
WVZ	Waitaha Valley	3.14	241	P		Pn	12 39 31.4	-0.2	
MRHZ	Matea Rd	3.15	28	P		Pn	12 39 31.4	-0.4	
RPZ	Rata Peaks	3.29	230	Pn		Pn	12 39 32.8	-0.8	
RPZ	Rata Peaks	3.29	230	P		Pn	12 39 32.6	-1.0	
RPZ	Rata Peaks	3.29	230	P		Pn	12 39 33.2	-0.4	
KUTZ	Kaahu Road	3.30	18	P		Pb	12 39 39.9	-1.7	
MTHZ	Maungataniwha	3.30	34	P		Pn	12 39 33.2	-0.6	
RAHZ	Arahi	3.35	37	P		Pn	12 39 33.5	-1.1	
WPRZ	Whakapapaterin	3.36	23	P		Pn	12 39 35.4	+0.8	
ARCZ	Arundel	3.37	225	P		Pn	12 39 33.6	-1.2	
ALRZ	Allen Road	3.37	25	P		Pn	12 39 34.4	-0.4	
TLZ	Tolley Road	3.39	14	P		Pn	12 39 36.5	+1.4	
PRRZ	Plateau Road	3.45	26	P		Pb	12 39 35.3	-0.5	
GRRZ	Galatos Road	3.50	21	P		Pb	12 39 43.6	-1.5	
HRRZ	Handcock Road	3.51	23	P		Pn	12 39 36.8	0.0	
HRRZ				P		Pb	12 39 36.9	-8.4	
GCSZ	Gaunt Creek Bo	3.52	240	P		Pn	12 39 38.3	+1.6	
RTZ	Ruatahuna	3.56	33	P		Pn	12 39 40.4	+3.0	
HSRZ	Hossack Road	3.57	23	P		Pb	12 39 44.7	-1.7	
SNGZ	Shannon Statio	3.58	38	P		Pn	12 39 36.2	-1.5	
MHGZ	Mahia Peninsul	3.59	48	P		Pn	12 39 36.1	-1.7	
MUGZ	Murupara	3.60	30	P		Pn	12 39 37.1	-0.8	
TARZ	Mount Tarawera	3.72	25	P		Pn	12 39 39.4	-0.3	
TMZ	Timaru	3.76	222	P		Pn	12 39 39.1	-1.0	
OMRZ	Omania	3.80	23	P		Pb	12 39 47.7	-2.5	
URZ	Urewera	3.92	32	Pn		Pn	12 39 40.7	-1.6	
URZ	Urewera	3.92	32	P		Pn	12 39 41.4	-0.8	
FOZ	Fox Glacier	3.95	240			Pn	12 39 42.2	-0.5	
FOZ	Fox Glacier	3.95	240	P		Pn	12 39 43.3	+0.7	
TOZ	Tahuroa Road	3.97	12	P		Pn	12 39 44.3	+1.3	
TGRZ	Tauranga	4.12	20	P		Pn	12 39 46.1	+1.0	
LBZ	Lake Benmore	4.20	228	Pn		Pn	12 39 45.6	-0.5	
LBZ	Lake Benmore	4.20	228	P		Pn	12 39 45.7	-0.4	
TWGZ	Tauwhareparae	4.36	39	P		Pn	12 39 46.9	-1.5	
ODZ	Otahua Downs	4.42	218			Pn	12 39 47.9	-1.2	
ODZ	Otahua Downs	4.42	218	P		Pn	12 39 47.7	-1.5	
ODZ	Otahua Downs	4.42	218	P		Pn	12 39 48.4	-0.8	
MYRZ	Mayor Island	4.55	18	P		Pb	12 39 58.6	-4.3	
AWAZ	Awhitu Peninsu	4.56	1	P		Pn	12 39 53.6	+2.5	
ETAZ	East Tamaki Re	4.68	4	P		Pn	12 39 55.5	+2.8	
WTAZ	Waiatarua	4.69	1	P		Pn	12 39 55.8	+2.9	
EPAZ	Eden Park BICE	4.75	2	P		Pn	12 39 58.6	+4.9	
HBAZ	Herne Bay Bore	4.78	2	P		Pb	12 40 01.3	-5.5	
RVAZ	Riverhead Bore	4.85	1	P		Pn	12 39 57.4	+2.3	
WIAZ	Waiheke Island	4.86	6	P		Pn	12 39 58.0	+2.9	
JCZ	Jackson Bay	4.86	238	P		Pn	12 39 55.3	0.0	
MBAZ	Motutapu North	4.86	4	P		Pn	12 39 57.6	+2.4	
KUZ	Kuaotunu	4.97	11	P		Pn	12 39 58.5	+1.8	
MXZ	Matakaoa Point	5.01	37	Pn		Pn	12 39 56.4	-0.9	
ABAZ	Army Bay	5.03	3	P		Pn	12 39 59.9	+2.3	
HHSZ	Highcliff Hill	5.11	212	P		Pn	12 39 57.4	-1.2	
WKZ	Wanaka	5.12	230	Pn		Pn	12 39 58.2	-0.7	
WKZ	Wanaka	5.12	230	P		Pn	12 39 57.9	-0.9	
EAZ	Earnscleugh	5.22	225	P		Pn	12 39 59.2	-0.9	
TUZ	Tuapeka	5.58	218	P		Pn	12 40 04.5	-0.5	
WCZ	Waipu Caves	5.68	350	P		Pn	12 40 09.1	+2.6	
MSZ	Milford Sound	5.69	235	P		Pn	12 40 11.9	+5.3	
MLZ	Mavora Lakes	5.96	229	Pn		Pn	12 40 08.7	-1.6	
SYZ	Scrubby Hill	6.24	216	P		Pn	12 40 13.4	-0.7	
WHZ	Wether Hill Ro	6.38	226	Pn		Pn	12 40 14.8	-1.2	
WHZ	Wether Hill Ro	6.38	226	P		Pn	12 40 14.7	-1.4	
OUZ	Omahuta	6.44	353	Pn		Pn	12 40 17.6	+0.7	
OUZ	Omahuta	6.44	353	P		Pn	12 40 18.4	+1.5	
OUZ	Omahuta	6.44	353	P		Pn	12 40 19.4	+2.5	
DCZ	Deep Cove	6.57	232	Pn		Pn	12 40 18.2	-0.5	
APZ	The Paps	6.99	220	P		Pn	12 40 23.7	-0.8	
KOUNC	Koumac, New Ca	22.73	335	P		P	12 43 43.5	-0.2	
KOUNC				IAmb	IAmb		12 43 54.1		
	comp=Z,7.1nm,0.8s								
MSVF	Nonsavu	24.01	8	P		P	12 43 55.4	-1.2	
MSVF				IAmb	IAmb		12 44 08.3		
	comp=Z,18nm,0.9s								
CTA	Charters Tower	32.15	303	LR		LR	12 56 39.6		
	comp=Z,55nm,21.6s,baz=86,slow=34								
AS31	Alice Springs	38.18	285	P		P	12 45 59.5	-1.8	
ASAR	Alice Springs	38.18	285	P		P	12 46 00.7	-0.6	
WR0	Warramunga Arr	40.09	290	P		P	12 46 16.5	-0.7	
WR0				IAmb	IAmb		12 46 44.6		
	comp=Z,13nm,1.4s								
WB2	Warramunga Arr	40.23	290	P		P	12 46 17.4	-1.0	
WRA	Warramunga Arr	40.24	290	P		P	12 46 17.7	-0.7	
	comp=Z,1.2nm,0.5s,baz=127,slow=8.3,SNR=34								
	comp=Z,1.2nm,0.5s								
WRA	Warramunga Arr	40.24	290	P		P	12 46 17.5	-0.9	
WB0	Warramunga Arr	40.32	290	P		P	12 46 18.0	-1.1	
WB0				IAmb	IAmb		12 46 26.5		
	comp=Z,6.6nm,0.6s								
CASY	Casey	42.41	213	P		P	12 46 35.3	-0.4	
KNRA	Kununurra	47.02	289	P		P	12 47 11.8	-1.2	
KNRA				IAmb	IAmb		12 47 42.0		
	comp=Z,5.7nm,1.0s								
MTN	Manton Dam	47.34	294	P		P	12 47 14.7	-0.8	
QSPA	South Pole Qui	48.50	180	P		P	12 47 26.9	+2.8	
QSPA				IAmb	IAmb		12 47 47.8		
	comp=Z,6.2nm,1.1s								
TROLL	Troll, Antarti	66.52	183	P		P	12 49 32.6	+1.7	
SNAA	Sanae	66.99	181	P		P	12 49 35.5	+1.7	
SNAA	Sanae	66.99	181	P		P	12 49 35.5	+1.7	
VNA3	Neumayer Olymp	67.40	179	P		P	12 49 38.0	+1.7	
VNA1	Neumayer--Stat	68.01	179	P		P	12 49 41.6	+1.5	
PZH	PanZhiHua	95.43	301	P		P	12 52 11.4	+5.2	
PZH				pmax	pmax				
	comp=Z,7.0nm,0.9s								
PZH				pmax	pmax				
	comp=Z,100nm,5.3s								
HHC	Hu-ho-hao-te	99.93	317	eP		Pdif	12 52 28.0	+1.9	
HHC				pmax	pmax				
	comp=Z,11nm,0.9s								
HHC				pmax	pmax				
	comp=Z,200nm,8.6s								
ARCES	ARCESS Array B	147.73	340	PKPbc		PKPbc	12 58 24.1	-0.7	
	comp=Z,0.9nm,0.7s,baz=42,slow=2.0,SNR=5.8								
ARCES	ARCESS Array B	147.73	340			PKPbc	12 58 24.7	-0.2	
TORD	Torodi Ar. Bea	150.94	195	PKPbc		PKiKP	12 58 34.5	-0.6	
	comp=Z,0.5nm,0.4s,baz=149,slow=3.0,SNR=6.7								
TORD				PKPab		pPKPbc	12 58 42.5	-0.6	
	comp=Z,0.7nm,0.4s,baz=157,slow=3.3,SNR=6.3								
TORD	Torodi Ar. Bea	150.94	195			PKiKP	12 58 35.1	0.0	
FINES	FINESS Array B	152.54	327	PKPbc		PKPbc	12 58 35.5	-1.2	
	comp=Z,0.5nm,0.7s,baz=48,slow=4.1,SNR=5.0								
FINES	FINESS Array B	152.54	327			PKPbc	12 58 35.9	-0.8	

*TUL **24** 12:55:43.3±1.3, 36°.51N±0°.02×99°.04W±0°.02, h6km±6km, ML2.9, mb_Lg2.8/60(NEIC), Error ellipse: s-maj=2.8km s-min=1.7km az=152.0*

NEIC 24 12:55:43.1±1.3, 36°.52N±0°.02×99°.05W±0°.02, h5km±2km, Error ellipse: s-maj=3.5km s-min=3.0km az=136.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKCFA	Oklahoma City	1.70	130	Pn	Pn	12 56 12.8	-0.7
WMOK	Wichita Mounta	1.79	173		Pn	12 56 14.6	-0.2
WMOK				IAmb_Lg		12 56 43.9	
	comp=Z,45nm,0.9s						
FNO	Franklin	1.84	133		Pn	12 56 16.0	+0.6
R32A	Long Quarter,	1.91	8		Pb	12 56 17.6	-1.0
T35A	Sooner Cattle	2.07	78		Pn	12 56 17.6	-1.1
T35A				IAmb_Lg		12 56 52.5	
	comp=Z,37nm,0.7s						
X34A	Smith Ranch, M	2.16	152		Pn	12 56 20.3	+0.5
X34A				IAmb_Lg		12 56 53.5	
	comp=Z,54nm,0.7s						
CBKS	Cedar Bluff	2.35	347	IAmb_Lg		12 57 03.5	
	comp=Z,49nm,0.7s						
AMTX	Amarillo	2.70	233		Pn	12 56 27.1	-0.2
AMTX				IAmb_Lg		12 57 08.7	
	comp=Z,28nm,0.7s						
TUL1	Leonard	2.70	102	Pn	Pn	12 56 27.6	+0.4
KSU1	Kansas State U	3.21	36	Pn	Pn	12 56 34.3	0.0
X37A	Clayton	3.56	122	Pn	Pn	12 56 38.6	-0.5
X37A				IAmb_Lg		12 57 45.8	
	comp=Z,31nm,0.8s						
KSCO	Kaye Shedlock'	3.77	312	IAmb_Lg		12 57 46.1	
	comp=Z,24nm,0.7s						
ABTX	Abilene, Hawle	3.92	187	IAmb_Lg		12 57 52.4	
	comp=Z,16nm,0.9s						
HHAR	Hobbs	4.12	92	IAmb_Lg		12 57 55.8	
	comp=Z,20nm,0.9s						
T25A	Trinidad	4.35	280	IAmb_Lg		12 58 08.4	
	comp=Z,20nm,0.9s						
N33A	J Bar K, Exete	4.39	16	IAmb_Lg		12 58 05.9	
	comp=Z,22nm,0.8s						
W39A	Magazine	4.47	106	IAmb_Lg		12 58 13.9	
	comp=Z,16nm,0.7s						
Z38A	Mt. Pleasant	4.66	133	IAmb_Lg		12 58 16.2	
	comp=Z,22nm,0.8s						
MIAR	Mount Ida	4.88	112	IAmb_Lg		12 58 25.4	
	comp=Z,16nm,0.8s						
SDCO	Great Sand Dun	5.30	285	IAmb_Lg		12 58 40.8	
	comp=Z,12nm,1.2s						
P38A	Dawn	5.34	53	IAmb_Lg		12 58 44.4	
	comp=Z,15nm,0.7s						
WLAR	White Oak Lake	5.63	118	IAmb_Lg		12 58 53.3	
	comp=Z,15nm,0.8s						
FCAR	Ozark Folk Cen	5.63	94	IAmb_Lg		12 58 47.3	
	comp=Z,12nm,0.8s						
W41B	Gary Mavity, V	5.68	102	IAmb_Lg		12 58 53.9	
	comp=Z,13nm,0.8s						
UALR	University of	5.73	106	IAmb_Lg		12 58 56.1	
	comp=Z,14nm,0.9s						
435B	Jarrell	5.85	168	IAmb_Lg		12 59 02.3	
	comp=Z,16nm,0.7s						
P40A	Paris	6.29	59	IAmb_Lg		12 59 01.5	
	comp=Z,14nm,0.8s						
LCAR	Lake Charles	6.39	92	IAmb_Lg		12 59 06.9	
	comp=Z,9.1nm,0.8s						
PBMO	Poplar Bluff	6.93	85	IAmb_Lg		12 59 25.8	
	comp=Z,11nm,0.7s						
N23A	Red Feather La	6.94	311	IAmb_Lg		12 59 34.8	
	comp=Z,12nm,0.9s						
SCIA	State Center	7.03	38	IAmb_Lg		12 59 41.5	
	comp=Z,12nm,0.7s						
FVM	French Village	7.03	75	IAmb_Lg		12 59 35.4	
	comp=Z,10nm,0.8s						
K38A	Parkersburg	7.80	36	IAmb_Lg		12 59 58.6	
	comp=Z,14nm,0.7s						
L42A	Oliver, Polo	9.10	50	IAmb_Lg		13 00 33.5	
	comp=Z,11nm,0.8s						
JFWS	Jewell Farm	9.30	44	IAmb_Lg		13 00 49.3	
	comp=Z,8.6nm,0.7s						

MAN 24 13:16:53.4, 13°.67N×121°.04E, h19km, mb3.8, ML2.5, MS2.0, 3D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACP	Maragondon, Ca	0.67	332	eP	Pb	13 17 07.5	+0.5
MACP				eS		13 17 19.0	
LUBP	Lubang	0.77	275	eP	Pb	13 17 07.2	+0.1
LUBP				eS		13 17 19.5	
SJMP	San Jose	1.20	176	eP	Pn	13 17 14.3	+1.0
SJMP				eS		13 17 32.0	

DJA 24 13:39:27.5±0.8, 7°S±5°×10°5E±°, h10km, M4.0/9, mb4.1/1, MLv4.0/9, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	Kota Agung	1.23	355	P	Pn	13 39 50.7	-0.1
BLSI	Bandar Lampung	1.52	25	P	Pn	13 39 53.7	-1.1
SBJI	Serang	1.65	67	P	Pn	13 39 56.6	+0.1
SKJI	Sukabumi	1.96	97	P	Pn	13 40 00.9	+0.1
DBJI	Dramaga	2.15	85	P	Pn	13 40 03.6	+0.2
CBJI	Citeko	2.26	82	P	Pn	13 40 05.8	+0.8
CNJI	Cibinong	2.57	102	P	Pn	13 40 07.4	-1.8
LEM	Lembang	3.00	91	P	Pn	13 40 16.0	+0.7
CMJI	Cimerak	3.95	105	P	Pn	13 40 28.4	+0.2
PCJI	Pacitan	6.68	103	P	Pn	13 41 06.2	+0.5

*IDC **24** 13:53:21.9±1.7, 21°.20N×122°.77E, h0km, mb3.6/4, mbtmp3.6/4, MS2.5/1, Error ellipse: s-maj=59.7km s-min=24.5km az=58.0*
*TAP **24** 13:53:40.2, 21°.08N×121°.94E, h171km, ML4.4, D*
*MAN **24** 13:53:42.3, 20°.96N×121°.35E, h138km, mb4.8, ML3.7, MS3.6*

ISC 24 13:53:40.7±0.9, 21°.05N±0°.03×121°.99E±0°.06, h157km±7km, n122,s118/33/181, mb3.4/4, 6D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LYUB	Lan-yu	1.02	338	iP	Pn	13 54 06.3	-0.1
LYUB	baz=340			iS	Sn	13 54 25.9	-0.2
LAY	baz=340 Lan-yu	1.07	337	eP	Pn	13 54 06.0	-0.8
LAY	baz=339			eS	Sn	13 54 26.4	-0.5
TSEB	baz=339 Hengchuen, Pin	1.33	310	iP	Pn	13 54 10.1	+1.0
TSEB	baz=305			S	Sn	13 54 31.8	+0.9
TWKBT	baz=305 Hengchun	1.41	309	P	Pn	13 54 10.5	+0.5
TWKBT	baz=306			eS	Sn	13 54 32.1	-0.3
TWK1	baz=306 Hengchun	1.42	309	eP	Pn	13 54 10.7	+0.6
TWK1	baz=306			eS	Sn	13 54 32.1	-0.4
SMST	Manzhou Townsh	1.45	312	eP	Pn	13 54 10.7	+0.4
SMST	baz=316			eS	Sn	13 54 33.2	+0.2
HEN	baz=316 Hengchun	1.51	309	eP	Pn	13 54 11.6	+0.7
HEN	baz=303			eS	Sn	13 54 33.3	-0.8
SLIU	baz=303 Shizi	1.61	317	P	Pn	13 54 12.0	+0.1
SLIU	baz=324			eS	Sn	13 54 34.9	-1.2
TAWH	baz=324 Dawu Township	1.65	322	eP	Pn	13 54 12.3	0.0
TAWH	baz=322			eS	Sn	13 54 34.9	-1.9
TAW	baz=322 Tawu	1.66	322	eP	Pn	13 54 11.9	-0.5
TAW	baz=323			eS	Sn	13 54 35.6	-1.3
LDUT	baz=323 Ludao	1.69	343	eP	Pn	13 54 11.8	-1.0
LDUT	baz=346			eS	Sn	13 54 36.7	-0.9
EAST	baz=346 Anshuo	1.70	322	eP	Pn	13 54 13.1	0.0
EAST	baz=322			eS	Sn	13 54 36.8	-1.1
SCZT	baz=322 Fangliau	1.84	316	P	Pn	13 54 14.6	+0.2
SCZT	baz=322			eS	Sn	13 54 39.4	-1.0
TTN	baz=322 Taitung	1.87	335	eP	Pn	13 54 15.0	+0.2
SSPT	baz=332 Xinbi	1.95	317	eP	Pn	13 54 16.3	+0.7
SSPT	baz=322			eS	Sn	13 54 42.1	-0.6
TWGBT	baz=322 Beinan	1.96	334	eP	Pn	13 54 15.4	-0.3
TWGBT	baz=335			eS	Sn	13 54 40.4	-2.5
TWG	baz=335 Pinlang	1.96	334	P	Pn	13 54 15.4	-0.4
TWG	baz=335			eS	Sn	13 54 40.2	-2.8
WLCH	baz=335 Liuqiu	1.98	311	eP	Pn	13 54 17.6	+1.6
WLCH	baz=311			eS	Sn	13 54 45.3	+1.9
MASBT	baz=311 Mashibuluo	2.01	321	eP	Pn	13 54 16.6	+0.3
MASBT	baz=322			eS	Sn	13 54 42.0	-1.9
LONT	baz=322 Longtian	2.02	337	eP	Pn	13 54 16.7	+0.2
LONT	baz=331			eS	Sn	13 54 42.5	-1.6
EDH	baz=331 Donghe	2.02	342	eP	Pn	13 54 16.6	+0.1
EDH	baz=336			eS	Sn	13 54 44.7	+0.5
TSMG	baz=336 Majia	2.07	323	eP	Pn	13 54 17.4	+0.2
TSMG	baz=328			eS	Sn	13 54 43.7	-1.6
SSD	baz=328 Sandimen	2.11	323	eP	Pn	13 54 17.6	+0.1
SSD	baz=324			eS	Sn	13 54 44.7	-1.4
SGLT	baz=324 Jiouru	2.18	320	eP	Pn	13 54 19.7	+1.4
SGLT	baz=325			eS	Sn	13 54 49.1	+1.7
KAU	baz=325 Kaohsiung	2.18	314	eP	Pn	13 54 19.7	+1.4
KAU	baz=308			eS	Sn	13 54 49.0	+1.6
FULB	baz=308 Fuli	2.24	343	eP	Pn	13 54 19.1	0.0
FULB	baz=340			eS	Sn	13 54 49.9	+1.2
TWM1	baz=340 Shoushan	2.29	321	eP	Pn	13 54 21.0	+1.3
TWM1	baz=314			eS	Sn	13 54 50.5	+0.6
SCST	baz=314 Cishan	2.30	323	eP	Pn	13 54 20.2	+0.5
SCST	baz=330			eS	Sn	13 54 49.2	-0.8
ELDTW	baz=330 Lidau	2.32	337	eP	Pn	13 54 19.9	-0.2
EYUL	baz=341 Yuli	2.37	345	eP	Pn	13 54 21.3	+0.6
EYUL	baz=350			eS	Sn	13 54 51.7	+0.1
STYH	baz=350 Taoyuan	2.40	332	eP	Pn	13 54 21.3	+0.4
STYH	baz=333			eS	Sn	13 54 49.9	-2.1
SGST	baz=333 Jiashian	2.41	327	eP	Pn	13 54 20.7	-0.4
SGST	baz=328			eS	Sn	13 54 49.9	-2.5
YULB	baz=328 Yu-li	2.42	345	eP	Pn	13 54 20.6	-0.7
YULB	baz=337			eS	Sn	13 54 50.4	-2.3
SHHT	baz=337 Tainan City	2.49	322	eP	Pn	13 54 23.5	+1.4
HGSD	baz=315 Ruisui	2.49	348	eP	Pn	13 54 21.6	-0.4
CHN3	baz=351 Shinhua	2.52	324	eP	Pn	13 54 23.7	+1.3
CHN1	baz=330 Nanshi	2.52	328	eP	Pn	13 54 23.3	+0.8
EHY	baz=328 Hungye	2.52	346	eP	Pn	13 54 22.3	-0.2
WTP	baz=347 Ta-pu	2.54	330	eP	Pn	13 54 22.8	+0.2
SNST	baz=330 Tainan City	2.57	328	eP	Pn	13 54 23.3	+0.3
SNST	baz=334			eS	Sn	13 54 55.0	-0.8
TAI1	baz=334 Yung-k'ang	2.57	321	eP	Pn	13 54 23.8	+0.8
TPUB	baz=314 Ta-pu	2.57	331	eP	Pn	13 54 23.2	+0.1
TPUB	baz=331			eS	Sn	13 54 53.4	-2.6
SSHA	baz=331 Shanhua	2.61	323	eP	Pn	13 54 24.4	+0.9
TWK	baz=323 Hsinying	2.61	328	eP	Pn	13 54 23.5	-0.1
TWK	baz=329			eS	Sn	13 54 55.2	-1.7
YUS	baz=329 Yu-Shan	2.62	339	eP	Pn	13 54 24.5	+0.4
YUS	baz=332			eS	Sn	13 54 57.0	-0.6
EGFH	baz=332 Guangfu	2.66	349	eP	Pn	13 54 24.1	-0.1
ALS	baz=352 Alishan	2.69	336	eP	Pn	13 54 25.3	+0.5
ALS	baz=330			eS	Sn	13 54 57.9	-1.0
SCLT	baz=330 Jiali	2.70	322	eP	Pn	13 54 24.5	-0.1
SCLT	baz=328			eS	Sn	13 54 57.7	-0.9
SGCP	baz=328 Gonzaga	2.79	179	eP	Pn	13 54 25.2	-0.6
SGCP				eS	Sn	13 54 57.2	-3.5
ICHU	Yijhu	2.80	326	eP	Pn	13 54 25.9	+0.1
ICHU	baz=332			eS	Sn	13 54 58.6	-2.2
ESL	baz=332 Shilin	2.80	349	eP	Pn	13 54 25.6	-0.3
ESL	baz=344			eS	Sn	13 54 58.9	-2.0
VWDT	baz=344 VWDT	2.81	344	eP	Pn	13 54 27.0	+1.0
VWDT	baz=348			eS	Sn	13 55 01.0	0.0
CHY	baz=348 Chiayi	2.84	330	eP	Pn	13 54 26.0	-0.4
CHY	baz=330			eS	Sn	13 55 00.2	-1.5
CHN2	baz=330 Minshiung	2.84	331	eP	Pn	13 54 26.4	0.0
CHN2	baz=331			eS	Sn	13 54 59.8	-2.1
SSLB	baz=331 Suanglung	2.89	341	eP	Pn	13 54 27.1	+0.1
SSLB	baz=334			eS	Sn	13 55 01.0	-2.0
HWA	baz=334 Hwalien	2.94	353	eP	Pn	13 54 29.0	+1.4
WDLH	baz=358 Douliu	2.95	333	eP	Pn	13 54 27.1	-0.6
WDLH	baz=333			eS	Sn	13 55 02.3	-2.0
WSL	baz=333 Shuilin Townsh	2.96	327	eP	Pn	13 54 27.5	-0.3
WSL	baz=327			eS	Sn	13 55 01.8	-2.5
OWD	baz=327 Renai	2.99	346	eP	Pn	13 54 29.3	+0.9
OWD	baz=349			eS	Sn	13 55 05.0	-0.5
SMLT	baz=349 Sun Moon Lake	3.00	340	eP	Pn	13 54 28.4	0.0
SMLT	baz=334			eS	Sn	13 55 03.9	-1.6
WJS	baz=334 Zhushan	3.00	337	eP	Pn	13 54 28.4	+0.1
WTK	baz=338 Tuku	3.02	331	eP	Pn	13 54 27.8	-0.8
WTK	baz=331			eS	Sn	13 55 03.8	-2.0
TYC	baz=331 Yuchr	3.03	340	eP	Pn	13 54 28.1	-0.7
TWD	baz=341 Chiawan	3.04	353	eP	Pn	13 54 28.9	0.0
WUSB	baz=354 Renai	3.04	345	eP	Pn	13 54 29.4	+0.4
WUSB	baz=351			eS	Sn	13 55 05.6	-0.9
WSF	baz=351 Szhu	3.06	328	eP	Pn	13 54 28.4	-0.6
WDGT	baz=328 Dungji	3.09	316	eP	Pn	13 54 29.2	-0.3
CHGB	baz=316 Renai	3.09	346	eP	Pn	13 54 30.5	+0.7
NACB	baz=346 Ninganchiao	3.13	353	eP	Pn	13 54 29.8	-0.2
WHF	baz=359 Hehuan Shan	3.16	348	eP	Pn	13 54 31.2	+0.5
WCS	baz=354 Beigang Elemen	3.16	342	eP	Pn	13 54 31.0	+0.7
WCS	baz=336			eS	Sn	13 55 07.3	-1.6

baz=336
ETLH Xiulin Townshi 3.18 352 *e*P **Pn 13 54 31.1 +0.4**
baz=347
ETLH *e*S **Sn 13 55 08.0 -1.6**
baz=347
VCHM Qimei 3.21 313 *e*P **Pn 13 54 30.4 -0.5**
baz=313
VCHM *e*S **Sn 13 55 07.1 -2.8**
baz=313
WRL Guolierlin Hig 3.21 333 *e*P **Pn 13 54 30.8 -0.2**
baz=338
WRL *e*S **Sn 13 55 07.5 -2.6**
baz=338
APYP Conner 3.25 193‖*e*P **Pn 13 54 31.1 -0.4**
APYP *e*S **Sn 13 55 08.2 -2.7**
FUSS Fushou 3.26 348 *e*P **Pn 13 54 32.8 +0.9**
baz=354
TWT Tachien 3.28 347 *e*P **Pn 13 54 33.6 +1.5**
baz=347
TDCB Techi 3.28 347 *e*P **Pn 13 54 32.8 +0.7**
baz=347
WCHH Zhanghua 3.30 337 *e*P **Pn 13 54 32.2 +0.1**
baz=337
WCHH *e*S **Sn 13 55 10.8 -1.3**
baz=337
TCU Taichung 3.32 339 *e*P **Pn 13 54 32.9 +0.6**
baz=332
PHUB P'eng-hu 3.33 318 P **Pn 13 54 32.0 -0.4**
baz=323
PHUB *e*S **Sn 13 55 09.9 -2.7**
baz=323
WHP Taichung City 3.36 343 *e*P **Pn 13 54 33.3 +0.4**
baz=337
ENA Nanau 3.37 356 *e*P **Pn 13 54 33.9 +0.8**
baz=357
PNG Penghu 3.38 318 *e*P **Pn 13 54 32.3 -0.8**
baz=319
EWUT Wuta 3.39 357 *e*P **Pn 13 54 33.8 +0.5**
baz=357
NNSB Datong 3.41 351 *e*P **Pn 13 54 34.3 +0.6**
baz=355
NNS Nan Shan 3.42 351 *e*P **Pn 13 54 35.0 +1.1**
baz=356
TWQ1 Liyutan 3.47 341 *e*P **Pn 13 54 34.2 -0.1**
baz=342
LATG Datong 3.50 353 *e*P **Pn 13 54 35.6 +0.8**
baz=353
YOJ Yonaguni jima 3.53 15 *e*P **Pn 13 54 34.7 -0.3**
baz=10.0
TWC Suao 3.55 358 *e*P **Pn 13 54 36.4 +1.1**
baz=5.0
NDS Dongshan 3.58 356 *e*P **Pn 13 54 37.1 +1.4**
baz=356
YHNB Yeheng 3.65 351 *e*P **Pn 13 54 37.6 +0.9**
baz=352
NFF Wufeng Townshi 3.66 347 *e*P **Pn 13 54 36.7 -0.1**
baz=338
NSK Sanguang 3.66 351 *e*P **Pn 13 54 38.1 +1.3**
baz=351
NSK *e*S **Sn 13 55 20.3 -0.2**
baz=351
NSTT Nanjuang 3.68 346 *e*P **Pn 13 54 36.5 -0.6**
baz=346
FUSB Fushanzhiwuyua 3.71 354 *e*P **Pn 13 54 38.7 +1.2**
baz=1.0
NWLT Wulai 3.74 353 *e*P **Pn 13 54 39.0 +1.1**
baz=359
NTC Toucheng 3.79 358 *e*P **Pn 13 54 39.9 +1.4**
baz=6.0
TIPB Shuangxi 3.91 358 *e*P **Pn 13 54 40.9 +0.9**
baz=6.0
NHDH Xindian Distri 3.92 354 *e*P **Pn 13 54 41.5 +1.4**
baz=357
PALP Palanan 3.98 174‖*e*P **Pn 13 54 43.8 +2.7**
SXI1 Grass Mountain 4.03 358 *e*P **Pn 13 54 43.4 +1.8**
baz=6.0
CAUP Cauayan 4.08 182‖*e*P **Pn 13 54 43.7 +1.4**
CAUP *e*S **Sn 13 55 36.2 +6.0**
YM01 YM01 4.10 355 *e*P **Pn 13 54 43.2 +0.7**
baz=346
VWUC VWUC 4.57 330 *e*P **Pn 13 54 47.8 -0.8**
baz=330
KNM Kinmen 4.70 316 *e*P **Pn 13 54 51.1 +0.9**
baz=315
KNMB Chin-men Tao 4.76 316 *e*P **Pn 13 54 50.6 -0.5**
baz=316
PTMZ Houxiangcun 4.78 327 *e*P **Pn 13 54 50.6 -0.7**
baz=327
ZPLA Ao Xicun 4.86 307 *e*P **Pn 13 54 52.9 +0.5**
baz=306
SMPP San Manuel, Pa 5.03 195‖*e*P **Pn 13 54 54.7 0.0**
SMPP *e*S **Sn 13 55 47.1 -5.3**
BALP Baler 5.29 184‖*e*P **Pn 13 54 58.1 0.0**
AXDP Jialang 5.33 317 *e*P **Pn 13 54 58.3 -0.3**
baz=316
MHZQ Yeshan 5.72 332 *e*P **Pn 13 55 02.9 -0.8**
baz=332
LYJJ Jianjiangzhen 5.85 340 *e*P **Pn 13 55 04.3 -1.1**
baz=340
XPSS Dashiqiu 6.08 345 *e*P **Pn 13 55 07.7 -0.8**
baz=350
SXFK Yanhouchang 6.65 324 *e*P **Pn 13 55 15.7 -0.5**
baz=324
KSRS Korea Array 17.14 16 LR LR 14 04 40.5
comp=Z,14nm,18.5s,baz=135,slow=40
CMAR Chiang Mai Arr 21.84 267 P **P 13 58 23.6 +2.7**
0.6nm,0.7s,baz=73,slow=7.5,SNR=5.9
0.6nm,0.7s
MKAR Makanchi Array 41.13 318 P **P 14 01 11.1 +1.7**
0.9nm,0.6s,baz=112,slow=10.0,SNR=8.7
0.9nm,0.6s
WRA Warramunga Arr 42.49 163 P **P 14 01 18.5 -2.0**
1.1nm,0.9s,baz=347,slow=8.0,SNR=18
1.1nm,0.9s
KURBB Kurchatov Arra 45.00 322 P **P 14 01 41.4 +1.1**
0.4nm,0.4s,baz=116,slow=7.5,SNR=7.0
0.4nm,0.4s

DJA 24 13:56:33.6±0.3,11°S±3°×11°6E±°, h10km, M3.9/12, mb4.1/7, MLv3.8/12, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TWSI	**Taliwang, Sumb**	**2.83**	**15**	P		P	Pn	13 57 18.0	-0.8
IGBI	**Denpasar**	**2.84**	**339**	P		P	Pn	13 57 18.1	-0.9
PLAI	**Plampang**	**3.09**	**31**	P		P	Pn	13 57 22.1	-0.4
SRBI	**Singaraja**	**3.51**	**344**	P		P	Pn	13 57 28.8	+0.5
JAGI	**Jajag, Banyuwa**	**3.59**	**326**	P		P	Pn	13 57 28.3	-1.1
WBSI	**Waikabubak, Su**	**3.67**	**60**	P		P	Pn	13 57 30.5	0.0
GMJI	**Gumukmas**	**4.17**	**320**	P		P	Pn	13 57 36.4	-0.9
PWJI	**Pagerwojo**	**5.50**	**308**	P		P	Pn	13 57 56.1	+0.4
0.2nm14nm,1.2s									
PCJI	**Pacitan**	**5.90**	**303**	P		P	Pn	13 58 02.0	+0.8
0.2nm50nm,1.5s									
EDFI	**Ende, Flores**	**6.09**	**64**	P		P	Pn	13 58 03.6	-0.2
0.0nm2.9nm,1.2s									
UGM	**Wanagama**	**6.60**	**302**	P		P	Pn	13 58 11.2	+0.5
0.6nm93nm,1.6s									
BSSI	**Bau Bau, Buton**	**6.82**	**39**	P		P	Pn	13 58 13.9	+0.1
0.1nm9.0nm,1.3s									

MAN 24 14:07:07.3,16°31N×122°26E,h32km, mb3.9,ML2.6, MS2.2,7D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CAUP	**Cauayan**	**0.76**	**327**‖	*e*P		P	Pn	14 07 21.3	+0.3
CAUP				*e*S				14 07 32.9	
PALP	**Palanan**	**0.77**	**12**‖	*e*P		P	Pn	14 07 21.7	+0.4
PALP				*e*S				14 07 33.4	
BALP	**Baler**	**0.86**	**229**‖	*e*P		P	Pn	14 07 23.2	+0.7
BALP				*e*S				14 07 35.4	
SMPP	**San Manuel, Pa**	**1.52**	**264**‖	*e*P		P	Pn	14 07 32.3	+0.8
SMPP				*e*S				14 07 51.0	
APYP	**Conner**	**1.82**	**328**‖	*e*P		P	Pn	14 07 37.4	+1.7
APYP				*e*S				14 07 58.9	
JCNP	**Jose Panganiba**	**2.05**	**168**‖	*e*P		P	Pn	14 07 41.0	+2.0
JCNP				*e*S				14 08 05.0	
BOAC	**Boac**	**2.86**	**188**‖	*e*P		P	Pn	14 07 46.8	+3.3

IDC 24 14:11:44.8±1.4,55°36S×26°98W, h0km, mb3.7/2, mbtmp3.7/2, Error ellipse: s-maj=110.6km s-min=37.0km az=102.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**47.27**	**183**	P		P	P	14 20 18.9	-0.1
0.5nm,0.7s,baz=193,slow=9.1,SNR=3.7									
0.5nm,0.7s									
TORD	**Torodi Ar. Bea**	**72.40**	**29**	P		P	P	14 23 12.6	0.0
1.3nm,0.8s,baz=193,slow=6.4,SNR=5.5									
1.3nm,0.8s									
ILAR	**Eielson Array**	**149.74**	**312**	PKPbc		PKPbc	PKPbc	14 31 34.5	-0.5
0.5nm,0.7s,baz=127,slow=2.4,SNR=5.8									

*IDC **24** 14:42:02.4±6.0,7°03S×126°43E, h391km±64km, mb3.3/6, mbtmp4.0/7, Error ellipse: s-maj=55.2km s-min=17.7km az=77.0*
*NEIC **24** 14:42:03.9±1.6,6°9S±0°1×126°7E±0°1, h410km±9km, mb4.1/14, Error ellipse: s-maj=20.6km s-min=16.5km az=105.0*

ISC 24 14:42:03.8±0.6,6°97S±0°08×126°8E±0°1, h412km, n34, σ0§87/35, mb3.8/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**3.70**	**221**			**P**		**14 43 14.3**	**+0.4**
MMRI	**Maumere**	**4.77**	**249**			**P**		**14 43 22.8**	**-1.1**
FAKI	**Fak Fak**	**6.80**	**54**			**P**		**14 43 44.5**	**-1.5**
MTN	**Manton Dam**	**7.26**	**144**	P		**P**		**14 43 52.1**	**+1.1**
KNRA	**Kununurra**	**8.87**	**167**	P		**P**		**14 44 09.4**	**+0.7**
WB0	**Warramunga Arr**	**14.72**	**150**	P		**P**		**14 45 13.7**	**+0.7**
WRA	**Warramunga Arr**	**14.85**	**151**	P		**P**		**14 45 14.6**	**+0.2**
0.8nm,0.5s,baz=332,slow=10.0,SNR=18									
WRA				S		**S**		**14 47 49.3**	**-2.7**
0.3nm,0.3s,baz=327,slow=20,SNR=5.9									
WRA	**Warramunga Arr**	**14.85**	**151**	P		**P**		**14 45 13.9**	**-0.4**
WB2	**Warramunga Arr**	**14.85**	**151**	P		**P**		**14 45 14.0**	**-0.4**
WR0	**Warramunga Arr**	**14.96**	**150**	P		**P**		**14 45 16.0**	**+0.5**
WR0				IAmb		IAmb		14 45 16.8	
comp=Z,4.9nm,0.8s									
MBWA	**Marble Bar**	**15.65**	**205**	P		**P**		**14 45 23.0**	**0.0**
MBWA				IAmb		IAmb		14 45 34.8	
comp=Z,11nm,1.0s									
PSA00	**Pilbara Seismi**	**15.97**	**204**	P		**P**		**14 45 26.2**	**-0.2**
PSA00				IAmb		IAmb		14 45 28.1	
comp=Z,12nm,0.9s									
PSA00	**Pilbara Seismi**	**15.97**	**204**	P		**P**		**14 45 25.8**	**-0.6**
PSA00				IAmb		IAmb		14 45 27.3	
comp=Z,11nm,1.4s									
COEN	**Coen**	**17.57**	**115**	P		**P**		**14 45 43.6**	**+0.1**
COEN				IAmb		IAmb		14 45 59.6	
comp=Z,15nm,1.4s									
AS31	**Alice Springs**	**17.96**	**158**	P		**P**		**14 45 48.7**	**+1.1**
AS31				IAmb		IAmb		14 45 50.5	
comp=Z,2.8nm,0.6s									
ASAR	**Alice Springs**	**17.97**	**158**	P		**P**		**14 45 47.4**	**-0.2**
FORT	**Forrest**	**23.71**	**177**	P		**P**		**14 46 41.1**	**-0.1**
BBOO	**Buckleboo**	**27.13**	**163**	P		**P**		**14 47 12.1**	**+0.6**
STKA	**Stephens Creek**	**28.39**	**153**	P		**P**		**14 47 23.8**	**+1.1**
comp=Z,2.4nm,0.5s,baz=314,slow=9.1,SNR=7.5									
comp=Z,2.4nm,0.5s									
STKA	**Stephens Creek**	**28.39**	**153**	P		**P**		**14 47 23.8**	**+1.1**
PEA0B	**Petropavlovsk-**	**65.35**	**20**	P		**P**		**14 52 04.3**	**+0.8**
PETK	**Petropavlovsk-**	**65.35**	**20**	P		**P**		**14 52 05.0**	**+1.5**
comp=Z,1.0nm,0.6s,baz=191,slow=4.9,SNR=6.4									
comp=Z,1.0nm,0.6s									
PETK	**Petropavlovsk-**	**65.35**	**20**	P		**P**		**14 52 04.8**	**+1.2**
MKAR	**Makanchi Array**	**66.47**	**328**	P		**P**		**14 52 11.1**	**+0.3**
comp=Z,0.5nm,0.5s,baz=121,slow=6.9,SNR=6.1									
comp=Z,0.5nm,0.5s									
MKAR	**Makanchi Array**	**66.47**	**328**	P		**P**		**14 52 10.3**	**-0.5**
ZALV	**Zalesovo Beam**	**70.17**	**335**	P		**P**		**14 52 32.8**	**-0.4**
comp=Z,2nm,0.4s,baz=132,slow=5.4,SNR=5.3									
comp=Z,1.2nm,0.4s									
VNDA	**Vanda**	**72.88**	**172**	P		**P**		**14 52 49.1**	**+0.3**
comp=Z,0.4nm,0.6s,baz=337,slow=4.9,SNR=2.2									
comp=Z,0.4nm,0.6s									
VNDA	**Vanda**	**72.88**	**172**	P		**P**		**14 52 49.4**	**+0.6**
MAW	**Mawson**	**73.81**	**201**	P		**P**		**14 52 54.2**	**-0.1**
ABKAR	**Akbulak array**	**80.50**	**322**	P		**P**		**14 53 31.0**	**-0.4**
QSPA	**South Pole Qui**	**83.00**	**180**	P		**P**		**14 53 44.1**	**-0.1**
comp=Z,0.9nm,0.7s,baz=298,slow=2.8,SNR=2.4									
comp=Z,0.9nm,0.7s									
QSPA	**South Pole Qui**	**83.00**	**180**	P		**P**		**14 53 43.7**	**-0.5**
QSPA				IAmb		IAmb		14 53 57.9	
comp=Z,3.6nm,1.2s									
SNAA	**Sanae**	**94.92**	**194**	P		**P**		**14 54 40.8**	**+0.6**
SNAA				IAmb		IAmb		14 55 09.3	
comp=Z,6.8nm,1.5s									
CPUP	**Villa Florida**	**146.66**	**173**	PKPbc		**PKPbc**		**15 00 59.2**	**+0.4**
comp=Z,1.3nm,0.7s,baz=95,slow=2.2,SNR=4.5									

*IDC **24** 14:42:56.6±0.9,59°44S×25°15W, h0km, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=44.0km s-min=28.0km az=25.0*
*NEIC **24** 14:42:59.2±1.2,59°1S±0°1×24°9W±0°3, h10km±1km, mb4.6/22, Error ellipse: s-maj=30.3km s-min=18.0km az=56.0*

ISC 24 14:42:58.6±0.6,59°2S±0°1×24°9W±0°1, h10km, n42, σ1§27/42, mb4.5/11, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.41**	**156**	P		P	**Pn**	**14 46 06.8**	**-1.9**
VNA1				S		S	Sn	14 48 22.3	-15
VNA3	**Neumayer Olymp**	**13.61**	**159**	P		P	**Pn**	**14 46 09.0**	**-2.4**
VNA3				S		S	Sn	14 48 23.6	-19
SNAA	**Sanae**	**15.37**	**153**	P		P	**Pn**	**14 46 33.1**	**-2.2**
SNAA				S		S	Sn	14 49 08.7	-17
SNAA	**Sanae**	**15.37**	**153**				**Pn**	**14 46 33.3**	**-2.0**
TROLL	**Troll, Antarti**	**16.88**	**151**	P		P	**Pn**	**14 46 53.0**	**-1.7**
TROLL				S		S	Sn	14 49 45.7	-16
BELA	**Belgrano 2**	**19.07**	**186**	P		P	**Pn**	**14 47 25.3**	**+3.9**
BELA				IAmb		IAmb		14 47 28.6	
comp=Z,7.9nm,0.4s									
EFI	**East Falkland**	**20.11**	**277**	P		P	**Pn**	**14 47 33.5**	**-0.6**
DSPA	**Despedida**	**24.14**	**263**	P		P	**P**	**14 48 13.9**	**-0.5**
QSPA	**South Pole Qui**	**31.06**	**180**	P		P	**P**	**14 49 17.4**	**+0.9**
TRQA	**Tornquist**	**31.75**	**295**	P		P	**P**	**14 49 21.9**	**-0.7**
TRQA				IAmb		IAmb		14 49 25.4	
comp=Z,14nm,1.4s									
PLCA	**Paso Flores**	**33.85**	**282**	P		P	**P**	**14 49 40.0**	**-1.1**
comp=Z,7.7nm,0.4s,baz=120,slow=5.4,SNR=6.1									
comp=Z,0.7nm,0.4s									
PLCA	**Paso Flores**	**33.85**	**282**	P		P	**P**	**14 49 40.5**	**-0.6**
PLCA				IAmb		IAmb		14 49 52.4	
comp=Z,6.5nm,1.3s									
MAW	**Mawson**	**36.90**	**140**	P		P	**P**	**14 50 05.0**	**-1.9**
comp=Z,0.6nm,0.5s,baz=232,slow=12,SNR=1.4									
comp=Z,0.6nm,0.5s									
MAW	**Mawson**	**36.90**	**140**	P		P	**P**	**14 50 06.6**	**-0.2**
BO01	**Tunca**	**39.06**	**289**	P		P	**P**	**14 50 25.1**	**-0.3**
BO01				IAmb		IAmb		14 50 26.7	
comp=Z,7.2nm,0.6s									
MT09	**Talagante**	**39.51**	**289**	P		P	**P**	**14 50 28.5**	**-0.8**
MT09				IAmb		IAmb		14 50 30.1	
comp=Z,20nm,0.8s									
MT02	**Curacav**	**40.00**	**290**	P		P	**P**	**14 50 32.6**	**-0.7**
MT02				IAmb		IAmb		14 50 33.9	
comp=Z,18nm,0.9s									
ROC1	**El Roble**	**40.17**	**290**	P		P	**P**	**14 50 35.1**	**+0.1**
CO02	**Combarbal**	**41.62**	**292**	P		P	**P**	**14 50 46.2**	**-0.5**
CO01	**Juntas del Tor**	**42.21**	**293**	P		P	**P**	**14 50 52.9**	**+1.1**
CO01				IAmb		IAmb		14 50 53.5	
comp=Z,9.4nm,1.1s									
VNDA	**Vanda**	**43.49**	**182**	P		P	**P**	**14 51 02.3**	**+1.0**
LPAZ	**La Paz**	**53.21**	**305**	P		P	**P**	**14 52 16.2**	**-1.4**
comp=Z,0.8nm,0.5s,baz=121,slow=5.9,SNR=3.0									
comp=Z,0.8nm,0.5s									
LPAZ	**La Paz**	**53.21**	**305**	P		P	**P**	**14 52 17.1**	**-0.6**
TOA0	**Tordoi Ar. Sit**	**75.23**	**27**	P		P	**P**	**14 54 43.0**	**+1.7**
TOA0				IAmb		IAmb		14 54 57.6	
comp=Z,5.5nm,0.7s									
TORD	**Torodi Ar. Bea**	**75.23**	**27**	P		P	**P**	**14 54 43.0**	**+1.7**
comp=Z,2.0nm,0.5s,baz=203,slow=6.5,SNR=12									
comp=Z,2.0nm,0.5s									
TORD	**Torodi Ar. Bea**	**75.23**	**27**	P		P	**P**	**14 54 43.2**	**+1.9**
TORD				IAmb		IAmb		14 54 57.6	
comp=Z,3.5nm,0.7s									
BIRV	**Birongo**	**77.00**	**318**	P		P	**P**	**14 54 51.2**	**-0.2**
STKA	**Stephens Creek**	**88.59**	**168**	P		P	**P**	**14 55 52.1**	**+0.7**
STKA				IAmb		IAmb		14 55 59.1	
comp=Z,2.1nm,1.2s									
NVAR	**Mina Array Bea**	**123.71**	**290**	PKP		**PKiKP**		**15 01 57.0**	**+0.7**
comp=Z,0.4nm,0.6s,baz=132,slow=2.7,SNR=3.1									
ARCES	**ARCESS Array B**	**133.39**	**22**	PKP		**PKPdf**		**15 02 12.6**	**-0.5**
comp=Z,0.2nm,0.5s,baz=214,slow=2.9,SNR=4.2									
ARCES	**ARCESS Array B**	**133.39**	**22**			**PKPdf**		**15 02 13.6**	**+0.4**
YKA	**Yellowknife Ar**	**139.31**	**315**	PKP		**PKPdf**		**15 02 24.2**	**-0.1**
comp=Z,1.1nm,0.8s,baz=125,slow=2.1,SNR=5.3									
P33M	**Teslin, Yukon**	**145.29**	**303**				**PKPdf**	**15 02 35.4**	**+0.3**
M31M	**Drury Creek, Y**	**146.93**	**306**				**PKPbc**	**15 02 39.8**	**+0.1**
INK	**Inuvik**	**148.99**	**317**	PKPbc			**PKPbc**	**15 02 43.3**	**-1.7**
comp=Z,7.5nm,0.7s,baz=84,slow=6.4,SNR=9.4									
SONM	**Songino Array**	**149.56**	**90**	PKPbc			**PKPbc**	**15 02 46.7**	**-0.6**
comp=Z,1.2nm,0.9s,baz=216,slow=1.9,SNR=4.4									
DAWY	**Dawson**	**149.76**	**307**				**PKPbc**	**15 02 47.0**	**-0.1**
BCAR	**Beaver Creek A**	**150.39**	**305**				**PKiKP**	**15 02 49.0**	**-0.4**
SCRK	**Sand Creek**	**151.63**	**306**				**PKiKP**	**15 02 52.3**	**+0.2**
IL31		**153.07**	**307**				**PKiKP**	**15 02 55.0**	**+0.2**
ILAR	**Eielson Array**	**153.07**	**307**	PKPbc			**PKPbc**	**15 02 54.6**	**0.0**
comp=Z,1.7nm,0.8s,baz=0.1,slow=0.6,SNR=20									
KDAK	**Kodiak Island**	**153.21**	**290**	PKPbc			**PKiKP**	**15 02 55.3**	**0.0**
comp=Z,4.4nm,0.7s,baz=216,slow=2.6,SNR=8.4									

*DJA **24** 14:43:29.4±0.3,1°N±3°×12°6E±°, h10km, M4.5/12, mb4.8/7, mB5.1/4, MLv4.3/12, Mw(mB)4.5/4*
*IDC **24** 14:43:31.7±3.5,1°46N×126°36E, h62km±32km, mb3.8/11, mbtmp4.1/12, ML4.4/1, MS2.8/2, Error ellipse: s-maj=37.1km s-min=12.1km az=76.0*
*NEIC **24** 14:43:32.5±1.8,1°45N±0°08×126°40E±0°07, h66km±3km, mb4.4/27, Error ellipse: s-maj=12.7km s-min=9.5km az=204.0*

ISC 24 14:43:30.0±0.5,1°46N±0°06×126°44E±0°07, h47km, n82, σ1§29/81, mb4.4/24, 1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.15**	**126**	Pn		**Pn**	**Pn**	**14 43 51.3**	**+1.5**
TNTI	**Ternate**	**1.15**	**126**	P		**P**	**Pn**	**14 43 51.0**	**+1.3**
LBMI	**Labuha**	**2.33**	**153**	P		**P**	**Pn**	**14 44 08.0**	**+2.0**
SGSI	**Sangihe**	**2.40**	**338**	P		**P**	**Pn**	**14 44 08.2**	**+1.4**
KMSI	**Cibinong**	**2.61**	**250**	P		**P**	**Pn**	**14 44 10.2**	**+0.4**
SANI	**Sanana**	**3.51**	**187**	P		**P**	**Pn**	**14 44 22.5**	**+0.3**
SANI	**Sanana**	**3.51**	**187**	P		**P**	**Pn**	**14 44 22.2**	**0.0**
LUWI	**Luwuk**	**4.43**	**236**	Pn		**P**	**Pn**	**14 44 38.6**	**+3.9**
LUWI	**Luwuk**	**4.43**	**236**	P		**P**	**Pn**	**14 44 36.0**	**+1.3**
LUWI	**Luwuk**	**4.43**	**236**	P		**P**	**Pn**	**14 44 37.3**	**+2.6**
MRSI	**Marisa**	**4.60**	**258**	P		**P**	**Pn**	**14 44 39.5**	**+2.4**
APSI	**Ampana**	**5.34**	**244**	P		**P**	**Pn**	**14 44 49.4**	**+2.2**
TOLI2	**Tolitoli**	**5.67**	**267**	Pn		**P**	**Pn**	**14 44 51.0**	**-0.7**
TOLI2	**Tolitoli**	**5.67**	**267**	P		**P**	**Pn**	**14 44 51.6**	**-0.2**
CTBH	**Cotabato--PC H**	**6.13**	**339**‖	*e*P		**P**	**Pn**	**14 45 00.9**	**+2.8**
MPSI	**Mapaga**	**6.64**	**260**	P		**P**	**Pn**	**14 45 06.3**	**+1.2**
0.1nm35nm,0.8s									
TTSI	**Tana Toraja**	**7.99**	**236**	P		**P**	**Pn**	**14 45 24.6**	**+1.0**
0.3nm1µm61nm,0.5s									
SPSI	**Sidrap Palu**	**8.57**	**231**	P		**P**	**Pn**	**14 45 32.7**	**+1.1**
1µm58nm,0.4s									
BNSI	**Bone**	**8.60**	**227**	P		**P**	**Pn**	**14 45 33.8**	**+1.8**
34nm,0.5s									
MYLDM	**Lahad Datu**	**8.75**	**295**	Pn		**P**	**Pn**	**14 45 36.7**	**+2.7**
BKSI	**Bulukumba**	**9.23**	**223**	P		**P**	**Pn**	**14 45 42.2**	**+1.6**
25nm,0.5s									
KAPI	**Kappang**	**9.27**	**226**	P		**P**	**Pn**	**14 45 42.9**	**+1.7**
3.4nm,0.3s,baz=24,slow=5.1,SNR=10.0									
14nm,0.5s									
KAPI	**Kappang**	**9.27**	**226**	Pn		**Pn**	**Pn**	**14 45 43.5**	**+2.3**
KAPI	**Kappang**	**9.27**	**226**	P		**P**	**Pn**	**14 45 43.4**	**+2.2**
KSM	**Kuching**	**16.13**	**270**	P		**P**	**P**	**14 47 16.7**	**+0.4**
KSM				IAmb		IAmb		14 47 41.0	
comp=Z,11nm,0.9s									
GUMO	**Guam**	**21.86**	**56**	LR		LR		14 55 35.9	
comp=Z,27nm,20.1s,baz=204,slow=33									
TPUB	**Ta-pu**	**22.43**	**346**	P		**P**	**P**	**14 48 24.3**	**-0.8**
TPUB				IAmb		IAmb		14 48 27.8	
comp=Z,15nm,0.6s									
WB0	**Warramunga Arr**	**22.49**	**160**	P		**P**	**P**	**14 48 25.9**	**+0.2**
WB0				IAmb		IAmb		14 48 28.3	
comp=Z,9.1nm,0.5s									
COEN	**Coen**	**22.57**	**133**	P		**P**	**P**	**14 48 26.1**	**-0.5**
COEN				IAmb		IAmb		14 48 49.5	
comp=Z,24nm,1.4s									
WRAB	**Tennant Creek**	**22.63**	**160**	P		**P**	**P**	**14 48 27.1**	**-0.1**
WRA	**Warramunga Arr**	**22.63**	**160**	P		**P**	**P**	**14 48 26.7**	**-0.6**
comp=Z,6.8nm,0.4s,baz=336,slow=11,SNR=32									
WRA				S		**S**		**14 52 32.7**	**+0.7**
comp=Z,0.9nm,0.8s,baz=344,slow=17,SNR=4.3									
comp=Z,6.8nm,0.4s									
WRA	**Warramunga Arr**	**22.63**	**160**	P		**P**	**P**	**14 48 26.9**	**-0.3**
WB2	**Warramunga Arr**	**22.64**	**160**	P		**P**	**P**	**14 48 27.4**	**+0.2**
WB2				IAmb		IAmb		14 48 32.9	
comp=Z,9.4nm,0.6s									
WR0	**Warramunga Arr**	**22.72**	**160**	P		**P**	**P**	**14 48 28.5**	**+0.4**
WR0				IAmb		IAmb		14 48 33.3	
comp=Z,7.1nm,0.8s									
MBWA	**Marble Bar**	**23.42**	**196**	P		**P**	**P**	**14 48 34.1**	**-1.0**
MBWA				IAmb		IAmb		14 48 34.1	
comp=Z,27nm,1.4s									
MBWA	**Marble Bar**	**23.42**	**196**	P		**P**	**P**	**14 48 34.1**	**-1.0**
PSA00	**Pilbara Seismi**	**23.78**	**195**	P		**P**	**P**	**14 48 37.4**	**-1.1**
PSA00				IAmb		IAmb		14 48 44.7	
comp=Z,18nm,1.4s									
PSA00	**Pilbara Seismi**	**23.78**	**195**	P		**P**	**P**	**14 48 37.6**	**-0.9**
PSA00				IAmb		IAmb		14 48 39.5	
comp=Z,3.2nm,0.9s									
PSA00	**Pilbara Seismi**	**23.78**	**195**	P		**P**	**P**	**14 48 37.7**	**-0.8**
QIS	**Mount Isa**	**25.40**	**150**	P		**P**	**P**	**14 48 54.6**	**+1.3**
AS31	**Alice Springs**	**26.00**	**164**	P		**P**	**P**	**14 48 59.2**	**+0.4**
ASAR	**Alice Springs**	**26.01**	**164**	P		**P**	**P**	**14 48 57.7**	**-1.1**
WRKA	**Warakurna**	**26.40**	**176**	P		**P**	**P**	**14 49 04.2**	**+1.9**
OOD	**Oodnadatta**	**30.41**	**164**	P		**P**	**P**	**14 49 38.3**	**+0.3**
CMAR	**Chiang Mai Arr**	**31

IMAR	**Indian Mountai**	**84.53**	**24**	P	**P**	**14 55 59.5**	**+1.6**
ILAR	**Eielson Array**	**87.27**	**25**	P	**P**	**14 56 11.0**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=236,slow=5.1,SNR=7.6						
	comp=Z,0.2nm,0.4s						
ILAR	**Eielson Array**	**87.27**	**25**	P	**P**	**14 56 11.5**	**+0.1**
J25K	**Salcha River,**	**87.91**	**26**	P	**P**	**14 56 14.2**	**-0.4**
J25K				IAmb	IAmb	14 56 38.6	
	comp=Z,4.9nm,1.4s						
BMAR	**Burnt Mountain**	**88.27**	**23**		**P**	**14 56 16.5**	**+0.3**
BCAR	**Beaver Creek A**	**89.52**	**27**	P	**P**	**14 56 23.7**	**+1.5**
QSPA	**South Pole Qui**	**91.38**	**180**	P	**P**	**14 56 28.1**	**-2.7**
QSPA				IAmb	IAmb	14 56 46.2	
	comp=Z,4.0nm,1.3s						
ARCES	**ARCESS Array B**	**92.47**	**340**	P	**P**	**14 56 35.3**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=90,slow=8.5,SNR=5.5						
	comp=Z,0.8nm,0.6s						
FINES	**FINESS Array B**	**93.69**	**332**	P	**P**	**14 56 40.2**	**-1.2**
	comp=Z,0.4nm,0.7s,baz=64,slow=6.7,SNR=1.5						
	comp=Z,0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**123.32**	**287**	PKP	**PKiKP**	**15 02 23.4**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=89,slow=3.0,SNR=1.6						

GCG ***24*** *14:48:18.4±3.1, 14°.06N×92°.52W, h84km±80km, MD4.1*
NEIC ***24*** *14:48:22.9±1.2, 14°.31N±0°.10×92°.29W±0°.07, h68km±8km, mb4.2/1, Md4.2/25(MEX), Error ellipse: s-maj=15.8km s-min=8.3km az=208.0*
MEX ***24*** *14:48:23.5±0.5, 14°.34N×92°.17W, h76km±9km, MD4.2*
UCR ***24*** *14:48:25.1±1.1, 14°.35N×92°.11W, h52km±11km, ML4.1*
SNET ***24*** *14:48:25.0±1.1, 14°.33N×92°.12W, h51km±13km, ML4.4*

ISC 24 14:48:20.5±1.3, 14°.17N±0°.07×92°.41W±0°.05, h55km±14km, n61, σ1§71/93, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
THIG		**0.75**	**11**			**Pn**	**14 48 36.1**	**+1.0**
THIG						**Sn**	**14 48 46.2**	**+0.6**
THIG		**0.75**	**11**	*eP*		**Pn**	**14 48 36.1**	**+1.0**
THIG				*eS*		**Sn**	**14 48 46.2**	**+0.6**
RTAL	**Retalhuleu**	**0.78**	**63**	Pn		**Pn**	**14 48 35.8**	**+0.3**
RTAL	**Retalhuleu**	**0.78**	**63**	*eP*		**Pn**	**14 48 35.9**	**+0.4**
RTAL				*eS*		**Sn**	**14 48 44.2**	**-2.3**
PATR	**El Naranjo**	**0.96**	**10**	*eP*		**Pn**	**14 48 38.3**	**+0.3**
PATR				*eS*		**Sn**	**14 48 49.8**	**-1.1**
CHUJ	**Union Juarez**	**0.96**	**18**	*eP*		**Pn**	**14 48 38.3**	**+0.1**
CHUJ				*eS*		**Sn**	**14 48 49.8**	**-1.3**
STG3	**Santiaguito 3,**	**0.98**	**57**	*eP*		**Pn**	**14 48 38.9**	**+0.6**
PAVE	**Pavencul**	**1.04**	**13**	*eP*		**Pn**	**14 48 39.3**	**+0.2**
PAVE				*eS*		**Sn**	**14 48 51.9**	**-1.0**
HUEH	**Huehuetenango**	**1.44**	**38**	Pn		**Pn**	**14 48 45.1**	**+0.6**
HUEH	**Huehuetenango**	**1.44**	**38**	*eP*		**Pn**	**14 48 45.6**	**+1.1**
HUEH	**Huehuetenango**	**1.44**	**38**	*eP*		**Pn**	**14 48 45.6**	**+1.1**
FUG	**Fuego 3**	**1.55**	**80**	*eP*		**Pn**	**14 48 46.9**	**+1.0**
PCIG		**1.71**	**333**			**Pn**	**14 48 49.8**	**+1.9**
PCIG						**Sn**	**14 49 09.9**	**+1.2**
PCIG		**1.71**	**333**	*i*	P	**Pn**	**14 48 49.8**	**+1.9**
PCIG				*i*	S	**Sn**	**14 49 09.9**	**+1.2**
PCG	**Pacaya**	**1.76**	**83**	*eP*		**Pn**	**14 48 50.7**	**+1.8**
NBG	**Las Nubes**	**2.04**	**78**	*eP*		**Pn**	**14 48 52.5**	**-0.2**
NBG				*eS*		**Sn**	**14 49 18.9**	**+1.6**
CCIG	**Comitan**	**2.12**	**7**			**Pn**	**14 48 56.5**	**+2.9**
CCIG						**Sn**	**14 49 17.7**	**-1.1**
CCIG	**Comitan**	**2.12**	**7**	*eP*		**Pn**	**14 48 56.5**	**+2.9**
CCIG				*eS*		**Sn**	**14 49 17.7**	**-1.1**
SLOZ	**Alcaldia de Sa**	**2.56**	**93**	*eP*		**Pn**	**14 48 59.8**	**+0.3**
SLOZ				*eS*		**Sn**	**14 49 28.8**	**-0.7**
LOAL	**Lomas de Alarc**	**2.56**	**94**	*eP*		**Pn**	**14 49 01.2**	**+1.6**
LOAL				*eS*		**Sn**	**14 49 29.3**	**-0.3**
LOAL	**Lomas de Alarc**	**2.56**	**94**	*eP*		**Pn**	**14 49 01.2**	**+1.6**
LOAL				*eS*		**Sn**	**14 49 29.3**	**-0.3**
NUBE	**Las Nubes**	**2.57**	**96**	*eP*		**Pn**	**14 49 00.8**	**+1.0**
NUBE				*eS*		**Sn**	**14 49 28.3**	**-1.7**
NUBE	**Las Nubes**	**2.57**	**96**	*eP*		**Pn**	**14 49 00.8**	**+1.0**
NUBE				*eS*		**Sn**	**14 49 28.3**	**-1.7**
TGIG		**2.68**	**345**			**Pn**	**14 49 02.4**	**+1.1**
TGIG						**Sn**	**14 49 32.8**	**+0.2**
TGIG		**2.68**	**345**	*eP*		**Pn**	**14 49 02.4**	**+1.1**
TGIG				*eS*		**Sn**	**14 49 32.8**	**+0.2**
RTR	**El Retiro**	**2.70**	**95**	*eP*		**Pn**	**14 49 03.6**	**+2.0**
RTR	**El Retiro**	**2.70**	**95**	*eP*		**Pn**	**14 49 03.6**	**+2.0**
CEVE	**Cerro Verde**	**2.73**	**97**	*eP*		**Pn**	**14 49 03.9**	**+1.8**
CEVE				*eS*		**Sn**	**14 49 35.1**	**+1.1**
CEVE				IAML			14 49 38.5	
	comp=Z,1μm,0.5s							
CEVE	**Cerro Verde**	**2.73**	**97**	*eP*		**Pn**	**14 49 03.9**	**+1.8**
CEVE				*eS*		**Sn**	**14 49 35.1**	**+1.1**
CEVE				IAML			14 49 38.5	
	comp=Z,1μm,0.5s							
SBLS	**San Blas**	**2.73**	**97**	*eP*		**Pn**	**14 49 03.7**	**+1.6**
SBLS				*eS*		**Sn**	**14 49 33.5**	**-0.5**
SBLS	**San Blas**	**2.73**	**97**	*eP*		**Pn**	**14 49 03.7**	**+1.6**
SBLS				*eS*		**Sn**	**14 49 33.5**	**-0.5**
MRL	**Marmol**	**2.79**	**71**	*eP*		**Pn**	**14 49 04.1**	**+1.2**
MRL				*eS*		**Sn**	**14 49 41.8**	**+6.2**
JAYA	**Jayaque - finc**	**2.92**	**100**	*eP*		**Pn**	**14 49 05.8**	**+1.1**
JAYA				*eS*		**Sn**	**14 49 38.0**	**-0.7**
JAYA				IAML			14 49 39.9	
	comp=Z,2μm,0.2s							
JAYA	**Jayaque - finc**	**2.92**	**100**	*eP*		**Pn**	**14 49 05.8**	**+1.1**
JAYA				*eS*		**Sn**	**14 49 38.0**	**-0.7**
JAYA				IAML			14 49 39.9	
	comp=Z,2μm,0.2s							
MTO3	**Montecristo**	**2.97**	**85**	Pn		**Pn**	**14 49 05.5**	**+0.2**
MTO3	**Montecristo**	**2.97**	**85**	*eP*		**Pn**	**14 49 06.0**	**+0.7**
MTO3	**Montecristo**	**2.97**	**85**	*eP*		**Pn**	**14 49 06.0**	**+0.7**
PMON	**Piamonte**	**3.04**	**98**	*eP*		**Pn**	**14 49 08.1**	**+1.8**
PMON				*eS*		**Sn**	**14 49 41.3**	**-0.2**
PMON	**Piamonte**	**3.04**	**98**	*eP*		**Pn**	**14 49 08.1**	**+1.8**
PMON				*eS*		**Sn**	**14 49 41.3**	**-0.2**
LFRS	**El Faro**	**3.30**	**99**	*eP*		**Pn**	**14 49 11.4**	**+1.6**
LFRS				*eS*		**Sn**	**14 49 47.1**	**-0.7**
LFRS	**El Faro**	**3.30**	**99**	*eP*		**Pn**	**14 49 11.4**	**+1.6**
LFRS				*eS*		**Sn**	**14 49 47.1**	**-0.7**
SJTE	**Alcalda de S**	**3.35**	**99**	*eP*		**Pn**	**14 49 12.3**	**+1.8**
SJTE	**Alcalda de S**	**3.35**	**99**	*eP*		**Pn**	**14 49 12.3**	**+1.8**
PAVA	**Las Pavas**	**3.41**	**97**	*eP*		**Pn**	**14 49 12.6**	**+1.3**
PAVA	**Las Pavas**	**3.41**	**97**	*eP*		**Pn**	**14 49 12.6**	**+1.3**
COEG	**Centro de Oper**	**3.47**	**99**	*eP*		**Pn**	**14 49 14.5**	**+2.4**
COEG	**Centro de Oper**	**3.47**	**99**	*eP*		**Pn**	**14 49 14.5**	**+2.4**
UXUV	**UXUV**	**3.55**	**332**	*eP*		**Pn**	**14 49 16.0**	**+3.0**
UXUV				*eS*		**Sn**	**14 49 54.3**	**+0.6**
CMIG	**Matias Romero**	**3.75**	**321**			**Pn**	**14 49 18.6**	**+2.6**
CMIG						**Sn**	**14 49 59.3**	**+0.4**
CMIG	**Matias Romero**	**3.75**	**321**	*eP*		**Pn**	**14 49 18.6**	**+2.6**
CMIG				*eS*		**Sn**	**14 49 59.3**	**+0.4**
HUIG	**Huatulco**	**3.91**	**294**			**Pn**	**14 49 20.5**	**+2.5**
HUIG	**Huatulco**	**3.91**	**294**	*eP*		**Pn**	**14 49 20.5**	**+2.5**
HUIG				*e*			14 49 59.6	
TGUH	**Tegucigalpa,Un**	**4.99**	**91**	Pn		**Pn**	**14 49 33.4**	**+0.5**
VHO	**Vista Hermosa**	**5.06**	**305**	*e*		**Sn**	**14 50 28.9**	**-2.4**
CRIN	**San Cristobal**	**5.42**	**105**	Pn		**Pn**	**14 49 42.0**	**+3.2**
TOIG	**Toxpalan**	**5.93**	**312**	*eP*		**Pn**	**14 49 49.0**	**+3.0**
TOIG				*eS*		**Sn**	**14 50 49.4**	**-3.3**
FTIG	**Fresnillo de T**	**6.64**	**305**	*e*		Pn	14 50 02.0	+6.4
FTIG				*e*			14 51 10.1	
ORTG	**Ortega, Santa**	**7.78**	**118**	Pn		**Pn**	**14 50 13.2**	**+2.0**
RIMA	**Rio Macho**	**9.44**	**117**	Pn		**Pn**	**14 50 36.9**	**+2.8**
R40A	**Maddies Statio**	**24.02**	**0**	P		**P**	**14 53 28.0**	**-2.3**
R40A				IAmb		IAmb	14 53 33.3	
	comp=Z,4.9nm,0.6s							
AGPR	**Aguadilla, PR**	**24.64**	**77**	P		**P**	**14 53 34.6**	**-1.5**

NEIC ***24*** *14:48:38.9±1.1, 52°.6N±0°.2×33°.49W±0°.07, h10km±1km, mb4.3/12, Error ellipse: s-maj=25.7km s-min=7.5km az=185.0*
IDC ***24*** *14:48:38.1±1.2, 52°.65N×33°.48W, h0km, mb3.7/10, mbtmp3.8/12, ML3.5/2, MS3.3/14, Error ellipse: s-maj=35.0km s-min=17.1km az=22.0*

ISC 24 14:48:38.8±0.6, 52°.6N±0°.1×33°.54W±0°.08, h10km, n37, σ0§80/28, mb4.0/14, MS3.2/13, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DRLN	**Deer Lake**	**15.45**	**267**	Pn		**Pn**	**14 52 15.4**	**-1.2**
DRLN				IAmb		IAmb	14 52 27.7	
	comp=Z,16nm,1.1s							
SFJD	**Kangerlussuaq**	**16.71**	**336**	LR		LR	14 57 42.3	
	comp=Z,121nm,20.5s,baz=172,slow=33							
EKA	**Eskdalemuir Ar**	**18.02**	**69**	P		**P**	**14 52 49.1**	**-0.4**
	baz=269,slow=8.7							
	comp=Z,4.4nm,0.8s							
GBN	**Guysborough**	**19.62**	**260**	P		**P**	**14 53 08.0**	**+0.9**
SCHQ	**Schefferville**	**19.73**	**290**	P		**P**	**14 53 09.1**	**+0.8**
	comp=Z,0.5nm,0.3s,baz=82,slow=8.8,SNR=6.8							
	comp=Z,2.3nm,0.5s							
SCHQ	**Schefferville**	**19.73**	**290**	P		**P**	**14 53 08.9**	**+0.6**
FRB	**Frobisher Bay**	**21.27**	**315**	P		**P**	**14 53 24.8**	**0.0**
	comp=Z,6.4nm,0.7s,baz=93,slow=9.9,SNR=3.2							
	comp=Z,6.4nm,0.7s							
JMIC	**Jan Mayen**	**21.61**	**22**	LR		LR	14 59 07.0	
	comp=Z,30nm,20.8s,baz=232,slow=29							
D62A	**Allapoint, All**	**23.39**	**271**	P		**P**	**14 53 48.4**	**+0.9**
D62A				IAmb		IAmb	14 53 58.7	
	comp=Z,8.1nm,1.1s							
F64A	**Sherman**	**23.53**	**267**	P		**P**	**14 53 48.7**	**-0.2**
F64A				IAmb		IAmb	14 54 09.6	
	comp=Z,15nm,1.5s							
E62A	**Clayton Lake**	**23.89**	**270**	P		**P**	**14 53 52.8**	**+0.4**
ESDC	**Sonseca Array**	**24.03**	**111**	P		**P**	**14 53 55.2**	**+1.4**
	comp=Z,0.3nm,0.4s,baz=28,slow=40,SNR=1.7							
ESDC				LR		LR	15 01 16.2	
	comp=Z,72nm,18.9s,baz=300,slow=32							
	comp=Z,0.3nm,0.4s							
NB2	**NORSAR Subarra**	**25.45**	**53**	P		**P**	**14 54 06.6**	**+0.1**
	comp=Z,2.9nm,1.0s,baz=276,slow=10							
NOA	**NORSAR Array B**	**25.45**	**53**	P		**P**	**14 54 06.8**	**+0.3**
	comp=Z,2.2nm,1.0s,baz=275,slow=9.2,SNR=5.5							
NOA				LR		LR	15 03 18.5	
	comp=Z,29nm,18.2s,baz=245,slow=35							
	comp=Z,2.2nm,1.0s							
NC303	**NORSAR Array S**	**25.52**	**52**	P		**P**	**14 54 06.8**	**-0.3**
NC303				IAmb		IAmb	14 54 20.4	
	comp=Z,11nm,1.2s							
HFS	**Hagfors**	**26.71**	**55**	LR		LR	15 03 59.9	
	comp=Z,59nm,18.9s,baz=283,slow=35							
SADO	**Sadowa**	**30.66**	**274**	LR		LR	15 06 44.6	
	comp=Z,48nm,18.4s,baz=100,slow=35							
VRAC	**Vranov**	**31.24**	**76**	LR		LR	15 06 58.4	
	comp=Z,50nm,18.5s,baz=273,slow=35							
ARCES	**ARCESS Array B**	**31.57**	**35**	LR		LR	15 04 52.3	
	comp=Z,38nm,18.7s,baz=291,slow=31							
FINES	**FINESS Array B**	**32.53**	**50**	P		**P**	**14 55 09.2**	**-0.2**
	comp=Z,1.2nm,0.8s,baz=282,slow=9.5,SNR=4.7							
FINES				LR		LR	15 06 06.2	
	comp=Z,65nm,21.9s,baz=312,slow=32							
	comp=Z,1.2nm,0.8s							
FINES	**FINESS Array B**	**32.53**	**50**	P		**P**	**14 55 07.1**	**-2.3**
KEST	**Kesra**	**34.48**	**102**	P		**P**	**14 55 26.3**	**-0.4**
	comp=Z,2.8nm,0.8s,baz=281,slow=10,SNR=2.5							
	comp=Z,2.8nm,0.8s							
AKASG	**Malin Array Be**	**37.91**	**67**	P		**P**	**14 55 55.6**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=307,slow=7.8,SNR=7.2							
AKASG				LR		LR	15 11 00.1	
	comp=Z,37nm,19.7s,baz=348,slow=36							
	comp=Z,0.7nm,0.5s							
YKA	**Yellowknife Ar**	**41.78**	**316**	P		**P**	**14 56 27.8**	**0.0**
	comp=Z,0.5nm,0.7s,baz=67,slow=10,SNR=3.5							
	comp=Z,0.5nm,0.7s							
YKA	**Yellowknife Ar**	**41.78**	**316**	P		**P**	**14 56 27.4**	**-0.5**
MAGL	**Barre de l'ile**	**42.62**	**221**	P		**P**	**14 56 34.6**	**-0.5**
INK	**Inuvik**	**45.88**	**329**	LR		LR	15 14 08.0	
	comp=Z,73nm,19.0s,baz=124,slow=33							
TORD	**Torodi Ar. Bea**	**48.35**	**131**	P		**P**	**14 57 21.4**	**+0.8**
	comp=Z,1.1nm,1.0s,baz=342,slow=6.2,SNR=4.1							
	comp=Z,1.1nm,1.0s							
TORD	**Torodi Ar. Bea**	**48.35**	**131**	P		**P**	**14 57 19.9**	**-0.6**
TORD				IAmb		IAmb	14 57 30.9	
	comp=Z,2.5nm,1.1s							
TOLK	**Toolik Lake Re**	**50.27**	**335**	P		**P**	**14 57 35.2**	**+0.5**
TOLK				IAmb		IAmb	14 57 39.3	
	comp=Z,2.7nm,0.9s							
DBIC	**Dimbokro**	**51.46**	**142**	LR		LR	15 17 07.7	
	comp=Z,52nm,18.8s,baz=332,slow=33							
SCRK	**Sand Creek**	**51.90**	**328**	P		**P**	**14 57 47.5**	**+0.4**
ILAR	**Eielson Array**	**52.25**	**330**	P		**P**	**14 57 50.6**	**+1.1**
	comp=Z,0.5nm,0.9s,baz=52,slow=4.6,SNR=7.0							
ILAR				LR		LR	15 17 47.2	
	comp=Z,67nm,19.4s,baz=131,slow=34							
	comp=Z,0.5nm,0.9s							
ILAR	**Eielson Array**	**52.25**	**330**	P		**P**	**14 57 49.5**	**-0.1**
AKTO	**Aktyubinsk**	**53.24**	**53**	LR		LR	15 19 30.7	
	comp=Z,42nm,19.9s,baz=332,slow=35							
MKAR	**Makanchi Array**	**66.86**	**42**	P		**P**	**14 59 31.4**	**+0.8**
	comp=Z,0.8nm,0.7s,baz=337,slow=4.4,SNR=6.7							
	comp=Z,0.8nm,0.7s							
WRA	**Warramunga Arr**	**146.08**	**21**	PKPbc		**PKPab**	**15 08 19.6**	**+0.1**
	comp=Z,0.7nm,1.0s,baz=347,slow=3.0,SNR=2.7							

NEIC 24 14:50:59.2±1.4, 35°.605N±0°.010×97°.27W±0°.01, h5km±1km, mb_Lg2.5/12, Error ellipse: s-maj=2.9km s-min=2.3km az=243.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
OK005	**Luther M Schoo**	**0.08**	**53**	Sg		Sg	14 51 03.3	+1.1
OKCFA	**Oklahoma City**	**0.24**	**218**			Pg	14 51 03.7	-0.2
OKCFA				Sg		Sg	14 51 07.3	+0.2
OKCSW	**OKLAHOMA CITY**	**0.24**	**214**			Pg	14 51 04.0	0.0
OKCSW				Sg		Sg	14 51 07.8	+0.6
FNO	**Franklin**	**0.36**	**197**	Pg		Pg	14 51 06.1	-0.1
FNO				Sg		Sg	14 51 11.4	+0.4
X34A	**Smith Ranch, M**	**1.10**	**205**			Pg	14 51 20.0	-0.3
X34A				Sg		Sg	14 51 34.1	-0.6
TUL1	**Leonard**	**1.24**	**75**			Pg	14 51 21.9	-1.1
TUL1				Sg		Sg	14 51 38.7	-0.4
T35A	**Sooner Cattle**	**1.44**	**25**	Pn		Pn	14 51 25.6	-0.4
WMOK	**Wichita Mounta**	**1.51**	**235**			Pn	14 51 27.3	+0.3
X37A	**Clayton**	**1.86**	**123**			Pn	14 51 32.4	+0.7
W39A	**Magazine**	**2.88**	**97**	IAmb_Lg			14 52 33.8	
	comp=Z,8.0nm,1.1s							
MIAR	**Mount Ida**	**3.21**	**108**	Pn		Pn	14 51 48.8	-1.5
WHAR	**Wooly Hollow**	**4.08**	**93**	Pn		Pn	14 52 01.4	-0.9
W41B	**Gary Mavity, V**	**4.13**	**95**			Pn	14 52 01.8	-1.1
FCAR	**Ozark Folk Cen**	**4.20**	**85**			Pn	14 52 01.9	-2.0
FCAR				IAmb_Lg			14 53 16.7	
	comp=Z,3.7nm,0.7s							
MGMO	**Mountain Grove**	**4.32**	**68**	IAmb_Lg			14 53 17.7	
	comp=Z,5.7nm,1.0s							
LCAR	**Lake Charles**	**4.99**	**83**	Pn		Pn	14 52 13.2	-1.5
SDCO	**Great Sand Dun**	**6.95**	**290**	IAmb_Lg			14 54 38.5	
	comp=Z,18nm,1.3s							
S22A	**4UR Ranch, Cre**	**7.97**	**288**	IAmb_Lg			14 55 10.4	
	comp=Z,13nm,1.3s							
SMCO	**Snowmass**	**8.51**	**298**	IAmb_Lg			14 55 31.0	
	comp=Z,3.2nm,0.9s							

NEIC ***24*** *14:57:41.1±1.4, 14°.2S±0°.1×168°.5E±0°.1, h46km±10km, mb4.7/23, Error ellipse: s-maj=18.0km s-min=16.2km az=69.0*
NOU ***24*** *14:58:00.9, 15°.48S×167°.86E, h154km, mb4.9/37, Vanuatu Islands*
IDC ***24*** *14:58:02.0±2.7, 15°.62S×167°.80E, h167km±23km, mb3.7/9, mbtmp4.4/12, Error ellipse: s-maj=26.0km s-min=13.3km az=77.0*

ISC 24 14:58:00.2±0.7, 15°.52S±0°.07×167°.89E±0°.09, h150km, n77, σ1§13/78, mb4.3/21, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**2.21**	**173**	P		**Pn**	**14 58 39.4**	**+1.6**
LIFNC	**LIFOU**	**5.27**	**187**			**Pn**	**14 59 16.6**	**-0.5**
LIFNC	**LIFOU**	**5.27**	**187**	P		**Pn**	**14 59 16.5**	**-0.7**
MARNC	**Mare, Loyalty**	**5.93**	**179**	Pn		**Pn**	**14 59 25.9**	**-0.1**
MARNC	**Mare, Loyalty**	**5.93**	**179**	P		**Pn**	**14 59 26.2**	**+0.2**
KOUNC	**Koumac, New Ca**	**6.07**	**214**			**Pn**	**14 59 28.3**	**+0.5**
KOUNC	**Koumac, New Ca**	**6.07**	**214**	P		**Pn**	**14 59 28.9**	**+1.1**
YATNC	**Mamie plateau,**	**6.57**	**188**	P		**Pn**	**14 59 34.4**	**-0.2**
DZM	**Mont Dzumac**	**6.66**	**192**	P		**Pn**	**14 59 36.3**	**+0.5**
	62nm,0.3s,baz=52,slow=17,SNR=168							
DZM				S		**Sn**	**15 00 49.1**	**-1.6**
	27nm,0.5s,baz=145,slow=22,SNR=2.0							
DZM	**Mont Dzumac**	**6.66**	**192**	P		**Pn**	**14 59 36.8**	**+1.0**
NOUC	**Port Laguerre**	**6.72**	**193**	P		**Pn**	**14 59 38.8**	**+2.3**
OUENC	**Ouen Island, N**	**6.93**	**188**			**Pn**	**14 59 40.8**	**+1.4**
OUENC	**Ouen Island, N**	**6.93**	**188**	P		**Pn**	**14 59 41.8**	**+2.4**
PINNC	**Pines Island,**	**7.07**	**183**			**Pn**	**14 59 41.6**	**+0.5**
PINNC	**Pines Island,**	**7.07**	**183**	P		**Pn**	**14 59 42.7**	**+1.5**
HNR	**Honiara**	**9.84**	**307**	P		**Pn**	**15 00 20.3**	**+2.1**
	51nm,0.5s,baz=212,slow=7.3,SNR=2.9							
HNR				S		**Sn**	**15 02 07.9**	**+0.7**
	48nm,0.5s,baz=57,slow=18,SNR=1.7							
EIDS	**Eidsvold**	**18.53**	**235**	P		**P**	**15 02 06.5**	**+1.1**
EIDS				IAmb		IAmb	15 02 07.7	
	comp=Z,36nm,0.9s							
EIDS	**Eidsvold**	**18.53**	**235**	P		**P**	**15 02 06.7**	**+1.3**
KRVT	**Keravat (AS076**	**19.18**	**304**	P		**Pn**	**15 02 14.2**	**-0.8**
	comp=Z,67nm,0.9s,baz=210,slow=1.8,SNR=7.4							
RMQ	**Roma**	**20.90**	**235**	P		**P**	**15 02 31.9**	**+1.0**
ARMA	**Armidale**	**21.04**	**222**	P		**P**	**15 02 34.7**	**+2.3**
ARMA				IAmb		IAmb	15 02 35.6	
	comp=Z,56nm,1.2s							
ARMA	**Armidale**	**21.04**	**222**	P		**P**	**15 02 33.1**	**+0.7**
CTA	**Charters Tower**	**21.04**	**254**	P		**P**	**15 02 33.0**	**0.0**
	comp=Z,5.0nm,0.7s,baz=79,slow=11,SNR=12							
	comp=Z,5.0nm,0.7s							
CTA	**Charters Tower**	**21.09**	**254**	P		**P**	**15 02 33.2**	**+0.2**
CTAO	**Charters Tower**	**21.09**	**254**	P		**P**	**15 02 33.3**	**+0.3**
CTAO	**Charters Tower**	**21.09**	**254**	P		**P**	**15 02 33.4**	**+0.3**
MTSU	**Mount Surprise**	**22.71**	**260**	P		**P**	**15 02 49.6**	**+0.1**
MGCD	**Mangrove Creek**	**23.26**	**218**	P		**P**	**15 02 55.3**	**+0.9**
QLP	**Quilpie**	**24.63**	**240**	P		**P**	**15 03 07.2**	**+0.3**
BKZ	**Black Stump Fm**	**24.74**	**164**	P		**P**	**15 03 08.2**	**+0.5**
BKZ				IAmb		IAmb	15 03 12.8	
	comp=Z,37nm,1.3s							
BKZ	**Black Stump Fm**	**24.74**	**164**	P		**P**	**15 03 09.1**	**+1.3**
CNB	**Canberra Magne**	**25.77**	**217**	P		**P**	**15 03 17.8**	**+0.6**
CMSA	**Cobar Meteorol**	**25.78**	**228**	P		**P**	**15 03 16.9**	**-0.3**
LTZ	**Lake Taylor**	**27.43**	**173**	P		**P**	**15 03 32.9**	**+0.9**
LTZ				IAmb		IAmb	15 03 33.5	
	comp=Z,19nm,0.8s							
INKA	**Innaminka**	**27.94**	**240**	P		**P**	**15 03 37.5**	**+0.9**
STKA	**Stephens Creek**	**28.95**	**231**	P		**P**	**15 03 45.6**	**+0.1**
	comp=Z,16nm,0.6s,baz=44,slow=8.4,SNR=41							
	comp=Z,16nm,0.6s							
STKA	**Stephens Creek**	**28.95**	**231**	P		**P**	**15 03 46.1**	**+0.5**
STKA	**Stephens Creek**	**28.95**	**231**	P		**P**	**15 03 46.0**	**+0.5**
TOO	**Toolangi**	**29.59**	**218**	P		**P**	**15 03 52.2**	**+1.1**
TOO				IAmb		IAmb	15 03 52.4	
	comp=Z,14nm,0.9s							
GLAD	**Gladstone**	**30.68**	**210**	P		**P**	**15 04 01.0**	**+0.3**
LCRK	**Leigh Creek**	**30.98**	**236**	P		**P**	**15 04 03.4**	**-0.1**
WR0	**Warramunga Arr**	**32.04**	**257**	P		**P**	**15 04 10.6**	**-2.3**
WR0				IAmb		IAmb	15 04 11.9	
	comp=Z,10nm,1.4s							
WB0	**Warramunga Arr**	**32.17**	**257**	P		**P**	**15 04 11.6**	**-2.4**
MOO	**Moorlands**	**32.19**	**209**	P		**P**	**15 04 14.4**	**+0.5**
WB2	**Warramunga Arr**	**32.22**	**257**	P		**P**	**15 04 12.3**	**-2.1**
WB2				IAmb		IAmb	15 04 23.8	
	comp=Z,4.3nm,0.8s							
OOD	**Oodnadatta**	**32.23**	**242**	P		**P**	**15 04 14.6**	**+0.2**
WRA	**Warramunga Arr**	**32.23**	**257**	P		**P**	**15 04 12.5**	**-2.1**
	comp=Z,2.7nm,0.7s,baz=87,slow=9.1,SNR=24							
	comp=Z,2.7nm,0.7s							
WRA	**Warramunga Arr**	**32.23**	**257**	P		**P**	**15 04 12.2**	**-2.4**
AS31	**Alice Springs**	**32.97**	**250**	P		**P**	**15 04 19.8**	**-1.2**
AS31				IAmb		IAmb	15 04 20.3	

TWD	**Chiawan**	**1.13**	**246**	P	**Pn**	**15 08 16.9**	**-0.1**
	baz=235						
TWD				*e*S	**Sn**	**15 08 33.1**	**-0.3**
	baz=235						
NWLT	**Wulai**	**1.13**	**282**	*e*P	**Pn**	**15 08 17.6**	**+0.5**
	baz=283						
NWLT				*e*S	**Sn**	**15 08 34.5**	**+1.0**
	baz=283						
NHDH	**Xindian Distri**	**1.16**	**291**	P	**Pn**	**15 08 17.6**	**+0.2**
	baz=279						
NHDH				*e*S	**Sn**	**15 08 33.5**	**-0.6**
	baz=279						
ETLH	**Xiulin Townshi**	**1.18**	**253**	P	**Pn**	**15 08 17.6**	**-0.2**
	baz=249						
ETLH				*e*S	**Sn**	**15 08 34.5**	**-0.2**
	baz=249						
YM01	**YM01**	**1.20**	**300**	*e*P	**Pn**	**15 08 17.9**	**+0.1**
	baz=290						
JKRS	**Kuro-shima**	**1.22**	**105**	P	**Pn**	**15 08 18.5**	**+0.6**
JKRS				S	**Sn**	**15 08 35.4**	**+0.3**
NNSB	**Datong**	**1.23**	**264**	P	**Pn**	**15 08 18.2**	**-0.1**
	baz=254						
NNSB				*e*S	**Sn**	**15 08 35.5**	**-0.1**
	baz=254						
YHNB	**Yeheng**	**1.23**	**276**	*i* P	**Pn**	**15 08 18.6**	**+0.4**
	baz=265						
YHNB				S	**Sn**	**15 08 34.9**	**-0.8**
	baz=265						
NNS	**Nan Shan**	**1.23**	**265**	P	**Pn**	**15 08 18.6**	**+0.3**
	baz=254						
NNS				*e*S	**Sn**	**15 08 35.7**	**-0.1**
	baz=254						
NSK	**Sanguang**	**1.25**	**276**	*i* P	**Pn**	**15 08 18.9**	**+0.5**
	baz=265						
NSK				*e*S	**Sn**	**15 08 35.5**	**-0.5**
	baz=265						
JIJ	**Ishigaki jima**	**1.31**	**98**	P	**Pn**	**15 08 19.2**	**+0.1**
JIJ				S	**Sn**	**15 08 36.1**	**-1.0**
FUSS	**Fushou**	**1.38**	**258**	P	**Pn**	**15 08 20.6**	**+0.3**
	baz=249						
FUSS				*e*S	**Sn**	**15 08 39.5**	**+0.4**
	baz=249						
ESL	**Shilin**	**1.39**	**238**	*e*P	**Pn**	**15 08 20.0**	**-0.1**
	baz=231						
WHF	**Hehuan Shan**	**1.39**	**253**	*e*P	**Pn**	**15 08 20.8**	**+0.2**
	baz=249						
WHF				*e*S	**Sn**	**15 08 38.1**	**-1.5**
	baz=249						
TWT	**Tachien**	**1.44**	**258**	*e*P	**Pn**	**15 08 22.0**	**+1.1**
	baz=251						
TWT				*e*S	**Sn**	**15 08 40.8**	**+0.5**
	baz=251						
JISG	**Ishigakijimahi**	**1.45**	**88**	P	**Pn**	**15 08 20.8**	**0.0**
JISG				*e*S	**Sn**	**15 08 39.3**	**-0.7**
NFF	**Wufeng Townshi**	**1.46**	**273**	*e*P	**Pn**	**15 08 21.5**	**+0.5**
	baz=270						
NFF				*e*S	**Sn**	**15 08 40.8**	**+0.2**
	baz=270						
EGFH	**Guangfu**	**1.48**	**234**	*e*P	**Pn**	**15 08 20.8**	**-0.4**
	baz=230						
EGFH				*e*S	**Sn**	**15 08 41.0**	**+0.2**
	baz=230						
CHGB	**Renai**	**1.50**	**251**	P	**Pn**	**15 08 22.1**	**+0.6**
	baz=241						
CHGB				*e*S	**Sn**	**15 08 41.3**	**-0.3**
	baz=241						
OWD	**Renai**	**1.53**	**247**	*e*P	**Pn**	**15 08 22.2**	**+0.3**
	baz=239						
OWD				*e*S	**Sn**	**15 08 41.6**	**-0.6**
	baz=239						
WUSB	**Renai**	**1.57**	**249**	*i* P	**Pn**	**15 08 23.1**	**+0.7**
	baz=241						
WUSB				S	**Sn**	**15 08 42.8**	**-0.2**
	baz=241						
NSTT	**Nanjuang**	**1.57**	**273**	P	**Pn**	**15 08 22.8**	**+0.5**
	baz=270						
NSTT				*e*S	**Sn**	**15 08 42.8**	**0.0**
	baz=270						
HGSD	**Ruisui**	**1.59**	**229**	*e*P	**Pn**	**15 08 21.2**	**-1.3**
	baz=224						
WHP	**Taichung City**	**1.64**	**261**	P	**Pn**	**15 08 24.7**	**+1.4**
	baz=254						
WHP				*e*S	**Sn**	**15 08 45.8**	**+1.2**
	baz=254						
VWDT	**VWDT**	**1.65**	**241**	*e*P	**Pn**	**15 08 23.6**	**+0.3**
	baz=233						
VWDT				*e*S	**Sn**	**15 08 44.7**	**+0.1**
	baz=233						
EHY	**Hungye**	**1.65**	**231**	*e*P	**Pn**	**15 08 23.0**	**-0.3**
	baz=228						
EHY				*e*S	**Sn**	**15 08 43.3**	**-1.4**
	baz=228						
WCS	**Beigang Elemen**	**1.73**	**254**	*e*P	**Pn**	**15 08 24.6**	**+0.3**
	baz=247						
YULB	**Yu-li**	**1.74**	**229**	*e*P	**Pn**	**15 08 24.3**	**-0.2**
	baz=234						
EYUL	**Yuli**	**1.76**	**227**	*e*P	**Pn**	**15 08 25.5**	**+0.8**
	baz=233						
NMLH	**Miaoli**	**1.76**	**270**	*e*P	**Pn**	**15 08 25.0**	**+0.4**
	baz=267						
SSLB	**Suanglung**	**1.79**	**245**	*e*P	**Pn**	**15 08 25.9**	**+0.8**
	baz=237						
SMLT	**Sun Moon Lake**	**1.79**	**249**	*e*P	**Pn**	**15 08 26.4**	**+1.2**
	baz=240						
JTJ	**Tarama**	**1.80**	**87**	P	**Pn**	**15 08 25.7**	**+0.5**
JTJ				S	**Sn**	**15 08 47.7**	**-0.4**
TYC	**Yuchr**	**1.82**	**250**	*e*P	**Pn**	**15 08 26.6**	**+1.1**
	baz=241						
TYC				*e*S	**Sn**	**15 08 49.8**	**+1.4**
	baz=241						
FULB	**Fuli**	**1.88**	**224**	*e*P	**Pn**	**15 08 26.1**	**-0.2**
	baz=217						
YUS	**Yu-Shan**	**1.94**	**237**	*e*P	**Pn**	**15 08 28.1**	**+0.7**
	baz=234						
ALS	**Alishan**	**2.04**	**240**	*e*P	**Pn**	**15 08 30.0**	**+1.5**
	baz=237						
EDH	**Donghe**	**2.04**	**220**	*e*P	**Pn**	**15 08 27.8**	**-0.5**
	baz=217						
ELDTW	**Lidau**	**2.07**	**229**	*e*P	**Pn**	**15 08 28.4**	**-0.4**
	baz=227						
LDUT	**Ludao**	**2.20**	**212**	*e*P	**Pn**	**15 08 29.8**	**-0.5**
	baz=213						
JIRB	**Irabujima**	**2.25**	**83**	P	**Pn**	**15 08 31.2**	**+0.3**
CHN4	**Tsaushan**	**2.29**	**239**	*e*P	**Pn**	**15 08 33.5**	**+2.0**
	baz=236						
TWK	**Hsinying**	**2.41**	**238**	*e*P	**Pn**	**15 08 34.2**	**+0.9**
	baz=235						
CHN1	**Nanshi**	**2.43**	**236**	*e*P	**Pn**	**15 08 34.6**	**+1.2**
	baz=234						
MASBT	**Mashibuluo**	**2.72**	**225**	*e*P	**Pn**	**15 08 38.4**	**+1.1**
	baz=223						
VWUC	**VWUC**	**3.01**	**279**	*e*P	**Pn**	**15 08 39.9**	**-1.1**
	baz=277						
PHUB	**P'eng-hu**	**3.06**	**251**	*e*P	**Pn**	**15 08 40.2**	**-1.6**
	baz=248						
PTMZ	**Houxiangcun**	**3.31**	**279**	*e*P	**Pn**	**15 08 44.9**	**-0.2**
	baz=277						

MAN 24 15:15:30.1, 16°.22N×119°.70E, h11km, mb3.8, ML2.5, MS2.0, 2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPP	**San Manuel, Pa**	**0.94**	**94**	⇓*e*P	Pn	15 15 47.0	+0.9
SMPP				*e*S		15 16 03.1	
SAMP	**Sagada Mountai**	**1.44**	**53**	⇓*e*P	Pn	15 15 54.0	+0.4

TRN 24 15:39:07.2, 18°.05N×62°.83W, h28km, MD3.7, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMRT	**St. Maarten**	**0.24**	**270**	*e*P	Pn	15 39 14.9	+0.1
SMRT				*e*S	Sb	15 39 19.4	+1.4
SEUS	**St. Eustatius**	**0.57**	**195**	*e*S	Sn	15 39 30.8	+2.8
SKI	**Saint Kitts**	**0.72**	**173**	*e*P	Pn	15 39 23.4	+1.9
SKI				*e*S	Sn	15 39 34.1	+2.6
SKOC	**St. Kitts, UWI**	**0.76**	**173**	*e*P	Pn	15 39 23.7	+1.7
SKOC				*e*S	Sn	15 39 34.8	+2.3
ANWB	**Willy Bob**	**1.06**	**111**	*e*P	Pb	15 39 27.6	+0.6
ANWB				*e*S	Sb	15 39 42.2	+1.8
BPA	**Boggy Peak**	**1.36**	**137**	*e*P	Pb	15 39 31.9	-0.2
BPA				*e*S	Sb	15 39 49.1	0.0
ANBD	**Bethesda, Anti**	**1.42**	**134**	*e*P	Pb	15 39 32.4	-0.6
ANBD				*e*S	Sb	15 39 50.7	0.0
MBFL	**Flemmings, Mon**	**1.42**	**156**	*e*S	Sb	15 39 51.1	+0.4
MLYT	**Lee's Yard**	**1.45**	**155**	*e*S	Sb	15 39 52.0	+0.3
ABD	**La Joyeuse, An**	**2.02**	**141**	*e*P	Pb	15 39 42.2	-1.1
ABD	**La Joyeuse, An**	**2.02**	**141**	*e*P	Pb	15 39 42.6	-0.7
ABD				*e*S	Sn	15 40 05.7	+2.0
CBE	**Ff, Capester**	**2.29**	**149**	*e*P	Pn	15 39 45.2	+2.1
CBE				*e*S	Sn	15 40 12.3	+1.9
TDBA	**Terre de Bas,**	**2.47**	**152**	*e*P	Pn	15 39 46.6	+1.1
TDBA				*e*S	Sn	15 40 17.3	+2.5
MAGL	**Barre de l'ile**	**2.56**	**144**	*e*P	Pn	15 39 49.2	+2.4
MAGL				*e*S	Sn	15 40 18.9	+1.9
MDCT	**Cottage Hill,**	**2.75**	**151**	*e*S	Sn	15 40 24.2	+2.5
DSLB	**Salisbury**	**2.92**	**152**	*e*P	Pn	15 39 55.2	+3.3
DSLB				*e*S	Sn	15 40 26.9	+0.8
MPOM	**Morne Pois Mar**	**4.05**	**152**	*e*P	Pn	15 40 09.8	+2.4
MPOM	**Morne Pois Mar**	**4.05**	**152**	*e*S	Sn	15 40 55.4	+1.5

*NEIC **24** 15:59:49.6±2.3, 15°.3N±0°.4×97°.9W±0°.2, h8km±31km, Error ellipse: s-maj=61.8km s-min=14.1km az=208.0*
*MEX **24** 15:59:50.4±0.9, 15°.16N×97°.91W, h16km±23km, MD4.2*
ISC 24 15:59:49.2±1.4, 15°.47N±0°.08×97°.84W±0°.05, h10km, n24, σ1§58/36, mb4.1/3, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.96**	**343**		**Pn**	**16 00 09.3**	**+0.5**
PNIG					**Sn**	**16 00 23.9**	**+1.4**
PNIG	**Pinotepa**	**0.96**	**343**	*i* P	**Pn**	**16 00 09.3**	**+0.5**
PNIG				*i* S	**Sn**	**16 00 23.9**	**+1.4**
HUIG	**Huatulco**	**1.70**	**80**		**Pn**	**16 00 17.3**	**-1.6**
HUIG					**Sn**	**16 00 39.2**	**-1.5**
HUIG	**Huatulco**	**1.70**	**80**	*i* P	**Pn**	**16 00 17.3**	**-1.6**
HUIG				*e*S	**Sn**	**16 00 39.2**	**-1.5**
CRIG	**Cruz Grande**	**1.77**	**316**		**Pn**	**16 00 19.4**	**-0.5**
CRIG					**Sn**	**16 00 40.9**	**-1.6**
CRIG	**Cruz Grande**	**1.77**	**316**	*e*P	**Pn**	**16 00 19.4**	**-0.5**
CRIG				*e*S	**Sn**	**16 00 40.9**	**-1.6**
TXIG	**Tlaxiaco**	**1.78**	**2**	*i* P	**Pg**	**16 00 22.5**	**-0.8**
TXIG				*e*S	**Sg**	**16 00 46.4**	**-0.1**
MGIG	**Malinaltepec**	**1.92**	**337**	*i* P	**Pb**	**16 00 23.6**	**-0.7**
MGIG				*i* S	**Sb**	**16 00 47.9**	**-0.5**
VHO	**Vista Hermosa**	**1.92**	**34**	*e*P	**Pb**	**16 00 23.8**	**-0.6**
VHO				*e*S	**Sg**	**16 00 49.7**	**-1.3**
TLIG	**Tlapa**	**2.20**	**342**		**Pb**	**16 00 28.2**	**-0.9**
DAIG	**Los Arroyos**	**2.33**	**312**		**Pn**	**16 00 27.2**	**-0.3**
DAIG					**Sn**	**16 00 54.3**	**-2.0**
DAIG	**Los Arroyos**	**2.33**	**312**	*e*P	**Pn**	**16 00 27.2**	**-0.3**
DAIG				*e*S	**Sn**	**16 00 54.3**	**-2.0**
FTIG	**Fresnillo de T**	**2.44**	**353**	*e*P	**Pb**	**16 00 32.3**	**-1.1**
FTIG				*e*S	**Sb**	**16 01 02.0**	**-1.6**
CCIG	**Comitan**	**5.55**	**81**		**Pn**	**16 01 13.3**	**+1.3**
PETF	**Flores**	**7.80**	**78**		**Pn**	**16 01 42.6**	**-0.2**
MSTX	**Muleshoe**	**18.95**	**347**	P	**Pn**	**16 04 12.5**	**+1.1**
MSTX				IAmb	IAmb	16 04 17.8	
	comp=Z,8.1nm,0.9s						
WMOK	**Wichita Mounta**	**19.21**	**358**	P	**Pn**	**16 04 16.0**	**+1.7**
MIAR	**Mount Ida**	**19.38**	**11**	P	**Pn**	**16 04 17.7**	**+1.3**
MIAR				IAmb	IAmb	16 04 28.6	
	comp=Z,7.7nm,1.1s						
AMTX	**Amarillo**	**19.64**	**351**	P	**Pn**	**16 04 18.3**	**-1.2**
ANMO	**Albuquerque**	**20.89**	**340**	P	**P**	**16 04 32.0**	**+0.2**
SWET	**Sewanee**	**22.38**	**26**	P	**P**	**16 04 50.4**	**+2.7**
S39A	**Bolivar**	**22.50**	**9**	P	**P**	**16 04 50.5**	**+1.6**
S39A				IAmb	IAmb	16 04 58.2	
	comp=Z,4.6nm,0.9s						
CPCT	**Cooper Cave**	**23.20**	**29**	P	**P**	**16 04 59.1**	**+2.8**
CPCT				IAmb	IAmb	16 05 01.9	
	comp=Z,5.5nm,0.9s						
BG3	**Lake Jocassee**	**23.61**	**32**	P	**P**	**16 05 04.9**	**+4.5**
BG3				IAmb	IAmb	16 05 08.3	
	comp=Z,7.8nm,0.8s						

*BJI **24** 16:40:28.4±0.0, 41°.86N×142°.70E, h61km, mb4.5/47, mB4.7/23, Ms3.7/6, Ms7 3.4/6*
*MOS **24** 16:40:31.1±1.2, 41°.99N×142°.57E, h72km, mb4.6/19, Error ellipse: s-maj=6.6km s-min=5.0km az=95.3*
*JMA **24** 16:40:32.2±0.2, 42°.0N±0°.8×142°.5E±0°.8, h59km±1km, MV3.8/40, S OFF URAKAWA*
JMA Felt I J1 at S OFF URAKAWA .
*NIED **24** 16:40:32.2, 41°.99N×142°.53E, h59km, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr3.83; Mθθ-0.85; Mφφ-2.98; Mrθ1.74; Mθφ-1.23; Mφr3.10; Fault plane solution: M₀5.11000×10¹⁵ NP1: φs202.00000°, δ23.00000°, λ85.00000°. NP2:φs28.00000°, δ67.00000°, λ92.00000°.*
*NEIC **24** 16:40:32.3±1.9, 42°.01N±0°.05×142°.55E±0°.05, h68km±7km, mb4.5/24 Error ellipse: s-maj=7.6km s-min=4.8km az=194.0*
*IDC **24** 16:40:35.0±2.2, 42°.02N×142°.42E, h86km±19km, mb3.7/19, mbtmp4.0/24, MS3.4/33, Error ellipse: s-maj=15.2km s-min=14.5km az=106.0*
ISC 24 16:40:32.5±0.6, 41°.97N±0°.04×142°.56E±0°.03, h67km±5km, n191, σ1§54/193, mb4.3/52, 12C-19D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	**0.34**	**24**	P	**Pn**	**16 40 42.4**	**-1.2**
JNBK				*e*S	**Sn**	**16 40 50.2**	**-1.6**
ERM	**Erimo**	**0.45**	**84**	Pn	**Pn**	**16 40 43.8**	**-0.7**
ERM	**Erimo**	**0.45**	**84**	*c i*P	**Pn**	**16 40 44.0**	**-0.5**
JEM	**Erimo**	**0.45**	**83**	P	**Pn**	**16 40 43.9**	**-0.6**
JEM				*e*S	**Sn**	**16 40 52.3**	**-1.0**
JSHD	**Hidakashinhida**	**0.45**	**351**	⇓*i*P	**Pn**	**16 40 43.6**	**-1.0**
JTHR	**Tokachihiroo**	**0.64**	**59**	*i* P	**Pn**	**16 40 45.9**	**-0.6**
JIAM	**Iburiatsuma**	**0.81**	**324**	⇓*i*P	**Pn**	**16 40 48.1**	**-0.3**
JBT2	**Biratori 2**	**0.82**	**350**	*e*S	**Sn**	**16 40 59.4**	**-1.2**
JCH	**Churui**	**0.88**	**42**	P	**Pn**	**16 40 48.6**	**-0.7**
JKB	**Kayabe**	**1.14**	**267**	⇓*e*P	**Pn**	**16 40 51.6**	**-1.1**
JKB				⇓*e*S	**Sn**	**16 41 05.9**	**-1.8**
JFR	**Furan**	**1.20**	**1**	⇓*e*P	**Pn**	**16 40 52.4**	**-1.0**
JEW	**Eniwo**	**1.20**	**317**	Pn	**Pn**	**16 40 51.7**	**-1.7**
JEW	**Eniwo**	**1.20**	**317**	⇓P	**Pn**	**16 40 52.6**	**-0.8**
JEW				⇓*e*S	**Sn**	**16 41 07.9**	**-1.1**
JNB	**Noboribetsu**	**1.24**	**294**	⇓*e*P	**Pn**	**16 40 52.2**	**-1.7**
JNB				⇓*e*S	**Sn**	**16 41 07.5**	**-2.3**
JOT	**Ohata**	**1.27**	**243**	⇓*e*P	**Pn**	**16 40 53.4**	**-1.0**
JOT				⇓*e*S	**Sn**	**16 41 09.4**	**-1.3**
JOB	**Onbets**	**1.33**	**45**	*e*P	**Pn**	**16 40 55.4**	**+0.3**
JOB				*e*S	**Sn**	**16 41 12.8**	**+0.8**
JAB	**Ashibetsu**	**1.56**	**351**	⇓*e*P	**Pn**	**16 40 57.6**	**-0.5**
JISS	**Ishikarishitsu**	**1.56**	**328**	⇓P	**Pn**	**16 40 57.5**	**-0.6**
JISS				⇓*e*S	**Sn**	**16 41 16.9**	**-0.5**
JAR	**Ashorobuto**	**1.60**	**33**	*e*P	**Pn**	**16 40 58.4**	**-0.3**
JAR				*e*S	**Sn**	**16 41 17.7**	**-0.8**
JTM	**Tenmabayashi**	**1.63**	**224**	Pn	**Pn**	**16 40 59.3**	**+0.3**
ASAJ	**Asahikawa**	**2.15**	**1**	P	**Pn**	**16 41 06.0**	**-0.1**
JKA	**Kamikawa-asahi**	**2.15**	**1**	Pn	**Pn**	**16 41 06.0**	**-0.1**
NMR	**Nemuro--Hokkai**	**2.72**	**58**	*e*P	**Pn**	**16 41 11.9**	**-2.0**
NMR				*e*S	**Sn**	**16 41 44.7**	**-1.0**
GLVR	**Golovnino**	**2.81**	**50**	*e*P	**Pn**	**16 41 15.3**	**+0.3**
GLVR				*e*S	**Sn**	**16 41 47.8**	**+0.2**
GLVR				pmax	pmax		
	comp=Z,95nm,0.2s						
GLVR				smax	smax		
	comp=N,280nm,0.3s						
GLVR				smax	smax		
	comp=E,415nm,0.4s						
RUSJ	**Misakicho**	**2.91**	**42**	*e*P	**Pn**	**16 41 19.0**	**+2.7**
RUSJ				S	**Sn**	**16 41 54.4**	**+4.3**
YUK	**Yuzh-Kuril'sk**	**3.18**	**48**	*e*P	**Pn**	**16 41 20.8**	**+0.7**
YUK				S	**Sn**	**16 41 55.5**	**-1.4**
YUK				pmax	pmax		
	comp=Z,203nm,0.2s						
YUK				smax	smax		
	comp=N,250nm,0.4s						
YUK				smax	smax		
	comp=E,402nm,0.4s						
SHO	**Shikotan**	**3.67**	**57**	*c i*P	**Pn**	**16 41 26.3**	**-0.4**
SHO				*i* S	**Sn**	**16 42 06.0**	**-2.7**
SHO				pmax	pmax		
	comp=N,7.0nm,0.2s						
SHO				pmax	pmax		
	comp=E,14nm,0.2s						
SHO				pmax	pmax		
	comp=Z,33nm,0.2s						
SHO				smax	smax		
	comp=N,109nm,0.5s						
SHO				smax	smax		
	comp=E,174nm,0.4s						
JMM	**Marumori**	**4.32**	**199**		**Pn**	**16 41 34.8**	**-0.8**
YSS	**Yuzh-Sakhalins**	**4.99**	**2**	Pn	**Pn**	**16 41 46.0**	**+1.3**
YSS	**Yuzh-Sakhalins**	**4.99**	**2**	⇑*e*P	**Pn**	**16 41 46.5**	**+1.7**
YSS				*e*S	**Sn**	**16 42 41.4**	**+0.4**
YSS				pmax	pmax		
	comp=Z,100nm,4.7s						
YSS				pmax	pmax		
	comp=Z,70nm,0.7s						
YSS				smax	smax		
	comp=Z,30nm,0.9s						
YSS				MLR	MLR		
	comp=Z,300nm,12.0s						
KUR	**Kuril'sk**	**5.05**	**48**	*e*P	**Pn**	**16 41 46.9**	**+1.3**
KUR				*e*S	**Sn**	**16 42 45.3**	**+2.7**
KUR				pmax	pmax		
	comp=N,16nm,0.5s						
KUR				pmax	pmax		
	comp=Z,49nm,0.5s						
KUR				smax	smax		
	comp=N,61nm,0.7s						
KUR				smax	smax		
	comp=E,47nm,0.5s						
JSD	**Sado**	**5.13**	**221**	Pn	**Pn**	**16 41 47.0**	**+0.3**
TEY	**Ternei**	**5.31**	**307**	⇑*i*P	**Pn**	**16 41 48.6**	**-0.5**
TEY				pmax	pmax		
	comp=N,10.0nm,1.0s						
TEY				pmax	pmax		
	comp=E,10.0nm,1.0s						
TEY				pmax	pmax		
	comp=Z,20nm,1.0s						
MJB9	**Matsu-Tunnel**	**6.38**	**213**		**Pn**	**16 42 05.2**	**+1.3**
MAJO	**Matsushiro**	**6.38**	**213**	Pn	**Pn**	**16 42 05.3**	**+1.4**
MAJO	**Matsushiro**	**6.38**	**213**	*c i*P	**Pn**	**16 42 06.8**	**+2.9**
MJAR	**Matsushiro Arr**	**6.38**	**213**	P	**Pn**	**16 42 06.3**	**+2.4**
	comp=Z,1.7nm,0.4s,baz=28,slow=17,SNR=8.7						
MJAR				S	**Sn**	**16 43 18.4**	**+3.1**
	comp=Z,1.5nm,0.6s,baz=236,slow=32,SNR=0.9						
MJAR				LR	LR	16 45 05.5	
	comp=Z,158nm,19.3s,baz=28,slow=42						
MJAR	**Matsushiro Arr**	**6.38**	**213**	Pn	**Pn**	**16 42 04.5**	**+0.6**
VLA	**Vladivostok**	**7.97**	**282**	*e*P	**Pn**	**16 42 27.0**	**+1.5**
USA0B	**Ussuriysk Arra**	**8.05**	**290**	Pn	**Pn**	**16 42 25.3**	**-1.4**
USA0B	**Ussuriysk Arra**	**8.05**	**290**	*d i*P	**Pn**	**16 42 29.1**	**+2.4**
USRK	**Ussuriysk Ar.**	**8.05**	**290**	P	**Pn**	**16 42 26.0**	**-0.7**
	comp=Z,22nm,0.8s,baz=97,slow=13,SNR=32						
USRK				S	**Sn**	**16 43 57.3**	**+1.1**
	comp=Z,7.1nm,0.7s,baz=99,slow=25,SNR=4.6						
USRK				LR	LR	16 45 35.3	
	comp=Z,159nm,19.7s,baz=126,slow=38						
USRK	**Ussuriysk Ar.**	**8.05**	**290**	Pn	**Pn**	**16 42 26.3**	**-0.4**
MSHR	**Mys Shultsa**	**8.48**	**278**	⇑*i*P	**Pn**	**16 42 34.0**	**+1.5**
TYV	**Tymovskoe**	**8.90**	**0**	*e*P	**Pn**	**16 42 39.6**	**+1.4**
TYV				*e*S	**Sn**	**16 44 16.0**	**-0.8**
TYV				pmax	pmax		
	comp=Z,100nm,3.7s						
TYV				pmax	pmax		
	comp=Z,5.0nm,1.5s						
TYV				smax	smax		
	comp=E,7.0nm,1.7s						
TYV				smax	smax		
	comp=N,100nm,3.3s						
TYV				smax	smax		
	comp=E,100nm,3.3s						
GRNR	**Gornyy**	**9.77**	**336**	⇑*i*P	**Pn**	**16 42 52.1**	**+2.0**
GRNR				pmax	pmax		
	comp=N,7.0nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GRNR				MLR	MLR		
	comp=E,40nm,12.0s						
GRNR				MLR	MLR		
	comp=N,70nm,14.0s						
MDJ	**Mudanjiang**	**9.82**	**290**	P	**Pn**	**16 42 53.5**	**+2.7**
MDJ				pP		16 42 56.0	
MDJ				pmax	pmax		
	comp=N,20nm,0.9s						
MDJ				pmax	pmax		
	comp=N,200nm,3.5s						
MDJ				LR	LR		
	comp=N,210nm,19.5s						
KLR	**Kul'dur**	**10.49**	**318**	P	**Pn**	**16 43 01.6**	**+1.7**
	comp=N,6.8nm,1.0s,baz=121,slow=15,SNR=14						
KLR				LR	LR	16 47 06.9	
	comp=N,231nm,21.0s,baz=161,slow=38						
KLR	**Kul'dur**	**10.49**	**318**	⇓*i*P	**Pn**	**16 43 00.7**	**+0.8**
KLR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BNX	**BinXian**	**11.57**	**294**	P	**Pn**	**16 43 16.6**	**+1.9**
BNX				pmax	pmax		
	comp=Z,120nm,4.0s						
BNX				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KSRS	**Korea Array**	**12.14**	**253**	P	**Pn**	**16 43 24.2**	**+1.8**
	comp=Z,2.5nm,0.4s,baz=66,slow=12,SNR=5.6						
KSRS				S	**Sn**	**16 45 42.2**	**+6.3**
	comp=Z,4.0nm,0.7s,baz=67,slow=23,SNR=6.3						
KSRS				LR	LR	16 47 35.3	
	comp=Z,147nm,21.0s,baz=60,slow=35						
CN2	**Changchun**	**12.69**	**284**	*e*P	**Pn**	**16 43 32.3**	**+2.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				LR	LR		
	comp=Z,200nm,13.0s						
CN2				LR	LR		
	comp=Z,200nm,13.0s						
CN2				LR	LR		
	comp=Z,200nm,14.0s						
JCJ	**Chichijima**	**14.84**	**181**	LR	LR	16 50 25.7	
	comp=Z,25nm,20.0s,baz=109,slow=40						
PEA0B	**Petropavlovsk-**	**15.09**	**37**	Pn	**Pn**	**16 43 59.9**	**-1.7**
PEA0B	**Petropavlovsk-**	**15.09**	**37**	P	**Pn**	**16 43 59.9**	**-1.7**
PEA0B				pmax	pmax		
	comp=Z,17nm,1.2s						
PETK	**Petropavlovsk-**	**15.09**	**37**	P	**P**	**16 44 04.7**	**-0.7**
	comp=Z,1.4nm,0.7s,baz=205,slow=12,SNR=5.6						
PETK				LR	LR	16 51 08.3	
	comp=Z,55nm,18.2s,baz=209,slow=42						
PETK	**Petropavlovsk-**	**15.09**	**37**	Pn	**Pn**	**16 44 01.4**	**-0.2**
PETK	**Petropavlovsk-**	**15.09**	**37**	P	**Pn**	**16 44 01.4**	**-0.2**
PET	**Petropavlovsk**	**15.47**	**39**	⇑*i*P	**Pn**	**16 44 03.6**	**-2.9**
ZEA	**Zeya**	**15.59**	**324**	*e*P	**Pn**	**16 44 07.5**	**-0.5**
ZEA				pmax	pmax

YAK				pmax	pmax			
	comp=N,3.0nm,1.5s							
YAK				pmax	pmax			
	comp=E,3.0nm,1.5s							
YAK				smax	smax			
	comp=N,62nm,3.2s							
YAK				smax	smax			
	comp=E,37nm,2.4s							
SEY	**Seymchan**	**21.79**	**12**	P	**P**	**16 45 16.3**	**-2.2**	
	comp=E,2.2nm,0.7s,baz=204,slow=9.9,SNR=6.9							
SEY				LR	LR	16 55 03.9		
	comp=E,57nm,20.6s,baz=162,slow=40							
SEY	**Seymchan**	**21.79**	**12**	*eP*	**P**	**16 45 15.7**	**-2.8**	
SEY				pmax	pmax			
	comp=Z,4.0nm,1.0s							
HNS	**HongShan**	**21.87**	**267**	*eP*	**P**	**16 45 17.6**	**-2.0**	
HHC	**Hu-ho-hao-te**	**23.22**	**278**	*eP*	**P**	**16 45 34.3**	**+0.5**	
HHC				pmax	pmax			
	comp=Z,32nm,0.9s							
HHC				pmax	pmax			
	comp=Z,86nm,7.9s							
SHEM	**Shemya Is, Ala**	**23.74**	**52**	LR	LR	16 54 56.2		
	comp=Z,26nm,20.0s,baz=309,slow=36							
ULN	**Ulaanbaatar**	**25.67**	**295**⇓	*iP*	**P**	**16 45 56.0**	**-0.1**	
ULN				pmax	pmax			
	comp=Z,8.0nm,1.5s							
SONM	**Songino Array**	**26.11**	**295**	P	**P**	**16 45 59.5**	**-0.6**	
	comp=Z,3.9nm,0.7s,baz=94,slow=8.3,SNR=14							
SONM				LR	LR	16 56 51.3		
	comp=Z,97nm,19.9s,baz=84,slow=38							
	comp=Z,3.9nm,0.7s							
SONM	**Songino Array**	**26.11**	**295**	P	**P**	**16 45 59.7**	**-0.4**	
SONM	**Songino Array**	**26.11**	**295**	P	**P**	**16 45 59.7**	**-0.4**	
SONM				pmax	pmax			
	comp=Z,8.0nm,1.3s							
XAN	**Xi'an**	**27.53**	**264**	P	**P**	**16 46 13.6**	**+0.8**	
XAN				pP	pP	16 46 25.8	-2.8	
XAN				sP	sP	16 46 32.8	-3.6	
XAN				pmax	pmax			
	comp=Z,9.0nm,1.2s							
ZAK	**Zakamensk**	**28.19**	**301**	*eP*	**P**	**16 46 16.5**	**-2.2**	
ZAK				pmax	pmax			
	comp=Z,3.0nm,1.4s							
GUMO	**Guam**	**28.34**	**175**	LR	LR	16 56 28.2		
	comp=Z,42nm,20.8s,baz=8.0,slow=34							
BILL	**Bilibino**	**29.06**	**18**	*eP*	**P**	**16 46 25.6**	**-0.4**	
BILL				pmax	pmax			
	comp=Z,4.0nm,1.7s							
H11N2	**WAKE ISLAND Hy**	**30.27**	**130**	T	T	17 19 17.5		
	baz=322,slow=75,SNR=4.4							
H11N1	**WAKE ISLAND Hy**	**30.28**	**130**	T	T	17 19 20.3		
	baz=322,slow=75,SNR=4.2							
H11N3	**WAKE ISLAND Hy**	**30.29**	**130**	T	T	17 19 19.4		
	baz=322,slow=75,SNR=4.8							
TIXI	**Tiksi**	**30.52**	**352**	LR	LR	16 59 57.3		
	comp=Z,53nm,19.7s,baz=180,slow=38							
TIXI	**Tiksi**	**30.52**	**352**	*eP*	**P**	**16 46 38.6**	**-0.3**	
TIXI				pmax	pmax			
	comp=Z,4.0nm,2.1s							
H11S1	**WAKE ISLAND Hy**	**31.13**	**131**	T	T	17 20 22.0		
	baz=323,slow=76,SNR=4.4							
H11S3	**WAKE ISLAND Hy**	**31.13**	**131**	T	T	17 20 26.6		
	baz=323,slow=76,SNR=60							
H11S2	**WAKE ISLAND Hy**	**31.15**	**131**	T	T	17 20 24.8		
	baz=323,slow=76,SNR=4.5							
GTA	**Gaotai**	**32.27**	**280**	*eP*	**P**	**16 46 56.9**	**+2.1**	
GTA				pP	pP	16 47 07.1	-3.6	
GTA				sP	sP	16 47 12.8	-5.6	
GTA				pmax	pmax			
	comp=Z,3.0nm,1.1s							
PZH	**PanZhiHua**	**36.73**	**258**	P	**P**	**16 47 34.3**	**+0.9**	
PZH				pmax	pmax			
	comp=Z,20nm,1.2s							
PZH				pmax	pmax			
	comp=Z,100nm,5.7s							
GOMU	**GeErMu**	**37.12**	**277**	P	**P**	**16 47 38.3**	**+1.3**	
GOMU				pmax	pmax			
	comp=Z,3.0nm,0.9s							
GOMU				pmax	pmax			
	comp=Z,37nm,4.7s							
ZAA0	**Zalesovo Array**	**39.41**	**308**	P	**P**	**16 47 55.3**	**-0.2**	
ZAA0				IAmb	IAmb	16 47 56.2		
	comp=Z,11nm,1.0s							
ZALV	**Zalesovo Beam**	**39.41**	**308**	P	**P**	**16 47 55.4**	**-0.1**	
	comp=Z,6.6nm,0.8s,baz=80,slow=8.1,SNR=31							
ZALV				PcP	**PcP**	**16 50 02.1**	**-0.3**	
	comp=Z,0.8nm,0.5s,baz=92,slow=4.3,SNR=2.9							
ZALV				LR	LR	17 04 52.2		
	comp=Z,80nm,20.2s,baz=91,slow=37							
	comp=Z,6.6nm,0.8s							
ZALV	**Zalesovo Beam**	**39.41**	**308**	P	**P**	**16 47 53.9**	**-1.5**	
WMQ	**Urumqi**	**39.62**	**292**	*eP*	**P**	**16 47 59.5**	**+2.0**	
WMQ				pmax	pmax			
	comp=Z,16nm,0.7s							
MK31	**Makanchi Array**	**42.42**	**298**	P	**P**	**16 48 18.9**	**-1.5**	
MK31				IAmb	IAmb	16 48 21.1		
	comp=Z,8.7nm,1.1s							
MK31	**Makanchi Array**	**42.42**	**298**	P	**P**	**16 48 18.9**	**-1.5**	
MK31				pmax	pmax			
	comp=Z,9.0nm,1.1s							
MKAR	**Makanchi Array**	**42.42**	**298**	P	**P**	**16 48 20.1**	**-0.4**	
	comp=Z,7.5nm,0.9s,baz=82,slow=8.9,SNR=35							
MKAR				LR	LR	17 08 01.8		
	comp=Z,60nm,18.0s,baz=90,slow=39							
	comp=Z,7.5nm,0.9s							
MKAR	**Makanchi Array**	**42.42**	**298**	P	**P**	**16 48 19.9**	**-0.5**	
MAKZ	**Makanchi**	**42.63**	**298**	P	**P**	**16 48 20.4**	**-1.7**	
MAKZ				IAmb	IAmb	16 48 23.4		
	comp=Z,10nm,1.0s							
MAKZ	**Makanchi**	**42.63**	**298**	P	**P**	**16 48 20.4**	**-1.7**	
MAKZ				pmax	pmax			
	comp=Z,10.0nm,1.0s							
CHTO	**Chiang Mai**	**43.53**	**252**	P	**P**	**16 48 29.3**	**-0.3**	
CHTO				IAmb	IAmb	16 48 35.8		
	comp=Z,3.8nm,0.6s							
CHTO	**Chiang Mai**	**43.53**	**252**	P	**P**	**16 48 29.3**	**-0.3**	
CHTO				pmax	pmax			
	comp=Z,4.0nm,0.6s							
KURK	**Kurchatov**	**43.74**	**304**	P	**P**	**16 48 30.0**	**-0.9**	
KURK				IAmb	IAmb	16 48 33.9		
	comp=Z,14nm,1.1s							
KURK	**Kurchatov**	**43.74**	**304***c*	*iP*	**P**	**16 48 30.5**	**-0.4**	
KURK				pmax	pmax			
	comp=Z,13nm,1.0s							
CMAR	**Chiang Mai Arr**	**43.77**	**251**	P	**P**	**16 48 32.0**	**+0.5**	
	comp=Z,0.6nm,0.7s,baz=43,slow=6.8,SNR=2.7							
CMAR				LR	LR	17 07 43.6		
	comp=Z,42nm,18.7s,baz=20,slow=37							
	comp=Z,0.6nm,0.7s							
KURBB	**Kurchatov Arra**	**43.81**	**304**	LR	LR	17 06 23.9		
	comp=Z,51nm,18.2s,baz=92,slow=35							
KURBB	**Kurchatov Arra**	**43.81**	**304**	P	**P**	**16 48 30.5**	**-1.0**	
ILAR	**Eielson Array**	**44.90**	**35**	P	**P**	**16 48 40.1**	**+0.1**	
	comp=Z,0.9nm,1.0s,baz=271,slow=5.4,SNR=8.0							
	comp=Z,0.9nm,1.0s							
ILAR	**Eielson Array**	**44.90**	**35**	P	**P**	**16 48 38.5**	**-1.5**	
PDGK	**Podgornoye**	**45.41**	**294**	P	**P**	**16 48 43.7**	**-0.8**	
SCRK	**Sand Creek**	**46.24**	**36**	P	**P**	**16 48 49.6**	**-1.2**	
TARG	**Taragay, Kyrgy**	**47.17**	**293**	P	**P**	**16 48 56.1**	**-2.6**	
TARG				IAmb	IAmb	16 49 03.1		
	comp=Z,6.4nm,1.0s							
TARG	**Taragay, Kyrgy**	**47.17**	**293**	P	**P**	**16 48 56.1**	**-2.6**	
TARG				pmax	pmax			
	comp=Z,6.0nm,1.0s							
BCAR	**Beaver Creek A**	**47.37**	**37**	P	**P**	**16 48 58.7**	**-0.8**	
KDJ	**Kajisay**	**47.44**	**293**	P	**P**	**16 49 00.3**	**-0.2**	
KDJ				IAmb	IAmb	16 49 01.5		
	comp=Z,8.2nm,1.1s							
KDJ	**Kajisay**	**47.44**	**293**	P	**P**	**16 49 00.3**	**-0.2**	
KDJ				pmax	pmax			
	comp=Z,8.0nm,1.2s							
MESA	**MESA**	**47.90**	**41**	P	**P**	**16 49 02.9**	**-0.9**	
BOOM	**Boomskoye usch**	**48.15**	**294**	P	**P**	**16 49 05.3**	**-0.6**	
BOOM	**Boomskoye usch**	**48.15**	**294**	P	**P**	**16 49 05.4**	**-0.6**	
BOOM				pmax	pmax			
	comp=Z,11nm,1.0s							
TKM2	**Tokmak 2**	**48.21**	**295**	P	**P**	**16 49 06.2**	**-0.3**	
OTUK	**Ortayu**	**48.38**	**303**	P	**P**	**16 49 07.3**	**-0.2**	
AAK	**Ala-Archa**	**49.07**	**295**⇑	*iP*	**P**	**16 49 13.0**	**0.0**	
AAK				pmax	pmax			
	comp=Z,3.0nm,0.8s							
KSH	**Kashi**	**49.35**	**291**	P	**P**	**16 49 19.4**	**+4.3**	
KSH				pmax	pmax			
	comp=Z,4.0nm,0.7s							
KK31	**Karatay Array**	**51.54**	**297**	P	**P**	**16 49 30.9**	**-0.6**	
KKAR	**Karatay Array**	**51.54**	**297**	P	**P**	**16 49 30.7**	**-0.8**	
KKAR	**Karatay Array**	**51.54**	**297**	P	**P**	**16 49 30.7**	**-0.8**	
SVE	**Sverdlovsk**	**52.11**	**316**	*eP*	**P**	**16 49 35.9**	**+0.4**	
SVE				pmax	pmax			
	comp=Z,14nm,1.1s							
ARU	**Arti**	**53.33**	**316**	LR	LR	17 13 55.4		
	comp=Z,116nm,19.3s,baz=82,slow=38							
ARU	**Arti**	**53.33**	**316***c*	*iP*	**P**	**16 49 44.1**	**-0.3**	
ARU				*PP	**pP**	**16 50 01.0**	**-0.6**	
ARU						16 50 47.8		
ARU				S	**S**	**16 57 12.7**	**+1.8**	
ARU				SS	**SS**	**17 00 50.3**	**-0.5**	
ARU				pmax	pmax			
	comp=Z,14nm,1.4s							
GAR	**Garm**	**53.50**	**293**	P	**P**	**16 49 45.8**	**-0.3**	
HNR	**Honiara**	**53.58**	**159**	LR	LR	17 10 47.0		
	comp=Z,45nm,19.8s,baz=9.0,slow=34							
DLBC	**Dease Lake**	**54.24**	**40**	LR	LR	17 13 03.5		
	comp=Z,89nm,19.7s,baz=290,slow=36							
AB31	**Akbulak array**	**55.52**	**308**	P	**P**	**16 49 59.7**	**-0.8**	
ABKAR	**Akbulak array**	**55.52**	**308**	P	**P**	**16 50 00.3**	**-0.2**	
ABKAR				IAmb	IAmb	16 50 01.5		
	comp=Z,2.7nm,0.8s							
KIRV	**Kirov**	**56.90**	**321**	LR	LR	17 17 09.3		
	comp=Z,41nm,18.6s,baz=146,slow=39							
KIRV	**Kirov**	**56.90**	**321**	*eP*	**P**	**16 50 10.6**	**+0.5**	
BBB	**Bella Bella**	**57.97**	**47**	LR	LR	17 17 55.9		
	comp=Z,57nm,18.2s,baz=284,slow=39							
KNRA	**Kununurra**	**58.75**	**196**	P	**P**	**16 50 22.8**	**-0.7**	
YKA	**Yellowknife Ar**	**59.13**	**32**	P	**P**	**16 50 25.9**	**+0.3**	
	comp=Z,0.4nm,0.5s,baz=302,slow=7.0,SNR=3.0							
	comp=Z,0.4nm,0.5s							
ARCES	**ARCESS Array B**	**59.71**	**339**	P	**P**	**16 50 28.9**	**-0.7**	
	comp=Z,0.7nm,0.5s,baz=46,slow=8.7,SNR=10							
ARCES				LR	LR	17 19 03.1		
	comp=Z,43nm,19.0s,baz=94,slow=39							
	comp=Z,0.7nm,0.5s							
ARCES	**ARCESS Array B**	**59.71**	**339**	P	**P**	**16 50 28.0**	**-1.6**	
ARCES				IAmb	IAmb	16 50 55.3		
	comp=Z,8.8nm,1.5s							
ARCES	**ARCESS Array B**	**59.71**	**339**	P	**P**	**16 50 28.0**	**-1.6**	
ARCES				pmax	pmax			
	comp=Z,9.0nm,1.5s							
KLMR	**Klimovskoe**	**60.10**	**327**	*eP*	**P**	**16 50 29.9**	**-2.4**	
KLMR				pmax	pmax			
	comp=Z,5.0nm,1.0s							
KLMR	**Klimovskoe**	**60.10**	**327**	*eP*	**P**	**16 50 29.9**	**-2.4**	
KLMR				AMP		16 50 33.8		
	comp=Z,5.0nm,1.0s							
BELG	**Belogornoye**	**60.85**	**316**	LR	LR	17 19 12.3		
	comp=Z,68nm,18.9s,baz=9.9,slow=38							
WB0	**Warramunga Arr**	**61.88**	**189**	P	**P**	**16 50 43.7**	**-1.2**	
WB0				IAmb	IAmb	16 51 05.1		
	comp=Z,3.3nm,0.9s							
WR0	**Warramunga Arr**	**62.06**	**189**	P	**P**	**16 50 45.6**	**-0.4**	
WRA	**Warramunga Arr**	**62.06**	**189**	P	**P**	**16 50 46.1**	**0.0**	
	comp=Z,0.8nm,0.7s,baz=4.7,slow=6.9,SNR=9.7							
	comp=Z,0.8nm,0.7s							
WRA	**Warramunga Arr**	**62.06**	**189**	P	**P**	**16 50 45.5**	**-0.6**	
GEYT	**Alibeck**	**62.30**	**297**	P	**P**	**16 50 47.7**	**+0.1**	
	comp=Z,2.5nm,0.6s,baz=53,slow=5.7,SNR=4.9							
	comp=Z,2.5nm,0.6s							
PALK	**Palekele**	**64.36**	**256**	LR	LR	17 22 41.8		
	comp=Z,40nm,18.1s,baz=224,slow=39							
OBN	**Obninsk**	**64.71**	**322**	*eP*	**P**	**16 51 02.8**	**-0.3**	
OBN				*e*		16 51 33.3		
OBN				*e*		16 53 26.2		
OBN				pmax	pmax			
	comp=Z,6.0nm,1.0s							
FIA1	**FINESS Array S**	**64.88**	**332**	P	**P**	**16 51 02.8**	**-1.4**	
FIA1				IAmb	IAmb	16 51 04.4		
	comp=Z,11nm,1.2s							
FINES	**FINESS Array B**	**64.88**	**332**	P	**P**	**16 51 03.7**	**-0.5**	
	comp=Z,3.3nm,0.6s,baz=54,slow=6.8,SNR=44							
FINES				LR	LR	17 21 39.6		
	comp=Z,55nm,18.2s,baz=50,slow=38							
	comp=Z,3.3nm,0.6s							
FINES	**FINESS Array B**	**64.88**	**332**	P	**P**	**16 51 03.5**	**-0.7**	
ASAR	**Alice Springs**	**65.79**	**189**	P	**P**	**16 51 08.9**	**-1.6**	
ASAR	**Alice Springs**	**65.79**	**189**	P	**P**	**16 51 08.9**	**-1.6**	
NEW	**Newport**	**66.02**	**46**	LR	LR	17 22 33.0		
	comp=Z,53nm,18.4s,baz=206,slow=38							
DZM	**Mont Dzumac**	**67.44**	**156**	LR	LR	17 21 45.2		
	comp=Z,344nm,18.0s,baz=38,slow=37							
KIV	**Kislovodsk**	**68.38**	**310***c*	*iP*	**P**	**16 51 27.9**	**+1.0**	
KIV				*e*		16 51 50.0		
KIV				*e*		16 53 58.3		
KIV				pmax	pmax			
	comp=Z,13nm,1.1s							
KBZ	**Khabaz**	**68.40**	**310**	P	**P**	**16 51 27.7**	**+0.9**	
	comp=Z,1.5nm,0.5s,baz=30,slow=7.0,SNR=4.9							
	comp=Z,1.5nm,0.5s							
KBZ	**Khabaz**	**68.40**	**310**⇓	*iP*	**P**	**16 51 27.8**	**+0.9**	
KBZ				pmax	pmax			
	comp=Z,7.0nm,1.3s							
NB2	**NORSAR Subarra**	**69.99**	**337**	P	**P**	**16 51 35.7**	**-0.8**	
	comp=Z,0.7nm,0.5s,baz=35,slow=6.5							
NOA	**NORSAR Array B**	**69.99**	**337**	P	**P**	**16 51 35.9**	**-0.7**	
	comp=Z,2.3nm,0.8s,baz=36,slow=6.2,SNR=12							
	comp=Z,2.3nm,0.8s							
AKASG	**Malin Array Be**	**70.96**	**322**	P	**P**	**16 51 41.9**	**-0.6**	
	comp=Z,1.3nm,0.4s,baz=44,slow=6.9,SNR=16							
	comp=Z,1.3nm,0.4s							
AKASG	**Malin Array Be**	**70.96**	**322**	*i* P	**P**	**16 51 41.9**	**-0.6**	
AKASG				pmax	pmax			
	comp=Z,2.0nm,0.4s							
NVAR	**Mina Array Bea**	**71.38**	**55**	P	**P**	**16 51 46.7**	**+1.1**	
	comp=Z,0.6nm,0.6s,baz=296,slow=6.1,SNR=6.0							
	comp=Z,0.6nm,0.6s							
PDAR	**Pinedale Array**	**73.61**	**47**	P	**P**	**16 51 59.9**	**+1.0**	
	comp=Z,0.5nm,0.7s,baz=267,slow=1.8,SNR=6.4							
	comp=Z,0.5nm,0.7s							
BUR08	**Bucovina Ar. S**	**74.99**	**322**	P	**P**	**16 52 06.5**	**-0.1**	
BURAR	**Bucovina Array**	**75.00**	**322**	P	**P**	**16 52 05.0**	**-1.6**	
BURAR				IAmb	IAmb	16 52 08.1		
	comp=Z,3.6nm,1.0s							
BURAR	**Bucovina Array**	**75.00**	**322**	P	**P**	**16 52 04.0**	**-2.6**	
BURAR				pmax	pmax			
	comp=Z,4.0nm,1.0s							
MLR	**Muntele Rosu**	**76.20**	**320**	LR	LR	17 28 21.0		
	comp=Z,60nm,19.7s,baz=308,slow=38							
BRTR	**Keskin Array B**	**76.26**	**311**	P	**P**	**16 52 13.8**	**-0.2**	
	comp=Z,0.9nm,0.5s,baz=60,slow=4.9,SNR=5.4							
BRTR				LR	LR	17 29 36.1		
	comp=Z,31nm,18.1s,baz=341,slow=39							
	comp=Z,0.9nm,0.5s							
BRTR	**Keskin Array B**	**76.26**	**311**	P	**P**	**16 52 12.8**	**-1.2**	
BRTR	**Keskin Array B**	**76.26**	**311**	*i* P	**P**	**16 52 14.5**	**+0.5**	
BRTR				pmax	pmax			
	comp=Z,1.0nm,0.5s							
CLL	**Collm**	**77.26**	**330**	*i* P	**P**	**16 52 18.7**	**-0.5**	
CLL				pmax	pmax			
	comp=Z,4.0nm,0.7s							
CLL	**Collm**	**77.26**	**330**	*i* P	**P**	**16 52 18.7**	**-0.5**	
	comp=Z,4.0nm,0.7s							
KHC	**Kasperske Hory**	**78.80**	**329**	*eP*	**P**	**16 52 28.5**	**+0.6**	
KHC	**Kasperske Hory**	**78.80**	**329**	*eP*	**P**	**16 52 28.5**	**+0.6**	
GERES	**GERESS Array B**	**78.99**	**328**	P	**P**	**16 52 28.4**	**-0.5**	
	comp=Z,0.3nm,0.5s,baz=51,slow=5.3,SNR=4.3							
	comp=Z,0.3nm,0.5s							
DAVOX	**Davos/Dischmat**	**82.15**	**329**	LR	LR	17 34 52.5		
	comp=Z,54nm,18.3s,baz=66,slow=40							
TXAR	**Lajitas Array**	**86.43**	**53**	P	**P**	**16 53 09.5**	**+1.5**	
	comp=Z,0.2nm,0.4s,baz=275,slow=3.7,SNR=3.4							
	comp=Z,0.2nm,0.4s							
TKL	**Tuckaleechee C**	**91.87**	**36**	LR	LR	17 38 03.1		
	comp=Z,60nm,18.9s,baz=234,slow=38							
ESDC	**Sonseca Array**	**93.24**	**335**	P	**P**	**16 53 39.1**	**-0.5**	
	comp=Z,0.3nm,0.4s,baz=32,slow=5.1,SNR=2.2							
	comp=Z,0.3nm,0.4s							
TROLL	**Troll, Antarti**	**144.18**	**200**	PKPdf	**PKPab**	**16 59 57.3**	**-0.1**	
SNAA	**Sanae**	**145.71**	**199**	PKPdf	**PKPab**	**17 00 03.1**	**+0.1**	

TAP ***24*** *16:44:57.1, 22˚.86N×120˚.66E, h17km, ML3.8, B*
JMA ***24*** *16:44:57.2×0.4, 23˚N±1˚×12˚1E±˚, h0km, MV3.5/10,*
TAIWAN REGION
ISC 24 16:44:57.7±0.8, **22˚.86N**±0˚.01×**120˚.63E**±0˚.02, **h16**km±5km,
n123, σ0**8**2/207, **29C-13D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SSD	**Sandimen**	**0.11**	**180**⇑	*iP*	**Pg**		**16 45 01.4**	**+0.1**
	baz=187							
SSD				*i* S	**Sb**		**16 45 03.9**	**-0.1**
	baz=187							
SCST	**Cishan**	**0.13**	**282**⇓	*iP*	**Pb**		**16 45 02.0**	**+0.2**
	baz=279							
SCST				*i* S	**Sb**		**16 45 05.4**	**+0.8**
	baz=279							
TSMG	**Majia**	**0.15**	**176**⇑	*iP*	**Pg**		**16 45 01.8**	**0.0**
	baz=184							
TSMG				*i* S	**Sg**		**16 45 04.7**	**+0.3**
	baz=184							
SGLT	**Jiouru**	**0.19**	**225**⇑	*iP*	**Pb**		**16 45 03.4**	**+0.6**
	baz=226							
SGLT				*i* S	**Sb**		**16 45 08.2**	**+2.1**
	baz=226							
TWM1	**Shoushan**	**0.20**	**260**⇓	*iP*	**Pb**		**16 45 03.5**	**+0.5**
	baz=259							
TWM1				*i* S	**Sb**		**16 45 09.0**	**+2.6**
	baz=259							
SGST	**Jiashian**	**0.23**	**348**⇑	*iP*	**Pg**		**16 45 02.6**	**-0.3**
	baz=345							
SGST				*i* S	**Sb**		**16 45 07.3**	**-0.1**
	baz=345							
MASBT	**Mashibuluo**	**0.24**	**180**⇑	*iP*	**Pg**		**16 45 03.2**	**0.0**
	baz=179							
MASBT				S	**Sg**		**16 45 07.0**	**+0.1**
	baz=179							
SNJT	**Kaohsiung City**	**0.29**	**249**	*eP*	**Pb**		**16 45 04.7**	**+0.1**
	baz=242							
SHHT	**Tainan City**	**0.31**	**302**⇓	*iP*	**Pb**		**16 45 06.2**	**+1.3**
	baz=308							
SHHT				S	**Sn**		**16 45 12.9**	**-0.8**
	baz=308							
CHN3	**Shinhua**	**0.33**	**311**⇓	*iP*	**Pb**		**16 45 06.3**	**+1.1**
	baz=317							
CHN3				*eS*	**Sn**		**16 45 13.6**	**-0.7**
	baz=317							
STYH	**Taoyuan**	**0.34**	**23**⇑	*iP*	**Pb**		**16 45 05.3**	**-0.1**
	baz=24							
STYH				*i* S	**Sb**		**16 45 10.9**	**+0.3**
	baz=24							
CHN1	**Nanshi**	**0.34**	**344**⇑	*iP*	**Pb**		**16 45 05.5**	**+0.1**
	baz=344							
CHN1				*i* S	**Sb**		**16 45 11.9**	**+1.3**
	baz=344							
SSPT	**Xinbi**	**0.38**	**189**⇑	*iP*	**Pb**		**16 45 05.9**	**-0.2**
	baz=186							
SSPT				S	**Sb**		**16 45 11.7**	**0.0**
	baz=186							
SNST	**Tainan City**	**0.38**	**341**⇑	*iP*	**Pb**		**16 45 06.4**	**+0.2**
	baz=350							
SNST				*i* S	**Sb**		**16 45 13.1**	**+1.3**
	baz=350							
WTP	**Ta-pu**	**0.39**	**357**⇑	*iP*	**Pg**		**16 45 06.1**	**+0.5**
	baz=355							
WTP				S	**Sb**		**16 45 12.5**	**+0.5**
	baz=355							
TWG	**Pinlang**	**0.41**	**95**⇓	*iP*	**Pg**		**16 45 06.3**	**+0.3**
	baz=100							
TWG				*i* S	**Sg**		**16 45 11.7**	**+0.1**
	baz=100							
TAI1	**Yung-k'ang**	**0.41**	**296**	*eP*	**Pn**		**16 45 08.8**	**-0.2**
	baz=295							
TAI1				*eS*	**Sn**		**16 45 16.4**	**+0.1**
	baz=295							
TWGBT	**Beinan**	**0.41**	**96**⇓	*iP*	**Pg**		**16 45 06.3**	**+0.2**
	baz=100							
TWGBT				*i* S	**Sg**		**16 45 11.5**	**-0.4**
	baz=100							
KAU	**Kaohsiung**	**0.42**	**226**	*eP*	**Pn**		**16 45 08.3**	**-0.7**
	baz=227							
SSHA	**Shanhua**	**0.42**	**311**	*eP*	**Pb**		**16 45 07.9**	**+1.1**
	baz=309							
SSHA				*eS*	**Sn**		**16 45 16.8**	**+0.3**
	baz=309							
TPUB	**Ta-pu**	**0.44**	**360**⇑	*iP*	**Pg**		**16 45 06.8**	**+0.2**
	baz=357							
TPUB				*i* S	**Sb**		**16 45 13.7**	**+0.2**
	baz=357							
LONT	**Longtian**	**0.46**	**84**⇓	*iP*	**Pg**		**16 45 07.1**	**+0.1**
	baz=84							
LONT				*i* S	**Sb**		**16 45 14.2**	**+0.2**
	baz=84							
ELDTW	**Lidau**	**0.48**	**47**⇓	*iP*	**Pg**		**16 45 07.6**	**+0.2**
	baz=46							
ELDTW				*i* S	**Sb**		**16 45 14.6**	**-0.2**
	baz=46							
SCZT	**Fangliau**	**0.48**	**181**⇑	*iP*	**Pg**		**16 45 07.3**	**-0.1**
	baz=178							
SCZT				*eS*	**Sg**		**16 45 14.0**	**0.0**
	baz=178							
TTN	**Taitung**	**0.49**	**102**⇓	*iP*	**Pb**		**16 45 08.4**	**+0.5**
	baz=103							
TTN				*eS*	**Sn**		**16 45 16.5**	**-1.6**
	baz=103							
SCLT	**Jiali**	**0.51**	**308**	*eP*	**Pb**		**16 45 09.0**	**+0.7**
	baz=307							
SCLT				*eS*	**Sn**		**16 45 18.3**	**-0.5**
	baz=307							
EAST	**Anshuo**	**0.51**	**157**⇑	*iP*	**Pg**		**16 45 08.0**	**+0.1**
	baz=157							
EAST				*eS*	**Sg**		**16 45 15.1**	**+0.2**
	baz=157							
TAW	**Tawu**	**0.56**	**154**⇑	*iP*	**Pg**		**16 45 08.7**	**0.0**
	baz=154							
TAW				S	**Sg**		**16 45 16.0**	**-0.1**
	baz=154							
WLCH	**Liuqiu**	**0.56**	**205**	*i* P	**Pn**		**16 45 11.7**	**+0.8**
	baz=207							
WLCH				*eS*

WTK					*e*S		Sn	16 45 27.4 +0.1
	baz=344							
WSF	**Szhu**	**0.86**	**334**	⇑	*i*P		**Pb**	**16 45 14.0 -0.3**
	baz=333							
WSF					S		Sn	16 45 26.9 -0.5
	baz=333							
EHY	**Hungye**	**0.90**	**44**		P		**Pb**	**16 45 14.8 -0.3**
	baz=51							
EHY					*e*S		**Sb**	**16 45 26.6 -0.3**
	baz=51							
TWK1	**Hengchun**	**0.93**	**170**	⇑	*i*P		**Pn**	**16 45 16.0 0.0**
	baz=171							
TWK1					*e*S		**Sn**	**16 45 30.2 +1.2**
	baz=171							
TWKBT	**Hengchun**	**0.93**	**170**		*e*P		**Pg**	**16 45 15.6 -0.1**
	baz=171							
TWKBT					*e*S		**Sg**	**16 45 28.4 +0.4**
	baz=171							
HGSD	**Ruisui**	**0.96**	**49**		*e*P		**Pb**	**16 45 16.2 +0.2**
	baz=48							
HGSD					*e*S		**Sg**	**16 45 29.2 +0.1**
	baz=48							
WJS	**Zhushan**	**0.96**	**5**		P		**Pb**	**16 45 16.2 +0.2**
	baz=349							
WJS					*e*S		**Sn**	**16 45 30.9 +1.0**
	baz=349							
SSLB	**Suanglung**	**0.97**	**18**	⇑	*i*P		**Pb**	**16 45 15.7 -0.5**
	baz=3.0							
SSLB					*e*S		**Sn**	**16 45 30.0 -0.2**
	baz=3.0							
WDGT	**Dungji**	**0.98**	**294**		P		**Pb**	**16 45 15.2 -1.1**
	baz=294							
WDGT					*e*S		**Sb**	**16 45 28.3 -0.7**
	baz=294							
TSEB	**Hengchuen, Pin**	**0.98**	**165**		*e*P		**Pg**	**16 45 17.1 +0.3**
	baz=169							
TSEB					*e*S		**Sn**	**16 45 30.4 0.0**
	baz=169							
VWDT	**VWDT**	**1.01**	**28**	⇑	*i*P		**Pb**	**16 45 16.4 -0.4**
	baz=33							
WNT	**Mingjian**	**1.02**	**3**	⇑	*i*P		**Pb**	**16 45 16.7 -0.3**
	baz=348							
WNT					*e*S		**Sn**	**16 45 31.9 +0.7**
	baz=348							
SMLT	**Sun Moon Lake**	**1.05**	**13**		*i*P		**Pb**	**16 45 17.3 -0.3**
	baz=12							
SMLT					*e*S		**Sn**	**16 45 33.6 +1.3**
	baz=12							
TYC	**Yuchr**	**1.06**	**11**		*i*P		**Pb**	**16 45 17.4 -0.3**
	baz=10.0							
TYC					*e*S		**Sn**	**16 45 32.9 +0.6**
	baz=10.0							
WRL	**Guolierlin Hig**	**1.06**	**347**		*e*P		**Pb**	**16 45 17.2 -0.6**
	baz=346							
WRL					*e*S		**Sn**	**16 45 32.9 +0.4**
	baz=346							
EGFH	**Guangfu**	**1.09**	**42**		*e*P		**Pb**	**16 45 18.1 -0.1**
	baz=49							
EGFH					*e*S		**Sb**	**16 45 31.8 -0.3**
	baz=49							
VCHM	**Qimei**	**1.16**	**288**		P		**Pn**	**16 45 17.7 -1.6**
	baz=289							
PHUB	**P'eng-hu**	**1.17**	**304**		P		**Pn**	**16 45 17.8 -1.6**
	baz=316							
PHUB					*e*S		**Sb**	**16 45 33.2 -1.4**
	baz=316							
LAY	**Lan-yu**	**1.18**	**134**		*e*P		**Pn**	**16 45 18.5 -1.0**
	baz=123							
OWD	**Renai**	**1.20**	**24**		*e*P		**Pn**	**16 45 19.7 -0.3**
	baz=35							
OWD					*e*S		**Sg**	**16 45 36.6 -0.1**
	baz=35							
ESL	**Shilin**	**1.20**	**38**		*e*P		**Pn**	**16 45 20.0 +0.1**
	baz=24							
ESL					*e*S		**Sn**	**16 45 36.2 +0.3**
	baz=24							
WUSB	**Renai**	**1.21**	**21**	⇑	P		**Pn**	**16 45 19.7 -0.5**
	baz=8.0							
WUSB					*e*S		**Sn**	**16 45 36.5 +0.1**
	baz=8.0							
PNG	**Penghu**	**1.22**	**306**		*e*P		**Pn**	**16 45 18.6 -1.5**
	baz=305							
PNG					*e*S		**Sb**	**16 45 34.3 -1.5**
	baz=305							
WCHH	**Zhanghua**	**1.22**	**357**		*e*P		**Pn**	**16 45 19.6 -0.5**
	baz=356							
WCHH					*e*S		**Sg**	**16 45 37.9 +0.8**
	baz=356							
WCS	**Beigang Elemen**	**1.22**	**12**		*e*P		**Pn**	**16 45 20.2 +0.1**
	baz=10.0							
WCS					*e*S		**Sg**	**16 45 37.3 0.0**
	baz=10.0							
LYUB	**Lan-yu**	**1.23**	**134**		*e*P		**Pn**	**16 45 17.3 -2.9**
	baz=123							
TCU	**Taichung**	**1.28**	**2**		*e*P		**Pn**	**16 45 20.8 -0.2**
	baz=1.0							
TCU					*e*S		**Sn**	**16 45 38.7 +0.8**
	baz=1.0							
CHGB	**Renai**	**1.30**	**22**	⇑	*i*P		**Pn**	**16 45 21.3 -0.1**
	baz=5.0							
WHF	**Hehuan Shan**	**1.41**	**24**		P		**Pn**	**16 45 23.1 0.0**
	baz=23							
WHF					*e*S		**Sg**	**16 45 44.1 +0.8**
	baz=23							
HWA	**Hwalien**	**1.43**	**39**		*e*P		**Pn**	**16 45 22.9 -0.1**
	baz=46							
WHP	**Taichung City**	**1.44**	**11**		*e*P		**Pn**	**16 45 23.5 +0.2**
	baz=9.0							
TDCB	**Techi**	**1.47**	**19**		*e*P		**Pn**	**16 45 23.5 -0.2**
	baz=7.0							
TWT	**Tachien**	**1.48**	**20**		*e*P		**Pn**	**16 45 24.2 +0.4**
	baz=6.0							
WDJ	**Dajia District**	**1.48**	**0**		*e*P		**Pn**	**16 45 24.1 +0.3**
	baz=359							
WDJ					*e*S		**Sg**	**16 45 45.1 -0.5**
	baz=359							
TWQ1	**Liyutan**	**1.49**	**5**		*e*P		**Pn**	**16 45 23.9 +0.1**
	baz=4.0							
TWQ1					*e*S		**Sb**	**16 45 45.0 +1.3**
	baz=4.0							
FUSS	**Fushou**	**1.49**	**22**		*e*P		**Pb**	**16 45 25.3 +0.1**
	baz=20							
FUSS					*e*S		**Sb**	**16 45 45.0 +0.9**
	baz=20							
TWD	**Chiawan**	**1.50**	**36**		*e*P		**Pn**	**16 45 24.1 +0.1**
	baz=34							
TWD					*e*S		**Sb**	**16 45 45.3 +1.2**
	baz=34							
ETLH	**Xiulin Townshi**	**1.55**	**30**		*e*P		**Pb**	**16 45 25.7 -0.4**
	baz=28							
ETLH					*e*S		**Sb**	**16 45 46.9 +1.3**
	baz=28							
NSY	**Sanyi**	**1.56**	**4**		*e*P		**Pn**	**16 45 24.6 -0.1**
	baz=3.0							
NSY					*e*S		**Sb**	**16 45 46.8 +1.2**
	baz=3.0							
NACB	**Ninganchiao**	**1.58**	**34**		*e*P		**Pn**	**16 45 24.9 -0.2**
	baz=32							
NACB					*e*S		**Sn**	**16 45 44.7 -0.4**
	baz=32							
ETL	**Fush Village**	**1.58**	**35**		*e*P		**Pb**	**16 45 26.1 -0.6**
	baz=31							
NMLH	**Miaoli**	**1.68**	**5**		*e*P		**Pn**	**16 45 27.0 +0.6**
	baz=350							
NNSB	**Datong**	**1.71**	**24**		*e*P		**Pn**	**16 45 27.6 +0.6**
	baz=4.0							
NNS	**Nan Shan**	**1.71**	**23**		*e*P		**Pb**	**16 45 28.3 -0.7**
	baz=22							
NNS					*e*S		**Sg**	**16 45 52.0 -1.0**
	baz=22							
NSTT	**Nanjuang**	**1.80**	**11**		*e*P		**Pn**	**16 45 27.8 -0.3**
	baz=353							
NSTT					*e*S		**Sb**	**16 45 51.9 -0.7**
	baz=353							
NFF	**Wufeng Townshi**	**1.82**	**14**		P		**Pn**	**16 45 28.7 +0.3**
	baz=357							
NFF					*e*S		**Sb**	**16 45 54.6 +1.3**
	baz=357							
LATG	**Datong**	**1.86**	**26**		*e*P		**Pn**	**16 45 30.1 +1.1**
	baz=24							
LATG					*e*S		**Sb**	**16 45 54.8 +0.3**
	baz=24							
EWUT	**Wuta**	**1.90**	**33**		*e*P		**Pn**	**16 45 29.6 +0.1**
	baz=29							
YHNB	**Yeheng**	**1.93**	**21**		*e*P		**Pn**	**16 45 30.1 +0.2**
	baz=19							
YHNB					*e*S		**Sb**	**16 45 56.2 -0.2**
	baz=19							
NSK	**Sanguang**	**1.93**	**20**		*e*P		**Pn**	**16 45 29.7 -0.2**
	baz=16							
NDS	**Dongshan**	**2.03**	**29**		*e*P		**Pn**	**16 45 32.5 +1.3**
	baz=41							
TWC	**Suao**	**2.07**	**32**		*e*P		**Pn**	**16 45 32.9 +1.1**
	baz=28							
NWLT	**Wulai**	**2.07**	**22**		*e*P		**Pn**	**16 45 32.1 +0.3**
	baz=18							
TWE	**Neicheng**	**2.08**	**27**		*e*P		**Pb**	**16 45 33.8 -1.3**
	baz=40							
FUSB	**Fushanzhiwuyua**	**2.08**	**25**		*e*P		**Pn**	**16 45 33.1 +1.0**
	baz=2.0							
NHDH	**Xindian Distri**	**2.25**	**21**		*e*P		**Pb**	**16 45 37.2 -0.7**
	baz=2.0							
NTC	**Toucheng**	**2.27**	**29**		*e*P		**Pn**	**16 45 36.3 +1.7**
	baz=39							
TWA	**Mucha**	**2.29**	**22**		*e*P		**Pb**	**16 45 38.1 -0.5**
	baz=2.0							
EGS		**2.31**	**31**		*e*P		**Pb**	**16 45 37.8 -1.2**
	baz=27							
TIPB	**Shuangxi**	**2.37**	**27**		*e*P		**Pn**	**16 45 36.6 +0.6**
	baz=38							
VWUC	**VWUC**	**2.38**	**333**		*e*P		**Pn**	**16 45 34.9 -1.3**
	baz=335							
NWF	**Wu-fen Shan**	**2.44**	**25**		*e*P		**Pn**	**16 45 38.7 +1.7**
	baz=4.0							
SXI1	**Grass Mountain**	**2.50**	**27**		*e*P		**Pn**	**16 45 38.9 +1.1**
	baz=6.0							
PTMZ	**Houxiangcun**	**2.58**	**328**		*e*P		**Pn**	**16 45 37.4 -1.3**
	baz=343							
KNMB	**Chin-men Tao**	**2.60**	**308**		*e*P		**Pn**	**16 45 38.0 -1.2**
	baz=310							
JYNG	**Yonagunijimaku**	**2.65**	**53**		*e*P		**Pn**	**16 45 40.5 +0.7**
JYNG					*e*S		**Sn**	**16 46 12.3 +0.8**
YOJ	**Yonaguni jima**	**2.70**	**53**		P		**Pn**	**16 45 41.5 +1.0**
YOJ	**Yonaguni jima**	**2.70**	**53**		*e*P		**Pn**	**16 45 40.5 0.0**
	baz=50							
YOJ	**Yonaguni jima**	**2.70**	**53**		P		**Pn**	**16 45 41.5 +1.0**
YOJ					*e*S		**Sn**	**16 46 14.2 +1.3**
YOJ	**Yonaguni jima**	**2.70**	**53**		pmax		pmax	
	comp=Z,172nm,1.3s							
YOJ	**Yonaguni jima**	**2.70**	**53**		P		**Pn**	**16 45 41.5 +1.0**
HATJ	**Hateruma jima**	**3.15**	**67**		P		**Pn**	**16 45 47.7 +1.1**
HATJ					S		**Sn**	**16 46 24.8 +0.9**
AXDP	**Jialang**	**3.17**	**310**		*e*P		**Pn**	**16 45 45.1 -1.9**
	baz=312							
IRIF	**Iriomote-Funau**	**3.20**	**62**		P		**Pn**	**16 45 48.5 +1.2**
IRIF					S		**Sn**	**16 46 27.0 +1.9**
JKRS	**Kuro-shima**	**3.39**	**65**		*e*P		**Pn**	**16 45 51.4 +1.5**
JKRS					*e*S		**Sn**	**16 46 30.6 +0.8**
MHZQ	**Yeshan**	**3.54**	**336**		*e*P		**Pn**	**16 45 51.0 -1.1**
	baz=339							
JIJ	**Ishigaki jima**	**3.55**	**64**		P		**Pn**	**16 45 52.1 -0.1**
JIJ					*e*S		**Sn**	**16 46 33.1 -0.7**
LYJJ	**Jianjiangzhen**	**3.76**	**348**		*e*P		**Pn**	**16 45 53.7 -1.3**
	baz=349							
JISG	**Ishigakijimahi**	**3.79**	**62**		P		**Pn**	**16 45 55.0 -0.4**
JISG					S		**Sn**	**16 46 38.7 -0.9**

JMA 24 16:46:53.6±0.3, 24°N±2°×123°4E±0°9, h47km±4km, MV2.0/9, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HATJ	**Hateruma jima**	**0.65**	**36**	P		Pn	16 47 06.6 0.0
HATJ				*e*S		Sn	16 47 15.6 -0.3
IRIF	**Iriomote-Funau**	**0.86**	**21**	P		Pn	16 47 09.6 +0.2
IRIF				S		Sn	16 47 21.9 +1.0
JKRS	**Kuro-shima**	**0.90**	**39**	P		Pn	16 47 10.5 +0.5
JKRS				*e*S		Sn	16 47 22.5 +0.5
YOJ	**Yonaguni jima**	**0.99**	**339**	*e*P		Pn	16 47 11.2 0.0
YOJ				*e*S		Sn	16 47 24.4 +0.3
JYNG	**Yonagunijimaku**	**1.00**	**336**	*e*P		Pn	16 47 11.9 +0.5
JYNG				*e*S		Sn	16 47 24.1 -0.2
JIJ	**Ishigaki jima**	**1.08**	**39**	P		Pn	16 47 12.5 +0.1
JIJ				*e*S		Sn	16 47 26.3 +0.1
JISG	**Ishigakijimahi**	**1.35**	**38**	*e*P		Pn	16 47 16.1 +0.1

TAP 24 16:47:14.4, 24°29N×121°77E, h57km, ML2.1, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ENA	**Nanau**	**0.14**	**350**	*e*P		Pn	16 47 23.6 +0.3
	baz=352						
ENA				*e*S		Sn	16 47 30.6 +1.0
	baz=352						
EWUT	**Wuta**	**0.15**	**4**	P		Pn	16 47 23.6 +0.3
	baz=3.0						
EWUT				S		Sn	16 47 30.4 +0.6
	baz=3.0						
ETL	**Fush Village**	**0.18**	**225**	*e*P		Pn	16 47 23.9 +0.4
	baz=225						
ETL				*e*S		Sn	16 47 30.8 +0.7
	baz=225						
NACB	**Ninganchiao**	**0.20**	**234**	*e*P		Pn	16 47 23.5 0.0
	baz=233						
NACB				*e*S		Sn	16 47 30.5 +0.4
	baz=233						
TWD	**Chiawan**	**0.26**	**217**	*e*P		Pn	16 47 24.3 +0.3
	baz=215						
TWD				*e*S		Sn	16 47 31.3 +0.5
	baz=215						
ETLH	**Xiulin Townshi**	**0.27**	**252**	*e*P		Pn	16 47 24.5 +0.3
	baz=252						
ETLH				*e*S		Sn	16 47 31.4 +0.2
	baz=252						
TWC	**Suao**	**0.33**	**13**	*e*P		Pn	16 47 24.9 +0.4
	baz=14						
TWC				*e*S		Sn	16 47 32.7 +1.0
	baz=14						
LATG	**Datong**	**0.33**	**318**	*e*P		Pn	16 47 24.8 +0.2
	baz=318						
LATG				*e*S		Sn	16 47 32.4 +0.4
	baz=318						
NDS	**Dongshan**	**0.34**	**352**	*e*P		Pn	16 47 25.0 +0.3
	baz=352						
NDS				*e*S		Sn	16 47 33.0 +1.0
	baz=352						
NNSB	**Datong**	**0.38**	**292**	*e*P		Pn	16 47 25.4 +0.4
	baz=291						
NNSB				*e*S		Sn	16 47 33.0 +0.2
	baz=291						
NNS	**Nan Shan**	**0.39**	**293**	*e*P		Pn	16 47 25.6 +0.4
	baz=292						
NNS				*e*S		Sn	16 47 33.2 +0.3
	baz=292						
TWE	**Neicheng**	**0.44**	**348**	*e*P		Pn	16 47 25.8 +0.3
	baz=349						
TWE				*e*S		Sn	16 47 34.4 +0.9
	baz=349						
FUSS	**Fushou**	**0.48**	**265**	*e*P		Pn	16 47 26.8 +0.6
	baz=264						
FUSS				*e*S		Sn	16 47 35.7 +0.9
	baz=264						
WHF	**Hehuan Shan**	**0.48**	**253**	*e*P		Pn	16 47 25.9 -0.6
	baz=252						
WHF				*e*S		Sn	16 47 35.3 +0.3
	baz=252						
FUSB	**Fushanzhiwuyua**	**0.49**	**341**	*e*P		Pn	16 47 26.6 +0.4
	baz=340						
FUSB				*e*S		Sn	16 47 35.1 +0.4
	baz=340						
YHNB	**Yeheng**	**0.52**	**317**	*e*P		Pn	16 47 26.8 +0.3
	baz=316						
YHNB				*e*S		Sn	16 47 35.1 -0.1
	baz=316						
NSK	**Sanguang**	**0.54**	**316**	*e*P		Pn	16 47 26.9 +0.3
	baz=316						
NSK				*e*S		Sn	16 47 35.2 -0.3
	baz=316						
TWT	**Tachien**	**0.54**	**266**	*e*P		Pn	16 47 27.1 +0.3
	baz=265						
TWT				*e*S		Sn	16 47 36.8 +1.0
	baz=265						
NWLT	**Wulai**	**0.54**	**334**	*e*P		Pn	16 47 26.9 +0.3
	baz=333						
NWLT				*e*S		Sn	16 47 35.5 0.0
	baz=333						
TDCB	**Techi**	**0.56**	**266**	*e*P		Pn	16 47 27.9 +0.9
	baz=266						
TDCB				*e*S		Sn	16 47 36.8 +0.7
	baz=266						
ESL	**Shilin**	**0.56**	**213**	*e*P		Pn	16 47 27.0 +0.1
	baz=212						
ESL				*e*S		Sn	16 47 35.8 -0.1
	baz=212						
NTC	**Toucheng**	**0.56**	**6**	*e*P		Pn	16 47 27.8 +0.9
	baz=5.0						
NTC				*e*S		Sn	16 47 37.3 +1.4
	baz=5.0						
CHGB	**Renai**	**0.59**	**247**	*e*P		Pn	16 47 27.5 +0.1
	baz=247						
CHGB				*e*S		Sn	16 47 37.8 +1.0
	baz=247						
OWD	**Renai**	**0.64**	**238**	*e*P		Pn	16 47 26.2 -1.6
	baz=238						
OWD				*e*S		Sn	16 47 38.1 +0.4
	baz=238						
WUSB	**Renai**	**0.66**	**244**	*e*P		Pn	16 47 27.4 -0.8
	baz=243						
WUSB				*e*S		Sn	16 47 39.3 +1.1
	baz=243						
TIPB	**Shuangxi**	**0.68**	**4**	*e*P		Pn	16 47 29.4 +1.1
	baz=4.0						
TIPB				*e*S		Sn	16 47 39.8 +1.3
	baz=4.0						
NFF	**Wufeng Townshi**	**0.68**	**300**	*e*P		Pn	16 47 29.2 +0.8
	baz=299						
NFF				*e*S		Sn	16 47 40.0 +1.5
	baz=299						
TWA	**Mucha**	**0.71**	**346**	*e*P		Pn	16 47 28.7 +0.1
	baz=346						
TWA				*e*S		Sn	16 47 38.2 -0.7
	baz=346						
TWB1	**Santiao Chiao**	**0.74**	**16**	*e*P		Pn	16 47 29.1 +0.1
	baz=16						
TWB1				*e*S		Sn	16 47 40.4 +0.7
	baz=16						
WHP	**Taichung City**	**0.75**	**269**	*e*P		Pn	16 47 30.7 +1.5
	baz=269						
WHP				*e*S		Sn	16 47 41.8 +1.8
	baz=269						
NSTT	**Nanjuang**	**0.78**	**296**	*e*P		Pn	16 47 30.2 +0.8
	baz=296						
NSTT				*e*S		Sn	16 47 41.7 +1.2
	baz=296						
VWDT	**VWDT**	**0.78**	**227**	*e*S		Sn	16 47 42.2 +1.6
	baz=226						

MAN 24 16:50:40.4, 13°15N×124°15E, h32km, mb4.9, ML3.9, MS3.9, Luzon

*NNC **24** 17:00:03.6±2.9, 36°91N×70°92E, h0km, mb5.1, mpv5.2, Error ellipse: s-maj=28.1km s-min=16.1km az=158.0*
*MOS **24** 17:00:08.9±1.0, 36°69N×71°39E, h187km, mb4.7/32, Error ellipse: s-maj=4.7km s-min=3.2km az=89.8*
*BJI **24** 17:00:10.5±0.0, 36°86N×71°42E, h183km, mb4.4/24, mB4.5/14*
*NEIC **24** 17:00:10.8±1.8, 36°69N±0°06×71°26E±0°08, h191km±4km, mb4.5/146, Error ellipse: s-maj=9.1km s-min=8.3km az=134.0*
*IDC **24** 17:00:10.8±0.5, 36°62N×71°32E, h194km±3km, mb4.1/29, mbtmp4.6/33, MS3.3/2, Error ellipse: s-maj=8.3km s-min=7.2km az=162.0*

ISC 24 17:00:09.8±0.2, 36°62N±0°03×71°26E±0°03, h186km±2km, h186km:pP-P, n544, σ1s86/679, mb4.5/166, 40C-24D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAR	**Garm**	**2.50**	**343**	Pn	**Pn**	**17 00 52.8**	**-0.1**
GAR				Sn	**Sn**	**17 01 23.3**	**-3.2**
CHGR	**Chuyangaron**	**2.63**	**321**	Pn	**Pn**	**17 00 54.2**	**-0.3**
CHGR				Sn	**Sn**	**17 01 26.0**	**-3.3**
CHGR	**Chuyangaron**	**2.63**	**321**	PN	**Pn**	**17 00 54.3**	**-0.1**
KBL	**Kabul**	**2.75**	**222**	Pn	**Pn**	**17 00 57.5**	**+1.5**
KBL	**Kabul**	**2.75**	**222**	PN	**Pn**	**17 00 57.5**	**+1.5**
DRK	**Karamyk**	**2.89**	**8**	Pn	**Pn**	**17 00 57.9**	**+0.3**
DRK				Sn	**Sn**	**17 01 31.8**	**-3.3**
BTK	**Batken**	**3.45**	**354**		**Pn**	**17 01 04.7**	**+0.4**
BTK	**Batken**	**3.45**	**354**	PN	**Pn**	**17 01 04.7**	**+0.4**
KSH	**Kashi**	**4.71**	**51**	P	Pn	17 01 15.0	-5.2
KSH				S	Sn	17 02 04.0	-12
KSH				smax	smax		
	comp=N,1μm,0.9s						
KSH				smax	smax		
	comp=E,3μm,0.7s						
JMU	**Jammu**	**4.91**	**141**	*e*P	**Pn**	**17 01 21.0**	**-1.7**
JMU				*e*P		17 01 22.1	
JMU				*e*S	**Sn**	**17 02 18.2**	**-1.8**
TAS	**Tashkent**	**4.95**	**343**	Pn	**Pn**	**17 01 22.6**	**-0.5**
TAS	**Tashkent**	**4.95**	**343**	PN	**Pn**	**17 01 22.6**	**-0.5**
THN	**Thein Dam**	**5.56**	**137**	*e*P	**Pn**	**17 01 32.2**	**+1.0**
THN				*e*S	**Sn**	**17 02 33.3**	**-1.8**
IUG	**Iuzhnay**	**5.61**	**351**	*e*PN	**Pn**	**17 01 31.3**	**-0.4**
IUG	**Iuzhnay**	**5.61**	**351**	*e*P	**Pn**	**17 01 31.4**	**-0.4**
	baz=349						
IUG				*e*S	**Sn**	**17 02 32.0**	**-4.3**
	baz=349						
AML	**Almayashu**	**5.82**	**18**	P	**Pn**	**17 01 34.0**	**-0.9**
	SNR=957						
AML	**Almayashu**	**5.82**	**18**	*i* P	**Pn**	**17 01 33.9**	**-0.9**
	SNR=1042						
UCH	**Uchtor**	**6.14**	**23**	P	**Pn**	**17 01 38.4**	**-0.7**
	SNR=184						
DZA	**Taraz**	**6.27**	**0**	*e*PN	**Pn**	**17 01 40.0**	**-0.2**
DZA	**Taraz**	**6.27**	**0**	*e*P	**Pn**	**17 01 40.1**	**-0.2**
	baz=360						
DZA				*e*S	**Sn**	**17 02 47.1**	**-4.7**
	baz=360						
EKS2	**Erkin-Say**	**6.34**	**17**	P	**Pn**	**17 01 40.6**	**-0.7**
	SNR=161						
BRLS	**Boroldaу**	**6.50**	**351**	*e*PN	**Pn**	**17 01 38.9**	**-4.4**
BRLS	**Boroldaу**	**6.50**	**351**	*e*P	**Pn**	**17 01 38.9**	**-4.4**
	baz=348						
KK31	**Karatay Array**	**6.50**	**355**	Pn	**Pn**	**17 01 42.5**	**-0.9**
KK31	**Karatay Array**	**6.50**	**355**	PN	**Pn**	**17 01 38.6**	**-4.8**
KK31	**Karatay Array**	**6.50**	**355**	P	**Pn**	**17 01 38.6**	**-4.8**
	48nm,0.3s,baz=183,slow=14,SNR=1093						
KK31				⇑S	**Sn**	**17 02 50.9**	**-6.5**
	477nm,0.6s,baz=186,slow=25,SNR=3.8						
KKAR	**Karatay Array**	**6.50**	**355**		**Pn**	**17 01 42.4**	**-1.0**
KKAR	**Karatay Array**	**6.50**	**355**		**Pn**	**17 01 42.5**	**-0.8**
KKAR	**Karatay Array**	**6.50**	**355**	PN	**Pn**	**17 01 42.6**	**-0.8**
AAK	**Ala-Archa**	**6.51**	**22**	P	**Pn**	**17 01 43.1**	**-0.5**
	SNR=135						
AAK	**Ala-Archa**	**6.51**	**22**	P	**Pn**	**17 01 43.1**	**-0.5**
	124nm,0.4s,baz=199,slow=6.9,SNR=202						
AAK				S	**Sn**	**17 02 53.2**	**-4.4**
	131nm,0.6s,baz=222,slow=15,SNR=6.8						
AAK	**Ala-Archa**	**6.51**	**22**	Pn	**Pn**	**17 01 42.9**	**-0.6**
AAK	**Ala-Archa**	**6.51**	**22**	*i* P	**Pn**	**17 01 43.0**	**-0.6**
	SNR=148						
KBK	**Karagaybulak**	**6.67**	**24**	P	**Pn**	**17 01 45.3**	**-0.4**
	SNR=68						
BHK	**Bhakra**	**6.72**	**139**	*e*P	**Pn**	**17 01 46.4**	**+0.1**
BHK				*e*S	**Sn**	**17 03 00.3**	**-2.3**
ULHL	**Ulahol**	**6.81**	**33**	P	**Pn**	**17 01 46.6**	**-1.0**
	SNR=57						
BOOM	**Boomskoye usch**	**6.89**	**30**		**Pn**	**17 01 47.7**	**-0.9**
BOOM	**Boomskoye usch**	**6.89**	**30**	PN	**Pn**	**17 01 47.7**	**-0.9**
CHMS	**Chumysh**	**6.92**	**22**	P	**Pn**	**17 01 48.0**	**-0.8**
	SNR=87						
CHMS	**Chumysh**	**6.92**	**22**	*i* PN	**Pn**	**17 01 47.0**	**-1.8**
CHMS				pmax	pmax		
	comp=Z,60nm,0.4s						
CHMS	**Chumysh**	**6.92**	**22**	⇑P	**Pn**	**17 01 45.7**	**-3.0**
	comp=Z,60nm,0.5s						
CHMS				⇑S	**Sn**	**17 03 02.3**	**-4.

SGDS pmax pmax
comp=Z,15nm,0.3s
SGDS Sogindy 7.30 20 *e*P **Pn 17 01 51.9 -1.9**
comp=Z,15nm,0.3s,baz=20
SGDS *e*S **Sn 17 03 11.3 -4.9**
baz=20
SMLA Simla 7.35 136 *e*P **Pn 17 01 54.4 -0.1**
SMLA *e*S **Sn 17 03 13.4 -4.0**
SMLA IAML 17 03 16.3
comp=E,1µm,0.7s
SMLA IAML 17 03 16.5
comp=N,2µm,0.4s
HRA Herat 7.69 256 Pn **Pn 17 01 59.5 +0.4**
TNSS Tian-Shan 7.76 33 *e*PN **Pn 17 01 58.9 -1.3**
TNSS Tian-Shan 7.76 33 *e*P **Pn 17 01 59.0 -1.3**
baz=34
TNSS *e*S **Sn 17 03 21.7 -5.9**
baz=34
AAA Alma-Ata 7.88 32 *e*PN **Pn 17 02 00.5 -1.0**
AAA Alma-Ata 7.88 32 *e*P **Pn 17 02 00.6 -1.0**
baz=33
KNDC Almaty 7.91 32 ⇓P **Pn 17 02 00.7 -1.2**
KNDC ⇓S **Sn 17 03 28.9 -2.0**
comp=N,253nm,0.8s
PRZ Przheval'sk 8.04 41 Pn **Pn 17 02 03.5 -0.2**
PRZ Przheval'sk 8.04 41 PN **Pn 17 02 03.5 -0.2**
KKR Kurukshetra 8.10 143 *e*P **Pn 17 02 05.2 +0.7**
KKR *e*S **Sn 17 03 31.2 -4.2**
KUU Kurty 8.24 27 *i* PN **Pn 17 02 04.1 -1.9**
KUU pmax pmax
comp=Z,8.0nm,0.4s
KUU Kurty 8.24 27 *i* P **Pn 17 02 04.2 -1.9**
comp=Z,8.2nm,0.4s,baz=27
CHKK Chushkaly 8.45 29 *e*PN **Pn 17 02 07.1 -1.7**
CHKK Chushkaly 8.45 29 *e*P **Pn 17 02 07.1 -1.7**
baz=30
SATY Saty 8.46 38 *e*PN **Pn 17 02 07.2 -1.8**
SATY *e*S **Sn 17 03 42.0 -1.8**
SATY pmax pmax
comp=Z,13nm,0.6s
SATY Saty 8.46 38 *e*P **Pn 17 02 07.3 -1.8**
comp=Z,13nm,0.6s,baz=40
SATY *e*S **Sn 17 03 42.1 -1.8**
baz=40
DDI Dehra Dun 8.46 136 *e*P **Pn 17 02 09.6 +0.5**
DDI IAML 17 02 10.3
comp=Z,6µm,0.4s
DDI IAML 17 03 41.9
comp=N,1µm,0.5s
ZHN Zhinishke 8.55 38 *e*PN **Pn 17 02 09.0 -1.3**
ZHN pmax pmax
comp=Z,8.0nm,0.4s
ZHN Zhinishke 8.55 38 *e*P **Pn 17 02 09.1 -1.3**
comp=Z,8.5nm,0.4s,baz=39
BTLS Baital 8.68 13 *e*PN **Pn 17 02 10.4 -1.3**
BTLS Baital 8.68 13 *e*P **Pn 17 02 10.5 -1.3**
baz=13
KPKS Kokpek 8.89 37 *i* PN **Pn 17 02 13.5 -1.3**
KPKS pmax pmax
comp=Z,28nm,0.6s
KPKS Kokpek 8.89 37 *i* P **Pn 17 02 13.5 -1.3**
comp=Z,28nm,0.6s,baz=38
SHLS Shalkode 9.07 41 *e*P **Pn 17 02 17.1 0.0**
SHLS Shalkode 9.07 41 *e*P **Pn 17 02 17.2 0.0**
baz=44
ARXS Arharly 9.09 31 *e*PN **Pn 17 02 15.1 -2.2**
PDGK Podgornoye 9.21 41 P **Pn 17 02 16.8 -2.1**
PDGK S **Sn 17 03 59.9 -1.8**
PDGK Podgornoye 9.21 41 ⇑P **Pn 17 02 16.8 -2.1**
comp=Z,37nm,0.8s
PDGK ⇑S **Sn 17 03 59.9 -1.8**
comp=Z,81nm,0.9s
KHET Khetri 9.34 154 *e*P **Pn 17 02 18.7 -2.0**
KHET *e*S **Sn 17 03 57.1 -8.0**
NDI New Delhi 9.37 146 *e*P **Pn 17 02 20.7 -0.3**
NDI *e*P 17 02 22.0
AYAN Aya Nagar 9.50 147 *e*P **Pn 17 02 21.3 -1.4**
AYAN *e*S **Sn 17 04 00.1 -8.6**
JASL Jaisalmer 9.67 182 *e*S **Sn 17 04 09.0 -3.9**
SONA Sohna 9.68 148 *e*P **Pn 17 02 24.3 -0.8**
SONA *e*S **Sn 17 04 06.1 -7.0**
TDK Taldyqorghan 9.97 31 *e*P **Pn 17 02 25.6 -3.1**
TDK Taldyqorghan 9.97 31 *e*P **Pn 17 02 25.7 -3.1**
baz=31
PTH Pithoragarh 10.29 131 *e*P **Pn 17 02 29.9 -3.3**
PTH *e*S **Sn 17 04 20.5 -7.5**
AJM Ajmer 10.51 163 *e*P **Pn 17 02 35.6 -0.4**
AJM *e*S **Sn 17 04 26.2 -6.8**
GEYT Alibeck 10.56 281 P **Pn 17 02 34.1 -2.4**
comp=Z,114nm,0.6s,baz=108,slow=13,SNR=136
GEYT S **Sn 17 04 28.0 -6.0**
comp=Z,58nm,0.3s,baz=118,slow=12,SNR=8.7
GEYT Alibeck 10.56 281 Pn **Pn 17 02 33.8 -2.7**
GYA0 ALIBECK ARRAY 10.56 281 P **Pn 17 02 33.6 -2.9**
GYA0 S **Sn 17 04 27.5 -6.5**
GYA0B ALIBECK ARRAY 10.56 281 Pn **Pn 17 02 33.7 -2.8**
GYA0B ALIBECK ARRAY 10.56 281 ⇑P **Pn 17 02 33.8 -2.7**
GYA0B ⇑S **Sn 17 04 27.6 -6.5**
OTUK Ortayu 11.65 4 P **Pn 17 02 48.2 -2.2**
OTUK S **Sn 17 04 55.7 -4.1**
OTUK Ortayu 11.65 4 ⇓P **Pn 17 02 48.2 -2.2**
comp=Z,12nm,0.8s
OTUK ⇑S **Sn 17 04 55.7 -4.1**
comp=Z,117nm,1.1s
JHNI Jhansi 12.74 149 *e*P **Pn 17 03 03.8 -0.7**
MAKZ Makanchi 12.94 35 **Pn 17 03 04.9 -1.9**
MAKZ Makanchi 12.94 35 P **Pn 17 03 04.9 -1.9**
MAKZ Makanchi 12.94 35 ⇓P **Pn 17 03 05.1 -1.8**
comp=Z,15nm,0.5s
PYUN Piuthan 13.04 127 *e*P **Pn 17 03 06.6 -1.9**
comp=Z,361nm,0.3s
PYUN *e*S Sn 17 05 23.5 -10
MK31 Makanchi Array 13.07 36 Pn **Pn 17 03 06.4 -2.1**
MK31 Makanchi Array 13.07 36 *i* P **Pn 17 03 06.9 -1.6**
MK31 Makanchi Array 13.07 36 ⇑P **Pn 17 03 07.4 -1.1**
comp=Z,5.4nm,0.5s,baz=212,slow=13,SNR=91
MKAR Makanchi Array 13.07 36 P **Pn 17 03 07.4 -1.1**
comp=Z,6.7nm,0.8s,baz=226,slow=13,SNR=42
MKAR Makanchi Array 13.07 36 Pn **Pn 17 03 06.2 -2.4**
DANN Dangsing 13.38 124 *e*P **Pn 17 03 11.9 -0.9**
comp=Z,373nm,0.4s
GKN Gorkha 14.19 123 *e*P **Pn 17 03 22.9 +0.1**
comp=Z,367nm,0.3s
BHPL Bhopal 14.35 157 *e*P **P 17 03 26.6 +0.1**
BHPL IAmb IAmb 17 03 29.6
comp=Z,194nm,0.9s
BHPL *e*S Sn 17 05 54.3 -11
ALBI Allahabad 14.44 138 *e*P **Pn 17 03 24.2 -1.5**
DMN Daman 14.76 124 *e*P **P 17 03 30.9 -0.3**
comp=Z,459nm,0.4s
ZSN Zaisan 14.79 39 *e*P **Pn 17 03 28.9 -0.9**
ZSN Zaisan 14.79 39 *e*P **Pn 17 03 28.9 -0.9**
baz=39
KURBB Kurchatov Arra 14.95 18 P **Pn 17 03 28.7 -3.0**
comp=Z,8.0nm,0.6s,baz=208,slow=11,SNR=32
KURBB Kurchatov Arra 14.95 18 P **Pn 17 03 29.7 -2.0**
KURBB Kurchatov Arra 14.95 18 ⇑P **P 17 03 33.1 +0.4**
comp=Z,13nm,0.7s
PKIN Phulchoki 14.97 123 *e*P **P 17 03 33.3 -0.3**
comp=Z,549nm,0.4s
KURK Kurchatov 15.05 18 **Pn 17 03 30.1 -3.0**
KURK Kurchatov 15.05 18*c* *i*P **Pn 17 03 30.8 -2.2**
KURK pmax pmax
comp=Z,10.0nm,1.0s
KURK Kurchatov 15.05 18 ⇓P **P 17 03 33.8 -0.2**
comp=Z,9.6nm,1.0s
AB31 Akbulak array 15.09 330 *i* P **Pn 17 03 31.7 -1.8**
AB31 S Sn 17 06 09.4 -13
AB31 Akbulak array 15.09 330 ⇓P **Pn 17 03 31.5 -1.9**
comp=Z,56nm,0.7s,baz=143,slow=10,SNR=537
AB31 ⇑S **Sn 17 06 16.6 -5.3**
comp=Z,103nm,0.6s,baz=152,slow=25,SNR=13
ABKAR Akbulak array 15.09 330 **Pn 17 03 30.4 -3.1**
ABKAR Akbulak array 15.09 330 P **Pn 17 03 31.4 -2.1**
ABKAR IAmb IAmb 17 03 35.8
comp=Z,75nm,0.8s
SEM Semipalatinsk 15.23 22 *e*P **Pn 17 03 33.4 -2.0**
SEM Semipalatinsk 15.23 22 *e*P **Pn 17 03 33.5 -2.0**
baz=23
JBP Jabalpur 15.38 148 IAmb IAmb 17 03 46.8
comp=Z,32nm,0.7s
JBP ⇓*e*S S 17 06 17.9 -11
BANOM Banah 16.63 234 P **Pn 17 03 52.5 +0.1**
AKL Akola 16.63 161 *e*P **Pn 17 03 53.3 +0.9**
AKL *e*S **S 17 06 47.7 -8.1**
SHME Shamm 16.65 235 P **Pn 17 03 52.9 +0.3**
TAPN Taplejung 16.71 119 *e*P **Pn 17 03 56.8 +3.1**
comp=Z,241nm,0.3s
AKTO Aktyubinsk 16.79 330 P **Pn 17 03 54.0 0.0**
comp=Z,191nm,0.5s,baz=137,slow=9.2,SNR=451
AKTO S **S 17 06 54.8 -3.7**
comp=Z,29nm,0.7s,baz=2.2,slow=23,SNR=7.5
AKTO Aktyubinsk 16.79 330 ⇓P **P 17 03 53.5 +0.4**
comp=Z,114nm,0.5s
AKTO ⇑S **S 17 06 57.4 -1.1**
comp=Z,147nm,1.1s
WSAR Wadi Sarin 17.23 223 P **Pn 17 03 59.4 -0.2**
comp=Z,6.4nm,0.6s,baz=60,slow=5.1,SNR=11
WSAR S **S 17 07 08.2 +0.1**
comp=Z,5.2nm,0.9s,baz=355,slow=20,SNR=1.7
UOSS Minazif 17.38 232 P **P 17 04 00.2 +0.4**
UOSS IAmb IAmb 17 04 20.9
comp=Z,32nm,1.2s
UOSS Minazif 17.38 232 P **Pn 17 04 01.3 +0.1**
HATD Hatta, Dubai 17.51 232 P **Pn 17 04 03.3 +0.5**
ASHO Ashiyiah 17.65 232 *i* P **Pn 17 04 04.5 -0.1**
SNR=20
NAZ Nazwa, Dubai 17.69 233 P **Pn 17 04 04.9 -0.1**
FAQ Al Faqa, Dubai 17.91 233 P **P 17 04 06.6 +1.0**
LKRN Lenkeran, Azer 17.92 283 P **Pn 17 04 07.3 -0.2**
BOK Bokaro 17.94 131 *e*P **Pn 17 04 13.4 +5.4**
BOK IAmb IAmb 17 04 13.7
comp=Z,32nm,0.9s
BOK *e*S **S 17 07 19.5 -2.9**
LSA Lhasa 18.01 107 P **Pn 17 04 10.3 +1.2**
LSA Lhasa 18.01 107 P **Pn 17 04 11.5 +2.4**
LSA pmax pmax
comp=Z,23nm,0.5s
LSA Lhasa 18.01 107 P **Pn 17 04 10.3 +1.2**
LSA pmax pmax
comp=Z,42nm,0.8s
LSA Lhasa 18.01 107 *i* P **Pn 17 04 11.2 +2.0**
SNR=16
ASUD Al Ashush, Dub 18.16 233 *i* P **Pn 17 04 10.2 -0.3**
SNR=7.3
GOMU GeErMu 18.96 84 P **Pn 17 04 21.6 +1.5**
GOMU pmax pmax
comp=Z,5.0nm,0.7s
GOMU pmax pmax
comp=Z,110nm,5.4s
SEKA Sheki 19.26 291 P **Pn 17 04 21.9 -1.4**
MAK Makhachkala 19.29 296 *e*P **P 17 04 20.0 -0.4**
MAK *e*S **S 17 07 50.6 +1.9**
MAK pmax pmax
comp=Z,64nm,0.7s
MAK MLR MLR
comp=Z,68nm,16.0s
MNGR Mingechevir, A 19.30 290 P **Pn 17 04 23.1 -0.7**
ZAA0 Zalesovo Array 19.72 24 P **P 17 04 24.5 -0.4**
ZAA0 Zalesovo Array 19.72 24 ⇑P **Pn 17 04 30.7 +2.1**
comp=Z,1.7nm,0.4s
ZALV Zalesovo Beam 19.72 24 P **P 17 04 24.8 -0.1**
comp=Z,27nm,0.4s,baz=222,slow=11,SNR=117
ZALV S **S 17 07 58.0 +1.2**
comp=Z,4.1nm,0.6s,baz=215,slow=18,SNR=3.4
ZALV Zalesovo Beam 19.72 24 P **P 17 04 24.4 -0.5**
ZKTA Zakatala 19.74 292 P **P 17 04 27.1 +1.9**
GANJ Ganja 19.87 289 P **P 17 04 27.9 +1.2**
HYBB Hyderabad (bro 20.18 159 *e*P **P 17 04 31.8 +1.6**
HYBB *e*pP **pP 17 05 02.7 +0.8**
HYBB *e*sP sP 17 05 34.1 +8.7
HYBB *e*S **S 17 08 08.7 +2.1**
HYBB *e*PcP **PcP 17 08 36.2 -0.5**
GROC Groznyy 20.57 296 *e*P **P 17 04 36.0 +1.9**
GROC *e*S **S 17 08 17.8 +4.1**
GROC pmax pmax
comp=Z,117nm,0.6s
SHL Shillong 20.77 116 P **P 17 04 36.8 +0.2**
SHL Shillong 20.77 116 P **P 17 04 36.8 +0.2**
SHL pmax pmax
comp=Z,56nm,0.7s
GNI Garni 21.06 288 P **P 17 04 42.6 +3.1**
comp=Z,53nm,0.8s,baz=124,slow=2.2,SNR=28
GNI Garni 21.06 288 P **P 17 04 41.6 +2.1**
GNI Garni 21.06 288 P **P 17 04 41.6 +2.1**
GNI pmax pmax
comp=Z,84nm,1.0s
SVE Sverdlovsk 21.44 344 *e*P **P 17 04 43.4 +0.3**
SVE *e*S **S 17 08 38.7 +10**
SVE pmax pmax
comp=Z,26nm,0.9s
ARU Arti 21.59 341 P **P 17 04 44.9 +0.2**
comp=Z,18nm,0.5s,baz=146,slow=7.4,SNR=37
ARU S **S 17 08 32.9 +1.5**
comp=Z,3.3nm,0.4s,baz=202,slow=21,SNR=1.9
comp=Z,18nm,0.5s
ARU Arti 21.59 341 P **P 17 04 44.7 0.0**
ARU Arti 21.59 341*d* *i*P **P 17 04 44.8 0.0**
ARU *e*PP **pP 17 05 16.0 -1.3**
ARU S **S 17 08 33.1 +1.7**
ARU pmax pmax
comp=Z,25nm,0.7s
ZEI Tsey 21.88 295 *e*P **P 17 04 48.5 +0.4**
ZEI pmax pmax
comp=Z,27nm,1.0s
ONI Oni 22.19 294 P **P 17 04 52.6 +1.7**
ONI Oni 22.19 294 P **P 17 04 52.6 +1.7**
ONI pmax pmax
comp=Z,26nm,0.7s
NCK Nalchik 22.20 297 ⇑*i*P **P 17 04 51.9 +0.9**
NCK pmax pmax
comp=Z,62nm,1.0s
KARS Kars 22.34 289 P **P 17 04 54.7 +2.3**
KARS Kars 22.34 289 P **P 17 04 54.7 +2.3**
KARS pmax pmax
comp=Z,70nm,1.0s
GTA Gaotai 22.63 74 *e*P **P 17 04 56.9 +1.8**
GTA pP pP 17 05 33.3 +3.7
GTA sP sP 17 05 57.4 +3.9
GTA pmax pmax
comp=Z,9.0nm,1.1s
KBZ Khabaz 22.74 297 P **P 17 04 56.6 +0.8**
comp=Z,8.1nm,0.6s,baz=116,slow=8.9,SNR=18
KBZ S **S 17 08 58.6 +8.5**
comp=Z,2.3nm,0.5s,baz=106,slow=3.4,SNR=1.7
comp=Z,8.1nm,0.6s
KBZ Khabaz 22.74 297*d* *i*P **P 17 04 56.1 +0.3**
KBZ pmax pmax
comp=Z,22nm,1.1s
GOF Gofitskoye 22.87 300⇑ *e*P **P 17 04 59.3 +2.3**
GOF pmax pmax
comp=Z,101nm,0.7s
SHA1 Shidzhatmaz 22.91 297*d* *i*P **P 17 04 58.9 +1.2**
KVAR Kislovodsk Arr 22.92 298 P **P 17 04 58.4 +0.8**
comp=Z,4.2nm,0.5s,baz=258,slow=20,SNR=4.8
KVAR S 17 09 06.3 +13
comp=Z,15nm,1.1s,baz=184,slow=13,SNR=1.9
comp=Z,4.2nm,0.5s
KIV Kislovodsk 22.92 298 ⇑P **P 17 04 59.3 +1.7**
KIV Kislovodsk 22.92 298 P **P 17 04 58.8 +1.2**
KIV Kislovodsk 22.92 298*d* *i*P **P 17 04 58.8 +1.2**
KIV *e*PP **pP 17 05 31.5 -0.1**
KIV *e*SP PP 17 05 53.1 -0.6
KIV *e* 17 08 43.1
KIV pmax pmax
comp=Z,20nm,0.6s
KIV Kislovodsk 22.92 298 *i* P **P 17 04 59.0 +1.4**
SNR=8.8
BELG Belogornoye 22.93 321 P **P 17 04 58.5 +1.1**
comp=Z,82nm,0.5s,baz=287,slow=1.2,SNR=26
BELG pP **pP 17 05 33.3 +1.7**
comp=Z,108nm,0.8s,baz=125,slow=7.4,SNR=6.4
BELG sP **sP 17 05 58.3 +3.4**
comp=Z,86nm,0.9s,baz=156,slow=5.6,SNR=2.9
comp=Z,82nm,0.5s
BELG Belogornoye 22.93 321*d* *i*P **P 17 04 58.2 +0.8**
BELG pmax pmax
comp=Z,15nm,0.6s
CHVG Ch'k'valeri 23.20 294 ⇑P **P 17 05 03.4 +3.3**
BATM Batumi 23.42 291 ⇑P **P 17 05 05.1 +3.1**
SOC Sochi 25.01 296 *e*P **P 17 05 16.6 +0.1**
SOC *e*PP **pP 17 05 53.7 -0.2**
SOC *e* 17 06 02.8
SOC *e*S **S 17 09 28.6 +2.2**
SOC *e*SS **sS 17 10 29.7 -5.6**
SOC pmax pmax
comp=Z,29nm,0.8s
VRH Novokhopyorsk 25.58 314 *e*P **P 17 05 20.9 -0.6**
VRH pmax pmax
comp=Z,10.0nm,0.6s
RAYN Ar Rayn 25.74 247 P **P 17 05 23.6 +0.3**
RAYN IAmb IAmb 17 05 30.7
comp=Z,18nm,1.2s
RAYN Ar Rayn 25.74 247 P **P 17 05 23.6 +0.3**
RAYN pmax pmax
comp=Z,17nm,1.3s
RAYN Ar Rayn 25.74 247 *i* P **P 17 05 24.1 +0.9**
SNR=10
MOY Mondy 25.87 45 *e*P **P 17 05 25.6 +1.3**
KIRV Kirov 26.23 334 P **P 17 05 28.1 +0.9**
comp=Z,13nm,0.6s,baz=185,slow=6.7,SNR=5.8
KIRV pP **pP 17 06 07.6 +1.8**
comp=Z,35nm,0.6s,baz=82,slow=1.0,SNR=6.3
KIRV sP **PP 17 06 30.6 +0.4**
comp=Z,22nm,0.7s,baz=147,slow=18,SNR=3.0
comp=Z,13nm,0.6s
ZAK Zakamensk 26.75 49 *e*P **P 17 05 32.9 +0.7**
ZAK pmax pmax
comp=Z,4.0nm,0.9s
ANN Anapa 26.77 298 *e*P **P 17 05 33.2 +1.0**
ANN pmax pmax
comp=Z,45nm,0.8s
VSR Storozhevoye 27.08 313 *e*P **P 17 05 33.0 -1.9**
VSR pmax pmax
comp=Z,10.0nm,0.9s
VORR Voronezh 27.21 314 *e*P **P 17 05 35.6 -0.5**
VORR pmax pmax
comp=Z,60nm,0.4s
LPSR Galich'ya Gora 27.72 315 *e*P **P 17 05 39.6 -1.0**
LPSR pmax pmax
comp=Z,10.0nm,0.9s
SONM Songino Array 28.09 55 P **P 17 05 45.2 +1.1**
comp=Z,4.1nm,0.8s,baz=260,slow=10.0,SNR=21
SONM pP **pP 17 06 24.3 +0.7**
comp=Z,3.0nm,0.8s,baz=243,slow=12,SNR=3.2
comp=Z,4.1nm,0.8s
SONM Songino Array 28.09 55 P **P 17 05 45.0 +0.8**
SONM Songino Array 28.09 55 P **P 17 05 45.0 +0.8**
SONM pmax pmax
comp=Z,4.0nm,0.9s
ULN Ulaanbaatar 28.54 56 P **P 17 05 48.7 +0.6**
ULN Ulaanbaatar 28.54 56*c* *i*P **P 17 05 48.9 +0.8**
ULN pmax pmax
comp=Z,4.0nm,0.7s
BR131 Keskin Array S 29.60 288 P **P 17 05 55.8 -1.8**
BR131 Keskin Array S 29.60 288 P **P 17 05 55.8 -1.8**
BR131 pmax pmax
comp=Z,4.0nm,0.8s
BRTR Keskin Array B 29.60 288 P **P 17 05 58.8 +1.2**
comp=Z,1.4nm,0.6s,baz=91,slow=9.0,SNR=9.4
BRTR pP **pP 17 06 39.2 +3.1**
comp=Z,2.9nm,0.7s,baz=97,slow=7.8,SNR=5.7
BRTR sP **sP 17 07 00.2 +2.6**
comp=Z,2.2nm,0.8s,baz=97,slow=7.6,SNR=3.1
comp=Z,1.4nm,0.6s
BRTR Keskin Array B 29.60 288 P **P 17 05 57.2 -0.4**
BRTR Keskin Array B 29.60 288 *i* P **P 17 05 59.7 +2.1**
BRTR pmax pmax
comp=Z,2.0nm,0.6s
MOS Moscow 29.70 321 *e*P **P 17 05 57.2 -0.9**
MOS *e**PP **pP 17 06 36.3 -0.6**
MOS *e* 17 06 57.7
MOS *e* 17 07 08.8
MOS *e*S **S 17 10 38.5 -1.4**
MOS pmax pmax
comp=Z,39nm,1.0s
PRGR Permogore 29.75 335 *e*P **P 17 05 56.0 -2.4**
OBN Obninsk 29.99 319 P **P 17 06 00.6 0.0**
OBN Obninsk 29.99 319*d* *i*P **P 17 06 01.4 +0.8**
OBN *e**PP **pP 17 06 39.8 +0.6**
OBN *e**SP **sP 17 07 01.1 +0.2**
OBN *e* 17 08 58.3
OBN *e*S **S 17 10 44.8 +0.4**
OBN *e**SS **sS 17 11 54.0 -0.1**
OBN pmax pmax
comp=Z,32nm,0.6s
CHTO Chiang Mai 30.09 119 P **P 17 06 02.8 +0.9**
CHTO IAmb IAmb 17 06 04.6
comp=Z,5.0nm,0.6s
CHTO Chiang Mai 30.09 119 P **P 17 06 02.8 +0.9**
CHTO pmax pmax
comp=Z,5.0nm,0.6s
CM31 Chiang Mai Arr 30.32 119 P **P 17 06 04.2 +0.2**
CM31 IAmb IAmb 17 06 07.3
comp=Z,18nm,1.4s
CMAR Chiang Mai Arr 30.32 119 P **P 17 06 05.0 +1.0**
comp=Z,5.0nm,0.8s,baz=300,slow=8.3,SNR=33
CMAR PcP **PcP 17 08 59.5 -0.1**
comp=Z,0.8nm,0.8s,baz=302,slow=3.5,SNR=4.2
comp=Z,5.0nm,0.8s
CMAR Chiang Mai Arr 30.32 119 P **P 17 06 04.4 +0.4**
CMAR Chiang Mai Arr 30.32 119 *i* P **P 17 06 05.3 +1.3**
CMAR pmax pmax
comp=Z,5.0nm,0.7s
PALK Pallekele 30.45 161 P **P 17 06 06.3 +1.2**
PALK Pallekele 30.45 161 P **P 17 06 06.4 +1.2**
PALK pmax pmax
comp=Z,23nm,0.7s
XAN Xi'an 30.70 83 P **P 17 06 08.3 +1.1**
XAN pmax pmax
comp=Z,9.0nm,0.8s
KLMR Klimovskoe 31.48 330 *e*P **P 17 06 12.7 -1.0**
KLMR *e**PP **pP 17 06 53.0 +0.3**
KLMR *e**SP **sP 17 07 13.1 -1.3**
KLMR pmax pmax
comp=Z,9.0nm,0.7s
KLMR Klimovskoe 31.48 330 *e*P **P 17 06 12.7 -1.0**
KLMR AMP 17 06 14.3
comp=Z,9.0nm,0.7s
KLMR *e*pP **pP 17 06 53.0 +0.3**
KLMR *e*sP **sP 17 07 13.2 -1.2**
AKASG Malin Array Be 33.04 309 P **P 17 06 27.9 +0.6**
comp=Z,8.2nm,0.5s,baz=80,slow=7.2,SNR=59
AKASG pP **pP 17 07 09.3 +2.9**
comp=Z,2.5nm,0.6s,baz=82,slow=7.2,SNR=2.1
AKASG PP **PnPn 17 07 41.1 -3.2**
comp=Z,6.1nm,0.9s,baz=90,slow=12,SNR=6.2
comp=Z,8.2nm,0.5s
AKASG Malin Array Be 33.04 309 *i* P **P 17 06 28.0 +0.6**
AKASG pmax pmax
comp=Z,17nm,0.6s
AKBB Malin Array Si 33.04 309*d* *i*P **P 17 06 27.9 +0.6**
SORM Soroca 33.31 304 ⇑P **P 17 06 30.6 +0.9**
CFR Carcaliu 33.37 298 ⇑P **P 17 06 32.0 +1.7**
GHRR 33.88 300 ⇑P **P 17 06 37.1 +2.4**
VRI Vrincioaia 34.35 300 ⇑P **P 17 06 41.0 +2.2**
VRI Vrincioaia 34.35 300 P **P 17 06 41.0 +2.2**
VRI pmax pmax
comp=Z,11nm,1.0s
PLOR Plostina 34.41 300 ⇓P **P 17 06 41.7 +2.4**
PLOR Plostina 34.41 300 P **P 17 06 41.7 +2.4**
COVR Voineasa-Covas 34.72 300 ⇑P **P 17 06 44.0 +2.1**
BIZ Bicaz 34.79 302 ⇑P **P 17 06 44.5 +2.0**
MLR Muntele Rosu 34.91 299 ⇓P **P 17 06 46.4 +2.7**
MLR Muntele Rosu 34.91 299 P **P 17 06 45.6 +1.9**
MLR Muntele Rosu 34.91 299 P **P 17 06 45.6 +1.9**
MLR pmax pmax
comp=Z,25nm,0.8s
NACGM Naroch 35.28 316 ⇓*i*P **P 17 06 47.5 +0.9**
baz=102
DOPR Dopca 35.29 300 ⇑P **P 17 06 49.2 +2.4**
IDID Didziasalis 35.40 316 *e*P **P 17 06 48.7 +1.1**
BUR01 Bucovina Ar. S 35.40 303 ⇑P **P 17 06 49.7 +1.9**
BURAR Bucovina Array 35.40 303 P **P 17 06 48.8 +1.0**
BURAR IAmb IAmb 17 06 50.0
comp=Z,8.3nm,0.7s
BUR08 Bucovina Ar. S 35.41 303 P **P 17 06 47.7 -0.2**
KARP Karpathos 35.43 282 P **P 17 06 47.9 -0.2**
VOIR 35.54 299 ⇑P **P 17 06 50.6 +1.5**
IIGN Ignalina 35.69 316 *e*P **P 17 06 51.8 +1.7**
ARR Arges 35.84 299 ⇑P **P 17 06 53.8 +2.2**
VSU Vasula 36.23 321 *e*P **P 17 06 55.3 +0.8**
LOT Lotru 36.44 299 ⇑P **P 17 06 58.7 +2.0**
PABE Paberze 36.98 316 P **P 17 07 01.0 +0.1**
PABE Paberze 36.98 316 *e*P **P 17 07 01.8 +0.9**
VSVD Vaisvydziai 37.09 317 *e*P **P 17 07 02.8 +0.9**
SUW Suwalki 37.19 313 *e*P **P 17 07 03.1 +0.4**
SUW Suwalki 37.19 313 P **P 17 07 03.0 +0.2**
SUW IAmb IAmb 17 07 04.0
comp=Z,22nm,1.1s
SUW Suwalki 37.19 313 P **P 17 07 03.0 +0.2**
SUW pmax pmax
comp=Z,22nm,1.1s

SUW Suwalki 37.19 313 *e*P P 17 07 03.8 +1.1
IDI Anoyia 37.28 282 P P 17 07 04.8 +0.9
IDI IAmb IAmb 17 07 10.5
comp=Z,15nm,1.1s
UZH Uzhgorod 37.37 304 *e*P P 17 07 02.4 -1.9
KOLS Kolonicke sedl 37.38 305 *e*P P 17 07 06.0 +1.5
KOLS *e* 17 08 38.6
KOLS Kolonicke sedl 37.38 305 *e*P P 17 07 06.0 +1.5
KOLS *e*PP PnPn 17 08 38.5 +1.7
LVZ Lovozero 37.43 338 P P 17 07 04.6 -0.1
LVZ IAmb IAmb 17 07 24.8
comp=Z,21nm,1.3s
LVZ Lovozero 37.43 338 P P 17 07 04.6 -0.1
LVZ pmax pmax
comp=Z,21nm,1.3s
FIA1 FINESS Array S 37.51 326 P P 17 07 05.0 -0.3
FIA1 IAmb IAmb 17 07 06.8
comp=Z,10nm,0.7s
FINES FINESS Array B 37.51 326 P P 17 07 06.0 +0.7
comp=Z,8.6nm,0.5s,baz=114,slow=9.0,SNR=109
FINES PP PP 17 08 33.2 -1.5
comp=Z,4.2nm,0.6s,baz=113,slow=13,SNR=4.0
comp=Z,8.6nm,0.5s
FINES FINESS Array B 37.51 326 P P 17 07 05.6 +0.3
MTSE Matsula 37.77 321 *e*P P 17 07 08.2 +0.7
CRVS Cervenica-Dubn 37.92 305 *e*P P 17 07 10.4 +1.4
CRVS Cervenica-Dubn 37.92 305 *e*P P 17 07 10.4 +1.4
MDVR Moldovita 37.94 298 ⇑P P 17 07 11.5 +2.2
PBUR Paburge 38.21 316 ⇓*e*P P 17 07 12.3 +1.1
NIE Niedzica 38.68 306 *e*P P 17 07 17.8 +2.4
NIE *e*pP pP 17 07 58.4 +3.1
PSZ Piszkesteto 38.99 303 P P 17 07 18.5 +0.6
PSZ Piszkesteto 38.99 303 P P 17 07 18.5 +0.6
PSZ pmax pmax
comp=Z,6.0nm,1.0s
OJC Ojcow 39.00 307 *e*P P 17 07 18.9 +0.9
OJC *e*pP pP 17 07 59.8 +1.8
OJC Ojcow 39.00 307 P P 17 07 18.3 +0.3
OJC IAmb IAmb 17 07 19.7
comp=Z,11nm,0.9s
OJC Ojcow 39.00 307 P P 17 07 18.3 +0.3
OJC pmax pmax
comp=Z,11nm,0.9s
NJ2 Nanjing 39.25 82 *e*P P 17 07 19.8 -0.4
NJ2 pmax pmax
comp=Z,5.0nm,0.5s
RAF Rauma 39.36 324 *e*P P 17 07 21.4 +0.7
KOLL Kolacno 39.95 304 *e*P P 17 07 27.7 +1.9
MORH Mrgy, Hungar 39.96 301 P P 17 07 27.0 +1.1
MAUC Maruska 40.30 306 *e*P P 17 07 30.7 +2.0
KOVH Kovagotottos 40.35 301 P P 17 07 30.3 +1.2
JAVC Velka Javorina 40.42 305 *e*P P 17 07 31.9 +2.1
JAVC *e* 17 08 13.9
MORC Moravsky Berou 40.47 306 ⇑P P 17 07 31.1 +1.0
MORC Moravsky Berou 40.47 306 P P 17 07 30.8 +0.7
MORC IAmb IAmb 17 07 32.6
comp=Z,7.1nm,0.7s
MORC Moravsky Berou 40.47 306 P P 17 07 30.8 +0.7
MORC pmax pmax
comp=Z,7.0nm,0.7s
MORC Moravsky Berou 40.47 306 *e*P P 17 07 31.6 +1.5
MORC *e* 17 08 13.1
MODS Modra-Piesok 40.71 304 *e*P P 17 07 33.7 +1.6
MODS Modra-Piesok 40.71 304 *e*P P 17 07 33.7 +1.6
KEV Kevo 40.77 338 P P 17 07 32.9 +0.7
KEV IAmb IAmb 17 07 35.0
comp=Z,22nm,1.5s
KEV Kevo 40.77 338 P P 17 07 32.9 +0.7
KEV pmax pmax
comp=Z,22nm,1.5s
KRLC Kraliky 40.95 307 *e*P P 17 07 35.4 +1.4
KRLC Kraliky 40.95 307 *e*P P 17 07 35.4 +1.4
VRAC Vranov 41.10 306 ⇓P P 17 07 37.1 +1.8
VRAC Vranov 41.10 306 LR LR 17 26 18.8
comp=Z,38nm,18.7s,baz=5.0,slow=38
VRAC Vranov 41.10 306 P P 17 07 37.1 +1.8
VRAC Vranov 41.10 306 *e*P P 17 07 37.1 +1.8
VRAC *e* 17 08 18.5
ARCES ARCESS Array B 41.12 337 P P 17 07 36.0 +0.9
comp=Z,6.8nm,0.5s,baz=112,slow=8.5,SNR=77
ARCES pP pP 17 08 16.7 +0.7
comp=Z,3.8nm,0.6s,baz=113,slow=9.3,SNR=3.6
ARCES sP sP 17 08 38.2 +0.6
comp=Z,6.9nm,0.9s,baz=112,slow=8.0,SNR=3.7
comp=Z,6.8nm,0.5s
ARCES ARCESS Array B 41.12 337 P P 17 07 35.8 +0.7
ARCES IAmb IAmb 17 07 36.8
comp=Z,7.7nm,0.7s
ARCES ARCESS Array B 41.12 337 P P 17 07 35.8 +0.7
ARCES pmax pmax
comp=Z,8.0nm,0.7s
DPC Dobruska-Polom 41.23 307 *e*P P 17 07 37.6 +1.3
DPC Dobruska-Polom 41.23 307 *e*P P 17 07 37.6 +1.3
KSP Ksiaz 41.23 308 *e*P P 17 07 37.7 +1.4
KSP *e*pP pP 17 08 19.2 +2.5
KRUC Moravsky 41.25 305 *e*P P 17 07 37.7 +1.3
KRUC *e* 17 08 19.4
CHVC Chvalec 41.39 308 *e*P P 17 07 39.2 +1.6
RONA Rosalia, Austr 41.42 303 *e*P P 17 07 39.6 +1.7
comp=Z,6.5nm,1.5s
RONA *i* P pP 17 08 20.8 +2.4
comp=Z,5.3nm,1.0s
UPC Upice 41.42 308 *e*P P 17 07 39.6 +1.8
UPC Upice 41.42 308 *e*P P 17 07 39.6 +1.8
KTK1 Kautokeino 41.59 336 *e*P P 17 07 39.5 +0.5
KTK1 IAmb IAmb 17 07 40.0
comp=Z,13nm,0.6s
CONA Conrad Observa 41.69 304 *e*P P 17 07 42.1 +2.0
comp=Z,8.0nm,0.8s,SNR=9.2
CONA *e*P pP 17 08 23.4 +2.7
comp=Z,11nm,1.1s
ZEA Zeya 41.83 48 *e*P P 17 07 42.4 +1.3
ZEA pmax pmax
comp=Z,10.0nm,0.8s
GROS Grobnik 42.09 302 *i* P P 17 07 44.7 +1.2
GROS *i* pP pP 17 08 26.2 +2.2
HAMF Hammerfest 42.20 339 *e*P P 17 07 45.0 +1.2
HAMF IAmb IAmb 17 07 45.5
comp=Z,19nm,0.6s
PERS Pernice 42.34 302 *e*P P 17 07 46.8 +1.4
SOKA Soboth 42.39 302 *e*P P 17 07 47.7 +1.9
comp=Z,7.3nm,0.7s,SNR=9.0
SOKA *e*P pP 17 08 29.1 +2.7
comp=Z,9.8nm,1.3s
PRU Pruhonice 42.39 307 *e*P P 17 07 47.3 +1.6
PRU Pruhonice 42.39 307 *e*P P 17 07 47.3 +1.6
BRG Berggiesshubel 42.72 308 *i* P P 17 07 49.8 +1.5
BRG Amp 17 07 52.3
comp=Z,8.2nm,0.6s
BRG pP pP 17 08 31.7 +2.7
BRG Amp 17 08 32.8
comp=Z,12nm,1.1s
BRG Berggiesshubel 42.72 308 *i* P P 17 07 49.8 +1.5
BRG 17 08 31.7
BRG pmax pmax
comp=Z,8.0nm,0.6s
JETT Jettan, Norway 42.74 336 *e*P P 17 07 49.2 +0.9
JETT IAmb IAmb 17 07 51.1
comp=Z,39nm,1.6s
GSI Gunungsitoli 42.74 139 P P 17 07 50.4 +1.5
GSI Gunungsitoli 42.74 139 P P 17 07 50.1 +1.2
comp=Z,66nm,1.0s
OBKA Obir 42.74 302 *e*P P 17 07 49.3 +0.6
comp=Z,10.0nm,1.6s
OBKA *e*P pP 17 08 30.2 +0.9
comp=Z,8.0nm,1.5s
MOZS Mozjanca 42.84 301 *i* P P 17 07 51.1 +1.7
CRNS Crni Vrh 43.00 301 *i* pP pP 17 08 33.9 +2.5
GEC2 GERESS Array S 43.04 305 P P 17 07 51.5 +0.5
GERES GERESS Array B 43.04 305 P P 17 07 52.1 +1.1
comp=Z,0.5nm,0.6s,baz=76,slow=11,SNR=8.9
GERES pP pP 17 08 33.9 +2.2
comp=Z,0.5nm,0.6s,baz=82,slow=11,SNR=2.4
GERES PP PP 17 09 34.9 +0.3
comp=Z,1.2nm,0.7s,baz=67,slow=9.9,SNR=6.5
GERES LR LR 17 30 17.2
comp=Z,36nm,18.0s,baz=350,slow=42
comp=Z,0.5nm,0.5s
GERES GERESS Array B 43.04 305 P P 17 07 51.7 +0.7
KHC Kasperske Hory 43.09 306 P P 17 07 52.0 +0.6
KHC Kasperske Hory 43.09 306 P P 17 07 52.0 +0.6
KHC pmax pmax
comp=Z,2.0nm,0.7s
KHC Kasperske Hory 43.09 306 *e*P P 17 07 52.4 +1.0

KHC *e*pP pP 17 08 34.9 +2.8
KHC *e*PP PP 17 09 31.5 -3.7
BIOA Bad Ischl, Aus 43.21 304 *e*P P 17 07 53.7 +1.4
comp=Z,2.6nm,0.4s
BIOA *e*P pP 17 08 35.0 +2.0
comp=Z,6.7nm,1.2s
CLL Collm 43.28 309 *i* P P 17 07 53.7 +0.9
CLL *i* *PP pP 17 08 35.8 +2.2
CLL pmax pmax
comp=Z,6.0nm,0.7s
CLL Collm 43.28 309 *i* P P 17 07 53.7 +0.9
comp=Z,6.0nm,0.7s
CLL *i* pP pP 17 08 35.8 +2.2
comp=Z,6.0nm,0.7s
MYKA Terra Mystica 43.34 302 *e*P pP 17 08 36.6 +2.4
comp=Z,2.0nm,0.5s
PRED Cave del Predi 43.42 302 P 17 07 54.9 +0.8
PRED IAmb IAmb 17 07 56.3
comp=Z,15nm,1.5s
CEL Celeste 43.44 290 P P 17 07 54.6 +0.3
CEL IAmb IAmb 17 07 57.2
comp=Z,20nm,0.8s
KBA Koelnbreinsper 43.48 303 *i* P P 17 07 56.1 +1.4
comp=Z,1.9nm,0.6s
KBA *e*P pP 17 08 38.6 +3.2
comp=Z,9.6nm,1.5s
YAK Yakutsk 43.75 36 P P 17 07 56.0 -0.4
YAK IAmb IAmb 17 07 56.7
comp=Z,18nm,0.7s
YAK Yakutsk 43.75 36 *c* *i*P P 17 07 55.8 -0.5
YAK *e**PP pP 17 08 40.2 +2.2
YAK *e* 17 09 40.2
YAK *e* 17 09 41.3
YAK *e*S S 17 14 11.0 -1.2
YAK *e* 17 17 31.9
YAK pmax pmax
comp=Z,17nm,0.9s
YAK pmax pmax
comp=E,4.0nm,1.3s
YAK pmax pmax
comp=N,2.0nm,1.0s
YAK pmax pmax
comp=Z,87nm,4.1s
YAK pmax pmax
comp=N,59nm,3.8s
YAK smax smax
comp=E,42nm,2.0s
YAK smax smax
comp=N,16nm,2.8s
FAUS Fauske 43.80 332 *e*P P 17 07 57.5 +0.8
STEI Steigen 43.97 333 *e*P P 17 07 58.6 +0.6
ABTA Abfaltersbach 44.10 302 *i* P P 17 08 00.1 +0.6
comp=N,3.6nm,0.9s
ABTA *e*P pP 17 08 41.6 +1.3
comp=N,3.5nm,1.0s
NC405 NORSAR Array S 44.18 323 P P 17 07 59.9 0.0
NC602 NORSAR Array S 44.23 323 P P 17 07 59.8 -0.5
NC602 IAmb IAmb 17 08 01.2
comp=Z,11nm,0.9s
NC602 NORSAR Array S 44.23 323 *e*P P 17 08 00.0 -0.2
NC602 IAmb IAmb 17 08 00.9
comp=Z,5.7nm,0.8s
YHNB Yeheng 44.28 91 P P 17 08 01.9 +0.6
YHNB IAmb IAmb 17 08 04.0
comp=Z,11nm,0.9s
NC303 NORSAR Array S 44.36 323 P P 17 08 01.6 +0.4
NC303 pP pP 17 08 42.7 +0.3
SSLB Suanglung 44.36 92 P P 17 08 03.5 +1.7
SSLB IAmb IAmb 17 08 04.8
comp=Z,18nm,0.7s
NB201 NORSAR Array S 44.38 323 P P 17 08 01.3 -0.2
NB201 IAmb IAmb 17 08 02.1
comp=Z,14nm,0.7s
KONS Konsvik 44.41 331 *e*P P 17 08 02.2 +0.7
KONS IAmb IAmb 17 08 05.0
comp=Z,10nm,0.7s
NB2 NORSAR Subarra 44.41 323 P P 17 08 01.6 -0.1
baz=95,slow=7.9
NB2 NORSAR Subarra 44.41 323 P P 17 08 01.6 -0.1
comp=Z,9.7nm,0.6s,baz=95,slow=7.9
NOA NORSAR Array B 44.41 323 P P 17 08 01.9 +0.1
comp=Z,11nm,0.7s,baz=96,slow=7.8,SNR=93
NOA pP pP 17 08 43.5 +0.7
comp=Z,6.6nm,0.7s,baz=96,slow=8.1,SNR=5.7
NOA sP sP 17 09 07.3 +3.3
comp=Z,3.3nm,0.8s,baz=96,slow=8.0,SNR=2.4
NOA PP PP 17 09 46.5 -2.6
comp=Z,2.8nm,0.8s,baz=93,slow=9.7,SNR=3.6
comp=Z,11nm,0.7s
NAO01 NORSAR Array S 44.56 323 P P 17 08 02.2 -0.6
NAO01 IAmb IAmb 17 08 03.8
comp=Z,18nm,0.7s
GRA1 Grafenberg Arr 44.56 307 P P 17 08 04.4 +1.4
GRF Grafenberg Arr 44.56 307 P P 17 08 04.4 +1.4
GRF pmax pmax
comp=Z,7.0nm,0.8s
WTTA Wattenberg 44.61 303 *e*P P 17 08 03.8 +0.2
comp=Z,7.1nm,1.3s
WTTA *i* P pP 17 08 46.1 +1.4
comp=Z,3.8nm,0.8s
KSAR Wonju Array Be 44.62 71 P P 17 08 04.1 +0.5
KSAR Wonju Array Be 44.62 71 P P 17 08 04.1 +0.5
NBO00 NORSAR Array S 44.63 323 P P 17 08 03.4 0.0
NBO00 pP pP 17 08 44.8 +0.3
WATA Walderalm 44.64 303 *i* P P 17 08 03.6 -0.3
comp=Z,2.6nm,0.5s
WATA *e*P pP 17 08 46.2 +1.4
comp=Z,5.1nm,0.9s
KSRS Korea Array 44.64 71 P P 17 08 04.6 +0.8
comp=Z,2.5nm,0.8s,baz=278,slow=7.3,SNR=7.8
comp=Z,2.5nm,0.8s
NC204 NORSAR Array S 44.65 323 P P 17 08 03.8 +0.1
NC204 IAmb IAmb 17 08 04.3
comp=Z,18nm,0.7s
MURB Monte Urbino 44.72 297 P P 17 08 05.7 +1.3
MURB IAmb IAmb 17 08 08.3
comp=Z,36nm,1.2s
MURB pP pP 17 08 47.5 +2.1
CTI Castel Tesino 44.80 301 P P 17 08 05.4 +0.3
CTI Castel Tesino 44.80 301 P P 17 08 05.4 +0.3
CTI pmax pmax
comp=Z,4.0nm,0.7s
YULB Yu-li 44.82 93 P P 17 08 06.7 +1.2
YULB IAmb IAmb 17 08 08.8
comp=Z,17nm,1.0s
KLR Kul'dur 44.90 54 *d* *i*P P 17 08 05.7 0.0
KLR pmax pmax
comp=Z,3.0nm,0.4s
SQTA Sankt Quirin 44.90 303 *i* P P 17 08 05.5 -0.4
comp=Z,3.1nm,0.5s
SQTA *i* P pP 17 08 48.4 +1.4
comp=Z,6.4nm,1.1s
TWG Pinlang 44.92 94 P P 17 08 08.6 +2.4
MOTA Moosalm 44.96 303 *i* P P 17 08 06.8 +0.4
comp=Z,6.9nm,1.1s
MOTA *i* P pP 17 08 48.5 +1.1
comp=Z,3.6nm,0.8s
KONO Kongsberg 45.13 321 P P 17 08 07.5 +0.2
KONO IAmb IAmb 17 08 22.1
comp=Z,23nm,1.4s
KONO Kongsberg 45.13 321 P P 17 08 07.5 +0.2
KONO pmax pmax
comp=Z,23nm,1.4s
KONO Kongsberg 45.13 321 *e*P P 17 08 07.7 +0.3
KONO IAmb IAmb 17 08 15.6
comp=Z,41nm,1.7s
RETA Reutte 45.16 304 *e*P P 17 08 07.8 -0.1
comp=Z,2.5nm,1.1s
RETA *e*P pP 17 08 50.2 +1.3
comp=Z,5.0nm,1.2s
BJO1 Bjornoya 45.22 343 *e*P P 17 08 08.6 +0.8
FETA Feichten 45.26 303 *e*P P 17 08 09.2 +0.4
comp=Z,6.6nm,1.2s
FETA *i* P pP 17 08 50.4 +0.5
comp=Z,4.4nm,1.0s
DOMB Dombas 45.52 324 *e*P P 17 08 11.1 +0.7
TIXI Tiksi 45.59 22 P P 17 08 10.5 -0.2
TIXI IAmb IAmb 17 08 11.5
comp=Z,13nm,0.9s
TIXI Tiksi 45.59 22 *c* *i*P P 17 08 10.5 -0.2
TIXI pmax pmax
comp=Z,6.0nm,0.5s
DAVA Damuels 45.79 304 *e*P P 17 08 13.1 +0.2
comp=Z,6.1nm,0.5s,SNR=7.6
DAVA *i* P pP 17 08 55.2 +1.1
comp=Z,13nm,1.1s

USRK Ussuriysk Ar. 45.93 61 P P 17 08 13.8 0.0
comp=Z,1.7nm,0.7s,baz=267,slow=7.2,SNR=6.9
comp=Z,1.7nm,0.7s
LODK Lodwar 46.70 234 P P 17 08 22.0 +1.7
SPB2 Spitsbergen Ar 47.42 347 P P 17 08 25.9 +0.9
SPA0 Spitsbergen Ar 47.43 347 *e*P P 17 08 27.0 +2.0
SPITS Spitsbergen Ar 47.43 347 P P 17 08 25.7 +0.7
SPITS pmax pmax
comp=Z,20nm,1.5s
SENIN Lac Senin/Sane 47.70 303 P P 17 08 27.8 0.0
LPL La Plagne 48.27 302 *e*P P 17 08 33.0 +0.8
LPL pmax pmax
comp=Z,8.0nm,0.9s
KBS Kingsbay 48.55 347 P P 17 08 34.0 +0.4
KBS IAmb IAmb 17 08 37.0
comp=Z,9.5nm,0.7s
KBS Kingsbay 48.55 347 P P 17 08 34.0 +0.4
KBS pmax pmax
comp=Z,10.0nm,0.7s
KBS Kingsbay 48.55 347 *e*P P 17 08 35.0 +1.5
KBS IAmb IAmb 17 08 36.8
comp=Z,9.6nm,0.6s
JOW Kunigami 48.85 84 P P 17 08 35.6 -1.0
KMBO Kilima Mbogo 49.07 228 P P 17 08 40.0 +1.4
comp=Z,3.0nm,0.6s,baz=33,slow=11,SNR=6.8
comp=Z,3.0nm,0.6s
KMBO Kilima Mbogo 49.07 228 P P 17 08 39.5 +0.9
KMBO Kilima Mbogo 49.07 228 P P 17 08 39.5 +0.9
KMBO pmax pmax
comp=Z,3.0nm,0.8s
KMBO Kilima Mbogo 49.07 228 P P 17 08 40.1 +1.5
KEST Kesra 49.20 289 P P 17 08 41.2 +2.0
comp=Z,2.5nm,0.4s,baz=356,slow=2.2,SNR=7.9
KEST pP pP 17 09 23.5 +2.7
comp=Z,6.6nm,0.8s,baz=157,slow=2.1,SNR=5.1
comp=Z,2.5nm,0.4s
KEST Kesra 49.20 289 P P 17 08 40.7 +1.5
JHS Saijyo 49.41 72 P P 17 08 40.4 -0.3
KIBK Kibwezi 49.58 226 P P 17 08 43.4 +1.2
KIBK IAmb IAmb 17 08 45.2
comp=Z,14nm,0.9s
SSB Saint Sauveur 49.83 302 P P 17 08 44.0 +0.2
SSB Saint Sauveur 49.83 302 P P 17 08 44.0 +0.2
SSB pmax pmax
comp=Z,10.0nm,1.4s
SSF Saint Saulge 50.09 304 *e*P P 17 08 43.6 -2.1
SSF pmax pmax
comp=Z,3.0nm,0.8s
CAF Calviac 51.62 302 *e*P P 17 08 57.9 +0.8
CAF pmax pmax
comp=Z,3.0nm,0.8s
LFF La Frestale 52.51 302 *e*P P 17 09 04.3 +0.6
LFF pmax pmax
comp=Z,2.0nm,0.4s
MJAR Matsushiro Arr 52.71 69 P P 17 09 05.6 +0.2
comp=Z,3.6nm,0.9s,baz=294,slow=11,SNR=5.1
comp=Z,3.6nm,0.9s
MJAR Matsushiro Arr 52.71 69 P P 17 09 03.7 -1.7
MJAR Matsushiro Arr 52.71 69 P P 17 09 03.7 -1.7
MJAR pmax pmax
comp=Z,5.0nm,1.3s
MBAR Mbarara 52.75 235 P P 17 09 06.9 +0.9
MBAR IAmb IAmb 17 09 07.9
comp=Z,11nm,0.8s
MBAR Mbarara 52.75 235 *c* *i*P P 17 09 07.1 +1.1
MBAR pmax pmax
comp=Z,12nm,0.8s
MBAR pmax pmax
comp=Z,5.0nm,0.6s
ASAJ Asahikawa 53.31 58 P P 17 09 08.8 -0.8
ASAJ pmax pmax
comp=Z,26nm,1.4s
JKA Kamikawa-asahi 53.31 58 P P 17 09 08.8 -0.8
JKA IAmb IAmb 17 09 12.8
comp=Z,26nm,1.4s
MA2 Magadan 54.14 38 *e*P P 17 09 13.5 -1.8
MA2 pmax pmax
comp=Z,40nm,1.8s
JMM Marumori 54.15 66 P P 17 09 15.3 -0.4
SEY Seymchan 54.20 34 *d* *i*P P 17 09 16.4 +0.7
SEY pmax pmax
comp=Z,10.0nm,1.0s
DAG Danmarks Havn 54.68 344 *i* P P 17 09 19.4 +0.4
DAG IAmb IAmb 17 09 29.6
comp=Z,3.1nm,0.7s
DAG Danmarks Havn 54.68 344 *i* P P 17 09 20.0 +1.1
DAG *i* S pP 17 10 02.5 +0.5
DBG Daneborg 55.54 341 *i* P P 17 09 26.6 +1.4
ESDC Sonseca Array 57.59 298 P P 17 09 40.8 +0.6
comp=Z,2.2nm,0.6s,baz=62,slow=6.6,SNR=19
ESDC pP pP 17 10 24.9 +1.7
comp=Z,4.9nm,1.0s,baz=60,slow=7.2,SNR=7.9
ESDC sP sP 17 10 45.0 +1.2
comp=Z,1.2nm,0.7s,baz=51,slow=8.7,SNR=2.5
comp=Z,2.2nm,0.6s
BILL Bilibino 58.41 26 *d* *i*P P 17 09 45.9 +0.5
BILL *e**PP pP 17 10 30.5 +1.2
BILL *e* 17 10 38.0
BILL *e*SP sP 17 10 44.7 -5.4
BILL *e* 17 11 54.9
BILL *e*S S 17 17 34.9 +1.8
BILL pmax pmax
comp=Z,8.0nm,1.1s
PEA0B Petropavlovsk- 59.74 44 P P 17 09 54.2 -0.5
PEA0B Petropavlovsk- 59.74 44 P P 17 09 54.2 -0.5
PEA0B pmax pmax
comp=Z,28nm,1.5s
PETK Petropavlovsk- 59.74 44 P P 17 09 53.4 -1.4
comp=Z,1.7nm,0.6s,baz=317,slow=5.7,SNR=11
comp=Z,1.7nm,0.6s
PETK Petropavlovsk- 59.74 44 P P 17 09 53.5 -1.2
TTSI Tana Toraja 59.97 120 P P 17 09 57.0 +0.2
comp=Z,14nm,1.0s
SUMG Summit 61.02 341 P P 17 10 04.5 +0.9
SUMG Summit 61.02 341 P P 17 10 04.5 +0.9
SUMG pmax pmax
comp=Z,6.0nm,1.0s
SUMG Summit 61.02 341 *i* P P 17 10 05.0 +1.4
VOI Vohitsoka 62.63 206 P P 17 10 15.4 +0.8
SANI Sanana 63.69 114 P P 17 10 21.4 -0.2
comp=Z,14nm,0.7s
WBSI Waikabubak, Su 64.49 126 P P 17 10 24.8 -2.0
comp=Z,55nm,1.0s
LSZ Lusaka 65.69 226 P P 17 10 34.4 -0.2
LSZ IAmb IAmb 17 10 36.1
comp=Z,11nm,0.7s
LSZ Lusaka 65.69 226 P P 17 10 34.4 -0.2
LSZ pmax pmax
comp=Z,11nm,0.7s
TOA0 Torodi Ar. Sit 65.93 269 P P 17 10 35.1 -1.1
TOA0 IAmb IAmb 17 10 35.6
comp=Z,6.4nm,0.7s
TORD Torodi Ar. Bea 65.93 269 P P 17 10 34.8 -1.3
comp=Z,7.3nm,0.5s,baz=51,slow=6.1,SNR=93
TORD pP pP 17 11 20.9 +0.5
comp=Z,2.6nm,0.8s,baz=40,slow=5.6,SNR=2.7
TORD sP sP 17 11 41.4 +0.7
comp=Z,1.6nm,0.5s,baz=48,slow=5.7,SNR=2.2
comp=Z,7.3nm,0.5s
TORD Torodi Ar. Bea 65.93 269 P P 17 10 34.9 -1.2
TORD IAmb IAmb 17 10 36.1
comp=Z,5.2nm,0.8s
ILULI Ilulissat 66.36 341 P P 17 10 38.5 +0.5
ILULI IAmb IAmb 17 10 39.7
comp=Z,9.4nm,0.8s
ILULI Ilulissat 66.36 341 P P 17 10 38.5 +0.5
ILULI pmax pmax
comp=Z,9.0nm,0.8s
DY2G Dye2 66.75 337 *i* P P 17 10 41.8 +0.9
BATI Baumata 67.75 123 P P 17 10 47.7 +0.1
comp=Z,18nm,1.2s
TNA Tin City 68.37 23 P P 17 10 50.8 +0.1
TNA IAmb IAmb 17 11 23.3
comp=Z,8.4nm,1.1s
RES Resolute Bay 68.60 356 P P 17 10 51.7 -0.2
RES IAmb IAmb 17 11 18.7
comp=Z,17nm,1.4s
RES Resolute Bay 68.60 356 P P 17 10 51.7 -0.2
RES pmax pmax
comp=Z,17nm,1.5s
FAKI Fak Fak 68.92 111 P P 17 10 54.5 -0.4
FAKI IAmb IAmb 17 10 55.8
comp=Z,10.0nm,0.9s
TOLK Toolik Lake Re 70.76 15 P P 17 11 05.8 +0.5
TOLK IAmb IAmb 17 11 06.6

comp=Z,9.9nm,0.8s
IMAR Indian Mountai 72.00 18 P **P** 17 11 12.4 -0.3
AMKA Amchitka 72.14 39 P **P** 17 11 13.4 -0.5
H21K Melozitna Rive 72.49 18 P **P** 17 11 15.0 -0.7
H21K IAmb IAmb 17 11 16.8
comp=Z,9.0nm,1.4s
H21K pP **pP** **17 12 02.1 +1.1**
BMAR Burnt Mountain 72.78 14 P **P** **17 11 18.6 +1.2**
BMAR **pP** **17 12 04.2 +1.3**
I21K Tanana 73.08 18 P **P** **17 11 19.0 -0.1**
H23K Yukon River 73.12 16 P **P** **17 11 19.7 +0.3**
H23K IAmb IAmb 17 11 21.1
comp=Z,5.4nm,0.7s
H23K pP **pP** **17 12 06.2 +1.4**
J20K Nowinta River 73.35 19 P **P** **17 11 21.1 +0.4**
J20K IAmb IAmb 17 11 22.1
comp=Z,7.2nm,0.6s
J20K pP **pP** **17 12 07.7 +1.5**
H24K Noodor Dome 73.48 16 P **P** **17 11 21.6 +0.1**
H24K pP **pP** **17 12 08.7 +1.6**
MLY Manley 73.50 17 P **P** **17 11 21.9 +0.2**
I23K Minto, Yukon-K 73.73 17 P **P** **17 11 22.9 +0.1**
I23K **pP** **17 12 10.0 +1.6**
C36M Paulatuk 73.74 6 P **P** **17 11 23.0 +0.1**
INK Inuvik 73.75 9 P **P** **17 11 23.4 +0.5**
INK IAmb IAmb 17 11 24.6
comp=Z,8.4nm,1.0s
INK pP **pP** **17 12 10.2 +1.8**
INK Inuvik 73.75 9 P **P** **17 11 23.5 +0.5**
INK *PP **pP** **17 12 10.2 +1.8**
INK pmax pmax
comp=Z,8.0nm,1.0s
PSA00 Pilbara Seismi 73.84 133 P **P** **17 11 23.7 -0.4**
PSA00 IAmb IAmb 17 11 25.0
comp=Z,6.6nm,0.8s
PSA00 Pilbara Seismi 73.84 133 P **P** **17 11 23.9 -0.2**
PSA00 IAmb IAmb 17 11 25.0
comp=Z,40nm,1.3s
K20K Telida 74.03 19 P **P** **17 11 25.2 +0.4**
K20K IAmb IAmb 17 11 26.1
comp=Z,8.0nm,0.7s
K20K pP **pP** **17 12 12.5 +2.2**
MDM Murphy Dome 74.15 16 P **P** **17 11 24.7 -0.7**
BPAW Bear Paw Mtn. 74.22 18 P **P** **17 11 25.4 -0.4**
BPAW pP **pP** **17 12 12.4 +1.1**
CAST Castle Rocks 74.50 19 P **P** **17 11 27.6 +0.1**
CAST IAmb IAmb 17 11 28.7
comp=Z,13nm,0.9s
CAST **pP** **17 12 15.3 +2.4**
CCB Clear Creek Bu 74.51 16 P **P** **17 11 26.6 -0.9**
IL31 74.61 16 P **P** **17 11 26.9 -1.0**
ILAR Eielson Array 74.61 16 P **P** **17 11 27.4 -0.6**
comp=Z,2.3nm,0.9s,baz=312,slow=4.7,SNR=22
ILAR pP **pP** **17 12 14.5 +0.8**
comp=Z,2.3nm,0.8s,baz=318,slow=4.9,SNR=7.3
comp=Z,2.3nm,0.9s
KTH Kantishna Hill 74.69 18 P **P** **17 11 28.1 -0.5**
KTH IAmb IAmb 17 11 29.5
comp=Z,9.5nm,0.8s
KTH pP **pP** **17 12 15.7 +1.6**
MTN Manton Dam 74.77 119 P **P** **17 11 28.7 -0.9**
MTN IAmb IAmb 17 11 49.3
comp=Z,16nm,1.2s
PPLA Purkeypile 74.91 19 P **P** **17 11 29.7 -0.2**
PPLA IAmb IAmb 17 11 31.1
comp=Z,7.0nm,0.6s
LBTB Lobatse 74.91 222 P **P** **17 11 31.0 +0.7**
LBTB Lobatse 74.91 222 P **P** **17 11 31.0 +0.7**
LBTB pmax pmax
comp=Z,11nm,0.6s
DBIC Dimbokro 74.92 267 P **P** **17 11 29.6 -0.9**
comp=Z,3.8nm,0.5s,baz=55,slow=5.4,SNR=8.2
comp=Z,3.8nm,0.5s
I26K Coal Creek Min 74.92 14 P **P** **17 11 29.9 +0.1**
KIC Kosan Boka 75.00 267⫛ *e*PKP2 **P** **17 11 29.9 -1.2**
comp=Z,10nm,0.5s
TIC Toumodi 75.06 267⫛ *e*PKP2 **P** **17 11 30.5 -1.0**
comp=Z,0.5nm,0.1s
J25K Salcha River, 75.08 15 P **P** **17 11 30.2 -0.6**
J25K **pP** **17 12 17.3 +0.8**
KNRA Kununurra 75.11 123 P **P** **17 11 31.5 -0.1**
M19K Big River Lodg 75.11 21 P **P** **17 11 31.2 +0.3**
M19K IAmb IAmb 17 11 41.4
comp=Z,9.2nm,1.4s
TSUM Tsumeb 75.16 232 P **P** **17 11 32.3 +0.4**
LIC Lamto 75.31 267 *e*PKP2 **P** **17 11 31.2 -1.7**
comp=Z,10nm,0.6s
RND Reindeer 75.32 17 P **P** **17 11 31.6 -0.6**
RND IAmb IAmb 17 11 32.4
comp=Z,5.1nm,0.5s
RND Reindeer 75.32 17 P **P** **17 11 31.6 -0.6**
RND pmax pmax
comp=Z,5.0nm,0.5s
J26L Joseph Creek 75.55 15 P **P** **17 11 33.7 +0.2**
J26L IAmb IAmb 17 11 34.1
comp=Z,4.4nm,0.7s
J26L **pP** **17 12 19.8 +0.5**
N18K Kilae Creek 75.66 22 P **P** **17 11 34.7 +0.6**
N18K IAmb IAmb 17 11 55.6
comp=Z,16nm,1.5s
I29M Ogilvie Camp, 75.77 12 P **P** **17 11 34.4 -0.3**
I29M IAmb IAmb 17 11 35.5
comp=Z,8.0nm,1.1s
I29M **pP** **17 12 21.3 +0.8**
SKT Skwentna 75.84 19 P **P** **17 11 34.5 -0.6**
SKT IAmb IAmb 17 11 35.4
comp=Z,9.7nm,0.9s
SKT **pP** **17 12 21.9 +1.1**
SCRK Sand Creek 75.93 15 P **P** **17 11 35.4 -0.3**
SCRK IAmb IAmb 17 11 36.4
comp=Z,4.3nm,0.6s
SCRK pP **pP** **17 12 23.1 +1.6**
RIDG Independent Ri 75.95 16 P **P** **17 11 34.9 -0.8**
DHY Denali Highway 75.95 17 P **P** **17 11 35.3 -0.7**
DHY IAmb IAmb 17 11 36.8
comp=Z,8.4nm,0.6s
DOT Dot Lake 76.20 15 P **P** **17 11 36.9 -0.3**
K27K Chicken 76.27 14 P **P** **17 11 37.6 +0.1**
PAX Paxson 76.49 16 P **P** **17 11 38.7 -0.1**
PAX IAmb IAmb 17 11 39.5
comp=Z,5.2nm,0.7s
PAX **pP** **17 12 25.6 +0.9**
O18K Koktuh Hills 76.53 22 P **P** **17 11 39.6 +0.6**
O18K IAmb IAmb 17 11 40.8
comp=Z,7.7nm,0.7s
DAWY Dawson 76.76 13 P **P** **17 11 40.2 -0.1**
P18K Big Mountain, 76.89 22 P **P** **17 11 41.2 +0.2**
P18K IAmb IAmb 17 11 49.9
comp=Z,18nm,1.5s
SCM Sheep Creek Mo 77.03 18 P **P** **17 11 41.4 -0.5**
SCM IAmb IAmb 17 11 42.3
comp=Z,8.0nm,0.6s
SCM Sheep Creek Mo 77.03 18 P **P** **17 11 41.4 -0.5**
SCM pmax pmax
comp=Z,8.0nm,0.6s
L27K Beaver Creek, 77.19 15 P **P** **17 11 43.0 +0.3**
BCAR Beaver Creek A 77.20 15 P **P** **17 11 43.2 +0.5**
MORW Morawa 77.71 141 P **P** **17 11 45.6 -0.3**
M27K Edge Creek, AK 77.81 15 P **P** **17 11 46.4 +0.1**
M27K IAmb IAmb 17 11 48.7
comp=Z,12nm,1.2s
M27K **pP** **17 12 33.6 +1.2**
BOSA Boshof 77.97 220 P **P** **17 11 47.1 -0.4**
comp=Z,5.6nm,0.7s,baz=54,slow=4.8,SNR=11
comp=Z,5.6nm,0.7s
BOSA Boshof 77.97 220 P **P** **17 11 46.8 -0.7**
BOSA IAmb IAmb 17 11 48.8
comp=Z,5.9nm,0.8s
BOSA Boshof 77.97 220 P **P** **17 11 46.8 -0.7**
BOSA pmax pmax
comp=Z,6.0nm,0.8s
HYT Haines Junctio 80.09 14 P **P** **17 11 58.3 -0.4**
HYT IAmb IAmb 17 12 00.4
comp=Z,8.8nm,0.9s
WHY Whitehorse 80.73 13 P **P** **17 12 01.3 -0.7**
YKA Yellowknife Ar 81.12 3 P **P** **17 12 04.3 +0.4**
comp=Z,13nm,0.7s,baz=349,slow=5.2,SNR=70
YKA pP **pP** **17 12 51.4 +0.9**
comp=Z,3.1nm,0.6s,baz=351,slow=5.6,SNR=5.5
comp=Z,13nm,0.7s
YKA Yellowknife Ar 81.12 3 P **P** **17 12 04.0 +0.1**
YKA pP **pP** **17 12 50.9 +0.4**
YKA Yellowknife Ar 81.12 3 *i* P **P** **17 12 04.3 +0.4**
YKA pmax pmax
comp=Z,14nm,0.7s
P33M Teslin, Yukon 81.50 12 P **P** **17 12 06.2 +0.1**
P33M IAmb IAmb 17 12 07.1
comp=Z,11nm,0.8s
WB0 Warramunga Arr 81.79 122 P **P** **17 12 07.0 -1.1**
WB0 IAmb IAmb 17 12 07.9
comp=Z,9.0nm,0.8s
WRA Warramunga Arr 81.87 122 P **P** **17 12 07.5 -1.0**
comp=Z,9.4nm,0.7s,baz=324,slow=4.9,SNR=102
comp=Z,9.4nm,0.7s
WRA Warramunga Arr 81.87 122 P **P** **17 12 07.4 -1.1**
WRA Warramunga Arr 81.87 122 *i* P **P** **17 12 07.5 -1.0**
WRA pmax pmax
comp=Z,10.0nm,0.7s
WRAB Tennant Creek 81.87 122*c* *i* P **P** **17 12 07.7 -0.8**
WRAB pmax pmax
comp=Z,14nm,0.8s
WB2 Warramunga Arr 81.88 122 P **P** **17 12 07.7 -0.8**
WR0 Warramunga Arr 82.02 122 P **P** **17 12 08.3 -1.0**
WR0 IAmb IAmb 17 12 09.1
comp=Z,8.9nm,0.8s
SCHQ Schefferville 82.07 337 P **P** **17 12 09.1 0.0**
comp=Z,3.4nm,0.6s,baz=22,slow=4.0,SNR=8.5
comp=Z,3.4nm,0.6s
SCHQ Schefferville 82.07 337 P **P** **17 12 09.1 0.0**
SCHQ IAmb IAmb 17 12 11.3
comp=Z,10nm,1.3s
AS31 Alice Springs 84.15 125 P **P** **17 12 19.2 -0.9**
AS31 IAmb IAmb 17 12 20.0
comp=Z,3.7nm,0.6s
ASAR Alice Springs 84.15 125 P **P** **17 12 19.4 -0.8**
ASAR Alice Springs 84.15 125 P **P** **17 12 19.4 -0.8**
FCC Fort Churchill 84.19 352 P **P** **17 12 20.7 +0.9**
FCC IAmb IAmb 17 12 21.4
comp=Z,8.6nm,0.9s
FCC Fort Churchill 84.19 352 P **P** **17 12 20.7 +0.9**
FCC pmax pmax
comp=Z,9.0nm,0.9s
FORT Forrest 85.59 134 P **P** **17 12 26.9 -0.2**
CTAO Charters Tower 90.40 115 P **P** **17 12 49.2 -1.0**
CTAO IAmb IAmb 17 12 50.3
comp=Z,6.2nm,1.1s
CTAO Charters Tower 90.40 115 P **P** **17 12 49.2 -1.0**
CTAO pmax pmax
comp=Z,6.0nm,1.1s
EDM Edmonton 90.44 3 P **P** **17 12 50.1 +0.1**
EDM Edmonton 90.44 3 P **P** **17 12 50.1 +0.1**
EDM pmax pmax
comp=Z,16nm,0.6s
ULM Lac du Bonnet 92.76 352 P **P** **17 13 00.4 -0.4**
comp=Z,4.8nm,0.7s,baz=24,slow=4.4,SNR=5.0
comp=Z,4.8nm,0.7s
ULM Lac du Bonnet 92.76 352 IAmb IAmb 17 13 01.3
comp=Z,4.9nm,0.8s
STKA Stephens Creek 94.69 127 P **P** **17 13 09.9 +0.1**
comp=Z,1.4nm,0.6s,baz=324,slow=8.1,SNR=3.7
comp=Z,1.4nm,0.6s
PDAR Pinedale Array 100.99 1 P **Pdif** **17 13 38.8 +0.4**
comp=Z,0.3nm,0.6s,baz=48,slow=1.3,SNR=2.7
TXAR Lajitas Array 114.22 355 PKP **PKiKP** **17 18 27.4 0.0**
comp=Z,0.1nm,0.5s,baz=90,slow=0.9,SNR=1.8
VNDA Vanda 125.55 164 PKP **PKPdf** **17 18 46.1 -1.4**
comp=Z,1.0nm,0.7s,baz=294,slow=3.2,SNR=9.1
QSPA South Pole Qui 126.41 180 PKPdf **PKPdf** **17 18 48.2 -1.3**
SBA Scott Base 126.64 165 PKPdf **PKPdf** **17 18 48.3 -1.3**
SBA Scott Base 126.64 165 PKiKP **PKPdf** **17 18 48.3 -1.3**
CPUP Villa Florida 135.43 268 PKP **PKPdf** **17 19 07.2 -0.5**
comp=Z,1.0nm,0.5s,baz=22,slow=5.4,SNR=3.7
PLCA Paso Flores 150.07 250 PKPbc **PKPbc** **17 19 37.9 -0.4**
comp=Z,7.4nm,0.9s,baz=110,slow=4.6,SNR=12

MAN 24 17:07:37.0, 18°.19N×118°.87E, h334km, mb4.6, ML3.5, MS3.3, Philippine Islands region

*TUL **24** 17:15:13.8±1.4, 35°.49N±0°.01×96°.98W±0°.02, h7km±5km, ML2.5, mb_Lg2.2/18(NEIC), Error ellipse: s-maj=2.3km s-min=1.4km az=144.0*
NEIC 24 17:15:14.2±1.5, 35°.51N±0°.02×97°.00W±0°.02, h12km±5km, Error ellipse: s-maj=2.9km s-min=1.5km az=145.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKCSW	**OKLAHOMA CITY**	**0.38**	**254**		**Pg**	17 15 21.5	-0.3
OKCSW				Sg	Sg	17 15 27.1	+0.4
OKCFA	**Oklahoma City**	**0.38**	**256**	**Pg**	**Pg**	17 15 21.7	-0.2
OKCFA				Sg	Sg	17 15 27.5	+0.4
FNO	**Franklin**	**0.42**	**233**	**Pg**	**Pg**	17 15 22.1	-0.4
FNO				Sg	Sg	17 15 28.1	0.0
TUL1	**Leonard**	**1.06**	**67**		**Pb**	17 15 34.0	-0.5
TUL1				Sg	Sb	17 15 48.0	-0.4
X34A	**Smith Ranch, M**	**1.14**	**217**	**Pg**	**Pb**	17 15 35.2	-0.6
X34A				Sg	Sn	17 15 51.4	-0.1
T35A	**Sooner Cattle**	**1.46**	**15**	**Pn**	**Pn**	17 15 40.2	-0.2
T35A				Sn	Sg	17 16 00.8	-0.4
X37A	**Clayton**	**1.62**	**124**		**Pn**	17 15 42.1	-0.5
WMOK	**Wichita Mounta**	**1.65**	**243**		**Pn**	17 15 42.0	-1.1
Z35A	**Perchaven, San**	**2.18**	**186**	**Pn**	**Pn**	17 15 50.8	+0.4
U38A	**Gravette**	**2.31**	**66**	**Pn**	**Pn**	17 15 52.0	-0.2
W39A	**Magazine**	**2.64**	**96**		**Pn**	17 15 57.2	+0.5
W39A				IAmb_Lg		17 16 42.8	
comp=Z,6.1nm,1.1s							
MIAR	**Mount Ida**	**2.96**	**108**	**Pn**	**Pn**	17 16 02.7	+1.6
S39A	**Bolivar**	**3.67**	**53**	**Pn**	**Pn**	17 16 11.0	+0.1
S39A				IAmb_Lg		17 17 14.8	
comp=Z,6.5nm,0.8s							
WHAR	**Wooly Hollow**	**3.85**	**92**	**Pn**	**Pn**	17 16 12.2	-1.1
WHAR				IAmb_Lg		17 17 19.8	
comp=Z,8.3nm,1.0s							
W41B	**Gary Mavity, V**	**3.90**	**94**	IAmb_Lg		17 17 25.2	
comp=Z,4.5nm,0.8s							
CBKS	**Cedar Bluff**	**3.96**	**327**	**Pn**	**Pn**	17 16 11.2	-3.7
MGMO	**Mountain Grove**	**4.15**	**65**	**Pn**	**Pn**	17 16 13.8	-3.7
MGMO				IAmb_Lg		17 17 30.4	
comp=Z,4.1nm,0.9s							
R40A	**Maddies Statio**	**4.70**	**52**	IAmb_Lg		17 17 44.0	
comp=Z,5.2nm,0.7s							
LCAR	**Lake Charles**	**4.78**	**82**		**Pn**	17 16 24.0	-2.1
P38A	**Dawn**	**4.94**	**33**	IAmb_Lg		17 17 55.7	
comp=Z,2.9nm,0.7s							
P40A	**Paris**	**5.62**	**43**	**Pn**	**Pn**	17 16 36.0	-1.5
S44A	**Carbondale**	**6.60**	**68**	IAmb_Lg		17 18 55.1	
comp=Z,6.6nm,0.9s							

*DJA **24** 17:31:03.7±0.3, 4°.5S±3°.12°.8E±°, h10km, M4.0/9, mb4.2/4, MLv3.9/9*
*NEIC **24** 17:31:07.8±2.2, 3°.98S±0°.08×128°.49E±0°.05, h46km±7km, mb4.3/31, Error ellipse: s-maj=11.4km s-min=6.2km az=198.0*
*IDC **24** 17:31:09.7±4.1, 4°.01S×128°.40E, h66km±38km, mb3.8/10, mbtmp4.1/11, ML3.6/1, Error ellipse: s-maj=32.1km s-min=16.7km az=62.0*
ISC 24 17:31:05.9±0.4, 4°.04S±0°.06×128°.47E±0°.06, h35km, n59, σ1847/55, mb4.3/20, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	**0.44**	**322**	P	**Pn**	**17 31 11.8**	**-3.9**
MSAI	**Masohi**	**0.83**	**34**	P	**Pn**	**17 31 19.2**	**-1.8**
NLAI	**Namlea**	**1.58**	**300**	P	**Pn**	**17 31 30.2**	**-1.1**
SANI	**Sanana**	**3.16**	**308**	P	**Pn**	**17 31 52.6**	**-0.6**
LBMI	**Labuha**	**3.51**	**344**	P	**Pn**	**17 31 59.4**	**+1.4**
FAKI	**Fak Fak**	**3.94**	**74**		**Pn**	**17 32 04.9**	**+1.1**
FAKI				Sn	**Sn**	**17 32 47.5**	**-1.3**
FAKI	**Fak Fak**	**3.94**	**74**	P	**Pn**	**17 32 04.4**	**+0.6**
SOEI	**Soe**	**7.05**	**216**	Pn	Pn	17 32 50.2	+3.5
KAPI	**Kappang**	**8.74**	**263**	P	**Pn**	**17 33 11.9**	**+2.0**
0.7nm,0.3s,baz=172,slow=2.8,SNR=5.9							
9.8nm,0.7s							
MTN	**Manton Dam**	**9.14**	**163**	Pn	**Pn**	**17 33 16.9**	**+1.6**
KNRA	**Kununurra**	**11.57**	**179**	Pn	**Pn**	**17 33 48.5**	**-0.1**
WB0	**Warramunga Arr**	**16.67**	**160**	Pn	**Pn**	**17 34 55.3**	**-1.6**
WRA	**Warramunga Arr**	**16.82**	**161**	P	**Pn**	**17 34 55.8**	**-2.9**
1.1nm,0.6s,baz=346,slow=13,SNR=10							
WB2	**Warramunga Arr**	**16.82**	**161**		**Pn**	**17 34 55.5**	**-3.3**
WR0	**Warramunga Arr**	**16.90**	**160**	P	**Pn**	**17 34 56.0**	**-3.7**
WR0				IAmb	IAmb	17 35 25.7	
comp=Z,18nm,1.5s							
COEN	**Coen**	**17.54**	**125**	P	**P**	**17 35 07.5**	**-1.2**
COEN				IAmb	IAmb	17 35 20.2	
comp=Z,13nm,1.1s
PSA00 Pilbara Seismi 19.34 205 P **Pn** **17 35 28.3 -1.3**
PSA00 Pilbara Seismi 19.34 205 P **Pn** **17 35 28.7 -0.9**
PSA00 IAmb IAmb 17 35 42.0
comp=Z,20nm,1.4s
AS31 Alice Springs 20.21 165 P Pn 17 35 39.7 -0.3
AS31 IAmb IAmb 17 35 42.1
comp=Z,4.9nm,0.7s
ASAR Alice Springs 20.21 165 P Pn 17 35 39.5 -0.5
CTA Charters Tower 23.56 134 P **P** **17 36 15.3 +1.9**
comp=Z,2.5nm,0.8s,baz=312,slow=9.2,SNR=4.0
comp=Z,2.5nm,0.8s
CTAO Charters Tower 23.56 134 P **P** **17 36 15.2 +1.9**
CTAO IAmb IAmb 17 36 44.1
comp=Z,14nm,1.4s
MYKOM Kota Tinggi 25.27 283 P **P** **17 36 28.5 -0.7**
MYKOM IAmb IAmb 17 36 51.9
comp=Z,21nm,1.4s
FORT Forrest 26.60 181 P **P** **17 36 42.6 +1.6**
BBOO Buckleboo 29.50 167 P **P** **17 37 07.5 +0.6**
STKA Stephens Creek 30.32 157 P **P** **17 37 15.4 +1.3**
comp=Z,4.2nm,0.8s,baz=328,slow=12,SNR=5.6
comp=Z,4.2nm,0.8s
STKA Stephens Creek 30.32 157 IAmb IAmb 17 37 16.3
comp=Z,1.6nm,0.9s
CM31 Chiang Mai Arr 36.69 308 P **P** **17 38 09.0 -0.7**
CM31 IAmb IAmb 17 38 12.4
comp=Z,7.9nm,1.2s
CMAR Chiang Mai Arr 36.69 308 P **P** **17 38 10.7 +0.9**
comp=Z,1.6nm,0.7s,baz=139,slow=7.3,SNR=14
comp=Z,1.6nm,0.7s
CMAR Chiang Mai Arr 36.69 308 P **P** **17 38 08.7 -1.0**
TOO Toolangi 36.84 157 P **P** **17 38 09.8 -1.1**
CHTO Chiang Mai 36.89 309 P **P** **17 38 11.9 +0.5**
CHTO IAmb IAmb 17 38 13.5
comp=Z,5.2nm,0.8s
DZM Mont Dzumac 40.93 119 P **P** **17 38 43.7 -1.7**
DZM IAmb IAmb 17 38 56.3
comp=Z,7.8nm,1.2s
KSRS Korea Array 41.28 359 P **P** **17 38 48.5 +0.7**
comp=Z,0.9nm,0.7s,baz=173,slow=11,SNR=4.5
comp=Z,0.9nm,0.7s
USRK Ussuriysk Ar. 48.12 3 P **P** **17 39 42.8 +0.5**
comp=Z,1.2nm,0.5s,baz=176,slow=7.3,SNR=5.6
comp=Z,1.2nm,0.5s
QRZ Quartz Range 53.88 139 P **P** **17 40 27.7 +1.9**
ULN Ulaanbaatar 54.99 343 P **P** **17 40 34.3 +0.4**
ULN IAmb IAmb 17 40 35.2
comp=Z,2.6nm,0.6s
TUWZ Tuamarina 55.10 139 P **P** **17 40 34.8 +0.2**
SONM Songino Array 55.17 342 P **P** **17 40 35.0 0.0**
comp=Z,1.0nm,0.9s,baz=160,slow=7.9,SNR=5.7
comp=Z,1.0nm,0.9s
SONM Songino Array 55.17 342 P **P** **17 40 35.1 0.0**
BKZ Black Stump Fm 55.76 136 P **P** **17 40 40.1 +0.6**
PEA0B Petropavlovsk- 62.03 19 P **P** **17 41 22.7 +0.1**
PETK Petropavlovsk- 62.03 19 P **P** **17 41 23.0 +0.4**
comp=Z,4.6nm,0.9s,baz=155,slow=4.9,SNR=5.5
comp=Z,4.6nm,0.9s
CASY Casey 63.39 188 P **P** **17 41 31.0 -0.4**
CASY IAmb IAmb 17 41 32.1
comp=Z,4.6nm,1.2s
MK31 Makanchi Array 64.92 327 P **P** **17 41 41.8 -0.1**
MKAR Makanchi Array 64.92 327 P **P** **17 41 41.8 -0.2**
comp=Z,1.7nm,0.6s,baz=124,slow=8.5,SNR=17
MKAR PcP **PcP** **17 42 15.2 +0.3**
comp=Z,0.7nm,0.7s,baz=119,slow=4.7,SNR=4.9
comp=Z,1.7nm,0.6s
MKAR Makanchi Array 64.92 327 PcP **PcP** **17 42 15.0 +0.1**
MAKZ Makanchi 65.11 327 P **P** **17 41 42.9 -0.2**
MAKZ IAmb IAmb 17 41 43.3
comp=Z,1.3nm,0.6s
YAK Yakutsk 65.89 1 P **P** **17 41 47.6 -0.1**
ZALV Zalesovo Beam 68.27 334 P **P** **17 42 02.2 -0.8**
comp=Z,1.3nm,0.8s,baz=134,slow=4.3,SNR=6.3
comp=Z,1.3nm,0.8s
KURK Kurchatov 69.21 329 P **P** **17 42 08.8 -0.2**
KURK IAmb IAmb 17 42 09.2
comp=Z,2.6nm,0.8s
TIXI Tiksi 75.54 0 P **P** **17 42 46.5 +0.2**
TIXI IAmb IAmb 17 42 47.2
comp=Z,2.7nm,0.7s
ABKAR Akbulak array 79.25 322 P **P** **17 43 10.2 +2.6**
ABKAR Akbulak array 79.25 322 P **P** **17 43 10.1 +2.5**
ABKAR IAmb IAmb 17 43 12.1
comp=Z,2.1nm,0.7s
ARCES ARCESS Array B 98.29 340 P Pdif 17 44 38.1 -1.4
comp=Z,1.6nm,1.0s,baz=78,slow=8.4,SNR=4.2
comp=Z,1.6nm,1.0s
ARCES ARCESS Array B 98.29 340 IAmb IAmb 17 44 49.9
comp=Z,3.1nm,1.1s
TORD Torodi Ar. Bea 126.69 283 PKP **PKiKP** **17 50 06.5 -0.7**
comp=Z,0.4nm,0.7s,baz=76,slow=2.9,SNR=3.7
CPUP Villa Florida 149.30 170 PKPbc **PKiKP** **17 50 51.8 -1.2**
comp=Z,1.1nm,0.3s,baz=190,slow=0.7,SNR=4.1
LPAZ La Paz 153.98 141 PKPbc **PKiKP** **17 51 03.1 -0.6**
comp=Z,0.5nm,0.4s,baz=198,slow=3.2,SNR=2.8

*KEA **24** 18:24:50.1, 38°.84N×125°.87E, h13km, ML2.5/5*
*KMA **24** 18:24:52.4±0.5, 38°.78N×125°.87E, h1km±5km, Error ellipse: s-maj=4.6km s-min=1.9km az=21.0*
ISC 24 18:24:51.2±1.1, 38°.84N±0°.03×125°.88E±0°.03, h5km±13km, n13, σ059/23, North Korea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PYAG	**Pyongyang**	**0.23**	**336**	Pg	**Pg**	**18 24 55.6**	**-0.2**
PYAG				Sg	**Sg**	**18 24 59.0**	**+0.1**
PYAG				AML	AML		
comp=N,1μm,0.1s							
PYAG				AML	AML		
comp=E,1μm,0.1s							
PYAG				AML	AML		
comp=Z,417nm,0.1s							
PYS	**Pyongsong**	**0.41**	**357**	Pg	**Pg**	**18 24 59.0**	**-0.2**
PYS				Sg	**Sg**	**18 25 04.7**	**0.0**
PYS				AML	AML		
comp=N,537nm,0.1s							
PYS				AML	AML		
comp=E,1μm,0.2s							
PYS				AML	AML		
comp=Z,1μm,0.2s							
HJU	**Haeju**	**0.80**	**189**	Pg	**Pg**	**18 25 05.8**	**-0.7**
HJU				Sg	**Sg**	**18 25 15.8**	**-1.1**
HJU				AML	AML		
comp=N,1μm,0.2s							
HJU				AML	AML		
comp=E,903nm,0.2s							
HJU				AML	AML		
comp=Z,1μm,0.2s							
KSMUS	**Musan**	**1.17**	**144**	P	**Pn**	**18 25 14.2**	**+0.1**
SNR=104							
KSGAH	**Ganghwa**	**1.21**	**158**	P	Pn	**18 25 14.9**	**+0.2**
SNR=44							
KSGAH				S	**Sn**	**18 25 30.9**	**-0.6**
KSBAR	**Backryungdo**	**1.25**	**227**	P	**Pg**	**18 25 15.5**	**+0.3**
SNR=198							
KSBAR				P	**Pg**	**18 25 15.5**	**+0.3**
SNR=198							
KSBAR	**Backryungdo**	**1.25**	**227**	P	**Pg**	**18 25 16.5**	**+1.3**
SNR=11							
KSBAR				P	**Pg**	**18 25 16.5**	**+1.3**
SNR=11							
KSDDC	**Dongducheon**	**1.32**	**135**	P	**Pg**	**18 25 16.9**	**+0.5**
SNR=24							
DACB	**Daecheong-do R**	**1.36**	**223**	P	**Pg**	**18 25 17.7**	**+0.4**
SNR=9.0							
KSCWO	**Cheorwon**	**1.49**	**120**	P	**Pg**	**18 25 20.0**	**+0.3**
SNR=47							
KSCWO				P	**Pg**	**18 25 20.0**	**+0.3**
SNR=47							
HWCB	**Hwacheon**	**1.53**	**113**	P	**Pg**	**18 25 20.8**	**+0.3**
SNR=69							
HWCB				P	**Pg**	**18 25 20.8**	**+0.3**
SNR=69							
SUJ	**Sinuiju**	**1.66**	**320**	Pg	**Pb**	**18 25 22.0**	**-0.2**
SUJ				Sg	**Sg**	**18 25 44.4**	**-0.1**
SUJ				AML	AML		
comp=N,56nm,0.2s							
SUJ				AML	AML		
comp=E,67nm,0.4s							
SUJ				AML	AML		
comp=Z,107nm,0.3s							
HHU	**Hamhung**	**1.68**	**49**	Pg	**Pb**	**18 25 22.8**	**+0.3**
HHU				Sg	**Sg**	**18 25 45.3**	**+0.2**

HHU					AML	AML		
	comp=N,99nm,0.4s							
HHU					AML	AML		
	comp=E,74nm,0.4s							
HHU					AML	AML		
	comp=Z,79nm,0.3s							

*INET **24** 18:34:47.9±0.4, 12°.92N×87°.04W, h8km±3km, MW3.9*
*SNET **24** 18:34:50.1±1.2, 12°.96N×87°.14W, h9km±14km, ML3.4*

ISC 24 18:34:47.7±1.0, **12°.94N**±0°.04×**87°.02W**±0°.04, **h16**km±10km, **n15**, σ0°**37**/21, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**0.24**	**188**	*e*P	**Pg**	**18 34 52.8**	**-0.3**
CRIN				*e*S	**Sg**	**18 34 57.1**	**+0.2**
TELN	**Telica**	**0.38**	**152**	*e*P	**Pg**	**18 34 55.9**	**+0.4**
CSGN	**Cosiguina Volc**	**0.53**	**274**	*e*P	**Pb**	**18 34 58.3**	**-0.4**
CNGN	**Cerro Negro**	**0.54**	**145**	*e*P	**Pg**	**18 34 58.5**	**+0.1**
MOMN	**Momotombo**	**0.70**	**139**	*e*P	**Pb**	**18 35 01.6**	**0.0**
CNCH	**Conchagua**	**0.86**	**293**	*e*P	**Pb**	**18 35 04.1**	**-0.3**
CNCH				*e*S	**Sg**	**18 35 15.8**	**-0.2**
CNCH				IAML		18 35 20.7	
	comp=Z,3μm,0.3s						
LCND	**La Caada**	**0.93**	**293**	*e*P	**Pb**	**18 35 05.0**	**-0.3**
LCND				*e*S	**Sg**	**18 35 17.4**	**-0.5**
LCND				IAML		18 35 20.4	
	comp=Z,810nm,0.4s						
RCON	**San Juan de Ri**	**1.00**	**57**	*e*P	**Pn**	**18 35 07.3**	**+0.2**
HUEN		**1.02**	**126**	*e*P	**Pb**	**18 35 07.0**	**+0.1**
MATN	**Matagalpa**	**1.06**	**90**	*e*P	**Pb**	**18 35 06.8**	**-0.9**
TGUH	**Tegucigalpa,Un**	**1.14**	**347**	*e*P	**Pg**	**18 35 09.9**	**+0.2**
TGUH				*e*S	**Sg**	**18 35 25.1**	**+0.4**
PACA	**Pacayal**	**1.38**	**293**	*e*P	**Pb**	**18 35 11.3**	**0.0**
PACA				*e*S	**Sb**	**18 35 30.3**	**-0.2**
PACA				IAML		18 35 38.2	
	comp=Z,3μm,0.4s						
BOAB	**BOACO BROADBAN**	**.40**	**110**	*e*P	**Pn**	**18 35 12.5**	**-0.1**
SCLA	**Alcaldia de Sa**	**1.83**	**295**	*e*P	**Pb**	**18 35 21.1**	**+0.3**
SCLA				*e*S	**Sb**	**18 35 43.6**	**0.0**
JAYA	**Jayaque - finc**	**2.47**	**287**	*e*P	**Pn**	**18 35 27.7**	**+0.3**
JAYA				IAML		18 36 07.9	
	comp=Z,72nm,0.3s						

*SKO **24** 18:48:40.4, 41°.91N×23°.00E, h15km*
*SOF **24** 18:48:40.4, 41°.94N×23°.03E, h19km, MD3.0*
*ISK **24** 18:48:41.1, 41°.90N×23°.02E, h9km, ML3.0/5*
*ATH **24** 18:48:42.1, 41°.91N×23°.03E, h13km±2km, ML3.0/6, Error ellipse: s-maj=2.6km s-min=1.6km az=359.0*
*BEO **24** 18:48:42.0±0.2, 41°.95N×23°.00E, h14km±1km, ML2.9/18*
*THE **24** 18:48:43.3, 41°.84N×23°.04E, h10km, ML2.9/10, Error ellipse: s-maj=1.0km s-min=0.6km az=167.0*

ISC 24 18:48:41.7±0.9, **41°.93N**±0°.02×**22°.98E**±0°.02, **h13**km±7km, **n88**, σ1°**17**/133, **16C-6D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KKB	**Krupnik**	**0.10**	**128**	*i* Pg	**Pg**	**18 48 44.8**	**+0.2**
MMB	**Musomiste**	**0.65**	**121**	*i* Pg	**Pb**	**18 48 54.5**	**-0.5**
VAY	**Valandovo**	**0.68**	**207**	*e*Pg	**Pb**	**18 48 55.6**	**+0.2**
VAY				*e*Sg	**Sb**	**18 49 05.0**	**+0.3**
VAY	**Valandovo**	**0.68**	**207**	*i* Pg	**Pb**	**18 48 55.6**	**+0.2**
VAY				*i* Sg	**Sb**	**18 49 04.7**	**0.0**
VAY				*e*Lg	Lg	18 49 07.1	
	comp=N,250nm,0.3s						
VAY				*e*Lg	Lg	18 49 09.3	
	comp=E,362nm,0.8s						
BOSS	**Bosilegrad**	**0.68**	**327**	*e*Pg	**Pg**	**18 48 54.3**	**-0.7**
BOSS				*e*Sg	**Sg**	**18 49 03.4**	**-0.6**
VTS	**Vitosha**	**0.72**	**15** ⇓S		**Sg**	**18 49 03.7**	**-1.5**
VTS	**Vitosha**	**0.72**	**15**	*i* Pg	**Pg**	**18 48 54.6**	**-1.1**
VTS				*i* Sg	**Sg**	**18 49 03.7**	**-1.5**
VTS	**Vitosha**	**0.72**	**15**	*i* Pg	**Pg**	**18 48 54.6**	**-1.1**
KNT	**Kendrikon**	**0.77**	**185**	P	**Pg**	**18 48 56.4**	**-0.2**
KNT				S	**Sg**	**18 49 06.5**	**-0.1**
KNT	**Kendrikon**	**0.77**	**185**	P	**Pg**	**18 48 56.4**	**-0.2**
KNT				S	**Sg**	**18 49 06.5**	**-0.1**
	comp=E,2μm,0.2s						
KNT	**Kendrikon**	**0.77**	**185**	PG	**Pg**	**18 48 56.0**	**-0.6**
KNT				SG	**Sg**	**18 49 06.5**	**-0.1**
KNT	**Kendrikon**	**0.77**	**185** ⇑	*i* Pg	**Pg**	**18 48 56.4**	**-0.2**
KNT				*i* Sg	**Sg**	**18 49 06.6**	**-0.1**
NVR	**Nevrokopi**	**0.87**	**131**	P	**Pg**	**18 48 57.9**	**-0.7**
NVR				S	**Sb**	**18 49 09.8**	**-0.6**
NVR				AML	AML	18 49 13.4	
	comp=E,2018μm,0.3s						
NVR				AML	AML	18 49 13.5	
	comp=N,2614μm,0.3s						
NVR	**Nevrokopi**	**0.87**	**131**	P	**Pg**	**18 48 58.0**	**-0.7**
NVR				S	**Sb**	**18 49 09.8**	**-0.6**
	comp=N,1μm,0.3s						
PRVS	**Prvonek**	**0.89**	**311**	*e*Pg	**Pb**	**18 48 58.6**	**-0.5**
PRVS				*e*Sg	**Sb**	**18 49 10.4**	**-0.5**
SRS	**Serrai**	**0.93**	**150**	*e*Pg	**Pb**	**18 48 59.0**	**-0.7**
SRS				*e*Sg	**Sb**	**18 49 11.4**	**-0.6**
SRS	**Serrai**	**0.93**	**150**	P	**Pb**	**18 48 59.0**	**-0.7**
SRS				S	**Sb**	**18 49 11.4**	**-0.6**
SRS				AML	AML	18 49 12.9	
	comp=N,1156μm,0.3s						
SRS				AML	AML	18 49 14.9	
	comp=E,1244μm,0.3s						
SRS	**Serrai**	**0.93**	**150**	P	**Pb**	**18 48 59.0**	**-0.7**
SRS				S	**Sb**	**18 49 11.4**	**-0.6**
	comp=E,658nm,0.3s						
SRS	**Serrai**	**0.93**	**150** ⇑	*i* Pg	**Pb**	**18 48 59.1**	**-0.7**
SRS				*i* Sg	**Sb**	**18 49 11.7**	**-0.3**
GRG	**Griva**	**1.06**	**205**	P	**Pb**	**18 49 01.7**	**-0.3**
GRG	**Griva**	**1.06**	**205**	P	**Pb**	**18 49 01.7**	**-0.3**
GRG				S	**Sg**	**18 49 16.6**	**+0.6**
	comp=E,332nm,0.4s						
GRG	**Griva**	**1.06**	**205**	PG	**Pb**	**18 49 01.7**	**-0.3**
GRG				SG	**Sg**	**18 49 16.4**	**+0.4**
GRG	**Griva**	**1.06**	**205**	*i* Pg	**Pb**	**18 49 01.9**	**-0.1**
PGB	**Panagyurishte**	**1.08**	**54**	*i* Pg	**Pb**	**18 49 01.1**	**-1.2**
SOH	**Sokhos**	**1.14**	**166**	P	**Pb**	**18 49 03.0**	**-0.3**
SOH				S	**Sg**	**18 49 18.0**	**-0.5**
SOH				AML	AML	18 49 21.1	
	comp=E,3089μm,0.6s						
SOH				AML	AML	18 49 21.8	
	comp=N,5438μm,0.4s						
SOH	**Sokhos**	**1.14**	**166**	P	**Pb**	**18 49 03.0**	**-0.3**
SOH				S	**Sg**	**18 49 18.0**	**-0.5**
	comp=N,2μm,0.5s						
SOH	**Sokhos**	**1.14**	**166**	*i* Pg	**Pb**	**18 49 03.1**	**-0.3**
SOH				*i* Sg	**Sn**	**18 49 18.7**	**-0.2**
SKO	**Skopje**	**1.15**	**273**	*e*Pg	**Pn**	**18 49 03.5**	**-0.1**
SKO				*e*Sg	**Sb**	**18 49 19.8**	**+1.4**
SKO	**Skopje**	**1.15**	**273**	*i* Pg	**Pn**	**18 49 03.8**	**+0.2**
SKO				*i* Sg	**Sg**	**18 49 20.9**	**+2.0**
BARS	**Barje**	**1.24**	**316**	*e*Pg	**Pn**	**18 49 04.9**	**+0.1**
BARS	**Barje**	**1.24**	**316**	*e*Pn	Pg	18 49 17.8	+12
BARS				*e*Sg	**Sb**	**18 49 20.6**	**-0.4**
BARS				*e*Sn	Sg	18 49 44.9	+23
BARS	**Barje**	**1.24**	**316**	*i* Pg	**Pn**	**18 49 04.8**	**-0.1**
BARS				*i* Sg	**Sn**	**18 49 22.3**	**+0.8**
THE	**Thessaloniki**	**1.29**	**181**	P	**Pb**	**18 49 05.8**	**-0.1**
THE				S	**Sn**	**18 49 22.4**	**-0.2**
THE				AML	AML	18 49 25.9	
	comp=E,821μm,0.4s						
THE				AML	AML	18 49 26.6	
	comp=N,1253μm,0.5s						
THE	**Thessaloniki**	**1.29**	**181**	P	**Pb**	**18 49 05.8**	**-0.1**
THE				S	**Sn**	**18 49 22.4**	**-0.2**
	comp=N,515nm,0.5s						
THE	**Thessaloniki**	**1.29**	**181**	*i* Pg	**Pb**	**18 49 05.9**	**-0.1**
THE				*i* Sg	**Sn**	**18 49 22.7**	**+0.1**
PLD	**Plovdiv**	**1.29**	**81**	*e*Pg	**Pn**	**18 49 05.3**	**-0.3**
PLD				*e*Sg	**Sg**	**18 49 23.6**	**+0.2**
PLD	**Plovdiv**	**1.29**	**81**	PN	**Pn**	**18 49 05.2**	**-0.3**
PLD				SN	**Sg**	**18 49 23.6**	**+0.2**
PLD	**Plovdiv**	**1.29**	**81**	*i* Pg	**Pb**	**18 49 05.5**	**-0.4**
PLD				*i* Sg	**Sg**	**18 49 24.2**	**+0.8**
PLD	**Plovdiv**	**1.29**	**81**	*i* Pg	**Pg**	**18 49 06.0**	**-0.6**
RZN	**Rozhen**	**1.32**	**100**	*i* Pg	**Pb**	**18 49 05.9**	**-0.6**
KOKK	**Kokkinochori,**	**1.34**	**145**	P	**Pb**	**18 49 06.4**	**-0.4**
KOKK				S	**Sb**	**18 49 22.8**	**-1.1**
	comp=E,1352μm,0.3s						
KOKK				AML	AML	18 49 27.0	
	comp=N,1240μm,0.4s						

KOKK	**Kokkinochori,**	**1.34**	**145**	P		**Pb**	**18 49 06.4**	**-0.4**
KOKK				S		**Sb**	**18 49 22.8**	**-1.1**
	comp=N,658nm,0.3s							
ZAPS	**Zavoj**	**1.37**	**349**	*e*Pg		**Pn**	**18 49 06.6**	**-0.1**
ZAPS				*e*Sg		**Sn**	**18 49 24.7**	**-0.1**
KVLA	**Kavala**	**1.45**	**133**	P		**Pb**	**18 49 08.3**	**-0.2**
PLG	**Polygyros**	**1.59**	**167**	P		**Pn**	**18 49 10.0**	**+0.4**
PLG				S		**Sb**	**18 49 30.6**	**-0.4**
PLG				AML	AML		18 49 34.8	
	comp=E,365μm,0.3s							
PLG				AML	AML		18 49 35.4	
	comp=N,413μm,0.3s							
PLG	**Polygyros**	**1.59**	**167**	P		**Pn**	**18 49 10.0**	**+0.4**
PLG				S		**Sb**	**18 49 30.6**	**-0.4**
	comp=N,195nm,0.3s							
FNA	**Florina**	**1.66**	**227**	P		**Pn**	**18 49 11.7**	**+1.0**
FNA	**Florina**	**1.66**	**227**	P		**Pn**	**18 49 11.7**	**+1.0**
FNA				S		**Sb**	**18 49 33.8**	**+0.7**
	comp=N,55nm,0.4s							
FNA	**Florina**	**1.66**	**227**	PN		**Pn**	**18 49 11.1**	**+0.4**
FNA	**Florina**	**1.66**	**227**	*i* Pn		**Pn**	**18 49 11.7**	**+1.0**
OUR	**Ouranopolis**	**1.76**	**154**	PN		**Pn**	**18 49 12.2**	**+0.3**
OHR	**Ohrid**	**1.83**	**244**	*e*Pn		**Pn**	**18 49 14.0**	**+1.0**
OHR				*e*Sn		**Sn**	**18 49 35.9**	**-0.2**
OHR	**Ohrid**	**1.83**	**244**	*e*Pn		**Pn**	**18 49 14.0**	**+1.0**
OHR				*e*Sg		**Sg**	**18 49 41.1**	**+0.5**
OHR				*e*Lg		Lg	18 49 43.8	
	comp=E,42nm,0.5s							
OHR				*e*Lg		Lg	18 49 46.3	
	comp=N,34nm,0.4s							
THAS	**Thassos island**	**1.86**	**135**	P		**Pn**	**18 49 13.2**	**-0.1**
THAS	**Thassos island**	**1.86**	**135**	P		**Pn**	**18 49 13.2**	**-0.1**
THAS				S		**Sn**	**18 49 35.6**	**-1.0**
	comp=N,272nm,0.3s							
LIT	**Litokhoron**	**1.86**	**192**	*i* Pn		**Pn**	**18 49 13.0**	**-0.3**
LIT				*e*Sg		**Sb**	**18 49 38.0**	**-0.8**
SELS	**Selova**	**1.89**	**314**	*e*Pn		**Pn**	**18 49 13.8**	**0.0**
SELS				*e*Sn		**Sn**	**18 49 37.8**	**+0.3**
BOVS	**Bovan**	**1.95**	**332**	*e*Pn		**Pn**	**18 49 14.1**	**-0.5**
BOVS				*e*Sn		**Sn**	**18 49 39.1**	**+0.2**
BOVS	**Bovan**	**1.95**	**332** ⇑	P		**Pn**	**18 49 14.7**	**+0.1**
ZAGS	**Zajecar**	**1.96**	**344**	*e*Pn		**Pn**	**18 49 15.1**	**+0.3**
ZAGS				*e*Sn		**Sn**	**18 49 39.6**	**+0.3**
RDO	**Rodhopi**	**2.07**	**111**	P		**Pn**	**18 49 17.1**	**+0.9**
RDO	**Rodhopi**	**2.07**	**111**	P		**Pn**	**18 49 17.1**	**+0.9**
ALN	**Alexandroupoli**	**2.52**	**113**	P		**Pn**	**18 49 23.2**	**+0.8**
GRUS	**Gruza**	**2.57**	**320**	*e*Pn		**Pn**	**18 49 23.4**	**+0.3**
GRUS				*e*Sn		**Sn**	**18 49 54.4**	**+0.1**
SJES	**Sjenica**	**2.59**	**302**	*e*Pn		**Pn**	**18 49 23.9**	**+0.4**
IVAS	**Ivanjica**	**2.66**	**309**	*e*Pn		**Pn**	**18 49 24.6**	**+0.2**
IVAS				*e*Sn		**Sn**	**18 49 56.8**	**+0.3**
KUBS	**Kucevo**	**2.66**	**339**	*e*Pn		**Pn**	**18 49 23.7**	**-0.7**
KUBS				*e*Sn		**Sn**	**18 49 55.5**	**-1.1**
PDG	**Podgorica**	**2.82**	**282**	⇑P		**Pn**	**18 49 22.7**	**-3.7**
TRUS	**Trudelj**	**2.97**	**321**	*e*Pn		**Pn**	**18 49 29.0**	**+0.4**
HERR	**Herculane**	**2.98**	**352**	⇑P		**Pn**	**18 49 28.9**	**+0.1**
MDVR	**Moldovita**	**3.00**	**342**	⇑P		**Pn**	**18 49 29.6**	**+0.6**
RAZG	**Razgrad**	**3.07**	**57**	⇓P		**Pb**	**18 49 37.3**	**+1.1**
DIVS	**Divibare**	**3.09**	**316**	*e*Pn		**Pn**	**18 49 30.3**	**0.0**
DIVS				*e*Sn		**Sn**	**18 50 06.0**	**-1.1**
BBLS	**Lazići**	**3.27**	**308**	*e*Sn		**Sn**	**18 50 10.3**	**-1.2**
MTUR	**Matau**	**3.63**	**24**	⇑P		**Pn**	**18 49 39.5**	**+1.8**
VOIR		**3.82**	**22**	⇑P		**Pn**	**18 49 42.0**	**+1.7**
BZS	**Buzias**	**3.82**	**345**	⇓P		**Pn**	**18 49 40.5**	**+0.2**
FRGS	**Fruska Gora**	**3.97**	**326**	⇑P		**Pn**	**18 49 46.1**	**+3.7**
MLR	**Muntele Rosu**	**4.16**	**30**	⇑P		**Pn**	**18 49 48.3**	**+3.2**
NEHR	**Nehoiu**	**4.25**	**33**	⇑P		**Pn**	**18 49 50.2**	**+4.1**
BISRR	**Bisoca**	**4.52**	**35**	⇑P		**Pn**	**18 49 53.4**	**+3.5**
COVR	**Voineasa-Covas**	**4.56**	**30**	⇑P		**Pn**	**18 49 53.9**	**+3.5**
TIRR	**Tirgusor**	**4.71**	**56**	⇓P		Pn	18 49 57.1	+4.7
PLOR	**Plostina**	**4.74**	**33**	⇓P		**Pn**	**18 49 56.1**	**+3.2**
VRI	**Vrincioaia**	**4.78**	**33**	⇑P		**Pn**	**18 49 55.8**	**+2.3**
TPGR	**Topolog**	**4.93**	**52**	⇑P		**Pn**	**18 49 59.3**	**+3.8**
CFR	**Carcaliu**	**4.96**	**47**	⇑P		**Pn**	**18 49 59.7**	**+3.9**
MORH	**Mrgy, Hungar**	**5.31**	**325**	⇑P		**Pn**	**18 50 00.9**	**+0.3**

*IDC **24** 18:56:26.4±1.0, 58°.06S×26°.13W, h0km, mb4.3/4, mbtmp4.3/5, ML4.3/1, MS2.8/1, Error ellipse: s-maj=47.6km s-min=24.7km az=101.0*
*NEIC **24** 18:56:36.5±1.4, 58°.2S±0°.1×25°.8W±0°.2, h73km±8km, mb4.4/14, Error ellipse: s-maj=19.1km s-min=13.6km az=54.0*

ISC 24 18:56:39.4±0.6, **58°.28S**±0°.09×**25°.6W**±0°.1, **h100**km, **n33**, σ1°**55**/24, **mb4.2/7, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**7.28**	**299**	Pn	**Pn**	**18 59 24.8**	**+1.9**
VNA1	**Neumayer--Stat**	**14.39**	**156**	P	**Pn**	**18 59 56.4**	**-1.6**
VNA1				S	Sn	19 02 24.1	-12
VNA3	**Neumayer Olymp**	**14.59**	**159**	P	**Pn**	**18 59 58.6**	**-1.9**
VNA3				S	Sn	19 02 25.2	-16
SNAA	**Sanae**	**16.34**	**154**	P	**Pn**	**19 00 22.2**	**-0.4**
SNAA				S	Sn	19 03 10.5	-13
SNAA	**Sanae**	**16.34**	**154**	Pn	**Pn**	**19 00 22.2**	**-0.4**
	1.0nm,0.3s,baz=321,slow=15,SNR=65						
SNAA				Sn	Sn	19 03 08.7	-15
	0.1nm,0.3s,baz=168,slow=5.1,SNR=2.7						
	3.4nm,0.4s						
SNAA	**Sanae**	**16.34**	**154**		**Pn**	**19 00 22.6**	**0.0**
TROLL	**Troll, Antarti**	**17.86**	**151**	P	**Pn**	**19 00 40.9**	**-0.2**
TROLL				S	Sn	19 03 46.0	-14
EFI	**East Falkland**	**19.64**	**276**		**P**	**19 00 56.7**	**-3.1**
EFI				IAmb	IAmb	19 01 26.8	
	comp=Z,56nm,1.4s						
BELA	**Belgrano 2**	**19.93**	**186**	P	**P**	**19 01 01.6**	**-1.2**
QSPA	**South Pole Qui**	**31.97**	**180**	P	**P**	**19 02 56.0**	**+0.5**
QSPA				IAmb	IAmb	19 03 32.9	
	comp=Z,7.9nm,1.5s						
MAW	**Mawson**	**37.84**	**141**	P	**P**	**19 03 48.6**	**+2.9**
TRCB	**Terra Rica**	**40.43**	**320**	P	P	19 04 03.2	-4.6
SUR	**Sutherland**	**40.45**	**71**	LR	LR	19 15 36.0	
	comp=Z,14nm,20.7s,baz=172,slow=28						
SBA	**Scott Base**	**43.91**	**184**	P	**P**	**19 04 36.8**	**+1.5**
SBA				IAmb	IAmb	19 05 13.8	
	comp=Z,5.9nm,1.4s						
VNDA	**Vanda**	**44.38**	**182**	P	**P**	**19 04 39.9**	**+0.8**
	comp=Z,1.6nm,0.6s,baz=184,slow=6.8,SNR=18						
	comp=Z,1.6nm,0.6s						
VNDA	**Vanda**	**44.38**	**182**	P	**P**	**19 04 40.3**	**+1.2**
VNDA				IAmb	IAmb	19 04 45.0	
	comp=Z,2.4nm,0.9s						
BOSA	**Boshof**	**45.73**	**72**	P	**P**	**19 04 50.3**	**-0.2**
	comp=Z,1.3nm,0.5s,baz=200,slow=7.9,SNR=5.0						
	comp=Z,1.3nm,0.5s						
BOSA	**Boshof**	**45.73**	**72**	IAmb	IAmb	19 05 27.3	
	comp=Z,13nm,1.5s						
H10S2	**ASCENSION HYDR**	**49.92**	**14**	T	T	19 59 51.0	
	baz=188,slow=74,SNR=11						
H10S3	**ASCENSION HYDR**	**49.92**	**14**	T	T	19 59 51.2	
	baz=32,slow=74,SNR=21						
H10N1	**ASCENSION HYDR**	**51.03**	**14**	T	T	20 01 12.9	
	baz=202,slow=79,SNR=19						
H10N3	**ASCENSION HYDR**	**51.04**	**14**	T	T	20 01 20.6	
	baz=202,slow=79,SNR=24						
H10N2	**ASCENSION HYDR**	**51.05**	**14**	T	T	20 01 16.0	
	baz=202,slow=79,SNR=18						
DBIC	**Dimbokro**	**66.86**	**22**	P	**P**	**19 07 20.2**	**-0.3**
	comp=Z,5.1nm,1.0s,baz=214,slow=5.7,SNR=4.0						
	comp=Z,5.1nm,1.0s						
DBIC	**Dimbokro**	**66.86**	**22**	IAmb	IAmb	19 07 22.6	
	comp=Z,28nm,1.4s						
TOA0	**Torodi Ar. Sit**	**74.59**	**28**	P	**P**	**19 08 07.0**	**-0.3**
TOA0				IAmb	IAmb	19 08 10.4	
	comp=Z,8.0nm,1.2s						
TOA0					**pP**	**19 08 29.5**	**-2.2**
TORD	**Torodi Ar. Bea**	**74.59**	**28**	P	**P**	**19 08 07.5**	**+0.2**
	comp=Z,2.1nm,0.5s,baz=200,slow=6.4,SNR=42						
	comp=Z,2.1nm,0.5s						
TORD	**Torodi Ar. Bea**	**74.59**	**28**	IAmb	IAmb	19 08 10.4	
	comp=Z,3.2nm,1.2s						
TORD					pwP	19 08 29.3	-6.9
BIM	**Bigot**	**78.17**	**325**	P	**P**	**19 08 29.5**	**+2.0**
FINES	**FINESS Array B**	**125.95**	**28**	PKP	**PKPdf**	**19 15 27.7**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=180,slow=0.7,SNR=5.5						
YKA	**Yellowknife Ar**	**138.41**	**316**	PKP	**PKPdf**	**19 15 48.8**	**-2.6**
	comp=Z,0.4nm,0.7s,baz=117,slow=2.6,SNR=3.5						
SONM	**Songino Array**	**149.93**	**89**	PKPbc	**PKPbc**	**19 16 16.9**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=229,slow=3.6,SNR=4.7						
ILAR	**Eielson Array**	**152.23**	**308**	PKPbc	**PKPbc**	**19 16 21.1**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=137,slow=5.9,SNR=5.6						

*IDC **24** 19:20:01.4±0.7, 62°.20S×165°.09E, h0km, mb4.3/7, mbtmp4.3/8, ML4.3/1, MS3.9/21, Error ellipse: s-maj=41.0km s-min=18.6km az=66.0*
*NEIC **24** 19:20:03.2±1.0, 62°.1S±0°.1×165°.5E±0°.3, h10km±1km, mb4.7/20, Error ellipse: s-maj=24.2km s-min=17.1km az=257.0*

ISC 24 19:20:03.0±0.5, **62°.11S**±0°.07×**165°.5E**±0°.2, **h10**km, **n71**, σ0°**73**/37, **mb4.5**/13, **MS3.9**/20, **Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**15.53**	**183**	Pn	**Pn**	**19 23 40.5**	**-1.0**
	1.2nm,0.3s,baz=9.6,slow=16,SNR=84						
VNDA				LR	LR	19 28 43.2	
	comp=Z,472nm,18.5s,baz=9.5,slow=34						
	5.1nm,0.5s						
VNDA	**Vanda**	**15.53**	**183**		**Pn**	**19 23 41.2**	**-0.3**
SBA	**Scott Base**	**15.82**	**179**		**Pn**	**19 23 46.2**	**+0.7**
LBZ	**Lake Benmore**	**17.97**	**11**	P	**Pn**	**19 24 12.6**	**-0.1**
RPZ	**Rata Peaks**	**18.72**	**13**	LR	LR	19 30 03.8	
	comp=Z,540nm,21.4s,baz=199,slow=32						
RPZ	**Rata Peaks**	**18.72**	**13**	P	**P**	**19 24 21.1**	**-0.4**
CASY	**Casey**	**23.59**	**236**	P	**P**	**19 25 14.1**	**+0.8**
CASY				IAmb	IAmb	19 25 27.0	
	comp=Z,23nm,1.5s						
URZ	**Urewera**	**24.94**	**22**	LR	LR	19 35 01.4	
	comp=Z,409nm,19.1s,baz=211,slow=36						
QSPA	**South Pole Qui**	**27.98**	**180**	P	**P**	**19 25 53.1**	**-0.4**
	comp=Z,5.1nm,1.1s,baz=4.2,slow=4.1,SNR=6.5						
QSPA				LR	LR	19 36 04.4	
	comp=Z,206nm,18.6s,baz=32,slow=34						
	comp=Z,5.1nm,1.1s						
QSPA	**South Pole Qui**	**27.98**	**180**	IAmb	IAmb	19 25 55.5	
	comp=Z,14nm,1.4s						
STKA	**Stephens Creek**	**33.93**	**322**	P	**P**	**19 26 46.9**	**+0.8**
	comp=Z,4.3nm,0.9s,baz=150,slow=8.9,SNR=4.5						
STKA				LR	LR	19 38 15.0	
	comp=Z,94nm,18.6s,baz=200,slow=32						
	comp=Z,4.3nm,0.9s						
RAO	**Raoul Island**	**34.64**	**26**	LR	LR	19 39 03.7	
	comp=Z,99nm,19.1s,baz=304,slow=33						
EIDS	**Eidsvold**	**37.99**	**339**	P	**P**	**19 27 21.8**	**+1.0**
EIDS				IAmb	IAmb	19 28 03.8	
	comp=Z,11nm,1.1s						
MAW	**Mawson**	**39.11**	**216**	LR	LR	19 43 35.8	
	comp=Z,401nm,18.2s,baz=134,slow=36						
MAW	**Mawson**	**39.11**	**216**	P	**P**	**19 27 30.9**	**+1.1**
DZM	**Mont Dzumac**	**40.02**	**1**	P	**P**	**19 27 38.9**	**+0.9**
	comp=Z,7.1nm,1.0s,baz=180,slow=12,SNR=3.5						
DZM				LR	LR	19 42 48.9	
	comp=Z,81nm,18.4s,baz=192,slow=34						
	comp=Z,7.1nm,1.0s						
DZM	**Mont Dzumac**	**40.02**	**1**	IAmb	IAmb	19 27 41.0	
	comp=Z,16nm,1.3s						
H01W1	**Cape Leeuwin H**	**41.90**	**286**	T	T	20 12 39.4	
	baz=146,slow=75,SNR=121						
H01W2	**Cape Leeuwin H**	**41.91**	**286**	T	T	20 12 39.8	
	baz=146,slow=75,SNR=171						
H01W3	**Cape Leeuwin H**	**41.92**	**286**	T	T	20 12 40.7	
	baz=146,slow=75,SNR=157						
ASAR	**Alice Springs**	**43.97**	**316**	P	**P**	**19 28 09.8**	**-0.4**
AS31	**Alice Springs**	**43.97**	**316**	P	**P**	**19 28 09.9**	**-0.3**
CTA	**Charters Tower**	**44.05**	**334**	LR	LR	19 44 47.8	
	comp=Z,73nm,18.1s,baz=87,slow=34						
MSVF	**Nonsavu**	**45.21**	**17**	LR	LR	19 44 36.0	
	comp=Z,186nm,20.3s,baz=192,slow=32						
TROLL	**Troll, Antarti**	**45.64**	**187**	P	**P**	**19 28 23.2**	**+0.2**
SNAA	**Sanae**	**46.25**	**185**	P	**P**	**19 28 28.1**	**+0.4**
SNAA	**Sanae**	**46.25**	**185**	LR	LR	19 46 52.8	
	comp=Z,144nm,19.9s,baz=236,slow=35						
SNAA	**Sanae**	**46.25**	**185**	P	**P**	**19 28 28.0**	**+0.3**
SNAA				IAmb	I

TAP 24 21:24:39.3, 24°.25N×121°.73E, h8km, ML1.5, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.13**	**227**	*i* P	Pg	21 24 42.9	+0.8
	baz=226						
ETL				S	Sg	21 24 45.5	+1.5
	baz=226						
NACB	**Ninganchiao**	**0.14**	**238**	*i* P	Pg	21 24 43.1	+0.8
	baz=238						
NACB				S	Sg	21 24 45.9	+1.5
	baz=238						
ENA	**Nanau**	**0.18**	**4**	*e*P	Pg	21 24 44.0	+1.0
	baz=6.0						
ENA				*e*S	Sg	21 24 47.2	+1.7
	baz=6.0						
EWUT	**Wuta**	**0.20**	**14**	P	Pg	21 24 44.4	+1.0
	baz=13						
EWUT				S	Sg	21 24 48.0	+1.8
	baz=13						
TWD	**Chiawan**	**0.20**	**215**	*e*P	Pg	21 24 43.9	+0.4
	baz=213						
TWD				*e*S	Sg	21 24 47.3	+1.1
	baz=213						
ETLH	**Xiulin Townshi**	**0.23**	**260**	*e*P	Pg	21 24 44.8	+0.9
	baz=259						
ETLH				*e*S	Sg	21 24 48.6	+1.7
	baz=259						
LATG	**Datong**	**0.34**	**328**	*e*P	Pb	21 24 47.0	-0.7
	baz=327						
LATG				*e*S	Sb	21 24 52.6	-0.7
	baz=327						
NNSB	**Datong**	**0.36**	**300**	*e*P	Pb	21 24 47.7	-0.4
	baz=299						
NNSB				*e*S	Sb	21 24 53.6	-0.4
	baz=299						
NNS	**Nan Shan**	**0.37**	**301**	*e*P	Pb	21 24 47.5	-0.8
	baz=300						
NNS				*e*S	Sb	21 24 53.7	-0.7
	baz=300						
TWC	**Suao**	**0.38**	**17**	*e*P	Pb	21 24 48.0	-0.2
	baz=18						
TWC				*e*S	Sb	21 24 53.6	-0.7
	baz=18						
NDS	**Dongshan**	**0.38**	**359**	*e*P	Pb	21 24 48.0	-0.5
	baz=358						
NDS				*e*S	Sb	21 24 54.0	-0.5
	baz=358						
WHF	**Hehuan Shan**	**0.43**	**256**	*e*P	Pb	21 24 48.9	-0.6
	baz=255						
WHF				*e*S	Sb	21 24 55.5	-0.8
	baz=255						
FUSS	**Fushou**	**0.44**	**270**	*e*P	Pb	21 24 49.1	-0.3
	baz=269						
FUSS				*e*S	Sb	21 24 56.0	-0.3
	baz=269						
TWE	**Neicheng**	**0.47**	**354**	*e*P	Pb	21 24 49.6	-0.3
	baz=355						
TWE				*e*S	Sb	21 24 56.7	-0.4
	baz=355						
FUSB	**Fushanzhiwuyua**	**0.53**	**346**	*e*P	Pb	21 24 50.7	-0.2
	baz=346						
FUSB				*e*S	Sb	21 24 58.8	+0.1
	baz=346						
YHNB	**Yeheng**	**0.53**	**323**	*e*P	Pb	21 24 50.4	-0.5
	baz=322						
YHNB				*e*S	Sb	21 24 58.9	+0.1
	baz=322						
OWD	**Renai**	**0.58**	**240**	*e*P	Pb	21 24 51.8	-0.1
	baz=239						
OWD				*e*S	Sb	21 25 00.5	+0.1
	baz=239						
WUSB	**Renai**	**0.61**	**245**	*e*P	Pb	21 24 52.4	0.0
	baz=245						
WUSB				*e*S	Sb	21 25 01.5	+0.3
	baz=245						

JMA 24 21:25:03.9±0.3, 24°N±1°×123°.4E±0°.8, h55km±3km, MV2.0/8, NEAR ISHIGAKIJIMA ISLAND, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**0.64**	**35**	P	Pn	21 25 17.1	0.0
HATJ				S	Sn	21 25 26.7	0.0
IRIF	**Iriomote-Funau**	**0.86**	**20**	P	Pn	21 25 20.2	+0.3
IRIF				S	Sn	21 25 31.9	+0.4
JKRS	**Kuro-shima**	**0.90**	**38**	P	Pn	21 25 20.7	+0.3
JKRS				S	Sn	21 25 32.8	+0.3
YOJ	**Yonaguni jima**	**1.00**	**339**	P	Pn	21 25 21.6	-0.1
JYNG	**Yonagunijimaku**	**1.01**	**335**	*e*P	Pn	21 25 22.3	+0.4
JIJ	**Ishigaki jima**	**1.07**	**39**	P	Pn	21 25 22.7	0.0
JIJ				*e*S	Sn	21 25 36.6	0.0
JISG	**Ishigakijimahi**	**1.34**	**38**	*e*P	Pn	21 25 26.6	+0.3
JISG				*e*S	Sn	21 25 43.3	+0.2

SSNC ***24*** *21:28:49.8±1.4, 18°.59N×71°.44W, h22km±26km, MD3.3, ML2.0*

OSPL ***24*** *21:28:51.6±1.9, 19°.13N×71°.47W, h76km±19km, ML2.1*

ISC 24 21:28:44.1±1.4, 18°.63N±0°.10×71°.94W±0°.04, h10km, n6, σ1§64/10, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDDR	**Presa de Saban**	**0.71**	**60**	*i* P	**Pn**	**21 29 02.0**	**+1.7**
SDDR				*e*S	**Sn**	**21 29 10.0**	**-1.3**
SDDR				IAML		21 29 11.9	
	comp=Z,60nm,0.3s						
LODA1	**ITESIL, Dajabo**	**0.94**	**14**	*e*S	**Sg**	**21 29 13.4**	**-1.0**
BANI	**BANI**	**1.52**	**99**	*i* P	**Pg**	**21 29 13.2**	**0.0**
BANI				*e*S	**Sn**	**21 29 29.2**	**-2.1**
MASC	**Masc**	**2.66**	**306**	*e*P	**Pg**	**21 29 35.0**	**0.0**
MASC				*e*S	**Sg**	**21 30 09.7**	**+0.2**
MASC				IAML		21 30 11.7	
	comp=N,2.8nm,0.1s						
MASC				IAML		21 30 13.4	
	comp=E,3.4nm,0.2s						
GRTK	**Grand Turk**	**2.97**	**15**	*e*S	Sn	21 29 54.3	-13
GRTK				IAML		21 29 58.2	
	comp=Z,50nm,0.9s						
GTBY	**Guantanamo Bay**	**3.26**	**294**	*e*P	**Pg**	**21 29 45.3**	**-1.4**
GTBY				*e*S	**Sb**	**21 30 24.1**	**+2.1**
GTBY				*e*Sg	**Sg**	**21 30 27.5**	**-1.5**

MOS ***24*** *21:29:16.7±1.4, 25°.74S×69°.29W, h107km, mb5.5/7, Error ellipse: s-maj=11.0km s-min=4.5km az=101.2*

VAO ***24*** *21:29:16.9±0.7, 25°.76S×69°.12W, h91km±4km, mb5.3*

GUC ***24*** *21:29:17.2±0.8, 25°.74S×69°.35W, h124km±5km, ML5.8*

SJA ***24*** *21:29:18.7±0.9, 25°.67S×69°.33W, h90km, ML5.6, MW5.1*

BJI ***24*** *21:29:19.0±0.0, 25°.80S×69°.30W, h127km, mB5.1/7*

IDC ***24*** *21:29:19.1±0.4, 25°.71S×69°.07W, h114km±2km, mb4.8/29, mbtmp5.1/32, MS4.2/31, Error ellipse: s-maj=13.1km s-min=8.6km az=59.0*

NEIC ***24*** *21:29:19.0±2.3, 25°.77S±0°.04×69°.34W±0°.06, h119km±3km, mb5.5/646, Mwb5.4/17, Mww5.5, ML5.7(GUC), Error ellipse: s-maj=8.2km s-min=5.2km az=90.0*

NEIC ***24*** *21:29:19, 25°.75S×69°.35W, h108km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.61; $M_{\theta\theta}$0.64; $M_{\phi\phi}$-1.26; $M_{r\theta}$0.76; $M_{r\phi}$-0.96; $M_{\theta\phi}$0.66; Fault plane solution: M_o1.77000×10^{17} NP1:φs58.28000°, δ78.11000°, λ135.81000°. NP2:φs159.61000°, δ47.00000°, λ16.37000°. Principal axes: T 1.4134, Plg39.0000°, Azm9.0000°; N 0.5688, Plg45.0000°, Azm226.0000°; P -1.9822, Plg20.0000°, Azm116.0000°;*

GCMT ***24*** *21:29:21.0±0.2, 25°.79S±0°.01×69°.51W±0°.01, h128km±1km, MW5.4/118, Moment Tensor Solution. s88,c120; s118,c199; Duration: 1§3 Moment tensor: Scale 10^{17} Nm; M_{rr}0.66±.03; $M_{\theta\theta}$1.08±.03; $M_{\phi\phi}$-1.73±.03; $M_{r\theta}$0.48±.02; $M_{r\phi}$-1.00±.03; $M_{\theta\phi}$0.37±.03; Best double couple: M_o1.84000×10^{17} NP1:φs153.00000°, δ67.00000°, λ9.00000°. NP2:φs60.00000°, δ82.00000°, λ156.00000°. Principal axes: T 1.5400, Plg23.0000°, Azm14.0000°; N 0.6040, Plg65.0000°, Azm221.0000°; P -2.1390, Plg10.0000°, Azm109.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

Triangular moment-rate function

NEIC ***24*** *21:29:23, 25°.75S×69°.23W, h120km, Moment Tensor Solution. Duration: 10§0 Moment tensor: Scale 10^{17}Nm; M_{rr}1.24; $M_{\theta\theta}$1.11; $M_{\phi\phi}$-2.35; $M_{r\theta}$0.23; $M_{r\phi}$-0.94; $M_{\theta\phi}$0.38; Fault plane solution: M_o2.29000×10^{17} NP1: φs154.00000°, δ59.00000°, λ24.00000°. NP2:φs51.00000°, δ69.00000°, λ147.00000°. Principal axes: T 1.4552, Plg38.0000°, Azm9.0000°; N 1.1839, Plg51.0000°, Azm202.0000°; P -2.6391, Plg6.0000°, Azm104.0000°;*

ISC 24 21:29:18.3±0.2, 25°.74S±0°.02×69°.34W±0°.03, h117km±1km, h117km:pP-P, n1427, σ1§63/1566, mb5.5/347, 352C-42D, Fault plane solution: NP1:φs34.52655°, δ60.16331°, λ146.36676°. **NP2:**φs142.83975°, δ61.28475°, λ34.56193°. **Principal axes:** T Plg43.7522°, Azm359.1183°; N Plg46.2394°, Azm177.7337°; P Plg0.6917°, Azm268.4561°; **Fault plane solution: NP1:** φs170.82747°, δ23.67128°, λ7.60392°. **NP2:**φs73.85673°, δ86.95463°, λ113.48575°. **Principal axes:** T Plg43.2498°, Azm6.6175°; N Plg23.4506°, Azm252.5343°; P Plg37.5929°, Azm143.0240°; **Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO02	**Mina Guanaco**	**0.62**	**339**		**Pn**	**21 29 37.2**	**+0.1**
GO02				Sn	**Sn**	**21 29 51.9**	**+0.7**
GO02	**Mina Guanaco**	**0.62**	**339**	*i* P	**Pn**	**21 29 36.8**	**-0.3**
GO02				*i* S	**Sn**	**21 29 51.2**	**0.0**
GO02				IAML		21 29 53.1	
	comp=N,579μm,0.3s						
GO02	**Mina Guanaco**	**0.62**	**339**	*i* P	**Pn**	**21 29 37.4**	**+0.3**
GO02				*e*S	**Sn**	**21 29 52.1**	**+0.9**
AC02	**Maricunga**	**1.11**	**170**	Pn	**Pn**	**21 29 41.9**	**+0.2**
AC02				Sn	**Sn**	**21 29 59.1**	**-0.3**
AC01	**Pan de Azucar**	**1.20**	**250**		**Pn**	**21 29 41.7**	**-0.5**
AC01				Sn	**Sn**	**21 29 59.8**	**-0.5**
AC01	**Pan de Azucar**	**1.20**	**250**	‖ *i*P	**Pn**	**21 29 41.6**	**-0.6**
AC01				*e*S	**Sn**	**21 29 59.7**	**-0.6**
AC01				IAML		21 30 01.9	
	comp=E,130μm,0.3s						
AC01	**Pan de Azucar**	**1.20**	**250**	*i* P	**Pn**	**21 29 41.8**	**-0.3**
AC01				*e*S	**Sn**	**21 29 59.9**	**-0.4**
AC01				IAML		21 30 01.8	
	comp=Z,96μm,0.2s						
PB14	**IPOC Station P**	**1.47**	**319**	*i* P	**Pn**	**21 29 45.7**	**+0.2**
PB14				*e*S	**Sn**	**21 30 07.0**	**+0.9**
PB14				IAML		21 30 08.2	
	comp=Z,102μm,0.8s						
GO03	**Copiap**	**2.01**	**203**		**Pn**	**21 29 51.2**	**-0.6**
GO03				Sn	**Sn**	**21 30 15.6**	**-1.9**
GO03	**Copiap**	**2.01**	**203**	*e*P	**Pn**	**21 29 51.0**	**-0.8**
GO03				*e*S	**Sn**	**21 30 15.2**	**-2.2**
GO03				IAML		21 30 19.6	
	comp=E,42μm,0.2s						
GO03	**Copiap**	**2.01**	**203**	*i* P	**Pn**	**21 29 51.4**	**-0.4**
GO03				*e*S	**Sn**	**21 30 17.2**	**-0.2**
PB10	**IPOC Station P**	**2.47**	**333**		**Pn**	**21 29 57.5**	**-0.2**
PB10				Sn	**Sn**	**21 30 24.3**	**-3.5**
PB10	**IPOC Station P**	**2.47**	**333**	*e*P	**Pn**	**21 29 57.0**	**-0.6**
PB10				*e*S	**Sn**	**21 30 26.8**	**-1.0**
PB10				IAML		21 30 28.6	
	comp=N,53μm,0.2s						
PB10	**IPOC Station P**	**2.47**	**333**	*i* P	**Pn**	**21 29 57.6**	**0.0**
PB10				*e*S	**Sn**	**21 30 26.6**	**-1.3**
PB10				IAML		21 30 29.1	
	comp=Z,18μm,0.2s						
PB15	**IPOC Station P**	**2.52**	**357**		**Pn**	**21 29 58.5**	**0.0**
PB15				Sn	**Sn**	**21 30 29.3**	**0.0**
PB15	**IPOC Station P**	**2.52**	**357**	*e*P	**Pn**	**21 29 58.8**	**+0.3**
PB15				*i* S	**Sn**	**21 30 28.5**	**-0.8**
PB15	**IPOC Station P**	**2.52**	**357**	*i* P	**Pn**	**21 29 59.2**	**+0.7**
PB15				*e*S	**Sn**	**21 30 30.1**	**+0.8**
PB15				IAML		21 30 31.3	
	comp=Z,80μm,0.3s						
TINO	**Tinogasta**	**2.81**	**146**	‖ *i*P	**Pn**	**21 30 04.7**	**+2.6**
AC04	**Llanos de Chal**	**2.90**	**212**	Pn	**Pn**	**21 30 02.0**	**-1.1**
AC04				Sn	**Sn**	**21 30 30.9**	**-6.9**
AC04	**Llanos de Chal**	**2.90**	**212**	*e*P	**Pn**	**21 30 01.2**	**-2.0**
AC04				*e*S	**Sn**	**21 30 36.4**	**-1.3**
AC04				IAML		21 30 41.1	
	comp=E,14μm,0.3s						
AC04	**Llanos de Chal**	**2.90**	**212**	*i* P	**Pn**	**21 30 01.9**	**-1.3**
AF01	**San Pedro de A**	**2.97**	**21**		**Pn**	**21 30 04.8**	**+0.4**
AF01	**San Pedro de A**	**2.97**	**21**	*i* P	**Pn**	**21 30 05.2**	**+0.8**
AF01				*e*S	**Sn**	**21 30 40.5**	**+0.6**
PB06	**IPOC Station P**	**3.03**	**356**		**Pn**	**21 30 04.0**	**-1.1**
PB06	**IPOC Station P**	**3.03**	**356**	*e*P	**Pn**	**21 30 04.6**	**-0.4**
PB06				*i* S	**Sn**	**21 30 38.9**	**-2.1**
PB06				IAML		21 30 47.2	
	comp=E,25μm,0.6s						
PB06	**IPOC Station P**	**3.03**	**356**	*i* P	**Pn**	**21 30 05.1**	**+0.1**
PB06				*e*S	**Sn**	**21 30 34.7**	**-6.3**
PB06				IAML		21 30 49.4	
	comp=Z,18μm,0.4s						
LVC	**Limon Verde**	**3.14**	**7**	P	**Pn**	**21 30 06.7**	**0.0**
	comp=Z,5μm,0.3s,baz=168,slow=9.4,SNR=8824						
LVC				S	**Sn**	**21 30 37.9**	**-6.1**
	comp=Z,18μm,0.7s,baz=192,slow=14,SNR=36						
LVC				LR	LR	21 31 40.0	
	comp=Z,3μm,20.5s,baz=248,slow=46						
LVC	**Limon Verde**	**3.14**	**7**	Pn	**Pn**	**21 30 06.7**	**0.0**
LVC				Sn	**Sn**	**21 30 39.0**	**-4.9**
LVC	**Limon Verde**	**3.14**	**7**	*e*P	**Pn**	**21 30 06.1**	**-0.6**
LVC				*e*S	**Sn**	**21 30 42.8**	**-1.2**
LVC	**Limon Verde**	**3.14**	**7**	*i* P	**Pn**	**21 30 06.9**	**+0.2**
LVC				*e*S	**Sn**	**21 30 38.6**	**-5.4**
LVC				IAML		21 30 39.1	
	comp=Z,8μm,0.8s						
LVC	**Limon Verde**	**3.14**	**7**	*e*P	**Pn**	**21 30 06.6**	**0.0**
VCA	**Vinchina**	**3.15**	**162**	*i* P	**Pn**	**21 30 08.2**	**+1.5**
VCA				*e*S	**Sn**	**21 30 46.4**	**+2.4**
VCA				IAML		21 30 52.5	
	comp=Z,8μm,0.7s						
PB04	**IPOC Station P**	**3.47**	**348**		**Pn**	**21 30 09.6**	**-1.3**
PB04	**IPOC Station P**	**3.47**	**348**	*e*P	**Pn**	**21 30 09.4**	**-1.4**
PB04				*i* S	**Sn**	**21 30 49.1**	**-2.3**
PB04	**IPOC Station P**	**3.47**	**348**	*i* P	**Pn**	**21 30 09.8**	**-1.1**
LCO	**Las Campanas**	**3.48**	**200**	Pn	**Pn**	**21 30 09.6**	**-1.4**
LCO	**Las Campanas**	**3.48**	**200**	P	**Pn**	**21 30 09.6**	**-1.4**
LCO	**Las Campanas**	**3.48**	**200**	‖ *e*P	**Pn**	**21 30 09.1**	**-1.9**
LCO	**Las Campanas**	**3.48**	**200**	*i* P	**Pn**	**21 30 10.0**	**-1.1**
SLA	**San Lorenzo**	**3.62**	**75**	*i* P	**Pn**	**21 30 14.2**	**+1.3**
PB09	**IPOC Station P**	**3.93**	**1**	*i* P	**Pn**	**21 30 17.1**	**+0.1**
PB07	**IPOC Station P**	**4.03**	**353**	‖ *i*P	**Pn**	**21 30 17.1**	**-1.2**
ACLC	**CERRO LA CRUZ**	**4.24**	**151**	*i* P	**Pn**	**21 30 21.5**	**+0.4**
CO01	**Juntas del Tor**	**4.27**	**189**	Pn	**Pn**	**21 30 21.2**	**-0.5**
CO01	**Juntas del Tor**	**4.27**	**189**	‖ *i*P	**Pn**	**21 30 21.2**	**-0.5**
CO01	**Juntas del Tor**	**4.27**	**189**	*i* P	**Pn**	**21 30 21.5**	**-0.1**
HJA	**Humahuaca**	**4.38**	**56**	*i* P	**Pn**	**21 30 25.0**	**+1.7**
ARGD	**Rodeo**	**4.41**	**181**	*i* P	**Pn**	**21 30 24.3**	**+0.7**
ACDV	**Cuesta del Vie**	**4.42**	**177**	*i* P	**Pn**	**21 30 24.4**	**+0.9**
PB02	**IPOC Station P**	**4.43**	**353**		**Pn**	**21 30 21.3**	**-2.3**
PB02	**IPOC Station P**	**4.43**	**353**	*i* P	**Pn**	**21 30 22.1**	**-1.5**
PB02	**IPOC Station P**	**4.43**	**353**	*i* P	**Pn**	**21 30 22.8**	**-0.8**
CO05	**La Serena**	**4.49**	**202**		**Pn**	**21 30 21.7**	**-2.6**
CO05	**La Serena**	**4.49**	**202**	*e*P	**Pn**	**21 30 21.5**	**-2.8**
GO04	**Tololo Observa**	**4.60**	**196**		**Pn**	**21 30 23.7**	**-2.3**
GO04	**Tololo Observa**	**4.60**	**196**	*e*P	**Pn**	**21 30 23.4**	**-2.6**
GO04	**Tololo Observa**	**4.60**	**196**	*i* P	**Pn**	**21 30 24.3**	**-1.8**
PB01	**IPOC Station P**	**4.68**	**358**	*i* P	**Pn**	**21 30 25.7**	**-1.2**
ACCO	**Cerro Coronel**	**4.84**	**177**	‖ *i*P	**Pn**	**21 30 29.6**	**+0.3**
PATCX	**Punta Patache**	**4.95**	**351**		**Pn**	**21 30 28.0**	**-2.7**
PATCX	**Punta Patache**	**4.95**	**351**	*i* P	**Pn**	**21 30 28.2**	**-2.5**
PATCX	**Punta Patache**	**4.95**	**351**	*i* P	**Pn**	**21 30 28.5**	**-2.2**
YJA	**Yavi**	**4.99**	**45**	*i* P	**Pn**	**21 30 32.8**	**+1.4**
TA01	**Diego Aracena**	**5.21**	**351**	Pn	**Pn**	**21 30 31.2**	**-2.8**
CO03	**El Pedregal**	**5.22**	**193**	Pn	**Pn**	**21 30 31.9**	**-2.3**
CO06	**Fray Jorge**	**5.32**	**202**		**Pn**	**21 30 31.7**	**-3.7**
CO06	**Fray Jorge**	**5.32**	**202**	*e*P	**Pn**	**21 30 31.5**	**-3.9**
TA02	**Huaiquique**	**5.49**	**352**		**Pn**	**21 30 35.1**	**-2.8**
PB08	**IPOC Station P**	**5.57**	**2**		**Pn**	**21 30 37.5**	**-1.8**
CO02	**Combarbal**	**5.64**	**195**		**Pn**	**21 30 37.2**	**-2.7**
ZON	**Zonda**	**5.81**	**174**		**Pn**	**21 30 40.9**	**-1.3**
ZON	**Zonda**	**5.81**	**174**	P	**Pn**	**21 30 40.9**	**-1.3**
PB11	**IPOC Station P**	**5.96**	**357**		**Pn**	**21 30 41.7**	**-2.6**
VA06	**Catapilco**	**7.01**	**194**		**Pn**	**21 30 54.7**	**-3.6**
VA03	**San Esteban**	**7.08**	**188**	Pn	**Pn**	**21 30 55.3**	**-4.0**
PB12	**IPOC Station P**	**7.15**	**352**	Pn	**Pn**	**21 30 56.6**	**-3.8**
ROC1	**El Roble**	**7.36**	**191**	Pn	**Pn**	**21 31 00.0**	**-3.2**
PB16	**IPOC Station P**	**7.37**	**359**		**Pn**	**21 31 01.9**	**-1.9**
AP01	**Chacalluta**	**7.39**	**353**	Pn	**Pn**	**21 31 00.8**	**-2.7**
PEL	**Peldehue**	**7.47**	**189**		**Pn**	**21 31 01.6**	**-3.0**
PEL	**Peldehue**	**7.47**	**189**	P	**Pn**	**21 31 01.6**	**-3.0**
VA01	**Torpederas**	**7.53**	**195**		**Pn**	**21 31 00.9**	**-4.5**
MT05	**Renca**	**7.72**	**189**		**Pn**	**21 31 05.0**	**-3.1**
MT03	**Universidad Ad**	**7.79**	**187**		**Pn**	**21 31 07.0**	**-2.1**
LMEL	**Las Melosas**	**8.12**	**185**		**Pn**	**21 31 12.2**	**-1.3**
VA05	**Santo Domingo**	**8.13**	**194**		Pn	21 31 08.0	-5.4
MT09	**Talagante**	**8.14**	**190**		**Pn**	**21 31 10.3**	**-3.4**
BO01	**Tunca**	**8.76**	**190**	Pn	Pn	21 31 16.8	-5.1
LPAZ	**La Paz**	**9.47**	**7**	P	**Pn**	**21 31 30.9**	**-1.3**
	comp=Z,168nm,0.5s,baz=182,slow=4.7,SNR=737						
LPAZ				LR	LR	21 35 55.9	
	comp=Z,1μm,20.0s,baz=194,slow=42						
LPAZ	**La Paz**	**9.47**	**7**		**Pn**	**21 31 31.2**	**-1.1**
LPAZ	**La Paz**	**9.47**	**7**	P	**Pn**	**21 31 31.2**	**-1.1**
LPAZ	**La Paz**	**9.47**	**7**	*e*P	**Pn**	**21 31 31.0**	**-1.3**
GO05	**Huala**	**9.51**	**193**		Pn	21 31 26.8	-5.3
CPUP	**Villa Florida**	**10.82**	**96**	P	**Pn**	**21 31 46.3**	**-3.6**
	comp=Z,74nm,1.2s,baz=279,slow=12,SNR=58						
CPUP	**Villa Florida**	**10.82**	**96**	Pn	**Pn**	**21 31 47.4**	**-2.5**
CPUP	**Villa Florida**	**10.82**	**96**	P	**Pn**	**21 31 47.4**	**-2.5**
CPUP	**Villa Florida**	**10.82**	**96**	*e*P	**Pn**	**21 31 46.0**	**-3.9**
VA04	**Juan Fernndez**	**11.40**	**224**	Pn	Pn	21 31 52.4	-5.2
BI05	**Punta Hualpn**	**11.46**	**196**		Pn	21 31 52.8	-5.4
ITQB	**Itaqui**	**11.93**	**112**	Pn	**Pn**	**21 32 01.6**	**-3.0**
ITQB	**Itaqui**	**11.93**	**112**	*e*P	**Pn**	**21 32 01.3**	**-3.3**
SIV	**San Ignacio**	**12.40**	**40**	P	Pn	21 32 05.6	-5.2
	comp=Z,334nm,0.7s,baz=233,slow=9.7,SNR=222						
SIV				S	Sn	21 34 07.9	-19
	comp=Z,28nm,0.7s,baz=227,slow=16,SNR=1.0						
SIV				LR	LR	21 37 50.3	
	comp=Z,1μm,19.4s,baz=228,slow=42						
ANTJ	**Antonio Joao (**	**12.76**	**76**	*e*P	**Pn**	**21 32 11.8**	**-3.7**
UNIS	**Unistalda (Bra**	**13.11**	**108**	*e*P	**Pn**	**21 32 15.7**	**-4.2**
AMBA	**Amambai (Brazi**	**13.38**	**81**	*e*P	**Pn**	**21 32 19.9**	**-3.7**
PANT	**Pantanal (Braz**	**13.55**	**63**	*e*P	**Pn**	**21 32 22.5**	**-3.3**
AQDB	**Aquidauana**	**13.60**	**70**	*e*P	**Pn**	**21 32 22.5**	**-4.0**
TRQA	**Tornquist**	**13.77**	**155**	Pn	**Pn**	**21 32 27.3**	**-1.3**
TRQA	**Tornquist**	**13.77**	**155**	P	**Pn**	**21 32 27.3**	**-1.3**
CRSM	**Crissiumal (Br**	**13.80**	**101**	*e*P	**Pn**	**21 32 25.6**	**-3.4**
MCR1	**Marechal Candi**	**13.93**	**88**	*e*P	**Pn**	**21 32 27.8**	**-2.9**
LR03	**Panguipulli**	**14.08**	**190**		**Pn**	**21 32 31.2**	**-1.3**
LR04	**Corral**	**14.51**	**193**	Pn	**Pn**	**21 32 35.6**	**-2.3**
FRBT	**Francisco Belt**	**14.66**	**94**	*e*P	**Pn**	**21 32 37.9**	**-2.1**
CPSB	**Cacapava Do Su**	**14.79**	**112**	*e*P	**Pn**	**21 32 38.0**	**-3.5**
ALGR	**Alto Alegre (B**	**14.83**	**106**	*e*P	**Pn**	**21 32 38.8**	**-3.3**
POCN	**Pocone**	**14.84**	**55**	*e*P	**Pn**	**21 32 38.5**	**-3.8**
PLCA	**Paso Flores**	**14.99**	**184**	P	**Pn**	**21 32 41.8**	**-2.3**
	comp=Z,40nm,1.1s,baz=4.0,slow=13,SNR=32						
PLCA				LR	LR	21 39 06.1	
	comp=Z,606nm,18.6s,baz=349,slow=39						
PLCA	**Paso Flores**	**14.99**	**184**		**Pn**	**21 32 42.0**	**-2.0**
PLCA	**Paso Flores**	**14.99**	**184**	P	**Pn**	**21 32 42.0**	**-2.0**
PLTB	**Pedras Altas**	**15.05**	**117**	Pn	**Pn**	**21 32 42.3**	**-2.5**
PLTB				IAmb	IAmb	21 32 43.0	
	comp=Z,452nm,1.1s						
PLTB	**Pedras Altas**	**15.05**	**117**	*e*P	**Pn**	**21 32 41.5**	**-3.4**
LL04	**Puerto Octay**	**15.34**	**189**	P	**Pn**	**21 32 45.9**	**-2.5**
VILB	**Vilhena**	**15.36**	**36**	*e*P	**Pn**	**21 32 46.1**	**-2.8**
PTET	**Porto Estrela**	**15.36**	**50**	*e*P	**Pn**	**21 32 45.2**	**-3.6**
NNA	**Nana**	**15.40**	**331**	P	**P**	**21 32 51.0**	**-0.4**
	comp=Z,51nm,1.0s,baz=170,slow=11,SNR=7.9						
NNA				S	**Sn**	**21 35 32.7**	**-7.4**
	comp=Z,38nm,0.3s,baz=215,slow=17,SNR=6.7						
NNA	**Nana**	**15.40**	**331**	P	**Pn**	**21 32 48.6**	**-0.8**
NNA	**Nana**	**15.40**	**331**	‖ *i*P	**Pn**	**21 32 50.2**	**+0.8**
NNA				pmax	pmax		
	comp=Z,246nm,1.7s						
ITAB	**Concordia**	**15.49**	**99**	Pn	**Pn**	**21 32 47.5**	**-2.8**
ITAB	**Concordia**	**15.49**	**99**	*e*P	**Pn**	**21 32 48.5**	**-1.9**
TRCB	**Terra Rica**	**15.52**	**83**	Pn	**Pn**	**21 32 49.1**	**-1.7**
TRCB				IAmb	IAmb	21 32 49.4	
	comp=Z,322nm,1.0s						
TRCB	**Terra Rica**	**15.52**	**83**	*e*P	**Pn**	**21 32 48.2**	**-2.5**
LL03	**Petrohue**	**15.57**	**189**		**Pn**	**21 32 48.5**	**-2.7**
LL03				IAmb	IAmb	21 33 10.4	
	comp=Z,217nm,0.8s						
PTGB	**Pitanga**	**15.67**	**90**	*e*P	**Pn**	**21 32 51.0**	**-1.7**
PP1B	**Ponte de Pedra**	**15.69**	**62**	*e*P	**Pn**	**21 32 49.7**	**-3.2**
LL05	**Los Muermos**	**16.00**	**191**	Pn	**Pn**	**21 32 54.6**	**-1.9**
SALV	**Santo Antonio**	**16.07**	**55**	*e*P	**Pn**	**21 32 55.0**	**-2.7**
C2SB	**Chapadao do Su**	**16.77**	**69**	*e*P	**Pn**	**21 33 05.4**	**-0.8**
**CNLB

SLOR **San Lorenzo -** **26.39 339** P **P** **21 34 45.8 +1.5**
SLOR IAmb IAmb 21 35 12.3
comp=Z,127nm,1.0s
SDBA **SAO DESIDERIO** **26.57 65** *e*P **P** **21 34 44.9 -0.7**
SMTB **Santa Maria do** **26.63 55** *e*P **P** **21 34 46.2 +0.1**
ALF01 **Guarapari-ES** **26.77 85** *e*P **P** **21 34 47.0 -0.2**
SJMB **Sao Joao De Ma** **26.95 81** *e*P **P** **21 34 47.9 -1.1**
PRPB **Parauapebas** **26.96 47** *e*P **P** **21 34 48.7 -0.4**
MG02 **Cerro Sombrero** **27.01 180** P **P** **21 34 48.2 -0.8**
MG04 **Isla Riesco** **27.14 183** P **P** **21 34 50.2 +0.1**
MG04 IAmb IAmb 21 34 54.0
comp=Z,218nm,1.2s
OTAV **Otavalo** **27.28 340** P **P** **21 34 54.2 +1.8**
OTAV **Otavalo** **27.28 340** P **P** **21 34 54.2 +1.8**
OTAV pmax pmax
comp=Z,70nm,1.5s
OTAV **Otavalo** **27.28 340** *e*P P 21 35 01.7 +9.3
OTAV **Otavalo** **27.28 340** *e*P **P** **21 34 55.2 +2.8**
EFI **East Falkland** **27.29 165** P **P** **21 34 51.1 -0.5**
EFI **East Falkland** **27.29 165***d i*P **P** **21 34 51.3 -0.3**
EFI pmax pmax
comp=Z,55nm,0.8s
CUSE **Cuicocha Este** **27.33 340** *e*P **P** **21 34 55.7 +2.9**
GO10 **Punta Arenas** **27.41 182** P **P** **21 34 52.4 -0.4**
RIB01 **Linhares ES** **27.46 82** *e*P **P** **21 34 53.2 -0.2**
TULM **Tulcn-Chalpat** **27.54 341** P **P** **21 34 55.2 +0.5**
TULM IAmb IAmb 21 34 58.9
comp=Z,104nm,1.1s
TULM **Tulcn-Chalpat** **27.54 341** *e*P **P** **21 34 49.7 -5.0**
MALB **Monte Alegre** **27.84 34** *e*P **P** **21 34 56.5 -0.3**
FLOC **Florencia** **27.84 346** *e*P **P** **21 34 49.7 -7.2**
GCUF **Volcan Galeras** **27.90 343** *e*P **P** **21 34 55.7 -2.3**
MACC **Macarena, Meta** **28.06 350** *e*P **P** **21 34 55.7 -3.1**
MG03 **Isla Dawson** **28.09 181** P **P** **21 34 57.5 -1.1**
MG03 IAmb IAmb 21 35 00.4
comp=Z,132nm,0.8s
CRUC **La Cruz** **28.13 344** *e*P **P** **21 35 01.7 +1.9**
DSPA **Despedida** **28.19 179** P **P** **21 35 00.2 +0.6**
NAN01 **Guarapari, ES** **28.20 80** *e*P **P** **21 34 59.1 -1.0**
GARC **Garzon, Huila** **28.39 347** *e*P **P** **21 35 01.7 -0.3**
SOTA **Rioblanco** **28.59 345** *e*P P 21 34 55.7 -8.4
PCON **Cinco Dias** **28.73 345** *e*P **P** **21 35 01.7 -3.6**
BETC **Betania** **28.86 347** *e*P **P** **21 35 01.7 -4.3**
GUA01 **Guaratinga, BA** **28.96 78** *e*P **P** **21 35 06.7 -0.2**
POPC **Popayan, Colom** **29.00 345** *e*P P 21 34 55.7 -12
USHA **Ushuaia** **29.07 179** P **P** **21 35 08.4 +1.0**
comp=Z,21nm,0.7s,baz=357,slow=5.9,SNR=3.0
comp=Z,21nm,0.7s
MARP **Paez Belalcaza** **29.13 346** *e*P P 21 35 01.7 -6.9
BOAV **Boa Vista** **29.24 18** *e*P **P** **21 35 09.7 +0.4**
CMC01 **Camacan, BA** **29.71 76** *e*P **P** **21 35 13.3 -0.1**
PRAC **Prado** **29.77 349** *e*P P 21 35 07.7 -6.3
PTGC **Puerto Gaitan,** **29.88 354** *e*P P 21 35 07.7 -7.2
VILC **Villavicencio,** **29.97 351** *e*P **P** **21 35 19.7 +3.8**
MCPB **Macapa, AP** **30.25 36** *e*P **P** **21 35 18.6 +0.4**
YOTC **Yotoco, Valle** **30.32 346** *e*P P 21 35 13.7 -5.2
GDU01 **Guandu, BA** **30.39 73** *e*P **P** **21 35 17.4 -2.1**
CHIC **Chingaza** **30.49 351** *e*P P 21 35 13.7 -7.0
ROSC **El Rosal** **30.78 350** P **P** **21 35 24.9 +1.7**
comp=Z,17nm,0.5s,baz=207,slow=6.8,SNR=4.7
ROSC LR LR 21 48 56.2
comp=Z,548nm,20.0s,baz=212,slow=38
comp=Z,17nm,0.5s
ROSC **El Rosal** **30.78 350** P **P** **21 35 23.9 +0.6**
ROSC **El Rosal** **30.78 350** P **P** **21 35 23.9 +0.6**
ROSC pmax pmax
comp=Z,46nm,0.9s
TMAB **Tom-Au,PA,Br** **30.95 45** *e*P **P** **21 35 25.2 +0.8**
PLMC **San Jos del P** **31.20 347** *e*P P 21 35 13.7 -13
GUY2C **Guyana, Caldas** **31.33 348** *e*P **P** **21 35 25.7 -2.5**
SPBC **San Pablo de B** **31.54 351** *e*P P 21 35 19.7 -10
CNOCA **NORCASIA, CALD** **31.58 349** *e*P **P** **21 35 31.8 +1.8**
RUSC **La Rusia** **31.65 353** *e*P P 21 35 19.7 -11
CBOC **Ciudad Bolivar** **32.08 347** *e*P P 21 35 25.7 -8.7
PAYG **Puerto Ayora** **32.08 318** P **P** **21 35 33.5 -0.9**
PAYG IAmb IAmb 21 35 47.7
comp=Z,81nm,1.2s
HELC **Santa Helena** **32.30 348** *e*P **P** **21 35 37.8 +1.1**
PAMC **Pamplona, Colo** **33.04 354** *e*P P 21 35 31.8 -11
ROSB **Rosrio** **33.22 51** *e*P **P** **21 35 44.3 0.0**
NBLA **Lagarto - SE** **33.23 70** *e*P **P** **21 35 42.9 -1.5**
ZARC **Zaragoza, Cauc** **33.46 350** P **P** **21 35 45.8 -0.5**
ZARC IAmb IAmb 21 35 47.2
comp=Z,86nm,1.3s
ZARC **Zaragoza, Cauc** **33.46 350** *e*P P 21 35 37.8 -8.6
NBMA **Muriti-CE** **34.40 63** *e*P **P** **21 35 55.1 +0.6**
SDV **Santo Domingo** **34.44 358** LR LR 21 52 28.7
comp=Z,515nm,18.2s,baz=184,slow=40
SDV **Santo Domingo** **34.44 358** P **P** **21 35 54.3 -0.7**
SDV IAmb IAmb 21 35 55.7
comp=Z,78nm,1.1s
SDV **Santo Domingo** **34.44 358** *e*P **P** **21 35 54.7 -0.3**
SDV **Santo Domingo** **34.44 358** P **P** **21 35 54.5 -0.4**
BAUV **El Baul** **34.50 2** P **P** **21 35 54.6 -0.6**
MDP **Montagnes des** **34.68 30** P **P** **21 35 57.2 +0.3**
comp=Z,92nm,0.7s,baz=210,slow=9.8,SNR=65
MDP LR LR 21 49 56.8
comp=Z,202nm,20.3s,baz=198,slow=36
comp=Z,92nm,0.7s
MPGF **Montagnes des** **34.69 30** P **P** **21 35 57.2 +0.3**
MPGF x x 21 36 05.2
MPGF pP **pP** **21 36 25.7 +1.7**
MPGF sP **sP** **21 36 36.8 -1.1**
NBPB **Pedra_Branca-C** **34.84 60** *e*P **P** **21 35 58.6 +0.3**
NBAN **Anadia - AL** **35.19 69** *e*P **P** **21 36 01.7 +0.4**
RPN **Rapa Nui** **35.73 259** LR LR 21 46 53.3
comp=Z,538nm,18.4s,baz=18,slow=29
VA02 **Isla de Pascua** **35.82 259** P **P** **21 36 06.5 -0.1**
SJCC **San Jacinto, C** **35.87 350** P **P** **21 36 06.4 -0.8**
NBMO **Morrinhos-CE** **35.90 56** *e*P **P** **21 36 07.4 0.0**
BIRV **Birongo** **36.12 5** P **P** **21 36 08.4 -0.8**
CDITO **Canoas** **36.56 337** P **P** **21 36 12.8 -0.1**
BRU2 **Volcan** **36.70 338** P **P** **21 36 12.9 -1.4**
BRU2 **Volcan** **36.70 338** *e*P P 21 36 07.8 -6.5
URIC **Uribia, Colomb** **37.30 356** P **P** **21 36 15.9 -3.2**
DRK0 **Durika** **37.33 337** P **P** **21 36 20.3 +0.6**
DRK0 pP **pP** **21 36 49.1 +2.5**
SRBA **San Rafael, Bu** **37.34 337** P **P** **21 36 21.1 +1.5**
SRBA IAmb IAmb 21 36 24.0
comp=Z,133nm,1.3s
SRBA **pP** **21 36 47.7 +1.1**
HOPE **Hope Point** **37.43 148** P **P** **21 36 19.1 -0.7**
HOPE IAmb IAmb 21 36 33.3
comp=Z,154nm,1.4s
HOPE **Hope Point** **37.43 148** P **P** **21 36 19.1 -0.7**
HOPE pmax pmax
comp=Z,154nm,1.4s
HOPE **Hope Point** **37.43 148** P **P** **21 36 20.9 +1.1**
HOPE pP **pP** **21 36 46.3 -1.1**
PEZE **Perez Zeledon,** **37.59 336** P **P** **21 36 21.6 -0.2**
PEZE IAmb IAmb 21 36 26.3
comp=Z,154nm,1.5s
RCBR **Riachuelo** **37.60 64** P **P** **21 36 21.4 -0.4**
comp=Z,45nm,1.1s,baz=227,slow=18,SNR=6.6
RCBR LR LR 21 53 55.7
comp=Z,401nm,20.6s,baz=29,slow=40
comp=Z,45nm,1.1s
RCBR **Riachuelo** **37.60 64** P **P** **21 36 20.9 -0.9**
RCBR **Riachuelo** **37.60 64** P **P** **21 36 20.9 -0.9**
RCBR pmax pmax
comp=Z,42nm,1.1s
RCBR **Riachuelo** **37.60 64** *e*P **P** **21 36 22.4 +0.6**
RCBR **Riachuelo** **37.60 64** P **P** **21 36 22.4 +0.6**
RCBR x x 21 36 54.6
RCBR sP **sP** **21 37 02.8 -0.4**
TOSP **Speyside** **37.80 14** P **P** **21 36 22.5 -0.8**
RIMA **Rio Macho** **38.02 336** P **P** **21 36 24.0 -1.4**
RIMA IAmb IAmb 21 36 29.1
comp=Z,76nm,1.4s
CVTR **Volcan Turrial** **38.21 337** P **P** **21 36 28.6 +1.2**
CVTR IAmb IAmb 21 36 58.0
comp=Z,55nm,0.9s
GRGR **Grenville** **38.38 12** P **P** **21 36 26.0 -2.3**
ESPZ **Base Esperanza** **38.53 171** P **P** **21 36 30.4 +1.5**
ESPZ IAmb IAmb 21 36 47.1
comp=Z,111nm,1.2s
ORCD **Orcadas** **38.83 161** P **P** **21 36 30.6 -0.8**
ORCD IAmb IAmb 21 36 34.8
comp=Z,106nm,1.0s
JTS **Las Juntas de** **38.90 335** P **P** **21 36 35.6 +3.0**
comp=Z,4.9nm,0.4s,baz=243,slow=7.9,SNR=5.6
comp=Z,4.9nm,0.4s
JTS **Las Juntas de** **38.90 335** P **P** **21 36 30.9 -1.8**
JTS IAmb IAmb 21 36 36.4
comp=Z,91nm,1.5s
JTS **Las Juntas de** **38.90 335***d i*P **P** **21 36 34.8 +2.1**
JTS pmax pmax
comp=Z,113nm,2.3s
JTS **Las Juntas de** **38.90 335** P **P** **21 36 35.7 +3.0**
JTS pP **pP** **21 37 02.4 +2.6**
JTS sP **sP** **21 37 14.9 +1.5**
DUNO **Dulce Nombre,** **38.92 334** P **P** **21 36 32.5 -0.2**
DUNO IAmb IAmb 21 36 47.4
comp=Z,108nm,1.5s
ORTG **Ortega, Santa** **39.16 334** P **P** **21 36 35.8 +0.9**
ORTG IAmb IAmb 21 37 05.3
comp=Z,56nm,0.9s
PMSA **Palmer Station** **39.19 176** P **P** **21 36 35.2 +0.8**
HZTE **Horizontes, Gu** **39.54 334** P **P** **21 36 36.0 -1.9**
SVB **Belmont** **39.57 12** P **P** **21 36 35.5 -2.6**
SVB IAmb IAmb 21 36 39.4
comp=Z,136nm,1.1s
BBGH **Gun Hill** **39.80 15** P **P** **21 36 37.7 -2.4**
MCLT **Moule a Chique** **40.05 13** P **P** **21 36 41.3 -0.9**
ESPN **Las Esperanzas** **40.42 337** P **P** **21 36 44.5 -0.6**
ACON **Acoyapa** **40.53 336** P **P** **21 36 45.4 -0.7**
PRVC **Isla de Provid** **40.60 342** P **P** **21 36 47.2 +0.5**
PRVC **Isla de Provid** **40.60 342** *e*P **P** **21 36 43.9 -2.8**
MPOM **Morne Pois Mar** **40.79 13** P **P** **21 36 45.5 -2.6**
BIM **Bigot** **40.82 12** P **P** **21 36 45.9 -2.6**
BIM IAmb IAmb 21 36 50.6
comp=Z,154nm,1.0s
FDF **Fort de France** **41.01 12** P **P** **21 36 48.3 -1.7**
FDF **Fort de France** **41.01 12** P **P** **21 36 48.3 -1.7**
FDF pmax pmax
comp=Z,295nm,1.4s
ILAM **Ilet Lapin Mar** **41.10 13** P **P** **21 36 48.9 -1.8**
SVN **Savane Anatole** **41.11 12** P **P** **21 36 49.4 -1.6**
BOAB **BOACO BROADBAN** **41.15 335** P **P** **21 36 50.0 -1.2**
DLPL **La Plaine** **41.58 12** P **P** **21 36 53.5 -1.2**
MATN **Managalpa** **41.69 335** P **P** **21 36 53.7 -2.0**
GDSD **La Dsirade Is** **42.57 12** P **P** **21 37 00.6 -2.1**
GDSD IAmb IAmb 21 37 23.0
comp=Z,80nm,1.3s
SEUS **St. Eustatius** **43.41 9** P **P** **21 37 07.1 -2.4**
ICMP **Isla Caja de M** **43.45 4** P **P** **21 37 06.7 -3.1**
MLPR **Magueyes Islan** **43.50 3** P **P** **21 37 07.2 -2.9**
MLPR IAmb IAmb 21 37 10.4
comp=Z,144nm,1.0s
CRPR **Cabo Rojo, PR** **43.54 3** P **P** **21 37 08.6 -1.8**
CRPR IAmb IAmb 21 37 10.6
comp=Z,84nm,0.9s
OBIP **Obispado Ponce** **43.60 4** P **P** **21 37 09.3 -1.7**
PDPR **Patillas Dam,** **43.61 5** P **P** **21 37 08.8 -2.2**
PDPR IAmb IAmb 21 37 10.7
comp=Z,112nm,0.9s
CELP **Cerrillos** **43.63 4** P **P** **21 37 09.7 -1.5**
SJG **San Juan** **43.70 4** P **P** **21 37 10.2 -1.5**
comp=Z,74nm,0.8s,baz=236,slow=3.0,SNR=20
SJG LR LR 21 58 23.7
comp=Z,180nm,18.5s,baz=229,slow=40
SJG **San Juan** **43.70 4** P **P** **21 37 09.5 -2.2**
SJG IAmb IAmb 21 37 11.4
comp=Z,119nm,1.0s
SJG **San Juan** **43.70 4** P **P** **21 37 09.5 -2.2**
SJG pmax pmax
comp=Z,119nm,1.0s
SJG **San Juan** **43.70 4** *e*P **P** **21 37 07.9 -3.8**
SJG **San Juan** **43.70 4** P **P** **21 37 10.7 -1.1**
SJG pP **pP** **21 37 37.3 -2.4**
SJG pwP sP 21 37 43.4 -10
SJG sP sP 21 37 50.9 -2.3
PRSN **Puerto Rico Se** **43.74 3** P **P** **21 37 10.0 -2.0**
PRSN IAmb IAmb 21 37 12.0
comp=Z,211nm,1.4s
HUMP **Col San Antoni** **43.75 5** P **P** **21 37 08.8 -3.3**
HUMP IAmb IAmb 21 37 11.8
comp=Z,76nm,1.2s
ANWB **Willy Bob** **43.77 10** P **P** **21 37 08.1 -4.2**
JAKH **Jacmel** **43.82 356** P **P** **21 37 13.0 +0.3**
JAKH IAmb IAmb 21 37 23.7
comp=Z,204nm,1.3s
BANI **BANI** **43.88 359** P **P** **21 37 12.2 -1.1**
CBYP **Canovanas** **43.88 5** P **P** **21 37 11.8 -1.4**
CBYP IAmb IAmb 21 37 12.9
comp=Z,174nm,1.1s
CBYP pP **pP** **21 37 40.0 -1.2**
AOPR **Arecibo Observ** **43.89 4** P **P** **21 37 11.5 -1.8**
AOPR IAmb IAmb 21 37 13.7
comp=Z,157nm,1.4s
GCPR **Guaynabo City** **43.90 4** P **P** **21 37 09.9 -3.5**
SMRT **St. Maarten** **43.95 9** P **P** **21 37 11.4 -2.3**
SMRT IAmb IAmb 21 37 12.4
comp=Z,78nm,0.5s
CUPR **Culebra, Puert** **43.96 6** P **P** **21 37 11.9 -1.9**
STVI **Saint Thomas** **44.03 6** P **P** **21 37 11.0 -3.4**
DR12 **Loma Pena Alta** **44.26 360** P **P** **21 37 14.3 -2.0**
MTO3 **Montecristo** **44.40 332** P **P** **21 37 18.4 +0.7**
MTDJ **Mount Denham** **44.42 349** P **P** **21 37 17.9 +0.3**
SDDR **Presa de Saban** **44.49 357** P **P** **21 37 17.2 -0.9**
ESQI **Esquipulas** **44.54 332** P **P** **21 37 19.9 +1.2**
ESQI IAmb IAmb 21 37 22.4
comp=Z,78nm,1.0s
SC01 **Santiago de lo** **44.92 358** P **P** **21 37 20.5 -1.0**
GTBY **Guantanamo Bay** **45.74 352** P **P** **21 37 27.1 -0.8**
GTBY IAmb IAmb 21 37 30.0
comp=Z,81nm,0.9s
LCCY **Blossom Villag** **46.33 346** P **P** **21 37 31.8 -0.7**
PETF **Flores** **46.87 333** P **P** **21 37 37.0 +0.2**
PETF IAmb IAmb 21 37 39.8
comp=Z,70nm,1.0s
GRTK **Grand Turk** **47.00 358** P **P** **21 37 37.2 -0.5**
CCIG **Comitan** **47.30 330** P **P** **21 37 39.5 -0.8**
CMIG **Matias Romero** **49.30 327** LR LR 21 54 21.5
comp=Z,185nm,21.9s,baz=160,slow=30
TRIS **Tristan da Cun** **49.32 118** P **P** **21 37 55.2 -0.4**
SOR **Soroa** **50.03 343** P **P** **21 38 00.4 -0.6**
SOR IAmb IAmb 21 38 03.0
comp=Z,96nm,1.0s
SOR **Soroa** **50.03 343** P **P** **21 38 00.4 -0.6**
SOR pmax pmax
comp=Z,97nm,1.0s
TLIG **Tlapa** **51.59 324** P **P** **21 38 14.3 +1.5**
061Z **Ochoppi** **52.50 347** P **P** **21 38 19.9 +0.6**
061Z **Ochoppi** **52.50 347** P **P** **21 38 20.3 +1.0**
baz=167
060A **Indiantown** **53.53 348** P **P** **21 38 26.6 -0.3**
060A **Indiantown** **53.53 348** P **P** **21 38 28.5 +1.6**
baz=168,SNR=5.5
BELA **Belgrano 2** **54.63 172** P **P** **21 38 34.7 +0.4**
BELA IAmb IAmb 21 38 36.4
comp=Z,32nm,0.8s
MOIG **Morelia** **54.73 322** P **P** **21 38 37.6 +1.6**
MOIG IAmb IAmb 21 38 40.3
comp=Z,50nm,0.8s
DWPF **Disney Wildern** **54.79 347** P **P** **21 38 36.1 +0.2**
DWPF **Disney Wildern** **54.79 347** P **P** **21 38 36.8 +0.9**
baz=166
DWPF **Disney Wildern** **54.79 347** P **P** **21 38 36.9 +0.9**
DWPF pP **pP** **21 39 07.7 +2.9**
DWPF sP **sP** **21 39 17.5 -0.6**
VNA3 **Neumayer Olymp** **56.22 160** P **P** **21 38 46.6 +0.8**
VNA3 **Neumayer Olymp** **56.22 160** pP pP 21 39 16.2 +1.3
656A **Willston** **56.24 346** P **P** **21 38 46.1 -0.2**
656A pP **pP** **21 39 15.1 -0.1**
656A **Willston** **56.24 346** P **P** **21 38 47.3 +1.0**
baz=166,SNR=17
VNA1 **Neumayer--Stat** **56.46 160** P **P** **21 38 48.6 +1.2**
VNA1 **Neumayer--Stat** **56.46 160** pP pP 21 39 17.2 +0.7
VNA1 **Neumayer--Stat** **56.46 160** sP sP 21 39 29.4 -0.5
456A **Hilliard** **57.44 347** P **P** **21 38 54.6 -0.2**
456A **Hilliard** **57.44 347** P **P** **21 38 56.0 +1.2**
baz=166,SNR=7.1
553A **Crawfordville** **57.46 344** P **P** **21 38 55.4 +0.5**
553A pP **pP** **21 39 24.7 +0.8**
553A **Crawfordville** **57.46 344** P **P** **21 38 56.3 +1.4**
baz=164,SNR=21
BBSR **BB Station** **57.96 5** P **P** **21 38 58.1 -0.3**
BBSR IAmb IAmb 21 39 00.2
comp=Z,87nm,1.3s
BBSR **BB Station** **57.96 5** P **P** **21 38 59.2 +0.9**
BBSR pP **pP** **21 39 28.1 +0.4**
BBSR sP **sP** **21 39 41.3 +0.3**
ZAIG **Zacatecas** **57.98 323** P **P** **21 39 01.0 +1.9**
ZAIG IAmb IAmb 21 39 03.6
comp=Z,51nm,1.2s
451A **Vernon** **58.20 343** P **P** **21 38 58.6 -1.5**
451A pP **pP** **21 39 29.5 +0.5**
451A **Vernon** **58.20 343** P **P** **21 39 00.8 +0.8**
baz=162,SNR=6.6
SNAA **Sanae** **58.43 160** P **P** **21 39 02.0 +0.7**
SNAA **Sanae** **58.43 160** pP pP 21 39 30.7 0.0
SNAA **Sanae** **58.43 160** sP sP 21 39 45.0 +1.0
SNAA **Sanae** **58.43 160** P **P** **21 39 01.8 +0.4**
comp=Z,42nm,0.5s,baz=279,slow=7.1,SNR=256
SNAA pP **pP** **21 39 29.8 -0.9**
comp=Z,52nm,1.0s,baz=285,slow=4.3,SNR=6.8
SNAA sP **sP** **21 39 42.5 -1.5**
comp=Z,34nm,1.1s,baz=309,slow=3.6,SNR=2.5
SNAA LR LR 22 04 27.9
comp=Z,112nm,19.2s,baz=288,slow=36
comp=Z,42nm,0.5s
SNAA **Sanae** **58.43 160** P **P** **21 39 01.2 -0.2**
SNAA IAmb IAmb 21 39 02.9
comp=Z,77nm,1.0s
SNAA **Sanae** **58.43 160***c i*P **P** **21 39 01.7 +0.4**
SNAA pmax pmax
comp=Z,82nm,1.0s
257A **Skidaway Islan** **58.46 348** P **P** **21 39 01.6 -0.3**
257A **Skidaway Islan** **58.46 348** P **P** **21 39 02.9 +1.0**
baz=168
TIGA **Tifton** **58.46 346** P **P** **21 39 01.5 -0.4**
TIGA **Tifton** **58.46 346** P **P** **21 39 02.4 +0.5**
baz=165,SNR=6.7
TIGA **Tifton** **58.46 346** P **P** **21 39 02.3 +0.4**
baz=165,SNR=6.7
255A **Hazlehurst** **58.70 347** P **P** **21 39 03.2 -0.3**
255A **Hazlehurst** **58.70 347** P **P** **21 39 04.2 +0.6**
baz=166,SNR=12
352A **Blakely** **58.81 344** P **P** **21 39 04.2 -0.2**
352A **Blakely** **58.81 344** P **P** **21 39 04.8 +0.5**
baz=163,SNR=19
BRAL **Brewton** **59.07 342** P **P** **21 39 05.7 -0.4**
BRAL **Brewton** **59.07 342** P **P** **21 39 07.0 +0.9**
baz=161,SNR=8.8
CSU **Charleston Sou** **59.29 350** P **P** **21 39 07.2 -0.4**
NHSC **New Hope** **59.42 349** P **P** **21 39 08.0 -0.5**
NHSC **New Hope** **59.42 349** P **P** **21 39 09.9 +1.4**
baz=168,SNR=12
154A **Montrose** **59.49 347** P **P** **21 39 08.3 -0.7**
154A **Montrose** **59.49 347** P **P** **21 39 09.5 +0.5**
baz=165,SNR=22
250A **Grady** **59.62 343** P **P** **21 39 09.4 -0.5**
250A **Grady** **59.62 343** P **P** **21 39 10.3 +0.4**
baz=162,SNR=9.8
KVTX **Kingsville** **59.69 331** P **P** **21 39 10.4 0.0**
152A **Waverly Hall** **59.90 345** P **P** **21 39 11.1 -0.8**
152A **Waverly Hall** **59.90 345** P **P** **21 39 12.2 +0.4**
baz=164,SNR=21
346A **Big Creek Wild** **59.97 340** P **P** **21 39 12.3 0.0**
346A **Big Creek Wild** **59.97 340** P **P** **21 39 13.2 +0.9**
baz=159
Y60A **Bolivia** **60.01 351** P **P** **21 39 12.7 +0.2**
Y60A **Bolivia** **60.01 351** P **P** **21 39 13.9 +1.4**
baz=171
Y60A P **P** **21 39 13.9 +1.4**
baz=171
Y58A **Scranton** **60.12 350** P **P** **21 39 13.9 +0.6**
TROLL **Troll, Antarti** **60.15 160** P **P** **21 39 14.2 +1.0**
TROLL **Troll, Antarti** **60.15 160** pP pP 21 39 44.0 +1.3
TROLL **Troll, Antarti** **60.15 160** sP sP 21 39 57.3 +1.3
SACV **Santiago Islan** **60.16 53** P **P** **21 39 12.5 -1.4**
SACV IAmb IAmb 21 39 21.7
comp=Z,30nm,0.9s
GOGA **Godfrey** **60.34 346** P **P** **21 39 14.1 -0.7**
GOGA IAmb IAmb 21 39 16.3
comp=Z,56nm,1.0s
GOGA **Godfrey** **60.34 346** P **P** **21 39 14.1 -0.7**
GOGA pmax pmax
comp=Z,56nm,1.0s
GOGA **Godfrey** **60.34 346** P **P** **21 39 14.9 +0.1**
baz=165,SNR=20
Y57A **Sumter** **60.35 349** P **P** **21 39 15.1 +0.3**
Y57A **Sumter** **60.35 349** P **P** **21 39 15.9 +1.1**
baz=168,SNR=11
Y57A P **P** **21 39 15.9 +1.1**
baz=168,SNR=11
344A **Westbrook Farm** **60.43 339** P **P** **21 39 16.4 +0.9**
344A **Westbrook Farm** **60.43 339** P **P** **21 39 16.8 +1.3**
baz=158,SNR=6.3
441A **DeRidder** **60.63 336** P **P** **21 39 18.1 +1.3**
441A IAmb IAmb 21 39 20.4
comp=Z,87nm,1.1s
441A **DeRidder** **60.63 336** P **P** **21 39 19.1 +2.3**
baz=155
Z51A **Franklin** **60.63 345** P **P** **21 39 16.8 0.0**
Z51A IAmb IAmb 21 39 18.4
comp=Z,77nm,1.2s
Z51A **Franklin** **60.63 345** P **P** **21 39 17.2 +0.5**
baz=164,SNR=9.4
X58A **Rowland** **60.71 351** P **P** **21 39 18.0 +0.7**
X58A **Rowland** **60.71 351** P **P** **21 39 18.5 +1.3**
baz=170,SNR=14
X58A P **P** **21 39 18.5 +1.3**
baz=170,SNR=14
JSC **Jenkinsville** **60.75 349** P **P** **21 39 17.4 -0.1**
JSC IAmb IAmb 21 39 19.7
comp=Z,81nm,0.9s
JSC **Jenkinsville** **60.75 349** P **P** **21 39 17.5 -0.1**
JSC pmax pmax
comp=Z,81nm,0.9s
735A **Kenedy** **60.78 331** P **P** **21 39 19.4 +1.5**
735A **Kenedy** **60.78 331** P **P** **21 39 20.0 +2.1**
baz=150
LRAL **Lakeview Retre** **60.82 343** P **P** **21 39 18.1 0.0**
LRAL IAmb IAmb 21 39 19.5
comp=Z,74nm,1.2s
LRAL pP **pP** **21 39 46.5 -0.8**
LRAL **Lakeview Retre** **60.82 343** P **P** **21 39 18.2 +0.1**
baz=162,SNR=23
HODGE **Hodges** **60.89 348** P **P** **21 39 18.9 +0.4**
HODGE IAmb IAmb 21 39 20.4
comp=Z,57nm,1.1s
342A **Flagon Creek P** **60.89 338** P **P** **21 39 20.2 +1.6**
342A pP **pP** **21 39 48.3 +0.5**
342B **Flagon Creek P** **60.89 338** P **P** **21 39 20.4 +1.8**
baz=156,SNR=8.2
Y52A **Lilburn** **60.90 346** P **P** **21 39 19.0 +0.4**
Y52A IAmb IAmb 21 39 20.2
comp=Z,76nm,1.0s
Y52A pP **pP** **21 39 47.7 -0.3**
Y52A **Lilburn** **60.90 346** P **P** **21 39 19.1 +0.5**
baz=165,SNR=23
Y52A P **P** **21 39 19.1 +0.5**
baz=165,SNR=23
HKT **Hockley** **60.92 334** P **P** **21 39 19.2 +0.5**
HKT IAmb IAmb 21 39 21.0
comp=Z,56nm,1.4s
HKT pP **pP** **21 39 48.2 +0.3**
HKT **Hockley** **60.92 334***c i*P **P** **21 39 20.2 +1.5**
HKT pmax pmax
comp=Z,77nm,1.7s
HKT **Hockley** **60.92 334** P **P** **21 39 20.4 +1.7**
HKT pP **pP** **21 39 48.3 +0.4**
HKT sP **PcP** **21 40 04.6 +3.5**
BIRD **Birdtown, Kers** **60.97 350** P **P** **21 39 19.3 +0.3**
BIRD pP **pP** **21 39 48.8 +0.4**
146A **Union** **61.02 341** P **P** **21 39 20.2 +0.8**
146A pP **pP** **21 39 48.9 +0.2**
146A **Union** **61.02 341** P **P** **21 39 20.1 +0.7**
baz=160
833A **Chaparral WMA,** **61.03 330** P **P** **21 39 20.9 +1.4**
833A pP **pP** **21 39 49.1 +0.4**
833A **Chaparral WMA,** **61.03 330** P **P** **21 39 21.4 +1.8**
baz=149,SNR=35
833A **Chaparral WMA,** **61.03 330** P **P** **21 39 21.6 +2.0**
baz=149,SNR=35
VBMS **Vicksburg** **61.07 340** P **P** **21 39 19.6 -0.1**
VBMS IAmb IAmb 21 39 23.0
comp=Z,60nm,0.9s
VBMS pP **pP** **21 39 49.6 +0.5**
VBMS **Vicksburg** **61.07 340** P **P** **21 39 20.7 +0.9**
baz=158
CNNC **Cliffs of the** **61.18 352** P **P** **21 39 20.9 +0.4**
CNNC **Cliffs of the** **61.18 352** P **P** **21 39 21.6 +1.2**
baz=171
Z47A **Carrollton** **61.26 342** P **P** **21 39 20.9 -0.1**
Z47A IAmb IAmb 21 39 22.5
comp=Z,77nm,1.1s
Z47A pP **pP** **21 39 49.5 -0.9**
Z47A **Carrollton** **61.26 342** P **P** **21 39 21.3 +0.3**

baz=161,SNR=15
PAULI Pauline 61.38 348 P **P** **21 39 23.1 +1.3**
PAULI pP **pP** **21 39 51.5 +0.3**
W57A Gilead 61.40 350 P **P** **21 39 22.1 +0.3**
W57A lAmb lAmb 21 39 24.1
comp=Z,76nm,0.9s
W57A Gilead 61.40 350 P **P** **21 39 22.8 +0.9**
baz=169,SNR=24
W57A P **P** **21 39 22.8 +0.9**
baz=169,SNR=24
Y49A Blount Mountai 61.45 344 P **P** **21 39 21.2 -1.1**
Y49A lAmb lAmb 21 39 23.7
comp=Z,76nm,1.2s
Y49A Blount Mountai 61.45 344 P **P** **21 39 22.4 +0.1**
baz=162,SNR=20
V61A Roper 61.58 353 P **P** **21 39 21.9 -1.2**
V61A Roper 61.58 353 P **P** **21 39 24.0 +0.9**
baz=172,SNR=5.6
V61A P **P** **21 39 24.0 +0.9**
baz=172,SNR=5.6
KMSC Kings Mountain 61.60 349 P **P** **21 39 23.4 0.0**
KMSC lAmb lAmb 21 39 25.4
comp=Z,98nm,1.1s
KMSC pP **pP** **21 39 52.2 -0.5**
KMSC Kings Mountain 61.60 349 P **P** **21 39 24.2 +0.8**
baz=168,SNR=16
KMSC Kings Mountain 61.60 349 P **P** **21 39 24.1 +0.8**
baz=168,SNR=16
X51A Calhoun 61.75 345 P **P** **21 39 24.8 +0.4**
X51A Calhoun 61.75 345 P **P** **21 39 24.9 +0.6**
baz=164,SNR=35
X51A P **P** **21 39 24.9 +0.6**
baz=164,SNR=35
BG3 Lake Jocassee 61.76 347 P **P** **21 39 24.9 +0.6**
BG3 lAmb lAmb 21 39 26.4
comp=Z,69nm,1.0s
BG3 pP **pP** **21 39 54.2 +0.4**
143A Socs Landing, 61.80 339 P **P** **21 39 26.2 +1.5**
143A pP **pP** **21 39 55.0 +1.0**
143A Socs Landing, 61.80 339 P **P** **21 39 25.7 +1.0**
baz=157,SNR=7.8
V58A Windy Hill, Pi 61.89 351 P **P** **21 39 25.9 +0.6**
V58A lAmb lAmb 21 39 27.4
comp=Z,95nm,1.1s
V58A Windy Hill, Pi 61.89 351 P **P** **21 39 26.3 +1.1**
baz=170,SNR=25
V58A P **P** **21 39 26.3 +1.1**
baz=170,SNR=25
FPAL Fort Paine 61.90 345 P **P** **21 39 25.1 -0.3**
FPAL lAmb lAmb 21 39 26.8
comp=Z,95nm,1.1s
FPAL pP **pP** **21 39 54.5 -0.2**
W52A Murphy 62.06 346 P **P** **21 39 26.3 -0.1**
W52A lAmb lAmb 21 39 28.3
comp=Z,55nm,0.8s
W52A Murphy 62.06 346 P **P** **21 39 26.9 +0.5**
baz=165,SNR=11
NATX Nacogdoches 62.08 336 P **P** **21 39 27.0 +0.4**
NATX lAmb lAmb 21 39 29.7
comp=Z,86nm,0.9s
NATX Nacogdoches 62.08 336 P **P** **21 39 28.2 +1.6**
baz=154
X48A Hartselle 62.17 343 P **P** **21 39 26.9 -0.3**
X48A Hartselle 62.17 343 P **P** **21 39 27.6 +0.4**
baz=162,SNR=46
U59A Littleton 62.27 352 P **P** **21 39 27.8 0.0**
U59A lAmb lAmb 21 39 30.2
comp=Z,75nm,1.1s
U59A Littleton 62.27 352 P **P** **21 39 28.8 +1.1**
baz=171,SNR=14
U59A P **P** **21 39 28.8 +1.1**
baz=171,SNR=14
V55A Taylorsville 62.28 349 P **P** **21 39 27.6 -0.2**
V55A Taylorsville 62.28 349 P **P** **21 39 29.0 +1.2**
baz=168,SNR=28
V55A P **P** **21 39 29.0 +1.2**
baz=168,SNR=28
Y45A Yeager Farm, C 62.31 341 P **P** **21 39 28.5 +0.6**
Y45A Yeager Farm, C 62.31 341 P **P** **21 39 28.6 +0.6**
baz=159,SNR=7.3
435B Jarrell 62.36 333 P **P** **21 39 28.9 +0.4**
435B lAmb lAmb 21 39 31.1
comp=Z,42nm,1.1s
435B pP **pP** **21 39 57.9 +0.1**
435B Jarrell 62.36 333 P **P** **21 39 29.9 +1.4**
baz=151
435B Jarrell 62.36 333 P **P** **21 39 29.8 +1.4**
baz=151
V53A Saluda 62.39 348 P **P** **21 39 28.5 -0.2**
V53A lAmb lAmb 21 39 30.4
comp=Z,46nm,0.8s
V53A Saluda 62.39 348 P **P** **21 39 29.1 +0.5**
baz=166,SNR=26
V53A P **P** **21 39 29.1 +0.5**
baz=166,SNR=26
W50A Signal Mountai 62.47 345 P **P** **21 39 29.5 +0.4**
baz=164,SNR=49
CPCT Cooper Cave 62.53 346 P **P** **21 39 28.8 -0.7**
CPCT lAmb lAmb 21 39 31.2
comp=Z,96nm,1.1s
TKL Tuckaleechee C 62.57 347 pP pP 21 39 58.6 -0.7
baz=164,slow=6.3
TKL Tuckaleechee C 62.57 347 P **P** **21 39 29.4 -0.4**
TKL lAmb lAmb 21 39 31.2
comp=Z,67nm,0.8s
TKL Tuckaleechee C 62.57 347 P **P** **21 39 29.4 -0.4**
TKL *PP **pP** **21 39 58.6 -0.7**
TKL pmax pmax
comp=Z,67nm,0.8s
U56A King 62.62 350 P **P** **21 39 30.6 +0.5**
U56A lAmb lAmb 21 39 32.7
comp=Z,89nm,1.1s
U56A pP **pP** **21 39 60.0 +0.4**
U56A King 62.62 350 P **P** **21 39 31.3 +1.2**
baz=169,SNR=11
U56A P **P** **21 39 31.3 +1.2**
baz=169,SNR=11
SWET Sewanee 62.63 345 P **P** **21 39 30.0 -0.2**
V52A Sevierville 62.71 347 P **P** **21 39 30.4 -0.3**
V52A lAmb lAmb 21 39 32.2
comp=Z,87nm,0.8s
V52A Sevierville 62.71 347 P **P** **21 39 30.9 +0.2**
baz=165,SNR=57
237A Washetta, Mont 62.73 335 P **P** **21 39 32.2 +1.3**
237A **pP** **21 40 00.6 +0.4**
237A Washetta, Mont 62.73 335 P **P** **21 39 32.6 +1.7**
baz=153,SNR=6.7
Z41A Richland Creek 62.77 338 P **P** **21 39 30.8 -0.3**
Z41A lAmb lAmb 21 39 34.0
comp=Z,104nm,1.3s
Z41A **pP** **21 40 01.4 +0.8**
Z41A Richland Creek 62.77 338 P **P** **21 39 32.7 +1.5**
baz=156
Z41A P **P** **21 39 32.7 +1.5**
baz=156
Z41A Richland Creek 62.77 338 P **P** **21 39 32.7 +1.5**
baz=156
V51A Loudon 62.83 346 P **P** **21 39 31.4 -0.1**
V51A lAmb lAmb 21 39 33.0
comp=Z,61nm,1.1s
V51A Loudon 62.83 346 P **P** **21 39 31.8 +0.3**
baz=165,SNR=20
T59A Double "B" Far 62.85 353 P **P** **21 39 32.4 +0.8**
T59A lAmb lAmb 21 39 34.0
comp=Z,74nm,1.1s
T59A Double "B" Far 62.85 353 P **P** **21 39 32.5 +0.9**
baz=172,SNR=19
T59A P **P** **21 39 32.5 +0.9**
baz=172,SNR=19
OXF Oxford 62.87 341 P **P** **21 39 31.6 -0.1**
baz=160,SNR=17
SLBS Sierra La Lagu 62.92 318 P **P** **21 39 33.6 +1.2**
SLBS lAmb lAmb 21 39 36.9
comp=Z,100nm,1.4s
SLBS Sierra La Lagu 62.92 318 P **P** **21 39 35.8 +3.4**
SLBS pP **pP** **21 40 03.4 +1.7**
SLBS sP **sP** **21 40 17.0 +2.2**
T60A Surry 62.93 353 P **P** **21 39 32.2 +0.2**
T60A Surry 62.93 353 P **P** **21 39 33.3 +1.2**
baz=172
T60A P **P** **21 39 33.3 +1.2**
baz=172
PLAL Pickwick Lake 62.94 343 lAmb lAmb 21 39 33.4
comp=Z,67nm,1.0s
HPIG 62.99 324 P **P** **21 39 33.5 +0.5**
HPIG lAmb lAmb 21 39 36.8
comp=Z,88nm,1.3s
HPIG **pP** **21 40 03.0 +0.8**
U54A Nelsons Funny 63.03 349 P **P** **21 39 32.6 -0.3**
U54A Nelsons Funny 63.03 349 P **P** **21 39 33.5 +0.6**
baz=167,SNR=20
U54A P **P** **21 39 33.5 +0.6**
baz=167,SNR=20
CCAR Cane Creek 63.04 339 P **P** **21 39 32.9 0.0**
CCAR **pP** **21 40 02.3 -0.1**
NVL N'lazarevskaya 63.04 158 ↑P **P** **21 39 32.6 +0.1**
NVL e*PP **pP** **21 40 01.4 -0.8**
NVL eS **S** **21 47 51.2 -2.3**
NVL pmax pmax
comp=Z,66nm,0.9s
JCT Junction City 63.05 331 P **P** **21 39 33.6 +0.5**
JCT lAmb lAmb 21 39 35.9
comp=Z,78nm,0.9s
JCT **pP** **21 40 03.4 +1.0**
JCT Junction City 63.05 331 P **P** **21 39 33.6 +0.5**
JCT *PP **pP** **21 40 03.4 +1.0**
JCT pmax pmax
comp=Z,78nm,0.9s
JCT Junction City 63.05 331 P **P** **21 39 34.7 +1.6**
baz=149,SNR=24
T57A Hurt 63.10 351 P **P** **21 39 33.7 +0.5**
T57A lAmb lAmb 21 39 35.6
comp=Z,53nm,0.9s
T57A Hurt 63.10 351 P **P** **21 39 34.2 +1.0**
baz=170,SNR=19
T57A P **P** **21 39 34.2 +1.0**
baz=170,SNR=19
WLAR White Oak Lake 63.27 338 P **P** **21 39 35.8 +1.3**
V48A Smith Brothers 63.34 344 lAmb lAmb 21 39 36.5
comp=Z,99nm,0.9s
V48A Smith Brothers 63.34 344 P **P** **21 39 35.2 +0.4**
baz=162,SNR=44
WHTX Lake Whitney, 63.37 333 P **P** **21 39 35.2 0.0**
WHTX pP **pP** **21 40 05.0 +0.6**
WHTX Lake Whitney, 63.37 333 P **P** **21 39 36.2 +1.1**
baz=152
WHTX Lake Whitney, 63.37 333 P **P** **21 39 36.3 +1.1**
baz=152
TZTN Tazewell 63.38 347 P **P** **21 39 34.4 -0.7**
TZTN lAmb lAmb 21 39 36.6
comp=Z,51nm,1.1s
TZTN Tazewell 63.38 347 P **P** **21 39 35.2 +0.1**
baz=166,SNR=12
W45A Hickory Valley 63.41 342 P **P** **21 39 35.5 +0.2**
W45A Hickory Valley 63.41 342 P **P** **21 39 35.3 0.0**
baz=160,SNR=5.2
LPIG La Paz 63.45 318 P **P** **21 39 38.6 +2.8**
comp=Z,20nm,0.3s,baz=90,slow=1.0,SNR=1.4
comp=Z,20nm,0.3s
BLA Blacksburg 63.48 350 P **P** **21 39 35.6 -0.2**
BLA lAmb lAmb 21 39 37.5
comp=Z,67nm,1.2s
BLA Blacksburg 63.48 350 P **P** **21 39 35.6 -0.2**
BLA pmax pmax
comp=Z,67nm,1.2s
BLA Blacksburg 63.48 350 P **P** **21 39 36.8 +1.0**
baz=169,SNR=12
Z38A Mt. Pleasant 63.54 336 P **P** **21 39 36.0 -0.2**
Z38A Mt. Pleasant 63.54 336 P **P** **21 39 37.7 +1.5**
baz=154
CLTN Cedars of Leba 63.55 345 P **P** **21 39 35.7 -0.6**
CLTN lAmb lAmb 21 39 37.9
comp=Z,111nm,1.1s
MET Memphis--Engin 63.59 341 P **P** **21 39 36.8 +0.3**
JSRW J. Sargeant Re 63.60 352 P **P** **21 39 37.8 +1.3**
S57A Dark Hollow, R 63.80 352 P **P** **21 39 38.5 +0.7**
S57A lAmb lAmb 21 39 40.4
comp=Z,68nm,0.8s
S57A Dark Hollow, R 63.80 352 P **P** **21 39 39.1 +1.2**
baz=170,SNR=25
S57A P **P** **21 39 39.1 +1.2**
baz=170,SNR=25
U49A Red Boiling Sp 63.83 345 P **P** **21 39 37.8 -0.2**
U49A lAmb lAmb 21 39 39.5
comp=Z,140nm,1.4s
U49A Red Boiling Sp 63.83 345 P **P** **21 39 38.3 +0.3**
baz=163,SNR=36
R58B Mineral 63.87 352 P **P** **21 39 38.3 0.0**
R58B lAmb lAmb 21 39 41.0
comp=Z,88nm,1.0s
R58B Mineral 63.87 352 P **P** **21 39 39.7 +1.5**
baz=171,SNR=28
R58B P **P** **21 39 39.7 +1.5**
baz=171,SNR=28
TXAR Lajitas Array 63.90 327 P **P** **21 39 40.6 +1.8**
comp=Z,4.7nm,0.5s,baz=151,slow=7.6,SNR=76
TXAR pP **pP** **21 40 08.7 +0.5**
comp=Z,8.6nm,1.0s,baz=155,slow=9.2,SNR=4.8
TXAR LR LR 22 04 44.7
comp=Z,132nm,18.9s,baz=144,slow=33
comp=Z,4.7nm,0.5s
TXAR Lajitas Array 63.90 327 P **P** **21 39 40.0 +1.1**
TX31 Lajitas Ar. Si 63.90 327 P **P** **21 39 39.9 +1.0**
TX31 lAmb lAmb 21 39 42.2
comp=Z,112nm,1.2s
TX32 Lajitas Array 63.90 327 P **P** **21 39 39.6 +0.7**
WVT Waverly 63.96 343 P **P** **21 39 38.1 -0.8**
WVT lAmb lAmb 21 39 40.2
comp=Z,95nm,1.1s
WVT Waverly 63.96 343 P **P** **21 39 38.1 -0.8**
WVT pmax pmax
comp=Z,95nm,1.1s
WVT Waverly 63.96 343 P **P** **21 39 39.0 +0.1**
baz=161
WVT Waverly 63.96 343 P **P** **21 39 39.1 +0.1**
WVT pP **pP** **21 40 07.2 -1.2**
WVT sP **sP** **21 40 20.5 -0.9**
UALR University of 64.01 339 P **P** **21 39 39.7 +0.4**
UALR lAmb lAmb 21 39 41.3
comp=Z,54nm,0.9s
UALR pP **pP** **21 40 08.8 0.0**
CBN Corbin Frederi 64.05 353 P **P** **21 39 40.2 +0.7**
CBN lAmb lAmb 21 39 41.9
comp=Z,59nm,1.1s
CBN Corbin Frederi 64.05 353 P **P** **21 39 40.6 +1.1**
baz=172
T50A Nancy 64.11 346 P **P** **21 39 39.6 -0.2**
T50A lAmb lAmb 21 39 41.2
comp=Z,55nm,1.1s
T50A Nancy 64.11 346 P **P** **21 39 40.0 +0.1**
baz=164
T50A P **P** **21 39 40.0 +0.1**
baz=164
HALT Halls 64.16 342 P **P** **21 39 40.6 +0.3**
HALT lAmb lAmb 21 39 41.6
comp=Z,59nm,0.9s
HALT pP **pP** **21 40 08.8 -0.9**
S54A Dingess, Beckl 64.19 349 P **P** **21 39 40.9 +0.5**
S54A lAmb lAmb 21 39 42.3
comp=Z,66nm,0.8s
S54A Dingess, Beckl 64.19 349 P **P** **21 39 41.0 +0.5**
baz=168,SNR=17
S54A P **P** **21 39 41.0 +0.5**
baz=168,SNR=17
HBAR Harrisburg 64.21 341 P **P** **21 39 41.0 +0.5**
MIAR Mount Ida 64.21 338 P **P** **21 39 41.3 +0.7**
MIAR lAmb lAmb 21 39 42.8
comp=Z,90nm,1.1s
MIAR pP **pP** **21 40 10.1 0.0**
MIAR Mount Ida 64.21 338 P **P** **21 39 41.3 +0.7**
MIAR *PP **pP** **21 40 10.1 0.0**
MIAR pmax pmax
comp=Z,90nm,1.1s
MIAR Mount Ida 64.21 338 P **P** **21 39 41.5 +0.9**
baz=156,SNR=44
W41B Gary Mavity, V 64.35 339 P **P** **21 39 42.0 +0.6**
W41B lAmb lAmb 21 39 43.5
comp=Z,62nm,1.0s
W41B Gary Mavity, V 64.35 339 P **P** **21 39 42.3 +0.8**
baz=157,SNR=32
W41B Gary Mavity, V 64.35 339 P **P** **21 39 42.2 +0.8**
baz=157,SNR=32
LNXT Lenox 64.38 342 P **P** **21 39 41.4 -0.2**
LNXT lAmb lAmb 21 39 43.5
comp=Z,85nm,0.9s
GNAR Gosnell 64.40 341 P **P** **21 39 43.0 +1.2**
UTMT University of 64.44 343 P **P** **21 39 43.1 +1.1**
S51A Beattyville 64.45 347 P **P** **21 39 42.3 +0.2**
S51A lAmb lAmb 21 39 43.5
comp=Z,40nm,0.8s
S51A Beattyville 64.45 347 P **P** **21 39 42.4 +0.3**
baz=166,SNR=19
S51A P **P** **21 39 42.4 +0.3**
baz=166,SNR=19
WHAR Wooly Hollow 64.47 339 lAmb lAmb 21 39 44.3
comp=Z,66nm,1.0s
Z35A Perchaven, San 64.47 334 pP 21 40 12.4 +0.8
Z35A Perchaven, San 64.47 334 P **P** **21 39 43.4 +1.1**
baz=152,SNR=9.1
QSPA South Pole Qui 64.47 180 P **P** **21 39 43.4 +1.3**
QSPA lAmb lAmb 21 39 45.1
comp=Z,118nm,1.1s
QSPA South Pole Qui 64.47 180 P **P** **21 39 43.6 +1.5**
QSPA pP **pP** **21 40 11.1 -0.8**
QSPA sP **sP** **21 40 23.5 -1.5**
R55A Marlinton 64.48 351 P **P** **21 39 43.7 +1.3**
R55A lAmb lAmb 21 39 45.2
comp=Z,76nm,1.1s
R55A Marlinton 64.48 351 P **P** **21 39 44.0 +1.6**
baz=169,SNR=24
R55A P **P** **21 39 44.0 +1.6**
baz=169,SNR=24
GLAT Glass 64.48 342 P **P** **21 39 42.8 +0.5**
T47A Sharon Grove 64.60 344 P **P** **21 39 43.4 +0.3**
baz=162,SNR=50
HICK Hickman 64.72 342 P **P** **21 39 44.9 +1.1**
PVMO Portageville 64.73 342 P **P** **21 39 45.3 +1.4**
MBO M'Bour 64.74 58 P **P** **21 39 45.5 +1.1**
MBO lAmb lAmb 21 39 48.0
comp=Z,74nm,0.8s
R53A Hurricane 64.82 349 P **P** **21 39 44.8 +0.3**
R53A lAmb lAmb 21 39 46.2
comp=Z,51nm,1.1s
R53A Hurricane 64.82 349 P **P** **21 39 44.7 +0.3**
baz=167,SNR=9.6
R53A P **P** **21 39 44.7 +0.3**
baz=167,SNR=9.6
ABTX Abilene, Hawle 64.83 332 P **P** **21 39 45.6 +0.9**
ABTX Abilene, Hawle 64.83 332 P **P** **21 39 46.2 +1.5**
baz=150,SNR=24
ABTX Abilene, Hawle 64.83 332 P **P** **21 39 46.0 +1.3**
baz=150,SNR=24
LCAR Lake Charles 64.83 341 P **P** **21 39 45.2 +0.6**
LCAR lAmb lAmb 21 39 46.3
comp=Z,88nm,1.1s
W39A Magazine 64.87 338 P **P** **21 39 45.9 +1.0**
W39A lAmb lAmb 21 39 47.7
comp=Z,104nm,1.1s
W39A pP **pP** **21 40 14.5 0.0**
W39A Magazine 64.87 338 P **P** **21 39 46.4 +1.5**
baz=156,SNR=38
W39A Magazine 64.87 338 P **P** **21 39 46.4 +1.5**
baz=156,SNR=38
FCAR Ozark Folk Cen 64.97 340 lAmb lAmb 21 39 47.2
comp=Z,89nm,1.2s
T45B Paducah 65.01 343 P **P** **21 39 46.2 +0.4**
baz=161,SNR=6.8
T45A Paducah 65.02 343 P **P** **21 39 45.7 0.0**
Q56A Snyder Ridge, 65.10 352 P **P** **21 39 47.2 +1.0**
Q56A lAmb lAmb 21 39 49.3
comp=Z,107nm,1.1s
Q56A Snyder Ridge, 65.10 352 P **P** **21 39 47.9 +1.6**
baz=170,SNR=30
Q56A P **P** **21 39 47.9 +1.6**
baz=170,SNR=30
R50A Paris 65.22 347 P **P** **21 39 47.0 0.0**
R50A Paris 65.22 347 P **P** **21 39 47.1 0.0**
baz=165,SNR=10
R50A P **P** **21 39 47.1 0.0**
baz=165,SNR=10
Q54A Coxs Mills 65.28 350 P **P** **21 39 47.7 +0.3**
Q54A lAmb lAmb 21 39 49.1
comp=Z,29nm,0.7s
Q54A Coxs Mills 65.28 350 P **P** **21 39 48.0 +0.6**
baz=168,SNR=14
Q54A P **P** **21 39 48.0 +0.6**
baz=168,SNR=14
PBMO Poplar Bluff 65.28 341 P **P** **21 39 47.9 +0.4**
PBMO lAmb lAmb 21 39 49.2
comp=Z,75nm,0.8s
P57A Homestead Farm 65.39 353 P **P** **21 39 49.5 +1.4**
P57A lAmb lAmb 21 39 51.2
comp=Z,66nm,0.9s
P57A Homestead Farm 65.39 353 P **P** **21 39 50.0 +1.9**
baz=171,SNR=21
P57A P **P** **21 39 50.0 +1.9**
baz=171,SNR=21
R49A Shelbyville 65.40 346 P **P** **21 39 48.2 0.0**
R49A lAmb lAmb 21 39 49.4
comp=Z,45nm,0.9s
R49A Shelbyville 65.40 346 P **P** **21 39 48.2 0.0**
baz=164,SNR=17
R49A P **P** **21 39 48.2 0.0**
baz=164,SNR=17
Q52A Bidwell 65.49 349 lAmb lAmb 21 39 50.4
comp=Z,57nm,1.0s
Q52A Bidwell 65.49 349 P **P** **21 39 48.9 +0.1**
baz=167,SNR=16
Q52A P **P** **21 39 48.9 +0.1**
baz=167,SNR=16
WUPA West Chester U 65.59 355 P **P** **21 39 50.4 +1.0**
MVL Millersville 65.72 354 P **P** **21 39 51.7 +1.5**
Q51A Peebles 65.75 348 lAmb lAmb 21 39 51.9
comp=Z,66nm,1.1s
Q51A Peebles 65.75 348 P **P** **21 39 50.7 +0.3**
baz=166,SNR=14
Q51A P **P** **21 39 50.7 +0.3**
baz=166,SNR=14
MCWV Mont Chateau 65.79 351 P **P** **21 39 51.3 +0.6**
MCWV lAmb lAmb 21 39 53.2
comp=Z,75nm,1.0s
MCWV Mont Chateau 65.79 351 P **P** **21 39 52.0 +1.3**
baz=169,SNR=15
X34A Smith Ranch, M 65.81 334 P **P** **21 39 52.2 +1.3**
X34A lAmb lAmb 21 39 53.6
comp=Z,96nm,0.9s
S44A Carbondale 65.81 343 P **P** **21 39 51.4 +0.5**
S44A lAmb lAmb 21 39 52.4
comp=Z,80nm,0.8s
S44A Carbondale 65.81 343 P **P** **21 39 51.1 +0.2**
baz=160,SNR=11
SIUC Southern Illin 65.82 343 P **P** **21 39 50.9 -0.1**
SIUC lAmb lAmb 21 39 52.5
comp=Z,86nm,0.8s
SIUC pP **pP** **21 40 19.8 -0.8**
P53A Whipple 65.86 350 lAmb lAmb 21 39 53.1
comp=Z,111nm,1.1s
P53A Whipple 65.86 350 P **P** **21 39 51.8 +0.7**
baz=168,SNR=24
P53A P **P** **21 39 51.8 +0.7**
baz=168,SNR=24
HHAR Hobbs 65.91 338 lAmb lAmb 21 39 53.8
comp=Z,79nm,1.2s
HHAR pP pP 21 40 21.0 -0.2
PAGS Pennsylvania G 65.99 354 P **P** **21 39 52.3 +0.4**
PAGS lAmb lAmb 21 39 54.4
comp=Z,47nm,0.9s
P52A Corning 66.12 349 lAmb lAmb 21 39 54.3
comp=Z,79nm,0.8s
P52A Corning 66.12 349 P **P** **21 39 53.0 +0.2**
baz=167,SNR=30
P51A Williamsport 66.14 348 PcP **PcP** **21 40 21.8 -0.5**
P51A Williamsport 66.14 348 P **P** **21 39 53.0 +0.1**
baz=166,SNR=16
P51A P **P** **21 39 53.0 +0.1**
baz=166,SNR=16
MGMO Mountain Grove 66.17 340 lAmb lAmb 21 39 55.3
comp=Z,80nm,0.9s
TUL1 Leonard 66.21 337 PcP **PcP** **21 40 23.4 +0.7**
TUL1 Leonard 66.21 337 P **P** **21 39 54.3 +0.8**
baz=154,SNR=18
TUL1 Leonard 66.21 337 P **P** **21 39 54.4 +0.8**
baz=154,SNR=18
FNO Franklin 66.22 335 **P** **21 39 54.5 +0.9**
FNO lAmb lAmb 21 39 56.6
comp=Z,152nm,1.5s
FNO PcP **pP** **21 40 23.6 +0.5**
LUPA Lehigh Univers 66.23 355 P **P** **21 39 54.2 +0.7**
BRNJ Basking Ridge 66.26 356 P **P** **21 39 54.3 +0.7**
BRNJ lAmb lAmb 21 39 56.4
comp=Z,45nm,1.0s
WMOK Wichita Mounta 66.30 334 P **P** **21 39 54.2 0.0**
WMOK PcP **PcP** **21 40 23.4 +0.2**
WMOK Wichita Mounta 66.30 334 P **P** **21 39 54.2 0.0**
WMOK 21 40 23.4
WMOK pmax pmax
comp=Z,47nm,1.4s
WMOK Wichita Mounta 66.30 334 P **P** **21 39 54.6 +0.5**

baz=151,SNR=11
CPNY Central Park 66.33 356 P **P** **21 39 53.7 -0.4**
O54A Avella 66.38 351 P **P** **21 39 55.1 +0.6**
O54A Avella 66.38 351 P **P** **21 39 54.8 +0.4**
baz=169,SNR=8.1
O54A P **P** **21 39 54.8 +0.4**
baz=169,SNR=8.1
OKCFA Oklahoma City 66.38 335 P **P** **21 39 55.1 +0.5**
OKCFA IAmb IAmb 21 39 56.5
comp=Z,89nm,1.2s
N62A Caumsett State 66.44 357 P **P** **21 39 56.0 +1.2**
OLIL Olney 66.50 344 IAmb IAmb 21 39 56.2
comp=Z,85nm,1.1s
OLIL PcP **PcP** **21 40 23.8 0.0**
P49A Miami Univ. Ec 66.50 347 IAmb IAmb 21 39 56.3
comp=Z,65nm,0.8s
P49A Miami Univ. Ec 66.50 347 P **P** **21 39 55.0 -0.2**
baz=165,SNR=16
P49A Miami Univ. Ec 66.50 347 P **P** **21 39 55.1 -0.2**
baz=165,SNR=16
SSPA Standing Stone 66.51 353 P **P** **21 39 56.3 +1.1**
SSPA IAmb IAmb 21 39 58.0
comp=Z,107nm,1.5s
SSPA Standing Stone 66.51 353 P **P** **21 39 56.6 +1.3**
baz=171
SSPA Standing Stone 66.51 353 ⇑P **P** **21 39 56.6 +1.3**
SSPA x x 21 40 10.9
SSPA pP **pP** **21 40 25.6 +0.3**
SSPA sP **sP** **21 40 39.2 +0.8**
PAL Palisades 66.54 356 P **P** **21 39 56.5 +1.1**
PAL Palisades 66.54 356 P **P** **21 39 56.5 +1.1**
PAL pmax pmax
comp=Z,48nm,1.3s
PAL Palisades 66.54 356 P **P** **21 39 56.6 +1.2**
baz=175
BLO Bloomington 66.54 346 P **P** **21 39 54.7 -0.8**
BLO IAmb IAmb 21 39 55.9
comp=Z,61nm,1.1s
BLO PcP **PcP** **21 40 23.7 -0.3**
O52A Adamsville 66.54 350 IAmb IAmb 21 39 57.1
comp=Z,64nm,0.9s
O52A Adamsville 66.54 350 P **P** **21 39 55.7 +0.2**
baz=168,SNR=13
O52A P **P** **21 39 55.7 +0.2**
baz=168,SNR=13
O53A New Philadelph 66.57 350 P **P** **21 39 55.6 -0.1**
O53A IAmb IAmb 21 39 57.5
comp=Z,93nm,1.2s
O53A New Philadelph 66.57 350 P **P** **21 39 56.0 +0.3**
baz=168,SNR=18
P48A Milroy 66.58 346 IAmb IAmb 21 39 56.6
comp=Z,39nm,0.7s
P48A Milroy 66.58 346 P **P** **21 39 55.3 -0.4**
baz=164,SNR=17
P48A P **P** **21 39 55.3 -0.4**
baz=164,SNR=17
N58A Sunbury 66.59 354 P **P** **21 39 56.9 +1.1**
N58A IAmb IAmb 21 39 58.6
comp=Z,68nm,1.1s
N58A Sunbury 66.59 354 P **P** **21 39 57.1 +1.3**
baz=173,SNR=17
N58A P **P** **21 39 57.1 +1.3**
baz=173,SNR=17
ODNJ Ogdensburg 66.66 356 P **P** **21 39 56.2 0.0**
WSPT Westport, CT 66.67 357 P **P** **21 39 57.5 +1.2**
WSPT IAmb IAmb 21 39 59.0
comp=Z,103nm,1.1s
MNTX Cornudas Mount 66.68 327 PcP **PcP** **21 40 26.1 +1.3**
MNTX Cornudas Mount 66.68 327 P **P** **21 39 57.7 +1.0**
baz=145,SNR=59
CCM Cathedral Cave 66.70 341 P **P** **21 39 57.0 +0.4**
CCM Cathedral Cave 66.70 341 P **P** **21 39 57.0 +0.4**
CCM pmax pmax
comp=Z,93nm,0.8s
CCM Cathedral Cave 66.70 341 P **P** **21 39 57.3 +0.8**
baz=158
CCM Cathedral Cave 66.70 341 P **P** **21 39 57.4 +0.8**
CCM pP **pP** **21 40 25.9 -0.4**
CCM sP **sP** **21 40 39.2 -0.1**
YLE Yale 66.80 357 P **P** **21 39 58.6 +1.6**
M63A Gales Ferry 66.85 358 P **P** **21 39 57.8 +0.4**
M63A IAmb IAmb 21 40 00.2
comp=Z,75nm,1.4s
M63A Gales Ferry 66.85 358 P **P** **21 39 59.0 +1.6**
baz=177
M63A P **P** **21 39 59.0 +1.6**
baz=177
ACSO Alum Creek Sta 66.85 349 P **P** **21 39 57.7 +0.3**
ACSO Alum Creek Sta 66.85 349 P **P** **21 39 57.8 +0.4**
baz=166,SNR=22
Q44A Meyer Farm, Va 66.89 343 IAmb IAmb 21 39 58.7
comp=Z,72nm,1.0s
Q44A PcP **PcP** **21 40 25.7 +0.2**
Q44A Meyer Farm, Va 66.89 343 P **P** **21 39 57.5 -0.2**
baz=161,SNR=12
SLM Saint Louis 66.96 342 P **P** **21 39 58.1 -0.1**
SLM IAmb IAmb 21 39 59.8
comp=Z,73nm,1.1s
SLM Saint Louis 66.96 342 P **P** **21 39 58.1 -0.1**
SLM pmax pmax
comp=Z,73nm,1.1s
S39A Bolivar 67.00 339 P **P** **21 39 59.4 +0.9**
S39A Bolivar 67.00 339 P **P** **21 39 59.3 +0.9**
baz=156,SNR=144
O49A Covington 67.06 348 P **P** **21 39 58.5 -0.3**
O49A IAmb IAmb 21 40 00.1
comp=Z,82nm,0.9s
O49A Covington 67.06 348 P **P** **21 39 58.7 -0.1**
baz=165,SNR=30
O49A P **P** **21 39 58.7 -0.1**
baz=165,SNR=30
N53A Lisbon 67.06 351 P **P** **21 39 58.8 0.0**
N53A IAmb IAmb 21 40 00.9
comp=Z,82nm,1.2s
N53A Lisbon 67.06 351 P **P** **21 39 59.5 +0.8**
baz=169,SNR=16
N53A P **P** **21 39 59.5 +0.8**
baz=169,SNR=16
P46A Rosedale 67.12 345 P **P** **21 39 58.5 -0.7**
P46A IAmb IAmb 21 40 00.1
comp=Z,71nm,0.9s
P46A Rosedale 67.12 345 P **P** **21 39 59.0 -0.2**
baz=162,SNR=20
M57A Sunshine Farm, 67.12 354 P **P** **21 39 59.8 +0.6**
M57A IAmb IAmb 21 40 02.0
comp=Z,48nm,1.1s
M57A Sunshine Farm, 67.12 354 P **P** **21 40 00.7 +1.5**
baz=172,SNR=13
M57A P **P** **21 40 00.7 +1.5**
baz=172,SNR=13
KSPA Keystone Colle 67.22 355 P **P** **21 39 59.6 -0.2**
KSPA IAmb IAmb 21 40 02.6
comp=Z,63nm,1.1s
R40A Maddies Statio 67.22 341 P **P** **21 40 00.8 +0.9**
R40A Maddies Statio 67.22 341 P **P** **21 40 00.7 +0.9**
baz=158,SNR=106
KSCT Kent School, K 67.23 357 P **P** **21 40 00.4 +0.6**
KSCT IAmb IAmb 21 40 02.7
comp=Z,64nm,1.2s
UCCT U. Connecticut 67.25 358 P **P** **21 39 58.0 -1.9**
UCCT IAmb IAmb 21 40 02.4
comp=Z,49nm,1.0s
O48B Farmland 67.29 347 P **P** **21 40 00.2 0.0**
baz=164,SNR=30
O48B Farmland 67.29 347 P **P** **21 40 00.0 -0.2**
baz=164,SNR=30
MSTX Muleshoe 67.33 330 P **P** **21 40 01.8 +0.9**
MSTX pP **pP** **21 40 31.0 +0.5**
MSTX Muleshoe 67.33 330 P **P** **21 40 02.3 +1.5**
baz=147,SNR=60
MSTX Muleshoe 67.33 330 P **P** **21 40 02.2 +1.4**
baz=147,SNR=60
BRYW Bryant College 67.35 358 P **P** **21 40 01.4 +0.8**
L64A Middleborough 67.35 359 P **P** **21 40 00.4 -0.1**
L64A IAmb IAmb 21 40 03.3
comp=Z,101nm,1.2s
L64A Middleborough 67.35 359 P **P** **21 40 02.0 +1.5**
baz=178,SNR=6.4
L64A P **P** **21 40 02.0 +1.5**
baz=178,SNR=6.4
T35A Sooner Cattle 67.37 337 **P** **21 40 00.7 -0.1**
T35A IAmb IAmb 21 40 03.2
comp=Z,125nm,1.2s
T35A pP **pP** **21 40 30.9 +0.4**
T35B Sooner Cattle 67.37 337 P **P** **21 40 01.6 +0.8**
baz=153,SNR=23

N51A Ashland 67.41 349 P **P** **21 40 00.7 -0.3**
N51A IAmb IAmb 21 40 02.4
comp=Z,77nm,1.1s
N51A Ashland 67.41 349 P **P** **21 40 01.2 +0.2**
baz=167,SNR=6.2
N51A P **P** **21 40 01.2 +0.2**
baz=167,SNR=6.2
M55A Ridgway 67.44 352 P **P** **21 40 01.4 +0.3**
M55A IAmb IAmb 21 40 03.5
comp=Z,80nm,0.8s
M55A Ridgway 67.44 352 P **P** **21 40 02.4 +1.2**
baz=171,SNR=37
M55A P **P** **21 40 02.4 +1.2**
baz=171,SNR=37
HSIG 67.53 321 P **P** **21 40 03.2 +1.2**
HSIG IAmb IAmb 21 40 05.9
comp=Z,98nm,1.3s
HSIG pP **pP** **21 40 32.6 +1.1**
AMTX Amarillo 67.63 332 P **P** **21 40 01.0 -1.7**
AMTX IAmb IAmb 21 40 05.2
comp=Z,78nm,1.4s
AMTX pP **pP** **21 40 32.3 0.0**
AMTX Amarillo 67.63 332 P **P** **21 40 03.8 +1.2**
baz=148
M53A WI Miller and 67.66 351 P **P** **21 40 01.3 -1.2**
M53A IAmb IAmb 21 40 04.5
comp=Z,83nm,1.0s
M53A WI Miller and 67.66 351 P **P** **21 40 03.1 +0.6**
baz=169,SNR=12
P43A Skaggs, Pawnee 67.71 343 P **P** **21 40 02.3 -0.6**
P43A pP **pP** **21 40 31.9 -0.8**
P43A Skaggs, Pawnee 67.71 343 P **P** **21 40 03.0 +0.1**
baz=160,SNR=13
QUA2 Belchertown 67.73 358 P **P** **21 40 02.7 -0.3**
QUA2 IAmb IAmb 21 40 05.7
comp=Z,60nm,1.2s
N49A Columbus Grove 67.74 348 P **P** **21 40 02.4 -0.6**
N49A Columbus Grove 67.74 348 P **P** **21 40 03.5 +0.5**
baz=165,SNR=49
N49A P **P** **21 40 03.5 +0.5**
baz=165,SNR=49
BCX Boston College 67.75 359 P **P** **21 40 03.0 0.0**
ALLY Alegheny Colle 67.79 351 IAmb IAmb 21 40 05.4
comp=Z,123nm,1.1s
L59A Walton 67.79 355 P **P** **21 40 05.0 +1.5**
L59A Walton 67.79 355 P **P** **21 40 05.1 +1.7**
baz=174,SNR=48
L59A P **P** **21 40 05.1 +1.7**
baz=174,SNR=48
WES Weston 67.81 358 P **P** **21 40 04.2 +0.8**
WES IAmb IAmb 21 40 06.2
comp=Z,52nm,1.2s
WES Weston 67.81 358 P **P** **21 40 04.2 +0.8**
WES pmax pmax
comp=Z,52nm,1.2s
SFIN Lafayette 67.82 345 P **P** **21 40 02.7 -0.8**
SFIN IAmb IAmb 21 40 04.3
comp=Z,46nm,0.7s
SFIN Lafayette 67.82 345 P **P** **21 40 03.0 -0.6**
baz=163,SNR=16
SFIN Lafayette 67.82 345 P **P** **21 40 03.0 -0.6**
baz=163,SNR=16
M52A Chesterland 67.86 350 IAmb IAmb 21 40 05.6
comp=Z,86nm,0.9s
M52A Chesterland 67.86 350 P **P** **21 40 04.4 +0.6**
baz=168,SNR=6.5
M52A P **P** **21 40 04.4 +0.6**
baz=168,SNR=6.5
BINY Binghamton 67.88 355 P **P** **21 40 04.9 +1.0**
BINY IAmb IAmb 21 40 06.8
comp=Z,114nm,1.1s
BINY Binghamton 67.88 355 P **P** **21 40 05.5 +1.6**
baz=173,SNR=24
O44A Mansfield 67.93 344 IAmb IAmb 21 40 05.1
comp=Z,55nm,0.6s
O44A Mansfield 67.93 344 P **P** **21 40 03.9 -0.4**
baz=161,SNR=10
HRV Adam Dziewonsk 67.93 358 P **P** **21 40 05.4 +1.2**
HRV IAmb IAmb 21 40 07.2
comp=Z,88nm,1.1s
HRV Adam Dziewonsk 67.93 358 P **P** **21 40 05.4 +1.2**
HRV pmax pmax
comp=Z,88nm,1.1s
HRV Adam Dziewonsk 67.93 358 P **P** **21 40 05.9 +1.7**
baz=178
HRV Adam Dziewonsk 67.93 358 P **P** **21 40 06.0 +1.8**
HRV pP **pP** **21 40 35.0 +0.7**
HRV sP **sP** **21 40 48.5 +1.3**
L56A Greenwood 67.96 353 P **P** **21 40 05.3 +0.8**
L56A IAmb IAmb 21 40 07.0
comp=Z,70nm,0.9s
L56A Greenwood 67.96 353 P **P** **21 40 05.8 +1.4**
baz=172,SNR=28
L56A P **P** **21 40 05.8 +1.4**
baz=172,SNR=28
N47A Urbana 68.00 347 IAmb IAmb 21 40 05.7
comp=Z,86nm,0.9s
N47A Urbana 68.00 347 P **P** **21 40 04.6 -0.1**
baz=164,SNR=19
N47A P **P** **21 40 04.6 -0.1**
baz=164,SNR=19
M50A Fremont 68.00 349 P **P** **21 40 05.0 +0.3**
M50A IAmb IAmb 21 40 06.2
comp=Z,112nm,1.2s
K62A Royalston 68.11 358 P **P** **21 40 06.7 +1.4**
K62A IAmb IAmb 21 40 08.5
comp=Z,93nm,1.4s
K62A Royalston 68.11 358 P **P** **21 40 06.7 +1.4**
baz=177,SNR=8.1
K62A P **P** **21 40 06.7 +1.4**
baz=177,SNR=8.1
ERPA Erie 68.23 351 P **P** **21 40 07.0 +0.9**
baz=170,SNR=12
TRY Troy 68.25 357 P **P** **21 40 08.1 +1.9**
P40A Paris 68.30 341 P **P** **21 40 07.4 +0.8**
baz=158,SNR=73
K57A Scipio Center 68.45 354 IAmb IAmb 21 40 09.7
comp=Z,69nm,0.9s
K57A Scipio Center 68.45 354 P **P** **21 40 08.4 +0.9**
baz=173,SNR=10
HDIL Hopedale 68.52 344 P **P** **21 40 08.0 +0.1**
baz=161,SNR=14
121A Cookes Peak, D 68.56 326 P **P** **21 40 10.3 +1.7**
121A Cookes Peak, D 68.56 326 P **P** **21 40 11.5 +2.9**
baz=143,SNR=27
121A Cookes Peak, D 68.56 326 P **P** **21 40 11.4 +2.8**
baz=143,SNR=27
MMNY Mt. Morris Dam 68.58 353 P **P** **21 40 09.1 +0.8**
MMNY IAmb IAmb 21 40 10.7
comp=Z,120nm,1.0s
L48A N Adams 68.77 348 P **P** **21 40 09.7 +0.2**
baz=165,SNR=23
L48A P **P** **21 40 09.7 +0.2**
baz=165,SNR=23
J61A Chester 68.81 357 P **P** **21 40 11.0 +1.4**
J61A IAmb IAmb 21 40 13.0
comp=Z,83nm,1.1s
J61A Chester 68.81 357 P **P** **21 40 11.6 +2.0**
baz=177,SNR=22
J61A P **P** **21 40 11.6 +2.0**
baz=177,SNR=22
P38A Dawn 68.83 340 IAmb IAmb 21 40 11.8
comp=Z,98nm,1.1s
P38A Dawn 68.83 340 P **P** **21 40 10.7 +0.8**
baz=157,SNR=29
ACCN Adirondack Com 68.90 357 P **P** **21 40 10.5 +0.3**
ACCN IAmb IAmb 21 40 13.3
comp=Z,105nm,1.4s
FFD Franklin Falls 68.90 358 P **P** **21 40 11.5 +1.3**
FFD IAmb IAmb 21 40 13.6
comp=Z,57nm,1.0s
J58A Remsen 68.97 355 P **P** **21 40 11.5 +0.8**
J58A Remsen 68.97 355 P **P** **21 40 11.9 +1.2**
baz=174,SNR=14
J58A P **P** **21 40 11.9 +1.2**
baz=174,SNR=14
AAM Ann Arbor 68.98 349 P **P** **21 40 10.8 +0.1**
AAM IAmb IAmb 21 40 12.2
comp=Z,45nm,0.7s
AAM Ann Arbor 68.98 349 P **P** **21 40 10.8 +0.1**
AAM pmax pmax
comp=Z,45nm,0.7s
AAM Ann Arbor 68.98 349 P **P** **21 40 10.9 +0.2**
baz=166
M44A Midewin, Midew 69.00 345 IAmb IAmb 21 40 11.9
comp=Z,81nm,1.1s

M44A Midewin, Midew 69.00 345 P **P** **21 40 10.6 -0.3**
baz=162,SNR=6.7
J56A Wolcott 69.02 354 IAmb IAmb 21 40 13.1
comp=Z,100nm,0.8s
J56A Wolcott 69.02 354 P **P** **21 40 11.8 +0.9**
baz=173,SNR=18
J56A P **P** **21 40 11.8 +0.9**
baz=173,SNR=18
J59A Piesco 69.03 356 IAmb IAmb 21 40 13.9
comp=Z,144nm,1.1s
J59A Piesco 69.03 356 P **P** **21 40 12.7 +1.6**
baz=175,SNR=52
J59A P **P** **21 40 12.7 +1.6**
baz=175,SNR=52
N41A Harden Midland 69.07 343 P **P** **21 40 11.6 +0.3**
baz=159,SNR=26
MEDO Medina 69.07 353 IAmb IAmb 21 40 13.5
comp=Z,70nm,1.1s
J57A Williamstown 69.08 355 IAmb IAmb 21 40 13.7
comp=Z,99nm,1.0s
J57A Williamstown 69.08 355 P **P** **21 40 12.4 +1.1**
baz=173,SNR=31
J57A P **P** **21 40 12.4 +1.1**
baz=173,SNR=31
J55A Hilton 69.10 353 IAmb IAmb 21 40 13.7
comp=Z,80nm,1.1s
J55A Hilton 69.10 353 P **P** **21 40 12.2 +0.8**
baz=172,SNR=13
J55A P **P** **21 40 12.2 +0.8**
baz=172,SNR=13
HNH Hanover 69.16 358 P **P** **21 40 13.0 +1.3**
HNH IAmb IAmb 21 40 15.3
comp=Z,121nm,1.2s
CRNM Carthage 69.17 327 P **P** **21 40 14.4 +2.0**
J54A Appleton 69.20 353 P **P** **21 40 12.5 +0.4**
J54A IAmb IAmb 21 40 14.3
comp=Z,70nm,0.9s
J54A Appleton 69.20 353 P **P** **21 40 12.9 +0.9**
baz=171,SNR=7.4
J54A P **P** **21 40 12.9 +0.9**
baz=171,SNR=7.4
L46A Eue Claire 69.21 347 P **P** **21 40 11.9 -0.3**
baz=164,SNR=18
L46A P **P** **21 40 11.9 -0.3**
baz=164,SNR=18
K50A Casco 69.26 350 P **P** **21 40 12.7 +0.3**
baz=167,SNR=10
K50A P **P** **21 40 12.7 +0.3**
baz=167,SNR=10
BNM Barren Site 69.28 328 P **P** **21 40 14.6 +1.5**
I62A Tamworth 69.30 358 P **P** **21 40 14.0 +1.3**
I62A Tamworth 69.30 358 P **P** **21 40 14.6 +1.9**
baz=178,SNR=7.6
I62A P **P** **21 40 14.6 +1.9**
baz=178,SNR=7.6
KSU1 Kansas State U 69.36 338 P **P** **21 40 13.0 -0.1**
KSU1 IAmb IAmb 21 40 15.1
comp=Z,47nm,0.8s
KSU1 Kansas State U 69.36 338 P **P** **21 40 13.7 +0.5**
baz=154,SNR=5.9
Y22D IRIS PASSCAL I 69.36 327 P **P** **21 40 16.0 +2.5**
baz=144
I63A Otisfield 69.46 359 IAmb IAmb 21 40 17.1
comp=Z,90nm,1.3s
I63A Otisfield 69.46 359 P **P** **21 40 15.8 +2.2**
baz=179,SNR=12
I63A P **P** **21 40 15.8 +2.2**
baz=179,SNR=12
LENM Lemitar 69.46 327 P **P** **21 40 15.6 +1.5**
R32A Long Quarter, 69.51 336 P **P** **21 40 15.8 +1.7**
baz=152,SNR=22
NCB Newcomb 69.51 356 P **P** **21 40 13.6 -0.4**
NCB IAmb IAmb 21 40 16.7
comp=Z,71nm,1.2s
LBNH Lisbon 69.68 358 P **P** **21 40 14.8 -0.1**
LBNH IAmb IAmb 21 40 18.2
comp=Z,86nm,1.4s
LBNH Lisbon 69.68 358 P **P** **21 40 14.9 -0.1**
LBNH pmax pmax
comp=Z,86nm,1.4s
LBNH Lisbon 69.68 358 P **P** **21 40 16.8 +1.8**
baz=177,SNR=12
PECO Prince Edward 69.69 354 P **P** **21 40 15.7 +0.6**
PECO IAmb IAmb 21 40 17.4
comp=Z,96nm,1.0s
L44A Lake County Fo 69.72 345 P **P** **21 40 14.0 -1.3**
L44A Lake County Fo 69.72 345 P **P** **21 40 15.3 0.0**
baz=162,SNR=6.2
L44A Lake County Fo 69.72 345 P **P** **21 40 15.2 -0.1**
baz=162,SNR=6.2
VT1 Waterbury 69.80 357 P **P** **21 40 15.7 -0.1**
N38A Joes South For 69.82 341 IAmb IAmb 21 40 17.8
comp=Z,64nm,1.0s
N38A Joes South For 69.82 341 P **P** **21 40 16.7 +0.8**
baz=157,SNR=5.9
ANMO Albuquerque 69.84 328 P **P** **21 40 19.0 +2.6**
comp=Z,19nm,0.5s,baz=144,slow=7.5,SNR=71
ANMO pP **pP** **21 40 47.6 +1.3**
comp=Z,14nm,1.0s,baz=143,slow=9.6,SNR=3.7
ANMO LR LR 22 08 57.7
comp=Z,130nm,19.6s,baz=145,slow=34
comp=Z,19nm,0.5s
ANMO Albuquerque 69.84 328 P **P** **21 40 17.5 +1.0**
ANMO Albuquerque 69.84 328*ce*P **P** **21 40 18.9 +2.4**
ANMO pmax pmax
comp=Z,49nm,0.9s
ANMO Albuquerque 69.84 328 P **P** **21 40 19.1 +2.6**
baz=144
ANMO Albuquerque 69.84 328 P **P** **21 40 19.1 +2.6**
ANMO pP **pP** **21 40 47.7 +1.4**
ANMO pwP **sP** **21 40 51.7 -7.5**
TUC Tucson 69.95 323 P **P** **21 40 18.3 +1.2**
TUC IAmb IAmb 21 40 21.0
comp=Z,69nm,1.3s
TUC Tucson 69.95 323 P **P** **21 40 18.3 +1.2**
TUC pmax pmax
comp=Z,69nm,1.3s
TUC Tucson 69.95 323 P **P** **21 40 19.6 +2.5**
baz=140
TUC Tucson 69.95 323 P **P** **21 40 19.7 +2.6**
TUC pP **pP** **21 40 48.5 +1.6**
TUC sP **sP** **21 41 01.7 +2.0**
WVL Waterville 69.96 360 P **P** **21 40 16.3 -0.4**
L42A Oliver, Polo 69.97 344 P **P** **21 40 16.0 -0.9**
L42A IAmb IAmb 21 40 18.3
comp=Z,83nm,1.1s
L42A Oliver, Polo 69.97 344 P **P** **21 40 17.1 +0.2**
baz=160,SNR=8.8
H62A Milan 69.99 359 P **P** **21 40 16.8 -0.1**
LIC Lamto 70.00 72⇑*i*P **P** **21 40 18.4 +0.8**
comp=Z,13nm,0.4s
J47A Sunmer 70.10 348 IAmb IAmb 21 40 19.0
comp=Z,78nm,0.8s
J47A Sunmer 70.10 348 P **P** **21 40 17.7 +0.2**
baz=165,SNR=11
J47A P **P** **21 40 17.7 +0.2**
baz=165,SNR=11
EMMW East Machias 70.12 1 P **P** **21 40 18.1 +0.5**
LONY Lake Ozonia 70.18 356 P **P** **21 40 18.1 0.0**
LONY IAmb IAmb 21 40 20.8
comp=Z,80nm,1.2s
LONY Lake Ozonia 70.18 356 P **P** **21 40 19.4 +1.3**
baz=175,SNR=28
TIC Toumodi 70.21 72⇑*i*P **P** **21 40 19.2 +0.2**
comp=Z,1.5nm,0.2s
HAL Halifax 70.23 4 P **P** **21 40 18.4 +0.1**
HAL IAmb IAmb 21 40 21.1
comp=Z,53nm,1.0s
HAL Halifax 70.23 4 P **P** **21 40 18.4 +0.1**
HAL pmax pmax
comp=Z,53nm,1.0s
CBKS Cedar Bluff 70.23 335 P **P** **21 40 19.6 +1.0**
CBKS Cedar Bluff 70.23 335 P **P** **21 40 19.6 +1.0**
CBKS pmax pmax
comp=Z,162nm,0.9s
CBKS Cedar Bluff 70.23 335 P **P** **21 40 20.4 +1.7**
baz=151,SNR=14
KIC Kosan Boka 70.31 72⇑*e*P **P** **21 40 19.9 +0.3**
comp=Z,10.0nm,0.3s
K43A Burlington 70.32 345 P **P** **21 40 18.4 -0.6**
K43A Burlington 70.32 345 P **P** **21 40 19.4 +0.4**
baz=162,SNR=24
DELO Deloro Mine 70.32 354 IAmb IAmb 21 40 21.2
comp=Z,67nm,1.2s
FRNY Flat Rock 70.34 357 IAmb IAmb 21 40 21.7
comp=Z,78nm,1.2s
DBIC Dimbokro 70.36 72 P **P** **21 40 19.4 -0.5**

comp=Z,37nm,0.8s,baz=250,slow=3.2,SNR=24
DBIC LR LR 22 08 38.3

comp=Z,265nm,21.9s,baz=240,slow=34
comp=Z,37nm,0.8s
DBIC Dimbokro 70.36 72 P **P** **21 40 19.1 -0.8**
DBIC Dimbokro 70.36 72 P **P** **21 40 19.1 -0.8**
DBIC pmax pmax

comp=Z,42nm,0.9s
DBIC Dimbokro 70.36 72 P **P** **21 40 20.5 +0.6**
DBIC pP **pP** **21 40 50.9 +0.4**
DBIC sP **sP** **21 41 03.0 -0.6**
L40A Anamosa 70.43 343 P **P** **21 40 20.1 +0.5**
baz=159,SNR=50
I49A Point Hope 70.43 350 IAmb IAmb 21 40 20.9

comp=Z,84nm,0.9s
I49A Point Hope 70.43 350 P **P** **21 40 19.7 +0.1**
baz=167,SNR=13
I49A P **P** **21 40 19.7 +0.1**
baz=167,SNR=13
GGN Saint George 70.55 2 P **P** **21 40 19.2 -1.0**
G65A Princeton 70.61 1 P **P** **21 40 20.3 -0.4**
G65A Princeton 70.61 1 P **P** **21 40 22.3 +1.6**
baz=182,SNR=6.9
G65A P **P** **21 40 22.3 +1.6**
baz=182,SNR=6.9
G62A West of Eustis 70.62 359 IAmb IAmb 21 40 23.9

comp=Z,85nm,1.1s
G62A West of Eustis 70.62 359 P **P** **21 40 22.7 +2.0**
baz=179,SNR=25
G62A P **P** **21 40 22.7 +2.0**
baz=179,SNR=25
N35A Tabor 70.62 339 P **P** **21 40 21.8 +0.9**
baz=155,SNR=20
PKME Peaks-Kenny Pk 70.66 0 P **P** **21 40 22.5 +1.5**
baz=180,SNR=11
T25A Trinidad 70.72 331 P **P** **21 40 23.2 +1.5**
T25A IAmb IAmb 21 40 25.6

comp=Z,89nm,1.1s
T25A Trinidad 70.72 331 P **P** **21 40 24.3 +2.5**
baz=147,SNR=49
SADO Sadowa 70.73 353 LR LR 22 13 26.0

comp=Z,79nm,20.2s,baz=191,slow=37
SADO Sadowa 70.73 353 IAmb IAmb 21 40 23.4

comp=Z,91nm,1.1s
214A Organ Pipe Nat 70.80 322 P **P** **21 40 23.9 +1.8**
214A IAmb IAmb 21 40 26.5

comp=Z,85nm,1.1s
214A Organ Pipe Nat 70.80 322 P **P** **21 40 25.1 +3.0**
baz=139,SNR=33
SCIA State Center 70.84 341 P **P** **21 40 22.9 +0.8**
baz=157
JFWS Jewell Farm 70.98 344 P **P** **21 40 22.5 -0.5**
JFWS IAmb IAmb 21 40 24.9

comp=Z,55nm,0.9s
JFWS Jewell Farm 70.98 344 P **P** **21 40 22.5 -0.5**
JFWS pmax pmax

comp=Z,55nm,0.9s
JFWS Jewell Farm 70.98 344 P **P** **21 40 23.6 +0.6**
baz=160,SNR=16
MNTQ Montreal, Queb 71.00 357 P **P** **21 40 23.5 +0.5**
MNTQ IAmb IAmb 21 40 25.7

comp=Z,80nm,1.1s
F63A Nahmakanta, Br 71.10 0 P **P** **21 40 23.8 +0.2**
F63A Nahmakanta, Br 71.10 0 P **P** **21 40 25.1 +1.5**
baz=180,SNR=12
F63A P **P** **21 40 25.1 +1.5**
baz=180,SNR=12
N33B J Bar K, Exete 71.11 338 P **P** **21 40 24.9 +1.0**
baz=153,SNR=7.7
I45A Fountain 71.14 347 P **P** **21 40 22.6 -1.2**
I45A Fountain 71.14 347 P **P** **21 40 23.5 -0.4**
baz=164
I45A P **P** **21 40 23.5 -0.4**
baz=164
GBN Guysborough 71.16 6 P **P** **21 40 23.3 -0.6**
F64A Sherman 71.27 1 P **P** **21 40 24.6 +0.1**
F64A Sherman 71.27 1 P **P** **21 40 26.2 +1.7**
baz=181,SNR=14
F64A P **P** **21 40 26.2 +1.7**
baz=181,SNR=14
SFX San Felipe 71.28 320 P **P** **21 40 23.9 -1.2**
F62A Pittston Farm, 71.30 360 P **P** **21 40 25.2 +0.4**
LMN Caledonia Moun 71.37 3 P **P** **21 40 24.1 -1.1**
LMN **pP** **21 40 57.2 +1.6**
K38A Parkersburg 71.39 342 IAmb IAmb 21 40 27.2

comp=Z,56nm,0.7s
K38A Parkersburg 71.39 342 P **P** **21 40 26.1 +0.7**
baz=158,SNR=12
KSCO Kaye Shedlock' 71.54 333 P **P** **21 40 28.4 +1.8**
KSCO IAmb IAmb 21 40 30.1

comp=Z,115nm,0.8s
KSCO Kaye Shedlock' 71.54 333 P **P** **21 40 28.8 +2.2**
baz=148,SNR=20
KSCO Kaye Shedlock' 71.54 333 P **P** **21 40 28.8 +2.2**
baz=148,SNR=20
I42A Draeger Farm, 71.58 345 IAmb IAmb 21 40 28.4

comp=Z,149nm,1.3s
I42A Draeger Farm, 71.58 345 P **P** **21 40 27.4 +0.9**
baz=161,SNR=23
W18A Petrified Fore 71.59 326 P **P** **21 40 28.8 +1.7**
W18A IAmb IAmb 21 40 31.1

comp=Z,120nm,1.1s
W18A Petrified Fore 71.59 326 P **P** **21 40 29.7 +2.7**
baz=142,SNR=31
SBA Scott Base 71.61 191 P **P** **21 40 28.2 +1.8**
SBA Scott Base 71.61 191 P **P** **21 40 28.2 +1.8**
SBA pmax pmax

comp=Z,48nm,1.3s
SBA Scott Base 71.61 191 P **P** **21 40 29.1 +2.7**
SDCO Great Sand Dun 71.70 330 P **P** **21 40 28.8 +1.0**
SDCO IAmb IAmb 21 40 31.5

comp=Z,92nm,1.2s
SDCO Great Sand Dun 71.70 330 P **P** **21 40 30.2 +2.4**
baz=146,SNR=82
TRQ Mont Tremblant 71.78 356 IAmb IAmb 21 40 29.9

comp=Z,90nm,1.2s
E63A Oxbow 71.82 1 P **P** **21 40 29.4 +1.5**
baz=181,SNR=10
E63A P **P** **21 40 29.4 +1.5**
baz=181,SNR=10
L34A Svendsen Farm, 71.86 339 P **P** **21 40 29.0 +0.7**
baz=154,SNR=14
H43A Windswept, Lux 71.87 346 IAmb IAmb 21 40 30.0

comp=Z,72nm,0.8s
H43A Windswept, Lux 71.87 346 P **P** **21 40 28.9 +0.7**
baz=162,SNR=19
BGNE Belgrade 71.95 338 P **P** **21 40 30.4 +1.6**
baz=153,SNR=26
BGNE Belgrade 71.95 338 P **P** **21 40 30.4 +1.6**
baz=153,SNR=26
I40A Norwalk 71.99 344 IAmb IAmb 21 40 30.0

comp=Z,65nm,1.1s
I40A Norwalk 71.99 344 P **P** **21 40 29.6 +0.6**
baz=160,SNR=14
G45A Suttons Bay 72.00 348 IAmb IAmb 21 40 30.5

comp=Z,69nm,1.1s
G45A Suttons Bay 72.00 348 P **P** **21 40 29.1 +0.1**
baz=164,SNR=6.2
G45A P **P** **21 40 29.1 +0.1**
baz=164,SNR=6.2
E62A Clayton Lake 72.02 360 P **P** **21 40 29.4 +0.3**
E62A Clayton Lake 72.02 360 P **P** **21 40 30.9 +1.8**
baz=180,SNR=20
E62A P **P** **21 40 30.9 +1.8**
baz=180,SNR=20
PQI Presque Isle 72.08 1 P **P** **21 40 29.8 +0.3**
S22A 4UR Ranch, Cre 72.30 330 P **P** **21 40 32.6 +1.2**
S22A 4UR Ranch, Cre 72.30 330 P **P** **21 40 33.7 +2.3**
baz=145,SNR=15
D62A Allapoint, All 72.48 0 P **P** **21 40 32.4 +0.6**
D62A IAmb IAmb 21 40 34.6

comp=Z,72nm,1.1s
D62A Allapoint, All 72.48 0 P **P** **21 40 33.3 +1.5**
baz=180,SNR=22
D62A P **P** **21 40 33.3 +1.5**
baz=180,SNR=22
Q24A Divide 72.56 331 P **P** **21 40 33.9 +1.0**
Q24A IAmb IAmb 21 40 36.5

comp=Z,168nm,1.2s
Q24A Divide 72.56 331 P **P** **21 40 35.2 +2.3**
baz=146,SNR=28
VNDA Vanda 72.63 190 P **P** **21 40 34.8 +2.3**
comp=Z,14nm,0.9s,baz=128,slow=5.8,SNR=66
VNDA LR LR 22 10 03.1

comp=Z,93nm,21.8s,baz=132,slow=34
comp=Z,14nm,0.9s
VNDA Vanda 72.63 190 P **P** **21 40 32.7 +0.2**

MVCO Mesa Verde 72.64 328 P **P** **21 40 34.5 +1.2**
MVCO IAmb IAmb 21 40 37.2

comp=Z,88nm,1.1s
MVCO Mesa Verde 72.64 328 P **P** **21 40 35.9 +2.5**
baz=143,SNR=28
BATG Bathurst New B 72.73 2 P **P** **21 40 33.5 +0.1**
WUAZ Wupatki 72.74 325 P **P** **21 40 35.7 +1.8**
WUAZ IAmb IAmb 21 40 38.2

comp=Z,76nm,1.0s
WUAZ Wupatki 72.74 325 P **P** **21 40 36.8 +2.9**
baz=141,SNR=40
GLA Glamis 72.75 321 P **P** **21 40 36.4 +2.6**
GLA Glamis 72.75 321 P **P** **21 40 36.4 +2.6**
GLA pmax pmax

comp=Z,34nm,1.1s
GLA Glamis 72.75 321 P **P** **21 40 36.7 +2.9**
baz=138
I37A Lemond, Waseca 72.83 342 P **P** **21 40 33.5 -0.5**
I37A IAmb IAmb 21 40 36.1

comp=Z,104nm,0.8s
I37B Waseca 72.83 342 P **P** **21 40 35.0 +1.0**
baz=157,SNR=20
LATQ La Tuque 72.85 358 P **P** **21 40 33.1 -0.9**
LMQ La Malbaie 72.95 359 P **P** **21 40 33.6 -1.0**
OGNE Ogallala 72.96 335 P **P** **21 40 35.2 +0.3**
OGNE IAmb IAmb 21 40 38.1

comp=Z,118nm,1.2s
OGNE Ogallala 72.96 335 P **P** **21 40 36.9 +1.9**
baz=149,SNR=6.8
E46A Sault Ste Mari 73.04 349 IAmb IAmb 21 40 36.8

comp=Z,97nm,0.9s
E46A Sault Ste Mari 73.04 349 P **P** **21 40 35.7 +0.6**
baz=166,SNR=40
YUH Yuha Desert 73.08 320 P **P** **21 40 35.7 0.0**
BLYC Blythe 73.09 322 P **P** **21 40 37.6 +1.8**
G40A Rib Lake 73.18 345 P **P** **21 40 35.1 -0.9**
G40A Rib Lake 73.18 345 P **P** **21 40 36.7 +0.7**
baz=160,SNR=15
F42A Maple Grove Fa 73.18 346 P **P** **21 40 36.3 +0.3**
IKP In-Ko-Pah, Jac 73.19 320 P **P** **21 40 39.3 +2.8**
baz=137,SNR=9.7
SWSC Sam W. Stewart 73.22 320 P **P** **21 40 39.4 +2.8**
baz=137,SNR=6.1
K31A O'Neill 73.23 338 P **P** **21 40 37.1 +0.7**
K31A O'Neill 73.23 338 P **P** **21 40 38.2 +1.7**
baz=152,SNR=17
CBX Cerro Bola 73.27 319 P **P** **21 40 38.0 +1.0**
PDMCI Parker Dam,Lak 73.29 322 P **P** **21 40 39.6 +2.6**
baz=138,SNR=5.2
TKX Tecate 73.42 320 P **P** **21 40 36.1 -1.6**
ISCO Idaho Springs 73.45 332 P **P** **21 40 38.4 +0.3**
ISCO Idaho Springs 73.45 332 P **P** **21 40 38.4 +0.3**
ISCO pmax pmax

comp=Z,47nm,1.0s
ISCO Idaho Springs 73.45 332 P **P** **21 40 40.4 +2.3**
baz=146,SNR=45
ECSD EROS Data Cent 73.53 340 P **P** **21 40 38.0 -0.1**
ECSD IAmb IAmb 21 40 40.4

comp=Z,102nm,1.1s
ECSD EROS Data Cent 73.53 340 P **P** **21 40 39.2 +1.0**
baz=154,SNR=63
BAR Barrett 73.53 320 P **P** **21 40 38.4 -0.1**
SMCO Snowmass 73.53 330 P **P** **21 40 39.7 +1.0**
SMCO IAmb IAmb 21 40 42.8

comp=Z,61nm,0.8s
E43A Lone Tree Farm 73.54 347 P **P** **21 40 37.9 -0.2**
E43A Lone Tree Farm 73.54 347 P **P** **21 40 38.7 +0.6**
baz=163,SNR=28
MONP2 Monument Peak 73.54 320 P **P** **21 40 41.5 +2.8**
baz=136,SNR=9.4
BC3 Big Chuckawall 73.54 321 P **P** **21 40 41.4 +2.8**
baz=137,SNR=26
PV15 Paradox Valley 73.55 329 P **P** **21 40 40.3 +1.7**
PV15 IAmb IAmb 21 40 42.8

comp=Z,144nm,1.4s
PV13 Radium Mtn., P 73.56 328 IAmb IAmb 21 40 42.5

comp=Z,78nm,1.1s
PV11 David Mesa, Pa 73.69 329 P **P** **21 40 38.6 -0.9**
PV11 IAmb IAmb 21 40 43.2

comp=Z,84nm,1.3s
COWI Conover 73.72 346 IAmb IAmb 21 40 41.4

comp=Z,52nm,0.9s
IRM Iron Mountain 73.74 322 P **P** **21 40 42.3 +2.7**
baz=138,SNR=15
SPMN Marine on St. 73.79 343 IAmb IAmb 21 40 41.3

comp=Z,63nm,0.8s
SPMN Marine on St. 73.79 343 P **P** **21 40 40.0 +0.5**
baz=158,SNR=14
SPMN Marine on St. 73.79 343 P **P** **21 40 40.1 +0.5**
baz=158,SNR=14
PV10 Paradox Valley 73.83 328 P **P** **21 40 39.8 -0.6**
PV10 IAmb IAmb 21 40 43.5

comp=Z,80nm,1.2s
VLDQ Val d'Or 73.87 354 P **P** **21 40 41.2 +1.3**
PV23 Carpenter Ridg 73.88 329 P **P** **21 40 42.3 +1.6**
NEE2 Needles Airpor 73.90 322 P **P** **21 40 43.0 +2.5**
baz=138
U15A North Rim 73.91 325 P **P** **21 40 43.7 +2.8**
U15A IAmb IAmb 21 40 45.4

comp=Z,52nm,0.9s
109C Camp Elliot, M 73.94 320 P **P** **21 40 42.3 +1.6**
109C Camp Elliot, M 73.94 320 P **P** **21 40 42.7 +2.0**
baz=136
PV21 Cone Mtn., Par 73.95 329 P **P** **21 40 42.8 +1.8**
TPFO Pinon Flats 74.08 321 P **P** **21 40 44.5 +2.8**
baz=157,SNR=13
PFO Pinyon Flats O 74.08 321 P **P** **21 40 44.1 +2.3**
comp=Z,11nm,0.5s,baz=123,slow=5.7,SNR=15
PFO pP **pP** **21 41 12.6 +0.9**

comp=Z,11nm,1.1s,baz=115,slow=7.2,SNR=3.0
comp=Z,11nm,0.5s
PFO Pinyon Flats O 74.08 321 P **P** **21 40 43.5 +1.7**
PFO Pinyon Flats O 74.08 321 *c* iP **P** **21 40 44.2 +2.4**
PFO pmax pmax

comp=Z,60nm,1.1s
PFO Pinyon Flats O 74.08 321 P **P** **21 40 44.6 +2.9**
baz=137,SNR=9.4
BELC Belle Mtn. Jos 74.10 321 P **P** **21 40 44.6 +2.7**
baz=137,SNR=13
GMRC Granite Mounta 74.49 322 P **P** **21 40 47.0 +2.9**
baz=137,SNR=41
MURC Murrieta 74.50 320 P **P** **21 40 46.8 +2.8**
baz=136,SNR=5.1
N23A Red Feather La 74.50 332 P **P** **21 40 45.4 +1.2**
N23A IAmb IAmb 21 40 47.8

comp=Z,89nm,1.3s
N23A Red Feather La 74.50 332 P **P** **21 40 46.5 +2.3**
baz=146,SNR=26
D41A Chassel 74.51 346 P **P** **21 40 45.1 +1.3**
D41A Chassel 74.51 346 P **P** **21 40 45.1 +1.3**
baz=162,SNR=49
F36A Milaca 74.57 343 IAmb IAmb 21 40 46.0

comp=Z,116nm,1.2s
F36A Milaca 74.57 343 P **P** **21 40 44.6 +0.5**
baz=157,SNR=50
PHWY Pilot Hill 74.64 333 P **P** **21 40 46.2 +1.3**
PHWY IAmb IAmb 21 40 48.3

comp=Z,87nm,1.2s
ELS Elsinore Mount 74.67 320 P **P** **21 40 46.2 +1.1**
PKCU Pink Cliffs 74.70 326 P **P** **21 40 46.1 +0.6**
E38A The Farm, Brul 74.76 344 P **P** **21 40 45.4 +0.2**
E38A IAmb IAmb 21 40 47.1

comp=Z,92nm,1.2s
E38A The Farm, Brul 74.76 344 P **P** **21 40 45.9 +0.7**
baz=159,SNR=21
BBRC Big Bear Solar 74.82 321 P **P** **21 40 48.7 +2.5**
baz=136
SCI2 San Clemente I 74.85 319 P **P** **21 40 48.8 +2.7**
baz=135
LCMT Little Creek M 74.85 325 P **P** **21 40 47.7 +1.5**
O20A White River Ci 74.88 330 P **P** **21 40 48.2 +1.9**
O20A IAmb IAmb 21 40 50.1

comp=Z,104nm,1.0s
O20A White River Ci 74.88 330 P **P** **21 40 48.9 +2.6**
baz=144,SNR=38
HEC Hector,Ludlow 74.90 321 P **P** **21 40 49.5 +3.1**
baz=137,SNR=8.8
SUSD Miller 74.91 338 P **P** **21 40 47.2 +1.0**
SUSD IAmb IAmb 21 40 48.5

comp=Z,121nm,1.1s
SUSD Miller 74.91 338 P **P** **21 40 47.2 +1.0**
baz=152
CIS Catalina Islan 75.07 319 P **P** **21 40 50.1 +2.7**
baz=135
MTPU Mount Pierson 75.10 326 P **P** **21 40 48.7 +0.9**
TUQ Turquoise Moun 75.11 322 P **P** **21 40 50.4 +2.8**
baz=137,SNR=5.1
SRU San Rafael Swe 75.12 328 P **P** **21 40 49.5 +1.8**
SRU IAmb IAmb 21 40 51.2

comp=Z,49nm,0.8s
SRU San Rafael Swe 75.12 328 P **P** **21 40 49.5 +1.8**
SRU pmax pmax

comp=Z,49nm,0.8s
SZCU Shurtz Canyon 75.22 325 P **P** **21 40 50.3 +2.0**
SZCU IAmb IAmb 21 40 52.7

comp=Z,94nm,1.3s
FMP Fort Macarthur 75.22 319 P **P** **21 40 50.7 +2.6**
baz=135
BFSC Mount Baldy Ra 75.23 320 P **P** **21 40 50.9 +2.6**
baz=136,SNR=12
Q16A Castle Valley 75.28 327 P **P** **21 40 50.0 +1.4**
Q16A IAmb IAmb 21 40 52.7

comp=Z,125nm,1.4s
RRX Edison Barstow 75.31 321 P **P** **21 40 51.6 +2.9**
baz=136
CCUT Cedar City 75.32 325 P **P** **21 40 51.5 +2.5**
CCUT IAmb IAmb 21 40 53.7

comp=Z,102nm,1.0s
F33A 5 Mile Ranch, 75.33 341 P **P** **21 40 49.2 +0.7**
F33A 5 Mile Ranch, 75.33 341 P **P** **21 40 49.3 +0.8**
baz=155,SNR=7.9
P18A Preston Nutter 75.40 328 P **P** **21 40 51.2 +1.8**
P18A IAmb IAmb 21 40 53.4

comp=Z,70nm,1.0s
DRLN Deer Lake 75.40 8 P **P** **21 40 49.5 +0.8**
DRLN IAmb IAmb 21 40 51.3

comp=Z,109nm,0.9s
MSU Marysvale 75.46 327 P **P** **21 40 51.8 +2.1**
MSU Marysvale 75.46 327 P **P** **21 40 51.8 +2.1**
PASC Pasadena Art C 75.48 320 P **P** **21 40 51.3 +1.6**
SHPR Sheep Range 75.48 323 P **P** **21 40 51.5 +1.7**
GSC Goldstone, Bar 75.51 322 P **P** **21 40 52.1 +2.2**
GSC Goldstone, Bar 75.51 322 P **P** **21 40 52.1 +2.2**
GSC pmax pmax

comp=Z,44nm,1.1s
GSC Goldstone, Bar 75.51 322 P **P** **21 40 52.7 +2.9**
baz=137,SNR=16
P17A Butcher Ranch, 75.51 328 P **P** **21 40 51.5 +1.6**
P17A IAmb IAmb 21 40 53.6

comp=Z,84nm,1.1s
TMUT Trail Mountain 75.60 328 P **P** **21 40 51.2 +0.7**
SNCC San Nicolas Is 75.62 318 P **P** **21 40 52.2 +1.7**
SNCC IAmb IAmb 21 40 53.7

comp=Z,154nm,1.4s
SNCC San Nicolas Is 75.62 318 P **P** **21 40 53.0 +2.6**
baz=134
DECC Green Verdugo 75.63 320 P **P** **21 40 53.2 +2.7**
baz=135
SHOC Shoshone, Teco 75.65 322 P **P** **21 40 53.2 +2.7**
baz=137
TCRU Three Creeks R 75.67 326 P **P** **21 40 53.7 +2.8**
RWWY Rawlins 75.69 332 P **P** **21 40 52.1 +1.1**
RWWY IAmb IAmb 21 40 54.6

comp=Z,84nm,1.0s
RDMU Red Mountain 75.83 330 P **P** **21 40 52.9 +1.1**
RDMU IAmb IAmb 21 40 55.2

comp=Z,50nm,0.8s
EDW2 Edwards Air Fo 75.88 320 P **P** **21 40 54.0 +2.1**
baz=136,SNR=5.8
EYMN Ely 76.00 345 P **P** **21 40 51.8 -0.5**
EYMN IAmb IAmb 21 40 54.1

comp=Z,98nm,1.2s
EYMN Ely 76.00 345 P **P** **21 40 52.8 +0.5**
baz=159,SNR=40
QSM Queen of Sheba 76.02 322 P **P** **21 40 53.9 +1.2**
GWY Greenwater Val 76.07 322 P **P** **21 40 54.9 +1.7**
CCAC Calif City Air 76.08 321 P **P** **21 40 55.0 +1.9**
PRN Pahroc Range 76.10 324 P **P** **21 40 55.5 +2.2**
PRN IAmb IAmb 21 40 57.8

comp=Z,88nm,1.1s
OSI Osito Audit: C 76.11 320 P **P** **21 40 55.6 +2.3**
baz=135
LRMC Laurel Mtn Rad 76.13 321 P **P** **21 40 55.9 +2.5**
baz=136,SNR=8.2
K22A Casper 76.20 333 P **P** **21 40 54.5 +0.8**
K22A IAmb IAmb 21 40 57.3

comp=Z,70nm,1.1s
K22A Casper 76.20 333 P **P** **21 40 55.9 +2.2**
baz=146
K22A Casper 76.20 333 P **P** **21 40 55.9 +2.2**
baz=146
PSUT Pine Spring 76.32 326 P **P** **21 40 56.7 +2.1**
MPU Maple Canyon 76.36 328 P **P** **21 40 56.5 +1.8**
FURC Furnace Creek, 76.39 322 P **P** **21 40 57.6 +3.0**
baz=137,SNR=20
TPNV Topopah Spring 76.40 323 P **P** **21 40 57.5 +2.5**
TPNV IAmb IAmb 21 40 59.5

comp=Z,104nm,1.3s
TPNV Topopah Spring 76.40 323 P **P** **21 40 57.5 +2.5**
TPNV pmax pmax

comp=Z,104nm,1.3s
TPNV Topopah Spring 76.40 323 P **P** **21 40 58.1 +3.1**
baz=137,SNR=48
MPMC Manual Prospec 76.44 322 P **P** **21 40 57.7 +2.5**
baz=136,SNR=23
RSSD Black Hills 76.44 335 P **P** **21 40 56.4 +1.3**
RSSD IAmb IAmb 21 40 58.3

comp=Z,75nm,1.2s
RSSD Black Hills 76.44 335 P **P** **21 40 56.4 +1.3**
RSSD pmax pmax

comp=Z,75nm,1.2s
RSSD Black Hills 76.44 335 P **P** **21 40 57.0 +1.9**
baz=148
NLU North Lily Min 76.53 328 P **P** **21 40 57.5 +1.8**
ARVC Arvin 76.53 320 P **P** **21 40 57.8 +2.2**
baz=135
S11A Rachel 76.64 324 P **P** **21 40 58.1 +1.8**
S11A IAmb IAmb 21 41 01.1

comp=Z,89nm,1.3s
ISA Isabella, Lake 76.71 321 P **P** **21 40 57.5 +0.9**
ISA Isabella, Lake 76.71 321 P **P** **21 40 57.5 +0.9**
ISA pmax pmax

comp=Z,40nm,1.0s
ISA Isabella, Lake 76.71 321 P **P** **21 40 59.5 +2.9**
baz=136,SNR=9.5
D32A Dogwood Acres, 76.72 341 P **P** **21 40 56.4 +0.1**
D32A IAmb IAmb 21 40 58.5

comp=Z,125nm,0.9s
JLU Jordanelle 76.73 328 P **P** **21 40 58.2 +1.3**
BCW Bitter Crk WRg 76.74 320 P **P** **21 40 57.4 +0.5**
BCW IAmb IAmb 21 41 01.1

comp=Z,89nm,1.1s
SUR Sutherland 76.81 120 LR LR 22 13 11.6

comp=Z,160nm,18.2s,baz=236,slow=34
SUR Sutherland 76.81 120 P **P** **21 40 58.0 +0.3**
B35A Bob, Littlefor 76.94 344 IAmb IAmb 21 40 59.5

comp=Z,49nm,0.6s
B35A Bob, Littlefor 76.94 344 P **P** **21 40 58.2 +0.7**
baz=157,SNR=59
PKM Mcpherson Peak 76.94 319 P **P** **21 41 01.0 +2.9**
baz=134,SNR=16
CTU Camp Tracy 76.95 328 P **P** **21 40 58.6 +0.6**
CWC Cottonwood Cre 77.04 322 P **P** **21 41 01.3 +2.7**
baz=136
GRAC Grapevine Rang 77.05 322 P **P** **21 41 00.4 +1.9**
GRAC Grapevine Rang 77.05 322 P **P** **21 41 01.4 +2.9**
baz=136,SNR=22
DUG Dugway, Tooele 77.07 327 P **P** **21 40 59.6 +0.9**
DUG IAmb IAmb 21 41 02.6

comp=Z,63nm,1.1s
DUG Dugway, Tooele 77.07 327 P **P** **21 40 59.6 +0.9**
DUG pmax pmax

comp=Z,63nm,1.1s
DUG Dugway, Tooele 77.07 327 P **P** **21 41 01.4 +2.7**
baz=140,SNR=38
R11A Troy Canyon, C 77.08 324 P **P** **21 41 01.1 +2.3**
R11A IAmb IAmb 21 41 03.2

comp=Z,88nm,1.4s
R11A Troy Canyon, C 77.08 324 P **P** **21 41 01.8 +3.0**
baz=138,SNR=38
VES Vestal, Richgr 77.19 321 P **P** **21 41 01.8 +2.6**
baz=135
SMMC Simmler 77.34 320 P **P** **21 41 03.2 +3.0**
baz=134
E28A Huff 77.37 338 P **P** **21 41 00.5 +0.5**
E28A Huff 77.37 338 P **P** **21 41 01.9 +1.9**
baz=151
AGMN Agassiz Nation 77.44 342 P **P** **21 40 60.0 -0.4**
AGMN Agassiz Nation 77.44 342 P **P** **21 41 01.2 +0.9**
baz=156,SNR=24
TIN Tinemaha, Big 77.57 322 P **P** **21 41 04.5 +3.0**
baz=136,SNR=6.7

HWUT Hardware Ranch 77.57 329 P **P** **21 41 01.4 -0.1**
HWUT IAmb IAmb 21 41 04.8
comp=Z,134nm,1.3s
BW06 Boulder Array 77.59 331 P **P** **21 41 01.6 0.0**
BW06 Boulder Array 77.59 331 P **P** **21 41 03.2 +1.6**
baz=143,SNR=15
PD31 Pinedale Array 77.59 331 P **P** **21 41 02.4 +0.8**
PDAR Pinedale Array 77.59 331 P **P** **21 41 02.9 +1.3**
comp=Z,6.1nm,0.5s,baz=132,slow=8.1,SNR=50
PDAR pP **pP** **21 41 32.0 -0.1**
comp=Z,3.8nm,0.6s,baz=122,slow=7.5,SNR=3.7
comp=Z,6.1nm,0.5s
PDAR Pinedale Array 77.59 331 P **P** **21 40 59.6 -2.0**
BGU Big Grassy Mou 77.74 328 P **P** **21 41 03.5 +1.1**
BGU IAmb IAmb 21 41 05.9
comp=Z,85nm,1.4s
TPH Tonopah 77.75 323 P **P** **21 41 04.7 +2.1**
TPH Tonopah 77.75 323 P **P** **21 41 04.7 +2.1**
TPH pmax pmax
comp=Z,218nm,1.0s
PAGB Antelope Grade 77.78 320 P **P** **21 41 04.8 +2.2**
MDND Maddock 78.14 340 P **P** **21 41 05.5 +1.2**
MDND Maddock 78.14 340 P **P** **21 41 06.0 +1.8**
baz=152,SNR=5.9
MDND Maddock 78.14 340 P **P** **21 41 05.8 +1.6**
baz=152,SNR=5.9
AHID Auburn Hatcher 78.27 330 P **P** **21 41 06.2 +0.9**
AHID IAmb IAmb 21 41 08.7
comp=Z,82nm,0.9s
AHID **pP** **21 41 36.6 +0.9**
HVU Hansel Valley 78.28 328 P **P** **21 41 06.3 +1.0**
HVU Hansel Valley 78.28 328 P **P** **21 41 06.4 +1.0**
HVU pmax pmax
comp=Z,44nm,0.9s
Q09A Carvers 78.28 324 P **P** **21 41 07.5 +2.0**
Q09A IAmb IAmb 21 41 09.5
comp=Z,170nm,1.3s
MLAC Mammoth, Mammo 78.31 322 P **P** **21 41 08.6 +2.9**
baz=136
OMMB Old Mammoth Mi 78.39 322 P **P** **21 41 07.8 +1.6**
OMMB IAmb IAmb 21 41 10.1
comp=Z,88nm,1.2s
PMPB Monarch Peak 78.44 320 P **P** **21 41 07.0 +0.7**
MDPB Devils Postpil 78.45 322 P **P** **21 41 07.6 +1.1**
NV11 Mina Array Sit 78.52 323 P **P** **21 41 08.2 +1.5**
LHV Little Huntoon 78.58 323 P **P** **21 41 08.5 +1.7**
NVAR Mina Array Bea 78.59 323 P **P** **21 41 09.7 +2.4**
comp=Z,13nm,0.8s,baz=148,slow=6.1,SNR=65
NVAR pP **pP** **21 41 38.4 +0.7**
comp=Z,6.3nm,0.8s,baz=159,slow=6.9,SNR=4.9
comp=Z,13nm,0.8s
NVAR Mina Array Bea 78.59 323 P **P** **21 41 08.8 +1.5**
ECR Eagle Creek 78.62 330 P **P** **21 41 09.1 +1.8**
REDW Red Top Meadow 78.63 330 P **P** **21 41 09.0 +1.7**
REDW IAmb IAmb 21 41 10.9
comp=Z,90nm,1.2s
SNOW Snow King Moun 78.67 331 P **P** **21 41 08.5 +0.9**
SNOW IAmb IAmb 21 41 11.2
comp=Z,81nm,1.2s
ELK Elko 78.69 326 P **P** **21 41 09.8 +2.0**
comp=Z,28nm,1.0s,baz=146,slow=3.6,SNR=53
ELK pP **pP** **21 41 39.0 +0.8**
comp=Z,11nm,0.8s,baz=115,slow=4.2,SNR=4.0
ELK LR LR 22 12 28.5
comp=Z,165nm,20.7s,baz=140,slow=33
comp=Z,28nm,1.0s
ELK Elko 78.69 326 P **P** **21 41 08.6 +0.9**
ELK Elko 78.69 326 P **P** **21 41 08.6 +0.9**
ELK pmax pmax
comp=Z,32nm,0.9s
LOHW Long Hollow 78.72 331 P **P** **21 41 09.0 +1.1**
TPAW Teton Pass 78.78 330 P **P** **21 41 09.7 +1.5**
TPAW IAmb IAmb 21 41 11.8
comp=Z,91nm,1.2s
BBGB Big Mountain B 78.83 320 P **P** **21 41 09.0 +0.6**
BBGB IAmb IAmb 21 41 14.4
comp=Z,66nm,1.2s
RYN Ryan 78.86 323 P **P** **21 41 10.2 +1.6**
MOOW Moose Ponds 78.89 331 P **P** **21 41 09.8 +1.0**
FXWY Fox Creek 78.93 331 P **P** **21 41 08.3 -0.7**
KVN Kaiserville 78.93 323 P **P** **21 41 09.5 +0.4**
KVN Kaiserville 78.93 323 P **P** **21 41 09.5 +0.4**
KVN pmax pmax
comp=Z,40nm,0.8s
FLWY Flagg Ranch 79.14 331 P **P** **21 41 11.5 +1.4**
FLWY IAmb IAmb 21 41 14.1
comp=Z,118nm,1.1s
TOA0 Torodi Ar. Sit 79.17 70 P **P** **21 41 10.1 -0.6**
TOA0 pP **pP** **21 41 42.2 +0.5**
TORD Torodi Ar. Bea 79.17 70 P **P** **21 41 11.0 +0.3**
comp=Z,24nm,0.6s,baz=266,slow=5.6,SNR=258
TORD PKKPbc **PKKPbc** **22 00 03.2 +2.5**
comp=Z,0.2nm,0.4s,baz=44,slow=1.5,SNR=4.1
comp=Z,24nm,0.6s
TORD Torodi Ar. Bea 79.17 70 P **P** **21 41 10.2 -0.4**
TORD pP **pP** **21 41 41.8 +0.1**
SAO San Andreas Ge 79.19 320 P **P** **21 41 08.9 -1.3**
SAO San Andreas Ge 79.19 320 P **P** **21 41 09.0 -1.3**
SAO pmax pmax
comp=Z,28nm,1.3s
TSUM Tsumeb 79.23 106 LR LR 22 12 25.9
comp=Z,106nm,20.5s,baz=146,slow=33
TSUM Tsumeb 79.23 106 P **P** **21 41 11.4 +0.3**
ULM Lac du Bonnet 79.23 343 P **P** **21 41 10.7 +0.5**
comp=Z,36nm,0.4s,baz=160,slow=4.9,SNR=56
ULM pP **pP** **21 41 40.2 -0.6**
comp=Z,15nm,0.5s,baz=143,slow=6.2,SNR=4.9
ULM sP **sP** **21 41 53.0 -0.6**
comp=Z,20nm,0.8s,baz=154,slow=8.2,SNR=3.5
comp=Z,36nm,0.4s
ULM Lac du Bonnet 79.23 343 P **P** **21 41 10.4 +0.2**
ULM IAmb IAmb 21 41 12.2
comp=Z,59nm,0.7s
ULM pP **pP** **21 41 40.0 -0.8**
RLMT Red Lodge 79.36 332 P **P** **21 41 13.5 +2.3**
baz=144,SNR=8.1
LKWY Lake 79.39 331 P **P** **21 41 14.1 +2.6**
LKWY Lake 79.39 331 P **P** **21 41 14.1 +2.6**
LKWY pmax pmax
comp=Z,45nm,1.0s
LAO LASA Array 79.43 335 P **P** **21 41 12.4 +1.0**
LAO IAmb IAmb 21 41 14.5
comp=Z,78nm,0.9s
LAO LASA Array 79.43 335 P **P** **21 41 13.3 +1.8**
baz=146,SNR=20
CMB Columbia Colle 79.47 321 P **P** **21 41 12.5 +0.7**
CMB Columbia Colle 79.47 321 P **P** **21 41 12.5 +0.7**
CMB pmax pmax
comp=Z,17nm,1.1s
BMN Battle Mountai 79.47 325 P **P** **21 41 13.0 +1.1**
BMN Battle Mountai 79.47 325 P **P** **21 41 13.0 +1.1**
BMN pmax pmax
comp=Z,18nm,1.0s
YFT Old Faithful 79.49 331 P **P** **21 41 14.5 +2.5**
YERR Yerington 79.50 323 P **P** **21 41 13.4 +1.2**
YERR IAmb IAmb 21 41 16.2
comp=Z,55nm,0.9s
YNR Norris Junctio 79.63 331 P **P** **21 41 13.6 +0.8**
YMR Madison River 79.72 331 P **P** **21 41 15.0 +1.8**
YMR IAmb IAmb 21 41 17.5
comp=Z,130nm,1.1s
PNTR Pine Nut 79.77 323 P **P** **21 41 15.4 +1.7**
PNTR IAmb IAmb 21 41 17.7
comp=Z,184nm,1.4s
VCNR Virginia City 79.95 323 P **P** **21 41 16.0 +1.4**
YHL Hebgen Lake 79.96 331 P **P** **21 41 14.6 0.0**
EMB Emerald Bay 79.97 322 P **P** **21 41 14.1 -0.7**
GCMT Greycliff 80.06 333 P **P** **21 41 16.5 +1.5**
PAHR Pah Rah Range 80.09 323 **P** **21 41 17.5 +2.2**
PAHR IAmb IAmb 21 41 19.4
comp=Z,124nm,1.1s
MPK Martis Peak 80.16 322 P **P** **21 41 14.4 -1.4**
MPK IAmb IAmb 21 41 20.8
comp=Z,110nm,1.2s
DGMT Dagmar 80.20 337 P **P** **21 41 16.7 +1.2**
DGMT Dagmar 80.20 337 P **P** **21 41 17.7 +2.2**
baz=148,SNR=33
SCHQ Schefferville 80.27 1 P **P** **21 41 16.2 +0.6**
comp=Z,10nm,0.8s,baz=158,slow=3.6,SNR=17
SCHQ LR LR 22 19 45.2
comp=Z,55nm,18.8s,baz=225,slow=38
comp=Z,10nm,0.8s
SCHQ Schefferville 80.27 1 P **P** **21 41 16.6 +0.9**
MAW Mawson 80.40 163 P **P** **21 41 17.4 +1.0**
comp=Z,34nm,0.8s,baz=210,slow=6.6,SNR=72
MAW LR LR 22 18 27.7
comp=Z,76nm,18.1s,baz=226,slow=37
comp=Z,34nm,0.8s
HLID Hailey 80.42 329 P **P** **21 41 18.5 +1.5**
HLID IAmb IAmb 21 41 21.0
comp=Z,72nm,0.9s
HLID Hailey 80.42 329 P **P** **21 41 19.7 +2.7**
baz=140,SNR=66
MCMT McKenzie Canyo 80.67 330 P **P** **21 41 20.7 +2.3**
BOZ Bozeman (W) 80.74 331 P **P** **21 41 20.5 +1.9**
BOZ Bozeman (W) 80.74 331 P **P** **21 41 20.5 +1.9**
BOZ pmax pmax
comp=Z,41nm,1.3s
BOZ Bozeman (W) 80.74 331 P **P** **21 41 20.6 +1.9**
baz=142,SNR=29
MFID Camas Ranch 80.98 328 IAmb IAmb 21 41 23.6
comp=Z,86nm,1.4s
ORV Oroville 81.15 322 P **P** **21 41 21.8 +1.1**
ORV IAmb IAmb 21 41 24.6
comp=Z,90nm,1.1s
ORV Oroville 81.15 322 P **P** **21 41 21.8 +1.1**
ORV pmax pmax
comp=Z,90nm,1.2s
LRM Limekiln Ridge 81.27 331 P **P** **21 41 22.6 +1.0**
GDXM Geysers 81.37 321 P **P** **21 41 22.9 +0.9**
WVOR Wild Horse Val 81.66 325 P **P** **21 41 24.9 +1.4**
WVOR Wild Horse Val 81.66 325 P **P** **21 41 24.9 +1.4**
WVOR pmax pmax
comp=Z,38nm,1.4s
HRY Holter Researc 81.70 332 P **P** **21 41 25.0 +1.3**
BOSA Boshof 81.83 118 P **P** **21 41 25.0 +0.1**
comp=Z,11nm,0.8s,baz=261,slow=4.4,SNR=24
BOSA LR LR 22 14 23.1
comp=Z,167nm,19.6s,baz=226,slow=33
comp=Z,11nm,0.8s
BOSA Boshof 81.83 118 P **P** **21 41 25.5 +0.6**
BOSA Boshof 81.83 118 P **P** **21 41 25.5 +0.6**
BOSA pmax pmax
comp=Z,13nm,0.9s
EGMT Eagleton 81.90 334 P **P** **21 41 25.0 +0.4**
EGMT IAmb IAmb 21 41 27.3
comp=Z,68nm,1.1s
EGMT Eagleton 81.90 334 P **P** **21 41 26.1 +1.5**
baz=144,SNR=26
MOD Modoc Plateau 82.14 324 P **P** **21 41 27.0 +0.9**
J08A Circle Bar Ran 82.24 326 P **P** **21 41 27.9 +1.3**
J08A IAmb IAmb 21 41 30.2
comp=Z,49nm,0.9s
PLID Pearl Lake 82.32 329 P **P** **21 41 28.2 +1.2**
PLID IAmb IAmb 21 41 30.3
comp=Z,77nm,1.0s
KCPM Cahto Peak 82.41 321 P **P** **21 41 28.0 +0.5**
KCPM IAmb IAmb 21 41 31.7
comp=Z,76nm,1.2s
ZGR Zagora 82.51 52 P **P** **21 41 30.1 +1.9**
MSO Missoula 82.71 331 P **P** **21 41 29.7 +0.9**
MSO Missoula 82.71 331 P **P** **21 41 30.9 +2.1**
baz=140,SNR=12
BMO Blue Mountains 82.76 328 P **P** **21 41 30.3 +1.1**
BMO Blue Mountains 82.76 328 P **P** **21 41 30.3 +1.1**
BMO pmax pmax
comp=Z,29nm,1.2s
TZRR Tazzarine 82.93 51 P **P** **21 41 33.0 +2.6**
K05A Summer Lake 83.03 324 IAmb IAmb 21 41 34.6
comp=Z,103nm,1.3s
I07A Izee 83.28 326 P **P** **21 41 32.1 +0.2**
KHMM Horse Mountain 83.30 322 P **P** **21 41 31.2 -0.9**
KHMM IAmb IAmb 21 41 36.0
comp=Z,62nm,1.4s
YBH Yreka Blue Hor 83.32 323 P **P** **21 41 32.4 +0.3**
comp=Z,4.2nm,0.7s,baz=154,slow=2.7,SNR=8.2
YBH pP **pP** **21 42 02.0 -0.7**
comp=Z,6.6nm,0.8s,baz=124,slow=4.7,SNR=5.6
YBH sP **sP** **21 42 15.9 +0.4**
comp=Z,4.9nm,0.8s,baz=63,slow=10.0,SNR=3.4
comp=Z,4.2nm,0.7s
YBH Yreka Blue Hor 83.32 323 P **P** **21 41 31.0 -1.1**
YBH Yreka Blue Hor 83.32 323 P **P** **21 41 31.0 -1.1**
YBH pmax pmax
comp=Z,11nm,1.1s
K04D Chiloquin, OR 83.42 324 P **P** **21 41 34.5 +1.8**
baz=134
L04D Klamath Falls 83.43 323 P **P** **21 41 32.9 +0.2**
L04D IAmb IAmb 21 41 35.5
comp=Z,66nm,1.4s
L04D Klamath Falls 83.43 323 P **P** **21 41 34.0 +1.3**
baz=134,SNR=7.7
F10A Beach Ranch, E 83.55 329 P **P** **21 41 33.9 +0.7**
JTMT Jette 83.56 331 P **P** **21 41 34.1 +0.9**
JTMT IAmb IAmb 21 41 35.8
comp=Z,63nm,1.4s
J05D Fort Rock, OR 83.60 325 P **P** **21 41 35.7 +2.1**
baz=134,SNR=18
LBTB Lobatse 83.62 115 P **P** **21 41 34.1 -0.1**
LBTB Lobatse 83.62 115 P **P** **21 41 34.1 -0.1**
LBTB pmax pmax
comp=Z,27nm,0.8s
PINE Pine Mountain 83.81 325 P **P** **21 41 35.9 +1.2**
PINE IAmb IAmb 21 41 38.5
comp=Z,48nm,0.9s
G08A Pilot Rock 83.88 327 P **P** **21 41 35.2 +0.3**
KSXB Camp Six Broad 84.02 322 P **P** **21 41 35.0 -0.7**
KSXB IAmb IAmb 21 41 39.4
comp=Z,77nm,1.4s
J04D Umpqua Nationa 84.03 324 P **P** **21 41 37.6 +1.8**
J04D Umpqua Nationa 84.03 324 P **P** **21 41 37.6 +1.8**
baz=134
HUMO Hull Mountain 84.05 323 P **P** **21 41 35.3 -0.4**
L02F Cave Junction 84.05 323 P **P** **21 41 37.8 +2.1**
baz=133,SNR=5.2
ARF Arif 84.25 51 P **P** **21 41 40.0 +2.9**
E09A Wood Farm, Sta 84.38 329 **P** **21 41 36.8 -0.5**
I05D Terrebonne, OR 84.39 325 P **P** **21 41 39.7 +2.3**
baz=134,SNR=8.4
WALA Waterton Lakes 84.41 332 P **P** **21 41 37.6 +0.1**
KBO Bosley Butte 84.47 322 P **P** **21 41 38.8 +0.9**
K02D Willamette Mer 84.49 323 P **P** **21 41 40.3 +2.2**
baz=133,SNR=11
DBO Dodson Butte 84.55 324 P **P** **21 41 38.7 +0.4**
I04A Tendick Farm, 84.57 324 P **P** **21 41 39.8 +1.5**
baz=134,SNR=5.9
CZD Col de Zad 84.59 49 P **P** **21 41 42.0 +2.9**
MDT Midelt 84.77 50 LR LR 22 19 49.3
comp=Z,137nm,19.1s,baz=238,slow=36
MDT Midelt 84.77 50 P **P** **21 41 42.0 +2.4**
F07A Phinny Hill Vi 84.79 327 P **P** **21 41 40.7 +1.4**
E08A Dider Farm, El 84.80 328 P **P** **21 41 40.5 +1.2**
KEBM Edson Butte 84.97 323 P **P** **21 41 38.2 -2.2**
KEBM IAmb IAmb 21 41 44.2
comp=Z,53nm,1.1s
I03D Drain, OR 85.00 324 P **P** **21 41 42.5 +2.1**
baz=133,SNR=6.0
G05D Wamic, OR 85.02 326 P **P** **21 41 43.0 +2.4**
baz=134,SNR=6.8
H04A Detroit Lake 85.07 325 P **P** **21 41 41.1 +0.3**
D08A Wollman Farm, 85.14 329 P **P** **21 41 42.3 +1.2**
BUCK Buck Mountain 85.15 324 P **P** **21 41 42.0 +0.7**
BUCK IAmb IAmb 21 41 44.4
comp=Z,38nm,0.9s
PBDV Barranco-do-Ve 85.17 45 *eP* **P** **21 41 43.6 +2.1**
comp=Z,95nm,1.6s
NEW Newport 85.20 330 P **P** **21 41 41.7 +0.4**
comp=Z,7.0nm,0.7s,baz=151,slow=4.0,SNR=20
comp=Z,7.0nm,0.7s
NEW Newport 85.20 330 P **P** **21 41 42.0 +0.6**
NEW Newport 85.20 330 P **P** **21 41 42.0 +0.6**
NEW pmax pmax
comp=Z,30nm,1.2s
NEW Newport 85.20 330 P **P** **21 41 42.3 +1.0**
baz=138,SNR=11
HOOD Mount Hood Mea 85.24 326 P **P** **21 41 42.8 +1.0**
HOOD IAmb IAmb 21 41 45.1
comp=Z,59nm,1.2s
H04D Lebanon 85.25 325 P **P** **21 41 43.1 +1.5**
baz=133
PNCL Nicolau / Gran 85.33 44 *eP* **P** **21 41 44.0 +1.8**
PCVE Castro Verde 85.34 44 *eP* **P** **21 41 44.4 +2.1**
comp=Z,57nm,2.1s
PCVE *epP* **pP** **21 42 16.6 +2.8**
MESJ Messejana 85.35 44 *eP* **P** **21 41 44.4 +2.1**
comp=Z,59nm,1.2s
MESJ *epP* **pP** **21 42 16.2 +2.4**
C09A Chrisman Ranch 85.38 329 P **P** **21 41 43.2 +0.9**
I02E Swisshome, OR 85.55 324 P **P** **21 41 45.3 +2.2**
baz=132
PBEJ Beja 85.69 44 *eP* **P** **21 41 45.9 +1.9**
comp=Z,59nm,1.8s
PBEJ *epP* **pP** **21 42 18.1 +2.6**
SMIR Smir Dam 85.90 47 P **P** **21 41 47.0 +1.9**
G03D McMinnville, O 85.99 325 P **P** **21 41 47.4 +2.1**
baz=133
F04A Amboy 86.05 326 P **P** **21 41 46.5 +0.9**
F04A IAmb IAmb 21 41 48.4
comp=Z,39nm,0.8s
PMTG Montargil 86.10 43 *eP* **P** **21 41 47.7 +1.7**
comp=Z,65nm,1.9s
PMTG *epP* **pP** **21 42 19.4 +1.9**
LTY Liberty 86.12 328 P **P** **21 41 46.8 +0.8**
B08A Colville Reser 86.28 329 P **P** **21 41 47.0 +0.3**
PESTR Estremoz 86.37 44 *eP* **P** **21 41 48.8 +1.4**
comp=Z,54nm,1.4s
PESTR *epP* **pP** **21 42 19.6 +0.7**
PESTR Estremoz 86.37 44 P **P** **21 41 46.6 -0.7**
PESTR pP **pP** **21 42 19.5 +0.6**
FCC Fort Churchill 86.66 347 P **P** **21 41 48.5 +0.3**
FCC IAmb IAmb 21 41 50.8
comp=Z,34nm,0.8s
FCC Fort Churchill 86.66 347 P **P** **21 41 48.5 +0.3**
FCC pmax pmax
comp=Z,34nm,0.8s
D05A Enumclaw 86.71 327 P **P** **21 41 49.3 +0.5**
D05A IAmb IAmb 21 41 51.4
comp=Z,68nm,1.3s
FIGM Figuig 86.73 52 P **P** **21 41 52.1 +2.6**
JBK JBK 87.03 50 P **P** **21 41 53.0 +2.1**
E03A Lebam 87.05 326 P **P** **21 41 50.2 -0.2**
E03A IAmb IAmb 21 41 53.5
comp=Z,102nm,1.4s
EDM Edmonton 87.42 335 P **P** **21 41 51.5 -0.6**
EDM Edmonton 87.42 335 P **P** **21 41 51.5 -0.6**
EDM pmax pmax
comp=Z,190nm,1.3s
NLWA Neilton Lookou 87.78 326 P **P** **21 41 55.1 +1.2**
NLWA IAmb IAmb 21 41 57.1
comp=Z,51nm,1.2s
CASY Casey 88.27 180 P **P** **21 41 56.9 +0.8**
CASY IAmb IAmb 21 41 59.6
comp=Z,54nm,1.1s
IVI Ivigtut 88.32 10 P **P** **21 41 55.4 -0.7**
IVI IAmb IAmb 21 41 58.7
comp=Z,51nm,1.5s
IVI **pP** **21 42 29.0 +1.5**
ESDC Sonseca Array 89.12 45 P **P** **21 42 01.2 +0.7**
comp=Z,4.2nm,1.1s,baz=236,slow=4.9,SNR=12
ESDC LR LR 22 19 26.6
comp=Z,78nm,21.7s,baz=229,slow=34
comp=Z,4.2nm,1.1s
ESDC Sonseca Array 89.12 45 P **P** **21 42 00.3 -0.2**
ESDC pP **pP** **21 42 33.7 +1.5**
FRB Frobisher Bay 89.19 0 P **P** **21 42 00.7 +0.6**
comp=Z,5.0nm,0.8s,baz=150,slow=8.1,SNR=2.4
comp=Z,5.0nm,0.8s
LSZ Lusaka 90.06 107 LR LR 22 20 22.0
comp=Z,242nm,18.3s,baz=255,slow=34
CBB Campbell River 90.29 328 P **P** **21 42 04.0 -1.6**
CBB IAmb IAmb 21 42 08.4
comp=Z,32nm,1.2s
BBB Bella Bella 93.00 328 LR LR 22 23 32.4
comp=Z,99nm,18.8s,baz=134,slow=35
AFI Afiamalu 94.90 252 LR LR 22 17 55.1
comp=Z,101nm,18.1s,baz=120,slow=31
YKA Yellowknife Ar 95.04 341 P **P** **21 42 27.9 +0.7**
comp=Z,6.9nm,0.7s,baz=139,slow=4.8,SNR=47
YKA pP **pP** **21 42 58.0 -0.5**
comp=Z,4.7nm,0.9s,baz=138,slow=4.9,SNR=4.6
YKA LR LR 22 30 38.5
comp=Z,66nm,18.2s,baz=174,slow=39
comp=Z,6.9nm,0.7s
YKA Yellowknife Ar 95.04 341 P **P** **21 42 26.8 -0.4**
KEST Kesra 96.15 53 LR LR 22 26 20.2
comp=Z,161nm,21.0s,baz=221,slow=36
T35M Bob Quinn 96.97 331 P **P** **21 42 37.8 +1.6**
baz=127
WRAK Wrangell Islan 97.56 330 P Pdif 21 42 39.9 +1.1
baz=126
DLBC Dease Lake 97.76 332 P Pdif 21 42 39.8 0.0
comp=Z,2.4nm,0.6s,baz=135,slow=11,SNR=4.4
comp=Z,2.4nm,0.6s
DLBC Dease Lake 97.76 332 P **P** **21 42 38.7 -1.1**
DLBC Dease Lake 97.76 332 P Pdif 21 42 41.3 +1.5
baz=127
EKA Eskdalemuir Ar 98.42 32 P **P** **21 42 42.0 -0.6**
comp=Z,0.4nm,0.3s,baz=240,slow=5.4,SNR=13
comp=Z,0.4nm,0.3s
DAVA Damuels 101.63 43 *eP* **PP** **21 47 07.1 -2.3**
comp=Z,14nm,1.3s
FETA Feichten 102.04 44 *eP* **PP** **21 47 07.9 -4.7**
comp=Z,5.5nm,1.1s
RETA Reutte 102.26 43 *eP* **PP** **21 47 10.3 -3.8**
comp=Z,8.3nm,1.2s
MOTA Moosalm 102.41 43 *eP* **PP** **21 47 11.1 -4.2**
comp=Z,6.9nm,1.3s
SQTA Sankt Quirin 102.42 44 *eP* **PP** **21 47 10.8 -4.6**
comp=Z,8.1nm,1.2s
WATA Walderalm 102.70 44 *eP* **PP** **21 47 12.7 -4.8**
comp=Z,12nm,1.4s
WTTA Wattenberg 102.70 44 *eP* **PP** **21 47 13.3 -4.3**
comp=Z,7.4nm,1.0s
ABTA Abfaltersbach 103.05 44 *eP* **PP** **21 47 14.8 -5.2**
comp=Z,15nm,1.4s
KBA Koelnbreinsper 103.70 44 *eP* **PKiKP** **21 47 19.8 -4.5**
comp=Z,7.9nm,1.4s
BIOA Bad Ischl, Aus 104.12 44 *eP* **PKiKP** **21 47 22.7 -2.1**
comp=Z,8.2nm,1.2s
MOA Molln 104.57 44 *eP* **PKiKP** **21 47 21.1 -4.5**
comp=Z,6.2nm,1.1s
GERES GERESS Array B 104.60 43 PP **PP** **21 47 30.0 -1.5**
comp=Z,0.7nm,0.9s,baz=243,slow=8.7,SNR=4.8
KHC Kasperske Hory 104.64 42 *e*PKP **PKiKP** **21 47 24.0 -1.7**
KHC *e*PP **PP** **21 47 27.8 -3.9**
CKRC Cesky Krumlov 104.97 43 *e*PP **PKiKP** **21 47 30.4 +4.1**
CLL Collm 105.12 40 *e*Sdif Sdif 21 54 53.0 -3.9
CLL *e*SS **SS** **22 02 22.0 +0.8**
PRU Pruhonice 105.54 42 *e*PP **PP** **21 47 34.0 -4.3**
CONA Conrad Observa 105.60 44 *eP* **PKiKP** **21 47 28.5 +0.9**
comp=Z,4.5nm,1.4s
RONA Rosalia, Austr 105.79 44 *eP* **PKiKP** **21 47 28.2 +0.3**
comp=Z,4.0nm,1.1s
DPC Dobruska-Polom 106.74 42 *e*PP **PP** **21 47 42.9 -4.3**
KRLC Kraliky 106.92 42 *e*PP **PP** **21 47 44.6 -3.9**
NOA NORSAR Array B 107.78 30 PKKPbc PKKPbc 21 59 00.6 +14
comp=Z,0.6nm,0.8s,baz=77,slow=4.1,SNR=3.5
ILAR Eielson Array 107.87 334 PP **PP** **21 47 57.6 +2.6**
comp=Z,2.1nm,1.2s,baz=108,slow=6.0,SNR=5.6
HFS Hagfors 108.61 32 PP **PP** **21 48 02.8 +2.2**
comp=Z,3.0nm,0.9s,baz=224,slow=14,SNR=4.4
AKASG Malin Array Be 114.76 44 PKP PKPdf 21 47 44.4 -0.3
comp=Z,0.3nm,0.3s,baz=276,slow=2.6,SNR=5.4
AKASG PP **PP** **21 48 42.2 -2.5**
comp=Z,0.8nm,0.6s,baz=258,slow=6.7,SNR=11
AKASG Malin Array Be 114.76 44c *i*PKIKP **PKiKP** **21 47 46.0 +1.4**
AKBB Malin Array Si 114.76 44⇑*i*PKIKP PKPdf 21 47 44.3 -0.3
FINES FINESS Array B 114.82 32 PKP **PKiKP** **21 47 45.0 +0.6**
comp=Z,0.3nm,0.4s,baz=255,slow=5.1,SNR=10
FINES PP **PP** **21 48 46.9 +2.1**
comp=Z,2.6nm,1.0s,baz=233,slow=6.8,SNR=4.2
FINES PKKPbc **PKKPbc** **21 58 23.2 -0.5**
comp=Z,0.6nm,0.4s,baz=95,slow=4.1,SNR=15
ARCES ARCESS Array B 115.54 23 PKP **PKPdf** **21 47 46.2 +0.5**
comp=Z,0.5nm,0.5s,baz=270,slow=2.4,SNR=5.7
ARCES PKKPbc **PKKPbc** **21 58 20.3 -1.1**
comp=Z,1.3nm,0.7s,baz=72,slow=4.0,SNR=7.6
BRTR Keskin Array B 115.54 56 PKP **PKiKP** **21 47 46.8 +0.1**
comp=Z,0.7nm,0.6s,baz=183,slow=5.8,SNR=1.8
APA Apatity 118.37 25⇓*i*PKIKP **PKPdf** **21 47 48.4 -2.7**
APA *i* 21 48 30.1
APA pmax pmax
comp=Z,3.0nm,1.2s
OBN Obninsk 119.71 40⇑*i*PKIKP **PKiKP** **21 47 54.4 +0.3**
OBN *i* *PP **pPKPdf** **21 48 20.1 -6.9**
OBN *e*PPP PPP 21 51 51.2
OBN pmax pmax
comp=Z,31nm,1.7s
VORR Voronezh 121.11 44 *e*PKIKP **PKPdf** **21 47 56.8 0.0**
VORR pmax pmax
comp=Z,20nm,0.4s
KLMR Klimovskoe 121.29 33 *e*PKIKP **PKPdf** **21 47 56.5 -0.3**
KLMR *e* 21 48 30.0
KLMR *e* 21 49 33.0
KLMR pmax pmax
comp=Z,24nm,1.4s

KLMR	**Klimovskoe**	**121.29**	**33**	*e*PKPdf	**PKPdf**	**21 47 56.6**	**-0.6**
KLMR				AMP		21 47 59.4	
	comp=Z,24nm,1.4s						
KLMR				*e*pPKPdf	**pPKPdf**	**21 48 30.0**	**+0.3**
KLMR				*e*PP	**PP**	**21 49 33.0**	**+3.5**
KIV	**Kislovodsk**	**122.89**	**53**	⇑*i*PKIKP	**PKiKP**	**21 48 00.9**	**0.0**
KIV				*e**PP	**pPKPdf**	**21 48 30.6**	**-3.0**
KIV				*e*		21 49 37.5	
KIV				pmax	pmax		
	comp=Z,10.0nm,1.7s						
KBZ	**Khabaz**	**123.02**	**53**	PKP	**PKiKP**	**21 48 01.3**	**+0.3**
	comp=Z,3.2nm,0.8s,baz=239,slow=4.2,SNR=5.6						
KBZ	**Khabaz**	**123.02**	**53**	⇑*i*PKIKP	**PKiKP**	**21 48 01.7**	**+0.7**
PRGR	**Permogore**	**124.15**	**32**	*e*PKIKP	**PKPdf**	**21 48 02.3**	**0.0**
PRGR				*e*		21 48 35.7	
ASAR	**Alice Springs**	**125.97**	**207**		**PKPdf**	**21 48 06.6**	**-0.6**
ASAR	**Alice Springs**	**125.97**	**207**	PKIKP	**PKPdf**	**21 48 06.6**	**-0.6**
BILL	**Bilibino**	**126.28**	**337***c*	*i*PKIKP	**PKiKP**	**21 48 07.9**	**+1.2**
BILL				pmax	pmax		
	comp=Z,10.0nm,1.7s						
MAK	**Makhachkala**	**126.32**	**54**	*i* P	**Pdif**	**21 44 45.8**	**-1.3**
MAK				*i*		21 48 06.9	
MAK				*i*		21 48 34.8	
MAK				*e*		21 50 03.1	
MAK				*e*PPP	PPP	21 52 48.6	
MAK				*e*PS	**PS**	**22 00 10.6**	**+2.2**
MAK				*e*SS	SS	22 07 04.2	+5.5
MAK				pmax	pmax		
	comp=Z,96nm,1.0s						
KIRV	**Kirov**	**126.53**	**35**	PKP	**PKiKP**	**21 48 08.0**	**+0.6**
	baz=304,slow=3.6						
KIRV	**Kirov**	**126.53**	**35***c*	*i*PKIKP	**PKiKP**	**21 48 07.8**	**+0.4**
WRA	**Warramunga Arr**	**129.09**	**209**	PKhKP	PKPpre	21 47 56.5	
	comp=Z,0.3nm,0.6s,baz=164,slow=1.2,SNR=5.5						
WRA				PKP	**PKiKP**	**21 48 13.8**	**-0.1**
	comp=Z,1.7nm,0.4s,baz=158,slow=1.7,SNR=32						
WRA				pPKP	pPKPdf	21 48 45.5	-0.3
	comp=Z,2.8nm,0.7s,baz=161,slow=1.8,SNR=5.5						
WRA	**Warramunga Arr**	**129.09**	**209**	PKPdf	**PKPdf**	**21 48 13.1**	**-0.1**
WRA				pPKPdf	**pPKPdf**	**21 48 45.3**	**-0.5**
ARU	**Arti**	**131.83**	**36**	PKP	**PKiKP**	**21 48 19.0**	**+0.7**
	comp=Z,4.6nm,0.4s,baz=282,slow=2.3,SNR=5.9						
ARU	**Arti**	**131.83**	**36**	*i*PKIKP	**PKiKP**	**21 48 18.9**	**+0.7**
ARU						21 50 40.8	
ARU				SS	SS	22 08 02.0	-3.5
TIXI	**Tiksi**	**132.93**	**352**	PKP	**PKPdf**	**21 48 17.6**	**-1.2**
	comp=Z,1.4nm,0.4s,baz=90,slow=20,SNR=6.9						
SEY	**Seymchan**	**133.79**	**335**	PKP	**PKiKP**	**21 48 22.3**	**+0.4**
	comp=Z,3.6nm,0.6s,baz=86,slow=3.7,SNR=15						
SEY	**Seymchan**	**133.79**	**335**	⇑*i*PKIKP	**PKiKP**	**21 48 22.6**	**+0.6**
SEY				pmax	pmax		
	comp=Z,20nm,2.5s						
PETK	**Petropavlovsk-**	**135.65**	**321**	PKP	**PKiKP**	**21 48 26.3**	**+0.2**
	comp=Z,1.2nm,0.5s,baz=110,slow=3.5,SNR=4.9						
SKR	**Severo-Kuril's**	**137.37**	**318**	*i*PKHKP	PKPpre	21 48 15.3	
SKR				pmax	pmax		
	comp=Z,47nm,1.1s						
IUG	**Iuzhnay**	**142.92**	**53**	*e*PKIKP	**PKPdf**	**21 48 36.4**	**-1.8**
IUG				*e*		21 51 48.5	
IUG	**Iuzhnay**	**142.92**	**53**	*e*PKP	**PKPdf**	**21 48 36.4**	**-1.8**
	baz=54						
IUG				*e*PP	**PP**	**21 51 48.6**	**-0.4**
	baz=54						
GAR	**Garm**	**143.74**	**59**	PKPdf	PKPbc	21 48 38.1	+0.4
GAR				pPKPdf	pPKPdf	21 49 11.6	-1.2
MMRI	**Maumere**	**144.02**	**200**	PKP	**PKPdf**	**21 48 41.0**	**+0.1**
EDFI	**Ende, Flores**	**144.08**	**199**	PKP	PKPbc	21 48 39.8	+0.5
BTLS	**Baital**	**144.87**	**47**	*e*PKIKP	**PKPdf**	**21 48 42.1**	**+0.8**
BTLS	**Baital**	**144.87**	**47**	*e*PKP	**PKPdf**	**21 48 42.2**	**+0.8**
	baz=47						
PLAI	**Plampang**	**144.95**	**192**	PKP	**PKPdf**	**21 48 42.3**	**-0.2**
KURK	**Kurchatov**	**145.03**	**36**		**PKPdf**	**21 48 42.5**	**+1.1**
KURK	**Kurchatov**	**145.03**	**36***c*	*i*PKIKP	**PKPdf**	**21 48 42.4**	**+1.0**
KURBB	**Kurchatov Arra**	**145.03**	**36**	PKP	**PKPdf**	**21 48 42.5**	**+1.0**
	comp=Z,35nm,0.8s,baz=304,slow=3.5,SNR=331						
KURBB				PP	**PP**	**21 52 04.5**	**+3.6**
	comp=Z,3.3nm,1.0s,baz=299,slow=6.0,SNR=5.2						
TWSI	**Taliwang, Sumb**	**145.20**	**191**	PKP	**PKPdf**	**21 48 43.3**	**+0.4**
EKS2	**Erkin-Say**	**145.47**	**51**	P	**PKPab**	**21 48 44.5**	**+1.2**
	SNR=40						
AML	**Almayashu**	**145.56**	**52**	P	**PKPab**	**21 48 45.1**	**+1.1**
	SNR=50						
USP	**Ospenovka**	**145.78**	**50**	P	**PKPab**	**21 48 44.8**	**+0.4**
	SNR=24						
SGDS	**Sogindy**	**145.81**	**50**	*e*PKP2	**PKPab**	**21 48 44.4**	**-0.1**
SGDS	**Sogindy**	**145.81**	**50**	*e*PKP	**PKPab**	**21 48 44.5**	**-0.1**
	baz=50						
JAGI	**Jajag, Banyuwa**	**145.83**	**186**	PKP	**PKiKP**	**21 48 46.8**	**-1.3**
ZALV	**Zalesovo Beam**	**145.91**	**27**	PKPbc	**PKPab**	**21 48 44.2**	**-0.2**
	comp=Z,28nm,0.4s,baz=301,slow=4.0,SNR=170						
AAK	**Ala-Archa**	**145.98**	**51**	P	**PKPab**	**21 48 46.2**	**+0.9**
	SNR=31						
AAK	**Ala-Archa**	**145.98**	**51***c*	*i*PKP2	**PKPab**	**21 48 45.4**	**+0.1**
CHMS	**Chumysh**	**146.04**	**50**	P	**PKPdf**	**21 48 43.8**	**+0.3**
	SNR=15						
SEM	**Semipalatinsk**	**146.06**	**35**	*e*PKP2	**PKPbc**	**21 48 44.2**	**-0.4**
SEM	**Semipalatinsk**	**146.06**	**35**	*e*PKP	**PKPbc**	**21 48 44.3**	**-0.4**
	baz=36						
GMJI	**Gumukmas**	**146.08**	**185**	PKP	**PKPab**	**21 48 46.6**	**+0.5**
SRBI	**Singaraja**	**146.09**	**188**	PKP	**PKPbc**	**21 48 45.1**	**-0.3**
UCH	**Uchtor**	**146.12**	**52**	P	**PKPab**	**21 48 46.5**	**+0.3**
	SNR=40						
AAI	**Ambon**	**146.16**	**213**	PKP	**PKPbc**	**21 48 45.7**	**0.0**
PCJI	**Pacitan**	**146.27**	**181**	PKP	**PKPab**	**21 48 47.4**	**+0.6**
KBK	**Karagaybulak**	**146.29**	**51**	P	**PKPab**	**21 48 46.6**	**+0.1**
	SNR=11						
PWJI	**Pagerwojo**	**146.42**	**182**	PKP	**PKPbc**	**21 48 45.8**	**-0.6**
PWJI				PKP	**PKPab**	**21 48 47.6**	**+0.2**
BLJI	**Banyuglugur**	**146.59**	**185**	PKP	**PKPab**	**21 48 48.0**	**-0.1**
WOJI	**Wonogiri, Jawa**	**146.62**	**180**	PKP	**PKPbc**	**21 48 46.4**	**-0.6**
WOJI				PKP	**PKPab**	**21 48 48.2**	**0.0**
TKM2	**Tokmak 2**	**146.66**	**50**	P	**PKPbc**	**21 48 46.4**	**-0.2**
	SNR=25						
KUU	**Kurty**	**146.82**	**48**	*e*PKP2	**PKPbc**	**21 48 46.0**	**-0.7**
KUU	**Kurty**	**146.82**	**48**	*e*PKP	**PKPbc**	**21 48 46.0**	**-0.7**
	baz=48						
BSSI	**Bau Bau, Buton**	**146.90**	**198**	PKP	**PKPbc**	**21 48 48.0**	**+0.2**
YSS	**Yuzh-Sakhalins**	**146.93**	**318**	*i*PKP2	**PKPab**	**21 48 48.0**	**-0.6**
CNJI	**Cibinong**	**146.97**	**174**	PKP	**PKPab**	**21 48 48.8**	**-0.7**
NLAI	**Namlea**	**147.08**	**211**	PKP	**PKPbc**	**21 48 48.8**	**+0.5**
KMMI	**Kalianget**	**147.25**	**186**	PKP	**PKPab**	**21 48 49.8**	**-0.8**
ULHL	**Ulahol**	**147.33**	**51**	P	**PKPbc**	**21 48 48.2**	**-0.3**
	SNR=32						
AAA	**Alma-Ata**	**147.46**	**49**	*e*PKIKP	**PKPbc**	**21 48 47.3**	**-1.3**
AAA	**Alma-Ata**	**147.46**	**49**	*e*PKP	**PKPbc**	**21 48 47.4**	**-1.3**
	baz=49						
LEM	**Lembang**	**147.50**	**174**	PKP	**PKiKP**	**21 48 51.5**	**-0.3**
TNSS	**Tian-Shan**	**147.54**	**49**	*e*PKIKP	**PKPdf**	**21 48 47.1**	**+0.6**
TNSS	**Tian-Shan**	**147.54**	**49**	*e*PKP	**PKPdf**	**21 48 47.2**	**+0.6**
	baz=50						
DBJI	**Dramaga**	**147.68**	**173**	PKP	**PKiKP**	**21 48 51.2**	**-0.8**
TDK	**Taldyqorghan**	**147.73**	**45**	*e*PKIKP	**PKPbc**	**21 48 48.0**	**-1.2**
TDK	**Taldyqorghan**	**147.73**	**45**	*e*PKP	**PKPbc**	**21 48 48.1**	**-1.2**
	baz=45						
BKSI	**Bulukumba**	**147.79**	**198**	PKP	**PKiKP**	**21 48 51.2**	**-0.9**
BOD	**Bodaibo**	**147.85**	**357**	*e*PKIKP	**PKPdf**	**21 48 46.8**	**+0.8**
BOD				pmax	pmax		
	comp=Z,54nm,1.2s						
KSH	**Kashi**	**147.93**	**56**	PKPbc	**PKPdf**	**21 48 48.3**	**+1.4**
KSH				PP	**PP**	**21 52 17.8**	**-1.0**
KDJ	**Kajisay**	**148.02**	**51**		pPKPab	21 49 24.4	-1.0
KAPI	**Kappang**	**148.18**	**197**	PKPab	**PKiKP**	**21 48 53.0**	**0.0**
KAPI					**pPKPbc**	**21 49 23.9**	**0.0**
KASI	**Kota Agung**	**148.35**	**168**	PKP	**PKiKP**	**21 48 52.7**	**-0.6**
ZHN	**Zhinishke**	**148.50**	**48**	*e*PKIKP	**PKPdf**	**21 48 48.9**	**+1.2**
ZHN	**Zhinishke**	**148.50**	**48**	*e*PKP	**PKPdf**	**21 48 49.0**	**+1.2**
	baz=48						
SATY	**Saty**	**148.53**	**49**	*e*PKIKP	**PKPbc**	**21 48 50.5**	**-1.0**
SATY	**Saty**	**148.53**	**49**	*e*PKP	**PKPbc**	**21 48 50.5**	**-1.0**
	baz=49						
KPKS	**Kokpek**	**148.55**	**48**	*e*PKIKP	**PKPdf**	**21 48 49.0**	**+1.3**
KPKS	**Kokpek**	**148.55**	**48**	*e*PKP	**PKPdf**	**21 48 49.1**	**+1.3**
	baz=48						
TARG	**Taragay, Kyrgy**	**148.60**	**51**		**PKPdf**	**21 48 49.9**	**+1.6**
TARG	**Taragay, Kyrgy**	**148.60**	**51**	PKIKP	**PKPdf**	**21 48 49.9**	**+1.6**
SANI	**Sanana**	**148.64**	**211**	PKP	**PKiKP**	**21 48 53.5**	**-0.4**
BNSI	**Bone**	**148.67**	**198**	PKP	**PKiKP**	**21 48 53.6**	**-0.4**
PRZ	**Przheval'sk**	**148.74**	**50**		**PKPbc**	**21 48 51.2**	**-1.0**
PRZ	**Przheval'sk**	**148.74**	**50**	PKIKP	**PKPbc**	**21 48 51.2**	**-1.0**
LWLI	**Liwa**	**148.76**	**167**	PKP	**PKiKP**	**21 48 53.9**	**-0.4**
MAKZ	**Makanchi**	**149.03**	**40**		**PKiKP**	**21 48 53.3**	**-0.5**
MAKZ	**Makanchi**	**149.03**	**40**	PKP2	**PKiKP**	**21 48 53.3**	**-0.5**
HYBB	**Hyderabad (bro**	**149.08**	**99**	*e*PKPdf	**PKPdf**	**21 48 42.8**	**-6.4**
HYBB				*e*PKiKP	**PKPbc**	**21 48 50.4**	**-3.1**
HYBB				*e*SKSdf	**SKSdf**	**21 55 39.8**	**-7.2**
SPSI	**Sidrap Palu**	**149.18**	**198**	PKP	**PKPbc**	**21 48 54.1**	**+0.3**
SHLS	**Shalkode**	**149.20**	**48**	*e*PKHKP	PKPpre	21 48 50.8	
SHLS	**Shalkode**	**149.20**	**48**	*e*PKP	**PKPdf**	**21 48 50.8**	**+2.0**
	baz=48						
MK31	**Makanchi Array**	**149.22**	**40**		**PKiKP**	**21 48 53.6**	**-0.6**
MK31	**Makanchi Array**	**149.22**	**40**	PKP2	**PKiKP**	**21 48 53.6**	**-0.6**
MKAR	**Makanchi Array**	**149.22**	**40**	PKPbc	**PKiKP**	**21 48 53.9**	**-0.3**
	comp=Z,32nm,0.5s,baz=331,slow=1.6,SNR=367						
MKAR				pPKPbc	**pPKPbc**	**21 49 24.3**	**-1.5**
	comp=Z,35nm,0.7s,baz=307,slow=2.9,SNR=11						
MKAR	**Makanchi Array**	**149.22**	**40***c*	*i*PKP2	**PKPbc**	**21 48 52.5**	**-0.5**
MKAR				pmax	pmax		
	comp=Z,32nm,0.5s						
ZEA	**Zeya**	**149.42**	**341**	*e*PKP2	**PKiKP**	**21 48 54.2**	**-0.1**
ZEA				pmax	pmax		
	comp=Z,20nm,1.7s						
ZSN	**Zaisan**	**150.27**	**37**	*e*PKIKP	**PKPdf**	**21 48 51.9**	**+1.7**
ZSN	**Zaisan**	**150.27**	**37**	*e*PKP	**PKPdf**	**21 48 52.0**	**+1.7**
	baz=37						
KLR	**Kul'dur**	**151.38**	**330**	PKPbc	**PKiKP**	**21 48 58.8**	**+0.3**
	comp=Z,4.7nm,0.4s,baz=49,slow=3.0,SNR=19						
KLR				pPKPbc	**pPKPbc**	**21 49 30.0**	**-0.5**
	comp=Z,14nm,0.9s,baz=34,slow=3.7,SNR=9.2						
MOY	**Mondy**	**153.08**	**13**	*e*PKIKP	**PKPdf**	**21 48 56.7**	**+2.2**
MOY				pmax	pmax		
	comp=Z,45nm,1.4s						
IRK	**Irkutsk**	**153.09**	**9**	*e*PKIKP	**PKPdf**	**21 48 55.6**	**+1.3**
IRK				pmax	pmax		
	comp=Z,73nm,1.8s						
WMQ	**Urumqi**	**154.04**	**40**	*e*PKPbc	**PKPdf**	**21 48 55.0**	**-1.1**
MJAR	**Matsushiro Arr**	**154.16**	**301**	PKPbc	**PKiKP**	**21 49 05.4**	**+0.7**
	comp=Z,1.4nm,0.5s,baz=71,slow=1.6,SNR=6.2						
MJAR	**Matsushiro Arr**	**154.16**	**301**	PKPab	**PKPab**	**21 49 23.0**	**+1.5**
USRK	**Ussuriysk Ar.**	**154.73**	**322**	PKPab	**PKPab**	**21 49 22.4**	**+1.5**
	comp=Z,4.4nm,0.9s,baz=36,slow=5.1,SNR=4.4						
USRK	**Ussuriysk Ar.**	**154.73**	**322**	PKPdf	**PKPdf**	**21 48 57.1**	**+0.3**
USRK				PKPbc	**PKiKP**	**21 49 06.2**	**+0.6**
ZAK	**Zakamensk**	**154.75**	**11**	*e*PKIKP	**PKPdf**	**21 48 58.3**	**+1.4**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.5s						
BNX	**BinXian**	**155.94**	**330**	⇓P	**PKPab**	**21 49 27.4**	**+1.4**
BNX				pmax	pmax		
	comp=Z,31nm,1.3s						
BNX				pmax	pmax		
	comp=Z,160nm,3.7s						
SONM	**Songino Array**	**157.69**	**8**	PKP	**PKPdf**	**21 49 02.3**	**+1.4**
	comp=Z,4.9nm,1.1s,baz=252,slow=1.1,SNR=25						
SONM				PKPab	**pPKPdf**	**21 49 34.6**	**+0.7**
	comp=Z,7.1nm,0.9s,baz=328,slow=4.8,SNR=16						
SONM				PP	**PP**	**21 53 15.9**	**+3.3**
	comp=Z,2.5nm,1.1s,baz=316,slow=4.0,SNR=5.2						
SONM	**Songino Array**	**157.69**	**8**	PKPdf	**PKPdf**	**21 49 02.6**	**+1.8**
SONM				pPKPdf	**pPKPdf**	**21 49 35.1**	**+1.1**
SONM				pPKPab	**pPKPab**	**21 50 06.6**	**+1.2**
SONM					**PP**	**21 53 13.4**	**+0.8**
SONM	**Songino Array**	**157.69**	**8**	PKIKP	**PKPdf**	**21 49 02.6**	**+1.8**
SONM						21 49 35.1	
SONM						21 53 13.4	
CN2	**Changchun**	**158.33**	**330**	*e*P	PKPdf	21 49 10.4	+8.8
KSRS	**Korea Array**	**161.25**	**313**	PKPab	**PKPab**	**21 49 51.8**	**+2.4**
	comp=Z,3.9nm,0.7s,baz=52,slow=4.7,SNR=10						
XLT	**XiLinHaoTe**	**161.35**	**348**	*e*PKPbc	**PKPdf**	**21 49 11.8**	**+6.7**
XLT				pPKP	pPKPdf	21 49 38.9	+0.8
XLT				sPKP		21 49 52.1	
XLT				PKPab	**sPKPdf**	**21 49 58.9**	**+8.5**
XLT				PP	PP	21 53 23.8	-8.6
GOMU	**GeErMu**	**162.90**	**49**	PKP	**PKPdf**	**21 49 09.3**	**+2.0**
GTA	**Gaotai**	**163.61**	**31**	⇑PKP	**PKPdf**	**21 49 09.1**	**+1.6**
GTA				pPKP	pPKPdf	21 49 43.8	+3.2
GTA				PKPab	**PKPab**	**21 50 01.0**	**+1.2**
GTA				AMB	AMB		
	comp=Z,140nm,8.0s						
HHC	**Hu-ho-hao-te**	**164.91**	**357**	*e*PKP	**PKPdf**	**21 49 10.1**	**+1.5**
CMAR	**Chiang Mai Arr**	**166.95**	**121**	PKP	**PKPdf**	**21 49 11.9**	**+1.2**
	comp=Z,0.9nm,0.8s,baz=247,slow=2.9,SNR=4.2						
CMAR				PKPab	**PKPab**	**21 50 15.3**	**+0.3**
	comp=Z,2.4nm,0.8s,baz=232,slow=5.1,SNR=9.2						
HNS	**HongShan**	**167.88**	**344**	⇑PKP	**PKPdf**	**21 49 12.3**	**+1.5**
HNS				pPKP	**pPKPdf**	**21 49 45.8**	**+2.0**
HNS				PKPab	**PKPab**	**21 50 19.8**	**+1.5**
HNS				PP	**PP**	**21 54 07.9**	**+1.6**
LZH	**Lanzhou**	**168.15**	**28**	*e*PKP	PKPdf	21 49 03.5	-7.8
LZH				pPKP	pPKPdf	21 49 47.4	+3.0
LZH				sPKP		21 50 01.4	
LZH				PKP	**PKPab**	**21 50 22.0**	**+2.1**
NJ2	**Nanjing**	**170.46**	**313**	*e*PKP	**PKPdf**	**21 49 07.4**	**-5.2**
PZH	**PanZhiHua**	**171.95**	**83**	PKP	**PKPdf**	**21 49 07.9**	**-5.8**
CD2	**Chengdu**	**172.03**	**48**	PKP	**PKPdf**	**21 49 12.0**	**-1.5**
GYA	**Guiyang**	**176.34**	**78**	⇑PKP	**PKPdf**	**21 49 13.5**	**-1.7**
GYA				PP	**PP**	**21 54 48.0**	**-2.2**
GYA				AMB	AMB		
	comp=Z,93nm,11.0s						
GYA				LR	LR		
	comp=Z,100nm,4.1s						
GYA				LR	LR		
	comp=Z,150nm,3.8s						
GYA				LR	LR		
	comp=Z,70nm,8.1s						

TAP ***24*** *21:43:14.0,22.°14N×121.°33E,h34km,ML3.3,C*
JMA ***24*** *21:43:14.3±0.6,22.°N±2.°×12.°1E±.°,h36km,MV3.5/12,*
TAIWAN REGION

ISC 24 21:43:14.2±0.9,22.°17N±0.°03×121.°33E±0.°02,h30km±8km,
n70,σ0°86/136,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.24**	**122**	*i* P		**Pb**		**21 43 21.2**	**+0.3**
	baz=110								
LAY				*e*S		**Sb**		**21 43 26.4**	**+0.9**
	baz=110								
LYUB	**Lan-yu**	**0.28**	**125**	*i* P		**Pb**		**21 43 20.8**	**-0.6**
	baz=115								
LYUB				S		**Sb**		**21 43 25.7**	**-0.6**
	baz=115								
TAW	**Tawu**	**0.45**	**295**	P		**Pb**		**21 43 23.5**	**-0.3**
	baz=305								
TAW				*e*S		**Sb**		**21 43 29.1**	**-1.3**
	baz=305								
TAWH	**Dawu Township**	**0.45**	**293**	P		**Pb**		**21 43 23.6**	**-0.2**
	baz=302								
TAWH				*e*S		**Sb**		**21 43 29.4**	**-1.1**
	baz=302								
TSEB	**Hengchuen, Pin**	**0.48**	**237**	P		**Pb**		**21 43 24.3**	**-0.1**
	baz=252								
TSEB				*e*S		**Sb**		**21 43 31.6**	**+0.4**
	baz=252								
SMST	**Manzhou Townsh**	**0.48**	**253**	*e*P		**Pb**		**21 43 24.0**	**-0.4**
	baz=261								
SMST				*e*S		**Sb**		**21 43 30.9**	**-0.4**
	baz=261								
SLIU	**Shizi**	**0.50**	**276**	P		**Pb**		**21 43 24.3**	**-0.3**
	baz=279								
SLIU				*e*S		**Sb**		**21 43 31.3**	**-0.5**
	baz=279								
EAST	**Anshuo**	**0.50**	**296**	P		**Pb**		**21 43 24.4**	**-0.3**
	baz=305								
EAST				*e*S		**Sb**		**21 43 31.0**	**-0.8**
	baz=305								
LDUT	**Ludao**	**0.52**	**14**	*i* P		**Pb**		**21 43 24.8**	**-0.2**
	baz=21								
LDUT				*e*S		**Sb**		**21 43 32.7**	**+0.3**
	baz=21								
TWKBT	**Hengchun**	**0.53**	**245**	P		**Pb**		**21 43 24.5**	**-0.6**
	baz=253								
TWKBT				*e*S		**Sb**		**21 43 31.7**	**-1.0**
	baz=253								
TWK1	**Hengchun**	**0.54**	**246**	P		**Pb**		**21 43 24.6**	**-0.6**
	baz=253								
TWK1				*e*S		**Sb**		**21 43 31.9**	**-1.0**
	baz=253								
ECL	**Taimali**	**0.56**	**321**	P		**Pb**		**21 43 24.9**	**-0.7**
	baz=323								
ECL				*e*S		**Sb**		**21 43 32.8**	**-0.5**
	baz=323								
HEN	**Hengchun**	**0.57**	**254**	P		**Pb**		**21 43 25.4**	**-0.4**
	baz=256								
HEN				*e*S		**Sb**		**21 43 33.5**	**-0.4**
	baz=256								
TTN	**Taitung**	**0.61**	**344**	P		**Pn**		**21 43 26.8**	**0.0**
	baz=332								
TTN				*e*S		**Sn**		**21 43 35.3**	**-0.3**
	baz=332								
TWGBT	**Beinan**	**0.69**	**340**	P		**Pb**		**21 43 27.0**	**-0.8**
	baz=332								
TWGBT				*e*S		**Sb**		**21 43 36.2**	**-0.9**
	baz=332								
SCZT	**Fangliau**	**0.69**	**287**	P		**Pb**		**21 43 27.4**	**-0.4**
	baz=290								
SCZT				*e*S		**Sb**		**21 43 36.5**	**-0.6**
	baz=290								
TWG	**Pinlang**	**0.70**	**340**	P		**Pb**		**21 43 27.1**	**-0.8**
	baz=332								
TWG				*e*S		**Sb**		**21 43 36.7**	**-0.5**
	baz=332								
LONT	**Longtian**	**0.76**	**346**	P		**Pb**		**21 43 28.1**	**-0.8**
	baz=335								
LONT				*e*S		**Sb**		**21 43 38.7**	**-0.4**
	baz=335								
SSPT	**Xinbi**	**0.78**	**294**	*i* P		**Pb**		**21 43 28.9**	**-0.3**
	baz=296								
SSPT				*e*S		**Sb**		**21 43 39.3**	**-0.2**
	baz=296								
MASBT	**Mashibuluo**	**0.79**	**305**	*e*P		**Pb**		**21 43 29.1**	**-0.3**
	baz=310								
MASBT				*e*S		**Sb**		**21 43 38.7**	**-1.1**
	baz=310								
EDH	**Donghe**	**0.80**	**358**	P		**Pb**		**21 43 29.1**	**-0.6**
	baz=347								
EDH				*e*S		**Sn**		**21 43 40.3**	**-0.1**
	baz=347								
TSMG	**Majia**	**0.83**	**310**	P		**Pb**		**21 43 29.9**	**-0.3**
	baz=314								
TSMG				*e*S		**Sb**		**21 43 40.2**	**-0.9**
	baz=314								
SSD	**Sandimen**	**0.87**	**312**	P		**Pb**		**21 43 30.2**	**-0.6**
	baz=316								
SSD				*e*S		**Sb**		**21 43 41.7**	**-0.5**
	baz=316								
FULB	**Fuli**	**1.03**	**358**	*e*P		**Pn**		**21 43 32.4**	**-0.2**
	baz=347								
FULB				*e*S		**Sn**		**21 43 47.0**	**+0.9**
	baz=347								
SCST	**Cishan**	**1.06**	**313**	*e*P		**Pb**		**21 43 34.1**	**+0.2**
	baz=314								
SCST				*e*S		**Sb**		**21 43 47.7**	**+0.2**
	baz=314								
ELDTW	**Lidau**	**1.06**	**344**	*e*P		**Pn**		**21 43 32.1**	**-0.9**
	baz=345								
ELDTW				*e*S		**Sn**		**21 43 45.4**	**-1.5**
	baz=345								
TWM1	**Shoushan**	**1.07**	**308**	*e*P		**Pb**		**21 43 34.2**	**0.0**
	baz=310								
TWM1				*e*S		**Sb**		**21 43 48.5**	**+0.7**
	baz=310								
STYH	**Taoyuan**	**1.13**	**333**	*e*P		**Pn**		**21 43 34.5**	**+0.6**
	baz=343								
STYH				*e*S		**Sb**		**21 43 49.3**	**-0.1**
	baz=343								
STYT	**Tauyuan**	**1.13**	**332**	P		**Pn**		**21 43 34.3**	**+0.3**
	baz=342								
STYT				*e*S		**Sb**		**21 43 49.8**	**+0.3**
	baz=342								
SGST	**Jiashian**	**1.15**	**323**	*e*P		**Pb**		**21 43 35.2**	**-0.3**
	baz=324								
SGST				*e*S		**Sb**		**21 43 49.7**	**-0.3**
	baz=324								
EYUL	**Yuli**	**1.18**	**359**	P		**Pb**		**21 43 35.9**	**-0.1**
	baz=349								
EYUL				S		**Sb**		**21 43 51.5**	**+0.7**
	baz=349								
TWF1	**Yuli**	**1.18**	**358**	P		**Pb**		**21 43 36.1**	**0.0**
	baz=349								
YULB	**Yu-li**	**1.22**	**358**	*e*P		**Pn**		**21 43 34.0**	**-1.2**
	baz=350								
CHN1	**Nanshi**	**1.26**	**324**	P		**Pb**		**21 43 37.3**	**-0.1**
	baz=325								
CHN1				*e*S		**Sb**		**21 43 53.8**	**+0.6**

NNSB	**Datong**	**2.25**	**1**	*e*P		**Pn**	**21 43 49.9**	**+0.4**
	baz=9.0								
NNSB				*e*S		**Sn**	**21 44 16.2**	**-0.2**
	baz=9.0								
LATG	**Datong**	**2.37**	**4**	*e*P		**Pn**	**21 43 51.8**	**+0.8**
	baz=4.0								
LATG				*e*S		**Sn**	**21 44 20.8**	**+1.6**
	baz=4.0								
YHNB	**Yeheng**	**2.49**	**1**	*e*P		**Pn**	**21 43 53.7**	**+0.9**
	baz=11								
YHNB				*e*S		**Sn**	**21 44 22.8**	**+0.6**
	baz=11								
FUSB	**Fushanzhiwuyua**	**2.59**	**5**	*e*P		**Pn**	**21 43 55.8**	**+1.7**
	baz=5.0								
FUSB				*e*S		**Sn**	**21 44 25.9**	**+1.2**
	baz=5.0								
YOJ	**Yonaguni jima**	**2.76**	**34**	*e*P		**Pn**	**21 43 57.6**	**+1.3**
HATJ	**Hateruma jima**	**2.95**	**50**	P		**Pn**	**21 43 59.6**	**+0.6**
HATJ				*e*S		**Sn**	**21 44 32.6**	**-0.9**
IRIF	**Iriomote-Funau**	**3.08**	**45**	P		**Pn**	**21 44 01.7**	**+0.8**
IRIF				S		**Sn**	**21 44 36.8**	**+0.1**
JKRS	**Kuro-shima**	**3.21**	**50**	P		**Pn**	**21 44 03.7**	**+1.1**
JKRS				*e*S		**Sn**	**21 44 39.0**	**-0.8**
JIJ	**Ishigaki jima**	**3.38**	**49**	P		**Pn**	**21 44 05.8**	**+0.8**
JIJ				S		**Sn**	**21 44 42.4**	**-1.7**
JISG	**Ishigakijimahi**	**3.65**	**48**	P		**Pn**	**21 44 08.9**	**+0.4**
JISG				*e*S		**Sn**	**21 44 48.7**	**-1.8**
JTJ	**Tarama**	**3.96**	**51**	P		**Pn**	**21 44 13.6**	**+0.8**
JTJ				S		**Sn**	**21 44 57.3**	**-0.8**
JIRB	**Irabujima**	**4.41**	**52**	*e*S		**Sn**	**21 45 09.1**	**-0.3**
JMJ2	**Miyako jima3**	**4.47**	**54**	*e*P		**Pn**	**21 44 20.9**	**+1.0**
JMJ2				*e*S		**Sn**	**21 45 10.5**	**-0.4**

IDC ***24*** *21:53:17.1±1.6, 1°.35N×126°.73E, h0km, mb3.9/4, mbtmp4.0/4, MS3.2/1, Error ellipse: s-maj=184.2km s-min=20.5km az=64.0*

NEIC ***24*** *21:53:33.0±2.8, 1°.56N±0°.10×127°.2E±0°.1, h145km±6km, mb4.0/17, Error ellipse: s-maj=17.0km s-min=11.3km az=47.0*

ISC 24 21:53:32.7±0.7, 1°.46N±0°.09×127°.2E±0°.1, h150km, n31, σ1§04/32, mb3.9/12, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.71**	**163**			**Pn**	**21 53 54.9**	**-0.5**
TNTI					Sn	**Sn**	**21 54 13.5**	**+0.9**
LUWI	**Luwuk**	**5.04**	**241**		Pn	**Pn**	**21 54 47.6**	**+0.9**
TOLI2	**Tolitoli**	**6.39**	**267**		Pn	**Pn**	**21 55 04.6**	**0.0**
FAKI	**Fak Fak**	**6.69**	**131**		Pn	**Pn**	**21 55 08.3**	**-0.4**
MYLDM	**Lahad Datu**	**9.41**	**293**		Pn	**Pn**	**21 55 43.6**	**-1.3**
MTN	**Manton Dam**	**14.74**	**165**		Pn	**Pn**	**21 56 53.1**	**-0.9**
KNRA	**Kununurra**	**17.10**	**175**		P	**Pn**	**21 57 23.1**	**+0.2**
KNRA					IAmb	IAmb	21 57 41.7	
	comp=Z,9.0nm,1.1s							
WB0	**Warramunga Arr**	**22.25**	**162**		P	**P**	**21 58 17.4**	**-0.2**
WB0					IAmb	IAmb	21 58 35.5	
	comp=Z,3.6nm,0.9s							
WRA	**Warramunga Arr**	**22.40**	**162**		P	**P**	**21 58 18.4**	**-0.6**
	comp=Z,1.4nm,0.3s,baz=339,slow=11,SNR=26							
WRA					LR	LR	22 07 55.5	
	comp=Z,55nm,18.7s,baz=182,slow=39							
	comp=Z,1.4nm,0.3s							
WRA	**Warramunga Arr**	**22.40**	**162**		P	**P**	**21 58 18.1**	**-1.0**
WB2	**Warramunga Arr**	**22.40**	**162**		P	**P**	**21 58 18.8**	**-0.3**
WB2					IAmb	IAmb	21 58 27.0	
	comp=Z,3.4nm,0.8s							
WR0	**Warramunga Arr**	**22.48**	**162**		P	**P**	**21 58 19.6**	**-0.2**
YULB	**Yu-li**	**22.54**	**346**			**P**	**21 58 19.7**	**-0.6**
YULB					IAmb	IAmb	21 58 29.9	
	comp=Z,6.5nm,1.0s							
AS31	**Alice Springs**	**25.82**	**166**		P	**P**	**21 58 50.3**	**+0.1**
ASAR	**Alice Springs**	**25.82**	**166**		P	**P**	**21 58 51.8**	**+1.6**
FORT	**Forrest**	**32.07**	**179**		P	**P**	**21 59 43.8**	**-1.6**
STKA	**Stephens Creek**	**35.87**	**159**		P	**P**	**22 00 18.7**	**+0.5**
	comp=Z,1.1nm,0.6s,baz=342,slow=11,SNR=5.9							
	comp=Z,1.1nm,0.6s							
STKA	**Stephens Creek**	**35.87**	**159**		P	**P**	**22 00 19.2**	**+0.9**
ARMA	**Armidale**	**39.35**	**146**		P	**P**	**22 00 49.6**	**+1.8**
ARMA					IAmb	IAmb	22 01 02.5	
	comp=Z,9.6nm,1.1s							
LBZ	**Lake Benmore**	**59.57**	**145**		P	**P**	**22 03 21.3**	**+0.6**
MK31	**Makanchi Array**	**59.66**	**326**		P	**P**	**22 03 23.0**	**+1.7**
MK31					IAmb	IAmb	22 03 23.5	
	comp=Z,1.0nm,0.7s							
MKAR	**Makanchi Array**	**59.66**	**326**		P	**P**	**22 03 22.8**	**+1.5**
	comp=Z,0.9nm,0.5s,baz=116,slow=8.3,SNR=14							
	comp=Z,0.9nm,0.5s							
MKAR	**Makanchi Array**	**59.66**	**326**		P	**P**	**22 03 22.7**	**+1.4**
MAKZ	**Makanchi**	**59.85**	**326**		P	**P**	**22 03 23.9**	**+1.3**
MAKZ					IAmb	IAmb	22 03 38.8	
	comp=Z,1.2nm,0.9s							
KDJ	**Kajisay**	**60.33**	**319**		P	**P**	**22 03 26.7**	**+0.6**
KDJ					IAmb	IAmb	22 03 34.7	
	comp=Z,2.7nm,0.8s							
BKZ	**Black Stump Fm**	**60.62**	**137**		P	**P**	**22 03 28.9**	**+0.9**
KNTN	**Kanton**	**61.24**	**94**		P	**P**	**22 03 32.9**	**+0.3**
KURBB	**Kurchatov Arra**	**63.88**	**328**		P	**P**	**22 03 50.3**	**+1.0**
	comp=Z,1.0nm,0.6s,baz=129,slow=6.0,SNR=16							
	comp=Z,1.0nm,0.6s							
KURK	**Kurchatov**	**63.88**	**328**		P	**P**	**22 03 50.7**	**+1.3**
KURK					IAmb	IAmb	22 03 51.2	
	comp=Z,1.6nm,0.7s							
NIUE	**Niue**	**65.02**	**112**		P	**P**	**22 03 56.0**	**-1.3**
HRA	**Herat**	**68.61**	**306**		P	**P**	**22 04 20.2**	**0.0**

MOS ***24*** *22:03:49.3±1.1, 42°.05N×142°.15E, h74km, mb4.3/8, Error ellipse: s-maj=8.7km s-min=6.2km az=72.1*

NIED ***24*** *22:03:50.5, 42°.04N×142°.14E, h89km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr3.58; Mθθ3.18; Mϕϕ-6.76; Mrθ1.13; Mθϕ-6.67; Mϕr-3.59; Fault plane solution: M₀9.40000×10¹⁴ NP1:φs69.00000°, δ59.00000°, λ164.00000°. NP2:φs167.00000°, δ76.00000°, λ32.00000°.*

IDC ***24*** *22:03:50.6±2.7, 42°.19N×142°.16E, h70km±27km, mb3.7/14, mbtmp4.0/17, MS4.0/2 Error ellipse: s-maj=30.4km s-min=16.3km az=173.0*

JMA ***24*** *22:03:50.5±0.2, 42°.0N±0°.7×142°.1E±0°.6, h89km±1km, MV3.8/39, S OFF URAKAWA*

JMA Felt I J1 at S OFF URAKAWA .

SKHL ***24*** *22:03:51.0±0.6, 42°.00N×142°.30E, h92km±4km, mb5.2/4, mshа6.1/4*

NEIC ***24*** *22:03:51.6±1.2, 42°.05N±0°.04×142°.11E±0°.04, h79km±7km, mb4.3/56, Error ellipse: s-maj=6.9km s-min=2.1km az=149.0*

ISC 24 22:03:51.7±0.6, 42°.04N±0°.04×142°.21E±0°.03, h85km±5km, n174, σ1§37/198, mb4.2/54, 4C-18D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JSHD	**Hidakashinhida**	**0.42**	**27**		P	**Pn**	**22 04 04.7**	**-0.5**
JSHD					*e*S	**Sn**	**22 04 15.6**	**+0.3**
JNBK	**Urakawa-nobuka**	**0.47**	**59**	⇓	P	**Pn**	**22 04 04.9**	**-0.8**
JNBK				⇓	*e*S	**Sn**	**22 04 15.8**	**-0.2**
JIAM	**Iburiatsuma**	**0.62**	**340**	⇓	*e*P	**Pn**	**22 04 06.5**	**-0.5**
JIAM				⇓	*e*S	**Sn**	**22 04 18.3**	**0.0**
ERM	**Erimo**	**0.70**	**91**			**Pn**	**22 04 07.9**	**+0.2**
ERM					Sn	**Sn**	**22 04 20.4**	**+0.7**
ERM	**Erimo**	**0.70**	**91**		PN	**Pn**	**22 04 07.9**	**+0.2**
ERM					SN	**Sn**	**22 04 20.4**	**+0.7**
JEM	**Erimo**	**0.70**	**91**	⇓	P	**Pn**	**22 04 07.8**	**+0.1**
JEM				⇓	*e*S	**Sn**	**22 04 20.3**	**+0.6**
JKB	**Kayabe**	**0.89**	**261**		P	**Pn**	**22 04 08.4**	**-1.4**
JKB					*e*S	**Sn**	**22 04 21.1**	**-2.2**
JNB	**Noboribetsu**	**0.97**	**297**	⇓	*e*P	**Pn**	**22 04 08.8**	**-1.9**
JNB				⇓	*e*S	**Sn**	**22 04 22.3**	**-2.6**
JEW	**Eniwo**	**0.98**	**325**			**Pn**	**22 04 09.8**	**-1.0**
JEW					Sn	**Sn**	**22 04 22.9**	**-2.2**
JEW	**Eniwo**	**0.98**	**325**	⇓	*e*P	**Pn**	**22 04 09.7**	**-1.0**
JEW				⇓	*e*S	**Sn**	**22 04 23.6**	**-1.5**
JCH	**Churui**	**1.03**	**55**	⇓	P	**Pn**	**22 04 11.3**	**0.0**
JCH				⇓	*e*S	**Sn**	**22 04 25.9**	**-0.2**
JOT	**Ohata**	**1.09**	**234**		*e*P	**Pn**	**22 04 10.9**	**-1.1**
JOT					*e*S	**Sn**	**22 04 25.7**	**-1.6**
JFR	**Furan**	**1.16**	**14**		*e*P	**Pn**	**22 04 12.1**	**-0.8**
JFR					*e*S	**Sn**	**22 04 28.0**	**-0.9**
JISS	**Ishikarishitsu**	**1.37**	**335**	⇓	*e*P	**Pn**	**22 04 14.5**	**-1.0**
JISS				⇓	*e*S	**Sn**	**22 04 32.2**	**-1.2**
JYM2	**Yakumo 2**	**1.38**	**274**	⇓	P	**Pn**	**22 04 14.2**	**-1.3**
JYM2				⇓	*e*S	**Sn**	**22 04 31.7**	**-1.9**
JTM	**Tenmabayashi**	**1.52**	**215**		Pn	**Pn**	**22 04 16.9**	**-0.4**
JAR	**Ashorobuto**	**1.70**	**42**		*e*P	**Pn**	**22 04 19.4**	**-0.4**
JAR					*e*S	**Sn**	**22 04 40.1**	**-1.1**
JOMM	**Oshimamatsumae**	**1.73**	**254**		*e*P	**Pn**	**22 04 19.4**	**-0.7**
JANG	**Nango**	**1.74**	**198**		*e*P	**Pn**	**22 04 19.4**	**-0.9**
JANG					*e*S	**Sn**	**22 04 40.5**	**-1.5**
JHR	**Hokuryu**	**1.74**	**348**		*e*P	**Pn**	**22 04 20.1**	**-0.2**
JHR					*e*S	**Sn**	**22 04 41.9**	**-0.2**
JKK2	**Kamakawa 2**	**1.88**	**12**		*e*P	**Pn**	**22 04 21.9**	**-0.2**
JKK2					*e*S	**Sn**	**22 04 44.9**	**-0.3**
JOSM	**Okushiri--Mats**	**2.04**	**272**		*e*P	**Pn**	**22 04 23.1**	**-1.1**
JOSM					*e*S	**Sn**	**22 04 47.5**	**-1.5**
JKA	**Kamikawa-asahi**	**2.10**	**8**			**Pn**	**22 04 24.9**	**0.0**
JKA	**Kamikawa-asahi**	**2.10**	**8**		*e*P	**Pn**	**22 04 25.9**	**+0.9**
ASAJ	**Asahikawa**	**2.10**	**8**		PN	**Pn**	**22 04 24.9**	**-0.1**
AKK	**Akkeshi**	**2.18**	**62**		*e*P	**Pn**	**22 04 24.9**	**-1.1**
AKK					*e*S	**Sn**	**22 04 49.9**	**-2.3**
NMR	**Nemuro--Hokkai**	**2.91**	**62**		*e*PN	**Pn**	**22 04 34.3**	**-1.5**
NMR					*e*S	**Sn**	**22 05 05.0**	**-4.9**
NMR	**Nemuro--Hokkai**	**2.91**	**62**		*e*P	**Pn**	**22 04 34.5**	**-1.3**
NMR					*e*S	**Sn**	**22 05 06.5**	**-3.4**
GLVR	**Golovnino**	**2.96**	**54**		PN	**Pn**	**22 04 35.6**	**-0.9**
GLVR					*e*S	**Sn**	**22 05 09.1**	**-2.0**
GLVR					pmax	pmax		
	comp=Z,147nm,0.1s							
GLVR					smax	smax		
	comp=N,400nm,0.2s							
GLVR					smax	smax		
	comp=E,2μm,0.2s							
GLVR	**Golovnino**	**2.96**	**54**	*e*P		**Pn**	**22 04 35.6**	**-0.9**
GLVR					AMB	AMB	22 04 36.9	
	comp=E,140nm,0.1s							
GLVR					*e*S	**Sn**	**22 05 09.1**	**-2.0**
GLVR					A	A	22 05 14.6	
	comp=E,400nm,0.2s							
GLVR					A	A	22 05 14.6	
	comp=E,2μm,0.2s							
RUSJ	**Misakicho**	**3.04**	**46**	*e*PN		**Pn**	**22 04 38.0**	**+0.5**
RUSJ					*e*S	**Sn**	**22 05 13.8**	**+1.0**
YUK	**Yuzh-Kuril'sk**	**3.34**	**52**	*e*PN		**Pn**	**22 04 40.2**	**-1.3**
YUK				*i* S		**Sn**	**22 05 17.9**	**-2.2**
YUK					pmax	pmax		
	comp=E,105nm,0.2s							
YUK					pmax	pmax		
	comp=Z,320nm,0.2s							
YUK					pmax	pmax		
	comp=N,35nm,0.1s							
YUK					smax	smax		
	comp=N,931nm,0.2s							
YUK					smax	smax		
	comp=E,1μm,0.4s							
YUK	**Yuzh-Kuril'sk**	**3.34**	**52**	*e*P		**Pn**	**22 04 40.3**	**-1.3**
YUK					AMB	AMB	22 04 40.7	
	comp=E,180nm,0.3s							
YUK					*e*S	**Sn**	**22 05 17.9**	**-2.2**
YUK					A	A	22 05 20.3	
	comp=E,630nm,0.5s							
YUK					A	A	22 05 20.3	
	comp=E,870nm,0.5s							
SHO	**Shikotan**	**3.85**	**60**	*c i*PN		**Pn**	**22 04 47.3**	**-1.2**
SHO				*i* S		**Sn**	**22 05 27.7**	**-4.9**
SHO					pmax	pmax		
	comp=Z,82nm,0.3s							
SHO					pmax	pmax		
	comp=N,29nm,0.2s							
SHO					pmax	pmax		
	comp=E,46nm,0.2s							
SHO					smax	smax		
	comp=N,923nm,0.2s							
SHO					smax	smax		
	comp=E,527nm,0.2s							
SHO	**Shikotan**	**3.85**	**60**	*e*P		**Pn**	**22 04 47.6**	**-0.9**
SHO					AMB	AMB	22 04 47.8	
	comp=E,80nm,0.3s							
SHO					*e*S	**Sn**	**22 05 27.8**	**-4.9**
SHO					A	A	22 05 30.2	
	comp=E,890nm,0.4s							
SHO					A	A	22 05 30.2	
	comp=E,790nm,0.4s							
JMM	**Marumori**	**4.31**	**195**			**Pn**	**22 04 53.7**	**-1.0**
YSS	**Yuzh-Sakhalins**	**4.93**	**4**			**Pn**	**22 05 03.2**	**0.0**
YSS	**Yuzh-Sakhalins**	**4.93**	**4**	*e*PN		**Pn**	**22 05 03.7**	**+0.5**
YSS					pmax	pmax		
	comp=Z,30nm,0.6s							
YSS	**Yuzh-Sakhalins**	**4.93**	**4**	*e*P		**Pn**	**22 05 03.7**	**+0.5**
YSS					AMB	AMB	22 05 04.8	
YSS					AMB	AMB	22 05 04.8	
JSD	**Sado**	**5.02**	**219**		Pn	**Pn**	**22 05 04.3**	**-0.2**
KUR	**Kuril'sk**	**5.20**	**50**	*e*PN		**Pn**	**22 05 08.5**	**+1.6**
KUR					*e*S	**Sn**	**22 06 06.0**	**+0.5**
KUR					pmax	pmax		
	comp=Z,50nm,0.4s							
KUR					smax	smax		
	comp=N,176nm,0.4s							
KUR					smax	smax		
	comp=E,74nm,0.4s							
KUR	**Kuril'sk**	**5.20**	**50**	*e*P		**Pn**	**22 05 08.1**	**+1.2**
KUR					AMB	AMB	22 05 08.9	
	comp=E,50nm,0.4s							
KUR					*e*S	**Sn**	**22 06 04.6**	**-0.9**
KUR					A	A	22 06 11.9	
	comp=E,180nm,0.4s							
KUR					A	A	22 06 11.9	
	comp=E,70nm,0.4s							
JYT	**Yasato**	**6.01**	**196**			**Pn**	**22 05 15.7**	**-2.3**
MJB9	**Matsu-Tunnel**	**6.30**	**211**			**Pn**	**22 05 21.4**	**-0.6**
MAJO	**Matsushiro**	**6.30**	**211**			**Pn**	**22 05 21.3**	**-0.7**
MAJO	**Matsushiro**	**6.30**	**211**		PN	**Pn**	**22 05 21.3**	**-0.7**
MJAR	**Matsushiro Arr**	**6.30**	**211**		P	**Pn**	**22 05 21.4**	**-0.6**
	comp=E,5.7nm,0.5s,baz=24,slow=15,SNR=26							
MJAR	**Matsushiro Arr**	**6.30**	**211**			**Pn**	**22 05 21.0**	**-1.0**
JGF	**Kuroka**	**7.46**	**212**			**Pn**	**22 05 35.8**	**-2.0**
USA0B	**Ussuriysk Arra**	**7.79**	**290**		Pn	**Pn**	**22 05 39.8**	**-2.3**
USA0B	**Ussuriysk Arra**	**7.79**	**290**		PN	**Pn**	**22 05 39.8**	**-2.3**
USRK	**Ussuriysk Ar.**	**7.79**	**290**		P	**Pn**	**22 05 41.9**	**-0.3**
	comp=E,9.4nm,0.7s,baz=91,slow=14,SNR=14							
USRK	**Ussuriysk Ar.**	**7.79**	**290**		Pn	**Pn**	**22 05 40.6**	**-1.5**
INU	**Inuyama**	**7.81**	**213**		Pn	**Pn**	**22 05 41.1**	**-1.5**
MDJ	**Mudanjiang**	**9.55**	**290**		P	**Pn**	**22 06 08.1**	**+1.9**
MDJ					pmax	pmax		
	comp=Z,16nm,1.1s							
MDJ					pmax	pmax		
	comp=Z,250nm,3.7s							
KLR	**Kul'dur**	**10.26**	**318**		P	**Pn**	**22 06 16.6**	**+0.8**
	comp=Z,1.9nm,0.6s,baz=117,slow=15,SNR=7.0							
KSRS	**Korea Array**	**11.91**	**252**		P	Pn	**22 06 44.4**	**+6.1**
	comp=Z,5.2nm,0.5s,baz=62,slow=14,SNR=17							
KSRS					S	**Sn**	**22 08 54.4**	**+5.1**
	comp=Z,8.0nm,0.8s,baz=66,slow=22,SNR=9.4							
PEA0B	**Petropavlovsk-**	**15.19**	**38**		Pn	**Pn**	**22 07 19.3**	**-2.0**
PEA0B					IAmb	IAmb	22 07 32.6	
	comp=Z,37nm,1.5s							
PEA0B	**Petropavlovsk-**	**15.19**	**38**		P	**Pn**	**22 07 19.3**	**-2.0**
PEA0B					pmax	pmax		
	comp=Z,37nm,1.5s							
PETK	**Petropavlovsk-**	**15.19**	**38**		P	**Pn**	**22 07 18.8**	**-2.5**
	comp=Z,3.0nm,0.9s,baz=206,slow=9.6,SNR=2.2							
SEY	**Seymchan**	**21.77**	**13**		P	**P**	**22 08 33.6**	**-2.5**
	comp=Z,5.6nm,0.3s,baz=192,slow=9.4,SNR=35							
	comp=Z,5.6nm,0.3s							
HHC	**Hu-ho-hao-te**	**22.95**	**277**		*e*P	**P**	**22 08 47.8**	**-1.0**
HHC					pmax	pmax		
	comp=Z,26nm,1.0s							
HHC					pmax	pmax		
	comp=Z,88nm,8.3s							
SONM	**Songino Array**	**25.85**	**295**		P	**P**	**22 09 14.6**	**-0.5**
	comp=Z,1.2nm,0.5s,baz=73,slow=9.0,SNR=12							
	comp=Z,1.2nm,0.5s							
SONM	**Songino Array**	**25.85**	**295**		P	**P**	**22 09 14.7**	**-0.5**
SONM	**Songino Array**	**25.85**	**295**		P	**P**	**22 09 14.7**	**-0.5**
SONM					pmax	pmax		
	comp=Z,3.0nm,1.4s							
BILL	**Bilibino**	**29.07**	**18**	*e*P		**P**	**22 09 42.9**	**-0.7**
BILL					pmax	pmax		
	comp=Z,2.0nm,1.0s							
TIXI	**Tiksi**	**30.42**	**352**	⇑	*i*P	**P**	**22 09 56.7**	**+1.3**
TIXI					pmax	pmax		
	comp=Z,2.0nm,1.1s							
TIXI	**Tiksi**	**30.42**	**352**		*e*P	**P**	**22 09 56.7**	**+1.3**
H11N2	**WAKE ISLAND Hy**	**30.51**	**129**		T	T	22 41 45.8	
	baz=322,slow=75							
H11N1	**WAKE ISLAND Hy**	**30.52**	**129**		T	T	22 41 46.2	
	baz=322,slow=75							
H11N3	**WAKE ISLAND Hy**	**30.53**	**129**		T	T	22 41 50.1	
	baz=322,slow=75							
H11S1	**WAKE ISLAND Hy**	**31.37**	**131**		T	T	22 42 58.1	
	baz=326,slow=76							
H11S3	**WAKE ISLAND Hy**	**31.38**	**131**		T	T	22 43 04.6	
	baz=326,slow=76							
H11S2	**WAKE ISLAND Hy**	**31.39**	**131**		T	T	22 43 03.5	
	baz=326,slow=76							
PZH	**PanZhiHua**	**36.49**	**258**		P	**P**	**22 10 49.3**	**+0.5**
PZH					pmax	pmax		
	comp=Z,10.0nm,1.1s							
PZH					pmax	pmax		
	comp=Z,100nm,6.2s							
ZAA0	**Zalesovo Array**	**39.16**	**308**		P	**P**	**22 11 11.6**	**+0.8**
ZALV	**Zalesovo Beam**	**39.16**	**308**		P	**P**	**22 11 10.5**	**-0.3**
	comp=Z,2.3nm,0.5s,baz=90,slow=9.8,SNR=11							
	comp=Z,2.3nm,0.5s							
ZALV	**Zalesovo Beam**	**39.16**	**308**		P	**P**	**22 11 10.9**	**+0.2**
WMQ	**Urumqi**	**39.35**	**292**	*e*P		**P**	**22 11 15.1**	**+2.5**
TTA	**Tatalina**	**41.03**	**38**		P	**P**	**22 11 26.6**	**+0.4**
TTA	**Tatalina**	**41.03**	**38**		P	**P**	**22 11 26.6**	**+0.4**
TTA					pmax	pmax		
	comp=Z,1.0nm,0.9s							
N18K	**Kilae Creek**	**41.11**	**41**		P	**P**	**22 11 27.8**	**+0.9**
N18K					IAmb	IAmb	22 11 32.4	
	comp=Z,11nm,1.4s							
O18K	**Koktuh Hills**	**41.49**	**43**		P	**P**	**22 11 33.3**	**+3.3**
O18K					IAmb	IAmb	22 11 50.2	
	comp=Z,6.8nm,1.1s							
P18K	**Big Mountain,**	**41.51**	**43**		P	**P**	**22 11 32.5**	**+2.3**
P18K					IAmb	IAmb	22 11 43.2	
	comp=Z,7.2nm,1.3s							
N19K	**Bonanza Creek**	**41.80**	**41**		P	**P**	**22 11 34.5**	**+2.0**
N19K					IAmb	IAmb	22 11 39.1	
	comp=Z,4.0nm,1.0s							
J20K	**Nowinta River**	**41.88**	**36**		P	**P**	**22 11 34.0**	**+1.0**
J20K					IAmb	IAmb	22 11 34.3	
	comp=Z,2.7nm,0.7s							
K20K	**Telida**	**41.91**	**37**		P	**P**	**22 11 34.2**	**+0.8**
IMAR	**Indian Mountai**	**42.08**	**33**		P	**P**	**22 11 34.7**	**0.0**
MK31	**Makanchi Array**	**42.16**	**298**		IAmb	IAmb	22 11 35.9	
	comp=Z,2.1nm,0.7s							
MK31	**Makanchi Array**	**42.16**	**298**	*c i*P		**P**	**22 11 35.3**	**-0.4**
MKAR	**Makanchi Array**	**42.16**	**298**		P	**P**	**22 11 35.4**	**-0.3**
	comp=Z,1.7nm,0.6s,baz=84,slow=9.2,SNR=22							
	comp=Z,1.7nm,0.6s							
Q19K	**Cape Douglas,**	**42.36**	**44**		P	**P**	**22 11 41.7**	**+4.6**
MAKZ	**Makanchi**	**42.37**	**298**		P	**P**	**22 11 37.2**	**-0.1**
MAKZ					IAmb	IAmb	22 11 37.7	
	comp=Z,2.4nm,0.7s							
MAKZ	**Makanchi**	**42.37**	**298**		P	**P**	**22 11 37.2**	**-0.1**
MAKZ					pmax	pmax		
	comp=Z,2.0nm,0.7s							
H21K	**Melozitna Rive**	**42.46**	**34**		P	**P**	**22 11 37.3**	**-0.6**
PPLA	**Purkeypile**	**42.78**	**38**		P	**P**	**22 11 41.6**	**+1.1**
PPLA					IAmb	IAmb	22 11 43.4	
	comp=Z,5.4nm,0.9s							
CAST	**Castle Rocks**	**42.80**	**37**		P	**P**	**22 11 41.7**	**+1.1**
CAST					IAmb	IAmb	22 11 42.2	
	comp=Z,4.1nm,0.7s							
I21K	**Tanana**	**42.81**	**35**		P	**P**	**22 11 40.8**	**+0.2**
I21K					IAmb	IAmb	22 11 58.0	
	comp=Z,7.6nm,1.4s							
KDAK	**Kodiak Island**	**43.05**	**45**		P	**P**	**22 11 42.5**	**-0.1**
	comp=Z,3.6nm,0.6s,baz=315,slow=8.6,SNR=4.4							
	comp=Z,3.6nm,0.6s							
KDAK	**Kodiak Island**	**43.05**	**45**		P	**P**	**22 11 42.7**	**0.0**
BPAW	**Bear Paw Mtn.**	**43.26**	**36**		P	**P**	**22 11 45.1**	**+0.8**
BPAW					IAmb	IAmb	22 12 03.4	
	comp=Z,4.7nm,1.4s							
KTH	**Kantishna Hill**	**43.32**	**37**		P	**P**	**22 11 45.8**	**+0.9**
MLY	**Manley**	**43.34**	**35**		P	**P**	**22 11 45.9**	**+1.0**
KURK	**Kurchatov**	**43.48**	**304**		P	**P**	**22 11 45.9**	**-0.3**
KURK	**Kurchatov**	**43.48**	**304**	*c i*P		**P**	**22 11 45.9**	**-0.3**
KURK					pmax	pmax		
	comp=Z,5.0nm,0.6s							
KURK	**Kurchatov**	**43.48**	**304**	*e*P		**P**	**22 11 45.9**	**-0.3**
TRF	**Thorofare Moun**	**43.61**	**37**		P	**P**	**22 11 47.8**	**+0.5**
TRF					IAmb	IAmb	22 11 56.8	
	comp=Z,4.7nm,1.1s							
TOLK	**Toolik Lake Re**	**43.78**	**29**		P	**P**	**22 11 49.6**	**+1.2**
TOLK					IAmb	IAmb	22 11 54.8	
	comp=Z,2.7nm,0.8s							
NEA2	**Nenana**	**44.07**	**35**		P	**P**	**22 11 51.4**	**+0.6**
NEA2					IAmb	IAmb	22 11 52.6	
	comp=Z,4.5nm,0.6s							
GHO	**Glory Hole Cre**	**44.39**	**39**		P	**P**	**22 11 54.1**	**+0.7**
MDM

comp=Z,0.6nm,0.5s
ARCES ARCESS Array B 59.55 339 P **P 22 13 45.5 -0.1**
comp=Z,0.6nm,0.7s,baz=49,slow=9.7,SNR=4.0
comp=Z,0.6nm,0.7s
ARCES ARCESS Array B 59.55 339 IAmb IAmb 22 14 01.2
comp=Z,4.7nm,1.2s
ARCES ARCESS Array B 59.55 339 P **P 22 13 45.6 -0.1**
ARCES pmax pmax
comp=Z,5.0nm,1.3s
BELG Belogornoye 60.62 315 *e*P **P 22 13 53.4 +0.2**
BELG pmax pmax
comp=Z,1.0nm,0.6s
OBN Obninsk 64.49 322 *e*P **P 22 14 19.7 +0.8**
OBN pmax pmax
comp=Z,3.0nm,0.4s
OBN Obninsk 64.49 322 *e*P **P 22 14 19.7 +0.8**
FINES FINESS Array B 64.70 332 P **P 22 14 19.5 -0.7**
comp=Z,1.7nm,0.5s,baz=53,slow=7.1,SNR=23
comp=Z,1.7nm,0.5s
FINES FINESS Array B 64.70 332 *e*P **P 22 14 19.8 -0.4**
FINES pmax pmax
comp=Z,2.0nm,0.5s
NB2 NORSAR Subarra 69.82 337 P **P 22 14 52.3 -0.3**
comp=Z,0.8nm,0.8s,baz=32,slow=6.5
NOA NORSAR Array B 69.82 337 P **P 22 14 51.8 -0.8**
comp=Z,0.6nm,0.7s,baz=38,slow=6.2,SNR=6.4
comp=Z,0.6nm,0.7s
AKASG Malin Array Be 70.74 322 P **P 22 14 57.0 -1.4**
comp=Z,0.2nm,0.3s,baz=44,slow=6.9,SNR=3.9
comp=Z,0.2nm,0.3s
AKASG Malin Array Be 70.74 322 *e*P **P 22 15 01.0 +2.7**
UOSS Minazif 70.92 287 P **P 22 14 60.0 +0.1**
KVN Kaiserville 71.28 54 P **P 22 15 02.8 +0.7**
KVN Kaiserville 71.28 54 P **P 22 15 02.8 +0.7**
KVN pmax pmax
comp=Z,3.0nm,1.5s
NVAR Mina Array Bea 71.55 55 P **P 22 15 04.0 +0.3**
comp=Z,0.6nm,0.6s,baz=302,slow=8.4,SNR=3.7
comp=Z,0.6nm,0.6s
NVAR Mina Array Bea 71.55 55 P **P 22 15 04.4 +0.7**
YPP Pitchstone Pla 72.08 46 P **P 22 15 07.8 +0.9**
YMP Mirror Lake Pl 72.11 46 P **P 22 15 06.3 -0.8**
PDAR Pinedale Array 73.75 47 P **P 22 15 17.4 +0.6**
comp=Z,0.9nm,0.7s,baz=298,slow=1.9,SNR=5.1
comp=Z,0.9nm,0.7s
PDAR Pinedale Array 73.75 47 P **P 22 15 16.9 +0.1**
BURAR Bucovina Array 74.78 321 **P 22 15 23.8 +1.4**
SRU San Rafael Swe 75.69 50 P **P 22 15 28.5 +0.6**
SRU IAmb IAmb 22 15 30.2
comp=Z,2.7nm,0.9s
SRU San Rafael Swe 75.69 50 P **P 22 15 28.5 +0.6**
SRU pmax pmax
comp=Z,3.0nm,0.9s
PPT Papeete 86.35 117 LR LR 22 57 21.1
comp=Z,168nm,18.4s,baz=102,slow=37
TXAR Lajitas Array 86.60 53 P **P 22 16 26.9 +1.1**
comp=Z,0.3nm,0.5s,baz=273,slow=3.5,SNR=3.9
comp=Z,0.3nm,0.5s

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*IDC **24** 22:05:42.6±1.6, 52˚.25N×178˚.71E, h151km±13km, mb3.7/16, mbtmp4.2/19, Error ellipse: s-maj=27.1km s-min=9.1km az=169.0*
*MOS **24** 22:05:42.7±0.8, 52˚.26N×178˚.67E, h168km, mb4.1/9, Error ellipse: s-maj=9.9km s-min=8.9km az=49.8*
*NEIC **24** 22:05:44.3±2.3, 52˚.25N±0˚.08×178˚.69E±0˚.07, h166km±6km, mb4.4/174, ML3.6(AEIC), Error ellipse: s-maj=12.7km s-min=5.5km az=164.0*
*AEIC **24** 22:05:44±2.3, 52˚.1N±0˚.1×178˚.74E±0˚.08, h173km±5km, Error ellipse: s-maj=16.4km s-min=7.3km az=181.0*

ISC 24 22:05:43.9±0.6, 52˚21N±0˚.09×178˚69E±0˚.03, h165km±5km, n418, σ0s87/419, mb4.3/89, 5C-2D, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSNW	**Little Sitkin**	**0.26**	**203**		**Pn**	**22 06 06.3**	**+0.2**
LSPA	**Little Sitkin**	**0.27**	**195**		**Pn**	**22 06 06.3**	**+0.2**
LSPA					**Sn**	**22 06 25.7**	**+2.6**
LSSA	**Little Sitkin**	**0.28**	**202**		**Pn**	**22 06 06.5**	**+0.3**
LSSE	**Little Sitkin**	**0.29**	**195**		**Pn**	**22 06 06.6**	**+0.4**
CEAP	**Semis' Anvil P**	**0.59**	**111**		**Pn**	**22 06 07.9**	**+0.5**
CESW	**Semis' Southwe**	**0.62**	**120**		**Pn**	**22 06 07.4**	**-0.2**
CERB	**Semis' Cerberu**	**0.65**	**115**		**Pn**	**22 06 07.7**	**-0.0**
CERB					**Sn**	**22 06 28.0**	**+2.1**
CERAA	**Semis' Rag'd T**	**0.69**	**116**		**Pn**	**22 06 08.0**	**+0.1**
AMKA	**Amchitka**	**0.92**	**155**	Pn	**Pn**	**22 06 09.2**	**-0.2**
AMKA				Sn	**Sn**	**22 06 27.7**	**-1.4**
GASW	**Gareloi Southw**	**1.58**	**105**		**Pn**	**22 06 15.1**	**-0.3**
GASW					**Sn**	**22 06 39.6**	**-0.1**
GANE	**Gareloi Northe**	**1.62**	**103**		**Pn**	**22 06 15.6**	**-0.2**
GANE					**Sn**	**22 06 40.1**	**-0.3**
GALAA	**Gareloi Lava P**	**1.64**	**105**		**Pn**	**22 06 15.9**	**0.0**
GAEA	**Gareloi East**	**1.64**	**104**		**Pn**	**22 06 15.9**	**-0.1**
TASE	**Tanaga Southea**	**2.06**	**99**		**Pn**	**22 06 20.3**	**-0.3**
TAFP	**Tanaga Falls P**	**2.08**	**97**		**Pn**	**22 06 20.4**	**-0.4**
TAFP					**Sn**	**22 06 48.7**	**-0.7**
TAPA	**Tanaga Point A**	**2.20**	**99**		**Pn**	**22 06 21.7**	**-0.5**
KICM	**Kanaga Island**	**2.56**	**95**		**Pn**	**22 06 26.1**	**-0.3**
KIMD	**Kanaga Island**	**2.56**	**99**		**Pn**	**22 06 26.0**	**-0.4**
KIKV	**Kanaga Island**	**2.58**	**96**		**Pn**	**22 06 26.1**	**-0.5**
KIWB	**Kanaga Island**	**2.60**	**96**	Pn	**Pn**	**22 06 25.7**	**-1.1**
KINC	**Kanaga Island**	**2.60**	**95**		**Pn**	**22 06 26.2**	**-0.6**
SHEM	**Shemya Is, Ala**	**2.85**	**282**	P	**Pn**	**22 06 29.3**	**-0.6**
	46nm,0.3s,baz=126,slow=2.4,SNR=12						
SHEM				S	**Sn**	**22 07 03.7**	**-2.0**
	211nm,0.3s,baz=336,slow=20,SNR=42						
SMY	**Shemya**	**2.85**	**282**	Pn	**Pn**	**22 06 30.0**	**+0.1**
SMY				Sn	**Sn**	**22 07 04.5**	**-1.2**
SMY	**Shemya**	**2.85**	**282**	P	**Pn**	**22 06 29.0**	**-0.9**
SMY				SN	**Sn**	**22 07 05.3**	**-0.4**
GSCK	**Great Sitkin C**	**3.18**	**92**		**Pn**	**22 06 33.5**	**-0.5**
GSTD	**Great Sitkin T**	**3.19**	**91**		**Pn**	**22 06 33.3**	**-0.9**
GSTD					**Sn**	**22 07 12.3**	**-1.0**
GSTR	**Great Sitkin T**	**3.24**	**90**		**Pn**	**22 06 33.8**	**-1.0**
GSTR				Sn	**Sn**	**22 07 13.8**	**-0.6**
GSMY	**Great Sitkin M**	**3.25**	**91**		**Pn**	**22 06 34.1**	**-0.8**
KOKL	**Mount Kliuchef**	**4.37**	**86**		**Pn**	**22 06 48.9**	**-0.4**
ATKA	**Atka Island**	**4.38**	**87**		**Pn**	**22 06 48.7**	**-0.6**
NIKH	**Nikolski High**	**7.63**	**79**		**Pn**	**22 07 33.2**	**+1.1**
PET	**Petropavlovsk**	**12.20**	**282**	*e*P	**Pn**	**22 08 30.5**	**-1.6**
SDPT	**Sand Point**	**12.71**	**67**	Pn	**Pn**	**22 08 38.4**	**-0.1**
PEA0B	**Petropavlovsk-**	**12.77**	**282**	Pn	**Pn**	**22 08 38.8**	**-0.5**
PEA0B	**Petropavlovsk-**	**12.77**	**282**	*e*P	**Pn**	**22 08 39.0**	**-0.4**
PETK	**Petropavlovsk-**	**12.77**	**282**	P	**Pn**	**22 08 39.0**	**-0.3**
	5.6nm,0.7s,baz=91,slow=15,SNR=7.2						
PETK				S	**Sn**	**22 10 56.8**	**-4.0**
	3.2nm,0.7s,baz=91,slow=27,SNR=8.1						
PETK	**Petropavlovsk-**	**12.77**	**282**	P	**P**	**22 08 43.0**	**-1.0**
SKR	**Severo-Kuril's**	**14.15**	**273**	*i* P	**Pn**	**22 08 56.1**	**-0.7**
P16K	**Nushagak River**	**14.78**	**53**	P	**Pn**	**22 09 05.4**	**+0.8**
	baz=252						
O16K	**Kokwok River B**	**14.91**	**51**	P	**Pn**	**22 09 07.0**	**+0.8**
	baz=250						
N16K	**Nishlik Lake**	**14.92**	**48**	P	**P**	**22 09 07.2**	**-0.6**
	baz=246						
TNA	**Tin City**	**15.01**	**22**	P	**P**	**22 09 08.4**	**-0.4**
	baz=213						
R17K	**Ugashik Creek**	**15.28**	**59**	P	**P**	**22 09 11.3**	**-0.4**
	baz=259						
O17K	**Koliganek Bris**	**15.45**	**51**	P	**P**	**22 09 13.6**	**-0.1**
	baz=251						
P17K	**Kvichak River**	**15.60**	**54**	P	**P**	**22 09 16.0**	**+0.7**
	baz=254						
Q17K	**Contact Creek**	**15.66**	**57**	P	**P**	**22 09 16.0**	**-0.1**
	baz=258						
Q18K	**Katmai Hardscr**	**16.19**	**56**	P	**Pn**	**22 09 21.9**	**0.0**
	baz=257						
P18K	**Big Mountain,**	**16.25**	**54**		**Pn**	**22 09 23.1**	**+0.5**
P18K				IAmb	IAmb	22 09 26.7	
	comp=Z,12nm,0.8s						
P18K	**Big Mountain,**	**16.25**	**54**	P	**Pn**	**22 09 22.7**	**+0.1**
	baz=255						
N18K	**Kilae Creek**	**16.32**	**49**		**Pn**	**22 09 24.5**	**+1.1**
N18K				IAmb	IAmb	22 09 25.6	
	comp=Z,9.0nm,0.8s						
N18K	**Kilae Creek**	**16.32**	**49**	P	**Pn**	**22 09 24.0**	**+0.6**
	baz=250						
SII	**Sitkinak Islan**	**16.34**	**64**		**P**	**22 09 22.2**	**-1.2**
O18K	**Koktuh Hills**	**16.38**	**52**		**Pn**	**22 09 25.3**	**+1.1**
O18K				IAmb	IAmb	22 09 30.3	
	comp=Z,14nm,0.8s						
O18K	**Koktuh Hills**	**16.38**	**52**	P	**Pn**	**22 09 25.2**	**+1.1**
	baz=253,SNR=6.2						
OHAK	**Old Harbor**	**16.88**	**62**	P	**P**	**22 09 28.4**	**-1.1**
OHAK	**Old Harbor**	**16.88**	**62**	P	**P**	**22 09 28.1**	**-1.4**
	baz=264						
Q19K	**Cape Douglas,**	**16.94**	**56**	P	**P**	**22 09 30.5**	**+0.4**
Q19K	**Cape Douglas,**	**16.94**	**56**	P	**P**	**22 09 29.9**	**-0.3**
	baz=258						
BILL	**Bilibino**	**16.98**	**344**	*e*P	**Pn**	**22 09 31.5**	**+0.3**
BILL				pmax	pmax		
	comp=Z,3.0nm,0.5s						
N19K	**Bonanza Creek**	**17.02**	**49**		**Pn**	**22 09 33.1**	**+1.3**
N19K				IAmb	IAmb	22 09 35.5	
	comp=Z,19nm,0.8s						
N19K	**Bonanza Creek**	**17.02**	**49**	P	**Pn**	**22 09 31.9**	**+0.1**
	baz=251,SNR=9.4						
TTA	**Tatalina**	**17.17**	**41**		**Pn**	**22 09 34.0**	**+0.4**
TTA	**Tatalina**	**17.17**	**41**	P	**Pn**	**22 09 34.0**	**+0.4**
TTA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
TTA	**Tatalina**	**17.17**	**41**	P	**Pn**	**22 09 33.8**	**+0.2**
	baz=242,SNR=6.3						
KDAK	**Kodiak Island**	**17.32**	**60**	P	**P**	**22 09 33.2**	**-1.0**
	comp=Z,16nm,0.4s,baz=296,slow=9.1,SNR=88						
KDAK	**Kodiak Island**	**17.32**	**60**	P	**P**	**22 09 33.4**	**-0.8**
KDAK				IAmb	IAmb	22 09 34.5	
	comp=Z,21nm,0.9s						
KDAK	**Kodiak Island**	**17.32**	**60**	*c i* P	**P**	**22 09 33.4**	**-0.8**
KDAK				pmax	pmax		
	comp=Z,40nm,1.2s						
KDAK	**Kodiak Island**	**17.32**	**60**	P	**P**	**22 09 33.5**	**-0.7**
	baz=263						
L19K	**White Mountain**	**17.33**	**45**		**Pn**	**22 09 35.8**	**+0.2**
L19K				IAmb	IAmb	22 09 39.5	
	comp=Z,16nm,1.0s						
L19K	**White Mountain**	**17.33**	**45**	P	**Pn**	**22 09 35.7**	**+0.1**
	baz=246,SNR=10						
M19K	**Big River Lodg**	**17.43**	**46**	P	**Pn**	**22 09 37.0**	**+0.3**
M19K				IAmb	IAmb	22 09 40.0	
	comp=Z,9.9nm,0.7s						
M19K	**Big River Lodg**	**17.43**	**46**	P	**P**	**22 09 36.0**	**+0.6**
	baz=248						
Q20K	**Shyak Island**	**17.52**	**57**	P	**P**	**22 09 36.9**	**+0.4**
	baz=261						
SEY	**Seymchan**	**17.58**	**318**	*i* P	**P**	**22 09 35.6**	**-1.4**
SEY				pmax	pmax		
	comp=Z,9.0nm,1.3s						
O20K	**Slope Mountain**	**17.70**	**52**	P	**P**	**22 09 39.1**	**+0.6**
	baz=256						
RSO	**Redoubt South**	**17.73**	**51**	P	**Pn**	**22 09 40.7**	**+0.3**
GCSA	**Galena City Sc**	**17.75**	**36**	P	**P**	**22 09 39.6**	**+0.7**
	baz=236						
L20K	**Farewell, AK**	**17.87**	**44**	P	**P**	**22 09 40.3**	**0.0**
	baz=247						
M20K	**Styx River**	**17.98**	**46**	P	**Pn**	**22 09 43.2**	**-0.1**
M20K				IAmb	IAmb	22 09 53.0	
	comp=Z,11nm,0.6s						
M20K	**Styx River**	**17.98**	**46**	P	**P**	**22 09 42.2**	**+0.7**
	baz=250						
K20K	**Telida**	**18.15**	**42**	P	**Pn**	**22 09 44.6**	**-0.5**
K20K				IAmb	IAmb	22 09 48.2	
	comp=Z,9.5nm,0.8s						
K20K	**Telida**	**18.15**	**42**	P	**P**	**22 09 44.2**	**+0.9**
	baz=244,SNR=7.9						
N20K	**Mount Spurr**	**18.19**	**49**	P	**P**	**22 09 44.7**	**+0.9**
	baz=253						
SPU	**Mount Spurr**	**18.25**	**49**	P	**P**	**22 09 45.3**	**+0.8**
CNPM	**China Poot**	**18.27**	**55**	P	**P**	**22 09 44.9**	**+0.2**
J20K	**Nowinta River**	**18.48**	**39**	P	**Pn**	**22 09 48.3**	**-0.8**
J20K				IAmb	IAmb	22 09 51.6	
	comp=Z,17nm,0.8s						
J20K	**Nowinta River**	**18.48**	**39**	P	**P**	**22 09 47.7**	**+0.8**
	baz=242,SNR=21						
BRLK	**Bradley Lake**	**18.49**	**54**	P	**P**	**22 09 47.0**	**0.0**
BRSE	**Bradley Lake S**	**18.55**	**54**	P	**P**	**22 09 47.6**	**-0.2**
	baz=259						
SKT	**Skwentna**	**18.73**	**47**	P	**Pn**	**22 09 51.5**	**-0.5**
SKT				IAmb	IAmb	22 09 55.4	
	comp=Z,8.4nm,0.8s						
SKT	**Skwentna**	**18.73**	**47**	P	**P**	**22 09 49.9**	**+0.3**
	baz=252						
PPLA	**Purkeypile**	**18.75**	**44**	Pn	**Pn**	**22 09 52.2**	**-0.2**
PPLA	**Purkeypile**	**18.75**	**44**	P	**P**	**22 09 51.0**	**+1.0**
	baz=248,SNR=10						
SUA	**Susitna One**	**18.94**	**49**	P	**P**	**22 09 53.1**	**+1.1**
SUA				IAmb	IAmb	22 09 57.9	
	comp=Z,27nm,1.2s						
SUA	**Susitna One**	**18.94**	**49**	P	**P**	**22 09 52.1**	**+0.1**
	baz=254						
CAST	**Castle Rocks**	**18.99**	**42**	IAmb	IAmb	22 09 54.8	
	comp=Z,15nm,0.8s						
CAST	**Castle Rocks**	**18.99**	**42**	P	**P**	**22 09 53.6**	**+1.2**
	baz=247,SNR=14						
CHUM	**Lake Minchumin**	**19.08**	**41**	P	**P**	**22 09 54.8**	**+1.4**
	baz=245,SNR=22						
O22K	**Cooper Landing**	**19.20**	**52**	P	**P**	**22 09 55.7**	**+1.1**
O22K	**Cooper Landing**	**19.20**	**52**	P	**P**	**22 09 54.3**	**-0.3**
	baz=258						
SEW	**Seward**	**19.26**	**53**	P	**P**	**22 09 55.5**	**+0.2**
	baz=259						
M22K	**Willow**	**19.30**	**48**	P	**P**	**22 09 56.0**	**+0.2**
	baz=254						
RC01	**Rabbit Creek A**	**19.32**	**50**	P	**Pn**	**22 09 58.8**	**0.0**
RC01				IAmb	IAmb	22 09 59.7	
	comp=Z,10nm,0.8s						
RC01	**Rabbit Creek A**	**19.32**	**50**	P	**P**	**22 09 55.9**	**-0.1**
	baz=256						
KTH	**Kantishna Hill**	**19.52**	**43**	IAmb	IAmb	22 10 02.8	
	comp=Z,15nm,0.7s						
IMAR	**Indian Mountai**	**19.53**	**35**	P	**P**	**22 09 59.0**	**+0.8**
H21K	**Melozitna Rive**	**19.70**	**36**	P	**P**	**22 10 01.1**	**+1.1**
H21K				IAmb	IAmb	22 10 04.8	
	comp=Z,15nm,0.9s						
H21K	**Melozitna Rive**	**19.70**	**36**	P	**P**	**22 10 00.9**	**+0.9**
	baz=240,SNR=20						
BPAW	**Bear Paw Mtn.**	**19.70**	**41**	IAmb	IAmb	22 10 04.5	
	comp=Z,12nm,0.9s						
BPAW	**Bear Paw Mtn.**	**19.70**	**41**	P	**P**	**22 10 01.0**	**+0.9**
	baz=247,SNR=14						
PMR	**Palmer**	**19.72**	**49**	P	**P**	**22 10 00.3**	**+0.1**
	baz=256						
TRF	**Thorofare Moun**	**19.75**	**43**	P	**P**	**22 10 01.6**	**+0.8**
TRF				IAmb	IAmb	22 10 04.2	
	comp=Z,12nm,0.6s						
TRF	**Thorofare Moun**	**19.75**	**43**	P	**P**	**22 10 01.2**	**+0.3**
	baz=249						
I21K	**Tanana**	**19.77**	**38**	P	**P**	**22 10 02.0**	**+1.2**
I21K				IAmb	IAmb	22 10 03.0	
	comp=Z,13nm,0.9s						
I21K	**Tanana**	**19.77**	**38**	P	**P**	**22 10 01.8**	**+1.0**
	baz=243,SNR=15						
GHO	**Glory Hole Cre**	**19.86**	**49**	P	**P**	**22 10 03.6**	**+1.7**
GHO				IAmb	IAmb	22 10 06.2	
	comp=Z,6.6nm,0.6s						
G21K	**Allakaket**	**19.89**	**33**	P	**P**	**22 10 02.6**	**+0.5**
	baz=237						
KNK	**Knik Glacier**	**19.99**	**50**	P	**P**	**22 10 03.7**	**+0.4**
	baz=257						
SML	**Sawmill**	**20.14**	**49**	P	**P**	**22 10 06.5**	**+1.6**
SML				IAmb	IAmb	22 10 07.7	
	comp=Z,9.6nm,0.7s						
SML	**Sawmill**	**20.14**	**49**	P	**P**	**22 10 04.7**	**-0.1**
	baz=256						
MLY	**Manley**	**20.18**	**39**	IAmb	IAmb	22 10 09.5	
	comp=Z,8.3nm,1.0s						
MLY	**Manley**	**20.18**	**39**	P	**P**	**22 10 05.5**	**+0.3**
	baz=245,SNR=11						
WAT1	**Susitna Watana**	**20.31**	**46**	P	**P**	**22 10 06.4**	**-0.2**
	baz=253						
H22K	**Ishtalitna Cre**	**20.32**	**36**	P	**P**	**22 10 07.2**	**+0.5**
	baz=242,SNR=8.3						
RND	**Reindeer**	**20.35**	**44**	IAmb	IAmb	22 10 09.0	
	comp=Z,6.0nm,0.6s						
BWN	**Browne**	**20.35**	**42**	P	**P**	**22 10 08.0**	**+1.0**
MCK	**McKinley**	**20.42**	**43**	P	**P**	**22 10 07.8**	**0.0**
MCK				IAmb	IAmb	22 10 10.4	
	comp=Z,10nm,1.0s						
MCK	**McKinley**	**20.42**	**43**	P	**P**	**22 10 07.8**	**0.0**
MCK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MCK	**McKinley**	**20.42**	**43**	P	**P**	**22 10 08.0**	**+0.2**
	baz=250						
M23K	**Glacier View**	**20.42**	**49**	P	**P**	**22 10 07.8**	**0.0**
	baz=257						
GLI	**Glacier Island**	**20.54**	**52**	P	**P**	**22 10 08.8**	**-0.3**
GLI				IAmb	IAmb	22 10 09.0	
	comp=Z,13nm,0.8s						
GLI	**Glacier Island**	**20.54**	**52**	P	**P**	**22 10 08.6**	**-0.5**
	baz=260						
WAT6	**Susitna Watana**	**20.60**	**47**	P	**P**	**22 10 09.4**	**-0.5**
	baz=255,SNR=12						
SCM	**Sheep Creek Mo**	**20.61**	**49**	P	**P**	**22 10 10.1**	**+0.1**
SCM				IAmb	IAmb	22 10 14.8	
	comp=Z,10nm,0.6s						
SCM	**Sheep Creek Mo**	**20.61**	**49**	P	**P**	**22 10 10.1**	**+0.1**
SCM				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SCM	**Sheep Creek Mo**	**20.61**	**49**	P	**P**	**22 10 10.0**	**+0.1**
	baz=257						
NEA2	**Nenana**	**20.66**	**41**	P	**P**	**22 10 10.9**	**+0.6**
NEA2	**Nenana**	**20.66**	**41**	P	**P**	**22 10 10.6**	**+0.2**
	baz=248,SNR=18						
I23K	**Minto, Yukon-K**	**20.76**	**39**	P	**P**	**22 10 12.0**	**+0.7**
I23K	**Minto, Yukon-K**	**20.76**	**39**	P	**P**	**22 10 11.7**	**+0.4**
	baz=246,SNR=7.3						
G22K	**Bettles**	**20.78**	**34**	P	**P**	**22 10 12.2**	**+0.7**
	baz=239						
FID	**Port Fidalgo**	**20.82**	**52**	P	**P**	**22 10 11.9**	**-0.1**
DHY	**Denali Highway**	**20.89**	**45**	P	**P**	**22 10 12.8**	**-0.1**
DHY	**Denali Highway**	**20.89**	**45**	P	**P**	**22 10 13.0**	**+0.1**
	baz=254						
H23K	**Yukon River**	**20.97**	**37**	P	**P**	**22 10 15.5**	**+1.9**
H23K				IAmb	IAmb	22 10 16.7	
	comp=Z,9.0nm,0.9s						
H23K	**Yukon River**	**20.97**	**37**	P	**P**	**22 10 14.9**	**+1.3**
	baz=244,SNR=8.6						
WRH	**Wood River Hil**	**21.02**	**41**	P	**P**	**22 10 13.4**	**-0.7**
WRH				IAmb	IAmb	22 10 15.3	
	comp=Z,5.0nm,0.6s						
MDM	**Murphy Dome**	**21.13**	**40**	IAmb	IAmb	22 10 17.9	
	comp=Z,11nm,0.6s						
G23K	**Bananza Creek**	**21.19**	**35**	P	**P**	**22 10 16.5**	**+0.5**
	baz=242						
M24K	**Tolsona, Glenn**	**21.20**	**48**	P	**P**	**22 10 16.2**	**0.0**
	baz=258						
KLU	**Klutina**	**21.20**	**50**	P	**P**	**22 10 16.5**	**+0.2**
KLU				IAmb	IAmb	22 10 28.3	
	comp=Z,13nm,1.2s						
KLU	**Klutina**	**21.20**	**50**	P	**P**	**22 10 16.1**	**-0.1**
	baz=260						
TCOL	**CIGO, UAF Yank**	**21.25**	**40**	P	**P**	**22 10 16.6**	**+0.1**
	baz=249						
COLA	**College**	**21.25**	**41**	*c i* P	**P**	**22 10 16.6**	**0.0**
COLA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
COLA	**College**	**21.25**	**41**	P	**P**	**22 10 16.5**	**0.0**
	baz=249						
COLD	**Coldfoot**	**21.38**	**33**	P	**P**	**22 10 17.7**	**-0.3**
	baz=240						
HDA	**Harding Lake**	**21.46**	**42**	P	**P**	**22 10 18.9**	**0.0**
HDA				IAmb	IAmb	22 10 19.9	
	comp=Z,9.7nm,0.5s						
HDA	**Harding Lake**	**21.46**	**42**	P	**P**	**22 10 19.0**	**0.0**
	baz=251,SNR=10						
POKR	**Poker Plat Res**	**21.50**	**40**	IAmb	IAmb	22 10 20.5	
	comp=Z,11nm,0.7s						
POKR	**Poker Plat Res**	**21.50**	**40**	P	**P**	**22 10 19.0**	**-0.3**
	baz=249						
H24K	**Noodor Dome**	**21.60**	**38**	P	**P**	**22 10 21.2**	**+0.9**
H24K				IAmb	IAmb	22 10 22.4	
	comp=Z,7.4nm,0.7s						
H24K	**Noodor Dome**	**21.60**	**38**	P	**P**	**22 10 21.2**	**+0.9**
	baz=247,SNR=13						
ILAR	**Eielson Array**	**21.61**	**41**	P	**P**	**22 10 18.1**	**-2.2**
	comp=Z,2.0nm,0.5s,baz=246,slow=8.5,SNR=37						
	comp=Z,2.0nm,0.5s						
ILAR	**Eielson Array**	**21.61**	**41**	P	**P**	**22 10 19.5**	**-0.9**
ILAR	**Eielson Array**	**21.61**	**41**	*e*P	**P**	**22 10 19.8**	**-0.6**
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
PAX	**Paxson**	**21.71**	**46**	IAmb	IAmb	22 10 23.2	
	comp=Z,12nm,0.6s						
PAX	**Paxson**	**21.71**	**46**	P	**P**	**22 10 21.5**	**0.0**
	baz=256,SNR=13						
BMRM	**Bremner River**	**21.76**	**52**	P	**P**	**22 10 22.4**	**+0.4**
BMRM				IAmb	IAmb	22 10 28.2	
	comp=Z,13nm,0.9s						
BMRM	**Bremner River**	**21.76**	**52**	P	**P**	**22 10 21.4**	**-0.6**
	baz=262						
K24K	**Donnelly Dome**	**21.78**	**44**	P	**P**	**22 10 20.9**	**-1.3**
	baz=254,SNR=6.2						
N25K	**Chitina, Valde**	**21.85**	**50**	IAmb	IAmb	22 10 26.2	
	comp=Z,8.6nm,0.8s						
N25K	**Chitina, Valde**	**21.85**	**50**	P	**P**	**22 10 22.8**	**-0.2**
	baz=261						
A21K	**Barrow**	**22.12**	**21**	P	**P**	**22 10 25.6**	**+0.1**
A21K				IAmb	IAmb	22 10 26.3	
	comp=Z,8.0nm,0.7s						
A21K	**Barrow**	**22.12**	**21**	P	**P**	**22 10 25.3**	**-0.2**
	baz=223						
D23K	**Nanushuk River**	**22.14**	**29**	P	**P**	**22 10 25.8**	**+0.1**
	baz=236,SNR=14						
RIDG	**Independent Ri**	**22.16**	**44**	P	**P**	**22 10 25.0**	**-1.1**
RIDG				IAmb	IAmb	22 10 27.8	
	comp=Z,14nm,1.2s						
RIDG	**Independent Ri**	**22.16**	**44**	P	**P**	**22 10 24.6**	**-1.5**
	baz=255,SNR=9.1						
J25K	**Salcha River,**	**22.18**	**42**	P	**P**	**22 10 24.6**	**-1.7**
J25K	**Salcha River,**	**22.18**	**42**	P	**P**	**22 10 24.2**	**-2.1**
	baz=253						
GLB	**Gilahina Butte**	**22.20**	**51**	P	**P**	**22 10 26.6**	**+0.2**
GLB				IAmb	IAmb	22 10 28.0	
	comp=Z,8.5nm,0.8s						
TOLK	**Toolik Lake Re**	**22.30**	**31**		**P**	**22 10 27.8**	**+0.4**
TOLK				IAmb	IAmb	22 10 29.8	
	comp=Z,12nm,0.7s						
TOLK	**Toolik Lake Re**	**22.30**	**31**	P	**P**	**22 10 27.4**	**0.0**
	baz=238,SNR=21						
CRQM	**Cirque**	**22.45**	**53**	P	**P**	**22 10 29.5**	**+0.6**
CRQM				IAmb	IAmb	22 10 32.2	
	comp=Z,12nm,0.7s						
CRQE	**Cirque**	**22.47**	**53**	P	**P**	**22 10 29.0**	**-0.2**
	baz=264						
DOT	**Dot

K27K	**Chicken**	**23.42**	**44**	P		**P**		**22 10 38.4**	**+0.7**
	baz=258								
BMAR	**Burnt Mountain**	**23.43**	**35**			**P**		**22 10 38.5**	**+0.8**
LOGN	**Logan Glacier**	**23.50**	**53**	P		**P**		**22 10 40.0**	**+1.5**
D25K	**Kavik River**	**23.64**	**30**	P		**P**		**22 10 40.6**	**+0.9**
	baz=241								
YSS	**Yuzh-Sakhalins**	**23.71**	**272**	⇑ *i* P		**P**		**22 10 41.0**	**+0.6**
YSS				pmax	pmax				
	comp=Z,9.0nm,0.9s								
YUK3	**Moose Creek**	**23.83**	**50**	P		**P**		**22 10 41.2**	**-0.4**
	baz=265,SNR=17								
PCA	**Pinnacle**	**23.84**	**55**	P		**P**		**22 10 43.2**	**+1.6**
PINM	**Pinnacle**	**23.84**	**55**	P		**P**		**22 10 41.6**	**0.0**
	baz=269								
YUK8	**Steele Glacier**	**24.12**	**52**	P		**P**		**22 10 44.1**	**-0.3**
	baz=266								
BCPM	**Bancas Point**	**24.15**	**55**	P		**P**		**22 10 46.4**	**+2.1**
PNL	**Peninsula**	**24.27**	**56**	P		**P**		**22 10 45.0**	**-0.4**
	baz=270								
DAWY	**Dawson**	**24.59**	**45**	P		**P**		**22 10 49.3**	**+1.0**
DAWY	**Dawson**	**24.59**	**45**	P		**P**		**22 10 48.6**	**+0.3**
	baz=261,SNR=14								
C27K	**Jago River**	**24.62**	**31**	P		**P**		**22 10 48.9**	**+0.5**
	baz=244								
YUK4	**Talbot Arm**	**24.67**	**52**	P		**P**		**22 10 49.3**	**+0.1**
	baz=267,SNR=5.2								
YUK6	**Outpost Mounta**	**24.79**	**52**	P		**P**		**22 10 50.6**	**+0.2**
	baz=268								
HYT	**Haines Junctio**	**25.21**	**53**	P		**P**		**22 10 57.0**	**+2.9**
HYT				IAmb		IAmb		22 10 59.0	
	comp=Z,9.7nm,0.6s								
HYT	**Haines Junctio**	**25.21**	**53**	P		**P**		**22 10 54.0**	**0.0**
	baz=270,SNR=10.0								
I29M	**Ogilvie Camp,**	**25.27**	**42**	IAmb		IAmb		22 10 57.6	
	comp=Z,11nm,0.9s								
I29M	**Ogilvie Camp,**	**25.27**	**42**	P		**P**		**22 10 54.3**	**-0.1**
	baz=259								
N30M	**Aishikik Lake**	**25.42**	**51**	P		**P**		**22 10 56.1**	**+0.2**
	baz=268								
P30M	**Million Dollar**	**25.49**	**54**	P		**P**		**22 10 56.6**	**+0.1**
	baz=271								
M30M	**Minto, Yukon**	**25.60**	**49**	P		**P**		**22 11 02.6**	**+5.1**
M30M	**Minto, Yukon**	**25.60**	**49**	P		**P**		**22 10 57.2**	**-0.2**
	baz=266								
PLBC	**Pleasant Camp**	**25.82**	**56**	P		**P**		**22 10 58.8**	**-0.6**
	baz=273								
EPYK	**Eagle Plains**	**26.10**	**40**	P		**P**		**22 11 02.4**	**+0.5**
EPYK				IAmb		IAmb		22 11 02.5	
	comp=Z,8.1nm,0.7s								
EPYK	**Eagle Plains**	**26.10**	**40**	P		**P**		**22 11 01.4**	**-0.5**
	baz=259								
M31M	**Drury Creek, Y**	**26.71**	**50**	P		**P**		**22 11 07.3**	**-0.1**
	baz=269								
P32M	**Atlin**	**27.16**	**55**	P		**P**		**22 11 11.4**	**-0.1**
	baz=275								
P33M	**Teslin, Yukon**	**27.55**	**54**	P		**P**		**22 11 14.8**	**-0.2**
	baz=275								
INK	**Inuvik**	**27.69**	**36**	P		**P**		**22 11 16.3**	**+0.3**
	comp=Z,3.8nm,0.6s,baz=257,slow=10,SNR=6.0								
	comp=Z,3.8nm,0.6s								
INK	**Inuvik**	**27.69**	**36**	IAmb		IAmb		22 11 17.3	
	comp=Z,3.8nm,0.6s								
INK	**Inuvik**	**27.69**	**36**	P		**P**		**22 11 16.3**	**+0.3**
	baz=258								
MMPY	**Sheldon Lake,**	**28.16**	**49**	P		**P**		**22 11 20.4**	**+0.1**
	baz=271								
DLBC	**Dease Lake**	**29.21**	**57**	P		**P**		**22 11 30.9**	**+1.2**
	comp=Z,2.1nm,0.6s,baz=293,slow=13,SNR=4.4								
	comp=Z,2.1nm,0.6s								
DLBC	**Dease Lake**	**29.21**	**57**	P		**P**		**22 11 29.8**	**+0.2**
	baz=280								
T35M	**Bob Quinn**	**29.38**	**60**	P		**P**		**22 11 31.1**	**0.0**
	baz=282								
KLR	**Kul'dur**	**29.46**	**283**	P		**P**		**22 11 32.1**	**+0.2**
	comp=Z,3.2nm,0.5s,baz=66,slow=8.3,SNR=12								
	comp=Z,3.2nm,0.5s								
KLR	**Kul'dur**	**29.46**	**283**	*i* P		**P**		**22 11 31.9**	**0.0**
KLR				pmax	pmax				
	comp=Z,4.0nm,0.6s								
A36M	**Sachs Harbour**	**31.13**	**30**	P		**P**		**22 11 48.0**	**+1.7**
A36M	**Sachs Harbour**	**31.13**	**30**	P		**P**		**22 11 46.2**	**-0.1**
	baz=261,SNR=5.8								
C36M	**Paulatuk**	**31.23**	**35**	P		**P**		**22 11 48.1**	**+1.0**
C36M	**Paulatuk**	**31.23**	**35**	P		**P**		**22 11 46.9**	**-0.2**
	baz=266								
USRK	**Ussuriysk Ar.**	**31.66**	**274**	P		**P**		**22 11 51.4**	**+0.2**
	comp=Z,1.9nm,0.6s,baz=61,slow=10,SNR=7.0								
	comp=Z,1.9nm,0.6s								
VLA	**Vladivostok**	**32.30**	**273**	*i* P		**P**		**22 11 58.2**	**+1.4**
VLA				pmax	pmax				
	comp=Z,35nm,1.0s								
MAJO	**Matsushiro**	**32.41**	**257**	*e*P		**P**		**22 11 59.4**	**+1.5**
YKA	**Yellowknife Ar**	**35.79**	**47**	P		**P**		**22 12 27.3**	**+0.6**
	comp=Z,4.0nm,0.6s,baz=283,slow=8.2,SNR=29								
	comp=Z,4.0nm,0.6s								
YKA	**Yellowknife Ar**	**35.79**	**47**	P		**P**		**22 12 27.1**	**+0.4**
KSRS	**Korea Array**	**38.09**	**268**	P		**P**		**22 12 46.9**	**+0.6**
	comp=Z,1.4nm,0.7s,baz=54,slow=9.0,SNR=4.2								
	comp=Z,1.4nm,0.7s								
KBO	**Bosley Butte**	**39.10**	**81**	P		**P**		**22 12 54.5**	**-0.4**
HUMO	**Hull Mountain**	**39.64**	**80**	P		**P**		**22 13 00.5**	**+1.2**
I05D	**Terrebonne, OR**	**39.65**	**77**	P		**P**		**22 12 59.0**	**-0.4**
	baz=303								
EDM	**Edmonton**	**39.77**	**61**	P		**P**		**22 13 00.4**	**+0.2**
EDM	**Edmonton**	**39.77**	**61**	P		**P**		**22 13 00.4**	**+0.2**
EDM				pmax	pmax				
	comp=Z,10.0nm,0.6s								
EUNU	**Eureka**	**39.90**	**16**	P		**P**		**22 13 01.5**	**+0.5**
NEW	**Newport**	**40.05**	**69**	P		**P**		**22 13 02.5**	**-0.1**
NEW				IAmb		IAmb		22 13 02.7	
	comp=Z,4.2nm,0.8s								
NEW	**Newport**	**40.05**	**69**	P		**P**		**22 13 02.5**	**-0.1**
NEW				pmax	pmax				
	comp=Z,4.0nm,0.8s								
NEW	**Newport**	**40.05**	**69**	P		**P**		**22 13 01.7**	**-0.9**
	baz=300								
KHMM	**Horse Mountain**	**40.18**	**83**	P		**P**		**22 13 05.9**	**+2.1**
KHMM				IAmb		IAmb		22 13 18.4	
	comp=Z,10.0nm,1.0s								
L04D	**Klamath Falls**	**40.26**	**80**	P		**P**		**22 13 03.5**	**-1.0**
	baz=305								
J05D	**Fort Rock, OR**	**40.30**	**78**	P		**P**		**22 13 03.7**	**-1.1**
	baz=304								
K05A	**Summer Lake**	**40.82**	**79**	P		**P**		**22 13 10.3**	**+1.1**
WALA	**Waterton Lakes**	**41.47**	**66**	P		**P**		**22 13 14.0**	**-0.3**
MSO	**Missoula**	**42.64**	**69**	P		**P**		**22 13 22.8**	**-1.0**
MSO	**Missoula**	**42.64**	**69**	P		**P**		**22 13 22.3**	**-1.5**
	baz=303								
PNTR	**Pine Nut**	**43.78**	**82**	P		**P**		**22 13 34.2**	**+1.0**
PNTR				IAmb		IAmb		22 13 34.6	
	comp=Z,8.2nm,0.9s								
HLID	**Hailey**	**44.21**	**74**	P		**P**		**22 13 35.4**	**-1.0**
	baz=306								
EGMT	**Eagleton**	**44.36**	**66**	P		**P**		**22 13 36.4**	**-1.1**
	baz=303								
BMN	**Battle Mountai**	**44.40**	**79**	P		**P**		**22 13 38.1**	**+0.1**
BMN	**Battle Mountai**	**44.40**	**79**	P		**P**		**22 13 38.1**	**+0.1**
BMN				pmax	pmax				
	comp=Z,3.0nm,0.6s								
ULN	**Ulaanbaatar**	**44.49**	**294**	*d* iP		**P**		**22 13 39.1**	**+0.5**
ULN				pmax	pmax				
	comp=Z,2.0nm,0.6s								
BOZ	**Bozeman (W)**	**44.66**	**70**	P		**P**		**22 13 39.3**	**-0.6**
BOZ	**Bozeman (W)**	**44.66**	**70**	P		**P**		**22 13 39.3**	**-0.6**
BOZ				pmax	pmax				
	comp=Z,2.0nm,0.7s								
BOZ	**Bozeman (W)**	**44.66**	**70**	P		**P**		**22 13 38.8**	**-1.2**
	baz=305								
KVN	**Kaiserville**	**44.72**	**81**	P		**P**		**22 13 41.0**	**+0.4**
KVN	**Kaiserville**	**44.72**	**81**	P		**P**		**22 13 41.0**	**+0.4**
KVN				pmax	pmax				
	comp=Z,1.0nm,0.6s								
RYN	**Ryan**	**44.73**	**82**	P		**P**		**22 13 40.9**	**+0.3**
SONM	**Songino Array**	**44.88**	**295**	P		**P**		**22 13 42.5**	**+0.9**
	comp=Z,1.5nm,0.6s,baz=64,slow=7.7,SNR=14								
	comp=Z,1.5nm,0.6s								
SONM	**Songino Array**	**44.88**	**295**	P		**P**		**22 13 42.5**	**+0.9**
NVAR	**Mina Array Bea**	**44.99**	**82**	P		**P**		**22 13 43.0**	**+0.3**
	comp=Z,1.8nm,0.6s,baz=295,slow=7.3,SNR=16								
	comp=Z,1.8nm,0.6s								
NVAR	**Mina Array Bea**	**44.99**	**82**	P		**P**		**22 13 43.5**	**+0.8**
NV11	**Mina Array Sit**	**45.08**	**82**	P		**P**		**22 13 43.5**	**+0.1**
ELK	**Elko**	**45.40**	**77**	P		**P**		**22 13 46.2**	**+0.2**
ELK	**Elko**	**45.40**	**77**	P		**P**		**22 13 46.2**	**+0.2**
ELK				pmax	pmax				
	comp=Z,2.0nm,0.7s								
HHC	**Hu-ho-hao-te**	**45.97**	**284**	*e*P		**P**		**22 13 51.3**	**+1.1**
HHC				pmax	pmax				
	comp=Z,21nm,0.8s								
HHC				pmax	pmax				
	comp=Z,140nm,9.3s								
LCH	**Last Change Ra**	**46.15**	**83**	P		**P**		**22 13 52.1**	**+0.3**
R11A	**Troy Canyon, C**	**46.69**	**80**	P		**P**		**22 13 55.9**	**-0.2**
R11A	**Troy Canyon, C**	**46.69**	**80**	P		**P**		**22 13 55.8**	**-0.2**
	baz=309,SNR=5.7								
MPMC	**Manual Prospec**	**47.01**	**84**	P		**P**		**22 13 57.8**	**-0.7**
	baz=311								
FURC	**Furnace Creek,**	**47.12**	**83**	P		**P**		**22 13 58.9**	**-0.2**
	baz=311								
TPNV	**Topopah Spring**	**47.19**	**82**	P		**P**		**22 14 00.5**	**+0.7**
TPNV				IAmb		IAmb		22 14 01.2	
	comp=Z,5.4nm,0.8s								
TPNV	**Topopah Spring**	**47.19**	**82**	P		**P**		**22 14 00.5**	**+0.7**
TPNV				pmax	pmax				
	comp=Z,5.0nm,0.9s								
TPNV	**Topopah Spring**	**47.19**	**82**	P		**P**		**22 13 60.0**	**+0.1**
	baz=310,SNR=6.5								
DUG	**Dugway, Tooele**	**47.20**	**76**	P		**P**		**22 14 00.1**	**+0.2**
DUG	**Dugway, Tooele**	**47.20**	**76**	P		**P**		**22 14 00.1**	**+0.2**
DUG				pmax	pmax				
	comp=Z,2.0nm,0.7s								
DUG	**Dugway, Tooele**	**47.20**	**76**	P		**P**		**22 13 59.3**	**-0.6**
	baz=309								
LRMC	**Laurel Mtn Rad**	**47.27**	**85**	P		**P**		**22 14 00.2**	**-0.3**
	baz=311								
GWY	**Greenwater Val**	**47.43**	**83**	P		**P**		**22 14 02.3**	**+0.6**
PDAR	**Pinedale Array**	**47.53**	**71**	P		**P**		**22 14 01.9**	**-0.6**
	comp=Z,1.4nm,0.6s,baz=314,slow=3.4,SNR=12								
	comp=Z,1.4nm,0.6s								
PDAR	**Pinedale Array**	**47.53**	**71**	P		**P**		**22 14 02.1**	**-0.4**
PRN	**Pahroc Range**	**47.62**	**81**	P		**P**		**22 14 04.0**	**+0.9**
SHOC	**Shoshone, Teco**	**47.85**	**83**	P		**P**		**22 14 04.2**	**-0.6**
	baz=311								
GSC	**Goldstone, Bar**	**47.92**	**84**	P		**P**		**22 14 04.6**	**-0.8**
	baz=311								
CCUT	**Cedar City**	**48.55**	**79**	P		**P**		**22 14 10.6**	**+0.3**
GMRC	**Granite Mounta**	**48.97**	**84**	P		**P**		**22 14 12.9**	**-0.6**
	baz=312								
BELC	**Belle Mtn. Jos**	**49.29**	**85**	P		**P**		**22 14 15.4**	**-0.5**
	baz=312								
SPITS	**Spitsbergen Ar**	**49.42**	**355**	P		**P**		**22 14 16.0**	**-0.2**
SPITS				pmax	pmax				
	comp=Z,3.0nm,0.9s								
SPB2	**Spitsbergen Ar**	**49.42**	**355**	P		**P**		**22 14 16.2**	**0.0**
SPB2				IAmb		IAmb		22 14 21.6	
	comp=Z,7.2nm,1.0s								
IRM	**Iron Mountain**	**49.70**	**84**	P		**P**		**22 14 18.5**	**-0.5**
	baz=312								
BC3	**Big Chuckawall**	**49.85**	**85**	P		**P**		**22 14 19.3**	**-0.9**
	baz=313								
U15A	**North Rim**	**49.93**	**80**	P		**P**		**22 14 21.3**	**+0.4**
U15A				IAmb		IAmb		22 14 22.1	
	comp=Z,5.7nm,1.2s								
ULM	**Lac du Bonnet**	**50.52**	**56**	P		**P**		**22 14 24.2**	**-0.6**
	comp=Z,2.2nm,0.4s,baz=328,slow=7.3,SNR=3.3								
	comp=Z,2.2nm,0.4s								
ULM	**Lac du Bonnet**	**50.52**	**56**	P		**P**		**22 14 24.2**	**-0.6**
ULM				IAmb		IAmb		22 14 24.7	
	comp=Z,3.1nm,0.5s								
ULM	**Lac du Bonnet**	**50.52**	**56**	⇑ *i* P		**P**		**22 14 24.1**	**-0.7**
ULM				pmax	pmax				
	comp=Z,2.0nm,0.4s								
GLA	**Glamis**	**50.65**	**85**	P		**P**		**22 14 25.6**	**-0.4**
	baz=313								
PV20	**West Nyswonger**	**50.67**	**76**	P		**P**		**22 14 27.4**	**+1.0**
PV13	**Radium Mtn., P**	**50.88**	**76**	P		**P**		**22 14 27.8**	**-0.2**
PV13				IAmb		IAmb		22 14 28.2	
	comp=Z,7.5nm,0.7s								
AGMN	**Agassiz Nation**	**51.73**	**58**	P		**P**		**22 14 32.8**	**-1.0**
	baz=308								
SUMG	**Summit**	**52.85**	**13**	P		**P**		**22 14 42.6**	**+0.5**
SUMG				IAmb		IAmb		22 14 43.1	
	comp=Z,3.9nm,0.6s								
SUMG	**Summit**	**52.85**	**13**	P		**P**		**22 14 42.7**	**+0.5**
SUMG				pmax	pmax				
	comp=Z,4.0nm,0.6s								
SDCO	**Great Sand Dun**	**53.12**	**74**	P		**P**		**22 14 43.8**	**-0.8**
	baz=312								
T25A	**Trinidad**	**54.17**	**74**	P		**P**		**22 14 51.6**	**-0.6**
	baz=312								
EYMN	**Ely**	**54.21**	**56**	P		**P**		**22 14 51.6**	**-0.4**
EYMN	**Ely**	**54.21**	**56**	P		**P**		**22 14 51.2**	**-0.8**
	baz=310								
ECSD	**EROS Data Cent**	**54.25**	**63**	P		**P**		**22 14 51.7**	**-0.6**
	baz=311								
ANMO	**Albuquerque**	**54.44**	**77**	P		**P**		**22 14 53.5**	**-0.6**
	baz=313								
KURK	**Kurchatov**	**57.31**	**312**	P		**P**		**22 15 14.3**	**+0.4**
KURK	**Kurchatov**	**57.31**	**312**	P		**P**		**22 15 14.4**	**+0.4**
KURK				pmax	pmax				
	comp=Z,3.0nm,1.1s								
MNTX	**Cornudas Mount**	**57.34**	**79**	P		**P**		**22 15 14.9**	**+0.4**
MNTX	**Cornudas Mount**	**57.34**	**79**	P		**P**		**22 15 14.4**	**-0.1**
	baz=315								
WMQ	**Urumqi**	**57.57**	**301**	*e*P		**P**		**22 15 18.9**	**+2.9**
JFWS	**Jewell Farm**	**58.24**	**60**	P		**P**		**22 15 19.7**	**-0.9**
	baz=314								
MK31	**Makanchi Array**	**58.29**	**307**	P		**P**		**22 15 20.8**	**-0.1**
MK31	**Makanchi Array**	**58.29**	**307**	P		**P**		**22 15 20.8**	**-0.1**
MK31				pmax	pmax				
	comp=Z,1.0nm,1.0s								
MKAR	**Makanchi Array**	**58.29**	**307**	P		**P**		**22 15 20.6**	**-0.3**
	comp=Z,0.7nm,0.4s,baz=49,slow=6.3,SNR=14								
	comp=Z,0.7nm,0.4s								
MAKZ	**Makanchi**	**58.43**	**307**	P		**P**		**22 15 21.9**	**0.0**
MAKZ	**Makanchi**	**58.43**	**307**	P		**P**		**22 15 21.9**	**0.0**
MAKZ				pmax	pmax				
	comp=Z,1.0nm,0.9s								
H43A	**Windswept, Lux**	**58.46**	**57**	P		**P**		**22 15 21.0**	**-1.1**
E46A	**Sault Ste Mari**	**58.89**	**53**	P		**P**		**22 15 25.2**	**+0.2**
TX31	**Lajitas Ar. Si**	**60.05**	**80**	P		**P**		**22 15 33.2**	**-0.2**
TX31				IAmb		IAmb		22 15 33.6	
	comp=Z,4.4nm,0.6s								
TX32	**Lajitas Array**	**60.05**	**80**	P		**P**		**22 15 33.2**	**-0.2**
TXAR	**Lajitas Array**	**60.06**	**80**	P		**P**		**22 15 33.1**	**-0.2**
	comp=Z,1.1nm,0.5s,baz=304,slow=5.4,SNR=20								
	comp=Z,1.1nm,0.5s								
TXAR	**Lajitas Array**	**60.06**	**80**	P		**P**		**22 15 33.3**	**-0.1**
TXAR	**Lajitas Array**	**60.06**	**80**	P		**P**		**22 15 33.3**	**-0.1**
SCHQ	**Schefferville**	**60.30**	**37**	P		**P**		**22 15 33.9**	**-0.6**
	comp=Z,2.1nm,0.6s,baz=309,slow=5.6,SNR=8.1								
	comp=Z,2.1nm,0.6s								
SCHQ	**Schefferville**	**60.30**	**37**	P		**P**		**22 15 34.4**	**-0.2**
SCHQ				IAmb		IAmb		22 15 35.2	
	comp=Z,4.0nm,1.1s								
VLDQ	**Val d'Or**	**60.90**	**48**	P		**P**		**22 15 36.5**	**-2.1**
VLDQ				IAmb		IAmb		22 15 37.0	
	comp=Z,5.5nm,0.8s								
IVI	**Ivigtut**	**60.92**	**24**	P		**P**		**22 15 38.6**	**0.0**
ARU	**Arti**	**61.06**	**327**	*d* iP		**P**		**22 15 39.7**	**+0.1**
ARU								22 16 20.2	
ARU								22 17 54.5	
ARU					S	**S**		**22 23 47.4**	**+2.5**
ARU					SS	**SS**		**22 27 49.4**	**+3.0**
ARU					pmax	pmax			
	comp=Z,8.0nm,2.7s								
PZH	**PanZhiHua**	**61.68**	**277**	P		**P**		**22 15 46.3**	**+1.9**
PZH				pmax	pmax				
	comp=Z,10.0nm,0.9s								
PZH				pmax	pmax				
	comp=Z,100nm,5.3s								
W39A	**Magazine**	**61.70**	**68**	P		**P**		**22 15 43.5**	**-0.8**
	baz=316								
FCAR	**Ozark Folk Cen**	**62.15**	**67**	P		**P**		**22 15 45.9**	**-1.4**
FCAR				IAmb		IAmb		22 15 46.3	
	comp=Z,4.9nm,0.8s								
MIAR	**Mount Ida**	**62.29**	**69**	P		**P**		**22 15 47.4**	**-0.8**
MIAR				IAmb		IAmb		22 15 48.6	
	comp=Z,4.7nm,1.1s								
MIAR	**Mount Ida**	**62.29**	**69**	P		**P**		**22 15 47.4**	**-0.8**
MIAR				pmax	pmax				
	comp=Z,5.0nm,1.2s								
MIAR	**Mount Ida**	**62.29**	**69**	P		**P**		**22 15 47.3**	**-0.8**
	baz=316								
W41B	**Gary Mavity, V**	**62.59**	**67**	P		**P**		**22 15 48.6**	**-1.6**
	baz=316								
O48B	**Farmland**	**62.81**	**59**	P		**P**		**22 15 50.6**	**-1.0**
	baz=316								
P48A	**Milroy**	**63.25**	**60**	P		**P**		**22 15 53.6**	**-0.9**
DELO	**Deloro Mine**	**63.48**	**51**	P		**P**		**22 15 54.9**	**-1.0**
DELO				IAmb		IAmb		22 15 57.0	
	comp=Z,4.0nm,0.9s								
LATQ	**La Tuque**	**63.55**	**46**	P		**P**		**22 15 55.4**	**-0.8**
P49A	**Miami Univ. Ec**	**63.57**	**59**	P		**P**		**22 15 55.8**	**-0.7**
	baz=317								
TRQ	**Mont Tremblant**	**63.63**	**48**	P		**P**		**22 15 55.7**	**-1.3**
TRQ				IAmb		IAmb		22 15 56.5	
	comp=Z,3.1nm,0.6s								
PECO	**Prince Edward**	**64.21**	**51**	P		**P**		**22 15 59.8**	**-0.8**
PECO				IAmb		IAmb		22 16 00.7	
	comp=Z,4.1nm,0.9s								
J55A	**Hilton**	**64.31**	**52**	P		**P**		**22 15 59.8**	**-1.5**
WVT	**Waverly**	**64.38**	**64**	P		**P**		**22 16 01.1**	**-0.8**
	baz=317								
LMQ	**La Malbaie**	**64.50**	**44**	P		**P**		**22 16 01.7**	**-0.8**
LMQ				IAmb		IAmb		22 16 03.5	
	comp=Z,5.1nm,0.8s								
Q51A	**Peebles**	**64.67**	**59**	P		**P**		**22 16 03.7**	**0.0**
J56A	**Wolcott**	**64.77**	**51**	P		**P**		**22 16 03.5**	**-0.8**
LONY	**Lake Ozonia**	**64.83**	**49**	P		**P**		**22 16 02.5**	**-2.2**
LONY	**Lake Ozonia**	**64.83**	**49**	P		**P**		**22 16 03.4**	**-1.3**
	baz=319								
P52A	**Corning**	**64.85**	**57**	P		**P**		**22 16 03.9**	**-1.0**
	baz=318								
O53A	**New Philadelph**	**64.87**	**56**	P		**P**		**22 16 04.1**	**-0.9**
	baz=318								
AAK	**Ala-Archa**	**65.12**	**308**	*e*P		**P**		**22 16 07.4**	**+0.6**
AAK				pmax	pmax				
	comp=Z,1.0nm,0.9s								
M55A	**Ridgway**	**65.19**	**54**	P		**P**		**22 16 07.0**	**-0.1**
M55A				IAmb		IAmb		22 16 07.6	
	comp=Z,5.6nm,0.8s								
CLTN	**Cedars of Leba**	**65.23**	**63**	IAmb		IAmb		22 16 08.1	
	comp=Z,5.2nm,0.8s								
L56A	**Greenwood**	**65.28**	**53**	P		**P**		**22 16 07.7**	**0.0**
K57A	**Scipio Center**	**65.34**	**52**	P		**P**		**22 16 07.5**	**-0.6**
D62A	**Allapoint, All**	**65.41**	**44**	P		**P**		**22 16 07.6**	**-0.8**
D62A				IAmb		IAmb		22 16 08.6	
	comp=Z,5.6nm,1.1s								
NCB	**Newcomb**	**65.49**	**49**	P		**P**		**22 16 08.0**	**-1.0**
NCB				IAmb		IAmb		22 16 09.6	
	comp=Z,2.9nm,0.8s								
E62A	**Clayton Lake**	**65.56**	**45**	P		**P**		**22 16 08.7**	**-0.7**
E62A				IAmb		IAmb		22 16 09.2	
	comp=Z,3.3nm,0.7s								
J59A	**Piesco**	**65.75**	**50**	P		**P**		**22 16 09.2**	**-1.4**
BINY	**Binghamton**	**66.00**	**52**	P		**P**		**22 16 11.5**	**-0.8**
	baz=319								
M57A	**Sunshine Farm,**	**66.10**	**53**	P		**P**		**22 16 12.6**	**-0.3**
PQI	**Presque Isle**	**66.17**	**44**	P		**P**		**22 16 12.4**	**-0.8**
PQI				IAmb		IAmb		22 16 28.1	
	comp=Z,3.8nm,0.9s								
G62A	**West of Eustis**	**66.21**	**46**	P		**P**		**22 16 12.8**	**-0.7**
G62A				IAmb		IAmb		22 16 13.2	
	comp=Z,4.9nm,0.8s								
SSPA	**Standing Stone**	**66.25**	**54**	P		**P**		**22 16 13.4**	**-0.4**
SSPA	**Standing Stone**	**66.25**	**54**	P		**P**		**22 16 13.3**	**-0.6**
	baz=319								
LBNH	**Lisbon**	**66.34**	**48**	P		**P**		**22 16 13.6**	**-0.8**
LBNH				IAmb		IAmb		22 16 14.7	
	comp=Z,3.0nm,0.8s								
LBNH	**Lisbon**	**66.34**	**48**	P		**P**		**22 16 13.6**	**-0.8**
LBNH				pmax	pmax				
	comp=Z,3.0nm,0.9s								
LBNH	**Lisbon**	**66.34**	**48**	P		**P**		**22 16 13.8**	**-0.6**
	baz=321								
TZTN	**Tazewell**	**66.40**	**61**	P		**P**		**22 16 14.7**	**-0.2**
	baz=318								
H62A	**Milan**	**66.43**	**47**	P		**P**		**22 16 14.1**	**-0.8**
F63A	**Nahmakanta, Br**	**66.46**	**45**	P		**P**		**22 16 14.4**	**-0.7**
F63A				IAmb		IAmb		22 16 15.6	
	comp=Z,4.2nm,0.9s								
L59A	**Walton**	**66.46**	**51**	P		**P**		**22 16 14.6**	**-0.6**
L59A				IAmb		IAmb		22 16 15.7	
	comp=Z,4.7nm,0.8s								
BATG	**Bathurst New B**	**66.51**	**42**	P		**P**		**22 16 15.0**	**-0.4**
BATG				IAmb		IAmb		22 16 16.1	
	comp=Z,9.1nm,1.2s								
F64A	**Sherman**	**66.66**	**44**	P		**P**		**22 16 15.8**	**-0.6**
F64A				IAmb		IAmb		22 16 16.

baz=300
CNPM China Poot 1.01 119 Pn 22 18 29.0 +0.3
CNPM IAML 22 18 46.3
comp=N,3µm,0.5s
CNPM China Poot 1.01 119 Sn 22 18 45.1 0.0
BRLK Bradley Lake 1.08 104 Pn **Pn 22 18 29.8 +0.3**
BRLK IAML 22 18 47.8
comp=E,2µm,0.4s
BRLK Bradley Lake 1.08 104 Sn 22 18 46.4 0.0
N19K Bonanza Creek 1.08 317 Pn 22 18 29.1 -0.5
N19K **Sn 22 18 45.2 -1.3**
N19K Bonanza Creek 1.08 317 P **Pn 22 18 29.1 -0.5**
baz=136,SNR=236
N19K S **Sn 22 18 44.8 -1.7**
baz=136
O18K Koktuh Hills 1.14 262 Pn 22 18 29.6 -0.5
O18K IAML 22 18 46.9
comp=E,821nm,1.0s
O18K Koktuh Hills 1.14 262 P **Pn 22 18 29.6 -0.5**
baz=79,SNR=415
O18K S **Sn 22 18 46.2 -1.3**
baz=79
BRSE Bradley Lake S 1.16 104 Pn 22 18 30.5 +0.2
BRSE **Sn 22 18 48.4 +0.6**
BRSE Bradley Lake S 1.16 104 P **Pn 22 18 30.8 +0.5**
baz=286,SNR=63
BRSE S **Sn 22 18 47.3 -0.5**
baz=286
Q19K Cape Douglas, 1.16 198 Pn 22 18 30.3 0.0
Q19K **Sn 22 18 46.9 -1.0**
Q19K IAML 22 18 52.7
comp=N,953nm,0.6s
Q19K IAML 22 18 54.9
comp=E,1µm,1.0s
Q19K Cape Douglas, 1.16 198 P **Pn 22 18 30.1 -0.2**
baz=15,SNR=29
Q19K S **Sn 22 18 47.1 -0.8**
baz=15
CAPN Captain Cook N 1.16 50 Pn 22 18 31.8 +1.5
CAPN Captain Cook N 1.16 50 P **Pn 22 18 32.0 +1.7**
baz=233,SNR=5.1
CAPN S **Sn 22 18 51.1 +3.3**
baz=233
N20K Mount Spurr 1.23 17 P **Pn 22 18 31.1 0.0**
baz=200
N20K S **Sn 22 18 48.5 -0.8**
baz=200
SPU Mount Spurr 1.24 21 Pn 22 18 31.1 0.0
CKN Chakachatna No 1.26 18 Pn 22 18 31.6 +0.3
SPWE Spurr West 1.26 9 Pn 22 18 31.9 +0.4
SPBG Spurr Blockage 1.27 13 Pn 22 18 31.8 +0.3
SPBG **Sn 22 18 50.5 +0.5**
SPCP Crater Peak Br 1.30 18 Pn 22 18 32.2 +0.3
P18K Big Mountain, 1.31 242 Pn 22 18 31.5 -0.6
P18K Big Mountain, 1.31 242 P **Pn 22 18 31.4 -0.6**
baz=58,SNR=116
P18K S **Sn 22 18 49.3 -1.6**
baz=58
SPCG Spurr Capps Gl 1.35 20 Pn 22 18 32.6 +0.1
SLKM Skilak Lake 1.45 70 Pn 22 18 33.5 0.0
SLKM **Sn 22 18 52.9 -0.7**
Q20K Shuyak Island 1.46 168 P **Pn 22 18 33.9 +0.3**
baz=347,SNR=31
Q20K S **Sn 22 18 53.2 -0.5**
baz=347
SYI Shuyak Island 1.46 168 Pn 22 18 33.9 +0.2
SYI **Sn 22 18 53.3 -0.4**
STLK Strandline Lak 1.57 20 Pn 22 18 35.2 +0.2
N18K Kilae Creek 1.59 295 Pn 22 18 34.6 -0.6
N18K Kilae Creek 1.59 295 P **Pn 22 18 34.6 -0.6**
baz=113,SNR=256
N18K S **Sn 22 18 54.7 -1.8**
baz=113
KAPH Katmai Pasha 1.61 207 Pn 22 18 35.9 +0.4
SVW2 Sparrevohn 1.67 311 Pn 22 18 35.5 -0.7
O22K Cooper Landing 1.68 73 Pn 22 18 36.8 +0.5
O22K Cooper Landing 1.68 73 P **Pn 22 18 36.5 +0.2**
baz=257,SNR=29
O22K S **Sn 22 18 57.1 -1.3**
baz=257
KAHC Katmai Hardscr 1.74 218 Pn 22 18 37.1 0.0
Q18K Katmai Hardscr 1.74 218 P **Pn 22 18 37.1 -0.1**
baz=35
Q18K S **Sn 22 18 58.7 -1.2**
baz=35
KAHG Katmai Hook Gl 1.74 208 Pn 22 18 37.9 +0.7
FIS Fire Island 1.76 49 Pn 22 18 38.5 +1.3
FIS IAML 22 19 12.7
comp=N,1µm,0.5s
SEW Seward 1.77 86 Pn 22 18 37.0 -0.2
SEW Seward 1.77 86 P **Pn 22 18 37.2 -0.1**
baz=270,SNR=71
SEW S **Sn 22 18 59.1 -1.1**
baz=270
SUA Susitna One 1.80 36 Pn 22 18 38.3 +0.4
SUA Susitna One 1.80 36 IAML 22 19 04.4
comp=E,907nm,0.5s
SUA IAML 22 19 05.2
comp=N,588nm,0.4s
SUA Susitna One 1.80 36 P **Pn 22 18 38.4 +0.4**
baz=219,SNR=152
SUA S **Sn 22 19 01.4 +0.1**
baz=219
M20K Styx River 1.86 358 Pn 22 18 38.9 +0.3
M20K Styx River 1.86 358 P **Pn 22 18 38.7 +0.2**
baz=179,SNR=23
M20K S **Sn 22 19 01.6 -0.8**
baz=179
RC01 Rabbit Creek A 1.92 55 Pn 22 18 39.3 +0.2
RC01 Rabbit Creek A 1.92 55 P **Pn 22 18 39.4 +0.2**
baz=239,SNR=47
RC01 S **Sn 22 19 03.7 0.0**
baz=239
P17K Kvichak River 1.95 246 Pn 22 18 39.7 +0.1
P17K Kvichak River 1.95 246 P **Pn 22 18 39.7 +0.1**
baz=62,SNR=91
M19K Big River Lodg 2.00 340 Pn 22 18 40.0 -0.2
M19K Big River Lodg 2.00 340 P **Pn 22 18 40.1 -0.2**
baz=160
M19K S **Sn 22 19 04.7 -0.9**
baz=160
SKT Skwentna 2.08 19 Pn 22 18 41.2 0.0
SKT Skwentna 2.08 19 IAML 22 19 12.9
comp=N,207nm,0.4s
SKT Skwentna 2.08 19 P **Pn 22 18 41.3 0.0**
baz=201,SNR=31
SKT S **Sn 22 19 07.6 +0.3**
baz=201
O17K Koliganek Bris 2.10 265 Pn 22 18 41.1 -0.3
O17K Koliganek Bris 2.10 265 P **Pn 22 18 41.1 -0.3**
baz=81,SNR=83
KELA Mount Kelaz 2.14 223 Pn 22 18 42.1 0.0
M22K Willow 2.22 38 Pn 22 18 43.7 +0.8
M22K Willow 2.22 38 P **Pn 22 18 43.5 +0.6**
baz=221,SNR=23
M22K S **Sn 22 19 10.9 +0.5**
baz=221
KDAK Kodiak Island 2.27 175 P **Pn 22 18 42.5 -1.1**
comp=N,46nm,0.4s,baz=62,slow=10,SNR=124
KDAK S **Sn 22 19 09.1 -2.5**
comp=N,37nm,0.3s,baz=217,slow=20,SNR=5.6
KDAK Kodiak Island 2.27 175 Pn 22 18 43.1 -0.6
KDAK Kodiak Island 2.27 175 Sn 22 19 11.1 -0.4
KDAK IAML 22 19 12.4
comp=N,353nm,0.2s
KDAK Kodiak Island 2.27 175 P **Pn 22 18 42.8 -0.8**
baz=354
KDAK S **Sn 22 19 11.0 -0.6**
baz=354
Q16K King Salmon 2.33 236 P **Pn 22 18 44.5 +0.2**
baz=52,SNR=8.6
Q16K S **Sn 22 19 11.9 -1.0**
baz=52
L19K White Mountain 2.34 338 Pn 22 18 44.3 -0.3
L19K White Mountain 2.34 338 P **Pn 22 18 44.3 -0.3**
baz=157,SNR=79
L19K S **Sn 22 19 12.2 -1.2**
baz=157
PMR Palmer 2.45 49 Pn 22 18 45.5 -0.4
PMR Palmer 2.45 49 IAML 22 19 16.3
comp=N,364nm,0.2s
PMR IAML 22 19 16.7
comp=E,473nm,0.4s
PMR Palmer 2.45 49 P **Pn 22 18 45.5 -0.4**
baz=233,SNR=21
PMR S **Sn 22 19 14.6 -1.1**

baz=233
L20K Farewell, AK 2.49 350 Pn 22 18 46.8 +0.2
L20K Farewell, AK 2.49 350 P **Pn 22 18 46.8 +0.2**
baz=170,SNR=27
KNK Knik Glacier 2.61 56 Pn 22 18 47.5 -0.7
KNK Knik Glacier 2.61 56 P **Pn 22 18 47.4 -0.7**
baz=241,SNR=26
KNK S **Sn 22 19 17.9 -1.8**
baz=241
O16K Kokwok River B 2.63 263 Pn 22 18 48.2 -0.1
O16K Kokwok River B 2.63 263 P **Pn 22 18 48.2 -0.1**
baz=78,SNR=34
GHO Glory Hole Cre 2.64 47 Pn 22 18 48.1 -0.4
GHO IAML 22 19 21.6
comp=E,540nm,0.4s
GHO IAML 22 19 29.6
comp=N,407nm,0.6s
CUT Chulitna 2.71 28 Pn 22 18 49.9 +0.5
CUT Chulitna 2.71 28 IAML 22 19 27.0
comp=E,552nm,0.6s
CUT IAML 22 19 29.2
comp=N,305nm,0.6s
CUT Chulitna 2.71 28 P **Pn 22 18 49.7 +0.3**
baz=211,SNR=11
CUT S **Sn 22 19 21.8 -0.1**
baz=211
P16K Nushagak River 2.75 251 Pn 22 18 50.5 +0.7
P16K Nushagak River 2.75 251 P **Pn 22 18 50.4 +0.6**
baz=66,SNR=29
OHAK Old Harbor 2.83 184 Pn 22 18 50.6 -0.3
OHAK IAML 22 19 23.5
comp=N,130nm,0.5s
OHAK IAML 22 19 24.3
comp=E,114nm,0.4s
OHAK Old Harbor 2.83 184 P **Pn 22 18 49.9 -1.0**
baz=2.5
OHAK S **Sn 22 19 22.0 -2.5**
baz=2.5
SML Sawmill 2.88 50 Pn 22 18 51.0 -0.6
SML Sawmill 2.88 50 IAML 22 19 26.0
comp=N,311nm,1.0s
SML IAML 22 19 36.0
comp=E,289nm,1.2s
SML Sawmill 2.88 50 P **Pn 22 18 51.0 -0.6**
baz=234,SNR=20
SML S **Sn 22 19 24.1 -1.8**
baz=234
PPLA Purkeypile 2.90 7 Pn 22 18 53.1 +1.1
PPLA Purkeypile 2.90 7 P **Pn 22 18 53.2 +1.3**
baz=188,SNR=7.5
PPLA S **Sn 22 19 27.2 +0.7**
baz=188
N16K Nishlik Lake 2.92 281 Pn 22 18 52.2 0.0
N16K Nishlik Lake 2.92 281 P **Pn 22 18 52.1 0.0**
baz=96,SNR=43
R17K Ugashik Creek 2.99 218 Pn 22 18 53.9 +0.9
R17K Ugashik Creek 2.99 218 P **Pn 22 18 53.9 +0.9**
baz=34,SNR=20
R17K S **Sn 22 19 28.5 +0.2**
baz=34
GLI Glacier Island 3.03 71 Pn 22 18 52.0 -1.6
GLI Glacier Island 3.03 71 IAML 22 19 28.0
comp=N,353nm,0.7s
GLI IAML 22 19 32.7
comp=E,446nm,0.5s
GLI Glacier Island 3.03 71 P **Pn 22 18 51.9 -1.6**
baz=257
GLI S **Sn 22 19 26.5 -2.8**
baz=257
M23K Glacier View 3.11 53 Pn 22 18 54.0 -0.6
M23K Glacier View 3.11 53 P **Pn 22 18 54.0 -0.6**
baz=238,SNR=27
M23K S **Sn 22 19 29.9 -1.4**
baz=238
TT01 Tatalina 3.23 334 Pn 22 18 55.6 -0.6
HIN Hinchinbrook I 3.25 81 Pn **Pn 22 18 56.0 -0.5**
HIN IAML 22 19 36.4
comp=E,303nm,0.5s
HIN IAML 22 19 36.7
comp=N,312nm,0.6s
TTA Tatalina 3.25 335 Pn 22 18 55.9 -0.7
TTA Tatalina 3.25 335 P **Pn 22 18 55.8 -0.7**
baz=152,SNR=30
SCM Sheep Creek Mo 3.29 54 Pn 22 18 56.5 -0.6
SCM Sheep Creek Mo 3.29 54 IAML 22 19 39.4
comp=E,331nm,0.6s
SCM IAML 22 19 47.7
comp=N,374nm,1.1s
SCM Sheep Creek Mo 3.29 54 P **Pn 22 18 56.5 -0.6**
baz=240,SNR=23
SCM S **Sn 22 19 34.1 -1.5**
baz=240
FID Port Fidalgo 3.30 75 Pn 22 18 55.3 -1.9
FID Port Fidalgo 3.30 75 IAML 22 19 35.8
comp=E,316nm,0.4s
JPK Jack Peak 3.31 69 Pn 22 18 56.2 -1.1
K20K Telida 3.38 352 Pn 22 18 58.3 +0.1
K20K Telida 3.38 352 P **Pn 22 18 58.2 +0.1**
baz=171,SNR=20
Q23K Middleton Isla 3.41 97 Pn 22 18 58.9 +0.4
Q23K Middleton Isla 3.41 97 P **Pn 22 18 58.2 -0.4**
baz=283
Q23K S **Sn 22 19 37.0 -1.2**
baz=283
MID Middleton Isla 3.41 97 Pn 22 18 59.0 +0.5
CAST Castle Rocks 3.42 7 Pn 22 18 59.2 +0.4
CAST Castle Rocks 3.42 7 P **Pn 22 18 59.2 +0.4**
baz=188,SNR=23
WAT1 Susitna Watana 3.52 35 Pn 22 18 60.0 -0.1
WAT1 Susitna Watana 3.52 35 P **Pn 22 19 00.1 +0.1**
baz=220
WAT1 S **Sn 22 19 39.4 -1.6**
baz=220
SII Sitkinak Islan 3.54 191 Pn 22 19 00.1 -0.3
SII Sitkinak Islan 3.54 191 IAML 22 19 53.2
comp=E,126nm,0.9s
SII IAML 22 19 53.5
comp=N,115nm,0.9s
SII Sitkinak Islan 3.54 191 P **Pn 22 19 00.1 -0.3**
baz=9.3
SII S **Sn 22 19 39.6 -2.0**
baz=9.3
WAT6 Susitna Watana 3.59 42 Pn 22 19 00.7 -0.4
WAT6 Susitna Watana 3.59 42 P **Pn 22 19 00.8 -0.3**
baz=228,SNR=74
WAT6 S **Sn 22 19 40.9 -2.0**
baz=228
EYAK Cordova Ski Ar 3.63 79 Pn 22 19 01.7 +0.2
EYAK Cordova Ski Ar 3.63 79 P **Pn 22 19 00.8 -0.7**
baz=265
EYAK S **Sn 22 19 41.6 -2.0**
baz=265
TRF Thorofare Moun 3.66 19 Pn 22 19 02.0 0.0
TRF Thorofare Moun 3.66 19 IAML 22 19 44.8
comp=N,70nm,0.7s
TRF IAML 22 19 46.8
comp=E,51nm,0.5s
TRF Thorofare Moun 3.66 19 P **Pn 22 19 02.1 0.0**
baz=202,SNR=48
TRF S **Sn 22 19 43.2 -1.3**
baz=202
KTH Kantishna Hill 3.66 15 Pn 22 19 02.1 +0.1
KTH IAML 22 19 46.4
comp=N,85nm,0.9s
KTH IAML 22 20 22.6
comp=E,62nm,1.4s
DIV Divide 3.72 70 Pn 22 19 02.0 -0.7
KLU Klutina 3.75 64 Pn 22 19 02.5 -0.8
KLU Klutina 3.75 64 P **Pn 22 19 02.4 -0.9**
baz=251,SNR=14
KLU S **Sn 22 19 44.2 -2.5**
baz=251
CHUM Lake Minchumin 3.88 4 Pn 22 19 05.3 +0.5
CHUM Lake Minchumin 3.88 4 P **Pn 22 19 05.3 +0.5**
baz=185,SNR=12
M24K Tolsona, Glenn 3.90 55 Pn 22 19 05.3 +0.1
M24K Tolsona, Glenn 3.90 55 P **Pn 22 19 05.1 -0.1**
baz=241,SNR=26
M24K S **Sn 22 19 49.7 -0.4**
baz=241
RND Reindeer 3.91 28 Pn 22 19 05.0 -0.3
RND Reindeer 3.91 28 IAML 22 20 08.4
comp=E,55nm,0.6s
RND IAML 22 20 10.2
comp=N,58nm,0.9s
DHY Denali Highway 4.06 39 Pn 22 19 07.3 -0.1

DHY Denali Highway 4.06 39 IAML 22 19 55.6
comp=E,133nm,0.3s
DHY IAML 22 19 56.0
comp=N,132nm,0.5s
DHY Denali Highway 4.06 39 P **Pn 22 19 07.3 -0.1**
baz=224
MCK McKinley 4.17 25 Pn 22 19 09.5 +0.7
MCK McKinley 4.17 25 IAML 22 19 56.6
comp=E,38nm,0.5s
MCK IAML 22 20 29.6
comp=N,42nm,0.9s
MCK McKinley 4.17 25 P **Pn 22 19 08.6 -0.2**
baz=210
BPAW Bear Paw Mtn. 4.19 12 Pn 22 19 09.1 +0.1
BPAW Bear Paw Mtn. 4.19 12 P **Pn 22 19 08.7 -0.2**
baz=194,SNR=18
J20K Nowinta River 4.20 353 Pn 22 19 09.2 +0.2
J20K Nowinta River 4.20 353 P **Pn 22 19 09.2 +0.2**
baz=172,SNR=22
BMRM Bremner River 4.24 74 Pn 22 19 08.6 -1.1
BMRM Bremner River 4.24 74 IAML 22 20 17.7
comp=E,144nm,0.9s
BMRM IAML 22 20 25.3
comp=N,152nm,0.9s
BMRM Bremner River 4.24 74 P **Pn 22 19 08.5 -1.2**
baz=261
HMT Hamilton 4.36 82 Pn **Pn 22 19 11.8 +0.5**
N25K Chitina, Valde 4.39 65 Pn 22 19 11.0 -0.8
N25K Chitina, Valde 4.39 65 IAML 22 20 03.1
comp=N,140nm,0.4s
N25K IAML 22 20 03.8
comp=E,135nm,0.6s
N25K Chitina, Valde 4.39 65 P **Pn 22 19 11.0 -0.8**
baz=253,SNR=14
CHIR Chirikof Islan 4.46 200 Pn **Pn 22 19 11.6 -1.0**
CHIR IAML 22 19 59.3
comp=N,115nm,1.5s
CHIR IAML 22 21 22.0
comp=E,72nm,1.6s
HARP HAARP 4.46 55 Pn 22 19 12.5 -0.2
HARP HAARP 4.46 55 P **Pn 22 19 12.4 -0.2**
baz=242
BWN Browne 4.47 20 Pn 22 19 13.7 +0.9
BWN IAML 22 20 28.2
comp=N,66nm,0.9s
BWN IAML 22 20 50.0
comp=E,66nm,1.0s
SUCK Suckling Hills 4.61 86 Pn **Pn 22 19 15.0 +0.4**
SUCK IAML 22 20 14.6
comp=N,113nm,1.5s
PAX Paxson 4.64 47 Pn 22 19 15.1 -0.1
PAX Paxson 4.64 47 P **Pn 22 19 15.1 -0.1**
baz=234,SNR=23
GLB Gilahina Butte 4.71 69 Pn 22 19 15.5 -0.6
GLB Gilahina Butte 4.71 69 IAML 22 20 08.3
comp=N,93nm,0.6s
GLB IAML 22 20 11.7
comp=E,75nm,0.3s
GRIN Grindle Hills 4.83 83 Pn 22 19 18.0 +0.4
VRDI Verde Repeater 4.84 72 Pn 22 19 17.5 -0.4
VRDI Verde Repeater 4.84 72 IAML 22 20 14.2
comp=N,69nm,0.3s
VRDI IAML 22 20 14.4
comp=E,64nm,0.4s
KHIT Khitrov Hills 4.86 81 Pn 22 19 18.2 0.0
NEA2 Nenana 4.92 20 Pn 22 19 18.7 -0.1
NEA2 Nenana 4.92 20 P **Pn 22 19 18.7 -0.1**
baz=204,SNR=34
CRQM Cirque 4.93 77 IAML 22 20 16.6
comp=E,95nm,0.6s
CRQE Cirque 4.95 77 P **Pn 22 19 18.7 -0.7**
baz=266
WRH Wood River Hil 5.00 25 Pn 22 19 19.5 -0.4
WRH Wood River Hil 5.00 25 IAML 22 20 48.2
comp=E,22nm,1.0s
WAX Waxell Ridge 5.06 81 Pn 22 19 21.7 +0.9
MCARA McCarthy VSAT 5.07 70 Pn 22 19 20.6 -0.2
MCARA McCarthy VSAT 5.07 70 P **Pn 22 19 20.6 -0.3**
baz=259
SNH Sunshine Point 5.07 84 Pn 22 19 21.4 +0.5
SNH Sunshine Point 5.07 84 IAML 22 20 58.0
comp=E,90nm,2.2s
K24K Donnelly Dome 5.08 39 Pn 22 19 22.4 +1.4
K24K Donnelly Dome 5.08 39 P **Pn 22 19 22.4 +1.4**
baz=226,SNR=29
MLY Manley 5.12 11 Pn 22 19 21.9 +0.3
MLY Manley 5.12 11 P **Pn 22 19 20.9 -0.6**
baz=193,SNR=39
I21K Tanana 5.19 5 Pn 22 19 23.1 +0.7
I21K Tanana 5.19 5 P **Pn 22 19 22.3 -0.1**
baz=186
HDA Harding Lake 5.21 30 Pn 22 19 22.6 -0.2
HDA Harding Lake 5.21 30 IAML 22 20 20.2
comp=E,84nm,0.4s
HDA IAML 22 20 20.4
comp=N,83nm,0.4s
HDA Harding Lake 5.21 30 P **Pn 22 19 22.4 -0.4**
baz=216,SNR=19
CCB Clear Creek Bu 5.22 25 Pn 22 19 22.5 -0.3
CCB Clear Creek Bu 5.22 25 IAML 22 20 22.9
comp=E,22nm,0.4s
CCB IAML 22 20 23.3
comp=N,16nm,0.3s
PTPK Patty Peak 5.30 73 Pn 22 19 23.8 -0.4
ISLE Juniper Island 5.32 79 Pn 22 19 24.4 +0.1
ISLE Juniper Island 5.32 79 IAML 22 20 27.2
comp=E,73nm,0.8s
ISLE IAML 22 20 27.2
comp=N,87nm,0.6s
BALM Baldy 5.34 75 Pn 22 19 24.6 0.0
RIDG Independent Ri 5.34 42 Pn 22 19 24.7 +0.1
RIDG Independent Ri 5.34 42 IAML 22 20 28.0
comp=E,85nm,0.6s
RIDG IAML 22 20 41.8
comp=N,69nm,1.5s
RIDG Independent Ri 5.34 42 P **Pn 22 19 24.7 +0.1**
baz=230,SNR=24
PS08 TAPS Pump Stn8 5.36 30 Pn 22 19 24.3 -0.4
M26K Nabesna, AK 5.37 59 Pn 22 19 25.1 +0.1
M26K Nabesna, AK 5.37 59 P **Pn 22 19 25.1 +0.1**
baz=248,SNR=34
I23K Minto, Yukon-K 5.40 16 Pn 22 19 25.8 +0.6
I23K Minto, Yukon-K 5.40 16 P **Pn 22 19 25.6 +0.4**
baz=200,SNR=61
TCOL CIGO, UAF Yank 5.40 24 Pn 22 19 25.5 +0.2
TCOL CIGO, UAF Yank 5.40 24 P **Pn 22 19 25.3 0.0**
baz=209,SNR=8.6
COLA College 5.41 24 Pn **Pn 22 19 25.7 +0.4**
COLA College 5.41 24 P **Pn 22 19 25.4 0.0**
baz=209
MDM Murphy Dome 5.41 22 Pn 22 19 25.3 -0.1
BAGL Bagley Icefiel 5.44 80 Pn 22 19 26.6 +0.8
L26K Log Cabin Wild 5.49 53 P **Pn 22 19 26.9 +0.3**
baz=242,SNR=7.9
MESA MESA 5.51 84 Pn 22 19 28.1 +1.0
MESA MESA 5.51 84 P **Pn 22 19 27.3 +0.3**
baz=273
IL31 5.53 28 Pn 22 19 26.5 -0.5
ILAR Eielson Array 5.53 28 P **Pn 22 19 26.2 -0.8**
comp=N,17nm,0.4s,baz=213,slow=14,SNR=329
ILAR S **Sn 22 20 23.8 -5.5**
comp=N,5.1nm,0.5s,baz=215,slow=26,SNR=8.5
ILAR Eielson Array 5.53 28 Pn 22 19 26.8 -0.2
DOT Dot Lake 5.56 45 Pn 22 19 27.4 -0.1
GRNC Granite Creek 5.61 78 Pn 22 19 28.9 +0.5
YAH Yahtse 5.61 82 Pn 22 19 29.2 +0.8
H21K Melozitna Rive 5.64 1 Pn 22 19 28.6 0.0
H21K Melozitna Rive 5.64 1 P **Pn 22 19 28.6 0.0**
baz=181,SNR=14
BARN Barnard Glacie 5.68 75 Pn 22 19 29.6 +0.4
POKR Poker Plat Res 5.71 24 Pn 22 19 29.4 0.0
POKR Poker Plat Res 5.71 24 P **Pn 22 19 28.9 -0.5**
baz=210,SNR=9.6
SCRK Sand Creek 5.79 43 Pn 22 19 30.1 -0.6
SCRK Sand Creek 5.79 43 P **Pn 22 19 29.8 -0.9**
baz=231,SNR=17
J25K Salcha River, 5.80 34 Pn 22 19 30.5 -0.1
J25K Salcha River, 5.80 34 P **Pn 22 19 30.6 -0.1**
baz=221,SNR=52
CTG Chitna Glacier 5.82 76 P **Pn 22 19 31.7 +0.5**
baz=266,SNR=13
CTGM Chitina Glacie 5.83 76 Pn 22 19 32.2 +1.0
M27K Edge Creek, AK 5.85 62 Pn 22 19 31.8 +0.3
M27K Edge Creek, AK 5.85 62 P **Pn 22 19 31.7 +0.3**
baz=252,SNR=9.4
TABL Table Mountain 5.91 81 Pn 22 19 33.1 +0.7

H22K	**Ishtalitna Cre**	**5.93**	**6**	P		**Pn**	**22 19 32.6 +0.2**
	baz=188,SNR=8.7						
CHX	**Chaix Hills**	**5.94**	**85**			**Pn**	**22 19 33.6 +0.9**
LOGN	**Logan Glacier**	**5.98**	**77**			**Pn**	**22 19 33.9 +0.6**
IM03		**5.98**	**357**			**Pn**	**22 19 33.4 +0.3**
IMAR	**Indian Mountai**	**5.98**	**357**	Pn		**Pn**	**22 19 33.6 +0.5**
H23K	**Yukon River**	**6.02**	**14**			**Pn**	**22 19 34.3 +0.6**
H23K	**Yukon River**	**6.02**	**14**	P		**Pn**	**22 19 34.0 +0.3**
	baz=197,SNR=43						
SAMH	**Samovar Hills**	**6.10**	**84**			**Pn**	**22 19 35.5 +0.7**
L27K	**Beaver Creek,**	**6.13**	**56**			**Pn**	**22 19 35.3 +0.2**
L27K	**Beaver Creek**	**6.13**	**56**	P		**Pn**	**22 19 34.7 -0.4**
	baz=246,SNR=6.4						
BC03		**6.15**	**56**			**Pn**	**22 19 35.1 -0.2**
YUK2	**White River**	**6.17**	**68**			**Pn**	**22 19 35.9 +0.1**
H24K	**Noodor Dome**	**6.27**	**20**			**Pn**	**22 19 37.1 0.0**
H24K	**Noodor Dome**	**6.27**	**20**	P		**Pn**	**22 19 36.9 -0.1**
	baz=204,SNR=11						
J26L	**Joseph Creek**	**6.27**	**40**			**Pn**	**22 19 36.8 -0.3**
J26L	**Joseph Creek**	**6.27**	**40**	P		**Pn**	**22 19 36.6 -0.5**
	baz=229,SNR=17						
BVCY	**Beaver Creek**	**6.32**	**63**	P		**Pn**	**22 19 38.5 +0.8**
	baz=253,SNR=9.1						
YUK3	**Moose Creek**	**6.35**	**69**			**Pn**	**22 19 38.3 0.0**
YUK3	**Moose Creek**	**6.35**	**69**	P		**Pn**	**22 19 38.4 +0.1**
	baz=260,SNR=10						
PCA	**Pinnacle**	**6.37**	**84**			**Pn**	**22 19 39.1 +0.7**
PINM	**Pinnacle**	**6.37**	**84**	P		**Pn**	**22 19 38.8 +0.3**
	baz=275						
K27K	**Chicken**	**6.50**	**47**	P		**Pn**	**22 19 40.1 0.0**
	baz=237						
G21K	**Allakaket**	**6.51**	**358**	P		**Pn**	**22 19 40.5 +0.2**
	baz=178						
YUK8	**Steele Glacier**	**6.61**	**73**	P		**Pn**	**22 19 42.1 +0.2**
	baz=265						
BCPM	**Bancas Point**	**6.69**	**85**			**Pn**	**22 19 42.6 -0.2**
G23K	**Bananza Creek**	**6.83**	**10**	P		**Pn**	**22 19 45.2 +0.5**
	baz=193						
PNL	**Peninsula**	**6.85**	**87**			**Pn**	**22 19 45.1 +0.2**
PNL	**Peninsula**	**6.85**	**87**	P		**Pn**	**22 19 44.9 0.0**
	baz=279						
I26K	**Coal Creek Min**	**6.95**	**36**	P		**Pn**	**22 19 45.3 -0.9**
	baz=225						
YUK4	**Talbot Arm**	**7.15**	**73**	P		**Pn**	**22 19 49.9 +0.7**
	baz=265						
F21K	**Alatna River**	**7.22**	**358**	P		**Pn**	**22 19 50.4 +0.6**
	baz=178						
YUK6	**Outpost Mounta**	**7.27**	**76**			**Pn**	**22 19 50.6 -0.3**
YUK6	**Outpost Mounta**	**7.27**	**76**	P		**Pn**	**22 19 50.9 0.0**
	baz=269						
COLD	**Coldfoot**	**7.33**	**8**	Pn		**Pn**	**22 19 51.5 +0.2**
COLD	**Coldfoot**	**7.33**	**8**	P		**Pn**	**22 19 51.7 +0.4**
	baz=191						
ANM	**Nome**	**7.35**	**313**	P		**Pn**	**22 19 51.9 +0.3**
	baz=123						
DAWY	**Dawson**	**7.55**	**52**			**Pn**	**22 19 54.3 -0.1**
DAWY	**Dawson**	**7.55**	**52**	P		**Pn**	**22 19 54.9 +0.6**
	baz=244						
HYT	**Haines Junctio**	**7.69**	**77**			**Pn**	**22 19 55.9 -0.6**
HYT	**Haines Junctio**	**7.69**	**77**	P		**Pn**	**22 19 56.7 +0.3**
	baz=271						
N30M	**Aishikik Lake**	**7.91**	**73**	P		**Pn**	**22 19 58.4 -0.9**
	baz=267						
M30M	**Minto, Yukon**	**8.19**	**65**	Pn		**Pn**	**22 20 03.8 +0.8**
M30M	**Minto, Yukon**	**8.19**	**65**	P		**Pn**	**22 20 03.0 0.0**
	baz=259						
BM03	**Burnt Mountain**	**8.28**	**23**			**Pn**	**22 20 02.6 -1.6**
O30N	**Mendenhall**	**8.39**	**78**	P		**Pn**	**22 20 05.7 0.0**
	baz=272						
PLBC	**Pleasant Camp**	**8.41**	**87**	P		**Pn**	**22 20 06.6 +0.7**
	baz=281						
N31M	**Braeburn, Yuko**	**8.54**	**73**	Pn		**Pn**	**22 20 09.7 +1.9**
TOLK	**Toolik Lake Re**	**8.77**	**8**	Pn		**Pn**	**22 20 12.0 +1.2**
TOLK	**Toolik Lake Re**	**8.77**	**8**	P		**Pn**	**22 20 11.1 +0.3**
	baz=192						
TNA	**Tin City**	**8.79**	**315**	P		**Pn**	**22 20 11.1 0.0**
	baz=122						
WHY	**Whitehorse**	**8.99**	**78**	Pn		**Pn**	**22 20 14.3 +0.4**
WHY	**Whitehorse**	**8.99**	**78**	P		**Pn**	**22 20 13.7 -0.3**
	baz=274						
D23K	**Nanushuk River**	**9.02**	**5**	P		**Pn**	**22 20 15.1 +0.8**
	baz=188						
SIT	**Sitka**	**9.69**	**100**	P		**Pn**	**22 20 23.7 +0.4**
	baz=295						
P32M	**Atlin**	**9.71**	**84**	P		**Pn**	**22 20 23.4 -0.2**
	baz=281						
D25K	**Kavik River**	**9.73**	**14**	P		**Pn**	**22 20 23.8 -0.1**
	baz=200						
DLBC	**Dease Lake**	**11.84**	**88**	P		**Pn**	**22 20 54.2 +2.0**
	comp=N,3.1nm,0.3s,baz=276,slow=10,SNR=17						
DLBC				S		**Sn**	**22 22 55.5 -6.9**
	comp=N,1.9nm,0.5s,baz=252,slow=20,SNR=2.4						
YKA	**Yellowknife Ar**	**18.42**	**66**	P		**P**	**22 22 14.2 +0.9**
	comp=N,3.8nm,0.5s,baz=277,slow=9.9,SNR=52						
YKA				pP		**pP**	**22 22 32.4 -1.6**
	comp=N,0.9nm,0.6s,baz=274,slow=11,SNR=4.6						
YKA				PcP		**PcP**	**22 26 39.0 +0.5**
	comp=N,0.3nm,0.4s,baz=286,slow=1.4,SNR=5.0						
NEW	**Newport**	**23.74**	**104**	P		**P**	**22 23 11.2 +2.4**
	comp=N,2.5nm,0.7s,baz=304,slow=7.7,SNR=4.4						
	comp=N,2.5nm,0.7s						
SEY	**Seymchan**	**25.59**	**300**	P		**P**	**22 23 27.1 +1.9**
	comp=N,1.0nm,0.5s,baz=68,slow=11,SNR=4.3						
	comp=N,1.0nm,0.5s						
PETK	**Petropavlovsk-**	**27.47**	**278**	P		**P**	**22 23 42.9 +0.6**
	comp=N,0.8nm,0.6s,baz=65,slow=14,SNR=1.7						
	comp=N,0.8nm,0.6s						
TXAR	**Lajitas Array**	**44.98**	**111**	P		**P**	**22 26 10.6 -0.4**
	comp=N,0.1nm,0.4s,baz=341,slow=7.9,SNR=2.1						
	comp=N,0.1nm,0.4s						
MJAR	**Matsushiro Arr**	**48.79**	**274**	LR		LR	22 46 54.5
	comp=N,49nm,20.2s,baz=54,slow=35						
ARCES	**ARCESS Array B**	**50.72**	**1**	P		**P**	**22 26 54.0 -0.6**
	comp=N,0.6nm,0.6s,baz=7.6,slow=8.2,SNR=3.7						
	comp=N,0.6nm,0.6s						
KSRS	**Korea Array**	**53.19**	**283**	LR		LR	22 50 58.6
	comp=N,21nm,19.2s,baz=65,slow=37						
SONM	**Songino Array**	**54.78**	**306**	P		**P**	**22 27 26.2 +1.3**
	comp=N,2.3nm,0.8s,baz=46,slow=6.6,SNR=12						
	comp=N,2.3nm,0.8s						
ZALV	**Zalesovo Beam**	**57.36**	**324**	P		**P**	**22 27 42.5 -0.5**
	comp=N,2.3nm,0.5s,baz=36,slow=7.4,SNR=11						
	comp=N,2.3nm,0.5s						
FINES	**FINESS Array B**	**58.85**	**1**	P		**P**	**22 27 53.5 +0.3**
	comp=N,0.9nm,0.7s,baz=349,slow=5.8,SNR=5.1						
	comp=N,0.9nm,0.7s						
MKAR	**Makanchi Array**	**64.42**	**321**	P		**P**	**22 28 30.4 -0.5**
	comp=N,0.3nm,0.6s,baz=45,slow=6.3,SNR=3.8						
	comp=N,0.3nm,0.6s						
ESDC	**Sonseca Array**	**77.42**	**24**	P		**P**	**22 29 49.3 -0.2**
	comp=N,0.5nm,0.8s,baz=340,slow=7.3,SNR=2.4						
	comp=N,0.5nm,0.8s						
BOSA	**Boshof**	**148.56**	**3**	PKPbc		**PKPbc**	**22 37 39.4 -1.0**
	comp=N,2.0nm,0.9s,baz=331,slow=3.0,SNR=3.8						
QSPA	**South Pole Qui**	**149.83**	**180**	PKPbc		**PKPbc**	**22 37 42.5 +0.3**
	comp=N,2.0nm,0.6s,baz=134,slow=1.7,SNR=18						

*IDC **24** 22:30:51.3±1.7,29.01°S×177.52°W,h48km±12km,mb4.0/8, mbtmp4.2/8,MS3.7/3,Error ellipse: s-maj=27.2km s-min=21.6km az=58.0*

*NEIC **24** 22:30:53.6±2.3,29.33°S±0.04°×177.64°W±0.09, h56km±5km, mb4.5/25,Error ellipse: s-maj=12.8km s-min=1.6km az=116.0*

ISC 24 22:30:52.2±0.6,29°30S±0.06°×177°55W±0.10,h52km,n77, σ1°44/69,mb4.4/13,MS3.6/3,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RAO	**Raoul Island**	**0.32**	**279**	P		**Pn**	**22 31 02.4**	**+0.6**
	18μm,0.3s,baz=103,slow=18,SNR=248							
RAO				S		**Sn**	**22 31 11.3**	**+2.7**
	40μm,0.4s,baz=94,slow=23,SNR=27							
RAO	**Raoul Island**	**0.32**	**279**			**Pn**	**22 31 02.5**	**+0.8**
RAO						**Sn**	**22 31 10.4**	**+1.8**
MXZ	**Matakaoa Point**	**8.94**	**202**	Pn		**Pn**	**22 32 59.5**	**+0.9**
URZ	**Urewera**	**9.97**	**205**	P		**Pn**	**22 33 10.0**	**-2.8**
	2.0nm,0.3s,baz=114,slow=19,SNR=1.2							
URZ				S		**Sn**	**22 35 00.6**	**-2.7**
	19nm,0.4s,baz=258,slow=20,SNR=9.3							
URZ	**Urewera**	**9.97**	**205**			**Pn**	**22 33 13.3**	**+0.4**
URZ						**Sn**	**22 35 02.6**	**-0.7**
BKZ	**Black Stump Fm**	**11.00**	**205**	Pn		**Pn**	**22 33 25.0**	**-1.9**
MSVF	**Nonsavu**	**12.20**	**340**	P		**Pn**	**22 33 44.0**	**+0.6**
	9.3nm,0.8s,baz=147,slow=16,SNR=6.5							
BFZ	**Birch Farm**	**12.44**	**202**			**Pn**	**22 33 45.0**	**-1.5**
MSWZ	**Moikau Station**	**13.43**	**204**	Pn		**Pn**	**22 34 00.4**	**+0.3**
PLWZ	**Palliser**	**13.56**	**204**	Pn		**Pn**	**22 34 03.9**	**+2.0**
TUWZ	**Tuamarina**	**13.94**	**207**	Pn		**Pn**	**22 34 07.1**	**+0.2**
NNZ	**Nelson**	**14.00**	**209**	Pn		**Pn**	**22 34 06.4**	**-1.3**
QRZ	**Quartz Range**	**14.06**	**213**	Pn		**Pn**	**22 34 08.1**	**-0.5**
BSWZ	**Blackbirch Sta**	**14.21**	**207**	P		**P**	**22 34 14.4**	**-2.2**
THZ	**Tophouse**	**14.65**	**209**	Pn		**Pn**	**22 34 17.4**	**+1.1**
KHZ	**Kahutara**	**14.93**	**206**	P		**P**	**22 34 24.6**	**0.0**
LTZ	**Lake Taylor**	**15.75**	**209**	P		**Pn**	**22 34 32.4**	**+1.8**
LTZ				IAmb		IAmb	22 34 43.4	
	comp=Z,34nm,1.4s							
DZM	**Mont Dzumac**	**16.11**	**293**	Pn		**Pn**	**22 34 36.0**	**+0.6**
MQZ	**McQueen's Vall**	**16.37**	**206**	Pn		**Pn**	**22 34 37.8**	**-0.6**
MQZ				IAmb		IAmb	22 34 46.6	
	comp=Z,74nm,1.4s							
RPZ	**Rata Peaks**	**17.03**	**209**	P		**Pn**	**22 34 44.2**	**-2.4**
	comp=Z,10nm,0.9s,baz=44,slow=17,SNR=2.8							
RPZ				S		Sn	22 37 40.2	-15
	comp=Z,9.9nm,1.0s,baz=244,slow=21,SNR=1.9							
RPZ	**Rata Peaks**	**17.03**	**209**	IAmb		IAmb	22 35 12.6	
	comp=Z,14nm,0.9s							
FOZ	**Fox Glacier**	**17.43**	**212**	Pn		**Pn**	**22 34 49.9**	**-1.8**
FOZ				IAmb		IAmb	22 35 22.1	
	comp=Z,58nm,1.3s							
ODZ	**Otahua Downs**	**18.28**	**208**	P		**P**	**22 35 01.8**	**+0.1**
ODZ				IAmb		IAmb	22 35 16.4	
	comp=Z,31nm,1.3s							
ARMA	**Armidale**	**26.71**	**260**	P		**P**	**22 36 28.5**	**+1.6**
TAU	**Tasmania Unive**	**31.22**	**235**	P		**P**	**22 37 08.8**	**+2.1**
TOO	**Toolangi**	**31.77**	**245**	P		**P**	**22 37 12.2**	**+0.7**
CTA	**Charters Tower**	**34.03**	**277**	P		**P**	**22 37 31.0**	**-0.5**
	comp=Z,2.3nm,0.5s,baz=98,slow=10,SNR=6.1							
CTA				LR		LR	22 49 45.8	
	comp=Z,95nm,18.3s,baz=83,slow=33							
	comp=Z,2.3nm,0.5s							
CTAO	**Charters Tower**	**34.03**	**277**	P		**P**	**22 37 31.1**	**-0.3**
CTAO				IAmb		IAmb	22 37 49.7	
	comp=Z,9.3nm,1.2s							
STKA	**Stephens Creek**	**35.12**	**255**	P		**P**	**22 37 41.8**	**+1.0**
	comp=Z,1.7nm,0.5s,baz=110,slow=13,SNR=5.7							
STKA				LR		LR	22 49 30.5	
	comp=Z,128nm,20.5s,baz=36,slow=32							
	comp=Z,1.7nm,0.5s							
PMG	**Port Moresby**	**38.51**	**294**	LR		LR	22 51 10.6	
	comp=Z,88nm,20.5s,baz=139,slow=32							
AS31	**Alice Springs**	**43.57**	**266**	P		**P**	**22 38 51.0**	**-0.4**
ASAR	**Alice Springs**	**43.57**	**266**	P		**P**	**22 38 49.2**	**-2.1**
WB2	**Warramunga Arr**	**44.45**	**271**	P		**P**	**22 38 57.1**	**-1.3**
WB2				IAmb		IAmb	22 39 01.0	
	comp=Z,11nm,1.4s							
WRA	**Warramunga Arr**	**44.46**	**271**	P		**P**	**22 38 56.1**	**-2.4**
	comp=Z,1.2nm,0.4s,baz=110,slow=7.2,SNR=21							
WRA				PcP		**PcP**	**22 40 41.0**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=128,slow=3.2,SNR=2.7							
	comp=Z,1.2nm,0.4s							
WRA	**Warramunga Arr**	**44.46**	**271**	P		**P**	**22 38 56.3**	**-2.2**
WB0	**Warramunga Arr**	**44.48**	**271**	P		**P**	**22 38 57.0**	**-1.6**
WB0				IAmb		IAmb	22 39 38.5	
	comp=Z,7.3nm,1.1s							
FORT	**Forrest**	**46.71**	**254**	P		**P**	**22 39 15.7**	**-0.5**
SBA	**Scott Base**	**49.16**	**184**	P		**P**	**22 39 38.0**	**+3.6**
SBA				IAmb		IAmb	22 40 00.3	
	comp=Z,5.4nm,1.4s							
VNDA	**Vanda**	**49.22**	**186**	P		**P**	**22 39 37.2**	**+2.3**
KNRA	**Kununurra**	**51.02**	**273**	P		**P**	**22 39 48.0**	**-1.4**
KNRA				IAmb		IAmb	22 39 48.2	
	comp=Z,12nm,1.1s							
CASY	**Casey**	**56.29**	**208**	P		**P**	**22 40 26.5**	**-0.6**
CASY				IAmb		IAmb	22 40 28.5	
	comp=Z,4.0nm,0.8s							
QSPA	**South Pole Qui**	**60.80**	**180**	P		**P**	**22 40 59.8**	**+1.1**
	comp=Z,1.7nm,0.6s,baz=110,slow=8.3,SNR=18							
	comp=Z,1.7nm,0.6s							
QSPA	**South Pole Qui**	**60.80**	**180**	P		**P**	**22 41 00.4**	**+1.6**
QSPA				IAmb		IAmb	22 41 27.1	
	comp=Z,5.7nm,1.1s							
GIRL	**Giralia**	**60.93**	**259**	P		**P**	**22 41 01.0**	**+0.9**
TOLI2	**Tolitoli**	**66.10**	**286**	P		**P**	**22 41 33.2**	**-1.2**
MAW	**Mawson**	**73.47**	**200**	P		**P**	**22 42 19.2**	**+0.4**
	comp=Z,1.6nm,0.7s,baz=153,slow=6.8,SNR=2.2							
	comp=Z,1.6nm,0.7s							
MJAR	**Matsushiro Arr**	**77.57**	**325**	P		**P**	**22 42 40.3**	**-2.4**
	comp=Z,2.1nm,0.7s,baz=153,slow=5.9,SNR=5.1							
	comp=Z,2.1nm,0.7s							
TROLL	**Troll, Antarti**	**78.97**	**180**	P		**P**	**22 42 50.4**	**+0.2**
SNAA	**Sanae**	**79.24**	**178**	P		**P**	**22 42 49.6**	**-1.9**
VNA3	**Neumayer Olymp**	**79.37**	**176**	P		**P**	**22 42 51.8**	**-0.4**
VNA1	**Neumayer--Stat**	**80.04**	**176**	P		**P**	**22 42 55.0**	**-0.8**
H03S2	**Juan Fernandez**	**80.74**	**124**	T		T	00 12 44.2	
	baz=238							
H03S1	**Juan Fernandez**	**80.76**	**124**	T		T	00 12 44.7	
	baz=238							
H03S3	**Juan Fernandez**	**80.76**	**124**	T		T	00 12 44.0	
	baz=238							
H03N3	**Juan Fernandez**	**80.93**	**123**	T		T	00 12 51.8	
	baz=244,slow=73,SNR=11							
H03N2	**Juan Fernandez**	**80.93**	**123**	T		T	00 12 49.5	
	baz=244,slow=73,SNR=8.1							
H03N1	**Juan Fernandez**	**80.95**	**123**	T		T	00 12 48.8	
	baz=244,slow=73,SNR=14							
PLCA	**Paso Flores**	**82.97**	**133**	P		**P**	**22 43 12.5**	**+0.5**
	comp=Z,1.9nm,0.8s,baz=228,slow=6.5,SNR=3.7							
	comp=Z,1.9nm,0.8s							
PLCA	**Paso Flores**	**82.97**	**133**	IAmb		IAmb	22 43 19.8	
	comp=Z,11nm,1.5s							
PETK	**Petropavlovsk-**	**84.85**	**345**	P		**P**	**22 43 18.8**	**-2.1**
	comp=Z,1.7nm,0.6s,baz=124,slow=7.9,SNR=4.4							
	comp=Z,1.7nm,0.6s							
MKAR	**Makanchi Array**	**117.36**	**310**	PKP		**PKPdf**	**22 49 31.7**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=176,slow=0.8,SNR=11							
BOSA	**Boshof**	**118.42**	**203**	PKP		**PKPdf**	**22 49 35.9**	**+1.3**
	comp=Z,1.5nm,0.9s,baz=166,slow=4.2,SNR=4.1							
ARCES	**ARCESS Array B**	**137.60**	**348**	PKP		**PKPdf**	**22 50 08.2**	**-1.3**
	comp=Z,2.0nm,0.9s,baz=330,slow=3.1,SNR=1.9							
H10N3	**ASCENSION HYDR**	**139.62**	**154**	T		T	01 27 23.6	
	baz=206,slow=74							
H10N1	**ASCENSION HYDR**	**139.63**	**154**	T		T	01 27 24.0	
	baz=206,slow=74							
H10N2	**ASCENSION HYDR**	**139.64**	**154**	T		T	01 27 24.9	
	baz=206							
FINES	**FINESS Array B**	**144.25**	**341**	PKhKP		PKPpre	22 50 16.7	
	comp=Z,2.5nm,0.8s,baz=75,slow=3.7,SNR=7.6							
KBZ	**Khabaz**	**144.81**	**305**	PKP		**PKPab**	**22 50 22.3**	**0.0**
	comp=Z,1.8nm,0.7s,baz=86,slow=3.7,SNR=4.4							
NB2	**NORSAR Subarra**	**147.72**	**352**	PKP		**PKPdf**	**22 50 28.1**	**+0.4**
	comp=Z,1.1nm,0.6s,baz=18,slow=3.0							
NOA	**NORSAR Array B**	**147.72**	**352**	PKPbc		**PKPdf**	**22 50 27.5**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=14,slow=4.4,SNR=6.3							
HFS	**Hagfors**	**148.25**	**349**	PKPbc		**PKPdf**	**22 50 28.9**	**+0.4**
	comp=Z,3.0nm,0.6s,baz=56,slow=5.6,SNR=12							
ASF	**Jabal al Asfar**	**150.33**	**284**	PKPbc		**PKPbc**	**22 50 38.2**	**+0.2**
	comp=Z,4.5nm,0.6s,baz=147,slow=3.1,SNR=11							
AKASG	**Malin Array Be**	**150.65**	**324**	PKPbc		**PKPbc**	**22 50 37.9**	**-0.2**
	comp=Z,4.5nm,0.5s,baz=46,slow=3.4,SNR=15							
MMAI	**Mount Meron Ar**	**151.62**	**286**	PKPbc		**PKPbc**	**22 50 40.1**	**-1.0**
	comp=Z,5.5nm,0.5s,baz=76,slow=7.0,SNR=42							
BRTR	**Keskin Array B**	**152.40**	**300**	PKPbc		**PKPbc**	**22 50 43.0**	**+0.3**
	comp=Z,1.9nm,0.6s,baz=152,slow=4.1,SNR=7.8							
CLL	**Collm**	**156.64**	**343**	*e*PKPab		**PKPab**	**22 51 12.0**	**+1.6**
TORD	**Torodi Ar. Bea**	**163.91**	**177**	PKPab		**PKPab**	**22 51 42.6**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=190,slow=3.1,SNR=3.3							

MAN 24 22:42:34.0,14.73N×119.87E,h24km,mb3.8,ML2.5, MS2.0,1D,Luzon

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BOLP	**Bolinao**	**1.65**	**1**	*e*P		Pn	22 43 00.9	+1.3
BOLP				*e*S			22 43 21.1	

*DNK **24** 22:43:06.8±3.7,57.2°N×33.64°W,h0km±242km,mb4.2*

*IDC **24** 22:43:08.8±0.4,57.36°N×33.32°W,h0km,mb4.4/35, mbtmp4.4/39,ML3.8/4,MS4.1/63,Error ellipse: s-maj=13.3km s-min=8.6km az=177.0*

*GCMT **24** 22:43:09.3±0.3,57.45N±0.04×33.14W±0.03,h12km±1km, MW4.9/90,Moment Tensor Solution. s17,c20; s90,c138; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-2.61±.21; Mθθ-0.33±.13; Mφφ2.94±.15; Mrθ0.80±.47; Mθφ0.27±.09; Mφr-0.42±.35; Best double couple: M=2.94400×10^16 NP1:φs202.00000°,δ44.00000°,λ-64.00000°. NP2: φs347.00000°,δ51.00000°,λ-113.00000°. Principal axes: T 2.9840, Plg4.0000°, Azm94.0000°; N -0.0830, Plg18.0000°, Azm2.0000°; P -2.9040, Plg72.0000°, Azm195.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **24** 22:43:11.3±1.2,57.40N±0.08×33.4W±0.1,h10km±1km, mb4.8/528 Error ellipse: s-maj=13.8km s-min=11.3km az=174.0*

ISC 24 22:43:09.8±1.2,57°39N±0.05×33°28W±0.04,h6km±7km, n930,σ0§93/846,mb4.8/315,MS4.2/74,17C-12D, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NRS	**Narsarsuaq**	**7.28**	**306**	Pn		**Pn**	**22 44 56.2**	**-0.3**
ANGG	**Ammassalik, Gr**	**8.52**	**348**			**Pn**	**22 45 13.1**	**-0.3**
IVI	**Ivigtut**	**8.52**	**303**	Pn		**Pn**	**22 45 14.2**	**+0.6**
BORG	**Borgarnes**	**9.37**	**33**	Pn		**Pn**	**22 45 27.2**	**+2.0**
	2.9nm,0.3s,baz=220,slow=7.8,SNR=14							
BORG				Sn		**Sn**	**22 47 11.2**	**+0.5**
	0.5nm,0.3s,baz=68,slow=19,SNR=5.7							
BORG				LR		LR	22 48 01.5	
	comp=Z,2μm,20.4s,baz=268,slow=31							
	36nm,0.8s							
DY2G	**Dye2**	**10.95**	**332**	*i* P		**Pn**	**22 45 44.8**	**-2.2**
DY2G				IAmb		IAmb	22 45 57.2	
	comp=Z,15nm,0.8s							
ICESG	**Greenland Ices**	**12.08**	**349**	*i* P		**Pn**	**22 46 03.5**	**+0.9**
ICESG				IAmb		IAmb	22 46 08.1	
	comp=Z,7.3nm,0.8s							
SFJD	**Kangerlussuaq**	**12.53**	**327**	LR		LR	22 50 13.3	
	comp=Z,1μm,19.3s,baz=136,slow=34							
SFJD	**Kangerlussuaq**	**12.53**	**327**	Pn		**Pn**	**22 46 08.1**	**-0.2**
SUMG	**Summit**	**15.40**	**354**	Pn		**Pn**	**22 46 46.7**	**-1.0**
SUMG				IAmb		IAmb	22 46 56.9	
	comp=Z,58nm,1.5s							
SUMG	**Summit**	**15.40**	**354**	*i* P		**Pn**	**22 46 46.6**	**-1.0**
SUMG				IAmb		IAmb	22 46 59.6	
	comp=Z,6.6nm,0.8s							
DRLN	**Deer Lake**	**16.53**	**251**	P		**P**	**22 47 04.6**	**-0.1**
DRLN				IAmb		IAmb	22 47 06.5	
	comp=Z,59nm,1.0s							
ESK	**Eskdalemuir**	**16.73**	**84**	Pn		**Pn**	**22 47 05.5**	**+0.9**
EKA	**Eskdalemuir Ar**	**16.75**	**84**	Pn		**Pn**	**22 47 03.5**	**-1.3**
	baz=293,slow=12							
EKA				LR		LR	22 52 26.1	
	comp=Z,1μm,18.6s,baz=252,slow=33							
	comp=Z,3.1nm,0.7s							
JMIC	**Jan Mayen**	**17.18**	**28**	LR		LR	22 52 03.7	
	comp=Z,284nm,20.2s,baz=232,slow=31							
DBG	**Daneborg**	**17.73**	**12**	*i* P		**P**	**22 47 17.5**	**-0.3**
H07N1	**FLORES T-PHASE**	**17.76**	**175**	T		T	23 05 05.5	
	SNR=7.0							
UPNV	**Upernavik**	**17.98**	**338**	*i* P		**P**	**22 47 20.5**	**-0.1**
FRB	**Frobisher Bay**	**18.27**	**305**	P		**Pn**	**22 47 22.4**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=101,slow=12,SNR=4.5							
FRB				LR		LR	22 53 29.5	
	comp=Z,686nm,18.4s,baz=73,slow=34							
	comp=Z,12nm,0.8s							
SCHQ	**Schefferville**	**18.77**	**276**	P		**P**	**22 47 29.0**	**-0.4**
	comp=Z,0.7nm,0.3s,baz=75,slow=7.6,SNR=16							
SCHQ				LR		LR	22 53 36.4	
	comp=Z,1μm,18.5s,baz=94,slow=34							
	comp=Z,15nm,0.8s							
SCHQ	**Schefferville**	**18.77**	**276**	P		**P**	**22 47 29.1**	**-0.4**
DAG	**Danmarks Havn**	**20.16**	**10**	*i* P		Pn	22 47 45.9	-0.3
GBN	**Guysborough**	**21.12**	**248**	P		**P**	**22 47 54.8**	**-0.3**
PGAV	**Gavieira, Arco**	**22.17**	**123**	*e*LQ		LQ	22 52 10.3	
PGAV				*e*LR		LR	22 53 17.7	
	comp=Z,818nm,18.0s							
BATG	**Bathurst New B**	**22.22**	**257**	P		**P**	**22 48 06.3**	**-0.6**
BATG				IAm

PESTR **Estremoz** 24.99 127 *e*P P 22 48 34.9 +0.8
comp=Z,35nm,2.0s
PESTR **Estremoz** 24.99 127 P P 22 48 33.9 -0.3
PESTR IAmb IAmb 22 48 38.5
comp=Z,27nm,1.5s
F62A **Pittston Farm,** 25.18 259 P P 22 48 35.6 -0.1
PKME **Peaks-Kenny Pk** 25.23 257 P P 22 48 36.5 +0.3
PKME IAmb IAmb 22 48 38.5
comp=Z,28nm,0.9s
PKME **Peaks-Kenny Pk** 25.23 257 P P 22 48 36.2 0.0
baz=48,SNR=10
MESJ **Messejana** 25.59 129 *e*P P 22 48 39.9 +0.4
MESJ IAmb IAmb 22 48 46.5
comp=Z,174nm,2.2s
MESJ *e*S S 22 53 08.9 +1.4
LATQ **La Tuque** 25.75 264 P P 22 48 42.1 +1.2
MORF **Marmelete** 25.86 130 *e*P P 22 48 42.4 +0.4
MORF IAmb IAmb 22 48 48.2
comp=Z,115nm,1.9s
WVL **Waterville** 25.90 256 P P 22 48 41.5 -0.7
WVL IAmb IAmb 22 49 20.2
comp=Z,26nm,1.3s
PAB **San Pablo** 25.90 121 P P 22 48 42.7 +0.3
G62A **West of Eustis** 25.92 258 IAmb IAmb 22 48 45.5
comp=Z,30nm,0.9s
PFVI **Vila Bisbo** 25.94 131 P P 22 48 43.7 +1.0
ESBB **Sonseca Array** 25.98 120 P P 22 48 43.5 +0.4
ESDC **Sonseca Array** 25.98 120 P P 22 48 42.4 -0.7
comp=Z,2.8nm,0.8s,baz=319,slow=8.4,SNR=21
ESDC LR LR 22 57 12.0
comp=Z,389nm,18.0s,baz=324,slow=32
comp=Z,2.8nm,0.8s
ESDC **Sonseca Array** 25.98 120 P P 22 48 43.4 +0.3
PVAQ **Vaqueiros** 26.17 129 *e*LR LR 22 55 09.3
comp=Z,743nm,20.0s
SSB **Saint Sauveur** 26.19 101 P 22 48 45.8 +0.8
BFO **Black Forest** 26.32 92 P P 22 48 47.2 +1.0
H62A **Milan** 26.68 258 P P 22 48 50.0 +0.6
I63A **Otisfield** 26.73 256 P P 22 48 48.9 -0.9
PMOZ **Porto Moniz, M** 26.92 149 *e*LR LR 22 55 58.5
comp=Z,246nm,18.0s
SENIN **Lac Senin/Sane** 26.96 97 P P 22 48 53.0 +0.9
SENIN IAmb IAmb 22 49 13.0
comp=Z,25nm,1.5s
GRFO **Grafenberg** 27.11 87 P P 22 48 54.1 +0.9
GRFO IAmb IAmb 22 48 59.1
comp=Z,25nm,1.2s
GRA1 **Grafenberg Arr** 27.12 87 P P 22 48 53.2 -0.1
GRA1 IAmb IAmb 22 48 59.1
comp=Z,29nm,1.3s
CLL **Collm** 27.21 83 P P 22 48 53.2 -0.9
CLL **Collm** 27.21 83 *i* P P 22 48 53.8 -0.3
comp=Z,7.0nm,0.9s
CLL *i* pP pwP 22 48 57.4 -0.5
comp=Z,11nm,1.3s
CLL LmH 22 58 00.0
comp=N,300nm,19.9s
CLL LmH 22 58 00.0
comp=E,500nm,21.7s
LBNH **Lisbon** 27.31 258 P P 22 48 55.4 +0.3
baz=47
TRQ **Mont Tremblant** 27.42 264 P P 22 48 55.5 -0.6
TRQ IAmb IAmb 22 49 00.9
comp=Z,30nm,1.4s
BNI **Bardonecchia** 27.48 99 P P 22 48 58.0 +1.4
NKC **Novy Kostel** 27.48 85 AMS AMS 22 59 50.0
comp=Z,700nm,14.3s
ARCES **ARCESS Array B** 27.67 40 P P 22 48 57.2 -0.8
comp=Z,2.1nm,0.8s,baz=285,slow=10,SNR=5.2
ARCES LR LR 22 57 46.5
comp=Z,337nm,19.8s,baz=280,slow=32
comp=Z,2.1nm,0.8s
ARCES **ARCESS Array B** 27.67 40 P P 22 48 58.1 +0.1
DAVA **Damuels** 27.79 93 *e*P P 22 49 00.4 +1.0
comp=Z,5.3nm,1.1s
FRNY **Flat Rock** 27.80 261 P P 22 48 59.6 +0.2
EUNU **Eureka** 27.83 343 P P 22 49 00.1 +0.7
EUNU IAmb IAmb 22 49 32.9
comp=Z,34nm,1.6s
VLDQ **Val d'Or** 27.84 270 P P 22 49 00.5 +0.8
VLDQ IAmb IAmb 22 49 05.9
comp=Z,21nm,1.2s
HNH **Hanover** 27.87 258 P P 22 48 59.6 -0.4
BRG **Berggiesshubel** 27.94 83 *e*P P 22 49 00.7 0.0
BRG Amp 22 49 03.5
comp=Z,6.5nm,1.3s
BRG Amp 23 00 36.0
comp=N,0.4nm,16.3s
BRG Amp 23 00 41.0
comp=Z,1.0nm,17.0s
BRG Amp 23 00 45.0
comp=E,0.7nm,17.2s
TUE **Stuetta** 28.00 94 P P 22 49 02.4 +1.0
TUE IAmb IAmb 22 49 14.1
comp=Z,32nm,1.4s
DAVOX **Davos/Dischmat** 28.10 93 P P 22 49 02.7 +0.4
comp=Z,1.3nm,0.4s,baz=298,slow=8.5,SNR=4.0
DAVOX LR LR 22 59 44.6
comp=Z,898nm,19.1s,baz=299,slow=35
comp=Z,1.3nm,0.4s
RETA **Reutte** 28.14 91 *e*P P 22 49 04.0 +1.5
comp=Z,9.2nm,1.6s
HRV **Adam Dziewonsk** 28.32 255 P P 22 49 05.4 +1.4
baz=45
FUORN **Ofenpass-Fuorn** 28.40 93 P P 22 49 05.5 +0.4
FETA **Feichten** 28.41 92 *e*P P 22 49 06.3 +1.3
comp=Z,8.4nm,1.2s
MOTA **Moosalm** 28.41 91 *e*P P 22 49 08.9 +3.8
comp=Z,9.8nm,1.9s
PVCC **Panska Ves** 28.46 83 AMS AMS 23 00 40.0
comp=Z,900nm,15.1s
LONY **Lake Ozonia** 28.48 261 P P 22 49 05.8 +0.4
baz=48
RES **Resolute Bay** 28.50 331 LR LR 22 59 57.4
comp=Z,224nm,18.1s,baz=99,slow=35
RES **Resolute Bay** 28.50 331 P P 22 49 05.0 -0.3
RES IAmb IAmb 22 49 09.8
comp=Z,37nm,1.7s
SQTA **Sankt Quirin** 28.55 92 *e*P P 22 49 10.5 +4.3
comp=Z,11nm,1.7s
WATA **Walderalm** 28.68 91 *e*P P 22 49 08.7 +1.4
comp=Z,5.7nm,1.4s
KHC **Kasperske Hory** 28.70 86 *e*P P 22 49 07.5 0.0
KHC AMS AMS 22 59 50.0
comp=Z,600nm,18.6s
PRU **Pruhonice** 28.74 84 AMS AMS 23 01 10.0
comp=Z,600nm,13.9s
WTTA **Wattenberg** 28.75 91 *e*P P 22 49 08.3 +0.2
comp=Z,5.6nm,1.0s
GEC2 **GERESS Array S** 28.93 87 P P 22 49 09.5 0.0
GERES **GERESS Array B** 28.93 87 P P 22 49 09.6 0.0
comp=Z,0.5nm,0.7s,baz=333,slow=5.9,SNR=5.5
GERES LR LR 23 00 33.6
comp=Z,486nm,18.2s,baz=274,slow=36
comp=Z,0.5nm,0.7s
GERES **GERESS Array B** 28.93 87 P P 22 49 10.0 +0.4
CART **Cartagena** 29.04 119 P P 22 49 11.6 +1.2
J59A **Piesco** 29.21 259 P P 22 49 12.2 +0.2
KSP **Ksiaz** 29.22 81 *e*P P 22 49 12.1 +0.1
CHVC **Chvalec** 29.23 82 *e*P P 22 49 12.1 0.0
CHVC AMS AMS 23 01 20.0
comp=Z,900nm,17.5s
UPC **Upice** 29.25 82 AMS AMS 23 01 20.0
comp=Z,900nm,16.3s
CKRC **Cesky Krumlov** 29.28 86 *e*P P 22 49 12.8 +0.2
CKRC AMS AMS 23 00 10.0
comp=Z,500nm,17.4s
OSTC **Ostas** 29.33 82 *e*P P 22 49 13.2 +0.2
OSTC AMS AMS 23 01 20.0
comp=Z,1μm,16.8s
M63A **Gales Ferry** 29.36 254 P P 22 49 13.0 -0.3
M63A IAmb IAmb 22 49 14.3
comp=Z,18nm,1.0s
DPC **Dobruska-Polom** 29.50 82 *e*P P 22 49 13.6 -1.0
DPC AMS AMS 23 01 20.0
comp=Z,800nm,15.1s
CTI **Castel Tesino** 29.51 93 P P 22 49 15.2 +0.5
ABTA **Abfaltersbach** 29.54 91 *e*P P 22 49 16.7 +1.7
comp=Z,8.8nm,1.9s
FINES **FINESS Array B** 29.56 57 P P 22 49 15.1 +0.3
comp=Z,3.0nm,0.8s,baz=291,slow=5.9,SNR=14
FINES LR LR 23 00 51.5
comp=Z,230nm,18.1s,baz=286,slow=36
comp=Z,3.0nm,0.8s
FINES **FINESS Array B** 29.56 57 P P 22 49 15.5 +0.6
FIA1 **FINESS Array S** 29.56 57 P P 22 49 15.5 +0.6
FIA1 IAmb IAmb 22 49 20.5
comp=Z,23nm,1.4s
BIOA **Bad Ischl, Aus** 29.58 89 *e*P P 22 49 16.4 +1.2
comp=Z,2.2nm,0.7s
TREC **Trest** 29.64 85 AMS AMS 23 00 40.0
comp=Z,700nm,18.4s
J58A **Remsen** 29.70 260 P P 22 49 16.8 +0.5
KBA **Koelnbreinsper** 29.79 90 *e*P P 22 49 19.1 +1.8
comp=Z,6.6nm,1.5s
MOA **Molln** 29.82 88 *e*P P 22 49 18.4 +1.0
comp=Z,4.2nm,1.3s
KRLC **Kraliky** 29.90 82 *e*P P 22 49 18.5 +0.4
CLUD **Cludinico** 29.92 91 P P 22 49 18.8 +0.5
J57A **Williamstown** 30.04 261 P P 22 49 19.3 0.0
DELO **Deloro Mine** 30.17 264 P P 22 49 21.0 +0.5
DELO IAmb IAmb 22 49 26.1
comp=Z,20nm,1.5s
MYKA **Terra Mystica** 30.23 90 *e*P P 22 49 22.5 +1.5
comp=Z,4.8nm,0.9s
VRAC **Vranov** 30.23 84 ⇑P P 22 49 22.0 +1.0
VRAC **Vranov** 30.23 84 P P 22 49 21.4 +0.4
comp=Z,2.9nm,0.8s,baz=310,slow=11,SNR=2.6
VRAC LR LR 23 01 29.6
comp=Z,631nm,18.8s,baz=304,slow=36
comp=Z,2.9nm,0.8s
VRAC **Vranov** 30.23 84 *e*P P 22 49 20.0 -1.0
ZCCA **Zocca** 30.24 96 P P 22 49 23.6 +2.4
ZCCA IAmb IAmb 22 49 53.6
comp=Z,22nm,1.5s
KRUC **Moravsky** 30.27 84 *e*P P 22 49 19.2 -2.1
PRED **Cave del Predi** 30.30 91 P P 22 49 21.1 -0.6
L59A **Walton** 30.38 258 P P 22 49 22.2 -0.1
L59A IAmb IAmb 22 49 24.5
comp=Z,24nm,1.5s
MORC **Moravsky Berou** 30.48 82 P P 22 49 22.8 -0.4
MORC **Moravsky Berou** 30.48 82 *e*P P 22 49 20.1 -3.1
J56A **Wolcott** 30.59 262 P P 22 49 23.9 -0.3
J56A IAmb IAmb 22 49 25.9
comp=Z,14nm,0.9s
SADO **Sadowa** 30.83 266 LR LR 23 00 31.5
comp=Z,1μm,18.9s,baz=56,slow=34
SADO **Sadowa** 30.83 266 P P 22 49 26.0 -0.3
SADO IAmb IAmb 22 49 27.9
comp=Z,15nm,0.9s
MAUC **Maruska** 30.86 83 *e*P P 22 49 27.1 +0.5
MAUC AMS AMS 23 02 10.0
comp=Z,1μm,16.2s
BINY **Binghamton** 30.87 259 P P 22 49 27.0 +0.3
baz=46
PABE **Paberze** 30.91 69 P P 22 49 26.7 -0.1
PABE **Paberze** 30.91 69 *e*P P 22 49 27.5 +0.7
SOKA **Soboth** 30.95 89 *e*P P 22 49 28.3 +0.8
comp=Z,5.1nm,1.4s
VSU **Vasila** 30.97 62 *e*P P 22 49 27.9 +0.5
RONA **Rosalia, Austr** 31.01 87 *e*P P 22 49 29.1 +1.2
comp=Z,4.8nm,1.2s
SUW **Suwalki** 31.22 72 *e*P P 22 49 29.1 -0.5
FCC **Fort Churchill** 31.22 299 P P 22 49 29.5 0.0
FCC IAmb IAmb 22 49 37.8
comp=Z,31nm,1.6s
MDT **Midelt** 31.41 129 LR LR 23 00 50.6
comp=Z,166nm,19.7s,baz=342,slow=34
OJC **Ojcow** 31.43 80 *e*P P 22 49 31.4 -0.1
OJC *e*PcP PcP 22 52 17.8 -6.8
OJC **Ojcow** 31.43 80 P P 22 49 30.9 -0.6
MMNY **Mt. Morris Dam** 31.53 262 P P 22 49 32.4 -0.1
J54A **Appleton** 31.55 263 P P 22 49 32.3 -0.3
J54A IAmb IAmb 22 49 34.4
comp=Z,23nm,1.1s
LANS **Liptovska Anna** 31.86 82 *e*P P 22 49 36.7 +1.3
IIGN **Ignalina** 32.11 68 *e*P P 22 49 37.9 +0.5
WVNY **West Valley, N** 32.13 262 P P 22 49 38.5 +0.7
WVNY IAmb IAmb 22 49 40.7
comp=Z,12nm,0.9s
NRCA **Norcia** 32.41 96 P P 22 49 41.0 +0.7
E46A **Sault Ste Mari** 32.61 273 P P 22 49 42.3 +0.4
E46A IAmb IAmb 22 49 43.8
comp=Z,20nm,1.0s
NACGM **Naroch** 32.61 68⇓ *e*P P 22 49 45.3 +3.5
baz=299
PSZ **Piszkesteto** 32.82 83 IAmb IAmb 22 49 49.0
comp=Z,12nm,1.1s
M55A **Ridgway** 32.87 261 P P 22 49 44.0 -0.2
M55A IAmb IAmb 22 49 46.2
comp=Z,12nm,0.9s
SSPA **Standing Stone** 32.99 259 P P 22 49 44.8 -0.5
SSPA IAmb IAmb 22 49 51.0
comp=Z,24nm,1.8s
SSPA **Standing Stone** 32.99 259 P P 22 49 45.6 +0.3
baz=44
ERPA **Erie** 33.07 263 P P 22 49 46.5 +0.5
baz=46
MORH **Mrgy, Hungar** 33.19 87 ⇑P P 22 49 46.9 0.0
MNK **Minsk** 33.37 68 *i* P P 22 49 48.9 +0.5
comp=E,1.0nm,0.9s
MNK *i* P P 22 49 48.9 +0.5
comp=N,13nm,0.9s
MNK *i* P P 22 49 48.9 +0.5
comp=Z,19nm,0.9s,baz=300
MNK *i* PP PnPn 22 51 00.3 +1.6
MNK *i* PPP PPP 22 51 11.2
MNK *i* S S 22 55 11.9 +2.6
MNK *i* SS SnSn 22 57 01.2 -8.4
MNK *i* SSS SSS 22 57 28.0
MNK *i* LQ LQ 23 00 49.1
MNK *i* LR LR 23 02 45.2
MNK *i* LRM MLR 23 04 34.5
comp=Z,6μm,17.1s
MNK *i* LRM MLR 23 05 02.5
comp=E,20nm,17.4s
MNK *i* LRM MLR 23 05 19.0
comp=N,971nm,17.4s
I49A **Point Hope** 33.37 268 P P 22 49 48.8 +0.3
I49A IAmb IAmb 22 49 54.2
comp=Z,19nm,1.1s
P57A **Homestead Farm** 33.88 258 P P 22 49 53.5 +0.4
P57A IAmb IAmb 22 49 55.2
comp=Z,10nm,0.9s
M53A **WI Miller and** 33.91 263 P P 22 49 53.8 +0.5
M53A **WI Miller and** 33.91 263 P P 22 49 54.0 +0.7
baz=46
K50A **Casco** 34.04 266 P P 22 49 54.9 +0.5
K50A IAmb IAmb 22 49 56.5
comp=Z,15nm,0.9s
E43A **Lone Tree Farm** 34.05 275 P P 22 49 54.4 -0.1
E43A IAmb IAmb 22 49 56.2
comp=Z,20nm,1.1s
G45A **Suttons Bay** 34.18 272 P P 22 49 55.8 +0.1
G45A IAmb IAmb 22 50 01.1
comp=Z,12nm,0.8s
M52A **Chesterland** 34.20 263 P P 22 49 56.0 +0.1
N53A **Lisbon** 34.44 262 P P 22 49 58.1 +0.2
N53A IAmb IAmb 22 50 01.1
comp=Z,16nm,1.1s
PAOL **Paolisi** 34.44 97 P P 22 49 58.8 +0.8
PAOL IAmb IAmb 22 50 02.3
comp=Z,22nm,1.5s
D41A **Chassel** 34.47 277 P P 22 49 58.0 -0.1
SGRT **San Giovanni R** 34.57 95 P P 22 49 58.9 -0.2
SGRT IAmb IAmb 22 49 59.9
comp=Z,16nm,1.2s
O54A **Avella** 34.64 261 P P 22 49 59.6 -0.1
O54A IAmb IAmb 22 50 01.8
comp=Z,17nm,1.1s
MCWV **Mont Chateau** 34.73 260 P P 22 50 00.8 +0.4
baz=44
J47A **Sunmer** 34.91 269 P P 22 50 02.1 +0.1
J47A IAmb IAmb 22 50 04.1
comp=Z,10nm,0.8s
O53A **New Philadelph** 35.04 262 P P 22 50 04.0 +0.9
baz=44
F42A **Maple Grove Fa** 35.06 275 P P 22 50 03.9 +0.7
BZS **Buzias** 35.18 85 ⇑P P 22 50 04.7 +0.5
N51A **Ashland** 35.19 264 P P 22 50 04.2 -0.2
N51A IAmb IAmb 22 50 07.2
comp=Z,8.9nm,0.7s
O52A **Adamsville** 35.47 262 P P 22 50 07.3 +0.5
O52A IAmb IAmb 22 50 16.8
comp=Z,19nm,1.2s
EYMN **Ely** 35.50 280 P P 22 50 07.5 +0.5
baz=52,SNR=18
KEST **Kesra** 35.62 109 P P 22 50 08.9 +0.8
comp=Z,8.2nm,0.8s,baz=315,slow=2.8,SNR=9.5
KEST LR LR 23 03 00.1
comp=Z,295nm,20.3s,baz=334,slow=33
comp=Z,8.2nm,0.8s
KEST **Kesra** 35.62 109 P P 22 50 09.0 +0.8
KEST IAmb IAmb 22 50 10.8
comp=Z,16nm,1.1s
S57A **Dark Hollow, R** 35.65 257 P P 22 50 08.6 +0.2
P53A **Whipple** 35.68 261 P P 22 50 09.5 +0.9
P53A IAmb IAmb 22 50 10.7
comp=Z,13nm,1.1s
H43A **Windswept, Lux** 35.70 273 P P 22 50 08.7 0.0
Q54A **Coxs Mills** 35.75 260 P P 22 50 09.6 +0.4
KLMR **Klimovskoe** 35.76 53 *e*P P 22 50 07.4 -1.7
KLMR AMP 22 50 12.7
comp=Z,46nm,1.3s
BUR08 **Bucovina Ar. S** 35.83 80 P P 22 50 10.7 +0.8
BURAR **Bucovina Array** 35.86 80 ⇑P P 22 50 09.9 -0.2
R55A **Marlinton** 35.88 258 P P 22 50 10.3 -0.2
P52A **Corning** 35.97 262 P P 22 50 11.3 +0.2
P52A IAmb IAmb 22 50 43.5
comp=Z,25nm,1.6s
P52A **Corning** 35.97 262 P P 22 50 11.5 +0.3
baz=44
ACSO **Alum Creek Sta** 36.00 263 P P 22 50 11.7 +0.3
ACSO IAmb IAmb 22 50 13.3
comp=Z,13nm,0.8s
ACSO **Alum Creek Sta** 36.00 263 P P 22 50 11.7 +0.3
baz=44
U59A **Littleton** 36.11 254 P P 22 50 13.3 +1.1
AKASG **Malin Array Be** 36.12 73 P P 22 50 11.7 -0.5
comp=Z,9.8nm,0.9s,baz=308,slow=8.4,SNR=48
AKASG LR LR 23 04 31.8
comp=Z,367nm,20.6s,baz=280,slow=36
comp=Z,9.8nm,0.9s
N49A **Columbus Grove** 36.16 265 P P 22 50 12.9 +0.3
N49A IAmb IAmb 22 50 14.8
comp=Z,21nm,0.9s
CLTB **Caltabellotta** 36.23 103 P P 22 50 13.9 +0.5
E38A **The Farm, Brul** 36.36 278 P P 22 50 14.2 -0.2
E38A IAmb IAmb 22 50 19.4
comp=Z,14nm,1.0s
T57A **Hurt** 36.38 256 P P 22 50 14.7 +0.1
T57A IAmb IAmb 22 50 21.0
comp=Z,31nm,1.7s
ULM **Lac du Bonnet** 36.43 286 P P 22 50 14.0 -0.9
comp=Z,7.3nm,0.8s,baz=57,slow=7.6,SNR=8.1
ULM LR LR 23 03 49.7
comp=Z,693nm,19.2s,baz=66,slow=34
comp=Z,7.3nm,0.8s
ULM **Lac du Bonnet** 36.43 286 P P 22 50 14.3 -0.6
ULM IAmb IAmb 22 50 16.6
comp=Z,16nm,1.1s
B35A **Bob, Littlefor** 36.43 282 P P 22 50 14.8 -0.2
B35A IAmb IAmb 22 50 15.6
comp=Z,12nm,0.8s
Q52A **Bidwell** 36.53 261 P P 22 50 16.5 +0.7
P51A **Williamsport** 36.58 263 P P 22 50 16.7 +0.4
P51A IAmb IAmb 22 50 18.1
comp=Z,13nm,0.8s
I42A **Draeger Farm,** 36.70 273 P P 22 50 17.9 +0.7
BIZ **Bicaz** 36.75 80 ⇓P P 22 50 18.1 +0.4
O49A **Covington** 36.76 265 P P 22 50 18.1 +0.2
O49A IAmb IAmb 22 50 19.8
comp=Z,25nm,1.1s
R53A **Hurricane** 36.82 260 P P 22 50 18.3 -0.1
R53A IAmb IAmb 22 50 20.1
comp=Z,12nm,0.8s
BLA **Blacksburg** 36.84 257 P P 22 50 19.1 +0.5
BLA IAmb IAmb 22 50 20.9
comp=Z,17nm,1.2s
BLA **Blacksburg** 36.84 257 P P 22 50 19.0 +0.5
baz=41
S54A **Dingess, Beckl** 36.87 259 P P 22 50 19.3 +0.4
S54A IAmb IAmb 22 50 21.1
comp=Z,22nm,1.4s
VAE **Valguarnera** 36.93 102 LR LR 23 03 51.9
comp=Z,309nm,20.6s,baz=329,slow=34
DOPR **Dopca** 36.98 82 ⇑P P 22 50 20.2 +0.5
N47A **Urbana** 37.01 267 P P 22 50 20.4 +0.5
N47A IAmb IAmb 22 50 21.1
comp=Z,15nm,1.1s
Q51A **Peebles** 37.06 262 P P 22 50 21.6 +1.2
VOIR 37.14 83 ⇑P P 22 50 20.8 -0.3
O48B **Farmland** 37.15 265 P P 22 50 21.5 +0.3
baz=45
K43A **Burlington** 37.18 271 P P 22 50 21.5 +0.1
K43A IAmb IAmb 22 50 24.3
comp=Z,20nm,1.1s
SORM **Soroca** 37.20 77 ⇑P P 22 50 20.8 -0.7
V58A **Windy Hill, Pi** 37.22 255 P P 22 50 22.0 +0.2
V58A IAmb IAmb 22 50 24.1
comp=Z,17nm,1.2s
L44A **Lake County Fo** 37.31 270 P P 22 50 22.9 +0.5
baz=47
OBN **Obninsk** 37.32 63 LR LR 23 05 02.0
comp=Z,87nm,18.6s,baz=332,slow=35
P49A **Miami Univ. Ec** 37.43 264 P P 22 50 23.6 +0.1
P49A IAmb IAmb 22 50 32.1
comp=Z,18nm,1.2s
P49A **Miami Univ. Ec** 37.43 264 P P 22 50 23.6 +0.1
baz=44
A36M **Sachs Harbour** 37.52 329 P P 22 50 24.9 +1.0
A36M IAmb IAmb 22 50 33.7
comp=Z,13nm,0.9s
A36M **Sachs Harbour** 37.52 329 P P 22 50 24.1 +0.2
baz=63
MLR **Muntele Rosu** 37.59 82 ⇑P P 22 50 24.8 -0.1
MLR **Muntele Rosu** 37.59 82 P P 22 50 24.7 -0.2
comp=Z,1.4nm,0.5s,baz=303,slow=14,SNR=2.0
MLR LR LR 23 07 03.7
comp=Z,744nm,18.2s,baz=324,slow=38
comp=Z,1.4nm,0.5s
MLR **Muntele Rosu** 37.59 82 P P 22 50 26.5 +1.6
AGMN **Agassiz Nation** 37.60 284 P P 22 50 24.7 -0.1
baz=52
I40A **Norwalk** 37.62 274 IAmb IAmb 22 50 38.0
comp=Z,27nm,1.0s
PLOR **Plostina** 37.73 81 ⇑P P 22 50 27.0 +0.9
VRI **Vrincioaia** 37.77 81 ⇑P P 22 50 26.6 +0.3
P48A **Milroy** 37.87 265 IAmb IAmb 22 50 28.7
comp=Z,14nm,0.9s
SPMN **Marine on St.** 37.92 278 P P 22 50 27.5 -0.1
baz=49
M44A **Midewin, Midew** 37.92 269 P P 22 50 28.1 +0.4
JFWS **Jewell Farm** 38.07 273 P P 22 50 29.5 +0.6
JFWS IAmb IAmb 22 51 00.9
comp=Z,11nm,0.7s
JFWS **Jewell Farm** 38.07 273 P P 22 50 29.0 +0.1
baz=47
KBN **Korca** 38.09 92 P P 22 50 30.3 +1.2
KBN IAmb IAmb 22 50 35.1
comp=Z,33nm,1.3s
U54A **Nelsons Funny** 38.10 258 P P 22 50 29.1 -0.2
U54A IAmb IAmb 22 50 43.0
comp=Z,27nm,1.6s
SFIN **Lafayette** 38.12 267 P P 22 50 30.1 +0.8
SFIN IAmb IAmb 22 50 31.2
comp=Z,44nm,1.6s
SFIN **Lafayette** 38.12 267 P P 22 50 29.9 +0.6
baz=45
R50A **Paris** 38.13 262 P P 22 50 29.7 +0.2
R50A IAmb IAmb 22 50 31.5
comp=Z,24nm,1.5s
MILM **Milestii Mici** 38.20 78 ⇑ *i*P P 22 50 29.0 -1.0
comp=Z,160nm,4.1s
MILM **Milestii Mici** 38.20 78 *e*PP PP 22 52 01.0 +4.0
MILM *e*L L 23 02 06.0
MILM LRM MLR 23 08 00.0
comp=Z,400nm,17.5s
MILM **Milestii Mici** 38.20 78 ⇑P P 22 50 29.1 -0.8
S51A **Beattyville** 38.21 261 P P 22 50 30.2 +0.1
S51A IAmb IAmb 22 50 32.0
comp=Z,13nm,0.8s
X58A **Rowland** 38.29 254 P P 22 50 31.1 +0.2
X58A IAmb IAmb 22 50 33.2
comp=Z,17nm,0.9s
L42A **Oliver, Polo** 38.38 271 P P 22 50 31.9 +0.4
YKA **Yellowknife Ar** 38.51 313 P P 22 50 32.2 -0.2
comp=Z,4.1nm,0.7s,baz=59,slow=9.4,SNR=28

YKA PcP **PcP** **22 52 44.1 -0.8**
comp=Z,1.5nm,0.8s,baz=54,slow=3.4,SNR=7.9
YKA LR LR 23 05 46.4
comp=Z,1µm,18.1s,baz=50,slow=35
comp=Z,4.1nm,0.7s
R49A Shelbyville 38.58 263 P **P** **22 50 33.6 +0.4**
BLO Bloomington 38.67 265 P **P** **22 50 34.9 +0.9**
BLO IAmb IAmb 22 50 35.8
comp=Z,55nm,1.8s
P46A Rosedale 38.72 266 P **P** **22 50 35.5 +1.1**
P46A IAmb IAmb 22 50 55.7
comp=Z,9.7nm,0.6s
CFR Carcaliu 38.97 81 ⇑P **P** **22 50 35.7 -0.6**
TZTN Tazewell 39.00 260 P **P** **22 50 37.8 +1.0**
TZTN Tazewell 39.00 260 P **P** **22 50 37.9 +1.1**
baz=41
O44A Mansfield 39.02 268 P **P** **22 50 37.9 +1.0**
O44A IAmb IAmb 22 50 39.1
comp=Z,28nm,1.6s
L40A Anamosa 39.18 273 P **P** **22 50 38.5 +0.3**
HDIL Hopedale 39.18 269 P **P** **22 50 39.1 +0.8**
HDIL IAmb IAmb 22 50 40.7
comp=Z,57nm,1.6s
HDIL Hopedale 39.18 269 P **P** **22 50 38.9 +0.7**
baz=45
V53A Saluda 39.26 258 P **P** **22 50 39.3 +0.3**
TPGR Topolog 39.33 81 ⇑P **P** **22 50 38.6 -0.8**
T50A Nancy 39.33 262 P **P** **22 50 40.0 +0.5**
F33A 5 Mile Ranch, 39.38 281 P **P** **22 50 40.5 +0.6**
JSC Jenkinsville 39.51 255 P **P** **22 50 40.4 -0.6**
K38A Parkersburg 39.62 275 P **P** **22 50 42.4 +0.6**
K38A IAmb IAmb 22 50 43.6
comp=Z,24nm,0.8s
TKL Tuckaleechee C 39.78 259 LR LR 23 06 01.7
comp=Z,868nm,20.9s,baz=50,slow=34
TKL Tuckaleechee C 39.78 259 P **P** **22 50 43.5 +0.2**
OLIL Olney 39.83 266 P **P** **22 50 43.1 -0.6**
BG3 Lake Jocassee 39.84 258 P **P** **22 50 44.4 +0.6**
N41A Harden Midland 39.92 271 P **P** **22 50 44.7 +0.3**
N41A IAmb IAmb 22 50 54.2
comp=Z,36nm,1.4s
P43A Skaggs, Pawnee 39.95 269 P **P** **22 50 45.8 +1.1**
P43A IAmb IAmb 22 50 50.5
comp=Z,39nm,1.6s
V51A Loudon 39.98 260 P **P** **22 50 45.0 +0.1**
AGG Agios Georgios 40.06 93 P **P** **22 50 46.8 +1.2**
HODGE Hodges 40.07 256 P **P** **22 50 45.5 -0.2**
Q44A Meyer Farm, Va 40.21 267 P **P** **22 50 46.8 0.0**
Q44A IAmb IAmb 22 50 52.6
comp=Z,30nm,1.3s
CPCT Cooper Cave 40.34 260 P **P** **22 50 48.4 +0.5**
SCIA State Center 40.36 274 P **P** **22 50 48.6 +0.6**
SCIA IAmb IAmb 22 50 50.0
comp=Z,44nm,1.2s
SCIA State Center 40.36 274 P **P** **22 50 48.3 +0.3**
baz=46
T47A Sharon Grove 40.57 264 P **P** **22 50 50.9 +1.1**
CLTN Cedars of Leba 40.82 262 P **P** **22 50 52.4 +0.5**
ECSD EROS Data Cent 40.95 279 P **P** **22 50 53.8 +0.9**
ECSD EROS Data Cent 40.95 279 P **P** **22 50 53.9 +1.0**
baz=48,SNR=15
SLM Saint Louis 41.06 268 P **P** **22 50 54.0 +0.1**
SLM IAmb IAmb 22 51 17.2
comp=Z,13nm,0.5s
N38A Joes South For 41.15 273 P **P** **22 50 54.4 -0.1**
N38A IAmb IAmb 22 50 56.2
comp=Z,28nm,1.2s
SIUC Southern Illin 41.18 266 IAmb IAmb 22 51 01.2
comp=Z,17nm,0.9s
ITM Ithomi 41.18 95 P **P** **22 50 56.8 +1.9**
ITM IAmb IAmb 22 51 00.6
comp=Z,36nm,1.5s
X51A Calhoun 41.19 259 P **P** **22 50 55.3 +0.3**
X51A IAmb IAmb 22 50 57.2
comp=Z,57nm,1.8s
S44A Carbondale 41.21 266 P **P** **22 50 55.2 +0.1**
S44A IAmb IAmb 22 50 56.9
comp=Z,46nm,1.5s
KIRV Kirov 41.22 52 LR LR 23 07 59.7
comp=Z,175nm,19.1s,baz=290,slow=36
E28A Huff 41.23 285 P **P** **22 50 55.9 +0.8**
E28A IAmb IAmb 22 50 56.5
comp=Z,22nm,0.8s
SWET Sewanee 41.27 261 P **P** **22 50 55.7 0.0**
Y52A Lilburn 41.30 258 P **P** **22 50 56.3 +0.3**
GOGA Godfrey 41.34 257 P **P** **22 50 56.9 +0.7**
baz=39,SNR=5.3
V48A Smith Brothers 41.35 262 P **P** **22 50 56.5 +0.2**
WVT Waverly 41.60 263 P **P** **22 50 58.4 +0.1**
WVT Waverly 41.60 263 P **P** **22 50 58.9 +0.6**
baz=42
FPAL Fort Paine 41.61 260 P **P** **22 50 58.1 -0.4**
FVM French Village 41.63 268 P **P** **22 50 59.1 +0.5**
FVM IAmb IAmb 22 51 05.4
comp=Z,35nm,1.8s
DGMT Dagmar 41.81 289 **P** **22 51 00.2 +0.3**
DGMT IAmb IAmb 22 51 02.4
comp=Z,37nm,1.3s
DGMT Dagmar 41.81 289 P **P** **22 51 00.3 +0.3**
baz=50
INK Inuvik 41.88 327 P **P** **22 50 59.3 -0.9**
INK comp=Z,2.8nm,0.7s,baz=20,slow=9.5,SNR=8.1 PcP **PcP** **22 52 55.8 +0.2**
INK comp=Z,2.2nm,0.5s,baz=52,slow=2.2,SNR=3.1 LR LR 23 08 03.3
comp=Z,265nm,19.6s,baz=34,slow=36
comp=Z,2.8nm,0.7s
INK Inuvik 41.88 327 IAmb IAmb 22 51 08.4
comp=Z,20nm,1.3s
INK Inuvik 41.88 327 P **P** **22 50 59.6 -0.5**
baz=53
255A Hazlehurst 41.98 254 P **P** **22 51 01.8 +0.3**
CCM Cathedral Cave 42.02 268 P **P** **22 51 01.2 -0.6**
CCM Cathedral Cave 42.02 268 P **P** **22 51 02.1 +0.3**
baz=43
P38A Dawn 42.13 272 IAmb IAmb 22 51 04.1
comp=Z,29nm,1.6s
N35A Tabor 42.40 275 P **P** **22 51 04.8 0.0**
R40A Maddies Statio 42.41 269 P **P** **22 51 05.0 +0.1**
R40A IAmb IAmb 22 51 06.5
comp=Z,42nm,1.8s
X48A Hartselle 42.44 261 P **P** **22 51 05.3 +0.1**
PBMO Poplar Bluff 42.52 266 IAmb IAmb 22 51 07.5
comp=Z,52nm,1.7s
Y49A Blount Mountai 42.56 260 P **P** **22 51 05.5 -0.6**
152A Waverly Hall 42.58 257 P **P** **22 51 06.8 +0.5**
PLAL Pickwick Lake 42.59 262 P **P** **22 51 06.4 0.0**
PLAL IAmb IAmb 22 51 08.0
comp=Z,25nm,1.6s
TIGA Tifton 42.95 255 P **P** **22 51 09.7 +0.4**
baz=38
EDM Edmonton 43.29 300 P **P** **22 51 12.3 +0.3**
EDM IAmb IAmb 22 51 21.1
comp=Z,26nm,1.2s
BGNE Belgrade 43.37 277 P **P** **22 51 13.1 +0.4**
LRAL Lakeview Retre 43.50 260 P **P** **22 51 14.3 +0.5**
LRAL Lakeview Retre 43.50 260 P **P** **22 51 14.5 +0.7**
baz=39,SNR=5.6
352A Blakely 43.62 256 P **P** **22 51 14.4 -0.4**
352A IAmb IAmb 22 51 16.8
comp=Z,44nm,1.7s
OXF Oxford 43.66 263 P **P** **22 51 14.5 -0.6**
OXF IAmb IAmb 22 51 20.0
comp=Z,22nm,0.9s
OXF Oxford 43.66 263 P **P** **22 51 14.2 -0.9**
baz=40
C27K Jago River 43.84 332 P **P** **22 51 16.1 0.0**
baz=47
250A Grady 43.93 258 P **P** **22 51 17.9 +0.6**
Z47A Carrollton 43.95 261 P **P** **22 51 17.6 +0.2**
Z47A IAmb IAmb 22 51 18.4
comp=Z,24nm,1.1s
LAO LASA Array 44.02 289 P **P** **22 51 19.3 +1.4**
LAO LASA Array 44.02 289 P **P** **22 51 19.5 +1.6**
baz=48,SNR=6.9
656A Willston 44.05 252 P **P** **22 51 18.0 -0.2**
656A IAmb IAmb 22 51 20.4
comp=Z,23nm,1.1s
EPYK Eagle Plains 44.06 326 P **P** **22 51 18.2 +0.3**
EPYK Eagle Plains 44.06 326 P **P** **22 51 18.2 +0.3**
baz=49,SNR=5.7
FCAR Ozark Folk Cen 44.09 267 P **P** **22 51 18.4 -0.2**
KSU1 Kansas State U 44.17 274 P **P** **22 51 19.6 +0.5**
KSU1 Kansas State U 44.17 274 P **P** **22 51 19.0 -0.1**
KSU1 IAmb IAmb 22 51 20.2
comp=Z,23nm,0.9s
KSU1 Kansas State U 44.17 274 P **P** **22 51 19.1 -0.1**
baz=44
IDI Anoyia 44.19 94 ⇑P **P** **22 51 19.3 0.0**
IDI Anoyia 44.19 94 P **P** **22 51 18.9 -0.5**
comp=Z,12nm,0.9s,baz=329,slow=16,SNR=10
IDI LR LR 23 10 15.8
comp=Z,285nm,20.8s,baz=306,slow=37
comp=Z,12nm,0.9s
IDI Anoyia 44.19 94 P **P** **22 51 19.4 0.0**
IDI IAmb IAmb 22 51 30.1
comp=Z,18nm,0.9s
BELG Belogornoye 44.21 60 LR LR 23 08 27.9
comp=Z,318nm,21.8s,baz=324,slow=34
Y45A Yeager Farm, C 44.23 263 P **P** **22 51 19.6 0.0**
TGTN Hyland Airport 44.33 317 P **P** **22 51 21.1 +0.8**
baz=50
553A Crawfordville 44.38 255 P **P** **22 51 21.7 +0.9**
553A IAmb IAmb 22 51 24.5
comp=Z,19nm,0.9s
RSSD Black Hills 44.62 285 P **P** **22 51 23.4 +0.5**
RSSD Black Hills 44.62 285 P **P** **22 51 22.1 -0.8**
baz=47
WHAR Wooly Hollow 44.63 267 P **P** **22 51 22.5 -0.3**
WHAR IAmb IAmb 22 51 28.3
comp=Z,23nm,1.3s
W41B Gary Mavity, V 44.70 266 P **P** **22 51 23.5 +0.2**
W41B IAmb IAmb 22 51 28.7
comp=Z,23nm,1.4s
W41B Gary Mavity, V 44.70 266 P **P** **22 51 23.5 +0.2**
baz=41
MMPY Sheldon Lake, 44.71 319 P **P** **22 51 24.3 +1.0**
baz=50
D25K Kavik River 44.73 332 P **P** **22 51 23.1 -0.2**
baz=45
ILGA Ilgaz 44.76 81 P **P** **22 51 25.7 +1.5**
HHAR Hobbs 44.79 269 P **P** **22 51 23.9 -0.2**
U38A Gravette 44.91 269 P **P** **22 51 24.4 -0.7**
U38A IAmb IAmb 22 51 26.4
comp=Z,11nm,1.0s
EGMT Eagleton 44.92 292 P **P** **22 51 25.1 +0.1**
EGMT Eagleton 44.92 292 P **P** **22 51 25.8 +0.7**
baz=48,SNR=7.3
I29M Ogilvie Camp, 45.22 325 P **P** **22 51 27.7 +0.5**
I29M IAmb IAmb 22 51 28.2
comp=Z,19nm,0.9s
CCAR Cane Creek 45.39 265 P **P** **22 51 29.0 +0.1**
C23K Itkillik River 45.39 334 P **P** **22 51 29.5 +1.1**
baz=43,SNR=13
D24K Happy Valley 45.46 333 P **P** **22 51 29.5 +0.4**
baz=43
W39A Magazine 45.51 268 P **P** **22 51 29.9 +0.1**
W39A Magazine 45.51 268 P **P** **22 51 30.1 +0.3**
baz=41,SNR=7.8
A21K Barrow 45.58 338 IAmb IAmb 22 51 32.6
comp=Z,15nm,0.8s
A21K Barrow 45.58 338 P **P** **22 51 30.5 +0.6**
baz=39,SNR=6.5
BMAR Burnt Mountain 45.61 330 P **P** **22 51 31.0 +0.8**
BR131 Keskin Array S 45.66 83 P **P** **22 51 32.7 +1.5**
BR131 IAmb IAmb 22 51 37.3
comp=Z,17nm,1.1s
BRTR Keskin Array B 45.67 83 P **P** **22 51 32.5 +1.3**
comp=Z,5.2nm,0.9s,baz=327,slow=6.7,SNR=10.0
BRTR LR LR 23 11 30.5
comp=Z,143nm,19.7s,baz=310,slow=37
comp=Z,5.2nm,0.9s
T35A Sooner Cattle 45.71 272 P **P** **22 51 30.6 -0.9**
T35A IAmb IAmb 22 51 39.0
comp=Z,11nm,1.1s
OGNE Ogallala 45.77 280 P **P** **22 51 32.3 +0.3**
baz=45
R32A Long Quarter, 45.80 275 P **P** **22 51 32.0 -0.2**
R32A IAmb IAmb 22 51 36.6
comp=Z,13nm,0.8s
ELL Elmali 45.82 89 P **P** **22 51 33.2 +0.9**
MIAR Mount Ida 45.89 267 P **P** **22 51 33.1 +0.2**
MIAR IAmb IAmb 22 51 38.4
comp=Z,17nm,1.2s
MIAR Mount Ida 45.89 267 P **P** **22 51 33.2 +0.4**
baz=41,SNR=7.2
TOLK Toolik Lake Re 46.02 333 P **P** **22 51 34.1 +0.5**
baz=42,SNR=12
D23K Nanushuk River 46.05 334 P **P** **22 51 34.9 +1.2**
baz=42,SNR=17
TUL1 Leonard 46.06 270 P **P** **22 51 34.2 0.0**
TUL1 Leonard 46.06 270 P **P** **22 51 33.4 -0.8**
baz=42
CBKS Cedar Bluff 46.07 276 P **P** **22 51 33.8 -0.5**
baz=44
M31M Drury Creek, Y 46.08 320 P **P** **22 51 35.2 +1.1**
M31M IAmb IAmb 22 51 43.8
comp=Z,15nm,1.4s
M31M Drury Creek, Y 46.08 320 P **P** **22 51 35.8 +1.7**
baz=48
WALA Waterton Lakes 46.27 296 P **P** **22 51 36.3 +0.5**
WLAR White Oak Lake 46.29 266 P **P** **22 51 35.9 0.0**
N32M Quiet Lake 46.33 319 P **P** **22 51 37.2 +1.1**
baz=48,SNR=7.7
ARU Arti 46.42 50 LR LR 23 09 46.5
comp=Z,258nm,19.8s,baz=297,slow=34
ARU Arti 46.42 50 P **P** **22 51 37.4 +0.6**
ARU IAmb IAmb 22 51 49.3
comp=Z,10nm,1.1s
Z41A Richland Creek 46.45 265 P **P** **22 51 37.3 +0.1**
Z41A IAmb IAmb 22 51 38.0
comp=Z,11nm,0.8s
Z41A Richland Creek 46.45 265 P **P** **22 51 37.2 +0.1**
baz=40
DAWY Dawson 46.45 324 P **P** **22 51 38.0 +1.1**
baz=46,SNR=8.8
RLMT Red Lodge 46.64 289 P **P** **22 51 39.4 +0.5**
baz=46
M30M Minto, Yukon 46.64 322 IAmb IAmb 22 51 48.3
comp=Z,18nm,1.5s
M30M Minto, Yukon 46.64 322 P **P** **22 51 39.7 +1.2**
baz=46,SNR=6.2
I26K Coal Creek Min 46.72 327 P **P** **22 51 39.6 +0.6**
baz=44
X37A Clayton 46.83 269 IAmb IAmb 22 51 41.7
comp=Z,12nm,1.1s
P33M Teslin, Yukon 46.88 318 P **P** **22 51 39.9 -0.5**
baz=47
K22A Casper 46.94 285 P **P** **22 51 41.1 -0.2**
baz=45
DLBC Dease Lake 47.04 314 LR LR 23 11 04.6
comp=Z,1µm,19.2s,baz=92,slow=36
DLBC Dease Lake 47.04 314 P **P** **22 51 42.4 +0.7**
baz=47
N31M Braeburn, Yuko 47.05 320 P **P** **22 51 42.5 +0.8**
baz=46
COLD Coldfoot 47.24 332 P **P** **22 51 43.8 +0.7**
COLD IAmb IAmb 22 51 44.7
comp=Z,6.0nm,0.8s
COLD Coldfoot 47.24 332 P **P** **22 51 43.3 +0.2**
baz=41
WHY Whitehorse 47.31 319 P **P** **22 51 43.8 0.0**
WHY IAmb IAmb 22 51 52.9
comp=Z,19nm,1.7s
WHY Whitehorse 47.31 319 P **P** **22 51 43.9 +0.1**
baz=46
K27K Chicken 47.31 325 IAmb IAmb 22 51 56.2
comp=Z,7.0nm,1.0s
K27K Chicken 47.31 325 P **P** **22 51 44.4 +0.8**
baz=44
J26L Joseph Creek 47.42 327 IAmb IAmb 22 51 47.5
comp=Z,6.2nm,0.8s
J26L Joseph Creek 47.42 327 P **P** **22 51 45.3 +0.6**
baz=44,SNR=13
KIV Kislovodsk 47.45 72 ⇑P **P** **22 51 44.6 -0.5**
KIV Kislovodsk 47.45 72 P **P** **22 51 47.6 +2.6**
KIV IAmb IAmb 22 51 51.4
comp=Z,14nm,1.1s
KVAR Kislovodsk Arr 47.45 72 LR LR 23 12 24.6
comp=Z,190nm,19.1s,baz=292,slow=37
KSCO Kaye Shedlock' 47.48 278 P **P** **22 51 45.3 -0.1**
baz=43
BNN Bunyan 47.48 82 P **P** **22 51 46.6 +1.2**
BOZ Bozeman (W) 47.51 291 P **P** **22 51 46.4 +0.7**
baz=46,SNR=9.3
N30M Aishikik Lake 47.52 321 P **P** **22 51 46.0 +0.6**
baz=46
G23K Bananza Creek 47.59 331 P **P** **22 51 46.6 +0.7**
baz=41
P32M Atlin 47.63 317 P **P** **22 51 47.1 +0.9**
baz=46
O30N Mendenhall 47.66 320 P **P** **22 51 47.7 +1.3**
baz=46,SNR=5.2
H24K Noodor Dome 47.67 330 IAmb IAmb 22 51 48.5
comp=Z,8.0nm,0.8s
H24K Noodor Dome 47.67 330 P **P** **22 51 47.5 +1.0**
baz=42,SNR=12
KBZ Khabaz 47.71 72 P **P** **22 51 49.4 +2.4**
comp=Z,4.6nm,0.9s,baz=306,slow=7.4,SNR=9.2
KBZ LR LR 23 12 49.7
comp=Z,170nm,18.4s,baz=330,slow=37
LRM Limekiln Ridge 47.77 292 P **P** **22 51 47.0 -0.7**
YHL Hebgen Lake 47.81 290 P **P** **22 51 48.7 +0.6**
G22K Bettles 47.81 332 P **P** **22 51 47.1 -0.3**
baz=40
MSO Missoula 47.81 294 P **P** **22 51 47.6 -0.3**
baz=46
H17A Grant Village 47.82 289 P **P** **22 51 48.8 +0.6**
J25K Salcha River, 47.87 327 IAmb IAmb 22 51 57.8
comp=Z,13nm,1.2s
J25K Salcha River, 47.87 327 P **P** **22 51 49.0 +0.9**
baz=43,SNR=7.0
N23A Red Feather La 47.89 283 P **P** **22 51 49.3 +0.6**
N23A IAmb IAmb 22 51 51.7
comp=Z,12nm,0.8s
N23A Red Feather La 47.89 283 P **P** **22 51 49.6 +0.9**
baz=44,SNR=5.9
BCAR Beaver Creek A 47.92 324 P **P** **22 51 49.7 +1.3**
SCRK Sand Creek 47.93 326 IAmb IAmb 22 51 50.5
comp=Z,11nm,0.9s
SCRK Sand Creek 47.93 326 P **P** **22 51 49.9 +1.2**
baz=43,SNR=18
L27K Beaver Creek, 47.94 324 IAmb IAmb 22 51 58.6
comp=Z,8.6nm,1.1s
L27K Beaver Creek, 47.94 324 P **P** **22 51 49.9 +1.3**
baz=44,SNR=7.0
F21K Alatna River 48.07 333 P **P** **22 51 50.0 +0.5**
baz=39
POKR Poker Plat Res 48.09 329 P **P** **22 51 50.6 +1.0**
POKR IAmb IAmb 22 51 52.0
comp=Z,10nm,0.9s
POKR Poker Plat Res 48.09 329 P **P** **22 51 50.6 +1.0**
baz=42
BVCY Beaver Creek 48.10 323 P **P** **22 51 50.1 +0.3**
baz=44
FLWY Flagg Ranch 48.10 289 P **P** **22 51 51.4 +1.1**
FLWY IAmb IAmb 22 52 05.5
comp=Z,15nm,1.1s
HYT Haines Junctio 48.11 320 P **P** **22 51 51.6 +1.6**
baz=45,SNR=5.8
T35M Bob Quinn 48.12 313 P **P** **22 51 51.4 +1.3**
baz=46
H23K Yukon River 48.13 330 P **P** **22 51 51.4 +1.4**
baz=41,SNR=11
YUK4 Talbot Arm 48.13 321 P **P** **22 51 51.0 +0.8**
baz=45,SNR=5.4
X34A Smith Ranch, M 48.15 271 P **P** **22 51 51.4 +0.8**
IL31 48.19 328 IAmb IAmb 22 51 52.4
comp=Z,9.6nm,0.9s
ILAR Eielson Array 48.19 328 P **P** **22 51 50.9 +0.4**
comp=Z,5.9nm,0.8s,baz=36,slow=6.4,SNR=71
ILAR PcP **PcP** **22 53 17.1 -0.5**
comp=Z,2.1nm,0.8s,baz=2.5,slow=3.0,SNR=6.6
ILAR LR LR 23 11 00.5
comp=Z,195nm,21.8s,baz=78,slow=35
comp=Z,5.9nm,0.8s
DOT Dot Lake 48.20 326 P **P** **22 51 51.8 +1.2**
DOT IAmb IAmb 22 52 00.4
comp=Z,12nm,1.1s
SKAG Skagway 48.31 318 P **P** **22 51 52.2 +0.8**
SKAG IAmb IAmb 22 52 01.9
comp=Z,8.3nm,0.9s
SKAG Skagway 48.31 318 P **P** **22 51 52.0 +0.6**
baz=45
YUK6 Outpost Mounta 48.32 321 P **P** **22 51 52.8 +1.0**
baz=44
MOOW Moose Ponds 48.36 289 P **P** **22 51 52.5 +0.2**
MOOW IAmb IAmb 22 51 54.1
comp=Z,12nm,1.5s
RIDG Independent Ri 48.37 326 P **P** **22 51 52.6 +0.7**
RIDG IAmb IAmb 22 51 54.4
comp=Z,13nm,1.0s
RIDG Independent Ri 48.37 326 P **P** **22 51 53.3 +1.4**
baz=42,SNR=7.9
NEW Newport 48.37 297 LR LR 23 11 26.1
comp=Z,556nm,18.1s,baz=39,slow=35
NEW Newport 48.37 297 P **P** **22 51 52.4 +0.3**
baz=46
LOHW Long Hollow 48.38 289 P **P** **22 51 52.6 +0.1**
COLA College 48.39 329 P **P** **22 51 52.3 +0.4**
COLA College 48.39 329 P **P** **22 51 52.8 +0.8**
baz=41
TCOL CIGO, UAF Yank 48.39 329 P **P** **22 51 53.1 +1.2**
TCOL CIGO, UAF Yank 48.39 329 P **P** **22 51 52.7 +0.7**
baz=41
P30M Million Dollar 48.42 319 P **P** **22 51 52.9 +0.5**
baz=45
YUK3 Moose Creek 48.43 323 P **P** **22 51 54.0 +1.4**
baz=44,SNR=5.4
MDM Murphy Dome 48.43 329 P **P** **22 51 52.9 +0.5**
MDM IAmb IAmb 22 51 54.2
comp=Z,12nm,0.8s
L26K Log Cabin Wild 48.44 325 P **P** **22 51 53.0 +0.6**
L26K IAmb IAmb 22 51 55.1
comp=Z,13nm,1.4s
L26K Log Cabin Wild 48.44 325 P **P** **22 51 53.2 +0.8**
baz=43
BW06 Boulder Array 48.44 287 P **P** **22 51 51.9 -1.0**
BW06 IAmb IAmb 22 51 53.1
comp=Z,7.2nm,0.8s
BW06 Boulder Array 48.44 287 P **P** **22 51 52.5 -0.4**
baz=45
PD31 Pinedale Array 48.44 287 IAmb IAmb 22 51 53.1
comp=Z,5.6nm,0.8s
PDAR Pinedale Array 48.44 287 P **P** **22 51 52.5 -0.5**
comp=Z,4.6nm,0.7s,baz=65,slow=7.9,SNR=34
PDAR LR LR 23 11 16.0
comp=Z,560nm,18.0s,baz=41,slow=35
comp=Z,4.6nm,0.7s
M27K Edge Creek, AK 48.46 324 P **P** **22 51 53.8 +1.0**
M27K IAmb IAmb 22 52 04.8
comp=Z,14nm,1.4s
M27K Edge Creek, AK 48.46 324 P **P** **22 51 53.2 +0.4**
baz=43
HDA Harding Lake 48.48 328 P **P** **22 51 53.0 +0.3**
HDA Harding Lake 48.48 328 P **P** **22 51 53.3 +0.6**
baz=42
ISCO Idaho Springs 48.50 281 P **P** **22 51 54.3 +0.8**
ISCO IAmb IAmb 22 51 55.9
comp=Z,12nm,1.1s
ISCO Idaho Springs 48.50 281 P **P** **22 51 54.8 +1.2**
baz=43,SNR=10
YUK8 Steele Glacier 48.55 322 P **P** **22 51 53.4 -0.2**
baz=44
WMOK Wichita Mounta 48.56 272 IAmb IAmb 22 51 59.1
comp=Z,15nm,1.1s
WMOK Wichita Mounta 48.56 272 P **P** **22 51 53.2 -0.5**
baz=41
SNOW Snow King Moun 48.56 289 P **P** **22 51 55.0 +1.0**
H22K Ishtalitna Cre 48.57 331 P **P** **22 51 54.4 +1.1**
baz=40,SNR=6.3
K24K Donnelly Dome 48.60 327 P **P** **22 51 55.1 +1.5**
baz=42,SNR=9.3
NATX Nacogdoches 48.60 265 P **P** **22 51 54.2 +0.2**
baz=39
I23K Minto, Yukon-K 48.60 330 IAmb IAmb 22 52 03.3
comp=Z,17nm,1.3s
I23K Minto, Yukon-K 48.60 330 P **P** **22 51 54.8 +1.2**
baz=40,SNR=11
G21K Allakaket 48.63 333 P **P** **22 51 54.3 +0.6**
baz=39
TPAW Teton Pass 48.65 289 P **P** **22 51 54.8 +0.2**
TPAW IAmb IAmb 22 51 55.8
comp=Z,10.0nm,0.9s
REDW Red Top Meadow 48.69 289 P **P** **22 51 54.6 -0.2**
REDW IAmb IAmb 22 51 59.7
comp=Z,9.9nm,1.0s
WRH Wood River Hil 48.76 328 IAmb IAmb 22 51 56.5
comp=Z,6.9nm,0.9s
M26K Nabesna, AK 48.79 324 P **P** **22 51 56.3 +1.2**
M26K IAmb IAmb 22 52 04.6
comp=Z,13nm,1.3s
M26K Nabesna, AK 48.79 324 P **P** **22 51 56.4 +1.2**
baz=43
Z35A Perchaven, San 48.80 269 P **P** **22 51 55.8 +0.3**
Z35A IAmb IAmb 22 52 17.4
comp=Z,9.6nm,0.8s
ONI Oni 48.81 73 P **P** **22 51 57.0 +1.4**
ONI IAmb IAmb 22 51 59.6

comp=Z,19nm,1.6s
Q24A **Divide** 48.86 280 P P 22 51 56.7 +0.4
Q24A **Divide** 48.86 280 P P 22 51 56.5 +0.1
baz=43
NEA2 **Nenana** 48.95 329 P P 22 51 57.2 +1.0
NEA2 IAmb IAmb 22 51 58.2
comp=Z,7.8nm,1.0s
NEA2 **Nenana** 48.95 329 P P 22 51 56.3 +0.1
baz=40
LLLB **Lillooet** 48.98 302 P P 22 51 57.1 +0.4
CSS **Mathiatis** 49.00 87 P P 22 51 56.8 -0.2
CSS IAmb IAmb 22 52 03.4
comp=Z,18nm,1.3s
MLY **Manley** 49.07 330 IAmb IAmb 22 51 58.9
comp=Z,6.5nm,0.7s
MLY **Manley** 49.07 330 P P 22 51 57.8 +0.6
baz=40,SNR=14
IMAR **Indian Mountai** 49.11 332 P P 22 51 57.9 +0.4
KOPT **Kop Dagi** 49.11 77 P P 22 52 00.3 +2.1
KOPT IAmb IAmb 22 52 05.7
comp=Z,11nm,1.0s
H21K **Melozitna Rive** 49.12 332 P P 22 51 58.0 +0.4
H21K **Melozitna Rive** 49.12 332 P P 22 51 58.6 +1.0
baz=39,SNR=8.1
PAX **Paxson** 49.13 326 P P 22 51 58.5 +0.7
PAX IAmb IAmb 22 51 59.5
comp=Z,9.2nm,1.2s
PAX **Paxson** 49.13 326 P P 22 51 58.7 +1.0
baz=42
AHID **Auburn Hatcher** 49.24 288 IAmb IAmb 22 52 04.4
comp=Z,23nm,1.4s
I21K **Tanana** 49.28 331 IAmb IAmb 22 52 08.2
comp=Z,19nm,1.2s
I21K **Tanana** 49.28 331 P P 22 51 59.7 +0.9
baz=39,SNR=11
LOGN **Logan Glacier** 49.30 322 P P 22 51 59.3 0.0
LOGN IAmb IAmb 22 52 12.9
comp=Z,16nm,1.0s
CTGM **Chitina Glacie** 49.31 322 P P 22 52 00.4 +1.2
CTG **Chitina Glacier** 49.31 322 P P 22 52 00.0 +0.8
baz=43
WRAK **Wrangell Islan** 49.34 314 P P 22 52 00.3 +1.0
baz=45
BARN **Barnard Glacie** 49.35 323 P P 22 52 00.3 +0.7
B08A **Colville Reser** 49.36 299 IAmb IAmb 22 52 08.4
comp=Z,12nm,1.1s
BWN **Browne** 49.38 329 P P 22 51 59.9 +0.3
HARP **HAARP** 49.46 325 P P 22 52 01.2 +0.9
baz=41
RDOG **Red Dog Mine** 49.52 338 P P 22 51 55.5 -5.1
RDOG **Red Dog Mine** 49.52 338 P P 22 51 59.8 -0.8
baz=33
MCARA **McCarthy VSAT** 49.55 323 P P 22 52 00.0 -0.9
baz=42
MCK **McKinley** 49.57 328 P P 22 52 01.9 +0.9
MCK **McKinley** 49.57 328 P P 22 52 01.8 +0.7
baz=40,SNR=5.4
PINM **Pinnacle** 49.59 321 P P 22 52 02.2 +1.0
baz=43
PNL **Peninsula** 49.60 320 P P 22 52 02.7 +1.3
baz=43
DHY **Denali Highway** 49.62 327 IAmb IAmb 22 52 24.5
comp=Z,7.3nm,0.7s
DHY **Denali Highway** 49.62 327 P P 22 52 00.9 -0.7
baz=40
GRNC **Granite Creek** 49.62 322 P P 22 52 02.7 +1.0
O20A **White River Ci** 49.65 284 IAmb IAmb 22 52 11.6
comp=Z,8.4nm,0.8s
O20A **White River Ci** 49.65 284 P P 22 52 03.0 +0.8
baz=43,SNR=6.0
RND **Reindeer** 49.80 328 IAmb IAmb 22 52 04.2
comp=Z,10nm,0.9s
T25A **Trinidad** 49.81 278 IAmb IAmb 22 52 05.1
comp=Z,10nm,0.9s
T25A **Trinidad** 49.81 278 P P 22 52 04.5 +1.0
baz=42,SNR=9.3
BPAW **Bear Paw Mtn.** 49.86 329 IAmb IAmb 22 52 05.8
comp=Z,25nm,1.6s
BPAW **Bear Paw Mtn.** 49.86 329 P P 22 52 03.8 +0.5
baz=39,SNR=5.7
N25K **Chitina, Valde** 49.89 324 P P 22 52 04.3 +0.8
N25K IAmb IAmb 22 52 05.6
comp=Z,14nm,1.0s
N25K **Chitina, Valde** 49.89 324 P P 22 52 04.0 +0.4
baz=41
YAH **Yahtse** 49.89 322 P P 22 52 03.4 -0.4
ISLE **Juniper Island** 49.91 322 P P 22 52 04.6 +0.8
WHTX **Lake Whitney,** 49.93 268 P P 22 52 04.0 -0.1
baz=39
SDCO **Great Sand Dun** 49.94 280 P P 22 52 05.2 +0.7
SDCO IAmb IAmb 22 52 06.7
comp=Z,17nm,1.6s
SDCO **Great Sand Dun** 49.94 280 P P 22 52 05.3 +0.7
baz=42,SNR=5.4
M24K **Tolsona, Glenn** 50.00 326 P P 22 52 04.9 +0.5
baz=41
AMTX **Amarillo** 50.02 274 P P 22 52 05.3 +0.4
AMTX **Amarillo** 50.02 274 P P 22 52 05.4 +0.4
baz=41
RDMU **Red Mountain** 50.03 285 P P 22 52 05.4 +0.3
SIT **Sitka** 50.03 316 P P 22 52 05.4 +0.9
baz=44
F10A **Beach Ranch, E** 50.03 295 IAmb IAmb 22 52 06.0
comp=Z,31nm,1.8s
CRQE **Cirque** 50.05 323 P P 22 52 04.5 -0.3
baz=42
MESA **MESA** 50.10 322 P P 22 52 06.4 +1.0
baz=42
WAT6 **Susitna Watana** 50.11 327 P P 22 52 06.0 +0.7
baz=40,SNR=5.9
WAT1 **Susitna Watana** 50.15 327 P P 22 52 05.7 +0.2
baz=40
TRF **Thorofare Moun** 50.17 329 P P 22 52 06.0 +0.2
baz=39
WAX **Waxell Ridge** 50.19 323 P P 22 52 06.2 +0.2
KTH **Kantishna Hill** 50.27 329 P P 22 52 06.9 +0.4
KTH IAmb IAmb 22 52 08.1
comp=Z,28nm,1.5s
HWUT **Hardware Ranch** 50.31 287 IAmb IAmb 22 52 08.2
comp=Z,12nm,0.8s
AKTO **Aktyubinsk** 50.33 56 P P 22 52 07.4 +0.5
comp=Z,7.0nm,0.8s,baz=300,slow=7.8
AKTO LR LR 23 13 15.4
comp=Z,300nm,18.0s,baz=317,slow=36
comp=Z,7.0nm,0.8s
CRAG **Craig** 50.33 313 P P 22 52 07.0 +0.2
baz=44
HLID **Hailey** 50.36 291 P P 22 52 08.0 +0.5
HLID IAmb IAmb 22 52 09.8
comp=Z,14nm,1.4s
HLID **Hailey** 50.36 291 P P 22 52 08.4 +0.9
baz=44,SNR=7.4
BMRM **Bremner River** 50.37 324 P P 22 52 07.6 +0.4
baz=41
KLU **Klutina** 50.39 325 P P 22 52 07.9 +0.5
KLU IAmb IAmb 22 52 24.1
comp=Z,21nm,1.2s
KLU **Klutina** 50.39 325 P P 22 52 07.9 +0.5
baz=40
CHUM **Lake Minchumin** 50.39 330 P P 22 52 07.7 +0.4
baz=38
SCM **Sheep Creek Mo** 50.56 326 P P 22 52 09.2 +0.5
baz=40
BGLC **Bering Glacier** 50.58 322 P P 22 52 09.3 +0.6
baz=41
BBB **Bella Bella** 50.63 307 LR LR 23 13 55.9
comp=Z,239nm,18.6s,baz=31,slow=36
ABTX **Abilene, Hawle** 50.63 270 P P 22 52 09.5 0.0
ABTX **Abilene, Hawle** 50.63 270 P P 22 52 10.6 +1.0
baz=40
HKT **Hockley** 50.63 265 P P 22 52 10.3 +0.8
TIXI **Tiksi** 50.65 7 LR LR 23 11 14.0
comp=Z,48nm,20.8s,baz=359,slow=33
TIXI **Tiksi** 50.65 7 P P 22 52 09.9 +0.8
TIXI IAmb IAmb 22 52 10.7
comp=Z,8.9nm,0.7s
J20K **Nowinta River** 50.65 331 P P 22 52 09.9 +0.7
baz=37,SNR=6.1
S22A **4UR Ranch, Cre** 50.65 281 P P 22 52 10.5 +0.5
S22A IAmb IAmb 22 52 12.4
comp=Z,15nm,1.4s
S22A **4UR Ranch, Cre** 50.65 281 P P 22 52 11.2 +1.2
baz=42,SNR=7.3
CAST **Castle Rocks** 50.70 329 IAmb IAmb 22 52 10.9
comp=Z,9.4nm,1.0s
CAST **Castle Rocks** 50.70 329 P P 22 52 08.9 -0.7
baz=38

HVU **Hansel Valley** 50.81 288 P P 22 52 10.2 -0.8
HVU IAmb IAmb 22 52 11.9
comp=Z,26nm,1.7s
SML **Sawmill** 50.88 326 P P 22 52 11.9 +0.8
SML IAmb IAmb 22 52 13.2
comp=Z,14nm,1.0s
SML **Sawmill** 50.88 326 P P 22 52 11.0 0.0
baz=39
GCSA **Galena City Sc** 50.89 333 P P 22 52 11.4 +0.5
baz=36
435B **Jarrell** 50.93 267 P P 22 52 12.9 +1.1
baz=39
CBB **Campbell River** 50.96 304 P P 22 52 12.2 +0.4
CBB IAmb IAmb 22 52 13.4
comp=Z,10nm,0.8s
JLU **Jordanelle** 50.98 286 P P 22 52 11.7 -0.6
JLU IAmb IAmb 22 52 13.7
comp=Z,24nm,1.5s
CUT **Chulitna** 50.98 328 P P 22 52 11.8 0.0
baz=38
GURO **Guroymak-BITLI** 50.99 77 P P 22 52 14.0 +1.7
EYAK **Cordova Ski Ar** 51.06 324 P P 22 52 13.0 +0.7
baz=40
P18A **Preston Nutter** 51.07 285 P P 22 52 13.1 0.0
CTU **Camp Tracy** 51.07 287 P P 22 52 13.2 +0.3
GHO **Glory Hole Cre** 51.09 327 P P 22 52 12.7 +0.1
GHO IAmb IAmb 22 52 25.9
comp=Z,22nm,1.3s
PV15 **Paradox Valley** 51.09 282 P P 22 52 13.2 0.0
PV15 IAmb IAmb 22 52 15.0
comp=Z,9.1nm,0.9s
PV07 **Paradox Valley** 51.10 282 P P 22 52 08.8 -4.4
PV07 IAmb IAmb 22 52 09.4
comp=Z,16nm,1.3s
PPLA **Purkeypile** 51.14 329 P P 22 52 14.8 +1.7
PPLA **Purkeypile** 51.14 329 P P 22 52 13.9 +0.8
baz=38
MFID **Camas Ranch** 51.18 292 P P 22 52 13.6 0.0
PV21 **Cone Mtn., Par** 51.19 283 P P 22 52 14.8 +0.9
GLI **Glacier Island** 51.22 325 P P 22 52 13.9 +0.4
baz=40
KNK **Knik Glacier** 51.23 326 P P 22 52 14.4 +0.8
baz=39
GNI **Garni** 51.24 74 P P 22 52 15.5 +1.4
comp=Z,9.2nm,0.8s,baz=193,slow=4.2,SNR=10
GNI LR LR 23 14 09.1
comp=Z,137nm,20.5s,baz=332,slow=36
comp=Z,9.2nm,0.8s
GNI **Garni** 51.24 74 P P 22 52 15.9 +1.7
GNI IAmb IAmb 22 52 18.4
comp=Z,21nm,1.1s
MARD **Mardin** 51.24 79 P P 22 52 16.5 +2.2
MARD IAmb IAmb 22 52 20.9
comp=Z,17nm,1.0s
PV23 **Carpenter Ridg** 51.28 283 P P 22 52 14.8 +0.2
PV23 IAmb IAmb 22 52 17.4
comp=Z,12nm,1.1s
K20K **Telida** 51.29 330 P P 22 52 14.7 +0.6
K20K IAmb IAmb 22 52 15.6
comp=Z,14nm,0.8s
K20K **Telida** 51.29 330 P P 22 52 14.3 +0.2
baz=37,SNR=8.8
PMR **Palmer** 51.29 327 P P 22 52 14.8 +0.8
baz=39
MSTX **Muleshoe** 51.30 274 P P 22 52 14.9 +0.3
MSTX IAmb IAmb 22 52 16.1
comp=Z,22nm,1.2s
MSTX **Muleshoe** 51.30 274 P P 22 52 15.3 +0.6
baz=40
PV11 **David Mesa, Pa** 51.33 283 P P 22 52 15.8 +0.9
PV11 IAmb IAmb 22 52 16.9
comp=Z,16nm,0.9s
PV10 **Paradox Valley** 51.35 283 P P 22 52 16.6 +1.4
PV10 IAmb IAmb 22 52 17.6
comp=Z,15nm,0.9s
PV13 **Radium Mtn., P** 51.40 282 P P 22 52 15.7 +0.2
P17A **Butcher Ranch,** 51.44 285 P P 22 52 16.0 +0.3
P17A IAmb IAmb 22 52 17.2
comp=Z,22nm,1.4s
MPU **Maple Canyon** 51.51 286 P P 22 52 16.9 +0.7
MPU IAmb IAmb 22 52 17.9
comp=Z,16nm,0.9s
BGU **Big Grassy Mou** 51.56 288 P P 22 52 16.9 +0.3
MMAI **Mount Meron Ar** 51.59 87 P P 22 52 17.3 +0.5
comp=Z,3.5nm,0.9s,baz=300,slow=40,SNR=3.6
MMAI LR LR 23 15 33.9
comp=Z,217nm,22.0s,baz=108,slow=38
comp=Z,3.5nm,0.9s
SRU **San Rafael Swe** 51.59 284 P P 22 52 16.3 -0.6
SKT **Skwentna** 51.69 328 IAmb IAmb 22 52 18.2
comp=Z,10nm,0.8s
SKT **Skwentna** 51.69 328 P P 22 52 17.2 +0.2
baz=38,SNR=5.9
NLU **North Lily Min** 51.78 286 P P 22 52 18.4 +0.1
TMUT **Trail Mountain** 51.82 285 IAmb IAmb 22 52 20.2
comp=Z,11nm,1.0s
RC01 **Rabbit Creek A** 51.87 326 P P 22 52 19.7 +1.3
RC01 **Rabbit Creek A** 51.87 326 P P 22 52 19.2 +0.8
baz=38
SUA **Susitna One** 51.87 327 P P 22 52 19.7 +1.2
SUA IAmb IAmb 22 52 20.8
comp=Z,18nm,0.9s
SUA **Susitna One** 51.87 327 P P 22 52 19.3 +0.8
baz=38
MVCO **Mesa Verde** 51.94 281 P P 22 52 21.0 +1.5
baz=42,SNR=7.4
L20K **Farewell, AK** 51.95 329 P P 22 52 18.1 -0.9
baz=36
DUG **Dugway, Tooele** 51.99 287 IAmb IAmb 22 52 22.7
comp=Z,21nm,1.7s
DUG **Dugway, Tooele** 51.99 287 P P 22 52 20.2 +0.4
baz=42
ABKAR **Akbulak array** 52.04 56 P P 22 52 20.2 +0.4
ABKAR IAmb IAmb 22 52 23.0
comp=Z,15nm,1.4s
Q16A **Castle Valley** 52.08 285 P P 22 52 20.9 +0.4
Q16A IAmb IAmb 22 52 22.0
comp=Z,16nm,1.4s
TTA **Tatalina** 52.15 331 P P 22 52 20.6 0.0
TTA **Tatalina** 52.15 331 P P 22 52 20.2 -0.4
baz=35
M20K **Styx River** 52.22 329 P P 22 52 20.7 -0.4
baz=36
JCT **Junction City** 52.37 269 IAmb IAmb 22 52 23.5
comp=Z,14nm,0.9s
JCT **Junction City** 52.37 269 P P 22 52 22.6 +0.1
baz=39
L19K **White Mountain** 52.45 330 P P 22 52 22.7 0.0
baz=36
SPU **Mount Spurr** 52.48 328 P P 22 52 23.1 +0.1
I07A **Izee** 52.52 295 P P 22 52 23.3 -0.3
J08A **Circle Bar Ran** 52.54 294 P P 22 52 23.8 0.0
J08A IAmb IAmb 22 52 24.8
comp=Z,11nm,0.8s
ANMO **Albuquerque** 52.54 278 LR LR 23 13 52.1
comp=Z,805nm,18.2s,baz=55,slow=35
ANMO **Albuquerque** 52.54 278 P P 22 52 24.4 +0.4
ANMO **Albuquerque** 52.54 278 P P 22 52 24.2 +0.1
baz=41
M19K **Big River Lodg** 52.55 329 P P 22 52 23.0 -0.5
M19K **Big River Lodg** 52.55 329 P P 22 52 22.8 -0.7
baz=36
735A **Kenedy** 52.56 266 P P 22 52 23.2 -0.7
SEW **Seward** 52.56 326 P P 22 52 22.2 -1.3
baz=38
TNA **Tin City** 52.69 338 P P 22 52 24.3 -0.1
baz=29
ELK **Elko** 52.83 289 LR LR 23 14 08.4
comp=Z,737nm,18.3s,baz=46,slow=35
ELK **Elko** 52.83 289 P P 22 52 26.5 +0.4
ELK IAmb IAmb 22 52 28.7
comp=Z,11nm,1.1s
MSU **Marysvale** 52.90 285 P P 22 52 27.3 +0.6
TCRU **Three Creeks R** 52.97 285 P P 22 52 26.7 -0.5
ASF **Jabal al Asfar** 53.05 87 P P 22 52 27.6 -0.1
comp=Z,6.1nm,1.1s,baz=289,slow=2.6,SNR=7.4
comp=Z,6.1nm,1.1s
I05D **Terrebonne, OR** 53.22 296 P P 22 52 27.9 -0.8
baz=42
BNM **Barren Site** 53.24 277 P P 22 52 29.2 0.0
BRSE **Bradley Lake S** 53.24 326 P P 22 52 28.9 +0.3
baz=37
MTPU **Mount Pierson** 53.26 285 P P 22 52 29.2 -0.2
MTPU IAmb IAmb 22 52 31.8
comp=Z,30nm,1.7s
WVOR **Wild Horse Val** 53.30 293 P P 22 52 29.5 +0.1

H04A **Detroit Lake** 53.38 297 P P 22 52 30.2 +0.4
H04A IAmb IAmb 22 52 35.1
comp=Z,27nm,1.5s
PINE **Pine Mountain** 53.43 296 P P 22 52 30.8 +0.3
PINE IAmb IAmb 22 52 39.4
comp=Z,19nm,1.1s
CRNM **Carthage** 53.45 277 P P 22 52 31.6 +0.9
N19K **Bonanza Creek** 53.47 329 P P 22 52 29.8 -0.6
baz=35
BVAR **Borovoye Array** 53.66 47 LR LR 23 15 14.4
comp=Z,123nm,18.4s,baz=189,slow=36
H04D **Lebanon** 53.76 298 P P 22 52 32.9 +0.3
H04D **Lebanon** 53.76 298 P P 22 52 32.5 -0.1
baz=42
PSUT **Pine Spring** 53.76 286 P P 22 52 33.6 +0.7
PSUT IAmb IAmb 22 52 38.7
comp=Z,7.8nm,0.9s
PKCU **Pink Cliffs** 53.77 284 P P 22 52 33.1 0.0
833A **Chaparral WMA,** 53.83 267 P P 22 52 34.4 +1.1
baz=38
EIL **Elat** 53.93 90 P P 22 52 33.0 -1.0
comp=Z,9.5nm,0.7s,baz=310,slow=2.9,SNR=3.7
EIL PcP PcP 22 53 37.5 -1.9
comp=Z,14nm,0.7s,baz=70,slow=0.8,SNR=4.3
comp=Z,9.5nm,0.7s
J05D **Fort Rock, OR** 53.95 295 P P 22 52 35.4 +1.2
baz=42,SNR=9.8
N18K **Kilae Creek** 53.97 329 P P 22 52 34.0 +0.1
baz=34
SZCU **Shurtz Canyon** 54.06 285 P P 22 52 35.3 +0.1
SZCU IAmb IAmb 22 52 40.7
comp=Z,7.7nm,1.0s
BMN **Battle Mountai** 54.07 290 P P 22 52 35.3 +0.2
I04A **Tendick Farm,** 54.15 297 P P 22 52 36.4 +0.9
baz=42
W18A **Petrified Fore** 54.17 281 P P 22 52 36.5 +0.6
baz=40
K05A **Summer Lake** 54.20 295 P P 22 52 36.4 +0.3
CCUT **Cedar City** 54.24 285 P P 22 52 36.4 -0.1
CCUT IAmb IAmb 22 52 38.3
comp=Z,19nm,1.6s
MDP **Montagnes des** 54.32 204 LR LR 23 10 08.6
comp=Z,132nm,18.6s,baz=21,slow=30
J04D **Umpqua Nationa** 54.41 296 P P 22 52 37.2 -0.4
MNTX **Cornudas Mount** 54.45 274 P P 22 52 37.4 -0.3
baz=39
O18K **Koktuh Hills** 54.47 328 IAmb IAmb 22 52 38.2
comp=Z,12nm,0.8s
O18K **Koktuh Hills** 54.47 328 P P 22 52 36.6 -0.9
baz=34
MOD **Modoc Plateau** 54.52 294 P P 22 52 38.5 +0.1
MOD IAmb IAmb 22 52 43.7
comp=Z,11nm,0.9s
U15A **North Rim** 54.53 284 IAmb IAmb 22 52 39.6
comp=Z,7.0nm,0.8s
LCMT **Little Creek M** 54.59 285 P P 22 52 38.8 -0.1
LCMT IAmb IAmb 22 52 40.4
comp=Z,26nm,1.6s
I03D **Drain, OR** 54.67 297 P P 22 52 39.3 +0.1
baz=42
X18A **Snowflake** 54.73 280 P P 22 52 40.1 +0.1
WUAZ **Wupatki** 54.73 282 P P 22 52 40.4 +0.4
WUAZ **Wupatki** 54.73 282 P P 22 52 40.6 +0.6
baz=40,SNR=6.4
Q19K **Cape Douglas,** 54.77 327 P P 22 52 39.3 -0.6
Q19K **Cape Douglas,** 54.77 327 P P 22 52 39.5 -0.3
baz=35
R11A **Troy Canyon, C** 54.80 288 IAmb IAmb 22 52 42.1
comp=Z,9.0nm,1.1s
R11A **Troy Canyon, C** 54.80 288 P P 22 52 41.0 +0.5
baz=41,SNR=11
P18K **Big Mountain,** 54.85 328 P P 22 52 40.3 -0.1
P18K IAmb IAmb 22 52 48.2
comp=Z,18nm,1.3s
P18K **Big Mountain,** 54.85 328 P P 22 52 40.3 -0.1
baz=34
O17K **Koliganek Bris** 55.06 329 P P 22 52 41.6 -0.2
baz=33
121A **Cookes Peak, D** 55.10 277 P P 22 52 43.4 +0.6
121A **Cookes Peak, D** 55.10 277 P P 22 52 43.6 +0.9
baz=39
PRN **Pahroc Range** 55.23 286 IAmb IAmb 22 52 45.8
comp=Z,13nm,1.2s
DBIC **Dimbokro** 55.24 145 P P 22 52 42.3 -1.3
comp=Z,7.7nm,0.9s,baz=31,slow=5.0,SNR=4.4
DBIC LR LR 23 13 27.6
comp=Z,270nm,20.1s,baz=353,slow=33
comp=Z,7.7nm,0.9s
Q09A **Carvers** 55.25 289 P P 22 52 44.3 +0.6
L04D **Klamath Falls** 55.27 295 P P 22 52 43.7 -0.1
baz=41
BAUV **El Baul** 55.29 223 P P 22 52 43.7 -0.3
J01E **Myrtle Point** 55.35 297 P P 22 52 44.5 +0.3
baz=41
TXAR **Lajitas Array** 55.35 271 P P 22 52 44.0 -0.4
comp=Z,1.7nm,0.9s,baz=63,slow=5.3,SNR=14
TXAR PcP PcP 22 53 44.4 -0.6
comp=Z,0.9nm,0.8s,baz=57,slow=4.6,SNR=3.6
comp=Z,1.7nm,0.9s
TX31 **Lajitas Ar. Si** 55.35 271 IAmb IAmb 22 52 47.8
comp=Z,9.0nm,1.0s
TX32 **Lajitas Array** 55.35 271 P P 22 52 44.6 +0.2
KDAK **Kodiak Island** 55.40 325 P P 22 52 44.2 -0.1
baz=35
Q18K **Katmai Hardscr** 55.41 327 P P 22 52 44.6 +0.1
baz=34
O16K **Kokwok River B** 55.49 330 P P 22 52 45.5 +0.6
baz=33
K02D **Willamette Mer** 55.58 297 P P 22 52 45.5 -0.4
baz=41
X16A **Lo Mia Camp, P** 55.61 281 IAmb IAmb 22 52 48.9
comp=Z,7.3nm,0.9s
P16K **Nushagak River** 55.94 329 P P 22 52 48.1 0.0
baz=32
L02F **Cave Junction** 55.96 296 P P 22 52 47.1 -1.5
baz=41
SHPR **Sheep Range** 55.97 286 P P 22 52 49.9 +1.0
SHPR IAmb IAmb 22 52 50.7
comp=Z,14nm,1.3s
NV11 **Mina Array Sit** 56.05 289 IAmb IAmb 22 52 51.0
comp=Z,11nm,1.4s
OHAK **Old Harbor** 56.08 325 P P 22 52 47.7 -1.5
baz=34
BEKR **Beckworth** 56.08 292 P P 22 52 49.9 +0.2
BEKR IAmb IAmb 22 52 58.2
comp=Z,17nm,1.4s
RYN **Ryan** 56.09 290 P P 22 52 49.7 -0.1
RYN IAmb IAmb 22 52 51.0
comp=Z,8.8nm,0.9s
NVAR **Mina Array Bea** 56.13 290 P P 22 52 50.4 +0.2
comp=Z,2.0nm,0.8s,baz=53,slow=5.7,SNR=12
comp=Z,2.0nm,0.8s
VCNR **Virginia City** 56.16 291 P P 22 52 50.3 0.0
VCNR IAmb IAmb 22 52 56.2
comp=Z,6.4nm,0.8s
YERR **Yerington** 56.19 291 P P 22 52 50.0 -0.4
YERR IAmb IAmb 22 52 52.4
comp=Z,14nm,1.4s
TPNV **Topopah Spring** 56.20 287 IAmb IAmb 22 52 59.2
comp=Z,7.5nm,0.9s
TPNV **Topopah Spring** 56.20 287 P P 22 52 51.0 +0.4
baz=40,SNR=5.3
PNTR **Pine Nut** 56.29 291 P P 22 52 51.2 0.0
SDV **Santo Domingo** 56.33 226 LR LR 23 14 33.9
comp=Z,74nm,20.6s,baz=357,slow=34
LHV **Little Huntoon** 56.37 290 P P 22 52 52.5 +1.0
LHV IAmb IAmb 22 52 53.3
comp=Z,14nm,1.2s
W13A **Hualapai Mount** 56.38 284 P P 22 52 52.5 +0.6
W13A IAmb IAmb 22 52 53.6
comp=Z,14nm,1.5s
EMB **Emerald Bay** 56.63 291 P P 22 52 54.7 +1.1
LCH **Last Change Ra** 56.70 288 IAmb IAmb 22 52 56.8
comp=Z,23nm,1.7s
GRAC **Grapevine Rang** 56.74 288 P P 22 52 54.4 +0.2
GRAC **Grapevine Rang** 56.74 288 P P 22 52 55.1 +0.8
baz=40,SNR=14
319A **Douglas** 56.80 277 P P 22 52 55.1 +0.3
TUC **Tucson** 56.88 279 P P 22 52 56.8 +1.4
TUC **Tucson** 56.88 279 P P 22 52 55.6 +0.2
baz=39
FURC **Furnace Creek,** 56.89 287 P P 22 52 55.4 +0.2
baz=40
ORV **Oroville** 56.89 293 P P 22 52 55.0 -0.2
SII **Sitkinak Islan** 56.90 325 P P 22 52 55.4 +0.4
SII **Sitkinak Islan** 56.90 325 P P 22 52 54.9 -0.2
baz=34

GWY	Greenwater Val	57.00	287	P		P		22 52 56.5 +0.3
SHOC	Shoshone, Teco	57.02	286	P		P		22 52 56.6 +0.4
	baz=40							
OMMB	Old Mammoth Mi	57.11	289	P		P		22 52 56.2 -1.0
PDMCI	Parker Dam,Lak	57.12	283	P		P		22 52 57.2 +0.3
	baz=39							
TIN	Tinemaha, Big	57.14	288	P		P		22 52 57.7 +0.5
	baz=40							
TUQ	Turquoise Moun	57.19	286	P		P		22 52 58.0 +0.4
	baz=40							
QSM	Queen of Sheba	57.27	287	P		P		22 52 57.9 -0.1
QSM				IAmb		IAmb		22 53 00.1
	comp=Z,20nm,1.3s							
CMB	Columbia Colle	57.49	291	P		P		22 52 58.6 -1.0
MPMC	Manual Prospec	57.52	287	P		P		22 53 00.9 +0.9
	baz=40,SNR=12							
CWC	Cottonwood Cre	57.54	288	P		P		22 53 00.5 +0.4
	baz=40							
GMRC	Granite Mounta	57.55	285	P		P		22 53 00.7 +0.6
	baz=39,SNR=5.2							
GSC	Goldstone, Bar	57.75	286	P		P		22 53 02.0 +0.5
GSC				IAmb		IAmb		22 53 03.5
	comp=Z,14nm,1.1s							
GSC	Goldstone, Bar	57.75	286	P		P		22 53 01.9 +0.5
	baz=39							
BLYC	Blythe	57.75	283	P		P		22 53 02.0 +0.6
IRM	Iron Mountain	57.76	284	P		P		22 53 02.2 +0.7
	baz=39							
HEC	Hector,Ludlow	57.87	285	P		P		22 53 03.2 +0.9
	baz=39							
LRMC	Laurel Mtn Rad	58.07	287	P		P		22 53 04.6 +0.9
	baz=39,SNR=5.1							
GDXM	Geysers	58.11	293	P		P		22 53 04.8 +0.8
113A	Mohawk Valley,	58.11	282	P		P		22 53 04.2 +0.3
113A				IAmb		IAmb		22 53 05.9
	comp=Z,15nm,1.0s							
ZAA0	Zalesovo Array	58.18	38	P		P		22 53 04.9 +0.9
ZALV	Zalesovo Beam	58.18	38	P		P		22 53 04.0 -0.1
	comp=Z,0.5nm,0.3s,baz=324,slow=9.2,SNR=4.4							
ZALV				PcP		PcP		22 53 55.1 -0.3
	comp=Z,1.2nm,0.5s,baz=332,slow=5.1,SNR=5.4							
ZALV				LR		LR		23 18 11.9
	comp=Z,72nm,19.5s,baz=323,slow=36							
	comp=Z,0.5nm,0.3s							
ZALV	Zalesovo Beam	58.18	38	P		P		22 53 04.3 +0.3
214A	Organ Pipe Nat	58.23	281	P		P		22 53 05.1 +0.3
214A				IAmb		IAmb		22 53 06.9
	comp=Z,11nm,1.0s							
214A	Organ Pipe Nat	58.23	281	P		P		22 53 05.7 +0.9
	baz=39							
BC3	Big Chuckawall	58.31	284	P		P		22 53 06.4 +1.0
	baz=39,SNR=7.5							
BELC	Belle Mtn. Jos	58.33	284	P		P		22 53 06.8 +1.2
	baz=39,SNR=7.9							
ISA	Isabella, Lake	58.34	288	P		P		22 53 06.2 +0.7
	baz=39							
GLA	Glamis	58.45	283	P		P		22 53 07.3 +1.0
GLA	Glamis	58.45	283	P		P		22 53 07.4 +1.0
	baz=39,SNR=8.8							
CCAC	Calif City Air	58.49	287	P		P		22 53 07.9 +1.2
VES	Vestal, Richgr	58.51	288	P		P		22 53 06.6 -0.1
	baz=39							
KURK	Kurchatov	58.63	44	P		P		22 53 07.5 +0.2
KURBB	Kurchatov Arra	58.68	44	LR		LR		23 18 55.1
	comp=Z,115nm,18.2s,baz=294,slow=37							
EDW2	Edwards Air Fo	58.69	287	P		P		22 53 09.2 +1.2
	baz=39,SNR=5.2							
PFO	Pinyon Flats O	58.88	285	LR		LR		23 17 15.8
	comp=Z,299nm,22.0s,baz=62,slow=35							
PFO	Pinyon Flats O	58.88	285	P		P		22 53 10.5 +1.1
PFO	Pinyon Flats O	58.88	285	P		P		22 53 10.4 +1.0
	baz=39,SNR=9.3							
TPFO	Pinon Flats	58.88	285	P		P		22 53 10.4 +1.0
	baz=39,SNR=9.1							
BOAV	Boa Vista	58.94	212	eP		P		22 53 09.6 -0.2
BFSC	Mount Baldy Ra	59.02	286	P		P		22 53 10.9 +0.5
	baz=39							
SWSC	Sam W. Stewart	59.05	284	P		P		22 53 11.4 +1.0
	baz=39,SNR=5.6							
MURC	Murrieta	59.27	285	P		P		22 53 12.6 +0.6
	baz=39							
ZARC	Zaragoza, Cauc	59.30	230	P		P		22 53 12.4 +0.1
ZARC				IAmb		IAmb		22 53 14.1
	comp=Z,11nm,1.1s							
ZARC	Zaragoza, Cauc	59.30	230	eP		P		22 53 11.9 -0.4
ELS	Elsinore Mount	59.35	285	P		P		22 53 13.4 +0.8
MONP2	Monument Peak	59.42	284	P		P		22 53 14.7 +1.4
	baz=38,SNR=5.1							
IKP	In-Ko-Pah, Jac	59.44	284	P		P		22 53 14.0 +0.8
	baz=38							
MCPB	Macapa, AP	59.50	202	eP		P		22 53 13.5 -0.2
HSIG		59.53	277	P		P		22 53 13.7 -0.1
PKM	Mcpherson Peak	59.63	288	P		P		22 53 15.3 +0.7
	baz=39							
BAR	Barrett	59.71	284	P		P		22 53 16.2 +1.1
GEYT	Alibeck	59.73	66	P		P		22 53 16.2 +1.0
	comp=Z,5.0nm,0.9s,baz=292,slow=5.0,SNR=3.5							
GEYT				LR		LR		23 19 52.6
	comp=Z,125nm,19.0s,baz=346,slow=37							
	comp=Z,5.0nm,0.9s							
GEYT	Alibeck	59.73	66	IAmb		IAmb		22 53 20.9
	comp=Z,5.2nm,1.1s							
GYA0B	ALIBECK ARRAY	59.73	66	P		P		22 53 16.5 +1.4
GYA0B				IAmb		IAmb		22 53 44.6
	comp=Z,6.8nm,1.1s							
SEY	Seymchan	59.93	357	LR		LR		23 21 34.7
	comp=Z,56nm,18.5s,baz=348,slow=38							
BCIP	Isla Barro Col	59.95	236	eP		P		22 53 23.2 +6.4
MTO3	Montecristo	59.96	248	P		P		22 53 16.1 -1.1
ZAIG	Zacatecas	59.98	266	P		P		22 53 18.2 +0.9
PTBG	PUERTO BERRIO,	59.99	229	eP		P		22 53 17.7 +0.6
RUSC	La Rusia	60.02	227	eP		P		22 53 14.8 -3.1
CIS	Catalina Islan	60.06	286	P		P		22 53 17.5 0.0
	baz=38							
YAK	Yakutsk	60.18	9	LR		LR		23 19 16.7
	comp=Z,38nm,18.2s,baz=231,slow=36							
DBBC	Dabeiba	60.29	231	eP		P		22 53 20.1 +0.9
SPBC	San Pablo de B	60.64	228	eP		P		22 53 21.5 -0.1
SPIA	Saint Paul Isl	60.69	335	P		P		22 53 21.6 +0.3
	baz=25							
ROSB	Rosrio	60.72	192	eP		P		22 53 21.8 -0.2
NORC	Norcasia	61.04	229	eP		P		22 53 22.5 -1.9
CBOC	Ciudad Bolivar	61.24	230	eP		P		22 53 26.9 +1.1
JTS	Las Juntas de	61.33	242	LR		LR		23 20 22.9
	comp=Z,181nm,18.2s,baz=66,slow=36							
MALB	Monte Alegre	61.42	204	eP		P		22 53 27.2 +0.5
DRK0	Durika	61.42	239	P		P		22 53 28.0 +0.9
KK31	Karatay Array	61.46	54	P		P		22 53 27.6 +0.7
KK31				IAmb		IAmb		22 53 35.5
	comp=Z,14nm,1.8s							
KKAR	Karatay Array	61.46	54	P		P		22 53 27.4 +0.6
KKAR				IAmb		IAmb		22 53 35.5
	comp=Z,14nm,1.8s							
ROSC	El Rosal	61.48	228	P		P		22 53 29.1 +1.3
	comp=Z,24nm,0.6s,baz=41,slow=4.5,SNR=15							
	comp=Z,24nm,0.6s							
ROSC	El Rosal	61.48	228	P		P		22 53 29.0 +1.3
ROSC	El Rosal	61.48	228	eP		P		22 53 28.2 +0.6
SRBA	San Rafael, Bu	61.50	239	P		P		22 53 27.7 +0.2
GUY2C	Guyana, Caldas	61.55	229	eP		P		22 53 29.2 +0.9
CDITO	Canoas	61.85	239			P		22 53 29.1 -0.6
PLMC	San Jos del P	62.22	230	eP		P		22 53 34.0 +1.7
ORTC	Ortega, Tolima	62.70	229	eP		P		22 53 35.9 +0.5
PRAC	Prado	62.73	228	eP		P		22 53 33.0 -2.6
YOTC	Yotoco, Valle	63.08	230	eP		P		22 53 35.9 -2.2
LPIG	La Paz	63.10	273	LR		LR		23 22 40.0
	comp=Z,123nm,18.3s,baz=56,slow=38							
MAKZ	Makanchi	63.11	44	P		P		22 53 37.7 -0.2
MAKZ				IAmb		IAmb		22 53 39.8
	comp=Z,8.4nm,1.4s							
MKAR	Makanchi Array	63.24	44	P		P		22 53 38.7 0.0
	comp=Z,2.8nm,0.7s,baz=329,slow=5.9,SNR=26							
MKAR				LR		LR		23 21 03.8
	comp=Z,52nm,20.3s,baz=310,slow=36							
	comp=Z,2.8nm,0.7s							
AAK	Ala-Archa	63.55	52	LR		LR		23 20 37.4
	comp=Z,183nm,18.7s,baz=328,slow=35							
AAK	Ala-Archa	63.55	52	P		P		22 53 41.2 +0.2
AAK				IAmb		IAmb		22 53 50.9
	comp=Z,15nm,1.6s							
BTK	Batken	64.05	56	IAmb		IAmb		22 53 52.6
	comp=Z,10nm,1.0s							
ITTB	Itaituba	64.18	205	eP		P		22 53 44.8 -0.3
BOOM	Boomskoye usch	64.29	51	P		P		22 53 46.9 +1.0
BOOM				IAmb		IAmb		22 53 58.5
	comp=Z,14nm,1.6s							

CHGR	Chuyangaron	64.43	58	P		P		22 53 47.6 +0.8
RAYN	Ar Rayn	64.51	86	P		P		22 53 48.2 +0.7
RAYN				IAmb		IAmb		22 53 50.7
	comp=Z,13nm,1.5s							
POPC	Popayan, Colom	64.52	229	eP		P		22 53 46.5 -1.3
HRA	Herat	64.57	66	P		P		22 53 48.3 +0.5
GAR	Garm	64.68	57	P		P		22 53 49.5 +1.0
SOTA	Rioblanco	64.86	229	eP		P		22 53 48.4 -1.9
FLOC	Florencia	64.97	228	eP		P		22 53 49.3 -1.1
KDJ	Kajisay	65.10	50	P		P		22 53 53.9 +2.7
KDJ				IAmb		IAmb		22 54 04.8
	comp=Z,13nm,1.5s							
BBAC	Balboa, Cauca	65.23	230	eP		P		22 53 51.7 -0.6
PRZ	Przheval'sk	65.31	49	P		P		22 53 53.2 +0.6
PRZ				IAmb		IAmb		22 53 54.8
	comp=Z,4.9nm,0.9s							
TARG	Taragay, Kyrgy	65.69	50	P		P		22 53 56.7 +1.3
TARG				IAmb		IAmb		22 53 58.4
	comp=Z,8.2nm,0.8s							
TULM	Tulcn-Chalpat	66.63	230	P		P		22 54 02.0 +0.4
NPGB	Novo Progresso	66.69	204	eP		P		22 54 01.0 -0.4
KSH	Kashi	66.76	53	P		P		22 54 04.1 +2.3
KSH				sP		pwP		22 54 10.8 +5.1
KSH				pmax		pmax		
	comp=Z,11nm,1.4s							
H10N2	ASCENSION HYDR	66.78	160	T		T		00 06 13.1
	baz=350,slow=75,SNR=20							
H10N3	ASCENSION HYDR	66.79	160	T		T		00 06 21.3
	baz=350,slow=75,SNR=19							
H10N1	ASCENSION HYDR	66.80	160	T		T		00 06 07.8
	baz=350,slow=75,SNR=24							
OTAV	Otavalo	67.34	230	P		P		22 54 05.7 -0.5
OTAV	Otavalo	67.34	230	eP		P		22 54 06.7 +0.5
KBL	Kabul	67.73	61	P		P		22 54 08.4 +0.3
KBL				IAmb		IAmb		22 54 24.6
	comp=Z,14nm,1.6s							
WMQ	Urumqi	67.77	42	eP		P		22 54 11.3 +3.2
WMQ				LR		LR		
	comp=N,220nm,18.3s							
WMQ				LR		LR		
	comp=Z,110nm,21.5s							
H10S3	ASCENSION HYDR	67.85	160	T		T		00 07 51.4
	baz=350,slow=74,SNR=13							
H10S2	ASCENSION HYDR	67.86	160	T		T		00 07 51.4
	baz=230,slow=74,SNR=7.3							
SHEM	Shemya Is, Ala	67.98	342	LR		LR		23 24 03.3
	comp=Z,72nm,21.4s,baz=84,slow=36							
PORT	Chimborazo Vol	69.01	230	P		P		22 54 17.1 +0.4
PETK	Petropavlovsk-	69.50	353	LR		LR		23 25 40.5
	comp=Z,41nm,19.6s,baz=25,slow=37							
PETK	Petropavlovsk-	69.50	353	P		P		22 54 19.4 +0.7
PET	Petropavlovsk	69.52	352	P		P		22 54 18.5 -0.2
SONM	Songino Array	69.94	28	P		P		22 54 21.8 +0.2
	comp=Z,5.6nm,0.8s,baz=330,slow=7.0,SNR=34							
SONM				LR		LR		23 26 51.1
	comp=Z,79nm,19.6s,baz=322,slow=38							
	comp=Z,5.6nm,0.8s							
SONM	Songino Array	69.94	28	P		P		22 54 21.8 +0.2
SONM				IAmb		IAmb		22 54 22.9
	comp=Z,7.4nm,0.9s							
ULN	Ulaanbaatar	70.07	27	P		P		22 54 23.2 +0.7
ULN				IAmb		IAmb		22 54 31.8
	comp=Z,11nm,0.9s							
COHC	Cochancay	70.12	230	P		P		22 54 23.4 +0.6
BOSC	San Juan Bosco	70.42	229	P		P		22 54 25.2 +0.2
CLDB	Colider	70.50	204	eP		P		22 54 24.8 -0.4
SNDB	Serra Nova Dou	70.69	199	eP		P		22 54 26.3 0.0
PDRB	Porto dos Gac	71.42	204	eP		P		22 54 30.8 +0.1
WSAR	Wadi Sarin	71.75	75	LR		LR		23 29 00.1
	comp=Z,97nm,21.5s,baz=347,slow=38							
JANB	Januaria	72.75	191	eP		P		22 54 37.9 -0.8
BDFB	Brasilia	73.78	195	P		P		22 54 44.5 -0.4
	comp=Z,5.2nm,0.7s,baz=351,slow=3.2,SNR=8.9							
	comp=Z,5.2nm,0.7s							
BDFB	Brasilia	73.78	195	P		P		22 54 45.0 +0.2
BDFB				IAmb		IAmb		22 54 45.3
	comp=Z,6.7nm,0.9s							
SALV	Santo Antonio	75.35	202	eP		P		22 54 54.2 +0.3
GTA	Gaotai	75.82	36	eP		P		22 54 56.6 -0.1
GTA				pP		pwP		22 55 01.6 +1.0
GTA				sP		PcP		22 55 05.0 -4.2
GTA				pmax		pmax		
	comp=Z,7.0nm,1.2s							
GTA				pmax		pmax		
	comp=Z,76nm,5.1s							
GTA				LR		LR		
	comp=N,85nm,19.3s							
GTA				LR		LR		
	comp=E,120nm,19.6s							
GTA				LR		LR		
	comp=Z,110nm,18.9s							
GOMU	GeErMu	77.05	41	P		P		22 55 04.5 +0.5
GOMU				pP		pwP		22 55 07.8 -0.1
GOMU				sP		PcP		22 55 11.9 -3.0
GOMU				pmax		pmax		
	comp=Z,3.0nm,1.1s							
GOMU				pmax		pmax		
	comp=Z,33nm,5.8s							
CN2	Changchun	77.62	16	eP		P		22 55 08.0 +1.5
CN2				pmax		pmax		
	comp=Z,10.0nm,0.5s							
HHC	Hu-ho-hao-te	77.77	27	eP		P		22 55 07.1 -0.5
HHC				pmax		pmax		
	comp=Z,18nm,1.1s							
HHC				pmax		pmax		
	comp=Z,150nm,7.5s							
ITRB	Iturama	78.11	196	eP		P		22 55 09.6 +0.2
LPAZ	La Paz	78.90	214	P		P		22 55 13.4 -1.1
	comp=Z,2.8nm,1.0s,baz=116,slow=4.0,SNR=5.6							
	comp=Z,2.8nm,1.0s							
LPAZ	La Paz	78.90	214	P		P		22 55 14.1 -0.4
LPAZ	La Paz	78.90	214	eP		P		22 55 14.5 0.0
BJI	Beijing	79.59	23	P		P		22 55 18.1 +0.6
BJI				PcP		PcP		22 55 25.5 +0.1
BJI				pmax		pmax		
	comp=Z,9.0nm,1.5s							
LZH	Lanzhou	80.12	34	eP		P		22 55 21.1 +0.4
LZH				sP		PcP		22 55 28.8 +0.8
LZH				PP		PP		22 58 15.6 -6.4
LZH				pmax		pmax		
	comp=Z,22nm,1.5s							
LZH				LR		LR		
	comp=N,180nm,16.8s							
LZH				LR		LR		
	comp=E,140nm,16.2s							
LZH				LR		LR		
	comp=Z,140nm,15.5s							
KMBO	Kilima Mbogo	80.56	107	LR		LR		23 31 50.2
	comp=Z,84nm,18.9s,baz=66,slow=36							
PB16	IPOC Station P	81.25	215	P		P		22 55 26.8 -0.3
HNS	HongShan	81.80	25	⇑P		P		22 55 30.6 +1.3
HNS				PcP		PcP		22 55 38.0 +3.0
HNS	HongShan	81.80	25	eS		S		23 05 39.6 -3.0
HNS				pmax		pmax		
	comp=Z,12nm,1.3s							
HNS				LR		LR		
	comp=N,120nm,14.3s							
HNS				LR		LR		
	comp=E,100nm,11.4s							
HNS				LR		LR		
	comp=Z,120nm,18.3s							
GO01	Chusmiza	82.41	214	P		P		22 55 32.5 -0.6
PB08	IPOC Station P	82.84	214	P		P		22 55 35.2 -0.1
PB08				IAmb		IAmb		22 55 35.8
	comp=Z,7.7nm,0.9s							
PB02	IPOC Station P	84.18	214	P		P		22 55 42.1 +0.3
KSRS	Korea Array	84.20	15	P		P		22 55 42.0 +0.2
	comp=Z,5.9nm,0.9s,baz=353,slow=5.2,SNR=17							
	comp=Z,5.9nm,0.9s							
KSAR	Wonju Array Be	84.21	15	P		P		22 55 41.3 -0.5
LVC	Limon Verde	85.10	213	P		P		22 55 46.2 -0.5
LVC	Limon Verde	85.10	213	eP		P		22 55 47.6 +0.9
CPUP	Villa Florida	85.82	202	P		P		22 55 48.9 -0.9
	comp=Z,2.6nm,0.3s,baz=17,slow=4.5,SNR=12							
	comp=Z,2.6nm,0.3s							
CPUP	Villa Florida	85.82	202	IAmb		IAmb		22 55 49.6
	comp=Z,7.2nm,0.8s							
PZH	PanZhiHua	88.29	39	P		P		22 56 03.1 +0.8
PZH				pmax		pmax		
	comp=Z,8.0nm,0.6s							
PZH				pmax		pmax		
	comp=Z,100nm,4.8s							
VNA1	Neumayer--Stat	128.98	170	PKPdf		PKPdf		23 02 16.8 +0.1
VNA3	Neumayer Olymp	129.41	170	PKPdf		PKPdf		23 02 17.1 -0.4
SNAA	Sanae	130.52	168	PKPdf		PKPdf		23 02 19.3 -0.4

TROLL	Troll, Antarti	131.50	166	PKPdf		PKPdf		23 02 20.9 -0.8
WRA	Warramunga Arr	141.51	19	PKhKP		PKPpre		23 02 36.6
	comp=Z,0.8nm,0.7s,baz=341,slow=2.1,SNR=2.6							
WRA				PKP		PKPdf		23 02 41.0 -0.6
	comp=Z,0.7nm,0.6s,baz=334,slow=1.8,SNR=6.0							
VNDA	Vanda	159.11	189	PKP		PKPdf		23 03 06.0 -1.0
	comp=Z,0.7nm,1.0s,baz=61,slow=2.2,SNR=4.2							
VNDA				PKPab		PKPab		23 03 44.3 +0.4
	comp=Z,2.1nm,1.0s,baz=239,slow=1.7,SNR=6.9							

*IDC **24** 22:43:07.8±2.4,20°.33S×70°.86W,h0km,mb4.1/2, mbtmp3.9/3,ML3.8/1,MS3.8/2,Error ellipse: s-maj=72.4km s-min=59.9km az=158.0*

*NEIC **24** 22:43:11.7±1.1,19°.82S±0°.04×71°.05W±0°.07,h18km±4km, mb4.4/6,Mwr3.9/21,ML3.9(GUC),Error ellipse: s-maj=9.4km s-min=6.1km az=81.0*

*NEIC **24** 22:43:12.1,19°.82S×71°.06W,h21km,Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.89; $M_{\theta\theta}$0.15; $M_{\phi\phi}$-1.04; $M_{r\theta}$0.21; $M_{\theta\phi}$0.27; $M_{\phi r}$-0.04; Fault plane solution: $M_0$1.03000×10^{15} NP1:ϕ_s153.69000°, δ49.35000°,λ70.37000°. NP2:ϕ_s2.39000°,δ44.39000°, λ111.37000°. Principal axes: T 0.9441, Plg75.0000°, Azm357.0000°; N 0.1597, Plg15.0000°, Azm167.0000°; P -1.1038, Plg3.0000°, Azm257.0000°;*

*VAO **24** 22:43:13.2±0.8, 19°.79S×71°.03W,h29km±3km, mb4.1*

*GUC **24** 22:43:14.2±0.7, 19°.80S×70°.94W,h38km±3km, ML3.9*

ISC 24 22:43:12.2±1.4,**19°.81S**±0°.03×**71°.02W**±0°.06,**h23**km±10km, **n80,σ0°.83/82,mb4.3/5,10C-1D,Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TA02	Huaiquique	0.95	119			Pn		22 43 29.6	-0.7
TA02				Sn		Sn		22 43 41.9	-1.2
TA02	Huaiquique	0.95	119	⇑eP		Pn		22 43 29.2	-1.0
TA02				eS		Sn		22 43 41.3	-1.8
TA02				IAML				22 43 43.5	
	comp=N,7μm,0.3s								
TA01	Diego Aracena	1.09	134			Pn		22 43 32.0	-0.1
TA01				Sn		Sn		22 43 46.9	+0.4
TA01	Diego Aracena	1.09	134	⇑eP		Pn		22 43 32.0	-0.1
TA01				eS		Sn		22 43 45.0	-1.5
TA01				IAML				22 43 50.4	
	comp=E,4μm,0.8s								
HMBC	Humberstone	1.16	114	eP		Pn		22 43 33.0	-0.2
HMBC				eS		Sn		22 43 47.3	-1.1
HMBC				IAML				22 43 53.7	
	comp=E,6μm,0.4s								
PB11	IPOC Station P	1.28	88			Pn		22 43 34.5	-0.5
PB11	IPOC Station P	1.28	88	⇓eP		Pn		22 43 34.4	-0.5
PB11				*i* S		Sn		22 43 50.6	-0.9
PB11				IAML				22 43 52.9	
	comp=E,4μm,0.5s								
PATCX	Punta Patache	1.30	141			Pn		22 43 35.0	0.0
PATCX	Punta Patache	1.30	141	⇑eP		Pn		22 43 35.1	0.0
PATCX				eS		Sn		22 43 51.2	-0.5
PATCX				IAML				22 44 01.4	
	comp=N,3μm,0.5s								
PB12	IPOC Station P	1.35	29			Pn		22 43 35.6	-0.2
PB12	IPOC Station P	1.35	29	⇑eP		Pn		22 43 35.7	-0.2
PB12				eS		Sb		22 43 53.4	-0.5
PB12				IAML				22 44 03.7	
	comp=N,2μm,0.5s								
AP01	Chacalluta	1.57	24	Pn		Pn		22 43 38.8	+0.2
AP01	Chacalluta	1.57	24	⇑eP		Pn		22 43 38.7	0.0
AP01				eS		Sn		22 43 57.0	-1.2
AP01				IAML				22 44 08.2	
	comp=N,5μm,0.3s								
GO01	Chusmiza	1.73	86			Pn		22 43 41.7	+0.4
GO01	Chusmiza	1.73	86	⇑eP		Pn		22 43 41.6	+0.4
GO01				eS		Sn		22 44 03.0	+0.2
PB08	IPOC Station P	1.79	101			Pn		22 43 42.0	0.0
PB08	IPOC Station P	1.79	101	⇑eP		Pn		22 43 42.4	+0.3
PB08				*i* S		Sn		22 44 03.7	-0.5
PB08				IAML				22 44 09.5	
	comp=N,1μm,0.7s								
PB02	IPOC Station P	1.84	145			Pn		22 43 42.1	-0.4
PB02	IPOC Station P	1.84	145	⇑eP		Pn		22 43 42.7	+0.2
PB02				*i* S		Sn		22 44 05.0	-0.1
PB02				IAML				22 44 14.8	
	comp=E,4μm,0.5s								
PB16	IPOC Station P	2.05	45			Pn		22 43 46.4	+0.6
PB16	IPOC Station P	2.05	45	⇑eP		Pn		22 43 46.4	+0.6
PB16				⇑*i*P		Pn		22 43 46.4	+0.6
PB16				eS		Sn		22 44 10.2	-0.7
PB16				IAML				22 44 18.7	
	comp=N,1μm,0.3s								
PB04	IPOC Station P	2.64	162			Pn		22 43 53.6	-0.1
PB04	IPOC Station P	2.64	162	IAML				22 44 48.6	
	comp=E,738nm,0.6s								
PB06	IPOC Station P	3.19	155			Pn		22 43 59.9	-1.2
PB06	IPOC Station P	3.19	155	IAML				22 44 57.3	
	comp=N,771nm,0.7s								
LVC	Limon Verde	3.41	145	Pn		Pn		22 44 04.4	0.0
LVC	Limon Verde	3.41	145	eP		Pn		22 44 05.4	+1.0
LVC				eS		Sn		22 44 45.2	+0.8
PB15	IPOC Station P	3.68	157			Pn		22 44 08.0	0.0
PB10	IPOC Station P	3.71	173	Pn		Pn		22 44 08.1	-0.1
AF01	San Pedro de A	4.10	140			Pn		22 44 14.1	+0.3
LPAZ	La Paz	4.45	39	Pn		Pn		22 44 21.9	+3.0
	comp=N,2.8nm,0.3s,baz=206,slow=6.5,SNR=30	

MATP Matopo 91.67 112 LR LR 23 34 35.2
comp=Z,270nm,20.1s,baz=60,slow=34
H11S2 WAKE ISLAND Hyl 25.69 279 T T 01 21 29.7
baz=101,slow=74,SNR=20
H11S1 WAKE ISLAND Hyl 25.69 279 T T 01 21 33.2
baz=101,slow=74,SNR=13
H11S3 WAKE ISLAND Hyl 25.70 279 T T 01 21 33.1
baz=101,slow=74,SNR=14
H11N3 WAKE ISLAND Hyl 25.73 280 T T 01 21 36.5
baz=102,slow=74
H11N2 WAKE ISLAND Hyl 25.74 280 T T 01 21 34.7
baz=102,slow=74
H11N1 WAKE ISLAND Hyl 25.75 280 T T 01 21 40.1
baz=102
MKAR Makanchi Array 145.36 33 PKPbc **PKPdf 23 02 49.4 +1.1**
comp=Z,0.6nm,0.9s,baz=293,slow=4.1,SNR=3.8

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*IDC **24** 22:45:59.3±0.6, 57°30N×33°26W, h0km, mb3.9/18, mbtmp4.0/21, ML3.2/3, Error ellipse: s-maj=19.5km s-min=13.6km az=1.0*
*NEIC **24** 22:46:01.6±1.2, 57°34N±0°04×33°2W±0°1, h10km±1km, mb4.6/214, Error ellipse: s-maj=11.4km s-min=5.2km az=245.0*
ISC 24 22:46:01.1±0.3, 57°33N±0°06×33°23W±0°05, h10km, n240, σ0s72/238, mb4.6/117, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRS	**Narsarsuaq**	**7.33**	**307**	Pn	**Pn**	**22 47 48.5**	**+0.5**
IVI	**Ivigtut**	**8.57**	**303**	Pn	**Pn**	**22 48 05.5**	**+0.5**
ANGG	**Ammassalik, Gr**	**8.57**	**348**	Pn	**Pn**	**22 48 04.8**	**-0.2**
BORG	**Borgarnes**	**9.40**	**33**	Pn	**Pn**	**22 48 17.9**	**+1.5**
	0.6nm,0.3s,baz=306,slow=10,SNR=1.7						
BORG				Sn	**Sn**	**22 49 59.9**	**-2.1**
	0.2nm,0.3s,baz=180,slow=20,SNR=2.2						
	29nm,0.9s						
BORG	**Borgarnes**	**9.40**	**33**	Pn	**Pn**	**22 48 17.0**	**+0.6**
SFJD	**Kangerlussuaq**	**12.59**	**327**	Pn	**Pn**	**22 49 00.6**	**+0.7**
ILULI	**Ilulissat**	**14.29**	**334**	Pn	**Pn**	**22 49 23.7**	**+0.6**
SUMG	**Summit**	**15.46**	**354**	Pn	**Pn**	**22 49 38.2**	**-1.0**
DRLN	**Deer Lake**	**16.54**	**251**	Pn	**Pn**	**22 49 53.3**	**+0.5**
ESK	**Eskdalemuir**	**16.71**	**84**	Pn	**Pn**	**22 49 54.9**	**-0.2**
EKA	**Eskdalemuir Ar**	**16.73**	**84**	Pn	**Pn**	**22 49 54.0**	**-1.3**
	baz=287,slow=12						
	0.9nm,0.6s						
H07N1	**FLORES T-PHASE**	**17.71**	**175**	T	T	23 07 54.1	
SCHQ	**Schefferville**	**18.80**	**277**	P	**P**	**22 50 20.1**	**-0.3**
	0.1nm,0.3s,baz=64,slow=8.4,SNR=3.9						
	5.3nm,0.9s						
SCHQ	**Schefferville**	**18.80**	**277**	P	**Pn**	**22 50 20.8**	**-0.1**
ROSA	**Rosais**	**18.91**	**168**	P	**Pn**	**22 50 21.9**	**-0.4**
GBN	**Guysborough**	**21.13**	**248**	P	**P**	**22 50 45.0**	**-0.8**
GBN				IAmb	IAmb	22 50 46.8	
	comp=Z,36nm,1.1s						
KONO	**Kongsberg**	**22.22**	**66**	P	**P**	**22 50 59.3**	**+1.9**
KONO				IAmb	IAmb	22 51 10.8	
	comp=Z,34nm,1.6s						
BATG	**Bathurst New B**	**22.24**	**257**	P	**P**	**22 50 57.4**	**-0.3**
BATG				IAmb	IAmb	22 51 07.8	
	comp=Z,40nm,1.5s						
NC204	**NORSAR Array S**	**22.47**	**61**	P	**P**	**22 50 59.4**	**-0.7**
NC204				IAmb	IAmb	22 51 35.9	
	comp=Z,34nm,1.6s						
LMN	**Caledonia Moun**	**22.51**	**253**	P	**P**	**22 50 59.0**	**-1.7**
NBO00	**NORSAR Array S**	**22.52**	**62**	P	**P**	**22 51 01.2**	**+0.6**
NBO00				IAmb	IAmb	22 51 13.6	
	comp=Z,61nm,1.6s						
NAO01	**NORSAR Array S**	**22.60**	**62**	P	**P**	**22 51 00.7**	**-0.8**
NOA	**NORSAR Array B**	**22.73**	**62**	P	**P**	**22 51 01.1**	**-1.8**
	comp=Z,0.6nm,0.8s,baz=280,slow=9.7,SNR=3.8						
	comp=Z,0.6nm,0.8s						
NB201	**NORSAR Array S**	**22.76**	**62**	P	**P**	**22 51 00.7**	**-2.5**
NC303	**NORSAR Array S**	**22.77**	**61**	P	**P**	**22 51 00.9**	**-2.3**
NC602	**NORSAR Array S**	**22.94**	**63**	P	**P**	**22 51 05.7**	**+0.6**
NC405	**NORSAR Array S**	**22.95**	**62**	P	**P**	**22 51 04.5**	**-0.7**
NC405				IAmb	IAmb	22 51 17.5	
	comp=Z,37nm,1.4s						
PQI	**Presque Isle**	**23.66**	**258**	P	**P**	**22 51 10.9**	**-1.5**
D62A	**Allapoint, All**	**23.95**	**260**	P	**P**	**22 51 15.3**	**+0.2**
D62A				IAmb	IAmb	22 51 17.3	
	comp=Z,14nm,1.1s						
GGN	**Saint George**	**24.06**	**254**	P	**P**	**22 51 16.4**	**+0.2**
GGN				IAmb	IAmb	22 51 21.5	
	comp=Z,18nm,1.2s						
HFS	**Hagfors**	**24.11**	**63**	P	**P**	**22 51 16.6**	**0.0**
	comp=Z,4.4nm,0.8s,baz=285,slow=7.3,SNR=4.2						
	comp=Z,4.4nm,0.8s						
LMQ	**La Malbaie**	**24.35**	**262**	P	**P**	**22 51 19.0**	**+0.1**
F64A	**Sherman**	**24.36**	**257**	P	**P**	**22 51 18.9**	**-0.1**
F64A				IAmb	IAmb	22 51 22.6	
	comp=Z,34nm,1.8s						
G65A	**Princeton**	**24.38**	**255**	P	**P**	**22 51 20.4**	**+1.3**
G65A				IAmb	IAmb	22 51 24.2	
	comp=Z,45nm,1.9s						
E62A	**Clayton Lake**	**24.49**	**260**	P	**P**	**22 51 20.4**	**+0.2**
E62A				IAmb	IAmb	22 52 12.3	
	comp=Z,30nm,1.9s						
EMMW	**East Machias**	**24.66**	**254**	P	**P**	**22 51 22.3**	**+0.6**
EMMW				IAmb	IAmb	22 51 31.2	
	comp=Z,11nm,1.0s						
PESTR	**Estremoz**	**24.94**	**127**	P	**P**	**22 51 25.1**	**+0.8**
F62A	**Pittston Farm,**	**25.19**	**259**	P	**P**	**22 51 27.1**	**+0.6**
F62A				IAmb	IAmb	22 51 29.2	
	comp=Z,15nm,0.9s						
PKME	**Peaks-Kenny Pk**	**25.25**	**257**	P	**P**	**22 51 27.4**	**+0.4**
PKME				IAmb	IAmb	22 51 29.5	
	comp=Z,12nm,1.0s						
ECH	**Echery**	**25.73**	**93**	P	**P**	**22 51 31.2**	**-0.2**
PFVI	**Vila Bisbo**	**25.88**	**131**	P	**P**	**22 51 32.8**	**0.0**
ESDC	**Sonseca Array**	**25.93**	**120**	P	**P**	**22 51 33.4**	**+0.1**
	comp=Z,1.0nm,0.7s,baz=312,slow=8.4,SNR=4.5						
	comp=Z,1.0nm,0.7s						
G62A	**West of Eustis**	**25.94**	**258**	P	**P**	**22 51 33.1**	**-0.2**
G62A				IAmb	IAmb	22 51 35.9	
	comp=Z,9.7nm,0.9s						
PVAQ	**Vaqueiros**	**26.11**	**129**	P	**P**	**22 51 34.9**	**0.0**
GRA1	**Grafenberg Arr**	**27.09**	**87**	P	**P**	**22 51 43.8**	**+0.2**
GRFO	**Grafenberg**	**27.09**	**87**	P	**P**	**22 51 43.6**	**-0.1**
I62A	**Tamworth**	**27.27**	**257**	P	**P**	**22 51 46.2**	**+0.9**
I62A				IAmb	IAmb	22 52 03.4	
	comp=Z,17nm,1.4s						
VLDQ	**Val d'Or**	**27.86**	**270**	P	**P**	**22 51 51.8**	**+1.3**
VLDQ				IAmb	IAmb	22 52 02.3	
	comp=Z,28nm,1.9s						
GERES	**GERESS Array B**	**28.91**	**87**	P	**P**	**22 52 00.6**	**+0.5**
UCCT	**U. Connecticut**	**29.19**	**255**	P	**P**	**22 52 00.7**	**-1.7**
CTI	**Castel Tesino**	**29.48**	**93**	P	**P**	**22 52 05.6**	**+0.5**
CTI				IAmb	IAmb	22 52 09.6	
	comp=Z,17nm,1.9s						
CLUD	**Cludinico**	**29.89**	**91**	P	**P**	**22 52 10.0**	**+1.3**
CLUD				IAmb	IAmb	22 52 21.1	
	comp=Z,13nm,1.6s						
DELO	**Deloro Mine**	**30.20**	**264**	P	**P**	**22 52 11.6**	**+0.3**
DELO				IAmb	IAmb	22 52 41.7	
	comp=Z,12nm,1.5s						
ZCCA	**Zocca**	**30.21**	**96**	P	**P**	**22 52 12.5**	**+1.0**
PAL	**Palisades**	**30.63**	**255**	P	**P**	**22 52 16.3**	**+1.1**
PAL				IAmb	IAmb	22 52 23.7	
	comp=Z,12nm,0.8s						
TRNY	**Table Rock, Ra**	**30.70**	**256**	P	**P**	**22 52 16.4**	**+0.6**
K57A	**Scipio Center**	**30.80**	**261**	P	**P**	**22 52 17.1**	**+0.4**
K57A				IAmb	IAmb	22 53 06.9	
	comp=Z,9.9nm,1.0s						
CPNY	**Central Park**	**30.82**	**255**	P	**P**	**22 52 17.9**	**+1.1**
SADO	**Sadowa**	**30.85**	**266**	P	**P**	**22 52 16.4**	**-0.7**
PABE	**Paberze**	**30.90**	**69**	P	**P**	**22 52 17.8**	**+0.4**
PABE				IAmb	IAmb	22 52 23.7	
	comp=Z,12nm,0.9s						
SUW	**Suwalki**	**31.21**	**72**	P	**P**	**22 52 21.3**	**+1.2**
SUW				IAmb	IAmb	22 52 24.4	
	comp=Z,10.0nm,0.9s						
FCC	**Fort Churchill**	**31.27**	**299**	P	**P**	**22 52 21.2**	**+0.6**
MEDO	**Medina**	**31.55**	**263**	P	**P**	**22 52 22.7**	**-0.6**
MEDO				IAmb	IAmb	22 52 54.8	
	comp=Z,11nm,0.8s						
MMNY	**Mt. Morris Dam**	**31.55**	**262**	P	**P**	**22 52 24.0**	**+0.7**
MMNY				IAmb	IAmb	22 52 24.8	
	comp=Z,7.4nm,0.8s						
E46A	**Sault Ste Mari**	**32.64**	**273**	P	**P**	**22 52 32.9**	**+0.1**
E46A				IAmb	IAmb	22 52 34.3	
	comp=Z,9.2nm,1.1s						
PSZ	**Piszkesteto**	**32.80**	**83**	P	**P**	**22 52 33.7**	**-0.6**
AQU	**L'Aquila**	**32.86**	**97**	P	**P**	**22 52 35.0**	**+0.2**
AQU				IAmb	IAmb	22 53 25.0	
	comp=Z,5.8nm,1.0s						
ERPA	**Erie**	**33.09**	**263**	P	**P**	**22 52 36.6**	**-0.2**
E43A	**Lone Tree Farm**	**34.09**	**275**	P	**P**	**22 52 45.9**	**+0.5**
E43A				IAmb	IAmb	22 52 46.8	
	comp=Z,8.5nm,1.2s						
N53A	**Lisbon**	**34.46**	**262**	P	**P**	**22 52 49.1**	**+0.4**
D41A	**Chassel**	**34.51**	**277**	P	**P**	**22 52 49.0**	**0.0**
COWI	**Conover**	**35.41**	**276**	P	**P**	**22 52 57.5**	**+0.6**
COWI				IAmb	IAmb	22 52 58.1	
	comp=Z,9.9nm,0.9s						
EYMN	**Ely**	**35.53**	**280**	P	**P**	**22 52 57.9**	**0.0**
EYMN				IAmb	IAmb	22 52 59.1	
	comp=Z,9.1nm,0.9s						
S57A	**Dark Hollow, R**	**35.67**	**257**	P	**P**	**22 52 60.0**	**+0.8**
S57A				IAmb	IAmb	22 53 01.7	
	comp=Z,8.4nm,1.1s						
BURAR	**Bucovina Array**	**35.84**	**80**	P	**P**	**22 53 01.1**	**+0.5**
AKASG	**Malin Array Be**	**36.11**	**73**	P	**P**	**22 53 02.3**	**-0.5**
	comp=Z,2.6nm,0.8s,baz=306,slow=8.6,SNR=9.5						
	comp=Z,2.6nm,0.8s						
N49A	**Columbus Grove**	**36.18**	**265**	P	**P**	**22 53 03.5**	**0.0**
N49A				IAmb	IAmb	22 53 05.2	
	comp=Z,10nm,1.1s						
B35A	**Bob, Littlefor**	**36.47**	**282**	P	**P**	**22 53 06.0**	**+0.1**
ULM	**Lac du Bonnet**	**36.47**	**286**	P	**P**	**22 53 05.5**	**-0.4**
G40A	**Rib Lake**	**36.52**	**276**	P	**P**	**22 53 06.2**	**-0.2**
P51A	**Williamsport**	**36.60**	**263**	P	**P**	**22 53 07.5**	**+0.4**
P51A				IAmb	IAmb	22 53 08.6	
	comp=Z,9.4nm,1.0s						
TIR	**Tirane**	**37.05**	**92**	P	**P**	**22 53 11.4**	**+0.5**
A36M	**Sachs Harbour**	**37.58**	**329**	P	**P**	**22 53 15.4**	**+0.4**
A36M				IAmb	IAmb	22 53 17.2	
	comp=Z,6.9nm,0.8s						
F36A	**Milaca**	**37.92**	**279**	P	**P**	**22 53 18.6**	**+0.3**
Y60A	**Bolivia**	**38.15**	**252**	P	**P**	**22 53 21.5**	**+1.2**
L42A	**Oliver, Polo**	**38.41**	**271**	P	**P**	**22 53 22.2**	**-0.2**
YKA	**Yellowknife Ar**	**38.57**	**313**	P	**P**	**22 53 23.3**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=62,slow=9.1,SNR=4.3						
	comp=Z,0.8nm,0.7s						
YKA	**Yellowknife Ar**	**38.57**	**313**	P	**P**	**22 53 22.7**	**-0.8**
K38A	**Parkersburg**	**39.65**	**275**	P	**P**	**22 53 33.1**	**+0.4**
K38A				IAmb	IAmb	22 53 34.1	
	comp=Z,12nm,1.0s						
T47A	**Sharon Grove**	**40.59**	**264**	P	**P**	**22 53 40.7**	**0.0**
ECSD	**EROS Data Cent**	**40.98**	**279**	P	**P**	**22 53 45.0**	**+1.1**
S44A	**Carbondale**	**41.24**	**266**	P	**P**	**22 53 46.1**	**+0.2**
E28A	**Huff**	**41.27**	**285**	P	**P**	**22 53 47.5**	**+1.4**
GOGA	**Godfrey**	**41.35**	**257**	P	**P**	**22 53 46.2**	**-0.8**
WVT	**Waverly**	**41.62**	**263**	P	**P**	**22 53 49.7**	**+0.6**
DGMT	**Dagmar**	**41.86**	**289**	P	**P**	**22 53 50.8**	**-0.1**
INK	**Inuvik**	**41.93**	**327**	P	**P**	**22 53 50.3**	**-1.0**
INK				IAmb	IAmb	22 53 59.6	
	comp=Z,15nm,1.8s						
255A	**Hazlehurst**	**41.99**	**254**	P	**P**	**22 53 52.7**	**+0.5**
L34A	**Svendsen Farm,**	**42.06**	**277**	P	**P**	**22 53 53.4**	**+0.8**
Z51A	**Franklin**	**42.33**	**258**	P	**P**	**22 53 55.1**	**+0.2**
PBMO	**Poplar Bluff**	**42.54**	**266**	P	**P**	**22 53 56.5**	**-0.1**
Y49A	**Blount Mountai**	**42.58**	**260**	P	**P**	**22 53 57.1**	**+0.1**
PLAL	**Pickwick Lake**	**42.61**	**263**	P	**P**	**22 53 57.4**	**+0.1**
PLAL				IAmb	IAmb	22 54 01.1	
	comp=Z,16nm,1.6s						
MGMO	**Mountain Grove**	**43.26**	**268**	P	**P**	**22 54 02.6**	**+0.1**
BGNE	**Belgrade**	**43.40**	**277**	P	**P**	**22 54 03.9**	**+0.3**
OXF	**Oxford**	**43.69**	**263**	P	**P**	**22 54 05.3**	**-0.6**
OXF				IAmb	IAmb	22 54 06.1	
	comp=Z,18nm,1.0s						
LAO	**LASA Array**	**44.06**	**289**	P	**P**	**22 54 09.5**	**+0.6**
LAO				IAmb	IAmb	22 54 11.1	
	comp=Z,18nm,1.1s						
IDI	**Anoyia**	**44.15**	**94**	P	**P**	**22 54 10.2**	**+0.5**
	comp=Z,3.3nm,0.8s,baz=304,slow=14,SNR=2.1						
	comp=Z,3.3nm,0.8s						
WHAR	**Wooly Hollow**	**44.66**	**267**	P	**P**	**22 54 14.5**	**+0.8**
WHAR				IAmb	IAmb	22 54 17.5	
	comp=Z,28nm,1.9s						
U38A	**Gravette**	**44.94**	**270**	P	**P**	**22 54 16.1**	**+0.2**
U38A				IAmb	IAmb	22 54 17.5	
	comp=Z,12nm,1.6s						
EGMT	**Eagleton**	**44.96**	**293**	P	**P**	**22 54 16.9**	**+0.9**
BR131	**Keskin Array S**	**45.65**	**83**	P	**P**	**22 54 22.1**	**+0.5**
BR131				IAmb	IAmb	22 54 28.6	
	comp=Z,17nm,1.6s						
BRTR	**Keskin Array B**	**45.65**	**83**	P	**P**	**22 54 22.7**	**+1.0**
	comp=Z,1.2nm,0.7s,baz=316,slow=6.2,SNR=3.6						
	comp=Z,1.2nm,0.7s						
BRTR	**Keskin Array B**	**45.65**	**83**	P	**P**	**22 54 22.0**	**+0.3**
BMAR	**Burnt Mountain**	**45.67**	**330**	P	**P**	**22 54 21.5**	**+0.1**
R32A	**Long Quarter,**	**45.83**	**275**	P	**P**	**22 54 22.3**	**-0.7**
R32A				IAmb	IAmb	22 54 25.3	
	comp=Z,6.2nm,0.7s						
TUL1	**Leonard**	**46.09**	**270**	P	**P**	**22 54 25.0**	**-0.1**
TUL1				IAmb	IAmb	22 54 26.3	
	comp=Z,15nm,1.4s						
GDHS	**Morne Mazeau,**	**46.24**	**219**	P	**P**	**22 54 26.2**	**-0.2**
WALA	**Waterton Lakes**	**46.32**	**296**	P	**P**	**22 54 26.6**	**-0.2**
Z41A	**Richland Creek**	**46.47**	**265**	P	**P**	**22 54 27.9**	**-0.2**
Z41A				IAmb	IAmb	22 54 33.1	
	comp=Z,7.3nm,0.9s						
DAWY	**Dawson**	**46.51**	**324**	P	**P**	**22 54 28.1**	**0.0**
DAWY				IAmb	IAmb	22 54 29.7	
	comp=Z,11nm,1.4s						
ICMP	**Isla Caja de M**	**46.52**	**226**	P	**P**	**22 54 27.2**	**-1.2**
M30M	**Minto, Yukon**	**46.70**	**322**	P	**P**	**22 54 29.6**	**0.0**
M30M				IAmb	IAmb	22 55 25.1	
	comp=Z,10nm,1.8s						
344A	**Westbrook Farm**	**46.74**	**262**	P	**P**	**22 54 30.2**	**0.0**
N31M	**Braeburn, Yuko**	**47.11**	**320**	P	**P**	**22 54 32.5**	**-0.2**
N31M				IAmb	IAmb	22 55 08.5	
	comp=Z,8.0nm,1.2s						
COLD	**Coldfoot**	**47.30**	**332**	P	**P**	**22 54 34.2**	**+0.1**
COLD				IAmb	IAmb	22 55 58.6	
	comp=Z,12nm,1.8s						
JTMT	**Jette**	**47.40**	**295**	P	**P**	**22 54 36.9**	**+1.6**
JTMT				IAmb	IAmb	22 54 52.3	
	comp=Z,10.0nm,1.1s						
BNN	**Bunyan**	**47.46**	**82**	P	**P**	**22 54 36.9**	**+1.0**
KSCO	**Kaye Shedlock'**	**47.51**	**279**	P	**P**	**22 54 36.0**	**-0.3**
BOZ	**Bozeman (W)**	**47.56**	**291**	P	**P**	**22 54 37.0**	**+0.4**
N23A	**Red Feather La**	**47.92**	**283**	P	**P**	**22 54 39.3**	**-0.3**
J25K	**Salcha River,**	**47.93**	**327**	P	**P**	**22 54 41.0**	**+1.8**
J25K				IAmb	IAmb	22 54 50.9	
	comp=Z,16nm,1.9s						
BCAR	**Beaver Creek A**	**47.98**	**324**	P	**P**	**22 54 40.2**	**+0.7**
SCRK	**Sand Creek**	**47.99**	**326**	P	**P**	**22 54 40.6**	**+0.9**
SCRK				IAmb	IAmb	22 54 41.5	
	comp=Z,4.9nm,1.0s						
L27K	**Beaver Creek,**	**47.99**	**324**	P	**P**	**22 54 40.8**	**+1.1**
POKR	**Poker Flat Res**	**48.15**	**329**	P	**P**	**22 54 41.8**	**+1.0**
POKR				IAmb	IAmb	22 54 58.0	
	comp=Z,5.6nm,0.9s						
IL31		**48.25**	**328**	P	**P**	**22 54 41.5**	**0.0**
ILAR	**Eielson Array**	**48.25**	**328**	P	**P**	**22 54 41.9**	**+0.4**
	comp=Z,2.2nm,0.9s,baz=37,slow=6.5,SNR=7.1						
ILAR				PcP	**PcP**	**22 56 07.5**	**-0.8**
	comp=Z,0.9nm,0.9s,baz=5.1,slow=3.2,SNR=5.0						
	comp=Z,2.2nm,0.9s						
DOT	**Dot Lake**	**48.26**	**326**	P	**P**	**22 54 41.6**	**0.0**
LOHW	**Long Hollow**	**48.42**	**289**	P	**P**	**22 54 43.4**	**0.0**
BW06	**Boulder Array**	**48.48**	**287**	P	**P**	**22 54 43.0**	**-0.9**
BW06				IAmb	IAmb	22 56 13.6	
	comp=Z,5.5nm,0.8s						
PDAR	**Pinedale Array**	**48.48**	**287**	P	**P**	**22 54 43.4**	**-0.6**
	comp=Z,1.4nm,0.8s,baz=67,slow=8.2,SNR=5.0						
	comp=Z,1.4nm,0.8s						
PDAR	**Pinedale Array**	**48.48**	**287**	P	**P**	**22 54 43.2**	**-0.7**
MDM	**Murphy Dome**	**48.49**	**329**	P	**P**	**22 54 44.0**	**+0.6**
MDM				IAmb	IAmb	22 54 44.8	
	comp=Z,4.0nm,0.9s						
ISCO	**Idaho Springs**	**48.54**	**282**	P	**P**	**22 54 45.2**	**+0.7**
ISCO				IAmb	IAmb	22 54 46.4	
	comp=Z,7.9nm,1.4s						
HDA	**Harding Lake**	**48.54**	**328**	P	**P**	**22 54 43.6**	**-0.2**
HDA				IAmb	IAmb	22 54 44.2	
	comp=Z,9.1nm,1.4s						
WMOK	**Wichita Mounta**	**48.59**	**272**	P	**P**	**22 54 44.7**	**+0.2**
WMOK				IAmb	IAmb	22 55 34.5	
	comp=Z,4.8nm,0.9s						
IMAR	**Indian Mountai**	**49.17**	**332**	P	**P**	**22 54 49.0**	**+0.5**
AHID	**Auburn Hatcher**	**49.28**	**288**	P	**P**	**22 54 49.2**	**-0.7**
AHID				IAmb	IAmb	22 54 55.6	
	comp=Z,3.7nm,0.6s						
C09A	**Chrisman Ranch**	**49.30**	**298**	P	**P**	**22 54 49.6**	**-0.2**
C09A				IAmb	IAmb	22 54 54.5	
	comp=Z,19nm,1.9s						
B08A	**Colville Reser**	**49.41**	**299**	P	**P**	**22 54 50.5**	**-0.2**
T25A	**Trinidad**	**49.84**	**278**	P	**P**	**22 54 54.3**	**0.0**
RND	**Reindeer**	**49.85**	**328**	P	**P**	**22 54 54.2**	**+0.3**
RND				IAmb	IAmb	22 54 54.8	
	comp=Z,8.1nm,1.2s						
N25K	**Chitina, Valde**	**49.95**	**324**	P	**P**	**22 54 55.0**	**+0.4**
SDCO	**Great Sand Dun**	**49.98**	**280**	P	**P**	**22 54 54.6**	**-0.8**
SDCO				IAmb	IAmb	22 54 56.1	
	comp=Z,14nm,1.9s						
F10A	**Beach Ranch, E**	**50.08**	**295**	P	**P**	**22 54 56.1**	**+0.2**
PLID	**Pearl Lake**	**50.11**	**294**	P	**P**	**22 54 56.1**	**-0.2**
E09A	**Wood Farm, Sta**	**50.15**	**296**	P	**P**	**22 54 58.1**	**+1.9**
E09A				IAmb	IAmb	22 55 56.3	
	comp=Z,6.4nm,0.8s						
AKTO	**Aktyubinsk**	**50.33**	**56**	P	**P**	**22 54 57.8**	**+0.2**
	comp=Z,1.9nm,0.9s,baz=303,slow=7.9,SNR=2.8						
	comp=Z,1.9nm,0.9s						
DIV	**Divide**	**50.68**	**325**	P	**P**	**22 54 59.5**	**-0.7**
TIXI	**Tiksi**	**50.70**	**7**	P	**P**	**22 55 00.5**	**+0.4**
FID	**Port Fidalgo**	**51.19**	**325**	P	**P**	**22 55 05.0**	**+1.0**
MARD	**Mardin**	**51.23**	**79**	P	**P**	**22 55 05.1**	**+0.4**
K20K	**Telida**	**51.35**	**330**	P	**P**	**22 55 05.6**	**+0.5**
PV11	**David Mesa, Pa**	**51.36**	**283**	P	**P**	**22 55 05.9**	**+0.1**
PV11				IAmb	IAmb	22 55 07.4	
	comp=Z,5.9nm,0.9s						
PV13	**Radium Mtn., P**	**51.44**	**282**	P	**P**	**22 55 06.9**	**+0.5**
PV13				IAmb	IAmb	22 55 07.9	
	comp=Z,9.7nm,1.0s						
TORD	**Torodi Ar. Bea**	**51.46**	**135**	P	**P**	**22 55 05.4**	**-1.0**
	comp=Z,1.0nm,0.8s,baz=338,slow=8.2,SNR=5.0						
	comp=Z,1.0nm,0.8s						
P17A	**Butcher Ranch,**	**51.48**	**285**	P	**P**	**22 55 06.9**	**+0.3**
MPU	**Maple Canyon**	**51.55**	**286**	P	**P**	**22 55 05.5**	**-1.7**
MPU				IAmb	IAmb	22 55 08.4	
	comp=Z,5.5nm,0.8s						
NLU	**North Lily Min**	**51.82**	**286**	P	**P**	**22 55 09.8**	**+0.5**
NLU				IAmb	IAmb	22 55 10.6	
	comp=Z,8.2nm,1.1s						
MVCO	**Mesa Verde**	**51.97**	**281**	P	**P**	**22 55 11.3**	**+0.9**
MVCO				IAmb	IAmb	22 55 12.5	
	comp=Z,12nm,1.4s						
ABKAR	**Akbulak array**	**52.05**	**56**	P	**P**	**22 55 10.6**	**+0.2**
ABKAR	**Akbulak array**	**52.05**	**56**	P	**P**	**22 55 10.5**	**0.0**
ABKAR				IAmb	IAmb	22 55 28.4	
	comp=Z,4.1nm,1.2s						
Q16A	**Castle Valley**	**52.12**	**285**	P	**P**	**22 55 11.1**	**-0.3**
Q16A				IAmb	IAmb	22 55 12.5	
	comp=Z,7.9nm,1.4s						
JCT	**Junction City**	**52.40**	**269**	P	**P**	**22 55 12.9**	**-0.5**
JCT				IAmb	IAmb	22 55 14.0	
	comp=Z,5.3nm,0.9s						
J08A	**Circle Bar Ran**	**52.58**	**294**	P	**P**	**22 55 14.5**	**-0.2**
J08A				IAmb	IAmb	22 55 15.3	
	comp=Z,8.2nm,1.2s						
TNA	**Tin City**	**52.75**	**338**	P	**P**	**22 55 14.5**	**-1.0**
TNA				IAmb	IAmb	22 55 15.5	
	comp=Z,9.3nm,0.9s						
ELK	**Elko**	**52.87**	**289**	P	**P**	**22 55 17.8**	**+0.7**
MSU	**Marysvale**	**52.94**	**285**	P	**P**	**22 55 18.3**	**+0.8**
BIRV	**Birongo**	**53.21**	**222**	P	**P**	**22 55 19.4**	**0.0**
WVOR	**Wild Horse Val**	**53.34**	**293**	P	**P**	**22 55 19.7**	**-0.7**
WVOR				IAmb	IAmb	22 55 20.9	
	comp=Z,7.3nm,1.3s						
PINE	**Pine Mountain**	**53.48**	**296**	P	**P**	**22 55 21.9**	**+0.5**
PINE				IAmb	IAmb	22 55 23.6	
	comp=Z,13nm,1.3s						
PSUT	**Pine Spring**	**53.80**	**286**	P	**P**	**22 55 24.2**	**+0.4**
PKCU	**Pink Cliffs**	**53.81**	**284**	P	**P**	**22 55 23.6**	**-0.5**
BMN	**Battle Mountai**	**54.12**	**290**	P	**P**	**22 55 26.1**	**0.0**
BMN				IAmb	IAmb	22 55 27.7	
	comp=Z,6.7nm,1.4s						
URIC	**Uribia, Colomb**	**54.30**	**229**	P	**P**	**22 55 25.6**	**-1.9**
MNTX	**Cornudas Mount**	**54.48**	**275**	P	**P**	**22 55 27.8**	**-0.8**
MOD	**Modoc Plateau**	**54.57**	**294**	P	**P**	**22 55 29.2**	**-0.1**
MOD				IAmb	IAmb	22 55 31.1	
	comp=Z,11nm,1.5s						
WUAZ	**Wupatki**	**54.77**	**282**	P	**P**	**22 55 31.0**	**+0.1**
WUAZ				IAmb	IAmb	22 55 41.5	
	comp=Z,6.9nm,1.2s						
R11A	**Troy Canyon, C**	**54.84**	**288**	P	**P**	**22 55 31.8**	**

	comp=Z,3.0nm,0.4s							
ULN	**Ulaanbaatar**	**70.11**	**27**	P	**P**	**22 57 13.1**	**-0.2**
ULN				IAmb	IAmb	22 57 14.8	
	comp=Z,7.5nm,1.2s							
BOSC	**San Juan Bosco**	**70.41**	**229**	P	**P**	**22 57 16.1**	**+0.6**
BDFB	**Brasilia**	**73.73**	**195**	P	**P**	**22 57 35.2**	**+0.1**
	comp=Z,1.4nm,0.3s,baz=307,slow=4.4,SNR=3.4							
	comp=Z,1.4nm,0.3s							
LODK	**Lodwar**	**75.68**	**106**		**P**	**22 57 47.0**	**+0.4**
LODK				IAmb	IAmb	22 58 06.1		
	comp=Z,6.5nm,1.4s							
LPAZ	**La Paz**	**78.87**	**214**	P	**P**	**22 58 04.9**	**-0.1**
LPAZ				IAmb	IAmb	22 58 05.5		
	comp=Z,9.8nm,1.6s							
PB16	**IPOC Station P**	**81.22**	**215**		**P**	**22 58 17.9**	**+0.2**
GO01	**Chusmiza**	**82.38**	**214**	P	**P**	**22 58 23.4**	**-0.2**
PB11	**IPOC Station P**	**82.61**	**214**	P	**P**	**22 58 24.3**	**-0.1**
PB08	**IPOC Station P**	**82.81**	**214**	P	**P**	**22 58 25.4**	**-0.3**
INCN	**Inchon**	**84.03**	**16**	P	**P**	**22 58 32.9**	**+1.4**
KSRS	**Korea Array**	**84.24**	**15**	P	**P**	**22 58 32.1**	**-0.5**
	comp=Z,2.0nm,0.8s,baz=351,slow=4.9,SNR=5.0							
	comp=Z,2.0nm,0.8s							
KSAR	**Wonju Array Be**	**84.25**	**15**	P	**P**	**22 58 32.1**	**-0.5**
CPUP	**Villa Florida**	**85.78**	**202**	P	**P**	**22 58 38.9**	**-1.2**
	comp=Z,1.8nm,0.6s,baz=32,slow=7.5,SNR=5.4							
	comp=Z,1.8nm,0.6s							
VNDA	**Vanda**	**159.06**	**189**	PKPab	**PKPab**	**23 06 34.7**	**+0.4**
	comp=Z,0.8nm,0.9s,baz=183,slow=2.5,SNR=4.0							

TAP 24 22:49:36.5,24.57N×121.88E,h9km,ML1.6,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWC	**Suao**	**0.05**	**320**	P	Pg	22 49 38.5	+0.2
	baz=330						
TWC				S	Sg	22 49 39.6	0.0
	baz=330						
EWUT	**Wuta**	**0.16**	**217**	P	Pg	22 49 40.3	+0.4
	baz=208						
EWUT				S	Sg	22 49 42.7	+0.5
	baz=208						
NDS	**Dongshan**	**0.16**	**292**	P	Pg	22 49 40.3	+0.3
	baz=286						
NDS				S	Sg	22 49 43.1	+0.8
	baz=286						
ENA	**Nanau**	**0.19**	**222**	*eP*	Pg	22 49 40.7	+0.2
	baz=212						
ENA				*eS*	Sg	22 49 43.4	+0.2
	baz=212						
TWE	**Neicheng**	**0.24**	**307**	P	Pg	22 49 41.9	+0.5
	baz=309						
TWE				*eS*	Sg	22 49 45.4	+0.6
	baz=309						
EGS		**0.28**	**10**	*eS*	Sb	22 49 47.2	-1.1
	baz=13						
FUSB	**Fushanzhiwuyua**	**0.33**	**305**	*eP*	Pg	22 49 43.6	+0.6
	baz=306						
FUSB				*eS*	Sb	22 49 48.9	-1.0
	baz=306						
LATG	**Datong**	**0.33**	**263**	P	Pg	22 49 43.2	+0.2
	baz=263						
LATG				S	Sg	22 49 47.8	+0.5
	baz=263						
NDT	**Datong Townshi**	**0.34**	**275**	*eP*	Pg	22 49 43.0	-0.2
	baz=275						
NDT				*eS*	Sb	22 49 49.1	-1.0
	baz=275						
TIPB	**Shuangxi**	**0.40**	**353**	*eS*	Sg	22 49 50.8	+1.1
	baz=4.0						
NWLT	**Wulai**	**0.40**	**301**	*eP*	Pg	22 49 45.0	+0.6
	baz=302						
NWLT				*eS*	Sg	22 49 50.7	+1.1
	baz=302						
TWB1	**Santiao Chiao**	**0.44**	**13**	*eS*	Sg	22 49 51.3	+0.3
	baz=15						
YHNB	**Yeheng**	**0.47**	**282**	*eP*	Pg	22 49 46.2	+0.5
	baz=289						
YHNB				*eS*	Sb	22 49 53.3	-0.8
	baz=289						
NACB	**Ninganchiao**	**0.48**	**213**	P	Pg	22 49 46.1	+0.4
	baz=199						
NACB				*eS*	Sg	22 49 51.9	-0.1
	baz=199						
NNSB	**Datong**	**0.48**	**253**	P	Pg	22 49 45.9	+0.1
	baz=251						
NNSB				*eS*	Sb	22 49 55.0	+0.7
	baz=251						
NNSH	**Datong**	**0.48**	**253**	*eP*	Pg	22 49 45.8	0.0
	baz=243						
NNSH				*eS*	Sg	22 49 51.6	-0.4
	baz=243						
NNS	**Nan Shan**	**0.48**	**254**	*eS*	Sg	22 49 52.7	+0.4
	baz=253						
NSK	**Sanguang**	**0.49**	**282**	*eP*	Pb	22 49 46.9	-0.4
	baz=289						
NSK				*eS*	Sg	22 49 53.1	+0.7
	baz=289						
ETLH	**Xiulin Townshi**	**0.52**	**225**	*eS*	Sg	22 49 53.8	+0.5
	baz=222						
SXI1	**Grass Mountain**	**0.52**	**359**	*eP*	Pg	22 49 47.1	+0.6
	baz=6.0						
YM01	**YM01**	**0.64**	**334**	*eP*	Pb	22 49 49.9	+0.1
	baz=335						
YM01				*eS*	Sb	22 49 59.1	+0.2
	baz=335						
WHF	**Hehuan Shan**	**0.71**	**233**	*eP*	Pb	22 49 51.1	-0.1
	baz=243						

JMA 24 22:50:12.4±0.3,24°N±1°×123.4E±0.7,h52km±3km, MV2.6/10,NEAR ISHIGAKIJIMA ISLAND,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HATJ	**Hateruma jima**	**0.67**	**38**	P	Pn	22 50 25.8	0.0
HATJ				S	Sn	22 50 35.4	-0.1
IRIF	**Iriomote-Funau**	**0.87**	**23**	P	Pn	22 50 28.7	+0.3
IRIF				S	Sn	22 50 40.5	+0.2
JKRS	**Kuro-shima**	**0.93**	**40**	P	Pn	22 50 29.7	+0.6
JKRS				S	Sn	22 50 41.8	+0.3
YOJ	**Yonaguni jima**	**0.98**	**341**	P	Pn	22 50 30.4	+0.5
YOJ				*eS*	Sn	22 50 43.5	+0.8
JYNG	**Yonagunijimaku**	**0.99**	**338**	*eP*	Pn	22 50 30.0	0.0
JYNG				*eS*	Sn	22 50 43.0	0.0
JIJ	**Ishigaki jima**	**1.10**	**41**	P	Pn	22 50 31.7	+0.2
JIJ				*eS*	Sn	22 50 45.3	-0.4
JISG	**Ishigakijimahi**	**1.37**	**40**	*eP*	Pn	22 50 35.4	+0.3
JISG				*eS*	Sn	22 50 52.6	+0.5
JTJ	**Tarama**	**1.66**	**48**	*eS*	Sn	22 50 60.0	+0.8

IDC 24 22:55:09.8±4.8,56.90N×33.14W,h0km,mb3.5/4, mbtmp3.5/4,MS2.9/2,Error ellipse: s-maj=133.8km s-min=38.8km az=173.0,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FRB	**Frobisher Bay**	**18.61**	**306**	LR	LR	23 06 02.5	
	comp=Z,81nm,18.4s,baz=192,slow=35						
NOA	**NORSAR Array B**	**22.89**	**61**	LR	LR	23 08 02.0	
	comp=Z,11nm,18.8s,baz=315,slow=34						
ILAR	**Eielson Array**	**48.65**	**328**	P	P	23 03 54.8	-0.1
	0.6nm,0.9s,baz=39,slow=5.9,SNR=5.1						
	0.6nm,0.9s						
PDAR	**Pinedale Array**	**48.66**	**288**	P	P	23 03 55.5	-0.1
	0.4nm,0.5s,baz=57,slow=9.9,SNR=2.2						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**63.54**	**44**	P	P	23 05 41.6	0.0
	0.3nm,0.5s,baz=332,slow=5.7,SNR=2.4						
	0.3nm,0.5s						
SONM	**Songino Array**	**70.33**	**28**	P	P	23 06 25.1	0.0
	0.3nm,0.5s,baz=336,slow=6.6,SNR=2.3						
	0.3nm,0.5s						

NDI 24 23:01:15.8±2.0,24.15N×93.65E,h10km,ML3.0, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AZL	**Aizawl**	**0.97**	**245**	*eP*	Pg	23 01 33.8	-0.6
AZL				*eS*	Sn	23 01 49.1	-0.3
AZL				IAML		23 01 53.7	
	comp=E,329nm,0.2s						
AZL				IAML		23 01 54.8	
	comp=N,264nm,0.2s						
KOHI	**KOHIMA**	**1.62**	**15**	*eP*	Pn	23 01 44.7	+0.1
KOHI				*eS*	Sg	23 02 07.8	-0.2
KOHI				IAML		23 02 08.5	
	comp=N,133nm,0.6s						
KOHI				IAML		23 02 09.0	
	comp=E,117nm,0.4s						
MOKO	**MOKOCHONG**	**2.30**	**20**	*eP*	Pn	23 01 53.3	-0.6
MOKO				*eS*	Sn	23 02 22.5	0.0
ITAN	**ITANAGAR**	**2.98**	**1**	*eS*	Sn	23 02 38.7	-0.4
TURI	**Tura**	**3.32**	**296**	*eP*	Pn	23 02 10.2	+2.4
TURI				*eS*	Sn	23 02 46.5	-0.8
TURI				IAML		23 02 51.0	
	comp=E,88nm,0.1s						
ZIRO	**ZIRO**	**3.37**	**3**	*eP*	Pn	23 02 08.2	-0.5
ZIRO				*eS*	Sn	23 02 46.9	-1.9
ZIRO				IAML		23 02 50.3	
	comp=E,91nm,0.3s						
ZIRO				IAML		23 02 51.3	
	comp=Z,37nm,0.3s						

IDC ***24*** *23:16:32.8±0.5,36.82N×24.07W,h0km,mb4.3/29, mbtmp4.3/29,MS4.0/71,Error ellipse: s-maj=17.9km s-min=10.6km az=146.0*
NEIC ***24*** *23:16:35.3±1.2,36.90N±0.08×24.00W±0.08,h10km±1km, mb4.7/181,Error ellipse: s-maj=14.3km s-min=8.9km az=209.0*
LDG ***24*** *23:16:36.8±0.3,37.05N×24.01W,h30km,Ml3.9/7*
SVSA ***24*** *23:16:37.6±1.3,36.73N×24.05W,h10km,ML5.0(INMG), Error ellipse: s-maj=7.1km s-min=4.3km az=49.0*
GCMT ***24*** *23:16:40.3±0.5,36.86N±0.04×23.83W±0.03,h34km±1km, MW5.0/64,Moment Tensor Solution. s20,c22; s64,c87; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=4.27±.45; Mθθ=0.51±.24; Mϕϕ3.76±.25; Mrθ-1.93±.22; Mrϕ-0.37±.13; Mθϕ0.38±.18; Best double couple: Mw4.40400×10¹⁶ NP1:ϕs10.00000°,δ43.00000°,λ-62.00000°. NP2: ϕs154.00000°,δ53.00000°,λ-114.00000°. Principal axes: T 3.8510, Plg5.0000°, Azm261.0000°; N 1.1090, Plg19.0000°, Azm169.0000°; P -4.9580, Plg71.0000°, Azm5.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
CNRM ***24*** *23:17:31.6,35.66N×18.90W,h0km*

ISC 24 23:16:34.9±0.8,36.94N±0.05×23.97W±0.03,h13km±4km, n610,σ2s00/564,mb4.6/146,MS4.0/82,19C-16D,Azores Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSMN	**Pico do Norte,**	**0.88**	**275**	*eP*	**Pg**	**23 16 50.5**	**-1.4**
PSMN				*eS*	**Sg**	**23 17 01.1**	**-2.4**
PSMN				A	A	23 17 01.9	
	7μm,0.1s						
PSMA	**Santa Maria**	**0.93**	**274**	*eP*	**Pg**	**23 16 51.0**	**-1.9**
PSMA				*eS*	**Sg**	**23 17 01.8**	**-3.3**
PSMA				A	A	23 17 02.5	
	6μm,0.1s						
BART	**Pico Bartolome**	**1.27**	**312**	*eP*	**Pn**	**23 16 57.9**	**-0.5**
BART				*eS*	**Sb**	**23 17 13.9**	**-1.1**
BART				A	A	23 17 17.7	
	12μm,0.5s						
PNOR2	**Nordeste**	**1.30**	**314**	*eP*	**Pn**	**23 16 58.3**	**-0.4**
PNOR2				*eS*	**Sb**	**23 17 14.1**	**-1.6**
PNOR2				A	A	23 17 16.6	
	3μm,0.2s						
PPOV	**Povoa$£o**	**1.30**	**309**	*eP*	**Pn**	**23 16 58.0**	**-0.7**
PPOV				*eS*	**Sb**	**23 17 14.1**	**-1.7**
PPOV				A	A	23 17 14.6	
	6μm,0.3s						
PCALD	**Caldeiras da R**	**1.48**	**306**	*eP*	**Pn**	**23 17 00.8**	**-0.4**
PCALD				*eS*	**Sn**	**23 17 18.2**	**-2.3**
PCALD				A	A	23 17 21.5	
	4μm,0.5s						
CMLA	**Cha da Macela**	**1.49**	**304**	*eP*	**Pn**	**23 17 00.8**	**-0.5**
CMLA				*eS*	**Sn**	**23 17 18.4**	**-2.2**
CMLA				A	A	23 17 22.2	
	23μm,0.4s						
CMLA	**Cha da Macela**	**1.49**	**304**		**Pn**	**23 17 00.9**	**-0.4**
CMLA				Sn	**Sn**	**23 17 18.9**	**-1.7**
GRON	**Grota Negra**	**1.50**	**304**	*eP*	**Pn**	**23 17 00.1**	**-1.4**
GRON				*eS*	**Sn**	**23 17 16.3**	**-4.6**
GRON				A	A	23 17 18.4	
	2μm,0.2s						
PRIG	**Ribeira Grande**	**1.52**	**306**	*eP*	**Pn**	**23 17 00.5**	**-1.2**
PRIG				*eS*	**Sn**	**23 17 18.4**	**-2.9**
PRIG				A	A	23 17 19.9	
	8μm,0.4s						
PDA	**Ponta Delgada**	**1.57**	**301**	*eP*	**Pn**	**23 17 01.6**	**-0.9**
PDA				*eS*	**Sn**	**23 17 19.9**	**-2.8**
PDA				A	A	23 17 22.8	
	3μm,0.5s						
PSET	**Sete Cidades**	**1.65**	**303**	*eP*	**Pn**	**23 17 03.0**	**-0.6**
PSET				*eS*	**Sn**	**23 17 21.8**	**-2.9**
PSET				A	A	23 17 35.6	
	7μm,0.5s						
PMOS	**Mosteiros**	**1.76**	**303**	*eP*	**Pn**	**23 17 04.6**	**-0.3**
PMOS				*eS*	**Sn**	**23 17 24.9**	**-2.2**
PMOS				A	A	23 17 27.0	
	2μm,0.3s						
ADH	**Angra Heroismo**	**3.10**	**305**	*eP*	**Pn**	**23 17 23.7**	**+0.2**
ADH				*eS*	**Sn**	**23 17 57.6**	**-2.8**
ADH				A	A	23 18 02.3	
	2μm,0.4s						
PAGU	**Agualva, Azore**	**3.13**	**307**	*eP*	**Pn**	**23 17 24.3**	**+0.4**
PAGU				*eS*	**Sn**	**23 17 58.7**	**-2.5**
PAGU				A	A	23 18 00.6	
	3μm,0.3s						
PID	**Ribeirinha**	**3.62**	**296**	*eP*	**Pn**	**23 17 30.3**	**-0.3**
PID				*eS*	**Sn**	**23 18 09.3**	**-3.9**
PID				A	A	23 18 13.3	
	554nm,0.3s						
PMAN	**Manadas**	**3.68**	**299**	*eP*	**Pn**	**23 17 30.7**	**-0.7**
PMAN				*eS*	**Sn**	**23 18 10.3**	**-4.3**
PMAN				A	A	23 18 15.8	
	284nm,0.1s						
PPNO	**Prainha do Nor**	**3.74**	**296**	*eP*	**Pn**	**23 17 31.8**	**-0.4**
PPNO				*eS*	**Sn**	**23 18 12.0**	**-4.1**
PPNO				A	A	23 18 15.8	
	351nm,0.3s						
ROSA	**Rosais**	**3.82**	**299**	*eP*	**Pn**	**23 17 33.2**	**-0.2**
ROSA				*eS*	**Sn**	**23 18 13.7**	**-4.5**
ROSA				A	A	23 18 17.4	
	412nm,0.4s						
ROSA	**Rosais**	**3.82**	**299**	Pn	**Pn**	**23 17 33.3**	**-0.1**
SRBC	**Serra Branca**	**3.84**	**304**	*eP*	**Pn**	**23 17 33.7**	**+0.1**
SRBC				*eS*	**Sn**	**23 18 15.5**	**-3.1**
SRBC				A	A	23 18 19.8	
	663nm,0.3s						
PICO	**Pico**	**3.86**	**295**	*eP*	**Pn**	**23 17 33.7**	**-0.3**
PICO				*eS*	**Sn**	**23 18 15.0**	**-4.3**
PICO				A	A	23 18 17.8	
	730nm,0.1s						
PCAN	**Candelaria**	**3.89**	**294**	*eP*	**Pn**	**23 17 33.6**	**-0.8**
PCAN				*eS*	**Sn**	**23 18 16.1**	**-3.8**
PCAN				A	A	23 18 18.2	
	469nm,0.2s						
HOR	**Horta**	**4.02**	**295**	*eP*	**Pn**	**23 17 35.4**	**-0.7**
HOR				*eS*	**Sn**	**23 18 18.1**	**-5.0**
HOR				A	A	23 18 22.0	
	712nm,0.1s						
PFCBR	**Castelo Branco**	**4.08**	**294**	*eP*	**Pn**	**23 17 36.2**	**-0.7**
PFCBR				*eS*	**Sn**	**23 18 20.2**	**-4.4**
PFCBR				A	A	23 18 27.2	
	114nm,0.3s						
CALA	**Caldeira**	**4.09**	**295**	*eP*	**Pn**	**23 17 36.5**	**-0.7**
CALA				*eS*	**Sn**	**23 18 21.1**	**-3.9**
CALA				A	A	23 18 25.3	
	1μm,0.2s						
PCED	**Cedros**	**4.11**	**296**	*eP*	**Pn**	**23 17 36.8**	**-0.6**
PCED				*eS*	**Sn**	**23 18 20.6**	**-4.7**
PCED				A	A	23 18 23.3	
	238nm,0.2s						
PCAPE	**Capelo, Faial**	**4.19**	**295**	*eP*	**Pn**	**23 17 38.1**	**-0.3**
PCAPE				*eS*	**Sn**	**23 18 22.8**	**-4.4**
PCAPE				A	A	23 18 27.3	
	1μm,0.3s						
PMOZ	**Porto Moniz, M**	**6.91**	**124**	*ǁiP*	**Pn**	**23 18 14.3**	**-1.6**
PMOZ				*eS*	Sn	23 19 23.3	-11
PMOZ				A	A	23 19 35.7	
	474nm,0.5s						
PMOZ	**Porto Moniz, M**	**6.91**	**124**	Pn	**Pn**	**23 18 14.3**	**-1.6**
PMOZ	**Porto Moniz, M**	**6.91**	**124**	P	**Pn**	**23 18 14.4**	**-1.6**
PMAR	**Madeira**	**7.16**	**124**	*eP*	**Pn**	**23 18 17.5**	**-1.9**
PMAR				*eS*	Sn	23 19 28.9	-12
PMAR				A	A	23 19 39.3	
	653nm,0.2s						
FUL	**Funchal**	**7.22**	**124**	*eP*	**Pn**	**23 18 18.3**	**-1.8**
FUL				*eS*	Sn	23 19 29.9	-12
FUL				A	A	23 19 37.9	
	389nm,0.3s						
PMPST	**Porto Santo, M**	**7.35**	**119**	*eP*	**Pn**	**23 18 19.2**	**-2.7**
PMPST				*eS*	Sn	23 19 30.3	-15
PMPST				A	A	23 19 42.7	
	283nm,0.3s						
PMPS	**Porto Santo**	**7.36**	**119**	*eP*	**Pn**	**23 18 19.4**	**-2.6**
PMPS				*eS*	Sn	23 19 30.0	-15
PMPS				A	A	23 19 39.8	
	220nm,0.2s						
MACI	**Morro de la Ar**	**10.70**	**142**	Pn	**Pn**	**23 19 06.4**	**-1.5**
PMAFR	**Mafra**	**11.77**	**76**	*eP*	**Pn**	**23 19 19.1**	**-3.3**
PMAFR				*eS*	Sn	23 21 22.8	-11
PMST	**Lisbon--Monsan**	**11.83**	**77**	*eS*	Sn	23 21 22.7	-12
LIS	**Lisbon**	**11.86**	**77**	*eS*	Sn	23 21 24.8	-11
PACT	**Alcochete**	**12.11**	**77**	*eS*	Sn	23 21 31.9	-10
PFVI	**Vila Bisbo**	**12.11**	**85**	*eS*	Sn	23 21 30.1	-12
PFVI	**Vila Bisbo**	**12.11**	**85**	Pn	**Pn**	**23 19 23.7**	**-3.3**
PTEO	**Sao Teotonio**	**12.17**	**83**	*eP*	Pn	23 19 22.9	-4.9
PTEO				*eS*	Sn	23 21 32.4	-11
PSBE	**So Bento**	**12.21**	**73**	*eP*	**Pn**	**23 19 24.9**	**-3.5**
PSBE				*eS*	Sn	23 21 34.4	-10
PNCL	**Nicolau / Gran**	**12.32**	**80**	*eP*	**Pn**	**23 19 26.6**	**-3.3**
PNCL				*eS*	Sn	23 21 31.6	-15
PCAS	**Casmilo, Conde**	**12.51**	**71**	*eP*	Pn	23 19 28.6	-4.0
PCAS				*eS*	Sn	23 21 38.0	-14
MESJ	**Messejana**	**12.56**	**81**	*eP*	**Pn**	**23 19 30.3**	**-2.9**
MESJ				*eS*	Sn	23 21 40.6	-12
PMTG	**Montargil**	**12.60**	**75**	*eP*	**Pn**	**23 19 29.9**	**-3.9**
PMTG				*eS*	Sn	23 21 41.5	-12
COI	**Coimbra**	**12.61**	**70**	*eP*	**Pn**	**23 19 30.1**	**-3.7**
COI				*eS*	Sn	23 21 41.8	-12
COI	**Coimbra**	**12.61**	**70**	Pn	**Pn**	**23 19 31.5**	**-2.3**
PTO	**Porto**	**12.66**	**66**	*eP*	Pn	23 19 30.4	-4.1
PTO				*eS*	Sn	23 21 40.0	-15
PCVE	**Castro Verde**	**12.71**	**82**	*eP*	Pn	23 19 29.9	-5.3
PCVE				*eS*	Sn	23 21 44.7	-12
EVO	**Evora**	**12.73**	**78**	P	Pn	23 19 31.6	-4.0
EVO				S	Sn	23 21 42.4	-15
EVO	**Evora**	**12.73**	**78**	*eP*	**Pn**	**23 19 31.9**	**-3.7**
EVO				*eS*	Sn	23 21 42.8	-14
PBDV	**Barranco-do-Ve**	**12.81**	**84**	*eP*	**Pn**	**23 19 33.5**	**-3.2**
PBDV				*eS*	Sn	23 21 47.8	-11
PBEJ	**Beja**	**12.84**	**80**	*eS*	Sn	23 21 47.0	-13
PVAQ	**Vaqueiros**	**12.97**	**83**	*eP*	**Pn**	**23 19 35.6**	**-3.2**
PVAQ				*eS*	Sn	23 21 50.9	-12
PVAQ	**Vaqueiros**	**12.97**	**83**	Pn	**Pn**	**23 19 39.6**	**+0.8**
EAH	**EAH**	**13.01**	**110**	P	**Pn**	**23 19 38.0**	**-1.3**
EAH	**EAH**	**13.01**	**110**	P	**Pn**	**23 19 35.4**	**-4.0**
PESTR	**Estremoz**	**13.08**	**77**	Pn	**Pn**	**23 19 40.5**	**+0.2**
PMRV	**Marv??o**	**13.28**	**74**	*eP*	**Pn**	**23 19 39.2**	**-3.8**
PMRV				*eS*	Sn	23 21 58.2	-12
MTIT	**Manteigas**	**13.29**	**70**	Pn	**Pn**	**23 19 40.6**	**-2.6**
TANT	**Tantan**	**13.68**	**125**	P	**Pn**	**23 19 47.6**	**-1.0**
MVO	**Moncorvo**	**13.82**	**67**	*eP*	Pn	23 19 46.1	-4.4
MVO				*eS*	Sn	23 22 10.0	-14
SRHM	**Skhour des Reh**	**13.95**	**104**	P	Pn	23 19 47.6	-4.7
AVE	**Averroes**	**14.03**	**100**	P	**Pn**	**23 19 50.3**	**-3.0**
AVE				S	Sn	23 22 15.1	-14
AVE	**Averroes**	**14.03**	**100**	Pn	**Pn**	**23 19 51.6**	**-1.6**
PBRG	**Braganca**	**14.18**	**65**	*eP*	Pn	23 19 50.6	-4.8
PBRG				*eS*	Sn	23 22 17.0	-16
TTIG	**Tnine Tigouga,**	**14.40**	**112**	P	**Pn**	**23 19 55.0**	**-3.5**
OUK	**Oukaimeden**	**14.51**	**108**	P	**Pn**	**23 19 59.5**	**-0.7**
OUK	**Oukaimeden**	**14.51**	**108**	P	**Pn**	**23 19 58.0**	**-2.2**
ZHG	**ZHG**	**14.59**	**99**	P	Pn	23 19 54.5	-6.5
SMIR	**Smir Dam**	**15.04**	**89**	P	Pn	23 19 59.7	-7.3
OUZM	**OUZ**	**15.49**	**108**	P	**Pn**	**23 20 12.1**	**-1.1**
OUZM	**OUZ**	**15.49**	**108**	P	**Pn**	**23 20 11.2**	**-2.0**
PAB	**San Pablo**	**15.63**	**74**	Pn	**Pn**	**23 20 14.4**	**-0.6**
IFR	**Ifrane**	**15.77**	**97**	P	**Pn**	**23 20 11.6**	**-5.2**
IFR				S	Sn	23 22 53.5	-18
ESDC	**Sonseca Array**	**15.94**	**74**	Pn	**Pn**	**23 20 13.6**	**-5.2**
	0.8nm,0.3s,baz=269,slow=13,SNR=57						
ESDC					Sn	23 23 00.3	-15
	0.4nm,0.3s,baz=268,slow=24,SNR=4.0						
ESDC					LR	23 25 32.5	
	comp=Z,242nm,19.2s,baz=258,slow=34						
ESDC	**Sonseca Array**	**15.94**	**74**	Pn	**Pn**	**23 20 15.7**	**-3.1**
ESBB	**Sonseca Array**	**15.94**	**74**	Pn	**Pn**	**23 20 14.7**	**-4.1**
CZD	**Col de Zad**	**15.99**	**99**	P	**Pn**	**23 20 14.4**	**-5.4**
MD31	**MD31**	**16.27**	**99**	P	**Pn**	**23 20 18.3**	**-4.8**
MDT	**Midelt**	**16.41**	**99**	Pn	**Pn**	**23 20 21.2**	**-3.7**
	2.5nm,0.3s,baz=277,slow=9.4,SNR=47						
MDT					Sn	23 23 08.8	-18
	1.0nm,0.3s,baz=155,slow=14,SNR=3.3						
MDT					LR	23 25 37.8	
	comp=Z,112nm,18.4s,baz=300,slow=33						
MDT	**Midelt**	**16.41**	**99**	P	**Pn**	**23 20 25.4**	**+0.4**
MDT	**Midelt**	**16.41**	**99**	P	**Pn**	**23 20 25.4**	**+0.4**
TZRR	**Tazzarine**	**16.46**	**107**	P	**Pn**	**23 20 25.5**	**0.0**
AKLM	**AKL**	**16.51**	**92**	P	**Pn**	**23 20 27.0**	**+0.9**
AKLM	**AKL**	**16.51**	**92**	P	Pn	23 20 19.2	-6.9
UCM	**Universidad Co**	**16.54**	**72**	P	**Pn**	**23 20 23.9**	**-2.6**
UCM				S	Sn	23 23 15.8	-14
ZGR	**Zagora**	**16.73**	**109**	P	**Pn**	**23 20 30.0**	**+1.0**
ZGR	**Zagora**	**16.73**	**109**	P	**Pn**	**23 20 28.8**	**-0.2**
JBK	**JBK**	**17.59**	**92**	P	Pn	23 20 32.7	-7.1
CART	**Cartagena**	**18.29**	**81**	Pn	**Pn**	**23 20 47.3**	**-1.0**
SJPF	**Ste Jean**	**18.45**	**63**	*eP*	**Pn**	**23 20 51.3**	**+1.1**
SJPF				*eS*	**Sn**	**23 24 07.1**	**-9.1**
	8.7nm,0.5s						
QUIF	**Quistinic**	**18.81**	**48**	*eP*	**Pn**	**23 20 56.4**	**+1.9**
QUIF				*eS*	Sn	23 24 12.1	-13
	75nm,1.2s						
QUIF	**Quistinic**	**18.81**	**48**	*eT*	T	23 38 13.2	
ETSF	**Etsaut**	**18.89**	**64**	*eP*	**Pn**	**23 20 56.2**	**+0.6**
ETSF				*eS*	Sn	23 24 14.6	-12
	16nm,0.8s						
ROSF	**Rostrenen**	**18.95**	**47**	*eP*	**Pn**	**

SSF eSn S 23 25 37.3 -6.4
6.7nm,0.5s
SMF 22.79 56 eP P 23 21 38.4 +1.3
SMF eSn S 23 25 40.6 -5.1
4.1nm,0.6s
SSB Saint Sauveur 22.95 60 P P 23 21 40.2 +1.4
VIVF Saint-Julien-l 22.96 61 eP P 23 21 41.0 +2.1
VIVF eS S 23 25 40.4 -8.4
LOR Lormes 22.97 55 eP P 23 21 39.6 +0.6
baz=236
LOR eS S 23 25 42.9 -6.0
12nm,0.9s
ESK Eskdalemuir 23.19 31 P P 23 21 43.1 +2.0
ESK IAmb IAmb 23 21 55.0
comp=Z,12nm,0.7s
EKA Eskdalemuir Ar 23.22 31 P P 23 21 42.7 +1.3
comp=Z,4.7nm,0.5s,baz=228,slow=8.3,SNR=65
EKA LR LR 23 29 29.6
comp=Z,628nm,18.2s,baz=229,slow=33
comp=Z,4.7nm,0.5s
SMRF Simiane la Rot 23.47 63 eP P 23 21 45.7 +1.6
ORIF Oris-en-Rattie 23.82 61 eP P 23 21 48.8 +1.3
SFTF Sexfontaines 24.00 53 eP P 23 21 50.8 +1.6
SFTF eS S 23 26 03.5 -2.2
MEZF Maizieres J'vi 24.10 52 eP P 23 21 51.1 +1.1
MEZF eS S 23 26 06.0 -1.2
BAIF Baives 24.12 48 eP P 23 21 50.9 +0.7
SAVF Savonnieres en 24.18 52 eP P 23 21 52.4 +1.6
SAVF eSn S 23 26 04.0 -4.5
comp=Z,5.5nm,0.6s
CABF La Chapelle 24.28 57 eP P 23 21 57.5 +5.7
SNF Seneffe 24.34 47 dP P 23 21 52.2 +0.1
comp=Z,14nm,0.9s
SNF dx x 23 22 08.4
DOU Dourbes 24.36 48 dP P 23 21 53.0 +0.6
comp=Z,12nm,1.2s
DOU dPP PnPn 23 22 24.5 +1.9
BNI Bardonecchia 24.40 61 P P 23 21 54.1 +1.1
MBDF Montbardon 24.42 62 eP P 23 21 58.0 +4.8
GIVF Givet 24.50 48 eP P 23 21 53.3 -0.4
LPG La Plagne 24.52 60 eP P 23 21 57.2 +2.9
BMRD Maredsous 24.54 48 dPP PnPn 23 22 26.5 +1.4
PAGF Fort de Pagny 24.55 52 eP P 23 21 55.1 +1.0
baz=264
RCHB Rochefort 24.76 49 dx x 23 22 09.0
HAU Haudompre 24.79 54 eP P 23 21 57.6 +1.2
HAU eS S 23 26 18.8 +0.4
SBF Sospel 24.79 64 eP P 23 21 57.2 +0.7
BCLA Clavier 24.91 48 dP P 23 21 58.2 +0.9
comp=Z,6.8nm,1.1s
SENIN Lac Senin/Sane 25.05 58 P P 23 22 00.3 +1.4
HINF Hinteralfeld 25.07 55 eP P 23 22 00.2 +1.3
HINF eS S 23 26 20.8 -2.1
WLF Walferdange 25.16 50 P P 23 22 00.3 +0.7
WLF IAmb IAmb 23 22 13.1
comp=Z,23nm,0.9s
WLF Walferdange 25.16 50 dP P 23 22 00.5 +0.9
comp=Z,19nm,0.9s
WLF dx x 23 22 11.4
BHOU Houvegnez 25.30 48 dP P 23 22 02.0 +1.1
comp=Z,10nm,1.0s
ECH Echery 25.37 54 P P 23 22 03.3 +1.7
MEM Membach 25.39 48 dP P 23 22 03.0 +1.3
comp=Z,7.8nm,0.9s
BTNL Ternell 25.46 48 dP P 23 22 03.1 +0.7
comp=Z,8.2nm,1.1s
CDF Champ du Feu 25.50 53 eP P 23 22 05.1 +2.3
CDF eS S 23 26 28.3 -1.5
BFO Black Forest 26.16 54 P P 23 22 09.7 +1.0
TUE Stuetta 26.47 58 P P 23 22 12.7 +1.0
TUE IAmb IAmb 23 22 22.1
comp=Z,17nm,1.1s
DAVOX Davos/Dischmat 26.88 58 P P 23 22 17.3 +1.8
comp=Z,2.5nm,0.7s,baz=253,slow=9.5,SNR=4.6
DAVOX LR LR 23 32 51.1
comp=Z,297nm,18.5s,baz=264,slow=36
comp=Z,2.5nm,0.7s
DAVA Damuels 26.96 57 eP P 23 22 18.1 +1.9
comp=Z,14nm,1.2s
ZCCA Zocca 27.38 63 P P 23 22 21.4 +1.7
ZCCA IAmb IAmb 23 22 38.1
comp=Z,17nm,0.8s
FETA Feichten 27.49 58 eP P 23 22 22.8 +1.9
comp=Z,6.6nm,0.9s
RETA Reutte 27.59 57 eP P 23 22 22.6 +1.0
comp=Z,3.5nm,0.8s
NRS Narsarsuaq 27.76 338 P P 23 22 24.1 +1.2
MOTA Moosalm 27.79 57 eP P 23 22 24.6 +1.0
comp=Z,5.1nm,0.9s
SQTA Sankt Quirin 27.84 57 eP P 23 22 25.9 +1.8
comp=Z,6.1nm,0.8s
BORG Borgarnes 27.89 2 LR LR 23 30 23.6
comp=Z,313nm,21.0s,baz=188,slow=30
CTI Castel Tesino 27.99 60 P P 23 22 26.1 +0.8
CTI IAmb IAmb 23 22 40.0
comp=Z,15nm,1.0s
WATA Walderalm 28.11 57 eP P 23 22 27.9 +1.5
comp=Z,5.2nm,0.9s
WTTA Wattenberg 28.14 57 eP P 23 22 28.4 +1.7
comp=Z,5.2nm,1.0s
GRFO Grafenberg 28.33 52 P P 23 22 30.0 +1.8
GRFO IAmb IAmb 23 22 36.4
comp=Z,11nm,1.0s
GRA1 Grafenberg Arr 28.33 52 P P 23 22 29.5 +1.3
GRA1 IAmb IAmb 23 22 36.5
comp=Z,14nm,1.1s
MURB Monte Urbino 28.46 66 P P 23 22 30.4 +0.9
ABTA Abfaltersbach 28.66 58 iP P 23 22 32.2 +0.9
comp=Z,4.6nm,1.0s
IVI Ivigtut 28.67 336 iP P 23 22 39.9 +8.8
CLUD Cludinico 28.89 59 P P 23 22 33.6 +0.4
NRCA Norcia 28.89 67 P P 23 22 33.8 +0.4
TAM Tamanrasset 29.06 111 P P 23 22 34.0 -1.1
AQU L'Aquila 29.12 68 P P 23 22 36.7 +1.3
AQU IAmb IAmb 23 22 51.5
comp=Z,12nm,1.0s
NKC Novy Kostel 29.22 51 AMS AMS 23 34 20.0
comp=Z,200nm,15.8s
KBA Koelnbreinsper 29.27 58 eP P 23 22 38.0 +1.2
comp=Z,12nm,1.4s
PRED Cave del Predi 29.36 59 P P 23 22 38.7 +1.2
MYKA Terra Mystica 29.43 59 iP P 23 22 39.2 +1.1
comp=Z,6.2nm,1.0s
BIOA Bad Ischl, Aus 29.54 57 eP P 23 22 40.0 +0.9
comp=Z,11nm,1.2s
KHC Kasperske Hory 29.72 54 eP P 23 22 41.0 +0.4
KHC epP sP 23 22 45.8 +0.9
KHC AMS AMS 23 34 10.0
comp=Z,200nm,17.3s
GEC2 GERESS Array S 29.75 54 P P 23 22 42.4 +1.4
GERES GERESS Array B 29.75 54 P P 23 22 41.6 +0.7
comp=Z,0.8nm,0.7s,baz=269,slow=6.9,SNR=7.7
GERES LR LR 23 34 08.3
comp=Z,172nm,19.4s,baz=256,slow=35
comp=Z,0.8nm,0.7s
CLL Collm 29.82 49 eS S 23 27 45.0 +7.4
CLL LmV 23 33 00.0
comp=Z,400nm,18.0s
MOZS Mozjanca 29.95 60 eP P 23 22 42.3 -0.4
MOA Molln 29.98 57 eP P 23 22 44.0 +1.1
comp=Z,5.1nm,1.1s
OBKA Obir 30.04 59 eP P 23 22 43.6 +0.1
comp=Z,14nm,1.1s
VNDS Vrh nad Dolski 30.11 60 iP P 23 22 45.5 +1.4
CKRC Cesky Krumlov 30.15 55 eP P 23 22 45.2 +0.8
BRG Berggiesshubel 30.30 51 eP P 23 22 47.1 +1.5
BRG Amp 23 22 49.5
comp=Z,4.7nm,1.1s
BRG Amp 23 34 39.0
comp=E,0.3nm,17.7s
BRG Amp 23 34 52.0
comp=Z,0.4nm,16.8s
BRG Amp 23 34 57.0
comp=N,0.1nm,13.2s
SOKA Soboth 30.38 59 iP P 23 22 47.3 +0.7
comp=N,5.7nm,1.3s
VAE Valguarnera 30.43 77 LR LR 23 35 11.0
comp=N,178nm,18.0s,baz=334,slow=37
PRU Pruhonice 30.49 52 AMS AMS 23 34 20.0
comp=N,200nm,12.5s
PVCC Panska Ves 30.61 51 AMS AMS 23 34 50.0
comp=N,200nm,15.9s
GROS Grobnik 30.69 59 iP P 23 22 49.8 +0.5
CONA Conrad Observa 31.06 57 eP P 23 22 53.0 +0.5
comp=N,1.9nm,0.8s

CUC Castrocucco 31.12 72 IAmb IAmb 23 23 11.0
comp=Z,10nm,0.9s
RONA Rosalia, Austr 31.33 57 eP P 23 22 55.4 +0.5
comp=Z,4.5nm,1.4s
UPC Upice 31.51 52 AMS AMS 23 35 30.0
comp=Z,200nm,19.1s
KRUC Moravsky 31.54 55 eP P 23 22 57.4 +0.8
CHVC Chvalec 31.55 52 eP P 23 22 57.8 +1.0
CHVC ex x 23 23 04.6
CHVC AMS AMS 23 35 30.0
comp=Z,300nm,19.6s
OSTC Ostas 31.65 52 eP P 23 22 59.4 +1.8
OSTC AMS AMS 23 35 40.0
comp=Z,200nm,17.7s
DPC Dobruska-Polom 31.68 52 eP P 23 22 59.1 +1.2
DPC AMS AMS 23 38 30.0
comp=Z,200nm,12.4s
VRAC Vranov 31.70 54 ⇑P P 23 22 59.3 +1.2
VRAC Vranov 31.70 54 LR LR 23 35 52.1
comp=Z,102nm,18.1s,baz=264,slow=36
VRAC Vranov 31.70 54 eP P 23 22 58.8 +0.7
KRLC Kraliky 31.93 53 eP P 23 23 01.5 +1.4
KRLC AMS AMS 23 35 10.0
comp=Z,200nm,14.8s
TIP Timpagrande 31.96 73 IAmb IAmb 23 23 15.7
comp=Z,9.5nm,0.7s
DY2G Dye2 32.26 343 iP P 23 23 03.7 +0.7
DY2G IAmb IAmb 23 23 04.9
comp=Z,11nm,0.7s
MORC Moravsky Berou 32.38 53 P P 23 23 06.3 +2.3
MORC Moravsky Berou 32.38 53 eP P 23 23 10.1 +6.1
MAUC Maruska 32.51 54 eP P 23 23 06.2 +1.0
NC204 NORSAR Array S 32.65 31 P P 23 23 06.8 +0.5
NC602 NORSAR Array S 32.69 32 P P 23 23 07.6 +1.0
NB2 NORSAR Subarra 32.71 31 P P 23 23 08.3 +1.5
baz=240,slow=9.3
NB2 NORSAR Subarra 32.71 31 P P 23 23 08.3 +1.5
comp=Z,18nm,1.7s,baz=240,slow=9.3
NOA NORSAR Array B 32.71 31 P P 23 23 08.3 +1.5
comp=Z,1.3nm,0.7s,baz=239,slow=8.8,SNR=8.0
NOA LR LR 23 34 43.3
comp=Z,387nm,21.1s,baz=240,slow=33
comp=Z,1.3nm,0.7s
OKC Ostrava-Krasne 32.77 53 AMS AMS 23 38 50.0
comp=Z,200nm,15.1s
MORH Mrgy, Hungar 32.86 60 ⇑P P 23 23 09.3 +1.2
NC303 NORSAR Array S 32.87 31 P P 23 23 09.7 +1.6
NC303 IAmb IAmb 23 23 21.2
comp=Z,12nm,1.2s
HFS Hagfors 33.34 34 LR LR 23 36 22.4
comp=Z,372nm,18.6s,baz=248,slow=36
ICESG Greenland Ices 33.34 350 iP P 23 23 12.9 +0.3
ICESG IAmb IAmb 23 23 15.5
comp=Z,9.9nm,0.8s
FRGS Fruska Gora 33.68 62 ⇑P P 23 23 27.3 +12
SFJD Kangerlussuaq 33.73 341 LR LR 23 33 50.3
comp=Z,496nm,19.7s,baz=161,slow=31
DIVS Divibare 33.85 64 P P 23 23 18.7 +1.7
OJC Ojcow 33.88 53 eP P 23 23 18.2 +1.2
OJC Ojcow 33.88 53 IAmb IAmb 23 23 19.2
comp=Z,7.9nm,0.8s
F64A Sherman 34.09 299 P P 23 23 18.5 -0.4
F64A IAmb IAmb 23 23 32.0
comp=Z,12nm,1.1s
SCHQ Schefferville 34.13 315 P P 23 23 19.6 +0.4
comp=Z,3.6nm,0.8s,baz=93,slow=8.0,SNR=7.2
SCHQ LR LR 23 34 57.0
comp=Z,241nm,19.8s,baz=108,slow=32
comp=Z,3.6nm,0.8s
SCHQ Schefferville 34.13 315 P P 23 23 19.8 +0.6
D62A Allapoint, All 34.57 301 P P 23 23 23.0 -0.1
D62A IAmb IAmb 23 23 36.2
comp=Z,8.6nm,0.8s
KBN Korca 34.80 70 P P 23 23 26.9 +1.7
DBIC Dimbokro 34.81 145 LR LR 23 36 56.7
comp=Z,248nm,18.9s,baz=332,slow=35
BZS Buzias 34.94 61 ⇑P P 23 23 28.1 +1.8
SIRR Siria 34.95 60 ⇓P P 23 23 27.8 +1.4
WVL Waterville 35.06 297 P P 23 23 26.9 -0.5
WVL IAmb IAmb 23 23 29.2
comp=Z,24nm,1.5s
JMIC Jan Mayen 35.08 9 LR LR 23 35 16.3
comp=Z,190nm,18.0s,baz=231,slow=32
F62A Pittston Farm, 35.22 299 P P 23 23 30.3 +1.6
F62A IAmb IAmb 23 23 43.7
comp=Z,8.9nm,1.1s
LMQ La Malbaie 35.44 302 P P 23 23 31.6 +1.0
LMQ IAmb IAmb 23 23 39.3
comp=Z,13nm,1.1s
HERR Herculane 35.54 62 ⇑P P 23 23 43.3 +12
ILULI Ilulissat 35.56 344 P P 23 23 31.5 +0.1
AGG Agios Georgios 36.25 72 P P 23 23 39.0 +1.3
SUW Suwalki 36.43 47 eP P 23 23 39.5 +0.6
SUW Suwalki 36.43 47 P P 23 23 40.0 +1.0
SUW Suwalki 36.43 47 eP P 23 23 40.2 +1.3
LOT Lotru 36.46 61 ⇑P P 23 23 40.2 +0.8
SUMG Summit 36.46 353 P P 23 23 40.5 +1.0
SUMG IAmb IAmb 23 23 41.7
comp=Z,14nm,0.8s
SUMG Summit 36.46 353 iP P 23 23 40.0 +0.5
SUMG IAmb IAmb 23 23 41.7
comp=Z,10nm,0.7s
HRV Adam Dziewonsk 36.64 294 P P 23 23 41.3 +0.4
baz=82
LBNH Lisbon 36.71 297 P P 23 23 42.0 +0.5
baz=85
MDB Medias 36.84 60 ⇑P P 23 23 44.1 +1.4
ARR Arges 37.07 61 ⇑P P 23 23 46.4 +1.7
PABE Paberze 37.11 44 eP P 23 23 46.3 +1.6
K62A Royalston 37.11 294 P P 23 23 47.3 +2.3
K62A IAmb IAmb 23 23 53.1
comp=Z,18nm,1.3s
J61A Chester 37.26 295 P P 23 23 47.2 +1.0
BUR08 Bucovina Ar. S 37.34 58 P P 23 23 48.6 +1.7
BURAR Bucovina Array 37.35 58 ⇑P P 23 23 48.3 +1.3
BURAR Bucovina Array 37.35 58 P P 23 23 47.7 +0.7
VOIR 37.36 61 ⇑P P 23 23 48.6 +1.5
DBG Daneborg 37.50 2 iP P 23 23 48.4 +0.6
DBG IAmb IAmb 23 23 50.9
comp=Z,3.4nm,0.8s
DOPR Dopca 37.55 60 ⇑P P 23 23 49.8 +1.1
FAUS Fauske 37.65 24 eP P 23 23 51.2 +2.1
FAUS IAmb IAmb 23 24 04.7
comp=Z,13nm,1.3s
MTSE Matsula 37.69 39 eP P 23 23 50.5 +1.0
OZUR 37.82 60 ⇑P P 23 23 52.3 +1.4
FRB Frobisher Bay 37.84 329 P P 23 23 51.2 +0.4
comp=Z,3.7nm,0.7s,baz=84,slow=11,SNR=2.0
FRB LR LR 23 35 34.1
comp=Z,129nm,18.3s,baz=149,slow=30
comp=Z,3.7nm,0.7s
MLR Muntele Rosu 37.98 61 ⇑P P 23 23 53.3 +0.8
MLR Muntele Rosu 37.98 61 LR LR 23 40 43.5
comp=Z,206nm,18.3s,baz=280,slow=38
MLR Muntele Rosu 37.98 61 P P 23 23 54.0 +1.6
BIZ Bicaz 37.98 59 ⇑P P 23 23 53.9 +1.6
COVR Voineasa-Covas 38.13 60 ⇓P P 23 23 55.3 +1.8
PLOR Plostina 38.44 60 ⇑P P 23 23 57.1 +0.9
VRI Vrincioaia 38.49 60 ⇑P P 23 23 53.9 -2.7
LONY Lake Ozonia 38.56 298 P P 23 23 57.5 +0.3
baz=84
NACGM Naroch 38.63 46⇓eP P 23 23 59.4 +1.8
baz=263
IAS Iasi 38.96 58 ⇑P P 23 24 01.2 +0.7
VSU Vasula 39.13 40 eP P 23 24 02.8 +1.1
MNK Minsk 39.22 46 iP P 23 24 01.5 -1.0
MNK iP P 23 24 01.5 -1.0
comp=N,12nm,0.9s
MNK iP P 23 24 01.5 -1.0
comp=Z,24nm,0.9s,baz=265
MNK iPP PP 23 25 13.7 -19
MNK iPPP PPP 23 25 48.3
MNK iS S 23 30 02.9 +0.5
MNK iSS SnSn 23 32 45.7 -10
MNK iLQ LQ 23 36 38.8
MNK iLR LR 23 39 50.9
MNK iLRM MLR 23 41 03.4
comp=Z,5μm,17.2s
MNK iLRM MLR 23 42 02.8
comp=E,50nm,17.6s
MNK iLRM MLR 23 42 31.7
comp=N,193nm,17.4s
SORM Soroca 39.44 57 ⇑P P 23 24 03.1 -1.3
FINES FINESS Array B 39.47 35 P P 23 24 04.9 +0.4
comp=N,1.5nm,0.8s,baz=246,slow=9.4,SNR=12

FINES LR LR 23 39 55.1
comp=N,222nm,19.1s,baz=258,slow=35
comp=N,1.5nm,0.8s
CFR Carcaliu 39.55 61 ⇑P P 23 24 04.6 -0.8
AKASG Malin Array Be 39.91 53 P P 23 24 08.7 +0.3
comp=N,3.3nm,0.6s,baz=272,slow=7.9,SNR=18
AKASG LR LR 23 40 22.3
comp=N,108nm,19.8s,baz=288,slow=36
comp=N,3.3nm,0.6s
DAG Danmarks Havn 40.01 2 iP P 23 24 10.0 +1.2
DAG IAmb IAmb 23 24 10.9
comp=Z,4.0nm,0.6s
JETT Jettan, Norway 40.41 22 eP P 23 24 14.2 +1.9
JETT IAmb IAmb 23 24 15.4
comp=Z,19nm,0.8s
KTK1 Kautokeino 41.04 24 eP P 23 24 19.0 +1.6
KTK1 IAmb IAmb 23 24 19.5
comp=Z,92nm,2.2s
MDP Montagnes des 41.14 227 P P 23 24 18.4 -0.5
comp=Z,7.8nm,0.8s,baz=10.0,slow=9.6,SNR=4.1
MDP LR LR 23 36 44.2
comp=Z,105nm,20.4s,baz=52,slow=30
comp=Z,7.8nm,0.8s
SJG San Juan 41.45 255 P P 23 24 21.5 +0.1
comp=Z,10nm,0.5s,baz=72,slow=5.7,SNR=4.4
SJG LR LR 23 37 19.9
comp=Z,64nm,19.4s,baz=274,slow=30
comp=Z,10nm,0.5s
SADO Sadowa 41.76 299 LR LR 23 40 22.4
comp=Z,132nm,18.9s,baz=108,slow=34
HAMF Hammerfest 41.92 22 eP P 23 24 26.4 +1.7
HAMF IAmb IAmb 23 24 29.0
comp=Z,18nm,0.9s
ARA0 ARCESS Array S 41.99 24 eP P 23 24 26.4 +1.2
ARA0 IAmb IAmb 23 24 26.6
comp=Z,13nm,0.6s
ARCES ARCESS Array B 41.99 24 P P 23 24 26.2 +1.0
comp=Z,8.6nm,0.5s,baz=240,slow=9.1,SNR=118
ARCES LR LR 23 40 21.7
comp=Z,214nm,18.1s,baz=232,slow=34
comp=Z,8.6nm,0.5s
ARCES ARCESS Array B 41.99 24 P P 23 24 26.2 +1.0
ARCES IAmb IAmb 23 24 26.7
comp=Z,9.5nm,0.7s
BJO1 Bjornoya 42.78 16 eP P 23 24 34.6 +3.0
RCBR Riachuelo 43.98 197 LR LR 23 38 14.0
comp=Z,185nm,21.9s,baz=136,slow=30
KBS Kingsbay 44.56 9 P P 23 24 48.1 +2.3
KBS IAmb IAmb 23 24 50.2
comp=Z,18nm,1.1s
KBS Kingsbay 44.56 9 iP P 23 24 48.6 +2.7
KBS Kingsbay 44.56 9 eP P 23 24 49.7 +3.8
KBS IAmb IAmb 23 24 49.9
comp=Z,17nm,1.1s
BR131 Keskin Array S 44.61 68 P P 23 24 48.3 +1.3
BR131 IAmb IAmb 23 25 03.9
comp=Z,7.3nm,0.9s
BRTR Keskin Array B 44.61 68 P P 23 24 48.0 +1.0
comp=Z,2.6nm,0.8s,baz=282,slow=5.3,SNR=16
BRTR LR LR 23 44 24.8
comp=Z,147nm,19.0s,baz=302,slow=37
comp=Z,2.6nm,0.8s
BRTR Keskin Array B 44.61 68 P P 23 24 47.8 +0.8
SPITS Spitsbergen Ar 44.65 11 P P 23 24 49.0 +2.3
comp=Z,3.3nm,0.7s,baz=174,slow=15,SNR=4.0
SPITS LR LR 23 39 27.8
comp=Z,345nm,18.6s,baz=202,slow=31
comp=Z,3.3nm,0.7s
P52A Corning 45.05 292 P P 23 24 50.1 -0.2
baz=74
HOPEN Hopen 45.16 14 eP P 23 24 52.9 +2.2
H10N2 ASCENSION HYDR 45.41 167 T T 00 13 17.8
baz=348,slow=75,SNR=60
H10N3 ASCENSION HYDR 45.42 167 T T 00 13 18.6
baz=348,slow=75,SNR=49
H10N1 ASCENSION HYDR 45.42 167 T T 00 13 16.8
baz=348,slow=75,SNR=80
KLMR Klimovskoe 45.83 38 eP P 23 24 55.7 -0.4
KLMR AMP 23 24 58.1
comp=Z,8.0nm,1.1s
H10S3 ASCENSION HYDR 46.47 167 T T 00 14 21.3
baz=232,slow=74,SNR=23
H10S2 ASCENSION HYDR 46.48 167 T T 00 14 15.8
baz=348,slow=74,SNR=8.1
BNN Bunyan 46.50 69 P P 23 25 01.7 -0.2
TOKA Tokat 46.54 66 P P 23 25 03.0 +0.9
TOKA IAmb IAmb 23 25 18.0
comp=Z,14nm,1.2s
O48B Farmland 47.10 294 P P 23 25 07.0 +0.5
baz=73
TKL Tuckaleechee C 47.51 287 LR LR 23 44 16.8
comp=Z,44nm,18.3s,baz=82,slow=35
GOGA Godfrey 48.08 284 P P 23 25 14.6 +0.5
baz=68
BLO Bloomington 48.43 293 P P 23 25 17.2 +0.4
EUNU Eureka 49.18 348 P P 23 25 23.8 +1.7
EUNU IAmb IAmb 23 25 24.6
comp=Z,9.3nm,1.2s
FCC Fort Churchill 49.26 320 P P 23 25 24.3 +1.5
G40A Rib Lake 49.33 302 P P 23 25 24.3 +0.7
G40A IAmb IAmb 23 25 25.4
comp=Z,5.8nm,1.0s
152A Waverly Hall 49.33 284 IAmb IAmb 23 25 26.3
comp=Z,4.8nm,0.8s
EYMN Ely 49.55 305 P P 23 25 25.8 +0.6
EYMN IAmb IAmb 23 25 26.6
comp=Z,6.3nm,0.9s
EYMN Ely 49.55 305 P P 23 25 25.3 +0.1
baz=77
RES Resolute Bay 49.73 341 P P 23 25 27.1 +0.9
comp=Z,4.7nm,0.9s,baz=126,slow=8.7,SNR=2.0
RES LR LR 23 44 33.4
comp=Z,91nm,18.9s,baz=150,slow=34
comp=Z,4.7nm,0.9s
RES Resolute Bay 49.73 341 IAmb IAmb 23 25 41.0
comp=Z,6.4nm,0.9s
KBZ Khabaz 50.18 60 P P 23 25 32.4 +2.3
comp=Z,7.6nm,0.9s,baz=317,slow=3.9,SNR=12
KBZ LR LR 23 48 49.1
comp=Z,41nm,19.0s,baz=295,slow=38
comp=Z,7.6nm,0.9s
SDV Santo Domingo 50.57 249 LR LR 23 43 49.6
comp=Z,132nm,20.4s,baz=10.0,slow=32
KIRV Kirov 50.97 40 LR LR 23 47 40.5
comp=Z,430nm,18.3s,baz=281,slow=37
PLAL Pickwick Lake 51.04 288 P P 23 25 37.8 +1.1
PLAL IAmb IAmb 23 25 57.3
comp=Z,8.6nm,1.1s
BELG Belogornoye 51.11 48 LR LR 23 48 10.3
comp=Z,394nm,18.0s,baz=321,slow=37
ULM Lac du Bonnet 51.79 309 LR LR 23 45 40.3
comp=Z,241nm,19.6s,baz=92,slow=34
OXF Oxford 52.23 288 P P 23 25 46.0 +0.3
baz=67
AGMN Agassiz Nation 52.29 307 P P 23 25 46.1 +0.2
baz=74
P40A Paris 52.36 295 IAmb IAmb 23 26 00.1
comp=Z,6.2nm,0.9s
S39A Bolivar 53.96 293 IAmb IAmb 23 25 59.1
comp=Z,4.7nm,0.7s
W41B Gary Mavity, V 54.12 290 IAmb IAmb 23 26 05.8
comp=Z,8.2nm,1.3s
W41B Gary Mavity, V 54.12 290 P P 23 25 59.3 -0.2
baz=67
ECSD EROS Data Cent 54.17 301 P P 23 26 00.1 +0.3
ECSD EROS Data Cent 54.17 301 P P 23 25 59.8 0.0
baz=71
ZARC Zaragoza, Cauc 54.64 251 P P 23 26 02.9 -0.6
ZARC IAmb IAmb 23 26 05.1
comp=Z,8.7nm,1.1s
W39A Magazine 55.27 291 P P 23 26 07.9 +0.1
baz=66
MIAR Mount Ida 55.38 290 P P 23 26 08.6 0.0
baz=66
ROSC El Rosal 55.97 248 P P 23 26 13.0 -0.6
comp=Z,10nm,0.8s,baz=4.8,slow=17,SNR=4.0
ROSC LR LR 23 46 36.1
comp=Z,172nm,21.5s,baz=26,slow=32
comp=Z,10nm,0.8s
ARU Arti 56.26 41 LR LR 23 50 48.3
comp=Z,262nm,18.2s,baz=292,slow=36
ARU Arti 56.26 41 P P 23 26 15.4 +0.8
ARU IAmb IAmb 23 26 16.4
comp=Z,7.5nm,0.8s
BDFB Brasilia 57.00 208 P P 23 26 20.2 -0.2
comp=Z,1.4nm,0.4s,baz=36,slow=17,SNR=3.3
BDFB LR LR 23 47 23.4
comp=Z,134nm,20.9s,baz=292,slow=32

comp=Z,1.4nm,0.4s
BDFB Brasilia 57.00 208 IAmb IAmb 23 26 35.1
comp=Z,10nm,1.3s
DGMT Dagmar 57.51 309 P **P** **23 26 23.9 +0.2**
baz=69
AKTO Aktyubinsk 57.90 48 LR LR 23 51 58.4
comp=Z,124nm,18.4s,baz=311,slow=37
YKA Yellowknife Ar 58.28 327 P **P** **23 26 28.2 -0.5**
comp=Z,1.0nm,0.6s,baz=72,slow=7.3,SNR=11
YKA LR LR 23 48 00.7
comp=Z,89nm,18.6s,baz=120,slow=32
comp=Z,1.0nm,0.6s
SAML Samuel 58.61 227 P **P** **23 26 30.7 -1.0**
A36M Sachs Harbour 58.67 339 P **P** **23 26 32.0 +0.6**
baz=67
WMOK Wichita Mounta 59.19 292 P **P** **23 26 35.4 -0.2**
baz=64
C36M Paulatuk 59.37 336 P **P** **23 26 36.3 +0.1**
baz=66
EGMT Eagleton 61.12 310 P **P** **23 26 48.8 0.0**
baz=66
TULM Tulcn-Chalpat 61.29 247 P **P** **23 26 51.7 +0.9**
N23A Red Feather La 61.64 301 P **P** **23 26 52.9 +0.3**
N23A IAmb IAmb 23 26 54.7
comp=Z,8.7nm,1.0s
N23A Red Feather La 61.64 301 P **P** **23 26 52.8 +0.3**
baz=64
JCT Junction City 61.88 288 P **P** **23 26 54.5 +0.4**
baz=62
ISCO Idaho Springs 61.89 300 P **P** **23 26 54.6 +0.3**
baz=64
T25A Trinidad 62.22 297 P **P** **23 26 56.8 +0.3**
baz=63
SDCO Great Sand Dun 62.73 298 P **P** **23 27 00.2 +0.3**
baz=63
MBAR Mbarara 62.83 113 LR LR 23 53 54.9
comp=Z,67nm,18.0s,baz=274,slow=36
INK Inuvik 62.89 337 P **P** **23 27 00.6 +0.5**
baz=58
GEYT Alibeck 63.03 61 P **P** **23 27 02.8 +1.1**
comp=Z,3.7nm,0.6s,baz=262,slow=6.1,SNR=8.0
GEYT LR LR 23 58 57.9
comp=Z,40nm,18.1s,baz=346,slow=40
comp=Z,3.7nm,0.6s
GEYT Alibeck 63.03 61 IAmb IAmb 23 27 17.8
comp=Z,7.2nm,1.0s
SIV San Ignacio 63.21 221 LR LR 23 50 24.2
comp=Z,132nm,21.6s,baz=104,slow=32
PDAR Pinedale Array 63.24 305 P **P** **23 27 02.8 -0.5**
comp=Z,1.2nm,0.7s,baz=77,slow=6.7,SNR=9.6
PDAR LR LR 23 53 45.1
comp=Z,145nm,18.0s,baz=70,slow=35
comp=Z,1.2nm,0.7s
PDAR Pinedale Array 63.24 305 P **P** **23 27 02.6 -0.7**
BOZ Bozeman (W) 63.32 308 P **P** **23 27 03.0 -0.7**
BOZ Bozeman (W) 63.32 308 P **P** **23 27 04.0 +0.4**
baz=64
O20A White River Ci 63.55 302 P **P** **23 27 06.2 +1.0**
baz=63
S22A 4UR Ranch, Cre 63.66 299 P **P** **23 27 07.0 +0.9**
baz=62
BVAR Borovoye Array 63.89 42 LR LR 23 55 40.8
comp=Z,216nm,18.4s,baz=184,slow=37
MSO Missoula 64.20 310 P **P** **23 27 10.2 +0.9**
baz=63
ANMO Albuquerque 64.71 296 P **P** **23 27 13.7 +0.8**
baz=61
EPYK Eagle Plains 65.00 336 P **P** **23 27 15.3 +1.2**
EPYK Eagle Plains 65.00 336 P **P** **23 27 15.0 +0.9**
baz=55
MVCO Mesa Verde 65.08 299 P **P** **23 27 16.4 +0.9**
baz=62
C27K Jago River 65.09 340 P **P** **23 27 15.6 +1.0**
baz=50
HWUT Hardware Ranch 65.10 304 IAmb IAmb 23 27 30.2
comp=Z,6.8nm,1.1s
MMPY Sheldon Lake, 65.14 331 P **P** **23 27 16.6 +1.5**
baz=58
P18A Preston Nutter 65.15 302 P **P** **23 27 16.5 +0.6**
P18A IAmb IAmb 23 27 41.2
comp=Z,6.3nm,1.0s
TX31 Lajitas Ar. Si 65.37 289 P **P** **23 27 17.5 +0.2**
TX32 Lajitas Array 65.37 289 P **P** **23 27 17.0 -0.2**
TX32 IAmb IAmb 23 27 18.4
comp=Z,3.3nm,0.8s
TXAR Lajitas Array 65.37 289 P **P** **23 27 17.5 +0.3**
comp=Z,2.8nm,0.8s,baz=74,slow=6.9,SNR=30
comp=Z,2.8nm,0.8s
NEW Newport 65.44 313 LR LR 23 53 36.5
comp=Z,162nm,18.1s,baz=44,slow=34
NEW Newport 65.44 313 P **P** **23 27 16.8 -0.5**
NEW Newport 65.44 313 P **P** **23 27 17.1 -0.1**
baz=62,SNR=5.0
MNTX Cornudas Mount 65.49 292 P **P** **23 27 17.9 0.0**
baz=60
P17A Butcher Ranch, 65.56 302 P **P** **23 27 18.1 -0.2**
P17A IAmb IAmb 23 27 39.7
comp=Z,3.0nm,0.7s
TMUT Trail Mountain 65.96 302 P **P** **23 27 21.7 +0.6**
D25K Kavik River 66.00 341 P **P** **23 27 21.2 +0.7**
baz=48
HLID Hailey 66.02 307 P **P** **23 27 22.0 +0.7**
baz=61
I29M Ogilvie Camp, 66.12 335 P **P** **23 27 22.6 +1.2**
baz=53
NLU North Lily Min 66.23 303 P **P** **23 27 23.0 +0.3**
NLU IAmb IAmb 23 27 24.6
comp=Z,4.8nm,1.2s
PLID Pearl Lake 66.28 309 P **P** **23 27 23.1 +0.1**
PLID IAmb IAmb 23 27 38.8
comp=Z,5.2nm,1.1s
M31M Drury Creek, Y 66.58 331 P **P** **23 27 26.1 +1.7**
M31M IAmb IAmb 23 27 27.0
comp=Z,4.4nm,0.9s
M31M Drury Creek, Y 66.58 331 P **P** **23 27 25.7 +1.3**
baz=55
DUG Dugway, Tooele 66.61 303 P **P** **23 27 25.4 +0.4**
DUG IAmb IAmb 23 27 40.3
comp=Z,4.8nm,1.1s
DUG Dugway, Tooele 66.61 303 P **P** **23 27 25.8 +0.7**
baz=61
N32M Quiet Lake 66.67 330 P **P** **23 27 26.0 +1.0**
baz=56
C23K Itkillik River 66.71 342 P **P** **23 27 26.0 +1.0**
baz=44,SNR=7.6
D24K Happy Valley 66.75 341 P **P** **23 27 26.3 +1.0**
baz=46
BMAR Burnt Mountain 66.77 339 P **P** **23 27 26.6 +1.1**
DLBC Dease Lake 66.90 327 P **P** **23 27 27.4 +0.8**
baz=57
A21K Barrow 66.95 345 P **P** **23 27 27.8 +1.3**
A21K Barrow 66.95 345 P **P** **23 27 27.5 +1.0**
baz=40
W18A Petrified Fore 66.97 297 P **P** **23 27 27.9 +0.3**
baz=60
MSU Marysvale 67.00 302 P **P** **23 27 28.7 +0.9**
P33M Teslin, Yukon 67.10 329 P **P** **23 27 28.4 +0.6**
baz=55
ATAH Atahualpa 67.12 241 LR LR 23 55 56.8
comp=Z,134nm,18.5s,baz=339,slow=35
MTPU Mount Pierson 67.24 301 P **P** **23 27 29.8 +0.3**
M30M Minto, Yukon 67.27 332 P **P** **23 27 29.8 +1.0**
baz=53
DAWY Dawson 67.28 334 P **P** **23 27 29.4 +0.6**
DAWY IAmb IAmb 23 27 31.3
comp=Z,9.5nm,1.1s
DAWY Dawson 67.28 334 P **P** **23 27 30.1 +1.3**
baz=52
TOLK Toolik Lake Re 67.30 341 P **P** **23 27 30.3 +1.4**
TOLK IAmb IAmb 23 27 31.2
comp=Z,6.7nm,0.9s
TOLK Toolik Lake Re 67.30 341 P **P** **23 27 29.7 +0.8**
baz=45,SNR=6.5
LPAZ La Paz 67.34 226 P **P** **23 27 29.4 -1.0**
comp=Z,1.4nm,0.7s,baz=4.5,slow=7.8,SNR=6.6
LPAZ LR LR 23 52 58.6
comp=Z,125nm,21.8s,baz=26,slow=32
comp=Z,1.4nm,0.7s
D23K Nanushuk River 67.35 342 P **P** **23 27 30.3 +1.2**
baz=44,SNR=8.2
N31M Braeburn, Yuko 67.54 331 P **P** **23 27 31.5 +1.0**
baz=54
HRA Herat 67.66 63 P **P** **23 27 32.8 +0.9**
WHY Whitehorse 67.67 330 P **P** **23 27 32.3 +0.9**
WHY IAmb IAmb 23 27 33.5
comp=Z,7.6nm,1.1s
WHY Whitehorse 67.67 330 P **P** **23 27 32.4 +0.9**
baz=54
I26K Coal Creek Min 67.74 337 P **P** **23 27 32.7 +1.1**
I26K IAmb IAmb 23 27 34.0
comp=Z,6.8nm,0.8s
I26K Coal Creek Min 67.74 337 P **P** **23 27 32.8 +1.1**
baz=49
WUAZ Wupatki 67.94 298 IAmb IAmb 23 27 36.2
comp=Z,6.9nm,0.9s
WUAZ Wupatki 67.94 298 P **P** **23 27 35.2 +1.6**
baz=60
ELK Elko 67.94 305 P **P** **23 27 34.8 +1.1**
N30M Aishikik Lake 68.06 332 P **P** **23 27 35.1 +1.3**
baz=53
SZCU Shurtz Canyon 68.08 301 P **P** **23 27 35.3 +0.8**
SZCU IAmb IAmb 23 27 36.4
comp=Z,4.3nm,0.8s
O30N Mendenhall 68.09 331 P **P** **23 27 35.3 +1.4**
baz=53
PSUT Pine Spring 68.13 302 P **P** **23 27 35.4 +0.5**
PSUT IAmb IAmb 23 27 49.8
comp=Z,4.0nm,0.8s
TSUM Tsumeb 68.22 138 LR LR 23 55 09.2
comp=Z,118nm,20.2s,baz=332,slow=34
K27K Chicken 68.22 335 P **P** **23 27 36.6 +1.9**
baz=50
CCUT Cedar City 68.29 301 P **P** **23 27 36.5 +0.6**
CCUT IAmb IAmb 23 27 38.0
comp=Z,4.4nm,0.8s
J26L Joseph Creek 68.40 336 P **P** **23 27 36.8 +0.8**
J26L IAmb IAmb 23 27 37.5
comp=Z,5.5nm,1.2s
J26L Joseph Creek 68.40 336 P **P** **23 27 37.2 +1.2**
baz=48
COLD Coldfoot 68.48 340 P **P** **23 27 37.5 +1.3**
COLD IAmb IAmb 23 27 39.4
comp=Z,7.8nm,1.0s
COLD Coldfoot 68.48 340 P **P** **23 27 37.9 +1.6**
baz=44
X16A Lo Mia Camp, P 68.54 297 P **P** **23 27 38.3 +0.9**
X16A IAmb IAmb 23 27 40.5
comp=Z,3.9nm,0.9s
SKAG Skagway 68.57 329 P **P** **23 27 38.2 +1.3**
SKAG Skagway 68.57 329 P **P** **23 27 38.6 +1.7**
baz=53
HYT Haines Junctio 68.60 331 P **P** **23 27 38.8 +1.5**
baz=52
J08A Circle Bar Ran 68.69 309 P **P** **23 27 39.3 +1.2**
YUK4 Talbot Arm 68.72 332 P **P** **23 27 39.3 +1.3**
baz=52
L27K Beaver Creek, 68.77 334 P **P** **23 27 39.7 +1.5**
baz=50
G23K Bananza Creek 68.81 340 P **P** **23 27 40.3 +1.9**
baz=44
H24K Noodor Dome 68.82 339 P **P** **23 27 39.5 +1.0**
H24K Noodor Dome 68.82 339 P **P** **23 27 40.2 +1.8**
baz=46
P30M Million Dollar 68.82 330 P **P** **23 27 40.0 +1.4**
baz=52
SCRK Sand Creek 68.89 336 P **P** **23 27 40.2 +1.2**
SCRK IAmb IAmb 23 27 41.6
comp=Z,5.6nm,1.0s
SCRK Sand Creek 68.89 336 P **P** **23 27 40.3 +1.3**
baz=48
J25K Salcha River, 68.90 337 IAmb IAmb 23 27 41.3
comp=Z,4.4nm,0.8s
J25K Salcha River, 68.90 337 P **P** **23 27 40.4 +1.4**
baz=47
G22K Bettles 69.06 340 P **P** **23 27 41.6 +1.8**
baz=43
YUK3 Moose Creek 69.11 333 P **P** **23 27 42.0 +1.4**
baz=50
DOT Dot Lake 69.14 336 P **P** **23 27 41.8 +1.3**
DOT IAmb IAmb 23 27 43.0
comp=Z,6.1nm,0.9s
TUC Tucson 69.15 295 P **P** **23 27 42.5 +1.4**
baz=59
YUK8 Steele Glacier 69.17 332 P **P** **23 27 42.3 +1.3**
baz=50
POKR Poker Plat Res 69.19 338 P **P** **23 27 42.2 +1.5**
POKR IAmb IAmb 23 27 45.0
comp=Z,4.3nm,0.8s
POKR Poker Plat Res 69.19 338 P **P** **23 27 42.3 +1.5**
baz=46
M27K Edge Creek, AK 69.25 334 P **P** **23 27 42.6 +1.3**
M27K IAmb IAmb 23 27 44.0
comp=Z,6.0nm,1.1s
M27K Edge Creek, AK 69.25 334 P **P** **23 27 43.1 +1.8**
baz=49
ILAR Eielson Array 69.27 337 P **P** **23 27 41.2 0.0**
comp=Z,1.5nm,0.8s,baz=33,slow=4.9,SNR=16
ILAR LR LR 23 54 48.2
comp=Z,53nm,19.5s,baz=110,slow=33
comp=Z,1.5nm,0.8s
H23K Yukon River 69.31 339 IAmb IAmb 23 27 44.3
comp=Z,6.9nm,0.9s
H23K Yukon River 69.31 339 P **P** **23 27 42.7 +1.2**
baz=44,SNR=8.7
L26K Log Cabin Wild 69.31 335 P **P** **23 27 42.4 +0.9**
L26K Log Cabin Wild 69.31 335 P **P** **23 27 43.3 +1.7**
baz=48
RIDG Independent Ri 69.33 336 P **P** **23 27 43.1 +1.4**
RIDG IAmb IAmb 23 27 44.4
comp=Z,4.5nm,0.9s
RIDG Independent Ri 69.33 336 P **P** **23 27 42.9 +1.3**
baz=47
F21K Alatna River 69.35 341 P **P** **23 27 43.3 +1.6**
baz=41
BBB Bella Bella 69.45 320 LR LR 23 54 45.6
comp=Z,74nm,18.9s,baz=145,slow=33
KURK Kurchatov 69.46 41 P **P** **23 27 42.8 +0.1**
KURK IAmb IAmb 23 27 44.4
comp=Z,6.8nm,0.8s
KURBB Kurchatov Arra 69.46 42 LR LR 23 59 14.4
comp=Z,250nm,18.4s,baz=293,slow=37
PRN Pahroc Range 69.52 302 P **P** **23 27 44.5 +1.0**
PRN IAmb IAmb 23 27 45.6
comp=Z,7.0nm,1.2s
NNA Nana 69.53 236 LR LR 23 53 28.0
comp=Z,58nm,21.7s,baz=20,slow=32
HDA Harding Lake 69.54 337 P **P** **23 27 44.1 +1.2**
baz=46
MDM Murphy Dome 69.55 338 P **P** **23 27 44.1 +1.2**
MDM IAmb IAmb 23 27 45.3
comp=Z,6.8nm,1.2s
K24K Donnelly Dome 69.59 336 P **P** **23 27 44.5 +1.3**
baz=47
CCB Bear Creek Bu 69.64 338 IAmb IAmb 23 27 45.5
comp=Z,5.7nm,1.0s
I23K Minto, Yukon-K 69.75 338 P **P** **23 27 45.2 +1.1**
I23K IAmb IAmb 23 27 46.8
comp=Z,6.8nm,1.0s
I23K Minto, Yukon-K 69.75 338 P **P** **23 27 44.5 +0.4**
baz=44,SNR=5.7
H22K Ishtalitna Cre 69.78 340 P **P** **23 27 45.6 +1.2**
baz=43
WRH Wood River Hil 69.85 338 P **P** **23 27 45.5 +0.7**
WRH IAmb IAmb 23 27 47.0
comp=Z,7.2nm,0.9s
S11A Rachel 69.87 302 P **P** **23 27 45.8 +0.2**
S11A IAmb IAmb 23 27 47.6
comp=Z,8.1nm,1.0s
G21K Allakaket 69.89 341 P **P** **23 27 46.1 +1.0**
baz=41
CTG Chitna Glacier 69.96 333 P **P** **23 27 46.5 +0.8**
baz=49
CRAG Craig 69.99 325 P **P** **23 27 46.7 +0.9**
baz=54
TIXI Tiksi 70.02 9 P **P** **23 27 46.6 +1.0**
NEA2 Nenana 70.06 338 P **P** **23 27 47.2 +1.1**
NEA2 IAmb IAmb 23 27 48.2
comp=Z,9.6nm,1.0s
NEA2 Nenana 70.06 338 P **P** **23 27 46.5 +0.4**
baz=44,SNR=9.8
SHPR Sheep Range 70.06 301 P **P** **23 27 47.1 +0.3**
PAX Paxson 70.06 336 P **P** **23 27 47.3 +1.1**
PAX IAmb IAmb 23 27 48.2
comp=Z,4.2nm,0.9s
PAX Paxson 70.06 336 P **P** **23 27 46.8 +0.5**
baz=47
PINM Pinnacle 70.12 331 P **P** **23 27 47.6 +1.0**
baz=50
MLY Manley 70.23 339 P **P** **23 27 48.4 +1.2**
MLY IAmb IAmb 23 27 49.6
comp=Z,7.3nm,1.0s
MLY Manley 70.23 339 P **P** **23 27 47.5 +0.3**
baz=43,SNR=6.7
H04A Detroit Lake 70.27 311 P **P** **23 27 49.1 +1.3**
H04A IAmb IAmb 23 27 50.3
comp=Z,7.0nm,1.0s
CPUP Villa Florida 70.33 212 P **P** **23 27 46.3 -1.8**
comp=Z,1.3nm,0.5s,baz=339,slow=9.0,SNR=4.2
CPUP LR LR 23 56 12.4
comp=Z,234nm,19.6s,baz=8.0,slow=34
comp=Z,1.3nm,0.5s
H21K Melozitna Rive 70.35 340 P **P** **23 27 48.8 +0.9**
H21K IAmb IAmb 23 27 50.5
comp=Z,4.6nm,0.9s
H21K Melozitna Rive 70.35 340 P **P** **23 27 48.1 +0.2**
baz=42,SNR=7.0
HARP HAARP 70.35 335 P **P** **23 27 48.8 +0.8**
baz=47
J05D Fort Rock, OR 70.44 310 P **P** **23 27 49.8 +0.8**
baz=58
I21K Tanana 70.48 339 P **P** **23 27 50.0 +1.4**
I21K IAmb IAmb 23 27 51.2
comp=Z,6.6nm,0.9s
I21K Tanana 70.48 339 P **P** **23 27 48.9 +0.2**
baz=42,SNR=7.5
TPNV Topopah Spring 70.58 302 P **P** **23 27 50.3 +0.3**
baz=58
DHY Denali Highway 70.61 336 P **P** **23 27 50.0 +0.3**
DHY Denali Highway 70.61 336 P **P** **23 27 50.5 +0.8**
baz=45
G03D McMinnville, O 70.62 312 P **P** **23 27 50.7 +0.8**
baz=57
GO01 Chusmiza 70.63 225 P **P** **23 27 49.6 -1.1**
MCK McKinley 70.64 337 P **P** **23 27 50.3 +0.6**
baz=44
H04D Lebanon 70.69 311 P **P** **23 27 50.8 +0.6**
baz=57
KVN Kaiserville 70.70 305 P **P** **23 27 50.9 +0.2**
KVN IAmb IAmb 23 27 51.8
comp=Z,5.2nm,0.8s
ZAA0 Zalesovo Array 70.73 36 P **P** **23 27 51.0 +0.7**
ZALV Zalesovo Beam 70.73 36 P **P** **23 27 51.2 +0.9**
comp=Z,8.1nm,0.8s,baz=304,slow=6.4,SNR=25
ZALV LR LR 00 00 10.7
comp=Z,127nm,18.3s,baz=326,slow=37
comp=Z,8.1nm,0.8s
214A Organ Pipe Nat 70.80 296 P **P** **23 27 51.7 +0.5**
baz=58
GAR Garm 70.83 55 P **P** **23 27 52.3 +0.9**
M24K Tolsona, Glenn 70.90 335 P **P** **23 27 52.4 +1.1**
baz=46
BPAW Bear Paw Mtn. 70.99 338 P **P** **23 27 52.3 +0.5**
baz=43
WAT6 Susitna Watana 71.08 336 P **P** **23 27 53.2 +0.6**
baz=45
BMRM Bremner River 71.15 334 P **P** **23 27 53.3 +0.4**
baz=47
NVAR Mina Array Bea 71.17 304 P **P** **23 27 53.5 -0.1**
comp=Z,0.5nm,0.6s,baz=81,slow=5.6,SNR=3.9
comp=Z,0.5nm,0.6s
WAT1 Susitna Watana 71.17 336 P **P** **23 27 53.4 +0.5**
baz=44
KLU Klutina 71.24 335 P **P** **23 27 54.4 +1.0**
baz=46
TRF Thorofare Moun 71.26 338 P **P** **23 27 54.6 +1.0**
baz=43
GWY Greenwater Val 71.27 301 P **P** **23 27 55.1 +1.0**
GWY IAmb IAmb 23 27 56.4
comp=Z,5.4nm,0.9s
IRM Iron Mountain 71.29 299 P **P** **23 27 55.6 +1.4**
baz=58
GRAC Grapevine Rang 71.31 302 P **P** **23 27 55.5 +1.3**
baz=58
GMRC Granite Mounta 71.32 300 P **P** **23 27 55.4 +1.0**
baz=58
LSZ Lusaka 71.47 127 LR LR 00 00 25.1
comp=Z,78nm,18.6s,baz=311,slow=37
QSM Queen of Sheba 71.52 301 P **P** **23 27 56.0 +0.5**
QSM IAmb IAmb 23 28 11.5
comp=Z,5.7nm,1.0s
AAK Ala-Archa 71.53 50 LR LR 00 00 39.2
comp=Z,105nm,19.0s,baz=328,slow=37
CHUM Lake Minchumin 71.55 339 P **P** **23 27 57.1 +2.0**
baz=42
M23K Glacier View 71.64 335 P **P** **23 27 57.2 +1.4**
baz=45
BC3 Big Chuckawall 71.78 299 P **P** **23 27 58.5 +1.3**
baz=57
CAST Castle Rocks 71.83 338 P **P** **23 27 56.8 -0.1**
baz=42
J20K Nowinta River 71.85 339 P **P** **23 27 57.9 +1.0**
J20K IAmb IAmb 23 27 59.3
comp=Z,14nm,1.4s
J20K Nowinta River 71.85 339 P **P** **23 27 58.5 +1.6**
baz=40
MPMC Manual Prospec 71.89 302 P **P** **23 27 59.4 +1.4**
baz=57
BELC Belle Mtn. Jos 71.97 299 P **P** **23 27 59.9 +1.5**
baz=57
GLI Glacier Island 72.08 334 P **P** **23 28 00.0 +1.6**
baz=45
KNK Knik Glacier 72.16 335 P **P** **23 28 00.3 +1.4**
KNK Knik Glacier 72.16 335 P **P** **23 28 00.6 +1.7**
baz=44
YBH Yreka Blue Hor 72.20 309 LR LR 23 58 33.9
comp=Z,92nm,18.5s,baz=288,slow=35
PMR Palmer 72.25 336 P **P** **23 28 00.3 +0.9**
PMR Palmer 72.25 336 P **P** **23 28 00.7 +1.3**
baz=44
K02D Willamette Mer 72.26 310 P **P** **23 28 00.7 +0.8**
baz=56
K20K Telida 72.46 339 P **P** **23 28 01.5 +0.9**
K20K IAmb IAmb 23 28 03.4
comp=Z,10nm,0.9s
K20K Telida 72.46 339 P **P** **23 28 00.4 -0.2**
baz=40,SNR=6.5
BBRC Big Bear Solar 72.47 300 P **P** **23 28 02.8 +1.3**
baz=57
PFO Pinyon Flats O 72.50 299 P **P** **23 28 01.1 -0.5**
PFO IAmb IAmb 23 28 04.0
comp=Z,7.3nm,1.2s
TPFO Pinon Flats 72.50 299 P **P** **23 28 02.1 +0.5**
baz=57
YUH Yuha Desert 72.65 298 P **P** **23 28 02.6 +0.3**
YUH IAmb IAmb 23 28 04.9
comp=Z,9.2nm,1.2s
SKT Skwentna 72.74 337 P **P** **23 28 03.4 +1.1**
SKT Skwentna 72.74 337 P **P** **23 28 02.5 +0.1**
baz=42,SNR=7.9
LVC Limon Verde 72.82 223 LR LR 23 58 01.5
comp=Z,87nm,18.9s,baz=354,slow=34
MID Middleton Isla 72.84 333 P **P** **23 28 04.2 +1.3**
Q23K Middleton Isla 72.85 333 P **P** **23 28 04.2 +1.3**
KSXB Camp Six Broad 72.87 310 P **P** **23 28 04.4 +0.8**
MONP2 Monument Peak 72.87 298 P **P** **23 28 04.8 +0.9**
baz=57
SUA Susitna One 72.87 336 P **P** **23 28 03.4 +0.2**
SUA IAmb IAmb 23 28 14.7
comp=Z,8.8nm,1.1s
SUA Susitna One 72.87 336 P **P** **23 28 04.4 +1.1**
baz=42
BFSC Mount Baldy Ra 73.00 300 P **P** **23 28 04.8 +0.3**
baz=57
L20K Farewell, AK 73.08 338 P **P** **23 28 04.5 +0.1**
baz=40,SNR=5.4
M20K Styx River 73.31 337 P **P** **23 28 06.9 +1.1**
baz=40
TTA Tatalina 73.35 339 P **P** **23 28 07.2 +1.2**
baz=38
L19K White Mountain 73.60 338 P **P** **23 28 08.0 +0.6**
baz=39
PB15 IPOC Station P 73.61 223 P **P** **23 28 08.0 -0.2**
M19K Big River Lodg 73.67 338 P **P** **23 28 08.4 +0.6**
baz=40
MK31 Makanchi Array 73.70 43 P **P** **23 28 09.1 +0.8**
MK31 IAmb IAmb 23 28 10.0
comp=Z,3.8nm,0.7s
MKAR Makanchi Array 73.70 43 P **P** **23 28 09.1 +0.8**
comp=Z,4.5nm,0.6s,baz=310,slow=5.4,SNR=40
MKAR LR LR 00 01 35.3
comp=Z,252nm,18.6s,baz=309,slow=37
comp=Z,4.5nm,0.6s
TARG Taragay, Kyrgy 74.07 50 P **P** **23 28 12.1 +1.0**
TARG IAmb IAmb 23 28 13.8
comp=Z,4.4nm,0.8s
KSH Kashi 74.20 52 P **P** **23 28 12.9 +1.4**
KSH sP PcP 23 28 23.9 -2.6
KSH PcP pwP 23 28 34.8 +16
KSH pmax pmax
comp=Z,13nm,0.9s
O20K Slope Mountain 74.52 336 P **P** **23 28 13.5 +0.6**

baz=40
N19K Bonanza Creek 74.55 337 P **P** 23 28 13.8 +0.7
N19K Bonanza Creek 74.55 337 P **P** 23 28 12.9 -0.2
baz=39,SNR=5.9
BILL Bilibino 75.06 356 P **P** 23 28 17.3 +1.5
BILL IAmb IAmb 23 28 19.1
comp=E,6.0nm,1.0s
O18K Koktuh Hills 75.53 337 P **P** 23 28 19.5 +0.9
baz=38
N16K Nishlik Lake 76.11 339 P **P** 23 28 23.5 +1.6
baz=36
O17K Koliganek Bris 76.17 338 P **P** 23 28 23.3 +1.1
baz=37
KDAK Kodiak Island 76.27 334 LR LR 23 59 50.8
comp=Z,102nm,18.0s,baz=90,slow=34
KDAK Kodiak Island 76.27 334 P **P** 23 28 24.1 +1.3
baz=40
GAMB Gambell 76.41 346 P **P** 23 28 25.1 +1.6
baz=26
Q18K Katmai Hardscr 76.41 336 P **P** 23 28 25.1 +1.3
baz=38
O16K Kokwok River B 76.62 338 P **P** 23 28 26.3 +1.5
baz=36
LBTB Lobatse 77.30 135 LR LR 00 00 18.6
comp=Z,92nm,21.1s,baz=318,slow=34
R17K Ugashik Creek 77.66 336 P **P** 23 28 31.1 +0.4
baz=37
WMQ Urumqi 78.54 43 eP **P** 23 28 37.8 +1.9
WMQ LR LR
comp=N,240nm,16.1s
WMQ LR LR
comp=E,290nm,17.7s
WMQ LR LR
comp=Z,190nm,17.9s
YAK Yakutsk 79.09 12 LR LR 00 00 57.8
comp=Z,60nm,20.3s,baz=96,slow=34
GO04 Tololo Observa 79.89 220 P **P** 23 28 44.9 +1.4
BOSA Boshof 79.92 137 LR LR 00 02 31.9
comp=Z,93nm,20.0s,baz=352,slow=34
SEY Seymchan 80.43 2 LR LR 00 03 13.1
comp=Z,30nm,19.4s,baz=71,slow=35
SUR Sutherland 80.66 143 LR LR 00 01 14.6
comp=Z,74nm,19.9s,baz=318,slow=33
MA2 Magadan 83.74 3 LR LR 00 03 15.4
comp=Z,42nm,20.8s,baz=102,slow=33
UNV Unalaska Valle 83.97 339 P **P** 23 29 06.4 +2.0
SONM Songino Array 84.69 31 P **P** 23 29 09.7 +1.2
comp=Z,6.1nm,0.9s,baz=304,slow=5.1,SNR=33
SONM LR LR 00 08 04.7
comp=Z,72nm,18.1s,baz=334,slow=36
comp=Z,6.1nm,0.9s
SONM Songino Array 84.69 31 P **P** 23 29 09.1 +0.6
ULN Ulaanbaatar 84.94 31 P **P** 23 29 10.6 +0.9
GTA Gaotai 88.10 40 eP **P** 23 29 25.9 +0.5
GTA pP pwP 23 29 34.6 +1.4
GTA sP PcP 23 29 38.3 +11
GTA pmax pmax
comp=Z,6.0nm,0.9s
PLCA Paso Flores 88.31 214 P **P** 23 29 24.9 -1.1
comp=Z,2.4nm,0.9s,baz=63,slow=2.3,SNR=4.1
PLCA LR LR 00 08 53.9
comp=Z,124nm,18.5s,baz=64,slow=36
comp=Z,2.4nm,0.9s
PLCA Paso Flores 88.31 214 IAmb IAmb 23 29 26.7
comp=Z,5.7nm,1.1s
SHEM Shemya Is, Ala 89.33 349 LR LR 00 09 51.7
comp=Z,33nm,19.1s,baz=12,slow=36
PETK Petropavlovsk- 90.31 359 LR LR 00 07 55.4
comp=Z,45nm,20.4s,baz=31,slow=34
KLR Kul'dur 91.54 16 LR LR 00 08 26.2
comp=Z,38nm,21.9s,baz=344,slow=34
HHC Hu-ho-hao-te 92.52 32 eP **P** 23 29 45.5 -0.4
HHC pmax pmax
comp=Z,27nm,0.8s
HHC pmax pmax
comp=Z,80nm,9.1s
HHC LR LR
comp=N,260nm,15.3s
HHC LR LR
comp=E,220nm,16.3s
HHC LR LR
comp=Z,230nm,15.5s
LZH Lanzhou 92.69 40 eP **P** 23 29 45.3 -1.6
LZH pP sP 23 29 51.6 +0.1
USRK Ussuriysk Ar. 96.35 17 LR LR 00 18 01.3
comp=Z,63nm,18.1s,baz=345,slow=38
ASAJ Asahikawa 98.41 10 LR LR 00 11 52.4
comp=Z,31nm,20.6s,baz=340,slow=34
QSPA South Pole Qui 126.82 180 PKP **PKPdf** 23 35 36.4 -0.9
comp=Z,0.9nm,0.8s,baz=212,slow=4.7,SNR=2.0
VNDA Vanda 139.24 182 PKP **PKPdf** 23 36 01.3 +1.1
comp=Z,0.5nm,0.8s,baz=135,slow=1.4,SNR=2.2
WRA Warramunga Arr 154.59 54 PKPbc **PKPbc** 23 36 34.9 -0.9
comp=Z,0.4nm,0.5s,baz=319,slow=2.2,SNR=7.8

SVSA 24 23:16:55.8±1.4,36.71N×24.12W,h10km,ML4.6(INMG),
Error ellipse: s-maj=10.0km s-min=6.9km az=84.0,
Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSMN	**Pico do Norte,**	**0.81**	**292**	eS	Sg	23 17 18.3	-3.8
PSMN				A	A	23 17 19.7	
	5μm,0.2s						
PSMA	**Santa Maria**	**0.86**	**290**	eS	Sg	23 17 19.1	-4.4
PSMA				A	A	23 17 20.6	
	5μm,0.2s						
BART	**Pico Bartolome**	**1.36**	**322**	eS	Sb	23 17 31.4	-7.4
BART				A	A	23 17 32.4	
	3μm,0.3s						
PPOV	**Povoa§£o**	**1.37**	**320**	eS	Sb	23 17 31.6	-7.6
PPOV				A	A	23 17 31.8	
	3μm,0.1s						
PNOR2	**Nordeste**	**1.39**	**324**	eS	Sb	23 17 31.6	-8.1
PNOR2				A	A	23 17 33.7	
	2μm,0.2s						
CMLA	**Cha da Macela**	**1.54**	**314**	eS	Sn	23 17 36.2	-7.2
CMLA				A	A	23 17 40.6	
	5μm,0.3s						
PCALD	**Caldeiras da R**	**1.54**	**315**	eS	Sn	23 17 35.8	-7.6
PCALD				A	A	23 17 37.5	
	846nm,0.2s						
GRON	**Grota Negra**	**1.55**	**314**	eS	Sn	23 17 34.2	-9.4
GRON				A	A	23 17 37.5	
	2μm,0.2s						
PRIG	**Ribeira Grande**	**1.57**	**315**	eS	Sn	23 17 36.8	-7.4
PDA	**Ponta Delgada**	**1.61**	**311**	eS	Sn	23 17 37.5	-7.6
PDA				A	A	23 17 38.6	
	974nm,0.2s						
PSET	**Sete Cidades**	**1.69**	**312**	eS	Sn	23 17 39.8	-7.4
PSET				A	A	23 17 40.4	
	5μm,0.4s						
PMOS	**Mosteiros**	**1.80**	**312**	eS	Sn	23 17 41.9	-7.8
PMOS				A	A	23 17 44.3	
	1μm,0.2s						
ADH	**Angra Heroismo**	**3.14**	**309**	eS	Sn	23 18 15.5	-7.4
ADH				A	A	23 18 17.7	
	394nm,0.3s						
PAGU	**Agualva, Azore**	**3.18**	**311**	eS	Sn	23 18 16.3	-7.6
PAGU				A	A	23 18 17.9	
	1μm,0.2s						
PID	**Ribeirinha**	**3.62**	**300**	eP	Pn	23 17 48.0	-3.9
PID				eS	Sn	23 18 26.6	-8.1
PID				A	A	23 18 29.3	
	384nm,0.4s						
PMAN	**Manadas**	**3.69**	**303**	eS	Sn	23 18 28.5	-7.9
PMAN				A	A	23 18 30.2	
	305nm,0.2s						
PPNO	**Prainha do Nor**	**3.73**	**299**	eP	Pn	23 17 49.4	-4.1
PPNO				eS	Sn	23 18 29.0	-8.6
PPNO				A	A	23 18 29.6	
	220nm,0.3s						
ROSA	**Rosais**	**3.83**	**303**	eP	Pn	23 17 51.1	-3.8
ROSA				eS	Sn	23 18 32.0	-8.0
ROSA				A	A	23 18 34.7	
	265nm,0.3s						
PICO	**Pico**	**3.86**	**299**	eS	Sn	23 18 32.6	-8.1
PCAN	**Candelaria**	**3.88**	**298**	eS	Sn	23 18 32.9	-8.4
PCAN				A	A	23 18 35.4	
	363nm,0.2s						
HOR	**Horta**	**4.01**	**298**	eS	Sn	23 18 36.0	-8.4
HOR				A	A	23 18 37.2	
	374nm,0.3s						
PFCBR	**Castelo Branco**	**4.07**	**298**	eP	Pn	23 17 53.6	-4.5
PFCBR				eS	Sn	23 18 37.1	-8.8
				A	A	23 18 39.0	
	69nm,0.2s						
CALA	**Caldeira**	**4.09**	**299**	eP	Pn	23 17 53.8	-4.6
CALA				eS	Sn	23 18 37.6	-8.8
CALA				A	A	23 18 39.3	
	865nm,0.3s						
PCED	**Cedros**	**4.11**	**299**	eS	Sn	23 18 38.2	-8.6
PCED				A	A	23 18 40.1	
	202nm,0.2s						

*IDC **24** 23:46:37.6±1.3,57.34N×33.44W,h0km,mb3.5/9,*
mbtmp3.6/11,ML2.5/2,MS3.4/15,Error ellipse:
s-maj=37.5km s-min=17.8km az=8.0
ISC 24 23:46:39.7±1.1,57.3N±0.2×33.46W±0.10,h16km,n24,
σ0s82/11,mb3.6/9,MS3.4/12,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	**9.52**	**33**	Pn	**Pn**	**23 48 57.0**	**+1.0**
	0.3nm,0.3s,baz=190,slow=9.5,SNR=1.4						
BORG				LR	LR	23 51 39.5	
	comp=Z,137nm,19.5s,baz=203,slow=32						
	6.7nm,0.7s						
EKA	**Eskdalemuir Ar**	**16.86**	**84**	LR	LR	23 55 44.9	
	comp=Z,95nm,19.9s,baz=282,slow=32						
FRB	**Frobisher Bay**	**18.26**	**305**	LR	LR	23 56 11.7	
	comp=Z,97nm,19.1s,baz=200,slow=32						
SCHQ	**Schefferville**	**18.69**	**277**	P	**Pn**	**23 50 58.1**	**+0.6**
	0.1nm,0.3s,baz=59,slow=12,SNR=2.1						
	2.9nm,0.9s						
NOA	**NORSAR Array B**	**22.86**	**62**	P	**P**	**23 51 41.3**	**-0.7**
	0.5nm,0.9s,baz=281,slow=9.9,SNR=2.6						
NOA				LR	LR	23 58 42.2	
	comp=Z,26nm,20.8s,baz=290,slow=32						
	0.5nm,0.9s						
HFS	**Hagfors**	**24.25**	**63**	P	**P**	**23 51 56.4**	**+0.8**
	1.3nm,0.8s,baz=262,slow=10.0,SNR=2.4						
	1.3nm,0.8s						
ESDC	**Sonseca Array**	**25.99**	**120**	P	**P**	**23 52 12.7**	**+1.1**
	0.6nm,0.8s,baz=311,slow=8.0,SNR=4.3						
ESDC				LR	LR	00 01 23.2	
	comp=Z,55nm,18.5s,baz=288,slow=34						
	0.6nm,0.8s						
ARCES	**ARCESS Array B**	**27.82**	**40**	LR	LR	00 02 19.1	
	comp=Z,30nm,19.4s,baz=324,slow=34						
DAVOX	**Davos/Dischmat**	**28.18**	**93**	LR	LR	00 02 51.1	
	comp=Z,69nm,18.3s,baz=264,slow=35						
VRAC	**Vranov**	**30.34**	**83**	LR	LR	00 04 38.9	
	comp=Z,66nm,19.2s,baz=306,slow=36						
SADO	**Sadowa**	**30.73**	**266**	LR	LR	00 04 07.7	
	comp=Z,96nm,18.3s,baz=214,slow=34						
AKASG	**Malin Array Be**	**36.25**	**73**	P	**P**	**23 53 40.8**	**-0.9**
	1.0nm,0.6s,baz=304,slow=8.4,SNR=3.3						
	1.0nm,0.6s						
MLR	**Muntele Rosu**	**37.70**	**82**	LR	LR	00 10 33.6	
	comp=Z,78nm,18.2s,baz=357,slow=38						
YKA	**Yellowknife Ar**	**38.52**	**313**	P	**P**	**23 54 00.1**	**-0.8**
	0.4nm,0.6s,baz=58,slow=9.4,SNR=4.2						
	0.4nm,0.6s						
TKL	**Tuckaleechee C**	**39.67**	**259**	LR	LR	00 11 01.7	
	comp=Z,63nm,18.9s,baz=312,slow=37						
BRTR	**Keskin Array B**	**45.77**	**82**	P	**P**	**23 55 00.0**	**-0.4**
	0.4nm,0.7s,baz=306,slow=6.5,SNR=1.9						
BRTR				LR	LR	00 13 34.9	
	comp=Z,36nm,21.7s,baz=316,slow=35						
	0.4nm,0.7s						
ILAR	**Eielson Array**	**48.25**	**328**	P	**P**	**23 55 19.3**	**+0.1**
	0.7nm,0.9s,baz=33,slow=5.6,SNR=4.7						
	0.7nm,0.9s						
NEW	**Newport**	**48.35**	**297**	LR	LR	00 13 21.4	
	comp=Z,85nm,18.4s,baz=286,slow=33						
PDAR	**Pinedale Array**	**48.39**	**287**	P	**P**	**23 55 20.9**	**0.0**
	0.4nm,0.5s,baz=75,slow=7.8,SNR=5.0						
PDAR				LR	LR	00 14 06.0	
	comp=Z,106nm,18.2s,baz=219,slow=34						
	0.4nm,0.5s						
ELK	**Elko**	**52.78**	**289**	LR	LR	00 17 56.5	
	comp=Z,114nm,18.3s,baz=188,slow=36						
H10N2	**ASCENSION HYDR**	**66.70**	**159**	T	T	01 09 48.4	
	baz=345						
H10N3	**ASCENSION HYDR**	**66.71**	**159**	T	T	01 09 35.4	
	baz=345						
H10N1	**ASCENSION HYDR**	**66.72**	**159**	T	T	01 09 39.1	
	baz=345						
SONM	**Songino Array**	**70.09**	**28**	P	**P**	**23 57 50.5**	**-0.3**
	0.9nm,0.8s,baz=324,slow=8.5,SNR=4.7						
	0.9nm,0.8s						

SVSA 24 23:48:41.4±1.1,36.70N×24.07W,h10km,ML3.5(INMG),
Error ellipse: s-maj=7.1km s-min=4.5km az=53.0,
Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSMN	**Pico do Norte,**	**0.85**	**291**	eP	Pg	23 48 54.3	-3.5
PSMN				eS	Sg	23 49 04.5	-4.4
PSMN				A	A	23 49 06.6	
	298nm,0.3s						
PSMA	**Santa Maria**	**0.90**	**289**	eP	Pg	23 48 54.8	-3.8
PSMA				eS	Sg	23 49 05.9	-4.4
PSMA				A	A	23 49 06.1	
	591nm,0.4s						
BART	**Pico Bartolome**	**1.38**	**321**	eP	Pn	23 49 01.7	-5.2
BART				eS	Sb	23 49 17.8	-7.4
BART				A	A	23 49 19.6	
	268nm,0.4s						
PPOV	**Povoa§£o**	**1.40**	**319**	eP	Pn	23 49 02.4	-4.6
PPOV				eS	Sn	23 49 18.0	-7.6
PPOV				A	A	23 49 20.1	
	227nm,0.2s						
CMLA	**Cha da Macela**	**1.57**	**313**	eP	Pn	23 49 04.8	-4.5
CMLA				eS	Sn	23 49 22.1	-7.6
CMLA				A	A	23 49 25.7	
	707nm,0.4s						
GRON	**Grota Negra**	**1.58**	**313**	eP	Pn	23 49 04.0	-5.5
GRON				eS	Sn	23 49 20.3	-10
GRON				A	A	23 49 22.0	
	158nm,0.2s						
PDA	**Ponta Delgada**	**1.64**	**310**	eP	Pn	23 49 06.0	-4.3
PDA				eS	Sn	23 49 24.0	-7.5
PDA				A	A	23 49 26.7	
	79nm,0.4s						
PSET	**Sete Cidades**	**1.73**	**311**	eP	Pn	23 49 06.9	-4.6
PSET				eS	Sn	23 49 26.1	-7.5
PSET				A	A	23 49 30.0	
	99nm,0.2s						
PMOS	**Mosteiros**	**1.83**	**311**	eS	Sn	23 49 31.6	-4.5
PMOS				A	A	23 49 33.4	
	353nm,0.1s						
ADH	**Angra Heroismo**	**3.18**	**309**	eS	Sn	23 50 01.4	-7.9
ADH				A	A	23 50 03.7	
	22nm,0.2s						
PAGU	**Agualva, Azore**	**3.21**	**311**	eP	Pn	23 49 28.0	-3.9
PAGU				eS	Sn	23 50 02.2	-8.1
PAGU				A	A	23 50 04.4	
	91nm,0.3s						
PMAN	**Manadas**	**3.72**	**302**	eP	Pn	23 49 34.6	-4.3
PMAN				eS	Sn	23 50 14.6	-8.2
PMAN				A	A	23 50 16.1	
	13nm,0.4s						
ROSA	**Rosais**	**3.87**	**303**	eP	Pn	23 49 37.2	-3.8
ROSA				eS	Sn	23 50 17.8	-8.7
ROSA				A	A	23 50 23.3	
	10nm,0.2s						
PICO	**Pico**	**3.89**	**299**	eP	Pn	23 49 37.5	-3.9
PICO				eS	Sn	23 50 18.9	-8.3
PICO				A	A	23 50 23.1	
	33nm,0.2s						
PCAN	**Candelaria**	**3.92**	**298**	eP	Pn	23 49 37.4	-4.3
PCAN				eS	Sn	23 50 19.7	-8.1
PCAN				A	A	23 50 21.4	
	16nm,0.3s						
CALA	**Caldeira**	**4.12**	**298**	eP	Pn	23 49 40.6	-3.9
CALA				eS	Sn	23 50 24.7	-8.2
CALA				A	A	23 50 27.9	
	57nm,0.3s						

*IDC **24** 23:56:17.5±1.2,4.38S×150.93E,h0km,mb3.8/2,*
mbtmp3.9/2,Error ellipse: s-maj=44.1km s-min=19.2km
az=167.0
*NEIC **24** 23:56:23.5±1.5,4.3S±0.2×150.96E±0.02,h32km±6km,*
mb4.4/26,Error ellipse: s-maj=24.9km s-min=1.5km
az=173.0
ISC 24 23:56:23.0±0.9,4.4S±0.2×150.94E±0.09,h35km,n35,
σ1s03/37,mb4.4/16,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.09**	**85**	Pn	**Pn**	**23 56 40.4**	**-1.4**
	380nm,0.3s,baz=240,slow=3.5,SNR=190						
KRVT				Sn	**Sn**	**23 56 57.4**	**+1.7**
	511nm,0.3s,baz=143,slow=19,SNR=8.0						
RABL	**Rabaul**	**1.24**	**80**		**Pn**	**23 56 42.9**	**-0.9**
RABL				Sg	**Sn**	**23 57 01.1**	**+1.7**
WB0	**Warramunga Arr**	**22.21**	**225**	P	**P**	**00 01 17.2**	**+0.6**
WR0	**Warramunga Arr**	**22.23**	**225**	P	**P**	**00 01 17.8**	**+1.0**
WB2	**Warramunga Arr**	**22.35**	**225**	P	**P**	**00 01 18.4**	**+0.3**
WRA	**Warramunga Arr**	**22.36**	**225**	P	**P**	**00 01 17.1**	**-1.2**
	1.1nm,0.6s,baz=52,slow=9.7,SNR=12						
	1.1nm,0.6s						
WRA	**Warramunga Arr**	**22.36**	**225**	P	**P**	**00 01 17.6**	**-0.6**
OUENC	**Ouen Island, N**	**23.62**	**141**	P	**P**	**00 01 31.2**	**+0.3**
KNRA	**Kununurra**	**24.51**	**241**	P	**P**	**00 01 42.2**	**+2.9**
KNRA				IAmb	IAmb	00 01 48.6	
	comp=Z,9.3nm,0.8s						
AS31	**Alice Springs**	**25.23**	**219**	P	**P**	**00 01 45.0**	**-0.8**
SOEI	**Soe**	**26.98**	**257**	P	**P**	**00 02 02.4**	**+0.4**
KNTN	**Kanton**	**37.30**	**89**	P	**P**	**00 03 30.2**	**-1.9**
HIZ	**Hauiti**	**40.33**	**151**	P	**P**	**00 03 57.9**	**+0.7**
BPAW	**Bear Paw Mtn.**	**80.62**	**22**	P	**P**	**00 08 31.4**	**-0.4**
BPAW				IAmb	IAmb	00 08 50.5	
	comp=Z,4.7nm,1.4s						
GLI	**Glacier Island**	**80.64**	**26**	P	**P**	**00 08 32.0**	**0.0**
IMAR	**Indian Mountai**	**80.64**	**20**	P	**P**	**00 08 33.1**	**+1.2**
H21K	**Melozitna Rive**	**80.78**	**20**	P	**P**	**00 08 32.5**	**-0.1**
H21K				IAmb	IAmb	00 09 13.6	
	comp=Z,4.4nm,1.4s						
RND	**Reindeer**	**81.09**	**23**	P	**P**	**00 08 34.3**	**-0.2**
RND				IAmb	IAmb	00 08 50.8	
	comp=Z,7.1nm,1.3s						
MLY	**Manley**	**81.19**	**21**	P	**P**	**00 08 35.9**	**+1.0**
MLY				IAmb	IAmb	00 08 36.2	
	comp=Z,7.0nm,0.6s						
WRH	**Wood River Hil**	**81.90**	**23**	P	**P**	**00 08 38.4**	**-0.2**
WRH				IAmb	IAmb	00 08 39.5	
	comp=Z,6.4nm,1.4s						
CCB	**Clear Creek Bu**	**82.09**	**22**	P	**P**	**00 08 39.0**	**-0.6**
TCOL	**CIGO, UAF Yank**	**82.18**	**22**	P	**P**	**00 08 40.3**	**+0.3**
ILAR	**Eielson Array**	**82.50**	**22**	P	**P**	**00 08 40.7**	**-1.0**
	comp=Z,1.5nm,0.6s,baz=247,slow=5.4,SNR=19						
	comp=Z,1.5nm,0.6s						
ILAR	**Eielson Array**	**82.50**	**22**	P	**P**	**00 08 41.5**	**-0.3**
H24K	**Noodor Dome**	**82.63**	**21**	P	**P**	**00 08 43.0**	**+0.6**
H24K				IAmb	IAmb	00 09 02.5	
	comp=Z,4.0nm,1.4s						
J25K	**Salcha River,**	**83.01**	**23**	P	**P**	**00 08 44.8**	**+0.4**
J25K				IAmb	IAmb	00 08 45.4	
	comp=Z,3.8nm,0.8s						
DOT	**Dot Lake**	**83.12**	**24**	P	**P**	**00 08 45.4**	**+0.4**
DOT				IAmb	IAmb	00 09 17.7	
	comp=Z,5.5nm,1.3s						
TOLK	**Toolik Lake Re**	**83.43**	**19**	P	**P**	**00 08 47.7**	**+1.2**
TOLK				IAmb	IAmb	00 09 19.0	
	comp=Z,2.4nm,1.2s						
M27K	**Edge Creek, AK**	**83.52**	**26**	P	**P**	**00 08 48.3**	**+1.1**
M27K				IAmb	IAmb	00 08 48.9	
	comp=Z,2.8nm,0.7s						
L27K	**Beaver Creek,**	**83.81**	**25**	P	**P**	**00 08 49.0**	**+0.4**
L27K				IAmb	IAmb	00 09 19.5	
	comp=Z,4.0nm,1.5s						
BCAR	**Beaver Creek A**	**83.83**	**25**	P	**P**	**00 08 49.4**	**+0.7**
I26K	**Coal Creek Min**	**84.16**	**23**	P	**P**	**00 08 50.1**	**-0.2**
I26K				IAmb	IAmb	00 09 33.6	
	comp=Z,4.5nm,1.4s						
BMAR	**Burnt Mountain**	**84.52**	**20**	P	**P**	**00 08 53.2**	**+1.1**
HYT	**Haines Junctio**	**84.95**	**28**	P	**P**	**00 08 55.4**	**+0.9**
HYT				IAmb	IAmb	00 09 15.4	
	comp=Z,4.9nm,1.3s						
TORD	**Torodi Ar. Bea**	**148.42**	**288**	PKPbc	**PKiKP**	**00 16 07.8**	**-0.7**
	comp=Z,0.7nm,0.8s,baz=98,slow=3.2,SNR=5.6						

*UCR **25** 00:07:24.7±1.5,9.95N×85.69W,h20km±5km,MW3.6*
*INET **25** 00:07:24.2±0.3,9.93N×85.64W,h4km±5km,MW3.1*
ISC 25 00:07:24.8±1.6,9.95N±0.05×85.65W±0.08,h17km±6km,
n27,σ0s61/39,1C-1D,Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
INDI	**Punta indio, G**	**0.17**	**120**	eP	**Pb**	**00 07 29.3**	**-0.3**
INDI				eS	**Sg**	**00 07 33.1**	**+1.1**
DUNO	**Dulce Nombre,**	**0.20**	**51**	eP	**Pg**	**00 07 29.3**	**-0.3**
DUNO				eS	**Sg**	**00 07 33.2**	**+0.4**
GUAI	**GUAI**	**0.34**	**24**	iP	**Pg**	**00 07 31.5**	**-0.5**
GUAI				eS	**Sg**	**00 07 37.0**	**+0.1**
ORTG	**Ortega, Santa**	**0.45**	**25**	eP	**Pg**	**00 07 33.4**	**-0.5**
LAFE	**Finca La Fe, P**	**0.74**	**101**	eP	**Pg**	**00 07 38.1**	**-1.3**
LAFE				eS	**Sb**	**00 07 49.4**	**+0.2**
LAFE	**Finca La Fe, P**	**0.74**	**101**	eP	**Pg**	**00 07 38.2**	**-1.1**
HZTE	**Horizontes, Gu**	**0.76**	**4**	eP	**Pg**	**00 07 39.4**	**-0.3**
HZTE				eS	**Sb**	**00 07 50.1**	**+0.5**
HZTE	**Horizontes, Gu**	**0.76**	**4**	eP	**Pg**	**00 07 39.4**	**-0.3**
JTS	**Las Juntas de**	**0.77**	**64**	eP	**Pg**	**00 07 38.9**	**-0.8**
COLC	**Colonia**	**0.83**	**32**	eP	**Pg**	**00 07 40.8**	**-0.2**
COLC				eS	**Sg**	**00 07 52.3**	**+0.2**
GPS2	**Hotel Rincn d**	**0.85**	**20**	eP	**Pg**	**00 07 41.0**	**-0.4**
GPS2				eS	**Sn**	**00 07 55.0**	**+0.8**
CUI	**Cuipilapa**	**0.85**	**34**	eP	**Pg**	**00 07 40.5**	**-0.9**
CUI				eS	**Sg**	**00 07 52.8**	**+0.2**
GUAB	**Guayabo de Bag**	**0.86**	**29**	iP	**Pg**	**00 07 41.2**	**-0.3**
HORNC	**Hornillas**	**0.89**	**32**	eP	**Pg**	**00 07 41.5**	**-0.6**
GB1A	**Borinquen Arri**	**0.90**	**16**	eP	**Pg**	**00 07 41.1**	**-1.2**
ACAL	**Aguas Claras**	**0.91**	**42**	eP	**Pg**	**00 07 41.9**	**-0.6**
ACAL				eS	**Sg**	**00 07 53.9**	**-0.5**
PTEN	**Parque Tenorio**	**1.00**	**41**	eP	**Pb**	**00 07 43.6**	**-0.2**
VMAR	**Armenia, Volca**	**1.00**	**31**	eP	**Pb**	**00 07 43.2**	**-0.6**
JACO	**JACO, Garabito**	**1.02**	**106**	eP	**Pb**	**00 07 43.8**	**-0.2**
CASO	**Castillo**	**1.02**	**62**	eP	**Pb**	**00 07 43.8**	**-0.3**
CASO				eS	**Sg**	**00 07 58.4**	**+0.4**
ARE1	**Arenal 1**	**1.05**	**61**	eP	**Pb**	**00 07 44.4**	**-0.2**
CEDE	**Laguna Cedeo**	**1.07**	**60**	eP	**Pb**	**00 07 45.2**	**+0.2**
CEDE				eS	**Sn**	**00 08 00.5**	**+0.7**
FORC	**Fortuna**	**1.09**	**62**	eP	**Pb**	**00 07 45.4**	**0.0**
FORC				eS	**Sg**	**00 08 00.6**	**+0.3**
LCR2	**La Lucha 2**	**1.64**	**97**	eP	**Pn**	**00 07 54.0**	**+1.0**
RIMA	**Rio Macho**	**1.77**	**96**	eP	**Pn**	**00 07 55.1**	**+0.1**
CDM	**Cerro de Muert**	**1.90**	**102**	eP	**Pn**	**00 07 57.2**	**+0.3**
ACON	**Acoyapa**	**2.06**	**13**	eP	**Pn**	**00 07 58.0**	**-0.6**

*JMA **25** 00:07:28.8±0.3,36.4N±1.0×13.7E±, h268km±2km,*
MV2.8/23,TOYAMA GIFU BORDER REG
*IDC **25** 00:07:29.1±0.7,36.45N×137.11E,h270km±8km,mb3.0/5,*
mbtmp3.7/8,Error ellipse: s-maj=33.0km s-min=17.3km
az=69.0
ISC 25 00:07:28.9±0.8,36.52N±0.09×136.96E±0.08,h250km,n17,
σ1s82/21,mb3.2/5,Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JGN	**Niukaw**	**0.41**	**136**	P	**Pn**	**00 08 03.3**	**+1.7**
JYTA	**Yamagatataniai**	**0.95**	**191**	eP	**Pn**	**00 08 05.0**	**+1.4**
JYTA				eS	**S**	**00 08 32.8**	**+1.8**
MAT	**Matsushiro**	**1.00**	**89**	eP	**Pn**	**00 08 05.6**	**+1.6**
MJAR	**Matsushiro Arr**	**1.00**	**89**	P	**Pn**	**00 08 04.6**	**+0.6**
	17nm,0.5s,baz=256,slow=5.5,SNR=40						
MJAR				S	**S**	**00 08 36.0**	**+4.5**
	4.9nm,0.7s,baz=236,slow=24,SNR=6.0						
JYN	**Shimob**	**1.64**	**128**	P	**Pn**	**00 08 08.8**	**+0.4**
JWT	**Wachi**	**1.77**	**226**	P	**Pn**	**00 08 10.7**	**+1.3**
JWT				S	**S**	**00 08 42.9**	**+1.7**
JAG	**Ashikaga**	**2

0.2nm,0.3s,baz=0.2,slow=7.7,SNR=3.0
0.2nm,0.3s
ARCES ARCESS Array B 63.19 338 P **P** **00 17 29.3 -0.7**
0.9nm,0.7s,baz=30,slow=8.4,SNR=3.6
0.9nm,0.7s
FINES FINESS Array B 67.56 331 P **P** **00 17 56.9 -1.1**
0.9nm,0.6s,baz=76,slow=5.9,SNR=9.7
0.9nm,0.6s
NOA NORSAR Array B 73.22 336 P **P** **00 18 31.3 -1.0**
0.3nm,0.7s,baz=61,slow=8.2,SNR=3.0
0.3nm,0.7s

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*IDC **25** 00:47:28.6±0.6,31.51S×71.31W,h41km±4km,mb4.2/11, mbtmp4.4/16,ML4.1/5,MS3.6/12,Error ellipse: s-maj=18.6km s-min=12.8km az=89.0*
*GUC **25** 00:47:28.2±0.8,31.54S×71.50W,h51km±3km,ML4.7*
*VAO **25** 00:47:28.1±0.5,31.54S×71.40W,h40km,mb4.6*
*NEIC **25** 00:47:28.5±1.3,31.53S±0.03×71.55W±0.06,h40km±5km, mb4.8/150,Mwr4.4/45,ML4.8(GUC),Error ellipse: s-maj=7.2km s-min=4.1km az=94.0*
*NEIC **25** 00:47:28.5,31.53S×71.55W,h51km,Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr4.42; Mθθ0.46; Mϕϕ-4.88; Mrθ0.69; Mrϕ0.30; Mθϕ-2.50; Fault plane solution: M₀5.35000×10¹⁵ NP1:φ₁170.40000°, δ59.58000°, λ83.09000°. NP2:φ₂3.87000°, δ31.12000°, λ101.59000°. Principal axes: T 5.1289, Plg74.0000°, Azm62.0000°; N 0.4191, Plg6.0000°, Azm174.0000°; P -5.5481, Plg14.0000°, Azm265.0000°:*

ISC 25 00:47:26.7±0.5,31.55S±0.02×71.47W±0.04,h29km±3km, n302,σθ96/303,mb4.8/80,MS3.9/8,6C-12D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CO02	**Combarbal**	**0.53**	**49**				**Pn**	**00 47 39.9**	**+1.5**
CO02							**Sn**	**00 47 48.2**	**+1.7**
CO02	**Combarbal**	**0.53**	**49**	⇓*i*P			**Pn**	**00 47 40.2**	**+1.7**
CO02				*i* S			**Sn**	**00 47 48.5**	**+2.0**
CO02				IAML				00 47 50.7	
	comp=E,426μm,0.4s								
CO06	**Fray Jorge**	**0.89**	**351**				**Pb**	**00 47 44.3**	**+0.8**
CO06							**Sn**	**00 47 55.5**	**+0.4**
CO06	**Fray Jorge**	**0.89**	**351**	⇑*i*P			**Pb**	**00 47 44.5**	**+0.9**
CO06				*i* S			**Sn**	**00 47 56.1**	**+1.1**
CO06				IAML				00 48 00.1	
	comp=N,15μm,0.1s								
CO03	**El Pedregal**	**0.98**	**43**	Pn			**Pb**	**00 47 46.0**	**+0.9**
CO03							**Sb**	**00 47 59.2**	**+1.5**
CO03	**El Pedregal**	**0.98**	**43**	⇓*i*P			**Pb**	**00 47 46.1**	**+1.0**
CO03				*i* S			**Sb**	**00 47 59.0**	**+1.3**
CO03				IAML				00 48 00.8	
	comp=N,15μm,0.5s								
VA06	**Catapilco**	**1.02**	**172**	Pn			**Pb**	**00 47 46.6**	**+0.9**
VA06							Sn	**00 47 59.7**	**+1.0**
VA06	**Catapilco**	**1.02**	**172**	⇑*i*P			**Pb**	**00 47 46.5**	**+0.8**
VA06				*i* S			**Sb**	**00 48 01.2**	**+2.5**
VA06				IAML				00 48 07.5	
	comp=N,27μm,0.4s								
VA03	**San Esteban**	**1.44**	**147**				**Pb**	**00 47 52.5**	**-0.5**
VA03	**San Esteban**	**1.44**	**147**	⇓*i*P			**Pb**	**00 47 53.0**	**0.0**
VA03				*i* S			**Sb**	**00 48 11.4**	**+0.5**
VA03				IAML				00 48 14.5	
	comp=E,22μm,0.2s								
ROCH	**El Roble**	**1.47**	**165**	⇓*i*P			**Pb**	**00 47 53.7**	**+0.2**
ROCH				⇓*i*P			**Pb**	**00 47 53.7**	**+0.2**
ROCH				*i* S			**Sb**	**00 48 13.0**	**+1.1**
ROCH				*i* S			**Sb**	**00 48 13.5**	**+1.6**
ROCH				IAML				00 48 15.2	
	comp=N,14μm,0.5s								
ROCH				IAML				00 48 15.2	
	comp=N,19μm,0.2s								
ROC1	**El Roble**	**1.47**	**165**				**Pb**	**00 47 53.5**	**-0.1**
VA01	**Torpederas**	**1.48**	**186**				**Pb**	**00 47 52.9**	**-0.5**
VA01	**Torpederas**	**1.48**	**186**	⇓*i*P			**Pb**	**00 47 53.0**	**-0.5**
VA01				*i* S			**Sb**	**00 48 11.9**	**+0.1**
VA01				IAML				00 48 16.6	
	comp=E,8μm,0.2s								
GO04	**Tololo Observa**	**1.49**	**23**				**Pb**	**00 47 53.5**	**-0.4**
GO04	**Tololo Observa**	**1.49**	**23**	⇓*i*P			**Pb**	**00 47 53.4**	**-0.4**
GO04				*i* S			**Sb**	**00 48 12.7**	**+0.2**
GO04				IAML				00 48 16.5	
	comp=N,57μm,0.4s								
CO05	**La Serena**	**1.64**	**7**				**Pn**	**00 47 54.5**	**+0.9**
CO05	**La Serena**	**1.64**	**7**	⇑*i*P			**Pb**	**00 47 55.6**	**-0.7**
CO05				*i* S			**Sb**	**00 48 15.7**	**-0.8**
CO05				IAML				00 48 20.7	
	comp=E,8μm,0.4s								
PEL	**Peldehue**	**1.72**	**158**	Pn			**Pb**	**00 47 56.9**	**-0.8**
PEL	**Peldehue**	**1.72**	**158**	⇓*i*P			**Pb**	**00 47 57.1**	**-0.6**
PEL				*i* S			**Sb**	**00 48 19.0**	**+0.1**
PEL				IAML				00 48 21.8	
	comp=N,12μm,0.6s								
MT02	**Curacav**	**1.73**	**171**				**Pb**	**00 47 56.4**	**-1.3**
MT02	**Curacav**	**1.73**	**171**	*e*P			**Pb**	**00 47 57.1**	**-0.7**
MT02				*i* S			**Sb**	**00 48 18.8**	**-0.3**
MT02				IAML				00 48 22.0	
	comp=E,5μm,0.5s								
MT05	**Renca**	**1.94**	**162**				**Pb**	**00 48 00.2**	**-1.2**
MT05	**Renca**	**1.94**	**162**	⇓*i*P			**Pb**	**00 48 00.1**	**-1.2**
MT05				*i* S			**Sb**	**00 48 24.2**	**-0.9**
MT05				IAML				00 48 28.1	
	comp=E,19μm,0.2s								
CO01	**Juntas del Tor**	**1.97**	**37**				**Pb**	**00 48 01.1**	**-0.8**
CO01	**Juntas del Tor**	**1.97**	**37**	⇓*i*P			**Pb**	**00 48 01.2**	**-0.8**
CO01				*i* S			**Sb**	**00 48 24.9**	**-1.2**
MT03	**Universidad Ad**	**2.10**	**158**				**Pb**	**00 48 02.5**	**-1.6**
MT03	**Universidad Ad**	**2.10**	**158**	⇓*i*P			**Pb**	**00 48 02.5**	**-1.6**
MT03				*i* S			**Sb**	**00 48 28.7**	**-1.2**
MT03				IAML				00 48 34.2	
	comp=N,12μm,0.4s								
MT03				IAML				00 48 34.6	
	comp=E,11μm,0.2s								
VA05	**Santo Domingo**	**2.10**	**183**				**Pn**	**00 48 01.5**	**+1.6**
MT09	**Talagante**	**2.25**	**170**				**Pb**	**00 48 04.8**	**-2.0**
MT09	**Talagante**	**2.25**	**170**	⇑*i*P			**Pb**	**00 48 04.8**	**-2.0**
MT09				*i* S			**Sn**	**00 48 31.7**	**+2.6**
ZON	**Zonda**	**2.38**	**91**				**Pb**	**00 48 08.5**	**-0.4**
LMEL	**Las Melosas**	**2.53**	**155**				**Pb**	**00 48 09.1**	**-2.4**
LMEL	**Las Melosas**	**2.53**	**155**	⇓*i*P			**Pb**	**00 48 08.9**	**-2.5**
LMEL				*i* S			**Sn**	**00 48 38.6**	**+2.8**
LMEL				IAML				00 48 51.5	
	comp=E,5μm,0.1s								
BO04	**La Punta**	**2.54**	**164**				**Pn**	**00 48 08.6**	**+2.6**
LCO	**Las Campanas**	**2.62**	**15**	Pn			**Pn**	**00 48 09.2**	**+2.0**
BO01	**Tunca**	**2.85**	**174**	Pn			**Pn**	**00 48 12.3**	**+2.0**
AC04	**Llanos de Chal**	**3.35**	**6**	Pn			**Pn**	**00 48 18.6**	**+1.5**
GO05	**Huala**	**3.47**	**186**				**Pn**	**00 48 19.4**	**+0.6**
GO03	**Copiap**	**4.09**	**16**	Pn			**Pn**	**00 48 29.2**	**+1.9**
ML02	**Panimavida**	**4.20**	**179**				**Pn**	**00 48 30.5**	**+1.7**
ML02	**Panimavida**	**4.20**	**179**	*e*P			**Pn**	**00 48 31.1**	**+2.4**
ML02				*e*S			**Sn**	**00 49 17.8**	**+0.9**
AC02	**Maricunga**	**5.12**	**24**	Pn			**Pn**	**00 48 43.4**	**+1.4**
BI05	**Punta Hualpn**	**5.38**	**195**				**Pn**	**00 48 44.0**	**-1.0**
AC01	**Pan de Azucar**	**5.44**	**8**				**Pn**	**00 48 46.7**	**+0.8**
VA04	**Juan Fernndez**	**6.55**	**249**	Pn			**Pn**	**00 49 00.2**	**-0.9**
H03N1	**Juan Fernandez** baz=79,slow=72,SNR=2246	**6.56**	**251**	T		T	T	00 55 46.4	
GO02	**Mina Guanaco**	**6.58**	**15**	Pn			**Pn**	**00 49 01.8**	**0.0**
H03N3	**Juan Fernandez** baz=79,slow=72,SNR=2792	**6.58**	**251**	T		T	T	00 55 45.4	
H03N2	**Juan Fernandez** baz=79,slow=72,SNR=2332	**6.58**	**251**	T		T	T	00 55 46.9	
H03S3	**Juan Fernandez** baz=82,SNR=34	**6.67**	**248**	T		T	T	00 55 57.8	
H03S1	**Juan Fernandez** baz=82,SNR=31	**6.67**	**248**	T		T	T	00 55 55.7	
H03S2	**Juan Fernandez** baz=82,SNR=62	**6.69**	**248**	T		T	T	00 55 57.0	
PB10	**IPOC Station P**	**8.05**	**6**				**Pn**	**00 49 22.2**	**+0.5**
LR03	**Panguipulli**	**8.10**	**185**				**Pn**	**00 49 22.2**	**-0.1**
LR04	**Corral**	**8.46**	**190**	Pn			**Pn**	**00 49 27.1**	**-0.2**
PB15	**IPOC Station P**	**8.50**	**13**				**Pn**	**00 49 26.9**	**-1.1**
PB06	**IPOC Station P**	**8.97**	**11**	Pn			**Pn**	**00 49 34.1**	**-0.4**
AF01	**San Pedro de A**	**9.05**	**20**	Pn			**Pn**	**00 49 36.1**	**+0.4**
LVC	**Limon Verde**	**9.19**	**15**	P			**Pn**	**00 49 38.1**	**+0.4**
LVC	comp=E,0.6nm,0.3s,baz=227,slow=7.9,SNR=2.5				S		**Sn**	**00 51 18.8**	**-1.6**
LVC	comp=E,23nm,0.7s,baz=257,slow=13,SNR=1.9				LR		LR	00 53 10.0	
	comp=E,313nm,20.7s,baz=214,slow=37 comp=E,3.2nm,0.3s								

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**9.19**	**15**	Pn			**Pn**	**00 49 37.2**	**-0.5**
LVC	**Limon Verde**	**9.19**	**15**	*e*P			**Pn**	**00 49 37.8**	**+0.1**
PLCA	**Paso Flores**	**9.19**	**176**	P			**Pn**	**00 49 39.1**	**+1.7**
PLCA	comp=E,0.3nm,0.3s,baz=338,slow=12,SNR=14				LR		LR	00 53 10.2	
	comp=E,178nm,20.3s,baz=344,slow=37 comp=E,1.1nm,0.4s								
PLCA	**Paso Flores**	**9.19**	**176**	*e*P			**Pn**	**00 49 38.2**	**+0.8**
PB04	**IPOC Station P**	**9.26**	**8**	Pn			**Pn**	**00 49 39.0**	**+0.6**
LL04	**Puerto Octay**	**9.37**	**184**				**Pn**	**00 49 39.1**	**-0.6**
LL03	**Petrohue**	**9.60**	**184**	Pn			**Pn**	**00 49 43.5**	**+0.7**
TRQA	**Tornquist**	**10.14**	**132**				**Pn**	**00 49 51.6**	**+1.3**
PB02	**IPOC Station P**	**10.29**	**8**	Pn			**Pn**	**00 49 52.8**	**+0.3**
TA01	**Diego Aracena**	**11.00**	**6**	Pn			**Pn**	**00 50 03.1**	**+0.9**
TA02	**Huaiquique**	**11.30**	**6**	Pn			**Pn**	**00 50 05.9**	**-0.3**
LL07	**Hotel Espejo d**	**11.37**	**188**	Pn			**Pn**	**00 50 07.2**	**+0.1**
PB11	**IPOC Station P**	**11.85**	**8**	Pn			**Pn**	**00 50 15.1**	**+1.1**
GO01	**Chusmiza**	**12.01**	**10**	Pn			**Pn**	**00 50 17.1**	**+0.7**
PB12	**IPOC Station P**	**12.92**	**5**	Pn			**Pn**	**00 50 28.8**	**+0.2**
ITQB	**Itaqui**	**12.93**	**85**	Pn			**Pn**	**00 50 27.7**	**-0.7**
ITQB	**Itaqui**	**12.93**	**85**	*e*P			**Pn**	**00 50 28.0**	**-0.5**
PB16	**IPOC Station P**	**13.28**	**8**				**Pn**	**00 50 36.3**	**+2.5**
CPUP	**Villa Florida**	**13.43**	**71**	P			**Pn**	**00 50 34.7**	**-0.6**
CPUP	comp=E,0.3nm,0.3s,baz=235,slow=13,SNR=5.9				S		**Sn**	**00 52 59.4**	**-4.2**
CPUP	comp=E,5.6nm,0.6s,baz=229,slow=17,SNR=1.3				LR		LR	00 56 22.9	
	comp=E,180nm,19.1s,baz=250,slow=40 comp=E,4.8nm,1.1s								
CPUP	**Villa Florida**	**13.43**	**71**				**Pn**	**00 50 36.2**	**+0.9**
CPUP	**Villa Florida**	**13.43**	**71**	*e*P			**Pn**	**00 50 36.2**	**+0.9**
CPUP				*e*S			**Sn**	**00 53 03.1**	**-0.4**
PLTB	**Pedras Altas**	**15.22**	**95**	Pn			**Pn**	**00 50 59.1**	**-0.5**
PLTB	**Pedras Altas**	**15.22**	**95**	*e*P			**Pn**	**00 50 57.8**	**-1.8**
LPAZ	**La Paz**	**15.50**	**12**	P			**Pn**	**00 51 05.1**	**+1.3**
	comp=E,0.5nm,0.3s,baz=184,slow=7.1,SNR=15 comp=E,7.9nm,0.8s								
LPAZ	**La Paz**	**15.50**	**12**				**Pn**	**00 51 04.9**	**+1.1**
LPAZ	**La Paz**	**15.50**	**12**	*e*P			**Pn**	**00 51 05.3**	**+1.4**
CPSB	**Cacapava Do Su**	**15.51**	**90**	*e*P			**Pn**	**00 51 01.7**	**-1.6**
ITAB	**Concordia**	**17.39**	**81**	*e*P			**P**	**00 51 28.4**	**+0.1**
CNLB	**Canela**	**17.92**	**88**	*e*P			**P**	**00 51 36.0**	**+1.7**
CNLB				*e*S			**Sn**	**00 54 54.3**	**+1.4**
SIV	**San Ignacio**	**18.16**	**34**	P			**P**	**00 51 36.9**	**0.0**
SIV	comp=E,0.2nm,0.3s,baz=208,slow=9.3,SNR=57				LR		LR	00 59 48.2	
	comp=E,115nm,21.5s,baz=282,slow=41 comp=E,8.4nm,0.6s								
PTGB	**Pitanga**	**18.41**	**73**	*e*P			**Pn**	**00 51 39.8**	**0.0**
TRCB	**Terra Rica**	**18.87**	**67**	P			**Pn**	**00 51 46.6**	**+1.1**
TRCB	**Terra Rica**	**18.87**	**67**	*e*P			**Pn**	**00 51 45.1**	**-0.3**
PTLB	**Pontes e Lacer**	**19.59**	**38**	*e*P			**P**	**00 51 53.2**	**+0.6**
NNA	**Nana**	**20.09**	**345**	LR			LR	00 58 21.6	
	comp=E,74nm,19.2s,baz=178,slow=32								
PCMB	**Pacaembu**	**20.58**	**66**	*e*P			**P**	**00 52 03.0**	**-0.3**
FRTB	**Fartura**	**21.06**	**73**	*e*P			**P**	**00 52 08.1**	**-0.5**
SALV	**Santo Antonio**	**21.20**	**46**	*e*P			**P**	**00 52 09.3**	**-0.8**
VILB	**Vilhena**	**21.22**	**32**	*e*P			**P**	**00 52 09.3**	**-1.0**
MG04	**Isla Riesco**	**21.29**	**180**	P			**P**	**00 52 09.5**	**-1.3**
ETMB	**Extrema**	**22.17**	**14**	*e*P			**P**	**00 52 20.7**	**+0.2**
ITRB	**Itarama**	**22.35**	**63**	*e*P			**P**	**00 52 21.5**	**-0.9**
DVLD	**Duverlandia**	**22.99**	**54**	*e*P			**P**	**00 52 26.7**	**-2.5**
BB19B	**Bebedouro**	**23.02**	**69**	*e*P			**P**	**00 52 28.9**	**-0.6**
RCLB	**Rio Claro- Sao**	**23.15**	**73**	*e*P			**P**	**00 52 30.5**	**-0.4**
VAO	**Valinhos**	**23.35**	**75**	*e*P			**P**	**00 52 31.9**	**-1.0**
CZSB	**Cruzeiro do Su**	**23.73**	**357**	*e*P			**P**	**00 52 37.4**	**+0.9**
SAML	**Samuel**	**23.77**	**21**	P			**P**	**00 52 36.5**	**-0.4**
PDRB	**Porto dos Gac**	**24.06**	**38**	*e*P			**P**	**00 52 38.7**	**-0.9**
IPMB	**Ipameri, GO**	**25.00**	**63**	*e*P			**P**	**00 52 47.0**	**-1.2**
ATAH	**Atahualpa**	**25.14**	**344**	LR			LR	01 01 53.9	
	comp=E,136nm,19.1s,baz=344,slow=34								
CLDB	**Colider**	**25.18**	**39**	*e*P			**P**	**00 52 49.1**	**-0.6**
PMNB	**Patos De Minas**	**26.04**	**66**	*e*P			**P**	**00 52 57.3**	**-0.4**
BDFB	**Brasilia**	**26.61**	**59**	P			**P**	**00 53 01.8**	**-1.0**
	comp=E,22nm,1.0s,baz=229,slow=6.4,SNR=19 comp=E,22nm,1.0s								
BDFB	**Brasilia**	**26.61**	**59**	P			**P**	**00 53 02.1**	**-0.7**
BDFB						IAmb	IAmb	00 53 03.9	
	comp=Z,21nm,0.9s								
BDFB	**Brasilia**	**26.61**	**59**	*e*P			**P**	**00 53 02.2**	**-0.7**
SNDB	**Serra Nova Dou**	**26.94**	**48**	*e*P			**P**	**00 53 05.5**	**-0.2**
NPGB	**Novo Progresso**	**28.65**	**35**	*e*P			**P**	**00 53 19.0**	**-2.0**
PEXB	**Peixe**	**28.82**	**53**	*e*P			**P**	**00 53 22.1**	**-0.4**
JANB	**Januaria**	**29.74**	**63**	*e*P			**P**	**00 53 29.6**	**-1.1**
MACA	**Manacapuru-AM**	**30.01**	**22**	*e*P			**P**	**00 53 32.6**	**-0.4**
SJMB	**Sao Joao De Ma**	**30.15**	**72**	*e*P			**P**	**00 53 33.4**	**-0.8**
ITTB	**Itaituba**	**30.82**	**32**	*e*P			**P**	**00 53 39.1**	**-1.1**
SDBA	**SAO DESIDERIO**	**31.00**	**58**	*e*P			**P**	**00 53 41.1**	**-0.8**
SMTB	**Santa Maria do**	**31.66**	**57**	*e*P			**P**	**00 53 47.9**	**+0.2**
PRPB	**Parapebas**	**32.38**	**43**	*e*P			**P**	**00 53 52.2**	**-1.7**
MALB	**Monte Alegre**	**33.71**	**32**	*e*P			**P**	**00 54 04.9**	**-0.6**
ORCD	**Orcadas**	**34.09**	**157**	P			**P**	**00 54 08.6**	**+0.3**
ORCD	comp=Z,8.4nm,0.8s					IAmb	IAmb	00 54 10.4	
GDU01	**Guandu, BA**	**34.19**	**66**	*e*P			**P**	**00 54 09.5**	**-0.3**
PRAC	**Prado**	**35.22**	**354**	*e*P			**P**	**00 54 19.9**	**+1.2**
BOAV	**Boa Vista**	**35.33**	**19**	*e*P			**P**	**00 54 18.9**	**-0.6**
BOAV				*e*S			**S**	**00 59 52.3**	**+0.3**
ORTC	**Ortega, Tolima**	**35.45**	**353**	*e*P			**P**	**00 54 22.5**	**+1.9**
PAYG	**Puerto Ayora**	**35.50**	**326**	P			**P**	**00 54 21.4**	**+0.4**
MCPB	**Macapa, AP**	**36.06**	**34**	*e*P			**P**	**00 54 25.2**	**-0.6**
ROSC	**El Rosal**	**36.29**	**355**	P			**P**	**00 54 28.2**	**0.0**
ROSC	comp=Z,12nm,1.1s					IAmb	IAmb	00 54 30.3	
GUY2C	**Guyana, Caldas**	**36.76**	**354**	*e*P			**P**	**00 54 32.9**	**+0.6**
NORC	**Norcasia**	**37.05**	**354**	*e*P			**P**	**00 54 35.7**	**+1.4**
NBLA	**Lagarto - SE**	**37.23**	**64**	*e*P			**P**	**00 54 35.1**	**-0.8**
RUSC	**La Rusia**	**37.27**	**357**	*e*P			**P**	**00 54 37.1**	**+0.5**
CBOC	**Ciudad Bolivar**	**37.46**	**353**	*e*P			**P**	**00 54 39.2**	**+1.4**
PTBC	**PUERTO BERRIO,**	**37.98**	**355**	*e*P			P	00 54 34.8	-7.4
ROSB	**Rosrio**	**38.42**	**48**	*e*P			**P**	**00 54 45.2**	**-0.6**
NBMA	**Muriti-CE**	**38.84**	**59**	*e*P			**P**	**00 54 49.1**	**-0.4**
NBMA				*e*S			**S**	**01 00 44.3**	**-1.5**
ZARC	**Zaragoza, Cauc**	**38.96**	**355**	P			**P**	**00 54 50.0**	**-0.3**
ZARC	**Zaragoza, Cauc**	**38.96**	**355**	*e*P			**P**	**00 54 50.6**	**+0.3**
NBPB	**Pedra_Branca-C**	**39.51**	**56**	*e*P			**P**	**00 54 55.2**	**+0.2**
BAUV	**El Baul**	**40.40**	**5**	P			**P**	**00 55 01.6**	**-0.7**
BAUV	comp=Z,15nm,0.9s					IAmb	IAmb	00 55 02.5	
MDP	**Montagnes des** comp=Z,93nm,18.5s,baz=218,slow=37	**40.63**	**30**	LR			LR	01 12 22.5	
RCBR	**Riachuelo** comp=Z,206nm,20.4s,baz=16,slow=38	**41.98**	**60**	LR			LR	01 13 56.1	
BIRV	**Birongo**	**42.08**	**8**	P			**P**	**00 55 18.6**	**+2.5**
GDSD	**La Dsirade Is**	**48.63**	**13**	P			**P**	**00 56 07.1**	**-0.9**
BELA	**Belgrano 2**	**49.20**	**170**	P			**P**	**00 56 13.1**	**+1.3**
BELA	comp=Z,5.6nm,0.7s					IAmb	IAmb	00 56 13.4	
CRPR	**Cabo Rojo, PR**	**49.45**	**5**	P			**P**	**00 56 13.5**	**-0.7**
PDPR	**Patillas Dam,**	**49.56**	**7**	P			**P**	**00 56 13.8**	**-1.2**
CELP	**Cerrillos**	**49.56**	**6**	P			**P**	**00 56 14.5**	**-0.6**
GCPR	**Guaynabo City**	**49.84**	**7**	P			**P**	**00 56 16.0**	**-1.3**
VNA3	**Neumayer Olymp**	**51.45**	**159**	P			**P**	**00 56 29.3**	**+0.4**
SNAA	**Sanae**	**53.67**	**159**	P			**P**	**00 56 45.8**	**+0.4**
SNAA	**Sanae**	**53.67**	**159**	P			**P**	**00 56 45.9**	**+0.5**
SNAA	comp=Z,5.3nm,0.6s,baz=264,slow=7.3,SNR=14				pP		**sP**	**00 56 57.5**	**-0.3**
	comp=Z,10nm,0.7s,baz=263,slow=6.7,SNR=14 comp=Z,5.3nm,0.6s								
SNAA	**Sanae**	**53.67**	**159**	P			**P**	**00 56 45.8**	**+0.4**
SNAA						IAmb	IAmb	00 56 58.5	
	comp=Z,12nm,0.8s								
TROLL	**Troll, Antarti**	**55.38**	**159**	P			**P**	**00 56 58.2**	**+0.4**
QSPA	**South Pole Qui**	**58.68**	**180**	P			**P**	**00 57 22.2**	**+1.0**
QSPA	comp=Z,10nm,0.9s					IAmb	IAmb	00 57 37.1	
SHEL	**Horse Pasture**	**61.32**	**92**	P			**P**	**00 57 40.5**	**+0.5**
656A	**Willston**	**61.49**	**349**	P			**P**	**00 57 40.6**	**0.0**
451A	**Vernon**	**63.30**	**346**	P			**P**	**00 57 54.1**	**+1.4**
352A	**Blakely**	**63.97**	**347**	P			**P**	**00 57 56.6**	**-0.6**
346A	**Big Creek Wild**	**64.88**	**343**	P			**P**	**00 58 03.2**	**+0.1**
833A	**Chaparral WMA,**	**65.21**	**333**	P			**P**	**00 58 05.9**	**+0.6**
833A	comp=Z,13nm,1.1s					IAmb	IAmb	00 58 08.4	
344A	**Westbrook Farm**	**65.27**	**342**	P			**P**	**00 58 05.1**	**-0.5**
Y52A	**Lilburn**	**66.14**	**349**	P			**P**	**00 58 11.1**	**-0.1**
Y52A	comp=Z,5.8nm,0.8s					IAmb	IAmb	00 58 12.2	
VNDA	**Vanda** comp=Z,0.5nm,0.9s,baz=118,slow=4.5,SNR=2.5 comp=Z,0.5nm,0.9s	**66.59**	**191**	P			**P**	**00 58 14.7**	**+1.0**
143A	**Socs Landing,**	**66.63**	**342**	P			**P**	**00 58 15.3**	**+1.0**
X51A	**Calhoun**	**66.96**	**348**	P			**P**	**00 58 16.1**	**-0.3**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BG3	**Lake Jocassee**	**67.06**	**350**	P			**P**	**00 58 17.4**	**+0.2**
BG3						IAmb	IAmb	00 58 19.0	
	comp=Z,7.5nm,1.0s								
Y45A	**Yeager Farm, C**	**67.26**	**344**	P			**P**	**00 58 18.4**	**0.0**
X48A	**Hartselle**	**67.27**	**346**	P			**P**	**00 58 18.3**	**-0.1**
X48A						IAmb	IAmb	00 58 19.1	
	comp=Z,9.2nm,0.8s								
JCT	**Junction City**	**67.30**	**334**	P			**P**	**00 58 18.6**	**-0.1**
JCT						IAmb	IAmb	00 58 38.1	
	comp=Z,3.9nm,0.6s								
W50A	**Signal Mountai**	**67.66**	**348**	P			**P**	**00 58 20.8**	**-0.1**
W50A						IAmb	IAmb	00 58 21.7	
	comp=Z,9.0nm,1.0s								
V55A	**Taylorsville**	**67.67**	**351**	P			**P**	**00 58 20.1**	**-0.9**
V55A						IAmb	IAmb	00 58 32.8	
	comp=Z,12nm,1.4s								
V53A	**Saluda**	**67.71**	**350**	P			**P**	**00 58 20.6**	**-0.7**
V53A						IAmb	IAmb	00 58 22.2	
	comp=Z,9.7nm,1.2s								
CPCT	**Cooper Cave**	**67.77**	**349**	P			**P**	**00 58 21.1**	**-0.5**
CPCT						IAmb	IAmb	00 58 22.2	
	comp=Z,8.5nm,1.0s								
TKL	**Tuckaleechee C**	**67.85**	**349**	IAmb	IAmb			00 58 22.3	
	comp=Z,9.1nm,1.1s								
OXF	**Oxford**	**67.85**	**344**	P			**P**	**00 58 21.9**	**-0.1**
TXAR	**Lajitas Array**	**67.85**	**330**	P			**P**	**00 58 22.9**	**+0.5**
	comp=Z,1.4nm,0.7s,baz=153,slow=8.7,SNR=18								
TXAR					pP		**sP**	**00 58 34.8**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=142,slow=8.9,SNR=7.6 comp=Z,1.4nm,0.7s								
TXAR	**Lajitas Array**	**67.85**	**330**	P			**P**	**00 58 22.5**	**+0.2**
TX31	**Lajitas Ar. Si**	**67.85**	**330**	P			**P**	**00 58 22.3**	**-0.1**
TX31						IAmb	IAmb	00 58 23.8	
	comp=Z,6.3nm,0.9s								
TX32	**Lajitas Array**	**67.85**	**330**	P			**P**	**00 58 22.4**	**+0.1**
V52A	**Sevierville**	**68.00**	**349**	IAmb	IAmb			00 58 23.2	
	comp=Z,7.3nm,0.8s								
PLAL	**Pickwick Lake**	**68.00**	**345**	IAmb	IAmb			00 58 22.9	
	comp=Z,4.2nm,0.6s								
V51A	**Loudon**	**68.08**	**349**	P			**P**	**00 58 22.8**	**-0.7**
V51A						IAmb	IAmb	00 58 23.8	
	comp=Z,6.3nm,0.9s								
U54A	**Nelsons Funny**	**68.41**	**351**	IAmb	IAmb			00 58 26.9	
	comp=Z,8.1nm,0.8s								
W45A	**Hickory Valley**	**68.42**	**344**	P			**P**	**00 58 25.4**	**-0.2**
V48A	**Smith Brothers**	**68.47**	**347**	P		

comp=Z,7.0nm,0.8s
PECO Prince Edward 75.29 356 P **P** **00 59 06.2 -0.5**
PECO IAmb IAmb 00 59 07.4
comp=Z,14nm,1.4s
MAW Mawson 75.39 164 P **P** **00 59 07.5 +0.4**
comp=Z,5.2nm,0.8s,baz=229,slow=5.3,SNR=5.5
MAW pP **sP** **00 59 19.0 -0.8**
comp=Z,1.4nm,0.3s,baz=191,slow=5.2,SNR=2.1
comp=Z,5.2nm,0.8s
MAW Mawson 75.39 164 P **P** **00 59 07.4 +0.3**
N35A Tabor 75.44 341 P **P** **00 59 07.6 0.0**
L40A Anamosa 75.48 345 P **P** **00 59 07.7 -0.1**
X16A Lo Mia Camp, P 75.65 327 P **P** **00 59 09.0 -0.2**
SDCO Great Sand Dun 75.91 333 P **P** **00 59 11.0 +0.2**
FRNY Flat Rock 76.05 358 P **P** **00 59 10.4 -0.6**
JFWS Jewell Farm 76.08 346 P **P** **00 59 10.6 -0.7**
JFWS IAmb IAmb 00 59 11.5
comp=Z,6.6nm,0.7s
SADO Sadowa 76.28 354 P **P** **00 59 11.9 -0.5**
SADO IAmb IAmb 00 59 12.8
comp=Z,14nm,1.4s
K38A Parkersburg 76.39 344 P **P** **00 59 12.7 -0.3**
H43A Windswept, Lux 77.11 348 P **P** **00 59 17.1 0.0**
H43A IAmb IAmb 00 59 17.5
comp=Z,16nm,1.2s
PV13 Radium Mtn., P 77.61 331 P **P** **00 59 20.7 +0.4**
ISCO Idaho Springs 77.74 334 P **P** **00 59 21.2 +0.1**
RAR Rarotonga 77.83 253 LR LR 01 25 48.7
comp=Z,108nm,21.9s,baz=282,slow=30
K31A O'Neill 77.95 340 P **P** **00 59 22.4 +0.5**
ECSD EROS Data Cent 78.38 342 P **P** **00 59 24.1 -0.1**
ECSD IAmb IAmb 00 59 24.9
comp=Z,11nm,0.9s
E46A Sault Ste Mari 78.42 351 IAmb IAmb 00 59 24.6
comp=Z,8.3nm,0.9s
N23A Red Feather La 78.82 334 P **P** **00 59 27.2 +0.3**
Q16A Castle Valley 79.24 330 P **P** **00 59 29.4 +0.2**
TSUM Tsumeb 79.42 106 LR LR 01 29 32.9
comp=Z,64nm,19.4s,baz=156,slow=32
P18A Preston Nutter 79.44 331 P **P** **00 59 29.8 -0.6**
VLDQ Val d'Or 79.48 356 IAmb IAmb 00 59 31.4
comp=Z,9.8nm,1.1s
P17A Butcher Ranch, 79.52 330 P **P** **00 59 30.8 +0.1**
D41A Chassel 79.75 348 P **P** **00 59 31.4 -0.2**
D41A IAmb IAmb 00 59 32.6
comp=Z,12nm,0.8s
PRN Pahroc Range 79.78 326 P **P** **00 59 32.6 +0.5**
ISA Isabella, Lake 80.10 323 P **P** **00 59 33.5 -0.4**
BOSA Boshof 80.78 118 P **P** **00 59 37.4 -0.5**
comp=Z,5.8nm,0.9s,baz=262,slow=5.3,SNR=8.2
comp=Z,5.8nm,0.9s
EYMN Ely 81.15 347 P **P** **00 59 39.0 -0.1**
BGU Big Grassy Mou 81.71 329 P **P** **00 59 43.1 +0.7**
PDAR Pinedale Array 81.81 333 P **P** **00 59 43.9 +0.9**
comp=Z,0.3nm,0.4s,baz=153,slow=8.1,SNR=1.8
comp=Z,0.3nm,0.4s
B35A Bob, Littlefor 82.01 345 IAmb IAmb 00 59 56.1
comp=Z,5.3nm,0.8s
NVAR Mina Array Bea 82.16 325 P **P** **00 59 46.0 +1.1**
comp=Z,1.1nm,0.8s,baz=163,slow=6.8,SNR=5.6
comp=Z,1.1nm,0.8s
NVAR Mina Array Bea 82.16 325 P **P** **00 59 45.5 +0.6**
CASY Casey 82.47 181 P **P** **00 59 46.9 +0.9**
CASY IAmb IAmb 00 59 47.8
comp=Z,7.1nm,1.0s
ELK Elko 82.54 328 P **P** **00 59 46.8 -0.1**
LBTB Lobatse 82.90 115 LR LR 01 32 42.5
comp=Z,64nm,19.6s,baz=174,slow=33
LBTB Lobatse 82.90 115 P **P** **00 59 48.6 -0.5**
LBTB IAmb IAmb 00 59 48.9
comp=Z,5.3nm,0.6s
TOA0 Torodi Ar. Sit 82.92 70 P **P** **00 59 48.6 -0.5**
TORD Torodi Ar. Bea 82.92 70 P **P** **00 59 49.0 -0.2**
comp=Z,9.9nm,0.8s,baz=274,slow=5.7,SNR=47
TORD pP **sP** **01 00 01.7 -0.3**
comp=Z,3.9nm,0.7s,baz=269,slow=5.9,SNR=6.2
comp=Z,9.9nm,0.8s
ULM Lac du Bonnet 84.27 345 P **P** **00 59 54.0 -1.2**
ULM IAmb IAmb 01 00 07.6
comp=Z,5.7nm,0.9s
HLID Hailey 84.45 330 P **P** **00 59 57.2 +0.6**
J08A Circle Bar Ran 86.08 328 P **P** **01 00 04.5 -0.2**
J08A IAmb IAmb 01 00 06.4
comp=Z,6.8nm,1.1s
HOOD Mount Hood Mea 89.05 327 P **P** **01 00 18.4 -0.4**
YKA Yellowknife Ar 99.90 341 P **Pdif** **01 01 07.1 -0.8**
comp=Z,0.3nm,0.5s,baz=141,slow=4.7,SNR=5.8
comp=Z,0.3nm,0.5s
WRA Warramunga Arr 123.13 209 PKP **PKPdf** **01 06 20.1 -1.0**
comp=Z,1.5nm,0.4s,baz=155,slow=1.6,SNR=20
H11S2 WAKE ISLAND Hyl 26.25 271 T T 03 25 27.7
baz=117,slow=74,SNR=39
H11S1 WAKE ISLAND Hyl 26.27 271 T T 03 25 27.0
baz=117,slow=74,SNR=84
H11S3 WAKE ISLAND Hyl 26.27 271 T T 03 25 29.2
baz=117,slow=74,SNR=21
H11N3 WAKE ISLAND Hyl 26.61 272 T T 03 25 53.5
baz=117,slow=75,SNR=84
H11N1 WAKE ISLAND Hyl 26.62 272 T T 03 25 55.1
baz=117,slow=75,SNR=22
H11N2 WAKE ISLAND Hyl 26.62 272 T T 03 25 56.6
baz=117,slow=75,SNR=200
ZALV Zalesovo Beam 151.89 30 PKPbc **PKPbc** **01 07 18.2 -0.1**
comp=Z,18nm,0.5s,baz=276,slow=2.2,SNR=76
ZALV pPKPbc **sPKPbc** **01 07 31.1 -0.2**
comp=Z,13nm,0.6s,baz=300,slow=3.3,SNR=14
ZALV Zalesovo Beam 151.89 30 **PKPbc** **01 07 17.9 -0.3**
MKAR Makanchi Array 154.75 45 PKPbc **PKPbc** **01 07 24.1 -0.7**
comp=Z,1.3nm,0.6s,baz=288,slow=2.1,SNR=9.7
MKAR PKPab **PKPab** **01 07 39.7 -0.2**
comp=Z,3.0nm,0.7s,baz=4.1,slow=1.7,SNR=15
MKAR pPKPab **sPKPab** **01 07 52.7 -0.1**
comp=Z,1.7nm,0.7s,baz=301,slow=4.1,SNR=4.8
MKAR Makanchi Array 154.75 45 **PKPab** **01 07 39.1 -0.8**

*DJA **25** 00:50:34.3±0.3,5°S±3″×13″4E±°, h10km, M4.8/13, mB5.3/9, mb4.9/13, MLv4.8/10, Mw(mB)4.7/9*
*IDC **25** 00:50:34.4±1.1,4.92S×133.63E, h0km, mb4.1/4, mbtmp4.2/6, ML4.3/2, MS3.9/32, Error ellipse: s-maj=99.4km s-min=21.0km az=65.0*
*NEIC **25** 00:50:35.5±1.8,4.70S±0.03×133.94E±0.09, h10km±1km, mb4.6/27, Error ellipse: s-maj=14.8km s-min=4.4km az=86.0*

ISC 25 00:50:35.2±0.4,**4.73S**±0.06×**134.02E**±0.07,**h10**km,**n98,**
σ1§41/67,mb4.5/17,MS4.0/32,1C,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**2.52**	**315**			**Pn**	**00 51 14.4**	**-1.8**
FAKI	**Fak Fak**	**2.52**	**315**	P		**Pn**	**00 51 14.1**	**-2.1**
SWI	**Sorong**	**4.72**	**324**	P		**Pn**	**00 51 44.6**	**-1.9**
MSAI	**Masohi**	**5.26**	**285**	P		**Pn**	**00 51 53.5**	**-0.4**
SMPI	**Sarmi**	**5.41**	**60**	P		**Pn**	**00 51 52.7**	**-3.3**
	0.4nm2µm21nm,0.7s							
AAI	**Ambon**	**5.90**	**280**	P		**Pn**	**00 52 02.6**	**-0.1**
	1.0nm4µm235nm,0.6s							
GENI	**Genyem**	**6.49**	**71**	P		**Pn**	**00 52 11.1**	**+0.3**
	0.7nm3µm49nm,0.6s							
NLAI	**Namlea**	**7.06**	**282**	P		**Pn**	**00 52 20.0**	**+1.4**
	0.5nm1µm103nm,0.5s							
LBMI	**Labuha**	**7.67**	**302**	P		**Pn**	**00 52 27.3**	**+0.2**
	0.2nm1µm41nm,0.5s							
SANI	**Sanana**	**8.45**	**288**	P		**Pn**	**00 52 35.2**	**-2.5**
	37nm,0.6s							
MTN	**Manton Dam**	**8.55**	**199**	Pn		**Pn**	**00 52 38.4**	**-0.8**
TNTI	**Ternate**	**8.60**	**309**	Pn		**Pn**	**00 52 38.6**	**-1.3**
SOEI	**Soe**	**10.89**	**242**			**Pn**	**00 53 10.6**	**-0.7**
SOEI	**Soe**	**10.89**	**242**	P		**Pn**	**00 53 10.8**	**-0.5**
	68nm,0.7s							
LUWI	**Luwuk**	**11.81**	**288**	Pn		**Pn**	**00 53 22.6**	**-1.2**
KNRA	**Kununurra**	**12.05**	**205**	Pn		**Pn**	**00 53 24.9**	**-2.1**
COEN	**Coen**	**12.87**	**136**	Pn		**Pn**	**00 53 40.5**	**+2.2**
APSI	**Ampana**	**12.92**	**287**	P		**Pn**	**00 53 39.5**	**+0.5**
	383nm26nm,1.5s							
PMG	**Port Moresby**	**13.84**	**110**	LR		LR	01 01 34.7	
	comp=Z,2µm,18.4s,baz=326,slow=47							
PMG	**Port Moresby**	**13.84**	**110**	Pn		**Pn**	**00 53 52.4**	**+0.8**
DAV	**Davao City (W)**	**14.43**	**324**	LR		LR	00 59 47.2	
	comp=Z,314nm,21.8s,baz=150,slow=38							
TOLI2	**Tolitoli**	**14.44**	**293**	Pn		**Pn**	**00 53 58.9**	**-0.9**
WB0	**Warramunga Arr**	**14.96**	**179**			**Pn**	**00 54 06.2**	**-0.7**
WRAB	**Tennant Creek**	**15.12**	**179**	Pn		**Pn**	**00 54 08.0**	**-1.0**
WRAB				IAmb		IAmb	00 54 17.4	
	comp=Z,98nm,1.4s							
WB2	**Warramunga Arr**	**15.13**	**179**	Pn		**Pn**	**00 54 06.7**	**-2.5**
WB2				IAmb		IAmb	00 54 18.0	
	comp=Z,68nm,1.2s							
WRA	**Warramunga Arr**	**15.13**	**179**	Pn		**Pn**	**00 54 05.5**	**-3.7**
	comp=Z,1.4nm,0.3s,baz=356,slow=13,SNR=28							
WRA				Sn		Sn	00 56 44.0	-13
	comp=Z,0.8nm,0.3s,baz=0.4,slow=23,SNR=6.8							
	comp=Z,2.9nm,0.4s							
WRA	**Warramunga Arr**	**15.13**	**179**			**Pn**	**00 54 06.8**	**-2.4**
WR0	**Warramunga Arr**	**15.15**	**178**	Pn		**Pn**	**00 54 07.0**	**-2.4**
KRVT	**Keravat (AS076**	**17.96**	**89**	LR		LR	01 01 56.5	
	comp=Z,577nm,19.7s,baz=63,slow=37							
MYLDM	**Lahad Datu**	**18.36**	**302**			**Pn**	**00 54 49.1**	**-1.0**
MYLDM				IAmb		IAmb	00 55 06.7	
	comp=Z,24nm,1.1s							
AS31	**Alice Springs**	**18.83**	**180**	P		**P**	**00 54 55.0**	**-0.3**
ASAR	**Alice Springs**	**18.83**	**180**	P		**P**	**00 54 54.5**	**-0.9**
CTA	**Charters Tower**	**19.37**	**143**	P		**P**	**00 55 01.8**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=312,slow=8.9,SNR=4.9							
CTA				LR		LR	01 03 21.7	
	comp=Z,1µm,20.6s,baz=322,slow=40							
	comp=Z,14nm,1.1s							
CTAO	**Charters Tower**	**19.37**	**143**	P		**P**	**00 54 59.8**	**-1.4**
CTAO				IAmb		IAmb	00 55 06.2	
	comp=Z,46nm,1.4s							
GUMO	**Guam**	**21.14**	**30**	LR		LR	01 03 54.6	
	comp=Z,190nm,18.1s,baz=214,slow=37							
MBWA	**Marble Bar**	**21.43**	**219**	P		**P**	**00 55 23.7**	**+0.1**
MBWA				IAmb		IAmb	00 55 26.6	
	comp=Z,35nm,1.1s							
PSA00	**Pilbara Seismi**	**21.67**	**218**	P		**P**	**00 55 26.2**	**+0.1**
PSA00				IAmb		IAmb	00 55 29.2	
	comp=Z,12nm,0.9s							
STKA	**Stephens Creek**	**27.93**	**166**	P		**P**	**00 56 26.2**	**+0.5**
	comp=Z,2.4nm,0.7s,baz=333,slow=6.8,SNR=3.6							
STKA				LR		LR	01 08 16.9	
	comp=Z,348nm,19.1s,baz=344,slow=38							
	comp=Z,2.4nm,0.7s							
STKA	**Stephens Creek**	**27.93**	**166**	IAmb		IAmb	00 56 35.7	
	comp=Z,1.7nm,1.1s							
JOW	**Kunigami**	**31.86**	**350**	LR		LR	01 07 59.4	
	comp=Z,358nm,21.6s,baz=154,slow=33							
QIZ	**Qiongzhong**	**33.53**	**315**	P		**P**	**00 57 15.3**	**0.0**
QIZ				S		**S**	**01 02 38.5**	**+1.0**
QIZ				LR		LR		
	comp=N,250nm,11.8s							
QIZ				LR		LR		
	comp=E,150nm,13.7s							
QIZ				LR		LR		
	comp=Z,110nm,12.2s							
DZM	**Mont Dzumac**	**35.81**	**122**	*e*LR		LR	01 07 10.3	
	comp=Z,491nm,24.7s							
MJAR	**Matsushiro Arr**	**41.24**	**5**	LR		LR	01 14 05.4	
	comp=Z,159nm,18.9s,baz=188,slow=34							
CMAR	**Chiang Mai Arr**	**41.54**	**305**	LR		LR	01 18 26.4	
	comp=Z,70nm,19.2s,baz=115,slow=40							
KSRS	**Korea Array**	**42.35**	**353**	LR		LR	01 15 43.0	
	comp=Z,185nm,20.1s,baz=170,slow=36							
KMI	**Kunming**	**42.48**	**316**	⇑P		**P**	**00 58 31.1**	**+0.1**
KMI				pmax		pmax		
	comp=Z,15nm,0.5s							
PZH	**PanZhiHua**	**44.05**	**317**	P		**P**	**00 58 47.3**	**+3.7**
PZH				PKP		**PKiKP**	**01 07 32.0**	**+1.5**
PZH				pmax		pmax		
	comp=Z,10.0nm,0.8s							
PZH				pmax		pmax		
	comp=Z,80nm,5.4s							
MSVF	**Nonsan**	**44.95**	**110**	LR		LR	01 17 14.8	
	comp=Z,330nm,18.3s,baz=205,slow=35							
DCZ	**Deep Cove**	**49.80**	**150**	P		**P**	**00 59 27.5**	**-0.7**
HHC	**Hu-ho-hao-te**	**49.80**	**338**	*e*P		**P**	**00 59 30.8**	**+2.4**
HHC				pmax		pmax		
	comp=Z,20nm,0.8s							
HHC				pmax		pmax		
	comp=Z,150nm,7.0s							
RPZ	**Rata Peaks**	**50.71**	**146**	LR		LR	01 20 57.0	
	comp=Z,445nm,20.3s,baz=308,slow=36							
URZ	**Urewera**	**51.43**	**137**	LR		LR	01 22 36.4	
	comp=Z,483nm,18.5s,baz=31,slow=37							
RAO	**Raoul Island**	**51.55**	**124**	LR		LR	01 20 04.4	
	comp=Z,127nm,20.3s,baz=28,slow=34							
KLR	**Kul'dur**	**53.77**	**358**	LR		LR	01 21 19.0	
	comp=Z,63nm,21.2s,baz=180,slow=34							
AFI	**Afiamalu**	**54.15**	**104**	LR		LR	01 21 29.4	
	comp=Z,141nm,21.8s,baz=289,slow=34							
AFI	**Afiamalu**	**54.15**	**104**	P		**P**	**01 00 00.1**	**-1.2**
PALK	**Pallekele**	**54.52**	**282**	LR		LR	01 25 00.5	
	comp=Z,72nm,19.2s,baz=219,slow=38							
SONM	**Songino Array**	**57.69**	**338**	LR		LR	01 25 36.3	
	comp=Z,84nm,20.2s,baz=118,slow=36							
PEA0B	**Petropavlovsk-**	**60.99**	**16**	P		**P**	**01 00 48.9**	**+0.3**
CASY	**Casey**	**63.60**	**190**	P		**P**	**01 01 06.5**	**+0.6**
CASY				IAmb		IAmb	01 01 07.9	
	comp=Z,8.9nm,1.4s							
WMQ	**Urumqi**	**63.79**	**324**	*e*P		**P**	**01 01 09.8**	**+2.2**
MA2	**Magadan**	**65.46**	**9**	LR		LR	01 27 57.3	
	comp=Z,51nm,21.1s,baz=174,slow=34							
SHEM	**Shemya Is, Ala**	**66.50**	**25**	LR		LR	01 25 37.6	
	comp=Z,64nm,21.7s,baz=257,slow=32							
YAK	**Yakutsk**	**66.65**	**359**	LR		LR	01 32 58.7	
	comp=Z,38nm,18.0s,baz=90,slow=38							
MK31	**Makanchi Array**	**68.61**	**325**	P		**P**	**01 01 38.6**	**+0.1**
MK31				IAmb		IAmb	01 01 45.5	
	comp=Z,2.2nm,0.8s							
MKAR	**Makanchi Array**	**68.61**	**325**	P		**P**	**01 01 38.5**	**0.0**
	comp=Z,1.2nm,0.3s,baz=109,slow=8.4,SNR=33							
	comp=Z,1.2nm,0.3s							
MKAR	**Makanchi Array**	**68.61**	**325**	P		**P**	**01 01 38.4**	**-0.1**
MAKZ	**Makanchi**	**68.80**	**324**	P		**P**	**01 01 39.7**	**0.0**
MAKZ				IAmb		IAmb	01 01 47.8	
	comp=Z,3.9nm,0.9s							
SEY	**Seymchan**	**68.90**	**9**	LR		LR	01 31 11.2	
	comp=Z,32nm,20.1s,baz=166,slow=35							
KDJ	**Kajisay**	**69.46**	**318**	P		**P**	**01 01 42.4**	**-1.7**
KDJ				IAmb		IAmb	01 01 43.8	
	comp=Z,4.9nm,0.9s							
ZAA0	**Zalesovo Array**	**71.40**	**332**	P		**P**	**01 01 53.3**	**-2.1**
ZALV	**Zalesovo Beam**	**71.40**	**332**	P		**P**	**01 01 56.7**	**+1.3**
	comp=Z,0.8nm,0.7s,baz=123,slow=5.3,SNR=4.2							
	comp=Z,0.8nm,0.7s							
ZALV	**Zalesovo Beam**	**71.40**	**332**	P		**P**	**01 01 55.1**	**-0.3**
AAK	**Ala-Archa**	**71.47**	**318**	LR		LR	01 37 32.4	
	comp=Z,35nm,19.4s,baz=118,slow=40							
AAK	**Ala-Archa**	**71.47**	**318**	P		**P**	**01 01 55.9**	**-0.5**
AAK				IAmb		IAmb	01 02 06.3	
	comp=Z,6.0nm,1.5s							
KURK	**Kurchatov**	**72.75**	**327**	P		**P**	**01 02 02.9**	**-0.7**
KURK				IAmb		IAmb	01 02 08.6	
	comp=Z,5.4nm,1.2s							
GAR	**Garm**	**72.98**	**313**	P		**P**	**01 02 03.9**	**-1.5**
GAR				IAmb		IAmb	01 02 13.2	
	comp=Z,8.3nm,1.0s							
VNDA	**Vanda**	**74.24**	**174**	P		**P**	**01 02 12.2**	**+0.3**
	comp=Z,0.8nm,0.9s,baz=325,slow=8.2,SNR=3.7							
VNDA				LR		LR	01 33 51.9	
	comp=Z,141nm,19.0s,baz=353,slow=35							
	comp=Z,0.8nm,0.9s							
VNDA	**Vanda**	**74.24**	**174**	P		**P**	**01 02 12.3**	**+0.3**
VNDA				IAmb		IAmb	01 02 13.6	
	comp=Z,6.4nm,1.4s							
KK31	**Karatay Array**	**74.34**	**317**	P		**P**	**01 02 12.9**	**-0.3**
KKAR	**Karatay Array**	**74.34**	**317**	P		**P**	**01 02 13.1**	**-0.1**
TBI	**Tubuai**	**75.77**	**113**	*e*LR		LR	01 25 41.4	
	comp=Z,209nm,24.5s							
TIXI	**Tiksi**	**76.30**	**358**	LR		LR	01 36 59.3	
	comp=Z,55nm,18.0s,baz=181,slow=36							
WSAR	**Wadi Sarin**	**78.51**	**295**	LR		LR	01 43 37.7	
	comp=Z,29nm,18.9s,baz=148,slow=41							
MAW	**Mawson**	**78.52**	**202**	LR		LR	01 34 19.5	
	comp=Z,146nm,20.6s,baz=68,slow=34							
MAW	**Mawson**	**78.52**	**202**	P		**P**	**01 02 36.9**	**+0.5**
TNA	**Tin City**	**81.67**	**21**	P		**P**	**01 02 53.0**	**-0.3**
ABKAR	**Akbulak array**	**83.26**	**321**	P		**P**	**01 03 01.4**	**-0.6**
OHAK	**Old Harbor**	**84.69**	**31**	P		**P**	**01 03 09.8**	**+0.7**
AKTO	**Aktyubinsk**	**84.77**	**321**	LR		LR	01 43 33.0	
	comp=Z,32nm,19.4s,baz=77,slow=38							
TAOE	**Nuku Hiva Isla**	**85.18**	**98**	*e*LR		LR	01 30 03.7	
	comp=Z,155nm,23.6s							
KDAK	**Kodiak Island**	**85.21**	**31**	LR		LR	01 38 52.7	
	comp=Z,220nm,20.1s,baz=254,slow=34							
QSPA	**South Pole Qui**	**85.23**	**180**	LR		LR	01 41 31.3	
	comp=Z,131nm,20.0s,baz=12,slow=36							
ILAR	**Eielson Array**	**89.61**	**25**	P		**P**	**01 03 32.2**	**-0.7**
	comp=Z,0.7nm,1.1s,baz=234,slow=7.4,SNR=2.6							
ATD	**Arta Tunnel**	**92.08**	**281**	LR		LR	01 45 23.8	
	comp=Z,19nm,18.3s,baz=157,slow=36							
KMBO	**Kilima Mbogo**	**96.65**	**268**	LR		LR	01 45 25.5	
	comp=Z,59nm,19.3s,baz=95,slow=34							
CPUP	**Villa Florida**	**147.23**	**161**	PKPbc		**PKPbc**	**01 10 20.5**	**+0.9**
	comp=Z,1.1nm,0.6s,baz=127,slow=4.5,SNR=2.8							
LPAZ	**La Paz**	**149.73**	**134**	PKPbc		**PKPbc**	**01 10 28.0**	**+0.8**
	comp=Z,0.5nm,0.5s,baz=217,slow=5.1,SNR=2.3							

*KRNET **25** 01:05:20.5±0.1, 41.91N×72.33E, h22km, mb2.7*
*SOME **25** 01:05:20.6, 42.03N×72.40E, h0km*
*NNC **25** 01:05:21.7±0.6, 41.97N×72.41E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=6.6km s-min=1.8km az=177.0*
*ISU **25** 01:05:22.3, 39.80N×69.81E, h13km*
*KNET **25** 01:05:22.6±0.4, 42.05N×72.47E, h0km, ml2.2, Error ellipse: s-maj=2.4km s-min=1.6km az=106.0*

ISC 25 01:05:21.4±1.1,**41.86N**±0.02×**72.29E**±0.02,**h16**km±10km,
n48,σ1§33/80,24C-18D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ARK	**Arkit**	**0.26**	**257**	⇑*i*P		**Pb**	**01 05 26.9**	**-0.8**
	baz=48							
ARK				⇑*i*S		**Sb**	**01 05 31.6**	**-0.4**
	baz=48							
TRKS	**Terek-Say**	**0.92**	**250**	⇑*i*P		**Pg**	**01 05 38.8**	**-0.5**
	baz=43							
TRKS				⇑*i*S		**Sn**	**01 05 51.8**	**-1.2**
	baz=43							
AML	**Almayashu**	**1.08**	**75**	⇑P		**Pb**	**01 05 40.2**	**-1.7**
	16nm,0.1s,SNR=15							
AML				⇓S		**Sb**	**01 05 54.5**	**-1.5**
	14nm,0.2s							
EKS2	**Erkin-Say**	**1.36**	**53**	⇓*i*P		**Pn**	**01 05 44.8**	**-1.1**
	baz=55							
EKS2				⇓*i*S		**Sn**	**01 06 02.3**	**-1.5**
	baz=55							
OHH	**Osh**	**1.38**	**164**	⇑*i*P		**Pb**	**01 05 46.5**	**-0.4**
	baz=66							
OHH				⇑*i*S		**Sg**	**01 06 05.5**	**-0.5**
	baz=66							
ARLS	**Aral**	**1.52**	**89**	⇓*i*P		**Pn**	**01 05 47.7**	**-0.3**
	baz=91							
ARLS				⇓*i*S		**Sn**	**01 06 07.6**	**0.0**
	baz=91							
FRG	**Fergana**	**1.53**	**195**	P		**Pg**	**01 05 51.6**	**+0.8**
FRG				S		**Sg**	**01 06 13.6**	**+2.9**
UCH	**Uchtor**	**1.69**	**77**	⇓P		**Pn**	**01 05 51.3**	**+0.5**
	9.8nm,0.1s,SNR=60							
UCH				⇑S		**Sg**	**01 06 15.2**	**-0.8**
	19nm,0.2s							
UCH	**Uchtor**	**1.69**	**77**	⇑*i*P		**Pn**	**01 05 50.7**	**-0.1**
	baz=78							
UCH				⇑*i*S		**Sn**	**01 06 12.8**	**+0.4**
	baz=78							
IUG	**Iuzhnay**	**1.71**	**280**	*e*P		**Pg**	**01 05 54.7**	**+0.5**
	257nm,0.3s							
IUG				*e*S		**Sg**	**01 06 19.0**	**+2.5**
	71nm,0.2s							
IUG	**Iuzhnay**	**1.71**	**280**	P		**Pg**	**01 05 53.6**	**-0.7**
	233nm,0.4s							
IUG				S		**Sg**	**01 06 17.0**	**+0.5**
	71nm,0.2s							
CHMG	**Chimgan**	**1.74**	**261**	P		**Pg**	**01 05 55.0**	**+0.2**
CHMG				S		**Sg**	**01 06 18.8**	**+1.4**
CHRV	**Charvak**	**1.77**	**264**	S		**Sg**	**01 06 20.0**	**+1.7**
AAK	**Ala-Archa**	**1.81**	**64**	⇓P		**Pb**	**01 05 53.5**	**-0.8**
	4.9nm,0.2s							
AAK	**Ala-Archa**	**1.81**	**64**	⇓*i*P		**Pn**	**01 05 52.4**	**+0.3**
	baz=65							
AAK				⇓*i*S		**Sn**	**01 06 15.5**	**+0.7**
	baz=65							
KK31	**Karatay Array**	**1.81**	**314**	⇑Pn		**Pb**	**01 05 54.2**	**0.0**
	0.8nm,0.2s,baz=126,slow=16,SNR=28							
KK31				Sn		**Sg**	**01 06 18.8**	**-1.0**
	6.6nm,0.4s,baz=129,slow=28,SNR=14							
KKAR	**Karatay Array**	**1.81**	**314**	⇑*i*P		**Pn**	**01 05 52.8**	**+0.8**
	baz=12							
KKAR				⇑*i*S		**Sb**	**01 06 16.1**	**-0.7**
	baz=12							
BTK	**Batken**	**2.12**	**212**	⇑*i*P		**Pb**	**01 05 58.0**	**-1.4**
	baz=12							
BTK				⇑*i*S		**Sb**	**01 06 25.3**	**-0.2**
	baz=12							
KBK	**Karagaybulak**	**2.13**	**67**	⇓P		**Pb**	**01 05 59.0**	**-0.7**
	9.6nm,0.1s,SNR=7.0							
CHMS	**Chumysh**	**2.15**	**57**	⇓Pg		**Pb**	**01 05 59.6**	**-0.4**
	3.1nm,0.3s							
CHMS				⇑Lg		Lg	01 06 26.6	
	11nm,0.5s							
USP	**Ospenovka**	**2.15**	**48**	⇑P		**Pb**	**01 05 58.9**	**-1.2**
	9.8nm,0.3s,SNR=12							
USP				⇑S		**Sb**	**01 06 26.9**	**+0.3**
	17nm,0.3s							
USP	**Ospenovka**	**2.15**	**48**	⇓*i*P		**Pn**	**01 05 56.9**	**+0.2**
	baz=49							
USP				⇓*i*S		**Sn**	**01 06 23.4**	**+0.2**
	baz=49							
BRLS	**Boroldaу**	**2.16**	**304**	*e*P		**Pg**	**01 06 01.2**	**-1.6**
	2.3nm,0.2s							
BRLS				*e*S		**Sg**	**01 06 30.1**	**-0.9**
	30nm,0.7s							
SGDS	**Sogindy**	**2.35**	**46**	*e*P		**Pb**	**01 06 02.2**	**-1.2**
	6.7nm,0.2s							
SGDS				*e*S		**Sb**	**01 06 31.8**	**-0.3**
	15nm,0.3s							
SGDS	**Sogindy**	**2.35**	**46**	Pg		**Pb**	**01 06 02.2**	**-1.2**
	6.7nm,0.2s							
SGDS				Lg		Lg	01 06 31.8	
	15nm,0.3s							
DRK	**Karamyk**	**2.40**	**189**	⇓*i*P		**Pb**	**01 06 02.4**	**-2.1**
	baz=89							
DRK				⇓*i*S		**Sb**	**01 06 32.3**	**-1.7**
	baz=89	

	2.0nm,0.4s							
TNSS					*e*S		**Sb**	**01 07 12.6 +2.9**
	2.2nm,0.6s							
TNSS	**Tian-Shan**	**3.64**	**70**		Pg		**Pb**	**01 06 25.7 +0.1**
	2.0nm,0.4s							
TNSS					Lg		Lg	01 07 12.6
	2.2nm,0.6s							
KTBS	**Karatobe**	**3.72**	**59**		*e*P		**Pb**	**01 06 26.9 +0.1**
	2.2nm,0.6s							
KTBS					*e*S		**Sb**	**01 07 14.6 +2.9**
	13nm,0.3s							
KTBS	**Karatobe**	**3.72**	**59**		Pg		**Pb**	**01 06 26.9 +0.1**
	2.2nm,0.6s							
KTBS					Lg		Lg	01 07 14.6
	13nm,0.3s							
CHKK	**Chushkaly**	**3.99**	**58**		*e*P		**Pb**	**01 06 31.6 +0.4**
	0.7nm,0.0s							
CHKK					*e*S		**Sb**	**01 07 22.3 +3.1**
	8.1nm,0.1s							
CHKK	**Chushkaly**	**3.99**	**58**		Pg		**Pb**	**01 06 31.6 +0.4**
	0.7nm,0.0s							
CHKK					Lg		Lg	01 07 22.3
	8.1nm,0.1s							
ARXS	**Arharly**	**4.69**	**58**		*e*P		**Pb**	**01 06 45.5 +2.2**
	2.9nm,0.6s							
ARXS					*e*S		**Sg**	**01 07 46.6 -5.2**
	5.2nm,0.4s							
ARXS	**Arharly**	**4.69**	**58**		Pg		**Pb**	**01 06 45.5 +2.2**
	2.9nm,0.6s							
ARXS					Lg		Lg	01 07 46.6
	5.2nm,0.4s							

PRU ***25*** *01:12:49.0±0.0,43.˙48N×13.˙87E,h0km*
STR ***25*** *01:12:50.0±1.1,44˚N±6˚×1˚4E±˚,h10km,MLv3.6/20,Error ellipse: s-maj=0.0km s-min=0.0km az=102.8,preliminary*
ROM ***25*** *01:12:53.0±0.1,43.˙490N±0.˙004×13.˙441E±0.˙005, h29km,ML3.4/62,Mw3.2,Error ellipse: s-maj=0.4km s-min=0.2km az=216.0,Moment Tensor Solution. Moment tensor: Scale 10¹³Nm; Mrr1.70; Mθθ-2.30; Mφφ0.60; Mrθ-0.95; Mθφ-5.70; Mrφ3.28; Fault plane solution: Mw6.95863×10¹³ NP1:φs273.00000°,δ61.00000°, λ163.00000°. NP2:φs11.00000°,δ75.00000°,λ30.00000°.*
LDG ***25*** *01:12:53.2±0.1,43.˙50N×13.˙38E,h10km,Ml3.5/24 Error ellipse: s-maj=2.9km s-min=1.8km az=53.0*
GEN ***25*** *01:13:06.6,43.˙59N×12.˙14E,h39km±3km,Ml2.2*

ISC 25 01:12:52.6±0.9,43.˙50N±0.˙02×13.˙44E±0.˙02,h33km±4km, n318,σ1s71/380,31C-11D,Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
AOI	**Ancona**	**0.13**	**66**	⇑P		**Pb**	**01 12 58.5**	**-0.2**
AOI				S		**Sb**	**01 13 02.6**	**-0.3**
AOI				AML		AML		
	comp=N,9610μm,0.5s							
AOI				AML		AML		
	comp=E,7460μm,0.3s							
PP3	**Marolino**	**0.17**	**133**	⇓P		**Pn**	**01 12 59.5**	**+1.9**
PP3				AML		AML		
	comp=N,24350μm,0.9s							
PP3				AML		AML		
	comp=E,21450μm,0.4s							
PP3				AML		AML		
	comp=E,21700μm,0.4s							
PP3				AML		AML		
	comp=E,21750μm,0.4s							
PP3				AML		AML		
	comp=N,25150μm,0.9s							
PP3				AML		AML		
	comp=N,24300μm,0.9s							
PP3				AML		AML		
	comp=E,21450μm,0.4s							
TRE1	**Treia**	**0.21**	**206**	P		**Pb**	**01 12 59.1**	**-0.3**
TRE1				S		**Sb**	**01 13 03.8**	**-0.1**
TRE1				AML		AML		
	comp=E,28850μm,0.3s							
TRE1				AML		AML		
	comp=E,28800μm,0.3s							
TRE1				AML		AML		
	comp=N,20000μm,0.4s							
CING	**Cingoli**	**0.21**	**235**	⇑P		**Pb**	**01 12 59.0**	**-0.5**
CING				S		**Sb**	**01 13 03.6**	**-0.5**
CING				AML		AML		
	comp=N,8945μm,0.3s							
CING				AML		AML		
	comp=E,12200μm,0.4s							
SENI	**Senigallia**	**0.26**	**325**	⇓P		**Pb**	**01 12 60.0**	**+0.1**
SENI				S		**Sn**	**01 13 05.9**	**+2.5**
SENI				AML		AML		
	comp=N,39600μm,0.3s							
SENI				AML		AML		
	comp=N,5260μm,1.0s							
SENI				AML		AML		
	comp=E,45850μm,1.5s							
SENI				AML		AML		
	comp=E,5070μm,0.9s							
CIMA	**Civitanova Mar**	**0.26**	**138**	P		**Pn**	**01 13 00.6**	**+0.9**
CIMA				AML		AML		
	comp=E,15400μm,0.4s							
CIMA				AML		AML		
	comp=N,17900μm,0.4s							
CIMA				AML		AML		
	comp=N,17850μm,0.4s							
CIMA				AML		AML		
	comp=E,15400μm,0.4s							
CIMA				AML		AML		
	comp=N,17850μm,0.4s							
EL6	**Elcito**	**0.30**	**236**	⇑P		**Pb**	**01 13 00.2**	**-0.3**
EL6				S		**Sb**	**01 13 05.8**	**0.0**
EL6				AML		AML		
	comp=E,25750μm,0.3s							
EL6				AML		AML		
	comp=N,26000μm,1.1s							
MMUR	**Monte Murano**	**0.32**	**260**	⇑P		**Pb**	**01 13 00.5**	**-0.3**
MMUR				S		**Sb**	**01 13 06.4**	**+0.1**
MMUR				AML		AML		
	comp=E,15950μm,0.5s							
MMUR				AML		AML		
	comp=N,18050μm,0.4s							
SSM1	**San Severino M**	**0.33**	**215**	⇑P		**Pb**	**01 13 00.7**	**-0.1**
SSM1				S		**Sb**	**01 13 06.4**	**+0.1**
COR1	**Corinaldo**	**0.34**	**293**	⇓P		**Pb**	**01 13 01.3**	**+0.3**
COR1				S		**Sn**	**01 13 08.0**	**+1.3**
COR1				AML		AML		
	comp=E,19550μm,0.7s							
COR1				AML		AML		
	comp=N,11820μm,0.6s							
COR1				AML		AML		
	comp=N,11235μm,0.7s							
COR1				AML		AML		
	comp=E,19550μm,0.7s							
COR1				AML		AML		
	comp=N,11250μm,0.7s							
COR1				AML		AML		
	comp=N,11795μm,0.6s							
COR1				AML		AML		
	comp=E,11000μm,0.7s							
ARVD	**Arcevia**	**0.36**	**270**	⇑P		**Pb**	**01 13 00.8**	**-0.4**
ARVD				S		**Sb**	**01 13 07.2**	**+0.1**
ARVD				AML		AML		
	comp=E,3870μm,0.3s							
ARVD				AML		AML		
	comp=N,5495μm,0.5s							
MNTP	**Montappone**	**0.36**	**176**	⇓P		**Pn**	**01 13 01.7**	**+0.1**
MNTP				S		**Sn**	**01 13 07.9**	**+0.7**
MNTP				AML		AML		
	comp=E,18650μm,0.7s							
MNTP				AML		AML		
	comp=N,13450μm,0.9s							
MDAR	**Monte D'Aria**	**0.37**	**215**	⇑P		**Pb**	**01 13 01.2**	**-0.2**
MDAR				S		**Sb**	**01 13 07.8**	**+0.3**
MDAR				AML		AML		
	comp=E,5535μm,0.7s							
MDAR				AML		AML		
	comp=N,4005μm,0.9s							
MDAR				AML		AML		
	comp=N,4010μm,0.9s							
MDAR				AML		AML		
	comp=E,5530μm,0.7s							
GAG1	**Gagliole**	**0.37**	**226**	⇑P		**Pb**	**01 13 01.2**	**-0.2**
GAG1				S		**Sb**	**01 13 07.7**	**+0.2**
CADA	**Capodarco di F**	**0.39**	**142**	P		**Pn**	**01 13 02.4**	**+0.5**
CADA				AML		AML		
	comp=E,8615μm,0.5s							
CADA				AML		AML		
	comp=N,7185μm,0.6s							
MTL1	**Matelica**	**0.39**	**232**	P		**Pb**	**01 13 01.5**	**-0.1**
SNTG	**Esanatoglia**	**0.43**	**236**	⇑P		**Pb**	**01 13 02.1**	**-0.2**
SNTG				S		**Sb**	**01 13 09.3**	**+0.4**
SNTG				AML		AML		
	comp=N,524μm,0.7s							
SNTG				AML		AML		
	comp=E,422μm,0.3s							
SNTG				AML		AML		
	comp=E,3560μm,0.7s							
SNTG				AML		AML		
	comp=N,3910μm,0.3s							
CSP1	**Cessapalombo**	**0.44**	**203**	⇑P		**Pb**	**01 13 02.4**	**-0.1**
CSP1				S		**Sn**	**01 13 10.0**	**+0.5**
PIO1	**Pioraco**	**0.46**	**226**	P		**Pb**	**01 13 02.6**	**-0.1**
FIU1	**Fiuminata**	**0.48**	**230**	P		**Pb**	**01 13 02.8**	**-0.1**
FIU1				AML		AML		
	comp=E,4180μm,1.3s							
FIU1				AML		AML		
	comp=N,3425μm,1.1s							
SSFR	**Montelago di S**	**0.48**	**263**	⇑P		**Pb**	**01 13 02.8**	**-0.2**
SSFR				S		**Sb**	**01 13 10.6**	**+0.5**
SSFR				AML		AML		
	comp=E,9990μm,1.3s							
SSFR				AML		AML		
	comp=N,14300μm,0.2s							
SSFR				AML		AML		
	comp=E,9995μm,1.3s							
SSFR				AML		AML		
	comp=E,9030μm,1.2s							
SSFR				AML		AML		
	comp=N,14650μm,0.3s							
MPAG	**Monte Paganucc**	**0.51**	**285**	⇓P		**Pb**	**01 13 03.2**	**-0.2**
MPAG				S		**Sb**	**01 13 11.4**	**+0.5**
MPAG				AML		AML		
	comp=E,4420μm,1.6s							
MPAG				AML		AML		
	comp=N,4705μm,0.4s							
MPAG				AML		AML		
	comp=N,4805μm,0.4s							
MPAG				AML		AML		
	comp=E,4220μm,0.3s							
MPAG				AML		AML		
	comp=E,4420μm,1.6s							
MPAG				AML		AML		
	comp=N,4700μm,0.4s							
FSSB	**Fossombrone**	**0.52**	**292**	⇓P		**Pb**	**01 13 03.4**	**-0.1**
FSSB				S		**Sn**	**01 13 12.0**	**+0.6**
FSSB				AML		AML		
	comp=E,10795μm,0.5s							
FSSB				AML		AML		
	comp=N,11900μm,0.4s							
FRON	**Frontone**	**0.52**	**273**	⇑P		**Pb**	**01 13 03.5**	**-0.1**
FRON				S		**Sn**	**01 13 11.8**	**+0.5**
FRON				AML		AML		
	comp=E,9675μm,0.5s							
FRON				AML		AML		
	comp=N,10390μm,0.3s							
FRON				AML		AML		
	comp=E,9710μm,0.5s							
FRON				AML		AML		
	comp=N,10400μm,0.3s							
FDMO	**Fiordimonte**	**0.53**	**209**	⇑P		**Pb**	**01 13 03.5**	**-0.2**
FDMO				S		**Sn**	**01 13 12.1**	**+0.5**
FDMO				AML		AML		
	comp=N,2495μm,0.6s							
FDMO				AML		AML		
	comp=E,4685μm,0.3s							
FOSV	**Fossato di Vic**	**0.53**	**248**	⇑P		**Pb**	**01 13 03.5**	**-0.3**
FOSV				S		**Sn**	**01 13 12.4**	**+0.7**
FOSV				AML		AML		
	comp=N,5780μm,0.5s							
FOSV				AML		AML		
	comp=E,3840μm,0.3s							
ATSC	**Scheggia e Pas**	**0.55**	**263**	⇑P		**Pb**	**01 13 03.8**	**-0.3**
ATSC				S		**Sn**	**01 13 13.0**	**+0.8**
GUMA	**Gualdo di Mace**	**0.57**	**140**	⇑P		**Pb**	**01 13 02.8**	**-1.5**
GUMA				S		**Sb**	**01 13 09.4**	**-3.0**
GUMA				AML		AML		
	comp=N,18100μm,0.4s							
GUMA				AML		AML		
	comp=E,17250μm,0.4s							
GUMA				AML		AML		
	comp=N,22350μm,0.3s							
GUMA				AML		AML		
	comp=N,18050μm,0.4s							
GUMA				AML		AML		
	comp=E,19700μm,0.4s							
OFFI	**Offida**	**0.59**	**162**	⇓P		**Pn**	**01 13 06.3**	**+1.7**
OFFI				AML		AML		
	comp=E,15550μm,0.6s							
OFFI				AML		AML		
	comp=N,12050μm,0.6s							
FEMA	**Monte Fema**	**0.60**	**208**	P		**Pb**	**01 13 04.9**	**-0.2**
FEMA				S		**Sn**	**01 13 14.8**	**+1.1**
PESA	**Pesaro**	**0.62**	**316**	P		**Pb**	**01 13 05.4**	**+0.2**
PESA				AML		AML		
	comp=E,3570μm,0.3s							
PESA				AML		AML		
	comp=N,5460μm,0.2s							
NARO	**Abbazia di Nar**	**0.63**	**281**	P		**Pb**	**01 13 05.3**	**0.0**
NARO				S		**Sn**	**01 13 15.2**	**+1.1**
NARO				AML		AML		
	comp=E,1675μm,0.9s							
NARO				AML		AML		
	comp=N,2230μm,1.0s							
ATFO	**Monte Foce - G**	**0.64**	**259**	⇑P		**Pb**	**01 13 05.5**	**-0.2**
ATFO				S		**Sn**	**01 13 15.7**	**+1.2**
ATFO				AML		AML		
	comp=E,5375μm,0.4s							
ATFO				AML		AML		
	comp=N,6300μm,0.5s							
ATBU	**Serra di Buran**	**0.65**	**268**	⇑P		**Pb**	**01 13 05.8**	**+0.1**
ATBU				S		**Sn**	**01 13 16.0**	**+1.3**
PIEI	**Pieia**	**0.66**	**274**	⇑P		**Pb**	**01 13 05.7**	**-0.2**
PIEI				S		**Sn**	**01 13 16.0**	**+1.2**
ATCC	**AVT- Casa Cast**	**0.66**	**242**	⇑P		**Pb**	**01 13 05.7**	**-0.1**
ATCC				S		**Sn**	**01 13 16.4**	**+1.6**
MURB	**Monte Urbino**	**0.70**	**251**	⇑P		**Pb**	**01 13 06.6**	**0.0**
MURB				S		**Sn**	**01 13 17.6**	**+1.6**
MURB				AML		AML		
	comp=E,8520μm,0.3s							
MURB				AML		AML		
	comp=N,7895μm,1.3s							
MURB				AML		AML		
	comp=E,9175μm,0.3s							
MURB				AML		AML		
	comp=E,8520μm,0.4s							
MURB				AML		AML		
	comp=N,7895μm,1.3s							
MURB				AML		AML		
	comp=N,9010μm,1.3s							
NRCA	**Norcia**	**0.70**	**200**	P		**Pb**	**01 13 06.4**	**-0.2**
NRCA				AML		AML		
	comp=E,5915μm,0.2s							
NRCA				AML		AML		
	comp=N,7115μm,0.4s							
NRCA				AML		AML		
	comp=E,5915μm,0.1s							
NRCA				AML		AML		
	comp=N,7655μm,0.4s							
NRCA				AML		AML		
	comp=N,7110μm,0.4s							
NRCA				AML		AML		
	comp=E,6375μm,0.2s							
PE3	**Peglio**	**0.71**	**287**	⇓P		**Pn**	**01 13 07.2**	**+0.9**
PE3				AML		AML		
	comp=E,50μm,0.5s							
PE3				AML		AML		
	comp=N,48μm,1.4s							
AQT1	**Arquata del Tr**	**0.73**	**188**	P		**Pb**	**01 13 07.1**	**0.0**
TB01	**Gubbio**	**0.74**	**261**	⇑P		**Pb**	**01 13 07.1**	**0.0**
TB01				S		**Sn**	**01 13 18.5**	**+1.6**
APEC	**Apecchio**	**0.74**	**275**	⇑P		**Pb**	**01 13 07.3**	**+0.1**
APEC				S		**Sn**	**01 13 18.3**	**+1.4**
APEC				AML		AML		
	comp=E,1570μm,0.3s							
APEC				AML		AML		
	comp=N,926μm,0.9s							
APEC				AML		AML		
	comp=N,924μm,0.9s							
APEC				AML		AML		
	comp=N,3960μm,0.3s							
APEC				AML		AML		
	comp=E,1565μm,0.3s							
APEC				AML		AML		
	comp=E,8270μm,0.3s							
TB03	**Pietralunga**	**0.75**	**263**	⇑P		**Pb**	**01 13 07.2**	**-0.2**
ATPI	**Pietralunga -**	**0.75**	**267**	⇑P		**Pb**	**01 13 07.4**	**0.0**
ATPI				S		**Sn**	**01 13 19.0**	**+1.8**
ATPI				AML		AML		
	comp=E,3375μm,0.6s							
ATPI				AML		AML		
	comp=N,2700μm,1.0s							
ATPI				AML		AML		
	comp=N,2705μm,1.0s							
ATPI				AML		AML		
	comp=E,3370μm,0.6s							
ATVO	**AVT- Monte Val**	**0.76**	**262**	⇑P		**Pb**	**01 13 07.4**	**-0.1**
ATVO				S		**Sn**	**01 13 18.8**	**+1.4**
ATVO				AML		AML		
	comp=E,2630μm,0.3s							
ATVO				AML		AML		
	comp=N,3035μm,0.7s							
TB02	**Pietralunga**	**0.76**	**261**	⇑P		**Pb**	**01 13 07.4**	**-0.1**
TB02				S		**Sn**	**01 13 18.9**	**+1.5**
ATLO	**AVT- Montelove**	**0.77**	**257**	⇑P		**Pb**	**01 13 07.5**	**-0.2**
ATLO				S		**Sn**	**01 13 19.3**	**+1.7**
TRTR	**Tortoreto Alta**	**0.77**	**153**	P		**Pn**	**01 13 08.4**	**+1.3**
TRTR				AML		AML		
	comp=E,4040μm,1.5s							
TRTR				AML		AML		
	comp=N,4630μm,1.0s							
RSM	**Repubblica di**	**0.84**	**302**	P		**Pb**	**01 13 09.5**	**+0.7**
RSM				AML		AML		
	comp=N,2265μm,0.7s							
RSM				AML		AML		
	comp=E,1335μm,0.8s							
CPGN	**Carpegna, Ital**	**0.86**	**291**	P		**Pb**	**01 13 10.2**	**+0.8**
CPGN				AML		AML		
CPGN				AML		AML		
ATMI	**Monte Miggiano**	**0.87**	**260**	P		**Pn**	**01 13 09.2**	**+0.7**
ATMI				AML		AML		
	comp=E,3550μm,0.4s							
ATMI				AML		AML		
	comp=N,4075μm,1.0s							
ATVA	**AVT- Monte Val**	**0.87**	**256**	P		**Pn**	**01 13 09.3**	**+0.8**
BADI	**Badiali**	**0.87**	**271**	P		**Pb**	**01 13 09.4**	**+0.2**
BADI				S		**Sn**	**01 13 22.4**	**+2.5**
BADI				AML		AML		
	comp=N,5675μm,0.4s							
BADI				AML		AML		
	comp=E,6585μm,0.4s							
BADI				AML		AML		
	comp=N,5670μm,0.4s							
SMA1	**SAN MARTINO**	**0.87**	**185**	P		**Pn**	**01 13 09.3**	**+0.6**
SMA1				AML		AML		
	comp=E,5985μm,0.3s							
SMA1				AML		AML		
	comp=N,5965μm,0.9s							
PARC	**Parchiule**	**0.88**	**280**	P		**Pb**	**01 13 09.7**	**+0.2**
PARC				AML		AML		
	comp=E,2905μm,0.9s							
PARC				AML		AML		
	comp=N,2915μm,0.3s							
TERO	**Teramo**	**0.88**	**172**	P		**Pn**	**01 13 09.2**	**+0.5**
TERO				AML		AML		
	comp=E,2820μm,1.1s							
TERO				AML		AML		
	comp=N,2935μm,0.3s							
TERO				AML		AML		
	comp=N,3045μm,0.3s							
TERO				AML		AML		
	comp=E,3065μm,1.1s							
ATMC	**Monte Cedrone**	**0.91**	**267**	P		**Pn**	**01 13 10.0**	**+0.9**
LNSS	**Leonessa**	**0.94**	**198**	⇑P		**Pn**	**01 13 10.3**	**+0.8**
LNSS				AML		AML		
	comp=E,6050μm,1.2s							
LNSS				AML		AML		
	comp=N,4305μm,1.3s							
BLLA	**Bellaria**	**0.95**	**313**	P		**Pb**	**01 13 11.5**	**+0.8**
BLLA				AML		AML		
	comp=N,1535μm,1.3s							
BLLA				AML		AML		
	comp=E,2395μm,0.5s							
SSP9	**Sansepolcro**	**0.95**	**275**	P		**Pb**	**01 13 11.0**	**+0.3**
CAMP	**Campotosto**	**0.96**	**181**	P		**Pb**	**01 13 10.9**	**-0.1**
CAMP				AML		AML		
	comp=E,1615μm,1.3s							
CAMP				AML		AML		
	comp=N,1255μm,0.7s							
RM33	**Pellescritta (**	**1.00**	**189**	⇓P		**Pb**	**01 13 11.6**	**+0.1**
RM33				AML		AML		
	comp=E,2695μm,0.3s							
RM33				AML		AML		
	comp=N,2785μm,1.0s							
RM33				AML		AML		
	comp=N,2780μm,1.0s							
RM33				AML		AML		
	comp=E,2680μm,0.3s							
RM33				AML		AML		
	comp=E,2690μm,0.3s							
GIGS	**Gran Sasso**	**1.05**	**175**	⇓P		**Pb**	**01 13 12.3**	**-0.1**
GIGS				AML		AML		
	comp=E,814μm,0.2s							
GIGS				AML		AML		
	comp=N,760μm,0.2s							
CAFI	**Castiglion Fio**	**1.08**	**262**	P		**Pb**	**01 13 13.2**	**+0.2**
CAFI				AML		AML		
	comp=N,2175μm,0.6s							
CAFI				AML		AML		
	comp=E,1515μm,0.7s							
CRE	**Caprese Michel**	**1.09**	**277**	P		**Pb**	**01 13 13.1**	**+0.1**
CRE				AML		AML		
	comp=N,1880μm,0.5s							
CRE				AML		AML		
	comp=E,1350μm,0.7s							
A309A	**Martorano (FC)**	**1.09**	**308**	P		**Pb**	**01 13 13.3**	**+0.2**
MGAB	**Montegabbione**	**1.13**	**239**	P		**Pb**	**01 13 13.8**	**+0.1**
MGAB				AML		AML		
	comp=E,1840μm,0.5s							
MGAB				AML		AML		
	comp=E,1825μm,0.5s							
MGAB				AML		AML		
	comp=N,2460μm,0.6s							
MGAB				AML		AML		
	comp=N,2475μm,0.6s							
VCEL	**Villa Celiera**	**1.14**	**165**	P		**Pb**	**01 13 13.8**	**-0.2**
VCEL				AML		AML		
	comp=E,2020μm,0.3s							
VCEL				AML		AML		
	comp=N,2135μm,1.4s							
AQU	**L'Aquila**	**1.14**	**181**	P		**Pb**	**01 13 13.9**	**0.0**
AQU				AML		AML		
	comp=E,993μm,0.3s							
AQU				AML		AML		
	comp=E,976μm,1.2s							
AQU				AML		AML		
	comp=N,1110μm,0.7s							
AQU				AML		AML		
	comp=N,1145μm,0.7s							
SFI	**Santa Sofia**	**1.22**	**290**	P		**Pb**	**01 13 15.3**	**0.0**
SFI				AML		AML		
	comp=N,958μm,1.2s							
SFI				AML		AML		
	comp=E,896μm,1.3s							
ASQU	**Asqua**	**1.23**	**285**	P		**Pb**	**01 13 15.8**	**+0.4**
ASQU	**Asqua**	**1.23**	**285**	P		**Pb**	**01 13 15.9**	**+0.4**
ASQU				AML		AML		
	comp=E,1655μm,1.4s							
ASQU				AML		AML		
	comp=N,1985μm,0.5s							
FAGN	**Fagnano**	**1.23**	**175**	P		**Pb**	**01 13 15.7**	**+0.3**
FAGN				AML		AML		
	comp=N,1570μm,0.8s							
FAGN				AML		AML		
	comp=E,2125μm,0.6s							
FIAM	**Fiamignano**	**1.25**	**191**	P		**Pb**	**01 13 15.5**	**-0.3**
FIAM				AML		AML		
	comp=N,1046μm,1.0s							
FIAM				AML		AML		
	comp=E,1225μm,0.7s							
DUGI	**Dugi Otok**	**1.27**	**67**	*e*Pn		**Pn**	**01 13 14.5**	**+0.4**
DUGI				Sg		**Sn**	**01 13 29.8**	**-0.2**
T0110	**Collepietro**	**1.29**	**169**	P		**Pn**	**01 13 15.8**	**+1.3**
T0110				AML		AML		
	comp=E,1715μm,0.8s							
T0110				AML		AML		
	comp=N,1935μm,0.4s							
LMD	**Lutirano**	**1.38**	**295**	P		**Pb**	**01 13 17.8**	**-0.1**
LMD	**Lutirano**	**1.38**	**295**	P		**Pn**	**01 13 17.2**	**+1.6**
LMD				AML		AML		

	comp=N,818µm,1.4s							
LMD					AML	AML		
	comp=E,1125µm,0.3s							
VIRC	**Vir**	**1.41**	**55**	*e*Pn	**Pn**	**01 13 16.6 +0.6**		
VIRC				Sn	**Sn**	**01 13 33.3 -0.2**		
BRJN	**Brijuni**	**1.43**	**9**	*e*Pn	**Pn**	**01 13 17.7 +1.5**		
BRJN				Sn	**Sn**	**01 13 35.1 +1.4**		
BRJN	**Brijuni**	**1.43**	**9**	P	**Pn**	**01 13 17.0 +0.9**		
SF11	**Podere del Sol**	**1.43 245**		P	**Pb**	**01 13 18.1 -0.7**		
SRES	**S.Oreste - Sor**	**1.43 209**		P	**Pn**	**01 13 17.6 +1.3**		
SRES				AML	AML			
	comp=N,389µm,1.4s							
SRES				AML	AML			
	comp=E,376µm,0.8s							
CAFR	**Castel Frentan**	**1.44 152**		P	**Pn**	**01 13 17.9 +1.6**		
RUFI	**Rufina**	**1.44 284**		P	**Pb**	**01 13 18.6 -0.3**		
RUFI	**Rufina**	**1.44 284**		P	**Pb**	**01 13 18.5 -0.3**		
SF03	**Valle Cupa**	**1.46 242**		P	**Pn**	**01 13 17.9 +1.3**		
SF04	**Casetta**	**1.46 244**		P	**Pn**	**01 13 18.1 +1.4**		
MCIV	**Monte Civitell**	**1.47 241**		P	**Pn**	**01 13 18.1 +1.2**		
PTQR	**Pietraquaria**	**1.48 181**		P	**Pb**	**01 13 18.9 -0.7**		
PTQR				AML	AML			
	comp=E,284µm,0.3s							
PTQR				AML	AML			
	comp=N,275µm,0.8s							
NVLJ	**Novalja**	**1.49**	**44**	*e*Pn	**Pn**	**01 13 17.7 +0.7**		
NVLJ				Sn	**Sn**	**01 13 35.0 -0.2**		
LATE	**Laterza**	**1.49 234**		P	**Pn**	**01 13 18.3 +1.3**		
SF13	**Bagnolo**	**1.49 244**		P	**Pn**	**01 13 18.6 +1.5**		
A308A	**Longastrino (F**	**1.50 317**		P	**Pn**	**01 13 18.6 +1.5**		
INTR	**Introdacqua**	**1.52 167**		P	**Pn**	**01 13 18.5 +0.9**		
INTR				AML	AML			
	comp=E,420µm,1.0s							
INTR				AML	AML			
	comp=N,904µm,0.7s							
SF14	**Selvena**	**1.53 242**		P	**Pn**	**01 13 18.7 +1.1**		
SF01	**Poggio Pratacc**	**1.53 244**		P	**Pb**	**01 13 19.8 -0.6**		
BRIS	**BRISIGHELLA**	**1.54 296**		P	**Pn**	**01 13 18.4 +0.7**		
LPEL	**Lama dei Pelig**	**1.55 159**		P	**Pn**	**01 13 19.5 +1.6**		
LPEL				AML	AML			
	comp=E,492µm,0.7s							
LPEL				AML	AML			
	comp=N,536µm,0.8s							
MTCE	**Montecelio**	**1.56 199**		P	**Pn**	**01 13 19.0 +1.0**		
MTCE				AML	AML			
	comp=N,292µm,0.6s							
MTCE				AML	AML			
	comp=E,413µm,1.6s							
CSNT	**Castellina Chi**	**1.56 270**		P	**Pn**	**01 13 19.5 +1.4**		
CSNT	**Castellina Chi**	**1.56 270**		P	**Pn**	**01 13 19.5 +1.4**		
CSNT				AML	AML			
	comp=E,326µm,0.4s							
CSNT				AML	AML			
	comp=N,438µm,0.7s							
ARCI	**Arcidosso**	**1.57 246**	⇑	P	**Pn**	**01 13 19.5 +1.3**		
ARCI				AML	AML			
	comp=N,110µm,1.1s							
ARCI				AML	AML			
	comp=E,132µm,0.6s							
CERT	**Cerreto**	**1.58 192**		P	**Pn**	**01 13 19.7 +1.3**		
CERT				AML	AML			
	comp=N,494µm,0.7s							
CERT				AML	AML			
	comp=E,612µm,0.3s							
RABC	**Rab**	**1.58**	**37**	*e*Pn	**Pn**	**01 13 19.6 +1.3**		
RABC				Sn	**Sn**	**01 13 38.2 +0.6**		
OSSC	**Osservatorio P**	**1.59 272**		P	**Pn**	**01 13 20.1 +1.6**		
OSSC	**Osservatorio P**	**1.59 272**		P	**Pn**	**01 13 20.1 +1.6**		
OSSC				AML	AML			
	comp=N,326µm,1.0s							
OSSC				AML	AML			
	comp=N,474µm,1.6s							
OSSC				AML	AML			
	comp=E,506µm,1.6s							
OSSC				AML	AML			
	comp=E,259µm,0.7s							
SEI	**Scarperia**	**1.61 291**		P	**Pb**	**01 13 21.7 0.0**		
SEI	**Scarperia**	**1.61 291**		P	**Pb**	**01 13 21.0 -0.7**		
SEI				AML	AML			
	comp=E,1260µm,0.4s							
SEI				AML	AML			
	comp=N,2145µm,0.4s							
ZIRJ	**Zirje**	**1.61**	**84**	*e*Pn	**Pn**	**01 13 20.2 +1.5**		
ZIRJ				Sn	**Sn**	**01 13 40.0 +1.6**		
SMRN	**Sveta Marina**	**1.62**	**18**	*e*Pn	**Pn**	**01 13 19.5 +0.7**		
SMRN				Sn	**Sn**	**01 13 40.3 +1.7**		
VVLD	**Villa Vallelon**	**1.63 175**		P	**Pn**	**01 13 21.0 +1.9**		
VVLD				AML	AML			
	comp=N,312µm,0.5s							
VVLD				AML	AML			
	comp=E,336µm,0.6s							
MTRZ	**Monterenzio**	**1.67 302**		P	**Pb**	**01 13 22.1 -0.7**		
FROS	**Frosini**	**1.69 261**		P	**Pn**	**01 13 21.1 +1.3**		
FROS	**Frosini**	**1.69 261**		P	**Pn**	**01 13 21.1 +1.3**		
RCAV	**Rocca di Cave**	**1.69 193**		P	**Pn**	**01 13 20.9 +1.1**		
MORI	**Morici**	**1.69**	**77**	*i* Pn	**Pn**	**01 13 20.9 +1.2**		
MORI				Sn	**Sn**	**01 13 41.2 +1.0**		
MPPT	**Montemurlo**	**1.76 286**		P	**Pn**	**01 13 23.1 +2.2**		
MPPT				AML	AML			
	comp=E,431µm,0.5s							
MPPT				AML	AML			
	comp=N,256µm,0.5s							
FRES	**Fresagrandinar**	**1.77 149**		P	**Pn**	**01 13 22.2 +1.2**		
TOLF	**Tolfa**	**1.78 217**		P	**Pn**	**01 13 22.0 +0.9**		
POFI	**Posta Fibreno**	**1.79 173**		P	**Pn**	**01 13 22.9 +1.7**		
FNVD	**Fontana Vidola**	**1.80 293**		P	**Pb**	**01 13 24.7 -0.3**		
FNVD	**Fontana Vidola**	**1.80 293**		P	**Pn**	**01 13 23.5 +2.1**		
RDP	**Rocca di Papa**	**1.82 197**		P	**Pn**	**01 13 22.9 +1.3**		
MTCR	**Monte La Croce**	**1.84 288**		P	**Pn**	**01 13 24.1 +2.0**		
MTCR	**Monte La Croce**	**1.84 288**		P	**Pn**	**01 13 24.1 +2.0**		
RNI2	**Rionero Sannit**	**1.87 163**		P	**Pn**	**01 13 23.6 +1.2**		
TRIF	**Trifonti**	**1.89 259**	⇑	P	**Pn**	**01 13 23.7 +1.2**		
TRIF				AML	AML			
	comp=N,210µm,1.5s							
TRIF				AML	AML			
	comp=E,272µm,0.3s							
A250A	**Rusevo Krmpots**	**1.91**	**33**	*e*Pn	**Pn**	**01 13 24.1 +1.3**		
A250A				Sn	**Sn**	**01 13 46.5 +0.8**		
GIUL	**Giuliano Di Ro**	**1.94 184**		P	**Pn**	**01 13 24.3 +1.0**		
GIUL				AML	AML			
	comp=N,216µm,1.0s							
GIUL				AML	AML			
	comp=E,156µm,1.4s							
CERA	**Filignano**	**1.95 167**		P	**Pn**	**01 13 24.6 +1.2**		
CERA				AML	AML			
	comp=E,356µm,0.8s							
CERA				AML	AML			
	comp=N,274µm,1.3s							
MIDA	**Miranda**	**1.95 162**		P	**Pn**	**01 13 24.2 +0.7**		
MIDA				AML	AML			
	comp=E,255µm,0.8s							
MIDA				AML	AML			
	comp=N,180µm,0.8s							
UDBI	**Udbina**	**1.97**	**58**	*e*Pn	**Pn**	**01 13 25.1 +1.4**		
UDBI				Sn	**Sn**	**01 13 48.3 +1.0**		
RIY	**Rijeka**	**1.98**	**22**	*e*Pn	**Pn**	**01 13 24.8 +1.0**		
RIY				Sn	**Sn**	**01 13 48.0 +0.6**		
CASP	**Castiglione de**	**2.01 250**		AML	AML			
	comp=N,87µm,1.4s							
CASP				AML	AML			
	comp=E,66µm,1.6s							
TREM	**Isole Tremiti**	**2.05 131**		P	**Pn**	**01 13 25.9 +1.1**		
TREM				AML	AML			
	comp=N,644µm,0.8s							
TREM				AML	AML			
	comp=E,456µm,0.7s							
SKDS	**Skadanscina**	**2.09**	**11**	*e*Pn	**Pn**	**01 13 25.3 0.0**		
PLIT	**Plitvice**	**2.09**	**48**	*e*Pn	**Pn**	**01 13 26.6 +1.2**		
PLIT				Sn	**Sn**	**01 13 50.1 -0.1**		
PII	**Pisa**	**2.13 277**		P	**Pn**	**01 13 27.1 +1.4**		
PII	**Pisa**	**2.13 277**		AML	AML			
	comp=N,355µm,1.1s							
PII				AML	AML			
	comp=E,368µm,0.3s							
BSSO	**Busso**	**2.13 156**		P	**Pn**	**01 13 27.1 +1.1**		
BDI	**Bagni Di Lucca**	**2.13 286**		AML	AML			
	comp=E,84µm,0.3s							
BDI				AML	AML			
	comp=N,90µm,0.4s							
CIGN	**Sant'Elia a Pi**	**2.14 149**		P	**Pn**	**01 13 26.9 +1.0**		
KNDS	**Knezji Dol**	**2.14**	**18**	*i* Pn	**Pn**	**01 13 27.1 +1.0**		
VAGA	**Valle Agricola**	**2.16 164**		P	**Pn**	**01 13 27.9 +1.6**		
VAGA				AML	AML			
	comp=E,149µm,0.5s							
VAGA				AML	AML			
	comp=N,181µm,0.8s							
MAIM	**Mastiano**	**2.17 282**		P	**Pn**	**01 13 27.9 +1.4**		
MAIM	**Mastiano**	**2.17 282**		AML	AML			
	comp=E,184µm,0.4s							
MAIM				AML	AML			
	comp=N,230µm,0.5s							
MELA	**Melanico ??? S**	**2.18 145**		P	**Pn**	**01 13 27.8 +1.3**		
MELA				AML	AML			
	comp=E,455µm,0.5s							
MELA				AML	AML			
	comp=N,558µm,0.6s							
MELA				AML	AML			
	comp=N,580µm,0.6s							
MELA				AML	AML			
	comp=E,510µm,0.5s							
CARD	**Cardoso**	**2.20 285**		P	**Pn**	**01 13 28.3 +1.4**		
KIJV	**Kijevo**	**2.21**	**76**	*e*Pn	**Pn**	**01 13 28.6 +1.6**		
KIJV				Sn	**Sn**	**01 13 53.6 +0.5**		
HVAR	**Hvar**	**2.22**	**97**	*e*Pn	**Pn**	**01 13 28.1 +1.0**		
HVAR				Sn	**Sn**	**01 13 54.4 +1.0**		
SACR	**S. Croce Del S**	**2.30 155**		P	**Pn**	**01 13 29.2 +0.9**		
SACR				AML	AML			
	comp=E,77µm,1.6s							
SACR				AML	AML			
	comp=N,96µm,0.8s							
SARO	**Sassorosso**	**2.30 288**		P	**Pn**	**01 13 29.8 +1.5**		
APRC	**Apricena**	**2.33 137**		AML	AML			
	comp=E,218µm,0.2s							
APRC				AML	AML			
	comp=N,322µm,0.6s							
CEY	**Cerknica**	**2.35**	**17**	*e*Pn	**Pn**	**01 13 29.8 +0.9**		
PIGN	**Pignataro Magg**	**2.36 166**		P	**Pn**	**01 13 30.5 +1.5**		
MODR	**Mondragone**	**2.37 172**		P	**Pn**	**01 13 30.3 +1.1**		
BOJS	**Bojanci**	**2.39**	**32**	*i* Pn	**Pn**	**01 13 30.8 +1.4**		
BOJS	**Bojanci**	**2.39**	**32**	AML	AML			
	comp=E,578µm,1.5s							
BOJS				AML	AML			
	comp=N,651µm,0.9s							
SGRT	**San Giovanni R**	**2.44 135**		P	**Pn**	**01 13 30.7 +0.6**		
SGRT				AML	AML			
	comp=N,218µm,0.4s							
SGRT				AML	AML			
	comp=E,254µm,1.2s							
EQUI	**Equi**	**2.47 287**		AML	AML			
	comp=N,132µm,0.4s							
EQUI				AML	AML			
	comp=E,76µm,1.1s							
VITU	**Vitulano (BN)**	**2.48 159**		P	**Pn**	**01 13 31.9 +1.2**		
MOCO	**Biccari - m.te**	**2.48 148**		P	**Pn**	**01 13 32.0 +1.3**		
SABO	**M.te Sabotino**	**2.48**	**3**	AML	AML			
	comp=N,518µm,0.5s							
SABO				AML	AML			
	comp=E,1835µm,0.5s							
SABO				AML	AML			
	comp=E,422µm,0.5s							
SABO				AML	AML			
	comp=N,1950µm,0.5s							
PSB1	**Pescosannita**	**2.49 155**		P	**Pn**	**01 13 32.7 +1.8**		
MSAG	**Monte S. Angel**	**2.55 133**		P	**Pn**	**01 13 32.5 +0.8**		
MSAG				AML	AML			
	comp=N,464µm,0.9s							
MSAG				AML	AML			
	comp=E,256µm,0.6s							
OZLJ	**Ozalj**	**2.57**	**34**	*e*Pn	**Pn**	**01 13 33.1 +1.2**		
OZLJ				Sn	**Sn**	**01 14 02.0 +0.2**		
MAKA	**Makarska**	**2.62**	**93**	*e*Pn	**Pn**	**01 13 34.2 +1.6**		
MAKA				Sn	**Sn**	**01 14 04.2 +1.0**		
GRAM	**Graiana**	**2.63 293**		AML	AML			
	comp=N,410µm,0.4s							
GRAM				AML	AML			
	comp=E,303µm,0.3s							
MRB1	**Monte Rocchett**	**2.63 154**		P	**Pn**	**01 13 35.1 +2.4**		
MRB1				AML	AML			
	comp=N,187µm,0.7s							
MRB1				AML	AML			
	comp=E,174µm,0.7s							
LSTV	**Lastovo**	**2.63 105**		*e*Pn	**Pn**	**01 13 33.6 +0.8**		
LSTV				Sn	**Sn**	**01 14 04.9 +1.4**		
CGRP	**Cima Grappa**	**2.65 334**		AML	AML			
	comp=E,387µm,0.7s							
CGRP				AML	AML			
	comp=E,293µm,0.7s							
CGRP				AML	AML			
	comp=N,294µm,0.6s							
CGRP				AML	AML			
	comp=N,331µm,0.6s							
LJU	**Ljubljana**	**2.66**	**17**	*e*Pn	**Pn**	**01 13 34.7 +1.5**		
LJU	**Ljubljana**	**2.66**	**17**	AML	AML			
	comp=N,1870µm,1.3s							
LJU				AML	AML			
	comp=E,1650µm,0.8s							
VARN	**Col Varnada, M**	**2.67 340**		AML	AML			
	comp=E,411µm,0.4s							
VARN				AML	AML			
	comp=N,278µm,0.5s							
RICI	**Ricice**	**2.69**	**89**	*e*Pn	**Pn**	**01 13 35.5 +2.0**		
RICI				Sn	**Sn**	**01 14 06.0 +1.0**		
ROVR	**Rover Verones**	**2.73 323**		AML	AML			
	comp=E,79µm,1.1s							
ROVR				AML	AML			
	comp=N,185µm,0.2s							
CRES	**Cresnjev**	**2.74**	**31**	*e*Pn	**Pn**	**01 13 35.3 +1.1**		
ROBS	**Robic**	**2.75**	**1**	*i* Pn	**Pn**	**01 13 34.8 +0.4**		
SRKY	**Kupres RS**	**2.76**	**77**	*e*Pn	**Pn**	**01 13 38.4 +3.8**		
MPRI	**Monte Prat**	**2.76 354**		AML	AML			
	comp=N,542µm,0.5s							
MPRI				AML	AML			
	comp=E,274µm,0.6s							
PRIJ	**Prijedor**	**2.78**	**57**	*e*Pn	**Pb**	**01 13 40.6 -1.0**		
MGRS	**Mrkonjic Grad**	**2.79**	**70**	*e*Pn	**Pb**	**01 13 40.0 -1.8**		
CAFE	**Carife**	**2.81 151**		P	**Pn**	**01 13 36.8 +1.6**		
CAFE				AML	AML			
	comp=E,102µm,0.9s							
CAFE				AML	AML			
	comp=N,86µm,1.0s							
STAL	**STALIGIAL**	**2.81 350**		AML	AML			
	comp=E,418µm,0.4s							
STAL				AML	AML			
	comp=N,286µm,0.7s							
RSF3	**Rocca San Feli**	**2.84 152**		P	**Pn**	**01 13 37.1 +1.4**		
CTI	**Castel Tesino**	**2.85 334**		AML	AML			
	comp=N,292µm,1.3s							
CTI				AML	AML			
	comp=E,297µm,1.3s							
SNAL	**S. Angelo Dei**	**2.89 152**		AML	AML			
	comp=E,102µm,1.5s							
SNAL				AML	AML			
	comp=N,103µm,1.1s							
CIMO	**Cimolais**	**2.90 346**		AML	AML			
CIMO				AML	AML			
	comp=E,68µm,0.4s							
CIMO				AML	AML			
CIMO				AML	AML			
	comp=N,76µm,0.3s							
PTCC	**Patocco-Chiusa**	**2.91 359**		AML	AML			
	comp=E,130µm,0.4s							
PTCC				AML	AML			
	comp=N,97µm,0.4s							
AGOR	**Agordo**	**2.96 341**		AML	AML			
	comp=N,98µm,0.7s							
AGOR				AML	AML			
	comp=E,111µm,0.4s							
ZAG	**Zagreb**	**2.96**	**37**	*e*Pn	**Pn**	**01 13 38.5 +1.3**		
ZAG				Sn	**Sn**	**01 14 10.9 -0.6**		
SALO	**Salr**	**2.97 317**		AML	AML			
	comp=E,198µm,0.3s							
SALO				AML	AML			
	comp=N,224µm,0.2s							
BLY	**Banja Luka**	**2.98**	**64**	*e*Pn	**Pb**	**01 13 44.8 -0.1**		
CLUD	**Cludinico**	**2.99 353**		AML	AML			
	comp=N,122µm,1.6s							
CLUD				AML	AML			
	comp=E,142µm,0.6s							
PTJ	**Puntijarka**	**3.01**	**36**	*e*Pn	**Pn**	**01 13 38.8 +0.8**		
PTJ				Sn	**Sn**	**01 14 12.7 -0.3**		
MAGA	**Magasa**	**3.03 320**		AML	AML			
	comp=E,601µm,0.4s							
MAGA				AML	AML			
	comp=N,530µm,1.1s							
LUSI	**Trento, Gardas**	**3.04 325**		AML	AML			
	comp=E,191µm,0.6s							
LUSI				AML	AML			
	comp=N,276µm,0.2s							
ACOM	**Acomizza, Ital**	**3.05**	**1**	AML	AML			
	comp=E,250µm,1.1s							
ACOM				AML	AML			
	comp=E,267µm,0.4s							
ACOM				AML	AML			
	comp=N,340µm,1.5s							
ACOM				AML	AML			
	comp=N,349µm,0.5s							
ZOU	**Zoufplan**	**3.08 354**		AML	AML			
	comp=E,148µm,1.1s							
ZOU				AML	AML			
	comp=N,136µm,0.5s							
ZOU				AML	AML			
	comp=E,149µm,0.5s							
ZOU				AML	AML			
	comp=N,125µm,0.5s							
OBKA	**Obir**	**3.11**	**14**	*i* Pn	**Pn**	**01 13 41.2 +1.7**		
OBKA	comp=N,1.4nm,0.1s			*e*Sn	**Sn**	**01 14 18.7 +3.1**		
	comp=N,22nm,0.3s							
GAGG	**Gaggia**	**3.13 327**		AML	AML			
	comp=N,152µm,0.7s							
GAGG				AML	AML			
	comp=E,151µm,0.8s							
FVI	**Forni Avoltri**	**3.13 352**		AML	AML			
	comp=N,101µm,0.4s							
FVI				AML	AML			
	comp=E,68µm,0.4s							
MYKA	**Terra Mystica**	**3.14**	**3**	*i* Pn	**Pn**	**01 13 41.2 +1.4**		
MYKA	comp=E,3.1nm,0.2s,SNR=4.4			*i* Sn	**Sn**	**01 14 17.1 +1.1**		
	comp=E,9.7nm,0.4s							
PALZ	**Palazzo San Ge**	**3.17 143**		AML	AML			
	comp=N,147µm,0.6s							
PALZ				AML	AML			
	comp=E,169µm,1.4s							
MOSL	**Moslavina**	**3.18**	**47**	*e*Pn	**Pn**	**01 13 40.8 +0.6**		
MOSL				Sn	**Sn**	**01 14 17.2 +0.2**		
MRVN	**Minervino Murg**	**3.18 139**		AML	AML			
	comp=N,56µm,0.6s							
MRVN				AML	AML			
	comp=E,43µm,1.1s							
STON	**Ston**	**3.18 100**		*e*Pn	**Pn**	**01 13 41.1 +0.8**		
STON	**Ston**	**3.18 100**		*e*Pn	**Pn**	**01 13 41.7 +1.5**		
STON				Sn	**Sn**	**01 14 17.6 +0.6**		
STON	**Ston**	**3.18 100**		P	**Pn**	**01 13 41.9 +1.6**		
ZONE	**Zone**	**3.28 315**		AML	AML			
	comp=E,192µm,0.2s							
ZONE				AML	AML			
	comp=N,308µm,0.3s							
KOSI	**Kohlern**	**3.31 335**		AML	AML			
	comp=E,264µm,0.7s							
KOSI				AML	AML			
	comp=N,140µm,0.8s							
CDRU	**Civita di Ruta**	**3.31 155**		AML	AML			
	comp=N,19µm,0.3s							
CDRU				AML	AML			
	comp=E,26µm,0.6s							
ABTA	**Abfaltersbach**	**3.31 349**		*i* Pn	**Pn**	**01 13 43.6 +1.4**		
ABTA	comp=E,10nm,0.1s,SNR=56			*i* Sn	**Sn**	**01 14 20.3 -0.2**		
	comp=E,8.6nm,0.3s							
SMPL	**Sampolo**	**3.36 247**		P	**Pn**	**01 13 45.5 +2.7**		
APPI	**Appiano**	**3.37 333**		AML	AML			
	comp=E,180µm,0.4s							
APPI				AML	AML			
	comp=N,187µm,1.4s							
CORF	**Corte**	**3.37 251**		P	**Pn**	**01 13 44.7 +1.8**		
SOKA	**Soboth**	**3.38**	**19**	*i* Pn	**Pn**	**01 13 43.7 +0.6**		
	comp=N,0.2nm,0.1s							
SOKA				*i* Sn	**Sn**	**01 14 22.8 +0.8**		
	comp=N,6.7nm,0.3s							
PGF	**Pioggiola**	**3.39 255**		*e*Pn	**Pn**	**01 13 43.9 +0.7**		
PGF				*e*Sn	**Sn**	**01 14 22.6 +0.3**		
	comp=N,4.3nm,0.3s							
PGF	**Pioggiola**	**3.39 255**		P	**Pn**	**01 13 44.7 +1.4**		
KALN	**Kalnik**	**3.40**	**38**	*e*Pn	**Pn**	**01 13 43.4 +0.1**		
KALN				Sn	**Sn**	**01 14 22.1 -0.4**		
AMUR	**Altamura**	**3.50 137**		AML	AML			
	comp=N,74µm,1.3s							
AMUR				AML	AML			
	comp=E,93µm,1.3s							
MDI	**Monti di Nese**	**3.50 312**		AML	AML			
	comp=E,114µm,0.3s							
MDI				AML	AML			
	comp=N,100µm,0.2s							
DBRK	**Dubrovnik**	**3.55 102**		*e*Pn	**Pn**	**01 13 46.8 +1.4**		
DBRK				Sn	**Sn**	**01 14 27.5 +1.4**		
ABSI	**Aberstueckl**	**3.56 336**		AML	AML			
	comp=E,280µm,0.7s							
ABSI				AML	AML			
	comp=N,268µm,0.8s							
RISI	**Rein**	**3.58 345**		AML	AML			
	comp=E,275µm,0.4s							
RISI				AML	AML			
	comp=N,307µm,0.4s							
KBA	**Koelnbreinsper**	**3.58 359**		*e*Pn	**Pn**	**01 13 47.5 +1.6**		
KBA	comp=N,5.0nm,0.3s,SNR=9.8			*i* Sn	**Sn**	**01 14 27.4 +0.2**		
	comp=N,18nm,0.5s							
TREB	**Trebinje**	**3.68 101**		*e*Pn	**Pn**	**01 13 48.4 +1.2**		
A252A	**Venje**	**3.71**	**57**	*e*Pn	**Pn**	**01 13 48.2 +0.7**		
A252A				Sn	**Sn**	**01 14 28.8 -1.2**		
ROSI	**Rosskopf**	**3.72 338**		AML	AML			
	comp=E,160µm,0.9s							
ROSI				AML	AML			
	comp=N,184µm,1.0s							
BRY	**Bratogost**	**3.78**	**97**	*e*Pn	**Pn**	**01 13 50.3 +1.7**		
BEHE	**Becsehely**	**3.80**	**37**	*e*Pn	**Pb**	**01 14 02.6 +3.6**		
BEHE	**Becsehely**	**3.80**	**37**	P	**Pb**	**01 14 02.6 +3.6**		
NOCI	**Noci**	**3.82 134**		AML	AML			
	comp=N,78µm,0.4s							
NOCI				AML	AML			
	comp=E,94µm,0.8s							
CANO	**Canova, Maglio**	**3.83 282**		AML	AML			
	comp=E,120µm,0.3s							
CANO				AML	AML			
	comp=N,118µm,0.3s							
HCY	**Herceg Novi**	**3.86 104**		*e*Pn	**Pn**	**01 13 51.6 +2.0**		
MUGIO	**Muggio**	**3.96 309**		AML	AML			
	comp=N,64µm,0.3s							
MUGIO				AML	AML			
	comp=E,63µm,1.6s							
WTTA	**Wattenberg**	**3.97 342**		*e*Pn	**Pn**	**01 13 53.6 +2.2**		
WTTA	comp=E,3.2nm,0.2s,SNR=12			*e*Sn	**Sn**	**01 14 37.4 +0.6**		
	comp=E,18nm,0.3s							
WTTA	**Wattenberg**	**3.97 342**		AML	AML			
	comp=N,99µm,0.5s							
WTTA				AML	AML			
	comp=E,106µm,0.6s							
UPM	**Unac-Piva**	**4.00**	**92**	*e*Pn	**Pn**	**01 13 54.5 +2.8**		
FETA	**Feichten**	**4.01 332**		*i* Pn	**Pn**	**01 13 53.9 +2.1**		
	comp=E,3.4nm,0.2s,SNR=14							
FETA				*i* Sn	**Sn**	**01 14 39.2 +1.5**		
	comp=E,11nm,0.4s							
SQTA	**Sankt Quirin**	**4.04 338**		*i* Pn	**Pn**	**01 13 54.3 +2.0**		
	comp=E,15nm,0.3s,SNR=8.2							
SQTA				*i* Sn	**Sn**	**01 14 39.5 +1.1**		
	comp=E,18nm,0.4s							
WATA	**Walderalm**	**4.06 342**		*i* Pn	**Pn**	**01 13 54.6 +2.2**		
	comp=E,12nm,0.3s,SNR=12							
WATA				*i* Sn	**Sn**	**01 14 40.8 +2.0**		
	comp=E,22nm,0.3s							
VARE	**Varese**	**4.08 307**		AML	AML			
	comp=N,126µm,0.4s							
VARE				AML	AML			
	comp=E,126µm,0.2s							
MOTA	**Moosalm**	**4.18 338**		*i* Pn	**Pn**	**01 13 56.1 +1.9**		
	comp=E,2.1nm,0.2s,SNR=9.0							
MOTA				*i* Sn	**Sn**	**01 14 44.3 +2.3**		
	comp=E,8.7nm,0.3s							
BIOA	**Bad Ischl, Aus**	**4.20**	**2**	*i* Pn	**Pn**	**01 13 56.0 +1.7**		
	comp=E,7.7nm,0.4s,SNR=15							
BIOA				*i* Sn	**Sn**	**01 14 42.9 +0.8**		
	comp=E,7.7nm,0.3s							
KOVH	**Kovagotottos**	**4.21**	**50**	P	**Pn**	**01 13 55.0 +0.6**		
KOVH				S	**Sn**	**01 14 40.3 -2

TURF	**col de Turini**	**4.41 278**	P		**Pn**	**01 13 59.1**	**+1.8**
TURF			S		**Sn**	**01 14 47.8**	**+0.3**
RETA	**Reutte**	**4.41 336**	*i* Pn		**Pn**	**01 13 59.4**	**+2.1**
	comp=E,2.6nm,0.2s,SNR=4.8						
RETA			*e*Sn		**Sn**	**01 14 48.1**	**+0.7**
	comp=E,4.9nm,0.3s						
ESCA	**l'Escarene**	**4.41 276**	P		**Pn**	**01 13 59.2**	**+2.0**
DRME	**Dracevica, Mon**	**4.42 105**	*e*Pn		**Pn**	**01 13 59.2**	**+1.8**
SPIF	**crte de Spivo**	**4.52 279**	P		**Pn**	**01 14 00.0**	**+1.2**
DAVA	**Damuels**	**4.54 328**	*i* Pn		**Pn**	**01 14 01.3**	**+2.2**
	comp=E,1.5nm,0.2s						
DAVA			*i* Sn		**Sn**	**01 14 51.0**	**+0.2**
	comp=E,14nm,0.7s						
MORH	**Mrgy, Hungar**	**4.59 52**	*e*Pn		**Pb**	**01 14 12.8**	**+0.4**
MORH	**Mrgy, Hungar**	**4.59 52**	P		Pn	01 14 05.7	+6.0
RONA	**Rosalia, Austr**	**4.66 25**	*i* Pn		**Pn**	**01 14 01.8**	**+1.2**
	comp=E,0.2nm,0.1s						
MPLH	**Magyarpolny**	**4.67 37**	P		Pn	01 14 07.3	+6.5
CALF	**Calern**	**4.74 275**	P		**Pn**	**01 14 03.4**	**+1.6**
CONA	**Conrad Observa**	**4.75 20**	*i* Pn		**Pn**	**01 14 03.1**	**+1.2**
	comp=E,0.6nm,0.1s,SNR=9.1						
CONA			*i* Sn		**Sn**	**01 14 56.2**	**+0.5**
	comp=E,5.6nm,0.4s						
SJES	**Sjenica**	**4.77 91**	*e*Pn		**Pn**	**01 14 04.5**	**+2.2**
DIVS	**Divibare**	**4.78 81**	*e*Pn		**Pb**	**01 14 13.7**	**-2.1**
MBDF	**Montbardon**	**4.95 287**	*e*Pn		**Pn**	**01 14 04.6**	**-0.2**
MBDF			*e*Sn		**Sn**	**01 14 57.8**	**-3.2**
	comp=E,14nm,0.6s						
VSL	**Villasalto**	**5.03 219**	⇓P		**Pn**	**01 14 08.3**	**+2.6**
LMR	**La Mourre**	**5.05 271**	*e*Pn		**Pn**	**01 14 06.4**	**+0.5**
LMR			*e*Sn		**Sn**	**01 15 01.9**	**-1.2**
	comp=E,3.5nm,0.2s						
TRIGF	**Trigance**	**5.11 275**	P		**Pn**	**01 14 08.6**	**+1.8**
TRIGF			S		**Sn**	**01 15 06.9**	**+2.2**
LPG	**La Plagne**	**5.18 295**	*e*Pn		**Pn**	**01 14 07.8**	**-0.3**
LPG			*e*Sn		**Sn**	**01 15 02.8**	**-4.0**
	comp=E,9.1nm,0.3s						
LPL	**La Plagne**	**5.20 295**	*e*Pn		**Pn**	**01 14 08.9**	**+0.6**
LPL			*e*Sn		**Sn**	**01 15 03.4**	**-3.8**
	comp=E,30nm,0.5s						
RSL	**Roselend**	**5.33 297**	P		**Pn**	**01 14 11.3**	**+1.3**
RSL			S		**Sn**	**01 15 08.5**	**-1.9**
CKRC	**Cesky Krumlov**	**5.36 6**	*e*PN		**Pn**	**01 14 10.6**	**+0.4**
CKRC			*e*SN		**Sn**	**01 15 08.2**	**-2.5**
SLE	**Schleitheim**	**5.50 323**	S		**Sn**	**01 15 10.7**	**-3.5**
SLE	**Schleitheim**	**5.50 323**	P		**Pn**	**01 14 12.0**	**-0.2**
SULZ	**Cheisacher**	**5.50 319**	P		**Pn**	**01 14 13.0**	**+0.9**
SULZ	**Cheisacher**	**5.50 319**	S		**Sn**	**01 15 10.1**	**-4.1**
BALST	**Balsthal**	**5.57 316**	P		**Pn**	**01 14 13.7**	**+0.5**
BALST	**Balsthal**	**5.57 316**	S		**Sn**	**01 15 11.3**	**-4.7**
ORIF	**Oris-en-Rattie**	**5.61 287**	*e*Pn		**Pn**	**01 14 15.1**	**+1.3**
ORIF			*e*Sn		**Sn**	**01 15 15.4**	**-1.8**
	comp=E,9.3nm,0.4s						
ORIF	**Oris-en-Rattie**	**5.61 287**	P		**Pn**	**01 14 15.4**	**+1.6**
TORNY	**Torny/Romont**	**5.63 308**	P		**Pn**	**01 14 14.8**	**+0.8**
KHC	**Kasperske Hory**	**5.64 1**	*e*PN		**Pn**	**01 14 14.6**	**+0.6**
KHC			*e*SN		**Sn**	**01 15 14.5**	**-3.1**
KHC			*ex*		**Sb**	**01 15 35.0**	**-2.3**
BSTF	**la Bastide-des**	**5.66 277**	P		**Pn**	**01 14 16.4**	**+2.0**
SMRF	**Simiane la Rot**	**5.72 278**	*e*Pn		**Pn**	**01 14 17.4**	**+2.2**
SMRF			*e*Sn		**Sn**	**01 15 17.7**	**-1.9**
KIZ	**Kirchzarten**	**5.90 321**	P		**Pn**	**01 14 18.4**	**+0.8**
KIZ	**Kirchzarten**	**5.90 321**	S		**Sn**	**01 15 20.1**	**-3.9**
OGSM	**Saint Maurice**	**5.92 294**	P		**Pn**	**01 14 18.9**	**+1.0**
KRUC	**Moravsky**	**5.93 19**	*e*PN		**Pn**	**01 14 18.2**	**+0.1**
KRUC			*e*SN		**Sn**	**01 15 26.9**	**+2.1**
BRANT	**Les Verrieres**	**6.00 307**	P		**Pn**	**01 14 20.3**	**+1.2**
CABF	**La Chapelle**	**6.06 303**	*e*Pn		**Pn**	**01 14 20.6**	**+0.6**
CABF			*e*Sn		**Sn**	**01 15 25.0**	**-3.2**
	comp=E,5.4nm,0.3s						
CHMF	**Charmoille**	**6.07 310**	P		**Pn**	**01 14 20.0**	**-0.1**
CHMF			S		**Sn**	**01 15 23.0**	**-5.4**
VOGT	**Vogtsburg - To**	**6.10 321**	P		**Pn**	**01 14 21.0**	**+0.5**
OG35	**Corcelles**	**6.15 297**	P		**Pn**	**01 14 21.5**	**+0.4**
OPP	**Oppenau**	**6.19 326**	P		**Pn**	**01 14 21.9**	**+0.2**
MOF	**Molkenrain**	**6.20 317**	P		**Pn**	**01 14 22.4**	**+0.6**
HINF	**Hinteralfeld**	**6.32 315**	*e*Pn		**Pn**	**01 14 23.4**	**0.0**
HINF			*e*Sn		**Sn**	**01 15 29.9**	**-4.5**
	comp=E,17nm,0.3s						
RONF	**Ronchamp**	**6.36 314**	P		**Pn**	**01 14 24.1**	**+0.2**
ECH	**Echery**	**6.44 319**	P		**Pn**	**01 14 25.8**	**+0.7**
ECH	**Echery**	**6.44 319**	P		**Pn**	**01 14 25.5**	**+0.4**
VIVF	**Saint-Julien-l**	**6.45 285**	*e*Pn		**Pn**	**01 14 25.5**	**+0.3**
WLS	**Welschbruch**	**6.49 321**	P		**Pn**	**01 14 26.2**	**+0.4**
CDF	**Champ du Feu**	**6.53 321**	*e*Pn		**Pn**	**01 14 26.6**	**+0.3**
CDF			*e*Sn		**Sn**	**01 15 35.8**	**-3.8**
	comp=E,8.8nm,0.4s						
HAU	**Haudompre**	**6.70 315**	*e*Pn		**Pn**	**01 14 28.9**	**+0.3**
HAU			*e*Sn		**Sn**	**01 15 38.1**	**-5.7**
	comp=E,28nm,0.4s						
LASF	**Ste Croix**	**6.96 278**	*e*Pn		**Pn**	**01 14 32.8**	**+0.6**
PAGF	**Fort de Pagny**	**7.37 316**	*e*Pn		**Pn**	**01 14 38.6**	**+0.8**
	baz=148						
PAGF			*e*Sn		**Sn**	**01 15 55.5**	**-4.8**
	comp=E,6.2nm,0.2s						
SMF	**Signal de Mont**	**7.49 298**	*e*Pn		**Pn**	**01 14 39.1**	**-0.3**
SMF			*e*Sn		**Sn**	**01 15 56.5**	**-6.6**
	comp=E,13nm,0.5s						
SFTF	**Sexfontaines**	**7.52 312**	*e*Pn		**Pn**	**01 14 39.6**	**-0.2**
	baz=133						
SFTF			*e*Sn		**Sn**	**01 15 59.4**	**-4.4**
	comp=E,7.9nm,0.4s						
MEZF	**Maizieres J'vi**	**7.69 314**	*e*Pn		**Pn**	**01 14 42.2**	**+0.1**
	baz=130						
MEZF			*e*Sn		**Sn**	**01 16 01.7**	**-6.3**
	comp=E,4.6nm,0.3s						
SAVF	**Savonnieres en**	**7.72 314**	*e*Pn		**Pn**	**01 14 42.7**	**+0.1**
	baz=126						
SAVF			*e*Sn		**Sn**	**01 16 03.2**	**-5.6**
	comp=E,4.7nm,0.3s						
LOR	**Lormes**	**7.72 303**	*e*Pn		**Pn**	**01 14 42.6**	**-0.1**
	baz=125						
LOR			*e*Sn		**Sn**	**01 16 02.5**	**-6.4**
	comp=E,15nm,0.3s						
CLL	**Collm**	**7.82 358**	*i* Pn		**Pn**	**01 14 44.1**	**+0.2**
	comp=Z,3.0nm,0.4s						
CLL			*i* Sg		Sb	01 17 03.2	+23
	comp=Z,11nm,1.4s						
AVF	**Avril sur Loir**	**7.85 298**	*e*Pn		**Pn**	**01 14 44.1**	**-0.3**
AVF			*e*Sn		**Sn**	**01 16 05.7**	**-6.3**
	comp=Z,2.6nm,0.4s						
SSF	**Saint Saulge**	**7.86 300**	*e*Pn		**Pn**	**01 14 45.0**	**+0.5**
SSF			*e*Sn		**Sn**	**01 16 06.7**	**-5.5**
	comp=Z,8.9nm,0.5s						
BGF	**Bois d'Agland**	**8.10 296**	*e*Pn		**Pn**	**01 14 47.3**	**-0.5**
BGF			*e*Sn		**Sn**	**01 16 11.4**	**-6.8**
	comp=Z,17nm,0.5s						
TCF	**Toulx Ste Croi**	**8.44 293**	*e*Pn		**Pn**	**01 14 52.9**	**+0.3**
TCF			*e*Sn		**Sn**	**01 16 19.5**	**-7.2**
	comp=Z,3.2nm,0.3s						
HYF	**Humbligny**	**8.48 300**	*e*Pn		**Pn**	**01 14 53.5**	**+0.4**

*NOU **25** 01:25:21.5,21.67S×169.93E,h28km,MLv4.7/8, Southeast of Loyalty Islands*
*NEIC **25** 01:25:21.3±1.2,21.63S±0.08×169.95E±0.09,h59km±11km, mb4.1/7, Error ellipse: s-maj=13.1km s-min=10.7km az=140.0*
*IDC **25** 01:25:22.9±2.7,21.52S×169.93E,h80km±21km,mb4.0/3, mbtmp4.3/4,MS3.1/3, Error ellipse: s-maj=77.2km s-min=17.9km az=163.0*
ISC 25 01:25:20.2±0.9,21.65S±0.1×169.99E±0.08,h50km,n34, σ1°39/37,mb4.5/8,1C,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**1.83 274**			**Pn**	**01 25 49.5**	**+0.4**
MARNC	**Mare, Loyalty**	**1.83 274**		P	**Pn**	**01 25 50.4**	**+1.2**
PINNC	**Pines Island,**	**2.55 247**			**Pn**	**01 25 59.1**	**0.0**
PINNC				Sn	**Sn**	**01 26 30.0**	**+1.0**
PINNC	**Pines Island,**	**2.55 247**		P	**Pn**	**01 25 59.7**	**+0.6**
LIFNC	**LIFOU**	**2.70 288**			**Pn**	**01 26 01.1**	**-0.1**
LIFNC	**LIFOU**	**2.70 288**		P	**Pn**	**01 26 02.3**	**+1.2**
YATNC	**Mamie plateau,**	**2.91 261**		P	**Pn**	**01 26 04.5**	**+0.5**
OUENC	**Ouen Island, N**	**3.02 254**			**Pn**	**01 26 05.9**	**+0.4**
OUENC	**Ouen Island, N**	**3.02 254**		P	**Pn**	**01 26 06.8**	**+1.2**
DZM	**Mont Dzumac**	**3.32 262**		P	**Pn**	**01 26 11.7**	**+2.0**
	605nm,0.4s,baz=128,slow=11,SNR=2934						
DZM				LR	LR	01 26 46.4	
	comp=Z,77nm,19.4s,baz=50,slow=25						
DZM				S	**Sn**	**01 26 50.7**	**+2.7**
	287nm,0.4s,baz=32,slow=20,SNR=12						
DZM	**Mont Dzumac**	**3.32 262**			**Pn**	**01 26 10.7**	**+1.0**
DZM				Sn	**Sn**	**01 26 49.5**	**+1.5**
ONTNC	**Ouen Toro**	**3.35 258**			**Pn**	**01 26 10.7**	**+0.7**
ONTNC	**Ouen Toro**	**3.35 258**		P	**Pn**	**01 26 11.5**	**+1.5**
NOUC	**Port Laguerre**	**3.46 261**		P	**Pn**	**01 26 13.0**	**+1.5**
KOUNC	**Koumac, New Ca**	**5.43 280**		Pn	**Pn**	**01 26 39.1**	**+0.5**
MSVF	**Nonsavu**	**8.52 64**		P	**Pn**	**01 27 24.0**	**+2.9**
	20nm,1.1s,baz=244,slow=12,SNR=5.0						
MSVF				LR	LR	01 30 06.6	
	comp=Z,297nm,18.5s,baz=187,slow=33						
MSVF	**Nonsavu**	**8.52 64**			**Pn**	**01 27 22.6**	**+1.5**
URZ	**Urewera**	**17.68 161**		LR	LR	01 34 28.9	
	comp=Z,94nm,21.5s,baz=31,slow=31						
EIDS	**Eidsvold**	**17.74 254**		Pn	**Pn**	**01 29 21.6**	**-2.0**
EIDS				IAmb	IAmb	01 29 27.8	
	comp=Z,9.6nm,0.8s						
CTA	**Charters Tower**	**22.23 270**		P	**P**	**01 30 14.3**	**+1.5**
	comp=Z,1.7nm,0.3s,baz=107,slow=11,SNR=2.4						
	comp=Z,1.7nm,0.3s						
STKA	**Stephens Creek**	**27.26 242**		P	**P**	**01 30 59.9**	**+0.1**
	comp=Z,5.9nm,0.8s,baz=86,slow=11,SNR=8.8						
	comp=Z,5.9nm,0.8s						
STKA	**Stephens Creek**	**27.26 242**		P	**P**	**01 30 59.8**	**0.0**
STKA				IAmb	IAmb	01 31 03.4	
	comp=Z,3.4nm,1.5s						
WR0	**Warramunga Arr**	**33.14 266**		P	**P**	**01 31 50.9**	**-1.0**
WR0				IAmb	IAmb	01 31 51.8	
	comp=Z,8.9nm,1.0s						
WB0	**Warramunga Arr**	**33.31 267**		P	**P**	**01 31 52.4**	**-1.0**
WB0				IAmb	IAmb	01 31 53.4	
	comp=Z,10nm,1.1s						
AS31	**Alice Springs**	**33.31 260**		P	**P**	**01 31 52.0**	**-1.4**
AS31				IAmb	IAmb	01 31 53.5	
	comp=Z,1.2nm,0.8s						
ASAR	**Alice Springs**	**33.31 260**		P	**P**	**01 31 52.3**	**-1.1**
WRA	**Warramunga Arr**	**33.33 266**		P	**P**	**01 31 52.5**	**-1.1**
	comp=Z,4.4nm,0.8s,baz=99,slow=8.1,SNR=25						
	comp=Z,4.4nm,0.8s						
WRA	**Warramunga Arr**	**33.33 266**		P	**P**	**01 31 52.2**	**-1.4**
MBWA	**Marble Bar**	**46.63 261**		P	**P**	**01 33 43.9**	**+0.1**
XLT	**XiLinHaoTe**	**81.78 324**	*i*	iP	**P**	**01 37 32.6**	**-1.1**
XLT				pP	pwP	01 37 49.1	-2.4
XLT				sP	sP	01 37 55.0	+2.8
XLT				PP	**PP**	**01 40 40.6**	**-1.1**
XLT				pmax	pmax		
	comp=Z,16nm,0.5s						
XLT				pmax	pmax		
	comp=Z,76nm,8.0s						
HHC	**Hu-ho-hao-te**	**82.48 319**	*e*	P	**P**	**01 37 37.9**	**+0.4**
HHC				pmax	pmax		
	comp=Z,42nm,1.0s						
HHC				pmax	pmax		
	comp=Z,140nm,6.9s						
BRG	**Berggiesshubel**	**145.31 333**	*e*	PKP	**PKPbc**	**01 44 50.1**	**-2.0**
BRG				Amp		01 44 51.6	
	comp=Z,3.9nm,0.9s						
CLL	**Collm**	**145.37 334**	*i*	PKPbc	**PKPbc**	**01 44 49.5**	**-2.7**
	comp=Z,3.0nm,0.7s						
GERES	**GERESS Array B**	**146.91 331**		PKPbc	**PKPdf**	**01 44 54.8**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=46,slow=3.9,SNR=8.3						

*BER **25** 01:30:48.7±2.9,80.37N×1.32W,h10km,ML2.4, ML3.3(NAO),Confirmed Earthquake*
*DNK **25** 01:30:51.0±2.3,80.24N×1.02W,h36km±19km,ML2.1*
*IEPN **25** 01:30:52.0,79.98N×0.86W,h10km*
ISC 25 01:30:46.5±1.0,80.18N±0.05×1.26W±0.05,h10km,n33, σ3°01/59,2C,North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**2.71 111**		Pn	**Pn**	**01 31 31.5**	**+1.5**
KBS				Sn	**Sn**	**01 32 00.7**	**-2.1**
KBS	**Kingsbay**	**2.71 111**	*i*	P	**Pn**	**01 31 31.5**	**+1.5**
KBS			*i*			01 31 32.4	
KBS			*e*	S	**Sn**	**01 31 59.5**	**-3.2**
KBS				IAML		01 32 07.0	
	comp=Z,36nm,0.3s						
KBS	**Kingsbay**	**2.71 111**	*e*	P	**Pn**	**01 31 31.5**	**+1.5**
KBS			*e*	S	**Sn**	**01 32 02.3**	**-0.5**
KBS				IAML		01 32 09.3	
	comp=Z,17nm,0.3s						
KBS	**Kingsbay**	**2.71 111**	⇑ *i*	P	**Pn**	**01 31 31.4**	**+1.4**
KBS			*e*	S	**Sn**	**01 32 00.4**	**-2.3**
NOR	**Nord**	**2.83 308**		Pn	**Pn**	**01 31 31.6**	**-0.1**
NOR				Sn	**Sn**	**01 32 02.5**	**-3.2**
NOR	**Nord**	**2.83 308**	*i*	P	**Pn**	**01 31 32.1**	**+0.4**
NOR			*i*	S	**Sn**	**01 32 03.0**	**-2.8**
NOR				IAML		01 32 14.8	
	comp=Z,4.2nm,0.4s						
NOR	**Nord**	**2.83 308**	*e*	P	**Pn**	**01 31 30.8**	**-0.9**
NOR			*e*	S	**Sn**	**01 32 00.6**	**-5.1**
BRBA	**Barentsburg A**	**3.61 118**		Pn	**Pn**	**01 31 45.7**	**+3.3**
BRBA				Sn	**Sn**	**01 32 25.6**	**+0.6**
BRBA	**Barentsburg A**	**3.61 118**	*e*	P	**Pn**	**01 31 45.6**	**+3.2**
BRBA			*e*	S	**Sn**	**01 32 25.4**	**+0.4**
BRBA				IAML		01 32 31.7	
	comp=Z,9.6nm,0.5s						
SPA0	**Spitsbergen Ar**	**3.87 112**		Pn	**Pn**	**01 31 48.1**	**+2.2**
	baz=329,slow=10						
SPA0				Sn	**Sn**	**01 32 29.9**	**-1.4**
	baz=320,slow=37						
SPA0	**Spitsbergen Ar**	**3.87 112**		Pn	**Pn**	**01 31 48.1**	**+2.2**
	baz=329,slow=10						
SPA0				Sn	**Sn**	**01 32 29.9**	**-1.4**
	baz=320,slow=37						
SPA0				IAML		01 32 33.5	
	comp=Z,13nm,0.4s						
SPA0	**Spitsbergen Ar**	**3.87 112**	⇑ *i*	P	**Pn**	**01 31 48.1**	**+2.2**
SPA0			*i*	S	**Sn**	**01 32 29.1**	**-2.3**
HSPB	**Hornsund (broa**	**4.59 125**		Pn	**Pn**	**01 31 58.9**	**+3.0**
HSPB				Sn	**Sn**	**01 32 48.7**	**-0.4**
HSPB	**Hornsund (broa**	**4.59 125**	*e*	P	**Pn**	**01 31 58.8**	**+3.0**
HSPB			*e*	S	**Sn**	**01 32 48.3**	**-0.8**
HSPB				IAML		01 32 53.0	
	comp=Z,13nm,0.5s						
DAG	**Danmarks Havn**	**4.86 234**	*e*		**Pn**	**01 32 00.1**	**+0.6**
DAG			*i*	P	**Pn**	**01 32 00.3**	**+0.8**
DAG			*i*	S	**Sn**	**01 32 52.0**	**-3.6**
DAG				IAML		01 32 53.5	
	comp=Z,14nm,0.4s						
DAG	**Danmarks Havn**	**4.86 234**	*e*	P	**Pn**	**01 32 00.5**	**+1.0**
DAG			*e*	S	**Sn**	**01 32 50.6**	**-5.0**
HOPEN	**Hopen**	**6.40 111**		Pn	**Pn**	**01 32 22.4**	**+1.7**
HOPEN				Sn	**Sn**	**01 33 30.3**	**-3.3**
HOPEN	**Hopen**	**6.40 111**	*e*	P	**Pn**	**01 32 22.6**	**+2.0**
HOPEN			*e*	S	**Sn**	**01 33 28.9**	**-4.7**
HOPEN				IAML		01 33 34.4	
	comp=Z,11nm,0.8s						
HOPEN	**Hopen**	**6.40 111**	*e*	P	**Pn**	**01 32 22.0**	**+1.4**
HOPEN			*e*	S	**Sn**	**01 33 28.7**	**-4.9**
BJO1	**Bjornoya**	**7.17 132**		Pn	**Pn**	**01 32 35.6**	**+4.5**
BJO1				Sn	**Sn**	**01 33 52.1**	**-0.4**
BJO1	**Bjornoya**	**7.17 132**	*e*	P	**Pn**	**01 32 34.2**	**+3.1**
BJO1			*e*	S	**Sn**	**01 33 48.0**	**-4.4**
BJO1				IAML		01 33 57.9	
	comp=Z,2.6nm,0.6s						
BJO1	**Bjornoya**	**7.17 132**	*e*	P	**Pn**	**01 32 34.7**	**+3.6**
BJO1			*e*	S	**Sn**	**01 33 50.2**	**-2.2**
DBG	**Daneborg**	**7.18 225**		Pn	**Pn**	**01 32 32.1**	**+0.8**
DBG				Sn	**Sn**	**01 33 46.5**	**-6.3**
DBG	**Daneborg**	**7.18 225**	*i*	P	**Pn**	**01 32 32.1**	**+0.8**
DBG			*i*	S	**Sn**	**01 33 46.7**	**-6.0**
DBG				IAML		01 33 51.1	
	comp=Z,15nm,0.4s						
DBG	**Daneborg**	**7.18 225**	*e*	P	**Pn**	**01 32 31.8**	**+0.5**
DBG			*e*	S	Sn	01 33 45.4	-7.3
ZFI2	**Zemlya Franca-**	**7.92 62**	*e*	P	**Pn**	**01 32 42.6**	**+1.3**
ZFI2			*e*	S	**Sn**	**01 34 05.1**	**-5.7**
ZFI	**Zemlya Franca-**	**7.92 62**	*e*	P	**Pn**	**01 32 42.7**	**+1.3**
ZFI			*e*	S	**Sn**	**01 34 05.2**	**-5.6**
	comp=Z,8.6nm,1.2s						
JMIC	**Jan Mayen**	**9.40 195**	*e*	P	**Pn**	**01 33 04.6**	**+2.9**
JMIC			*e*	S	**Sn**	**01 34 43.6**	**-3.6**
JMIC				IAML		01 34 53.6	
	comp=Z,15nm,0.6s						
SUMG	**Summit**	**11.31 248**	*i*	P	**Pn**	**01 33 28.1**	**-0.1**
SUMG			*i*	S	Sn	01 35 25.4	-9.1
SUMG				IAML		01 35 33.4	
	comp=Z,1.8nm,0.4s						
KIF	**Kilpisjarvi**	**12.50 141**		Pn	Pn	01 33 49.0	+4.9
KIF	**Kilpisjarvi**	**12.50 141**		Pn	Pn	01 33 49.0	+4.9
ARA0	**ARCESS Array S**	**12.54 133**		Pn	**Pn**	**01 33 48.4**	**+3.7**
	baz=333,slow=11						
ARA0	**ARCESS Array S**	**12.54 133**		Pn	**Pn**	**01 33 48.4**	**+3.7**

*IDC **25** 01:32:41.5±2.8,6.89S×154.64E,h53km±24km,mb4.1/11, mbtmp4.4/15,ML4.0/3,MS3.6/12,Error ellipse: s-maj=22.1km s-min=16.8km az=64.0*
*NEIC **25** 01:32:42.9±1.7,6.98S±0.10×154.73E±0.06,h64km±5km, mb4.6/29,Error ellipse: s-maj=15.5km s-min=6.1km az=206.0*
ISC 25 01:32:39.9±0.4,6.86S±0.07×154.68E±0.07,h39km,n67, σ0°87/57,mb4.6/26,MS3.6/9,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**3.65 317**		Pn	Pn	01 33 40.8	+6.9
KRVT	**Keravat (AS076**	**3.66 314**		P	**Pn**	**01 33 34.7**	**+0.6**
	18nm,0.3s,baz=309,slow=1.6,SNR=13						
KRVT				S	**Sn**	**01 34 15.2**	**-0.9**
	266nm,0.5s,baz=193,slow=16,SNR=3.2						
	46nm,0.3s						
HNR	**Honiara**	**5.81 116**		LR	LR	01 36 30.2	
	comp=Z,1μm,19.4s,baz=188,slow=39						
HNR	**Honiara**	**5.81 116**		Pn	**Pn**	**01 34 04.2**	**+0.7**
PMG	**Port Moresby**	**7.86 251**		P	**Pn**	**01 34 34.3**	**+2.5**
	25nm,0.7s,baz=21,slow=5.0,SNR=5.6						
PMG	**Port Moresby**	**7.86 251**			**Pn**	**01 34 32.1**	**+0.3**
CTA	**Charters Tower**	**15.48 211**		P	**P**	**01 36 18.0**	**-1.6**
	0.3nm,0.3s,baz=38,slow=11,SNR=7.9						
CTA				LR	LR	01 42 25.3	
	comp=Z,366nm,18.1s,baz=48,slow=38						
	12nm,0.8s						
CTAO	**Charters Tower**	**15.48 211**		Pn	**Pn**	**01 36 15.3**	**-0.3**
DZM	**Mont Dzumac**	**18.91 144**		P	**Pn**	**01 36 59.1**	**+0.8**
	0.6nm,0.3s,baz=281,slow=8.2,SNR=9.2						
DZM				LR	LR	01 42 45.5	
	comp=Z,87nm,19.1s,baz=47,slow=32						
	12nm,0.9s						
DZM	**Mont Dzumac**	**18.91 144**		P	**P**	**01 36 56.8**	**-0.6**
WR0	**Warramunga Arr**	**23.48 234**		P	**P**	**01 37 44.5**	**-1.8**
WR0				IAmb	IAmb	01 38 03.7	
	comp=Z,13nm,0.9s						
WB0	**Warramunga Arr**	**23.50 235**		P	**P**	**01 37 46.7**	**+0.2**
WB0				IAmb	IAmb	01 37 58.1	
	comp=Z,19nm,1.2s						
WB2	**Warramunga Arr**	**23.63 235**		P	**P**	**01 37 47.0**	**-0.7**
WB2				IAmb	IAmb	01 38 00.6	
	comp=Z,22nm,1.2s						
WRA	**Warramunga Arr**	**23.64 235**		P	**P**	**01 37 46.7**	**-1.1**
	comp=Z,7.5nm,0.9s,baz=57,slow=9.4,SNR=32						
WRA				LR	LR	01 47 16.6	
	comp=Z,207nm,18.5s,baz=38,slow=37						
	comp=Z,7.5nm,0.9s						
WRA	**Warramunga Arr**	**23.64 235**		P	**P**	**01 37 46.9**	**-0.9**
MSVF	**Nonsavu**	**25.23 117**		P	**P**	**01 38 02.8**	**+0.3**
	comp=Z,5.1nm,0.5s,baz=311,slow=5.4,SNR=5.8						
	comp=Z,5.1nm,0.5s						
MSVF	**Nonsavu**	**25.23 117**		P	**P**	**01 38 02.0**	**-0.5**
MSVF				IAmb	IAmb	01 38 16.1	
	comp=Z,43nm,1.4s						
AS31	**Alice Springs**	**26.03 228**		P	**P**	**01 38 09.5**	**-0.2**
KNRA	**Kununurra**	**26.86 249**		P	**P**	**01 38 17.0**	**-0.1**
KNRA				IAmb	IAmb	01 38 42.0	
	comp=Z,22nm,1.2s						
STKA	**Stephens Creek**	**27.72 204**		P	**P**	**01 38 23.9**	**-0.8**
	comp=Z,3.3nm,0.8s,baz=24,slow=15,SNR=3.7						
STKA				LR	LR	01 50 20.5	
	comp=Z,195nm,18.1s,baz=23,slow=38						
	comp=Z,3.3nm,0.8s						
AFI	**Afiamalu**	**33.70 105**		LR	LR	01 49 39.3	
	comp=Z,60nm,20.9s,baz=30,slow=30						
URZ	**Urewera**	**37.28 150**		LR	LR	01 53 43.7	
	comp=Z,104nm,18.7s,baz=31,slow=34						
NACB	**Ninganchiao**	**44.64 315**		P	**P**	**01 40 49.0**	**+0.1**
MJAR	**Matsushiro Arr**	**45.86 341**		LR	LR	01 59 52.8	
	comp=Z,25nm,19.7s,baz=166,slow=36						
KSRS	**Korea Array**	**50.68 332**		LR	LR	02 02 05.9	
	comp=Z,15nm,18.9s,baz=160,slow=35						
ASAJ	**Asahikawa**	**51.90 349**		LR	LR	02 03 04.4	
	comp=Z,37nm,19.4s,baz=80,slow=35						
ENH	**Enshi**	**56.92 313**		P	**P**	**01 42 20.8**	**-0.6**
PETK	**Petropavlovsk-**

comp=Z,3.2nm,0.7s,baz=145,slow=4.2,SNR=5.0
TORD Torodi Ar. Bea 152.69 285 PKPbc **PKPbc 01 52 33.3 -0.3**
comp=Z,4.1nm,0.7s,baz=83,slow=2.2,SNR=40

*IPEC **25** 01:51:03.6±0.2,51°.48N×16°.21E,h1km,ML2.7/6, Error ellipse: s-maj=2.0km s-min=1.1km az=38.0*
*IDC **25** 01:51:04.9±0.8,51°.44N×16°.10E,h0km, mbtmp3.1/6, ML2.8/6, Error ellipse: s-maj=14.3km s-min=7.7km az=109.0*
*VIE **25** 01:51:05.5±0.8,51°.33N×16°.41E,h0km, mb2.6/10, ml2.9/9, Error ellipse: s-maj=9.3km s-min=4.9km az=67.0 49 km NW of Wroclaw Suspected Mining induced.*
*PRU **25** 01:51:05.6±0.0,51°.40N×16°.14E,h0km*
*MCSM **25** 01:51:07.3±1.2,51°.N±7°×1°.6E±°,h7km±3km, ML3.1*
*DNK **25** 01:51:57.0±2.1,55°.31N×14°.77E,h0km±22km*

ISC 25 01:51:02.6±0.7,51°.52N±0'.03×16°.20E±0'.02,h0km,n62, σ1§36/108, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.68**	**175**	*i* Pg		**Pg**	**01 51 16.1**	**+0.5**
KSP				eSg		**Sg**	**01 51 24.0**	**-0.3**
KSP	**Ksiaz**	**0.68**	**175**	Pg		**Pg**	**01 51 15.8**	**+0.2**
KSP				Sg		**Sg**	**01 51 24.3**	**0.0**
CHVC	**Chvalec**	**0.94**	**186**	*e*PG		**Pg**	**01 51 21.0**	**+0.5**
CHVC				eSG		**Sg**	**01 51 32.5**	**-0.1**
CHVC	**Chvalec**	**0.94**	**186**	Pg		**Pg**	**01 51 21.0**	**+0.5**
OSTC	**Ostas**	**0.96**	**180**	*e*PG		**Pg**	**01 51 21.6**	**+0.5**
OSTC				eSG		**Sg**	**01 51 32.8**	**-0.7**
	comp=Z,74nm,0.6s							
OSTC	**Ostas**	**0.96**	**180**	Pg		**Pg**	**01 51 21.5**	**+0.5**
UPC	**Upice**	**1.02**	**187**	*e*PG		**Pg**	**01 51 22.4**	**+0.3**
UPC				eSG		**Sg**	**01 51 34.6**	**-0.7**
	comp=Z,204nm,0.6s							
UPC	**Upice**	**1.02**	**187**	Pg		**Pg**	**01 51 22.2**	**+0.1**
DPC	**Dobruska-Polom**	**1.17**	**176**	*e*PG		**Pg**	**01 51 25.1**	**+0.1**
DPC				eSG		**Sg**	**01 51 39.1**	**-1.1**
	comp=Z,83nm,0.6s							
DPC	**Dobruska-Polom**	**1.17**	**176**	Pg		**Pg**	**01 51 24.8**	**-0.2**
PVCC	**Panska Ves**	**1.43**	**227**	*e*PG		**Pb**	**01 51 30.6**	**+0.5**
PVCC				eSG		**Sn**	**01 51 49.3**	**0.0**
	comp=Z,300nm,0.3s							
KRLC	**Kraliky**	**1.49**	**165**	*e*PG		**Pn**	**01 51 30.6**	**-0.1**
KRLC				eSG		**Sg**	**01 51 49.1**	**-1.3**
BRG	**Berggiesshubel**	**1.56**	**247**	Pn		**Pn**	**01 51 31.7**	**+0.1**
BRG				Pg		**Pg**	**01 51 33.8**	**+1.2**
BRG				Sg		**Sg**	**01 51 53.8**	**+1.0**
BRG				Amp			01 51 56.2	
	comp=Z,52nm,0.4s							
PRU	**Pruhonice**	**1.86**	**215**	*e*PG		**Pb**	**01 51 37.6**	**+0.1**
PRU				eSG		**Sb**	**01 52 00.9**	**-0.3**
	comp=Z,65nm,0.6s							
MORC	**Moravsky Berou**	**1.94**	**153**	*e*Pn		**Pn**	**01 51 36.9**	**0.0**
	baz=334							
MORC				eSg		**Sb**	**01 52 03.2**	**-0.4**
	comp=Z,54nm,0.8s,baz=334							
MORC	**Moravsky Berou**	**1.94**	**153**	*e*PN		**Pn**	**01 51 36.9**	**0.0**
MORC				eSG		**Sb**	**01 52 03.3**	**-0.4**
CLL	**Collm**	**2.02**	**265**	*e*Pn		**Pn**	**01 51 38.0**	**+0.1**
	comp=Z,4.0nm,0.5s							
CLL				*i* Pg		**Pg**	**01 51 41.4**	**+0.2**
CLL				*i* x		x	01 51 44.9	
CLL				*i* Sg		**Sg**	**01 52 09.0**	**+1.7**
	comp=Z,31nm,0.6s							
OKC	**Ostrava-Krasne**	**2.09**	**143**	*e*PG		**Pg**	**01 51 42.3**	**-0.3**
OKC				eSG		**Sb**	**01 52 07.6**	**-0.2**
VRAC	**Vranov**	**2.23**	**173**	Pn		**Pn**	**01 51 41.4**	**+0.6**
	comp=Z,2.1nm,0.3s,baz=340,slow=14,SNR=18							
VRAC				Sn		**Sn**	**01 52 09.3**	**+0.3**
	comp=Z,4.9nm,0.3s,baz=100,slow=14,SNR=10							
	comp=Z,6.0nm,0.4s							
VRAC	**Vranov**	**2.23**	**173**	*e*Pn		**Pn**	**01 51 41.2**	**+0.4**
	baz=354							
VRAC				eSg		**Sb**	**01 52 12.2**	**+0.4**
	comp=Z,40nm,0.8s,baz=354							
VRAC	**Vranov**	**2.23**	**173**	*e*PN		**Pn**	**01 51 41.2**	**+0.4**
VRAC				eSG		**Sb**	**01 52 12.2**	**+0.4**
TREC	**Trest**	**2.27**	**192**	*e*PN		**Pn**	**01 51 42.1**	**+0.7**
KRUC	**Moravsky**	**2.46**	**177**	*e*Pn		**Pn**	**01 51 44.4**	**+0.5**
	baz=357							
KRUC				eSg		**Sb**	**01 52 19.7**	**+1.1**
	comp=Z,29nm,0.7s,baz=357							
KRUC	**Moravsky**	**2.46**	**177**	*e*PN		**Pn**	**01 51 44.5**	**+0.5**
KRUC				eSG		**Sb**	**01 52 19.7**	**+1.1**
OJC	**Ojcow**	**2.62**	**118**	*e*Pg		**Pg**	**01 51 53.1**	**+0.2**
OJC				eSg		**Sg**	**01 52 27.2**	**+0.3**
NKC	**Novy Kostel**	**2.70**	**243**	*e*PN		**Pn**	**01 51 48.4**	**+1.0**
NKC				*e*PG		**Pg**	**01 51 54.8**	**+0.4**
NKC				eSG		**Sg**	**01 52 29.7**	**+0.3**
	comp=Z,39nm,0.4s							
JAVC	**Velka Javorina**	**2.82**	**160**	*e*Pn		**Pn**	**01 51 49.6**	**+0.6**
	baz=341							
JAVC				eSg		**Sg**	**01 52 31.3**	**-2.0**
	comp=Z,26nm,0.8s,baz=341							
JAVC	**Velka Javorina**	**2.82**	**160**	*e*PN		**Pn**	**01 51 49.6**	**+0.6**
JAVC				eSG		**Sg**	**01 51 31.4**	**-1.9**
KHC	**Kasperske Hory**	**2.92**	**216**	*e*PN		**Pn**	**01 51 51.4**	**+1.0**
KHC				*e*PG		**Pb**	**01 51 57.0**	**+1.4**
KHC				eSN		**Sn**	**01 52 23.5**	**-2.7**
KHC				eSG		**Sb**	**01 52 33.7**	**+1.9**
	comp=Z,17nm,0.6s							
CKRC	**Cesky Krumlov**	**2.96**	**205**	*e*PN		**Pn**	**01 51 52.0**	**+1.1**
CKRC				*e*PG		**Pb**	**01 51 57.7**	**+1.4**
CKRC				eSG		**Sg**	**01 52 35.5**	**-2.2**
	comp=Z,42nm,0.9s							
SMOL	**Smolenice**	**3.11**	**165**	eSG		**Sg**	**01 52 44.3**	**+1.9**
GERES	**GERESS Array B**	**3.12**	**212**	Pn		**Pn**	**01 51 54.2**	**+1.1**
	comp=Z,0.8nm,0.3s,baz=35,slow=12,SNR=23							
GERES				Pg		**Pb**	**01 52 00.2**	**+1.2**
	comp=Z,8.0nm,0.3s,baz=30,slow=18,SNR=64							
GERES				Lg		Lg	01 52 39.8	
	comp=Z,6.9nm,0.3s,baz=32,slow=33,SNR=12							
	comp=Z,1.5nm,0.4s							
LANS	**Liptovska Anna**	**3.16**	**137**	*e*PN		**Pn**	**01 51 54.8**	**+1.1**
LANS				*e*PG		**Pg**	**01 52 03.2**	**0.0**
LANS				eSG		**Sg**	**01 52 45.5**	**+1.4**
MODS	**Modra-Piesok**	**3.22**	**167**	eSG		**Sg**	**01 52 46.1**	**0.0**
KOLL	**Kolacno**	**3.27**	**153**	*e*PN		**Pn**	**01 51 56.3**	**+1.3**
KOLL				*e*PG		**Pg**	**01 52 04.9**	**-0.3**
KOLL				eSG		**Sg**	**01 52 47.4**	**-0.1**
ZST	**Bratislava**	**3.38**	**170**	eSG		**Sg**	**01 52 50.4**	**-0.6**
CONA	**Conrad Observa**	**3.60**	**184**	*i* Pn		**Pn**	**01 52 00.4**	**+0.7**
	comp=Z,1.3nm,0.4s							
CONA				Sg		**Sg**	**01 52 57.9**	**-0.3**
	comp=Z,17nm,0.4s							
BSD	**Bornholm Skovb**	**3.69**	**348**	*i* P		**Pn**	**01 52 01.1**	**+0.3**
RONA	**Rosalia, Austr**	**3.82**	**179**	*i* Pn		**Pn**	**01 52 03.8**	**+1.1**
	comp=Z,0.4nm,0.2s							
RONA				Sg		**Sg**	**01 53 04.4**	**-0.9**
	comp=Z,8.3nm,0.4s							
MOA	**Molln**	**3.88**	**200**	*i* Pn		**Pn**	**01 52 04.4**	**+0.9**
	comp=Z,2.6nm,0.3s							
MOA				Sg		**Sg**	**01 53 07.7**	**+0.5**
	comp=Z,15nm,0.5s							
BIOA	**Bad Ischl, Aus**	**4.18**	**205**	*i* Pn		**Pn**	**01 52 09.1**	**+1.5**
	comp=Z,1.9nm,0.3s							
BIOA				eSg		**Sg**	**01 53 15.7**	**-1.0**
	comp=Z,19nm,0.5s							
CRVS	**Cervenica-Dubn**	**4.27**	**126**	*e*PG		**Pg**	**01 52 28.6**	**+4.1**
KOLS	**Kolonicke sedl**	**4.68**	**121**	*e*PN		**Pn**	**01 52 14.9**	**+0.4**
KOLS				*e*PG		**Pg**	**01 52 36.3**	**+4.1**
BLEU	**Blekinge**	**4.80**	**357**	*i* P		**Pn**	**01 52 17.5**	**+1.4**
KBA	**Koelnbreinsper**	**4.82**	**204**	eSg		**Sg**	**01 53 38.5**	**+1.1**
	comp=Z,8.6nm,0.5s							
BJUU	**Bjuv**	**4.94**	**339**	*i* P		**Pn**	**01 52 18.6**	**+0.6**
DEL	**Delary**	**5.15**	**345**	*i* P		**Pn**	**01 52 21.5**	**+0.6**
WATA	**Walderalm**	**5.16**	**218**	*i* Pn		**Pn**	**01 52 23.2**	**+1.9**
	comp=Z,2.0nm,0.4s							
WTTA	**Wattenberg**	**5.20**	**217**	*i* Pn		**Pn**	**01 52 23.5**	**+1.8**
	comp=Z,1.4nm,0.5s							
WTTA				Sg		**Sg**	**01 53 51.5**	**+2.0**
	comp=Z,12nm,0.6s							
ABTA	**Abfaltersbach**	**5.35**	**208**	*i* Pn		**Pn**	**01 52 26.2**	**+2.4**
	comp=Z,1.1nm,0.4s							
ABTA				eSg		**Sg**	**01 53 53.8**	**-0.7**
	comp=Z,12nm,0.7s							
RETA	**Reutte**	**5.37**	**223**	*i* Pn		**Pn**	**01 52 24.5**	**+0.5**
	comp=Z,1.5nm,0.3s							
RETA				Sg		**Sg**	**01 53 55.8**	**+0.8**
	comp=Z,5.2nm,0.5s							
DAVOX	**Davos/Dischmat**	**6.30**	**224**	Lg		Lg	01 54 21.2	
	comp=Z,0.3nm,0.3s,baz=184,slow=23,SNR=3.7							

BORU	**Boraas**	**6.45**	**343**	*i* P		**Pn**	**01 52 40.4**	**+1.7**
KMPD	**K-Podol'skiy**	**7.24**	**110**	Pn		**Pn**	**01 52 50.7**	**+1.1**
KMPD				pP		**Pn**	**01 52 53.0**	**+3.4**
MI29	**MI29, Kamyanyy**	**7.44**	**94**	Pn		**Pn**	**01 52 54.5**	**+2.2**
LUBAR	**Lubar, Ukraine**	**7.51**	**98**	Pn		**Pn**	**01 52 54.4**	**+1.1**
LUBAR				pP		**Pn**	**01 52 57.5**	**+4.2**
AKASG	**Malin Array Be**	**8.24**	**91**	Pn		**Pn**	**01 53 04.5**	**+1.2**
	comp=Z,0.5nm,0.3s,baz=281,slow=12,SNR=4.2							
	comp=Z,0.2nm,0.3s							
AKBB	**Malin Array Si**	**8.24**	**91**	Pn		**Pn**	**01 53 05.9**	**+2.6**
AKBB				Sn		**Sn**	**01 54 33.6**	**-3.4**
HFS	**Hagfors**	**8.75**	**352**	Pn		**Pn**	**01 53 10.4**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=190,slow=16,SNR=4.1							
	comp=Z,0.5nm,0.4s							
FINES	**FINESS Array B**	**11.33**	**25**	Pn		**Pn**	**01 53 43.9**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=207,slow=11,SNR=12							
	comp=Z,0.5nm,0.4s							
EKA	**Eskdalemuir Ar**	**12.15**	**296**	Pn		**Pn**	**01 53 54.3**	**-2.6**
	baz=100,slow=14							
ARCES	**ARCESS Array B**	**18.61**	**10**	Pn		**P**	**01 55 19.4**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=197,slow=11,SNR=13							
	comp=Z,0.4nm,0.4s							

*GCMT **25** 01:57:51.4±0.3,56°.46N±0°.03×34°.56W±0°.03,h12km, MW5.0/84, Moment Tensor Solution. s33,c38; s84,c133; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=2.78±.13; $M_{\theta\theta}$=0.17±.15; $M_{\phi\phi}$=2.60±.09; $M_{r\theta}$=-0.56±.41; $M_{r\phi}$=-0.08±.10; $M_{\theta\phi}$=3.77±.35; Best double couple: M_W=4.66500×10^{16} NP1:$\phi_{1,2}$=2.00000°, δ=18.00000°, λ=-81.00000°. NP2: ϕ_s=173.00000°, δ=72.00000°, λ=-93.00000°. Principal axes: T 4.5660, Plg27.0000°, Azm265.0000°; N 0.1910, Plg3.0000°, Azm174.0000°; P -4.7640, Plg62.0000°, Azm78.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **25** 01:57:55.3±0.4,56°.59N×34°.48W,h0km,mb4.3/37, mbtmp4.4/41,ML3.8/4,MS4.2/82 Error ellipse: s-maj=13.1km s-min=9.2km az=0.0*
*NEIC **25** 01:57:57.4±1.5,56°.65N±0°.08×34°.5W±0°.1,h10km±1km, mb4.8/330, Error ellipse: s-maj=14.0km s-min=11.3km az=174.0*

ISC 25 01:57:57.4±0.3,56°.76N±0'.06×34°.46W±0'.04,h10km,n535, σ1§62/362,mb4.8/236,MS4.3/94,15C-16D,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
NRS	**Narsarsuaq**	**7.18**	**312**	Pn		**Pn**	**01 59 43.9**	**+1.6**
IVI	**Ivigtut**	**8.36**	**308**	Pn		**Pn**	**01 59 59.0**	**+0.5**
ANGG	**Ammassalik, Gr**	**9.02**	**352**	Pn		**Pn**	**02 00 08.6**	**+1.0**
BORG	**Borgarnes**	**10.25**	**33**	Pn		**Pn**	**02 00 26.8**	**+2.5**
	0.6nm,0.3s,baz=198,slow=5.2,SNR=1.7							
BORG				Sn		**Sn**	**02 02 14.7**	**-4.5**
	baz=210,slow=8.1							
BORG				LR		LR	02 03 16.9	
	comp=Z,3μm,19.5s,baz=243,slow=31							
	16nm,0.7s							
BORG	**Borgarnes**	**10.25**	**33**	Pn		**Pn**	**02 00 24.6**	**+0.3**
SFJD	**Kangerlussuaq**	**12.73**	**330**	LR		LR	02 05 09.9	
	comp=Z,986nm,18.2s,baz=140,slow=34							
DRLN	**Deer Lake**	**15.71**	**251**			**Pn**	**02 01 36.1**	**-2.5**
DRLN					IAmb	IAmb	02 01 46.0	
	comp=Z,69nm,1.4s							
SUMG	**Summit**	**15.97**	**356**	Pn		**Pn**	**02 01 41.4**	**-0.8**
SUMG	**Summit**	**15.97**	**356**	*i* P		**P**	**02 01 45.4**	**-0.4**
SUMG					IAmb	IAmb	02 01 54.1	
	comp=Z,9.5nm,0.9s							
DSB	**Dublin**	**16.43**	**90**	Pn		**Pn**	**02 01 48.2**	**+0.3**
DSB					IAmb	IAmb	02 01 52.7	
	comp=Z,107nm,1.4s							
H07N1	**FLORES T-PHASE**	**17.22**	**171**	T		T	02 19 06.9	
	SNR=8.9							
ESK	**Eskdalemuir**	**17.45**	**82**	Pn		**Pn**	**02 01 58.7**	**-1.9**
EKA	**Eskdalemuir Ar**	**17.47**	**81**	P		**Pn**	**02 02 01.3**	**+0.4**
	baz=293,slow=9.5							
EKA				LR		LR	02 07 33.4	
	comp=Z,2μm,21.0s,baz=286,slow=33							
	comp=Z,3.5nm,0.7s							
JMIC	**Jan Mayen**	**18.04**	**28**	LR		LR	02 07 29.0	
	comp=Z,1μm,19.1s,baz=230,slow=32							
FRB	**Frobisher Bay**	**18.12**	**307**	P		**Pn**	**02 02 08.0**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=94,slow=12,SNR=7.1							
FRB				LR		LR	02 07 59.3	
	comp=Z,901nm,20.9s,baz=112,slow=33							
	comp=Z,11nm,0.8s							
SCHQ	**Schefferville**	**18.21**	**278**	P		**Pn**	**02 02 09.5**	**-0.5**
	comp=Z,1.3nm,0.3s,baz=74,slow=7.6,SNR=26							
SCHQ				LR		LR	02 08 08.2	
	comp=Z,2μm,21.0s,baz=68,slow=34							
	comp=Z,40nm,1.1s							
SCHQ	**Schefferville**	**18.21**	**278**	Pn		**Pn**	**02 02 07.3**	**-2.8**
GBN	**Guysborough**	**20.29**	**248**	P		**P**	**02 02 30.8**	**-2.3**
GBN					IAmb	IAmb	02 02 36.1	
	comp=Z,67nm,1.5s							
BATG	**Bathurst New B**	**21.46**	**257**	P		**P**	**02 02 44.4**	**-1.2**
BATG					IAmb	IAmb	02 02 55.6	
	comp=Z,46nm,1.2s							
HAL	**Halifax**	**21.89**	**249**	P		**P**	**02 02 48.3**	**-2.0**
PGAV	**Gavieira, Arco**	**22.39**	**120**	*e*P		**P**	**02 02 54.7**	**-1.1**
	comp=Z,123nm,1.6s							
PGAV				eS		**S**	**02 07 02.7**	**+1.1**
PGAV				eLR		LR	02 08 14.3	
	comp=Z,1μm,20.0s							
PCAB	**Cabril**	**22.70**	**120**	*e*P		**P**	**02 02 59.1**	**+0.1**
	comp=Z,79nm,1.3s							
PQI	**Presque Isle**	**22.88**	**258**	P		**P**	**02 03 00.0**	**-0.9**
PQI					IAmb	IAmb	02 03 09.5	
	comp=Z,33nm,1.3s							
POLO	**Lamas de Olo**	**23.07**	**120**	*e*P		**P**	**02 03 02.1**	**-0.9**
	comp=Z,24nm,1.4s							
POLO				eS		**S**	**02 07 15.1**	**+1.2**
KONO	**Kongsberg**	**23.07**	**64**	P		**P**	**02 03 02.8**	**0.0**
KONO					IAmb	IAmb	02 03 08.7	
	comp=Z,31nm,1.1s							
D62A	**Allapoint, All**	**23.19**	**260**	P		**P**	**02 03 02.8**	**-1.3**
D62A					IAmb	IAmb	02 03 10.8	
	comp=Z,38nm,1.1s							
PBRG	**Braganca**	**23.25**	**118**	*e*P		**P**	**02 03 04.2**	**-0.5**
GGN	**Saint George**	**23.26**	**254**	P		**P**	**02 03 03.4**	**-1.3**
GGN					IAmb	IAmb	02 03 08.4	
	comp=Z,34nm,1.1s							
NAO01	**NORSAR Array S**	**23.47**	**61**	P		**P**	**02 03 06.3**	**-0.5**
NAO01					IAmb	IAmb	02 03 19.5	
	comp=Z,44nm,1.4s							
PVIS	**Viseu**	**23.54**	**122**	*e*P		**P**	**02 03 08.5**	**+0.9**
SNF	**Seneffe**	**23.56**	**89**	*d*P		**P**	**02 03 05.9**	**-1.8**
	comp=Z,28nm,0.9s							
GOET	**G??ttrup**	**23.56**	**71**	*i* P		**P**	**02 03 08.1**	**+0.5**
GOET					IAmb	IAmb	02 03 13.6	
	comp=Z,24nm,0.6s							
G65A	**Princeton**	**23.58**	**255**		IAmb	IAmb	02 03 14.7	
	comp=Z,22nm,1.1s							
NB2	**NORSAR Subarra**	**23.59**	**60**	P		**P**	**02 03 07.8**	**-0.2**
	baz=280,slow=10							
NB2	**NORSAR Subarra**	**23.59**	**60**	P		**P**	**02 03 07.8**	**-0.2**
	comp=Z,295nm,3.3s,baz=280,slow=10							
NOA	**NORSAR Array B**	**23.59**	**60**	P		**P**	**02 03 07.8**	**-0.2**
	comp=Z,2.4nm,0.8s,baz=290,slow=9.2,SNR=8.4							
NOA				LR		LR	02 11 12.2	
	comp=Z,688nm,21.8s,baz=275,slow=34							
	comp=Z,2.4nm,0.8s							
MVO	**Moncorvo**	**23.60**	**120**	*e*P		**P**	**02 03 07.3**	**-0.9**
	comp=Z,57nm,1.5s							
MVO				eS		**S**	**02 07 27.4**	**+4.9**
MVO				eLR		LR	02 08 50.0	
	comp=Z,1μm,20.0s							
LMQ	**La Malbaie**	**23.61**	**262**	P		**P**	**02 03 07.8**	**-0.4**
LMQ					IAmb	IAmb	02 03 25.1	
	comp=Z,34nm,1.3s							
COI	**Coimbra**	**23.70**	**123**	*e*S		**S**	**02 07 30.6**	**+6.7**
MUD	**Monsted U'grnd**	**23.72**	**72**	*i* P		**P**	**02 03 10.1**	**+0.9**
MUD					IAmb	IAmb	02 03 18.4	
	comp=Z,5.8nm,0.7s							
PCAS	**Casmilo, Conde**	**23.78**	**124**	*e*P		**P**	**02 03 12.2**	**+2.2**
	comp=Z,78nm,1.6s							
PCAS				eS		**S**	**02 07 28.9**	**+3.6**
NC405	**NORSAR Array S**	**23.82**	**60**	IAmb		IAmb	02 03 12.0	
	comp=Z,51nm,1.3s							
EMMW	**East Machias**	**23.86**	**254**	P		**P**	**02 03 09.2**	**-1.4**
EMMW					IAmb	IAmb	02 03 17.4	
	comp=Z,22nm,0.8s							
BMRD	**Maredsous**	**23.93**	**89**	*d*P		**P**	**02 03 10.9**	**-0.4**
	comp=Z,11nm,0.9s							

DOU	**Dourbes**	**23.94**	**89**	*d*P		**P**	**02 03 11.3**	**-0.1**
	comp=Z,8.7nm,1.1s							
MTE	**Manteigas**	**23.95**	**122**	*e*S		**S**	**02 07 34.7**	**+6.6**
MTE				*e*LR		LR	02 08 50.3	
	comp=Z,866nm,20.0s							
MTE	**Manteigas**	**23.95**	**122**	P		**P**	**02 03 09.6**	**-2.1**
MTE					IAmb	IAmb	02 03 22.1	
	comp=Z,50nm,1.4s							
OVD	**Ostervraa, Den**	**23.98**	**70**	*i* P		**P**	**02 03 13.1**	**+1.4**
OVD					IAmb	IAmb	02 03 16.9	
	comp=Z,36nm,0.8s							
F63A	**Nahmakanta, Br**	**24.08**	**258**		IAmb	IAmb	02 03 16.9	
	comp=Z,23nm,1.1s							
PSBE	**So Bento**	**24.08**	**125**	*e*S		**S**	**02 07 37.4**	**+7.3**
BCLA	**Clavier**	**24.16**	**88**	*d*P		**P**	**02 03 13.1**	**-0.4**
	comp=Z,8.9nm,1.0s							
BEBN	**Eben Emael**	**24.18**	**87**	*d*P		**P**	**02 03 13.6**	**0.0**
	comp=Z,17nm,0.5s							
BSTI	**Sart Tilman**	**24.23**	**88**	*d*P		**P**	**02 03 13.3**	**-0.7**
	comp=Z,4.5nm,1.2s							
RCHB	**Rochefort**	**24.26**	**89**	*d*P		**P**	**02 03 14.2**	**-0.2**
PMAFR	**Mafra**	**24.32**	**126**	*e*S		**S**	**02 07 39.4**	**+5.5**
F62A	**Pittston Farm,**	**24.42**	**259**	IAmb		IAmb	02 03 21.4	
	comp=Z,28nm,0.9s							
PCBR	**Castelo Branco**	**24.42**	**122**	*e*P		**P**	**02 03 16.1**	**+0.2**
	comp=Z,91nm,1.6s							
MEM	**Membach**	**24.46**	**87**	*d*P		**P**	**02 03 15.4**	**-0.7**
	comp=Z,12nm,1.0s							
PKME	**Peaks-Kenny Pk**	**24.46**	**257**	P		**P**	**02 03 15.3**	**-1.0**
PKME					IAmb	IAmb	02 03 26.6	
	comp=Z,27nm,1.3s							
PKME	**Peaks-Kenny Pk**	**24.46**	**257**	P		**P**	**02 03 15.0**	**-1.2**
	baz=50							
BTNL	**Ternell**	**24.54**	**87**	*d*P		**P**	**02 03 16.0**	**-0.9**
	comp=Z,16nm,1.4s							
BHOU	**Houvegnez**	**24.59**	**88**	*d*P		**P**	**02 03 16.7**	**-0.7**
	comp=Z,19nm,1.2s							
PMTG	**Montargil**	**24.70**	**125**	*e*P		**P**	**02 03 17.5**	**-0.9**
	comp=Z,79nm,1.5s							
PMRV	**Marv??o**	**24.79**	**123**	*e*P		**P**	**02 03 18.4**	**-0.9**
	comp=Z,59nm,1.6s							
PMRV				eS		S	02 07 53.4	+12
PMRV				eLR		LR	02 09 17.6	
	comp=Z,842nm,20.0s							
HFS	**Hagfors**	**24.98**	**62**	P		**P**	**02 03 20.7**	**-0.1**
	comp=Z,9.1nm,1.0s,baz=219,slow=3.8,SNR=12							
HFS				LR		LR	02 11 53.1	
	comp=Z,893nm,21.5s,baz=284,slow=33							
	comp=Z,9.1nm,1.0s							
WLF	**Walferdange**	**25.03**	**89**	*d*P		**P**	**02 03 21.2**	**-0.1**
	comp=Z,11nm,1.1s							
WVL	**Waterville**	**25.12**	**256**	IAmb		IAmb	02 03 26.2	
	comp=Z,23nm,1.3s							
PESTR	**Estremoz**	**25.15**	**124**	*e*P		**P**	**02 03 22.0**	**-0.6**
	comp=Z,55nm,1.7s							
PESTR				eS		**S**	**02 07 52.2**	**+4.9**
PESTR	**Estremoz**	**25.15**	**124**	P		**P**	**02 03 21.6**	**-1.0**
PESTR					IAmb	IAmb	02 03 30.1	
	comp=Z,27nm,1.4s							
G62A	**West of Eustis**	**25.16**	**258**		IAmb	IAmb	02 03 23.3	
	comp=Z,18nm,0.8s							
PNCL	**Nicolau / Gran**	**25.35**	**126**	*e*P		**P**	**02 03 22.6**	**-1.7**
PNCL				*e*S		S	02 08 00.3	+10
PBEJ	**Beja**	**25.71**	**125**	*e*P		**P**	**02 03 28.6**	**+1.0**
	comp=Z,59nm,1.5s							
H62A	**Milan**	**25.92**	**258**		IAmb	IAmb	02 03 35.4	
	comp=Z,40nm,1.4s							
I63A	**Disfield**	**25.96**	**256**		IAmb	IAmb	02 03 37.0	
	comp=Z,32nm,1.3s							
PCVE	**Castro Verde**	**25.96**	**126**	*e*S		**S**	**02 08 05.9**	**+5.8**
MORF	**Marmelete**	**25.96**	**128**	*e*P		**P**	**02 03 31.5**	**+1.5**
	comp=Z,94nm,1.6s							
PAB	**San Pablo**	**26.14**	**118**	P		**P**	**02 03 31.8**	**+0.2**
PAB					IAmb	IAmb	02 03 37.4	
	comp=Z,39nm,1.4s							
ESBB	**Sonseca Array**	**26.23**	**118**		IAmb	IAmb	02 03 39.8	
	comp=Z,29nm,1.4s							
ESDC	**Sonseca Array**	**26.23**	**118**	P		**P**	**02 03 31.4**	**-1.0**
	comp=Z,4.4nm,0.8s,baz=320,slow=9.9,SNR=15							

comp=Z,1µm,15.0s
CKRC Cesky Krumlov 29.97 84 *e*P **P 02 04 09.0 +3.3**
CKRC AMS AMS 02 16 40.0
comp=Z,900nm,15.4s
UPC Upice 29.98 80 AMS AMS 02 16 40.0
comp=Z,1µm,15.0s
OSTC Ostas 30.07 80 *e*P **P 02 04 06.0 -0.5**
SADO Sadowa 30.14 266 LR LR 02 15 08.6
comp=Z,2µm,19.4s,baz=62,slow=34
ABTA Abfaltersbach 30.18 89 *e*P **P 02 04 06.7 -0.9**
comp=Z,5.3nm,1.0s
DPC Dobruska-Polom 30.23 80 *e*P **P 02 04 07.5 -0.5**
DPC *e*pP **sP 02 04 12.0 +0.6**
DPC AMS AMS 02 16 50.0
comp=Z,1µm,15.0s
BIOA Bad Ischl, Aus 30.25 87 *e*P **P 02 04 08.0 -0.1**
comp=Z,8.3nm,1.3s
TREC Trest 30.35 83 AMS AMS 02 17 40.0
comp=Z,1µm,13.6s
FINES FINESS Array B 30.44 56 P **P 02 04 09.6 0.0**
comp=Z,3.1nm,0.8s,baz=291,slow=7.9,SNR=19
FINES LR LR 02 15 47.7
comp=Z,415nm,18.6s,baz=282,slow=35
comp=Z,3.1nm,0.8s
FINES FINESS Array B 30.44 56 P **P 02 04 09.4 -0.2**
FIA1 FINESS Array S 30.44 56 IAmb IAmb 02 04 15.2
comp=Z,17nm,1.2s
KBA Koelnbreinsper 30.44 88 *e*P **P 02 04 10.5 +0.5**
comp=Z,12nm,1.4s,SNR=8.7
MOA Molln 30.50 86 *e*P **P 02 04 10.9 +0.5**
comp=Z,11nm,1.7s
STAL STALIGIAL 30.59 90 IAmb IAmb 02 04 15.4
comp=Z,17nm,1.1s
KRLC Kraliky 30.63 80 *e*P **P 02 04 11.7 +0.2**
KRLC AMS AMS 02 18 20.0
comp=Z,900nm,12.6s
MYKA Terra Mystica 30.88 88 *e*P **P 02 04 14.0 +0.3**
comp=Z,25nm,1.5s
PRED Cave del Predi 30.95 89 IAmb IAmb 02 04 19.2
comp=Z,14nm,1.1s
VRAC Vranov 30.95 82 ⇑P **P 02 04 14.2 -0.1**
VRAC Vranov 30.95 82 LR LR 02 16 17.0
comp=Z,1µm,20.2s,baz=303,slow=36
VRAC Vranov 30.95 82 *e*P **P 02 04 14.0 -0.3**
FCC Fort Churchill 30.96 299 P **P 02 04 14.0 -0.2**
FCC IAmb IAmb 02 04 33.4
comp=Z,14nm,1.2s
KRUC Moravsky 30.98 82 *e*P **P 02 04 13.9 -0.6**
L56A Greenwood 31.02 260 IAmb IAmb 02 04 20.1
comp=Z,18nm,1.3s
MORC Moravsky Berou 31.21 80 ⇑P **P 02 04 16.5 -0.1**
MORC Moravsky Berou 31.21 80 IAmb IAmb 02 04 20.9
comp=Z,14nm,1.5s
MORC Moravsky Berou 31.21 80 *e*P **P 02 04 16.1 -0.5**
CONA Conrad Observa 31.33 85 *i* P **P 02 04 17.7 0.0**
comp=Z,9.6nm,1.5s
WVNY West Valley, N 31.40 262 IAmb IAmb 02 04 26.6
comp=Z,9.0nm,0.8s
OBKA Obir 31.45 88 *e*P **P 02 04 18.5 -0.3**
comp=Z,16nm,1.0s,SNR=7.8
N58A Sunbury 31.46 258 IAmb IAmb 02 04 25.4
comp=Z,14nm,1.1s
OKC Ostrava-Krasne 31.50 80 AMS AMS 02 17 40.0
comp=Z,1µm,15.4s
MDT Midelt 31.52 127 P **P 02 04 18.6 -1.0**
comp=Z,5.8nm,1.0s,baz=326,slow=7.1,SNR=7.2
comp=Z,5.8nm,1.0s
MAUC Maruska 31.59 81 *e*P **P 02 04 19.7 -0.2**
MAUC AMS AMS 02 16 00.0
comp=Z,2µm,21.9s
SOKA Soboth 31.61 87 *e*P **P 02 04 19.7 -0.6**
comp=Z,14nm,1.2s,SNR=6.0
RONA Rosalia, Austr 31.70 85 *e*P **P 02 04 21.2 +0.2**
comp=Z,22nm,1.8s
PABE Paberze 31.74 67 P **P 02 04 21.1 0.0**
PABE Paberze 31.74 67 *e*P **P 02 04 21.6 +0.5**
JAVC Velka Javorina 31.79 82 *e*P **P 02 04 21.8 +0.1**
VSU Vasula 31.84 61 *e*P **P 02 04 21.9 -0.1**
MODS Modra-Piesok 31.85 83 *e*P **P 02 04 21.8 -0.4**
E46A Sault Ste Mari 31.99 273 IAmb IAmb 02 04 31.1
comp=Z,13nm,1.0s
SUW Suwalki 32.03 70 *e*P **P 02 04 22.7 -1.0**
SUW Suwalki 32.03 70 *e*P **P 02 04 24.1 +0.4**
M55A Ridgway 32.13 261 IAmb IAmb 02 04 29.9
comp=Z,13nm,1.1s
OJC Ojcow 32.19 78 *e*P **P 02 04 26.0 +0.8**
OJC Ojcow 32.19 78 IAmb IAmb 02 04 29.7
comp=Z,19nm,1.3s
EGYH Egyhazaskeszo 32.43 84 P P 02 04 33.4 +6.1
LANS Liptovska Anna 32.60 80 *e*P **P 02 04 32.5 +3.7**
MPLH Magyarpolny 32.69 84 P P 02 04 36.2 +6.6
NIE Niedzica 32.90 79 *e*P **P 02 04 33.5 +2.1**
CSKK Cskako 32.98 84 P **P 02 04 33.5 +1.4**
NRCA Norcia 32.99 94 IAmb IAmb 02 04 38.6
comp=Z,17nm,1.3s
TIH Tihany 33.05 85 P **P 02 04 34.2 +1.5**
M53A WI Miller and 33.19 263 P **P 02 04 34.0 0.0**
baz=47
BUD Budapest 33.32 83 P **P 02 04 35.6 +0.6**
E43A Lone Tree Farm 33.47 275 P **P 02 04 36.9 +0.5**
E43A IAmb IAmb 02 04 43.8
comp=Z,9.6nm,1.1s
PSZ Piszkesteto 33.54 82 ⇑P **P 02 04 36.7 -0.3**
PSZ Piszkesteto 33.54 82 P **P 02 04 38.0 +1.0**
PSZ IAmb IAmb 02 04 42.5
comp=Z,11nm,0.9s
PSZ Piszkesteto 33.54 82 P **P 02 04 37.6 +0.5**
KOVH Kovagotottos 33.66 86 P **P 02 04 38.0 0.0**
CRVS Cervenica-Dubn 33.82 79 *e*P **P 02 04 41.5 +2.1**
MORH Mrgy, Hungar 33.88 85 ⇑P **P 02 04 39.5 -0.4**
MORH Mrgy, Hungar 33.88 85 P **P 02 04 40.1 +0.2**
MCWV Mont Chateau 33.98 259 P **P 02 04 41.0 +0.1**
baz=45
BSZH Besenyszg 34.11 82 P **P 02 04 43.1 +1.2**
O53A New Philadelph 34.31 262 IAmb IAmb 02 04 50.3
comp=Z,12nm,1.1s
O53A New Philadelph 34.31 262 P **P 02 04 43.7 -0.1**
baz=46
O52A Adamsville 34.74 262 IAmb IAmb 02 04 54.6
comp=Z,12nm,0.9s
COWI Conover 34.81 276 IAmb IAmb 02 04 54.9
comp=Z,10nm,1.0s
P53A Whipple 34.95 261 IAmb IAmb 02 04 56.7
comp=Z,18nm,1.0s
EYMN Ely 34.98 280 P **P 02 04 49.6 +0.1**
EYMN IAmb IAmb 02 04 54.5
comp=Z,18nm,1.1s
EYMN Ely 34.98 280 P **P 02 04 49.5 0.0**
baz=54
PAOL Paolisi 35.01 95 IAmb IAmb 02 04 51.5
comp=Z,27nm,1.4s
FRGS Fruska Gora 35.17 86 ⇓P **P 02 04 51.5 +0.3**
P52A Corning 35.24 262 P **P 02 04 51.8 -0.1**
baz=45
ACSO Alum Creek Sta 35.29 263 P **P 02 04 52.4 +0.2**
baz=46
N49A Columbus Grove 35.47 265 IAmb IAmb 02 05 00.7
comp=Z,19nm,1.0s
DRGR 35.75 81 ⇑P **P 02 04 56.6 +0.4**
P51A Williamsport 35.86 262 IAmb IAmb 02 05 03.8
comp=Z,17nm,1.0s
BZS Buzias 35.88 84 ⇑P **P 02 04 57.5 +0.3**
DIVS Divibare 35.95 87 IAmb IAmb 02 05 05.0
comp=Z,26nm,1.5s
ULM Lac du Bonnet 35.99 286 P **P 02 04 57.8 -0.3**
comp=Z,3.8nm,0.8s,baz=49,slow=7.8,SNR=5.4
ULM LR LR 02 19 08.7
comp=Z,779nm,18.1s,baz=82,slow=35
comp=Z,3.8nm,0.8s
ULM Lac du Bonnet 35.99 286 P **P 02 04 57.9 -0.3**
KEST Kesra 36.03 107 P **P 02 04 57.8 -1.0**
comp=Z,10nm,1.0s,baz=312,slow=3.3,SNR=7.1
KEST LR LR 02 17 32.4
comp=Z,251nm,20.0s,baz=269,slow=33
comp=Z,10nm,1.0s
KEST Kesra 36.03 107 IAmb IAmb 02 05 04.2
comp=Z,16nm,0.9s
O49A Covington 36.06 264 IAmb IAmb 02 05 06.1
comp=Z,13nm,0.8s
R53A Hurricane 36.08 260 IAmb IAmb 02 05 04.4
comp=Z,19nm,1.1s
I42A Draeger Farm, 36.09 273 IAmb IAmb 02 05 04.3
comp=Z,12nm,1.1s
Q51A Peebles 36.34 262 IAmb IAmb 02 05 08.1
comp=Z,15nm,1.1s
O48B Farmland 36.46 265 P **P 02 05 01.6 -0.6**
baz=46
K43A Burlington 36.55 271 IAmb IAmb 02 05 10.6
comp=Z,22nm,1.2s
BUR08 Bucovina Ar. S 36.58 78 P **P 02 05 04.0 +0.7**
BUR08 IAmb IAmb 02 05 09.3
comp=Z,13nm,1.2s
BURAR Bucovina Array 36.61 78 ⇓P **P 02 05 03.7 +0.2**
KLMR Klimovskoe 36.66 52 *e*P **P 02 05 02.1 -1.6**
KLMR AMP 02 05 10.3
comp=Z,53nm,1.3s
KLMR LQ LQ 02 15 00.7
KLMR LQ LQ 02 15 00.7
KLMR LR LR 02 17 07.3
P49A Miami Univ. Ec 36.73 264 IAmb IAmb 02 05 09.2
comp=Z,14nm,1.2s
P49A Miami Univ. Ec 36.73 264 P **P 02 05 05.0 +0.5**
baz=45
HERR Herculane 36.78 84 ⇓P **P 02 05 05.2 +0.3**
AKASG Malin Array Be 36.93 72 P **P 02 05 05.1 -1.0**
comp=Z,3.3nm,0.7s,baz=309,slow=8.2,SNR=14
AKASG LR LR 02 20 22.9
comp=Z,453nm,20.2s,baz=284,slow=36
comp=Z,3.3nm,0.7s
LOT Lotru 37.16 82 ⇑P **P 02 05 08.1 -0.1**
P48A Milroy 37.17 264 IAmb IAmb 02 05 14.6
comp=Z,15nm,0.9s
SPMN Marine on St. 37.36 278 P **P 02 05 10.2 +0.3**
baz=51
VAE Valguarnera 37.45 100 LR LR 02 18 36.5
comp=Z,492nm,21.3s,baz=346,slow=33
JFWS Jewell Farm 37.46 273 P **P 02 05 10.7 0.0**
baz=49
S51A Beattyville 37.47 261 IAmb IAmb 02 05 18.3
comp=Z,12nm,0.8s
BIZ Bicaz 37.50 79 ⇑P **P 02 05 10.5 -0.5**
DOPR Dopca 37.72 80 ⇑P **P 02 05 13.2 +0.4**
A36M Sachs Harbour 37.73 329 P **P 02 05 15.2 +2.5**
baz=64
L42A Oliver, Polo 37.75 271 IAmb IAmb 02 05 20.8
comp=Z,23nm,1.1s
VOIR 37.87 81 ⇑P **P 02 05 15.3 +1.0**
SORM Soroca 37.97 76 ⇑P **P 02 05 15.9 +1.0**
OBN Obninsk 38.19 62 LR LR 02 19 44.2
comp=Z,191nm,21.9s,baz=326,slow=34
TZTN Tazewell 38.25 259 P **P 02 05 17.9 +0.4**
TZTN Tazewell 38.25 259 P **P 02 05 17.8 +0.3**
baz=42
MLR Muntele Rosu 38.32 81 LR LR 02 21 15.6
comp=Z,996nm,20.3s,baz=310,slow=36
YKA Yellowknife Ar 38.46 313 P **P 02 05 19.3 +0.3**
comp=Z,4.0nm,1.0s,baz=58,slow=9.2,SNR=12
YKA PcP **PcP 02 07 30.4 -1.3**
comp=Z,1.5nm,0.7s,baz=55,slow=3.4,SNR=7.1
comp=Z,4.0nm,1.0s
V53A Saluda 38.50 258 IAmb IAmb 02 05 24.6
comp=Z,17nm,1.2s
VRI Vrincioaia 38.50 80 ⇓P **P 02 05 19.2 -0.4**
HDIL Hopedale 38.53 269 P **P 02 05 20.2 +0.5**
baz=46
KBN Korca 38.71 90 IAmb IAmb 02 05 27.4
comp=Z,30nm,1.2s
MILM Milestii Mici 38.97 77 *e*P **P 02 05 19.0 -4.3**
comp=Z,150nm,2.9s
MILM Milestii Mici 38.97 77 *e*PP PP 02 06 52.0 -0.4
TKL Tuckaleechee C 39.03 259 LR LR 02 20 35.8
comp=Z,1µm,20.5s,baz=46,slow=35
BG3 Lake Jocassee 39.08 257 IAmb IAmb 02 05 29.7
comp=Z,30nm,1.3s
V51A Loudon 39.23 259 IAmb IAmb 02 05 30.9
comp=Z,23nm,1.2s
N41A Harden Midland 39.29 271 IAmb IAmb 02 05 31.6
comp=Z,30nm,1.1s
P43A Skaggs, Pawnee 39.29 268 P **P 02 05 25.7 -0.4**
P43A IAmb IAmb 02 05 33.1
comp=Z,16nm,0.9s
MDND Maddock 39.39 286 P **P 02 05 28.3 +1.4**
baz=52
Q44A Meyer Farm, Va 39.53 267 IAmb IAmb 02 05 35.4
comp=Z,23nm,0.9s
CPCT Cooper Cave 39.59 259 IAmb IAmb 02 05 35.9
comp=Z,15nm,1.0s
CFR Carcaliu 39.71 79 ⇑P **P 02 05 29.1 -0.4**
W50A Signal Mountai 40.20 260 IAmb IAmb 02 05 38.5
comp=Z,14nm,0.9s
ECSD EROS Data Cent 40.41 279 P **P 02 05 36.0 +0.6**
baz=49
SIUC Southern Illin 40.49 266 P **P 02 05 35.1 -1.0**
Y52A Lilburn 40.54 257 IAmb IAmb 02 05 41.7
comp=Z,17nm,1.2s
GOGA Godfrey 40.57 256 P **P 02 05 36.6 -0.2**
baz=40
V48A Smith Brothers 40.62 262 IAmb IAmb 02 05 42.4
comp=Z,18nm,1.2s
P40A Paris 40.76 270 IAmb IAmb 02 05 43.4
comp=Z,20nm,1.1s
WVT Waverly 40.89 263 P **P 02 05 38.9 -0.5**
WVT Waverly 40.89 263 P **P 02 05 38.9 -0.5**
baz=42
CCM Cathedral Cave 41.36 268 P **P 02 05 43.3 0.0**
CCM IAmb IAmb 02 05 50.0
comp=Z,12nm,0.9s
CCM Cathedral Cave 41.36 268 P **P 02 05 43.4 0.0**
baz=44
DGMT Dagmar 41.41 289 P **P 02 05 47.4 +3.8**
baz=51
PLAL Pickwick Lake 41.87 262 IAmb IAmb 02 05 54.5
comp=Z,20nm,1.4s
INK Inuvik 42.05 327 P **P 02 05 48.7 +0.1**
comp=Z,5.3nm,1.0s,baz=48,slow=7.9,SNR=7.2
INK LR LR 02 22 55.4
comp=Z,229nm,18.7s,baz=14,slow=36
comp=Z,5.3nm,1.0s
INK Inuvik 42.05 327 P **P 02 05 48.7 +0.1**
baz=54
KIRV Kirov 42.12 51 LR LR 02 23 02.4
comp=Z,318nm,18.2s,baz=284,slow=36
MGMO Mountain Grove 42.58 268 P **P 02 05 53.2 0.0**
LRAL Lakeview Retre 42.75 259 IAmb IAmb 02 06 01.4
comp=Z,16nm,1.1s
LRAL Lakeview Retre 42.75 259 P **P 02 05 54.5 -0.2**
baz=40
OXF Oxford 42.95 263 P **P 02 05 57.5 +1.2**
baz=42
EDM Edmonton 43.05 300 IAmb IAmb 02 06 04.4
comp=Z,24nm,1.3s
KSU1 Kansas State U 43.57 274 P **P 02 06 00.3 -0.9**
KSU1 IAmb IAmb 02 06 08.2
comp=Z,16nm,1.1s
WHAR Wooly Hollow 43.95 266 IAmb IAmb 02 06 10.8
comp=Z,18nm,1.1s
W41B Gary Mavity, V 44.01 266 IAmb IAmb 02 06 11.3
comp=Z,20nm,1.1s
W41B Gary Mavity, V 44.01 266 P **P 02 06 04.3 -0.5**
baz=42
EPYK Eagle Plains 44.22 326 IAmb IAmb 02 06 13.8
comp=Z,24nm,1.4s
EPYK Eagle Plains 44.22 326 P **P 02 06 06.8 +0.6**
baz=51
EGMT Eagleton 44.56 292 IAmb IAmb 02 06 17.5
comp=Z,16nm,1.1s
EGMT Eagleton 44.56 292 P **P 02 06 10.5 +1.3**
baz=50
CCAR Cane Creek 44.69 264 P **P 02 06 10.1 -0.2**
MMPY Sheldon Lake, 44.77 319 P **P 02 06 13.2 +2.5**
baz=51,SNR=6.6
IDI Anoyia 44.79 93 LR LR 02 26 38.8
comp=Z,219nm,20.0s,baz=320,slow=38
W39A Magazine 44.84 267 IAmb IAmb 02 06 19.4
comp=Z,14nm,0.8s
W39A Magazine 44.84 267 P **P 02 06 11.3 -0.2**
baz=42
BELG Belogornoye 45.09 59 LR LR 02 24 02.3
comp=Z,560nm,21.6s,baz=324,slow=35
MIAR Mount Ida 45.21 267 P **P 02 06 14.3 -0.1**
baz=42
SJG San Juan 45.28 225 LR LR 02 20 35.1
comp=Z,137nm,22.0s,baz=71,slow=30
I29M Ogilvie Camp, 45.37 325 P **P 02 06 16.4 +1.0**
baz=49,SNR=11
TUL1 Leonard 45.42 270 P **P 02 06 15.3 -0.8**
baz=43
C23K Itkillik River 45.68 334 P **P 02 06 19.5 +1.8**
baz=44,SNR=10
D24K Happy Valley 45.73 333 P **P 02 06 19.4 +1.2**
baz=44
Z41A Richland Creek 45.75 265 P **P 02 06 18.4 -0.3**
baz=41
BMAR Burnt Mountain 45.83 330 P **P 02 06 19.8 +0.9**
A21K Barrow 45.92 338 P **P 02 06 21.0 +1.5**
baz=40
M31M Drury Creek, Y 46.15 320 P **P 02 06 24.7 +3.1**
baz=49
RLMT Red Lodge 46.24 289 P **P 02 06 24.7 +2.0**
baz=48
TOLK Toolik Lake Re 46.29 333 IAmb IAmb 02 06 30.0
comp=Z,19nm,1.4s
TOLK Toolik Lake Re 46.29 333 P **P 02 06 23.8 +1.1**
baz=44
D23K Nanushuk River 46.33 333 P **P 02 06 24.1 +1.3**
baz=43,SNR=16
N32M Quiet Lake 46.38 319 P **P 02 06 25.5 +2.1**
baz=49
BR131 Keskin Array S 46.39 81 P **P 02 06 24.5 +0.7**
BRTR Keskin Array B 46.39 81 P **P 02 06 24.6 +0.8**
comp=Z,5.2nm,0.7s,baz=310,slow=5.8,SNR=24
BRTR LR LR 02 28 00.1
comp=Z,128nm,18.9s,baz=331,slow=39
comp=Z,5.2nm,0.7s
BRTR Keskin Array B 46.39 81 P **P 02 06 24.1 +0.3**
DAWY Dawson 46.59 324 P **P 02 06 26.4 +1.4**
baz=47,SNR=11
M30M Minto, Yukon 46.74 322 IAmb IAmb 02 06 34.2
comp=Z,7.7nm,1.1s
M30M Minto, Yukon 46.74 322 P **P 02 06 27.9 +1.7**
baz=48,SNR=6.9
I26K Coal Creek Min 46.90 327 P **P 02 06 30.1 +2.7**
baz=46
DLBC Dease Lake 47.02 314 LR LR 02 25 42.7
comp=Z,690nm,21.2s,baz=84,slow=35
DLBC Dease Lake 47.02 314 IAmb IAmb 02 06 37.3
comp=Z,14nm,1.4s
DLBC Dease Lake 47.02 314 P **P 02 06 32.1 +3.6**
baz=49
N31M Braeburn, Yuko 47.12 320 P **P 02 06 32.6 +3.3**
baz=48,SNR=6.3
BOZ Bozeman (W) 47.14 291 IAmb IAmb 02 06 37.8
comp=Z,12nm,1.0s
BOZ Bozeman (W) 47.14 291 P **P 02 06 30.4 +0.7**
baz=47
ARU Arti 47.32 49 P **P 02 06 30.9 +0.1**
comp=Z,6.6nm,0.7s,baz=317,slow=3.2,SNR=13
ARU LR LR 02 25 11.8
comp=Z,457nm,19.2s,baz=303,slow=34
comp=Z,6.6nm,0.7s
ARU Arti 47.32 49 P **P 02 06 31.1 +0.4**
N23A Red Feather La 47.40 282 IAmb IAmb 02 06 40.3
comp=Z,8.7nm,1.1s
N23A Red Feather La 47.40 282 P **P 02 06 32.5 +0.7**
baz=45
K27K Chicken 47.47 325 IAmb IAmb 02 06 41.1
comp=Z,9.8nm,1.1s
K27K Chicken 47.47 325 P **P 02 06 32.9 +1.1**
baz=46
MSO Missoula 47.48 294 P **P 02 06 32.8 +0.5**
baz=47
COLD Coldfoot 47.49 332 IAmb IAmb 02 06 36.6
comp=Z,5.4nm,0.8s
J26L Joseph Creek 47.59 326 IAmb IAmb 02 06 42.9
comp=Z,6.9nm,0.9s
J26L Joseph Creek 47.59 326 P **P 02 06 34.6 +1.7**
baz=45,SNR=6.3
O30N Mendenhall 47.72 319 P **P 02 06 35.4 +1.5**
baz=47,SNR=7.4
H24K Noodor Dome 47.89 329 P **P 02 06 36.7 +1.6**
baz=43,SNR=16
WMOK Wichita Mounta 47.93 271 IAmb IAmb 02 06 43.8
comp=Z,13nm,1.1s
WMOK Wichita Mounta 47.93 271 P **P 02 06 36.2 +0.4**
baz=42
ISCO Idaho Springs 47.99 281 IAmb IAmb 02 06 45.1
comp=Z,9.6nm,1.0s
ISCO Idaho Springs 47.99 281 P **P 02 06 37.3 +0.7**
baz=45
PDAR Pinedale Array 48.01 287 P **P 02 06 35.9 -0.7**
comp=Z,2.3nm,0.6s,baz=60,slow=7.1,SNR=27
comp=Z,2.3nm,0.6s
BCAR Beaver Creek A 48.06 324 P **P 02 06 37.5 +1.1**
J25K Salcha River, 48.06 327 P **P 02 06 36.9 +0.4**
baz=44,SNR=11
L27K Beaver Creek, 48.07 324 IAmb IAmb 02 06 45.3
comp=Z,9.1nm,1.1s
L27K Beaver Creek, 48.07 324 P **P 02 06 38.7 +2.2**
baz=45,SNR=7.4
T35M Bob Quinn 48.09 313 P **P 02 06 40.3 +3.5**
baz=48
NEW Newport 48.09 297 LR LR 02 25 46.0
comp=Z,1µm,20.7s,baz=36,slow=35
NEW Newport 48.09 297 IAmb IAmb 02 06 43.8
comp=Z,7.8nm,1.1s
NEW Newport 48.09 297 P **P 02 06 37.2 +0.3**
baz=47
SCRK Sand Creek 48.10 326 P **P 02 06 37.8 +1.0**
baz=44,SNR=12
HYT Haines Junctio 48.19 320 P **P 02 06 39.9 +2.3**
baz=46,SNR=9.9
BVCY Beaver Creek 48.22 323 P **P 02 06 39.7 +2.0**
baz=45,SNR=8.9
KVAR Kislowodsk Arr 48.26 71 LR LR 02 27 01.4
comp=Z,225nm,21.4s,baz=280,slow=36
POKR Poker Plat Res 48.29 329 P **P 02 06 41.9 +3.7**
baz=43,SNR=5.4
DOT Dot Lake 48.36 326 IAmb IAmb 02 06 52.8
comp=Z,8.2nm,1.1s
H23K Yukon River 48.36 330 IAmb IAmb 02 06 50.1
comp=Z,10nm,1.0s
H23K Yukon River 48.36 330 P **P 02 06 40.6 +1.8**
baz=42,SNR=6.7
ILAR Eielson Array 48.39 328 P **P 02 06 40.3 +1.4**
comp=Z,7.5nm,0.8s,baz=37,slow=6.6,SNR=53
ILAR LR LR 02 27 22.2
comp=Z,209nm,19.4s,baz=54,slow=36
comp=Z,7.5nm,0.8s
KBZ Khabaz 48.52 71 P **P 02 06 40.3 +0.1**
comp=Z,1.0nm,0.5s,baz=310,slow=7.9,SNR=5.9
KBZ LR LR 02 26 42.4
comp=Z,357nm,21.9s,baz=324,slow=36
comp=Z,1.0nm,0.5s
YUK3 Moose Creek 48.54 322 P **P 02 06 42.0 +1.6**
baz=45,SNR=5.0
M27K Edge Creek, AK 48.59 324 IAmb IAmb 02 06 46.1
comp=Z,7.5nm,0.9s
M27K Edge Creek, AK 48.59 324 P **P 02 06 44.3 +3.6**
baz=44
MDM Murphy Dome 48.64 329 P **P 02 06 41.8 +0.9**
HDA Harding Lake 48.67 328 P **P 02 06 43.0 +1.9**
baz=43,SNR=8.7
CCB Clear Creek Bu 48.75 328 IAmb IAmb 02 06 45.5
comp=Z,5.0nm,0.8s
K24K Donnelly Dome 48.77 327 P **P 02 06 44.2 +2.3**
baz=43
H22K Ishtalitna Cre 48.81 331 P **P 02 06 44.6 +2.4**
baz=41
I23K Minto, Yukon-K 48.82 329 IAmb IAmb 02 06 46.0
comp=Z,7.7nm,0.8s
I23K Minto, Yukon-K 48.82 329 P **P 02 06 43.9 +1.7**
baz=42,SNR=6.0
WRH Wood River Hil 48.96 328 IAmb IAmb 02 06 47.9
comp=Z,8.6nm,0.9s
C09A Chrisman Ranch 48.97 297 IAmb IAmb 02 06 51.7
comp=Z,6.0nm,0.8s
B08A Colville Reser 49.10 298 IAmb IAmb 02 06 54.8
comp=Z,10nm,1.1s
NEA2 Nenana 49.15 329 IAmb IAmb 02 06 52.4
comp=Z,8.3nm,0.9s
NEA2 Nenana 49.15 329 P **P 02 06 46.2 +1.4**
baz=42
O20A White River Ci 49.17 283 IAmb IAmb 02 07 02.4
comp=Z,13nm,1.2s
O20A White River Ci 49.17 283 P **P 02 06 46.9 +1.4**
baz=44
T25A Trinidad 49.26 278 IAmb IAmb 02 06 54.5
comp=Z,12nm,1.1s
T25A Trinidad 49.26 278 P **P 02 06 47.3 +1.1**
baz=43
MLY Manley 49.29 330 P **P 02 06 47.2 +1.3**
baz=41
IMAR Indian Mountai 49.36 332 P **P 02 06 46.9 +0.5**
H21K Melozitna Rive 49.37 331 IAmb IAmb 02 06 57.5
comp=Z,6.4nm,0.8s
H21K Melozitna Rive 49.37 331 P **P 02 06 47.9 +1.4**
baz=40,SNR=11
SDCO Great Sand Dun 49.41 279 P **P 02 06 50.3 +2.8**
baz=43
AMTX Amarillo 49.42 274 P **P 02 06 48.4 +1.0**
baz=42

I21K	Tanana	49.52	331	P	P	02 06 49.0 +1.5
	baz=40,SNR=14					
PLID	Pearl Lake	49.72	293	IAmb	IAmb	02 06 57.2
	comp=Z,13nm,1.1s					
MCK	McKinley	49.76	328	P	P	02 06 50.6 +1.1
	baz=41					
DHY	Denali Highway	49.80	327	IAmb	IAmb	02 06 58.9
	comp=Z,9.5nm,1.0s					
DHY	Denali Highway	49.80	327	P	P	02 06 52.6 +2.7
	baz=42					
HWUT	Hardware Ranch	49.89	287	IAmb	IAmb	02 06 58.0
	comp=Z,7.8nm,0.9s					
HKT	Hockley	49.94	264	P	P	02 06 51.4 +0.3
HKT				IAmb	IAmb	02 06 57.9
	comp=Z,13nm,1.1s					
HLID	Hailey	49.98	291	P	P	02 06 53.3 +1.7
	baz=45					
RND	Reindeer	49.99	328	IAmb	IAmb	02 06 55.1
	comp=Z,9.0nm,0.9s					
ABTX	Abilene, Hawle	49.99	270	IAmb	IAmb	02 06 58.4
	comp=Z,19nm,1.3s					
ABTX	Abilene, Hawle	49.99	270	P	P	02 06 52.0 +0.4
	baz=41					
N25K	Chitina, Valde	50.02	324	IAmb	IAmb	02 06 57.0
	comp=Z,9.1nm,0.9s					
N25K	Chitina, Valde	50.02	324	P	P	02 06 55.3 +3.8
	baz=42					
BPAW	Bear Paw Mtn.	50.07	329	IAmb	IAmb	02 07 02.4
	comp=Z,7.0nm,0.9s					
BPAW	Bear Paw Mtn.	50.07	329	P	P	02 06 55.0 +3.2
	baz=40					
S22A	4UR Ranch, Cre	50.13	280	P	P	02 06 54.5 +1.6
	baz=43					
CRQE	Cirque	50.16	323	P	P	02 06 55.8 +3.1
	baz=43					
WAT6	Susitna Watana	50.28	326	P	P	02 06 55.5 +1.9
	baz=41					
WAT1	Susitna Watana	50.34	327	P	P	02 06 56.9 +3.0
	baz=41					
TRF	Thorofare Moun	50.37	328	P	P	02 06 55.3 +1.0
TRF	Thorofare Moun	50.37	328	P	P	02 06 56.2 +1.9
	baz=40					
BBB	Bella Bella	50.50	307	LR	LR	02 26 56.2
	comp=Z,237nm,21.1s,baz=40,slow=34					
LTY	Liberty	50.52	298	IAmb	IAmb	02 07 01.5
	comp=Z,10nm,1.1s					
KLU	Klutina	50.53	325	IAmb	IAmb	02 07 09.4
	comp=Z,15nm,1.0s					
KLU	Klutina	50.53	325	P	P	02 06 57.6 +2.2
	baz=42					
PV15	Paradox Valley	50.59	282	IAmb	IAmb	02 07 03.4
	comp=Z,15nm,1.2s					
CHUM	Lake Minchumin	50.61	330	P	P	02 06 57.7 +1.8
	baz=39,SNR=5.4					
MSTX	Muleshoe	50.70	274	P	P	02 06 58.4 +1.3
	baz=41					
CBB	Campbell River	50.78	304	P	P	02 06 58.1 +0.8
KARS	Kars	50.82	73	P	P	02 06 58.7 +0.8
J20K	Nowinta River	50.89	331	IAmb	IAmb	02 07 02.5
	comp=Z,14nm,0.9s					
J20K	Nowinta River	50.89	331	P	P	02 06 59.5 +1.5
	baz=38,SNR=7.7					
CAST	Castle Rocks	50.91	329	IAmb	IAmb	02 07 02.3
	comp=Z,9.4nm,0.9s					
CAST	Castle Rocks	50.91	329	P	P	02 06 59.6 +1.4
	baz=39,SNR=7.1					
SML	Sawmill	51.05	326	P	P	02 07 01.5 +2.3
	baz=40					
AKTO	Aktyubinsk	51.21	55	P	P	02 07 01.1 +0.5
	comp=Z,6.4nm,0.7s,baz=304,slow=6.9,SNR=14					
	comp=Z,6.4nm,0.7s					
NLU	North Lily Min	51.34	286	IAmb	IAmb	02 07 09.9
	comp=Z,11nm,1.0s					
TIXI	Tiksi	51.35	7	LR	LR	02 26 29.2
	comp=Z,121nm,20.7s,baz=359,slow=33					
TIXI	Tiksi	51.35	7	P	P	02 07 02.0 +0.7
MVCO	Mesa Verde	51.43	281	P	P	02 07 04.2 +1.5
	baz=43					
K20K	Telida	51.51	330	IAmb	IAmb	02 07 07.2
	comp=Z,14nm,0.9s					
K20K	Telida	51.51	330	P	P	02 07 04.0 +1.3
	baz=38,SNR=10					
TORD	Torodi Ar. Bea	51.55	133	P	P	02 07 01.0 -2.5
	comp=Z,8.8nm,1.2s,baz=337,slow=6.4,SNR=12					
TORD				LR	LR	02 26 16.5
	comp=Z,168nm,21.7s,baz=307,slow=33					
	comp=Z,8.8nm,1.2s					
JCT	Junction City	51.71	268	IAmb	IAmb	02 07 11.3
	comp=Z,14nm,0.9s					
JCT	Junction City	51.71	268	P	P	02 07 04.6 0.0
	baz=40					
SKT	Skwentna	51.88	328	P	P	02 07 06.4 +1.0
	baz=39					
ANMO	Albuquerque	51.99	277	LR	LR	02 28 24.9
	comp=Z,881nm,18.8s,baz=60,slow=35					
ANMO	Albuquerque	51.99	277	P	P	02 07 07.7 +0.9
ANMO	Albuquerque	51.99	277	P	P	02 07 08.9 +2.0
	baz=42					
GNI	Garni	52.04	73	P	P	02 07 08.3 +1.2
	comp=Z,4.8nm,0.7s,baz=183,slow=8.9,SNR=6.2					
GNI				LR	LR	02 29 20.9
	comp=Z,252nm,21.2s,baz=316,slow=36					
	comp=Z,4.8nm,0.7s					
GNI	Garni	52.04	73	P	P	02 07 07.5 +0.4
L20K	Farewell, AK	52.16	329	P	P	02 07 08.2 +0.7
	baz=38					
J08A	Circle Bar Ran	52.20	293	IAmb	IAmb	02 07 15.5
	comp=Z,16nm,1.1s					
MMAI	Mount Meron Ar	52.27	86	P	P	02 07 08.9 +0.1
	comp=Z,1.5nm,0.8s,baz=4.6,slow=4.2,SNR=5.4					
MMAI				LR	LR	02 31 42.9
	comp=Z,296nm,20.1s,baz=98,slow=39					
	comp=Z,1.5nm,0.8s					
TTA	Tatalina	52.39	331	IAmb	IAmb	02 07 13.4
	comp=Z,9.7nm,1.1s					
TTA	Tatalina	52.39	331	P	P	02 07 09.7 +0.4
	baz=36					
ELK	Elko	52.43	289	LR	LR	02 28 17.6
	comp=Z,712nm,21.7s,baz=60,slow=35					
M19K	Big River Lodg	52.77	329	IAmb	IAmb	02 07 15.8
	comp=Z,8.8nm,1.0s					
M19K	Big River Lodg	52.77	329	P	P	02 07 12.0 0.0
	baz=37					
ABKAR	Akbulak array	52.93	55	P	P	02 07 13.6 +0.2
WVOR	Wild Horse Val	52.95	293	IAmb	IAmb	02 07 21.2
	comp=Z,13nm,1.1s					
PINE	Pine Mountain	53.12	295	P	P	02 07 16.0 +0.9
833A	Chaparral WMA,	53.15	266	IAmb	IAmb	02 07 22.0
	comp=Z,15nm,0.9s					
833A	Chaparral WMA,	53.15	266	P	P	02 07 15.1 -0.2
	baz=39					
PKCU	Pink Cliffs	53.30	284	IAmb	IAmb	02 07 25.2
	comp=Z,11nm,1.1s					
MDP	Montagnes des	53.49	203	LR	LR	02 24 59.7
	comp=Z,167nm,21.2s,baz=22,slow=30					
J05D	Fort Rock, OR	53.64	295	P	P	02 07 21.0 +2.1
	baz=43					
ASF	Jabal al Asfar	53.73	85	P	P	02 07 19.8 +0.2
	comp=Z,2.7nm,0.8s,baz=9.4,slow=5.3,SNR=5.4					
	comp=Z,2.7nm,0.8s					
MNTX	Cornudas Mount	53.85	274	IAmb	IAmb	02 07 27.6
	comp=Z,9.3nm,1.2s					
MNTX	Cornudas Mount	53.85	274	P	P	02 07 21.0 +0.6
	baz=40					
MOD	Modoc Plateau	54.19	293	IAmb	IAmb	02 07 30.6
	comp=Z,12nm,1.1s					
WUAZ	Wupatki	54.23	282	P	P	02 07 26.8 +3.5
	baz=41					
R11A	Troy Canyon, C	54.37	287	P	P	02 07 25.5 +1.2
	baz=42					
BAUV	El Baul	54.39	222	P	P	02 07 24.0 -0.4
121A	Cookes Peak, D	54.53	277	P	P	02 07 26.8 +1.2
	baz=40					
BVAR	Borovoye Array	54.56	46	LR	LR	02 30 45.7
	comp=Z,138nm,18.6s,baz=194,slow=36					
EIL	Elat	54.58	89	P	P	02 07 26.0 +0.3
	comp=Z,4.8nm,0.8s,baz=267,slow=8.1,SNR=4.8					
EIL				LR	LR	02 34 25.9
	comp=Z,58nm,19.0s,baz=288,slow=40					
	comp=Z,4.8nm,0.8s					
O18K	Koktuh Hills	54.66	328	IAmb	IAmb	02 07 36.2
	comp=Z,15nm,1.1s					
O18K	Koktuh Hills	54.66	328	P	P	02 07 26.0 +0.1
	baz=36					
TXAR	Lajitas Array	54.72	271	P	P	02 07 27.7 +0.9
	comp=Z,1.3nm,0.8s,baz=54,slow=6.5,SNR=14					
TXAR				LR	LR	02 30 32.9
	comp=Z,702nm,18.0s,baz=80,slow=36					
	comp=Z,1.3nm,0.8s					
TIC	Toumodi	55.08	143	*e*P	P	02 07 31.4 +2.0
	comp=Z,1.1nm,0.2s					
DBIC	Dimbokro	55.11	143	P	P	02 07 28.3 -1.3
	comp=Z,10.0nm,0.7s,baz=343,slow=7.2,SNR=9.6					
DBIC				LR	LR	02 27 45.7
	comp=Z,287nm,20.9s,baz=358,slow=33					
	comp=Z,10.0nm,0.7s					
KVN	Kaiserville	55.16	289	IAmb	IAmb	02 07 38.0
	comp=Z,11nm,0.9s					
SDV	Santo Domingo	55.43	225	LR	LR	02 29 23.1
	comp=Z,72nm,20.9s,baz=38,slow=34					
KIC	Kosan Boka	55.44	143	*e*P	P	02 07 33.9 +1.9
	comp=Z,7.5nm,0.6s					
LIC	Lamto	55.47	144	*e*P	P	02 07 31.2 -1.0
	comp=Z,6.9nm,0.6s					
SHPR	Sheep Range	55.52	285	P	P	02 07 33.3 +0.7
YBH	Yreka Blue Hor	55.52	295	LR	LR	02 30 25.2
	comp=Z,721nm,20.0s,baz=28,slow=35					
KDAK	Kodiak Island	55.55	325	LR	LR	02 32 41.6
	comp=Z,298nm,18.2s,baz=73,slow=38					
RYN	Ryan	55.70	289	IAmb	IAmb	02 07 38.1
	comp=Z,7.7nm,1.1s					
NVAR	Mina Array Bea	55.73	289	P	P	02 07 34.4 +0.1
	comp=Z,1.1nm,0.7s,baz=58,slow=5.2,SNR=9.7					
NVAR				LR	LR	02 30 32.4
	comp=Z,733nm,20.9s,baz=60,slow=35					
	comp=Z,1.1nm,0.7s					
NVAR	Mina Array Bea	55.73	289	P	P	02 07 34.1 -0.1
TPNV	Topopah Spring	55.77	286	P	P	02 07 35.5 +1.1
	baz=41					
PNTR	Pine Nut	55.91	291	IAmb	IAmb	02 07 39.4
	comp=Z,7.9nm,0.7s					
TUC	Tucson	56.34	279	P	P	02 07 39.0 +0.6
TUC				IAmb	IAmb	02 07 51.1
	comp=Z,10nm,1.5s					
TUC	Tucson	56.34	279	P	P	02 07 40.9 +2.4
	baz=40					
GWY	Greenwater Val	56.56	286	IAmb	IAmb	02 07 47.6
	comp=Z,13nm,1.3s					
MPMC	Manual Prospec	57.09	287	P	P	02 07 47.1 +3.2
	baz=41					
GSC	Goldstone, Bar	57.30	286	P	P	02 07 47.7 +2.4
	baz=40					
HPIG		57.69	271	P	P	02 07 48.7 +0.5
PFO	Pinyon Flats O	58.41	284	LR	LR	02 32 56.5
	comp=Z,353nm,19.5s,baz=54,slow=36					
PFO	Pinyon Flats O	58.41	284	P	P	02 07 54.6 +1.5
PFO				IAmb	IAmb	02 08 05.1
	comp=Z,8.3nm,1.1s					
ZAA0	Zalesovo Array	59.07	37	P	P	02 07 57.1 -0.1
ZALV	Zalesovo Beam	59.07	37	P	P	02 07 58.4 +1.1
	comp=Z,1.0nm,0.7s,baz=48,slow=2.2,SNR=3.8					
ZALV				LR	LR	02 34 59.5
	comp=Z,123nm,18.5s,baz=307,slow=38					
	comp=Z,1.0nm,0.7s					
KURK	Kurchatov	59.53	43	P	P	02 08 00.6 +0.1
KURBB	Kurchatov Arra	59.58	43	P	P	02 08 00.8 +0.1
	comp=Z,7.2nm,0.7s,baz=323,slow=7.4,SNR=21					
KURBB				LR	LR	02 33 08.0
	comp=Z,171nm,20.5s,baz=296,slow=35					
	comp=Z,7.2nm,0.7s					
CMIG	Matias Romero	59.75	254	LR	LR	02 33 34.8
	comp=Z,451nm,21.8s,baz=20,slow=36					
JTS	Las Juntas de	60.46	241	LR	LR	02 31 13.0
	comp=Z,161nm,21.6s,baz=74,slow=33					
SEY	Seymchan	60.53	356	LR	LR	02 33 20.3
	comp=Z,123nm,21.5s,baz=26,slow=35					
GYA0B	ALIBECK ARRAY	60.57	65	P	P	02 08 08.4 +0.5
GYA0B				IAmb	IAmb	02 08 14.8
	comp=Z,6.1nm,0.8s					
ROSC	El Rosal	60.58	227	P	P	02 08 08.8 +0.4
	comp=Z,9.5nm,0.4s,baz=38,slow=7.9,SNR=6.5					
ROSC				LR	LR	02 31 41.7
	comp=Z,142nm,21.3s,baz=28,slow=34					
	comp=Z,9.5nm,0.4s					
ROSC	El Rosal	60.58	227	P	P	02 08 08.4 0.0
RCBR	Riachuelo	62.38	182	LR	LR	02 28 52.0
	comp=Z,119nm,19.7s,baz=130,slow=30					
LPIG	La Paz	62.48	272	LR	LR	02 34 44.8
	comp=Z,245nm,20.6s,baz=49,slow=35					
MA2	Magadan	63.94	357	LR	LR	02 36 18.0
	comp=Z,62nm,18.5s,baz=44,slow=36					
MAKZ	Makanchi	64.01	43	P	P	02 08 30.7 0.0
MAKZ				IAmb	IAmb	02 08 32.0
	comp=Z,6.7nm,1.2s					
MK31	Makanchi Array	64.14	43	IAmb	IAmb	02 08 37.2
	comp=Z,4.0nm,0.7s					
MKAR	Makanchi Array	64.14	43	P	P	02 08 31.5 -0.1
	comp=Z,7.3nm,0.8s,baz=328,slow=6.0,SNR=16					
	comp=Z,7.3nm,0.8s					
MKAR	Makanchi Array	64.14	43	P	P	02 08 31.2 -0.4
AAK	Ala-Archa	64.45	51	P	P	02 08 34.3 +0.4
	comp=Z,1.6nm,0.3s,baz=324,slow=4.0,SNR=7.8					
AAK				LR	LR	02 35 04.5
	comp=Z,169nm,20.3s,baz=326,slow=34					
	comp=Z,1.6nm,0.3s					
AAK	Ala-Archa	64.45	51	P	P	02 08 34.4 +0.5
AAK				IAmb	IAmb	02 08 43.9
	comp=Z,10nm,1.3s					
BOOM	Boomskoye usch	65.18	50	P	P	02 08 39.2 +0.5
BOOM				IAmb	IAmb	02 08 45.5
	comp=Z,4.4nm,0.7s					
RAYN	Ar Rayn	65.21	85	P	P	02 08 39.0 +0.1
RAYN				IAmb	IAmb	02 08 44.5
	comp=Z,5.9nm,0.9s					
KDJ	Kajisay	66.00	49	P	P	02 08 45.0 +1.1
KDJ				IAmb	IAmb	02 08 48.0
	comp=Z,7.1nm,0.8s					
KSH	Kashi	67.65	52	P	P	02 08 56.4 +2.0
KSH				pP	pwP	02 08 59.5 -0.3
KSH				sP	sP	02 09 02.1 +4.2
SHEM	Shemya Is, Ala	68.39	342	LR	LR	02 40 07.5
	comp=Z,67nm,20.0s,baz=158,slow=37					
KBL	Kabul	68.60	60	P	P	02 09 00.9 +0.3
KBL				IAmb	IAmb	02 09 10.7
	comp=Z,4.5nm,0.6s					
WMQ	Urumqi	68.67	41	*e*P	P	02 09 03.9 +3.2
WMQ				LR	LR	
	comp=N,290nm,14.5s					
WMQ				LR	LR	
	comp=Z,170nm,23.9s					
PETK	Petropavlovsk-	70.04	352	LR	LR	02 40 35.7
	comp=Z,121nm,20.2s,baz=3.1,slow=36					
SONM	Songino Array	70.79	27	P	P	02 09 13.4 -0.4
	comp=Z,0.8nm,0.6s,baz=325,slow=5.4,SNR=2.2					
SONM				LR	LR	02 42 17.8
	comp=Z,206nm,20.3s,baz=334,slow=38					
	comp=Z,0.8nm,0.6s					
ULN	Ulaanbaatar	70.93	26	P	P	02 09 15.3 +0.7
ULN				IAmb	IAmb	02 09 21.3
	comp=Z,2.8nm,0.6s					
BDFB	Brasilia	73.01	194	P	P	02 09 24.9 -2.4
	comp=Z,3.1nm,0.6s,baz=341,slow=7.0,SNR=6.3					
BDFB				LR	LR	02 36 44.6
	comp=Z,168nm,19.6s,baz=26,slow=32					
	comp=Z,3.1nm,0.6s					
ATAH	Atahualpa	73.10	226	LR	LR	02 43 01.8
	comp=Z,65nm,18.8s,baz=0.6,slow=37					
ATD	Arta Tunnel	73.48	94	LR	LR	02 43 30.3
	comp=Z,32nm,18.8s,baz=345,slow=37					
KLR	Kul'dur	73.76	9	P	P	02 09 31.1 -0.2
	comp=Z,1.4nm,0.6s,baz=280,slow=17,SNR=1.5					
	comp=Z,1.4nm,0.6s					
SIV	San Ignacio	75.81	206	LR	LR	02 39 14.9
	comp=Z,268nm,20.1s,baz=78,slow=33					
GTA	Gaotai	76.71	35	*e*P	P	02 09 48.4 -0.2
GTA				sP	PcP	02 10 01.5 +1.5
GTA				pmax	pmax	
	comp=Z,4.0nm,1.1s					
GTA				pmax	pmax	
	comp=Z,77nm,4.7s					
GTA				LR	LR	
	comp=N,140nm,17.8s					
GTA				LR	LR	
	comp=E,260nm,16.7s					
GTA				LR	LR	
	comp=Z,210nm,17.1s					
NNA	Nana	76.95	223	LR	LR	02 43 02.7
	comp=Z,100nm,21.5s,baz=348,slow=35					
MBAR	Mbarara	77.16	111	LR	LR	02 43 02.7
	comp=Z,244nm,21.5s,baz=318,slow=35					
GOMU	GeErMu	77.95	40	P	P	02 09 56.3 +0.4
GOMU				pP	sP	02 09 59.4 -0.1
GOMU				sP	pwP	02 10 03.5 +2.1
GOMU				S	SKiKP	02 19 26.6 +19
GOMU				pmax	pmax	
	comp=Z,2.0nm,0.5s					
GOMU				pmax	pmax	
	comp=Z,60nm,4.1s					
GOMU				LR	LR	
	comp=N,130nm,11.9s					
GOMU				LR	LR	
	comp=E,140nm,11.8s					
GOMU				LR	LR	
	comp=Z,130nm,12.4s					
LPAZ	La Paz	78.02	213	P	P	02 09 53.7 -2.9
	comp=Z,0.8nm,0.7s,baz=63,slow=6.8,SNR=2.6					
LPAZ				LR	LR	02 42 26.4
	comp=Z,72nm,20.4s,baz=354,slow=34					
	comp=Z,0.8nm,0.7s					
LPAZ	La Paz	78.02	213	P	P	02 09 54.9 -1.7
HHC	Hu-ho-hao-te	78.62	26	*e*P	P	02 09 58.8 -0.4
ASAJ	Asahikawa	79.47	2	LR	LR	02 46 06.6
	comp=Z,46nm,18.7s,baz=328,slow=36					
KMBO	Kilima Mbogo	81.00	106	LR	LR	02 46 52.7
	comp=Z,78nm,18.3s,baz=276,slow=36					
LZH	Lanzhou	81.01	33	*e*P	P	02 10 11.3 -1.0
LZH				pP	sP	02 10 17.0 +1.2
LZH				sP	PcP	02 10 19.3 +0.5
GO01	Chusmiza	81.53	213	IAmb	IAmb	02 10 22.0
	comp=Z,8.8nm,1.1s					
LVC	Limon Verde	84.22	212	P	P	02 10 29.2 0.0
KSRS	Korea Array	84.97	14	P	P	02 10 32.7 +0.1
	comp=Z,2.7nm,0.9s,baz=4.5,slow=7.8,SNR=2.3					
KSRS				LR	LR	02 51 01.8
	comp=Z,64nm,19.0s,baz=330,slow=37					
	comp=Z,2.7nm,0.9s					
KSAR	Wonju Array Be	84.98	14	P	P	02 10 32.6 0.0
CPUP	Villa Florida	85.00	200	P	P	02 10 30.0 -2.6
	comp=Z,1.5nm,0.8s,baz=11,slow=10,SNR=3.6					
CPUP				LR	LR	02 46 52.0
	comp=Z,62nm,19.8s,baz=1.5,slow=35					
	comp=Z,1.5nm,0.8s					
TSUM	Tsumeb	87.29	132	LR	LR	02 48 50.8
	comp=Z,100nm,18.7s,baz=332,slow=35					
LSZ	Lusaka	88.53	121	LR	LR	02 50 32.2
	comp=Z,88nm,18.5s,baz=323,slow=36					
NJ2	Nanjing	88.69	22	*e*P	P	02 10 49.3 -1.5
NJ2				pmax	pmax	
	comp=Z,8.0nm,0.5s					
NJ2				pmax	pmax	
	comp=Z,9.0nm,0.6s					
PZH	PanZhiHua	89.19	38	P	P	02 10 54.1 +0.7
CMAR	Chiang Mai Arr	95.54	44	LR	LR	02 56 20.9
	comp=Z,83nm,20.8s,baz=320,slow=37					
LBTB	Lobatse	95.83	128	LR	LR	02 54 35.6
	comp=Z,153nm,19.3s,baz=348,slow=36					
PALK	Pallekele	97.32	65	LR	LR	02 59 58.1
	comp=Z,75nm,18.1s,baz=81,slow=38					
BOSA	Boshof	98.83	130	LR	LR	02 54 06.7
	comp=Z,91nm,21.0s,baz=358,slow=34					
TAOE	Nuku Hiva Isla	105.95	278	*e*LR	LR	02 47 53.6
	comp=Z,216nm,23.9s					
PPT2	Papeete2	118.27	281	*e*LR	LR	02 53 33.9
	comp=Z,292nm,22.0s					
TBI	Tubuai	122.88	277	*e*LR	LR	02 55 42.6
	comp=Z,294nm,26.2s					
DZM	Mont Dzumac	142.10	327	*e*LR	LR	03 04 35.9
	comp=Z,136nm,23.8s					
WRA	Warramunga Arr	142.31	17	PKP	PKPdf	02 17 27.6 -2.4
	comp=Z,0.7nm,0.8s,baz=2.9,slow=2.9,SNR=3.0					
ASAR	Alice Springs	145.87	19	PKPbc	PKPdf	02 17 35.7 -0.5
QSPA	South Pole Qui	146.65	180	PKPbc	PKPbc	02 17 37.5 -0.3

NEIC ***25*** *01:58:44.1±1.3,56.7°N±0.1°×34.3°W±0.1°,h10km±1km, mb4.9/112, Error ellipse: s-maj=17.0km s-min=13.9km az=177.0*

ISC 25 01:58:43.8±0.5, 56.7°N±0.1°×34.32°W±0.06, h10km, n116, σ0.971/95, mb4.9/54, 6D, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
NRS	Narsarsuaq	7.27	313	Pn	Pn	Pn	02 00 31.0	+1.0
IVI	Ivigtut	8.46	308	Pn	Pn	Pn	02 00 45.8	-0.4
SFJD	Kangerlussuaq	12.82	330	Pn	Pn	Pn	02 01 46.2	+0.3
DRLN	Deer Lake	15.77	252	Pn	Pn	Pn	02 02 26.2	+0.5
SUMG	Summit	16.03	355	Pn	Pn	Pn	02 02 28.2	-1.2
SUMG				IAmb	IAmb		02 02 35.0	
	comp=Z,108nm,1.5s							
SCHQ	Schefferville	18.30	278			Pn	02 02 56.3	-1.1
SCHQ				IAmb	IAmb		02 03 00.6	
	comp=Z,132nm,1.5s							
PQI	Presque Isle	22.95	258	P	P	P	02 03 49.3	+1.4
PQI				IAmb	IAmb		02 03 55.3	
	comp=Z,41nm,1.3s							
D62A	Allapoint, All	23.26	260	P	P	P	02 03 50.9	-0.2
D62A				IAmb	IAmb		02 03 53.6	
	comp=Z,38nm,1.3s							
F64A	Sherman	23.64	257	P	P	P	02 03 53.9	-1.0
F64A				IAmb	IAmb		02 04 07.4	
	comp=Z,33nm,1.2s							
EMMW	East Machias	23.91	254	P	P	P	02 03 56.5	-1.1
BEBN	Eben Emael	24.11	87	*d*P	P	P	02 03 58.0	-1.3
BEBN	Eben Emael	24.11	87	*d*PP	P	PnPn	02 04 30.1	+2.0
BSTI	Sart Tilman	24.15	88	*d*P	P	P	02 03 58.6	-1.2
MEM	Membach	24.38	87	*d*P	P	P	02 04 02.4	+0.5
BTNL	Ternell	24.46	87	*d*P	P	P	02 04 03.1	+0.5
F62A	Pittston Farm,	24.49	259	P	P	P	02 04 02.7	-0.2
F62A				IAmb	IAmb		02 04 05.0	
	comp=Z,20nm,0.9s							
BHOU	Houvegnez	24.51	88	*d*P	P	P	02 04 03.3	+0.2
WVL	Waterville	25.18	256	P	P	P	02 04 09.3	+0.2
ESBB	Sonseca Array	26.14	118	P	P	P	02 04 19.3	+1.4
ESDC	Sonseca Array	26.14	118	P	P	P	02 04 18.0	0.0
I62A	Tamworth	26.54	257	P	P	P	02 04 20.8	-0.6
I62A				IAmb	IAmb		02 04 23.9	
	comp=Z,31nm,1.2s							
TRQ	Mont Tremblant	26.79	264	P	P	P	02 04 23.2	-0.5
J59A	Piesco	28.53	260	P	P	P	02 04 39.6	+0.3
ARCES	ARCESS Array B	28.56	39	P	P	P	02 04 39.1	-0.2
GERES	GERESS Array B	29.55	85	P	P	P	02 04 48.9	+0.4
J56A	Wolcott	29.93	262	P	P	P	02 04 51.6	-0.1
J56A				IAmb	IAmb		02 04 52.3	
	comp=Z,17nm,1.3s							
FCC	Fort Churchill	31.06	299	P	P	P	02 05 01.6	+0.1
FCC				IAmb	IAmb		02 05 02.7	
	comp=Z,17nm,1.3s							
TRI	Trieste	31.43	90	P	P	P	02 05 04.5	-0.4
TRI				IAmb	IAmb		02 05 05.7	
	comp=Z,20nm,1.4s							
OJC	Ojcow	32.12	78	P	P	P	02 05 10.4	-0.6
PSZ	Piszkesteto	33.47	82	P	P	P	02 05 22.8	-0.1
E43A	Lone Tree Farm	33.55	275	P	P	P	02 05 23.2	-0.3
E43A				IAmb	IAmb		02 05 24.3	
	comp=Z,18nm,1.3s							
PAOL	Paolisi	34.93	95	P	P	P	02 05 34.6	-1.0
PAOL				IAmb	IAmb		02 05 35.7	
	comp=Z,22nm,1.4s							
EYMN	Ely	35.06	280	P	P	P	02 05 37.1	+0.4
EYMN				IAmb	IAmb	

HHAR					IAmb	IAmb	02 07 01.4	
	comp=Z,21nm,1.5s							
U38A	**Gravette**	**44.34**	**269**		IAmb	IAmb	02 06 54.2	
	comp=Z,23nm,1.4s							
UALR	**University of**	**44.43**	**266**		P	**P**	**02 06 54.3**	**-0.4**
UALR					IAmb	IAmb	02 06 55.3	
	comp=Z,20nm,1.2s							
EGMT	**Eagleton**	**44.65**	**292**		IAmb	IAmb	02 06 57.9	
	comp=Z,32nm,1.4s							
CCAR	**Cane Creek**	**44.76**	**265**		P	**P**	**02 06 57.4**	**+0.2**
W39A	**Magazine**	**44.91**	**268**		P	**P**	**02 06 58.6**	**+0.2**
W39A					IAmb	IAmb	02 07 07.2	
	comp=Z,32nm,1.5s							
I29M	**Ogilvie Camp,**	**45.46**	**325**		IAmb	IAmb	02 07 03.5	
	comp=Z,25nm,1.2s							
TUL1	**Leonard**	**45.50**	**270**		P	**P**	**02 07 02.7**	**-0.3**
A21K	**Barrow**	**46.00**	**338**		P	**P**	**02 07 07.0**	**+0.4**
M31M	**Drury Creek, Y**	**46.25**	**320**		IAmb	IAmb	02 07 20.2	
	comp=Z,15nm,1.4s							
BR131	**Keskin Array S**	**46.32**	**81**		P	**P**	**02 07 09.9**	**+0.2**
BR131					IAmb	IAmb	02 07 11.7	
	comp=Z,18nm,1.2s							
RLMT	**Red Lodge**	**46.33**	**289**		P	**P**	**02 07 10.7**	**+0.8**
M30M	**Minto, Yukon**	**46.83**	**322**		P	**P**	**02 07 14.1**	**+0.7**
M30M					IAmb	IAmb	02 07 20.7	
	comp=Z,21nm,1.4s							
DLBC	**Dease Lake**	**47.11**	**314**		P	**P**	**02 07 16.3**	**+0.7**
DLBC					IAmb	IAmb	02 07 21.2	
	comp=Z,12nm,1.2s							
ARU	**Arti**	**47.30**	**49**		P	**P**	**02 07 16.6**	**-0.4**
WHY	**Whitehorse**	**47.46**	**319**		IAmb	IAmb	02 07 29.8	
	comp=Z,11nm,1.4s							
N23A	**Red Feather La**	**47.48**	**283**		IAmb	IAmb	02 07 27.1	
	comp=Z,11nm,1.2s							
BCAR	**Beaver Creek A**	**48.15**	**324**		P	**P**	**02 07 23.5**	**-0.1**
ILAR	**Eielson Array**	**48.48**	**328**		P	**P**	**02 07 26.1**	**0.0**
M27K	**Edge Creek, AK**	**48.68**	**324**		IAmb	IAmb	02 07 34.7	
	comp=Z,24nm,1.5s							
HDA	**Harding Lake**	**48.76**	**328**		P	**P**	**02 07 28.8**	**+0.6**
B08A	**Colville Reser**	**49.20**	**299**		IAmb	IAmb	02 07 32.7	
	comp=Z,18nm,1.4s							
SDCO	**Great Sand Dun**	**49.49**	**279**		P	**P**	**02 07 35.0**	**+0.5**
PLID	**Pearl Lake**	**49.81**	**293**		IAmb	IAmb	02 07 42.3	
	comp=Z,24nm,1.4s							
HKT	**Hockley**	**50.01**	**265**		P	**P**	**02 07 38.3**	**+0.3**
HKT					IAmb	IAmb	02 07 46.1	
	comp=Z,24nm,1.4s							
N25K	**Chitina, Valde**	**50.11**	**324**		IAmb	IAmb	02 07 43.8	
	comp=Z,25nm,1.2s							
TGL	**Tana Glacier**	**50.16**	**323**		P	**P**	**02 07 40.4**	**+1.4**
BPAW	**Bear Paw Mtn.**	**50.16**	**329**		IAmb	IAmb	02 07 48.2	
	comp=Z,14nm,1.4s							
TRF	**Thorofare Moun**	**50.46**	**328**		P	**P**	**02 07 42.3**	**+1.0**
PV07	**Paradox Valley**	**50.70**	**282**		IAmb	IAmb	02 07 44.0	
	comp=Z,20nm,1.5s							
KARS	**Kars**	**50.76**	**74**		P	**P**	**02 07 45.4**	**+1.5**
MSTX	**Muleshoe**	**50.78**	**274**		IAmb	IAmb	02 07 48.0	
	comp=Z,30nm,1.4s							
CBB	**Campbell River**	**50.88**	**304**		P	**P**	**02 07 43.8**	**-0.6**
CBB					IAmb	IAmb	02 07 45.1	
	comp=Z,20nm,1.1s							
CAST	**Castle Rocks**	**51.00**	**329**		IAmb	IAmb	02 07 52.3	
	comp=Z,29nm,1.4s							
TIXI	**Tiksi**	**51.40**	**7**		P	**P**	**02 07 48.1**	**+0.1**
TIXI					IAmb	IAmb	02 07 49.9	
	comp=Z,20nm,1.3s							
PPLA	**Purkeypile**	**51.44**	**329**		P	**P**	**02 07 48.5**	**-0.1**
GURO	**Guroymak-BITLI**	**51.70**	**76**		P	**P**	**02 07 52.1**	**+1.1**
ANMO	**Albuquerque**	**52.08**	**278**		P	**P**	**02 07 53.4**	**-0.5**
RC01	**Rabbit Creek A**	**52.12**	**326**		IAmb	IAmb	02 07 55.5	
	comp=Z,26nm,1.2s							
BNM	**Barren Site**	**52.76**	**277**		P	**P**	**02 07 59.6**	**+0.5**
WVOR	**Wild Horse Val**	**53.05**	**293**		IAmb	IAmb	02 08 06.8	
	comp=Z,18nm,1.2s							
TXAR	**Lajitas Array**	**54.80**	**271**		P	**P**	**02 08 13.4**	**-0.4**
PAHR	**Pah Rah Range**	**55.43**	**291**		IAmb	IAmb	02 08 19.4	
	comp=Z,21nm,1.4s							
TUC	**Tucson**	**56.42**	**279**		P	**P**	**02 08 25.4**	**-0.1**
TUC					IAmb	IAmb	02 08 27.4	
	comp=Z,13nm,1.4s							
GWY	**Greenwater Val**	**56.65**	**286**		IAmb	IAmb	02 08 27.8	
	comp=Z,18nm,1.4s							
113A	**Mohawk Valley,**	**57.69**	**281**		P	**P**	**02 08 35.1**	**+0.8**
HSIG		**59.05**	**277**		P	**P**	**02 08 43.3**	**-0.5**
HSIG					IAmb	IAmb	02 08 46.7	
	comp=Z,9.2nm,0.9s							
ZAA0	**Zalesovo Array**	**59.07**	**37**		P	**P**	**02 08 43.3**	**-0.3**
ZAA0					IAmb	IAmb	02 08 45.5	
	comp=Z,9.9nm,1.4s							
ZALV	**Zalesovo Beam**	**59.07**	**37**		P	**P**	**02 08 43.0**	**-0.6**
KURK	**Kurchatov**	**59.52**	**43**		P	**P**	**02 08 47.8**	**+1.0**
GYA0B	**ALIBECK ARRAY**	**60.53**	**65**		P	**P**	**02 08 53.4**	**-0.6**
GYA0B					IAmb	IAmb	02 08 53.5	
	comp=Z,10nm,1.3s							
KKAR	**Karatay Array**	**62.32**	**53**		P	**P**	**02 09 05.8**	**-0.2**
MAKZ	**Makanchi**	**64.00**	**43**		P	**P**	**02 09 17.1**	**+0.1**
MKAR	**Makanchi Array**	**64.13**	**43**		P	**P**	**02 09 17.2**	**-0.7**
AAK	**Ala-Archa**	**64.43**	**51**		P	**P**	**02 09 20.8**	**+0.7**
BTK	**Batken**	**64.91**	**55**		P	**P**	**02 09 23.9**	**+0.7**
RAYN	**Ar Rayn**	**65.14**	**85**		P	**P**	**02 09 24.6**	**-0.2**
RAYN					IAmb	IAmb	02 09 25.1	
	comp=Z,9.6nm,1.2s							
BOOM	**Boomskoye usch**	**65.16**	**50**		P	**P**	**02 09 26.4**	**+1.4**
BOOM					IAmb	IAmb	02 09 27.1	
	comp=Z,15nm,1.2s							
KDJ	**Kajisay**	**65.98**	**49**		P	**P**	**02 09 30.6**	**+0.4**
KDJ					IAmb	IAmb	02 09 32.1	
	comp=Z,14nm,1.1s							
KBL	**Kabul**	**68.56**	**60**		P	**P**	**02 09 46.7**	**0.0**
ULN	**Ulaanbaatar**	**70.94**	**26**		P	**P**	**02 10 00.9**	**-0.3**
ULN					IAmb	IAmb	02 10 01.7	
	comp=Z,7.0nm,1.1s							
GO01	**Chusmiza**	**81.52**	**213**		P	**P**	**02 11 00.8**	**-1.0**
GO01					IAmb	IAmb	02 11 01.8	
	comp=Z,15nm,1.4s							
LVC	**Limon Verde**	**84.22**	**212**		P	P	02 11 11.1	-4.5
SHL	**Shillong**	**86.35**	**47**		P	**P**	**02 11 25.6**	**-0.7**
AS31	**Alice Springs**	**145.90**	**19**			**PKPdf**	**02 18 21.1**	**-1.4**
ASAR	**Alice Springs**	**145.90**	**19**			**PKPdf**	**02 18 21.9**	**-0.6**

*IDC **25** 02:02:25.1±0.8,56°.55N×34°.54W,h0km,mb4.0/18, mbtmp4.0/22,ML3.4/4,Error ellipse: s-maj=21.9km s-min=14.0km az=16.0*
*NEIC **25** 02:02:27.8±1.2,56°.6N±0°.1×34°.5W±0°.1,h10km±1km, mb4.5/68,Error ellipse: s-maj=18.4km s-min=12.5km az=183.0*

ISC 25 02:02:26.9±0.5,56°.59N±0°.09×34°.45W±0°.06,h10km,n103, σ1§12/91,mb4.5/56,MS4.6/4,8D,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRS	**Narsarsuaq**	**7.29**	**313**	Pn	**Pn**	**02 04 14.2**	**+0.8**
ANGG	**Ammassalik, Gr**	**9.18**	**352**	Pn	**Pn**	**02 04 38.8**	**-0.5**
BORG	**Borgarnes**	**10.38**	**33**	Pn	**Pn**	**02 04 56.8**	**+1.1**
	1.4nm,0.3s,baz=221,slow=6.8,SNR=8.2 12nm,0.8s						
SUMG	**Summit**	**16.13**	**356**		**Pn**	**02 06 13.1**	**-0.7**
ESK	**Eskdalemuir**	**17.47**	**81**	Pn	**Pn**	**02 06 28.8**	**-1.5**
EKA	**Eskdalemuir Ar**	**17.49**	**81**	P	**P**	**02 06 32.8**	**+1.0**
	baz=288,slow=11 2.4nm,0.9s						
FRB	**Frobisher Bay**	**18.22**	**307**	P	**Pn**	**02 06 38.2**	**-1.3**
	0.5nm,0.3s,baz=88,slow=12,SNR=4.0 7.0nm,0.8s						
SCHQ	**Schefferville**	**18.24**	**278**	P	**Pn**	**02 06 40.1**	**+0.3**
	0.3nm,0.3s,baz=56,slow=10.0,SNR=5.7 4.6nm,0.8s						
SCHQ	**Schefferville**	**18.24**	**278**	Pn	**Pn**	**02 06 38.0**	**-1.9**
BATG	**Bathurst New B**	**21.43**	**258**	P	**P**	**02 07 14.7**	**-0.1**
D62A	**Allapoint, All**	**23.17**	**261**	P	**P**	**02 07 33.8**	**+0.5**
D62A				IAmb	IAmb	02 07 37.0	
	comp=Z,16nm,1.2s						
F64A	**Sherman**	**23.54**	**257**	P	**P**	**02 07 37.0**	**-0.1**
SNF	**Seneffe**	**23.56**	**88**	*d*P	**P**	**02 07 37.0**	**-0.2**
	comp=Z,8.9nm,1.0s						
NOA	**NORSAR Array B**	**23.67**	**60**	P	**P**	**02 07 38.5**	**+0.2**
	comp=Z,3.1nm,1.1s,baz=282,slow=10,SNR=3.5 comp=Z,3.1nm,1.1s						
CLF	**Chambon-Foret**	**23.77**	**95**	P	**P**	**02 07 40.1**	**+0.9**
BMRD	**Maredsous**	**23.93**	**89**	*d*P	**P**	**02 07 41.0**	**+0.3**
DOU	**Dourbes**	**23.94**	**89**	*d*P	**P**	**02 07 40.7**	**-0.2**
BSTI	**Sart Tilman**	**24.23**	**87**	*d*P	**P**	**02 07 45.5**	**+1.9**
RCHB	**Rochefort**	**24.26**	**88**	*d*P	**P**	**02 07 43.7**	**-0.1**
F62A	**Pittston Farm,**	**24.40**	**259**	P	**P**	**02 07 45.0**	**-0.2**
F62A				IAmb	IAmb	02 07 47.6	
	comp=Z,13nm,0.9s						
MEM	**Membach**	**24.46**	**87**	*d*P	**P**	**02 07 45.7**	**0.0**
	comp=Z,6.4nm,0.9s						
BTNL	**Ternell**	**24.54**	**87**	*d*P	**P**	**02 07 46.0**	**-0.4**
	comp=Z,8.0nm,1.3s						
BHOU	**Houvegnez**	**24.59**	**87**	*d*P	**P**	**02 07 47.2**	**+0.4**
	comp=Z,6.6nm,1.2s						
HFS	**Hagfors**	**25.05**	**62**	P	**P**	**02 07 52.9**	**+2.0**
	comp=Z,7.8nm,1.2s,baz=324,slow=15,SNR=6.4 comp=Z,7.8nm,1.2s						
G62A	**West of Eustis**	**25.13**	**259**	P	**P**	**02 07 51.7**	**-0.1**
G62A				IAmb	IAmb	02 07 52.9	
	comp=Z,9.1nm,0.9s						
ESDC	**Sonseca Array**	**26.15**	**117**	P	**P**	**02 08 01.8**	**+0.6**
	comp=Z,2.6nm,1.2s,baz=312,slow=6.8,SNR=5.8 comp=Z,2.6nm,1.2s						
CLL	**Collm**	**27.96**	**81**	*i* P	**P**	**02 08 17.5**	**+0.3**
CLL				*i* x	x	02 08 20.0	
	comp=Z,12nm,1.5s						
CLL				Lm	MLR	02 46 00.0	
	comp=N,200nm,18.4s						
CLL				Lm	MLR	02 46 00.0	
	comp=E,200nm,19.4s						
CLL				Lm	MLR	02 46 00.0	
	comp=Z,300nm,20.4s						
TUE	**Stuetta**	**28.59**	**92**	P	**P**	**02 08 24.1**	**+0.9**
TUE				IAmb	IAmb	02 08 29.6	
	comp=Z,16nm,1.4s						
ARCES	**ARCESS Array B**	**28.69**	**39**	P	**P**	**02 08 22.2**	**-1.4**
	comp=Z,0.9nm,0.5s,baz=265,slow=8.2,SNR=11 comp=Z,0.9nm,0.5s						
ARCES	**ARCESS Array B**	**28.69**	**39**	IAmb	IAmb	02 08 27.8	
	comp=Z,12nm,1.4s						
GEC2	**GERESS Array S**	**29.63**	**84**	P	**P**	**02 08 33.3**	**+1.1**
GERES	**GERESS Array B**	**29.63**	**84**	P	**P**	**02 08 33.6**	**+1.4**
	comp=Z,0.5nm,0.8s,baz=312,slow=9.0,SNR=2.7 comp=Z,0.5nm,0.8s						
FINES	**FINESS Array B**	**30.53**	**55**	P	**P**	**02 08 38.8**	**-1.1**
	comp=Z,1.1nm,0.7s,baz=318,slow=6.1,SNR=6.8 comp=Z,1.1nm,0.7s						
FIA1	**FINESS Array S**	**30.53**	**55**	P	**P**	**02 08 41.0**	**+1.1**
FIA1				IAmb	IAmb	02 08 49.2	
	comp=Z,7.9nm,1.1s						
CLUD	**Cludinico**	**30.56**	**89**	P	**P**	**02 08 39.9**	**-0.5**
CLUD				IAmb	IAmb	02 08 51.0	
	comp=Z,8.4nm,1.0s						
MMNY	**Mt. Morris Dam**	**30.78**	**262**	P	**P**	**02 08 42.5**	**+0.2**
MMNY				IAmb	IAmb	02 08 44.0	
	comp=Z,11nm,1.0s						
OJC	**Ojcow**	**32.21**	**78**	P	**P**	**02 08 55.8**	**+0.9**
OJC				IAmb	IAmb	02 09 12.0	
	comp=Z,6.2nm,1.2s						
COWI	**Conover**	**34.83**	**276**	P	**P**	**02 09 18.4**	**+0.6**
EYMN	**Ely**	**35.01**	**281**	P	**P**	**02 09 19.9**	**+0.7**
EYMN				IAmb	IAmb	02 09 22.1	
	comp=Z,7.1nm,1.0s						
BURAR	**Bucovina Array**	**36.63**	**78**	P	**P**	**02 09 34.1**	**+0.8**
KLMR	**Klimovskoe**	**36.76**	**52**	*e*P	**P**	**02 09 33.7**	**-0.3**
KLMR				AMP		02 09 39.7	
	comp=Z,24nm,1.3s						
AKASG	**Malin Array Be**	**36.97**	**71**	P	**P**	**02 09 35.2**	**-0.7**
	comp=Z,1.5nm,0.8s,baz=305,slow=8.4,SNR=5.0 comp=Z,1.5nm,0.8s						
AGMN	**Agassiz Nation**	**37.17**	**284**	P	**P**	**02 09 38.2**	**+0.6**
SPMN	**Marine on St.**	**37.39**	**278**	P	**P**	**02 09 39.6**	**0.0**
SPMN				IAmb	IAmb	02 09 58.0	
	comp=Z,12nm,1.4s						
YKA	**Yellowknife Ar**	**38.58**	**313**	P	**P**	**02 09 49.3**	**-0.1**
	comp=Z,0.8nm,0.8s,baz=68,slow=8.8,SNR=4.8 comp=Z,0.8nm,0.8s						
ECSD	**EROS Data Cent**	**40.44**	**279**	P	**P**	**02 10 05.7**	**+0.5**
SIUC	**Southern Illin**	**40.49**	**266**	P	**P**	**02 10 06.2**	**+0.6**
SIUC				IAmb	IAmb	02 10 07.3	
	comp=Z,9.5nm,0.8s						
S44A	**Carbondale**	**40.52**	**266**	P	**P**	**02 10 06.1**	**+0.2**
S44A				IAmb	IAmb	02 10 07.5	
	comp=Z,9.2nm,0.7s						
PBMO	**Poplar Bluff**	**41.83**	**266**	IAmb	IAmb	02 10 20.0	
	comp=Z,13nm,1.1s						
LCAR	**Lake Charles**	**42.75**	**266**	P	**P**	**02 10 24.6**	**+0.5**
Z47A	**Carrollton**	**43.19**	**261**	P	**P**	**02 10 27.9**	**+0.2**
Z47A				IAmb	IAmb	02 10 28.8	
	comp=Z,11nm,0.8s						
Y45A	**Yeager Farm, C**	**43.49**	**262**	P	**P**	**02 10 29.8**	**-0.4**
WHAR	**Wooly Hollow**	**43.94**	**266**	P	**P**	**02 10 34.2**	**+0.4**
WHAR				IAmb	IAmb	02 10 35.1	
	comp=Z,6.0nm,0.9s						
W41B	**Gary Mavity, V**	**44.01**	**266**	P	**P**	**02 10 34.7**	**+0.4**
W41B				IAmb	IAmb	02 10 37.4	
	comp=Z,6.7nm,0.9s						
I29M	**Ogilvie Camp,**	**45.51**	**325**	IAmb	IAmb	02 10 54.6	
	comp=Z,5.5nm,1.0s						
BMAR	**Burnt Mountain**	**45.97**	**330**	P	**P**	**02 10 50.5**	**+0.9**
BR131	**Keskin Array S**	**46.41**	**81**	P	**P**	**02 10 54.5**	**+1.0**
BR131				IAmb	IAmb	02 10 56.1	
	comp=Z,5.0nm,0.8s						
BRTR	**Keskin Array B**	**46.41**	**81**	P	**P**	**02 10 55.0**	**+1.4**
	comp=Z,2.8nm,0.7s,baz=310,slow=5.5,SNR=13 comp=Z,2.8nm,0.7s						
BRTR	**Keskin Array B**	**46.41**	**81**	P	**P**	**02 10 54.2**	**+0.7**
DAWY	**Dawson**	**46.72**	**324**	IAmb	IAmb	02 11 02.3	
	comp=Z,5.7nm,1.1s						
BOZ	**Bozeman (W)**	**47.20**	**291**	P	**P**	**02 11 00.3**	**+0.6**
BOZ				IAmb	IAmb	02 11 08.9	
	comp=Z,4.7nm,1.1s						
ARU	**Arti**	**47.43**	**49**	P	**P**	**02 11 01.0**	**-0.1**
	comp=Z,2.8nm,0.8s,baz=301,slow=8.9,SNR=4.2 comp=Z,2.8nm,0.8s						
ARU	**Arti**	**47.43**	**49**	P	**P**	**02 11 01.1**	**+0.1**
J26L	**Joseph Creek**	**47.73**	**326**	IAmb	IAmb	02 11 11.5	
	comp=Z,3.4nm,0.9s						
ISCO	**Idaho Springs**	**48.03**	**281**	P	**P**	**02 11 07.3**	**+0.9**
ISCO				IAmb	IAmb	02 11 09.1	
	comp=Z,2.7nm,0.8s						
H24K	**Noodor Dome**	**48.03**	**329**	P	**P**	**02 11 06.2**	**+0.5**
H24K				IAmb	IAmb	02 11 14.4	
	comp=Z,7.8nm,1.1s						
PDAR	**Pinedale Array**	**48.06**	**287**	P	**P**	**02 11 06.0**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=64,slow=6.0,SNR=5.7 comp=Z,0.8nm,0.7s						
SCRK	**Sand Creek**	**48.24**	**326**	IAmb	IAmb	02 11 16.9	
	comp=Z,7.1nm,1.0s						
IL31		**48.53**	**328**	P	**P**	**02 11 10.3**	**+0.8**
IL31				IAmb	IAmb	02 11 18.0	
	comp=Z,7.1nm,1.1s						
ILAR	**Eielson Array**	**48.53**	**328**	P	**P**	**02 11 10.2**	**+0.7**
ILAR	comp=Z,1.6nm,0.7s,baz=40,slow=6.5,SNR=12			PcP	**PcP**	**02 12 33.5**	**-1.7**
	comp=Z,0.7nm,0.8s,baz=24,slow=2.6,SNR=3.0 comp=Z,1.6nm,0.7s						
ILAR	**Eielson Array**	**48.53**	**328**	P	**P**	**02 11 09.2**	**-0.4**
HDA	**Harding Lake**	**48.81**	**328**	IAmb	IAmb	02 11 14.5	
	comp=Z,6.5nm,0.8s						
T25A	**Trinidad**	**49.28**	**278**	P	**P**	**02 11 17.4**	**+1.5**
T25A				IAmb	IAmb	02 11 32.4	
	comp=Z,8.1nm,1.4s						
MLY	**Manley**	**49.43**	**330**	IAmb	IAmb	02 11 24.8	
	comp=Z,3.3nm,0.9s						
MCK	**McKinley**	**49.91**	**328**	P	**P**	**02 11 20.9**	**+0.8**
KARS	**Kars**	**50.86**	**73**	P	**P**	**02 11 28.3**	**+0.6**
PV11	**David Mesa, Pa**	**50.87**	**282**	P	**P**	**02 11 29.0**	**+1.0**
PV11				IAmb	IAmb	02 11 31.8	
	comp=Z,6.6nm,0.8s						
J20K	**Nowinta River**	**51.03**	**331**	IAmb	IAmb	02 11 40.8	
	comp=Z,7.7nm,1.1s						
AKTO	**Aktyubinsk**	**51.30**	**55**	P	**P**	**02 11 31.1**	**+0.3**
	comp=Z,2.5nm,0.8s,baz=315,slow=8.9,SNR=7.3 comp=Z,2.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**51.43**	**133**	P	**P**	**02 11 31.0**	**-1.1**
	comp=Z,1.5nm,0.9s,baz=338,slow=6.7,SNR=5.4 comp=Z,1.5nm,0.9s						
TIXI	**Tiksi**	**51.51**	**7**	P	**P**	**02 11 32.1**	**+0.1**
	comp=Z,3.9nm,0.8s,baz=90,slow=20,SNR=0.3 comp=Z,3.9nm,0.8s						
TIXI	**Tiksi**	**51.51**	**7**	P	**P**	**02 11 34.9**	**+2.9**
TIXI				IAmb	IAmb	02 11 37.7	
	comp=Z,7.0nm,1.1s						
ABKAR	**Akbulak array**	**53.02**	**55**	P	**P**	**02 11 44.2**	**+0.7**
DBIC	**Dimbokro**	**54.98**	**143**	P	**P**	**02 11 57.0**	**-1.2**
	comp=Z,2.8nm,0.6s,baz=5.5,slow=6.8,SNR=3.5 comp=Z,2.8nm,0.6s						
MAKZ	**Makanchi**	**64.13**	**43**	P	**P**	**02 13 01.5**	**+0.5**
MKAR	**Makanchi Array**	**64.26**	**43**	P	**P**	**02 13 02.3**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=328,slow=5.1,SNR=3.9 comp=Z,1.3nm,0.6s						
MKAR	**Makanchi Array**	**64.26**	**43**	P	**P**	**02 13 02.6**	**+0.8**
AAK	**Ala-Archa**	**64.55**	**51**	P	**P**	**02 13 05.9**	**+1.9**
BTK	**Batken**	**65.03**	**55**	P	**P**	**02 13 07.6**	**+0.6**
GAR	**Garm**	**65.65**	**56**	P	**P**	**02 13 12.2**	**+1.0**
TARG	**Taragay, Kyrgy**	**66.70**	**49**	P	**P**	**02 13 18.9**	**+0.7**
KSH	**Kashi**	**67.75**	**52**	P	**P**	**02 13 26.5**	**+1.9**
KSH				pP	pwP	02 13 31.3	+1.2
KSH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WMQ	**Urumqi**	**68.79**	**41**	*e*P	**P**	**02 13 34.5**	**+3.6**
SONM	**Songino Array**	**70.94**	**27**	P	**P**	**02 13 43.0**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=350,slow=5.9,SNR=2.3 comp=Z,0.5nm,0.7s						
HHC	**Hu-ho-hao-te**	**78.76**	**26**	*e*P	**P**	**02 14 28.8**	**-0.7**
HHC				pmax	pmax		
	comp=Z,30nm,0.8s						
HHC				pmax	pmax		
	comp=Z,140nm,4.6s						
LZH	**Lanzhou**	**81.14**	**33**	*e*P	**P**	**02 14 38.6**	**-3.9**
LZH				pP	pP	02 14 43.4	-1.8
LZH				pmax	pmax		
	comp=Z,18nm,1.6s						
NJ2	**Nanjing**	**88.84**	**22**	*e*P	**P**	**02 15 18.0**	**-3.0**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
PZH	**PanZhiHua**	**89.31**	**38**	P	**P**	**02 15 23.0**	**-0.5**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PZH				pmax	pmax		
	comp=Z,80nm,4.2s						
LBTB	**Lobatse**	**95.72**	**128**	P	**P**	**02 15 53.9**	**+1.1**
TAOE	**Nuku Hiva Isla**	**105.98**	**278**	*e*LR	LR	02 51 31.9	
	comp=Z,216nm,23.9s						
PPT2	**Papeete2**	**118.31**	**281**	*e*LR	LR	02 57 15.5	
TBI	**Tubuai**	**122.90**	**277**	*e*LR	LR	02 59 22.0	
	comp=Z,294nm,26.2s						
DZM	**Mont Dzumac**	**142.24**	**327**	*e*LR	LR	03 08 22.1	
	comp=Z,136nm,23.8s						

*IDC **25** 02:02:29.6±0.7,8°.62N×127°.65E,h0km,mb4.3/16, mbtmp4.3/17,ML4.8/1,MS3.0/3,Error ellipse: s-maj=23.0km s-min=15.6km az=82.0*
*MAN **25** 02:02:35.0,8°.62N×127°.30E,h27km,mb5.1,ML4.1,MS4.1*
*NEIC **25** 02:02:36.0±0.9,8°.60N±0°.08×127°.5E±0°.1,h42km±8km, mb4.7/24,Error ellipse: s-maj=17.4km s-min=11.8km az=81.0*

ISC 25 02:02:34.7±0.5,8°.61N±0°.05×127°.41E±0°.07,h34km,n63, σ1§20/63,mb4.5/24,4C-10D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**1.12**	**248**	⇑*i*P	**Pn**	**02 02 52.8**	**-1.1**
BIPH				*i* S	**Sn**	**02 03 07.6**	**-0.6**
GLSP	**General Luna,**	**1.72**	**313**	*e*P	**Pn**	**02 03 00.5**	**-1.7**
GLSP				*e*S	**Sn**	**02 03 20.2**	**-2.8**
BUTP	**Butuan**	**1.80**	**282**	‖*e*P	**Pn**	**02 03 03.6**	**+0.2**
BUTP				*e*S	**Sn**	**02 03 23.9**	**-1.1**
MATI	**Mati**	**2.01**	**215**	‖*e*P	**Pn**	**02 03 06.4**	**+0.2**
DAV	**Davao City (W)**	**2.37**	**230**	Pn	**Pn**	**02 03 14.6**	**+3.4**
	172nm,0.3s,baz=55,slow=3.7,SNR=11						
DAV				Sn	**Sb**	**02 03 44.8**	**-0.8**
	115nm,0.3s,baz=226,slow=20,SNR=5.4						
DAV				LR	LR	02 04 11.4	
	comp=Z,306nm,20.2s,baz=344,slow=40 646nm,0.5s						
BUKP	**Musuan**	**2.43**	**253**	‖*e*P	**Pn**	**02 03 14.4**	**+2.3**
CGP	**Cagayan de Oro**	**2.69**	**267**	‖*e*P	**Pn**	**02 03 17.3**	**+1.7**
MSLP	**Maasin**	**2.94**	**301**	‖*e*P	**Pn**	**02 03 19.4**	**+0.5**
DDMP	**Don Marcelino,**	**3.00**	**214**	‖*e*P	**Pn**	**02 03 21.3**	**+1.4**
DDMP				*e*S	**Sn**	**02 03 53.1**	**-1.6**
GSPH	**General Santos**	**3.50**	**224**	⇑*i*P	**Pn**	**02 03 24.9**	**-1.9**
GSPH				*i* S	**Sn**	**02 04 09.9**	**+2.8**
SKMP	**Bagumbayan, Su**	**3.52**	**234**	‖*e*P	**Pn**	**02 03 28.4**	**+1.4**
BESP	**Borongan**	**3.55**	**327**	‖*e*P	**Pn**	**02 03 30.3**	**+2.8**
SNPH	**Sibulan**	**4.18**	**280**	‖*e*P	**Pn**	**02 03 37.5**	**+1.3**
RCP	**Roxas**	**5.45**	**303**	‖*e*P	**Pn**	**02 03 54.5**	**+1.0**
TNTI	**Ternate**	**7.79**	**180**	Pn	**Pn**	**02 04 25.5**	**-0.2**
TOLI2	**Tolitoli**	**9.95**	**222**	Pn	**Pn**	**02 04 55.2**	**-0.2**
LUWI	**Luwuk**	**10.64**	**206**	Pn	**Pn**	**02 05 05.8**	**+0.9**
TWG	**Pinlang**	**15.38**	**337**	Pn	**Pn**	**02 06 09.4**	**0.0**
TWG				IAmb	IAmb	02 06 35

comp=Z,1.6nm,0.8s,baz=33,slow=7.3,SNR=6.9
comp=Z,1.6nm,0.8s
ARCES ARCESS Array B 86.13 340 IAmb IAmb 02 15 17.1
comp=Z,10nm,1.5s
FINES FINESS Array B 87.88 332 P **P** **02 15 21.6 +1.0**
comp=Z,0.6nm,0.4s,baz=85,slow=4.7,SNR=22
comp=Z,0.6nm,0.4s
FINES FINESS Array B 87.88 332 P **P** **02 15 21.1 +0.5**
VNDA Vanda 88.15 173 P **P** **02 15 22.0 +0.5**
comp=Z,1.2nm,0.9s,baz=314,slow=4.8,SNR=6.2
comp=Z,1.2nm,0.9s
VNDA Vanda 88.15 173 IAmb IAmb 02 15 42.0
comp=Z,3.4nm,1.2s
AKASG Malin Array Be 88.55 321 P **P** **02 15 24.1 0.0**
comp=Z,1.2nm,0.7s,baz=64,slow=4.9,SNR=5.3
comp=Z,1.2nm,0.7s
YKA Yellowknife Ar 94.80 24 P **P** **02 15 52.8 0.0**
comp=Z,0.5nm,0.7s,baz=306,slow=5.5,SNR=4.1
comp=Z,0.5nm,0.7s

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*SKHL **25** 02:11:32.5±0.2,45°.50N×152°.90E,h30km±5km,mb4.3/3*
*IDC **25** 02:11:46.0±28.0,48°.96N×151°.66E,h0km,mb3.6/3,*
mbtmp3.6/3,Error ellipse: s-maj=625.0km s-min=67.1km az=148.0
ISC 25 02:11:31.6±2.5,45°.7N±0°.3×153°.0E±0°.2,h35km,n8,
σ2§23/11,mb3.7/3,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.64**	**265**	*e*P		**Pn**	**02 12 26.4**	**+1.0**
KUR					AMB	AMB	02 12 27.7	
	40nm,0.4s							
KUR				*e*S		**Sn**	**02 13 06.2**	**-1.0**
KUR					A	A	02 13 20.0	
	110nm,0.5s							
KUR					A	A	02 13 20.0	
	80nm,0.5s							
SHO	**Shikotan**	**4.75**	**250**	*e*P		**Pn**	**02 12 41.1**	**+0.4**
SHO					AMB	AMB	02 12 43.5	
	20nm,0.3s							
SHO				*e*S		**Sn**	**02 13 32.7**	**-1.8**
SHO					A	A	02 13 34.4	
	20nm,0.2s							
SHO					A	A	02 13 34.4	
	20nm,0.2s							
YUK	**Yuzh-Kuril'sk**	**5.34**	**255**	*e*P		**Pn**	**02 12 51.0**	**+2.3**
YUK					AMB	AMB	02 12 53.1	
	10.0nm,0.3s							
NMR	**Nemuro--Hokkai**	**5.69**	**249**	*e*P		**Pn**	**02 12 53.7**	**+0.1**
NMR				*e*S		**Sn**	**02 13 55.1**	**-2.5**
AKK	**Akkeshi**	**6.42**	**249**	*e*P		**Pn**	**02 13 06.0**	**+2.3**
SONM	**Songino Array**	**31.64**	**291**	P		**P**	**02 17 54.1**	**+2.8**
	0.3nm,0.3s,baz=60,slow=8.5,SNR=2.4							
	0.3nm,0.3s							
FINES	**FINESS Array B**	**64.99**	**335**	P		**P**	**02 22 04.7**	**-2.8**
	0.4nm,0.6s,baz=44,slow=7.1,SNR=6.6							
	0.4nm,0.6s							
NOA	**NORSAR Array B**	**69.23**	**341**	P		**P**	**02 22 32.9**	**-1.5**
	0.5nm,0.7s,baz=28,slow=6.4,SNR=4.2							
	0.5nm,0.7s							

IDC 25 02:13:58.8±1.4,11°.76N×141°.52E,h0km,mb3.8/3,
mbtmp3.8/4,ML4.0/1,MS3.2/1,Error ellipse:
s-maj=52.2km s-min=26.8km az=126.0,Western
Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.73**	**61**	Pn		Pn	02 14 58.2	+0.5
	12nm,0.3s,baz=269,slow=2.4,SNR=6.1							
GUMO					Sn	Sn	02 15 43.5	+1.0
	16nm,0.3s,baz=31,slow=19,SNR=1.6							
	53nm,0.5s							
CTA	**Charters Tower**	**31.99**	**172**	LR		LR	02 33 17.5	
	comp=Z,41nm,18.4s,baz=70,slow=36							
WRA	**Warramunga Arr**	**32.29**	**193**	P		P	02 20 29.5	0.0
	0.6nm,0.8s,baz=14,slow=9.8,SNR=4.7							
	0.6nm,0.8s							
ILAR	**Eielson Array**	**71.61**	**25**	P		P	02 25 21.4	-0.3
	0.6nm,0.6s,baz=250,slow=6.2,SNR=9.8							
	0.6nm,0.6s							
FINES	**FINESS Array B**	**91.41**	**334**	P		P	02 27 07.0	+0.4
	0.4nm,0.6s,baz=90,slow=3.5,SNR=3.7							
	0.4nm,0.6s							

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*IDC **25** 02:30:18.7±0.6,56°.63N×34°.42W,h0km,mb4.0/18,*
mbtmp4.0/22,ML3.1/4,MS3.8/38,Error ellipse:
s-maj=16.6km s-min=12.6km az=2.0
*NEIC **25** 02:30:21.0±1.3,56°.68N±0°.08×34°.6W±0°.1,h10km±1km,*
mb4.5/110,Error ellipse: s-maj=14.3km s-min=12.5km
az=342.0
ISC 25 02:30:22.3±0.4,56°.69N±0°.08×34°.54W±0°.05,h22km,n166,
σ1§10/101,mb4.5/73,MS3.9/44,1C-3D,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
NRS	**Narsarsuaq**	**7.20**	**313**	Pn		Pn	02 31 59.9	-6.1
NRS	**Narsarsuaq**	**7.20**	**313**	*i* P		Pn	02 31 58.8	-7.1
NRS					IAmb	IAmb	02 32 06.1	
	comp=Z,27nm,0.9s							
IVI	**Ivigtut**	**8.37**	**308**	Pn		**Pn**	**02 32 19.5**	**-2.5**
ANGG	**Ammassalik, Gr**	**9.09**	**352**	Pn		**Pn**	**02 32 30.7**	**-1.2**
BORG	**Borgarnes**	**10.33**	**33**	Pn		**Pn**	**02 32 49.2**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=315,slow=6.2,SNR=2.5							
BORG					LR	LR	02 35 39.3	
	comp=Z,652nm,19.7s,baz=225,slow=31							
	comp=Z,25nm,1.2s							
DY2G	**Dye2**	**11.27**	**335**	*i* P		**Pn**	**02 33 02.9**	**+0.9**
DY2G					IAmb	IAmb	02 33 05.3	
	comp=Z,11nm,1.0s							
ICESG	**Greenland Ices**	**12.66**	**352**	*i* P		**P**	**02 33 30.8**	**-1.5**
ICESG					IAmb	IAmb	02 33 36.5	
	comp=Z,6.3nm,0.8s							
SFJD	**Kangerlussuaq**	**12.78**	**331**	LR		LR	02 37 32.0	
	comp=Z,353nm,19.1s,baz=151,slow=34							
SUMG	**Summit**	**16.04**	**356**			**Pn**	**02 34 05.9**	**-0.5**
SUMG	**Summit**	**16.04**	**356**	*i* P		**Pn**	**02 34 05.0**	**-1.4**
SUMG					IAmb	IAmb	02 34 14.2	
	comp=Z,14nm,1.2s							
EKA	**Eskdalemuir Ar**	**17.52**	**81**	P		**P**	**02 34 25.2**	**-0.6**
	baz=287,slow=8.7							
EKA					LR	LR	02 39 55.3	
	comp=Z,478nm,18.0s,baz=270,slow=33							
	comp=Z,1.3nm,0.7s							
JMIC	**Jan Mayen**	**18.12**	**28**	LR		LR	02 39 51.7	
	comp=Z,236nm,20.1s,baz=236,slow=32							
FRB	**Frobisher Bay**	**18.12**	**307**	P		**P**	**02 34 32.7**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=94,slow=11,SNR=4.4							
FRB					LR	LR	02 40 01.8	
	comp=Z,306nm,22.0s,baz=114,slow=32							
	comp=Z,16nm,1.1s							
SCHQ	**Schefferville**	**18.18**	**278**	P		**P**	**02 34 33.5**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=75,slow=8.6,SNR=11							
SCHQ					LR	LR	02 40 21.6	
	comp=Z,329nm,19.8s,baz=67,slow=33							
	comp=Z,15nm,1.0s							
SCHQ	**Schefferville**	**18.18**	**278**	Pn		**Pn**	**02 34 31.5**	**-1.4**
SCHQ					IAmb	IAmb	02 34 40.2	
	comp=Z,43nm,1.3s							
BATG	**Bathurst New B**	**21.40**	**257**	P		**P**	**02 35 08.3**	**+0.1**
BATG					IAmb	IAmb	02 35 13.8	
	comp=Z,22nm,1.1s							
HAL	**Halifax**	**21.82**	**249**	P		**P**	**02 35 12.6**	**-0.1**
PQI	**Presque Isle**	**22.83**	**258**	P		**P**	**02 35 23.1**	**-0.4**
D62A	**Allapoint, All**	**23.14**	**260**	P		**P**	**02 35 26.8**	**+0.2**
D62A					IAmb	IAmb	02 35 30.0	
	comp=Z,12nm,0.9s							
GGN	**Saint George**	**23.19**	**254**	P		**P**	**02 35 28.3**	**+1.1**
GGN					IAmb	IAmb	02 35 32.9	
	comp=Z,18nm,1.0s							
F64A	**Sherman**	**23.52**	**257**	P		**P**	**02 35 30.3**	**-0.1**
F64A					IAmb	IAmb	02 35 31.9	
	comp=Z,14nm,0.8s							
NOA	**NORSAR Array B**	**23.66**	**60**	P		**P**	**02 35 31.3**	**-0.5**
	comp=Z,0.7nm,0.8s,baz=280,slow=9.7,SNR=4.4							
NOA					LR	LR	02 43 02.5	
	comp=Z,146nm,22.0s,baz=280,slow=32							
	comp=Z,0.7nm,0.8s							
EMMW	**East Machias**	**23.79**	**254**	P		**P**	**02 35 31.5**	**-1.6**
EMMW					IAmb	IAmb	02 35 40.1	
	comp=Z,16nm,0.9s							
BMRD	**Maredsous**	**23.98**	**89**	*d*P		**P**	**02 35 35.2**	**+0.5**
F63A	**Nahmakanta, Br**	**24.02**	**258**	P		**P**	**02 35 35.9**	**+0.6**
BSTI	**Sart Tilman**	**24.27**	**87**	*d*P		**P**	**02 35 37.8**	**+0.2**
F62A	**Pittston Farm,**	**24.37**	**259**	P		**P**	**02 35 39.2**	**+0.8**
F62A					IAmb	IAmb	02 35 39.9	
	comp=Z,12nm,0.8s							
BTNL	**Ternell**	**24.58**	**87**	*d*P		**P**	**02 35 41.1**	**+0.7**
HFS	**Hagfors**	**25.05**	**62**	LR		LR	02 44 14.7	
	comp=Z,162nm,18.6s,baz=304,slow=33							
G62A	**West of Eustis**	**25.11**	**258**	P		**P**	**02 35 45.3**	**+0.1**
G62A					IAmb	IAmb	02 35 46.9	
	comp=Z,9.9nm,0.8s							
ESDC	**Sonseca Array**	**26.24**	**117**	P		**P**	**02 35 54.8**	**-0.7**
	comp=Z,1.6nm,1.0s,baz=317,slow=9.6,SNR=6.5							
ESDC					LR	LR	02 44 25.3	
	comp=Z,235nm,18.4s,baz=319,slow=32							
	comp=Z,1.6nm,1.0s							
ESDC	**Sonseca Array**	**26.24**	**117**	P		**P**	**02 35 55.4**	**-0.1**
ECH	**Echery**	**26.42**	**91**	P		**P**	**02 35 58.5**	**+1.5**
NKC	**Novy Kostel**	**28.24**	**83**	AMS		AMS	02 48 20.0	
	comp=Z,300nm,15.1s							
ARCES	**ARCESS Array B**	**28.65**	**39**	P		**P**	**02 36 15.9**	**-0.8**
	comp=Z,1.5nm,0.7s,baz=291,slow=10,SNR=5.0							
ARCES					LR	LR	02 45 23.8	
	comp=Z,166nm,19.1s,baz=286,slow=32							
	comp=Z,1.5nm,0.7s							
DAVOX	**Davos/Dischmat**	**28.76**	**91**	LR		LR	02 47 28.5	
	comp=Z,431nm,18.7s,baz=266,slow=36							
RES	**Resolute Bay**	**28.78**	**331**	LR		LR	02 47 40.2	
	comp=Z,73nm,18.2s,baz=91,slow=36							
PVCC	**Panska Ves**	**29.24**	**81**	AMS		AMS	02 47 20.0	
	comp=Z,300nm,17.1s							
KHC	**Kasperske Hory**	**29.45**	**84**	AMS		AMS	02 48 50.0	
	comp=Z,300nm,13.7s							
PRU	**Pruhonice**	**29.51**	**82**	AMS		AMS	02 50 20.0	
	comp=Z,300nm,12.4s							
GERES	**GERESS Array B**	**29.67**	**85**	LR		LR	02 47 42.3	
	comp=Z,157nm,18.8s,baz=298,slow=35							
CHVC	**Chvalec**	**30.02**	**80**	AMS		AMS	02 47 40.0	
	comp=Z,300nm,15.4s							
CKRC	**Cesky Krumlov**	**30.02**	**84**	AMS		AMS	02 48 00.0	
	comp=Z,200nm,14.0s							
UPC	**Upice**	**30.04**	**80**	AMS		AMS	02 47 40.0	
	comp=Z,300nm,19.0s							
SADO	**Sadowa**	**30.09**	**266**	LR		LR	02 47 22.5	
	comp=Z,343nm,18.6s,baz=56,slow=34							
OSTC	**Ostas**	**30.12**	**80**	AMS		AMS	02 47 50.0	
	comp=Z,300nm,20.2s							
DPC	**Dobruska-Polom**	**30.29**	**80**	AMS		AMS	02 48 20.0	
	comp=Z,300nm,19.0s							
TREC	**Trest**	**30.40**	**82**	AMS		AMS	02 48 10.0	
	comp=Z,300nm,16.2s							
FINES	**FINESS Array B**	**30.52**	**56**	P		**P**	**02 36 32.8**	**-0.6**
	comp=Z,1.5nm,0.7s,baz=297,slow=5.8,SNR=8.3							
FINES					LR	LR	02 46 52.8	
	comp=Z,146nm,21.9s,baz=288,slow=33							
	comp=Z,1.5nm,0.7s							
CLUD	**Cludinico**	**30.61**	**89**	P		**P**	**02 36 34.5**	**+0.1**
CLUD					IAmb	IAmb	02 36 39.3	
	comp=Z,5.5nm,1.0s							
KRLC	**Kraliky**	**30.69**	**80**	AMS		AMS	02 48 40.0	
	comp=Z,300nm,18.2s							
VRAC	**Vranov**	**31.00**	**82**	LR		LR	02 48 48.7	
	comp=Z,278nm,19.2s,baz=312,slow=36							
OKC	**Ostrava-Krasne**	**31.56**	**80**	AMS		AMS	02 49 20.0	
	comp=Z,300nm,17.6s							
E46A	**Sault Ste Mari**	**31.95**	**273**	P		**P**	**02 36 46.8**	**+0.7**
E46A					IAmb	IAmb	02 36 48.2	
	comp=Z,4.8nm,0.8s							
NACGM	**Naroch**	**33.51**	**67**	*e*P		**P**	**02 36 55.7**	**-4.0**
	baz=298							
COWI	**Conover**	**34.77**	**276**	IAmb		IAmb	02 37 12.5	
	comp=Z,4.5nm,0.8s							
EYMN	**Ely**	**34.95**	**280**	P		**P**	**02 37 12.9**	**+0.7**
EYMN					IAmb	IAmb	02 37 15.7	
	comp=Z,8.5nm,0.9s							
B35A	**Bob, Littlefor**	**35.91**	**282**	P		**P**	**02 37 20.4**	**-0.1**
B35A					IAmb	IAmb	02 37 22.0	
	comp=Z,4.3nm,0.8s							
ULM	**Lac du Bonnet**	**35.97**	**286**	LR		LR	02 50 39.6	
	comp=Z,204nm,21.3s,baz=87,slow=34							
KEST	**Kesra**	**36.05**	**107**	LR		LR	02 50 13.7	
	comp=Z,101nm,19.6s,baz=332,slow=33							
K43A	**Burlington**	**36.50**	**271**	P		**P**	**02 37 25.2**	**-0.4**
K43A					IAmb	IAmb	02 37 27.9	
	comp=Z,11nm,0.9s							
BURAR	**Bucovina Array**	**36.66**	**78**	P		**P**	**02 37 27.4**	**+0.4**
KLMR	**Klimovskoe**	**36.74**	**52**	*e*P		**P**	**02 37 25.2**	**-2.2**
KLMR					AMP		02 37 28.9	
	comp=Z,21nm,1.3s							
AKASG	**Malin Array Be**	**36.99**	**71**	P		**P**	**02 37 28.1**	**-1.5**
	comp=Z,0.8nm,0.5s,baz=310,slow=8.2,SNR=6.8							
AKASG					LR	LR	02 52 24.5	
	comp=Z,145nm,19.2s,baz=322,slow=36							
	comp=Z,0.8nm,0.5s							
S51A	**Beattyville**	**37.42**	**261**	IAmb		IAmb	02 37 35.9	
	comp=Z,5.2nm,0.8s							
VAE	**Valguarnera**	**37.48**	**100**	LR		LR	02 50 49.7	
	comp=Z,106nm,20.8s,baz=325,slow=33							
MLR	**Muntele Rosu**	**38.37**	**80**	LR		LR	02 53 47.2	
	comp=Z,258nm,19.5s,baz=308,slow=37							
YKA	**Yellowknife Ar**	**38.48**	**313**	P		**P**	**02 37 43.0**	**+0.9**
	comp=Z,1.9nm,1.0s,baz=68,slow=8.8,SNR=4.8							
YKA					LR	LR	02 51 47.2	
	comp=Z,109nm,21.6s,baz=30,slow=33							
	comp=Z,1.9nm,1.0s							
T50A	**Nancy**	**38.55**	**261**	P		**P**	**02 37 44.4**	**+1.5**
TKL	**Tuckaleechee C**	**38.97**	**259**	LR		LR	02 52 58.5	
	comp=Z,225nm,19.0s,baz=32,slow=35							
ECSD	**EROS Data Cent**	**40.37**	**279**	P		**P**	**02 37 58.8**	**+0.7**
SIUC	**Southern Illin**	**40.44**	**266**	P		**P**	**02 37 59.3**	**+0.6**
WVT	**Waverly**	**40.83**	**263**	P		**P**	**02 38 02.7**	**+0.7**
PBMO	**Poplar Bluff**	**41.79**	**266**	IAmb		IAmb	02 38 11.6	
	comp=Z,7.1nm,0.8s							
INK	**Inuvik**	**42.09**	**327**	P		**P**	**02 38 11.5**	**-0.3**
	comp=Z,1.6nm,0.9s,baz=47,slow=10.0,SNR=3.7							
INK					LR	LR	02 53 28.8	
	comp=Z,107nm,19.1s,baz=46,slow=33							
	comp=Z,1.6nm,0.9s							
KIRV	**Kirov**	**42.20**	**51**	LR		LR	02 55 42.8	
	comp=Z,69nm,18.6s,baz=284,slow=36							
250A	**Grady**	**43.11**	**257**	IAmb		IAmb	02 38 22.9	
	comp=Z,9.5nm,0.7s							
W41B	**Gary Mavity, V**	**43.97**	**266**	P		**P**	**02 38 27.9**	**+0.4**
W41B					IAmb	IAmb	02 38 28.7	
	comp=Z,5.1nm,0.8s							
W39A	**Magazine**	**44.80**	**267**	P		**P**	**02 38 35.0**	**+0.9**
W39A					IAmb	IAmb	02 38 35.5	
	comp=Z,4.8nm,0.7s							
IDI	**Anoyia**	**44.83**	**92**	LR		LR	02 59 00.6	
	comp=Z,68nm,19.0s,baz=295,slow=38							
BELG	**Belogornoye**	**45.16**	**59**	LR		LR	02 56 03.0	
	comp=Z,151nm,21.5s,baz=312,slow=34							
MIAR	**Mount Ida**	**45.16**	**267**	IAmb		IAmb	02 38 43.8	
	comp=Z,10nm,1.4s							
SJG	**San Juan**	**45.20**	**225**	LR		LR	02 53 38.6	
	comp=Z,50nm,21.4s,baz=282,slow=31							
I29M	**Ogilvie Camp,**	**45.41**	**325**	IAmb		IAmb	02 38 40.3	
	comp=Z,4.6nm,0.8s							
M31M	**Drury Creek, Y**	**46.18**	**320**	P		**P**	**02 38 45.5**	**+0.7**
M31M					IAmb	IAmb	02 38 52.0	
	comp=Z,4.5nm,1.1s							
TOLK	**Toolik Lake Re**	**46.33**	**333**	P		**P**	**02 38 47.1**	**+1.2**
TOLK					IAmb	IAmb	02 38 54.6	
	comp=Z,9.4nm,1.4s							
BR131	**Keskin Array S**	**46.44**	**81**	P		**P**	**02 38 48.2**	**+1.0**
BR131					IAmb	IAmb	02 38 49.6	
	comp=Z,5.8nm,0.8s							
BRTR	**Keskin Array B**	**46.44**	**81**	P		**P**	**02 38 48.5**	**+1.2**
	comp=Z,3.3nm,0.8s,baz=316,slow=5.2,SNR=18							
	comp=Z,3.3nm,0.8s							
BRTR	**Keskin Array B**	**46.44**	**81**	P		**P**	**02 38 47.3**	**0.0**
M30M	**Minto, Yukon**	**46.77**	**322**	P		**P**	**02 38 51.3**	**+1.9**
M30M					IAmb	IAmb	02 38 58.0	
	comp=Z,7.0nm,1.2s							
I26K	**Coal Creek Min**	**46.94**	**327**	IAmb		IAmb	02 38 57.1	
	comp=Z,8.8nm,1.4s							
DLBC	**Dease Lake**	**47.04**	**314**	LR		LR	02 58 14.2	
	comp=Z,208nm,19.5s,baz=96,slow=36							
BOZ	**Bozeman (W)**	**47.12**	**291**	IAmb		IAmb	02 38 56.5	
	comp=Z,5.0nm,1.1s							
ARU	**Arti**	**47.40**	**49**	LR		LR	02 57 24.1	
	comp=Z,76nm,18.7s,baz=324,slow=34							
ARU	**Arti**	**47.40**	**49**	P		**P**	**02 38 54.7**	**+0.3**
COLD	**Coldfoot**	**47.53**	**332**	P		**P**	**02 38 55.8**	**+0.5**
COLD					IAmb	IAmb	02 38 57.9	
	comp=Z,4.1nm,1.2s							
WMOK	**Wichita Mounta**	**47.89**	**271**	IAmb		IAmb	02 39 03.4	
	comp=Z,6.8nm,1.4s							
H24K	**Noodor Dome**	**47.93**	**329**	IAmb		IAmb	02 39 00.7	
	comp=Z,4.4nm,0.8s							
ISCO	**Idaho Springs**	**47.96**	**281**	P		**P**	**02 39 00.5**	**+1.1**
ISCO					IAmb	IAmb	02 39 02.2	
	comp=Z,2.9nm,0.8s							
PDAR	**Pinedale Array**	**47.99**	**287**	P		**P**	**02 38 59.4**	**0.0**
	comp=Z,0.9nm,0.6s,baz=72,slow=8.4,SNR=9.5							
PDAR					LR	LR	02 58 06.6	
	comp=Z,151nm,19.1s,baz=76,slow=35							
	comp=Z,0.9nm,0.6s							
PDAR	**Pinedale Array**	**47.99**	**287**	P		**P**	**02 38 59.6**	**+0.2**
NEW	**Newport**	**48.08**	**297**	LR		LR	02 57 58.4	
	comp=Z,210nm,20.6s,baz=6.5,slow=34							
J25K	**Salcha River,**	**48.09**	**327**	IAmb		IAmb	02 39 05.6	
	comp=Z,5.1nm,1.1s							
L27K	**Beaver Creek,**	**48.11**	**324**	IAmb		IAmb	02 39 02.6	
	comp=Z,6.0nm,1.1s							
SCRK	**Sand Creek**	**48.13**	**326**	IAmb		IAmb	02 39 02.6	
	comp=Z,4.4nm,0.8s							
MCMT	**McKenzie Canyo**	**48.28**	**291**	P		**P**	**02 39 02.0**	**+0.3**
IL31		**48.43**	**328**	IAmb		IAmb	02 39 04.3	
	comp=Z,3.8nm,0.8s							
ILAR	**Eielson Array**	**48.43**	**328**	P		**P**	**02 39 03.4**	**+1.1**
	comp=Z,2.6nm,0.7s,baz=40,slow=6.2,SNR=28							
ILAR					LR	LR	02 59 44.2	
	comp=Z,73nm,19.5s,baz=108,slow=36							
	comp=Z,2.6nm,0.7s							
ILAR	**Eielson Array**	**48.43**	**328**	P		**P**	**02 39 02.5**	**+0.3**
I23K	**Minto, Yukon-K**	**48.86**	**329**	IAmb		IAmb	02 39 07.5	
	comp=Z,3.2nm,0.8s							
NEA2	**Nenana**	**49.19**	**329**	IAmb		IAmb	02 39 14.3	
	comp=Z,4.1nm,0.9s							
T25A	**Trinidad**	**49.22**	**278**	IAmb		IAmb	02 39 14.7	
	comp=Z,4.5nm,1.1s							
MLY	**Manley**	**49.33**	**330**	IAmb		IAmb	02 39 11.1	
	comp=Z,3.6nm,0.8s							
IMAR	**Indian Mountai**	**49.41**	**332**	P		**P**	**02 39 10.0**	**+0.3**
I21K	**Tanana**	**49.56**	**331**	IAmb		IAmb	02 39 17.0	
	comp=Z,5.3nm,0.9s							
CBB	**Campbell River**	**50.78**	**304**	IAmb		IAmb	02 39 26.1	
	comp=Z,8.0nm,1.0s							
J20K	**Nowinta River**	**50.93**	**331**	IAmb		IAmb	02 39 27.0	
	comp=Z,4.6nm,0.8s							
CAST	**Castle Rocks**	**50.95**	**329**	IAmb		IAmb	02 39 26.5	
	comp=Z,4.2nm,0.9s							
AKTO	**Aktyubinsk**	**51.29**	**55**	LR		LR	02 59 55.1	
	comp=Z,70nm,20.2s,baz=324,slow=35							
MVCO	**Mesa Verde**	**51.40**	**281**	P		**P**	**02 39 26.1**	**+0.7**
MVCO					IAmb	IAmb	02 39 45.3	
	comp=Z,7.1nm,1.3s							
TIXI	**Tiksi**	**51.43**	**7**	P		**P**	**02 39 24.6**	**-0.2**
	comp=Z,3.4nm,0.7s,baz=86,slow=23,SNR=4.7							
	comp=Z,3.4nm,0.7s							
TIXI	**Tiksi**	**51.43**	**7**	P		**P**	**02 39 24.6**	**-0.2**
TIXI					IAmb	IAmb	02 39 26.8	
	comp=Z,4.3nm,0.8s							
TOA0	**Torodi Ar. Sit**	**51.53**	**133**	P		**P**	**02 39 25.4**	**-1.0**
TOA0					IAmb	IAmb	02 39 25.5	
	comp=Z,4.9nm,1.0s							
TORD	**Torodi Ar. Bea**	**51.53**	**133**	P		**P**	**02 39 24.4**	**-1.9**
	comp=Z,3.8nm,0.9s,baz=338,slow=6.6,SNR=15							
	comp=Z,3.8nm,0.9s							
K20K	**Telida**	**51.55**	**330**	IAmb		IAmb	02 39 31.9	
	comp=Z,7.8nm,1.0s							
ELK	**Elko**	**52.41**	**289**	P		**P**	**02 39 33.1**	**+0.2**
WVOR	**Wild Horse Val**	**52.94**	**293**	P		**P**	**02 39 37.3**	**+0.6**
WVOR					IAmb	IAmb	02 39 45.9	
	comp=Z,9.9nm,1.5s							
ABKAR	**Akbulak array**	**53.00**	**55**	P		**P**	**02 39 37.3**	**+0.5**
TXAR	**Lajitas Array**	**54.68**	**271**	P		**P**	**02 39 50.2**	**+0.7**
	comp=Z,0.7nm,1.0s,baz=90,slow=3.8,SNR=4.3							
	comp=Z,0.7nm,1.0s							
KVN	**Kaiserville**	**55.15**	**289**	IAmb		IAmb	02 39 56.6	
	comp=Z,4.5nm,0.9s							
PAHR	**Pah Rah Range**	**55.33**	**291**	IAmb		IAmb	02 39 57.0	
	comp=Z,6.6nm,1.2s							
YBH	**Yreka Blue Hor**	**55.51**	**295**	LR		LR	03 02 56.1	
	comp=Z,112nm,20.3s,baz=42,slow=35							
NVAR	**Mina Array Bea**	**55.72**	**289**	P		**P**	**02 39 57.8**	**+0.7**
	comp=Z,0.9nm,0.8s,baz=75,slow=6.0,SNR=4.7							
	comp=Z,0.9nm,0.8s							
KURK	**Kurchatov**	**59.62**	**43**	P		**P**	**02 40 24.0**	**0.0**
KURK					IAmb	IAmb	02 40 24.7	
	comp=Z,5.7nm,1.0s							
CMIG	**Matias Romero**	**59.69**	**254**	LR		LR	03 05 58.5	
	comp=Z,184nm,20.0s,baz=106,slow=36							
SEY	**Seymchan**	**60.59**	**356**	LR		LR	03 05 28.5	
	comp=Z,23nm,20.7s,baz=37,slow=35							
GEYT	**Alibeck**	**60.64**	**65**	LR		LR	03 08 33.0	
	comp=Z,56nm,18.2s,baz=316,slow=38							
GYA0B	**ALIBECK ARRAY**	**60.64**	**65**	P		**P**	**02 40 32.2**	**+1.0**
KK31	**Karatay Array**	**62.43**	**53**	P		**P**	**02 40 44.3**	**+1.0**
KK31					IAmb	IAmb	02 40 48.8	
	comp=Z,3.7nm,1.1s							
KKAR	**

EKA **Eskdalemuir Ar** 17.58 80 P Pn 02 36 13.0 -1.0
baz=293,slow=9.2
1.3nm,0.8s
HNH **Hanover** 26.98 258 P P 02 37 49.1 -1.4
HNH IAmb IAmb 02 37 56.8
comp=Z,10nm,1.3s
ARCES **ARCESS Array B** 28.89 39 P P 02 38 09.3 +2.0
comp=Z,1.3nm,0.8s,baz=293,slow=7.8,SNR=3.9
comp=Z,1.3nm,0.8s
ARCES **ARCESS Array B** 28.89 39 IAmb IAmb 02 38 43.8
comp=Z,12nm,1.4s
FINES **FINESS Array B** 30.70 55 P P 02 38 21.9 -1.5
comp=Z,0.4nm,0.5s,baz=276,slow=13,SNR=1.7
comp=Z,0.4nm,0.5s
E46A **Sault Ste Mari** 31.96 273 P P 02 38 34.4 -0.4
AKASG **Malin Array Be** 37.09 71 P P 02 39 17.3 -1.7
comp=Z,0.4nm,0.5s,baz=303,slow=8.6,SNR=2.8
comp=Z,0.4nm,0.5s
YKA **Yellowknife Ar** 38.68 313 P P 02 39 32.1 -0.2
comp=Z,0.7nm,0.7s,baz=60,slow=9.3,SNR=5.2
comp=Z,0.7nm,0.7s
LCAR **Lake Charles** 42.68 266 P P 02 40 06.8 +1.3
BORA **Eskisehir** 44.64 83 P P 02 40 20.8 -0.6
BRTR **Keskin Array B** 46.50 81 P P 02 40 37.8 +1.6
comp=Z,0.7nm,0.6s,baz=309,slow=4.7,SNR=3.8
comp=Z,0.7nm,0.6s
PD31 **Pinedale Array** 48.07 287 P P 02 40 48.5 -0.1
PDAR **Pinedale Array** 48.07 287 P P 02 40 49.4 +0.9
comp=Z,0.6nm,0.8s,baz=59,slow=8.7,SNR=3.8
comp=Z,0.6nm,0.8s
PDAR **Pinedale Array** 48.07 287 P P 02 40 48.7 +0.2
KVAR **Kislovodsk Arr** 48.43 70 LR LR 03 00 13.5
comp=Z,67nm,19.5s,baz=300,slow=35
IL31 **48.68 328** P P 02 40 52.7 +0.1
IL31 IAmb IAmb 02 41 02.7
comp=Z,4.6nm,1.4s
ILAR **Eielson Array** 48.68 328 P P 02 40 53.0 +0.4
comp=Z,1.0nm,0.9s,baz=34,slow=5.9,SNR=4.5
comp=Z,1.0nm,0.9s
HWUT **Hardware Ranch** 49.95 287 P P 02 41 03.1 +0.3
TORD **Torodi Ar. Bea** 51.33 132 P P 02 41 13.7 +0.4
comp=Z,0.5nm,0.8s,baz=340,slow=8.1,SNR=2.9
comp=Z,0.5nm,0.8s
BMN **Battle Mountai** 53.77 290 P P 02 41 31.0 -0.3
BMN IAmb IAmb 02 41 33.7
comp=Z,3.0nm,0.7s
EIL **Elat** 54.63 89 LR LR 03 05 43.6
comp=Z,40nm,20.0s,baz=294,slow=37
DBIC **Dimbokro** 54.84 143 LR LR 03 03 43.2
comp=Z,86nm,18.3s,baz=343,slow=35
PAHR **Pah Rah Range** 55.43 291 P P 02 41 43.6 +0.3
PAHR IAmb IAmb 02 42 12.8
comp=Z,4.9nm,1.3s
TUC **Tucson** 56.35 279 P P 02 41 50.5 +0.5
TUC IAmb IAmb 02 41 54.9
comp=Z,3.6nm,1.4s
JTS **Las Juntas de** 60.24 241 LR LR 03 07 08.4
comp=Z,70nm,20.2s,baz=17,slow=35
YAK **Yakutsk** 61.28 8 LR LR 03 07 13.5
comp=Z,52nm,18.4s,baz=93,slow=34
MAKZ **Makanchi** 64.32 43 P P 02 42 45.3 +1.1
MAKZ IAmb IAmb 02 42 53.0
comp=Z,2.7nm,1.1s
MKAR **Makanchi Array** 64.45 43 P P 02 42 45.1 0.0
comp=Z,0.9nm,0.8s,baz=337,slow=5.6,SNR=6.8
comp=Z,0.9nm,0.6s
TARG **Taragay, Kyrgy** 66.88 49 P P 02 43 02.2 +0.9

*IDC **25** 02:36:11.9±1.1,36°.73N×140°.61E, h0km, mb3.6/8, mbtmp3.6/8, Error ellipse: s-maj=26.3km s-min=22.3km az=159.0*
*JMA **25** 02:36:13.2±0.0,36°.9N±0°.1×140°.6E±0°.2, h7km, MV3.7/20, NORTHERN IBARAKI PREF*
JMA Felt II J1 at NORTHERN IBARAKI PREF .
*NIED **25** 02:36:13.2,36°.89N×140°.56E, h7km, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.67; $M_{\theta\theta}$-0.48; $M_{\phi\phi}$2.14; $M_{r\theta}$0.66; $M_{\theta\phi}$0.03; $M_{\phi r}$0.87; Fault plane solution: $M_0$2.23000×10^{14} NP1: ϕ_s339.00000°,δ37.00000°,λ-125.00000°. NP2: ϕ_s200.00000°,δ61.00000°,λ-67.00000°.*
ISC 25 02:36:12.9±1.2, 36°.87N±0°.03×140°.57E±0°.04, h5km±8km, n26, σ0°80/28, mb3.6/9, 2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JFFD	**Fukushimafurud**	0.22	357	⇓*iP*	**Pg**	02 36 17.5	+0.2
JFFD				⇓*eS*	**Sg**	02 36 20.3	+0.1
JHO	**Hitachi**	0.26	181	P	**Pg**	02 36 18.7	+0.8
ONAJ	**Iwakimizuishiy**	0.29	38	P	**Pg**	02 36 18.9	+0.3
ONAJ				S	**Sg**	02 36 23.0	+0.4
JSB	**Shiboa**	0.53	281	P	**Pg**	02 36 24.0	+0.8
JSB				eS	**Sg**	02 36 31.6	+1.5
JFK	**Kawauchi**	0.55	26	P	**Pg**	02 36 23.4	-0.1
JFT	**Otama**	0.68	344	P	**Pg**	02 36 25.9	0.0
JFT				S	**Sg**	02 36 34.7	0.0
JYT	**Yasato**	0.71	206	P	**Pb**	02 36 26.7	-1.0
JYT				S	**Sb**	02 36 36.3	-1.4
JFY	**Yanaizu**	0.88	308	P	**Pg**	02 36 29.4	-0.4
JFY				S	**Sg**	02 36 40.8	-0.4
JAG	**Ashikaga**	1.00	244	P	**Pg**	02 36 31.6	-0.6
JAG				S	**Sb**	02 36 45.7	-0.5
JMM	**Marumori**	1.01	10	P	**Pg**	02 36 31.4	-0.8
JMM				S	**Sg**	02 36 44.7	-0.7
MJAR	**Matsushiro Arr**	1.93	261	Pn	**Pn**	02 36 45.7	-0.7
MJAR	4.2nm,0.3s,baz=81,slow=16,SNR=134			Sn	**Sb**	02 37 12.0	-0.9
MJAR	6.9nm,0.3s,baz=139,slow=13,SNR=20			LR	LR	02 37 50.0	
SONM	comp=Z,73nm,20.5s,baz=72,slow=50 **Songino Array**	27.32	304	P	**P**	02 41 59.4	+0.9
H11N2	0.8nm,0.7s,baz=127,slow=8.7,SNR=3.9 0.8nm,0.7s **WAKE ISLAND Hy**	28.65	119	T	T	03 11 57.2	
H11N1	baz=313,slow=75,SNR=209 **WAKE ISLAND Hy**	28.66	119	T	T	03 11 57.7	
H11N3	baz=313,slow=75,SNR=187 **WAKE ISLAND Hy**	28.67	119	T	T	03 11 58.5	
H11S1	baz=313,slow=75,SNR=155 **WAKE ISLAND Hy**	29.34	121	T	T	03 12 48.6	
H11S3	baz=314,slow=76,SNR=404 **WAKE ISLAND Hy**	29.34	122	T	T	03 12 48.3	
H11S2	baz=314,slow=76,SNR=420 **WAKE ISLAND Hy**	29.36	122	T	T	03 12 49.4	
LZH	baz=314,slow=76,SNR=330 **Lanzhou**	29.43	280	*e*P	P	02 42 26.8	+9.3
LZH				sP	sP	02 42 33.8	+14
LZH				pmax	pmax		
ZALV	comp=Z,19nm,1.4s **Zalesovo Beam**	41.53	313	P	**P**	02 44 01.4	+0.5
ILAR	comp=Z,0.7nm,0.7s,baz=93,slow=9.1,SNR=2.1 comp=Z,0.7nm,0.7s **Eielson Array**	49.99	32	P	**P**	02 45 08.7	+1.1
WRA	comp=Z,0.2nm,0.7s,baz=265,slow=7.0,SNR=2.6 comp=Z,0.2nm,0.7s **Warramunga Arr**	56.81	187	P	**P**	02 45 57.1	-1.1
ARCES	comp=Z,0.9nm,0.7s,baz=5.1,slow=7.3,SNR=9.7 comp=Z,0.9nm,0.7s **ARCESS Array B**	63.91	339	P	**P**	02 46 47.3	+1.1
FINES	comp=Z,0.7nm,0.9s,baz=57,slow=9.9,SNR=1.0 comp=Z,0.7nm,0.9s **FINESS Array B**	68.64	332	P	**P**	02 47 17.5	+0.9
NOA	comp=Z,0.6nm,0.6s,baz=38,slow=9.6,SNR=5.9 comp=Z,0.6nm,0.6s **NORSAR Array B**	74.08	337	P	**P**	02 47 49.9	+0.3
NVAR	comp=Z,0.5nm,0.8s,baz=38,slow=5.8,SNR=3.5 comp=Z,0.5nm,0.8s **Mina Array Bea**	75.62	53	P	**P**	02 47 59.1	-0.1
	comp=Z,0.4nm,0.7s,baz=281,slow=6.2,SNR=1.9 comp=Z,0.4nm,0.7s						

IDC 25 02:55:34.5±1.5, 12°.20N×145°.78E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=49.0km s-min=24.5km az=69.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	1.64	327	Pn	Pn	02 56 04.4	-0.2
GUMO	13nm,0.3s,baz=168,slow=2.9,SNR=5.5			Sn	Sg	02 56 27.8	+0.5
STKA	23nm,0.3s,baz=341,slow=23,SNR=16 **Stephens Creek**	44.01	185	P	P	03 03 44.0	0.0
	0.7nm,0.4s,baz=355,slow=12,SNR=3.0 0.7nm,0.4s						

ILAR **Eielson Array** 69.44 25 P P 03 06 45.1 +0.8
0.2nm,0.6s,baz=238,slow=5.8,SNR=5.1
0.2nm,0.6s
YKA **Yellowknife Ar** 83.67 27 P P 03 08 04.0 -1.0
0.2nm,0.5s,baz=283,slow=4.9,SNR=5.1
0.2nm,0.5s

*IDC **25** 03:01:23.7±1.0, 56°.5N×34°.48W, h0km, mb3.7/14, mbtmp3.7/16, ML3.5/2, MS3.8/3, Error ellipse: s-maj=28.8km s-min=14.9km az=2.0*
*NEIC **25** 03:01:25.8±1.0, 56°.5N±0°.1×34°.4W±0°.2, h10km±1km, mb4.3/53, Error ellipse: s-maj=21.3km s-min=15.3km az=171.0*
ISC 25 03:01:25.5±0.6, 56°.5N±0°.1×34°.44W±0°.06, h10km, n82, σ0°85/78, mb4.2/41, MS3.7/3, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	10.42	33	Pn	**Pn**	03 03 56.1	+1.4
	0.5nm,0.3s,baz=27,slow=2.3,SNR=2.5 17nm,1.1s						
BORG	**Borgarnes**	10.42	33		**Pn**	03 03 56.1	+1.4
SUMG	**Summit**	16.18	356	Pn	**Pn**	03 05 11.4	-1.6
ESK	**Eskdalemuir**	17.47	81	Pn	**Pn**	03 05 26.2	-2.7
EKA	**Eskdalemuir Ar**	17.49	81	P	**Pn**	03 05 29.6	+0.4
	baz=267,slow=8.5 0.6nm,0.7s						
BATG	**Bathurst New B**	21.42	258	P	**P**	03 06 12.6	-0.7
BATG				IAmb	IAmb	03 06 24.8	
	comp=Z,11nm,1.2s						
F64A	**Sherman**	23.54	257	P	**P**	03 06 36.7	+1.1
F64A				IAmb	IAmb	03 06 49.2	
	comp=Z,16nm,1.4s						
CLF	**Chambon-Foret**	23.76	95	P	**P**	03 06 38.2	+0.4
CLF				IAmb	IAmb	03 06 49.5	
	comp=Z,17nm,1.2s						
F62A	**Pittston Farm,**	24.39	259	P	**P**	03 06 42.9	-0.7
G62A	**West of Eustis**	25.13	259	P	**P**	03 06 50.7	+0.4
ECH	**Echery**	26.36	91	P	**P**	03 07 00.2	-1.3
ECH				IAmb	IAmb	03 07 07.8	
	comp=Z,7.3nm,1.5s						
CLL	**Collm**	27.96	80	*e*P	**P**	03 07 17.0	+1.2
ARCES	**ARCESS Array B**	28.72	39	P	**P**	03 07 21.1	-1.3
	comp=Z,0.8nm,0.5s,baz=265,slow=7.2,SNR=9.1 comp=Z,0.8nm,0.5s						
FUORN	**Ofenpass-Fuorn**	29.01	91	P	**P**	03 07 25.0	-0.5
TEOL	**Teolo**	30.55	92	P	**P**	03 07 38.9	0.0
TEOL				IAmb	IAmb	03 07 57.8	
	comp=Z,3.9nm,0.7s						
FINES	**FINESS Array B**	30.55	55	P	**P**	03 07 38.0	-0.7
	comp=Z,0.6nm,0.6s,baz=286,slow=7.7,SNR=5.1 comp=Z,0.6nm,0.6s						
PRED	**Cave del Predi**	30.94	88	P	**P**	03 07 42.1	-0.3
OJC	**Ojcow**	32.22	78	P	**P**	03 07 53.3	-0.2
OJC				IAmb	IAmb	03 08 02.9	
	comp=Z,2.5nm,0.6s						
NRCA	**Norcia**	32.97	94	P	**P**	03 08 00.9	+0.7
NRCA				IAmb	IAmb	03 08 11.7	
	comp=Z,3.9nm,1.1s						
N53A	**Lisbon**	33.70	262	P	**P**	03 08 07.4	+0.9
COWI	**Conover**	34.84	276	P	**P**	03 08 16.8	+0.4
B35A	**Bob, Littlefor**	35.99	283	P	**P**	03 08 26.2	0.0
AKASG	**Malin Array Be**	36.98	71	P	**P**	03 08 33.6	-1.0
	comp=Z,0.6nm,0.5s,baz=303,slow=8.8,SNR=3.6 comp=Z,0.6nm,0.5s						
AGMN	**Agassiz Nation**	37.18	284	P	**P**	03 08 37.4	+1.0
L40A	**Anamosa**	38.58	273	P	**P**	03 08 47.9	-0.4
YKA	**Yellowknife Ar**	38.62	313	P	**P**	03 08 47.0	-1.3
	comp=Z,0.4nm,0.8s,baz=55,slow=8.9,SNR=2.6 comp=Z,0.4nm,0.8s						
YKA	**Yellowknife Ar**	38.62	313	P	**P**	03 08 47.0	-1.3
JSC	**Jenkinsville**	38.68	255	P	**P**	03 08 49.1	+0.1
JSC				IAmb	IAmb	03 08 51.7	
	comp=Z,4.6nm,0.8s						
ECSD	**EROS Data Cent**	40.45	279	P	**P**	03 09 02.9	-0.9
CCM	**Cathedral Cave**	41.37	268	P	**P**	03 09 12.0	+0.7
CCM				IAmb	IAmb	03 09 16.3	
	comp=Z,10nm,1.5s						
PBMO	**Poplar Bluff**	41.83	266	P	**P**	03 09 16.1	+0.9
PBMO				IAmb	IAmb	03 09 20.6	
	comp=Z,4.7nm,0.9s						
INK	**Inuvik**	42.23	327	P	**P**	03 09 17.4	-0.7
	comp=Z,1.0nm,0.7s,baz=360,slow=7.3,SNR=2.8 comp=Z,1.0nm,0.7s						
Y45A	**Yeager Farm, C**	43.49	263	P	**P**	03 09 28.8	+0.1
EGMT	**Eagleton**	44.65	292	P	**P**	03 09 39.0	+1.0
EGMT				IAmb	IAmb	03 09 47.4	
	comp=Z,4.7nm,0.9s						
W39A	**Magazine**	44.84	268	P	**P**	03 09 39.6	+0.1
TUL1	**Leonard**	45.43	270	P	**P**	03 09 44.0	-0.2
I29M	**Ogilvie Camp,**	45.55	325	P	**P**	03 09 44.8	0.0
I29M				IAmb	IAmb	03 09 52.3	
	comp=Z,3.3nm,0.8s						
344A	**Westbrook Farm**	45.97	261	P	**P**	03 09 48.3	-0.2
RLMT	**Red Lodge**	46.32	289	P	**P**	03 09 52.4	+1.0
RLMT				IAmb	IAmb	03 09 54.0	
	comp=Z,2.8nm,1.1s						
BRTR	**Keskin Array B**	46.41	81	P	**P**	03 09 53.7	+1.6
	comp=Z,1.0nm,0.7s,baz=312,slow=5.5,SNR=6.2 comp=Z,1.0nm,0.7s						
BRTR	**Keskin Array B**	46.41	81	P	**P**	03 09 53.7	+1.6
K22A	**Casper**	46.55	285	P	**P**	03 09 52.9	-0.3
DAWY	**Dawson**	46.77	324	P	**P**	03 09 54.4	-0.1
BOZ	**Bozeman (W)**	47.22	291	P	**P**	03 09 59.3	+0.9
BOZ				IAmb	IAmb	03 10 14.1	
	comp=Z,3.3nm,1.2s						
COLD	**Coldfoot**	47.68	332	P	**P**	03 10 02.9	+1.4
J26L	**Joseph Creek**	47.78	326	P	**P**	03 10 02.8	+0.4
J26L				IAmb	IAmb	03 10 04.5	
	comp=Z,1.7nm,0.9s						
WMOK	**Wichita Mounta**	47.95	271	P	**P**	03 10 04.6	+0.6
PDAR	**Pinedale Array**	48.08	287	P	**P**	03 10 05.2	0.0
	comp=Z,0.4nm,0.4s,baz=59,slow=7.2,SNR=6.0 comp=Z,0.4nm,0.4s						
PDAR	**Pinedale Array**	48.08	287	P	**P**	03 10 05.2	0.0
SCRK	**Sand Creek**	48.28	326	P	**P**	03 10 07.0	+0.7
SCRK				IAmb	IAmb	03 10 08.0	
	comp=Z,2.8nm,0.8s						
POKR	**Poker Plat Res**	48.48	329	P	**P**	03 10 08.5	+0.8
H23K	**Yukon River**	48.55	330	P	**P**	03 10 08.5	+0.3
H23K				IAmb	IAmb	03 10 16.6	
	comp=Z,4.9nm,1.1s						
IL31		48.58	328	P	**P**	03 10 09.1	+0.7
IL31				IAmb	IAmb	03 10 16.2	
	comp=Z,4.6nm,1.1s						
ILAR	**Eielson Array**	48.58	328	P	**P**	03 10 08.7	+0.2
	comp=Z,1.7nm,0.8s,baz=37,slow=7.1,SNR=21 comp=Z,1.7nm,0.8s						
ILAR	**Eielson Array**	48.58	328	P	**P**	03 10 08.7	+0.2
MDM	**Murphy Dome**	48.83	329	P	**P**	03 10 11.1	+0.7
MDM				IAmb	IAmb	03 10 18.6	
	comp=Z,3.4nm,0.9s						
HDA	**Harding Lake**	48.86	328	P	**P**	03 10 11.9	+1.3
MLY	**Manley**	49.48	330	P	**P**	03 10 16.7	+1.3
MLY				IAmb	IAmb	03 10 20.2	
	comp=Z,2.1nm,0.7s						
IMAR	**Indian Mountai**	49.56	332	P	**P**	03 10 16.5	+0.6
HWUT	**Hardware Ranch**	49.96	287	P	**P**	03 10 19.8	+0.2
HWUT				IAmb	IAmb	03 10 35.7	
	comp=Z,4.3nm,1.2s						
MSTX	**Muleshoe**	50.72	274	P	**P**	03 10 25.5	+0.2
MSTX				IAmb	IAmb	03 10 30.1	
	comp=Z,5.9nm,1.2s						
PV11	**David Mesa, Pa**	50.89	282	P	**P**	03 10 27.0	+0.4
PV13	**Radium Mtn., P**	50.96	282	IAmb	IAmb	03 10 33.6	
	comp=Z,5.5nm,1.0s						
AKTO	**Aktyubinsk**	51.33	55	P	**P**	03 10 29.5	0.0
	comp=Z,1.1nm,0.5s,baz=304,slow=10,SNR=5.2						
AKTO				LR	LR	03 32 02.9	
	comp=Z,75nm,21.6s,baz=325,slow=36 comp=Z,1.1nm,0.5s						
TORD	**Torodi Ar. Bea**	51.40	133	P	**P**	03 10 29.8	-0.6
	comp=Z,1.3nm,0.9s,baz=335,slow=7.2,SNR=5.0 comp=Z,1.3nm,0.9s						
TIXI	**Tiksi**	51.56	7	LR	LR	03 28 58.5	
	comp=Z,77nm,21.9s,baz=359,slow=32						
ELK	**Elko**	52.51	289	P	**P**	03 10 38.9	+0.2
ABKAR	**Akbulak array**	53.04	55	P	**P**	03 10 42.7	+0.5
MNTX	**Cornudas Mount**	53.88	274	P	**P**	03 10 48.7	0.0
MNTX				IAmb	IAmb	03 10 50.5	
	comp=Z,4.5nm,1.4s						
TXAR	**Lajitas Array**	54.73	271	P	**P**	03 10 53.9	-1.1
	comp=Z,0.6nm,0.9s,baz=83,slow=2.9,SNR=4.7						
TXAR				LR	LR	03 34 44.2	
	comp=Z,115nm,19.2s,baz=66,slow=37 comp=Z,0.6nm,0.9s						
TXAR	**Lajitas Array**	54.73	271	P	**P**	03 10 53.9	-1.1
BILL	**Bilibino**	54.79	351	P	**P**	03 10 55.1	+0.3
KVN	**Kaiserville**	55.24	290	IAmb	IAmb	03 11 03.9	
	comp=Z,2.3nm,0.9s						
TPH	**Tonopah**	55.51	288	P	**P**	03 11 00.8	+0.2
NVAR	**Mina Array Bea**	55.81	289	P	**P**	03 11 03.1	+0.3
	comp=Z,0.4nm,0.6s,baz=46,slow=5.2,SNR=3.7 comp=Z,0.4nm,0.6s						
NVAR	**Mina Array Bea**	55.81	289	P	**P**	03 11 03.1	+0.3
319A	**Douglas**	56.27	277	P	**P**	03 11 07.3	+1.3
319A				IAmb	IAmb	03 11 18.8	
	comp=Z,3.9nm,0.8s						
KURK	**Kurchatov**	59.69	43	P	**P**	03 11 29.6	0.0
KURK	**Kurchatov**	59.69	43	IAmb	IAmb	03 11 30.1	
	comp=Z,2.3nm,0.8s						
KURBB	**Kurchatov Arra**	59.73	43	P	**P**	03 11 29.6	-0.3
	comp=Z,1.3nm,0.9s,baz=322,slow=7.3,SNR=7.0 comp=Z,1.3nm,0.9s						
MKAR	**Makanchi Array**	64.29	43	P	**P**	03 12 00.3	-0.3
	comp=Z,0.4nm,0.6s,baz=324,slow=8.1,SNR=4.1 comp=Z,0.4nm,0.6s						
MKAR	**Makanchi Array**	64.29	43	P	**P**	03 12 00.3	-0.3

*IDC **25** 03:02:23.6±0.5, 56°.61N×34°.52W, h0km, mb4.1/25, mbtmp4.1/28, ML3.1/3, MS3.7/14, Error ellipse: s-maj=14.8km s-min=11.5km az=1.0*
*NEIC **25** 03:02:27.2±1.7, 56°.78N±0°.09×34°.8W±0°.1, h10km±1km, mb4.7/177, Error ellipse: s-maj=14.9km s-min=11.8km az=175.0*
*GCMT **25** 03:02:29.2±0.2, 56°.61N±0°.03×34°.31W±0°.02, h12km, MW5.0/103, Moment Tensor Solution. s32,c36; s103,c172; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.30±.12; $M_{\theta\theta}$0.25±.13; $M_{\phi\phi}$4.05±.08; $M_{r\theta}$0.89±.52; $M_{\theta\phi}$0.06±.10; $M_{\phi r}$0.20±.39; Best double couple: $M_0$4.26500×10^{16} NP1:ϕ_s350.00000°,δ44.00000°, λ-105.00000°. NP2:ϕ_s191.00000°,δ47.00000°, λ-75.00000°. Principal axes: T 4.0570, Plg2.0000°, Azm271.0000°; N 0.4130, Plg11.0000°, Azm1.0000°; P -4.4730, Plg79.0000°, Azm173.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 25 03:02:26.9±0.3, 56°.78N±0°.06×34°.85W±0°.04, h10km, n309, σ2°98/225, mb4.6/129, MS4.1/24, 13D, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRS	**Narsarsuaq**	7.01	313	Pn	**Pn**	03 04 07.5	-1.9
ANGG	**Ammassalik, Gr**	8.97	353	Pn	**Pn**	03 04 36.4	+0.2
BORG	**Borgarnes**	10.35	34	Pn	**Pn**	03 04 55.2	+0.1
	1.0nm,0.3s,baz=158,slow=5.4,SNR=2.3						
BORG				Sn	**Sn**	03 06 43.0	-8.0
	baz=342,slow=13						
BORG				LR	LR	03 07 45.2	
	comp=Z,1μm,19.1s,baz=245,slow=31 7.0nm,0.7s						
DY2G	**Dye2**	11.12	336	*i* P	**Pn**	03 05 08.6	+2.7
ICESG	**Greenland Ices**	12.54	352	*i* P	Pn	03 05 34.3	+8.9
SUMG	**Summit**	15.93	356	Pn	**Pn**	03 06 11.7	+0.5
SUMG	**Summit**	15.93	356	*i* P	**Pn**	03 06 11.1	0.0
SUMG				IAmb	IAmb	03 06 15.4	
	comp=Z,3.5nm,0.7s						
H07N1	**FLORES T-PHASE**	17.27	170	T	T	03 23 47.6	
	SNR=7.8						
ESK	**Eskdalemuir**	17.66	81	Pn	**Pn**	03 06 31.7	-0.9
EKA	**Eskdalemuir Ar**	17.67	81	P	**Pn**	03 06 32.1	-0.8
	comp=Z,2.4nm,0.8s,baz=280,slow=10,SNR=7.7						
EKA				LR	LR	03 11 55.6	
	comp=Z,519nm,18.4s,baz=268,slow=33						
FRB	**Frobisher Bay**	17.93	307	P	**P**	03 06 37.9	+1.4
	comp=Z,0.2nm,0.3s,baz=105,slow=11,SNR=3.5 comp=Z,4.9nm,0.8s						
SCHQ	**Schefferville**	18.00	277	P	**P**	03 06 38.8	+1.4
	comp=Z,0.2nm,0.3s,baz=81,slow=12,SNR=7.1						
SCHQ				LR	LR	03 12 21.0	
	comp=Z,400nm,20.9s,baz=62,slow=33 comp=Z,19nm,1.2s						
SCHQ	**Schefferville**	18.00	277	Pn	**Pn**	03 06 35.6	-1.3
JMIC	**Jan Mayen**	18.11	28	LR	LR	03 11 47.8	
	comp=Z,389nm,19.4s,baz=242,slow=31						
UPNV	**Upernavik**	18.25	340	*i* P	**P**	03 06 45.5	+5.6
UPNV				IAmb	IAmb	03 06 50.6	
	comp=Z,6.2nm,0.8s						
DBG	**Daneborg**	18.50	13	*i* P	**Pn**	03 06 44.9	+2.0
DAG	**Danmarks Havn**	20.91	10	*e*P	Pn	03 07 12.2	+0.7
BATG	**Bathurst New B**	21.25	257	P	**P**	03 07 11.5	-1.4
BATG				IAmb	IAmb	03 07 31.7	
	comp=Z,49nm,1.3s						
LMN	**Caledonia Moun**	21.50	252	P	**P**	03 07 15.3	-0.3
LMN				IAmb	IAmb	03 07 38.8	
	comp=Z,34nm,1.1s						
D62A	**Allapoint, All**	22.99	260	P	**P**	03 07 32.0	+0.7
D62A				IAmb	IAmb	03 07 52.2	
	comp=Z,20nm,1.0s						
GGN	**Saint George**	23.06	253	P	**P**	03 07 30.6	-1.5
GGN				IAmb	IAmb	03 07 51.7	
	comp=Z,26nm,1.1s						
F64A	**Sherman**	23.37	256	P	**P**	03 07 35.5	+0.2
F64A				IAmb	IAmb	03 07 46.5	
	comp=Z,19nm,0.9s						
GOET	**G??ttrup**	23.75	71	*i* P	**P**	03 07 36.1	-2.9
NB2	**NORSAR Subarra**	23.76	60	P	**P**	03 07 36.4	-2.7
	comp=Z,151nm,3.3s,baz=281,slow=11						
NOA	**NORSAR Array B**	23.76	60	P	**P**	03 07 36.8	-2.3
	comp=Z,1.3nm,0.9s,baz=288,slow=9.1,SNR=3.5 comp=Z,1.3nm,0.9s						
SNF	**Seneffe**	23.77	89	*d*P	P	03 07 46.5	+7.3
SNF				*d*PP	**PnPn**	03 08 14.6	+8.0
NC303	**NORSAR Array S**	23.80	60	P	**P**	03 07 40.3	+0.8
F63A	**Nahmakanta, Br**	23.88	257	P	**P**	03 07 40.3	0.0
F63A				IAmb	IAmb	03 08 02.9	
	comp=Z,19nm,1.2s						
MUD	**Monsted U'grnd**	23.91	72	*i* P	**P**	03 07 37.5	-3.0
MUD				IAmb	IAmb	03 07 49.8	
	comp=Z,3.9nm,0.8s						
BMRD	**Maredsous**	24.14	89	*d*P	P	03 07 50.1	+7.3
DOU	**Dourbes**	24.15	89	*d*P	**P**	03 07 49.0	+6.1
OVD	**Ostervraa, Den**	24.18	70	*i* P	**P**	03 07 40.8	-2.2
OVD				IAmb	IAmb	03 07 42.9	
	comp=Z,15nm,0.5s						
F62A	**Pittston Farm,**	24.22	258	P	**P**	03 07 44.3	+0.8
F62A				IAmb	IAmb	03 08 05.8	
	comp=Z,23nm,0.9s						
PKME	**Peaks-Kenny Pk**	24.27	256	P	**P**	03 07 44.6	+0.7
PKME				IAmb	IAmb	03 07 59.6	
	comp=Z,24n

comp=Z,6.0nm,1.1s
CLL ex x 03 08 26.0
CLL Lm MLR 03 18 00.0
comp=Z,400nm,21.7s
NKC Novy Kostel 28.39 83 AMS AMS 03 21 00.0
comp=Z,400nm,12.2s
RES Resolute Bay 28.61 331 LR LR 03 19 17.1
comp=Z,60nm,18.6s,baz=69,slow=35
DAVA Damuels 28.62 90 *eP* **P 03 08 27.2 +3.8**
comp=Z,6.5nm,1.5s
ARCES ARCESS Array B 28.68 40 P **P 03 08 20.8 -2.7**
comp=Z,1.7nm,0.5s,baz=263,slow=8.2,SNR=19
comp=Z,1.7nm,0.5s
ARCES ARCESS Array B 28.68 40 IAmb IAmb 03 08 23.1
comp=Z,14nm,1.4s
TUE Stuetta 28.82 92 P **P 03 08 26.4 +1.3**
TUE IAmb IAmb 03 08 36.7
comp=Z,9.2nm,0.9s
FETA Feichten 29.25 90 *eP* P 03 08 33.5 +4.6
comp=Z,7.3nm,1.3s
DELO Deloro Mine 29.26 264 P **P 03 08 29.2 +0.3**
MOTA Moosalm 29.26 89 *eP* P 03 08 34.2 +5.2
comp=Z,5.4nm,0.8s
PVCC Panska Ves 29.39 81 AMS AMS 03 21 00.0
comp=Z,400nm,12.8s
KHC Kasperske Hory 29.61 84 *eP* P 03 08 37.9 +6.0
KHC AMS AMS 03 20 50.0
comp=Z,300nm,11.2s
PRU Pruhonice 29.66 82 AMS AMS 03 22 20.0
comp=Z,400nm,12.5s
GERES GERESS Array B 29.83 84 P **P 03 08 32.5 -1.5**
comp=Z,0.1nm,0.3s,baz=287,slow=14,SNR=2.1
GERES LR LR 03 19 42.8
comp=Z,153nm,18.9s,baz=267,slow=35
comp=Z,0.1nm,0.3s
GERES GERESS Array B 29.83 84 P **P 03 08 36.1 +2.1**
CHVC Chvalec 30.17 80 *eP* **P 03 08 34.7 -2.2**
CHVC AMS AMS 03 21 40.0
comp=Z,400nm,10.2s
CKRC Cesky Krumlov 30.18 84 AMS AMS 03 21 10.0
comp=Z,200nm,13.8s
UPC Upice 30.19 80 AMS AMS 03 21 40.0
comp=Z,400nm,13.2s
OSTC Ostas 30.27 80 *eP* **P 03 08 35.0 -2.8**
OSTC AMS AMS 03 21 40.0
comp=Z,400nm,14.3s
ABTA Abfaltersbach 30.39 89 *eP* P 03 08 44.9 +5.9
comp=Z,6.1nm,1.3s
DPC Dobruska-Polom 30.44 80 AMS AMS 03 21 50.0
comp=Z,400nm,13.6s
BIOA Bad Ischl, Aus 30.46 86 *eP* P 03 08 47.4 +8.0
comp=Z,6.4nm,1.2s
TREC Trest 30.56 82 AMS AMS 03 22 10.0
comp=Z,400nm,13.5s
FINES FINESS Array B 30.60 56 P **P 03 08 37.6 -2.9**
comp=Z,1.4nm,0.8s,baz=297,slow=8.4,SNR=7.4
comp=Z,1.4nm,0.8s
FINES FINESS Array B 30.60 56 P P 03 08 45.7 +5.2
KBA Koelnbreinsper 30.66 88 *eP* **P 03 08 43.7 +2.3**
comp=Z,5.3nm,1.1s
FCC Fort Churchill 30.77 299 P **P 03 08 40.5 -1.5**
TEOL Teolo 30.78 92 P P 03 08 47.6 +5.3
TEOL IAmb IAmb 03 08 54.2
comp=Z,12nm,0.9s
KRLC Kraliky 30.84 80 AMS AMS 03 22 10.0
comp=Z,400nm,13.2s
PRED Cave del Predi 31.16 88 P P 03 08 51.6 +5.9
PRED IAmb IAmb 03 09 06.1
comp=Z,9.1nm,1.0s
OKC Ostrava-Krasne 31.70 80 AMS AMS 03 22 50.0
comp=Z,400nm,12.5s
MDT Midelt 31.71 126 LR LR 03 19 50.8
comp=Z,51nm,19.1s,baz=341,slow=33
MAUC Maruska 31.79 81 *eP* **P 03 08 49.3 -1.9**
MAUC AMS AMS 03 22 40.0
comp=Z,700nm,13.9s
MODS Modra-Piesok 32.05 83 *eP* P 03 08 59.2 +5.7
SUW Suwalki 32.22 70 *eP* **P 03 08 51.1 -3.7**
KOLL Kolacno 32.55 81 *eP* P 03 09 06.5 +8.7
EGYH Egyhazaskeszo 32.64 84 P P 03 09 09.1 +11
NRCA Norcia 33.21 94 IAmb IAmb 03 09 18.1
comp=Z,11nm,1.0s
N53A Lisbon 33.51 261 IAmb IAmb 03 09 17.9
comp=Z,9.0nm,0.9s
NACGM Naroch 33.63 67‖ *eP* P 03 09 14.6 +7.4
baz=298
PSZ Piszkesteto 33.75 81 P P 03 09 14.0 +5.7
PSZ IAmb IAmb 03 09 22.4
comp=Z,6.9nm,0.9s
PSZ Piszkesteto 33.75 81 P P 03 09 18.7 +10
MORH Mrgy, Hungar 34.09 85 P P 03 09 21.2 +10
EYMN Ely 34.77 280 P **P 03 09 18.0 +0.9**
EYMN IAmb IAmb 03 09 36.0
comp=Z,9.5nm,1.0s
EYMN Ely 34.77 280 P **P 03 09 18.0 +0.9**
baz=54,SNR=7.8
B35A Bob, Littlefor 35.73 282 P **P 03 09 26.6 +1.3**
KEST Kesra 36.24 106 P **P 03 09 27.4 -2.5**
comp=Z,3.5nm,0.8s,baz=305,slow=9.3,SNR=2.5
comp=Z,3.5nm,0.8s
KEST Kesra 36.24 106 P **P 03 09 30.4 +0.4**
KEST IAmb IAmb 03 09 57.6
comp=Z,15nm,1.2s
BUR08 Bucovina Ar. S 36.78 78 P P 03 09 41.5 +7.0
KLMR Klimovskoe 36.81 52 *eP* P 03 09 29.1 -5.3
KLMR AMP 03 09 35.8
comp=Z,30nm,1.5s
P48A Milroy 36.96 264 IAmb IAmb 03 09 55.9
comp=Z,9.4nm,1.0s
AKASG Malin Array Be 37.12 71 P **P 03 09 35.0 -2.2**
comp=Z,1.9nm,0.7s,baz=310,slow=8.0,SNR=11
comp=Z,1.9nm,0.7s
A36M Sachs Harbour 37.60 329 P **P 03 09 41.7 +0.6**
A36M IAmb IAmb 03 09 59.5
comp=Z,17nm,1.1s
YKA Yellowknife Ar 38.29 312 P **P 03 09 47.0 +0.1**
comp=Z,1.5nm,0.8s,baz=62,slow=9.0,SNR=7.9
YKA PcP **PcP 03 11 57.8 -2.8**
comp=Z,0.9nm,0.9s,baz=46,slow=3.6,SNR=4.8
comp=Z,1.5nm,0.8s
Q44A Meyer Farm, Va 39.32 267 IAmb IAmb 03 10 16.1
comp=Z,13nm,0.8s
ECSD EROS Data Cent 40.19 278 P **P 03 10 04.4 +1.3**
baz=49
SIUC Southern Illin 40.28 266 IAmb IAmb 03 10 24.2
comp=Z,19nm,0.8s
GOGA Godfrey 40.37 256 P **P 03 10 05.5 +0.9**
baz=40
WVT Waverly 40.68 263 P **P 03 10 07.7 +0.5**
WVT Waverly 40.68 263 P **P 03 10 07.7 +0.5**
baz=42
CCM Cathedral Cave 41.15 268 P **P 03 10 12.3 +1.2**
CCM Cathedral Cave 41.15 268 P **P 03 10 12.2 +1.1**
baz=44
PBMO Poplar Bluff 41.63 266 IAmb IAmb 03 10 35.5
comp=Z,12nm,0.8s
INK Inuvik 41.91 327 P **P 03 10 16.7 -0.2**
comp=Z,1.4nm,0.8s,baz=40,slow=8.7,SNR=3.3
comp=Z,1.4nm,0.8s
INK Inuvik 41.91 327 P **P 03 10 16.7 -0.2**
baz=54
LRAL Lakeview Retre 42.55 259 P **P 03 10 23.1 +0.5**
baz=40
OXF Oxford 42.74 262 P **P 03 10 23.5 -0.5**
baz=41
EDM Edmonton 42.86 300 P **P 03 10 26.2 +1.3**
EDM IAmb IAmb 03 10 28.2
comp=Z,16nm,1.4s
250A Grady 42.97 257 IAmb IAmb 03 10 44.7
comp=Z,18nm,0.9s
Z47A Carrollton 43.01 260 IAmb IAmb 03 10 44.1
comp=Z,13nm,0.8s
W41B Gary Mavity, V 43.80 266 IAmb IAmb 03 10 43.6
comp=Z,7.0nm,0.8s
W41B Gary Mavity, V 43.80 266 P **P 03 10 33.2 +0.6**
baz=42
EPYK Eagle Plains 44.08 325 P **P 03 10 34.4 -0.2**
baz=51
EGMT Eagleton 44.36 292 P **P 03 10 37.6 +0.5**
EGMT IAmb IAmb 03 10 40.9
comp=Z,14nm,1.4s
EGMT Eagleton 44.36 292 P **P 03 10 38.7 +1.7**
baz=49
MMPY Sheldon Lake, 44.62 319 P **P 03 10 40.9 +2.0**
baz=51
W39A Magazine 44.63 267 IAmb IAmb 03 10 59.3
comp=Z,15nm,1.2s
W39A Magazine 44.63 267 P **P 03 10 39.6 +0.3**
baz=42
MIAR Mount Ida 45.00 266 IAmb IAmb 03 11 02.9
comp=Z,11nm,1.1s
MIAR Mount Ida 45.00 266 P **P 03 10 42.4 +0.2**
baz=42
VBMS Vicksburg 45.08 261 P **P 03 10 43.2 +0.3**
baz=40
TUL1 Leonard 45.21 269 P P 03 10 46.9 +3.0
TUL1 IAmb IAmb 03 10 48.1
comp=Z,10.0nm,0.8s
TUL1 Leonard 45.21 269 P **P 03 10 44.6 +0.7**
baz=43
I29M Ogilvie Camp, 45.23 325 P **P 03 10 44.1 +0.4**
baz=49,SNR=9.5
Z41A Richland Creek 45.54 264 P **P 03 10 47.0 +0.5**
baz=41
C23K Itkillik River 45.56 334 P **P 03 10 48.1 +1.8**
baz=44,SNR=6.2
D24K Happy Valley 45.62 333 P **P 03 10 47.5 +0.8**
baz=45
BMAR Burnt Mountain 45.70 329 P **P 03 10 49.2 +1.8**
344A Westbrook Farm 45.79 261 P **P 03 10 48.9 +0.4**
RLMT Red Lodge 46.03 289 P **P 03 10 51.2 +0.7**
RLMT IAmb IAmb 03 10 55.4
comp=Z,10nm,1.3s
RLMT Red Lodge 46.03 289 P **P 03 10 52.0 +1.5**
baz=47
TOLK Toolik Lake Re 46.17 333 P **P 03 10 51.9 +0.7**
baz=44
D23K Nanushuk River 46.22 333 P **P 03 10 51.9 +0.5**
baz=43
N32M Quiet Lake 46.22 318 P **P 03 10 52.7 +1.0**
baz=49
K22A Casper 46.27 284 IAmb IAmb 03 11 07.4
comp=Z,7.6nm,1.0s
DAWY Dawson 46.45 324 P **P 03 10 54.8 +1.4**
baz=42,SNR=6.8
FNO Franklin 46.58 270 P **P 03 10 58.6 +3.9**
M30M Minto, Yukon 46.59 321 IAmb IAmb 03 11 13.5
comp=Z,7.5nm,1.1s
M30M Minto, Yukon 46.59 321 P **P 03 10 55.3 +0.8**
baz=48
BR131 Keskin Array S 46.60 81 P **P**
BRTR Keskin Array B 46.60 81 P **P 03 10 53.3 -1.6**
comp=Z,2.2nm,0.8s,baz=343,slow=7.2,SNR=8.1
comp=Z,2.2nm,0.8s
KSCO Kaye Shedlock' 46.72 278 P **P 03 10 56.6 +0.6**
baz=44
I26K Coal Creek Min 46.77 327 P **P 03 10 56.5 +0.7**
I26K IAmb IAmb 03 11 06.6
comp=Z,4.8nm,0.9s
I26K Coal Creek Min 46.77 327 P **P 03 10 56.7 +1.0**
baz=46
DLBC Dease Lake 46.85 314 P **P 03 10 58.5 +1.9**
baz=49
BOZ Bozeman (W) 46.93 291 IAmb IAmb 03 11 18.3
comp=Z,6.3nm,0.9s
BOZ Bozeman (W) 46.93 291 P **P 03 10 58.8 +1.2**
baz=47,SNR=9.2
N31M Braeburn, Yuko 46.97 320 P **P 03 10 58.4 +0.9**
baz=48
K27K Chicken 47.33 325 IAmb IAmb 03 11 14.9
comp=Z,9.5nm,1.1s
K27K Chicken 47.33 325 P **P 03 11 01.6 +1.4**
baz=46
COLD Coldfoot 47.37 331 IAmb IAmb 03 11 03.2
comp=Z,4.0nm,0.7s
COLD Coldfoot 47.37 331 P **P 03 11 02.3 +1.8**
baz=42
J26L Joseph Creek 47.46 326 IAmb IAmb 03 11 28.1
comp=Z,7.8nm,1.2s
J26L Joseph Creek 47.46 326 P **P 03 11 02.5 +1.2**
baz=45,SNR=7.5
ARU Arti 47.47 49 P **P 03 10 59.3 -2.0**
comp=Z,7.3nm,0.8s,baz=324,slow=4.3,SNR=10
comp=Z,7.3nm,0.8s
O30N Mendenhall 47.57 319 P **P 03 11 03.6 +1.5**
baz=47
WMOK Wichita Mounta 47.72 271 IAmb IAmb 03 11 22.8
comp=Z,9.5nm,1.1s
WMOK Wichita Mounta 47.72 271 P **P 03 11 04.6 +0.9**
baz=42
H24K Noodor Dome 47.76 329 IAmb IAmb 03 11 22.2
comp=Z,8.6nm,1.1s
H24K Noodor Dome 47.76 329 P **P 03 11 04.2 +0.6**
baz=43,SNR=6.1
ISCO Idaho Springs 47.78 281 IAmb IAmb 03 11 10.7
comp=Z,4.2nm,0.8s
ISCO Idaho Springs 47.78 281 P **P 03 11 05.7 +1.3**
baz=44
PDAR Pinedale Array 47.80 286 P **P 03 11 04.0 -0.4**
comp=Z,1.1nm,0.5s,baz=76,slow=6.3,SNR=8.0
comp=Z,1.1nm,0.5s
PDAR Pinedale Array 47.80 286 P **P 03 11 04.4 -0.1**
NEW Newport 47.89 297 P **P 03 11 09.2 +4.4**
baz=47
BCAR Beaver Creek A 47.91 324 P **P 03 11 05.8 +1.0**
J25K Salcha River, 47.92 327 IAmb IAmb 03 11 23.4
comp=Z,9.0nm,1.2s
J25K Salcha River, 47.92 327 P **P 03 11 05.4 +0.5**
baz=44
L27K Beaver Creek, 47.93 324 IAmb IAmb 03 11 24.1
comp=Z,6.7nm,1.1s
L27K Beaver Creek, 47.93 324 P **P 03 11 06.2 +1.3**
baz=45
SCRK Sand Creek 47.96 326 P **P 03 11 06.5 +1.2**
baz=44,SNR=13
HYT Haines Junctio 48.03 320 P **P 03 11 07.9 +2.0**
baz=46
BVCY Beaver Creek 48.07 323 P **P 03 11 07.6 +1.6**
baz=5
YUK4 Talbot Arm 48.07 321 P **P 03 11 06.5 +0.2**
baz=46
POKR Poker Flat Res 48.16 328 P **P 03 11 08.2 +1.5**
baz=43,SNR=7.7
DOT Dot Lake 48.22 326 IAmb IAmb 03 11 26.0
comp=Z,5.6nm,0.9s
H23K Yukon River 48.23 330 P **P 03 11 08.5 +1.2**
baz=42,SNR=7.3
ILAR Eielson Array 48.26 328 P **P 03 11 08.0 +0.6**
comp=Z,4.0nm,0.7s,baz=38,slow=6.5,SNR=23
comp=Z,4.0nm,0.7s
ILAR Eielson Array 48.26 328 P **P 03 11 07.7 +0.3**
YUK3 Moose Creek 48.39 322 P **P 03 11 10.2 +1.5**
baz=45
RIDG Independent Ri 48.40 326 P **P 03 11 10.0 +1.4**
baz=44
HDA Harding Lake 48.54 328 P **P 03 11 10.5 +0.9**
baz=43,SNR=8.1
K24K Donnelly Dome 48.63 326 P **P 03 11 11.9 +1.6**
baz=43,SNR=11
H22K Ishtalitna Cre 48.68 331 P **P 03 11 12.3 +1.6**
baz=41
I23K Minto, Yukon-K 48.69 329 P **P 03 11 11.6 +1.0**
baz=42,SNR=6.0
KBZ Khabaz 48.72 71 P **P 03 11 11.4 +0.2**
comp=Z,2.3nm,0.8s,baz=332,slow=7.3,SNR=4.0
M26K Nabesna, AK 48.78 324 IAmb IAmb 03 11 30.8
comp=Z,8.0nm,1.1s
M26K Nabesna, AK 48.78 324 P **P 03 11 12.9 +1.4**
baz=44
WRH Wood River Hil 48.83 328 IAmb IAmb 03 11 30.4
comp=Z,6.3nm,1.0s
B08A Colville Reser 48.90 298 IAmb IAmb 03 11 31.2
comp=Z,6.0nm,1.1s
SMCO Snowmass 48.96 281 P **P 03 11 14.2 +0.6**
NEA2 Nenana 49.02 329 IAmb IAmb 03 11 32.2
comp=Z,8.9nm,1.0s
NEA2 Nenana 49.02 329 P **P 03 11 14.2 +1.0**
baz=42
T25A Trinidad 49.04 277 IAmb IAmb 03 11 27.4
comp=Z,5.9nm,0.9s
T25A Trinidad 49.04 277 P **P 03 11 15.4 +1.3**
baz=43
PAX Paxson 49.15 326 IAmb IAmb 03 11 23.8
comp=Z,8.1nm,1.1s
PAX Paxson 49.15 326 P **P 03 11 15.7 +1.3**
baz=43
MLY Manley 49.16 330 IAmb IAmb 03 11 25.7
comp=Z,5.1nm,0.8s
MLY Manley 49.16 330 P **P 03 11 14.9 +0.5**
baz=41,SNR=7.5
IMAR Indian Mountai 49.24 332 P **P 03 11 15.4 +0.4**
H21K Melozitna Rive 49.25 331 IAmb IAmb 03 11 33.4
comp=Z,4.8nm,0.9s
H21K Melozitna Rive 49.25 331 P **P 03 11 16.0 +1.0**
baz=40,SNR=5.9
I21K Tanana 49.39 330 IAmb IAmb 03 11 34.9
comp=Z,9.0nm,0.9s
I21K Tanana 49.39 330 P **P 03 11 17.0 +0.9**
baz=40
PLID Pearl Lake 49.52 293 IAmb IAmb 03 11 38.1
comp=Z,7.0nm,1.1s
MCK McKinley 49.63 328 P **P 03 11 18.6 +0.7**
MCK McKinley 49.63 328 P **P 03 11 18.8 +0.9**
baz=41
DHY Denali Highway 49.66 327 IAmb IAmb 03 11 27.0
comp=Z,8.5nm,1.0s
DHY Denali Highway 49.66 327 P **P 03 11 18.8 +0.5**
baz=42
HWUT Hardware Ranch 49.68 287 IAmb IAmb 03 11 24.0
comp=Z,4.4nm,0.7s
HLID Hailey 49.78 291 P **P 03 11 20.9 +1.3**
baz=45,SNR=7.0
RND Reindeer 49.85 327 IAmb IAmb 03 11 37.5
comp=Z,10.0nm,1.0s
N25K Chitina, Valde 49.88 324 P **P 03 11 20.8 +0.9**
baz=43
S22A 4UR Ranch, Cre 49.92 280 P **P 03 11 22.6 +1.8**
baz=43
BPAW Bear Paw Mtn. 49.94 329 IAmb IAmb 03 11 41.0
comp=Z,14nm,1.4s
BPAW Bear Paw Mtn. 49.94 329 P **P 03 11 21.7 +1.4**
baz=40
CRQE Cirque 50.01 323 P **P 03 11 23.4 +2.4**
baz=43
WAT6 Susitna Watana 50.14 326 P **P 03 11 23.0 +1.0**
baz=41
WAT1 Susitna Watana 50.20 327 P **P 03 11 24.1 +1.8**
baz=41
CHUM Lake Minchumin 50.49 329 P **P 03 11 24.9 +0.5**
baz=39
MSTX Muleshoe 50.49 273 IAmb IAmb 03 11 35.2
comp=Z,9.0nm,1.1s
CBB Campbell River 50.59 303 P **P 03 11 26.2 +0.8**
J20K Nowinta River 50.76 330 IAmb IAmb 03 11 45.2
comp=Z,6.1nm,0.8s
J20K Nowinta River 50.76 330 P **P 03 11 26.8 +0.4**
baz=38
CAST Castle Rocks 50.78 329 IAmb IAmb 03 11 44.7
comp=Z,7.4nm,1.0s
CAST Castle Rocks 50.78 329 P **P 03 11 26.4 -0.3**
baz=39
SML Sawmill 50.91 326 P **P 03 11 28.7 +1.1**
baz=40
MVCO Mesa Verde 51.21 281 IAmb IAmb 03 11 36.5
comp=Z,6.5nm,1.0s
MVCO Mesa Verde 51.21 281 P **P 03 11 32.1 +1.5**
baz=42
TIXI Tiksi 51.35 7 P **P 03 11 30.7 -0.1**
TIXI IAmb IAmb 03 11 44.9
comp=Z,8.4nm,1.1s
AKTO Aktyubinsk 51.37 55 P **P 03 11 29.3 -2.0**
comp=Z,5.9nm,1.0s,baz=320,slow=7.5,SNR=9.8
comp=Z,5.9nm,1.0s
K20K Telida 51.39 330 IAmb IAmb 03 11 49.7
comp=Z,10nm,1.0s
K20K Telida 51.39 330 P **P 03 11 31.9 +0.7**
baz=38,SNR=7.4
JCT Junction City 51.50 268 IAmb IAmb 03 12 02.1
comp=Z,12nm,1.2s
TOA0 Torodi Ar. Sit 51.72 132 P **P 03 11 32.6 -1.6**
TOA0 IAmb IAmb 03 11 40.4
comp=Z,12nm,1.0s
TORD Torodi Ar. Bea 51.72 132 P P 03 11 29.6 -4.6
comp=Z,6.0nm,1.1s,baz=336,slow=4.5,SNR=11
comp=Z,6.0nm,1.1s
SKT Skwentna 51.74 327 IAmb IAmb 03 11 41.7
comp=Z,8.0nm,0.8s
SKT Skwentna 51.74 327 P **P 03 11 34.2 +0.4**
baz=39
ANMO Albuquerque 51.78 277 P **P 03 11 36.6 +1.9**
baz=42
ELK Elko 52.22 289 P **P 03 11 38.7 +0.7**
TTA Tatalina 52.26 330 P **P 03 11 38.0 +0.2**
baz=36
ABKAR Akbulak array 53.09 55 P **P 03 11 43.5 -0.5**
ABKAR IAmb IAmb 03 11 44.8
comp=Z,11nm,1.2s
J05D Fort Rock, OR 53.44 295 P **P 03 11 47.8 +0.9**
baz=43
MNTX Cornudas Mount 53.64 274 P **P 03 11 48.5 +0.2**
baz=40
R11A Troy Canyon, C 54.16 287 P **P 03 11 53.0 +0.7**
baz=42
TXAR Lajitas Array 54.51 270 P **P 03 11 54.0 -0.7**
comp=Z,1.6nm,1.0s,baz=243,slow=4.0,SNR=7.2
comp=Z,1.6nm,1.0s
TXAR Lajitas Array 54.51 270 P **P 03 11 55.0 +0.2**
BILL Bilibino 54.52 350 P **P 03 11 53.9 -0.3**
BILL IAmb IAmb 03 11 54.4
comp=Z,7.2nm,1.2s
O18K Koktuh Hills 54.53 328 P **P 03 11 54.1 -0.3**
baz=36
KVN Kaiserville 54.96 289 IAmb IAmb 03 12 18.9
comp=Z,6.6nm,1.0s
PAHR Pah Rah Range 55.13 291 IAmb IAmb 03 12 26.2
comp=Z,8.9nm,1.2s
DBIC Dimbokro 55.26 143 P **P 03 11 55.6 -4.5**
comp=Z,5.9nm,1.0s,baz=342,slow=6.4,SNR=3.3
comp=Z,5.9nm,1.0s
NVAR Mina Array Bea 55.53 289 P **P 03 12 02.6 +0.4**
comp=Z,0.8nm,0.7s,baz=58,slow=5.5,SNR=5.3
comp=Z,0.8nm,0.7s
TUC Tucson 56.13 278 P **P 03 12 06.8 +0.4**
TUC IAmb IAmb 03 12 10.5
comp=Z,8.5nm,1.4s
TUC Tucson 56.13 278 P **P 03 12 08.9 +2.5**
baz=40
GWY Greenwater Val 56.35 286 IAmb IAmb 03 12 29.1
comp=Z,6.4nm,1.0s
MPMC Manual Prospec 56.88 286 P **P 03 12 13.1 +1.3**
baz=40
GLA Glamis 57.75 282 P **P 03 12 18.0 +0.2**
GLA IAmb IAmb 03 12 45.4
comp=Z,6.3nm,0.9s
PFO Pinyon Flats O 58.20 284 P **P 03 12 22.3 +1.3**
baz=40
KURK Kurchatov 59.66 43 P **P 03 12 29.0 -1.8**
KURK IAmb IAmb 03 12 43.9
comp=Z,6.8nm,0.9s
KURBB Kurchatov Arra 59.70 43 P **P 03 12 28.7 -2.4**
comp=Z,4.0nm,0.8s,baz=324,slow=7.2,SNR=17
KURBB LR LR 03 38 28.9
comp=Z,56nm,19.2s,baz=315,slow=36
comp=Z,4.0nm,0.8s
ROSC El Rosal 60.44 227 P **P 03 12 36.7 -0.3**
GEYT Alibeck 60.76 65 P **P 03 12 40.1 +1.5**
GYA0B ALIBECK ARRAY 60.76 65 P **P 03 12 39.3 +0.7**
GYA0B IAmb IAmb 03 12 41.8
comp=Z,4.9nm,0.8s
KK31 Karatay Array 62.51 53 P **P 03 12 49.8 -0.5**
KKAR Karatay Array 62.51 53 P **P 03 12 50.3 0.0**
MAKZ Makanchi 64.14 43 P **P 03 12 59.1 -1.9**
MK31 Makanchi Array 64.27 43 P **P 03 13 01.3 -0.6**
MK31 IAmb IAmb 03 13 10.9
comp=Z,4.9nm,1.1s
MKAR Makanchi Array 64.27 43 P **P 03 12 59.6 -2.3**
comp=Z,2.3nm,0.8s,baz=347,slow=5.0,SNR=11
MKAR LR LR 03 38 40.7
comp=Z,37nm,21.7s,baz=312,slow=34
comp=Z,2.3nm,0.8s
MKAR Makanchi Array 64.27 43 P **P 03 13 00.2 -1.7**
AAK Ala-Archa 64.60 50 P **P 03 13 04.8 +0.5**
AAK IAmb IAmb 03 13 05.5
comp=Z,7.8nm,1.1s
BOOM Boomskoye usch 65.33 50 P **P 03 13 08.7 -0.3**
RAYN Ar Rayn 65.42 84 P **P 03 13 10.1 +0.4**
RAYN IAmb IAmb 03 13 18.1
comp=Z,6.0nm,1.0s
HRA Herat 65.59 64 P **P 03 13 12.9 +2.0**
DRK Karamyk 66.00 54 P **P 03 13 14.3 +0.7**
KDJ Kajisay 66.14 49 P **P 03 13 13.0 -1.4**
KDJ IAmb IAmb 03 13 15.3
comp=Z,7.5nm,1.1s
TARG Taragay, Kyrgy 66.74 49 P **P 03 13 18.3 -0.1**
KSH Kashi 67.80 51 P **P 03 13 24.9 0.0**
KSH pP pwP 03 13 30.4 -0.2
KSH sP sP 03 13 34.4 +6.2
KSH pmax pmax
comp=Z,15nm,1.3s
KBL Kabul 68.77 59 P **P 03 13 30.7 -0.4**
KBL IAmb IAmb 03 13 32.1
comp=Z,5.6nm,0.8s

WMQ	Urumqi	68.79	41	eP		P		03 13 37.9	+7.0
BOSC	San Juan Bosco	69.38	227	P		P		03 13 35.4	+0.4
SONM	Songino Array	70.87	27	P		P		03 13 41.9	-1.8
	comp=Z,0.9nm,0.6s,baz=311,slow=3.7,SNR=5.8								
	comp=Z,0.9nm,0.6s								
SONM	Songino Array	70.87	27	P		P		03 13 43.3	-0.4
ATAH	Atahualpa	72.97	226	LR		LR		03 43 26.9	
	comp=Z,83nm,21.9s,baz=1.6,slow=34								
BDFB	Brasilia	72.98	193	P		P		03 13 54.5	-2.0
	comp=Z,1.8nm,0.6s,baz=63,slow=6.8,SNR=3.8								
	comp=Z,1.8nm,0.6s								
BDFB	Brasilia	72.98	193	IAmb		IAmb		03 14 09.5	
	comp=Z,9.2nm,1.2s								
ATD	Arta Tunnel	73.69	94	LR		LR		03 47 07.1	
	comp=Z,17nm,18.5s,baz=162,slow=36								
KLR	Kul'dur	73.77	9	P		P		03 14 00.7	-0.2
	comp=Z,0.8nm,0.3s,baz=240,slow=8.1,SNR=4.3								
	comp=Z,0.8nm,0.3s								
GTA	Gaotai	76.81	34	eP		P		03 14 17.8	-0.8
GTA				sP		PcP		03 14 31.0	+1.1
GTA				pmax		pmax			
	comp=Z,5.0nm,1.3s								
LPAZ	La Paz	77.92	213	P		P		03 14 23.5	-2.0
	comp=Z,4.5nm,1.3s,baz=72,slow=6.4,SNR=3.5								
	comp=Z,4.5nm,1.3s								
HHC	Hu-ho-hao-te	78.69	25	eP		P		03 14 31.6	+2.5
HHC				pmax		pmax			
	comp=Z,26nm,0.7s								
HHC				pmax		pmax			
	comp=Z,170nm,4.8s								
KMBO	Kilima Mbogo	81.21	106	LR		LR		03 50 23.4	
	comp=Z,42nm,18.9s,baz=96,slow=36								
GO01	Chusmiza	81.44	213	P		P		03 14 43.0	-1.4
LVC	Limon Verde	84.13	211	P		P		03 14 57.9	-0.3
LVC				IAmb		IAmb		03 15 16.0	
	comp=Z,5.4nm,0.9s								
CPUP	Villa Florida	84.94	200	P		P		03 15 00.1	-1.6
	comp=Z,1.7nm,0.8s,baz=76,slow=4.2,SNR=3.7								
CPUP				LR		LR		03 46 47.2	
	comp=Z,44nm,21.2s,baz=332,slow=31								
	comp=Z,1.7nm,0.8s								
SHL	Shillong	86.50	46	P		P		03 15 08.9	-1.2
PZH	PanZhiHua	89.30	38	P		P		03 15 27.3	+3.9
PZH				pmax		pmax			
	comp=Z,10.0nm,0.9s								
PZH				pmax		pmax			
	comp=Z,80nm,5.5s								
VA03	San Esteban	94.19	210	P		P		03 15 48.2	+2.6
GO05	Huala	96.68	210	P		P		03 15 58.7	+1.9
ASAR	Alice Springs	145.92	19	PKPdf		PKPdf		03 22 04.3	-1.3
QSPA	South Pole Qui	146.68	180	PKPbc		PKPdf		03 22 04.5	-1.1
	comp=Z,6.8nm,1.1s,baz=208,slow=1.4,SNR=7.5								
QSPA	South Pole Qui	146.68	180	PKPdf		PKPdf		03 22 05.9	+0.3

*IDC **25** 03:09:07.3±1.4,56°.34N×34°.48W,h0km,mb3.5/5, mbtmp3.6/6,ML2.4/1,Error ellipse: s-maj=42.9km s-min=26.3km az=13.0*

ISC 25 03:09:08.7±1.2,56°.3N±0°.3×34°.5W±0°.2,h10km,n6,σ1s09/6, mb3.6/5,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCHQ	Schefferville	18.25	279	P	Pn	03 13 21.5	-0.3
	0.1nm,0.3s,baz=76,slow=13,SNR=3.6						
	4.7nm,1.1s						
PDAR	Pinedale Array	48.11	287	P	P	03 17 48.7	0.0
	0.4nm,0.7s,baz=61,slow=9.2,SNR=4.2						
	0.4nm,0.7s						
ILAR	Eielson Array	48.73	328	P	P	03 17 53.1	+0.3
	0.5nm,0.8s,baz=36,slow=6.3,SNR=8.4						
	0.5nm,0.8s						
TORD	Torodi Ar. Bea	51.28	132	P	P	03 18 12.8	0.0
	0.5nm,1.0s,baz=322,slow=9.1,SNR=1.9						
	0.5nm,1.0s						
KURBB	Kurchatov Arra	59.90	43	P	P	03 19 12.9	-1.4
	0.6nm,0.6s,baz=327,slow=6.8,SNR=2.9						
	0.6nm,0.6s						
MKAR	Makanchi Array	64.47	43	P	P	03 19 46.3	+1.2
	0.5nm,0.7s,baz=337,slow=7.9,SNR=3.9						
	0.5nm,0.7s						

*IDC **25** 03:14:35.9±1.5,56°.82N×34°.50W,h0km,mb3.8/11, mbtmp3.8/11,MS3.6/21,Error ellipse: s-maj=50.6km s-min=16.0km az=177.0*

*NEIC **25** 03:14:36.7±1.7,56°.6N±0°.1×34°.4W±0°.2,h10km±1km, mb4.4/46,Error ellipse: s-maj=18.6km s-min=13.9km az=163.0*

ISC 25 03:14:36.3±0.5,56°.66N±0°.10×34°.45W±0°.06,h10km,n77, σ0s99/50,mb4.3/34,MS3.6/17,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	Borgarnes	10.33	33	Pn	Pn	03 17 09.8	+5.5
	0.7nm,0.3s,baz=224,slow=6.9,SNR=6.2						
BORG	Borgarnes	10.33	33		Pn	03 17 02.5	-1.7
SFJD	Kangerlussuaq	12.82	330	LR	LR	03 21 37.4	
	comp=Z,122nm,18.2s,baz=170,slow=33						
ILULI	Ilulissat	14.62	336	Pn	Pn	03 18 02.1	-0.7
SUMG	Summit	16.07	356	Pn	Pn	03 18 20.9	-1.4
SUMG	Summit	16.07	356	*i* P	Pn	03 18 21.0	-1.4
EKA	Eskdalemuir Ar	17.48	81	LR	LR	03 24 21.6	
	comp=Z,213nm,18.3s,baz=256,slow=34						
FRB	Frobisher Bay	18.18	307	LR	LR	03 23 21.2	
	comp=Z,54nm,21.3s,baz=92,slow=29						
SCHQ	Schefferville	18.23	278	LR	LR	03 24 27.3	
	comp=Z,150nm,20.3s,baz=74,slow=32						
SCHQ	Schefferville	18.23	278	Pn	Pn	03 18 48.1	-1.1
BATG	Bathurst New B	21.44	258	P	P	03 19 24.2	-0.1
LMN	Caledonia Moun	21.67	253	P	P	03 19 24.0	-2.8
F64A	Sherman	23.56	257	P	P	03 19 46.6	0.0
F64A				IAmb	IAmb	03 19 48.3	
	comp=Z,8.1nm,0.9s						
NOA	NORSAR Array B	23.63	60	LR	LR	03 27 40.2	
	comp=Z,62nm,18.9s,baz=275,slow=33						
F62A	Pittston Farm,	24.41	259	P	P	03 19 54.5	-0.2
F62A				IAmb	IAmb	03 19 56.8	
	comp=Z,7.4nm,0.8s						
HFS	Hagfors	25.02	62	LR	LR	03 28 31.3	
	comp=Z,76nm,19.3s,baz=292,slow=34						
WLF	Walferdange	25.02	89	P	P	03 19 59.8	-0.3
WLF				IAmb	IAmb	03 20 00.6	
	comp=Z,9.4nm,1.2s						
ESDC	Sonseca Array	26.18	117	LR	LR	03 28 41.7	
	comp=Z,106nm,18.4s,baz=320,slow=32						
ESDC	Sonseca Array	26.18	117	P	P	03 20 10.9	+0.1
ECH	Echery	26.37	91	P	P	03 20 11.2	-1.2
ARCES	ARCESS Array B	28.64	39	P	P	03 20 31.4	-1.0
	comp=Z,1.2nm,0.8s,baz=254,slow=8.6,SNR=4.5						
ARCES				LR	LR	03 29 40.2	
	comp=Z,94nm,19.2s,baz=281,slow=32						
	comp=Z,1.2nm,0.8s						
ARCES	ARCESS Array B	28.64	39	IAmb	IAmb	03 20 33.3	
	comp=Z,7.6nm,1.4s						
DAVOX	Davos/Dischmat	28.70	91	LR	LR	03 31 26.7	
	comp=Z,191nm,18.4s,baz=294,slow=35						
SADO	Sadowa	30.14	266	LR	LR	03 31 38.5	
	comp=Z,150nm,19.9s,baz=48,slow=34						
FINES	FINESS Array B	30.49	56	P	P	03 20 48.8	-0.2
	comp=Z,0.9nm,0.8s,baz=235,slow=4.9,SNR=2.8						
FINES				LR	LR	03 31 07.3	
	comp=Z,71nm,20.7s,baz=304,slow=33						
	comp=Z,0.9nm,0.8s						
VRAC	Vranov	30.95	82	LR	LR	03 32 44.8	
	comp=Z,156nm,19.4s,baz=293,slow=35						
FCC	Fort Churchill	31.02	299	P	P	03 20 53.7	+0.1
FCC				IAmb	IAmb	03 20 57.4	
	comp=Z,11nm,1.5s						
COWI	Conover	34.83	276	P	P	03 21 27.6	+0.6
EYMN	Ely	35.00	280	P	P	03 21 29.2	+0.6
EYMN				IAmb	IAmb	03 21 29.8	
	comp=Z,6.8nm,1.1s						
B35A	Bob, Littlefor	35.97	283	P	P	03 21 37.1	+0.3
ULM	Lac du Bonnet	36.02	287	LR	LR	03 34 43.6	
	comp=Z,116nm,20.1s,baz=62,slow=34						
AKASG	Malin Array Be	36.95	71	P	P	03 21 45.6	+0.4
	comp=Z,0.2nm,0.4s,baz=309,slow=7.6,SNR=7.5						
	comp=Z,0.2nm,0.4s						
JFWS	Jewell Farm	37.47	273	P	P	03 21 50.0	+0.3
JFWS				IAmb	IAmb	03 21 51.2	
	comp=Z,3.3nm,0.7s						
MLR	Muntele Rosu	38.33	80	LR	LR	03 37 43.5	
	comp=Z,127nm,19.9s,baz=322,slow=36						
YKA	Yellowknife Ar	38.53	313	P	P	03 21 58.4	0.0
	comp=Z,0.6nm,0.8s,baz=60,slow=9.4,SNR=4.6						
YKA				LR	LR	03 36 36.3	
	comp=Z,83nm,19.7s,baz=75,slow=34						
	comp=Z,0.6nm,0.8s						
TKL	Tuckaleechee C	39.02	259	LR	LR	03 37 15.2	
	comp=Z,143nm,18.4s,baz=14,slow=35						
ECSD	EROS Data Cent	40.43	279	P	P	03 22 14.8	+0.3
PBMO	Poplar Bluff	41.84	266	P	P	03 22 26.7	+0.7
PBMO				IAmb	IAmb	03 22 27.3	
	comp=Z,6.8nm,1.0s						
SACV	Santiago Islan	42.42	164	P	P	03 22 29.6	-1.5
Z47A	Carrollton	43.20	260	P	P	03 22 36.5	-0.6
Z47A				IAmb	IAmb	03 22 38.8	
	comp=Z,8.9nm,0.8s						
Y45A	Yeager Farm, C	43.50	262	P	P	03 22 39.6	0.0
CCAR	Cane Creek	44.69	264	P	P	03 22 49.8	+0.7
BELG	Belogornoye	45.13	59	LR	LR	03 40 20.0	
	comp=Z,65nm,20.3s,baz=107,slow=34						
I29M	Ogilvie Camp,	45.45	325	IAmb	IAmb	03 22 55.9	
	comp=Z,3.7nm,0.6s						
BMAR	Burnt Mountain	45.91	330	P	P	03 22 59.4	+0.9
BRTR	Keskin Array B	46.40	81	P	P	03 23 05.0	+2.1
	comp=Z,1.3nm,0.7s,baz=305,slow=6.4,SNR=8.2						
	comp=Z,1.3nm,0.7s						
BRTR	Keskin Array B	46.40	81	P	P	03 23 02.9	0.0
DAWY	Dawson	46.67	324	P	P	03 23 05.8	+1.3
KSCO	Kaye Shedlock'	46.95	278	P	P	03 23 08.6	+1.5
BOZ	Bozeman (W)	47.18	291	P	P	03 23 09.8	+0.9
BOZ				IAmb	IAmb	03 23 10.6	
	comp=Z,4.1nm,1.1s						
H24K	Noodor Dome	47.98	329	P	P	03 23 15.5	+0.8
H24K				IAmb	IAmb	03 23 17.5	
	comp=Z,4.2nm,1.1s						
ISCO	Idaho Springs	48.02	281	P	P	03 23 15.9	+0.2
ISCO				IAmb	IAmb	03 23 17.8	
	comp=Z,1.8nm,0.8s						
PDAR	Pinedale Array	48.05	287	P	P	03 23 15.3	-0.4
	comp=Z,0.6nm,0.5s,baz=59,slow=7.8,SNR=8.4						
PDAR				LR	LR	03 42 22.2	
	comp=Z,89nm,18.5s,baz=78,slow=35						
	comp=Z,0.6nm,0.5s						
NEW	Newport	48.14	297	LR	LR	03 41 51.8	
	comp=Z,116nm,20.4s,baz=66,slow=34						
H23K	Yukon River	48.45	330	IAmb	IAmb	03 23 20.1	
	comp=Z,3.3nm,0.8s						
IL31		48.48	328	IAmb	IAmb	03 23 20.2	
	comp=Z,2.3nm,0.8s						
ILAR	Eielson Array	48.48	328	P	P	03 23 19.2	+0.8
	comp=Z,2.1nm,0.7s,baz=39,slow=6.2,SNR=33						
	comp=Z,2.1nm,0.7s						
MLY	Manley	49.38	330	IAmb	IAmb	03 23 27.0	
	comp=Z,3.4nm,0.9s						
I21K	Tanana	49.60	331	IAmb	IAmb	03 23 28.9	
	comp=Z,4.2nm,0.9s						
J20K	Nowinta River	50.97	331	IAmb	IAmb	03 23 43.6	
	comp=Z,3.5nm,0.8s						
AKTO	Aktyubinsk	51.26	55	LR	LR	03 44 30.9	
	comp=Z,81nm,18.5s,baz=317,slow=35						
J08A	Circle Bar Ran	52.24	293	P	P	03 23 47.2	-0.2
J08A				IAmb	IAmb	03 23 48.8	
	comp=Z,3.6nm,1.0s						
ELK	Elko	52.47	289	P	P	03 23 50.6	+1.4
	comp=Z,0.6nm,0.3s,baz=14,slow=5.3,SNR=4.7						
	comp=Z,0.6nm,0.3s						
ELK	Elko	52.47	289	IAmb	IAmb	03 23 54.9	
	comp=Z,2.6nm,1.1s						
ABKAR	Akbulak array	52.98	55	P	P	03 23 52.6	0.0
TXAR	Lajitas Array	54.73	271	P	P	03 24 06.1	+0.3
	comp=Z,2.0nm,0.7s,baz=41,slow=5.9,SNR=3.2						
	comp=Z,2.0nm,0.7s						
KVN	Kaiserville	55.20	290	IAmb	IAmb	03 24 10.7	
	comp=Z,3.7nm,0.9s						
PAHR	Pah Rah Range	55.38	291	P	P	03 24 10.6	+0.2
PAHR				IAmb	IAmb	03 24 12.4	
	comp=Z,4.1nm,1.0s						
NVAR	Mina Array Bea	55.77	289	P	P	03 24 13.7	+0.3
	comp=Z,0.8nm,0.8s,baz=52,slow=6.1,SNR=5.6						
	comp=Z,0.8nm,0.8s						
JTS	Las Juntas de	60.42	241	LR	LR	03 49 31.1	
	comp=Z,123nm,19.5s,baz=26,slow=35						
KK31	Karatay Array	62.40	53	P	P	03 24 60.0	+1.0
KK31				IAmb	IAmb	03 25 07.6	
	comp=Z,2.5nm,1.4s						
KKAR	Karatay Array	62.40	53	P	P	03 24 59.9	+0.9
MK31	Makanchi Array	64.21	43	P	P	03 25 12.2	+1.3
MK31				IAmb	IAmb	03 25 15.0	
	comp=Z,4.6nm,1.5s						
MKAR	Makanchi Array	64.21	43	P	P	03 25 11.8	+0.9
	comp=Z,1.0nm,0.8s,baz=328,slow=4.3,SNR=5.5						
	comp=Z,1.0nm,0.8s						
GAR	Garm	65.61	56	P	P	03 25 21.6	+1.3
TARG	Taragay, Kyrgy	66.65	49	P	P	03 25 28.8	+1.5
TARG				IAmb	IAmb	03 25 31.3	
	comp=Z,3.5nm,1.0s						
LVC	Limon Verde	84.14	212	P	P	03 27 07.3	-0.3

*AUST **25** 03:17:25.8±1.6,19°.78S×133°.96E,h2km±14km,Error ellipse: s-maj=11.3km s-min=5.6km az=65.0*

*NOU **25** 03:17:26.4,19°.87S×133°.92E,h0km,mb4.1/9,Northern Territory, Australia*

ISC 25 03:17:26.2±0.8,19°.79S±0°.06×133°.97E±0°.05,h12km,n24, σ1s47/30,Northern Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRAB	Tennant Creek	0.39	112	P	Pg	03 17 34.2	+0.2
WB2	Warramunga Arr	0.40	113	P	Pg	03 17 33.8	-0.3
	baz=0.4						
WB2				S	Sg	03 17 38.9	-0.5
	baz=0.4						
ASPA	Alice Springs	3.86	181	P	Pn	03 18 28.5	+3.0
	baz=3.9						
ASPA				S	Sn	03 19 11.7	+0.8
	baz=3.9						
QIS	Mount Isa	5.35	99	P	Pn	03 18 48.0	+2.0
	baz=5.4,SNR=6.6						
QIS	Mount Isa	5.35	99	P	Pn	03 18 48.2	+2.2
AUKAT	Katherine High	5.54	343	P	Pn	03 18 49.3	+0.8
	baz=5.6						
AUKAT				S	Sn	03 19 51.3	-0.8
	baz=5.6						
KNRA	Kununurra	6.42	309	P	Pn	03 19 01.6	+0.9
	baz=6.4						
KNRA				S	Sn	03 20 13.6	-0.4
	baz=6.4						
KDU	Kakadu	7.20	348	P	Pn	03 19 12.8	+1.4
	baz=7.2,SNR=15						
WRKA	Warakurna	7.40	224	P	Pn	03 19 14.0	-0.2
	baz=7.4,SNR=3.1						
WRKA				S	Sn	03 20 35.8	-2.5
	baz=7.4						
WRKA	Warakurna	7.40	224	P	Pn	03 19 14.2	0.0
MTN	Manton Dam	7.42	338	P	Pn	03 19 14.6	+0.2
	baz=7.4,SNR=7.5						
MTN				S	Sn	03 20 38.8	+0.3
	baz=7.4						
MTN	Manton Dam	7.42	338	P	Pn	03 19 16.8	+2.4
OOD	Oodnadatta	8.13	169	P	Pn	03 19 25.3	+1.2
	baz=8.2,SNR=5.0						
OOD	Oodnadatta	8.13	169	P	Pn	03 19 25.9	+1.8
INKA	Innaminka	10.06	143	P	Pn	03 19 50.5	-0.1
	baz=10						
MULG	Mulgathing	10.45	180	P	Pn	03 19 56.0	+0.1
	baz=10,SNR=3.6						
MULG	Mulgathing	10.45	180	P	Pn	03 19 55.8	-0.2
COEN	Coen	10.55	58	S	Sn	03 21 51.9	-3.6
	baz=11,SNR=4.4						
LCRK	Leigh Creek	11.29	161	P	Pn	03 20 07.2	-0.2
	baz=11						
LCRK	Leigh Creek	11.29	161	P	Pn	03 20 08.0	+0.6
FORT	Forrest	12.18	205	P	Pn	03 20 18.1	-1.4
	baz=12						
FORT	Forrest	12.18	205	P	Pn	03 20 19.8	+0.2
BBOO	Buckleboo	13.11	172	P	Pn	03 20 30.5	-1.8
	baz=13						
BBOO	Buckleboo	13.11	172	P	Pn	03 20 32.3	0.0
	30nm,2.2s						

*TAP **25** 03:20:42.9,24°.40N×121°.91E,h22km,ML3.4,B*

*JMA **25** 03:20:42.8±0.1,24°.3N±0°.6×121°.9E±0°.6,h42km±2km, MV2.7/10,TAIWAN REGION*

ISC 25 03:20:43.0±0.9,24°.37N±0°.02×121°.92E±0°.02,h25km±4km, n70,σ0s78/140,2D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EWUT	Wuta	0.15	299	P	Pb	03 20 47.9	-0.2
	baz=289						
EWUT				S	Sn	03 20 51.6	0.0
	baz=289						
ENA	Nanau	0.17	289	⇓ *i* P	Pb	03 20 48.2	-0.2
	baz=279						
ENA				*i* S	Sn	03 20 52.0	0.0
	baz=279						
TWC	Suao	0.24	345	⇓ *i* P	Pb	03 20 48.9	-0.4
	baz=346						
TWC				*i* S	Sb	03 20 52.8	-0.7
	baz=346						
NDS	Dongshan	0.32	324	P	Pb	03 20 50.2	-0.2
	baz=322						
NDS				S	Sb	03 20 55.2	-0.2
	baz=322						
ETL	Fush Village	0.34	232	P	Pn	03 20 51.3	-1.2
	baz=227						
ETL				eS	Sn	03 20 58.0	-0.7
	baz=227						
NACB	Ninganchiao	0.36	237	P	Pb	03 20 51.2	+0.3
	baz=232						
NACB				S	Sn	03 20 57.3	-1.6
	baz=232						
LATG	Datong	0.40	294	P	Pb	03 20 51.7	+0.1
	baz=290						
LATG				S	Sb	03 20 57.7	+0.2
	baz=290						
TWD	Chiawan	0.41	226	eP	Pn	03 20 52.1	-1.3
	baz=221						
TWD				eS	Sn	03 20 59.4	-1.0
	baz=221						
TWE	Neicheng	0.42	326	*i* P	Pb	03 20 51.8	-0.1
	baz=326						
TWE				S	Sb	03 20 57.4	-0.6
	baz=326						
ILA	Ilan	0.42	338	P	Pb	03 20 52.1	+0.1
	baz=338						
ILA				eS	Sb	03 20 58.6	+0.6
	baz=338						
ETLH	Xiulin Townshi	0.43	248	eP	Pb	03 20 52.3	0.0
	baz=243						
ETLH				eS	Sn	03 20 59.5	-1.4
	baz=243						
EGS		0.47	1	P	Pb	03 20 52.7	-0.1
	baz=3.0						
EGS				eS	Sb	03 20 59.6	+0.2
	baz=3.0						
NTC	Toucheng	0.49	350	eP	Pb	03 20 52.8	-0.3
	baz=350						
NTC				eS	Sb	03 20 59.9	0.0
	baz=350						
FUSB	Fushanzhiwuyua	0.49	322	P	Pb	03 20 53.1	-0.1
	baz=320						
FUSB				S	Sb	03 21 00.0	-0.1
	baz=320						
NNSB	Datong	0.49	277	P	Pb	03 20 53.2	0.0
	baz=273						
NNSB				S	Sn	03 21 00.8	-1.6
	baz=273						
NNS	Nan Shan	0.50	278	eP	Pb	03 20 53.5	0.0
	baz=274						
NNS				S	Sn	03 21 01.2	-1.5
	baz=274						
NWLT	Wulai	0.56	317	eP	Pb	03 20 54.1	-0.1
	baz=314						
NWLT				eS	Sb	03 21 02.0	+0.1
	baz=314						
YHNB	Yeheng	0.58	301	P	Pb	03 20 54.6	0.0
	baz=298						
YHNB				S	Sb	03 21 02.7	+0.2
	baz=298						
NSK	Sanguang	0.60	301	P	Pb	03 20 54.8	-0.1
	baz=298						
NSK				eS	Sb	03 21 03.1	+0.1
	baz=298						
TIPB	Shuangxi	0.60	352	P	Pb	03 20 54.9	-0.2
	baz=351						
TIPB				S	Sb	03 21 03.3	+0.1
	baz=351						
FUSS	Fushou	0.63	259	P	Pn	03 20 56.2	-0.4
	baz=255						
FUSS				eS	Sn	03 21 05.3	-0.7
	baz=255						
TWB1	Santiao Chiao	0.64	6	P	Pb	03 20 55.5	-0.1
	baz=7.0						
TWB1				eS	Sb	03 21 04.4	+0.3
	baz=7.0						
WHF	Hehuan Shan	0.64	249	P	Pn	03 20 56.2	-0.7
	baz=246						
WHF				eS	Sn	03 21 05.5	-1.0
	baz=246						
TWA	Mucha	0.68	333	eP	Pb	03 20 57.2	+0.9
	baz=332						
TWA				eS	Sn	03 21 06.0	-0.9
	baz=332						
NHDH	Xindian Distri	0.69	329	eP	Pb	03 20 57.7	+1.2
	baz=327						
NHDH				eS	Sb	03 21 05.9	+0.3
	baz=327						
TWT	Tachien	0.69	260	eP	Pn	03 20 57.0	-0.4
	baz=257						
TWT				eS	Sn	03 21 07.5	+0.1
	baz=257						
TDCB	Techi	0.71	261	eP	Pb	03 20 57.1	+0.3
	baz=257						
TDCB				eS	Sn	03 21 07.6	-0.2
	baz=257						
NWF	Wu-fen Shan	0.71	350	P	Pb	03 20 57.0	+0.2
	baz=349						
NWF				eS	Sb	03 21 06.6	+0.4
	baz=349						
ESL	Shilin	0.71	219	P	Pb	03 20 56.8	-0.1
	baz=216						
ESL				eS	Sn	03 21 07.8	+0.2
	baz=216						
SXI1	Grass Mountain	0.72	357	P	Pb	03 20 57.3	+0.3
	baz=357						
SXI1				S	Sb	03 21 06.9	+0.3
	baz=357						
CHGB	Renai	0.75	246	eP	Pb	03 20 58.0	+0.4
	baz=243						
CHGB				eS	Sn	03 21 08.1	-0.8
	baz=243						
NFF	Wufeng Townshi	0.78	290	eP	Pb	03 20 58.6	+0.7
	baz=287						
NFF				eS	Sn	03 21 09.3	-0.1
	baz=287						
OWD	Renai	0.80	239	eP	Pb	03 20 58.5	+0.2
	baz=236						
OWD				eS	Sn	03 21 10.2	+0.3
	baz=236						
WUSB	Renai	0.82	243	P	Pb	03 20 59.1	+0.3
	baz=240						
WUSB				eS	Sb	03 21 10.9	+1.3
	baz=240						
YM01	YM01	0.83	338	eP	Pb	03 20 59.5	+0.5
	baz=337						
YM01				eS	Sb	03 21 10.9	+1.2
	baz=337						
TWS1	Kuangyinshan	0.86	328	eP	Pb	03 21 00.5	+1.2
	baz=327						
TWS1				eS	Sb	03 21 11.3	+0.9
	baz=327						
NSTT	Nanjuang	0.88	287	eP	Pb	03 21 00.2	+0.6
	baz=285						
NSTT				eS	Sb	03 21 12.4	+1.4
	baz=285						
WHP	Taichung City	0.89	264	eP	Pb	03 21 01.1	+1.2
	baz=262						
WHP				eS	Sb	03 21 13.4	+1.9
	baz=262						
NTST	Danshui	0.90	332	eP	Pb	03 21 01.0	+1.0
	baz=330						
NTST				eS	Sb	03 21 13.4	+1.9
	baz=330						
JYNG	Yonagunijimaku	0.94	85	eP	Pn	03 21 00.3	-0.3
JYNG				S	Sb

WCS	**Beigang Elemen**	**0.97**	**251**	*e*P		**Pb**	**03 21 01.9**	**+0.7**
	baz=249							
WCS				*e*S		**Sb**	**03 21 15.4**	**+1.7**
	baz=249							
HGSD	**Ruisui**	**0.99**	**208**	*e*P		**Pb**	**03 21 01.9**	**+0.5**
	baz=206							
HGSD				*e*S		**Sb**	**03 21 16.0**	**+1.9**
	baz=206							
YOJ	**Yonaguni jima**	**1.00**	**85**	P		**Pn**	**03 21 01.1**	**-0.3**
	baz=86							
YOJ				S		**Sn**	**03 21 14.5**	**-0.2**
	baz=86							
YOJ	**Yonaguni jima**	**1.00**	**85**	P		**Pn**	**03 21 01.1**	**-0.3**
YOJ				*e*S		**Sn**	**03 21 13.9**	**-0.8**
SMLT	**Sun Moon Lake**	**1.05**	**243**	*e*P		**Pb**	**03 21 03.0**	**+0.3**
	baz=240							
SMLT				*e*S		**Sb**	**03 21 17.4**	**+1.3**
	baz=240							
SSLB	**Suanglung**	**1.06**	**237**	*e*P		**Pb**	**03 21 02.6**	**-0.1**
	baz=235							
SSLB				*e*S		**Sb**	**03 21 16.9**	**+0.8**
	baz=235							
YULB	**Yu-li**	**1.13**	**210**	*e*P		**Pn**	**03 21 02.7**	**-0.5**
	baz=209							
YULB				*e*S		**Sb**	**03 21 20.1**	**+1.9**
	baz=209							
YUS	**Yu-Shan**	**1.25**	**225**	*e*P		**Pb**	**03 21 05.6**	**-0.6**
	baz=223							
YUS				*e*S		**Sb**	**03 21 22.1**	**0.0**
	baz=223							
ALS	**Alishan**	**1.33**	**230**	*e*P		**Pb**	**03 21 07.6**	**0.0**
	baz=228							
ALS				*e*S		**Sb**	**03 21 24.6**	**+0.3**
	baz=228							
ELDTW	**Lidau**	**1.44**	**215**	*e*P		**Pb**	**03 21 07.8**	**-1.5**
	baz=213							
ELDTW				*e*S		**Sb**	**03 21 26.9**	**-0.3**
	baz=213							
WRL	**Guolierlin Hig**	**1.49**	**252**	*e*P		**Pb**	**03 21 09.6**	**-0.4**
	baz=250							
WRL				*e*S		**Sb**	**03 21 28.7**	**+0.3**
	baz=250							
EDH	**Donghe**	**1.50**	**202**	*e*P		**Pb**	**03 21 09.0**	**-1.2**
	baz=201							
EDH				*e*S		**Sb**	**03 21 29.0**	**+0.1**
	baz=201							
CHN4	**Tsaushan**	**1.58**	**230**	*e*P		**Pb**	**03 21 11.7**	**0.0**
	baz=229							
CHN4				*e*S		**Sb**	**03 21 32.7**	**+1.4**
	baz=229							
STYH	**Taoyuan**	**1.59**	**221**	*e*P		**Pb**	**03 21 11.0**	**-0.8**
	baz=220							
STYH				*e*S		**Sb**	**03 21 30.6**	**-0.8**
	baz=220							
TPUB	**Ta-pu**	**1.59**	**228**	*e*P		**Pb**	**03 21 11.2**	**-0.6**
	baz=227							
TPUB				*e*S		**Sb**	**03 21 32.6**	**+1.0**
	baz=227							
WTP	**Ta-pu**	**1.64**	**227**	*e*P		**Pb**	**03 21 12.5**	**-0.2**
	baz=225							
WTP				*e*S		**Sb**	**03 21 34.4**	**+1.5**
	baz=225							
IRIF	**Iriomote-Funau**	**1.65**	**91**	P		**Pn**	**03 21 10.4**	**0.0**
IRIF				*e*S		**Sn**	**03 21 30.8**	**0.0**
TWK	**Hsinying**	**1.71**	**230**	*e*P		**Pb**	**03 21 13.7**	**-0.2**
	baz=228							
TWK				*e*S		**Sb**	**03 21 36.1**	**+1.1**
	baz=228							
CHN1	**Nanshi**	**1.74**	**227**	*e*P		**Pb**	**03 21 14.3**	**0.0**
	baz=226							
CHN1				*e*S		**Sb**	**03 21 37.1**	**+1.4**
	baz=226							
JKRS	**Kuro-shima**	**1.91**	**94**	*e*P		**Pn**	**03 21 14.8**	**+0.8**
JKRS				*e*S		**Sn**	**03 21 37.7**	**+0.5**
JIJ	**Ishigaki jima**	**2.03**	**90**	*e*P		**Pn**	**03 21 16.1**	**+0.5**
JIJ				*e*S		**Sn**	**03 21 38.9**	**-1.2**
JISG	**Ishigakijimahi**	**2.19**	**84**	P		**Pn**	**03 21 17.4**	**-0.4**
JISG				S		**Sn**	**03 21 43.6**	**-0.5**
VWUC	**VWUC**	**2.33**	**286**	*e*P		**Pn**	**03 21 19.4**	**-0.3**
	baz=284							
VWUC				*e*S		**Sn**	**03 21 47.1**	**-0.5**
	baz=284							
JTJ	**Tarama**	**2.55**	**83**	*e*P		**Pn**	**03 21 22.2**	**-0.6**
JTJ				*e*S		**Sn**	**03 21 53.6**	**+0.6**
VCHM	**Qimei**	**2.56**	**244**	*e*P		**Pn**	**03 21 23.8**	**+0.9**
	baz=242							
VCHM				*e*S		**Sn**	**03 21 54.2**	**+0.9**
	baz=242							
PTMZ	**Houxiangcun**	**2.63**	**285**	*e*P		**Pn**	**03 21 23.9**	**-0.1**
	baz=284							
PTMZ				*e*S		**Sn**	**03 21 54.3**	**-0.8**
	baz=284							
XPSS	**Dashiqiu**	**2.99**	**329**	*e*P		**Pn**	**03 21 28.7**	**-0.2**
	baz=328							
XPSS				*e*S		**Sn**	**03 22 02.5**	**-1.4**
	baz=328							
AXDP	**Jialang**	**3.63**	**279**	*e*P		**Pn**	**03 21 37.7**	**0.0**
	baz=277							
AXDP				*e*S		**Sn**	**03 22 18.4**	**-1.3**
	baz=277							

IDC 25 03:20:45.1±1.2, 55°56S×26°63W, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=52.2km s-min=31.9km az=94.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**47.08**	**183**	P	P	03 29 17.9	0.0
	0.3nm,0.5s,baz=196,slow=7.4,SNR=3.9						
	0.3nm,0.5s						
LPAZ	**La Paz**	**50.35**	**304**	P	P	03 29 44.6	+0.1
	0.7nm,0.6s,baz=179,slow=6.8,SNR=2.1						
	0.7nm,0.6s						
TORD	**Torodi Ar. Bea**	**72.47**	**29**	P	P	03 32 13.5	+0.1
	1.3nm,0.7s,baz=198,slow=6.9,SNR=9.7						
	1.3nm,0.7s						
ILAR	**Eielson Array**	**150.02**	**312**	PKPbc	PKPbc	03 40 35.2	-0.8
	0.4nm,0.7s,baz=93,slow=1.3,SNR=6.5						

*NEIC **25** 03:40:11.7±1.6, 11°.50N±0°.09×141°.9E±0°.1, h10km±1km, mb4.8/96, Error ellipse: s-maj=17.9km s-min=14.9km az=104.0*

*BJI **25** 03:40:15.8±0.0, 11°.88N×141°.84E, h29km, mb4.7/48, mB4.9/26, Ms4.3/26, Ms7 4.2/28*

*IDC **25** 03:40:17.7±3.3, 11°.59N×141°.96E, h54km±30km, mb4.1/13, mbtmp4.3/14, ML4.4/1, MS4.0/51, Error ellipse: s-maj=22.1km s-min=15.8km az=85.0*

ISC 25 03:40:16.8±0.4, 11°.51N±0°.06×141°.91E±0°.07, h49km, n237, σ1§18/173, mb4.7/71, MS4.1/56, 1C-5D, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**3.56**	**54**	P		**Pn**	**03 41 09.1**	**-0.5**
	38nm,0.3s,baz=180,slow=11,SNR=15							
GUMO				S		**Sn**	**03 41 53.2**	**+2.8**
	319nm,0.6s,baz=10.0,slow=19,SNR=4.4							
	324nm,0.7s							
GUMO	**Guam**	**3.56**	**54**	Pn		**Pn**	**03 41 08.6**	**-0.9**
JCJ	**Chichijima**	**15.51**	**1**	LR		LR	03 49 12.2	
	comp=Z,404nm,18.9s,baz=96,slow=35							
JCJ	**Chichijima**	**15.51**	**1**	Pn		**Pn**	**03 43 48.2**	**-4.1**
DAV	**Davao City (W)**	**16.70**	**256**	LR		LR	03 49 37.9	
	comp=Z,267nm,19.5s,baz=78,slow=33							
FAKI	**Fak Fak**	**17.25**	**214**			**Pn**	**03 44 13.0**	**-1.4**
RABL	**Rabaul**	**18.64**	**146**	P		**P**	**03 44 29.1**	**-1.5**
KRVT	**Keravat (AS076**	**18.66**	**147**	LR		LR	03 51 37.2	
	comp=Z,394nm,18.1s,baz=109,slow=36							
JOW	**Kunigami**	**19.93**	**322**	LR		LR	03 51 27.4	
	comp=Z,466nm,19.5s,baz=88,slow=34							
JOW	**Kunigami**	**19.93**	**322**	P		**P**	**03 44 43.2**	**-1.5**
JOW						IAmb	IAmb	03 44 55.5
	comp=Z,51nm,1.0s							
PMG	**Port Moresby**	**21.42**	**166**	P		**P**	**03 45 02.2**	**+1.4**
	comp=Z,26nm,0.9s,baz=312,slow=12,SNR=3.4							
PMG					LR	LR	03 52 52.6	
	comp=Z,259nm,18.2s,baz=32,slow=35							
	comp=Z,26nm,0.9s							
PMG	**Port Moresby**	**21.42**	**166**	P		**P**	**03 44 58.8**	**-2.0**
PMG						IAmb	IAmb	03 45 15.5
	comp=Z,68nm,1.2s							
JHJ	**Hachijo jima 2**	**21.60**	**355**	LR		LR	03 52 28.4	
	comp=Z,669nm,19.9s,baz=358,slow=34							
MYLDM	**Lahad Datu**	**23.98**	**257**	P		**P**	**03 45 26.6**	**-0.4**

INU	**Inuyama**	**24.15**	**350**	P		**P**	**03 45 26.6**	**-1.8**
INU						IAmb	IAmb	03 45 30.7
	comp=Z,34nm,1.3s							
MJAR	**Matsushiro Arr**	**25.15**	**353**	P		**P**	**03 45 39.2**	**+1.7**
	comp=Z,4.0nm,0.9s,baz=159,slow=12,SNR=5.3							
MJAR						LR	LR	03 55 08.0
	comp=Z,300nm,19.5s,baz=132,slow=36							
MJAR	**Matsushiro Arr**	**25.15**	**353**			IAmb	IAmb	03 45 44.4
	comp=Z,4.5nm,1.2s							
NJ2	**Nanjing**	**29.48**	**317**	*e*P		**P**	**03 46 15.3**	**-1.0**
NJ2						pmax	pmax	
	comp=Z,10.0nm,0.5s							
CTA	**Charters Tower**	**31.69**	**172**	LR		LR	03 59 28.7	
	comp=Z,274nm,18.7s,baz=332,slow=36							
QIZ	**Qiongzhong**	**31.78**	**288**	P		**P**	**03 46 37.1**	**+0.3**
QIZ				S		**S**	**03 51 47.8**	**+4.0**
QIZ				LR		LR		
	comp=Z,160nm,10.8s							
QIZ				LR		LR		
	comp=Z,220nm,18.3s							
QIZ				LR		LR		
	comp=Z,230nm,20.4s							
WRA	**Warramunga Arr**	**32.13**	**193**	P		**P**	**03 46 40.2**	**+0.4**
	comp=Z,4.9nm,1.0s,baz=15,slow=9.8,SNR=12							
WRA						LR	LR	03 59 35.0
	comp=Z,174nm,21.5s,baz=231,slow=36							
	comp=Z,4.9nm,1.0s							
WRA	**Warramunga Arr**	**32.13**	**193**	P		**P**	**03 46 36.9**	**-2.9**
USRK	**Ussuriysk Ar.**	**33.68**	**347**	P		**P**	**03 46 53.5**	**+0.4**
	comp=Z,5.7nm,0.8s,baz=179,slow=8.4,SNR=7.9							
	comp=Z,5.7nm,0.8s							
USRK	**Ussuriysk Ar.**	**33.68**	**347**	P		**P**	**03 46 51.5**	**-1.5**
LYN	**LuoYang**	**35.27**	**315**	⇓*i*P		**P**	**03 47 07.3**	**+0.3**
LYN				PP		**PnPn**	**03 48 25.3**	**-0.9**
LYN				S		**S**	**03 52 34.3**	**-3.2**
LYN				pmax		pmax		
	comp=Z,20nm,1.0s							
LYN				pmax		pmax		
	comp=Z,90nm,4.2s							
LYN				LR		LR		
	comp=Z,400nm,19.2s							
LYN				LR		LR		
	comp=Z,250nm,18.2s							
LYN				LR		LR		
	comp=Z,520nm,18.8s							
ENH	**Enshi**	**35.39**	**307**	P		**P**	**03 47 07.2**	**-0.9**
HNS	**HongShan**	**35.50**	**321**	⇓P		**P**	**03 47 09.4**	**+0.5**
HNS				*e*S		**S**	**03 52 37.5**	**-3.4**
HNS				pmax		pmax		
	comp=Z,22nm,1.1s							
HNS				LR		LR		
	comp=Z,190nm,14.3s							
HNS				LR		LR		
	comp=Z,140nm,15.1s							
HNS				LR		LR		
	comp=Z,230nm,18.3s							
AS31	**Alice Springs**	**35.82**	**193**	P		**P**	**03 47 11.0**	**-0.9**
BNX	**BinXian**	**36.29**	**343**	⇓P		**P**	**03 47 15.5**	**-0.1**
BNX				pmax		pmax		
	comp=Z,29nm,1.1s							
BNX				pmax		pmax		
	comp=Z,140nm,4.0s							
BJT	**Baijiatuan**	**36.39**	**326**	P		**P**	**03 47 17.2**	**+0.7**
BJT						IAmb	IAmb	03 47 18.3
	comp=Z,11nm,0.8s							
BJI	**Beijing**	**36.40**	**326**	P		**P**	**03 47 17.3**	**+0.7**
BJI				pmax		pmax		
	comp=Z,14nm,1.1s							
BJI				LR		LR		
	comp=Z,62nm,17.0s							
BJI				LR		LR		
	comp=Z,160nm,14.6s							
BJI				LR		LR		
	comp=Z,400nm,20.9s							
XAN	**Xi'an**	**37.52**	**312**	P		**P**	**03 47 26.3**	**0.0**
XAN				pP		pP	03 47 34.6	-3.1
XAN				sP		pwP	03 47 38.4	-5.8
XAN				pmax		pmax		
	comp=Z,10.0nm,1.0s							
KLR	**Kul'dur**	**38.54**	**349**	LR		LR	04 01 30.9	
	comp=Z,285nm,21.1s,baz=164,slow=33							
XLT	**XiLinHaoTe**	**39.22**	**330**	⇓*i*P		**P**	**03 47 40.6**	**+0.1**
XLT				sP		pP	03 47 53.3	+1.5
XLT				sS		sS	03 53 56.8	+1.0
XLT				pmax		pmax		
	comp=Z,13nm,1.3s							
XLT				pmax		pmax		
	comp=Z,120nm,8.6s							
XLT				LR		LR		
	comp=Z,26nm,13.5s							
XLT				LR		LR		
	comp=Z,220nm,16.3s							
XLT				LR		LR		
	comp=Z,270nm,17.5s							
HHC	**Hu-ho-hao-te**	**39.57**	**323**	*e*P		**P**	**03 47 45.9**	**+2.4**
HHC				S		**S**	**03 53 47.4**	**+4.5**
HHC				pmax		pmax		
	comp=Z,21nm,0.6s							
HHC				pmax		pmax		
	comp=Z,230nm,6.5s							
HHC				LR		LR		
	comp=Z,420nm,15.3s							
HHC				LR		LR		
	comp=Z,390nm,13.1s							
HHC				LR		LR		
	comp=Z,620nm,17.2s							
PZH	**PanZhiHua**	**40.61**	**297**	P		**P**	**03 47 56.8**	**+4.5**
PZH				pmax		pmax		
	comp=Z,20nm,1.1s							
PZH				pmax		pmax		
	comp=Z,90nm,4.8s							
DZM	**Mont Dzumac**	**41.15**	**144**	LR		LR	04 02 21.7	
	comp=Z,129nm,18.6s,baz=328,slow=32							
CMAR	**Chiang Mai Arr**	**41.99**	**285**	P		**P**	**03 48 05.2**	**+1.5**
	comp=Z,2.5nm,0.4s,baz=85,slow=5.8,SNR=7.7							
CMAR				LR		LR	04 05 05.1	
	comp=Z,121nm,19.1s,baz=310,slow=35							
	comp=Z,2.5nm,0.4s							
CMAR	**Chiang Mai Arr**	**41.99**	**285**	P		**P**	**03 48 02.7**	**-0.9**
LZH	**Lanzhou**	**42.16**	**312**	⇑P		**P**	**03 48 06.6**	**+1.7**
LZH				pP		pP	03 48 16.8	+0.3
LZH				pmax		pmax		
	comp=Z,24nm,1.5s							
LZH				pmax		pmax		
	comp=Z,90nm,5.2s							
LZH				LR		LR		
	comp=Z,210nm,16.8s							
LZH				LR		LR		
	comp=Z,270nm,17.2s							
LZH				LR		LR		
	comp=Z,450nm,15.8s							
STKA	**Stephens Creek**	**43.14**	**180**	P		**P**	**03 48 13.2**	**+0.6**
	comp=Z,5.6nm,1.1s,baz=339,slow=14,SNR=3.3							
STKA						LR	LR	04 07 03.1
	comp=Z,113nm,19.2s,baz=22,slow=37							
	comp=Z,5.6nm,1.1s							
STKA	**Stephens Creek**	**43.14**	**180**			IAmb	IAmb	03 48 20.4
	comp=Z,3.5nm,1.4s							
PETK	**Petropavlovsk-**	**43.39**	**14**	LR		LR	04 05 04.8	
	comp=Z,205nm,19.9s,baz=201,slow=34							
FORT	**Forrest**	**44.10**	**197**	P		**P**	**03 48 19.5**	**-0.9**
MSVF	**Nonsavu**	**46.02**	**129**	LR		LR	04 06 57.1	
	comp=Z,366nm,18.4s,baz=350,slow=35							
GTA	**Gaotai**	**46.46**	**314**	⇓P		**P**	**03 48 39.9**	**+0.6**
GTA				pP		pP	03 48 51.8	+0.7
GTA				sP		sP	03 48 56.8	+0.6
GTA				pmax		pmax		
	comp=Z,10.0nm,1.2s							
GTA				pmax		pmax		
	comp=Z,76nm,4.7s							
GTA				LR		LR		
	comp=Z,120nm,19.6s							
GTA				LR		LR		
	comp=Z,270nm,19.3s							
GTA				LR		LR		
	comp=Z,220nm,19.3s							
ULN	**Ulaanbaatar**	**46.52**	**328**	P		**P**	**03 48 39.7**	**+0.1**
ULN						IAmb	IAmb	03 48 41.9
	comp=Z,14nm,1.4s							
SONM	**Songino Array**	**46.84**	**328**	P		**P**	**03 48 43.2**	**+1.1**
	comp=Z,0.8nm,0.4s,baz=144,slow=8.5,SNR=10.0							
SONM						LR	LR	04 09 55.6
	comp=Z,145nm,18.5s,baz=120,slow=38							
	comp=Z,0.8nm,0.4s							
SONM	**Songino Array**	**46.84**	**328**	P		**P**	**03 48 43.0**	**+0.9**
MA2	**Magadan**	**48.43**	**6**	LR		LR	04 07 46.4	
	comp=Z,97nm,20.4s,baz=192,slow=34							

SHEM	**Shemya Is, Ala**	**48.56**	**26**	LR		LR	04 07 17.5	
	comp=Z,181nm,21.2s,baz=236,slow=33							
AMKA	**Amchitka**	**50.02**	**30**	P		**P**	**03 49 05.5**	**-0.8**
LSA	**Lhasa**	**50.42**	**299**	P		**P**	**03 49 09.6**	**-0.7**
LSA						IAmb	IAmb	03 49 24.1
	comp=Z,5.7nm,0.4s							
YAK	**Yakutsk**	**51.21**	**353**	LR		LR	04 09 13.9	
	comp=Z,200nm,20.0s,baz=92,slow=34							
SEY	**Seymchan**	**51.89**	**6**	LR		LR	04 10 26.3	
	comp=Z,142nm,20.1s,baz=188,slow=35							
AFI	**Afiamalu**	**52.41**	**118**	LR		LR	04 09 20.0	
	comp=Z,181nm,18.8s,baz=298,slow=33							
WMQ	**Urumqi**	**56.52**	**315**	*e*P		**P**	**03 49 57.3**	**+3.0**
WMQ				LR		LR		
	comp=Z,240nm,18.1s							
WMQ				LR		LR		
	comp=Z,160nm,22.3s							
BILL	**Bilibino**	**58.70**	**10**	P		**P**	**03 50 09.0**	**-0.2**
URZ	**Urewera**	**59.45**	**148**	LR		LR	04 15 45.5	
	comp=Z,75nm,18.4s,baz=31,slow=36							
TIXI	**Tiksi**	**60.63**	**355**	LR		LR	04 15 36.1	
	comp=Z,50nm,20.3s,baz=180,slow=35							
MK31	**Makanchi Array**	**61.01**	**317**	P		**P**	**03 50 25.4**	**-0.1**
MKAR	**Makanchi Array**	**61.01**	**317**	P		**P**	**03 50 25.4**	**0.0**
	comp=Z,1.7nm,0.8s,baz=98,slow=8.7,SNR=12							
MKAR						LR	LR	04 17 52.9
	comp=Z,228nm,19.3s,baz=99,slow=37							
	comp=Z,1.7nm,0.8s							
MKAR	**Makanchi Array**	**61.01**	**317**	P		**P**	**03 50 25.1**	**-0.3**
RPZ	**Rata Peaks**	**61.04**	**156**	LR		LR	04 16 20.6	
	comp=Z,86nm,18.4s,baz=335,slow=35							
MAKZ	**Makanchi**	**61.22**	**317**	P		**P**	**03 50 26.8**	**0.0**
MAKZ						IAmb	IAmb	03 50 41.2
	comp=Z,12nm,1.5s							
ZAA0	**Zalesovo Array**	**61.66**	**326**	P		**P**	**03 50 29.4**	**-0.2**
ZALV	**Zalesovo Beam**	**61.66**	**326**	P		**P**	**03 50 28.6**	**-1.0**
	comp=Z,1.1nm,0.4s,baz=114,slow=8.1,SNR=7.0							
ZALV						LR	LR	04 18 47.4
	comp=Z,131nm,18.0s,baz=106,slow=38							
	comp=Z,1.1nm,0.4s							
ZALV	**Zalesovo Beam**	**61.66**	**326**	P		**P**	**03 50 29.4**	**-0.2**
PRZ	**Przheval'sk**	**62.82**	**312**	P		**P**	**03 50 37.8**	**0.0**
KDJ	**Kajisay**	**63.66**	**311**	P		**P**	**03 50 43.7**	**+0.3**
KURK	**Kurchatov**	**64.33**	**321**	P		**P**	**03 50 47.3**	**-0.1**
BOOM	**Boomskoye usch**	**64.62**	**312**	P		**P**	**03 50 49.4**	**-0.3**
P16K	**Nushagak River**	**65.02**	**30**	P		**P**	**03 50 52.4**	**+0.7**
	baz=250							
O16K	**Kokwok River B**	**65.17**	**29**	P		**P**	**03 50 53.0**	**+0.3**
	baz=249							
R17K	**Ugashik Creek**	**65.36**	**31**	P		**P**	**03 50 52.9**	**-1.1**
	baz=252							
AAK	**Ala-Archa**	**65.69**	**312**	LR		LR	04 22 16.5	
	comp=Z,124nm,18.3s,baz=85,slow=38							
O17K	**Koliganek Bris**	**65.71**	**29**	P		**P**	**03 50 56.5**	**+0.4**
	baz=250							
Q18K	**Katmai Hardscr**	**66.36**	**31**	P		**P**	**03 50 59.4**	**-1.1**
	baz=252							
O18K	**Koktuh Hills**	**66.64**	**29**	P		**P**	**03 51 01.9**	**-0.3**
O18K	**Koktuh Hills**	**66.64**	**29**	P		**P**	**03 51 02.4**	**+0.2**
	baz=252							
OHAK	**Old Harbor**	**66.84**	**32**	P		**P**	**03 51 03.1**	**-0.3**
	baz=255							
Q19K	**Cape Douglas,**	**67.13**	**31**	P		**P**	**03 51 03.6**	**-1.7**
	baz=254							
N19K	**Bonanza Creek**	**67.28**	**28**	P		**P**	**03 51 06.0**	**-0.3**
N19K	**Bonanza Creek**	**67.28**	**28**	P		**P**	**03 51 06.5**	**+0.2**
	baz=252							
TTA	**Tatalina**	**67.28**	**26**	P		**P**	**03 51 05.7**	**-0.6**
	baz=250							
L19K	**White Mountain**	**67.54**	**27**	P		**P**	**03 51 07.6**	**-0.2**
L19K						IAmb	IAmb	03 51 10.8
	comp=Z,6.7nm,0.8s							
L19K	**White Mountain**	**67.54**	**27**	P		**P**	**03 51 08.2**	**+0.3**
	baz=251							
M19K	**Big River Lodg**	**67.66**	**27**	P		**P**	**03 51 08.7**	**+0.1**
	baz=252							
Q20K	**Shuyak Island**	**67.67**	**31**	P		**P**	**03 51 07.4**	**-1.3**
	baz=255							
L20K	**Farewell, AK**	**68.06**	**27**	P		**P**	**03 51 09.6**	**-1.6**
	baz=252							
M20K	**Styx River**	**68.22**	**28**	P		**P**	**03 51 13.0**	**+0.8**
	baz=253							
K20K	**Telida**	**68.26**	**26**	P		**P**	**03 51 12.4**	**+0.1**
K20K						IAmb	IAmb	03 51 15.3
	comp=Z,7.7nm,0.9s							
K20K	**Telida**	**68.26**	**26**	P		**P**	**03 51 12.9**	**+0.6**
	baz=252							
J20K	**Nowinta River**	**68.49**	**25**	P		**P**	**03 51 13.4**	**-0.4**
J20K	**Nowinta River**	**68.49**	**25**	P		**P**	**03 51 14.4**	**+0.7**
	baz=251,SNR=10							
KKAR	**Karatay Array**	**68.65**	**312**	P		**P**	**03 51 13.8**	**-1.4**
PPLA	**Purkeypile**	**68.93**	**27**	P		**P**	**03 51 16.6**	**-0.1**
	baz=253							
CAST	**Castle Rocks**	**69.13**	**26**	P		**P**	**03 51 16.8**	**-1.0**
CAST						IAmb	IAmb	03 51 18.4
	comp=Z,7.9nm,0.8s							
CAST	**Castle Rocks**	**69.13**	**26**	P		**P**	**03 51 17.8**	**+0.1**
	baz=253,SNR=6.9							
CHUM	**Lake Minchumin**	**69.16**	**26**	P		**P**	**03 51 18.5**	**+0.6**
	baz=253							
KBL	**Kabul**	**69.50**	**303**	P		**P**	**03 51 21.5**	**+0.7**
KBL						IAmb	IAmb	03 51 50.0
	comp=Z,3.6nm,0.6s							
H21K	**Melozitna Rive**	**69.50**	**24**	IAmb		IAmb	03 51 22.6	
	comp=Z,7.2nm,0.9s							
H21K	**Melozitna Rive**	**69.50**	**24**	P		**P**	**03 51 20.3**	**+0.2**
	baz=252,SNR=7.8							
I21K	**Tanana**	**69.68**	**24**	IAmb		IAmb	03 51 22.3	
	comp=Z,10nm,1.1s							
I21K	**Tanana**	**69.68**	**24**	P		**P**	**03 51 21.5**	**+0.4**
	baz=253,SNR=6.0							
BVAR	**Borovoye Array**	**69.78**	**322**	LR		LR	04 23 19.4	
	comp=Z,188nm,19.4s,baz=334,slow=37							
BPAW	**Bear Paw Mtn.**	**69.79**	**26**	IAmb		IAmb	03 51 22.5	
	comp=Z,9.5nm,1.0s							
BPAW	**Bear Paw Mtn.**	**69.79**	**26**	P		**P**	**03 51 21.7**	**-0.1**
	baz=254,SNR=7.0							
TRF	**Thorofare Moun**	**69.91**	**26**	P		**P**	**03 51 22.4**	**-0.4**
TRF						IAmb	IAmb	03 51 29.7
	comp=Z,6.5nm,0.8s							
TRF	**Thorofare Moun**	**69.91**	**26**	P		**P**	**03 51 22.0**	**-0.8**
	baz=255							
H22K	**Ishtalitna Cre**	**70.13**	**24**	P		**P**	**03 51 24.4**	**+0.4**
	baz=253							
MLY	**Manley**	**70.14**	**25**	IAmb		IAmb	03 51 24.9	
	comp=Z,8.7nm,1.0s							
MLY	**Manley**	**70.14**	**25**	P		**P**	**03 51 24.1**	**+0.1**
	baz=254,SNR=10							
SML	**Sawmill**	**70.40**	**28**	P		**P**	**03 51 24.9**	**-0.8**

MDM	**Murphy Dome**	**71.16**	**25**	IAmb	IAmb	03 51 31.5	
	comp=Z,4.4nm,0.8s						
CCB	**Clear Creek Bu**	**71.26**	**25**	IAmb	IAmb	03 51 32.0	
	comp=Z,14nm,1.4s						
D23K	**Nanushuk River**	**71.29**	**21**	P	**P**	**03 51 31.4**	**+0.5**
	baz=253						
KLU	**Klutina**	**71.47**	**29**	P	**P**	**03 51 32.2**	**0.0**
	baz=260						
H24K	**Noodor Dome**	**71.51**	**24**	IAmb	IAmb	03 51 33.4	
	comp=Z,9.2nm,1.2s						
H24K	**Noodor Dome**	**71.51**	**24**	P	**P**	**03 51 32.5**	**+0.2**
	baz=256,SNR=7.5						
HDA	**Harding Lake**	**71.57**	**26**	IAmb	IAmb	03 51 33.6	
	comp=Z,8.7nm,0.8s						
HDA	**Harding Lake**	**71.57**	**26**	P	**P**	**03 51 31.8**	**-0.9**
	baz=258,SNR=8.6						
C23K	**Itkillik River**	**71.58**	**20**	P	**P**	**03 51 33.0**	**+0.5**
	baz=253						
TOLK	**Toolik Lake Re**	**71.59**	**21**	P	**P**	**03 51 33.4**	**+0.7**
	baz=254						
IL31		**71.68**	**25**	IAmb	IAmb	03 51 33.9	
	comp=Z,6.3nm,0.8s						
ILAR	**Eielson Array**	**71.68**	**25**	P	**P**	**03 51 31.8**	**-1.5**
	comp=Z,4.5nm,0.8s,baz=255,slow=5.3,SNR=40						
ILAR				LR	LR	04 21 20.9	
	comp=Z,191nm,20.5s,baz=247,slow=34						
	comp=Z,4.5nm,0.8s						
ILAR	**Eielson Array**	**71.68**	**25**	P	**P**	**03 51 31.9**	**-1.4**
PAX	**Paxson**	**71.94**	**27**	P	**P**	**03 51 34.2**	**-0.8**
PAX				IAmb	IAmb	03 51 37.0	
	comp=Z,5.8nm,0.8s						
PAX	**Paxson**	**71.94**	**27**	P	**P**	**03 51 34.5**	**-0.5**
	baz=260						
K24K	**Donnelly Dome**	**71.96**	**26**	P	**P**	**03 51 34.3**	**-0.7**
	baz=259						
HARP	**HAARP**	**71.98**	**28**	P	**P**	**03 51 35.6**	**+0.4**
	baz=260						
D24K	**Happy Valley**	**71.99**	**21**	P	**P**	**03 51 35.9**	**+0.9**
	baz=254						
BMRM	**Bremner River**	**72.01**	**29**	P	**P**	**03 51 35.3**	**-0.1**
	baz=261						
J25K	**Salcha River,**	**72.28**	**26**	P	**P**	**03 51 35.6**	**-1.4**
	baz=259						
RIDG	**Independent Ri**	**72.35**	**27**	P	**P**	**03 51 37.0**	**-0.4**
	baz=260,SNR=5.9						
DOT	**Dot Lake**	**72.68**	**27**	IAmb	IAmb	03 51 39.7	
	comp=Z,8.9nm,0.9s						
SCRK	**Sand Creek**	**72.77**	**26**	IAmb	IAmb	03 51 44.4	
	comp=Z,7.2nm,0.9s						
SCRK	**Sand Creek**	**72.77**	**26**	P	**P**	**03 51 39.5**	**-0.5**
	baz=261,SNR=8.3						
L26K	**Log Cabin Wild**	**72.90**	**27**	IAmb	IAmb	03 51 43.0	
	comp=Z,5.9nm,0.8s						
L26K	**Log Cabin Wild**	**72.90**	**27**	P	**P**	**03 51 40.9**	**+0.2**
	baz=262,SNR=6.3						
M26K	**Nabesna, AK**	**72.98**	**28**	P	**P**	**03 51 42.7**	**+1.6**
	baz=262						
J26L	**Joseph Creek**	**73.03**	**26**	IAmb	IAmb	03 51 46.3	
	comp=Z,5.2nm,0.8s						
J26L	**Joseph Creek**	**73.03**	**26**	P	**P**	**03 51 41.1**	**-0.4**
	baz=261,SNR=10						
BMAR	**Burnt Mountain**	**73.13**	**23**	P	**P**	**03 51 41.5**	**-0.5**
I26K	**Coal Creek Min**	**73.33**	**25**	P	**P**	**03 51 42.0**	**-1.1**
	baz=261						
M27K	**Edge Creek, AK**	**73.49**	**28**	IAmb	IAmb	03 51 46.7	
	comp=Z,7.5nm,1.1s						
M27K	**Edge Creek, AK**	**73.49**	**28**	P	**P**	**03 51 44.5**	**+0.3**
	baz=263						
PPT	**Papeete**	**73.56**	**112**	LR	LR	04 20 06.0	
	comp=Z,135nm,18.9s,baz=315,slow=32						
CTG	**Chitna Glacier**	**73.59**	**30**	P	**P**	**03 51 44.5**	**-0.4**
	baz=264						
CTGM	**Chitina Glacie**	**73.59**	**30**	IAmb	IAmb	03 51 46.2	
	comp=Z,12nm,1.0s						
L27K	**Beaver Creek,**	**73.59**	**27**	P	**P**	**03 51 44.7**	**-0.1**
	baz=263						
K27K	**Chicken**	**73.61**	**26**	P	**P**	**03 51 45.6**	**+0.8**
	baz=262						
BVCY	**Beaver Creek**	**73.96**	**28**	P	**P**	**03 51 47.5**	**+0.6**
	baz=264						
YUK3	**Moose Creek**	**74.09**	**29**	P	**P**	**03 51 48.4**	**+0.5**
	baz=265						
YUK8	**Steele Glacier**	**74.38**	**29**	P	**P**	**03 51 50.6**	**+1.0**
	baz=265						
DAWY	**Dawson**	**74.79**	**27**	IAmb	IAmb	03 51 53.0	
	comp=Z,9.1nm,1.0s						
DAWY	**Dawson**	**74.79**	**27**	P	**P**	**03 51 52.3**	**+0.6**
	baz=265,SNR=8.9						
YUK4	**Talbot Arm**	**74.92**	**29**	P	**P**	**03 51 54.0**	**+1.3**
	baz=266						
YUK6	**Outpost Mounta**	**75.03**	**30**	P	**P**	**03 51 54.5**	**+1.1**
	baz=267						
HRA	**Herat**	**75.11**	**303**	P	**P**	**03 51 54.8**	**+0.4**
I29M	**Ogilvie Camp,**	**75.36**	**25**	P	**P**	**03 51 55.1**	**+0.2**
	baz=266						
HYT	**Haines Junctio**	**75.45**	**30**	IAmb	IAmb	03 52 01.5	
	comp=Z,8.0nm,0.8s						
HYT	**Haines Junctio**	**75.45**	**30**	P	**P**	**03 51 56.7**	**+1.0**
	baz=267						
M30M	**Minto, Yukon**	**75.86**	**28**	P	**P**	**03 51 58.5**	**+0.6**
	baz=268						
EPYK	**Eagle Plains**	**76.08**	**24**	P	**P**	**03 51 59.1**	**+0.1**
	baz=267						
O30N	**Mendenhall**	**76.14**	**30**	P	**P**	**03 51 59.0**	**-0.5**
	baz=269,SNR=7.1						
ABKAR	**Akbulak array**	**76.14**	**318**	P	**P**	**03 52 00.1**	**+0.5**
ARU	**Arti**	**76.83**	**325**	LR	LR	04 28 13.0	
	comp=Z,187nm,18.9s,baz=74,slow=37						
ARU	**Arti**	**76.83**	**325**	P	**P**	**03 52 03.9**	**+0.5**
M31M	**Drury Creek, Y**	**76.97**	**29**	P	**P**	**03 52 04.1**	**0.0**
	baz=270						
AKTO	**Aktyubinsk**	**77.34**	**319**	LR	LR	04 28 20.2	
	comp=Z,75nm,18.2s,baz=81,slow=37						
INK	**Inuvik**	**77.38**	**22**	LR	LR	04 28 28.4	
	comp=Z,33nm,18.4s,baz=180,slow=37						
INK	**Inuvik**	**77.38**	**22**	IAmb	IAmb	03 52 06.6	
	comp=Z,7.0nm,1.1s						
INK	**Inuvik**	**77.38**	**22**	P	**P**	**03 52 05.8**	**-0.4**
	baz=269						
N32M	**Quiet Lake**	**77.61**	**30**	P	**P**	**03 52 08.5**	**+0.8**
	baz=271						
GEYT	**Alibeck**	**78.16**	**307**	LR	LR	04 31 11.0	
	comp=Z,101nm,18.4s,baz=92,slow=39						
GYA0B	**ALIBECK ARRAY**	**78.16**	**307**	P	**P**	**03 52 12.0**	**+0.7**
GYA0B				IAmb	IAmb	03 52 19.2	
	comp=Z,11nm,1.2s						
WRAK	**Wrangell Islan**	**78.16**	**34**	P	**P**	**03 52 11.4**	**+0.6**
	baz=273						
DLBC	**Dease Lake**	**79.28**	**32**	IAmb	IAmb	03 52 20.4	
	comp=Z,9.8nm,1.1s						
DLBC	**Dease Lake**	**79.28**	**32**	P	**P**	**03 52 17.5**	**+0.4**
	baz=274						
BBB	**Bella Bella**	**81.00**	**39**	LR	LR	04 23 43.6	
	comp=Z,143nm,19.8s,baz=290,slow=32						
BELG	**Belogornoye**	**83.58**	**322**	LR	LR	04 32 08.4	
	comp=Z,172nm,19.0s,baz=137,slow=37						
EUNU	**Eureka**	**85.30**	**7**	IAmb	IAmb	03 52 50.8	
	comp=Z,5.1nm,1.0s						
SPITS	**Spitsbergen Ar**	**85.61**	**350**	LR	LR	04 31 12.0	
	comp=Z,100nm,20.4s,baz=352,slow=36						
YKA	**Yellowknife Ar**	**86.02**	**27**	P	**P**	**03 52 51.8**	**-0.1**
	comp=Z,2.4nm,0.8s,baz=290,slow=4.9,SNR=19						
YKA				LR	LR	04 30 44.2	
	comp=Z,155nm,20.4s,baz=268,slow=35						
	comp=Z,2.4nm,0.8s						
YBH	**Yreka Blue Hor**	**86.41**	**48**	LR	LR	04 25 17.7	
	comp=Z,39nm,21.6s,baz=282,slow=31						
LTY	**Liberty**	**86.63**	**43**	IAmb	IAmb	03 53 21.2	
	comp=Z,6.4nm,0.9s						
J05D	**Fort Rock, OR**	**87.14**	**47**	P	**P**	**03 52 59.1**	**+1.1**
	baz=283						
PINE	**Pine Mountain**	**87.23**	**46**	P	**P**	**03 52 58.6**	**+0.1**
B08A	**Colville Reser**	**87.24**	**41**	P	**P**	**03 52 57.4**	**-0.9**
GNI	**Garni**	**88.07**	**310**	LR	LR	04 37 35.5	
	comp=Z,61nm,18.1s,baz=58,slow=39						
ARCES	**ARCESS Array B**	**88.15**	**342**	P	**P**	**03 53 01.6**	**-0.5**
	comp=Z,0.6nm,0.5s,baz=60,slow=7.4,SNR=9.0						
ARCES				LR	LR	04 37 25.3	
	comp=Z,98nm,18.2s,baz=68,slow=39						
	comp=Z,0.6nm,0.5s						
ARCES	**ARCESS Array B**	**88.15**	**342**	P	**P**	**03 53 03.4**	**+1.2**
KBZ	**Khabaz**	**88.55**	**314**	LR	LR	04 36 13.4	
	comp=Z,81nm,19.6s,baz=46,slow=38						
BEKR	**Beckworth**	**88.57**	**50**	IAmb	IAmb	03 53 21.6	
	comp=Z,6.4nm,1.1s						
NEW	**Newport**	**88.69**	**41**	P	**P**	**03 53 05.2**	**+0.1**
	baz=286						
J08A	**Circle Bar Ran**	**89.08**	**46**	IAmb	IAmb	03 53 24.6	
	comp=Z,4.8nm,1.0s						
OBN	**Obninsk**	**89.24**	**326**	LR	LR	04 35 56.6	
	comp=Z,54nm,19.2s,baz=124,slow=37						
BMO	**Blue Mountains**	**89.50**	**44**	IAmb	IAmb	03 53 26.3	
	comp=Z,5.2nm,1.1s						
VNDA	**Vanda**	**89.60**	**176**	LR	LR	04 33 10.0	
	comp=Z,102nm,18.8s,baz=280,slow=35						
VNDA	**Vanda**	**89.60**	**176**	P	**P**	**03 53 10.6**	**+2.0**
NVAR	**Mina Array Bea**	**90.47**	**51**	P	**P**	**03 53 15.2**	**+1.2**
	comp=Z,1.9nm,0.8s,baz=268,slow=5.4,SNR=10						
	comp=Z,1.9nm,0.8s						
NVAR	**Mina Array Bea**	**90.47**	**51**	P	**P**	**03 53 14.2**	**+0.2**
NV11	**Mina Array Sit**	**90.58**	**51**	P	**P**	**03 53 13.9**	**-0.5**
NV11				IAmb	IAmb	03 53 41.8	
	comp=Z,6.2nm,1.4s						
MFID	**Camas Ranch**	**90.92**	**45**	IAmb	IAmb	03 53 18.3	
	comp=Z,8.7nm,1.4s						
MPMC	**Manual Prospec**	**91.72**	**53**	P	**P**	**03 53 20.9**	**+1.1**
	baz=286						
FINES	**FINESS Array B**	**91.80**	**334**	P	**P**	**03 53 17.2**	**-2.0**
	comp=Z,0.8nm,0.6s,baz=74,slow=4.5,SNR=9.1						
FINES				LR	LR	04 38 11.2	
	comp=Z,136nm,18.6s,baz=12,slow=38						
	comp=Z,0.8nm,0.6s						
HLID	**Hailey**	**91.86**	**45**	P	**P**	**03 53 19.6**	**-0.7**
HLID	**Hailey**	**91.86**	**45**	P	**P**	**03 53 21.2**	**+1.0**
	baz=288						
FURC	**Furnace Creek,**	**92.10**	**52**	P	**P**	**03 53 22.2**	**+1.0**
	baz=286						
RLMT	**Red Lodge**	**94.82**	**42**	P	**P**	**03 53 32.4**	**-1.5**
RLMT				IAmb	IAmb	03 53 36.2	
	comp=Z,5.4nm,1.3s						
AKASG	**Malin Array Be**	**95.01**	**324**	LR	LR	04 38 51.2	
	comp=Z,207nm,19.5s,baz=86,slow=37						
JMIC	**Jan Mayen**	**95.28**	**351**	LR	LR	04 37 48.8	
	comp=Z,27nm,18.4s,baz=259,slow=36						
BRTR	**Keskin Array B**	**96.36**	**313**	LR	LR	04 42 48.6	
	comp=Z,54nm,18.7s,baz=86,slow=39						
HFS	**Hagfors**	**97.58**	**337**	LR	LR	04 41 34.4	
	comp=Z,143nm,19.1s,baz=34,slow=38						
NOA	**NORSAR Array B**	**97.92**	**338**	LR	LR	04 41 05.2	
	comp=Z,53nm,21.3s,baz=60,slow=37						
MLR	**Muntele Rosu**	**99.26**	**320**	LR	LR	04 42 05.3	
	comp=Z,90nm,18.7s,baz=76,slow=37						
LPAZ	**La Paz**	**150.48**	**103**	PKPbc	**PKiKP**	**04 00 06.2**	**+0.6**
	comp=Z,1.6nm,0.7s,baz=41,slow=1.3,SNR=8.0						
LPAZ	**La Paz**	**150.48**	**103**		**PKiKP**	**04 00 07.3**	**+1.7**

*MDD **25** 03:49:48.9±0.8,34°.93N×8°.64W,h38km±28km,Mb3.9/13, M_mb3.2/13,Error ellipse: s-maj=11.0km s-min=4.1km az=43.0*
*IGIL **25** 03:49:48.9,34°.94N×8°.62W,h26km,ML2.6*
*CNRM **25** 03:49:49.8,34°.53N×8°.47W,h73km,ml2.8*
*INMG **25** 03:49:49.8±1.1,34°.94N×8°.62W,h31km,ML2.4,Error ellipse: s-maj=4.4km s-min=2.9km az=57.0*

ISC 25 03:49:46.1±1.3,34°.89N±0°.03×8°.63W±0°.05,h35km,n54, σ2s09/92,12C,West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ZHG	**ZHG**	**2.19**	**131**	P		**Pn**		**03 50 20.7**	**+0.7**
ZHG				S		**Sn**		**03 50 43.2**	**-2.8**
PFVI	**Vila Bisbo**	**2.25**	**356**	*e*Pn		**Pn**		**03 50 22.0**	**+1.2**
PFVI				*e*Sn		**Sn**		**03 50 46.6**	**-0.7**
MORF	**Marmelete**	**2.41**	**360**	*e*P		**Pn**		**03 50 24.5**	**+1.3**
MORF				*e*S		**Sn**		**03 50 50.7**	**-0.8**
MORF				IAML				03 50 52.4	
	comp=N,37nm,0.2s								
MORF	**Marmelete**	**2.41**	**360**	*e*Pn		**Pn**		**03 50 24.7**	**+1.5**
MORF				*e*Sn		**Sn**		**03 50 50.9**	**-0.6**
MORF				A		A		03 50 52.1	
	comp=N,23nm,0.1s								
PBDV	**Barranco-do-Ve**	**2.42**	**13**	*e*Pn		**Pn**		**03 50 25.1**	**+1.9**
PBDV				*e*Sn		**Sn**		**03 50 51.0**	**-0.6**
PBDV				A		A		03 50 57.8	
	comp=N,6.6nm,0.2s								
SRHM	**Skhour des Reh**	**2.49**	**166**	P		**Pn**		**03 50 25.6**	**+1.4**
SRHM				S		**Sn**		**03 50 53.5**	**+0.2**
PVAQ	**Vaqueiros**	**2.62**	**16**	*e*Pn		**Pn**		**03 50 27.7**	**+1.8**
PVAQ				*e*Sn		**Sn**		**03 50 56.0**	**-0.5**
PVAQ				A		A		03 51 00.1	
	comp=N,11nm,0.1s								
PTEO	**Sao Teotonio**	**2.65**	**358**	*e*Pn		**Pn**		**03 50 27.7**	**+1.3**
PTEO				*e*Sn		**Sn**		**03 50 56.5**	**-0.8**
PTEO				A		A		03 51 00.9	
	comp=N,7.2nm,0.3s								
CHEFC	**Chefchaouen**	**2.71**	**84**	P		**Pn**		**03 50 31.3**	**+4.0**
CHEFC				S		**Sn**		**03 51 00.4**	**+1.5**
SMIR	**Smir Dam**	**2.77**	**72**	P		**Pn**		**03 50 31.0**	**+2.9**
PCVE	**Castro Verde**	**2.78**	**10**	*e*Pn		**Pn**		**03 50 30.3**	**+2.1**
PCVE				*e*Sn		**Sn**		**03 51 00.1**	**-0.4**
PCVE				A		A		03 51 03.6	
	comp=N,8.2nm,0.3s								
EGRO	**El Granado**	**2.80**	**19**	P		**Pn**		**03 50 30.4**	**+2.0**
EGRO				⇑*i*Vmb_V				03 50 37.8	
	comp=N,199nm,SNR=1.6								
EGRO				S		**Sn**		**03 50 59.4**	**-1.5**
MESJ	**Messejana**	**2.96**	**6**	*e*P		**Pn**		**03 50 32.2**	**+1.6**
MESJ				*e*S		**Sn**		**03 51 03.8**	**-1.2**
MESJ				IAML				03 51 06.4	
	comp=N,17nm,0.3s								
MESJ	**Messejana**	**2.96**	**6**	*e*Pn		**Pn**		**03 50 32.3**	**+1.6**
MESJ				*e*Sn		**Sn**		**03 51 04.3**	**-0.7**
MESJ				A		A		03 51 05.8	
	comp=N,6.8nm,0.4s								
ESPR	**Espera**	**3.00**	**48**	P		**Pn**		**03 50 32.9**	**+1.8**
ESPR				⇑*i*Vmb_V				03 50 33.9	
	comp=N,245nm,SNR=3.8								
ESPR				S		**Sn**		**03 51 05.5**	**-0.3**
EJIF	**Jimena Fronter**	**3.01**	**58**	P		**Pn**		**03 50 34.8**	**+3.5**
EJIF				S		**Sn**		**03 51 01.8**	**-4.4**
PBEJ	**Beja**	**3.19**	**11**	*e*Pn		**Pn**		**03 50 36.2**	**+2.4**
PBEJ				*e*Sn		**Sn**		**03 51 09.9**	**-0.8**
PBEJ				A		A		03 51 11.6	
	comp=N,6.3nm,0.3s								
PNCL	**Nicolau / Gran**	**3.22**	**1**	*e*Pn		**Pn**		**03 50 35.6**	**+1.4**
PNCL				*e*Sn		**Sn**		**03 51 09.9**	**-1.4**
PNCL				A		A		03 51 12.3	
	comp=N,6.8nm,0.2s								
EMIN	**Mina Concepcio**	**3.28**	**28**	P		**Pn**		**03 50 37.2**	**+2.2**
EMIN				⇑*i*Vmb_V				03 50 40.6	
	comp=N,81nm,SNR=1.3								
EMIN				S		**Sn**		**03 51 12.4**	**-0.5**
EAH	**EAH**	**3.33**	**194**	P		**Pn**		**03 50 35.9**	**+0.2**
EAH				S		**Sn**		**03 51 10.5**	**-3.6**
CZD	**Col de Zad**	**3.51**	**121**	P		**Pn**		**03 50 40.4**	**+1.9**
CZD				S		**Sn**		**03 51 16.3**	**-2.7**
PBAR	**Barrancos**	**3.52**	**21**	*e*Pn		Pn		03 50 23.6	-15
PBAR				*e*Sn		Sn		03 51 01.3	-17
PBAR				A		A		03 51 03.2	
	comp=N,4.1nm,0.3s								
EMIJ	**Mijas**	**3.56**	**61**	P		**Pn**		**03 50 40.7**	**+1.8**
EMIJ				⇑*i*Vmb_V				03 50 42.0	
	comp=N,56nm,SNR=1.8								
EMIJ				S		**Sn**		**03 51 18.3**	**-1.4**
EVO	**Evora**	**3.67**	**8**	*e*Sn		**Sn**		**03 51 20.8**	**-1.7**
EVO				A		A		03 51 21.4	
	comp=N,6.5nm,0.4s								
OUK	**Oukaimeden**	**3.73**	**170**	P		**Pn**		**03 50 43.0**	**+1.5**
OUK				S		Sn		03 51 19.9	-4.5
MD31	**MD31**	**3.80**	**121**	P		**Pn**		**03 50 44.5**	**+2.2**
MD31				S		**Sn**		**03 51 23.7**	**-2.1**
PALE	**Palemas**	**3.86**	**84**	P		**Pn**		**03 50 45.4**	**+2.3**
PALE				S		**Sn**		**03 51 28.3**	**+1.0**
PMST	**Lisbon--Monsan**	**3.87**	**354**	*e*Sn		**Sn**		**03 51 25.7**	**-1.6**
PACT	**Alcochete**	**3.88**	**358**	*e*Sn		**Sn**		**03 51 27.5**	**0.0**
MDT	**Midelt**	**3.94**	**121**	P		**Pn**		**03 50 46.1**	**+1.9**
MDT				S		**Sn**		**03 51 26.7**	**-2.5**
PESTR	**Estremoz**	**4.06**	**12**	*e*Sn		**Sn**		**03 51 30.9**	**-1.2**
EBAD	**Badajoz**	**4.07**	**18**	P		**Pn**		**03 50 46.9**	**+0.9**
EBAD				⇑*i*Vmb_V				03 50 48.3	
	comp=N,162nm,SNR=2.7								
EBAD				S		**Sn**		**03 51 30.1**	**-2.2**
PMAFR	**Mafra**	**4.09**	**353**	*e*Pn		**Pn**		**03 50 48.2**	**+2.0**
PMAFR				*e*Sn		**Sn**		**03 51 31.3**	**-1.6**
PMAFR				A		A		03 51 33.8	
	comp=N,14nm,0.6s								
ECAB	**El Cabril**	**4.10**	**38**	P		**Pn**		**03 50 47.1**	**+0.7**
ECAB				⇑*i*Vmb_V				03 50 52.8	
	comp=N,114nm,SNR=2.1								
ECAB				S		**Sn**		**03 51 31.4**	**-1.8**
PMTG	**Montargil**	**4.19**	**4**	*e*Pn		**Pn**		**03 50 49.0**	**+1.5**
PMTG				*e*Sn		**Sn**		**03 51 32.7**	**-2.5**
PMTG				A		A		03 51 35.3	
	comp=N,4.0nm,0.1s								
OUZM	**OUZ**	**4.27**	**158**	P		**Pn**		**03 50 49.9**	**+1.2**
OUZM				S		**Sn**		**03 51 34.0**	**-3.4**
EGOR	**Sierra Gorda,**	**4.29**	**58**	P		**Pn**		**03 50 52.4**	**+3.4**
EGOR				S		**Sn**		**03 51 37.7**	**-0.1**
TTIG	**Tnine Tigouga,**	**4.33**	**178**	P		Pn		03 50 46.5	-3.1
TTIG				S		Sn		03 51 30.3	-8.7
ELGU	**Los Guajares,**	**4.52**	**63**	P		**Pn**		**03 50 53.4**	**+1.2**
ELGU				⇑*i*Vmb_V				03 50 55.8	
	comp=N,53nm,SNR=1.8								
ELGU				S		**Sn**		**03 51 38.2**	**-5.3**
EADA	**Adamuz**	**4.62**	**44**	P		**Pn**		**03 50 54.6**	**+1.1**
EADA				⇑*i*Vmb_V				03 50 55.6	
	comp=N,121nm,SNR=3.2								
EADA				S		**Sn**		**03 51 44.0**	**-2.0**
GOG	**Mont Gurugu**	**4.64**	**84**	P		**Pn**		**03 50 53.4**	**-0.3**
GOG				S		**Sn**		**03 51 46.1**	**-0.3**
PMRV	**Marv??o**	**4.64**	**12**	*e*Pn		**Pn**		**03 50 55.4**	**+1.7**
PMRV				*e*Sn		**Sn**		**03 51 44.8**	**-1.6**
PMRV				A		A		03 51 46.4	
	comp=N,2.4nm,0.7s								
EQUE	**Quentar**	**4.80**	**60**	P		**Pn**		**03 50 59.3**	**+3.2**
EQUE				⇑*i*Vmb_V				03 51 02.5	
	comp=N,48nm,SNR=2.0								
EQUE				S		**Sn**		**03 51 52.2**	**+1.7**
PCBR	**Castelo Branco**	**5.03**	**10**	*e*Sn		**Sn**		**03 51 53.7**	**-2.2**
PCBR				A		A		03 51 56.7	
	comp=N,3.1nm,0.6s								
EQES	**Quesada**	**5.35**	**55**	P		**Pn**		**03 51 04.7**	**+1.1**
EQES				⇑*i*Vmb_V				03 51 07.1	
	comp=N,67nm,SNR=1.4								
EQES				S		**Sn**		**03 52 01.7**	**-2.3**
EPLA	**Plasencia**	**5.55**	**21**	P		**Pn**		**03 51 08.7**	**+2.4**
EPLA				⇑*i*Vmb_V				03 51 14.8	
	comp=N,78nm,SNR=1.1								
EPLA				S		**Sn**		**03 52 07.7**	**-1.1**
MTE	**Manteigas**	**5.57**	**9**	*e*Pn		**Pn**		**03 51 08.0**	**+1.4**
MTE				*e*Sn		**Sn**		**03 52 07.3**	**-2.1**
MTE				A		A		03 52 08.6	
	comp=N,2.8nm,0.5s								
PVIS	**Viseu**	**5.85**	**6**	*e*Sn		**Sn**		**03 52 12.9**	**-3.3**
MVO	**Moncorvo**	**6.39**	**11**	*e*Sn		**Sn**		**03 52 26.3**	**-3.3**
MVO				A		A		03 52 29.1	
	comp=N,3.0nm,0.8s								
POLO	**Lamas de Olo**	**6.51**	**6**	*e*Sn		**Sn**		**03 52 30.4**	**-2.1**
ETOB	**Tobarra**	**6.81**	**55**	P		**Pn**		**03 51 24.8**	**+1.2**
ETOB				S		**Sn**		**03 52 35.6**	**-4.4**
PCAB	**Cabril**	**6.83**	**4**	*e*Sn		**Sn**		**03 52 38.0**	**-2.3**
PGAV	**Gavieira, Arco**	**7.07**	**2**	*e*Sn		**Sn**		**03 52 44.2**	**-2.2**
ETOR	**Torete**	**7.88**	**39**	⇑*i*Vmb_V				03 51 38.3	
	comp=N,69nm,SNR=1.2								
ETOR				P		**Pn**		**03 51 39.3**	**+1.0**
ETOR				S		**Sn**		**03 53 01.8**	**-4.5**

*KRNET **25** 03:53:18.8±0.1,39°.35N×78°.60E,mb2.9*
*SOME **25** 03:53:23.9,39°.68N×77°.72E,h5km*
*NNC **25** 03:53:31.9±1.4,39°.96N×77°.71E,h0km,mb3.6,mpv3.3, Error ellipse: s-maj=10.0km s-min=9.3km az=55.0*

ISC 25 03:53:24.6±3.2,39°.7N±0°.1×77°.56E±0°.06,h2km±17km,n30, σ1s84/46,13C-5D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**2.02**	**5**	⇑*e*P		**Pn**		**03 54 00.6**	**+0.6**
TARG	baz=46			⇑*i*S		**Sg**		**03 54 30.8**	**+1.3**
KDJ	**Kajisay**	**2.43**	**353**	⇑*e*P		**Pn**		**03 54 07.6**	**+2.2**
KDJ	baz=39			⇑*i*S		**Sg**		**03 54 43.5**	**+0.9**
PRZ	**Przheval'sk**	**2.84**	**13**	⇑*i*P		**Pn**		**03 54 09.9**	**-1.1**
PRZ	baz=57			⇑*i*S		**Sb**		**03 54 47.9**	**-3.4**
BOOM	**Boomskoye usch**	**3.03**	**337**	⇓*e*P		**Pb**		**03 54 18.1**	**-1.2**
BOOM	baz=28			⇓*i*S		**Sg**		**03 55 01.7**	**-0.1**
ANVS	**Anan'yevo**	**3.06**	**2**	⇑*i*P		**Pn**		**03 54 15.1**	**+0.9**
ANVS	baz=49			⇑*i*S		**Sb**		**03 54 56.1**	**-1.7**
ARLS	**Aral**	**3.26**	**312**	⇑*e*P		**Pb**		**03 54 23.3**	**+0.1**
ARLS	baz=9.0			⇑*i*S		**Sg**		**03 55 09.9**	**+0.7**
TNSS	**Tian-Shan**	**3.35**	**352**	*e*P		**Pb**		**03 54 27.7**	**+2.8**
TNSS	3.0nm,0.3s			*e*S		**Sg**		**03 55 12.7**	**+0.6**
TNSS	**Tian-

KRBS					Lg	Lg	03 55 39.3			
	2.3nm,0.4s									
KUU	**Kurty**	**4.27**	**348**	*eP*	**Pb**		**03 54 43.8**	**+3.4**		
	2.3nm,0.4s									
KUU				*eS*	**Sg**		**03 55 40.6**	**-1.1**		
	6.6nm,0.5s									
KUU	**Kurty**	**4.27**	**348**	Pg	**Pg**		**03 54 45.1**	**-1.3**		
	2.3nm,0.4s									
KUU				Lg	Lg		03 55 40.6			
	6.6nm,0.5s									
ARXS	**Arharly**	**4.50**	**2**	*eP*	**Pb**		**03 54 47.4**	**+3.1**		
	4.5nm,0.4s									
ARXS				*eS*	**Sg**		**03 55 46.7**	**-2.3**		
	13nm,0.3s									
ARXS	**Arharly**	**4.50**	**2**	Pg	**Pg**		**03 54 48.6**	**-2.2**		
	4.5nm,0.4s									
ARXS				Lg	Lg		03 55 46.7			
	13nm,0.3s									

HEL 25 03:59:02.3±0.1, 67°64N×33°75E, h0km, ML1.7, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVZ	**Lovozero**	**0.43**	**52**	PG	Pg	03 59 09.8	-0.7
LVZ				SG	Sg	03 59 16.0	-0.1
VRF	**Varrio**	**1.58**	**276**	PG	Pn	03 59 30.6	-1.0
VRF				MSG		03 59 49.7	
	comp=Z,5.9nm,0.2s						
VRF				SG	Sn	03 59 50.8	-2.0
OLKF	**Oulanka, Finla**	**2.16**	**234**	PG	Pb	03 59 41.0	-1.3
OLKF				SG	Sb	04 00 09.8	+0.2
KU6	**Riekki**	**2.23**	**225**	PG	Pb	03 59 42.0	-1.3
KU6				MSG		04 00 08.1	
	comp=Z,3.5nm,0.2s						
KU6				SG	Sb	04 00 11.6	+0.1
MSF	**Maaselka**	**2.55**	**229**	PG	Pn	03 59 46.6	+1.7
SGF	**Sodankyl**	**2.78**	**269**	PG	Pb	03 59 51.1	-1.7
SGF				SG	Sb	04 00 27.0	-0.4
KEV	**Kevo**	**3.25**	**314**	PN	Pn	03 59 54.6	+0.2
	baz=132						
KEV				SN	Sn	04 00 33.5	-0.3
RMF	**Romuvaara**	**3.78**	**206**	PN	Pn	04 00 01.7	0.0
TOF	**Tornio**	**4.04**	**252**	PG	Pb	04 00 15.6	+1.5
KTK1	**Kautokeino**	**4.14**	**294**	PN	Pn	04 00 04.3	-2.3
KTK1				SG	Sb	04 01 09.1	+2.8
LANU	**Lannavaara**	**4.47**	**281**	SG	Sb	04 01 19.9	+3.9
KALU	**Kalix**	**4.49**	**251**	PG	Pb	04 00 23.5	+1.6
ERTU	**Ertsjaerv**	**4.65**	**262**	SN	Sn	04 01 07.1	-1.1

HEL 25 03:59:12.6±0.4, 67°85N×20°24E, h0km, ML1.5, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LANU	**Lannavaara**	**0.69**	**72**	PG	Pg	03 59 24.4	-1.3
LANU				SG	Sg	03 59 33.5	-1.1
KIF	**Kilpisjarvi**	**1.18**	**10**	*eP*	Pn	03 59 36.2	-0.1
KIF	**Kilpisjarvi**	**1.18**	**10**	PN	Pn	03 59 36.4	+0.1
KIF				MSG		03 59 49.4	
	comp=Z,2.3nm,0.2s						
PAJU	**Pajala**	**1.38**	**126**	PG	Pg	03 59 36.5	-2.5
	baz=304						
PAJU				SG	Sg	03 59 56.1	-0.9
HEF	**Hetta**	**1.40**	**65**	*eP*	Pn	03 59 36.9	-2.4
HEF	**Hetta**	**1.40**	**65**	PN	Pn	03 59 38.9	-0.5
HEF				MSG		03 59 54.6	
	comp=Z,2.8nm,0.2s						
HEF				SG	Sg	03 59 56.2	-1.2
ERTU	**Ertsjaerv**	**1.51**	**149**	PB	Pn	03 59 39.1	-1.8
ERTU				SG	Sg	04 00 00.1	-0.8
KLF	**Kolari**	**1.56**	**112**	PN	Pb	03 59 41.9	-0.4
KLF				SN	Sn	04 00 01.8	-0.6
KALU	**Kalix**	**2.35**	**147**	PN	Pn	03 59 52.1	-0.2
	baz=333						
TOF	**Tornio**	**2.40**	**136**	PB	Pn	03 59 53.6	+0.7
TOF				MSG		04 00 23.6	
	comp=Z,1.5nm,0.2s						
TOF				SG	Sb	04 00 25.7	-0.8
RNF	**Rovaniemi**	**2.57**	**116**	PN	Pn	03 59 53.7	-1.7
RNF				SB	Sb	04 00 30.9	-0.6
KEV	**Kevo**	**3.11**	**49**	SN	Sn	04 00 40.0	-0.7
KEV				MSG		04 00 44.1	
	comp=Z,4.7nm,0.2s						
OLKF	**Oulanka, Finla**	**3.90**	**109**	PN	Pn	04 00 11.7	-2.0
MSF	**Maaselka**	**3.98**	**115**	PG	Pb	04 00 22.0	-1.5

*IDC **25** 04:30:23.7±1.9, 30°32S×178°07W, h71km±17km, mb4.1/3, mbtmp4.4/3, MS3.4/1, Error ellipse: s-maj=30.0km s-min=23.4km az=106.0*
*NEIC **25** 04:30:24.1±2.5, 30°2S±0°1×178°1W±0°2, h68km±8km, mb4.5/9, Error ellipse: s-maj=20.9km s-min=13.5km az=110.0*

ISC 25 04:30:21.1±1.0, 30°43S±0°09×177°9W±0°2, h50km, n31, σt¹42/24, mb4.4/7, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.17**	**1**	P	**Pn**	**04 30 43.0**	**+1.8**
	632nm,0.5s,baz=94,slow=10,SNR=13						
RAO				S	**Sn**	**04 30 57.9**	**+1.8**
	2µm,0.2s,baz=139,slow=23,SNR=15						
RAO	**Raoul Island**	**1.17**	**1**	Pn	**Pn**	**04 30 41.9**	**+0.7**
OUZ	**Omahuta**	**8.58**	**234**	Pn	**Pn**	**04 32 26.1**	**+3.4**
ONTNC	**Ouen Toro**	**16.15**	**296**	Pn	**Pn**	**04 34 03.0**	**-1.7**
DZM	**Mont Dzumac**	**16.29**	**297**	LR	LR	04 39 02.6	
	comp=Z,124nm,18.7s,baz=32,slow=32						
CTAO	**Charters Tower**	**33.86**	**279**	P	**P**	**04 36 59.4**	**+0.3**
CTAO				IAmb	IAmb	04 37 21.0	
	comp=Z,17nm,1.4s						
STKA	**Stephens Creek**	**34.53**	**257**	P	**P**	**04 37 05.0**	**+0.2**
	comp=Z,6.3nm,0.7s,baz=101,slow=11,SNR=16						
	comp=E,6.3nm,0.7s						
STKA	**Stephens Creek**	**34.53**	**257**	P	**P**	**04 37 05.4**	**+0.6**
BBOO	**Buckleboo**	**39.02**	**254**	P	**P**	**04 37 41.9**	**-1.0**
WR0	**Warramunga Arr**	**43.97**	**272**	P	**P**	**04 38 21.5**	**-2.2**
WR0				IAmb	IAmb	04 38 40.9	
	comp=Z,11nm,1.4s						
WB2	**Warramunga Arr**	**44.14**	**272**	P	**P**	**04 38 23.1**	**-1.9**
WB2				IAmb	IAmb	04 38 48.0	
	comp=Z,10.0nm,1.3s						
WRA	**Warramunga Arr**	**44.15**	**272**	P	**P**	**04 38 23.8**	**-1.4**
	comp=Z,2.4nm,0.5s,baz=111,slow=8.1,SNR=54						
	comp=Z,2.4nm,0.5s						
WB0	**Warramunga Arr**	**44.18**	**272**	P	**P**	**04 38 24.7**	**-0.6**
WB0				IAmb	IAmb	04 38 37.7	
	comp=Z,15nm,1.4s						
FORT	**Forrest**	**46.09**	**255**	P	**P**	**04 38 39.9**	**-0.5**
QSPA	**South Pole Qui**	**59.68**	**180**	P	**P**	**04 40 21.4**	**+1.2**
	comp=Z,1.8nm,0.6s,baz=69,slow=0.7,SNR=18						
	comp=Z,1.8nm,0.6s						
QSPA	**South Pole Qui**	**59.68**	**180**	IAmb	IAmb	04 40 29.5	
	comp=Z,3.1nm,0.8s						
H03S2	**Juan Fernandez**	**80.40**	**124**	T	T	06 11 39.2	
	baz=238,SNR=19						
H03S1	**Juan Fernandez**	**80.42**	**124**	T	T	06 11 39.0	
	baz=238,SNR=17						
H03S3	**Juan Fernandez**	**80.42**	**124**	T	T	06 11 40.2	
	baz=238,SNR=16						
H03N3	**Juan Fernandez**	**80.60**	**123**	T	T	06 11 45.7	
	baz=241,slow=72,SNR=7.9						
H03N2	**Juan Fernandez**	**80.60**	**123**	T	T	06 11 45.5	
	baz=241,slow=72,SNR=7.3						
H03N1	**Juan Fernandez**	**80.61**	**123**	T	T	06 11 46.5	
	baz=241,slow=72,SNR=14						
FINES	**FINESS Array B**	**145.19**	**340**	PKPbc	**PKPab**	**04 49 51.2**	**-1.0**
	comp=Z,3.6nm,0.4s,baz=65,slow=3.2,SNR=62						
FINES	**FINESS Array B**	**145.19**	**340**		**PKPab**	**04 49 50.9**	**-1.3**
GEVA	**Gevas**	**145.48**	**294**	PKPbc	**PKPbc**	**04 49 53.4**	**-0.7**
NB2	**NORSAR Subarra**	**148.79**	**351**	PKP	**PKPbc**	**04 50 02.3**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=12,slow=2.7						
NOA	**NORSAR Array B**	**148.79**	**351**	PKPbc	**PKPbc**	**04 50 01.5**	**-0.9**
	comp=Z,1.0nm,0.6s,baz=15,slow=4.2,SNR=9.1						
AKASG	**Malin Array Be**	**151.35**	**323**	PKPbc	**PKPbc**	**04 50 08.3**	**-0.5**
	comp=Z,1.9nm,0.5s,baz=49,slow=3.5,SNR=10.0						
EIL	**Elat**	**151.57**	**277**	PKPbc	**PKPbc**	**04 50 10.0**	**-0.1**
	comp=Z,4.9nm,0.8s,baz=54,slow=6.9,SNR=4.2						
BRTR	**Keskin Array B**	**152.66**	**298**	PKPbc	**PKPbc**	**04 50 11.3**	**-1.1**
	comp=Z,1.0nm,0.8s,baz=134,slow=3.6,SNR=4.7						
TORD	**Torodi Ar. Bea**	**162.80**	**179**	PKPab	**PKPab**	**04 51 06.2**	**-1.0**
	comp=Z,0.7nm,0.7s,baz=166,slow=3.8,SNR=2.3						

*NEIC **25** 04:34:53.1±0.8, 36°22N±0°01×97°58W±0°02, h5km±7km, Error ellipse: s-maj=2.1km s-min=1.7km az=52.0*
*TUL **25** 04:34:53.1±1.1, 36°21N±0°01×97°57W±0°02, h6km±7km, ML3.3, mb_Lg3.3/109(NEIC), Error ellipse: s-maj=1.8km s-min=1.6km az=218.0*
*ANF **25** 04:34:53.7±0.7, 36°23N×97°52W, h6km±5km, ML3.9/10, Error ellipse: s-maj=4.7km s-min=4.4km az=26.0*

ISC 25 04:34:53.2±0.9, 36°22N±0°04×97°58W±0°05, h10km, n93, σt⁰67/76, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK009	**Oakdale Elemen**	**0.65**	**169**		**Pg**	**04 35 04.7**	**-1.0**
OK009				Sg	**Sg**	**04 35 14.6**	**+0.4**
OKCFA	**Oklahoma City**	**0.81**	**173**		**Pg**	**04 35 08.4**	**-0.3**
OKCFA				IAmb_Lg		04 35 19.0	
	comp=Z,284nm,0.9s						
OKCSW	**OKLAHOMA CITY**	**0.82**	**172**		**Pg**	**04 35 08.6**	**-0.3**
OKCSW				Sg	**Sg**	**04 35 19.8**	**+0.2**
FNO	**Franklin**	**0.97**	**171**		**Pg**	**04 35 11.3**	**-0.5**
T35A	**Sooner Cattle**	**1.10**	**51**		**Pb**	**04 35 13.8**	**-0.6**
T35B	**Sooner Cattle**	**1.10**	**51**	P	**Pb**	**04 35 13.8**	**-0.6**
	baz=231						
TUL1	**Leonard**	**1.48**	**101**		**Pn**	**04 35 19.7**	**-0.2**
TUL1	**Leonard**	**1.48**	**101**	P	**Pn**	**04 35 19.6**	**-0.2**
	baz=282						
TUL1				S	**Sb**	**04 35 39.7**	**+0.1**
	baz=282						
X34A	**Smith Ranch, M**	**1.63**	**187**	Pn	**Pb**	**04 35 23.3**	**0.0**
WMOK	**Wichita Mounta**	**1.77**	**214**		**Pn**	**04 35 23.8**	**-0.2**
WMOK				IAmb_Lg		04 35 52.2	
	comp=Z,144nm,0.7s						
R32A	**Long Quarter,**	**2.38**	**338**		**Pn**	**04 35 33.3**	**+1.0**
R32A	**Long Quarter,**	**2.38**	**338**	P	**Pn**	**04 35 33.1**	**+0.8**
	baz=157						
X37A	**Clayton**	**2.43**	**131**		**Pn**	**04 35 34.0**	**+1.1**
U38A	**Gravette**	**2.59**	**84**		**Pn**	**04 35 36.0**	**+0.9**
U38A	**Gravette**	**2.59**	**84**	P	**Pn**	**04 35 36.3**	**+1.2**
	baz=266						
Z35A	**Perchaven, San**	**2.89**	**175**		**Pn**	**04 35 39.2**	**-0.1**
Z35A	**Perchaven, San**	**2.89**	**175**	P	**Pn**	**04 35 40.5**	**+1.2**
	baz=355						
HHAR	**Hobbs**	**2.94**	**88**		**Pn**	**04 35 40.5**	**+0.5**
HHAR				IAmb_Lg		04 36 32.5	
	comp=Z,87nm,0.7s						
KSU1	**Kansas State U**	**2.98**	**15**		**Pn**	**04 35 41.0**	**+0.5**
KSU1	**Kansas State U**	**2.98**	**15**	Pn	**Pn**	**04 35 40.7**	**+0.2**
CBKS	**Cedar Bluff**	**3.11**	**327**	Pn	**Pn**	**04 35 41.4**	**-0.9**
W39A	**Magazine**	**3.25**	**107**		**Pn**	**04 35 44.2**	**0.0**
W39A				IAmb_Lg		04 36 40.5	
	comp=Z,125nm,0.8s						
W39A	**Magazine**	**3.25**	**107**	P	**Pn**	**04 35 45.1**	**+0.8**
	baz=289						
W39A				S	**Sn**	**04 36 24.1**	**+1.1**
	baz=289						
AMTX	**Amarillo**	**3.60**	**250**		**Pn**	**04 35 50.0**	**+0.9**
Z38A	**Mt. Pleasant**	**3.64**	**143**	Pn	**Pn**	**04 35 50.1**	**+0.5**
Z38A	**Mt. Pleasant**	**3.64**	**143**	P	**Pn**	**04 35 50.7**	**+1.1**
	baz=325						
MIAR	**Mount Ida**	**3.67**	**116**		**Pn**	**04 35 49.5**	**-0.5**
MIAR				IAmb_Lg		04 36 53.4	
	comp=Z,111nm,1.1s						
S39A	**Bolivar**	**3.71**	**65**		**Pn**	**04 35 51.1**	**+0.5**
S39A				IAmb_Lg		04 36 56.1	
	comp=Z,69nm,0.8s						
S39A	**Bolivar**	**3.71**	**65**	P	**Pn**	**04 35 51.5**	**+0.9**
	baz=248						
ABTX	**Abilene, Hawle**	**3.97**	**206**	Pn	**Pn**	**04 35 55.4**	**+1.2**
ABTX				IAmb_Lg		04 36 59.8	
	comp=Z,69nm,0.9s						
WHTX	**Lake Whitney,**	**4.22**	**179**	Pn	**Pn**	**04 35 57.2**	**-0.3**
MGMO	**Mountain Grove**	**4.37**	**76**		**Pn**	**04 35 59.3**	**-0.3**
MGMO				IAmb_Lg		04 37 14.7	
	comp=Z,76nm,0.7s						
WHAR	**Wooly Hollow**	**4.40**	**101**		**Pn**	**04 36 00.6**	**+0.5**
FCAR	**Ozark Folk Cen**	**4.43**	**93**	Pn	**Pn**	**04 36 01.0**	**+0.5**
FCAR				IAmb_Lg		04 37 13.0	
	comp=Z,50nm,0.8s						
WLAR	**White Oak Lake**	**4.45**	**123**		**Pn**	**04 36 01.0**	**+0.3**
WLAR				IAmb_Lg		04 37 13.0	
	comp=Z,51nm,0.7s						
W41B	**Gary Mavity, V**	**4.46**	**102**	IAmb_Lg		04 37 17.8	
	comp=Z,84nm,0.9s						
W41B	**Gary Mavity, V**	**4.46**	**102**	P	**Pn**	**04 36 01.0**	**+0.1**
	baz=285						
N33A	**J Bar K, Exete**	**4.51**	**1**	Pn	**Pn**	**04 36 02.6**	**+1.0**
N33A					LR	04 37 15.7	
N33A				IAmb_Lg		04 37 26.8	
	comp=Z,77nm,0.8s						
P38A	**Dawn**	**4.67**	**42**	IAmb_Lg		04 37 22.9	
	comp=Z,84nm,0.7s						
R40A	**Maddies Statio**	**4.71**	**62**	Pn	**Pn**	**04 36 04.6**	**+0.3**
R40A	**Maddies Statio**	**4.71**	**62**	P	**Pn**	**04 36 05.0**	**+0.6**
	baz=265						
MSTX	**Muleshoe**	**4.81**	**244**		**Pn**	**04 36 07.0**	**+1.1**
N35A	**Tabor**	**4.88**	**18**	Pn	**Pn**	**04 36 07.1**	**+0.5**
KSCO	**Kaye Shedlock'**	**4.88**	**306**	Pn	**Pn**	**04 36 06.6**	**-0.2**
KSCO				IAmb_Lg		04 37 40.2	
	comp=Z,60nm,0.9s						
Z41A	**Richland Creek**	**4.92**	**126**	Pn	**Pn**	**04 36 07.7**	**+0.5**
Z41A				IAmb_Lg		04 37 42.7	
	comp=Z,56nm,0.8s						
NATX	**Nacogdoches**	**5.06**	**151**	Pn	**Pn**	**04 36 09.7**	**+0.5**
BGNE	**Belgrade**	**5.20**	**355**	Pn	**Pn**	**04 36 11.3**	**+0.2**
CCAR	**Cane Creek**	**5.29**	**114**	Pn	**Pn**	**04 36 12.5**	**+0.3**
CCM	**Cathedral Cave**	**5.38**	**68**	Pn	**Pn**	**04 36 13.9**	**+0.4**
CCM				IAmb_Lg		04 37 49.5	
	comp=Z,54nm,0.7s						
435B	**Jarrell**	**5.42**	**180**	Pn	**Pn**	**04 36 14.6**	**+0.5**
435B				IAmb_Lg		04 37 54.6	
	comp=Z,52nm,0.7s						
P40A	**Paris**	**5.48**	**51**	Pn	**Pn**	**04 36 15.2**	**+0.3**
P40A				IAmb_Lg		04 37 55.0	
	comp=Z,52nm,0.7s						
T25A	**Trinidad**	**5.57**	**282**	Pn	**Pn**	**04 36 16.3**	**-0.1**
T25A				IAmb_Lg		04 37 59.9	
	comp=Z,61nm,0.8s						
N38A	**Joes South For**	**5.70**	**35**	Pn	**Pn**	**04 36 18.4**	**+0.5**
PBMO	**Poplar Bluff**	**5.79**	**82**	Pn	**Pn**	**04 36 18.5**	**-0.5**
PBMO				IAmb_Lg		04 38 02.2	
	comp=Z,59nm,0.8s						
L34A	**Svendsen Farm,**	**5.82**	**9**	Pn	**Pn**	**04 36 20.3**	**+0.7**
OGNE	**Ogallala**	**5.87**	**325**	IAmb_Lg		04 38 05.3	
	comp=Z,54nm,0.7s						
FVM	**French Village**	**5.98**	**71**	IAmb_Lg		04 38 04.3	
	comp=Z,34nm,0.8s						
JCT	**Junction City**	**6.02**	**199**	Pn	**Pn**	**04 36 21.4**	**-0.9**
143A	**Socs Landing,**	**6.19**	**123**	Pn	**Pn**	**04 36 26.2**	**+1.6**
143A				IAmb_Lg		04 38 21.3	
	comp=Z,52nm,0.8s						
SLM	**Saint Louis**	**6.32**	**65**	IAmb_Lg		04 38 14.2	
	comp=Z,42nm,0.7s						
PARMO	**Parma**	**6.32**	**84**	Pn	**Pn**	**04 36 26.7**	**+0.3**
PARMO				IAmb_Lg		04 38 15.3	
	comp=Z,56nm,0.7s						
K31A	**O'Neill**	**6.46**	**352**	Pn	**Pn**	**04 36 27.8**	**-0.6**
SDCO	**Great Sand Dun**	**6.52**	**286**	Pn	**Pn**	**04 36 28.3**	**-1.2**
Q24A	**Divide**	**6.61**	**297**	IAmb_Lg		04 38 32.8	
	comp=Z,46nm,0.8s						
S44A	**Carbondale**	**6.82**	**75**	Pn	**Pn**	**04 36 33.6**	**+0.3**
S44A				IAmb_Lg		04 38 28.6	
	comp=Z,55nm,0.8s						
SIUC	**Southern Illin**	**6.86**	**75**		**Pn**	**04 36 32.5**	**-1.3**
OXF	**Oxford**	**6.89**	**102**	Pn	**Pn**	**04 36 34.7**	**+0.5**
OXF				IAmb_Lg		04 38 35.4	
	comp=Z,53nm,0.8s						
W45A	**Hickory Valley**	**6.91**	**96**	Pn	**Pn**	**04 36 35.0**	**+0.5**
W45A				IAmb_Lg		04 38 45.7	
	comp=Z,50nm,0.7s						
N41A	**Harden Midland**	**6.92**	**48**	Pn	**Pn**	**04 36 35.2**	**+0.5**
Y45A	**Yeager Farm, C**	**6.99**	**107**	IAmb_Lg		04 38 40.2	
	comp=Z,34nm,0.7s						
P43A	**Skaggs, Pawnee**	**7.22**	**59**		**Pn**	**04 36 39.4**	**+0.5**
P43A				IAmb_Lg		04 38 51.9	
	comp=Z,49nm,0.8s						
ISCO	**Idaho Springs**	**7.28**	**302**	IAmb_Lg		04 38 53.1	
	comp=Z,30nm,1.0s						
Q44A	**Meyer Farm, Va**	**7.31**	**66**	Pn	**Pn**	**04 36 40.8**	**+0.8**
Q44A				IAmb_Lg		04 38 54.9	
	comp=Z,48nm,0.8s						
735A	**Kenedy**	**7.34**	**182**	IAmb_Lg		04 38 56.9	
	comp=Z,28nm,1.0s						
ECSD	**EROS Data Cent**	**7.54**	**5**	Pn	**Pn**	**04 36 43.2**	**0.0**
L40A	**Anamosa**	**7.64**	**38**	Pn	**Pn**	**04 36 44.6**	**0.0**
L40A				IAmb_Lg		04 38 57.3	
	comp=Z,41nm,0.9s						
BNM	**Barren Site**	**7.69**	**257**	Pn	**Pn**	**04 36 46.0**	**+0.5**
PLAL	**Pickwick Lake**	**7.84**	**96**	IAmb_Lg		04 39 09.5	
	comp=Z,25nm,1.0s						
CRNM	**Carthage**	**7.84**	**256**	Pn	**Pn**	**04 36 47.2**	**-0.3**
146A	**Union**	**7.89**	**114**	IAmb_Lg		04 39 17.2	
	comp=Z,32nm,1.1s						
PHWY	**Pilot Hill**	**7.98**	**312**	IAmb_Lg		04 39 14.9	
	comp=Z,21nm,0.8s						
833A	**Chaparral WMA,**	**8.02**	**192**	IAmb_Lg		04 39 13.3	
	comp=Z,23nm,0.9s						
N23A	**Red Feather La**	**8.05**	**308**	Pn	**Pn**	**04 36 50.3**	**-0.1**
N23A				IAmb_Lg		04 39 21.2	
	comp=Z,42nm,0.9s						
O44A	**Mansfield**	**8.18**	**59**	Pn	**Pn**	**04 36 52.2**	**+0.3**
O44A				IAmb_Lg		04 39 28.2	
	comp=Z,34nm,0.8s						
SUSD	**Miller**	**8.28**	**353**	IAmb_Lg		04 39 22.5	
	comp=Z,38nm,1.0s						
I37A	**Lemond, Waseca**	**8.42**	**21**	IAmb_Lg		04 39 43.7	
	comp=Z,36nm,0.9s						
L42A	**Oliver, Polo**	**8.44**	**44**	Pn	**Pn**	**04 36 55.7**	**+0.3**
L42A				IAmb_Lg		04 39 33.7	
	comp=Z,34nm,0.7s						
JFWS	**Jewell Farm**	**8.76**	**38**	IAmb_Lg		04 39 29.6	
	comp=Z,38nm,0.8s						
RWWY	**Rawlins**	**9.28**	**309**	IAmb_Lg		04 39 58.5	
	comp=Z,18nm,0.9s						
I40A	**Norwalk**	**9.34**	**33**	IAmb_Lg		04 39 54.3	
	comp=Z,23nm,0.9s						
K22A	**Casper**	**9.44**	**316**	IAmb_Lg		04 40 08.8	
	comp=Z,34nm,1.0s						
F33A	**5 Mile Ranch,**	**9.66**	**5**	IAmb_Lg		04 40 12.6	
	comp=Z,18nm,1.1s						
SPMN	**Marine on St.**	**9.70**	**20**	IAmb_Lg		04 40 09.6	
	comp=Z,21nm,0.8s						

*BJI **25** 04:51:53.4±0.0, 36°66N×138°35E, h10km, mb4.5/57, mB4.7/29, Ms4.5/51, Ms7 4.2/47*
*NIED **25** 04:51:57.3, 36°82N×137°83E, h0km, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr-0.68; Mθθ 7.75; Mϕϕ-7.07; Mrθ-3.67; Mθϕ-4.57; Mϕr2.69; Fault plane solution: M0 9.69000×10¹⁵ NP1: ϕs239.00000°, δ66.00000°, λ174.00000°. NP2: ϕs331.00000°, δ85.00000°, λ24.00000°.*
*IDC **25** 04:51:57.2±0.4, 36°86N×137°88E, h0km, mb4.3/19, mbtmp4.3/22, ML4.0/2, MS3.9/43 Error ellipse: s-maj=14.3km s-min=5.9km az=51.0*
*JMA **25** 04:51:57.3±0.1, 36°8N±0°2×137°8E±0°3, h0km, MD4.8/20, MW4.6/20, SW NIIGATA PREF*
JMA Felt IV J1 at SW NIIGATA PREF .
*NEIC **25** 04:51:58.9±2.0, 36°80N±0°03×137°94E±0°04, h10km±1km, mb4.6/104, Error ellipse: s-maj=5.9km s-min=5.2km az=221.0*
*MOS **25** 04:51:58.2±1.1, 36°77N×137°95E, h21km, mb4.7/32, MS4.2/9, Error ellipse: s-maj=8.5km s-min=5.3km az=113.4*

ISC 25 04:51:59.7±0.3, 36°81N±0°03×137°93E±0°03, h18km, n342, σt¹85/234, mb4.5/104, MS4.1/63, 13C-14D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJN	**Nakama**	**0.34**	**33**		A	04 52 05.4	
	comp=E,328nm,0.8s,comp=E,461nm,0.4s						
MJB9	**Matsu-Tunnel**	**0.35**	**141**		**Pg**	**04 52 05.5**	**-1.5**
MAJO	**Matsushiro**	**0.35**	**141**		**Pg**	**04 52 05.4**	**-1.7**
MAJO	**Matsushiro**	**0.35**	**141**	*d* iP	**Pg**	**04 52 05.4**	**-1.7**
MAT	**Matsushiro**	**0.35**	**141**	P	**Pg**	**04 52 05.4**	**-1.6**
MAT				S	**Sb**	**04 52 11.2**	**-1.5**
MJAR	**Matsushiro Arr**	**0.35**	**140**	Pg	**Pg**	**04 52 04.8**	**-2.3**
	223nm,0.3s,baz=328,slow=14,SNR=1446						
MJAR				Lg	Lg	04 52 12.2	
	903nm,0.3s,baz=322,slow=32,SNR=69						
MJAR	**Matsushiro Arr**	**0.35**	**140**	Pg	**Pg**	**04 52 04.3**	**-2.8**
JNG	**Nsakai**	**0.43**	**161**	P	**Pg**	**04 52 06.6**	**-1.9**
JNG				*eS*	**Sb**	**04 52 13.3**	**-1.7**
JNG	**Nsakai**	**0.43**	**161**	A	A	04 52 06.6	
	comp=E,108nm,7.8s,comp=E,80nm,1.5s						
JTT	**Ttatey**	**0.52**	**247**	⇓P	**Pg**	**04 52 06.7**	**-3.4**
JTT				⇓*eS*	**Sg**	**04 52 13.3**	**-3.9**
JTT	**Ttatey**	**0.52**	**247**	A	A	04 52 06.7	
	comp=E,162nm,1.6s,comp=E,302nm,3.2s						
JGK	**Kuni**	**0.62**	**114**	⇓P	**Pg**	**04 52 11.0**	**-1.1**
JGK				⇓S	**Sb**	**04 52 20.8**	**+0.4**
JGK	**Kuni**	**0.62**	**114**	A	A	04 52 11.0	
	comp=E,41nm,3.7s,comp=E,44nm,2.1s						
JGN	**Niukaw**	**0.77**	**220**	P	**Pb**	**04 52 11.3**	**-3.3**
JGN	**Niukaw**	**0.77**	**220**	A	A	04 52 11.3	
	comp=E,33nm,3.5s,comp=E,44nm,3.4s						
JSZ	**Suzu**	**0.78**	**325**	⇓P	**Pb**	**04 52 11.8**	**-2.9**
JSZ				⇓S	**Sb**	**04 52 22.2**	**-2.7**
JSZ	**Suzu**	**0.78**	**325**	A	A	04 52 11.8	
	comp=E,73nm,1.0s,comp=E,49nm,1.0s						
**J

JYAR Yonezawaarcadi 2.08 57 A A 04 52 35.1
comp=E,12nm,1.2s,comp=E,12nm,1.4s
JEG Eigenji 2.09 217 A A 04 52 33.7
comp=E,10.0nm,4.3s,comp=E,15nm,5.4s
JYO Yokosk 2.12 138 A A 04 52 35.5
comp=E,40nm,2.1s,comp=E,27nm,2.1s
JSG Sagara 2.15 174 A A 04 52 35.3
comp=E,41nm,2.8s,comp=E,44nm,2.4s
JHYU Hitachinakayam 2.19 102 A A 04 52 36.9
comp=E,7.0nm,5.3s,comp=E,13nm,6.3s
JYS Shirataka 2.20 50 A A 04 52 36.8
comp=E,10.0nm,1.3s,comp=E,15nm,1.5s
JIZS Izushimoda 2.23 160 A A 04 52 36.8
comp=E,19nm,1.4s,comp=E,11nm,2.9s
JAA Atsumi 2.27 197 A A 04 52 36.6
comp=E,9.0nm,4.6s,comp=E,5.0nm,1.6s
JYA Atsumi 2.27 38 A A 04 52 37.6
comp=E,8.0nm,1.3s,comp=E,6.0nm,0.7s
TATJ Tateyama 2 2.39 138 A A 04 52 39.4
comp=E,20nm,4.0s,comp=E,30nm,4.0s
JIM2 Oshima 3 2.42 149 A A 04 52 39.7
comp=E,14nm,4.9s,comp=E,16nm,5.0s
JMM Marumori 2.51 64 **Pn** **04 52 40.2 +0.7**
JWT Wachi 2.56 234 A A 04 52 40.2
comp=E,7.0nm,6.5s,comp=E,10.0nm,5.4s
JKY Yasaka 2.57 243 A A 04 52 40.3
comp=E,7.0nm,6.3s,comp=E,9.0nm,10.0s
JIE Ise 2.62 203 A A 04 52 41.5
comp=E,6.0nm,2.2s,comp=E,5.0nm,7.5s
JSKK Shikinejimakit 2.69 157 A A 04 52 43.4
comp=E,30nm,2.2s,comp=E,19nm,1.7s
JKO Kozu shima 2.80 159 A A 04 52 45.0
comp=E,58nm,3.2s,comp=E,23nm,2.7s
JHE Heguri 2.83 221 A A 04 52 44.2
comp=E,12nm,5.3s,comp=E,7.0nm,2.8s
JKN2 Miekihoku 2.90 208 A A 04 52 45.6
comp=E,6.0nm,4.7s,comp=E,6.0nm,5.4s
JKSM Kasumi 2.91 246 A A 04 52 45.2
comp=E,4.0nm,7.3s,comp=E,6.0nm,9.2s
JMIK Miki 3.08 230 A A 04 52 47.7
comp=E,13nm,6.7s,comp=E,16nm,5.7s
JKS Kasai 3.10 235 A A 04 52 48.0
comp=E,5.0nm,5.3s,comp=E,12nm,6.1s
JTNC Tanabenakahech 3.54 213 A A 04 52 54.5
comp=E,6.0nm,3.9s,comp=E,8.0nm,5.4s
JWM Minabe 3.63 216 A A 04 52 55.8
comp=E,5.0nm,4.0s,comp=E,5.0nm,5.0s
JHJ Hachijo jima 2 3.99 157 Pn **Pb** **04 53 04.7 -4.7**
64nm,0.3s,baz=263,slow=9.1,SNR=8.1
JJS Sakaide 4.07 234 A A 04 53 01.7
comp=E,4.0nm,6.8s,comp=E,5.0nm,6.2s
JHS Saijyo 4.31 247 Pn **Pn** **04 53 04.1 -0.3**
JMN Monobe 4.52 228 Pn **Pn** **04 53 08.5 +1.2**
JMN Monobe 4.52 228 A A 04 53 08.2
comp=E,5.0nm,9.3s,comp=E,6.0nm,4.8s
ERM Erimo 6.58 36 eP **Pn** **04 53 35.4 -0.1**
JNU Nakatsue 6.86 240 Pn **Pn** **04 53 40.8 +1.4**
3.2nm,0.3s,baz=41,slow=11,SNR=7.4
46nm,1.0s
JNU Nakatsue 6.86 240 **Pn** **04 53 40.1 +0.7**
MSHR Mys Shultsa 7.77 320 *i* P **Pn** **04 53 54.2 +2.4**
MSHR pmax pmax
comp=Z,29nm,1.5s
KSCHJ Chungju 7.98 273 Pn **Pn** **04 53 54.6 -0.2**
KSRS Korea Array 8.02 278 Pn **Pn** **04 53 55.6 +0.4**
comp=Z,1.9nm,0.3s,baz=94,slow=14,SNR=22
KSRS LR LR 04 56 42.7
comp=Z,1μm,21.5s,baz=90,slow=36
comp=Z,9.3nm,0.6s
KSAR Wonju Array Be 8.05 277 Pn **Pn** **04 53 55.0 -0.7**
KSAR Wonju Array Be 8.05 277 P **Pn** **04 53 55.0 -0.7**
KS19 Wonju Array Si 8.07 278 **Pn** **04 53 55.9 0.0**
ASAJ Asahikawa 8.11 25 LR LR 04 57 19.1
comp=Z,722nm,19.6s,baz=244,slow=40
TJN Taejon 8.51 270⇑ *i* P **Pn** **04 54 05.4 +3.4**
USA0B Ussuriysk Arra 8.65 330 *eP* **Pn** **04 54 06.5 +2.6**
USRK Ussuriysk Ar. 8.65 330 Pn **Pn** **04 54 02.0 -1.9**
comp=Z,1.4nm,0.5s,baz=141,slow=13,SNR=5.8
USRK LR LR 04 57 00.9
comp=Z,449nm,19.5s,baz=146,slow=35
USRK Ussuriysk Ar. 8.65 330 Pn **Pn** **04 54 03.3 -0.6**
USRK Ussuriysk Ar. 8.65 330 P **Pn** **04 54 03.3 -0.6**
JCJ Chichijima 10.34 158 LR LR 04 58 02.8
comp=Z,622nm,20.5s,baz=52,slow=35
YSS Yuzh-Sakhalins 10.75 18 *eP* **Pn** **04 54 33.5 +0.9**
YSS *eS* **Sn** **04 56 32.0 -0.4**
YSS pmax pmax
comp=Z,100nm,2.1s
YSS pmax pmax
comp=Z,40nm,0.8s
YSS MLR MLR
comp=Z,1μm,14.0s
YSS MLR MLR
comp=N,600nm,13.0s
KUR Kuril'sk 11.26 39⇑ *i* P **Pn** **04 54 40.1 +0.4**
KLR Kul'dur 13.20 342 Pn **Pn** **04 55 09.8 +3.7**
comp=N,0.4nm,0.3s,baz=144,slow=9.0,SNR=16
KLR LR LR 04 59 52.7
comp=N,462nm,19.4s,baz=158,slow=36
KLR Kul'dur 13.20 342*ceP* **Pn** **04 55 09.9 +3.8**
KLR pmax pmax
comp=Z,57nm,1.6s
SSE Sheshan 15.02 253 P **Pn** **04 55 30.4 -0.5**
SSE S **Sn** **04 58 18.3 +1.5**
SSE pmax pmax
comp=Z,12nm,0.7s
SSE pmax pmax
comp=Z,85nm,3.5s
SSE LR LR
comp=Z,910nm,16.4s
SSE LR LR
comp=Z,610nm,16.8s
NJ2 Nanjing 16.44 259 *eP* **Pn** **04 55 49.5 +0.1**
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
TIA Tai'an 16.74 274 P **P** **04 55 55.4 0.0**
TIA pmax pmax
comp=Z,4.0nm,0.6s
TIA pmax pmax
comp=Z,110nm,3.7s
TIA LR LR
comp=Z,640nm,10.7s
TIA LR LR
comp=Z,540nm,12.1s
TIA LR LR
comp=Z,660nm,14.2s
OKH Okha 17.09 10*deP* **Pn** **04 55 51.2 -6.3**
OKH MLR MLR
comp=E,900nm,15.0s
OKH MLR MLR
comp=N,500nm,18.0s
OKH MLR MLR
comp=Z,300nm,14.0s
BJI Beijing 17.34 287 P **Pn** **04 56 01.3 +0.6**
BJI S **S** **04 59 19.9 -1.8**
BJI pmax pmax
comp=Z,41nm,1.0s
BJI LR LR
comp=Z,61nm,15.5s
BJI LR LR
comp=Z,210nm,18.7s
BJI LR LR
comp=Z,290nm,16.4s
BJT Baijiatuau 17.35 287 Pn **Pn** **04 55 59.0 -1.8**
BJT IAmb IAmb 04 56 06.1
comp=Z,32nm,0.8s
BJT Baijiatuau 17.35 287 P **Pn** **04 55 59.0 -1.8**
BJT pmax pmax
comp=Z,32nm,0.8s
XLT XiLinHaoTe 18.07 300⇑ *i* P **P** **04 56 11.8 +1.7**
XLT pP pP 04 56 16.6 +1.1
XLT PP **PnPn** **04 56 25.8 +5.0**
XLT S **Sn** **04 59 23.5 -7.3**
XLT pmax pmax
comp=Z,46nm,0.9s
XLT pmax pmax
comp=Z,140nm,4.1s
XLT LR LR
comp=Z,84nm,16.8s
XLT LR LR
comp=Z,560nm,16.9s
XLT LR LR
comp=Z,540nm,16.9s
HIA Hailar 18.15 319 Pn **Pn** **04 56 08.0 -2.7**
HIA Hailar 18.15 319 P **Pn** **04 56 08.0 -2.7**
HIA pmax pmax
comp=Z,22nm,1.3s

ZEA Zeya 18.48 340 *eP* **Pn** **04 56 16.9 +2.3**
ZEA pmax pmax
comp=N,10.0nm,0.7s
ZEA pmax pmax
comp=Z,20nm,1.3s
ZEA MLR MLR
comp=Z,200nm,14.0s
HNS HongShan 18.53 279⇓ P **Pn** **04 56 16.4 +1.1**
HNS S **S** **04 59 45.0 -0.8**
HNS SS **SnSn** **05 00 07.8 +12**
HNS pmax pmax
comp=Z,84nm,1.2s
HNS LR LR
comp=Z,310nm,14.7s
HNS LR LR
comp=Z,600nm,12.0s
HNS LR LR
comp=Z,640nm,12.2s
WHN Wuhan 20.57 259⇑ P Pn 04 56 39.4 -0.4
WHN pmax pmax
comp=Z,140nm,1.5s
LYN LuoYang 20.79 271⇑ P **P** **04 56 41.1 +1.2**
LYN pP pP 04 56 45.3 -0.1
LYN S Sn 05 00 36.3 -0.3
LYN SS **SnSn** **05 00 58.1 +6.8**
LYN pmax pmax
comp=Z,20nm,1.3s
LYN pmax pmax
comp=Z,80nm,8.4s
LYN LR LR
comp=Z,950nm,13.8s
LYN LR LR
comp=Z,410nm,12.8s
LYN LR LR
comp=Z,450nm,17.3s
HHC Hu-ho-hao-te 20.90 289 *eP* **P** **04 56 42.3 +1.2**
HHC pmax pmax
comp=Z,20nm,1.0s
HHC pmax pmax
comp=Z,200nm,5.0s
HHC LR LR
comp=Z,610nm,17.3s
HHC LR LR
comp=Z,640nm,11.0s
HHC LR LR
comp=Z,580nm,12.1s
PETK Petropavlovsk- 21.36 34 P **P** **04 56 46.0 +0.2**
comp=Z,6.7nm,0.8s,baz=207,slow=11,SNR=8.6
PETK LR LR 05 05 29.7
comp=Z,488nm,18.2s,baz=225,slow=38
comp=Z,6.7nm,0.8s
PETK Petropavlovsk- 21.36 34 P **P** **04 56 44.2 -1.6**
PETK Petropavlovsk- 21.36 34 P **P** **04 56 46.0 +0.2**
BTO Baotou 22.07 288 *eP* **P** **04 56 50.3 -3.4**
XAN Xi'an 23.76 272 P **P** **04 57 10.4 -0.7**
XAN pP pP 04 57 15.0 -2.1
XAN sP sP 04 57 17.5 -1.8
XAN pmax pmax
comp=Z,11nm,1.1s
XAN Xi'an 23.76 272 P **P** **04 57 10.3 -0.8**
XAN pP pP 04 57 14.8 -2.3
XAN sP sP 04 57 17.6 -1.7
XAN S **S** **05 01 28.9 +3.2**
XAN pmax pmax
comp=Z,11nm,1.3s
XAN pmax pmax
comp=Z,520nm,3.9s
XAN LR LR
comp=Z,870nm,15.2s
XAN LR LR
comp=Z,320nm,14.7s
XAN LR LR
comp=Z,490nm,11.8s
GUMO Guam 23.95 163 LR LR 05 05 15.1
comp=Z,264nm,19.4s,baz=343,slow=33
MA2 Magadan 24.24 16 P **P** **04 57 14.0 -1.3**
comp=Z,9.9nm,0.6s,baz=205,slow=6.7,SNR=7.3
MA2 LR LR 05 06 10.4
comp=Z,217nm,20.8s,baz=210,slow=35
comp=Z,9.9nm,0.6s
MA2 Magadan 24.24 16 P **P** **04 57 14.8 -0.5**
MA2 IAmb IAmb 04 57 15.8
comp=Z,16nm,0.8s
MA2 Magadan 24.24 16 P **P** **04 57 14.0 -1.3**
ENH Enshi 24.53 263 P **P** **04 57 17.3 -1.0**
ENH IAmb IAmb 04 57 21.5
comp=Z,14nm,0.7s
ULN Ulaanbaatar 25.19 306 P **P** **04 57 23.6 -0.6**
ULN Ulaanbaatar 25.19 306 P **P** **04 57 23.6 -0.6**
ULN pmax pmax
comp=Z,13nm,1.4s
SONM Songino Array 25.61 305 P **P** **04 57 28.0 0.0**
comp=Z,1.8nm,0.8s,baz=94,slow=10.0,SNR=12
SONM LR LR 05 07 49.0
comp=Z,286nm,18.9s,baz=98,slow=37
comp=Z,1.8nm,0.8s
SONM Songino Array 25.61 305 P **P** **04 57 27.4 -0.7**
SONM Songino Array 25.61 305 P **P** **04 57 27.4 -0.7**
SONM pmax pmax
comp=Z,4.0nm,1.1s
YAK Yakutsk 25.76 351 LR LR 05 07 28.8
comp=Z,498nm,19.2s,baz=161,slow=36
LZH Lanzhou 27.35 279⇓ P **P** **04 57 44.1 +0.2**
LZH sP pP 04 57 50.3 +0.4
LZH SS SS 05 03 42.6 -35
LZH pmax pmax
comp=Z,16nm,1.4s
LZH LR LR
comp=Z,540nm,16.1s
LZH LR LR
comp=Z,560nm,15.5s
LZH LR LR
comp=Z,700nm,16.1s
SEY Seymchan 27.62 14 P **P** **04 57 45.2 -0.5**
comp=Z,3.5nm,0.9s,baz=217,slow=9.1,SNR=6.7
comp=Z,3.5nm,0.9s
ZAK Zakamensk 28.24 310 *eP* **P** **04 57 49.5 -2.1**
ZAK pmax pmax
comp=Z,3.0nm,1.1s
SHEM Shemya Is, Ala 29.82 46 LR LR 05 08 55.1
comp=Z,132nm,21.9s,baz=282,slow=34
GTA Gaotai 29.96 287 *eP* **P** **04 58 05.9 -1.1**
GTA pP sP 04 58 14.9 -0.3
GTA sP pP 04 58 19.3 +6.5
GTA pmax pmax
comp=Z,6.0nm,1.0s
GTA pmax pmax
comp=Z,70nm,5.8s
GTA LR LR
comp=Z,290nm,19.6s
GTA LR LR
comp=Z,220nm,19.3s
GTA LR LR
comp=Z,220nm,18.2s
DAV Davao City (W) 31.68 204 LR LR 05 12 31.9
comp=Z,218nm,18.1s,baz=4.5,slow=39
KMI Kunming 32.17 259⇑ P **P** **04 58 29.4 +2.6**
KMI pmax pmax
comp=Z,6.0nm,0.9s
KMI pmax pmax
comp=Z,84nm,4.0s
KMI LR LR
comp=Z,340nm,18.1s
KMI LR LR
comp=Z,670nm,18.1s
KMI LR LR
comp=Z,770nm,17.5s
PZH PanZhiHua 32.30 262 P **P** **04 58 29.4 +1.6**
PZH S **S** **05 03 39.3 -1.5**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,100nm,5.9s
PZH LR LR
comp=Z,420nm,15.3s
PZH LR LR
comp=Z,400nm,14.5s
PZH LR LR
comp=Z,510nm,15.2s
GOMU GeErMu 34.45 282 P **P** **04 58 45.8 -0.9**
GOMU pP pP 04 58 49.3 -3.6
GOMU sP sP 04 58 53.9 -1.0
GOMU S **S** **05 04 19.0 +4.6**
GOMU pmax pmax
comp=Z,7.0nm,0.8s
GOMU pmax pmax
comp=Z,35nm,6.3s
GOMU LR LR
comp=Z,130nm,13.1s
GOMU LR LR
comp=Z,190nm,12.9s
GOMU LR LR
comp=Z,230nm,13.2s
BILL Bilibino 35.06 18 P **P** **04 58 50.8 -0.4**
BILL Bilibino 35.06 18⇓ *i* P **P** **04 58 51.4 +0.2**
BILL pmax pmax
comp=Z,10.0nm,1.5s
BILL MLR MLR
comp=Z,224nm,16.0s
TIXI Tiksi 35.22 355 LR LR 05 12 07.8
comp=Z,161nm,19.3s,baz=180,slow=34
TIXI Tiksi 35.22 355 P **P** **04 58 51.5 -0.9**
TIXI IAmb IAmb 04 58 53.7
comp=Z,12nm,1.1s
TIXI Tiksi 35.22 355*ceP* **P** **04 58 51.8 -0.7**
TIXI pmax pmax
comp=Z,9.0nm,0.8s
WMQ Urumqi 38.44 297 *eP* **P** **04 59 23.1 +2.7**
WMQ LR LR
comp=Z,430nm,12.5s
WMQ LR LR
comp=Z,140nm,21.5s
CHTO Chiang Mai 38.55 253 P **P** **04 59 21.4 0.0**
CHTO Chiang Mai 38.55 253 P **P** **04 59 21.4 0.0**
CHTO pmax pmax
comp=Z,5.0nm,0.9s
CMAR Chiang Mai Arr 38.75 253 P **P** **04 59 24.1 +1.0**
comp=Z,2.9nm,0.3s,baz=52,slow=7.3,SNR=8.3
CMAR PcP **PcP** **05 01 36.0 +1.3**
comp=Z,1.8nm,0.3s,baz=29,slow=1.2,SNR=4.6
CMAR LR LR 05 17 06.3
comp=Z,258nm,18.4s,baz=65,slow=39
comp=Z,2.9nm,0.3s
ZALV Zalesovo Beam 40.01 313 P **P** **04 59 31.8 -1.3**
comp=Z,1.3nm,0.4s,baz=75,slow=6.7,SNR=3.8
ZALV PcP **PcP** **05 01 37.6 -0.3**
comp=Z,2.9nm,0.7s,baz=86,slow=2.0,SNR=7.2
ZALV LR LR 05 15 13.3
comp=Z,62nm,21.8s,baz=88,slow=35
comp=Z,1.3nm,0.4s
ZALV Zalesovo Beam 40.01 313 P **P** **04 59 31.6 -1.5**
ZALV **PcP** **05 01 38.0 0.0**
SHL Shillong 40.61 267 P **P** **04 59 38.3 -0.5**
SHL Shillong 40.61 267 P **P** **04 59 38.3 -0.5**
SHL pmax pmax
comp=Z,6.0nm,0.8s
MKAR Makanchi Array 41.87 302 P **P** **04 59 46.9 -1.7**
comp=Z,1.7nm,0.8s,baz=91,slow=9.0,SNR=13
MKAR PcP **PcP** **05 01 44.9 +0.7**
comp=Z,3.7nm,1.2s,baz=103,slow=2.6,SNR=4.5
MKAR LR LR 05 17 33.4
comp=Z,192nm,21.0s,baz=81,slow=37
comp=Z,1.7nm,0.8s
MKAR Makanchi Array 41.87 302 P **P** **04 59 47.4 -1.2**
MKAR Makanchi Array 41.87 302 P **P** **04 59 47.4 -1.2**
MKAR 05 01 44.9
MAKZ Makanchi 42.08 302 P **P** **04 59 49.4 -1.0**
MAKZ Makanchi 42.08 302 P **P** **04 59 49.4 -1.0**
MAKZ pmax pmax
comp=Z,5.0nm,1.1s
KRVT Keravat (AS076 42.97 159 LR LR 05 17 04.7
comp=Z,77nm,20.4s,baz=122,slow=35
KURK Kurchatov 43.87 308 P **P** **05 00 03.6 -1.2**
KURK IAmb IAmb 05 00 05.7
comp=Z,8.9nm,0.7s
KURK Kurchatov 43.87 308 P **P** **05 00 03.6 -1.2**
KURK pmax pmax
comp=Z,9.0nm,0.7s
KURBB Kurchatov Arra 43.93 308 LR LR 05 17 15.3
comp=Z,150nm,19.3s,baz=60,slow=35
SDPT Sand Point 44.94 45 P **P** **05 00 13.4 +0.1**
KAPI Kappang 44.95 206 LR LR 05 17 14.5
comp=Z,49nm,21.9s,baz=9.0,slow=34
TARG Taragay, Kyrgy 45.98 296 IAmb IAmb 05 00 23.9
comp=Z,4.8nm,0.8s
KSH Kashi 47.94 293 P **P** **05 00 41.0 +3.8**
KSH pmax pmax
comp=Z,5.0nm,0.9s
J20K Nowinta River 48.05 33 P **P** **05 00 38.6 +1.1**
J20K IAmb IAmb 05 00 41.0
comp=Z,6.1nm,1.1s
K20K Telida 48.08 34 IAmb IAmb 05 00 41.3
comp=Z,4.5nm,0.9s
AAK Ala-Archa 48.13 298 LR LR 05 21 49.4
comp=Z,232nm,18.7s,baz=70,slow=37
AAK Ala-Archa 48.13 298⇓ *i* P **P** **05 00 37.8 -0.9**
AAK pmax pmax
comp=Z,4.0nm,1.2s
IMAR Indian Mountai 48.26 31 P **P** **05 00 40.0 +0.8**
KDAK Kodiak Island 49.12 42 P **P** **05 00 47.1 +1.2**
comp=Z,3.9nm,0.7s,baz=279,slow=8.7
KDAK LR LR 05 21 00.7
comp=Z,88nm,21.8s,baz=267,slow=36
comp=Z,3.9nm,0.7s
KDAK Kodiak Island 49.12 42 IAmb IAmb 05 00 55.1
comp=Z,24nm,1.3s
MLY Manley 49.51 32 IAmb IAmb 05 00 53.7
comp=Z,4.7nm,0.9s
TOLK Toolik Lake Re 49.94 27 P **P** **05 00 53.1 +1.1**
TOLK IAmb IAmb 05 00 55.1
comp=Z,5.4nm,0.9s
H23K Yukon River 49.99 31 IAmb IAmb 05 00 56.8
comp=Z,6.4nm,0.8s
NEA2 Nenana 50.25 32 IAmb IAmb 05 00 58.5
comp=Z,8.2nm,1.4s
HNR Honiara 50.44 151 LR LR 05 23 09.9
comp=Z,58nm,18.7s,baz=355,slow=37
H24K Noodor Dome 50.67 31 IAmb IAmb 05 01 13.0
comp=Z,9.9nm,1.4s
KK31 Karatay Array 50.81 299 P **P** **05 00 58.6 -0.4**
KK31 IAmb IAmb 05 01 01.2
comp=Z,7.8nm,1.1s
KK31 Karatay Array 50.81 299 P **P** **05 00 58.6 -0.4**
KK31 pmax pmax
comp=Z,8.0nm,1.1s
KKAR Karatay Array 50.81 299 P **P** **05 00 59.1 +0.1**
KKAR IAmb IAmb 05 01 01.2
comp=Z,7.8nm,1.1s
KKAR Karatay Array 50.81 299 P **P** **05 00 59.1 +0.1**
KKAR pmax pmax
comp=Z,8.0nm,1.1s
POKR Poker Plat Res 50.91 32 IAmb IAmb 05 01 04.3
comp=Z,8.1nm,0.8s
ILAR Eielson Array 51.17 32 P **P** **05 01 01.9 +0.6**
comp=Z,2.3nm,0.7s,baz=277,slow=7.5,SNR=26
ILAR LR LR 05 22 36.9
comp=Z,156nm,21.5s,baz=266,slow=36
comp=Z,2.3nm,0.7s
BTK Batken 51.54 295 P **P** **05 01 05.4 +0.8**
BTK IAmb IAmb 05 01 07.0
comp=Z,7.9nm,1.2s
BTK Batken 51.54 295 P **P** **05 01 05.4 +0.8**
BTK pmax pmax
comp=Z,8.0nm,1.2s
L26K Log Cabin Wild 52.95 34 IAmb IAmb 05 01 17.9
comp=Z,6.1nm,1.1s
M26K Nabesna, AK 53.21 35 IAmb IAmb 05 01 20.0
comp=Z,5.4nm,0.9s
SVE Sverdlovsk 53.46 318 *eP* **P** **05 01 18.6 +0.2**
SVE pmax pmax
comp=Z,12nm,1.1s
L27K Beaver Creek, 53.62 34 IAmb IAmb 05 01 23.1
comp=Z,5.3nm,1.0s
M27K Edge Creek, AK 53.73 35 IAmb IAmb 05 01 28.0
comp=Z,11nm,1.1s
ARU Arti 54.67 318 P **P** **05 01 27.1 -0.1**
ARU IAmb IAmb 05 01 28.7
comp=Z,9.2nm,1.1s
ARU Arti 54.67 318*c i* P **P** **05 01 27.6 +0.4**
ARU 05 02 32.7
ARU S **S** **05 09 08.7 +2.5**
ARU SS **SS** **05 12 47.4 -1.2**
ARU pmax pmax
comp=Z,10.0nm,1.1s
ARU MLR MLR
comp=Z,173nm,16.0s
INK Inuvik 55.84 27 LR LR 05 28 38.8
comp=Z,80nm,20.1s,baz=265,slow=39
INK Inuvik 55.84 27 IAmb IAmb 05 01 38.3
comp=Z,4.1nm,0.9s
ABKAR Akbulak array 55.93 309 P **P** **05 01 35.2 -1.2**
HYT Haines Junctio 56.13 36 IAmb IAmb 05 01 43.1
comp=Z,5.8nm,0.7s

WRAB	**Tennant Creek**	**56.54**	**184**	*i* P		**P**		**05 01 41.9**	**+0.9**
WRAB					pmax	pmax			
	comp=Z,9.0nm,0.9s								
WRA	**Warramunga Arr**	**56.55**	**184**	P		**P**		**05 01 41.7**	**+0.6**
	comp=Z,7.5nm,0.8s,baz=3.9,slow=7.5,SNR=13								
WRA					LR	LR		05 24 09.9	
	comp=Z,130nm,21.4s,baz=52,slow=34								
	comp=Z,7.5nm,0.8s								
WRA	**Warramunga Arr**	**56.55**	**184**	P		**P**		**05 01 41.5**	**+0.4**
WRA	**Warramunga Arr**	**56.55**	**184**	P		**P**		**05 01 41.5**	**+0.4**
WRA					pmax	pmax			
	comp=Z,1.0nm,0.9s								
WR0	**Warramunga Arr**	**56.56**	**184**	P		**P**		**05 01 41.5**	**+0.4**
AKTO	**Aktyubinsk**	**56.73**	**311**	LR		LR		05 26 24.6	
	comp=Z,91nm,20.8s,baz=66,slow=36								
CTA	**Charters Tower**	**57.14**	**171**	LR		LR		05 23 30.3	
	comp=Z,71nm,21.4s,baz=352,slow=33								
KIRV	**Kirov**	**58.73**	**322**	*e*P		**P**		**05 01 57.7**	**+1.7**
PRGR	**Permogore**	**59.41**	**326**	*e*P		**P**		**05 02 00.3**	**-0.4**
PALK	**Pallekele**	**59.60**	**255**	LR		LR		05 29 05.0	
	comp=Z,81nm,20.6s,baz=166,slow=37								
SPITS	**Spitsbergen Ar**	**60.19**	**348**	LR		LR		05 28 27.1	
	comp=Z,143nm,19.8s,baz=8.5,slow=36								
ASAR	**Alice Springs**	**60.27**	**184**	P		**P**		**05 02 07.2**	**+0.1**
ASAR	**Alice Springs**	**60.27**	**184**	P		**P**		**05 02 07.2**	**+0.1**
GEYT	**Alibeck**	**61.48**	**298**	LR		LR		05 29 12.4	
	comp=Z,100nm,18.7s,baz=40,slow=36								
BELG	**Belogornoye**	**62.04**	**316**	LR		LR		05 29 06.1	
	comp=Z,66nm,20.0s,baz=309,slow=36								
KLMR	**Klimovskoe**	**62.43**	**327**	*e*P		**P**		**05 02 18.2**	**-3.0**
KLMR					pmax	pmax			
	comp=Z,5.0nm,1.2s								
KLMR	**Klimovskoe**	**62.43**	**327**	*e*P		**P**		**05 02 18.3**	**-3.0**
KLMR					AMP			05 02 20.6	
	comp=Z,5.0nm,1.2s								
ARCES	**ARCESS Array B**	**63.20**	**339**	P		**P**		**05 02 26.5**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=47,slow=8.9,SNR=9.7								
ARCES					LR	LR		05 33 08.8	
	comp=Z,182nm,19.4s,baz=50,slow=39								
	comp=Z,1.0nm,0.5s								
ARCES	**ARCESS Array B**	**63.20**	**339**	IAmb		IAmb		05 02 54.5	
	comp=Z,9.3nm,1.4s								
RES	**Resolute Bay**	**63.49**	**14**	LR		LR		05 33 36.1	
	comp=Z,110nm,18.2s,baz=337,slow=39								
BBB	**Bella Bella**	**64.15**	**43**	LR		LR		05 31 10.8	
	comp=Z,53nm,19.8s,baz=238,slow=37								
DZM	**Mont Dzumac**	**64.45**	**151**	LR		LR		05 26 54.6	
	comp=Z,104nm,21.7s,baz=353,slow=32								
DZM	**Mont Dzumac**	**64.45**	**151**	*e*LR		LR		05 21 50.2	
	comp=Z,234nm,24.3s								
YKA	**Yellowknife Ar**	**65.38**	**29**	P		**P**		**05 02 41.3**	**+0.7**
	comp=Z,1.2nm,0.8s,baz=305,slow=6.4,SNR=12								
	comp=Z,1.2nm,0.8s								
YKA	**Yellowknife Ar**	**65.38**	**29**	P		**P**		**05 02 42.1**	**+1.5**
YKA	**Yellowknife Ar**	**65.38**	**29**	*ce*P		**P**		**05 02 41.0**	**+0.4**
YKA					pmax	pmax			
	comp=Z,1.0nm,0.8s								
OBN	**Obninsk**	**66.58**	**322**	*e*P		**P**		**05 02 48.7**	**+0.3**
OBN					pmax	pmax			
	comp=Z,4.0nm,0.8s								
OBN					MLR	MLR			
	comp=Z,102nm,14.0s								
VORR	**Voronezh**	**66.98**	**318**	*e*P		**P**		**05 02 52.4**	**+1.3**
FIA1	**FINESS Array S**	**67.68**	**331**	P		**P**		**05 02 55.8**	**+0.4**
FIA1					IAmb	IAmb		05 02 57.7	
	comp=Z,6.6nm,0.9s								
FINES	**FINESS Array B**	**67.68**	**331**	P		**P**		**05 02 54.8**	**-0.6**
	comp=Z,4.1nm,0.8s,baz=71,slow=6.9,SNR=15								
	comp=Z,4.1nm,0.8s								
FINES	**FINESS Array B**	**67.68**	**331**	*ce*P		**P**		**05 02 55.0**	**-0.4**
FINES					pmax	pmax			
	comp=Z,4.0nm,0.8s								
WSAR	**Wadi Sarin**	**68.22**	**283**	LR		LR		05 34 21.8	
	comp=Z,63nm,21.6s,baz=96,slow=37								
STKA	**Stephens Creek**	**68.42**	**177**	LR		LR		05 33 16.1	
	comp=Z,61nm,20.2s,baz=21,slow=36								
KBZ	**Khabaz**	**68.90**	**309**	*d* P		**P**		**05 03 05.0**	**+1.7**
KBZ					pmax	pmax			
	comp=Z,5.0nm,1.1s								
KIV	**Kislovodsk**	**68.92**	**310**	P		**P**		**05 03 04.8**	**+1.3**
KIV					IAmb	IAmb		05 03 07.6	
	comp=Z,5.8nm,0.8s								
KIV	**Kislovodsk**	**68.92**	**310**	*e* P		**P**		**05 03 05.6**	**+2.0**
KIV				*e*				05 05 33.8	
KIV					pmax	pmax			
	comp=Z,8.0nm,1.0s								
KIV					MLR	MLR			
	comp=Z,107nm,18.0s								
AFI	**Afiamalu**	**69.19**	**127**	LR		LR		05 34 43.8	
	comp=Z,43nm,18.7s,baz=68,slow=37								
GNI	**Garni**	**69.58**	**305**	LR		LR		05 35 36.2	
	comp=Z,117nm,19.2s,baz=84,slow=38								
SUMG	**Summit**	**70.88**	**359**	P		**P**		**05 03 16.4**	**+0.9**
SUMG	**Summit**	**70.88**	**359**	P		**P**		**05 03 16.4**	**+0.9**
SUMG					pmax	pmax			
	comp=Z,10.0nm,1.2s								
SUMG	**Summit**	**70.88**	**359**	*i* P		**P**		**05 03 16.0**	**+0.5**
B08A	**Colville Reser**	**70.94**	**43**	P		**P**		**05 03 16.7**	**+0.9**
B08A					IAmb	IAmb		05 03 22.1	
	comp=Z,6.3nm,1.2s								
GURO	**Guroymak-BITLI**	**72.20**	**305**	P		**P**		**05 03 24.8**	**+1.1**
GURO					IAmb	IAmb		05 03 26.7	
	comp=Z,5.6nm,1.1s								
PABE	**Paberze**	**72.23**	**327**	P		**P**		**05 03 23.4**	**+0.1**
AKASG	**Malin Array Be**	**72.73**	**321**	P		**P**		**05 03 26.1**	**-0.4**
	comp=Z,1.2nm,0.5s,baz=46,slow=8.0,SNR=10								
	comp=Z,1.2nm,0.5s								
AKASG	**Malin Array Be**	**72.73**	**321**	*ce*P		**P**		**05 03 26.7**	**+0.2**
AKASG					pmax	pmax			
	comp=Z,1.0nm,0.5s								
NB2	**NORSAR Subarra**	**73.28**	**336**	P		**P**		**05 03 29.0**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=41,slow=6.2								
NOA	**NORSAR Array B**	**73.28**	**336**	P		**P**		**05 03 29.3**	**-0.3**
	comp=Z,1.9nm,0.7s,baz=42,slow=6.0,SNR=13								
NOA					LR	LR		05 40 11.5	
	comp=Z,83nm,18.1s,baz=45,slow=40								
	comp=Z,1.9nm,0.7s								
F10A	**Beach Ranch, E**	**73.49**	**45**	P		**P**		**05 03 33.2**	**+2.1**
F10A					IAmb	IAmb		05 03 37.2	
	comp=Z,4.1nm,1.0s								
MARD	**Mardin**	**73.71**	**304**	P		**P**		**05 03 33.0**	**+0.3**
BMO	**Blue Mountains**	**74.10**	**46**	P		**P**		**05 03 35.9**	**+1.1**
BMO	**Blue Mountains**	**74.10**	**46**	P		**P**		**05 03 35.9**	**+1.1**
BMO					pmax	pmax			
	comp=Z,3.0nm,0.9s								
FCC	**Fort Churchill**	**75.41**	**25**	P		**P**		**05 03 42.5**	**+0.5**
FCC					IAmb	IAmb		05 03 45.3	
	comp=Z,4.8nm,1.0s								
FCC	**Fort Churchill**	**75.41**	**25**	P		**P**		**05 03 42.5**	**+0.5**
FCC					pmax	pmax			
	comp=Z,5.0nm,1.0s								
MFID	**Camas Ranch**	**75.81**	**46**	P		**P**		**05 03 45.8**	**+1.0**
BNN	**Bunyan**	**76.02**	**308**	P		**P**		**05 03 46.6**	**+0.6**
EGMT	**Eagleton**	**76.25**	**40**	P		**P**		**05 03 48.0**	**+0.9**
BOZ	**Bozeman (W)**	**76.81**	**43**	IAmb		IAmb		05 03 55.5	
	comp=Z,3.5nm,0.8s								
BR131	**Keskin Array S**	**76.88**	**310**	P		**P**		**05 03 50.4**	**-0.5**
BR131	**Keskin Array S**	**76.88**	**310**	P		**P**		**05 03 50.4**	**-0.5**
BR131					pmax	pmax			
	comp=Z,12nm,1.2s								
BRTR	**Keskin Array B**	**76.88**	**310**	P		**P**		**05 03 51.9**	**+0.9**
	comp=Z,4.0nm,1.0s,baz=74,slow=4.4,SNR=13								
	comp=Z,4.0nm,1.0s								
BRTR	**Keskin Array B**	**76.88**	**310**	P		**P**		**05 03 50.5**	**-0.5**
BRTR	**Keskin Array B**	**76.88**	**310**	*ce*P		**P**		**05 03 51.4**	**+0.5**
BRTR					pmax	pmax			
	comp=Z,5.0nm,1.0s								
DY2G	**Dye2**	**76.99**	**2**	*i* P		**P**		**05 03 51.3**	**+0.2**
OJC	**Ojcow**	**77.63**	**325**	*e*P		**P**		**05 03 55.6**	**+0.8**
OJC	**Ojcow**	**77.63**	**325**	IAmb		IAmb		05 03 57.2	
	comp=Z,6.7nm,0.9s								
NIE	**Niedzica**	**77.95**	**324**	*e*P		**P**		**05 03 57.3**	**+0.7**
HVU	**Hansel Valley**	**78.60**	**46**	IAmb		IAmb		05 04 07.5	
	comp=Z,8.5nm,1.0s								
OKC	**Ostrava-Krasne**	**78.66**	**325**	AMS		AMS		05 42 50.0	
	comp=Z,200nm,13.9s								
KSP	**Ksiaz**	**78.78**	**327**	*e*P		**P**		**05 04 02.1**	**+1.0**
MORC	**Moravsky Berou**	**78.98**	**325**	P		**P**		**05 04 03.2**	**+0.9**
MORC					IAmb	IAmb		05 04 05.1	
	comp=Z,6.7nm,1.1s								
MORC	**Moravsky Berou**	**78.98**	**325**	P		**P**		**05 04 03.2**	**+0.9**
MORC					pmax	pmax			
	comp=Z,7.0nm,1.1s								
MORC	**Moravsky Berou**	**78.98**	**325**	*e*P		**P**		**05 04 03.5**	**+1.2**
OSTC	**Ostas**	**79.02**	**326**	AMS		AMS		05 41 40.0	
	comp=Z,200nm,13.4s								
CHVC	**Chvalec**	**79.07**	**327**	AMS		AMS		05 43 10.0	
	comp=Z,200nm,12.7s								
KRLC	**Kraliky**	**79.12**	**326**	*e*P		**P**		**05 04 04.0**	**+1.0**
KRLC					MLR	MLR			
	comp=Z,100nm,14.9s								
KRLC	**Kraliky**	**79.12**	**326**	*e*P		**P**		**05 04 04.0**	**+1.0**
KRLC					AMS	AMS		05 41 50.0	
	comp=Z,100nm,14.9s								
DPC	**Dobruska-Polom**	**79.12**	**326**	*e*P		**P**		**05 04 03.4**	**+0.3**
DPC					MLR	MLR			
	comp=Z,200nm,14.4s								
DPC	**Dobruska-Polom**	**79.12**	**326**	*e*P		**P**		**05 04 03.4**	**+0.3**
DPC					AMS	AMS		05 39 30.0	
	comp=Z,200nm,14.4s								
UPC	**Upice**	**79.15**	**327**	AMS		AMS		05 43 20.0	
	comp=Z,200nm,15.1s								
VRAC	**Vranov**	**79.75**	**325**	*e*P		**P**		**05 04 07.9**	**+1.5**
PDAR	**Pinedale Array**	**79.78**	**44**	P		**P**		**05 04 08.2**	**+1.2**
	comp=Z,1.9nm,0.7s,baz=302,slow=2.1,SNR=21								
	comp=Z,1.9nm,0.7s								
BRG	**Berggiesshubel**	**79.78**	**328**	*e*P		**P**		**05 04 07.4**	**+0.8**
BRG					Amp			05 04 11.0	
	comp=Z,6.1nm,1.3s								
BRG	**Berggiesshubel**	**79.78**	**328**	*e*P		**P**		**05 04 07.4**	**+0.8**
BRG					pmax	pmax			
	comp=Z,6.0nm,1.3s								
CLL	**Collm**	**79.86**	**328**	IAmb		IAmb		05 04 09.2	
	comp=Z,7.1nm,1.0s								
CLL	**Collm**	**79.86**	**328**	*i* P		**P**		**05 04 07.4**	**+0.4**
CLL					pmax	pmax			
	comp=Z,9.0nm,1.1s								
CLL	**Collm**	**79.86**	**328**	*i* P		**P**		**05 04 07.4**	**+0.4**
	comp=Z,9.0nm,1.1s								
CLL					LmH			05 36 00.0	
	comp=N,100nm,18.1s								
CLL					LmH			05 36 00.0	
	comp=E,200nm,19.8s								
CLL					LmV			05 38 00.0	
	comp=Z,100nm,19.2s								
CLL					LmV			05 59 00.0	
	comp=Z,100nm,20.8s								
KRUC	**Moravsky**	**80.02**	**325**	*e*P		**P**		**05 04 07.9**	**0.0**
MODS	**Modra-Piesok**	**80.11**	**324**	*e*P		**P**		**05 04 12.2**	**+3.8**
MODS	**Modra-Piesok**	**80.11**	**324**	*e*P		**P**		**05 04 12.2**	**+3.8**
PRU	**Pruhonice**	**80.17**	**327**	AMS		AMS		05 43 00.0	
	comp=Z,200nm,13.6s								
SHPR	**Sheep Range**	**80.48**	**51**	P		**P**		**05 04 10.2**	**-0.6**
NKC	**Novy Kostel**	**80.90**	**328**	AMS		AMS		05 43 10.0	
	comp=Z,200nm,17.7s								
MOX	**Moxa**	**80.94**	**329**	P		**P**		**05 04 13.8**	**+1.0**
MOX					pmax	pmax			
	comp=Z,4.0nm,1.1s								
RONA	**Rosalia, Austr**	**81.05**	**324**	*i* P		**P**		**05 04 14.5**	**+1.0**
	comp=Z,7.2nm,1.2s								
CONA	**Conrad Observa**	**81.08**	**325**	*e*P		**P**		**05 04 15.6**	**+1.9**
	comp=Z,6.4nm,1.1s								
CKRC	**Cesky Krumlov**	**81.14**	**326**	*e*P		**P**		**05 04 14.7**	**+0.8**
CKRC					AMS	AMS		05 42 50.0	
	comp=Z,200nm,15.6s								
KHC	**Kasperske Hory**	**81.23**	**327**	IAmb		IAmb		05 04 17.2	
	comp=Z,4.6nm,0.8s								
KHC	**Kasperske Hory**	**81.23**	**327**	*e*P		**P**		**05 04 14.6**	**+0.2**
KHC					MLR	MLR			
	comp=Z,200nm,14.7s								
KHC	**Kasperske Hory**	**81.23**	**327**	*e*P		**P**		**05 04 14.6**	**+0.2**
KHC					AMS	AMS		05 44 50.0	
	comp=Z,200nm,14.7s								
P17A	**Butcher Ranch,**	**81.27**	**47**	IAmb		IAmb		05 04 18.6	
	comp=Z,3.5nm,0.8s								
GEC2	**GERESS Array S**	**81.39**	**326**	IAmb		IAmb		05 04 16.9	
	comp=Z,5.8nm,1.3s								
GERES	**GERESS Array B**	**81.39**	**326**	P		**P**		**05 04 15.1**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=41,slow=4.3,SNR=13								
	comp=Z,1.0nm,0.6s								
GERES	**GERESS Array B**	**81.39**	**326**	P		**P**		**05 04 15.0**	**-0.3**
P18A	**Preston Nutter**	**81.45**	**46**	IAmb		IAmb		05 04 35.9	
	comp=Z,11nm,1.4s								
GRFO	**Grafenberg**	**81.83**	**328**	P		**P**		**05 04 18.5**	**+1.0**
GRFO	**Grafenberg**	**81.83**	**328**	P		**P**		**05 04 18.5**	**+1.0**
GRFO					pmax	pmax			
	comp=Z,9.0nm,0.9s								
MOA	**Molln**	**81.87**	**326**	*e*P		**P**		**05 04 18.8**	**+1.0**
	comp=Z,2.7nm,1.0s								
BIOA	**Bad Ischl, Aus**	**82.28**	**326**	*i* P		**P**		**05 04 20.1**	**+0.2**
	comp=Z,2.4nm,0.7s								
U15A	**North Rim**	**82.31**	**50**	P		**P**		**05 04 22.1**	**+1.4**
U15A					IAmb	IAmb		05 04 25.6	
	comp=Z,5.0nm,1.1s								
SOKA	**Soboth**	**82.38**	**324**	*e*P		**P**		**05 04 20.9**	**+0.3**
	comp=Z,11nm,1.4s								
OBKA	**Obir**	**82.73**	**324**	*e*P		**P**		**05 04 22.6**	**+0.2**
	comp=Z,2.0nm,0.9s								
KBA	**Koelnbreinsper**	**82.86**	**325**	*e*P		**P**		**05 04 24.4**	**+1.2**
	comp=Z,4.7nm,1.2s								
PV23	**Carpenter Ridg**	**82.95**	**47**	IAmb		IAmb		05 04 33.8	
	comp=Z,5.2nm,0.8s								
URZ	**Urewera**	**83.00**	**150**	LR		LR		05 38 41.1	
	comp=Z,36nm,20.4s,baz=31,slow=34								
PHWY	**Pilot Hill**	**83.02**	**43**	P		**P**		**05 04 26.1**	**+1.8**
PHWY					IAmb	IAmb		05 04 35.7	
	comp=Z,6.1nm,1.1s								
MYKA	**Terra Mystica**	**83.06**	**325**	*e*P		**P**		**05 04 24.2**	**+0.1**
	comp=Z,2.2nm,0.5s								
ABTA	**Abfaltersbach**	**83.49**	**326**	*e*P		**P**		**05 04 26.7**	**+0.3**
	comp=Z,3.0nm,0.8s								
WTTA	**Wattenberg**	**83.49**	**326**	*e*P		**P**		**05 04 27.9**	**+1.4**
	comp=Z,3.6nm,0.7s								
CLUD	**Cludinico**	**83.54**	**325**	IAmb		IAmb		05 04 27.6	
	comp=Z,6.8nm,1.0s								
MOTA	**Moosalm**	**83.67**	**327**	*e*P		**P**		**05 04 28.4**	**+1.0**
	comp=Z,5.0nm,0.9s								
RETA	**Reutte**	**83.71**	**327**	*e*P		**P**		**05 04 28.7**	**+1.2**
	comp=Z,7.3nm,1.0s								
SQTA	**Sankt Quirin**	**83.72**	**327**	*i* P		**P**		**05 04 28.4**	**+0.9**
	comp=Z,1.7nm,0.5s								
STAL	**STALIGIAL**	**83.77**	**325**	IAmb		IAmb		05 04 28.2	
	comp=Z,6.4nm,1.1s								
FETA	**Feichten**	**84.08**	**327**	*e*P		**P**		**05 04 30.5**	**+1.1**
	comp=Z,4.5nm,0.9s								
BFO	**Black Forest**	**84.09**	**329**	P		**P**		**05 04 29.5**	**+0.2**
BFO	**Black Forest**	**84.09**	**329**	P		**P**		**05 04 29.5**	**+0.2**
BFO					pmax	pmax			
	comp=Z,7.0nm,0.9s								
DAVA	**Damuels**	**84.24**	**327**	*i* P		**P**		**05 04 30.6**	**+0.3**
	comp=Z,11nm,1.1s								
CTI	**Castel Tesino**	**84.41**	**326**	IAmb		IAmb		05 04 32.3	
	comp=Z,4.8nm,0.9s								
EYMN	**Ely**	**84.79**	**31**	P		**P**		**05 04 32.0**	**-0.9**
EYMN					IAmb	IAmb		05 04 36.0	
	comp=Z,3.9nm,0.8s								
SDCO	**Great Sand Dun**	**85.46**	**45**	P		**P**		**05 04 36.6**	**-0.1**
T25A	**Trinidad**	**86.50**	**45**	IAmb		IAmb		05 04 46.1	
	comp=Z,2.7nm,0.8s								
PPT	**Papeete**	**87.06**	**114**	LR		LR		05 40 55.6	
	comp=Z,98nm,18.4s,baz=102,slow=34								
PPT2	**Papeete2**	**87.07**	**114**	*e*LR		LR		05 32 18.3	
	comp=Z,116nm,21.8s								
TBI	**Tubuai**	**90.84**	**119**	*e*LR		LR		05 34 04.5	
	comp=Z,127nm,23.8s								
S39A	**Bolivar**	**92.02**	**38**	P		**P**		**05 05 07.3**	**-0.3**
S39A					IAmb	IAmb		05 05 09.6	
	comp=Z,2.7nm,0.9s								
TX32	**Lajitas Array**	**92.44**	**50**	IAmb		IAmb		05 05 13.0	
	comp=Z,2.2nm,0.9s								
TXAR	**Lajitas Array**	**92.44**	**50**	P		**P**		**05 05 11.3**	**+1.5**
	comp=Z,1.7nm,0.8s,baz=293,slow=3.8,SNR=19								
	comp=Z,1.7nm,0.8s								
TXAR	**Lajitas Array**	**92.44**	**50**	P		**P**		**05 05 11.0**	**+1.3**
KMBO	**Kilima Mbogo**	**99.23**	**276**	LR		LR		05 53 16.1	
	comp=Z,43nm,18.2s,baz=96,slow=37								
LPAZ	**La Paz**	**149.16**	**55**	PKPbc		**PKiKP**		**05 11 49.8**	**+0.3**
	comp=Z,3.8nm,0.9s,baz=236,slow=3.9,SNR=12								
LPAZ	**La Paz**	**149.16**	**55**	PKPbc		**PKiKP**		**05 11 49.2**	**-0.3**

DJA 25 04:54:35.7±0.3, 11°S±3°×12°4E±°, h10km, M4.0/11, mb4.3/6, MLv3.9/11, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**0.31**	**19**	P	Pg	04 54 41.7	-0.2
SOEI	**Soe**	**1.02**	**43**	P	Pn	04 54 56.4	+0.3
MMRI	**Maumere**	**2.27**	**325**	P	Pn	04 55 13.7	+0.5
EDFI	**Ende, Flores**	**2.54**	**313**	P	Pn	04 55 16.3	-0.7
WBSI	**Waikabubak, Su**	**4.19**	**281**	P	Pn	04 55 40.2	+0.4
PLAI	**Plampang**	**5.94**	**286**	P	Pn	04 56 03.6	-0.2
	0.2nm32nm,0.8s						
TWSI	**Taliwang, Sumb**	**6.81**	**284**	P	Pn	04 56 16.1	+0.3
	0.1nm11nm,0.7s						

*ISK **25** 05:12:40.9, 38°.76N×26°.42E, h7km, ML3.0/17*
*DDA **25** 05:12:41.3±0.0, 38°.73N×26°.43E, h11km±4km, ML3.1*
*THE **25** 05:12:42.8, 38°.74N×26°.35E, h19km±1km, ML2.9/7, Error ellipse: s-maj=2.4km s-min=0.5km az=269.0*
*ATH **25** 05:12:42.9, 38°.74N×26°.43E, h15km±5km, ML3.0/4, Error ellipse: s-maj=6.0km s-min=1.4km az=282.0*

ISC 25 05:12:42.0±0.9, 38.76N±0.02×26.44E±0.02, h10km±8km, n50, σ0.965/82, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FOCM	**Foa**	**0.23**	**100**	PG	**Pg**	**05 12 46.6**	**-0.2**
FOCM				SG	**Sg**	**05 12 50.4**	**+0.4**
URLA	**Izmir**	**0.41**	**163**	PG	**Pg**	**05 12 49.3**	**-0.8**
URLA				SG	**Sg**	**05 12 55.9**	**+0.3**
URLA	**Izmir**	**0.41**	**163**	P	**Pg**	**05 12 49.4**	**-0.7**
URLA				S	**Sg**	**05 12 55.5**	**0.0**
URLA				*i* AML	AML	05 12 56.0	
	comp=E,1μm,0.4s						
CHOS	**Chios island**	**0.48**	**220**	P	**Pg**	**05 12 51.3**	**0.0**
CHOS				S	**Sg**	**05 12 57.8**	**+0.2**
CHOS				AML	AML	05 13 00.6	
	comp=E,3085μm,0.4s						
CHOS				AML	AML	05 13 01.7	
	comp=N,2571μm,0.5s						
CHOS	**Chios island**	**0.48**	**220**	P	**Pg**	**05 12 51.3**	**0.0**
CHOS				S	**Sg**	**05 12 57.8**	**+0.2**
	comp=N,1μm,0.4s						
DKL	**Dikili**	**0.48**	**49**	PG	**Pg**	**05 12 50.8**	**-0.6**
DKL				SG	**Sb**	**05 12 58.4**	**-1.2**
PRK	**Paraskevi**	**0.51**	**345**	P	**Pb**	**05 12 53.0**	**0.0**
PRK				S	**Sb**	**05 13 00.7**	**+0.3**
PRK				AML	AML	05 13 04.5	
	comp=N,5180μm,0.4s						
PRK				AML	AML	05 13 04.8	
	comp=E,5280μm,0.4s						
PRK	**Paraskevi**	**0.51**	**345**	P	**Pb**	**05 12 53.0**	**0.0**
PRK				S	**Sb**	**05 13 00.7**	**+0.3**
	comp=E,3μm,0.4s						
ZEYE	**Izmir, Urla-Ze**	**0.52**	**175**	P	**Pg**	**05 12 50.7**	**-1.4**
ZEYE				S	**Sg**	**05 12 59.3**	**+0.4**
ZEDA	**zmir-Bergama**	**0.54**	**67**	P	**Pg**	**05 12 52.2**	**-0.3**
AYVA	**Ayvalik**	**0.59**	**19**	P	**Pg**	**05 12 53.3**	**-0.1**
AYVA				S	**Sg**	**05 13 01.1**	**0.0**
SIGR	**SIGRI**	**0.65**	**315**	P	**Pg**	**05 12 54.9**	**+0.4**
SIGR				S	**Sg**	**05 13 03.4**	**+0.4**
	comp=E,1μm,0.3s						
PSRA	**Psara**	**0.72**	**253**	P	**Pb**	**05 12 57.1**	**+0.5**
PSRA				S	**Sb**	**05 13 06.7**	**+0.2**
PSRA				AML	AML	05 13 09.1	
	comp=N,3106μm,0.4s						
PSRA				AML	AML	05 13 09.4	
	comp=E,6251μm,0.4s						
DGB	**zmir**	**0.78**	**154**	P	**Pg**	**05 12 55.7**	**-1.4**
DGB				S	**Sg**	**05 13 06.8**	**-0.5**
KOCA	**Canakkale, Ayv**	**0.78**	**343**	P	**Pg**	**05 12 57.2**	**+0.1**
KOCA				S	**Sb**	**05 13 08.8**	**+0.5**
KOCA				*i* AML	AML	05 13 11.0	
	comp=E,1μm,0.4s						
KOCA				*i* AML	AML	05 13 18.0	
	comp=E,415nm,0.5s						
BUHA	**Balikesir, Bur**	**0.89**	**33**	P	**Pg**	**05 12 59.0**	**-0.3**
BUHA				S	**Sn**	**05 13 13.3**	**-0.3**
BUHA				*i* AML	AML	05 13 15.0	
	comp=E,591nm,0.7s						
BUHA				*i* AML	AML	05 13 17.0	
	comp=E,424nm,0.9s						
BAYC	**CANAKKALE_Bayr**	**0.99**	**5**	P	**Pg**	**05 13 00.7**	**-0.4**
BAYC				S	**Sb**	**05 13 15.0**	**+0.7**
BAYC				*i* AML	AML	05 13 17.0	
	comp=E,494nm,0.6s						
BAYC				*i* AML	AML	05 13 17.0	
	comp=E,363nm,0.3s						
EZN	**Ezine**	**1.07**	**355**	P	**Pg**	**05 13 01.9**	**-0.8**
EZN				S	**Sg**	**05 13 16.5**	**-0.1**
	comp=E,682nm,0.5s						
EZN	**Ezine**	**1.07**	**355**	PG	**P

ANVS				⇑*i*S		**Sg**	05 15 00.1	+0.1
	baz=0.0							
SATY	**Saty**	**0.45**	**79**	*e*P		**Pg**	05 15 00.7	+0.2
	13nm,0.1s							
SATY				*e*S		**Sb**	05 15 06.9	-0.6
	222nm,0.1s							
SATY	**Saty**	**0.45**	**79**	P		**Pg**	05 15 00.7	+0.2
	13nm,0.1s							
SATY				S		**Sb**	05 15 06.9	-0.6
	222nm,0.1s							
KOTS	**Kotyrbulak**	**0.57**	**298**	*e*P		**Pg**	05 15 02.9	+0.2
	4.6nm,0.1s							
KOTS				*e*S		**Sg**	05 15 10.7	+0.4
	46nm,0.3s							
KOTS	**Kotyrbulak**	**0.57**	**298**	P		**Pg**	05 15 02.9	+0.2
	4.6nm,0.1s							
KOTS				S		**Sg**	05 15 10.7	+0.4
	46nm,0.3s							
KURS	**Kuram**	**0.58**	**28**	⇓*i*P		**Pb**	05 15 03.5	+0.3
	4.8nm,0.1s							
KURS				⇓*i*S		**Sb**	05 15 11.6	+0.4
	28nm,0.6s							
KURS	**Kuram**	**0.58**	**28**	P		**Pb**	05 15 03.5	+0.3
	4.8nm,0.1s							
KURS				S		**Sb**	05 15 11.6	+0.4
	28nm,0.6s							
TNSS	**Tian-Shan**	**0.63**	**276**	*e*P		**Pg**	05 15 03.5	-0.4
	4.6nm,0.1s							
TNSS				*e*S		**Sg**	05 15 11.8	-0.6
	16nm,0.1s							
TNSS	**Tian-Shan**	**0.63**	**276**	P		**Pg**	05 15 03.5	-0.4
	4.6nm,0.1s							
TNSS				S		**Sg**	05 15 11.8	-0.6
	16nm,0.1s							
PRZ	**Przheval'sk**	**0.66**	**138**	⇑*i*P		**Pg**	05 15 04.4	0.0
	baz=32							
PRZ				⇑*i*S		**Sg**	05 15 13.8	+0.6
	baz=32							
KPKS	**Kokpek**	**0.81**	**52**	*e*P		**Pg**	05 15 07.2	0.0
	7.4nm,0.1s							
KPKS				⇓*i*S		**Sg**	05 15 18.1	+0.1
	40nm,0.3s							
KPKS	**Kokpek**	**0.81**	**52**	P		**Pg**	05 15 07.2	0.0
	7.4nm,0.1s							
KPKS				S		**Sg**	05 15 18.1	+0.1
	40nm,0.3s							
KDJ	**Kajisay**	**0.96**	**209**	⇑*e*P		**Pb**	05 15 09.2	-0.5
	baz=7.0							
KDJ				⇑*i*S		**Sb**	05 15 21.5	-0.7
	baz=7.0							
MTBS	**Maitube**	**1.02**	**279**	*e*P		**Pb**	05 15 10.4	-0.2
	2.8nm,0.1s							
MTBS				*e*S		**Sb**	05 15 23.6	-0.1
	14nm,0.2s							
MTBS	**Maitube**	**1.02**	**279**	P		**Pb**	05 15 10.4	-0.2
	2.8nm,0.1s							
MTBS				S		**Sb**	05 15 23.6	-0.1
	14nm,0.2s							
CHKK	**Chushkaly**	**1.06**	**326**	*e*P		**Pn**	05 15 11.6	+0.1
	8.6nm,0.1s							
CHKK				*e*S		**Sn**	05 15 25.7	-0.3
	84nm,0.1s							
CHKK	**Chushkaly**	**1.06**	**326**	P		**Pn**	05 15 11.6	+0.1
	8.6nm,0.1s							
CHKK				S		**Sn**	05 15 25.7	-0.3
	84nm,0.1s							
KTBS	**Karatobe**	**1.10**	**312**	*e*P		**Pn**	05 15 12.2	+0.1
	15nm,0.1s							
KTBS				*e*S		**Sn**	05 15 26.7	-0.3
	62nm,0.1s							
KTBS	**Karatobe**	**1.10**	**312**	P		**Pn**	05 15 12.2	+0.1
	15nm,0.1s							
KTBS				S		**Sn**	05 15 26.7	-0.3
	62nm,0.1s							
BLB	**Baldybastay**	**1.23**	**23**	*e*P		**Pg**	05 15 14.5	-0.6
	25nm,0.2s							
BLB				*e*S		**Sg**	05 15 30.7	-0.4
	57nm,0.3s							
BLB	**Baldybastay**	**1.23**	**23**	P		**Pg**	05 15 14.5	-0.6
	25nm,0.2s							
BLB				S		**Sg**	05 15 30.7	-0.4
	57nm,0.3s							
ARXS	**Arharly**	**1.24**	**1**	*e*P		**Pg**	05 15 14.8	-0.5
	14nm,0.2s							
ARXS				*e*S		**Sg**	05 15 31.4	-0.1
	81nm,0.1s							
ARXS	**Arharly**	**1.24**	**1**	P		**Pg**	05 15 14.8	-0.5
	14nm,0.2s							
ARXS				S		**Sg**	05 15 31.4	-0.1
	81nm,0.1s							
TARG	**Taragay, Kyrgy**	**1.24**	**180**	⇓*i*P		**Pn**	05 15 14.4	0.0
	baz=78							
TARG				⇓*i*S		**Sb**	05 15 30.4	-0.1
	baz=78							
PDGK	**Podgornoye**	**1.29**	**73**	P		**Pb**	05 15 15.3	+0.1
	1.2nm,0.2s							
PDGK				S		**Sg**	05 15 32.1	-0.9
	3.0nm,0.1s							
PDGK	**Podgornoye**	**1.29**	**73**	⇑P		**Pg**	05 15 16.0	-0.2
	1.6nm,0.5s							
PDGK				⇓S		**Sn**	05 15 31.6	0.0
	3.7nm,0.5s							
KST	**Kastek**	**1.35**	**274**	*e*P		**Pb**	05 15 16.3	0.0
	3.7nm,0.3s							
KST				*e*S		**Sb**	05 15 33.8	+0.4
	9.9nm,0.3s							
KST	**Kastek**	**1.35**	**274**	P		**Pb**	05 15 16.3	0.0
	3.7nm,0.3s							
KST				S		**Sb**	05 15 33.7	+0.4
	9.9nm,0.3s							
ULHL	**Ulahol**	**1.36**	**238**	⇑*i*P		**Pn**	05 15 15.9	+0.1
	baz=39							
ULHL				⇑*e*S		**Sn**	05 15 33.2	-0.4
	baz=39							
KUU	**Kurty**	**1.41**	**311**	*e*P		**Pb**	05 15 17.4	+0.2
	8.6nm,0.2s							
KUU				*e*S		**Sg**	05 15 35.8	-1.0
	18nm,0.1s							
KUU	**Kurty**	**1.41**	**311**	P		**Pb**	05 15 17.4	+0.2
	8.6nm,0.2s							
KUU				S		**Sg**	05 15 35.8	-1.0
	18nm,0.1s							
BOOM	**Boomskoye usch**	**1.45**	**251**	⇓*e*P		**Pn**	05 15 17.7	+0.6
	baz=52							
BOOM				⇓*e*S		**Sn**	05 15 36.2	+0.4
	baz=52							
DGS	**Degeres**	**1.51**	**281**	*e*P		**Pb**	05 15 19.1	+0.1
	4.2nm,0.2s							
DGS				*e*S		**Sb**	05 15 38.6	+0.7
	15nm,0.2s							
DGS	**Degeres**	**1.51**	**281**	P		**Pb**	05 15 19.1	+0.1
	4.2nm,0.2s							
DGS				S		**Sb**	05 15 38.6	+0.7
	15nm,0.2s							
TKM2	**Tokmak 2**	**1.62**	**269**	⇑*e*P		**Pb**	05 15 20.6	-0.3
	baz=70							
TKM2				⇑*e*S		**Sb**	05 15 41.6	+0.4
	baz=70							
TKM2	**Tokmak 2**	**1.62**	**269**	⇓P		**Pb**	05 15 20.8	-0.2
	1.1nm,0.5s							
TKM2				⇑S		**Sg**	05 15 43.0	-0.6
	19nm,0.6s							
KRBS	**Karabastau**	**1.71**	**296**	*e*P		**Pb**	05 15 22.4	0.0
	3.3nm,0.2s							
KRBS				*e*S		**Sb**	05 15 44.4	+0.7
	17nm,0.1s							
KRBS	**Karabastau**	**1.71**	**296**	P		**Pb**	05 15 22.4	0.0
	3.3nm,0.2s							
KRBS				S		**Sb**	05 15 44.4	+0.7
	17nm,0.1s							
CHMS	**Chumysh**	**2.24**	**272**	⇑Pg		**Pb**	05 15 30.9	-0.5
	2.4nm,0.7s							
CHMS				⇑Lg		Lg	05 16 01.5	
	5.9nm,0.5s							
UCH	**Uchtor**	**2.54**	**254**	⇓*i*P		**Pn**	05 15 33.5	+1.3
	baz=55							
UCH				⇓*e*S		**Sn**	05 16 04.0	+1.0
	baz=55							
KK31	**Karatay Array**	**5.34**	**274**	⇑Lg		Lg	05 17 40.5	
	0.3nm,0.2s,baz=85,slow=27,SNR=3.7							

MOS ***25*** *05:40:10.6±1.6, 40°.78N×29°.32E, h12km, mb4.3/9, Error ellipse: s-maj=6.1km s-min=3.8km az=85.6*
MED_RC ***25*** *05:40:11.0±0.9, 40°.66N×29°.25E, h16km±3km, MW4.2/9, Moment Tensor Solution.Mantle waves: s9,c10; Duration: 1⇕0 Moment tensor: Scale 10^{15}Nm; M_{rr}0.02±.25;*

$M_{\theta\theta}$-0.20±.26; $M_{\phi\phi}$0.18±.22; $M_{r\theta}$-0.25±.39; $M_{r\phi}$-2.06±.27; $M_{\theta\phi}$-0.31±.97; Best double couple: M_o2.10000×10^{15} NP1:ϕ_{s1}2.00000°, δ84.00000°, λ-9.00000°. NP2: ϕ_{s2}93.00000°, δ81.00000°, λ-174.00000°. Principal axes: T 2.0600, Plg2.0000°, Azm48.0000°; N 0.0900, Plg80.0000°, Azm148.0000°; P -2.1500, Plg10.0000°, Azm317.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.

IDC ***25*** *05:40:11.4±0.8, 40°.69N×29°.20E, h0km, mb3.9/14, mbtmp4.0/20, ML4.0/6, MS3.3/15 Error ellipse: s-maj=14.1km s-min=7.8km az=36.0*

ISK ***25*** *05:40:11.9, 40°.71N×29°.21E, h9km, ML4.5/33*

DDA ***25*** *05:40:11.8±0.0, 40°.70N×29°.20E, h10km±1km, MW4.2*

NEIC ***25*** *05:40:12.9±1.9, 40°.71N±0°.05×29°.23E±0°.04, h9km±6km, Error ellipse: s-maj=8.3km s-min=2.6km az=202.0*

IASPEI ***25*** *05:40:12.2±0.8, 40°.71N±0°.02×29°.22E±0°.02, h9km±5km, mb4.0/23, MS3.2/6, Error ellipse: s-maj=2.8km s-min=2.2km az=53.1, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*

ISC 25 05:40:12.2±0.7, 40°.71N±0°.01×29°.23E±0°.01, h10km±4km, n294,σ1⇕52/348, mb4.0/23, MS3.2/6, 46C-18D, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
CFTB	**Yalova**	**0.07**	**132**		PG	**Pg**	05 40 14.6	+0.2
CFTB					SG	**Sg**	05 40 16.3	+0.2
TRML	**Termal-Yalova**	**0.11**	**202**		PG	**Pg**	05 40 15.0	+0.1
KURT	**Yalova, Merkez**	**0.12**	**187**		P	**Pg**	05 40 14.1	-1.0
KURT					S	**Sg**	05 40 15.8	-1.4
TSVK	**Tesvikiye-Yalo**	**0.14**	**232**		PG	**Pg**	05 40 15.3	0.0
YLV	**Yalova**	**0.18**	**143**		PG	**Pg**	05 40 16.3	+0.2
YLV					SG	**Sg**	05 40 19.5	+0.7
YLV	**Yalova**	**0.18**	**143**		P	**Pg**	05 40 16.1	0.0
YLV					S	**Sg**	05 40 19.3	+0.5
GEMT	**Gemlik**	**0.28**	**186**		PG	**Pg**	05 40 17.8	0.0
GEMT					SG	**Sg**	05 40 21.7	+0.1
ARMT	**Armutlu**	**0.32**	**242**		PG	**Pg**	05 40 18.2	-0.3
ARMT					SG	**Sg**	05 40 22.9	+0.2
KAVV	**Kandilli-Istan**	**0.37**	**340**		PG	**Pg**	05 40 19.3	+0.3
KAVV					SG	**Sb**	05 40 25.6	-1.1
ISK	**Istanbul-Kandi**	**0.38**	**340**		P	**Pg**	05 40 19.8	+0.2
ISK	**Istanbul-Kandi**	**0.38**	**340**		PG	**Pg**	05 40 19.9	+0.3
ISK					SG	**Sg**	05 40 25.3	+0.6
ISK	**Istanbul-Kandi**	**0.38**	**340**		P	**Pg**	05 40 19.8	+0.2
ISK					S	**Sg**	05 40 25.2	+0.6
IZI	**Iznik**	**0.42**	**154**		PG	**Pb**	05 40 20.7	-1.0
IZI					SG	**Sb**	05 40 26.9	-1.2
MDNY	**Mudanya-Bursa**	**0.43**	**218**		PG	**Pb**	05 40 21.0	-0.8
MDNY					SG	**Sb**	05 40 26.9	-1.5
IGD	**Bursa**	**0.45**	**183**		P	**Pb**	05 40 21.2	-0.9
IGD					S	**Sg**	05 40 27.2	+0.3
AVCI	**Avcilar-stanb**	**0.48**	**307**		PG	**Pb**	05 40 21.9	-0.7
AVCI					SG	**Sb**	05 40 28.8	-0.9
ADVT	**Abdulvahap**	**0.48**	**126**		PG	**Pb**	05 40 21.8	-0.8
ADVT					SG	**Sb**	05 40 28.8	-0.9
SILT	**Sile**	**0.54**	**35**		PG	**Pb**	05 40 23.3	-0.4
SILT					SG	**Sb**	05 40 31.2	-0.3
KLYT	**Kilyos**	**0.56**	**345**		PG	**Pb**	05 40 23.5	-0.5
KLYT					SG	**Sb**	05 40 31.2	-0.8
ULDT	**Uludag**	**0.57**	**187**		P	**Pb**	05 40 23.5	-0.9
ULDT					S	**Sg**	05 40 31.0	+0.1
BGKT	**Bogazkoy**	**0.58**	**324**		PG	**Pg**	05 40 23.6	+0.1
BGKT					SG	**Sb**	05 40 31.7	-1.0
ORLT	**Orhaneli**	**0.71**	**201**		PG	**Pg**	05 40 25.7	-0.2
BILE	**Bilecik/Merkez**	**0.74**	**138**		P	**Pb**	05 40 26.5	-0.6
BILE					S	**Sb**	05 40 37.6	+0.3
ELBA	**Catalca**	**0.74**	**306**		P	**Pg**	05 40 26.4	-0.2
ELBA					S	**Sg**	05 40 36.1	-0.2
CTKS	**Kestanelik-??a**	**0.76**	**314**		PG	**Pg**	05 40 26.5	-0.3
KCTX	**Karacabey (Bur**	**0.80**	**236**		PG	**Pg**	05 40 27.1	-0.5
KAND	**Kocaeli-Kandir**	**0.82**	**62**		P	**Pb**	05 40 28.2	-0.3
KAND					S	**Sb**	05 40 39.6	-0.1
GEYV	**SAKARYA_Geyve**	**0.84**	**105**		P	**Pb**	05 40 28.7	-0.2
GEYV					S	**Sb**	05 40 40.6	+0.3
KAYN	**Sakarya, Kayna**	**0.88**	**73**		P	**Pb**	05 40 29.1	-0.4
KAYN					S	**Sg**	05 40 40.4	-0.2
GPA	**Golpazari**	**0.93**	**117**		PG	**Pb**	05 40 30.4	+0.1
SLVT	**Silivri**	**0.93**	**304**		PG	**Pb**	05 40 30.2	-0.1
AUBOZ	**BOZOYUK**	**1.01**	**142**		PG	**Pb**	05 40 31.5	-0.2
AUBOZ	**BOZOYUK**	**1.01**	**142**		P	**Pb**	05 40 31.4	-0.4
AUBOZ					S	**Sn**	05 40 47.8	+1.2
GULT	**Gulveren**	**1.02**	**106**		PG	**Pb**	05 40 31.9	0.0
CTYL	**Yalikoy Yolu**	**1.04**	**317**		PG	**Pg**	05 40 31.7	-0.5
EDC	**Edincik**	**1.10**	**251**		PN	**Pn**	05 40 33.7	+0.1
DST	**Dursunbey**	**1.20**	**203**		PN	**Pg**	05 40 34.9	-0.3
CRLT	**Corlu**	**1.21**	**291**		PN	**Pg**	05 40 35.5	+0.2
SAHE	**Sakarya_HENDEK**	**1.24**	**83**		P	**Pb**	05 40 35.5	-0.2
SAHE					S	**Sn**	05 40 53.2	+0.9
MRMT	**Marmara Adasi**	**1.25**	**266**		PN	**Pn**	05 40 35.3	-0.4
DURS	**Dursunbey**	**1.25**	**208**		P	**Pn**	05 40 35.3	-0.5
DURS					S	**Sn**	05 40 52.2	-0.5
BORA	**Eskisehir**	**1.25**	**131**		PN	**Pg**	05 40 35.3	-0.1
BORA	**Eskisehir**	**1.25**	**131**		Pn	**Pn**	05 40 35.4	-0.3
BORA					Sg	**Sn**	05 40 52.8	+0.1
BORA	**Eskisehir**	**1.25**	**131**		P	**Pn**	05 40 35.5	-0.3
BORA					S	**Sn**	05 40 53.1	+0.4
SRCK	**Saricakaya, Es**	**1.26**	**122**		PN	**Pg**	05 40 36.3	-0.1
TVSB	**Tavsanli**	**1.27**	**172**		PN	**Pg**	05 40 36.2	-0.4
ANDZ	**Kutahya, Merke**	**1.31**	**157**		P	**Pb**	05 40 36.5	-0.3
ANDZ					S	**Sn**	05 40 55.1	+1.0
TKR	**Tekirdag**	**1.31**	**283**		PN	**Pb**	05 40 36.6	-0.3
GONE	**Gonen-Balikesi**	**1.35**	**241**		PN	**Pb**	05 40 37.1	-0.5
BTAS	**Taskesti**	**1.35**	**95**		P	**Pg**	05 40 37.7	-0.5
BTAS					S	**Sg**	05 40 57.0	+1.2
VIZE	**Kirklareli, Vi**	**1.36**	**310**		P	**Pn**	05 40 36.8	-0.3
VIZE					S	**Sn**	05 40 55.2	-0.1
KNL	**Balıkesir**	**1.37**	**252**		P	**Pn**	05 40 36.7	-0.6
KNL					S	**Sg**	05 40 56.3	0.0
GZKV	**Gazikoy-Tekird**	**1.45**	**272**		PN	**Pb**	05 40 38.7	-0.4
MAR3	**Marsite Statio**	**1.47**	**272**		PN	**Pb**	05 40 38.7	0.0
MAR6	**Marsite Statio**	**1.49**	**270**		PN	**Pb**	05 40 39.4	-0.5
KRBG	**Karabiga-Canak**	**1.50**	**258**		PN	**Pb**	05 40 39.8	-0.3
MDUB	**Mudurnu**	**1.52**	**98**		PN	**Pb**	05 40 40.3	-0.2
MDUB	**Mudurnu**	**1.52**	**98**			**Pb**	05 40 40.1	-0.3
SART	**Tekirdag**	**1.56**	**270**		P	**Pn**	05 40 39.3	-0.6
BALY	**Balya**	**1.57**	**232**		P	**Pn**	05 40 39.7	-0.4
BALY					S	**Sn**	05 40 59.8	-0.6
PHSR	**Pinarhisar**	**1.58**	**306**		PN	**Pb**	05 40 40.8	-0.7
SMAA	**Simav-Kutahya**	**1.62**	**187**		PN	**Pb**	05 40 41.3	-0.9
GDZ	**Gediz**	**1.63**	**173**		P	**Pb**	05 40 41.4	-1.0
GDZ					S	**Sg**	05 41 03.5	-1.2
SIMA	**Simav-Kutahya**	**1.64**	**187**		PN	**Pb**	05 40 41.4	-1.1
GEDZ	**Gediz**	**1.67**	**175**		PN	**Pb**	05 40 42.1	-0.9
YIGI	**Dzce**	**1.70**	**81**		P	**Pb**	05 40 42.8	-0.7
SGAZ	**Eskisehir, Sey**	**1.71**	**133**		P	**Pn**	05 40 42.5	+0.4
DEMI	**Demirci**	**1.71**	**193**		P	**Pn**	05 40 41.9	-0.2
DEMI					S	**Sb**	05 41 05.7	+0.3
ESKT	**Eskisehir**	**1.72**	**133**		PN	**Pb**	05 40 42.9	-1.0
STEP	**BALIKESIR_Sava**	**1.77**	**221**		P	**Pn**	05 40 42.5	-0.3
STEP					S	**Sg**	05 41 07.5	-1.5
ARMN	**Kirklareli, Me**	**1.78**	**311**		P	**Pn**	05 40 42.6	-0.4
ARMN					S	**Sb**	05 41 07.8	+0.6
KDZE	**Karadeniz Ereo**	**1.78**	**70**	⇑P		**Pb**	05 40 43.9	-1.0
KDZE	**Karadeniz Ereo**	**1.78**	**70**	PN		**Pb**	05 40 43.9	-1.0
AUMIH	**MIHALICIK**	**1.92**	**115**	P		**Pn**	05 40 45.8	+0.8
KIRK	**Kırklareli**	**1.93**	**304**	P		**Pn**	05 40 44.8	-0.2
KESN	**Edirne-Kesan**	**1.94**	**274**	P		**Pn**	05 40 44.5	-0.9
USAK	**Uak-Merkez**	**2.00**	**185**	P		**Pn**	05 40 46.2	+0.2
USAK						S	**Sg**	05 41 15.9	-0.6
KIBS	**BOLU**	**2.02**	**97**	P		**Pb**	05 40 47.6	-1.4
BUHA	**Balikesir, Bur**	**2.05**	**234**	P		**Pn**	05 40 46.4	-0.2
AFYO	**Afyonkarahisar**	**2.09**	**156**	P		**Pn**	05 40 47.6	+0.2
AFYO					S	**Sg**	05 41 18.8	-0.6
DEVR	**Zonguldak/Devr**	**2.12**	**77**	P		**Pb**	05 40 49.0	-1.7
BCAM	**Yenicaga**	**2.16**	**86**	P		**Pn**	05 40 49.2	+0.9
AUSIV	**SIVRIHISAR**	**2.18**	**125**	P		**Pn**	05 40 49.0	+0.4
EDRB	**Edirne**	**2.19**	**302**	P		**Pn**	05 40 48.1	-0.5
KULA	**Kula-Manisa**	**2.24**	**191**	P		**Pn**	05 40 48.7	-0.6
BAYC	**CANAKKALE_Bayr**	**2.27**	**246**	P		**Pn**	05 40 49.5	-0.2
CAVK	**Edirne/Enez-Ca**	**2.33**	**270**	P		**Pn**	05 40 50.3	-0.1
ENEZ	**Enez**	**2.34**	**272**	P		**Pn**	05 40 49.8	-0.8
PASA	**Karahalli, USA**	**2.37**	**175**	P		**Pn**	05 40 51.2	+0.1
PASA					S	**Sg**	05 41 26.8	-1.5
EZN	**Ezine**	**2.39**	**249**	P		**Pn**	05 40 51.1	-0.2
AYVA	**Ayvalik**	**2.40**	**235**	P		**Pn**	05 40 52.1	+0.6
ZEDA	**zmir-Bergama**	**2.41**	**224**	P		**Pn**	05 40 51.1	-0.4
ALN	**Alexandroupoli**	**2.42**	**275**	P		**Pn**	05 40 51.0	-0.8
ALN	**Alexandroupoli**	**2.42**	**275**			**Pn**	05 40 52.3	+0.5
ALN	**Alexandroupoli**	**2.42**	**275**	P		**Pn**	05 40 52.3	+0.5
BTIN	**Bartın**	**2.46**	**67**	P		**Pn**	05 40 52.8	+0.5
BTIN				S		**Sn**	05 41 23.7	+1.3
BOZC	**Bozcaada**	**2.58**	**251**	P		**Pn**	05 40 54.9	+1.0
KBUK	**KARABUK-Merkez**	**2.63**	**77**	P		**Pn**	05 40 55.5	+0.9
AFYN	**Afyon-Dinar-K**	**2.63**	**158**	P		**Pn**	05 40 51.2	-3.5
KOCA	**Canakkale, Ayv**	**2.66**	**244**	P		**Pn**	05 40 55.3	+0.3
PRK	**Paraskevi**	**2.70**	**238**	P		**Pn**	05 40 56.8	+1.2
SMTH	**Samothraki Isl**	**2.83**	**266**	P		**Pn**	05 40 56.0	-1.3
RDO	**Rodhopi**	**2.83**	**280**			**Pn**	05 40 57.4	0.0
BR231	**Keskin MP Arra**	**2.85**	**107**			**Pn**	05 40 58.2	+0.5
ANTO	**Ankara**	**2.85**	**106**	⇓P		**Pn**	05 40 58.4	+0.6
ANTO	**Ankara**	**2.85**	**106**			**Pn**	05 40 58.2	+0.4
ANTO	**Ankara**	**2.85**	**106**	P		**Pn**	05 40 58.2	+0.4
SIGR	**SIGRI**	**3.00**	**241**	P		**Pn**	05 40 59.8	+0.2
KDZ	**Kurdzhali**	**3.03**	**289**	P		**Pn**	05 41 00.5	+0.4
ISP	**Isparta**	**3.06**	**160**			**Pn**	05 41 00.8	+0.2
ISP	**Isparta**	**3.06**	**160**	P		**Pn**	05 41 00.8	+0.2
PSN	**Preselentsi**	**3.07**	**346**	P		**Pn**	05 41 01.0	+0.4
PSN				S		**Sn**	05 41 37.4	0.0
CHOS	**Chios island**	**3.38**	**228**	P		**Pn**	05 41 04.7	-0.3
ILGA	**Ilgaz**	**3.42**	**83**	Pn		**Pn**	05 41 07.1	+1.4
RAZG	**Razgrad**	**3.50**	**326**	⇑P		**Pn**	05 41 07.3	+0.8
MFTR	**Murfatlar**	**3.52**	**350**	⇑P		**Pn**	05 41 07.3	+0.6
BR131	**Keskin Array S**	**3.52**	**105**	Pn		**Pn**	05 41 07.7	+0.7
BR131	**Keskin Array S**	**3.52**	**105**	*c iP*		**Pn**	05 41 07.7	+0.7
BRTR	**Keskin Array B**	**3.52**	**105**	Pn		**Pn**	05 41 07.6	+0.7
	3.8nm,0.3s,baz=280,slow=16,SNR=68							
BRTR				Pg		**Pg**	05 41 17.2	-2.4
	15nm,0.3s,baz=286,slow=15,SNR=39							
BRTR				Sn		**Sn**	05 41 49.8	+1.1
	7.0nm,0.3s,baz=272,slow=16,SNR=4.6							
BRTR				Lg		Lg	05 42 09.1	
	12nm,0.3s,baz=276,slow=25,SNR=8.6							
	9.6nm,0.5s							
SMG	**Samos**	**3.53**	**213**	P		**Pn**	05 41 07.6	+0.6
ICOR	**Ion Corvin**	**3.56**	**343**	⇑P		**Pn**	05 41 08.5	+1.1
YER	**Yerkesik**	**3.65**	**192**	P		**Pn**	05 41 08.8	+0.1
YER	**Yerkesik**	**3.65**	**192**	P		**Pn**	05 41 09.5	+0.8
TIRR	**Tirgusor**	**3.79**	**351**	⇑P		**Pn**	05 41 11.4	+0.8
TIRR				⇑S		**Sn**	05 41 54.4	-0.9
TIRR	**Tirgusor**	**3.79**	**351**	Pn		**Pn**	05 41 11.2	+0.7
TIRR	**Tirgusor**	**3.79**	**351**	P		**Pn**	05 41 11.2	+0.7
TIRR				S		**Sn**	05 41 54.3	-0.9
BZK	**Bozkurt**	**3.81**	**69**	⇑P		**Pn**	05 41 11.9	+1.1
BZK	**Bozkurt**	**3.81**	**69**			**Pn**	05 41 11.9	+1.1
TLBR	**Topalu**	**3.93**	**348**	⇑P		**Pn**	05 41 13.3	+0.9
TLBR				⇑S		**Sn**	05 41 58.7	+0.1
ELL	**Elmali**	**3.99**	**172**			**Pn**	05 41 14.9	+1.4
ELL	**Elmali**	**3.99**	**172**	P		**Pn**	05 41 14.9	+1.4
JURR	**Jurilovca**	**4.06**	**356**	⇑P		**Pn**	05 41 15.4	+1.2
HARR	**Harsova**	**4.09**	**347**	⇑P		**Pn**	05 41 15.3	+0.6
NVR	**Nevrokopi**	**4.11**	**281**	P		**Pn**	05 41 15.1	+0.1
TPGR	**Topolog**	**4.18**	**352**	⇓P		**Pn**	05 41 16.2	+0.2
TPGR				⇓S		**Sn**	05 42 03.8	-1.2
AKAS	**Kas**	**4.48**	**176**			**Pn**	05 41 22.0	+1.8
TLCR		**4.48**	**356**	⇓P		**Pn**	05 41 21.1	+1.0
TLCR				⇓S		**Sn**	05 42 11.9	-0.2
COPA	**Copaceanca**	**4.53**	**320**	⇑P		**Pn**	05 41 21.6	+0.9
SULR		**4.53**	**332**	⇑P		**Pn**	05

SOC	**Sochi**	**8.30**	**66**	*e*P		**Pn**	**05 42 09.8**	**-2.7**
SOC				*e*			05 43 45.3	
SOC					pmax	pmax		
	comp=Z,8.0nm,0.7s							
SOC					MLR	MLR		
	comp=Z,76nm,17.0s							
MMAI	**Mount Meron Ar**	**9.13**	**145**	Pn		**Pn**	**05 42 23.5**	**-0.5**
	comp=Z,4.0nm,0.3s,baz=343,slow=13,SNR=7.0							
MMAI					LR	LR	05 46 39.8	
	comp=Z,178nm,19.6s,baz=196,slow=43							
	comp=Z,1.6nm,0.3s							
ARXR	**Arkhyz**	**9.39**	**68**	*i* P		**Pn**	**05 42 27.1**	**-0.5**
MORH	**Mrgy, Hungar**	**9.46**	**309**	P		**Pn**	**05 42 27.3**	**-1.1**
MARD	**Mardin**	**9.61**	**107**	Pn		**Pn**	**05 42 31.6**	**+1.0**
AKASG	**Malin Array Be**	**9.99**	**360**	Pn		**Pn**	**05 42 34.1**	**-1.5**
	comp=Z,7.1nm,0.3s,baz=185,slow=12,SNR=39							
AKASG					Sn	**Sn**	**05 44 20.7**	**-7.0**
	comp=Z,5.0nm,0.3s,baz=186,slow=21,SNR=8.2							
	comp=Z,2.0nm,0.3s							
AKBB	**Malin Array Si**	**9.99**	**360**	*c* P		**Pn**	**05 42 34.2**	**-1.4**
SHA1	**Shidzhatmaz**	**10.41**	**69**	*i* P		**Pn**	**05 42 41.7**	**+0.1**
KIV	**Kislovodsk**	**10.48**	**68**	*e*P		**Pn**	**05 42 40.9**	**-1.5**
KIV					pmax	pmax		
	comp=Z,3.0nm,0.5s							
KIV					MLR	MLR		
	comp=Z,39nm,17.0s							
KBZ	**Khabaz**	**10.58**	**69**	*i* P		**Pn**	**05 42 42.8**	**-0.9**
ONI	**Oni**	**10.81**	**75**	Pn		**Pn**	**05 42 49.2**	**+2.2**
ONI	**Oni**	**10.81**	**75**	P		**Pn**	**05 42 49.2**	**+2.2**
GNI	**Garni**	**11.84**	**88**	LR		LR	05 47 58.3	
	comp=Z,156nm,18.3s,baz=266,slow=39							
GNI	**Garni**	**11.84**	**88**	*i* P		**Pn**	**05 43 00.4**	**-0.7**
VAE	**Valguarnera**	**11.96**	**259**	LR		LR	05 48 30.5	
	comp=Z,74nm,19.9s,baz=150,slow=42							
EIL	**Elat**	**11.96**	**155**	LR		LR	05 48 58.1	
	comp=Z,84nm,21.0s,baz=291,slow=44							
NRCA	**Norcia**	**12.22**	**285**	Pn		**Pn**	**05 43 07.1**	**+0.9**
VRAC	**Vranov**	**12.39**	**318**	LR		LR	05 48 05.3	
	comp=Z,82nm,18.1s,baz=82,slow=38							
VSR	**Storozhevoye**	**12.56**	**30**	*e*P		**Pn**	**05 43 10.1**	**-0.7**
VSR					pmax	pmax		
	comp=Z,80nm,0.4s							
MURB	**Monte Urbino**	**12.69**	**287**			**Pn**	**05 43 14.2**	**+1.6**
VRH	**Novokhopyorsk**	**13.60**	**35**	*e*P		**Pn**	**05 43 23.8**	**-1.1**
VRH					pmax	pmax		
	comp=Z,20nm,0.6s							
LPSR	**Galich'ya Gora**	**13.61**	**26**	*e*P		**Pn**	**05 43 23.0**	**-2.1**
LPSR					pmax	pmax		
	comp=Z,100nm,0.6s							
GERES	**GERESS Array B**	**13.68**	**312**	LR		LR	05 48 14.4	
	comp=Z,493nm,21.6s,baz=61,slow=35							
MNK	**Minsk**	**13.83**	**357**	*i* P		**Pn**	**05 43 25.3**	**-2.7**
MNK				*i* S		**Sn**	**05 46 00.5**	**-1.0**
MNK					pmax	pmax		
	comp=N,54nm,1.1s							
MNK					pmax	pmax		
	comp=E,2.0nm,0.9s							
MNK					pmax	pmax		
	comp=Z,41nm,1.1s							
MNK	**Minsk**	**13.83**	**357**	*i* P		**Pn**	**05 43 25.4**	**-2.7**
	comp=E,2.0nm,0.9s							
MNK				*i* P		**Pn**	**05 43 25.4**	**-2.7**
	comp=N,54nm,1.1s							
MNK				*i* P		**Pn**	**05 43 25.4**	**-2.7**
	comp=Z,41nm,1.1s,baz=176							
MNK				*i* PP		**PnPn**	**05 43 32.5**	**-3.4**
MNK				*i* S		**Sn**	**05 46 00.5**	**-1.0**
MNK				*i* SS		**SnSn**	**05 46 12.6**	**-1.2**
MNK				*i* LQ		LQ	05 47 27.5	
MNK				*i* LR		LR	05 48 30.5	
KHC	**Kasperske Hory**	**13.90**	**312**	*i* P		**Pn**	**05 43 26.7**	**-2.4**
NACGM	**Naroch**	**14.29**	**354**	*e*P		**Pn**	**05 43 30.9**	**-3.5**
	baz=172							
SQTA	**Sankt Quirin**	**14.50**	**303**	*e*P		**P**	**05 43 43.0**	**-1.2**
	comp=Z,1.9nm,0.5s							
MOTA	**Moosalm**	**14.61**	**303**	*e*P		**P**	**05 43 44.0**	**-1.4**
	comp=Z,2.8nm,0.8s							
IDID	**Didziasalis**	**14.71**	**354**	*e*P		**Pn**	**05 43 39.6**	**-0.4**
IIGN	**Ignalina**	**14.78**	**353**	*e*P		**Pn**	**05 43 41.4**	**+0.3**
IIGN					IAmb	IAmb	05 43 54.0	
	comp=Z,30nm,1.3s							
RETA	**Reutte**	**14.88**	**303**	*e*P		**P**	**05 43 47.2**	**-1.1**
	comp=Z,4.7nm,0.6s							
ISAL	**Salakas**	**15.01**	**353**		IAmb	IAmb	05 43 57.0	
	comp=Z,10nm,0.5s							
PABE	**Paberze**	**15.21**	**349**	*e*P		**Pn**	**05 43 44.7**	**-2.0**
PABE					IAmb	IAmb	05 43 55.3	
	comp=Z,13nm,0.8s							
OBN	**Obninsk**	**15.21**	**16**	*e*P		**Pn**	**05 43 42.4**	**-4.4**
OBN					pmax	pmax		
	comp=Z,31nm,0.6s							
OBN					MLR	MLR		
	comp=Z,86nm,15.0s							
DAVOX	**Davos/Dischmat**	**15.23**	**300**	LR		LR	05 49 50.6	
	comp=Z,113nm,20.1s,baz=77,slow=38							
DAVA	**Damuels**	**15.38**	**302**	*e*P		**P**	**05 43 55.7**	**+1.7**
	comp=Z,7.9nm,0.8s							
VSVD	**Vaisvydziai**	**15.67**	**349**	*e*P		**P**	**05 43 55.0**	**-2.0**
MOS	**Moscow**	**16.02**	**17**	*e*P		**Pn**	**05 43 52.4**	**-5.0**
MOS				*e*SS		**Sn**	**05 46 50.1**	**-4.8**
MOS					pmax	pmax		
	comp=Z,48nm,0.6s							
BELG	**Belogornoye**	**17.16**	**41**	P		**Pn**	**05 44 11.9**	**0.0**
	comp=Z,1.9nm,0.3s,baz=147,slow=5.9,SNR=7.4							
BELG					LR	LR	05 52 37.0	
	comp=Z,69nm,18.3s,baz=54,slow=43							
	comp=Z,26nm,0.8s							
SLIT	**Slitere, Latvi**	**17.51**	**348**	*e*P		**Pn**	**05 44 16.0**	**-0.1**
VSU	**Vasula**	**17.84**	**356**	*i* P		**Pn**	**05 44 16.7**	**-3.5**
VSU	**Vasula**	**17.84**	**356**	*e*P		**Pn**	**05 44 17.2**	**-2.9**
MTSE	**Matsula**	**18.35**	**351**	*e*P		**P**	**05 44 27.7**	**+1.2**
WLF	**Walferdange**	**18.50**	**307**	P		**P**	**05 44 26.3**	**-2.0**
WLF	**Walferdange**	**18.50**	**307**	P		**P**	**05 44 26.3**	**-2.0**
WLF					pmax	pmax		
	comp=Z,7.0nm,1.0s							
DEL	**Delary**	**18.68**	**333**	*e*P		**Pn**	**05 44 32.1**	**+1.6**
BTNL	**Ternell**	**18.86**	**309**	*d*P		Pn	05 44 39.7	+7.0
MEM	**Membach**	**18.94**	**309**	κP		**Pn**	**05 44 40.1**	**+6.4**
	comp=Z,6.3nm,0.7s							
VALR	**Valaam**	**20.70**	**2**	*i* P		**P**	**05 44 49.8**	**-2.3**
VALR					pmax	pmax		
	comp=Z,23nm,1.2s							
FINES	**FINESS Array B**	**20.85**	**356**	P		**P**	**05 44 53.9**	**+0.1**
	comp=Z,6.1nm,0.6s,baz=160,slow=12,SNR=49							
	comp=Z,6.1nm,0.6s							
FINES	**FINESS Array B**	**20.85**	**356**	P		**P**	**05 44 52.7**	**-1.0**
RAF	**Rauma**	**20.85**	**350**	*e*P		**P**	**05 44 54.4**	**+0.7**
FIA1	**FINESS Array S**	**20.85**	**356**	P		**P**	**05 44 53.9**	**+0.1**
FIA1					IAmb	IAmb	05 44 57.9	
	comp=Z,7.7nm,0.8s							
KLMR	**Klimovskoe**	**21.14**	**14**	*e*P		**P**	**05 44 55.7**	**-1.2**
KLMR					pmax	pmax		
	comp=Z,25nm,1.0s							
KLMR	**Klimovskoe**	**21.14**	**14**	*e*P		**P**	**05 44 55.7**	**-1.2**
KLMR					AMP		05 45 00.9	
	comp=Z,25nm,1.0s							
HFS	**Hagfors**	**21.71**	**339**	P		**P**	**05 45 03.9**	**+0.8**
	comp=Z,2.8nm,0.6s,baz=129,slow=15,SNR=10.0							
	comp=Z,2.8nm,0.6s							
RAYN	**Ar Rayn**	**21.93**	**136**	P		**P**	**05 45 06.9**	**+1.1**
RAYN					IAmb	IAmb	05 45 09.7	
	comp=Z,7.7nm,1.1s							
RAYN	**Ar Rayn**	**21.93**	**136**	P		**P**	**05 45 06.9**	**+1.1**
RAYN					pmax	pmax		
	comp=Z,8.0nm,1.2s							
KIRV	**Kirov**	**22.00**	**29**	P		**P**	**05 45 06.9**	**+0.8**
	comp=Z,11nm,0.6s,baz=167,slow=2.8,SNR=4.6							
	comp=Z,11nm,0.6s							
KIRV	**Kirov**	**22.00**	**29**	*i* P		**P**	**05 45 05.4**	**-0.7**
AKTO	**Aktyubinsk**	**22.25**	**54**	P		**P**	**05 45 10.8**	**+1.8**
	comp=Z,6.5nm,0.8s,baz=261,slow=13,SNR=14							
AKTO					LR	LR	05 56 58.9	
	comp=Z,88nm,19.8s,baz=276,slow=45							
	comp=Z,6.5nm,0.8s							
GEYT	**Alibeck**	**22.48**	**88**	P		**P**	**05 45 13.5**	**+2.0**
	comp=Z,2.4nm,0.4s,baz=34,slow=14,SNR=4.1							
	comp=Z,2.4nm,0.4s							
GEYT	**Alibeck**	**22.48**	**88**		IAmb	IAmb	05 45 15.5	
	comp=Z,4.9nm,0.9s							
GYA0	**ALIBECK ARRAY**	**22.48**	**88**	P		**P**	**05 45 12.0**	**+0.4**
GYA0					pmax	pmax		
	comp=Z,12nm,1.2s							
GYA0B	**ALIBECK ARRAY**	**22.48**	**88**	P		**P**	**05 45 12.9**	**+1.4**
GYA0B					IAmb	IAmb	05 45 22.9	
	comp=Z,12nm,1.1s							
NAO01	**NORSAR Array S**	**23.10**	**337**	P		**P**	**05 45 17.5**	**-0.3**
NB2	**NORSAR Subarra**	**23.16**	**337**	P		**P**	**05 45 17.7**	**-0.8**
	comp=Z,1.3nm,0.6s,baz=140,slow=10							
NOA	**NORSAR Array B**	**23.16**	**337**	P		**P**	**05 45 18.6**	**+0.1**
	comp=Z,1.6nm,0.8s,baz=146,slow=11,SNR=8.9							
	comp=Z,1.6nm,0.8s							
PRGR	**Permogore**	**23.20**	**20**	*e*P		**P**	**05 45 22.2**	**+3.4**
ARU	**Arti**	**24.71**	**41**	P		**P**	**05 45 34.3**	**+1.0**
	comp=Z,1.4nm,0.3s,baz=238,slow=7.5,SNR=6.9							
ARU					LR	LR	05 56 05.0	
	comp=Z,35nm,19.3s,baz=328,slow=38							
	comp=Z,1.4nm,0.3s							
ARU	**Arti**	**24.71**	**41**	P		**P**	**05 45 33.4**	**+0.2**
ARU					IAmb	IAmb	05 46 00.2	
	comp=Z,7.1nm,0.8s							
ARU	**Arti**	**24.71**	**41**	*d* P		**P**	**05 45 32.5**	**-0.7**
ARU							05 46 01.0	
ARU					PPP	PPP	05 46 14.7	
ARU					S	**S**	**05 49 56.7**	**+1.9**
ARU					SS	**SnSn**	**05 50 44.6**	**+3.8**
ARU					pmax	pmax		
	comp=Z,8.0nm,0.9s							
ESDC	**Sonseca Array**	**25.30**	**279**	P		**P**	**05 45 39.9**	**+1.2**
	comp=Z,2.0nm,1.0s,baz=68,slow=9.4,SNR=8.5							
	comp=Z,2.0nm,1.0s							
ESDC	**Sonseca Array**	**25.30**	**279**	IAmb		IAmb	05 45 46.0	
	comp=Z,1.8nm,1.1s							
EKA	**Eskdalemuir Ar**	**25.84**	**315**	P		**P**	**05 45 44.6**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=97,slow=9.7,SNR=12							
	comp=Z,0.4nm,0.3s							
HRA	**Herat**	**26.82**	**93**	P		**P**	**05 45 53.1**	**+0.3**
HRA					IAmb	IAmb	05 46 00.0	
	comp=Z,2.4nm,0.6s							
ARCES	**ARCESS Array B**	**28.95**	**357**	P		**P**	**05 46 11.6**	**+0.4**
	comp=Z,1.4nm,0.9s,baz=152,slow=5.5,SNR=4.8							
	comp=Z,1.4nm,0.9s							
ARCES	**ARCESS Array B**	**28.95**	**357**	IAmb		IAmb	05 46 38.0	
	comp=Z,4.1nm,0.9s							
GAR	**Garm**	**31.39**	**80**	P		**P**	**05 46 34.1**	**+0.9**
KURK	**Kurchatov**	**35.30**	**57**	*i* P		**P**	**05 47 06.0**	**-1.1**
KURK					pmax	pmax		
	comp=Z,1.0nm,1.0s							
TORD	**Torodi Ar. Bea**	**36.54**	**229**	P		**P**	**05 47 18.2**	**+0.3**
	comp=Z,1.5nm,0.8s,baz=35,slow=8.3,SNR=8.8							
	comp=Z,1.5nm,0.8s							
BORG	**Borgarnes**	**37.43**	**327**	LR		LR	06 04 39.8	
	comp=Z,41nm,19.4s,baz=203,slow=39							
MK31	**Manchi Array**	**38.19**	**63**	*i* P		**P**	**05 47 28.5**	**-3.3**
MKAR	**Makanchi Array**	**38.19**	**63**	P		**P**	**05 47 33.4**	**+1.7**
	comp=Z,0.5nm,0.6s,baz=272,slow=6.9,SNR=5.6							
	comp=Z,0.5nm,0.6s							
MKAR	**Makanchi Array**	**38.19**	**63**	P		**P**	**05 47 33.1**	**+1.3**
ZALV	**Zalesovo Beam**	**38.92**	**51**	P		**P**	**05 47 38.8**	**+1.1**
	comp=Z,0.8nm,0.4s,baz=263,slow=9.2,SNR=3.2							
	comp=Z,0.8nm,0.4s							
WMQ	**Urumqi**	**42.60**	**66**	*e*P		**P**	**05 48 11.3**	**+2.9**
ULN	**Ulaanbaatar**	**53.96**	**54**	*i* P		**P**	**05 49 34.7**	**-1.4**
ULN					pmax	pmax		
	comp=Z,2.0nm,1.1s							
TIXI	**Tiksi**	**54.83**	**22**	P		**P**	**05 49 40.7**	**-1.1**
TIXI					pmax	pmax		
	comp=Z,2.0nm,1.2s							
HHC	**Hu-ho-hao-te**	**59.98**	**60**	*e*P		**P**	**05 50 19.1**	**+0.3**
HHC					pmax	pmax		
	comp=Z,19nm,0.9s							
HHC					pmax	pmax		
	comp=Z,180nm,6.2s							
PZH	**PanZhiHua**	**60.46**	**79**	P		**P**	**05 50 24.1**	**+1.8**
PZH					pmax	pmax		
	comp=Z,10.0nm,0.9s							
PZH					pmax	pmax		
	comp=Z,100nm,8.4s							
TSUM	**Tsumeb**	**60.58**	**193**	LR		LR	06 16 49.5	
	comp=Z,102nm,18.1s,baz=150,slow=36							
SCHQ	**Schefferville**	**61.09**	**319**	P		**P**	**05 50 26.4**	**+0.4**
	comp=Z,2.6nm,0.8s,baz=0.0,slow=1.0,SNR=3.6							
	comp=Z,2.6nm,0.8s							
CMAR	**Chiang Mai Arr**	**62.96**	**88**	LR		LR	06 24 19.4	
	comp=Z,16nm,19.4s,baz=180,slow=42							
LBTB	**Lobatse**	**65.48**	**184**	LR		LR	06 18 49.2	
	comp=Z,268nm,19.2s,baz=246,slow=35							

*IDC **25** 05:43:44.1±1.3,56.65N×34.45W,h0km,mb3.6/6, mbtmp3.7/7,ML2.1/1,MS3.6/33,Error ellipse: s-maj=39.8km s-min=21.6km az=17.0*
ISC 25 05:43:45.5±1.0,56.5N±0.2×34.6W±0.1,h10km,n37, σ1s56/8,mb3.6/6,MS3.5/29,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
BORG	**Borgarnes**	**10.53**	**33**	Pn		**Pn**	**05 46 18.0**	**+1.8**
	0.7nm,0.3s,baz=219,slow=5.8,SNR=6.1							
BORG					LR	LR	05 49 05.2	
	comp=Z,314nm,19.0s,baz=227,slow=31							
SFJD	**Kangerlussuaq**	**12.95**	**331**	LR		LR	05 50 56.0	
	comp=Z,166nm,19.0s,baz=142,slow=34							
EKA	**Eskdalemuir Ar**	**17.59**	**80**	LR		LR	05 53 22.2	
	comp=Z,176nm,18.4s,baz=256,slow=33							
SCHQ	**Schefferville**	**18.18**	**278**	P		**P**	**05 47 59.7**	**+1.8**
	0.1nm,0.3s,baz=75,slow=15,SNR=3.7							
	4.0nm,1.1s							
FRB	**Frobisher Bay**	**18.23**	**307**	LR		LR	05 53 38.2	
	comp=Z,88nm,20.2s,baz=144,slow=33							
JMIC	**Jan Mayen**	**18.33**	**27**	LR		LR	05 53 17.0	
	comp=Z,107nm,19.3s,baz=260,slow=32							
ESDC	**Sonseca Array**	**26.16**	**117**	LR		LR	05 57 52.6	
	comp=Z,80nm,18.2s,baz=10,slow=32							
DAVOX	**Davos/Dischmat**	**28.78**	**91**	LR		LR	06 00 16.5	
	comp=Z,130nm,20.5s,baz=260,slow=35							
ARCES	**ARCESS Array B**	**28.83**	**39**	P		**P**	**05 49 41.2**	**-2.2**
	0.6nm,0.6s,baz=264,slow=8.7,SNR=5.6							
ARCES					LR	LR	05 58 24.4	
	comp=Z,106nm,18.6s,baz=128,slow=31							
	0.6nm,0.6s							
RES	**Resolute Bay**	**28.95**	**332**	LR		LR	06 00 54.3	
	comp=Z,68nm,19.3s,baz=100,slow=36							
GERES	**GERESS Array B**	**29.73**	**84**	LR		LR	06 00 17.3	
	comp=Z,112nm,20.9s,baz=322,slow=34							
SADO	**Sadowa**	**30.05**	**266**	LR		LR	06 00 48.6	
	comp=Z,128nm,18.8s,baz=44,slow=34							
VRAC	**Vranov**	**31.06**	**81**	LR		LR	06 02 24.5	
	comp=Z,92nm,18.5s,baz=283,slow=36							
MDT	**Midelt**	**31.41**	**126**	LR		LR	06 01 18.3	
	comp=Z,57nm,19.1s,baz=6.0,slow=34							
ULM	**Lac du Bonnet**	**36.00**	**287**	LR		LR	06 04 12.5	
	comp=Z,111nm,18.3s,baz=84,slow=34							
AKASG	**Malin Array Be**	**37.09**	**71**	LR		LR	06 06 00.7	
	comp=Z,61nm,19.0s,baz=313,slow=36							
OBN	**Obninsk**	**38.39**	**61**	LR		LR	06 05 33.3	
	comp=Z,20nm,20.7s,baz=188,slow=34							
MLR	**Muntele Rosu**	**38.44**	**80**	LR		LR	06 07 03.9	
	comp=Z,86nm,19.6s,baz=318,slow=36							
YKA	**Yellowknife Ar**	**38.60**	**313**	P		**P**	**05 51 07.6**	**-0.6**
	0.7nm,0.9s,baz=57,slow=9.3,SNR=3.6							
YKA					LR	LR	06 05 11.5	
	comp=Z,82nm,20.6s,baz=294,slow=33							
	0.7nm,0.9s							
TKL	**Tuckaleechee C**	**38.90**	**259**	LR		LR	06 06 15.2	
	comp=Z,120nm,20.0s,baz=20,slow=35							
IDI	**Anoyia**	**44.85**	**92**	LR		LR	06 11 58.2	
	comp=Z,35nm,18.2s,baz=282,slow=38							
BELG	**Belogornoye**	**45.30**	**59**	LR		LR	06 08 54.3	
	comp=Z,65nm,21.0s,baz=119,slow=34							
BRTR	**Keskin Array B**	**46.51**	**81**	P		**P**	**05 52 13.0**	**+0.2**
	0.8nm,0.7s,baz=308,slow=12,SNR=4.1							
BRTR					LR	LR	06 11 11.9	
	comp=Z,38nm,21.0s,baz=320,slow=36							
	0.8nm,0.7s							
DLBC	**Dease Lake**	**47.17**	**314**	LR		LR	06 11 40.1	
	comp=Z,247nm,18.0s,baz=111,slow=36							
PDAR	**Pinedale Array**	**48.02**	**287**	P		**P**	**05 52 24.1**	**-0.6**
	0.3nm,0.5s,baz=56,slow=7.1,SNR=4.9							
PDAR					LR	LR	06 10 46.7	
	comp=Z,102nm,21.4s,baz=40,slow=34							
	0.3nm,0.5s							
NEW	**Newport**	**48.15**	**297**	LR		LR	06 11 25.2	
	comp=Z,123nm,19.3s,baz=344,slow=34							
ILAR	**Eielson Array**	**48.60**	**328**	P		**P**	**05 52 28.3**	**-0.2**
	0.7nm,0.6s,baz=34,slow=6.5,SNR=9.9							
	0.7nm,0.6s							
KBZ	**Khabaz**	**48.69**	**70**	LR		LR	06 12 08.1	
	comp=Z,32nm,20.7s,baz=331,slow=35							
TORD	**Torodi Ar. Bea**	**51.41**	**132**	P		**P**	**05 52 50.8**	**+0.4**
	0.8nm,0.8s,baz=330,slow=10,SNR=3.7							
	0.8nm,0.8s							
AKTO	**Aktyubinsk**	**51.44**	**55**	LR		LR	06 14 00.6	
	comp=Z,26nm,18.4s,baz=333,slow=35							
ANMO	**Albuquerque**	**51.96**	**278**	LR		LR	06 13 31.3	
	comp=Z,86nm,19.9s,baz=280,slow=34							
GNI	**Garni**	**52.19**	**72**	LR		LR	06 15 28.3	
	comp=Z,28nm,18.2s,baz=358,slow=37							
TXAR	**Lajitas Array**	**54.65**	**271**	LR		LR	06 16 21.0	
	comp=Z,95nm,19.1s,baz=204,slow=36							
YBH	**Yreka Blue Hor**	**55.58**	**295**	LR		LR	06 16 10.0	
	comp=Z,74nm,18.5s,baz=309,slow=35							
KDAK	**Kodiak Island**	**55.74**	**325**	LR		LR	06 15 41.5	
	comp=Z,83nm,19.1s,baz=136,slow=34							
NVAR	**Mina Array Bea**	**55.76**	**289**	LR		LR	06 15 59.8	
	comp=Z,102nm,19.6s,baz=269,slow=35							
SIV	**San Ignacio**	**75.52**	**206**	LR		LR	06 24 29.2	
	comp=Z,368nm,20.0s,baz=124,slow=32							

IDC 25 05:46:03.0±7.5,18.00S×179.07W,h504km±22km, mb2.8/2,mbtmp3.7/3,Error ellipse: s-maj=277.8km s-min=32.7km az=146.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**2.75**	**275**	P		P	05 47 13.0	+0.2
	52nm,0.5s,baz=106,slow=5.2,SNR=103							
WRA	**Warramunga Arr**	**43.99**	**260**	P		P	05 53 25.1	-0.4
	0.3nm,0.2s,baz=97,slow=7.2,SNR=30							
	0.3nm,0.2s							
ILAR	**Eielson Array**	**86.12**	**13**	P		P	05 57 48.1	-1.6
	0.3nm,0.7s,baz=213,slow=5.6,SNR=4.2							
	0.3nm,0.7s							
GERES	**GERESS Array B**	**147.53**	**344**	PKPbc		PKiKP	06 04 51.4	-0.5
	0.3nm,0.6s,baz=68,slow=5.6,SNR=3.5							

GCMT 25 05:59:30.0±0.3,34.21S±0.02×14.49W±0.02,h24km±1km, MW5.0/80,Moment Tensor Solution. s22,c22; s80,c107; Duration: 0 Moment tensor: Scale 10^{16} **Nm;** M_{rr}-0.38±.24; $M_{\theta\theta}$-2.16±.20; $M_{\phi\phi}$2.54±.20; $M_{r\theta}$-0.28±.24; $M_{\theta\phi}$3.29±.14; $M_{\phi r}$1.25±.26; **Best double couple:** $M_0$4.24100×10^{16} **NP1:**ϕ_s72.00000°,δ72.00000°, λ-1.00000°. **NP2:**ϕ_s163.00000°,δ89.00000°, λ-162.00000°. **Principal axes:** T 4.4370, Plg12.0000°, Azm296.0000°; N -0.3930, Plg72.0000°, Azm166.0000°; P -4.0450, Plg13.0000°, Azm29.0000°; **nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Tristan da Cunha region**

*IDC **25** 06:26:51.8±0.9,30.21S×177.67W,h0km,mb4.4/5, mbtmp4.4/6,ML3.5/1,MS3.5/4 Error ellipse: s-maj=27.2km s-min=20.1km az=101.0*
*NEIC **25** 06:26:59.1±2.5,29.92S±0.08×177.5W±0.2,h57km±7km, mb4.5/13,Error ellipse: s-maj=20.7km s-min=9.1km az=70.0*
ISC 25 06:26:56.8±0.7,30.24S±0.07×177.8W±0.1,h35km,n38, σ1s65/29,mb4.5/11,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.99**	**354**	Pn		**Pn**	**06 27 13.8**	**-0.4**
	232nm,0.3s,baz=48,slow=22,SNR=17							
RAO					Sn	**Sn**	**06 27 24.7**	**-2.3**
	2µm,0.3s,baz=41,slow=20,SNR=18							
OUZ	**Omahuta**	**8.78**	**233**	Pn		Pn	06 29 08.6	+7.5
URZ	**Urewera**	**9.03**	**206**	Pn		**Pn**	**06 29 02.7**	**-1.9**
	0.5nm,0.3s,baz=262,slow=4.2,SNR=7.2							
URZ					Sn	**Sn**	**06 30 41.6**	**-3.5**
	3.0nm,0.3s,baz=211,slow=22,SNR=7.4							
	10nm,0.9s							
MSVF	**Nonsavu**	**13.02**	**342**	LR		LR	06 33 54.5	
	comp=Z,119nm,21.9s,baz=163,slow=32							
DZM	**Mont Dzumac**	**16.30**	**296**	LR		LR	06 35 27.6	
	comp=Z,130nm,18.9s,baz=146,slow=32							
AFI	**Afiamalu**	**17.18**	**20**	LR		LR	06 36 57.6	
	comp=Z,80nm,21.3s,baz=122,slow=35							
ARMA	**Armidale**	**26.34**	**262**			**P**	**06 32 32.8**	**+3.1**
ARMA					IAmb	IAmb	06 33 09.4	
	comp=Z,18nm,1.2s							
EIDS	**Eidsvold**	**27.89**	**272**	P		**P**	**06 32 44.7**	**+1.1**
EIDS					IAmb	IAmb	06 32 55.5	
	comp=Z,12nm,1.4s							
CTA	**Charters Tower**	**33.94**	**279**	P		**P**	**06 33 39.1**	**+2.2**
	comp=Z,12nm,0.5s,baz=102,slow=10,SNR=26							
	comp=Z,12nm,0.5s							
CTAO	**Charters Tower**	**33.94**	**279**	P		**P**	**06 33 38.9**	**+2.0**
STKA	**Stephens Creek**	**34.68**	**257**	P		**P**	**06 33 45.1**	**+2.0**
	comp=

s-min=7.5km az=57.0
DJA ***25*** *06:40:30.4±0.3, 7°N±2°×12°6E±°, h53km±3km, M5.1/89, mb5.3/89, mB5.6/47, MLv5.7/7, Mw(mB)5.1/47, MwMwp4.9/7, Mwp5.2/7*
IDC ***25*** *06:40:30.1±1.1, 6°61N×126°09E, h57km±9km, mb4.7/43, mbtmp5.0/45, MS4.2/67, Error ellipse: s-maj=12.3km s-min=9.4km az=70.0*
NEIC ***25*** *06:40:34, 6°57N×125°97E, h60km, Moment Tensor Solution. Duration: 10s0 Moment tensor: Scale 10¹⁶Nm; Mrr5.34; Mθθ0.22; Mφφ -5.56; Mrθ4.74; Mθφ-4.14; Mφr1.13; Fault plane solution: M08.41000×10¹⁶ NP1: φs179.00000°, δ40.00000°, λ40.00000°. NP2:φs56.00000°, δ65.00000°, λ123.00000°. Principal axes: T 8.2776, Plg57.0000°, Azm10.0000°; N 0.2519, Plg29.0000°, Azm221.0000°; P -8.5295, Plg14.0000°, Azm122.0000°;*
ISC 25 06:40:30.0±0.3, 6°55N±0.03×126°12E±0.03, h55km±2km, h55km:pP-P,n810,σ1s59/892,mb5.2/182,MS4.3/97, 28C-30D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.42**	**19**	⇓*e*P		**Pn**	**06 40 38.5**	**-2.3**
MATI				*e*S		**Sn**	**06 40 47.5**	**-1.0**
DDMP	**Don Marcelino,**	**0.60**	**223**	⇓*e*P		**Pn**	**06 40 40.5**	**-2.2**
DDMP				*e*S		**Sn**	**06 40 50.5**	**-1.4**
DAV	**Davao City (W)**	**0.75**	**314**	P		**Pn**	**06 40 44.9**	**+0.3**
	60μm,0.5s,baz=115,slow=2.1,SNR=902							
DAV	**Davao City (W)**	**0.75**	**314**			**Pn**	**06 40 44.3**	**-0.4**
DAV	**Davao City (W)**	**0.75**	**314**	P		**Pn**	**06 40 45.1**	**+0.5**
KCP	**Kidapawan**	**1.12**	**294**	⇓*i*P		**Pn**	**06 40 48.9**	**-0.7**
KCP				*i* S		**Sn**	**06 41 03.5**	**-0.6**
GSPH	**General Santos**	**1.25**	**249**	⇑*e*P		**Pn**	**06 40 48.2**	**-3.2**
GSPH				*i* S		**Sn**	**06 41 03.9**	**-3.4**
SKMP	**Bagumbayan, Su**	**1.57**	**269**	⇓*e*P		**Pn**	**06 40 54.4**	**-1.2**
SKMP				*e*S		**Sn**	**06 41 15.7**	**+0.9**
BIPH	**Bislig**	**1.65**	**8**	⇑*e*P		**Pn**	**06 40 58.2**	**+1.6**
BIPH				*e*S		**Sn**	**06 41 19.0**	**+2.3**
BUKP	**Musuan**	**1.69**	**322**	⇓*e*P		**Pn**	**06 40 57.0**	**-0.3**
BUKP				*e*S		**Sn**	**06 41 22.2**	**+4.4**
BUTP	**Butuan**	**2.46**	**348**	⇓*e*P		**Pn**	**06 41 09.2**	**+1.5**
BUTP				*e*S		**Sn**	**06 41 42.8**	**+6.2**
SGSI	**Sangihe**	**2.90**	**192**	P		**Pn**	**06 41 12.9**	**-0.9**
PAGZ	**Pagadian**	**3.01**	**296**	⇓*e*P		**Pn**	**06 41 15.0**	**-0.2**
GLSP	**General Luna,**	**3.22**	**0**	⇓*e*P		**Pn**	**06 41 19.4**	**+1.3**
GLSP				*e*S		**Sn**	**06 41 58.7**	**+3.5**
DCPH	**Dipolog City**	**3.41**	**307**	⇓*e*P		**Pn**	**06 41 24.7**	**+4.0**
MSLP	**Maasin**	**3.78**	**341**	⇓*e*P		**Pn**	**06 41 25.4**	**-0.4**
MSLP				*e*S		Sn	06 41 47.0	-22
SNPH	**Sibulan**	**3.99**	**314**	⇓*i*P		**Pn**	**06 41 28.3**	**-0.4**
SNPH				*e*S		**Sn**	**06 42 18.1**	**+3.9**
ZCP	**Zamboanga City**	**4.04**	**276**	⇑*e*P		**Pn**	**06 41 29.9**	**+0.6**
ZCP				*e*S		**Sn**	**06 42 20.0**	**+4.7**
LLP	**Lapu-Lapu**	**4.31**	**331**	*e*P		**Pn**	**06 41 34.2**	**+1.1**
LLP				*e*S		**Sn**	**06 42 23.8**	**+1.7**
OCLP	**Ormoc**	**4.72**	**342**	⇓*e*P		**Pn**	**06 41 39.1**	**+0.4**
OCLP				*e*S		Sn	06 42 15.8	-16
TNTI	**Ternate**	**5.87**	**168**	Pn		**Pn**	**06 41 54.6**	**+0.1**
TNTI	**Ternate**	**5.87**	**168**	P		**Pn**	**06 41 55.7**	**+1.2**
	2.3nm2μm8μm670nm,0.7s							
TNTI	**Ternate**	**5.87**	**168**	P		**Pn**	**06 41 56.2**	**+1.7**
	668nm,0.7s							
JAP	**San Jose, Anti**	**5.87**	**316**	⇓*e*P		**Pn**	**06 41 57.1**	**+2.7**
RCP	**Roxas**	**6.00**	**326**	⇓*e*P		**Pn**	**06 41 57.8**	**+1.5**
KMSI	**Cibinong**	**6.30**	**200**	P		**Pn**	**06 42 01.5**	**+1.1**
	3.2nm9μm1μm,0.8s							
LBMI	**Labuha**	**7.27**	**169**	P		**Pn**	**06 42 16.2**	**+2.5**
	1.5nm5μm409nm,0.8s							
MRSI	**Marisa**	**7.33**	**215**	P		**Pn**	**06 42 13.4**	**-1.1**
	3.1nm8μm575nm,0.6s							
TOLI2	**Tolitoli**	**7.58**	**225**	Pn		**Pn**	**06 42 15.0**	**-3.0**
MYLDM	**Lahad Datu**	**7.70**	**260**	Pn		**Pn**	**06 42 20.4**	**+0.9**
LUWI	**Luwuk**	**8.24**	**204**	Pn		**Pn**	**06 42 28.9**	**+1.9**
LUWI	**Luwuk**	**8.24**	**204**	P		**Pn**	**06 42 29.9**	**+2.9**
	12μm788nm,1.2s							
LUWI	**Luwuk**	**8.24**	**204**	P		**Pn**	**06 42 28.3**	**+1.3**
I39PW	**PALAU INFRASON**	**8.42**	**83**	*i*			07 36 40.0	
	baz=268,slow=307,SNR=0.4							
SANI	**Sanana**	**8.54**	**181**	P		**Pn**	**06 42 30.6**	**-0.5**
	6μm296nm,0.7s							
APSI	**Ampana**	**8.65**	**211**	P		**Pn**	**06 42 36.2**	**+3.6**
	3μm251nm,1.0s							
MPSI	**Mapaga**	**8.75**	**225**	P		**Pn**	**06 42 36.7**	**+2.7**
	1μm27nm,0.6s							
SWI	**Sorong**	**8.97**	**145**	P		**Pn**	**06 42 38.0**	**+1.0**
	4μm2μm144nm,0.9s							
NLAI	**Namlea**	**9.77**	**174**	P		**Pn**	**06 42 46.7**	**-1.2**
	6μm215nm,0.6s							
MSAI	**Masohi**	**10.22**	**164**	P		**Pn**	**06 42 55.9**	**+1.8**
	23nm,0.7s							
AAI	**Ambon**	**10.37**	**168**	P		**Pn**	**06 42 58.2**	**+2.0**
	146nm,0.7s							
FAKI	**Fak Fak**	**11.22**	**147**	Pn		**Pn**	**06 43 07.7**	**-0.1**
FAKI	**Fak Fak**	**11.22**	**147**	P		**Pn**	**06 43 08.2**	**+0.5**
	4μm1μm82nm,0.7s							
TTSI	**Tana Toraja**	**11.42**	**214**	P		**Pn**	**06 43 12.7**	**+2.2**
	2μm157nm,1.0s							
SPSI	**Sidrap Palu**	**12.21**	**211**	P		**Pn**	**06 43 24.9**	**+3.5**
	2μm81nm,0.7s							
BNSI	**Bone**	**12.42**	**209**	P		**Pn**	**06 43 24.4**	**+0.2**
	2μm142nm,0.8s							
BAKI	**Biak**	**12.59**	**127**	P		**Pn**	**06 43 28.9**	**+2.4**
	6μm473nm,1.2s							
SRPI	**Serui, Papua**	**13.11**	**129**	P		**Pn**	**06 43 34.9**	**+1.3**
KAPI	**Kappang**	**13.12**	**209**	P		**Pn**	**06 43 35.2**	**+1.4**
	59nm,0.9s,baz=27,slow=12,SNR=11							
KAPI				LR		LR	06 48 40.2	
	comp=Z,476nm,18.9s,baz=34,slow=37							
KAPI	**Kappang**	**13.12**	**209**	Pn		**Pn**	**06 43 29.7**	**-4.1**
KAPI	**Kappang**	**13.12**	**209**	⇑*i*P		**Pn**	**06 43 34.5**	**+0.7**
KAPI	**Kappang**	**13.12**	**209**	P		**Pn**	**06 43 36.6**	**+2.8**
	129nm,1.3s							
BKSI	**Bulukumba**	**13.22**	**207**	P		**Pn**	**06 43 37.2**	**+2.1**
SBUM	**Sibu**	**14.44**	**254**	P		**Pn**	**06 43 49.3**	**-2.2**
BBKI	**Banjar Baru**	**15.02**	**229**	P		**P**	**06 44 02.9**	**-0.5**
	7μm125nm,1.4s							
MMRI	**Maumere**	**15.57**	**194**	P		**P**	**06 44 08.0**	**-1.5**
	3μm234nm,0.8s							
EDFI	**Ende, Flores**	**15.82**	**196**	P		**P**	**06 44 12.4**	**0.0**
	888nm72nm,1.3s							
STKI	**Sintang**	**15.97**	**247**	P		**P**	**06 44 14.2**	**+0.3**
	17μm55nm,1.3s							
SOEI	**Soe**	**16.30**	**187**	P		**Pn**	**06 44 16.2**	**+0.7**
SOEI	**Soe**	**16.30**	**187**	P		**P**	**06 44 17.1**	**-0.6**
	3μm356nm,1.1s							
SOEI	**Soe**	**16.30**	**187**	P		**P**	**06 44 19.1**	**+1.4**
KSM	**Kuching**	**16.55**	**253**	P		**P**	**06 44 21.8**	**+1.4**
KSM	**Kuching**	**16.55**	**253**	P		**P**	**06 44 23.0**	**+2.6**
BATI	**Baumata**	**16.82**	**188**	P		**P**	**06 44 23.8**	**+0.4**
	2μm192nm,0.7s							
YULB	**Yu-li**	**17.38**	**345**	P		**P**	**06 44 29.8**	**+0.3**
PLAI	**Plampang**	**17.39**	**209**	P		**P**	**06 44 32.5**	**+2.8**
	2μm250nm,1.1s							
PLAI	**Plampang**	**17.39**	**209**	P		**P**	**06 44 31.9**	**+2.2**
WBSI	**Waikabubak, Su**	**17.42**	**203**	P		**P**	**06 44 31.7**	**+1.6**
	140nm,1.1s							
TPUB	**Ta-pu**	**17.48**	**343**	P		**Pn**	**06 44 29.4**	**-0.7**
TPUB	**Ta-pu**	**17.48**	**343**	P		**P**	**06 44 31.3**	**+0.7**
BASI	**Baing, Sumba**	**17.54**	**198**	P		**P**	**06 44 33.3**	**+1.9**
	2μm95nm,1.0s							
TWSI	**Taliwang, Sumb**	**17.76**	**211**	P		**P**	**06 44 35.9**	**+2.2**
	1μm58nm,0.9s							
SSLB	**Suanglung**	**17.85**	**344**			**Pn**	**06 44 33.7**	**-0.9**
SSLB	**Suanglung**	**17.85**	**344**	P		**P**	**06 44 35.5**	**+0.8**
KMMI	**Kalianget**	**18.15**	**222**	P		**Pn**	**06 44 42.5**	**+4.2**
	113nm,1.0s							
SRBI	**Singaraja**	**18.15**	**217**	P		**Pn**	**06 44 42.4**	**+4.1**
	70nm,0.9s							
BWJI	**Bawean**	**18.23**	**228**	P		**Pn**	**06 44 43.5**	**+4.3**
	5μm572nm,1.3s							
YHNB	**Yeheng**	**18.59**	**346**	P		**Pn**	**06 44 45.3**	**+1.7**
BLJI	**Banyuglugur**	**18.91**	**222**	P		**Pn**	**06 44 50.0**	**+2.5**
	3μm40nm,0.7s							
JAGI	**Jajag, Banyuwa**	**19.10**	**219**			**Pn**	**06 44 49.4**	**-0.4**
JAGI					IAmb	IAmb	06 44 55.9	
	comp=Z,97nm,1.0s							
JAGI	**Jajag, Banyuwa**	**19.10**	**219**	P		**Pn**	**06 44 53.3**	**+3.5**
	comp=Z,82nm,0.9s							
GMJI	**Gumukmas**	**19.40**	**221**	P		**Pn**	**06 44 57.4**	**+4.0**
	comp=Z,56nm,1.0s							
QZH	**Quanzhou**	**19.66**	**339**	⇑*i*P		**Pn**	**06 44 57.5**	**+1.1**
QZH				pP		**pP**	**06 45 08.5**	**+1.9**
QZH				S		**S**	**06 48 31.3**	**-2.2**
QZH				sS		**Sn**	**06 48 41.5**	**+4.9**
QZH					pmax	pmax		
	comp=Z,73nm,0.9s							
QZH					LR	LR		
	comp=Z,890nm,21.3s							
QZH					LR	LR		
	comp=Z,500nm,20.8s							
QZH					LR	LR		
	comp=Z,1μm,22.3s							
GUMO	**Guam**	**19.73**	**68**	P		**P**	**06 44 55.1**	**-0.3**
	comp=Z,128nm,0.8s,baz=230,slow=10,SNR=7.5							
GUMO					LR	LR	06 53 21.0	
	comp=Z,384nm,19.1s,baz=236,slow=39							
GUMO	**Guam**	**19.73**	**68**	P		**P**	**06 44 55.6**	**+0.2**
GUMO					IAmb	IAmb	06 45 03.8	
	comp=Z,259nm,1.1s							
GUMO	**Guam**	**19.73**	**68**	P		**P**	**06 44 55.6**	**+0.2**
GUMO					pmax	pmax		
	comp=Z,259nm,1.2s							
GUMO	**Guam**	**19.73**	**68**	P		**Pn**	**06 44 57.2**	**-0.1**
UWJI	**Ujung Watu**	**19.88**	**230**	P		**Pn**	**06 45 01.5**	**+2.5**
	comp=Z,4μmcomp=Z,351nm,1.1s							
MTN	**Manton Dam**	**19.90**	**165**	P		**P**	**06 44 57.0**	**-0.1**
	baz=20,SNR=20							
MTN	**Manton Dam**	**19.90**	**165**	P		**P**	**06 44 56.6**	**-0.5**
MTN					IAmb	IAmb	06 45 05.1	
	comp=Z,164nm,1.0s							
MTN	**Manton Dam**	**19.90**	**165**	P		**P**	**06 44 57.7**	**+0.6**
KDU	**Kakadu**	**20.12**	**162**	P		**P**	**06 44 58.9**	**-0.7**
	baz=20,SNR=72							
KDU	**Kakadu**	**20.12**	**162**	P		**P**	**06 44 59.5**	**-0.1**
QIZ	**Qiongzhong**	**20.12**	**310**	P		Pn	06 45 01.8	-0.1
QIZ				pP		pP	06 45 12.5	+0.9
QIZ				S		**S**	**06 48 43.0**	**+0.2**
QIZ					pmax	pmax		
	comp=Z,28nm,1.0s							
QIZ					pmax	pmax		
	comp=Z,320nm,4.3s							
QIZ					LR	LR		
	comp=Z,1μm,16.7s							
QIZ					LR	LR		
	comp=Z,480nm,16.9s							
QIZ					LR	LR		
	comp=Z,1μm,18.5s							
JOW	**Kunigami**	**20.28**	**6**	P		**P**	**06 45 02.3**	**+1.0**
	comp=Z,123nm,0.7s,baz=200,slow=8.5,SNR=19							
JOW					LR	LR	06 52 27.6	
	comp=Z,523nm,21.5s,baz=155,slow=36							
	comp=Z,123nm,0.7s							
JOW	**Kunigami**	**20.28**	**6**	P		**P**	**06 45 01.3**	**0.0**
JOW					IAmb	IAmb	06 45 03.0	
	comp=Z,140nm,0.8s							
JOW	**Kunigami**	**20.28**	**6**	P		**P**	**06 45 02.2**	**+1.0**
PWJI	**Pagerwojo**	**20.33**	**225**	P		Pn	06 45 06.9	+2.6
	comp=Z,90nm,0.8s							
SMRI	**Semarang**	**20.66**	**229**	P		Pn	06 45 07.5	-0.9
SMRI					IAmb	IAmb	06 45 15.1	
	comp=Z,198nm,1.2s							
SMRI	**Semarang**	**20.66**	**229**	P		Pn	06 45 08.9	+0.6
	comp=Z,161nm,1.1s							
SMRI	**Semarang**	**20.66**	**229**	P		Pn	06 45 09.8	+1.5
WOJI	**Wonogiri, Jawa**	**20.83**	**227**	P		Pn	06 45 10.8	+0.6
	comp=Z,83nm,0.9s							
PCJI	**Pacitan**	**20.89**	**226**	P		Pn	06 45 10.8	-0.2
	comp=Z,79nm,0.9s							
PPBI	**Pangkal Pinang**	**21.74**	**247**	P		**P**	**06 45 21.7**	**+4.6**
	comp=Z,63nm,1.0s							
KPJI	**Karang Pucung**	**22.00**	**231**	P		**P**	**06 45 22.2**	**+2.3**
	comp=Z,9μmcomp=Z,2μmcomp=Z,203nm,0.8s							
JCJI	**Jatiyangi**	**22.02**	**234**	P		**P**	**06 45 26.0**	**+5.9**
	comp=Z,7μmcomp=Z,465nm,0.8s							
KNRA	**Kununurra**	**22.23**	**173**	P		**P**	**06 45 21.7**	**-0.6**
	baz=22,SNR=24							
KNRA	**Kununurra**	**22.23**	**173**	P		**P**	**06 45 21.9**	**-0.4**
KNRA	**Kununurra**	**22.23**	**173**	P		**P**	**06 45 22.4**	**+0.1**
DSRI	**Dabo**	**22.60**	**253**	P		**P**	**06 45 27.7**	**+1.3**
	comp=Z,932nmcomp=Z,93nm,1.1s							
CMJI	**Cimerak**	**22.66**	**231**	P		**P**	**06 45 28.0**	**+1.1**
	comp=Z,64nm,0.9s							
MYKOM	**Kota Tinggi**	**22.70**	**259**	P		**P**	**06 45 27.8**	**+0.4**
MYKOM					IAmb	IAmb	06 45 35.5	
	comp=Z,62nm,0.7s							
LEM	**Lembang**	**22.74**	**235**	P		**P**	**06 45 30.0**	**+2.0**
LEM					pmax	pmax		
	comp=Z,139nm,0.9s							
LEM	**Lembang**	**22.74**	**235**	P		**P**	**06 45 30.5**	**+2.5**
	comp=Z,2μmcomp=Z,87nm,0.9s							
CBJI	**Citeko**	**23.14**	**237**	P		**P**	**06 45 35.5**	**+3.6**
	comp=Z,390nm,0.9s							
DBJI	**Dramaga**	**23.30**	**236**	P		**P**	**06 45 35.8**	**+2.4**
	comp=Z,17μmcomp=Z,216nm,1.1s							
CNJI	**Cibinong**	**23.41**	**234**	P		**P**	**06 45 34.4**	**-0.1**
	comp=Z,2μmcomp=Z,257nm,0.8s							
SBJI	**Serang**	**23.59**	**238**	P		**P**	**06 45 39.4**	**+3.3**
	comp=Z,216nm,1.0s							
JMBI	**JAMBI**	**23.86**	**251**	P		**P**	**06 45 41.6**	**+2.9**
	comp=Z,259nm,1.1s							
BLSI	**Bandar Lampung**	**23.96**	**241**	P		**P**	**06 45 40.6**	**+1.0**
	comp=Z,145nm,0.5s							
GULI	**GuiLin**	**23.97**	**323**	⇓P		**P**	**06 45 33.5**	**-6.0**
GULI				S		**S**	**06 49 49.0**	**-3.6**
GULI					pmax	pmax		
	comp=Z,30nm,0.9s							
GULI					LR	LR		
	comp=N,400nm,21.4s							
GULI					LR	LR		
	comp=E,510nm,17.1s							
GULI					LR	LR		
	comp=Z,670nm,20.6s							
KLI	**Kotabumi**	**24.06**	**242**	P		**P**	**06 45 41.2**	**+0.8**
	comp=Z,8μmcomp=Z,250nm,0.9s							
KASI	**Kota Agung**	**24.69**	**241**	P		**P**	**06 45 48.7**	**+2.5**
	comp=Z,136nm,0.9s							
LWLI	**Liwa**	**24.84**	**243**	P		**P**	**06 45 49.6**	**+1.9**
	comp=Z,218nm,0.8s							
SSE	**Sheshan**	**24.86**	**350**	P		**P**	**06 45 51.5**	**+4.0**
SSE					pmax	pmax		
	comp=Z,17nm,1.0s							
SSE					pmax	pmax		
	comp=Z,100nm,3.5s							
SSE					LR	LR		
	comp=Z,230nm,22.0s							
SSE					LR	LR		
	comp=Z,210nm,22.6s							
CNSH	**ChangSha**	**24.89**	**331**	⇓P		**P**	**06 45 50.0**	**+2.2**
CNSH				S		**S**	**06 50 12.0**	**+4.8**
CNSH					pmax	pmax		
	comp=Z,41nm,1.3s							
CNSH					LR	LR		
	comp=N,830nm,18.5s							
CNSH					LR	LR		
	comp=E,1μm,22.8s							
CNSH					LR	LR		
	comp=Z,2μm,23.3s							
CNSH	**ChangSha**	**24.89**	**331**	⇓P		**P**	**06 45 49.5**	**+1.7**
CNSH				S		**S**	**06 50 12.8**	**+5.6**
CNSH					pmax	pmax		
	comp=Z,41nm,1.3s							
CNSH					LR	LR		
	comp=Z,880nm,20.3s							
CNSH					LR	LR		
	comp=Z,1μm,22.8s							
CNSH					LR	LR		
	comp=Z,2μm,20.9s							
KULM	**Kulim**	**25.36**	**269**	P		**P**	**06 45 53.0**	**+0.6**
KULM					IAmb	IAmb	06 46 01.0	
	comp=Z,78nm,0.9s							
JCJ	**Chichijima**	**25.52**	**35**	P		**P**	**06 45 52.0**	**-1.6**
	comp=Z,227nm,0.5s,baz=262,slow=7.2,SNR=23							
JCJ					LR	LR	06 54 15.4	
	comp=Z,382nm,21.6s,baz=286,slow=32							
JCJ	**Chichijima**	**25.52**	**35**	P		**P**	**06 45 54.2**	**+0.6**
PMG	**Port Moresby**	**26.28**	**127**	P		**P**	**06 45 59.6**	**-0.9**
	comp=Z,26nm,0.8s,baz=210,slow=8.1,SNR=3.2							
	comp=Z,26nm,0.8s							
PMG	**Port Moresby**	**26.28**	**127**	P		**P**	**06 45 59.7**	**-0.9**
PMG					pmax	pmax		
	comp=Z,40nm,1.1s							
WHN	**Wuhan**	**26.31**	**337**	⇑*i*P		**P**	**06 46 04.3**	**+3.6**
WHN				S		**S**	**06 50 35.8**	**+6.1**
WHN					pmax	pmax		
	comp=Z,320nm,1.1s							
WHN					LR	LR		
	comp=Z,3μm,23.0s							
WHN					LR	LR		
	comp=Z,2μm,15.4s							
WHN					LR	LR		
	comp=Z,4μm,22.7s							
SRIT	**Nakonsritamara**	**26.36**	**276**	P		**P**	**06 46 02.0**	**+0.7**
SRIT					IAmb	IAmb	06 46 05.2	
	comp=Z,71nm,1.2s							
COEN	**Coen**	**26.48**	**140**	P		**P**	**06 46 03.3**	**+0.9**
	baz=27,SNR=15							
COEN	**Coen**	**26.48**	**140**	P		**P**	**06 46 02.7**	**+0.3**
COEN					IAmb	IAmb	06 46 05.9	
	comp=Z,66nm,1.2s							
COEN	**Coen**	**26.48**	**140**	P		**P**	**06 46 04.5**	**+2.1**
GYA	**Guiyang**	**27.13**	**319**	⇑P		**P**	**06 46 10.8**	**+2.5**
GYA				sP		sP	06 46 28.5	+0.5
GYA				S		**S**	**06 50 50.5**	**+7.5**
GYA				sS		sS	06 51 07.0	+0.6
GYA					pmax	pmax		
	comp=Z,12nm,0.9s							
GYA					pmax	pmax		
	comp=Z,230nm,3.6s							
GYA					LR	LR		
	comp=Z,550nm,19.7s							
GYA					LR	LR		
	comp=Z,460nm,12.4s							
GYA					LR	LR		
	comp=Z,880nm,18.5s							
PSI	**Prapat**	**27.35**	**263**	P		**P**	**06 46 11.5**	**+1.1**
PSI					pmax	pmax		
	comp=Z,37nm,1.0s							
PSI	**Prapat**	**27.35**	**263**	P		**P**	**06 46 15.5**	**+5.1**
RPSI	**Rantau Prapat**	**27.37**	**263**	P		**P**	**06 46 11.5**	**+1.1**
WRAB	**Tennant Creek**	**27.53**	**163**	P		**P**	**06 46 10.7**	**-1.1**
WRAB					IAmb	IAmb	06 46 39.7	
	comp=Z,49nm,0.9s							
WRAB	**Tennant Creek**	**27.53**	**163**	P		**P**	**06 46 10.7**	**-1.1**
WRAB					pmax	pmax		
	comp=Z,49nm,0.9s							
WRAB	**Tennant Creek**	**27.53**	**163**	P		**P**	**06 46 11.7**	**-0.1**
WRA	**Warramunga Arr**	**27.54**	**163**	P		**P**	**06 46 10.9**	**-0.9**
	comp=Z,4.8nm,0.4s,baz=343,slow=10,SNR=74							
WRA				ScP		**ScP**	**06 53 05.7**	**+0.6**
	comp=Z,4.6nm,0.9s,baz=332,slow=3.4,SNR=6.5							
WRA					LR	LR	06 59 46.3	
	comp=Z,720nm,19.7s,baz=313,slow=42							
	comp=Z,4.8nm,0.4s							
WRA	**Warramunga Arr**	**27.54**	**163**	P		**P**	**06 46 11.1**	**-0.7**
WRA	**Warramunga Arr**	**27.54**	**163**	P		**P**	**06 46 11.1**	**-0.7**
KRVT	**Keravat (AS076**	**28.02**	**112**	P		**P**	**06 46 18.0**	**+1.8**
	comp=Z,32nm,0.6s,baz=355,slow=18,SNR=5.3							
KRVT					LR	LR	06 56 41.6	
	comp=Z,559nm,19.8s,baz=83,slow=35							
	comp=Z,32nm,0.6s							
SISI	**Saibi**	**28.09**	**255**	P		**P**	**06 46 18.3**	**+1.4**
	comp=Z,89nm,0.7s							
MBWA	**Marble Bar**	**28.24**	**193**	P		**P**	**06 46 17.9**	**-0.1**
MBWA					IAmb	IAmb	06 46 48.8	
	comp=Z,100nm,1.6s							
MBWA	**Marble Bar**	**28.24**	**193**	P		**P**	**06 46 19.6**	**+1.6**
MBWA	**Marble Bar**	**28.24**	**193**	P		**P**	**06 46 17.5**	**-0.5**
ENH	**Enshi**	**28.31**	**329**	P		**P**	**06 46 19.3**	**+0.6**
ENH	**Enshi**	**28.31**	**329**	P		**P**	**06 46 20.9**	**+2.1**
ENH				sP		**sP**	**06 46 37.7**	**-0.8**
KCSI	**Kotacane, Aceh**	**28.39**	**265**	P		**P**	**06 46 20.9**	**+1.3**
	comp=Z,102nm,1.3s							
PSA00	**Pilbara Seismi**	**28.61**	**192**	P		**P**	**06 46 25.0**	**+3.6**
GSI	**Gunungsitoli**	**28.94**	**261**	P		**P**	**06 46 23.6**	**-0.9**
GSI	**Gunungsitoli**	**28.94**	**261**	P		**P**	**06 46 23.4**	**-1.0**
	comp=Z,130nm,0.8s							
GSI	**Gunungsitoli**	**28.94**	**261**	P		**P**	**06 46 26.3**	**+1.9**
CMAR	**Chiang Mai Arr**	**29.00**	**297**	P		**P**	**06 46 26.1**	**+1.2**
	comp=Z,8.6nm,0.6s,baz=120,slow=7.0,SNR=29							
CMAR				PcP		**PcP**	**06 49 32.9**	**+0.2**
	comp=Z,1.9nm,0.3s,baz=120,slow=1.4,SNR=4.8							
CMAR					LR	LR	06 58 46.3	
	comp=Z,623nm,18.0s,baz=110,slow=38							
	comp=Z,8.6nm,0.6s							
CMAR	**Chiang Mai Arr**	**29.00**	**297**	P		**P**	**06 46 25.9**	**+0.9**
KMI	**Kunming**	**29.01**	**312**	⇑P		**P**	**06 46 28.0**	**+2.8**
KMI				pP		pP	06 46 39.0	+0.3
KMI				PP		**PnPn**	**06 47 21.5**	**+2.0**
KMI				S		**S**	**06 51 14.5**	**+1.5**
KMI					pmax	pmax		
	comp=Z,27nm,0.8s							
KMI					LR	LR		
	comp=Z,550nm,18.6s							
KMI					LR	LR		
	comp=Z,870nm,20.2s							
KMI					LR	LR		
	comp=Z,1μm,20.9s							
CHTO	**Chiang Mai**	**29.13**	**297**	P		**P**	**06 46 26.4**	**+0.3**
CHTO	**Chiang Mai**	**29.13**	**297**	P		**P**	**06 46 26.4**	**+0.3**
CHTO					pmax	pmax		
	comp=Z,27nm,1.2s							
CHTO	**Chiang Mai**	**29.13**	**297**	P		**P**	**06 46 27.5**	**+1.4**
	comp=Z,7.9nm,0.8s							
CHTO	**Chiang Mai**	**29.13**	**297**	P		**P**	**06 46 27.6**	**+1.6**
CHTO				pP		**pP**	**06 46 40.2**	**+0.8**
JHJ	**Hachijo jima 2**	**29.33**	**24**	LR		LR

XAN pmax pmax
comp=Z,430nm,3.8s
XAN LR LR
comp=Z,820nm,19.2s
XAN LR LR
comp=Z,620nm,17.8s
XAN LR LR
comp=Z,1μm,17.9s
XAN Xi'an 31.65 332 P **P** **06 46 49.4 +1.2**
XAN pP **pP** **06 47 04.3 +2.6**
MAJO Matsushiro 31.84 19*d* iP **P** **06 46 47.4 -2.4**
MAJO pmax pmax
comp=Z,37nm,1.9s
MAJO Matsushiro 31.84 19 P **P** **06 46 47.6 -2.2**
MJAR Matsushiro Arr 31.84 19 P **P** **06 46 47.6 -2.2**
comp=Z,4.8nm,0.8s,baz=189,slow=9.3,SNR=8.2
MJAR PcP **PcP** **06 49 40.0 +0.3**
comp=Z,2.0nm,0.7s,baz=151,slow=3.9,SNR=4.1
MJAR LR LR 06 59 38.2
comp=Z,420nm,19.7s,baz=222,slow=36
comp=Z,4.8nm,0.8s
CD2 Chengdu 32.05 322 P **P** **06 46 56.3 +4.6**
CD2 S **S** **06 51 59.3 -0.7**
CD2 pmax pmax
comp=Z,100nm,0.5s
CD2 LR LR
comp=Z,730nm,15.0s
CD2 LR LR
comp=Z,470nm,15.5s
HNS HongShan 32.42 343 ⇑P **P** **06 46 55.8 +0.9**
HNS pP **pP** **06 47 07.3 -1.4**
HNS PcP **PcP** **06 49 43.5 +2.3**
HNS S **S** **06 52 07.5 +1.9**
HNS ScP **ScP** **06 53 23.0 +2.4**
HNS pmax pmax
comp=Z,150nm,0.9s
HNS LR LR
comp=Z,320nm,15.2s
HNS LR LR
comp=Z,350nm,17.5s
HNS LR LR
comp=Z,370nm,18.3s
CTA Charters Tower 33.06 144 LR LR 07 01 25.8
comp=Z,862nm,20.4s,baz=324,slow=38
CTA Charters Tower 33.06 144 P **P** **06 47 03.2 +2.6**
CTAO Charters Tower 33.06 144 P **P** **06 47 01.8 +1.2**
CTAO Charters Tower 33.06 144 P **P** **06 47 01.8 +1.2**
CTAO pmax pmax
comp=Z,186nm,2.0s
CTAO Charters Tower 33.06 144 P **P** **06 47 03.0 +2.4**
CTAO Charters Tower 33.06 144 P **P** **06 47 03.3 +2.7**
CTAO pP **pP** **06 47 16.5 +2.2**
TIY Taiyuan 33.43 340 *e*P **P** **06 47 06.0 +2.2**
TIY pP **pP** **06 47 21.0 +3.3**
TIY sP **sP** **06 47 25.5 +1.4**
TIY S **S** **06 52 25.8 +4.4**
TIY pmax pmax
comp=Z,65nm,1.0s
TIY pmax pmax
comp=Z,200nm,3.8s
TIY LR LR
comp=Z,300nm,22.5s
TIY LR LR
comp=Z,210nm,15.0s
TIY LR LR
comp=Z,370nm,27.3s
BJT Baijiatuau 34.51 346 P **P** **06 47 12.9 -0.1**
BJT Baijiatuau 34.51 346 P **P** **06 47 12.9 -0.1**
BJT pmax pmax
comp=Z,109nm,0.8s
BJT Baijiatuau 34.51 346 P **P** **06 47 14.8 +1.8**
BJT x x 06 49 04.9
BJI Beijing 34.53 346 P **P** **06 47 13.3 +0.2**
BJI S **S** **06 52 39.0 +0.9**
BJI pmax pmax
comp=Z,150nm,0.7s
BJI LR LR
comp=Z,81nm,20.3s
BJI LR LR
comp=Z,250nm,18.3s
BJI LR LR
comp=Z,580nm,22.3s
SNY Shenyang 35.21 357 ⇓P **P** **06 47 19.5 +0.5**
SNY S **S** **06 52 54.3 +5.8**
SNY pmax pmax
comp=Z,88nm,0.9s
SNY LR LR
comp=Z,330nm,19.0s
SNY LR LR
comp=Z,310nm,19.9s
SNY LR LR
comp=Z,540nm,16.6s
OOD Oodnadatta 35.37 165 P **P** **06 47 20.7 +0.2**
LZH Lanzhou 35.79 328 *e*P **P** **06 47 26.0 +1.7**
LZH pP sP 06 47 42.5 -1.8
LZH pmax pmax
comp=Z,190nm,1.6s
LZH pmax pmax
comp=Z,250nm,4.8s
LZH LR LR
comp=Z,940nm,12.4s
LZH LR LR
comp=Z,700nm,12.7s
LZH LR LR
comp=Z,610nm,14.4s
MSHR Mys Shultsa 36.16 6*c* iP **P** **06 47 26.9 -0.2**
MSHR pmax pmax
comp=Z,23nm,0.6s
HHC Hu-ho-hao-te 36.55 341 *e*P **P** **06 47 32.3 +1.6**
HHC pP pP 06 47 42.0 -2.7
HHC S **S** **06 53 09.0 -0.4**
HHC pmax pmax
comp=Z,170nm,1.7s
HHC LR LR
comp=Z,600nm,19.8s
HHC LR LR
comp=Z,480nm,15.7s
HHC LR LR
comp=Z,550nm,18.6s
MORW Morawa 36.71 195 P **P** **06 47 32.5 +0.5**
baz=37,SNR=12
MORW Morawa 36.71 195 P **P** **06 47 33.1 +1.1**
INKA Innaminka 36.90 158 P **P** **06 47 35.7 +2.1**
CN2 Changchun 37.11 359 *e*P **P** **06 47 35.0 -0.2**
CN2 *es*P pP 06 47 52.5 +3.2
CN2 *e*PP **PnPn** **06 49 03.0 +1.4**
CN2 *e*S **S** **06 53 18.0 +0.4**
CN2 LR LR
comp=Z,220nm,20.0s
CN2 LR LR
comp=Z,690nm,20.0s
CN2 LR LR
comp=Z,210nm,22.0s
FORT Forrest 37.16 177 P **P** **06 47 35.5 -0.2**
baz=37,SNR=32
FORT Forrest 37.16 177 P **P** **06 47 39.1 +3.3**
HNR Honiara 37.26 115 LR LR 07 01 13.1
comp=Z,203nm,21.3s,baz=291,slow=33
QLP Quilpie 37.32 153 P **P** **06 47 36.5 -0.7**
baz=38,SNR=7.3
QLP Quilpie 37.32 153 P **P** **06 47 38.8 +1.6**
MULG Mulgathing 37.40 169 P **P** **06 47 38.7 +0.9**
SHL Shillong 37.77 304 P **P** **06 47 41.2 -0.1**
SHL Shillong 37.77 304 P **P** **06 47 41.2 -0.1**
SHL pmax pmax
comp=Z,71nm,0.9s
USA0B Ussuriysk Arra 37.86 7 P **P** **06 47 41.0 -0.5**
USA0B IAmb IAmb 06 48 27.4
comp=Z,29nm,1.1s
USA0B Ussuriysk Arra 37.86 7 P **P** **06 47 41.0 -0.5**
USA0B pmax pmax
comp=Z,29nm,1.1s
USRK Ussuriysk Ar. 37.86 7 P **P** **06 47 41.2 -0.3**
comp=Z,14nm,0.5s,baz=180,slow=7.3,SNR=57
USRK LR LR 07 02 46.8
comp=Z,299nm,21.7s,baz=163,slow=35
comp=Z,14nm,0.5s
USRK Ussuriysk Ar. 37.86 7 P **P** **06 47 40.6 -0.9**
BLDU Ballidu 38.03 193 P **P** **06 47 43.6 +0.4**
baz=38,SNR=19
BLDU Ballidu 38.03 193 P **P** **06 47 45.4 +2.2**
MDJ Mudanjiang 38.04 4 P **P** **06 47 43.1 0.0**
MDJ IAmb IAmb 06 47 58.6
comp=Z,49nm,1.1s
MDJ Mudanjiang 38.04 4 P **P** **06 47 43.3 +0.2**
MDJ pmax pmax
comp=Z,23nm,0.7s
MDJ pmax pmax
comp=Z,210nm,4.9s
MDJ Mudanjiang 38.04 4 P **P** **06 47 43.4 +0.2**
MDJ x x 06 47 53.0
MDJ pP **pP** **06 47 57.5 +0.3**
RK1H Rockhampton Ha 38.11 142 P **P** **06 47 46.2 +2.3**
comp=Z,30nm,1.0s
XLT XiLinHaoTe 38.24 348 ⇑iP **P** **06 47 45.3 +0.5**
XLT pP pP 06 47 57.5 -1.4
XLT sP sP 06 48 01.5 -3.8
XLT S **S** **06 53 35.5 +0.6**
XLT sS sS 06 53 56.8 -1.9
XLT pmax pmax
comp=Z,73nm,1.0s
XLT pmax pmax
comp=Z,310nm,5.7s
XLT LR LR
comp=Z,500nm,18.4s
XLT LR LR
comp=Z,350nm,20.3s
LCRK Leigh Creek 38.57 163 P **P** **06 47 48.4 +0.7**
KLBR Kellerberrin 38.76 191 P **P** **06 47 49.6 +0.4**
baz=39,SNR=13
KLBR Kellerberrin 38.76 191 P **P** **06 47 50.0 +0.8**
BNX BinXian 39.06 1 P **P** **06 47 51.8 +0.2**
BNX pP **pP** **06 48 03.8 -2.0**
BNX sP **sP** **06 48 09.8 -2.4**
BNX pmax pmax
comp=Z,19nm,0.5s
BNX pmax pmax
comp=Z,210nm,4.2s
MUN Mundaring 39.46 193 P **P** **06 47 56.2 +1.1**
baz=40,SNR=13
MUN Mundaring 39.46 193 P **P** **06 47 56.5 +1.4**
EIDS Eidsvold 39.95 144 P **P** **06 47 59.8 +0.6**
baz=40,SNR=5.1
EIDS Eidsvold 39.95 144 P **P** **06 47 58.3 -1.0**
EIDS IAmb IAmb 06 48 02.4
comp=Z,70nm,1.4s
EIDS Eidsvold 39.95 144 P **P** **06 47 59.8 +0.6**
ASAJ Asahikawa 40.11 18 LR LR 07 04 09.8
comp=Z,291nm,21.9s,baz=194,slow=35
NWAO Narrogin (SRO) 40.15 192 P **P** **06 48 01.0 +0.1**
NWAO Narrogin (SRO) 40.15 192 P **P** **06 48 01.0 +0.1**
NWAO pmax pmax
comp=Z,104nm,1.3s
NWAO Narrogin (SRO) 40.15 192 P **P** **06 48 01.8 +1.0**
NWAO Narrogin (SRO) 40.15 192 P **P** **06 48 01.8 +1.0**
NWAO pP **pwP** **06 48 16.9 -0.4**
BBOO Buckleboo 40.26 167 P **P** **06 48 02.0 +0.3**
baz=40,SNR=48
BBOO Buckleboo 40.26 167 P **P** **06 48 01.1 -0.7**
BBOO IAmb IAmb 06 48 04.7
comp=Z,67nm,0.9s
BBOO Buckleboo 40.26 167 P **P** **06 48 01.9 +0.1**
GTA Gaotai 40.39 328 P **P** **06 48 04.3 +1.3**
GTA pP pP 06 48 17.3 +0.5
GTA sP sP 06 48 25.0 +2.0
GTA PP **PnPn** **06 49 43.5 +2.5**
GTA PcP **PcP** **06 50 07.3 +2.0**
GTA ScP **ScP** **06 53 50.5 +0.3**
GTA S **S** **06 54 06.8 -0.7**
GTA sS sS 06 54 29.5 -1.9
GTA pmax pmax
comp=Z,180nm,0.8s
GTA pmax pmax
comp=Z,290nm,4.7s
GTA LR LR
comp=Z,480nm,20.0s
GTA LR LR
comp=Z,390nm,20.0s
GTA LR LR
comp=Z,710nm,20.0s
WHYH Whyalla 40.84 165 P **P** **06 48 06.8 +0.3**
comp=Z,54nm,0.6s
STKA Stephens Creek 40.96 160 P **P** **06 48 07.5 0.0**
comp=Z,33nm,0.8s,baz=334,slow=8.0,SNR=50
STKA LR LR 07 07 02.8
comp=Z,307nm,18.6s,baz=329,slow=39
comp=Z,33nm,0.8s
STKA Stephens Creek 40.96 160 P **P** **06 48 07.5 0.0**
baz=41,SNR=33
STKA Stephens Creek 40.96 160 P **P** **06 48 07.5 0.0**
STKA Stephens Creek 40.96 160 P **P** **06 48 07.5 0.0**
STKA pmax pmax
comp=Z,8.0nm,0.8s
STKA Stephens Creek 40.96 160 P **P** **06 48 07.8 +0.2**
NAPP Napperby 41.13 165 P **P** **06 48 11.3 +2.4**
comp=Z,69nm,0.7s
GOMU GeErMu 41.13 320 P **P** **06 48 11.3 +1.9**
GOMU PP **PnPn** **06 49 50.8 +0.9**
GOMU S **S** **06 54 25.3 +6.3**
GOMU pmax pmax
comp=Z,5.0nm,0.9s
GOMU LR LR
comp=Z,190nm,13.9s
GOMU LR LR
comp=Z,270nm,14.1s
GOMU LR LR
comp=Z,340nm,13.8s
HTT Hallett 41.57 164 P **P** **06 48 13.1 +0.5**
baz=42,SNR=25
HTT Hallett 41.57 164 P **P** **06 48 14.8 +2.2**
RKGY Rocky Gully 41.83 191 P **P** **06 48 16.8 +2.2**
CMSA Cobar Meteorol 42.23 155 P **P** **06 48 18.7 +0.7**
baz=42,SNR=5.8
CMSA Cobar Meteorol 42.23 155 P **P** **06 48 19.2 +1.2**
YSS Yuzh-Sakhalins 42.72 17 *e*P **P** **06 48 20.3 -1.4**
YSS *e**SP **sP** **06 48 41.0 -1.5**
YSS *e* 06 49 57.6
YSS *e*PPP PPP 06 50 39.4
YSS *e*S **S** **06 54 39.1 -2.3**
YSS pmax pmax
comp=Z,20nm,0.9s
YSS MLR MLR
comp=Z,400nm,15.0s
YSS MLR MLR
comp=N,300nm,16.0s
KLR Kul'dur 42.80 5 P **P** **06 48 21.8 -0.6**
comp=N,11nm,0.5s,baz=193,slow=6.9,SNR=57
KLR PcP **PcP** **06 50 13.1 +0.3**
comp=N,11nm,0.8s,baz=247,slow=3.6,SNR=5.8
KLR LR LR 07 06 03.9
comp=N,185nm,20.0s,baz=187,slow=36
comp=N,11nm,0.5s
KLR Kul'dur 42.80 5*ce*P **P** **06 48 21.4 -1.0**
KLR pmax pmax
comp=Z,27nm,1.5s
HIA Hailar 42.91 354 P **P** **06 48 23.3 0.0**
HIA Hailar 42.91 354 P **P** **06 48 23.3 0.0**
HIA pmax pmax
comp=Z,25nm,0.9s
TWOA Tennyson Woods 42.99 165 P **P** **06 48 27.0 +3.0**
comp=Z,114nm,0.6s
GUN Gumba 43.62 304 *e*P **P** **06 48 30.4 +0.7**
comp=Z,84nm,0.7s
PKIN Phulchoki 43.90 303 *e*P **P** **06 48 31.9 0.0**
comp=Z,32nm,0.7s
KKN Kakani 44.07 304 *e*P **P** **06 48 33.4 +0.2**
ARMA Armidale 44.15 148 P **P** **06 48 34.3 +0.7**
baz=44,SNR=6.3
ARMA Armidale 44.15 148 P **P** **06 48 34.6 +1.0**
DMN Daman 44.15 303 *e*P **P** **06 48 34.3 +0.4**
comp=Z,57nm,0.9s
ULN Ulaanbaatar 44.27 342 P **P** **06 48 35.6 +1.2**
ULN Ulaanbaatar 44.27 342 P **P** **06 48 35.6 +1.2**
ULN pmax pmax
comp=Z,98nm,1.0s
ULN Ulaanbaatar 44.27 342 P **P** **06 48 35.9 +1.5**
ULN pP **pP** **06 48 49.3 +0.7**
ULN sP **sP** **06 48 54.5 -0.5**
SONM Songino Array 44.45 341 P **P** **06 48 36.7 +0.8**
comp=Z,30nm,1.0s,baz=158,slow=8.2,SNR=86
SONM PcP **PcP** **06 50 18.5 -0.2**
comp=Z,11nm,0.8s,baz=158,slow=3.6,SNR=6.0
SONM LR LR 07 10 31.1
comp=Z,395nm,18.8s,baz=153,slow=41
comp=Z,30nm,1.0s
SONM Songino Array 44.45 341 P **P** **06 48 36.6 +0.8**
SONM IAmb IAmb 06 48 38.5
comp=Z,64nm,1.2s
GKN Gorkha 44.68 304 *e*P **P** **06 48 38.0 0.0**
comp=Z,22nm,0.7s
PALK Pallekele 45.08 274 LR LR 07 08 57.9
comp=Z,151nm,19.4s,baz=197,slow=38
KOLN Koldanda 45.46 303 *e*P **P** **06 48 44.5 +0.2**
comp=Z,32nm,0.8s
DANN Dangsing 45.53 304 *e*P **P** **06 48 45.0 +0.1**
comp=Z,99nm,0.7s
ARPS Mount Arapiles 45.53 162 P **P** **06 48 45.1 +0.8**
baz=46,SNR=19
ARPS Mount Arapiles 45.53 162 P **P** **06 48 46.5 +2.1**
PYUN Piuthan 46.08 303 *e*P **P** **06 48 49.6 +0.4**
comp=Z,77nm,0.9s
CIT Chita 46.51 349 *e*P **P** **06 48 53.2 +1.3**
CIT *e* 06 49 05.6
CIT *e* 06 49 11.0
CIT pmax pmax
comp=Z,156nm,2.2s
CAN Canberra 46.89 154 P **P** **06 48 56.8 +1.6**
CAN pP **pP** **06 49 11.1 +1.8**
BRAT Ballarat 46.91 161 P **P** **06 48 58.1 +3.0**
comp=Z,13nm,0.8s
CNB Canberra Magne 47.04 154 P **P** **06 48 57.7 +1.4**
baz=47,SNR=6.9
ZEA Zeya 47.06 1 *e*P **P** **06 48 55.8 -0.3**
ZEA pmax pmax
comp=Z,10.0nm,0.7s
ZEA MLR MLR
comp=N,200nm,15.0s
TOO Toolangi 47.47 159 P **P** **06 49 00.8 +1.3**
baz=48,SNR=7.0
HYBB Hyderabad (bro 47.65 288 *e*P **P** **06 49 00.3 -1.0**
HYBB *es*P **sP** **06 49 20.3 -0.9**
HYBB *e*S **S** **06 55 49.4 -4.1**
ZAK Zakamensk 47.69 340 *e*P **P** **06 49 02.0 +0.8**
ZAK *e* 06 50 29.6
ZAK pmax pmax
comp=Z,14nm,0.9s
NOUC Port Laguerre 48.58 127 P **P** **06 49 11.8 +3.5**
NOUC Port Laguerre 48.58 127 x **P** **06 49 08.2 -0.2**
LIFNC LIFOU 48.66 125 P **P** **06 49 08.7 -0.3**
LIFNC LIFOU 48.66 125 P **P** **06 49 10.1 +1.1**
comp=Z,93nm,0.8s
DZM Mont Dzumac 48.67 127 LR LR 07 07 42.3
comp=Z,266nm,21.9s,baz=302,slow=34
DZM Mont Dzumac 48.67 127 *e*P **P** **06 49 08.0 -1.2**
comp=Z,69nm,1.1s
DZM Mont Dzumac 48.67 127 *e*LR LR 07 03 01.0
comp=Z,1μm,29.7s
DZM Mont Dzumac 48.67 127 P **P** **06 49 08.8 -0.4**
DZM IAmb IAmb 06 49 12.9
comp=Z,29nm,1.0s
DZM Mont Dzumac 48.67 127 P **P** **06 49 10.1 +0.9**
DZM Mont Dzumac 48.67 127 P **P** **06 49 09.6 +0.3**
IRK Irkutsk 48.98 342 *e*P **P** **06 49 12.2 +1.2**
IRK pmax pmax
comp=Z,106nm,2.2s
YATNC Mamie plateau, 49.02 127 P **P** **06 49 14.8 +3.0**
MOY Mondy 49.55 340 *e*P **P** **06 49 18.8 +3.3**
MOY pmax pmax
comp=Z,13nm,1.6s
PINNC Pines Island, 49.75 127 P **P** **06 49 18.1 +0.8**
WMQ Urumqi 50.09 324 ⇓*i*P **P** **06 49 23.5 +3.8**
WMQ pP pP 06 49 29.8 -4.1
WMQ pmax pmax
comp=Z,52nm,0.9s
WMQ pmax pmax
comp=Z,300nm,3.8s
WMQ LR LR
comp=Z,770nm,17.9s
WMQ LR LR
comp=Z,570nm,14.3s
WMQ LR LR
comp=Z,500nm,29.7s
WMQ Urumqi 50.09 324 P **P** **06 49 24.2 +4.5**
WMQ pP **pP** **06 49 36.3 +2.4**
BOD Bodaibo 52.01 352 *e*P **P** **06 49 34.0 +0.3**
BOD pmax pmax
comp=Z,91nm,1.6s
PEA0B Petropavlovsk- 53.08 23 P **P** **06 49 41.4 -0.4**
PEA0B IAmb IAmb 06 49 47.6
comp=Z,48nm,1.1s
PEA0B Petropavlovsk- 53.08 23 P **P** **06 49 41.4 -0.4**
PEA0B pmax pmax
comp=Z,49nm,1.2s
PETK Petropavlovsk- 53.08 23 P **P** **06 49 41.5 -0.3**
comp=Z,6.6nm,0.5s,baz=196,slow=5.3,SNR=13
comp=Z,6.6nm,0.5s
PETK Petropavlovsk- 53.08 23 P **P** **06 49 41.3 -0.5**
PDGK Podgornoye 54.88 320 P **P** **06 49 53.5 -1.7**
MK31 Makanchi Array 54.92 324 P **P** **06 49 54.4 -0.9**
MK31 IAmb IAmb 06 49 59.6
comp=Z,23nm,0.7s
MK31 Makanchi Array 54.92 324 P **P** **06 49 54.4 -0.9**
MK31 pmax pmax
comp=Z,23nm,0.7s
MKAR Makanchi Array 54.92 324 P **P** **06 49 54.8 -0.5**
comp=Z,23nm,0.5s,baz=125,slow=7.6,SNR=148
MKAR PcP **PcP** **06 50 57.0 +0.2**
comp=Z,12nm,0.7s,baz=118,slow=4.3,SNR=4.0
MKAR LR LR 07 15 44.1
comp=Z,423nm,18.7s,baz=104,slow=38
comp=Z,23nm,0.5s
MKAR Makanchi Array 54.92 324 P **P** **06 49 54.6 -0.8**
MKAR Makanchi Array 54.92 324*ce*P **P** **06 49 54.4 -0.9**
MKAR pmax pmax
comp=Z,22nm,0.5s
MAKZ Makanchi 55.11 324 P **P** **06 49 56.2 -0.5**
MAKZ IAmb IAmb 06 50 00.9
comp=Z,31nm,0.8s
MAKZ Makanchi 55.11 324 P **P** **06 49 56.2 -0.5**
MAKZ pmax pmax
comp=Z,31nm,0.8s
MAKZ Makanchi 55.11 324 P **P** **06 49 56.0 -0.7**
PRZ Przheval'sk 55.20 318 P **P** **06 49 58.0 +0.3**
PRZ Przheval'sk 55.20 318 P **P** **06 49 58.0 +0.3**
PRZ pmax pmax
comp=Z,59nm,1.0s
TARG Taragay, Kyrgy 55.27 317 P **P** **06 49 57.6 -0.9**
TARG IAmb IAmb 06 50 13.1
comp=Z,16nm,0.8s
TARG Taragay, Kyrgy 55.27 317 P **P** **06 49 57.6 -0.9**
TARG pmax pmax
comp=Z,16nm,0.8s
YAK Yakutsk 55.43 2 P **P** **06 49 58.6 -0.1**
comp=Z,53nm,0.7s,baz=320,slow=0.8,SNR=14
YAK LR LR 07 14 16.3
comp=Z,172nm,20.8s,baz=260,slow=37
comp=Z,53nm,0.7s
YAK Yakutsk 55.43 2 P **P** **06 49 58.3 -0.3**
YAK Yakutsk 55.43 2*d* iP **P** **06 49 58.8 +0.1**
YAK *e*AP **pP** **06 50 11.1 -2.4**
YAK *e*PP **PP** **06 52 00.8 -2.2**
YAK *e*S **S** **06 57 39.2 -0.1**
YAK pmax pmax
comp=Z,80nm,1.0s
YAK Yakutsk 55.43 2 P **P** **06 49 59.4 +0.8**
KPKS Kokpek 55.46 319 *e*P **P** **06 49 58.1 -1.3**
KPKS pmax pmax
comp=Z,11nm,0.8s
KSH Kashi 55.65 314 P **P** **06 50 01.0 +0.2**
KSH pP pP 06 50 14.8 -0.4
KSH sP sP 06 50 19.3 -2.0
KSH pmax pmax
comp=Z,9.0nm,1.1s
KSH LR LR
comp=Z,530nm,19.2s
KSH LR LR
comp=Z,350nm,18.9s
KSH LR LR
comp=Z,720nm,21.6s
KDJ Kajisay 55.87 317 P **P** **06 50 01.8 -0.6**
KDJ IAmb IAmb 06 50 08.0
comp=Z,23nm,0.8s
KDJ Kajisay 55.87 317 P **P** **06 50 01.8 -0.6**
KDJ pmax pmax
comp=Z,23nm,0.8s
MA2 Magadan 56.15 15 P **P** **06 50 04.0 +0.2**
comp=Z,13nm,0.7s,baz=216,slow=14,SNR=3.7
MA2 PcP **PcP** **06 51 01.8 +0.6**
comp=Z,13nm,0.7s,baz=160,slow=9.7,SNR=4.3
MA2 LR LR 07 14 29.8
comp=Z,53nm,19.6s,baz=206,slow=36
comp=Z,13nm,0.7s
MA2 Magadan 56.15 15*c* iP **P** **06 50 03.5 -0.3**
MA2 pmax pmax
comp=Z,28nm,1.7s

MA2 Magadan 56.15 15 P **P** **06 50 03.6 -0.3**
ARXS Arharly 56.36 320 *e*P **P** **06 50 04.5 -1.3**
ULHL Ulahol 56.55 317 P **P** **06 50 07.3 -0.1**
SNR=9.2
MSVF Nonsavu 56.66 116 LR LR 07 12 33.3
comp=Z,192nm,20.9s,baz=284,slow=34
MSVF Nonsavu 56.66 116 P **P** **06 50 08.2 -0.1**
MSVF IAmb IAmb 06 50 11.9
comp=Z,26nm,0.9s
MSVF Nonsavu 56.66 116 P **P** **06 50 08.2 -0.1**
MSVF pmax pmax
comp=Z,26nm,0.9s
MSVF Nonsavu 56.66 116 P **P** **06 50 09.1 +0.8**
MSVF x x 06 50 32.4
BOOM Boomskoye usch 56.85 317 P **P** **06 50 08.4 -1.0**
BOOM IAmb IAmb 06 50 21.9
comp=Z,35nm,1.6s
BOOM Boomskoye usch 56.85 317 P **P** **06 50 08.5 -1.0**
BOOM pmax pmax
comp=Z,35nm,1.6s
TKM2 Tokmak 2 57.26 318 P **P** **06 50 11.8 -0.6**
SNR=11
TKM2 Tokmak 2 57.26 318 P **P** **06 50 11.3 -1.0**
UCH Uchtor 57.72 316 P **P** **06 50 16.1 +0.3**
SNR=25
ZAA0 Zalesovo Array 57.82 333 P **P** **06 50 15.1 -0.7**
ZALV Zalesovo Beam 57.82 333 P **P** **06 50 14.6 -1.2**
comp=Z,53nm,0.8s,baz=120,slow=6.7,SNR=43
ZALV LR LR 07 16 15.8
comp=Z,435nm,21.6s,baz=138,slow=37
comp=Z,53nm,0.8s
ZALV Zalesovo Beam 57.82 333 P **P** **06 50 14.4 -1.4**
CHMS Chumysh 57.86 317 P **P** **06 50 15.4 -0.9**
AAK Ala-Archa 57.89 317 P **P** **06 50 16.5 -0.2**
comp=Z,5.4nm,0.7s,baz=160,slow=9.4,SNR=7.2
AAK LR LR 07 18 14.6
comp=Z,257nm,22.0s,baz=90,slow=39
comp=Z,5.4nm,0.7s
AAK Ala-Archa 57.89 317 P **P** **06 50 16.6 -0.2**
AAK Ala-Archa 57.89 317 P **P** **06 50 16.6 -0.1**
AAK pmax pmax
comp=Z,9.0nm,0.7s
AAK Ala-Archa 57.89 317 x **P** **06 50 17.0 +0.3**
USP Ospenovka 58.13 318 P **P** **06 50 17.6 -0.7**
SNR=18
AML Almayashu 58.24 316 P **P** **06 50 18.9 -0.5**
SNR=14
EKS2 Erkin-Say 58.38 317 P **P** **06 50 19.9 -0.2**
SNR=13
KURBB Kurchatov Arra 59.06 327 P **P** **06 50 23.6 -0.9**
comp=Z,76nm,0.8s,baz=126,slow=7.5
KURBB LR LR 07 17 14.7
comp=Z,174nm,18.4s,baz=100,slow=37
comp=Z,76nm,0.8s
KURBB Kurchatov Arra 59.06 327 P **P** **06 50 22.8 -1.7**
KURK Kurchatov 59.06 327 P **P** **06 50 23.2 -1.3**
KURK Kurchatov 59.06 327 P **P** **06 50 23.2 -1.3**
KURK pmax pmax
comp=Z,92nm,0.8s
KURK Kurchatov 59.06 327 P **P** **06 50 23.5 -0.9**
KURK pP **pP** **06 50 35.9 -2.9**
BTLS Baital 59.15 319 *e*P **P** **06 50 23.7 -1.5**
BTLS pmax pmax
comp=Z,6.0nm,0.8s
KBL Kabul 59.36 306 P **P** **06 50 26.4 -0.8**
KBL IAmb IAmb 06 50 27.9
comp=Z,20nm,0.7s
KBL Kabul 59.36 306 P **P** **06 50 26.4 -0.8**
KBL pmax pmax
comp=Z,20nm,0.7s
SEY Seymchan 59.45 14 P **P** **06 50 27.0 0.0**
comp=Z,3.1nm,0.5s,baz=226,slow=5.4,SNR=10
comp=Z,3.1nm,0.5s
SEY Seymchan 59.45 14*d i*P **P** **06 50 28.0 +1.1**
SEY pmax pmax
comp=Z,26nm,1.7s
BTK Batken 59.56 313 P **P** **06 50 27.4 -0.9**
BTK IAmb IAmb 06 50 34.0
comp=Z,40nm,1.2s
BTK Batken 59.56 313 P **P** **06 50 27.4 -0.9**
BTK pmax pmax
comp=Z,40nm,1.3s
CHGR Chuyangaron 60.36 311 P **P** **06 50 32.4 -1.4**
CHGR Chuyangaron 60.36 311 P **P** **06 50 32.4 -1.4**
CHGR pmax pmax
comp=Z,48nm,0.8s
SHEM Shemya Is, Ala 60.37 31 LR LR 07 13 42.6
comp=Z,55nm,21.3s,baz=132,slow=33
KK31 Karatay Array 60.78 316 P **P** **06 50 35.1 -1.3**
KK31 IAmb IAmb 06 50 36.9
comp=Z,19nm,0.8s
KK31 Karatay Array 60.78 316 P **P** **06 50 35.2 -1.3**
KK31 pmax pmax
comp=Z,19nm,0.8s
KKAR Karatay Array 60.78 316 P **P** **06 50 34.9 -1.6**
KKAR Karatay Array 60.78 316 P **P** **06 50 35.0 -1.5**
KKAR IAmb IAmb 06 50 36.9
comp=Z,19nm,0.8s
KKAR Karatay Array 60.78 316 P **P** **06 50 35.0 -1.5**
KKAR pmax pmax
comp=Z,19nm,0.8s
IUG Iuzhnay 60.80 315 *e*P **P** **06 50 35.7 -1.0**
OTUK Ortayu 61.53 322 P **P** **06 50 39.8 -1.7**
RPZ Rata Peaks 64.40 145 LR LR 07 19 31.0
comp=Z,368nm,20.9s,baz=302,slow=36
RAO Raoul Island 64.47 127 LR LR 07 18 28.1
comp=Z,124nm,19.9s,baz=355,slow=35
BVAR Borovoye Array 64.65 326 LR LR 07 22 01.2
comp=Z,211nm,19.3s,baz=349,slow=39
BRVK Borovoye 64.72 326 P **P** **06 51 01.7 -0.8**
HRA Herat 64.82 305 P **P** **06 51 02.2 -1.6**
AFI Afiamalu 64.89 109 LR LR 07 13 46.9
comp=Z,251nm,21.9s,baz=259,slow=31
URZ Urewera 65.01 138 LR LR 07 18 14.2
comp=Z,318nm,21.9s,baz=31,slow=35
TIXI Tiksi 65.06 1 P **P** **06 51 04.1 -0.2**
comp=Z,22nm,0.6s,baz=100,slow=18,SNR=48
TIXI LR LR 07 20 51.1
comp=Z,225nm,20.0s,baz=180,slow=37
comp=Z,22nm,0.6s
TIXI Tiksi 65.06 1 P **P** **06 51 03.9 -0.3**
TIXI IAmb IAmb 06 51 07.4
comp=Z,33nm,0.8s
TIXI Tiksi 65.06 1*c i*P **P** **06 51 03.4 -0.9**
TIXI pmax pmax
comp=Z,19nm,0.8s
TIXI Tiksi 65.06 1 P **P** **06 51 04.2 0.0**
TIXI sP **sP** **06 51 24.4 -1.2**
WSAR Wadi Sarin 66.78 292 P **P** **06 51 17.3 +1.0**
comp=Z,2.8nm,0.6s,baz=113,slow=3.8,SNR=5.0
comp=Z,2.8nm,0.6s
BILL Bilibino 67.01 15 P **P** **06 51 16.6 -0.3**
BILL IAmb IAmb 06 51 34.7
comp=Z,47nm,1.8s
BILL Bilibino 67.01 15⇓ *e*P **P** **06 51 15.9 -1.0**
BILL *i* 06 51 31.5
BILL pmax pmax
comp=Z,20nm,1.9s
BILL MLR MLR
comp=Z,87nm,17.0s
GEYT Alibeck 68.68 308 P **P** **06 51 28.1 +0.1**
comp=Z,7.7nm,0.7s,baz=120,slow=8.7,SNR=9.9
GEYT LR LR 07 25 31.0
comp=Z,186nm,20.1s,baz=92,slow=39
comp=Z,7.7nm,0.7s
GEYT Alibeck 68.68 308 P **P** **06 51 27.5 -0.6**
GYA0 ALIBECK ARRAY 68.68 308 P **P** **06 51 26.4 -1.7**
GYA0B ALIBECK ARRAY 68.68 308 P **P** **06 51 27.9 -0.1**
AB31 Akbulak array 69.61 320 *i* P **P** **06 51 31.6 -1.9**
ABKAR Akbulak array 69.61 320 P **P** **06 51 31.9 -1.7**
ABKAR IAmb IAmb 06 51 45.0
comp=Z,23nm,0.9s
ABKAR Akbulak array 69.61 320 P **P** **06 51 32.0 -1.5**
AKTO Aktyubinsk 71.09 321 P **P** **06 51 41.4 -1.2**
comp=Z,14nm,0.7s,baz=96,slow=7.8,SNR=34
AKTO LR LR 07 26 19.5
comp=Z,327nm,19.1s,baz=102,slow=39
comp=Z,14nm,0.7s
SVE Sverdlovsk 71.26 328 *e*P **P** **06 51 42.5 -1.0**
SVE pmax pmax
comp=Z,41nm,0.9s
ARU Arti 72.25 327 P **P** **06 51 48.2 -1.2**
comp=Z,17nm,0.4s,baz=88,slow=1.3,SNR=35
ARU LR LR 07 26 59.0
comp=Z,202nm,18.9s,baz=136,slow=39
comp=Z,17nm,0.4s

ARU Arti 72.25 327 P **P** **06 51 47.8 -1.6**
ARU IAmb IAmb 06 51 55.4
comp=Z,25nm,0.6s
ARU Arti 72.25 327*d i*P **P** **06 51 47.5 -1.9**
ARU *PP **pP** **06 52 04.3 -0.4**
ARU 06 54 27.7
ARU S **S** **06 51 06.5 -1.6**
ARU SS **SS** **07 05 41.8 -4.9**
ARU pmax pmax
comp=Z,17nm,0.6s
ARU MLR MLR
comp=Z,171nm,15.0s
CASY Casey 73.52 187 P **P** **06 51 56.4 -0.2**
N16K Nishlik Lake 77.01 29 P **P** **06 52 17.4 +0.4**
baz=260
O16K Kokwok River B 77.20 30 P **P** **06 52 17.9 -0.1**
baz=261
KIRV Kirov 77.52 329 P **P** **06 52 18.6 -1.2**
comp=Z,56nm,0.8s,baz=310,slow=1.5,SNR=14
comp=Z,56nm,0.8s
RAR Rarotonga 77.69 113 LR LR 07 23 24.2
comp=Z,64nm,19.0s,baz=264,slow=33
O17K Koliganek Bris 77.73 30 P **P** **06 52 20.9 0.0**
baz=262
R17K Ugashik Creek 77.81 32 P **P** **06 52 20.2 -1.2**
baz=263
BELG Belogornoye 77.82 322 P **P** **06 52 19.4 -2.2**
comp=Z,47nm,0.8s,baz=307,slow=0.7,SNR=16
BELG LR LR 07 29 14.8
comp=Z,143nm,20.6s,baz=135,slow=38
comp=Z,47nm,0.8s
BELG Belogornoye 77.82 322*c i*P **P** **06 52 19.8 -1.8**
BELG pmax pmax
comp=Z,7.0nm,0.8s
P17K Kvichak River 77.98 31 P **P** **06 52 21.9 -0.4**
baz=263
Q17K Contact Creek 78.15 32 P **P** **06 52 21.8 -1.7**
baz=263
N18K Kilae Creek 78.44 29 P **P** **06 52 26.0 +1.0**
baz=263
GROC Groznyy 78.50 313 *e*P **P** **06 52 24.8 -0.8**
GROC *e* 06 52 33.6
GROC *e*PP **pP** **06 52 39.5 -1.0**
GROC pmax pmax
comp=Z,22nm,0.5s
P18K Big Mountain, 78.62 31 P **P** **06 52 25.6 -0.3**
baz=264
SVW2 Sparrevohn 78.65 29 P **P** **06 52 26.0 0.0**
Q18K Katmai Hardscr 78.65 32 P **P** **06 52 24.9 -1.3**
baz=264
O18K Koktuh Hills 78.68 30 P **P** **06 52 26.5 +0.2**
baz=264
TTA Tatalina 78.68 27 P **P** **06 52 26.3 0.0**
TTA Tatalina 78.68 27 P **P** **06 52 26.3 0.0**
TTA pmax pmax
comp=Z,21nm,1.4s
TTA Tatalina 78.68 27 P **P** **06 52 26.6 +0.3**
baz=262
RAYN Ar Rayn 78.84 293 P **P** **06 52 26.4 -1.5**
RAYN IAmb IAmb 06 52 28.9
comp=Z,21nm,0.9s
RAYN Ar Rayn 78.84 293 P **P** **06 52 26.4 -1.5**
RAYN pmax pmax
comp=Z,21nm,0.9s
L19K White Mountain 79.12 28 P **P** **06 52 28.6 -0.1**
L19K IAmb IAmb 06 52 44.4
comp=Z,26nm,1.3s
L19K White Mountain 79.12 28 P **P** **06 52 28.7 +0.1**
baz=263
N19K Bonanza Creek 79.15 29 P **P** **06 52 29.1 +0.2**
baz=264
GNI Garni 79.23 310 LR LR 07 33 38.4
comp=Z,49nm,19.1s,baz=90,slow=40
M19K Big River Lodg 79.31 28 P **P** **06 52 30.1 +0.5**
baz=264
Q19K Cape Douglas, 79.39 31 P **P** **06 52 31.4 +1.2**
baz=265
OHAK Old Harbor 79.44 33 P **P** **06 52 29.9 -0.5**
OHAK IAmb IAmb 06 52 46.3
comp=Z,25nm,0.9s
OHAK Old Harbor 79.44 33 P **P** **06 52 29.8 -0.6**
baz=266
KZRT Kazreti 79.50 311 P **P** **06 52 30.8 -0.4**
L20K Farewell, AK 79.61 28 P **P** **06 52 32.8 +1.6**
baz=264
K20K Telida 79.61 27 P **P** **06 52 30.8 -0.5**
K20K IAmb IAmb 06 52 47.9
comp=Z,29nm,1.2s
K20K Telida 79.61 27 P **P** **06 52 31.7 +0.4**
baz=264
J20K Nowinta River 79.67 26 P **P** **06 52 31.5 0.0**
J20K IAmb IAmb 06 52 48.1
comp=Z,32nm,1.3s
J20K Nowinta River 79.67 26 P **P** **06 52 32.0 +0.5**
baz=264,SNR=11
PRGR Permogore 79.75 331 *e*P **P** **06 52 30.6 -1.4**
PRGR *e* 06 52 40.5
PRGR *e* 06 55 34.9
KDAK Kodiak Island 79.85 33 P **P** **06 52 31.8 -0.8**
comp=Z,17nm,0.7s,baz=327,slow=0.9,SNR=29
KDAK LR LR 07 23 37.3
comp=Z,216nm,20.4s,baz=256,slow=32
comp=Z,17nm,0.7s
KDAK Kodiak Island 79.85 33*c i*P **P** **06 52 32.4 -0.2**
KDAK pmax pmax
comp=Z,74nm,1.8s
KDAK Kodiak Island 79.85 33 P **P** **06 52 32.2 -0.4**
baz=266
ZEI Tsey 79.88 312 *e*P **P** **06 52 31.8 -1.6**
ZEI pmax pmax
comp=Z,17nm,1.0s
M20K Styx River 79.90 28 P **P** **06 52 33.1 +0.1**
baz=265
IMAR Indian Mountai 80.04 24 P **P** **06 52 33.7 +0.2**
ONI Oni 80.21 312 P **P** **06 52 34.1 -0.9**
ONI IAmb IAmb 06 52 48.7
comp=Z,33nm,1.5s
ONI Oni 80.21 312 P **P** **06 52 34.1 -0.9**
ONI pmax pmax
comp=Z,33nm,1.5s
H21K Melozitna Rive 80.39 25 P **P** **06 52 35.4 0.0**
H21K IAmb IAmb 06 52 51.8
comp=Z,40nm,1.4s
H21K Melozitna Rive 80.39 25 P **P** **06 52 35.4 0.0**
baz=265,SNR=12
PPLA Purkeypile 80.42 27 P **P** **06 52 35.6 -0.2**
baz=266
CAST Castle Rocks 80.51 27 P **P** **06 52 35.9 -0.2**
baz=266,SNR=11
GEVA Gevas 80.54 308 P **P** **06 52 36.0 -1.0**
GEVA IAmb IAmb 06 52 50.1
comp=Z,18nm,0.9s
KBZ Khabaz 80.62 313 P **P** **06 52 36.5 -0.6**
comp=Z,2.6nm,0.7s,baz=111,slow=1.5,SNR=5.1
KBZ LR LR 07 34 10.9
comp=Z,148nm,18.1s,baz=72,slow=40
comp=Z,2.6nm,0.7s
KBZ Khabaz 80.62 313*c e*P **P** **06 52 35.7 -1.3**
KBZ pmax pmax
comp=Z,5.0nm,1.1s
SKT Skwentna 80.66 28 P **P** **06 52 36.3 -0.7**
baz=266
I21K Tanana 80.69 25 P **P** **06 52 36.8 -0.2**
I21K IAmb IAmb 06 52 53.4
comp=Z,34nm,1.2s
I21K Tanana 80.69 25 P **P** **06 52 37.3 +0.3**
baz=265,SNR=18
KIV Kislovodsk 80.77 313⇑ *e*P **P** **06 52 37.5 -0.5**
KIV *e* 06 55 36.7
KIV pmax pmax
comp=Z,15nm,0.9s
BRSE Bradley Lake S 80.92 31 P **P** **06 52 39.4 +1.0**
baz=267
H22K Ishtalitna Cre 81.00 24 P **P** **06 52 38.8 +0.2**
baz=266
SUA Susitna One 81.00 29 P **P** **06 52 37.7 -1.2**
baz=267
BPAW Bear Paw Mtn. 81.04 26 P **P** **06 52 38.6 -0.3**
BPAW Bear Paw Mtn. 81.04 26 P **P** **06 52 38.7 -0.3**
baz=266,SNR=19
MLY Manley 81.21 25 P **P** **06 52 39.7 -0.1**
baz=267,SNR=15
TRF Thorofare Moun 81.31 27 P **P** **06 52 39.9 -0.7**
baz=267,SNR=9.3
M22K Willow 81.32 29 P **P** **06 52 39.7 -0.6**
baz=268
GURO Guroymak-BITLI 81.34 308 P **P** **06 52 41.2 0.0**

GURO IAmb IAmb 06 52 54.1
comp=Z,23nm,1.0s
VRH Novokhopyorsk 81.43 321 *e*P **P** **06 52 41.2 0.0**
VRH pmax pmax
comp=Z,20nm,0.8s
O22K Cooper Landing 81.46 30 P **P** **06 52 41.3 +0.1**
O22K Cooper Landing 81.46 30 P **P** **06 52 42.0 +0.9**
baz=268
RC01 Rabbit Creek A 81.48 29 P **P** **06 52 41.9 +0.6**
baz=268
D23K Nanushuk River 81.48 21 P **P** **06 52 41.7 +0.5**
baz=266,SNR=13
COLD Coldfoot 81.55 23 P **P** **06 52 41.2 -0.4**
COLD IAmb IAmb 06 52 50.4
comp=Z,14nm,0.8s
COLD Coldfoot 81.55 23 P **P** **06 52 42.2 +0.6**
baz=267
C23K Itkillik River 81.57 20 P **P** **06 52 41.7 +0.1**
baz=266,SNR=21
SEW Seward 81.59 30 P **P** **06 52 42.6 +0.8**
baz=268
H23K Yukon River 81.75 24 P **P** **06 52 43.1 +0.4**
H23K IAmb IAmb 06 52 47.1
comp=Z,16nm,0.8s
H23K Yukon River 81.75 24 P **P** **06 52 43.2 +0.6**
baz=268,SNR=21
PMR Palmer 81.78 29 P **P** **06 52 42.0 -0.8**
baz=268
I23K Minto, Yukon-K 81.80 25 P **P** **06 52 43.1 +0.3**
baz=268,SNR=33
TOLK Toolik Lake Re 81.87 22 P **P** **06 52 42.8 -0.4**
TOLK IAmb IAmb 06 52 54.6
comp=Z,16nm,0.8s
TOLK Toolik Lake Re 81.87 22 P **P** **06 52 43.5 +0.2**
baz=267,SNR=18
NEA2 Nenana 81.90 26 P **P** **06 52 43.2 -0.2**
baz=268,SNR=17
MCK McKinley 81.93 27 P **P** **06 52 42.3 -1.3**
MCK McKinley 81.93 27 P **P** **06 52 42.3 -1.3**
MCK pmax pmax
comp=Z,50nm,1.0s
MCK McKinley 81.93 27 P **P** **06 52 42.6 -1.1**
baz=268,SNR=19
WAT1 Susitna Watana 82.08 28 P **P** **06 52 43.9 -0.6**
baz=269
KNK Knik Glacier 82.10 29 P **P** **06 52 43.2 -1.4**
KNK Knik Glacier 82.10 29 P **P** **06 52 43.6 -1.0**
baz=269
D24K Happy Valley 82.16 21 P **P** **06 52 45.0 +0.3**
baz=268
SML Sawmill 82.17 29 P **P** **06 52 44.5 -0.5**
baz=269,SNR=6.1
WRH Wood River Hil 82.32 26 P **P** **06 52 44.6 -1.0**
WRH IAmb IAmb 06 53 00.8
comp=Z,47nm,1.3s
TCOL CIGO, UAF Yank 82.42 25 P **P** **06 52 45.3 -0.8**
baz=269
COLA College 82.43 25 P **P** **06 52 45.0 -1.1**
COLA IAmb IAmb 06 53 00.9
comp=Z,12nm,0.7s
COLA College 82.43 25 P **P** **06 52 45.1 -1.1**
COLA pmax pmax
comp=Z,12nm,0.7s
H24K Noodor Dome 82.43 24 P **P** **06 52 46.6 +0.4**
baz=269,SNR=27
WAT6 Susitna Watana 82.45 28 P **P** **06 52 46.2 -0.4**
baz=270,SNR=10
M23K Glacier View 82.45 29 P **P** **06 52 45.7 -0.8**
baz=270,SNR=7.5
POKR Poker Plat Res 82.61 25 P **P** **06 52 46.4 -0.7**
baz=270
DHY Denali Highway 82.62 27 P **P** **06 52 47.5 +0.1**
DHY Denali Highway 82.62 27 P **P** **06 52 47.4 -0.1**
baz=270
SCM Sheep Creek Mo 82.64 29 P **P** **06 52 47.4 -0.1**
baz=270
KLMR Klimovskoe 82.67 330 *e*P **P** **06 52 45.6 -1.9**
KLMR *e* 06 55 54.7
KLMR pmax pmax
comp=Z,20nm,0.6s
KLMR Klimovskoe 82.67 330 *e*P **P** **06 52 45.6 -1.9**
KLMR AMP 06 52 53.8
comp=Z,20nm,0.6s
KLMR *e*PP **PP** **06 55 54.8 -2.8**
HDA Harding Lake 82.81 26 P **P** **06 52 46.8 -1.4**
baz=270,SNR=20
ILAR Eielson Array 82.84 26 P **P** **06 52 46.9 -1.5**
comp=Z,4.8nm,0.6s,baz=242,slow=5.0,SNR=102
ILAR LR LR 07 28 34.5
comp=Z,79nm,21.7s,baz=236,slow=35
comp=Z,4.8nm,0.6s
VORR Voronezh 83.00 321 *e*P **P** **06 52 48.3 -1.1**
VORR pmax pmax
comp=Z,60nm,0.4s
VSR Storozhevoye 83.04 321 *e*P **P** **06 52 47.5 -2.1**
VSR pmax pmax
comp=Z,10.0nm,0.6s
LPSR Galich'ya Gora 83.14 322 *e*P **P** **06 52 48.5 -1.6**
LPSR pmax pmax
comp=Z,30nm,0.8s
M24K Tolsona, Glenn 83.19 28 P **P** **06 52 51.0 +0.7**
baz=271
KLU Klutina 83.32 29 P **P** **06 52 51.6 +0.6**
baz=271
K24K Donnelly Dome 83.33 27 P **P** **06 52 50.5 -0.5**
baz=271
J25K Salcha River, 83.49 26 P **P** **06 52 50.3 -1.5**
baz=272,SNR=9.5
PAX Paxson 83.49 27 P **P** **06 52 51.7 -0.1**
baz=272,SNR=12
HARP HAARP 83.66 28 P **P** **06 52 53.2 +0.6**
baz=272
RIDG Independent Ri 83.75 27 P **P** **06 52 52.6 -0.5**
baz=272,SNR=25
MOS Moscow 83.79 325 *e*P **P** **06 52 50.9 -2.5**
MOS *e* 06 53 00.3
MOS pmax pmax
comp=Z,37nm,0.8s
N25K Chitina, Valde 83.95 29 P **P** **06 52 54.7 +0.5**
baz=272,SNR=6.8
BMRM Bremner River 83.97 29 P **P** **06 52 54.3 0.0**
baz=273,SNR=5.2
SCRK Sand Creek 84.12 26 P **P** **06 52 54.9 -0.2**
baz=273,SNR=9.5
J26L Joseph Creek 84.28 26 P **P** **06 52 55.3 -0.5**
baz=273,SNR=26
I26K Coal Creek Min 84.41 25 P **P** **06 52 55.8 -0.5**
I26K IAmb IAmb 06 53 12.5
comp=Z,47nm,1.4s
I26K Coal Creek Min 84.41 25 P **P** **06 52 55.7 -0.7**
baz=273,SNR=20
OBN Obninsk 84.42 325 LR LR 07 32 52.4
comp=Z,51nm,21.1s,baz=58,slow=37
OBN Obninsk 84.42 325⇑ *e*P **P** **06 52 56.5 -0.1**
OBN *e* 06 56 12.8
OBN *e*S **SKSac** **07 03 11.9 -3.8**
OBN *e*SS **SS** **07 08 52.0 +2.5**
OBN pmax pmax
comp=Z,70nm,2.5s
OBN MLR MLR
comp=Z,209nm,21.0s
L26K Log Cabin Wild 84.46 27 P **P** **06 52 56.9 +0.2**
baz=274,SNR=15
LVZ Lovozero 84.54 338⇑ *i*P **P** **06 52 56.3 -0.7**
LVZ pmax pmax
comp=Z,10.0nm,0.6s
M26K Nabesna, AK 84.66 28 P **P** **06 52 57.8 0.0**
baz=274,SNR=6.1
CRQM Cirque 84.70 30 P **P** **06 52 57.6 -0.6**
MCARA McCarthy VSAT 84.72 29 P **P** **06 52 58.4 +0.4**
baz=274
CRQE Cirque 84.72 30 P **P** **06 52 58.0 -0.2**
baz=274
K27K Chicken 84.96 26 P **P** **06 52 59.3 +0.1**
K27K Chicken 84.96 26 P **P** **06 52 59.9 +0.7**
baz=274
APA Apatity 85.04 337⇓ *i*P **P** **06 52 58.7 -0.8**
APA pmax pmax
comp=Z,18nm,0.8s
L27K Beaver Creek, 85.15 27 P **P** **06 53 00.3 +0.1**
baz=275,SNR=16
BCAR Beaver Creek A 85.17 27 P **P** **06 53 00.1 -0.2**
M27K Edge Creek, AK 85.18 28 P **P** **06 53 00.9 +0.4**
baz=275,SNR=7.5
CTG Chitna Glacier 85.56 29 P **P** **06 53 03.5 +1.1**
baz=275,SNR=12
CTGM Chitina Glacie 85.57 29 P **P** **06 53 01.9 -0.5**

BVCY Beaver Creek 85.65 28 P **P** 06 53 03.4 +0.7
baz=276
ASF Jabal al Asfar 85.90 302 P **P** 06 53 04.8 +0.1
comp=Z,6.5nm,0.8s,baz=79,slow=2.1,SNR=8.2
comp=Z,6.5nm,0.8s
YUK3 Moose Creek 85.90 28 P **P** 06 53 04.8 +0.6
baz=276
DAWY Dawson 86.13 26 P **P** 06 53 05.0 -0.1
DAWY IAmb IAmb 06 53 11.7
comp=Z,7.5nm,0.7s
DAWY Dawson 86.13 26 P **P** 06 53 05.3 +0.3
baz=277,SNR=11
MAW Mawson 86.17 200 P **P** 06 53 04.5 -0.5
comp=Z,10nm,0.8s,baz=55,slow=7.4,SNR=8.8
MAW LR LR 07 25 51.6
comp=Z,102nm,21.3s,baz=52,slow=32
comp=Z,10nm,0.8s
MAW Mawson 86.17 200 P **P** 06 53 04.8 -0.2
baz=86,SNR=6.1
MAW Mawson 86.17 200 P **P** 06 53 04.1 -0.9
MAW Mawson 86.17 200 P **P** 06 53 04.1 -0.9
MAW pmax pmax
comp=Z,7.0nm,0.9s
VNDA Vanda 86.28 173 P **P** 06 53 04.8 -0.6
comp=Z,2.5nm,0.6s,baz=314,slow=6.2,SNR=11
VNDA LR LR 07 32 05.2
comp=Z,166nm,20.6s,baz=346,slow=36
comp=Z,2.5nm,0.6s
VNDA Vanda 86.28 173 P **P** 06 53 04.9 -0.5
VNDA Vanda 86.28 173 P **P** 06 53 04.9 -0.5
VNDA pmax pmax
comp=Z,7.0nm,0.8s
YUK8 Steele Glacier 86.29 29 P **P** 06 53 06.8 +0.6
baz=277
I29M Ogilvie Camp, 86.43 25 P **P** 06 53 06.2 -0.2
baz=278
PPT Papeete 86.55 108 LR LR 07 28 20.2
comp=Z,146nm,18.1s,baz=296,slow=33
PPT2 Papeete2 86.56 108 *e*LR LR 07 20 37.0
comp=Z,381nm,26.8s
VALR Valaam 86.82 331 *d* iP **P** 06 53 07.3 -1.0
VALR pmax pmax
comp=Z,31nm,1.0s
YUK4 Talbot Arm 86.82 29 P **P** 06 53 09.0 +0.3
baz=278
SIM Simferopol' 86.84 315 *e*P **P** 06 53 06.7 -2.2
SIM pmax pmax
comp=Z,21nm,0.9s
EPYK Eagle Plains 86.92 24 P **P** 06 53 08.4 -0.5
baz=279
MMAI Mount Meron Ar 87.08 303 P **P** 06 53 10.5 +0.1
comp=Z,0.9nm,0.3s,baz=81,slow=10,SNR=4.8
MMAI LR LR 07 38 15.7
comp=Z,81nm,20.3s,baz=241,slow=40
comp=Z,0.9nm,0.3s
HYT Haines Junctio 87.44 29 P **P** 06 53 11.8 +0.2
baz=279,SNR=8.4
TBI Tubuai 87.47 114 *e*LR LR 07 21 00.7
comp=Z,405nm,27.5s
M30M Minto, Yukon 87.50 27 P **P** 06 53 12.0 +0.2
baz=279
N30M Aishikik Lake 87.54 29 P **P** 06 53 12.1 +0.1
baz=279
ARCES ARCESS Array B 87.61 340 P **P** 06 53 10.8 -1.3
comp=Z,9.5nm,0.6s,baz=85,slow=4.9,SNR=38
ARCES PKKP **PKKPdf** 07 10 58.3 +2.0
comp=Z,1.1nm,0.6s,baz=270,slow=2.4,SNR=5.3
ARCES LR LR 07 35 12.2
comp=Z,136nm,21.4s,baz=90,slow=38
comp=Z,9.5nm,0.6s
SPITS Spitsbergen Ar 87.62 349 LR LR 07 36 28.3
comp=Z,216nm,21.8s,baz=32,slow=38
SPITS Spitsbergen Ar 87.62 349 P **P** 06 53 11.5 -0.5
SPITS pmax pmax
comp=Z,28nm,0.8s
BR131 Keskin Array S 87.77 310 *d* iP **P** 06 53 12.2 -1.4
BRTR Keskin Array B 87.77 310 P **P** 06 53 11.6 -2.1
comp=Z,2.8nm,0.8s,baz=102,slow=4.5,SNR=12
BRTR LR LR 07 39 09.3
comp=Z,53nm,18.3s,baz=97,slow=40
comp=Z,2.8nm,0.8s
BRTR Keskin Array B 87.77 310 *c e*P **P** 06 53 12.3 -1.4
BRTR pmax pmax
comp=Z,3.0nm,0.8s
INK Inuvik 87.78 21 P **P** 06 53 11.8 -1.0
comp=Z,6.0nm,0.7s,baz=269,slow=8.9,SNR=22
INK LR LR 07 32 53.1
comp=Z,73nm,21.7s,baz=278,slow=36
comp=Z,6.0nm,0.7s
INK Inuvik 87.78 21 P **P** 06 53 11.7 -1.2
INK Inuvik 87.78 21 P **P** 06 53 11.7 -1.2
INK pmax pmax
comp=Z,7.0nm,0.9s
INK Inuvik 87.78 21 P **P** 06 53 12.0 -0.8
baz=282
EIL Elat 87.81 299 P **P** 06 53 12.7 -1.2
comp=Z,1.6nm,0.3s,baz=279,slow=5.4,SNR=10
EIL LR LR 07 38 43.4
comp=Z,46nm,18.3s,baz=88,slow=40
comp=Z,1.6nm,0.3s
HAMF Hammerfest 87.97 341 *e*P **P** 06 53 12.7 -1.0
HAMF IAmb IAmb 06 53 15.3
comp=Z,18nm,0.7s
KBS Kingsbay 88.14 350 *c* iP **P** 06 53 13.7 -0.8
KBS pmax pmax
comp=Z,13nm,0.7s
KBS Kingsbay 88.14 350 *i* P **P** 06 53 11.5 -2.9
KBS Kingsbay 88.14 350 *e*P **P** 06 53 13.6 -0.8
KBS IAmb IAmb 06 53 16.6
comp=Z,14nm,0.8s
N31M Braeburn, Yuko 88.16 28 P **P** 06 53 15.1 +0.2
baz=280
BJO1 Bjornoya 88.26 345 *e*P **P** 06 53 14.3 -0.7
BJO1 IAmb IAmb 06 53 14.9
comp=Z,24nm,0.8s
KTK1 Kautokeino 88.52 339 *e*P **P** 06 53 15.3 -1.1
KTK1 IAmb IAmb 06 53 18.1
comp=Z,6.4nm,0.7s
M31M Drury Creek, Y 88.67 28 P **P** 06 53 16.7 -0.6
baz=281
WHY Whitehorse 88.74 29 P **P** 06 53 17.2 -0.5
WHY IAmb IAmb 06 53 24.1
comp=Z,8.4nm,0.8s
WHY Whitehorse 88.74 29 P **P** 06 53 17.7 0.0
baz=281,SNR=6.9
KMBO Kilima Mbogo 89.00 269 LR LR 07 33 27.2
comp=Z,60nm,19.7s,baz=85,slow=36
FINES FINESS Array B 89.08 332 P **P** 06 53 17.8 -1.3
comp=Z,7.1nm,0.6s,baz=66,slow=4.9,SNR=58
FINES LR LR 07 37 29.0
comp=Z,270nm,19.6s,baz=79,slow=38
comp=Z,7.1nm,0.6s
FINES FINESS Array B 89.08 332 P **P** 06 53 17.9 -1.2
AKASG Malin Array Be 89.34 321 P **P** 06 53 18.7 -1.9
comp=Z,4.3nm,0.8s,baz=65,slow=5.1,SNR=12
AKASG LR LR 07 36 39.1
comp=Z,159nm,21.5s,baz=76,slow=38
comp=Z,4.3nm,0.8s
AKASG Malin Array Be 89.34 321 *c e*P **P** 06 53 18.3 -2.3
AKASG pmax pmax
comp=Z,6.0nm,0.7s
AKBB Malin Array Si 89.34 321 *c* iP **P** 06 53 19.0 -1.6
AKBB pmax pmax
comp=Z,5.0nm,1.0s
JETT Jettan, Norway 89.34 340 *e*P **P** 06 53 19.1 -1.3
JETT IAmb IAmb 06 53 21.4
comp=Z,68nm,0.6s
VSU Vasula 89.36 329 *e*P **P** 06 53 19.4 -1.1
MNK Minsk 89.49 325 *i* P P 06 53 14.8 -6.4
MNK *i* *PP pP 06 53 31.8 -5.0
MNK *i* S **SKSac** **07 03 39.3 -7.6**
MNK *i* SS **SS** **07 10 00.3 -3.2**
MNK *i* SSS SSS 07 13 36.4
MNK pmax pmax
comp=E,3.0nm,0.8s
MNK pmax pmax
comp=N,23nm,0.7s
MNK pmax pmax
comp=Z,35nm,0.9s
MNK MLR MLR
comp=N,384nm,24.0s
MNK MLR MLR
comp=Z,4μm,20.0s
MNK MLR MLR
comp=E,66nm,27.0s
MNK Minsk 89.49 325 *i* P P 06 53 14.8 -6.4
comp=E,3.0nm,0.8s
MNK *i* P P 06 53 14.8 -6.4
comp=N,23nm,0.7s
MNK *i* P P 06 53 14.8 -6.4
comp=Z,35nm,0.9s,baz=259
MNK *i* pP pP 06 53 31.8 -5.0
MNK *i* PP **PP** **06 56 46.0 -6.9**
MNK *i* PPP PPP 06 58 44.1
MNK *i* S **SKSac** **07 03 39.4 -7.6**
MNK *i* SS **SS** **07 10 00.3 -3.2**
MNK *i* SSS SSS 07 13 36.4
MNK *i* LQ LQ 07 27 52.7
MNK *i* LR LR 07 31 26.8
MNK *i* LRM MLR 07 34 41.0
comp=N,384nm,24.3s
MNK *i* LRM MLR 07 34 43.5
comp=Z,4μm,20.4s
MNK *i* LRM MLR 07 34 44.8
comp=E,66nm,26.8s
N32M Quiet Lake 89.50 28 P **P** **06 53 21.3 +0.1**
baz=283
TRO Tromso 89.81 340 *e*P **P** 06 53 20.9 -1.5
TRO IAmb IAmb 06 53 22.6
comp=Z,11nm,0.8s
MMPY Sheldon Lake, 90.00 27 P **P** **06 53 23.6 +0.1**
baz=284,SNR=6.9
NACGM Naroch 90.04 325 ‖ *e*P **P** **06 53 22.5 -1.3**
baz=78
NOR Nord 90.25 355 *i* P **P** **06 53 22.7 -1.6**
NOR IAmb IAmb 06 53 25.5
comp=Z,7.6nm,0.7s
C36M Paulatuk 90.78 20 P **P** **06 53 26.3 -0.6**
baz=291,SNR=9.0
MTSE Matsula 90.80 329 *e*P **P** **06 53 26.6 -0.6**
RAF Rauma 91.21 332 *e*P **P** **06 53 28.7 -0.3**
VSVD Vaisvydziai 91.39 327 *e*P **P** **06 53 28.9 -1.1**
PABE Paberze 91.48 326 *e*P **P** **06 53 29.0 -1.4**
TGTN Hyland Airport 91.65 28 P **P** **06 53 31.2 0.0**
baz=287
DLBC Dease Lake 91.65 31 LR LR 07 29 45.9
comp=Z,161nm,21.5s,baz=285,slow=32
STEI Steigen 91.66 339 *e*P **P** **06 53 30.3 -0.7**
STEI IAmb IAmb 06 53 34.6
comp=Z,12nm,0.7s
FAUS Fauske 91.85 339 *e*P **P** **06 53 30.2 -1.7**
FAUS IAmb IAmb 06 53 32.2
comp=Z,18nm,0.8s
VRI Vrincioaia 91.85 316 P **P** **06 53 36.1 +3.6**
SUW Suwalki 92.29 325 *e*P **P** **06 53 33.2 -1.1**
MLR Muntele Rosu 92.46 316 P **P** **06 53 33.8 -1.7**
comp=Z,5.9nm,1.0s,baz=191,slow=4.6,SNR=5.9
MLR LR LR 07 41 19.1
comp=Z,191nm,20.1s,baz=62,slow=40
comp=Z,5.9nm,1.0s
BURAR Bucovina Array 92.51 318 P **P** **06 53 33.9 -1.7**
BURAR Bucovina Array 92.51 318 P **P** **06 53 33.8 -1.7**
BUR08 Bucovina Ar. S 92.51 318 P **P** **06 53 33.9 -1.7**
MOR8 Moi Rana 92.62 338 *e*P **P** **06 53 33.9 -1.7**
DAG Danmarks Havn 94.40 352 *i* P **P** **06 53 42.0 -1.5**
DAG IAmb IAmb 06 53 43.5
comp=Z,29nm,0.9s
BBB Bella Bella 94.42 36 LR LR 07 39 55.7
comp=Z,39nm,18.2s,baz=292,slow=38
CRVS Cervenica-Dubn 94.64 320 *e*P **P** **06 53 44.9 -0.3**
CRVS Cervenica-Dubn 94.64 320 *e*P **P** **06 53 44.9 -0.3**
TAOE Palu Hiva Isla 94.66 98 *e*LR LR 07 24 21.0
comp=Z,646nm,25.7s
RES Resolute Bay 95.17 10 LR LR 07 39 25.9
comp=Z,68nm,20.3s,baz=337,slow=37
HFS Hagfors 95.26 332 LR LR 07 39 06.4
comp=Z,240nm,22.0s,baz=62,slow=37
IDI Anoyia 95.35 306 LR LR 07 43 57.1
comp=Z,31nm,18.8s,baz=89,slow=40
MBAR Mbarara 95.42 270 LR LR 07 34 17.2
comp=Z,102nm,22.0s,baz=129,slow=34
NB2 NORSAR Subarra 96.01 334 P **P** **06 53 49.2 -2.1**
baz=64,slow=4.4
NB2 NORSAR Subarra 96.01 334 P **P** **06 53 49.2 -2.1**
comp=Z,5.7nm,0.8s,baz=64,slow=4.4
NOA NORSAR Array B 96.01 334 P **P** **06 53 49.6 -1.6**
comp=Z,5.4nm,0.8s,baz=64,slow=4.6,SNR=34
NOA PKKPbc **PKKPbc** **07 10 38.6 -2.7**
comp=Z,0.5nm,0.7s,baz=252,slow=2.2,SNR=6.7
NOA LR LR 07 40 49.8
comp=Z,386nm,21.7s,baz=65,slow=38
comp=Z,5.4nm,0.8s
QSPA South Pole Qui 96.43 180 LR LR 07 38 02.5
comp=Z,140nm,21.3s,baz=358,slow=36
DBG Daneborg 96.67 351 *i* P **P** **06 53 51.8 -2.1**
DBG IAmb IAmb 06 53 54.7
comp=Z,12nm,0.9s
JMIC Jan Mayen 97.00 346 LR LR 07 42 28.5
comp=Z,152nm,20.5s,baz=37,slow=38
YKA Yellowknife Ar 97.20 24 P **P** **06 53 55.9 -0.6**
comp=Z,4.7nm,0.7s,baz=299,slow=4.2,SNR=42
YKA PKiKP **PKiKP** **06 58 32.2 +0.4**
comp=Z,0.7nm,0.8s,baz=298,slow=1.5,SNR=7.1
YKA PKKP **PKKPbc** **07 10 33.6 -4.5**
comp=Z,1.1nm,0.7s,baz=118,slow=2.7,SNR=11
comp=Z,4.7nm,0.7s
YKA Yellowknife Ar 97.20 24 P **P** **06 53 55.4 -1.1**
KONO Kongsberg 97.34 333 ‖ *i* P **P** **06 53 56.0 -1.2**
KONO pmax pmax
comp=Z,5.0nm,0.9s
VRAC Vranov 97.57 322 LR LR 07 40 38.3
comp=Z,73nm,20.7s,baz=58,slow=37
BRG Berggiesshubel 98.63 324 *e*P **P** **06 54 02.2 -1.0**
BRG Amp 06 54 05.9
comp=Z,4.2nm,0.8s
BRG Berggiesshubel 98.63 324 *e*P **P** **06 54 02.2 -1.0**
BRG pmax pmax
comp=Z,4.0nm,0.8s
BLS5 Blasjo 98.86 333 *e*P **P** **06 54 03.5 -0.7**
CLL Collm 99.02 324 *e*P **Pdif** **06 54 04.0 -0.9**
CLL *e*S **S** **07 05 31.0 -0.5**
CLL MLR MLR
comp=Z,200nm,22.0s
CLL Collm 99.02 324 *e*(Pdif) 06 54 04.0
CLL *e*PP **PP** **06 58 01.0 -6.1**
CLL *e*Sdif **S** **07 05 31.0 -0.5**
CLL *e*PS **PS** **07 07 02.0 -2.2**
CLL *e*(SS) 07 13 00.0
CLL *e*SSS SSS 07 16 24.0
CLL LmV 07 43 00.0
comp=Z,200nm,22.0s
CLL L L 11 11 00.0
comp=Z,200nm,19.1s
LSZ Lusaka 99.32 256 LR LR 07 34 22.5
comp=Z,77nm,21.8s,baz=150,slow=32
GERES GERESS Array B 99.52 322 P **Pdif** **06 54 06.4 -1.0**
comp=Z,0.6nm,0.6s,baz=93,slow=6.7,SNR=7.4
comp=Z,0.6nm,0.6s
GERES GERESS Array B 99.52 322 P **Pdif** **06 54 05.3 -2.0**
SUMG Summit 100.40 355 *i* P **Pdif** **06 54 11.0 -0.2**
NVAR Mina Array Bea 105.47 47 Pdiff **Pdif** **06 54 33.5 -0.7**
comp=Z,0.5nm,0.7s,baz=267,slow=6.6,SNR=5.1
NVAR PKKPbc **PKKPbc** **07 10 12.5 -1.2**
comp=Z,0.5nm,0.7s,baz=121,slow=3.5,SNR=3.6
SNAA Sanae 107.76 195 PKKPbc PKKPbc 07 10 04.8 -2.7
SNAA Sanae 107.76 195 PKKPbc PKKPbc 07 10 04.9 -2.6
comp=Z,2.0nm,0.7s,baz=207,slow=9.0,SNR=5.5
VNA3 Neumayer Olymp 109.73 194 PKKPbc PKKPbc 07 09 58.2 -3.0
O20A White River Ci 111.79 42 P **PKiKP** **06 59 00.5 +1.0**
baz=300
RSSD Black Hills 112.33 37 P **PKiKP** **06 59 00.4 0.0**
baz=305
S22A 4UR Ranch, Cre 113.92 44 P **PKiKP** **06 59 04.9 +1.2**
baz=300
SDCO Great Sand Dun 114.83 43 P PKPdf 06 59 06.3 +0.8
baz=301
ANMO Albuquerque 115.56 46 ‖ *i* PKiKP **PKPdf** **06 59 07.4 +0.6**
ANMO pmax pmax
comp=Z,4.0nm,1.3s
ANMO Albuquerque 115.56 46 P **PKPdf** **06 59 07.4 +0.6**
baz=299
121A Cookes Peak, D 115.71 49 P **PKPdf** **06 59 08.2 +1.0**
baz=297
T25A Trinidad 115.89 43 P **PKPdf** **06 59 07.8 +0.4**
baz=302
EYMN Ely 116.44 27 P **PKPdf** **06 59 07.6 -0.4**
baz=318
ECSD EROS Data Cent 116.81 33 P **PKPdf** **06 59 08.4 -0.4**
baz=311
F36A Milaca 116.98 30 P **PKPdf** **06 59 07.7 -1.3**
baz=315
E38A The Farm, Brul 117.40 28 P **PKPdf** **06 59 09.6 -0.2**
baz=317
SCHQ Schefferville 117.89 8 PKP **PKPdf** **06 59 10.4 -0.1**
comp=Z,4.7nm,0.7s,baz=40,slow=3.1,SNR=8.9
MNTX Cornudas Mount 117.90 49 P **PKiKP** **06 59 11.5 +0.3**
baz=298
D41A Chassel 118.42 26 P **PKiKP** **06 59 11.8 0.0**
baz=320
MSTX Muleshoe 118.68 46 P **PKiKP** **06 59 13.2 +0.3**
baz=302
R32A Long Quarter, 118.91 39 P **PKiKP** **06 59 13.0 0.0**
baz=307,SNR=7.6
G40A Rib Lake 119.02 29 P **PKPdf** **06 59 12.2 -0.7**
baz=318
KSU1 Kansas State U 119.79 37 P **PKPdf** **06 59 14.3 -0.3**
baz=309
TXAR Lajitas Array 120.33 51 PKP **PKiKP** **06 59 16.4 +0.3**
comp=Z,1.1nm,0.6s,baz=310,slow=0.7,SNR=12
I42A Draeger Farm, 120.66 29 P **PKPdf** **06 59 15.1 -1.0**
baz=319
JFWS Jewell Farm 120.73 30 P **PKPdf** **06 59 15.5 -0.8**
baz=317
E46A Sault Ste Mari 120.77 24 P **PKPdf** **06 59 16.0 -0.3**
baz=324
L40A Anamosa 120.84 32 P **PKPdf** **06 59 15.6 -0.9**
baz=316
WMOK Wichita Mounta 121.02 43 P **PKiKP** **06 59 17.2 0.0**
baz=305
P38A Dawn 121.26 35 P **PKPdf** **06 59 17.2 -0.2**
baz=312,SNR=8.5
TORD Torodi Ar. Bea 121.44 290 PKP **PKPdf** **06 59 17.0 -1.4**
comp=Z,7.0nm,0.7s,baz=40,slow=1.9,SNR=36
TORD PKKPab **PKKPab** **07 09 19.6 -0.6**
comp=Z,1.2nm,0.8s,baz=262,slow=4.2,SNR=5.3
L42A Oliver, Polo 121.68 31 P **PKPdf** **06 59 17.3 -0.8**
baz=317
K43A Burlington 121.83 29 P **PKPdf** **06 59 17.8 -0.6**
baz=319
P40A Paris 122.16 34 P **PKPdf** **06 59 18.9 -0.2**
baz=314,SNR=11
TUL1 Leonard 122.28 40 P **PKiKP** **06 59 19.6 0.0**
baz=308
TUL1 Leonard 122.28 40 P **PKiKP** **06 59 19.8 +0.1**
baz=308
L44A Lake County Fo 122.43 30 P **PKPdf** **06 59 19.3 -0.3**
baz=319
L44A Lake County Fo 122.43 30 P **PKPdf** **06 59 19.5 0.0**
baz=319
JCT Junction City 122.65 47 P **PKPdf** **06 59 20.4 0.0**
baz=302
S39A Bolivar 122.67 37 P **PKPdf** **06 59 19.2 -1.0**
baz=312,SNR=55
U38A Gravette 122.83 39 P **PKPdf** **06 59 19.8 -0.8**
baz=310
R40A Maddies Statio 122.88 36 P **PKPdf** **06 59 19.5 -1.0**
baz=313,SNR=20
HDIL Hopedale 122.93 32 P **PKPdf** **06 59 19.7 -0.8**
baz=317
J47A Sunmer 123.06 27 P **PKPdf** **06 59 20.5 -0.2**
baz=323
J47A P **PKPdf** **06 59 20.5 -0.2**
baz=323
P43A Skaggs, Pawnee 123.47 33 P **PKPdf** **06 59 21.4 -0.2**
baz=316,SNR=6.4
CCM Cathedral Cave 123.63 35 P **PKPdf** **06 59 21.3 -0.7**
baz=314
W39A Magazine 124.00 39 P **PKPdf** **06 59 22.6 -0.2**
baz=310
W39A Magazine 124.00 39 P **PKPdf** **06 59 22.8 0.0**
baz=310,SNR=7.4
833A Chaparral WMA, 124.08 49 P **PKiKP** **06 59 23.9 +0.5**
baz=301
L48A N Adams 124.26 27 P **PKPdf** **06 59 22.8 -0.3**
baz=322
L48A P **PKPdf** **06 59 22.8 -0.3**
baz=322
M1AR Mount Ida 124.55 40 P **PKPdf** **06 59 24.6 +0.5**
baz=310,SNR=26
P46A Rosedale 124.70 31 P **PKiKP** **06 59 24.2 -0.2**
baz=318
W41B Gary Mavity, V 124.98 38 P **PKPdf** **06 59 23.8 -0.9**
baz=311
N49A Columbus Grove 125.18 28 P **PKPdf** **06 59 24.2 -0.7**
baz=322,SNR=9.8
N49A P **PKPdf** **06 59 24.2 -0.7**
baz=322,SNR=9.8
O48B Farmland 125.24 29 P **PKPdf** **06 59 24.6 -0.5**
baz=321
O48B Farmland 125.24 29 P **PKPdf** **06 59 24.6 -0.5**
baz=321
M50A Fremont 125.32 27 P **PKPdf** **06 59 24.5 -0.6**
baz=324
M50A P **PKPdf** **06 59 24.5 -0.6**
baz=324
NATX Nacogdoches 125.56 43 P **PKiKP** **06 59 26.9 +0.6**
baz=307
O49A Covington 125.69 29 P **PKPdf** **06 59 25.1 -0.7**
baz=322,SNR=13
O49A P **PKPdf** **06 59 25.1 -0.7**
baz=322,SNR=13
P48A Milroy 125.72 30 P **PKPdf** **06 59 25.5 -0.5**
baz=320,SNR=8.1
P48A P **PKPdf** **06 59 25.5 -0.5**
baz=320,SNR=8.1
LONY Lake Ozonia 125.77 18 P **PKPdf** **06 59 25.7 -0.2**
baz=334,SNR=7.0
Z41A Richland Creek 125.86 41 P **PKiKP** **06 59 26.8 0.0**
baz=310
J55A Hilton 125.88 21 P **PKPdf** **06 59 25.3 -0.8**
baz=330,SNR=12
J55A P **PKPdf** **06 59 25.3 -0.8**
baz=330,SNR=12
M52A Chesterland 125.94 25 P **PKPdf** **06 59 26.2 -0.2**
baz=326
M52A P **PKPdf** **06 59 26.2 -0.2**
baz=326
N51A Ashland 126.00 27 P **PKPdf** **06 59 25.9 -0.6**
baz=324
N51A P **PKPdf** **06 59 25.9 -0.6**
baz=324
P49A Miami Univ. Ec 126.01 29 P **PKPdf** **06 59 25.3 -1.3**
baz=321,SNR=6.1
P49A Miami Univ. Ec 126.01 29 P **PKPdf** **06 59 25.9 -0.6**
baz=321,SNR=6.1
ERPA Erie 126.03 24 P **PKPdf** **06 59 26.5 0.0**
baz=327
J56A Wolcott 126.21 21 P **PKPdf** **06 59 25.9 -0.9**
baz=331,SNR=7.5
J56A P **PKPdf** **06 59 25.9 -0.9**
baz=331,SNR=7.5
F64A Sherman 126.25 13 P **PKPdf** **06 59 26.0 -0.7**
baz=342,SNR=5.0
F64A P **PKPdf** **06 59 26.0 -0.7**
baz=342,SNR=5.0
ACSO Alum Creek Sta 126.28 28 P **PKPdf** **06 59 26.9 -0.2**
baz=323,SNR=6.3
M53A WI Miller and 126.31 25 P **PKPdf** **06 59 26.9 -0.1**
baz=326,SNR=6.7
J57A Williamstown 126.39 20 P **PKPdf** **06 59 26.8 -0.3**
baz=332,SNR=11
J57A P **PKPdf** **06 59 26.8 -0.3**
baz=332,SNR=11
PKME Peaks-Kenny Pk 126.60 14 P **PKPdf** **06 59 27.2 -0.2**
baz=341
J58A Remsen 126.67 19 P **PKPdf** **06 59 27.8 +0.1**
baz=333,SNR=16
J58A P **PKPdf** **06 59 27.8 +0.1**
baz=333,SNR=16
T47A Sharon Grove 126.70 33 P **PKPdf** **06 59 28.1 +0.2**
baz=317
K57A Scipio Center 126.81 21 P **PKPdf** **06 59 27.9 0.0**
baz=332,SNR=9.0
J59A Piesco 126.83 19 P **PKPdf** **06 59 27.7 -0.3**
baz=334,SNR=17
J59A P **PKPdf** **06 59 27.7 -0.3**
baz=334,SNR=17
LBNH Lisbon 126.89 16 P **PKiKP** **06 59 28.8 +0.3**
baz=338,SNR=6.2
WVT Waverly 126.92 34 P **PKPdf** **06 59 28.4 +0.1**
baz=316
L56A Greenwood 126.95 22 P **PKPdf** **06 59 27.4 -0.9**
baz=330,SNR=6.0
L56A P **PKPdf** **06 59 27.4 -0.9**
baz=330,SNR=6.0
M55A Ridgway 127.06 23 P **PKPdf** **06 59 28.6 +0.1**
baz=328,SNR=6.2
M55A P **PKPdf** **06 59 28.6 +0.1**
baz=328,SNR=6.2
O53A New Philadelph 127.06 26 P **PKPdf** **06 59 27.9 -0.7**
baz=325

OXF	**Oxford**	**127.15**	**37**	P		**PKiKP**	06 59 29.2	**-0.1**
	baz=314							
P52A	**Corning**	**127.15**	**27**	P		**PKPdf**	06 59 28.6	**-0.2**
	baz=324,SNR=7.7							
R50A	**Paris**	**127.17**	**30**	P		**PKPdf**	06 59 28.7	**-0.1**
	baz=321							
R50A				P		**PKPdf**	06 59 28.7	**-0.1**
	baz=321							
BINY	**Binghamton**	**127.46**	**21**	P		**PKPdf**	06 59 29.4	**+0.2**
	baz=332,SNR=8.6							
O54A	**Avella**	**127.48**	**26**	P		**PKPdf**	06 59 29.6	**+0.2**
	baz=326,SNR=7.6							
O54A				P		**PKPdf**	06 59 29.6	**+0.2**
	baz=326,SNR=7.6							
P53A	**Whipple**	**127.61**	**27**	P		**PKPdf**	06 59 29.5	**-0.1**
	baz=325,SNR=7.3							
P53A				P		**PKPdf**	06 59 29.5	**-0.1**
	baz=325,SNR=7.3							
Q52A	**Bidwell**	**127.63**	**28**	P		**PKPdf**	06 59 29.7	**+0.1**
	baz=324							
Q52A				P		**PKPdf**	06 59 29.7	**+0.1**
	baz=324							
U49A	**Red Boiling Sp**	**127.77**	**33**	P		**PKiKP**	06 59 30.5	**0.0**
	baz=318							
V48A	**Smith Brothers**	**127.77**	**34**	P		**PKPdf**	06 59 30.1	**0.0**
	baz=317							
M57A	**Sunshine Farm,**	**127.80**	**22**	P		**PKPdf**	06 59 29.7	**-0.2**
	baz=330,SNR=6.2							
M57A				P		**PKPdf**	06 59 29.7	**-0.2**
	baz=330,SNR=6.2							
T50A	**Nancy**	**127.88**	**31**	P		**PKPdf**	06 59 29.9	**-0.2**
	baz=320							
T50A				P		**PKPdf**	06 59 29.9	**-0.2**
	baz=320							
VBMS	**Vicksburg**	**128.00**	**40**	P		**PKiKP**	06 59 31.8	**+0.7**
	baz=311							
S51A	**Beattyville**	**128.04**	**30**	P		**PKPdf**	06 59 30.3	**-0.2**
	baz=321							
S51A				P		**PKPdf**	06 59 30.3	**-0.2**
	baz=321							
SSPA	**Standing Stone**	**128.12**	**23**	P		**PKiKP**	06 59 30.8	**-0.3**
	baz=329							
N58A	**Sunbury**	**128.39**	**22**	P		**PKPdf**	06 59 31.3	**+0.2**
	baz=331							
N58A				P		**PKPdf**	06 59 31.3	**+0.2**
	baz=331							
X48A	**Hartselle**	**128.57**	**35**	P		**PKPdf**	06 59 31.4	**-0.2**
	baz=316							
HRV	**Adam Dziewonsk**	**128.59**	**17**	P		**PKPdf**	06 59 31.5	**+0.2**
	baz=337							
PAL	**Palisades**	**129.23**	**20**	P		**PKPdf**	06 59 32.8	**+0.2**
	baz=334							
KIC	**Kosan Boka**	**129.32**	**284**	*eP*		**PKPdf**	06 59 31.7	**-1.8**
	comp=Z,9.6nm,0.6s							
DBIC	**Dimbokro**	**129.35**	**284**	PKP		**PKPdf**	06 59 31.9	**-1.7**
	comp=Z,6.8nm,0.9s,baz=285,slow=1.9,SNR=4.8							
TIC	**Toumodi**	**129.52**	**284**	*iP*		**PKPdf**	06 59 33.3	**-0.6**
	comp=Z,1.9nm,0.2s							
LRAL	**Lakeview Retre**	**129.61**	**37**	P		**PKiKP**	06 59 34.5	**+0.1**
	baz=315							
LIC	**Lamto**	**129.63**	**284**	*eP*		**PKPdf**	06 59 33.1	**-1.0**
	comp=Z,6.8nm,0.6s							
BLA	**Blacksburg**	**129.90**	**28**	P		**PKiKP**	06 59 34.8	**-0.1**
	baz=325							
Y52A	**Lilburn**	**130.68**	**33**	P		**PKiKP**	06 59 36.1	**-0.4**
	baz=319							
Y52A				P		**PKiKP**	06 59 36.1	**-0.4**
	baz=319							
BRAL	**Brewton**	**130.89**	**38**	P		**PKiKP**	06 59 37.0	**0.0**
	baz=314							
KMSC	**Kings Mountain**	**131.12**	**30**	P		**PKPdf**	06 59 36.0	**-0.4**
	baz=323							
GOGA	**Godfrey**	**131.35**	**33**	P		**PKiKP**	06 59 37.7	**-0.1**
	baz=319							
TIGA	**Tifton**	**132.75**	**35**	P		**PKiKP**	06 59 40.2	**-0.5**
	baz=318							
PLCA	**Paso Flores**	**142.84**	**159**	PKhKP		PKPpre	06 59 54.3	
	comp=Z,3.9nm,0.9s,baz=214,slow=4.7,SNR=11							
PLCA	**Paso Flores**	**142.84**	**159**	*eP*		**PKPdf**	06 59 58.2	**+0.3**
JTS	**Las Juntas de**	**144.82**	**62**	*eP*		**PKPdf**	07 00 02.3	**+0.3**
SDDR	**Presa de Saban**	**149.38**	**34**	*eP*		**PKiKP**	07 00 14.7	**-0.4**
BCIP	**Isla Barro Col**	**149.79**	**59**	*eP*		**PKPbc**	07 00 14.6	**-0.5**
AVIZ	**Vizcacheras**	**149.96**	**155**	*eP*		**PKiKP**	07 00 16.2	**+0.2**
UPA	**Univ. de Panam**	**150.14**	**59**	*eP*		**PKPbc**	07 00 15.8	**-0.1**
AAGR	**Agrelo**	**150.16**	**154**	*eP*		**PKPbc**	07 00 16.0	**+0.4**
ARCO	**CERRO ARCO**	**150.32**	**154**	*eP*		**PKPbc**	07 00 16.0	**-0.1**
ASAL	**Salagasta**	**150.58**	**154**	*eP*		**PKPbc**	07 00 16.7	**+0.1**
RTLS	**Leoncito**	**151.04**	**152**	*eP*		**PKPbc**	07 00 18.0	**0.0**
MRA	**San Martin**	**151.99**	**158**	*eP*		**PKPbc**	07 00 19.6	**-0.2**
ACCO	**Cerro Coronel**	**152.16**	**151**	*eP*		**PKPbc**	07 00 20.7	**+0.1**
AROD	**Rodeo**	**152.30**	**150**	*eP*		**PKiKP**	07 00 21.4	**+0.2**
ACDV	**Cuesta del Vie**	**152.47**	**150**	*eP*		**PKiKP**	07 00 21.5	**+0.1**
SJG	**San Juan**	**152.67**	**26**	*eP*		**PKPbc**	07 00 20.6	**-1.0**
SJCC	**San Jacinto, C**	**153.22**	**53**	*eP*		**PKPdf**	07 00 19.3	**+3.7**
TCA	**Tanti**	**153.37**	**159**	*eP*		**PKPbc**	07 00 22.6	**-0.4**
APLL	**PUNTA DE LOS L**	**153.46**	**155**	*eP*		**PKPbc**	07 00 23.0	**-0.2**
VCA	**Vinchina**	**154.10**	**150**	*eP*		**PKiKP**	07 00 24.9	**+0.1**
ACLC	**CERRO LA CRUZ**	**154.12**	**153**	*eP*		**PKPbc**	07 00 24.6	**-0.2**
UREC	**San Jos de Ur**	**154.15**	**57**	*eP*		**PKPdf**	07 00 16.9	**0.0**
OTAV	**Otavalo**	**154.57**	**76**	*eP*		**PKPbc**	07 00 25.6	**-1.0**
CBOC	**Ciudad Bolivar**	**154.71**	**61**	*eP*		**PKPdf**	07 00 17.4	**-0.4**
ZARC	**Zaragoza, Cauc**	**154.85**	**57**	*eP*		**PKPdf**	07 00 17.8	**-0.1**
PLMC	**San Jos del P**	**154.91**	**64**	*eP*		**PKPdf**	07 00 19.2	**+1.2**
BBAC	**Balboa, Cauca**	**155.17**	**71**	*eP*		**PKPdf**	07 00 23.0	**+4.4**
YOTC	**Yotoco, Valle**	**155.25**	**66**	*eP*		**PKPdf**	07 00 17.8	**-0.8**
POPC	**Popayan, Colom**	**155.52**	**69**	*eP*		**PKPdf**	07 00 18.5	**-0.5**
GUY2C	**Guyana, Caldas**	**155.57**	**62**	*eP*		**PKPdf**	07 00 19.2	**-0.2**
ATAH	**Atahualpa**	**155.65**	**93**	PKPab		**PKPab**	07 00 48.3	**+2.5**
	comp=Z,10nm,0.8s,baz=225,slow=2.9,SNR=5.6							
PTBC	**PUERTO BERRIO**	**155.70**	**58**	*eP*		**PKPdf**	07 00 17.7	**-1.2**
SOTA	**Rioblanco**	**155.73**	**70**	*eP*		**PKPdf**	07 00 23.0	**+3.4**
ORTC	**Ortega, Tolima**	**156.28**	**65**	*eP*		**PKPdf**	07 00 19.4	**-0.4**
SPBC	**San Pablo de B**	**156.49**	**59**	*eP*		**PKPdf**	07 00 19.9	**-0.2**
ROSC	**El Rosal**	**156.67**	**61**	PKP		**PKPdf**	07 00 21.4	**+0.6**
	comp=Z,8.7nm,0.7s,baz=13,slow=5.6,SNR=5.7							
PRAC	**Prado**	**156.68**	**65**	*eP*		**PKPdf**	07 00 20.2	**-0.2**
CHIC	**Chingaza**	**157.28**	**61**	*eP*		**PKPdf**	07 00 21.2	**-0.4**
MACC	**Macarena, Meta**	**158.28**	**67**	*eP*		**PKPdf**	07 00 21.6	**-0.6**
CPUP	**Villa Florida**	**160.05**	**171**	PKP		**PKPdf**	07 00 24.6	**+0.6**
	comp=Z,2.4nm,0.8s,baz=48,slow=2.3,SNR=5.8							
FRBT	**Francisco Belt**	**160.66**	**182**	*eP*		**PKPdf**	07 00 25.6	**+0.9**
ALF01	**Guarapari-ES**	**161.07**	**221**	*eP*		**PKPdf**	07 00 27.3	**+2.1**
PET01	**Itanhaem-SP**	**161.25**	**199**	*eP*		**PKPdf**	07 00 26.6	**+1.2**
LPAZ	**La Paz**	**163.02**	**126**	PKP		**PKPdf**	07 00 28.7	**+0.6**
	comp=Z,5.2nm,0.9s,baz=169,slow=0.5,SNR=19							
LPAZ				PKPab		**PKPab**	07 01 19.8	**+2.0**
	comp=Z,5.1nm,0.8s,baz=233,slow=8.1,SNR=5.8							
LPAZ	**La Paz**	**163.02**	**126**	*eP*		**PKPdf**	07 00 28.1	**+0.1**
LPAZ	**La Paz**	**163.02**	**126**	*eP*		**PKPdf**	07 00 27.9	**-0.2**
NBPB	**Pedra_Branca-C**	**165.75**	**273**	*eP*		**PKPdf**	07 00 31.2	**+1.4**
SIV	**San Ignacio**	**168.26**	**144**	PKP		**PKPdf**	07 00 31.6	**0.0**
	comp=Z,5.9nm,0.8s,baz=180,slow=1.3,SNR=34							
SIV				PKPab		**PKPab**	07 01 41.0	**+0.9**
	comp=Z,2.5nm,0.8s,baz=170,slow=6.1,SNR=3.7							
BDFB	**Brasilia**	**169.29**	**212**	PKP		**PKPdf**	07 00 32.2	**-0.2**
	comp=Z,3.8nm,0.9s,baz=167,slow=2.5,SNR=4.8							
BDFB				PKPab		**PKPab**	07 01 46.4	**+1.7**
	comp=Z,3.5nm,0.9s,baz=117,slow=6.8,SNR=3.1							

*TAP **25** 06:43:11.7, 24.6°N × 122.2°96E, h99km, ML2.7, D*
*JMA **25** 06:43:12.1±0.2, 25.2°N±4.4° × 122.2°8E±0.7, h111km, MV1.5/8, NW OFF ISHIGAKIJIMA IS*

ISC 25 06:43:13.2±2.0, 24°61N±0.08° × 122°81E±0.03, h100km±14km, n31, σ0°63/52, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.23**	**130**	*eP*		**Pn**	**06 43 25.9**	**-1.6**
	baz=183							
YOJ	**Yonaguni jima**	**0.23**	**130**	P		**Pn**	**06 43 27.8**	**+0.3**
YOJ				S		**Sn**	**06 43 39.5**	**+1.3**
IRIF	**Iriomote-Funau**	**0.88**	**108**	P		**Pn**	**06 43 32.1**	**-0.2**
IRIF				*eS*		**Sn**	**06 43 47.2**	**+0.5**
ENA	**Nanau**	**0.99**	**260**	*eP*		**Pn**	**06 43 33.7**	**+0.2**
	baz=252							
ENA				*eS*		**Sn**	**06 43 49.7**	**+0.8**
	baz=252							
NDS	**Dongshan**	**1.00**	**271**	*eS*		**Sn**	**06 43 49.2**	**+0.2**
	baz=261							
FUSB	**Fushanzhiwuyua**	**1.12**	**278**	*eP*		**Pn**	**06 43 34.9**	**-0.1**
	baz=273							
FUSB				*eS*		**Sn**	**06 43 51.1**	**-0.4**
	baz=273							
JKRS	**Kuro-shima**	**1.15**	**109**	P		**Pn**	**06 43 35.5**	**+0.2**
JKRS				S		**Sn**	**06 43 53.1**	**+1.2**
NACB	**Ninganchiao**	**1.19**	**249**	*eS*		**Sn**	**06 43 51.4**	**-1.5**
	baz=248							
NWLT	**Wulai**	**1.20**	**278**	*eS*		**Sn**	**06 43 53.0**	**-0.1**
	baz=274							
JIJ	**Ishigaki jima**	**1.24**	**101**	P		**Pn**	**06 43 35.9**	**-0.4**
JIJ				*eS*		**Sn**	**06 43 53.6**	**-0.1**
ETLH	**Xiulin Townshi**	**1.28**	**252**	*eP*		**Pn**	**06 43 36.5**	**-0.3**
	baz=245							
ETLH				*eS*		**Sn**	**06 43 54.9**	**+0.1**
	baz=245							
YHNB	**Yeheng**	**1.31**	**273**	*eP*		**Pn**	**06 43 37.7**	**+0.5**
	baz=277							
YHNB				*eS*		**Sn**	**06 43 55.5**	**+0.1**
	baz=277							
NNSB	**Datong**	**1.32**	**262**	*eP*		**Pn**	**06 43 35.8**	**-1.6**
	baz=260							
NNSB				*eS*		**Sn**	**06 43 56.0**	**+0.4**
	baz=260							
NSK	**Sanguang**	**1.33**	**273**	*eP*		**Pn**	**06 43 37.7**	**+0.3**
	baz=278							
NSK				*eS*		**Sn**	**06 43 55.7**	**0.0**
	baz=278							
JISG	**Ishigakijimahi**	**1.36**	**91**	*eS*		**Sn**	**06 43 55.6**	**-0.8**
FUSS	**Fushou**	**1.48**	**256**	*eS*		**Sn**	**06 43 59.5**	**+0.2**
	baz=249							
WHF	**Hehuan Shan**	**1.49**	**252**	*eP*		**Pn**	**06 43 39.8**	**+0.1**
	baz=251							
WHF				*eS*		**Sn**	**06 43 59.2**	**-0.6**
	baz=251							
ESL	**Shilin**	**1.49**	**238**	*eS*		**Sn**	**06 43 59.3**	**+0.1**
	baz=238							
CHGB	**Renai**	**1.59**	**250**	*eP*		**Pn**	**06 43 41.2**	**+0.4**
	baz=249							
CHGB				*eS*		**Sn**	**06 44 01.3**	**-0.5**
	baz=249							
OWD	**Renai**	**1.63**	**247**	*eP*		**Pn**	**06 43 41.4**	**+0.1**
	baz=241							
OWD				*eS*		**Sn**	**06 44 02.5**	**0.0**
	baz=241							
NSTT	**Nanjuang**	**1.65**	**271**	*eS*		**Sn**	**06 44 02.8**	**+0.1**
	baz=268							
WUSB	**Renai**	**1.67**	**249**	*eP*		**Pn**	**06 43 41.6**	**0.0**
	baz=248							
WUSB				*eS*		**Sn**	**06 44 03.4**	**+0.1**
	baz=248							
HGSD	**Ruisui**	**1.69**	**229**	*eP*		**Pn**	**06 43 41.9**	**+0.1**
	baz=225							
HGSD				*eS*		**Sn**	**06 44 03.3**	**-0.3**
	baz=225							
WCS	**Beigang Elemen**	**1.82**	**253**	*eS*		**Sn**	**06 44 07.3**	**+0.8**
	baz=248							
YULB	**Yu-li**	**1.84**	**229**	*eP*		**Pn**	**06 43 43.7**	**-0.1**
	baz=238							
YULB				*eS*		**Sn**	**06 44 06.5**	**-0.6**
	baz=238							
SSLB	**Suanglung**	**1.89**	**245**	*eP*		**Pn**	**06 43 44.5**	**+0.2**
	baz=239							
SSLB				*eS*		**Sn**	**06 44 09.2**	**+1.1**
	baz=239							
SMLT	**Sun Moon Lake**	**1.89**	**248**	*eS*		**Sn**	**06 44 09.7**	**+1.4**
	baz=244							
FULB	**Fuli**	**1.98**	**225**	*eP*		**Pn**	**06 43 45.3**	**-0.2**
	baz=219							
FULB				*eS*		**Sn**	**06 44 10.5**	**+0.3**
	baz=219							
YUS	**Yu-Shan**	**2.04**	**237**	*eP*		**Pn**	**06 43 46.5**	**-0.2**
	baz=237							
YUS				*eS*		**Sn**	**06 44 12.3**	**+0.1**
	baz=237							
EDH	**Donghe**	**2.14**	**221**	*eP*		**Pn**	**06 43 47.5**	**0.0**
	baz=221							
EDH				*eS*		**Sn**	**06 44 14.1**	**+0.2**
	baz=221							
ELDTW	**Lidau**	**2.17**	**230**	*eP*		**Pn**	**06 43 47.9**	**-0.2**
	baz=230							
ELDTW				*eS*		**Sn**	**06 44 14.1**	**-0.7**
	baz=230							

*IDC **25** 07:02:22.9±3.3, 15.95°S × 167.89°E, h147km±31km, mb3.8/13, mbtmp4.2/14, Error ellipse: s-maj=22.3km s-min=20.0km az=8.0*
*NEIC **25** 07:02:23.5±1.8, 15.9°S±0.1° × 167.9°E±0.1, h147km±7km, mb4.4/18, Error ellipse: s-maj=17.2km s-min=16.0km az=110.0*
*NOU **25** 07:02:24.8, 15.94°S × 167.88E, h124km, mb4.3/17, Vanuatu Islands*

ISC 25 07:02:23.4±0.5, 15°93S±0.07° × 167°87E±0.08, h150km, n51, σ0°99/49, mb4.3/19, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DVP	**Devils Point**	**1.81**	**170**	P		**Pn**	**07 02 56.8**	**+0.5**
LIFNC	**LIFOU**	**4.86**	**187**			**Pn**	**07 03 33.8**	**-1.1**
LIFNC	**LIFOU**	**4.86**	**187**	P		**Pn**	**07 03 34.2**	**-0.7**
MARNC	**Mare, Loyalty**	**5.52**	**178**			**Pn**	**07 03 42.5**	**-1.2**
MARNC	**Mare, Loyalty**	**5.52**	**178**	P		**Pn**	**07 03 42.9**	**-0.8**
KOUNC	**Koumac, New Ca**	**5.72**	**216**			**Pn**	**07 03 47.3**	**+0.9**
KOUNC	**Koumac, New Ca**	**5.72**	**216**	P		**Pn**	**07 03 48.4**	**+2.0**
YATNC	**Mamie plateau,**	**6.16**	**189**	P		**Pn**	**07 03 52.0**	**-0.3**
DZM	**Mont Dzumac**	**6.25**	**192**	P		**Pn**	**07 03 53.4**	**-0.2**
	9.8nm,0.3s,baz=77,slow=12,SNR=116							
DZM				S		**Sn**	**07 05 03.4**	**-0.8**
	13nm,0.6s,baz=320,slow=22,SNR=6.0							
DZM	**Mont Dzumac**	**6.25**	**192**			**Pn**	**07 03 54.2**	**+0.6**
DZM	**Mont Dzumac**	**6.25**	**192**	P		**Pn**	**07 03 54.6**	**+1.0**
NOUC	**Port Laguerre**	**6.31**	**193**	P		**Pn**	**07 03 56.0**	**+1.7**
ONTNC	**Ouen Toro**	**6.48**	**192**			**Pn**	**07 03 59.2**	**+2.7**
ONTNC	**Ouen Toro**	**6.48**	**192**	P		**Pn**	**07 03 58.5**	**+2.0**
OUENC	**Ouen Island, N**	**6.52**	**188**			**Pn**	**07 03 57.8**	**+0.6**
OUENC	**Ouen Island, N**	**6.52**	**188**	P		**Pn**	**07 03 58.5**	**+1.4**
MSVF	**Nonsavu**	**9.91**	**102**	P		**Pn**	**07 04 44.0**	**+1.7**
EIDS	**Eidsvold**	**18.29**	**236**	P		**Pn**	**07 06 27.2**	**-0.5**
EIDS				IAmb		IAmb	07 06 29.0	
	comp=Z,13nm,0.8s							
CTA	**Charters Tower**	**20.97**	**255**	P		**P**	**07 06 55.5**	**+0.6**
	comp=Z,6.3nm,0.5s,baz=77,slow=9.9,SNR=15							
	comp=Z,6.3nm,0.5s							
CTAO	**Charters Tower**	**20.97**	**255**	P		**P**	**07 06 55.7**	**+0.8**
CTAO				IAmb		IAmb	07 06 58.2	
	comp=Z,8.4nm,0.6s							
COEN	**Coen**	**23.94**	**271**	P		**P**	**07 07 23.7**	**-0.3**
COEN				IAmb		IAmb	07 07 26.1	
	comp=Z,16nm,1.0s							
STKA	**Stephens Creek**	**28.68**	**232**	P		**P**	**07 08 06.3**	**0.0**
	comp=Z,4.2nm,0.6s,baz=48,slow=7.3,SNR=8.0							
	comp=Z,4.2nm,0.6s							
STKA	**Stephens Creek**	**28.68**	**232**	IAmb		IAmb	07 08 08.0	
	comp=Z,1.0nm,0.7s							
RAR	**Rarotonga**	**31.08**	**105**	P		**P**	**07 08 27.4**	**-0.2**
	comp=Z,14nm,0.7s,baz=282,slow=13,SNR=1.7							
	comp=Z,14nm,0.7s							
WB2	**Warramunga Arr**	**32.11**	**258**	P		**P**	**07 08 35.2**	**-1.5**
WB2				IAmb		IAmb	07 08 59.6	
	comp=Z,9.9nm,1.4s							
WRA	**Warramunga Arr**	**32.12**	**258**	P		**P**	**07 08 35.5**	**-1.3**
	comp=Z,2.9nm,0.6s,baz=83,slow=8.0,SNR=44							
WRA				PcP		**PcP**	**07 11 22.5**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=80,slow=4.0,SNR=2.3							
	comp=Z,2.9nm,0.6s							
WRA	**Warramunga Arr**	**32.12**	**258**	IAmb		IAmb	07 08 37.6	
	comp=Z,0.3nm,1.1s							
AS31	**Alice Springs**	**32.81**	**251**	P		**P**	**07 08 42.6**	**-0.2**
AS31				IAmb		IAmb	07 08 43.4	
	comp=Z,4.7nm,0.5s							
ASAR	**Alice Springs**	**32.81**	**251**	P		**P**	**07 08 42.1**	**-0.8**
BBOO	**Buckleboo**	**33.32**	**234**	P		**P**	**07 08 47.7**	**+0.5**
KNRA	**Kununurra**	**37.60**	**265**	P		**P**	**07 09 23.1**	**-0.7**
MBWA	**Marble Bar**	**45.80**	**256**	P		**P**	**07 10 30.4**	**-0.1**
MBWA				IAmb		IAmb	07 10 55.6	
	comp=Z,14nm,1.1s							
UGM	**Wanagama**	**56.53**	**271**	P		**P**	**07 11 50.3**	**-0.4**
MJAR	**Matsushiro Arr**	**59.24**	**332**	P		**P**	**07 12 08.4**	**-0.6**
	comp=Z,1.7nm,0.7s,baz=164,slow=9.2,SNR=4.9							
	comp=Z,1.7nm,0.7s							
MJAR	**Matsushiro Arr**	**59.24**	**332**	IAmb		IAmb	07 12 10.1	
	comp=Z,2.2nm,0.9s							
VNDA	**Vanda**	**61.68**	**181**	P		**P**	**07 12 25.2**	**+0.2**
	comp=Z,0.3nm,0.8s,baz=352,slow=6.0,SNR=1.3							
	comp=Z,0.3nm,0.8s							
VNDA	**Vanda**	**61.68**	**181**	P		**P**	**07 12 25.5**	**+0.4**
CASY	**Casey**	**62.64**	**203**	P		**P**	**07 12 31.4**	**-0.2**
CASY				IAmb		IAmb	07 13 03.9	
	comp=Z,8.9nm,1.4s							
KSRS	**Korea Array**	**65.06**	**326**	P		**P**	**07 12 47.9**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=132,slow=7.2,SNR=2.5							
	comp=Z,1.2nm,0.8s							
USRK	**Ussuriysk Ar.**	**68.22**	**333**	P		**P**	**07 13 08.8**	**+1.2**
	comp=Z,3.0nm,0.7s,baz=115,slow=6.8,SNR=5.0							
	comp=Z,3.0nm,0.7s							
QSPA	**South Pole Qui**	**74.10**	**180**	P		**P**	**07 13 43.5**	**+0.5**
QSPA				IAmb		IAmb	07 13 46.6	
	comp=Z,8.6nm,1.3s							
CMAR	**Chiang Mai Arr**	**75.97**	**294**	P		**P**	**07 13 55.4**	**+1.0**
	comp=Z,1.2nm,0.3s,baz=144,slow=6.3,SNR=1.6							
	comp=Z,1.2nm,0.3s							
L19K	**White Mountain**	**83.21**	**17**	P		**P**	**07 14 33.0**	**+0.5**
L19K				IAmb		IAmb	07 14 39.1	
	comp=Z,9.4nm,1.4s							
SONM	**Songino Array**	**83.81**	**323**	P		**P**	**07 14 35.9**	**-0.2**
	comp=Z,2.0nm,0.9s,baz=133,slow=4.3,SNR=8.6							
	comp=Z,2.0nm,0.9s							
SONM	**Songino Array**	**83.81**	**323**	IAmb		IAmb	07 14 37.3	
	comp=Z,4.0nm,1.2s							
ILAR	**Eielson Array**	**87.49**	**18**	P		**P**	**07 14 51.9**	**-1.8**
	comp=Z,0.2nm,0.6s,baz=226,slow=4.6,SNR=5.7							
	comp=Z,0.2nm,0.6s							
MKAR	**Makanchi Array**	**98.47**	**316**	P		**P**	**07 15 44.7**	**0.0**
	comp=Z,0.4nm,0.8s,baz=116,slow=3.4,SNR=2.7							
	comp=Z,0.4nm,0.8s							
ZALV	**Zalesovo Beam**	**98.70**	**324**	P		**P**	**07 15 44.9**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=120,slow=5.5,SNR=1.8							
	comp=Z,0.3nm,0.3s							
ARCES	**ARCESS Array B**	**121.56**	**345**	PKP		**PKPdf**	**07 20 58.1**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=50,slow=1.4,SNR=6.2							
FINES	**FINESS Array B**	**127.05**	**338**	PKP		**PKPdf**	**07 21 09.4**	**+0.1**
	baz=96,slow=1.4,SNR=1.7							
TORD	**Torodi Ar. Bea**	**166.34**	**260**	PKPab		**PKPab**	**07 23 12.9**	**-1.0**
	comp=Z,0.2nm,0.4s,baz=96,slow=3.8,SNR=2.6							

*NEIC **25** 07:16:25.1±1.6, 12.2°S±0.1° × 166.7°E±0.2, h180km±8km, mb4.3/12, Error ellipse: s-maj=23.9km s-min=16.7km az=86.0*
*IDC **25** 07:16:29.1±5.6, 12.48°S × 166.66E, h224km±59km, mb3.6/8, mbtmp4.1/9, MS3.5/1, Error ellipse: s-maj=41.6km s-min=31.5km az=175.0*

ISC 25 07:16:26.8±0.6, 12°33S±0.07° × 166°7E±0.1, h200km, n41, σ1°29/41, mb4.2/13, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LIFNC	**LIFOU**	**8.42**	**176**	Pn		**Pn**	**07 18 23.6**	**-1.9**
KOUNC	**Koumac, New Ca**	**8.50**	**195**			**Pn**	**07 18 26.3**	**-0.2**
MARNC	**Mare, Loyalty**	**9.20**	**172**	Pn		**Pn**	**07 18 33.7**	**-2.0**
DZM	**Mont Dzumac**	**9.70**	**181**	P		**Pn**	**07 18 43.6**	**+1.4**
	16nm,0.3s,baz=183,slow=15,SNR=93							
DZM				S		**Sn**	**07 20 27.5**	**-3.2**
	3.6nm,0.7s,baz=129,slow=17,SNR=1.7							
DZM	**Mont Dzumac**	**9.70**	**181**			**Pn**	**07 18 43.2**	**+1.0**
OUENC	**Ouen Island, N**	**10.04**	**179**	Pn		**Pn**	**07 18 48.0**	**+1.5**
PINNC	**Pines Island,**	**10.26**	**176**	Pn		**Pn**	**07 18 50.7**	**+1.3**
EIDS	**Eidsvold**	**19.63**	**226**	P		**P**	**07 20 41.7**	**+1.5**
EIDS				IAmb		IAmb	07 20 47.7	
	comp=Z,7.1nm,1.1s							
CTAO	**Charters Tower**	**21.07**	**246**	P		**P**	**07 20 55.2**	**-0.4**
CTAO				IAmb		IAmb	07 21 27.1	
	comp=Z,20nm,1.4s							
ARMA	**Armidale**	**22.77**	**215**	P		**P**	**07 21 13.5**	**+1.3**
MRHZ	**Matea Rd**	**27.78**	**164**	P		**P**	**07 21 59.7**	**+2.5**
NMHZ	**Naumai**	**28.14**	**163**	P		**P**	**07 22 02.9**	**+2.5**
BHHZ

HEF	**Hetta**	**1.39**	**61**	*e*P		**Pb**	**07 21 33.8**	**+0.2**
HEF				*e*S		**Sn**	**07 21 52.4**	**-0.1**
ERTU	**Ertsjaerv**	**1.41**	**149**	*e*P		**Pb**	**07 21 35.0**	**+1.0**
ERTU				*e*S		**Sn**	**07 21 55.3**	**+2.4**
HARU	**Harads**	**1.63**	**171**	*e*P		**Pb**	**07 21 38.3**	**+0.6**
KTK1	**Kautokeino**	**1.64**	**39**	Pn		**Pb**	**07 21 37.5**	**-0.3**
KTK1				Sn		**Sb**	**07 21 58.7**	**-0.3**
KTK1	**Kautokeino**	**1.64**	**39**	*e*P		**Pb**	**07 21 37.5**	**-0.3**
KTK1	**Kautokeino**	**1.64**	**39**	*e*P		**Pb**	**07 21 37.5**	**-0.3**
KTK1				*e*S		**Sb**	**07 21 58.9**	**-0.1**
JETT	**Jettan, Norway**	**1.80**	**0**	Pn		**Pn**	**07 21 39.4**	**+0.3**
JETT				Sn		**Sn**	**07 22 02.1**	**-0.5**
TRO	**Tromso**	**1.95**	**345**	*e*P		**Pn**	**07 21 41.3**	**+0.3**
TRO	**Tromso**	**1.95**	**345**	*e*P		**Pn**	**07 21 41.6**	**+0.6**
TRO				*e*S		**Sn**	**07 22 06.7**	**+0.5**
STEI	**Steigen**	**1.96**	**277**	*e*P		**Pn**	**07 21 42.2**	**+1.1**
FAUS	**Fauske**	**1.99**	**261**	*e*P		**Pn**	**07 21 42.8**	**+1.2**
FAUS				IAML			07 22 13.3	
	comp=Z,16nm,0.4s							
TOF	**Tornio**	**2.30**	**136**	MSG			07 22 22.2	
	comp=Z,11nm,0.2s							
ARA0	**ARCESS Array S**	**2.58**	**44**	Pn		**Pn**	**07 21 51.7**	**+1.9**
	baz=234,slow=14							
ARA0				Lg		Lg	07 22 25.6	
	baz=234,slow=28							
ARA0	**ARCESS Array S**	**2.58**	**44**	Pn		**Pn**	**07 21 51.7**	**+1.9**
	baz=234,slow=14							
ARA0				IAML			07 22 28.4	
	comp=Z,7.3nm,0.2s							
ARCES	**ARCESS Array B**	**2.58**	**44**	Pn		**Pn**	**07 21 51.2**	**+1.4**
	comp=Z,0.6nm,0.3s,baz=228,slow=14,SNR=42							
ARCES				Lg		Lg	07 22 24.6	
	comp=Z,2.7nm,0.3s,baz=229,slow=26,SNR=20							
	comp=Z,1.1nm,0.3s							
ARCES	**ARCESS Array B**	**2.58**	**44**	P		**Pb**	**07 21 52.0**	**-1.9**
ARCES				S		**Sn**	**07 22 23.3**	**+1.4**
LOF	**Lofoten**	**2.61**	**281**	*e*P		**Pn**	**07 21 51.6**	**+1.5**
HAMF	**Hammerfest**	**3.12**	**21**	*e*P		**Pn**	**07 21 59.2**	**+2.0**
HAMF				IAML			07 22 38.3	
	comp=Z,11nm,0.4s							
KEV	**Kevo**	**3.13**	**47**	*e*P		**Pn**	**07 21 59.2**	**+1.9**
VRF	**Varrio**	**3.51**	**86**	MSG			07 22 56.1	
	comp=Z,4.0nm,0.2s							
OBF0	**Syolatti, Pyha**	**3.64**	**153**	MSG			07 23 11.0	
	comp=Z,3.7nm,0.3s							
PRVG	**Vayda Guba**	**4.73**	**60**	P		**Pn**	**07 22 19.3**	**+0.1**
APA0	**Apatity Array**	**4.81**	**86**	Pn		**Pn**	**07 22 21.3**	**+0.9**
	baz=290,slow=12							
APA0				Sn		**Sn**	**07 23 16.6**	**-0.1**
	baz=276,slow=28							
APA0				Lg		Lg	07 23 35.1	
	baz=289,slow=28							
APA0	**Apatity Array**	**4.81**	**86**	Pn		**Pn**	**07 22 21.3**	**+0.9**
	baz=290,slow=12							
APA0	**Apatity Array**	**4.81**	**86**	P		**Pn**	**07 22 22.0**	**+1.6**
APA0				S		**Sn**	**07 23 16.7**	**0.0**
LVZ	**Lovozero**	**5.41**	**82**	S		**Sn**	**07 23 32.2**	**+0.7**
TERR	**Teriberka**	**5.61**	**68**	S		**Sn**	**07 23 34.9**	**-1.4**
FIA0	**FINESS Array S**	**6.80**	**156**	Pn		**Pn**	**07 22 47.1**	**-0.6**
	baz=340,slow=12							
FIA0				Sn		**Sn**	**07 24 06.0**	**+0.2**
	baz=349,slow=28							
FIA0				Lg		Lg	07 24 39.9	
	baz=354,slow=28							
FIA0	**FINESS Array S**	**6.80**	**156**	Pn		**Pn**	**07 22 47.1**	**-0.6**
	baz=340,slow=12							
FIA0				Sg		**Sg**	**07 24 39.9**	**-5.1**
	baz=354,slow=28							
FINES	**FINESS Array B**	**6.80**	**156**	Pn		**Pn**	**07 22 47.0**	**-0.6**
	baz=341,slow=10,SNR=1.2							
FINES				Sn		**Sn**	**07 24 05.8**	**0.0**
	comp=Z,0.1nm,0.3s,baz=345,slow=22,SNR=2.4							
FINES				Lg		Lg	07 24 38.6	
	comp=Z,0.1nm,0.3s,baz=349,slow=28,SNR=2.3							
	comp=Z,0.3nm,0.4s							
NOA	**NORSAR Array B**	**7.82**	**215**	Pn		**Pn**	**07 23 02.0**	**+0.2**
	baz=40,slow=20,SNR=1.4							
NOA				Lg		Lg	07 25 11.8	
	baz=73,slow=7.5,SNR=4.5							
	comp=Z,0.1nm,0.4s							
NRA0	**NORESS Array S**	**8.03**	**213**	Pn		**Pn**	**07 23 06.6**	**+2.1**
	baz=39,slow=18							
NRA0				Lg		Lg	07 25 20.7	
	baz=29,slow=28							
NRA0	**NORESS Array S**	**8.03**	**213**	Pn		**Pn**	**07 23 06.6**	**+2.1**
	baz=39,slow=18							
NRA0				Sg		**Sg**	**07 25 20.7**	**-3.6**
	baz=29,slow=28							
HFS	**Hagfors**	**8.20**	**204**	Pn		**Pn**	**07 23 07.5**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=9.5,slow=14,SNR=2.3							
HFS				Lg		Lg	07 25 23.0	
	comp=Z,0.2nm,0.3s,baz=7.5,slow=34,SNR=2.5							
	comp=Z,0.9nm,0.7s							
HFS	**Hagfors**	**8.20**	**204**	Pn		**Pn**	**07 23 07.7**	**+0.8**
	baz=8.3,slow=16							
HFS	**Hagfors**	**8.20**	**204**	Pn		**Pn**	**07 23 07.7**	**+0.8**
	baz=8.3,slow=16							
SPITS	**Spitsbergen Ar**	**10.53**	**355**	Pn		**Pn**	**07 23 38.2**	**-0.4**
	comp=Z,1.3nm,0.8s,baz=151,slow=6.3,SNR=1.4							

*IDC **25** 07:34:23.8±1.9, 26.46S×177.62W, h156km±16km, mb3.3/4, mbtmp4.0/6, Error ellipse: s-maj=33.2km s-min=18.0km az=79.0*

ISC 25 07:34:22.6±0.8, 26°43S±0.08×177°5W±0.1, h150km, n24, σ1§11/17, mb3.5/4, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.84**	**188**	P	**Pn**	**07 35 08.2**	**+0.3**
	451nm,0.2s,baz=8.5,slow=22,SNR=9.7						
RAO				S	**Sn**	**07 35 44.1**	**+1.0**
	866nm,0.3s,baz=273,slow=23,SNR=10						
MSVF	**Nonsavu**	**9.60**	**333**	P	**Pn**	**07 36 38.9**	**+1.5**
	12nm,0.7s,baz=128,slow=13,SNR=7.9						
URZ	**Urewera**	**12.65**	**200**	P	**Pn**	**07 37 17.6**	**+0.3**
	6.5nm,0.5s,baz=318,slow=3.0,SNR=8.3						
URZ				S	Sn	07 39 23.0	-14
	22nm,0.5s,baz=16,slow=23,SNR=12						
AFI	**Afiamalu**	**13.54**	**24**	P	Pn	07 37 22.3	-6.6
	14nm,0.6s,baz=188,slow=23,SNR=1.5						
AFI				S	Sn	07 39 45.2	-14
	28nm,0.4s,baz=216,slow=19,SNR=5.8						
DZM	**Mont Dzumac**	**15.31**	**283**	P	P	07 37 59.8	+7.4
	12nm,0.8s,baz=109,slow=14,SNR=8.8						
DZM				S	**Sn**	**07 40 40.7**	**-0.6**
	5.2nm,0.6s,baz=87,slow=18,SNR=7.7						
WRA	**Warramunga Arr**	**44.58**	**268**	P	**P**	**07 42 18.6**	**-1.4**
	0.6nm,0.7s,baz=104,slow=6.8,SNR=11						
	0.6nm,0.7s						
VNDA	**Vanda**	**52.08**	**186**	P	**P**	**07 43 17.9**	**+1.3**
	1.1nm,0.8s,baz=357,slow=8.0,SNR=5.8						
	1.1nm,0.8s						
TROLL	**Troll, Antarti**	**81.83**	**180**	P	**P**	**07 46 24.1**	**-0.6**
SNAA	**Sanae**	**82.10**	**178**	P	**P**	**07 46 25.1**	**-0.8**
VNA3	**Neumayer Olymp**	**82.22**	**176**	P	**P**	**07 46 24.9**	**-1.7**
H03S2	**Juan Fernandez**	**82.26**	**124**	T	T	09 17 35.1	
	baz=246						
H03S1	**Juan Fernandez**	**82.28**	**124**	T	T	09 17 32.7	
	baz=246						
H03S3	**Juan Fernandez**	**82.28**	**124**	T	T	09 17 34.8	
	baz=246						
H03N2	**Juan Fernandez**	**82.44**	**123**	T	T	09 17 28.0	
	baz=240						
H03N3	**Juan Fernandez**	**82.44**	**123**	T	T	09 17 33.2	
	baz=240						
H03N1	**Juan Fernandez**	**82.45**	**123**	T	T	09 16 51.8	
	baz=240						
VNA1	**Neumayer--Stat**	**82.89**	**176**	P	**P**	**07 46 28.7**	**-1.2**
USRK	**Ussuriysk Ar.**	**84.13**	**326**	P	**P**	**07 46 37.7**	**+1.1**
	1.0nm,0.5s,baz=127,slow=4.5,SNR=1.9						
	1.0nm,0.5s						
NVAR	**Mina Array Bea**	**85.00**	**43**	P	**P**	**07 46 41.6**	**+0.2**
	0.4nm,0.8s,baz=252,slow=5.6,SNR=3.0						
	0.4nm,0.8s						
FINES	**FINESS Array B**	**141.56**	**342**	PKhKP	PKPpre	07 53 29.1	
	baz=20,slow=4.4,SNR=6.4						
NB2	**NORSAR Subarra**	**144.90**	**353**	PKP	**PKPdf**	**07 53 40.3**	**-1.0**
	comp=Z,0.5nm,0.5s,baz=12,slow=3.6						
NOA	**NORSAR Array B**	**144.90**	**353**	PKP	**PKPab**	**07 53 39.6**	**-1.2**
	comp=Z,1.7nm,0.8s,baz=5.6,slow=3.7,SNR=8.4						
AKASG	**Malin Array Be**	**148.34**	**327**	PKPbc	**PKiKP**	**07 53 52.3**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=46,slow=4.3,SNR=1.2						
TORD	**Torodi Ar. Bea**	**166.76**	**176**	PKPab	**PKPab**	**07 55 13.5**	**-0.8**
	comp=Z,0.5nm,0.8s,baz=198,slow=3.8,SNR=2.7						

*IDC **25** 07:38:20.4±2.4, 27.71N×66.10E, h0km, mb3.3/3, mbtmp3.4/4, Error ellipse: s-maj=64.2km s-min=35.5km az=53.0, Pakistan*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEYT	**Alibeck**	**12.19**	**329**	Pn	Pn	07 41 17.1	+1.8
	1.3nm,0.5s,baz=185,slow=16,SNR=1.4						
MKAR	**Makanchi Array**	**22.91**	**29**	P	P	07 43 25.9	0.0
	0.3nm,0.5s,baz=217,slow=10.0,SNR=5.2						
	0.3nm,0.5s						
FINES	**FINESS Array B**	**42.95**	**333**	P	P	07 46 20.0	-0.8
	0.3nm,0.5s,baz=110,slow=8.1,SNR=1.5						
	0.3nm,0.5s						
WRA	**Warramunga Arr**	**81.24**	**118**	P	P	07 50 38.7	+0.1
	0.3nm,0.8s,baz=322,slow=4.0,SNR=1.5						
	0.3nm,0.8s						

*IDC **25** 07:54:51.5±1.9, 3.54N×126.85E, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=192.5km s-min=27.0km az=66.0, Talaud Islands*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.47**	**163**	P	P	08 00 12.7	+0.3
	0.6nm,0.7s,baz=341,slow=11,SNR=12						
	0.6nm,0.7s						
MKAR	**Makanchi Array**	**57.78**	**325**	P	P	08 04 45.6	+1.1
	0.4nm,0.4s,baz=117,slow=8.5,SNR=8.1						
	0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**60.81**	**333**	P	P	08 05 03.3	-2.0
	0.7nm,0.6s,baz=122,slow=6.5,SNR=1.8						
	0.7nm,0.6s						

*IDC **25** 08:01:14.8±1.9, 22.1N±0.1×143.3E±0.5, h250km, n8, σ1§03/9, mb3.3/5, Volcano Islands region*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.05**	**349**	P	**Pn**	**08 02 32.5**	**+1.4**
	19nm,0.4s,baz=164,slow=20,SNR=11						
JCJ				S	**S**	**08 03 30.4**	**-1.7**
	47nm,0.6s,baz=249,slow=17,SNR=1.9						
KSRS	**Korea Array**	**20.22**	**323**	P	**P**	**08 05 32.0**	**+1.0**
	1.4nm,0.6s,baz=142,slow=8.7,SNR=7.1						
	1.4nm,0.6s						
SONM	**Songino Array**	**39.05**	**320**	P	**P**	**08 08 17.4**	**-0.3**
	0.4nm,0.4s,baz=118,slow=11,SNR=2.9						
	0.4nm,0.4s						
WRA	**Warramunga Arr**	**42.70**	**192**	P	**P**	**08 08 47.4**	**-0.2**
	0.2nm,0.6s,baz=17,slow=8.3,SNR=7.0						
	0.2nm,0.6s						
ZALV	**Zalesovo Beam**	**53.92**	**321**	P	**P**	**08 10 12.8**	**+0.3**
	0.5nm,0.3s,baz=136,slow=10,SNR=2.0						
	0.5nm,0.3s						
MKAR	**Makanchi Array**	**54.46**	**312**	P	**P**	**08 10 16.3**	**-0.3**
	0.1nm,0.3s,baz=100,slow=7.4,SNR=1.7						
	0.1nm,0.3s						
FINES	**FINESS Array B**	**82.83**	**334**	P	**P**	**08 13 10.4**	**-0.5**
	0.7nm,0.3s,baz=69,slow=4.6,SNR=19						
	0.7nm,0.3s						
TORD	**Torodi Ar. Bea**	**128.52**	**309**	PKP	**PKiKP**	**08 19 53.2**	**-0.3**
	0.4nm,0.7s,baz=42,slow=1.5,SNR=2.3						

NOU 25 08:05:22.7, 20.24S×169.61E, h110km, MLv3.7/12, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**1.93**	**230**	P	Pn	08 05 54.9	+0.2
LIFNC	**LIFOU**	**2.29**	**256**	P	Pn	08 05 58.6	-0.7
DVP	**Devils Point**	**2.84**	**331**	P	Pn	08 06 07.7	+1.1
PINNC	**Pines Island,**	**3.10**	**220**	P	Pn	08 06 10.0	-0.1
YATNC	**Mamie plateau,**	**3.12**	**234**	P	Pn	08 06 09.0	-1.3
OUENC	**Ouen Island, N**	**3.37**	**229**	P	Pn	08 06 13.7	+0.1
DZM	**Mont Dzumac**	**3.47**	**238**	P	Pn	08 06 15.0	-0.1
ONTNC	**Ouen Toro**	**3.59**	**234**	P	Pn	08 06 16.7	+0.1
NOUC	**Port Laguerre**	**3.60**	**238**	P	Pn	08 06 17.8	+1.1
KOUNC	**Koumac, New Ca**	**5.00**	**266**	P	Pn	08 06 36.0	+0.4
	12nm,1.1s						

*IDC **25** 08:05:30.3±5.6, 10.61S×120.89E, h0km, mb3.8/2, mbtmp3.6/3, ML3.3/1, Error ellipse: s-maj=379.3km s-min=44.8km az=46.0*
*DJA **25** 08:05:42.8±0.8, 9.5±5.5×12.2E±*, h12km±7km, M3.7/11, mb3.9/3, MLv3.5/11*

ISC 25 08:05:43.4±1.1, 9.24S±0.08×122.28E±0.06, h100km, n12, σ3§02/14, Savu Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**0.60**	**356**	P	**Pn**	**08 05 58.5**	**-1.5**
MMRI				S	**Sn**	**08 06 08.9**	**-3.5**
EDFI	**Ende, Flores**	**0.75**	**310**	P	**Pn**	**08 05 59.0**	**-2.5**
EDFI				S	**Sn**	**08 06 10.4**	**-4.6**
BATI	**Baumata**	**1.67**	**125**	P	**Pn**	**08 06 12.8**	**+0.9**
BASI	**Baing, Sumba**	**1.94**	**240**	P	**Pn**	**08 06 13.9**	**-1.3**
SOEI	**Soe**	**2.03**	**105**	P	**Pn**	**08 06 18.0**	**+1.5**
WBSI	**Waikabubak, Su**	**2.88**	**262**	P	**Pn**	**08 06 28.3**	**+0.7**
BKSI	**Bukukumba**	**4.44**	**331**	P	**Pn**	**08 06 50.9**	**+2.3**
PLAI	**Plampang**	**4.46**	**275**	P	**Pn**	**08 06 50.8**	**+1.9**
TWSI	**Taliwang, Sumb**	**5.35**	**275**	P	**Pn**	**08 07 03.4**	**+2.5**
	0.1nm9.9nm,1.3s						
WRA	**Warramunga Arr**	**15.79**	**134**	Pn	**Pn**	**08 09 16.3**	**-3.8**
	0.1nm,0.3s,baz=301,slow=13,SNR=6.9						
WRA				Sn	Sn	08 11 59.1	-16
	0.2nm,0.3s,baz=305,slow=22,SNR=2.4						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**66.18**	**331**	P	**P**	**08 16 24.2**	**+3.8**
	0.4nm,0.6s,baz=140,slow=6.6,SNR=6.3						
	0.4nm,0.6s						
ZALV	**Zalesovo Beam**	**70.45**	**338**	P	**P**	**08 16 49.8**	**+3.0**
	0.7nm,0.5s,baz=129,slow=4.1,SNR=2.6						
	0.7nm,0.5s						

UCR 25 08:15:45.1±1.6, 10.69N×85.20W, h3km±2km, MW3.8, 2C-5D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MICM	**Guayabo**	**0.01**	**355**	*e*P	Pg	08 15 45.4	-0.4
COLC	**Colonia**	**0.02**	**193**	*e*P	Pg	08 15 46.4	+0.5
COLC				*e*S	Sg	08 15 47.5	+1.1
HORNC	**Hornillas**	**0.03**	**40**	*e*P	Pg	08 15 45.9	0.0
HORNC				*e*S	Sg	08 15 46.6	0.0
GUAB	**Guayabo de Bag**	**0.04**	**301**	*e*P	Pg	08 15 46.4	+0.4
GUAB				*e*S	Sg	08 15 47.6	+1.0
CUI	**Cuipilapa**	**0.05**	**133**	*e*P	Pg	08 15 46.7	+0.6
VMAR	**Armenia, Volca**	**0.14**	**32**	*e*P	Pg	08 15 48.8	+0.8
GPS2	**Hotel Rincn d**	**0.16**	**293**	*e*P	Pg	08 15 49.1	+0.8
GPS2				*e*S	Sg	08 15 52.2	+1.7
ACAL	**Aguas Claras**	**0.17**	**109**	*i*P	Pg	08 15 49.4	+1.0
VRLE	**La Escondida,**	**0.19**	**301**	*e*P	Pg	08 15 49.6	+0.8
PTEN	**Parque Tenorio**	**0.21**	**83**	*e*P	Pg	08 15 50.2	+1.0
PTEN				*e*S	Sg	08 15 54.2	+2.3
BUEV	**Buena Vista**	**0.23**	**298**	*i*P	Pg	08 15 50.3	+0.7
GB1A	**Borinquen Arri**	**0.23**	**303**	*i*P	Pg	08 15 50.4	+0.7
GB1A				*e*S	Sg	08 15 54.2	+1.4
PLVR	**Palo Verde**	**0.37**	**204**	*e*P	Pg	08 15 53.2	+0.9
ORTG	**Ortega, Santa**	**0.41**	**218**	*e*P	Pg	08 15 53.9	+0.8
JTS	**Las Juntas de**	**0.46**	**149**	*e*P	Pg	08 15 54.5	+0.5
GUAI	**GUAI**	**0.52**	**216**	*i*P	Pg	08 15 55.8	+0.7
GUAI				*e*S	Sb	08 16 04.0	-0.8
CASO	**Castillo**	**0.52**	**119**	*i*P	Pg	08 15 56.0	+0.9
CASO				*e*S	Sb	08 16 03.9	-1.1
CEDE	**Laguna Cedeo**	**0.53**	**112**	*e*P	Pb	08 15 56.3	-0.8
DUNO	**Dulce Nombre,**	**0.67**	**206**	*e*P	Pg	08 15 58.7	+0.7
LAFE	**Finca La Fe, P**	**0.92**	**162**	*e*P	Pg	08 16 02.5	-0.3
ACON	**Acoyapa**	**1.27**	**1**	*e*P	Pg	08 16 08.2	-1.3
EDDO	**Dominical**	**1.94**	**137**	*i*P	Pn	08 16 19.1	+0.1

MAN 25 08:32:12.2, 19.56N×122.14E, h1km, mb4.4, ML3.2, MS3.0, 2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APYP	**Conner**	**1.89**	**207**	*i*P	Pb	08 32 47.1	+0.8
APYP				*e*S		08 33 13.5	
SMPP	**San Manuel, Pa**	**3.66**	**203**	*i*P	Pn	08 33 11.7	+2.2
SMPP				*e*S		08 33 56.0	

*GUC **25** 08:39:36.6±0.6, 21.40S×70.41W, h50km±3km, ML3.3*
*IDC **25** 08:39:41.2±3.2, 21.39S×70.24W, h76km±29km, mb3.0/3, mbtmp3.4/5, Error ellipse: s-maj=55.6km s-min=21.4km az=64.0*

ISC 25 08:39:35.2±1.6, 21°42S±0.03×70°50W±0.09, h27km±11km, n26, σ1§32/28, mb3.4/3, 1C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB02	**IPOC Station P**	**0.58**	**80**	*i*P	**Pb**	**08 39 47.3**	**+0.5**
PB02				*i*S	**Sb**	**08 39 55.4**	**+0.6**
PB02				IAML		08 39 56.0	
	comp=E,9μm,0.2s						
PATCX	**Punta Patache**	**0.68**	**29**	*i*P	**Pb**	**08 39 48.6**	**0.0**
PATCX				*i*S	**Sb**	**08 39 57.6**	**0.0**
PATCX				IAML		08 39 59.3	
	comp=E,3μm,0.4s						
TA01	**Diego Aracena**	**0.90**	**20**	*i*P	**Pb**	**08 39 51.5**	**-0.7**
TA01				*i*S	**Sb**	**08 40 03.2**	**-0.6**
TA01				IAML		08 40 04.2	
	comp=N,1μm,0.2s						
PB04	**IPOC Station P**	**0.97**	**160**	*i*P	**Pb**	**08 39 53.2**	**-0.2**
PB04				*i*S	**Sn**	**08 40 06.4**	**+0.2**
PB04				IAML		08 40 07.8	
	comp=E,3μm,0.2s						
TA02	**Huaiquique**	**1.20**	**17**	*e*P	**Pn**	**08 39 55.4**	**-0.8**
TA02				*i*S	**Sn**	**08 40 10.7**	**-0.8**
TA02				IAML		08 40 12.8	
	comp=N,1μm,0.5s						
PB06	**IPOC Station P**	**1.54**	**146**	*i*P	**Pn**	**08 40 01.4**	**+0.3**
PB06				*i*S	**Sn**	**08 40 20.7**	**+0.3**
PB06				IAML		08 40 25.9	
	comp=E,509nm,0.3s						
PB08	**IPOC Station P**	**1.79**	**45**	*e*P	**Pn**	**08 40 05.7**	**+0.9**
PB08				*i*S	**Sb**	**08 40 28.9**	**-1.0**
PB08				IAML		08 40 30.1	
	comp=N,265nm,0.2s						
PB11	**IPOC Station P**	**1.83**	**26**	*e*P	**Pn**	**08 40 05.0**	**0.0**
PB11				*i*S	**Sn**	**08 40 25.9**	**-1.6**
PB11				IAML		08 40 32.2	
	comp=N,298nm,0.2s						
LVC	**Limon Verde**	**1.90**	**129**	P	**Pb**	**08 40 07.9**	**-1.4**
	comp=N,52nm,0.3s,baz=319,slow=11,SNR=494						
LVC				S	**Sb**	**08 40 31.7**	**-1.0**
	comp=N,111nm,0.3s,baz=27,slow=16,SNR=12						
GO01	**Chusmiza**	**2.13**	**35**	*e*P	**Pn**	**08 40 09.9**	**+0.5**
GO01				*i*S	**Sn**	**08 40 34.4**	**-0.9**
GO01				IAML		08 40 42.6	
AF01	**San Pedro de A**	**2.64**	**126**	*e*P	**Pb**	**08 40 19.9**	**-2.1**
PB12	**IPOC Station P**	**2.80**	**3**	*e*P	**Pn**	**08 40 18.1**	**-0.2**
PB12				*i*S	**Sn**	**08 40 49.4**	**-1.8**
PB12				IAML		08 41 05.2	
	comp=N,73nm,0.6s						
LPAZ	**La Paz**	**5.58**	**24**	P	**Pn**	**08 41 01.4**	**+4.4**
	comp=N,0.7nm,0.3s,baz=195,slow=2.3,SNR=11						
CPUP	**Villa Florida**	**13.00**	**115**	P	**Pn**	**08 42 39.1**	**+0.8**
	comp=N,1.7nm,0.5s,baz=287,slow=12,SNR=5.0						
H03N1	**Juan Fernandez**	**14.10**	**210**	T	T	08 57 30.3	
	baz=35,slow=72,SNR=10						
H03N2	**Juan Fernandez**	**14.11**	**210**	T	T	08 57 26.3	
	baz=35,slow=72,SNR=10						
H03N3	**Juan Fernandez**	**14.12**	**210**	T	T	08 57 23.5	
	baz=35,slow=72,SNR=10						
NVAR	**Mina Array Bea**	**74.52**	**323**	P	**P**	**08 51 13.1**	**+1.3**
	comp=N,0.1nm,0.4s,baz=143,slow=7.9,SNR=1.5						
	comp=N,0.1nm,0.4s						
TORD	**Torodi Ar. Bea**	**78.73**	**71**	P	**P**	**08 51 34.7**	**-1.1**
	comp=N,0.4nm,1.0s,baz=251,slow=4.4,SNR=2.5						
	comp=N,0.4nm,1.0s						
YKA	**Yellowknife Ar**	**90.62**	**341**	P	**P**	**08 52 34.6**	**-0.1**
	comp=N,0.1nm,0.5s,baz=122,slow=6.1,SNR=1.5						
	comp=N,0.1nm,0.5s						
H11S2	**WAKE ISLAND Hyl**	**26.39**	**278**	T	T	11 17 56.6	
	baz=103,slow=75,SNR=34						
H11S1	**WAKE ISLAND Hyl**	**26.40**	**278**	T	T	11 17 42.7	
	baz=103,slow=75,SNR=25						
H11S3	**WAKE ISLAND Hyl**	**26.41**	**278**	T	T	11 17 47.4	
	baz=103,slow=75,SNR=18						
H11N3	**WAKE ISLAND Hyl**	**26.48**	**279**	T	T	11 17 53.1	
	baz=104,slow=74,SNR=16						
H11N2	**WAKE ISLAND Hyl**	**26.49**	**279**	T	T	11 17 51.8	
	baz=104,slow=74,SNR=16						
H11N1	**WAKE ISLAND Hyl**	**26.49**	**279**	T	T	11 17 53.0	
	baz=104,slow=74,SNR=11						

*VAO **25** 08:39:39.5±0.6, 24.53S×69.76W, h10km, mb4.7*
*NEIC **25** 08:40:22.6±2.7, 23.84S±0.07×66.77W±0.10, h194km±8km, mb4.4/15, Md4.2(SJA), Error ellipse: s-maj=13.1km s-min=10.6km az=74.0*
*IDC **25** 08:40:22.6±1.1, 23.69S×66.74W, h190km±9km, mb3.7/6, mbtmp4.2/13, Error ellipse: s-maj=19.6km s-min=13.3km az=16.0*
*GUC **25** 08:40:24.7±0.4, 23.63S×67.20W, h237km±6km, ML4.2*

ISC 25 08:40:22.7±0.5, 23.77S±0.05×66.84W±0.05, h200km, n88, σ1§59/99, mb4.3/15, 1C-1D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AF01	**San Pedro de A**	**1.48**	**303**	Pn	**Pn**	**08 40 57.8**	**+1.3**
AF01	**San

PTLB	**Pontes e Lacer**	**11.00**	**43**	*eP*		**Pn**	**08 42 52.0**	**-2.9**
SALV	**Santo Antonio**	**13.08**	**55**	*eP*		**Pn**	**08 43 20.7**	**-0.5**
TRCB	**Terra Rica**	**13.09**	**89**	*eP*		**Pn**	**08 43 21.6**	**+0.2**
PCMB	**Pacaembu**	**14.54**	**85**	*eP*		**P**	**08 43 40.5**	**-0.1**
SAML	**Samuel**	**15.14**	**14**	P		**Pn**	**08 43 47.0**	**+0.2**
PDRB	**Porto dos Gac**	**15.44**	**40**	*eP*		**Pn**	**08 43 48.8**	**-1.7**
ITRB	**Iturama**	**15.83**	**78**	*eP*		**Pn**	**08 43 56.8**	**+1.6**
FRTB	**Fartura**	**15.85**	**92**	*eP*		**Pn**	**08 43 56.4**	**+1.1**
CLDB	**Colider**	**16.58**	**41**	*eP*		**P**	**08 44 02.7**	**-0.4**
BB19B	**Bebedouro**	**17.14**	**85**	*eP*		**Pn**	**08 44 11.3**	**+0.5**
PLCA	**Paso Flores**	**17.20**	**190**	P		**Pn**	**08 44 10.9**	**-0.4**
	comp=N,1.1nm,0.7s,baz=12,slow=11,SNR=5.1							
PLCA	**Paso Flores**	**17.20**	**190**	P		**Pn**	**08 44 10.7**	**-0.7**
RCLB	**Rio Claro- Sao**	**17.81**	**90**	*eP*		**Pn**	**08 44 18.1**	**-0.5**
VAO	**Valinhos**	**18.26**	**92**	*eP*		**P**	**08 44 21.7**	**+0.2**
IPMB	**Ipameri, GO**	**18.32**	**75**	*eP*		**Pn**	**08 44 23.1**	**-1.6**
SNDB	**Serra Nova Dou**	**18.86**	**54**	*eP*		**P**	**08 44 27.6**	**-0.4**
PARB	**Paraibuna**	**19.45**	**93**	*eP*		**P**	**08 44 35.1**	**+0.7**
BDFB	**Brasilia**	**19.46**	**69**	P		**P**	**08 44 34.7**	**+0.1**
	comp=N,58nm,0.7s,baz=244,slow=11,SNR=78							
BDFB	**Brasilia**	**19.46**	**69**	P		**P**	**08 44 34.9**	**+0.3**
BDFB	**Brasilia**	**19.46**	**69**	*eP*		**P**	**08 44 35.0**	**+0.4**
ATAH	**Atahualpa**	**19.91**	**324**	P		**P**	**08 44 41.1**	**+1.3**
	comp=N,4.1nm,0.7s,baz=121,slow=16,SNR=1.9							
NPGB	**Novo Progresso**	**19.95**	**35**	*eP*		**P**	**08 44 37.6**	**-2.0**
ESAR	**Angra dos Reis**	**20.57**	**92**	*eP*		**P**	**08 44 46.8**	**+0.6**
PEXB	**Peixe**	**21.08**	**60**	*eP*		**P**	**08 44 52.1**	**+0.4**
JANB	**Januaria**	**22.92**	**72**	*eP*		**P**	**08 45 08.9**	**-0.7**
BOSC	**San Juan Bosco**	**23.39**	**329**	P		**P**	**08 45 15.3**	**+1.4**
SMTB	**Santa Maria do**	**23.64**	**54**	*eP*		**P**	**08 45 14.8**	**-1.1**
SDBA	**SAO DESIDERIO**	**23.67**	**65**	*eP*		**P**	**08 45 15.5**	**-0.9**
PRPB	**Parauapebas**	**23.96**	**46**	*eP*		**P**	**08 45 17.2**	**-1.7**
COHC	**Cochancay**	**24.35**	**329**	P		**P**	**08 45 26.4**	**+4.0**
COHC				IAmb	IAmb		08 45 27.7	
	comp=Z,3.3nm,0.7s							
ALF01	**Guarapari-ES**	**24.37**	**88**	*eP*		**P**	**08 45 21.9**	**-0.6**
SJMB	**Sao Joao De Ma**	**24.42**	**83**	*eP*		**P**	**08 45 22.6**	**-0.5**
RIB01	**Linhares ES**	**24.97**	**85**	*eP*		**P**	**08 45 27.7**	**-0.4**
CMC01	**Camacan, BA**	**27.03**	**77**	*eP*		**P**	**08 45 46.2**	**-0.3**
NBLA	**Lagarto - SE**	**30.42**	**70**	*eP*		**P**	**08 46 15.3**	**-1.3**
NBPB	**Pedra_Branca-C**	**31.88**	**60**	*eP*		**P**	**08 46 29.0**	**-0.4**
SJCC	**San Jacinto, C**	**34.44**	**345**	P		**P**	**08 46 53.6**	**+2.1**
SJCC				IAmb	IAmb		08 47 19.8	
	comp=Z,25nm,1.3s							
ORTG	**Ortega, Santa**	**38.50**	**330**	P		**P**	**08 47 28.9**	**+3.0**
833A	**Chaparral WMA,**	**60.55**	**327**	P		**P**	**08 50 13.2**	**+1.1**
833A				IAmb	IAmb		08 50 13.9	
	comp=Z,8.2nm,0.7s							
WVT	**Waverly**	**62.79**	**341**	P		**P**	**08 50 26.5**	**-0.4**
WVT				IAmb	IAmb		08 50 27.1	
	comp=Z,3.7nm,0.7s							
TXAR	**Lajitas Array**	**63.58**	**324**	P		**P**	**08 50 33.3**	**+1.0**
	comp=Z,0.6nm,0.7s,baz=148,slow=6.1,SNR=8.8							
	comp=Z,0.6nm,0.7s							
CCM	**Cathedral Cave**	**65.63**	**339**	P		**P**	**08 50 45.2**	**-0.1**
CCM				IAmb	IAmb		08 50 46.0	
	comp=Z,3.9nm,0.7s							
S39A	**Bolivar**	**66.01**	**337**	P		**P**	**08 50 48.0**	**+0.2**
S39A				IAmb	IAmb		08 50 48.8	
	comp=Z,4.8nm,0.6s							
DBIC	**Dimbokro**	**67.59**	**72**	P		**P**	**08 50 57.8**	**-0.4**
	comp=Z,5.8nm,0.9s,baz=235,slow=3.1,SNR=2.7							
	comp=Z,5.8nm,0.9s							
P38A	**Dawn**	**67.81**	**338**	P		**P**	**08 50 58.7**	**-0.4**
P38A				IAmb	IAmb		08 50 59.7	
	comp=Z,7.8nm,0.5s							
F64A	**Sherman**	**69.31**	**359**	P		**P**	**08 51 08.9**	**+0.8**
F64A				IAmb	IAmb		08 51 13.9	
	comp=Z,7.6nm,1.3s							
TOA0	**Torodi Ar. Sit**	**76.34**	**69**	P		**P**	**08 51 49.8**	**-0.4**
TOA0				IAmb	IAmb		08 51 51.0	
	comp=Z,3.7nm,0.6s							
TORD	**Torodi Ar. Bea**	**76.34**	**69**	P		**P**	**08 51 50.0**	**-0.2**
	comp=Z,3.1nm,0.5s,baz=257,slow=5.8,SNR=53							
	comp=Z,3.1nm,0.5s							
TORD	**Torodi Ar. Bea**	**76.34**	**69**	P		**P**	**08 51 49.8**	**-0.4**
PDAR	**Pinedale Array**	**77.03**	**329**	P		**P**	**08 51 54.5**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=141,slow=7.1,SNR=4.9							
	comp=Z,0.3nm,0.5s							
ULM	**Lac du Bonnet**	**78.06**	**341**	P		**P**	**08 51 59.4**	**+0.4**
	comp=Z,2.0nm,0.5s,baz=155,slow=7.8,SNR=2.6							
	comp=Z,2.0nm,0.5s							
YKA	**Yellowknife Ar**	**93.96**	**340**	P		**P**	**08 53 17.6**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=137,slow=4.8,SNR=18							
	comp=Z,0.5nm,0.5s							
WRA	**Warramunga Arr**	**131.90**	**207**	PKP		**PKiKP**	**08 59 13.7**	**-0.3**
	comp=Z,0.1nm,100.0s,baz=148,slow=1.8,SNR=5.9							
MKAR	**Makanchi Array**	**146.25**	**39**	PKPbc		**PKPab**	**08 59 40.7**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=293,slow=3.6,SNR=8.9							

*TUL **25** 09:39:43.0±0.8, 36°.215N±0°.008×97°.57W±0°.01, h5km±5km, ML2.9, mb_Lg2.5/48(NEIC), Error ellipse: s-maj=1.6km s-min=1.1km az=70.0*

NEIC 25 09:39:43.1±0.6, 36°.224N±0°.010×97°.57W±0°.01, h5km±7km, Error ellipse: s-maj=1.5km s-min=1.4km az=98.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKCFA	**Oklahoma City**	**0.81**	**173**		Pg	09 39 58.5	-0.2
OKCFA				Sg	Sg	09 40 09.1	-0.2
OKCSW	**OKLAHOMA CITY**	**0.82**	**172**		Pg	09 39 58.8	-0.1
OKCSW				Sg	Sg	09 40 09.7	+0.1
FNO	**Franklin**	**0.97**	**172**		Pg	09 40 01.3	-0.5
FNO					Sb	09 40 16.2	+0.5
T35A	**Sooner Cattle**	**1.10**	**51**		Pg	09 40 03.9	-0.3
T35A				Sg	Sg	09 40 18.3	-0.1
TUL1	**Leonard**	**1.47**	**102**		Pn	09 40 09.6	-0.7
X34A	**Smith Ranch, M**	**1.63**	**188**		Pb	09 40 13.5	-0.3
WMOK	**Wichita Mounta**	**1.78**	**214**		Pn	09 40 14.7	+0.1
X37A	**Clayton**	**2.43**	**132**		Pn	09 40 24.1	+0.6
HHAR	**Hobbs**	**2.94**	**88**		Pn	09 40 31.2	+0.8
CBKS	**Cedar Bluff**	**3.11**	**327**	IAmb_Lg		09 41 22.0	
	comp=Z,13nm,0.8s						
W39A	**Magazine**	**3.25**	**107**	IAmb_Lg		09 41 34.4	
	comp=Z,19nm,0.9s						
MIAR	**Mount Ida**	**3.67**	**116**	IAmb_Lg		09 41 46.8	
	comp=Z,10nm,0.8s						
MGMO	**Mountain Grove**	**4.36**	**76**	IAmb_Lg		09 42 02.5	
	comp=Z,12nm,0.7s						
FCAR	**Ozark Folk Cen**	**4.42**	**93**	IAmb_Lg		09 42 08.8	
	comp=Z,9.6nm,0.8s						
WLAR	**White Oak Lake**	**4.45**	**123**	IAmb_Lg		09 42 11.6	
	comp=Z,7.1nm,0.7s						
W41B	**Gary Mavity, V**	**4.46**	**102**	IAmb_Lg		09 42 06.4	
	comp=Z,10.0nm,0.8s						
UALR	**University of**	**4.50**	**107**	IAmb_Lg		09 42 16.1	
	comp=Z,15nm,0.9s						
N33A	**J Bar K, Exete**	**4.51**	**1**	IAmb_Lg		09 42 07.1	
	comp=Z,12nm,0.8s						
P38A	**Dawn**	**4.66**	**42**	IAmb_Lg		09 42 12.9	
	comp=Z,10.0nm,0.7s						
KSCO	**Kaye Shedlock'**	**4.88**	**306**	IAmb_Lg		09 42 29.5	
	comp=Z,7.5nm,0.9s						
Z41A	**Richland Creek**	**4.92**	**126**	IAmb_Lg		09 42 25.6	
	comp=Z,9.1nm,0.7s						
CCM	**Cathedral Cave**	**5.37**	**68**	IAmb_Lg		09 42 35.4	
	comp=Z,6.5nm,0.7s						
P40A	**Paris**	**5.47**	**51**	IAmb_Lg		09 42 40.5	
	comp=Z,10nm,0.9s						
T25A	**Trinidad**	**5.57**	**281**	IAmb_Lg		09 42 50.2	
	comp=Z,9.1nm,0.8s						
PBMO	**Poplar Bluff**	**5.78**	**82**	IAmb_Lg		09 42 46.9	
	comp=Z,9.6nm,0.8s						
FVM	**French Village**	**5.97**	**71**	IAmb_Lg		09 42 55.4	
	comp=Z,6.2nm,0.8s						
S44A	**Carbondale**	**6.82**	**75**	IAmb_Lg		09 43 24.3	
	comp=Z,9.2nm,0.7s						
SIUC	**Southern Illin**	**6.85**	**75**	IAmb_Lg		09 43 36.3	
	comp=Z,7.8nm,0.8s						
OXF	**Oxford**	**6.88**	**102**	IAmb_Lg		09 43 25.3	
	comp=Z,8.9nm,0.8s						
OLIL	**Olney**	**7.94**	**69**	IAmb_Lg		09 44 07.1	
	comp=Z,5.6nm,0.9s						
N23A	**Red Feather La**	**8.05**	**308**	IAmb_Lg		09 44 10.7	
	comp=Z,4.8nm,0.8s						
I40A	**Norwalk**	**9.33**	**33**	IAmb_Lg		09 44 36.7	
	comp=Z,3.9nm,0.8s						

*IDC **25** 09:41:25.7±1.1, 55°.45S×26°.99W, h0km, mb3.9/3, mbtmp3.9/3, Error ellipse: s-maj=52.1km s-min=30.9km az=88.0*

*NEIC **25** 09:41:29.4±2.3, 55°.2S±0°.2×27°.0W±0°.2, h19km±6km, mb4.1/6, Error ellipse: s-maj=24.2km s-min=17.7km az=207.0*

ISC 25 09:41:29.7±0.9, 55°.3S±0°.1×27°.1W±0°.1, h25km, n13, σ0s87/13, mb4.0/4, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.54**	**277**	Pn	**Pn**	**09 42 50.4**	**-0.1**
HOPE				Sn	**Sn**	**09 43 54.0**	**+0.7**
SNAA	**Sanae**	**19.37**	**157**	P	**Pn**	**09 45 56.0**	**+1.6**
SNAA				IAmb	IAmb	09 46 15.0	
	comp=Z,9.5nm,1.5s						
QSPA	**South Pole Qui**	**34.92**	**180**	P	**P**	**09 48 17.4**	**-1.6**
	comp=Z,0.6nm,0.7s,baz=208,slow=3.0,SNR=7.9						
	comp=Z,0.6nm,0.7s						
QSPA	**South Pole Qui**	**34.92**	**180**	P	**P**	**09 48 18.4**	**-0.6**
VNDA	**Vanda**	**47.29**	**183**	P	**P**	**09 50 00.2**	**0.0**
VNDA				IAmb	IAmb	09 50 08.5	
	comp=Z,1.2nm,0.9s						
LPAZ	**La Paz**	**50.02**	**305**	P	**P**	**09 50 22.1**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=157,slow=7.7,SNR=2.8						
	comp=Z,0.8nm,0.7s						
LPAZ	**La Paz**	**50.02**	**305**	IAmb	IAmb	09 50 57.8	
	comp=Z,6.7nm,1.5s						
TOA0	**Torodi Ar. Sit**	**72.40**	**29**	P	**P**	**09 52 53.9**	**+0.5**
TORD	**Torodi Ar. Bea**	**72.40**	**29**	P	**P**	**09 52 53.5**	**0.0**
	comp=Z,1.8nm,0.7s,baz=206,slow=6.5,SNR=7.2						
	comp=Z,1.8nm,0.7s						
TORD	**Torodi Ar. Bea**	**72.40**	**29**	P	**P**	**09 52 53.2**	**-0.2**
TORD				IAmb	IAmb	09 53 23.2	
	comp=Z,4.2nm,1.5s						
INK	**Inuvik**	**145.29**	**321**	PKPbc	**PKPab**	**10 01 03.9**	**+0.4**
	comp=Z,0.7nm,0.8s,baz=81,slow=2.6,SNR=5.2						
INK	**Inuvik**	**145.29**	**321**		**PKPab**	**10 01 04.3**	**+0.9**
ILAR	**Eielson Array**	**149.68**	**313**	PKPbc	**PKiKP**	**10 01 16.4**	**-0.2**
	comp=Z,1.1nm,1.0s,baz=108,slow=2.9,SNR=8.4						

*DDA **25** 09:52:39.7±0.0, 39°.17N×28°.28E, h7km±2km, ML1.9*
*ISK **25** 09:52:39.9, 39°.10N×28°.30E, h10km, ML2.5/8*

ISC 25 09:52:40.0±1.0, 39°.15N±0°.02×28°.28E±0°.02, h10km±9km, n24, σ0s48/38, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEMI	**Demirci**	**0.36**	**107**	P	**Pg**	**09 52 47.4**	**+0.2**
DEMI				S	**Sg**	**09 52 52.3**	**+0.4**
DEMI				*i* AML	AML	09 52 53.0	
	comp=N,123nm,0.3s						
DEMI				*i* AML	AML	09 52 53.0	
	comp=E,180nm,0.4s						
AKS	**Akhisar**	**0.45**	**233**	PG	**Pg**	**09 52 49.0**	**+0.2**
DURS	**Dursunbey**	**0.48**	**19**	P	**Pg**	**09 52 49.0**	**-0.4**
DURS				*i* AML	AML	09 52 55.0	
	comp=N,115nm,0.3s						
DURS				S	**Sg**	**09 52 55.3**	**-0.3**
DURS				*i* AML	AML	09 53 02.0	
	comp=E,88nm,0.2s						
GOMA	**Golmarmara-Man**	**0.52**	**212**	PG	**Pg**	**09 52 50.0**	**-0.2**
GOMA				SG	**Sg**	**09 52 57.3**	**+0.2**
SIMA	**Simav-Kutahya**	**0.55**	**97**	PG	**Pg**	**09 52 50.9**	**+0.1**
SIMA				SG	**Sg**	**09 52 58.5**	**+0.4**
KULA	**Kula-Manisa**	**0.70**	**155**	PG	**Pb**	**09 52 53.8**	**-0.6**
KULA				SG	**Sg**	**09 53 02.7**	**-0.1**
USAK	**Uak-Merkez**	**0.72**	**127**	P	**Pb**	**09 52 54.1**	**-0.7**
USAK				S	**Sg**	**09 53 03.4**	**-0.1**
USAK				*i* AML	AML	09 53 04.0	
	comp=N,57nm,0.2s						
USAK				*i* AML	AML	09 53 04.0	
	comp=E,52nm,0.1s						
BALY	**Balya**	**0.78**	**319**	P	**Pb**	**09 52 56.0**	**+0.3**
BALY				S	**Sb**	**09 53 06.5**	**+0.1**
BALY				*i* AML	AML	09 53 10.0	
	comp=N,38nm,0.9s						
GDZ	**Gediz**	**0.94**	**93**	P	**Pg**	**09 52 58.0**	**-0.1**
GDZ				S	**Sb**	**09 53 10.8**	**-0.3**
GDZ				*i* AML	AML	09 53 11.0	
	comp=N,48nm,0.5s						
GDZ				*i* AML	AML	09 53 11.0	
	comp=E,41nm,0.2s						
ZEDA	**zmir-Bergama**	**0.95**	**259**	P	**Pg**	**09 52 58.0**	**-0.3**
ZEDA				S	**Sb**	**09 53 11.4**	**+0.2**
ZEDA				*i* AML	AML	09 53 13.0	
	comp=N,30nm,0.5s						
ZEDA				*i* AML	AML	09 53 13.0	
	comp=E,28nm,0.4s						
TVSB	**Tavsanli**	**0.97**	**72**	PG	**Pb**	**09 52 58.9**	**0.0**
ULDT	**Uludag**	**1.19**	**34**	P	**Pg**	**09 53 01.6**	**-1.4**
ULDT				S	**Sg**	**09 53 17.7**	**-0.7**
ULDT				*i* AML	AML	09 53 20.0	
	comp=E,74nm,0.3s						
ULDT				*i* AML	AML	09 53 22.0	
	comp=N,60nm,0.2s						
AYDB	**Zeytinkoy-Aydi**	**1.24**	**194**	PN	**Pb**	**09 53 02.9**	**-0.7**
AYDB				SN	**Sn**	**09 53 20.3**	**0.0**
PASA	**Karahalli, USA**	**1.24**	**130**	P	**Pg**	**09 53 04.0**	**+0.1**
PASA				S	**Sn**	**09 53 19.7**	**-0.6**
PASA				*i* AML	AML	09 53 24.0	
	comp=N,11nm,0.4s						
PASA				*i* AML	AML	09 53 25.0	
	comp=E,13nm,0.5s						
MDNY	**Mudanya-Bursa**	**1.30**	**21**	PN	**Pg**	**09 53 05.0**	**-0.1**
ANDZ	**Kutahya, Merke**	**1.31**	**74**	P	**Pg**	**09 53 05.2**	**+0.1**
ANDZ				S	**Sb**	**09 53 21.7**	**0.0**
ANDZ				*i* AML	AML	09 53 25.0	
	comp=N,50nm,0.6s						
ANDZ				*i* AML	AML	09 53 25.0	
	comp=E,52nm,0.4s						
IGD	**Bursa**	**1.32**	**32**	P	**Pg**	**09 53 05.4**	**0.0**
IGD				S	**Sb**	**09 53 21.4**	**-0.6**
IGD				*i* AML	AML	09 53 23.0	
	comp=E,29nm,0.6s						
IGD				*i* AML	AML	09 53 24.0	
	comp=N,32nm,0.2s						
ARMT	**Armutlu**	**1.48**	**18**	PN	**Pb**	**09 53 07.9**	**+0.2**
URLA	**Izmir**	**1.53**	**240**	PN	**Pn**	**09 53 07.8**	**+0.3**
TSVK	**Tesvikiye-Yalo**	**1.60**	**23**	PN	**Pb**	**09 53 09.6**	**-0.1**
TRML	**Termal-Yalova**	**1.61**	**25**	PN	**Pb**	**09 53 09.8**	**-0.1**
YLV	**Yalova**	**1.65**	**30**	PN	**Pb**	**09 53 10.3**	**-0.2**
BORA	**Eskisehir**	**1.83**	**66**	PN	**Pn**	**09 53 12.6**	**+0.9**
SRCK	**Saricakaya, Es**	**2.02**	**63**	PN	**Pn**	**09 53 15.3**	**+1.1**

*TUL **25** 09:54:18.8±0.7, 36°.21N±0°.01×97°.57W±0°.01, h6km±5km, ML2.6, mb_Lg2.4/28(NEIC), Error ellipse: s-maj=1.8km s-min=1.5km az=52.0*

NEIC 25 09:54:18.7±0.7, 36°.22N±0°.01×97°.57W±0°.01, h7km±4km, Error ellipse: s-maj=1.8km s-min=1.5km az=55.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKCFA	**Oklahoma City**	**0.80**	**173**	Pg	Pg	09 54 34.0	-0.1
OKCSW	**OKLAHOMA CITY**	**0.81**	**172**		Pg	09 54 34.4	0.0
FNO	**Franklin**	**0.97**	**172**	Pg	Pg	09 54 36.9	-0.3
T35A	**Sooner Cattle**	**1.10**	**50**		Pg	09 54 39.5	-0.3
TUL1	**Leonard**	**1.47**	**101**		Pn	09 54 45.4	-0.3
W39A	**Magazine**	**3.25**	**107**	IAmb_Lg		09 56 10.6	
	comp=Z,17nm,1.1s						
AMTX	**Amarillo**	**3.60**	**250**	IAmb_Lg		09 56 17.9	
	comp=Z,6.7nm,0.7s						
Z38A	**Mt. Pleasant**	**3.64**	**143**	IAmb_Lg		09 56 22.0	
	comp=Z,12nm,0.9s						
S39A	**Bolivar**	**3.71**	**65**	IAmb_Lg		09 56 23.0	
	comp=Z,8.1nm,0.7s						
MGMO	**Mountain Grove**	**4.36**	**76**	IAmb_Lg		09 56 38.2	
	comp=Z,8.2nm,0.8s						
WHAR	**Wooly Hollow**	**4.39**	**101**	IAmb_Lg		09 56 41.6	
	comp=Z,6.4nm,0.9s						
FCAR	**Ozark Folk Cen**	**4.42**	**93**	IAmb_Lg		09 56 38.6	
	comp=Z,7.2nm,0.8s						
W41B	**Gary Mavity, V**	**4.46**	**102**	IAmb_Lg		09 56 42.5	
	comp=Z,6.0nm,0.8s						
UALR	**University of**	**4.50**	**107**	IAmb_Lg		09 56 53.2	
	comp=Z,8.3nm,0.9s						
P38A	**Dawn**	**4.67**	**42**	IAmb_Lg		09 56 48.9	
	comp=Z,5.6nm,0.7s						
KSCO	**Kaye Shedlock'**	**4.89**	**306**	IAmb_Lg		09 57 07.7	
	comp=Z,6.3nm,0.8s						
CCM	**Cathedral Cave**	**5.38**	**68**	IAmb_Lg		09 57 16.0	
	comp=Z,4.9nm,0.8s						
P40A	**Paris**	**5.48**	**51**	IAmb_Lg		09 57 16.7	
	comp=Z,6.6nm,0.8s						
T25A	**Trinidad**	**5.58**	**282**	IAmb_Lg		09 57 21.7	
	comp=Z,5.3nm,0.7s						

IDC 25 10:04:37.0±14.0, 5°.97S×129°.65E, h269km±170km, mb3.0/2, mbtmp3.6/3, Error ellipse: s-maj=117.4km s-min=50.5km az=75.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.62**	**162**	P	Pn	10 07 52.8	+0.7
	1.0nm,0.7s,baz=344,slow=12,SNR=27						
WRA				S	S	10 10 31.1	-1.9
	0.5nm,0.5s,baz=343,slow=21,SNR=1.9						
SONM	**Songino Array**	**57.36**	**342**	P	P	10 13 57.3	-0.2
	0.3nm,0.4s,baz=152,slow=6.5,SNR=1.8						
	0.3nm,0.4s						
MKAR	**Makanchi Array**	**67.18**	**327**	P	P	10 15 02.4	0.0
	0.3nm,0.4s,baz=116,slow=6.7,SNR=5.4						
	0.3nm,0.4s						

*NEIC **25** 10:30:35.8, 36°.51N×99°.01W, h4km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.55; $M_{\theta\theta}$1.32; $M_{\phi\phi}$0.24; $M_{r\theta}$0.22; $M_{r\phi}$0.57; $M_{\theta\phi}$0.19; Fault plane solution: $M_0$1.58000×10^{14} NP1:ϕ_s70.00000°, δ40.00000°, λ-85.00000°. NP2:ϕ_s243.00000°, δ50.00000°, λ-94.00000°. Principal axes: T 1.5854, Plg5.0000°, Azm337.0000°; N -0.0025, Plg3.0000°, Azm246.0000°; P -1.5830, Plg84.0000°, Azm124.0000°;*

*TUL **25** 10:30:35.8±1.2, 36°.50N±0°.02×99°.06W±0°.03, h5km±5km, ML3.5, mb_Lg3.6/111(NEIC), Mwr3.4/9(SLM) Error ellipse: s-maj=3.7km s-min=2.4km az=65.0*

*IDC **25** 10:30:36.4±1.1, 36°.60N×99°.23W, h0km, mb3.6/1, mbtmp3.6/4, ML3.9/3, Error ellipse: s-maj=13.6km s-min=13.3km az=75.0*

*NEIC **25** 10:30:36.5±1.1, 36°.52N±0°.02×99°.04W±0°.03, h8km±4km, Error ellipse: s-maj=3.9km s-min=2.9km az=69.0*

ISC 25 10:30:36.5±0.9, 36°.52N±0°.06×99°.08W±0°.06, h10km, n76, σ0s93/44, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKCFA	**Oklahoma City**	**1.72**	**129**		**Pn**	**10 31 06.7**	**+0.1**
OKCSW	**OKLAHOMA CITY**	**1.73**	**129**		**Pn**	**10 31 06.5**	**-0.2**
WMOK	**Wichita Mounta**	**1.79**	**172**		**Pn**	**10 31 07.8**	**+0.3**
WMOK				IAmb_Lg		10 31 36.2	
	comp=Z,459nm,0.9s						
R32A	**Long Quarter,**	**1.93**	**9**	IAmb_Lg		10 31 40.4	
	comp=Z,382nm,1.0s						
T35A	**Sooner Cattle**	**2.10**	**78**		**Pn**	**10 31 11.2**	**-0.6**
T35A				IAmb_Lg		10 31 45.4	
	comp=Z,369nm,0.9s						
X34A	**Smith Ranch, M**	**2.16**	**152**	IAmb_Lg		10 31 49.4	
	comp=Z,295nm,0.8s						
CBKS	**Cedar Bluff**	**2.35**	**347**		**Pn**	**10 31 14.2**	**-1.1**
CBKS				IAmb_Lg		10 31 56.7	
	comp=Z,369nm,0.9s						
AMTX	**Amarillo**	**2.67**	**233**		**Pn**	**10 31 19.7**	**0.0**
AMTX				IAmb_Lg		10 32 00.9	
	comp=Z,214nm,1.1s						
TUL1	**Leonard**	**2.73**	**102**		**Pn**	**10 31 21.2**	**+0.8**
KSU1	**Kansas State U**	**3.24**	**36**	Pn	**Pn**	**10 31 28.0**	**+0.6**
KSU1				IAmb_Lg		10 32 26.4	
	comp=Z,246nm,1.1s						
Z35A	**Perchaven, San**	**3.51**	**154**		**Pn**	**10 31 31.8**	**+0.6**
X37A	**Clayton**	**3.58**	**121**	Pn	**Pn**	**10 31 31.4**	**-0.7**
KSCO	**Kaye Shedlock'**	**3.76**	**313**	IAmb_Lg		10 32 45.4	
	comp=Z,121nm,0.7s						
U38A	**Gravette**	**3.78**	**90**		**Pn**	**10 31 35.3**	**+0.4**
U38A				IAmb_Lg		10 32 37.6	
	comp=Z,220nm,0.9s						
ABTX	**Abilene, Hawle**	**3.91**	**187**	Pn	**Pn**	**10 31 37.3**	**+0.6**
ABTX				IAmb_Lg		10 32 41.7	
	comp=Z,103nm,0.8s						
MSTX	**Muleshoe**	**3.95**	**231**		**Pn**	**10 31 38.3**	**+1.0**
HHAR	**Hobbs**	**4.15**	**92**		**Pn**	**10 31 40.4**	**+0.4**
HHAR				IAmb_Lg		10 32 48.5	
	comp=Z,164nm,0.7s						
T25A	**Trinidad**	**4.32**	**280**		**Pn**	**10 31 43.8**	**+1.2**
T25A				IAmb_Lg		10 33 01.2	
	comp=Z,129nm,1.0s						
N33A	**J Bar K, Exete**	**4.41**	**16**		**Pn**	**10 31 43.5**	**0.0**
N33A				IAmb_Lg		10 33 07.4	
	comp=Z,110nm,0.7s						
W39A	**Magazine**	**4.50**	**105**		**Pn**	**10 31 44.2**	**-0.6**
Z38A	**Mt. Pleasant**	**4.68**	**133**		**Pn**	**10 31 46.7**	**-0.5**
Z38A				IAmb_Lg		10 33 09.5	
	comp=Z,143nm,0.9s						
WHTX	**Lake Whitney,**	**4.71**	**163**		**Pn**	**10 31 46.7**	**-1

comp=Z,87nm,0.9s
O20A White River Ci 8.05 299 IAmb_Lg 10 35 03.9
comp=Z,41nm,1.2s
TX31 Lajitas Ar. Si 8.13 210 Pn **Pn 10 32 35.1 +0.4**
TX32 Lajitas Array 8.13 210 **Pn 10 32 35.0 +0.2**
TXAR Lajitas Array 8.13 210 Pn **Pn 10 32 34.8 +0.1**
comp=Z,0.6nm,0.3s,baz=32,slow=11,SNR=41
TXAR Pg Pb 10 33 03.2 +5.6
comp=Z,0.7nm,0.3s,baz=33,slow=14,SNR=4.9
TXAR Lg Lg 10 34 47.1
comp=Z,1.2nm,0.3s,baz=33,slow=18,SNR=4.2
comp=Z,1.3nm,0.4s
OXF Oxford 8.13 101 Pn **Pn 10 32 34.8 +0.1**
OXF IAmb_Lg 10 34 56.7
comp=Z,66nm,0.7s
P43A Skaggs, Pawnee 8.16 65 **Pn 10 32 34.9 -0.1**
RWWY Rawlins 8.16 312 IAmb_Lg 10 35 11.2
comp=Z,39nm,1.0s
833A Chaparral WMA, 8.17 182 IAmb_Lg 10 35 06.9
comp=Z,54nm,0.8s
L40A Anamosa 8.23 45 IAmb_Lg 10 35 02.2
comp=Z,72nm,0.8s
Y45A Yeager Farm, C 8.24 106 IAmb_Lg 10 35 10.2
comp=Z,76nm,0.9s
RSSD Black Hills 8.49 335 IAmb_Lg 10 35 17.6
comp=Z,49nm,1.0s
I37A Lemond, Waseca 8.65 28 IAmb_Lg 10 35 29.3
comp=Z,76nm,1.1s
L42A Oliver, Polo 9.13 50 IAmb_Lg 10 35 27.7
comp=Z,67nm,0.8s
JFWS Jewell Farm 9.33 44 IAmb_Lg 10 35 51.0
comp=Z,54nm,0.8s
F33A 5 Mile Ranch, 9.55 12 IAmb_Lg 10 35 42.4
comp=Z,38nm,1.1s
I40A Norwalk 9.80 39 IAmb_Lg 10 36 07.6
comp=Z,36nm,1.1s
SPMN Marine on St. 9.91 27 IAmb_Lg 10 35 48.4
comp=Z,28nm,0.8s
PDAR Pinedale Array 10.21 311 Pn **Pn 10 33 03.9 +0.6**
comp=Z,0.1nm,0.3s,baz=126,slow=16,SNR=6.7
PDAR Pg 10 33 41.0
comp=Z,0.2nm,0.3s,baz=104,slow=14,SNR=4.4
PDAR Lg Lg 10 35 50.2
comp=Z,0.2nm,0.3s,baz=114,slow=22,SNR=2.1
comp=Z,0.5nm,0.6s
TKL Tuckaleechee C 12.41 89 Pn **Pn 10 33 34.1 +0.8**
comp=Z,0.2nm,0.3s,baz=192,slow=6.8,SNR=4.2
TKL Lg Lg 10 37 06.7
comp=Z,1.1nm,0.3s,baz=160,slow=23,SNR=6.3
comp=Z,2.7nm,0.7s
ULM Lac du Bonnet 13.92 9 Lg Lg 10 37 45.2
ILAR Eielson Array 39.90 330 P **P 10 38 11.3 +1.1**
comp=Z,0.7nm,0.8s,baz=107,slow=7.0,SNR=7.4
comp=Z,0.7nm,0.8s

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*IDC **25** 10:33:33.4±1.1,39°.42N×73°.54E,h0km,mb3.7/9, mbtmp3.6/14,ML2.9/5,MS2.8/5,Error ellipse: s-maj=22.5km s-min=12.0km az=128.0*
*NNC **25** 10:33:34.5±0.9,39°.41N×73°.68E,h0km,mb4.5,mpv4.2, Error ellipse: s-maj=7.3km s-min=3.9km az=174.0*
*MOS **25** 10:33:36.7±1.1,39°.41N×73°.84E,h23km,mb4.1/4,Error ellipse: s-maj=8.4km s-min=4.2km az=75.4*
*SOME **25** 10:33:36.9,39°.67N×73°.77E,h10km*
*KRNET **25** 10:33:37.6±0.1,39°.60N×73°.76E,mb4.2*
*NEIC **25** 10:33:37.1±1.0,39°.48N±0°.07×73°.68E±0°.09,h10km±2km, mb4.1/3,ML4.2(BJI),Error ellipse: s-maj=15.0km s-min=8.8km az=138.0*
ISC 25 10:33:35.6±1.2,39°.62N±0°.03×73°.73E±0°.02,h6km±7km, n183,σ2s55/2s55,mb3.7/12,47C-18D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.16**	**322**	⇑*i*P		**Pn**	**10 33 59.9**	**+1.5**
	baz=21							
OHH				⇑*i*S		**Sn**	**10 34 15.9**	**+1.4**
	baz=21							
DRK	**Karamyk**	**1.50**	**265**	⇑*i*P		**Pb**	**10 34 05.9**	**+1.9**
	baz=66							
DRK				⇑*i*S		**Sg**	**10 34 26.2**	**+2.5**
	baz=66							
DRK	**Karamyk**	**1.50**	**265**			**Pn**	**10 34 03.2**	**0.0**
KSH	**Kashi**	**1.74**	**93**	Pg		Pn	10 33 57.0	-9.4
KSH				pP		Pn	10 34 01.0	-5.4
KSH				Sg		Sn	10 34 12.8	-16
KSH				pmax		pmax		
	comp=Z,560nm,0.8s							
KSH				smax		smax		
	comp=N,4μm,0.7s							
KSH				smax		smax		
	comp=E,890nm,0.7s							
BTK	**Batken**	**2.28**	**282**	⇑*i*P		**Pb**	**10 34 17.5**	**+0.3**
	baz=82							
BTK				⇑*i*S		**Sb**	**10 34 47.2**	**+1.5**
	baz=82							
BTK	**Batken**	**2.28**	**282**	Pn		**Pn**	**10 34 15.8**	**+1.9**
BTK	**Batken**	**2.28**	**282**	*i* PN		**Pb**	**10 34 17.5**	**+0.3**
BTK				*i* S		**Sb**	**10 34 47.2**	**+1.5**
ARLS	**Aral**	**2.28**	**11**	⇑*e*P		**Pb**	**10 34 17.4**	**+0.1**
	baz=11							
ARLS				⇑*i*S		**Sb**	**10 34 46.8**	**+1.0**
	baz=11							
ARLS	**Aral**	**2.28**	**11**	*e*PN		**Pb**	**10 34 17.4**	**+0.1**
ARLS				*i* S		**Sb**	**10 34 46.8**	**+1.0**
AML	**Almayashu**	**2.51**	**359**	P		**Pb**	**10 34 21.2**	**0.0**
	SNR=46							
AML	**Almayashu**	**2.51**	**359**	*i* PN		**Pb**	**10 34 21.0**	**-0.3**
AML				*i* S		**Sb**	**10 34 52.7**	**+0.2**
ARK	**Arkit**	**2.56**	**329**	⇓*i*P		**Pb**	**10 34 21.4**	**-0.5**
	baz=29							
ARK				⇓*i*S		**Sb**	**10 34 54.1**	**+0.5**
	baz=29							
UCH	**Uchtor**	**2.67**	**13**	P		**Pb**	**10 34 23.6**	**-0.5**
	SNR=164							
UCH	**Uchtor**	**2.67**	**13**	⇑*i*P		**Pb**	**10 34 23.0**	**-1.1**
	baz=12							
UCH				⇑*i*S		**Sb**	**10 34 56.5**	**-0.8**
	baz=12							
UCH	**Uchtor**	**2.67**	**13**	*i* PN		**Pb**	**10 34 23.0**	**-1.1**
UCH				*i* S		**Sb**	**10 34 56.5**	**-0.8**
GAR	**Garm**	**2.72**	**258**	⇓*i*P		**Pn**	**10 34 23.4**	**+3.5**
	baz=58							
GAR				⇓*i*S		**Sb**	**10 34 57.6**	**-0.7**
	baz=58							
GAR	**Garm**	**2.72**	**258**			**Pn**	**10 34 18.9**	**-1.0**
GAR	**Garm**	**2.72**	**258**	*i* PN		**Pn**	**10 34 23.4**	**+3.5**
GAR				*i* S		**Sb**	**10 34 57.6**	**-0.7**
TRKS	**Terek-Say**	**2.74**	**315**	⇑*i*P		**Pn**	**10 34 23.4**	**+3.1**
	baz=14							
TRKS				⇑*i*S		**Sb**	**10 34 57.0**	**-2.0**
	baz=14							
TRKS	**Terek-Say**	**2.74**	**315**	*i* PN		**Pn**	**10 34 23.4**	**+3.1**
EKS2	**Erkin-Say**	**3.04**	**1**	P		**Pb**	**10 34 29.1**	**-1.0**
	SNR=16							
EKS2	**Erkin-Say**	**3.04**	**1**	⇑*i*P		**Pb**	**10 34 28.2**	**-1.9**
	baz=0.0							
EKS2				⇑*i*S		**Sb**	**10 35 05.3**	**-2.2**
	baz=0.0							
EKS2	**Erkin-Say**	**3.04**	**1**	*i* PN		**Pb**	**10 34 28.2**	**-1.9**
EKS2				*i* S		**Sb**	**10 35 05.3**	**-2.2**
AAK	**Ala-Archa**	**3.07**	**11**	P		**Pb**	**10 34 29.5**	**-1.2**
	SNR=17							
AAK	**Ala-Archa**	**3.07**	**11**	Pn		**Pb**	**10 34 29.4**	**-1.2**
	comp=E,7.1nm,0.3s,baz=194,slow=14,SNR=28							
AAK				Pg		**Pg**	**10 34 34.8**	**+0.4**
	comp=E,18nm,0.3s,baz=200,slow=15,SNR=24							
AAK				Sn		**Sg**	**10 35 11.3**	**-2.9**
	comp=E,0.8nm,0.3s,baz=177,slow=17,SNR=2.9							
AAK				LR		LR	10 36 01.4	
	comp=E,66nm,21.1s,baz=70,slow=45							
	comp=E,17nm,0.3s							
AAK	**Ala-Archa**	**3.07**	**11**	⇑*i*P		**Pb**	**10 34 28.6**	**-2.1**
	baz=10.0							
AAK				⇑*i*S		**Sb**	**10 35 05.9**	**-2.5**
	baz=10.0							
AAK	**Ala-Archa**	**3.07**	**11**			**Pn**	**10 34 27.6**	**+2.8**
KBK	**Karagaybulak**	**3.17**	**16**	P		**Pb**	**10 34 31.2**	**-1.2**
	SNR=19							
KBK	**Karagaybulak**	**3.17**	**16**	⇓*i*P		**Pb**	**10 34 29.8**	**-2.6**
	baz=16							
KBK				⇓*i*S		**Sb**	**10 35 08.1**	**-3.2**
	baz=16							
KBK	**Karagaybulak**	**3.17**	**16**	*i* PN		**Pb**	**10 34 29.8**	**-2.6**
KBK				*i* S		**Sb**	**10 35 08.1**	**-3.2**
ULHL	**Ulahol**	**3.24**	**35**	P		**Pg**	**10 34 36.4**	**-1.3**
	SNR=34							
ULHL	**Ulahol**	**3.24**	**35**	⇑*i*P		**Pb**	**10 34 31.0**	**-2.6**
	baz=35							
ULHL				⇑*i*S		**Sb**	**10 35 09.8**	**-3.6**
	baz=35							
ULHL	**Ulahol**	**3.24**	**35**	*i* PN		**Pb**	**10 34 31.0**	**-2.6**
ULHL				*i* S		**Sb**	**10 35 09.8**	**-3.6**
BOOM	**Boomskoye usch**	**3.32**	**30**	⇑*i*P		**Pn**	**10 34 31.6**	**+3.4**
	baz=29							
BOOM				⇑*i*S		**Sb**	**10 35 11.6**	**-4.0**
	baz=29							
BOOM	**Boomskoye usch**	**3.32**	**30**			**Pn**	**10 34 31.5**	**+3.4**
BOOM	**Boomskoye usch**	**3.32**	**30**	PN		**Pn**	**10 34 31.5**	**+3.4**
CHMS	**Chumysh**	**3.46**	**13**	P		**Pb**	**10 34 34.5**	**-2.8**
	SNR=6.0							
CHMS	**Chumysh**	**3.46**	**13**	⇑*e*P		**Pb**	**10 34 33.9**	**-3.4**
	baz=12							
CHMS				⇑*i*S		**Sn**	**10 35 14.8**	**+3.5**
	baz=12							
CHMS	**Chumysh**	**3.46**	**13**	PN		**Pb**	**10 34 34.8**	**-2.5**
CHMS				PG		**Pg**	**10 34 41.5**	**-0.4**
CHMS				LG		Lg	10 35 29.3	
CHMS	**Chumysh**	**3.46**	**13**	⇓Pn		**Pb**	**10 34 34.1**	**-3.2**
	comp=E,19nm,0.9s							
CHMS				⇑Pg		**Pg**	**10 34 41.5**	**-0.4**
	comp=E,38nm,0.8s							
CHMS				⇓Lg		Lg	10 35 29.3	
	comp=E,59nm,0.8s							
TKM2	**Tokmak 2**	**3.58**	**23**	P		**Pb**	**10 34 36.8**	**-2.7**
	SNR=9.6							
TKM2	**Tokmak 2**	**3.58**	**23**	⇑*i*P		**Pn**	**10 34 35.7**	**+3.8**
	baz=22							
TKM2				⇑*i*S		**Sn**	**10 35 18.2**	**+3.6**
	baz=22							
TKM2	**Tokmak 2**	**3.58**	**23**	*i* PN		**Pn**	**10 34 35.7**	**+3.8**
TKM2				*i* S		**Sn**	**10 35 18.2**	**+3.6**
TKM2	**Tokmak 2**	**3.58**	**23**	⇓Pn		**Pn**	**10 34 34.9**	**+3.0**
	comp=E,9.9nm,0.5s							
TKM2				⇑Pg		**Pg**	**10 34 42.6**	**-1.7**
	comp=E,38nm,0.9s							
TKM2				⇓Lg		Lg	10 35 34.4	
	comp=E,83nm,1.0s							
KDJ	**Kajisay**	**3.62**	**45**	⇑*i*P		**Pn**	**10 34 36.1**	**+3.7**
	baz=45							
KDJ				⇑*i*S		**Sn**	**10 35 19.0**	**+3.5**
	baz=45							
KDJ	**Kajisay**	**3.62**	**45**			**Pn**	**10 34 34.8**	**+2.4**
KDJ	**Kajisay**	**3.62**	**45**	*i* PN		**Pn**	**10 34 36.1**	**+3.7**
KDJ				*i* S		**Sn**	**10 35 19.0**	**+3.5**
CHGR	**Chuyangaron**	**3.68**	**256**	⇑*i*P		**Pn**	**10 34 37.1**	**+4.0**
	baz=57							
CHGR				⇑*i*S		**Sn**	**10 35 20.5**	**+3.7**
	baz=57							
CHGR	**Chuyangaron**	**3.68**	**256**			**Pn**	**10 34 33.2**	**+0.1**
CHGR	**Chuyangaron**	**3.68**	**256**	*i* PN		**Pn**	**10 34 37.1**	**+4.0**
CHGR				*i* S		**Sn**	**10 35 20.5**	**+3.7**
USP	**Ospenovka**	**3.69**	**9**	P		**Pb**	**10 34 37.5**	**-3.6**
	SNR=9.1							
USP	**Ospenovka**	**3.69**	**9**	⇑*e*P		**Pn**	**10 34 37.2**	**+4.1**
	baz=8.0							
USP				⇑*i*S		**Sn**	**10 35 20.8**	**+3.9**
	baz=8.0							
USP	**Ospenovka**	**3.69**	**9**	*e*PN		**Pn**	**10 34 37.0**	**+3.9**
USP				*i* S		**Sn**	**10 35 20.6**	**+3.7**
DZA	**Taraz**	**3.73**	**332**	*e*Sn		**Sb**	**10 35 27.2**	**-0.2**
	baz=331							
TARG	**Taragay, Kyrgy**	**3.75**	**54**	⇑*i*P		**Pn**	**10 34 37.9**	**+3.6**
	baz=54							
TARG				⇑*i*S		**Sn**	**10 35 22.2**	**+3.3**
	baz=54							
TARG	**Taragay, Kyrgy**	**3.75**	**54**			**Pn**	**10 34 36.9**	**+2.6**
TARG	**Taragay, Kyrgy**	**3.75**	**54**	*i* PN		**Pn**	**10 34 37.9**	**+3.6**
TARG				*i* S		**Sn**	**10 35 22.2**	**+3.3**
IUG	**Iuzhnay**	**3.77**	**313**	*e*P		**Pg**	**10 34 48.7**	**+0.9**
	comp=E,506nm,0.4s							
IUG				*e*S		**Sg**	**10 35 39.7**	**+3.0**
	comp=E,252nm,1.0s							
IUG	**Iuzhnay**	**3.77**	**313**	Pg		**Pb**	**10 34 45.2**	**+2.6**
	comp=E,2μm,0.6s							
IUG				Lg		Lg	10 35 39.7	
	comp=E,252nm,1.0s							
TAS	**Tashkent**	**3.79**	**298**	⇑*i*P		**Pn**	**10 34 38.5**	**+4.1**
	baz=98							
TAS				⇑*i*S		**Sn**	**10 35 23.3**	**+4.0**
	baz=98							
SGDS	**Sogindy**	**3.89**	**10**	*e*PN		**Pn**	**10 34 37.2**	**+1.3**
SGDS				*e*			10 35 43.7	
SGDS	**Sogindy**	**3.89**	**10**	*e*P		**Pg**	**10 34 50.8**	**+0.7**
	comp=E,24nm,0.5s							
SGDS				*e*S		**Sg**	**10 35 44.0**	**+3.6**
	comp=E,87nm,1.0s							
SGDS	**Sogindy**	**3.89**	**10**	*e*Pn		**Pn**	**10 34 37.2**	**+1.3**
	baz=8.3							
SGDS				*e*Pg		**Pb**	**10 34 46.7**	**+2.1**
	baz=8.3							
SGDS				*e*Lg		Lg	10 35 43.8	
	baz=8.3							
SGDS	**Sogindy**	**3.89**	**10**	Pg		**Pg**	**10 34 48.5**	**-1.5**
	comp=E,23nm,0.6s							
SGDS				Lg		Lg	10 35 45.3	
	comp=E,87nm,1.0s							
DGS	**Degeres**	**3.93**	**22**	*e*P		**Pg**	**10 34 51.0**	**+0.1**
	comp=E,39nm,0.6s							
DGS				*e*S		**Sg**	**10 35 43.7**	**+1.9**
	comp=E,63nm,0.8s							
DGS	**Degeres**	**3.93**	**22**	Pg		**Pb**	**10 34 47.5**	**+2.2**
	comp=E,51nm,0.5s							
DGS				Lg		Lg	10 35 43.6	
	comp=E,63nm,0.8s							
MTBS	**Maitube**	**4.05**	**29**	*e*P		**Pg**	**10 34 52.9**	**-0.3**
	comp=E,31nm,0.7s							
MTBS				*e*S		**Sg**	**10 35 47.1**	**+1.4**
	comp=E,35nm,0.5s							
MTBS	**Maitube**	**4.05**	**29**	Pg		**Pb**	**10 34 49.6**	**+2.2**
	comp=E,58nm,0.5s							
MTBS				Lg		Lg	10 35 47.1	
	comp=E,35nm,0.5s							
CHM	**Chimkent**	**4.13**	**312**	*e*P		**Pg**	**10 34 54.5**	**-0.1**
	comp=E,3.7nm,0.2s							
CHM				*e*S		**Sg**	**10 35 50.3**	**+2.3**
	comp=E,420nm,0.3s							
TNSS	**Tian-Shan**	**4.19**	**34**	*e*PN		**Pn**	**10 34 42.9**	**+2.6**
TNSS				*e*			10 34 52.7	
TNSS				*e*			10 35 52.8	
TNSS	**Tian-Shan**	**4.19**	**34**	*e*P		**Pg**	**10 34 55.4**	**-0.4**
	comp=E,17nm,0.6s							
TNSS				*e*S		**Sg**	**10 35 51.7**	**+1.7**
	comp=E,33nm,1.2s							
TNSS	**Tian-Shan**	**4.19**	**34**	*e*Pn		**Pn**	**10 34 43.0**	**+2.6**
	baz=33							
TNSS				*e*Pg		**Pb**	**10 34 52.8**	**+2.9**
	baz=33							
TNSS				*e*Lg		Lg	10 35 52.9	
	baz=33							
TNSS	**Tian-Shan**	**4.19**	**34**	Pg		**Pb**	**10 34 52.2**	**+2.4**
	comp=E,30nm,0.6s							
TNSS				Lg		Lg	10 35 51.7	
	comp=E,33nm,1.2s							
KK31	**Karatay Array**	**4.24**	**326**			**Pn**	**10 34 44.2**	**+3.5**
KK31	**Karatay Array**	**4.24**	**326**	PN		**Pn**	**10 34 44.6**	**+3.9**
KK31				PG		**Pg**	**10 34 57.4**	**+0.6**
KK31				SN		**Sb**	**10 35 38.6**	**-3.3**
KK31				LG		Lg	10 35 55.6	
KK31	**Karatay Array**	**4.24**	**326**	Pn		**Pn**	**10 34 44.6**	**+3.9**
	comp=E,1.7nm,0.3s,baz=136,slow=14,SNR=63							
KK31				⇑Pg		**Pg**	**10 34 57.0**	**+0.3**
	comp=E,3.4nm,0.3s,baz=143,slow=15,SNR=6.5							
KK31				⇑Sn		**Sb**	**10 35 38.6**	**-3.3**
	comp=E,27nm,0.6s,baz=143,slow=18,SNR=4.5							
KK31				⇓Lg		Lg	10 35 55.6	
	comp=E,32nm,0.7s,baz=149,slow=30,SNR=4.4							
KKAR	**Karatay Array**	**4.24**	**326**			**Pn**	**10 34 44.8**	**+4.1**
KKAR	**Karatay Array**	**4.24**	**326**	PN		**Pn**	**10 34 44.8**	**+4.1**
AAA	**Alma-Ata**	**4.31**	**33**	*e*PN		**Pn**	**10 34 45.2**	**+3.5**
AAA	**Alma-Ata**	**4.31**	**33**	*e*Pn		**Pn**	**10 34 45.2**	**+3.5**
	baz=31							
AAA				*e*Pg		**Pb**	**10 34 54.5**	**+2.7**
	baz=31							
KRBS	**Karabastau**	**4.33**	**19**	*e*P		**Pg**	**10 34 58.8**	**+0.4**
	comp=E,1.1nm,0.8s							
KRBS				*e*S		**Sg**	**10 35 57.4**	**+2.9**
	comp=E,34nm,0.8s							
KRBS	**Karabastau**	**4.33**	**19**	Pg		**Pg**	**10 34 55.7**	**-2.8**
	comp=E,10nm,0.2s							
KRBS				Lg		Lg	10 35 57.4	
	comp=E,34nm,0.8s							
ANVS	**Anan'yevo**	**4.34**	**42**	⇑*i*P		**Pn**	**10 34 46.1**	**+3.9**
	baz=42							
ANVS				⇑*i*S		**Sn**	**10 35 35.9**	**+2.8**
	baz=42							
KNDC	**Almaty**	**4.34**	**33**	⇓Pg		**Pg**	**10 34 56.8**	**-1.9**
	comp=E,97nm,0.6s							
KNDC				⇓Lg		Lg	10 35 57.4	
	comp=E,552nm,1.2s							
BRLS	**Boroldaу**	**4.49**	**321**	*e*PN		**Pb**	**10 34 57.9**	**+3.1**
BRLS				*e*			10 35 58.7	
BRLS	**Boroldaу**	**4.49**	**321**	*e*P		**Pg**	**10 35 00.3**	**-1.3**
	comp=E,8.7nm,0.5s							
BRLS				*e*S		**Sg**	**10 36 00.1**	**+0.3**
	comp=E,76nm,0.9s							
BRLS	**Boroldaу**	**4.49**	**321**	*e*Pg		**Pb**	**10 34 58.0**	**+3.1**
	baz=317							
BRLS				*e*Lg		Lg	10 35 58.7	
	baz=317							
BRLS	**Boroldaу**	**4.49**	**321**	Pg		**Pb**	**10 34 57.1**	**+2.3**
	comp=E,11nm,0.5s							
BRLS				Lg		Lg	10 36 00.1	
	comp=E,76nm,0.9s							
PRZ	**Przheval'sk**	**4.54**	**49**	⇑*i*P		**Pn**	**10 34 49.3**	**+4.3**
	baz=49							
PRZ				⇑*i*S		**Sn**	**10 35 41.0**	**+2.8**
	baz=49							
PRZ	**Przheval'sk**	**4.54**	**49**	Pn		**Pn**	**10 34 48.0**	**+3.0**
PRZ	**Przheval'sk**	**4.54**	**49**	PN		**Pn**	**10 34 48.0**	**+3.0**
KTBS	**Karatobe**	**4.65**	**27**	*e*P		**Pg**	**10 35 04.0**	**-0.6**
	comp=E,19nm,0.8s							
KTBS				*e*S		**Sg**	**10 36 07.0**	**+2.2**
	comp=E,68nm,0.7s							
KTBS	**Karatobe**	**4.65**	**27**	Pg		**Pg**	**10 35 01.2**	**-3.4**
	comp=E,26nm,0.7s							
KTBS				Lg		Lg	10 36 07.0	
	comp=E,68nm,0.7s							
KUU	**Kurty**	**4.69**	**24**	*e*PN		**Pn**	**10 34 49.5**	**+2.6**
KUU				*e*			10 36 05.4	
KUU	**Kurty**	**4.69**	**24**	*e*P		**Pg**	**10 35 05.8**	**+0.3**
	comp=E,21nm,0.5s							
KUU				*e*S		**Sg**	**10 36 09.1**	**+2.8**
	comp=E,39nm,0.9s							
KUU	**Kurty**	**4.69**	**24**	*e*Pn		**Pn**	**10 34 49.5**	**+2.6**
	baz=22							
KUU				*e*Pg		**Pb**	**10 35 01.7**	**+3.4**
	baz=22							
KUU				*e*Lg		Lg	10 36 05.5	
	baz=22							
KUU	**Kurty**	**4.69**	**24**	Pg		**Pg**	**10 35 02.5**	**-3.0**
	comp=E,21nm,0.5s							
KUU				Lg		Lg	10 36 09.1	
	comp=E,39nm,0.9s							
CHKK	**Chushkaly**	**4.88**	**29**	*e*PN		**Pn**	**10 34 50.9**	**+1.4**
CHKK				*e*			10 36 11.6	
CHKK	**Chushkaly**	**4.88**	**29**	*e*P		**Pg**	**10 35 07.2**	**-1.9**
	comp=E,15nm,0.6s							
CHKK				*e*S		**Sg**	**10 36 12.2**	**-0.1**
	comp=E,39nm,0.6s							
CHKK	**Chushkaly**	**4.88**	**29**	*e*Pn		**Pn**	**10 34 50.9**	**+1.4**
	baz=28							
CHKK				*e*Pg		**Pb**	**10 35 04.8**	**+3.3**
	baz=28							
CHKK				*e*Lg		Lg	10 36 11.7	
	baz=28							
CHKK	**Chushkaly**	**4.88**	**29**	Pg		**Pb**	**10 35 04.8**	**+3.3**
	comp=E,15nm,0.8s							
CHKK				Lg		Lg	10 36 13.1	
	comp=E,39nm,0.6s							
SATY	**Saty**	**4.92**	**44**	*e*PN		**Pn**	**10 34 50.3**	**+0.2**
SATY				*e*			10 35 04.8	
SATY				*e*			10 36 12.9	
SATY	**Saty**	**4.92**	**44**	*e*P		**Pg**	**10 35 08.5**	**-1.3**
	comp=E,14nm,0.7s							
SATY				*e*S		**Sg**	**10 36 13.5**	**0.0**
	comp=E,97nm,1.3s							
SATY	**Saty**	**4.92**	**44**	*e*Pn		**Pn**	**10 34 50.3**	**+0.2**
	baz=43							
SATY				*e*Pg		**Pb**	**10 35 04.8**	**+2.7**
	baz=43							
SATY				*e*Lg		Lg	10 36 12.9	
	baz=43							
SATY	**Saty**	**4.92**	**44**	Pg		**Pb**	**10 35 05.0**	**+2.9**
	comp=E,33nm,0.8s							
SATY				Lg		Lg	10 36 13.5	
	comp=E,97nm,1.3s							
ZHN	**Zhinishke**	**5.01**	**43**	*e*P		**Pg**	**10 35 09.1**	**-2.4**
	comp=E,9.7nm,0.3s							
ZHN				*e*S		**Sg**	**10 36 15.6**	**-0.8**
	comp=E,56nm,0.8s							
ZHN	**Zhinishke**	**5.01**	**43**	*e*Pg		**Pb**	**10 35 06.0**	**+2.3**
	baz=42							
ZHN				*e*Lg		Lg	10 36 14.6	
	baz=42							
ZHN	**Zhinishke**	**5.01**	**43**	Pg		**Pb**	**10 35 06.6**	**+2.9**
	comp=E,21nm,0.2s							
ZHN				Lg		Lg	10 36 16.2	
	comp=E,56nm,0.8s							
KURS	**Kuram**	**5.10**	**39**	*e*P		**Pg**	**10 35 12.2**	**-1.1**
	comp=E,15nm,0.7s							
KURS				*e*S		**Sg**	**10 36 20.1**	**+0.7**
	comp=E,42nm,1.4s							
KURS	**Kuram**	**5.10**	**39**	Pg		**Pb**	**10 35 08.8**	**+3.5**
	comp=E,34nm,0.7s							
KURS				Lg		Lg	10 36 20.0	
	comp=E,42nm,1.4s							
KPKS	**Kokpek**	**5.35**	**42**	*e*PN		**Pn**	**10 34 56.7**	**+0.8**
KPKS				*e*			10 36 25.0	
KPKS	**Kokpek**	**5.35**	**42**	*e*P		**Pg**	**10 35 14.9**	**-3.1**
	comp=E,27nm,0.7s							
KPKS				*e*S		**Sg**	**10 36 25.0**	**-2.2**
	comp=E,61nm,0.5s							
KPKS	**Kokpek**	**5.35**	**42**	*e*Pn		**Pn**	**10 34 56.8**	**+0.8**
	baz=41							
KPKS				*e*Pg		**Pb**	**10 35 12.3**	**+2.8**
	baz=41							
KPKS				*e*Lg		Lg	10 36 25.1	
	baz=41							
KPKS	**Kokpek**	**5.35**	**42**	Pg		**Pb**	**10 35 12.2**	**+2.8**
	comp=E,27nm,0.7s							
KPKS				Lg		Lg	10 36 25.9	
	comp=E,61nm,0.5s							
BTLS	**Baital**	**5.42**	**2**	*e*P		**Pg**	**10 35 18.2**	**-1.2**
	comp=E,7.0nm,0.7s							
BTLS				*e*S		**Sg**	**10 36 31.2**	**+1.6**
	comp=E,23nm,1.0s							
BTLS	**Baital**	**5.42**	**2**	*e*Pg		**Pb**	**10 35 14.7**	**+4.0**
	baz=1.5					

comp=E,37nm,0.8s
BLB Baldybastay 5.71 37 Pg **Pb 10 35 20.0 +4.4**
comp=E,34nm,0.8s
BLB Lg Lg 10 36 38.8
comp=E,37nm,0.8s
CEP Cherat 5.97 195 P **Pn 10 35 04.1 -0.4**
KTMS Ketmen 6.27 50 *eP* **Pg 10 35 35.7 +0.1**
comp=E,2.6nm,1.0s
KTMS *eS* **Sg 10 37 00.7 +3.9**
comp=E,17nm,0.6s
KTMS Ketmen 6.27 50 Pg **Pb 10 35 29.9 +4.7**
KTMS Lg Lg 10 36 56.5
comp=E,17nm,0.6s
KBL Kabul 6.30 218 **Pn 10 35 08.2 -1.0**
KBL Kabul 6.30 218 PN **Pn 10 35 08.2 -1.0**
TDK Taldyqorghan 6.40 31 *eP* **Pg 10 35 36.4 -1.7**
comp=E,68nm,0.5s
TDK *eS* **Sg 10 37 01.7 +0.8**
comp=E,70nm,0.6s
TDK Taldyqorghan 6.40 31 *e*Pg **Pg 10 35 35.4 -2.7**
baz=30
TDK Taldyqorghan 6.40 31 Pg Pg 10 35 33.0 -5.1
comp=E,68nm,0.5s
TDK Lg Lg 10 37 01.7
comp=E,70nm,0.6s
DJR Jarkent 6.52 42 *eP* **Pg 10 35 36.9 -3.6**
comp=E,14nm,0.2s
DJR *eS* **Sg 10 37 02.4 -2.5**
comp=E,19nm,0.2s
DJR Jarkent 6.52 42 Pg **Pb 10 35 33.7 +4.2**
comp=E,14nm,0.2s
DJR Lg Lg 10 37 02.4
comp=E,19nm,0.2s
THW Thamme Wali 7.00 194 P Pn 10 35 15.1 -3.5
OTUK Ortayu 8.68 354 P **Pn 10 35 45.2 +3.6**
OTUK Ortayu 8.68 354 ⇑Pn **Pn 10 35 45.2 +3.6**
comp=E,3.8nm,0.8s
OTUK ⇑Lg Lg 10 38 15.5
comp=E,18nm,0.8s
MAKZ Makanchi 9.37 37 Pn **Pn 10 35 54.1 +3.0**
MAKZ Makanchi 9.37 37 P **Pn 10 35 54.1 +3.0**
MAKZ Makanchi 9.37 37 ⇓Lg Lg 10 38 34.1
comp=E,4.3nm,1.1s
MK31 Makanchi Array 9.51 38 Pn **Pn 10 35 55.4 +2.4**
MK31 Makanchi Array 9.51 38 P **Pn 10 35 53.6 +0.6**
MK31 Makanchi Array 9.51 38 Pn **Pn 10 35 53.6 +0.6**
comp=E,1.8nm,1.0s,baz=217,slow=13,SNR=6.0
MK31 Pg 10 36 20.5
comp=E,2.8nm,0.8s,baz=225,slow=13,SNR=7.1
MK31 ⇓Lg Lg 10 38 40.7
comp=E,7.1nm,1.1s,baz=322,slow=27,SNR=5.8
MKAR Makanchi Array 9.51 38 Pn **Pn 10 35 56.1 +3.1**
comp=E,0.1nm,0.3s,baz=220,slow=13,SNR=5.7
MKAR Sn **Sn 10 37 43.9 +3.8**
baz=217,slow=19,SNR=1.6
MKAR LR LR 10 39 51.5
comp=E,46nm,21.8s,baz=164,slow=39
comp=E,1.0nm,0.9s
MKAR Makanchi Array 9.51 38 Pn **Pn 10 35 55.8 +2.8**
WMQ Urumqi 11.25 64 *eP* **Pn 10 36 17.5 +0.6**
WMQ smax smax
comp=N,17nm,0.5s
WMQ smax smax
comp=E,15nm,0.9s
KURBB Kurchatov Arra 11.51 16 Pn **Pn 10 36 21.0 +0.7**
baz=194,slow=8.4,SNR=2.9
KURBB Lg Lg 10 39 46.2
baz=202,slow=30,SNR=5.3
comp=E,0.2nm,0.6s
KURK Kurchatov 11.62 16 P **Pn 10 36 21.0 -0.8**
KURK Kurchatov 11.62 16 ⇓Lg Lg 10 39 48.8
comp=E,24nm,1.4s
GEYT Alibeck 12.30 267 Pn **Pn 10 36 28.0 -3.3**
AB31 Akbulak array 13.76 319 P **Pn 10 36 50.9 -0.1**
AB31 SN **Sn 10 39 21.9 -2.1**
AB31 Akbulak array 13.76 319 Pn **Pn 10 36 51.0 -0.1**
comp=E,2.5nm,0.8s,baz=120,slow=10,SNR=14
AB31 Sn **Sn 10 39 21.9 -2.1**
comp=E,4.2nm,0.9s,baz=118,slow=23,SNR=7.1
ABKAR Akbulak array 13.76 319 Pn **Pn 10 36 51.5 +0.5**
AKTO Aktyubinsk 15.47 320 Pn **Pn 10 37 12.2 -1.9**
comp=E,0.1nm,0.3s,baz=142,slow=12,SNR=3.8
AKTO LR LR 10 43 30.8
comp=E,51nm,18.4s,baz=137,slow=38
comp=E,2.4nm,0.7s
AKTO Aktyubinsk 15.47 320 ⇑Pn **Pn 10 37 14.8 +0.7**
comp=E,2.9nm,0.9s
ZALV Zalesovo Beam 16.19 24 Pn **Pn 10 37 23.5 0.0**
comp=E,0.2nm,0.3s,baz=196,slow=9.9,SNR=6.7
ZALV LR LR 10 44 23.7
comp=E,24nm,18.5s,baz=104,slow=40
comp=E,1.3nm,0.6s
ZALV Zalesovo Beam 16.19 24 **Pn 10 37 22.7 -0.8**
ZALV Zalesovo Beam 16.19 24 *i* P **P 10 37 26.5 -0.2**
ZALV pmax pmax
comp=Z,2.0nm,0.8s
GOMU GeErMu 16.98 95 P **P 10 37 39.3 +3.3**
GOMU pP sP 10 37 42.8 +2.8
GOMU sP pP 10 37 46.5 +7.7
GOMU pmax pmax
comp=Z,3.0nm,0.4s
GOMU pmax pmax
comp=Z,53nm,7.1s
ARU Arti 19.56 334 P **Pn 10 38 05.7 +0.6**
ARU IAmb IAmb 10 38 11.6
comp=Z,3.2nm,0.7s
ARU Arti 19.56 334 *d* P **Pn 10 38 07.2 +2.1**
ARU S **S 10 41 51.3 +6.4**
ARU pmax pmax
comp=Z,3.0nm,0.7s
MAK Makhachkala 19.96 288 *eP* **P 10 38 04.7 -3.5**
MAK *eS* **S 10 41 47.8 -5.1**
MAK MLR MLR
comp=Z,78nm,17.0s
KNGR Kungurtug, Tuv 19.97 49 *i* P **P 10 38 07.4 -1.1**
KNGR pmax pmax
comp=Z,3.0nm,0.9s
BELG Belogornoye 22.03 314 *i* P **P 10 38 33.9 +3.3**
BELG pmax pmax
comp=Z,2.0nm,1.0s
GNI Garni 22.21 281 P **Pn 10 38 33.3 +0.5**
GNI IAmb IAmb 10 38 51.4
comp=Z,22nm,1.3s
GNI Garni 22.21 281 *i* P **P 10 38 33.7 +0.9**
GNI pmax pmax
comp=Z,9.0nm,0.7s
ONI Oni 22.95 287 P **P 10 38 39.7 -0.8**
ONI IAmb IAmb 10 38 43.0
comp=Z,6.0nm,0.8s
ONI Oni 22.95 287 P **P 10 38 39.7 -0.8**
ONI pmax pmax
comp=Z,6.0nm,0.8s
SONM Songino Array 24.85 60 LR LR 10 49 44.3
comp=Z,33nm,19.5s,baz=254,slow=39
BRTR Keskin Array B 30.68 283 P **P 10 39 50.4 -0.7**
comp=Z,0.3nm,0.3s,baz=46,slow=4.4,SNR=1.9
comp=Z,0.3nm,0.3s
FINES FINESS Array B 36.19 323 P **P 10 40 38.0 -0.6**
comp=Z,0.9nm,0.7s,baz=109,slow=8.3,SNR=8.0
comp=Z,0.9nm,0.7s
FINES FINESS Array B 36.19 323 *i* P **P 10 40 37.7 -0.9**
FINES pmax pmax
comp=Z,1.0nm,0.7s
ARCES ARCESS Array B 39.14 335 P **P 10 41 03.1 -0.4**
comp=Z,1.0nm,0.6s,baz=113,slow=9.1,SNR=8.8
comp=Z,1.0nm,0.6s
NOA NORSAR Array B 43.25 321 P **P 10 41 36.5 -0.9**
comp=Z,0.2nm,0.5s,baz=94,slow=7.1,SNR=2.5
comp=Z,0.2nm,0.5s
TORD Torodi Ar. Bea 67.94 269 P **P 10 44 31.7 -3.7**
comp=Z,0.4nm,0.5s,baz=49,slow=6.1,SNR=6.6
comp=Z,0.4nm,0.5s
ILAR Eielson Array 71.18 17 P **P 10 44 56.0 +1.2**
comp=Z,0.5nm,0.9s,baz=324,slow=4.5,SNR=3.7
comp=Z,0.5nm,0.9s
ILAR Eielson Array 71.18 17 P **P 10 44 56.0 +1.2**
YKA Yellowknife Ar 78.01 4 P **P 10 45 35.7 +1.3**
comp=Z,0.3nm,0.7s,baz=350,slow=5.6,SNR=3.0
comp=Z,0.3nm,0.7s
WRA Warramunga Ar 81.88 124 P **P 10 45 55.3 -0.7**
comp=Z,0.4nm,0.8s,baz=312,slow=3.8,SNR=1.1
comp=Z,0.4nm,0.8s
PDAR Pinedale Array 97.94 2 P **P 10 47 12.4 -0.2**
comp=Z,0.1nm,0.5s,baz=15,slow=7.5,SNR=1.9
comp=Z,0.1nm,0.5s

*IDC **25** 10:33:55.5±0.6,29.°22S×61.°15E,h0km,mb4.2/12, mbtmp4.3/13,ML4.5/1,MS3.4/10,Error ellipse: s-maj=25.3km s-min=19.9km az=62.0*
*NEIC **25** 10:33:57.4±0.9,29.°15S±0.°06×61.°1E±0.°1,h10km±1km, mb4.6/24,Error ellipse: s-maj=17.6km s-min=9.9km az=86.0*
ISC 25 10:33:57.0±0.5,**29.°2S**±0.°1×**61.°08E**±0.°09,**h10**km,**n68,** σ0s**67**/53,**mb4.5**/22,**MS3.4**/10,**Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RER	**Riviere de l'E**	**9.30**	**328**	Pn	**Pn**	**10 36 09.9**	**-1.5**
ROCAM	**Rodrigues Isla**	**9.58**	**13**	Pn	**Pn**	**10 36 14.3**	**-0.8**
FOMA	**Nahamoana Res**	**13.23**	**285**	Pn	**Pn**	**10 37 04.0**	**-1.1**
VOI	**Vohitsoka**	**14.77**	**296**		**Pn**	**10 37 26.3**	**+0.1**
ABPO	**Ambohimpanom**	**16.16**	**306**	Pn	**Pn**	**10 37 44.4**	**-0.1**
OPO	**Ambohidratompo**	**16.49**	**307**	Pn	**Pn**	**10 37 49.0**	**+0.3**
	0.2nm,0.3s,baz=121,slow=15,SNR=8.2						
OPO				Sn	Sn	10 40 36.0	-16
	baz=133,slow=3.9,SNR=1.9						
	5.9nm,0.6s						
H08S1	**Diego Carcia H**	**23.93**	**29**	T	T	11 03 54.5	
	baz=203,slow=76,SNR=12						
H08S2	**Diego Garcia H**	**23.94**	**29**	T	T	11 03 55.1	
	baz=203,slow=76,SNR=10						
H08S3	**Diego Garcia H**	**23.95**	**29**	T	T	11 03 56.2	
	baz=203,slow=76,SNR=60						
MSEY	**Mahe Island**	**24.91**	**347**	P	**P**	**10 39 19.4**	**-1.1**
BOSA	**Boshof**	**31.30**	**262**	LR	LR	10 50 31.3	
	comp=Z,75nm,20.6s,baz=175,slow=32						
BOSA	**Boshof**	**31.30**	**262**	P	**P**	**10 40 17.2**	**-0.4**
BOSA				IAmb	IAmb	10 40 25.8	
	comp=Z,11nm,1.2s						
LBTB	**Lobatse**	**31.79**	**269**	LR	LR	10 51 38.8	
	comp=Z,51nm,18.2s,baz=112,slow=33						
LBTB	**Lobatse**	**31.79**	**269**	P	**P**	**10 40 21.8**	**-0.2**
LBTB				IAmb	IAmb	10 40 45.2	
	comp=Z,9.0nm,1.4s						
LSZ	**Lusaka**	**33.30**	**287**	LR	LR	10 53 15.5	
	comp=Z,51nm,19.0s,baz=200,slow=35						
LSZ	**Lusaka**	**33.30**	**287**	P	**P**	**10 40 35.8**	**+0.5**
LSZ				IAmb	IAmb	10 40 36.5	
	comp=Z,5.4nm,0.8s						
KMBO	**Kilima Mbogo**	**35.95**	**317**	LR	LR	10 52 22.3	
	comp=Z,63nm,22.0s,baz=86,slow=31						
MAW	**Mawson**	**38.50**	**179**	LR	LR	10 53 57.0	
	comp=Z,69nm,18.4s,baz=280,slow=31						
MBAR	**Mbarara**	**40.54**	**309**	LR	LR	10 55 45.9	
	comp=Z,63nm,21.2s,baz=122,slow=32						
TSUM	**Tsumeb**	**40.70**	**274**	LR	LR	10 57 08.5	
	comp=Z,57nm,18.6s,baz=150,slow=34						
ATD	**Arta Tunnel**	**44.10**	**334**	LR	LR	10 58 10.1	
	comp=Z,44nm,20.1s,baz=254,slow=33						
H01W2	**Cape Leeuwin H**	**44.91**	**112**	T	T	11 29 51.8	
	baz=261,slow=75,SNR=13						
H01W3	**Cape Leeuwin H**	**44.92**	**111**	T	T	11 29 52.5	
	baz=261,slow=75,SNR=34						
H01W1	**Cape Leeuwin H**	**44.93**	**112**	T	T	11 29 53.5	
	baz=261,slow=75,SNR=48						
WSAR	**Wadi Sarin**	**52.13**	**357**	LR	LR	11 02 17.2	
	comp=Z,30nm,18.4s,baz=230,slow=33						
CMAR	**Chiang Mai Arr**	**59.80**	**42**	P	**P**	**10 44 03.4**	**+0.7**
	comp=Z,0.7nm,0.3s,baz=231,slow=5.7,SNR=4.5						
	comp=Z,0.7nm,0.3s						
CMAR	**Chiang Mai Arr**	**59.80**	**42**	P	**P**	**10 44 03.1**	**+0.5**
CHTO	**Chiang Mai**	**60.08**	**42**	P	**P**	**10 44 04.4**	**-0.2**
CHTO				IAmb	IAmb	10 44 29.6	
	comp=Z,7.5nm,1.4s						
QSPA	**South Pole Qui**	**61.01**	**180**	P	**P**	**10 44 10.1**	**-0.4**
	comp=Z,2.6nm,0.8s,baz=284,slow=3.0,SNR=10						
QSPA				LR	LR	11 06 37.7	
	comp=Z,51nm,20.7s,baz=282,slow=32						
	comp=Z,2.6nm,0.8s						
QSPA	**South Pole Qui**	**61.01**	**180**	P	**P**	**10 44 10.2**	**-0.4**
VNDA	**Vanda**	**64.06**	**166**	P	**P**	**10 44 30.0**	**-0.6**
	comp=Z,1.4nm,0.8s,baz=274,slow=8.5,SNR=7.0						
	comp=Z,1.4nm,0.8s						
VNDA	**Vanda**	**64.06**	**166**	P	**P**	**10 44 30.5**	**-0.1**
ASAR	**Alice Springs**	**64.52**	**104**	P	**P**	**10 44 33.8**	**-0.7**
AS31	**Alice Springs**	**64.52**	**104**	P	**P**	**10 44 34.1**	**-0.4**
SBA	**Scott Base**	**64.95**	**167**	P	**P**	**10 44 36.9**	**+0.6**
WRA	**Warramunga Arr**	**66.34**	**100**	P	**P**	**10 44 45.6**	**-0.7**
	comp=Z,1.8nm,0.8s,baz=246,slow=5.8,SNR=18						
	comp=Z,1.8nm,0.8s						
WRA	**Warramunga Arr**	**66.34**	**100**	P	**P**	**10 44 45.7**	**-0.7**
WB2	**Warramunga Arr**	**66.35**	**100**	P	**P**	**10 44 45.7**	**-0.7**
WRAB	**Tennant Creek**	**66.35**	**100**	P	**P**	**10 44 45.9**	**-0.5**
WRAB				IAmb	IAmb	10 44 50.0	
	comp=Z,6.4nm,1.1s						
WB0	**Warramunga Arr**	**66.45**	**100**	P	**P**	**10 44 46.5**	**-0.5**
WB0				IAmb	IAmb	10 44 51.0	
	comp=Z,7.2nm,1.1s						
WR0	**Warramunga Arr**	**66.50**	**100**	P	**P**	**10 44 46.9**	**-0.5**
WR0				IAmb	IAmb	10 44 50.4	
	comp=Z,5.2nm,1.0s						
TORD	**Torodi Ar. Bea**	**71.07**	**298**	P	**P**	**10 45 16.2**	**+0.4**
	comp=Z,2.7nm,0.8s,baz=108,slow=5.9,SNR=13						
	comp=Z,2.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**71.07**	**298**	P	**P**	**10 45 16.2**	**+0.4**
TORD				IAmb	IAmb	10 45 17.0	
	comp=Z,3.2nm,0.9s						
KKAR	**Karatay Array**	**72.41**	**7**	P	**P**	**10 45 24.0**	**+0.7**
KKAR				IAmb	IAmb	10 45 28.1	
	comp=Z,4.0nm,1.0s						
KDJ	**Kajisay**	**72.46**	**12**	P	**P**	**10 45 23.6**	**-0.2**
KDJ				IAmb	IAmb	10 45 28.4	
	comp=Z,7.2nm,1.3s						
AAK	**Ala-Archa**	**72.49**	**10**	P	**P**	**10 45 23.9**	**0.0**
AAK				IAmb	IAmb	10 45 28.6	
	comp=Z,2.6nm,0.7s						
DBIC	**Dimbokro**	**72.64**	**288**	P	**P**	**10 45 26.2**	**-4.4**
DBIC	**Dimbokro**	**72.64**	**288**	P	**P**	**10 45 26.2**	**+0.9**
	comp=Z,6.3nm,0.9s,baz=167,slow=9.1,SNR=2.5						
	comp=Z,6.3nm,0.9s						
DBIC	**Dimbokro**	**72.64**	**288**	P	**P**	**10 45 24.4**	**-0.9**
MAKZ	**Makanchi**	**77.92**	**15**	P	**P**	**10 45 55.1**	**+0.1**
MK31	**Makanchi Array**	**77.98**	**15**	P	**P**	**10 45 55.6**	**+0.4**
MKAR	**Makanchi Array**	**77.98**	**15**	P	**P**	**10 45 55.5**	**+0.2**
	comp=Z,2.2nm,0.8s,baz=188,slow=4.4,SNR=7.1						
	comp=Z,2.2nm,0.8s						
MKAR	**Makanchi Array**	**77.98**	**15**	P	**P**	**10 45 55.4**	**+0.1**
ABKAR	**Akbulak array**	**78.05**	**359**	P	**P**	**10 45 55.5**	**0.0**
AKASG	**Malin Array Be**	**84.34**	**340**	P	**P**	**10 46 29.4**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=153,slow=4.4,SNR=1.2						
	comp=Z,0.3nm,0.4s						
ARU	**Arti**	**85.26**	**359**	P	**P**	**10 46 34.0**	**+0.5**
	comp=Z,1.7nm,0.3s,baz=151,slow=10,SNR=1.6						
	comp=Z,1.7nm,0.3s						
ZALV	**Zalesovo Beam**	**85.27**	**14**	P	**P**	**10 46 33.7**	**+0.2**
	comp=Z,2.4nm,0.8s,baz=241,slow=4.8,SNR=6.6						
	comp=Z,2.4nm,0.8s						
SONM	**Songino Array**	**86.77**	**29**	P	**P**	**10 46 41.9**	**+0.6**
	comp=Z,1.0nm,0.9s,baz=213,slow=6.9,SNR=1.7						
	comp=Z,1.0nm,0.9s						
ESDC	**Sonseca Array**	**91.33**	**316**	P	**P**	**10 47 04.0**	**+1.0**
	comp=Z,1.9nm,1.1s,baz=104,slow=2.6,SNR=4.6						
	comp=Z,1.9nm,1.1s						
ILAR	**Eielson Array**	**140.25**	**18**	PKP	**PKPdf**	**10 53 25.1**	**-0.3**
	comp=Z,0.2nm,0.6s,baz=322,slow=2.5,SNR=2.0						
YKA	**Yellowknife Ar**	**146.53**	**356**	PKPbc	**PKPbc**	**10 53 37.4**	**-0.5**
	comp=Z,2.1nm,0.7s,baz=354,slow=3.2,SNR=38						
YKA	**Yellowknife Ar**	**146.53**	**356**		**PKPdf**	**10 53 36.6**	**+0.2**
ULM	**Lac du Bonnet**	**152.66**	**327**	PKPbc	**PKPbc**	**10 53 52.6**	**-1.0**
	comp=Z,4.6nm,0.8s,baz=85,slow=4.9,SNR=3.4						
ULM	**Lac du Bonnet**	**152.66**	**327**		**PKPdf**	**10 53 45.8**	**-0.8**
PDAR	**Pinedale Array**	**164.45**	**333**	PKP	**PKPdf**	**10 54 00.9**	**-0.3**
	comp=Z,1.1nm,0.9s,baz=167,slow=4.4,SNR=5.6						
PDAR	**Pinedale Array**	**164.45**	**333**		**PKPdf**	**10 54 00.7**	**-0.5**
TXAR	**Lajitas Array**	**166.68**	**275**	PKP	**PKPdf**	**10 54 04.4**	**+1.1**
	comp=Z,0.6nm,0.8s,baz=105,slow=1.4,SNR=8.2						
NVAR	**Mina Array Bea**	**170.72**	**357**	PKP	**PKPdf**	**10 54 07.8**	**+2.0**
	comp=Z,0.1nm,0.4s,baz=146,slow=0.3,SNR=3.5						

*NEIC **25** 10:43:42.7±2.3,5.°59S±0.°07×131.°02E±0.°09,h64km±6km, mb4.8/44,Error ellipse: s-maj=12.8km s-min=10.0km az=93.0*
*IDC **25** 10:43:44.6±2.5,5.°50S×130.°98E,h83km±21km,mb4.2/14, mbtmp4.6/15,MS3.4/6,Error ellipse: s-maj=20.8km s-min=11.6km az=64.0*
*DJA **25** 10:43:44.5±0.2,5.°S±2.°×13.°1E±.°,h87km±4km,M4.6/37, mB5.0/12,mb4.6/37,MLv5.1/13,Mw(mB)4.4/12*
ISC 25 10:43:43.2±0.6,**5.°55S**±0.°05×**131.°04E**±0.°06,**h75**km±5km,

n192, σ1s**28**/189,**mb4.8**/54,**1C-3D,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**1.52**	**312**	P	**Pn**	**10 44 09.9**	**+1.2**
FAKI	**Fak Fak**	**2.88**	**25**	Pn	**Pn**	**10 44 27.0**	**+0.1**
FAKI	**Fak Fak**	**2.88**	**25**	P	**Pn**	**10 44 26.9**	**+0.1**
FAKI	**Fak Fak**	**2.88**	**25**	P	**Pn**	**10 44 27.8**	**+0.9**
MSAI	**Masohi**	**3.04**	**316**	P	**Pn**	**10 44 28.9**	**-0.1**
AAI	**Ambon**	**3.39**	**303**	P	**Pn**	**10 44 33.4**	**-0.4**
NLAI	**Namlea**	**4.55**	**300**	P	**Pn**	**10 44 49.6**	**0.0**
SWI	**Sorong**	**4.66**	**3**	P	**Pn**	**10 44 50.7**	**-0.5**
LBMI	**Labuha**	**6.02**	**324**	P	**Pn**	**10 45 10.8**	**+1.0**
	1.9nm2µm145nm,1.1s						
SANI	**Sanana**	**6.12**	**304**	P	**Pn**	**10 45 11.5**	**+0.4**
	0.4nm2µm92nm,0.8s						
SANI	**Sanana**	**6.12**	**304**	P	**Pn**	**10 45 12.5**	**+1.4**
BAKI	**Biak**	**6.66**	**50**	P	**Pn**	**10 45 20.0**	**+1.6**
KDU	**Kakadu**	**7.23**	**169**	P	**Pn**	**10 45 24.6**	**-1.7**
MTN	**Manton Dam**	**7.25**	**179**	Pn	**Pn**	**10 45 24.2**	**-2.3**
MTN	**Manton Dam**	**7.25**	**179**	P	**Pn**	**10 45 25.0**	**-1.5**
SOEI	**Soe**	**7.91**	**238**		**Pn**	**10 45 36.6**	**+0.9**
SOEI	**Soe**	**7.91**	**238**	P	**Pn**	**10 45 36.4**	**+0.8**
	1.6nm2µm216nm,0.8s						
SMPI	**Sarmi**	**8.43**	**65**	P	**Pn**	**10 45 45.6**	**+2.9**
	13nm,1.0s						
BBSI	**Bau Bau**	**8.43**	**270**	P	**Pn**	**10 45 46.2**	**+3.5**
	364nm37nm,1.1s						
BATI	**Baumata**	**8.65**	**237**	P	**Pn**	**10 45 46.1**	**+0.4**
	84nm,0.9s						
MMRI	**Maumere**	**9.26**	**250**	Pn	**Pn**	**10 45 56.8**	**+2.8**
EDFI	**Ende, Flores**	**9.81**	**251**	P	**Pn**	**10 46 03.9**	**+2.3**
	28nm,1.6s						
KNRA	**Kununurra**	**10.31**	**192**	Pn	Pn	10 46 04.7	-3.6
KNRA	**Kununurra**	**10.31**	**192**	P	Pn	10 46 04.8	-3.5
APSI	**Ampana**	**10.45**	**296**	P	**Pn**	**10 46 11.8**	**+1.6**
	432nm39nm,1.2s						
BSSI	**Bau Bau, Buton**	**10.51**	**266**	P	**Pn**	**10 46 13.4**	**+2.3**
	47nm,1.0s						
BKSI	**Bulukumba**	**10.87**	**271**	P	**Pn**	**10 46 19.2**	**+3.2**
	28nm,0.6s						
MRSI	**Marisa**	**10.88**	**303**	P	**Pn**	**10 46 16.7**	**+0.5**
	30nm,0.4s						
BNSI	**Bone**	**10.95**	**275**	P	**Pn**	**10 46 21.3**	**+4.2**
	28nm,1.4s						
KAPI	**Kappang**	**11.25**	**272**	P	**Pn**	**10 46 23.3**	**+2.1**
	15nm,0.6s,baz=92,slow=10.0,SNR=8.3						
KAPI	**Kappang**	**11.25**	**272**	Pn	**Pn**	**10 46 24.7**	**+3.5**
SPSI	**Sidrap Palu**	**11.34**	**277**	P	**Pn**	**10 46 24.3**	**+1.9**
	993nm43nm,1.0s						
TTSI	**Tana Toraja**	**11.46**	**282**	P	**Pn**	**10 46 26.7**	**+2.6**
	683nm62nm,1.1s						
TOLI2	**Tolitoli**	**12.20**	**303**	P	**Pn**	**10 46 35.9**	**+1.8**
MPSI	**Mapaga**	**12.57**	**297**	P	**Pn**	**10 46 39.1**	**-0.1**
	13nm,1.2s						
PLAI	**Plampang**	**13.56**	**255**	P	**Pn**	**10 46 52.4**	**0.0**
	25nm,1.1s						
DAV	**Davao City (W)**	**13.67**	**336**	LR	LR	10 53 25.9	
	comp=Z,55nm,20.3s,baz=141,slow=43						
TWSI	**Taliwang, Sumb**	**14.40**	**256**	P	**Pn**	**10 47 04.4**	**+1.0**
	9.5nm,0.9s						
WB0	**Warramunga Arr**	**14.50**	**167**		Pn	10 46 58.7	-6.0
COEN	**Coen**	**14.58**	**126**		**Pn**	**10 47 03.9**	**-1.8**
COEN	**Coen**	**14.58**	**126**	P	**Pn**	**10 47 05.2**	**-0.6**
WRAB	**Tennant Creek**	**14.66**	**168**		Pn	10 47 01.5	-5.2
WRA	**Warramunga Arr**	**14.66**	**168**	P	Pn	10 47 00.6	-6.2
	4.1nm,0.4s,baz=346,slow=13,SNR=56						
WRA				S	Sn	10 49 34.0	-14
	35nm,0.9s,baz=348,slow=22,SNR=10						
WRA				LR	LR	10 53 11.1	
	comp=Z,273nm,19.7s,baz=82,slow=38						
WRA	**Warramunga Arr**	**14.66**	**168**		Pn	10 47 00.3	-6.5
WB2	**Warramunga Arr**	**14.66**	**168**	Pn	Pn	10 47 00.3	-6.5
WR0	**Warramunga Arr**	**14.72**	**167**	Pn	Pn	10 47 02.2	-5.4
BBKI	**Banjar Baru**	**16.28**	**277**	P	**P**	**10 47 29.2**	**0.0**
	5µm91nm,1.4s						
MYLDM	**Lahad Datu**	**16.44**	**310**	P	**P**	**10 47 32.8**	**+1.9**
KMMI	**Kalianget**	**17.04**	**264**	P	**Pn**	**10 47 36.7**	**-0.1**
	111nm,0.7s						
QIS	**Mount Isa**	**17.08**	**152**	P	**Pn**	**10 47 35.7**	**-1.6**
BLJI	**Banyuglugur**	**17.46**	**262**	P	**Pn**	**10 47 42.7**	**+0.7**
	1µm44nm,0.8s						
GMJI	**Gumukmas**	**17.68**	**260**	P	**Pn**	**10 47 46.5**	**+1.9**
	28nm,1.1s						
MTSU	**Mount Surprise**	**18.02**	**135**	P	**P**	**10 47 49.9**	**+1.6**
AS31	**Alice Springs**	**18.22**	**172**		**P**	**10 47 48.1**	**-2.5**
ASAR	**Alice Springs**	**18.22**	**172**		**P**	**10 47 48.3**	**-2.2**
MBWA	**Marble Bar**	**19.00**	**214**	P	**P**	**10 47 57.8**	**-1.3**
MBWA	**Marble Bar**	**19.00**	**214**	P	**P**	**10 47 59.1**	**0.0**
PSA00	**Pilbara Seismi**	**19.27**	**213**	P	**P**	**10 48 01.1**	**-0.9**
PSA00	**Pilbara Seismi**	**19.27**	**213**	P	**P**	**10 48 01.6**	**-0.4**
WRKA	**Warakurna**	**19.55**	**187**	P	**P**	**10 48 04.7**	**-0.4**
PCJI	**Pacitan**	**19.89**	**261**	P	**P**	**10 48 07.2**	**-1.6**
	70nm,2.6s						
CTA	**Charters Tower**	**20.68**	**136**	P	**P**	**10 48 18.6**	**+1.3**
	5.9nm,0.7s,baz=314,slow=13,SNR=7.7						
CTA				LR	LR	10 57 27.8	
	comp=Z,72nm,19.5s,baz=316,slow=40						
	5.9nm,0.7s						
CTA	**Charters Tower**	**20.68**	**136**	P	**P**	**10 48 17.8**	**+0.5**
CTAO	**Charters Tower**	**20.68**	**136**	P	**P**	**10 48 18.5**	**+1.1**
CTAO	**Charters Tower**	**20.68**	**136**	P	**P**	**10 48 17.9**	**+0.6**
KRVT	**Keravat (AS076**	**20.94**	**88**	P	Pn	10 48 23.2	-0.3
	38nm,0.9s,baz=328,slow=7.4,SNR=6.7						
	38nm,0.9s						
OOD	**Oodnadatta**	**22.56**	**169**	P	**P**	**10 48 36.9**	**-0.5**
INKA	**Innaminka**	**23.92**	**158**	P	**P**	**10 48 52.2**	**+1.8**
CBJI	**Citeko**	**24.07**	**267**	P	**P**	**10 48 51.8**	**-0.1**
QLP	**Quilpie**	**24.41**	**150**	P	**P**	**10 48 56.9**	**+2.1**
MULG	**Mulgathing**	**24.77**	**174**	P	**P**	**10 48 58.1**	**+0.1**
FORT	**Forrest**	**25.25**	**186**	P	**P**	**10 49 02.7**	**+0.3**
LCRK	**Leigh Creek**	**25.67**	**166**	P	**P**	**10 49 06.6**	**+0.4**
RMQ	**Roma**	**26.82**	**143**	P	**P**	**10 49 18.0**	**+1.3**
MORW	**Morawa**	**27.36**	**210**	P	**P**	**10 49 20.3**	**-1.2**
MORW	**Morawa**	**27.36**	**210**	P	**P**	**10 49 21.2**	**-0.3**
BBOO	**Buckleboo**	**27.52**	**171**	P	**P**	**10 49 20.7**	**-2.2**
BBOO				IAmb	IAmb	10 49 49.2	
	comp=Z,19nm,1.1s						
BBOO	**Buckleboo**	**27.52**	**171**	P	**P**	**10

MAJO pP **pP** 10 51 45.4 -1.2
PZH PanZhiHua 42.67 320 P **P** 10 51 35.3 +2.3
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,90nm,5.0s
KSRS Korea Array 42.88 356 P **P** 10 51 35.4 +1.1
comp=Z,1.3nm,0.7s,baz=175,slow=8.8,SNR=5.8
KSRS PcP **PcP** 10 53 24.6 +0.6
comp=Z,1.0nm,0.6s,baz=174,slow=2.4,SNR=4.6
comp=Z,1.3nm,0.7s
XAN Xi'an 44.59 334 P **P** 10 51 47.5 -0.6
XAN pP pP 10 51 51.5 -13
XAN sP sP 10 51 55.3 -17
XAN pmax pmax
comp=Z,19nm,0.8s
HNS HongShan 45.36 342 ⇑P **P** 10 51 54.0 -0.1
HNS pmax pmax
comp=Z,14nm,1.0s
BJT Baijiatuao 47.37 344 P **P** 10 52 10.4 +0.6
BJT IAmb IAmb 10 52 10.8
comp=Z,13nm,0.8s
BJT Baijiatuao 47.37 344 P **P** 10 52 10.1 +0.3
BJT pP **pP** 10 52 23.6 -2.6
BJI Beijing 47.39 344 P **P** 10 52 09.5 -0.4
BJI pmax pmax
comp=Z,18nm,0.8s
LZH Lanzhou 48.64 330 *eP* **P** 10 52 21.3 +1.4
LZH pP pP 10 52 35.5 -0.8
LZH sP sP 10 52 45.8 +1.9
LZH pmax pmax
comp=Z,12nm,1.5s
HHC Hu-ho-hao-te 49.51 341 *eP* **P** 10 52 27.5 +1.1
HHC pP pP 10 52 47.8 +4.8
HHC pmax pmax
comp=Z,28nm,0.9s
HHC pmax pmax
comp=Z,97nm,7.3s
USRK Ussuriysk Ar. 49.53 1 P **P** 10 52 26.9 +0.5
comp=Z,6.5nm,0.7s,baz=187,slow=6.0,SNR=9.3
comp=Z,6.5nm,0.7s
USRK Ussuriysk Ar. 49.53 1 P **P** 10 52 26.7 +0.3
RPZ Rata Peaks 51.76 144 LR LR 11 14 37.7
comp=Z,80nm,19.4s,baz=262,slow=36
LSA Lhasa 51.89 315 P **P** 10 52 45.0 0.0
LSA IAmb IAmb 10 52 46.0
comp=Z,10nm,0.8s
TUWZ Tuamarina 52.29 140 P **P** 10 52 47.4 +0.2
GTA Gaotai 53.23 330 ⇓P **P** 10 52 54.8 +0.5
GTA sP sP 10 53 21.3 +2.9
GTA PcP **PcP** 10 54 02.3 +1.0
GTA pmax pmax
comp=Z,7.0nm,1.4s
GUN Gumba 54.80 310 *eP* **P** 10 53 05.1 -1.1
comp=Z,75nm,0.7s
PKIN Phulchoki 55.01 309 *eP* **P** 10 53 06.2 -1.4
comp=Z,27nm,0.7s
KKN Kakani 55.20 309 *eP* **P** 10 53 07.7 -1.3
comp=Z,20nm,1.0s
DMN Daman 55.25 309 *eP* **P** 10 53 08.3 -1.0
comp=Z,72nm,0.9s
GKN Gorkha 55.80 309 *eP* **P** 10 53 12.1 -1.1
comp=Z,78nm,0.7s
KOLN Koldanda 56.49 308 *eP* **P** 10 53 16.6 -1.6
comp=Z,21nm,0.8s
DANN Dangsing 56.65 309 *eP* **P** 10 53 18.2 -1.2
comp=Z,70nm,1.0s
PYUN Piuthan 57.12 309 *eP* **P** 10 53 21.7 -1.0
comp=Z,96nm,0.8s
ULN Ulaanbaatar 57.23 341 P **P** 10 53 23.4 +0.5
ULN Ulaanbaatar 57.23 341 P **P** 10 53 24.1 +1.2
SONM Songino Array 57.41 341 P **P** 10 53 24.8 +0.6
comp=Z,5.0nm,0.7s,baz=160,slow=7.7,SNR=23
SONM PcP **PcP** 10 54 17.7 +0.4
comp=Z,0.5nm,0.3s,baz=158,slow=1.0,SNR=4.1
comp=Z,5.0nm,0.7s
SONM Songino Array 57.41 341 P **P** 10 53 25.0 +0.8
SONM IAmb IAmb 10 53 27.0
comp=Z,4.8nm,0.7s
DRV Dumont d'Urvil 61.33 176 P **P** 10 53 51.5 +0.8
DRV x x 10 53 57.9
CASY Casey 62.29 189 P **P** 10 53 56.3 -0.9
CASY IAmb IAmb 10 53 57.5
comp=Z,6.0nm,1.1s
CASY Casey 62.29 189 P **P** 10 53 56.8 -0.4
CASY sP **pP** 10 54 15.3 +1.1
PEA0B Petropavlovsk- 62.63 18 P **P** 10 54 00.1 +0.4
PETK Petropavlovsk- 62.63 18 P **P** 10 53 59.4 -0.3
comp=Z,7.3nm,0.8s,baz=190,slow=4.4,SNR=6.5
PETK LR LR 11 18 31.9
comp=Z,33nm,21.6s,baz=270,slow=33
comp=Z,7.3nm,0.8s
WMQ Urumqi 62.76 326 *eP* **P** 10 54 02.0 +1.2
WMQ pP pP 10 54 18.0 +0.1
WMQ PcP **PcP** 10 54 37.0 -1.8
WMQ pmax pmax
comp=Z,33nm,0.9s
TARG Taragay, Kyrgy 67.53 320 P **P** 10 54 32.4 +0.2
TARG IAmb IAmb 10 54 44.0
comp=Z,8.1nm,1.2s
MK31 Makanchi Array 67.60 326 P **P** 10 54 33.1 +1.1
MKAR Makanchi Array 67.60 326 P **P** 10 54 32.3 +0.3
comp=Z,20nm,0.7s,baz=123,slow=7.9,SNR=176
comp=Z,20nm,0.7s
MKAR Makanchi Array 67.60 326 P **P** 10 54 32.5 +0.5
KSH Kashi 67.67 317 P **P** 10 54 33.5 +0.8
KSH pmax pmax
comp=Z,12nm,0.8s
MAKZ Makanchi 67.78 326 P **P** 10 54 33.6 +0.5
MAKZ Makanchi 67.78 326 P **P** 10 54 33.2 +0.1
KDJ Kajisay 68.13 320 P **P** 10 54 35.9 +0.2
KDJ IAmb IAmb 10 54 37.2
comp=Z,12nm,0.8s
BOOM Boomskoye usch 69.11 320 P **P** 10 54 42.4 +0.7
BOOM IAmb IAmb 10 54 43.2
comp=Z,13nm,0.8s
TKM2 Tokmak 2 69.54 320 P **P** 10 54 44.9 +0.5
SNR=13
CCD Concordia, Ant 69.64 182 P **P** 10 54 45.2 +0.5
UCH Uchtor 69.92 319 P **P** 10 54 47.8 +0.7
SNR=23
AAK Ala-Archa 70.12 319 P **P** 10 54 49.0 +1.1
SNR=6.2
AAK Ala-Archa 70.12 319 P **P** 10 54 48.6 +0.7
AML Almayashu 70.41 318 P **P** 10 54 50.8 +0.8
SNR=17
USP Ospenovka 70.41 320 P **P** 10 54 50.3 +0.7
SNR=5.1
EKS2 Erkin-Say 70.60 319 P **P** 10 54 51.8 +0.9
SNR=9.6
ZAA0 Zalesovo Array 70.76 333 P **P** 10 54 50.7 -0.6
ZAA0 IAmb IAmb 10 54 51.6
comp=Z,8.6nm,0.8s
ZALV Zalesovo Beam 70.76 333 P **P** 10 54 50.9 -0.5
comp=Z,7.4nm,0.6s,baz=130,slow=6.2,SNR=24
comp=Z,7.4nm,0.6s
ZALV Zalesovo Beam 70.76 333 P **P** 10 54 51.2 -0.2
KURK Kurchatov 71.83 328 P **P** 10 54 57.7 -0.2
KURK IAmb IAmb 10 54 58.9
comp=Z,16nm,1.0s
KURK Kurchatov 71.83 328 P **P** 10 54 57.9 0.0
KURK pP **PcP** 10 55 11.8 -4.6
KK31 Karatay Array 72.95 318 P **P** 10 55 04.5 -0.3
KK31 IAmb IAmb 10 55 05.8
comp=Z,13nm,0.9s
KKAR Karatay Array 72.95 318 P **P** 10 55 05.3 +0.5
KKAR Karatay Array 72.95 318 P **P** 10 55 04.7 0.0
KKAR IAmb IAmb 10 55 05.8
comp=Z,13nm,0.9s
VNDA Vanda 73.76 173 P **P** 10 55 09.3 +0.5
comp=Z,3.3nm,0.5s,baz=314,slow=8.9,SNR=18
comp=Z,3.3nm,0.5s
VNDA Vanda 73.76 173 P **P** 10 55 09.6 +0.7
SBA Scott Base 74.63 173 P **P** 10 55 15.7 +1.8
SBA IAmb IAmb 10 55 16.4
comp=Z,11nm,1.4s
HRA Herat 75.89 307 P **P** 10 55 21.7 -0.6
HRA IAmb IAmb 10 55 22.9
comp=Z,7.2nm,0.8s
MAW Mawson 76.67 201 P **P** 10 55 25.2 -0.5
TIXI Tiksi 77.06 359 P **P** 10 55 27.6 -0.2
TIXI IAmb IAmb 10 55 28.6
comp=Z,6.1nm,0.6s
GEYT Alibeck 80.08 310 P **P** 10 55 45.1 -0.1
comp=Z,6.5nm,0.8s,baz=208,slow=8.4,SNR=5.9
comp=Z,6.5nm,0.8s

GEYT Alibeck 80.08 310 P **P** 10 55 45.4 +0.2
GYA0B ALIBECK ARRAY 80.08 310 P **P** 10 55 45.6 +0.4
GYA0B IAmb IAmb 10 55 46.3
comp=Z,7.4nm,0.9s
ABKAR Akbulak array 82.03 321 P **P** 10 55 54.8 -0.5
QSPA South Pole Qui 84.42 180 P **P** 10 56 07.2 -0.2
QSPA IAmb IAmb 10 56 07.8
comp=Z,6.1nm,0.8s
ARU Arti 85.03 328 P **P** 10 56 09.7 -0.7
ARU IAmb IAmb 10 56 10.8
comp=Z,8.7nm,0.9s
OHAK Old Harbor 86.94 32 P **P** 10 56 21.0 +1.2
N19K Bonanza Creek 87.31 28 P **P** 10 56 23.5 +1.8
N19K IAmb IAmb 10 56 49.9
comp=Z,8.8nm,1.1s
L19K White Mountain 87.53 27 P **P** 10 56 24.3 +1.6
L19K IAmb IAmb 10 56 25.1
comp=Z,6.9nm,0.9s
RAYN Ar Rayn 88.11 294 P **P** 10 56 25.7 -0.6
ILAR Eielson Array 91.60 25 P **P** 10 56 40.8 -0.9
comp=Z,0.8nm,0.7s,baz=266,slow=4.2,SNR=11
comp=Z,0.8nm,0.7s
ILAR Eielson Array 91.60 25 P **P** 10 56 41.0 -0.6
GEVA Gevas 91.82 308 P **P** 10 56 43.7 +0.2
KLMR Klimovskoe 95.55 331 *eP* **P** 10 56 56.7 -3.1
KLMR AMP 10 56 58.3
comp=Z,5.0nm,0.8s
TROLL Troll, Antarti 95.81 194 P **P** 10 57 01.3 +0.2
SPITS Spitsbergen Ar 100.35 349 P **Pdif** 10 57 20.1 -1.1
comp=Z,1.1nm,0.7s,baz=87,slow=4.9,SNR=2.0
FINES FINESS Array B 101.99 332 P **Pdif** 10 57 27.0 -1.7
comp=Z,0.6nm,0.8s,baz=93,slow=7.5,SNR=5.1
EKA Eskdalemuir Ar 118.38 332 PKP **PKPdf** 11 02 21.9 -0.2
comp=Z,0.3nm,0.5s,baz=37,slow=4.0,SNR=3.8
TXAR Lajitas Array 123.30 59 PKP **PKiKP** 11 02 33.2 +0.6
comp=Z,0.4nm,0.9s,baz=270,slow=0.9,SNR=4.0
TORD Torodi Ar. Bea 129.53 282 PKP **PKPdf** 11 02 44.7 +0.1
comp=Z,1.8nm,0.8s,baz=53,slow=2.1,SNR=6.0
PLCA Paso Flores 129.86 159 PKP **PKPdf** 11 02 45.3 +0.7
comp=Z,0.8nm,0.7s,baz=207,slow=5.5,SNR=3.6
CPUP Villa Florida 147.29 166 PKPbc **PKPbc** 11 03 19.4 +0.5
comp=Z,4.5nm,0.8s,baz=212,slow=3.7,SNR=7.1
ATAH Atahualpa 148.04 113 PKPab **PKPab** 11 03 24.7 -0.1
comp=Z,3.1nm,0.6s,baz=283,slow=4.2,SNR=3.5
LPAZ La Paz 151.18 139 PKPbc **PKiKP** 11 03 31.1 +0.8
comp=Z,8.3nm,0.8s,baz=164,slow=2.1,SNR=23
SIV San Ignacio 155.47 151 PKPab **PKPab** 11 03 56.0 +1.0
comp=Z,1.5nm,0.8s,baz=208,slow=4.5,SNR=5.8

*IDC **25** 10:47:30.9±1.2,31.°70S×72.°00W,h0km,mb3.7/3, mbtmp3.6/7,ML3.8/4,Error ellipse: s-maj=34.0km s-min=32.2km az=76.0*
*NEIC **25** 10:47:31.9±2.1,31.°71S±0.°04×72.°2W±0.°1,h10km±1km, mb4.3/7,ML3.9(GUC),Error ellipse: s-maj=16.8km s-min=7.1km az=271.0*
*GUC **25** 10:47:33.0±0.7,31.°71S×72.°16W,h39km±4km,ML3.9*
ISC 25 10:47:31.0±1.6,31.°71S±0.°03×72.°20W±0.°06,h4km±9km, n63,σ0s88/70,mb4.2/6,1C-4D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**1.14**	**25**				**Pg**	**10 47 52.9**	**+0.1**
CO06	**Fray Jorge**	**1.14**	**25**	⇓*iP*			**Pg**	**10 47 52.8**	**0.0**
CO02	**Combarbal**	**1.14**	**64**				**Pb**	**10 47 53.1**	**-0.3**
CO02	**Combarbal**	**1.14**	**64**	⇑*iP*			**Pg**	**10 47 52.9**	**+0.1**
CO02				*i* S			**Sg**	**10 48 07.8**	**+0.1**
CO02				IAML				10 48 09.0	
comp=N,9μm,0.4s									
VA06	**Catapilco**	**1.14**	**138**				**Pg**	**10 47 53.1**	**+0.2**
VA06	**Catapilco**	**1.14**	**138**	⇓*iP*			**Pg**	**10 47 53.1**	**+0.2**
VA06				*i* S			**Sg**	**10 47 57.7**	**0.0**
VA06				IAML				10 48 14.6	
comp=E,5μm,0.6s									
VA01	**Torpederas**	**1.39**	**161**				**Pn**	**10 47 56.5**	**-0.7**
VA01	**Torpederas**	**1.39**	**161**	*eP*			**Pn**	**10 47 56.5**	**-0.7**
CO03	**El Pedregal**	**1.56**	**57**	Pn			**Pb**	**10 47 59.9**	**-0.5**
CO03	**El Pedregal**	**1.56**	**57**	*i* P			**Pn**	**10 47 59.7**	**+0.2**
CO03				*i* S			**Sn**	**10 48 19.7**	**-0.5**
CO03				IAML				10 48 23.5	
comp=E,3μm,0.4s									
ROCH	**El Roble**	**1.61**	**142**	⇓*iP*			**Pn**	**10 48 00.2**	**-0.2**
ROCH				*i* S			**Sb**	**10 48 22.3**	**+0.1**
ROCH				IAML				10 48 30.3	
comp=N,2μm,0.3s									
ROC1	**El Roble**	**1.61**	**142**				**Pn**	**10 47 59.9**	**-0.5**
VA03	**San Esteban**	**1.75**	**127**				**Pn**	**10 48 02.3**	**+0.1**
VA03	**San Esteban**	**1.75**	**127**	*i* P			**Pn**	**10 48 02.3**	**+0.1**
VA03				*i* S			**Sn**	**10 48 23.9**	**-1.1**
VA03				IAML				10 48 31.7	
comp=E,3μm,0.5s									
MT02	**Curacav**	**1.79**	**150**				**Pn**	**10 48 02.1**	**-0.5**
MT02	**Curacav**	**1.79**	**150**	⇓*iP*			**Pn**	**10 48 02.4**	**-0.2**
PEL	**Peldehue**	**1.92**	**139**				**Pn**	**10 48 04.7**	**+0.2**
PEL	**Peldehue**	**1.92**	**139**	*eP*			**Pn**	**10 48 04.7**	**+0.2**
PEL				IAML				10 48 35.8	
comp=N,3μm,0.9s									
GO04	**Tololo Observa**	**1.95**	**39**				**Pn**	**10 48 05.2**	**+0.2**
GO04	**Tololo Observa**	**1.95**	**39**	*eP*			**Pn**	**10 48 05.0**	**0.0**
CO05	**La Serena**	**1.96**	**25**	Pn			**Pn**	**10 48 05.8**	**+0.7**
VA05	**Santo Domingo**	**2.00**	**166**				**Pn**	**10 48 04.9**	**-0.7**
VA05	**Santo Domingo**	**2.00**	**166**	*eP*			**Pn**	**10 48 05.1**	**-0.5**
VA05				IAML				10 48 44.4	
comp=N,1μm,0.4s									
MT05	**Renca**	**2.08**	**144**	Pn			**Pn**	**10 48 06.8**	**+0.1**
MT05	**Renca**	**2.08**	**144**	*eP*			**Pn**	**10 48 06.9**	**+0.2**
MT05				IAML				10 48 42.2	
comp=E,2μm,0.4s									
MT03	**Universidad Ad**	**2.28**	**142**	Pn			**Pn**	**10 48 09.9**	**+0.4**
MT03	**Universidad Ad**	**2.28**	**142**	*eP*			**Pn**	**10 48 09.9**	**+0.4**
MT03				IAML				10 48 48.0	
comp=N,1μm,0.6s									
FCH	**Farellones**	**2.28**	**136**	*eP*			**Pn**	**10 48 10.0**	**+0.3**
FCH				*i* S			**Sb**	**10 48 41.9**	**+0.3**
MT09	**Talagante**	**2.30**	**154**	Pn			**Pn**	**10 48 10.2**	**+0.4**
MT09	**Talagante**	**2.30**	**154**	*eP*			**Pn**	**10 48 10.3**	**+0.4**
MT09				IAML				10 48 53.0	
comp=E,525nm,0.5s									
CO01	**Juntas del Tor**	**2.50**	**47**	Pn			**Pn**	**10 48 14.1**	**+1.4**
CO01	**Juntas del Tor**	**2.50**	**47**	*eP*			**Pn**	**10 48 14.1**	**+1.4**
CO01				IAML				10 48 53.4	
comp=N,473nm,0.5s									
BO04	**La Punta**	**2.64**	**150**				**Pn**	**10 48 15.2**	**+0.8**
BO04	**La Punta**	**2.64**	**150**	*eP*			**Pn**	**10 48 15.1**	**+0.7**
BO04				IAML				10 48 59.5	
comp=E,578nm,0.8s									
LMEL	**Las Melosas**	**2.72**	**142**				**Pn**	**10 48 16.4**	**+0.8**
LMEL	**Las Melosas**	**2.72**	**142**	*eP*			**Pn**	**10 48 16.4**	**+0.8**
LMEL				IAML				10 48 59.6	
BO01	**Tunca**	**2.84**	**161**	Pn			**Pn**	**10 48 17.0**	**0.0**
BO01	**Tunca**	**2.84**	**161**	*eP*			**Pn**	**10 48 17.0**	**0.0**
GO05	**Huala**	**3.30**	**176**	Pn			**Pn**	**10 48 22.6**	**-0.8**
AC04	**Llanos de Chal**	**3.62**	**16**	Pn			**Pn**	**10 48 27.2**	**-0.7**
H03N1	**Juan Fernandez** baz=75,slow=72	**5.92**	**251**	T			T	10 55 51.3	
H03N3	**Juan Fernandez** baz=75,slow=72	**5.94**	**251**	T			T	10 55 45.6	
H03N2	**Juan Fernandez** baz=75,slow=72	**5.94**	**251**	T			T	10 55 50.1	
PLCA	**Paso Flores**	**9.10**	**172**	Pn			**Pn**	**10 49 43.7**	**+0.5**
comp=E,0.4nm,0.3s,baz=336,slow=14,SNR=24									
comp=E,1.0nm,0.3s									
TRQA	**Tornquist**	**10.51**	**130**	Pn			**Pn**	**10 50 06.6**	**+4.2**
CPUP	**Villa Florida**	**14.07**	**71**	Pn			**Pn**	**10 50 49.4**	**-1.7**
comp=E,0.2nm,0.3s,baz=265,slow=10,SNR=2.0									
CPUP				Sn			**Sn**	**10 53 26.8**	**-0.8**
comp=E,0.1nm,0.3s,baz=263,slow=16,SNR=1.7									
comp=E,0.8nm,0.4s									
LPAZ	**La Paz**	**15.79**	**14**	Pn			**Pn**	**10 51 16.1**	**+1.3**
comp=E,0.1nm,0.3s,baz=183,slow=5.6,SNR=4.6									
comp=E,1.3nm,0.8s									
LPAZ	**La Paz**	**15.79**	**14**	Pn			**Pn**	**10 51 15.2**	**+0.4**
SIV	**San Ignacio** baz=218,slow=12,SNR=4.3	**18.64**	**35**	Pn			**P**	**10 51 48.7**	**-1.1**
comp=E,0.4nm,0.4s									
VNA3	**Neumayer Olymp**	**51.53**	**158**	P			**P**	**10 56 38.4**	**+0.9**
SNAA	**Sanae**	**53.76**	**158**	P			**P**	**10 56 54.7**	**+0.7**
SNAA	**Sanae**	**53.76**	**158**	P			**P**	**10 56 54.0**	**0.0**
SNAA				IAmb			IAmb	10 56 55.5	
comp=Z,4.2nm,0.9s									
QSPA	**South Pole Qui**	**58.52**	**180**	P			**P**	**10 57 29.6**	**+1.3**
VNDA	**Vanda**	**66.32**	**191**	P			**P**	**10 58 20.5**	**+0.4**
VNDA				IAmb			IAmb	10 58 41.4	
comp=Z,3.0nm,1.3s									

TXAR Lajitas Array 67.68 330 P **P** 10 58 29.9 +0.5
comp=Z,0.2nm,0.7s,baz=168,slow=9.2,SNR=2.9
comp=Z,0.2nm,0.7s
SRBC Serra Branca 81.48 33 *eP* **P** 10 59 48.7 -0.6
SRBC *eS* **P** 10 59 50.6 +1.3
SRBC A A 10 59 51.6
comp=Z,49nm,0.3s
NVAR Mina Array Bea 81.93 325 P **P** 10 59 53.8 +1.8
comp=Z,0.5nm,0.7s,baz=141,slow=5.8,SNR=4.8
comp=Z,0.5nm,0.7s
CASY Casey 82.30 181 P **P** 10 59 51.8 -1.5
CASY IAmb IAmb 11 00 09.7
comp=Z,1.9nm,1.0s
TORD Torodi Ar. Bea 83.56 70 P **P** 11 00 00.4 -0.3
comp=Z,1.1nm,0.7s,baz=247,slow=3.1,SNR=6.3
comp=Z,1.1nm,0.7s
TORD Torodi Ar. Bea 83.56 70 P **P** 11 00 00.7 0.0
TORD IAmb IAmb 11 00 10.2
comp=Z,1.6nm,0.8s
ZALV Zalesovo Beam 152.34 30 PKPbc **PKiKP** 11 07 28.1 +0.2
comp=Z,0.8nm,0.5s,baz=322,slow=4.1,SNR=3.8
ZALV PKPab **PKPab** 11 07 36.9 -0.7
comp=Z,1.4nm,0.6s,baz=303,slow=4.0,SNR=5.2
ZALV Zalesovo Beam 152.34 30 PKPdf **PKPdf** 11 07 19.7 -1.1
ZALV **PKiKP** 11 07 27.9 0.0
MKAR Makanchi Array 155.30 45 PKPab **PKPab** 11 07 50.1 -0.4
comp=Z,0.3nm,0.8s,baz=256,slow=1.2,SNR=3.6

*IDC **25** 10:53:46.9±0.8,53.°68N×35.°37W,h0km,mb3.7/13, mbtmp3.7/15,ML3.3/2,MS3.8/31,Error ellipse: s-maj=28.6km s-min=14.7km az=3.0*
*NEIC **25** 10:53:49.1±1.0,53.°80N±0.°09×35.°3W±0.°1,h10km±1km, mb4.3/37,Error ellipse: s-maj=20.7km s-min=3.4km az=224.0*
ISC 25 10:53:49.5±0.6,53.°7N±0.°1×35.°36W±0.°07,h16km,n78, σ0s63/51,mb4.2/28,MS3.9/27,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NRS	**Narsarsuaq**	**9.19**	**328**			Pn	**Pn**	**10 56 00.4**	**-0.8**
IVI	**Ivigtut**	**10.16**	**323**			Pn	**Pn**	**10 56 14.2**	**-0.2**
BORG	**Borgarnes**	**13.12**	**27**			LR	LR	11 00 18.9	
comp=Z,303nm,21.5s,baz=229,slow=30									
SFJD	**Kangerlussuaq**	**15.21**	**337**			LR	LR	11 02 05.0	
comp=Z,295nm,21.2s,baz=153,slow=33									
SCHQ	**Schefferville** 0.3nm,0.3s,baz=69,slow=12,SNR=5.7	**18.33**	**286**	P			**P**	**10 58 02.5**	**-0.3**
SCHQ				LR			LR	11 03 54.1	
comp=Z,245nm,20.2s,baz=88,slow=33									
2.1nm,0.5s									
SCHQ	**Schefferville**	**18.33**	**286**	P			**P**	**10 58 02.7**	**-0.1**
EKA	**Eskdalemuir Ar** baz=284,slow=8.7	**18.67**	**72**	P			**Pn**	**10 58 07.4**	**+0.6**
1.3nm,0.8s									
GBN	**Guysborough**	**18.81**	**254**	P			**Pn**	**10 58 08.4**	**-0.2**
SUMG	**Summit**	**18.95**	**357**	P			**P**	**10 58 09.2**	**-0.7**
FRB	**Frobisher Bay**	**19.67**	**314**	LR			LR	11 04 20.8	
comp=Z,365nm,18.6s,baz=155,slow=32									
BATG	**Bathurst New B**	**20.45**	**264**	P			**P**	**10 58 25.7**	**-0.4**
HAL	**Halifax**	**20.46**	**255**	P			**P**	**10 58 26.5**	**+0.5**
HAL				IAmb			IAmb	10 58 47.9	
comp=Z,31nm,1.4s									
JMIC	**Jan Mayen**	**20.98**	**24**	LR			LR	11 04 29.9	
comp=Z,278nm,19.1s,baz=264,slow=31									
D62A	**Allapoint, All**	**22.32**	**266**	P			**P**	**10 58 47.2**	**+1.1**
D62A				IAmb			IAmb	10 58 54.7	
comp=Z,13nm,1.2s									
F64A	**Sherman**	**22.54**	**263**	P			**P**	**10 58 48.9**	**+0.4**
F64A				IAmb			IAmb	10 58 55.3	
comp=Z,14nm,1.1s									
EMMW	**East Machias**	**22.66**	**260**	P			**P**	**10 58 50.4**	**+0.7**
EMMW				IAmb			IAmb	10 59 18.5	
comp=Z,19nm,1.4s									
E62A	**Clayton Lake**	**22.84**	**266**	P			**P**	**10 58 52.4**	**+0.8**
E62A				IAmb			IAmb	10 59 06.9	
comp=Z,17nm,1.2s									
ESDC	**Sonseca Array**	**25.47**	**111**	P			**P**	**10 59 16.9**	**+0.3**
comp=Z,3.0nm,1.0s,baz=310,slow=8.2,SNR=12									
ESDC				LR			LR	11 08 01.5	
comp=Z,322nm,19.0s,baz=316,slow=34									
comp=Z,3.0nm,1.0s									
ESDC	**Sonseca Array**	**25.47**	**111**	P			**P**	**10 59 15.8**	**-0.8**
NOA	**NORSAR Array B**	**25.65**	**55**	P			**P**	**10 59 17.3**	**-0.8**
comp=Z,0.7nm,0.8s,baz=276,slow=9.8,SNR=5.4									
NOA				LR			LR	11 08 50.3	
comp=Z,186nm,19.3s,baz=270,slow=35									
comp=Z,0.7nm,0.8s									
TULEG	**Thule**	**26.08**	**343**	P			**P**	**10 59 22.8**	**+1.1**
HFS	**Hagfors**	**26.96**	**56**	P			**P**	**10 59 30.7**	**+0.8**
comp=Z,1.0nm,0.8s,baz=294,slow=16,SNR=2.6									
HFS				LR			LR	11 08 45.1	
comp=Z,326nm,20.7s,baz=280,slow=33									
comp=Z,1.0nm,0.8s									
DAVOX	**Davos/Dischmat**	**29.33**	**85**	LR			LR	11 10 55.8	
comp=Z,292nm,19.9s,baz=261,slow=35									
SADO	**Sadowa**	**29.53**	**270**	LR			LR	11 10 50.3	
comp=Z,577nm,18.7s,baz=70,slow=35									
GERES	**GERESS Array B**	**30.57**	**79**	LR			LR	11 12 00.6	
comp=Z,278nm,19.3s,baz=282,slow=36									
RES	**Resolute Bay**	**31.18**	**334**	LR			LR	11 11 13.0	
comp=Z,92nm,19.8s,baz=72,slow=34									
ARCES	**ARCESS Array B**	**31.26**	**36**	P			**P**	**11 00 08.2**	**+0.2**
comp=Z,1.1nm,0.8s,baz=268,slow=11,SNR=1.6									
ARCES				LR			LR	11 10 56.7	
comp=Z,70nm,20.4s,baz=288,slow=33									
comp=Z,1.1nm,0.8s									
VRAC	**Vranov**	**32.02**	**76**	LR			LR	11 12 50.9	
comp=Z,244nm,18.3s,baz=282,slow=36									
COWI	**Conover**	**34.71**	**280**	P			**P**	**11 00 38.5**	**+0.2**
COWI				IAmb			IAmb	11 00 45.0	
comp=Z,3.3nm,0.9s									
ULM	**Lac du Bonnet**	**36.44**	**290**	LR			LR	11 14 36.1	
comp=Z,248nm,19.3s,baz=102,slow=34									
F36A	**Milaca**	**37.40**	**282**	P			**P**	**11 01 01.6**	**+0.3**
F36A				IAmb			IAmb	11 01 08.8	
comp=Z,8.1nm,1.4s									
VAE	**Valguarnera**	**37.57**	**95**	LR			LR	11 16 00.6	
comp=Z,88nm,18.6s,baz=328,slow=36									
TKL	**Tuckaleechee C**	**38.00**	**262**	LR			LR	11 15 57.6	
comp=Z,236nm,21.8s,baz=65,slow=35									
AKASG	**Malin Array Be**	**38.47**	**67**	P			**P**	**11 01 10.6**	**+0.3**
comp=Z,0.2nm,0.3s,baz=302,slow=8.7,SNR=1.9									
comp=Z,0.2nm,0.3s									
YKA	**Yellowknife Ar**	**40.18**	**315**	LR			LR	11 16 10.1	
comp=Z,139nm,21.9s,baz=68,slow=33									
ECSD	**EROS Data Cent**	**40.42**	**281**	P			**P**	**11 01 27.1**	**+0.4**
SJG	**San Juan**	**42.79**	**226**	LR			LR	11 21 19.2	
comp=Z,28nm,18.0s,baz=72,slow=39									
HHAR	**Hobbs**	**43.60**	**271**	P			**P**	**11 01 52.8**	**+0.1**
HHAR				IAmb			IAmb	11 01 54.1	
comp=Z,5.8nm,1.1s									
W39A	**Magazine**	**44.25**	**270**	P			**P**	**11 01 58.2**	**+0.3**
INK	**Inuvik**	**44.32**	**328**	LR			LR	11 18 51.9	
comp=Z,157nm,21.7s,baz=52,slow=34									
MIAR	**Mount Ida**	**44.57**	**269**	P			**P**	**11 02 00.7**	**+0.2**
143A	**Socs Landing,**	**44.58**	**265**	P			**P**	**11 02 00.7**	**+0.2**
T35A	**Sooner Cattle**	**44.70**	**274**	P			**P**	**11 02 02.1**	**+0.6**
T35A				IAmb			IAmb	11 02 40.9	
comp=Z,5.8nm,1.1s									
BRTR	**Keskin Array B**	**47.45**	**78**	P			**P**	**11 02 23.5**	**+0.2**
comp=Z,0.7nm,0.6s,baz=309,slow=7.3,SNR=2.5									
comp=Z,0.7nm,0.6s									
WMOK	**Wichita Mounta**	**47.53**	**273**	P			**P**	**11 02 23.

TORD					IAmb	IAmb	11 02 49.5			
	comp=Z,3.2nm,1.1s									
HWUT	**Hardware Ranch**	**50.33**	**289**	P		**P**	**11 02 45.0**	**-0.4**		
HWUT					IAmb	IAmb	11 02 46.8			
	comp=Z,5.9nm,1.1s									
MSTX	**Muleshoe**	**50.43**	**275**	P		**P**	**11 02 46.2**	**+0.1**		
MDP	**Montagnes des**	**50.51**	**203**	LR		LR	11 18 14.8			
	comp=Z,79nm,19.7s,baz=314,slow=29									
ILAR	**Eielson Array**	**50.69**	**329**	P		**P**	**11 02 46.9**	**-0.8**		
	comp=Z,0.4nm,1.0s,baz=22,slow=8.2,SNR=3.1									
ILAR					PcP	**PcP**	**11 04 03.6**	**-1.0**		
	comp=Z,0.7nm,1.1s,baz=35,slow=3.3,SNR=2.4									
	comp=Z,0.4nm,1.0s									
PV13	**Radium Mtn., P**	**51.08**	**284**	IAmb		IAmb	11 02 53.1			
	comp=Z,5.3nm,1.1s									
BBB	**Bella Bella**	**51.95**	**309**	LR		LR	11 23 49.1			
	comp=Z,134nm,19.1s,baz=92,slow=35									
SDV	**Santo Domingo**	**52.94**	**226**	LR		LR	11 25 24.4			
	comp=Z,42nm,18.9s,baz=72,slow=36									
J08A	**Circle Bar Ran**	**52.96**	**295**	IAmb		IAmb	11 03 05.5			
	comp=Z,2.8nm,0.9s									
MTPU	**Mount Pierson**	**53.09**	**286**	IAmb		IAmb	11 03 18.2			
	comp=Z,5.7nm,1.4s									
TXAR	**Lajitas Array**	**54.28**	**272**	P		**P**	**11 03 15.3**	**+0.6**		
	comp=Z,0.8nm,0.9s,baz=55,slow=7.8,SNR=5.8									
TXAR					PcP	**PcP**	**11 04 18.5**	**-0.3**		
	comp=Z,0.6nm,0.9s,baz=62,slow=2.1,SNR=2.6									
	comp=Z,0.8nm,0.9s									
X16A	**Lo Mia Camp, P**	**55.20**	**282**	IAmb		IAmb	11 03 29.8			
	comp=Z,2.8nm,0.9s									
NVAR	**Mina Array Bea**	**56.27**	**290**	P		**P**	**11 03 29.2**	**0.0**		
	comp=Z,0.4nm,0.8s,baz=66,slow=2.3,SNR=2.4									
NVAR					LR	LR	11 26 36.1			
	comp=Z,144nm,20.6s,baz=86,slow=35									
	comp=Z,0.4nm,0.8s									
GWY	**Greenwater Val**	**56.94**	**287**	IAmb		IAmb	11 03 42.5			
	comp=Z,6.5nm,1.3s									
SEY	**Seymchan**	**63.50**	**356**	LR		LR	11 30 39.8			
	comp=Z,61nm,20.9s,baz=40,slow=35									
MKAR	**Makanchi Array**	**66.73**	**41**	P		**P**	**11 04 39.4**	**-0.1**		
	comp=Z,0.5nm,0.7s,baz=2.2,slow=4.0,SNR=3.6									
	comp=Z,0.5nm,0.7s									
SONM	**Songino Array**	**73.73**	**26**	P		**P**	**11 05 23.2**	**+0.7**		
	comp=Z,0.5nm,0.4s,baz=335,slow=6.4,SNR=1.6									
	comp=Z,0.5nm,0.4s									
SONM	**Songino Array**	**73.73**	**26**	P		**P**	**11 05 22.9**	**+0.5**		
TSUM	**Tsumeb**	**85.69**	**131**	LR		LR	11 42 08.4			
	comp=Z,30nm,20.2s,baz=330,slow=34									
LSZ	**Lusaka**	**87.44**	**120**	LR		LR	11 45 34.7			
	comp=Z,50nm,20.5s,baz=335,slow=36									
BOSA	**Boshof**	**97.30**	**129**	LR		LR	11 49 19.7			
	comp=Z,62nm,20.4s,baz=358,slow=34									
WRA	**Warramunga Arr**	**145.34**	**17**	PKPbc		**PKPdf**	**11 13 27.0**	**+0.6**		
	comp=Z,0.6nm,0.9s,baz=2.9,slow=3.3,SNR=2.9									

*IDC **25** 10:55:25.5±0.7, 53.91N×35.17W, h0km, mb3.6/10, mbtmp3.6/12, ML3.1/2, MS3.5/2, Error ellipse: s-maj=24.4km s-min=11.6km az=174.0*

ISC 25 10:55:26.9±0.7, 53.9N±0.1×35.24W±0.08, h10km, n17, σ1s 03/20, mb3.8/11, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SCHQ	**Schefferville**	**18.37**	**286**	P		**Pn**	**10 59 41.0**	**-0.5**
	0.1nm,0.3s,baz=73,slow=17,SNR=3.5							
	3.8nm,1.0s							
EKA	**Eskdalemuir Ar**	**18.56**	**72**	P		**Pn**	**10 59 44.3**	**+0.5**
	baz=264,slow=14							
EKA				S		**Sn**	**11 03 10.5**	**-0.6**
	1.0nm,0.7s,baz=282,slow=24,SNR=3.6							
	1.0nm,0.8s							
ESDC	**Sonseca Array**	**25.44**	**111**	P		**P**	**11 00 55.9**	**+1.2**
	3.1nm,1.0s,baz=308,slow=7.8,SNR=5.7							
	3.1nm,1.0s							
NOA	**NORSAR Array B**	**25.52**	**55**	P		**P**	**11 00 55.3**	**+0.1**
	1.2nm,1.1s,baz=276,slow=10.0,SNR=2.5							
	1.2nm,1.1s							
FINES	**FINESS Array B**	**32.52**	**52**	S		**S**	**11 07 12.6**	**+0.5**
	0.5nm,0.7s,baz=289,slow=29,SNR=2.1							
YKA	**Yellowknife Ar**	**40.15**	**315**	P		**P**	**11 03 02.1**	**-0.4**
	0.8nm,1.0s,baz=78,slow=24,SNR=1.9							
YKA					PcP	**PcP**	**11 05 05.5**	**-1.1**
	0.4nm,0.8s,baz=59,slow=3.9,SNR=4.1							
	0.8nm,1.0s							
PDAR	**Pinedale Array**	**48.47**	**289**	P		**P**	**11 04 08.8**	**-0.9**
	1.0nm,0.9s,baz=59,slow=8.8,SNR=5.2							
	1.0nm,0.9s							
TORD	**Torodi Ar. Bea**	**49.96**	**130**	P		**P**	**11 04 20.1**	**-1.0**
	1.4nm,0.9s,baz=334,slow=8.2,SNR=4.6							
TORD					PcP	**PcP**	**11 05 39.0**	**-2.1**
	0.5nm,0.8s,baz=307,slow=2.9,SNR=1.8							
	1.4nm,0.9s							
ILAR	**Eielson Array**	**50.63**	**329**	P		**P**	**11 04 26.9**	**+1.3**
	0.5nm,1.1s,baz=30,slow=7.7,SNR=2.0							
ILAR					PcP	**PcP**	**11 05 42.2**	**-0.7**
	0.9nm,1.1s,baz=28,slow=4.1,SNR=3.5							
	0.5nm,1.1s							
TXAR	**Lajitas Array**	**54.35**	**272**	P		**P**	**11 04 54.1**	**+0.4**
	1.2nm,1.1s,baz=54,slow=4.6,SNR=4.5							
TXAR					PcP	**PcP**	**11 05 56.5**	**-1.0**
	0.5nm,0.8s,baz=64,slow=6.1,SNR=3.8							
	1.2nm,1.1s							
NVAR	**Mina Array Bea**	**56.30**	**290**	P		**P**	**11 05 07.5**	**-0.4**
	0.2nm,0.6s,baz=60,slow=5.3,SNR=4.0							
	0.2nm,0.6s							
ROSC	**El Rosal**	**58.28**	**228**	P		**P**	**11 05 24.3**	**+2.1**
	9.2nm,0.6s,baz=14,slow=19,SNR=5.2							
RCBR	**Riachuelo**	**59.47**	**181**	LR		LR	11 25 06.2	
	comp=Z,39nm,20.0s,baz=99,slow=30							
MKAR	**Makanchi Array**	**66.59**	**42**	P		**P**	**11 06 17.0**	**0.0**
	0.3nm,0.7s,baz=335,slow=8.6,SNR=2.8							
	0.3nm,0.7s							
SONM	**Songino Array**	**73.59**	**26**	P		**P**	**11 07 00.5**	**+0.5**
	0.3nm,0.3s,baz=328,slow=5.1,SNR=1.9							
	0.3nm,0.3s							
NNA	**Nana**	**74.51**	**222**	LR		LR	11 41 34.6	
	comp=Z,25nm,19.1s,baz=354,slow=37							
WRA	**Warramunga Arr**	**145.21**	**17**	PKPbc		**PKPdf**	**11 15 05.0**	**+0.3**
	1.2nm,1.1s,baz=1.6,slow=5.8,SNR=3.6							

*IDC **25** 10:58:43.3±0.9, 53.80N×35.24W, h0km, mb3.6/8, mbtmp3.6/10, ML3.0/2, Error ellipse: s-maj=30.5km s-min=12.3km az=179.0*

ISC 25 10:58:44.8±0.8, 53.8N±0.2×35.29W±0.09, h10km, n10, σ0s 85/13, mb3.6/8, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SCHQ	**Schefferville**	**18.37**	**286**	P		**P**	**11 03 00.1**	**+0.7**
	0.2nm,0.3s,baz=93,slow=8.3,SNR=3.5							
	2.6nm,0.8s							
EKA	**Eskdalemuir Ar**	**18.62**	**72**	P		**P**	**11 03 02.1**	**0.0**
	baz=288,slow=9.5							
EKA				S		**Sn**	**11 06 30.9**	**+0.6**
	1.7nm,0.9s,baz=267,slow=26,SNR=2.6							
	1.8nm,0.9s							
ESDC	**Sonseca Array**	**25.43**	**111**	P		**P**	**11 04 12.9**	**+0.4**
	1.7nm,0.9s,baz=313,slow=9.1,SNR=6.4							
	1.7nm,0.9s							
NOA	**NORSAR Array B**	**25.60**	**55**	P		**P**	**11 04 14.0**	**+0.1**
	0.8nm,1.0s,baz=275,slow=11,SNR=3.4							
	0.8nm,1.0s							
YKA	**Yellowknife Ar**	**40.20**	**315**	P		**P**	**11 06 20.0**	**-0.8**
	0.5nm,1.0s,baz=65,slow=7.7,SNR=3.2							
YKA					PcP	**PcP**	**11 08 22.8**	**-1.8**
	0.3nm,0.7s,baz=68,slow=4.1,SNR=4.0							
	0.5nm,1.0s							
PDAR	**Pinedale Array**	**48.48**	**289**	P		**P**	**11 07 27.0**	**-0.6**
	0.4nm,0.5s,baz=63,slow=6.2,SNR=4.4							
	0.4nm,0.5s							
TORD	**Torodi Ar. Bea**	**49.92**	**130**	P		**P**	**11 07 38.1**	**-0.5**
	1.2nm,0.9s,baz=347,slow=4.9,SNR=4.1							
	1.2nm,0.9s							
ILAR	**Eielson Array**	**50.70**	**329**	P		**P**	**11 07 44.3**	**+0.4**
	0.8nm,1.2s,baz=27,slow=6.4,SNR=4.0							
	0.8nm,1.2s							
TXAR	**Lajitas Array**	**54.32**	**272**	P		**P**	**11 08 12.5**	**+1.1**
	0.9nm,1.0s,baz=55,slow=7.8,SNR=5.4							
TXAR					PcP	**PcP**	**11 09 15.6**	**+0.2**
	0.2nm,0.6s,baz=64,slow=4.2,SNR=2.1							
	0.9nm,1.0s							
NVAR	**Mina Array Bea**	**56.30**	**290**	P		**P**	**11 08 26.0**	**+0.3**
	0.2nm,0.6s,baz=42,slow=1.5,SNR=1.7							
	0.2nm,0.6s							

*VIE **25** 11:01:45.7±0.1, 46.21N×12.51E, h9km±1km, mb1.7/15,*

ml2.4/19, Error ellipse: s-maj=1.4km s-min=0.9km az=19.0
20 km SE of Ospitale
*PRU **25** 11:01:46.7±0.0, 46.20N×12.53E, h5km*
ROM 25 11:01:45.0±0.1, 46.216N±0.005×12.528E±0.006, h6km, ML2.0/14, 3C-3D, Error ellipse: s-maj=0.6km s-min=0.2km az=333.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MLNI	**Malnisio**	**0.09**	**139**	↑	*e*Pg	Pg	11 01 47.7	+0.8
MLNI					*e*Sg	Sg	11 01 49.5	+1.3
CIMO	**Cimolais**	**0.11**	**327**	↓	*e*Pg	Pg	11 01 48.0	+0.7
CIMO					*e*Sg	Sg	11 01 50.0	+1.0
CIMO	**Cimolais**	**0.11**	**327**	↓	*i*P	Pg	11 01 48.0	+0.6
CIMO					S	Sg	11 01 50.0	+1.0
CIMO					AML	AML		
	comp=E,2340μm,0.6s							
CIMO					AML	AML		
	comp=E,2335μm,0.6s							
CIMO					AML	AML		
	comp=N,6110μm,0.1s							
CIMO					AML	AML		
	comp=N,6105μm,0.1s							
CIMO					AML	AML		
CIMO					AML	AML		
CSO	**Casso**	**0.15**	**292**	↓	*e*Pg	Pg	11 01 48.4	+0.3
CSO					*e*Sg	Sg	11 01 50.6	+0.4
CAE	**Caneva**	**0.22**	**197**	↑	*e*Pg	Pg	11 01 49.3	+0.1
CAE					*e*Sg	Sg	11 01 53.1	+1.0
CAE	**Caneva**	**0.22**	**197**	↑	*i*P	Pg	11 01 49.3	+0.1
CAE					S	Sg	11 01 53.3	+1.2
CSMI	**Casera Mimoias**	**0.31**	**16**		*e*Pg	Pg	11 01 51.9	+0.8
MPRI	**Monte Prat**	**0.32**	**85**		*e*Pg	Pb	11 01 52.2	-0.9
MPRI	**Monte Prat**	**0.32**	**85**		P	Pg	11 01 52.2	+1.0
MPRI					S	Sb	11 01 58.0	-0.6
AGOR	**Agordo**	**0.34**	**282**		P	Pg	11 01 51.3	-0.3
AGOR					AML	AML		
	comp=N,102μm,0.5s							
AGOR					AML	AML		
	comp=E,110μm,0.3s							
CLUD	**Cludinico**	**0.34**	**45**		*e*Pg	Pg	11 01 52.6	+0.9
CLUD					*e*Sg	Sb	11 01 58.3	-1.0
CLUD	**Cludinico**	**0.34**	**45**		P	Pg	11 01 52.4	+0.7
CLUD					S	Sb	11 01 58.6	-0.7
VARN	**Col Varnada, M**	**0.37**	**233**		*e*Pg	Pg	11 01 51.6	-0.5
VARN	**Col Varnada, M**	**0.37**	**233**		P	Pg	11 01 51.6	-0.5
VARN					AML	AML		
	comp=E,378μm,0.6s							
VARN					AML	AML		
	comp=N,318μm,0.3s							
VARN					AML	AML		
	comp=E,378μm,0.6s							
FUSE	**Fusea**	**0.38**	**59**		*e*Pg	Pg	11 01 53.2	+0.8
FUSE					*e*Sg	Sb	11 01 59.5	-0.9
FUSE	**Fusea**	**0.38**	**59**		P	Pg	11 01 53.1	+0.7
FUSE					S	Sb	11 01 60.0	-0.5
BOO	**Bordano**	**0.41**	**75**		*e*Pg	Pg	11 01 53.5	+0.6
BOO					*e*Sg	Sb	11 02 00.6	-0.6
BOO	**Bordano**	**0.41**	**75**		P	Pg	11 01 53.6	+0.7
BOO					S	Sb	11 01 59.9	-1.3
BUA	**Buia**	**0.41**	**89**		*e*Pg	Pb	11 01 54.0	-0.7
FVI	**Forni Avoltri**	**0.42**	**25**		*e*P	Pb	11 01 54.1	-0.8
FVI					S	Sb	11 02 00.5	-1.1
FVI					AML	AML		
	comp=N,117μm,0.9s							
FVI					AML	AML		
	comp=E,171μm,0.2s							
ZOU	**Zoufplan**	**0.46**	**42**		*e*Pg	Pb	11 01 54.8	-0.9
ZOU					*e*Sg	Sb	11 02 02.5	-0.3
ZOU	**Zoufplan**	**0.46**	**42**		P	Pg	11 01 54.6	+0.8
ZOU					S	Sb	11 02 01.8	-1.0
TLI	**Talmassons**	**0.50**	**126**		*e*Pg	Pg	11 01 55.1	+0.6
BAD	**Bernadia**	**0.50**	**87**		*e*Pg	Pg	11 01 55.1	+0.5
BAD					*e*Sg	Sb	11 02 03.5	-0.2
BAD	**Bernadia**	**0.50**	**87**		P	Pb	11 01 55.8	-0.4
BAD					S	Sb	11 02 03.5	-0.2
MTLO	**Montello**	**0.50**	**217**		*e*Pg	Pg	11 01 54.6	0.0
VINO	**Villanova**	**0.53**	**85**		*e*Pg	Pg	11 01 55.5	+0.5
ABTA	**Abfaltersbach**	**0.53**	**359**		*e*Pg	Pb	11 01 56.1	-0.7
	comp=E,3.4nm,0.2s,SNR=18							
ABTA					*i* Sg	Sb	11 02 03.8	-1.0
	comp=E,11nm,0.1s							
PLRO	**Paularo**	**0.54**	**52**		*e*Pg	Pb	11 01 56.6	-0.4
PLRO	**Paularo**	**0.54**	**52**		P	Pb	11 01 56.7	-0.3
COLI	**Coloredo**	**0.60**	**98**		*e*Pg	Pg	11 01 56.9	+0.5
PTCC	**Patocco-Chiusa**	**0.60**	**71**		P	Pg	11 01 56.8	+0.3
PTCC					S	Sb	11 02 06.4	-0.4
CGRP	**Cima Grappa**	**0.61**	**237**		P	Pg	11 01 57.2	+0.5
CGRP					AML	AML		
	comp=E,120μm,1.2s							
CGRP					AML	AML		
	comp=N,116μm,0.9s							
CTI	**Castel Tesino**	**0.63**	**255**		P	Pg	11 01 57.0	-0.2
CTI					S	Sb	11 02 06.8	-0.9
CTI					AML	AML		
	comp=N,190μm,0.2s							
CTI					AML	AML		
	comp=E,249μm,0.2s							
ZIAN	**Ziano**	**0.67**	**276**		*e*Pg	Pg	11 01 57.8	-0.1
LSR	**Lussari**	**0.74**	**69**		*e*Pg	Pg	11 01 59.5	+0.3
PRED	**Cave del Predi**	**0.75**	**72**		*e*Pg	Pg	11 01 59.7	+0.3
PRED	**Cave del Predi**	**0.75**	**72**		P	Pg	11 01 59.6	+0.2
PRED					S	Sb	11 02 11.8	+0.7
ACOM	**Acomizza, Ital**	**0.76**	**64**		P	Pb	11 02 00.3	-0.4
DRE	**Drenchia**	**0.78**	**93**		*e*Pg	Pg	11 02 00.1	+0.2
SABO	**M.te Sabotino**	**0.78**	**107**		P	Pb	11 02 00.6	-0.4
RISI	**Rein**	**0.80**	**337**		P	Pb	11 01 02.2	-0.2
RISI					AML	AML		
	comp=E,160μm,0.4s							
RISI					AML	AML		
	comp=N,192μm,0.5s							
KOSI	**Kohlern**	**0.83**	**288**		P	Pg	11 02 01.3	+0.3
KOSI					AML	AML		
	comp=E,61μm,0.4s							
KOSI					AML	AML		
	comp=N,54μm,0.5s							
PANI	**Panarotta**	**0.85**	**259**		*e*Pg	Pb	11 02 02.0	-0.2
MYKA	**Terra Mystica**	**0.88**	**61**		*e*Pg	Pb	11 02 02.3	-0.3
	comp=N,2.5nm,0.2s							
MYKA					*e*Sg	Sb	11 02 15.7	+1.0
	comp=N,8.2nm,0.2s,SNR=5.2							
APPI	**Appiano**	**0.94**	**287**		P	Pb	11 02 03.6	-0.1
APPI					AML	AML		
	comp=E,90μm,0.7s							
APPI					AML	AML		
	comp=N,65μm,0.3s							
APPI					AML	AML		
	comp=E,90μm,0.7s							
ABSI	**Aberstueckl**	**0.98**	**302**		P	Pb	11 02 04.4	-0.1
ABSI					AML	AML		
	comp=N,100μm,0.3s							
ABSI					AML	AML		
	comp=E,118μm,0.3s							
ABSI					AML	AML		
	comp=N,100μm,0.3s							
DOSS	**Dosso del Somm**	**0.99**	**251**		P	Pg	11 02 04.2	+0.2
DOSS					AML	AML		
	comp=E,117μm,1.0s							
DOSS					AML	AML		
	comp=N,114μm,1.3s							
DOSS					AML	AML		
	comp=E,98μm,0.3s							
DOSS					AML	AML		
	comp=N,97μm,1.0s							
DOSS					AML	AML		
	comp=N,98μm,1.0s							
DOSS					AML	AML		
	comp=N,115μm,1.3s							
DOSS					AML	AML		
	comp=E,117μm,1.0s							
KBA	**Koelnbreinsper**	**1.03**	**33**		*e*Pg	Pb	11 02 05.7	+0.4
	comp=E,1.0nm,0.1s,SNR=5.3							
KBA					*e*Sg	Sb	11 02 19.9	+0.7
	comp=E,4.0nm,0.2s							
TEOL	**Teolo**	**1.04**	**215**		P	Pg	11 02 05.2	+0.2
TEOL					S	Sb	11 02 20.1	+0.7
ROSI	**Rosskopf**	**1.05**	**313**		P	Pb	11 02 06.0	+0.3
ROSI					AML	AML		
	comp=E,63μm,0.4s							
ROSI					AML	AML		
	comp=N,71μm,0.4s							
ZOVE	**Zovencedo**	**1.05**	**224**		*e*P	Pn	11 02 06.1	-0.2
MARN	**Marana (Italy)**	**1.09**	**238**		P	Pb	11 02 06.5	+0.3
GAGG	**Gaggia**	**1.10**	**264**		P	Pg	11 02 06.2	+0.2
GAGG					AML	AML		
	comp=E,71μm,1.0s							
GAGG					AML	AML		
	comp=N,77μm,1.5s							
GAGG					AML	AML		
	comp=E,71μm,1.0s							
GAGG					AML	AML		
	comp=N,78μm,1.5s							
LUSI	**Trento, Gardas**	**1.13**	**257**		P	Pb	11 02 07.1	+0.1
LUSI					S	Sb	11 02 22.4	+0.4
LUSI					AML	AML		
	comp=N,222μm,0.3s							
LUSI					AML	AML		
	comp=E,102μm,0.2s							
ROVR	**Rover Verones**	**1.17**	**241**		P	Pg	11 02 07.3	0.0
VARA	**Varagna**	**1.20**	**252**		P	Pb	11 02 08.2	0.0
WTTA	**Wattenberg**	**1.22**	**330**		*e*Pg	Pn	11 02 09.4	+0.7
	comp=E,4.7nm,0.1s,SNR=9.6							
WTTA					*e*Sg	Sn	11 02 25.5	-0.1
	comp=E,20nm,0.4s							
WTTA	**Wattenberg**	**1.22**	**330**		P	Pb	11 02 08.4	-0.1
WTTA					AML	AML		
	comp=N,31μm,0.3s							
WTTA					AML	AML		
	comp=E,55μm,0.4s							
WATA	**Walderalm**	**1.30**	**330**		*e*Pg	Pb	11 02 10.8	+1.0
	comp=E,4.0nm,0.2s,SNR=8.5							
WATA					*e*Sn	Sn	11 02 28.7	+1.1
	comp=E,5.1nm,0.2s							
SQTA	**Sankt Quirin**	**1.35**	**318**		*e*Pg	Pg	11 02 11.7	+0.8
	comp=E,4.8nm,0.2s,SNR=5.4							
SQTA					*e*Sn	Sn	11 02 30.1	+1.2
	comp=E,3.8nm,0.2s							
ZEN8	**San Zeno di Mo**	**1.38**	**246**		AML	AML		
	comp=N,7522μm,1.0s							
ZEN8					AML	AML		
	comp=E,16445μm,1.6s							
ZEN8					AML	AML		
	comp=N,7485μm,1.0s							
ZEN8					AML	AML		
	comp=E,16425μm,1.6s							
MAGA	**Magasa**	**1.40**	**252**		AML	AML		
	comp=E,177μm,0.3s							
MAGA					AML	AML		
	comp=N,162μm,0.4s							
MAGA					AML	AML		
	comp=E,176μm,0.3s							
MABI	**Malga Bissina**	**1.41**	**264**		AML	AML		
	comp=N,69μm,0.3s							
MABI					AML	AML		
	comp=E,44μm,1.3s							
MABI					AML	AML		
	comp=N,69μm,0.3s							
MOSI	**Grossmontoni**	**1.43**	**287**		P	Pb	11 02 11.9	-0.2
OBKA	**Obir**	**1.43**	**77**		*e*Sg	Sg	11 02 32.9	+2.0
	comp=N,8.7nm,0.3s							
FETA	**Feichten**	**1.48**	**304**		*e*Pg	Pg	11 02 13.5	+0.2
	comp=N,0.9nm,0.1s,SNR=5.8							
FETA					*i* Sn	Sg	11 02 32.6	+0.1
	comp=N,0.9nm,0.1s							
MOTA	**Moosalm**	**1.50**	**320**		*e*Pg	Pg	11 02 14.6	+1.0
	comp=N,1.8nm,0.2s							
MOTA					*e*Sg	Sg	11 02 35.8	+2.8
	comp=N,3.7nm,0.3s							
SALO	**Salr**	**1.52**	**248**		P	Pn	11 02 12.9	+0.2
BRJN	**Brijuni**	**1.57**	**146**		*e*Pn	Pn	11 02 13.3	0.0
BRJN					Sg	Sn	11 02 34.0	+0.1
BRJN	**Brijuni**	**1.57**	**146**		*e*P	Pb	11 02 14.0	-0.3
BRJN					S	Sg	11 02 35.1	-0.1
SBPO	**S.Benedetto Po**	**1.62**	**225**		AML	AML		
	comp=N,2705μm,0.1s							
SBPO					AML	AML		
	comp=E,12715μm,0.1s							
SMRN	**Sveta Marina**	**1.64**	**135**		*e*Pn	Pn	11 02 13.9	-0.5
SMRN					Sn	Sn	11 02 35.4	-0.4
BIOA	**Bad Ischl, Aus**	**1.66**	**27**		Sg	Sg	11 02 41.7	+3.4
	comp=E,7.9nm,0.3s,SNR=5.2							
RETA	**Reutte**	**1.76**	**317**		*e*Pg	Pg	11 02 19.9	+1.3
	comp=E,1.9nm,0.2s							
MOA	**Molln**	**2.02**	**35**		*e*Pg	Pg	11 02 23.2	-0.5
	comp=E,0.8nm,0.2s							
MOA					*e*Sg	Sg	11 02 51.0	+1.2
	comp=E,2.0nm,0.2s							
DAVA	**Damuels**	**2.11**	**301**		*e*Pg	Pg	11 02 25.6	+0.2
	comp=E,1.0nm,0.2s							
DAVA					*e*Sg	Sg	11 02 54.2	+1.4
	comp=E,9.4nm,0.4s							
VIRC	**Vir**	**2.62**	**136**		*e*Pn	Pn	11 02 27.6	-0.2
VIRC					Sn	Sn	11 02 59.1	-0.9
DUGI	**Dugi Otok**	**2.86**	**140**		*e*Pn	Pn	11 02 30.3	-0.8
DUGI					Sn	Sn	11 03 03.2	-2.6
CKRC	**Cesky Krumlov**	**2.87**	**24**		*e*SN	Sn	11 03 08.7	+2.5
KHC	**Kasperske Hory**	**3.00**	**13**		*e*PN	Pn	11 02 34.6	+1.5
KHC					*e*SN	Sn	11 03 11.7	+2.2
KHC					*e*SG	Sg	11 03 23.3	+2.0
ZIRJ	**Zirje**	**3.38**	**138**		*e*Pn	Pn	11 02 38.0	-0.3
ZIRJ					Sn	Sn	11 03 16.5	-2.3

*IDC **25** 11:07:26.6±1.1, 35.41N×140.84E, h0km, mb3.6/7, mbtmp3.7/10, ML2.1/2, MS2.8/3, Error ellipse: s-maj=33.4km s-min=17.6km az=82.0*
*JMA **25** 11:07:31.6±0.2, 35.6N±0.5×141.1E±1.0, h37km±1km, MV3.3/39, NEAR CHOSHI CITY*

ISC 25 11:07:29.8±1.5, 35.46N±0.05×141.14E±0.08, h27km±10km, n29, σ1s 81/28, mb3.7/7, 9D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.33**	**318**	↓	*i*P	**Pn**	**11 07 38.6**	**-0.3**
CHOJ					↓S	**Sb**	**11 07 43.4**	**+0.8**
JSMT	**Sammumatsuo**	**0.59**	**289**	↓	*

0.2nm,0.7s,baz=268,slow=6.0,SNR=2.7
0.2nm,0.7s
WRA Warramunga Arr 55.47 188 P **P** **11 17 02.8 +0.6**
0.7nm,0.7s,baz=13,slow=8.2,SNR=12
0.7nm,0.7s
FINES FINESS Array B 70.11 332 P **P** **11 18 39.6 +0.4**
0.3nm,0.3s,baz=57,slow=7.0,SNR=5.9
0.3nm,0.3s
NOA NORSAR Array B 75.55 337 P **P** **11 19 12.4 +0.7**
0.5nm,0.6s,baz=40,slow=5.7,SNR=3.5
0.5nm,0.6s

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*IDC **25** 11:21:08.7±4.8, 36°.42N×71°.44E, h73km±33km, mb3.3/4, mbtmp3.6/10, ML3.5/6, Error ellipse: s-maj=57.4km s-min=24.0km az=141.0*
*NNC **25** 11:21:15.7±2.5, 36°.83N×71°.41E, h158km±54km, mb3.1, mpv3.9, Error ellipse: s-maj=25.3km s-min=15.4km az=25.0*
ISC 25 11:21:12.3±1.7, 36°.6N±0°.1×71°.2E±0°.1, h100km, n19, σ1§48/23, mb3.6/4, 4C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.83**	**19**	P		**P**	**Pn**	**11 22 37.7**	**+1.0**
	SNR=35								
UCH	**Uchtor**	**6.16**	**24**	P		P	Pn	11 22 42.2	+1.0
EKS2	SNR=9.8 **Erkin-Say**	**6.35**	**18**	P		P	Pn	11 22 44.6	+1.2
	SNR=7.5								
KK31	**Karatay Array**	**6.48**	**356**	P		**P**	**Pn**	**11 22 46.1**	**+1.0**
	8.6nm,0.5s,baz=183,slow=17,SNR=56								
KK31				⇑S			**Sn**	**11 23 58.3**	**+0.8**
	1.8nm,0.3s,baz=185,slow=25,SNR=4.8								
AAK	**Ala-Archa**	**6.53**	**22**	P		P	Pn	11 22 47.1	+1.2
	SNR=6.9								
AAK	**Ala-Archa**	**6.53**	**22**	P		P	Pn	11 22 45.7	-0.1
	7.1nm,0.3s,baz=171,slow=7.1,SNR=20								
AAK				S			**Sn**	**11 23 57.9**	**-0.9**
	2.8nm,0.4s,baz=350,slow=9.9,SNR=4.9								
	12nm,0.3s								
CHMS	**Chumysh**	**6.93**	**22**	⇓P		P	Pn	11 22 51.3	0.0
	5.7nm,0.7s								
CHMS				⇑S			**Sn**	**11 24 06.8**	**-1.8**
	3.7nm,0.6s								
TKM2	**Tokmak 2**	**7.15**	**27**	P		P	Pn	11 22 55.1	+0.7
	SNR=7.6								
TKM2	**Tokmak 2**	**7.15**	**27**	⇑P		P	Pn	11 22 54.7	+0.3
	3.5nm,0.5s								
GEYT	**Ailbeck**	**10.47**	**281**	P		P	Pn	11 23 38.9	-0.6
	1.0nm,0.3s,baz=133,slow=10,SNR=5.6								
GEYT				S			**Sn**	**11 25 31.5**	**-3.3**
	3.0nm,0.5s,baz=110,slow=17,SNR=3.3								
	2.4nm,0.3s								
MKAR	**Makanchi Array**	**13.11**	**36**	P		P	Pn	11 24 11.3	-3.2
	0.1nm,0.3s,baz=214,slow=12,SNR=1.7								
	0.1nm,0.3s								
KURBB	**Kurchatov Arra**	**14.96**	**18**	P		P	Pn	11 24 37.9	-0.4
	baz=205,slow=10,SNR=5.4								
	0.4nm,0.6s								
AB31	**Akbulak array**	**15.03**	**331**	⇑P		P	Pn	11 24 39.0	-0.2
	0.7nm,0.5s,baz=138,slow=13,SNR=18								
AKTO	**Aktyubinsk**	**16.73**	**330**	P		P	P	11 25 01.6	+0.6
	0.4nm,0.3s,baz=142,slow=13,SNR=2.9								
	0.9nm,0.3s								
ZALV	**Zalesovo Beam**	**19.74**	**24**	P		P	P	11 25 32.9	-1.0
	0.3nm,0.3s,baz=210,slow=9.3,SNR=3.8								
	0.6nm,0.3s								
FINES	**FINESS Array B**	**37.45**	**326**	P		P	P	11 28 16.5	+0.9
	0.3nm,0.3s,baz=126,slow=8.9,SNR=7.9								
	0.3nm,0.3s								
HFS	**Hagfors**	**43.04**	**322**	P		P	P	11 29 03.7	+2.0
	0.5nm,0.3s,baz=99,slow=9.3,SNR=2.2								
	0.5nm,0.3s								
NOA	**NORSAR Array B**	**44.35**	**323**	P		P	P	11 29 14.4	+2.1
	0.3nm,0.5s,baz=96,slow=7.7,SNR=4.4								
	0.3nm,0.5s								
TORD	**Torodi Ar. Bea**	**65.85**	**269**	P		P	P	11 31 48.0	+0.5
	0.4nm,0.5s,baz=55,slow=5.2,SNR=5.6								
	0.4nm,0.5s								

DJA 25 11:27:34.6±0.3, 4°S±3°×12°6E±°, h10km, M3.7/13, mb3.9/7, mB4.7/3, MLv3.6/13, Mw(mB)4.0/3, Buru

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**1.07**	**67**	P		P	Pg	11 27 54.7	-0.6
SANI	**Sanana**	**1.60**	**356**	P		P	Pn	11 28 01.0	-2.0
AAI	**Ambon**	**2.08**	**91**	P		P	Pn	11 28 10.3	+0.7
LBMI	**Labuha**	**3.31**	**25**	P		P	Pn	11 28 27.4	+0.9
APSI	**Ampana**	**5.23**	**301**	P		P	Pn	11 28 52.2	-0.7
	0.1nm777nm15nm,0.7s								
BSSI	**Bau Bau, Buton**	**6.12**	**246**	P		P	Pn	11 29 05.2	+0.1
	0.1nm1µm15nm,1.2s								
FAKI	**Fak Fak**	**6.17**	**83**	P		P	Pn	11 29 05.3	-0.6
	0.1nm16nm,1.3s								
EDFI	**Ende, Flores**	**6.70**	**221**	P		P	Pn	11 29 14.0	+0.8
	0.0nm3.2nm,1.1s								
MPSI	**Mapaga**	**7.37**	**302**	P		P	Pn	11 29 23.9	+1.6

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*IDC **25** 11:28:28.3±0.9, 53°.98N×35°.69W, h0km, mb3.8/18, mbtmp3.8/20, ML3.0/2, Error ellipse: s-maj=29.2km s-min=12.8km az=3.0*
*NEIC **25** 11:28:29.9±2.2, 54°.0N±0°.2×35°.4W±0°.2, h11km±5km, mb4.3/21, Error ellipse: s-maj=21.9km s-min=14.8km az=188.0*
ISC 25 11:28:30.6±0.5, 53°.9N±0°.1×35°.56W±0°.06, h16km, n48, σ1§95/50, mb4.0/26, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SCHQ	**Schefferville**	**18.18**	**286**	P		**P**	**Pn**	**11 32 40.4**	**-1.7**
	0.2nm,0.3s,baz=65,slow=10,SNR=4.9								
	2.5nm,0.7s								
SCHQ	**Schefferville**	**18.18**	**286**	P		**P**		**11 32 42.5**	**+0.2**
EKA	**Eskdalemuir Ar**	**18.73**	**72**	P		**P**		**11 32 47.6**	**-0.8**
	baz=275,slow=7.8								
	1.3nm,0.9s								
GBN	**Guysborough**	**18.74**	**254**	P		**Pn**		**11 32 48.8**	**0.0**
BATG	**Bathurst New B**	**20.35**	**264**	P		Pn		11 33 08.1	-0.1
GGN	**Saint George**	**21.97**	**259**	P		**P**		**11 33 23.2**	**-0.3**
GGN					IAmb	IAmb		11 33 26.5	
	comp=Z,7.6nm,0.8s								
D62A	**Allapoint, All**	**22.21**	**266**	P		**P**		**11 33 25.9**	**-0.1**
D62A					IAmb	IAmb		11 33 40.8	
	comp=Z,18nm,1.4s								
F64A	**Sherman**	**22.44**	**262**	P		**P**		**11 33 27.7**	**-0.8**
F64A					IAmb	IAmb		11 33 32.6	
	comp=Z,9.3nm,1.4s								
ESDC	**Sonseca Array**	**25.62**	**111**	P		**P**		**11 34 00.3**	**+1.1**
	comp=Z,2.2nm,0.9s,baz=313,slow=9.5,SNR=12								
	comp=Z,2.2nm,0.9s								
ESDC	**Sonseca Array**	**25.62**	**111**	P		**P**		**11 33 58.8**	**-0.4**
NOA	**NORSAR Array B**	**25.66**	**55**	P		**P**		**11 33 59.1**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=273,slow=9.4,SNR=4.8								
	comp=Z,0.6nm,0.7s								
GERES	**GERESS Array B**	**30.65**	**79**	P		**P**		**11 34 44.4**	**+0.4**
	comp=Z,0.5nm,0.8s,baz=325,slow=6.8,SNR=4.7								
	comp=Z,0.5nm,0.8s								
GERES	**GERESS Array B**	**30.65**	**79**	P		**P**		**11 34 43.1**	**-0.9**
EUNU	**Eureka**	**30.84**	**345**	P		**P**		**11 34 44.6**	**-0.7**
EUNU					IAmb	IAmb		11 34 45.6	
	comp=Z,4.5nm,1.2s								
ARCES	**ARCESS Array B**	**31.22**	**36**	P		**P**		**11 34 50.1**	**+1.4**
	comp=Z,1.7nm,0.8s,baz=307,slow=8.9,SNR=3.7								
	comp=Z,1.7nm,0.8s								
FCC	**Fort Churchill**	**31.91**	**303**	P		**P**		**11 34 54.7**	**-0.1**
FCC					IAmb	IAmb		11 34 56.2	
	comp=Z,5.4nm,1.2s								
FINES	**FINESS Array B**	**32.66**	**52**	P		**P**		**11 35 01.9**	**+0.6**
	comp=Z,2.0nm,0.8s,baz=309,slow=6.6,SNR=8.7								
	comp=Z,2.0nm,0.8s								
FINES	**FINESS Array B**	**32.66**	**52**	P		**P**		**11 35 01.8**	**+0.4**
FIA1	**FINESS Array S**	**32.66**	**52**	P		**P**		**11 35 01.1**	**-0.2**
FIA1					IAmb	IAmb		11 35 22.2	
	comp=Z,5.1nm,1.0s								
KEST	**Kesra**	**35.93**	**102**	P		**P**		**11 35 31.9**	**+1.8**
	comp=Z,3.1nm,0.8s,baz=290,slow=8.3,SNR=4.3								
	comp=Z,3.1nm,0.8s								
AKASG	**Malin Array Be**	**38.52**	**67**	P		**P**		**11 35 53.2**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=298,slow=8.3,SNR=1.7								
	comp=Z,0.2nm,0.3s								
MLR	**Muntele Rosu**	**39.51**	**76**	P		**P**		**11 36 00.0**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=293,slow=7.7,SNR=1.6								
	comp=Z,0.9nm,0.5s								
YKA	**Yellowknife Ar**	**40.00**	**315**	P		**P**		**11 36 03.4**	**-0.7**
	comp=Z,0.6nm,0.8s,baz=59,slow=8.7,SNR=2.0								
YKA					PcP		**PcP**	**11 38 08.4**	**-0.3**
	comp=Z,0.9nm,0.9s,baz=61,slow=3.3,SNR=4.3								
	comp=Z,0.6nm,0.8s								
ECSD	**EROS Data Cent**	**40.28**	**281**	P		**P**		**11 36 07.8**	**+1.1**
WHAR	**Wooly Hollow**	**43.18**	**268**	P		**P**		**11 36 31.8**	**+1.4**
WHAR					IAmb	IAmb		11 36 32.5	
	comp=Z,3.6nm,0.8s								
BRTR	**Keskin Array B**	**47.53**	**78**	P		**P**		**11 37 05.6**	**+0.5**
	comp=Z,1.1nm,0.8s,baz=318,slow=4.7,SNR=4.2								
	comp=Z,1.1nm,0.8s								
BRTR	**Keskin Array B**	**47.53**	**78**	P		**P**		**11 37 03.8**	**-1.3**
BMAR	**Burnt Mountain**	**48.01**	**331**	P		**P**		**11 37 09.0**	**+0.7**
PD31	**Pinedale Array**	**48.28**	**289**	P		**P**		**11 37 11.1**	**+0.1**
PD31					IAmb	IAmb		11 37 17.1	
	comp=Z,3.7nm,1.3s								
PDAR	**Pinedale Array**	**48.28**	**289**	P		**P**		**11 37 10.3**	**-0.6**
	comp=Z,1.0nm,0.6s,baz=76,slow=6.8,SNR=15								
	comp=Z,1.0nm,0.6s								
PDAR	**Pinedale Array**	**48.28**	**289**	P		**P**		**11 37 10.7**	**-0.3**
ARU	**Arti**	**49.72**	**47**	P		**P**		**11 37 22.5**	**+1.0**
	comp=Z,1.8nm,0.2s,baz=287,slow=19,SNR=1.5								
	comp=Z,1.8nm,0.2s								
TOAO	**Torodi Ar. Sit**	**50.12**	**130**	P		**P**		**11 37 24.2**	**-0.7**
TORD	**Torodi Ar. Bea**	**50.12**	**130**	P		**P**		**11 37 21.9**	**-3.1**
	comp=Z,0.7nm,0.8s,baz=341,slow=7.8,SNR=3.9								
TORD	**Torodi Ar. Bea**	**50.12**	**130**	P		**P**		**11 37 24.2**	**-0.7**
TORD					IAmb	IAmb		11 37 35.5	
	comp=Z,3.9nm,1.4s								
HWUT	**Hardware Ranch**	**50.17**	**289**	P		**P**		**11 37 27.0**	**+1.7**
ILAR	**Eielson Array**	**50.51**	**329**	P		**P**		**11 37 26.7**	**-0.7**
	comp=Z,0.5nm,0.9s,baz=11,slow=7.9,SNR=4.4								
ILAR					PcP		**PcP**	**11 38 43.9**	**-1.2**
	comp=Z,0.8nm,1.0s,baz=12,slow=2.2,SNR=3.9								
	comp=Z,0.5nm,0.9s								
ILAR	**Eielson Array**	**50.51**	**329**	P		**P**		**11 37 27.8**	**+0.4**
PV11	**David Mesa, Pa**	**50.86**	**284**	P		**P**		**11 37 32.9**	**+2.3**
KOPT	**Kop Dagi**	**51.26**	**73**	P		**P**		**11 37 32.9**	**-0.8**
IMAR	**Indian Mountai**	**51.62**	**333**	P		**P**		**11 37 35.4**	**-0.3**
TXAR	**Lajitas Array**	**54.16**	**272**	P		**P**		**11 37 54.3**	**-0.7**
	comp=Z,0.5nm,0.9s,baz=41,slow=8.4,SNR=5.8								
TXAR					PcP		**PcP**	**11 38 59.7**	**+0.2**
	comp=Z,0.7nm,1.0s,baz=68,slow=5.0,SNR=3.2								
	comp=Z,0.5nm,0.9s								
TXAR	**Lajitas Array**	**54.16**	**272**	P		**P**		**11 37 54.6**	**-0.4**
TIXI	**Tiksi**	**54.28**	**6**	P		**P**		**11 37 54.9**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=288,slow=13,SNR=1.9								
	comp=Z,0.7nm,0.3s								
NVAR	**Mina Array Bea**	**56.11**	**290**	P		**P**		**11 38 09.4**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=49,slow=8.5,SNR=1.7								
	comp=Z,0.3nm,0.6s								
PNTR	**Pine Nut**	**56.36**	**292**	P		**P**		**11 38 13.2**	**+2.3**
ZALV	**Zalesovo Beam**	**61.76**	**35**	P		**P**		**11 38 47.1**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=306,slow=2.8,SNR=2.0								
	comp=Z,0.4nm,0.5s								
MKAR	**Makanchi Array**	**66.70**	**41**	P		**P**		**11 39 19.3**	**-1.1**
	comp=Z,1.0nm,0.8s,baz=358,slow=7.3,SNR=3.7								
	comp=Z,1.0nm,0.8s								

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*IDC **25** 11:34:25.1±0.6, 54°.09N×35°.54W, h0km, mb4.0/22, mbtmp4.0/25, ML3.4/3, MS3.8/60, Error ellipse: s-maj=20.2km s-min=10.9km az=174.0*
*NEIC **25** 11:34:27.7±2.3, 53°.9N±0°.1×35°.5W±0°.2, h11km±4km, mb4.6/62, Error ellipse: s-maj=18.3km s-min=13.1km az=181.0*
ISC 25 11:34:27.9±0.5, 53°.88N±0°.10×35°.57W±0°.05, h16km, n144, σ1§83/104, mb4.5/49, MS3.9/56, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**13.06**	**28**	LR		LR		11 40 55.6	
	comp=Z,235nm,21.1s,baz=228,slow=30								
H07N1	**FLORES T-PHASE**	**14.51**	**166**	T		T		11 52 33.2	
SFJD	**Kangerlussuaq**	**15.04**	**337**	Pn		**Pn**		**11 37 57.9**	**-1.5**
	0.6nm,0.3s,baz=180,slow=4.0,SNR=2.0								
SFJD				LR		LR		11 42 40.7	
	comp=Z,344nm,20.4s,baz=142,slow=33								
	6.4nm,0.7s								
SCHQ	**Schefferville**	**18.17**	**286**	P		**Pn**		**11 38 38.8**	**-0.4**
	0.4nm,0.3s,baz=66,slow=8.0,SNR=8.2								
SCHQ				LR		LR		11 44 41.1	
	comp=Z,168nm,20.4s,baz=94,slow=34								
	3.8nm,0.6s								
SCHQ	**Schefferville**	**18.17**	**286**	P		**Pn**		**11 38 38.9**	**-0.4**
GBN	**Guysborough**	**18.73**	**254**	P		**P**		**11 38 45.2**	**-0.4**
EKA	**Eskdalemuir Ar**	**18.74**	**72**	P		**P**		**11 38 44.0**	**-1.7**
	baz=281,slow=7.9								
EKA				LR		LR		11 44 42.0	
	comp=Z,443nm,18.2s,baz=272,slow=33								
	1.6nm,0.9s								
SUMG	**Summit**	**18.81**	**357**			**Pn**		**11 38 46.9**	**-0.4**
FRB	**Frobisher Bay**	**19.49**	**313**	LR		LR		11 44 56.3	
	comp=Z,418nm,18.9s,baz=77,slow=33								
BATG	**Bathurst New B**	**20.34**	**264**			Pn		11 39 06.6	+1.2
BATG					IAmb	IAmb		11 39 11.6	
	comp=Z,35nm,1.5s								
LMN	**Caledonia Moun**	**20.37**	**259**	P		**P**		**11 39 04.3**	**+0.8**
JMIC	**Jan Mayen**	**20.90**	**25**	LR		LR		11 45 06.5	
	comp=Z,248nm,18.9s,baz=247,slow=31								
GGN	**Saint George**	**21.96**	**259**	P		**P**		**11 39 22.1**	**+1.3**
GGN					IAmb	IAmb		11 39 26.0	
	comp=Z,26nm,1.2s								
D62A	**Allapoint, All**	**22.21**	**266**	P		**P**		**11 39 25.4**	**+2.0**
G65A	**Princeton**	**22.34**	**260**	P		**P**		**11 39 24.5**	**-0.2**
G65A					IAmb	IAmb		11 39 29.0	
	comp=Z,29nm,1.4s								
F64A	**Sherman**	**22.43**	**262**	P		**P**		**11 39 27.2**	**+1.5**
NC204	**NORSAR Array S**	**25.43**	**54**	P		**P**		**11 39 57.9**	**+3.4**
NC204					IAmb	IAmb		11 39 58.8	
	comp=Z,19nm,1.2s								
ESDC	**Sonseca Array**	**25.63**	**111**	P		**P**		**11 39 56.4**	**-0.2**
	comp=Z,4.0nm,0.9s,baz=316,slow=7.0,SNR=6.0								
ESDC				LR		LR		11 48 03.9	
	comp=Z,308nm,18.1s,baz=324,slow=32								
	comp=Z,4.0nm,0.9s								
NB2	**NORSAR Subarra**	**25.67**	**55**	P		**P**		**11 39 55.7**	**-1.0**
	comp=Z,15nm,1.4s,baz=276,slow=9.3								
NOA	**NORSAR Array B**	**25.67**	**55**	P		**P**		**11 39 55.4**	**-1.3**
	comp=Z,1.6nm,0.8s,baz=275,slow=9.4,SNR=6.5								
	comp=Z,1.6nm,0.8s								
TRQ	**Mont Tremblant**	**25.90**	**269**	P		**P**		**11 39 59.5**	**+0.5**
HFS	**Hagfors**	**26.99**	**57**	P		**P**		**11 40 05.4**	**-3.2**
	comp=Z,0.8nm,0.8s,baz=292,slow=15,SNR=1.6								
	comp=Z,0.8nm,0.8s								
CLL	**Collm**	**29.16**	**75**	*e*P		**P**		**11 40 29.0**	**+1.0**
CLL				*i* Pmax				11 40 30.9	
	comp=Z,7.0nm,1.2s								
CLL				*i* x		x		11 40 34.2	
	comp=Z,4.0nm,1.0s								
CLL				*e*S		**S**		**11 45 22.0**	**+2.7**
CLL				*e*SS		**SnSn**		**11 46 54.0**	**+10**
CLL				L		L		11 50 00.0	
	comp=Z,100nm,20.9s								
SADO	**Sadowa**	**29.40**	**270**	P		**P**		**11 40 29.0**	**-1.2**
	comp=Z,2.1nm,0.5s,baz=45,slow=8.8,SNR=4.2								
SADO				LR		LR		11 51 26.4	
	comp=Z,553nm,18.5s,baz=62,slow=35								
	comp=Z,2.1nm,0.5s								
SADO	**Sadowa**	**29.40**	**270**	P		**P**		**11 40 29.5**	**-0.7**
SADO					IAmb	IAmb		11 40 35.6	
	comp=Z,13nm,1.4s								
MDT	**Midelt**	**30.44**	**121**	LR		LR		11 51 11.1	
	comp=Z,92nm,20.2s,baz=338,slow=33								
GERES	**GERESS Array B**	**30.66**	**79**	P		**P**		**11 40 41.5**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=264,slow=7.8,SNR=5.0								
GERES				LR		LR		11 52 38.1	
	comp=Z,202nm,18.1s,baz=292,slow=36								
	comp=Z,0.7nm,0.8s								
RES	**Resolute Bay**	**31.00**	**334**	LR		LR		11 51 48.3	
	comp=Z,126nm,18.7s,baz=76,slow=34								
ARCES	**ARCESS Array B**	**31.23**	**36**	P		**P**		**11 40 43.2**	**-2.9**
	comp=Z,1.4nm,0.9s,baz=316,slow=8.5,SNR=2.2								
ARCES				LR		LR		11 51 57.1	
	comp=Z,44nm,18.8s,baz=292,slow=34								
	comp=Z,1.4nm,0.9s								
ARCES	**ARCESS Array B**	**31.23**	**36**	P		**P**		**11 40 45.0**	**-1.1**
ARCES					IAmb	IAmb		11 40 53.1	
	comp=Z,12nm,1.4s								
FCC	**Fort Churchill**	**31.90**	**303**	P		**P**		**11 40 53.4**	**+1.3**
VRAC	**Vranov**	**32.12**	**77**	LR		LR		11 53 28.6	
	comp=Z,242nm,18.6s,baz=271,slow=36								
FINES	**FINESS Array B**	**32.66**	**52**	P		**P**		**11 40 56.0**	**-2.7**
	comp=Z,1.6nm,1.0s,baz=289,slow=8.7,SNR=2.0								
FINES				LR		LR		11 52 20.1	
	comp=Z,191nm,21.4s,baz=288,slow=33								
	comp=Z,1.6nm,1.0s								
FINES	**FINESS Array B**	**32.66**	**52**	P		**P**		**11 40 57.0**	**-1.8**
PABE	**Paberze**	**33.54**	**63**	P		**P**		**11 41 08.8**	**+2.3**
COWI	**Conover**	**34.56**	**279**	P		**P**		**11 41 15.9**	**+0.4**
COWI					IAmb	IAmb		11 41 21.0	
	comp=Z,10.0nm,1.2s								
EYMN	**Ely**	**34.95**	**284**	P		**P**		**11 41 20.1**	**+1.2**
EYMN					IAmb	IAmb		11 41 23.5	
	comp=Z,13nm,1.3s								
G40A	**Rib Lake**	**35.65**	**279**	P		**P**		**11 41 25.5**	**+0.6**
KEST	**Kesra**	**35.94**	**102**	P		**P**		**11 41 27.8**	**+0.3**
	comp=Z,5.5nm,0.8s,baz=20,slow=1.5,SNR=6.6								
	comp=Z,5.5nm,0.8s								
KEST	**Kesra**	**35.94**	**102**	P		**P**		**11 41 26.2**	**-1.3**
KEST					IAmb	IAmb		11 41 31.2	
	comp=Z,8.9nm,1.1s								
ULM	**Lac du Bonnet**	**36.27**	**290**	P		**P**		**11 41 29.1**	**-1.0**
	comp=Z,5.1nm,0.7s,baz=53,slow=7.7,SNR=3.6								
ULM				LR		LR		11 55 03.0	
	comp=Z,276nm,18.6s,baz=87,slow=34								
	comp=Z,5.1nm,0.7s								
ULM	**Lac du Bonnet**	**36.27**	**290**	P		**P**		**11 41 29.4**	**-0.7**
ULM					IAmb	IAmb		11 41 35.6	
	comp=Z,18nm,1.4s								
F36A	**Milaca**	**37.25**	**282**	P		**P**		**11 41 41.2**	**+2.8**
F36A					IAmb	IAmb		11 41 44.2	
	comp=Z,12nm,1.3s								
T50A	**Nancy**	**37.59**	**264**	P		**P**		**11 41 42.7**	**+1.2**
TKL	**Tuckaleechee C**	**37.90**	**261**	LR		LR		11 56 23.0	
	comp=Z,196nm,21.2s,baz=64,slow=35								
AKASG	**Malin Array Be**	**38.53**	**67**	P		**P**		**11 41 47.8**	**-1.5**
	comp=Z,0.5nm,0.4s,baz=300,slow=8.2,SNR=2.1								
AKASG					LR		LR	11 57 25.1	
	comp=Z,71nm,18.6s,baz=262,slow=36								
	comp=Z,0.5nm,0.4s								
KLMR	**Klimovskoe**	**38.99**	**49**	*e*P		**P**		**11 41 51.4**	**-1.5**
KLMR					AMP			11 42 00.8	
	comp=Z,28nm,1.3s								
YKA	**Yellowknife Ar**	**40.00**	**315**	P		**P**		**11 42 00.1**	**-1.2**
	comp=Z,0.9nm,0.8s,baz=65,slow=9.2,SNR=6.2								
YKA					PcP		**PcP**	**11 44 04.8**	**-1.2**
	comp=Z,1.0nm,0.9s,baz=61,slow=3.4,SNR=4.0								
YKA					LR		LR	11 56 46.1	
	comp=Z,158nm,20.9s,baz=81,slow=34								
	comp=Z,0.9nm,0.8s								
YKA	**Yellowknife Ar**	**40.00**	**315**	P		**P**		**11 42 00.6**	**-0.7**
OBN	**Obninsk**	**40.19**	**58**	LR		LR		11 57 51.7	
	comp=Z,42nm,19.2s,baz=253,slow=35								
P40A	**Paris**	**40.20**	**273**	P		**P**		**11 42 07.7**	**+4.4**
P40A					IAmb	IAmb		11 42 09.0	
	comp=Z,19nm,1.5s								
FVM	**French Village**	**40.25**	**270**	P		**P**		**11 42 06.1**	**+2.4**
ECSD	**EROS Data Cent**	**40.27**	**281**	P		**P**		**11 42 05.0**	**+1.1**
ECSD					IAmb	IAmb		11 42 10.0	
	comp=Z,15nm,1.2s								
S39A	**Bolivar**	**42.16**	**272**	P		**P**		**11 42 19.4**	**0.0**
FCAR	**Ozark Folk Cen**	**42.66**	**269**	P		**P**		**11 42 27.7**	**+4.1**
FCAR					IAmb	IAmb		11 42 28.9	
	comp=Z,15nm,1.4s								
SJG	**San Juan**	**42.80**	**225**	LR		LR		11 57 39.6	
	comp=Z,38nm,19.6s,baz=86,slow=32								
WHAR	**Wooly Hollow**	**43.17**	**268**	P		**P**		**11 42 27.3**	**-0.4**
HHAR	**Hobbs**	**43.47**	**271**	P		**P**		**11 42 30.1**	**0.0**
HHAR					IAmb	IAmb		11 42 35.3	
	comp=Z,8.2nm,1.0s								
LAO	**LASA Array**	**43.98**	**291**	P		**P**		**11 42 35.7**	**+1.6**
INK	**Inuvik**	**44.14**	**328**	LR		LR		11 59 50.4	
	comp=Z,100nm,20.4s,baz=44,slow=35								
INK	**Inuvik**	**44.14**	**328**	P		**P**		**11 42 34.2**	**-0.7**
INK					IAmb	IAmb		11 42 42.2	
	comp=Z,13nm,1.4s								
MIAR	**Mount Ida**	**44.45**	**269**	P		**P**		**11 42 38.5**	**+0.6**
KIRV	**Kirov**	**44.47**	**48**	LR		LR		11 59 39.7	
	comp=Z,84nm,20.1s,baz=312,slow=34								
IDI	**Anoyia**	**45.39**	**89**	LR		LR		12

	comp=Z,222nm,18.0s,baz=64,slow=36							
	comp=Z,0.7nm,0.8s							
TX31	**Lajitas Ar. Si**		**54.15**	**272**	P	**P**	**11 43 53.6**	**+1.3**
TX32	**Lajitas Array**		**54.15**	**272**	P	**P**	**11 43 52.8**	**+0.5**
TX32					IAmb	IAmb	11 44 00.9	
	comp=Z,6.5nm,1.4s							
TIXI	**Tiksi**		**54.28**	**6**	P	**P**	**11 43 51.0**	**-1.5**
	comp=Z,0.9nm,0.3s,baz=90,slow=23,SNR=2.4							
	comp=Z,0.9nm,0.3s							
TIXI	**Tiksi**		**54.28**	**6**	P	**P**	**11 43 53.9**	**+1.4**
TIXI					IAmb	IAmb	11 44 01.5	
	comp=Z,9.8nm,1.2s							
PRN	**Pahroc Range**		**55.00**	**287**	P	**P**	**11 43 58.3**	**-0.1**
PRN					IAmb	IAmb	11 44 04.8	
	comp=Z,13nm,1.4s							
X16A	**Lo Mia Camp, P**		**55.04**	**282**	P	**P**	**11 44 00.0**	**+1.2**
X16A					IAmb	IAmb	11 44 05.1	
	comp=Z,5.1nm,1.0s							
TPH	**Tonopah**		**55.75**	**289**	P	**P**	**11 44 04.3**	**+0.4**
NVAR	**Mina Array Bea**		**56.10**	**290**	P	**P**	**11 44 06.2**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=69,slow=8.1,SNR=6.8							
NVAR					LR	LR	12 07 00.2	
	comp=Z,184nm,21.0s,baz=32,slow=35							
	comp=Z,0.5nm,0.7s							
NVAR	**Mina Array Bea**		**56.10**	**290**	P	**P**	**11 44 07.3**	**+0.8**
YBH	**Yreka Blue Hor**		**56.18**	**296**	LR	LR	12 07 27.7	
	comp=Z,158nm,18.7s,baz=24,slow=35							
PNTR	**Pine Nut**		**56.35**	**292**	P	**P**	**11 44 08.6**	**+0.4**
BVAR	**Borovoye Array**		**57.05**	**44**	LR	LR	12 08 08.3	
	comp=Z,44nm,18.4s,baz=186,slow=36							
KDAK	**Kodiak Island**		**57.55**	**326**	LR	LR	12 08 25.7	
	comp=Z,94nm,20.7s,baz=138,slow=36							
ROSC	**El Rosal**		**58.15**	**227**	P	**P**	**11 44 22.3**	**+1.0**
	comp=Z,8.6nm,0.5s,baz=64,slow=7.8,SNR=8.4							
	comp=Z,8.6nm,0.5s							
ROSC	**El Rosal**		**58.15**	**227**	IAmb	IAmb	11 44 28.4	
	comp=Z,44nm,1.2s							
CMIG	**Matias Romero**		**58.37**	**255**	LR	LR	12 09 30.3	
	comp=Z,107nm,18.7s,baz=83,slow=36							
JTS	**Las Juntas de**		**58.51**	**241**	LR	LR	12 07 53.3	
	comp=Z,146nm,19.3s,baz=32,slow=34							
PFO	**Pinyon Flats O**		**58.51**	**285**	LR	LR	12 08 38.0	
	comp=Z,139nm,19.6s,baz=122,slow=35							
LPIG	**La Paz**		**61.98**	**273**	LR	LR	12 11 21.5	
	comp=Z,130nm,18.9s,baz=22,slow=36							
KURK	**Kurchatov**		**62.10**	**41**	P	**P**	**11 44 50.2**	**+2.7**
KURK					IAmb	IAmb	11 44 51.5	
	comp=Z,3.1nm,0.8s							
GEYT	**Alibeck**		**62.41**	**63**	LR	LR	12 12 42.1	
	comp=Z,66nm,18.9s,baz=338,slow=37							
SEY	**Seymchan**		**63.36**	**356**	LR	LR	12 11 13.6	
	comp=Z,67nm,20.4s,baz=99,slow=35							
MK31	**Makanchi Array**		**66.71**	**41**	P	**P**	**11 45 20.5**	**+2.8**
MKAR	**Makanchi Array**		**66.71**	**41**	P	**P**	**11 45 16.0**	**-1.8**
	comp=Z,1.2nm,0.9s,baz=330,slow=4.6,SNR=13							
MKAR					LR	LR	12 13 11.8	
	comp=Z,39nm,19.7s,baz=329,slow=35							
	comp=Z,1.2nm,0.9s							
MKAR	**Makanchi Array**		**66.71**	**41**	P	**P**	**11 45 16.9**	**-0.8**
MA2	**Magadan**		**66.78**	**356**	LR	LR	12 13 14.2	
	comp=Z,48nm,20.8s,baz=38,slow=35							
AAK	**Ala-Archa**		**66.80**	**49**	LR	LR	12 13 37.4	
	comp=Z,92nm,20.1s,baz=334,slow=35							
KSH	**Kashi**		**69.97**	**50**	P	P	11 45 44.0	+5.6
KSH					sP	pwP	11 45 51.3	+6.1
KSH					pmax	pmax		
	comp=Z,4.0nm,0.9s							
SHEM	**Shemya Is, Ala**		**70.92**	**341**	LR	LR	12 16 22.1	
	comp=Z,41nm,20.9s,baz=281,slow=36							
WMQ	**Urumqi**		**71.28**	**40**	*eP*	P	11 45 51.0	+4.7
PETK	**Petropavlovsk-**		**72.81**	**352**	LR	LR	12 19 15.2	
	comp=Z,68nm,18.8s,baz=312,slow=37							
SONM	**Songino Array**		**73.66**	**26**	P	**P**	**11 45 58.5**	**-2.0**
	comp=Z,1.0nm,1.0s,baz=316,slow=4.0,SNR=4.0							
SONM					LR	LR	12 18 02.5	
	comp=Z,41nm,20.9s,baz=12,slow=36							
	comp=Z,1.0nm,1.0s							
WSAR	**Wadi Sarin**		**73.96**	**73**	LR	LR	12 20 36.6	
	comp=Z,36nm,20.2s,baz=316,slow=38							
LPAZ	**La Paz**		**75.25**	**212**	P	**P**	**11 46 10.4**	**0.0**
	comp=Z,1.6nm,0.9s,baz=32,slow=12,SNR=5.2							
	comp=Z,1.6nm,0.9s							
MBAR	**Mbarara**		**76.74**	**110**	LR	LR	12 19 05.8	
	comp=Z,80nm,21.0s,baz=214,slow=35							
GTA	**Gaotai**		**79.45**	**34**	*eP*	**P**	**11 46 36.3**	**+2.9**
GTA					pP	PcP	11 46 40.3	-1.1
GTA					pmax	pmax		
	comp=Z,3.0nm,1.4s							
KMBO	**Kilima Mbogo**		**80.85**	**105**	LR	LR	12 21 16.0	
	comp=Z,41nm,21.7s,baz=90,slow=35							
HHC	**Hu-ho-hao-te**		**81.50**	**25**	*eP*	**P**	**11 46 44.8**	**+0.5**
HHC					pmax	pmax		
	comp=Z,18nm,0.8s							
HHC					pmax	pmax		
	comp=Z,120nm,5.5s							
KSRS	**Korea Array**		**87.92**	**13**	LR	LR	12 28 33.1	
	comp=Z,20nm,18.5s,baz=50,slow=37							
PZH	**PanZhiHua**		**91.85**	**37**	P	**P**	**11 47 37.0**	**+1.7**
PZH					pmax	pmax		
	comp=Z,10.0nm,0.7s							
PZH					pmax	pmax		
	comp=Z,80nm,4.6s							
WRA	**Warramunga Arr**		**145.25**	**17**	PKPbc	**PKPbc**	**11 54 02.7**	**-1.6**
	comp=Z,1.3nm,1.2s,baz=347,slow=3.4,SNR=4.8							
WRA	**Warramunga Arr**		**145.25**	**17**		**PKPbc**	**11 54 02.1**	**-2.2**

*DDA **25** 12:07:01.5±0.0,40°.91N×30°.92E,h15km±2km, ML2.5*
*ISK **25** 12:07:01.3,40°.90N×30°.91E,h5km, ML3.1/27*
ISC 25 12:07:01.7±1.0,**40°.93N**±0°.03×**30°.91E**±0°.02,**h13**km±9km,
n43,σ0°60/58,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YIGI	**Dzce**	**0.41**	**85**	P	**Pg**	**12 07 09.7**	**-0.1**
YIGI				S	**Sg**	**12 07 15.4**	**+0.1**
YIGI				*i* AML	AML	12 07 17.0	
	comp=E,599nm,0.2s						
YIGI				*i* AML	AML	12 07 18.0	
	comp=N,546nm,0.3s						
KAYN	**Sakarya, Kayna**	**0.43**	**275**	P	**Pb**	**12 07 10.8**	**-0.4**
KAYN				*i* AML	AML	12 07 17.0	
	comp=N,659nm,0.2s						
KAYN				*i* AML	AML	12 07 17.0	
	comp=E,390nm,0.2s						
KAYN				S	**Sb**	**12 07 17.2**	**-0.4**
MDUB	**Mudurnu**	**0.51**	**154**	PG	**Pg**	**12 07 11.3**	**-0.3**
MDUB				SG	**Sg**	**12 07 17.9**	**-0.5**
KDZE	**Karadeniz Ereo**	**0.56**	**46**	PG	**Pb**	**12 07 13.0**	**-0.3**
KDZE				SG	**Sb**	**12 07 20.9**	**-0.2**
GULT	**Gulveren**	**0.58**	**212**	PG	**Pg**	**12 07 12.7**	**-0.3**
GPA	**Golpazari**	**0.79**	**216**	PG	**Pg**	**12 07 16.3**	**-0.6**
YUVA	**Yuva-Kibriscik**	**0.80**	**132**	PG	**Pg**	**12 07 16.8**	**-0.3**
YUVA				SG	**Sb**	**12 07 28.2**	**+0.1**
KIBS	**BOLU**	**0.88**	**125**	P	**Pb**	**12 07 18.6**	**-0.2**
KIBS				S	**Sb**	**12 07 30.3**	**-0.1**
KIBS				*i* AML	AML	12 07 31.0	
	comp=E,190nm,0.3s						
KIBS				*i* AML	AML	12 07 32.0	
	comp=N,134nm,0.3s						
SRCK	**Saricakaya, Es**	**0.91**	**194**	PG	**Pg**	**12 07 18.7**	**-0.6**
SILT	**Sile**	**0.99**	**284**	PG	**Pb**	**12 07 20.6**	**0.0**
SILT				SG	**Sn**	**12 07 34.9**	**0.0**
ADVT	**Abdulvahap**	**1.02**	**241**	PG	**Pg**	**12 07 20.7**	**-0.6**
BILE	**Bilecik/Merkez**	**1.10**	**226**	P	**Pg**	**12 07 22.2**	**-0.7**
BILE				S	**Sn**	**12 07 37.7**	**-0.2**
BILE				*i* AML	AML	12 07 39.0	
	comp=E,133nm,0.5s						
BILE				*i* AML	AML	12 07 41.0	
	comp=N,154nm,0.3s						
BORA	**Eskisehir**	**1.10**	**199**	PG	**Pg**	**12 07 22.2**	**-0.7**
AUMIH	**MIHALICIK**	**1.15**	**157**	PN	**Pn**	**12 07 23.2**	**-0.3**
AUBOZ	**BOZOYUK**	**1.22**	**214**	PN	**Pg**	**12 07 24.8**	**-0.3**
YLV	**Yalova**	**1.22**	**253**	PN	**Pn**	**12 07 24.3**	**-0.2**
BTIN	**Bartın**	**1.23**	**54**	P	**Pn**	**12 07 24.4**	**-0.2**
BTIN				S	**Sb**	**12 07 41.1**	**+0.5**
BTIN				*i* AML	AML	12 07 43.0	
	comp=E,191nm,0.4s						
IZI	**Iznik**	**1.24**	**242**	PN	**Pg**	**12 07 25.1**	**-0.5**
CFTB	**Yalova**	**1.25**	**258**	PN	**Pg**	**12 07 25.6**	**-0.1**
TRML	**Termal-Yalova**	**1.36**	**257**	PN	**Pg**	**12 07 27.2**	**-0.6**
SGAZ	**Eskisehir, Sey**	**1.40**	**182**	P	**Pg**	**12 07 28.5**	**0.0**
SGAZ				S	**Sg**	**12 07 48.8**	**+2.2**
SGAZ				*i* AML	AML	12 07 52.0	
	comp=E,45nm,0.2s						
SGAZ				*i* AML	AML	12 07 52.0	

	comp=N,40nm,0.2s							
GEMT	**Gemlik**		**1.40**	**250**	PN	**Pb**	**12 07 27.5**	**-0.1**
ESKT	**Eskisehir**		**1.41**	**182**	PN	**Pb**	**12 07 27.7**	**-0.1**
ISK	**Istanbul-Kandi**		**1.41**	**276**	PN	**Pb**	**12 07 28.1**	**+0.3**
KAVV	**Kandilli-Istan**		**1.41**	**276**	PN	**Pg**	**12 07 28.3**	**-0.4**
TSVK	**Tesvikiye-Yalo**		**1.42**	**258**	PN	**Pb**	**12 07 28.1**	**+0.2**
KLYT	**Kilyos**		**1.45**	**284**	PN	**Pb**	**12 07 28.9**	**+0.4**
IGD	**Bursa**		**1.46**	**244**	P	**Pb**	**12 07 28.8**	**+0.1**
IGD					S	**Sg**	**12 07 49.0**	**+0.3**
IGD					*i* AML	AML	12 07 50.0	
	comp=E,71nm,0.8s							
IGD					*i* AML	AML	12 07 51.0	
	comp=N,70nm,0.5s							
SVRH	**Sivrihisar-ESK**		**1.55**	**162**	PN	**Pb**	**12 07 29.9**	**-0.4**
AUSIV	**SIVRIHISAR**		**1.56**	**162**	PN	**Pb**	**12 07 29.9**	**-0.6**
AUSIV	**SIVRIHISAR**		**1.56**	**162**	P	**Pg**	**12 07 31.2**	**-0.5**
AUSIV					*i* AML	AML	12 07 53.0	
	comp=N,48nm,0.4s							
AUSIV					S	**Sg**	**12 07 53.8**	**+1.9**
ULDT	**Uludag**		**1.56**	**240**	P	**Pb**	**12 07 30.5**	**0.0**
ULDT					S	**Sg**	**12 07 52.6**	**+0.5**
ULDT					*i* AML	AML	12 07 53.0	
	comp=E,38nm,0.3s							
ULDT					*i* AML	AML	12 07 56.0	
	comp=N,61nm,0.4s							
CIFT	**Cifteler, Eski**		**1.57**	**176**	PN	**Pb**	**12 07 30.3**	**-0.2**
ANDZ	**Kutahya, Merke**		**1.61**	**209**	P	**Pg**	**12 07 32.1**	**-0.6**
ANDZ					S	**Sb**	**12 07 51.2**	**-0.4**
ANDZ					*i* AML	AML	12 07 53.0	
	comp=E,74nm,0.7s							
ANDZ					*i* AML	AML	12 07 54.0	
	comp=N,75nm,0.4s							
BGKT	**Bogazkoy**		**1.64**	**280**	PN	**Pb**	**12 07 31.6**	**-0.1**
MDNY	**Mudanya-Bursa**		**1.64**	**251**	PN	**Pb**	**12 07 31.3**	**-0.4**
AVCI	**Avcilar-stanb**		**1.66**	**273**	PN	**Pb**	**12 07 31.7**	**-0.3**
LOD	**Lodumlu**		**1.75**	**126**	PN	**Pb**	**12 07 32.9**	**-0.8**
ORLT	**Orhaneli**		**1.77**	**241**	PN	**Pn**	**12 07 32.9**	**+0.9**
ANTO	**Ankara**		**1.78**	**126**	PN	**Pb**	**12 07 33.5**	**-0.7**
TVSB	**Tavsanli**		**1.85**	**217**	PN	**Pb**	**12 07 34.3**	**-1.0**
PELI	**Kastamonı-Ara**		**1.85**	**78**	P	**Pb**	**12 07 35.9**	**+0.5**
PELI					S	**Sg**	**12 08 00.9**	**-0.3**
PELI					*i* AML	AML	12 08 04.0	
	comp=N,22nm,0.4s							
PELI					*i* AML	AML	12 08 05.0	
	comp=E,29nm,0.8s							
KIZT	**Kizilcal**		**2.18**	**160**	PN	**Pn**	**12 07 38.8**	**+1.2**

GCMT 25 12:20:01.0±0.5,**46°.44S**±0°.03×**96°.17E**±0°.04,**h22**km±2km,
MW4.9/70,**Moment Tensor Solution. s14,c20;**
s70,c90; Duration: 0 Moment tensor: Scale 10^{16}**Nm;**
M_{rr}-0.21±.20; $M_{\theta\theta}$-2.19±.17; $M_{\phi\phi}$2.40±.17; $M_{r\theta}$0.51±.26;
$M_{\theta\phi}$-1.22±.12; $M_{\phi r}$-0.83±.28; **Best double couple:**
$M_0$2.75600×10^{16} **NP1:**ϕ_s212.00000°,δ73.00000°,
λ6.00000°. **NP2:**ϕ_s120.00000°,δ84.00000°,λ163.00000°.
Principal axes: T 2.9770, Plg16.0000°, Azm75.0000°; N
-0.4400, Plg72.0000°, Azm282.0000°; P -2.5340,
Plg8.0000°, Azm167.0000°; **nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Southeast Indian Ridge**

MAN 25 12:30:46.4,9°.41N×126°.27E,h36km,mb4.2,ML3.0,MS2.7,
6D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	**General Luna,**	**0.40**	**339**	*eP*	Pn	12 30 56.7	+0.1
GLSP				*eS*		12 31 03.8	
BUTP	**Butuan**	**0.78**	**236**	*eP*	Pb	12 31 01.3	+0.2
BUTP				*eS*		12 31 12.7	
BIPH	**Bislig**	**1.22**	**176**	*iP*	Pn	12 31 07.2	+3.3
BIPH				*i* S		12 31 23.4	
MSLP	**Maasin**	**1.57**	**297**	*eP*	Pb	12 31 14.4	+1.3
MSLP				*eS*		12 31 32.4	
CGP	**Cagayan de Oro**	**1.83**	**239**	*eP*	Pn	12 31 16.1	+0.1
CGP				*eS*		12 31 37.6	
BUKP	**Musuan**	**1.94**	**218**	*eP*	Pn	12 31 19.3	+0.8
BUKP				*eS*		12 31 42.6	

*FUNV **25** 12:31:27.1,7°.47N×72°.12W,h3km,MW3.1*
*RSNC **25** 12:31:28.8±1.7,7°.41N×72°.19W,h4km±9km,ML2.3*
ISC 25 12:31:26.6±1.3,**7°.48N**±0°.03×**72°.21W**±0°.03,**h16**km±12km,
n14,σ1°96/27,1C-1D,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**0.40**	**344**	*iP*	**Pb**	**12 31 35.4**	**+0.1**
CAPV				*eS*	**Sb**	**12 31 42.2**	**+0.9**
PAMC	**Pamplona, Colo**	**0.51**	**254**	*iP*	**Pg**	**12 31 37.1**	**+0.2**
PAMC				*eS*	**Sb**	**12 31 45.4**	**+0.6**
PAMC				*i*		12 31 50.1	
	comp=Z,71nm,0.5s						
TAMC	**Tame, Arauca**	**1.12**	**158**	*eP*	**Pb**	**12 31 47.1**	**-0.5**
TAMC				*eS*	**Sb**	**12 32 01.3**	**-0.6**
TAMC				*i*		12 32 06.5	
	comp=Z,52nm,0.2s						
BRRC	**Barranca, Sant**	**1.54**	**256**	*eP*	**Pg**	**12 31 56.4**	**+0.1**
BRRC				*eS*	**Sg**	**12 32 17.0**	**+0.7**
BRRC				*i*		12 32 22.2	
	comp=Z,31nm,0.4s						
SOCV	**Socops**	**1.56**	**59**	*eP*	**Pb**	**12 31 54.5**	**-0.6**
SOCV				*eS*	**Sb**	**12 32 14.5**	**-0.1**
RUSC	**La Rusia**	**1.80**	**209**	*eP*	**Pb**	**12 31 59.9**	**+0.3**
RUSC				*eS*	**Sb**	**12 32 22.2**	**+0.1**
RUSC				*i*		12 32 30.5	
	comp=Z,19nm,0.3s						
SDV	**Santo Domingo**	**2.09**	**48**	*eP*	**Pb**	**12 32 03.4**	**-0.9**
SDV				*eS*	**Sb**	**12 32 30.7**	**+0.7**
SDV				*i*		12 32 37.2	
	comp=Z,28nm,0.3s						
PTBC	**PUERTO BERRIO,**	**2.42**	**247**	*eP*	**Pb**	**12 32 08.2**	**-1.6**
PTBC				*eS*	**Sb**	**12 32 40.4**	**+1.0**
PTBC				*i*		12 32 43.9	
	comp=Z,23nm,0.4s						
LL6C	**La Loma 6 Bece**	**2.47**	**335**	*eP*	**Pb**	**12 32 09.9**	**-0.8**
LL6C				*eS*	**Sb**	**12 32 42.2**	**+1.3**
LL6C				*i*		12 32 48.1	
	comp=Z,19nm,0.3s						
SPBC	**San Pablo de B**	**2.60**	**226**	*eP*	**Pb**	**12 32 11.4**	**-1.4**
SPBC				*eS*	**Sb**	**12 32 44.9**	**+0.3**
SPBC				*i*		12 32 51.9	
	comp=Z,15nm,0.4s						
ZARC	**Zaragoza, Cauc**	**2.63**	**270**	*eP*	**Pb**	**12 32 12.4**	**-1.0**
ZARC				*eS*	**Sb**	**12 32 45.7**	**+0.2**
ZARC				*i*		12 32 55.2	
	comp=Z,11nm,0.4s						
BAUV	**El Baul**	**4.37**	**70**	*eP*	**Pn**	**12 32 32.4**	**0.0**
BAUV				*eS*	**Sn**	**12 33 20.1**	**-2.8**
BENV	**Beln**	**5.18**	**61**	*eP*	**Pn**	**12 32 43.2**	**-0.3**
BENV				*eS*	**Sn**	**12 33 39.3**	**-3.7**
CACV	**CAICARA DEL OR**	**5.62**	**89**	*eP*	Pn	12 32 56.2	+6.6
CACV				*eS*	**Sn**	**12 34 01.1**	**+7.3**

DJA 25 12:33:43.8±0.6,**2°N**±4°×**12°6E**±°,**h120**km±11km,**M3.6**/9,
mb3.8/1,**MLv3.5**/9,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.63**	**339**	P	Pn	12 34 13.0	+0.3
TNTI	**Ternate**	**1.86**	**138**	P	Pn	12 34 16.4	+0.9
KMSI	**Cibinong**	**2.66**	**234**	P	Pn	12 34 25.8	+0.2
LBMI	**Labuha**	**3.10**	**154**	P	Pn	12 34 31.7	+0.2
SANI	**Sanana**	**4.18**	**182**	P	Pn	12 34 45.2	-0.6
LUWI	**Luwuk**	**4.62**	**226**	P	Pn	12 34 51.5	-0.1
APSI	**Ampana**	**5.41**	**236**	P	Pn	12 35 02.4	+0.1

MAN 25 12:34:02.9,13°.52N×120°.87E,h6km,mb3.8,ML2.5,MS2.1,
3D,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.64**	**289**	*eP*	Pn	12 34 15.8	+2.3
LUBP				*eS*		12 34 29.1	
MACP	**Maragondon, Ca**	**0.75**	**349**	*eP*	Pn	12 34 16.7	+1.5
SJMP	**San Jose**	**1.08**	**167**	*eP*	Pn	12 34 21.9	+1.4
SJMP				*eS*		12 34 39.9	

NOU 25 12:52:52.0,22°.15S×170°.87E,h0km,MLv3.9/8,
Southeast of Loyalty Islands,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**2.72**	**284**	P	Pn	12 53 35.9	-1.1
PINNC	**Pines Island,**	**3.20**	**261**	P	Pn	12 53 43.5	-0.1
LIFNC	**LIFOU**	**3.65**	**291**	P	Pn	12 53 49.6	-0.1
YATNC	**Mamie plateau,**	**3.69**	**271**	P	Pn	12 53 50.3	-0.1
OUENC	**Ouen Island, N**	**3.74**	**265**	P	Pn	12 53 50.8	-0.2
DZM	**Mont Dzumac**	**4.11**	**270**	P	Pn	12 53 56.0	-0.1
NOUC	**Port Laguerre**	**4.24**	**270**	P	Pn	12 53 57.5	-0.3
KOUNC	**Koumac, New Ca**	**6.34**	**283**	P	Pn	12 54 27.7	+0.9

IDC 25 13:01:43.2±4.4,**0°.65S**×**14°.16W,h0**km,**mb3.6**/2,
mbtmp3.8/3,**ML3.9**/1,**Error ellipse: s-maj=145.1km**
s-min=62.7km az=149.0,North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**7.14**	**183**	T	T	13 09 56.5	
	baz=360,slow=73,SNR=30						
H10N3	**ASCENSION HYDR**	**7.16**	**183**	T	T	13 09 48.7	
	baz=360,slow=73,SNR=59						
H10N1	**ASCENSION HYDR**	**7.16**	**183**	T	T	13 10 16.1	
	baz=360,slow=73,SNR=45						
H10S3	**ASCENSION HYDR**	**8.27**	**183**	T	T	13 11 42.0	
	baz=0.6,slow=74,SNR=24						
H10S2	**ASCENSION HYDR**	**8.27**	**183**	T	T	13 11 38.9	
	baz=219,slow=74,SNR=7.0						
DBIC	**Dimbokro**	**11.79**	**52**	Pn	Pn	13 04 33.1	+0.3
	0.7nm,0.3s,baz=236,slow=7.9,SNR=7.8						
DBIC				Sn	Sn	13 06 39.4	-5.8
	0.5nm,0.3s,baz=68,slow=10,SNR=2.1						
	2.4nm,0.4s						
TORD	**Torodi Ar. Bea**	**20.86**	**48**	P	P	13 06 26.7	-0.2
	1.8nm,0.5s,baz=236,slow=11,SNR=17						
TORD				S	S	13 10 15.3	-5.3
	0.8nm,0.9s,baz=234,slow=20,SNR=2.1						
	1.8nm,0.5s						
FINES	**FINESS Array B**	**69.09**	**19**	P	P	13 12 50.9	+0.1
	0.5nm,0.7s,baz=243,slow=6.1,SNR=1.7						
	0.5nm,0.7s						
WRA	**Warramunga Arr**	**142.97**	**125**	PKP	PKPdf	13 21 19.3	-0.7
	0.4nm,0.9s,baz=247,slow=2.3,SNR=1.8						

*IASPEI **25** 13:17:13.7±1.3,64°.68N±0°.03×17°.54W±0°.03,h10km±7km,*
mb3.4/9, Error ellipse: s-maj=4.6km s-min=3.1km
az=125.3,GT5 selection from ISC bulletin GT5 identified
by Bondr and McLaughlin (2009) selection criteria Bondr
and McLaughlin, A new ground truth data set for seismic
studies, Seism. Res. Let., 80, 465-472,
2009
*REY **25** 13:17:14.2,64°.67N×17°.54W,h2km*
*IDC **25** 13:17:15.0±0.8,64°.72N×17°.52W,h0km,mb3.3/9,*
mbtmp3.3/10,ML2.0/1,MS2.9/3,Error ellipse:
s-maj=29.3km s-min=18.8km az=32.0
ISC 25 13:17:15.2±0.7,**64°.68N**±0°.03×**17°.48W**±0°.03,**h8**km±4km,
n38,σ1°76/47,mb3.4/9,Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKIS	**Kista**	**0.04**	**259**	P	**Pg**	**13 17 15.0**	**-2.0**
	baz=285						
IDYN	**Dyngjuhals**	**0.12**	**23**	P	**Pb**	**13 17 17.4**	**-0.6**
	baz=28						
IDYN				S	**Sb**	**13 17 19.8**	**-0.1**
	baz=28						
IVON	**Vonarskard**	**0.12**	**266**	P	**Pg**	**13 17 15.9**	**-2.0**
	baz=273						
IVON				S	**Sg**	**13 17 18.0**	**-1.9**
	baz=273						
IURH	**Urdarhals**	**0.20**	**45**	P	**Pb**	**13 17 19.0**	**-0.2**
	baz=46						
IURH				S	**Sb**	**13 17 22.2**	**+0.2**
	baz=46						
IGRF	**Grimsfjall**	**0.29**	**162**	P	**Pg**	**13 17 20.1**	**-0.9**
	baz=157						
IGRF				S	**Sg**	**13 17 23.8**	**-1.0**
	baz=157						
IHUS	**Husbondi**	**0.40**	**192**	P	**Pg**	**13 17 21.9**	**-1.1**
	baz=189						
IVOT	**Vottur**	**0.43**	**163**	P	**Pg**	**13 17 22.4**	**-1.2**
	baz=160						
IKRE	**Kreppuhraun**	**0.48**	**77**	P	**Pb**	**13 17 23.5**	**-2.4**
	baz=76						
IKRE				S	**Sb**	**13 17 30.8**	**-2.3**
	baz=76						
IJOK	**Jokulheimar**	**0.49**	**222**	P	**Pg**	**13 17 23.2**	**-1.4**
	baz=221						
IJOK				S	**Sg**	**13 17 29.6**	**-1.5**
	baz=221						
IASK	**Askja**	**0.51**	**43**	P	**Pb**	**13 17 24.3**	**-2.2**
	baz=44						
IASK				S	**Sb**	**13 17 31.8**	**-2.3**
	baz=44						
IMKO	**Mokollar**	**0.57**	**58**	P	**Pb**	**13 17 25.3**	**-2.1**
	baz=58						
IMKO				S	**Sb**	**13 17 34.4**	**-1.3**
	baz=58						
IIEY	**Innrieyrar**	**0.65**	**206**	P	**Pg**	**13 17 26.0**	**-1.7**
	baz=205						
ISVA	**Svartarkot**	**0.67**	**8**	P	**Pb**	**13 17 26.8**	**-2.2**
	baz=9.5						
ISVA				S	**Sb**	**13 17 36.9**	**-1.5**
	baz=9.5						
IKSK	**Karasker**	**0.68**	**140**	P	**Pg**	**13 17 26.3**	**-2.0**
	baz=138						
IHAE	**Haedir**	**0.69**	**162**	P	**Pg**	**13 17 26.8**	**-1.7**
	baz=160						
IKAL	**Kalfafell**	**0

	0.7nm,0.9s								
SONM	**Songino Array**	**59.62**	**40**	P		**P**		**13 27 21.3**	**+2.0**
	0.3nm,0.5s,baz=345,slow=4.5,SNR=2.0								
	0.3nm,0.5s								
NVAR	**Mina Array Bea**	**60.30**	**297**	P		**P**		**13 27 25.5**	**+1.3**
	0.1nm,0.3s,baz=41,slow=5.0,SNR=1.8								
	0.1nm,0.3s								
TXAR	**Lajitas Array**	**62.29**	**280**	P		**P**		**13 27 39.2**	**+1.6**
	0.4nm,0.9s,baz=28,slow=4.1,SNR=3.5								
	0.4nm,0.9s								

*UCR **25** 13:27:18.9±1.0, 12°.74N×88°.67W, h42km±42km, ML3.8*
*INET **25** 13:27:18.7±0.8, 13°.52N×88°.37W, h19km±5km, MW3.4*
*SNET **25** 13:27:18.7±1.0, 12°.75N×88°.66W, h32km±3km, ML3.7*

ISC 25 13:27:17.7±1.5, **12°.69N**±0°.06×**88°.69W**±0°.03, **h29**km±12km, **n59**, σ0**837**/89, **Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
COEB	**Comit de Eme**	**0.82**	**11**	*e*P		**Pb**		**13 27 33.5**	**0.0**
COEB				*e*S		**Sn**		**13 27 44.7**	**0.0**
COEB	**Comit de Eme**	**0.82**	**11**	*e*P		**Pb**		**13 27 33.5**	**0.0**
COEB				*e*S		**Sn**		**13 27 44.7**	**0.0**
LCY	**Lacayo**	**0.82**	**28**	*e*P		**Pb**		**13 27 33.7**	**+0.1**
LCY	**Lacayo**	**0.82**	**28**	*e*P		**Pb**		**13 27 33.7**	**+0.1**
VSM	**San Miguel**	**0.84**	**29**	*e*P		**Pb**		**13 27 33.8**	**-0.1**
VSM	**San Miguel**	**0.84**	**29**	*e*P		**Pb**		**13 27 33.8**	**-0.1**
PACA	**Pacayal**	**0.85**	**25**	*e*P		**Pb**		**13 27 34.1**	**0.0**
PACA				*e*S		**Sn**		**13 27 45.9**	**+0.4**
PACA	**Pacayal**	**0.85**	**25**	*e*P		**Pb**		**13 27 34.1**	**0.0**
PACA				*e*S		**Sn**		**13 27 45.5**	**0.0**
PACA				*e*S		**Sn**		**13 27 45.9**	**+0.4**
SNVI	**San Vicente**	**0.93**	**351**	*e*P		**Pb**		**13 27 35.5**	**+0.1**
SNVI	**San Vicente**	**0.93**	**351**	*e*P		**Pb**		**13 27 35.5**	**+0.1**
PQSS	**Presa 15 de Se**	**0.94**	**8**	*e*P		**Pb**		**13 27 35.1**	**+0.1**
PQSS				*e*S		**Sb**		**13 27 47.7**	**+0.2**
PQSS	**Presa 15 de Se**	**0.94**	**8**	*e*P		**Pb**		**13 27 35.1**	**+0.1**
PQSS				*e*S		**Sb**		**13 27 47.7**	**+0.2**
COEG	**Centro de Oper**	**0.94**	**349**	*e*P		**Pb**		**13 27 35.5**	**0.0**
COEG				*e*S		**Sb**		**13 27 47.7**	**0.0**
COEG				IAML				13 27 51.5	
	comp=Z,2μm,0.3s								
COEG	**Centro de Oper**	**0.94**	**349**	*e*P		**Pb**		**13 27 35.5**	**0.0**
COEG				*e*S		**Sb**		**13 27 47.7**	**0.0**
COEG				IAML				13 27 51.5	
	comp=Z,2μm,0.3s								
COEG	**Centro de Oper**	**0.94**	**349**	*e*P		**Pn**		**13 27 35.4**	**+0.2**
COEG				*e*S		**Sb**		**13 27 47.8**	**+0.1**
SJTE	**Alcalda de S**	**0.97**	**341**	*e*P		**Pn**		**13 27 35.6**	**+0.1**
SJTE				*e*S		**Sb**		**13 27 48.3**	**-0.2**
SJTE	**Alcalda de S**	**0.97**	**341**	*e*P		**Pn**		**13 27 35.6**	**+0.1**
SJTE				*e*S		**Sb**		**13 27 48.3**	**-0.2**
LCND	**La Caada**	**0.99**	**52**	*e*P		**Pn**		**13 27 35.6**	**-0.1**
LCND				*e*S		**Sb**		**13 27 48.7**	**-0.3**
LCND				IAML				13 27 50.1	
	comp=Z,5μm,0.2s								
LCND	**La Caada**	**0.99**	**52**	*e*P		**Pn**		**13 27 35.6**	**-0.1**
LCND				*e*S		**Sb**		**13 27 48.7**	**-0.3**
LCND				IAML				13 27 50.1	
	comp=Z,5μm,0.2s								
LFRS	**El Faro**	**1.00**	**339**	*e*P		**Pn**		**13 27 36.0**	**+0.2**
LFRS	**El Faro**	**1.00**	**339**	*e*P		**Pn**		**13 27 36.0**	**+0.2**
SCLA	**Alcaldia de Sa**	**1.00**	**358**	*e*P		**Pb**		**13 27 36.6**	**0.0**
SCLA				*e*S		**Sb**		**13 27 50.0**	**+0.5**
SCLA	**Alcaldia de Sa**	**1.00**	**358**	*e*P		**Pb**		**13 27 36.6**	**0.0**
SCLA				*e*S		**Sb**		**13 27 50.0**	**+0.5**
CNCH	**Conchagua**	**1.02**	**55**	*e*P		**Pn**		**13 27 36.0**	**-0.1**
CNCH	**Conchagua**	**1.02**	**55**	*e*P		**Pn**		**13 27 36.0**	**-0.1**
PAVA	**Las Pavas**	**1.04**	**347**	*e*P		**Pb**		**13 27 37.3**	**0.0**
PAVA				*e*S		**Sb**		**13 27 51.1**	**+0.5**
PAVA	**Las Pavas**	**1.04**	**347**	*e*P		**Pb**		**13 27 37.3**	**0.0**
PAVA				*e*S		**Sb**		**13 27 51.1**	**+0.5**
LBRS	**Las Brisas**	**1.10**	**342**	*e*P		**Pb**		**13 27 38.0**	**-0.2**
LBRS	**Las Brisas**	**1.10**	**342**	*e*P		**Pb**		**13 27 38.0**	**-0.2**
SNET	**Serv Nac Est T**	**1.12**	**332**	*e*P		**Pn**		**13 27 37.7**	**+0.1**
SNET				*e*S		**Sb**		**13 27 52.4**	**-0.5**
SNET	**Serv Nac Est T**	**1.12**	**332**	*e*P		**Pn**		**13 27 37.7**	**+0.1**
SNET				*e*S		**Sb**		**13 27 52.4**	**-0.5**
LFU	**La Fuente**	**1.13**	**339**	*e*S		**Sb**		**13 27 53.1**	**0.0**
LFU	**La Fuente**	**1.13**	**339**	*e*S		**Sb**		**13 27 53.1**	**0.0**
CSGN	**Cosiguina Volc**	**1.14**	**75**	*e*P		**Pn**		**13 27 37.6**	**-0.2**
UEES	**Universidad Ev**	**1.15**	**332**	*e*P		**Pn**		**13 27 38.2**	**+0.2**
UEES				*e*S		**Sb**		**13 27 53.7**	**0.0**
UEES				IAML				13 27 58.0	
	comp=Z,2μm,0.2s								
UEES	**Universidad Ev**	**1.15**	**332**	*e*P		**Pn**		**13 27 38.2**	**+0.2**
UEES				*e*S		**Sb**		**13 27 53.7**	**0.0**
UEES				IAML				13 27 58.0	
	comp=Z,2μm,0.2s								
CAHU	**Cacacuatique**	**1.17**	**23**	*e*P		**Pn**		**13 27 37.8**	**-0.6**
CAHU	**Cacacuatique**	**1.17**	**23**	*e*P		**Pn**		**13 27 37.8**	**-0.6**
BOQS	**Boqueron**	**1.19**	**331**	*e*P		**Pn**		**13 27 39.0**	**+0.4**
BOQS	**Boqueron**	**1.19**	**331**	*e*P		**Pn**		**13 27 39.0**	**+0.4**
JAYA	**Jayaque - finc**	**1.21**	**322**	*e*P		**Pn**		**13 27 39.0**	**+0.2**
JAYA				*e*S		**Sn**		**13 27 54.0**	**-0.5**
JAYA	**Jayaque - finc**	**1.21**	**322**	*e*P		**Pn**		**13 27 39.0**	**+0.2**
JAYA				*e*S		**Sn**		**13 27 54.0**	**-0.5**
CEDA	**San Andres**	**1.30**	**328**	*e*P		**Pn**		**13 27 39.7**	**-0.4**
CEDA				*e*S		**Sb**		**13 27 57.4**	**-0.5**
CEDA				IAML				13 27 59.7	
	comp=Z,1μm,0.3s								
CEDA	**San Andres**	**1.30**	**328**	*e*P		**Pn**		**13 27 39.7**	**-0.4**
CEDA				*e*S		**Sb**		**13 27 57.4**	**-0.5**
CEDA				IAML				13 27 59.7	
	comp=Z,1μm,0.3s								
SNJE	**San Jose**	**1.47**	**323**	*e*P		**Pn**		**13 27 43.3**	**+0.7**
SNJE	**San Jose**	**1.47**	**323**	*e*P		**Pn**		**13 27 43.3**	**+0.7**
CRIN	**San Cristobal**	**1.60**	**90**	*e*P		**Pn**		**13 27 44.7**	**+0.6**
CRIN				*e*S		**Sn**		**13 28 03.4**	**-0.5**
NUBE	**Las Nubes**	**1.61**	**319**	*e*S		**Sn**		**13 28 04.2**	**0.0**
NUBE	**Las Nubes**	**1.61**	**319**	*e*S		**Sn**		**13 28 04.2**	**0.0**
SLOZ	**Alcaldia de Sa**	**1.70**	**321**	*e*P		**Pn**		**13 27 46.5**	**+1.0**
SLOZ				*e*S		**Sb**		**13 28 08.0**	**-1.4**
MTO3	**Montecristo**	**1.82**	**339**	*e*P		**Pn**		**13 27 47.5**	**+0.2**
MTO3	**Montecristo**	**1.82**	**339**	*e*P		**Pn**		**13 27 47.5**	**+0.2**
TGUH	**Tegucigalpa,Un**	**1.93**	**45**	*e*P		**Pn**		**13 27 48.5**	**-0.4**
TGUH	**Tegucigalpa,Un**	**1.93**	**45**	*e*P		**Pn**		**13 27 48.5**	**-0.4**
CNGN	**Cerro Negro**	**1.95**	**95**	*e*P		**Pn**		**13 27 49.2**	**+0.2**
CNGN				*e*S		**Sn**		**13 28 13.3**	**+0.7**
ESQI	**Esquipulas**	**1.96**	**341**	*e*P		**Pn**		**13 27 49.5**	**+0.3**
COPN	**Copaltepe**	**2.11**	**104**	*e*P		**Pn**		**13 27 51.3**	**+0.2**
APYN	**Apoyeque**	**2.33**	**101**	*e*P		**Pn**		**13 27 53.2**	**-0.9**
HUEN		**2.48**	**98**	*e*P		**Pn**		**13 27 56.3**	**0.0**
HUEN				*e*S		**Sn**		**13 28 26.1**	**+0.6**

*IDC **25** 13:41:38.6±0.9, 51°.46N×16°.02E, h0km, mbtmp3.0/6, ML2.7/6, Error ellipse: s-maj=18.0km s-min=8.1km az=105.0*
*VIE **25** 13:41:39.2±1.0, 51°.39N×16°.12E, h0km, mb2.3/2, ml2.7/1, Error ellipse: s-maj=11.5km s-min=5.3km az=55.0 70 km WNW of Wroclaw Suspected Mining induced.*
*PRU **25** 13:41:39.7±0.0, 51°.43N×16°.07E, h0km*

ISC 25 13:41:37.1±0.8, **51°.52N**±0°.04×**16°.09E**±0°.03, **h0**km, **n28**, σ1**912**/56, **Poland**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.69**	**169**	*e*Pg		**Pg**		**13 41 50.8**	**+0.5**
KSP				*e*Sg		**Sg**		**13 41 59.2**	**+0.2**
CHVC	**Chvalec**	**0.93**	**182**	*e*PG		**Pg**		**13 41 55.6**	**+0.7**
CHVC				*e*SG		**Sg**		**13 42 07.4**	**+0.5**
OSTC	**Ostas**	**0.96**	**175**	*e*PG		**Pg**		**13 41 56.2**	**+0.6**
OSTC				*e*SG		**Sg**		**13 42 08.2**	**+0.2**
UPC	**Upice**	**1.01**	**183**	*e*PG		**Pg**		**13 41 57.2**	**+0.7**
UPC				*e*SG		**Sg**		**13 42 09.7**	**+0.2**
DPC	**Dobruska-Polom**	**1.18**	**173**	*e*PG		**Pg**		**13 41 59.6**	**0.0**
DPC				*e*SG		**Sg**		**13 42 13.9**	**-0.9**
	comp=Z,22nm,0.6s								
PVCC	**Panska Ves**	**1.38**	**225**	*e*PG		**Pn**		**13 42 04.4**	**+0.8**
PVCC				*e*SG		**Sn**		**13 42 22.6**	**0.0**
	comp=Z,113nm,0.3s								
BRG	**Berggiesshubel**	**1.50**	**245**	Pg		**Pg**		**13 42 06.5**	**+0.7**
BRG				Sg		**Sn**		**13 42 26.6**	**+1.2**
BRG				Amp				13 42 28.8	
	comp=Z,32nm,0.3s								
KRLC	**Kraliky**	**1.51**	**163**	*e*PG		**Pn**		**13 42 05.4**	**0.0**
KRLC				*e*SG		**Sg**		**13 42 23.6**	**-1.9**
	comp=Z,50nm,0.9s								
PRU	**Pruhonice**	**1.82**	**213**	*e*PN		**Pn**		**13 42 09.5**	**-0.2**
PRU				*e*PG		**Pb**		**13 42 11.8**	**+0.5**
PRU				*e*SG		**Sb**		**13 42 35.0**	**+0.4**
	comp=Z,18nm,0.6s								
CLL	**Collm**	**1.95**	**265**	*i* Pn		**Pn**		**13 42 10.9**	**-0.5**
CLL				*i* Pg		**Pb**		**13 42 14.0**	**+0.6**
CLL				*ex*		x		13 42 16.0	
CLL				*e*Sg		**Sg**		**13 42 42.0**	**+2.4**
	comp=Z,12nm,0.3s								
MORC	**Moravsky Berou**	**1.97**	**152**	*e*PN		**Pn**		**13 42 11.9**	**+0.1**
MORC				*e*SG		**Sn**		**13 42 38.0**	**+0.8**
VRAC	**Vranov**	**2.23**	**172**	Pn		**Pn**		**13 42 15.8**	**+0.5**
	comp=Z,1.8nm,0.3s,baz=345,slow=18,SNR=7.4								
VRAC				Lg		Lg		13 42 46.6	
	comp=Z,3.1nm,0.3s,baz=256,slow=23,SNR=9.7								
	comp=Z,2.3nm,0.2s								
VRAC	**Vranov**	**2.23**	**172**	*e*PN		**Pn**		**13 42 16.1**	**+0.7**
VRAC				*e*SG		**Sb**		**13 42 46.6**	**+0.1**
MAUC	**Maruska**	**2.42**	**152**	*e*PN		**Pn**		**13 42 19.0**	**+1.0**
MAUC				*e*PG		**Pb**		**13 42 22.2**	**+0.7**
MAUC				*e*SG		**Sg**		**13 42 54.7**	**-0.2**
	comp=Z,37nm,0.7s								
KRUC	**Moravsky**	**2.46**	**175**	*e*PN		**Pn**		**13 42 19.5**	**+1.0**
KRUC				*e*SG		**Sb**		**13 42 54.1**	**+1.0**
OJC	**Ojcow**	**2.68**	**117**	*e*Pg		**Pg**		**13 42 30.0**	**+1.5**
OJC				*e*Sg		**Sg**		**13 43 04.2**	**+1.0**
JAVC	**Velka Javorina**	**2.85**	**159**	*e*PN		**Pn**		**13 42 24.6**	**+0.8**
KHC	**Kasperske Hory**	**2.88**	**215**	*e*PN		**Pn**		**13 42 24.9**	**+0.6**
KHC				*e*PG		**Pb**		**13 42 30.3**	**+0.9**
KHC				*e*SN		**Sn**		**13 42 57.6**	**-2.0**
KHC				*e*SG		**Sg**		**13 43 08.1**	**-1.5**
	comp=Z,7.3nm,0.3s								
CKRC	**Cesky Krumlov**	**2.93**	**204**	*e*PN		**Pn**		**13 42 26.1**	**+1.1**
CKRC				*e*PG		**Pb**		**13 42 31.3**	**+1.1**
CKRC				*e*SG		**Sg**		**13 43 09.6**	**-1.7**
	comp=Z,8.7nm,0.6s								
GERES	**GERESS Array B**	**3.08**	**211**	Pn		**Pn**		**13 42 27.6**	**+0.5**
	comp=Z,0.5nm,0.3s,baz=26,slow=12,SNR=12								
GERES				Pg		**Pb**		**13 42 34.2**	**+1.3**
	comp=Z,1.8nm,0.3s,baz=31,slow=17,SNR=30								
GERES				Sn		**Sn**		**13 43 03.0**	**-1.8**
	comp=Z,1.3nm,0.3s,baz=32,slow=19,SNR=6.2								
GERES				Lg		Lg		13 43 13.3	
	comp=Z,2.1nm,0.3s,baz=27,slow=26,SNR=4.9								
	comp=Z,0.8nm,0.3s								
LANS	**Liptovska Anna**	**3.21**	**136**	*e*PG		**Pg**		**13 42 39.8**	**+1.3**
LANS				*e*SG		**Sg**		**13 43 19.4**	**-0.7**
MODS	**Modra-Piesok**	**3.24**	**166**	*e*PG		**Pg**		**13 42 39.0**	**-0.1**
MODS				*e*SG		**Sg**		**13 43 19.5**	**-1.5**
VYHS	**Vyhne**	**3.50**	**149**	*e*SG		**Sg**		**13 43 30.6**	**+1.0**
CONA	**Conrad Observa**	**3.59**	**182**	*e*Pn		**Pn**		**13 42 35.1**	**+0.9**
	comp=Z,0.9nm,0.3s								
CONA				*e*Sg		**Sg**		**13 43 31.5**	**-1.0**
	comp=Z,4.8nm,0.3s								
HFS	**Hagfors**	**8.74**	**352**	Pn		**Pn**		**13 43 43.7**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=174,slow=14,SNR=2.1								
	comp=Z,0.3nm,0.3s								
FINES	**FINESS Array B**	**11.36**	**25**	Pn		**Pn**		**13 44 19.0**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=206,slow=12,SNR=5.7								
	comp=Z,1.7nm,1.0s								
EKA	**Eskdalemuir Ar**	**12.09**	**296**	Pn		**Pn**		**13 44 31.5**	**+1.0**
	baz=96,slow=13								
	comp=Z,0.1nm,0.3s								
ARCES	**ARCESS Array B**	**18.62**	**10**	Pn		**P**		**13 45 52.2**	**-3.6**
	comp=Z,0.1nm,0.3s,baz=200,slow=7.7,SNR=5.3								
	comp=Z,0.7nm,0.9s								

*DJA **25** 13:48:33.5±0.4, 7°.5E×4°.1×12°.9E±°, h214km±17km, M4.1/10, mb3.9/7, mB4.8/4, MLv4.3/10, Mw(mB)4.1/4*

ISC 25 13:48:34.0±1.0, **7°.4S**±0°.1×**128°.51E**±0°.09, **h151**km, **n17**, σ1**904**/17, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**4.83**	**240**	P		**Pn**		**13 49 46.5**	**+1.2**
SOEI	**Soe**	**4.83**	**240**	P		**Pn**		**13 49 46.9**	**+1.6**
BATI	**Baumata**	**5.56**	**239**	P		**Pn**		**13 49 56.5**	**+1.5**
	0.2nm19nm,0.6s								
FAKI	**Fak Fak**	**5.77**	**40**	P		**Pn**		**13 49 57.9**	**+0.1**
	0.1nm29nm,1.2s								
FAKI	**Fak Fak**	**5.77**	**40**	P		**Pn**		**13 49 58.3**	**+0.5**
MTN	**Manton Dam**	**6.03**	**155**	P		**Pn**		**13 50 01.3**	**+0.2**
MMRI	**Maumere**	**6.34**	**258**	P		**Pn**		**13 50 06.0**	**+0.6**
	0.1nm26nm,1.3s								
KDU	**Kakadu**	**6.57**	**144**	P		**Pn**		**13 50 08.4**	**0.0**
EDFI	**Ende, Flores**	**6.90**	**258**	P		**Pn**		**13 50 13.2**	**+0.4**
	0.0nm4.9nm,1.1s								
SWI	**Sorong**	**7.01**	**23**	P		**Pn**		**13 50 13.5**	**-0.8**
KNRA	**Kununurra**	**8.27**	**178**	P		**Pn**		**13 50 29.8**	**-1.2**
WBSI	**Waikabubak, Su**	**9.30**	**255**	P		**Pn**		**13 50 43.5**	**-1.4**
	26nm,1.2s								
PLAI	**Plampang**	**10.73**	**261**	P		**Pn**		**13 51 02.6**	**-1.2**
PLAI	**Plampang**	**10.73**	**261**	P		**Pn**		**13 51 05.3**	**+1.5**
	22nm,1.1s								
WRAB	**Tennant Creek**	**13.72**	**156**	P		**Pn**		**13 51 42.2**	**-0.2**
COEN	**Coen**	**15.82**	**116**	P		**P**		**13 52 09.3**	**-0.1**
WRKA	**Warakurna**	**17.58**	**181**	P		**P**		**13 52 29.2**	**+0.5**

IDC 25 14:10:49.0±3.2, **27°.79N×86°.96E, h0**km, **mb3.3**/3, **mbtmp3.3**/4, **ML3.2**/1, **Error ellipse: s-maj=108.2km s-min=29.8km az=71.0, Nepal**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.32**	**350**	P		P		14 15 14.4	-1.4
	0.1nm,0.3s,baz=165,slow=12,SNR=3.8								
	0.2nm,0.4s								
SONM	**Songino Array**	**25.09**	**32**	P		P		14 16 15.4	-0.1
	0.2nm,0.3s,baz=224,slow=8.0,SNR=1.6								
	0.2nm,0.3s								
ZALV	**Zalesovo Beam**	**26.18**	**357**	P		P		14 16 26.1	+1.1
	0.3nm,0.4s,baz=180,slow=9.5,SNR=2.3								
	0.3nm,0.4s								
WRA	**Warramunga Arr**	**65.97**	**131**	P		P		14 21 37.3	-0.1
	0.2nm,0.7s,baz=320,slow=6.7,SNR=4.9								
	0.2nm,0.7s								

*MOS **25** 14:13:19.8±0.0, 42°.56N×45°.47E, h17km, MPVA3.9*
*NORS **25** 14:13:19.7±0.0, 42°.46N×45°.42E, h5km, MPVA3.8*
*DRS **25** 14:13:21.5±0.0, 42°.50N×45°.39E, h16km*

ISC 25 14:13:20.8±1.0, **42°.55N**±0°.02×**45°.45E**±0°.02, **h19**km±3km, **n33**, σ1**940**/67, **Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BTLR	**Botlikh**	**0.58**	**78**	*e*Pg		**Pn**		**14 13 32.7**	**-1.5**
BTLR				*e*Sg		**Sn**		**14 13 40.9**	**-2.5**
PNSH	**Pansheti**	**0.62**	**279**	P		**Pg**		**14 13 32.1**	**-1.1**
PNSH				S		**Sg**		**14 13 39.3**	**-2.2**
KMGR	**Komgaron**	**0.67**	**320**	*i* Pg		**Pn**		**14 13 34.0**	**-1.3**
KMGR				*e*Sg		**Sn**		**14 13 45.1**	**-0.2**
MTEO	**Meteo**	**0.69**	**282**	P		**Pg**		**14 13 33.3**	**-1.2**
MTEO				S		**Sg**		**14 13 42.8**	**-0.9**
GROC	**Groznyy**	**0.70**	**21**	*e*Pg		**Pn**		**14 13 35.2**	**-0.6**
GROC				*e*Sg		**Sn**		**14 13 46.2**	**0.0**
GUDG	**Gudauri**	**0.72**	**264**	P		**Pg**		**14 13 34.5**	**-0.6**
GUDG				S		**Sg**		**14 13 43.6**	**-1.1**
LACR	**Lac**	**0.89**	**289**	*e*Pg		**Pg**		**14 13 37.3**	**-1.0**
LACR				*e*Sg		**Sn**		**14 13 50.7**	**-0.3**
LGD	**Lagodekhi**	**0.93**	**140**	P		**Pn**		**14 13 39.3**	**+0.4**
XNZR	**Khunzakh**	**0.93**	**90**	*i* Pg		**Pn**		**14 13 39.2**	**+0.1**
XNZR				*e*Sg		**Sn**		**14 13 52.8**	**+0.8**
BTNK	**Botanikuri**	**0.99**	**209**	P		**Pb**		**14 13 36.8**	**-2.5**
BTNK				S		**Sb**		**14 13 51.6**	**-0.3**
UNCR	**Uncukul**	**1.01**	**80**	*e*Pg		**Pg**		**14 13 40.9**	**+0.4**
UNCR				*e*Sg		**Sn**		**14 13 54.4**	**+0.7**
DLMR	**Dylym**	**1.02**	**59**	*e*Pg		**Pg**		**14 13 40.6**	**0.0**
DLMR				*e*Sg		**Sn**		**14 13 54.5**	**+0.6**
BTKR	**Batakoyurt**	**1.06**	**322**	*e*Pg		**Pg**		**14 13 44.5**	**+3.2**
BTKR				*e*Sg		**Sn**		**14 13 59.4**	**+4.4**
ARNR	**Ardon**	**1.06**	**307**	*e*Pg		**Pg**		**14 13 41.4**	**0.0**
ARNR				*e*Sg		**Sg**		**14 13 56.7**	**+1.2**
DGRG	**David-gareji**	**1.10**	**183**	P		**Pg**		**14 13 44.1**	**+2.0**
DGRG				S		**Sg**		**14 14 01.8**	**+5.3**
KRNR	**Karanay**	**1.11**	**75**	*e*Pg		**Pg**		**14 13 42.4**	**-0.1**
KRNR				*e*Sg		**Sg**		**14 13 57.9**	**+0.9**
DBC	**Dubki**	**1.12**	**65**	*e*Pg		**Pg**		**14 13 42.2**	**-0.4**
DBC				*e*Sg		**Sg**		**14 13 58.8**	**+1.4**
GNBR	**Gunib**	**1.13**	**97**	*e*Pg		**Pg**		**14 13 42.7**	**-0.1**
GNBR				*e*Sg		**Sg**		**14 13 58.0**	**+0.3**
ARKR	**Arakani**	**1.15**	**87**	*e*Pg		**Pg**		**14 13 43.2**	**+0.2**
ARKR				*e*Sg		**Sg**		**14 13 59.1**	**+1.0**
KORR	**Kora**	**1.15**	**298**	*e*Pg		**Pg**		**14 13 43.0**	**0.0**
KORR				*e*Sg		**Sg**		**14 13 59.3**	**+1.2**
BUJR	**Buynaksk**	**1.26**	**77**	*e*Pg		**Pg**		**14 13 44.5**	**-0.6**
BUJR				*e*Sg		**Sg**		**14 14 01.7**	**+0.1**
KMKR	**Kumukh**	**1.29**	**108**	*e*Pg		**Pg**		**14 13 45.0**	**-0.9**
KMKR				*e*Sg		**Sg**		**14 14 03.5**	**+0.7**
STDR	**Stavd-Durt**	**1.31**	**309**	*e*Pg		**Pg**		**14 13 46.0**	**-0.1**
STDR				*e*Sg		**Sg**		**14 14 04.4**	**+1.2**
KZRT	**Kazreti**	**1.40**	**214**	P		**Pg**		**14 13 47.5**	**-0.3**
LSNR	**Lesken**	**1.40**	**302**	*e*Pg		**Pg**		**14 13 47.5**	**-0.3**
LSNR				*e*Pg		**Pg**		**14 13 47.5**	**-0.3**
LSNR				*e*Pg		**Pg**		**14 13 47.5**	**-0.3**
LSNR				*e*Sg		**Sg**		**14 14 07.4**	**+1.4**
LSNR				*e*Sg		**Sg**		**14 14 07.4**	**+1.4**
LSNR				*e*Sg		**Sg**		**14 14 07.4**	**+1.4**
TRLG	**Trialeti**	**1.42**	**225**	P		**Pg**		**14 13 48.1**	**-0.1**
TRLG				S		**Sg**		**14 14 08.5**	**+1.7**
ONI	**Oni**	**1.47**	**272**	P		**Pg**		**14 13 48.3**	**-0.9**
PRTR	**Priterechnaya**	**1.48**	**325**	*e*Pg		**Pg**		**14 13 48.2**	**-1.1**
PRTR				*e*Sg		**Sg**		**14 14 08.9**	**+0.4**
BRNG	**Burnasheti**	**1.52**	**233**	P		**Pg**		**14 13 49.9**	**-0.2**
BRNG				S		**Sg**		**14 14 11.7**	**+1.8**
DMNI	**Dmanisi**	**1.54**	**218**	P		**Pg**		**14 13 49.4**	**-1.0**
DMNI				S		**Sg**		**14 14 10.3**	**-0.1**
SGKR	**Sergokala**	**1.64**	**92**	*e*Pg		**Pg**		**14 13 51.3**	**-1.1**
SGKR				*e*Sg		**Sg**		**14 14 12.9**	**-0.8**
KBZ	**Khabaz**	**2.21**	**303**	*i* Pg		**Pb**		**14 13 59.5**	**-0.6**
KBZ				*e*Sg		**Sb**		**14 14 28.4**	**+1.3**
SHA1	**Shidzhatmaz**	**2.36**	**301**	*e*Pn		**Pb**		**14 14 02.8**	**-0.1**
SHA1				*e*Sn		**Sb**		**14 14 33.5**	**+1.7**

*IDC **25** 14:26:42.6±4.3, 17°.00S×70°.36W, h82km±37km, mb3.4/3, mbtmp3.7/6, MS3.1/3, Error ellipse: s-maj=58.1km s-min=25.8km az=112.0*

ISC 25 14:26:43.8±1.1, **16°.99S**±0°.09×**70°.4W**±0°.1, **h100**km, **n10**, σ1**977**/10, **mb3.5/3, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**2.26**	**72**	P		**Pn**		**14 27 19.0**	**-1.3**
	65nm,0.5s,baz=263,slow=12,SNR=186								
LPAZ				S		**Sn**		**14 27 50.8**	**+2.6**
	20nm,0.5s,baz=309,slow=23,SNR=1.6								
LVC	**Limon Verde**	**5.75**	**166**	P		**Pn**		**14 28 05.2**	**-1.9**
	7.1nm,0.5s,baz=342,slow=5.4,SNR=10								
LVC				S		**Sn**		**14 29 14.6**	**+2.5**
	13nm,0.8s,baz=282,slow=10,SNR=1.5								
NNA	**N

NOA	**NORSAR Array B**	**143.74**	**350**	PKP		**PKPdf**	**14**	**45**	**48.3**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=16,slow=2.4,SNR=6.7									

*TIR **25** 14:30:20.4, 42.37N× 19.35E, h7km± 18km, Md2.8, Ml2.8*
*RHSSO **25** 14:30:21.8± 0.4, 42.39N× 19.43E, h7km± 1km, ML2.8/15*
*PDG **25** 14:30:21.1± 0.1, 42.38N× 19.35E, h23km, MD2.9/5,*
ML2.8/12, Error ellipse: s-maj=0.1km s-min=0.2km az=0.0
*BEO **25** 14:30:22.1± 0.2, 42.42N× 19.40E, h15km± 2km, ML2.5/18*

ISC 25 14:30:22.0± 0.7, 42.40N± 0.02× 19.38E± 0.01, h17km± 3km, n91, σ 0.97/174, 27C-16D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PDG	**Podgorica**	**0.10**	**291**	*e*	Pg	**Pg**	**14 30 25.0**	**-0.5**
PDG				*e*	Sg	**Sb**	**14 30 28.3**	**+0.5**
PDG	**Podgorica**	**0.10**	**291**	↑	P	**Pg**	**14 30 25.1**	**-0.5**
PDG				↓	S	**Sb**	**14 30 28.3**	**+0.5**
PDG	**Podgorica**	**0.10**	**291**	↑	*i* Pg	**Pg**	**14 30 25.2**	**-0.3**
PDG				*e*	Sg	**Sb**	**14 30 28.4**	**+0.6**
TTG	**Podgorica**	**0.10**	**291**	↑	*i* Pg	**Pg**	**14 30 25.2**	**-0.3**
TTG				*i*	Sg	**Sb**	**14 30 28.5**	**+0.6**
DRME	**Dracevica, Mon**	**0.25**	**215**	↑	*i* Pg	**Pg**	**14 30 26.9**	**-0.8**
DRME				*e*	Sg	**Sg**	**14 30 31.7**	**+0.2**
DRME	**Dracevica, Mon**	**0.25**	**215**	↑	*i* Pg	**Pg**	**14 30 26.9**	**-0.8**
DRME				*i*	Sg	**Sg**	**14 30 31.6**	**+0.1**
BUM	**Brajici-Budva**	**0.37**	**255**	↓	*i* Pg	**Pg**	**14 30 28.7**	**-1.0**
BUM				*i*	Sg	**Sg**	**14 30 34.9**	**-0.1**
CEME	**Cevo**	**0.37**	**294**	↑	*i* Pg	**Pg**	**14 30 28.8**	**-1.0**
CEME				*i*	Sg	**Sg**	**14 30 35.3**	**+0.3**
ULC	**Ulcinj**	**0.44**	**193**	↑	*i* Pg	**Pg**	**14 30 29.5**	**-1.5**
ULC				*i*	Sg	**Sg**	**14 30 37.0**	**0.0**
KOME	**Kolasin**	**0.47**	**13**	↓	*i* Pg	**Pg**	**14 30 31.0**	**-0.5**
KOME				*i*	Sg	**Sb**	**14 30 39.2**	**+0.7**
PVY	**Plav**	**0.47**	**65**	↑	*i* Pg	**Pg**	**14 30 31.0**	**-0.6**
PVY				*i*	Sg	**Sb**	**14 30 39.4**	**+0.6**
NKME	**Niksic**	**0.49**	**320**	↓	*i* Pg	**Pg**	**14 30 30.8**	**-1.0**
NKY	**Niksic**	**0.51**	**326**	↓	*i* Pg	**Pg**	**14 30 31.2**	**-1.0**
NKY				*i*	Sg	**Sb**	**14 30 39.7**	**+0.1**
BCI	**Bajram Curri**	**0.51**	**93**	P		**Pg**	**14 30 31.2**	**-1.0**
	baz=89							
BCI				S		**Sb**	**14 30 39.2**	**-0.5**
	baz=89							
BCI				AMP				
	comp=N,3.5nm,0.4s,baz=89							
IVA	**Berane**	**0.61**	**38**	↓	*i* Pg	**Pg**	**14 30 33.5**	**-0.6**
IVA				*e*	Sg	**Sb**	**14 30 44.0**	**+1.4**
HCY	**Herceg Novi**	**0.66**	**275**	↑	*i* Pg	**Pg**	**14 30 33.5**	**-1.4**
HCY				*e*	Sg	**Sb**	**14 30 44.6**	**+0.8**
HCY	**Herceg Novi**	**0.66**	**275**	↑	*i* Pg	**Pg**	**14 30 33.6**	**-1.4**
HCY				*i*	Sg	**Sg**	**14 30 44.0**	**+0.3**
BRY	**Bratogost**	**0.80**	**310**	↑	*i* Pg	**Pg**	**14 30 36.1**	**-1.5**
BRY				*e*	Sg	**Sb**	**14 30 48.6**	**+0.5**
BRY	**Bratogost**	**0.80**	**310**	↑	*i* Pg	**Pg**	**14 30 36.2**	**-1.4**
BRY				*i*	Sg	**Sb**	**14 30 49.1**	**+1.0**
TREB	**Trebinje**	**0.82**	**293**	*e*	Pg	**Pb**	**14 30 36.7**	**-1.2**
TREB				*e*	Sg	**Sb**	**14 30 49.9**	**+1.2**
UPM	**Unac-Piva**	**0.88**	**337**	↑	*i* Pg	**Pb**	**14 30 37.8**	**-1.1**
UPM				*e*	Sg	**Sg**	**14 30 50.5**	**-0.3**
UPM	**Unac-Piva**	**0.88**	**337**	↑	*i* Pg	**Pb**	**14 30 37.8**	**-1.1**
UPM				*i*	Sg	**Sn**	**14 30 52.1**	**-0.2**
PLE	**Pljevlja**	**0.94**	**1**	↓	*i* Pg	**Pb**	**14 30 39.1**	**-0.7**
PLE				*i*	Sg	**Sn**	**14 30 54.3**	**+0.8**
DBRK	**Dubrovnik**	**0.95**	**287**	*e*	Pg	**Pb**	**14 30 40.0**	**0.0**
DBRK					Sg	**Sg**	**14 30 53.3**	**+0.4**
SJES	**Sjenica**	**0.97**	**27**	*e*	Pg	**Pb**	**14 30 39.9**	**-0.6**
SJES				*e*	Sg	**Sg**	**14 30 53.2**	**-0.5**
SJES	**Sjenica**	**0.97**	**27**	*e*	Pg	**Pb**	**14 30 39.9**	**-0.6**
SJES				*e*	Sg	**Sb**	**14 30 52.5**	**-0.5**
PHP	**Peshkopia**	**1.06**	**131**	P		**Pb**	**14 30 40.8**	**-1.1**
	baz=129							
PHP				S		**Sn**	**14 30 57.0**	**+0.3**
	baz=129							
PHP				AMP				
	comp=N,0.7nm,0.4s,baz=129							
TIR	**Tirane**	**1.11**	**161**	*e*	Pg	**Pb**	**14 30 41.5**	**-1.2**
TIR				*e*	Sg	**Sn**	**14 30 58.8**	**+1.2**
TIR	**Tirane**	**1.11**	**161**	↑	P	**Pb**	**14 30 42.5**	**-0.2**
TIR				↓	S	**Sn**	**14 30 59.3**	**+1.7**
TIR	**Tirane**	**1.11**	**161**		P	**Pb**	**14 30 42.0**	**-0.7**
	baz=159							
TIR				S		**Sn**	**14 30 59.5**	**+1.9**
	baz=159							
TIR				AMP				
	comp=N,0.8nm,0.7s,baz=159							
RUDO	**Rudo**	**1.22**	**360**	↑	*i* Pg	**Pn**	**14 30 43.5**	**-0.8**
RUDO				*e*	Sg	**Sn**	**14 31 00.8**	**+0.3**
STON	**Ston**	**1.33**	**292**	*e*	Pg	**Pn**	**14 30 45.2**	**-0.4**
STON				*e*	Sg	**Sg**	**14 31 04.8**	**-0.1**
STON	**Ston**	**1.33**	**292**	*e*	Pg	**Pn**	**14 30 45.3**	**-0.4**
STON				*e*	Sg	**Sg**	**14 31 04.8**	**-0.1**
STON	**Ston**	**1.33**	**292**	*e*	Pn	**Pn**	**14 30 45.3**	**-0.4**
STON					Sn	**Sn**	**14 31 03.5**	**+0.5**
BBLS	**Lazići**	**1.47**	**1**	*e*	Pg	**Pb**	**14 30 48.9**	**0.0**
BBLS				*e*	Sg	**Sb**	**14 31 08.3**	**+0.9**
BBLS	**Lazići**	**1.47**	**1**	*e*	Pg	**Pn**	**14 30 48.2**	**+0.4**
BBLS				*e*	Sg	**Sg**	**14 31 08.5**	**-1.0**
SELS	**Selova**	**1.52**	**57**	*e*	Pg	**Pn**	**14 30 48.5**	**0.0**
SELS				*e*	Sg	**Sb**	**14 31 08.7**	**-0.2**
SKO	**Skopje**	**1.59**	**105**	*e*	Pn	**Pn**	**14 30 49.5**	**+0.1**
SKO				*e*	Sg	**Sn**	**14 31 07.1**	**-2.4**
OHR	**Ohrid**	**1.67**	**140**	*e*	Pg	**Pg**	**14 30 53.1**	**-0.9**
OHR				*e*	Sg	**Sg**	**14 31 15.9**	**+0.2**
OHR	**Ohrid**	**1.67**	**140**	*e*	Pn	**Pg**	**14 30 53.4**	**-0.6**
OHR				*e*	Sg	**Sg**	**14 31 17.9**	**+2.2**
DIVS	**Divibare**	**1.76**	**15**	*e*	Pn	**Pn**	**14 30 52.0**	**+0.2**
DIVS				*e*	Sn	**Sn**	**14 31 13.1**	**-0.8**
DIVS	**Divibare**	**1.76**	**15**	*e*	Pn	**Pn**	**14 30 52.0**	**+0.2**
DIVS				*e*	Sn	**Sn**	**14 31 14.9**	**+1.0**
GRUS	**Gruza**	**1.79**	**33**	*e*	Pn	**Pn**	**14 30 52.5**	**+0.4**
GRUS				*e*	Sn	**Sn**	**14 31 14.5**	**+0.1**
BARS	**Barje**	**1.85**	**76**	*e*	Pn	**Pn**	**14 30 53.2**	**+0.3**
BARS	**Barje**	**1.85**	**76**	*e*	Pn	**Pg**	**14 31 01.2**	**+3.7**
BARS				*e*	Sn	**Sn**	**14 31 15.9**	**0.0**
BARS				*e*	Sn	Sg	14 31 32.2	+11
LSTV	**Lastovo**	**1.87**	**282**	*e*	Pn	**Pn**	**14 30 53.2**	**-0.1**
LSTV					Sn	**Sn**	**14 31 16.7**	**+0.3**
MAKA	**Makarska**	**1.95**	**298**	*e*	Pn	**Pn**	**14 30 55.2**	**+0.9**
MAKA					Sn	**Sn**	**14 31 19.2**	**+0.8**
TRUS	**Trudelj**	**1.98**	**22**	*e*	Pn	**Pn**	**14 30 54.8**	**+0.1**
TRUS				*e*	Sn	**Sn**	**14 31 18.7**	**-0.4**
RICI	**Ricice**	**1.98**	**304**	*e*	Pn	**Pn**	**14 30 55.7**	**+0.9**
RICI					Sn	**Sn**	**14 31 20.2**	**+1.0**
PRVS	**Prvonek**	**2.00**	**86**	*e*	Pn	**Pn**	**14 30 55.2**	**+0.1**
PRVS				*e*	Sn	**Sn**	**14 31 20.0**	**+0.3**
BOVS	**Bovan**	**2.11**	**53**	↑	S	**Sn**	**14 31 22.2**	**-0.2**
TEKS	**Tekeris**	**2.16**	**3**	*e*	Pn	**Pn**	**14 30 57.7**	**+0.6**
TEKS				*e*	Sn	**Sn**	**14 31 23.9**	**+0.4**
TEKS	**Tekeris**	**2.16**	**3**	*e*	Pn	**Pn**	**14 30 57.8**	**+0.6**
TEKS				*e*	Sn	**Sb**	**14 31 25.8**	**-1.3**
HVAR	**Hvar**	**2.29**	**291**	*e*	Pn	**Pn**	**14 30 59.2**	**+0.2**
HVAR					Sn	**Sn**	**14 31 27.0**	**+0.1**
BOSS	**Bosilegrad**	**2.30**	**86**	*e*	Pn	**Pn**	**14 30 59.3**	**+0.2**
BOSS				*e*	Sn	**Sn**	**14 31 26.4**	**-0.6**
SRKY	**Kupres RS**	**2.33**	**317**	*e*	Pn	**Pn**	**14 31 01.6**	**+2.0**
SRKY				*e*	Sn	**Sn**	**14 31 30.3**	**+2.5**
ZAGS	**Zajecar**	**2.53**	**55**	*e*	Pn	**Pn**	**14 31 01.9**	**-0.3**
ZAGS				*e*	Sn	**Sn**	**14 31 32.6**	**0.0**
ZAPS	**Zavoj**	**2.55**	**69**	*e*	Pn	**Pn**	**14 31 02.8**	**+0.2**
ZAPS				*e*	Sn	**Sn**	**14 31 33.5**	**+0.2**
VAY	**Valandovo**	**2.62**	**113**	*e*	Pn	**Pn**	**14 31 05.0**	**+1.6**
MGRS	**Mrkonjic Grad**	**2.62**	**321**	*e*	Pn	**Pn**	**14 31 05.1**	**+1.5**
MGRS				*e*	Sn	**Sn**	**14 31 37.0**	**+2.0**
MATE	**Matera**	**2.66**	**230**	↑	P	**Pn**	**14 31 03.8**	**-0.3**
KIJV	**Kijevo**	**2.70**	**308**	*i*	Pn	**Pn**	**14 31 06.0**	**+1.3**
KIJV					Sn	**Sn**	**14 31 37.6**	**+0.6**
BLKB	**Belogradchik**	**2.71**	**62**	↑	S	**Sn**	**14 31 37.5**	**+0.2**
FRGS	**Fruska Gora**	**2.78**	**6**	*e*	Pn	**Pn**	**14 31 05.6**	**-0.2**
FRGS				*e*	Sn	**Sn**	**14 31 38.2**	**-0.7**
FRGS	**Fruska Gora**	**2.78**	**6**	↓	P	**Pn**	**14 31 05.3**	**-0.5**
FRGS				↓	S	**Sn**	**14 31 38.9**	**0.0**
FRGS	**Fruska Gora**	**2.78**	**6**	*e*	Pn	**Pn**	**14 31 06.3**	**+0.5**
FRGS				*e*	Sn	**Sn**	**14 31 40.0**	**+1.1**
BLY	**Banja Luka**	**2.84**	**327**	*e*	Pn	**Pn**	**14 31 07.9**	**+1.3**
BLY				*e*	Sn	**Sn**	**14 31 43.0**	**+2.6**
VTS	**Vitosha**	**2.86**	**84**	↓	S	**Sn**	**14 31 42.1**	**+1.0**
MDVR	**Moldovita**	**2.93**	**35**	↓	P	**Pn**	**14 31 06.6**	**-1.2**
MDVR				↓	S	**Sn**	**14 31 42.0**	**-0.6**
A050A	**Klekovaca**	**2.94**	**316**	*e*	Pn	**Pn**	**14 31 09.8**	**+1.8**
A050A				*e*	Sn	**Sn**	**14 31 45.4**	**+2.4**
ZIRJ	**Zirje**	**3.01**	**296**	*e*	Pn	**Pn**	**14 31 09.7**	**+0.8**
ZIRJ					Sn	**Sn**	**14 31 44.8**	**+0.2**
MORI	**Morici**	**3.06**	**300**	*e*	Pn	**Pn**	**14 31 10.4**	**+0.8**
MORI					Sn	**Sn**	**14 31 47.0**	**+1.1**
A051A	**Mrakovica**	**3.17**	**326**	*e*	Pn	**Pn**	**14 31 11.9**	**+0.7**
A051A				*e*	Sn	**Sn**	**14 31 50.6**	**+2.0**
HERR	**Herculane**	**3.32**	**41**	↑	P	**Pn**	**14 31 13.4**	**+0.3**
HERR				↑	S	**Sn**	**14 31 51.8**	**-0.5**
UDBI	**Udbina**	**3.38**	**310**	*e*	Pn	**Pn**	**14 31 15.9**	**+1.8**
UDBI					Sn	**Sn**	**14 31 54.6**	**+0.7**
DUGI	**Dugi Otok**	**3.54**	**298**	*e*	Pn	**Pn**	**14 31 16.6**	**+0.5**
DUGI					Sn	**Sn**	**14 31 57.8**	**+0.2**
BZS	**Buzias**	**3.60**	**26**	↓	P	**Pn**	**14 31 17.3**	**+0.2**
BZS				↓	S	**Sn**	**14 31 58.6**	**-0.5**
VIRC	**Vir**	**3.68**	**302**	*e*	Pn	**Pn**	**14 31 19.1**	**+1.1**
VIRC					Sn	**Sn**	**14 32 01.4**	**+0.4**
PLIT	**Plitvice**	**3.69**	**314**	*e*	Pn	**Pn**	**14 31 19.8**	**+1.6**
PLIT					Sn	**Sn**	**14 32 01.9**	**+0.6**
TIP	**Timpagrande**	**3.78**	**213**	↑	P	**Pn**	**14 31 18.2**	**-1.3**
MORH	**Mrgy, Hungar**	**3.85**	**352**	↓	P	**Pn**	**14 31 20.4**	**-0.1**
MORH				↑	S	**Sn**	**14 32 04.8**	**-0.6**
MORH	**Mrgy, Hungar**	**3.85**	**352**	*e*	Pn	**Pn**	**14 31 21.8**	**+1.3**
MORH				*e*	Sn	**Sn**	**14 32 06.1**	**+0.7**
NVLJ	**Novalja**	**3.93**	**305**	*e*	Pn	**Pn**	**14 31 22.0**	**+0.5**
NVLJ					Sn	**Sn**	**14 32 07.2**	**0.0**
SIRR	**Siria**	**4.20**	**22**	↑	P	**Pn**	**14 31 25.4**	**+0.1**
SIRR				↑	S	**Sn**	**14 32 12.9**	**-1.2**
BOJS	**Bojanci**	**4.30**	**318**	*e*	Pn	**Pn**	**14 31 28.5**	**+1.8**
BOJS				*e*	Sn	**Sn**	**14 32 16.7**	**+0.2**
CRES	**Cresnjev**	**4.44**	**322**	*e*	Pn	**Pn**	**14 31 30.1**	**+1.5**
CRES				*e*	Sn	**Sn**	**14 32 20.1**	**+0.2**
SMRN	**Sveta Marina**	**4.62**	**307**	*e*	Pn	**Pn**	**14 31 31.1**	**+0.2**
SMRN					Sn	**Sn**	**14 32 23.9**	**-0.2**
BRJN	**Brijuni**	**4.79**	**303**	*e*	Pn	**Pn**	**14 31 34.1**	**+0.8**
BRJN					Sn	**Sn**	**14 32 27.7**	**-0.7**
CEY	**Cerknica**	**4.89**	**315**	*e*	Pn	**Pn**	**14 31 35.9**	**+1.2**
CEY				*e*	Sn	**Sn**	**14 32 31.2**	**+0.3**
SKDS	**Skadanscina**	**4.99**	**311**	*e*	Pn	**Pn**	**14 31 37.6**	**+1.5**
SKDS				*e*	Sn	**Sn**	**14 32 33.5**	**+0.1**
DRGR		**5.00**	**27**	↑	P	**Pn**	**14 31 36.5**	**+0.3**
DRGR				↑	S	**Sn**	**14 32 32.3**	**-1.4**

*KRNET **25** 15:10:24.9± 0.1, 40.63N× 69.18E, h12km, mb2.9*
*ISU **25** 15:10:28.8, 41.04N× 69.50E, h15km*

ISC 25 15:10:29.1± 0.9, 40.88N± 0.03× 69.57E± 0.03, h10km, n11, σ 2.88/18, 14C-2D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TAS	**Tashkent**	**0.49**	**335**	↑	*i* P	**Pb**	**15 10 38.8**	**-1.0**
	baz=7.0							
TAS				↑	*i* S	**Sb**	**15 10 48.5**	**+1.4**
	baz=7.0							
CHDK	**Chadak**	**0.90**	**84**	P		**Pb**	**15 10 47.2**	**+0.3**
CHDK				S		**Sb**	**15 11 00.4**	**+1.3**
BTK	**Batken**	**1.26**	**130**	↓	*i* P	**Pn**	**15 10 50.8**	**-2.1**
	baz=14							
BTK				↓	*i* S	**Sb**	**15 11 10.4**	**+1.1**
	baz=14							
TRKS	**Terek-Say**	**1.35**	**61**	↑	*i* P	**Pg**	**15 10 57.2**	**+2.1**
	baz=61							
TRKS				↑	*i* S	Sg	15 11 21.2	+8.5
	baz=61							
CHMI	**Chimion**	**1.61**	**112**	P		**Pb**	**15 10 59.4**	**+0.4**
CHMI				S		**Sg**	**15 11 22.7**	**+1.8**
BXML	**Bakhmal**	**1.67**	**225**	P		**Pg**	**15 11 03.3**	**+2.1**
BXML				S		**Sg**	**15 11 28.4**	**+5.4**
GAR	**Garm**	**1.97**	**163**	↑	*i* P	**Pn**	**15 10 59.8**	**-2.8**
	baz=51							
GAR				↑	*e* S	**Sn**	**15 11 25.2**	**-2.2**
	baz=51							
ARK	**Arkit**	**2.02**	**62**	↑	*i* P	**Pg**	**15 11 07.3**	**-0.6**
	baz=60							
ARK				↑	*i* S	**Sg**	**15 11 39.2**	**+5.0**
	baz=60							
CHGR	**Chuyangaron**	**2.24**	**188**	↑	*i* P	Pn	15 11 01.4	-5.0
	baz=80							
CHGR				↑	*i* S	**Sn**	**15 11 28.4**	**-5.8**
	baz=80							
KK31	**Karatay Array**	**2.33**	**17**	↑	Pg	Pg	15 11 17.9	+4.2
	0.7nm,0.4s,baz=195,slow=18,SNR=9.1							
KK31				↑	Lg	Lg	15 11 54.3	
	1.3nm,0.2s,baz=195,slow=30,SNR=12							
KKAR	**Karatay Array**	**2.33**	**17**	↑	*i* P	**Pb**	**15 11 10.8**	**-0.4**
	baz=22							
KKAR				↑	*i* S	**Sg**	**15 11 44.5**	**+0.5**
	baz=22							

*IDC **25** 15:18:07.7± 0.8, 2.46N× 126.22E, h0km, mb3.9/11,*
mbtmp3.9/11, MS3.4/7, Error ellipse: s-maj=59.4km
s-min=16.7km az=68.0
*DJA **25** 15:18:13.6± 0.9, 3.1N± 4.7× 12.7E± *, h36km± 9km, M4.1/8,*
mb4.4/8, mB5.0/3, MLv3.9/6, Mw(mB)4.3/3
*NEIC **25** 15:18:14.2± 2.2, 2.70N± 0.09× 126.9E± 0.1, h55km± 9km,*
mb4.5/17, Error ellipse: s-maj=16.1km s-min=11.6km
az=53.0

ISC 25 15:18:13.8± 0.6, 2.69N± 0.06× 126.96E± 0.09, h53km, n62, σ 1.9/94/51, mb4.3/23, MS3.5/7, 1C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SGSI	**Sangihe**	**1.74**	**305**	P		**Pn**	**15 18 41.0**	**-0.6**
TNTI	**Ternate**	**1.94**	**168**	Pn		**Pn**	**15 18 45.4**	**+1.0**
TNTI	**Ternate**	**1.94**	**168**	P		**Pn**	**15 18 44.3**	**-0.1**
LBMI	**Labuha**	**3.34**	**171**	P		**Pn**	**15 19 03.3**	**+2.7**
KMSI	**Cibinong**	**3.64**	**235**	P		Pn	15 19 17.4	+10
KCP	**Kidapawan**	**4.68**	**337**	↑	*e* P	**Pn**	**15 19 26.6**	**+4.5**
MRSI	**Marisa**	**5.47**	**246**	P		**Pn**	**15 19 33.9**	**+1.1**
	0.2nm618nm44nm,0.6s							
LUWI	**Luwuk**	**5.59**	**229**	Pn		**Pn**	**15 19 34.8**	**+0.4**
TOLI2	**Tolitoli**	**6.37**	**256**	Pn		**Pn**	**15 19 44.3**	**-0.8**
APSI	**Ampana**	**6.40**	**236**	P		Pn	**15 19 49.1**	**+3.6**
	0.2nm495nm59nm,1.3s							
MPSI	**Mapaga**	**7.43**	**252**	P		**Pn**	**15 20 02.5**	**+2.8**
	0.1nm12nm,0.8s							
MYLDM	**Lahad Datu**	**8.79**	**287**			**Pn**	**15 20 17.5**	**-0.9**
TTSI	**Tana Toraja**	**9.13**	**231**	P		**Pn**	**15 20 26.3**	**+3.4**
	18nm,1.2s							
SBUM	**Sibu**	**14.73**	**269**	Pn		**Pn**	**15 21 37.0**	**-2.1**
TWSI	**Taliwang, Sumb**	**15.16**	**221**	P		**P**	**15 21 50.1**	**+1.3**
KNRA	**Kununurra**	**18.33**	**174**	P		**P**	**15 22 23.7**	**-0.2**
UGM	**Wanagama**	**19.48**	**237**	P		**P**	**15 22 34.9**	**-1.8**
WB0	**Warramunga Arr**	**23.48**	**162**	P		**P**	**15 23 18.6**	**-0.3**
WB0						IAmb	IAmb	15 23 21.0
	comp=Z,17nm,1.2s							
WRAB	**Tennant Creek**	**23.62**	**162**	P		**P**	**15 23 19.5**	**-0.8**
WRAB						IAmb	IAmb	15 23 24.4
	comp=Z,16nm,1.0s							
WRA	**Warramunga Arr**	**23.63**	**162**	P		**P**	**15 23 20.1**	**-0.2**
	comp=Z,6.5nm,0.8s,baz=343,slow=11,SNR=34							
	comp=Z,6.5nm,0.8s							
WRA	**Warramunga Arr**	**23.63**	**162**	P		**P**	**15 23 18.4**	**-1.9**
WB2	**Warramunga Arr**	**23.63**	**162**	P		**P**	**15 23 20.2**	**-0.1**
WB2						IAmb	IAmb	15 23 22.6
	comp=Z,31nm,1.3s							
WR0	**Warramunga Arr**	**23.70**	**162**	P		**P**	**15 23 18.2**	**-2.8**
WR0						IAmb	IAmb	15 23 23.3
	comp=Z,9.8nm,1.0s							
RABL	**Rabaul**	**26.10**	**105**	P		**P**	**15 23 38.3**	**-4.6**
KULM	**Kulim**	**26.37**	**276**	P		**P**	**15 23 43.1**	**-2.2**
KULM						IAmb	IAmb	15 23 44.6
	comp=Z,23nm,1.3s							
AS31	**Alice Springs**	**27.05**	**166**	P		**P**	**15 23 49.2**	**-2.2**
ASAR	**Alice Springs**	**27.05**	**166**	P		**P**	**15 23 49.9**	**-1.5**
CMAR	**Chiang Mai Arr**	**31.60**	**302**	P		**P**	**15 24 27.4**	**-4.4**
	comp=Z,0.2nm,0.6s,baz=102,slow=13,SNR=1.8							
CMAR						LR	LR	15 37 14.0
	comp=Z,27nm,21.0s,baz=105,slow=37							
	comp=Z,0.2nm,0.6s							
FORT	**Forrest**	**33.29**	**178**	P		**P**	**15 24 44.0**	**-2.4**
PZH	**PanZhiHua**	**33.85**	**317**	P		**P**	**15 24 51.8**	**+0.2**
PZH						pmax	pmax	
	comp=Z,10.0nm,0.8s							
PZH						pmax	pmax	
	comp=Z,100nm,4.3s							
KSRS	**Korea Array**	**34.61**	**1**	P		**P**	**15 25 00.6**	**+2.8**
	comp=Z,0.6nm,0.6s,baz=174,slow=8.7,SNR=3.7							
	comp=Z,0.6nm,0.6s							
BBOO	**Buckleboo**	**36.34**	**167**	P		**P**	**15 25 12.3**	**-0.4**
BBOO						IAmb	IAmb	15 25 16.0
	comp=Z,18nm,1.4s							
STKA	**Stephens Creek**	**37.08**	**159**	P		**P**	**15 25 20.2**	**+1.2**
	comp=Z,10nm,1.0s,baz=334,slow=8.1,SNR=9.0							
	comp=Z,10nm,1.0s							
STKA	**Stephens Creek**	**37.08**	**159**	P		**P**	**15 25 19.4**	**+0.4**
LZH	**Lanzhou**	**39.52**	**330**	*e* P		**P**	**15 25 42.3**	**+2.6**
LZH					sP	sP	15 26 02.3	+3.4
LZH					pmax	pmax		
	comp=Z,18nm,1.5s							
HHC	**Hu-ho-hao-te**	**40.46**	**342**	*e* P		**P**	**15 25 49.5**	**+2.2**
HHC					pmax	pmax		
	comp=Z,27nm,0.8s							
HHC					pmax	pmax		
	comp=Z,220nm,6.2s							
USRK	**Ussuriysk Ar.**	**41.58**	**5**	P		**P**	**15 25 54.4**	**-2.0**
H11S3	**WAKE ISLAND Hy**	**41.95**	**65**	T		T	16 11 06.3	
	baz=252,slow=75,SNR=12							
H11S1	**WAKE ISLAND Hy**	**41.97**	**65**	T		T	16 11 03.5	
	baz=252,slow=75,SNR=4.1							
H11S2	**WAKE ISLAND Hy**	**41.97**	**65**	T		T	16 11 03.3	
	baz=252,slow=75,SNR=5.5							
H11N1	**WAKE ISLAND Hy**	**42.50**	**64**	T		T	16 11 46.2	
	baz=251							
H11N2	**WAKE ISLAND Hy**	**42.51**	**63**	T		T	16 11 46.9	
	baz=251							
H11N3	**WAKE ISLAND Hy**	**42.52**	**64**	T		T	16 11 59.6	
	baz=251							
PALK	**Pallekele**	**46.29**	**277**	LR		LR	15 48 04.3	
	comp=Z,49nm,19.0s,baz=194,slow=39							
SONM	**Songino Array**	**48.35**	**342**	P		**P**	**15 26 51.1**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=155,slow=7.9,SNR=2.2							
SONM				PcP		**PcP**	**15 28 16.6**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=146,slow=1.5,SNR=3.0							
	comp=Z,0.4nm,0.6s							
WMQ	**Urumqi**	**53.71**	**325**	*e* P		**P**	**15 27 31.3**	**+0.8**
MK31	**Makanchi Array**	**58.54**	**326**	P		**P**	**15 28 04.9**	**0.0**
MK31						IAmb	IAmb	15 28 07.5
	comp=Z,2.1nm,1.2s							
MKAR	**Makanchi Array**	**58.54**	**326**	P		**P**	**15 28 04.6**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=120,slow=8.3,SNR=10							
MKAR						LR	LR	15 54 33.7
	comp=Z,31nm,20.7s,baz=64,slow=38							
	comp=Z,0.7nm,0.5s							
MAKZ	**Makanchi**	**58.73**	**325**	P		**P**	**15 28 06.7**	**+0.5**
MAKZ						IAmb	IAmb	15 28 08.8
	comp=Z,3.7nm,1.2s							
ZALV	**Zalesovo Beam**	**61.62**	**333**	P		**P**	**15 28 26.4**	**+0.6**
	comp=Z,0.5nm,0.5s,baz=116,slow=6.6,SNR=2.6							
	comp=Z,0.5nm,0.5s							
KURK	**Kurchatov**	**62.74**	**328**	P		**P**	**15 28 33.3**	**-0.1**
KURK						IAmb	IAmb	15 28 45.6
	comp=Z,2.5nm,0.6s							
AKTO	**Aktyubinsk**	**74.61**	**322**	LR		LR	16 06 01.9	

TRKR				*e*S		**Sn**	**15 32 01.3 +0.2**
TRKR	**Terskaya**	**0.92**	**302**	*e*Pg		**Pn**	**15 31 46.9 -0.7**
TRKR				*e*Sg		**Sn**	**15 32 02.2 +1.1**
BTKR	**Batakoyurt**	**0.93**	**279**	*e*PG		**Pn**	**15 31 47.6 -0.2**
BTKR				*e*S		**Sn**	**15 32 02.1 +0.6**
BTKR	**Batakoyurt**	**0.93**	**279**	*e*Pg		**Pn**	**15 31 47.6 -0.2**
BTKR				*e*Sg		**Sn**	**15 32 02.1 +0.6**
XNZR	**Khunzakh**	**0.96**	**136**	*e*PG		**Pn**	**15 31 47.2 -1.0**
XNZR				*i* S		**Sn**	**15 32 01.2 -1.0**
XNZR				pmax	pmax		
	comp=Z,73nm,0.4s						
XNZR				smax	smax		
	comp=N,272nm,0.8s						
XNZR	**Khunzakh**	**0.96**	**136**	*e*Pg		**Pn**	**15 31 47.3 -1.0**
XNZR				*e*Sg		**Sn**	**15 32 00.9 -1.3**
BUJR	**Buynaksk**	**1.04**	**113**	*e*PG		**Pn**	**15 31 48.7 -0.5**
BUJR				*i* S		**Sn**	**15 32 04.5 +0.5**
BUJR				pmax	pmax		
	comp=Z,151nm,0.5s						
BUJR				smax	smax		
	comp=N,837nm,0.4s						
PNSH	**Pansheti**	**1.06**	**236**	P		**Pg**	**15 31 47.8 -0.8**
PNSH				S		**Sb**	**15 32 03.1 0.0**
PNSH	**Pansheti**	**1.06**	**236**	PG		**Pg**	**15 31 47.8 -0.8**
PNSH				S		**Sb**	**15 32 03.1 0.0**
ARKR	**Arakani**	**1.08**	**125**	*e*PG		**Pn**	**15 31 49.2 -0.6**
ARKR				*e*S		**Sn**	**15 32 05.5 +0.5**
ARKR	**Arakani**	**1.08**	**125**	*e*Pg		**Pn**	**15 31 49.2 -0.6**
ARKR				*e*Sg		**Sn**	**15 32 05.5 +0.5**
MTEO	**Meteo**	**1.09**	**240**	P		**Pg**	**15 31 48.9 -0.2**
MTEO				S		**Sb**	**15 32 03.9 -0.3**
ARNR	**Ardon**	**1.11**	**268**	*e*PG		**Pn**	**15 31 50.5 +0.2**
ARNR				*e*S		**Sn**	**15 32 07.8 +1.9**
ARNR	**Ardon**	**1.11**	**268**	*i* Pg		**Pn**	**15 31 50.4 +0.2**
ARNR				*i* Sg		**Sn**	**15 32 07.6 +1.7**
LACR	**Lac**	**1.18**	**250**	*e*PG		**Pn**	**15 31 51.1 -0.2**
LACR				*e*S		**Sn**	**15 32 07.6 -0.1**
LACR	**Lac**	**1.18**	**250**	*e*Pg		**Pg**	**15 31 50.6 -0.2**
LACR				*e*Sg		**Sn**	**15 32 08.9 +1.2**
GNBR	**Gunib**	**1.20**	**134**	*e*PG		**Pn**	**15 31 52.2 +0.7**
GNBR				*e*S		**Sn**	**15 32 10.0 +2.0**
GNBR	**Gunib**	**1.20**	**134**	*e*Pg		**Pn**	**15 31 52.1 +0.7**
GNBR				*e*Sg		**Sn**	**15 32 09.8 +1.8**
PRTR	**Priterechnaya**	**1.23**	**296**	*e*PG		**Pg**	**15 31 52.8 +1.1**
PRTR				*e*S		**Sn**	**15 32 11.4 +2.8**
PRTR	**Priterechnaya**	**1.23**	**296**	*e*Pg		**Pg**	**15 31 52.5 +0.7**
PRTR				*e*Sg		**Sn**	**15 32 12.0 +3.4**
KANR	**Karaman**	**1.23**	**91**	*e*PG		**Pg**	**15 31 52.7 +0.9**
KANR				*e*S		**Sn**	**15 32 10.5 +1.8**
KANR				pmax	pmax		
	comp=Z,331nm,0.4s						
KANR				smax	smax		
	comp=E,281nm,0.7s						
KANR				smax	smax		
	comp=N,203nm,0.4s						
KANR				smax	smax		
	comp=E,258nm,0.3s						
GUDG	**Gudauri**	**1.24**	**232**	P		**Pn**	**15 31 51.6 -0.6**
GUDG				S		**Sn**	**15 32 09.2 -0.2**
GUDG	**Gudauri**	**1.24**	**232**	PG		**Pn**	**15 31 51.6 -0.6**
GUDG				S		**Sn**	**15 32 09.2 -0.2**
MAK	**Makhachkala**	**1.27**	**102** ⇓	*i* PG		**Pg**	**15 31 54.2 +1.6**
MAK				*e*			15 32 12.8
MAK				pmax	pmax		
	comp=Z,158nm,0.3s						
MAK				smax	smax		
	comp=N,646nm,0.3s						
MAK				smax	smax		
	comp=N,731nm,0.3s						
KORR	**Kora**	**1.28**	**264**	*e*PG		**Pg**	**15 31 53.3 +0.5**
KORR				*e*S		**Sn**	**15 32 11.9 +1.8**
KORR	**Kora**	**1.28**	**264**	*e*Pg		**Pg**	**15 31 53.2 +0.5**
KORR				*e*Sg		**Sn**	**15 32 11.7 +1.6**
STDR	**Stavd-Durt**	**1.28**	**277**	*e*PG		**Pg**	**15 31 53.4 +0.6**
STDR				*e*S		**Sn**	**15 32 12.3 +2.3**
STDR	**Stavd-Durt**	**1.28**	**277**	*e*Pg		**Pg**	**15 31 53.4 +0.6**
STDR				*e*Sg		**Sn**	**15 32 12.3 +2.3**
LGD	**Lagodekhi**	**1.43**	**167**	P		**Pg**	**15 31 55.1 -0.7**
LGD				S		**Sg**	**15 32 15.0 +0.7**
LGD	**Lagodekhi**	**1.43**	**167**	PG		**Pg**	**15 31 55.0 -0.7**
LGD				S		**Sg**	**15 32 15.0 +0.7**
LSNR	**Lesken**	**1.45**	**272**	*e*PG		**Pg**	**15 31 55.9 -0.1**
LSNR				*e*S		**Sg**	**15 32 17.2 +2.4**
LSNR	**Lesken**	**1.45**	**272**	*e*Pg		**Pg**	**15 31 55.7 -0.3**
LSNR				*e*Sg		**Sg**	**15 32 17.1 +2.4**
KMKR	**Kumukh**	**1.46**	**139**	*e*PG		**Pg**	**15 31 55.9 -0.2**
KMKR				*i* S		**Sg**	**15 32 16.8 +1.8**
KMKR				pmax	pmax		
	comp=Z,70nm,0.4s						
KMKR				smax	smax		
	comp=N,892nm,0.4s						
ZEI	**Tsey**	**1.47**	**253**	*e*PG		**Pb**	**15 31 55.3 -0.7**
ZEI				*e*S		**Sb**	**15 32 15.0 +0.1**
ZEI	**Tsey**	**1.47**	**253**	*e*Pg		**Pb**	**15 31 55.2 -0.7**
ZEI				*i* Sg		**Sg**	**15 32 16.7 +1.3**
SGKR	**Sergokala**	**1.56**	**119**	*e*PG		**Pb**	**15 31 56.9 -0.6**
SGKR				*i* S		**Sg**	**15 32 19.3 +0.8**
SGKR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
SGKR				smax	smax		
	comp=E,219nm,0.3s						
NCK	**Nalchik**	**1.63**	**280**	*i* PN		**Pn**	**15 31 56.7 -0.7**
SEAG	**Tbilisi Sea**	**1.65**	**207**	P		**Pb**	**15 31 58.9 -0.1**
SEAG				S		**Sg**	**15 32 21.4 +0.4**
SEAG	**Tbilisi Sea**	**1.65**	**207**	PN		**Pb**	**15 31 58.8 -0.1**
SEAG				S		**Sg**	**15 32 21.4 +0.4**
DIGR	**Digorskoe uzhe**	**1.67**	**259**	*e*PN		**Pb**	**15 31 58.8 -0.5**
DIGR				*e*S		**Sb**	**15 32 20.4 -0.2**
DIGR	**Digorskoe uzhe**	**1.67**	**259**	*e*Pg		**Pb**	**15 31 58.5 -0.9**
DIGR				*e*Sg		**Sg**	**15 32 22.1 +0.3**
DDFL	**Dedoflistskaro**	**1.80**	**173**	P		**Pg**	**15 32 06.1 +3.4**
DDFL				S		Sg	15 32 34.6 +8.5
DDFL	**Dedoflistskaro**	**1.80**	**173**	PN		**Pg**	**15 32 06.7 +4.0**
DDFL				S		**Sg**	**15 32 34.5 +8.4**
DGRG	**David-gareji**	**1.81**	**190**	P		**Pg**	**15 32 02.8 -0.2**
DGRG	**David-gareji**	**1.81**	**190**	PN		**Pg**	**15 32 06.1 +3.2**
ONI	**Oni**	**1.85**	**250**	P		**Pb**	**15 32 01.4 -1.0**
ONI				S		**Sg**	**15 32 26.5 -1.0**
ONI	**Oni**	**1.85**	**250**	*e*PN		**Pb**	**15 32 01.6 -0.7**
ONI				*e*S		**Sg**	**15 32 26.6 -0.9**
ONI	**Oni**	**1.85**	**250**	*e*Pg		**Pb**	**15 32 01.6 -0.7**
ONI				*e*Sg		**Sg**	**15 32 26.6 -0.9**
TRLG	**Trialeti**	**2.11**	**217**	P		**Pb**	**15 32 05.3 -1.6**
TRLG				S		**Sb**	**15 32 33.9 +0.5**
TRLG	**Trialeti**	**2.11**	**217**	PN		**Pb**	**15 32 05.3 -1.6**
TRLG				S		**Sb**	**15 32 33.9 +0.5**
KZRT	**Kazreti**	**2.12**	**210**	P		**Pb**	**15 32 06.5 -0.6**
KZRT	**Kazreti**	**2.12**	**210**	PN		**Pb**	**15 32 06.4 -0.6**
PYA1	**Pyatigorsk**	**2.14**	**294**	*i* PN		**Pn**	**15 32 02.8 -1.5**
KBZ	**Khabaz**	**2.17**	**284**	*e*PN		**Pb**	**15 32 06.4 -1.5**
KBZ				*e*S		**Sb**	**15 32 34.5 -0.5**
KBZ	**Khabaz**	**2.17**	**284**	*e*Pg		**Pb**	**15 32 06.4 -1.5**
KBZ				*e*Sg		**Sb**	**15 32 34.5 -0.5**
BRNG	**Burnasheti**	**2.18**	**223**	P		**Pb**	**15 32 06.7 -1.3**
BRNG				S		**Sg**	**15 32 38.3 +0.1**
DRN	**Derbent**	**2.22**	**122**	*e*PN		**Pn**	**15 32 05.7 +0.3**
DRN				*e*S		**Sb**	**15 32 35.2 -1.0**
DRN				*i* S		**Sg**	**15 32 35.7 -3.7**
DRN				pmax	pmax		
	comp=Z,44nm,0.1s						
DRN				smax	smax		
	comp=N,169nm,0.6s						
DRN				smax	smax		
	comp=E,206nm,0.4s						
DRN				smax	smax		
	comp=E,167nm,0.3s						
DMNI	**Dmanisi**	**2.25**	**213**	P		**Pn**	**15 32 06.7 +0.7**
DMNI				S		**Sb**	**15 32 36.7 -0.6**
DMNI	**Dmanisi**	**2.25**	**213**	PN		**Pn**	**15 32 02.7 -3.3**
DMNI				S		**Sb**	**15 32 36.7 -0.6**
TKB	**Tkibuli**	**2.25**	**248**	P		**Pg**	**15 32 10.1 -1.2**
TKB				S		**Sg**	**15 32 39.1 -1.4**
TKB	**Tkibuli**	**2.25**	**248**	PN		**Pg**	**15 32 10.1 -1.2**
TKB				S		**Sg**	**15 32 39.1 -1.4**
SHA1	**Shidzhatmaz**	**2.35**	**283**	*e*PN		**Pn**	**15 32 06.8 -0.6**
SHA1				*e*S		**Sn**	**15 32 37.7 +1.1**
SHA1	**Shidzhatmaz**	**2.35**	**283**	*i* Pn		**Pn**	**15 32 06.6 -0.9**
SHA1				*i* Sn		**Sn**	**15 32 36.2 -0.4**
KSMR	**Kasumkent**	**2.37**	**133**	*e*PN		**Pn**	**15 32 08.2 +0.6**
KSMR				*i* S		**Sb**	**15 32 39.1 -1.6**
KSMR				pmax	pmax		
	comp=Z,2.0nm,0.0s						
KSMR				smax	smax		
	comp=E,87nm,0.4s						
KIV	**Kislovodsk**	**2.38**	**289**	*e*PN		**Pn**	**15 32 06.5 -1.2**
KIV				*e*			15 32 13.5
KIV				*e*S		**Sn**	**15 32 36.9 -0.3**
KIV				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KIV	**Kislovodsk**	**2.38**	**289**	*e*Pn		**Pb**	**15 32 10.2 -1.3**
KIV				*i* Sn		**Sb**	**15 32 40.6 -0.4**
AKH	**Akhalkalaki**	**2.50**	**224**	P		**Pb**	**15 32 12.4 -1.2**
AKH				S		**Sb**	**15 32 44.9 +0.1**
AKH	**Akhalkalaki**	**2.50**	**224**	PN		**Pb**	**15 32 12.4 -1.2**
AKH				S		**Sb**	**15 32 44.8 +0.1**
BGD	**Bogdanovka**	**2.56**	**221**	P		**Pb**	**15 32 12.8 -1.8**
BGD				S		**Sg**	**15 32 48.4 -2.2**
BGD	**Bogdanovka**	**2.56**	**221**	PN		**Pb**	**15 32 12.8 -1.8**
BGD				S		**Sg**	**15 32 48.3 -2.2**
ABS	**Abastumani**	**2.66**	**237**	P		**Pb**	**15 32 15.0 -1.3**
ABS				S		**Sb**	**15 32 48.4 -0.9**
ABS	**Abastumani**	**2.66**	**237**	PN		**Pb**	**15 32 15.0 -1.3**
ABS				S		**Sb**	**15 32 48.3 -0.9**
GOF	**Gofitskoye**	**2.70**	**313**	*e*PN		**Pg**	**15 32 21.0 +1.1**
GOF				*i* S		**Sg**	**15 32 55.2 +0.3**
GOF	**Gofitskoye**	**2.70**	**313**	*e*Pn		**Pg**	**15 32 21.0 +1.1**
GOF				*i* Sn		**Sg**	**15 32 55.2 +0.3**
GNI	**Garni**	**3.18**	**195**	*i* PN		**Pn**	**15 32 20.2 +1.3**
NACGM	**Naroch**	**17.01**	**320** ⇑	*e*P		**Pn**	**15 35 25.4 -1.1**
	baz=126						
AAK	**Ala-Archa**	**20.97**	**82**	*i* P		**P**	**15 36 11.8 -0.2**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KHC	**Kasperske Hory**	**22.97**	**296**	*i* P		**P**	**15 36 35.4 +2.3**
KHC				pmax	pmax		
	comp=Z,3.0nm,1.1s						

MAN 25 15:56:41.6, 11°.08N×124°.70E, h7km, mb4.5, ML3.4, MS3.2, 1C-3D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.10**	**251** ⇓	*e*P	Pg	15 56 44.2	+1.4
OCLP				*e*S		15 56 46.4	
BESP	**Borongan**	**0.89**	**54** ⇓	*e*P	Pb	15 56 57.6	+0.5
BESP				*e*S		15 57 10.3	
MSLP	**Maasin**	**0.95**	**171** ⇓	*e*P	Pn	15 57 00.6	+0.5
MSLP				*e*S		15 57 15.9	
LLP	**Lapu-Lapu**	**1.05**	**224** ⇑	*i* P	Pn	15 57 01.7	+0.3
LLP				*i* S		15 57 17.5	

*IDC **25** 16:02:05.4±0.8, 1°.32N×125°.86E, h0km, mb4.0/9, mbtmp4.0/9, MS3.0/4, Error ellipse: s-maj=56.6km s-min=19.4km az=71.0*
*DJA **25** 16:02:12.7±0.4, 2°.N×4°×12°.7E±°, h51km±14km, M4.0/12, mb4.2/12, mB4.6/3, MLv4.0/11, Mw(mB)3.8/3*
*NEIC **25** 16:02:13.5±1.9, 1°.49N±0°.09×126°.45E±0°.08, h62km±9km, mb4.3/12, Error ellipse: s-maj=15.5km s-min=9.1km az=220.0*

ISC 25 16:02:12.3±0.5, 1°.46N±0°.06×126°.43E±0°.07, h47km, n55, σ1§94/52, mb4.2/14, MS2.7/4, 1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.16**	**126**	Pn	**Pn**	**16 02 31.5**	**-0.7**
TNTI	**Ternate**	**1.16**	**126**	P	**Pn**	**16 02 31.3**	**-0.9**
LBMI	**Labuha**	**2.34**	**153**	P	**Pn**	**16 02 48.6**	**+0.2**
SGSI	**Sangihe**	**2.39**	**338**	P	**Pn**	**16 02 48.3**	**-0.7**
KMSI	**Cibinong**	**2.60**	**250**	P	**Pn**	**16 02 51.7**	**-0.3**
SANI	**Sanana**	**3.52**	**187**	P	**Pn**	**16 03 04.0**	**-0.5**
LUWI	**Luwuk**	**4.42**	**236**		**Pn**	**16 03 19.8**	**+2.8**
LUWI	**Luwuk**	**4.42**	**236**	P	**Pn**	**16 03 20.0**	**+3.0**
MRSI	**Marisa**	**4.59**	**258**	P	**Pn**	**16 03 22.9**	**+3.6**
NLAI	**Namlea**	**4.72**	**172**	P	**Pn**	**16 03 21.5**	**+0.5**
APSI	**Ampana**	**5.33**	**244**	P	**Pn**	**16 03 31.0**	**+1.6**
	0.5nm781nm54nm,0.6s						
TOLI2	**Tolitoli**	**5.66**	**267**	Pn	**Pn**	**16 03 34.4**	**+0.5**
KCP	**Kidapawan**	**5.67**	**346** ⇓	*i* P	**Pn**	**16 03 37.9**	**+3.7**
KCP				*i* S	**Sn**	**16 04 42.7**	**+4.6**
MPSI	**Mapaga**	**6.63**	**260**	P	**Pn**	**16 03 49.4**	**+2.2**
	0.1nm15nm,0.8s						
FAKI	**Fak Fak**	**7.26**	**127**	Pn	**Pn**	**16 03 58.4**	**+2.4**
BBSI	**Bau Bau**	**7.91**	**209**	P	**Pn**	**16 04 08.1**	**+3.3**
	40nm3.0nm,0.9s						
TTSI	**Tana Toraja**	**7.98**	**236**	P	**Pn**	**16 04 09.5**	**+3.7**
	25nm,0.6s						
SPSI	**Sidrap Palu**	**8.57**	**231**	P	**Pn**	**16 04 14.9**	**+1.1**
	16nm,0.6s						
BNSI	**Bone**	**8.59**	**227**	P	**Pn**	**16 04 16.2**	**+2.0**
	2µm11nm,0.6s						
MYLDM	**Lahad Datu**	**8.73**	**295**	Pn	**Pn**	**16 04 17.3**	**+1.1**
BKSI	**Bulukumba**	**9.23**	**223**	P	**Pn**	**16 04 26.6**	**+3.7**
	6.9nm,1.0s						
BSSI	**Bau Bau, Buton**	**9.60**	**218**	P	**Pn**	**16 04 31.7**	**+3.6**
	14nm,1.1s						
EDFI	**Ende, Flores**	**11.19**	**205**	P	**Pn**	**16 04 52.0**	**+2.1**
	2.6nm,0.7s						
MTN	**Manton Dam**	**14.96**	**162**	Pn	**Pn**	**16 05 40.8**	**-0.1**
KNRA	**Kununurra**	**17.18**	**172**	P	**Pn**	**16 06 08.5**	**-0.7**
KNRA				IAmb	IAmb	16 06 10.2	
	comp=Z,12nm,0.8s						
GUMO	**Guam**	**21.86**	**56**	LR	LR	16 14 35.9	
	comp=Z,23nm,19.9s,baz=96,slow=34						
WB0	**Warramunga Arr**	**22.50**	**160**	P	**P**	**16 07 07.5**	**-0.6**
WB0				IAmb	IAmb	16 07 10.0	
	comp=Z,14nm,0.9s						
COEN	**Coen**	**22.58**	**133**	P	**P**	**16 07 08.8**	**-0.3**
COEN				IAmb	IAmb	16 07 23.0	
	comp=Z,10nm,1.1s						
WRAB	**Tennant Creek**	**22.64**	**160**	P	**P**	**16 07 08.9**	**-0.7**
WRAB				IAmb	IAmb	16 07 11.0	
	comp=Z,9.3nm,0.8s						
WRA	**Warramunga Arr**	**22.64**	**160**	P	**P**	**16 07 08.6**	**-1.0**
	comp=Z,6.9nm,0.8s,baz=336,slow=11,SNR=50						
WRA				PcP	**PcP**	**16 11 01.5**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=346,slow=2.1,SNR=1.9						
	comp=Z,6.9nm,0.8s						
WRA	**Warramunga Arr**	**22.64**	**160**	P	**P**	**16 07 08.0**	**-1.7**
WB2	**Warramunga Arr**	**22.65**	**160**	P	**P**	**16 07 08.9**	**-0.8**
WB2				IAmb	IAmb	16 07 11.1	
	comp=Z,10nm,0.8s						
WR0	**Warramunga Arr**	**22.73**	**160**	P	**P**	**16 07 10.1**	**-0.4**
PSA00	**Pilbara Seismi**	**23.78**	**195**	P	**P**	**16 07 19.6**	**-1.2**
PSA00				IAmb	IAmb	16 07 21.1	
	comp=Z,12nm,0.8s						
AS31	**Alice Springs**	**26.01**	**164**	P	**P**	**16 07 41.6**	**+0.4**
ASAR	**Alice Springs**	**26.01**	**164**	P	**P**	**16 07 41.0**	**-0.2**
CMAR	**Chiang Mai Arr**	**31.82**	**304**	LR	LR	16 20 49.5	
	comp=Z,15nm,21.0s,baz=125,slow=36						
MORW	**Morawa**	**31.95**	**197**	P	**P**	**16 08 30.1**	**-3.7**
FORT	**Forrest**	**32.10**	**177**	P	**P**	**16 08 35.0**	**-0.2**
BBOO	**Buckleboo**	**35.28**	**166**	P	**P**	**16 09 03.0**	**+0.2**
KSRS	**Korea Array**	**35.84**	**2**	P	**P**	**16 09 08.2**	**+0.7**
	comp=Z,6.0nm,0.6s,baz=183,slow=9.4,SNR=2.0						
	comp=Z,0.6nm,0.6s						
STKA	**Stephens Creek**	**36.14**	**158**	P	**P**	**16 09 10.3**	**+0.1**
	comp=Z,1.5nm,0.4s,baz=351,slow=8.7,SNR=3.0						
	comp=Z,1.5nm,0.4s						
H11S3	**WAKE ISLAND Hy**	**42.95**	**64**	T	T	16 57 14.7	
	baz=248						
H11S2	**WAKE ISLAND Hy**	**42.96**	**64**	T	T	16 57 00.7	
	baz=248						
H11S1	**WAKE ISLAND Hy**	**42.96**	**64**	T	T	16 57 21.8	
	baz=248						
ASAJ	**Asahikawa**	**44.84**	**17**	LR	LR	16 33 47.6	
	comp=Z,10.0nm,18.1s,baz=156,slow=42						
SONM	**Songino Array**	**49.35**	**342**	P	**P**	**16 10 56.3**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=160,slow=4.7,SNR=3.8						
SONM				PcP	**PcP**	**16 12 19.3**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=151,slow=3.3,SNR=3.6						
	comp=Z,0.6nm,0.7s						
PETK	**Petropavlovsk-**	**57.63**	**22**	P	**P**	**16 11 59.6**	**+2.0**
	comp=Z,2.5nm,0.8s,baz=219,slow=1.8,SNR=2.0						
	comp=Z,2.5nm,0.8s						
MKAR	**Makanchi Array**	**59.25**	**326**	P	**P**	**16 12 07.5**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=118,slow=7.6,SNR=16						
MKAR				PcP	**PcP**	**16 12 56.5**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=122,slow=4.6,SNR=5.5						
	comp=Z,0.4nm,0.3s						
MKAR	**Makanchi Array**	**59.25**	**326**	P	**P**	**16 12 07.3**	**-1.7**
URZ	**Urewera**	**61.12**	**136**	LR	LR	16 43 16.4	
	comp=Z,52nm,18.0s,baz=31,slow=40						
BRTR	**Keskin Array B**	**91.23**	**310**	P	**P**	**16 15 10.9**	**-2.2**
	comp=Z,0.4nm,0.6s,baz=77,slow=5.6,SNR=2.8						
	comp=Z,0.4nm,0.6s						
ARCES	**ARCESS Array B**	**92.46**	**340**	P	**P**	**16 15 16.8**	**-1.2**
	comp=Z,1.5nm,0.8s,baz=63,slow=8.2,SNR=2.7						
	comp=Z,1.5nm,0.8s						
FINES	**FINESS Array B**	**93.68**	**332**	P	**P**	**16 15 21.9**	**-1.8**
	comp=Z,0.4nm,0.7s,baz=98,slow=2.8,SNR=1.6						
	comp=Z,0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**123.31**	**287**	PKP	**PKPdf**	**16 21 04.9**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=60,slow=2.2,SNR=4.4						

*IDC **25** 16:11:32.3±1.1, 5°.50S×154°.32E, h162km±8km, mb4.0/16, mbtmp4.5/19, MS3.0/2, Error ellipse: s-maj=13.3km s-min=8.9km az=68.0*
*DJA **25** 16:11:32.9±1.3, 5°.S±6°×15°.4E±1°.3, h163km±6km, M4.9/19, mb4.7/19, mB5.0/5, MLv5.4/2, Mw(mB)4.3/5*
*NEIC **25** 16:11:33.1±1.9, 5°.49S±0°.09×154°.4E±0°.1, h171km±7km, mb4.4/39, Error ellipse: s-maj=17.3km s-min=12.0km az=74.0*

ISC 25 16:11:30.9±0.4, 5°.45S±0°.05×154°.45E±0°.07, h150km, n146, σ1§17/143, mb4.5/47, 1C-1D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**2.60**	**299**	Pn	**Pn**	**16 12 14.8**	**+1.4**
KRVT	**Keravat (AS076**	**2.67**	**295**	P	**Pn**	**16 12 15.7**	**+1.5**
	201nm,0.3s,baz=50,slow=7.9,SNR=126						
KRVT				S	**Sn**	**16 12 47.8**	**+0.3**
	836nm,0.5s,baz=164,slow=19,SNR=15						
KRVT				LR	LR	16 13 21.8	
	comp=Z,122nm,18.0s,baz=233,slow=42						
HNR	**Honiara**	**6.73**	**126**	P	**Pn**	**16 13 08.7**	**+1.3**
	60nm,0.5s,baz=330,slow=20,SNR=3.7						
PMG	**Port Moresby**	**8.23**	**241**	P	**Pn**	**16 13 30.9**	**+3.5**
	27nm,0.9s,baz=72,slow=19,SNR=4.1						
PMG	**Port Moresby**	**8.23**	**241**	P	Pn	16 13 35.5	+8.1
PMG	**Port Moresby**	**8.23**	**241**	P	Pn	16 13 35.7	+8.3
COEN	**Coen**	**13.95**	**232**	P	**Pn**	**16 14 43.1**	**+0.7**
COEN	**Coen**	**13.95**	**232**	P	**P**	**16 14 48.0**	**+2.4**
GENI	**Genyem**	**14.53**	**281**	P	**P**	**16 14 51.7**	**-0.3**
	98nm,1.2s						
MTSU	**Mount Surprise**	**16.03**	**217**	P	**P**	**16 15 11.2**	**+2.6**
SMPI	**Sarmi**	**16.08**	**282**	P	**P**	**16 15 10.2**	**+1.0**
	73nm,1.2s						
CTA	**Charters Tower**	**16.59**	**208**	P	**Pn**	**16 15 16.1**	**+1.2**
	26nm,0.1s,baz=26,slow=12,SNR=31						
CTA	**Charters Tower**	**16.59**	**208**	P	**Pn**	**16 15 16.9**	**+2.0**
CTAO	**Charters Tower**	**16.59**	**208**	Pn	**Pn**	**16 15 17.1**	**+2.2**
CTAO	**Charters Tower**	**16.59**	**208**	P	**Pn**	**16 15 17.0**	**+2.0**
KOUNC	**Koumac, New Ca**	**17.79**	**148**	P	**P**	**16 15 27.6**	**-0.4**
KOUNC				IAmb	IAmb	16 15 37.1	
	comp=Z,18nm,1.1s						
KOUNC	**Koumac, New Ca**	**17.79**	**148**	P	**Pn**	**16 15 30.4**	**+1.1**
RK1H	**Rockhampton Ha**	**18.23**	**192**	P	**Pn**	**16 15 34.7**	**+0.2**
LIFNC	**LIFOU**	**19.65**	**142**	P	**P**	**16 15 48.6**	**+0.4**
EIDS	**Eidsvold**	**20.07**	**189**	P	**P**	**16 15 52.7**	**+0.1**
EIDS				IAmb	IAmb	16 15 59.5	
	comp=Z,16nm,0.9s						
EIDS	**Eidsvold**	**20.07**	**189**	P	**P**	**16 15 53.4**	**+0.8**
NOUC	**Port Laguerre**	**20.14**	**146**	P	**P**	**16 15 53.6**	**+0.2**
DZM	**Mont Dzumac**	**20.19**	**146**	P	**P**	**16 15 54.9**	**+0.8**
	comp=Z,10nm,0.5s,baz=266,slow=7.1,SNR=47						
	comp=Z,10nm,0.5s						
DZM	**Mont Dzumac**	**20.19**	**146**	P	**P**	**16 15 54.5**	**+0.4**
DZM				IAmb	IAmb	16 15 58.9	
	comp=Z,9.5nm,0.5s						
DZM	**Mont Dzumac**	**20.19**	**146**	P	**P**	**16 15 54.9**	**+0.8**
YATNC	**Mamie plateau,**	**20.43**	**145**	P	Pn	16 16 00.2	-0.2
OUENC	**Ouen Island, N**	**20.69**	**146**	P	**P**	**16 15 59.2**	**-0.1**
OUENC				IAmb	IAmb	16 16 02.4	
	comp=Z,9.7nm,0.8s						
OUENC	**Ouen Island, N**	**20.69**	**146**	P	**P**	**16 16 00.6**	**+1.3**
QIS	**Mount Isa**	**20.82**	**222**	P	**P**	**16 16 01.2**	**+0.4**
GUMO	**Guam**	**21.18**	**333**	P	**P**	**16 16 06.5**	**+1.9**
	comp=Z,43nm,0.9s,baz=149,slow=18,SNR=1.6						
	comp=Z,43nm,0.9s						
GUMO	**Guam**	**21.18**	**333**	P	**P**	**16 16 04.6**	**0.0**
RMQ	**Roma**	**21.61**	**194**	P	**P**	**16 16 09.8**	**+0.6**
FAKI	**Fak Fak**	**22.28**	**276**	P	**P**	**16

PLAI	**Plampang**	**36.53**	**263**	P	**P**	**16**	**18**	**22.0 -0.4**
MOO	**Moorlands**	**37.39**	**189**	P	**P**	**16**	**18**	**30.4 +1.1**
TAU	**Tasmania Unive**	**37.83**	**189**	P	**P**	**16**	**18**	**31.8 -1.1**
URZ	**Urewera**	**38.61**	**151**	P	**P**	**16**	**18**	**39.8 +0.3**
	comp=Z,9.6nm,0.8s,baz=44,slow=14,SNR=1.3							
	comp=Z,9.6nm,0.8s							
BKZ	**Black Stump Fm**	**39.04**	**152**	P	**P**	**16**	**18**	**43.1 -0.1**
BKZ				IAmb	IAmb	16	18	49.4
	comp=Z,11nm,1.0s							
BBKI	**Banjar Baru**	**39.53**	**271**	P	**P**	**16**	**18**	**50.0 +2.4**
TUWZ	**Tuamarina**	**39.83**	**157**	P	**P**	**16**	**18**	**49.4 -0.2**
BFZ	**Birch Farm**	**40.16**	**154**	P	**P**	**16**	**18**	**52.1 -0.2**
KHZ	**Kahutara**	**40.52**	**158**	P	**P**	**16**	**18**	**54.7 -0.6**
RPZ	**Rata Peaks**	**40.82**	**162**	P	**P**	**16**	**18**	**58.3 +0.6**
	comp=Z,17nm,0.8s,baz=345,slow=2.2,SNR=7.7							
	comp=Z,17nm,0.8s							
RPZ	**Rata Peaks**	**40.82**	**162**	P	**P**	**16**	**18**	**57.3 -0.4**
RPZ	**Rata Peaks**	**40.82**	**162**	P	**P**	**16**	**18**	**57.9 +0.2**
	comp=Z,155nm,0.4s							
ODZ	**Otahua Downs**	**41.90**	**163**	P	**P**	**16**	**19**	**05.5 -1.0**
KLBR	**Kellerberrin**	**43.08**	**228**	P	**P**	**16**	**19**	**14.2 -2.1**
	comp=Z,16nm,0.9s							
MORW	**Morawa**	**43.24**	**233**	P	**P**	**16**	**19**	**15.5 -2.1**
MORW				IAmb	IAmb	16	19	16.6
	comp=Z,6.4nm,0.8s							
YULB	**Yu-li**	**43.24**	**313**	P	**P**	**16**	**19**	**16.6 -1.0**
YULB				IAmb	IAmb	16	19	19.7
	comp=Z,6.0nm,0.7s							
TPUB	**Ta-pu**	**43.67**	**312**	P	**P**	**16**	**19**	**19.4 -1.8**
TPUB				IAmb	IAmb	16	19	22.0
	comp=Z,18nm,1.0s							
TPUB	**Ta-pu**	**43.67**	**312**	P	**P**	**16**	**19**	**21.3 +0.2**
	comp=Z,18nm,0.8s							
SSLB	**Suanglung**	**43.73**	**313**	P	**P**	**16**	**19**	**21.1 -0.5**
SSLB				IAmb	IAmb	16	19	22.0
	comp=Z,6.5nm,0.7s							
SSLB	**Suanglung**	**43.73**	**313**	P	**P**	**16**	**19**	**22.6 +1.0**
YHNB	**Yeheng**	**43.96**	**314**	P	**P**	**16**	**19**	**25.4 +1.9**
	comp=Z,22nm,2.5s							
MJAR	**Matsushiro Arr**	**44.46**	**341**	P	**P**	**16**	**19**	**26.2 -0.9**
	comp=Z,1.0nm,0.8s,baz=122,slow=7.1,SNR=6.7							
	comp=Z,1.0nm,0.8s							
MAJO	**Matsushiro**	**44.46**	**341**	P	**P**	**16**	**19**	**25.9 -1.2**
MAJO	**Matsushiro**	**44.46**	**341**	P	**P**	**16**	**19**	**27.8 +0.7**
	comp=Z,15nm,1.9s							
KSRS	**Korea Array**	**49.33**	**332**	P	**P**	**16**	**20**	**05.2 +0.2**
	comp=Z,4.2nm,0.9s,baz=147,slow=8.1,SNR=14							
	comp=Z,4.2nm,0.9s							
NJ2	**Nanjing**	**50.39**	**320**	*e*P	**P**	**16**	**20**	**12.3 -0.7**
NJ2				pmax	pmax			
	comp=Z,9.0nm,0.5s							
USRK	**Ussuriysk Ar.**	**53.41**	**340**	P	**P**	**16**	**20**	**35.2 +0.1**
	comp=Z,1.0nm,0.3s,baz=140,slow=5.5,SNR=9.5							
	comp=Z,1.0nm,0.3s							
USRK	**Ussuriysk Ar.**	**53.41**	**340**	P	**P**	**16**	**20**	**34.0 -1.1**
KULM	**Kulim**	**54.77**	**280**	P	**P**	**16**	**20**	**43.4 -2.2**
KULM				IAmb	IAmb	16	20	49.0
	comp=Z,7.5nm,1.1s							
PETK	**Petropavlovsk-**	**58.41**	**2**	P	**P**	**16**	**21**	**11.0 +0.5**
	comp=Z,2.2nm,0.7s,baz=143,slow=7.9,SNR=2.0							
	comp=Z,2.2nm,0.7s							
PETK	**Petropavlovsk-**	**58.41**	**2**	P	**P**	**16**	**21**	**10.4 -0.1**
CM31	**Chiang Mai Arr**	**59.64**	**295**	P	**P**	**16**	**21**	**19.7 -0.1**
CM31				IAmb	IAmb	16	21	21.5
	comp=Z,10nm,0.8s							
CMAR	**Chiang Mai Arr**	**59.64**	**295**	P	**P**	**16**	**21**	**20.6 +0.8**
	comp=Z,6.0nm,0.8s,baz=116,slow=5.1,SNR=41							
	comp=Z,6.0nm,0.8s							
CMAR	**Chiang Mai Arr**	**59.64**	**295**	P	**P**	**16**	**21**	**19.5 -0.2**
CHTO	**Chiang Mai**	**59.75**	**295**	P	**P**	**16**	**21**	**18.3 -2.2**
CHTO				IAmb	IAmb	16	21	21.4
	comp=Z,3.7nm,0.7s							
XLT	**XiLinHaoTe**	**60.07**	**329**	⇑*i*P	**P**	**16**	**21**	**22.8 +0.5**
XLT				pmax	pmax			
	comp=Z,16nm,1.1s							
XLT				pmax	pmax			
	comp=Z,74nm,4.4s							
PZH	**PanZhiHua**	**60.09**	**305**	P	**P**	**16**	**21**	**24.0 +1.2**
PZH				pmax	pmax			
	comp=Z,10.0nm,0.8s							
PZH				pmax	pmax			
	comp=Z,100nm,5.3s							
HHC	**Hu-ho-hao-te**	**60.54**	**324**	*e*P	**P**	**16**	**21**	**28.0 +2.4**
HHC				pmax	pmax			
	comp=Z,14nm,0.8s							
HHC				pmax	pmax			
	comp=Z,89nm,5.5s							
LZH	**Lanzhou**	**62.84**	**315**	⇓P	**P**	**16**	**21**	**45.5 +4.3**
LZH				pP	pwP	16	22	22.8 +2.5
LZH				sP	sP	16	22	35.0 +3.4
GTA	**Gaotai**	**67.25**	**317**	*e*P	**P**	**16**	**22**	**10.5 +0.9**
GTA				pmax	pmax			
	comp=Z,6.0nm,1.3s							
SONM	**Songino Array**	**67.75**	**327**	P	**P**	**16**	**22**	**13.1 +0.5**
	comp=Z,1.8nm,0.5s,baz=148,slow=5.7,SNR=15							
	comp=Z,1.8nm,0.5s							
SONM	**Songino Array**	**67.75**	**327**	P	**P**	**16**	**22**	**12.8 +0.3**
SONM				IAmb	IAmb	16	22	15.5
	comp=Z,3.0nm,0.9s							
CASY	**Casey**	**67.89**	**198**	P	**P**	**16**	**22**	**11.4 -1.4**
VNDA	**Vanda**	**72.13**	**178**	P	**P**	**16**	**22**	**38.7 +0.2**
	comp=Z,2.2nm,0.6s,baz=332,slow=6.8,SNR=23							
	comp=Z,2.2nm,0.6s							
VNDA	**Vanda**	**72.13**	**178**	P	**P**	**16**	**22**	**38.2 -0.3**
TAPN	**Taplejung**	**72.15**	**301**	*e*P	**P**	**16**	**22**	**40.2 +0.2**
	comp=Z,9.0nm,0.5s							
ODAN	**Odare**	**72.29**	**300**	*e*P	**P**	**16**	**22**	**41.5 +0.7**
	comp=Z,10nm,0.5s							
GUN	**Gumba**	**73.86**	**301**	*e*P	**P**	**16**	**22**	**50.0 -0.1**
	comp=Z,15nm,0.5s							
PKIN	**Phulchoki**	**74.19**	**301**	*e*P	**P**	**16**	**22**	**51.3 -0.7**
	comp=Z,5.6nm,0.4s							
DMN	**Daman**	**74.45**	**300**	*e*P	**P**	**16**	**22**	**53.2 -0.2**
	comp=Z,14nm,0.5s							
GKN	**Gorkha**	**74.95**	**301**	*e*P	**P**	**16**	**22**	**55.7 -0.5**
	comp=Z,13nm,0.4s							
KOLN	**Koldanda**	**75.78**	**300**	*e*P	**P**	**16**	**23**	**00.4 -0.6**
DANN	**Dangsing**	**75.78**	**301**	*e*P	**P**	**16**	**23**	**00.1 -1.0**
	comp=Z,20nm,0.6s							
Q19K	**Cape Douglas,**	**76.24**	**25**	P	**P**	**16**	**23**	**01.8 -0.9**
PYUN	**Piuthan**	**76.38**	**300**	*e*P	**P**	**16**	**23**	**03.1 -1.3**
	comp=Z,17nm,0.6s							
WMQ	**Urumqi**	**77.33**	**317**	*e*P	**P**	**16**	**23**	**10.0 +0.8**
L19K	**White Mountain**	**77.73**	**22**	P	**P**	**16**	**23**	**11.7 +0.7**
MK31	**Makanchi Array**	**81.90**	**319**	P	**P**	**16**	**23**	**33.3 -0.5**
MKAR	**Makanchi Array**	**81.90**	**319**	P	**P**	**16**	**23**	**33.4 -0.4**
	comp=Z,1.4nm,0.5s,baz=94,slow=8.4,SNR=37							
	comp=Z,1.4nm,0.5s							
MKAR	**Makanchi Array**	**81.90**	**319**	P	**P**	**16**	**23**	**33.2 -0.6**
MAKZ	**Makanchi**	**82.11**	**319**	P	**P**	**16**	**23**	**34.3 -0.5**
ILAR	**Eielson Array**	**82.15**	**22**	P	**P**	**16**	**23**	**34.4 -0.3**
	comp=Z,0.7nm,0.5s,baz=252,slow=5.3,SNR=14							
	comp=Z,0.7nm,0.5s							
ZALV	**Zalesovo Beam**	**82.61**	**326**	P	**P**	**16**	**23**	**36.1 -1.1**
	comp=Z,1.6nm,0.5s,baz=114,slow=4.8,SNR=7.8							
	comp=Z,1.6nm,0.5s							
QSPA	**South Pole Qui**	**84.51**	**180**	P	**P**	**16**	**23**	**46.2 -0.7**
QSPA				IAmb	IAmb	16	23	46.9
	comp=Z,2.7nm,0.8s							
TORD	**Torodi Ar. Bea**	**152.07**	**288**	PKPbc	**PKPbc**	**16**	**31**	**07.9 -1.7**
	comp=Z,0.5nm,0.8s,baz=72,slow=3.1,SNR=4.5							
TORD				PKPab	**PKPab**	**16**	**31**	**19.1 -0.5**
	comp=Z,0.4nm,0.5s,baz=80,slow=3.3,SNR=4.5							

MAN 25 16:15:31.6, 16°50N×120°61E, h38km, mb4.1, ML2.9, MS2.5, Luzon

*DJA **25** 16:24:51.1±0.5, 3°N±4°×12°7E±°, h10km, M3.8/8, mb4.1/3, MLv3.7/8*
*IDC **25** 16:25:02.4±4.8, 2°.38N×126°.35E, h137km±45km, mb3.5/4, mbtmp3.9/4, MS3.1/3, Error ellipse: s-maj=78.9km s-min=16.8km az=70.0*
ISC 25 16:24:53.5±1.0, 2°.74N±0°.09×127°.0E±0°.1, h50km, n14, σ2°67/12, mb3.9/4, MS3.2/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.77**	**302**	P		P	**Pn**	**16 25 20.7**	**-1.0**
TNTI	**Ternate**	**1.98**	**170**	P		P	**Pn**	**16 25 25.5**	**+0.9**
LBMI	**Labuha**	**3.38**	**172**	P		P	**Pn**	**16 25 45.0**	**+1.1**
KMSI	**Cibinong**	**3.72**	**235**	P		P	**Pn**	**16 25 49.7**	**+1.2**
MRSI	**Marisa**	**5.55**	**246**	P		P	**Pn**	**16 26 13.8**	**+0.1**
	0.1nm28nm,1.2s								
APSI	**Ampana**	**6.48**	**236**	P		**Pn**		**16 26 27.7**	**+1.3**
	0.1nm26nm,1.2s								
MPSI	**Mapaga**	**7.51**	**252**	P		**Pn**		**16 26 41.4**	**+0.9**
WRA	**Warramunga Arr**	**23.65**	**163**	P		P		**16 29 59.5**	**-1.0**
	3.4nm,0.8s,baz=341,slow=11,SNR=21								
WRA				S		**S**		**16 34 04.8**	**-7.0**
	0.1nm,0.3s,baz=326,slow=24,SNR=5.4								
	3.4nm,0.8s								
CMAR	**Chiang Mai Arr**	**31.63**	**302**	LR		LR		16 45 14.7	
	comp=Z,14nm,18.3s,baz=145,slow=39								
KSRS	**Korea Array**	**34.56**	**1**	P		P		**16 31 39.8**	**+2.4**
	0.6nm,0.8s,baz=178,slow=10,SNR=2.6								
	0.6nm,0.8s								
STKA	**Stephens Creek**	**37.10**	**159**	P		P		**16 31 59.9**	**+0.7**
	4.2nm,0.9s,baz=310,slow=7.6,SNR=4.8								
	4.2nm,0.9s								
PALK	**Pallekele**	**46.34**	**277**	LR		LR		16 55 04.2	
	comp=Z,26nm,18.3s,baz=278,slow=39								
SONM	**Songino Array**	**48.33**	**341**	LR		LR		16 56 20.9	
	comp=Z,30nm,18.4s,baz=60,slow=39								
MKAR	**Makanchi Array**	**58.54**	**325**	P		P		**16 34 44.4**	**-0.6**
	0.5nm,0.5s,baz=119,slow=7.6,SNR=7.5								
	0.5nm,0.5s								

*KRNET **25** 16:28:33.9±0.1, 41°.08N×74°.01E, h14km, mb2.9*
*NNC **25** 16:28:34.0±0.9, 41°.06N×74°.09E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=7.5km s-min=3.7km az=166.0*
*SOME **25** 16:28:34.0, 41°.15N×74°.05E, h5km*
*KNET **25** 16:28:35.8±0.6, 41°.19N×74°.14E, h3km±3km, ml2.4, Error ellipse: s-maj=3.4km s-min=3.0km az=66.0*
ISC 25 16:28:32.6±1.2, 41°.04N±0°.03×74°.03E±0°.02, h8km±11km, n62, σ1°58/103, 33C-22D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ARLS	**Aral**	**0.85**	**15**	⇑*i*P			**Pg**	**16 28 49.4**	**+0.4**
	baz=17								
ARLS				⇑*i*S			**Sb**	**16 29 00.7**	**-0.7**
	baz=17								
OHH	**Osh**	**1.08**	**242**	⇑*i*P			**Pb**	**16 28 54.2**	**+0.6**
	baz=39								
OHH				⇑*i*S			**Sn**	**16 29 09.3**	**0.0**
	baz=39								
AML	**Almayashu**	**1.12**	**347**	P			**Pn**	**16 28 54.9**	**0.0**
	35nm,0.2s,SNR=45								
AML				⇓S			**Sn**	**16 29 09.9**	**-0.9**
	23nm,0.2s								
UCH	**Uchtor**	**1.24**	**17**	⇓P			**Pb**	**16 28 57.0**	**+0.3**
	20nm,0.1s,SNR=103								
UCH				⇓S			**Sn**	**16 29 13.5**	**-0.3**
	22nm,0.2s								
UCH	**Uchtor**	**1.24**	**17**	⇑*i*P			**Pb**	**16 28 56.9**	**+0.3**
	baz=18								
UCH				⇑*i*S			**Sn**	**16 29 13.6**	**-0.3**
	baz=18								
EKS2	**Erkin-Say**	**1.63**	**353**	⇑P			**Pg**	**16 29 04.1**	**+0.2**
	3.8nm,0.1s,SNR=5.6								
EKS2				⇓S			**Sg**	**16 29 26.6**	**+1.6**
	7.7nm,0.2s								
EKS2	**Erkin-Say**	**1.63**	**353**	⇑*i*P			**Pg**	**16 29 03.8**	**-0.1**
	baz=54								
EKS2				⇑*i*S			**Sg**	**16 29 25.5**	**+0.5**
	baz=54								
AAK	**Ala-Archa**	**1.63**	**12**	⇓P			**Pg**	**16 29 04.0**	**+0.1**
	5.8nm,0.1s,SNR=6.0								
AAK				⇑S			**Sg**	**16 29 25.5**	**+0.3**
	11nm,0.2s								
AAK	**Ala-Archa**	**1.63**	**12**	⇓*i*P			**Pb**	**16 29 03.9**	**+0.8**
	baz=13								
AAK				⇓*i*S			**Sg**	**16 29 25.7**	**+0.6**
	baz=13								
ARK	**Arkit**	**1.73**	**297**	⇑*i*P			**Pg**	**16 29 05.7**	**0.0**
	baz=96								
ARK				⇑*i*S			**Sg**	**16 29 28.8**	**+0.6**
	baz=96								
KBK	**Karagaybulak**	**1.75**	**23**	⇓P			**Pg**	**16 29 06.4**	**+0.1**
	11nm,0.1s,SNR=34								
KBK				⇓S			**Sg**	**16 29 29.3**	**+0.2**
	43nm,0.2s								
KBK	**Karagaybulak**	**1.75**	**23**	⇑*i*P			**Pb**	**16 29 06.1**	**+0.9**
	baz=24								
KBK				⇑*i*S			**Sg**	**16 29 29.4**	**+0.4**
	baz=24								
CHMS	**Chumysh**	**2.03**	**15**	⇑*e*P			**Pb**	**16 29 10.8**	**+1.0**
	baz=16								
CHMS				⇑*i*S			**Sg**	**16 29 37.6**	**-0.2**
	baz=16								
CHMS	**Chumysh**	**2.03**	**15**	⇓Pg			**Pg**	**16 29 12.1**	**+0.6**
	2.8nm,0.3s								
CHMS				⇑Lg			Lg	16 29 37.8	
	30nm,0.8s								
BOOM	**Boomskoye usch**	**2.04**	**44**	⇑*i*P			**Pb**	**16 29 11.2**	**+1.2**
	baz=45								
BOOM				⇑*i*S			**Sg**	**16 29 38.4**	**+0.4**
	baz=45								
ULHL	**Ulahol**	**2.05**	**53**	⇓P			**Pb**	**16 29 10.8**	**+0.6**
	8.0nm,0.1s,SNR=15								
ULHL				⇑S			**Sg**	**16 29 38.2**	**-0.3**
	21nm,0.2s								
ULHL	**Ulahol**	**2.05**	**53**	⇑*i*P			**Pb**	**16 29 11.3**	**+1.1**
	baz=54								
ULHL				⇑*i*S			**Sg**	**16 29 38.8**	**+0.3**
	baz=54								
TKM2	**Tokmak 2**	**2.21**	**31**	⇓P			**Pb**	**16 29 14.3**	**+1.3**
	3.2nm,0.1s,SNR=10.0								
TKM2	**Tokmak 2**	**2.21**	**31**	⇓*i*P			**Pb**	**16 29 13.6**	**+0.6**
	baz=32								
TKM2				⇓*i*S			**Sg**	**16 29 42.4**	**-1.3**
	baz=32								
TKM2	**Tokmak 2**	**2.21**	**31**	⇑Pg			**Pb**	**16 29 14.2**	**+1.1**
	2.5nm,0.3s								
TKM2				⇓Lg			Lg	16 29 42.6	
	13nm,0.5s								
TRKS	**Terek-Say**	**2.23**	**284**	⇓*i*P			**Pb**	**16 29 13.4**	**+0.1**
	baz=81								
TRKS				⇓*i*S			**Sb**	**16 29 41.9**	**+0.8**
	baz=81								
USP	**Ospenovka**	**2.25**	**9**	⇑P			**Pg**	**16 29 15.3**	**-0.5**
	8.6nm,0.2s,SNR=8.9								
USP				⇑S			**Sg**	**16 29 44.8**	**-0.2**
	20nm,0.4s								
USP	**Ospenovka**	**2.25**	**9**	⇓*i*P			**Pb**	**16 29 14.0**	**+0.4**
	baz=9.0								
USP				⇓*i*S			**Sg**	**16 29 43.1**	**-1.9**
	baz=9.0								
DRK	**Karamyk**	**2.31**	**228**	⇑*i*P			**Pb**	**16 29 15.2**	**+0.5**
	baz=27								
DRK				⇑*i*S			**Sb**	**16 29 45.8**	**+2.2**
	baz=27								
SGDS	**Sogindy**	**2.45**	**10**	*e*P			**Pg**	**16 29 19.1**	**-0.5**
	2.3nm,0.1s								
SGDS				*e*S			**Sg**	**16 29 51.6**	**+0.2**
	9.2nm,0.1s								
SGDS	**Sogindy**	**2.45**	**10**	Pg			**Pg**	**16 29 19.1**	**-0.5**
	2.3nm,0.1s								
SGDS				Lg			Lg	16 29 51.6	
	9.2nm,0.1s								
KST	**Kastek**	**2.47**	**35**	*e*P			**Pg**	**16 29 19.3**	**-0.6**
	3.6nm,0.2s								
KST				*e*S			**Sg**	**16 29 51.9**	**+0.1**
	36nm,0.4s								
KST	**Kastek**	**2.47**	**35**	Pg			**Pb**	**16 29 18.9**	**+1.6**
	3.6nm,0.2s								
KST				Lg			Lg	16 29 51.9	
	36nm,0.4s								
DGS	**Degeres**	**2.55**	**30**	*e*P			**Pg**	**16 29 21.0**	**-0.5**
	5.3nm,0.3s								
DGS				*e*S			**Sg**	**16 29 54.8**	**+0.1**
	50nm,0.4s								
DGS	**Degeres**	**2.55**	**30**	Pg			**Pg**	**16 29 21.0**	**-0.5**
	5.3nm,0.3s								
DGS				Lg			Lg	16 29 54.8	
	50nm,0.4s								
KDJ	**Kajisay**	**2.60**	**64**	⇑*i*P			**Pb**	**16 29 19.5**	**-0.1**
	baz=65								
KDJ				⇑*i*S			**Sb**	**16 29 52.6**	**+0.7**
	baz=65								
BTK	**Batken**	**2.64**	**249**	⇓*i*P			**Pb**	**16 29 20.0**	**-0.1**
	baz=48								
BTK				⇓*i*S			**Sb**	**16 29 53.4**	**+0.7**
	baz=48								
MTBS	**Maitube**	**2.75**	**40**	*e*P			**Pb**	**16 29 24.1**	**+2.1**
	5.9nm,0.2s								
MTBS				*e*S			**Sg**	**16 30 00.1**	**-0.8**
	25nm,0.3s								
MTBS	**Maitube**	**2.75**	**40**	Pg			**Pb**	**16 29 24.1**	**+2.1**
	5.9nm,0.2s								
MTBS				Lg			Lg	16 30 00.1	
	25nm,0.3s								
KRBS	**Karabastau**	**2.92**	**24**	*e*P			**Pb**	**16 29 27.1**	**+2.1**
	4.0nm,0.2s								
KRBS				*e*S			**Sg**	**16 30 05.1**	**-1.4**
	8.6nm,0.2s								
KRBS	**Karabastau**	**2.92**	**24**	Pg			**Pb**	**16 29 27.1**	**+2.1**
	4.0nm,0.2s								
KRBS				Lg			Lg	16 30 05.1	
	8.6nm,0.2s								
TARG	**Taragay, Kyrgy**	**2.92**	**75**	⇑*e*P			**Pb**	**16 29 24.1**	**-1.2**
	baz=76								
TARG				⇑*i*S			**Sb**	**16 30 00.4**	**-0.9**
	baz=76								
TNSS	**Tian-Shan**	**2.95**	**47**	*e*P			**Pb**	**16 29 27.6**	**+1.9**
	4.5nm,0.2s								
TNSS				*e*S			**Sg**	**16 30 06.2**	**-1.2**
	14nm,0.4s								
TNSS	**Tian-Shan**	**2.95**	**47**	Pg			**Pb**	**16 29 27.3**	**+1.6**
	4.5nm,0.2s								
TNSS				Lg			Lg	16 30 06.2	
	14nm,0.4s								
KOTS	**Kotyrbulak**	**3.17**	**45**	*e*P			**Pb**	**16 29 31.5**	**+2.2**
	2.2nm,0.3s								
KOTS				*e*S			**Sg**	**16 30 12.7**	**-1.8**
	14nm,0.3s								
KOTS	**Kotyrbulak**	**3.17**	**45**	Pg			**Pb**	**16 29 31.0**	**+1.6**
	2.6nm,0.3s								
KOTS				Lg			Lg	16 30 12.7	
	14nm,0.3s								
IUG	**Iuzhnay**	**3.19**	**292**	*e*P			**Pg**	**16 29 33.0**	**-0.9**
	138nm,0.2s								
IUG				*e*S			**Sg**	**16 30 15.4**	**+0.2**
	38nm,0.6s								
IUG	**Iuzhnay**	**3.19**	**292**	Pg			**Pg**	**16 29 33.0**	**-0.9**
	138nm,0.2s								
IUG				Lg			Lg	16 30 15.4	
	38nm,0.6s								
ANVS	**Anan'yevo**	**3.23**	**56**	⇑*i*P			**Pb**	**16 29 27.9**	**-2.4**
	baz=57								
ANVS				⇑*i*S			**Sb**	**16 30 07.3**	**-2.5**
	baz=57								
KTBS	**Karatobe**	**3.31**	**35**	*e*P			**Pb**	**16 29 34.1**	**+2.4**
	1.9nm,0.2s								
KTBS				*e*S			**Sg**	**16 30 17.2**	**-1.8**
	62nm,0.3s								
KTBS	**Karatobe**	**3.31**	**35**	Pg			**Pb**	**16 29 33.7**	**+2.0**
	1.9nm,0.2s								
KTBS				Lg			Lg	16 30 17.2	
	62nm,0.3s								
KUU	**Kurty**	**3.32**	**30**	*e*P			**Pb**	**16 29 34.0**	**+2.2**
	2.5nm,0.2s								
KUU				*e*S			**Sg**	**16 30 17.0**	**-2.4**
	14nm,0.4s								
KUU	**Kurty**	**3.32**	**30**	Pg			**Pb**	**16 29 34.0**	**+2.2**
	2.5nm,0.2s								
KUU				Lg			Lg	16 30 17.0	
	14nm,0.4s								
KK31	**Karatay Array**	**3.33**	**309**	⇓Pg			**Pb**	**16 29 34.1**	**+2.1**
	0.3nm,0.2s,baz=136,slow=15,SNR=10								
KK31				Lg			Lg	16 30 19.7	
	4.7nm,0.7s,baz=130,slow=29,SNR=11								
CHKK	**Chushkaly**	**3.56**	**37**	*e*P			**Pb**	**16 29 38.1**	**+2.2**
	1.3nm,0.3s								
CHKK				*e*S			**Sg**	**16 30 24.2**	**-2.8**
	9.2nm,0.3s								
CHKK	**Chushkaly**	**3.56**	**37**	Pg			**Pb**	**16 29 38.1**	**+2.2**
	1.3nm,0.3s								
CHKK				Lg			Lg	16 30 24.2	
	9.2nm,0.3s								
BRLS	**Borolday**	**3.70**	**304**	*e*P			**Pg**	**16 29 41.5**	**-2.1**
	3.2nm,0.2s								
BRLS				*e*S			**Sg**	**16 30 30.0**	**-1.5**
	10.0nm,0.6s								
BRLS	**Borolday**	**3.70**	**304**	Pg			**Pg**	**16 29 41.5**	**-2.1**
	3.2nm,0.2s								
BRLS				Lg			Lg	16 30 30.0	
	10.0nm,0.6s								
SATY	**Saty**	**3.83**	**57**	*e*P			**Pb**	**16 29 43.4**	**+2.8**
	4.8nm,0.4s								
SATY				*e*S			**Sg**	**16 30 33.1**	**-2.6**
	7.9nm,0.3s								
SATY	**Saty**	**3.83**	**57**	Pg			**Pb**	**16 29 42.4**	**+1.9**
	4.8nm,0.4s								
SATY				Lg			Lg	16 30 33.1	
	7.9nm,0.3s								
BTLS	**Baital**	**4.00**	**0**	*e*P			**Pb**	**16 29 46.1**	**+2.8**
	1.2nm,0.7s								
BTLS				*e*S			**Sg**	**16 30 37.9**	**-3.1**
	2.2nm,0.5s								
BTLS	**Baital**	**4.00**	**0**	Pg			**Pg**	**16 29 47.2**	**-2.0**
	1.0nm,0.2s								
BTLS				Lg			Lg	16 30 37.9	
	2.2nm,0.5s								
KPKS	**Kokpek**	**4.22**	**53**	*e*P			**Pb**	**16 29 49.7**	**+2.5**
	2.5nm,0.3s								
KPKS				*e*S			**Sg**	**16 30 43.8**	**-4.3**
	7.6nm,0.3s								
KPKS	**Kokpek**	**4.22**

SAMP	**Sagada Mountai**	**0.85**	**114**	ǁ*e*P	Pb	17 03 06.9	+0.5
BOLP	**Bolinao**	**1.05**	**189**	ǁ*e*P	Pn	17 03 09.4	+0.2
BOLP				*e*S		17 03 21.8	
SMPP	**San Manuel, Pa**	**1.39**	**156**	ǁ*e*P	Pb	17 03 15.3	+0.6
SMPP				*e*S		17 03 28.0	
CAUP	**Cauayan**	**1.73**	**106**	ǁ*e*P	Pb	17 03 23.0	+1.9
BALP	**Baler**	**2.20**	**139**	ǁ*e*P	Pb	17 03 29.0	+0.6
BALP				*e*S		17 03 58.1	

*DDA **25** 17:03:54.4±0.0,36˚.95N×27˚.59E,h7km±1km,ML2.4*
*ISK **25** 17:03:54.5,36˚.95N×27˚.59E,h5km,ML2.6/10*
ISC 25 17:03:55.1±0.9,**36˚.98N**±0˚.03×**27˚.57E**±0˚.03,**h9**km±8km,
n21,σ1§**52**/34,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BDRM	**Kayabasi**	**0.13**	**310**	P	**Pg**	**17 03 58.1**	**+0.1**
BDRM				S	**Sg**	**17 04 00.9**	**+0.7**
BDRM				*i* AML	AML	17 04 01.0	
	comp=Z,2μm,0.2s						
BDRM				*i* AML	AML	17 04 01.0	
	comp=E,2μm,0.3s						
BODT	**Bodrum**	**0.22**	**291**	PG	**Pg**	**17 03 59.8**	**+0.2**
BODT				SG	**Sg**	**17 04 03.9**	**+1.2**
DAT	**Datca**	**0.25**	**178**	PG	**Pg**	**17 03 59.4**	**-0.9**
DAT	**Datca**	**0.25**	**178**	P	**Pg**	**17 03 59.4**	**-0.9**
DAT				S	**Sg**	**17 04 03.3**	**-0.4**
NIS1	**Nisyros Isl.**	**0.49**	**219**	PG	**Pg**	**17 04 04.4**	**-0.2**
KOSK	**Kos Island**	**0.52**	**244**	PG	**Pg**	**17 04 05.2**	**-0.1**
DDIM	**Aydin, Didim**	**0.54**	**331**	P	**Pg**	**17 04 05.3**	**-0.2**
DDIM				S	**Sg**	**17 04 14.2**	**+1.5**
TURN	**Turunc**	**0.58**	**111**	PG	**Pg**	**17 04 05.3**	**-1.1**
TURN				SG	**Sb**	**17 04 13.8**	**-1.9**
TURN	**Turunc**	**0.58**	**111**	P	**Pg**	**17 04 05.1**	**-1.2**
TURN				S	**Sb**	**17 04 13.6**	**-2.1**
TURN				*i* AML	AML	17 04 15.0	
	comp=N,275nm,0.2s						
TURN				*i* AML	AML	17 04 16.0	
	comp=Z,175nm,0.2s						
TURN				*i* AML	AML	17 04 16.0	
	comp=E,254nm,0.5s						
YER	**Yerkesik**	**0.59**	**75**	PG	**Pg**	**17 04 06.4**	**-0.2**
MULA	**Mugla, Merkez-**	**0.66**	**65**	P	**Pg**	**17 04 07.3**	**-0.6**
MULA				S	**Sg**	**17 04 15.7**	**-0.9**
AYDN	**Tasoluk**	**0.72**	**20**	P	**Pg**	**17 04 08.8**	**-0.3**
AYDN				S	**Sg**	**17 04 19.0**	**+0.6**
AYDN				*i* AML	AML	17 04 23.0	
	comp=E,118nm,0.2s						
AYDN				*i* AML	AML	17 04 27.0	
	comp=N,128nm,0.7s						
ARG	**Arkhangelos**	**0.89**	**149**	PG	**Pg**	**17 04 11.1**	**-1.1**
DALY	**Dalyan (Mula)**	**0.89**	**100**	PG	**Pb**	**17 04 11.8**	**-0.8**
AYDB	**Zeytinkoy-Aydi**	**1.00**	**15**	PG	**Pg**	**17 04 13.6**	**-0.7**
TAVA	**DENIZLI_Tavas**	**1.18**	**65**	P	**Pb**	**17 04 17.2**	**-0.5**
TAVA				S	**Sb**	**17 04 33.2**	**+0.1**
DGB	**zmir**	**1.20**	**333**	P	**Pg**	**17 04 16.9**	**-1.2**
DGB				S	**Sg**	**17 04 32.9**	**-0.7**
FETY	**Fethiye**	**1.27**	**105**	PN	**Pn**	**17 04 18.9**	**0.0**
FETY	**Fethiye**	**1.27**	**105**	P	**Pn**	**17 04 21.8**	**+2.8**
FETY				S	**Sn**	**17 04 41.6**	**+5.6**
ZEYE	**Izmir, Urla-Ze**	**1.51**	**326**	P	**Pn**	**17 04 21.2**	**-1.0**
ZEYE				S	**Sn**	**17 04 40.8**	**-1.2**
AKAS	**Kas**	**1.80**	**114**	P	**Pg**	**17 04 28.5**	**-1.2**
AKAS				S	**Sg**	**17 04 55.0**	**+1.9**
AKAS				*i* AML	AML	17 05 01.0	
	comp=N,37nm,1.1s						

*IDC **25** 17:10:25.7±1.8,63˚.00N×150˚.57W,h140km±25km,mb3.4/7,*
mbtmp3.7/10,MS3.5/2,Error ellipse: s-maj=44.9km
s-min=22.0km az=125.0
*NEIC **25** 17:10:26.5±0.9,63˚.19N±0˚.02×150˚.76W±0˚.07,*
h138km±5km,Error ellipse: s-maj=5.4km s-min=1.9km
az=126.0
*AEIC **25** 17:10:27±1.4,63˚.18N±0˚.04×150˚.78W±0˚.08,h128km±4km,*
ML3.2,ML3.3/172(NEIC),Error ellipse: s-maj=5.5km
s-min=4.8km az=50.0
ISC 25 17:10:26.4±0.7,**63˚.17N**±0˚.03×**150˚.77W**±0˚.03,
h137km±5km,**n273,**σ0§**69**/263,**mb3.7**/7,**Central Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRF	**Thorofare Moun**	**0.36**	**38**	Pn	**Pn**	**17 10 46.1**	**+0.4**
TRF	**Thorofare Moun**	**0.36**	**38**		**Sn**	**17 11 00.4**	**-0.1**
TRF	**Thorofare Moun**	**0.36**	**38**	P	**Pn**	**17 10 46.2**	**+0.4**
	baz=219						
TRF				S	**Sn**	**17 11 00.4**	**-0.1**
	baz=219						
KTH	**Kantishna Hill**	**0.39**	**350**	Pn	**Pn**	**17 10 46.2**	**+0.4**
KTH	**Kantishna Hill**	**0.39**	**350**		**Sn**	**17 10 60.0**	**-0.6**
CAST	**Castle Rocks**	**0.64**	**293**		**Pn**	**17 10 47.2**	**+0.1**
CAST	**Castle Rocks**	**0.64**	**293**		**Sn**	**17 11 01.8**	**-1.0**
CAST	**Castle Rocks**	**0.64**	**293**	P	**Pn**	**17 10 47.2**	**+0.1**
	baz=112						
CAST				S	**Sn**	**17 11 01.8**	**-1.0**
	baz=112						
PPLA	**Purkeypile**	**0.70**	**248**	Pn	**Pn**	**17 10 48.2**	**+0.5**
PPLA	**Purkeypile**	**0.70**	**248**		**Sn**	**17 11 03.7**	**0.0**
PPLA	**Purkeypile**	**0.70**	**248**	P	**Pn**	**17 10 48.2**	**+0.5**
	baz=66						
PPLA				S	**Sn**	**17 11 03.7**	**0.0**
	baz=66						
CUT	**Chulitna**	**0.80**	**163**		**Pn**	**17 10 48.6**	**+0.5**
CUT				IAML		17 11 06.0	
	comp=N,862nm,0.7s						
CUT				IAML		17 11 07.0	
	comp=E,1μm,0.4s						
CUT	**Chulitna**	**0.80**	**163**		**Sn**	**17 11 05.4**	**+0.7**
CUT	**Chulitna**	**0.80**	**163**	P	**Pn**	**17 10 48.7**	**+0.5**
	baz=343						
CUT				S	**Sn**	**17 11 05.4**	**+0.7**
	baz=343						
RND	**Reindeer**	**0.90**	**74**		**Pn**	**17 10 49.3**	**+0.2**
RND	**Reindeer**	**0.90**	**74**		**Sn**	**17 11 06.0**	**-0.4**
BPAW	**Bear Paw Mtn.**	**0.94**	**354**		**Sn**	**17 11 06.2**	**-0.6**
BPAW	**Bear Paw Mtn.**	**0.94**	**354**	Pn	**Pn**	**17 10 49.4**	**0.0**
BPAW	**Bear Paw Mtn.**	**0.94**	**354**	IAML		17 11 06.4	
	comp=E,324nm,0.8s						
BPAW				IAML		17 11 06.5	
	comp=N,460nm,0.8s						
BPAW	**Bear Paw Mtn.**	**0.94**	**354**	P	**Pn**	**17 10 49.5**	**+0.1**
	baz=174						
BPAW				S	**Sn**	**17 11 06.2**	**-0.6**
	baz=174						
CHUM	**Lake Minchumin**	**0.99**	**317**		**Pn**	**17 10 50.2**	**+0.5**
CHUM					**Sn**	**17 11 07.3**	**-0.3**
CHUM	**Lake Minchumin**	**0.99**	**317**	P	**Pn**	**17 10 50.2**	**+0.5**
	baz=135						
CHUM				S	**Sn**	**17 11 07.3**	**-0.3**
	baz=135						
MCK	**McKinley**	**1.00**	**55**	Pn	**Pn**	**17 10 50.4**	**+0.5**
MCK	**McKinley**	**1.00**	**55**		**Sn**	**17 11 07.8**	**0.0**
MCK	**McKinley**	**1.00**	**55**	IAML		17 11 09.9	
	comp=E,366nm,0.5s						
MCK				IAML		17 11 10.0	
	comp=N,430nm,0.5s						
MCK	**McKinley**	**1.00**	**55**	P	**Pn**	**17 10 50.3**	**+0.5**
	baz=237						
MCK				S	**Sn**	**17 11 07.8**	**0.0**
	baz=237						
WAT1	**Susitna Watana**	**1.07**	**108**		**Pn**	**17 10 51.0**	**+0.4**
WAT1					**Sn**	**17 11 09.0**	**+0.1**
WAT1	**Susitna Watana**	**1.07**	**108**	P	**Pn**	**17 10 51.0**	**+0.4**
	baz=290						
WAT1				S	**Sn**	**17 11 09.0**	**+0.1**
	baz=290						
BWN	**Browne**	**1.16**	**30**		**Pn**	**17 10 52.3**	**+1.0**
BWN				IAML		17 11 11.4	
	comp=E,336nm,0.9s						
BWN				IAML		17 11 15.7	
	comp=N,277nm,0.8s						
SKT	**Skwentna**	**1.25**	**197**		**Pn**	**17 10 52.6**	**+0.3**
SKT					**Sn**	**17 11 12.5**	**+0.5**
SKT	**Skwentna**	**1.25**	**197**	IAML		17 11 14.1	
	comp=E,1μm,0.4s						
SKT				IAML		17 11 14.3	
	comp=N,922nm,0.3s						
SKT	**Skwentna**	**1.25**	**197**	P	**Pn**	**17 10 52.6**	**+0.3**
	baz=16						
SKT				S	**Sn**	**17 11 12.5**	**+0.5**
	baz=16						
M22K	**Willow**	**1.46**	**168**		**Pn**	**17 10 54.8**	**+0.4**
	baz=348						
K20K	**Telida**	**1.50**	**279**	Pn	**Pn**	**17 10 55.3**	**+0.3**
K20K				IAML		17 11 17.2	
	comp=E,278nm,0.9s						
K20K	**Telida**	**1.50**	**279**	P	**Pn**	**17 10 55.3**	**+0.3**
	baz=96						
WAT6	**Susitna Watana**	**1.51**	**112**		**Pn**	**17 10 55.1**	**-0.1**
WAT6	**Susitna Watana**	**1.51**	**112**	P	**Pn**	**17 10 55.1**	**-0.1**
	baz=295						
DHY	**Denali Highway**	**1.55**	**92**		**Pn**	**17 10 56.1**	**+0.5**
DHY				IAML		17 11 18.9	
	comp=E,705nm,0.8s						
DHY				IAML		17 11 20.6	
	comp=N,565nm,0.5s						
DHY	**Denali Highway**	**1.55**	**92**	P	**Pn**	**17 10 56.0**	**+0.4**
	baz=275						
L20K	**Farewell, AK**	**1.59**	**245**		**Pn**	**17 10 56.2**	**+0.3**
L20K	**Farewell, AK**	**1.59**	**245**	P	**Pn**	**17 10 56.2**	**+0.3**
	baz=62						
NEA2	**Nenana**	**1.61**	**27**		**Pn**	**17 10 56.1**	**-0.1**
NEA2	**Nenana**	**1.61**	**27**	P	**Pn**	**17 10 56.1**	**-0.1**
	baz=209						
GHO	**Glory Hole Cre**	**1.65**	**148**		**Pn**	**17 10 57.1**	**+0.5**
M20K	**Styx River**	**1.69**	**221**	Pn	**Pn**	**17 10 57.4**	**+0.2**
M20K				IAML		17 11 21.9	
	comp=N,204nm,0.6s						
M20K				IAML		17 11 22.1	
	comp=E,376nm,0.6s						
M20K	**Styx River**	**1.69**	**221**	P	**Pn**	**17 10 57.2**	**+0.1**
	baz=39						
SUA	**Susitna One**	**1.71**	**180**		**Pn**	**17 10 58.2**	**+0.7**
SUA				IAML		17 11 24.7	
	comp=N,277nm,0.4s						
SUA				IAML		17 11 24.9	
	comp=E,309nm,0.5s						
SUA	**Susitna One**	**1.71**	**180**	P	**Pn**	**17 10 58.5**	**+1.0**
	baz=360						
STLK	**Strandline Lak**	**1.75**	**197**		**Pn**	**17 10 58.2**	**+0.3**
PMR	**Palmer**	**1.76**	**153**		**Pn**	**17 10 57.9**	**0.0**
PMR				IAML		17 11 30.4	
	comp=N,187nm,0.5s						
PMR				IAML		17 11 30.6	
	comp=E,236nm,0.4s						
PMR	**Palmer**	**1.76**	**153**	P	**Pn**	**17 10 57.9**	**0.0**
	baz=335						
WRH	**Wood River Hil**	**1.77**	**41**		**Pn**	**17 10 58.1**	**+0.2**
SML	**Sawmill**	**1.78**	**139**		**Pn**	**17 10 58.1**	**0.0**
SML	**Sawmill**	**1.78**	**139**	IAML		17 11 23.1	
	comp=E,542nm,0.5s						
SML				IAML		17 11 23.3	
	comp=N,423nm,0.4s						
SML	**Sawmill**	**1.78**	**139**	P	**Pn**	**17 10 58.1**	**0.0**
	baz=322						
J20K	**Nowinta River**	**1.81**	**305**	Pn	**Pn**	**17 10 58.7**	**+0.4**
J20K	**Nowinta River**	**1.81**	**305**	P	**Pn**	**17 10 58.8**	**+0.4**
	baz=122						
MLY	**Manley**	**1.87**	**0**	Pn	**Pn**	**17 10 59.2**	**0.0**
MLY	**Manley**	**1.87**	**0**	P	**Pn**	**17 10 59.3**	**+0.2**
	baz=180						
SPCG	**Spurr Capps Gl**	**1.97**	**198**		**Pn**	**17 11 01.1**	**+0.6**
M23K	**Glacier View**	**1.98**	**133**		**Pn**	**17 11 00.5**	**+0.1**
M23K	**Glacier View**	**1.98**	**133**	P	**Pn**	**17 11 00.5**	**+0.1**
	baz=316						
CCB	**Clear Creek Bu**	**1.98**	**40**		**Pn**	**17 11 00.6**	**+0.2**
FIS	**Fire Island**	**2.05**	**172**		**Pn**	**17 11 02.8**	**+1.5**
CKN	**Chakachatna No**	**2.06**	**199**		**Pn**	**17 11 02.9**	**+1.4**
KNK	**Knik Glacier**	**2.07**	**147**		**Pn**	**17 11 01.9**	**+0.3**
KNK	**Knik Glacier**	**2.07**	**147**	IAML		17 11 38.6	
	comp=E,442nm,0.4s						
KNK				IAML		17 11 39.0	
	comp=N,212nm,0.5s						
KNK	**Knik Glacier**	**2.07**	**147**	P	**Pn**	**17 11 01.9**	**+0.3**
	baz=330						
SPWE	**Spurr West**	**2.08**	**204**		**Pn**	**17 11 02.4**	**+0.7**
I23K	**Minto, Yukon-K**	**2.08**	**17**		**Pn**	**17 11 01.9**	**+0.3**
I23K	**Minto, Yukon-K**	**2.08**	**17**	IAML		17 11 29.1	
	comp=N,150nm,0.8s						
I23K				IAML		17 11 29.1	
	comp=E,124nm,0.7s						
I23K	**Minto, Yukon-K**	**2.08**	**17**	P	**Pn**	**17 11 01.9**	**+0.3**
	baz=198						
SPU	**Mount Spurr**	**2.08**	**197**		**Pn**	**17 11 01.9**	**+0.2**
I21K	**Tanana**	**2.09**	**346**		**Pn**	**17 11 02.0**	**+0.3**
I21K	**Tanana**	**2.09**	**346**	P	**Pn**	**17 11 02.0**	**+0.3**
	baz=165						
SCM	**Sheep Creek Mo**	**2.09**	**128**		**Pn**	**17 11 01.8**	**0.0**
SCM	**Sheep Creek Mo**	**2.09**	**128**	IAML		17 11 32.0	
	comp=E,223nm,0.5s						
SCM				IAML		17 11 37.5	
	comp=N,313nm,1.0s						
SCM	**Sheep Creek Mo**	**2.09**	**128**	P	**Pn**	**17 11 01.8**	**0.0**
	baz=312						
M19K	**Big River Lodg**	**2.10**	**234**		**Pn**	**17 11 02.1**	**+0.1**
M19K	**Big River Lodg**	**2.10**	**234**	P	**Pn**	**17 11 02.0**	**+0.1**
	baz=51						
HDA	**Harding Lake**	**2.10**	**52**		**Pn**	**17 11 01.9**	**0.0**
HDA				IAML		17 11 33.8	
	comp=E,210nm,0.4s						
HDA				IAML		17 11 34.0	
	comp=N,134nm,0.5s						
HDA	**Harding Lake**	**2.10**	**52**	P	**Pn**	**17 11 02.0**	**0.0**
	baz=236						
MDM	**Murphy Dome**	**2.12**	**31**		**Pn**	**17 11 02.3**	**+0.2**
L19K	**White Mountain**	**2.13**	**244**	Pn	**Pn**	**17 11 02.4**	**+0.1**
L19K	**White Mountain**	**2.13**	**244**	P	**Pn**	**17 11 02.5**	**+0.3**
	baz=60						
TCOL	**CIGO, UAF Yank**	**2.14**	**36**		**Pn**	**17 11 02.6**	**+0.4**
TCOL	**CIGO, UAF Yank**	**2.14**	**36**	IAML		17 11 34.6	
	comp=N,194nm,0.6s						
TCOL				IAML		17 11 34.8	
	comp=E,158nm,0.5s						
TCOL	**CIGO, UAF Yank**	**2.14**	**36**	P	**Pn**	**17 11 02.6**	**+0.4**
	baz=218						
COLA	**College**	**2.14**	**36**		**Pn**	**17 11 02.6**	**+0.3**
COLA				IAML		17 11 34.8	
	comp=E,174nm,0.5s						
COLA				IAML		17 11 34.9	
	comp=E,220nm,0.6s						
RC01	**Rabbit Creek A**	**2.15**	**166**		**Pn**	**17 11 02.9**	**+0.4**
RC01	**Rabbit Creek A**	**2.15**	**166**	IAML		17 11 30.9	
	comp=N,347nm,0.2s						
RC01				IAML		17 11 31.8	
	comp=E,218nm,0.2s						
RC01	**Rabbit Creek A**	**2.15**	**166**	P	**Pn**	**17 11 02.9**	**+0.4**
	baz=347						
PS08	**TAPS Pump Stn8**	**2.23**	**50**		**Pn**	**17 11 03.6**	**+0.2**
PS10	**TAPS Pump St10**	**2.27**	**81**		**Pn**	**17 11 05.6**	**+1.5**
K24K	**Donnelly Dome**	**2.33**	**72**		**Pn**	**17 11 05.6**	**+0.9**
K24K	**Donnelly Dome**	**2.33**	**72**	P	**Pn**	**17 11 05.6**	**+0.9**
	baz=256						
IL31		**2.35**	**45**		**Pn**	**17 11 04.9**	**+0.1**
ILAR	**Eielson Array**	**2.35**	**45**	P	**Pn**	**17 11 05.0**	**+0.1**
	comp=E,89nm,0.4s,baz=227,slow=12,SNR=1112						
ILAR				S	**Sn**	**17 11 35.7**	**+1.1**
	comp=E,15nm,0.7s,baz=228,slow=15,SNR=8.7						
ILAR	**Eielson Array**	**2.35**	**45**		**Pn**	**17 11 05.0**	**+0.1**
PS09	**TAPS Pump Stn9**	**2.37**	**69**		**Pn**	**17 11 05.9**	**+0.8**
M24K	**Tolsona, Glenn**	**2.38**	**115**		**Pn**	**17 11 05.6**	**+0.3**
M24K	**Tolsona, Glenn**	**2.38**	**115**	P	**Pn**	**17 11 05.6**	**+0.3**
	baz=299						
TTA	**Tatalina**	**2.40**	**267**	Pn	**Pn**	**17 11 05.8**	**+0.2**
TTA				IAML		17 11 36.2	
	comp=E,122nm,0.9s						
TTA	**Tatalina**	**2.40**	**267**	P	**Pn**	**17 11 05.8**	**+0.2**
	baz=82						
TT01	**Tatalina**	**2.41**	**266**		**Pn**	**17 11 06.0**	**+0.3**
CAPN	**Captain Cook N**	**2.42**	**184**	Pn	**Pn**	**17 11 08.5**	**+2.8**
PAX	**Paxson**	**2.42**	**92**		**Pn**	**17 11 06.3**	**+0.4**
PAX	**Paxson**	**2.42**	**92**	P	**Pn**	**17 11 06.3**	**+0.4**
	baz=277						
POKR	**Poker Plat Res**	**2.44**	**35**		**Pn**	**17 11 06.5**	**+0.4**
POKR	**Poker Plat Res**	**2.44**	**35**	P	**Pn**	**17 11 06.5**	**+0.4**
	baz=218						
H21K	**Melozitna Rive**	**2.65**	**341**	Pn	**Pn**	**17 11 08.8**	**+0.2**
H21K	**Melozitna Rive**	**2.65**	**341**	P	**Pn**	**17 11 08.9**	**+0.2**
	baz=160						
SLKM	**Skilak Lake**	**2.69**	**174**		**Pn**	**17 11 09.7**	**+0.5**
HARP	**HAARP**	**2.69**	**104**		**Pn**	**17 11 09.8**	**+0.5**
HARP	**HAARP**	**2.69**	**104**	P	**Pn**	**17 11 09.8**	**+0.5**
	baz=289						
H23K	**Yukon River**	**2.72**	**11**		**Pn**	**17 11 10.2**	**+0.6**
H23K	**Yukon River**	**2.72**	**11**	P	**Pn**	**17 11 10.2**	**+0.6**
	baz=192						
RIDG	**Independent Ri**	**2.72**	**75**		**Pn**	**17 11 10.2**	**+0.5**
RIDG	**Independent Ri**	**2.72**	**75**	IAML		17 11 49.3	
	comp=N,84nm,0.7s						
RIDG				IAML		17 12 07.3	
	comp=E,93nm,0.8s						
RIDG	**Independent Ri**	**2.72**	**75**	P	**Pn**	**17 11 10.2**	**+0.5**
	baz=261						
PS06	**TAPS Pump Stn6**	**2.73**	**9**		**Pn**	**17 11 10.5**	**+0.8**
DFR	**Drift River**	**2.74**	**200**		**Pn**	**17 11 10.6**	**+0.7**
O22K	**Cooper Landing**	**2.75**	**169**		**Pn**	**17 11 10.5**	**+0.6**
O22K	**Cooper Landing**	**2.75**	**169**	P	**Pn**	**17 11 10.5**	**+0.6**
	baz=350						
H22K	**Ishtalitna Cre**	**2.75**	**355**		**Pn**	**17 11 10.3**	**+0.4**
H22K	**Ishtalitna Cre**	**2.75**	**355**	P	**Pn**	**17 11 10.3**	**+0.4**
	baz=174						
RDJH	**Redoubt Jeurge**	**2.76**	**201**		**Pn**	**17 11 11.2**	**+0.9**
J25K	**Salcha River,**	**2.79**	**56**		**Pn**	**17 11 10.7**	**+0.1**
J25K				IAML		17 11 48.3	
	comp=E,98nm,0.6s						
J25K				IAML		17 11 48.3	
	comp=N,81nm,0.5s						
J25K	**Salcha River,**	**2.79**	**56**	P	**Pn**	**17 11 10.6**	**+0.1**
	baz=241						
NCT	**North Crescent**	**2.81**	**202**		**Pn**	**17 11 11.6**	**+0.8**
KLU	**Klutina**	**2.82**	**124**		**Pn**	**17 11 10.7**	**-0.2**
KLU	**Klutina**	**2.82**	**124**	IAML		17 11 58.2	
	comp=E,191nm,0.4s						
KLU				IAML		17 12 00.2	
	comp=N,184nm,0.4s						
KLU	**Klutina**	**2.82**	**124**	P	**Pn**	**17 11 10.7**	**-0.2**
	baz=309						
RDWB	**Redoubt West**	**2.87**	**201**		**Pn**	**17 11 12.0**	**+0.4**
RSO	**Redoubt South**	**2.88**	**200**		**Pn**	**17 11 08.9**	**-2.9**
GLI	**Glacier Island**	**2.88**	**141**		**Pn**	**17 11 11.3**	**-0.3**
GLI	**Glacier Island**	**2.88**	**141**	IAML		17 12 02.2	
	comp=N,165nm,0.7s						
GLI	**Glacier Island**	**2.88**	**141**	P	**Pn**	**17 11 11.3**	**-0.3**
	baz=325						
JPK	**Jack Peak**	**2.89**	**135**		**Pn**	**17 11 11.4**	**-0.4**
RED	**Redoubt Volcan**	**2.92**	**200**		**Pn**	**17 11 12.5**	**+0.3**
N19K	**Bonanza Creek**	**2.94**	**218**	Pn	**Pn**	**17 11 12.9**	**+0.4**
N19K				IAML		17 11 55.9	
	comp=E,45nm,0.6s						
N19K				IAML		17 12 18.6	
	comp=N,42nm,0.7s						
N19K	**Bonanza Creek**	**2.94**	**218**	P	**Pn**	**17 11 13.0**	**+0.4**
	baz=35						
H24K	**Noodor Dome**	**2.96**	**24**		**Pn**	**17 11 12.8**	**+0.2**
H24K	**Noodor Dome**	**2.96**	**24**	P	**Pn**	**17 11 12.8**	**+0.2**
	baz=206						
DOT	**Dot Lake**	**3.06**	**78**		**Pn**	**17 11 13.9**	**0.0**
SVW2	**Sparrevohn**	**3.07**	**229**	Pn	**Pn**	**17 11 14.4**	**+0.3**
SVW2				IAML		17 11 52.8	
	comp=E,40nm,0.6s						
SVW2				IAML		17 12 10.0	
	comp=N,60nm,0.7s						
IM03		**3.10**	**337**		**Pn**	**17 11 14.8**	**+0.4**
IMAR	**Indian Mountai**	**3.10**	**337**	Pn	**Pn**	**17 11 14.9**	**+0.4**
DIV	**Divide**	**3.12**	**129**	Pn	**Pn**	**17 11 14.3**	**-0.4**
SCRK	**Sand Creek**	**3.14**	**72**		**Pn**	**17 11 15.0**	**-0.1**
SCRK	**Sand Creek**	**3.14**	**72**	IAML		17 11 57.0	
	comp=N,47nm,0.7s						
SCRK				IAML		17 11 57.0	
	comp=E,55nm,0.6s						
SCRK	**Sand Creek**	**3.14**	**72**	P	**Pn**	**17 11 15.0**	**-0.1**
	baz=256						
SEW	**Seward**	**3.14**	**168**		**Pn**	**17 11 15.2**	**+0.2**
SEW	**Seward**	**3.14**	**168**	P	**Pn**	**17 11 15.2**	**+0.2**
	baz=349						
FID	**Port Fidalgo**	**3.16**	**138**		**Pn**	**17 11 15.1**	**-0.2**
MENT	**Mentasta**	**3.22**	**91**		**Pn**	**17 11 16.3**	**+0.2**
MENT				IAML		17 12 03.2	
	comp=N,144nm,0.7s						
O20K	**Slope Mountain**	**3.22**	**197**		**Pn**	**17 11 16.8**	**+0.7**
O20K	**Slope Mountain**	**3.22**	**197**	P	**Pn**	**17 11 16.8**	**+0.7**
	baz=15						
N25K	**Chitina, Valde**	**3.28**	**116**	Pn	**Pn**	**17 11 17.9**	**+1.0**
N25K				IAML		17 11 57.7	
	comp=E,72nm,0.5s						
N25K				IAML		17 11 58.0	
	comp=N,107nm,0.6s						
N25K	**Chitina, Valde**	**3.28**	**116**	P	**Pn**	**17 11 17.4**	**+0.6**
	baz=301						
IVE	**Iliamna Volcan**	**3.34**	**200**		**Pn**	**17 11 17.7**	**0.0**
L26K	**Log Cabin Wild**	**3.38**	**89**		**Pn**	**17 11 18.3**	**+0.2**
L26K				IAML		17 12 05.3	
	comp=N,137nm,1.0s						
L26K				IAML		17 12 07.2	
	comp=E,135nm,0.5s						
BRLK	**Bradley Lake**	**3.42**	**181**		**Pn**	**17 11 19.1**	**+0.5**
BRLK	**Bradley Lake**	**3.42**	**181**	IAML		17 12 10.7	
	comp=N,79nm,0.5s						
BRLK				IAML		17 12 19.3	
	comp=E,68nm,0.6s						
O19K	**Port Alsworth**	**3.43**	**211**	Pn	**Pn**	**17 11 19.9**	**+1.1**
O19K				IAML		17 12 01.1	
	comp=N,91nm,0.5s						
O19K				IAML		17 12 01.9	
	comp=E,134nm,0.5s						
BRSE	**Bradley Lake S**	**3.44**	**180**		**Pn**	**17 11 19.1**	**+0.2**
BRSE	**Bradley Lake S**	**3.44**	**180**	P	**Pn**	**17 11 19.1**	**+0.2**
	baz=360						
HIN	**Hinchinbrook I**	**3.44**	**142**	Pn	**Pn**	**17 11 21.4**	**+2.4**
HIN				IAML		17 12 31.1	
	comp=N,124nm,0.9s						
J26L	**Joseph Creek**	**3.46**	**64**		**Pn**	**17 11 19.6**	**+0.3**
J26L	**Joseph Creek**	**3.46**	**64**	IAML		17 12 04.1	
	comp=E,125nm,0.8s						
J26L				IAML		17 12 06.1	
	comp=N,56nm,0.6s						
J26L	**Joseph Creek**	**3.46**	**64**	P	**Pn**	**17 11 19.6**	**+0.3**
	baz=251						

	comp=N,36nm,1.2s							
M27K					IAML		17 12 43.5	
	comp=E,22nm,0.8s							
M27K	**Edge Creek, AK**	**4.17**	**97**	P		**Pn**	**17 11 29.5**	**+0.9**
	baz=285							
Q23K	**Middleton Isla**	**4.32**	**148**	Pn		**Pn**	**17 11 31.8**	**+1.4**
MID	**Middleton Isla**	**4.32**	**148**	Pn		**Pn**	**17 11 31.9**	**+1.5**
CRQM	**Cirque**	**4.34**	**120**	Pn		**Pn**	**17 11 30.8**	**-0.1**
P18K	**Big Mountain,**	**4.36**	**212**	Pn		**Pn**	**17 11 31.4**	**+0.4**
P18K					IAML		17 12 24.3	
	comp=N,15nm,1.9s							
CRQE	**Cirque**	**4.36**	**120**	P		**Pn**	**17 11 31.2**	**+0.1**
	baz=307							
PTPK	**Patty Peak**	**4.37**	**113**			**Pn**	**17 11 31.9**	**+0.6**
TGL	**Tana Glacier**	**4.46**	**119**	Pn		**Pn**	**17 11 32.6**	**+0.2**
TGL					IAML		17 12 46.2	
	comp=N,57nm,0.7s							
Q19K	**Cape Douglas,**	**4.48**	**199**			**Pn**	**17 11 32.8**	**+0.2**
Q19K	**Cape Douglas,**	**4.48**	**199**	P		**Pn**	**17 11 33.2**	**+0.6**
	baz=17							
KHIT	**Khitrov Hills**	**4.50**	**124**			**Pn**	**17 11 33.7**	**+0.8**
BALM	**Baldy**	**4.50**	**115**			**Pn**	**17 11 33.1**	**+0.1**
KIAG	**Kiagna River**	**4.56**	**116**			**Pn**	**17 11 33.8**	**+0.1**
O17K	**Koliganek Bris**	**4.56**	**224**			**Pn**	**17 11 34.1**	**+0.5**
O17K	**Koliganek Bris**	**4.56**	**224**	P		**Pn**	**17 11 34.1**	**+0.5**
	baz=39							
GRIN	**Grindle Hills**	**4.58**	**126**			**Pn**	**17 11 34.3**	**+0.4**
WAX	**Waxell Ridge**	**4.64**	**122**	Pn		**Pn**	**17 11 35.8**	**+1.0**
SYI	**Shuyak Island**	**4.64**	**191**			**Pn**	**17 11 35.0**	**+0.3**
Q20K	**Shuyak Island**	**4.64**	**191**	P		**Pn**	**17 11 35.0**	**+0.3**
	baz=9.1							
N16K	**Nishlik Lake**	**4.66**	**238**			**Pn**	**17 11 35.2**	**+0.3**
N16K	**Nishlik Lake**	**4.66**	**238**	P		**Pn**	**17 11 35.2**	**+0.3**
	baz=51							
BARN	**Barnard Glacie**	**4.77**	**112**			**Pn**	**17 11 37.5**	**+0.9**
BARN	**Barnard Glacie**	**4.77**	**112**	IAML			17 12 33.7	
	comp=E,20nm,0.8s							
BARN					IAML		17 12 57.5	
	comp=N,26nm,0.9s							
YUK2	**White River**	**4.81**	**102**			**Pn**	**17 11 38.0**	**+0.9**
SNH	**Sunshine Point**	**4.83**	**125**	Pn		**Pn**	**17 11 36.9**	**-0.3**
GRNC	**Granite Creek**	**4.91**	**116**	Pn		**Pn**	**17 11 36.8**	**-1.7**
GRNC					IAML		17 13 01.3	
	comp=N,35nm,0.9s							
GRNC					IAML		17 13 04.8	
	comp=E,18nm,0.9s							
CTGM	**Chitina Glacie**	**4.96**	**112**	Pn		**Pn**	**17 11 39.3**	**+0.2**
CTGM					IAML		17 13 08.8	
	comp=N,26nm,3.0s							
CTGM					IAML		17 13 10.6	
	comp=E,16nm,2.1s							
YUK3	**Moose Creek**	**4.99**	**102**			**Pn**	**17 11 40.5**	**+1.0**
YUK3	**Moose Creek**	**4.99**	**102**	P		**Pn**	**17 11 40.5**	**+1.0**
	baz=291							
BM03	**Burnt Mountain**	**4.99**	**29**			**Pn**	**17 11 39.5**	**+0.2**
BMAR	**Burnt Mountain**	**5.00**	**29**	Pn		**Pn**	**17 11 39.2**	**-0.3**
O16K	**Kokwok River B**	**5.03**	**228**			**Pn**	**17 11 40.0**	**+0.2**
O16K	**Kokwok River B**	**5.03**	**228**	P		**Pn**	**17 11 40.0**	**+0.2**
	baz=41							
YAH	**Yahtse**	**5.13**	**119**	Pn		**Pn**	**17 11 41.1**	**-0.2**
DAWY	**Dawson**	**5.16**	**75**			**Pn**	**17 11 41.6**	**+0.1**
DAWY	**Dawson**	**5.16**	**75**	IAML			17 13 00.2	
	comp=N,19nm,0.7s							
DAWY					IAML		17 13 00.6	
	comp=E,21nm,0.7s							
DAWY	**Dawson**	**5.16**	**75**	P		**Pn**	**17 11 41.6**	**+0.1**
	baz=265							
MESA	**MESA**	**5.16**	**122**	Pn		**Pn**	**17 11 41.5**	**-0.3**
LOGN	**Logan Glacier**	**5.17**	**113**	Pn		**Pn**	**17 11 41.4**	**-0.5**
LOGN					IAML		17 12 46.3	
	comp=N,23nm,2.7s							
LOGN					IAML		17 13 17.5	
	comp=E,24nm,2.5s							
P16K	**Nushagak River**	**5.43**	**223**			**Pn**	**17 11 45.8**	**+0.7**
P16K	**Nushagak River**	**5.43**	**223**	P		**Pn**	**17 11 45.8**	**+0.7**
	baz=37							
KDAK	**Kodiak Island**	**5.48**	**190**	P		**Pn**	**17 11 43.4**	**-2.4**
	comp=E,2.5nm,0.2s,baz=52,slow=7.4,SNR=34							
KDAK					S	**Sn**	**17 12 44.0**	**-3.8**
	comp=E,7.7nm,0.2s,baz=326,slow=21,SNR=15							
KDAK	**Kodiak Island**	**5.48**	**190**	Pn		**Pn**	**17 11 44.3**	**-1.6**
KDAK	**Kodiak Island**	**5.48**	**190**	P		**Pn**	**17 11 44.0**	**-1.8**
	baz=8.6							
TOLK	**Toolik Lake Re**	**5.52**	**5**	Pn		**Pn**	**17 11 45.9**	**-0.4**
TOLK	**Toolik Lake Re**	**5.52**	**5**	P		**Pn**	**17 11 46.6**	**+0.3**
	baz=186							
I29M	**Ogilvie Camp,**	**5.86**	**62**			**Pn**	**17 11 50.7**	**-0.2**
PCA	**Pinnacle**	**5.88**	**117**			**Pn**	**17 11 51.4**	**+0.1**
PINM	**Pinnacle**	**5.89**	**117**	P		**Pn**	**17 11 51.4**	**+0.1**
	baz=306							
YUK4	**Talbot Arm**	**5.95**	**102**	P		**Pn**	**17 11 53.5**	**+1.1**
	baz=292							
R17K	**Ugashik Creek**	**6.21**	**209**			**Pn**	**17 11 56.1**	**+0.5**
R17K	**Ugashik Creek**	**6.21**	**209**	P		**Pn**	**17 11 56.1**	**+0.5**
	baz=24							
BCPM	**Bancas Point**	**6.22**	**116**	Pn		**Pn**	**17 11 56.0**	**+0.2**
M30M	**Minto, Yukon**	**6.42**	**89**	Pn		**Pn**	**17 11 58.3**	**-0.2**
YKU2	**Yakutat**	**6.48**	**119**	Pn		**Pn**	**17 11 58.8**	**-0.3**
ANM	**Nome**	**6.60**	**289**	Pn		**Pn**	**17 12 00.4**	**-0.4**
HYT	**Haines Junctio**	**6.68**	**105**	Pn		**Pn**	**17 12 02.6**	**+0.6**
EPYK	**Eagle Plains**	**6.81**	**56**			**Pn**	**17 12 03.0**	**-0.6**
SII	**Sitkinak Islan**	**6.85**	**196**	Pn		**Pn**	**17 12 03.2**	**-1.1**
M31M	**Drury Creek, Y**	**7.60**	**90**			**Pn**	**17 12 15.2**	**+0.9**
C36M	**Paulatuk**	**12.32**	**48**	Pn		**Pn**	**17 13 14.4**	**-2.4**
YKA	**Yellowknife Ar**	**16.40**	**76**	P		**Pn**	**17 14 06.8**	**-1.4**
	comp=E,0.2nm,0.5s,baz=264,slow=9.0,SNR=3.6							
NEW	**Newport**	**23.74**	**113**	LR		LR	17 25 33.5	
	comp=E,66nm,22.0s,baz=318,slow=38							
SPITS	**Spitsbergen Ar**	**38.67**	**4**	P		**P**	**17 17 36.8**	**+0.9**
	comp=E,0.4nm,0.3s,baz=1.6,slow=5.8,SNR=5.4							
	comp=E,0.4nm,0.3s							
ARCES	**ARCESS Array B**	**47.55**	**2**	P		**P**	**17 18 47.9**	**+0.6**
	comp=E,3.1nm,1.1s,baz=13,slow=8.3,SNR=2.1							
	comp=E,3.1nm,1.1s							
SONM	**Songino Array**	**53.80**	**306**	P		**P**	**17 19 35.4**	**+0.9**
	comp=E,0.3nm,0.5s,baz=44,slow=4.4,SNR=2.8							
	comp=E,0.3nm,0.5s							
ZALV	**Zalesovo Beam**	**55.44**	**324**	P		**P**	**17 19 46.3**	**+0.2**
	comp=E,0.6nm,0.5s,baz=15,slow=7.2,SNR=4.4							
	comp=E,0.6nm,0.5s							
FINES	**FINESS Array B**	**55.68**	**2**	P		**P**	**17 19 47.4**	**-0.3**
	comp=E,0.7nm,0.9s,baz=10,slow=12,SNR=3.5							
	comp=E,0.7nm,0.9s							
MKAR	**Makanchi Array**	**62.60**	**322**	P		**P**	**17 20 35.2**	**-0.3**
	comp=E,0.5nm,0.5s,baz=44,slow=6.6,SNR=10							
MKAR					LR	LR	17 50 39.7	
	comp=E,56nm,18.7s,baz=358,slow=38							
	comp=E,0.5nm,0.5s							
AKASG	**Malin Array Be**	**66.47**	**0**	P		**P**	**17 21 00.3**	**-0.2**
	comp=E,1.2nm,0.5s,baz=0.8,slow=6.0,SNR=5.3							
	comp=E,1.2nm,0.5s							

IDC 25 17:11:37.0±1.2,53°94N×35°25W,h0km,mb3.6/5, mbtmp3.6/6,ML2.7/1,MS3.6/3,Error ellipse: s-maj=40.2km s-min=24.9km az=19.0,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCHQ	**Schefferville**	**18.34**	**286**	P	Pn	17 15 52.5	0.0
	0.3nm,0.3s,baz=77,slow=6.5,SNR=3.8						
	2.1nm,0.9s						
ESDC	**Sonseca Array**	**25.47**	**111**	P	P	17 17 07.4	+0.8
	1.6nm,0.9s,baz=321,slow=9.9,SNR=5.7						
	1.6nm,0.9s						
TORD	**Torodi Ar. Bea**	**50.02**	**130**	P	P	17 20 32.3	-0.8
	1.2nm,0.8s,baz=333,slow=7.6,SNR=6.1						
	1.2nm,0.8s						
TXAR	**Lajitas Array**	**54.34**	**272**	P	P	17 21 05.4	+0.1
	0.4nm,1.0s,baz=44,slow=3.8,SNR=2.7						
	0.4nm,1.0s						
EIL	**Elat**	**55.14**	**86**	LR	LR	17 47 02.1	
	comp=Z,28nm,21.1s,baz=269,slow=38						
CMIG	**Matias Romero**	**58.57**	**255**	LR	LR	17 48 41.7	
	comp=Z,52nm,18.1s,baz=65,slow=38						
PFO	**Pinyon Flats O**	**58.69**	**285**	LR	LR	17 44 12.3	
	comp=Z,109nm,18.1s,baz=184,slow=33						
MKAR	**Makanchi Array**	**66.53**	**42**	P	P	17 22 28.6	+0.3
	0.5nm,0.8s,baz=317,slow=5.1,SNR=4.9						
	0.5nm,0.8s						
SONM	**Songino Array**	**73.52**	**26**	P	P	17 23 10.9	-0.5
	0.8nm,1.0s,baz=348,slow=4.9,SNR=3.9						
	0.8nm,1.0s						

*IDC **25** 17:12:30.4±1.1,53°81N×35°23W,h0km,mb3.7/7, mbtmp3.7/8,ML3.8/1,MS3.6/7,Error ellipse: s-maj=34.9km s-min=23.6km az=0.0*

*NEIC **25** 17:12:33.1±1.1,54°1N×35°4W±0°2,h11km±6km, mb4.4/26,Error ellipse: s-maj=19.2km s-min=14.7km az=187.0*

ISC 25 17:12:33.1±0.6,54°1N±0°1×35°37W±0°07,h16km,n42, σ1s45/36,mb4.4/20,MS3.5/3,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRS	**Narsarsuaq**	**8.93**	**327**		Pn	17 14 29.1	-12
NRS					Sn	**17 16 16.5**	**-4.8**
BORG	**Borgarnes**	**12.85**	**28**	LR	LR	17 19 01.3	
	comp=Z,197nm,20.2s,baz=231,slow=30						
SFJD	**Kangerlussuaq**	**14.93**	**336**	LR	LR	17 20 45.7	
	comp=Z,247nm,18.7s,baz=176,slow=33						
SCHQ	**Schefferville**	**18.24**	**285**	LR	LR	17 22 38.2	
	comp=Z,218nm,20.1s,baz=99,slow=33						
EKA	**Eskdalemuir Ar**	**18.58**	**73**	P	**Pn**	**17 16 49.6**	**+0.2**
	baz=276,slow=8.9						
EKA				LR	LR	17 22 28.7	
	comp=Z,315nm,19.4s,baz=344,slow=32						
	3.0nm,1.0s						
GGN	**Saint George**	**22.12**	**259**	P	**P**	**17 17 27.4**	**-0.2**
D62A	**Allapoint, All**	**22.34**	**266**	P	**P**	**17 17 29.9**	**0.0**
D62A				IAmb	IAmb	17 17 39.0	
	comp=Z,13nm,1.1s						
G65A	**Princeton**	**22.49**	**260**	P	**P**	**17 17 32.6**	**+1.1**
G65A				IAmb	IAmb	17 17 39.6	
	comp=Z,17nm,1.2s						
F64A	**Sherman**	**22.57**	**262**	P	**P**	**17 17 34.3**	**+1.9**
F64A				IAmb	IAmb	17 17 37.8	
	comp=Z,23nm,1.4s						
EMMW	**East Machias**	**22.71**	**259**	P	**P**	**17 17 34.4**	**+0.5**
EMMW				IAmb	IAmb	17 17 38.3	
	comp=Z,20nm,1.4s						
LMQ	**La Malbaie**	**22.86**	**268**	P	**P**	**17 17 35.4**	**-0.1**
G62A	**West of Eustis**	**24.21**	**263**	P	**P**	**17 17 49.4**	**+0.7**
ESDC	**Sonseca Array**	**25.58**	**111**	P	**P**	**17 18 00.3**	**-0.9**
	comp=Z,2.2nm,1.0s,baz=311,slow=8.6,SNR=5.7						
	comp=Z,2.2nm,1.0s						
ESDC	**Sonseca Array**	**25.58**	**111**	P	**P**	**17 17 59.7**	**-1.6**
NC405	**NORSAR Array S**	**25.71**	**55**	P	**P**	**17 18 04.4**	**+2.2**
NC405				IAmb	IAmb	17 18 05.0	
	comp=Z,11nm,1.3s						
HRV	**Adam Dziewonsk**	**26.41**	**259**	P	**P**	**17 18 09.5**	**+0.8**
HRV				IAmb	IAmb	17 18 09.9	
	comp=Z,11nm,1.1s						
K57A	**Scipio Center**	**29.17**	**264**	P	**P**	**17 18 31.0**	**-2.4**
SADO	**Sadowa**	**29.52**	**270**	P	**P**	**17 18 37.1**	**+0.6**
SADO				IAmb	IAmb	17 19 10.6	
	comp=Z,4.6nm,0.8s						
SPB2	**Spitsbergen Ar**	**30.05**	**19**	P	**P**	**17 18 43.4**	**+2.6**
SPB2				IAmb	IAmb	17 19 03.0	
	comp=Z,6.9nm,1.0s						
MSSA	**Maissana**	**30.44**	**90**	P	**P**	**17 18 44.6**	**-0.1**
GERES	**GERESS Array B**	**30.51**	**79**	P	**P**	**17 18 44.8**	**-0.5**
E46A	**Sault Ste Mari**	**31.69**	**276**	P	**P**	**17 18 55.8**	**+0.2**
E46A				IAmb	IAmb	17 19 01.6	
	comp=Z,6.7nm,1.0s						
FCC	**Fort Churchill**	**31.91**	**303**	P	**P**	**17 18 57.5**	**+0.2**
FCC				IAmb	IAmb	17 19 04.3	
	comp=Z,8.7nm,1.3s						
S61A	**Accomac**	**31.96**	**256**	P	**P**	**17 18 59.0**	**+1.0**
FINES	**FINESS Array B**	**32.46**	**52**	P	**P**	**17 19 03.4**	**+1.2**
	comp=Z,1.0nm,0.8s,baz=282,slow=8.4,SNR=3.5						
	comp=Z,1.0nm,0.8s						
FINES	**FINESS Array B**	**32.46**	**52**	P	**P**	**17 19 02.3**	**+0.1**
AGMN	**Agassiz Nation**	**37.33**	**287**	P	**P**	**17 19 45.9**	**+1.5**
AGMN				IAmb	IAmb	17 19 51.2	
	comp=Z,8.6nm,1.3s						
F36A	**Milaca**	**37.33**	**282**	P	**P**	**17 19 45.5**	**+1.2**
YKA	**Yellowknife Ar**	**39.96**	**315**	LR	LR	17 35 01.4	
	comp=Z,125nm,18.4s,baz=62,slow=34						
ECSD	**EROS Data Cent**	**40.36**	**281**	P	**P**	**17 20 09.9**	**+0.2**
ECSD				IAmb	IAmb	17 20 16.3	
	comp=Z,8.3nm,1.1s						
BRTR	**Keskin Array B**	**47.39**	**78**	P	**P**	**17 21 06.4**	**0.0**
	comp=Z,0.5nm,0.9s,baz=315,slow=7.4,SNR=2.0						
	comp=Z,0.5nm,0.9s						
TORD	**Torodi Ar. Bea**	**50.14**	**130**	P	**P**	**17 21 24.6**	**-3.0**
	comp=Z,2.2nm,1.0s,baz=329,slow=6.9,SNR=5.0						
	comp=Z,2.2nm,1.0s						
ILAR	**Eielson Array**	**50.43**	**329**	PcP	**PcP**	**17 22 46.9**	**-0.4**
	comp=Z,0.8nm,0.9s,baz=19,slow=4.1,SNR=4.7						
ILAR	**Eielson Array**	**50.43**	**329**	P	**P**	**17 21 29.3**	**+0.1**
MMAI	**Mount Meron Ar**	**53.05**	**83**	LR	LR	17 45 13.2	
	comp=Z,37nm,19.0s,baz=56,slow=37						
TIXI	**Tiksi**	**54.10**	**6**	LR	LR	17 43 42.3	
	comp=Z,36nm,18.6s,baz=0.0,slow=34						
TXAR	**Lajitas Array**	**54.26**	**272**	P	**P**	**17 22 00.1**	**+1.8**
	comp=Z,1.1nm,1.0s,baz=31,slow=10,SNR=4.3						
TXAR				PcP	**PcP**	**17 23 01.4**	**-0.9**
	comp=Z,0.8nm,1.0s,baz=52,slow=5.9,SNR=3.9						
	comp=Z,1.1nm,1.0s						
TXAR	**Lajitas Array**	**54.26**	**272**	P	**P**	**17 21 58.7**	**+0.4**
KVN	**Kaiserville**	**55.61**	**291**	P	**P**	**17 22 08.3**	**+0.3**
KVN				IAmb	IAmb	17 22 09.6	
	comp=Z,7.9nm,1.5s						
MKAR	**Makanchi Array**	**66.50**	**42**	P	**P**	**17 23 21.7**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=324,slow=7.1,SNR=4.4						
	comp=Z,0.5nm,0.8s						
SONM	**Songino Array**	**73.45**	**26**	P	**P**	**17 24 04.7**	**+0.3**
	comp=Z,0.7nm,0.9s,baz=335,slow=6.6,SNR=4.2						
	comp=Z,0.7nm,0.9s						
SONM	**Songino Array**	**73.45**	**26**	IAmb	IAmb	17 24 07.4	
	comp=Z,2.1nm,1.2s						

NOU 25 17:18:52.9,19°58S×170°11E,h10km,mb3.8/9,Vanuatu Islands,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**2.72**	**226**	P	Pn	17 19 35.1	-1.5
LIFNC	**LIFOU**	**2.95**	**246**	P	Pn	17 19 38.1	-1.7
YATNC	**Mamie plateau,**	**3.89**	**230**	P	Pn	17 19 53.6	+0.8
PINNC	**Pines Island,**	**3.91**	**219**	P	Pn	17 19 52.7	-0.3
OUENC	**Ouen Island, N**	**4.16**	**227**	P	Pn	17 19 57.7	+1.2
DZM	**Mont Dzumac**	**4.23**	**234**	P	Pn	17 19 58.6	+1.0
NOUC	**Port Laguerre**	**4.36**	**234**	P	Pn	17 19 59.3	+0.1
KOUNC	**Koumac, New Ca**	**5.56**	**259**	P	Pn	17 20 16.3	+0.6

*IDC **25** 17:22:53.1±1.8,37°29N×142°40E,h0km,mb3.8/5, mbtmp3.9/11,ML4.1/3,MS2.8/4, Error ellipse: s-maj=38.2km s-min=21.7km az=80.0*

*JMA **25** 17:22:55.7±0.2,37°4N±0°4×142°2E±0°8,h31km±3km, MV3.8/35,E OFF FUKUSHIMA PREF*

*NIED **25** 17:22:55.7,37°36N×142°19E,h31km,MW3.5,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.63; $M_{\theta\theta}$-0.61; $M_{\phi\phi}$1.24; $M_{r\theta}$1.54; $M_{\theta\phi}$0.43; $M_{\phi r}$1.32; Fault plane solution: $M_0$2.33000×10^{14} NP1: ϕ_s336.00000°,δ26.00000°,λ-159.00000°. NP2: ϕ_s227.00000°,δ81.00000°,λ-66.00000°.*

*NEIC **25** 17:22:56.9±1.6,37°33N±0°06×142°2E±0°1,h22km±6km, mb4.2/11 Error ellipse: s-maj=13.5km s-min=8.3km az=100.0*

ISC 25 17:22:54.2±2.5,37°34N±0°04×142°18E±0°06,h7km±15km, n63,σ1s24/65,mb3.9/12,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**1.04**	**272**	P	**Pb**	**17 23 14.5**	**-0.1**
JFK				S	**Sg**	**17 23 27.5**	**-0.2**
JMST	**Minamisoumatoc**	**1.10**	**291**	P	**Pb**	**17 23 15.0**	**-0.5**
JMST				S	**Sb**	**17 23 28.6**	**-1.5**
JIKH	**Ishinomakikobu**	**1.12**	**330**	P	**Pb**	**17 23 15.2**	**-0.8**
JIKH				S	**Sb**	**17 23 28.9**	**-2.0**
ONAJ	**Iwakimizuishiy**	**1.13**	**258**	P	**Pb**	**17 23 15.8**	**-0.3**
JMM	**Marumori**	**1.22**	**296**		**Pn**	**17 23 16.9**	**-0.8**
JMM	**Marumori**	**1.22**	**296**	P	**Pn**	**17 23 17.0**	**-0.8**
JMM				*eS*	**Sb**	**17 23 32.4**	**-1.3**
JIO	**Ouri**	**1.29**	**330**	P	**Pn**	**17 23 17.9**	**-0.9**
JIO				S	**Sb**	**17 23 34.0**	**-1.7**
JFT	**Otama**	**1.48**	**278**	P	**Pn**	**17 23 21.8**	**+0.5**
JFT				S	**Sn**	**17 23 40.2**	**-0.7**
JOU	**Okura**	**1.58**	**311**	P	**Pn**	**17 23 23.0**	**+0.3**
JOU				S	**Sn**	**17 23 42.0**	**-1.4**
JMK	**Ichinoseki**	**1.78**	**335**	P	**Pn**	**17 23 25.4**	**0.0**
JMK				S	**Sn**	**17 23 46.6**	**-1.8**
JYS	**Shirataka**	**1.89**	**298**	P	**Pn**	**17 23 27.9**	**+0.8**
JYS				*eS*	**Sn**	**17 23 51.4**	**+0.3**
JYT	**Yasato**	**1.94**	**236**		**Pn**	**17 23 27.5**	**-0.2**
JFY	**Yanaizu**	**1.97**	**273**	P	**Pn**	**17 23 28.8**	**+0.7**
JFY				S	**Sb**	**17 23 54.1**	**-1.2**
JYK	**Kaneyama**	**2.13**	**318**	P	**Pn**	**17 23 30.7**	**+0.4**
JOM	**Ohasama**	**2.24**	**342**	P	**Pn**	**17 23 32.1**	**+0.2**
JSD	**Sado**	**3.19**	**284**	Pn	**Pn**	**17 23 45.7**	**+0.9**
MJAR	**Matsushiro Arr**	**3.28**	**257**	Pn	**Pn**	**17 23 47.1**	**+1.0**
	1.6nm,0.4s,baz=82,slow=15,SNR=24						
MJAR					Sn	**Sb**	**17 24 30.7**	**-2.2**
	0.4nm,0.3s,baz=85,slow=15,SNR=5.6						
MJAR	**Matsushiro Arr**	**3.28**	**257**		**Pn**	**17 23 46.4**	**+0.3**
MAJO	**Matsushiro**	**3.28**	**257**		**Pn**	**17 23 47.5**	**+1.4**
MJB9	**Matsu-Tunnel**	**3.28**	**257**		**Pn**	**17 23 47.5**	**+1.4**
JTM	**Tenmabayashi**	**3.55**	**346**	Pn	**Pn**	**17 23 50.5**	**+0.7**
JGF	**Kuroka**	**4.25**	**247**	Pn	**Pn**	**17 24 01.8**	**+2.3**
INU	**Inuyama**	**4.62**	**246**	Pn	**Pn**	**17 24 06.9**	**+2.5**
JHJ2	**Mitsune**	**4.64**	**205**	Pn	**Pn**	**17 24 03.1**	**-1.6**
JHJ	**Hachijo jima 2**	**4.64**	**206**	Pn	**Pn**	**17 24 05.4**	**+0.6**
	22nm,0.3s,baz=76,slow=22,SNR=6.4						
JHJ					Sn	**Sn**	**17 24 57.3**	**-1.7**
	12nm,0.3s,baz=70,slow=23,SNR=1.3						
JHJ				LR	LR	17 25 39.6	
	comp=Z,350nm,21.5s,baz=318,slow=36						
	56nm,0.3s						
ERM	**Erimo**	**4.73**	**9**	Pn	**Pn**	**17 24 06.6**	**+0.6**
JKA	**Kamikawa-asahi**	**6.78**	**3**	Pn	**Pn**	**17 24 34.9**	**+0.8**
JNU	**Nakatsue**	**10.15**	**249**	Pn	**Pn**	**17 25 21.1**	**+0.6**
	1.0nm,0.3s,baz=14,slow=17,SNR=1.9						
	4.5nm,0.4s						
JNU	**Nakatsue**	**10.15**	**249**	Pn	**Pn**	**17 25 20.8**	**+0.3**
JCJ	**Chichijima**	**10.21**	**180**	Pn	**Pn**	**17 25 20.0**	**-1.3**
	2.5nm,0.3s,baz=311,slow=21,SNR=1.1						
	13nm,0.5s						
USRK	**Ussuriysk Ar.**	**10.32**	**315**	Pn	**Pn**	**17 25 26.5**	**+3.8**
	2.2nm,0.7s,baz=113,slow=12,SNR=2.5						
USRK				LR	LR	17 29 07.7	
	comp=Z,33nm,19.2s,baz=292,slow=36						
KSRS	**Korea Array**	**11.34**	**275**	Pn	**Pn**	**17 25 40.9**	**+4.2**
	1.0nm,0.8s,baz=90,slow=14,SNR=4.2						
KSRS					LR	LR	17 29 52.1	
	comp=Z,28nm,19.0s,baz=75,slow=36						
KLR	**Kul'dur**	**14.09**	**331**	LR	LR	17 31 20.2	
	comp=Z,39nm,18.2s,baz=109,slow=36						
H11N2	**WAKE ISLAND Hy**	**27.79**	**122**	T	T	17 57 37.1	
	baz=315,slow=75,SNR=58						
H11N1	**WAKE ISLAND Hy**	**27.79**	**122**	T	T	17 57 53.3	
	baz=315,slow=75,SNR=41						
H11N3	**WAKE ISLAND Hy**	**27.80**	**122**	T	T	17 57 54.0	
	baz=315,slow=75,SNR=50						
SONM	**Songino Array**	**28.13**	**303**	P	**P**	**17 28 48.1**	**+1.2**
	0.9nm,0.7s,baz=96,slow=7.9,SNR=5.8						
	0.9nm,0.7s						
SONM	**Songino Array**	**28.13**	**303**	P	**P**	**17 28 47.3**	**+0.4**
H11S1	**WAKE ISLAND Hy**	**28.52**	**124**	T	T	17 58 46.4	
	baz=317,slow=76,SNR=67						
H11S3	**WAKE ISLAND Hy**	**28.52**	**124**	T	T	17 58 46.5	
	baz=317,slow=76,SNR=59						
H11S2	**WAKE ISLAND Hy**	**28.54**	**124**	T	T	17 58 48.7	
	baz=317,slow=76,SNR=67						
ZAA0	**Zalesovo Array**	**42.16**	**312**	P	**P**	**17 30 48.1**	**+0.9**
ZAA0				IAmb	IAmb	17 31 07.5	
	comp=Z,3.2nm,1.2s						
ZALV	**Zalesovo Beam**	**42.16**	**312**	P	**P**	**17 30 48.6**	**+1.3**
	comp=Z,1.3nm,0.5s,baz=85,slow=6.6,SNR=6.1						
	comp=Z,1.3nm,0.5s						
ZALV	**Zalesovo Beam**	**42.16**	**312**	P	**P**	**17 30 48.1**	**+0.9**
MK31	**Makanchi Array**	**44.48**	**302**	P	**P**	**17 31 06.7**	**+0.7**
MK31				IAmb	IAmb	17 31 08.8	
	comp=Z,1.1nm,0.8s						
MKAR	**Makanchi Array**	**44.48**	**302**	P	**P**	**17 31 06.8**	**+0.7**
	comp=Z,1.2nm,0.7s,baz=86,slow=9.1,SNR=12						
	comp=Z,1.2nm,0.7s						
MKAR	**Makanchi Array**	**44.48**	**302**	P	**P**	**17 31 05.7**	**-0.4**
MAKZ	**Makanchi**	**44.69**	**302**	P	**P**	**17 31 08

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
NRS	**Narsarsuaq**	**9.12**	**327**		**Pn**	**17 56 29.6**	**-2.2**
NRS	**Narsarsuaq**	**9.12**	**327**	P	**Pn**	**17 56 29.6**	**-2.2**
IVI	**Ivigtut**	**10.10**	**322**	Pn	**Pn**	**17 56 42.8**	**-2.4**
ANGG	**Ammassalik, Gr**	**11.86**	**355**	Pn	**Pn**	**17 57 07.3**	**-1.9**
BORG	**Borgarnes**	**13.00**	**27**	Pn	**Pn**	**17 57 24.0**	**-0.8**
	0.2nm,0.3s,baz=233,slow=8.3,SNR=4.3						
BORG				LR	LR	18 00 52.2	
	comp=Z,5μm,21.2s,baz=229,slow=30						
	3.2nm,0.7s						
BORG	**Borgarnes**	**13.00**	**27**		**Pn**	**17 57 22.6**	**-2.2**
BORG	**Borgarnes**	**13.00**	**27**	P	**Pn**	**17 57 22.6**	**-2.2**
NUUK	**Nuuk**	**13.32**	**327**	*i* P	**Pn**	**17 57 28.2**	**-1.0**
DY2G	**Dye2**	**13.76**	**341**	*i* P	**Pn**	**17 57 33.7**	**-1.6**
H07N1	**FLORES T-PHASE**	**14.45**	**167**	T	T	18 12 29.8	
	SNR=78						
DRLN	**Deer Lake**	**14.55**	**261**	Pn	**Pn**	**17 57 43.6**	**-2.4**
H07S1	**FLORES T-PHASE**	**14.74**	**168**	T	T	18 12 46.4	
	SNR=21						
SFJD	**Kangerlussuaq**	**15.13**	**337**	Pn	**Pn**	**17 57 53.5**	**-0.3**
	0.8nm,0.3s,baz=193,slow=6.9,SNR=2.2						
SFJD				LR	LR	18 02 37.1	
	comp=Z,7μm,20.6s,baz=156,slow=33						
	7.5nm,0.6s						
SFJD	**Kangerlussuaq**	**15.13**	**337**	P	**P**	**17 57 56.9**	**-2.1**
SFJD	**Kangerlussuaq**	**15.13**	**337**	P	**Pn**	**17 57 52.8**	**-1.0**
SFJD	**Kangerlussuaq**	**15.13**	**337**	*i* P	**P**	**17 57 56.6**	**-2.4**
ICESG	**Greenland Ices**	**15.43**	**354**	*i* P	**Pn**	**17 57 57.9**	**-0.1**
ICESG				IAmb	IAmb	17 58 05.8	
	comp=Z,8.7nm,0.8s						
ROSA	**Rosais**	**15.89**	**160**		**P**	**17 58 06.9**	**-0.6**
ILULI	**Ilulissat**	**17.06**	**341**	P	**Pn**	**17 58 18.5**	**0.0**
ILULI	**Ilulissat**	**17.06**	**341**	P	**Pn**	**17 58 18.5**	**0.0**
ILULI				pmax	pmax		
	comp=Z,94nm,1.5s						
DSB	**Dublin**	**17.14**	**80**	P	**Pn**	**17 58 20.4**	**+0.8**
CMLA	**Cha da Macela**	**17.44**	**153**	P	**Pn**	**17 58 23.1**	**-0.5**
CMLA				IAmb	IAmb	17 58 44.2	
	comp=Z,258nm,1.5s						
CMLA	**Cha da Macela**	**17.44**	**153**	P	**Pn**	**17 58 23.1**	**-0.5**
CMLA				pmax	pmax		
	comp=Z,258nm,1.5s						
SCO	**Scoresbysund**	**17.73**	**15**		**P**	**17 58 27.6**	**-0.1**
SCO	**Scoresbysund**	**17.73**	**15**	P	**P**	**17 58 27.6**	**-0.1**
SCO				pmax	pmax		
	comp=Z,40nm,1.1s						
SCO	**Scoresbysund**	**17.73**	**15**	*i* P	**P**	**17 58 29.6**	**+1.9**
SCO				IAmb	IAmb	17 58 35.8	
	comp=Z,10nm,0.9s						
SCHQ	**Schefferville**	**18.34**	**286**	P	**P**	**17 58 34.1**	**-0.6**
	comp=Z,1.1nm,0.3s,baz=77,slow=8.5,SNR=16						
	comp=Z,21nm,0.9s						
SCHQ	**Schefferville**	**18.34**	**286**		**Pn**	**17 58 32.8**	**-1.8**
ESK	**Eskdalemuir**	**18.56**	**72**	P	**P**	**17 58 37.0**	**0.0**
ESK	**Eskdalemuir**	**18.56**	**72**	P	**P**	**17 58 37.0**	**0.0**
ESK				pmax	pmax		
	comp=Z,30nm,1.2s						
EKA	**Eskdalemuir Ar**	**18.59**	**72**	P	**P**	**17 58 37.2**	**-0.1**
	baz=280,slow=9.7						
EKA				LR	LR	18 04 38.4	
	comp=Z,9μm,18.2s,baz=275,slow=33						
	comp=Z,21nm,0.9s						
SUMG	**Summit**	**18.84**	**357**	P	**P**	**17 58 37.5**	**-2.9**
SUMG	**Summit**	**18.84**	**357**	P	**P**	**17 58 37.5**	**-2.9**
SUMG				pmax	pmax		
	comp=Z,74nm,1.3s						
SUMG	**Summit**	**18.84**	**357**	*i* P	**Pn**	**17 58 42.1**	**+1.2**
GBN	**Guysborough**	**18.89**	**254**	P	**P**	**17 58 39.3**	**-1.4**
FRB	**Frobisher Bay**	**19.63**	**313**	LR	LR	18 04 53.4	
	comp=Z,9μm,18.7s,baz=104,slow=32						
BATG	**Bathurst New B**	**20.52**	**264**		**P**	**17 58 56.3**	**-2.1**
HAL	**Halifax**	**20.53**	**255**	P	**P**	**17 58 56.6**	**-2.0**
HAL	**Halifax**	**20.53**	**255**	P	**P**	**17 58 56.6**	**-2.0**
HAL				pmax	pmax		
	comp=Z,36nm,0.9s						
LMN	**Caledonia Moun**	**20.53**	**259**	P	**P**	**17 58 56.4**	**-2.2**
JMIC	**Jan Mayen**	**20.86**	**25**	LR	LR	18 04 53.7	
	comp=Z,6μm,21.9s,baz=234,slow=30						
UPNV	**Upernavik**	**20.94**	**343**	*i* P	**P**	**17 59 02.3**	**-0.5**
DBG	**Daneborg**	**21.42**	**11**	*i* P	**P**	**17 59 07.6**	**-0.4**
DBG				IAmb	IAmb	17 59 09.5	
	comp=Z,14nm,0.9s						
PGAV	**Gavieira, Arco**	**21.51**	**113**	*e*P	**P**	**17 59 09.7**	**+0.4**
	comp=Z,127nm,1.8s						
PGAV				*e*S	Sn	18 03 13.1	-2.8
PGAV				*e*LR	LR	18 04 07.8	
	comp=Z,9μm,20.0s						
PQI	**Presque Isle**	**21.98**	**264**	P	**P**	**17 59 11.2**	**-2.9**
PQI				IAmb	IAmb	17 59 21.8	
	comp=Z,134nm,1.4s						
PQI				IAMs_20	IAMs_20	18 06 41.9	
	comp=Z,10μm,19.0s						
GGN	**Saint George**	**22.13**	**260**	P	**P**	**17 59 13.9**	**-1.8**
GGN				IAmb	IAmb	17 59 22.1	
	comp=Z,57nm,0.9s						
POLO	**Lamas de Olo**	**22.18**	**113**	*e*P	**P**	**17 59 16.3**	**-0.2**
	comp=Z,40nm,1.8s						
POLO				*e*S	**S**	**18 03 26.6**	**+6.0**
PVRL	**Vila Real**	**22.29**	**113**	*e*P	**P**	**17 59 20.2**	**+2.6**
	comp=Z,69nm,1.7s						
E63A	**Oxbow**	**22.34**	**264**	P	**P**	**17 59 16.2**	**-1.9**
	baz=58,SNR=11						
E63A				P	**P**	**17 59 16.2**	**-1.9**
	baz=58,SNR=11						
E63A				S	**S**	**18 03 21.8**	**-1.7**
	baz=58						
E63A				S	**S**	**18 03 21.8**	**-1.7**
	baz=58						
D62A	**Allapoint, All**	**22.38**	**266**	P	**P**	**17 59 14.6**	**-3.9**
D62A				IAmb	IAmb	17 59 45.6	
	comp=Z,70nm,1.2s						
D62A	**Allapoint, All**	**22.38**	**266**	P	**P**	**17 59 15.1**	**-3.4**
	baz=60						
D62A				P	**P**	**17 59 15.1**	**-3.4**
	baz=60						
D62A				S	**S**	**18 03 25.4**	**+1.3**
	baz=60						
D62A				S	**S**	**18 03 25.4**	**+1.3**
	baz=60						
PBRG	**Braganca**	**22.46**	**111**	*e*P	**P**	**17 59 19.6**	**+0.1**
	comp=Z,65nm,1.7s						
PBRG				*e*S	**S**	**18 03 33.0**	**+7.1**
G65A	**Princeton**	**22.50**	**261**	P	**P**	**17 59 18.0**	**-1.8**
G65A	**Princeton**	**22.50**	**261**	P	**P**	**17 59 18.8**	**-1.0**
	baz=56,SNR=18						
G65A				P	**P**	**17 59 18.8**	**-1.0**
	baz=56,SNR=18						
G65A				S	**S**	**18 03 24.8**	**-1.7**
	baz=56						
G65A				S	**S**	**18 03 24.8**	**-1.7**
	baz=56						
PVIS	**Viseu**	**22.58**	**114**	*e*P	**P**	**17 59 25.6**	**+4.9**
	comp=Z,57nm,1.7s						
F64A	**Sherman**	**22.60**	**263**	P	**P**	**17 59 18.4**	**-2.4**
F64A				IAmb	IAmb	17 59 27.0	
	comp=Z,52nm,1.1s						
F64A	**Sherman**	**22.60**	**263**	P	**P**	**17 59 19.2**	**-1.7**
	baz=57,SNR=7.2						
F64A				P	**P**	**17 59 19.2**	**-1.7**
	baz=57,SNR=7.2						
F64A				S	**S**	**18 03 27.2**	**-1.0**
	baz=57						
F64A				S	**S**	**18 03 27.2**	**-1.0**
	baz=57						
COI	**Coimbra**	**22.66**	**116**	*e*S	**S**	**18 03 31.8**	**+2.3**
COI	**Coimbra**	**22.66**	**116**	IAMs_20	IAMs_20	18 05 42.9	
	comp=Z,10μm,19.0s						
EMMW	**East Machias**	**22.72**	**259**	P	**P**	**17 59 19.9**	**-2.3**
EMMW				IAMs_20	IAMs_20	18 07 16.8	
	comp=Z,7μm,20.0s						
PCAS	**Casmilo, Conde**	**22.73**	**116**	*e*P	**P**	**17 59 23.3**	**+1.0**
	comp=Z,75nm,2.2s						
PCAS				*e*S	Sn	18 03 38.9	-6.0
MVO	**Moncorvo**	**22.74**	**112**	*e*P	**P**	**17 59 22.5**	**+0.1**
	comp=Z,55nm,1.6s						
MVO				*e*S	**S**	**18 03 36.8**	**+5.8**
MVO				*e*LR	LR	18 04 55.0	
	comp=Z,8μm,20.0s						
E62A	**Clayton Lake**	**22.89**	**266**	P	**P**	**17 59 22.3**	**-1.6**
E62A				IAmb	IAmb	17 59 35.6	
	comp=Z,51nm,1.1s						
E62A	**Clayton Lake**	**22.89**	**266**	S	**S**	**18 03 31.8**	**-1.7**
	baz=59						
E62A				S	**S**	**18 03 31.8**	**-1.7**
	baz=59						
PSBE	**So Bento**	**22.97**	**118**	*e*P	**P**	**17 59 25.2**	**+0.4**
	comp=Z,102nm,1.6s						
PSBE				*e*S	**S**	**18 03 40.9**	**+6.0**
MTE	**Manteigas**	**22.99**	**115**	*e*P	**P**	**17 59 25.3**	**+0.2**
	comp=Z,56nm,1.3s						
MTE				*e*S	**S**	**18 03 42.3**	**+6.8**
MTE				*e*LR	LR	18 04 55.0	
	comp=Z,8μm,20.0s						
MTE	**Manteigas**	**22.99**	**115**	P	**P**	**17 59 23.8**	**-1.3**
MTE				IAMs_20	IAMs_20	18 05 44.6	
	comp=Z,8μm,21.0s						
PMAFR	**Mafra**	**23.13**	**120**	*e*S	**S**	**18 03 45.6**	**+8.0**
F63A	**Nahmakanta, Br**	**23.13**	**263**	P	**P**	**17 59 23.5**	**-2.9**
F63A	**Nahmakanta, Br**	**23.13**	**263**	P	**P**	**17 59 24.9**	**-1.4**
	baz=57						
F63A				P	**P**	**17 59 24.9**	**-1.4**
	baz=57						
F63A				S	**S**	**18 03 37.7**	**+0.1**
	baz=57						
F63A				S	**S**	**18 03 37.7**	**+0.1**
	baz=57						
PMST	**Lisbon--Monsan**	**23.34**	**120**	*e*P	**P**	**17 59 31.3**	**+2.7**
LIS	**Lisbon**	**23.38**	**120**	*e*P	**P**	**17 59 31.1**	**+2.1**
LIS				*e*S	**S**	**18 03 45.9**	**+4.1**
LIS				IAMs_20	IAMs_20	18 06 07.6	
	comp=Z,8μm,21.8s						
LIS	**Lisbon**	**23.38**	**120**	*e*P	**P**	**17 59 31.0**	**+2.1**
LIS				*e*S	**S**	**18 03 45.8**	**+4.1**
MFF	**Saint Martin d**	**23.43**	**94**	P	**P**	**17 59 30.2**	**+0.8**
PCBR	**Castelo Branco**	**23.43**	**115**	*e*P	**P**	**17 59 30.7**	**+1.3**
	comp=Z,121nm,1.4s						
PKME	**Peaks-Kenny Pk**	**23.48**	**262**	P	**P**	**17 59 27.6**	**-2.3**
PKME				IAmb	IAmb	17 59 47.1	
	comp=Z,54nm,1.1s						
PKME				IAMs_20	IAMs_20	18 07 47.7	
	comp=Z,10μm,19.0s						
PKME	**Peaks-Kenny Pk**	**23.48**	**262**	P	**P**	**17 59 30.9**	**+1.1**
	baz=56						
F62A	**Pittston Farm,**	**23.53**	**264**	P	**P**	**17 59 29.1**	**-1.3**
F62A				IAmb	IAmb	17 59 52.4	
	comp=Z,70nm,1.2s						
F62A	**Pittston Farm,**	**23.53**	**264**	P	**P**	**17 59 29.3**	**-1.1**
	baz=57,SNR=9.2						
F62A				P	**P**	**17 59 29.3**	**-1.1**
	baz=57,SNR=9.2						
F62A				S	**S**	**18 03 39.6**	**-4.6**
	baz=57						
F62A				S	**S**	**18 03 39.6**	**-4.6**
	baz=57						
PMTG	**Montargil**	**23.59**	**118**	*e*P	**P**	**17 59 33.1**	**+2.1**
	comp=Z,55nm,1.5s						
PMTG				*e*S	**S**	**18 03 51.8**	**+6.6**
PMRV	**Marv??o**	**23.77**	**116**	*e*P	**P**	**17 59 32.1**	**-0.7**
	comp=Z,53nm,2.2s						
PMRV				*e*S	**S**	**18 03 54.5**	**+6.4**
PMRV				*e*LR	LR	18 05 18.7	
	comp=Z,9μm,20.0s						
DAG	**Danmarks Havn**	**23.84**	**9**	*i* P	**P**	**17 59 33.3**	**+0.2**
DAG				IAmb	IAmb	17 59 37.6	
	comp=Z,5.0nm,0.8s						
PESTR	**Estremoz**	**24.08**	**117**	*e*P	**P**	**17 59 36.6**	**+0.9**
	comp=Z,54nm,1.5s						
PESTR				*e*S	**S**	**18 04 00.5**	**+7.6**
PESTR	**Estremoz**	**24.08**	**117**	P	**P**	**17 59 35.2**	**-0.5**
WVL	**Waterville**	**24.09**	**261**	P	**P**	**17 59 34.4**	**-1.3**
WVL				IAmb	IAmb	17 59 53.9	
	comp=Z,38nm,1.1s						
WVL				IAMs_20	IAMs_20	18 08 16.0	
	comp=Z,9μm,18.0s						
EVO	**Evora**	**24.10**	**118**	*e*P	**P**	**17 59 35.1**	**-0.8**
	comp=Z,32nm,1.7s						
CLF	**Chambon-Foret**	**24.15**	**89**	P	**P**	**17 59 35.3**	**-1.0**
CLF				IAMs_20	IAMs_20	18 07 40.7	
	comp=Z,6μm,20.0s						
PNCL	**Nicolau / Gran**	**24.15**	**120**	*e*P	**P**	**17 59 36.5**	**+0.1**
	comp=Z,64nm,2.1s						
PNCL				*e*S	**S**	**18 04 02.7**	**+8.6**
G62A	**West of Eustis**	**24.24**	**264**	P	**P**	**17 59 35.9**	**-1.2**
G62A	**West of Eustis**	**24.24**	**264**	P	**P**	**17 59 35.3**	**-1.9**
	baz=56						
G62A				P	**P**	**17 59 35.3**	**-1.9**
	baz=56						
MESJ	**Messejana**	**24.52**	**120**	*e*P	**P**	**17 59 41.4**	**+1.7**
MESJ				*e*S	**S**	**18 04 04.3**	**+4.3**
MESJ				IAMs_20	IAMs_20	18 06 21.3	
	comp=Z,6μm,20.6s						
MESJ	**Messejana**	**24.52**	**120**	*e*P	**P**	**17 59 39.9**	**+0.2**
	comp=Z,64nm,1.8s						
MESJ	**Messejana**	**24.52**	**120**	*e*P	**P**	**17 59 41.4**	**+1.7**
MESJ				*e*S	**S**	**18 04 04.3**	**+4.3**
PBEJ	**Beja**	**24.56**	**119**	*e*P	**P**	**17 59 39.3**	**-0.8**
	comp=Z,51nm,1.8s						
PMOZ	**Porto Moniz, M**	**24.66**	**141**	*e*S	S	18 04 16.1	+14
PMOZ				*e*LR	LR	18 05 51.0	
	comp=Z,3μm,20.0s						
MORF	**Marmelete**	**24.71**	**121**	*e*P	**P**	**17 59 43.3**	**+1.8**
MORF				*e*S	**S**	**18 04 07.5**	**+4.3**
MORF				IAMs_20	IAMs_20	18 06 12.8	
	comp=Z,5μm,21.1s						
MORF	**Marmelete**	**24.71**	**121**	*e*P	**P**	**17 59 41.0**	**-0.5**
	comp=Z,60nm,1.9s						
MORF				*e*S	**S**	**18 04 10.4**	**+7.2**
MORF	**Marmelete**	**24.71**	**121**	*e*P	**P**	**17 59 43.3**	**+1.8**
MORF				*e*S	**S**	**18 04 07.4**	**+4.3**
PFVI	**Vila Bisbo**	**24.75**	**122**	*e*S	**S**	**18 04 13.9**	**+10**
PCVE	**Castro Verde**	**24.77**	**120**	*e*P	**P**	**17 59 44.9**	**+2.9**
PCVE				*e*S	**S**	**18 04 13.9**	**+10**
PMAR	**Madeira**	**24.85**	**141**	*e*P	**P**	**17 59 45.0**	**+2.0**
	comp=Z,193nm,1.9s						
KONO	**Kongsberg**	**24.88**	**58**	P	**P**	**17 59 41.9**	**-0.9**
KONO	**Kongsberg**	**24.88**	**58**	IAMs_20	IAMs_20	18 07 45.9	
	comp=Z,5μm,20.0s						
KONO	**Kongsberg**	**24.88**	**58**	P	**P**	**17 59 41.9**	**-0.9**
KONO				pmax	pmax		
	comp=Z,219nm,2.4s						
KONO				MLR	MLR		
	comp=Z,5μm,20.0s						
I63A	**Otisfield**	**24.93**	**261**	P	**P**	**17 59 42.2**	**-1.2**
I63A	**Otisfield**	**24.93**	**261**	S	**S**	**18 04 03.4**	**-3.2**
	baz=54						
I63A				S	**S**	**18 04 03.4**	**-3.2**
	baz=54						
H62A	**Milan**	**24.96**	**263**	P	**P**	**17 59 42.7**	**-1.0**
H62A				IAmb	IAmb	18 00 07.5	
	comp=Z,47nm,1.6s						
H62A	**Milan**	**24.96**	**263**	S	**S**	**18 04 08.3**	**+1.1**
	baz=55						
H62A				S	**S**	**18 04 08.3**	**+1.1**
	baz=55						
GOET	**G??ttrup**	**25.10**	**65**	*i* P	**P**	**17 59 47.4**	**+2.6**
PVAQ	**Vaqueiros**	**25.11**	**120**	*e*P	**P**	**17 59 47.5**	**+2.5**
PVAQ				*e*S	**S**	**18 04 16.2**	**+6.7**
PVAQ				*e*LR	LR	18 05 56.9	
	comp=Z,5μm,20.0s						
PVAQ	**Vaqueiros**	**25.11**	**120**	P	**P**	**17 59 44.0**	**-1.1**
PVAQ				IAmb	IAmb	17 59 51.0	
	comp=Z,71nm,1.8s						
PBDV	**Barranco-do-Ve**	**25.12**	**120**	*e*P	**P**	**17 59 48.3**	**+3.1**
PBDV				*e*S	**S**	**18 04 19.2**	**+9.4**
MUD	**Monsted U'grnd**	**25.20**	**66**	*i* P	**P**	**17 59 46.3**	**+0.6**
NC204	**NORSAR Array S**	**25.31**	**54**	P	**P**	**17 59 45.8**	**-1.0**
NC204				IAmb	IAmb	18 00 04.1	
	comp=Z,93nm,1.8s						
NBO00	**NORSAR Array S**	**25.33**	**55**	P	**P**	**17 59 46.6**	**-0.3**
PAB	**San Pablo**	**25.34**	**112**	P	**P**	**17 59 47.6**	**+0.4**
PAB				IAmb	IAmb	18 00 01.2	
	comp=Z,37nm,1.1s						
PAB	**San Pablo**	**25.34**	**112**	IAMs_20	IAMs_20	18 07 25.5	
	comp=Z,8μm,20.0s						
PAB	**San Pablo**	**25.34**	**112**	P	**P**	**17 59 47.6**	**+0.4**
PAB				pmax	pmax		
	comp=Z,37nm,1.1s						
PAB				MLR	MLR		
	comp=Z,8μm,20.0s						
NAO01	**NORSAR Array S**	**25.40**	**55**	P	**P**	**17 59 47.0**	**-0.5**
NAO01				IAmb	IAmb	17 59 53.9	
	comp=Z,80nm,1.4s						
ESBB	**Sonseca Array**	**25.46**	**111**	P	**P**	**17 59 48.9**	**+0.6**
ESBB				IAmb	IAmb	18 00 02.3	
	comp=Z,37nm,1.1s						
ESDC	**Sonseca Array**	**25.46**	**111**	P	**P**	**17 59 48.8**	**+0.5**
	comp=Z,19nm,1.0s,baz=313,slow=8.6,SNR=36						
ESDC				LR	LR	18 07 51.2	
	comp=Z,7μm,18.8s,baz=316,slow=32						
	comp=Z,19nm,1.0s						
ESDC	**Sonseca Array**	**25.46**	**111**	P	**P**	**17 59 49.0**	**+0.7**
I62A	**Tamworth**	**25.48**	**262**	P	**P**	**17 59 46.8**	**-1.5**
I62A				IAmb	IAmb	18 00 13.3	
	comp=Z,40nm,1.4s						
I62A	**Tamworth**	**25.48**	**262**	P	**P**	**17 59 49.8**	**+1.5**
	baz=54						
I62A				P	**P**	**17 59 49.8**	**+1.5**
	baz=54						
I62A				S	**S**	**18 04 16.3**	**+1.1**
	baz=54						
I62A				S	**S**	**18 04 16.3**	**+1.1**
	baz=54						
NB2	**NORSAR Subarra**	**25.54**	**55**	P	**P**	**17 59 48.9**	**0.0**
	baz=274,slow=9.3						
NB2	**NORSAR Subarra**	**25.54**	**55**	P	**P**	**17 59 48.9**	**0.0**
	comp=Z,184nm,3.3s,baz=274,slow=9.3						
NOA	**NORSAR Array B**	**25.54**	**55**	P	**P**	**17 59 49.3**	**+0.4**
	comp=Z,12nm,1.2s,baz=276,slow=9.3,SNR=8.4						
NOA				LR	LR	18 08 28.8	
	comp=Z,3μm,20.2s,baz=275,slow=33						
	comp=Z,12nm,1.2s						
OVD	**Ostervraa, Den**	**25.57**	**64**	*i* P	P	17 59 57.3	+8.3
NB201	**NORSAR Array S**	**25.58**	**55**	P	**P**	**17 59 49.0**	**-0.2**
NC303	**NORSAR Array S**	**25.60**	**55**	P	**P**	**17 59 48.9**	**-0.4**
NC303				IAmb	IAmb	18 00 02.5	
	comp=Z,37nm,1.2s						
LBNH	**Lisbon**	**25.61**	**263**	P	**P**	**17 59 49.5**	**-0.1**
LBNH				IAmb	IAmb	18 00 26.3	
	comp=Z,142nm,2.5s						
LBNH				IAMs_20	IAMs_20	18 09 03.0	
	comp=Z,11μm,19.0s						
LBNH	**Lisbon**	**25.61**	**263**	P	**P**	**17 59 49.5**	**-0.1**
LBNH				pmax	pmax		
	comp=Z,142nm,2.5s						
LBNH				MLR	MLR		
	comp=Z,11μm,19.0s						
LBNH	**Lisbon**	**25.61**	**263**	S	**S**	**18 04 22.1**	**+4.7**
	baz=55						
WLF	**Walferdange**	**25.71**	**82**	P	**P**	**17 59 48.6**	**-1.8**
WLF				IAMs_20	IAMs_20	18 08 34.8	
	comp=Z,6μm,21.0s						
WLF	**Walferdange**	**25.71**	**82**	P	**P**	**17 59 48.6**	**-1.8**
WLF				pmax	pmax		
	comp=Z,23nm,1.3s						
WLF				MLR	MLR		
	comp=Z,6μm,21.0s						
NC602	**NORSAR Array S**	**25.73**	**56**	P	**P**	**17 59 49.8**	**-0.7**
NC405	**NORSAR Array S**	**25.78**	**55**	P	**P**	**17 59 49.1**	**-1.8**
FFD	**Franklin Falls**	**25.90**	**261**	IAMs_20	IAMs_20	18 09 20.7	
	comp=Z,7μm,18.0s						
MNTQ	**Montreal, Queb**	**25.91**	**267**	P	**P**	**17 59 50.5**	**-1.7**
TULEG	**Thule**	**25.99**	**343**	P	**P**	**17 59 51.1**	**-1.6**
TULEG				IAmb	IAmb	18 00 40.3	
	comp=Z,44nm,1.3s						
VT1	**Waterbury**	**26.04**	**264**	P	**P**	**17 59 51.7**	**-1.8**
VT1				IAMs_20	IAMs_20	18 09 07.6	
	comp=Z,7μm,19.0s						
TRQ	**Mont Tremblant**	**26.08**	**269**	P	**P**	**17 59 52.4**	**-1.5**
HNH	**Hanover**	**26.13**	**262**	P	**P**	**17 59 52.8**	**-1.5**
FRNY	**Flat Rock**	**26.25**	**266**	P	**P**	**17 59 54.0**	**-1.3**
FRNY				IAmb	IAmb	18 00 32.5	
	comp=Z,58nm,1.8s						
BCX	**Boston College**	**26.31**	**259**	P	**P**	**17 59 55.0**	**-0.8**
BCX				IAMs_20	IAMs_20	18 09 41.6	
	comp=Z,7μm,19.0s						
WES	**Weston**	**26.36**	**259**	P	**P**	**17 59 54.4**	**-2.0**
WES				IAmb	IAmb	18 00 09.3	
	comp=Z,48nm,1.5s						
WES				IAMs_20	IAMs_20	18 09 44.1	
	comp=Z,8μm,18.0s						
WES	**Weston**	**26.36**	**259**	P	**P**	**17 59 54.4**	**-2.0**
WES				pmax	pmax		
	comp=Z,48nm,1.5s						
WES				MLR	MLR		
	comp=Z,8μm,18.0s						
L64A	**Middleborough**	**26.36**	**258**	P	**P**	**17 59 55.2**	**-1.1**
L64A				IAmb	IAmb	18 00 00.6	
	comp=Z,24nm,0.9s						
HRV	**Adam Dziewonsk**	**26.43**	**259**	P	**P**	**17 59 56.6**	**-0.4**
HRV	**Adam Dziewonsk**	**26.43**	**259**	IAMs_20	IAMs_20	18 09 35.8	
	comp=Z,7μm,19.0s						
HRV	**Adam Dziewonsk**	**26.43**	**259**	P	**P**	**17 59 56.6**	**-0.4**
HRV				pmax	pmax		
	comp=Z,36nm,1.5s						
HRV				MLR	MLR		
	comp=Z,7μm,19.0s						
HRV	**Adam Dziewonsk**	**26.43**	**259**	S	**S**	**18 04 35.6**	**+5.3**
	baz=52						
J61A	**Chester**	**26.50**	**262**	P	**P**	**17 59 56.9**	**-0.7**
SFS	**San Fernando**	**26.60**	**119**	IAMs_20	IAMs_20	18 08 14.2	
	comp=Z,7μm,20.0s						
K62A	**Royalston**	**26.72**	**260**	P	**P**	**17 59 57.8**	**-1.9**
K62A				IAmb	IAmb	18 00 31.3	
	comp=Z,59nm,1.7s						
BRYW	**Bryant College**	**26.78**	**258**	P	**P**	**17 59 57.5**	**-2.7**
BRYW				IAMs_20	IAMs_20	18 10 06.2	
	comp=Z,6μm,18.0s						
VLDQ	**Val d'Or**	**26.85**	**275**	P	**P**	**18 00 00.3**	**-0.4**
HFS	**Hagfors**	**26.86**	**57**	P	**P**	**18 00 00.8**	**0.0**
	comp=Z,9.4nm,1.0s,baz=286,slow=10,SNR=12						
HFS				LR	LR	18 09 18.3	
	comp=Z,5μm,19.9s,baz=278,slow=34						
	comp=Z,9.4nm,1.0s						
SSB	**Saint Sauveur**	**26.90**	**92**	P	**P**	**18 00 00.5**	**-0.8**
SSB	**Saint Sauveur**	**26.90**	**92**	IAMs_20	IAMs_20	18 08 59.6	
	comp=Z,7μm,20.0s						
SSB	**Saint Sauveur**	**26.90**	**92**	P	**P**	**18 00 00.5**	**-0.8**
SSB				pmax	pmax		
	comp=Z,16nm,1.3s						
SSB				MLR	MLR		
	comp=Z,6μm,20.0s						
ECH	**Echery**	**26.96**	**85**	P	**P**	**18 00 00.6**	**-1.2**
ECH	**Echery**	**26.96**	**85**	P	**P**	**18 00 00.6**	**-1.2**
ECH				pmax	pmax		
	comp=Z,49nm,2.0s						
ECH				MLR	MLR		
	comp=Z,16μm,18.0s						
LONY	**Lake Ozonia**	**26.96**	**266**	P

J58A Remsen 28.10 265 P **P** 18 00 08.4 -3.6
J58A IAmb IAmb 18 00 17.6
comp=Z,65nm,2.1s
BNI Bardonecchia 28.29 91 P **P** 18 00 12.8 -1.0
BNI IAMs_20 IAMs_20 18 10 07.3
comp=Z,9µm,20.0s
BNI Bardonecchia 28.29 91 P **P** 18 00 12.8 -1.0
BNI pmax pmax
comp=Z,12nm,1.1s
BNI MLR MLR
comp=Z,10µm,20.0s
WSPT Westport, CT 28.30 259 IAMs_20 IAMs_20 18 10 51.2
comp=Z,5µm,19.0s
NOR Nord 28.43 6 *i* P **P** 18 00 13.0 -1.5
J57A Williamstown 28.49 265 P **P** 18 00 13.8 -1.7
CART Cartagena 28.57 111 IAMs_20 IAMs_20 18 09 54.2
comp=Z,5µm,18.0s
GRA1 Grafenberg Arr 28.66 79 P **P** 18 00 14.7 -2.3
GRA1 IAmb IAmb 18 00 24.4
comp=Z,93nm,2.0s
GRA1 IAMs_20 IAMs_20 18 11 17.8
comp=Z,5µm,18.0s
GRF Grafenberg Arr 28.66 79 P **P** 18 00 14.7 -2.3
GRF pmax pmax
comp=Z,93nm,2.0s
GRF MLR MLR
comp=Z,5µm,18.0s
GRFO Grafenberg 28.66 79 P **P** 18 00 14.5 -2.5
GRFO IAMs_20 IAMs_20 18 10 59.7
comp=Z,5µm,18.0s
GRFO Grafenberg 28.66 79 P **P** 18 00 14.5 -2.5
GRFO pmax pmax
comp=Z,109nm,2.1s
GRFO MLR MLR
comp=Z,5µm,18.0s
PAL Palisades 28.74 259 IAMs_20 IAMs_20 18 11 03.9
comp=Z,4µm,18.0s
PAL Palisades 28.74 259 S **S** 18 05 08.6 +1.9
baz=50
PECO Prince Edward 28.77 267 P **P** 18 00 16.3 -1.7
DELO Deloro Mine 28.81 269 P **P** 18 00 14.8 -3.5
DELO IAmb IAmb 18 00 29.6
comp=Z,34nm,1.5s
TRNY Table Rock, Ra 28.83 260 P P 18 00 13.7 -4.9
TRNY IAmb IAmb 18 00 26.2
comp=Z,29nm,1.2s
CLL Collm 29.00 75 P **P** 18 00 16.4 -3.5
CLL Collm 29.00 75 *i* P **P** 18 00 18.7 -1.2
CLL *e*S **S** 18 05 14.0 +3.3
CLL pmax pmax
comp=Z,58nm,2.0s
CLL MLR MLR
comp=Z,2µm,20.6s
CLL Collm 29.00 75 *e*P **P** 18 00 16.0 -3.9
CLL *i* Pmax 18 00 18.7
comp=Z,58nm,2.0s
CLL *e*Plp 18 01 06.0
comp=N,300nm,15.5s
CLL *e*Plp 18 01 06.0
comp=E,600nm,16.6s
CLL *e*Plp 18 01 06.0
comp=Z,600nm,16.5s
CLL *e*PP **PnPn** 18 01 09.0 -2.5
CLL *e*S **S** 18 05 14.0 +3.3
comp=E,800nm,10.3s
CLL *e*SS **SnSn** 18 06 36.0 +2.6
CLL LV 18 10 00.0
comp=Z,2µm,20.6s
J56A Wolcott 29.08 266 P **P** 18 00 17.8 -2.8
TUE Stuetta 29.11 86 P **P** 18 00 20.2 -1.1
TUE IAmb IAmb 18 00 29.8
comp=Z,69nm,1.7s
TUE IAMs_20 IAMs_20 18 11 35.9
comp=Z,4µm,19.0s
NKC Novy Kostel 29.14 77 AMS AMS 18 10 50.0
comp=Z,5µm,19.0s
K57A Scipio Center 29.20 265 P **P** 18 00 19.4 -2.4
BINY Binghamton 29.21 263 P **P** 18 00 19.1 -2.8
BINY IAmb IAmb 18 00 25.8
comp=Z,96nm,2.5s
BINY IAMs_20 IAMs_20 18 10 54.2
comp=Z,6µm,20.0s
DAVOX Davos/Dischmat 29.27 85 P **P** 18 00 24.3 +1.7
comp=Z,2.4nm,0.7s,baz=319,slow=14,SNR=4.9
DAVOX LR LR 18 11 28.2
comp=Z,6µm,19.2s,baz=290,slow=35
comp=Z,2.4nm,0.7s
RETA Reutte 29.43 83 *e*P **P** 18 00 26.5 +2.5
comp=Z,16nm,1.2s
KSPA Keystone Colle 29.48 262 P **P** 18 00 21.6 -2.6
KSPA IAmb IAmb 18 00 28.3
comp=Z,34nm,1.6s
SADO Sadowa 29.58 270 P **P** 18 00 24.6 -0.5
comp=Z,6.8nm,0.7s,baz=71,slow=8.1,SNR=8.3
SADO LR LR 18 11 23.0
comp=Z,13µm,18.3s,baz=66,slow=35
comp=Z,6.8nm,0.7s
SADO Sadowa 29.58 270 P **P** 18 00 23.0 -2.1
SADO IAmb IAmb 18 00 29.1
comp=Z,34nm,1.5s
FUORN Ofenpass-Fuorn 29.58 85 P **P** 18 00 23.0 -2.4
FUORN IAmb IAmb 18 00 48.5
comp=Z,62nm,2.1s
FUORN IAMs_20 IAMs_20 18 11 08.2
comp=Z,5µm,20.0s
FETA Feichten 29.65 84 *e*P **P** 18 00 28.3 +2.4
comp=Z,9.7nm,1.4s
MOTA Moosalm 29.71 83 *e*P **P** 18 00 29.0 +2.6
comp=Z,26nm,1.7s
BRG Berggiesshubel 29.72 75 *e*P **P** 18 00 30.5 +4.2
BRG Amp 18 00 35.0
comp=Z,16nm,1.4s
BRG Berggiesshubel 29.72 75 S **S** 18 05 19.0 -3.1
BRG Amp 18 13 08.0
comp=N,1.9nm,13.5s
BRG Amp 18 13 14.0
comp=E,2.1nm,13.8s
BRG Amp 18 13 18.0
comp=Z,4.6nm,14.4s
BRG Berggiesshubel 29.72 75 *e*P **P** 18 00 30.5 +4.2
BRG pmax pmax
comp=Z,16nm,1.4s
KBS Kingsbay 29.75 17 P **P** 18 00 25.0 -1.3
KBS Kingsbay 29.75 17 P **P** 18 00 25.0 -1.3
KBS pmax pmax
comp=Z,9.0nm,1.0s
KBS MLR MLR
comp=Z,2µm,19.0s
SQTA Sankt Quirin 29.83 84 *e*P **P** 18 00 30.3 +2.8
comp=Z,13nm,1.3s
LUPA Lehigh Univers 29.85 260 P **P** 18 00 25.6 -1.9
LUPA IAmb IAmb 18 00 38.9
comp=Z,27nm,1.3s
WATA Walderalm 29.99 83 *e*P **P** 18 00 30.7 +1.8
comp=Z,10nm,1.0s
BBSR BB Station 30.01 236 P **P** 18 00 28.0 -1.0
BBSR BB Station 30.01 236 IAMs_20 IAMs_20 18 09 52.3
comp=Z,5µm,22.0s
MMNY Mt. Morris Dam 30.02 266 P **P** 18 00 27.2 -1.8
MMNY IAmb IAmb 18 00 35.9
comp=Z,88nm,2.0s
WTTA Wattenberg 30.06 83 *e*P **P** 18 00 29.2 -0.4
comp=Z,12nm,1.1s
L56A Greenwood 30.17 265 P **P** 18 00 28.3 -2.1
SPITS Spitsbergen Ar 30.22 19 P **P** 18 00 30.8 +0.4
comp=Z,5.9nm,1.0s,baz=207,slow=14,SNR=5.4
SPITS LR LR 18 10 03.1
comp=Z,1µm,20.5s,baz=208,slow=31
comp=Z,5.9nm,1.0s
SPITS Spitsbergen Ar 30.22 19 P **P** 18 00 29.1 -1.4
SPITS pmax pmax
comp=Z,16nm,1.1s
SPB2 Spitsbergen Ar 30.22 19 P **P** 18 00 29.4 -1.0
PVCC Panska Ves 30.23 76 AMS AMS 18 13 20.0
comp=Z,5µm,14.4s
MDT Midelt 30.28 122 LR LR 18 09 49.7
comp=Z,996nm,21.0s,baz=348,slow=31
KHC Kasperske Hory 30.29 79 P **P** 18 00 32.3 +0.9
KHC Kasperske Hory 30.29 79 *e*P **P** 18 00 32.3 +0.9
KHC *e*S **S** 18 05 33.7 +2.6
KHC MLR MLR
comp=Z,5µm,17.4s
KHC Kasperske Hory 30.29 79 *e*P **P** 18 00 32.3 +0.9
KHC *e*S **S** 18 05 33.7 +2.6
KHC AMS AMS 18 11 50.0
comp=Z,5µm,17.4s

M57A Sunshine Farm, 30.41 263 P **P** 18 00 31.0 -1.5
M57A IAmb IAmb 18 01 06.3
comp=Z,61nm,1.9s
WUPA West Chester U 30.42 259 P **P** 18 00 30.7 -1.9
PRU Pruhonice 30.45 77 *e*S **S** 18 05 37.5 +3.9
PRU AMS AMS 18 12 00.0
comp=Z,5µm,18.6s
N58A Sunbury 30.48 262 P **P** 18 00 31.9 -1.2
N58A IAmb IAmb 18 00 44.5
comp=Z,24nm,1.2s
GEC2 GERESS Array S 30.50 79 P **P** 18 00 31.8 -1.5
GERES GERESS Array B 30.50 79 LR LR 18 12 34.5
comp=Z,5µm,18.4s,baz=287,slow=36
RAF Rauma 30.62 53 *e*P **P** 18 00 34.3 +0.2
WVNY West Valley, N 30.63 266 P **P** 18 00 32.3 -2.1
CTI Castel Tesino 30.70 85 P **P** 18 00 33.5 -1.6
CTI Castel Tesino 30.70 85 P **P** 18 00 33.5 -1.6
CTI pmax pmax
comp=Z,9.0nm,1.0s
MVL Millersville 30.81 260 P **P** 18 00 34.7 -1.3
ABTA Abfaltersbach 30.84 84 *e*P **P** 18 00 38.4 +2.0
comp=Z,8.5nm,1.3s
CKRC Cesky Krumlov 30.86 79 *e*P **P** 18 00 36.7 +0.2
CKRC *e*S **S** 18 05 42.3 +2.3
CKRC AMS AMS 18 12 20.0
comp=Z,5µm,17.3s
PAGS Pennsylvania G 30.88 261 P **P** 18 00 34.4 -2.3
EUNU Eureka 30.91 345 P **P** 18 00 34.3 -2.3
BIOA Bad Ischl, Aus 31.02 81 *e*P **P** 18 00 39.4 +1.5
comp=Z,13nm,1.1s
CHVC Chvalec 31.05 75 *e*P **P** 18 00 40.6 +2.5
CHVC AMS AMS 18 13 30.0
comp=Z,5µm,15.0s
UPC Upice 31.07 75 *e*P **P** 18 00 39.1 +0.9
UPC *e*S **S** 18 05 43.5 +0.3
UPC MLR MLR
comp=Z,5µm,15.1s
UPC Upice 31.07 75 *e*P **P** 18 00 39.1 +0.9
UPC *e*S **S** 18 05 43.5 +0.3
UPC AMS AMS 18 13 20.0
comp=Z,5µm,15.1s
TEOL Teolo 31.08 86 P **P** 18 00 37.8 -0.6
TEOL IAmb IAmb 18 00 50.8
comp=Z,57nm,1.8s
RES Resolute Bay 31.10 334 P **P** 18 00 36.8 -1.4
comp=Z,7.7nm,0.9s,baz=118,slow=8.8,SNR=5.6
RES LR LR 18 11 46.6
comp=Z,2µm,21.6s,baz=102,slow=34
comp=Z,7.7nm,0.9s
RES Resolute Bay 31.10 334 P **P** 18 00 35.5 -2.7
RES Resolute Bay 31.10 334 P **P** 18 00 35.5 -2.7
RES pmax pmax
comp=Z,16nm,1.1s
ARCES ARCESS Array B 31.15 36 P **P** 18 00 37.9 -0.8
comp=Z,6.1nm,0.8s,baz=270,slow=9.7,SNR=17
comp=Z,6.1nm,0.8s
ARCES ARCESS Array B 31.15 36 P **P** 18 00 37.9 -0.8
ARCES IAmb IAmb 18 00 45.0
comp=Z,21nm,1.2s
ARCES ARCESS Array B 31.15 36 P **P** 18 00 37.9 -0.8
ARCES pmax pmax
comp=Z,21nm,1.3s
KBA Koelnbreinsper 31.16 82 *e*P **P** 18 00 42.0 +2.8
comp=Z,7.4nm,1.1s
OSTC Ostas 31.16 75 *e*P **P** 18 00 40.1 +1.0
OSTC AMS AMS 18 13 40.0
comp=Z,5µm,14.9s
ZCCA Zocca 31.23 89 P **P** 18 00 39.6 -0.2
M55A Ridgway 31.29 265 P **P** 18 00 40.1 -0.3
SSPA Standing Stone 31.30 263 P **P** 18 00 39.1 -1.2
SSPA Standing Stone 31.30 263 IAMs_20 IAMs_20 18 12 17.6
comp=Z,7µm,20.0s
SSPA Standing Stone 31.30 263 P **P** 18 00 41.8 +1.4
baz=50
MOA Molln 31.31 80 *e*P **P** 18 00 42.3 +1.8
comp=Z,15nm,1.6s
DPC Dobruska-Polom 31.32 75 *e*P **P** 18 00 41.1 +0.6
DPC MLR MLR
comp=Z,5µm,15.2s
DPC Dobruska-Polom 31.32 75 *e*P **P** 18 00 41.1 +0.6
DPC AMS AMS 18 13 30.0
comp=Z,5µm,15.2s
TREC Trest 31.32 77 AMS AMS 18 12 30.0
comp=Z,6µm,17.6s
R61A Willards 31.33 257 P **P** 18 00 39.3 -1.3
MYKA Terra Mystica 31.57 83 *e*P **P** 18 00 45.4 +2.7
comp=Z,23nm,1.5s
KRLC Kraliky 31.70 75 AMS AMS 18 14 00.0
comp=Z,5µm,14.1s
E46A Sault Ste Mari 31.77 277 P **P** 18 00 43.1 -1.3
SLIT Slitere, Latvi 31.79 60 *e*P **P** 18 00 44.6 +0.2
OSSC Osservatorio P 31.86 90 P **P** 18 00 44.3 -1.0
VRAC Vranov 31.95 77 P **P** 18 00 46.1 0.0
comp=Z,0.7nm,0.3s,baz=293,slow=14,SNR=5.2
VRAC LR LR 18 13 24.9
comp=Z,5µm,18.5s,baz=308,slow=36
comp=Z,0.7nm,0.3s
VRAC Vranov 31.95 77 *e*P **P** 18 00 47.0 +1.0
VRAC *e*S S 18 05 48.0 -9.0
KRUC Moravsky 31.95 77 *e*P **P** 18 00 47.3 +1.3
KRUC *e*S **S** 18 05 49.7 -7.3
FCC Fort Churchill 32.06 303 P **P** 18 00 45.5 -1.2
FCC IAmb IAmb 18 00 51.8
comp=Z,30nm,1.2s
FCC Fort Churchill 32.06 303 P **P** 18 00 45.6 -1.2
FCC pmax pmax
comp=Z,30nm,1.2s
GSR Geological Sur 32.09 260 P **P** 18 00 45.8 -1.6
P57A Homestead Farm 32.12 261 P **P** 18 00 45.6 -1.9
TRI Trieste 32.13 84 P **P** 18 00 46.5 -1.0
TRI IAmb IAmb 18 00 54.8
comp=Z,32nm,1.3s
TRI Trieste 32.13 84 P **P** 18 00 46.5 -1.0
TRI pmax pmax
comp=Z,33nm,1.3s
OBKA Obir 32.16 82 *e*P **P** 18 00 50.0 +2.0
comp=Z,11nm,1.2s
CONA Conrad Observa 32.20 79 *e*P **P** 18 00 50.1 +1.8
comp=Z,6.4nm,1.5s
MTSE Matsula 32.22 57 *e*P **P** 18 00 48.6 +0.4
I49A Point Hope 32.23 272 P **P** 18 00 47.2 -1.3
I49A IAmb IAmb 18 00 55.2
comp=Z,35nm,1.2s
MORC Moravsky Berou 32.28 75 ⇑P **P** 18 00 50.6 +1.7
MORC Moravsky Berou 32.28 75 P **P** 18 00 48.8 -0.1
MORC IAmb IAmb 18 00 56.2
comp=Z,28nm,1.6s
MORC Moravsky Berou 32.28 75 P **P** 18 00 48.8 -0.1
MORC pmax pmax
comp=Z,28nm,1.6s
MORC Moravsky Berou 32.28 75 *e*P **P** 18 00 50.1 +1.2
MORC *e*S **S** 18 05 57.0 -5.1
SOKA Soboth 32.36 82 *e*P **P** 18 00 51.4 +1.7
comp=Z,8.1nm,1.2s
M53A WI Miller and 32.44 266 P **P** 18 00 48.2 -2.2
M53A IAmb IAmb 18 00 58.4
comp=Z,23nm,1.2s
FINES FINESS Array B 32.54 52 P **P** 18 00 51.1 0.0
comp=Z,5.7nm,0.8s,baz=289,slow=5.8,SNR=28
FINES LR LR 18 12 27.8
comp=Z,4µm,21.7s,baz=276,slow=33
comp=Z,5.7nm,0.8s
FINES FINESS Array B 32.54 52 P **P** 18 00 50.3 -0.7
FINES FINESS Array B 32.54 52 P **P** 18 00 50.3 -0.7
FIA1 FINESS Array S 32.55 52 P **P** 18 00 50.5 -0.6
FIA1 IAmb IAmb 18 00 57.7
comp=Z,21nm,1.1s
RONA Rosalia, Austr 32.57 79 *e*P **P** 18 00 54.2 +2.7
comp=Z,12nm,1.1s
CBN Corbin Frederi 32.59 259 P **P** 18 00 50.0 -1.7
CBN IAMs_20 IAMs_20 18 12 42.0
comp=Z,4µm,22.0s
OKC Ostrava-Krasne 32.59 75 AMS AMS 18 14 30.0
comp=Z,4µm,14.5s
MAUC Maruska 32.63 76 *e*P **P** 18 00 54.0 +2.0
MAUC AMS AMS 18 15 00.0
comp=Z,7µm,13.7s
LATE Laterza 32.73 91 P **P** 18 00 52.3 -0.6
MURB Monte Urbino 32.77 89 P **P** 18 00 52.9 -0.4
MURB IAmb IAmb 18 01 03.4
comp=Z,38nm,1.5s
M52A Chesterland 32.78 267 P **P** 18 00 52.2 -1.2
M52A IAmb IAmb 18 00 55.7
comp=Z,24nm,0.9s
ZST Bratislava 32.79 78 *e*P **P** 18 00 55.5 +2.2

ZST pmax pmax
comp=Z,313nm,2.5s
ZST Bratislava 32.79 78 *e*P **P** 18 00 55.5 +2.2
MODS Modra-Piesok 32.80 78 *e*P **P** 18 00 55.5 +2.0
MODS Modra-Piesok 32.80 78 *e*P **P** 18 00 55.5 +2.0
SMOL Smolenice 32.82 77 *e*P **P** 18 00 56.3 +2.7
SMOL Smolenice 32.82 77 *e*P **P** 18 00 56.3 +2.7
N53A Lisbon 32.93 266 P **P** 18 00 54.7 +0.1
N53A IAmb IAmb 18 00 59.2
comp=Z,31nm,1.2s
R58B Mineral 33.05 259 P **P** 18 00 54.3 -1.4
O54A Avella 33.05 264 P **P** 18 00 53.8 -2.0
O54A IAmb IAmb 18 01 00.1
comp=Z,29nm,1.3s
MCWV Mont Chateau 33.08 263 P **P** 18 00 53.7 -2.3
MCWV IAmb IAmb 18 01 00.4
comp=Z,41nm,1.4s
MCWV Mont Chateau 33.08 263 P **P** 18 00 56.3 +0.3
baz=49
Q56A Snyder Ridge, 33.09 262 P **P** 18 00 53.1 -3.0
Q56A IAmb IAmb 18 01 06.3
comp=Z,36nm,1.6s
VSVD Vaisvydziai 33.20 62 *e*P **P** 18 00 57.4 +0.6
JSRW J. Sargeant Re 33.23 258 P **P** 18 00 54.2 -3.1
E43A Lone Tree Farm 33.34 279 P **P** 18 00 56.6 -1.5
KOLL Kolacno 33.35 77 *e*P **P** 18 00 59.1 +0.9
OJC Ojcow 33.36 73 P **P** 18 00 56.5 -1.8
OJC IAmb IAmb 18 01 05.6
comp=Z,26nm,1.4s
OJC Ojcow 33.36 73 P **P** 18 00 56.5 -1.8
OJC pmax pmax
comp=Z,26nm,1.4s
NRCA Norcia 33.37 89 P **P** 18 00 57.7 -0.9
PABE Paberze 33.40 63 P **P** 18 00 57.0 -1.6
PABE Paberze 33.40 63 *e*P **P** 18 00 59.8 +1.2
O53A New Philadelph 33.50 265 P **P** 18 00 57.8 -1.8
O53A IAmb IAmb 18 01 04.9
comp=Z,28nm,1.1s
O53A New Philadelph 33.50 265 P **P** 18 01 00.1 +0.5
baz=50
O53A S **S** 18 06 24.7 +3.4
baz=50
T59A Double "B" Far 33.54 257 P **P** 18 00 58.3 -1.6
MPLH Magyarpolny 33.56 79 P **P** 18 01 02.5 +2.4
SUW Suwalki 33.57 65 P **P** 18 00 59.6 -0.4
SUW Suwalki 33.57 65 P **P** 18 00 59.6 -0.4
SUW pmax pmax
comp=Z,47nm,1.2s
SUW MLR MLR
comp=Z,2µm,22.0s
SUW Suwalki 33.57 65 *e*P **P** 18 01 01.1 +1.1
VYHS Vyhne 33.64 77 *e*P **P** 18 01 03.0 +2.2
VYHS Vyhne 33.64 77 *e*P **P** 18 01 03.0 +2.2
LANS Liptovska Anna 33.68 75 *e*P **P** 18 01 03.8 +2.6
LANS Liptovska Anna 33.68 75 *e*P **P** 18 01 03.8 +2.6
SRO Srobarova 33.68 78 *e*P **P** 18 01 03.1 +2.0
SRO pmax pmax
comp=Z,126nm,2.5s
SRO Srobarova 33.68 78 *e*P **P** 18 01 03.1 +2.0
VSU Vasula 33.75 57 *i* P **P** 18 01 01.2 -0.4
VSU pmax pmax
comp=Z,31nm,0.9s
VSU Vasula 33.75 57 *e*P **P** 18 01 01.4 -0.2
N51A Ashland 33.77 267 P **P** 18 00 59.9 -2.1
N51A IAmb IAmb 18 01 06.3
comp=Z,16nm,0.8s
S57A Dark Hollow, R 33.81 260 P **P** 18 01 00.1 -2.3
J47A Sunmer 33.81 272 P **P** 18 01 00.4 -2.0
J47A IAmb IAmb 18 01 17.3
comp=Z,46nm,1.4s
D41A Chassel 33.89 281 P **P** 18 01 01.1 -1.9
O52A Adamsville 33.96 265 P **P** 18 01 02.0 -1.6
P53A Whipple 34.10 264 P **P** 18 01 02.9 -1.9
Q54A Coxs Mills 34.10 263 P **P** 18 01 03.5 -1.4
Q54A IAmb IAmb 18 01 09.5
comp=Z,22nm,1.0s
U59A Littleton 34.11 257 P **P** 18 01 02.8 -2.1
U59A IAmb IAmb 18 01 07.4
comp=Z,20nm,1.1s
R55A Marlinton 34.14 261 P **P** 18 01 02.6 -2.7
R55A IAmb IAmb 18 01 08.3
comp=Z,24nm,1.1s
APA Apatity 34.25 39 ⇑*i*P **P** 18 01 05.3 -0.6
APA *i* 18 03 50.0
APA *i* S **S** 18 06 30.0 -2.3
APA pmax pmax
comp=Z,14nm,1.0s
L48A N Adams 34.36 270 P **P** 18 01 05.9 -1.2
P52A Corning 34.44 265 P **P** 18 01 05.9 -1.9
P52A IAmb IAmb 18 01 10.7
comp=Z,33nm,1.1s
P52A Corning 34.44 265 P **P** 18 01 08.3 +0.5
baz=50,SNR=8.5
P52A S **S** 18 06 38.0 +2.2
baz=50
KOVH Kovagototos 34.47 81 P **P** 18 01 07.2 -0.8
T57A Hurt 34.51 259 P **P** 18 01 07.0 -1.4
PSZ Piszkesteto 34.54 77 P **P** 18 01 09.0 +0.3
PSZ IAmb IAmb 18 01 20.8
comp=Z,72nm,2.1s
PSZ IAMs_20 IAMs_20 18 15 05.2
comp=Z,5µm,19.0s
PSZ Piszkesteto 34.54 77 P **P** 18 01 09.0 +0.3
PSZ pmax pmax
comp=Z,72nm,2.1s
PSZ MLR MLR
comp=Z,5µm,19.0s
PSZ Piszkesteto 34.54 77 P **P** 18 01 09.6 +0.8
ACSO Alum Creek Sta 34.56 267 P **P** 18 01 06.0 -2.9
ACSO IAmb IAmb 18 01 13.3
comp=Z,47nm,1.3s
ACSO IAMs_20 IAMs_20 18 13 58.8
comp=Z,7µm,19.0s
ACSO Alum Creek Sta 34.56 267 P **P** 18 01 09.5 +0.7
baz=50
LVZ Lovozero 34.65 39 *i* P **P** 18 01 09.4 0.0
LVZ pmax pmax
comp=Z,24nm,1.0s
MORH Mrgy, Hungar 34.72 80 ⇑P **P** 18 01 11.2 +1.1
MORH Mrgy, Hungar 34.72 80 P **P** 18 01 10.8 +0.7
COWI Conover 34.74 280 P **P** 18 01 09.2 -1.2
COWI IAmb IAmb 18 01 17.0
comp=Z,29nm,1.1s
VALR Valaam 34.78 51 *i* P **P** 18 01 12.2 +1.7
VALR pmax pmax
comp=Z,17nm,1.0s
N49A Columbus Grove 34.84 269 P **P** 18 01 08.5 -2.7
CRVS Cervenica-Dubn 34.94 74 *e*P **P** 18 01 14.1 +2.0
CRVS pmax pmax
comp=Z,75nm,1.9s
CRVS Cervenica-Dubn 34.94 74 *e*P **P** 18 01 14.1 +2.0
Q52A Bidwell 34.96 264 P **P** 18 01 10.6 -1.7
Q52A Bidwell 34.96 264 P **P** 18 01 12.2 0.0
baz=49,SNR=6.0
Q52A P **P** 18 01 12.2 0.0
baz=49,SNR=6.0
BLA Blacksburg 35.04 260 P **P** 18 01 11.0 -2.1
BLA IAMs_20 IAMs_20 18 14 33.7
comp=Z,5µm,20.0s
BLA Blacksburg 35.04 260 P **P** 18 01 11.0 -2.1
BLA pmax pmax
comp=Z,75nm,1.6s
BLA MLR MLR
comp=Z,5µm,20.0s
BLA Blacksburg 35.04 260 P **P** 18 01 14.6 +1.6
baz=47
BLA S **S** 18 06 46.9 +1.7
baz=47
NACGM Naroch 35.12 62 ⇑*e*P P 18 01 19.9 +6.4
baz=295
EYMN Ely 35.13 284 P **P** 18 01 11.6 -2.1
EYMN Ely 35.13 284 P **P** 18 01 13.3 -0.4
baz=59
EYMN S **S** 18 06 39.1 -7.1
baz=59
S54A Dingess, Beckl 35.16 262 P **P** 18 01 11.8 -2.3
S54A IAmb IAmb 18 01 22.5
comp=Z,47nm,1.4s
V58A Windy Hill, Pi 35.26 257 P **P** 18 01 13.3 -1.6
V58A IAmb IAmb 18 01 21.9
comp=Z,30nm,1.2s
O49A Covington 35.39 268 P **P** 18 01 14.5 -1.5
Q51A Peebles 35.55 265 P **P** 18 01 16.3 -1.1
Q51A IAmb IAmb 18 01 20.3

comp=Z,25nm,1.1s
Q51A Peebles 35.55 265 P **P** **18 01 17.6 +0.2**
baz=49
Q51A P **P** **18 01 17.6 +0.2**
baz=49
UZH Uzhgorod 35.55 74 *e*P **P** **18 01 18.0 +0.7**
UZH *i* 18 01 22.7
UZH *i* 18 01 26.4
UZH *e* 18 02 45.5
UZH *e*S **S** **18 06 50.0 -2.7**
UZH *e*SSS SSS 18 09 35.0
UZH MLR MLR
comp=N,400nm,16.0s
UZH MLR MLR
comp=E,700nm,16.0s
UZH MLR MLR
comp=Z,500nm,16.0s
SGRT San Giovanni R 35.58 89 P **P** **18 01 15.3 -2.4**
U56A King 35.61 259 P **P** **18 01 16.1 -1.8**
U56A IAmb IAmb 18 01 22.6
comp=Z,48nm,1.4s
N47A Urbana 35.76 270 P **P** **18 01 16.2 -3.0**
N47A IAmb IAmb 18 01 23.3
comp=Z,22nm,1.2s
KEST Kesra 35.76 102 LR LR 18 15 17.1
comp=Z,2μm,18.9s,baz=268,slow=35
G40A Rib Lake 35.82 279 P **P** **18 01 17.7 -2.0**
G40A IAmb IAmb 18 01 31.0
comp=Z,30nm,1.1s
G40A Rib Lake 35.82 279 P **P** **18 01 19.6 -0.1**
baz=56
O48B Farmland 35.83 268 P **P** **18 01 21.2 +1.4**
baz=50
O48B Farmland 35.83 268 P **P** **18 01 20.6 +0.8**
baz=50
O48B S **S** **18 07 01.1 +3.9**
baz=50
I42A Draeger Farm, 35.85 276 P **P** **18 01 17.5 -2.4**
I42A IAmb IAmb 18 01 24.4
comp=Z,44nm,1.6s
MNK Minsk 35.87 63 *i* P **P** **18 01 23.3 +3.4**
MNK *i* 18 02 44.0
MNK *i* S **S** **18 07 03.9 +6.6**
MNK pmax pmax
comp=E,1.0nm,0.6s
MNK pmax pmax
comp=Z,11nm,0.9s
MNK pmax pmax
comp=N,14nm,0.6s
MNK MLR MLR
comp=N,2μm,20.0s
MNK MLR MLR
comp=E,206nm,14.0s
MNK Minsk 35.87 63 *i* P **P** **18 01 23.3 +3.4**
comp=E,1.0nm,0.6s,baz=116
MNK *i* P **P** **18 01 23.3 +3.4**
comp=N,14nm,0.6s
MNK *i* P **P** **18 01 23.3 +3.4**
comp=Z,11nm,0.9s
MNK *i* PP **PP** **18 02 44.1 +2.9**
MNK *i* S **S** **18 07 04.0 +6.6**
MNK *i* SS **SS** **18 09 28.1 -5.1**
MNK *i* LQ LQ 18 13 25.6
MNK *i* LR LR 18 16 10.0
MNK *i* LRM MLR 18 17 32.0
comp=E,206nm,14.3s
MNK *i* LRM MLR 18 17 32.0
comp=N,2μm,19.6s
MNK *i* LRM MLR 18 17 32.0
comp=Z,13μm,29.6s
LVV L'vov 35.94 72 *e*P **P** **18 01 21.0 +0.4**
LVV *e* 18 03 54.1
LVV *e*S **S** **18 06 59.3 +0.7**
LVV MLR MLR
comp=Z,4μm,16.0s
FRGS Fruska Gora 35.98 81 ⇓P **P** **18 01 22.6 +1.6**
P49A Miami Univ. Ec 36.03 267 P **P** **18 01 19.3 -2.2**
P49A Miami Univ. Ec 36.03 267 P **P** **18 01 21.9 +0.4**
baz=50
P49A S **S** **18 07 03.1 +2.9**
baz=50
B35A Bob, Littlefor 36.19 286 P **P** **18 01 21.8 -1.0**
B35A IAmb IAmb 18 01 28.6
comp=Z,31nm,1.2s
W57A Gilead 36.22 257 P **P** **18 01 22.8 -0.3**
W57A IAmb IAmb 18 01 30.3
comp=Z,41nm,1.3s
W57A Gilead 36.22 257 P **P** **18 01 23.7 +0.6**
baz=45,SNR=6.3
W57A P **P** **18 01 23.7 +0.6**
baz=45,SNR=6.3
X58A Rowland 36.27 256 **P** **18 01 21.0 -2.5**
Y59A Loris 36.41 255 P **P** **18 01 23.1 -1.6**
V55A Taylorsville 36.44 259 P **P** **18 01 23.6 -1.5**
V55A IAmb IAmb 18 01 33.3
comp=Z,39nm,1.6s
SIRR Siria 36.44 78 ⇑P **P** **18 01 26.5 +1.5**
ULM Lac du Bonnet 36.45 290 P **P** **18 01 23.6 -1.3**
comp=Z,19nm,1.0s,baz=64,slow=8.5,SNR=10
ULM LR LR 18 15 08.4
comp=Z,6μm,18.1s,baz=68,slow=34
comp=Z,19nm,1.0s
ULM Lac du Bonnet 36.45 290 P **P** **18 01 22.6 -2.3**
ULM IAmb IAmb 18 01 28.9
comp=Z,29nm,1.1s
ULM Lac du Bonnet 36.45 290 P **P** **18 01 22.6 -2.3**
ULM pmax pmax
comp=Z,29nm,1.1s
P48A Milroy 36.50 268 P **P** **18 01 23.2 -2.3**
P48A IAmb IAmb 18 01 27.8
comp=Z,21nm,1.1s
P48A Milroy 36.50 268 P **P** **18 01 25.2 -0.3**
baz=50,SNR=5.1
P48A P **P** **18 01 25.2 -0.3**
baz=50,SNR=5.1
S51A Beattyville 36.61 264 P **P** **18 01 24.2 -2.3**
S51A IAmb IAmb 18 01 31.0
comp=Z,35nm,1.4s
S51A Beattyville 36.61 264 P **P** **18 01 26.4 -0.1**
baz=48
S51A P **P** **18 01 26.4 -0.1**
baz=48
R50A Paris 36.62 265 P **P** **18 01 23.7 -2.9**
R50A IAmb IAmb 18 01 31.1
comp=Z,42nm,1.4s
R50A Paris 36.62 265 P **P** **18 01 27.1 +0.6**
baz=48,SNR=5.9
R50A P **P** **18 01 27.1 +0.6**
baz=48,SNR=5.9
DIVS Divibare 36.69 82 P **P** **18 01 26.3 -1.0**
DIVS IAMs_20 IAMs_20 18 17 39.3
comp=Z,4μm,18.0s
CUC Castrocucco 36.72 91 P **P** **18 01 26.2 -1.2**
CLTB Caltabellotta 36.76 96 P **P** **18 01 25.7 -2.2**
CLTB IAmb IAmb 18 01 41.7
comp=Z,48nm,1.2s
DRGR 36.77 77 ⇑P **P** **18 01 29.7 +1.9**
DRGR 36.77 77 P **P** **18 01 29.7 +1.9**
BZS Buzias 36.78 79 ⇑P **P** **18 01 28.4 +0.6**
M44A Midewin, Midew 36.84 272 P **P** **18 01 26.7 -1.6**
BIRD Birdtown, Kers 36.85 257 P **P** **18 01 25.4 -3.1**
BIRD IAmb IAmb 18 01 35.7
comp=Z,57nm,1.5s
I40A Norwalk 36.85 277 P **P** **18 01 25.7 -2.8**
I40A IAmb IAmb 18 01 33.1
comp=Z,26nm,1.2s
SFIN Lafayette 36.90 270 P **P** **18 01 26.6 -2.4**
SFIN Lafayette 36.90 270 P **P** **18 01 29.4 +0.4**
baz=51
SFIN S **S** **18 07 17.5 +4.0**
baz=51
Y58A Scranton 36.92 256 P **P** **18 01 26.7 -2.4**
KMSC Kings Mountain 37.01 259 P **P** **18 01 27.3 -2.6**
R49A Shelbyville 37.11 266 P **P** **18 01 27.8 -3.0**
R49A IAmb IAmb 18 01 37.9
comp=Z,39nm,1.4s
PDG Podgorica 37.25 85 P **P** **18 01 29.1 -2.7**
PDG IAmb IAmb 18 01 44.6
comp=Z,45nm,1.7s
PDG IAMs_20 IAMs_20 18 17 21.1
comp=Z,4μm,18.0s
MDVR Moldovita 37.31 80 ⇑P **P** **18 01 33.4 +1.0**
TZTN Tazewell 37.33 262 P **P** **18 01 30.8 -1.8**
TZTN IAmb IAmb 18 01 44.6
comp=Z,30nm,1.1s
TZTN IAMs_20 IAMs_20 18 16 01.2
comp=Z,4μm,20.0s
TZTN Tazewell 37.33 262 P **P** **18 01 33.0 +0.4**
baz=47
TZTN S **S** **18 07 22.7 +2.6**
baz=47
BLO Bloomington 37.33 268 P **P** **18 01 30.3 -2.3**
BLO IAmb IAmb 18 01 37.0
comp=Z,49nm,1.4s
BLO Bloomington 37.33 268 P **P** **18 01 30.3 -2.3**
BLO pmax pmax
comp=Z,49nm,1.5s
SPMN Marine on St. 37.37 281 P **P** **18 01 33.1 +0.3**
baz=55
F36A Milaca 37.42 282 P **P** **18 01 31.2 -2.1**
F36A IAmb IAmb 18 01 37.4
comp=Z,27nm,1.2s
F36A Milaca 37.42 282 P **P** **18 01 33.1 -0.2**
baz=56
AGMN Agassiz Nation 37.44 287 P **P** **18 01 31.3 -2.1**
AGMN IAmb IAmb 18 01 41.1
comp=Z,106nm,2.4s
AGMN IAMs_20 IAMs_20 18 15 21.3
comp=Z,5μm,20.0s
AGMN Agassiz Nation 37.44 287 P **P** **18 01 33.3 -0.1**
baz=58
AGMN S **S** **18 07 25.2 +3.7**
baz=58
P46A Rosedale 37.45 269 P **P** **18 01 31.4 -2.2**
P46A IAmb IAmb 18 01 41.5
comp=Z,31nm,1.2s
V53A Saluda 37.50 261 P **P** **18 01 32.2 -1.9**
V53A IAmb IAmb 18 01 42.2
comp=Z,36nm,1.4s
VAE Valguarnera 37.53 95 LR LR 18 15 38.8
comp=Z,1μm,19.9s,baz=336,slow=34
JSC Jenkinsville 37.57 258 P **P** **18 01 31.9 -2.8**
JSC IAmb IAmb 18 01 43.6
comp=Z,43nm,1.6s
JSC Jenkinsville 37.57 258 P **P** **18 01 31.9 -2.8**
JSC pmax pmax
comp=Z,43nm,1.6s
BURAR Bucovina Array 37.76 74 ⇑P **P** **18 01 37.6 +1.4**
BURAR Bucovina Array 37.76 74 P **P** **18 01 35.1 -1.1**
BURAR Bucovina Array 37.76 74 P **P** **18 01 37.6 +1.4**
T50A Nancy 37.76 264 P **P** **18 01 33.1 -3.2**
NHSC New Hope 37.80 255 IAMs_20 IAMs_20 18 17 01.9
comp=Z,5μm,19.0s
TIP Timpagrande 37.80 91 IAMs_20 IAMs_20 18 16 36.9
comp=Z,4μm,21.0s
V52A Sevierville 37.84 262 P **P** **18 01 35.3 -1.6**
V52A IAmb IAmb 18 01 41.3
comp=Z,59nm,1.8s
TKL Tuckaleechee C 38.07 262 P **P** **18 01 37.3 -1.6**
comp=Z,2.2nm,0.8s,baz=46,slow=5.3,SNR=4.0
TKL LR LR 18 16 20.1
comp=Z,5μm,21.3s,baz=58,slow=35
comp=Z,2.2nm,0.8s
TKL Tuckaleechee C 38.07 262 P **P** **18 01 37.2 -1.6**
TKL IAmb IAmb 18 01 46.9
comp=Z,42nm,1.7s
TKL Tuckaleechee C 38.07 262 P **P** **18 01 37.2 -1.6**
TKL pmax pmax
comp=Z,42nm,1.7s
HDIL Hopedale 38.09 272 P **P** **18 01 37.9 -1.1**
HDIL Hopedale 38.09 272 P **P** **18 01 40.8 +1.8**
baz=51
HDIL S **S** **18 07 37.9 +6.3**
baz=51
LOT Lotru 38.12 78 ⇑P **P** **18 01 40.2 +0.8**
HODGE Hodges 38.19 258 P **P** **18 01 39.1 -0.8**
SCTE Santa Cesarea 38.24 89 P **P** **18 01 39.2 -1.0**
SCTE IAmb IAmb 18 02 09.3
comp=Z,58nm,1.1s
TIR Tirane 38.27 86 IAMs_20 IAMs_20 18 18 58.1
comp=Z,5μm,18.0s
V51A Loudon 38.31 262 P **P** **18 01 39.4 -1.5**
V51A IAmb IAmb 18 01 48.2
comp=Z,52nm,1.8s
AKASG Malin Array Be 38.38 68 P **P** **18 01 41.4 +0.1**
comp=Z,5.4nm,0.9s,baz=307,slow=8.2,SNR=23
AKASG PcP **PcP** **18 03 53.4 -1.2**
comp=Z,2.4nm,0.8s,baz=297,slow=3.6,SNR=6.1
AKASG LR LR 18 17 12.3
comp=Z,2μm,19.2s,baz=287,slow=36
comp=Z,5.4nm,0.9s
AKBB Malin Array Si 38.38 68 *ce*P **P** **18 01 40.8 -0.5**
W52A Murphy 38.55 261 P **P** **18 01 40.7 -2.3**
W52A IAmb IAmb 18 01 50.1
comp=Z,41nm,1.5s
W52A Murphy 38.55 261 P **P** **18 01 44.5 +1.6**
baz=45
BIZ Bicaz 38.63 74 ⇑P **P** **18 01 44.7 +1.2**
CPCT Cooper Cave 38.65 262 P **P** **18 01 40.7 -3.1**
CPCT IAmb IAmb 18 01 52.3
comp=Z,42nm,1.5s
U49A Red Boiling Sp 38.66 264 P **P** **18 01 41.8 -2.0**
U49A IAmb IAmb 18 01 51.1
comp=Z,37nm,1.4s
U49A Red Boiling Sp 38.66 264 P **P** **18 01 43.9 +0.1**
baz=47,SNR=9.1
P43A Skaggs, Pawnee 38.81 271 P **P** **18 01 42.7 -2.3**
P43A IAmb IAmb 18 01 49.3
comp=Z,35nm,1.3s
K38A Parkersburg 38.86 277 P **P** **18 01 43.8 -1.6**
K38A IAmb IAmb 18 01 49.7
comp=Z,85nm,1.4s
K38A Parkersburg 38.86 277 P **P** **18 01 45.6 +0.2**
baz=53
VOIR 38.87 77 ⇑P **P** **18 01 46.5 +0.9**
VOIR 38.87 77 P **P** **18 01 46.4 +0.9**
KLMR Klimovskoe 38.87 49 *e*P **P** **18 01 44.9 -0.4**
KLMR *e* 18 07 43.8
KLMR *e*SS SS 18 10 32.3 -1.4
KLMR pmax pmax
comp=Z,80nm,1.4s
KLMR Klimovskoe 38.87 49 *e*P **P** **18 01 44.9 -0.4**
KLMR AMP 18 01 56.2
comp=Z,80nm,1.4s
KLMR *e*ScP **ScP** **18 07 43.8 -0.1**
KLMR *e*SS **SnSn** **18 10 32.3 -0.1**
KLMR *e*SS **SnSn** **18 10 32.3 -0.1**
KLMR LQ LQ 18 13 40.1
KLMR LQ LQ 18 13 40.1
KLMR LR LR 18 14 14.7
KLMR AMP 18 15 59.9
comp=Z,2μm,17.4s
N41A Harden Midland 38.92 274 P **P** **18 01 43.9 -2.1**
N41A IAmb IAmb 18 01 47.6
comp=Z,115nm,1.9s
Q44A Meyer Farm, Va 38.99 270 P **P** **18 01 46.6 +0.1**
baz=49,SNR=6.7
F33A 5 Mile Ranch, 39.03 284 P **P** **18 01 45.0 -1.9**
SORM Soroca 39.25 72 ⇓P **P** **18 01 48.5 -0.1**
CLTN Cedars of Leba 39.27 264 P **P** **18 01 46.9 -2.0**
W50A Signal Mountai 39.29 262 P **P** **18 01 46.8 -2.3**
MLR Muntele Rosu 39.36 76 ⇑P **P** **18 01 50.9 +1.2**
MLR Muntele Rosu 39.36 76 P **P** **18 01 51.2 +1.5**
comp=Z,5.8nm,1.0s,baz=269,slow=1.9,SNR=5.3
MLR PcP **PcP** **18 03 57.6 -0.3**
comp=Z,3.7nm,0.8s,baz=244,slow=7.0,SNR=4.2
MLR LR LR 18 18 50.2
comp=Z,2μm,19.2s,baz=301,slow=37
comp=Z,5.8nm,1.0s
MLR Muntele Rosu 39.36 76 IAMs_20 IAMs_20 18 17 04.5
comp=Z,3μm,22.0s
GOGA Godfrey 39.47 259 P **P** **18 01 49.0 -1.7**
GOGA IAMs_20 IAMs_20 18 18 30.2
comp=Z,4μm,22.0s
GOGA Godfrey 39.47 259 P **P** **18 01 49.0 -1.7**
GOGA pmax pmax
comp=Z,17nm,1.3s
GOGA MLR MLR
comp=Z,4μm,22.0s
GOGA Godfrey 39.47 259 P **P** **18 01 51.0 +0.4**
baz=44
GOGA S **S** **18 07 54.0 +1.5**
baz=44
Y52A Lillburn 39.50 260 P **P** **18 01 48.8 -2.0**
PLOR Plostina 39.55 76 ⇓P **P** **18 01 52.3 +1.0**
SCIA State Center 39.57 277 P **P** **18 01 51.7 +0.3**
baz=52
VRI Vrincioaia 39.59 75 ⇓P **P** **18 01 53.4 +1.9**
SWET Sewanee 39.64 263 P **P** **18 01 49.7 -2.4**
MDND Maddock 39.79 288 P **P** **18 01 53.9 +0.7**
baz=56
MDND S **S** **18 08 01.3 +4.2**
baz=56
V48A Smith Brothers 39.80 264 P **P** **18 01 52.2 -1.2**
V48A Smith Brothers 39.80 264 P **P** **18 01 53.5 +0.1**
baz=46,SNR=7.1
154A Montrose 39.84 257 P **P** **18 01 52.5 -1.2**
154A IAmb IAmb 18 01 58.1
comp=Z,79nm,1.8s
SIUC Southern Illin 39.89 269 P **P** **18 01 52.8 -1.2**
SIUC IAmb IAmb 18 01 57.9
comp=Z,46nm,0.8s
S44A Carbondale 39.92 269 P **P** **18 01 53.1 -1.2**
S44A IAmb IAmb 18 01 58.0
comp=Z,47nm,0.8s
S44A Carbondale 39.92 269 P **P** **18 01 54.1 -0.2**
baz=48,SNR=20
FPAL Fort Paine 39.92 262 P **P** **18 01 52.7 -1.7**
A36M Sachs Harbour 40.03 331 IAMs_20 IAMs_20 18 17 10.0
comp=Z,4μm,20.0s
A36M Sachs Harbour 40.03 331 S **S** **18 08 06.4 +6.5**
baz=67
OBN Obninsk 40.06 58 P **P** **18 01 55.5 +0.3**
comp=Z,3.5nm,0.5s,baz=280,slow=11,SNR=1.4
OBN LR LR 18 17 56.6
comp=Z,800nm,18.4s,baz=290,slow=35
comp=Z,3.5nm,0.5s
OBN Obninsk 40.06 58 IAMs_20 IAMs_20 18 17 44.2
comp=Z,3μm,19.0s
OBN Obninsk 40.06 58 *ce*P **P** **18 01 55.6 +0.4**
OBN *i* 18 03 29.7
OBN *i*S **S** **18 08 06.6 +5.9**
OBN *i*SS **SS** **18 10 48.6 -8.9**
OBN pmax pmax
comp=Z,94nm,2.5s
OBN MLR MLR
comp=Z,3μm,18.0s
WVT Waverly 40.13 266 P **P** **18 01 55.1 -1.0**
WVT Waverly 40.13 266 P **P** **18 01 55.1 -1.0**
WVT pmax pmax
comp=Z,40nm,1.6s
WVT MLR MLR
comp=Z,8μm,19.0s
WVT Waverly 40.13 266 P **P** **18 01 56.3 +0.2**
baz=47
WVT S **S** **18 08 06.1 +3.8**
baz=47
KIS Kishinev 40.14 73 *e*P **P** **18 01 55.0 -1.0**
comp=Z,140nm,6.5s
KIS Kishinev 40.14 73 *e*PP PP 18 03 30.0 +1.9
comp=Z,240nm,10.8s
KIS *e*S **S** **18 08 02.0 -0.2**
KIS *e*L L 18 15 27.0
KIS LRM MLR 18 20 19.0
comp=Z,2μm,15.0s
KIS Kishinev 40.14 73 *e*P **P** **18 01 55.0 -1.0**
KIS *e* 18 03 30.0
KIS *e* 18 08 09.0
KIS pmax pmax
comp=Z,140nm,6.5s
KIS pmax pmax
comp=Z,240nm,10.8s
KIS MLR MLR
comp=N,1μm,15.0s
KIS MLR MLR
comp=Z,2μm,15.0s
KIS MLR MLR
comp=E,1μm,15.5s
YKA Yellowknife Ar 40.14 315 P **P** **18 01 54.7 -1.1**
comp=E,2.3nm,0.9s,baz=62,slow=9.0,SNR=9.7
YKA PcP **PcP** **18 03 59.0 -0.9**
comp=E,3.2nm,0.8s,baz=64,slow=3.6,SNR=9.4
YKA LR LR 18 17 02.5
comp=E,3μm,18.7s,baz=62,slow=34
comp=E,2.3nm,0.9s
YKA Yellowknife Ar 40.14 315 P **P** **18 01 53.3 -2.5**
MILM Milestii Mici 40.18 73 *e*P **P** **18 01 55.0 -1.4**
comp=E,290nm,5.9s
MILM Milestii Mici 40.18 73 *i* PP PP 18 03 30.0 +1.4
comp=E,620nm,11.5s
MILM *e*S **S** **18 07 57.0 -5.8**
comp=E,750nm,10.5s
MILM *e*L L 18 13 50.0
MILM LRM MLR 18 19 50.0
comp=E,2μm,16.0s
MILM Milestii Mici 40.18 73 *e*P **P** **18 01 55.0 -1.4**
MILM *i* 18 03 30.0
MILM *e*S **S** **18 07 57.0 -5.8**
MILM *i* 18 08 04.0
MILM pmax pmax
comp=Z,290nm,5.9s
MILM pmax pmax
comp=Z,620nm,11.5s
MILM MLR MLR
comp=Z,4μm,15.0s
MOS Moscow 40.28 57 *e*P **P** **18 01 56.2 -0.9**
MOS *e* 18 03 29.0
MOS *e*S **S** **18 08 03.8 -0.3**
MOS MLR MLR
comp=Z,1μm,15.0s
P40A Paris 40.38 273 P **P** **18 01 57.2 -0.8**
FVM French Village 40.42 270 P **P** **18 01 56.5 -2.0**
FVM IAmb IAmb 18 02 02.9
comp=Z,50nm,1.4s
FVM French Village 40.42 270 P **P** **18 01 56.5 -2.0**
FVM pmax pmax
comp=Z,50nm,1.4s
ECSD EROS Data Cent 40.45 281 P **P** **18 01 56.2 -2.5**
ECSD IAmb IAmb 18 02 06.1
comp=Z,36nm,1.2s
ECSD EROS Data Cent 40.45 281 IAMs_20 IAMs_20 18 17 31.1
comp=Z,4μm,19.0s
ECSD EROS Data Cent 40.45 281 P **P** **18 01 59.2 +0.5**
baz=53,SNR=18
ECSD S **S** **18 08 11.8 +4.8**
baz=53
LIT Litokhoron 40.60 86 P **P** **18 01 58.8 -1.2**
LIT Litokhoron 40.60 86 P **P** **18 01 58.8 -1.2**
LIT pmax pmax
comp=Z,16nm,1.1s
152A Waverly Hall 40.74 259 P **P** **18 01 59.5 -1.7**
152A Waverly Hall 40.74 259 P **P** **18 02 01.4 +0.3**
baz=43
C36M Paulatuk 40.74 327 IAMs_20 IAMs_20 18 17 26.9
comp=Z,3μm,20.0s
C36M Paulatuk 40.74 327 S **S** **18 08 14.8 +4.1**
baz=65
CFR Carcaliu 40.80 75 ⇑P **P** **18 02 01.7 +0.2**
X48A Hartselle 40.83 263 P **P** **18 01 59.9 -2.0**
CCM Cathedral Cave 40.86 271 P **P** **18 01 59.0 -3.1**
CCM IAmb IAmb 18 02 06.2
comp=Z,29nm,1.1s
CCM Cathedral Cave 40.86 271 IAMs_20 IAMs_20 18 17 32.4
comp=Z,4μm,20.0s
CCM Cathedral Cave 40.86 271 P **P** **18 01 59.0 -3.1**
CCM pmax pmax
comp=Z,29nm,1.2s
CCM MLR MLR
comp=Z,4μm,20.0s
CCM Cathedral Cave 40.86 271 P **P** **18 02 02.4 +0.3**
baz=48
CCM S **S** **18 08 17.1 +4.0**
baz=48
Y49A Blount Mountai 40.88 262 P **P** **18 02 00.2 -2.1**
PLAL Pickwick Lake 41.07 265 P **P** **18 02 02.4 -1.4**
E28A Huff 41.12 287 P **P** **18 02 03.4 -0.9**
PRGR Permogore 41.19 46 *e*P **P** **18 02 05.8 +1.3**
P38A Dawn 41.19 274 P **P** **18 02 03.8 -1.0**
P38A IAmb IAmb 18 02 11.7
comp=Z,54nm,1.6s
R40A Maddies Statio 41.31 272 P **P** **18 02 04.1 -1.7**
R40A Maddies Statio 41.31 272 P **P** **18 02 05.0 -0.8**
baz=49
SUSD Miller 41.38 284 P **P** **18 02 06.4 0.0**
baz=53
SUSD S **S** **18 08 26.5 +5.7**
baz=53
LRAL Lakeview Retre 41.80 262 P **P** **18 02 10.3 +0.4**
baz=44,SNR=5.4
LRAL S **S** **18 08 32.0 +4.7**
baz=44
MBO M'Bour 41.93 153 IAMs_20 IAMs_20 18 16 17.4
comp=Z,2μm,18.0s
DGMT Dagmar 42.00 292 P **P** **18 02 12.2 +0.8**
baz=56
DGMT S S 18 08 38.0 +8.0
baz=56
MGMO Mountain Grove 42.07 270 P **P** **18 02 10.9 -1.2**

LCAR Lake Charles 42.14 268 P P 18 02 10.8 -1.8
OXF Oxford 42.18 265 P P 18 02 10.7 -2.3
OXF Oxford 42.18 265 P P 18 02 10.7 -2.3
OXF pmax pmax
comp=Z,87nm,1.3s
OXF MLR MLR
comp=Z,8µm,19.0s
OXF Oxford 42.18 265 P P 18 02 12.2 -0.7
baz=45
OXF S S 18 08 33.9 +1.1
baz=45
DWPF Disney Wildern 42.26 251 IAMs_20 IAMs_20 18 20 22.2
comp=Z,3µm,18.0s
Z47A Carrollton 42.32 263 P P 18 02 11.8 -2.2
Z47A IAmb IAmb 18 02 21.8
comp=Z,55nm,1.2s
S39A Bolivar 42.33 272 P P 18 02 12.3 -1.9
S39A Bolivar 42.33 272 P P 18 02 13.9 -0.3
baz=48,SNR=10
H05N1 Guadeloupe/Mar 42.51 218 T T 18 47 30.7
LPSR Galich'ya Gora 42.54 60 *eP* **P 18 02 14.4 -1.3**
LPSR *eS* **S 18 08 37.5 -0.2**
LPSR pmax pmax
comp=Z,10.0nm,1.0s
LPSR smax smax
comp=E,810nm,12.8s
LPSR MLR MLR
comp=Z,1µm,14.0s
BGNE Belgrade 42.77 280 P P 18 02 16.8 -1.0
BGNE IAmb IAmb 18 02 22.2
comp=Z,53nm,1.0s
BGNE Belgrade 42.77 280 P P 18 02 17.6 -0.2
baz=51
BGNE S S 18 08 45.6 +4.2
baz=51
FCAR Ozark Folk Cen 42.84 269 P P 18 02 17.2 -1.1
FCAR IAmb IAmb 18 02 24.9
comp=Z,33nm,1.4s
SJG San Juan 42.90 226 LR LR 18 18 20.4
comp=Z,719nm,20.3s,baz=35,slow=34
BRAL Brewton 43.18 260 P P 18 02 22.1 +1.0
baz=43
BRAL S S 18 08 51.2 +3.6
baz=43
VORR Voronezh 43.20 61 P P 18 02 21.5 +0.5
VORR pmax pmax
comp=Z,82nm,2.2s
WHAR Wooly Hollow 43.34 268 P P 18 02 20.8 -1.6
WHAR IAmb IAmb 18 02 26.2
comp=Z,59nm,1.4s
KSU1 Kansas State U 43.35 276 P P 18 02 21.6 -0.8
baz=49
KSU1 S S 18 08 52.3 +2.4
baz=49
W41B Gary Mavity, V 43.40 268 P P 18 02 21.1 -1.7
W41B IAmb IAmb 18 02 24.7
comp=Z,22nm,0.9s
W41B Gary Mavity, V 43.40 268 P P 18 02 22.7 -0.1
baz=46,SNR=19
W41B Gary Mavity, V 43.40 268 P P 18 02 22.7 -0.1
baz=46,SNR=19
W41B S S 18 08 54.1 +3.4
baz=46
VSR Storozhevoye 43.43 62 *eP* **P 18 02 21.6 -1.3**
VSR *eS* **S 18 08 50.9 +0.1**
VSR pmax pmax
comp=Z,10.0nm,0.9s
VSR smax smax
comp=E,890nm,13.4s
VSR MLR MLR
comp=Z,2µm,13.0s
HHAR Hobbs 43.65 271 P P 18 02 23.9 -0.9
HHAR IAmb IAmb 18 02 28.6
comp=Z,36nm,1.1s
UALR University of 43.73 268 P P 18 02 24.6 -1.0
UALR IAmb IAmb 18 02 33.0
comp=Z,35nm,1.2s
U38A Gravette 43.80 271 P P 18 02 25.0 -1.1
U38A IAmb IAmb 18 02 33.4
comp=Z,33nm,1.4s
U38A Gravette 43.80 271 P P 18 02 25.7 -0.4
baz=47,SNR=5.0
EDM Edmonton 44.16 302 P P 18 02 27.6 -1.2
EDM IAmb IAmb 18 02 36.2
comp=Z,40nm,1.3s
EDM Edmonton 44.16 302 P P 18 02 27.6 -1.2
EDM pmax pmax
comp=Z,40nm,1.3s
INK Inuvik 44.25 328 P P 18 02 28.4 -0.8
comp=Z,11nm,1.1s,baz=41,slow=9.2,SNR=12
INK LR LR 18 19 36.6
comp=Z,3µm,21.5s,baz=45,slow=34
comp=Z,11nm,1.1s
INK Inuvik 44.25 328 P P 18 02 27.9 -1.4
INK IAmb IAmb 18 02 36.3
comp=Z,26nm,1.2s
INK Inuvik 44.25 328 P P 18 02 27.9 -1.4
INK pmax pmax
comp=Z,26nm,1.2s
INK Inuvik 44.25 328 P P 18 02 28.5 -0.8
baz=57,SNR=8.6
INK S S 18 09 04.0 +1.6
baz=57
W39A Magazine 44.30 270 P P 18 02 28.6 -1.4
W39A Magazine 44.30 270 P P 18 02 29.5 -0.6
baz=46,SNR=22
W39A Magazine 44.30 270 P P 18 02 29.8 -0.2
baz=46,SNR=22
W39A S S 18 09 08.3 +4.5
baz=46
KIRV Kirov 44.36 48 LR LR 18 19 37.1
comp=Z,2µm,19.9s,baz=296,slow=34
KIRV Kirov 44.36 48 *ceP* **P 18 02 30.5 +0.3**
346A Big Creek Wild 44.44 262 P P 18 02 30.5 -0.7
VBMS Vicksburg 44.46 264 P P 18 02 30.1 -1.2
VBMS Vicksburg 44.46 264 P P 18 02 30.7 -0.6
baz=44
VBMS S S 18 09 07.1 +0.9
baz=44
RSSD Black Hills 44.48 287 S S 18 09 11.8 +5.0
baz=52
MIAR Mount Ida 44.62 269 P P 18 02 32.1 -0.6
MIAR IAmb IAmb 18 02 35.3
comp=Z,38nm,1.0s
MIAR Mount Ida 44.62 269 P P 18 02 32.1 -0.6
MIAR pmax pmax
comp=Z,38nm,1.0s
MIAR MLR MLR
comp=Z,11µm,18.0s
MIAR Mount Ida 44.62 269 P P 18 02 32.9 +0.2
baz=46,SNR=22
MIAR S S 18 09 12.9 +4.3
baz=46
T35A Sooner Cattle 44.74 274 P 18 02 32.5 -1.1
T35A IAmb IAmb 18 02 37.0
comp=Z,25nm,1.1s
VRH Novokhopyorsk 44.76 61 *eP* **P 18 02 31.4 -2.1**
VRH *eS* **S 18 09 09.9 -0.3**
VRH pmax pmax
comp=Z,10.0nm,0.6s
VRH smax smax
comp=N,600nm,12.3s
VRH MLR MLR
comp=Z,2µm,13.0s
SANT Santorini 44.82 87 IAMs_20 IAMs_20 18 20 29.5
comp=Z,3µm,21.0s
BBGH Gun Hill 44.92 215 IAMs_20 IAMs_20 18 17 59.2
comp=Z,4µm,21.0s
WLAR White Oak Lake 44.95 268 P P 18 02 34.4 -0.8
TUL1 Leonard 44.99 272 P 18 02 34.2 -1.5
TUL1 IAmb IAmb 18 02 39.1
comp=Z,35nm,1.1s
TUL1 Leonard 44.99 272 P P 18 02 34.9 -0.8
baz=47
TUL1 S S 18 09 16.6 +2.6
baz=47
Z41A Richland Creek 45.07 267 P P 18 02 35.3 -0.9
Z41A Richland Creek 45.07 267 P P 18 02 36.0 -0.2
baz=45
IDI Anoyia 45.22 89 P P 18 02 37.7 +0.2
comp=Z,5.7nm,0.8s,baz=244,slow=20,SNR=1.4
IDI LR LR 18 22 12.7
comp=Z,2µm,20.7s,baz=327,slow=37
comp=Z,5.7nm,0.8s
IDI Anoyia 45.22 89 IAMs_20 IAMs_20 18 22 01.2
comp=Z,2µm,21.0s
EGMT Eagleton 45.29 294 IAMs_20 IAMs_20 18 20 00.7
comp=Z,4µm,20.0s
EGMT Eagleton 45.29 294 P P 18 02 36.9 -1.0
baz=53
OGNE Ogallala 45.33 282 IAMs_20 IAMs_20 18 20 36.2
comp=Z,2µm,21.0s
OGNE Ogallala 45.33 282 P P 18 02 38.5 +0.2
baz=50
OGNE S S 18 09 24.1 +5.3
baz=50
CBKS Cedar Bluff 45.38 278 P P 18 02 37.6 -1.1
baz=48
CBKS S S 18 09 19.1 -0.4
baz=48
MDUB Mudurnu 45.47 79 P P 18 02 39.5 -0.1
X37A Clayton 45.66 270 P P 18 02 38.8 -2.1
TGTN Hyland Airport 46.19 318 P P 18 02 45.3 +0.4
baz=55
TGTN S S 18 09 35.2 +4.5
baz=55
ANN Anapa 46.28 70 *eP* **P 18 02 48.5 +2.8**
ANN *eS* **S 18 09 37.7 +5.4**
ANN pmax pmax
comp=Z,55nm,1.6s
ANN MLR MLR
comp=N,2µm,16.0s
ANN MLR MLR
comp=Z,6µm,17.0s
EPYK Eagle Plains 46.38 327 P P 18 02 45.3 -0.9
EPYK IAMs_20 IAMs_20 18 21 22.8
comp=Z,2µm,18.0s
EPYK Eagle Plains 46.38 327 P P 18 02 46.3 +0.1
baz=53,SNR=11
EPYK S S 18 09 38.8 +5.6
baz=53
KARP Karpathos 46.39 87 IAMs_20 IAMs_20 18 21 49.0
comp=Z,3µm,21.0s
FNO Franklin 46.40 273 P 18 02 45.3 -1.4
MMPY Sheldon Lake, 46.70 321 P P 18 02 49.4 +0.6
baz=54,SNR=6.0
RLMT Red Lodge 46.79 291 P P 18 02 50.4 +0.4
baz=51,SNR=14
RLMT S S 18 09 46.9 +6.8
baz=51
ANTO Ankara 46.79 78 IAMs_20 IAMs_20 18 24 04.4
comp=Z,4µm,19.0s
K22A Casper 46.81 287 P P 18 02 48.2 -1.9
K22A Casper 46.81 287 P P 18 02 49.3 -0.9
baz=50
K22A S S 18 09 44.1 +3.8
baz=50
ISP Isparta 46.82 82 IAMs_20 IAMs_20 18 23 35.8
comp=Z,2µm,19.0s
WALA Waterton Lakes 46.87 298 P P 18 02 49.5 -0.9
KSCO Kaye Shedlock' 46.94 280 P P 18 02 50.8 -0.3
baz=48
KSCO S S 18 09 48.3 +6.2
baz=48
BELG Belogornoye 47.04 56 LR LR 18 22 16.4
comp=Z,3µm,18.3s,baz=309,slow=36
BELG Belogornoye 47.04 56 *i* **P P 18 02 51.4 -0.1**
BELG pmax pmax
comp=Z,6.0nm,1.0s
PHWY Pilot Hill 47.07 285 IAMs_20 IAMs_20 18 21 14.3
comp=Z,3µm,20.0s
HRY Holter Researc 47.20 294 P P 18 02 52.4 -0.7
NATX Nacogdoches 47.23 267 P P 18 02 53.1 -0.2
baz=44
NATX S S 18 09 47.8 +1.6
baz=44
BR131 Keskin Array S 47.38 78 P P 18 02 54.6 +0.1
BR131 IAmb IAmb 18 03 02.4
comp=Z,17nm,1.0s
BR131 Keskin Array S 47.38 78 P P 18 02 54.6 +0.1
BR131 pmax pmax
comp=Z,17nm,1.0s
BRTR Keskin Array B 47.38 78 P P 18 02 55.4 +0.8
comp=Z,3.9nm,0.8s,baz=308,slow=4.9,SNR=19
BRTR LR LR 18 24 36.0
comp=Z,3µm,18.2s,baz=306,slow=38
comp=Z,3.9nm,0.8s
BRTR Keskin Array B 47.38 78 P P 18 02 54.6 +0.1
BRTR Keskin Array B 47.38 78 P P 18 02 54.6 +0.1
I29M Ogilvie Camp, 47.51 326 IAMs_20 IAMs_20 18 21 49.8
comp=Z,2µm,18.0s
I29M Ogilvie Camp, 47.51 326 P P 18 02 54.6 -0.5
baz=52,SNR=20
I29M S S 18 09 52.3 +2.9
baz=52
WMOK Wichita Mounta 47.57 273 P P 18 02 55.0 -0.9
WMOK Wichita Mounta 47.57 273 P P 18 02 55.0 -0.9
WMOK pmax pmax
comp=Z,39nm,1.4s
WMOK MLR MLR
comp=Z,7µm,18.0s
WMOK Wichita Mounta 47.57 273 P P 18 02 56.3 +0.4
baz=46
WMOK S S 18 09 55.6 +4.7
baz=46
N23A Red Feather La 47.62 284 P P 18 02 55.7 -0.8
N23A Red Feather La 47.62 284 P P 18 02 57.4 +0.9
baz=49,SNR=26
N23A S S 18 09 56.2 +4.2
baz=49
BOZ Bozeman (W) 47.79 293 P P 18 02 56.9 -0.8
BOZ IAmb IAmb 18 03 05.2
comp=Z,20nm,1.1s
BOZ Bozeman (W) 47.79 293 P P 18 02 56.9 -0.8
BOZ pmax pmax
comp=Z,19nm,1.1s
BOZ MLR MLR
comp=Z,5µm,20.0s
BOZ Bozeman (W) 47.79 293 P P 18 02 58.2 +0.6
baz=51,SNR=16
BOZ S S 18 10 01.4 +7.3
baz=51
RWWY Rawlins 47.82 286 IAMs_20 IAMs_20 18 21 38.1
comp=Z,3µm,20.0s
JTMT Jette 47.87 297 P P 18 02 57.1 -1.2
YHL Hebgen Lake 48.02 292 P P 18 02 58.7 -0.9
YHL IAmb IAmb 18 03 08.0
comp=Z,32nm,1.5s
J29M Klondike Camp 48.05 325 IAMs_20 IAMs_20 18 21 52.1
comp=Z,3µm,20.0s
LRM Limekiln Ridge 48.10 294 P P 18 02 59.5 -0.7
C23K Itkillik River 48.11 335 P P 18 03 00.1 +0.5
baz=46,SNR=9.5
C23K S S 18 10 00.2 +2.5
baz=46
M31M Drury Creek, Y 48.12 322 IAMs_20 IAMs_20 18 22 26.8
comp=Z,3µm,19.0s
M31M Drury Creek, Y 48.12 322 P P 18 03 01.2 +1.4
baz=52
M31M S S 18 10 04.4 +6.3
baz=52
BMAR Burnt Mountain 48.12 331 P P 18 02 59.2 -0.6
D24K Happy Valley 48.12 334 P P 18 02 59.4 -0.3
baz=47,SNR=8.2
D24K S S 18 10 01.9 +4.0
baz=47
ISCO Idaho Springs 48.15 283 P P 18 03 00.5 -0.2
ISCO Idaho Springs 48.15 283 P P 18 03 00.5 -0.2
ISCO pmax pmax
comp=Z,33nm,1.3s
ISCO MLR MLR
comp=Z,4µm,20.0s
ISCO Idaho Springs 48.15 283 P P 18 03 01.2 +0.5
baz=48,SNR=20
ISCO S S 18 10 04.7 +5.1
baz=48
MTDJ Mount Denham 48.15 239 IAMs_20 IAMs_20 18 20 03.7
comp=Z,2µm,20.0s
FLWY Flagg Ranch 48.24 291 P P 18 02 59.8 -1.5
FLWY IAmb IAmb 18 03 26.3
comp=Z,36nm,1.4s
MSO Missoula 48.27 296 P P 18 03 01.6 +0.3
baz=51
MSO S S 18 10 07.0 +6.2
baz=51
N32M Quiet Lake 48.28 320 P P 18 03 01.5 +0.4
baz=52
N32M S S 18 10 10.3 +10
baz=52
SOC Sochi 48.33 70 *eP* **P 18 03 00.7 -0.9**
SOC *e* 18 04 52.9
SOC *e*PPP PPP 18 05 43.3
SOC *e*S **S 18 10 02.6 +1.2**
SOC *e*SS **SS 18 13 28.1 -2.3**
SOC *e*SSS SSS 18 14 45.1
SOC pmax pmax
comp=Z,2.0nm,0.3s
Q24A Divide 48.43 282 P P 18 03 01.4 -1.5
Q24A IAmb IAmb 18 03 09.9
comp=Z,15nm,1.2s
Q24A Divide 48.43 282 P P 18 03 02.5 -0.4
baz=48
Q24A S S 18 10 11.1 +7.4
baz=48
A21K Barrow 48.44 338 P P 18 03 01.2 -0.9
A21K IAmb IAmb 18 03 10.1
comp=Z,15nm,0.7s
A21K Barrow 48.44 338 P P 18 03 02.1 0.0
baz=43
A21K S S 18 10 08.7 +6.4
baz=43
BW06 Boulder Array 48.45 289 P P 18 03 01.1 -1.8
BW06 IAmb IAmb 18 03 09.2
comp=Z,31nm,1.5s
BW06 Boulder Array 48.45 289 P P 18 03 02.3 -0.7
baz=50
PD31 Pinedale Array 48.45 289 P P 18 03 01.1 -1.8
PD31 IAmb IAmb 18 03 09.2
comp=Z,25nm,1.4s
PDAR Pinedale Array 48.45 289 P P 18 03 01.9 -1.0
comp=Z,3.9nm,0.6s,baz=66,slow=7.0,SNR=28
PDAR PcP **PcP 18 04 28.2 -0.8**
comp=Z,1.2nm,0.9s,baz=24,slow=4.9,SNR=1.5
PDAR LR LR 18 22 26.1
comp=Z,4µm,18.5s,baz=48,slow=35
comp=Z,3.9nm,0.6s
PDAR Pinedale Array 48.45 289 P P 18 03 01.1 -1.8
DLMT Dillon 48.47 293 P P 18 03 01.3 -1.6
MOOW Moose Ponds 48.48 290 IAMs_20 IAMs_20 18 21 57.3
comp=Z,4µm,20.0s
LOHW Long Hollow 48.49 290 P P 18 03 02.0 -1.1
TOLK Toolik Lake Re 48.67 334 P P 18 03 03.2 -0.9
TOLK IAmb IAmb 18 03 11.3
comp=Z,18nm,0.9s
TOLK IAMs_20 IAMs_20 18 24 00.5
comp=Z,2µm,21.0s
TOLK Toolik Lake Re 48.67 334 P P 18 03 03.7 -0.3
baz=46,SNR=12
TOLK S S 18 10 07.8 +1.9
baz=46
DAWY Dawson 48.70 325 P P 18 03 03.8 -0.5
DAWY Dawson 48.70 325 P P 18 03 04.9 +0.6
baz=50,SNR=6.4
DAWY S S 18 10 10.7 +4.5
baz=50
WHTX Lake Whitney, 48.72 269 P P 18 03 03.3 -1.5
WHTX Lake Whitney, 48.72 269 P P 18 03 04.4 -0.4
baz=44
WHTX S S 18 10 06.3 -0.9
baz=44
D23K Nanushuk River 48.73 334 P P 18 03 04.8 +0.4
baz=45,SNR=27
D23K S S 18 10 11.5 +4.9
baz=45
DLBC Dease Lake 48.75 316 LR LR 18 22 34.1
comp=Z,3µm,19.6s,baz=64,slow=35
DLBC Dease Lake 48.75 316 S S 18 10 13.4 +6.2
baz=52
M30M Minto, Yukon 48.75 323 P P 18 03 03.9 -0.9
M30M IAmb IAmb 18 03 12.7
comp=Z,33nm,1.6s
M30M IAMs_20 IAMs_20 18 21 54.6
comp=Z,2µm,20.0s
M30M Minto, Yukon 48.75 323 P P 18 03 04.9 +0.2
baz=50
P33M Teslin, Yukon 48.76 319 IAMs_20 IAMs_20 18 22 23.9
comp=Z,3µm,18.0s
P33M Teslin, Yukon 48.76 319 S S 18 10 14.0 +6.7
baz=51
TPAW Teton Pass 48.76 290 P P 18 03 04.1 -1.2
TPAW IAmb IAmb 18 03 12.6
comp=Z,14nm,1.1s
TPAW IAMs_20 IAMs_20 18 22 06.8
comp=Z,4µm,20.0s
REDW Red Top Meadow 48.79 290 P P 18 03 04.8 -0.7
MCMT McKenzie Canyo 48.95 293 P P 18 03 06.1 -0.6
NEW Newport 49.04 299 P P 18 03 06.3 -0.8
comp=Z,5.3nm,1.1s,baz=60,slow=10,SNR=10
NEW LR LR 18 22 21.0
comp=Z,4µm,19.4s,baz=52,slow=34
comp=Z,5.3nm,1.1s
NEW Newport 49.04 299 P P 18 03 06.5 -0.6
NEW IAmb IAmb 18 03 14.2
comp=Z,36nm,1.6s
NEW Newport 49.04 299 IAMs_20 IAMs_20 18 21 59.8
comp=Z,3µm,20.0s
NEW Newport 49.04 299 P P 18 03 06.5 -0.6
NEW pmax pmax
comp=Z,36nm,1.7s
NEW MLR MLR
comp=Z,4µm,20.0s
NEW Newport 49.04 299 P P 18 03 07.2 +0.1
baz=51
NEW S S 18 10 14.5 +3.0
baz=51
N31M Braeburn, Yuko 49.08 321 P P 18 03 06.8 -0.5
N31M IAmb IAmb 18 03 15.5
comp=Z,30nm,1.2s
N31M IAMs_20 IAMs_20 18 23 07.3
comp=Z,3µm,18.0s
N31M Braeburn, Yuko 49.08 321 P P 18 03 08.1 +0.9
baz=50
I26K Coal Creek Min 49.10 328 P P 18 03 06.7 -0.6
I26K IAmb IAmb 18 03 15.6
comp=Z,27nm,1.4s
I26K Coal Creek Min 49.10 328 P P 18 03 07.8 +0.5
baz=48
I26K S S 18 10 18.5 +6.6
baz=48
AMTX Amarillo 49.18 275 P P 18 03 08.4 -0.1
AMTX Amarillo 49.18 275 P P 18 03 09.2 +0.8
baz=46
AMTX S S 18 10 21.1 +7.2
baz=46
T25A Trinidad 49.23 280 P P 18 03 09.8 +0.8
baz=47,SNR=12
T25A S S 18 10 17.0 +2.2
baz=47
BNN Bunyan 49.23 77 P P 18 03 08.6 -0.3
WHY Whitehorse 49.27 320 S S 18 10 19.8 +5.3
baz=50
AHID Auburn Hatcher 49.31 290 P P 18 03 07.7 -1.8
AHID IAmb IAmb 18 03 18.7
comp=Z,17nm,1.2s
SMCO Snowmass 49.34 283 P P 18 03 08.4 -1.6
O20A White River Ci 49.43 285 P P 18 03 11.2 +0.8
baz=48
O20A S S 18 10 25.2 +7.7
baz=48
SDCO Great Sand Dun 49.46 281 P P 18 03 11.2 +0.4
baz=47,SNR=9.8
SDCO S S 18 10 27.1 +9.1
baz=47
P32M Atlin 49.51 319 S S 18 10 23.5 +5.8
baz=50
ABTX Abilene, Hawle 49.57 272 P P 18 03 09.3 -2.0
ABTX IAmb IAmb 18 03 18.2
comp=Z,39nm,1.4s
ABTX Abilene, Hawle 49.57 272 P P 18 03 12.2 +0.8
baz=44
N30M Aishikik Lake 49.58 322 S S 18 10 27.3 +8.6
baz=50
K27K Chicken 49.61 326 P P 18 03 11.8 +0.6
baz=48
K27K S S 18 10 26.2 +7.2
baz=48
ARU Arti 49.62 47 LR LR 18 22 41.9
comp=Z,3µm,20.2s,baz=292,slow=34
ARU Arti 49.62 47 P P 18 03 10.2 -1.2
ARU IAmb IAmb 18 03 18.3
comp=Z,27nm,1.1s
ARU IAMs_20 IAMs_20 18 22 28.6
comp=Z,3µm,20.0s
ARU Arti 49.62 47 *c i* **P P 18 03 12.0 +0.6**
ARU 18 04 33.5
ARU 18 05 09.1
ARU PPP PPP 18 05 55.3
ARU S **S 18 10 23.0 +3.7**
ARU 18 13 02.7
ARU SS **SS 18 13 54.6 +3.8**
ARU pmax pmax

	comp=Z,36nm,2.3s								
O30N	**Mendenhall**	**49.66**	**321**		P		**P**	**18 03 12.6**	**+0.9**
	baz=50,SNR=6.6								
O30N					S		**S**	**18 10 27.9**	**+8.1**
	baz=50								
435B	**Jarrell**	**49.67**	**268**		P		**P**	**18 03 12.5**	**+0.4**
	baz=43								
435B					S		**S**	**18 10 24.2**	**+3.7**
	baz=43								
KIV	**Kislovodsk**	**49.73**	**68**	⇑	P		**P**	**18 03 13.3**	**+0.8**
KIV	**Kislovodsk**	**49.73**	**68**		IAMs_20	IAMs_20		18 24 30.5	
	comp=Z,2µm,19.0s								
KIV	**Kislovodsk**	**49.73**	**68**	*c i*	P		**P**	**18 03 11.6**	**-0.9**
KIV				*e*				18 05 12.4	
KIV					*e*S		**S**	**18 10 23.2**	**+1.9**
KIV					*e*SS		**SS**	**18 13 56.6**	**+3.5**
KIV					pmax		pmax		
	comp=Z,14nm,1.5s								
KIV					MLR		MLR		
	comp=Z,2µm,17.0s								
KVAR	**Kislovodsk Arr**	**49.73**	**68**		LR		LR	18 23 03.6	
	comp=Z,950nm,21.7s,baz=336,slow=35								
T35M	**Bob Quinn**	**49.76**	**314**		S		S	18 10 29.3	+8.0
	baz=51								
J26L	**Joseph Creek**	**49.77**	**327**		IAMs_20	IAMs_20		18 24 02.6	
	comp=Z,1µm,18.0s								
J26L	**Joseph Creek**	**49.77**	**327**		P		**P**	**18 03 12.3**	**-0.3**
	baz=47,SNR=9.3								
J26L					S		**S**	**18 10 25.8**	**+4.3**
	baz=47								
COLD	**Coldfoot**	**49.84**	**332**		P		**P**	**18 03 12.0**	**-0.9**
COLD	**Coldfoot**	**49.84**	**332**		P		**P**	**18 03 12.7**	**-0.3**
	baz=45,SNR=6.7								
COLD					S		**S**	**18 10 26.3**	**+4.1**
	baz=45								
SHA1	**Shidzhatmaz**	**49.85**	**68**	*i*	P		**P**	**18 03 15.7**	**+2.1**
C09A	**Chrisman Ranch**	**49.93**	**299**		P		**P**	**18 03 12.1**	**-1.8**
C09A					IAmb	IAmb		18 03 20.6	
	comp=Z,13nm,0.8s								
LLLB	**Lillooet**	**49.96**	**304**		P		**P**	**18 03 12.8**	**-1.3**
LLLB					IAmb	IAmb		18 03 20.0	
	comp=Z,14nm,0.9s								
TOA0	**Torodi Ar. Sit**	**49.97**	**130**		P		**P**	**18 03 13.6**	**-1.0**
TOA0					IAmb	IAmb		18 03 20.5	
	comp=Z,21nm,0.9s								
TORD	**Torodi Ar. Bea**	**49.97**	**130**		P		**P**	**18 03 13.4**	**-1.1**
	comp=Z,10nm,0.9s,baz=330,slow=7.1,SNR=27								
TORD					PcP		**PcP**	**18 04 33.9**	**-0.6**
	comp=Z,1.7nm,1.0s,baz=292,slow=4.2,SNR=0.8								
TORD					LR		LR	18 22 29.0	
	comp=Z,1µm,18.5s,baz=2.0,slow=34								
	comp=Z,10nm,0.9s								
TORD	**Torodi Ar. Bea**	**49.97**	**130**		P		**P**	**18 03 13.6**	**-0.9**
TORD					IAmb	IAmb		18 03 20.9	
	comp=Z,20nm,1.0s								
KBZ	**Khabaz**	**49.99**	**68**		P		**P**	**18 03 15.6**	**+1.2**
	comp=Z,5.6nm,0.9s,baz=319,slow=8.1,SNR=8.9								
KBZ					LR		LR	18 24 51.5	
	comp=Z,2µm,20.0s,baz=316,slow=37								
	comp=Z,5.6nm,0.9s								
KBZ	**Khabaz**	**49.99**	**68**	*ce*	P		**P**	**18 03 16.2**	**+1.9**
KBZ					pmax		pmax		
	comp=Z,20nm,1.1s								
B08A	**Colville Reser**	**50.12**	**300**		P		**P**	**18 03 14.7**	**-0.6**
B08A					IAmb	IAmb		18 03 22.9	
	comp=Z,38nm,1.4s								
HYT	**Haines Junctio**	**50.15**	**321**		P		**P**	**18 03 16.4**	**+0.9**
	baz=49								
HYT					S		**S**	**18 10 28.1**	**+1.3**
	baz=49								
BCAR	**Beaver Creek A**	**50.16**	**325**		P		**P**	**18 03 14.6**	**-0.9**
BCAR					PcP		**PcP**	**18 04 35.3**	**+0.7**
H24K	**Noodor Dome**	**50.17**	**330**		P		**P**	**18 03 15.3**	**-0.2**
H24K					IAMs_20	IAMs_20		18 23 29.1	
	comp=Z,2µm,21.0s								
H24K	**Noodor Dome**	**50.17**	**330**		P		**P**	**18 03 16.2**	**+0.7**
	baz=45,SNR=11								
H24K					S		**S**	**18 10 30.7**	**+3.8**
	baz=45								
L27K	**Beaver Creek,**	**50.18**	**325**		P		**P**	**18 03 15.0**	**-0.6**
L27K					IAmb	IAmb		18 03 23.7	
	comp=Z,23nm,1.5s								
L27K					IAMs_20	IAMs_20		18 23 18.4	
	comp=Z,3µm,19.0s								
L27K	**Beaver Creek,**	**50.18**	**325**		P		**P**	**18 03 16.5**	**+0.9**
	baz=48,SNR=5.9								
L27K					S		**S**	**18 10 33.0**	**+5.9**
	baz=48								
YUK4	**Talbot Arm**	**50.22**	**322**		P		**P**	**18 03 16.5**	**+0.3**
	baz=49								
S22A	**4UR Ranch, Cre**	**50.23**	**282**		P		**P**	**18 03 16.7**	**+0.1**
	baz=47								
S22A					S		**S**	**18 10 30.5**	**+1.7**
	baz=47								
SVE	**Sverdlovsk**	**50.25**	**45**	*e*	P		**P**	**18 03 15.8**	**-0.4**
SVE				*e*	S		**S**	**18 10 29.1**	**+1.0**
SVE					pmax		pmax		
	comp=Z,20nm,1.3s								
J25K	**Salcha River,**	**50.27**	**328**		P		**P**	**18 03 15.7**	**-0.6**
J25K					IAmb	IAmb		18 03 24.6	
	comp=Z,24nm,1.2s								
J25K					IAMs_20	IAMs_20		18 23 49.6	
	comp=Z,2µm,18.0s								
J25K	**Salcha River,**	**50.27**	**328**		P		**P**	**18 03 16.6**	**+0.3**
	baz=46,SNR=11								
J25K					S		**S**	**18 10 30.9**	**+2.6**
	baz=46								
SCRK	**Sand Creek**	**50.27**	**327**		P		**P**	**18 03 16.1**	**-0.3**
SCRK					IAmb	IAmb		18 03 25.0	
	comp=Z,24nm,1.1s								
SCRK	**Sand Creek**	**50.27**	**327**		P		**P**	**18 03 16.8**	**+0.5**
	baz=47,SNR=18								
SCRK					S		**S**	**18 10 32.8**	**+4.4**
	baz=47								
BVCY	**Beaver Creek**	**50.29**	**324**		P		**P**	**18 03 17.5**	**+1.1**
	baz=48								
HWUT	**Hardware Ranch**	**50.34**	**289**		P		**P**	**18 03 16.0**	**-1.3**
YUK6	**Outpost Mounta**	**50.38**	**322**		P		**P**	**18 03 18.3**	**+0.9**
	baz=48								
CSS	**Mathiatis**	**50.43**	**83**		IAMs_20	IAMs_20		18 27 45.9	
	comp=Z,2µm,19.0s								
MSTX	**Muleshoe**	**50.47**	**275**		P		**P**	**18 03 17.3**	**-1.0**
MSTX	**Muleshoe**	**50.47**	**275**		P		**P**	**18 03 18.5**	**+0.3**
	baz=45,SNR=9.0								
MSTX	**Muleshoe**	**50.47**	**275**		P		**P**	**18 03 18.5**	**+0.3**
	baz=45,SNR=9.0								
MSTX					S		**S**	**18 10 32.8**	**+0.9**
	baz=45								
PLID	**Pearl Lake**	**50.48**	**295**		P		**P**	**18 03 17.6**	**-0.7**
PLID					IAmb	IAmb		18 03 25.4	
	comp=Z,39nm,1.3s								
POKR	**Poker Plat Res**	**50.55**	**330**		P		**P**	**18 03 17.8**	**-0.5**
POKR					IAmb	IAmb		18 03 26.9	
	comp=Z,46nm,1.4s								
POKR					IAMs_20	IAMs_20		18 23 27.0	
	comp=Z,2µm,20.0s								
POKR	**Poker Plat Res**	**50.55**	**330**		P		**P**	**18 03 18.6**	**+0.3**
	baz=45								
POKR					S		**S**	**18 10 37.4**	**+5.3**
	baz=45								
YUK3	**Moose Creek**	**50.58**	**324**		P		**P**	**18 03 19.5**	**+0.6**
	baz=48								
JIS	**Juneau Island**	**50.62**	**318**		IAMs_20	IAMs_20		18 23 22.2	
	comp=Z,3µm,20.0s								
HLID	**Hailey**	**50.62**	**293**		P		**P**	**18 03 20.4**	**+1.0**
	baz=49,SNR=13								
HLID					S		**S**	**18 10 41.2**	**+7.2**
	baz=49								
IL31		**50.62**	**329**		P		**P**	**18 03 17.3**	**-1.5**
IL31					IAmb	IAmb		18 03 27.2	
	comp=Z,28nm,1.4s								
IL31					PcP		**PcP**	**18 04 35.2**	**-0.9**
ILAR	**Eielson Array**	**50.62**	**329**		P		**P**	**18 03 18.8**	**-0.2**
	comp=Z,3.7nm,1.0s,baz=40,slow=5.9,SNR=34								
ILAR					PcP		**PcP**	**18 04 35.4**	**-0.9**
	comp=Z,4.0nm,0.9s,baz=7.2,slow=2.8,SNR=9.3								
ILAR					LR		LR	18 24 16.1	
	comp=Z,1µm,18.2s,baz=40,slow=36								
	comp=Z,3.7nm,1.0s								
ILAR	**Eielson Array**	**50.62**	**329**		P		**P**	**18 03 18.2**	**-0.7**
ILAR					PcP		**PcP**	**18 04 34.7**	**-1.5**
ILAR	**Eielson Array**	**50.62**	**329**		P		**P**	**18 03 18.2**	**-0.7**
ILAR								18 04 34.7	
MDP	**Montagnes des**	**50.62**	**203**		P		**P**	**18 03 20.1**	**+0.6**
	comp=Z,17nm,1.0s,baz=26,slow=7.4,SNR=4.0								
MDP					LR		LR	18 19 54.1	
	comp=Z,556nm,21.1s,baz=50,slow=30								
	comp=Z,17nm,1.0s								
H23K	**Yukon River**	**50.66**	**331**		P		**P**	**18 03 18.6**	**-0.6**
H23K					IAmb	IAmb		18 03 27.9	
	comp=Z,22nm,1.1s								
H23K					IAMs_20	IAMs_20		18 24 07.1	
	comp=Z,2µm,21.0s								
H23K	**Yukon River**	**50.66**	**331**		P		**P**	**18 03 19.7**	**+0.5**
	baz=44,SNR=12								
H23K					S		**S**	**18 10 37.7**	**+4.0**
	baz=44								
M27K	**Edge Creek, AK**	**50.68**	**325**		IAMs_20	IAMs_20		18 23 44.5	
	comp=Z,3µm,19.0s								
M27K	**Edge Creek, AK**	**50.68**	**325**		P		**P**	**18 03 19.5**	**0.0**
	baz=47								
M27K					S		**S**	**18 10 41.6**	**+7.5**
	baz=47								
RIDG	**Independent Ri**	**50.71**	**327**		P		**P**	**18 03 20.3**	**+0.7**
	baz=46								
RIDG					S		**S**	**18 10 39.1**	**+4.7**
	baz=46								
L26K	**Log Cabin Wild**	**50.71**	**326**		IAMs_20	IAMs_20		18 24 18.5	
	comp=Z,2µm,18.0s								
PV15	**Paradox Valley**	**50.78**	**284**		P		**P**	**18 03 19.9**	**-0.8**
PV15					IAmb	IAmb		18 03 28.5	
	comp=Z,38nm,1.3s								
COLA	**College**	**50.84**	**329**	*i*	P		**P**	**18 03 19.9**	**-0.6**
COLA					pmax	pmax			
	comp=Z,16nm,1.2s								
TCOL	**CIGO, UAF Yank**	**50.85**	**329**		IAMs_20	IAMs_20		18 23 35.0	
	comp=Z,2µm,21.0s								
TCOL	**CIGO, UAF Yank**	**50.85**	**329**		P		**P**	**18 03 20.9**	**+0.4**
	baz=45								
TCOL					S		**S**	**18 10 40.4**	**+4.3**
	baz=45								
MDM	**Murphy Dome**	**50.90**	**330**		P		**P**	**18 03 20.7**	**-0.3**
MDM					IAmb	IAmb		18 03 29.2	
	comp=Z,20nm,1.2s								
MDM					IAMs_20	IAMs_20		18 23 37.3	
	comp=Z,2µm,22.0s								
HVU	**Hansel Valley**	**50.90**	**290**		P		**P**	**18 03 19.8**	**-1.7**
HVU	**Hansel Valley**	**50.90**	**290**		P		**P**	**18 03 19.8**	**-1.7**
HVU					pmax	pmax			
	comp=Z,19nm,1.3s								
HDA	**Harding Lake**	**50.90**	**329**		P		**P**	**18 03 20.4**	**-0.6**
	baz=45								
HDA					S		**S**	**18 10 40.6**	**+3.6**
	baz=45								
HDA					S		**S**	**18 10 40.6**	**+3.6**
	baz=45								
P18A	**Preston Nutter**	**50.92**	**286**		P		**P**	**18 03 20.9**	**-0.9**
P18A					PcP		**PcP**	**18 04 37.5**	**-0.6**
K24K	**Donnelly Dome**	**50.96**	**328**		P		**P**	**18 03 22.7**	**+1.2**
	baz=46,SNR=10								
K24K					S		**S**	**18 10 43.2**	**+5.3**
	baz=46								
CCB	**Clear Creek Bu**	**50.99**	**329**		P		**P**	**18 03 20.4**	**-1.3**
WRAK	**Wrangell Islan**	**51.00**	**315**		IAMs_20	IAMs_20		18 23 35.3	
	comp=Z,2µm,20.0s								
PV23	**Carpenter Ridg**	**51.01**	**284**		P		**P**	**18 03 21.5**	**-0.9**
M26K	**Nabesna, AK**	**51.03**	**325**		IAMs_20	IAMs_20		18 23 54.7	
	comp=Z,3µm,18.0s								
M26K	**Nabesna, AK**	**51.03**	**325**		P		**P**	**18 03 23.2**	**+1.2**
	baz=46								
M26K					S		**S**	**18 10 47.0**	**+8.1**
	baz=46								
PV11	**David Mesa, Pa**	**51.03**	**284**		P		**P**	**18 03 22.4**	**-0.2**
ONI	**Oni**	**51.05**	**69**		P		P	18 03 27.5	+5.0
PV10	**Paradox Valley**	**51.07**	**284**		P		**P**	**18 03 22.5**	**-0.5**
PV13	**Radium Mtn., P**	**51.10**	**284**		P		**P**	**18 03 22.1**	**-1.0**
PV13					IAmb	IAmb		18 03 40.2	
	comp=Z,25nm,0.9s								
I23K	**Minto, Yukon-K**	**51.10**	**330**		P		**P**	**18 03 21.8**	**-0.6**
I23K					IAmb	IAmb		18 03 31.0	
	comp=Z,32nm,1.4s								
I23K					IAMs_20	IAMs_20		18 24 06.6	
	comp=Z,2µm,20.0s								
I23K	**Minto, Yukon-K**	**51.10**	**330**		P		**P**	**18 03 22.7**	**+0.3**
	baz=44,SNR=10								
I23K					S		**S**	**18 10 45.9**	**+6.3**
	baz=44								
H22K	**Ishtalitna Cre**	**51.13**	**332**		P		**P**	**18 03 23.4**	**+0.7**
	baz=43,SNR=9.2								
H22K					S		**S**	**18 10 45.0**	**+4.9**
	baz=43								
ZEI	**Tsey**	**51.16**	**68**	*e*	P		**P**	**18 03 24.7**	**+1.2**
ZEI					pmax		pmax		
	comp=Z,11nm,0.9s								
JCT	**Junction City**	**51.20**	**270**		P		**P**	**18 03 22.3**	**-1.4**
JCT	**Junction City**	**51.20**	**270**		P		**P**	**18 03 22.3**	**-1.4**
JCT					pmax		pmax		
	comp=Z,52nm,1.4s								
JCT					MLR		MLR		
	comp=Z,7µm,19.0s								
JCT	**Junction City**	**51.20**	**270**		P		**P**	**18 03 23.1**	**-0.6**
	baz=43,SNR=11								
JCT					S		**S**	**18 10 41.3**	**-0.7**
	baz=43								
WRH	**Wood River Hil**	**51.20**	**329**		P		**P**	**18 03 22.5**	**-0.8**
P17A	**Butcher Ranch,**	**51.30**	**286**		P		**P**	**18 03 23.5**	**-1.1**
P17A					IAmb	IAmb		18 03 32.5	
	comp=Z,27nm,1.3s								
NEA2	**Nenana**	**51.41**	**330**		P		**P**	**18 03 24.4**	**-0.4**
NEA2					IAmb	IAmb		18 03 33.1	
	comp=Z,26nm,1.3s								
NEA2					IAMs_20	IAMs_20		18 23 40.9	
	comp=Z,2µm,22.0s								
NEA2	**Nenana**	**51.41**	**330**		P		**P**	**18 03 25.2**	**+0.3**
	baz=44								
NEA2					S		**S**	**18 10 47.4**	**+3.4**
	baz=44								
LOGN	**Logan Glacier**	**51.42**	**323**		IAMs_20	IAMs_20		18 23 43.2	
	comp=Z,2µm,22.0s								
SRU	**San Rafael Swe**	**51.42**	**286**		P		**P**	**18 03 23.6**	**-1.9**
SRU					IAmb	IAmb		18 03 36.3	
	comp=Z,22nm,1.2s								
SRU	**San Rafael Swe**	**51.42**	**286**		P		**P**	**18 03 23.6**	**-1.9**
SRU					pmax	pmax			
	comp=Z,22nm,1.2s								
CTGM	**Chitina Glacie**	**51.44**	**323**		IAMs_20	IAMs_20		18 23 42.8	
	comp=Z,2µm,22.0s								
PAX	**Paxson**	**51.45**	**327**		P		**P**	**18 03 25.8**	**+0.6**
	baz=45								
PAX					S		**S**	**18 10 50.7**	**+5.9**
	baz=45								
BARN	**Barnard Glacie**	**51.49**	**323**		IAMs_20	IAMs_20		18 24 05.1	
	comp=Z,2µm,21.0s								
MFID	**Camas Ranch**	**51.49**	**293**		P		**P**	**18 03 24.5**	**-1.3**
MFID					IAmb	IAmb		18 03 34.4	
	comp=Z,38nm,1.6s								
HAWA	**Hanford**	**51.50**	**298**		IAMs_20	IAMs_20		18 23 52.9	
	comp=Z,3µm,18.0s								
BCPM	**Bancas Point**	**51.52**	**321**		IAMs_20	IAMs_20		18 23 50.8	
	comp=Z,3µm,20.0s								
LTY	**Liberty**	**51.52**	**300**		P		**P**	**18 03 24.0**	**-1.9**
LTY					IAmb	IAmb		18 03 32.1	
	comp=Z,32nm,1.2s								
MVCO	**Mesa Verde**	**51.56**	**283**		P		**P**	**18 03 28.6**	**+2.0**
	baz=46								
MVCO					S		**S**	**18 10 53.2**	**+5.9**
	baz=46								
MLY	**Manley**	**51.59**	**331**		P		**P**	**18 03 24.9**	**-1.3**
MLY					IAMs_20	IAMs_20		18 24 34.5	
	comp=Z,2µm,20.0s								
MLY	**Manley**	**51.59**	**331**		P		**P**	**18 03 25.9**	**-0.2**
	baz=43,SNR=7.4								
MLY					S		**S**	**18 10 50.6**	**+4.1**
	baz=43								
BGU	**Big Grassy Mou**	**51.61**	**289**		P		**P**	**18 03 25.8**	**-1.1**
TMUT	**Trail Mountain**	**51.69**	**286**		P		**P**	**18 03 24.9**	**-2.7**
TMUT					IAmb	IAmb		18 03 33.4	
	comp=Z,50nm,1.8s								
H21K	**Melozitna Rive**	**51.71**	**332**		P		**P**	**18 03 26.5**	**-0.5**
H21K					IAMs_20	IAMs_20		18 25 25.7	
	comp=Z,2µm,21.0s								
H21K	**Melozitna Rive**	**51.71**	**332**		P		**P**	**18 03 27.6**	**+0.6**
	baz=42,SNR=14								
H21K					S		**S**	**18 10 53.1**	**+5.1**
	baz=42								
IMAR	**Indian Mountai**	**51.72**	**333**		P		**P**	**18 03 26.7**	**-0.5**
NLU	**North Lily Min**	**51.73**	**288**		P		**P**	**18 03 27.2**	**-0.6**
NLU					IAmb	IAmb		18 03 36.1	
	comp=Z,36nm,1.3s								
TABL	**Table Mountain**	**51.73**	**323**		IAMs_20	IAMs_20		18 23 53.5	
	comp=Z,2µm,21.0s								
MCARA	**McCarthy VSAT**	**51.74**	**324**		P		**P**	**18 03 26.5**	**-0.8**
MCARA					IAmb	IAmb		18 03 45.4	
	comp=Z,38nm,1.4s								
MCARA					IAMs_20	IAMs_20		18 24 09.7	
	comp=Z,2µm,20.0s								
MCARA	**McCarthy VSAT**	**51.74**	**324**		S		**S**	**18 10 54.8**	**+6.2**
	baz=46								
GRNC	**Granite Creek**	**51.75**	**323**		IAMs_20	IAMs_20		18 23 52.9	
	comp=Z,2µm,22.0s								
HARP	**HAARP**	**51.75**	**326**		S		S	18 10 58.7	+10
	baz=45								
I21K	**Tanana**	**51.83**	**331**		P		**P**	**18 03 27.6**	**-0.3**
I21K					IAmb		IAmb	18 03 36.1	
	comp=Z,19nm,1.1s								
I21K					IAMs_20	IAMs_20		18 24 43.0	
	comp=Z,2µm,22.0s								
I21K	**Tanana**	**51.83**	**331**		P		**P**	**18 03 28.1**	**+0.2**
	baz=42,SNR=16								
I21K					S		**S**	**18 10 54.9**	**+5.2**
	baz=42								
BBB	**Bella Bella**	**51.92**	**309**		LR		LR	18 24 21.0	
	comp=Z,2µm,18.8s,baz=47,slow=35								
Q16A	**Castle Valley**	**51.92**	**286**		P		**P**	**18 03 28.2**	**-1.1**
G08A	**Pilot Rock**	**51.93**	**297**		P		**P**	**18 03 27.7**	**-1.3**
BAUV	**El Baul**	**51.93**	**223**		P		**P**	**18 03 28.4**	**-0.8**
ANMO	**Albuquerque**	**51.95**	**279**		P		**P**	**18 03 30.3**	**+0.9**
	comp=Z,6.1nm,1.0s,baz=63,slow=7.4,SNR=16								
ANMO					LR		LR	18 25 03.9	
	comp=Z,13µm,18.1s,baz=52,slow=36								
	comp=Z,6.1nm,1.0s								
ANMO	**Albuquerque**	**51.95**	**279**	*d i*	P		**P**	**18 03 30.2**	**+0.8**
ANMO					pmax	pmax			
	comp=Z,18nm,1.5s								
ANMO	**Albuquerque**	**51.95**	**279**		P		**P**	**18 03 30.7**	**+1.2**
	baz=45								
GLB	**Gilahina Butte**	**51.97**	**325**		IAMs_20	IAMs_20		18 24 16.8	
	comp=Z,2µm,19.0s								
DUG	**Dugway, Tooele**	**51.98**	**288**		P		**P**	**18 03 29.5**	**-0.1**
DUG					IAMs_20	IAMs_20		18 24 41.2	
	comp=Z,3µm,18.0s								
DUG	**Dugway, Tooele**	**51.98**	**288**		P		**P**	**18 03 29.5**	**-0.1**
DUG					pmax	pmax			
	comp=Z,76nm,2.0s								
DUG					MLR	MLR			
	comp=Z,3µm,18.0s								
DUG	**Dugway, Tooele**	**51.98**	**288**		P		**P**	**18 03 30.5**	**+0.9**
	baz=47,SNR=13								
DUG					S		**S**	**18 10 58.3**	**+5.5**
	baz=47								
DHY	**Denali Highway**	**51.99**	**328**		P		**P**	**18 03 29.6**	**+0.3**
	baz=44								
MCK	**McKinley**	**52.00**	**329**		P		**P**	**18 03 28.9**	**-0.2**
MCK					IAmb	IAmb		18 03 37.3	
	comp=Z,34nm,1.2s								
MCK					IAMs_20	IAMs_20		18 25 45.4	
	comp=Z,2µm,18.0s								
MCK	**McKinley**	**52.00**	**329**		P		**P**	**18 03 29.0**	**-0.2**
MCK					pmax	pmax			
	comp=Z,34nm,1.2s								
MCK					MLR	MLR			
	comp=Z,2µm,18.0s								
MCK	**McKinley**	**52.00**	**329**		P		**P**	**18 03 29.6**	**+0.4**
	baz=44,SNR=6.9								
MCK					S		**S**	**18 10 56.4**	**+4.3**
	baz=44								
VRDI	**Verde Repeater**	**52.00**	**324**		IAMs_20	IAMs_20		18 24 19.5	
	comp=Z,2µm,20.0s								
YAH	**Yahtse**	**52.00**	**323**		IAMs_20	IAMs_20		18 24 11.7	
	comp=Z,3µm,20.0s								
CBB	**Campbell River**	**52.04**	**305**		P		**P**	**18 03 28.8**	**-0.9**
ISLE	**Juniper Island**	**52.05**	**323**		IAMs_20	IAMs_20		18 24 22.8	
	comp=Z,2µm,21.0s								
TGL	**Tana Glacier**	**52.11**	**324**		P		**P**	**18 03 29.4**	**-0.8**
TGL					IAMs_20	IAMs_20		18 24 35.5	
	comp=Z,2µm,19.0s								
N25K	**Chitina, Valde**	**52.12**	**325**		IAMs_20	IAMs_20		18 24 40.8	
	comp=Z,2µm,18.0s								
MESA	**MESA**	**52.20**	**323**		IAMs_20	IAMs_20		18 24 18.9	
	comp=Z,2µm,21.0s								
CRQE	**Cirque**	**52.21**	**324**		P		**P**	**18 03 31.4**	**+0.4**
	baz=46								
RND	**Reindeer**	**52.21**	**329**		IAMs_20	IAMs_20		18 25 51.0	
	comp=Z,1µm,18.0s								
CRQM	**Cirque**	**52.22**	**324**		P		**P**	**18 03 31.1**	**0.0**
CRQM					IAMs_20	IAMs_20		18 24 38.0	
	comp=Z,2µm,20.0s								
WAX	**Waxell Ridge**	**52.34**	**323**		IAMs_20	IAMs_20		18 24 33.4	
	comp=Z,3µm,20.0s								
BPAW	**Bear Paw Mtn.**	**52.34**	**330**		P		**P**	**18 03 31.6**	**-0.2**
BPAW					IAmb	IAmb		18 03 39.8	
	comp=Z,32nm,1.5s								
BPAW	**Bear Paw Mtn.**	**52.34**	**330**		P		**P**	**18 03 31.9**	**0.0**
	baz=42,SNR=6.6								
RDOG	**Red Dog Mine**	**52.37**	**338**		P		P	18 03 26.3	-5.6
	baz=36								
SNH	**Sunshine Point**	**52.52**	**323**		IAMs_20	IAMs_20		18 24 49.3	
	comp=Z,3µm,19.0s								
833A	**Chaparral WMA,**	**52.54**	**268**		P		**P**	**18 03 32.3**	**-1.4**
833A					IAmb	IAmb		18 03 39.3	
	comp=Z,28nm,1.1s								
833A	**Chaparral WMA,**	**52.54**	**268**		P		**P**	**18 03 32.8**	**-0.8**
	baz=42								
833A	**Chaparral WMA,**	**52.54**	**268**		P		**P**	**18 03 33.2**	**-0.4**
	baz=42								
833A					S		**S**	**18 11 01.2**	**+0.9**
	baz=42								
WAT1	**Susitna Watana**	**52.54**	**328**		P		**P**	**18 03 33.6**	**+0.3**
	baz=43								
BMRM	**Bremner River**	**52.58**	**325**		IAMs_20	IAMs_20		18 24 47.8	

baz=43
SDV Santo Domingo 53.05 226 LR LR 18 22 03.4
comp=Z,423nm,21.3s,baz=42,slow=31
DBIC Dimbokro 53.10 141 P **P** **18 03 37.5 -0.4**
comp=Z,9.7nm,0.9s,baz=339,slow=6.7,SNR=6.5
DBIC LR LR 18 23 17.1
comp=Z,4µm,20.7s,baz=352,slow=33
comp=Z,9.7nm,0.9s
DBIC Dimbokro 53.10 141 P **P** **18 03 37.2 -0.7**
DBIC IAmb IAmb 18 03 50.7
comp=Z,20nm,1.1s
DBIC Dimbokro 53.10 141 P **P** **18 03 37.2 -0.7**
DBIC pmax pmax
comp=Z,20nm,1.1s
MTPU Mount Pierson 53.10 286 P **P** **18 03 37.5 -0.7**
MTPU IAmb IAmb 18 03 47.2
comp=Z,54nm,1.6s
CAST Castle Rocks 53.18 330 P **P** **18 03 37.1 -0.9**
CAST IAmb IAmb 18 03 45.5
comp=Z,22nm,1.2s
CAST Castle Rocks 53.18 330 P **P** **18 03 36.2 -1.8**
baz=41,SNR=10.0
WISH Wishkah 53.19 301 P **P** **18 03 35.8 -2.4**
G05D Wamic, OR 53.20 298 P **P** **18 03 39.9 +1.6**
baz=48
G05D S S 18 11 22.1 +13
baz=48
J20K Nowinta River 53.20 331 IAMs_20 IAMs_20 18 25 36.2
comp=Z,2µm,22.0s
J20K Nowinta River 53.20 331 P **P** **18 03 38.1 0.0**
baz=40,SNR=5.4
J20K S **S** **18 11 13.0 +4.5**
baz=40
SML Sawmill 53.22 327 P **P** **18 03 38.9 +0.6**
baz=43,SNR=5.3
SML S **S** **18 11 15.0 +6.1**
baz=43
AKTO Aktyubinsk 53.30 53 LR LR 18 25 20.7
comp=Z,1µm,21.3s,baz=304,slow=35
FID Port Fidalgo 53.38 325 IAMs_20 IAMs_20 18 25 15.4
comp=Z,2µm,19.0s
CUT Chulitna 53.39 328 IAMs_20 IAMs_20 18 26 29.0
comp=Z,1µm,19.0s
GNI Garni 53.41 70 P **P** **18 03 39.7 -0.4**
comp=Z,9.4nm,0.8s,baz=10.0,slow=4.7,SNR=5.1
GNI LR LR 18 27 32.7
comp=Z,968nm,19.0s,baz=319,slow=37
comp=Z,9.4nm,0.8s
GNI Garni 53.41 70 P **P** **18 03 40.1 -0.1**
GNI IAmb IAmb 18 03 56.8
comp=Z,16nm,0.9s
GNI Garni 53.41 70 IAMs_20 IAMs_20 18 25 40.1
comp=Z,2µm,22.0s
GNI Garni 53.41 70 P **P** **18 03 40.1 -0.1**
GNI pmax pmax
comp=Z,16nm,1.0s
GNI MLR MLR
comp=Z,2µm,22.0s
ZKTA Zakatala 53.43 68 P **P** **18 03 40.4 +0.3**
GHO Glory Hole Cre 53.43 327 P **P** **18 03 39.0 -0.9**
E03A Lebam 53.47 301 P **P** **18 03 40.0 -0.3**
GLI Glacier Island 53.49 326 IAMs_20 IAMs_20 18 25 16.8
comp=Z,2µm,20.0s
GLI Glacier Island 53.49 326 S S 18 11 20.8 +8.3
baz=43
GCSA Galena City Sc 53.52 333 P **P** **18 03 40.7 +0.4**
baz=39
GCSA S S 18 11 23.2 +10
baz=39
KNK Knik Glacier 53.55 327 P **P** **18 03 40.6 -0.1**
baz=43
KNK S S 18 11 22.3 +9.0
baz=43
PPLA Purkeypile 53.61 330 P **P** **18 03 42.3 +1.1**
baz=41
MNTX Cornudas Mount 53.62 275 P **P** **18 03 40.4 -1.2**
MNTX IAmb IAmb 18 03 48.3
comp=Z,25nm,1.4s
MNTX Cornudas Mount 53.62 275 P **P** **18 03 41.4 -0.3**
baz=44,SNR=14
MNTX S **S** **18 11 22.0 +7.0**
baz=44
PMR Palmer 53.63 327 P **P** **18 03 40.4 -0.8**
PMR IAmb IAmb 18 03 49.8
comp=Z,41nm,1.5s
PMR Palmer 53.63 327 P **P** **18 03 40.4 -0.8**
PMR pmax pmax
comp=Z,41nm,1.5s
PMR Palmer 53.63 327 P **P** **18 03 41.5 +0.2**
baz=42
PMR S S 18 11 24.9 +11
baz=42
HIN Hinchinbrook I 53.64 325 IAMs_20 IAMs_20 18 25 31.9
comp=Z,2µm,18.0s
WVOR Wild Horse Val 53.68 294 P **P** **18 03 41.2 -0.9**
WVOR IAMs_20 IAMs_20 18 25 37.7
comp=Z,3µm,18.0s
WVOR Wild Horse Val 53.68 294 P **P** **18 03 41.2 -0.9**
WVOR pmax pmax
comp=Z,45nm,1.4s
WVOR MLR MLR
comp=Z,3µm,18.0s
PSUT Pine Spring 53.71 288 P **P** **18 03 41.6 -0.9**
PSUT IAmb IAmb 18 03 50.1
comp=Z,42nm,1.5s
W18A Petrified Fore 53.74 282 P **P** **18 03 39.9 -2.7**
W18A Petrified Fore 53.74 282 P **P** **18 03 42.8 +0.2**
baz=45
K20K Telida 53.81 331 P **P** **18 03 42.1 -0.5**
K20K IAmb IAmb 18 03 50.5
comp=Z,15nm,1.1s
K20K IAMs_20 IAMs_20 18 25 18.2
comp=Z,2µm,22.0s
K20K Telida 53.81 331 P **P** **18 03 42.6 0.0**
baz=40,SNR=7.9
M22K Willow 53.83 328 P **P** **18 03 42.8 +0.1**
baz=42
SZCU Shurtz Canyon 53.93 286 P **P** **18 03 43.2 -0.9**
GANJ Ganja 53.94 69 P **P** **18 03 44.0 +0.1**
PINE Pine Mountain 53.98 297 P **P** **18 03 43.8 -0.6**
SEKA Sheki 54.04 68 P **P** **18 03 45.3 +0.7**
SKT Skwentna 54.10 328 P **P** **18 03 44.1 -0.6**
SKT IAmb IAmb 18 03 51.8
comp=Z,32nm,1.2s
SKT IAMs_20 IAMs_20 18 27 01.9
comp=Z,1µm,20.0s
SKT Skwentna 54.10 328 P **P** **18 03 44.7 0.0**
baz=41,SNR=8.1
SKT S **S** **18 11 27.2 +6.4**
baz=41
CCUT Cedar City 54.12 286 P **P** **18 03 44.9 -0.6**
CCUT IAmb IAmb 18 03 53.1
comp=Z,24nm,1.4s
RC01 Rabbit Creek A 54.20 327 P **P** **18 03 46.5 +1.0**
baz=42
RC01 S S 18 11 31.5 +9.4
baz=42
G03D McMinnville, O 54.23 299 IAMs_20 IAMs_20 18 25 14.0
comp=Z,2µm,20.0s
SUA Susitna One 54.24 328 S S 18 11 31.2 +8.3
baz=41
X18A Snowflake 54.28 281 P **P** **18 03 45.9 -0.7**
MNGR Mingechevir, A 54.28 68 P **P** **18 03 46.3 0.0**
BMN Battle Mountai 54.28 291 P **P** **18 03 46.0 -0.5**
BMN IAmb IAmb 18 03 55.2
comp=Z,32nm,1.5s
BMN Battle Mountai 54.28 291 P **P** **18 03 46.0 -0.5**
BMN pmax pmax
comp=Z,33nm,1.5s
U15A North Rim 54.29 285 P **P** **18 03 45.6 -1.2**
TIXI Tiksi 54.29 6 LR LR 18 25 53.7
comp=Z,299nm,18.0s,baz=359,slow=35
TIXI Tiksi 54.29 6 P **P** **18 03 46.0 0.0**
TIXI IAmb IAmb 18 03 52.9
comp=Z,19nm,0.9s
TIXI Tiksi 54.29 6 *ceP* **P** **18 03 46.2 +0.2**
TIXI pmax pmax
comp=Z,17nm,0.8s
Q23K Middleton Isla 54.30 324 IAMs_20 IAMs_20 18 24 08.1
comp=Z,2µm,21.0s
TX31 Lajitas Ar. Si 54.32 272 P **P** **18 03 46.0 -0.9**
TXAR Lajitas Array 54.32 272 P **P** **18 03 46.4 -0.5**
comp=Z,9.2nm,1.1s,baz=59,slow=4.8,SNR=27
TXAR PcP **PcP** **18 04 50.8 -0.1**
comp=Z,3.7nm,0.9s,baz=64,slow=3.3,SNR=5.6
TXAR LR LR 18 26 36.2
comp=Z,4µm,18.1s,baz=41,slow=36
comp=Z,9.2nm,1.1s
TXAR Lajitas Array 54.32 272 P **P** **18 03 46.1 -0.8**
TXAR PcP **PcP** **18 04 49.9 -0.9**
TXAR Lajitas Array 54.32 272 P **P** **18 03 46.1 -0.8**
TXAR 18 04 49.9
WUAZ Wupatki 54.40 283 P **P** **18 03 48.1 +0.6**
baz=45
LCMT Little Creek M 54.42 286 P **P** **18 03 46.7 -0.9**
H04D Lebanon 54.42 299 IAMs_20 IAMs_20 18 25 18.3
comp=Z,2µm,20.0s
121A Cookes Peak, D 54.44 278 P **P** **18 03 48.4 +0.7**
baz=44
J05D Fort Rock, OR 54.49 297 P **P** **18 03 48.6 +0.6**
baz=46,SNR=14
ASF Jabal al Asfar 54.50 83 P **P** **18 03 49.5 +1.3**
comp=Z,3.3nm,0.9s,baz=247,slow=3.4,SNR=5.9
comp=Z,3.3nm,0.9s
NAX Nakhchivan 54.50 70 P **P** **18 03 48.2 +0.1**
COR Corvallis 54.68 299 IAMs_20 IAMs_20 18 25 27.0
comp=Z,2µm,20.0s
K05A Summer Lake 54.69 296 P **P** **18 03 48.7 -0.8**
TTA Tatalina 54.70 331 P **P** **18 03 48.1 -1.0**
TTA IAmb IAmb 18 03 56.8
comp=Z,20nm,1.5s
TTA PcP **PcP** **18 04 52.1 +0.4**
TTA Tatalina 54.70 331 P **P** **18 03 48.7 -0.5**
baz=39
R11A Troy Canyon, C 54.81 289 P **P** **18 03 48.8 -1.7**
R11A IAmb IAmb 18 03 58.5
comp=Z,24nm,1.4s
R11A Troy Canyon, C 54.81 289 P **P** **18 03 49.7 -0.8**
baz=46,SNR=14
SEW Seward 54.85 326 S **S** **18 11 36.7 +6.0**
baz=41
N20K Mount Spurr 54.90 328 S **S** **18 11 35.2 +3.5**
baz=40
MOD Modoc Plateau 54.94 295 P **P** **18 03 50.8 -0.5**
MOD IAmb IAmb 18 03 58.8
comp=Z,28nm,1.3s
MOD IAMs_20 IAMs_20 18 26 27.2
comp=Z,3µm,18.0s
J04D Umpqua Nationa 54.98 297 IAMs_20 IAMs_20 18 25 49.1
comp=Z,3µm,19.0s
J04D Umpqua Nationa 54.98 297 P **P** **18 03 52.2 +0.6**
baz=46
ABKAR Akbulak array 55.02 53 P **P** **18 03 50.8 -0.8**
M19K Big River Lodg 55.03 330 P **P** **18 03 50.1 -1.3**
M19K IAMs_20 IAMs_20 18 27 12.5
comp=Z,1µm,18.0s
EIL Elat 55.17 86 P **P** **18 03 54.6 +1.7**
comp=Z,3.2nm,0.9s,baz=306,slow=11,SNR=1.7
EIL LR LR 18 31 04.8
comp=Z,385nm,20.3s,baz=273,slow=40
comp=Z,3.2nm,0.9s
PRN Pahroc Range 55.17 287 P **P** **18 03 52.7 -0.3**
K04D Chiloquin, OR 55.22 296 P **P** **18 03 53.8 +0.6**
baz=46
I02E Swisshome, OR 55.29 299 IAMs_20 IAMs_20 18 25 57.2
comp=Z,2µm,20.0s
S11A Rachel 55.40 288 P **P** **18 03 54.3 -0.4**
TNA Tin City 55.55 338 S **S** **18 11 42.6 +2.5**
baz=32
KVN Kaiserville 55.73 291 P **P** **18 03 56.0 -1.0**
KVN IAmb IAmb 18 04 05.2
comp=Z,33nm,1.2s
KVN Kaiserville 55.73 291 P **P** **18 03 56.0 -1.0**
KVN pmax pmax
comp=Z,33nm,1.2s
L04D Klamath Falls 55.79 296 P **P** **18 03 56.1 -1.3**
L04D IAMs_20 IAMs_20 18 26 36.6
comp=Z,3µm,20.0s
L04D Klamath Falls 55.79 296 P **P** **18 03 56.5 -0.9**
baz=46
HUMO Hull Mountain 55.87 297 P **P** **18 03 56.3 -1.5**
HUMO IAmb IAmb 18 04 02.4
comp=Z,37nm,2.0s
HUMO IAMs_20 IAMs_20 18 26 37.5
comp=Z,2µm,18.0s
SHPR Sheep Range 55.87 287 P **P** **18 03 56.9 -1.2**
SHPR IAmb IAmb 18 04 05.5
comp=Z,28nm,1.6s
N19K Bonanza Creek 55.91 329 P **P** **18 03 56.7 -1.2**
N19K IAMs_20 IAMs_20 18 27 19.7
comp=Z,1µm,18.0s
TPH Tonopah 55.92 289 P **P** **18 03 57.6 -0.9**
TPH Tonopah 55.92 289 P **P** **18 03 57.6 -0.9**
TPH pmax pmax
comp=Z,177nm,1.3s
PAHR Pah Rah Range 55.97 292 P **P** **18 03 58.4 -0.3**
J01E Myrtle Point 55.99 298 IAMs_20 IAMs_20 18 26 26.8
comp=Z,2µm,19.0s
ZARC Zagoza, Cauc 56.14 230 P **P** **18 03 59.6 -0.4**
319A Douglas 56.15 278 P **P** **18 03 59.1 -1.0**
TPNV Topopah Spring 56.17 288 P **P** **18 03 58.3 -2.0**
TPNV IAmb IAmb 18 04 11.8
comp=Z,20nm,1.6s
TPNV Topopah Spring 56.17 288 P **P** **18 03 58.3 -2.0**
TPNV pmax pmax
comp=Z,20nm,1.7s
TPNV MLR MLR
comp=Z,1µm,20.0s
TPNV Topopah Spring 56.17 288 P **P** **18 04 00.5 +0.2**
baz=45,SNR=9.8
K02D Willamette Mer 56.18 297 P **P** **18 03 57.2 -2.9**
baz=45
NV11 Mina Array Sit 56.19 290 P **P** **18 03 59.1 -1.3**
NV11 IAmb IAmb 18 04 08.2
comp=Z,30nm,1.2s
RYN Ryan 56.26 291 P **P** **18 04 00.0 -0.8**
RYN IAmb IAmb 18 04 08.5
comp=Z,16nm,1.0s
NVAR Mina Array Bea 56.28 290 P **P** **18 04 00.7 -0.3**
comp=Z,1.4nm,0.7s,baz=47,slow=5.3,SNR=10
NVAR LR LR 18 27 07.9
comp=Z,4µm,19.8s,baz=42,slow=35
comp=Z,1.4nm,0.7s
NVAR Mina Array Bea 56.28 290 P **P** **18 03 59.4 -1.6**
YBH Yreka Blue Hor 56.35 296 P **P** **18 04 00.1 -1.2**
comp=Z,3.5nm,0.9s,baz=65,slow=5.3,SNR=4.1
YBH LR LR 18 27 16.0
comp=Z,3µm,19.1s,baz=40,slow=35
comp=Z,3.5nm,0.9s
YBH Yreka Blue Hor 56.35 296 P **P** **18 03 59.6 -1.7**
YBH IAmb IAmb 18 04 07.5
comp=Z,20nm,1.4s
YBH IAMs_20 IAMs_20 18 26 55.3
comp=Z,3µm,20.0s
YBH Yreka Blue Hor 56.35 296 P **P** **18 03 59.7 -1.7**
YBH pmax pmax
comp=Z,20nm,1.4s
YBH MLR MLR
comp=Z,3µm,20.0s
TUC Tucson 56.35 280 P **P** **18 04 01.4 -0.1**
TUC IAmb IAmb 18 04 10.1
comp=Z,26nm,1.6s
TUC Tucson 56.35 280 P **P** **18 04 01.4 -0.1**
TUC pmax pmax
comp=Z,26nm,1.6s
TUC MLR MLR
comp=Z,13µm,18.0s
TUC Tucson 56.35 280 P **P** **18 04 02.4 +0.9**
baz=43
BEKR Beckworth 56.40 293 P **P** **18 04 01.5 -0.3**
VCNR Virginia City 56.41 292 P **P** **18 04 00.8 -1.2**
VCNR IAmb IAmb 18 04 12.3
comp=Z,26nm,1.2s
LHV Little Huntoon 56.51 290 P **P** **18 04 01.9 -0.4**
LHV IAmb IAmb 18 04 10.8
comp=Z,39nm,1.4s
PNTR Pine Nut 56.53 292 P **P** **18 04 02.6 -0.3**
L02F Cave Junction 56.53 297 P **P** **18 04 02.5 0.0**
baz=45
LKRN Lenkeran, Azer 56.65 69 P **P** **18 04 03.3 -0.1**
TGUH Tegucigalpa,Un 56.74 246 IAMs_20 IAMs_20 18 29 14.1
comp=Z,2µm,18.0s
LCH Last Change Ra 56.76 289 P **P** **18 04 03.3 -1.1**
GRAC Grapevine Rang 56.77 289 P **P** **18 04 03.4 -0.9**
GRAC Grapevine Rang 56.77 289 P **P** **18 04 04.5 +0.2**
baz=44,SNR=16
PDMCI Parker Dam,Lak 56.86 284 P **P** **18 04 06.1 +1.1**
baz=44
FURC Furnace Creek, 56.86 288 P **P** **18 04 05.6 +0.7**
baz=44,SNR=6.4
O18K Koktuh Hills 56.89 329 P **P** **18 04 04.0 -0.8**
O18K Koktuh Hills 56.89 329 P **P** **18 04 04.6 -0.2**
baz=38
SHOC Shoshone, Teco 56.94 287 P **P** **18 04 05.7 +0.2**
baz=44
BVAR Borovoye Array 56.95 44 LR LR 18 28 05.2
comp=Z,945nm,18.1s,baz=178,slow=36
GWY Greenwater Val 56.95 287 P **P** **18 04 05.2 -0.6**
BCIP Isla Barro Col 57.02 236 IAMs_20 IAMs_20 18 23 52.0
comp=Z,2µm,22.0s
TUQ Turquoise Moun 57.07 286 P **P** **18 04 07.0 +0.5**
baz=44
Q19K Cape Douglas, 57.12 327 P **P** **18 04 05.1 -1.4**
Q19K Cape Douglas, 57.12 327 P **P** **18 04 05.7 -0.8**
baz=38
QSM Queen of Sheba 57.22 287 P **P** **18 04 06.5 -1.1**
QSM IAmb IAmb 18 04 16.0
comp=Z,35nm,1.4s
OMMB Old Mammoth Mi 57.24 290 P **P** **18 04 06.3 -1.7**
OMMB IAmb IAmb 18 04 16.7
comp=Z,27nm,1.4s
MDPB Devils Postpil 57.27 290 P **P** **18 04 06.4 -1.8**
MDPB IAmb IAmb 18 04 21.0
comp=Z,20nm,1.5s
BILL Bilibino 57.37 351 *ljeP* **P** **18 04 07.9 -0.2**
BILL *e* 18 06 14.2
BILL pmax pmax
comp=Z,8.0nm,1.7s
BILL MLR MLR
comp=Z,641nm,17.0s
GMRC Granite Mounta 57.38 286 P **P** **18 04 08.9 +0.1**
baz=44
N16K Nishlik Lake 57.46 331 S S 18 12 16.1 +11
baz=36
BLYC Blythe 57.48 284 P **P** **18 04 08.6 -0.7**
KHMM Horse Mountain 57.50 296 P **P** **18 04 08.1 -1.5**
MPMC Manual Prospec 57.51 288 P **P** **18 04 10.4 +0.6**
baz=44,SNR=29
IRM Iron Mountain 57.54 285 P **P** **18 04 10.2 +0.4**
baz=44
CWC Cottonwood Cre 57.57 289 P **P** **18 04 10.6 +0.5**
baz=44
CCIG Comitan 57.62 252 P **P** **18 04 09.2 -1.5**
GSC Goldstone, Bar 57.66 287 P **P** **18 04 11.5 +0.7**
baz=44
KDAK Kodiak Island 57.68 326 LR LR 18 28 21.8
comp=Z,2µm,19.0s,baz=63,slow=36
KDAK Kodiak Island 57.68 326 IAMs_20 IAMs_20 18 28 01.5
comp=Z,1µm,20.0s
HEC Hector,Ludlow 57.74 286 P **P** **18 04 12.6 +1.3**
baz=44
113A Mohawk Valley, 57.75 283 P **P** **18 04 10.5 -0.7**
113A IAmb IAmb 18 04 20.0
comp=Z,33nm,1.4s
214A Organ Pipe Nat 57.79 281 P **P** **18 04 10.8 -0.7**
214A Organ Pipe Nat 57.79 281 P **P** **18 04 12.4 +0.8**
baz=43,SNR=8.5
LRMC Laurel Mtn Rad 58.03 288 P **P** **18 04 13.8 +0.5**
baz=44,SNR=8.8
BC3 Big Chuckawall 58.08 284 P **P** **18 04 14.7 +1.0**
baz=43,SNR=12
SNET Serv Nac Est T 58.11 248 IAMs_20 IAMs_20 18 31 03.3
comp=Z,2µm,18.0s
BELC Belle Mtn. Jos 58.14 285 P **P** **18 04 15.4 +1.2**
baz=43,SNR=13
GLA Glamis 58.16 284 P **P** **18 04 13.9 -0.3**
GLA Glamis 58.16 284 P **P** **18 04 13.9 -0.3**
GLA pmax pmax
comp=Z,81nm,1.6s
GLA Glamis 58.16 284 P **P** **18 04 14.8 +0.6**
baz=43
ROSC El Rosal 58.26 228 P **P** **18 04 15.8 +0.3**
comp=Z,66nm,0.9s,baz=42,slow=6.4,SNR=22
ROSC LR LR 18 26 28.7
comp=Z,625nm,21.7s,baz=25,slow=33
ROSC El Rosal 58.26 228 P **P** **18 04 15.7 +0.3**
ROSC El Rosal 58.26 228 P **P** **18 04 15.7 +0.3**
ROSC pmax pmax
comp=Z,138nm,1.1s
ISA Isabella, Lake 58.35 288 P **P** **18 04 16.6 +1.1**
baz=44
CCAC Calif City Air 58.46 287 P **P** **18 04 16.5 +0.3**
HDC Heredia 58.46 240 IAMs_20 IAMs_20 18 25 18.8
comp=Z,2µm,19.0s
CMIG Matias Romero 58.53 255 LR LR 18 30 54.2
comp=Z,1µm,19.8s,baz=42,slow=38
VES Vestal, Richgr 58.56 289 P **P** **18 04 17.7 +0.8**
baz=44
EDW2 Edwards Air Fo 58.64 287 P **P** **18 04 18.5 +1.0**
baz=43,SNR=12
JTS Las Juntas de 58.65 241 P **P** **18 04 18.1 +0.4**
comp=Z,4.6nm,0.5s,baz=32,slow=13,SNR=1.6
JTS LR LR 18 26 50.4
comp=Z,2µm,20.7s,baz=80,slow=33
comp=Z,4.6nm,0.5s
JTS Las Juntas de 58.65 241 IAmb IAmb 18 04 23.8
comp=Z,48nm,1.5s
JTS IAMs_20 IAMs_20 18 26 56.9
comp=Z,3µm,19.0s
JTS Las Juntas de 58.65 241 P **P** **18 04 18.1 +0.4**
JTS pmax pmax
comp=Z,48nm,1.5s
JTS MLR MLR
comp=Z,3µm,19.0s
PFO Pinyon Flats O 58.69 285 P **P** **18 04 18.9 +0.9**
comp=Z,7.7nm,0.7s,baz=52,slow=5.9,SNR=12
PFO LR LR 18 29 19.2
comp=Z,1µm,19.6s,baz=58,slow=36
comp=Z,7.7nm,0.7s
PFO Pinyon Flats O 58.69 285 P **P** **18 04 17.7 -0.3**
PFO IAmb IAmb 18 04 28.6
comp=Z,23nm,1.1s
PFO Pinyon Flats O 58.69 285 IAMs_20 IAMs_20 18 28 56.7
comp=Z,1µm,20.0s
PFO Pinyon Flats O 58.69 285 P **P** **18 04 17.7 -0.3**
PFO pmax pmax
comp=Z,23nm,1.1s
PFO MLR MLR
comp=Z,1µm,20.0s
PFO Pinyon Flats O 58.69 285 P **P** **18 04 19.2 +1.2**
baz=43,SNR=9.8
TPFO Pinon Flats 58.69 285 P **P** **18 04 19.2 +1.2**
baz=43,SNR=9.1
SWSC Sam W. Stewart 58.80 284 P **P** **18 04 19.7 +1.2**
baz=43
YUH Yuha Desert 59.08 284 P **P** **18 04 20.2 -0.4**
YUH IAmb IAmb 18 04 25.8
comp=Z,16nm,1.2s
MURC Murrieta 59.12 286 P **P** **18 04 21.4 +0.6**
baz=43
SII Sitkinak Islan 59.18 326 IAMs_20 IAMs_20 18 29 12.3
comp=Z,2µm,19.0s
IKP In-Ko-Pah, Jac 59.19 284 P **P** **18 04 22.1 +0.7**
baz=43
MONP2 Monument Peak 59.19 285 P **P** **18 04 23.2 +1.6**
baz=43
OSI Osito Audit: C 59.25 288 P **P** **18 04 23.4 +1.7**
baz=43
PMPB Monarch Peak 59.25 290 P **P** **18 04 20.8 -0.9**
RCBR Riachuelo 59.46 181 LR LR 18 24 26.7
comp=Z,611nm,18.6s,baz=134,slow=30
109C Camp Elliot, M 59.58 285 IAMs_20 IAMs_20 18 29 35.5
comp=Z,3µm,19.0s
CHIR Chirikof Islan 60.25 326 IAMs_20 IAMs_20 18 29 57.7
comp=Z,2µm,20.0s
TLIG Tlapa 60.29 259 P **P** **18 04 28.1 -1.0**
ZALV Zalesovo Beam 61.69 36 P **P** **18 04 37.6 -0.4**
comp=Z,4.1nm,0.7s,baz=313,slow=7.4,SNR=19
ZALV LR LR 18 31 19.9
comp=Z,552nm,21.5s,baz=304,slow=36
comp=Z,4.1nm,0.7s
ZALV Zalesovo Beam 61.69 36 P **P** **18 04 37.3 -0.8**
ZALV Zalesovo Beam 61.69 36 P **P** **18 04 37.3 -0.8**
KURK Kurchatov 62.01 41 P **P** **18 04 39.2 -1.1**
KURK IAmb IAmb 18 04 46.4
comp=Z,12nm,0.9s
KURK Kurchatov 62.01 41 P **P** **18 04 39.2 -1.1**
KURK pmax pmax
comp=Z,12nm,0.9s
KURK MLR MLR
comp=Z,1µm,21.0s
KURBB Kurchatov Arra 62.05 41 LR LR 18 30 58.0
comp=Z,741nm,18.4s,baz=285,slow=35
LPIG La Paz 62.16 273 LR LR 18 31 27.1
comp=Z,4µm,19.4s,baz=56,slow=36
GEYT Alibeck 62.27 63 P **P** **18 04 43.3 +1.1**
comp=Z,2.1nm,0.6s,baz=295,slow=16,SNR=2.5
GEYT LR LR 18 32 18.2
comp=Z,960nm,20.6s,baz=336,slow=37
comp=Z,2.1nm,0.6s

GEYT Alibeck 62.27 63 P **P** 18 04 41.6 -0.7
GEYT IAmb IAmb 18 04 54.1
comp=Z,15nm,1.6s
GYA0B ALIBECK ARRAY 62.27 63 P **P** 18 04 41.8 -0.4
GYA0B IAmb IAmb 18 04 54.0
comp=Z,24nm,1.6s
CNBA Chernabura Isl 62.37 327 IAMs_20 IAMs_20 18 31 17.4
comp=Z,1µm,20.0s
SEY Seymchan 63.40 356 LR LR 18 31 11.3
comp=Z,868nm,21.6s,baz=14,slow=35
SEY Seymchan 63.40 356 *ce*P **P** 18 04 48.9 -0.4
SEY pmax pmax
comp=Z,20nm,2.3s
YAK Yakutsk 63.85 8 LR LR 18 32 27.3
comp=Z,320nm,18.3s,baz=26,slow=36
YAK Yakutsk 63.85 8 *i* P **P** 18 04 51.3 -1.0
YAK pmax pmax
comp=Z,8.0nm,0.8s
OTAV Otavalo 64.19 229 P **P** 18 04 54.9 -0.8
OTAV IAmb IAmb 18 05 11.1
comp=Z,26nm,1.4s
OTAV Otavalo 64.19 229 P **P** 18 04 54.9 -0.8
OTAV pmax pmax
comp=Z,26nm,1.4s
KK31 Karatay Array 64.50 51 P **P** 18 04 56.5 -0.5
KK31 IAmb IAmb 18 05 04.5
comp=Z,15nm,1.5s
KK31 Karatay Array 64.50 51 P **P** 18 04 56.5 -0.5
KK31 pmax pmax
comp=Z,15nm,1.5s
KKAR Karatay Array 64.50 51 P **P** 18 04 57.0 0.0
KKAR Karatay Array 64.50 51 P **P** 18 04 57.0 0.0
BOD Bodaibo 65.92 17 *e*P **P** 18 05 03.0 -2.9
BOD pmax pmax
comp=Z,12nm,1.6s
RAYN Ar Rayn 66.00 83 P **P** 18 05 06.7 -0.2
RAYN Ar Rayn 66.00 83 IAMs_20 IAMs_20 18 36 12.1
comp=Z,1µm,20.0s
RAYN Ar Rayn 66.00 83 P **P** 18 05 06.7 -0.2
RAYN pmax pmax
comp=Z,11nm,1.4s
RAYN MLR MLR
comp=Z,1µm,20.0s
MAKZ Makanchi 66.48 42 P **P** 18 05 09.3 -0.4
MAKZ IAmb IAmb 18 05 16.4
comp=Z,13nm,1.1s
MAKZ IAMs_20 IAMs_20 18 35 38.1
comp=Z,1µm,18.0s
MAKZ Makanchi 66.48 42 P **P** 18 05 09.3 -0.4
MAKZ pmax pmax
comp=Z,13nm,1.2s
MAKZ MLR MLR
comp=Z,1µm,18.0s
MK31 Makanchi Array 66.61 42 P **P** 18 05 09.9 -0.6
MK31 Makanchi Array 66.61 42 P **P** 18 05 09.9 -0.6
MK31 pmax pmax
comp=Z,6.0nm,0.9s
MKAR Makanchi Array 66.61 42 P **P** 18 05 10.6 +0.1
comp=Z,6.4nm,0.7s,baz=328,slow=5.6,SNR=60
MKAR LR LR 18 34 48.7
comp=Z,619nm,18.8s,baz=298,slow=36
comp=Z,6.4nm,0.7s
MKAR Makanchi Array 66.61 42 P **P** 18 05 09.9 -0.6
MKAR Makanchi Array 66.61 42 P **P** 18 05 09.9 -0.6
AAK Ala-Archa 66.68 49 LR LR 18 33 23.8
comp=Z,2µm,21.1s,baz=323,slow=35
AAK Ala-Archa 66.68 49 P **P** 18 05 11.5 +0.3
AAK IAmb IAmb 18 05 23.4
comp=Z,12nm,1.3s
AAK Ala-Archa 66.68 49 IAMs_20 IAMs_20 18 33 11.1
comp=Z,2µm,20.0s
AAK Ala-Archa 66.68 49 P **P** 18 05 11.5 +0.3
AAK pmax pmax
comp=Z,12nm,1.3s
AAK MLR MLR
comp=Z,2µm,20.0s
MA2 Magadan 66.82 357 LR LR 18 33 21.8
comp=Z,657nm,21.9s,baz=7.0,slow=35
MA2 Magadan 66.82 357 *i* P **P** 18 05 10.3 -1.3
MA2 pmax pmax
comp=Z,17nm,1.4s
SAML Samuel 66.87 210 P **P** 18 05 10.9 -1.5
SAML IAmb IAmb 18 05 12.5
comp=Z,9.5nm,1.1s
SAML Samuel 66.87 210 P **P** 18 05 10.9 -1.5
SAML pmax pmax
comp=Z,9.0nm,1.1s
BTK Batken 67.02 53 P **P** 18 05 12.7 -0.6
BTK IAmb IAmb 18 05 24.9
comp=Z,12nm,1.1s
BTK Batken 67.02 53 P **P** 18 05 12.7 -0.6
BTK pmax pmax
comp=Z,12nm,1.1s
BOSC San Juan Bosco 67.22 228 P **P** 18 05 14.2 -0.7
GAR Garm 67.61 54 P **P** 18 05 17.3 +0.1
KDJ Kajisay 68.28 48 P **P** 18 05 21.2 -0.2
KDJ IAmb IAmb 18 05 33.2
comp=Z,14nm,1.4s
KDJ Kajisay 68.28 48 P **P** 18 05 21.2 -0.2
KDJ pmax pmax
comp=Z,14nm,1.4s
KNGR Kungurtug, Tuv 68.63 30 *i* P **P** 18 05 23.5 +0.2
KNGR pmax pmax
comp=Z,7.0nm,0.8s
TARG Taragay, Kyrgy 68.88 48 P **P** 18 05 23.5 -1.9
TARG Taragay, Kyrgy 68.88 48 P **P** 18 05 23.5 -1.9
TARG pmax pmax
comp=Z,81nm,2.2s
ADK Adak 69.81 336 IAMs_20 IAMs_20 18 35 45.2
comp=Z,1µm,21.0s
KSH Kashi 69.85 50 P **P** 18 05 33.5 +2.4
KSH pP pwP 18 05 39.0 +2.7
KSH sP sP 18 05 42.5 +7.8
KSH S **S** **18 14 35.3 -5.2**
KSH sS sS 18 14 53.5 +8.9
KSH SS **SS** **18 19 07.0 -1.3**
KSH pmax pmax
comp=Z,9.0nm,1.4s
KSH pmax pmax
comp=Z,400nm,6.1s
KSH LR LR
comp=Z,1µm,19.6s
KSH LR LR
comp=Z,1µm,18.1s
KSH LR LR
comp=Z,2µm,19.0s
BDFB Brasilia 70.07 193 P **P** 18 05 33.1 +0.7
comp=Z,1.4nm,0.3s,baz=351,slow=18,SNR=3.7
BDFB LR LR 18 31 05.6
comp=Z,606nm,18.6s,baz=330,slow=32
comp=Z,1.4nm,0.3s
BDFB Brasilia 70.07 193 P **P** 18 05 32.3 -0.2
BDFB Brasilia 70.07 193 P **P** 18 05 32.3 -0.2
BDFB pmax pmax
comp=Z,87nm,2.2s
ZAK Zakamensk 70.45 27 *e*P **P** 18 05 33.5 -1.1
ZAK pmax pmax
comp=Z,5.0nm,2.2s
ATAH Atahualpa 70.75 226 P **P** 18 05 38.4 +1.3
comp=Z,5.4nm,0.9s,baz=102,slow=4.3,SNR=2.3
ATAH LR LR 18 37 11.8
comp=Z,398nm,19.7s,baz=1.1,slow=36
comp=Z,5.4nm,0.9s
SHEM Shemya Is, Ala 71.00 342 LR LR 18 38 47.1
comp=Z,356nm,20.0s,baz=53,slow=38
UOSS Minazif 71.10 74 P **P** 18 05 37.7 -1.1
WMQ Urumqi 71.19 40 *e*P **P** 18 05 42.0 +2.9
WMQ LR LR
comp=Z,670nm,22.3s
WMQ LR LR
comp=Z,1µm,19.5s
WMQ LR LR
comp=Z,870nm,24.7s
ZEA Zeya 71.80 11 *i* P **P** 18 05 42.6 +0.1
PETK Petropavlovsk- 72.86 352 P **P** 18 05 48.4 -0.5
comp=Z,2.7nm,0.8s,baz=9.6,slow=3.0,SNR=3.6
PETK LR LR 18 39 21.8
comp=Z,970nm,19.5s,baz=22,slow=37
comp=Z,2.7nm,0.8s
SIV San Ignacio 73.00 206 P **P** 18 05 50.4 +0.4
comp=Z,7.4nm,0.9s,baz=37,slow=5.9,SNR=16
SIV LR LR 18 33 20.5
comp=Z,777nm,21.3s,baz=62,slow=32
comp=Z,7.4nm,0.9s
FURI Furi 73.41 98 IAMs_20 IAMs_20 18 40 36.5
comp=Z,865nm,19.0s

SONM Songino Array 73.61 26 P **P** 18 05 53.6 +0.1
comp=Z,4.3nm,0.9s,baz=332,slow=6.2,SNR=29
SONM LR LR 18 38 33.7
comp=Z,425nm,21.0s,baz=332,slow=36
comp=Z,4.3nm,0.9s
SONM Songino Array 73.61 26 P **P** 18 05 52.7 -0.8
SONM Songino Array 73.61 26 P **P** 18 05 52.7 -0.8
SONM pmax pmax
comp=Z,15nm,1.4s
ULN Ulaanbaatar 73.75 25 P **P** 18 05 53.7 -0.7
ULN IAmb IAmb 18 06 01.8
comp=Z,22nm,1.2s
ULN Ulaanbaatar 73.75 25 P **P** 18 05 53.7 -0.7
ULN pmax pmax
comp=Z,22nm,1.3s
ULN MLR MLR
comp=Z,400nm,20.0s
ATD Arta Tunnel 73.77 93 LR LR 18 38 23.4
comp=Z,346nm,20.0s,baz=340,slow=36
WSAR Wadi Sarin 73.81 73 LR LR 18 41 22.1
comp=Z,554nm,22.0s,baz=327,slow=38
NNA Nana 74.48 222 LR LR 18 37 04.9
comp=Z,561nm,21.9s,baz=340,slow=34
LPAZ La Paz 75.32 213 P **P** 18 06 03.8 -0.5
comp=Z,8.1nm,1.0s,baz=26,slow=7.1,SNR=11
LPAZ LR LR 18 37 58.2
comp=Z,434nm,19.7s,baz=342,slow=35
comp=Z,8.1nm,1.0s
LPAZ La Paz 75.32 213 P **P** 18 06 03.2 -1.0
LPAZ La Paz 75.32 213 P **P** 18 06 03.3 -1.0
LPAZ pmax pmax
comp=Z,11nm,1.0s
LODK Lodwar 75.89 104 P **P** 18 06 06.7 -0.4
MBAR Mbarara 76.56 110 LR LR 18 39 02.1
comp=Z,2µm,21.1s,baz=319,slow=35
KLR Kul'dur 76.71 9 LR LR 18 39 34.2
comp=Z,301nm,19.8s,baz=0.5,slow=35
KLR Kul'dur 76.71 9 *i* P **P** 18 06 11.9 +0.7
KLR pmax pmax
comp=Z,8.0nm,1.4s
GO01 Chusmiza 78.83 212 P **P** 18 06 23.4 -0.4
GO01 IAmb IAmb 18 07 20.2
comp=Z,15nm,1.0s
PB08 IPOC Station P 79.26 212 P **P** 18 06 25.5 -0.6
PB08 IAmb IAmb 18 06 32.2
comp=Z,14nm,1.1s
GTA Gaotai 79.38 34 ⇓P **P** 18 06 26.0 -0.4
GTA pP sP 18 06 30.0 +0.3
GTA sP pwP 18 06 33.0 +0.8
GTA S **S** **18 16 24.5 -2.5**
GTA SS **SS** **18 21 35.3 +2.5**
GTA pmax pmax
comp=Z,6.0nm,1.1s
GTA pmax pmax
comp=Z,84nm,4.4s
GTA LR LR
comp=Z,420nm,18.5s
GTA LR LR
comp=Z,430nm,19.6s
GTA LR LR
comp=Z,660nm,19.6s
YSS Yuzh-Sakhalins 79.55 1 IAMs_20 IAMs_20 18 44 55.0
comp=Z,770nm,19.0s
YSS Yuzh-Sakhalins 79.55 1 *e*P **P** 18 06 27.1 +0.1
YSS *e*S **S** **18 16 25.9 -2.4**
YSS MLR MLR
comp=Z,700nm,14.0s
BNX BinXian 79.69 12 ⇓P **P** 18 06 26.5 -1.3
BNX PcP **pwP** **18 06 32.3 -1.3**
BNX pP **PcP** **18 06 36.3 +0.7**
BNX pmax pmax
comp=Z,10.0nm,1.8s
BNX pmax pmax
comp=Z,220nm,7.3s
GOMU GeErMu 80.50 39 P **P** 18 06 32.3 -0.5
GOMU pP pP 18 06 35.5 +0.3
GOMU sP PcP 18 06 39.8 0.0
GOMU S **S** **18 16 38.8 -0.7**
GOMU pmax pmax
comp=Z,4.0nm,1.2s
GOMU pmax pmax
comp=Z,220nm,7.2s
GOMU LR LR
comp=Z,580nm,17.5s
GOMU LR LR
comp=Z,570nm,17.3s
GOMU LR LR
comp=Z,380nm,17.6s
KMBO Kilima Mbogo 80.67 105 P **P** 18 06 36.2 +2.5
comp=Z,0.5nm,0.4s,baz=290,slow=10,SNR=1.6
KMBO LR LR 18 42 27.8
comp=Z,700nm,20.5s,baz=278,slow=36
comp=Z,0.5nm,0.4s
KMBO Kilima Mbogo 80.67 105 IAMs_20 IAMs_20 18 42 15.3
comp=Z,774nm,20.0s
BTO Baotou 81.29 26 *e*P **P** 18 06 33.8 -2.8
HHC Hu-ho-hao-te 81.45 25 *e*P **P** 18 06 36.8 -0.7
HHC pmax pmax
comp=Z,18nm,0.8s
HHC pmax pmax
comp=Z,530nm,4.9s
LVC Limon Verde 81.50 211 P **P** 18 06 38.4 +0.4
comp=Z,12nm,1.0s,baz=359,slow=4.1,SNR=7.1
LVC LR LR 18 40 34.4
comp=Z,406nm,19.3s,baz=352,slow=34
comp=Z,12nm,1.0s
LVC Limon Verde 81.50 211 P **P** 18 06 38.4 +0.4
LVC IAmb IAmb 18 06 45.3
comp=Z,18nm,1.1s
LVC Limon Verde 81.50 211 P **P** 18 06 38.4 +0.4
LVC pmax pmax
comp=Z,18nm,1.1s
USRK Ussuriysk Ar. 81.72 9 P **P** 18 06 38.2 -0.4
comp=Z,3.5nm,0.8s,baz=2.7,slow=6.2,SNR=3.6
USRK LR LR 18 43 38.4
comp=Z,287nm,19.2s,baz=343,slow=36
comp=Z,3.5nm,0.8s
CPUP Villa Florida 82.10 200 P **P** 18 06 40.5 -0.2
comp=Z,1.5nm,0.6s,baz=7.9,slow=9.5,SNR=2.3
CPUP LR LR 18 38 32.5
comp=Z,349nm,18.5s,baz=7.0,slow=32
comp=Z,1.5nm,0.6s
CPUP Villa Florida 82.10 200 P **P** 18 06 40.5 -0.2
CPUP pmax pmax
comp=Z,15nm,1.7s
KIBK Kibwezi 82.12 105 IAMs_20 IAMs_20 18 42 57.9
comp=Z,958nm,20.0s
ASAJ Asahikawa 82.39 2 LR LR 18 43 38.4
comp=Z,223nm,19.9s,baz=3.0,slow=36
BJI Beijing 83.30 22 P **P** 18 06 47.3 +0.3
BJI S **S** **18 17 11.8 +4.5**
BJI pmax pmax
comp=Z,6.0nm,2.1s
BJI LR LR
comp=Z,84nm,22.6s
BJI LR LR
comp=Z,340nm,18.0s
BJI LR LR
comp=Z,600nm,19.8s
LZH Lanzhou 83.71 32 ⇑P **P** 18 06 53.0 +3.6
LZH sP pwP 18 06 59.5 +4.2
LZH S **S** **18 17 14.0 +2.0**
LZH SS **SS** **18 22 41.0 +3.6**
LZH pmax pmax
comp=Z,24nm,1.5s
LZH pmax pmax
comp=Z,170nm,5.5s
LZH LR LR
comp=Z,610nm,19.6s
LZH LR LR
comp=Z,780nm,18.5s
LZH LR LR
comp=Z,830nm,18.6s
LSA Lhasa 84.78 45 IAMs_20 IAMs_20 18 46 33.4
comp=Z,979nm,20.0s
HNS HongShan 85.49 24 ⇓P **P** 18 06 59.0 +0.9
HNS S **S** **18 17 33.0 +3.7**
HNS SS **SS** **18 23 08.0 +5.0**
HNS pmax pmax
comp=Z,16nm,1.1s
HNS pmax pmax
comp=Z,320nm,6.3s
HNS LR LR
comp=Z,240nm,15.1s
HNS LR LR
comp=Z,600nm,15.7s
HNS LR LR

comp=Z,550nm,18.6s
TSUM Tsumeb 85.72 131 LR LR 18 41 04.7
comp=Z,714nm,21.9s,baz=338,slow=33
TSUM Tsumeb 85.72 131 IAMs_20 IAMs_20 18 40 17.8
comp=Z,806nm,22.0s
XAN Xi'an 87.14 29 ⇑*i* P **P** **18 07 06.5 +0.1**
XAN pP pwP 18 07 11.0 -1.3
XAN sP sP 18 07 14.0 +4.2
XAN S **S** **18 17 47.0 +1.3**
XAN pmax pmax
comp=Z,8.0nm,1.1s
XAN pmax pmax
comp=Z,250nm,5.7s
XAN LR LR
comp=Z,980nm,19.5s
XAN LR LR
comp=Z,420nm,15.6s
XAN LR LR
comp=Z,900nm,19.2s
LSZ Lusaka 87.45 120 LR LR 18 46 49.0
comp=Z,680nm,20.2s,baz=338,slow=36
LSZ Lusaka 87.45 120 IAMs_20 IAMs_20 18 46 17.5
comp=Z,793nm,20.0s
LYN LuoYang 87.63 26 *e*P **P** **18 07 08.8 +0.1**
LYN PP **PP** **18 10 34.0 +1.0**
LYN S **S** **18 17 57.3 +7.0**
LYN SS **SS** **18 23 38.5 +3.9**
LYN pmax pmax
comp=Z,20nm,0.5s
LYN pmax pmax
comp=Z,240nm,5.3s
LYN LR LR
comp=Z,390nm,13.7s
LYN LR LR
comp=Z,410nm,14.0s
LYN LR LR
comp=Z,510nm,15.9s
KSRS Korea Array 87.91 13 P **P** **18 07 09.4 -0.5**
comp=Z,3.6nm,1.0s,baz=343,slow=6.2,SNR=5.9
KSRS LR LR 18 46 22.0
comp=Z,247nm,20.4s,baz=345,slow=36
comp=Z,3.6nm,1.0s
KSAR Wonju Array Be 87.92 13 P **P** **18 07 09.0 -1.0**
KSAR Wonju Array Be 87.92 13 P **P** **18 07 09.0 -1.0**
CD2 Chengdu 88.44 34 P **P** **18 07 11.0 -1.6**
ENH Enshi 90.83 30 IAMs_20 IAMs_20 18 49 60.0
comp=Z,888nm,20.0s
NJ2 Nanjing 91.56 22 *e*P **P** **18 07 26.0 -1.1**
NJ2 pmax pmax
comp=Z,22nm,0.5s
NJ2 LR LR
comp=Z,450nm,17.5s
NJ2 LR LR
comp=Z,460nm,17.1s
NJ2 LR LR
comp=Z,520nm,18.0s
PZH PanZhiHua 91.77 38 P **P** **18 07 28.3 -0.1**
PZH SKS **SKSac** **18 18 01.8 +0.5**
PZH S **S** **18 18 29.3 0.0**
PZH SS **SS** **18 24 39.3 +4.1**
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH pmax pmax
comp=Z,120nm,6.5s
PZH LR LR
comp=Z,550nm,20.2s
PZH LR LR
comp=Z,380nm,21.2s
PZH LR LR
comp=Z,620nm,21.6s
MATP Matopo 91.95 123 LR LR 18 47 37.0
comp=Z,1µm,20.6s,baz=48,slow=35
SSE Sheshan 92.98 20 P **P** **18 07 32.3 -1.4**
SSE S **S** **18 18 37.3 -2.3**
SSE pmax pmax
comp=Z,10.0nm,0.7s
SSE pmax pmax
comp=Z,58nm,3.9s
SSE LR LR
comp=Z,200nm,22.6s
SSE LR LR
comp=Z,100nm,17.8s
JHJ Hachijo jima 2 93.28 4 LR LR 18 49 26.9
comp=Z,84nm,20.1s,baz=68,slow=36
KMI Kunming 93.39 37 ⇑P **P** **18 07 36.0 0.0**
KMI SKS **SKSac** **18 18 11.0 +0.4**
KMI pmax pmax
comp=Z,9.0nm,1.0s
KMI LR LR
comp=Z,520nm,18.4s
KMI LR LR
comp=Z,220nm,17.4s
KMI LR LR
comp=Z,560nm,19.9s
LBTB Lobatse 94.43 127 LR LR 18 47 46.0
comp=Z,764nm,20.1s,baz=324,slow=34
BOSA Boshof 97.33 129 LR LR 18 49 53.8
comp=Z,1µm,20.0s,baz=340,slow=34
CHTO Chiang Mai 97.65 43 IAMs_20 IAMs_20 18 53 34.7
comp=Z,754nm,22.0s
CMAR Chiang Mai Arr 97.97 43 P Pdif 18 07 56.8 +0.1
comp=Z,0.9nm,0.8s,baz=317,slow=6.5,SNR=6.4
CMAR LR LR 18 54 07.1
comp=Z,657nm,21.5s,baz=320,slow=37
comp=Z,0.9nm,0.8s
CMAR Chiang Mai Arr 97.97 43 P **P** **18 07 55.6 -1.1**
CMAR Chiang Mai Arr 97.97 43 P **P** **18 07 55.6 -1.1**
JOW Kunigami 98.40 15 LR LR 18 53 34.3
comp=Z,234nm,22.0s,baz=288,slow=36
SUR Sutherland 98.61 135 LR LR 18 46 58.9
comp=Z,948nm,21.9s,baz=332,slow=32
PLCA Paso Flores 98.98 206 LR LR 18 51 12.2
comp=Z,358nm,20.0s,baz=12,slow=34
PALK Pallekele 98.98 65 LR LR 18 54 20.3
comp=Z,467nm,21.7s,baz=87,slow=36
YHNB Yeheng 99.23 21 IAMs_20 IAMs_20 18 55 00.9
comp=Z,646nm,21.0s
JCJ Chichijima 99.36 2 LR LR 18 53 36.9
comp=Z,74nm,21.8s,baz=103,slow=36
NACB Ninganchiao 99.76 21 IAMs_20 IAMs_20 18 55 19.9
comp=Z,613nm,20.0s
SSLB Suanglung 99.99 22 IAMs_20 IAMs_20 18 55 45.1
comp=Z,516nm,19.0s
YULB Yu-li 100.45 22 IAMs_20 IAMs_20 18 56 00.2
comp=Z,604nm,18.0s
TWG Pinlang 100.95 22 IAMs_20 IAMs_20 18 56 08.7
comp=Z,451nm,19.0s
QIZ Qiongzhong 101.46 34 P **Pdif** **18 08 11.0 -1.2**
QIZ PP **PP** **18 12 19.5 -1.5**
QIZ S **Sdif** **18 19 51.0 -1.6**
QIZ SS **SS** **18 26 51.5 -0.5**
QIZ LR LR
comp=Z,460nm,18.2s
QIZ LR LR
comp=Z,370nm,17.3s
QIZ LR LR
comp=Z,410nm,17.3s
TAOE Nuku Hiva Isla 105.87 277 *e*LR LR 18 43 21.3
comp=Z,1µm,21.6s
DLV T Lat 107.58 37 IAMs_20 IAMs_20 19 05 53.9
comp=Z,405nm,19.0s
RPSI Rantau Prapat 112.02 51 IAMs_20 IAMs_20 19 04 14.2
comp=Z,509nm,22.0s
MYKOM Kota Tinggi 115.01 46 IAMs_20 IAMs_20 19 08 00.9
comp=Z,548nm,19.0s
KSM Kuching 117.91 40 IAMs_20 IAMs_20 19 07 17.1
comp=Z,402nm,20.0s
PPT2 Papeete2 118.33 279 *e*LR LR 18 49 08.0
comp=Z,1µm,24.5s
PMBI Palembang 119.63 48 IAMs_20 IAMs_20 19 07 20.2
comp=Z,526nm,21.0s
TBI Tubuai 122.72 275 *e*LR LR 18 51 08.7
comp=Z,1µm,36.2s
SNAA Sanae 127.31 168 PKPdf **PKPdf** **18 13 22.6 -0.8**
SNAA Sanae 127.31 168 PKIKP **PKPdf** **18 13 22.7 -0.8**
HNR Honiara 134.04 339 IAMs_20 IAMs_20 19 19 52.6
comp=Z,498nm,19.0s
DZM Mont Dzumac 144.24 324 *e*LR LR 19 01 07.0
comp=Z,554nm,23.9s
WRA Warramunga Arr 145.22 17 PKPbc **PKPbc** **18 13 56.8 -0.9**
comp=Z,4.4nm,1.0s,baz=337,slow=3.7,SNR=12
WRA Warramunga Arr 145.22 17 **PKPbc** **18 13 56.2 -1.5**
WRA Warramunga Arr 145.22 17 PKIKP **PKPbc** **18 13 56.2 -1.5**
WB2 Warramunga Arr 145.22 17 **PKPbc** **18 13 54.8 -2.9**
WR0 Warramunga Arr 145.27 17 **PKPbc** **18 13 55.8 -2.0**
CTA Charters Tower 146.27 357 PKPbc **PKPdf** **18 13 59.8 -0.1**
comp=Z,4.0nm,0.8s,baz=27,slow=2.3,SNR=1.8

AS31	Alice Springs	148.77	19		PKPbc	18 14 06.8	-1.0
ASAR	Alice Springs	148.77	19		PKPbc	18 14 06.7	-1.1
ASAR	Alice Springs	148.77	19	PKP2	PKPbc	18 14 06.7	-1.1
VNDA	Vanda	155.43	189	PKP	PKPdf	18 14 11.7	-0.5

comp=Z,1.4nm,0.9s,baz=218,slow=3.8,SNR=5.7

*IDC **25** 17:55:49.5±1.1,36°.64N×11°.11E,h0km,mb3.6/9, mbtmp3.6/14,ML3.6/4,Error ellipse: s-maj=25.6km s-min=14.9km az=137.0*

*LDG **25** 17:55:49.8±0.3,36°.42N×10°.92E,h10km,Ml3.6/6,Error ellipse: s-maj=7.5km s-min=4.9km az=24.0*

ISC 25 17:55:51.3±0.9,36.74N±0.08×10.90E±0.08,h14km,n49, σ1s51/40,mb3.7/8,Tunisia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEST	Kesra	1.60	232	Pg	Pn	17 56 19.4	+0.1
	29nm,0.3s,baz=8.1,slow=14,SNR=129						
KEST				Lg	Lg	17 56 42.0	
	83nm,0.3s,baz=54,slow=19,SNR=9.9						
VAE	Valguarnera	2.91	74	Pn	Pn	17 56 36.1	-1.1
	6.2nm,0.5s,baz=192,slow=20,SNR=2.1						
VAE				Lg	Lg	17 57 14.2	
	7.8nm,0.3s,baz=269,slow=12,SNR=6.3						
PGF	Pioggiola	5.99	346	*e*Pn	Pn	17 57 21.0	+1.4
PGF				*e*Sn	Sn	17 58 28.3	+0.4
	18nm,0.5s						
LMR	La Mourre	7.40	334	*e*Pn	Pn	17 57 38.9	+0.1
LMR	La Mourre	7.40	334	*e*P	Pn	17 57 46.7	+7.9
LMR				*e*Sn	Sn	17 59 00.9	-1.6
	0.8nm,0.3s						
SBF	Sospel	7.59	341	*e*Pn	Pn	17 57 41.9	+0.3
SBF	Sospel	7.59	341	*e*P	Pn	17 57 47.6	+6.0
SBF				*e*Sn	Sn	17 59 04.5	-2.9
	8.2nm,0.5s						
SMRF	Simiane la Rot	8.29	332	*e*Pn	Pn	17 57 52.3	+1.2
SMRF	Simiane la Rot	8.29	332	*e*P	Pn	17 57 57.0	+5.9
SMRF				*e*Sn	Sn	17 59 24.5	-0.1
	9.4nm,0.7s						
MBDF	Montbardon	8.57	340	*e*Pn	Pn	17 57 56.1	+1.0
MBDF	Montbardon	8.57	340	*e*P	Pn	17 58 00.9	+5.8
MBDF				*e*Sn	Sn	17 59 29.9	-1.7
	4.8nm,0.6s						
ORIF	Oris-en-Rattie	9.01	337	*e*Pn	Pn	17 58 02.2	+1.1
ORIF	Oris-en-Rattie	9.01	337	*e*P	Pn	17 58 07.5	+6.4
LASF	Ste Croix	9.08	326	*e*Pn	Pn	17 58 01.6	-0.4
LPG	La Plagne	9.29	342	*e*Pn	Pn	17 58 06.0	+0.9
LPG	La Plagne	9.29	342	*e*P	Pn	17 58 11.6	+6.5
LPL	La Plagne	9.32	342	*e*Pn	Pn	17 58 06.2	+0.9
MTLF	Montolieu	9.37	317	*e*Pn	Pn	17 58 05.1	-0.7
VIVF	Saint-Julien-l	9.38	332	*e*Pn	Pn	17 58 06.3	+0.3
DAVOX	Davos/Dischmat	10.06	356	Pn	Pn	17 58 17.9	+2.4
	0.3nm,0.3s,baz=193,slow=11,SNR=5.0						
	2.4nm,0.6s						
ABTA	Abfaltersbach	10.08	6	*e*Pn	Pn	17 58 23.4	+7.7
	8.4nm,1.1s						
EPF	Esparros	10.26	311	*e*Pn	Pn	17 58 16.8	-1.3
SOKA	Soboth	10.40	16	*e*Pn	Pn	17 58 26.6	+6.5
	2.4nm,1.1s						
SQTA	Sankt Quirin	10.48	1	*e*Pn	Pn	17 58 27.2	+6.0
	2.2nm,0.4s						
CABF	La Chapelle	10.50	342	*e*Pn	Pn	17 58 22.8	+1.4
CAF	Calviac	10.56	323	*e*Pn	Pn	17 58 22.0	-0.2
DAVA	Damuels	10.57	356	*e*Pn	Pn	17 58 28.5	+6.0
	6.5nm,0.7s						
MOTA	Moosalm	10.60	1	*i* Pn	Pn	17 58 28.5	+5.6
	2.8nm,0.6s						
ETSF	Etsaut	10.74	308	*e*Pn	Pn	17 58 22.5	-2.2
RJF	Les Rejaudoux	11.10	323	*e*Pn	Pn	17 58 29.1	-0.5
SMF	Signal de Mont	11.21	334	*e*Pn	Pn	17 58 30.8	-0.3
LFF	La Fresdale	11.23	320	*e*Pn	Pn	17 58 30.2	-1.1
SJPF	Ste Jean	11.27	308	*e*Pn	Pn	17 58 29.6	-2.3
MOA	Molln	11.38	12	*e*Pn	Pn	17 58 38.7	+5.3
	4.2nm,1.2s						
AVF	Avril sur Loir	11.51	333	*e*Pn	Pn	17 58 35.6	+0.5
CONA	Conrad Observa	11.77	17	*e*Pn	Pn	17 58 43.0	+4.2
	3.6nm,1.1s						
ESDC	Sonseca Array	12.05	289	Pn	Pn	17 58 46.2	+3.5
	0.2nm,0.3s,baz=95,slow=14,SNR=18						
	2.3nm,0.7s						
MLR	Muntele Rosu	14.31	48	Pn	P	17 59 17.3	-3.4
	0.3nm,0.3s,baz=222,slow=15,SNR=11						
BRTR	Keskin Array B	18.11	74	P	P	18 00 01.6	-1.3
	baz=250,slow=12,SNR=3.2						
	0.6nm,0.8s						
AKASG	Malin Array Be	19.17	38	P	P	18 00 12.7	-1.6
	0.4nm,0.3s,baz=230,slow=9.7,SNR=8.4						
	1.4nm,0.6s						
EKA	Eskdalemuir Ar	20.93	337	P	Pn	18 00 35.9	0.0
	1.4nm,0.9s,baz=141,slow=12,SNR=2.3						
	1.4nm,0.9s						
HFS	Hagfors	23.48	4	P	P	18 01 00.5	+0.2
	2.2nm,0.9s,baz=186,slow=12,SNR=1.0						
	2.2nm,0.9s						
NOA	NORSAR Array B	24.33	0	P	P	18 01 08.6	+0.3
	0.4nm,0.7s,baz=186,slow=9.2,SNR=2.3						
	0.4nm,0.7s						
TORD	Torodi Ar. Bea	24.90	202	P	P	18 01 14.5	+0.7
	0.6nm,0.9s,baz=11,slow=9.7,SNR=3.8						
	0.6nm,0.9s						
FINES	FINESS Array B	26.52	16	P	P	18 01 28.3	+0.3
	1.8nm,0.7s,baz=190,slow=7.1,SNR=3.8						
	1.8nm,0.7s						
ARCES	ARCESS Array B	33.81	9	P	P	18 02 33.7	+1.2
	0.6nm,0.6s,baz=192,slow=7.9,SNR=1.5						
	0.6nm,0.6s						
SPITS	Spitsbergen Ar	41.61	2	P	P	18 03 40.4	+2.0
	2.0nm,0.9s,baz=190,slow=5.6,SNR=2.6						
	2.0nm,0.9s						
MKAR	Makanchi Array	52.50	55	P	P	18 05 02.6	-1.2
	0.3nm,0.6s,baz=280,slow=7.3,SNR=4.5						
	0.3nm,0.6s						
YKA	Yellowknife Ar	71.89	337	P	P	18 07 15.5	+2.0
	0.8nm,0.8s,baz=46,slow=5.2,SNR=4.4						
	0.8nm,0.8s						

IDC 25 17:59:12.8±1.5,54.02N×35.28W,h0km,mb3.5/5, mbtmp3.5/5,Error ellipse: s-maj=44.8km s-min=30.4km az=22.0,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H07N1	FLORES T-PHASE	14.61	167	T	T	18 17 14.9	
	SNR=10.0						
NOA	NORSAR Array B	25.45	55	P	P	18 04 41.8	-0.2
	0.3nm,0.8s,baz=277,slow=9.9,SNR=2.4						
	0.3nm,0.8s						
ESDC	Sonseca Array	25.52	111	P	P	18 04 43.0	+0.1
	1.7nm,1.1s,baz=296,slow=9.7,SNR=3.0						
	1.7nm,1.1s						
PDAR	Pinedale Array	48.40	289	P	P	18 07 56.5	-0.1
	0.5nm,0.5s,baz=69,slow=8.3,SNR=3.0						
	0.5nm,0.5s						
TORD	Torodi Ar. Bea	50.08	130	P	P	18 08 09.3	-0.1
	0.8nm,0.7s,baz=334,slow=7.6,SNR=4.5						
	0.8nm,0.7s						
MKAR	Makanchi Array	66.49	42	P	P	18 10 03.9	+0.1
	0.4nm,0.9s,baz=309,slow=5.2,SNR=2.2						
	0.4nm,0.9s						

*IDC **25** 18:00:16.7±0.7,53°.81N×35°.29W,h0km,mb3.9/18, mbtmp3.9/20,ML3.2/2,Error ellipse: s-maj=22.7km s-min=12.6km az=0.0*

*NEIC **25** 18:00:17.4±2.7,53°.8N±0°.1×35°.6W±0°.2,h10km±4km, mb4.5/61,Error ellipse: s-maj=15.5km s-min=13.6km az=208.0*

ISC 25 18:00:17.1±0.5,53.8N±0°.1×35.57W±0°.06,h10km,n89, σ1s30/90,mb4.4/47,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRS	Narsarsuaq	9.11	328		Pn	18 02 27.9	-0.4
IVI	Ivigtut	10.07	323	Pn	Pn	18 02 36.1	-5.4
H07N1	FLORES T-PHASE	14.40	166	T	T	18 18 28.4	
SCHQ	Schefferville	18.21	286	P	P	18 04 32.0	+2.1
	0.3nm,0.3s,baz=86,slow=12,SNR=5.0						
	4.0nm,0.8s						
SCHQ	Schefferville	18.21	286	P	Pn	18 04 28.0	-1.7
SCHQ	Schefferville	18.21	286	LR	Pn	18 04 27.7	-1.9
	comp=Z,6µm,21.3s,baz=83,slow=33						
GBN	Guysborough	18.70	254	P	P	18 04 33.4	-2.0
EKA	Eskdalemuir Ar	18.77	72	P	P	18 04 36.0	-0.1
	baz=280,slow=8.6						
	2.8nm,0.9s						
SUMG	Summit	18.92	357	P	P	18 04 35.0	-3.0
BATG	Bathurst New B	20.34	264	P	P	18 04 52.2	-1.0
HAL	Halifax	20.35	255	P	P	18 04 51.0	-2.3
PQI	Presque Isle	21.80	264	P	P	18 05 06.8	-2.2
PQI				IAmb	IAmb	18 05 21.3	
	comp=Z,22nm,1.3s						
GGN	Saint George	21.95	260	P	P	18 05 09.5	-1.1
GGN				IAmb	IAmb	18 05 17.9	
	comp=Z,19nm,1.0s						
D62A	Allapoint, All	22.20	266	P	P	18 05 11.3	-2.0
D62A				IAmb	IAmb	18 05 25.2	
	comp=Z,27nm,1.4s						
G65A	Princeton	22.32	261	P	P	18 05 13.0	-1.6
G65A				IAmb	IAmb	18 05 43.9	
	comp=Z,24nm,1.5s						
EMMW	East Machias	22.54	259	P	P	18 05 14.9	-2.1
EMMW				IAmb	IAmb	18 05 32.0	
	comp=Z,27nm,1.5s						
G62A	West of Eustis	24.06	264	P	P	18 05 31.1	-1.1
ESDC	Sonseca Array	25.59	111	P	P	18 05 46.3	+0.1
	comp=Z,3.4nm,1.0s,baz=312,slow=8.5,SNR=8.5						
	comp=Z,3.4nm,1.0s						
ESDC	Sonseca Array	25.59	111	P	P	18 05 46.4	+0.2
NOA	NORSAR Array B	25.73	55	P	P	18 05 46.9	-0.5
	comp=Z,0.8nm,0.7s,baz=276,slow=9.7,SNR=6.2						
	comp=Z,0.8nm,0.7s						
VT1	Waterbury	25.87	264	P	P	18 05 47.4	-1.3
NC602	NORSAR Array S	25.92	55	P	P	18 05 47.4	-1.6
NC602				IAmb	IAmb	18 05 58.2	
	comp=Z,24nm,1.4s						
TULEG	Thule	26.02	343	P	P	18 05 47.5	-2.2
L64A	Middleborough	26.18	258	P	P	18 05 50.2	-1.3
L64A				IAmb	IAmb	18 06 04.6	
	comp=Z,12nm,0.9s						
SADO	Sadowa	29.41	270	P	P	18 06 19.7	-0.7
SADO				IAmb	IAmb	18 06 29.6	
	comp=Z,6.1nm,1.0s						
ARCES	ARCESS Array B	31.32	36	P	P	18 06 36.9	-0.1
	comp=Z,1.3nm,0.8s,baz=256,slow=7.3,SNR=2.5						
	comp=Z,1.3nm,0.8s						
FCC	Fort Churchill	31.97	303	P	P	18 06 42.3	-0.4
FCC				IAmb	IAmb	18 06 51.6	
	comp=Z,9.5nm,1.2s						
FINES	FINESS Array B	32.73	51	P	P	18 06 49.3	-0.2
	comp=Z,0.8nm,0.7s,baz=308,slow=9.4,SNR=4.0						
	comp=Z,0.8nm,0.7s						
FINES	FINESS Array B	32.73	51	P	P	18 06 48.4	-1.1
FIA1	FINESS Array S	32.73	51	P	P	18 06 48.1	-1.3
FIA1				IAmb	IAmb	18 06 58.1	
	comp=Z,9.5nm,1.4s						
ULM	Lac du Bonnet	36.32	290	P	P	18 07 22.4	+1.8
	comp=Z,3.8nm,0.6s,baz=43,slow=6.5,SNR=4.8						
	comp=Z,3.8nm,0.6s						
L42A	Oliver, Polo	37.26	274	P	P	18 07 26.5	-2.1
AKASG	Malin Array Be	38.57	67	P	P	18 07 39.6	-0.1
	comp=Z,0.5nm,0.5s,baz=296,slow=9.2,SNR=2.2						
	comp=Z,0.5nm,0.5s						
T47A	Sharon Grove	38.95	266	P	P	18 07 41.5	-1.5
YKA	Yellowknife Ar	40.08	315	P	P	18 07 53.5	+1.4
	comp=Z,1.3nm,0.9s,baz=62,slow=9.3,SNR=4.8						
YKA				PcP	PcP	18 09 56.9	+0.4
	comp=Z,1.2nm,0.8s,baz=69,slow=3.6,SNR=5.3						
	comp=Z,1.3nm,0.9s						
X48A	Hartselle	40.65	263	P	P	18 07 56.9	-0.2
EPYK	Eagle Plains	46.36	327	P	P	18 08 44.2	+1.4
EPYK				IAmb	IAmb	18 08 50.3	
	comp=Z,7.5nm,1.1s						
RLMT	Red Lodge	46.66	291	P	P	18 08 46.1	+0.3
RLMT				IAmb	IAmb	18 08 58.6	
	comp=Z,7.7nm,1.1s						
BRTR	Keskin Array B	47.56	78	P	P	18 08 53.2	+0.5
	comp=Z,0.8nm,0.7s,baz=315,slow=6.0,SNR=4.3						
	comp=Z,0.8nm,0.7s						
BOZ	Bozeman (W)	47.67	293	P	P	18 08 53.9	+0.4
BOZ				IAmb	IAmb	18 09 02.1	
	comp=Z,8.9nm,1.2s						
PD31	Pinedale Array	48.32	289	P	P	18 08 59.4	+0.7
PD31				IAmb	IAmb	18 09 09.6	
	comp=Z,3.6nm,0.8s						
PDAR	Pinedale Array	48.32	289	P	P	18 09 00.1	+1.5
	comp=Z,0.9nm,0.5s,baz=50,slow=7.2,SNR=6.9						
	comp=Z,0.9nm,0.5s						
PDAR	Pinedale Array	48.32	289	P	P	18 08 59.5	+0.8
B08A	Colville Reser	50.02	300	P	P	18 09 12.1	+0.7
B08A				IAmb	IAmb	18 09 19.1	
	comp=Z,7.6nm,1.2s						
TORD	Torodi Ar. Bea	50.05	130	P	P	18 09 11.4	-0.4
	comp=Z,2.0nm,0.8s,baz=331,slow=6.4,SNR=7.9						
	comp=Z,2.0nm,0.8s						
TORD	Torodi Ar. Bea	50.05	130	P	P	18 09 10.8	-1.0
HWUT	Hardware Ranch	50.20	289	P	P	18 09 12.1	-0.9
HWUT				IAmb	IAmb	18 09 16.7	
	comp=Z,8.8nm,0.9s						
HLID	Hailey	50.50	292	P	P	18 09 14.7	-0.5
ILAR	Eielson Array	50.61	329	P	P	18 09 16.1	+0.6
	comp=Z,0.8nm,1.0s,baz=39,slow=6.2,SNR=5.3						
ILAR				PcP	PcP	18 10 34.0	+1.0
	comp=Z,1.2nm,1.0s,baz=17,slow=2.2,SNR=4.8						
	comp=Z,0.8nm,1.0s						
PV10	Paradox Valley	50.93	284	P	P	18 09 19.8	+1.2
PV13	Radium Mtn., P	50.95	284	P	P	18 09 18.4	-0.4
PV13				IAmb	IAmb	18 09 23.9	
	comp=Z,8.5nm,1.0s						
NLU	North Lily Min	51.60	287	P	P	18 09 23.7	+0.1
NLU				IAmb	IAmb	18 09 32.3	
	comp=Z,11nm,1.4s						
IMAR	Indian Mountai	51.72	333	P	P	18 09 24.5	+0.7
ELK	Elko	52.84	290	P	P	18 09 36.7	+3.9
	comp=Z,1.5nm,0.8s,baz=30,slow=5.5,SNR=6.3						
	comp=Z,1.5nm,0.8s						
ELK	Elko	52.84	290	P	P	18 09 33.3	+0.5
J08A	Circle Bar Ran	52.84	295	P	P	18 09 33.6	+0.9
J08A				IAmb	IAmb	18 09 41.4	
	comp=Z,7.9nm,1.2s						
MTPU	Mount Pierson	52.97	286	P	P	18 09 34.6	+0.7
MTPU				IAmb	IAmb	18 09 46.4	
	comp=Z,12nm,1.3s						
WVOR	Wild Horse Val	53.56	294	P	P	18 09 37.7	-0.2
WVOR				IAmb	IAmb	18 09 46.8	
	comp=Z,4.9nm,0.9s						
PINE	Pine Mountain	53.87	297	P	P	18 09 39.4	-0.9
PINE				IAmb	IAmb	18 09 49.7	
	comp=Z,10nm,1.4s						
CCUT	Cedar City	53.98	286	P	P	18 09 40.9	-0.3
CCUT				IAmb	IAmb	18 09 50.1	
	comp=Z,4.9nm,1.3s						
TXAR	Lajitas Array	54.16	272	P	P	18 09 45.5	+3.0
	comp=Z,1.1nm,0.8s,baz=34,slow=6.6,SNR=2.4						
TXAR				PcP	PcP	18 10 48.6	+1.6
	comp=Z,1.1nm,0.9s,baz=69,slow=3.3,SNR=3.4						
	comp=Z,1.1nm,0.8s						
TXAR	Lajitas Array	54.16	272	P	P	18 09 41.7	-0.8
TIXI	Tiksi	54.40	6	P	P	18 09 44.7	+1.2
TIXI				IAmb	IAmb	18 09 51.4	
	comp=Z,5.9nm,1.4s						
K05A	Summer Lake	54.58	296	P	P	18 09 47.4	+1.9
R11A	Troy Canyon, C	54.68	288	P	P	18 09 47.1	+0.8
R11A				IAmb	IAmb	18 09 54.7	
	comp=Z,5.4nm,1.4s						
X16A	Lo Mia Camp, P	55.07	282	P	P	18 09 49.1	-0.1
X16A				IAmb	IAmb	18 09 54.4	
	comp=Z,4.6nm,0.9s						
S11A	Rachel	55.27	288	P	P	18 09 50.1	-0.4
KVN	Kaiserville	55.60	291	P	P	18 09 53.5	+0.6
KVN				IAmb	IAmb	18 10 01.4	
	comp=Z,6.4nm,1.1s						
TPH	Tonopah	55.79	289	P	P	18 09 55.4	+1.1
PAHR	Pah Rah Range	55.85	292	P	P	18 09 55.2	+0.6
NVAR	Mina Array Bea	56.15	290	P	P	18 10 00.1	+3.2
	comp=Z,0.6nm,0.8s,baz=86,slow=6.5,SNR=4.1						
	comp=Z,0.6nm,0.8s						
NVAR	Mina Array Bea	56.15	290	P	P	18 09 58.4	+1.5
BEKR	Beckworth	56.27	293	P	P	18 09 58.6	+0.9
PNTR	Pine Nut	56.40	292	P	P	18 09 59.0	+0.3
LCH	Last Change Ra	56.62	289	P	P	18 10 00.6	+0.4
LCH				IAmb	IAmb	18 10 08.7	
	comp=Z,8.1nm,1.4s						
GRAC	Grapevine Rang	56.64	288	P	P	18 10 01.0	+0.8
GWY	Greenwater Val	56.82	287	P	P	18 10 02.8	+1.2
CCAC	Calif City Air	58.32	287	P	P	18 10 12.2	+0.1
PFO	Pinyon Flats O	58.55	285	P	P	18 10 14.9	+1.1
PFO				IAmb	IAmb	18 10 24.4	
	comp=Z,5.7nm,1.1s						
ZALV	Zalesovo Beam	61.86	35	P	P	18 10 36.5	+0.6
	comp=Z,0.7nm,0.6s,baz=308,slow=7.4,SNR=4.4						
	comp=Z,0.7nm,0.6s						
MKAR	Makanchi Array	66.79	41	P	P	18 11 08.7	+0.3
	comp=Z,1.2nm,0.8s,baz=342,slow=5.1,SNR=9.8						
	comp=Z,1.2nm,0.8s						
MKAR	Makanchi Array	66.79	41	P	P	18 11 07.6	-0.8
SONM	Songino Array	73.76	26	P	P	18 11 51.2	0.0
	comp=Z,1.2nm,0.8s,baz=319,slow=4.3,SNR=6.9						
	comp=Z,1.2nm,0.8s						
SONM	Songino Array	73.76	26	P	P	18 11 50.9	-0.3
LPAZ	La Paz	75.16	212	P	P	18 12 01.7	+1.6
	comp=Z,1.7nm,0.9s,baz=40,slow=7.9,SNR=3.6						
	comp=Z,1.7nm,0.9s						
LPAZ	La Paz	75.16	212	P	P	18 11 60.0	-0.1
PB16	IPOC Station P	77.52	213	P	P	18 12 13.2	-0.2
PB16				IAmb	IAmb	18 12 17.2	
	comp=Z,5.2nm,1.0s						
WRA	Warramunga Arr	145.35	17	PKPbc	PKPbc	18 19 54.9	0.0
	comp=Z,0.7nm,0.9s,baz=341,slow=3.3,SNR=3.6						
WRA	Warramunga Arr	145.35	17		PKPbc	18 19 54.2	-0.6

NEIC 25 18:03:22.4±1.3,37.01N±0.01×97.55W±0.02,h5km±2km, Error ellipse: s-maj=3.0km s-min=2.4km az=353.0, Kansas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T35A	Sooner Cattle	0.84	96	Pg	Pg	18 03 38.5	0.0
T35A				Sg	Sg	18 03 49.3	+0.1
ADOK	Arcadia Dam	1.36	174	Pn	Pn	18 03 47.6	-0.5
OK005	Luther M Schoo	1.38	168	Pn	Pn	18 03 48.2	-0.1
OK009	Oakdale Elemen	1.43	176	Pn	Pn	18 03 49.1	+0.1
OKCFA	Oklahoma City	1.59	177	Pn	Pn	18 03 51.3	+0.1
OKCSW	OKLAHOMA CITY	1.60	177		Pb	18 03 51.9	-0.5
R32A	Long Quarter,	1.69	327		Pn	18 03 52.6	0.0
FNO	Franklin	1.75	176	Pn	Pn	18 03 53.3	-0.1
TUL1	Leonard	1.79	127	Pn	Pn	18 03 53.8	-0.1
TUL1				IAmb_Lg		18 04 20.8	
	comp=Z,110nm,0.7s						
KSU1	Kansas State U	2.22	19	Pn	Pn	18 04 00.3	+0.4
X34A	Smith Ranch, M	2.41	186	Pn	Pn	18 04 02.9	+0.4
WMOK	Wichita Mounta	2.48	204		Pn	18 04 03.8	+0.4
CBKS	Cedar Bluff	2.50	317	Pn	Pn	18 04 04.4	+0.7
U38A	Gravette	2.60	102		Pn	18 04 04.5	-0.7
HHAR	Hobbs	2.99	103	Pn	Pn	18 04 10.1	-0.4
X37A	Clayton	2.99	143	Pn	Pn	18 04 11.2	+0.7
X37A				IAmb_Lg		18 05 02.9	
	comp=Z,53nm,1.0s						
S39A	Bolivar	3.44	77		Pn	18 04 16.8	+0.2
Z35A	Perchaven, San	3.67	176	Pn	Pn	18 04 18.0	-1.9
N33A	J Bar K, Exete	3.73	1	Pn	Pn	18 04 19.9	-0.7
N33A				IAmb_Lg		18 05 30.3	
	comp=Z,34nm,0.8s						
AMTX	Amarillo	3.96	239	Pn	Pn	18 04 23.1	-0.8
AMTX				IAmb_Lg		18 05 31.3	
	comp=Z,28nm,0.9s						
MIAR	Mount Ida	4.06	126	Pn	Pn	18 04 24.2	-0.9
P38A	Dawn	4.10	49	Pn	Pn	18 04 24.3	-1.4
P38A				IAmb_Lg		18 05 35.8	
	comp=Z,31nm,0.8s						
MGMO	Mountain Grove	4.23	86	Pn	Pn	18 04 27.6	+0.1
Z38A	Mt. Pleasant	4.29	150	Pn	Pn	18 04 28.5	+0.3
Z38A				IAmb_Lg		18 05 44.4	
	comp=Z,40nm,0.8s						
R40A	Maddies Statio	4.38	71	Pn	Pn	18 04 30.3	+0.7
BGNE	Belgrade	4.42	354	Pn	Pn	18 04 30.0	-0.1
BGNE				IAmb_Lg		18 05 41.7	
	comp=Z,32nm,0.7s						
KSCO	Kaye Shedlock'	4.48	298	Pn	Pn	18 04 29.1	-1.9
KSCO				IAmb_Lg		18 05 53.5	
	comp=Z,31nm,0.8s						
FCAR	Ozark Folk Cen	4.51	103	Pn	Pn	18 04 30.3	-1.1
FCAR				IAmb_Lg		18 05 46.8	
	comp=Z,50nm,0.7s						
WHAR	Wooly Hollow	4.59	110	Pn	Pn	18 04 31.6	-0.8
W41B	Gary Mavity, V	4.67	111	Pn	Pn	18 04 31.8	-1.7
ABTX	Abilene, Hawle	4.70	202	Pn	Pn	18 04 31.6	-2.4
UALR	University of	4.78	116	IAmb_Lg		18 06 05.0	
	comp=Z,31nm,0.7s						
WLAR	White Oak Lake	4.91	131	Pn	Pn	18 04 34.3	-2.5
WLAR				IAmb_Lg		18 06 03.9	
	comp=Z,30nm,0.8s						
P40A	Paris	5.01	58	Pn	Pn	18 04 36.7	-1.5
P40A				IAmb_Lg		18 06 06.5	
	comp=Z,25nm,0.8s						
N38A	Joes South For	5.06	40	Pn	Pn	18 04 39.0	+0.1
CCM	Cathedral Cave	5.12	76	Pn	Pn	18 04 38.5	-1.3
CCM				IAmb_Lg		18 06 06.0	
	comp=Z,21nm,0.8s						
237A	Washetta, Mont	5.20	163	Pn	Pn	18 04 40.3	-0.5
MSTX	Muleshoe	5.23	236	Pn	Pn	18 04 41.1	-0.2
LCAR	Lake Charles	5.23	98	Pn	Pn	18 04 39.4	-1.9
LCAR				IAmb_Lg		18 06 06.4	
	comp=Z,27nm,0.9s						
OGNE	Ogallala	5.26	320	Pn	Pn	18 04 40.1	-1.6
OGNE				IAmb_Lg		18 06 16.7	
	comp=Z,27nm,0.8s						
Z41A	Richland Creek	5.40	132	Pn	Pn	18 04 41.9	-1.6
Z41A				IAmb_Lg		18 06 23.9	
	comp=Z,29nm,0.9s						
T25A	Trinidad	5.49	273	Pn	Pn	18 04 42.8	-2.2
T25A				IAmb_Lg		18 06 18.9	

ISC 25 18:12:02.2±0.9, 19°3S±0.2″×178°2W±0.1, h600km, n31, σ1°28/29, mb4.2/12, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.90**	**293**	P	**P**	**18 13 25.2**	**-1.9**
	28nm,0.4s,baz=111,slow=14,SNR=134						
MSVF	**Nonsavu**	**3.90**	**293**	P	**P**	**18 13 24.9**	**-2.2**
PINNC	**Pines Island,**	**13.84**	**254**	P	**P**	**18 14 58.9**	**-0.7**
DZM	**Mont Dzumac**	**14.67**	**256**	P	**P**	**18 15 09.6**	**+2.1**
	7.3nm,1.1s,baz=84,slow=15,SNR=1.8						
KOUNC	**Koumac, New Ca**	**16.55**	**263**	P	**P**	**18 15 27.5**	**+2.9**
KOUNC				IAmb	IAmb	18 15 42.0	
	comp=Z,16nm,1.2s						
RAR	**Rarotonga**	**17.37**	**100**	P	**P**	**18 15 34.2**	**+2.1**
PLWZ	**Palliser**	**22.92**	**193**	P	**P**	**18 16 23.2**	**+1.3**
CTA	**Charters Tower**	**33.47**	**263**	P	**P**	**18 17 54.7**	**+1.2**
	comp=Z,5.9nm,0.6s,baz=91,slow=9.1,SNR=16						
	comp=Z,5.9nm,0.6s						
CTAO	**Charters Tower**	**33.47**	**263**	P	**P**	**18 17 54.8**	**+1.2**
TOO	**Toolangi**	**36.50**	**232**	P	**P**	**18 18 18.1**	**-0.3**
TOO				IAmb	IAmb	18 18 37.4	
	comp=Z,15nm,1.4s						
BBOO	**Buckleboo**	**42.96**	**242**	P	**P**	**18 19 09.9**	**0.0**
WR0	**Warramunga Arr**	**44.43**	**261**	P	**P**	**18 19 22.1**	**+0.6**
WR0				IAmb	IAmb	18 19 35.2	
	comp=Z,10nm,1.4s						
WB0	**Warramunga Arr**	**44.60**	**261**	P	**P**	**18 19 23.1**	**+0.3**
WB0				IAmb	IAmb	18 19 59.7	
	comp=Z,7.9nm,1.3s						
WB2	**Warramunga Arr**	**44.61**	**261**	P	**P**	**18 19 23.3**	**+0.4**
WB2				IAmb	IAmb	18 19 29.4	
	comp=Z,9.5nm,1.4s						
WRA	**Warramunga Arr**	**44.62**	**261**	P	**P**	**18 19 23.1**	**+0.1**
	comp=Z,1.5nm,0.3s,baz=98,slow=7.5,SNR=76						
	comp=Z,1.5nm,0.3s						
WRA	**Warramunga Arr**	**44.62**	**261**	IAmb	IAmb	18 19 24.2	
	comp=Z,0.6nm,1.4s						
AS31	**Alice Springs**	**44.65**	**256**	P	**P**	**18 19 23.9**	**+0.7**
AS31				IAmb	IAmb	18 19 25.4	
	comp=Z,1.6nm,0.3s						
ASAR	**Alice Springs**	**44.66**	**256**	P	**P**	**18 19 23.6**	**+0.4**
MTN	**Manton Dam**	**49.00**	**270**	P	**P**	**18 19 56.0**	**+0.2**
MTN				IAmb	IAmb	18 20 18.1	
	comp=Z,12nm,1.2s						
FORT	**Forrest**	**49.64**	**246**	P	**P**	**18 20 00.1**	**-0.2**
KNRA	**Kununurra**	**50.59**	**265**	P	**P**	**18 20 08.2**	**+0.8**
KNRA				IAmb	IAmb	18 20 29.6	
	comp=Z,16nm,1.4s						
PSA00	**Pilbara Seismi**	**57.80**	**256**	P	**P**	**18 20 58.0**	**+0.2**
PSA00	**Pilbara Seismi**	**57.80**	**256**	P	**P**	**18 20 57.2**	**-0.7**
PSA00				IAmb	IAmb	18 21 19.5	
	comp=Z,13nm,1.1s						
MBWA	**Marble Bar**	**57.97**	**257**	P	**P**	**18 20 59.1**	**+0.1**
MBWA				IAmb	IAmb	18 21 37.0	
	comp=Z,31nm,1.4s						
MJAR	**Matsushiro Arr**	**69.13**	**324**	P	**P**	**18 22 09.6**	**-0.1**
	comp=Z,7nm,0.5s,baz=158,slow=6.4,SNR=4.4						
	comp=Z,0.7nm,0.5s						
MJAR	**Matsushiro Arr**	**69.13**	**324**	IAmb	IAmb	18 22 17.1	
	comp=Z,4.6nm,1.4s						
QSPA	**South Pole Qui**	**70.79**	**180**	P	**P**	**18 22 16.2**	**-2.9**
FINES	**FINESS Array B**	**134.56**	**344**	PKP	**PKPdf**	**18 30 12.9**	**+0.1**
	comp=Z,0.7nm,0.9s,baz=40,slow=4.5,SNR=3.3						
BRTR	**Keskin Array B**	**145.89**	**314**	PKPbc	**PKPbc**	**18 30 35.6**	**-0.3**
	comp=Z,0.5nm,0.4s,baz=90,slow=3.5,SNR=4.2						
BRTR	**Keskin Array B**	**145.89**	**314**		**PKPbc**	**18 30 35.4**	**-0.5**
MMAI	**Mount Meron Ar**	**147.06**	**301**	PKPbc	**PKPbc**	**18 30 39.1**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=70,slow=3.0,SNR=5.3						

*IDC **25** 18:19:30.0±1.1, 53°.85N×35°.28W, h0km, mb3.5/10, mbtmp3.5/10, MS3.7/1, Error ellipse: s-maj=31.3km s-min=20.0km az=9.0*

ISC 25 18:19:31.4±0.9, 53°.7N±0°.1×35°.2W±0°.1, h10km, n13, σ0°94/12, mb3.6/10, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRS	**Narsarsuaq**	**9.23**	**328**		**Pn**	**18 21 45.5**	**+1.1**
ANGG	**Ammassalik, Gr**	**11.97**	**355**		**Pn**	**18 22 22.8**	**+0.9**
SFJD	**Kangerlussuaq**	**15.24**	**337**	LR	LR	18 27 50.1	
	comp=Z,267nm,18.2s,baz=139,slow=33						
ESDC	**Sonseca Array**	**25.40**	**111**	P	**P**	**18 25 00.2**	**+1.4**
	2.1nm,1.0s,baz=314,slow=7.4,SNR=4.5						
	2.1nm,1.0s						
NOA	**NORSAR Array B**	**25.59**	**55**	P	**P**	**18 24 59.5**	**-0.8**
	0.4nm,0.9s,baz=278,slow=10,SNR=2.4						
	0.4nm,0.9s						
ARCES	**ARCESS Array B**	**31.23**	**36**	P	**P**	**18 25 49.1**	**-1.3**
	0.2nm,0.4s,baz=272,slow=8.7,SNR=8.4						
	0.2nm,0.4s						
BRTR	**Keskin Array B**	**47.38**	**78**	P	**P**	**18 28 05.8**	**+0.1**
	0.5nm,0.8s,baz=50,slow=42,SNR=2.0						
	0.5nm,0.8s						
PDAR	**Pinedale Array**	**48.51**	**289**	P	**P**	**18 28 13.9**	**-0.6**
	0.7nm,0.5s,baz=62,slow=7.7,SNR=9.0						
	0.7nm,0.5s						
TORD	**Torodi Ar. Bea**	**49.88**	**130**	P	**P**	**18 28 24.8**	**-0.1**
	1.2nm,1.0s,baz=343,slow=7.4,SNR=4.2						
	1.2nm,1.0s						
ILAR	**Eielson Array**	**50.73**	**329**	P	**P**	**18 28 30.0**	**-0.8**
	0.3nm,0.6s,baz=32,slow=7.5,SNR=2.8						
	0.3nm,0.6s						
TXAR	**Lajitas Array**	**54.35**	**272**	P	**P**	**18 28 58.2**	**0.0**
	0.1nm,0.4s,baz=51,slow=7.0,SNR=2.6						
	0.1nm,0.4s						
MKAR	**Makanchi Array**	**66.68**	**42**	P	**P**	**18 30 22.4**	**+0.4**
	0.2nm,0.5s,baz=329,slow=5.0,SNR=3.5						
	0.2nm,0.5s						
SONM	**Songino Array**	**73.70**	**26**	P	**P**	**18 31 05.6**	**+0.4**
	0.3nm,0.6s,baz=338,slow=5.6,SNR=2.2						
	0.3nm,0.6s						

*IDC **25** 18:19:58.5±0.8, 53°.75N×35°.41W, h0km, mb3.8/16, mbtmp3.8/18, ML3.2/2, Error ellipse: s-maj=25.9km s-min=14.0km az=9.0*
*NEIC **25** 18:19:59.8±2.5, 53°.8N±0°.2×35°.5W±0°.2, h10km±4km, mb4.4/27, Error ellipse: s-maj=22.1km s-min=13.2km az=187.0*

ISC 25 18:19:59.4±0.6, 53°.7N±0°.1×35°.50W±0°.07, h10km, n46, σ1°25/42, mb4.2/26, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H07N1	**FLORES T-PHASE**	**14.35**	**166**	T	T	18 37 33.7	
	SNR=5.5						
DRLN	**Deer Lake**	**14.40**	**261**	Pn	**Pn**	**18 23 21.0**	**-2.1**
SCHQ	**Schefferville**	**18.26**	**286**	P	**P**	**18 24 13.5**	**+0.7**
	0.3nm,0.3s,baz=101,slow=10.0,SNR=4.0						
	2.1nm,0.7s						
EKA	**Eskdalemuir Ar**	**18.75**	**72**	P	**P**	**18 24 16.8**	**-1.4**
	baz=278,slow=11						
	1.4nm,0.8s						
GGN	**Saint George**	**21.98**	**260**	P	**P**	**18 24 54.0**	**+0.7**
GGN				IAmb	IAmb	18 24 58.7	
	comp=Z,26nm,1.4s						
D62A	**Allapoint, All**	**22.24**	**266**	P	**P**	**18 24 55.5**	**-0.6**
D62A				IAmb	IAmb	18 25 04.0	
	comp=Z,12nm,1.1s						
F64A	**Sherman**	**22.46**	**263**	P	**P**	**18 24 56.9**	**-1.5**
F64A				IAmb	IAmb	18 25 09.3	
	comp=Z,12nm,1.2s						
ESBB	**Sonseca Array**	**25.53**	**111**	P	**P**	**18 25 28.1**	**+0.1**
ESDC	**Sonseca Array**	**25.53**	**111**	P	**P**	**18 25 28.4**	**+0.3**
	comp=Z,2.7nm,0.9s,baz=318,slow=8.8,SNR=6.5						
	comp=Z,2.7nm,0.9s						
ESDC	**Sonseca Array**	**25.53**	**111**	IAmb	IAmb	18 25 34.5	
	comp=Z,4.9nm,1.4s						
NOA	**NORSAR Array B**	**25.72**	**55**	P	**P**	**18 25 29.7**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=275,slow=8.9,SNR=3.5						
	comp=Z,0.9nm,0.8s						
NB201	**NORSAR Array S**	**25.76**	**55**		**P**	**18 25 28.9**	**-1.0**
NC303	**NORSAR Array S**	**25.78**	**54**	P	**P**	**18 25 28.5**	**-1.6**
NC303				IAmb	IAmb	18 25 36.9	
	comp=Z,13nm,1.4s						
WLF	**Walferdange**	**25.86**	**82**	P	**P**	**18 25 29.4**	**-1.5**
WLF				IAmb	IAmb	18 26 04.2	
	comp=Z,4.5nm,0.8s						
NC602	**NORSAR Array S**	**25.91**	**55**	P	**P**	**18 25 28.6**	**-2.6**
NC602				IAmb	IAmb	18 25 39.2	
	comp=Z,18nm,1.4s						
TRQ	**Mont Tremblant**	**25.95**	**269**	P	**P**	**18 25 30.1**	**-1.7**
NC405	**NORSAR Array S**	**25.96**	**54**	P	**P**	**18 25 30.9**	**-0.8**
NC405				IAmb	IAmb	18 25 42.6	
	comp=Z,7.5nm,1.1s						
L64A	**Middleborough**	**26.21**	**258**	P	**P**	**18 25 33.5**	**-0.6**
CLL	**Collm**	**29.16**	**75**	*e*P	**P**	**18 26 01.0**	**+0.6**
CLL				*i* x	x	18 26 05.2	
	comp=Z,4.0nm,0.9s						
ARCES	**ARCESS Array B**	**31.33**	**36**	P	**P**	**18 26 19.3**	**-0.1**
	comp=Z,3.2nm,1.0s,baz=264,slow=8.2,SNR=3.5						
	comp=Z,3.2nm,1.0s						
ARCES	**ARCESS Array B**	**31.33**	**36**	P	**P**	**18 26 18.6**	**-0.8**
FINES	**FINESS Array B**	**32.73**	**51**	P	**P**	**18 26 31.8**	**+0.1**
	comp=Z,2.1nm,0.9s,baz=298,slow=4.1,SNR=6.4						
	comp=Z,2.1nm,0.9s						
KEST	**Kesra**	**35.86**	**102**	P	**P**	**18 27 00.1**	**+0.8**
	comp=Z,2.9nm,0.9s,baz=338,slow=11,SNR=2.7						
	comp=Z,2.9nm,0.9s						
KEST	**Kesra**	**35.86**	**102**	IAmb	IAmb	18 27 36.6	
	comp=Z,7.4nm,1.2s						
AKASG	**Malin Array Be**	**38.55**	**67**	P	**P**	**18 27 20.2**	**-1.6**
	comp=Z,0.7nm,0.6s,baz=300,slow=8.6,SNR=4.7						
	comp=Z,0.7nm,0.6s						
YKA	**Yellowknife Ar**	**40.14**	**315**	P	**P**	**18 27 34.0**	**-1.0**
	comp=Z,0.3nm,0.6s,baz=76,slow=9.1,SNR=2.4						
YKA				PcP	**PcP**	**18 29 38.9**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=62,slow=3.9,SNR=3.8						
	comp=Z,0.3nm,0.6s						
INK	**Inuvik**	**44.29**	**328**	P	**P**	**18 28 09.0**	**+0.3**
	comp=Z,4.8nm,1.1s,baz=48,slow=6.8,SNR=3.1						
	comp=Z,4.8nm,1.1s						
INK	**Inuvik**	**44.29**	**328**	IAmb	IAmb	18 28 14.8	
	comp=Z,7.9nm,1.2s						
N23A	**Red Feather La**	**47.52**	**284**	P	**P**	**18 28 36.3**	**+1.4**
BRTR	**Keskin Array B**	**47.53**	**78**	P	**P**	**18 28 35.9**	**+1.0**
	comp=Z,0.9nm,0.8s,baz=315,slow=8.2,SNR=6.0						
	comp=Z,0.9nm,0.8s						
PD31	**Pinedale Array**	**48.37**	**289**	P	**P**	**18 28 41.9**	**+0.4**
PD31				IAmb	IAmb	18 29 14.8	
	comp=Z,3.6nm,1.2s						
PDAR	**Pinedale Array**	**48.37**	**289**	P	**P**	**18 28 42.4**	**+1.0**
	comp=Z,1.2nm,0.5s,baz=56,slow=7.6,SNR=12						
	comp=Z,1.2nm,0.5s						
TORD	**Torodi Ar. Bea**	**49.99**	**130**	P	**P**	**18 28 53.4**	**-0.4**
	comp=Z,1.6nm,0.7s,baz=334,slow=7.6,SNR=5.3						
	comp=Z,1.6nm,0.7s						
TORD	**Torodi Ar. Bea**	**49.99**	**130**	IAmb	IAmb	18 28 54.1	
	comp=Z,3.2nm,1.1s						
HWUT	**Hardware Ranch**	**50.26**	**289**	P	**P**	**18 28 57.0**	**+1.2**
ILAR	**Eielson Array**	**50.67**	**329**	P	**P**	**18 28 59.7**	**+1.3**
	comp=Z,0.4nm,0.7s,baz=31,slow=5.7,SNR=4.8						
	comp=Z,0.4nm,0.7s						
PV11	**David Mesa, Pa**	**50.94**	**284**	P	**P**	**18 29 02.4**	**+1.4**
PV13	**Radium Mtn., P**	**51.00**	**284**	P	**P**	**18 29 04.2**	**+2.7**
PV13				IAmb	IAmb	18 29 05.1	
	comp=Z,6.3nm,1.0s						
IMAR	**Indian Mountai**	**51.78**	**333**	P	**P**	**18 29 05.1**	**-1.5**
TXAR	**Lajitas Array**	**54.20**	**272**	P	**P**	**18 29 26.3**	**+1.2**
	comp=Z,0.2nm,0.6s,baz=44,slow=7.8,SNR=2.6						
TXAR				PcP	**PcP**	**18 30 30.7**	**+1.2**
	comp=Z,0.6nm,0.7s,baz=68,slow=4.2,SNR=4.5						
	comp=Z,0.2nm,0.6s						
X16A	**Lo Mia Camp, P**	**55.12**	**282**	P	**P**	**18 29 34.1**	**+2.3**
X16A				IAmb	IAmb	18 29 39.9	
	comp=Z,4.4nm,1.1s						
KVN	**Kaiserville**	**55.65**	**291**	P	**P**	**18 29 36.3**	**+0.7**
KVN				IAmb	IAmb	18 29 42.5	
	comp=Z,4.5nm,1.1s						
ZALV	**Zalesovo Beam**	**61.87**	**35**	P	**P**	**18 30 18.8**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=327,slow=10,SNR=4.5						
	comp=Z,0.8nm,0.6s						
MKAR	**Makanchi Array**	**66.79**	**41**	P	**P**	**18 30 51.8**	**+1.0**
	comp=Z,0.8nm,0.8s,baz=329,slow=7.5,SNR=5.4						
	comp=Z,0.8nm,0.8s						
SONM	**Songino Array**	**73.78**	**26**	P	**P**	**18 31 34.6**	**+0.9**
	comp=Z,1.3nm,0.9s,baz=329,slow=5.5,SNR=5.1						
	comp=Z,1.3nm,0.9s						
SONM	**Songino Array**	**73.78**	**26**	IAmb	IAmb	18 31 39.6	
	comp=Z,1.1nm,0.8s						

IDC 25 18:23:40.5±1.9, 53°.48N×35°.59W, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=212.1km s-min=29.0km az=24.0, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H07N1	**FLORES T-PHASE**	**14.12**	**166**	T	T	18 41 25.8	
	SNR=8.7						
ESDC	**Sonseca Array**	**25.50**	**110**	P	P	18 29 10.6	+0.2
	0.5nm,0.8s,baz=320,slow=10,SNR=2.5						
	0.5nm,0.8s						
PDAR	**Pinedale Array**	**48.40**	**289**	P	P	18 32 24.2	-0.1
	0.5nm,0.6s,baz=62,slow=7.7,SNR=5.4						
	0.5nm,0.6s						
TORD	**Torodi Ar. Bea**	**49.87**	**129**	P	P	18 32 35.3	-0.3
	0.7nm,0.9s,baz=350,slow=7.3,SNR=2.5						
	0.7nm,0.9s						

IDC 25 18:27:07.2±7.5, 19°.69S×179°.53W, h632km±34km, mb2.8/2, mbtmp3.6/3, Error ellipse: s-maj=243.0km s-min=32.4km az=148.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.01**	**310**	P	P	18 28 29.0	-0.2
	7.9nm,0.6s,baz=132,slow=15,SNR=26						
WRA	**Warramunga Arr**	**43.29**	**262**	P	P	18 34 15.8	+0.1
	0.4nm,0.3s,baz=96,slow=7.6,SNR=27						
	0.4nm,0.3s						
ILAR	**Eielson Array**	**87.85**	**13**	P	P	18 38 51.1	+0.6
	0.3nm,0.5s,baz=217,slow=4.3,SNR=2.8						
	0.3nm,0.5s						
ARCES	**ARCESS Array B**	**127.86**	**349**	PKP	PKPdf	18 45 01.2	-0.5
	1.8nm,1.0s,baz=45,slow=2.7,SNR=3.8						
HFS	**Hagfors**	**138.51**	**350**	PKhKP	PKPpre	18 45 14.5	
	0.3nm,0.3s,baz=354,slow=1.4,SNR=8.5						
AKASG	**Malin Array Be**	**141.61**	**330**	PKP	PKPdf	18 45 24.9	-2.9
	1.1nm,0.4s,baz=41,slow=4.2,SNR=11						

*IDC **25** 18:28:09.1±1.1, 21°.81S×67°.56W, h111km±17km, mb4.5/2, mbtmp4.7/4, Error ellipse: s-maj=31.3km s-min=12.2km az=119.0*
*NEIC **25** 18:28:10.3±1.5, 21°.77S±0°.02×68°.0W±0°.1, h138km±9km, Error ellipse: s-maj=14.0km s-min=2.2km az=77.0*
*GUC **25** 18:28:10.9±0.7, 21°.78S×68°.05W, h141km±6km, ML4.2*
*VAO **25** 18:28:10.7±0.4, 21°.67S×68°.01W, h146km±5km, mb4.1*
*SCB **25** 18:28:11.0±2.7, 21°.77S×68°.06W, h83km±415km, ML4.0/3, MW3.6, Error ellipse: s-maj=11.9km s-min=7.4km az=0.0*

ISC 25 18:28:09.7±0.6, 21°.76S±0°.04×68°.06W±0°.04, h144km±7km, n96, σ1°24/119, 6C-3D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**1.16**	**223**	P	**Pn**	**18 28 36.5**	**+0.8**
	467nm,0.2s,baz=62,slow=7.5,SNR=1826						
LVC				S	**Sn**	**18 28 56.3**	**+0.8**
	104nm,0.3s,baz=258,slow=20,SNR=11						
LVC	**Limon Verde**	**1.16**	**223**		**Pn**	**18 28 36.2**	**+0.5**
LVC				Sn	**Sn**	**18 28 56.0**	**+0.5**
LVC	**Limon Verde**	**1.16**	**223**	*i*P	**Pn**	**18 28 35.9**	**+0.2**
LVC				*i* S	**Sn**	**18 28 56.0**	**+0.5**
LVC	**Limon Verde**	**1.16**	**223**	*e*P	**Pn**	**18 28 36.5**	**+0.8**
AF01	**San Pedro de A**	**1.19**	**185**		**Pn**	**18 28 36.9**	**+0.9**
PB06	**IPOC Station P**	**1.69**	**236**		**Pn**	**18 28 41.5**	**+0.5**
PB06				Sn	**Sn**	**18 29 05.3**	**+0.3**
PB06	**IPOC Station P**	**1.69**	**236**	*i*P	**Pn**	**18 28 41.8**	**+0.8**
PB06				*i* S	**Sn**	**18 29 05.2**	**+0.3**
PB06	**IPOC Station P**	**1.69**	**236**	P	**Pn**	**18 28 41.8**	**+0.8**
PB02	**IPOC Station P**	**1.76**	**284**		**Pn**	**18 28 42.4**	**+0.5**
PB02				Sn	**Sn**	**18 29 06.1**	**-0.3**
PB02	**IPOC Station P**	**1.76**	**284**	*e*P	**Pn**	**18 28 42.1**	**+0.3**
PB02				*i* S	**Sn**	**18 29 06.8**	**+0.4**
PB02				IAML		18 29 07.8	
	comp=N,3μm,0.1s						
PB02	**IPOC Station P**	**1.76**	**284**	P	**Pn**	**18 28 42.7**	**+0.9**
PB02				S	**Sn**	**18 29 03.9**	**-2.5**
PB02				IAML		18 29 07.8	
	comp=N,2μm,0.2s						
PB08	**IPOC Station P**	**1.91**	**327**		**Pn**	**18 28 45.0**	**+1.2**
PB08				Sn	**Sn**	**18 29 10.9**	**+1.0**
PB08	**IPOC Station P**	**1.91**	**327**	*e*P	**Pn**	**18 28 44.9**	**+1.1**
PB08				*i* S	**Sn**	**18 29 11.0**	**+1.2**
PB08	**IPOC Station P**	**1.91**	**327**	P	**Pn**	**18 28 45.0**	**+1.2**
PB15	**IPOC Station P**	**1.94**	**222**		**Pn**	**18 28 44.9**	**+0.9**
PB15	**IPOC Station P**	**1.94**	**222**	*i*P	**Pn**	**18 28 45.0**	**+1.0**
PB15				*i* S	**Sn**	**18 29 10.6**	**+0.3**
PB15	**IPOC Station P**	**1.94**	**222**	P	**Pn**	**18 28 45.0**	**+1.0**
PB15				IAML		18 29 19.0	
	comp=N,1μm,0.2s						
PB04	**IPOC Station P**	**2.02**	**253**		**Pn**	**18 28 45.0**	**+0.2**
PB04	**IPOC Station P**	**2.02**	**253**	*i* P	**Pn**	**18 28 45.2**	**+0.3**
PB04				*i* S	**Sn**	**18 29 11.4**	**-0.4**
PB04				IAML		18 29 14.0	
	comp=N,906nm,0.2s						
PB04	**IPOC Station P**	**2.02**	**253**	P	**Pn**	**18 28 45.3**	**+0.4**
PB04				S	**Sn**	**18 29 09.0**	**-2.8**
PB04				IAML		18 29 14.0	
	comp=N,529nm,0.2s						
PATCX	**Punta Patache**	**2.16**	**295**		**Pn**	**18 28 47.0**	**+0.5**
PATCX				Sn	**Sn**	**18 29 13.9**	**-0.8**
PATCX	**Punta Patache**	**2.16**	**295**	*i*P	**Pn**	**18 28 46.8**	**+0.3**
PATCX				*i* S	**Sn**	**18 29 14.4**	**-0.3**
PATCX				IAML		18 29 16.7	
	comp=E,2μm,0.3s						
HMBC	**Humberstone**	**2.26**	**310**	*i*P	**Pn**	**18 28 47.9**	**+0.2**
HMBC				*i* S	**Sn**	**18 29 15.9**	**-0.9**
HMBC				IAML		18 29 18.4	
	comp=N,991nm,0.4s						
TA01	**Diego Aracena**	**2.31**	**301**	Pn	**Pn**	**18 28 48.3**	**+0.1**
TA01				Sn	**Sn**	**18 29 16.7**	**-1.0**
TA01	**Diego Aracena**	**2.31**	**301**	*i*P	**Pn**	**18 28 48.5**	**+0.3**
TA01				*i* S	**Sn**	**18 29 16.9**	**-0.8**
TA01				IAML		18 29 17.9	
	comp=E,2μm,0.4s						
MOCB	**Mochara**	**2.31**	**78**	P	**Pn**	**18 28 49.5**	**+0.9**
MOCB				S	**Sn**	**18 29 16.1**	**-2.4**
GO01	**Chusmiza**	**2.34**	**333**		**Pn**	**18 28 49.5**	**+0.5**
YJA	**Yavi**	**2.40**	**100**	P	**Pn**	**18 28 50.8**	**+1.1**
TA02	**Huaiquique**	**2.44**	**307**		**Pn**	**18 28 49.6**	**-0.1**
TA02	**Huaiquique**	**2.44**	**307**	*e*P	**Pn**	**18 28 49.9**	**+0.1**
TA02				*e*S	**Sn**	**18 29 18.2**	**-2.3**
TA02				IAML		18 29 21.9	
	comp=E,1μm,0.2s						
PB11	**IPOC Station P**	**2.49**	**323**		**Pn**	**18 28 50.4**	**-0.1**
PB11	**IPOC Station P**	**2.49**	**323**	*i*P	**Pn**	**18 28 50.9**	**+0.3**
PB11				*i* S	**Sn**	**18 29 21.9**	**0.0**
PB11				IAML		18 29 23.0	
	comp=E,663nm,0.3s						
PB11	**IPOC Station P**	**2.49**	**323**	P	**Pn**	**18 28 50.9**	**+0.3**
PB10	**IPOC Station P**	**2.89**	**232**	Pn	**Pn**	**18 28 56.1**	**+0.7**
PB10	**IPOC Station P**	**2.89**	**232**	*i*P	**Pn**	**18 28 55.9**	**+0.5**
GO02	**Mina Guanaco**	**3.67**	**202**	Pn	**Pn**	**18 29 05.7**	**0.0**
PB16	**IPOC Station P**	**3.67**	**338**		**Pn**	**18 29 06.8**	**+0.7**
PB12	**IPOC Station P**	**3.79**	**325**	Pn	**Pn**	**18 29 06.0**	**-1.1**
PB12	**IPOC Station P**	**3.79**	**325**	*i*P	**Pn**	**18 29 06.0**	**-1.1**
PB12				*i* S	**Sn**	**18 29 48.1**	**-3.5**
PB12				IAML		18 29 54.9	
	comp=N,179nm,0.4s						
AC01	**Pan de Azucar**	**4.95**	**207**		**Pn**	**18 29 20.8**	**-1.5**
AC02	**Maricunga**	**5.15**	**191**	Pn	**Pn**	**18 29 25.4**	**0.0**
LPAZ	**La Paz**	**5.44**	**359**	P	**Pn**	**18 29 31.1**	**+1.5**
	comp=N,5.1nm,0.4s,baz=155,slow=7.7,SNR=20						
LPAZ				S	**Sn**	**18 30 31.9**	**+0.2**
	comp=N,1.6nm,0.3s,baz=262,slow=23,SNR=1.2						
LPAZ	**La Paz**	**5.44**	**359**		**Pn**	**18 29 30.8**	**+1.3**
LPAZ	**La Paz**	**5.44**	**359**	P	**Pn**	**18 29 31.4**	**+1.9**
LPAZ	**La Paz**	**5.44**	**359**	*e*P	**Pn**	**18 29 29.5**	**0.0**
GO03	**Copiap**	**6.13**	**198**	Pn	**Pn**	**18 29 35.9**	**-2.3**
LCO	**Las Campanas**	**7.60**	**198**	Pn	**Pn**	**18 29 54.6**	**-3.5**
CO01	**Juntas del Tor**	**8.38**	**192**	Pn	**Pn**	**18 30 06.6**	**-1.8**
GO04	**Tololo Observa**	**8.73**	**196**	Pn	**Pn**	**18 30 08.8**	**-4.3**
SIV	**San Ignacio**	**8.76**	**50**	P	**Pn**	**18 30 09.7**	**-3.6**
	comp=N,39nm,0.4s,baz=248,slow=11,SNR=183						
SIV				S	Sn	18 31 40.5	-10
	comp=N,2.9nm,0.3s,baz=158,slow=23,SNR=2.3						
CO03	**El Pedregal**	**9.34**	**194**	Pn	**Pn**	**18 30 16.9**	**-4.2**
CO02	**Combarbal**	**9.77**	**195**	Pn	**Pn**	**18 30 23.3**	**-3.5**
VILB	**Vilhena**	**11.53**	**42**	*e*P	**Pn**	**18 30 49.0**	**-1.1**
ETMB	**Extrema**	**12.01**	**9**	*e*P	**Pn**	**18 30 56.2**	**-0.2**
SALV	**Santo Antonio**	**13.07**	**66**	*e*P	**Pn**	**18 31 10.8**	**+0.7**
SAML	**Samuel**	**13.57**	**21**	Pn	**Pn**	**18 31 16.6**	**0.0**
PDRB	**Porto dos Gac**	**14.81**	**49**	*e*P	**Pn**	**18 31 32.7**	**+0.5**
PTGB	**Pitanga**	**14.99**	**104**	*e*P	**P**	**18 31 36.5**	**+0.1**
ITAB	**Concordia**	**15.49**	**114**		**P

PQI IAmb IAmb 18 33 40.4
comp=Z,26nm,1.3s
GGN Saint George 22.05 260 P P 18 33 33.8 +0.7
GGN IAmb IAmb 18 33 39.6
comp=Z,30nm,1.4s
D62A Allapoint, All 22.31 266 P P 18 33 34.9 -1.0
D62A IAmb IAmb 18 33 42.4
comp=Z,24nm,1.3s
G65A Princeton 22.43 261 P P 18 33 36.5 -0.7
G65A IAmb IAmb 18 33 43.6
comp=Z,28nm,1.4s
F64A Sherman 22.53 263 P P 18 33 39.4 +1.2
F64A IAmb IAmb 18 33 47.5
comp=Z,19nm,1.3s
BCLA Clavier 24.98 81 *d*P **P 18 34 03.5 +1.6**
NBO00 NORSAR Array S 25.44 55 P P 18 34 06.8 +0.8
ESDC Sonseca Array 25.48 111 P P 18 34 06.5 -0.1
comp=Z,2.2nm,0.8s,baz=312,slow=9.6,SNR=9.3
ESDC LR LR 18 42 07.4
comp=Z,289nm,18.9s,baz=326,slow=32
comp=Z,2.2nm,0.8s
ESDC Sonseca Array 25.48 111 P P 18 34 07.8 +1.1
NB2 NORSAR Subarra 25.65 55 P P 18 34 07.9 -0.1
comp=Z,21nm,1.7s,baz=275,slow=9.3
NOA NORSAR Array B 25.65 55 P P 18 34 07.7 -0.3
comp=Z,0.9nm,0.8s,baz=276,slow=9.4,SNR=4.1
NOA LR LR 18 43 05.2
comp=Z,156nm,18.1s,baz=270,slow=34
comp=Z,0.9nm,0.8s
NC602 NORSAR Array S 25.84 55 P P 18 34 10.3 +0.7
NC602 IAmb IAmb 18 34 15.8
comp=Z,13nm,0.9s
NC405 NORSAR Array S 25.89 55 P P 18 34 10.1 0.0
NC405 IAmb IAmb 18 34 17.0
comp=Z,27nm,1.5s
HFS Hagfors 26.97 56 P P 18 34 17.3 -2.6
comp=Z,3.2nm,1.1s,baz=258,slow=6.8,SNR=3.6
HFS LR LR 18 43 14.6
comp=Z,246nm,18.2s,baz=336,slow=32
J59A Piesco 27.51 264 P P 18 34 24.6 -0.3
J59A IAmb IAmb 18 34 33.1
comp=Z,15nm,1.3s
BFO Black Forest 27.67 83 P P 18 34 25.3 -1.0
MACI Morro de la Ar 29.00 144 P P 18 34 38.8 +0.3
CLL Collm 29.09 75 *e*P **P 18 34 38.0 -0.8**
CLL *i* x x 18 34 43.2
comp=Z,5.0nm,0.9s
DAVOX Davos/Dischmat 29.34 85 LR LR 18 45 01.1
comp=Z,219nm,20.5s,baz=292,slow=34
SADO Sadowa 29.52 270 LR LR 18 45 31.7
comp=Z,449nm,18.4s,baz=56,slow=34
RES Resolute Bay 31.17 334 LR LR 18 46 05.6
comp=Z,192nm,18.3s,baz=86,slow=34
ARCES ARCESS Array B 31.27 36 P P 18 34 56.6 -1.3
comp=Z,1.3nm,0.7s,baz=265,slow=10,SNR=9.3
comp=Z,1.3nm,0.7s
ARCES ARCESS Array B 31.27 36 P P 18 34 57.6 -0.4
KEV Kevo 31.78 36 P P 18 35 02.9 +0.5
VRAC Vranov 32.03 76 LR LR 18 47 22.3
comp=Z,233nm,18.5s,baz=291,slow=35
MORC Moravsky Berou 32.36 75 *e*P **P 18 35 06.6 -1.2**
FINES FINESS Array B 32.66 51 P P 18 35 10.1 0.0
comp=Z,2.0nm,0.9s,baz=286,slow=7.1,SNR=6.8
FINES LR LR 18 46 45.3
comp=Z,143nm,18.5s,baz=227,slow=33
comp=Z,2.0nm,0.9s
FINES FINESS Array B 32.66 51 P P 18 35 10.3 +0.1
FIA1 FINESS Array S 32.66 51 P P 18 35 10.2 0.0
PABE Paberze 33.50 62 P P 18 35 16.8 -0.8
P52A Corning 34.37 265 P P 18 35 25.9 +0.6
KEST Kesra 35.80 102 P P 18 35 39.4 +1.6
comp=Z,4.5nm,1.0s,baz=333,slow=4.5,SNR=5.4
comp=Z,4.5nm,1.0s
ULM Lac du Bonnet 36.42 290 P P 18 35 42.1 -0.8
comp=Z,2.6nm,0.7s,baz=81,slow=7.0,SNR=2.8
ULM LR LR 18 49 16.4
comp=Z,266nm,19.3s,baz=108,slow=34
comp=Z,2.6nm,0.7s
ULM Lac du Bonnet 36.42 290 IAmb IAmb 18 35 48.1
comp=Z,5.0nm,0.8s
BURAR Bucovina Array 37.84 74 P P 18 35 55.1 0.0
AKASG Malin Array Be 38.48 67 P P 18 35 59.8 -0.4
comp=Z,2.0nm,0.9s,baz=306,slow=8.6,SNR=6.7
comp=Z,2.0nm,0.9s
Q44A Meyer Farm, Va 38.93 270 P P 18 36 04.8 +0.7
Q44A IAmb IAmb 18 36 05.9
comp=Z,14nm,1.1s
MLR Muntele Rosu 39.44 76 LR LR 18 51 54.2
comp=Z,212nm,19.0s,baz=309,slow=35
SIUC Southern Illin 39.82 269 P P 18 36 12.0 +0.4
SIUC IAmb IAmb 18 36 18.1
comp=Z,14nm,1.1s
S44A Carbondale 39.86 269 P P 18 36 11.2 -0.8
S44A IAmb IAmb 18 36 13.7
comp=Z,12nm,1.0s
YKA Yellowknife Ar 40.17 315 P P 18 36 13.3 -0.9
comp=Z,0.6nm,0.8s,baz=68,slow=8.3,SNR=2.8
YKA PcP **PcP 18 38 17.0 -1.2**
comp=Z,0.7nm,0.8s,baz=54,slow=3.2,SNR=3.3
YKA LR LR 18 50 37.6
comp=Z,223nm,18.3s,baz=80,slow=33
comp=Z,0.6nm,0.8s
ECSD EROS Data Cent 40.41 281 P P 18 36 17.7 +1.1
CCM Cathedral Cave 40.80 271 P P 18 36 20.0 +0.2
P38A Dawn 41.14 274 P P 18 36 22.0 -0.5
P38A IAmb IAmb 18 36 25.1
comp=Z,14nm,1.5s
250A Grady 42.06 260 P P 18 36 28.9 -1.3
250A IAmb IAmb 18 36 57.0
comp=Z,6.2nm,0.7s
LCAR Lake Charles 42.08 268 P P 18 36 30.0 -0.3
OXF Oxford 42.11 265 P P 18 36 30.1 -0.5
OXF IAmb IAmb 18 36 35.8
comp=Z,13nm,1.1s
553A Crawfordville 42.31 256 P P 18 36 31.6 -0.6
WHAR Wooly Hollow 43.28 269 P P 18 36 40.1 0.0
WHAR IAmb IAmb 18 36 45.3
comp=Z,9.4nm,1.2s
W41B Gary Mavity, V 43.34 268 P P 18 36 39.9 -0.6
W39A Magazine 44.23 270 P P 18 36 48.3 +0.5
W39A IAmb IAmb 18 36 53.2
comp=Z,14nm,1.3s
INK Inuvik 44.31 328 P P 18 36 47.2 -0.6
comp=Z,1.3nm,0.3s,baz=45,slow=5.6,SNR=3.6
comp=Z,1.3nm,0.3s
INK Inuvik 44.31 328 IAmb IAmb 18 36 53.2
comp=Z,10nm,1.3s
MIAR Mount Ida 44.56 269 P P 18 36 50.5 +0.2
MIAR IAmb IAmb 18 36 58.3
comp=Z,12nm,1.1s
IDI Anoyia 45.28 89 LR LR 18 55 35.9
comp=Z,130nm,19.1s,baz=328,slow=36
RLMT Red Lodge 46.77 291 P P 18 37 08.5 +0.5
WALA Waterton Lakes 46.87 298 P P 18 37 09.2 +0.6
WALA IAmb IAmb 18 37 14.2
comp=Z,6.9nm,1.1s
BRTR Keskin Array B 47.46 78 P P 18 37 13.8 +0.5
comp=Z,0.9nm,0.9s,baz=317,slow=4.3,SNR=6.5
comp=Z,0.9nm,0.9s
BRTR Keskin Array B 47.46 78 P P 18 37 14.3 +1.0
N23A Red Feather La 47.58 284 P P 18 37 15.2 +0.8
BOZ Bozeman (W) 47.78 293 P P 18 37 16.0 +0.3
BOZ IAmb IAmb 18 37 21.5
comp=Z,6.2nm,1.2s
RWWY Rawlins 47.79 286 P P 18 37 16.0 -0.1
LRM Limekiln Ridge 48.08 294 P P 18 37 18.6 +0.4
ISCO Idaho Springs 48.11 283 P P 18 37 19.2 +0.6
ISCO IAmb IAmb 18 37 28.6
comp=Z,5.5nm,1.0s
BMAR Burnt Mountain 48.18 331 P P 18 37 19.0 +0.5
PD31 Pinedale Array 48.43 289 P P 18 37 20.6 -0.2
PDAR Pinedale Array 48.43 289 P P 18 37 20.6 -0.2
comp=Z,1.2nm,0.6s,baz=53,slow=8.0,SNR=12
comp=Z,1.2nm,0.6s
PDAR Pinedale Array 48.43 289 P P 18 37 20.5 -0.4
NEW Newport 49.04 299 P P 18 37 25.0 -0.3
NEW IAmb IAmb 18 37 33.3
comp=Z,5.0nm,1.2s
T25A Trinidad 49.19 280 P P 18 37 27.4 +0.6
WHY Whitehorse 49.31 320 P P 18 37 28.4 +1.1
WHY IAmb IAmb 18 37 35.4
comp=Z,6.2nm,1.2s
ARU Arti 49.74 47 P P 18 37 29.8 -0.7
ARU IAmb IAmb 18 37 32.7
comp=Z,4.9nm,1.1s
RDMU Red Mountain 49.87 287 P P 18 37 32.0 +0.1
RDMU IAmb IAmb 18 37 34.9
comp=Z,8.0nm,1.3s
TOA0 Torodi Ar. Sit 49.95 130 P P 18 37 31.5 -1.0
TOA0 IAmb IAmb 18 37 37.5
comp=Z,5.0nm,1.1s
TORD Torodi Ar. Bea 49.95 130 P P 18 37 31.3 -1.2
comp=Z,3.4nm,0.9s,baz=335,slow=7.2,SNR=7.7
comp=Z,3.4nm,0.9s
TORD Torodi Ar. Bea 49.95 130 P P 18 37 31.6 -0.9
KBZ Khabaz 50.09 68 LR LR 18 59 28.5
comp=Z,112nm,18.1s,baz=333,slow=37
ILAR Eielson Array 50.68 329 P P 18 37 37.5 0.0
comp=Z,0.6nm,0.9s,baz=52,slow=6.8,SNR=6.7
comp=Z,0.6nm,0.9s
PV10 Paradox Valley 51.04 284 P P 18 37 41.7 +0.8
PV13 Radium Mtn., P 51.06 284 P P 18 37 41.9 +0.9
PV13 IAmb IAmb 18 37 47.8
comp=Z,10nm,1.1s
I23K Minto, Yukon-K 51.16 330 P P 18 37 42.0 +1.0
I23K IAmb IAmb 18 37 44.0
comp=Z,9.7nm,1.4s
SRU San Rafael Swe 51.40 286 P P 18 37 43.5 +0.1
MFID Camas Ranch 51.48 293 P P 18 37 44.5 +0.6
MFID IAmb IAmb 18 37 52.6
comp=Z,8.6nm,1.5s
BARN Barnard Glacie 51.54 323 P P 18 37 45.4 +1.2
NLU North Lily Min 51.71 288 P P 18 37 46.2 +0.4
NLU IAmb IAmb 18 37 48.0
comp=Z,8.7nm,1.4s
IMAR Indian Mountai 51.79 333 P P 18 37 46.5 +0.7
BWN Browne 51.90 329 P P 18 37 46.9 +0.3
ANMO Albuquerque 51.90 279 LR LR 18 59 21.4
comp=Z,477nm,18.0s,baz=54,slow=36
ANMO Albuquerque 51.90 279 P P 18 37 47.7 +0.4
BBB Bella Bella 51.94 309 LR LR 18 59 40.9
comp=Z,119nm,18.2s,baz=96,slow=36
DUG Dugway, Tooele 51.96 288 P P 18 37 48.0 +0.4
DUG IAmb IAmb 18 37 54.4
comp=Z,6.4nm,1.2s
ELK Elko 52.95 290 P P 18 37 55.9 +0.9
SML Sawmill 53.27 327 P P 18 37 56.9 0.0
E03A Lebam 53.47 301 P P 18 37 59.1 +0.6
WVOR Wild Horse Val 53.66 294 P P 18 38 01.2 +1.0
WVOR IAmb IAmb 18 38 08.1
comp=Z,7.8nm,1.1s
PINE Pine Mountain 53.98 297 P P 18 38 03.7 +1.2
BMN Battle Mountai 54.26 291 P P 18 38 05.2 +0.6
BMN IAmb IAmb 18 38 12.7
comp=Z,7.2nm,1.4s
TXAR Lajitas Array 54.27 272 P P 18 38 04.5 -0.1
comp=Z,0.9nm,1.0s,baz=53,slow=8.3,SNR=5.9
TXAR PcP **PcP 18 39 09.4 +0.6**
comp=Z,0.5nm,0.7s,baz=69,slow=4.9,SNR=4.3
comp=Z,0.9nm,1.0s
TXAR Lajitas Array 54.27 272 P P 18 38 04.8 +0.2
K05A Summer Lake 54.68 296 P P 18 38 08.6 +1.0
MOD Modoc Plateau 54.93 295 P P 18 38 09.7 +0.3
MOD IAmb IAmb 18 38 16.9
comp=Z,11nm,1.4s
KVN Kaiserville 55.71 291 P P 18 38 15.8 +0.8
KVN IAmb IAmb 18 38 20.9
comp=Z,4.7nm,1.1s
SHPR Sheep Range 55.84 287 P P 18 38 17.1 +1.0
SHPR IAmb IAmb 18 38 21.8
comp=Z,6.3nm,1.4s
TPH Tonopah 55.90 289 P P 18 38 17.0 +0.5
PAHR Pah Rah Range 55.96 292 P P 18 38 17.9 +1.0
PAHR IAmb IAmb 18 38 24.9
comp=Z,6.7nm,1.1s
NVAR Mina Array Bea 56.26 290 P P 18 38 19.4 +0.3
comp=Z,0.5nm,0.8s,baz=71,slow=6.4,SNR=4.3
comp=Z,0.5nm,0.8s
YBH Yreka Blue Hor 56.34 296 LR LR 19 01 34.5
comp=Z,201nm,19.2s,baz=84,slow=35
BEKR Beckworth 56.38 293 P P 18 38 20.5 +0.7
BEKR IAmb IAmb 18 38 27.5
comp=Z,8.8nm,1.3s
LHV Little Huntoon 56.49 290 P P 18 38 21.3 +0.9
LHV IAmb IAmb 18 38 26.4
comp=Z,6.8nm,1.2s
PNTR Pine Nut 56.51 292 P P 18 38 21.2 +0.4
LCH Last Change Ra 56.73 289 P P 18 38 22.3 -0.1
LCH IAmb IAmb 18 38 29.9
comp=Z,7.9nm,1.4s
CCAC Calif City Air 58.43 287 P P 18 38 34.7 +0.5
ZALV Zalesovo Beam 61.81 35 P P 18 38 57.2 +0.2
comp=Z,0.6nm,0.6s,baz=317,slow=6.1,SNR=3.7
comp=Z,0.6nm,0.6s
MK31 Makanchi Array 66.73 41 P P 18 39 28.9 -0.5
MKAR Makanchi Array 66.73 41 P P 18 39 29.8 +0.3
comp=Z,1.0nm,0.9s,baz=336,slow=6.1,SNR=7.0
comp=Z,1.0nm,0.9s
MKAR Makanchi Array 66.73 41 P P 18 39 29.6 +0.1
SIV San Ignacio 72.87 206 P P 18 40 06.2 -1.3
comp=Z,0.6nm,0.3s,baz=353,slow=8.1,SNR=3.9
comp=Z,0.6nm,0.3s
PETK Petropavlovsk- 72.95 352 LR LR 19 11 26.3
comp=Z,98nm,19.7s,baz=349,slow=35
SONM Songino Array 73.73 26 P P 18 40 12.7 +0.3
comp=Z,1.2nm,0.8s,baz=313,slow=5.7,SNR=7.6
comp=Z,1.2nm,0.8s
SONM Songino Array 73.73 26 P P 18 40 12.6 +0.1
ULN Ulaanbaatar 73.87 25 P P 18 40 13.8 +0.5
LPAZ La Paz 75.20 213 P P 18 40 22.1 +0.3
comp=Z,0.6nm,0.5s,baz=20,slow=12,SNR=3.5
comp=Z,0.6nm,0.5s
PB16 IPOC Station P 77.56 213 P P 18 40 35.0 -0.1
GTA Gaotai 79.50 34 ||P **P 18 40 46.0 +0.8**
GTA pP PcP 18 40 59.0 +5.8
GTA pmax pmax
comp=Z,4.0nm,2.0s
QSPA South Pole Qui 143.64 180 PKP PKPbc 18 48 10.8 +1.2
comp=Z,2.1nm,1.0s,baz=187,slow=0.7,SNR=4.1
WRA Warramunga Arr 145.34 17 PKPbc **PKPbc 18 48 15.2 -1.0**
comp=Z,0.2nm,0.7s,baz=344,slow=4.0,SNR=3.9

*IDC **25** 18:33:20.2±1.2, 53.80N×35.44W, h0km, mb3.6/9, mbtmp3.6/10, ML3.5/1, Error ellipse: s-maj=34.5km s-min=22.4km az=17.0*
ISC 25 18:33:21.7±1.0, 53.8N±0.2×35.4W±0.1, h10km, n11, σ0.6 1/10, mb3.7/9, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
H07N1	**FLORES T-PHASE**	**14.41**	**167**			T	T	18 51 26.9	
EKA	**Eskdalemuir Ar**	**18.68**	**72**			P	**Pn**	**18 37 39.5**	**-0.6**
	baz=291,slow=9.8								
	2.6nm,1.0s								
ESDC	**Sonseca Array**	**25.52**	**111**			P	**P**	**18 38 50.5**	**+0.3**
	2.8nm,0.9s,baz=314,slow=9.0,SNR=9.5								
	2.8nm,0.9s								
NOA	**NORSAR Array B**	**25.64**	**55**			P	**P**	**18 38 51.1**	**-0.1**
	2.0nm,1.2s,baz=275,slow=9.4,SNR=4.3								
	2.0nm,1.2s								
KEST	**Kesra**		**35.83 102**			P	**P**	**18 40 21.6**	**+0.3**
	2.5nm,0.9s,baz=300,slow=9.2,SNR=2.7								
	2.5nm,0.9s								
AKASG	**Malin Array Be**	**38.48**	**67**			P	**P**	**18 40 43.2**	**-0.3**
	0.1nm,0.3s,baz=295,slow=8.3,SNR=1.7								
	0.1nm,0.3s								
BRTR	**Keskin Array B**	**47.47**	**78**			P	**P**	**18 41 57.8**	**+1.1**
	0.8nm,0.8s,baz=327,slow=7.6,SNR=2.2								
	0.8nm,0.8s								
TORD	**Torodi Ar. Bea**	**50.00**	**130**			P	**P**	**18 42 15.8**	**-0.3**
	1.4nm,0.9s,baz=323,slow=7.8,SNR=5.6								
	1.4nm,0.9s								
ILAR	**Eielson Array**	**50.63**	**329**			P	**P**	**18 42 20.9**	**+0.5**
	0.5nm,0.9s,baz=26,slow=6.3,SNR=2.6								
	0.5nm,0.9s								
TXAR	**Lajitas Array**	**54.24**	**272**			P	**P**	**18 42 47.4**	**-0.3**
	0.3nm,0.7s,baz=76,slow=4.7,SNR=3.0								
	0.3nm,0.7s								
MKAR	**Makanchi Array**	**66.71**	**41**			P	**P**	**18 44 12.0**	**-0.5**
	0.3nm,0.7s,baz=324,slow=5.0,SNR=3.5								
	0.3nm,0.7s								

*IDC **25** 18:35:21.1±1.0, 53.80N×35.24W, h0km, mb3.6/12, mbtmp3.6/12, Error ellipse: s-maj=29.0km s-min=18.4km az=4.0*
ISC 25 18:35:22.6±0.9, 53.8N±0.2×35.3W±0.1, h10km, n13, σ0.6 9/13, mb3.7/12, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
H07N1	**FLORES T-PHASE**	**14.39**	**167**			T	T	18 53 24.3	
ESDC	**Sonseca Array**	**25.43**	**111**			P	**P**	**18 40 50.0**	**-0.2**
	1.3nm,0.8s,baz=317,slow=9.1,SNR=6.7								
	1.3nm,0.8s								
NOA	**NORSAR Array B**	**25.57**	**55**			P	**P**	**18 40 50.9**	**-0.4**
	0.6nm,0.9s,baz=275,slow=9.1,SNR=3.2								
	0.6nm,0.9s								
ARCES	**ARCESS Array B**	**31.18**	**36**			P	**P**	**18 41 40.8**	**-0.5**
	1.6nm,0.9s,baz=264,slow=7.2,SNR=6.2								
	1.6nm,0.9s								
FINES	**FINESS Array B**	**32.57**	**52**			P	**P**	**18 41 53.3**	**-0.2**
	0.8nm,0.8s,baz=291,slow=7.5,SNR=4.1								
	0.8nm,0.8s								
AKASG	**Malin Array Be**	**38.39**	**68**			P	**P**	**18 42 43.5**	**-0.1**
	0.1nm,0.2s,baz=306,slow=7.8,SNR=1.9								
	0.1nm,0.2s								
YKA	**Yellowknife Ar**	**40.19**	**315**			P	**P**	**18 42 57.6**	**-0.9**
	0.4nm,0.8s,baz=58,slow=9.5,SNR=2.6								
	0.4nm,0.8s								
BRTR	**Keskin Array B**	**47.38**	**78**			P	**P**	**18 43 58.0**	**+1.2**
	0.9nm,0.9s,baz=295,slow=8.2,SNR=3.9								
	0.9nm,0.9s								
PDAR	**Pinedale Array**	**48.48**	**289**			P	**P**	**18 44 05.7**	**+0.2**
	0.6nm,0.7s,baz=60,slow=7.6,SNR=3.0								
	0.6nm,0.7s								
TORD	**Torodi Ar. Bea**	**49.93**	**130**			P	**P**	**18 44 15.6**	**-0.8**
	1.3nm,0.7s,baz=325,slow=6.3,SNR=6.5								
	1.3nm,0.7s								
TXAR	**Lajitas Array**	**54.34**	**272**			P	**P**	**18 44 49.7**	**+0.5**
	0.3nm,0.8s,baz=37,slow=6.1,SNR=2.5								
TXAR				PcP		PcP	**PcP**	**18 45 53.3**	**+0.1**
	0.2nm,0.5s,baz=72,slow=2.9,SNR=2.3								
	0.3nm,0.8s								
MKAR	**Makanchi Array**	**66.65**	**42**			P	**P**	**18 46 12.8**	**-0.2**
	0.3nm,0.8s,baz=332,slow=8.1,SNR=2.6								
	0.3nm,0.8s								
SONM	**Songino Array**	**73.66**	**26**			P	**P**	**18 46 57.0**	**+1.0**
	0.4nm,0.6s,baz=348,slow=5.0,SNR=2.3								
	0.4nm,0.6s								

*IDC **25** 18:46:21.9±0.8, 53.74N×35.40W, h0km, mb3.8/19, mbtmp3.8/21, ML3.2/2, MS3.6/10, Error ellipse: s-maj=23.7km s-min=12.9km az=4.0*
*NEIC **25** 18:46:23.6±1.5, 54.01N±0.04×35.7W±0.2, h10km±5km, mb4.4/29, Error ellipse: s-maj=14.6km s-min=5.6km az=95.0*
ISC 25 18:46:23.1±0.6, 53.8N±0.1×35.60W±0.07, h10km, n65, σ1.9 16/60, mb4.2/30, MS3.6/10, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
H07N1	**FLORES T-PHASE**	**14.45**	**166**			T	T	19 04 24.8	
	SNR=7.5								
SCHQ	**Schefferville**		**18.17 286**			P	**P**	**18 50 37.2**	**+1.7**
	0.2nm,0.3s,baz=71,slow=15,SNR=2.8								
	2.2nm,0.7s								
SCHQ	**Schefferville**		**18.17 286**			P	**P**	**18 50 35.8**	**+0.2**
EKA	**Eskdalemuir Ar**	**18.78**	**72**			P	**Pn**	**18 50 43.1**	**+0.5**
	baz=278,slow=11								
	2.6nm,0.8s								
PQI	**Presque Isle**		**21.78 264**			P	**P**	**18 51 15.9**	**+1.1**
PQI						IAmb	IAmb	18 51 23.8	
	comp=Z,22nm,1.3s								
ESDC	**Sonseca Array**		**25.62 111**			P	**P**	**18 51 51.8**	**-0.8**
	comp=Z,6.6nm,1.1s,baz=316,slow=9.2,SNR=10								
ESDC						LR	LR	19 00 02.1	
	comp=Z,133nm,18.5s,baz=338,slow=32								
	comp=Z,6.6nm,1.1s								
ESDC	**Sonseca Array**		**25.62 111**			P	**P**	**18 51 52.7**	**+0.2**
NB2	**NORSAR Subarra**		**25.72 55**			P	**P**	**18 51 53.1**	**-0.1**
	comp=Z,9.0nm,1.7s,baz=276,slow=10								
NOA	**NORSAR Array B**		**25.72 55**			P	**P**	**18 51 52.6**	**-0.6**
	comp=Z,2.0nm,1.0s,baz=276,slow=9.8,SNR=5.8								
NOA						LR	LR	19 01 09.9	
	comp=Z,72nm,18.5s,baz=280,slow=35								
	comp=Z,2.0nm,1.0s								
NC303	**NORSAR Array S**	**25.78**	**54**			P	**P**	**18 51 53.7**	**-0.1**
NC602	**NORSAR Array S**	**25.91**	**56**			P	**P**	**18 51 53.6**	**-1.3**
NC602						IAmb	IAmb	18 52 00.5	
	comp=Z,8.3nm,0.9s								
HFS	**Hagfors**		**27.04 57**			P	**P**	**18 52 06.2**	**+1.0**
	comp=Z,1.6nm,0.8s,baz=278,slow=10.0,SNR=4.3								
	comp=Z,1.6nm,0.8s								
CLL	**Collm**		**29.20 75**			P	**P**	**18 52 22.9**	**-1.5**
CLL						IAmb	IAmb	18 52 28.7	
	comp=Z,5.0nm,1.0s								
CLL	**Collm**		**29.20 75**	*i*		P	**P**	**18 52 27.6**	**+3.2**
	comp=Z,5.0nm,0.9s								
SADO	**Sadowa**		**29.39 270**			LR	LR	19 03 04.4	
	comp=Z,176nm,19.5s,baz=105,slow=34								
DAVOX	**Davos/Dischmat**		**29.46 85**			LR	LR	19 02 45.4	
	comp=Z,109nm,20.2s,baz=268,slow=34								
ARCES	**ARCESS Array B**	**31.29**	**36**			P	**P**	**18 52 41.8**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=262,slow=7.2,SNR=6.4								
ARCES						LR	LR	19 03 17.6	
	comp=Z,136nm,19.5s,baz=309,slow=32								
	comp=Z,0.5nm,0.5s								
FINES	**FINESS Array B**	**32.72**	**51**			P	**P**	**18 52 55.2**	**-0.2**
	comp=Z,3.0nm,0.9s,baz=312,slow=7.3,SNR=9.4								
	comp=Z,3.0nm,0.9s								
FINES	**FINESS Array B**	**32.72**	**51**			P	**P**	**18 52 54.6**	**-0.7**
FIA1	**FINESS Array S**	**32.72**	**51**			P	**P**	**18 52 55.2**	**-0.1**
FIA1						IAmb	IAmb	18 53 00.3	
	comp=Z,4.3nm,1.0s								
KEST	**Kesra**		**35.94 102**			P	**P**	**18 53 25.6**	**+2.0**
KEST						IAmb	IAmb	18 53 28.5	
	comp=Z,9.7nm,1.1s								
TKL	**Tuckaleechee C**		**37.87 261**			LR	LR	19 08 19.3	
	comp=Z,72nm,19.3s,baz=66,slow=35								
BUR08	**Bucovina Ar. S**	**37.92**	**74**			P	**P**	**18 53 40.3**	**-0.1**
BURAR	**Bucovina Array**	**37.95**	**74**			P	**P**	**18 53 40.4**	**-0.2**
AKASG	**Malin Array Be**	**38.57**	**67**			P	**P**	**18 53 44.9**	**-0.8**
	comp=Z,1.7nm,0.8s,baz=298,slow=7.9,SNR=3.4								
	comp=Z,1.7nm,0.8s								
YKA	**Yellowknife Ar**		**40.03 315**			P	**P**	**18 53 59.1**	**+1.4**
	comp=Z,0.5nm,0.8s,baz=70,slow=9.2,SNR=2.8								
YKA						PcP	**PcP**	**18 56 02.5**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=67,slow=3.4,SNR=3.1								
	comp=Z,0.5nm,0.8s								
YKA	**Yellowknife Ar**		**40.03 315**			P	**P**	**18 53 56.1**	**-1.6**
OBN	**Obninsk**		**40.24 58**			LR	LR	19 09 12.6	
	comp=Z,25nm,18.8s,baz=4.5,slow=34								
ECSD	**EROS Data Cent**		**40.27 281**			P	**P**	**18 53 59.0**	**-0.9**
INK	**Inuvik**		**44.18 328**			P	**P**	**18 54 31.9**	**+0.4**
	comp=Z,1.1nm,0.5s,baz=39,slow=11,SNR=1.5								
	comp=Z,1.1nm,0.5s								
MIAR	**Mount Ida**		**44.43 269**			P	**P**	**18 54 34.0**	**0.0**
RLMT	**Red Lodge**		**46.63 291**			P	**P**	**18 54 50.1**	**-1.4**
N23A	**Red Feather La**		**47.44 284**			P	**P**	**18 54 57.0**	**-0.9**
BR131	**Keskin Array S**	**47.57**	**78**			P	**P**	**18 54 59.0**	**+0.2**
BR131						IAmb	IAmb	18 55 04.3	
	comp=Z,2.9nm,0.8s								
BRTR	**Keskin Array B**	**47.57**	**78**			P	**P**	**18 54 59.1**	**+0.3**
	comp=Z,2.0nm,0.9s,baz=303,slow=4.8,SNR=6.8								
	comp=Z,2.0nm,0.9s								
ISCO	**Idaho Springs**		**47.97 283**			P	**P**	**18 55 02.8**	**+0.7**
ISCO						IAmb	IAmb	18 55 05.5	
	comp=Z,2.5nm,0.8s								
PD31	**Pinedale Array**		**48.28 289**			P	**P**	**18 55 04.7**	**+0.3**
PD31						IAmb	IAmb	18 55 07.1	
	comp=Z,3.2nm,1.2s								
PDAR	**Pinedale Array**		**48.28 289**			P	**P**	**18 55 05.7**	**+1.3**
	comp=Z,1.0nm,0.5s,baz=59,slow=7.9,SNR=16								
	comp=Z,1.0nm,0.5s								
PDAR	**Pinedale Array**		**48.28 289**			P	**P**	**18 55 04.7**	**+0.3**
PDAR						PcP	**PcP**	**18 56 29.2**	**-2.0**
TORD	**Torodi Ar. Bea**		**50.10 130**			P	**P**	**18 55 16.4**	**-1.9**
	comp=Z,3.2nm,0.8s,baz=328,slow=6.6,SNR=11								
	comp=Z,3.2nm,0.8s								
TORD	**Torodi Ar. Bea**		**50.10 130**			P	**P**	**18 55 17.6**	**-0.7**
TORD						IAmb	IAmb	18 55 21.5	
	comp=Z,3.4nm,0.9s								
HWUT	**Hardware Ranch**		**50.17 289**			P	**P**	**18 55 18.2**	**-0.5**
HWUT						IAmb	IAmb	18 55 21.3	
	comp=Z,3.9nm,0.8s								
KBZ	**Khabaz**		**50.18 68**			P	**P**	**18 55 18.5**	**-0.1**
	comp=Z,1.0nm,0.9s,baz=315,slow=7.1,SNR=1.8								
	comp=Z,1.0nm,0.9s								
ILAR	**Eielson Array**		**50.56 329**			P	**P**	**18 55 21.9**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=41,slow=4.8,SNR=5.0								
	comp=Z,0.3nm,0.6s

comp=Z,7.6nm,1.3s
ANMO Albuquerque 51.76 279 LR LR 19 17 06.3
comp=Z,158nm,18.4s,baz=49,slow=36
ELK Elko 52.80 290 LR LR 19 17 34.8
comp=Z,99nm,18.1s,baz=35,slow=35
TXAR Lajitas Array 54.13 272 P **P** **18 55 49.9 +1.6**
comp=Z,0.6nm,0.8s,baz=48,slow=7.4,SNR=6.4
TXAR PcP **PcP** **18 56 54.0 +1.1**
comp=Z,0.5nm,0.6s,baz=82,slow=4.9,SNR=6.1
comp=Z,0.6nm,0.8s
TXAR Lajitas Array 54.13 272 P **P** **18 55 47.8 -0.5**
TIXI Tiksi 54.35 6 P **P** **18 55 50.6 +1.5**
comp=Z,1.3nm,0.8s,baz=269,slow=22,SNR=5.2
comp=Z,1.3nm,0.8s
TIXI Tiksi 54.35 6 P **P** **18 55 48.4 -0.8**
TIXI IAmb IAmb 18 55 57.5
comp=Z,3.6nm,1.1s
KVN Kaiserville 55.56 291 P **P** **18 55 58.5 -0.1**
KVN IAmb IAmb 18 56 05.6
comp=Z,5.6nm,1.3s
TPH Tonopah 55.76 289 P **P** **18 55 59.2 -0.9**
NVAR Mina Array Bea 56.11 290 P **P** **18 56 04.6 +2.0**
comp=Z,0.4nm,0.6s,baz=91,slow=5.9,SNR=4.2
comp=Z,0.4nm,0.6s
NVAR Mina Array Bea 56.11 290 P **P** **18 56 01.9 -0.7**
LHV Little Huntoon 56.35 290 P **P** **18 56 03.6 -0.4**
GWY Greenwater Val 56.78 287 P **P** **18 56 06.9 -0.4**
GWY IAmb IAmb 18 56 25.8
comp=Z,5.1nm,1.4s
ROSC El Rosal 58.09 227 LR LR 19 23 23.7
comp=Z,73nm,18.0s,baz=115,slow=38
ZALV Zalesovo Beam 61.84 35 P **P** **18 56 41.5 -0.3**
comp=Z,0.2nm,0.4s,baz=332,slow=8.8,SNR=1.9
comp=Z,0.2nm,0.4s
MKAR Makanchi Array 66.77 41 P **P** **18 57 14.6 +0.3**
comp=Z,0.5nm,0.7s,baz=350,slow=6.2,SNR=4.7
comp=Z,0.5nm,0.7s
SONM Songino Array 73.73 26 P **P** **18 57 57.8 +0.8**
comp=Z,1.1nm,0.9s,baz=320,slow=3.9,SNR=4.3
comp=Z,1.1nm,0.9s
WRA Warramunga Arr 145.31 17 PKPbc **PKPbc** **19 06 00.5 -0.2**
comp=Z,0.7nm,0.9s,baz=351,slow=2.9,SNR=3.1

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*REN **25** 18:46:59.0±0.7,38°.65N±0°.02×118°.80W±0°.04,h10km±6km, ML2.6/18,ML2.4/44(NEIC),Error ellipse: s-maj=5.1km s-min=2.8km az=62.0*

NEIC 25 18:46:58.7±0.8,38°.65N±0°.04×118°.81W±0°.04,h11km±6km, Error ellipse: s-maj=5.2km s-min=5.2km az=146.0, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RYN	**Ryan**	**0.23**	**96**		Pg	18 47 03.6	+0.1
RYN				Sg	Sg	18 47 06.6	-0.2
NVAR	**Mina Array Bea**	**0.46**	**119**		Pg	18 47 07.6	-0.1
LHV	**Little Huntoon**	**0.47**	**149**		Pg	18 47 08.2	+0.3
LHV				Sg	Sg	18 47 14.4	+0.4
YERR	**Yerington**	**0.47**	**315**		Pg	18 47 08.2	+0.2
YERR				Sg	Sg	18 47 14.8	+0.5
YERR	comp=N,262nm,0.6s			IAML		18 47 15.9	
YERR	comp=E,302nm,0.2s			IAML		18 47 16.7	
NV11	**Mina Array Sit**	**0.56**	**113**		Pg	18 47 09.7	0.0
KVN	**Kaiserville**	**0.69**	**54**		Pg	18 47 11.8	-0.2
KVN	comp=E,271nm,0.6s			IAML		18 47 21.8	
KVN	comp=N,202nm,0.1s			IAML		18 47 24.1	
PNTR	**Pine Nut**	**0.75**	**306**		Pg	18 47 13.5	+0.1
PNTR	comp=N,136nm,0.8s			IAML		18 47 24.6	
PNTR	comp=E,176nm,0.4s			IAML		18 47 24.9	
VCNR	**Virginia City**	**0.92**	**315**		Pg	18 47 16.3	-0.1
MDPB	**Devils Postpil**	**1.04**	**192**		Pg	18 47 18.3	-0.4
OMMB	**Old Mammoth Mi**	**1.05**	**188**		Pg	18 47 18.5	-0.4
EMB	**Emerald Bay**	**1.06**	**288**		Pg	18 47 19.1	0.0
EMB	comp=E,96nm,0.6s			IAML		18 47 38.0	
PAHR	**Pah Rah Range**	**1.14**	**337**		Pb	18 47 20.4	-0.2
PAHR	comp=N,62nm,1.0s			IAML		18 47 41.5	
MPK	**Martis Peak**	**1.15**	**305**		Pn	18 47 20.9	-0.1
MPK	comp=N,109nm,0.7s			IAML		18 47 41.0	
MPK	comp=E,100nm,0.7s			IAML		18 47 43.4	
Q09A	**Carvers**	**1.29**	**81**		Pn	18 47 22.9	+0.1
TPH	**Tonopah**	**1.38**	**114**		Pn	18 47 23.8	-0.3
CMB	**Columbia Colle**	**1.38**	**244**		Pb	18 47 24.8	+0.2
CMB	**Columbia Colle**	**1.38**	**244**	Pn	Pb	18 47 24.4	-0.1
CMB	**Columbia Colle**	**1.38**	**244**	IAML		18 47 43.4	
CMB	comp=E,46nm,0.3s			IAML		18 47 46.8	
KCC	**Kaiser Creek**	**1.38**	**197**		Pb	18 47 24.7	+0.1
LCH	**Last Change Ra**	**1.69**	**147**		Pn	18 47 28.5	+0.2
BEKR	**Beckworth**	**1.71**	**316**		Pn	18 47 29.0	+0.4
GRAC	**Grapevine Rang**	**2.01**	**145**	Pn	Pb	18 47 34.1	-1.1
GRAC	comp=N,25nm,0.5s			IAML		18 48 05.0	
GRAC	comp=E,26nm,0.4s			IAML		18 48 07.5	
BMN	**Battle Mountai**	**2.16**	**34**	Pn	Pn	18 47 34.2	-0.6
ORV	**Oroville**	**2.28**	**294**	Pn	Pn	18 47 36.7	+0.5
R11A	**Troy Canyon, C**	**2.55**	**96**	Pn	Pn	18 47 39.9	-0.3
R11A	comp=N,13nm,0.7s			IAML		18 48 19.2	
R11A	comp=E,10nm,0.4s			IAML		18 48 20.2	
S11A	**Rachel**	**2.62**	**112**	Pn	Pn	18 47 41.0	0.0
TPNV	**Topopah Spring**	**2.65**	**129**	Pn	Pn	18 47 41.2	-0.3
BBGB	**Big Mountain B**	**2.72**	**221**	Pn	Pn	18 47 42.2	-0.2
SAO	**San Andreas Ge**	**2.81**	**229**	Pn	Pn	18 47 44.4	+0.8
PMPB	**Monarch Peak**	**2.90**	**214**	Pn	Pn	18 47 44.1	-0.7
GWY	**Greenwater Val**	**3.00**	**145**	Pn	Pn	18 47 45.5	-0.8
ISA	**Isabella, Lake**	**3.00**	**175**	Pn	Pn	18 47 46.4	+0.2
ISA	comp=N,6.3nm,0.2s			IAML		18 48 36.6	
ISA	comp=E,7.3nm,1.8s			IAML		18 48 37.9	
QSM	**Queen of Sheba**	**3.10**	**149**	Pn	Pn	18 47 47.2	-0.4
PRN	**Pahroc Range**	**3.22**	**112**		Pn	18 47 49.1	-0.2
ELK	**Elko**	**3.46**	**52**		Pn	18 47 52.6	-0.1
PSUT	**Pine Spring**	**3.89**	**90**	Pn	Pn	18 47 58.4	-0.2
CCUT	**Cedar City**	**4.44**	**103**	Pn	Pn	18 48 05.8	-0.3
DUG	**Dugway, Tooele**	**4.89**	**70**	Pn	Pn	18 48 12.4	0.0

IDC 25 18:47:12.1±1.4,3°.57S×151°.13E,h0km,mb3.4/2, mbtmp3.5/2,MS3.8/1,Error ellipse: s-maj=34.6km s-min=22.4km az=36.0,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.16**	**130**	Pn	Pb	18 47 34.9	-0.1
KRVT	10nm,0.3s,baz=345,slow=20,SNR=9.6			Sn	Sn	18 47 54.0	+1.9
WRA	**Warramunga Arr**	**23.09**	**224**	P	P	18 52 20.4	+0.6
	15nm,0.3s,baz=32,slow=20,SNR=5.6						
	0.5nm,0.6s,baz=47,slow=10.0,SNR=6.7						
	0.5nm,0.6s						
ASAJ	**Asahikawa**	**48.08**	**352**	LR	LR	19 14 26.4	
	comp=Z,117nm,20.9s,baz=330,slow=34						
ILAR	**Eielson Array**	**81.65**	**22**	P	P	18 59 32.5	+0.6
	0.4nm,0.7s,baz=256,slow=5.5,SNR=4.6						
	0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**148.34**	**289**	PKPbc	PKPbc	19 07 00.0	-1.5
	0.4nm,0.7s,baz=79,slow=3.8,SNR=2.1						

IDC 25 19:21:11.5±2.5,6°.25S×130°.03E,h0km,mb3.6/2, mbtmp3.7/3,ML3.5/1,Error ellipse: s-maj=113.9km s-min=41.8km az=63.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.24**	**163**	Pn	Pn	19 24 34.6	-0.1
	0.2nm,0.3s,baz=346,slow=13,SNR=21						
WRA				Sn	Sn	19 27 03.2	-10
	1.4nm,0.3s,baz=331,slow=23,SNR=10						
	0.5nm,0.3s						
CMAR	**Chiang Mai Arr**	**39.27**	**309**	P	P	19 28 42.1	-0.2
	0.4nm,0.4s,baz=135,slow=7.4,SNR=2.3						
	0.4nm,0.4s						
MKAR	**Makanchi Array**	**67.61**	**327**	P	P	19 32 10.3	+0.1
	0.3nm,0.4s,baz=114,slow=8.1,SNR=9.3						
	0.3nm,0.4s						

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*IDC **25** 19:24:31.4±1.3,53°.64N×35°.36W,h0km,mb3.5/9, mbtmp3.5/10,ML3.6/1,MS3.3/4,Error ellipse: s-maj=37.1km s-min=23.5km az=9.0*

ISC 25 19:24:32.8±1.2,53°.6N±0°.2×35°.4W±0°.2,h10km,n13, σ1§02/10,mb3.6/9,MS3.3/4,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKA	**Eskdalemuir Ar**	**18.71**	**72**	P	**Pn**	**19 28 52.9**	**+1.4**
	baz=237,slow=22						
	0.7nm,0.6s						
ESDC	**Sonseca Array**	**25.43**	**110**	P	**P**	**19 30 01.4**	**+0.8**
	0.8nm,0.9s,baz=312,slow=8.4,SNR=2.9						
	0.8nm,0.9s						
NOA	**NORSAR Array B**	**25.72**	**55**	P	**P**	**19 30 03.3**	**+0.3**
	0.4nm,0.7s,baz=276,slow=9.7,SNR=3.4						
NOA				LR	LR	19 38 43.2	
	comp=Z,20nm,18.4s,baz=40,slow=33						
	0.4nm,0.7s						
GERES	**GERESS Array B**	**30.60**	**79**	P	**P**	**19 30 45.6**	**-1.1**
	0.5nm,0.6s,baz=276,slow=9.8,SNR=4.3						
	0.5nm,0.6s						
FINES	**FINESS Array B**	**32.73**	**51**	P	**P**	**19 31 03.8**	**-1.4**
	0.3nm,0.6s,baz=299,slow=5.7,SNR=1.2						
	0.3nm,0.6s						
OBN	**Obninsk**	**40.23**	**58**	LR	LR	19 47 45.9	
	comp=Z,7.1nm,19.1s,baz=250,slow=35						
BRTR	**Keskin Array B**	**47.48**	**78**	P	**P**	**19 33 07.7**	**-0.2**
	0.5nm,0.8s,baz=297,slow=6.6,SNR=1.9						
	0.5nm,0.8s						
PDAR	**Pinedale Array**	**48.47**	**289**	P	**P**	**19 33 15.8**	**+0.1**
	0.5nm,0.5s,baz=68,slow=7.8,SNR=9.4						
	0.5nm,0.5s						
TORD	**Torodi Ar. Bea**	**49.87**	**130**	P	**P**	**19 33 25.9**	**-0.3**
	1.0nm,0.9s,baz=320,slow=8.8,SNR=3.5						
	1.0nm,0.9s						
ELK	**Elko**	**52.99**	**291**	LR	LR	19 57 38.5	
	comp=Z,93nm,18.3s,baz=176,slow=38						
MKAR	**Makanchi Array**	**66.82**	**41**	P	**P**	**19 35 25.5**	**+1.1**
	0.4nm,0.7s,baz=329,slow=5.9,SNR=4.5						
	0.4nm,0.7s						
SONM	**Songino Array**	**73.84**	**26**	P	**P**	**19 36 07.3**	**-0.2**
	0.3nm,0.6s,baz=343,slow=9.5,SNR=2.9						
	0.3nm,0.6s						
KSRS	**Korea Array**	**88.15**	**13**	LR	LR	20 17 41.5	
	comp=Z,100nm,18.1s,baz=155,slow=36						

IDC 25 19:27:09.8±5.3,29°.04S×177°.86W,h0km,mb3.8/2, mbtmp3.8/2,Error ellipse: s-maj=197.9km s-min=83.9km az=157.0,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**34.92**	**255**	P	P	19 34 02.5	-0.9
	1.9nm,0.8s,baz=83,slow=17,SNR=2.1						
	1.9nm,0.8s						
WRA	**Warramunga Arr**	**44.19**	**271**	P	P	19 35 21.2	+0.4
	0.3nm,0.4s,baz=110,slow=7.8,SNR=9.7						
	0.3nm,0.4s						
FINES	**FINESS Array B**	**143.91**	**341**	PKP	PKPdf	19 46 45.9	-0.6
	0.8nm,0.8s,baz=60,slow=3.7,SNR=3.9						

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*IDC **25** 19:43:07.4±1.6,1°.81N×126°.77E,h0km,mb3.7/3, mbtmp3.8/4,ML3.9/1,Error ellipse: s-maj=57.6km s-min=24.8km az=75.0*

*DJA **25** 19:43:12.1±0.3,2°.N±3°×12°.7E±°,h10km,M3.9/10,mb4.0/4, MLv3.8/10*

*NEIC **25** 19:43:13.4±1.0,1°.81N±0°.09×126°.6E±0°.1,h41km±10km, mb4.0/10,Error ellipse: s-maj=20.5km s-min=2.8km az=50.0*

ISC 25 19:43:13.7±0.8,1°.81N±0°.08×126°.65E±0°.07,h47km,n34, σ1§09/37,mb4.0/8,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.26**	**145**		**Pn**	**19 43 34.4**	**-0.5**
TNTI				Sn	**Sn**	**19 43 50.1**	**-0.6**
TNTI	**Ternate**	**1.26**	**145**	P	**Pn**	**19 43 34.4**	**-0.5**
SGSI	**Sangihe**	**2.17**	**329**	P	**Pn**	**19 43 46.8**	**-0.6**
LBMI	**Labuha**	**2.58**	**161**	P	**Pn**	**19 43 54.4**	**+1.4**
LBMI				S	**Sn**	**19 44 25.3**	**+2.1**
KMSI	**Cibinong**	**2.93**	**245**	P	**Pn**	**19 43 57.8**	**-0.1**
KMSI				S	**Sn**	**19 44 33.7**	**+1.8**
SANI	**Sanana**	**3.89**	**190**	P	**Pn**	**19 44 09.4**	**-1.6**
LUWI	**Luwuk**	**4.80**	**234**		**Pn**	**19 44 24.2**	**+0.7**
LUWI	**Luwuk**	**4.80**	**234**	P	**Pn**	**19 44 24.0**	**+0.5**
MRSI	**Marisa**	**4.89**	**254**	P	**Pn**	**19 44 25.1**	**+0.4**
NLAI	**Namlea**	**5.04**	**175**	P	**Pn**	**19 44 27.0**	**+0.2**
	0.1nm13nm,0.9s						
APSI	**Ampana**	**5.68**	**242**	P	**Pn**	**19 44 35.3**	**-0.3**
	0.1nm19nm,0.5s						
TOLI2	**Tolitoli**	**5.90**	**263**	Pn	**Pn**	**19 44 36.8**	**-1.9**
MPSI	**Mapaga**	**6.90**	**258**	P	**Pn**	**19 44 52.4**	**0.0**
	0.0nm7.1nm,0.6s						
MYLDM	**Lahad Datu**	**8.79**	**293**	Pn	**Pn**	**19 45 19.0**	**+0.7**
SPSI	**Sidrap Palu**	**8.95**	**230**	P	**Pn**	**19 45 21.6**	**+1.1**
KAPI	**Kappang**	**9.66**	**225**	Pn	**Pn**	**19 45 31.0**	**+0.7**
	1.0nm,0.3s,baz=51,slow=3.2,SNR=4.7						
	3.9nm,0.5s						
KAPI	**Kappang**	**9.66**	**225**		**Pn**	**19 45 30.1**	**-0.1**
BKB	**Balikpapan**	**10.21**	**253**	Pn	**Pn**	**19 45 36.3**	**-1.5**
KNRA	**Kununurra**	**17.50**	**173**		**Pn**	**19 47 13.6**	**-0.9**
KNRA	comp=Z,12nm,1.1s			IAmb	IAmb	19 47 38.6	
WB0	**Warramunga Arr**	**22.75**	**161**	P	**P**	**19 48 11.1**	**-1.1**
WB0	comp=Z,6.9nm,1.1s			IAmb	IAmb	19 48 17.5	
WRA	**Warramunga Arr**	**22.90**	**161**	P	**P**	**19 48 12.3**	**-1.4**
	comp=Z,3.2nm,0.6s,baz=338,slow=11,SNR=24						
	comp=Z,3.2nm,0.6s						
WRA	**Warramunga Arr**	**22.90**	**161**	P	**P**	**19 48 11.3**	**-2.4**
KULM	**Kulim**	**26.17**	**278**	P	**P**	**19 48 42.7**	**-1.4**
AS31	**Alice Springs**	**26.29**	**165**	P	**P**	**19 48 44.5**	**-0.5**
ASAR	**Alice Springs**	**26.29**	**165**	P	**P**	**19 48 44.2**	**-0.8**
SONM	**Songino Array**	**49.08**	**342**	P	**P**	**19 51 58.3**	**+1.9**
	comp=Z,0.4nm,0.6s,baz=164,slow=7.5,SNR=2.8						
	comp=Z,0.4nm,0.6s						
MK31	**Makanchi Array**	**59.08**	**326**	P	**P**	**19 53 08.6**	**-0.7**
MK31	comp=Z,0.7nm,1.0s			IAmb	IAmb	19 53 13.6	
MKAR	**Makanchi Array**	**59.08**	**326**	P	**P**	**19 53 09.1**	**-0.1**
	comp=Z,0.6nm,0.4s,baz=121,slow=7.2,SNR=13						
	comp=Z,0.6nm,0.4s						
MKAR	**Makanchi Array**	**59.08**	**326**	P	**P**	**19 53 08.7**	**-0.6**
KDJ	**Kajisay**	**59.72**	**319**	P	**P**	**19 53 14.4**	**+0.4**
KDJ	comp=Z,1.6nm,0.8s			IAmb	IAmb	19 53 32.2	
KURK	**Kurchatov**	**63.31**	**328**	P	**P**	**19 53 37.9**	**+0.1**
ABKAR	**Akbulak array**	**73.58**	**321**	P	**P**	**19 54 42.2**	**+0.2**
ABKAR	comp=Z,1.9nm,1.4s			IAmb	IAmb	19 55 02.1	
ABKAR	**Akbulak array**	**73.58**	**321**	P	**P**	**19 54 42.1**	**+0.2**
VNDA	**Vanda**	**81.55**	**173**	P	**P**	**19 55 26.3**	**+0.5**
VNDA	comp=Z,3.3nm,1.5s			IAmb	IAmb	19 55 46.3	

MAN 25 19:43:32.2,8°.99N×122°.55E,h29km,mb3.8,ML2.6,MS2.1, Mindanao

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*IDC **25** 19:55:56.5±0.4,12°.18N×143°.97E,h0km,mb4.8/32, mbtmp4.8/34,ML5.0/2,MS4.3/54,Error ellipse: s-maj=14.1km s-min=9.5km az=75.0*

*BJI **25** 19:55:57.8±0.0,12°.30N×143°.88E,h11km,mb4.8/68, mB4.9/42,Ms4.7/59,Ms7 4.4/55*

*MOS **25** 19:55:57.7±1.0,12°.15N×143°.81E,h18km,mb5.1/25, MS4.4/6,Error ellipse: s-maj=8.3km s-min=4.6km az=119.3*

*NEIC **25** 19:55:59.1±1.2,12°.17N±0°.07×143°.94E±0°.09,h10km±1km, mb5.1/144,Error ellipse: s-maj=15.5km s-min=11.9km az=277.0*

*DJA **25** 19:56:00.5±1.2,12°.N±3°×14°.4E±°,h20km±9km,M5.0/49, mB5.5/21,mb5.2/49,MLv4.9/1,Mw(mB)5.0/21, MwMwp5.0/3,Mwp5.3/3*

*GCMT **25** 19:56:02.1±0.2,12°.09N±0°.01×143°.85E±0°.01,h16km, MW5.1/116,Moment Tensor Solution. s40,c49; s116,c170; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr=4.58±.24; Mθθ0.45±.14; Mϕϕ=4.13±.16; Mrθ=-0.82±.42; Mθϕ=-4.36±.11; Mϕr1.55±.40; Best double couple: M=6.06300×10^16^ NP1:ϕs322.00000°,δ37.00000°, λ-97.00000°. NP2:ϕs150.00000°,δ53.00000°, λ-85.00000°. Principal axes: T 7.2780, Plg8.0000°, Azm237.0000°; N -2.4310, Plg4.0000°, Azm327.0000°; P -4.8490, Plg81.0000°, Azm83.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 19:55:59.8±0.8,12°.20N±0°.04×143°.99E±0°.04,h18km±3km, n607,σ1§53/609,mb5.1/174,MS4.4/81,19C-5D,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.63**	**32**	Pn	**Pn**	**19 56 28.0**	**+0.4**
	418nm,0.3s,baz=294,slow=7.9,SNR=231						
GUMO				Sn	**Sb**	**19 56 49.4**	**-0.1**
	611nm,0.3s,baz=185,slow=21,SNR=13						
GUMO	**Guam**	**1.63**	**32**	Pn	**Pn**	**19 56 28.1**	**+0.5**
GUMO	**Guam**	**1.63**	**32**	P	**Pb**	**19 56 29.0**	**-0.3**
MANU	**Manus Island**	**14.54**	**166**		**Pn**	**19 59 24.5**	**-0.4**
JCJ	**Chichijima**	**14.91**	**354**	Pn	**Pn**	**19 59 32.0**	**+2.1**
	1.3nm,0.3s,baz=287,slow=19,SNR=1.7						
JCJ				LR	LR	20 04 39.0	
	comp=Z,831nm,18.5s,baz=119,slow=35						
PATS	**Pohnpei**	**15.10**	**109**	Pn	**Pn**	**19 59 29.2**	**-3.2**
GENI	**Genyem**	**15.18**	**195**	P	**Pn**	**19 59 35.6**	**+2.1**
	2µm135nm,1.6s						
SRPI	**Serui, Papua**	**15.96**	**209**	P	**P**	**19 59 50.9**	**+3.8**
WAMI	**Wamena**	**16.82**	**198**	P	**P**	**20 00 03.3**	**+6.7**
SWI	**Sorong**	**18.11**	**225**	P	**Pn**	**20 00 10.1**	**-0.6**
	1µm51nm,1.3s						
RABL	**Rabaul**	**18.20**	**153**		**Pn**	**20 00 11.2**	**-0.6**
KRVT	**Keravat (AS076**	**18.24**	**154**	P	**P**	**20 00 12.8**	**+0.4**
	0.7nm,0.3s,baz=304,slow=4.7,SNR=15						
KRVT				LR	LR	20 05 41.2	
	comp=Z,846nm,21.8s,baz=114,slow=32						
	59nm,1.0s						
DAV	**Davao City (W)**	**18.84**	**256**	P	**P**	**20 00 19.2**	**+0.2**
	39nm,0.3s,baz=96,slow=2.0,SNR=16						
DAV				LR	LR	20 06 09.5	
	comp=Z,949nm,21.2s,baz=72,slow=33						
	80nm,0.4s						
DAV	**Davao City (W)**	**18.84**	**256**	P	**Pn**	**20 00 19.8**	**+0.2**
FAKI	**Fak Fak**	**19.02**	**219**	P	**P**	**20 00 21.1**	**+0.2**
FAKI	**Fak Fak**	**19.02**	**219**	P	**Pn**	**20 00 21.4**	**-0.3**
	2µm1µm59nm,1.4s						
FAKI	**Fak Fak**	**19.02**	**219**	P	**Pn**	**20 00 21.8**	**+0.1**
TNTI	**Ternate**	**20.02**	**237**	P	**P**	**20 00 31.2**	**-0.6**
TNTI				IAmb	IAmb	20 00 42.3	
	comp=Z,187nm,1.5s						
TNTI	**Ternate**	**20.02**	**237**	P	**P**	**20 00 31.5**	**-0.4**
	comp=Z,1µmcomp=Z,96nm,1.1s						
JOW	**Kunigami**	**20.73**	**317**	P	Pn	20 00 41.8	-0.1
	comp=Z,27nm,0.7s,baz=156,slow=6.2,SNR=5.5						
JOW				LR	LR	20 08 33.0	
	comp=Z,484nm,20.1s,baz=125,slow=36						
JOW	**Kunigami**	**20.73**	**317**	P	Pn	20 00 41.4	-0.5
JOW				IAmb	IAmb	20 00 45.7	
	comp=Z,111nm,1.3s						
LBMI	**Labuha**	**20.75**	**233**	P	**P**	**20 00 39.9**	**+0.1**
	comp=Z,2µmcomp=Z,140nm,1.2s						
JHJ	**Hachijo jima 2**	**21.17**	**350**	LR	LR	20 07 31.1	
	comp=Z,903nm,21.5s,baz=121,slow=33						
MSAI	**Masohi**	**21.51**	**225**	P	**P**	**20 00 49.5**	**+1.5**
	comp=Z,614nmcomp=Z,30nm,1.0s						
PMG	**Port Moresby**	**21.70**	**172**	P	**P**	**20 00 49.1**	**-0.9**
	comp=Z,25nm,1.0s,baz=356,slow=12,SNR=3.8						
	comp=Z,25nm,1.0s						
PMG	**Port Moresby**	**21.70**	**172**	P	**P**	**20 00 48.6**	**-1.3**
PMG	**Port Moresby**	**21.70**	**172**	P	**P**	**20 00 48.6**	**-1.3**
PMG				pmax	pmax		
	comp=Z,44nm,1.1s						
AAI	**Ambon**	**22.26**	**226**	P	**P**	**20 00 55.7**	**-0.4**
	comp=Z,3µmcomp=Z,346nm,1.0s						
TGY	**Tagaytay City**	**22.52**	**277**	P	**P**	**20 00 58.3**	**-0.7**
	comp=Z,226nm,0.8s,baz=134,slow=2.9,SNR=10						
	comp=Z,226nm,0.8s						
NLAI	**Namlea**	**22.74**	**229**	P	**P**	**20 01 00.0**	**-1.1**
	comp=Z,515nmcomp=Z,32nm,1.3s						
SANI	**Sanana**	**22.81**	**233**	P	**P**	**20 00 59.4**	**-2.5**
JSU	**Suzuyama**	**22.91**	**329**	P	**P**	**20 01 02.8**	**0.0**
KMSI	**Cibinong**	**22.96**	**241**	P	**P**	**20 01 03.1**	**-0.4**
	comp=Z,4µmcomp=Z,401nm,1.1s						
H11N1	**WAKE ISLAND Hy**	**23.24**	**68**	T	T	20 25 03.0	
	baz=255,slow=75						
H11N2	**WAKE ISLAND Hy**	**23.25**	**68**	T	T	20 25 07.5	
	baz=255,slow=75						
H11N3	**WAKE ISLAND Hy**	**23.25**	**68**	T	T	20 25 08.2	
	baz=255,slow=75						
JNU	**Nakatsue**	**24.04**	**332**	P	**P**	**20 01 13.0**	**-1.0**
	comp=Z,16nm,0.9s,baz=63,slow=4.5,SNR=2.0						
	comp=Z,16nm,0.9s						
JNU	**Nakatsue**	**24.04**	**332**	P	**P**	**20 01 14.0**	**0.0**
JYT	**Yasato**	**24.17**	**352**	P	**P**	**20 01 14.7**	**-0.3**
JYT				IAmb	IAmb	20 01 30.4	
	comp=Z,156nm,1.9s						
TWG	**Pinlang**	**24.23**	**299**	P	**P**	**20 01 14.3**	**-1.5**
SSLB	**Suanglung**	**24.71**	**301**	P	**P**	**20 01 19.5**	**-0.7**
SSLB				IAmb	IAmb	20 01 25.3	
	comp=Z,40nm,1.0s						
SSLB	**Suanglung**	**24.71**	**301**	P	**P**	**20 01 23.1**	**+2.9**
YHNB	**Yeheng**	**24.73**	**303**	P	**P**	**20 01 20.3**	**-0.1**
MRSI	**Marisa**	**24.78**	**244**	P	**P**	**20 01 20.3**	**-0.6**
	comp=Z,1µmcomp=Z,3µmcomp=Z,408nm,1.2s						
MJAR	**Matsushiro Arr**	**24.79**	**349**	P	**P**	**20 01 19.6**	**-1.1**
	comp=Z,16nm,1.2s,baz=185,slow=9.5,SNR=8.9						
MJAR				PcP	**PcP**	**20 04 57.4**	**+0.3**
	comp=Z,2.4nm,0.9s,baz=157,slow=4.6,SNR=5.3						
MJAR				LR	LR	20 10 13.0	
	comp=Z,734nm,18.2s,baz=151,slow=34						
	comp=Z,16nm,1.2s						
MJAR	**Matsushiro Arr**	**24.79**	**349**	P	**P**	**20 01 20.9**	**+0.1**
MJAR	**Matsushiro Arr**	**24.79**	**349**	P	**P**	**20 01 20.9**	**+0.1**
MJAR				pmax	pmax		
	comp=Z,18nm,1.6s						
MAJO	**Matsushiro**	**24.79**	**349**	P	**P**	**20 01 20.2**	**-0.5**
MAJO				IAmb	IAmb	20 01 23.8	
	comp=Z,67nm,1.6s						
MAJO	**Matsushiro**	**24.79**	**349**	P	**P**	**20 01 20.3**	**-0.5**
MAJO				pmax	pmax		
	comp=Z,67nm,1.7s						
MAJO	**Matsushiro**	**24.79**	**349**	P	**P**	**20 01 23.8**	**+3.0**
LUWI	**Luwuk**	**24.84**	**239**	P	**P**	**20 01 20.5**	**-0.9**
LUWI	**Luwuk**	**24.84**	**239**	P	**P**	**20 01 20.3

KSAR **Wonju Airay Be** 28.98 333 P **P** **20 01 57.8 -0.7**
KAPI **Kappang** 29.55 236 P **P** **20 02 02.1 -1.7**
comp=Z,7,1nm,0.5s,baz=54,slow=5.1,SNR=4.5
comp=Z,7.1nm,0.5s
KAPI **Kappang** 29.55 236 P **P** **20 02 02.7 -1.0**
KAPI IAmb IAmb 20 02 12.2
comp=Z,24nm,1.0s
KAPI **Kappang** 29.55 236 P **P** **20 02 02.7 -1.0**
KAPI pmax pmax
comp=Z,24nm,1.0s
NJ2 **Nanjing** 30.40 315 *e*P **P** **20 02 11.3 +0.2**
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
KNRA **Kununurra** 31.53 209 P **P** **20 02 20.0 -1.2**
KNRA IAmb IAmb 20 02 31.6
comp=Z,21nm,1.1s
ASAJ **Asahikawa** 31.82 358 LR LR 20 15 15.1
comp=Z,255nm,20.8s,baz=182,slow=36
CTA **Charters Tower** 32.16 176 P **P** **20 02 25.4 -1.3**
comp=Z,8.7nm,0.9s,baz=335,slow=10,SNR=5.3
comp=Z,8.7nm,0.9s
CTA **Charters Tower** 32.16 176 P **P** **20 02 26.6 -0.1**
CTAO **Charters Tower** 32.16 176 P **P** **20 02 26.4 -0.3**
CTAO IAmb IAmb 20 03 23.2
comp=Z,72nm,1.8s
CTAO **Charters Tower** 32.16 176 P **P** **20 02 26.4 -0.3**
CTAO pmax pmax
comp=Z,72nm,1.8s
CTAO **Charters Tower** 32.16 176 P **P** **20 02 26.8 +0.1**
QIS **Mount Isa** 32.84 188 P **P** **20 02 32.5 -0.1**
WB0 **Warramunga Arr** 33.14 197 P **P** **20 02 34.2 -1.1**
WRAB **Tennant Creek** 33.31 197 P **P** **20 02 35.9 -0.9**
WRA **Warramunga Arr** 33.32 197 P **P** **20 02 35.2 -1.6**
comp=Z,9.8nm,0.9s,baz=24,slow=8.6,SNR=27
WRA LR LR 20 16 24.3
comp=Z,1μm,19.1s,baz=16,slow=37
comp=Z,9.8nm,0.9s
WRA **Warramunga Arr** 33.32 197 P **P** **20 02 35.7 -1.2**
WRA **Warramunga Arr** 33.32 197 P **P** **20 02 35.7 -1.2**
USRK **Ussuriysk Ar.** 33.52 344 LR LR 20 15 49.8
comp=Z,506nm,18.6s,baz=145,slow=36
QIZ **Qiongzhong** 33.53 286 P **P** **20 02 37.8 -1.0**
QIZ PP **PP** **20 03 54.8 0.0**
QIZ S **S** **20 08 01.0 +0.7**
QIZ LR LR
comp=Z,460nm,18.4s
QIZ LR LR
comp=Z,460nm,17.7s
QIZ LR LR
comp=Z,470nm,14.3s
TIA **Tai'an** 34.02 319 P **P** **20 02 42.5 -0.3**
TIA PcP **PcP** **20 05 22.0 +1.4**
TIA S **S** **20 08 06.0 -1.4**
TIA pmax pmax
comp=Z,3.0nm,0.6s
TIA pmax pmax
comp=Z,37nm,3.6s
TIA LR LR
comp=Z,400nm,13.5s
TIA LR LR
comp=Z,400nm,11.4s
TIA LR LR
comp=Z,360nm,17.8s
STKI **Sintang** 34.44 252 P **P** **20 02 47.6 +0.9**
comp=Z,28nm,1.5s
YSS **Yuzh-Sakhalins** 34.66 359 *e*P **P** **20 02 52.0 +3.9**
YSS *e* 20 04 04.4
YSS *e*S **S** **20 08 24.3 +7.4**
YSS *e*SS **SnSn** **20 10 23.0 -6.9**
YSS MLR MLR
comp=Z,600nm,12.0s
KSM **Kuching** 35.04 255 P **P** **20 02 51.2 -0.7**
KSM **Kuching** 35.04 255 P **P** **20 02 53.5 +1.5**
CN2 **Changchun** 35.31 337 *e*P **P** **20 02 53.0 -0.9**
CN2 *e*PP **PP** **20 04 13.8 -0.4**
CN2 *e*S **S** **20 08 24.0 -3.2**
CN2 LR LR
comp=Z,570nm,15.0s
CN2 LR LR
comp=Z,540nm,15.0s
CN2 LR LR
comp=Z,370nm,16.0s
PBKI **Pangkalan Bun** 35.36 247 P **P** **20 02 55.9 +1.2**
comp=Z,1μmcomp=Z,76nm,1.1s
LYN **LuoYang** 36.25 313 ⇑P **P** **20 03 01.0 -1.0**
LYN PP **PP** **20 04 24.5 -0.1**
LYN S **S** **20 08 45.5 +3.8**
LYN pmax pmax
comp=Z,10.0nm,0.9s
LYN pmax pmax
comp=Z,80nm,5.5s
LYN LR LR
comp=Z,1μm,17.7s
LYN LR LR
comp=Z,710nm,16.9s
LYN LR LR
comp=Z,560nm,16.5s
HNS **HongShan** 36.28 319 ⇓P **P** **20 03 02.5 +0.3**
HNS S **S** **20 08 41.3 -0.8**
HNS pmax pmax
comp=Z,27nm,1.1s
HNS LR LR
comp=Z,250nm,18.3s
HNS LR LR
comp=Z,720nm,15.2s
HNS LR LR
comp=Z,620nm,18.6s
BNX **BinXian** 36.28 340 ⇑P **P** **20 03 02.8 +0.6**
BNX pP **pwP** **20 03 12.5 +0.2**
BNX pmax pmax
comp=Z,15nm,1.1s
BNX pmax pmax
comp=Z,370nm,4.2s
ENH **Enshi** 36.64 305 P **P** **20 03 05.0 -0.5**
AS31 **Alice Springs** 36.98 195 P **P** **20 03 07.3 -1.1**
ASAR **Alice Springs** 36.99 195 P **P** **20 03 07.6 -0.9**
ASAR **Alice Springs** 36.99 195 P **P** **20 03 07.6 -0.9**
BJT **Baijiatuan** 37.01 323 P **P** **20 03 08.3 -0.1**
BJT **Baijiatuan** 37.01 323 P **P** **20 03 08.3 -0.1**
BJT pmax pmax
comp=Z,13nm,0.7s
BJI **Beijing** 37.02 323 P **P** **20 03 08.5 0.0**
BJI pmax pmax
comp=Z,17nm,0.7s
BJI LR LR
comp=Z,100nm,18.1s
BJI LR LR
comp=Z,340nm,14.1s
BJI LR LR
comp=Z,430nm,16.8s
GYA **Guiyang** 37.81 298 ⇑P **P** **20 03 17.0 +1.4**
GYA PP **PP** **20 04 41.5 -0.6**
GYA PcP **PcP** **20 05 34.5 +2.3**
GYA S **S** **20 09 04.5 -1.5**
GYA pmax pmax
comp=Z,15nm,1.0s
GYA pmax pmax
comp=Z,99nm,5.2s
GYA LR LR
comp=Z,280nm,12.4s
GYA LR LR
comp=Z,360nm,14.1s
GYA LR LR
comp=Z,410nm,20.1s
EIDS **Eidsvold** 37.98 170 P **P** **20 03 16.0 -0.8**
EIDS IAmb IAmb 20 03 17.1
comp=Z,47nm,1.3s
EIDS **Eidsvold** 37.98 170 P **P** **20 03 16.6 -0.2**
KOUNC **Koumac, New Ca** 38.18 148 P **P** **20 03 18.5 0.0**
KOUNC IAmb IAmb 20 03 20.4
comp=Z,103nm,1.5s
KLR **Kul'dur** 38.28 347 P **P** **20 03 18.4 -0.7**
comp=Z,5.4nm,0.8s,baz=143,slow=9.7,SNR=14
KLR PcP **PcP** **20 05 33.5 +0.5**
comp=Z,3.7nm,0.9s,baz=140,slow=5.5,SNR=3.9
KLR LR LR 20 18 10.6
comp=Z,429nm,20.5s,baz=152,slow=35
comp=Z,5.4nm,0.8s
KLR **Kul'dur** 38.28 347 *ce*P **P** **20 03 18.6 -0.5**
KLR pmax pmax
comp=Z,19nm,2.5s
XAN **Xi'an** 38.60 310 P **P** **20 03 21.5 -0.6**
XAN pP pP 20 03 26.5 +0.2
XAN sP sP 20 03 28.5 +0.8
XAN pmax pmax
comp=Z,11nm,0.9s
XAN pmax pmax
comp=Z,140nm,4.7s
XAN LR LR
comp=Z,710nm,24.7s
XAN LR LR
comp=Z,330nm,20.6s
XAN LR LR
comp=Z,580nm,16.5s
GRNR **Gornyy** 38.95 352 ⇓ *i*P **P** **20 03 24.8 +0.1**
GRNR pmax pmax
comp=Z,4.0nm,0.8s
GRNR MLR MLR
comp=N,310nm,14.0s
GRNR MLR MLR
comp=Z,310nm,13.0s
XLT **XiLinHaoTe** 39.67 328 *e*P **P** **20 03 30.8 -0.2**
XLT pP pP 20 03 35.0 -0.2
XLT sP pwP 20 03 38.5 -2.6
XLT S **S** **20 09 34.3 +0.6**
XLT pmax pmax
comp=Z,16nm,1.2s
XLT pmax pmax
comp=Z,67nm,4.4s
XLT LR LR
comp=Z,670nm,18.9s
XLT LR LR
comp=Z,770nm,16.3s
INKA **Innaminka** 39.83 184 P **P** **20 03 32.3 +0.1**
LIFNC **LIFOU** 39.96 145 P **P** **20 03 33.0 -0.4**
LIFNC IAmb IAmb 20 03 33.9
comp=Z,35nm,0.9s
WRKA **Warakurna** 40.05 202 P **P** **20 03 34.0 -0.2**
PPBI **Pangkal Pinang** 40.22 252 P **P** **20 03 35.6 -0.1**
HHC **Hu-ho-hao-te** 40.28 321 *e*P **P** **20 03 38.8 +2.7**
HHC pmax pmax
comp=Z,26nm,0.9s
HHC pmax pmax
comp=Z,230nm,4.6s
HHC LR LR
comp=Z,940nm,14.1s
HHC LR LR
comp=Z,970nm,16.1s
HHC LR LR
comp=Z,2μm,17.8s
DZM **Mont Dzumac** 40.56 147 P **P** **20 03 38.6 0.0**
comp=Z,53nm,1.0s,baz=257,slow=5.1,SNR=25
DZM LR LR 20 20 15.4
comp=Z,314nm,18.1s,baz=342,slow=36
comp=Z,53nm,1.0s
DZM **Mont Dzumac** 40.56 147 *e*P **P** **20 03 40.6 +2.0**
comp=Z,74nm,22.6s
DZM **Mont Dzumac** 40.56 147 *e*LR LR 20 14 46.5
comp=Z,482nm,27.1s
DZM **Mont Dzumac** 40.56 147 P **P** **20 03 38.5 -0.1**
DZM IAmb IAmb 20 03 40.1
comp=Z,66nm,1.0s
DZM **Mont Dzumac** 40.56 147 P **P** **20 03 39.5 +0.9**
OOD **Oodnadatta** 40.56 191 P **P** **20 03 37.9 -0.4**
YATNC **Mamie plateau,** 40.79 146 P **P** **20 03 40.5 +0.1**
MBWA **Marble Bar** 40.83 216 P **P** **20 03 39.8 -0.8**
MBWA IAmb IAmb 20 04 47.3
comp=Z,137nm,2.0s
MBWA **Marble Bar** 40.83 216 P **P** **20 03 41.1 +0.5**
comp=Z,13nm,2.7s
KMI **Kunming** 40.97 294 ⇑P **P** **20 03 43.8 +1.7**
KMI pmax pmax
comp=Z,12nm,1.3s
KMI LR LR
comp=Z,430nm,14.9s
KMI LR LR
comp=Z,310nm,13.5s
KMI LR LR
comp=Z,420nm,15.0s
OUENC **Ouen Island, N** 41.06 147 P **P** **20 03 42.3 -0.2**
OUENC IAmb IAmb 20 03 44.3
comp=Z,40nm,1.1s
OUENC **Ouen Island, N** 41.06 147 P **P** **20 03 42.6 +0.1**
PSA00 **Pilbara Seismi** 41.09 215 P **P** **20 03 41.6 -1.2**
PSA00 IAmb IAmb 20 04 01.6
comp=Z,40nm,1.1s
DSRI **Dabo** 41.09 255 P **P** **20 03 43.4 +0.4**
comp=Z,444nmcomp=Z,43nm,1.1s
MYKOM **Kota Tinggi** 41.09 259 P **P** **20 03 42.8 -0.2**
MYKOM IAmb IAmb 20 03 44.2
comp=Z,43nm,0.8s
BTO **Baotou** 41.10 320 *e*P **P** **20 03 42.3 -0.6**
BTO LR LR
comp=Z,920nm,10.8s
BTO LR LR
comp=Z,1μm,15.3s
CD2 **Chengdu** 41.50 303 P **P** **20 03 46.0 -0.2**
CD2 S **S** **20 10 02.8 +1.6**
CD2 pmax pmax
comp=Z,40nm,0.8s
CD2 LR LR
comp=Z,380nm,14.2s
CD2 LR LR
comp=Z,430nm,13.2s
PINNC **Pines Island,** 41.54 146 P **P** **20 03 46.4 -0.1**
PMBI **Palembang** 41.77 251 P **P** **20 03 48.5 0.0**
HIA **Hailar** 42.04 336 P **P** **20 03 50.5 +0.2**
HIA **Hailar** 42.04 336 P **P** **20 03 50.5 +0.2**
HIA pmax pmax
comp=Z,14nm,1.2s
PZH **PanZhiHua** 42.12 296 P **P** **20 03 51.8 +0.4**
PZH S **S** **20 10 11.3 +0.7**
PZH pmax pmax
comp=Z,20nm,0.8s
PZH pmax pmax
comp=Z,90nm,6.3s
PZH LR LR
comp=Z,630nm,20.1s
PZH LR LR
comp=Z,710nm,19.1s
PZH LR LR
comp=Z,640nm,22.0s
PETK **Petropavlovsk-** 42.25 12 LR LR 20 20 58.9
comp=Z,206nm,19.2s,baz=192,slow=36
BLSI **Bandar Lampung** 42.29 248 P **P** **20 03 54.3 +1.5**
comp=Z,85nm,0.4s
KLI **Kotabumi** 42.44 249 P **P** **20 03 53.6 -0.4**
comp=Z,191nm,0.6s
LCRK **Leigh Creek** 42.76 187 P **P** **20 03 56.0 -0.3**
ARMA **Armidale** 43.01 170 P **P** **20 03 57.7 -0.8**
ARMA IAmb IAmb 20 03 59.3
comp=Z,80nm,1.5s
ARMA **Armidale** 43.01 170 P **P** **20 03 58.6 +0.2**
KASI **Kota Agung** 43.03 248 P **P** **20 03 58.0 -0.8**
comp=Z,48nm,0.9s
LWLI **Liwa** 43.22 249 P **P** **20 03 59.6 -0.9**
comp=Z,71nm,0.8s
LZH **Lanzhou** 43.24 310 ⇑P **P** **20 04 01.8 +1.4**
LZH sP pwP 20 04 12.5 +2.1
LZH S **S** **20 10 34.8 +7.9**
LZH SS **SS** **20 13 35.5 -4.7**
LZH pmax pmax
comp=Z,37nm,1.5s
LZH pmax pmax
comp=Z,120nm,4.5s
LZH LR LR
comp=Z,410nm,14.1s
LZH LR LR
comp=Z,410nm,14.4s
LZH LR LR
comp=Z,580nm,14.8s
MULG **Mulgathing** 43.30 193 P **P** **20 04 00.6 -0.1**
KULM **Kulim** 43.33 265 P **P** **20 04 01.3 0.0**
KULM IAmb IAmb 20 04 03.6
comp=Z,44nm,1.1s
ZEA **Zeya** 43.52 346 *e*P **P** **20 04 02.1 -0.1**
ZEA *e* 20 05 51.9
ZEA pmax pmax
comp=Z,10.0nm,1.0s
ZEA MLR MLR
comp=E,300nm,16.0s
SRIT **Nakonsritamara** 43.77 270 P **P** **20 04 05.3 +0.6**
CM31 **Chiang Mai Arr** 43.80 284 P **P** **20 04 05.5 +0.5**
CM31 IAmb IAmb 20 04 07.1
comp=Z,37nm,1.4s
CMAR **Chiang Mai Arr** 43.80 284 P **P** **20 04 05.7 +0.7**
comp=Z,12nm,1.0s,baz=85,slow=5.8,SNR=34
CMAR PcP **PcP** **20 05 52.4 +0.8**
comp=Z,3.2nm,0.9s,baz=81,slow=1.4,SNR=4.8
comp=Z,12nm,1.0s
CMAR **Chiang Mai Arr** 43.80 284 P **P** **20 04 05.4 +0.5**
CMAR **Chiang Mai Arr** 43.80 284 *i* P **P** **20 04 05.6 +0.6**
CMAR pmax pmax
comp=Z,15nm,1.0s
STKA **Stephens Creek** 43.89 183 P **P** **20 04 03.6 -1.8**
comp=Z,8.8nm,0.9s,baz=350,slow=8.2,SNR=10
comp=Z,8.8nm,0.9s
STKA **Stephens Creek** 43.89 183 P **P** **20 04 04.2 -1.2**
STKA **Stephens Creek** 43.89 183 P **P** **20 04 04.2 -1.2**
STKA pmax pmax
comp=Z,6.0nm,1.2s
MNAI **Manna** 43.98 250 P **P** **20 04 05.3 -1.2**
MNAI **Manna** 43.98 250 P **P** **20 04 07.7 +1.2**
BKNI **Bangkinang** 44.21 258 P **P** **20 04 08.0 -0.3**
KRJI **Kerinci** 44.56 254 P **P** **20 04 11.8 +0.5**
comp=Z,4μmcomp=Z,284nm,1.1s
MSVF **Nonsavu** 44.90 131 P **P** **20 04 14.1 +0.2**
comp=Z,50nm,0.9s,baz=286,slow=6.3,SNR=25
comp=Z,50nm,0.9s
MSVF **Nonsavu** 44.90 131 P **P** **20 04 14.0 +0.2**
MSVF **Nonsavu** 44.90 131 P **P** **20 04 14.0 +0.2**
MSVF pmax pmax
comp=Z,68nm,1.0s
MSVF **Nonsavu** 44.90 131 P **P** **20 04 14.8 +1.0**
BBOO **Buckleboo** 45.39 189 P **P** **20 04 16.6 -0.9**
BBOO IAmb IAmb 20 04 17.2
comp=Z,39nm,1.1s
BBOO **Buckleboo** 45.39 189 P **P** **20 04 16.5 -0.9**
PSI **Prapat** 45.58 262 P **P** **20 04 18.8 -0.6**
PSI pmax pmax
comp=Z,52nm,1.1s
RPSI **Rantau Prapat** 45.60 262 P **P** **20 04 18.8 -0.6**
HTT **Hallett** 45.63 186 P **P** **20 04 19.0 -0.4**
KCSI **Kotacane, Aceh** 46.52 263 P **P** **20 04 26.6 -0.1**
comp=Z,93nm,1.2s
SISI **Saibi** 46.56 256 P **P** **20 04 27.3 +0.3**
comp=Z,77nm,1.2s
ULN **Ulaanbaatar** 47.04 326 P **P** **20 04 30.3 -0.2**
ULN **Ulaanbaatar** 47.04 326 P **P** **20 04 30.3 -0.2**
ULN pmax pmax
comp=Z,11nm,1.1s
SHEM **Shemya Is, Ala** 47.08 25 LR LR 20 25 27.1
comp=Z,120nm,18.2s,baz=196,slow=38
GSI **Gunungsitoli** 47.26 260 P **P** **20 04 31.2 -1.3**
GSI **Gunungsitoli** 47.26 260 P **P** **20 04 33.2 +0.7**
comp=Z,68nm,1.0s
GSI **Gunungsitoli** 47.26 260 P **P** **20 04 34.0 +1.5**
SONM **Songino Array** 47.38 326 P **P** **20 04 33.4 +0.3**
comp=Z,3.1nm,0.8s,baz=149,slow=7.5,SNR=17
SONM PcP **PcP** **20 06 03.9 +0.3**
comp=Z,4.1nm,0.9s,baz=150,slow=3.4,SNR=5.4
SONM ScP **ScP** **20 09 59.7 +2.7**
comp=Z,1.2nm,1.1s,baz=131,slow=4.0,SNR=3.8
SONM LR LR 20 25 23.1
comp=Z,687nm,18.7s,baz=130,slow=37
comp=Z,3.1nm,0.8s
SONM **Songino Array** 47.38 326 P **P** **20 04 33.2 +0.1**
SONM IAmb IAmb 20 04 38.1
comp=Z,20nm,1.6s
SONM **Songino Array** 47.38 326 P **P** **20 04 33.2 +0.1**
SONM pmax pmax
comp=Z,21nm,1.6s
GTA **Gaotai** 47.46 313 ⇑P **P** **20 04 33.8 -0.1**
GTA pP pP 20 04 38.5 +0.3
GTA sP sP 20 04 41.0 +1.5
GTA PcP **PcP** **20 06 05.5 +1.4**
GTA sS sS 20 11 38.8 +5.7
GTA pmax pmax
comp=Z,14nm,1.0s
GTA pmax pmax
comp=Z,96nm,4.7s
GTA LR LR
comp=Z,250nm,16.7s
GTA LR LR
comp=Z,320nm,16.7s
GTA LR LR
comp=Z,360nm,17.1s
MA2 **Magadan** 47.56 5 P **P** **20 04 33.9 -0.2**
MA2 IAmb IAmb 20 05 21.0
comp=Z,26nm,1.5s
MA2 **Magadan** 47.56 5 P **P** **20 04 33.9 -0.2**
MA2 pmax pmax
comp=Z,26nm,1.5s
ARPS **Mount Arapiles** 48.75 182 P **P** **20 04 43.2 -0.3**
MORW **Morawa** 49.11 213 P **P** **20 04 45.6 -0.9**
MORW **Morawa** 49.11 213 P **P** **20 04 46.1 -0.4**
TOO **Toolangi** 49.53 178 P **P** **20 04 49.2 -0.3**
TOO IAmb IAmb 20 04 51.3
comp=Z,43nm,1.4s
TOO **Toolangi** 49.53 178 P **P** **20 04 49.3 -0.3**
TOO pmax pmax
comp=Z,43nm,1.5s
TOO **Toolangi** 49.53 178 P **P** **20 04 50.4 +0.8**
BLDU **Ballidu** 50.00 211 P **P** **20 04 52.9 -0.4**
GOMU **GeErMu** 50.17 307 P **P** **20 04 55.5 +0.5**
GOMU pP pP 20 04 58.8 -0.3
GOMU sP sP 20 05 03.0 +2.3
GOMU S **S** **20 12 06.3 -0.2**
GOMU pmax pmax
comp=Z,5.0nm,0.9s
GOMU pmax pmax
comp=Z,82nm,6.5s
GOMU LR LR
comp=Z,120nm,13.5s
GOMU LR LR
comp=Z,120nm,13.9s
GOMU LR LR
comp=Z,140nm,13.5s
KIWB **Kanaga Island** 50.44 30 P **P** **20 04 56.9 +0.6**
ZAK **Zakamensk** 50.52 327 *e*P **P** **20 04 56.9 -0.2**
ZAK pmax pmax
comp=Z,14nm,1.2s
SHL **Shillong** 50.76 293 P **P** **20 04 58.6 -0.8**
SHL IAmb IAmb 20 04 59.5
comp=Z,20nm,0.7s
SHL **Shillong** 50.76 293 P **P** **20 04 58.6 -0.8**
SHL pmax pmax
comp=Z,20nm,0.7s
YAK **Yakutsk** 50.81 351 LR LR 20 25 49.5
comp=Z,342nm,18.8s,baz=92,slow=35
SEY **Seymchan** 51.01 5 *ce*P **P** **20 04 57.5 -2.9**
SEY pmax pmax
comp=Z,9.0nm,1.0s
IRK **Irkutsk** 51.09 330 *e*P **P** **20 05 01.1 -0.2**
IRK pmax pmax
comp=Z,35nm,1.9s
MUN **Mundaring** 51.36 210 P **P** **20 05 03.7 +0.2**
LSA **Lhasa** 51.87 298 P **P** **20 05 08.2 +0.2**
LSA IAmb IAmb 20 05 10.0
comp=Z,12nm,0.7s
LSA **Lhasa** 51.87 298 P **P** **20 05 08.5 +0.4**
LSA pmax pmax
comp=Z,21nm,0.9s
LSA **Lhasa** 51.87 298 P **P** **20 05 08.2 +0.2**
LSA pmax pmax
comp=Z,12nm,0.7s
ATKA **Atka Island** 52.12 31 P **P** **20 05 09.9 +1.0**
comp=Z,40nm,1.1s
MOY **Mondy** 52.43 328 *e*P **P** **20 05 11.9 +0.5**
KNGR **Kungurtug, Tuv** 53.78 325 *i* P **P** **20 05 21.7 +0.4**
KNGR pmax pmax
comp=Z,8.0nm,1.0s
GUN **Gumba** 56.30 295 *e*P **P** **20 05 40.2 0.0**
comp=Z,77nm,0.8s
PKIN **Phulchoki** 56.70 295 *e*P **P** **20 05 42.2 -0.8**
KKN **Kakani** 56.82 295 *e*P **P** **20 05 43.1 -0.7**
DMN **Daman** 56.96 295 *e*P **P** **20 05 44.6 -0.3**
comp=Z,46nm,0.8s
GKN **Gorkha** 57.40 295 *e*P **P** **20 05 47.2 -0.6**
WMQ **Urumqi** 57.48 314 *e*P **P** **20 05 48.8 +0.8**
WMQ sP pwP 20 05 58.3 -0.6
WMQ pmax pmax
comp=Z,20nm,0.9s
WMQ pmax pmax
comp=Z,130nm,3.8s
WMQ LR LR
comp=Z,370nm,29.1s
WMQ LR LR
comp=Z,360nm,15.7s
WMQ LR LR
comp=Z,120nm,29.1s
BILL **Bilibino** 57.67 10 P **P** **20 05 49.1 +0.3**
BILL IAmb IAmb 20 05 50.7
comp=Z,16nm,1.1s
BILL **Bilibino** 57.67 10 ⇑ *e*P **P** **20 05 48.0 -0.8**
BILL *e* 20 07 53.0
BILL *e*SS **SS** **20 17 31.7 -4.7**

BILL pmax pmax
comp=Z,18nm,1.3s
BILL MLR MLR
comp=Z,186nm,18.0s
DANN Dangsing 58.19 296 *e*P **P 20 05 53.0 -0.6**
comp=Z,53nm,0.7s
KOLN Koldanda 58.30 295 *e*P **P 20 05 53.8 -0.4**
PYUN Piuthan 58.86 295 *e*P **P 20 05 57.4 -0.7**
comp=Z,62nm,0.8s
URZ Urewera 59.00 150 P **P 20 05 58.3 -0.2**
comp=Z,8.0nm,0.4s,baz=327,slow=2.5,SNR=6.6
comp=Z,8.0nm,0.4s
URZ Urewera 59.00 150 P **P 20 05 58.5 0.0**
BKZ Black Stump Fm 59.41 151 P **P 20 06 01.4 0.0**
TIXI Tiksi 60.12 355 P **P 20 06 06.3 +0.5**
TIXI Tiksi 60.12 355 *ce*P **P 20 06 04.3 -1.5**
TIXI pmax pmax
comp=Z,5.0nm,1.0s
ZSN Zaisan 60.34 318 *e*P **P 20 06 05.4 -2.4**
ZSN Zaisan 60.34 318 *e*P **P 20 06 05.5 -2.4**
baz=318
RPZ Rata Peaks 60.88 158 P **P 20 06 10.0 -1.4**
comp=Z,14nm,0.8s,baz=47,slow=16,SNR=3.6
RPZ LR LR 20 28 17.0
comp=Z,285nm,22.0s,baz=315,slow=32
comp=Z,14nm,0.8s
MK31 Makanchi Array 61.90 317 P **P 20 06 18.6 +0.2**
MK31 Makanchi Array 61.90 317 P **P 20 06 18.6 +0.2**
MK31 pmax pmax
comp=Z,8.0nm,0.9s
MKAR Makanchi Array 61.90 317 P **P 20 06 18.7 +0.4**
comp=Z,8.1nm,0.8s,baz=94,slow=8.6,SNR=77
MKAR LR LR 20 34 26.2
comp=Z,174nm,19.4s,baz=97,slow=37
MKAR PKP2bc **P'P'df 20 35 35.2 +4.0**
comp=Z,0.6nm,0.8s,baz=242,slow=3.1,SNR=3.8
comp=Z,8.1nm,0.8s
MKAR Makanchi Array 61.90 317 P **P 20 06 18.3 0.0**
MAKZ Makanchi 62.11 317 P **P 20 06 20.2 +0.4**
MAKZ IAmb IAmb 20 06 20.9
comp=Z,15nm,0.8s
MAKZ Makanchi 62.11 317 P **P 20 06 20.2 +0.4**
MAKZ pmax pmax
comp=Z,15nm,0.9s
ZAA0 Zalesovo Array 62.25 325 P **P 20 06 19.9 -0.6**
ZALV Zalesovo Beam 62.25 325 P **P 20 06 20.1 -0.4**
comp=Z,5.2nm,0.7s,baz=107,slow=6.7,SNR=30
ZALV PcP **PcP 20 07 00.0 -0.3**
comp=Z,6.9nm,0.8s,baz=95,slow=3.2,SNR=8.3
ZALV LR LR 20 34 16.7
comp=Z,249nm,19.5s,baz=106,slow=37
ZALV PKP2bc **P'P'df 20 35 33.5 +3.2**
comp=Z,0.9nm,0.8s,baz=263,slow=2.5,SNR=4.0
comp=Z,5.2nm,0.7s
ZALV Zalesovo Beam 62.25 325 P **P 20 06 20.0 -0.6**
ZALV Zalesovo Beam 62.25 325 *i* P **P 20 06 20.6 +0.1**
ZALV pmax pmax
comp=Z,5.0nm,0.7s
PALK Pallekele 62.45 272 LR LR 20 33 09.0
comp=Z,70nm,19.7s,baz=184,slow=36
PDGK Podgornoye 63.21 312 *i* P **P 20 06 26.4 -0.9**
PDGK pmax pmax
comp=Z,11nm,0.9s
HYBB Hyderabad (bro 63.22 283 *e*P **P 20 06 27.4 -0.3**
HYBB *es*P **pP 20 06 31.9 0.0**
HYBB *e*S **S 20 14 59.8 +0.8**
O16K Kokwok River B 63.58 29 P **P 20 06 30.3 +1.1**
baz=248
N16K Nishlik Lake 63.61 28 P **P 20 06 30.6 +1.1**
baz=247,SNR=5.4
KPKS Kokpek 63.81 313 *e*P **P 20 06 28.5 -2.7**
KPKS Kokpek 63.81 313 *e*P **P 20 06 28.6 -2.7**
baz=312
PRZ Przheval'sk 63.88 311 P **P 20 06 32.2 +0.3**
PRZ IAmb IAmb 20 06 37.5
comp=Z,18nm,0.9s
PRZ Przheval'sk 63.88 311 P **P 20 06 32.2 +0.3**
PRZ pmax pmax
comp=Z,18nm,1.0s
ZHN Zhinishke 63.95 312 *e*P **P 20 06 29.8 -2.4**
ZHN Zhinishke 63.95 312 *e*P **P 20 06 29.8 -2.4**
baz=312
SATY Saty 63.95 312 *e*P **P 20 06 30.8 -1.4**
SATY Saty 63.95 312 *e*P **P 20 06 30.8 -1.4**
baz=312
SEM Semipalatinsk 64.01 320 *e*P **P 20 06 30.5 -2.1**
SEM Semipalatinsk 64.01 320 *e*P **P 20 06 30.5 -2.1**
baz=320
O17K Koliganek Bris 64.12 29 P **P 20 06 33.6 +0.8**
baz=248
TARG Taragay, Kyrgy 64.23 310 P **P 20 06 34.8 +0.4**
TARG Taragay, Kyrgy 64.23 310 P **P 20 06 34.8 +0.4**
TARG pmax pmax
comp=Z,10.0nm,1.2s
SII Sitkinak Islan 64.51 33 P **P 20 06 35.8 +0.3**
SII Sitkinak Islan 64.51 33 P **P 20 06 36.5 +1.1**
baz=253
Q18K Katmai Hardscr 64.74 30 P **P 20 06 36.0 -1.0**
baz=251
KDJ Kajisay 64.74 311 P **P 20 06 36.9 -0.6**
KDJ IAmb IAmb 20 06 40.4
comp=Z,13nm,1.1s
KDJ Kajisay 64.74 311 P **P 20 06 36.9 -0.6**
KDJ pmax pmax
comp=Z,13nm,1.1s
P18K Big Mountain, 64.87 30 P **P 20 06 39.2 +1.4**
baz=250
N18K Kilae Creek 65.01 28 P **P 20 06 39.1 +0.4**
N18K IAmb IAmb 20 06 40.6
comp=Z,11nm,1.1s
N18K Kilae Creek 65.01 28 P **P 20 06 39.0 +0.3**
baz=249
TNSS Tian-Shan 65.01 312 *e*P **P 20 06 38.6 -0.9**
TNSS Tian-Shan 65.01 312 *e*P **P 20 06 38.6 -0.9**
baz=312
O18K Koktuh Hills 65.04 29 P **P 20 06 38.6 -0.3**
baz=250
CHKK Chushkaly 65.08 313 *e*P **P 20 06 37.6 -1.8**
CHKK Chushkaly 65.08 313 *e*P **P 20 06 37.7 -1.8**
baz=313
KURK Kurchatov 65.09 320 P **P 20 06 39.2 -0.1**
KURK Kurchatov 65.09 320 P **P 20 06 39.2 -0.1**
KURK pmax pmax
comp=Z,45nm,0.9s
KURBB Kurchatov Arra 65.13 320 PKP2bc **P'P'df 20 35 26.7 +1.1**
comp=Z,0.7nm,0.3s,baz=277,slow=3.6,SNR=8.8
OHAK Old Harbor 65.17 32 P **P 20 06 40.9 +1.2**
baz=253
KSH Kashi 65.40 308 P **P 20 06 44.3 +2.5**
KSH pP sP 20 06 48.8 +1.2
KSH pmax pmax
comp=Z,8.0nm,0.9s
KSH LR LR
comp=Z,230nm,14.8s
KSH LR LR
comp=Z,360nm,15.5s
KSH LR LR
comp=Z,310nm,15.8s
RDOG Red Dog Mine 65.47 19 P P 20 06 36.4 -5.1
baz=239
KUU Kurty 65.55 313 *e*P **P 20 06 40.5 -2.0**
KUU Kurty 65.55 313 *e*P **P 20 06 40.5 -2.0**
baz=313
BOOM Boomskoye usch 65.69 311 P **P 20 06 42.4 -1.2**
BOOM Boomskoye usch 65.69 311 P **P 20 06 42.4 -1.2**
BOOM pmax pmax
comp=Z,13nm,1.5s
KDAK Kodiak Island 65.69 32 LR LR 20 34 13.2
comp=Z,120nm,19.4s,baz=233,slow=35
N19K Bonanza Creek 65.70 28 P **P 20 06 43.6 +0.3**
baz=251
TTA Tatalina 65.77 26 P **P 20 06 43.4 -0.2**
TTA Tatalina 65.77 26 P **P 20 06 43.4 -0.2**
TTA pmax pmax
comp=Z,11nm,1.2s
TTA Tatalina 65.77 26 P **P 20 06 43.8 +0.1**
baz=248
TKM2 Tokmak 2 65.98 312 *i* P **P 20 06 45.0 -0.6**
TKM2 pmax pmax
comp=Z,9.0nm,1.2s
L19K White Mountain 66.00 27 P **P 20 06 45.6 +0.6**
L19K IAmb IAmb 20 06 47.4
comp=Z,14nm,1.0s
L19K White Mountain 66.00 27 P **P 20 06 46.0 +0.9**
baz=250,SNR=8.3
M19K Big River Lodg 66.11 27 P **P 20 06 46.9 +1.2**
baz=250
L20K Farewell, AK 66.53 27 P **P 20 06 49.4 +0.9**
baz=250
M20K Styx River 66.67 27 P **P 20 06 50.7 +1.3**
baz=251,SNR=12
FRU1 Bishkek 66.68 311 P **P 20 06 49.5 -0.4**
FRU1 IAmb IAmb 20 08 58.1
comp=Z,11nm,0.4s
FRU1 Bishkek 66.68 311 P **P 20 06 49.5 -0.4**
FRU1 pmax pmax
comp=Z,11nm,0.4s
SGDS Sogindy 66.74 312 *e*P **P 20 06 47.9 -2.3**
SGDS Sogindy 66.74 312 *e*P **P 20 06 48.0 -2.3**
baz=312
K20K Telida 66.75 26 P **P 20 06 50.2 +0.3**
K20K IAmb IAmb 20 06 51.9
comp=Z,14nm,1.1s
K20K Telida 66.75 26 P **P 20 06 51.0 +1.2**
baz=250,SNR=7.3
AAK Ala-Archa 66.77 311 LR LR 20 37 21.8
comp=Z,234nm,20.2s,baz=96,slow=37
AAK Ala-Archa 66.77 311 P **P 20 06 50.2 -0.4**
AAK Ala-Archa 66.77 311 *ce*P **P 20 06 50.4 -0.1**
AAK pmax pmax
comp=Z,9.0nm,1.7s
CNPM China Poot 66.86 30 P **P 20 06 50.2 -0.4**
J20K Nowinta River 67.00 25 P **P 20 06 52.7 +1.3**
baz=250,SNR=16
BRSE Bradley Lake S 67.16 30 P **P 20 06 52.9 +0.4**
baz=254
BTLS Baital 67.30 314 *e*P **P 20 06 51.5 -2.2**
BTLS Baital 67.30 314 *e*P **P 20 06 51.6 -2.2**
baz=314
PPLA Purkeypile 67.41 26 P **P 20 06 54.6 +0.5**
PPLA Purkeypile 67.41 26 P **P 20 06 53.9 -0.3**
baz=252
SKT Skwentna 67.42 27 P **P 20 06 53.7 -0.4**
baz=253,SNR=7.2
CAST Castle Rocks 67.61 26 P **P 20 06 55.9 +0.5**
baz=252,SNR=17
SUA Susitna One 67.63 28 P **P 20 06 55.8 +0.2**
baz=254
IMAR Indian Mountai 67.80 23 P **P 20 06 55.6 -0.8**
M22K Willow 68.00 28 P **P 20 06 58.0 +0.3**
baz=254
RC01 Rabbit Creek A 68.00 29 P **P 20 06 58.0 +0.3**
baz=255
H21K Melozitna Rive 68.05 24 P **P 20 06 58.7 +0.6**
baz=250,SNR=11
I21K Tanana 68.22 24 P **P 20 06 60.0 +1.0**
baz=251,SNR=9.4
BPAW Bear Paw Mtn. 68.29 25 P **P 20 07 00.0 +0.5**
baz=253,SNR=12
TRF Thorofare Moun 68.39 26 P **P 20 07 00.1 -0.3**
baz=254,SNR=6.6
PMR Palmer 68.41 28 P **P 20 07 00.2 -0.1**
baz=255
GHO Glory Hole Cre 68.55 28 P **P 20 07 00.6 -0.7**
GHO IAmb IAmb 20 07 04.0
comp=Z,21nm,1.1s
DRK Karamyk 68.62 308 P **P 20 07 01.8 -0.7**
MLY Manley 68.67 24 P **P 20 07 02.2 +0.2**
MLY IAmb IAmb 20 07 03.5
comp=Z,14nm,1.0s
MLY Manley 68.67 24 P **P 20 07 02.6 +0.6**
baz=252,SNR=19
KNK Knik Glacier 68.68 29 P **P 20 07 02.6 +0.6**
baz=256,SNR=6.3
H22K Ishtlina Cre 68.69 23 P **P 20 07 03.1 +1.1**
baz=252,SNR=5.7
BRZS Berezniki 68.74 319 *e*P **P 20 07 01.0 -1.6**
BRZS Berezniki 68.74 319 *e*P **P 20 07 01.1 -1.6**
baz=319
OTUK Ortayu 68.78 317 *i* P **P 20 07 02.6 -0.3**
OTUK pmax pmax
comp=Z,11nm,0.9s
SML Sawmill 68.83 28 P **P 20 07 03.4 +0.4**
baz=256,SNR=12
A21K Barrow 68.95 17 P **P 20 07 03.9 +0.4**
A21K Barrow 68.95 17 P **P 20 07 04.7 +1.2**
baz=244
WAT1 Susitna Watana 68.99 27 P **P 20 07 04.0 +0.1**
baz=255
MCK McKinley 69.05 26 P **P 20 07 04.6 +0.3**
baz=255
M23K Glacier View 69.11 28 P **P 20 07 05.0 +0.3**
baz=256
DZA Taraz 69.11 311 *e*P **P 20 07 03.6 -1.5**
DZA Taraz 69.11 311 *e*P **P 20 07 03.7 -1.5**
baz=311
I23K Minto, Yukon-K 69.26 25 P **P 20 07 06.3 +0.7**
baz=254,SNR=13
WAT6 Susitna Watana 69.29 27 P **P 20 07 06.1 +0.2**
baz=256,SNR=10.0
SCM Sheep Creek Mo 69.30 28 P **P 20 07 06.7 +0.7**
baz=257,SNR=14
H23K Yukon River 69.38 24 P **P 20 07 06.2 -0.1**
H23K IAmb IAmb 20 07 08.2
comp=Z,12nm,1.1s
H23K Yukon River 69.38 24 P **P 20 07 06.9 +0.5**
baz=253,SNR=10
BTK Batken 69.40 308 P **P 20 07 06.0 -1.0**
BTK Batken 69.40 308 P **P 20 07 06.0 -1.0**
BTK pmax pmax
comp=Z,8.0nm,0.9s
COLD Coldfoot 69.55 22 P **P 20 07 08.6 +1.2**
baz=252,SNR=5.9
DHY Denali Highway 69.57 27 P **P 20 07 07.9 +0.2**
baz=256
KK31 Karatay Array 69.72 312 P **P 20 07 08.4 -0.4**
KK31 IAmb IAmb 20 07 10.2
comp=Z,10nm,0.9s
KK31 Karatay Array 69.72 312 P **P 20 07 08.4 -0.4**
KK31 pmax pmax
comp=Z,10.0nm,0.9s
KKAR Karatay Array 69.72 312 P **P 20 07 08.4 -0.4**
KKAR Karatay Array 69.72 312 P **P 20 07 08.4 -0.4**
GAR Garm 69.77 307 P **P 20 07 09.1 -0.3**
COLA College 69.81 25 *i* P **P 20 07 07.4 -1.5**
COLA pmax pmax
comp=Z,9.0nm,1.2s
KLU Klutina 69.88 29 P **P 20 07 10.5 +1.0**
baz=258,SNR=6.1
M24K Tolsona, Glenn 69.89 28 P **P 20 07 11.0 +1.5**
baz=258
D23K Nanushuk River 69.93 20 P **P 20 07 11.4 +1.7**
baz=251
H24K Noodor Dome 70.05 24 P **P 20 07 10.8 +0.3**
H24K IAmb IAmb 20 07 12.9
comp=Z,25nm,1.3s
H24K Noodor Dome 70.05 24 P **P 20 07 11.0 +0.5**
baz=255,SNR=21
HDA Harding Lake 70.07 26 P **P 20 07 09.9 -0.7**
baz=256,SNR=6.1
IL31 70.18 25 P **P 20 07 09.9 -1.3**
IL31 IAmb IAmb 20 07 11.2
comp=Z,14nm,1.1s
ILAR Eielson Array 70.18 25 P **P 20 07 10.4 -0.8**
comp=Z,4.9nm,0.8s,baz=259,slow=4.5,SNR=41
ILAR LR LR 20 36 19.8
comp=Z,142nm,19.9s,baz=258,slow=34
comp=Z,4.9nm,0.8s
ILAR Eielson Array 70.18 25 P **P 20 07 10.0 -1.3**
TOLK Toolik Lake Re 70.21 21 P **P 20 07 12.2 +0.8**
baz=252
C23K Itkillik River 70.24 20 P **P 20 07 12.7 +1.2**
baz=251
PAX Paxson 70.39 27 P **P 20 07 12.8 +0.1**
baz=258,SNR=14
BMRM Bremner River 70.41 29 P **P 20 07 13.9 +1.2**
baz=260,SNR=6.5
HARP HAARP 70.42 28 P **P 20 07 13.9 +1.2**
baz=259,SNR=6.4
K24K Donnelly Dome 70.43 26 P **P 20 07 13.1 +0.3**
baz=258,SNR=8.6
BVAR Borovoye Array 70.48 322 LR LR 20 39 11.9
comp=Z,287nm,18.6s,baz=335,slow=37
N25K Chitina, Valde 70.53 29 P **P 20 07 14.4 +0.9**
baz=259
TAS Tashkent 70.58 310 P **P 20 07 14.3 +0.2**
TAS Tashkent 70.58 310 P **P 20 07 14.3 +0.2**
D24K Happy Valley 70.62 20 P **P 20 07 15.5 +1.7**
baz=253
CHGR Chuyangaron 70.67 307 P **P 20 07 14.3 -0.6**
CHGR IAmb IAmb 20 07 16.1
comp=Z,26nm,0.9s
CHGR Chuyangaron 70.67 307 P **P 20 07 14.3 -0.6**
CHGR pmax pmax
comp=Z,26nm,0.9s
J25K Salcha River, 70.78 26 P **P 20 07 14.3 -0.7**
baz=258,SNR=7.1
RIDG Independent Ri 70.82 26 P **P 20 07 15.5 +0.2**
baz=258,SNR=13
KBL Kabul 70.84 302 P **P 20 07 15.4 -0.7**
KBL IAmb IAmb 20 07 17.7
comp=Z,20nm,1.0s
KBL Kabul 70.84 302 P **P 20 07 15.4 -0.7**
KBL pmax pmax
comp=Z,20nm,1.0s
CRQE Cirque 71.10 30 P **P 20 07 17.9 +0.9**
baz=261
DOT Dot Lake 71.15 27 P **P 20 07 17.1 -0.1**
DOT IAmb IAmb 20 07 18.3
comp=Z,17nm,0.9s
MCARA McCarthy VSAT 71.23 29 P **P 20 07 18.6 +0.9**
baz=261
SCRK Sand Creek 71.24 26 P **P 20 07 17.9 +0.1**
baz=259,SNR=13
L26K Log Cabin Wild 71.35 27 P **P 20 07 19.3 +0.9**
baz=260
M26K Nabesna, AK 71.41 28 P **P 20 07 20.0 +1.2**
baz=261
J26L Joseph Creek 71.52 26 P **P 20 07 19.4 -0.1**
J26L Joseph Creek 71.52 26 P **P 20 07 19.9 +0.4**
baz=259,SNR=16
BMAR Burnt Mountain 71.71 23 P **P 20 07 20.9 +0.4**
I26K Coal Creek Min 71.84 25 P **P 20 07 20.3 -1.0**
baz=260
M27K Edge Creek, AK 71.92 28 P **P 20 07 23.0 +1.0**
baz=262,SNR=6.5
PPT Papeete 71.95 113 LR LR 20 32 14.1
comp=Z,286nm,19.0s,baz=291,slow=30
PPT2 Papeete2 71.96 113 *e*LR LR 20 29 19.0
comp=Z,353nm,21.5s
CTG Chitna Glacier 71.98 30 P **P 20 07 23.3 +0.9**
baz=253,SNR=6.0
L27K Beaver Creek, 72.04 27 P **P 20 07 23.4 +0.8**
baz=261,SNR=8.3
BCAR Beaver Creek A 72.06 27 P **P 20 07 22.9 +0.1**
K27K Chicken 72.08 26 P **P 20 07 23.3 +0.5**
K27K Chicken 72.08 26 P **P 20 07 24.1 +1.3**
baz=261
BVCY Beaver Creek 72.39 28 P **P 20 07 25.9 +1.2**
baz=262
YUK3 Moose Creek 72.50 29 P **P 20 07 26.8 +1.2**
baz=263,SNR=9.5
YUK8 Steele Glacier 72.78 29 P **P 20 07 28.9 +1.6**
baz=264
DAWY Dawson 73.26 27 P **P 20 07 30.4 +0.5**
DAWY IAmb IAmb 20 07 33.1
comp=Z,19nm,1.1s
DAWY Dawson 73.26 27 P **P 20 07 31.1 +1.3**
baz=263,SNR=16
YUK4 Talbot Arm 73.32 29 P **P 20 07 32.5 +2.1**
baz=265,SNR=7.7
YUK6 Outpost Mounta 73.42 30 P **P 20 07 32.7 +1.7**
baz=265
HYT Haines Junctio 73.83 30 P **P 20 07 34.4 +1.1**
HYT IAmb IAmb 20 07 36.5
comp=Z,25nm,1.1s
HYT Haines Junctio 73.83 30 P **P 20 07 35.1 +1.7**
baz=266,SNR=11
I29M Ogilvie Camp, 73.86 25 P **P 20 07 34.1 +0.8**
baz=264,SNR=18
TBI Tubuai 74.05 119 *e*LR LR 20 30 17.0
comp=Z,4μm,22.2s
P30M Million Dollar 74.05 31 P **P 20 07 36.5 +1.9**
baz=267
N30M Aishikik Lake 74.07 29 P **P 20 07 35.9 +1.2**
baz=266,SNR=7.0
M30M Minto, Yukon 74.29 28 P **P 20 07 37.5 +1.6**
baz=266,SNR=11
PLBC Pleasant Camp 74.32 31 P **P 20 07 37.6 +1.6**
baz=267
EPYK Eagle Plains 74.61 24 P **P 20 07 38.7 +1.0**
baz=265,SNR=15
N31M Braeburn, Yuko 74.70 29 P **P 20 07 39.9 +1.6**
baz=267,SNR=8.3
SKAG Skagway 74.85 31 P **P 20 07 42.2 +3.1**
baz=268
WHY Whitehorse 75.11 30 P **P 20 07 41.7 +0.9**
WHY IAmb IAmb 20 07 43.3
comp=Z,22nm,1.1s
WHY Whitehorse 75.11 30 P **P 20 07 42.5 +1.7**
baz=268,SNR=6.7
M31M Drury Creek, Y 75.39 29 P **P 20 07 43.5 +1.3**
baz=268,SNR=10
P32M Atlin 75.67 31 P **P 20 07 45.7 +1.8**
baz=270,SNR=5.4
INK Inuvik 75.97 22 P **P 20 07 45.4 +0.1**
comp=Z,38nm,1.0s,baz=256,slow=7.1,SNR=42
INK LR LR 20 39 22.7
comp=Z,214nm,21.3s,baz=228,slow=34
comp=Z,38nm,1.0s
INK Inuvik 75.97 22 P **P 20 07 45.7 +0.4**
INK Inuvik 75.97 22 P **P 20 07 45.7 +0.4**
INK pmax pmax
comp=Z,40nm,1.0s
INK Inuvik 75.97 22 P **P 20 07 46.1 +0.7**
baz=268
P33M Teslin, Yukon 76.13 31 P **P 20 07 48.0 +1.4**
baz=270,SNR=5.6
SVE Sverdlovsk 76.25 326 *e*P **P 20 07 47.4 +0.2**
SVE pmax pmax
comp=Z,36nm,1.0s
SVE MLR MLR
comp=Z,311nm,18.0s
HRA Herat 76.46 303 P **P 20 07 48.8 -0.3**
HRA IAmb IAmb 20 07 50.6
comp=Z,21nm,0.8s
MMPY Sheldon Lake, 76.85 28 P **P 20 07 52.7 +2.1**
baz=271,SNR=5.5
AB31 Akbulak array 76.99 318 *i* P **P 20 07 50.8 -0.8**
AB31 pmax pmax
comp=Z,11nm,0.6s
ABKAR Akbulak array 76.99 318 P **P 20 07 51.1 -0.5**
ABKAR Akbulak array 76.99 318 P **P 20 07 51.2 -0.3**
ABKAR IAmb IAmb 20 07 52.4
comp=Z,16nm,0.8s
ARU Arti 77.41 325 LR LR 20 45 20.8
comp=Z,240nm,18.1s,baz=80,slow=38
ARU Arti 77.41 325 P **P 20 07 53.6 -0.2**
ARU Arti 77.41 325 *d* P **P 20 07 53.6 -0.2**
ARU 20 10 47.9
ARU PPP PPP 20 12 39.8
ARU S **S 20 17 47.5 +4.0**
ARU SS **SS 20 22 44.1 +2.2**
ARU pmax pmax
comp=Z,33nm,0.8s
T35M Bob Quinn 77.57 34 P **P 20 07 56.8 +2.1**
baz=273
DLBC Dease Lake 77.61 32 LR LR 20 35 40.7
comp=Z,205nm,21.9s,baz=278,slow=31
DLBC Dease Lake 77.61 32 P **P 20 07 55.7 +0.8**
DLBC IAmb IAmb 20 07 57.7
comp=Z,16nm,1.1s
DLBC Dease Lake 77.61 32 P **P 20 07 56.9 +2.0**
baz=273,SNR=10
AKTO Aktyubinsk 78.15 319 LR LR 20 45 06.2
comp=Z,90nm,19.9s,baz=84,slow=38
AKTO Aktyubinsk 78.15 319 *i* P **P 20 07 57.3 -0.7**
AKTO pmax pmax
comp=Z,7.0nm,0.7s
TAOE Nuku Hiva Isla 78.24 102 *e*LR LR 20 32 13.0
comp=Z,358nm,20.8s
TGTN Hyland Airport 78.30 29 P **P 20 08 00.5 +1.8**
baz=274
A36M Sachs Harbour 78.73 18 P **P 20 08 01.4 +0.6**
baz=275
BBB Bella Bella 79.19 39 LR LR 20 36 19.6
comp=Z,406nm,21.9s,baz=277,slow=31
C36M Paulatuk 79.36 21 P **P 20 08 04.3 0.0**
C36M Paulatuk 79.36 21 P **P 20 08 04.8 +0.6**
baz=276
GEYT Alibeck 79.38 307 P **P 20 08 05.6 +0.5**
comp=Z,12nm,0.9s,baz=198,slow=4.4,SNR=15
GEYT LR LR 20 46 24.5
comp=Z,172nm,19.4s,baz=86,slow=38
comp=Z,12nm,0.9s
GEYT Alibeck 79.38 307 P **P 20 08 05.2 +0.1**
GYA0B ALIBECK ARRAY 79.38 307 P **P 20 08 04.9 -0.2**
GYA0B IAmb IAmb 20 08 11.8
comp=Z,20nm,0.9s
WSAR Wadi Sarin 81.07 292 LR LR 20 44 40.7

comp=Z,86nm,21.4s,baz=112,slow=36
KIRV Kirov 82.06 328 LR LR 20 46 06.3
comp=Z,225nm,20.1s,baz=81,slow=37
KIRV Kirov 82.06 328 *ce* P **P 20 08 17.9 -1.0**
J01E Myrtle Point 83.27 47 P **P 20 08 30.1 +4.5**
baz=280
LLLB Lillooet 83.28 40 P **P 20 08 26.1 +0.5**
LLLB IAmb IAmb 20 08 36.1
comp=Z,11nm,1.1s
PRGR Permogore 83.30 332 *eP* **P 20 08 25.4 +0.1**
F04A Amboy 83.82 44 P **P 20 08 29.6 +1.3**
H04D Lebanon 83.87 46 P **P 20 08 31.2 +2.5**
baz=281
D05A Enumclaw 83.87 43 P **P 20 08 29.8 +1.2**
D05A IAmb IAmb 20 09 53.5
comp=Z,13nm,1.0s
I04A Tendick Farm, 84.24 47 P **P 20 08 32.9 +2.3**
baz=281
BELG Belogornoye 84.29 322 P **P 20 08 30.5 0.0**
comp=Z,67nm,0.8s,baz=330,slow=1.6,SNR=41
BELG LR LR 20 47 07.8
comp=Z,286nm,19.8s,baz=101,slow=36
BELG Belogornoye 84.29 322 *d* *i*P **P 20 08 30.3 -0.3**
BELG pmax pmax
comp=Z,13nm,0.8s
YBH Yreka Blue Hor 84.43 49 LR LR 20 39 04.1
comp=Z,265nm,21.9s,baz=282,slow=31
YBH Yreka Blue Hor 84.43 49 P **P 20 08 32.8 +1.1**
YBH IAmb IAmb 20 08 35.9
comp=Z,9.7nm,0.9s
YBH Yreka Blue Hor 84.43 49 P **P 20 08 32.8 +1.1**
YBH pmax pmax
comp=Z,10.0nm,0.9s
YKA Yellowknife Ar 84.48 27 P **P 20 08 31.6 +0.2**
comp=Z,6.7nm,0.6s,baz=288,slow=5.3,SNR=48
YKA LR LR 20 45 13.1
comp=Z,307nm,20.1s,baz=278,slow=35
comp=Z,6.7nm,0.6s
YKA Yellowknife Ar 84.48 27 *i* P **P 20 08 32.4 +1.0**
YKA pmax pmax
comp=Z,7.0nm,0.6s
J04D Umpqua Nationa 84.57 47 P **P 20 08 35.0 +2.5**
baz=282
L04D Klamath Falls 84.63 48 P **P 20 08 34.9 +2.1**
baz=282
J05D Fort Rock, OR 85.18 47 P **P 20 08 36.9 +1.3**
baz=282,SNR=7.3
SPITS Spitsbergen Ar 85.27 351 LR LR 20 47 34.2
comp=Z,158nm,20.1s,baz=8.0,slow=36
SPITS Spitsbergen Ar 85.27 351 P **P 20 08 35.8 +0.7**
SPITS pmax pmax
comp=Z,20nm,1.4s
HAWA Hanford 85.69 44 P **P 20 08 38.5 +0.7**
ORV Oroville 85.77 51 P **P 20 08 39.4 +1.0**
ORV Oroville 85.77 51 P **P 20 08 39.4 +1.0**
ORV pmax pmax
comp=Z,12nm,1.3s
RES Resolute Bay 86.09 13 P **P 20 08 40.0 +0.8**
RES Resolute Bay 86.09 13 P **P 20 08 40.0 +0.8**
RES pmax pmax
comp=Z,29nm,0.9s
MOD Modoc Plateau 86.15 48 P **P 20 08 41.1 +0.7**
KLMR Klimovskoe 86.36 332 *eP* **P 20 08 38.6 -2.1**
KLMR pmax pmax
comp=Z,13nm,0.8s
KLMR Klimovskoe 86.36 332 *eP* **P 20 08 38.7 -2.0**
KLMR AMP 20 08 42.1
comp=Z,13nm,0.8s
LKRN Lenkeran, Azer 86.48 309 P **P 20 08 42.1 +0.3**
NEW Newport 86.83 41 LR LR 20 43 33.6
comp=Z,222nm,19.4s,baz=302,slow=33
NEW Newport 86.83 41 P **P 20 08 44.6 +1.2**
NEW IAmb IAmb 20 08 46.9
comp=Z,18nm,0.8s
NEW Newport 86.83 41 P **P 20 08 44.6 +1.2**
NEW pmax pmax
comp=Z,18nm,0.8s
NEW Newport 86.83 41 P **P 20 08 45.0 +1.6**
baz=285,SNR=24
SEKA Sheki 87.10 311 P **P 20 08 44.3 -0.6**
WVOR Wild Horse Val 87.23 47 P **P 20 08 46.4 +0.8**
WVOR IAmb IAmb 20 09 07.1
comp=Z,9.3nm,1.1s
WVOR Wild Horse Val 87.23 47 P **P 20 08 46.4 +0.8**
WVOR pmax pmax
comp=Z,9.0nm,1.1s
MNGR Mingechevir, A 87.28 311 P **P 20 08 45.9 +0.2**
ZKTA Zakatala 87.42 312 P **P 20 08 46.3 -0.1**
BMO Blue Mountains 87.57 45 P **P 20 08 48.1 +0.9**
BMO IAmb IAmb 20 08 50.8
comp=Z,20nm,1.1s
BMO Blue Mountains 87.57 45 P **P 20 08 48.1 +0.9**
EDM Edmonton 87.77 36 P **P 20 08 48.3 +0.4**
EDM Edmonton 87.77 36 P **P 20 08 48.3 +0.4**
EDM pmax pmax
comp=Z,20nm,1.0s
GANJ Ganja 87.88 311 P **P 20 08 50.3 +1.7**
PKM Mcpherson Peak 88.12 55 P **P 20 08 52.6 +2.4**
baz=284
ARCES ARCESS Array B 88.13 342 P **P 20 08 48.5 -0.7**
comp=Z,3.8nm,0.6s,baz=73,slow=6.4,SNR=20
ARCES LR LR 20 51 14.5
comp=Z,124nm,20.8s,baz=63,slow=38
comp=Z,3.8nm,0.6s
ARCES ARCESS Array B 88.13 342 P **P 20 08 49.1 -0.1**
ARCES IAmb IAmb 20 08 51.3
comp=Z,19nm,1.3s
ARCES ARCESS Array B 88.13 342 P **P 20 08 49.1 -0.1**
ARCES pmax pmax
comp=Z,19nm,1.3s
VRH Novokhopyorsk 88.13 322 *eP* **P 20 08 46.9 -2.6**
VRH pmax pmax
comp=Z,30nm,0.9s
RYN Ryan 88.24 51 P **P 20 08 51.4 +0.9**
RYN IAmb IAmb 20 09 06.7
comp=Z,16nm,1.4s
PLID Pearl Lake 88.41 44 P **P 20 08 51.0 -0.3**
PLID IAmb IAmb 20 08 54.3
comp=Z,11nm,1.0s
NVAR Mina Array Bea 88.45 51 P **P 20 08 51.6 -0.1**
comp=Z,3.5nm,0.6s,baz=270,slow=5.4,SNR=36
comp=Z,3.5nm,0.6s
NVAR Mina Array Bea 88.45 51 P **P 20 08 52.1 +0.4**
BMN Battle Mountai 88.76 49 P **P 20 08 53.8 +0.8**
BMN IAmb IAmb 20 08 56.6
comp=Z,24nm,1.7s
BMN Battle Mountai 88.76 49 P **P 20 08 53.8 +0.8**
BMN pmax pmax
comp=Z,24nm,1.7s
NAX Nakhchivan 88.86 310 P **P 20 08 53.6 +0.2**
MFID Camas Ranch 88.98 46 P **P 20 08 55.2 +1.3**
MFID IAmb IAmb 20 08 57.9
comp=Z,23nm,1.1s
MOS Moscow 89.00 327 *eP* **P 20 08 52.1 -1.4**
MOS pmax pmax
comp=Z,43nm,0.9s
ZEI Tsey 89.08 314 *eP* **P 20 08 52.9 -1.6**
ZEI pmax pmax
comp=Z,11nm,1.0s
NCK Nalchik 89.10 314 *i* P **P 20 08 53.1 -1.2**
NCK pmax pmax
comp=Z,6.0nm,1.0s
GNI Garni 89.17 311 LR LR 20 54 44.0
comp=Z,72nm,18.1s,baz=95,slow=40
GNI Garni 89.17 311 P **P 20 08 55.5 +0.5**
GNI IAmb IAmb 20 09 16.5
comp=Z,23nm,1.6s
GNI Garni 89.17 311 P **P 20 08 55.5 +0.5**
GNI pmax pmax
comp=Z,23nm,1.6s
LPSR Galich'ya Gora 89.34 324 *eP* **P 20 08 52.3 -2.9**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
TPH Tonopah 89.37 51 P **P 20 08 56.6 +0.6**
TPH Tonopah 89.37 51 P **P 20 08 56.6 +0.6**
TPH pmax pmax
comp=Z,35nm,0.9s
ONI Oni 89.45 313 P **P 20 08 55.5 -0.6**
ONI Oni 89.45 313 P **P 20 08 55.5 -0.6**
ONI pmax pmax
comp=Z,9.0nm,1.1s
VORR Voronezh 89.48 323 *eP* **P 20 08 55.1 -0.8**
KBZ Khabaz 89.52 315 P **P 20 08 55.2 -1.0**
comp=Z,4.9nm,0.8s,baz=158,slow=4.2,SNR=7.0
KBZ LR LR 20 53 14.3
comp=Z,182nm,19.2s,baz=70,slow=38
comp=Z,4.9nm,0.8s
KBZ Khabaz 89.52 315 *ce* P **P 20 08 54.9 -1.3**
KBZ pmax pmax
comp=Z,7.0nm,0.9s
KVAR Kislovodsk Arr 89.60 315 LR LR 20 52 39.5
comp=Z,125nm,19.1s,baz=280,slow=38
KIV Kislovodsk 89.61 315 P **P 20 08 55.5 -1.3**
KIV Kislovodsk 89.61 315 *ll* *e*P **P 20 08 55.4 -1.4**
KIV *e* 20 12 29.8
KIV pmax pmax
comp=Z,13nm,2.5s
KIV MLR MLR
comp=Z,130nm,18.0s
VSR Storozhevoye 89.66 323 *eP* **P 20 08 54.6 -2.1**
VSR pmax pmax
comp=Z,30nm,0.8s
LRMC Laurel Mtn Rad 89.67 54 P **P 20 08 59.1 +1.8**
baz=285
MPMC Manual Prospec 89.68 53 P **P 20 08 59.3 +1.8**
baz=285,SNR=7.6
OBN Obninsk 89.79 327 LR LR 20 51 52.0
comp=Z,59nm,18.5s,baz=36,slow=37
OBN Obninsk 89.79 327 *ce* P **P 20 08 55.8 -1.4**
OBN Obninsk 89.79 327 *ce* P **P 20 08 55.5 -1.7**
OBN *i* 20 09 00.7
OBN *e* 20 12 28.6
OBN *e*S **SKSac 20 19 25.9 -1.1**
OBN *e*SS **SS 20 25 48.1 +3.4**
OBN pmax pmax
comp=Z,39nm,1.0s
OBN MLR MLR
comp=Z,250nm,18.0s
HLID Hailey 89.93 45 P **P 20 08 59.2 +0.7**
HLID Hailey 89.93 45 P **P 20 08 60.0 +1.6**
baz=287,SNR=7.1
FURC Furnace Creek, 90.06 53 P **P 20 09 00.8 +1.9**
baz=285
ELK Elko 90.13 48 LR LR 20 44 20.7
comp=Z,177nm,19.5s,baz=286,slow=32
ELK Elko 90.13 48 P **P 20 09 00.2 +0.7**
ELK IAmb IAmb 20 09 03.0
comp=Z,22nm,1.6s
ELK Elko 90.13 48 P **P 20 09 00.2 +0.7**
ELK pmax pmax
comp=Z,22nm,1.6s
VNDA Vanda 90.14 176 P **P 20 08 57.2 -1.1**
comp=Z,1.4nm,0.9s,baz=328,slow=4.2,SNR=7.9
VNDA LR LR 20 49 41.5
comp=Z,122nm,18.3s,baz=348,slow=36
comp=Z,1.4nm,0.9s
TPNV Topopah Spring 90.41 52 P **P 20 09 02.3 +1.5**
baz=286,SNR=8.1
GSC Goldstone, Bar 90.41 54 P **P 20 09 01.6 +0.9**
GSC IAmb IAmb 20 09 04.3
comp=Z,25nm,1.5s
GSC Goldstone, Bar 90.41 54 P **P 20 09 01.6 +0.9**
GSC pmax pmax
comp=Z,25nm,1.5s
GSC Goldstone, Bar 90.41 54 P **P 20 09 02.3 +1.6**
baz=285,SNR=7.2
R11A Troy Canyon, C 90.54 51 P **P 20 09 03.6 +2.2**
baz=286,SNR=8.7
SHOC Shoshone, Teco 90.67 53 P **P 20 09 04.0 +2.2**
baz=286
HEC Hector,Ludlow 90.91 54 P **P 20 09 05.2 +2.1**
baz=286
PUL Pulkovo 91.00 332 *ce* P **P 20 09 00.8 -2.0**
TUQ Turquoise Moun 91.07 54 P **P 20 09 05.7 +1.8**
baz=286
PFO Pinyon Flats O 91.13 55 P **P 20 09 04.7 +0.5**
PFO IAmb IAmb 20 09 19.5
comp=Z,15nm,1.4s
PFO Pinyon Flats O 91.13 55 P **P 20 09 04.7 +0.5**
PFO pmax pmax
comp=Z,15nm,1.4s
PFO Pinyon Flats O 91.13 55 P **P 20 09 06.7 +2.5**
baz=285
TPFO Pinon Flats 91.14 55 P **P 20 09 07.0 +2.8**
baz=285
BOZ Bozeman (W) 91.20 43 P **P 20 09 06.0 +1.7**
MONP2 Monument Peak 91.35 56 P **P 20 09 08.0 +2.7**
baz=285
BELC Belle Mtn. Jos 91.40 55 P **P 20 09 07.8 +2.4**
baz=286
GMRC Granite Mounta 91.45 54 P **P 20 09 07.5 +1.8**
baz=286,SNR=7.5
SOC Sochi 91.77 315 *eP* **P 20 09 05.2 -1.5**
SOC *e* 20 12 38.8
SOC *e*S **SKSac 20 19 36.3 -2.6**
SOC *e*SS **SS 20 26 18.7 +4.7**
SOC *e*SSS SSS 20 29 52.4
SOC pmax pmax
comp=Z,4.0nm,0.6s
BC3 Big Chuckawall 91.93 55 P **P 20 09 09.7 +1.9**
baz=286
IRM Iron Mountain 92.03 55 P **P 20 09 10.0 +1.8**
baz=286,SNR=6.0
FIA1 FINESS Array S 92.05 335 P **P 20 09 05.9 -1.7**
FIA1 IAmb IAmb 20 09 07.2
comp=Z,9.3nm,0.7s
FINES FINESS Array B 92.05 335 P **P 20 09 06.3 -1.3**
comp=Z,7.4nm,0.6s,baz=66,slow=5.2,SNR=56
FINES PP **PP 20 12 46.4 -0.5**
comp=Z,1.2nm,0.8s,baz=66,slow=1.1,SNR=2.7
FINES LR LR 20 53 56.7
comp=Z,136nm,18.6s,baz=54,slow=38
comp=Z,7.4nm,0.6s
FINES FINESS Array B 92.05 335 P **P 20 09 06.1 -1.5**
RAYN Ar Rayn 92.81 295 P **P 20 09 10.1 -1.9**
RAYN Ar Rayn 92.81 295 P **P 20 09 10.1 -1.9**
RAYN pmax pmax
comp=Z,5.0nm,0.9s
RLMT Red Lodge 92.93 43 P **P 20 09 14.8 +2.4**
baz=290
VSU Vasula 93.25 332 *i* P **P 20 09 10.4 -2.8**
VSU pmax pmax
comp=Z,36nm,0.9s
VSU Vasula 93.25 332 *eP* **P 20 09 13.0 -0.2**
PDAR Pinedale Array 93.55 45 P **P 20 09 14.3 -1.0**
comp=Z,0.5nm,0.7s,baz=263,slow=3.6,SNR=2.8
PDAR LR LR 20 48 12.5
comp=Z,127nm,18.7s,baz=302,slow=34
comp=Z,0.5nm,0.7s
RAF Rauma 94.04 336 *eP* **P 20 09 15.6 -1.1**
MTSE Matsula 94.43 333 *eP* **P 20 09 17.9 -0.8**
MNK Minsk 94.61 328 *i* P P 20 09 11.5 -8.1
MNK *i* S **SKSac 20 19 46.7 -7.4**
MNK *i* SS **SS 20 26 49.9 -4.0**
MNK *i* SSS SSS 20 30 32.0
MNK pmax pmax
comp=E,2.0nm,1.0s
MNK pmax pmax
comp=Z,27nm,0.6s
MNK MLR MLR
comp=N,330nm,20.0s
MNK MLR MLR
comp=E,22nm,20.0s
MNK Minsk 94.61 328 *i* P P 20 09 11.6 -8.0
comp=E,2.0nm,1.0s
MNK *i* P P 20 09 11.6 -8.0
comp=N,36nm,0.8s
MNK *i* P P 20 09 11.6 -8.0
comp=Z,27nm,0.6s,baz=243
MNK *i* PP **PP 20 12 59.7 -7.5**
MNK *i* PPP PPP 20 15 01.1
MNK *i* SKS 20 18 56.6
MNK *i* S **SKSac 20 19 46.7 -7.4**
MNK *i* SS **SS 20 26 49.9 -4.0**
MNK *i* SSS SSS 20 30 32.1
MNK *i* LQ LQ 20 45 59.0
MNK *i* LR LR 20 49 24.4
MNK *i* LRM MLR 20 52 41.2
MNK comp=E,22nm,20.4s *i* LRM MLR 20 52 41.2
MNK comp=N,330nm,20.0s *i* LRM MLR 20 52 41.2
MNK comp=Z,10μm,30.0s
NACGM Naroch 94.97 329 *ll* *eP* **P 20 09 21.4 +0.2**
baz=61
AKASG Malin Array Be 95.64 325 P **P 20 09 23.1 -1.3**
comp=Z,0.9nm,0.6s,baz=51,slow=4.8,SNR=7.2
AKASG LR LR 20 55 54.0
comp=Z,207nm,18.7s,baz=58,slow=38
comp=Z,0.9nm,0.6s
AKASG Malin Array Be 95.64 325 *i* P **P 20 09 24.5 +0.1**
AKASG pmax pmax
comp=Z,1.0nm,0.7s
PABE Paberze 96.06 330 *eP* **P 20 09 25.8 -0.4**
BR131 Keskin Array S 97.38 313 P **P 20 09 31.3 -1.4**
BR131 IAmb IAmb 20 09 35.5
comp=Z,9.1nm,1.2s
BR131 Keskin Array S 97.38 313 P **P 20 09 31.3 -1.4**
BR131 pmax pmax
comp=Z,9.0nm,1.2s
BRTR Keskin Array B 97.38 313 P **P 20 09 30.6 -2.1**
comp=Z,2.4nm,0.9s,baz=66,slow=1.8,SNR=8.5
BRTR LR LR 20 57 16.6
comp=Z,80nm,21.8s,baz=73,slow=38
comp=Z,2.4nm,0.9s
BRTR Keskin Array B 97.38 313 P **P 20 09 31.2 -1.5**
BRTR Keskin Array B 97.38 313 P **P 20 09 31.2 -1.5**
HFS Hagfors 97.74 337 P **P 20 09 31.7 -1.9**
comp=Z,1.8nm,0.5s,baz=92,slow=4.5,SNR=13
HFS LR LR 20 56 48.1
comp=Z,118nm,20.2s,baz=37,slow=37
comp=Z,1.8nm,0.5s
MAW Mawson 97.82 202 LR LR 20 51 50.7
comp=Z,297nm,18.2s,baz=87,slow=34
NB2 NORSAR Subarra 98.03 339 P **P 20 09 33.1 -1.9**
comp=Z,1.2nm,0.8s,baz=49,slow=4.6
NOA NORSAR Array B 98.03 339 P **P 20 09 32.7 -2.4**
comp=Z,1.0nm,0.8s,baz=58,slow=4.3,SNR=4.9
comp=Z,1.0nm,0.8s
MMAI Mount Meron Ar 98.51 306 LR LR 20 59 09.0
comp=Z,110nm,21.1s,baz=216,slow=38
ULM Lac du Bonnet 98.87 34 LR LR 20 53 07.9
comp=Z,152nm,18.8s,baz=349,slow=35
LPIG La Paz 99.01 63 LR LR 20 51 13.7
comp=Z,118nm,18.4s,baz=256,slow=34
CRVS Cervenica-Dubn 100.90 325 *i* P **Pdif 20 09 47.9 -0.2**
CRVS Cervenica-Dubn 100.90 325 *e*PDIFF **Pdif 20 09 47.8 -0.3**
BORG Borgarnes 102.47 354 *i* P **Pdif 20 09 46.1 -8.6**
VYHS Vyhne 102.57 326 *i* P **Pdif 20 09 55.4 -0.1**
VYHS Vyhne 102.57 326 *e*PDIFF **Pdif 20 09 55.4 -0.1**
MODS Modra-Piesok 103.48 327 *i* P **Pdif 20 10 00.8 +1.2**
MODS Modra-Piesok 103.48 327 *e*PDIFF **Pdif 20 10 00.8 +1.2**
RONA Rosalia, Austr 104.41 327 *eP* **Pdif 20 10 04.0 +0.2**
comp=Z,3.5nm,1.2s
CONA Conrad Observa 104.51 327 *eP* **Pdif 20 10 04.7 +0.5**
comp=Z,5.8nm,0.9s
MOA Molln 105.40 327 *eP* **Pdif 20 10 08.1 -0.1**
comp=Z,1.5nm,1.0s
SOKA Soboth 105.72 326 *i* P **Pdif 20 10 09.5 -0.1**
comp=Z,2.7nm,1.2s
OBKA Obir 106.09 326 *i* P **Pdif 20 10 10.9 -0.4**
comp=Z,3.0nm,1.0s
TORD Torodi Ar. Bea 134.91 303 PKP **PKPdf 20 15 17.3 -1.5**
comp=Z,0.3nm,0.4s,baz=30,slow=2.6,SNR=7.1
TORD PP **PP 20 17 51.4 -1.4**
comp=Z,1.1nm,0.9s,baz=42,slow=4.5,SNR=3.6
PLCA Paso Flores 138.46 139 PKP **PKPdf 20 15 25.5 +0.7**
comp=Z,5.3nm,1.0s,baz=241,slow=2.6,SNR=10
PLCA Paso Flores 138.46 139 PKPdf **PKiKP 20 15 25.9 -0.9**
PLCA Paso Flores 138.46 139 PKiKP **PKiKP 20 15 26.0 -0.9**
DBIC Dimbokro 143.79 300 PKP PKPbc 20 15 33.1 +0.5
comp=Z,18nm,0.8s,baz=82,slow=4.0,SNR=15
KIC Kosan Boka 143.85 299 ⇑ *i*P PKPbc 20 15 33.1 +0.3
comp=Z,18nm,0.5s
TIC Toumodi 143.94 300 ⇑ *i*P PKPbc 20 15 33.4 +0.3
comp=Z,32nm,0.8s
LIC Lamto 144.16 299 ⇑ *i*P PKPbc 20 15 34.7 +0.9
comp=Z,74nm,0.8s
ZON Zonda 144.30 128 PKPdf **PKPdf 20 15 34.7 -0.8**
ZON Zonda 144.30 128 PKiKP **PKPdf 20 15 34.7 -0.8**
LPAZ La Paz 148.63 101 PKPbc **PKPbc 20 15 46.8 -0.8**
comp=Z,5.2nm,0.9s,baz=353,slow=3.6,SNR=11
LPAZ La Paz 148.63 101 **PKPdf 20 15 45.6 +1.7**
SAML Samuel 153.10 86 **PKPab 20 16 09.4 +0.4**
SAML Samuel 153.10 86 PKP2 **PKPab 20 16 09.4 +0.4**

IDC ***25*** *20:00:34.7±3.1, 53.62N×35.84W, h0km, mb3.6/8, mbtmp3.6/9, ML3.6/1, MS3.1/6, Error ellipse: s-maj=64.7km s-min=34.8km az=76.0*

ISC 25 20:00:36.7±2.5, **53.6N**±0.2×**35.7W**±0.3, **h10km, n13,** σ**0.45/9, mb3.6/8, MS2.9/4, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**13.33**	**28**	LR	LR		20 07 48.1	
	comp=Z,38nm,18.3s,baz=243,slow=32							
SCHQ	**Schefferville**	**18.16**	**286**	LR	LR		20 10 54.2	
	comp=Z,95nm,18.4s,baz=259,slow=34							
EKA	**Eskdalemuir Ar**	**18.91**	**72**	P	**Pn**		**20 04 57.4**	**-0.3**
	baz=297,slow=8.6							
	0.8nm,0.8s							
ESDC	**Sonsea Array**	**25.62**	**110**	P	**P**		**20 06 06.0**	**-0.1**
	1.0nm,0.8s,baz=318,slow=8.1,SNR=3.6							
ESDC				LR	LR		20 14 07.7	
	comp=Z,38nm,21.1s,baz=300,slow=32							
	1.0nm,0.8s							
NOA	**NORSAR Array B**	**25.89**	**55**	P	**P**		**20 06 08.0**	**-0.4**
	0.5nm,0.7s,baz=275,slow=9.7,SNR=3.3							
NOA				LR	LR		20 14 56.6	
	comp=Z,24nm,18.9s,baz=280,slow=33							
	0.5nm,0.7s							
DAVOX	**Davos/Dischmat**	**29.55**	**85**	LR	LR		20 16 01.8	
	comp=Z,34nm,21.5s,baz=268,slow=31							
VRAC	**Vranov**	**32.26**	**76**	LR	LR		20 19 24.5	
	comp=Z,61nm,18.4s,baz=338,slow=35							
FINES	**FINESS Array B**	**32.89**	**51**	P	**P**		**20 07 10.2**	**-0.2**
	1.2nm,0.8s,baz=294,slow=10,SNR=2.6							
	1.2nm,0.8s							
AKASG	**Malin Array Be**	**38.71**	**67**	P	**P**		**20 08 00.6**	**+0.2**
	0.2nm,0.2s,baz=331,slow=5.5,SNR=1.4							
	0.2nm,0.2s							
BRTR	**Keskin Array B**	**47.68**	**77**	P	**P**		**20 09 14.1**	**+0.8**
	0.6nm,0.6s,baz=286,slow=6.9,SNR=3.2							
	0.6nm,0.6s							
TORD	**Torodi Ar. Bea**	**50.02**	**129**	P	**P**		**20 09 31.0**	**-0.2**
	0.9nm,0.8s,baz=336,slow=6.5,SNR=4.6							
	0.9nm,0.8s							
MKAR	**Makanchi Array**	**66.96**	**41**	P	**P**		**20 11 28.7**	**-0.4**
	0.4nm,0.9s,baz=316,slow=6.0,SNR=2.5							
	0.4nm,0.9s							
SONM	**Songino Array**	**73.93**	**26**	P	**P**		**20 12 12.0**	**+0.2**
	0.4nm,0.7s,baz=319,slow=4.2,SNR=3.6							
	0.4nm,0.7s							

IDC ***25*** *20:04:35.8±2.8, 44.10N×105.40W, h0km, mbtmp2.8/3, ML3.5/3, Error ellipse: s-maj=33.4km s-min=17.5km az=6.0*

NEIC ***25*** *20:04:38.8±2.0, 43.68N±0.06×105.27W±0.05, h0km±1km, ML2.8/28, Error ellipse: s-maj=10.3km s-min=4.9km az=157.0*

ISC 25 20:04:38.5±1.0, **43.58N**±0.06×**105.17W**±0.06, **h0km, n25,** σ**1.38/26, Wyoming**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.98**	**56**	Pg	**Pg**		**20 04 57.5**	**+0.1**
K22A	**Casper**	**1.36**	**227**	Pn	**Pg**		**20 05 04.2**	**-0.3**
K22A				IAML			20 05 31.5	
	comp=E,136nm,0.8s							
K22A				IAML			20 05 32.7	
	comp=N,116nm,0.3s							
PHWY	**Pilot Hill**	**2.29**	**185**	Pn	**Pn**		**20 05 17.3**	**-0.5**
PHWY				IAML			20 05 59.2	
	comp=N,53nm,0.8s							
RWWY	**Rawlins**	**2.42**	**219**		**Pn**		**20 05 21.4**	**+1.8**
N23A	**Red Feather La**	**2.74**	**192**		**Pn**		**20 05 26.0**	**+1.9**
N23A				IAML			20 06 20.5	
	comp=E,51nm,1.0s							
PD31	**Pinedale Array**	**3.31**	**257**	Pn	**Pn**		**20 05 30.9**	**-0.9**
PDAR	**Pinedale Array**	**3.31**	**257**	Pn	**Pn**		**20 05 32.5**	**+0.7**
	comp=E,1.3nm,0.3s,baz=73,slow=15,SNR=24							
PDAR				Pg	**Pb**		**20 05 39.0**	**+0.8**
	comp=E,3.9nm,0.3s,baz=72,slow=21,SNR=24							
PDAR				Lg	Lg		20 06 18.8	
	comp=E,2.7nm,0.3s,baz=72,slow=33,SNR=7.2							
	comp=E,2.0nm,0.4s							
PDAR	**Pinedale Array**	**3.31**	**257**		**Pn**		**20 05 31.3**	**-0.5**
RLMT	**Red Lodge**	**3.32**	**299**	Pn	**Pn**		**20 05 29.4**	**-2.5**
RLMT				IAML			20 06 23.0	
	comp=E,40nm,0.8s							
RLMT				IAML			20 06 27.2	
	comp=E,36nm,1.1s							
ISCO	**Idaho Springs**	**3.79**	**185**		**Pn**		**20 05 39.9**	**+1.4**
GCMT	**Greycliff**	**3.89**	**306**	Pn	**Pn**		**20 05 36.7**	**-3.1**
LOHW	**Long Hollow**	**3.94**	**272**		**Pn**		**20 05 41.2**	**+0.7**

LOHW				IAML		20 06 44.6	
	comp=E,13nm,0.8s						
LOHW				IAML		20 07 06.7	
	comp=E,12nm,0.8s						
FLWY	**Flagg Ranch**	**4.03 279**		Pn	**Pn**	**20 05 41.7**	**+0.1**
FLWY				IAML		20 06 50.6	
	comp=E,22nm,1.0s						
SNOW	**Snow King Moun**	**4.06 270**			**Pn**	**20 05 42.3**	**+0.2**
SNOW				IAML		20 07 00.3	
	comp=E,21nm,1.1s						
YPP	**Pitchstone Pla**	**4.13 282**		Pn	**Pn**	**20 05 43.3**	**+0.2**
YPP				IAML		20 06 10.0	
	comp=E,10.0nm,0.6s						
YPP				IAML		20 06 59.1	
	comp=N,9.5nm,0.7s						
E28A	**Huff**	**4.36 45**		Pn	**Pn**	**20 05 45.2**	**-0.9**
ECR	**Eagle Creek**	**4.55 265**		Pn	**Pn**	**20 05 48.5**	**-0.4**
DGMT	**Dagmar**	**4.94 8**		Pn	**Pn**	**20 05 52.5**	**-1.5**
HWUT	**Hardware Ranch**	**5.11 250**			**Pn**	**20 05 56.6**	**0.0**
P18A	**Preston Nutter**	**5.48 226**		Pn	**Pn**	**20 06 02.6**	**+0.8**
PV07	**Paradox Valley**	**5.77 208**		Pn	**Pn**	**20 06 02.7**	**-2.9**
ECSD	**EROS Data Cent**	**6.21 86**		Pn	**Pn**	**20 06 12.0**	**+0.5**
DUG	**Dugway, Tooele**	**6.63 242**		Pn	**Pn**	**20 06 17.8**	**+0.4**
NVAR	**Mina Array Bea**	**11.17 247**		Pn	**Pn**	**20 07 20.1**	**+0.4**
	comp=N,0.1nm,0.3s,baz=59,slow=11,SNR=3.9						
	comp=N,0.4nm,0.7s						
TXAR	**Lajitas Array**	**14.27 175**		Pn	**P**	**20 08 07.6**	**-1.9**
	baz=357,slow=7.2,SNR=1.9						
TXAR				Lg	Lg	20 12 15.6	
	baz=0.6,slow=25,SNR=2.4						
	comp=N,0.1nm,0.6s						

IDC ***25*** *20:14:13.4±1.1,28˚.16N×51˚.61E,h0km,mb3.9/17, mbtmp3.9/22,ML3.6/5,MS3.3/1,Error ellipse: s-maj=22.9km s-min=16.8km az=170.0*
OMAN ***25*** *20:14:15.4±1.5,28˚.44N×51˚.94E,h15km,mb4.4/8, ml4.1/10,Error ellipse: s-maj=13.3km s-min=7.2km az=174.0*
NEIC ***25*** *20:14:15.6±1.4,28˚.16N±0˚.06×51˚.54E±0˚.07,h10km±1km, mb4.2/31,mb_Lg4.1(TEH),Error ellipse: s-maj=10.8km s-min=8.6km az=231.0*
TEH ***25*** *20:14:15.2,28˚.17N×51˚.58E,h17km, ML4.1*
DSN ***25*** *20:14:16.1±2.1,28˚.20N×51˚.77E,h10km,ML3.9/9,Error ellipse: s-maj=28.5km s-min=8.9km az=175.0*

ISC 25 20:14:16.0±0.4,**28˚.17N**±0˚.03×**51˚.60E**±0˚.04,**h16km**,**n168,** σ**1**§**27**/194,**mb4.0**/29,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AHBU	**AHRAM**	**0.74**	**339**	*e*Pg		**Pg**	**20 14 29.4**	**-1.0**
KAZ1	**Kazerun**	**1.45**	**1**			**Pb**	**20 14 42.9**	**+0.3**
KAZ1	**Kazerun**	**1.45**	**1**	*e*Pg		**Pb**	**20 14 43.0**	**+0.3**
KAZ1				*e*			20 15 11.4	
	comp=E,61μm,0.8s							
LMD1	**Lamerd**	**1.62**	**121**			**Pb**	**20 14 45.5**	**+0.1**
LMD1	**Lamerd**	**1.62**	**121**	*e*Pg		**Pb**	**20 14 45.6**	**+0.1**
LMD1				*e*			20 15 14.3	
	comp=E,39μm,0.4s							
SHI	**Shiraz**	**1.67**	**28**			**Pb**	**20 14 46.3**	**-0.1**
SHI	**Shiraz**	**1.67**	**28**	*e*Pg		**Pb**	**20 14 46.3**	**-0.1**
SHI				*e*			20 15 18.4	
	comp=E,16μm,0.8s							
JHRM	**Jahrom**	**1.77**	**79**	Pn		**Pn**	**20 14 47.0**	**+0.9**
JHRM	**Jahrom**	**1.77**	**79**	*e*Pn		**Pn**	**20 14 47.0**	**+0.9**
SHMA	**Al-Shehemyia**	**2.38**	**194**	P		**Pb**	**20 14 59.6**	**+1.3**
SHMA				S		**Sg**	**20 15 32.3**	**-0.1**
SAKB	**Bahrain**	**2.38**	**204**	P		**Pb**	**20 14 57.1**	**-1.3**
SAKB				S		**Sg**	**20 15 34.4**	**+1.8**
LAR1	**LAR**	**2.51**	**101**	Pn		**Pn**	**20 14 57.0**	**+0.9**
LAR1	**LAR**	**2.51**	**101**	*e*Pn		**Pn**	**20 14 57.0**	**+0.9**
LAR1				*e*			20 15 48.2	
	comp=E,13μm,0.4s							
KHOR	**Al-Khor Airpor**	**2.54**	**182**	P		**Pb**	**20 15 01.8**	**+0.6**
KHOR				S		**Sg**	**20 15 38.6**	**+1.0**
ABEH	**Behbahan**	**2.69**	**334**	*e*Pn		**Pn**	**20 14 58.9**	**+0.3**
KLNJ	**Kolanjah**	**2.83**	**360**	Pn		**Pn**	**20 15 01.7**	**+1.0**
KLNJ	**Kolanjah**	**2.83**	**360**	*e*Pn		**Pn**	**20 15 01.8**	**+1.0**
KLNJ				*e*			20 16 08.4	
	comp=E,4μm,0.6s							
JRN	**Qarnain Island**	**3.41**	**161**	*e*Pn		**Pn**	**20 15 10.0**	**+1.6**
JRN	**Qarnain Island**	**3.41**	**161**	P		**Pn**	**20 15 11.1**	**+2.7**
JRN				S		**Sb**	**20 15 57.9**	**+0.8**
SMRA	**Abu-Samra**	**3.48**	**192**	P		**Pb**	**20 15 14.4**	**-2.9**
SMRA				S		**Sb**	**20 16 02.3**	**+3.0**
IRAM	**Ramesheh**	**3.69**	**10**	*e*Pn		**Pn**	**20 15 13.5**	**+1.0**
IRAM				*e*			20 15 30.1	
	comp=E,4μm,0.8s							
IBRJ	**Brojen**	**3.73**	**356**	*e*Pn		**Pn**	**20 15 14.3**	**+1.1**
AMIS	**Naft Sefid**	**4.02**	**331**	*e*Pn		**Pn**	**20 15 17.9**	**+1.0**
GENO	**Geno**	**4.12**	**100**	*e*Pn		**Pn**	**20 15 19.8**	**+1.3**
GENO				*e*			20 17 01.7	
	comp=E,1μm,0.8s							
IMEH	**Mehriz**	**4.14**	**39**	*e*Pn		**Pn**	**20 15 21.0**	**+2.2**
IMEH				*e*			20 15 22.4	
	comp=E,3μm,0.3s							
ISAD	**Sadrabad**	**4.14**	**25**	*e*Pn		**Pn**	**20 15 20.3**	**+1.4**
SHK1	**Shahrekord**	**4.19**	**352**	*e*Pn		**Pn**	**20 15 20.1**	**+0.7**
IGAR	**Gharneh**	**4.24**	**5**	*e*Pn		**Pn**	**20 15 21.1**	**+1.1**
IPIR	**Pirpir**	**4.54**	**352**	*e*Pn		**Pn**	**20 15 25.4**	**+1.1**
SHME	**Shamm**	**4.57**	**117**	*e*Pn		**Pn**	**20 15 24.2**	**-0.2**
SHME	**Shamm**	**4.57**	**117**	P		**Pn**	**20 15 24.5**	**+0.1**
SHME				S		**Sn**	**20 16 15.5**	**-1.6**
SHME	**Shamm**	**4.57**	**117**	P		**Pn**	**20 15 23.7**	**-0.7**
NGRK	**Negar Kerman**	**4.73**	**71**	*e*Pn		**Pn**	**20 15 27.9**	**+0.9**
IZEF	**Zefreh**	**4.75**	**7**	*e*Pn		**Pn**	**20 15 28.5**	**+1.3**
BANOM	**Banah**	**4.75**	**117**	*e*Pn		**Pn**	**20 15 27.0**	**+0.1**
BANOM	**Banah**	**4.75**	**117**	P		**Pn**	**20 15 27.1**	**+0.1**
	SNR=39							
BANOM				S		**Sn**	**20 16 19.8**	**-2.0**
BANOM	**Banah**	**4.75**	**117**	*i* P		**Pn**	**20 15 26.8**	**-0.2**
	SNR=39							
BANOM				S		**Sn**	**20 16 19.5**	**-2.3**
KHGB	**Koh Gabri**	**4.79**	**62**	*e*Pn		**Pn**	**20 15 29.3**	**+1.6**
KHGB				*e*			20 15 47.0	
	comp=Z,1μm,1.0s							
NAZ	**Nazwa, Dubai**	**4.83**	**130**	*e*Pn		**Pn**	**20 15 29.2**	**+1.2**
NAZ	**Nazwa, Dubai**	**4.83**	**130**	P		**Pn**	**20 15 29.0**	**+1.0**
NAZ				S		**Sn**	**20 16 23.6**	**0.0**
NAZ	**Nazwa, Dubai**	**4.83**	**130**	P		**Pn**	**20 15 28.5**	**+0.6**
IBAF	**Bafgh**	**4.84**	**44**	*e*Pn		**Pn**	**20 15 29.9**	**+1.5**
IBAF				*e*			20 15 30.9	
	comp=E,1μm,0.3s							
MZWR	**Madinat Zayed**	**4.85**	**154**	*e*Pn		**Pn**	**20 15 29.5**	**+1.2**
MZWR	**Madinat Zayed**	**4.85**	**154**	P		**Pn**	**20 15 30.8**	**+2.5**
MZWR				S		**Sn**	**20 16 28.6**	**+3.9**
ASUD	**Al Ashush, Dub**	**4.86**	**136**	*e*Pn		**Pn**	**20 15 29.5**	**+1.0**
ASUD	**Al Ashush, Dub**	**4.86**	**136**	P		**Pn**	**20 15 29.6**	**+1.1**
	SNR=16							
ASUD				S		**Sn**	**20 16 25.0**	**+0.5**
ASUD	**Al Ashush, Dub**	**4.86**	**136**	*i* P		**Pn**	**20 15 29.3**	**+0.8**
	SNR=16							
TVBK	**TV Kerman**	**4.87**	**67**	*e*Pn		**Pn**	**20 15 30.5**	**+1.7**
TVBK				*e*			20 15 51.0	
	comp=Z,1μm,0.7s							
MASF	**Masafi**	**4.94**	**123**	P		**Pn**	**20 15 29.9**	**+0.3**
MASF				S		**Sn**	**20 16 25.0**	**-1.4**
FAQ	**Al Faqa, Dubai**	**4.95**	**133**	P		**Pn**	**20 15 30.5**	**+0.9**
FAQ				S		**Sn**	**20 16 26.5**	**0.0**
MSFE	**Esma-Masafi**	**4.95**	**123**	*e*Pn		**Pn**	**20 15 30.0**	**+0.3**
MSFE	**Esma-Masafi**	**4.95**	**123**	P		**Pn**	**20 15 29.4**	**-0.3**
IKLH	**Kolahrood**	**5.13**	**360**	*e*Pn		**Pn**	**20 15 33.1**	**+0.7**
UOSS	**Minazif**	**5.23**	**127**			**Pn**	**20 15 33.0**	**-0.5**
UOSS	**Minazif**	**5.23**	**127**	*e*Pn		**Pn**	**20 15 33.2**	**-0.3**
UOSS	**Minazif**	**5.23**	**127**	P		**Pn**	**20 15 33.7**	**+0.2**
UOSS				S		**Sn**	**20 16 32.7**	**-0.8**
HATD	**Hatta, Dubai**	**5.25**	**128**	*e*Pn		**Pn**	**20 15 34.5**	**+0.6**
HATD	**Hatta, Dubai**	**5.25**	**128**	P		**Pn**	**20 15 34.3**	**+0.5**
HATD				S		**Sn**	**20 16 34.4**	**+0.3**
ASHO	**Ashiyiah**	**5.30**	**130**	*e*Pn		**Pn**	**20 15 34.9**	**+0.4**
ASHO	**Ashiyiah**	**5.30**	**130**	P		**Pn**	**20 15 34.9**	**+0.4**
	SNR=12							
ASHO				S		**Sn**	**20 16 36.3**	**+1.1**
ASHO	**Ashiyiah**	**5.30**	**130**	*i* P		**Pn**	**20 15 34.6**	**+0.1**
	SNR=12							
ANAR	**Anarak**	**5.33**	**20**	*e*Pn		**Pn**	**20 15 36.0**	**+1.0**
KHNJ	**Kahnooj**	**5.40**	**91**	*e*Pn		**Pn**	**20 15 37.0**	**+1.1**
MZR	**Muzera**	**5.42**	**161**	*e*Pn		**Pn**	**20 15 37.5**	**+1.3**
MZR	**Muzera**	**5.42**	**161**	P		**Pn**	**20 15 38.4**	**+2.2**
	SNR=22							
MZR	**Muzera**	**5.42**	**161**	*i* P		**Pn**	**20 15 37.3**	**+1.1**
	SNR=11							
CHMN	**Cheshme madani**	**5.47**	**71**	*e*Pn		**Pn**	**20 15 38.1**	**+1.0**
ALNE	**Al Ain**	**5.54**	**137**	*e*Pn		**Pn**	**20 15 38.1**	**+0.2**
ALNE	**Al Ain**	**5.54**	**137**	P		**Pn**	**20 15 38.8**	**+0.9**
ALNE				S		**Sn**	**20 16 42.6**	**+1.3**
QAMS	**Qamsar**	**5.55**	**358**	*e*Pn		**Pn**	**20 15 39.2**	**+1.1**
KRSH	**Karshahi**	**5.80**	**4**	*e*Pn		**Pn**	**20 15 41.9**	**+0.4**
JASK	**Jask - Hormozg**	**6.04**	**111**	*e*Pn		**Pn**	**20 15 44.4**	**-0.3**
KBAM	**BAM**	**6.10**	**79**	*e*Pn		**Pn**	**20 15 46.7**	**+1.2**
KBAM				*e*			20 15 53.5	
	comp=Z,550nm,0.3s							
ISFB	**Sefidab**	**6.18**	**5**	*e*Pn		**Pn**	**20 15 46.9**	**+0.2**
IKFM	**Kafar-mosalman**	**6.23**	**330**	*e*Pn		**Pn**	**20 15 48.6**	**+1.3**
UMZA	**Um Al Zommool**	**6.32**	**149**	*e*Pn		**Pn**	**20 15 49.1**	**+0.6**
UMZA	**Um Al Zommool**	**6.32**	**149**	P		**Pn**	**20 15 48.8**	**+0.4**
UMZA				S		**Sn**	**20 16 58.7**	**-1.6**
IDOB	**Doab**	**6.32**	**333**	*e*Pn		**Pn**	**20 15 49.2**	**+0.5**
TPRV	**Parvadeh(Tabas**	**6.53**	**41**	*e*Pn		**Pn**	**20 15 52.4**	**+0.9**
IQOM	**Qom**	**6.67**	**356**	*e*Pn		**Pn**	**20 15 53.2**	**-0.3**
IVRN	**Varamin**	**6.80**	**1**	*e*Pn		**Pn**	**20 15 55.6**	**+0.4**
HOQ	**Hoqain**	**6.88**	**130**	P		**Pn**	**20 15 56.5**	**+0.2**
HOQ				S		**Sn**	**20 17 10.5**	**-3.7**
IKOM	**Komasi**	**6.93**	**331**	*e*Pn		**Pn**	**20 15 57.9**	**+0.8**
RAYN	**Ar Rayn**	**7.18**	**231**			**Pn**	**20 15 60.0**	**-0.4**
RAYN	**Ar Rayn**	**7.18**	**231**	P		**Pn**	**20 16 00.3**	**-0.1**
RAYN	**Ar Rayn**	**7.18**	**231**	*i* P		**Pn**	**20 16 00.5**	**+0.1**
	SNR=8.3							
TNSJ	**Nastanj**	**7.20**	**35**	*e*Pn		**Pn**	**20 16 01.6**	**+1.0**
TKDS	**Koohdasht(Taba**	**7.21**	**40**	*e*Pn		**Pn**	**20 16 01.7**	**+0.9**
IRAZ	**Rayeghan**	**7.35**	**349**	*e*Pn		**Pn**	**20 16 03.2**	**+0.4**
IDMV	**Damavand**	**7.39**	**3**	*e*Pn		**Pn**	**20 16 03.9**	**+0.4**
BIDO	**Bidbid**	**7.48**	**127**	P		**Pn**	**20 16 04.7**	**+0.2**
BIDO				S		**Sn**	**20 17 27.1**	**-2.0**
IFIR	**Firoozkooh**	**7.51**	**7**	*e*Pn		**Pn**	**20 16 05.4**	**+0.3**
SMDO	**Samad**	**7.73**	**130**	P		**Pn**	**20 16 08.4**	**+0.4**
SMDO				S		**Sn**	**20 17 33.6**	**-1.7**
ILIN	**Lien**	**7.80**	**331**	*e*Pn		**Pn**	**20 16 10.0**	**+0.9**
IDHR	**Dehrash**	**7.88**	**327**	*e*Pn		**Pn**	**20 16 10.8**	**+0.7**
NHDN	**Nehbandan**	**8.01**	**64**	*e*Pn		**Pn**	**20 16 13.0**	**+1.1**
WSAR	**Wadi Sarin**	**8.02**	**126**	Pn		**Pn**	**20 16 10.9**	**-1.0**
	comp=Z,1.4nm,0.3s,baz=313,slow=9.4,SNR=15							
WSAR				Sn		**Sn**	**20 17 38.3**	**-4.0**
	comp=Z,1.8nm,0.3s,baz=68,slow=15,SNR=4.1							
	comp=Z,7.0nm,0.5s							
WSAR	**Wadi Sarin**	**8.02**	**126**	P		**Pn**	**20 16 11.4**	**-0.5**
WSAR				S		**Sn**	**20 17 38.7**	**-3.6**
JMDO	**Jabal Madar**	**8.25**	**133**	P		**Pn**	**20 16 14.1**	**-0.9**
JMDO				S		**Sn**	**20 17 45.5**	**-2.3**
WBK	**Wadi Bani Khal**	**8.66**	**128**	P		**Pn**	**20 16 20.6**	**-0.1**
WBK				S		**Sn**	**20 17 56.7**	**-1.5**
NGCH	**Negor - Chabah**	**8.97**	**106**	P		**Pn**	**20 16 23.4**	**-1.5**
NGCH				S		**Sn**	**20 18 00.9**	**-4.8**
MHTO	**MHTO**	**9.21**	**140**	P		**Pn**	**20 16 27.6**	**-0.5**
	SNR=35							
SRVN	**Saravan**	**9.60**	**92**	*e*Pn		**Pn**	**20 16 34.5**	**+0.9**
SBZV	**Sabzevar**	**9.64**	**30**	*e*Pn		**Pn**	**20 16 35.2**	**+0.9**
DOK	**Doka**	**9.79**	**166**	P		**Pn**	**20 16 36.2**	**+0.2**
DQM	**DQM**	**9.84**	**145**	P		**Pn**	**20 16 36.1**	**-0.7**
WHFO	**Wadi Hawf**	**10.40**	**168**	P		**Pn**	**20 16 43.9**	**-0.7**
DMTO	**DMTO**	**10.85**	**163**	P		**Pn**	**20 16 50.2**	**-0.6**
	SNR=15							
ABTO	**Aybut**	**10.88**	**171**	P		**Pn**	**20 16 50.2**	**-0.9**
RBK	**Rabkut**	**10.89**	**167**	P		**Pn**	**20 16 50.7**	**-0.5**
GEVA	**Gevas**	**12.38**	**327**	Pn		**Pn**	**20 17 10.3**	**-1.4**
MARD	**Mardin**	**12.88**	**318**	Pn		**Pn**	**20 17 15.9**	**-2.5**
ASF	**Jabal al Asfar**	**13.33**	**291**	Pn		**Pn**	**20 17 22.8**	**-1.8**
	comp=Z,0.3nm,0.3s,baz=77,slow=7.6,SNR=2.1							
ASF				Sn		**Sn**	**20 19 50.2**	**-2.3**
	comp=Z,0.2nm,0.3s,baz=150,slow=20,SNR=1.4							
	comp=Z,0.8nm,0.3s							
EIL	**Elat**	**14.66**	**280**	Pn		Pn	20 17 37.2	-5.5
	comp=Z,0.8nm,0.3s,baz=203,slow=11,SNR=5.9							
SOCY	**Socotra**	**16.06**	**172**	Pn		**Pn**	**20 17 56.8**	**-4.5**
KBL	**Kabul**	**16.19**	**63**	Pn		**Pn**	**20 18 03.8**	**+0.8**
KBZ	**Khabaz**	**17.03**	**338**	P		**Pn**	**20 18 14.1**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=159,slow=9.3,SNR=5.9							
	comp=Z,3.4nm,0.8s							
KVAR	**Kislovodsk Arr**	**17.30**	**338**	P		**Pn**	**20 18 16.7**	**-0.1**
	baz=246,slow=20							
	comp=Z,1.2nm,0.5s							
KIV	**Kislovodsk**	**17.30**	**338**			**Pn**	**20 18 17.2**	**+0.3**
BRTR	**Keskin Array B**	**18.80**	**312**	P		**Pn**	**20 18 35.5**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=131,slow=15,SNR=5.6							
BRTR				LR		LR	20 27 22.5	
	comp=Z,91nm,18.1s,baz=133,slow=42							
	comp=Z,1.2nm,0.8s							
BRTR	**Keskin Array B**	**18.80**	**312**	P		**P**	**20 18 35.0**	**+0.2**
GAR	**Garm**	**18.93**	**50**	P		**P**	**20 18 35.9**	**-0.4**
GAR				IAmb		IAmb	20 18 45.9	
	comp=Z,5.7nm,0.7s							
BTK	**Batken**	**19.80**	**48**	P		**Pn**	**20 18 47.0**	**-0.3**
DRK	**Karamyk**	**20.17**	**51**	P		**P**	**20 18 51.0**	**+0.9**
DRK				IAmb		IAmb	20 18 55.2	
	comp=Z,7.3nm,0.6s							
KK31	**Karatay Array**	**21.33**	**41**	P		**P**	**20 19 01.9**	**-0.4**
KK31				IAmb		IAmb	20 19 04.4	
	comp=Z,4.2nm,0.6s							
KKAR	**Karatay Array**	**21.33**	**41**	P		**P**	**20 19 01.9**	**-0.4**
ABKAR	**Akbulak array**	**22.01**	**15**	P		**P**	**20 19 09.5**	**+0.1**
ABKAR	**Akbulak array**	**22.01**	**15**	P		**P**	**20 19 09.9**	**+0.5**
AKTO	**Aktyubinsk**	**22.76**	**11**	P		**P**	**20 19 19.0**	**+1.5**
	comp=Z,2.0nm,0.6s,baz=191,slow=10,SNR=4.3							
	comp=Z,2.0nm,0.6s							
KSH	**Kashi**	**23.12**	**54**	P		**P**	**20 19 20.5**	**-0.9**
KSH				pP		pP	20 19 23.0	-3.2
KSH				pmax		pmax		
	comp=Z,2.0nm,0.7s							
BOOM	**Boomskoye usch**	**24.35**	**48**	P		**P**	**20 19 34.6**	**+1.3**
BOOM				IAmb		IAmb	20 19 39.2	
	comp=Z,4.4nm,0.7s							
BELG	**Belogornoye**	**24.38**	**354**	P		**P**	**20 19 33.0**	**-0.2**
	comp=Z,4.6nm,0.6s,baz=118,slow=1.0,SNR=5.4							
	comp=Z,4.6nm,0.6s							
KDJ	**Kajisay**	**25.01**	**49**	P		**P**	**20 19 40.6**	**+1.2**
KDJ				IAmb		IAmb	20 19 44.9	
	comp=Z,5.4nm,1.1s							
TARG	**Taragay, Kyrgy**	**25.27**	**51**	P		**P**	**20 19 42.8**	**+0.9**
TARG				IAmb		IAmb	20 19 48.0	
	comp=Z,3.7nm,0.9s							
PRZ	**Przheval'sk**	**25.98**	**50**	P		**P**	**20 19 49.0**	**+0.9**
PRZ				IAmb		IAmb	20 19 52.7	
	comp=Z,6.5nm,0.9s							
MLR	**Muntele Rosu**	**26.67**	**317**	P		**P**	**20 19 54.3**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=149,slow=5.9,SNR=1.5							
	comp=Z,0.7nm,0.5s							
AKASG	**Malin Array Be**	**28.16**	**329**	P		**P**	**20 20 07.1**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=138,slow=8.7,SNR=2.0							
	comp=Z,0.2nm,0.3s							
BURAR	**Bucovina Array**	**28.24**	**321**	P		**P**	**20 20 09.1**	**+0.8**
ARU	**Arti**	**28.67**	**8**	P		**P**	**20 20 10.4**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=282,slow=20,SNR=1.6							
	comp=Z,0.4nm,0.3s							
MAKZ	**Makanchi**	**30.18**	**44**	P		**P**	**20 20 25.8**	**+0.4**
MAKZ				IAmb		IAmb	20 21 05.3	
	comp=Z,1.6nm,0.6s							
MK31	**Makanchi Array**	**30.36**	**44**	P		**P**	**20 20 27.1**	**0.0**
MK31				IAmb		IAmb	20 20 30.0	
	comp=Z,1.4nm,0.8s							
MKAR	**Makanchi Array**	**30.36**	**44**	P		**P**	**20 20 27.4**	**+0.3**
	comp=Z,0.9nm,0.5s,baz=230,slow=8.3,SNR=11							
	comp=Z,0.9nm,0.5s							
ZALV	**Zalesovo Beam**	**35.37**	**34**	P		**P**	**20 21 08.8**	**-1.8**
	comp=Z,0.8nm,0.4s,baz=240,slow=10,SNR=5.6							
	comp=Z,0.8nm,0.4s							
ZALV	**Zalesovo Beam**	**35.37**	**34**	P		**P**	**20 21 10.2**	**-0.5**
FIA1	**FINESS Array S**	**37.37**	**340**	P		**P**	**20 21 27.2**	**-0.4**
FIA1				IAmb		IAmb	20 21 45.1	
	comp=Z,9.8nm,1.5s							
FINES	**FINESS Array B**	**37.37**	**340**	P		**P**	**20 21 27.5**	**-0.1**
	comp=Z,1.7nm,0.5s,baz=147,slow=8.8,SNR=16							
	comp=Z,1.7nm,0.5s							
GTA	**Gaotai**	**41.17**	**61**	P		**P**	**20 22 01.5**	**+1.6**
GTA				pP		sP	20 22 07.0	+0.1
GTA				sP		pP	20 22 09.8	+4.9
GTA				pmax		pmax		
	comp=Z,2.0nm,0.9s							
NC602	**NORSAR Array S**	**42.18**	**332**	P		**P**	**20 22 07.9**	**+0.3**
KONO	**Kongsberg**	**42.46**	**330**	P		**P**	**20 22 09.9**	**0.0**
KONO				IAmb		IAmb	20 22 31.9	
	comp=Z,11nm,1.4s							
NB2	**NORSAR Subarra**	**42.48**	**332**	P		**P**	**20 22 09.4**	**-0.7**
	comp=Z,0.8nm,0.7s,baz=124,slow=8.6							
NOA	**NORSAR Array B**	**42.48**	**332**	P		**P**	**20 22 09.5**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=125,slow=8.8,SNR=8.0							
	comp=Z,0.4nm,0.5s							
ARCES	**ARCESS Array B**	**44.07**	**347**	P		**P**	**20 22 22.9**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=158,slow=7.6,SNR=7.4							
	comp=Z,0.3nm,0.4s							
ARCES	**ARCESS Array B**	**44.07**	**347**	P		**P**	**20 22 22.9**	**+0.1**
ARCES				IAmb		IAmb	20 23 05.5	
	comp=Z,6.8nm,1.4s							
LZH	**Lanzhou**	**44.50**	**66**	*e*P		**P**	**20 22 30.5**	**+3.6**
LZH				pP		sP	20 22 38.0	+4.0
LZH				pmax		pmax		
	comp=Z,19nm,1.4s							
SONM	**Songino Array**	**46.37**	**50**	P		**P**	**20 22 42.8**	**+1.2**
	comp=Z,1.2nm,1.1s,baz=268,slow=9.0,SNR=3.9							
	comp=Z,1.2nm,1.1s							
SONM	**Songino Array**	**46.37**	**50**	P		**P**	**20 22 42.3**	**+0.8**
SONM				IAmb		IAmb	20 23 25.6	
	comp=Z,1.6nm,1.5s							
ESDC	**Sonseca Array**	**46.84**	**299**	P		**P**	**20 22 45.4**	**+0.1**
	comp=Z,0.6nm,0.9s,baz=66,slow=8.3,SNR=2.6							
	comp=Z,0.6nm,0.9s							
TOA0	**Torodi Ar. Sit**	**48.70**	**263**	P		**P**	**20 22 59.2**	**-0.7**
TORD	**Torodi Ar. Bea**	**48.70**	**263**	P		**P**	**20 23 00.1**	**+0.2**
	comp=Z,2.4nm,0.7s,baz=56,slow=7.6,SNR=16							
	comp=Z,2.4nm,0.7s							
TORD	**Torodi Ar. Bea**	**48.70**	**263**	P		**P**	**20 22 59.5**	**-0.4**
TORD				IAmb		IAmb	20 23 00.7	
	comp=Z,1.6nm,0.8s							
DBIC	**Dimbokro**	**57.40**	**259**	P		**P**	**20 24 03.6**	**-0.5**
	comp=Z,3.3nm,0.5s,baz=59,slow=6.9,SNR=5.4							
	comp=Z,3.3nm,0.5s							
DBIC	**Dimbokro**	**57.40**	**259**	P		**P**	**20 24 03.3**	**-0.8**
KSRS	**Korea Array**	**63.22**	**60**	P		**P**	**20 24 43.2**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=281,slow=6.3,SNR=2.9							
	comp=Z,0.6nm,0.6s							
TOLI2	**Tolitoli**	**71.17**	**99**	P		**P**	**20 25 34.8**	**+0.4**
SCHQ	**Schefferville**	**81.96**	**329**	P		**P**	**20 26 35.4**	**+0.5**
	comp=Z,1.4nm,0.5s,baz=49,slow=6.9,SNR=2.3							
	comp=Z,1.4nm,0.5s							
SCHQ	**Schefferville**	**81.96**	**329**	P		**P**	**20 26 35.1**	**+0.3**
IMAR	**Indian Mountai**	**84.15**	**10**	P		**P**	**20 26 46.4**	**+0.4**
YKA	**Yellowknife Ar**	**88.97**	**354**	P		**P**	**20 27 10.2**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=13,slow=5.2,SNR=4.6							
	comp=Z,0.4nm,0.5s							

DDA ***25*** *20:15:40.9±0.0,36˚.13N×29˚.04E,h18km,ML3.0*
THE ***25*** *20:15:41.9,36˚.13N×29˚.08E,h5km±2km,mb4.2/30,ML3.0/2,Error ellipse: s-maj=2.9km s-min=1.7km az=122.0

AKMS					AML	AML	20 16 58.8		
	0.4nm,0.4s								
AKMS					AML	AML	20 17 00.2		
	0.4nm,0.3s								
ALFC	**Alefka**	**3.03**	**107**		P	**Pn**	**20 16 26.9**	**-1.3**	
NATA	**Nata**	**3.15**	**113**		P	**Pn**	**20 16 29.4**	**-0.5**	
NATA					AML	AML	20 17 06.5		
	0.4nm,0.3s								
NATA					AML	AML	20 17 06.5		
	0.4nm,0.3s								
NATA					S	**Sn**	**20 17 06.6**	**-1.1**	
NATA					AML	AML	20 17 09.7		
	0.5nm,0.4s								
NATA					AML	AML	20 17 09.7		
	0.5nm,0.4s								
OSC1	**CSNet OBS 1**	**3.16**	**144**		P	**Pn**	**20 16 30.5**	**+0.6**	
SZAC	**Souni**	**3.40**	**112**		P	**Pn**	**20 16 32.3**	**-0.9**	
SZAC					AML	AML	20 17 12.7		
	0.2nm,0.4s								
SZAC					AML	AML	20 17 12.7		
	0.3nm,0.7s								
ASGA	**Asgata**	**3.66**	**109**		P	**Pn**	**20 16 36.4**	**-0.5**	
CSS	**Mathiatis**	**3.66**	**106**		P	**Pn**	**20 16 36.5**	**-0.4**	

*IDC **25** 20:25:57.5±1.5,25˚.60N×140˚.97E, h213km±14km, mb3.1/7, mbtmp3.7/9, Error ellipse: s-maj=35.8km s-min=18.7km az=87.0*

*JMA **25** 20:26:01.0±0.1,25˚.7N±0˚.5×14˚1E±˚, h186km, MV4.2/13, IOTO ISLANDS REGION*

ISC 25 20:25:57.4±1.0,25˚.6N±0˚.1×140˚.8E±0˚.1, h200km, n16, σ1s91/19, mb3.3/7, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHH2	**Haha-jima-NKT2**	**1.64**	**51**	P	**Pn**	**20 26 33.8**	**+1.5**
JHH2				S	**Sn**	**20 26 59.0**	**-0.6**
JHH2	**Haha-jima-NKT2**	**1.64**	**51**	A	A	20 26 33.8	
	comp=E,2.0nm,2.7s,comp=E,2.0nm,1.9s						
CBIJ	**Chichi jima**	**1.96**	**41**	P	**Pn**	**20 26 37.2**	**+1.7**
CBIJ				S	**Sn**	**20 27 05.0**	**-0.2**
JCJ	**Chichijima**	**1.96**	**41**	P	**Pn**	**20 26 37.2**	**+1.7**
	168nm,0.3s,baz=288,slow=22,SNR=100						
JCJ				S	**Sn**	**20 27 05.1**	**-0.1**
	215nm,0.5s,baz=288,slow=20,SNR=17						
JHJ	**Hachijo jima 2**	**7.54**	**354**	P	**Pn**	**20 27 46.6**	**+2.2**
	248nm,1.1s,baz=198,slow=20,SNR=1.8						
JHJ				S	**Sn**	**20 29 07.2**	**-2.5**
	48nm,0.8s,baz=41,slow=19,SNR=1.1						
BSO3	**Boso 3**	**9.17**	**359**	*e*P	**Pn**	**20 28 05.4**	**-0.1**
JAG	**Ashikaga**	**10.84**	**354**	P	**Pn**	**20 28 26.0**	**-1.4**
MJAR	**Matsushiro Arr**	**11.12**	**349**	P	**Pn**	**20 28 30.9**	**0.0**
	0.9nm,0.8s,baz=145,slow=9.6,SNR=2.4						
KSRS	**Korea Array**	**16.08**	**320**	P	**Pn**	**20 29 37.6**	**+5.1**
	1.8nm,0.5s,baz=138,slow=12,SNR=11						
KLR	**Kul'dur**	**24.61**	**346**	P	**P**	**20 30 59.5**	**+0.4**
	1.0nm,0.5s,baz=174,slow=7.5,SNR=4.5						
	1.0nm,0.5s						
WRA	**Warramunga Arr**	**45.70**	**188**	P	**P**	**20 33 57.6**	**-1.0**
	0.8nm,1.0s,baz=9.3,slow=8.7,SNR=7.0						
	0.8nm,1.0s						
MKAR	**Makanchi Array**	**50.45**	**311**	P	**P**	**20 34 35.0**	**+0.4**
	0.1nm,0.4s,baz=91,slow=7.1,SNR=1.9						
	0.1nm,0.4s						
ILAR	**Eielson Array**	**59.63**	**28**	P	**P**	**20 35 39.1**	**-0.9**
	0.5nm,0.8s,baz=244,slow=6.0,SNR=6.0						
	0.5nm,0.8s						
FINES	**FINESS Array B**	**78.71**	**334**	P	**P**	**20 37 35.8**	**-1.3**
	0.5nm,0.5s,baz=73,slow=4.6,SNR=14						
	0.5nm,0.5s						
HFS	**Hagfors**	**84.27**	**336**	P	**P**	**20 38 04.3**	**-2.1**
	0.7nm,0.7s,baz=114,slow=1.7,SNR=1.6						
	0.7nm,0.7s						
NOA	**NORSAR Array B**	**84.51**	**338**	P	**P**	**20 38 05.7**	**-1.9**
	0.2nm,0.5s,baz=46,slow=4.5,SNR=1.9						
	0.2nm,0.5s						

*NEIC **25** 20:33:29.0±1.7,53˚.6N±0˚.1×35˚.3W±0˚.1, h10km±1km, mb4.6/98, Error ellipse: s-maj=17.8km s-min=13.8km az=186.0*

*IDC **25** 20:33:28.3±0.6,53˚.86N×35˚.37W, h0km, mb4.0/25, mbtmp4.0/27, ML3.4/2, MS3.6/20, Error ellipse: s-maj=19.7km s-min=10.7km az=3.0*

ISC 25 20:33:28.7±0.4, 53˚.54N±0˚.09×35˚.46W±0˚.05, h10km, n168, σ1s35/156, mb4.5/73, MS3.8/18, 4D, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	**13.33**	**27**	LR	LR	20 39 49.2	
	comp=Z,60nm,20.9s,baz=229,slow=29						
SFJD	**Kangerlussuaq**	**15.38**	**337**	LR	LR	20 41 45.1	
	comp=Z,189nm,20.3s,baz=322,slow=33						
SFJD	**Kangerlussuaq**	**15.38**	**337**	Pn	**Pn**	**20 37 05.6**	**+0.2**
SFJD				IAmb	IAmb	20 37 31.0	
	comp=Z,29nm,1.4s						
ICESG	**Greenland Ices**	**15.73**	**354**	*e*P	**P**	**20 37 15.7**	**+1.3**
ICESG				IAmb	IAmb	20 37 18.6	
	comp=Z,4.8nm,0.9s						
DSB	**Dublin**	**17.30**	**79**	Pn	**Pn**	**20 37 26.7**	**-3.4**
SCHQ	**Schefferville**	**18.33**	**287**	P	**Pn**	**20 37 43.2**	**+0.4**
	comp=Z,0.8nm,0.3s,baz=86,slow=6.4,SNR=11						
	comp=Z,3.5nm,0.5s						
SCHQ	**Schefferville**	**18.33**	**287**	P	**Pn**	**20 37 42.0**	**-0.8**
EKA	**Eskdalemuir Ar**	**18.79**	**71**	P	**P**	**20 37 46.7**	**-1.2**
	baz=255,slow=8.0						
EKA				LR	LR	20 43 38.2	
	comp=Z,202nm,19.0s,baz=244,slow=33						
	comp=Z,1.4nm,0.7s						
SUMG	**Summit**	**19.15**	**357**	P	**P**	**20 37 51.6**	**-0.5**
SUMG	**Summit**	**19.15**	**357**	*i* P	**Pn**	**20 37 53.0**	**0.0**
HAL	**Halifax**	**20.35**	**255**	P	**P**	**20 38 04.5**	**-0.5**
HAL				IAmb	IAmb	20 38 12.6	
	comp=Z,58nm,1.6s						
LMN	**Caledonia Moun**	**20.37**	**260**	P	**P**	**20 38 03.9**	**-1.4**
BATG	**Bathurst New B**	**20.38**	**265**	P	**P**	**20 38 03.9**	**-1.4**
JMIC	**Jan Mayen**	**21.19**	**24**	LR	LR	20 43 37.2	
	comp=Z,51nm,20.6s,baz=304,slow=29						
DBG	**Daneborg**	**21.75**	**11**	*i* P	**P**	**20 38 17.3**	**-2.5**
DBG				IAmb	IAmb	20 38 23.7	
	comp=Z,3.4nm,0.9s						
PQI	**Presque Isle**	**21.84**	**265**	P	**P**	**20 38 18.8**	**-2.3**
PQI				IAmb	IAmb	20 38 30.5	
	comp=Z,26nm,1.3s						
GGN	**Saint George**	**21.97**	**260**	P	**P**	**20 38 20.3**	**-2.1**
GGN				IAmb	IAmb	20 38 39.6	
	comp=Z,29nm,1.2s						
D62A	**Allapoint, All**	**22.25**	**267**	P	**P**	**20 38 24.1**	**-1.4**
D62A				IAmb	IAmb	20 38 34.8	
	comp=Z,31nm,1.4s						
F64A	**Sherman**	**22.46**	**263**	P	**P**	**20 38 27.1**	**-0.6**
E62A	**Clayton Lake**	**22.76**	**266**	P	**P**	**20 38 30.6**	**-0.3**
E62A				IAmb	IAmb	20 38 43.5	
	comp=Z,20nm,1.3s						
BMRD	**Maredsous**	**24.79**	**81**	*d*P	**P**	**20 38 52.9**	**+2.4**
BCLA	**Clavier**	**25.06**	**80**	*d*P	**P**	**20 38 54.8**	**+1.9**
KONO	**Kongsberg**	**25.14**	**58**	P	**P**	**20 38 53.3**	**-0.2**
PAB	**San Pablo**	**25.32**	**111**	P	**P**	**20 38 53.7**	**-1.7**
PAB				IAmb	IAmb	20 39 01.3	
	comp=Z,23nm,1.6s						
ESBB	**Sonseca Array**	**25.45**	**110**	P	**P**	**20 38 53.7**	**-2.9**
ESDC	**Sonseca Array**	**25.45**	**110**	P	**P**	**20 38 58.1**	**+1.5**
	comp=Z,3.8nm,0.8s,baz=315,slow=9.2,SNR=20						
ESDC				LR	LR	20 46 51.6	
	comp=Z,154nm,20.1s,baz=328,slow=32						
	comp=Z,3.8nm,0.8s						
ESDC	**Sonseca Array**	**25.45**	**110**	P	**P**	**20 38 54.1**	**-2.5**
BTNL	**Ternell**	**25.48**	**80**	*d*P	**P**	**20 38 58.4**	**+1.6**
NBO00	**NORSAR Array S**	**25.60**	**54**	P	**P**	**20 38 57.5**	**-0.2**
NB2	**NORSAR Subarra**	**25.81**	**54**	P	**P**	**20 38 59.1**	**-0.6**
	comp=Z,11nm,1.4s,baz=276,slow=9.3						
NOA	**NORSAR Array B**	**25.81**	**54**	P	**P**	**20 38 59.5**	**-0.2**
	comp=Z,2.8nm,1.1s,baz=274,slow=9.2,SNR=11						
	comp=Z,2.8nm,1.1s						
WLF	**Walferdange**	**25.86**	**82**	*d*PP	**PnPn**	**20 39 35.9**	**-1.2**
TRQ	**Mont Tremblant**	**25.96**	**270**	P	**P**	**20 38 59.3**	**-2.0**
HFS	**Hagfors**	**27.13**	**56**	P	**P**	**20 39 10.6**	**-0.9**
	comp=Z,2.2nm,0.9s,baz=278,slow=13,SNR=4.0						
	comp=Z,2.2nm,0.9s						
BFO	**Black Forest**	**27.74**	**83**	P	**P**	**20 39 16.2**	**-0.9**
SENIN	**Lac Senin/Sane**	**28.08**	**87**	P	**P**	**20 39 19.2**	**-1.2**
SENIN				IAmb	IAmb	20 39 32.7	
	comp=Z,9.4nm,1.3s						
CLL	**Collm**	**29.19**	**74**	P	**P**	**20 39 29.8**	**-0.2**
CLL	**Collm**	**29.19**	**74**	*i* P	**P**	**20 39 30.8**	**+0.8**
	comp=Z,4.0nm,0.9s						
CLL				*e*S	**S**	**20 44 30.0**	**+8.0**
CLL				L	L	20 51 00.0	
	comp=Z,200nm,19.0s						
SADO	**Sadowa**	**29.47**	**271**	P	**P**	**20 39 33.4**	**+0.8**
	comp=Z,3.3nm,0.9s,baz=58,slow=11,SNR=3.1						
	comp=Z,3.3nm,0.9s						
GEC2	**GERESS Array S**	**30.66**	**79**	P	**P**	**20 39 43.4**	**+0.2**
GERES	**GERESS Array B**	**30.66**	**79**	P	**P**	**20 39 44.5**	**+1.3**
	comp=Z,0.8nm,0.8s,baz=280,slow=8.9,SNR=7.8						
	comp=Z,0.8nm,0.8s						
GERES	**GERESS Array B**	**30.66**	**79**	P	**P**	**20 39 43.1**	**0.0**
CLUD	**Cludinico**	**31.35**	**83**	P	**P**	**20 39 48.8**	**-0.4**
ARCES	**ARCESS Array B**	**31.46**	**36**	P	**P**	**20 39 48.0**	**-1.9**
	comp=Z,2.2nm,0.8s,baz=257,slow=7.7,SNR=12						
	comp=Z,2.2nm,0.8s						
ARCES	**ARCESS Array B**	**31.46**	**36**	P	**P**	**20 39 48.5**	**-1.4**
FCC	**Fort Churchill**	**32.14**	**303**	P	**P**	**20 39 57.2**	**+1.3**
FCC				IAmb	IAmb	20 40 01.8	
	comp=Z,6.2nm,0.9s						
MORC	**Moravsky Berou**	**32.46**	**75**	P	**P**	**20 39 59.1**	**+0.2**
MORC	**Moravsky Berou**	**32.46**	**75**	*e*P	**P**	**20 39 57.2**	**-1.7**
MTSE	**Matsula**	**32.48**	**57**	*e*P	**P**	**20 39 59.0**	**+0.1**
FINES	**FINESS Array B**	**32.82**	**51**	P	**P**	**20 40 00.7**	**-1.2**
	comp=Z,2.8nm,0.9s,baz=297,slow=8.4,SNR=10						
	comp=Z,2.8nm,0.9s						
FINES	**FINESS Array B**	**32.82**	**51**	P	**P**	**20 40 01.4**	**-0.5**
FIA1	**FINESS Array S**	**32.83**	**51**	P	**P**	**20 40 01.3**	**-0.6**
FIA1				IAmb	IAmb	20 40 35.0	
	comp=Z,8.9nm,1.3s						
OJC	**Ojcow**	**33.55**	**73**	P	**P**	**20 40 08.5**	**+0.1**
OJC				IAmb	IAmb	20 40 17.4	
	comp=Z,10nm,1.4s						
PABE	**Paberze**	**33.64**	**62**	P	**P**	**20 40 08.6**	**-0.4**
PABE	**Paberze**	**33.64**	**62**	*e*P	**P**	**20 40 09.3**	**+0.3**
VSU	**Vasula**	**34.01**	**56**	*e*P	**P**	**20 40 12.2**	**0.0**
PSZ	**Piszkesteto**	**34.72**	**76**	P	**P**	**20 40 18.2**	**-0.4**
EYMN	**Ely**	**35.10**	**284**	P	**P**	**20 40 21.1**	**-0.8**
KEST	**Kesra**	**35.80**	**101**	P	**P**	**20 40 30.0**	**+1.9**
	comp=Z,4.7nm,1.0s,baz=166,slow=2.1,SNR=4.1						
	comp=Z,4.7nm,1.0s						
KEST	**Kesra**	**35.80**	**101**	P	**P**	**20 40 25.6**	**-2.5**
KEST				IAmb	IAmb	20 40 39.1	
	comp=Z,7.1nm,0.9s						
ULM	**Lac du Bonnet**	**36.45**	**290**	P	**P**	**20 40 33.8**	**+0.4**
	comp=Z,4.3nm,0.8s,baz=73,slow=6.3,SNR=5.7						
	comp=Z,4.3nm,0.8s						
ULM	**Lac du Bonnet**	**36.45**	**290**	P	**P**	**20 40 31.7**	**-1.7**
ULM				IAmb	IAmb	20 40 35.8	
	comp=Z,11nm,1.1s						
TZTN	**Tazewell**	**37.18**	**263**	P	**P**	**20 40 37.9**	**-1.9**
TKL	**Tuckaleechee C**	**37.92**	**262**	LR	LR	20 56 03.6	
	comp=Z,143nm,20.1s,baz=320,slow=36						
BUR08	**Bucovina Ar. S**	**37.92**	**74**	P	**P**	**20 40 45.1**	**-0.9**
BURAR	**Bucovina Array**	**37.95**	**74**	P	**P**	**20 40 45.5**	**-0.7**
AKASG	**Malin Array Be**	**38.60**	**67**	P	**P**	**20 40 49.5**	**-2.0**
	comp=Z,1.6nm,0.7s,baz=308,slow=8.0,SNR=11						
	comp=Z,1.6nm,0.7s						
KLMR	**Klimovskoe**	**39.16**	**48**	*e*P	**P**	**20 40 52.6**	**-3.5**
KLMR				AMP		20 40 57.5	
	comp=Z,20nm,1.1s						
SIUC	**Southern Illin**	**39.77**	**269**	P	**P**	**20 41 01.1**	**-0.4**
SIUC				IAmb	IAmb	20 41 09.7	
	comp=Z,14nm,0.9s						
S44A	**Carbondale**	**39.81**	**269**	P	**P**	**20 41 01.2**	**-0.6**
S44A				IAmb	IAmb	20 41 09.4	
	comp=Z,14nm,0.8s						
YKA	**Yellowknife Ar**	**40.28**	**315**	P	**P**	**20 41 04.0**	**-1.5**
	comp=Z,0.9nm,0.9s,baz=64,slow=9.3,SNR=4.3						
YKA				PcP	**PcP**	**20 43 08.4**	**-0.4**
	comp=Z,1.0nm,0.9s,baz=67,slow=4.8,SNR=4.1						
	comp=Z,0.9nm,0.9s						
ECSD	**EROS Data Cent**	**40.41**	**282**	P	**P**	**20 41 07.2**	**+0.4**
ECSD				IAmb	IAmb	20 41 14.1	
	comp=Z,9.0nm,0.9s						
PBMO	**Poplar Bluff**	**41.12**	**269**	P	**P**	**20 41 12.2**	**-0.4**
PBMO				IAmb	IAmb	20 41 20.5	
	comp=Z,8.4nm,1.0s						
LCAR	**Lake Charles**	**42.02**	**269**	P	**P**	**20 41 19.9**	**-0.1**
LCAR				IAmb	IAmb	20 41 23.1	
	comp=Z,17nm,1.5s						
WHAR	**Wooly Hollow**	**43.23**	**269**	P	**P**	**20 41 30.7**	**+0.8**
WHAR				IAmb	IAmb	20 41 37.0	
	comp=Z,9.0nm,0.9s						
W39A	**Magazine**	**44.19**	**270**	P	**P**	**20 41 38.2**	**+0.6**
W39A				IAmb	IAmb	20 41 44.9	
	comp=Z,9.7nm,0.9s						
EDM	**Edmonton**	**44.24**	**303**	P	**P**	**20 41 38.8**	**+0.9**
EDM				IAmb	IAmb	20 41 41.1	
	comp=Z,11nm,1.3s						
INK	**Inuvik**	**44.46**	**328**	LR	LR	20 58 44.2	
	comp=Z,90nm,20.0s,baz=35,slow=34						
INK	**Inuvik**	**44.46**	**328**	P	**P**	**20 41 39.0**	**-0.3**
INK				IAmb	IAmb	20 41 40.4	
	comp=Z,10nm,1.4s						
MIAR	**Mount Ida**	**44.51**	**269**	P	**P**	**20 41 40.6**	**+0.5**
Z41A	**Richland Creek**	**44.94**	**267**	P	**P**	**20 41 43.3**	**-0.3**
Z41A				IAmb	IAmb	20 41 51.4	
	comp=Z,9.9nm,0.9s						
EPYK	**Eagle Plains**	**46.58**	**327**	P	**P**	**20 41 56.2**	**0.0**
RLMT	**Red Lodge**	**46.80**	**291**	P	**P**	**20 41 60.0**	**+1.5**
RLMT				IAmb	IAmb	20 42 04.9	
	comp=Z,8.4nm,1.1s						
BR131	**Keskin Array S**	**47.55**	**78**	P	**P**	**20 42 03.9**	**-0.4**
BR131				IAmb	IAmb	20 42 07.9	
	comp=Z,5.9nm,1.1s						
BRTR	**Keskin Array B**	**47.55**	**78**	P	**P**	**20 42 05.5**	**+1.2**
	comp=Z,1.6nm,0.7s,baz=317,slow=6.7,SNR=8.3						
	comp=Z,1.6nm,0.7s						
BRTR	**Keskin Array B**	**47.55**	**78**	P	**P**	**20 42 04.3**	**0.0**
N23A	**Red Feather La**	**47.59**	**285**	P	**P**	**20 42 06.2**	**+1.4**
BOZ	**Bozeman (W)**	**47.81**	**293**	P	**P**	**20 42 07.2**	**+0.9**
YFT	**Old Faithful**	**48.09**	**291**	P	**P**	**20 42 08.6**	**+0.1**
ISCO	**Idaho Springs**	**48.11**	**283**	P	**P**	**20 42 09.5**	**+0.7**
ISCO				IAmb	IAmb	20 42 16.9	
	comp=Z,4.2nm,0.7s						
BMAR	**Burnt Mountain**	**48.34**	**331**	P	**P**	**20 42 10.2**	**+0.3**
PD31	**Pinedale Array**	**48.45**	**289**	P	**P**	**20 42 11.7**	**+0.4**
PDAR	**Pinedale Array**	**48.45**	**289**	P	**P**	**20 42 12.4**	**+1.1**
	comp=Z,2.2nm,0.7s,baz=62,slow=7.5,SNR=12						
PDAR				LR	LR	21 01 33.6	
	comp=Z,92nm,18.4s,baz=9.5,slow=35						
	comp=Z,2.2nm,0.7s						
PDAR	**Pinedale Array**	**48.45**	**289**	P	**P**	**20 42 11.4**	**+0.1**
TOLK	**Toolik Lake Re**	**48.91**	**334**	P	**P**	**20 42 14.3**	**+0.1**
TOLK				IAmb	IAmb	20 42 15.6	
	comp=Z,11nm,1.5s						
NEW	**Newport**	**49.10**	**299**	LR	LR	21 00 30.3	
	comp=Z,165nm,18.7s,baz=6.0,slow=33						
BNN	**Bunyan**	**49.41**	**77**	P	**P**	**20 42 17.4**	**-1.2**
TOA0	**Torodi Ar. Sit**	**49.86**	**130**	P	**P**	**20 42 22.1**	**+0.1**
TOA0				IAmb	IAmb	20 42 32.8	
	comp=Z,4.8nm,0.9s						
TORD	**Torodi Ar. Bea**	**49.86**	**130**	P	**P**	**20 42 23.6**	**+1.6**
	comp=Z,3.2nm,0.9s,baz=340,slow=7.2,SNR=16						
	comp=Z,3.2nm,0.9s						
TORD	**Torodi Ar. Bea**	**49.86**	**130**	P	**P**	**20 42 21.7**	**-0.3**
RDMU	**Red Mountain**	**49.89**	**287**	P	**P**	**20 42 22.2**	**-0.1**
RDMU				IAmb	IAmb	20 42 25.9	
	comp=Z,13nm,1.4s						
ARU	**Arti**	**49.92**	**46**	P	**P**	**20 42 20.1**	**-1.9**
	comp=Z,1.3nm,0.4s,baz=333,slow=16,SNR=3.1						
	comp=Z,1.3nm,0.4s						
ARU	**Arti**	**49.92**	**46**	P	**P**	**20 42 22.0**	**-0.1**
ARU				IAmb	IAmb	20 42 23.8	
	comp=Z,6.9nm,1.1s						
KBZ	**Khabaz**	**50.21**	**68**	P	**P**	**20 42 25.1**	**+0.7**
	comp=Z,2.1nm,0.9s,baz=259,slow=7.5,SNR=3.7						
	comp=Z,2.1nm,0.9s						
HWUT	**Hardware Ranch**	**50.34**	**289**	P	**P**	**20 42 26.2**	**+0.5**
BCAR	**Beaver Creek A**	**50.36**	**325**	P	**P**	**20 42 26.2**	**+0.8**
MSTX	**Muleshoe**	**50.39**	**276**	P	**P**	**20 42 27.1**	**+1.0**
SCRK	**Sand Creek**	**50.47**	**327**	P	**P**	**20 42 26.9**	**+0.6**
SCRK				IAmb	IAmb	20 42 36.8	
	comp=Z,13nm,1.7s						
HLID	**Hailey**	**50.64**	**293**	P	**P**	**20 42 27.4**	**-0.5**
HLID				IAmb	IAmb	20 42 37.1	
	comp=Z,12nm,1.7s						
ILAR	**Eielson Array**	**50.84**	**329**	P	**P**	**20 42 28.8**	**-0.1**
	comp=Z,0.9nm,1.0s,baz=46,slow=5.2,SNR=11						
ILAR				PcP	**PcP**	**20 43 45.0**	**-0.4**
	comp=Z,1.3nm,0.9s,baz=25,slow=2.2,SNR=5.0						
	comp=Z,0.9nm,1.0s						
ILAR	**Eielson Array**	**50.84**	**329**	P	**P**	**20 42 28.1**	**-0.8**
JCT	**Junction City**	**51.09**	**270**	P	**P**	**20 42 30.9**	**-0.5**
JCT				IAmb	IAmb	20 42 37.9	
	comp=Z,7.9nm,0.9s						
PAX	**Paxson**	**51.65**	**327**	P	**P**	**20 42 35.7**	**+0.5**
PAX				IAmb	IAmb	20 42 39.6	
	comp=Z,8.6nm,1.4s						
ANMO	**Albuquerque**	**51.89**	**279**	P	**P**	**20 42 38.8**	**+1.4**
IMAR	**Indian Mountai**	**51.95**	**333**	P	**P**	**20 42 37.3**	**+0.1**
DUG	**Dugway, Tooele**	**51.98**	**288**	P	**P**	**20 42 39.4**	**+1.4**
DUG				IAmb	IAmb	20 42 42.1	
	comp=Z,13nm,1.4s						
BNM	**Barren Site**	**52.55**	**279**	P	**P**	**20 42 42.6**	**+0.3**
DBIC	**Dimbokro**	**52.93**	**141**	P	**P**	**20 42 47.5**	**+2.5**
	comp=Z,2.3nm,0.5s,baz=355,slow=5.8,SNR=5.0						
	comp=Z,2.3nm,0.5s						
DBIC	**Dimbokro**	**52.93**	**141**	P	**P**	**20 42 43.6**	**-1.3**
ELK	**Elko**	**52.98**	**291**	LR	LR	21 06 15.7	
	comp=Z,91nm,18.7s,baz=13,slow=37						
ELK	**Elko**	**52.98**	**291**	P	**P**	**20 42 46.8**	**+1.3**
MTPU	**Mount Pierson**	**53.09**	**286**	P	**P**	**20 42 46.6**	**+0.1**
MTPU				IAmb	IAmb	20 42 57.9	
	comp=Z,12nm,1.5s						
MARD	**Mardin**	**53.31**	**75**	P	**P**	**20 42 47.5**	**-0.3**
MARD				IAmb	IAmb	20 42 51.4	
	comp=Z,4.8nm,0.8s						
AKTO	**Aktyubinsk**	**53.58**	**52**	P	**P**	**20 42 48.9**	**-0.5**
	comp=Z,1.4nm,0.8s,baz=304,slow=11,SNR=4.5						
AKTO				LR	LR	21 04 17.4	
	comp=Z,30nm,21.4s,baz=315,slow=35						
	comp=Z,1.4nm,0.8s						
WVOR	**Wild Horse Val**	**53.71**	**294**	P	**P**	**20 42 51.9**	**+1.2**
WVOR				IAmb	IAmb	20 43 01.2	
	comp=Z,5.2nm,0.9s						
PINE	**Pine Mountain**	**54.03**	**297**	P	**P**	**20 42 54.2**	**+1.1**
PINE				IAmb	IAmb	20 42 56.3	
	comp=Z,8.9nm,1.2s						
TX32	**Lajitas Array**	**54.23**	**272**	P	**P**	**20 42 55.4**	**+0.8**
TX32				IAmb	IAmb	20 43 01.9	
	comp=Z,8.2nm,1.4s						
TXAR	**Lajitas Array**	**54.23**	**272**	P	**P**	**20 42 56.5**	**+1.9**
	comp=Z,0.9nm,0.8s,baz=64,slow=5.7,SNR=9.2						
	comp=Z,0.9nm,0.8s						
TXAR	**Lajitas Array**	**54.23**	**272**	P	**P**	**20 42 55.3**	**+0.7**
TIXI	**Tiksi**	**54.62**	**6**	P	**P**	**20 42 56.6**	**-0.1**
TIXI				IAmb	IAmb	20 43 02.0	
	comp=Z,6.2nm,1.1s						
MOD	**Modoc Plateau**	**54.98**	**295**	P	**P**	**20 43 00.7**	**+0.7**
MOD				IAmb	IAmb	20 43 04.4	
	comp=Z,11nm,1.6s						
X16A	**Lo Mia Camp, P**	**55.18**	**282**	P	**P**	**20 43 02.9**	**+1.3**
X16A				IAmb	IAmb	20 43 09.8	
	comp=Z,4.2nm,0.9s						
ABKAR	**Akbulak array**	**55.30**	**53**	P	**P**	**20 43 01.6**	**-0.4**
ABKAR	**Akbulak array**	**55.30**	**53**	P	**P**	**20 43 01.9**	**0.0**
ABKAR				IAmb	IAmb	20 43 10.5	
	comp=Z,8.0nm,1.6s						
S11A	**Rachel**	**55.39**	**288**	P	**P**	**20 43 02.1**	**-0.9**
TPNV	**Topopah Spring**	**56.17**	**288**	P	**P**	**20 43 09.3**	**+0.7**
NVAR	**Mina Array Bea**	**56.28**	**290**	P	**P**	**20 43 10.7**	**+1.2**
	comp=Z,0.5nm,0.6s,baz=51,slow=6.4,SNR=5.5						
NVAR				LR	LR	21 06 36.5	
	comp=Z,107nm,18.8s,baz=274,slow=35						
	comp=Z,0.5nm,0.6s						
NVAR	**Mina Array Bea**	**56.28**	**290**	P	**P**	**20 43 10.6**	**+1.1**
YBH	**Yreka Blue Hor**	**56.39**	**296**	LR	LR	21 06 23.6	
	comp=Z,154nm,18.7s,baz=325,slow=35						
PNTR	**Pine Nut**	**56.54**	**292**	P	**P**	**20 43 12.5**	**+1.2**
ROSC	**El Rosal**	**57.97**	**228**	LR	LR	21 08 53.6	
	comp=Z,37nm,18.8s,baz=244,slow=36						
CCAC	**Calif City Air**	**58.45**	**288**	P	**P**	**20 43 26.0**	**+1.4**
ZAIG	**Zacatecas**	**58.46**	**266**	P	**P**	**20 43 25.0**	**-0.1**
ZAIG				IAmb	IAmb	20 43 50.2	
	comp=Z,9.2nm,1.4s						
TLIG	**Tlapa**	**60.12**	**259**	P	**P**	**20 43 37.7**	**+1.3**
ZALV	**Zalesovo Beam**	**62.01**	**35**	P	**P**	**20 43 48.8**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=330,slow=8.3,SNR=2.1						
	comp=Z,0.5nm,0.5s						
LPIG	**La Paz**	**62.07**	**273**	LR	LR	21 10 34.7	
	comp=Z,123nm,18.6s,baz=246,slow=36						
KURK	**Kurchatov**	**

SFJD IAmb IAmb 21 53 09.6
comp=Z,32nm,1.1s
ICESG Greenland Ices 15.54 354 *i* P **Pn 21 53 02.5 0.0**
ILULI Ilulissat 17.15 341 Pn **Pn 21 53 21.8 -1.1**
ILULI IAmb IAmb 21 53 28.0
comp=Z,77nm,1.7s
SCO Scoresbysund 17.85 15 *i* P **P 21 53 33.1 +0.9**
SCHQ Schefferville 18.34 286 P **Pn 21 53 36.6 -1.1**
comp=Z,0.7nm,0.3s,baz=71,slow=6.1,SNR=10.0
SCHQ LR LR 21 59 31.0
comp=Z,468nm,21.9s,baz=84,slow=33
comp=Z,3.0nm,0.6s
SCHQ Schefferville 18.34 286 P **Pn 21 53 37.0 -0.6**
EKA Eskdalemuir Ar 18.66 72 P **Pn 21 53 41.5 0.0**
baz=286,slow=8.6
EKA LR LR 21 59 50.1
comp=Z,887nm,18.0s,baz=269,slow=34
comp=Z,3.3nm,0.8s
GBN Guysborough 18.82 254 P **P 21 53 42.7 -0.3**
SUMG Summit 18.96 357 P **P 21 53 43.1 -1.6**
SUMG Summit 18.96 357 *i* P **Pn 21 53 45.0 -0.3**
SUMG IAmb IAmb 21 53 51.9
comp=Z,2.7nm,0.7s
FRB Frobisher Bay 19.69 314 LR LR 21 59 57.1
comp=Z,780nm,18.5s,baz=90,slow=32
BATG Bathurst New B 20.47 264 P **P 21 54 01.0 0.0**
LMN Caledonia Moun 20.48 259 P **P 21 54 00.7 -0.4**
LMN IAmb IAmb 21 54 06.3
comp=Z,45nm,1.6s
JMIC Jan Mayen 20.98 24 LR LR 22 00 07.0
comp=Z,546nm,18.6s,baz=224,slow=31
DBG Daneborg 21.54 11 *i* P **P 21 54 13.4 +1.1**
DBG IAmb IAmb 21 54 18.5
comp=Z,2.0nm,0.8s
PQI Presque Isle 21.93 265 P **P 21 54 16.9 +0.2**
PQI IAmb IAmb 21 54 24.6
comp=Z,47nm,1.5s
GGN Saint George 22.07 260 P **P 21 54 18.2 0.0**
EMMW East Machias 22.67 260 P **P 21 54 24.8 +0.2**
EMMW IAmb IAmb 21 54 34.1
comp=Z,42nm,1.3s
E62A Clayton Lake 22.85 266 P **P 21 54 25.6 -0.9**
E62A IAmb IAmb 21 54 35.9
comp=Z,49nm,1.6s
MTE Manteigas 22.98 114 P **P 21 54 27.6 -0.4**
MTE IAmb IAmb 21 54 34.7
comp=Z,44nm,1.4s
F63A Nahmakanta, Br 23.08 263 P **P 21 54 28.1 -0.8**
PKME Peaks-Kenny Pk 23.43 263 P **P 21 54 32.8 +0.3**
PKME IAmb IAmb 21 54 44.4
comp=Z,29nm,1.2s
PKME Peaks-Kenny Pk 23.43 263 P **P 21 54 35.2 +2.7**
baz=56
KONO Kongsberg 24.97 58 P **P 21 54 46.1 -0.6**
KONO IAmb IAmb 21 54 58.2
comp=Z,31nm,1.6s
PAB San Pablo 25.33 111 P **P 21 54 50.0 -0.3**
PAB IAmb IAmb 21 54 57.5
comp=Z,25nm,1.4s
ESBB Sonseca Array 25.45 111 P **P 21 54 50.6 -0.7**
ESDC Sonseca Array 25.45 111 P **P 21 54 51.7 +0.4**
comp=Z,6.0nm,1.0s,baz=315,slow=8.9,SNR=29
ESDC LR LR 22 03 02.0
comp=Z,649nm,19.1s,baz=316,slow=32
comp=Z,6.0nm,1.0s
ESDC Sonseca Array 25.45 111 P **P 21 54 50.1 -1.2**
NB2 NORSAR Subarra 25.64 55 P **P 21 54 53.0 +0.2**
comp=Z,22nm,1.4s,baz=276,slow=10
NOA NORSAR Array B 25.64 55 P **P 21 54 52.8 0.0**
comp=Z,1.9nm,0.8s,baz=275,slow=9.1,SNR=9.2
NOA LR LR 22 03 51.5
comp=Z,315nm,19.4s,baz=275,slow=34
comp=Z,1.9nm,0.8s
TRQ Mont Tremblant 26.04 269 P **P 21 54 55.8 -0.8**
HFS Hagfors 26.96 56 P **P 21 55 04.3 -0.4**
comp=Z,1.4nm,0.8s,baz=280,slow=9.7,SNR=3.0
HFS LR LR 22 04 21.5
comp=Z,492nm,20.3s,baz=281,slow=33
comp=Z,1.4nm,0.8s
BFO Black Forest 27.64 83 P **P 21 55 09.9 -1.1**
BFO IAmb IAmb 21 55 21.8
comp=Z,24nm,1.8s
SENIN Lac Senin/Sane 28.00 88 P **P 21 55 13.7 -0.7**
SENIN IAmb IAmb 21 55 26.2
comp=Z,23nm,1.6s
CLL Collm 29.07 75 P **P 21 55 22.0 -1.6**
CLL Collm 29.07 75 *i* P **P 21 55 24.0 +0.4**
comp=Z,9.0nm,1.0s
CLL L L 22 06 00.0
comp=Z,200nm,20.6s
TUE Stuetta 29.16 86 P **P 21 55 24.6 -0.1**
TUE IAmb IAmb 21 55 36.4
comp=Z,24nm,1.5s
DAVOX Davos/Dischmat 29.32 85 P **P 21 55 25.7 -0.4**
comp=Z,1.4nm,0.5s,baz=334,slow=12,SNR=2.0
DAVOX LR LR 22 06 40.3
comp=Z,601nm,18.6s,baz=276,slow=35
comp=Z,1.4nm,0.5s
RETA Reutte 29.48 83 *i* P **P 21 55 30.0 +2.5**
comp=Z,2.4nm,0.6s
SADO Sadowa 29.54 270 LR LR 22 06 25.2
comp=Z,1μm,18.1s,baz=78,slow=35
SADO Sadowa 29.54 270 P **P 21 55 28.8 +0.9**
FETA Feichten 29.70 84 *e*P **P 21 55 30.8 +1.3**
comp=Z,13nm,1.8s
MOTA Moosalm 29.75 83 *e*P **P 21 55 32.6 +2.6**
comp=Z,11nm,1.6s
BRG Berggiesshubel 29.79 75 *e*(P) **P 21 55 31.6 +1.6**
BRG Amp 21 55 35.7
comp=Z,9.0nm,1.7s
BRG *ex* x 21 56 02.9
BRG Amp 21 56 05.1
comp=Z,4.2nm,1.4s
BRG Amp 22 08 16.0
comp=E,0.3nm,14.6s
BRG Amp 22 08 20.0
comp=Z,0.4nm,13.2s
BRG Amp 22 08 24.0
comp=N,0.2nm,14.1s
SQTA Sankt Quirin 29.88 83 *e*P **P 21 55 30.9 -0.1**
comp=N,10.0nm,1.3s
WATA Walderalm 30.04 83 *e*P **P 21 55 33.7 +1.3**
comp=N,5.9nm,1.5s
WTTA Wattenberg 30.11 83 *e*P **P 21 55 34.0 +0.9**
comp=N,5.8nm,1.2s
KHC Kasperske Hory 30.35 79 P **P 21 55 35.5 +0.4**
GEC2 GERESS Array S 30.55 79 P **P 21 55 37.1 +0.2**
GERES GERESS Array B 30.55 79 P **P 21 55 36.8 -0.1**
comp=N,0.8nm,0.8s,baz=282,slow=4.9,SNR=8.0
comp=N,0.8nm,0.8s
GERES GERESS Array B 30.55 79 P **P 21 55 36.1 -0.8**
CTI Castel Tesino 30.74 85 P **P 21 55 35.6 -3.0**
MVL Millersville 30.75 260 P **P 21 55 39.1 +0.5**
MVL IAmb IAmb 21 55 44.4
comp=Z,24nm,1.5s
ABTA Abfaltersbach 30.89 83 *e*P **P 21 55 40.9 +1.1**
comp=Z,3.1nm,0.8s
TEOL Teolo 31.12 86 P **P 21 55 41.6 -0.2**
TEOL IAmb IAmb 21 55 52.3
comp=Z,8.9nm,1.0s
RES Resolute Bay 31.19 334 LR LR 22 06 28.5
comp=Z,226nm,21.8s,baz=86,slow=33
KBA Koelnbreinsper 31.21 82 *e*P **P 21 55 45.6 +2.8**
comp=Z,6.1nm,1.4s
ARCES ARCESS Array B 31.26 36 P **P 21 55 42.2 -0.6**
comp=Z,2.5nm,0.8s,baz=265,slow=7.0,SNR=11
comp=Z,2.5nm,0.8s
ARCES ARCESS Array B 31.26 36 P **P 21 55 42.8 -0.1**
MOA Molln 31.36 80 *e*P **P 21 55 46.4 +2.4**
comp=Z,6.0nm,1.3s
MYKA Terra Mystica 31.61 83 *i* P **P 21 55 48.8 +2.6**
comp=Z,5.6nm,1.0s
VRAC Vranov 32.01 76 LR LR 22 08 27.8
comp=Z,519nm,18.5s,baz=302,slow=36
VRAC Vranov 32.01 76 *e*P **P 21 55 50.6 +0.9**
FCC Fort Churchill 32.09 303 P **P 21 55 50.3 +0.1**
FCC IAmb IAmb 21 55 58.4
comp=Z,13nm,1.3s
OBKA Obir 32.21 82 *e*P **P 21 55 53.2 +1.7**
comp=Z,5.8nm,1.1s
CONA Conrad Observa 32.26 79 *e*P **P 21 55 53.1 +1.2**
comp=Z,2.1nm,0.7s
MTSE Matsula 32.31 57 *e*P **P 21 55 52.5 +0.4**
MORC Moravsky Berou 32.34 75 P **P 21 55 51.0 -1.6**
MORC Moravsky Berou 32.34 75 *e*P **P 21 55 53.2 +0.6**
SOKA Soboth 32.41 82 *i* P **P 21 55 53.2 -0.1**
comp=Z,3.3nm,1.1s

RONA Rosalia, Austr 32.63 79 *i* P **P 21 55 56.5 +1.5**
comp=Z,7.5nm,1.3s
FINES FINESS Array B 32.64 51 P **P 21 55 54.5 -0.5**
comp=Z,2.9nm,0.8s,baz=291,slow=5.9,SNR=12
FINES LR LR 22 07 41.0
comp=Z,375nm,20.5s,baz=275,slow=34
comp=Z,2.9nm,0.8s
FINES FINESS Array B 32.64 51 P **P 21 55 54.2 -0.8**
FIA1 FINESS Array S 32.65 51 P **P 21 55 54.1 -0.9**
FIA1 IAmb IAmb 21 56 00.4
comp=Z,9.4nm,1.1s
LATE Laterza 32.76 90 P **P 21 55 56.0 -0.3**
MODS Modra-Piesok 32.86 78 *e*P **P 21 55 58.5 +1.4**
OJC Ojcow 33.42 73 *e*P **P 21 56 01.8 -0.2**
OJC Ojcow 33.42 73 P **P 21 56 01.7 -0.3**
OJC IAmb IAmb 21 56 07.3
comp=Z,18nm,1.5s
O53A New Philadelph 33.46 265 P **P 21 56 02.5 +0.1**
O53A IAmb IAmb 21 56 08.3
comp=Z,23nm,1.5s
PABE Paberze 33.48 62 P **P 21 56 01.8 -0.6**
PABE Paberze 33.48 62 *e*P **P 21 56 03.8 +1.5**
SUW Suwalki 33.65 65 P **P 21 56 02.8 -1.0**
SUW IAmb IAmb 21 56 09.2
comp=Z,13nm,1.0s
SUW Suwalki 33.65 65 *e*P **P 21 56 05.2 +1.4**
LANS Liptovska Anna 33.74 75 *e*P **P 21 56 06.5 +1.7**
VSU Vasula 33.84 57 *e*P **P 21 56 05.9 +0.4**
NIE Niedzica 34.09 74 *e*P **P 21 56 07.0 -0.8**
KOVH Kovagotottos 34.52 81 P **P 21 56 11.7 +0.2**
PSZ Piszkesteto 34.60 77 P **P 21 56 12.4 0.0**
PSZ IAmb IAmb 21 56 23.0
comp=Z,14nm,1.5s
MORH Mrgy, Hungar 34.77 80 ⇑P **P 21 56 14.2 +0.5**
MORH Mrgy, Hungar 34.77 80 P **P 21 56 12.5 -1.2**
P51A Williamsport 35.04 266 P **P 21 56 15.9 -0.1**
NACGM Naroch 35.20 62⇑ *e*P **P 21 56 18.0 +0.7**
baz=295
SGRT San Giovanni R 35.62 88 P **P 21 56 20.4 -0.8**
KEST Kesra 35.77 102 P **P 21 56 21.9 -0.6**
comp=Z,2.9nm,0.9s,baz=250,slow=12,SNR=2.8
KEST LR LR 22 10 18.5
comp=Z,230nm,18.9s,baz=336,slow=35
comp=Z,2.9nm,0.9s
KEST Kesra 35.77 102 P **P 21 56 22.5 0.0**
KEST IAmb IAmb 21 56 30.3
comp=Z,13nm,1.0s
ULM Lac du Bonnet 36.45 290 P **P 21 56 27.4 -0.7**
comp=Z,2.1nm,0.6s,baz=50,slow=11,SNR=2.9
ULM LR LR 22 10 11.6
comp=Z,596nm,18.3s,baz=42,slow=34
comp=Z,2.1nm,0.6s
ULM Lac du Bonnet 36.45 290 P **P 21 56 27.7 -0.4**
ULM IAmb IAmb 21 56 32.6
comp=Z,26nm,1.6s
R50A Paris 36.57 265 P **P 21 56 29.5 +0.3**
R50A IAmb IAmb 21 56 35.0
comp=Z,11nm,1.1s
DIVS Divibare 36.74 82 P **P 21 56 29.4 -1.3**
DRGR 36.83 77 ⇑P **P 21 56 33.3 +1.9**
BZS Buzias 36.84 79 ⇑P **P 21 56 32.5 +1.1**
TZTN Tazewell 37.28 262 P **P 21 56 34.9 -0.4**
MDVR Moldovita 37.36 80 ⇑P **P 21 56 39.8 +3.9**
VAE Valguarnera 37.56 95 LR LR 22 10 40.4
comp=Z,144nm,19.7s,baz=340,slow=34
BUR08 Bucovina Ar. S 37.80 74 P **P 21 56 39.2 -0.5**
BURAR Bucovina Array 37.82 74 ⇑P **P 21 56 41.4 +1.5**
BURAR Bucovina Array 37.82 74 P **P 21 56 39.6 -0.2**
TKL Tuckaleechee C 38.02 262 LR LR 22 11 40.4
comp=Z,372nm,18.6s,baz=62,slow=35
LOT Lotru 38.18 78 ⇑P P 21 56 48.8 +5.8
AKASG Malin Array Be 38.46 67 P **P 21 56 44.0 -1.0**
comp=Z,2.1nm,0.8s,baz=308,slow=7.8,SNR=13
AKASG LR LR 22 12 25.1
comp=Z,149nm,18.4s,baz=292,slow=36
comp=Z,2.1nm,0.8s
U49A Red Boiling Sp 38.61 264 P **P 21 56 46.2 -0.3**
U49A IAmb IAmb 21 56 53.3
comp=Z,33nm,1.8s
BIZ Bicaz 38.70 74 ⇑P **P 21 56 48.4 +1.3**
KLMR Klimovskoe 38.98 49 *e*P **P 21 56 48.6 -0.7**
KLMR AMP 21 56 54.9
comp=Z,23nm,1.0s
SORM Soroca 39.32 71 ⇓P **P 21 56 52.2 -0.1**
MLR Muntele Rosu 39.42 76 ⇑P P 21 56 58.6 +5.3
MLR Muntele Rosu 39.42 76 LR LR 22 13 53.7
comp=Z,163nm,19.3s,baz=302,slow=37
PLOR Plostina 39.62 75 ⇓P **P 21 56 56.3 +1.4**
SIUC Southern Illin 39.85 269 P **P 21 56 57.1 +0.3**
WVT Waverly 40.09 266 P **P 21 56 59.3 +0.5**
WVT IAmb IAmb 21 57 04.3
comp=Z,21nm,1.6s
OBN Obninsk 40.15 58 LR LR 22 12 51.3
comp=Z,76nm,18.9s,baz=289,slow=35
OBN Obninsk 40.15 58 P **P 21 56 58.8 -0.3**
YKA Yellowknife Ar 40.20 315 P **P 21 56 58.6 -0.8**
comp=Z,0.8nm,0.8s,baz=62,slow=9.1,SNR=5.2
YKA LR LR 22 12 15.3
comp=Z,265nm,18.3s,baz=55,slow=34
comp=Z,0.8nm,0.8s
ECSD EROS Data Cent 40.44 281 P **P 21 57 01.9 +0.2**
ECSD EROS Data Cent 40.44 281 P **P 21 57 03.0 +1.4**
baz=53,SNR=7.3
CCM Cathedral Cave 40.83 271 P **P 21 57 04.7 -0.2**
PBMO Poplar Bluff 41.19 269 P **P 21 57 07.9 -0.1**
PBMO IAmb IAmb 21 57 14.1
comp=Z,36nm,1.6s
LCAR Lake Charles 42.10 268 P **P 21 57 15.1 -0.3**
SJG San Juan 42.79 226 LR LR 22 12 49.7
comp=Z,60nm,20.9s,baz=66,slow=33
W41B Gary Mavity, V 43.36 268 P **P 21 57 25.6 -0.1**
W41B IAmb IAmb 21 57 30.9
comp=Z,27nm,1.4s
W41B Gary Mavity, V 43.36 268 P **P 21 57 26.1 +0.5**
baz=46
EDM Edmonton 44.20 302 P **P 21 57 32.2 0.0**
EDM IAmb IAmb 21 57 40.7
comp=Z,20nm,1.3s
W39A Magazine 44.26 270 P **P 21 57 33.8 +1.0**
baz=46
INK Inuvik 44.33 328 LR LR 22 14 50.7
comp=Z,239nm,20.5s,baz=42,slow=34
INK Inuvik 44.33 328 P **P 21 57 30.8 -2.2**
INK IAmb IAmb 21 57 38.6
comp=Z,13nm,1.4s
KIRV Kirov 44.46 48 LR LR 22 14 41.0
comp=Z,210nm,20.6s,baz=297,slow=34
MIAR Mount Ida 44.59 269 P **P 21 57 35.7 +0.2**
MIAR Mount Ida 44.59 269 P **P 21 57 36.3 +0.8**
baz=46
IDI Anoyia 45.26 89 LR LR 22 17 14.9
comp=Z,186nm,20.6s,baz=344,slow=37
EPYK Eagle Plains 46.45 327 P **P 21 57 49.4 -0.5**
EPYK Eagle Plains 46.45 327 P **P 21 57 50.5 +0.5**
baz=53
MMPY Sheldon Lake, 46.77 321 P **P 21 57 53.1 +0.6**
baz=54
RLMT Red Lodge 46.80 291 P **P 21 57 53.5 +0.3**
RLMT IAmb IAmb 21 57 56.6
comp=Z,12nm,1.2s
RLMT Red Lodge 46.80 291 P **P 21 57 54.7 +1.6**
baz=51
K22A Casper 46.81 287 P **P 21 57 54.3 +1.1**
baz=50
BELG Belogornoye 47.13 56 LR LR 22 17 19.8
comp=Z,269nm,18.1s,baz=321,slow=36
BR131 Keskin Array S 47.44 78 P **P 21 57 58.5 +0.5**
BR131 IAmb IAmb 21 58 06.0
comp=Z,7.6nm,0.8s
BRTR Keskin Array B 47.44 78 P **P 21 57 59.0 +0.9**
comp=Z,2.6nm,0.8s,baz=316,slow=4.5,SNR=14
BRTR LR LR 22 19 38.0
comp=Z,304nm,18.1s,baz=306,slow=38
comp=Z,2.6nm,0.8s
BRTR Keskin Array B 47.44 78 P **P 21 57 58.3 +0.2**
I29M Ogilvie Camp, 47.59 326 P **P 21 57 58.8 0.0**
I29M Ogilvie Camp, 47.59 326 P **P 21 57 59.6 +0.8**
baz=52,SNR=8.8
N23A Red Feather La 47.61 284 P **P 21 57 59.4 -0.1**
N23A Red Feather La 47.61 284 P **P 21 58 01.2 +1.6**
baz=49
BOZ Bozeman (W) 47.80 293 P **P 21 58 01.2 +0.4**
BOZ IAmb IAmb 21 58 06.8
comp=Z,10nm,1.3s
BOZ Bozeman (W) 47.80 293 P **P 21 58 02.0 +1.1**
baz=51,SNR=5.6

LRM Limekiln Ridge 48.11 294 P **P 21 58 03.1 -0.3**
ISCO Idaho Springs 48.14 283 P **P 21 58 05.4 +1.6**
baz=48,SNR=7.5
C23K Itkillik River 48.20 335 P **P 21 58 04.3 +0.9**
baz=46,SNR=6.3
BMAR Burnt Mountain 48.20 331 P **P 21 58 03.2 -0.3**
D24K Happy Valley 48.21 334 P **P 21 58 04.5 +1.0**
baz=47
PD31 Pinedale Array 48.45 289 P **P 21 58 05.5 -0.5**
PD31 IAmb IAmb 21 58 07.8
comp=Z,9.6nm,1.4s
PDAR Pinedale Array 48.45 289 P **P 21 58 06.2 +0.1**
comp=Z,2.2nm,0.6s,baz=66,slow=7.8,SNR=13
PDAR LR LR 22 17 28.9
comp=Z,340nm,19.1s,baz=60,slow=35
comp=Z,2.2nm,0.6s
PDAR Pinedale Array 48.45 289 P **P 21 58 05.5 -0.5**
A21K Barrow 48.53 338 P **P 21 58 06.4 +0.5**
TOLK Toolik Lake Re 48.76 334 P **P 21 58 08.0 +0.2**
TOLK Toolik Lake Re 48.76 334 P **P 21 58 08.7 +0.8**
baz=46,SNR=7.1
DAWY Dawson 48.77 325 P **P 21 58 08.0 +0.1**
DAWY IAmb IAmb 21 58 20.8
comp=Z,14nm,1.4s
DLBC Dease Lake 48.80 316 LR LR 22 17 37.6
comp=Z,341nm,19.6s,baz=108,slow=35
M30M Minto, Yukon 48.82 323 P **P 21 58 09.4 +1.1**
M30M IAmb IAmb 21 58 11.8
comp=Z,14nm,1.6s
M30M Minto, Yukon 48.82 323 P **P 21 58 09.7 +1.3**
baz=50
D23K Nanushuk River 48.82 334 P **P 21 58 09.5 +1.2**
baz=45,SNR=8.8
NEW Newport 49.06 299 LR LR 22 17 23.7
comp=Z,318nm,19.1s,baz=54,slow=34
NEW Newport 49.06 299 P **P 21 58 10.5 +0.1**
NEW Newport 49.06 299 P **P 21 58 11.0 +0.6**
baz=51
I26K Coal Creek Min 49.18 328 P **P 21 58 11.1 +0.1**
I26K IAmb IAmb 21 58 17.8
comp=Z,20nm,1.7s
I26K Coal Creek Min 49.18 328 P **P 21 58 12.4 +1.4**
baz=48
T25A Trinidad 49.22 280 P **P 21 58 10.7 -1.3**
T25A IAmb IAmb 21 58 22.7
comp=Z,5.2nm,0.9s
BNN Bunyan 49.30 77 P **P 21 58 13.1 +0.6**
K27K Chicken 49.69 326 P **P 21 58 16.8 +1.9**
baz=48
O30N Mendenhall 49.72 321 P **P 21 58 16.6 +1.3**
baz=50
ARU Arti 49.73 47 P **P 21 58 14.7 -0.6**
comp=Z,3.0nm,0.7s,baz=297,slow=14,SNR=2.9
ARU LR LR 22 17 45.4
comp=Z,290nm,19.7s,baz=298,slow=34
comp=Z,3.0nm,0.7s
ARU Arti 49.73 47 P **P 21 58 15.4 +0.2**
KVAR Kislovodsk Arr 49.81 68 LR LR 22 21 25.4
comp=Z,71nm,18.1s,baz=336,slow=39
J26L Joseph Creek 49.85 327 P **P 21 58 16.8 +0.5**
J26L IAmb IAmb 21 58 23.1
comp=Z,13nm,1.6s
RDMU Red Mountain 49.90 287 P **P 21 58 17.3 +0.2**
RDMU IAmb IAmb 21 58 20.3
comp=Z,15nm,1.2s
TOA0 Torodi Ar. Sit 49.93 130 P **P 21 58 16.9 -0.4**
TOA0 IAmb IAmb 21 58 22.1
comp=Z,11nm,1.1s
TORD Torodi Ar. Bea 49.93 130 P **P 21 58 16.1 -1.1**
comp=Z,3.9nm,0.7s,baz=331,slow=7.2,SNR=26
TORD LR LR 22 17 30.0
comp=Z,132nm,18.7s,baz=280,slow=34
comp=Z,3.9nm,0.7s
TORD Torodi Ar. Bea 49.93 130 P **P 21 58 16.8 -0.5**
TORD IAmb IAmb 21 58 22.1
comp=Z,7.1nm,1.0s
LLLB Lillooet 50.00 304 P **P 21 58 17.8 +0.3**
KBZ Khabaz 50.07 68 P **P 21 58 19.4 +1.4**
comp=Z,1.6nm,0.8s,baz=307,slow=7.9,SNR=3.5
KBZ LR LR 22 20 04.1
comp=Z,195nm,19.5s,baz=311,slow=37
comp=Z,1.6nm,0.8s
B08A Colville Reser 50.15 300 P **P 21 58 18.9 +0.3**
B08A IAmb IAmb 21 58 26.6
comp=Z,10nm,1.2s
HYT Haines Junctio 50.21 321 P **P 21 58 20.8 +1.7**
baz=49
BCAR Beaver Creek A 50.24 325 P **P 21 58 19.6 +0.4**
H24K Noodor Dome 50.25 330 P **P 21 58 18.5 -0.4**
H24K Noodor Dome 50.25 330 P **P 21 58 20.5 +1.3**
baz=45
HWUT Hardware Ranch 50.34 289 P **P 21 58 19.9 -0.5**
HWUT IAmb IAmb 21 58 21.8
comp=Z,8.0nm,0.8s
SCRK Sand Creek 50.35 327 P **P 21 58 20.4 +0.3**
SCRK IAmb IAmb 21 58 23.6
comp=Z,19nm,1.7s
SCRK Sand Creek 50.35 327 P **P 21 58 21.6 +1.6**
baz=47,SNR=6.1
J25K Salcha River, 50.35 328 P **P 21 58 20.3 +0.4**
J25K IAmb IAmb 21 58 28.0
comp=Z,23nm,1.8s
J25K Salcha River, 50.35 328 P **P 21 58 21.3 +1.3**
baz=46,SNR=7.8
MDP Montagnes des 50.51 203 LR LR 22 14 56.1
comp=Z,73nm,20.1s,baz=342,slow=30
HLID Hailey 50.63 293 P **P 21 58 23.4 +0.8**
HLID Hailey 50.63 293 P **P 21 58 24.2 +1.6**
baz=49,SNR=5.9
IL31 50.71 329 P **P 21 58 22.8 +0.2**
IL31 IAmb IAmb 21 58 29.5
comp=Z,17nm,1.6s
ILAR Eielson Array 50.71 329 P **P 21 58 22.6 -0.1**
comp=Z,0.8nm,0.7s,baz=52,slow=5.7,SNR=9.7
ILAR LR LR 22 19 11.8
comp=Z,149nm,18.3s,baz=66,slow=35
comp=Z,0.8nm,0.7s
ILAR Eielson Array 50.71 329 P **P 21 58 22.9 +0.3**
H23K Yukon River 50.75 331 P **P 21 58 23.9 +1.0**
baz=44,SNR=5.5
RIDG Independent Ri 50.79 327 P **P 21 58 22.9 -0.4**
MDM Murphy Dome 50.98 330 P **P 21 58 24.8 +0.1**
MDM IAmb IAmb 21 58 31.5
comp=Z,17nm,1.6s
PV11 David Mesa, Pa 51.02 284 P **P 21 58 26.0 +0.4**
ONI Oni 51.12 69 P **P 21 58 26.7 +0.6**
I23K Minto, Yukon-K 51.18 330 P **P 21 58 27.9 +1.8**
baz=44
WRH Wood River Hil 51.29 329 P **P 21 58 27.8 +0.9**
WRH IAmb IAmb 21 58 32.9
comp=Z,13nm,1.4s
BMO Blue Mountains 51.35 296 P **P 21 58 28.2 +0.3**
NEA2 Nenana 51.49 330 P **P 21 58 28.5 0.0**
NEA2 IAmb IAmb 21 58 30.7
comp=Z,20nm,1.8s
LTY Liberty 51.55 300 P **P 21 58 28.7 -0.6**
MVCO Mesa Verde 51.55 283 P **P 21 58 30.3 +0.6**
MVCO Mesa Verde 51.55 283 P **P 21 58 31.6 +1.9**
baz=46
H21K Melozitna Rive 51.79 332 P **P 21 58 31.9 +1.2**
baz=42
IMAR Indian Mountai 51.81 333 P **P 21 58 30.8 0.0**
BAUV El Baul 51.82 223 P **P 21 58 32.3 +0.8**
I21K Tanana 51.92 331 P **P 21 58 32.6 +0.9**
baz=42
ANMO Albuquerque 51.93 279 LR LR 22 20 06.4
comp=Z,1μm,18.2s,baz=50,slow=36
ANMO Albuquerque 51.93 279 P **P 21 58 33.6 +1.2**
ANMO Albuquerque 51.93 279 P **P 21 58 34.2 +1.8**
baz=45
BBB Bella Bella 51.96 309 LR LR 22 19 34.0
comp=Z,208nm,18.6s,baz=59,slow=35
DUG Dugway, Tooele 51.99 288 P **P 21 58 33.4 +0.6**
DUG IAmb IAmb 21 58 39.6
comp=Z,9.2nm,1.1s
DUG Dugway, Tooele 51.99 288 P **P 21 58 33.7 +1.0**
baz=47
DHY Denali Highway 52.06 328 P **P 21 58 32.7 -0.2**
DHY IAmb IAmb 21 58 41.7
comp=Z,11nm,1.3s
DHY Denali Highway 52.06 328 P **P 21 58 34.1 +1.1**
baz=44
CBB Campbell River 52.07 305 P **P 21 58 33.6 +0.5**
CBB IAmb IAmb 21 58 41.6
comp=Z,18nm,1.2s
BPAW Bear Paw Mtn. 52.43 330 P **P 21 58 35.7 +0.2**

BPAW	**Bear Paw Mtn.**	**52.43**	**330**	P	**P**	**21 58 36.6**	**+1.1**	
	baz=42							
BNM	**Barren Site**	**52.59**	**279**	P	**P**	**21 58 38.2**	**+0.8**	
TRF	**Thorofare Moun**	**52.70**	**329**	P	**P**	**21 58 38.8**	**+1.1**	
SDV	**Santo Domingo**	**52.95**	**226**	LR	LR	22 17 46.3		
	comp=Z,46nm,21.8s,baz=52,slow=32							
ELK	**Elko**	**52.97**	**290**	LR	LR	22 20 24.9		
	comp=Z,400nm,18.2s,baz=56,slow=35							
ELK	**Elko**	**52.97**	**290**	P	**P**	**21 58 40.9**	**+0.7**	
ELK				IAmb	IAmb	21 58 48.4		
	comp=Z,17nm,1.8s							
DBIC	**Dimbokro**	**53.03**	**141**	P	**P**	**21 58 39.9**	**-0.6**	
	comp=Z,4.4nm,0.8s,baz=13,slow=8.7,SNR=3.8							
DBIC				LR	LR	22 18 27.5		
	comp=Z,342nm,20.6s,baz=350,slow=33							
	comp=Z,4.4nm,0.8s							
DBIC	**Dimbokro**	**53.03**	**141**	P	**P**	**21 58 40.2**	**-0.2**	
MMAI	**Mount Meron Ar**	**53.07**	**83**	LR	LR	22 21 57.1		
	comp=Z,122nm,21.8s,baz=66,slow=37							
MARD	**Mardin**	**53.19**	**75**	P	**P**	**21 58 41.4**	**-0.2**	
MARD				IAmb	IAmb	21 58 48.4		
	comp=Z,6.9nm,0.9s							
CAST	**Castle Rocks**	**53.26**	**330**	P	**P**	**21 58 40.7**	**-1.0**	
CAST	**Castle Rocks**	**53.26**	**330**	P	**P**	**21 58 42.1**	**+0.4**	
	baz=41							
J20K	**Nowinta River**	**53.29**	**331**	P	**P**	**21 58 41.9**	**+0.1**	
J20K	**Nowinta River**	**53.29**	**331**	P	**P**	**21 58 42.4**	**+0.6**	
	baz=40							
AKTO	**Aktyubinsk**	**53.40**	**53**	P	**P**	**21 58 42.9**	**0.0**	
	comp=Z,1.6nm,0.8s,baz=333,slow=9.7,SNR=6.4							
AKTO				LR	LR	22 20 33.6		
	comp=Z,136nm,21.3s,baz=306,slow=35							
	comp=Z,1.6nm,0.8s							
GNI	**Garni**	**53.48**	**70**	LR	LR	22 22 35.2		
	comp=Z,132nm,19.6s,baz=321,slow=37							
GNI	**Garni**	**53.48**	**70**	P	**P**	**21 58 43.6**	**-0.2**	
GNI				IAmb	IAmb	21 58 51.1		
	comp=Z,12nm,1.1s							
MNTX	**Cornudas Mount**	**53.60**	**275**	P	**P**	**21 58 45.0**	**+0.4**	
	baz=44							
WVOR	**Wild Horse Val**	**53.69**	**294**	P	**P**	**21 58 45.4**	**+0.2**	
WVOR				IAmb	IAmb	21 58 54.3		
	comp=Z,15nm,1.2s							
GEVA	**Gevas**	**53.80**	**73**	P	**P**	**21 58 46.0**	**-0.1**	
GEVA				IAmb	IAmb	21 58 53.5		
	comp=Z,12nm,1.3s							
PINE	**Pine Mountain**	**54.00**	**297**	P	**P**	**21 58 47.5**	**-0.1**	
PINE				IAmb	IAmb	21 58 57.2		
	comp=Z,12nm,1.1s							
SKT	**Skwentna**	**54.18**	**328**	P	**P**	**21 58 49.8**	**+1.4**	
	baz=41							
TX32	**Lajitas Array**	**54.29**	**272**	P	**P**	**21 58 49.8**	**0.0**	
TXAR	**Lajitas Array**	**54.29**	**272**	P	**P**	**21 58 49.6**	**-0.2**	
	comp=Z,0.9nm,0.8s,baz=52,slow=9.3,SNR=9.3							
TXAR				PcP	**PcP**	**21 59 54.0**	**+0.1**	
	comp=Z,0.9nm,0.7s,baz=69,slow=4.9,SNR=8.0							
TXAR				LR	LR	22 21 38.8		
	comp=Z,384nm,18.3s,baz=40,slow=36							
	comp=Z,0.9nm,0.8s							
TXAR	**Lajitas Array**	**54.29**	**272**	P	**P**	**21 58 50.2**	**+0.4**	
TIXI	**Tiksi**	**54.41**	**6**	LR	LR	22 19 53.6		
	comp=Z,38nm,19.0s,baz=0.0,slow=34							
TIXI	**Tiksi**	**54.41**	**6**	P	**P**	**21 58 50.4**	**+0.5**	
TIXI				IAmb	IAmb	21 58 53.4		
	comp=Z,5.6nm,0.9s							
121A	**Cookes Peak, D**	**54.42**	**278**	P	**P**	**21 58 52.1**	**+1.4**	
	baz=44							
J05D	**Fort Rock, OR**	**54.51**	**297**	P	**P**	**21 58 51.6**	**+0.4**	
	baz=46							
TTA	**Tatalina**	**54.78**	**331**	P	**P**	**21 58 52.8**	**-0.1**	
	baz=39							
R11A	**Troy Canyon, C**	**54.82**	**289**	P	**P**	**21 58 53.7**	**+0.1**	
	baz=46							
MOD	**Modoc Plateau**	**54.96**	**295**	P	**P**	**21 58 54.9**	**+0.4**	
MOD				IAmb	IAmb	21 58 57.6		
	comp=Z,7.5nm,1.1s							
ABKAR	**Akbulak array**	**55.12**	**53**	P	**P**	**21 58 53.8**	**-1.6**	
ABKAR	**Akbulak array**	**55.12**	**53**	P	**P**	**21 58 54.5**	**-0.8**	
PRN	**Pahroc Range**	**55.17**	**287**	P	**P**	**21 58 56.5**	**+0.4**	
PRN				IAmb	IAmb	21 59 02.3		
	comp=Z,19nm,1.7s							
X16A	**Lo Mia Camp, P**	**55.21**	**282**	P	**P**	**21 58 57.1**	**+0.6**	
EIL	**Elat**	**55.21**	**86**	LR	LR	22 25 21.6		
	comp=Z,53nm,20.4s,baz=270,slow=39							
TPNV	**Topopah Spring**	**56.17**	**288**	P	**P**	**21 59 03.7**	**+0.3**	
TPNV				IAmb	IAmb	21 59 09.3		
	comp=Z,6.1nm,1.1s							
TPNV	**Topopah Spring**	**56.17**	**288**	P	**P**	**21 59 04.3**	**+1.0**	
	baz=45							
NV11	**Mina Array Sit**	**56.20**	**290**	P	**P**	**21 59 02.9**	**-0.6**	
NV11				IAmb	IAmb	21 59 11.8		
	comp=Z,6.7nm,1.2s							
NVAR	**Mina Array Bea**	**56.28**	**290**	P	**P**	**21 59 03.6**	**-0.5**	
	comp=Z,0.3nm,0.5s,baz=68,slow=9.0,SNR=5.0							
NVAR				LR	LR	22 22 20.6		
	comp=Z,312nm,19.2s,baz=76,slow=35							
	comp=Z,0.3nm,0.5s							
NVAR	**Mina Array Bea**	**56.28**	**290**	P	**P**	**21 59 03.9**	**-0.3**	
YBH	**Yreka Blue Hor**	**56.37**	**296**	LR	LR	22 22 29.3		
	comp=Z,246nm,19.2s,baz=36,slow=35							
GRAC	**Grapevine Rang**	**56.77**	**289**	P	**P**	**21 59 07.7**	**+0.2**	
GRAC	**Grapevine Rang**	**56.77**	**289**	P	**P**	**21 59 08.6**	**+1.1**	
	baz=44							
O18K	**Koktuh Hills**	**56.97**	**329**	P	**P**	**21 59 08.4**	**0.0**	
	baz=38							
BVAR	**Borovoye Array**	**57.06**	**44**	LR	LR	22 21 58.4		
	comp=Z,130nm,21.6s,baz=178,slow=34							
BLYC	**Blythe**	**57.47**	**284**	P	**P**	**21 59 13.1**	**+0.8**	
BLYC				IAmb	IAmb	21 59 16.0		
	comp=Z,7.5nm,0.9s							
MPMC	**Manual Prospec**	**57.51**	**288**	P	**P**	**21 59 14.2**	**+1.3**	
	baz=44							
KDAK	**Kodiak Island**	**57.75**	**326**	LR	LR	22 23 26.1		
	comp=Z,160nm,18.6s,baz=72,slow=35							
BC3	**Big Chuckawall**	**58.08**	**284**	P	**P**	**21 59 18.2**	**+1.4**	
	baz=43							
ROSC	**El Rosal**	**58.16**	**228**	LR	LR	22 22 23.9		
	comp=Z,56nm,20.8s,baz=222,slow=34							
ROSC	**El Rosal**	**58.16**	**228**	P	**P**	**21 59 19.0**	**+1.2**	
CMIG	**Matias Romero**	**58.47**	**255**	LR	LR	22 25 54.2		
	comp=Z,111nm,18.9s,baz=36,slow=38							
ZAIG	**Zacatecas**	**58.55**	**266**	P	**P**	**21 59 20.8**	**+0.4**	
DRK0	**Durika**	**58.55**	**239**	P	**P**	**21 59 20.8**	**+0.4**	
JTS	**Las Juntas de**	**58.56**	**241**	LR	LR	22 22 51.9		
	comp=Z,184nm,19.2s,baz=62,slow=34							
EDW2	**Edwards Air Fo**	**58.64**	**287**	P	**P**	**21 59 22.1**	**+1.5**	
	baz=43							
PFO	**Pinyon Flats O**	**58.68**	**285**	LR	LR	22 25 04.8		
	comp=Z,206nm,18.0s,baz=86,slow=36							
PFO	**Pinyon Flats O**	**58.68**	**285**	P	**P**	**21 59 21.7**	**+0.7**	
PFO				IAmb	IAmb	21 59 33.6		
	comp=Z,8.3nm,1.1s							
TPFO	**Pinon Flats**	**58.69**	**285**	P	**P**	**21 59 22.3**	**+1.3**	
	baz=43							
RCBR	**Riachuelo**	**59.35**	**181**	LR	LR	22 19 27.0		
	comp=Z,60nm,18.7s,baz=132,slow=30							
TLIG	**Tlapa**	**60.23**	**259**	P	**P**	**21 59 31.7**	**-0.2**	
ZAA0	**Zalesovo Array**	**61.81**	**35**	P	**P**	**21 59 42.5**	**+0.6**	
ZALV	**Zalesovo Beam**	**61.81**	**35**	P	**P**	**21 59 41.9**	**-0.1**	
	comp=Z,1.5nm,0.7s,baz=315,slow=7.9,SNR=7.5							
ZALV				LR	LR	22 26 22.6		
	comp=Z,69nm,20.0s,baz=316,slow=36							
	comp=Z,1.5nm,0.7s							
ZALV	**Zalesovo Beam**	**61.81**	**35**	P	**P**	**21 59 41.7**	**-0.2**	
KURK	**Kurchatov**	**62.12**	**41**	P	**P**	**21 59 43.6**	**-0.5**	
KURK				IAmb	IAmb	21 59 49.6		
	comp=Z,5.1nm,1.2s							
LPIG	**La Paz**	**62.13**	**273**	LR	LR	22 26 30.0		
	comp=Z,295nm,19.9s,baz=28,slow=36							
KURBB	**Kurchatov Arra**	**62.16**	**41**	P	**P**	**21 59 44.2**	**-0.2**	
	comp=Z,1.6nm,0.8s,baz=321,slow=7.3,SNR=11							
KURBB				LR	LR	22 25 43.7		
	comp=Z,91nm,18.8s,baz=286,slow=35							
	comp=Z,1.6nm,0.8s							
GEYT	**Alibeck**	**62.35**	**63**	LR	LR	22 28 58.1		
	comp=Z,93nm,18.8s,baz=341,slow=38							
GEYT	**Alibeck**	**62.35**	**63**	P	**P**	**21 59 46.5**	**+0.7**	
GYA0B	**ALIBECK ARRAY**	**62.35**	**63**	P	**P**	**21 59 46.7**	**+0.8**	
GYA0B				IAmb	IAmb	21 59 53.2		
	comp=Z,4.1nm,0.8s							
SEY	**Seymchan**	**63.51**	**356**	LR	LR	22 26 27.4		
	comp=Z,96nm,21.4s,baz=10.0,slow=35							
YAK	**Yakutsk**	**63.97**	**8**	LR	LR	22 25 11.0		
	comp=Z,43nm,21.6s,baz=268,slow=34							
KK31	**Karatay Array**	**64.60**	**51**	P	**P**	**22 00 00.7**	**0.0**	
KK31				IAmb	IAmb	22 00 03.0		
	comp=Z,8.9nm,1.8s							
KKAR	**Karatay Array**	**64.60**	**51**	P	**P**	**22 00 01.1**	**+0.4**	
MK31	**Makanchi Array**	**66.72**	**42**	P	**P**	**22 00 13.5**	**-0.8**	
MK31				IAmb	IAmb	22 00 15.8		
	comp=Z,8.2nm,1.8s							
MKAR	**Makanchi Array**	**66.72**	**42**	LR	LR	22 29 43.0		
	comp=Z,66nm,18.6s,baz=313,slow=36							
MKAR	**Makanchi Array**	**66.72**	**42**	P	**P**	**22 00 13.4**	**-0.9**	
AAK	**Ala-Archa**	**66.79**	**49**	LR	LR	22 28 47.6		
	comp=Z,207nm,19.5s,baz=332,slow=35							
AAK	**Ala-Archa**	**66.79**	**49**	P	**P**	**22 00 15.1**	**+0.1**	
AAK				IAmb	IAmb	22 00 18.1		
	comp=Z,10nm,1.5s							
MA2	**Magadan**	**66.93**	**357**	LR	LR	22 28 48.0		
	comp=Z,68nm,21.2s,baz=3.5,slow=35							
BOSC	**San Juan Bosco**	**67.12**	**228**	P	**P**	**22 00 17.3**	**-0.1**	
CHGR	**Chuyangaron**	**67.42**	**55**	P	**P**	**22 00 18.6**	**-0.4**	
GAR	**Garm**	**67.71**	**54**	P	**P**	**22 00 21.0**	**+0.2**	
KBL	**Kabul**	**70.60**	**58**	P	**P**	**22 00 39.6**	**+0.7**	
KBL				IAmb	IAmb	22 00 41.8		
	comp=Z,6.9nm,1.4s							
ATAH	**Atahualpa**	**70.64**	**226**	LR	LR	22 33 46.3		
	comp=Z,34nm,18.4s,baz=1.1,slow=38							
SHEM	**Shemya Is, Ala**	**71.10**	**342**	LR	LR	22 33 42.9		
	comp=Z,43nm,19.4s,baz=103,slow=37							
WMQ	**Urumqi**	**71.30**	**40**	*eP*	**P**	**22 00 45.0**	**+2.1**	
WMQ				LR	LR			
	comp=Z,110nm,28.9s							
SIV	**San Ignacio**	**72.88**	**206**	LR	LR	22 27 21.6		
	comp=Z,76nm,20.0s,baz=108,slow=31							
PETK	**Petropavlovsk-**	**72.97**	**352**	LR	LR	22 34 27.0		
	comp=Z,102nm,19.7s,baz=37,slow=37							
SONM	**Songino Array**	**73.73**	**26**	P	**P**	**22 00 57.1**	**-0.2**	
	comp=Z,1.5nm,0.7s,baz=336,slow=5.5,SNR=12							
SONM				LR	LR	22 33 48.4		
	comp=Z,48nm,20.9s,baz=343,slow=36							
	comp=Z,1.5nm,0.7s							
SONM	**Songino Array**	**73.73**	**26**	P	**P**	**22 00 57.4**	**+0.1**	
ULN	**Ulaanbaatar**	**73.87**	**25**	P	**P**	**22 00 57.7**	**-0.5**	
ULN				IAmb	IAmb	22 01 00.5		
	comp=Z,17nm,1.5s							
WSAR	**Wadi Sarin**	**73.87**	**73**	LR	LR	22 36 12.3		
	comp=Z,63nm,18.9s,baz=307,slow=38							
NNA	**Nana**	**74.38**	**222**	LR	LR	22 34 14.6		
	comp=Z,45nm,18.9s,baz=313,slow=36							
LPAZ	**La Paz**	**75.20**	**213**	P	**P**	**22 01 06.0**	**-0.7**	
	comp=Z,1.6nm,0.8s,baz=0.0,slow=8.1,SNR=4.2							
	comp=Z,1.6nm,0.8s							
MBAR	**Mbarara**	**76.56**	**110**	LR	LR	22 34 03.7		
	comp=Z,204nm,21.2s,baz=306,slow=35							
KLR	**Kul'dur**	**76.83**	**9**	LR	LR	22 32 52.8		
	comp=Z,43nm,21.9s,baz=22,slow=34							
GTA	**Gaotai**	**79.49**	**34**	*eP*	**P**	**22 01 29.0**	**-1.1**	
GTA				pP	pwP	22 01 35.0	-0.9	
GTA				pmax	pmax			
	comp=Z,3.0nm,1.7s							
KMBO	**Kilima Mbogo**	**80.68**	**105**	LR	LR	22 37 19.7		
	comp=Z,65nm,20.5s,baz=278,slow=36							
HHC	**Hu-ho-hao-te**	**81.57**	**25**	*eP*	**P**	**22 01 38.8**	**-2.4**	
HHC				pmax	pmax			
	comp=Z,8.0nm,0.9s							
HHC				pmax	pmax			
	comp=Z,190nm,5.5s							
ASAJ	**Asahikawa**	**82.50**	**1**	LR	LR	22 36 19.9		
	comp=Z,37nm,22.0s,baz=353,slow=34							
LZH	**Lanzhou**	**83.83**	**32**	*eP*	**P**	**22 01 54.5**	**+1.4**	
LZH				pP	pwP	22 02 01.5	+2.6	
LZH				pmax	pmax			
	comp=Z,14nm,1.5s							
TSUM	**Tsumeb**	**85.67**	**131**	LR	LR	22 39 01.3		
	comp=Z,65nm,18.0s,baz=332,slow=35							
LSZ	**Luuka**	**87.42**	**120**	LR	LR	22 42 01.0		
	comp=Z,90nm,19.0s,baz=327,slow=36							
KSRS	**Korea Array**	**88.03**	**13**	LR	LR	22 44 50.9		
	comp=Z,26nm,18.4s,baz=340,slow=38							
PZH	**PanZhiHua**	**91.88**	**38**	P	**P**	**22 02 31.8**	**-0.2**	
PZH				pmax	pmax			
	comp=Z,10.0nm,1.1s							
PZH				pmax	pmax			
	comp=Z,80nm,4.0s							
LBTB	**Lobatse**	**94.39**	**127**	LR	LR	22 42 56.9		
	comp=Z,64nm,19.0s,baz=310,slow=34							
BOSA	**Boshof**	**97.29**	**129**	LR	LR	22 44 54.8		
	comp=Z,100nm,19.9s,baz=354,slow=34							
CMAR	**Chiang Mai Arr**	**98.08**	**43**	LR	LR	22 49 10.7		
	comp=Z,64nm,21.2s,baz=310,slow=37							
SUR	**Sutherland**	**98.56**	**135**	LR	LR	22 41 48.1		
	comp=Z,84nm,22.0s,baz=326,slow=32							
PALK	**Pallekele**	**99.07**	**65**	LR	LR	22 49 12.2		
	comp=Z,60nm,21.9s,baz=83,slow=36							
WRA	**Warramunga Arr**	**145.34**	**17**	PKPbc	**PKPbc**	**22 09 00.8**	**-0.4**	
	comp=Z,0.9nm,0.8s,baz=349,slow=3.0,SNR=5.4							
WRA	**Warramunga Arr**	**145.34**	**17**		**PKPbc**	**22 09 00.3**	**-0.8**	

SOME ***25*** *21:58:52.1,42°.57N×82°.62E,h10km*
NNC ***25*** *21:58:56.4±1.5,42°.07N×82°.09E,h0km,mb3.5,mpv3.4,*
Error ellipse: s-maj=11.9km s-min=8.1km az=163.0
ISC 25 21:58:48.4±2.4,42°.57N±0°.08×83°.1E±0°.1,h10km,n24,
σ1s20/34,6C-2D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**2.21**	**294**	*eP*	**Pb**	**21 59 29.0**	**+0.4**
KTMS				*eS*	**Sb**	**21 59 55.7**	**-0.4**
KTMS	**Ketmen**	**2.21**	**294**	Pg	**Pb**	**21 59 29.0**	**+0.4**
KTMS				Lg	Lg	21 59 55.7	
PDGK	**Podgornoye**	**2.77**	**287**	Pg	**Pb**	**21 59 36.9**	**-1.2**
	2.0nm,0.2s						
PDGK				Lg	Lg	22 00 10.4	
	16nm,0.3s						
PDGK	**Podgornoye**	**2.77**	**287**	⇓Pn	**Pb**	**21 59 36.6**	**-1.5**
	9.1nm,0.6s						
PDGK				⇓Lg	Lg	22 00 10.2	
	20nm,0.5s						
KPKS	**Kokpek**	**3.38**	**287**	*eP*	**Pb**	**21 59 48.1**	**-0.3**
	13nm,0.2s						
KPKS				*eS*	**Sb**	**22 00 29.1**	**-0.4**
	48nm,0.3s						
KPKS	**Kokpek**	**3.38**	**287**	Pg	**Pb**	**21 59 48.1**	**-0.3**
	13nm,0.2s						
KPKS				Lg	Lg	22 00 29.1	
	48nm,0.3s						
ZHN	**Zhinishke**	**3.50**	**281**	*eP*	**Pb**	**21 59 49.8**	**-0.7**
	19nm,0.1s						
ZHN				*eS*	**Sb**	**22 00 31.2**	**-1.8**
	18nm,0.2s						
ZHN	**Zhinishke**	**3.50**	**281**	Pg	**Pb**	**21 59 49.8**	**-0.7**
	19nm,0.1s						
ZHN				Lg	Lg	22 00 31.3	
	18nm,0.2s						
SATY	**Saty**	**3.50**	**280**	*eP*	**Pb**	**21 59 49.7**	**-0.9**
	3.3nm,0.1s						
SATY				*eS*	**Sb**	**22 00 31.1**	**-2.1**
	32nm,0.2s						
SATY	**Saty**	**3.50**	**280**	Pg	**Pb**	**21 59 49.7**	**-0.9**
	3.3nm,0.1s						
SATY				Lg	Lg	22 00 31.1	
	32nm,0.2s						
BLB	**Baldybastay**	**3.71**	**296**	*eP*	**Pb**	**21 59 55.4**	**+1.2**
	10nm,0.4s						
BLB				*eS*	**Sb**	**22 00 41.4**	**+2.1**
	10nm,0.3s						
BLB	**Baldybastay**	**3.71**	**296**	Pg	**Pb**	**21 59 55.4**	**+1.2**
	10nm,0.4s						
BLB				Lg	Lg	22 00 41.4	
	10nm,0.3s						
KURS	**Kuram**	**3.74**	**286**	*eP*	**Pb**	**21 59 54.2**	**-0.5**
	3.2nm,0.2s						
KURS				*eS*	**Sb**	**22 00 40.3**	**+0.2**
	5.6nm,0.4s						
KURS	**Kuram**	**3.74**	**286**	Pg	**Pb**	**21 59 54.2**	**-0.5**
	3.2nm,0.2s						
KURS				Lg	Lg	22 00 40.3	
	5.6nm,0.4s						
MK31	**Makanchi Array**	**4.26**	**352**	⇑Pn	**Pg**	**22 00 10.2**	**+0.1**
	0.2nm,0.3s,baz=189,slow=12,SNR=33						
MK31				Lg	Lg	22 01 26.4	
MAKZ	**Makanchi**	**4.32**	**349**	⇑Pn	**Pg**	**22 00 10.1**	**-1.0**
	3.8nm,1.2s						
MAKZ				⇑Sn	**Sg**	**22 01 06.6**	**-0.3**
	3.5nm,0.9s						
MAKZ				⇑Lg	Lg	22 01 26.7	
	4.3nm,0.9s						
CHKK	**Chushkaly**	**4.66**	**288**	*eP*	**Pb**	**22 00 11.8**	**+1.6**
	1.5nm,0.4s						
CHKK				*eS*	**Sb**	**22 01 08.8**	**+2.4**
	5.7nm,0.2s						
CHKK	**Chushkaly**	**4.66**	**288**	Pg	**Pb**	**22 00 11.8**	**+1.6**
	1.5nm,0.4s						
CHKK				Lg	Lg	22 01 08.8	
	5.7nm,0.2s						
KUU	**Kurty**	**5.13**	**287**	*eP*	**Pb**	**22 00 19.7**	**+1.5**
	2.7nm,0.4s						
KUU				*eS*	**Sb**	**22 01 19.6**	**-0.2**
	8.8nm,0.3s						
KUU	**Kurty**	**5.13**	**287**	Pg	**Pb**	**22 00 19.7**	**+1.5**
	2.7nm,0.4s						
KUU				Lg	Lg	22 01 19.7	
	8.8nm,0.3s						
KST	**Kastek**	**5.29**	**278**	*eP*	**Pb**	**22 00 22.0**	**+1.0**
	1.7nm,0.3s						
KST				*eS*	**Sb**	**22 01 26.2**	**+1.6**
	9.7nm,0.7s						
KST	**Kastek**	**5.29**	**278**	Pg	**Pb**	**22 00 22.0**	**+1.0**
	1.7nm,0.3s						
KST				Lg	Lg	22 01 26.2	
	9.7nm,0.7s						
TKM2	**Tokmak 2**	**5.55**	**276**	⇑Pn	**Pn**	**22 00 10.9**	**-0.4**
	3.8nm,1.0s						
TKM2				⇑Lg	Lg	22 01 31.8	
	4.6nm,0.7s						
KSH	**Kashi**	**6.21**	**243**	P	**Pb**	**22 00 37.8**	**+1.2**
KSH				pP	Pg	22 00 42.5	-4.7
KSH				pmax	pmax		
	comp=Z,8.0nm,1.5s						

SOME ***25*** *22:49:49.1,40°.98N×79°.33E,h5km*
NNC ***25*** *22:49:50.3±1.5,40°.94N×79°.29E,h0km,mb3.6,mpv3.3,*
Error ellipse: s-maj=10.3km s-min=9.0km az=165.0
KRNET ***25*** *22:49:50.8±0.1,40°.97N×79°.22E,h21km,mb3.0*
ISC 25 22:49:48.6±2.6,40°.7N±0°.1×79°.38E±0°.07,h12km±14km,
n32,σ1s38/50,13C-4D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TARG	**Taragay, Kyrgy**	**1.56**	**311**	⇓*iP*	**Pn**	**22 50 15.4**	**-1.2**
	baz=6.0						
TARG				⇓*iS*	**Sn**	**22 50 33.6**	**-3.4**
	baz=6.0						
PRZ	**Przheval'sk**	**1.91**	**338**	⇑*eP*	**Pn**	**22 50 21.5**	**+0.3**
	baz=39						
PRZ				⇑*iS*	**Sn**	**22 50 43.8**	**-1.5**
	baz=39						
KDJ	**Kajisay**	**2.17**	**311**	⇓*eP*	**Pb**	**22 50 25.9**	**-2.1**
	baz=8.0						
KDJ				⇓*eS*	**Sn**	**22 50 51.6**	**-0.2**
	baz=8.0						
ANVS	**Anan'yevo**	**2.43**	**329**	⇑*iP*	**Pn**	**22 50 29.5**	**+1.2**
	baz=28						
ANVS				⇑*eS*	**Sn**	**22 50 57.8**	**-0.3**
	baz=28						
SATY	**Saty**	**2.45**	**343**	*eP*	**Pb**	**22 50 32.2**	**-0.5**
	16nm,0.8s						
SATY				*eS*	**Sb**	**22 51 03.5**	**+0.6**
	33nm,0.6s						
SATY	**Saty**	**2.45**	**343**	Pg	**Pb**	**22 50 31.7**	**-1.0**
	14nm,0.3s						
SATY				Lg	Lg	22 51 03.4	
	33nm,0.6s						
ZHN	**Zhinishke**	**2.55**	**344**	*eP*	**Pb**	**22 50 33.8**	**-0.5**
	12nm,0.2s						
ZHN				*eS*	**Sb**	**22 51 06.2**	**+0.5**
	49nm,0.1s						
ZHN	**Zhinishke**	**2.55**	**344**	Pg	**Pb**	**22 50 33.2**	**-1.2**
	12nm,0.2s						
ZHN				Lg	Lg	22 51 05.8	
	49nm,0.1s						
PDGK	**Podgornoye**	**2.61**	**2**	Pg	**Pb**	**22 50 33.2**	**-2.2**
	2.3nm,0.3s						
PDGK				Lg	Lg	22 51 05.7	
	18nm,0.5s						
PDGK	**Podgornoye**	**2.61**	**2**	⇑Pn	**Pn**	**22 50 32.1**	**+1.4**
	11nm,0.7s						
PDGK				⇑Lg	Lg	22 51 05.6	
	46nm,0.9s						
KPKS	**Kokpek**	**2.79**	**350**	*eP*	**Pb**	**22 50 38.1**	**-0.4**
	7.0nm,0.3s						
KPKS				*eS*	**Sb**	**22 51 13.7**	**+0.9**
	67nm,0.4s						
KPKS	**Kokpek**	**2.79**	**350**	Pg	**Pb**	**22 50 37.7**	**-0.9**
	19nm,0.2s						
KPKS				Lg	Lg	22 51 13.7	
	67nm,0.4s						
ULHL	**Ulahol**	**2.81**	**304**	⇑*eP*	**Pn**	**22 50 35.5**	**+1.9**
	baz=1.0						
ULHL				⇑*eS*	**Sn**	**22 51 07.7**	**+0.2**
	baz=1.0						
KTMS	**Ketmen**	**2.82**	**15**	*eP*	**Pg**	**22 50 42.2**	**-0.5**
	0.4nm,0.3s						
KTMS				*eS*	**Sg**	**22 51 20.8**	**+1.6**
	23nm,0.5s						
KTMS	**Ketmen**	**2.82**	**15**	Pg	**Pb**	**22 50 37.1**	**-1.9**
	1.8nm,0.3s						
KTMS				Lg	Lg	22 51 12.5	
	23nm,0.5s						
KURS	**Kuram**	**2.91**	**342**	*eP*	**Pb**	**22 50 39.0**	**-1.6**
	7.4nm,0.4s						
KURS				*eS*	**Sb**	**22 51 15.0**	**-1.1**
	14nm,0.4s						
KURS	**Kuram**	**2.91**	**342**	Pg	**Pb**	**22 50 38.2**	**-2.3**

NEIC ***25*** *22:51:20.1±1.5,58°27'S±0°06'×25°6'W±0°3,h35km±2km, mb4.4/11, Error ellipse: s-maj=29.8km s-min=8.6km az=261.0*

IDC ***25*** *22:51:27.0±10.0,58°26'S×25°88'W,h94km±86km,mb3.7/5, mbtmp4.0/5, Error ellipse: s-maj=33.4km s-min=28.2km az=97.0*

ISC 25 22:51:19.9±0.6,58°3S±0°1×25°7W±0°2,h35km,n32, σ0s77/29,mb4.4/9,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**14.41**	**156**	P	**Pn**	**22 54 40.1**	**-0.8**
VNA3	**Neumayer Olymp**	**14.60**	**159**	P	**Pn**	**22 54 42.3**	**-1.3**
VNA3				S	Sn	22 57 08.8	-1.5
SNAA	**Sanae**	**16.36**	**154**	P	**Pn**	**22 55 06.1**	**-0.4**
SNAA	**Sanae**	**16.36**	**154**		**Pn**	**22 55 06.1**	**-0.4**
TROLL	**Troll, Antarti**	**17.87**	**151**	P	**P**	**22 55 26.5**	**+0.6**
QSPA	**South Pole Qui**	**31.96**	**180**	P	**P**	**22 57 42.4**	**+0.3**
QSPA				IAmb	IAmb	22 57 43.9	
	comp=Z,7.6nm,1.5s						
PLCA	**Paso Flores**	**33.25**	**282**	P	**P**	**22 57 54.5**	**+1.0**
	comp=Z,0.8nm,0.5s,baz=126,slow=8.7,SNR=1.5						
	comp=Z,0.8nm,0.5s						
PLCA	**Paso Flores**	**33.25**	**282**	P	**P**	**22 57 54.1**	**+0.6**
BO01	**Tunca**	**38.37**	**288**	P	**P**	**22 58 38.6**	**+1.2**
BO01				IAmb	IAmb	22 58 57.9	
	comp=Z,20nm,1.4s						
MT09	**Talagante**	**38.81**	**289**	P	**P**	**22 58 40.9**	**-0.3**
MT09				IAmb	IAmb	22 59 00.1	
	comp=Z,30nm,1.5s						
VNDA	**Vanda**	**44.37**	**182**	P	**P**	**22 59 27.3**	**+1.2**
	comp=Z,0.6nm,0.7s,baz=183,slow=8.6,SNR=4.0						
	comp=Z,0.6nm,0.7s						
VNDA	**Vanda**	**44.37**	**182**	P	**P**	**22 59 27.0**	**+0.9**
VNDA				IAmb	IAmb	22 59 49.7	
	comp=Z,5.2nm,1.5s						
AF01	**San Pedro de A**	**46.52**	**301**	P	**P**	**22 59 42.9**	**-1.1**
H10N1	**ASCENSION HYDR**	**51.05**	**14**	T	T	23 56 06.3	
	baz=187,slow=76						
H10N3	**ASCENSION HYDR**	**51.05**	**14**	T	T	23 56 04.6	
	baz=187,slow=76						
H10N2	**ASCENSION HYDR**	**51.07**	**14**	T	T	23 56 07.2	
	baz=187,slow=76						
CASY	**Casey**	**51.52**	**159**	P	**P**	**23 00 21.5**	**+0.1**
LPAZ	**La Paz**	**52.35**	**305**	P	**P**	**23 00 28.3**	**-0.6**
	comp=Z,0.8nm,0.4s,baz=8.7,slow=5.4,SNR=4.9						
	comp=Z,0.8nm,0.4s						
DBIC	**Dimbokro**	**66.89**	**23**	P	**P**	**23 02 08.7**	**+0.5**
	comp=Z,9.7nm,1.2s,baz=175,slow=5.0,SNR=1.5						
	comp=Z,9.7nm,1.2s						
DBIC	**Dimbokro**	**66.89**	**23**	P	**P**	**23 02 08.4**	**+0.2**
TOA0	**Torodi Ar. Sit**	**74.62**	**28**	P	**P**	**23 02 55.6**	**+0.4**
TOA0				IAmb	IAmb	23 03 10.3	
	comp=Z,5.2nm,1.2s						
TORD	**Torodi Ar. Bea**	**74.62**	**28**	P	**P**	**23 02 56.4**	**+1.1**
	comp=Z,0.6nm,0.4s,baz=201,slow=6.2,SNR=14						
	comp=Z,0.6nm,0.4s						
TORD	**Torodi Ar. Bea**	**74.62**	**28**	P	**P**	**23 02 55.9**	**+0.7**
TORD				IAmb	IAmb	23 03 21.6	
	comp=Z,2.1nm,1.2s						
PDAR	**Pinedale Array**	**122.22**	**300**	PKP	**PKPdf**	**23 10 09.2**	**-1.0**
	comp=Z,0.2nm,0.5s,baz=128,slow=5.8,SNR=2.4						
PDAR	**Pinedale Array**	**122.22**	**300**		**PKPdf**	**23 10 09.6**	**-0.6**
FINES	**FINESS Array B**	**125.98**	**28**	PKP	**PKPdf**	**23 10 16.0**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=112,slow=5.1,SNR=5.9						
ARCES	**ARCESS Array B**	**132.71**	**22**	PKP	**PKPdf**	**23 10 28.7**	**-0.4**
	comp=Z,1.5nm,1.0s,baz=222,slow=1.2,SNR=1.7						
YKA	**Yellowknife Ar**	**138.38**	**316**	PKP	**PKPdf**	**23 10 39.1**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=122,slow=3.1,SNR=7.0						
SONM	**Songino Array**	**149.98**	**89**	PKPbc	**PKPbc**	**23 11 05.0**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=241,slow=1.7,SNR=4.2						
SONM	**Songino Array**	**149.98**	**89**		**PKPbc**	**23 11 04.8**	**-0.7**
ILAR	**Eielson Array**	**152.19**	**308**	PKPbc	**PKPbc**	**23 11 10.1**	**0.0**
	comp=Z,2.1nm,0.8s,baz=129,slow=2.5,SNR=11						
ILAR	**Eielson Array**	**152.19**	**308**		**PKPbc**	**23 11 10.2**	**+0.2**

NEIC 25 23:14:55.0±0.6,37°57N±0°03×97°81W±0°02,h3km±5km, mb_Lg2.6/48,Error ellipse: s-maj=4.1km s-min=1.8km az=194.0,Kansas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
R32A	**Long Quarter,**	**1.11**	**320**		Pg	23 15 14.5	-1.8
T35A	**Sooner Cattle**	**1.22**	**122**	Pg	Pg	23 15 17.1	-1.3
KSU1	**Kansas State U**	**1.80**	**31**		Pn	23 15 26.1	-0.9
KSU1				IAmb_Lg		23 15 56.2	
	comp=Z,34nm,0.8s						
CBKS	**Cedar Bluff**	**1.96**	**310**	Pn	Pn	23 15 29.2	0.0
OKCFA	**Oklahoma City**	**2.17**	**172**	IAmb_Lg		23 16 06.2	
	comp=Z,30nm,0.7s						
OKCSW	**OKLAHOMA CITY**	**2.18**	**172**		Pn	23 15 31.2	-0.9
TUL1	**Leonard**	**2.31**	**135**		Pn	23 15 33.0	-1.0
FNO	**Franklin**	**2.33**	**172**		Pn	23 15 33.2	-1.0
WMOK	**Wichita Mounta**	**2.93**	**196**		Pn	23 15 41.9	-0.6
X34A	**Smith Ranch, M**	**2.96**	**180**		Pn	23 15 42.8	-0.1
U38A	**Gravette**	**2.96**	**111**		Pn	23 15 43.4	+0.4
U38A				IAmb_Lg		23 16 36.7	
	comp=Z,24nm,0.8s						
N33A	**J Bar K, Exete**	**3.18**	**5**	Pn	Pn	23 15 44.3	-1.6
HHAR	**Hobbs**	**3.36**	**111**		Pn	23 15 48.6	+0.3
S39A	**Bolivar**	**3.56**	**87**		Pn	23 15 50.8	-0.4
X37A	**Clayton**	**3.57**	**146**		Pn	23 15 50.9	-0.3
X37A				IAmb_Lg		23 16 57.9	
	comp=Z,13nm,0.8s						
N35A	**Tabor**	**3.69**	**26**		Pn	23 15 52.8	-0.2
BGNE	**Belgrade**	**3.84**	**356**	Pn	Pn	23 15 54.6	-0.5
P38A	**Dawn**	**3.93**	**57**		Pn	23 15 55.7	-0.5
P38A				IAmb_Lg		23 17 00.7	
	comp=Z,11nm,0.8s						
W39A	**Magazine**	**4.02**	**125**	IAmb_Lg		23 17 11.3	
	comp=Z,18nm,0.7s						
KSCO	**Kaye Shedlock'**	**4.05**	**292**	IAmb_Lg		23 17 03.3	
	comp=Z,10nm,0.8s						
MGMO	**Mountain Grove**	**4.43**	**94**		Pn	23 16 03.1	0.0
MGMO				IAmb_Lg		23 17 15.5	
	comp=Z,17nm,0.8s						
R40A	**Maddies Statio**	**4.44**	**79**		Pn	23 16 02.8	-0.4
MIAR	**Mount Ida**	**4.57**	**130**		Pn	23 16 04.6	-0.3
MIAR				IAmb_Lg		23 17 29.7	
	comp=Z,9.6nm,0.8s						
OGNE	**Ogallala**	**4.70**	**317**	Pn	Pn	23 16 06.9	0.0
FCAR	**Ozark Folk Cen**	**4.86**	**108**	Pn	Pn	23 16 09.0	0.0
FCAR				IAmb_Lg		23 17 26.9	
	comp=Z,8.9nm,0.9s						
P40A	**Paris**	**4.92**	**65**	Pn	Pn	23 16 09.6	-0.2
WHAR	**Wooly Hollow**	**5.00**	**115**	Pn	Pn	23 16 10.2	-0.7
WHAR				IAmb_Lg		23 17 38.8	
	comp=Z,16nm,0.9s						
W41B	**Gary Mavity, V**	**5.08**	**116**	Pn	Pn	23 16 11.2	-0.9
W41B				IAmb_Lg		23 17 40.9	
	comp=Z,8.0nm,0.8s						
K31A	**O'Neill**	**5.10**	**352**	Pn	Pn	23 16 11.0	-1.3
CCM	**Cathedral Cave**	**5.22**	**83**	Pn	Pn	23 16 13.1	-0.8
CCM				IAmb_Lg		23 17 53.1	
	comp=Z,11nm,1.1s						
UALR	**University of**	**5.23**	**121**	IAmb_Lg		23 17 46.0	
	comp=Z,11nm,0.8s						
T25A	**Trinidad**	**5.28**	**267**	IAmb_Lg		23 17 51.6	
	comp=Z,7.9nm,0.8s						
SCIA	**State Center**	**5.60**	**38**	IAmb_Lg		23 17 56.8	
	comp=Z,11nm,0.7s						
435B	**Jarrell**	**6.77**	**178**	IAmb_Lg		23 18 44.9	
	comp=Z,7.8nm,0.7s						
S44A	**Carbondale**	**6.79**	**86**	IAmb_Lg		23 18 32.5	
	comp=Z,8.1nm,0.9s						
P43A	**Skaggs, Pawnee**	**6.81**	**70**	IAmb_Lg		23 18 47.3	
	comp=Z,7.0nm,0.8s						
SIUC	**Southern Illin**	**6.82**	**86**	IAmb_Lg		23 18 42.1	
	comp=Z,7.8nm,0.8s						
N23A	**Red Feather La**	**7.13**	**300**	IAmb_Lg		23 18 55.8	
	comp=Z,8.9nm,0.8s						
JFWS	**Jewell Farm**	**7.87**	**45**	IAmb_Lg		23 19 06.5	
	comp=Z,8.2nm,0.8s						
RWWY	**Rawlins**	**8.34**	**302**	IAmb_Lg		23 19 20.8	
	comp=Z,6.7nm,0.8s						

AEIC ***25*** *23:22:00±3.1,61°43N±0°02×140°54W±0°05,h16km±5km, Error ellipse: s-maj=3.9km s-min=2.3km az=122.0*

PGC ***25*** *23:22:01.9,61°43N×140°54W,h7km,ML3.4,ML3.6/15, 178km Wnw of Haines Jct., Yt Southern Yukon Territory, Canada*

NEIC ***25*** *23:22:01.4±2.3,61°43N±0°01×140°55W±0°03,h1km±10km, Error ellipse: s-maj=2.2km s-min=1.8km az=114.0*

ISC 25 23:22:01.7±0.8,61°44N±0°01×140°47W±0°02,h17km±6km, n259,σ1s77/280,Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK3	**Moose Creek**	**0.34**	**1**		**Pg**	**23 22 08.1**	**-1.0**
YUK3					**Sg**	**23 22 12.9**	**-1.1**
YUK3	**Moose Creek**	**0.34**	**1**	P	**Pg**	**23 22 08.1**	**-1.0**
YUK3				S	**Sg**	**23 22 12.9**	**-1.1**
YUK3	**Moose Creek**	**0.34**	**1**	P	**Pg**	**23 22 08.1**	**-1.0**
	baz=186						
YUK3				S	**Sg**	**23 22 12.9**	**-1.1**
	baz=186						
YUK8	**Steele Glacier**	**0.37**	**114**	P	**Pg**	**23 22 09.1**	**-0.5**
YUK8				S	**Sg**	**23 22 14.6**	**-0.3**
YUK8	**Steele Glacier**	**0.37**	**114**	P	**Pg**	**23 22 09.0**	**-0.5**
	baz=292						
YUK8				S	**Sg**	**23 22 15.0**	**+0.2**
	baz=292						
YUK2	**White River**	**0.40**	**333**		**Pg**	**23 22 08.7**	**-1.1**
YUK2					**Sg**	**23 22 14.3**	**-1.2**
YUK2	**White River**	**0.40**	**333**	P	**Pg**	**23 22 08.8**	**-1.1**
YUK2				S	**Sg**	**23 22 14.5**	**-1.0**
CTGM	**Chitina Glacie**	**0.63**	**222**		**Pg**	**23 22 12.7**	**-1.4**
CTGM					**Sg**	**23 22 21.5**	**-1.1**
CTGM	**Chitina Glacie**	**0.63**	**222**	IAML		23 22 21.8	
	comp=E,2μm,0.4s						
CTGM				IAML		23 22 22.6	
	comp=N,2μm,0.5s						
CTGM	**Chitina Glacie**	**0.63**	**222**	P	**Pg**	**23 22 12.8**	**-1.4**
CTGM				S	**Sg**	**23 22 21.4**	**-1.2**
CTG	**Chitna Glacier**	**0.63**	**222**	P	**Pg**	**23 22 12.7**	**-1.5**
	baz=39						
CTG				S	**Sg**	**23 22 21.5**	**-1.2**
	baz=39						
LOGN	**Logan Glacier**	**0.67**	**203**		**Pg**	**23 22 13.5**	**-1.3**
LOGN					**Sg**	**23 22 22.9**	**-0.8**
LOGN	**Logan Glacier**	**0.67**	**203**	P	**Pg**	**23 22 13.6**	**-1.3**
LOGN				S	**Sg**	**23 22 22.7**	**-1.0**
BARN	**Barnard Glacie**	**0.69**	**237**		**Pg**	**23 22 13.6**	**-1.7**
BARN					**Sg**	**23 22 23.0**	**-1.5**
BARN	**Barnard Glacie**	**0.69**	**237**	IAML		23 22 23.5	
	comp=E,4μm,0.5s						
YUK4	**Talbot Arm**	**0.88**	**95**	P	**Pb**	**23 22 19.1**	**+0.4**
YUK4	**Talbot Arm**	**0.88**	**95**	P	**Pb**	**23 22 19.0**	**+0.4**
	baz=271						
GRNC	**Granite Creek**	**0.94**	**222**		**Pg**	**23 22 18.4**	**-1.6**
GRNC					**Sg**	**23 22 31.4**	**-1.1**
GRNC	**Granite Creek**	**0.94**	**222**	P	**Pg**	**23 22 18.3**	**-1.7**
GRNC				S	**Sg**	**23 22 31.2**	**-1.3**
BALM	**Baldy**	**0.99**	**247**		**Pg**	**23 22 18.8**	**-2.1**
BALM					**Sg**	**23 22 32.4**	**-1.6**
BALM	**Baldy**	**0.99**	**247**	P	**Pg**	**23 22 19.0**	**-2.0**
BALM				S	**Sg**	**23 22 32.0**	**-2.0**
PTPK	**Patty Peak**	**1.00**	**256**		**Pg**	**23 22 18.9**	**-2.1**
PTPK	**Patty Peak**	**1.00**	**256**	P	**Pg**	**23 22 18.9**	**-2.1**
PTPK				S	**Sg**	**23 22 32.1**	**-2.0**
BVCY	**Beaver Creek**	**1.00**	**349**		**Pg**	**23 22 19.6**	**-1.5**
BVCY	**Beaver Creek**	**1.00**	**349**	P	**Pg**	**23 22 19.6**	**-1.5**
BVCY				S	**Sg**	**23 22 33.6**	**-0.6**
BVCY	**Beaver Creek**	**1.00**	**349**	P	**Pg**	**23 22 19.6**	**-1.5**
	baz=171						
KIAG	**Kiagna River**	**1.05**	**242**		**Pg**	**23 22 19.9**	**-2.1**
KIAG	**Kiagna River**	**1.05**	**242**	P	**Pg**	**23 22 20.0**	**-2.1**
KIAG				S	**Sg**	**23 22 33.7**	**-2.2**
TABL	**Table Mountain**	**1.05**	**199**		**Pg**	**23 22 20.5**	**-1.6**
TABL	**Table Mountain**	**1.05**	**199**	IAML		23 22 38.0	
	comp=N,1μm,0.5s						
TABL	**Table Mountain**	**1.05**	**199**	P	**Pg**	**23 22 20.4**	**-1.6**
TABL				S	**Sg**	**23 22 34.4**	**-1.4**
YUK6	**Outpost Mounta**	**1.13**	**115**		**Pg**	**23 22 22.4**	**-1.2**
YUK6					**Sb**	**23 22 38.8**	**+1.4**
YUK6	**Outpost Mounta**	**1.13**	**115**	P	**Pg**	**23 22 22.6**	**-1.0**
YUK6				S	**Sb**	**23 22 38.6**	**+1.2**
YUK6	**Outpost Mounta**	**1.13**	**115**	P	**Pg**	**23 22 22.4**	**-1.2**
	baz=296						
YUK6				S	**Sb**	**23 22 38.8**	**+1.4**
	baz=296						
M27K	**Edge Creek, AK**	**1.14**	**325**		**Pg**	**23 22 21.6**	**-2.2**
M27K	**Edge Creek, AK**	**1.14**	**325**	IAML		23 22 42.2	
	comp=N,1μm,0.6s						
M27K	**Edge Creek, AK**	**1.14**	**325**	P	**Pg**	**23 22 21.6**	**-2.2**
	baz=145						
MCARA	**McCarthy VSAT**	**1.23**	**269**		**Pg**	**23 22 23.4**	**-2.1**
MCARA	**McCarthy VSAT**	**1.23**	**269**	P	**Pg**	**23 22 23.3**	**-2.1**
	baz=86						
BAGL	**Bagley Icefiel**	**1.23**	**221**		**Pg**	**23 22 23.4**	**-2.1**
BAGL					**Sg**	**23 22 40.1**	**-1.5**
ISLE	**Juniper Island**	**1.24**	**228**		**Pg**	**23 22 23.5**	**-2.1**
ISLE					**Sg**	**23 22 39.8**	**-2.0**
YAH	**Yahtse**	**1.24**	**211**		**Pg**	**23 22 23.8**	**-1.9**
YAH	**Yahtse**	**1.24**	**211**	IAML		23 22 48.8	
	comp=N,791nm,0.3s						
YAH				IAML		23 22 48.9	
	comp=E,1μm,0.4s						
YUK5	**Granite Creek**	**1.29**	**102**	P	**Pg**	**23 22 25.8**	**-0.9**
YUK5				S	**Sb**	**23 22 44.0**	**+2.0**
SAMH	**Samovar Hills**	**1.32**	**187**		**Pg**	**23 22 25.9**	**-1.2**
SAMH	**Samovar Hills**	**1.32**	**187**	P	**Pg**	**23 22 26.0**	**-1.2**
TGL	**Tana Glacier**	**1.33**	**240**		**Pg**	**23 22 24.9**	**-2.6**
TGL	**Tana Glacier**	**1.33**	**240**	IAML		23 22 43.0	
	comp=N,1μm,0.7s						
PCA	**Pinnacle**	**1.35**	**176**		**Pg**	**23 22 26.6**	**-1.1**
PCA	**Pinnacle**	**1.35**	**176**	Pn	**Pg**	**23 22 26.6**	**-1.1**
PCA				Sg	**Sg**	**23 22 43.6**	**-1.6**
PINM	**Pinnacle**	**1.35**	**175**	P	**Pg**	**23 22 26.5**	**-1.1**
	baz=354						
CHX	**Chaix Hills**	**1.41**	**193**		**Pn**	**23 22 27.8**	**+1.1**
CRQE	**Cirque**	**1.45**	**243**	P	**Pn**	**23 22 26.7**	**-0.5**
	baz=60						
YUK7	**Dusty Glacier**	**1.45**	**128**		**Pn**	**23 22 28.9**	**+1.5**
YUK7	**Dusty Glacier**	**1.45**	**128**	Pn	**Pn**	**23 22 28.5**	**+1.2**
YUK7				Sg	**Sg**	**23 22 47.7**	**-0.9**
VRDI	**Verde Repeater**	**1.46**	**263**		**Pn**	**23 22 26.9**	**-0.4**
VRDI	**Verde Repeater**	**1.46**	**263**	IAML		23 22 48.6	
	comp=N,682nm,0.8s						
MESA	**MESA**	**1.46**	**211**		**Pn**	**23 22 28.1**	**+0.8**
MESA	**MESA**	**1.46**	**211**	Pn	**Pn**	**23 22 28.6**	**+1.2**
MESA				Sg	**Sg**	**23 22 48.1**	**-0.6**
MESA	**MESA**	**1.46**	**211**	P	**Pn**	**23 22 28.1**	**+0.8**
	baz=28						
CRQM	**Cirque**	**1.47**	**244**		**Pn**	**23 22 26.7**	**-0.8**
WAX	**Waxell Ridge**	**1.53**	**231**		**Pn**	**23 22 28.5**	**+0.3**
M26K	**Nabesna, AK**	**1.54**	**310**		**Pn**	**23 22 28.8**	**+0.4**
M26K	**Nabesna, AK**	**1.54**	**310**	IAML		23 22 52.6	
	comp=E,496nm,0.7s						
M26K				IAML		23 22 53.4	
	comp=N,522nm,0.6s						
M26K	**Nabesna, AK**	**1.54**	**310**	P	**Pn**	**23 22 28.8**	**+0.4**
	baz=129						
BCPM	**Bancas Point**	**1.54**	**164**		**Pn**	**23 22 29.6**	**+1.3**
BCPM	**Bancas Point**	**1.54**	**164**	IAML		23 22 53.1	
	comp=N,748nm,0.9s						
BCPM				IAML		23 22 58.0	
	comp=E,669nm,0.7s						
HYT	**Haines Junctio**	**1.56**	**112**		**Pn**	**23 22 29.9**	**+1.2**
HYT	**Haines Junctio**	**1.56**	**112**	IAML		23 22 52.3	
	comp=E,493nm,0.7s						
HYT	**Haines Junctio**	**1.56**	**112**	Pn	**Pn**	**23 22 30.2**	**+1.5**
HYT				Sg	**Sg**	**23 22 51.4**	**-0.7**
HYT	**Haines Junctio**	**1.56**	**112**	P	**Pn**	**23 22 29.9**	**+1.2**
	baz=294						
GLB	**Gilahina Butte**	**1.61**	**272**		**Pn**	**23 22 29.5**	**+0.2**
N30M	**Aishikik Lake**	**1.62**	**88**		**Pn**	**23 22 30.6**	**+1.0**
N30M	**Aishikik Lake**	**1.62**	**88**	P	**Pn**	**23 22 30.6**	**+1.0**
	baz=271						
KHIT	**Khitrov Hills**	**1.68**	**235**		**Pn**	**23 22 30.9**	**+0.5**
SNH	**Sunshine Point**	**1.71**	**224**		**Pn**	**23 22 32.2**	**+1.4**
SNH	**Sunshine Point**	**1.71**	**224**	IAML		23 22 59.2	
	comp=E,852nm,0.3s						
SNH				IAML		23 23 00.8	
	comp=N,422nm,0.6s						
BC03		**1.75**	**340**		**Pn**	**23 22 31.9**	**+0.7**
BCAR	**Beaver Creek A**	**1.75**	**340**	Pn	**Pn**	**23 22 31.4**	**+0.2**
L27K	**Beaver Creek,**	**1.75**	**339**		**Pn**	**23 22 31.8**	**+0.5**
L27K	**Beaver Creek,**	**1.75**	**339**	IAML		23 22 57.1	
	comp=N,381nm,1.1s						
L27K				IAML		23 22 57.1	
	comp=E,706nm,0.7s						
L27K	**Beaver Creek,**	**1.75**	**339**	P	**Pn**	**23 22 31.8**	**+0.5**
	baz=159						
PNL	**Peninsula**	**1.85**	**163**		**Pn**	**23 22 34.3**	**+1.7**
PNL	**Peninsula**	**1.85**	**163**	Pn	**Pn**	**23 22 34.3**	**+1.7**
PNL				Sg	**Sg**	**23 23 00.1**	**-1.1**
PNL	**Peninsula**	**1.85**	**163**	P	**Pn**	**23 22 34.3**	**+1.7**
	baz=343						
N25K	**Chitina, Valde**	**1.99**	**277**		**Pn**	**23 22 36.1**	**+1.5**
N25K	**Chitina, Valde**	**1.99**	**277**	P	**Pn**	**23 22 36.1**	**+1.5**
	baz=93						
BMRM	**Bremner River**	**2.06**	**259**		**Pn**	**23 22 36.5**	**+1.0**
BMRM	**Bremner River**	**2.06**	**259**	IAML		23 23 10.5	
	comp=E,476nm,0.7s						
BMRM	**Bremner River**	**2.06**	**259**	P	**Pn**	**23 22 36.5**	**+1.0**
	baz=75						
M30M	**Minto, Yukon**	**2.08**	**55**		**Pn**	**23 22 36.6**	**+0.9**
M30M	**Minto, Yukon**	**2.08**	**55**	Pg	**Pb**	**23 22 40.0**	**+1.1**
M30M				Sg	**Sg**	**23 23 07.5**	**-1.0**
M30M	**Minto, Yukon**	**2.08**	**55**	P	**Pn**	**23 22 36.6**	**+0.9**
	baz=239						
L26K	**Log Cabin Wild**	**2.09**	**321**		**Pn**	**23 22 36.8**	**+0.8**
L26K	**Log Cabin Wild**	**2.09**	**321**	P	**Pn**	**23 22 36.7**	**+0.8**
	baz=139						
SUCK	**Suckling Hills**	**2.12**	**231**		**Pb**	**23 22 40.0**	**+0.4**
SUCK				IAML		23 23 12.6	
	comp=E,505nm,1.1s						
SUCK				IAML		23 23 23.1	
	comp=N,351nm,0.9s						
MENT	**Mentasta**	**2.15**	**316**		**Pn**	**23 22 37.8**	**+1.1**
MENT	**Mentasta**	**2.15**	**316**	IAML		23 23 13.9	
	comp=E,416nm,0.7s						
MENT				IAML		23 23 20.1	
	comp=N,333nm,0.6s						
HMT	**Hamilton**	**2.16**	**241**		**Pn**	**23 22 39.9**	**+3.0**
P30M	**Million Dollar**	**2.17**	**126**	P	**Pn**	**23 22 39.1**	**+2.1**
	baz=308						
O30N	**Mendenhall**	**2.23**	**106**		**Pn**	**23 22 39.4**	**+1.5**
O30N	**Mendenhall**	**2.23**	**106**	P	**Pn**	**23 22 39.4**	**+1.5**
	baz=289						
N31M	**Braeburn, Yuko**	**2.25**	**87**		**Pn**	**23 22 40.6**	**+2.5**
N31M	**Braeburn, Yuko**	**2.25**	**87**	IAML		23 23 16.6	
	comp=N,410nm,0.9s						
N31M				IAML		23 23 17.4	
	comp=E,374nm,0.7s						
N31M	**Braeburn, Yuko**	**2.25**	**87**	Pn	**Pn**	**23 22 39.4**	**+1.2**
N31M				Sg	**Sg**	**23 23 12.6**	**-1.5**
N31M	**Braeburn, Yuko**	**2.25**	**87**	P	**Pn**	**23 22 40.6**	**+2.5**
	baz=271						
HARP	**HAARP**	**2.42**	**296**		**Pn**	**23 22 42.2**	**+1.8**
HARP	**HAARP**	**2.42**	**296**	P	**Pn**	**23 22 42.2**	**+1.8**
	baz=112						
DIV	**Divide**	**2.58**	**266**		**Pn**	**23 22 45.0**	**+2.3**
DIV	**Divide**	**2.58**	**266**	Pn	**Pn**	**23 22 45.1**	**+2.4**
DIV				Sg	**Sb**	**23 23 20.0**	**+1.1**
KLU	**Klutina**	**2.62**	**274**		**Pn**	**23 22 46.0**	**+2.7**
KLU	**Klutina**	**2.62**	**274**	IAML		23 23 23.7	
	comp=E,271nm,0.7s						
KLU				IAML		23 23 25.4	
	comp=N,213nm,0.9s						
KLU	**Klutina**	**2.62**	**274**	P	**Pn**	**23 22 46.0**	**+2.7**
	baz=89						
DAWY	**Dawson**	**2.69**	**10**		**Pn**	**23 22 45.2**	**+1.1**
DAWY	**Dawson**	**2.69**	**10**	IAML		23 23 26.1	
	comp=E,302nm,0.7s						
DAWY				IAML		23 23 29.1	
	comp=N,327nm,0.8s						
DAWY	**Dawson**	**2.69**	**10**	Pn	**Pn**	**23 22 45.4**	**+1.3**
DAWY				Sg	**Sb**	**23 23 24.9**	**+2.9**
DAWY	**Dawson**	**2.69**	**10**	P	**Pn**	**23 22 45.2**	**+1.1**
	baz=192						
K27K	**Chicken**	**2.71**	**345**		**Pn**	**23 22 45.7**	**+1.3**
K27K	**Chicken**	**2.71**	**345**	IAML		23 23 27.5	
	comp=E,196nm,1.2s						
K27K				IAML		23 23 31.6	
	comp=N,147nm,0.8s						
K27K	**Chicken**	**2.71**	**345**	P	**Pn**	**23 22 45.7**	**+1.3**
	baz=164						
EYAK	**Cordova Ski Ar**	**2.72**	**253**		**Pn**	**23 22 47.4**	**+2.9**
EYAK	**Cordova Ski Ar**	**2.72**	**253**	P	**Pn**	**23 22 47.2**	**+2.7**
	baz=68						
DOT	**Dot Lake**	**2.78**	**325**		**Pn**	**23 22 45.9**	**+0.5**
DOT	**Dot Lake**	**2.78**	**325**	Pn	**Pn**	**23 22 45.6**	**+0.2**
DOT				Sg	**Sb**	**23 23 26.8**	**+2.3**
M24K	**Tolsona, Glenn**	**2.80**	**286**		**Pn**	**23 22 48.0**	**+2.4**
M24K				IAML		23 23 42.2	
	comp=N,141nm,1.4s						
PAX	**Paxson**	**2.81**	**305**		**Pn**	**23 22 47.3**	**+1.5**
PAX	**Paxson**	**2.81**	**305**	P	**Pn**	**23 22 47.3**	**+1.5**
	baz=122						
WHY	**Whitehorse**	**2.83**	**104**		**Pn**	**23 22 48.0**	**+1.9**
WHY	**Whitehorse**	**2.83**	**104**	IAML		23 23

	baz=143						
P33M	**Teslin, Yukon**	**3.94**	**105**		**Pn**	**23 23 02.3**	**+0.9**
P33M	**Teslin, Yukon**	**3.94**	**105**	IAML		23 24 14.2	
	comp=E,51nm,0.8s						
P33M				IAML		23 24 22.4	
	comp=N,57nm,0.8s						
P33M	**Teslin, Yukon**	**3.94**	**105**	Pn	**Pn**	**23 23 02.4**	**+1.0**
P33M				Sg	**Sg**	**23 24 04.9**	**-3.2**
P33M	**Teslin, Yukon**	**3.94**	**105**	P	**Pn**	**23 23 02.3**	**+0.9**
	baz=291						
BESE	**Bessie Mountai**	**4.02**	**133**		**Pn**	**23 23 04.1**	**+1.7**
BESE	**Bessie Mountai**	**4.02**	**133**	Pn	**Pn**	**23 23 03.7**	**+1.3**
BESE				Sg	**Sg**	**23 24 07.4**	**-3.1**
WAT1	**Susitna Watana**	**4.04**	**294**		**Pn**	**23 23 05.2**	**+2.5**
WAT1	**Susitna Watana**	**4.04**	**294**	P	**Pn**	**23 23 05.2**	**+2.5**
	baz=107						
GHO	**Glory Hole Cre**	**4.05**	**278**		**Pn**	**23 23 05.5**	**+2.6**
GHO	**Glory Hole Cre**	**4.05**	**278**	IAML		23 24 11.4	
	comp=N,68nm,0.8s						
GHO				IAML		23 24 11.4	
	comp=E,73nm,0.8s						
I29M	**Ogilvie Camp,**	**4.06**	**13**	Pn	**Pn**	**23 23 04.5**	**+1.6**
I29M				Sg	**Sg**	**23 24 08.2**	**-3.7**
I26K	**Coal Creek Min**	**4.07**	**344**		**Pn**	**23 23 04.9**	**+1.9**
I26K	**Coal Creek Min**	**4.07**	**344**	P	**Pn**	**23 23 04.9**	**+1.9**
	baz=162						
PMR	**Palmer**	**4.15**	**276**		**Pn**	**23 23 05.9**	**+1.7**
HDA	**Harding Lake**	**4.21**	**318**		**Pn**	**23 23 05.0**	**+0.1**
HDA				IAML		23 24 17.4	
	comp=E,65nm,0.8s						
HDA				IAML		23 24 20.8	
	comp=N,50nm,0.7s						
RND	**Reindeer**	**4.37**	**301**	Pn	**Pn**	**23 23 11.1**	**+3.8**
JIS	**Juneau Island**	**4.41**	**133**		**Pn**	**23 23 09.6**	**+1.9**
JIS				IAML		23 24 25.4	
	comp=E,50nm,1.1s						
JIS				IAML		23 24 26.9	
	comp=N,58nm,0.8s						
IL31		**4.44**	**322**		**Pn**	**23 23 07.4**	**-0.7**
ILAR	**Eielson Array**	**4.44**	**322**		**Pn**	**23 23 08.2**	**+0.1**
RC01	**Rabbit Creek A**	**4.49**	**270**		**Pn**	**23 23 10.0**	**+1.2**
RC01				IAML		23 24 19.5	
	comp=N,52nm,0.9s						
MMPY	**Sheldon Lake,**	**4.50**	**71**	Pn	**Pn**	**23 23 10.0**	**+1.0**
MMPY				Sn	**Sn**	**23 24 00.9**	**+0.1**
MMPY				Sg	**Sg**	**23 24 22.1**	**-3.8**
SEW	**Seward**	**4.60**	**257**	Pn	**Pn**	**23 23 10.0**	**-0.3**
O22K	**Cooper Landing**	**4.61**	**262**	Pn	**Pn**	**23 23 12.0**	**+1.5**
WRH	**Wood River Hil**	**4.62**	**315**		**Pn**	**23 23 12.0**	**+1.3**
CCB	**Clear Creek Bu**	**4.64**	**317**		**Pn**	**23 23 10.0**	**-0.9**
CCB				IAML		23 24 29.1	
	comp=N,32nm,0.8s						
CUT	**Chulitna**	**4.73**	**286**		**Pn**	**23 23 14.6**	**+2.4**
SLKM	**Skilak Lake**	**4.84**	**263**		**Pn**	**23 23 16.0**	**+2.3**
POKR	**Poker Plat Res**	**4.85**	**323**	Pn	**Pn**	**23 23 14.9**	**+1.1**
POKR				IAML		23 24 36.9	
	comp=E,43nm,0.6s						
POKR				IAML		23 24 37.9	
	comp=N,46nm,0.8s						
SUA	**Susitna One**	**4.93**	**275**		**Pn**	**23 23 17.4**	**+2.4**
SUA				IAML		23 24 39.6	
	comp=E,36nm,0.9s						
SUA				IAML		23 24 46.5	
	comp=N,26nm,1.3s						
SUA	**Susitna One**	**4.93**	**275**	P	**Pn**	**23 23 17.0**	**+1.9**
	baz=86						
BWN	**Browne**	**4.96**	**308**		**Pn**	**23 23 17.6**	**+2.4**
MDM	**Murphy Dome**	**4.98**	**319**		**Pn**	**23 23 15.1**	**-0.5**
MDM				IAML		23 24 41.5	
	comp=E,29nm,1.0s						
MDM				IAML		23 24 49.6	
	comp=N,27nm,0.9s						
TRF	**Thorofare Moun**	**4.99**	**298**		**Pn**	**23 23 18.8**	**+3.0**
TRF				IAML		23 24 52.2	
	comp=E,28nm,1.8s						
TRF				IAML		23 24 54.4	
	comp=N,31nm,2.2s						
TRF	**Thorofare Moun**	**4.99**	**298**	P	**Pn**	**23 23 18.3**	**+2.4**
	baz=110						
NEA2	**Nenana**	**5.04**	**313**		**Pn**	**23 23 18.4**	**+2.1**
EPYK	**Eagle Plains**	**5.22**	**17**	Pn	**Pn**	**23 23 18.7**	**-0.2**
EPYK	**Eagle Plains**	**5.22**	**17**	Sn	**Sn**	**23 24 18.3**	**-0.4**
KTH	**Kantishna Hill**	**5.29**	**298**		**Pn**	**23 23 22.8**	**+2.9**
KTH				IAML		23 24 56.9	
	comp=E,29nm,1.3s						
KTH				IAML		23 25 14.1	
	comp=N,29nm,1.2s						
SKT	**Skwentna**	**5.29**	**281**		**Pn**	**23 23 21.4**	**+1.5**
SKT				IAML		23 24 50.8	
	comp=E,22nm,1.4s						
SKT				IAML		23 25 01.7	
	comp=N,20nm,0.9s						
SKT	**Skwentna**	**5.29**	**281**	P	**Pn**	**23 23 22.3**	**+2.4**
	baz=91						
BRSE	**Bradley Lake S**	**5.34**	**256**		**Pn**	**23 23 22.2**	**+1.6**
BRSE	**Bradley Lake S**	**5.34**	**256**	P	**Pn**	**23 23 22.2**	**+1.6**
	baz=67						
BRLK	**Bradley Lake**	**5.40**	**257**	Pn	**Pn**	**23 23 21.6**	**+0.2**
BRLK				IAML		23 24 42.4	
	comp=E,19nm,2.3s						
STLK	**Strandline Lak**	**5.45**	**276**		**Pn**	**23 23 23.2**	**+1.1**
I23K	**Minto, Yukon-K**	**5.47**	**317**		**Pn**	**23 23 24.2**	**+1.9**
H24K	**Noodor Dome**	**5.51**	**326**		**Pn**	**23 23 23.9**	**+1.0**
H24K	**Noodor Dome**	**5.51**	**326**	P	**Pn**	**23 23 24.0**	**+1.0**
	baz=140						
BPAW	**Bear Paw Mtn.**	**5.52**	**304**		**Pn**	**23 23 25.0**	**+2.0**
BPAW	**Bear Paw Mtn.**	**5.52**	**304**	P	**Pn**	**23 23 24.5**	**+1.5**
	baz=114						
SPU	**Mount Spurr**	**5.59**	**272**	Pn	**Pn**	**23 23 26.3**	**+2.3**
CNPM	**China Poot**	**5.66**	**255**		**Pn**	**23 23 26.3**	**+1.4**
PPLA	**Purkeypile**	**5.69**	**290**		**Pn**	**23 23 27.4**	**+2.0**
PPLA	**Purkeypile**	**5.69**	**290**	P	**Pn**	**23 23 26.9**	**+1.6**
	baz=100						
CAST	**Castle Rocks**	**5.75**	**295**		**Pn**	**23 23 28.7**	**+2.6**
TGTN	**Hyland Airport**	**5.84**	**84**	Sg	**Sg**	**23 25 03.4**	**-5.7**
MLY	**Manley**	**5.88**	**312**		**Pn**	**23 23 29.7**	**+1.8**
MLY	**Manley**	**5.88**	**312**	P	**Pn**	**23 23 29.1**	**+1.2**
	baz=123						
H23K	**Yukon River**	**5.98**	**321**		**Pn**	**23 23 30.3**	**+1.1**
H23K	**Yukon River**	**5.98**	**321**	P	**Pn**	**23 23 30.4**	**+1.2**
	baz=134						
DLBC	**Dease Lake**	**6.05**	**115**		**Pn**	**23 23 33.8**	**+3.6**
DLBC	**Dease Lake**	**6.05**	**115**	Sg	**Sg**	**23 25 09.5**	**-6.0**
M23K	**Styx River**	**6.05**	**280**	Pn	**Pn**	**23 23 32.2**	**+1.8**
BM03	**Burnt Mountain**	**6.27**	**345**		**Pn**	**23 23 35.0**	**+1.7**
BMAR	**Burnt Mountain**	**6.28**	**345**	Pn	**Pn**	**23 23 34.8**	**+1.5**
I21K	**Tanana**	**6.40**	**311**		**Pn**	**23 23 37.6**	**+2.5**
WRAK	**Wrangell Islan**	**6.55**	**137**	Pn	**Pn**	**23 23 39.3**	**+2.2**
K20K	**Telida**	**6.61**	**293**		**Pn**	**23 23 39.6**	**+1.7**
K20K	**Telida**	**6.61**	**293**	P	**Pn**	**23 23 38.6**	**+0.7**
	baz=101						
M19K	**Big River Lodg**	**6.65**	**280**	Pn	**Pn**	**23 23 40.0**	**+1.6**
N19K	**Bonanza Creek**	**6.82**	**271**	Pn	**Pn**	**23 23 42.3**	**+1.4**
J20K	**Nowinta River**	**6.84**	**300**		**Pn**	**23 23 43.7**	**+2.6**
J20K	**Nowinta River**	**6.84**	**300**	P	**Pn**	**23 23 42.9**	**+1.8**
	baz=108						
L19K	**White Mountain**	**6.86**	**283**		**Pn**	**23 23 42.3**	**+0.9**
H21K	**Melozitna Rive**	**6.95**	**313**		**Pn**	**23 23 45.0**	**+2.5**
H21K	**Melozitna Rive**	**6.95**	**313**	P	**Pn**	**23 23 44.0**	**+1.5**
	baz=122						
Q19K	**Cape Douglas,**	**7.04**	**255**		**Pn**	**23 23 46.4**	**+2.6**
Q19K	**Cape Douglas,**	**7.04**	**255**	P	**Pn**	**23 23 45.4**	**+1.6**
	baz=63						
KDAK	**Kodiak Island**	**7.15**	**245**	Pn	**Pn**	**23 23 47.4**	**+2.0**
COLD	**Coldfoot**	**7.18**	**328**		**Pn**	**23 23 45.5**	**-0.2**
SVW2	**Sparrevohn**	**7.29**	**274**	Pn	**Pn**	**23 23 48.8**	**+1.4**
O18K	**Koktuh Hills**	**7.42**	**264**	Pn	**Pn**	**23 23 50.7**	**+1.7**
TTA	**Tatalina**	**7.43**	**288**		**Pn**	**23 23 50.1**	**+0.9**
TT01	**Tatalina**	**7.43**	**288**		**Pn**	**23 23 50.2**	**+1.1**
IM03		**7.45**	**313**		**Pn**	**23 23 50.6**	**+1.3**
IMAR	**Indian Mountai**	**7.45**	**313**	Pn	**Pn**	**23 23 50.7**	**+1.3**
INK	**Inuvik**	**7.50**	**20**	Sn	**Sn**	**23 25 10.2**	**-4.3**
N18K	**Kilae Creek**	**7.52**	**271**	Pn	**Pn**	**23 23 50.5**	**+0.1**
P18K	**Big Mountain,**	**7.59**	**261**	Pn	**Pn**	**23 23 53.3**	**+1.9**
TOLK	**Toolik Lake Re**	**8.18**	**336**		**Pn**	**23 24 02.0**	**+2.5**
TOLK	**Toolik Lake Re**	**8.18**	**336**	P	**Pn**	**23 24 00.6**	**+1.1**
	baz=148						
FNBB	**Fort Nelson**	**9.06**	**99**	Pn	**Pn**	**23 24 12.4**	**+0.9**
C36M	**Paulatuk**	**10.44**	**34**	Pn	**Pn**	**23 24 30.3**	**+0.1**

*IDC **25** 23:40:03.1±1.9,2.08S×89.78E, h0km, mb3.6/5, mbtmp3.8/6, ML4.6/1, Error ellipse: s-maj=56.6km s-min=30.0km az=50.0*

*NEIC **25** 23:40:05.2±1.7,2.2S±0.1×89.5E±0.1, h10km±1km, mb4.1/5, Error ellipse: s-maj=22.9km s-min=15.7km az=209.0*

ISC 25 23:40:04.6±0.8, 2.1S±0.1×89.6E±0.1, h10km, n21, σ1§17/18, mb3.8/7, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSI	**Gunungsitoli**	**8.68**	**67**	Pn	**Pn**	**23 42 10.7**	**+0.3**
PALK	**Pallekele**	**12.88**	**317**	Pn	**Pn**	**23 43 08.0**	**+0.1**
	2.9nm,0.3s,baz=248,slow=12,SNR=22						
PALK				Sn	Sn	23 45 20.7	-11
	1.6nm,0.3s,baz=152,slow=17,SNR=1.7						
	6.5nm,0.3s						
PALK	**Pallekele**	**12.88**	**317**		**Pn**	**23 43 07.5**	**-0.4**
KULM	**Kulim**	**13.28**	**56**	Pn	**Pn**	**23 43 15.0**	**+1.7**
SRIT	**Nakonsritamara**	**14.59**	**43**	Pn	**Pn**	**23 43 32.9**	**+1.5**
H08S2	**Diego Garcia H**	**17.89**	**252**	T	T	00 02 32.2	
	baz=72,slow=74						
H08S3	**Diego Garcia H**	**17.90**	**252**	T	T	00 02 19.4	
	baz=72,slow=74						
H08S1	**Diego Garcia H**	**17.91**	**252**	T	T	00 02 19.6	
	baz=72,slow=74						
CMAR	**Chiang Mai Arr**	**22.43**	**24**	P	**P**	**23 45 00.9**	**-2.9**
	0.4nm,0.3s,baz=211,slow=10,SNR=2.1						
	0.4nm,0.3s						
WRA	**Warramunga Arr**	**47.14**	**115**	P	**P**	**23 48 36.0**	**-1.6**
	0.7nm,0.8s,baz=288,slow=8.8,SNR=4.0						
	0.7nm,0.8s						
WRA	**Warramunga Arr**	**47.14**	**115**	P	**P**	**23 48 36.8**	**-0.8**
MKAR	**Makanchi Array**	**49.13**	**353**	P	**P**	**23 48 52.6**	**+0.1**
	0.5nm,0.8s,baz=159,slow=7.0,SNR=5.0						
	0.5nm,0.8s						
MKAR	**Makanchi Array**	**49.13**	**353**	P	**P**	**23 48 52.1**	**-0.5**
SONM	**Songino Array**	**51.88**	**14**	P	**P**	**23 49 13.7**	**+0.4**
	1.2nm,0.6s,baz=197,slow=8.9,SNR=8.9						
	1.2nm,0.6s						
SONM	**Songino Array**	**51.88**	**14**	P	**P**	**23 49 13.8**	**+0.4**
SONM				IAmb	IAmb	23 49 15.4	
	comp=Z,1.5nm,0.9s						
ABKAR	**Akbulak array**	**57.23**	**337**	P	**P**	**23 49 53.0**	**+0.9**
ABKAR				IAmb	IAmb	23 49 53.7	
	comp=Z,1.7nm,0.7s						
ABKAR	**Akbulak array**	**57.23**	**337**	P	**P**	**23 49 52.6**	**+0.4**
CASY	**Casey**	**65.72**	**171**	P	**P**	**23 50 50.6**	**+1.4**
CASY				IAmb	IAmb	23 50 51.7	
	comp=Z,2.9nm,1.2s						
FINES	**FINESS Array B**	**79.52**	**334**	P	**P**	**23 52 11.3**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=116,slow=9.4,SNR=4.4						
	comp=Z,0.4nm,0.6s						
SNAA	**Sanae**	**88.77**	**198**	P	**P**	**23 52 58.2**	**-0.2**
TXAR	**Lajitas Array**	**150.14**	**24**	PKPbc	**PKPbc**	**23 59 56.4**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=333,slow=0.2,SNR=6.4						

PGC 25 23:55:27.0±0.4, 48.67N×129.07W, h10km, MLSn2.8/42, Mw3.5/42, 236km west of Tofino, Bc Vancouver Island, Canada Region, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NCHR	**NEPTUNE Canada**	**0.69**	**181**	P	Pg	23 55 39.8	-0.6
KEMF	**NEPTUNE Canada**	**0.72**	**182**	P	Pg	23 55 40.3	-0.5
NC27	**ODP1027**	**1.26**	**135**	P	Pn	23 55 47.9	-2.4
NC89	**ODP889**	**1.47**	**89**	Pn	Pn	23 55 52.0	-1.4
BPBC	**Brooks Peninsu**	**1.71**	**29**	Pn	Pn	23 55 55.1	-1.8
BPBC				Sn	Sn	23 56 15.3	-3.6
EDB	**Eliza Dome**	**1.76**	**46**	Pn	Pn	23 55 55.5	-2.0
EDB				Sn	Sn	23 56 15.1	-4.8
ETB	**Estevan Point**	**1.81**	**66**	Pn	Pn	23 55 56.9	-1.2
PACB	**Port Alice, BC**	**2.04**	**30**	Pn	Pn	23 55 59.6	-1.8
PACB				Sn	Sn	23 56 22.4	-4.5
HOLB	**Holberg**	**2.07**	**17**	Pn	Pn	23 56 00.1	-1.6
HOLB				Sn	Sn	23 56 23.4	-4.2
MAYB	**Maynard**	**2.13**	**35**	Pn	Pn	23 56 01.1	-1.6
TOFB	**Tofino**	**2.14**	**76**	Pn	Pn	23 56 01.0	-1.7
TOFB				Sn	Sn	23 56 25.6	-3.7
WOSB	**Woss**	**2.21**	**47**	Pn	Pn	23 56 02.8	-1.0
WOSB				Sn	Sn	23 56 27.9	-3.3
GDR	**Gold River**	**2.28**	**60**	Pn	Pn	23 56 02.9	-1.8
GDR				Sn	Sn	23 56 28.2	-4.6
PHC	**Port Hardy**	**2.30**	**27**	Pn	Pn	23 56 03.6	-1.3
PHC				Sn	Sn	23 56 29.0	-4.2
B012	**Ucluelet**	**2.35**	**82**	Pn	Pn	23 56 03.8	-1.7
B012				Sn	Sn	23 56 31.1	-3.3
TLCB	**Telegraph Cove**	**2.38**	**37**	Pn	Pn	23 56 03.9	-2.1
TLCB				Sn	Sn	23 56 31.2	-3.5
OZB	**Mount Ozzard**	**2.38**	**82**	Pn	Pn	23 56 04.2	-1.9
OZB				Sn	Sn	23 56 31.5	-3.8
BTB	**Buttle Lake**	**2.47**	**70**	Pn	Pn	23 56 06.2	-1.2
BTB				Sn	Sn	23 56 34.0	-3.7
SPLB	**Strathcona Par**	**2.55**	**60**	Pn	Pn	23 56 07.5	-0.9
SPLB				Sn	Sn	23 56 37.0	-2.5
BFSB	**Bamfield**	**2.61**	**85**	Pn	Pn	23 56 07.4	-1.7
BFSB				Sn	Sn	23 56 37.6	-3.2
B928	**Bamfield**	**2.61**	**85**	Pn	Pn	23 56 07.7	-1.5
B928				Sn	Sn	23 56 36.6	-4.2
NCRB	**Newcastle Ridg**	**2.62**	**47**	Pn	Pn	23 56 08.9	-0.6
NCRB				Sn	Sn	23 56 37.2	-4.2
MWAB	**Mount Washingt**	**2.69**	**65**	Pn	Pn	23 56 09.6	-0.8
MWAB				Sn	Sn	23 56 40.9	-2.2
CBB	**Campbell River**	**2.78**	**59**	Pn	Pn	23 56 10.9	-0.6
CBB				Sn	Sn	23 56 42.8	-2.3
B927	**Port Alberni**	**2.86**	**77**	Pn	Pn	23 56 11.3	-1.3
MGB	**Mount Grey**	**2.91**	**82**	Pn	Pn	23 56 11.7	-1.7
MGB				Sn	Sn	23 56 44.8	-3.7
OCP	**Olym-Cheeka Pk**	**2.98**	**95**	Pn	Pn	23 56 13.6	-0.7
PFB	**Port Renfrew**	**3.07**	**90**	Pn	Pn	23 56 14.8	-0.8
PFB				Sn	Sn	23 56 48.0	-4.4
TXB	**Texada**	**3.21**	**70**	Pn	Pn	23 56 17.0	-0.5
TXB				Sn	Sn	23 56 52.2	-3.5
GHNB	**Nanoose**	**3.25**	**77**	Pn	Pn	23 56 17.8	-0.1
GHNB				Sn	Sn	23 56 55.6	-0.9
B926	**Mesachie Lake**	**3.27**	**85**	Pn	Pn	23 56 17.0	-1.3
NLLB	**Nanaimo Lost L**	**3.40**	**79**	Pn	Pn	23 56 19.9	-0.1
NLLB				Sn	Sn	23 56 59.0	-1.2
SHB	**Sechelt**	**3.54**	**73**	Pn	Pn	23 56 21.6	-0.4
SHB				Sn	Sn	23 57 02.1	-1.7
BBB	**Bella Bella**	**3.57**	**9**	Pn	Pn	23 56 22.3	-0.1
BBB				Sn	Sn	23 57 02.1	-2.5
GOBB	**Galiano Island**	**3.69**	**84**	Pn	Pn	23 56 23.6	-0.4
B010	**North Saanich**	**3.72**	**88**	Pn	Pn	23 56 23.7	-0.8
PGC	**Sidney**	**3.72**	**88**	Pn	Pn	23 56 23.7	-0.8
B011	**North Saanich**	**3.73**	**88**	Pn	Pn	23 56 23.7	-0.8
BIB	**Bowen Island**	**3.86**	**77**	Pn	Pn	23 56 26.2	-0.2
BIB				Sn	Sn	23 57 09.4	-2.3
SNB	**Saturna Island**	**3.91**	**86**	Pn	Pn	23 56 26.5	-0.5
WPB	**Watts Point**	**3.97**	**73**	Pn	Pn	23 56 28.1	+0.2
WPB				Sn	Sn	23 57 12.9	-1.6
MCW	**Mount Constitu**	**4.13**	**88**	Pn	Pn	23 56 29.9	-0.2
HNBB	**Haney**	**4.32**	**79**	Pn	Pn	23 56 32.6	-0.1
HNBB				Sn	Sn	23 57 21.0	-2.1
BUTB	**Butedale**	**4.42**	**5**	Pn	Pn	23 56 34.4	+0.2
BUTB				Sn	Sn	23 57 21.9	-3.7
VDB	**Vedder Mountai**	**4.61**	**83**	Pn	Pn	23 56 36.5	-0.3
BNKB	**Banks Island**	**4.70**	**354**	Pn	Pn	23 56 37.9	0.0
MBW	**Mount Baker**	**4.75**	**86**	Pn	Pn	23 56 38.9	+0.2
HWKB	**Hawksbury Isla**	**4.94**	**359**	Pn	Pn	23 56 41.6	+0.4
HWKB				Sn	Sn	23 57 35.1	-3.3
RPW	**Rockport**	**5.02**	**90**	Pn	Pn	23 56 42.6	+0.2
LLLB	**Lillooet**	**5.06**	**65**	Pn	Pn	23 56 43.7	+0.8
GRNB	**Grenville Isla**	**5.21**	**354**	Pn	Pn	23 56 45.4	+0.4
UBRB	**Upper Baezaeko**	**5.28**	**35**	Pn	Pn	23 56 47.4	+1.4
KITB	**Kitimat**	**5.42**	**3**	Pn	Pn	23 56 48.4	+0.6
LTY	**Liberty**	**5.81**	**101**	Pn	Pn	23 56 55.0	+1.7
FSJB	**Fort St James**	**6.52**	**25**	Pn	Pn	23 57 04.1	+1.2
FSB	**Fort Saint Jam**	**6.52**	**25**	Pn	Pn	23 57 04.1	+1.1
SLEB	**Sale Mountain**	**7.49**	**66**	Pn	Pn	23 57 17.4	+1.0
NBC5	**NorthernBC 5**	**9.66**	**21**	Pn	Pn	23 57 47.7	+1.6
FNBB	**Fort Nelson**	**10.84**	**17**	Pn	Pn	23 58 03.6	+1.5

*EAF **26** 00:25:41.2±4.1, 10.73N×42.93E, h0km±141km, ML3.4*

AAE 26 00:25:41.4±1.1, 10.77N×43.03E, h0km±21km, ML3.7, Northwestern Somalia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATD	**Arta Tunnel**	**0.78**	**346**	*e*P	Pg	00 25 55.5	-0.9
ATD				*e*S	Sb	00 26 08.0	-1.1
ATD	**Arta Tunnel**	**0.78**	**346**	*e*P	Pg	00 25 55.6	-0.8
ATD				*e*S	Sg	00 26 07.3	+0.8
ATD	**Arta Tunnel**	**0.78**	**346**	*e*P	Pg	00 25 55.6	-0.8
ATD				*e*S	Sg	00 26 06.1	-0.5
ATD	**Arta Tunnel**	**0.78**	**346**	*e*P	Pg	00 25 55.5	-0.9
ATD				*e*S	Sb	00 26 08.0	-1.1
HARA	**HARA**	**1.49**	**171**	*e*P	Pn	00 26 06.7	-3.0
HARA				*i* Sg	Sg	00 26 28.2	-1.1
HARA	**HARA**	**1.49**	**171**	*e*P	Pn	00 26 07.0	-2.7
HARA				*e*S	Sg	00 26 27.7	-1.6
HARA				IAML		00 26 33.2	
	comp=E,378nm,0.2s						
HARA				IAML		00 26 34.8	
	comp=N,570nm,0.3s						
HARA	**HARA**	**1.49**	**171**	*e*P	Pn	00 26 07.0	-2.7
HARA				*e*S	Sg	00 26 27.7	-1.6
HARA				IAML		00 26 33.2	
	comp=E,378nm,0.2s						
HARA				IAML		00 26 34.8	
	comp=N,570nm,0.3s						
HARA	**HARA**	**1.49**	**171**	*e*P	Pn	00 26 06.7	-3.0
HARA				*i* Sg	Sg	00 26 28.2	-1.1
DESE	**Dese**	**3.36**	**276**	*e*P	Pn	00 26 28.9	-6.5
DESE				AMP		00 27 01.5	
	comp=N,290nm,1.4s						
DESE	**Dese**	**3.36**	**276**	*e*P	Pn	00 26 33.0	-2.5
DESE				AMP		00 27 01.5	
	comp=N,290nm,1.4s						
AAE	**Adis Abeba**	**4.55**	**248**	*e*P	Pn	00 26 49.4	-2.4
AAE				*e*S	Sn	00 27 40.5	-5.1
AAE				IAML		00 27 44.5	
	comp=N,161nm,0.5s						
AAE	**Adis Abeba**	**4.55**	**248**	*e*P	Pn	00 26 49.4	-2.4
AAE				*e*S	Sn	00 27 40.5	-5.1
AAE				IAML		00 27 44.5	
	comp=N,161nm,0.5s						
FURI	**Furi**	**4.68**	**247**	*e*S	Sn	00 27 43.6	-5.2
FURI				IAML		00 27 56.9	
	comp=N,58nm,0.5s						
FURI	**Furi**	**4.68**	**247**	*e*S	Sn	00 27 43.6	-5.2
FURI				IAML		00 27 56.9	
	comp=N,58nm,0.5s						

IDC 26 00:27:02.8±3.7, 1.90S×99.85E, h0km, mb3.5/4, mbtmp3.5/4, Error ellipse: s-maj=156.0km s-min=31.8km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S2	**Diego Garcia H**	**27.84**	**257**	T	T	01 01 22.0	
	baz=79,slow=75,SNR=76						
H08S3	**Diego Garcia H**	**27.85**	**257**	T	T	01 01 21.6	
	baz=79,slow=75,SNR=71						
H08S1	**Diego Carcia H**	**27.86**	**257**	T	T	01 01 23.1	
	baz=79,slow=75,SNR=58						
H01W3	**Cape Leeuwin H**	**35.41**	**160**	T	T	01 11 07.3	
	baz=335,slow=76,SNR=8.3						
H01W2	**Cape Leeuwin H**	**35.42**	**160**	T	T	01 11 08.1	
	baz=335,slow=76,SNR=8.9						
H01W1	**Cape Leeuwin H**	**35.42**	**159**	T	T	01 11 11.8	
	baz=335,slow=76,SNR=8.4						
WRA	**Warramunga Arr**	**38.17**	**120**	P	P	00 34 24.2	-0.1
	0.3nm,0.8s,baz=303,slow=9.0,SNR=2.2						
	0.3nm,0.8s						
SONM	**Songino Array**	**49.86**	**6**	P	P	00 35 58.9	+1.0
	0.6nm,0.7s,baz=185,slow=8.7,SNR=3.8						
	0.6nm,0.7s						
MKAR	**Makanchi Array**	**50.90**	**345**	P	P	00 36 05.3	-0.4
	0.3nm,0.6s,baz=159,slow=8.6,SNR=4.4						
	0.3nm,0.6s						
ZALV	**Zalesovo Beam**	**57.05**	**349**	P	P	00 36 50.0	-0.5
	0.3nm,0.3s,baz=142,slow=7.3,SNR=2.1						
	0.3nm,0.3s						
TXAR	**Lajitas Array**	**144.72**	**37**	PKP	PKPab	00 46 41.1	-0.1
	0.4nm,0.6s,baz=336,slow=2.0,SNR=5.4						

*IDC **26** 00:46:18.3±0.8, 56.58S×147.59E, h0km, mb4.4/6, mbtmp4.4/6, MS4.3/35, Error ellipse: s-maj=52.7km s-min=18.9km az=85.0*

*NEIC **26** 00:46:19.0±0.9, 56.64S±0.10×147.59E±0.07, h10km±1km, mb4.8/27, Error ellipse: s-maj=16.3km s-min=6.3km az=173.0*

*GCMT **26** 00:46:22.0±0.2, 56.60S±0.01×147.36E±0.02, h12km, MW5.1/107, Moment Tensor Solution. s48,c56; s107,c171; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.89±.13; Mθθ2.64±.11; Mφφ-1.75±.13; Mrθ0.26±.32; Mθφ-4.62±.09; Mφr-0.19±.34; Best double couple: M₀5.12300×10

MAW Mawson 37.89 218 LR LR 01 08 32.1
comp=Z,845nm,18.9s,baz=97,slow=35
WB2 Warramunga Arr 37.92 339 P **P** **00 53 35.9 -0.9**
WB2 IAmb IAmb 00 53 42.8
comp=Z,15nm,0.9s
WRA Warramunga Arr 37.93 339 P **P** **00 53 36.0 -0.8**
comp=Z,5.2nm,0.6s,baz=164,slow=7.8,SNR=36
WRA LR LR 01 07 27.9
comp=Z,250nm,21.1s,baz=194,slow=34
comp=Z,5.2nm,0.6s
WRA Warramunga Arr 37.93 339 P **P** **00 53 35.7 -1.1**
WB0 Warramunga Arr 38.09 340 P **P** **00 53 37.2 -1.0**
WB0 IAmb IAmb 00 53 43.9
comp=Z,16nm,1.0s
KOUNC Koumac, New Ca 38.09 26 P **P** **00 53 37.4 -0.7**
MBWA Marble Bar 40.95 318 P **P** **00 54 01.3 -0.7**
MBWA IAmb IAmb 00 54 09.0
comp=Z,27nm,1.1s
KNRA Kununurra 43.29 333 P **P** **00 54 20.8 -0.3**
KNRA IAmb IAmb 00 54 28.9
comp=Z,16nm,0.9s
MSVF Nonsavu 45.05 43 LR LR 01 09 14.4
comp=Z,460nm,21.1s,baz=211,slow=31
MTN Manton Dam 45.48 337 P **P** **00 54 38.0 -0.6**
MTN IAmb IAmb 00 54 45.8
comp=Z,11nm,0.8s
PMG Port Moresby 47.09 359 LR LR 01 13 25.4
comp=Z,1µm,18.1s,baz=183,slow=35
HNR Honiara 48.05 16 LR LR 01 11 57.6
comp=Z,257nm,20.0s,baz=167,slow=32
TROLL Troll, Antarti 49.37 194 pP **P** **00 55 07.9 -0.5**
SNAA Sanae 50.33 192 pP **P** **00 55 15.4 -0.3**
SNAA Sanae 50.33 192 LR LR 01 16 33.9
comp=Z,1µm,18.1s,baz=146,slow=36
SNAA Sanae 50.33 192 P **P** **00 55 15.0 -0.6**
SNAA IAmb IAmb 00 55 20.2
comp=Z,9.1nm,1.1s
VNA3 Neumayer Olymp 51.43 189 pP **P** **00 55 23.3 -0.5**
VNA1 Neumayer--Stat 51.87 190 pP **P** **00 55 26.9 -0.1**
RAR Rarotonga 52.21 70 LR LR 01 13 53.3
comp=Z,227nm,21.9s,baz=251,slow=32
KRVT Keravat (AS076 52.28 6 LR LR 01 14 42.3
comp=Z,218nm,21.1s,baz=320,slow=33
AFI Afiamalu 52.67 53 LR LR 01 16 32.7
comp=Z,97nm,18.4s,baz=214,slow=34
FAKI Fak Fak 54.92 341 P **P** **00 55 50.2 +0.1**
TBI Tubuai 55.98 81 eLR LR 01 12 13.9
comp=Z,294nm,28.5s
KAPI Kappang 55.98 326 LR LR 01 20 40.2
comp=Z,244nm,18.1s,baz=160,slow=37
KAPI Kappang 55.98 326 P **P** **00 55 57.4 -0.4**
KAPI IAmb IAmb 00 56 06.1
comp=Z,11nm,0.9s
SPSI Sidrap Palu 56.97 326 P **P** **00 56 05.0 +0.2**
comp=Z,20nm,1.4s
PPT2 Papeete2 60.59 77 eLR LR 01 14 24.7
comp=Z,219nm,23.5s
PPT Papeete 60.61 77 LR LR 01 20 12.1
comp=Z,92nm,18.0s,baz=225,slow=34
TOLI2 Tolitoli 61.49 329 P **P** **00 56 35.8 -0.2**
TOLI2 IAmb IAmb 00 56 46.5
comp=Z,8.4nm,0.9s
KSM Kuching 65.26 318 P **P** **00 57 01.4 +0.4**
KSM IAmb IAmb 00 57 14.2
comp=Z,11nm,1.1s
DAV Davao City (W) 65.99 336 LR LR 01 26 03.1
comp=Z,102nm,19.6s,baz=132,slow=36
GUMO Guam 69.97 357 LR LR 01 26 30.3
comp=Z,90nm,20.5s,baz=124,slow=34
TAOE Nuku Hiva Isla 72.91 80 eLR LR 01 20 07.0
comp=Z,190nm,26.8s
RPN Rapa Nui 74.55 116 LR LR 01 23 18.3
comp=Z,200nm,18.8s,baz=326,slow=30
H08S2 Diego Garcia H 75.46 278 T T 02 20 49.9
baz=147,slow=76,SNR=281
H08S1 Diego Carcia H 75.47 278 T T 02 20 44.6
baz=147,slow=76,SNR=216
H08S3 Diego Garcia H 75.48 278 T T 02 20 54.5
baz=147,slow=76,SNR=246
H11S2 WAKE ISLAND Hy 76.52 19 T T 02 22 13.8
baz=189
H11S3 WAKE ISLAND Hy 76.52 19 T T 02 22 14.3
baz=189
H11S1 WAKE ISLAND Hy 76.54 19 T T 02 22 09.4
baz=189
H11N1 WAKE ISLAND Hy 77.75 19 T T 02 23 46.5
baz=188
H11N3 WAKE ISLAND Hy 77.76 19 T T 02 23 46.9
baz=188
H11N2 WAKE ISLAND Hy 77.77 19 T T 02 23 48.8
baz=188
PLCA Paso Flores 77.81 151 LR LR 01 26 15.6
comp=Z,245nm,19.0s,baz=196,slow=31
SUR Sutherland 80.56 223 LR LR 01 27 01.7
comp=Z,221nm,20.4s,baz=143,slow=30
H03S1 Juan Fernandez 81.66 142 T T 02 29 25.7
SNR=22
H03S2 Juan Fernandez 81.66 142 T T 02 29 26.4
SNR=22
H03S3 Juan Fernandez 81.67 142 T T 02 29 24.7
SNR=17
H03N3 Juan Fernandez 82.00 142 T T 02 29 46.8
baz=202,slow=74
H03N2 Juan Fernandez 82.02 142 T T 02 29 44.8
baz=202,slow=74
H03N1 Juan Fernandez 82.02 142 T T 02 29 50.8
baz=202
BOSA Boshof 82.12 229 LR LR 01 29 41.5
comp=Z,147nm,18.7s,baz=168,slow=32
BOSA Boshof 82.12 229 P **P** **00 58 39.4 -0.7**
BOSA IAmb IAmb 00 59 03.5
comp=Z,27nm,1.7s
JCJ Chichijima 83.50 355 LR LR 01 34 48.0
comp=Z,149nm,21.5s,baz=120,slow=35
PALK Pallekele 83.65 293 LR LR 01 29 31.1
comp=Z,137nm,21.1s,baz=254,slow=31
LBTB Lobatse 85.14 231 LR LR 01 32 05.6
comp=Z,136nm,19.3s,baz=152,slow=32
CMAR Chiang Mai Arr 85.15 314 P **P** **00 58 56.8 +1.5**
comp=Z,1.6nm,0.3s,baz=178,slow=4.5,SNR=1.2
CMAR LR LR 01 34 40.4
comp=Z,160nm,20.7s,baz=165,slow=34
comp=Z,1.6nm,0.3s
CMAR Chiang Mai Arr 85.15 314 P **P** **00 58 55.2 -0.1**
PZH PanZhiHua 91.42 320 P **P** **00 59 27.0 +1.8**
PZH pmax pmax
comp=Z,10.0nm,0.6s
PZH pmax pmax
comp=Z,80nm,4.3s
NJ2 Nanjing 91.63 336 eP **P** **00 59 28.0 +2.2**
NJ2 pmax pmax
comp=Z,10.0nm,0.9s
LSZ Lusaka 92.51 237 LR LR 01 34 09.9
comp=Z,337nm,21.4s,baz=144,slow=31
MJAR Matsushiro Arr 93.14 352 LR LR 01 42 10.3
comp=Z,47nm,18.5s,baz=170,slow=36
TSUM Tsumeb 93.64 227 LR LR 01 35 42.0
comp=Z,184nm,19.7s,baz=152,slow=32
CPUP Villa Florida 94.73 158 LR LR 01 36 33.3
comp=Z,93nm,21.8s,baz=197,slow=32
KSRS Korea Array 95.18 344 LR LR 01 42 28.5
comp=Z,52nm,19.0s,baz=155,slow=35
LVC Limon Verde 95.29 146 LR LR 01 34 27.5
comp=Z,134nm,19.6s,baz=212,slow=30
HHC Hu-ho-hao-te 101.75 333 eP **Pdif** **01 00 14.3 +2.6**
HHC LR LR
comp=N,200nm,15.2s
HHC LR LR
comp=E,340nm,16.5s
HHC LR LR
comp=Z,290nm,16.5s
WMQ Urumqi 111.97 318 eP **PKiKP** **01 04 54.5 +0.9**
MKAR Makanchi Array 116.53 316 PKP **PKiKP** **01 05 02.4 +0.2**
comp=Z,0.2nm,0.4s,baz=131,slow=1.2,SNR=4.2
MKAR Makanchi Array 116.53 316 **PKiKP** **01 05 01.9 -0.3**
TORD Torodi Ar. Bea 129.36 225 PKP **PKiKP** **01 05 29.3 +0.8**
comp=Z,0.5nm,0.9s,baz=164,slow=5.8,SNR=2.2
ILAR Eielson Array 130.90 31 PKP **PKiKP** **01 05 29.9 -0.1**
comp=Z,0.2nm,0.5s,baz=324,slow=18,SNR=2.3
AKASG Malin Array Be 144.10 287 PKP **PKPdf** **01 05 53.6 -0.1**
comp=Z,0.7nm,0.6s,baz=107,slow=1.6,SNR=6.6
KEST Kesra 145.09 251 PKPbc **PKPdf** **01 05 56.4 +0.3**
comp=Z,3.1nm,1.0s,baz=76,slow=7.8,SNR=3.3
NACGM Naroch 147.54 292⇑ ePKP **PKPab** **01 06 03.3 -1.1**
baz=117
IDID Didziasalis 147.75 293 eP **PKPab** **01 06 10.7 +5.5**
SUW Suwalki 148.99 289 eP **PKiKP** **01 06 06.2 -1.0**
VSU Vasula 149.08 299 eP **PKiKP** **01 06 06.7 -0.5**
RONA Rosalia, Austr 149.41 274 eP **PKPab** **01 06 17.3 +5.1**
comp=Z,5.7nm,1.3s
SOKA Soboth 149.51 271 eP **PKiKP** **01 06 07.8 -0.9**
comp=Z,5.7nm,1.2s
CONA Conrad Observa 149.78 274 eP **PKiKP** **01 06 08.5 -0.8**
comp=Z,1.8nm,1.3s
CONA eP **sPKPbc** **01 06 19.1 -0.8**
comp=Z,4.8nm,1.3s
MYKA Terra Mystica 150.25 270 P **PKiKP** **01 06 10.8 +0.6**
comp=Z,9.2nm,1.2s
FINES FINESS Array B 150.41 304 PKPbc **PKiKP** **01 06 09.0 -0.9**
comp=Z,2.7nm,0.7s,baz=204,slow=1.9,SNR=18
MTSE Matsula 150.60 298 eP **PKiKP** **01 06 10.7 +0.3**
ABTA Abfaltersbach 150.95 269 i P **PKiKP** **01 06 12.1 +0.4**
comp=Z,2.2nm,0.6s
GERES GERESS Array B 151.49 274 PKPbc **PKiKP** **01 06 12.0 -0.7**
comp=Z,0.8nm,0.8s,baz=212,slow=3.5,SNR=6.1
WTTA Wattenberg 151.73 270 eP **PKiKP** **01 06 14.0 +0.6**
comp=Z,6.0nm,1.3s
WATA Walderalm 151.81 270 eP **PKPab** **01 06 18.6 -3.7**
comp=Z,4.5nm,0.9s
SQTA Sankt Quirin 151.95 269 i P **PKiKP** **01 06 14.5 +0.7**
comp=Z,6.5nm,0.9s
ARCES ARCESS Array B 152.04 321 PKPbc **PKiKP** **01 06 14.3 +1.2**
comp=Z,1.4nm,0.6s,baz=132,slow=2.9,SNR=16
ARCES ARCESS Array B 152.04 321 **PKiKP** **01 06 13.4 +0.3**
MOTA Moosalm 152.08 269 eP **PKiKP** **01 06 13.4 -0.7**
comp=Z,3.3nm,1.0s
RETA Reutte 152.35 269 eP **PKiKP** **01 06 14.2 -0.3**
comp=Z,2.4nm,0.6s
ESDC Sonseca Array 154.83 240 PKPbc **PKiKP** **01 06 21.2 +1.3**
comp=Z,0.5nm,1.0s,baz=99,slow=2.8,SNR=1.9

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*IDC **26** 00:48:03.1±4.0, 44.2°N×149.5°E, h0km, mb3.6/5, mbtmp3.6/5, Error ellipse: s-maj=123.9km s-min=38.2km az=2.0*
*SKHL **26** 00:48:06.1±0.5, 44.1°N×149.9°E, h46km±2km, mb3.8/3*
ISC 26 00:48:08.2±1.4, 44.2°N±0.1°×149.6°E±0.1°, h38km, n11, σ1°09/11, mb3.6/5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.65**	**311**	*eP*		**Pn**	**00 48 34.4**	**-0.1**
KUR					AMB	AMB	00 48 35.9	
	60nm,0.4s							
KUR				*eS*		**Sn**	**00 48 55.6**	**+1.1**
KUR					A	A	00 49 02.7	
	70nm,0.5s							
KUR					A	A	00 49 02.7	
	160nm,0.5s							
NMR	**Nemuro--Hokkai**	**2.94**	**256**	*eP*		**Pn**	**00 48 51.9**	**-0.4**
NMR					AMB	AMB	00 48 52.7	
	10.0nm,0.4s							
NMR				*eS*		**Sn**	**00 49 26.6**	**+0.3**
NMR					A	A	00 49 35.6	
	20nm,0.4s							
NMR					A	A	00 49 35.6	
	10.0nm,0.4s							
AKK	**Akkeshi**	**3.67**	**253**	*eP*		**Pn**	**00 49 02.8**	**+0.5**
AKK				*eS*		**Sn**	**00 49 45.0**	**+0.8**
H11S1	**WAKE ISLAND Hy**	**29.32**	**145**	T		T	01 26 21.0	
	baz=340							
H11S3	**WAKE ISLAND Hy**	**29.33**	**145**	T		T	01 26 24.2	
	baz=340							
H11S2	**WAKE ISLAND Hy**	**29.34**	**145**	T		T	01 26 19.1	
	baz=340							
SONM	**Songino Array**	**29.96**	**292**	P		**P**	**00 54 10.5**	**-2.3**
	0.2nm,0.3s,baz=64,slow=6.6,SNR=2.1							
	0.2nm,0.3s							
MKAR	**Manchi Array**	**45.97**	**298**	P		**P**	**00 56 28.3**	**+0.9**
	0.6nm,0.7s,baz=69,slow=7.8,SNR=5.4							
	0.6nm,0.7s							
FINES	**FINESS Array B**	**65.30**	**334**	P		**P**	**00 58 45.5**	**-0.3**
	0.7nm,0.6s,baz=51,slow=7.3,SNR=7.3							
	0.7nm,0.6s							
NOA	**NORSAR Array B**	**69.84**	**340**	P		**P**	**00 59 14.4**	**0.0**
	0.5nm,0.7s,baz=32,slow=6.3,SNR=3.7							
	0.5nm,0.7s							
TXAR	**Lajitas Array**	**80.92**	**58**	P		**P**	**01 00 19.4**	**+0.8**
	0.1nm,0.5s,baz=268,slow=4.2,SNR=2.0							
	0.1nm,0.5s							

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*SOME **26** 01:02:47.4, 38.2°N×73.7°E, h15km*
*IDC **26** 01:02:48.8±1.4, 38.7°N×73.1°E, h0km, mb3.6/9, mbtmp3.6/14, ML3.1/4, MS3.9/2, Error ellipse: s-maj=28.1km s-min=15.2km az=134.0*
*NEIC **26** 01:02:50.6±3.5, 38.7°N±0.0°×73.3°E±0.0°, h10km±1km, mb4.1/6, Error ellipse: s-maj=9.6km s-min=6.3km az=174.0*
*NNC **26** 01:02:56.5±2.2, 39.1°N×73.5°E, h0km, mb4.2, mpv3.8, Error ellipse: s-maj=18.4km s-min=10.2km az=164.0*
ISC 26 01:02:49.5±0.7, 38.6°N±0.0°×73.5°E±0.0°, h10km, n80, σ3°17/96, mb3.6/8, 3C-5D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**2.35**	**279**			**Pn**	**01 03 29.5**	**+1.1**
BTK	**Batken**	**2.38**	**307**			**Pn**	**01 03 30.4**	**+1.8**
CHGR	**Chuyangaron**	**3.24**	**271**			**Pn**	**01 03 42.9**	**+2.3**
AML	**Almayashu**	**3.48**	**5**	P		**Pn**	**01 03 45.9**	**+1.9**
	SNR=58							
UCH	**Uchtor**	**3.68**	**14**	P		**Pn**	**01 03 48.7**	**+1.8**
	SNR=35							
EKS2	**Erkin-Say**	**4.01**	**5**	P		**Pn**	**01 03 53.7**	**+2.6**
	SNR=18							
TAS	**Tashkent**	**4.07**	**312**	Pn		**Pn**	**01 03 53.4**	**+1.6**
AAK	**Ala-Archa**	**4.07**	**12**	P		**Pn**	**01 03 55.4**	**+3.4**
	SNR=22							
AAK	**Ala-Archa**	**4.07**	**12**	Pn		**Pn**	**01 03 55.3**	**+3.4**
	4.7nm,0.3s,baz=199,slow=8.5,SNR=61							
AAK					Sn	**Sn**	**01 04 45.1**	**+5.4**
	2.3nm,0.3s,baz=320,slow=22,SNR=8.2							
	36nm,0.6s							
AAK	**Ala-Archa**	**4.07**	**12**	Pn		**Pn**	**01 03 53.7**	**+1.7**
ULHL	**Ulahol**	**4.22**	**31**	P		**Pb**	**01 04 03.4**	**-0.5**
	SNR=10							
IUG	**luzhnay**	**4.28**	**325**	*eP*		**Pb**	**01 04 08.2**	**+3.3**
	1µm,0.7s							
IUG				*eS*		**Sg**	**01 05 05.9**	**-1.0**
	103nm,0.9s							
IUG	**luzhnay**	**4.28**	**325**	Pg		**Pb**	**01 04 08.4**	**+3.5**
	1µm,0.7s							
IUG					Lg	Lg	01 05 03.1	
	103nm,0.9s							
BOOM	**Boomskoye usch**	**4.32**	**27**	Pn		**Pn**	**01 03 56.9**	**+1.5**
CHMS	**Chumysh**	**4.47**	**14**	P		**Pn**	**01 04 00.4**	**+3.1**
	SNR=11							
CHMS	**Chumysh**	**4.47**	**14**	⇑Pn		**Pn**	**01 04 00.2**	**+2.9**
	7.5nm,0.5s							
CHMS				⇓Pg		**Pg**	**01 04 12.4**	**-2.6**
	10nm,0.6s							
CHMS				⇓Lg		Lg	01 05 05.1	
	13nm,0.6s							
KDJ	**Kajisay**	**4.55**	**39**	Pn		**Pn**	**01 03 60.0**	**+1.3**
TKM2	**Tokmak 2**	**4.59**	**22**	P		**Pn**	**01 04 02.9**	**+3.7**
	SNR=7.4							
TKM2	**Tokmak 2**	**4.59**	**22**	⇑Pn		**Pn**	**01 04 02.6**	**+3.4**
	1.2nm,0.3s							
TKM2				⇓Pg		**Pg**	**01 04 15.2**	**-2.3**
	10nm,0.6s							
TKM2				⇓Lg		Lg	01 05 07.9	
	9.4nm,0.6s							
TARG	**Taragay, Kyrgy**	**4.61**	**47**	Pn		**Pn**	**01 04 01.4**	**+1.8**
USP	**Ospenovka**	**4.69**	**11**	P		**Pn**	**01 04 03.4**	**+3.0**
	SNR=9.9							
KST	**Kastek**	**4.82**	**24**	*eP*		**Pb**	**01 04 13.8**	**-0.3**
	5.2nm,0.6s							
KST				*eS*		**Sb**	**01 05 16.0**	**+3.9**
	22nm,0.7s							
KST	**Kastek**	**4.82**	**24**	Pg		**Pb**	**01 04 16.3**	**+2.3**
	7.3nm,0.6s							
KST					Lg	Lg	01 05 16.0	
	22nm,0.7s							
SGDS	**Sogindy**	**4.89**	**11**	*eP*		**Pb**	**01 04 14.2**	**-1.0**
	7.5nm,0.5s							
SGDS				*eS*		**Sb**	**01 05 17.0**	**+3.0**
	12nm,0.7s							
KK31	**Karatay Array**	**4.91**	**335**	Pn		**Pn**	**01 04 04.0**	**+0.6**
KK31	**Karatay Array**	**4.91**	**335**	Pn		**Pn**	**01 04 04.6**	**+1.2**
	3.2nm,0.4s,baz=133,slow=12,SNR=56							
KK31				⇑Sn		**Sn**	**01 05 02.3**	**+2.0**
	27nm,0.6s,baz=150,slow=22,SNR=7.0							
KKAR	**Karatay Array**	**4.91**	**335**	Pn		**Pn**	**01 04 04.0**	**+0.6**
KKAR	**Karatay Array**	**4.91**	**335**			**Pn**	**01 04 04.0**	**+0.6**
DGS	**Degeres**	**4.94**	**21**	*eP*		**Pb**	**01 04 16.8**	**+0.7**
	6.9nm,0.8s							
DGS				*eS*		**Sb**	**01 05 20.8**	**+5.1**
	19nm,0.8s							
DGS	**Degeres**	**4.94**	**21**	Pg		**Pb**	**01 04 18.9**	**+2.7**
	14nm,0.5s							
DGS				Lg		Lg	01 05 20.8	
	19nm,0.8s							
MTBS	**Maitube**	**5.05**	**27**	*eP*		**Pb**	**01 04 18.6**	**+0.6**
	14nm,0.4s							
MTBS				*eS*		**Sb**	**01 05 23.8**	**+5.0**
	19nm,0.4s							
MTBS	**Maitube**	**5.05**	**27**	Pg		**Pb**	**01 04 20.8**	**+2.8**
	14nm,0.4s							
MTBS					Lg	Lg	01 05 23.8	
	19nm,0.4s							
BRLS	**Borolday**	**5.09**	**330**	*eP*		**Pb**	**01 04 17.3**	**-1.4**
	5.9nm,0.4s							
BRLS				*eS*		**Sb**	**01 05 21.9**	**+2.0**
	14nm,0.5s							
BRLS	**Borolday**	**5.09**	**330**	Pg		**Pb**	**01 04 19.6**	**+0.9**
	5.9nm,0.4s							
BRLS					Lg	Lg	01 05 22.1	
	14nm,0.5s							
TNSS	**Tian-Shan**	**5.17**	**31**	*eP*		**Pb**	**01 04 21.1**	**+0.9**
	6.1nm,0.6s							
TNSS				*eS*		**Sb**	**01 05 28.1**	**+5.6**
	13nm,0.7s							
TNSS	**Tian-Shan**	**5.17**	**31**	Pg		**Pb**	**01 04 23.3**	**+3.1**
	12nm,0.4s							
TNSS					Lg	Lg	01 05 28.1	
	13nm,0.7s							
KRBS	**Karabastau**	**5.33**	**19**	*eP*		**Pb**	**01 04 22.7**	**-0.1**
	4.7nm,0.4s							
KRBS				*eS*		**Sb**	**01 05 31.1**	**+4.1**
	9.9nm,0.6s							
KRBS	**Karabastau**	**5.33**	**19**	Pg		**Pb**	**01 04 25.0**	**+2.2**
	4.7nm,0.4s							
KRBS					Lg	Lg	01 05 31.1	
	9.9nm,0.6s							
KBL	**Kabul**	**5.35**	**221**	Pn		**Pn**	**01 04 11.8**	**+2.1**
PRZ	**Przheval'sk**	**5.44**	**44**	Pn		**Pn**	**01 04 12.8**	**+2.0**
KTBS	**Karatobe**	**5.65**	**26**	*eP*		**Pb**	**01 04 28.6**	**+0.4**
	6.8nm,0.7s							
KTBS				*eS*		**Sb**	**01 05 41.8**	**+5.8**
	15nm,0.6s							
KTBS	**Karatobe**	**5.65**	**26**	Pg		**Pb**	**01 04 31.3**	**+3.2**
	7.4nm,0.7s							
KTBS					Lg	Lg	01 05 41.8	
	15nm,0.6s							
KUU	**Kurty**	**5.70**	**23**	*eP*		**Pb**	**01 04 30.0**	**+0.9**
	5.4nm,0.5s							
KUU				*eS*		**Sb**	**01 05 43.9**	**+6.5**
	14nm,0.6s							
KUU	**Kurty**	**5.70**	**23**	Pg		**Pb**	**01 04 29.9**	**+0.8**
	5.6nm,0.5s							
KUU					Lg	Lg	01 05 40.4	
	14nm,0.6s							
SATY	**Saty**	**5.85**	**40**	*eP*		**Pb**	**01 04 34.0**	**+2.3**
	5.6nm,0.5s							
SATY				*eS*		**Sg**	**01 05 50.3**	**-7.0**
	24nm,0.8s							
CHKK	**Chushkaly**	**5.88**	**27**	*eP*		**Pb**	**01 04 32.8**	**+0.7**
	2.9nm,0.6s							
CHKK				*eS*		**Sb**	**01 05 48.7**	**+6.1**
	7.6nm,0.8s							
CHKK	**Chushkaly**	**5.88**	**27**	Pg		**Pb**	**01 04 35.1**	**+3.0**
	5.7nm,0.5s							
CHKK					Lg	Lg	01 05 49.6	
	7.6nm,0.8s							
KURS	**Kuram**	**6.06**	**36**	*eP*		**Pb**	**01 04 37.5**	**+2.3**
	8.8nm,0.9s							
KURS				*eS*		**Sg**	**01 05 57.1**	**-6.9**
	12nm,1.1s							
KPKS	**Kokpek**	**6.29**	**39**	*eP*		**Pb**	**01 04 40.1**	**+1.0**
	6.4nm,0.9s							
KPKS				*eS*		**Sb**	**01 06 01.1**	**+6.8**
	16nm,0.8s							
BTLS	**Baital**	**6.39**	**5**	*eP*		**Pb**	**01 04 43.1**	**+2.2**
	3.0nm,0.5s							
BTLS				*eS*		**Sg**	**01 06 06.7**	**-8.0**
	7.9nm,0.6s							
BTLS	**Baital**	**6.39**	**5**	Pg		**Pb**	**01 04 40.4**	**-0.4**
	2.2nm,0.5s							
BTLS					Lg	Lg	01 05 58.5	
	1.6nm,0.3s							
ARXS	**Arharly**	**6.50**	**30**	*eP*		**Pb**	**01 04 44.4**	**+1.7**
	7.7nm,0.7s							
ARXS				*eS*		**Sb**	**01 06 09.1**	**+8.6**
	9.6nm,0.7s							
ARXS	**Arharly**	**6.50**	**30**	Pg		**Pb**	**01 04 47.1**	**+4.4**
	15nm,0.7s							
ARXS					Lg	Lg	01 06 09.7	
	9.6nm,0.7s							
BLB	**Baldybastay**	**6.68**	**34**	*eP*		**Pb**	**01 04 48.5**	**+2.7**
	5.7nm,0.5s							
BLB				*eS*		**Sg**	**01 06 15.4**	**-8.3**
	11nm,0.8s							
MKAR	**Makanchi Array**	**10.47**	**36**	Pn		**Pn**	**01 05 22.0**	**+2.4**
	0.1nm,0.3s,baz=207,slow=7.3,SNR=4.3							
	0.5nm,0.7s							
WMQ	**Urumqi**	**11.99**	**60**	*eP*		**Pn**	**01 05 42.5**	**+2.0**
KURBB	**Kurchatov Arra**	**12.52**	**16**	Pn		**Pn**	**01 05 45.9**	**-1.6**
	0.2nm,0.4s,baz=210,slow=13,SNR=1.0							
AB31	**Akbulak array**	**14.28**	**322**	P		**Pn**	**01 06 09.2**	**-2.4**
	0.5nm,0.4s,baz=132,slow=12,SNR=16							
ABKAR	**Akbulak array**	**14.28**	**322**	Pn		**Pn**	**01 06 10.5**	**-1.2**
AKTO	**Aktyubinsk**	**16.00**	**322**	Pn		**Pn**	**01 06 32.4**	**-2.1**
	0.2nm,0.3s,baz=116,slow=15,SNR=2.7							
	0.9nm,0.5s							
AKTO	**Aktyubinsk**	**16.00**	**322**	⇓P		**Pn**	**01 06 35.9**	**+1.4**
	2.1nm,0.7s							
ZALV	**Zalesovo Beam**	**17.20**	**24**	P		**Pn**	**01 06 49.0**	**-0.6**
	0.1nm,0.3s,baz=204,slow=13,SNR=2.0							
ZALV					LR	LR	01 14 16.8	
	comp=Z,28nm,19.6s,baz=11,slow=40							
	0.4nm,0.4s							
ARU	**Arti**	**20.29**	**336**	P		**P**	**01 07 24.7**	**-0.5**
	0.7nm,0.3s,baz=240,slow=23,SNR=1.8							
	0.7nm,0.3s							
SONM	**Songino Array**	**25.62**	**58**	P		**P**	**01 08 20.2**	**+1.1**
	0.8nm,0.8s,baz=240,slow=12,SNR=4.0							
	0.8nm,0.8s							
SONM	**Songino Array**	**25.62**	**58**	IAmb		IAmb	01 08 30.6	
	comp=Z,2.1nm,1.2s							
BRTR	**Keskin Array B**	**30.59**	**285**	P		**P**	**01 09 03.7**	**+0.1**
	comp=Z,0.5nm,1.0s,baz=354,slow=11,SNR=2.2							
	comp=Z,0.5nm,1.0s							
ENH	**Enshi**	**30.83**	**95**	P		**P**	**01 09 04.8**	**-0.9**
FINES	**FINESS Array B**	**36.76**	**324**	P		**P**	**01 09 55.9**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=108,slow=12,SNR=6.0							
	comp=Z,0.4nm,0.3s							
ARCES	**ARCESS Array B**	**39.88**	**336**	P		**P**	**01 10 22.4**	**-0.5**
	comp=Z,1.4nm,0.8s,baz=101,slow=12,SNR=3.9							
	comp=Z,1.4nm,0.8s							
ARCES	**ARCESS Array B**	**39.88**	**336**	IAmb		IAmb	01 10 26.8	
	comp=Z,7.0nm,1.3s							
KSAR	**Wonju Array Be**	**42.46**	**74**	P		**P**	**01 10 42.9**	**-1.7**
NB2	**NORSAR Subarra**	**43.79**	**322**	P		**P**	**01 10 53.5**	**-1.6**
	comp=Z,1.1nm,1.0s,baz=90,slow=8.6							
NOA	**NORSAR Array B**	**43.79**	**322**	P		**P**	**01 10 53.7**	**-1.4**
	comp=Z,0.5nm,0.7s,baz=92,slow=8.0,SNR=4.1							
	comp=Z,0.5nm,0.7s							
KMBO	**Kilima Mbogo**	**51.63**	**229**	P		**P**	**01 11 58.9**	**+2.2**
	comp=Z,1.1nm,0.6s,baz=208,slow=23,SNR=2.2							
	comp=Z,1.1nm,0.6s							
KMBO	**Kilima Mbogo**	**51.63**	**229**	P		**P**	**01 11 55.5**	**-1.2**
KMBO					IAmb	IAmb	01 12 05.2	
	comp=Z,4.5nm,1.1s							
MBAR	**Mbarara**	**55.24**	**235**	LR		LR	01 40 32.5	
	comp=Z,104nm,19.7s,baz=140,slow=41							
TORD	**Torodi Ar. Bea**	**67.59**	**269**	P		**P**	**01 13 45.4**	**-1.2**
	comp=Z,0.6nm,1.0s,baz=54,slow=5.7,SNR=5.1							
	comp=Z,0.6nm,1.0s							
TORD	**Torodi Ar. Bea**	**67.59**	**269**	IAmb		IAmb	01 13 46.6	
	comp=Z,2.0nm,1.4s							
DBIC	**Dimbokro**	**76.62**	**268**	LR		LR	01 53 46.3	
	comp=Z,75nm,18.9s,baz=162,slow=40							
YKA	**

*DJA **26** 01:04:05.3±0.5,3°S±5°×13°1E±°, h122km±14km, M4.1/9, mb4.7/5, mB6.2/1, MLv3.8/9, Mw(mB)5.9/1*
*NEIC **26** 01:04:09.0±2.2,3.69S±0.08×131.4E±0.1, h45km±8km, mb4.1/15, Error ellipse: s-maj=15.7km s-min=10.5km az=121.0*
ISC 26 01:04:07.0±0.5,**3°59S**±0.06×**131°16E**±0.07,**h35**km,**n51,** σ2§**24**/45,**mb3.9**/13,**MS3.9**/7,**Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**1.27**	**59**			**Pn**	**Pn**	**01 04 29.5**	**+1.3**
FAKI	**Fak Fak**	**1.27**	**59**	P		**Pn**	**Pn**	**01 04 29.6**	**+1.3**
MSAI	**Masohi**	**2.24**	**276**	P		**Pn**	**Pn**	**01 04 41.4**	**-0.2**
SWI	**Sorong**	**2.71**	**2**	P		**Pn**	**Pn**	**01 04 44.3**	**-3.7**
AAI	**Ambon**	**2.96**	**268**	P		**Pn**	**Pn**	**01 04 51.2**	**-0.3**
NLAI	**Namlea**	**4.07**	**275**	P		**Pn**	**Pn**	**01 05 06.8**	**0.0**
LBMI	**Labuha**	**4.69**	**309**	P		**Pn**	**Pn**	**01 05 12.2**	**-3.1**
SANI	**Sanana**	**5.39**	**286**	P		**Pn**	**Pn**	**01 05 23.1**	**-1.8**
	0.2nm18nm,0.5s								
SOEI	**Soe**	**9.19**	**228**	Pn		**Pn**	**Pn**	**01 06 19.1**	**+1.9**
MTN	**Manton Dam**	**9.20**	**180**	Pn		**Pn**	**Pn**	**01 06 17.8**	**+0.6**
BATI	**Baumata**	**9.93**	**228**	P		**Pn**	**Pn**	**01 06 29.2**	**+1.9**
	37nm,0.8s								
KAPI	**Kappang**	**11.46**	**262**	Pn		**Pn**	**Pn**	**01 06 50.9**	**+2.5**
	2.2nm,0.3s,baz=252,slow=23,SNR=3.2								
	10nm,0.7s								
KAPI	**Kappang**	**11.46**	**262**			**Pn**	**Pn**	**01 06 52.9**	**+4.6**
KNRA	**Kununurra**	**12.24**	**191**	Pn		**Pn**	**Pn**	**01 06 58.1**	**-0.8**
COEN	**Coen**	**15.71**	**132**	Pn		**Pn**	**Pn**	**01 07 42.8**	**-3.0**
COEN					IAmb	IAmb		01 07 49.5	
	comp=Z,26nm,1.4s								
WB0	**Warramunga Arr**	**16.39**	**169**			**Pn**	**Pn**	**01 07 53.2**	**-1.2**
WB0					IAmb	IAmb		01 08 07.2	
	comp=Z,10nm,0.8s								
WRAB	**Tennant Creek**	**16.54**	**169**	Pn		**Pn**	**Pn**	**01 07 54.1**	**-2.3**
WRAB					IAmb	IAmb		01 08 09.9	
	comp=Z,11nm,0.8s								
WRA	**Warramunga Arr**	**16.55**	**169**	Pn		**Pn**	**Pn**	**01 07 55.2**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=358,slow=13,SNR=11								
WRA					Sn		**Sn**	**01 10 52.0**	**-7.3**
	comp=Z,0.6nm,0.3s,baz=355,slow=22,SNR=4.9								
WRA	**Warramunga Arr**	**16.55**	**169**			**Pn**	**Pn**	**01 07 54.8**	**-1.7**
WB2	**Warramunga Arr**	**16.55**	**169**	Pn		**Pn**	**Pn**	**01 07 54.9**	**-1.6**
AS31	**Alice Springs**	**20.14**	**173**	P		**P**	**P**	**01 08 38.6**	**+0.4**
AS31					IAmb	IAmb		01 08 48.6	
	comp=Z,6.5nm,0.6s								
ASAR	**Alice Springs**	**20.14**	**173**	P		Pn		01 08 40.8	+0.5
	comp=Z,10nm,0.5s,baz=350,slow=11,SNR=136								
ASAR					S		**S**	**01 12 23.8**	**+1.1**
	comp=Z,0.6nm,0.7s,baz=157,slow=20,SNR=3.4								
	comp=Z,10nm,0.5s								
ASAR	**Alice Springs**	**20.14**	**173**			Pn		01 08 40.2	-0.1
MBWA	**Marble Bar**	**20.70**	**212**	P		**P**		**01 08 44.9**	**+0.6**
PSA00	**Pilbara Seismi**	**20.99**	**211**	P		**P**		**01 08 45.9**	**-1.5**
KSM	**Kuching**	**21.44**	**283**	P		**P**		**01 08 56.4**	**+4.0**
KSM					IAmb	IAmb		01 08 58.2	
	comp=Z,11nm,0.9s								
CTA	**Charters Tower**	**22.04**	**139**	P		**P**		**01 08 59.8**	**+1.0**
	comp=Z,1.7nm,0.5s,baz=311,slow=11,SNR=1.5								
	comp=Z,1.7nm,0.5s								
FORT	**Forrest**	**27.20**	**186**	P		**P**		**01 09 48.2**	**+0.6**
STKA	**Stephens Creek**	**29.80**	**162**	P		**P**		**01 10 12.9**	**+2.2**
	comp=Z,1.8nm,0.4s,baz=343,slow=12,SNR=4.7								
	comp=Z,1.8nm,0.4s								
STKA	**Stephens Creek**	**29.80**	**162**	P		**P**		**01 10 11.2**	**+0.5**
JNU	**Nakatsue**	**36.51**	**360**	LR		LR		01 26 41.6	
	comp=Z,85nm,19.5s,baz=260,slow=38								
KSRS	**Korea Array**	**40.94**	**356**	P		**P**		**01 11 45.0**	**-1.2**
	comp=Z,0.5nm,0.5s,baz=173,slow=9.6,SNR=2.3								
	comp=Z,0.5nm,0.5s								
SONM	**Songino Array**	**55.62**	**340**	P		**P**		**01 13 38.4**	**-1.1**
	comp=Z,0.3nm,0.4s,baz=174,slow=2.9,SNR=2.1								
	comp=Z,0.3nm,0.4s								
MK31	**Makanchi Array**	**66.05**	**326**	P		**P**		**01 14 52.4**	**+2.1**
MK31					IAmb	IAmb		01 15 08.0	
	comp=Z,1.6nm,0.8s								
MKAR	**Makanchi Array**	**66.05**	**326**	P		**P**		**01 14 49.5**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=108,slow=8.6,SNR=6.8								
	comp=Z,0.5nm,0.6s								
MKAR	**Makanchi Array**	**66.05**	**326**	P		**P**		**01 14 52.2**	**+1.8**
AAK	**Ala-Archa**	**68.73**	**319**	LR		LR		01 50 06.9	
	comp=Z,37nm,18.2s,baz=145,slow=40								
ZALV	**Zalesovo Beam**	**69.08**	**333**	P		**P**		**01 15 07.8**	**-1.4**
	comp=Z,0.3nm,0.4s,baz=148,slow=14,SNR=1.6								
	comp=Z,0.3nm,0.4s								
KURBB	**Kurchatov Arra**	**70.25**	**327**	P		**P**		**01 15 15.4**	**-1.1**
	comp=Z,0.8nm,0.6s,baz=126,slow=5.8,SNR=8.7								
	comp=Z,0.8nm,0.6s								
KURK	**Kurchatov**	**70.25**	**328**	P		**P**		**01 15 18.4**	**+1.9**
KURK					IAmb	IAmb		01 15 22.7	
	comp=Z,2.8nm,0.9s								
KK31	**Karatay Array**	**71.58**	**318**	P		**P**		**01 15 26.5**	**+1.6**
KK31					IAmb	IAmb		01 15 34.6	
	comp=Z,2.3nm,1.2s								
KKAR	**Karatay Array**	**71.58**	**318**	P		**P**		**01 15 25.7**	**+0.8**
KKAR					IAmb	IAmb		01 15 34.6	
	comp=Z,2.3nm,1.2s								
GEYT	**Alibeck**	**78.92**	**310**	LR		LR		01 53 53.1	
	comp=Z,96nm,19.6s,baz=134,slow=38								
ABKAR	**Akbulak array**	**80.58**	**321**	P		**P**		**01 16 17.5**	**+1.6**
AKTO	**Aktyubinsk**	**82.11**	**322**	LR		LR		01 57 04.0	
	comp=Z,49nm,19.6s,baz=130,slow=39								
BELG	**Belogornoye**	**88.87**	**322**	LR		LR		02 01 16.0	
	comp=Z,46nm,20.9s,baz=164,slow=39								
ILAR	**Eielson Array**	**89.79**	**25**	P		**P**		**01 17 01.9**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=277,slow=4.5,SNR=1.9								
ILAR					LR	LR		01 53 35.6	
	comp=Z,139nm,21.3s,baz=220,slow=33								
	comp=Z,0.2nm,0.5s								
INK	**Inuvik**	**95.28**	**22**	LR		LR		01 56 31.4	
	comp=Z,135nm,22.0s,baz=205,slow=33								
TORD	**Torodi Ar. Bea**	**129.20**	**284**	PKP			**PKiKP**	**01 23 12.7**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=351,slow=1.9,SNR=2.2								
LPAZ	**La Paz**	**152.54**	**137**	PKPbc			**PKiKP**	**01 24 04.3**	**+2.5**
	comp=Z,0.7nm,0.4s,baz=48,slow=2.5,SNR=6.4								
LPAZ	**La Paz**	**152.54**	**137**				**PKPbc**	**01 23 58.0**	**-3.5**

*MOS **26** 01:07:36.0±1.6, 44°.25N×149°.77E, h16km, mb4.3/1, Error ellipse: s-maj=32.7km s-min=24.0km az=22.5*
*SKHL **26** 01:07:36.6±0.1, 44°.10N×149°.90E, h29km±4km, mb4.2/2*
*IDC **26** 01:07:37.0±4.2, 44°.54N×149°.69E, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=133.3km s-min=40.0km az=9.0*
*JMA **26** 01:07:41.8±1.0, 44°N±4°×14°9E±°, h30km, MV3.5/10, SE OFF ETOROFU*
ISC 26 01:07:40.0±1.3,**44°05N**±0°.08×**149°71E**±0°.10,**h35**km,**n26,** σ1§**67**/28,**mb3.9**/4,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.77**	**313**	*i*	PN		**Pn**	**01 08 06.6**	**-1.4**
KUR					*e*S		**Sn**	**01 08 29.5**	**+0.3**
KUR	**Kuril'sk**	**1.77**	**313**	*i*	P		**Pn**	**01 08 06.4**	**-1.6**
KUR					AMB		AMB	01 08 07.4	
	100nm,0.5s								
KUR					*e*S		**Sn**	**01 08 28.7**	**-0.5**
KUR					A		A	01 08 35.7	
	400nm,0.5s								
KUR					A		A	01 08 35.7	
	260nm,0.5s								
YUK	**Yuzh-Kuril'sk**	**2.77**	**271**	*e*P	N		**Pn**	**01 08 22.3**	**+0.5**
YUK				*e*S			**Sn**	**01 08 56.6**	**+2.6**
YUK	**Yuzh-Kuril'sk**	**2.77**	**271**	*e*P			**Pn**	**01 08 21.7**	**-0.1**
YUK					AMB		AMB	01 08 24.3	
	40nm,0.3s								
YUK				*e*S			**Sn**	**01 08 55.6**	**+1.6**
YUK					A		A	01 09 07.4	
	150nm,0.5s								
YUK					A		A	01 09 07.4	
	250nm,0.5s								
NEM2	**Nemuro 2**	**2.95**	**258**	*e*P			**Pn**	**01 08 24.0**	**-0.4**
NEM2				*e*S			**Sn**	**01 08 54.9**	**-3.6**
NMR	**Nemuro--Hokkai**	**2.96**	**258**	*e*P			**Pn**	**01 08 24.0**	**-0.5**
NMR				*e*S			**Sn**	**01 08 59.2**	**+0.4**
JRA	**Rausu**	**3.31**	**270**	*e*P			**Pn**	**01 08 30.1**	**+0.9**
AKK	**Akkeshi**	**3.68**	**255**	*e*P			**Pn**	**01 08 34.0**	**-0.4**
AKK				*e*S			**Sn**	**01 09 16.9**	**+0.3**
JAK	**Akkeshi**	**3.79**	**256**	*e*P			**Pn**	**01 08 35.9**	**0.0**
JTKR	**Abashiri--Toko**	**4.18**	**271**	*e*P			**Pn**	**01 08 42.4**	**+1.2**
JAR	**Ashorobuto**	**4.37**	**262**	*e*P			**Pn**	**01 08 44.7**	**+0.9**
JCH	**Churui**	**4.84**	**255**	*e*P			**Pn**	**01 08 51.2**	**+0.9**
JCH				*e*S			**Sn**	**01 09 45.4**	**+0.3**
ERM	**Erimo**	**5.21**	**249**	*e*PN			**Pn**	**01 08 57.0**	**+1.6**
JNBK	**Urakawa-nobuka**	**5.38**	**253**	*e*P			**Pn**	**01 08 58.4**	**+0.7**
JANG	**Nango**	**7.10**	**242**	*e*S			**Sn**	**01 10 35.2**	**-5.7**
H11N2	**WAKE ISLAND Hy**	**28.19**	**144**	T			T	01 44 39.1	
	baz=334,slow=76,SNR=4.9								
H11N1	**WAKE ISLAND Hy**	**28.20**	**144**	T			T	01 44 39.7	
	baz=334,slow=76,SNR=4.4								
H11N3	**WAKE ISLAND Hy**	**28.20**	**144**	T			T	01 44 36.1	
	baz=334,slow=76,SNR=3.8								
H11S1	**WAKE ISLAND Hy**	**29.20**	**145**	T			T	01 45 54.6	
	baz=344,slow=76								
H11S3	**WAKE ISLAND Hy**	**29.20**	**145**	T			T	01 46 01.4	
	baz=344								
H11S2	**WAKE ISLAND Hy**	**29.21**	**145**	T			T	01 45 51.6	
	baz=344,slow=76								
MKAR	**Makanchi Array**	**46.08**	**298**	P			**P**	**01 16 00.6**	**+0.3**
	1.0nm,0.7s,baz=75,slow=9.3,SNR=5.5								
	1.0nm,0.7s								
FINES	**FINESS Array B**	**65.43**	**334**	P			**P**	**01 18 18.3**	**-0.4**
	0.8nm,0.6s,baz=44,slow=8.5,SNR=11								
	0.8nm,0.6s								
NB2	**NORSAR Subarra**	**69.97**	**340**	P			**P**	**01 18 46.7**	**-0.7**
	comp=Z,1.2nm,0.8s,baz=31,slow=6.5								
NOA	**NORSAR Array B**	**69.97**	**340**	P			**P**	**01 18 46.8**	**-0.7**
	comp=Z,0.6nm,0.7s,baz=32,slow=5.9,SNR=5.5								
	comp=Z,0.6nm,0.7s								
TXAR	**Lajitas Array**	**80.94**	**58**	P			**P**	**01 19 52.1**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=319,slow=4.5,SNR=5.5								
	comp=Z,0.2nm,0.5s								

WEL 26 01:26:58.5±1.2,**34°S**±6°×**17°9E**±1°,**h27**km±11km,**M4.2**/14, **mB5.1**/2,**ML4.4**/19,**MLv4.2**/14,**Mw(mB)4.4**/2,**Error ellipse: s-maj=0.0km s-min=0.0km az=109.8,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.24**	**196**	P		Pn	01 27 48.9	+1.3
MXZ				S		Sn	01 28 27.7	+2.4
WMGZ	**Waiomatatini S**	**3.46**	**193**	P		Pn	01 27 52.4	+1.7
WMGZ				S		Sn	01 28 34.5	+3.7
HAZ	**Te Kaha**	**3.56**	**201**	P		Pn	01 27 53.0	+1.0
HAZ				S		Sn	01 28 36.7	+3.5
PKGZ	**Pakihiroa**	**3.60**	**197**	P		Pn	01 27 53.8	+1.1
PKGZ				S		Sn	01 28 35.7	+1.3
PUZ	**Puketiti**	**3.74**	**194**	P		Pn	01 27 55.0	+0.5
PUZ				S		Sn	01 28 38.5	+0.8
RUGZ	**Raukumara Rang**	**3.78**	**201**	P		Pn	01 27 56.2	+1.0
TWGZ	**Tauwhareparae**	**3.90**	**197**	P		Pn	01 27 57.9	+1.2
TWGZ				S		Sn	01 28 42.6	+0.9
CNGZ	**Carnagh Statio**	**4.15**	**193**	P		Pn	01 28 00.6	+0.5
MWZ	**Matawai**	**4.17**	**201**	P		Pn	01 28 00.7	+0.3
MWZ				S		Sn	01 28 48.4	+0.1
TKGZ	**Te Karaka**	**4.18**	**197**	P		Pn	01 28 00.6	0.0
TKGZ				S		Sn	01 28 48.0	-0.5
URZ	**Urewera**	**4.24**	**205**	P		Pn	01 28 01.3	0.0
URZ				S		Sn	01 28 49.4	-0.5
WCZ	**Waipu Caves**	**4.41**	**249**	P		Pn	01 28 04.6	+1.0
RIGZ	**Rimuhau**	**4.46**	**197**	P		Pn	01 28 04.0	-0.3
RIGZ				S		Sn	01 28 53.6	-1.8
MUGZ	**Murupara**	**4.55**	**207**	P		Pn	01 28 05.1	-0.6
TOZ	**Tahuroa Road**	**4.56**	**223**	P		Pn	01 28 08.3	+2.6
PRGZ	**Paritu Road**	**4.64**	**195**	P		Pn	01 28 05.8	-1.1
PRGZ				S		Sn	01 28 56.9	-2.9
SNGZ	**Shannon Statio**	**4.64**	**200**	P		Pn	01 28 06.1	-0.8
KNZ	**Kokohu**	**4.78**	**196**	P		Pn	01 28 07.2	-1.6
RAHZ	**Arahi**	**4.84**	**202**	P		Pn	01 28 08.7	-0.9
MHGZ	**Mahia Peninsul**	**4.85**	**194**	P		Pn	01 28 08.5	-1.3
MTHZ	**Maungataniwha**	**4.86**	**204**	P		Pn	01 28 10.1	+0.2
MRHZ	**Matea Rd**	**5.00**	**208**	P		Pn	01 28 10.9	-1.0
NMHZ	**Naumai**	**5.09**	**203**	P		Pn	01 28 11.6	-1.6
ARHZ	**Aropaoanui**	**5.18**	**201**	P		Pn	01 28 12.2	-2.1
GLKZ	**Green Lake**	**5.64**	**24**	S		Sn	01 29 25.3	+0.8

*CNRM **26** 01:32:19.5, 37°.23N×6°.57W, h13km, ml3.6*
*SFS **26** 01:33:01.0, 35°.11N×3°.82W, ML1.5, TAMASSINT (MARRUECOS)*
*MDD **26** 01:33:01.6±0.9, 35°.11N×3°.83W, h11km±4km, mb_Lg1.5/7, Error ellipse: s-maj=5.3km s-min=4.0km az=6.0*
ISC 26 01:33:00.7±1.1,**35°16N**±0°.02×**3°82W**±0°.02,**h14**km±9km, **n30,** σ0§**87**/52,**Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PALE	**Palemas**	**0.12**	**300**	P			**Pb**	**01 33 05.1**	**+0.4**
PALE	**Palemas**	**0.12**	**300**	P			**Pn**	**01 33 05.2**	**+0.4**
PALE				S			**Sb**	**01 33 08.8**	**+1.4**
PVLZ	**Peæn de**	**0.40**	**272**	P			**Pg**	**01 33 08.5**	**-0.1**
PVLZ				S			**Sb**	**01 33 15.2**	**-0.2**
AKLM	**AKL**	**0.65**	**183**	P			**Pg**	**01 33 12.0**	**-1.4**
AKLM	**AKL**	**0.65**	**183**	P			**Pg**	**01 33 11.9**	**-1.4**
AKLM				S			**Sb**	**01 33 22.7**	**-0.1**
GOG	**Mont Gurugu**	**0.67**	**84**	P			**Pg**	**01 33 14.0**	**+0.1**
GOG	**Mont Gurugu**	**0.67**	**84**	P			**Pg**	**01 33 13.6**	**-0.2**
GOG				S			**Sn**	**01 33 25.6**	**-0.7**
EMEL	**Melilla**	**0.72**	**78**	Pg			**Pb**	**01 33 15.3**	**+0.3**
EMEL				Sg			**Sn**	**01 33 26.0**	**-1.3**
WMELI	**Melilla**	**0.72**	**77**	P			**Pb**	**01 33 14.6**	**-0.4**
WMELI				S			**Sb**	**01 33 26.0**	**+1.1**
EALB	**Alboran**	**1.01**	**39**	Pg			**Pg**	**01 33 20.8**	**+0.7**
EALB				Sg			**Sn**	**01 33 34.6**	**+0.3**
EALB				*i*	Vmb_Lg			01 33 36.4	
CHAS	**Isla Isabel II**	**1.14**	**88**	P			**Pn**	**01 33 21.2**	**-0.9**
CHAS				S			**Sb**	**01 33 36.2**	**-0.4**
TAF	**Taforalt**	**1.20**	**106**	P			**Pb**	**01 33 23.6**	**+0.4**
CHEFC	**Chefchaouen**	**1.25**	**268**	P			**Pb**	**01 33 24.2**	**+0.1**
CHEFC				S			**Sb**	**01 33 38.7**	**-1.4**
JBK	**JBK**	**1.32**	**128**	P			**Pn**	**01 33 25.0**	**+0.1**
JBK	**JBK**	**1.32**	**128**	P			**Pn**	**01 33 24.0**	**-0.8**
JBK				S			**Sg**	**01 33 43.6**	**+0.4**
SMIR	**Smir Dam**	**1.38**	**293**	P			**Pn**	**01 33 24.0**	**-1.5**
SMIR				S			**Sn**	**01 33 42.9**	**-0.7**
EMIJ	**Mijas**	**1.60**	**331**	Pn			**Pn**	**01 33 28.6**	**0.0**
EMIJ				Sn			**Sn**	**01 33 48.5**	**-0.6**
EMIJ				*i*	Vmb_Lg			01 33 51.9	
SICH	**Sidi Chahed**	**1.62**	**230**	S			**Sb**	**01 33 51.2**	**+0.4**
LCRM	**LCR**	**1.70**	**211**	P			**Pb**	**01 33 31.7**	**-0.2**
LCRM				S			**Sg**	**01 33 56.6**	**+1.0**
ELGU	**Los Guajares,**	**1.71**	**5**	Pn			**Pn**	**01 33 30.7**	**+0.5**
ELGU				Sn			**Sn**	**01 33 52.1**	**+0.2**
ELGU				*i*	Vmb_Lg			01 33 57.1	
EBER	**Berja**	**1.89**	**23**	Sn			**Sb**	**01 33 57.9**	**-0.8**
EBER				*i*	Vmb_Lg			01 33 59.9	
CZD	**Col de Zad**	**2.35**	**206**	P			**Pn**	**01 33 39.9**	**+0.7**
CZD				S			**Sn**	**01 34 07.2**	**-0.8**
MD31	**MD31**	**2.42**	**199**	P			**Pn**	**01 33 40.7**	**+0.8**
MD31				S			**Sn**	**01 34 09.7**	**+0.4**
MDT	**Midelt**	**2.43**	**196**	P			**Pn**	**01 33 40.9**	**+0.8**
MDT				S			**Sb**	**01 34 13.5**	**-0.6**
TDRA	**Tendrara**	**2.58**	**144**	P			**Pn**	**01 33 43.3**	**+1.0**
TDRA				S			**Sn**	**01 34 15.3**	**+1.7**
EQES	**Quesada**	**2.71**	**13**	Pn			**Pb**	**01 33 47.8**	**-1.2**
EQES				Sn			**Sb**	**01 34 21.4**	**-0.7**
EQES				*i*	Vmb_Lg			01 34 24.5	
ZHG	**ZHG**	**2.90**	**235**	P			**Pn**	**01 33 48.2**	**+1.8**
ZHG				S			**Sn**	**01 34 20.7**	**-0.5**
ECAB	**El Cabril**	**3.18**	**337**	Pn			**Pn**	**01 33 51.2**	**+0.8**
ECAB				Sn			**Sn**	**01 34 29.2**	**+1.1**
ECAB				*i*	Vmb_Lg			01 34 32.6	
EMIN	**Mina Concepcio**	**3.48**	**319**	P			**Pn**	**01 33 54.5**	**+0.2**
EMIN				Sn			**Sn**	**01 34 33.9**	**-1.4**
EMIN				*i*	Vmb_Lg			01 34 36.9	
PVAQ	**Vaqueiros**	**3.87**	**307**	P			**Pn**	**01 34 00.2**	**+0.4**

*IDC **26** 01:36:36.4±1.7, 29°.10S×60°.90E, h0km, mb3.7/5, mbtmp3.8/6, MLL3.8/1, MS3.4/3, Error ellipse: s-maj=75.7km s-min=27.6km az=29.0*
ISC 26 01:36:38.8±1.9,**28°1S**±0°.9×**61°2E**±0°.5,**h10**km,**n16,** σ0§**93**/6,**mb3.9**/5,**MS3.5**/3,**Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**15.97**	**303**	Pn		**P**	**01 40 27.0**	**-0.4**
	baz=304,slow=20,SNR=2.1							
OPO					Sn	**Sn**	**01 43 20.6**	**-0.6**
	baz=6.4,slow=19,SNR=2.1							
	5.5nm,0.9s							
H08S1	**Diego Carcia H**	**22.92**	**30**	T		T	02 06 34.1	
	baz=204,slow=76,SNR=20							
H08S2	**Diego Garcia H**	**22.93**	**30**	T		T	02 06 34.9	
	baz=204,slow=76,SNR=11							
H08S3	**Diego Garcia H**	**22.94**	**30**	T		T	02 06 36.1	
	baz=204,slow=76,SNR=15							
LBTB	**Lobatse**	**31.95**	**267**	LR		LR	01 55 23.5	
	comp=Z,48nm,18.1s,baz=158,slow=36							
MAW	**Mawson**	**39.58**	**179**	LR		LR	01 57 03.6	
	comp=Z,72nm,19.5s,baz=142,slow=32							
H01W2	**Cape Leeuwin H**	**45.20**	**112**	T		T	02 32 28.2	
	baz=261,slow=75,SNR=37							
H01W3	**Cape Leeuwin H**	**45.20**	**112**	T		T	02 32 28.6	
	baz=261,slow=75,SNR=37							
H01W1	**Cape Leeuwin H**	**45.22**	**112**	T		T	02 32 29.5	
	baz=261,slow=75,SNR=38							
ASAR	**Alice Springs**	**64.65**	**104**	P		**P**	**01 47 16.6**	**-0.5**
	0.8nm,0.7s,baz=248,slow=6.1,SNR=8.2							
	0.8nm,0.7s							
WRA	**Warramunga Arr**	**66.41**	**101**	P		**P**	**01 47 28.0**	**-0.5**
	0.9nm,1.0s,baz=249,slow=5.3,SNR=3.1							
	0.9nm,1.0s							
GNI	**Garni**	**69.57**	**347**	LR		LR	02 17 30.9	
	comp=Z,26nm,19.2s,baz=135,slow=35							
TORD	**Torodi Ar. Bea**	**70.69**	**297**	P		**P**	**01 47 55.8**	**+0.6**
	0.6nm,1.0s,baz=109,slow=7.8,SNR=2.6							
	0.6nm,1.0s							
MKAR	**Makanchi Array**	**76.90**	**15**	P		P	01 48 35.3	+4.3
	0.5nm,0.8s,baz=193,slow=4.4,SNR=4.3							
	0.5nm,0.8s							
ZALV	**Zalesovo Beam**	**84.19**	**14**	P		P	01 49 15.9	+6.0
	0.3nm,0.3s,baz=190,slow=7.3,SNR=3.9							
	0.3nm,0.3s							
YKA	**Yellowknife Ar**	**145.46**	**357**	PKPbc			**PKPab**	**01 56 17.7**	**+1.1**
	0.2nm,0.6s,baz=355,slow=2.4,SNR=4.1								

*JMA **26** 01:40:47.9±0.2, 43°.2N±0°.7×14°6E±°, h45km, MV2.5/34, OFF NEMURO PENINSULA*
*SKHL **26** 01:40:48.4±0.2, 43°.20N×146°.00E, h40km±4km, mb3.6/3*
ISC 26 01:40:46.7±3.4,**43°1N**±0°.1×**146°1E**±0°.2,**h44**km±15km,**n12,** σ1§**00**/17,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.36**	**310**	P			**Pn**	**01 40 56.4**	**+0.5**
NEM2					*e*S		**Sn**	**01 41 02.5**	**+0.2**
NMR	**Nemuro--Hokkai**	**0.37**	**309**	*e*P			**Pn**	**01 40 56.3**	**+0.3**
NMR					AMB		AMB	01 40 56.8	
	40nm,0.2s								
NMR					*e*S		**Sn**	**01 41 02.1**	**-0.5**
NMR					A		A	01 41 02.9	
	250nm,0.3s								
NMR					A		A	01 41 02.9	
	290nm,0.3s								
JKHN	**Kushirohamanak**	**0.71**	**266**	P			**Pn**	**01 41 01.2**	**+1.0**
YUK	**Yuzh-Kuril'sk**	**0.92**	**348**	*e*P			**Pn**	**01 41 03.3**	**+0.2**
YUK					AMB		AMB	01 41 04.0	
	20nm,0.2s								
YUK					*e*S		**Sn**	**01 41 14.1**	**-1.1**
YUK					A		A	01 41 19.3	
	110nm,0.4s								
YUK					A		A	01 41 19.3	
	110nm,0.4s								
AKK	**Akkeshi**	**0.95**	**263**	*e*P			**Pn**	**01 41 02.9**	**-0.6**
AKK					*e*S		**Sn**	**01 41 13.8**	**-2.1**
JNSB	**Nemuroshibetsu**	**1.04**	**308**	P			**Pn**	**01 41 05.0**	**+0.3**
JAK	**Akkeshi**	**1.06**	**263**	P			**Pn**	**01 41 05.6**	**+0.6**
JRA	**Rausu**	**1.09**	**318**	*e*P			**Pn**	**01 41 05.9**	**+0.5**
JNK	**Nakash**	**1.12**	**294**	*e*P		

LOAL	**Lomas de Alarc**	**0.84**	**338**	*eP*	**Pn**	**02 14 39.3**	**0.0**
SCLA	**Alcaldia de Sa**	**0.85**	**56**	*eP*	**Pn**	**02 14 39.2**	**-0.3**
SCLA	**Alcaldia de Sa**	**0.85**	**56**	*eP*	**Pn**	**02 14 39.2**	**-0.3**
COEB	**Comit de Eme**	**0.94**	**73**	*eP*	**Pn**	**02 14 39.7**	**-0.9**
COEB	**Comit de Eme**	**0.94**	**73**	*eP*	**Pn**	**02 14 39.7**	**-0.9**
PACA	**Pacayal**	**1.13**	**77**	*eP*	**Pn**	**02 14 43.9**	**+0.6**
PACA				IAML		02 15 03.6	
	comp=Z,3μm,0.2s						
PACA	**Pacayal**	**1.13**	**77**	*eP*	**Pn**	**02 14 43.9**	**+0.6**
PACA				IAML		02 15 03.6	
	comp=Z,3μm,0.2s						
MTO3	**Montecristo**	**1.18**	**4**	*eP*	**Pn**	**02 14 43.2**	**-0.8**
MTO3	**Montecristo**	**1.18**	**4**	*eP*	**Pn**	**02 14 43.2**	**-0.8**
ESQI	**Esquipulas**	**1.34**	**5**	*eP*	**Pn**	**02 14 45.5**	**-0.6**
LCND	**La Caada**	**1.52**	**86**	*eP*	**Pn**	**02 14 48.0**	**-0.6**
LCND	**La Caada**	**1.52**	**86**	*eP*	**Pn**	**02 14 48.0**	**-0.6**
CNCH	**Conchagua**	**1.58**	**88**	*eP*	**Pn**	**02 14 49.9**	**+0.5**
CNCH	**Conchagua**	**1.58**	**88**	*eP*	**Pn**	**02 14 49.9**	**+0.5**

NEIC ***26*** *02:33:42.5±0.8, 40˚.83N±0˚.07×142˚.6E±0˚.1, h75km±7km, mb4.1/11, Error ellipse: s-maj=13.3km s-min=7.8km az=119.0*
IDC ***26*** *02:33:42.8±3.4, 40˚.83N×142˚.66E, h84km±28km, mb3.5/8, mbtmp3.8/12, MS3.3/2, Error ellipse: s-maj=33.0km s-min=15.9km az=79.0*
JMA ***26*** *02:33:42.5±0.1, 40˚.9N±0˚.3×142˚.6E±0˚.8, h66km±2km, MV3.9/35, E OFF AOMORI PREF*
JMA Felt I J1 at E OFF AOMORI PREF .
ISC 26 02:33:42.2±0.9, 40˚.85N±0˚.04×142˚.56E±0˚.06, h76km±8km, n55, σ0°75/61, mb4.0/15, 7D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JARK	**Aomorirokkasho**	**0.92**	**280**	*i* P		**Pn**	**02 34 00.1**	**+0.1**
JARK				S		**Sn**	**02 34 12.9**	**-0.3**
JKEN	**Kujiedanarisaw**	**0.92**	**225**	⇓*i* P		**Pn**	**02 33 59.9**	**-0.1**
JKEN				⇓S		**Sn**	**02 34 12.9**	**-0.3**
JANG	**Nango**	**0.93**	**239**	⇓*i* P		**Pn**	**02 34 00.3**	**+0.2**
JANG				⇓S		**Sn**	**02 34 13.4**	**-0.1**
JAHD	**Aomorihigashid**	**1.01**	**294**	P		**Pn**	**02 34 01.5**	**+0.4**
JAHD				S		**Sn**	**02 34 15.7**	**+0.5**
JTH	**Tanohata**	**1.06**	**210**	P		**Pn**	**02 34 01.7**	**0.0**
JTH				S		**Sn**	**02 34 15.9**	**-0.3**
JTM	**Tenmabayashi**	**1.13**	**267**			**Pn**	**02 34 02.8**	**+0.2**
JTM	**Tenmabayashi**	**1.13**	**267**	*i* P		**Pn**	**02 34 02.8**	**+0.2**
JTM				S		**Sn**	**02 34 17.8**	**-0.1**
ERM	**Erimo**	**1.24**	**21**			**Pn**	**02 34 04.4**	**+0.4**
JEM	**Erimo**	**1.25**	**21**	*i* P		**Pn**	**02 34 04.5**	**+0.4**
JEM				S		**Sn**	**02 34 20.7**	**+0.3**
JOT	**Ohata**	**1.26**	**295**	*i* P		**Pn**	**02 34 04.1**	**0.0**
JOT				S		**Sn**	**02 34 20.0**	**-0.7**
JNBK	**Urakawa-nobuka**	**1.43**	**6**	⇓*i* P		**Pn**	**02 34 07.3**	**+0.9**
JKB	**Kayabe**	**1.54**	**312**	S		**Sn**	**02 34 26.6**	**-0.7**
JAH	**Hinai**	**1.61**	**246**	*i* P		**Pn**	**02 34 09.4**	**+0.7**
JAH				S		**Sn**	**02 34 29.4**	**+0.5**
JOM	**Ohasama**	**1.69**	**216**	*i* P		**Pn**	**02 34 10.6**	**+0.8**
JOM				S		**Sn**	**02 34 30.9**	**+0.2**
JCH	**Churui**	**1.86**	**19**	⇓*i* P		**Pn**	**02 34 12.4**	**+0.4**
JCH				⇓S		**Sn**	**02 34 34.8**	**0.0**
JEW	**Eniwo**	**2.15**	**338**			**Pn**	**02 34 16.4**	**+0.5**
JEW	**Eniwo**	**2.15**	**338**	P		**Pn**	**02 34 16.5**	**+0.5**
JEW				S		**Sn**	**02 34 41.4**	**-0.4**
JMK	**Ichinoseki**	**2.16**	**209**	P		**Pn**	**02 34 16.7**	**+0.6**
JMK				S		**Sn**	**02 34 42.2**	**+0.2**
JKA	**Kamikawa-asahi**	**3.26**	**1**			**Pn**	**02 34 31.4**	**+0.4**
JMM	**Marumori**	**3.28**	**205**			**Pn**	**02 34 31.2**	**-0.1**
JYT	**Yasato**	**4.98**	**203**	Pn		**Pn**	**02 34 54.5**	**+0.1**
MJAR	**Matsushiro Arr**	**5.49**	**220**	P		**Pn**	**02 35 02.4**	**+1.1**
	3.1nm,0.6s,baz=32,slow=12,SNR=3.8							
MJB9	**Matsu-Tunnel**	**5.49**	**220**	Pn		**Pn**	**02 35 01.5**	**+0.1**
INU	**Inuyama**	**7.02**	**220**			**Pn**	**02 35 22.6**	**+0.3**
USA0B	**Ussuriysk Arra**	**8.49**	**297**	Pn		**Pn**	**02 35 43.1**	**+0.8**
USRK	**Ussuriysk Ar.**	**8.49**	**297**	P		**Pn**	**02 35 44.1**	**+1.9**
	15nm,0.8s,baz=97,slow=14,SNR=16							
USRK	**Ussuriysk Ar.**	**8.49**	**297**	Pn		**Pn**	**02 35 42.5**	**+0.3**
KLR	**Kul'dur**	**11.33**	**321**	P		**Pn**	**02 36 21.4**	**+0.4**
	1.3nm,0.7s,baz=128,slow=12,SNR=4.8							
KLR				LR		LR	02 40 42.3	
	comp=Z,32nm,19.2s,baz=82,slow=37							
KSRS	**Korea Array**	**11.86**	**258**	P		**Pn**	**02 36 30.6**	**+2.4**
	0.7nm,0.7s,baz=72,slow=12,SNR=2.3							
JSU	**Suzuyama**	**13.50**	**230**	Pn		**Pn**	**02 36 47.9**	**-2.5**
TWG	**Pinlang**	**25.51**	**232**	P		**P**	**02 39 03.1**	**-0.4**
SONM	**Songino Array**	**26.60**	**297**	P		**P**	**02 39 14.1**	**+0.8**
	1.1nm,0.6s,baz=88,slow=9.2,SNR=7.3							
	1.1nm,0.6s							
SONM	**Songino Array**	**26.60**	**297**	IAmb		IAmb	02 39 16.9	
	comp=Z,0.9nm,0.8s							
H11N2	**WAKE ISLAND Hy**	**29.57**	**128**	T		T	03 10 46.4	
	baz=318,slow=75,SNR=32							
H11N1	**WAKE ISLAND Hy**	**29.58**	**128**	T		T	03 10 44.5	
	baz=318,slow=75,SNR=22							
H11N3	**WAKE ISLAND Hy**	**29.59**	**128**	T		T	03 10 42.3	
	baz=318,slow=75,SNR=25							
H11S1	**WAKE ISLAND Hy**	**30.41**	**130**	T		T	03 12 29.3	
	baz=321,slow=74							
H11S3	**WAKE ISLAND Hy**	**30.41**	**130**	T		T	03 13 21.3	
	baz=321,slow=74							
H11S2	**WAKE ISLAND Hy**	**30.43**	**130**	T		T	03 12 27.8	
	baz=321							
ZAA0	**Zalesovo Array**	**40.10**	**309**	P		**P**	**02 41 11.1**	**+1.1**
ZAA0				IAmb		IAmb	02 41 15.3	
	comp=Z,2.3nm,0.7s							
ZALV	**Zalesovo Beam**	**40.10**	**309**	P		**P**	**02 41 10.6**	**+0.6**
	comp=Z,2.0nm,0.5s,baz=89,slow=8.8,SNR=10							
	comp=Z,2.0nm,0.5s							
ZALV	**Zalesovo Beam**	**40.10**	**309**	P		**P**	**02 41 11.3**	**+1.4**
MK31	**Makanchi Array**	**42.95**	**299**	P		**P**	**02 41 34.1**	**+0.7**
MKAR	**Makanchi Array**	**42.95**	**299**	P		**P**	**02 41 33.9**	**+0.5**
	comp=Z,1.0nm,0.7s,baz=82,slow=9.6,SNR=7.0							
	comp=Z,1.0nm,0.7s							
CHTO	**Chiang Mai**	**43.19**	**253**	P		**P**	**02 41 35.4**	**-0.2**
CHTO				IAmb		IAmb	02 41 39.5	
	comp=Z,10nm,1.5s							
KURK	**Kurchatov**	**44.37**	**305**	P		**P**	**02 41 45.5**	**+0.8**
KURK				IAmb		IAmb	02 41 49.4	
	comp=Z,2.6nm,0.8s							
ILAR	**Eielson Array**	**45.82**	**34**	P		**P**	**02 41 56.2**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=255,slow=7.1,SNR=2.7							
	comp=Z,0.3nm,0.7s							
KK31	**Karatay Array**	**52.05**	**298**	P		**P**	**02 42 44.1**	**+0.1**
KK31				IAmb		IAmb	02 43 16.9	
	comp=Z,2.6nm,1.4s							
KKAR	**Karatay Array**	**52.05**	**298**	P		**P**	**02 42 43.0**	**-1.0**
KKAR				IAmb		IAmb	02 43 16.9	
	comp=Z,2.6nm,1.4s							
ABKAR	**Akbulak array**	**56.21**	**309**	P		**P**	**02 43 13.2**	**-0.8**
ABKAR				IAmb		IAmb	02 43 28.1	
	comp=Z,1.3nm,0.8s							
ARCES	**ARCESS Array B**	**60.75**	**339**	P		**P**	**02 43 44.6**	**-0.7**
	comp=Z,2.1nm,1.1s,baz=52,slow=10,SNR=3.5							
	comp=Z,2.1nm,1.1s							
WRA	**Warramunga Arr**	**60.97**	**189**	P		**P**	**02 43 46.5**	**-0.9**
	comp=Z,1.2nm,0.7s,baz=4.8,slow=6.9,SNR=20							
WRA				LR		LR	03 08 55.7	
	comp=Z,96nm,20.6s,baz=239,slow=35							
	comp=Z,1.2nm,0.7s							
AS31	**Alice Springs**	**64.69**	**189**	P		**P**	**02 44 12.2**	**+0.1**
AS31				IAmb		IAmb	02 44 19.2	
	comp=Z,1.3nm,1.1s							
ASAR	**Alice Springs**	**64.69**	**189**	P		**P**	**02 44 12.1**	**0.0**
	comp=Z,0.9nm,0.7s,baz=2.2,slow=7.3,SNR=11							
	comp=Z,0.9nm,0.7s							
FINES	**FINESS Array B**	**65.86**	**332**	P		**P**	**02 44 19.0**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=51,slow=7.5,SNR=5.8							
	comp=Z,0.6nm,0.6s							

MAN ***26*** *02:49:14.6, 19˚.06N×120˚.95E, h47km, mb5.1, ML4.1, MS4.2*
MAN INTENSITY II - CLAVERIA CAGAYAN.
IDC ***26*** *02:49:19.4±3.7, 18˚.79N×121˚.16E, h85km±37km, mb3.4/8, mbtmp3.7/9, MS3.0/2, Error ellipse: s-maj=32.4km s-min=16.7km az=71.0*
ISC 26 02:49:17.0±1.5, 19˚.03N±0˚.09×121˚.11E±0˚.07, h52km±18km, n25, σ2°02/25, mb3.6/7, 7C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
APYP	**Conner**	**1.17**	**174**	⇑*eP*		**Pn**	**02 49 35.2**	**-1.9**
APYP				*i* S		**Sn**	**02 49 49.4**	**-2.6**
SGCP	**Gonzaga**	**1.19**	**131**	⇑*eP*		**Pn**	**02 49 37.8**	**+0.4**
SGCP				*eS*		**Sn**	**02 49 54.4**	**+1.9**
SIPP	**Brgy, Tapao**	**1.26**	**209**	⇓*iP*		**Pn**	**02 49 36.2**	**-2.1**
SIPP				*i* S		**Sn**	**02 49 57.6**	**+3.4**
SAMP	**Sagada Mountai**	**1.95**	**186**	⇑*eP*		**Pn**	**02 49 45.8**	**-2.0**
SAMP				*eS*		**Sn**	**02 50 10.3**	**-0.8**
BOLP	**Bolinao**	**2.87**	**204**	⇑*eP*		**Pn**	**02 50 00.3**	**0.0**
BOLP				*eS*		**Sn**	**02 50 36.2**	**+2.5**
BALP	**Baler**	**3.30**	**172**	⇑*eP*		**Pn**	**02 50 05.8**	**-0.4**
BALP				*i* S		**Sn**	**02 50 48.7**	**+4.4**
SCZP	**Santa Cruz**	**3.43**	**200**	⇑*eP*		**Pn**	**02 50 07.2**	**-0.8**
SCZP				*eS*		**Sn**	**02 50 51.0**	**+3.5**
PCPH	**Palayan**	**3.45**	**180**	⇓*eP*		**Pn**	**02 50 08.6**	**+0.3**
MACP	**Maragondon, Ca**	**4.76**	**185**	⇓*eP*		**Pn**	**02 50 26.1**	**-0.2**
TGY	**Tagaytay City**	**4.90**	**182**	P		**Pn**	**02 50 29.4**	**+1.0**
	140nm,0.3s,baz=90,slow=10,SNR=1.3							
KSRS	**Korea Array**	**19.30**	**17**	P		**Pn**	**02 53 38.6**	**-0.4**
	0.9nm,0.6s,baz=198,slow=12,SNR=4.7							
KSRS				LR		LR	03 02 08.3	
	comp=Z,44nm,19.2s,baz=335,slow=39							
CMAR	**Chiang Mai Arr**	**21.00**	**272**	P		**P**	**02 53 55.4**	**-0.9**
	1.7nm,0.3s,baz=78,slow=10,SNR=4.4							
CMAR				LR		LR	03 02 46.4	
	comp=Z,33nm,18.2s,baz=95,slow=38							
	1.7nm,0.3s							
SONM	**Songino Array**	**31.13**	**341**	P		**P**	**02 55 31.2**	**+0.4**
	0.2nm,0.5s,baz=207,slow=4.8,SNR=1.2							
	0.2nm,0.5s							
WRA	**Warramunga Arr**	**40.85**	**161**	P		P	02 56 49.7	-4.3
	0.5nm,0.4s,baz=341,slow=9.1,SNR=6.7							
	0.5nm,0.4s							
MKAR	**Makanchi Array**	**42.10**	**320**	P		**P**	**02 57 05.5**	**+1.5**
	0.6nm,0.8s,baz=114,slow=10,SNR=5.1							
	0.6nm,0.8s							
H11S3	**WAKE ISLAND Hy**	**43.07**	**83**	T		T	03 42 46.1	
	baz=276,slow=74,SNR=5.8							
H11S1	**WAKE ISLAND Hy**	**43.08**	**83**	T		T	03 42 58.9	
	baz=276,slow=74,SNR=3.9							
H11S2	**WAKE ISLAND Hy**	**43.09**	**83**	T		T	03 42 45.9	
	baz=276,slow=74,SNR=4.2							
H11N1	**WAKE ISLAND Hy**	**43.10**	**81**	T		T	03 43 00.2	
	baz=278,slow=75,SNR=5.7							
H11N2	**WAKE ISLAND Hy**	**43.10**	**81**	T		T	03 42 57.0	
	baz=278,slow=75,SNR=5.4							
H11N3	**WAKE ISLAND Hy**	**43.11**	**81**	T		T	03 43 01.4	
	baz=278,slow=75,SNR=3.8							
ASAR	**Alice Springs**	**44.24**	**163**	P		**P**	**02 57 18.8**	**-2.7**
	0.6nm,0.5s,baz=339,slow=6.9,SNR=9.3							
	0.6nm,0.5s							
ILAR	**Eielson Array**	**73.82**	**26**	P		**P**	**03 00 45.0**	**-0.9**
	0.3nm,0.9s,baz=273,slow=5.9,SNR=2.6							
	0.3nm,0.9s							
FINES	**FINESS Array B**	**75.85**	**330**	P		**P**	**03 00 58.0**	**+0.5**
	0.9nm,0.8s,baz=113,slow=9.1,SNR=5.0							
	0.9nm,0.8s							
YKA	**Yellowknife Ar**	**87.73**	**23**	P		**P**	**03 02 00.6**	**+0.6**
	0.6nm,0.7s,baz=308,slow=4.3,SNR=5.0							
	0.6nm,0.7s							

BJI ***26*** *02:56:36.3±0.0, 6˚.54S×130˚.25E, h160km, mb4.9/64, mB4.7/28*
NEIC ***26*** *02:56:41.3±1.4, 6˚.19S±0˚.07×130˚.06E±0˚.08, h158km±5km, mb4.8/71, Error ellipse: s-maj=11.6km s-min=9.6km az=83.0*
DJA ***26*** *02:56:42.2±0.2, 6˚S±2˚×13˚0E±˚, h163km±3km, M4.9/51, mb5.0/51, mB5.4/30, MLv5.5/13, Mw(mB)4.8/30, MwMwp4.5/2, Mwp4.9/2*
IDC ***26*** *02:56:42.0±0.7, 6˚.14S×130˚.09E, h163km±6km, mb4.3/15, mbtmp4.8/19, MS3.5/6, Error ellipse: s-maj=18.5km s-min=9.0km az=71.0*
ISC 26 02:56:41.2±0.3, 6˚.21S±0˚.04×130˚.04E±0˚.05, h160km±3km, h161km:pP-P, n275, σ1945/286, mb4.8/72, 6C-2D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BNDI	**Bandanaira**	**1.68**	**355**	P		**Pn**	**02 57 15.5**	**+2.0**
MSAI	**Masohi**	**3.05**	**339**	P		**Pn**	**02 57 31.1**	**+1.4**
AAI	**Ambon**	**3.11**	**324**	P		**Pn**	**02 57 31.7**	**+1.3**
FAKI	**Fak Fak**	**3.94**	**34**	Pn		**Pn**	**02 57 40.3**	**-0.8**
FAKI	**Fak Fak**	**3.94**	**34**	P		**Pn**	**02 57 40.1**	**-0.9**
NLAI	**Namlea**	**4.16**	**315**	P		**Pn**	**02 57 45.8**	**+2.0**
SWI	**Sorong**	**5.45**	**13**	P		**Pn**	**02 57 59.4**	**-1.4**
	5.6nm2μm43μm400nm,0.4s							
SANI	**Sanana**	**5.78**	**315**	P		**Pn**	**02 58 05.8**	**+0.7**
	2.2nm5μm506nm,1.5s							
SANI	**Sanana**	**5.78**	**315**	P		**Pn**	**02 58 06.7**	**+1.6**
LBMI	**Labuha**	**6.09**	**335**	P		**Pn**	**02 58 10.4**	**+1.2**
	5.6nm3μm422nm,0.8s							
MTN	**Manton Dam**	**6.68**	**171**	P		**Pn**	**02 58 17.3**	**+0.2**
	baz=6.7,SNR=108							
MTN	**Manton Dam**	**6.68**	**171**	Pn		**Pn**	**02 58 17.5**	**+0.4**
MTN	**Manton Dam**	**6.68**	**171**	P		**Pn**	**02 58 17.7**	**+0.6**
SOEI	**Soe**	**6.71**	**238**			**Pn**	**02 58 17.6**	**0.0**
SOEI	**Soe**	**6.71**	**238**	P		**Pn**	**02 58 17.3**	**-0.3**
	4.5nm5μm230nm,0.9s							
SOEI	**Soe**	**6.71**	**238**	P		**Pn**	**02 58 18.2**	**+0.6**
KDU	**Kakadu**	**6.87**	**160**	P		**Pn**	**02 58 19.2**	**-0.4**
	baz=6.9,SNR=908							
KDU	**Kakadu**	**6.87**	**160**	P		**Pn**	**02 58 19.6**	**0.0**
TNTI	**Ternate**	**7.43**	**339**	Pn		**Pn**	**02 58 26.2**	**-0.9**
BATI	**Baumata**	**7.46**	**237**	P		**Pn**	**02 58 27.1**	**-0.3**
	1.6nm4μm240nm,0.6s							
BBSI	**Bau Bau**	**7.46**	**275**	P		**Pn**	**02 58 31.3**	**+3.8**
SRPI	**Serui, Papua**	**7.54**	**55**	P		**Pn**	**02 58 29.6**	**+1.1**
	2.0nm531nm,0.8s							
BAKI	**Biak**	**7.84**	**51**	P		**Pn**	**02 58 33.6**	**+1.0**
	2μm,1.1s							
MMRI	**Maumere**	**8.10**	**252**	Pn		**Pn**	**02 58 36.5**	**+0.5**
MMRI	**Maumere**	**8.10**	**252**	P		**Pn**	**02 58 37.8**	**+1.8**
	110nm,0.6s							
EDFI	**Ende, Flores**	**8.65**	**253**	P		**Pn**	**02 58 43.5**	**+0.1**
	938nm81nm,1.1s							
LUWI	**Luwuk**	**8.88**	**305**	Pn		**Pn**	**02 58 47.7**	**+1.4**
LUWI	**Luwuk**	**8.88**	**305**	P		**Pn**	**02 58 48.8**	**+2.4**
	7μm413nm,1.3s							
WAMI	**Wamena**	**8.94**	**75**	P		**Pn**	**02 58 51.3**	**+4.2**
KMSI	**Cibinong**	**9.05**	**318**	P		**Pn**	**02 58 50.4**	**+1.8**
	181nm,0.8s							
KNRA	**Kununurra**	**9.49**	**187**	P		**Pn**	**02 58 52.3**	**-2.1**
	baz=9.5,SNR=485							
KNRA	**Kununurra**	**9.49**	**187**	Pn		**Pn**	**02 58 52.5**	**-1.8**
KNRA	**Kununurra**	**9.49**	**187**	P		**Pn**	**02 58 53.4**	**-1.0**
BSSI	**Bau Bau, Buton**	**9.49**	**270**	P		**Pn**	**02 58 56.0**	**+1.5**
	33nm,1.1s							
SMPI	**Sarmi**	**9.61**	**64**	P		**Pn**	**02 58 57.4**	**+1.4**
APSI	**Ampana**	**9.89**	**302**	P		**Pn**	**02 59 01.5**	**+1.8**
	4μm532nm,1.0s							
BKSI	**Bulukumba**	**9.91**	**275**	P		**Pn**	**02 59 02.3**	**+2.4**
	536nm59nm,0.9s							
BASI	**Baing, Sumba**	**10.18**	**246**	P		**Pn**	**02 59 05.0**	**+1.6**
	2μm111nm,0.6s							
KAPI	**Kappang**	**10.31**	**276**	P		**Pn**	**02 59 06.5**	**+1.3**
	5.8nm,0.4s,baz=69,slow=5.0,SNR=3.7							
KAPI	**Kappang**	**10.31**	**276**	Pn		**Pn**	**02 59 05.1**	**0.0**
MRSI	**Marisa**	**10.46**	**309**	P		**Pn**	**02 59 09.0**	**+1.8**
	8μm1μm,0.9s							
SPSI	**Sidrap Palu**	**10.47**	**282**	P		**Pn**	**02 59 09.0**	**+1.7**
	693nm57nm,0.6s							
TTSI	**Tana Toraja**	**10.66**	**287**	P		**Pn**	**02 59 12.4**	**+2.6**
	2μm42nm,1.6s							
GENI	**Genyem**	**10.72**	**71**	P		**Pn**	**02 59 13.4**	**+2.8**
	73nm,0.9s							
SGSI	**Sangihe**	**10.81**	**335**	P		**Pn**	**02 59 14.3**	**+2.5**
	162nm,0.6s							
WBSI	**Waikabubak, Su**	**11.08**	**251**	P		**Pn**	**02 59 17.4**	**+2.0**
	2μm102nm,0.8s							
TOLI2	**Tolitoli**	**11.76**	**308**	Pn		**Pn**	**02 59 24.2**	**+0.1**
MPSI	**Mapaga**	**12.03**	**302**	P		**Pn**	**02 59 29.7**	**+2.0**
	1μm38nm,0.8s							
PLAI	**Plampang**	**12.43**	**257**	P		**Pn**	**02 59 31.3**	**-1.6**
	1μm70nm,0.4s							
PLAI	**Plampang**	**12.43**	**257**	P		**Pn**	**02 59 33.6**	**+0.7**
DAV	**Davao City (W)**	**13.92**	**341**	P		**Pn**	**02 59 52.3**	**+0.5**
	96nm,0.3s,baz=188,slow=3.0,SNR=1.7							
DAV				LR		LR	03 06 33.7	
	comp=Z,148nm,19.4s,baz=138,slow=43							
DAV	**Davao City (W)**	**13.92**	**341**	Pn		**Pn**	**02 59 49.5**	**-2.4**
SMKI	**Samarinda**	**14.03**	**294**	P		**P**	**02 59 55.8**	**-0.2**
	84nm,0.5s							
WB0	**Warramunga Arr**	**14.12**	**163**	Pn		**Pn**	**02 59 52.0**	**-2.3**
WRAB	**Tennant Creek**	**14.27**	**163**			**Pn**	**02 59 53.7**	**-2.5**
WRAB	**Tennant Creek**	**14.27**	**163**	P		**Pn**	**02 59 54.8**	**-1.4**
WRA	**Warramunga Arr**	**14.28**	**163**	P		**Pn**	**02 59 53.3**	**-2.9**
	27nm,0.7s,baz=339,slow=13,SNR=36							
WRA				S		Sn	03 02 24.0	-11
	151nm,0.9s,baz=341,slow=22,SNR=15							
WB2	**Warramunga Arr**	**14.28**	**163**	P		**Pn**	**02 59 54.3**	**-2.0**
	baz=14							
WB2	**Warramunga Arr**	**14.28**	**163**	Pn		**Pn**	**02 59 54.2**	**-2.0**
WR0	**Warramunga Arr**	**14.35**	**163**	Pn		**Pn**	**02 59 55.4**	**-1.8**
COEN	**Coen**	**15.04**	**122**	P		**P**	**03 00 07.2**	**-0.1**
	baz=15,SNR=59							
COEN	**Coen**	**15.04**	**122**	Pn		**Pn**	**03 00 05.3**	**-0.5**
COEN				IAmb		IAmb	03 00 12.2	
	comp=Z,54nm,0.8s							
COEN	**Coen**	**15.04**	**122**	P		**P**	**03 00 07.3**	**-0.1**
BBKI	**Banjar Baru**	**15.39**	**280**	P		**P**	**03 00 12.8**	**+1.7**
	comp=Z,19μmcomp=Z,226nm,1.5s							
JAGI	**Jajag, Banyuwa**	**15.91**	**261**	P		**Pn**	**03 00 15.9**	**-0.7**
KMMI	**Kalianget**	**15.99**	**266**	P		**P**	**03 00 19.0**	**+1.3**
	comp=Z,128nm,0.8s							
MTKI	**Muara Teweh, K**	**15.99**	**289**	P		**P**	**03 00 19.5**	**+1.7**
MYLDM	**Lahad Datu**	**16.15**	**314**			**Pn**	**03 00 18.4**	**-1.0**
BLJI	**Banyuglugur**	**16.39**	**264**	P		**Pn**	**03 00 24.3**	**+2.0**
	comp=Z,1μmcomp=Z,82nm,0.7s							
QIS	**Mount Isa**	**17.02**	**148**	P		**Pn**	**03 00 31.0**	**+1.2**
	baz=17,SNR=41							
QIS	**Mount Isa**	**17.02**	**148**	P		**Pn**	**03 00 31.1**	**+1.3**
PMG	**Port Moresby**	**17.25**	**102**	P		**P**	**03 00 32.2**	**+0.5**
	comp=Z,36nm,0.8s,baz=286,slow=10,SNR=6.3							
PMG				S		**S**	**03 03 37.1**	**-6.3**
	comp=Z,10nm,0.6s,baz=218,slow=21,SNR=2.0							
PMG				LR		LR	03 07 20.0	
	comp=Z,177nm,19.3s,baz=278,slow=37							
PMG	**Port Moresby**	**17.25**	**102**	P		**P**	**03 00 32.3**	**+0.5**
PMG				IAmb		IAmb	03 00 36.8	
	comp=Z,51nm,0.9s							
PMG	**Port Moresby**	**17.25**	**102**	P		**Pn**	**03 00 36.1**	**+3.4**
AS31	**Alice Springs**	**17.75**	**168**			**P**	**03 00 37.8**	**+0.7**
ASAR	**Alice Springs**	**17.75**	**168**	P		**P**	**03 00 38.6**	**+1.5**
	comp=Z,179nm,0.8s,baz=347,slow=11,SNR=486							
ASAR				S		**S**	**03 03 45.9**	**-7.4**
	comp=Z,14nm,0.7s,baz=326,slow=14,SNR=5.0							
MBWA	**Marble Bar**	**17.90**	**213**	P		**P**	**03 00 38.6**	**-0.2**
MBWA	**Marble Bar**	**17.90**	**213**	P		**P**	**03 00 39.4**	**+0.6**
PSA00	**Pilbara Seismi**	**18.18**	**212**	P		**P**	**03 00 41.9**	**+0.1**
PSA00	**Pilbara Seismi**	**18.18**	**212**	P		**P**	**03 00 42.6**	**+0.8**
MTSU	**Mount Surprise**	**18.29**	**132**	P		**Pn**	**03 00 45.0**	**0.0**
	baz=18,SNR=32							
MTSU	**Mount Surprise**	**18.29**	**132**	P		**Pn**	**03 00 46.0**	**+1.0**
PBKI	**Pangkalan Bun**	**18.64**	**280**	P		**Pn**	**03 00 51.3**	**+2.2**
	comp=Z,7μmcomp=Z,175nm,0.6s							
WRKA	**Warakurna**	**18.80**	**185**	P		**P**	**03 00 49.7**	**+1.2**
	baz=19,SNR=116							
WRKA	**Warakurna**	**18.80**	**185**	P		**P**	**03 00 49.9**	**+1.4**
UGM	**Wanagama**	**19.44**	**264**	P		**P**	**03 00 57.3**	**+1.7**
STKI	**Sintang**	**19.55**	**288**	P		**P**	**03 00 58.2**	**+1.5**
SBUM	**Sibu**	**19.76**	**295**	P		**P**	**03 00 58.5**	**-0.5**
SBUM				IAmb		IAmb	03 01 00.9	
	comp=Z,56nm,0.9

ENH	**Enshi**	**41.28**	**333**	P	**P**	**03 04 10.5**	**-0.5**	
PZH	**PanZhiHua**	**42.54**	**321**	P	**P**	**03 04 21.8**	**+0.4**	
PZH				pmax	pmax			
	comp=Z,20nm,0.6s							
PZH				pmax	pmax			
	comp=Z,150nm,6.5s							
MJAR	**Matsushiro Arr**	**43.21**	**10**	P	**P**	**03 04 24.9**	**-1.6**	
	comp=Z,12nm,0.8s,baz=179,slow=10,SNR=32							
	comp=Z,12nm,0.8s							
MJAR	**Matsushiro Arr**	**43.21**	**10**	P	**P**	**03 04 25.0**	**-1.4**	
MAJO	**Matsushiro**	**43.21**	**10**	P	**P**	**03 04 25.2**	**-1.3**	
MAJO				IAmb	IAmb	03 04 27.1		
	comp=Z,29nm,0.8s							
MAJO	**Matsushiro**	**43.21**	**10**	P	**P**	**03 04 25.8**	**-0.7**	
MAJO				pP	**pP**	**03 04 58.6**	**-2.4**	
MJB9	**Matsu-Tunnel**	**43.21**	**10**	IAmb	IAmb	03 04 27.0		
	comp=Z,28nm,0.8s							
JYT	**Yasato**	**43.28**	**12**	P	**P**	**03 04 26.2**	**-0.7**	
JYT				IAmb	IAmb	03 04 27.6		
	comp=Z,29nm,0.9s							
KSAR	**Wonju Array Be**	**43.47**	**358**	P	**P**	**03 04 28.4**	**-0.1**	
KSRS	**Korea Array**	**43.48**	**358**	P	**P**	**03 04 29.2**	**+0.7**	
	comp=Z,3.9nm,0.8s,baz=173,slow=10.0,SNR=20							
KSRS				pP	**pP**	**03 05 04.0**	**+1.3**	
	comp=Z,1.1nm,0.6s,baz=176,slow=9.1,SNR=1.9							
KSRS				LR	LR	03 23 23.6		
	comp=Z,26nm,20.2s,baz=180,slow=37							
	comp=Z,3.9nm,0.8s							
KS19	**Wonju Array Si**	**43.53**	**357**	P	**P**	**03 04 28.3**	**-0.7**	
INCN	**Inchon**	**43.58**	**356**	P	**P**	**03 04 29.2**	**-0.2**	
INCN				IAmb	IAmb	03 04 32.2		
	comp=Z,13nm,0.7s							
LYN	**LuoYang**	**43.81**	**339**	⇑P	**P**	**03 04 30.5**	**-0.7**	
LYN				S	**S**	**03 10 52.0**	**+2.1**	
LYN				pmax	pmax			
	comp=Z,10.0nm,1.1s							
LYN				pmax	pmax			
	comp=Z,120nm,4.8s							
SEHB	**SEOHWA**	**44.28**	**358**	P	**P**	**03 04 34.5**	**-0.4**	
SEHB				IAmb	IAmb	03 04 44.6		
	comp=Z,54nm,1.5s							
CD2	**Chengdu**	**44.66**	**327**	P	**P**	**03 04 37.3**	**-0.9**	
CD2				pmax	pmax			
	comp=Z,20nm,0.7s							
XAN	**Xi'an**	**44.74**	**335**	⇑P	**P**	**03 04 37.8**	**-0.9**	
XAN				pP	pP	03 05 12.5	-0.4	
XAN				pmax	pmax			
	comp=Z,36nm,1.0s							
XAN	**Xi'an**	**44.74**	**335**	P	**P**	**03 04 38.2**	**-0.5**	
HNS	**HongShan**	**45.68**	**343**	⇓P	**P**	**03 04 46.3**	**+0.3**	
HNS				pmax	pmax			
	comp=Z,33nm,1.0s							
BJT	**Baijiatuan**	**47.75**	**346**	IAmb	IAmb	03 05 03.0		
	comp=Z,16nm,0.7s							
BJT	**Baijiatuan**	**47.75**	**346**	P	**P**	**03 05 01.9**	**-0.1**	
BJI	**Beijing**	**47.77**	**346**	P	**P**	**03 05 00.5**	**-1.6**	
BJI				pP	**pP**	**03 05 36.5**	**-0.2**	
BJI				pmax	pmax			
	comp=Z,22nm,1.0s							
SHL	**Shillong**	**48.70**	**312**	P	**P**	**03 05 08.6**	**-1.2**	
SHL				IAmb	IAmb	03 05 12.4		
	comp=Z,12nm,0.6s							
LZH	**Lanzhou**	**48.73**	**332**	*eP*	**P**	**03 05 10.8**	**+1.0**	
LZH				pP	pwP	03 05 51.3	+0.7	
LZH				pmax	pmax			
	comp=Z,42nm,1.5s							
LZH				pmax	pmax			
	comp=Z,73nm,4.8s							
HHC	**Hu-ho-hao-te**	**49.81**	**342**	*eP*	**P**	**03 05 18.0**	**+0.1**	
HHC				pmax	pmax			
	comp=Z,45nm,1.0s							
HHC				pmax	pmax			
	comp=Z,100nm,6.0s							
CN2	**Changchun**	**49.95**	**356**	*eP*	**P**	**03 05 19.3**	**+0.6**	
CN2				pmax	pmax			
	comp=Z,10.0nm,0.4s							
USRK	**Ussuriysk Ar.**	**50.21**	**2**	P	**P**	**03 05 21.3**	**+0.7**	
	comp=Z,8.4nm,0.5s,baz=184,slow=6.8,SNR=35							
USRK				pP	**pP**	**03 05 56.5**	**+0.6**	
	comp=Z,3.4nm,0.8s,baz=191,slow=7.0,SNR=2.9							
	comp=Z,8.4nm,0.5s							
USRK	**Ussuriysk Ar.**	**50.21**	**2**	P	**P**	**03 05 20.6**	**0.0**	
XLT	**XiLinHaoTe**	**51.45**	**347**	*eP*	**P**	**03 05 30.3**	**+0.2**	
XLT				pP	pP	03 06 06.3	+1.1	
XLT				sP	sP	03 06 24.0	+1.5	
XLT				PcP	**PcP**	**03 06 36.8**	**-5.4**	
XLT				ScP	**ScP**	**03 10 24.3**	**+0.5**	
XLT				pmax	pmax			
	comp=Z,15nm,0.9s							
XLT				pmax	pmax			
	comp=Z,96nm,4.5s							
LSA	**Lhasa**	**51.66**	**316**	P	**P**	**03 05 31.7**	**-0.6**	
LSA				IAmb	IAmb	03 05 33.8		
	comp=Z,14nm,0.7s							
LSA	**Lhasa**	**51.66**	**316**	P	**P**	**03 05 33.3**	**+1.0**	
BNX	**BinXian**	**51.77**	**358**	P	**P**	**03 05 32.0**	**-0.3**	
BNX				pmax	pmax			
	comp=Z,8.0nm,0.9s							
BNX				pmax	pmax			
	comp=Z,160nm,3.8s							
GTA	**Gaotai**	**53.30**	**331**	⇑P	**P**	**03 05 44.0**	**+0.1**	
GTA				pP	pwP	03 06 25.8	+0.6	
GTA				pmax	pmax			
	comp=Z,18nm,1.0s							
GOMU	**GeErMu**	**53.58**	**325**	P	**P**	**03 05 45.0**	**-1.2**	
GOMU				pP	pP	03 06 21.5	0.0	
GOMU				sP	sP	03 06 37.3	-1.3	
GOMU				pmax	pmax			
	comp=Z,4.0nm,0.7s							
GUN	**Gumba**	**54.47**	**311**	*eP*	**P**	**03 05 52.7**	**-0.1**	
	comp=Z,50nm,0.4s							
PKIN	**Phulchoki**	**54.66**	**310**	*eP*	**P**	**03 05 53.6**	**-0.5**	
	comp=Z,17nm,0.5s							
KKN	**Kakani**	**54.86**	**310**	*e*Pg	**P**	**03 05 54.8**	**-0.7**	
DMN	**Daman**	**54.90**	**310**	*eP*	**P**	**03 05 55.2**	**-0.6**	
	comp=Z,34nm,0.7s							
GKN	**Gorkha**	**55.45**	**310**	*eP*	**P**	**03 05 59.0**	**-0.7**	
	comp=Z,42nm,0.4s							
KOLN	**Koldanda**	**56.13**	**309**	*eP*	**P**	**03 06 03.9**	**-0.6**	
KOLN	**Koldanda**	**56.13**	**309**	*eP*	**P**	**03 06 04.0**	**-0.6**	
KOLN	**Koldanda**	**56.13**	**309**	*eP*	**P**	**03 06 04.3**	**-0.2**	
DANN	**Dangsing**	**56.30**	**310**	*eP*	**P**	**03 06 05.3**	**-0.5**	
PYUN	**Piuthan**	**56.76**	**309**	*eP*	**P**	**03 06 08.6**	**-0.4**	
	comp=Z,69nm,0.9s							
ULN	**Ulaanbaatar**	**57.53**	**342**	P	**P**	**03 06 14.4**	**+0.5**	
ULN				IAmb	IAmb	03 06 15.9		
	comp=Z,14nm,0.8s							
ULN	**Ulaanbaatar**	**57.53**	**342**	P	**P**	**03 06 14.8**	**+0.8**	
ULN				pP	**pP**	**03 06 49.7**	**-0.1**	
ULN				x	x	03 06 57.1		
ULN				sP	**PcP**	**03 07 06.5**	**+0.9**	
SONM	**Songino Array**	**57.71**	**341**	P	**P**	**03 06 15.9**	**+0.7**	
	comp=Z,2.7nm,0.5s,baz=159,slow=6.6,SNR=22							
SONM				pP	**pP**	**03 06 52.9**	**+1.8**	
	comp=Z,0.5nm,0.4s,baz=40,slow=41,SNR=1.7							
	comp=Z,2.7nm,0.5s							
SONM	**Songino Array**	**57.71**	**341**	P	**P**	**03 06 15.5**	**+0.3**	
SONM				IAmb	IAmb	03 06 17.1		
	comp=Z,13nm,1.3s							
DRV	**Dumont d'Urvil**	**60.75**	**175**	P	**P**	**03 06 36.4**	**+0.8**	
DRV				x	x	03 07 18.5		
CASY	**Casey**	**61.48**	**189**	P	**P**	**03 06 40.9**	**+0.4**	
CASY				IAmb	IAmb	03 06 42.0		
	comp=Z,10nm,0.9s							
CASY	**Casey**	**61.48**	**189**	P	**P**	**03 06 40.9**	**+0.4**	
CASY				pP	**pP**	**03 07 14.1**	**-2.7**	
CASY				sP	**sP**	**03 07 31.3**	**-2.4**	
WMQ	**Urumqi**	**62.76**	**327**	*eP*	**P**	**03 06 51.0**	**+1.5**	
WMQ				pmax	pmax			
	comp=Z,33nm,0.7s							
PETK	**Petropavlovsk-**	**63.57**	**18**	P	**P**	**03 06 55.1**	**+0.6**	
	comp=Z,8.0nm,0.9s,baz=206,slow=9.9,SNR=7.4							
	comp=Z,8.0nm,0.9s							
PETK	**Petropavlovsk-**	**63.57**	**18**	P	**P**	**03 06 54.8**	**+0.3**	
KSH	**Kashi**	**67.47**	**317**	P	**P**	**03 07 21.3**	**+1.3**	
KSH				pmax	pmax			
	comp=Z,15nm,0.7s							
MKAR	**Makanchi Array**	**67.59**	**327**	P	**P**	**03 07 20.9**	**+0.4**	
	comp=Z,42nm,0.8s,baz=123,slow=8.0,SNR=250							
	comp=Z,42nm,0.8s							
MAKZ	**Makanchi**	**67.77**	**326**	P	**P**	**03 07 21.6**	**-0.1**	
MAKZ	**Makanchi**	**67.77**	**326**	P	**P**	**03 07 22.0**	**+0.4**	
KDJ	**Kajisay**	**67.99**	**320**	IAmb	IAmb	03 07 25.2		
	comp=Z,11nm,0.8s							
YAK	**Yakutsk**	**68.04**	**360**	P	**P**	**03 07 23.5**	**+0.5**	
YAK	**Yakutsk**	**68.04**	**360**	P	**P**	**03 07 23.4**	**+0.4**	
ULHL	**Ulahol**	**68.65**	**320**	P	**P**	**03 07 28.1**	**+0.6**	
	SNR=5.4							
CCD	**Concordia, Ant**	**68.95**	**182**	P	**P**	**03 07 30.0**	**+1.0**	
CCD				x	x	03 07 53.0		
BOOM	**Boomskoye usch**	**68.97**	**320**	P	**P**	**03 07 29.8**	**+0.4**	
BOOM				IAmb	IAmb	03 07 31.2		
	comp=Z,19nm,0.9s							
TKM2	**Tokmak 2**	**69.40**	**320**	P	**P**	**03 07 33.1**	**+1.0**	
	SNR=21							
SHEM	**Shemya Is, Ala**	**69.56**	**27**	LR	LR	03 34 06.7		
	comp=Z,43nm,21.1s,baz=232,slow=32							
KBK	**Karagaybulak**	**69.69**	**320**	P	**P**	**03 07 35.1**	**+1.3**	
	SNR=5.1							
UCH	**Uchtor**	**69.75**	**319**	P	**P**	**03 07 35.6**	**+1.0**	
	SNR=27							
AAK	**Ala-Archa**	**69.97**	**320**	P	**P**	**03 07 37.0**	**+1.4**	
	SNR=9.5							
AAK	**Ala-Archa**	**69.97**	**320**	P	**P**	**03 07 36.0**	**+0.5**	
AAK				IAmb	IAmb	03 07 37.6		
	comp=Z,22nm,1.0s							
AAK	**Ala-Archa**	**69.97**	**320**	P	**P**	**03 07 36.9**	**+1.4**	
AML	**Almayashu**	**70.24**	**319**	P	**P**	**03 07 38.9**	**+1.4**	
	SNR=17							
USP	**Ospenovka**	**70.27**	**320**	P	**P**	**03 07 37.9**	**+0.6**	
	SNR=32							
KBL	**Kabul**	**70.29**	**310**	P	**P**	**03 07 37.7**	**0.0**	
EKS2	**Erkin-Say**	**70.44**	**319**	P	**P**	**03 07 39.5**	**+1.1**	
	SNR=18							
ZAA0	**Zalesovo Array**	**70.90**	**334**	P	**P**	**03 07 40.1**	**-0.6**	
ZAA0				IAmb	IAmb	03 07 41.2		
	comp=Z,11nm,0.8s							
ZALV	**Zalesovo Beam**	**70.90**	**334**	P	**P**	**03 07 40.5**	**-0.2**	
	comp=Z,7.0nm,0.4s,baz=122,slow=5.0,SNR=34							
ZALV				pP	**pP**	**03 08 19.7**	**+1.7**	
	comp=Z,3.9nm,0.9s,baz=114,slow=3.6,SNR=2.3							
	comp=Z,7.0nm,0.4s							
GAR	**Garm**	**71.14**	**315**	P	**P**	**03 07 42.9**	**+0.2**	
KURK	**Kurchatov**	**71.87**	**328**	P	**P**	**03 07 46.8**	**+0.2**	
KURK				IAmb	IAmb	03 07 47.8		
	comp=Z,31nm,1.1s							
KURK	**Kurchatov**	**71.87**	**328**	P	**P**	**03 07 46.8**	**+0.2**	
KURK				pP	**pP**	**03 08 24.3**	**+0.3**	
KURK				pwP	**pwP**	**03 08 30.6**	**+1.0**	
KURK				sP	**sP**	**03 08 37.2**	**-3.4**	
KK31	**Karatay Array**	**72.78**	**319**	P	**P**	**03 07 52.0**	**-0.1**	
KK31				IAmb	IAmb	03 07 53.6		
	comp=Z,20nm,1.1s							
KKAR	**Karatay Array**	**72.78**	**319**	P	**P**	**03 07 51.8**	**-0.4**	
KKAR				IAmb	IAmb	03 07 53.6		
	comp=Z,20nm,1.1s							
TAS	**Tashkent**	**72.83**	**317**	P	**P**	**03 07 52.9**	**+0.4**	
VNDA	**Vanda**	**73.22**	**173**	P	**P**	**03 07 54.5**	**+0.4**	
	comp=Z,4.6nm,0.7s,baz=320,slow=6.1,SNR=38							
	comp=Z,4.6nm,0.7s							
VNDA	**Vanda**	**73.22**	**173**	P	**P**	**03 07 54.2**	**+0.1**	
SBA	**Scott Base**	**74.11**	**172**	P	**P**	**03 08 00.7**	**+1.4**	
HRA	**Herat**	**75.50**	**308**	IAmb	IAmb	03 08 09.6		
	comp=Z,16nm,1.1s							
MAW	**Mawson**	**75.69**	**201**	P	**P**	**03 08 09.5**	**+1.0**	
	comp=Z,5.4nm,0.6s,baz=72,slow=5.7,SNR=5.9							
	comp=Z,5.4nm,0.6s							
MAW	**Mawson**	**75.69**	**201**	P	**P**	**03 08 09.3**	**+0.7**	
TIXI	**Tiksi**	**77.71**	**360**	P	**P**	**03 08 18.8**	**-0.9**	
GEYT	**Alibeck**	**79.73**	**310**	P	**P**	**03 08 32.3**	**+0.7**	
	comp=Z,5.1nm,0.5s,baz=198,slow=7.2,SNR=6.1							
	comp=Z,5.1nm,0.5s							
GEYT	**Alibeck**	**79.73**	**310**	P	**P**	**03 08 31.9**	**+0.3**	
ABKAR	**Akbulak array**	**81.92**	**322**	P	**P**	**03 08 42.7**	**-0.1**	
AKTO	**Aktyubinsk**	**83.48**	**322**	LR	LR	03 50 39.4		
	comp=Z,23nm,18.5s,baz=80,slow=39							
QSPA	**South Pole Qui**	**83.76**	**180**	P	**P**	**03 08 52.2**	**0.0**	
QSPA				IAmb	IAmb	03 08 53.1		
	comp=Z,8.7nm,0.8s							
ARU	**Arti**	**85.06**	**328**	P	**P**	**03 08 58.3**	**-0.4**	
ARU				IAmb	IAmb	03 08 59.3		
	comp=Z,12nm,0.8s							
RAYN	**Ar Rayn**	**87.46**	**294**	P	**P**	**03 09 11.3**	**0.0**	
TTA	**Tatalina**	**88.27**	**26**	P	**P**	**03 09 14.9**	**+0.7**	
GURO	**Guroymak-BITLI**	**92.27**	**308**	IAmb	IAmb	03 09 35.2		
	comp=Z,6.8nm,0.9s							
H24K	**Noodor Dome**	**92.38**	**24**	P	**P**	**03 09 33.8**	**+0.5**	
ILAR	**Eielson Array**	**92.62**	**25**	P	**P**	**03 09 33.2**	**-1.1**	
	comp=Z,1.0nm,0.8s,baz=280,slow=4.2,SNR=11							
	comp=Z,1.0nm,0.8s							
ILAR	**Eielson Array**	**92.62**	**25**	P	**P**	**03 09 33.3**	**-1.0**	
MARD	**Mardin**	**93.13**	**307**	P	**P**	**03 09 35.8**	**-1.7**	
MARD				IAmb	IAmb	03 09 38.4		
	comp=Z,4.8nm,0.9s							
BMAR	**Burnt Mountain**	**93.91**	**23**	P	**P**	**03 09 40.1**	**-0.2**	
J26L	**Joseph Creek**	**94.00**	**26**	P	**P**	**03 09 40.5**	**-0.3**	
TROLL	**Troll, Antarti**	**94.93**	**194**	PcP	**PcP**	**03 09 46.1**	**+0.8**	
BELA	**Belgrano 2**	**95.60**	**183**	IAmb	IAmb	03 09 48.2		
	comp=Z,3.8nm,1.0s							
KLMR	**Klimovskoe**	**95.63**	**331**	*eP*	**P**	**03 09 44.8**	**-3.4**	
KLMR				AMP		03 09 45.8		
	comp=Z,3.0nm,0.9s							
SNAA	**Sanae**	**96.44**	**193**	PcP	**P**	**03 09 52.4**	**+0.6**	
SNAA	**Sanae**	**96.44**	**193**	P	**P**	**03 09 52.5**	**+0.6**	
SNAA				IAmb	IAmb	03 09 52.9		
	comp=Z,3.6nm,1.0s							
BRTR	**Keskin Array B**	**98.85**	**309**	P	**P**	**03 10 02.3**	**-1.1**	
	comp=Z,1.0nm,0.8s,baz=108,slow=4.0,SNR=6.6							
	comp=Z,1.0nm,0.8s							
ARCES	**ARCESS Array B**	**100.86**	**340**	P	**Pdif**	**03 10 10.4**	**-1.1**	
	comp=Z,0.6nm,0.5s,baz=80,slow=6.7,SNR=8.7							
FINES	**FINESS Array B**	**102.09**	**332**	P	**Pdif**	**03 10 15.7**	**-1.4**	
	comp=Z,0.2nm,0.4s,baz=57,slow=7.0,SNR=4.8							
YKA	**Yellowknife Ar**	**107.03**	**26**	PKiKP	**PKiKP**	**03 14 47.8**	**+0.1**	
	comp=Z,0.3nm,0.6s,baz=53,slow=1.3,SNR=5.4							
GERES	**GERESS Array B**	**111.84**	**320**	PKiKP	**PKiKP**	**03 14 57.3**	**0.0**	
	comp=Z,0.2nm,0.4s,baz=64,slow=3.1,SNR=4.9							
TXAR	**Lajitas Array**	**124.49**	**59**	PKP	**PKPdf**	**03 15 20.8**	**-1.4**	
	comp=Z,0.1nm,0.5s,baz=184,slow=5.2,SNR=3.8							
TORD	**Torodi Ar. Bea**	**128.69**	**282**	PKP	**PKPdf**	**03 15 30.9**	**+0.4**	
	comp=Z,0.4nm,0.6s,baz=70,slow=2.2,SNR=8.7							
TORD				SKPbc	SKiKP	03 18 34.0	-18	
	comp=Z,0.9nm,0.7s,baz=56,slow=2.9,SNR=10							
SCHQ	**Schefferville**	**129.65**	**13**	SKPbc	SKPab	03 18 36.7	-1.3	
	comp=Z,4.3nm,0.8s,baz=2.7,slow=4.5,SNR=5.6							
DBIC	**Dimbokro**	**135.19**	**273**	SKPbc	**SKPbc**	**03 18 56.7**	**-2.1**	
	comp=Z,2.1nm,0.5s,baz=154,slow=1.7,SNR=9.2							
BOAB	**BOLIVIA BROADBAND**	**144.25**	**77**	PKPdf	**PKPab**	**03 15 57.7**	**+0.3**	
CPUP	**Villa Florida**	**146.87**	**168**	PKPbc	**PKPbc**	**03 16 05.9**	**+0.5**	
	comp=Z,6.5nm,0.7s,baz=203,slow=4.0,SNR=9.9							
CPUP	**Villa Florida**	**146.87**	**168**	PKPbc	**PKPdf**	**03 16 04.9**	**+1.6**	
GO01	**Chusmiza**	**148.07**	**144**	PKPbc	**PKPdf**	**03 16 08.0**	**+1.9**	
VAO	**Valinhos**	**150.82**	**186**	*eP*	**PKPdf**	**03 16 06.9**	**-3.1**	
LPAZ	**La Paz**	**151.31**	**141**	PKPbc	**PKiKP**	**03 16 18.7**	**+0.6**	
	comp=Z,1.5nm,0.4s,baz=359,slow=3.0,SNR=7.7							
LPAZ	**La Paz**	**151.31**	**141**		**PKiKP**	**03 16 19.1**	**+1.0**	
RCBR	**Riachuelo**	**161.56**	**230**	*eP*	**PKPdf**	**03 16 21.4**	**-2.7**	

*IDC **26** 03:35:14.6±3.3, 40.°71N×142.°08E, h50km±32km, mb3.4/11, mbtmp3.7/13, ML3.0/2, MS2.9/5, Error ellipse: s-maj=23.1km s-min=17.4km az=97.0*
*NIED **26** 03:35:15.7, 40.°72N×142.°25E, h55km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.84; $M_{\theta\theta}$-0.16; $M_{\phi\phi}$-0.68; $M_{r\theta}$-0.17; $M_{\theta\phi}$-0.71; $M_{\phi r}$-0.71; Fault plane solution: $M_0$1.26000×10^{15} NP1: ϕ_s56.00000°, δ31.00000°, λ123.00000°. NP2: ϕ_s199.00000°, δ64.00000°, λ72.00000°.*
*JMA **26** 03:35:15.7±0.1, 40.°7N±0.°4×142.°3E±0.°8, h55km±2km, MD3.9/37, MV4.0/37, E OFF AOMORI PREF*
JMA Felt II J1 at E OFF AOMORI PREF

ISC 26 03:35:15.8±0.9, 40.°69N±0.°04×142.°17E±0.°07, h62km±8km, n45, σ1°28/40, mb3.6/11, 8D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JANG	**Nango**	**0.59**	**238**	*i* P	**Pn**	**03 35 29.2**	**+0.4**
JANG				S	**Sn**	**03 35 39.2**	**+0.9**
JANG	**Nango**	**0.59**	**238**	A	A	03 35 29.2	
	comp=E,7.0nm,2.0s,comp=E,4.0nm,1.1s						
JKEN	**Kujiedanarisaw**	**0.59**	**216**	*i* P	**Pn**	**03 35 29.2**	**+0.4**
JKEN				S	**Sn**	**03 35 39.0**	**+0.6**
JKEN	**Kujiedanarisaw**	**0.59**	**216**	A	A	03 35 29.2	
	comp=E,8.0nm,0.2s,comp=E,10.0nm,0.2s						
JARK	**Aomorirokkasho**	**0.69**	**298**	⇓*i*P	**Pn**	**03 35 29.9**	**0.0**
JARK				⇓S	**Sn**	**03 35 40.0**	**-0.3**
JARK	**Aomorirokkasho**	**0.69**	**298**	A	A	03 35 29.9	
	comp=E,15nm,0.8s,comp=E,12nm,1.1s						

JTH	**Tanohata**	**0.78**	**198**	P	**Pn**	**03 35 31.3**	**+0.2**	
JTH				S	**Sn**	**03 35 42.4**	**0.0**	
JTM	**Tenmabayashi**	**0.84**	**277**	⇓*i*P	**Pn**	**03 35 32.0**	**+0.1**	
JTM				⇓S	**Sn**	**03 35 43.6**	**-0.1**	
JTM	**Tenmabayashi**	**0.84**	**277**	A	A	03 35 32.0		
	comp=E,6.0nm,2.5s,comp=E,5.0nm,1.1s							
JAHD	**Aomorihigashid**	**0.85**	**313**	A	A	03 35 32.1		
	comp=E,9.0nm,1.0s,comp=E,11nm,1.3s							
JOT	**Ohata**	**1.10**	**310**	*i* P	**Pn**	**03 35 34.8**	**-0.3**	
JOT				S	**Sn**	**03 35 49.4**	**-0.1**	
JAH	**Hinai**	**1.27**	**247**	P	**Pn**	**03 35 38.5**	**+1.0**	
JAH				S	**Sn**	**03 35 55.0**	**+1.3**	
JSI2	**Shiura 2**	**1.38**	**286**	A	A	03 35 39.9		
	comp=E,9.0nm,1.1s,comp=E,5.0nm,0.7s							
JOM	**Ohasama**	**1.39**	**209**	P	**Pn**	**03 35 40.1**	**+1.2**	
JOM				S	**Sn**	**03 35 57.7**	**+1.3**	
JOM	**Ohasama**	**1.39**	**209**	A	A	03 35 40.1		
	comp=E,3.0nm,2.3s,comp=E,3.0nm,2.4s							
JKB	**Kayabe**	**1.48**	**325**	⇓*i*P	**Pn**	**03 35 39.9**	**-0.2**	
JKB				⇓S	**Sn**	**03 35 58.1**	**-0.3**	
JEM	**Erimo**	**1.52**	**29**	P	**Pn**	**03 35 40.9**	**+0.2**	
JEM				S	**Sn**	**03 35 59.4**	**-0.2**	
JSR	**Shiriuchi**	**1.57**	**303**	⇓P	**Pn**	**03 35 41.6**	**+0.3**	
JSR				⇓S	**Sn**	**03 36 01.7**	**+1.0**	
JIW	**Iwasaki**	**1.65**	**267**	P	**Pn**	**03 35 43.6**	**+1.1**	
JIW				S	**Sn**	**03 36 05.2**	**+2.5**	
JNBK	**Urakawa-nobuka**	**1.65**	**15**	P	**Pn**	**03 35 43.3**	**+0.8**	
MJAR	**Matsushiro Arr**	**5.17**	**218**	P	**Pn**	**03 36 30.3**	**-0.3**	
	0.1nm,0.3s,baz=34,slow=13,SNR=8.0							
MJAR				LR	LR	03 38 53.1		
	comp=Z,46nm,21.9s,baz=68,slow=42							
	1.4nm,0.3s							
JHJ	**Hachijo jima 2**	**7.79**	**195**	P	**Pn**	**03 37 05.1**	**-1.3**	
	3.2nm,0.3s,baz=47,slow=22,SNR=1.9							
JHJ				S	**Sn**	**03 38 28.1**	**-5.0**	
	118nm,0.9s,baz=242,slow=22,SNR=2.3							
	105nm,1.0s							
USRK	**Ussuriysk Ar.**	**8.31**	**298**	P	**Pn**	**03 37 15.9**	**+2.5**	
	9.3nm,0.9s,baz=106,slow=13,SNR=7.5							
KLR	**Kul'dur**	**11.28**	**323**	LR	LR	03 42 18.1		
	comp=Z,50nm,19.4s,baz=142,slow=38							
KSRS	**Korea Array**	**11.54**	**258**	LR	LR	03 41 42.5		
	comp=Z,56nm,21.8s,baz=70,slow=34							
SEY	**Seymchan**	**23.10**	**12**	P	**P**	**03 40 15.1**	**-0.9**	
	2.1nm,0.8s,baz=195,slow=8.4,SNR=5.8							
	2.1nm,0.8s							
SONM	**Songino Array**	**26.42**	**298**	P	**P**	**03 40 45.0**	**-1.6**	
	0.5nm,0.6s,baz=108,slow=6.8,SNR=2.0							
SONM				LR	LR	03 51 56.7		
	comp=Z,41nm,20.0s,baz=246,slow=38							
	0.5nm,0.6s							
H11N2	**WAKE ISLAND Hy 29.70**	**127**		T	T	04 12 18.8		
	baz=320,slow=76,SNR=34							
H11N1	**WAKE ISLAND Hy 29.71**	**127**		T	T	04 12 49.8		
	baz=320,slow=76,SNR=31							
H11N3	**WAKE ISLAND Hy 29.72**	**127**		T	T	04 12 29.3		
	baz=320,slow=76,SNR=37							
H11S1	**WAKE ISLAND Hy 30.53**	**129**		T	T	04 13 45.0		
	baz=322,slow=76,SNR=38							
H11S3	**WAKE ISLAND Hy 30.53**	**129**		T	T	04 13 58.0		
	baz=322,slow=76,SNR=24							
H11S2	**WAKE ISLAND Hy 30.55**	**129**		T	T	04 13 50.3		
	baz=322,slow=76,SNR=31							
ZALV	**Zalesovo Beam**	**39.98**	**309**	P	**P**	**03 42 42.6**	**-1.4**	
	1.4nm,0.4s,baz=282,slow=41,SNR=3.0							
ZALV				LR	LR	03 58 33.6		
	comp=Z,22nm,18.8s,baz=329,slow=35							
	1.4nm,0.4s							
MKAR	**Makanchi Array**	**42.77**	**299**	P	**P**	**03 43 06.7**	**-0.3**	
	2.1nm,0.7s,baz=82,slow=9.2,SNR=10.0							
	2.1nm,0.7s							
ILAR	**Eiel

1.0nm,0.7s
SNAA Sanae 18.59 157 P Pn 03 52 14.9 +0.5
TROLL Troll, Antarti 20.07 154 P Pn 03 52 35.5 +3.3
PMSA Palmer Station 20.29 229 P P 03 52 30.4 -2.1
BELA Belgrano 2 22.15 185 P P 03 52 51.9 -0.6
TRQA Tornquist 29.75 292 P P 03 54 03.3 +0.2
TRQA IAmb IAmb 03 54 04.4
comp=Z,9.7nm,1.4s
QSPA South Pole Qui 34.24 180 P P 03 54 43.6 +1.2
comp=Z,3.7nm,0.7s,baz=22,slow=2.7,SNR=28
comp=Z,3.7nm,0.7s
QSPA South Pole Qui 34.24 180 P P 03 54 43.0 +0.6
QSPA IAmb IAmb 03 54 44.6
comp=Z,12nm,1.4s
CPUP Villa Florida 37.15 310 P P 03 55 08.9 +1.5
CPUP IAmb IAmb 03 55 10.8
comp=Z,6.4nm,1.4s
AC02 Maricunga 42.29 296 P P 03 55 50.6 -0.2
AC02 IAmb IAmb 03 55 53.8
comp=Z,20nm,1.3s
VNDA Vanda 46.63 182 P P 03 56 24.8 +0.5
comp=Z,0.9nm,0.8s,baz=174,slow=4.9,SNR=5.3
VNDA LR LR 04 16 44.6
comp=Z,66nm,18.2s,baz=119,slow=37
comp=Z,0.9nm,0.8s
VNDA Vanda 46.63 182 P P 03 56 24.0 -0.3
LBTB Lobatse 48.53 72 P P 03 56 42.5 +2.7
LPAZ La Paz 50.75 304 P P 03 56 58.8 +1.4
comp=Z,1.9nm,0.8s,baz=125,slow=6.3,SNR=5.0
comp=Z,1.9nm,0.8s
LPAZ La Paz 50.75 304 P P 03 56 57.4 +0.1
LPAZ IAmb IAmb 03 56 59.8
comp=Z,8.5nm,1.4s
MATP Matopo 53.81 72 P P 03 57 16.4 -3.0
comp=Z,4.2nm,0.9s,baz=197,slow=5.5,SNR=6.9
comp=Z,4.2nm,0.9s
SAML Samuel 55.12 314 P P 03 57 28.3 -0.5
SAML IAmb IAmb 03 57 44.3
comp=Z,2.5nm,0.9s
LSZ Lusaka 57.91 68 P P 03 57 48.0 -0.8
LSZ IAmb IAmb 03 57 48.3
comp=Z,4.3nm,1.1s
TORD Torodi Ar. Bea 72.78 29 P P 03 59 23.3 -1.5
comp=Z,1.4nm,0.9s,baz=200,slow=5.4,SNR=8.8
comp=Z,1.4nm,0.9s
TORD Torodi Ar. Bea 72.78 29 P P 03 59 25.0 +0.2
BAUV El Baul 73.36 317 P P 03 59 28.3 0.0
BAUV IAmb IAmb 03 59 40.3
comp=Z,23nm,1.5s
SDV Santo Domingo 74.33 314 LR LR 04 32 02.8
comp=Z,61nm,22.0s,baz=174,slow=36
STKA Stephens Creek 91.86 170 LR LR 04 41 27.1
comp=Z,89nm,19.6s,baz=211,slow=35
ILAR Eielson Array 150.45 312 PKPbc PKiKP 04 07 47.0 -0.1
comp=Z,2.0nm,1.0s,baz=128,slow=0.7,SNR=13
ILAR Eielson Array 150.45 312 PKPbc 04 07 46.4 0.0

*IDC **26** 03:48:41.0±0.8,55°.78S×26°.08W,h0km,mb4.3/6, mbtmp4.3/7,ML3.8/1,Error ellipse: s-maj=28.3km s-min=20.0km az=73.0*
*NEIC **26** 03:48:48.9±1.7,55°.92S±0°.09×26°.1W±0°.2,h62km±6km, mb4.6/21,Error ellipse: s-maj=17.4km s-min=5.6km az=221.0*
ISC 26 03:48:47.1±0.6,55°.84S±0°.09×26°.1W±0°.1,h50km,n29, σ1°.08/25,mb4.5/12,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**6.17**	**280**	Pn	**Pn**	**03 50 16.6**	**+1.1**
ORCD	**Orcadas**	**10.95**	**236**	Pn	**Pn**	**03 51 21.8**	**+0.9**
SNAA	**Sanae**	**18.69**	**157**	P	**Pn**	**03 53 02.5**	**+0.8**
	0.3nm,0.3s,baz=319,slow=13,SNR=5.7						
	3.0nm,0.8s						
SNAA	**Sanae**	**18.69**	**157**	P	**P**	**03 53 00.8**	**-0.1**
PMSA	**Palmer Station**	**20.50**	**229**	P	**P**	**03 53 18.4**	**-2.1**
BELA	**Belgrano 2**	**22.34**	**185**	P	**P**	**03 53 38.9**	**-1.3**
TRQA	**Tornquist**	**29.81**	**291**	P	**P**	**03 54 49.5**	**+0.4**
TRQA				IAmb	IAmb	03 54 55.2	
	comp=Z,12nm,1.3s						
QSPA	**South Pole Qui**	**34.41**	**180**	P	**P**	**03 55 29.5**	**+0.2**
	comp=Z,6.3nm,0.5s,baz=30,slow=1.4,SNR=13						
	comp=Z,6.3nm,0.5s						
QSPA	**South Pole Qui**	**34.41**	**180**	P	**P**	**03 55 29.3**	**0.0**
QSPA				IAmb	IAmb	03 55 31.9	
	comp=Z,7.8nm,0.7s						
CPUP	**Villa Florida**	**37.14**	**310**	P	**P**	**03 55 51.1**	**-1.8**
	comp=Z,2.6nm,0.7s,baz=113,slow=7.3,SNR=5.3						
	comp=Z,2.6nm,0.7s						
CPUP	**Villa Florida**	**37.14**	**310**	IAmb	IAmb	03 56 17.8	
	comp=Z,9.5nm,1.2s						
MT09	**Talagante**	**37.83**	**287**	P	**P**	**03 56 00.0**	**+1.2**
MT09				IAmb	IAmb	03 56 17.9	
	comp=Z,10nm,1.2s						
TRCB	**Terra Rica**	**38.39**	**318**	P	**P**	**03 56 01.9**	**-1.5**
AC02	**Maricunga**	**42.34**	**295**	P	**P**	**03 56 37.2**	**+0.7**
AC02				IAmb	IAmb	03 56 39.6	
	comp=Z,14nm,1.0s						
GO02	**Mina Guanaco**	**43.95**	**296**	P	**P**	**03 56 50.2**	**+0.8**
LVC	**Limon Verde**	**45.73**	**299**	P	**P**	**03 57 03.7**	**+0.1**
LVC				IAmb	IAmb	03 57 21.5	
	comp=Z,9.3nm,0.8s						
VNDA	**Vanda**	**46.81**	**182**	P	**P**	**03 57 11.8**	**+0.8**
	comp=Z,2.3nm,0.8s,baz=187,slow=6.0,SNR=6.6						
	comp=Z,2.3nm,0.8s						
VNDA	**Vanda**	**46.81**	**182**	IAmb	IAmb	03 57 12.6	
	comp=Z,3.4nm,0.9s						
GO01	**Chusmiza**	**48.36**	**301**	P	**P**	**03 57 25.0**	**+0.7**
LPAZ	**La Paz**	**50.76**	**304**	P	**P**	**03 57 44.4**	**+1.6**
	comp=Z,1.8nm,0.4s,baz=88,slow=8.4,SNR=11						
	comp=Z,1.8nm,0.4s						
LPAZ	**La Paz**	**50.76**	**304**	IAmb	IAmb	03 58 01.3	
	comp=Z,4.4nm,0.9s						
MATP	**Matopo**	**53.63**	**72**	P	**P**	**03 58 03.1**	**-0.3**
	comp=Z,4.1nm,0.8s,baz=239,slow=6.7,SNR=6.4						
	comp=Z,4.1nm,0.8s						
LSZ	**Lusaka**	**57.72**	**68**	P	**P**	**03 58 32.2**	**-0.6**
LSZ				IAmb	IAmb	03 58 35.9	
	comp=Z,7.0nm,1.2s						
TOA0	**Torodi Ar. Sit**	**72.57**	**28**	P	**P**	**04 00 09.6**	**+0.8**
TOA0				IAmb	IAmb	04 00 16.3	
	comp=Z,8.3nm,1.4s						
TORD	**Torodi Ar. Bea**	**72.57**	**28**	P	**P**	**04 00 09.9**	**+1.1**
	comp=Z,1.5nm,0.5s,baz=199,slow=6.7,SNR=12						
	comp=Z,1.5nm,0.5s						
TORD	**Torodi Ar. Bea**	**72.57**	**28**	IAmb	IAmb	04 00 10.9	
	comp=Z,2.8nm,1.1s						
BAUV	**El Baul**	**73.32**	**316**	P	**P**	**04 00 11.8**	**-1.5**
YKA	**Yellowknife Ar**	**136.43**	**318**	PKP	**PKPdf**	**04 08 02.1**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=129,slow=2.7,SNR=4.1						
ILAR	**Eielson Array**	**150.43**	**312**	PKPbc	**PKiKP**	**04 08 32.9**	**+0.8**
	comp=Z,1.9nm,0.8s,baz=126,slow=2.1,SNR=8.0						

IDC 26 04:06:48.5±61.0,18°.93S×179°.15W,h0km,mb3.8/3, mbtmp3.8/3,Error ellipse: s-maj=1101.0km s-min=163.9km az=80.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**37.53**	**242**	P	P	04 14 04.6	+0.1
	1.1nm,0.8s,baz=61,slow=9.5,SNR=3.7						
	1.1nm,0.8s						
WRA	**Warramunga Arr**	**43.77**	**261**	P	P	04 14 56.2	-0.1
	0.3nm,0.3s,baz=97,slow=7.5,SNR=6.0						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**43.85**	**255**	P	P	04 14 56.6	-0.3
	1.3nm,0.6s,baz=92,slow=7.7,SNR=21						
	1.3nm,0.6s						

IDC 26 04:10:14.0±2.4,6°.80S×129°.45E,h0km,mb3.4/1, mbtmp3.2/3,ML3.1/2,MS3.4/1,Error ellipse: s-maj=149.7km s-min=33.6km az=68.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.90**	**161**	Pn	Pn	04 13 31.6	-0.7
	0.1nm,0.3s,baz=343,slow=13,SNR=5.2						
WRA				Sn	Sn	04 15 57.7	-10
	0.4nm,0.3s,baz=339,slow=22,SNR=8.9						
	0.3nm,0.6s						
ASAR	**Alice Springs**	**17.31**	**166**	P	Pn	04 14 17.8	+0.6
	0.1nm,0.3s,baz=338,slow=9.9,SNR=8.0						
ASAR				S	Sn	04 17 14.4	-16
	0.2nm,0.3s,baz=345,slow=25,SNR=1.7						
	0.2nm,0.5s						

AFI	**Afiamalu**	**58.12**	**102**	LR	LR	04 44 17.1	
	comp=Z,28nm,18.5s,baz=124,slow=35						
MKAR	**Makanchi Array**	**67.76**	**327**	P	P	04 21 13.6	0.0
	0.2nm,0.5s,baz=116,slow=7.2,SNR=2.3						
	0.2nm,0.5s						

*LDG **26** 04:27:35.7±0.6,36°.97N×11°.64E,h11km,Ml3.3/4,Error ellipse: s-maj=17.9km s-min=3.7km az=29.0*
*ROM **26** 04:27:37.6±0.3,37°.33N±0°.02×11°.69E±0°.02,h13km±2km, ML3.2/12,Error ellipse: s-maj=2.4km s-min=1.5km az=359.0*
*IDC **26** 04:27:38.6±1.8,37°.19N×11°.60E,h0km,mb3.6/2, mbtmp3.3/4,ML3.1/2,MS3.2/1,Error ellipse: s-maj=82.4km s-min=20.6km az=126.0*
ISC 26 04:27:37.3±2.0,37°.30N±0°.05×11°.72E±0°.03,h3km±13km, n39,σ1°.90/44,1C-2D,Sicily

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ERC	**Erice**	**1.01**	**43**	P	**Pg**	**04 27 56.3**	**-0.3**
ERC					AML	AML	
	comp=N,1615μm,0.7s						
ERC					AML	AML	
	comp=E,1430μm,0.5s						
ERC					AML	AML	
	comp=N,1610μm,0.7s						
CLTB	**Caltabellotta**	**1.22**	**76**	P	**Pg**	**04 27 59.4**	**-1.3**
CLTB					AML	AML	
	comp=E,3035μm,0.5s						
CLTB					AML	AML	
	comp=N,3355μm,0.5s						
FAVR	**Favara**	**1.55**	**90**	P	**Pn**	**04 28 06.4**	**+0.7**
MPG	**Monte Pellegri**	**1.56**	**56**	P	**Pn**	**04 28 05.1**	**-0.9**
ALJA	**Alia**	**1.68**	**74**	P	**Pn**	**04 28 07.7**	**+0.1**
ALJA					AML	AML	
	comp=N,486μm,1.6s						
ALJA					AML	AML	
	comp=E,434μm,1.4s						
CLTA	**Licata**	**1.79**	**94**	P	**Pn**	**04 28 08.8**	**-0.3**
CLTA					AML	AML	
	comp=E,348μm,1.6s						
CLTA					AML	AML	
	comp=N,460μm,1.5s						
USI	**Ustica**	**1.82**	**39**	P	**Pn**	**04 28 08.5**	**-1.0**
GIB	**Gibilmanna**	**1.96**	**69**	P	**Pn**	**04 28 11.0**	**-0.4**
GIB					AML	AML	
	comp=E,588μm,1.3s						
GIB					AML	AML	
	comp=N,584μm,0.9s						
CSLB	**Castelbuono**	**1.96**	**70**	P	**Pn**	**04 28 11.1**	**-0.3**
CSLB					AML	AML	
	comp=N,174μm,1.6s						
CSLB					AML	AML	
	comp=E,133μm,1.6s						
PETRA	**Petralia Sopra**	**1.98**	**73**	P	**Pn**	**04 28 12.2**	**+0.4**
PETRA					AML	AML	
	comp=E,425μm,0.7s						
PETRA					AML	AML	
	comp=N,396μm,0.9s						
PLLN	**Pollina**	**2.04**	**69**	P	**Pn**	**04 28 12.7**	**+0.1**
PLLN					AML	AML	
	comp=E,498μm,0.8s						
PLLN					AML	AML	
	comp=N,546μm,1.1s						
TAMR	**Tamra**	**2.10**	**264**	P	**Pn**	**04 28 12.9**	**-0.4**
RAFF	**Raffo Rosso**	**2.11**	**91**	P	**Pn**	**04 28 13.2**	**-0.2**
RAFF					AML	AML	
	comp=N,204μm,0.7s						
RAFF					AML	AML	
	comp=E,246μm,0.7s						
KEST	**Kesra**	**2.47**	**232**	Pn	**Pn**	**04 28 19.0**	**+0.5**
	comp=E,1.7nm,0.3s,baz=7.7,slow=3.9,SNR=17						
KEST					Sn	**Sn**	**04 28 46.8**	**-2.4**
	comp=E,2.9nm,0.3s,baz=269,slow=21,SNR=3.7						
	comp=E,7.4nm,0.5s						
HMDC	**Modica**	**2.47**	**97**	P	**Pn**	**04 28 18.0**	**-0.5**
HMDC				S	**Sn**	**04 28 47.9**	**-1.2**
HLNI	**Lentini**	**2.51**	**88**	P	**Pn**	**04 28 18.4**	**-0.6**
HLNI				S	**Sn**	**04 28 48.5**	**-1.5**
HLNI					AML	AML	
	comp=N,184μm,0.7s						
HLNI					AML	AML	
	comp=E,164μm,0.3s						
MEU	**Monte Lauro**	**2.57**	**93**	P	**Pn**	**04 28 19.0**	**-0.8**
MEU				S	**Sn**	**04 28 49.2**	**-2.4**
MEU					AML	AML	
	comp=E,394μm,0.4s						
MEU					AML	AML	
	comp=N,458μm,0.3s						
SSY	**Sortino**	**2.68**	**92**	P	**Pn**	**04 28 21.1**	**-0.2**
SSY				S	**Sn**	**04 28 53.2**	**-1.1**
HAGA	**Augusta**	**2.74**	**89**	P	**Pn**	**04 28 21.7**	**-0.4**
HAGA				S	**Sn**	**04 28 54.3**	**-1.4**
HAGA					AML	AML	
	comp=E,202μm,0.5s						
HAGA					AML	AML	
	comp=N,180μm,0.8s						
HAVL	**Avola**	**2.74**	**96**	P	**Pn**	**04 28 21.4**	**-0.8**
HAVL				S	**Sn**	**04 28 54.4**	**-1.4**
HPAC	**Pachino**	**2.78**	**101**	P	**Pn**	**04 28 22.1**	**-0.5**
VSL	**Villasalto**	**2.87**	**321**	P	**Pn**	**04 28 23.0**	**-0.9**
VSL					AML	AML	
VSL					AML	AML	
LATB	**Latina**	**4.30**	**13**	P	Pn	04 28 47.7	+4.1
VIVA	**Pratoni del Vi**	**4.52**	**10**	P	**Pn**	**04 28 48.4**	**+1.8**
VIVA					AML	AML	
	comp=N,302μm,1.1s						
VIVA					AML	AML	
	comp=E,224μm,1.5s						
CIGN	**Sant'Elia a Pi**	**5.00**	**29**	P	**Pn**	**04 28 55.4**	**+2.2**
PGF	**Pioggiola**	**5.65**	**339**	*e*Pn	**Pn**	**04 29 01.8**	**-0.4**
PGF	**Pioggiola**	**5.65**	**339**	*e*P	**Pn**	**04 29 05.5**	**+3.3**
PGF				*e*Sn	**Sn**	**04 30 05.0**	**-2.6**
	comp=E,7.7nm,0.4s						
PP3	**Marolino**	**6.25**	**13**	⇓P	**Pn**	**04 29 08.2**	**-2.0**
LMR	**La Mourre**	**7.23**	**328**	*e*P	**Pn**	**04 29 27.6**	**+3.9**
LMR				*e*Sn	**Sn**	**04 30 41.8**	**-4.4**
	comp=E,2.7nm,0.6s						
SBF	**Sospel**	**7.33**	**335**	*e*Pn	**Pn**	**04 29 23.4**	**-1.8**
SBF	**Sospel**	**7.33**	**335**	*e*P	Pn	04 29 29.2	+4.0
SBF				*e*Sn	**Sn**	**04 30 44.8**	**-4.0**
	comp=E,8.8nm,0.7s						
RAVA	**Ravarino**	**7.47**	**357**	⇑P	Pn	04 29 33.4	+6.4
TIR	**Tirane**	**7.50**	**55**	⇓P	Pn	04 29 32.3	+4.9
MBDF	**Montbardon**	**8.31**	**335**	*e*Pn	**Pn**	**04 29 37.4**	**-1.4**
MBDF	**Montbardon**	**8.31**	**335**	*e*P	**Pn**	**04 29 42.4**	**+3.6**
AKASG	**Malin Array Be**	**18.33**	**37**	P	**P**	**04 31 55.0**	**+2.6**
	comp=E,0.2nm,0.3s,baz=231,slow=10.0,SNR=1.6						
	comp=E,0.1nm,0.3s						
TORD	**Torodi Ar. Bea**	**25.66**	**203**	P	**P**	**04 33 09.0**	**+0.6**
	comp=E,0.8nm,1.0s,baz=10,slow=9.0,SNR=3.9						
	comp=E,0.8nm,1.0s						
FINES	**FINESS Array B**	**25.80**	**16**	P	**P**	**04 33 12.2**	**+3.1**
	comp=E,1.3nm,0.8s,baz=229,slow=13,SNR=4.1						
	comp=E,1.3nm,0.8s						
AAK	**Ala-Archa**	**47.44**	**63**	LR	LR	04 59 54.4	
	comp=E,27nm,21.0s,baz=207,slow=41						

*NEIC **26** 04:53:08.4±1.0,61°.86N±0°.04×151°.84W±0°.07, h103km±5km,Error ellipse: s-maj=5.5km s-min=4.8km az=193.0*
*IDC **26** 04:53:09.3±2.1,62°.03N×151°.97W,h104km±18km, mb3.6/20,mbtmp4.0/24,MS3.2/1,Error ellipse: s-maj=18.6km s-min=10.5km az=36.0*
*AEIC **26** 04:53:09±1.2,61°.84N±0°.04×151°.81W±0°.06,h99km±4km, ML3.9,ML4.0/173(NEIC),Error ellipse: s-maj=5.1km s-min=4.1km az=164.0*
ISC 26 04:53:08.5±0.6,61°.85N±0°.02×151°.83W±0°.02, h105km±4km,n304,σ0°.85/298,mb3.9/20,1D,Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKT	**Skwentna**	**0.19**	**46**		**Pn**	**04 53 23.1**	**-0.2**
SKT					**Sn**	**04 53 33.9**	**-0.5**
SKT	**Skwentna**	**0.19**	**46**	P	**Pn**	**04 53 23.1**	**-0.2**
	baz=224						
SKT				S	**Sn**	**04 53 33.9**	**-0.5**
	baz=224						
STLK	**Strandline Lak**	**0.35**	**181**		**Pn**	**04 53 23.7**	**-0.3**
CGLM	**Capps Glacier**	**0.55**	**189**		**Pn**	**04 53 24.8**	**-0.4**

SPCG	**Spurr Capps Gl**	**0.57**	**190**		**Pn**	**04 53 25.0**	**-0.4**
SPCG					**Sn**	**04 53 37.0**	**-1.1**
CRP	**Crater Peak**	**0.60**	**195**		**Pn**	**04 53 25.6**	**-0.2**
CRP					**Sn**	**04 53 38.1**	**-0.5**
SPCP	**Crater Peak Br**	**0.61**	**195**		**Pn**	**04 53 25.5**	**-0.2**
SPCP					**Sn**	**04 53 38.1**	**-0.6**
M20K	**Styx River**	**0.62**	**274**		**Pn**	**04 53 25.6**	**-0.2**
M20K					**Sn**	**04 53 38.1**	**-0.6**
M20K	**Styx River**	**0.62**	**274**	P	**Pn**	**04 53 25.6**	**-0.2**
	baz=93						
M20K				S	**Sn**	**04 53 38.2**	**-0.6**
	baz=93						
SUA	**Susitna One**	**0.64**	**126**		**Pn**	**04 53 26.1**	**+0.1**
SUA					**Sn**	**04 53 39.1**	**0.0**
SUA	**Susitna One**	**0.64**	**126**	IAML		04 53 39.4	
	comp=N,9μm,0.8s						
SUA				IAML		04 53 39.5	
	comp=E,12μm,0.6s						
SUA	**Susitna One**	**0.64**	**126**	P	**Pn**	**04 53 26.1**	**+0.1**
	baz=307						
SUA				S	**Sn**	**04 53 39.1**	**0.0**
	baz=307						
SPBG	**Spurr Blockage**	**0.65**	**204**		**Pn**	**04 53 25.9**	**-0.1**
CKN	**Chakachatna No**	**0.65**	**195**		**Pn**	**04 53 25.9**	**-0.1**
SPWE	**Spurr West**	**0.68**	**212**		**Pn**	**04 53 26.2**	**-0.1**
SPU	**Mount Spurr**	**0.68**	**189**		**Pn**	**04 53 25.8**	**-0.4**
M22K	**Willow**	**0.81**	**96**		**Pn**	**04 53 27.6**	**+0.2**
M22K					**Sn**	**04 53 41.9**	**+0.4**
M22K	**Willow**	**0.81**	**96**	P	**Pn**	**04 53 27.6**	**+0.2**
	baz=277						
M22K				S	**Sn**	**04 53 41.9**	**+0.4**
	baz=277						
CUT	**Chulitna**	**0.92**	**52**		**Pn**	**04 53 28.8**	**+0.4**
CUT					**Sn**	**04 53 43.9**	**+0.5**
CUT	**Chulitna**	**0.92**	**52**	IAML		04 53 46.0	
	comp=N,8μm,0.6s						
CUT	**Chulitna**	**0.92**	**52**	P	**Pn**	**04 53 28.8**	**+0.4**
	baz=233						
CUT				S	**Sn**	**04 53 43.9**	**+0.5**
	baz=233						
FIS	**Fire Island**	**1.05**	**132**		**Pn**	**04 53 31.2**	**+1.5**
PPLA	**Purkeypile**	**1.06**	**351**		**Pn**	**04 53 30.3**	**+0.2**
PPLA	**Purkeypile**	**1.06**	**351**	P	**Pn**	**04 53 30.3**	**+0.2**
	baz=170						
CAPN	**Captain Cook N**	**1.13**	**163**		**Pn**	**04 53 32.1**	**+1.4**
CAPN	**Captain Cook N**	**1.13**	**163**	P	**Pn**	**04 53 32.1**	**+1.4**
	baz=344						
L20K	**Farewell, AK**	**1.15**	**304**		**Pn**	**04 53 30.8**	**-0.1**
L20K					**Sn**	**04 53 47.2**	**-0.7**
L20K	**Farewell, AK**	**1.15**	**304**	P	**Pn**	**04 53 30.8**	**-0.1**
	baz=123						
L20K				S	**Sn**	**04 53 47.2**	**-0.7**
	baz=123						
M19K	**Big River Lodg**	**1.22**	**274**		**Pn**	**04 53 31.6**	**-0.1**
M19K	**Big River Lodg**	**1.22**	**274**	P	**Pn**	**04 53 31.6**	**-0.1**
	baz=92						
RC01	**Rabbit Creek A**	**1.26**	**126**		**Pn**	**04 53 32.2**	**+0.1**
RC01					**Sn**	**04 53 49.6**	**-0.4**
RC01	**Rabbit Creek A**	**1.26**	**126**	IAML		04 53 54.7	
	comp=E,3μm,0.3s						
RC01	**Rabbit Creek A**	**1.26**	**126**	P	**Pn**	**04 53 32.2**	**+0.1**
	baz=308						
RC01				S	**Sn**	**04 53 49.6**	**-0.4**
	baz=308						
PMR	**Palmer**	**1.31**	**100**		**Pn**	**04 53 31.9**	**-0.7**
PMR	**Palmer**	**1.31**	**100**	P	**Pn**	**04 53 31.9**	**-0.7**
	baz=282						
DFR	**Drift River**	**1.33**	**199**		**Pn**	**04 53 33.1**	**+0.1**
RDJH	**Redoubt Jeurge**	**1.35**	**201**		**Pn**	**04 53 33.5**	**+0.2**
GHO	**Glory Hole Cre**	**1.38**	**92**		**Pn**	**04 53 33.4**	**-0.2**
GHO					**Sn**	**04 53 53.1**	**+0.5**
GHO	**Glory Hole Cre**	**1.38**	**92**	IAML		04 53 57.4	
	comp=N,2μm,0.3s						
NCT	**North Crescent**	**1.40**	**203**		**Pn**	**04 53 34.0**	**+0.1**
RDWB	**Redoubt West**	**1.45**	**200**		**Pn**	**04 53 34.8**	**+0.2**
RSO	**Redoubt South**	**1.46**	**198**		**Pn**	**04 53 34.9**	**+0.1**
L19K	**White Mountain**	**1.47**	**284**		**Pn**	**04 53 34.7**	**+0.1**
L19K					**Sn**	**04 53 54.2**	**-0.2**
L19K	**White Mountain**	**1.47**	**284**	P	**Pn**	**04 53 34.7**	**+0.1**
	baz=102						
L19K				S	**Sn**	**04 53 54.2**	**-0.2**
	baz=102						
RED	**Redoubt Volcan**	**1.51**	**198**		**Pn**	**04 53 35.2**	**+0.1**
SLKM	**Skilak Lake**	**1.55**	**149**		**Pn**	**04 53 35.4**	**-0.2**
CAST	**Castle Rocks**	**1.58**	**356**		**Pn**	**04 53 36.0**	**0.0**
CAST	**Castle Rocks**	**1.58**	**356**	P	**Pn**	**04 53 36.0**	**0.0**
	baz=175						
N19K	**Bonanza Creek**	**1.65**	**232**		**Pn**	**04 53 37.1**	**+0.2**
N19K					**Sn**	**04 53 58.1**	**-0.4**
N19K	**Bonanza Creek**	**1.65**	**232**	P	**Pn**	**04 53 37.1**	**+0.2**
	baz=50						
N19K				S	**Sn**	**04 53 58.1**	**-0.4**
	baz=50						
SML	**Sawmill**	**1.66**	**90**		**Pn**	**04 53 36.5**	**-0.5**
SML	**Sawmill**	**1.66**	**90**	IAML		04 54 00.2	
	comp=N,2μm,0.6s						
SML				IAML		04 54 04.2	
	comp=E,2μm,0.7s						
SML	**Sawmill**	**1.66**	**90**	P	**Pn**	**04 53 36.5**	**-0.5**
	baz=273						
KNK	**Knik Glacier**	**1.67**	**104**		**Pn**	**04 53 36.5**	**-0.5**
KNK	**Knik Glacier**	**1.67**	**104**	P	**Pn**	**04 53 36.5**	**-0.5**
	baz=286						
O22K	**Cooper Landing**	**1.71**	**143**		**Pn**	**04 53 37.5**	**0.0**
O22K					**Sn**	**04 53 58.9**	**-0.7**
O22K	**Cooper Landing**	**1.71**	**143**	P	**Pn**	**04 53 37.5**	**0.0**
	baz=324						
O22K				S	**Sn**	**04 53 58.9**	**-0.7**
	baz=324						
TRF	**Thorofare Moun**	**1.76**	**23**		**Pn**	**04 53 38.6**	**+0.3**
TRF	**Thorofare Moun**	**1.76**	**23**	P	**Pn**	**04 53 38.6**	**+0.3**
	baz=204						
KTH	**Kantishna Hill**	**1.76**	**13**		**Pn**	**04 53 38.5**	**+0.3**
KTH					**Sn**	**04 54 01.5**	**+0.6**
O20K	**Slope Mountain**	**1.82**	**193**		**Pn**	**04 53 39.0**	**+0.1**
O20K	**Slope Mountain**	**1.82**	**193**	P	**Pn**	**04 53 39.0**	**+0.1**
	baz=12						
WAT1	**Susitna Watana**	**1.82**	**56**		**Pn**	**04 53 39.0**	**0.0**
WAT1	**Susitna Watana**	**1.82**	**56**	P	**Pn**	**04 53 39.0**	**0.0**
	baz=238						
K20K	**Telida**	**1.83**	**327**		**Pn**	**04 53 39.0**	**-0.1**
K20K					**Sn**	**04 54 01.6**	**-0.9**
K20K	**Telida**	**1.83**	**327**	IAML		04 54 02.4	
	comp=E,1μm,0.6s						
K20K	**Telida**	**1.83**	**327**	P	**Pn**	**04 53 39.0**	**-0.1**
	baz=145						
K20K				S	**Sn**	**04 54 01.6**	**-0.9**
	baz=145						
IVE	**Iliamna Volcan**	**1.93**	**198**		**Pn**	**04 53 40.0**	**-0.4**
M23K	**Glacier View**	**1.95**	**90**		**Pn**	**04 53 39.9**	**-0.7**
M23K	**Glacier View**	**1.95**	**90**	P	**Pn**	**04 53 39.9**	**-0.7**
	baz=273						
SVW2	**Sparrevohn**	**1.95**	**249**		**Pn**	**04 53 40.5**	**-0.1**
SVW2					**Sn**	**04 54 04.7**	**-0.4**
SVW2	**Sparrevohn**	**1.95**	**249**	IAML		04 54 05.4	
	comp=E,1μm,0.7s						
WAT6	**Susitna Watana**	**2.05**	**67**		**Pn**	**04 53 41.

BRSE	**Bradley Lake S**	2.18	165			Pn	04 53 42.6	-0.9
BRSE	**Bradley Lake S**	2.18	165	P		Pn	04 53 42.6	-0.9
	baz=346							
HOM	**Homer**	2.20	178			Pn	04 53 43.6	-0.2
HOM	**Homer**	2.20	178	IAML			04 54 13.1	
	comp=E,2µm,0.4s							
HOM	**Homer**	2.20	178	P		Pn	04 53 43.6	-0.2
	baz=358							
TT01	**Tatalina**	2.22	300			Pn	04 53 44.1	0.0
TTA	**Tatalina**	2.23	301			Pn	04 53 44.1	-0.1
TTA	**Tatalina**	2.23	301	P		Pn	04 53 44.1	-0.1
	baz=117							
N18K	**Kilae Creek**	2.29	241			Pn	04 53 44.8	-0.1
N18K	**Kilae Creek**	2.29	241	P		Pn	04 53 44.8	-0.1
	baz=58							
BPAW	**Bear Paw Mtn.**	2.29	9			Pn	04 53 44.7	-0.3
BPAW	**Bear Paw Mtn.**	2.29	9	IAML			04 54 12.7	
	comp=E,1µm,0.6s							
BPAW				IAML			04 54 13.4	
	comp=N,1µm,0.9s							
BPAW	**Bear Paw Mtn.**	2.29	9	P		Pn	04 53 44.7	-0.3
	baz=190							
MCK	**McKinley**	2.31	34			Pn	04 53 45.4	+0.1
MCK	**McKinley**	2.31	34	IAML			04 54 16.7	
	comp=E,877nm,0.5s							
MCK				IAML			04 54 21.8	
	comp=N,775nm,0.9s							
MCK	**McKinley**	2.31	34	P		Pn	04 53 45.4	+0.1
	baz=216							
OPT	**Oil Point**	2.31	198			Pn	04 53 45.6	+0.3
OPT	**Oil Point**	2.31	198	P		Pn	04 53 45.6	+0.3
	baz=17							
CNPM	**China Poot**	2.35	173			Pn	04 53 44.8	-0.9
CNPM	**China Poot**	2.35	173	IAML			04 54 17.9	
	comp=E,785nm,0.4s							
CNPM				IAML			04 54 20.3	
	comp=N,816nm,0.4s							
DHY	**Denali Highway**	2.41	57			Pn	04 53 46.5	-0.1
DHY	**Denali Highway**	2.41	57	IAML			04 54 16.3	
	comp=E,1µm,0.8s							
DHY				IAML			04 54 16.6	
	comp=N,772nm,0.7s							
DHY	**Denali Highway**	2.41	57	P		Pn	04 53 46.5	-0.1
	baz=241							
GLI	**Glacier Island**	2.48	111			Pn	04 53 45.8	-1.6
GLI	**Glacier Island**	2.48	111	IAML			04 54 16.7	
	comp=N,1µm,0.8s							
GLI				IAML			04 54 30.6	
	comp=E,1µm,0.6s							
GLI	**Glacier Island**	2.48	111	P		Pn	04 53 45.8	-1.6
	baz=295							
J20K	**Nowinta River**	2.56	337			Pn	04 53 48.5	0.0
J20K	**Nowinta River**	2.56	337	IAML			04 54 20.9	
	comp=N,519nm,0.9s							
J20K				IAML			04 54 21.4	
	comp=E,484nm,1.1s							
J20K	**Nowinta River**	2.56	337	P		Pn	04 53 48.5	0.0
	baz=155							
BWN	**Browne**	2.57	24			Pn	04 53 48.9	+0.3
BWN	**Browne**	2.57	24	IAML			04 54 41.1	
	comp=E,917nm,0.9s							
BWN				IAML			04 54 47.9	
	comp=N,1µm,0.8s							
O18K	**Koktuh Hills**	2.60	221			Pn	04 53 49.2	+0.2
O18K	**Koktuh Hills**	2.60	221	P		Pn	04 53 49.2	+0.2
	baz=38							
AU22	**Augustine Moun**	2.60	198			Pn	04 53 49.4	+0.4
AUL	**Augustine Lava**	2.60	198			Pn	04 53 49.3	+0.3
AUH	**Augustine H**	2.62	198			Pn	04 53 49.9	+0.6
AUCH	**Augustine Cone**	2.62	198			Pn	04 53 49.7	+0.3
AUQ	**Augustine Qik'**	2.62	198			Pn	04 53 49.6	+0.3
JPK	**Jack Peak**	2.63	105			Pn	04 53 48.4	-1.1
M24K	**Tolsona, Glenn**	2.68	82			Pn	04 53 50.3	+0.2
M24K	**Tolsona, Glenn**	2.68	82	P		Pn	04 53 50.3	+0.2
	baz=267							
FID	**Port Fidalgo**	2.81	111			Pn	04 53 49.9	-1.8
KLU	**Klutina**	2.84	95			Pn	04 53 51.2	-1.0
KLU	**Klutina**	2.84	95	IAML			04 54 38.5	
	comp=N,469nm,0.4s							
KLU				IAML			04 54 41.7	
	comp=E,466nm,0.5s							
KLU	**Klutina**	2.84	95	P		Pn	04 53 51.2	-1.0
	baz=280							
HIN	**Hinchinbrook I**	2.96	117			Pn	04 53 53.1	-0.8
P18K	**Big Mountain,**	2.98	216			Pn	04 53 53.7	-0.4
DIV	**Divide**	2.99	101			Pn	04 53 52.8	-1.4
NEA2	**Nenana**	3.02	23			Pn	04 53 53.8	-0.8
NEA2	**Nenana**	3.02	23	IAML			04 54 29.7	
	comp=E,358nm,0.7s							
NEA2				IAML			04 54 29.9	
	comp=N,390nm,0.6s							
NEA2	**Nenana**	3.02	23	P		Pn	04 53 53.8	-0.8
	baz=205							
Q19K	**Cape Douglas,**	3.07	198			Pn	04 53 54.9	-0.3
Q19K	**Cape Douglas,**	3.07	198	IAML			04 54 43.7	
	comp=E,658nm,0.8s							
Q19K				IAML			04 54 57.4	
	comp=N,439nm,0.8s							
Q19K	**Cape Douglas,**	3.07	198	P		Pn	04 53 54.9	-0.3
	baz=16							
WRH	**Wood River Hil**	3.13	31			Pn	04 53 55.5	-0.5
PAX	**Paxson**	3.16	66			Pn	04 53 56.7	+0.2
PAX	**Paxson**	3.16	66	P		Pn	04 53 56.7	+0.2
	baz=252							
HARP	**HAARP**	3.18	77			Pn	04 53 57.0	+0.3
HARP	**HAARP**	3.18	77	P		Pn	04 53 57.0	+0.3
	baz=263							
EYAK	**Cordova Ski Ar**	3.22	111			Pn	04 53 57.5	+0.3
EYAK	**Cordova Ski Ar**	3.22	111	P		Pn	04 53 57.5	+0.3
	baz=296							
MLY	**Manley**	3.23	8			Pn	04 53 57.1	-0.3
MLY	**Manley**	3.23	8	IAML			04 54 35.9	
	comp=N,345nm,0.9s							
MLY	**Manley**	3.23	8	P		Pn	04 53 57.1	-0.3
	baz=189							
SYI	**Shuyak Island**	3.26	185			Pn	04 53 57.2	-0.6
Q20K	**Shuyak Island**	3.26	185	P		Pn	04 53 57.2	-0.6
	baz=4.8							
O17K	**Koliganek Bris**	3.32	233			Pn	04 53 58.9	+0.4
O17K	**Koliganek Bris**	3.32	233	P		Pn	04 53 58.9	+0.4
	baz=49							
CCB	**Clear Creek Bu**	3.34	31			Pn	04 53 58.2	-0.7
CCB	**Clear Creek Bu**	3.34	31	IAML			04 55 00.6	
	comp=E,256nm,0.5s							
I21K	**Tanana**	3.34	359			Pn	04 53 58.8	-0.1
I21K	**Tanana**	3.34	359	IAML			04 54 51.9	
	comp=E,265nm,0.8s							
I21K	**Tanana**	3.34	359	P		Pn	04 53 58.8	-0.1
	baz=179							
HDA	**Harding Lake**	3.39	39			Pn	04 53 59.2	-0.3
HDA	**Harding Lake**	3.39	39	IAML			04 54 42.2	
	comp=E,420nm,0.4s							
HDA				IAML			04 55 01.3	
	comp=N,502nm,0.7s							
HDA	**Harding Lake**	3.39	39	P		Pn	04 53 59.2	-0.3
	baz=223							
K24K	**Donnelly Dome**	3.40	52			Pn	04 54 00.6	+1.0
K24K	**Donnelly Dome**	3.40	52	P		Pn	04 54 00.6	+1.0
	baz=237							
N25K	**Chitina, Valde**	3.45	91			Pn	04 53 59.6	-0.7
N25K	**Chitina, Valde**	3.45	91	IAML			04 54 40.9	
	comp=E,242nm,0.5s							
N25K				IAML			04 55 02.3	
	comp=N,296nm,0.5s							
N25K	**Chitina, Valde**	3.45	91	P		Pn	04 53 59.6	-0.7
	baz=277							
I23K	**Minto, Yukon-K**	3.49	17			Pn	04 54 00.7	-0.1
I23K	**Minto, Yukon-K**	3.49	17	IAML			04 54 41.6	
	comp=N,286nm,0.6s							
I23K				IAML			04 54 41.7	
	comp=E,269nm,0.8s							
I23K	**Minto, Yukon-K**	3.49	17	P		Pn	04 54 00.7	-0.1
	baz=199							
P17K	**Kvichak River**	3.50	223			Pn	04 54 01.8	+0.8
P17K	**Kvichak River**	3.50	223	P		Pn	04 54 01.8	+0.8
	baz=39							
MDM	**Murphy Dome**	3.52	26			Pn	04 54 00.8	-0.4
MDM	**Murphy Dome**	3.52	26	IAML			04 54 41.4	
	comp=N,280nm,0.7s							
TCOL	**CIGO, UAF Yank**	3.52	29			Pn	04 54 01.2	0.0
TCOL	**CIGO, UAF Yank**	3.52	29	P		Pn	04 54 01.2	0.0
	baz=212							
COLA	**College**	3.52	29			Pn	04 54 00.9	-0.3
PS08	**TAPS Pump Stn8**	3.53	38			Pn	04 54 00.9	-0.4
BMRM	**Bremner River**	3.58	101			Pn	04 54 00.7	-1.4
BMRM	**Bremner River**	3.58	101	IAML			04 55 04.4	
	comp=E,321nm,0.5s							
BMRM				IAML			04 55 14.1	
	comp=N,380nm,0.8s							
BMRM	**Bremner River**	3.58	101	P		Pn	04 54 00.7	-1.4
	baz=287							
KAHC	**Katmai Hardscr**	3.58	208			Pn	04 54 02.6	+0.4
KAHC	**Katmai Hardscr**	3.58	208	P		Pn	04 54 02.6	+0.4
	baz=25							
Q23K	**Middleton Isla**	3.63	130	Pn		Pn	04 54 02.0	-0.6
Q23K				IAML			04 54 51.1	
	comp=N,312nm,1.4s							
Q23K				IAML			04 55 17.2	
	comp=E,308nm,1.2s							
MID	**Middleton Isla**	3.63	130			Pn	04 54 02.6	-0.1
MID	**Middleton Isla**	3.63	130	IAML			04 54 51.1	
	comp=N,279nm,1.0s							
MID				IAML			04 55 01.3	
	comp=E,325nm,0.7s							
N16K	**Nishlik Lake**	3.64	251			Pn	04 54 03.1	+0.3
N16K	**Nishlik Lake**	3.64	251	P		Pn	04 54 03.1	+0.3
	baz=65							
IL31		3.68	35			Pn	04 54 02.8	-0.6
ILAR	**Eielson Array**	3.68	35	P		Pn	04 54 02.8	-0.6
	comp=E,81nm,0.4s,baz=220,slow=14,SNR=155							
ILAR				S		Sn	04 54 39.6	-6.3
	comp=E,40nm,0.5s,baz=210,slow=17,SNR=2.7							
GCSA	**Galena City Sc**	3.69	324			Pn	04 54 03.8	+0.3
GCSA	**Galena City Sc**	3.69	324	P		Pn	04 54 03.8	+0.3
	baz=140							
PS07	**TAPS Pump Stn7**	3.82	23			Pn	04 54 05.2	0.0
O16K	**Kokwok River B**	3.82	236			Pn	04 54 05.5	+0.3
O16K	**Kokwok River B**	3.82	236	P		Pn	04 54 05.5	+0.3
	baz=51							
POKR	**Poker Plat Res**	3.83	29			Pn	04 54 05.3	0.0
POKR	**Poker Plat Res**	3.83	29	P		Pn	04 54 05.3	0.0
	baz=213							
GLB	**Gilahina Butte**	3.85	93			Pn	04 54 04.5	-1.2
GLB	**Gilahina Butte**	3.85	93	IAML			04 55 12.1	
	comp=E,240nm,0.6s							
GLB				IAML			04 55 13.6	
	comp=N,227nm,1.0s							
H21K	**Melozitna Rive**	3.85	354			Pn	04 54 05.5	-0.1
H21K	**Melozitna Rive**	3.85	354	P		Pn	04 54 05.5	-0.1
	baz=173							
KCG	**Knife Ck. Glac**	3.92	206			Pn	04 54 07.4	+0.8
DOT	**Dot Lake**	4.00	60			Pn	04 54 07.5	-0.2
J25K	**Salcha River,**	4.03	44			Pn	04 54 07.7	-0.4
J25K	**Salcha River,**	4.03	44	IAML			04 54 54.1	
	comp=N,241nm,0.7s							
J25K				IAML			04 55 06.1	
	comp=E,249nm,0.5s							
J25K	**Salcha River,**	4.03	44	P		Pn	04 54 07.7	-0.4
	baz=229							
VRDI	**Verde Repeater**	4.06	95			Pn	04 54 07.4	-1.2
KDAK	**Kodiak Island**	4.10	186	P		Pn	04 54 07.2	-1.8
	comp=E,35nm,0.5s,baz=45,slow=8.2,SNR=76							
KDAK				S		Sn	04 54 51.1	-4.7
	comp=E,49nm,0.4s,baz=174,slow=21,SNR=6.2							
KDAK	**Kodiak Island**	4.10	186	Pn		Pn	04 54 07.5	-1.4
KDAK				IAML			04 55 03.0	
	comp=E,140nm,0.4s							
KDAK				IAML			04 55 05.7	
	comp=E,154nm,0.9s							
H23K	**Yukon River**	4.12	13			Pn	04 54 09.1	-0.1
H23K	**Yukon River**	4.12	13	IAML			04 54 58.0	
	comp=N,214nm,0.8s							
H23K				IAML			04 54 58.7	
	comp=E,151nm,0.7s							
H23K	**Yukon River**	4.12	13	P		Pn	04 54 09.1	-0.1
	baz=195							
PS06	**TAPS Pump Stn6**	4.13	12			Pn	04 54 09.4	+0.1
SCRK	**Sand Creek**	4.17	56			Pn	04 54 09.8	-0.3
SCRK	**Sand Creek**	4.17	56	IAML			04 54 57.4	
	comp=N,245nm,0.7s							
SCRK				IAML			04 54 57.7	
	comp=E,225nm,0.6s							
SCRK	**Sand Creek**	4.17	56	P		Pn	04 54 09.8	-0.3
	baz=243							
M26K	**Nabesna, AK**	4.18	79			Pn	04 54 10.0	-0.1
M26K	**Nabesna, AK**	4.18	79	IAML			04 55 18.9	
	comp=E,212nm,0.6s							
M26K	**Nabesna, AK**	4.18	79	P		Pn	04 54 10.0	-0.1
	baz=266							
MCARA	**McCarthy VSAT**	4.23	92			Pn	04 54 10.7	0.0
MCARA	**McCarthy VSAT**	4.23	92	P		Pn	04 54 10.7	0.0
	baz=280							
IM03		4.24	349			Pn	04 54 10.8	+0.1
CRQM	**Cirque**	4.33	101			Pn	04 54 11.8	-0.5
CRQM	**Cirque**	4.33	101	IAML			04 55 28.2	
	comp=E,229nm,0.9s							
CRQE	**Cirque**	4.35	101	P		Pn	04 54 11.8	-0.7
	baz=288							
H24K	**Noodor Dome**	4.37	22			Pn	04 54 12.5	-0.1
H24K	**Noodor Dome**	4.37	22	IAML			04 55 02.9	
	comp=E,124nm,0.8s							
H24K	**Noodor Dome**	4.37	22	P		Pn	04 54 12.5	-0.1
	baz=205							
KHIT	**Khitrov Hills**	4.39	105			Pn	04 54 12.2	-0.8
GRIN	**Grindle Hills**	4.42	107			Pn	04 54 12.1	-1.3
TGL	**Tana Glacier**	4.47	100			Pn	04 54 13.6	-0.5
TGL	**Tana Glacier**	4.47	100	IAML			04 55 38.1	
	comp=E,230nm,0.6s							
TGL				IAML			04 55 42.0	
	comp=N,212nm,0.7s							
PTPK	**Patty Peak**	4.53	94			Pn	04 54 14.6	-0.4
WAX	**Waxell Ridge**	4.57	104	IAML			04 55 35.8	
	comp=E,221nm,0.7s							
J26L	**Joseph Creek**	4.59	51			Pn	04 54 15.9	+0.2
J26L	**Joseph Creek**	4.59	51	P		Pn	04 54 15.9	+0.2
	baz=238							
BALM	**Baldy**	4.62	96			Pn	04 54 15.6	-0.6
KIAG	**Kiagna River**	4.65	97			Pn	04 54 15.6	-1.0
M27K	**Edge Creek, AK**	4.70	79			Pn	04 54 17.7	+0.5
M27K	**Edge Creek, AK**	4.70	79	IAML			04 55 40.0	
	comp=N,127nm,0.8s							
M27K				IAML			04 55 52.5	
	comp=E,104nm,0.9s							
M27K	**Edge Creek, AK**	4.70	79	P		Pn	04 54 17.7	+0.5
	baz=268							
OHAK	**Old Harbor**	4.70	190	Pn		Pn	04 54 16.0	-1.1
ISLE	**Juniper Island**	4.75	101	IAML			04 55 43.9	
	comp=E,154nm,0.5s							
ISLE				IAML			04 55 46.3	
	comp=N,179nm,1.0s							
L27K	**Beaver Creek,**	4.80	71			Pn	04 54 18.1	-0.4
L27K	**Beaver Creek,**	4.80	71	P		Pn	04 54 18.1	-0.4
	baz=260							
BC03		4.82	71			Pn	04 54 18.4	-0.2
BAGL	**Bagley Icefiel**	4.91	102			Pn	04 54 19.5	-0.3
BARN	**Barnard Glacie**	4.94	95			Pn	04 54 20.3	-0.2
BARN	**Barnard Glacie**	4.94	95	IAML			04 55 46.2	
	comp=N,114nm,0.8s							
BARN				IAML			04 55 49.1	
	comp=E,102nm,0.9s							
K27K	**Chicken**	4.96	60	IAML			04 55 27.0	
	comp=E,106nm,0.6s							
K27K				IAML			04 55 36.6	
	comp=N,92nm,0.9s							
GRNC	**Granite Creek**	4.99	99			Pn	04 54 20.9	-0.3
GRNC	**Granite Creek**	4.99	99	IAML			04 55 47.8	
	comp=E,78nm,0.7s							
GRNC				IAML			04 55 50.5	
	comp=N,113nm,0.6s							
YAH	**Yahtse**	5.11	102			Pn	04 54 22.6	-0.3
YAH	**Yahtse**	5.11	102	IAML			04 55 52.5	
	comp=E,87nm,0.7s							
YAH				IAML			04 55 57.5	
	comp=N,102nm,0.9s							
CTG	**Chitna Glacier**	5.12	95	P		Pn	04 54 22.8	0.0
	baz=284							
CTGM	**Chitina Glacie**	5.12	95			Pn	04 54 22.9	0.0
CTGM	**Chitina Glacie**	5.12	95	IAML			04 55 45.6	
	comp=N,82nm,0.7s							
CTGM				IAML			04 55 51.4	
	comp=E,71nm,0.7s							
BVCY	**Beaver Creek**	5.18	79			Pn	04 54 23.8	+0.2
BVCY	**Beaver Creek**	5.18	79	P		Pn	04 54 23.8	+0.2
	baz=268							
I26K	**Coal Creek Min**	5.20	44	IAML			04 55 23.6	
	comp=N,142nm,0.7s							
YUK2	**White River**	5.21	86			Pn	04 54 23.9	-0.2
LOGN	**Logan Glacier**	5.31	96			Pn	04 54 25.5	0.0
LOGN	**Logan Glacier**	5.31	96	IAML			04 55 54.6	
	comp=E,69nm,1.0s							
LOGN				IAML			04 55 57.4	
	comp=N,63nm,0.7s							
YUK3	**Moose Creek**	5.39	86			Pn	04 54 26.3	-0.3
YUK3	**Moose Creek**	5.39	86	P		Pn	04 54 26.3	-0.3
	baz=276							
SII	**Sitkinak Islan**	5.44	194	Pn		Pn	04 54 27.1	-0.1
COLD	**Coldfoot**	5.45	7			Pn	04 54 27.8	+0.7
COLD	**Coldfoot**	5.45	7	P		Pn	04 54 27.8	+0.7
	baz=188							
DAWY	**Dawson**	6.09	63			Pn	04 54 36.0	+0.1
DAWY	**Dawson**	6.09	63	P		Pn	04 54 36.0	+0.1
	baz=254							
BCPM	**Bancas Point**	6.24	102			Pn	04 54 37.4	-0.6
BM03	**Burnt Mountain**	6.39	26			Pn	04 54 39.7	-0.3
N30M	**Aishikik Lake**	7.03	87			Pn	04 54 47.8	-0.9
N30M	**Aishikik Lake**	7.03	87	P		Pn	04 54 47.8	-0.9
	baz=280							
INK	**Inuvik**	10.04	42	P		Pn	04 55 29.3	-0.1
	comp=N,38nm,0.7s,baz=246,slow=18,SNR=46							
INK				S		Sn	04 57 15.8	-4.1
	comp=N,7.1nm,0.9s,baz=344,slow=8.6,SNR=2.5							
DLBC	**Dease Lake**	11.37	98	P		Pn	04 55 48.0	+0.5
	comp=N,1.3nm,0.5s,baz=174,slow=18,SNR=2.3							
A36M	**Sachs Harbour**	14.38	34	Pn		Pn	04 56 24.9	-1.9
BBB	**Bella Bella**	16.04	116	S		Sn	04 59 43.3	-1.8
	comp=N,14nm,1.2s,baz=123,slow=1.7,SNR=1.7							
YKA	**Yellowknife Ar**	17.24	71	P		P	04 57 02.5	+0.2
	comp=N,8.7nm,0.7s,baz=281,slow=11,SNR=45							
YKA				PcP		PcP	05 01 39.4	+0.5
	comp=N,0.5nm,0.6s,baz=285,slow=1.3,SNR=7.9							
YKA				ScP		ScP	05 05 03.9	0.0
	comp=N,0.7nm,0.9s,baz=288,slow=2.7,SNR=3.9							
YKA	**Yellowknife Ar**	17.24	71			P	04 57 01.6	-0.6
NEW	**Newport**	23.72	109	P		P	04 58 12.3	+1.6
	comp=N,0.8nm,0.5s,baz=321,slow=17,SNR=2.3							
	comp=N,0.8nm,0.5s							
SEY	**Seymchan**	25.20	297	P		P	04 58 22.5	-1.4
	comp=N,0.7nm,0.4s,baz=97,slow=14,SNR=3.7							
	comp=N,0.7nm,0.4s							
YBH	**Yreka Blue Hor**	26.62	126	P		P	04 58 39.2	+2.2
	comp=N,1.5nm,0.7s,baz=122,slow=13,SNR=2.5							
	comp=N,1.5nm,0.7s							
NVAR	**Mina Array Bea**	31.19	123	P		P	04 59 20.3	+2.7
	comp=N,2.4nm,0.7s,baz=320,slow=9.5,SNR=23							
NVAR				PcP		PcP	05 02 10.8	+1.0
	comp=N,0.4nm,0.6s,baz=289,slow=5.5,SNR=3.1							
	comp=N,2.4nm,0.7s							
PDAR	**Pinedale Array**	31.34	108	P		P	04 59 20.9	+1.9
	comp=N,0.2nm,0.4s,baz=331,slow=4.3,SNR=7.9							
PDAR				PcP		PcP	05 02 09.6	-0.6
	comp=N,0.2nm,0.5s,baz=106,slow=3.2,SNR=2.9							
	comp=N,0.2nm,0.4s							
ULM	**Lac du Bonnet**	32.28	85	P		P	04 59 28.3	+1.5
	comp=N,5.8nm,0.9s,baz=309,slow=5.6,SNR=3.3							
	comp=N,5.8nm,0.9s							
SPITS	**Spitsbergen Ar**	40.03	4	P		P	05 00 32.1	-0.4
	comp=N,0.5nm,0.3s,baz=348,slow=6.1,SNR=5.1							
SPITS				PcP		PcP	05 02 34.3	-0.8
	comp=N,0.6nm,0.3s,baz=58,slow=3.1,SNR=7.2							
	comp=N,0.5nm,0.3s							
TXAR	**Lajitas Array**	45.14	113	P		P	05 01 16.9	+2.5
	comp=N,1.3nm,0.6s,baz=320,slow=6.0,SNR=20							
TXAR				PcP		PcP	05 02 53.8	+0.8
	comp=N,0.2nm,0.4s,baz=232,slow=0.2,SNR=3.9							
	comp=N,1.3nm,0.6s							
ARCES	**ARCESS Array B**	48.89	1	P		P	05 01 42.2	-0.7
	comp=N,0.9nm,0.5s,baz=11,slow=7.7,SNR=6.1							
ARCES				PcP		PcP	05 03 05.8	+0.2
	comp=N,1.9nm,0.8s,baz=6.5,slow=4.3,SNR=7.9							
ARCES				LR		LR	05 24 57.4	
	comp=N,23nm,18.7s,baz=144,slow=39							
	comp=N,0.9nm,0.5s							
MJAR	**Matsushiro Arr**	49.25	273	P		P	05 01 45.0	-1.1
	comp=N,0.8nm,0.7s,baz=55,slow=6.5,SNR=2.5							
	comp=N,0.8nm,0.7s							
KSRS	**Korea Array**	53.34	282	P		P	05 02 17.3	+0.7
	comp=N,2.1nm,0.8s,baz=33,slow=7.1,SNR=7.6							
	comp=N,2.1nm,0.8s							
SONM	**Songino Array**	54.17	306	P		P	05 02 23.8	+1.1
	comp=N,2.2nm,0.7s,baz=46,slow=7.5,SNR=7.9							
	comp=N,2.2nm,0.7s							
ZALV	**Zalesovo Beam**	56.22	324	P		P	05 02 37.2	+0.1
	comp=N,1.3nm,0.6s,baz=24,slow=5.4,SNR=6.0							
	comp=N,1.3nm,0.6s							
NOA	**NORSAR Array B**	56.75	10	P		P	05 02 40.1	-0.7
	comp=N,0.4nm,0.7s,baz=337,slow=7.3,SNR=2.6							
	comp=N,0.4nm,0.7s							
FINES	**FINESS Array B**	57.02	1	P		P	05 02 42.0	-0.6
	comp=N,0.7nm,0.6s,baz=9.7,slow=8.7,SNR=7.2							
FINES				PcP		PcP	05 03 35.9	-0.6
	comp=N,0.4nm,0.6s,baz=15,slow=6.3,SNR=1.5							
	comp=N,0.7nm,0.6s							
HFS	**Hagfors**	57.84	9	P		P	05 02 47.5	-0.9
	comp=N,0.7nm,0.4s,baz=46,slow=4.2,SNR=11							
	comp=N,0.7nm,0.4s							
EKA	**Eskdalemuir Ar**	60.59	20	P		P	05 03 07.4	0.0
	comp=N,0.3nm,0.4s,baz=328,slow=5.4,SNR=5.2							
	comp=N,0.3nm,0.4s							
MKAR	**Makanchi Array**	63.34	321	P		P	05 03 25.4	-0.6
	comp=N,0.8nm,0.6s,baz=46,slow=7.6,SNR=8.4							
	comp=N,0.8nm,0.6s							
NACGM	**Naroch**	63.58		1∥*e*

baz=16,SNR=4.9
TOO Toolangi 16.00 15 Pn 05 21 48.7 -0.9
TOO IAmb IAmb 05 21 54.1
comp=Z,139nm,1.4s
TOO Toolangi 16.00 15 P Pn 05 21 48.9 -0.7
ARPS Mount Arapiles 16.43 4 P Pn 05 21 54.9 -0.1
baz=16
ARPS Mount Arapiles 16.43 4 P Pn 05 21 54.7 -0.4
CAN Canberra 18.85 22 P 05 22 23.1 -1.2
CAN IAmb IAmb 05 22 28.3
comp=Z,77nm,1.4s
CAN Canberra 18.85 22 P P 05 22 24.4 +0.1
DCZ Deep Cove 18.99 77 P Pn 05 22 25.6 -0.9
WHZ Wether Hill Ro 19.22 79 P P 05 22 28.1 -0.1
WHZ IAmb IAmb 05 22 33.3
comp=Z,44nm,1.2s
CASY Casey 19.70 217 P P 05 22 33.0 -0.3
NAPP Napperby 20.04 354 P P 05 22 37.4 +0.2
WHYH Whyalla 20.23 353 P P 05 22 39.3 +0.1
BBOO Buckleboo 20.59 350 P Pn 05 22 44.7 -0.9
STKA Stephens Creek 21.30 3 P P 05 22 50.1 -0.7
comp=Z,18nm,0.9s,baz=167,slow=12,SNR=21
STKA LR LR 05 29 43.8
comp=Z,233nm,19.8s,baz=186,slow=33
comp=Z,18nm,0.9s
STKA Stephens Creek 21.30 3 P P 05 22 51.2 +0.4
baz=21,SNR=13
STKA Stephens Creek 21.30 3 P P 05 22 50.4 -0.4
STKA Stephens Creek 21.30 3 P P 05 22 51.0 +0.2
MGCD Mangrove Creek 21.38 25 P P 05 22 52.8 +1.1
baz=21
CMSA Cobar Meteorol 21.96 12 P P 05 22 58.4 +0.5
baz=22,SNR=18
CMSA Cobar Meteorol 21.96 12 P P 05 22 58.1 +0.2
RPZ Rata Peaks 22.27 77 P P 05 23 01.0 -0.2
comp=Z,40nm,1.0s,baz=342,slow=4.0,SNR=5.2
RPZ LR LR 05 29 56.1
comp=Z,719nm,18.9s,baz=237,slow=32
comp=Z,40nm,1.0s
RPZ Rata Peaks 22.27 77 P P 05 23 00.6 -0.6
RPZ IAmb IAmb 05 23 04.3
comp=Z,55nm,1.1s
MULG Mulgathing 23.34 346 P P 05 23 11.6 -0.7
FORT Forrest 24.11 333 P P 05 23 20.6 +0.9
baz=24
FORT Forrest 24.11 333 P P 05 23 19.6 0.0
FORT Forrest 24.11 333 P P 05 23 20.4 +0.8
ARMA Armidale 24.17 24 P P 05 23 21.0 +0.7
baz=24,SNR=5.5
ARMA Armidale 24.17 24 P P 05 23 20.1 -0.2
ARMA Armidale 24.17 24 P P 05 23 20.0 -0.3
INKA Innaminka 25.40 1 P P 05 23 32.0 +0.6
VNDA Vanda 25.68 169 P P 05 23 32.5 -0.9
comp=Z,3.0nm,1.0s,baz=331,slow=9.4,SNR=8.0
VNDA LR LR 05 31 41.8
comp=Z,216nm,18.8s,baz=338,slow=32
comp=Z,3.0nm,1.0s
VNDA Vanda 25.68 169 P P 05 23 33.1 -0.4
VNDA IAmb IAmb 05 23 48.7
comp=Z,12nm,1.1s
H01W1 Cape Leeuwin H 26.03 304 T T 05 50 53.5
baz=142,slow=75,SNR=159
H01W2 Cape Leeuwin H 26.04 304 T T 05 50 52.6
baz=142,slow=75,SNR=228
H01W3 Cape Leeuwin H 26.05 304 T T 05 50 53.5
baz=142,slow=75,SNR=162
SBA Scott Base 26.54 168 P P 05 23 41.3 +0.1
QLP Quilpie 26.71 8 P P 05 23 44.2 +0.9
baz=27,SNR=3.7
QLP Quilpie 26.71 8 P P 05 23 43.5 +0.3
RMQ Roma 27.38 16 P P 05 23 49.5 +0.3
baz=27,SNR=3.9
RMQ Roma 27.38 16 P P 05 23 49.4 +0.2
EIDS Eidsvold 28.91 20 P P 05 24 02.7 -0.1
baz=29,SNR=4.5
EIDS Eidsvold 28.91 20 P P 05 24 02.6 -0.2
EIDS IAmb IAmb 05 24 03.6
comp=Z,18nm,1.1s
EIDS Eidsvold 28.91 20 P P 05 24 02.7 -0.2
URZ Urewera 29.27 74 LR LR 05 33 52.8
comp=Z,364nm,21.7s,baz=211,slow=33
WRKA Warakurna 29.54 337 P P 05 24 07.7 -0.8
ASAR Alice Springs 29.87 348 P P 05 24 10.9 -0.6
comp=Z,1.3nm,0.7s,baz=166,slow=10.0,SNR=13
comp=Z,1.3nm,0.7s
ASAR Alice Springs 29.87 348 P P 05 24 10.5 -1.0
AS31 Alice Springs 29.87 348 P P 05 24 11.3 -0.2
QIS Mount Isa 32.56 359 P P 05 24 35.1 0.0
baz=32,SNR=5.8
QIS Mount Isa 32.56 359 P P 05 24 35.1 0.0
CTAO Charters Tower 33.33 10 P P 05 24 40.8 -1.1
CTAO IAmb IAmb 05 24 43.7
comp=Z,17nm,1.2s
WR0 Warramunga Arr 33.46 350 P P 05 24 40.9 -2.1
WR0 IAmb IAmb 05 24 49.4
comp=Z,12nm,0.9s
WB2 Warramunga Arr 33.49 350 P P 05 24 42.6 -0.6
baz=33
WB2 Warramunga Arr 33.49 350 P P 05 24 42.7 -0.6
WRA Warramunga Arr 33.50 350 P P 05 24 42.2 -1.1
comp=Z,5.1nm,0.9s,baz=173,slow=7.4,SNR=28
comp=Z,5.1nm,0.9s
WRA Warramunga Arr 33.50 350 P P 05 24 42.3 -1.1
WRAB Tennant Creek 33.50 350 P P 05 24 42.3 -1.1
WRAB IAmb IAmb 05 24 49.7
comp=Z,13nm,0.8s
WRAB Tennant Creek 33.50 350 P P 05 24 43.2 -0.2
WB0 Warramunga Arr 33.66 350 P P 05 24 43.8 -1.0
WB0 IAmb IAmb 05 24 50.9
comp=Z,11nm,0.8s
DZM Mont Dzumac 36.87 43 LR LR 05 37 12.5
comp=Z,501nm,19.5s,baz=212,slow=31
QSPA South Pole Qui 36.94 180 P P 05 25 12.1 -0.7
comp=Z,6.2nm,1.1s,baz=351,slow=2.4,SNR=14
QSPA LR LR 05 39 43.8
comp=Z,319nm,21.3s,baz=2.0,slow=35
comp=Z,6.2nm,1.1s
QSPA South Pole Qui 36.94 180 P P 05 25 11.6 -1.2
QSPA IAmb IAmb 05 25 26.3
comp=Z,16nm,1.1s
MAW Mawson 38.06 217 LR LR 05 39 39.3
comp=Z,500nm,19.3s,baz=94,slow=34
KNRA Kununurra 38.52 342 P P 05 25 25.5 -0.7
PMG Port Moresby 43.98 10 LR LR 05 44 10.0
comp=Z,262nm,19.0s,baz=165,slow=36
MSVF Nonsavu 45.89 54 P P 05 26 25.5 -0.9
comp=Z,7.0nm,0.8s,baz=182,slow=8.7,SNR=4.0
comp=Z,7.0nm,0.8s
MSVF Nonsavu 45.89 54 P P 05 26 26.0 -0.5
MSVF IAmb IAmb 05 26 30.2
comp=Z,10nm,1.1s
BELA Belgrano 2 49.18 181 P P 05 26 50.6 -0.6
BELA IAmb IAmb 05 26 58.1
comp=Z,9.2nm,1.0s
KRVT Keravat (AS076 49.64 15 LR LR 05 46 02.7
comp=Z,104nm,21.4s,baz=293,slow=34
BKSI Bulukumba 50.52 333 P P 05 27 06.7 +4.7
comp=Z,18nm,1.0s
KAPI Kappang 50.91 333 P P 05 27 04.9 0.0
comp=Z,5.4nm,0.8s,baz=171,slow=10,SNR=2.4
KAPI LR LR 05 46 53.0
comp=Z,114nm,21.6s,baz=144,slow=34
comp=Z,5.4nm,0.8s
KAPI Kappang 50.91 333 P P 05 27 05.0 0.0
TROLL Troll, Antarti 51.67 195 P P 05 27 09.9 -0.3
SPSI Sidrap Palu 51.91 333 P P 05 27 17.3 +4.9
comp=Z,28nm,1.0s
SNAA Sanae 52.78 194 P P 05 27 18.6 +0.2
SNAA Sanae 52.78 194 LR LR 05 49 06.2
comp=Z,513nm,20.3s,baz=156,slow=35
SNAA Sanae 52.78 194 P P 05 27 17.5 -0.9
SNAA IAmb IAmb 05 27 24.6
comp=Z,17nm,1.3s
BBKI Banjar Baru 53.84 328 P P 05 27 32.3 +5.6
VNA3 Neumayer Olymp 54.07 191 P P 05 27 27.8 0.0
VNA1 Neumayer--Stat 54.45 192 P P 05 27 30.9 +0.4
TOLI2 Tolitoli 56.52 336 P P 05 27 45.8 -0.3
DAV Davao City (W) 61.31 343 LR LR 05 56 56.4
comp=Z,47nm,18.1s,baz=165,slow=38
H08S2 Diego Garcia H 70.73 283 T T 06 46 38.7
baz=144,slow=76,SNR=8.4
H08S1 Diego Carcia H 70.74 283 T T 06 46 39.0
baz=144,slow=76,SNR=7.6
H08S3 Diego Garcia H 70.75 283 T T 06 46 42.4
baz=144,slow=76,SNR=12
CMAR Chiang Mai Arr 79.81 320 P P 05 30 12.0 +0.1
comp=Z,0.7nm,0.3s,baz=170,slow=5.5,SNR=1.9
comp=Z,0.7nm,0.3s
CMAR Chiang Mai Arr 79.81 320 P P 05 30 11.7 -0.1
JCJ Chichijima 79.94 2 LR LR 06 05 56.6
comp=Z,32nm,18.2s,baz=121,slow=36
SUR Sutherland 79.97 228 LR LR 05 58 35.5
comp=Z,111nm,21.1s,baz=141,slow=30
BOSA Boshof 81.05 234 LR LR 05 58 41.5
comp=Z,160nm,21.5s,baz=175,slow=30
LBTB Lobatse 83.88 236 LR LR 06 00 58.5
comp=Z,122nm,19.9s,baz=152,slow=31
H03S1 Juan Fernandez 86.85 148 T T 07 07 43.0
baz=203
H03S2 Juan Fernandez 86.85 148 T T 07 07 47.5
baz=203
H03S3 Juan Fernandez 86.87 148 T T 07 07 40.7
baz=203
NJ2 Nanjing 86.92 342 *e*P P **05 30 50.8 +2.7**
NJ2 pmax pmax
comp=Z,11nm,0.5s
LSZ Lusaka 90.60 243 LR LR 06 05 56.7
comp=Z,134nm,18.4s,baz=150,slow=32
KSRS Korea Array 90.90 350 LR LR 06 11 20.9
comp=Z,29nm,21.0s,baz=100,slow=35
XAN Xi'an 91.06 334 ⇑P P **05 31 09.3 +1.6**
XAN pmax pmax
comp=Z,6.0nm,1.0s
TSUM Tsumeb 92.71 233 LR LR 06 07 33.0
comp=Z,77nm,18.1s,baz=150,slow=32
HHC Hu-ho-hao-te 96.90 338 *e*P P **05 31 36.5 +2.1**
HHC pmax pmax
comp=Z,18nm,0.9s
HHC pmax pmax
comp=Z,140nm,6.0s
ASAJ Asahikawa 96.93 2 LR LR 06 13 38.9
comp=Z,25nm,21.9s,baz=189,slow=34
USRK Ussuriysk Ar. 97.26 354 LR LR 06 13 07.5
comp=Z,34nm,21.8s,baz=131,slow=34
XLT XiLinHaoTe 98.93 342 *e*P P **05 31 46.5 +3.1**
XLT pP pP 05 31 51.3 -2.2
XLT sP sP 05 31 54.0 -3.1
XLT pmax pmax
comp=Z,10.0nm,0.8s
XLT pmax pmax
comp=Z,100nm,4.0s
NVAR Mina Array Bea 125.94 72 PKP PKPdf 05 37 04.8 -0.4
comp=Z,0.1nm,0.4s,baz=208,slow=3.7,SNR=2.2
TXAR Lajitar Array 128.25 91 PKP PKiKP 05 37 11.3 +1.0
comp=Z,0.3nm,0.9s,baz=212,slow=3.2,SNR=3.0
TORD Torodi Ar. Bea 128.39 235 PKP PKiKP 05 37 11.2 +0.3
comp=Z,0.7nm,1.0s,baz=169,slow=1.5,SNR=2.5
ILAR Eielson Array 130.15 32 PKP PKiKP 05 37 12.5 -0.4
comp=Z,0.2nm,0.6s,baz=212,slow=3.2,SNR=2.1
YKA Yellowknife Ar 141.22 46 PKhKP PKPpre 05 37 28.8
comp=Z,0.3nm,0.8s,baz=238,slow=3.2,SNR=2.4
RONA Rosalia, Austr 144.76 284 *e*P **PKPdf 05 37 40.3 +0.8**
comp=Z,4.4nm,1.0s
SOKA Soboth 144.98 282 *e*P **PKiKP 05 37 41.9 -1.9**
comp=Z,4.0nm,0.8s
ARSA Arzberg 144.99 283 *e*P **PKPdf 05 37 40.2 +0.4**
comp=Z,1.3nm,1.4s
FINES FINESS Array B 145.03 310 PKPbc **PKiKP 05 37 41.1 -2.2**
comp=Z,6.7nm,0.8s,baz=85,slow=3.3,SNR=12
FINES FINESS Array B 145.03 310 PKPbc 05 37 37.5 -1.3
MORC Moravsky Berou 145.05 288 *e*PKP **PKPdf 05 37 40.7 +0.8**
CONA Conrad Observa 145.13 284 *e*P **PKPdf 05 37 41.2 +1.1**
comp=Z,4.2nm,1.1s
OBKA Obir 145.18 281 P **PKPab 05 37 39.9 -0.2**
comp=Z,4.9nm,0.9s
KRUC Moravsky 145.38 286 *e*PKP **PKPab 05 37 41.5 +0.9**
MYKA Terra Mystica 145.78 281 *e*P **PKiKP 05 37 44.0 -1.4**
comp=Z,4.4nm,0.9s
DPC Dobruska-Polom 146.02 288 *e*PKP **PKPab 05 37 43.4 +0.3**
DPC epPKP **pPKPdf 05 37 49.3 -2.6**
CKRC Cesky Krumlov 146.47 285 *e*PKP **PKiKP 05 37 45.8 -0.9**
ABTA Abfaltersbach 146.51 280 *e*P **PKPab 05 37 45.7 +0.6**
comp=Z,5.0nm,1.3s
ARCES ARCESS Array B 146.78 324 PKPbc **PKiKP 05 37 46.2 -0.5**
comp=Z,3.4nm,0.7s,baz=354,slow=2.4,SNR=9.6
ARCES ARCESS Array B 146.78 324 PKPbc 05 37 43.2 -0.9
ARCES PKPbc **PKiKP 05 37 47.2 +0.5**
GERES GERESS Array B 146.84 284 PKPbc **PKPab 05 37 46.1 -0.3**
comp=Z,1.7nm,0.8s,baz=172,slow=4.0,SNR=14
GERES GERESS Array B 146.84 284 PKPdf 05 37 43.4 +0.4
GERES PKPbc **PKPab 05 37 46.6 +0.2**
KHC Kasperske Hory 147.04 285 *e*PKP **PKPab 05 37 46.1 -1.0**
KHC epPKP **pPKPdf 05 37 53.2 -0.5**
WTTA Wattenberg 147.28 281 *e*P **PKiKP 05 37 49.9 +1.3**
comp=Z,5.2nm,1.1s
SQTA Saxt Quirin 147.52 280 *e*P **PKiKP 05 37 48.2 -0.9**
comp=Z,7.1nm,1.2s
MOTA Moosalm 147.64 280 *e*P **PKPab 05 37 51.0 +1.3**
comp=Z,4.3nm,0.8s
FETA Feichten 147.70 280 *e*P **PKPbc 05 37 48.0 +0.5**
comp=Z,2.9nm,0.9s
CLL Collm 148.33 288 *i* PKPab **PKPab 05 37 54.3 +2.2**
comp=Z,5.0nm,1.1s
DAVA Damuels 148.34 280 *e*P **PKPab 05 37 55.5 +3.0**
comp=Z,3.1nm,0.7s

IDC ***26*** *05:19:00.0±0.4, 12°.58N×147°.00E, h0km, mb4.5/32, mbtmp4.5/34, ML5.0/3, MS3.9/47, Error ellipse: s-maj=14.3km s-min=9.3km az=79.0*
BJI ***26*** *05:19:03.0±0.0, 12°.50N×147°.00E, h10km, mb4.8/59, mB5.0/35, Ms4.3/28, Ms7 4.1/27*
MOS ***26*** *05:19:03.5±1.1, 12°.49N×146°.91E, h34km, mb5.0/35, Error ellipse: s-maj=10.8km s-min=6.2km az=102.6*
DJA ***26*** *05:19:05.4±0.7, 13°N±4°×14°.7E±°, h41km±6km, M5.3/32, mB5.6/11, mb5.2/32, MLv5.7/1, Mw(mB)5.1/11*
NEIC ***26*** *05:19:06.0±1.3, 12°.49N±0°.07×146°.89E±0°.07, h33km±4km, mb4.5/32, MS4.0/171, Error ellipse: s-maj=10.6km s-min=9.0km az=53.0*
GCMT ***26*** *05:19:07.0±0.4, 12°.37N±0°.02×146°.70E±0°.02, h36km±2km, MW5.0/72, Moment Tensor Solution. s20,c22; s72,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.83±.29; $M_{\theta\theta}$0.84±.19; $M_{\phi\phi}$-2.67±.18; $M_{r\theta}$-1.37±.19; $M_{\theta\phi}$2.40±.15; $M_{\phi r}$-1.15±.21; Best double couple: M≅3.80900×10^{16} NP1:$\phi_1$297.00000°, δ57.00000°, λ31.00000°. NP2: $\phi_2$189.00000°, δ65.00000°, λ143.00000°. Principal axes: T 3.6990, Plg43.0000°, Azm150.0000°; N 0.2180, Plg46.0000°, Azm339.0000°; P -3.9200, Plg4.0000°, Azm244.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 26 05:19:06.4±0.4, 12°.53N±0°.04×146°.93E±0°.05, h41km±3km, h42km:pP-P, n453, σ1°54/373, mb5.0/160, MS4.1/64, 13C-4D, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
GUMO	**Guam**	**2.27**	**298**	Pn	**Pn**	**05 19 40.8**	**-0.6**
	892nm,0.3s,baz=122,slow=5.7,SNR=250						
GUMO				Sn	**Sn**	**05 20 05.5**	**-2.7**
	4μm,0.3s,baz=188,slow=23,SNR=27						
	2μm,0.3s						
GUMO	**Guam**	**2.27**	**298**		**Pn**	**05 19 40.5**	**-0.9**
GUMO				Sn	**Sn**	**05 20 05.4**	**-2.7**
GUMO	**Guam**	**2.27**	**298**	P	**Pn**	**05 19 41.2**	**-0.2**
PATS	**Pohnpei**	**12.56**	**116**	Pn	**Pn**	**05 22 01.6**	**-1.0**
PATS	**Pohnpei**	**12.56**	**116**	P	**Pn**	**05 21 59.7**	**-2.9**
MANU	**Manus Island**	**14.49**	**178**	Pn	**Pn**	**05 22 29.0**	**+0.1**
JCJ	**Chichijima**	**15.16**	**344**	Pn	**Pn**	**05 22 36.0**	**-1.7**
	3.6nm,0.3s,baz=282,slow=16,SNR=2.1						
JCJ				Sn	**Sn**	**05 25 14.7**	**-10**
	3.7nm,0.3s,baz=254,slow=20,SNR=1.4						
	74nm,0.9s						
JCJ	**Chichijima**	**15.16**	**344**		**Pn**	**05 22 36.6**	**-1.1**
GENI	**Genyem**	**16.46**	**205**	P	**P**	**05 22 56.7**	**0.0**
	105nm,1.3s						
SMPI	**Sarmi**	**16.58**	**210**	P	**P**	**05 22 58.0**	**0.0**
	34nm,0.9s						
RABL	**Rabaul**	**17.41**	**162**	P	**Pn**	**05 23 05.5**	**-0.8**
RABL				IAmb	IAmb	05 23 10.4	
	comp=Z,132nm,0.9s						
RABL	**Rabaul**	**17.41**	**162**	P	**Pn**	**05 23 06.3**	**0.0**
KRVT	**Keravat (AS076**	**17.48**	**163**	P	**Pn**	**05 23 06.6**	**-0.6**
	comp=Z,2.9nm,0.3s,baz=277,slow=4.0,SNR=14						
KRVT				LR	LR	05 28 40.1	
	comp=Z,1μm,20.3s,baz=150,slow=33						
WAMI	**Wamena**	**18.24**	**207**	P	**Pn**	**05 23 19.6**	**+3.1**
H11S3	**WAKE ISLAND Hy**	**19.93**	**70**	T	T	05 43 09.4	
	baz=248,slow=74						
H11S1	**WAKE ISLAND Hy**	**19.94**	**70**	T	T	05 43 10.7	
	baz=248						
H11S2	**WAKE ISLAND Hy**	**19.94**	**70**	T	T	05 43 12.0	
	baz=248,slow=74						
H11N1	**WAKE ISLAND Hy**	**20.45**	**67**	T	T	05 43 48.1	
	baz=240,slow=74,SNR=15						
H11N2	**WAKE ISLAND Hy**	**20.46**	**67**	T	T	05 43 52.7	
	baz=240,slow=74,SNR=10						
H11N3	**WAKE ISLAND Hy**	**20.46**	**67**	T	T	05 43 54.7	
	baz=240,slow=74,SNR=9.6						
SWI	**Sorong**	**20.47**	**231**	P	Pn	05 23 43.0	-0.2
	comp=Z,49nm,1.2s						
FAKI	**Fak Fak**	**21.18**	**224**	P	**P**	**05 23 48.2**	**-0.2**
FAKI				IAmb	IAmb	05 23 50.4	
	comp=Z,63nm,1.0s						
FAKI	**Fak Fak**	**21.18**	**224**	P	**P**	**05 23 50.0**	**+1.5**
	comp=Z,812nmcomp=Z,70nm,1.0s						
FAKI	**Fak Fak**	**21.18**	**224**	P	**P**	**05 23 49.9**	**+1.5**
JHJ	**Hachijo jima 2**	**21.51**	**343**	LR	LR	05 32 17.1	
	comp=Z,149nm,19.6s,baz=103,slow=37						
DAV	**Davao City (W)**	**21.72**	**258**	P	**P**	**05 23 54.9**	**+0.6**
	comp=Z,74nm,0.3s,baz=37,slow=8.4,SNR=5.2						
DAV				LR	LR	05 32 23.4	
	comp=Z,162nm,21.7s,baz=154,slow=37						
	comp=Z,74nm,0.3s						
DAV	**Davao City (W)**	**21.72**	**258**	P	**P**	**05 23 54.4**	**+0.1**
PMG	**Port Moresby**	**21.80**	**179**	P	**P**	**05 23 56.2**	**+1.2**
	comp=Z,253nm,1.0s,baz=359,slow=8.6,SNR=42						
PMG				LR	LR	05 31 00.8	
	comp=Z,220nm,19.6s,baz=335,slow=33						
PMG	**Port Moresby**	**21.80**	**179**	P	**P**	**05 23 54.0**	**-0.9**
PMG	**Port Moresby**	**21.80**	**179**	P	**P**	**05 23 54.1**	**-0.9**
PMG				pmax	pmax		
	comp=Z,198nm,0.8s						
PMG	**Port Moresby**	**21.80**	**179**	P	**P**	**05 23 56.6**	**+1.6**
JOW	**Kunigami**	**22.56**	**312**	P	**P**	**05 24 03.1**	**-0.1**
	comp=Z,17nm,0.6s,baz=137,slow=8.7,SNR=2.6						
JOW				LR	LR	05 32 23.2	
	comp=Z,420nm,19.0s,baz=125,slow=36						
	comp=Z,17nm,0.6s						
JOW	**Kunigami**	**22.56**	**312**	P	**P**	**05 24 03.5**	**+0.4**
JOW	**Kunigami**	**22.56**	**312**	P	**P**	**05 24 06.6**	**+3.4**
JSU	**Suzuyama**	**24.23**	**324**	P	**P**	**05 24 20.6**	**+1.2**
JSU				IAmb	IAmb	05 24 39.7	
	comp=Z,48nm,1.0s						
JYT	**Yasato**	**24.36**	**347**	P	**P**	**05 24 21.5**	**+1.0**
INU	**Inuyama**	**24.42**	**340**	P	**P**	**05 24 22.2**	**+1.1**
JGF	**Kuroka**	**24.54**	**341**	P	**P**	**05 24 21.1**	**-1.2**
MJAR	**Matsushiro Arr**	**25.16**	**343**	P	**P**	**05 24 26.0**	**-1.8**
	comp=Z,1.0nm,0.6s,baz=170,slow=8.5,SNR=2.9						
	comp=Z,1.0nm,0.6s						
MJAR	**Matsushiro Arr**	**25.16**	**343**	P	**P**	**05 24 27.6**	**-0.2**
MJAR	**Matsushiro Arr**	**25.16**	**343**	P	**P**	**05 24 27.7**	**-0.2**
MJAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MAJO	**Matsushiro**	**25.16**	**343**	P	**P**	**05 24 28.5**	**+0.7**
MAJO	**Matsushiro**	**25.16**	**343**	*i* P	**P**	**05 24 26.3**	**-1.5**
MAJO				pmax	pmax		
	comp=Z,22nm,1.4s						
MJB9	**Matsu-Tunnel**	**25.17**	**343**	P	**P**	**05 24 28.7**	**+0.8**
JNU	**Nakatsue**	**25.21**	**327**	P	**P**	**05 24 27.9**	**-0.4**
	comp=Z,9.6nm,0.3s,baz=135,slow=4.9,SNR=3.1						
	comp=Z,9.6nm,0.3s						
TGY	**Tagaytay City**	**25.34**	**276**	P	**P**	**05 24 30.0**	**+0.2**
	comp=Z,127nm,0.3s,baz=90,slow=12,SNR=1.8						
TGY	**Tagaytay City**	**25.34**	**276**	P	**P**	**05 24 30.0**	**+0.2**
JHS	**Saijyo**	**25.63**	**333**	P	**P**	**05 24 34.8**	**+2.6**
COEN	**Coen**	**26.58**	**188**	P	**P**	**05 24 40.4**	**-0.4**
COEN				IAmb	IAmb	05 24 41.6	
	comp=Z,34nm,0.8s						
COEN	**Coen**	**26.58**	**188**	P	**P**	**05 24 40.7**	**-0.1**
SSLB	**Suanglung**	**27.05**	**298**	P	**P**	**05 24 45.7**	**+0.6**
SSLB	**Suanglung**	**27.05**	**298**	P	**P**	**05 24 45.7**	**+0.6**
TPUB	**Ta-pu**	**27.17**	**297**	P	**P**	**05 24 48.0**	**+1.8**
LUWI	**Luwuk**	**27.52**	**242**	P	**P**	**05 24 48.7**	**-0.6**
MRSI	**Marisa**	**27.53**	**246**	P	**P**	**05 24 49.1**	**-0.3**
	comp=Z,691nmcomp=Z,58nm,0.9s						
KDU	**Kakadu**	**28.87**	**210**	P	**P**	**05 25 00.5**	**-0.8**
MYLDM	**Lahad Datu**	**29.01**	**258**	P	**P**	**05 25 02.9**	**+0.3**
MYLDM				IAmb	IAmb	05 25 21.2	
	comp=Z,57nm,1.1s						
MPSI	**Mapaga**	**29.42**	**248**	P	**P**	**05 25 05.7**	**-0.6**
	comp=Z,12nm,1.2s						
MTN	**Manton Dam**	**29.69**	**212**	P	**P**	**05 25 07.6**	**-1.0**
MTN	**Manton Dam**	**29.69**	**212**	P	**P**	**05 25 07.5**	**-1.0**
KSRS	**Korea Array**	**30.09**	**329**	P	**P**	**05 25 11.5**	**-0.4**
	comp=Z,3.8nm,0.9s,baz=143,slow=8.8,SNR=12						
KSRS				PcP	**PcP**	**05 28 11.7**	**-1.3**
	comp=Z,3.4nm,1.1s,baz=156,slow=4.8,SNR=4.8						
	comp=Z,3.8nm,0.9s						
KSAR	**Wonju Array Be**	**30.10**	**329**	P	**P**	**05 25 10.9**	**-1.1**
KSAR	**Wonju Array Be**	**30.10**	**329**	P	**P**	**05 25 10.9**	**-1.1**
MTSU	**Mount Surprise**	**30.58**	**185**	P	**P**	**05 25 17.0**	**+0.5**
BNSI	**Bone**	**31.52**	**239**	P	**P**	**05 25 25.3**	**+0.5**
	comp=Z,14nm,0.9s						
SOEI	**Soe**	**31.58**	**226**	P	**P**	**05 25 24.1**	**-1.3**
BKSI	**Bulukumba**	**32.01**	**238**	P	P	05 25 36.0	+6.9
	comp=Z,11nm,1.0s						
KAPI	**Kappang**	**32.15**	**239**	P	**P**	**05 25 29.4**	**-1.0**
	comp=Z,4.6nm,0.5s,baz=97,slow=8.1,SNR=3.9						
	comp=Z,4.6nm,0.5s						
KAPI	**Kappang**	**32.15**	**239**	P	**P**	**05 25 29.0**	**-1.4**
KAPI	**Kappang**	**32.15**	**239**	P	**P**	**05 25 29.0**	**-1.4**
KAPI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KAPI	**Kappang**	**32.15**	**239**	P	P	05 25 36.8	+6.4
KAPI				pP	sP	05 25 45.2	+1.0
NJ2	**Nanjing**	**32.28**	**312**	*e*P	**P**	**05 25 33.5**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CTA	**Charters Tower**	**32.42**	**181**	P	**P**	**05 25 32.4**	**-0.3**
	comp=Z,19nm,1.0s,baz=358,slow=10,SNR=11						
	comp=Z,19nm,1.0s						
CTA	**Charters Tower**	**32.42**	**181**	P	**P**	**05 25 32.8**	**+0.2**
CTAO	**Charters Tower**	**32.42**	**181**	P	**P**	**05 25 31.6**	**-1.0**
CTAO	**Charters Tower**	**32.42**	**181**	P	**P**	**05 25 31.6**	**-1.0**
CTAO				pmax	pmax		
	comp=Z,51nm,1.4s						
CTAO	**Charters Tower**	**32.42**	**181**	P	**P**	**05 25 32.9**	**+0.3**
CTAO	**Charters Tower**	**32.42**	**181**	P	**P**	**05 25 32.6**	**-0.1**
CTAO				pP	**pP**	**05 25 43.4**	**+1.0**
CTAO				sP	**sP**	**05 25 48.0**	**+1.4**
KNRA	**Kununurra**	**33.30**	**213**	P	**P**	**05 25 39.6**	**-0.7**
QIS	**Mount Isa**	**33.66**	**192**	P	**P**	**05 25 43.4**	**-0.1**
USRK	**Ussuriysk Ar.**	**34.07**	**341**	P	**P**	**05 25 45.2**	**-1.6**
	comp=Z,1.9nm,0.6s,baz=167,slow=8.1,SNR=3.5						
USRK				LR	LR	05 40 21.4	
	comp=Z,68nm,18.1s,baz=159,slow=38						
	comp=Z,1.9nm,0.6s						
WB0	**Warramunga Arr**	**34.39**	**201**	P	**P**	**05 25 48.2**	**-1.6**
WB0				IAmb	IAmb	05 25 49.5	
	comp=Z,14nm,0.8s						
WR0	**Warramunga Arr**	**34.52**	**201**	P	**P**	**05 25 49.5**	**-1.4**
WRAB	**Tennant Creek**	**34.56**	**201**	P	**P**	**05 25 50.1**	**-1.2**
WRAB	**Tennant Creek**	**34.56**	**201**	*c* *i* P	**P**	**05 25 50.3**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,29nm,1.0s						
WRAB	**Tennant Creek**	**34.56**	**201**	P	**P**	**05 25 51.0**	**-0.3**
WRAB	**Tennant Creek**	**34.56**	**201**	P	**P**	**05 25 50.8**	**-0.4**
WRAB				pP	**pP**	**05 25 59.2**	**-1.9**
WB2	**Warramunga Arr**	**34.57**	**201**	P	**P**	**05 25 50.2**	**-1.1**
WRA	**Warramunga Arr**	**34.57**	**201**	P	**P**	**05 25 50.7**	**-0.7**
	comp=Z,18nm,0.6s,baz=26,slow=9.8,SNR=100						
WRA				PcP	**PcP**	**05 28 25.8**	**+0.2**
	comp=Z,5.1nm,0.9s,baz=16,slow=3.0,SNR=6.0						
WRA				LR	LR	05 40 37.5	
	comp=Z,243nm,18.0s,baz=326,slow=38						
	comp=Z,18nm,0.6s						
WRA	**Warramunga Arr**	**34.57**	**201**	P	**P**	**05 25 50.6**	**-0.7**
WRA	**Warramunga Arr**	**34.57**	**201**	*i* P	**P**	**05 25 50.7**	**-0.7**
WRA				pmax	pmax		
	comp=Z,19nm,0.6s						
WHN	**Wuhan**	**35.03**	**306**	⇑P	**P**	**05 25 56.3**	**+1.1**
WHN				pP	**pP**	**

comp=Z,250nm,21.7s
CN2 Changchun 36.23 333 *e*P **P** **05 26 07.5 +2.1**
CN2 *e*S **S** **05 31 45.5 +2.6**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=Z,200nm,11.0s
CN2 LR LR
comp=Z,200nm,11.0s
CN2 LR LR
comp=Z,200nm,14.0s
BNX BinXian 37.02 337 ⇑P **P** **05 26 14.5 +2.4**
BNX pmax pmax
comp=Z,14nm,1.1s
BNX pmax pmax
comp=Z,220nm,4.1s
EIDS Eidsvold 37.89 174 P **P** **05 26 18.2 -1.5**
KSM Kuching 37.91 256 P **P** **05 26 18.9 -1.2**
KSM IAmb IAmb 05 26 36.2
comp=Z,18nm,0.9s
KSM Kuching 37.91 256 P **P** **05 26 19.2 -0.9**
HNS HongShan 37.98 316 ⇓P **P** **05 26 20.8 +0.5**
HNS pP **pP** **05 26 30.0 +0.1**
HNS *e*S **S** **05 32 07.5 -2.1**
HNS pmax pmax
comp=Z,13nm,1.5s
HNS LR LR
comp=Z,150nm,16.7s
HNS LR LR
comp=Z,290nm,19.9s
HNS LR LR
comp=Z,350nm,19.6s
LYN LuoYang 38.16 311 ⇑P **P** **05 26 20.5 -1.4**
LYN S **S** **05 32 19.3 +6.7**
LYN pmax pmax
comp=Z,10.0nm,0.6s
LYN pmax pmax
comp=Z,130nm,3.5s
LYN LR LR
comp=Z,210nm,17.2s
LYN LR LR
comp=Z,150nm,13.6s
LYN LR LR
comp=Z,170nm,21.8s
AS31 Alice Springs 38.17 200 P **P** **05 26 21.2 -0.8**
ASAR Alice Springs 38.17 200 P **P** **05 26 21.5 -0.6**
comp=Z,14nm,0.6s,baz=22,slow=8.7,SNR=182
ASAR PcP **PcP** **05 28 36.6 +0.3**
comp=Z,2.2nm,0.7s,baz=28,slow=2.1,SNR=4.8
ASAR LR LR 05 41 48.7
comp=Z,212nm,20.6s,baz=356,slow=36
comp=Z,14nm,0.6s
ASAR Alice Springs 38.17 200 P **P** **05 26 21.1 -1.0**
BJT Baijiatuan 38.51 321 P P 05 26 31.0 +6.2
BJT pP sP 05 26 38.8 +0.1
BJT sP pwP 05 26 41.5 -0.6
BJI Beijing 38.52 321 P P 05 26 31.0 +6.2
BJI pP sP 05 26 38.8 +0.1
BJI pmax pmax
comp=Z,18nm,0.7s
KLR Kul'dur 38.68 344 P **P** **05 26 25.1 -1.0**
comp=Z,1.9nm,0.7s,baz=133,slow=8.8,SNR=8.4
KLR LR LR 05 41 08.6
comp=Z,152nm,21.4s,baz=160,slow=34
comp=Z,1.9nm,0.7s
KLR Kul'dur 38.68 344 *i* P **P** **05 26 23.9 -2.2**
KLR pmax pmax
comp=Z,19nm,2.5s
RMQ Roma 38.83 177 P **P** **05 26 27.5 0.0**
ENH Enshi 38.85 303 P **P** **05 26 27.8 0.0**
ENH Enshi 38.85 303 P P 05 26 34.2 +6.5
ENH pP sP 05 26 42.2 +0.4
ENH x x 05 26 48.8
QLP Quilpie 38.97 184 P **P** **05 26 27.6 -1.1**
NOUC Port Laguerre 39.32 151 P **P** **05 26 31.3 -0.3**
NOUC sP **sP** **05 26 45.7 -0.1**
DZM Mont Dzumac 39.36 151 P **P** **05 26 31.6 -0.5**
comp=Z,29nm,0.8s,baz=343,slow=9.6,SNR=13
comp=Z,29nm,0.8s
DZM Mont Dzumac 39.36 151 *e*LR LR 05 37 17.3
comp=Z,336nm,22.9s
DZM Mont Dzumac 39.36 151 P **P** **05 26 31.1 -1.1**
DZM IAmb IAmb 05 26 32.6
comp=Z,33nm,0.8s
DZM Mont Dzumac 39.36 151 P **P** **05 26 32.5 +0.4**
DZM Mont Dzumac 39.36 151 P **P** **05 26 32.1 0.0**
DZM pP **pP** **05 26 41.4 -0.6**
OUENC Ouen Island, N 39.84 151 P **P** **05 26 35.8 -0.2**
OUENC IAmb IAmb 05 26 37.2
comp=Z,31nm,0.8s
GYA Guiyang 40.23 296 ⇑P **P** **05 26 41.0 +1.5**
GYA pmax pmax
comp=Z,16nm,0.8s
PWJI Pagerwojo 40.45 241 P **P** **05 26 42.0 +0.8**
comp=Z,69nm,0.9s
INKA Innaminka 40.48 188 P **P** **05 26 40.4 -0.8**
XAN Xi'an 40.62 308 ⇑P P 05 26 49.0 +6.5
XAN pmax pmax
comp=Z,25nm,1.2s
XAN pmax pmax
comp=Z,120nm,5.2s
XAN LR LR
comp=Z,150nm,17.1s
XAN LR LR
comp=Z,180nm,15.9s
XAN LR LR
comp=Z,340nm,18.1s
XAN Xi'an 40.62 308 P P 05 26 49.3 +6.7
XLT XiLinHaoTe 40.98 326 *e*P **P** **05 26 50.0 +4.7**
XLT pmax pmax
comp=Z,31nm,0.8s
XLT pmax pmax
comp=Z,110nm,4.2s
XLT LR LR
comp=Z,23nm,16.4s
XLT LR LR
comp=Z,170nm,14.7s
XLT LR LR
comp=Z,220nm,20.6s
PETK Petropavlovsk- 41.38 10 P **P** **05 26 46.1 -2.3**
comp=Z,2.0nm,0.9s,baz=181,slow=13,SNR=1.7
PETK LR LR 05 42 15.2
comp=Z,166nm,19.9s,baz=193,slow=34
comp=Z,2.0nm,0.9s
WRKA Warakurna 41.53 206 P **P** **05 26 49.5 -0.5**
OOD Oodnadatta 41.54 195 P **P** **05 26 49.4 -0.6**
HHC Hu-ho-hao-te 41.88 319 *e*P **P** **05 26 56.3 +3.5**
HHC S **S** **05 33 06.5 -1.7**
HHC pmax pmax
comp=Z,23nm,1.0s
HHC LR LR
comp=Z,410nm,17.8s
HHC LR LR
comp=Z,390nm,17.8s
HHC LR LR
comp=Z,460nm,17.8s
BTO Baotou 42.76 318 *e*P P 05 27 07.3 +7.3
BTO S S 05 33 35.5 +14
BTO LR LR
comp=Z,440nm,6.9s
BTO LR LR
comp=Z,320nm,5.7s
MBWA Marble Bar 42.84 219 P **P** **05 26 59.9 -0.8**
MBWA IAmb IAmb 05 27 47.8
comp=Z,35nm,1.2s
ARMA Armidale 42.94 174 P **P** **05 27 00.8 -0.7**
ARMA IAmb IAmb 05 27 02.5
comp=Z,29nm,0.9s
ARMA Armidale 42.94 174 P **P** **05 27 01.6 +0.1**
MSVF Nonsavu 42.99 134 P **P** **05 27 02.1 +0.1**
comp=Z,9.9nm,0.8s,baz=288,slow=7.8,SNR=6.8
comp=Z,9.9nm,0.8s
MSVF Nonsavu 42.99 134 P **P** **05 27 02.0 +0.1**
MSVF Nonsavu 42.99 134 *i* P **P** **05 27 01.9 -0.1**
MSVF pmax pmax
comp=Z,21nm,1.1s
MSVF Nonsavu 42.99 134 P **P** **05 27 03.1 +1.1**
LCRK Leigh Creek 43.55 191 P **P** **05 27 05.7 -0.5**
CD2 Chengdu 43.76 302 P **P** **05 27 08.3 +0.2**
CD2 S **S** **05 33 37.0 +1.0**
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 LR LR
comp=Z,270nm,20.6s
CD2 LR LR
comp=Z,230nm,17.6s
CMSA Cobar Meteorol 43.84 182 P **P** **05 27 08.1 -0.4**
ZEA Zeya 43.97 343 *e*P **P** **05 27 13.5 +4.1**
ZEA pmax pmax
comp=N,10.0nm,0.4s
ZEA pmax pmax
comp=Z,10.0nm,1.1s
MULG Mulgathing 44.34 196 P **P** **05 27 12.2 -0.4**
STKA Stephens Creek 44.45 186 P **P** **05 27 12.5 -1.0**
comp=Z,18nm,0.7s,baz=354,slow=7.6,SNR=28
STKA LR LR 05 45 10.6
comp=Z,172nm,21.3s,baz=4.2,slow=35
comp=Z,18nm,0.7s
STKA Stephens Creek 44.45 186 P **P** **05 27 12.3 -1.2**
STKA Stephens Creek 44.45 186 P **P** **05 27 12.3 -1.2**
STKA pmax pmax
comp=Z,5.0nm,0.8s
STKA Stephens Creek 44.45 186 P **P** **05 27 12.7 -0.8**
PZH PanZhiHua 44.57 295 P **P** **05 27 15.5 +0.7**
PZH S **S** **05 33 48.3 +0.2**
PZH pmax pmax
comp=Z,20nm,1.0s
PZH pmax pmax
comp=Z,90nm,6.1s
PZH LR LR
comp=Z,370nm,21.6s
PZH LR LR
comp=Z,420nm,23.2s
PZH LR LR
comp=Z,610nm,24.0s
PBKT Sadao Pong 44.60 281 P **P** **05 27 15.6 +0.7**
LZH Lanzhou 45.24 309 ⇓P P 05 27 27.5 +7.4
LZH S S 05 34 09.8 +12
LZH pmax pmax
comp=Z,68nm,1.5s
LZH pmax pmax
comp=Z,83nm,4.5s
LZH LR LR
comp=Z,150nm,14.5s
LZH LR LR
comp=Z,160nm,15.5s
LZH LR LR
comp=Z,310nm,14.8s
SHEM Shemya Is, Ala 45.61 23 LR LR 05 45 04.2
comp=Z,138nm,20.2s,baz=134,slow=34
WHYH Whyalla 46.18 191 P **P** **05 27 26.8 -0.3**
NAPP Napperby 46.23 190 P **P** **05 27 27.5 0.0**
BBOO Buckleboo 46.27 193 P **P** **05 27 27.3 -0.6**
BBOO Buckleboo 46.27 193 P **P** **05 27 27.4 -0.5**
HTT Hallett 46.34 189 P **P** **05 27 28.3 -0.2**
CHTO Chiang Mai 46.52 284 P P 05 27 37.8 +7.6
CHTO sP pwP 05 27 53.0 +5.3
CMAR Chiang Mai Arr 46.52 284 P **P** **05 27 30.3 +0.1**
comp=Z,2.8nm,0.3s,baz=83,slow=6.0,SNR=18
CMAR LR LR 05 49 17.0
comp=Z,64nm,18.2s,baz=90,slow=39
comp=Z,2.8nm,0.3s
CMAR Chiang Mai Arr 46.52 284 *i* P **P** **05 27 30.6 +0.5**
CMAR pmax pmax
comp=Z,3.0nm,0.3s
FORT Forrest 46.73 202 P **P** **05 27 30.1 -1.4**
FORT Forrest 46.73 202 P **P** **05 27 32.3 +0.8**
MNAI Manna 46.81 252 P **P** **05 27 30.3 -2.2**
MA2 Magadan 47.04 3 P **P** **05 27 34.0 +0.4**
comp=Z,12nm,0.9s,baz=183,slow=5.7,SNR=10
comp=Z,12nm,0.9s
MA2 Magadan 47.04 3 P **P** **05 27 33.9 +0.3**
MA2 IAmb IAmb 05 27 42.4
comp=Z,21nm,1.0s
MA2 Magadan 47.04 3 *ce*P **P** **05 27 34.2 +0.6**
MA2 pmax pmax
comp=Z,13nm,0.8s
MA2 Magadan 47.04 3 P **P** **05 27 34.6 +1.0**
MA2 Magadan 47.04 3 P **P** **05 27 34.5 +0.9**
MA2 pP **pP** **05 27 44.4 +0.7**
MA2 sP **pwP** **05 27 52.8 +2.4**
CAN Canberra 47.63 178 P **P** **05 27 38.3 -0.2**
CAN Canberra 47.63 178 P **P** **05 27 38.3 -0.2**
CAN pmax pmax
comp=Z,63nm,1.4s
CAN Canberra 47.63 178 P **P** **05 27 39.3 +0.8**
CAN Canberra 47.63 178 P **P** **05 27 38.7 +0.2**
CAN sP **sP** **05 27 53.7 +0.8**
CNB Canberra Magne 47.64 177 P **P** **05 27 39.0 +0.4**
TWOA Tennyson Woods 47.96 189 P **P** **05 27 41.1 +0.1**
ULN Ulaanbaatar 48.40 325 P **P** **05 27 45.0 +0.5**
ULN IAmb IAmb 05 27 53.3
comp=Z,22nm,0.9s
ULN Ulaanbaatar 48.40 325 P **P** **05 27 45.0 +0.5**
ULN pmax pmax
comp=Z,22nm,1.0s
ULN Ulaanbaatar 48.40 325 P P 05 27 49.3 +4.8
ULN x x 05 27 52.7
ULN pP sP 05 27 58.6 0.0
SONM Songino Array 48.75 324 P **P** **05 27 47.4 +0.2**
comp=Z,1.8nm,0.6s,baz=145,slow=8.3,SNR=10.0
comp=Z,1.8nm,0.6s
SONM Songino Array 48.75 324 P **P** **05 27 48.0 +0.8**
SONM IAmb IAmb 05 27 58.1
comp=Z,25nm,1.2s
SONM Songino Array 48.75 324 P **P** **05 27 48.0 +0.8**
SONM pmax pmax
comp=Z,25nm,1.2s
ADK Adak 48.97 29 P **P** **05 27 49.0 +0.5**
ADK IAmb IAmb 05 28 55.1
comp=Z,22nm,1.1s
ADK Adak 48.97 29 P **P** **05 27 49.1 +0.5**
ADK pmax pmax
comp=Z,23nm,1.1s
ARPS Mount Arapiles 49.27 185 P **P** **05 27 51.3 +0.2**
GTA Gaotai 49.37 312 ⇑P P 05 28 00.0 +7.9
GTA pP sP 05 28 07.5 +1.2
GTA pmax pmax
comp=Z,28nm,1.5s
GTA LR LR
comp=Z,120nm,19.6s
GTA LR LR
comp=Z,220nm,23.3s
GTA LR LR
comp=Z,190nm,22.5s
TOO Toolangi 49.86 181 P **P** **05 27 55.1 -0.5**
TOO Toolangi 49.86 181 P **P** **05 27 55.1 -0.5**
TOO pmax pmax
comp=Z,43nm,0.8s
TOO Toolangi 49.86 181 P **P** **05 27 56.7 +1.1**
SEY Seymchan 50.47 3 P **P** **05 28 00.2 +0.4**
comp=Z,1.4nm,0.7s,baz=190,slow=9.5,SNR=3.7
comp=Z,1.4nm,0.7s
SEY Seymchan 50.47 3 *ce*P **P** **05 28 00.7 +0.8**
SEY pmax pmax
comp=Z,23nm,2.0s
YAK Yakutsk 50.96 350 LR LR 05 58 49.7
comp=Z,20nm,18.1s,baz=93,slow=47
YAK Yakutsk 50.96 350 *i* P **P** **05 28 06.3 +2.7**
YAK pmax pmax
comp=Z,17nm,0.7s
MORW Morawa 51.00 215 P **P** **05 28 03.1 -1.2**
MORW IAmb IAmb 05 28 04.8
comp=Z,26nm,1.1s
MORW Morawa 51.00 215 P **P** **05 28 03.6 -0.7**
BOD Bodaibo 51.63 338 *e*P P 05 28 14.3 +5.7
BOD pmax pmax
comp=Z,15nm,1.8s
ZAK Zakamensk 51.83 326 *e*P **P** **05 28 10.9 +0.5**
ZAK pmax pmax
comp=Z,4.0nm,1.2s
GOMU GeErMu 52.28 306 P P 05 28 21.8 +7.4
GOMU sP pP 05 28 26.0 +1.6
GOMU PcP **PcP** **05 29 27.5 +2.2**
GOMU pmax pmax
comp=Z,15nm,0.9s
GOMU pmax pmax
comp=Z,93nm,4.7s
GLAD Gladstone 53.26 179 P **P** **05 28 21.8 +1.0**
NWAO Narrogin (SRO) 53.37 211 P **P** **05 28 20.9 -0.9**
NWAO Narrogin (SRO) 53.37 211 P **P** **05 28 20.9 -0.9**
NWAO pmax pmax
comp=Z,94nm,1.7s
CORO Coronation Par 53.71 180 P **P** **05 28 25.5 +1.3**
MOY Mondy 53.73 326 *e*P P 05 28 32.1 +7.7
MOY pmax pmax
comp=Z,26nm,1.6s
LSA Lhasa 54.27 298 P P 05 28 35.5 +6.4
LSA pP sP 05 28 45.2 +1.8
BILL Bilibino 56.88 9 P **P** **05 28 47.4 +0.7**
BILL Bilibino 56.88 9 ⇓*i*P **P** **05 28 47.7 +1.0**
BILL *i* 05 28 53.2
BILL *i* 05 30 50.8
BILL pmax pmax
comp=Z,6.0nm,0.8s
TAPN Taplejung 57.11 294 *e*P P 05 28 56.0 +6.6
ODAN Odare 57.38 294 *e*P **P** **05 28 52.4 +1.2**
URZ Urewera 57.89 152 LR LR 05 51 28.2
comp=Z,188nm,19.0s,baz=31,slow=34
WMQ Urumqi 59.32 314 *e*P **P** **05 29 07.8 +3.5**
WMQ pP pP 05 29 14.0 -0.5
WMQ sP sP 05 29 19.8 +1.2
WMQ pmax pmax
comp=Z,23nm,0.7s
WMQ LR LR
comp=Z,190nm,23.7s
WMQ LR LR
comp=Z,240nm,23.5s
GKN Gorkha 59.86 295 *e*P P 05 29 15.9 +7.5
comp=Z,96nm,1.0s
TIXI Tiksi 60.09 353 *ce*P **P** **05 29 11.3 +2.3**
TIXI pmax pmax
comp=Z,6.0nm,1.0s
TIXI Tiksi 60.09 353 P **P** **05 29 13.7 +4.7**
RPZ Rata Peaks 60.15 160 LR LR 05 53 09.6
comp=Z,230nm,19.6s,baz=313,slow=34
KOLN Koldanda 60.77 295 *e*P **P** **05 29 19.3 +4.6**
comp=Z,26nm,1.2s
PYUN Piuthan 61.32 295 *e*P P 05 29 25.8 +7.4
RAR Rarotonga 62.16 122 LR LR 05 49 54.6
comp=Z,79nm,19.8s,baz=304,slow=30
MK31 Makanchi Array 63.64 316 P **P** **05 29 33.5 +0.1**
MK31 Makanchi Array 63.64 316 P **P** **05 29 33.5 +0.1**
MK31 pmax pmax
comp=Z,7.0nm,0.8s
MKAR Makanchi Array 63.64 316 P **P** **05 29 33.6 +0.2**
comp=Z,2.1nm,0.7s,baz=95,slow=8.5,SNR=20
comp=Z,2.1nm,0.7s
MKAR Makanchi Array 63.64 316 *i* P **P** **05 29 33.5 +0.1**
MKAR pmax pmax
comp=Z,2.0nm,0.5s
ZAA0 Zalesovo Array 63.65 324 P **P** **05 29 33.8 +0.6**
ZAA0 IAmb IAmb 05 29 41.6
comp=Z,28nm,1.8s
ZALV Zalesovo Beam 63.65 324 P **P** **05 29 32.8 -0.5**
comp=Z,1.2nm,0.6s,baz=98,slow=5.0,SNR=3.4
ZALV LR LR 05 59 40.0
comp=Z,70nm,18.2s,baz=44,slow=38
comp=Z,1.2nm,0.6s
ZALV Zalesovo Beam 63.65 324 P **P** **05 29 33.5 +0.3**
ZALV Zalesovo Beam 63.65 324 *i* P **P** **05 29 37.5 +4.3**
ZALV pmax pmax
comp=Z,3.0nm,0.5s
MAKZ Makanchi 63.85 316 P **P** **05 29 34.8 0.0**
MAKZ IAmb IAmb 05 29 44.2
comp=Z,12nm,0.8s
MAKZ Makanchi 63.85 316 P **P** **05 29 34.8 0.0**
MAKZ pmax pmax
comp=Z,13nm,0.8s
MAKZ Makanchi 63.85 316 P P 05 29 42.0 +7.2
MAKZ pP sP 05 29 50.5 +1.3
MAKZ sP pwP 05 29 57.9 +5.3
KDAK Kodiak Island 63.91 31 P **P** **05 29 34.8 0.0**
comp=Z,2.8nm,0.6s,baz=214,slow=3.6,SNR=1.4
KDAK LR LR 05 55 17.4
comp=Z,190nm,20.1s,baz=246,slow=34
comp=Z,2.8nm,0.6s
K20K Telida 65.21 25 P **P** **05 29 44.6 +1.3**
K20K Telida 65.21 25 P **P** **05 29 45.7 +2.3**
baz=247
J20K Nowinta River 65.50 24 P **P** **05 29 45.9 +0.7**
J20K Nowinta River 65.50 24 P **P** **05 29 46.6 +1.4**
baz=247,SNR=8.6
PPLA Purkeypile 65.84 26 P **P** **05 29 49.3 +1.7**
baz=249,SNR=5.7
CAST Castle Rocks 66.07 25 P **P** **05 29 49.5 +0.6**
CAST IAmb IAmb 05 29 58.0
comp=Z,12nm,0.8s
CAST Castle Rocks 66.07 25 P **P** **05 29 50.6 +1.8**
baz=249,SNR=7.3
CHUM Lake Minchumin 66.14 25 P **P** **05 29 51.5 +2.3**
baz=249,SNR=5.4
IMAR Indian Mountai 66.38 23 P **P** **05 29 51.2 +0.4**
KTH Kantishna Hill 66.60 26 P **P** **05 29 52.8 +0.5**
KTH IAmb IAmb 05 30 01.0
comp=Z,13nm,0.9s
H21K Melozitna Rive 66.61 23 P **P** **05 29 53.2 +0.9**
H21K Melozitna Rive 66.61 23 P **P** **05 29 54.2 +1.9**
baz=247,SNR=7.1
KURK Kurchatov 66.68 320 P **P** **05 29 51.6 -1.4**
KURK Kurchatov 66.68 320 *i* P **P** **05 29 54.3 +1.3**
KURK pmax pmax
comp=Z,20nm,0.9s
KURK Kurchatov 66.68 320 P **P** **05 29 56.2 +3.3**
KURK sP **pwP** **05 30 14.2 +4.4**
KDJ Kajisay 66.70 311 IAmb IAmb 05 30 11.8
comp=Z,20nm,1.1s
KURBB Kurchatov Arra 66.72 320 LR LR 06 00 15.2
comp=Z,208nm,19.4s,baz=68,slow=37
I21K Tanana 66.75 24 P **P** **05 29 55.3 +2.2**
baz=248,SNR=5.2
BPAW Bear Paw Mtn. 66.76 25 P **P** **05 29 54.8 +1.5**
baz=250,SNR=6.6
TRF Thorofare Moun 66.84 26 P **P** **05 29 54.8 +0.8**
baz=251
KNK Knik Glacier 67.02 28 P **P** **05 29 56.3 +1.4**
baz=253
MLY Manley 67.19 24 IAmb IAmb 05 30 05.2
comp=Z,13nm,0.9s
MLY Manley 67.19 24 P **P** **05 29 56.6 +0.6**
baz=250,SNR=6.9
H22K Ishtalitna Cre 67.24 23 P **P** **05 29 57.3 +1.0**
baz=249,SNR=6.2
KSH Kashi 67.48 308 P P 05 30 03.8 +5.4
KSH pP sP 05 30 14.0 +1.1
KSH sP pwP 05 30 18.3 +2.0
KSH pmax pmax
comp=Z,10.0nm,0.8s
SCM Sheep Creek Mo 67.65 28 P **P** **05 30 01.1 +2.1**
baz=254
WAT6 Susitna Watana 67.68 27 P **P** **05 30 00.6 +1.4**
baz=254
NEA2 Nenana 67.72 25 P **P** **05 29 59.8 +0.5**
baz=251
I23K Minto, Yukon-K 67.78 24 P **P** **05 29 59.9 +0.3**
I23K IAmb IAmb 05 30 08.9
comp=Z,12nm,0.8s
I23K Minto, Yukon-K 67.78 24 P **P** **05 30 00.3 +0.7**
baz=251,SNR=7.8
H23K Yukon River 67.93 23 IAmb IAmb 05 30 10.1
comp=Z,10nm,0.8s
H23K Yukon River 67.93 23 P **P** **05 30 02.4 +1.7**
baz=250,SNR=5.8
WRH Wood River Hil 68.08 25 IAmb IAmb 05 30 09.7
comp=Z,11nm,0.8s
MDM Murphy Dome 68.17 25 IAmb IAmb 05 30 12.4
comp=Z,9.0nm,0.7s
COLA College 68.30 25 *i* P **P** **05 30 04.1 +1.2**
COLA pmax pmax
comp=Z,6.0nm,0.8s
COLA College 68.30 25 P **P** **05 30 05.6 +2.7**
COLA x x 05 30 11.4
COLA sP **pwP** **05 30 19.4 -1.3**
H24K Noodor Dome 68.58 24 IAmb IAmb 05 30 14.1
comp=Z,13nm,0.9s
H24K Noodor Dome 68.58 24 P **P** **05 30 06.4 +1.7**
baz=252,SNR=7.8
D23K Nanushuk River 68.62 20 P **P** **05 30 06.3 +1.4**
baz=248,SNR=7.2
IL31 68.66 25 IAmb IAmb 05 30 12.8
comp=Z,20nm,1.4s
ILAR Eielson Array 68.66 25 P **P** **05 30 03.8 -1.5**
comp=Z,1.3nm,0.5s,baz=253,slow=5.8,SNR=24
ILAR LR LR 05 59 18.3
comp=Z,108nm,19.8s,baz=246,slow=35
comp=Z,1.3nm,0.5s
AAK Ala-Archa 68.72 311 LR LR 06 02 56.2
comp=Z,124nm,18.2s,baz=80,slow=38
AAK Ala-Archa 68.72 311 *i* P **P** **05 30 07.3 +1.1**
AAK pmax pmax
comp=Z,5.0nm,0.9s
PAX Paxson 68.79 27 P **P** **05 30 06.4 +0.2**
PAX Paxson 68.79 27 P **P** **05 30 06.4 +0.2**
PAX pmax pmax
comp=Z,8.0nm,0.7s

K24K	Donnelly Dome baz=255	68.86	26	P		P	05 30 08.4	+1.9
TOLK	Toolik Lake Re baz=249,SNR=5.4	68.88	21	P		P	05 30 09.3	+2.7
C23K	Itkillik River baz=248,SNR=7.8	68.97	19	P		P	05 30 09.2	+2.2
J25K	Salcha River, baz=255	69.25	25	P		P	05 30 09.3	+0.4
RIDG	Independent Ri baz=256	69.25	26	P		P	05 30 09.6	+0.6
PPT	Papeete comp=Z,195nm,20.7s,baz=286,slow=28	69.45	114	LR		LR	05 51 50.8	
PPT2	Papeete2 comp=Z,414nm,25.2s	69.45	114	eLR		LR	05 51 15.4	
C24K	Franklin Bluff baz=250	69.55	20	P		P	05 30 11.2	+0.6
DOT	Dot Lake comp=Z,11nm,0.8s	69.57	26	IAmb		IAmb	05 30 19.7	
SCRK	Sand Creek baz=256,SNR=6.0	69.68	26	P		P	05 30 13.2	+1.5
J26L	Joseph Creek comp=Z,10nm,0.8s	69.98	26	IAmb		IAmb	05 30 23.2	
J26L	Joseph Creek baz=257,SNR=7.3	69.98	26	P		P	05 30 13.6	+0.2
I26K	Coal Creek Min baz=257	70.33	25	P		P	05 30 14.4	-1.1
L27K	Beaver Creek, baz=259	70.43	27	P		P	05 30 17.8	+1.6
K27K	Chicken baz=258	70.51	26	P		P	05 30 18.8	+2.1
YUK3	Moose Creek baz=260	70.82	29	P		P	05 30 20.5	+1.7
KKAR	Karatay Array	71.66	311	P		P	05 30 23.7	-0.3
KKAR	Karatay Array	71.66	311	P		P	05 30 23.7	-0.3
DAWY	Dawson	71.68	26	P		P	05 30 24.4	+0.7
DAWY	Dawson baz=261,SNR=6.2	71.68	26	P		P	05 30 25.6	+1.9
TBI	Tubuai comp=Z,236nm,26.0s	71.70	120	eLR		LR	05 52 18.0	
BVAR	Borovoye Array comp=Z,128nm,19.0s,baz=334,slow=38	72.00	322	LR		LR	06 04 00.3	
HYT	Haines Junctio comp=Z,17nm,1.0s	72.11	30	IAmb		IAmb	05 30 36.6	
HYT	Haines Junctio baz=264	72.11	30	P		P	05 30 28.7	+2.2
I29M	Ogilvie Camp, baz=261	72.34	25	P		P	05 30 28.8	+1.2
M30M	Minto, Yukon baz=264	72.64	28	P		P	05 30 31.4	+1.8
CHGR	Chuyangaron	72.78	307	P		P	05 30 29.3	-1.6
N31M	Braeburn, Yuko comp=Z,28nm,1.4s	73.00	29	IAmb		IAmb	05 30 42.4	
N31M	Braeburn, Yuko baz=265	73.00	29	P		P	05 30 32.8	+1.1
WHY	Whitehorse baz=266	73.37	30	P		P	05 30 36.2	+2.2
M31M	Drury Creek, Y baz=266	73.72	29	P		P	05 30 37.3	+1.4
P33M	Teslin, Yukon baz=268	74.37	31	P		P	05 30 41.2	+1.4
INK	Inuvik comp=Z,1.4nm,0.5s,baz=260,slow=4.3,SNR=3.0 comp=Z,1.4nm,0.5s	74.57	22	P		P	05 30 40.5	-0.1
MMPY	Sheldon Lake, baz=268	75.19	28	P		P	05 30 46.4	+1.9
TAOE	Nuku Hiva Isla comp=Z,169nm,23.3s	75.50	103	eLR		LR	05 54 03.2	
DLBC	Dease Lake comp=Z,67nm,19.6s,baz=278,slow=36	75.78	33	LR		LR	06 04 29.2	
DLBC	Dease Lake baz=271	75.78	33	P		P	05 30 50.5	+2.5
BBB	Bella Bella comp=Z,98nm,20.3s,baz=272,slow=32	77.13	39	LR		LR	05 59 26.3	
SVE	Sverdlovsk SVE	77.60	326	eP pmax		P pmax	05 30 58.6	+0.5
	comp=Z,31nm,1.4s							
C36M	Paulatuk baz=274	78.01	21	P		P	05 31 01.2	+1.0
ABKAR	Akbulak array	78.67	318	P		P	05 31 03.3	-0.9
ARU	Arti comp=Z,91nm,18.3s,baz=247,slow=38	78.77	326	LR		LR	06 08 31.3	
ARU	Arti ARU	78.77	326	P IAmb		P IAmb	05 31 04.0 05 31 13.5	-0.6
	comp=Z,20nm,1.1s							
ARU	Arti ARU	78.77	326	c iP		P	05 31 04.0 05 31 11.9	-0.6
ARU				S		S	05 41 01.1	+1.9
ARU				SS		SS	05 45 58.7	-5.2
ARU				pmax		pmax		
	comp=Z,4.0nm,0.7s							
AKTO	Aktyubinsk comp=Z,117nm,19.5s,baz=86,slow=37	79.77	319	LR		LR	06 08 28.5	
GEYT	Alibeck comp=Z,1.2nm,0.4s,baz=75,slow=7.6,SNR=2.0 GEYT	81.49	307	P LR		P LR	05 31 20.6 06 11 11.8	+0.8
	comp=Z,32nm,19.6s,baz=71,slow=38 comp=Z,1.2nm,0.4s							
GEYT	Alibeck	81.49	307	P		P	05 31 19.4	-0.4
YBH	Yreka Blue Hor comp=Z,143nm,21.1s,baz=282,slow=31	82.04	49	LR		LR	06 00 48.8	
J05D	Fort Rock, OR baz=280	82.85	47	P		P	05 31 27.9	+1.0
YKA	Yellowknife Ar comp=Z,1.6nm,0.8s,baz=282,slow=4.9,SNR=16 comp=Z,1.6nm,0.8s	82.86	28	P		P	05 31 25.9	-0.5
PINE	Pine Mountain comp=Z,18nm,0.9s	82.97	47	IAmb		IAmb	05 31 37.9	
CASY	Casey CASY	83.06	194	P IAmb		P IAmb	05 31 26.9 05 31 28.2	-0.2
	comp=Z,16nm,0.9s							
K05A	Summer Lake	83.19	48	P		P	05 31 29.4	+0.6
KIRV	Kirov comp=Z,90nm,19.5s,baz=78,slow=38	83.29	328	LR		LR	06 11 15.1	
KIRV	Kirov	83.29	328	i P		P	05 31 27.7	-0.9
ORV	Oroville comp=Z,12nm,1.0s	83.33	51	IAmb		IAmb	05 31 40.6	
WSAR	Wadi Sarin comp=Z,64nm,21.0s,baz=118,slow=37	83.61	292	LR		LR	06 10 02.3	
MOD	Modoc Plateau comp=Z,22nm,1.4s	83.78	49	IAmb		IAmb	05 31 41.7	
BEKR	Beckworth comp=Z,26nm,1.6s	84.14	51	IAmb		IAmb	05 31 44.3	
PRGR	Permogore PRGR	84.37	332	eP e		P	05 31 33.0 05 31 39.1	-1.1
CMB	Columbia Colle CMB	84.48	52	P IAmb		P IAmb	05 31 35.3 05 31 46.0	+0.1
	comp=Z,16nm,1.2s							
CMB	Columbia Colle CMB	84.48	52	P pmax		P pmax	05 31 35.3	+0.1
	comp=Z,16nm,1.3s							
NEW	Newport baz=283	84.67	42	P		P	05 31 36.6	+0.6
J08A	Circle Bar Ran comp=Z,24nm,1.6s	84.81	47	IAmb		IAmb	05 31 47.6	
PNTR	Pine Nut PNTR	84.87	51	P IAmb		P IAmb	05 31 38.7 05 31 47.8	+1.3
	comp=Z,14nm,1.1s							
WVOR	Wild Horse Val comp=Z,22nm,1.5s	84.89	48	IAmb		IAmb	05 31 48.1	
PAHR	Pah Rah Range comp=Z,11nm,1.3s	84.90	51	IAmb		IAmb	05 31 48.2	
F10A	Beach Ranch, E comp=Z,16nm,1.7s	85.11	44	IAmb		IAmb	05 32 07.8	
YERR	Yerington comp=Z,12nm,1.1s	85.16	51	IAmb		IAmb	05 31 49.8	
BMO	Blue Mountains comp=Z,24nm,1.7s	85.31	45	IAmb		IAmb	05 31 49.9	
SPITS	Spitsbergen Ar comp=Z,29nm,18.0s,baz=18,slow=40	85.41	351	LR		LR	06 16 29.3	
OMMB	Old Mammoth Mi comp=Z,12nm,1.3s	85.64	53	IAmb		IAmb	05 31 52.3	
BELG	Belogornoye comp=Z,75nm,19.7s,baz=99,slow=37	85.78	323	LR		LR	06 12 20.5	
RYN	Ryan comp=Z,20nm,1.5s	85.79	52	IAmb		IAmb	05 31 52.9	
EDM	Edmonton comp=Z,12nm,1.0s	85.80	36	IAmb		IAmb	05 31 51.0	
NVAR	Mina Array Bea comp=Z,2.7nm,0.8s,baz=263,slow=5.8,SNR=22 comp=Z,2.7nm,0.8s	86.00	52	P		P	05 31 44.0	+0.9
KVN	Kaiserville comp=Z,16nm,1.4s	86.02	51	IAmb		IAmb	05 31 54.0	
NV11	Mina Array Sit comp=Z,11nm,1.2s	86.11	52	IAmb		IAmb	05 31 54.4	
WALA	Waterton Lakes	86.55	41	P		P	05 31 45.6	+0.2
CWC	Cottonwood Cre baz=283	86.61	54	P		P	05 31 46.7	+0.7
MFID	Camas Ranch	86.67	46	P		P	05 31 45.9	-0.2
LCH	Last Change Ra comp=Z,11nm,1.4s	86.77	53	IAmb		IAmb	05 31 57.5	
EDW2	Edwards Air Fo baz=283	87.03	55	P		P	05 31 48.7	+0.8
LRMC	Laurel Mtn Rad baz=283	87.14	54	P		P	05 31 49.3	+0.7
MPMC	Manual Prospec baz=283,SNR=7.0	87.17	54	P		P	05 31 49.4	+0.7
KLMR	Klimovskoe	87.42	332	eP		P	05 31 44.9	-4.2
KLMR	comp=Z,8.0nm,0.9s			pmax		pmax		
KLMR	Klimovskoe KLMR	87.42	332	eP AMP		P	05 31 45.0 05 31 56.3	-4.2
	comp=Z,8.0nm,0.9s							
FURC	Furnace Creek, baz=284	87.56	53	P		P	05 31 51.2	+0.8
HLID	Hailey baz=285,SNR=7.3	87.63	46	P		P	05 31 51.6	+0.7
QSM	Queen of Sheba comp=Z,9.7nm,1.1s	87.68	54	IAmb		IAmb	05 32 01.8	
ELK	Elko comp=Z,123nm,20.8s,baz=301,slow=31	87.76	49	LR		LR	06 04 55.5	
ELK	Elko comp=Z,12nm,1.2s	87.76	49	IAmb		IAmb	05 32 01.7	
GWY	Greenwater Val comp=Z,12nm,1.3s	87.78	54	IAmb		IAmb	05 32 02.4	
GSC	Goldstone, Bar comp=Z,10nm,1.1s	87.88	54	IAmb		IAmb	05 32 03.5	
GSC	Goldstone, Bar baz=284	87.88	54	P		P	05 31 52.8	+0.7
TPNV	Topopah Spring comp=Z,17nm,1.4s	87.92	53	IAmb		IAmb	05 32 03.3	
TPNV	Topopah Spring baz=284,SNR=6.6	87.92	53	P		P	05 31 53.2	+0.8
R11A	Troy Canyon, C comp=Z,18nm,1.4s	88.09	51	IAmb		IAmb	05 32 04.3	
R11A	Troy Canyon, C baz=284,SNR=7.2	88.09	51	P		P	05 31 53.7	+0.5
HEC	Hector,Ludlow baz=284	88.37	55	P		P	05 31 55.3	+0.9
TUQ	Turquoise Moun baz=284	88.55	54	P		P	05 31 55.9	+0.6
PFO	Pinyon Flats O comp=Z,132nm,21.1s,baz=298,slow=30	88.56	56	LR		LR	06 03 26.0	
PFO	Pinyon Flats O PFO	88.56	56	P IAmb		P IAmb	05 31 55.0 05 32 06.4	-0.4
	comp=Z,11nm,1.1s							
PFO	Pinyon Flats O PFO	88.56	56	P pmax		P pmax	05 31 55.0	-0.4
	comp=Z,11nm,1.1s							
PFO	Pinyon Flats O baz=284	88.56	56	P		P	05 31 55.9	+0.4
TPFO	Pinon Flats baz=284	88.57	56	P		P	05 31 55.9	+0.4
BAR	Barrett BAR	88.62	57	P IAmb		P IAmb	05 31 55.0 05 32 06.6	-0.5
	comp=Z,13nm,1.2s							
ARCES	ARCESS Array B comp=Z,1.1nm,0.7s,baz=54,slow=4.8,SNR=8.1 ARCES	88.69	343	P LR		P LR	05 31 53.4 06 16 27.5	-1.7
	comp=Z,66nm,18.9s,baz=76,slow=39 comp=Z,1.1nm,0.7s							
PRN	Pahroc Range comp=Z,10nm,1.1s	88.74	52	IAmb		IAmb	05 32 07.4	
MONPK	Monument Peak baz=284,SNR=5.8	88.77	57	P		P	05 31 57.1	+0.6
BELC	Belle Mtn. Jos baz=284	88.84	56	P		P	05 31 56.8	0.0
SHPR	Sheep Range comp=Z,12nm,1.3s	88.88	53	IAmb		IAmb	05 32 08.2	
GMRC	Granite Mounta baz=284	88.92	55	P		P	05 31 57.5	+0.4
BOZ	Bozeman (W) comp=Z,15nm,1.5s	88.99	43	IAmb		IAmb	05 32 07.8	
BOZ	Bozeman (W) baz=287	88.99	43	P		P	05 31 57.5	+0.3
IKP	In-Ko-Pah, Jac baz=284	89.08	57	P		P	05 31 58.5	+0.6
PSUT	Pine Spring comp=Z,13nm,1.2s	89.36	51	IAmb		IAmb	05 32 09.3	
BC3	Big Chuckawall baz=284	89.37	56	P		P	05 31 59.6	+0.4
IRM	Iron Mountain baz=285	89.49	55	P		P	05 32 00.5	+0.8
YHL	Hebgen Lake comp=Z,9.4nm,1.0s	89.51	44	IAmb		IAmb	05 32 21.0	
DUG	Dugway, Tooele baz=286,SNR=5.1	89.69	49	P		P	05 32 01.4	+0.8
CCUT	Cedar City comp=Z,11nm,1.2s	90.00	52	IAmb		IAmb	05 32 13.7	
H17A	Grant Village comp=Z,11nm,1.4s	90.06	44	IAmb		IAmb	05 32 14.9	
FLWY	Flagg Ranch comp=Z,14nm,1.2s	90.07	45	IAmb		IAmb	05 32 13.1	
TPAW	Teton Pass comp=Z,13nm,1.5s	90.07	45	IAmb		IAmb	05 32 13.6	
BLYC	Blythe comp=Z,5.8nm,0.8s	90.09	55	IAmb		IAmb	05 32 12.6	
AHID	Auburn Hatcher comp=Z,7.8nm,1.1s	90.18	46	IAmb		IAmb	05 32 21.7	
HWUT	Hardware Ranch comp=Z,9.4nm,1.2s	90.19	47	IAmb		IAmb	05 32 12.9	
SZCU	Shurtz Canyon comp=Z,11nm,1.2s	90.20	51	IAmb		IAmb	05 32 14.4	
LCMT	Little Creek M comp=Z,15nm,1.3s	90.23	52	IAmb		IAmb	05 32 14.6	
W13A	Hualapai Mount comp=Z,13nm,1.4s	90.25	54	IAmb		IAmb	05 32 14.5	
PDMCI	Parker Dam,Lak baz=285	90.25	55	P		P	05 32 04.0	+0.8
VNDA	Vanda comp=Z,2.9nm,0.9s,baz=318,slow=5.3,SNR=17 comp=Z,2.9nm,0.9s	90.30	177	P		P	05 32 02.0	-0.3
VNDA	Vanda	90.30	177	P		P	05 32 02.0	-0.3
JLU	Jordanelle comp=Z,16nm,1.4s	90.57	48	IAmb		IAmb	05 32 15.6	
RLMT	Red Lodge baz=288	90.72	43	P		P	05 32 09.0	+3.6
113A	Mohawk Valley, comp=Z,11nm,1.5s	90.96	56	IAmb		IAmb	05 32 17.2	
OBN	Obninsk comp=Z,14nm,21.9s,baz=6.5,slow=37	91.07	327	LR		LR	06 14 38.0	
OBN	Obninsk OBN	91.07	327	i P pmax		P pmax	05 32 07.9	+1.5
	comp=Z,10.0nm,1.4s							
GNI	Garni comp=Z,46nm,19.4s,baz=96,slow=38	91.12	311	LR		LR	06 17 16.2	
PDAR	Pinedale Array comp=Z,0.3nm,0.5s,baz=132,slow=2.2,SNR=4.5 PDAR	91.27	46	P LR		P LR	05 32 06.4 06 07 00.6	-1.6
	comp=Z,85nm,20.5s,baz=297,slow=32 comp=Z,0.3nm,0.5s							
KBZ	Khabaz comp=Z,1.2nm,0.7s,baz=276,slow=9.0,SNR=2.1 KBZ	91.33	315	P LR		P LR	05 32 06.5 06 18 35.6	-1.3
	comp=Z,44nm,18.6s,baz=60,slow=39 comp=Z,1.2nm,0.7s							
KBZ	Khabaz KBZ	91.33	315	i P pmax		P pmax	05 32 10.1	+2.2
	comp=Z,3.0nm,1.5s							
KIV	Kislovodsk KIV KIV KIV	91.40	316	eP e ePPP pmax		P PPP pmax	05 32 06.8 05 35 44.2 05 37 44.2	-1.6
	comp=Z,4.0nm,1.0s							
KIV				MLR		MLR		
	comp=Z,67nm,23.0s							
P17A	Butcher Ranch, comp=Z,7.2nm,1.3s	91.42	49	IAmb		IAmb	05 32 28.6	
SRU	San Rafael Swe comp=Z,5.6nm,1.0s	91.69	49	IAmb		IAmb	05 32 19.6	
RDMU	Red Mountain comp=Z,9.0nm,1.1s	91.94	48	IAmb		IAmb	05 32 21.7	
WUAZ	Wupatki baz=287	92.11	53	P		P	05 32 13.5	+1.6
LAO	LASA Array baz=291	92.20	41	P		P	05 32 13.0	+1.0
FINES	FINESS Array B comp=Z,1.3nm,0.7s,baz=71,slow=4.0,SNR=15 FINES	92.95	336	P LR		P LR	05 32 13.3 06 16 45.6	-1.8
	comp=Z,48nm,19.7s,baz=46,slow=37 comp=Z,1.3nm,0.7s							
PV11	David Mesa, Pa comp=Z,7.4nm,0.9s	93.17	50	IAmb		IAmb	05 32 38.6	
X18A	Snowflake comp=Z,8.1nm,1.2s	93.51	54	IAmb		IAmb	05 32 29.8	
SMCO	Snowmass	94.28	48	IAmb		IAmb	05 32 32.1	
	comp=Z,4.6nm,0.9s							
S22A	4UR Ranch, Cre baz=290	94.88	50	P		P	05 32 26.1	+1.3
MNK	Minsk	95.82	329	i P		P	05 32 26.0	-2.3
MNK				i			05 36 17.0	
MNK				i PPP		PPP	05 38 20.7	
MNK				i S		SKSac	05 42 59.3	-2.0
MNK				i SS		SS	05 50 13.6	+1.1
MNK				i SSS		SSS	05 53 58.3	
MNK				pmax		pmax		
	comp=E,2.0nm,0.8s							
MNK				pmax		pmax		
	comp=Z,23nm,1.3s							
MNK				pmax		pmax		
	comp=N,22nm,0.7s							
MNK				MLR		MLR		
	comp=N,281nm,17.0s							
MNK				MLR		MLR		
	comp=Z,5μm,17.0s							
MNK				MLR		MLR		
	comp=E,13nm,22.0s							
MNK	Minsk comp=E,2.0nm,0.8s	95.82	329	i P		P	05 32 26.1	-2.3
MNK				i P		P	05 32 26.1	-2.3
	comp=N,22nm,0.7s							
MNK				i P		P	05 32 26.1	-2.3
	comp=Z,23nm,1.3s,baz=59							
MNK				i PP		PP	05 36 17.1	-3.0
MNK				i PPP		PPP	05 38 20.8	
MNK				i S		SKSac	05 42 59.4	-2.0
MNK				i SS		SS	05 50 13.6	+1.1
MNK				i SSS		SSS	05 53 58.3	
MNK				i LQ		LQ	06 09 37.4	
MNK				i LR		LR	06 14 15.7	
MNK				i LRM		MLR	06 16 16.5	
	comp=N,281nm,17.2s							
MNK				i LRM		MLR	06 16 28.1	
	comp=Z,5μm,17.2s							
MNK				i LRM		MLR	06 16 29.2	
	comp=E,13nm,22.2s							
ANMO	Albuquerque ANMO	96.11	52	i P pmax		P pmax	05 32 30.6	+0.2
	comp=Z,4.0nm,1.3s							
NACGM	Naroch baz=58	96.16	330	‖ eP		P	05 32 30.1	+0.2
AKASG	Malin Array Be comp=Z,104nm,19.0s,baz=67,slow=37	97.03	325	LR		LR	06 19 04.1	
HFS	Hagfors comp=Z,49nm,21.5s,baz=31,slow=36	98.52	338	LR		LR	06 18 43.9	
NB2	NORSAR Subarra comp=Z,1.5nm,0.8s,baz=46,slow=4.4	98.73	340	P		P	05 32 39.4	-2.0
NOA	NORSAR Array B comp=Z,0.2nm,0.5s,baz=104,slow=5.6,SNR=2.2 NOA	98.73	340	P LR		P LR	05 32 38.6 06 20 46.9	-2.8
	comp=Z,35nm,20.0s,baz=40,slow=38							
MAW	Mawson comp=Z,123nm,20.1s,baz=104,slow=34	99.23	203	LR		LR	06 14 26.8	
BRTR	Keskin Array B comp=Z,19nm,19.4s,baz=66,slow=39	99.24	314	LR		LR	06 22 50.7	
TROLL	Troll, Antarti	116.85	192	PKPdf		PKPdf	05 37 45.4	-0.6
SNAA	Sanae	118.13	190	PKPdf		PKPdf	05 37 47.4	-1.0
VNA3	Neumayer Olymp	119.60	188	PKPdf		PKPdf	05 37 50.3	-0.8
VNA1	Neumayer--Stat	119.92	189	PKPdf		PKPdf	05 37 51.1	-0.6
ESDC	Sonseca Array comp=Z,0.1nm,0.4s,baz=347,slow=3.5,SNR=1.9	121.42	334	PKP		PKPdf	05 37 54.3	-1.5
PLCA	Paso Flores comp=Z,4.2nm,1.2s,baz=167,slow=0.9,SNR=5.8	136.80	138	PKP		PKPdf	05 38 23.4	-1.5
TORD	Torodi Ar. Bea comp=Z,1.4nm,0.9s,baz=13,slow=1.5,SNR=6.2	137.11	305	PKP		PKPdf	05 38 24.1	-1.9
PB11	IPOC Station P	144.19	106			PKPbc	05 38 37.6	+0.5
PB16	IPOC Station P	144.45	104	PKPdf		PKPdf	05 38 39.2	-0.6
LPAZ	La Paz comp=Z,7.6nm,0.6s,baz=324,slow=3.8,SNR=32	145.86	101	PKPbc		PKPbc	05 38 42.8	-0.2
LPAZ	La Paz	145.86	101			PKPab	05 38 43.6	+0.1
LPAZ	La Paz	145.86	101	PKP2		PKPab	05 38 43.6	+0.1
DBIC	Dimbokro comp=Z,9.8nm,0.7s,baz=74,slow=3.2,SNR=16	146.08	303	PKPbc		PKPdf	05 38 42.5	+0.4
KIC	Kosan Boka comp=Z,19nm,0.8s	146.16	302	⇑ ePKIKP		PKPdf	05 38 42.5	+0.2
TIC	Toumodi comp=Z,1.6nm,0.2s	146.23	303	⇑ iPKIKP		PKPdf	05 38 42.7	+0.3
LIC	Lamto comp=Z,28nm,0.7s	146.47	302	ePKIKP		PKPdf	05 38 42.3	-0.5
CPUP	Villa Florida comp=Z,1.8nm,0.8s,baz=17,slow=2.3,SNR=6.2 CPUP	153.39	125	PKPbc PKPab		PKPbc PKPab	05 39 00.5 05 39 13.2	-0.4 +0.2
	comp=Z,6.6nm,1.0s,baz=238,slow=3.5,SNR=6.5							
CPUP	Villa Florida	153.39	125	PKPbc		PKPbc	05 39 00.7	-0.2

TAP 26 05:24:32.8, 23.32N×121.59E, h33km, ML1.3, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HGSD	Ruisui baz=318	0.23	319	eP	Pn	05 24 39.9	+0.1
HGSD				eS	Sb	05 24 45.4	+1.0
	baz=318						
TWF1	Yuli baz=277	0.27	278	eP	Pn	05 24 40.6	+0.2
YULB	Yu-li baz=285	0.28	286	eP	Pn	05 24 40.7	+0.2
YULB				eS	Sn	05 24 46.3	+0.9
	baz=285						
YULB	Yu-li	0.28	286	P	Pn	05 24 40.7	+0.1
ECS	Chishang baz=237	0.41	237	eP	Pn	05 24 42.4	0.0
ELDTW	Lidau baz=256	0.54	257	eS	Sn	05 24 52.7	+0.3

*IDC **26** 05:28:14.5±2.3, 1.45S×77.56W, h166km±22km, mb3.7/15, mbtmp4.2/18, Error ellipse: s-maj=20.0km s-min=10.1km az=52.0*

*NEIC **26** 05:28:15.8±2.3, 1.61S±0.06×77.65W±0.08, h170km±6km, mb4.3/82, Error ellipse: s-maj=12.2km s-min=8.1km az=80.0*

*VAO **26** 05:28:22.6±3.6, 1.74S×76.86W, h171km±16km, mb4.3*

ISC 26 05:28:15.9±0.4, 1.60S±0.04×77.70W±0.05, h181km, n152, σ1.9 17/155, mb4.2/48, 1C, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PORT	Chimborazo Vol	1.08	277		Pn	05 28 43.7	-1.3
PORT				Sn	Sn	05 29 05.7	-1.7
SLOR	San Lorenzo -	1.18	317		Pn	05 28 44.4	-1.2
BOSC	San Juan Bosco	1.73	207		Pn	05 28 48.9	-1.5
BOSC				Sn	Sn	05 29 15.1	-2.2
COHC	Cochancay	1.78	241		Pn	05 28 48.1	-2.5
OTAV	Otavalo	1.97	338		Pn	05 28 51.8	-1.4
OTAV	Otavalo	1.97	338	eP	Pn	05 28 51.8	-1.4
CUSE	Cuicocha Este	2.02	340	eP	Pn	05 28 52.9	-0.8
CUSE				eS	Sn	05 29 40.2	+17
PAC1	Pacto, Paraso	2.15	329	eP	Pn	05 28 53.0	-1.8
TULM	Tulcn-Chalpat	2.30	358		Pn	05 28 56.8	-0.1
TULM	Tulcn-Chalpat	2.30	358	eP	Pn	05 28 57.1	+0.2
CMBC	Cumbal	2.53	357	eP	Pn	05 29 00.3	+0.9
GCUF	Volcan Galeras	2.83	7	eP	Pn	05 29 03.2	+0.1
CRUC	La Cruz	3.23	13	eP	Pn	05 29 07.9	+0.1
PTLC	Puerto Leguiza	3.39	59	eP	Pn	05 29 06.6	-2.8
BBAC	Balboa, Cauca	3.62	7	eP	Pn	05 29 11.3	-1.2
BBAC				eS	Sn	05 29 58.2	+1.4
FLOC	Florencia	3.76	33	⇑ iP	Pn	05 29 13.3	-0.8
FLOC				eS	Sn	05 29 55.9	-3.8
CFLOR	Florencia	3.77	33	eP	Pn	05 29 13.4	-0.8
SOTA	Rioblanco	3.87	16	eP	Pn	05 29 15.7	-0.2
POPC	Popayan, Colom	4.24	14	eP	Pn	05 29 19.2	-1.1
GARC	Garzon, Huila	4.36	30	eP	Pn	05 29 21.6	-0.2
GR1C	Gorgona, Isla	4.60	354	eP	Pn	05 29 22.6	-2.0
BETC	Betania	4.81	28	eP	Pn	05 29 28.5	+0.9
MACC	Macarena, Meta	5.35	46	eP	Pn	05 29 34.7	+0.2
ATAH	Atahualpa 164nm,0.6s,baz=8.6,slow=9.0,SNR=131	5.54	187	P	Pn	05 29 36.8	-0.5
ATAH				S	Sn	05 30 37.5	-3.9
	126nm,0.7s,baz=135,slow=18,SNR=10						
YOTC	Yotoco, Valle	5.71	14	eP	Pn	05 29 35.7	-3.5
PRAC	Prado	5.98	28	eP

15nm,0.5s,baz=72,slow=6.8,SNR=6.5
NNA Nana 10.36 175 Pn Pn 05 30 40.0 -0.2
BCIP Isla Barro Col 10.90 349 Pn Pn 05 30 46.2 -1.1
ETMB Extrema 14.04 126 *eP* **Pn 05 31 24.1 -3.0**
SAML Samuel 16.18 117 P **P 05 31 52.0 -1.2**
SAML IAmb IAmb 05 31 56.0
comp=Z,10nm,0.6s
BIRV Birongo 16.53 43 P **Pn 05 31 58.8 +1.2**
MACA Manacapuru-AM 17.07 96 *eP* **P 05 32 01.2 -1.7**
LPAZ La Paz 17.37 148 P **Pn 05 32 08.3 +0.1**
comp=Z,5.7nm,0.5s,baz=323,slow=7.3,SNR=30
LPAZ La Paz 17.37 148 P **Pn 05 32 08.7 +0.4**
LPAZ IAmb IAmb 05 32 09.8
comp=Z,12nm,1.1s
LPAZ La Paz 17.37 148 *eP* **P 05 32 07.6 +0.7**
PB12 IPOC Station P 18.39 157 P **P 05 32 18.4 +1.0**
PB16 IPOC Station P 18.47 155 P **Pn 05 32 20.7 -0.4**
PB16 IAmb IAmb 05 32 21.4
comp=Z,21nm,0.8s
PB11 IPOC Station P 19.69 157 P **P 05 32 32.8 +1.3**
VILB Vilhena 20.68 124 *eP* **P 05 32 41.9 -0.1**
SIV San Ignacio 21.75 132 P **P 05 32 53.8 +0.5**
comp=Z,5.8nm,0.7s,baz=312,slow=9.8,SNR=26
comp=Z,5.8nm,0.7s
DR12 Loma Pena Alta 21.85 22 P **P 05 32 54.4 +0.1**
ITTB Itaituba 22.10 98 *eP* **P 05 32 55.8 -1.0**
LVC Limon Verde 22.56 158 P **P 05 33 04.0 +2.6**
comp=Z,5.4nm,0.6s,baz=354,slow=6.6,SNR=8.2
comp=Z,5.4nm,0.6s
LVC Limon Verde 22.56 158 P **P 05 33 04.0 +2.6**
LVC IAmb IAmb 05 33 06.6
comp=Z,10.0nm,0.9s
NPGB Novo Progresso 22.91 104 *eP* **P 05 33 03.5 -0.9**
PDRB Porto dos Gac 23.06 116 *eP* **P 05 33 05.5 -0.1**
MALB Monte Alegre 23.42 91 *eP* **P 05 33 09.1 +0.1**
CLDB Colider 23.62 114 *eP* **P 05 33 10.7 -0.1**
CMIG Matias Romero 25.14 318 P **P 05 33 24.7 +0.2**
comp=Z,4.7nm,0.7s,baz=167,slow=4.1,SNR=6.6
comp=Z,4.7nm,0.7s
MCPB Macapa, AP 25.67 88 *eP* **P 05 33 29.0 -0.3**
MDP Montagnes des 25.90 75 P **P 05 33 30.1 -1.3**
comp=Z,6.3nm,0.8s,baz=262,slow=7.2,SNR=9.8
comp=Z,6.3nm,0.8s
LCO Las Campanas 28.06 167 P **P 05 33 52.1 +1.3**
SNDB Serra Nova Dou 28.14 113 *eP* **P 05 33 51.6 +0.3**
CO01 Juntas del Tor 29.13 166 P **P 05 34 01.9 +1.6**
CO03 El Pedregal 29.83 168 P **P 05 34 07.7 +1.5**
CO03 IAmb IAmb 05 34 08.4
comp=Z,12nm,1.2s
CO02 Combarbal 30.12 169 P **P 05 34 10.4 +1.6**
SMTB Santa Maria do 30.82 105 *eP* **P 05 34 15.2 +0.1**
VA06 Catapilco 31.38 170 P **P 05 34 21.5 +1.8**
CPUP Villa Florida 31.44 143 P **P 05 34 19.2 -1.0**
comp=Z,2.1nm,0.9s,baz=332,slow=9.7,SNR=5.1
comp=Z,2.1nm,0.9s
CPUP Villa Florida 31.44 143 P **P 05 34 20.6 +0.3**
VA03 San Esteban 31.72 168 P **P 05 34 25.0 +2.2**
VA03 IAmb IAmb 05 34 25.4
comp=Z,11nm,0.8s
ROC1 El Roble 31.84 169 P **P 05 34 25.5 +1.5**
BDFB Brasilia 32.42 117 P **P 05 34 29.5 +0.3**
comp=Z,2.7nm,0.5s,baz=276,slow=9.2,SNR=9.2
comp=Z,2.7nm,0.5s
BDFB Brasilia 32.42 117 P **P 05 34 29.8 +0.6**
BDFB IAmb IAmb 05 34 55.2
comp=Z,7.8nm,1.2s
BDFB Brasilia 32.42 117 *eP* **P 05 34 29.9 +0.7**
MT09 Talagante 32.62 170 P **P 05 34 32.4 +1.7**
MT09 IAmb IAmb 05 34 32.9
comp=Z,9.1nm,0.7s
BO04 La Punta 32.90 169 P **P 05 34 35.1 +2.1**
BO01 Tunca 33.20 170 P **P 05 34 36.7 +1.1**
BO01 IAmb IAmb 05 34 44.3
comp=Z,7.1nm,1.1s
GO05 Huala 33.67 171 P **P 05 34 40.6 +0.9**
ITAB Concordia 35.36 138 P **P 05 34 54.2 -0.1**
BBSR BB Station 35.96 19 P **P 05 35 00.2 +1.0**
W57A Gilead 36.62 357 P **P 05 35 05.3 +0.5**
W57A IAmb IAmb 05 35 11.5
comp=Z,11nm,1.2s
FPAL Fort Paine 36.71 349 P **P 05 35 04.8 -0.8**
FPAL IAmb IAmb 05 35 05.6
comp=Z,12nm,1.2s
CPCT Cooper Cave 37.41 351 P **P 05 35 11.3 -0.2**
CPCT IAmb IAmb 05 35 33.9
comp=Z,6.3nm,1.4s
PLTB Pedras Altas 37.64 145 P **P 05 35 13.6 0.0**
PLTB IAmb IAmb 05 35 14.1
comp=Z,22nm,1.5s
V48A Smith Brothers 38.11 348 P **P 05 35 17.1 -0.2**
V48A IAmb IAmb 05 35 17.4
comp=Z,6.3nm,0.7s
TZTN Tazewell 38.34 352 P **P 05 35 19.0 -0.3**
TZTN IAmb IAmb 05 35 35.8
comp=Z,6.2nm,1.2s
T57A Hurt 38.43 358 P **P 05 35 20.2 +0.2**
WVT Waverly 38.71 347 P **P 05 35 20.7 -1.6**
TRQA Tornquist 39.05 160 P **P 05 35 25.6 +0.4**
WHAR Wooly Hollow 39.16 341 P **P 05 35 24.9 -1.1**
WHAR IAmb IAmb 05 35 25.5
comp=Z,3.2nm,0.7s
S54A Dingess, Beckl 39.34 355 P **P 05 35 27.7 0.0**
PLCA Paso Flores 39.49 171 P **P 05 35 29.5 +0.7**
comp=Z,4.7nm,0.7s,baz=341,slow=10,SNR=12
PLCA PcP **PcP 05 37 33.5 +0.6**
comp=Z,1.4nm,0.7s,baz=13,slow=4.9,SNR=5.7
comp=Z,4.7nm,0.7s
PLCA Paso Flores 39.49 171 P **P 05 35 29.7 +0.9**
PLCA IAmb IAmb 05 35 31.1
comp=Z,9.6nm,1.1s
LCAR Lake Charles 39.52 343 P **P 05 35 28.1 -1.0**
LCAR IAmb IAmb 05 35 29.0
comp=Z,3.2nm,0.7s
TX31 Lajitas Ar. Si 39.54 323 P **P 05 35 30.7 +1.2**
TX31 IAmb IAmb 05 35 56.5
comp=Z,7.3nm,1.2s
TX32 Lajitas Array 39.54 323 P **P 05 35 30.7 +1.2**
TXAR Lajitas Array 39.54 323 P **P 05 35 30.2 +0.8**
comp=Z,0.8nm,0.5s,baz=146,slow=8.3,SNR=9.5
TXAR PcP **PcP 05 37 34.0 +0.7**
comp=Z,1.2nm,0.9s,baz=161,slow=5.7,SNR=6.3
comp=Z,0.8nm,0.5s
TXAR Lajitas Array 39.54 323 P **P 05 35 30.6 +1.1**
FCAR Ozark Folk Cen 39.65 342 P **P 05 35 29.4 -0.7**
HHAR Hobbs 40.61 340 P **P 05 35 37.3 -0.8**
HHAR IAmb IAmb 05 35 37.5
comp=Z,3.1nm,0.5s
MGMO Mountain Grove 40.86 342 P **P 05 35 39.1 -1.0**
MGMO IAmb IAmb 05 35 39.8
comp=Z,4.9nm,0.7s
U38A Gravette 40.91 339 P **P 05 35 39.7 -0.8**
WMOK Wichita Mounta 41.20 333 P **P 05 35 42.8 -0.1**
MVL Millersville 41.42 2 P **P 05 35 45.6 +1.1**
MVL IAmb IAmb 05 35 45.9
comp=Z,8.2nm,1.1s
MNTX Cornudas Mount 42.27 324 P **P 05 35 51.5 -0.1**
MSTX Muleshoe 42.52 329 P **P 05 35 53.5 -0.3**
MSTX IAmb IAmb 05 35 54.9
comp=Z,5.8nm,0.9s
AMTX Amarillo 42.69 330 P **P 05 35 54.6 -0.5**
AMTX IAmb IAmb 05 35 56.6
comp=Z,7.2nm,0.9s
KSPA Keystone Colle 42.99 2 P **P 05 35 57.9 +0.6**
KSU1 Kansas State U 44.08 339 P **P 05 36 05.1 -0.9**
KSU1 IAmb IAmb 05 36 05.6
comp=Z,7.3nm,0.6s
CBKS Cedar Bluff 45.04 336 IAmb IAmb 05 36 14.8
comp=Z,12nm,0.7s
ANMO Albuquerque 45.25 326 P **P 05 36 16.8 +1.2**
ANMO IAmb IAmb 05 36 17.4
comp=Z,7.9nm,0.6s
PECO Prince Edward 45.34 1 P **P 05 36 15.1 -0.7**
PECO IAmb IAmb 05 36 36.8
comp=Z,10.0nm,1.3s
TUC Tucson 46.02 320 P **P 05 36 22.5 +1.0**
SDCO Great Sand Dun 46.84 330 P **P 05 36 29.4 +1.4**
SDCO IAmb IAmb 05 36 29.9
comp=Z,4.8nm,0.8s
214A Organ Pipe Nat 47.12 318 P **P 05 36 31.2 +1.2**
214A IAmb IAmb 05 36 32.0
comp=Z,5.5nm,0.8s
X16A Lo Mia Camp, P 47.81 322 P **P 05 36 37.2 +1.7**
X16A IAmb IAmb 05 36 37.5
comp=Z,3.1nm,0.6s
E62A Clayton Lake 48.55 8 P **P 05 36 41.5 +0.8**
E62A IAmb IAmb 05 36 56.2
comp=Z,12nm,1.4s
E28A Huff 52.07 340 P **P 05 37 07.2 +0.1**
E28A IAmb IAmb 05 37 07.7
comp=Z,9.8nm,0.8s
PDAR Pinedale Array 52.67 331 P **P 05 37 11.5 -0.4**
comp=Z,0.7nm,0.6s,baz=125,slow=8.5,SNR=8.5
PDAR PcP **PcP 05 38 18.6 -0.8**
comp=Z,0.6nm,0.5s,baz=133,slow=5.6,SNR=4.8
comp=Z,0.7nm,0.6s
PDAR Pinedale Array 52.67 331 P **P 05 37 12.1 +0.2**
NVAR Mina Array Bea 54.63 321 P **P 05 37 26.9 +0.7**
comp=Z,1.4nm,0.7s,baz=133,slow=7.6,SNR=9.8
NVAR PcP **PcP 05 38 27.2 +0.4**
comp=Z,0.6nm,0.6s,baz=139,slow=5.7,SNR=4.3
comp=Z,1.4nm,0.7s
YHL Hebgen Lake 55.00 331 IAmb IAmb 05 37 31.1
comp=Z,4.2nm,0.9s
WVOR Wild Horse Val 57.29 325 IAmb IAmb 05 37 46.1
comp=Z,3.0nm,0.8s
J08A Circle Bar Ran 57.78 326 IAmb IAmb 05 37 49.9
comp=Z,3.2nm,0.6s
YKA Yellowknife Ar 69.72 343 P **P 05 39 04.8 -1.0**
comp=Z,1.0nm,0.5s,baz=139,slow=6.3,SNR=24
comp=Z,1.0nm,0.5s
YKA Yellowknife Ar 69.72 343 P **P 05 39 05.4 -0.4**
M30M Minto, Yukon 77.69 336 P **P 05 39 53.1 +0.8**
SUMG Summit 78.06 11 P **P 05 39 54.9 +0.3**
DAWY Dawson 79.42 337 P **P 05 40 02.0 +0.2**
INK Inuvik 79.45 342 P **P 05 40 00.5 -1.2**
comp=Z,3.5nm,0.6s,baz=290,slow=8.1,SNR=9.9
comp=Z,3.5nm,0.6s
INK Inuvik 79.45 342 P **P 05 40 01.6 -0.1**
INK IAmb IAmb 05 40 02.9
comp=Z,3.4nm,0.7s
TORD Torodi Ar. Bea 80.04 76 P **P 05 40 04.7 -1.3**
comp=Z,0.4nm,0.4s,baz=282,slow=6.3,SNR=8.8
comp=Z,0.4nm,0.4s
TORD Torodi Ar. Bea 80.04 76 P **P 05 40 05.7 -0.3**
PAX Paxson 81.48 335 P **P 05 40 12.7 -0.1**
PAX IAmb IAmb 05 40 13.4
comp=Z,3.7nm,0.8s
RIDG Independent Ri 81.50 336 P **P 05 40 13.2 +0.4**
RIDG IAmb IAmb 05 40 13.9
comp=Z,4.9nm,1.0s
VNA3 Neumayer Olymp 81.53 162 P **P 05 40 13.3 +0.5**
VNA1 Neumayer--Stat 81.77 162 P **P 05 40 14.7 +0.8**
HDA Harding Lake 82.60 336 P **P 05 40 18.5 0.0**
HDA IAmb IAmb 05 40 18.9
comp=Z,4.2nm,0.6s
ILAR Eielson Array 82.69 336 P **P 05 40 18.5 -0.4**
comp=Z,2.8nm,0.9s,baz=124,slow=3.9,SNR=23
comp=Z,2.8nm,0.9s
BMAR Burnt Mountain 82.77 339 P **P 05 40 20.0 +0.7**
SNAA Sanae 83.75 162 P **P 05 40 23.9 -0.4**
TROLL Troll, Antarti 85.46 162 P **P 05 40 33.5 +0.5**
IMAR Indian Mountai 85.80 337 P **P 05 40 34.5 0.0**
QSPA South Pole Qui 88.47 180 P **P 05 40 48.9 +1.4**
VNDA Vanda 94.77 191 P **P 05 41 17.6 +1.3**
comp=Z,0.7nm,0.7s,baz=129,slow=4.1,SNR=6.4
comp=Z,0.7nm,0.7s
VNDA Vanda 94.77 191 P **P 05 41 18.2 +1.9**
VNDA IAmb IAmb 05 41 18.6
comp=Z,1.1nm,0.8s
ZALV Zalesovo Beam 125.87 13 PKP **PKPdf 05 46 56.5 +0.3**
comp=Z,1.0nm,0.4s,baz=211,slow=2.5,SNR=3.6
KURK Kurchatov 127.11 19 PKPdf 05 46 58.2 -0.4
KURBB Kurchatov Arra 127.16 19 PKP **PKPdf 05 46 59.0 +0.2**
comp=Z,1.0nm,0.5s,baz=318,slow=4,SNR=14
STKA Stephens Creek 130.06 225 PKP **PKPdf 05 47 04.8 -0.1**
comp=Z,0.8nm,0.3s,baz=282,slow=5.8,SNR=3.2
MKAR Makanchi Array 131.72 18 PKP **PKPdf 05 47 07.1 -0.4**
comp=Z,0.3nm,0.4s,baz=278,slow=3.3,SNR=6.5
MKAR Makanchi Array 131.72 18 PKPdf 05 47 07.5 -0.1
SONM Songino Array 133.81 356 PKP **PKPdf 05 47 10.6 -1.0**
comp=Z,0.6nm,0.7s,baz=63,slow=0.6,SNR=2.3
KSRS Korea Array 137.23 330 PKP **PKPdf 05 47 17.1 -1.0**
comp=Z,1.1nm,0.7s,baz=15,slow=1.3,SNR=4.7
ASAR Alice Springs 140.31 229 PKhKP PKPpre 05 47 15.4
comp=Z,0.6nm,0.4s,baz=124,slow=3.7,SNR=16
ASAR PKP **PKPdf 05 47 22.6 -1.6**
comp=Z,1.2nm,0.6s,baz=116,slow=2.7,SNR=11
WRA Warramunga Arr 141.98 234 PKhKP PKPpre 05 47 21.5
comp=Z,1.7nm,0.7s,baz=115,slow=2.9,SNR=25

*JMA **26** 05:32:24.4±0.5,46°N×2°×14°6E±°, h352km, MV3.8/26, SOUTHERN SEA OF OKHOTSK*
*IDC **26** 05:32:25.0±3.4,46°64N×145°97E, h345km±37km, mb2.8/8, mbtmp3.6/11, Error ellipse: s-maj=30.1km s-min=14.5km az=115.0*
ISC 26 05:32:24.3±0.7, 46°17N±0°09×146°2E±0°1, h350km, n29, σ1s95/35, mb3.2/8, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JRA	**Rausu**	**2.35**	**199**	*eP*	**Pn**	**05 33 18.4**	**+0.2**
JTKR	**Abashiri--Toko**	**2.72**	**217**	P	**Pn**	**05 33 22.0**	**+0.8**
JNK	**Nakash**	**2.78**	**202**	*eP*	**Pn**	**05 33 22.2**	**+0.5**
JSE	**Soyaes**	**2.79**	**245**	*eP*	**Pn**	**05 33 22.1**	**+0.4**
NEM2	**Nemuro 2**	**2.82**	**186**	*eP*	**Pn**	**05 33 21.0**	**-1.1**
NEM2				*eS*	**S**	**05 34 06.5**	**-2.1**
JMP	**Maruseppu**	**2.94**	**223**	*eP*	**Pn**	**05 33 23.8**	**+0.6**
JWK2	**Keihoku**	**3.10**	**255**	*eP*	**Pn**	**05 33 25.4**	**+0.9**
JAR	**Ashorobuto**	**3.34**	**211**	*eP*	**Pn**	**05 33 27.7**	**+0.9**
JAK	**Akkeshi**	**3.34**	**199**	*eP*	**Pn**	**05 33 26.4**	**-0.5**
JAK				*eS*	**S**	**05 34 15.4**	**-1.8**
JSS	**Shosan**	**3.52**	**241**	*eP*	**Pn**	**05 33 29.9**	**+1.5**
JCH	**Churui**	**4.08**	**210**	*eP*	**Pn**	**05 33 33.8**	**-0.3**
JCH				*eS*	**S**	**05 34 27.6**	**-2.9**
JNBK	**Urakawa-nobuka**	**4.60**	**213**	*eP*	**Pn**	**05 33 39.1**	**-0.4**
JNBK				*eS*	**S**	**05 34 38.5**	**-1.8**
JEW	**Eniwo**	**4.74**	**227**	*eP*	**Pn**	**05 33 42.6**	**+1.6**
JOT	**Ohata**	**6.05**	**219**	*eP*	**Pn**	**05 33 55.2**	**-0.5**
JOT				*eS*	**S**	**05 35 05.4**	**-4.4**
JOSM	**Okushiri--Mats**	**6.31**	**232**	*eP*	**Pn**	**05 33 59.3**	**+0.6**
JSI2	**Shiura 2**	**6.60**	**221**	*eP*	**Pn**	**05 34 02.1**	**+0.1**
JANG	**Nango**	**6.71**	**212**	*eP*	**Pn**	**05 34 03.2**	**-0.1**
JANG				*eS*	**S**	**05 35 19.4**	**-4.5**
JIW	**Iwasaki**	**7.15**	**221**	*eP*	**Pn**	**05 34 08.7**	**+0.2**
USRK	**Ussuriysk Ar.**	**10.20**	**264**	P	**Pn**	**05 34 45.2**	**+0.7**
	1.8nm,0.5s,baz=74,slow=13,SNR=1.7						
MJAR	**Matsushiro Arr**	**11.32**	**215**	P	**P**	**05 35 01.1**	**+2.7**
	1.5nm,0.5s,baz=20,slow=11,SNR=4.3						
KSRS	**Korea Array**	**16.12**	**244**	P	**Pn**	**05 35 54.2**	**+0.2**
	0.5nm,0.4s,baz=43,slow=9.8,SNR=2.3						
ILAR	**Eielson Array**	**39.98**	**38**	P	**P**	**05 39 24.1**	**-1.6**
	0.5nm,0.6s,baz=262,slow=6.3,SNR=11						
	0.5nm,0.6s						
YKA	**Yellowknife Ar**	**54.19**	**34**	P	**P**	**05 41 12.3**	**-1.8**
	0.2nm,0.6s,baz=303,slow=6.8,SNR=1.9						
	0.2nm,0.6s						
FINES	**FINESS Array B**	**62.40**	**332**	P	**P**	**05 42 08.4**	**-2.0**
	0.7nm,0.7s,baz=27,slow=9.4,SNR=4.3						
	0.7nm,0.7s						
WRA	**Warramunga Arr**	**66.67**	**192**	P	**P**	**05 42 41.2**	**+3.0**
	0.7nm,0.7s,baz=7.7,slow=6.6,SNR=6.1						
	0.7nm,0.7s						
NOA	**NORSAR Array B**	**67.09**	**338**	P	**P**	**05 42 38.2**	**-2.3**
	0.4nm,0.9s,baz=43,slow=3.9,SNR=1.8						
	0.4nm,0.9s						
PDAR	**Pinedale Array**	**68.88**	**50**	P	**P**	**05 42 52.7**	**+0.6**
	0.3nm,0.5s,baz=289,slow=2.8,SNR=4.9						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**70.39**	**192**	P	**P**	**05 43 05.5**	**+4.4**
	0.5nm,0.5s,baz=7.2,slow=5.8,SNR=11						
	0.5nm,0.5s						
TXAR	**Lajitas Array**	**81.88**	**56**	P	**P**	**05 44 06.8**	**+1.4**
	0.1nm,0.5s,baz=316,slow=3.8,SNR=2.5						
	0.1nm,0.5s						

IDC 26 05:35:31.5±20.0, 1°70N×128°33E, h376km±251km, mb2.9/6, mbtmp3.6/6, Error ellipse: s-maj=79.7km s-min=19.4km az=96.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**20.18**	**53**	P	**P**	**05 39 39.9**	**+0.4**
	96nm,0.9s,baz=253,slow=14,SNR=3.7						
WRA	**Warramunga Arr**	**22.30**	**165**	P	**P**	**05 39 58.0**	**-0.7**
	0.2nm,0.4s,baz=347,slow=11,SNR=5.7						
	0.2nm,0.4s						
ASAR	**Alice Springs**	**25.79**	**168**	P	**P**	**05 40 29.7**	**-0.4**
	0.3nm,0.7s,baz=359,slow=8.3,SNR=2.0						
	0.3nm,0.7s						
STKA	**Stephens Creek**	**35.68**	**160**	P	**P**	**05 41 56.8**	**+0.9**
	2.3nm,0.9s,baz=322,slow=10.0,SNR=3.2						
	2.3nm,0.9s						
SONM	**Songino Array**	**49.73**	**341**	P	**P**	**05 43 46.3**	**-0.9**
	0.4nm,0.5s,baz=145,slow=5.3,SNR=2.0						
	0.4nm,0.5s						
MKAR	**Makanchi Array**	**60.13**	**325**	P	**P**	**05 45 01.1**	**+0.4**
	0.8nm,0.5s,baz=122,slow=7.9,SNR=9.0						
	0.8nm,0.5s						
KURBB	**Kurchatov Arra**	**64.30**	**327**	P	**P**	**05 45 27.6**	**-0.4**
	0.7nm,0.7s,baz=124,slow=6.6,SNR=5.6						
	0.7nm,0.7s						

*NEIC **26** 05:38:54.8±2.0, 28°47N±0°04×57°03E±0°07, h10km±1km, Error ellipse: s-maj=11.4km s-min=4.1km az=239.0*
*MOS **26** 05:38:54.1±1.0, 28°38N×56°96E, h24km, mb4.6/16, Error ellipse: s-maj=11.6km s-min=5.9km az=116.9*
*TEH **26** 05:38:55.7, 28°54N×57°16E, h14km, ML4.1*
*DSN **26** 05:38:57.2±2.1, 28°49N×56°81E, h10km, ML3.7/11, Error ellipse: s-maj=27.5km s-min=15.7km az=70.0*
*IDC **26** 05:38:59.6±2.4, 28°47N×57°01E, h49km±24km, mb3.7/16, mbtmp3.9/19, ML4.0/4, MS3.4/6, Error ellipse: s-maj=19.8km s-min=17.3km az=51.0*
*OMAN **26** 05:39:04.3±1.1, 28°07N×57°22E, h33km, mb4.3/5, ml4.0/14, Error ellipse: s-maj=10.3km s-min=6.7km az=174.0*
ISC 26 05:38:58.5±0.5, 28°49N±0°04×57°18E±0°04, h40km±7km, n168, σ1s47/175, mb4.2/40, MS3.6/7, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KHNJ	**Kahnooj**	**0.71**	**139**	Pg	**Pn**	**05 39 10.1**	**-2.0**
KHNJ					**Sn**	**05 39 23.8**	**+2.0**
KHNJ	**Kahnooj**	**0.71**	**139**	*e*Pg	**Pn**	**05 39 10.2**	**-1.9**
IBND	**Bandar-abas**	**1.18**	**209**	*e*Pg	**Pn**	**05 39 19.3**	**+0.8**
IBND				*e*Sg	**Sn**	**05 39 37.3**	**+4.0**
IBND				*e*		05 39 39.1	
	comp=Z,58μm,0.3s						
NGRK	**Negar Kerman**	**1.22**	**341**		**Pn**	**05 39 17.9**	**-1.5**
NGRK	**Negar Kerman**	**1.22**	**341**	*e*Pg	**Pn**	**05 39 17.8**	**-1.6**
NGRK				*e*Sg	**Sn**	**05 39 34.1**	**-0.8**
NGRK				*e*		05 39 34.9	
	comp=Z,46μm,0.3s						
KBAM	**BAM**	**1.29**	**60**	*e*Pg	**Pn**	**05 39 19.6**	**-0.5**
GENO	**Geno**	**1.40**	**220**	*e*Pg	**Pn**	**05 39 22.3**	**+0.6**
GENO				*e*Sg	**Sn**	**05 39 41.8**	**+2.7**
GENO				*e*		05 39 46.3	
	comp=Z,36μm,0.4s						
CHMN	**Cheshme madani**	**1.41**	**13**	*e*Pg	**Pn**	**05 39 21.9**	**0.0**
CHMN				*e*		05 39 42.7	
	comp=Z,23μm,0.3s						
KHGB	**Koh Gabri**	**1.98**	**342**	*e*Pn	**Pn**	**05 39 30.6**	**+0.9**
SHME	**Shamm**	**2.60**	**201**	P	**Pn**	**05 39 40.2**	**+2.2**
SHME	**Shamm**	**2.60**	**201**	*e*P	**Pn**	**05 39 38.2**	**+0.2**
	SNR=12						
LAR1	**LAR**	**2.61**	**252**	*e*Pn	**Pn**	**05 39 38.7**	**+0.5**
BANOM	**Banah**	**2.67**	**197**	P	**Pn**	**05 39 39.6**	**+0.5**
BANOM	**Banah**	**2.67**	**197**	*e*P	**Pn**	**05 39 39.1**	**0.0**
	SNR=20						
BANOM				S	**Sn**	**05 40 11.7**	**+1.5**
JASK	**Jask - Hormozg**	**2.68**	**167**	*e*Pn	**Pn**	**05 39 40.4**	**+1.3**
JASK	**Jask - Hormozg**	**2.68**	**167**	P	**Pn**	**05 39 40.3**	**+1.1**
MASF	**Masafi**	**3.23**	**197**	P	**Pn**	**05 39 49.0**	**+2.2**
MSFE	**Esma-Masafi**	**3.25**	**197**	P	**Pn**	**05 39 47.6**	**+0.7**
IBAF	**Bafgh**	**3.40**	**336**	*e*Pn	**Pn**	**05 39 50.3**	**+1.2**
IBAF				*e*		05 40 03.2	
	comp=Z,3μm,0.3s						
UOSS	**Minazif**	**3.63**	**194**		**Pn**	**05 39 50.5**	**-1.8**
ORTC				*e*S	Sn	05 30 59.2	-0.4
ORTC				*i*		05 31 04.0	
	comp=Z,67nm,0.3s						
PLMC	**San Jos del P**	**3.65**	**239**	*e*S	Sn	05 31 01.5	-0.3
SJCC	**San Jacinto, C**	**3.68**	**327**	*e*P	Pn	05 30 16.4	-2.7
SJCC				*e*S	Sn	05 30 57.8	-4.8
SJCC				*i*		05 31 12.4	
	comp=Z,31nm,0.6s						
CRJC	**Cerrejon, Guaj**	**4.20**	**3**	*e*P	Pn	05 30 23.0	-3.1
CRJC				*e*S	Sn	05 31 09.9	-5.0
CRJC				*i*		05 31 19.8	
	comp=Z,36nm,0.2s						

UOSS	**Minazif**	**3.63**	**194**	P		**Pn**	**05 39 53.0**	**+0.7**
UOSS	**Minazif**	**3.63**	**194**	P		**Pn**	**05 39 53.2**	**+1.0**
QIR1	**Qir**	**3.64**	**271**	*e*Pn		**Pn**	**05 39 52.8**	**+0.4**
IMEH	**Mehriz**	**3.65**	**323**	*e*Pn		**Pn**	**05 39 53.5**	**+0.8**
IMEH				*e*			05 40 06.4	
	comp=Z,2µm,0.4s							
LMD1	**Lamerd**	**3.73**	**253**	*e*Pn		**Pn**	**05 39 54.2**	**+0.6**
LMD1				*e*			05 40 44.8	
	comp=Z,6µm,0.5s							
NAZ	**Nazwa, Dubai**	**3.74**	**202**	P		**Pn**	**05 39 55.1**	**+1.4**
NAZ	**Nazwa, Dubai**	**3.74**	**202**	*i* P		**Pn**	**05 39 54.5**	**+0.8**
	SNR=9.3							
HATD	**Hatta, Dubai**	**3.77**	**195**	P		**Pn**	**05 39 55.9**	**+1.9**
HATD	**Hatta, Dubai**	**3.77**	**195**	P		**Pn**	**05 39 55.7**	**+1.6**
NHDN	**Nehbandan**	**3.82**	**40**	*e*Pn		**Pn**	**05 39 58.0**	**+3.1**
NHDN				*e*			05 41 08.0	
	comp=Z,6µm,0.4s							
ASHO	**Ashiyiah**	**3.92**	**195**	P		**Pn**	**05 39 58.3**	**+2.1**
ASHO	**Ashiyiah**	**3.92**	**195**	*i* P		**Pn**	**05 39 57.5**	**+1.3**
	SNR=23							
FAQ	**Al Faqa, Dubai**	**3.99**	**201**	P		**Pn**	**05 39 58.8**	**+1.7**
FAQ				S		**Sn**	**05 40 42.2**	**-0.5**
FAQ	**Al Faqa, Dubai**	**3.99**	**201**	*i* P		**Pn**	**05 39 57.8**	**+0.7**
	SNR=18							
CHBR	**Chabahar**	**4.12**	**134**	*e*Pn		**Pn**	**05 40 00.3**	**+1.4**
CHBR				*e*			05 40 10.4	
	comp=Z,99nm,0.3s							
ASUD	**Al Ashush, Dub**	**4.19**	**204**	P		**Pn**	**05 40 00.9**	**+1.1**
ASUD	**Al Ashush, Dub**	**4.19**	**204**	*i* P		**Pn**	**05 40 01.0**	**+1.1**
	SNR=51							
IKOO	**Kooshah**	**4.23**	**21**	*e*Pn		**Pn**	**05 40 02.1**	**+1.5**
IKOO				*e*			05 40 22.8	
	comp=Z,3µm,0.3s							
SOHO	**SOHO**	**4.37**	**188**	P		**Pn**	**05 39 60.0**	**-2.4**
SOHO	**SOHO**	**4.37**	**188**	P		**Pn**	**05 40 01.0**	**-1.4**
AJN	**Ajban**	**4.38**	**207**	*i* P		**Pn**	**05 40 02.9**	**+0.5**
	SNR=8.6							
ICHK	**Chekchek**	**4.45**	**328**	*e*			05 40 19.9	
	comp=Z,1µm,0.5s							
ICHK				*e*Pn		**Pn**	**05 40 05.3**	**+1.7**
ALNE	**Al Ain**	**4.59**	**197**	P		**Pn**	**05 40 06.6**	**+1.1**
NGCH	**Negor - Chabah**	**4.71**	**131**	*e*Pn		**Pn**	**05 40 08.9**	**+1.9**
NGCH	**Negor - Chabah**	**4.71**	**131**	P		**Pn**	**05 40 08.6**	**+1.6**
NGCH				S		**Sn**	**05 41 00.7**	**+0.4**
HOQ	**Hoqain**	**4.88**	**179**	P		**Pn**	**05 40 09.3**	**-0.1**
HOQ				S		**Sn**	**05 41 01.3**	**-3.4**
BIDO	**Bidbid**	**5.02**	**170**	P		**Pn**	**05 40 11.1**	**-0.1**
AFRZ	**Afriz**	**5.17**	**17**	*e*Pn		**Pn**	**05 40 15.4**	**+1.9**
AHBU	**AHRAM**	**5.19**	**276**	*e*Pn		**Pn**	**05 40 14.3**	**+0.8**
IRAM	**Ramesheh**	**5.32**	**310**	*e*Pn		**Pn**	**05 40 16.2**	**+0.7**
WSAR	**Wadi Sarin**	**5.39**	**166**	P		**Pn**	**05 40 16.6**	**+0.2**
	comp=Z,22nm,0.3s,baz=9.6,slow=13,SNR=31							
WSAR				S		**Sn**	**05 41 15.4**	**-1.7**
	comp=Z,72nm,0.5s,baz=152,slow=16,SNR=10							
WSAR	**Wadi Sarin**	**5.39**	**166**	P		**Pn**	**05 40 17.0**	**+0.7**
KLNJ	**Kolanjah**	**5.47**	**299**	*e*Pn		**Pn**	**05 40 18.0**	**+0.2**
KLNJ				*e*			05 41 32.5	
	comp=Z,1µm,0.3s							
ANAR	**Anarak**	**5.55**	**329**	*e*Pn		**Pn**	**05 40 19.5**	**+0.8**
MZWR	**Madinat Zayed**	**5.56**	**213**	P		**Pn**	**05 40 20.7**	**+2.0**
MZWR				S		**Sn**	**05 41 19.7**	**-1.8**
UMZA	**Um Al Zommool**	**6.03**	**198**	P		**Pn**	**05 40 26.1**	**+1.0**
WBK	**Wadi Bani Khal**	**6.07**	**164**	P		**Pn**	**05 40 25.7**	**0.0**
WBK				S		**Sn**	**05 41 31.1**	**-2.9**
IBRJ	**Brojen**	**6.16**	**305**	*e*Pn		**Pn**	**05 40 27.9**	**+0.8**
MZR	**Muzera**	**6.40**	**212**	P		**Pn**	**05 40 30.1**	**-0.2**
JLN	**Jalan Bani Buh**	**6.62**	**162**	P		**Pn**	**05 40 33.9**	**+0.6**
IKLH	**Kolahrood**	**6.81**	**316**	*e*Pn		**Pn**	**05 40 36.6**	**+0.5**
IPIR	**Pirpir**	**6.85**	**309**	*e*Pn		**Pn**	**05 40 37.3**	**+0.6**
HRA	**Herat**	**7.30**	**35**	Pn		**Pn**	**05 40 40.1**	**-2.7**
MHTO	**MHTO**	**7.50**	**174**	P		**Pn**	**05 40 46.1**	**+0.8**
MHTO				S		**Sn**	**05 42 08.5**	**-0.7**
AMIS	**Naft Sefid**	**7.54**	**297**	*e*Pn		**Pn**	**05 40 45.1**	**-0.8**
GEYT	**Alibeck**	**9.45**	**5**	P		**Pn**	**05 41 14.6**	**+2.5**
	comp=Z,0.4nm,0.3s,baz=206,slow=16,SNR=6.1							
GEYT				LR		LR	05 45 20.2	
	comp=Z,131nm,18.4s,baz=160,slow=40							
	comp=Z,3.4nm,0.6s							
GEYT	**Alibeck**	**9.45**	**5**			**Pn**	**05 41 09.3**	**-2.8**
GYA0	**ALIBECK ARRAY**	**9.45**	**5**	P		**Pn**	**05 41 14.0**	**+1.9**
GYA0B	**ALIBECK ARRAY**	**9.45**	**5**	Pn		**Pn**	**05 41 08.4**	**-3.7**
DOK	**Doka**	**10.21**	**197**	P		**Pn**	**05 41 22.9**	**+0.3**
DOK				S		**Sn**	**05 43 11.9**	**-3.9**
WHFO	**Wadi Hawf**	**10.97**	**197**	P		**Pn**	**05 41 32.8**	**-0.2**
RAYN	**Ar Rayn**	**11.61**	**247**			Pn	05 41 37.0	-4.7
RAYN	**Ar Rayn**	**11.61**	**247**	P		Pn	05 41 37.0	-4.7
RAYN	**Ar Rayn**	**11.61**	**247**	*i* P		Pn	05 41 37.1	-4.5
	SNR=30							
GNI	**Garni**	**15.50**	**322**	P		**P**	**05 42 38.5**	**+0.2**
	comp=Z,8.7nm,0.6s,baz=223,slow=21,SNR=5.0							
GNI	**Garni**	**15.50**	**322**	*i* P		**Pn**	**05 42 32.8**	**-1.6**
GURO	**Guroymak-BITLI**	**16.12**	**312**	P		**Pn**	**05 42 43.8**	**+1.6**
GURO				IAmb		IAmb	05 42 47.2	
	comp=Z,9.5nm,0.8s							
ZEI	**Tsey**	**17.86**	**327**	*e*P		**P**	**05 43 05.5**	**+1.1**
ZEI				pmax		pmax		
	comp=Z,9.0nm,0.8s							
NCK	**Nalchik**	**18.54**	**327**	*i* P		**P**	**05 43 11.9**	**+0.2**
KBZ	**Khabaz**	**19.05**	**327**	P		**Pn**	**05 43 18.3**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=164,slow=7.4,SNR=1.9							
	comp=Z,0.8nm,0.4s							
KBZ	**Khabaz**	**19.05**	**327**	*i* P		**P**	**05 43 16.0**	**-1.2**
KBZ				pmax		pmax		
	comp=Z,2.0nm,0.8s							
SHA1	**Shidzhatmaz**	**19.17**	**326**	*i* P		**P**	**05 43 18.0**	**-0.9**
PYA1	**Pyatigorsk**	**19.21**	**328**	*i* P		**P**	**05 43 17.6**	**-1.4**
MMAI	**Mount Meron Ar**	**19.25**	**289**	P		**P**	**05 43 20.1**	**+0.5**
	comp=Z,1.7nm,0.3s,baz=102,slow=13,SNR=4.0							
	comp=Z,1.6nm,0.4s							
KIV	**Kislovodsk**	**19.32**	**327**	*i* P		**P**	**05 43 21.0**	**+0.7**
KIV				pmax		pmax		
	comp=Z,6.0nm,0.6s							
AAK	**Ala-Archa**	**19.89**	**40**	*i* P		**Pn**	**05 43 29.1**	**+0.7**
AAK				pmax		pmax		
	comp=Z,7.0nm,2.1s							
BNN	**Bunyan**	**20.50**	**306**	P		**P**	**05 43 33.2**	**-0.1**
BNN				IAmb		IAmb	05 43 35.2	
	comp=Z,19nm,0.7s							
BOOM	**Boomskoye usch**	**20.64**	**42**	P		**P**	**05 43 35.2**	**+0.5**
BOOM	**Boomskoye usch**	**20.64**	**42**	P		**P**	**05 43 35.2**	**+0.5**
BOOM				pmax		pmax		
	comp=Z,3.0nm,1.0s							
ABKAR	**Akbulak array**	**20.85**	**5**	P		**P**	**05 43 37.5**	**+0.8**
AKTO	**Aktyubinsk**	**21.93**	**1**	P		**P**	**05 43 49.4**	**+1.0**
	comp=Z,3.3nm,0.7s,baz=168,slow=11,SNR=11							
	comp=Z,3.3nm,0.7s							
BR131	**Keskin Array S**	**22.42**	**306**	P		**P**	**05 43 53.0**	**-0.9**
BR131				IAmb		IAmb	05 43 55.7	
	comp=Z,10nm,0.9s							
BR131	**Keskin Array S**	**22.42**	**306**	P		**P**	**05 43 53.0**	**-0.9**
BR131				pmax		pmax		
	comp=Z,10.0nm,0.9s							
BRTR	**Keskin Array B**	**22.42**	**306**	P		**P**	**05 43 53.3**	**-0.7**
	comp=Z,6.2nm,0.9s,baz=124,slow=11,SNR=29							
BRTR				LR		LR	05 54 25.5	
	comp=Z,49nm,21.3s,baz=116,slow=42							
	comp=Z,6.2nm,0.9s							
BRTR	**Keskin Array B**	**22.42**	**306**	P		**P**	**05 43 52.0**	**-1.9**
BRTR	**Keskin Array B**	**22.42**	**306**	*i* P		**P**	**05 43 53.2**	**-0.7**
BRTR				pmax		pmax		
	comp=Z,7.0nm,0.9s							
ANN	**Anapa**	**22.63**	**321**	*e*P		**P**	**05 43 53.8**	**-2.0**
ANN				*e**PP		pP	05 43 56.8	-10
ANN				*e*S		**S**	**05 48 03.8**	**+2.9**
ANN				pmax		pmax		
	comp=Z,52nm,1.1s							
BORA	**Eskisehir**	**24.77**	**304**	P		**P**	**05 44 15.8**	**-0.8**
BORA				IAmb		IAmb	05 44 17.2	
	comp=Z,8.3nm,0.7s							
BELG	**Belogornoye**	**24.92**	**346**	P		**P**	**05 44 17.3**	**-0.3**
	comp=Z,7.5nm,0.6s,baz=319,slow=1.7,SNR=5.1							
	comp=Z,7.5nm,0.6s							
IDI	**Anoyia**	**28.16**	**292**	P		**P**	**05 44 46.7**	**-0.4**
	comp=Z,5.6nm,0.9s,baz=274,slow=7.6,SNR=1.4							
IDI				LR		LR	05 59 14.3	
	comp=Z,33nm,21.3s,baz=272,slow=43							
	comp=Z,5.6nm,0.9s							
WMQ	**Urumqi**	**28.80**	**50**	*e*P		P	05 44 58.0	+5.2
WMQ				LR		LR		
	comp=Z,140nm,20.3s							
OBN	**Obninsk**	**30.49**	**337**	*i* P		**P**	**05 45 07.3**	**-0.1**
OBN				*i*			05 46 10.2	
OBN				pmax		pmax		
	comp=Z,4.0nm,0.8s							

AKASG	**Malin Array Be**	**30.61**	**324**	P		**P**	**05 45 07.2**	**-1.4**
	comp=Z,1.0nm,0.5s,baz=129,slow=8.6,SNR=8.5							
	comp=Z,1.0nm,0.5s							
ITM	**Ithomi**	**30.73**	**296**	P		**P**	**05 45 08.1**	**-1.8**
BURAR	**Bucovina Array**	**31.28**	**316**	P		**P**	**05 45 13.9**	**-0.8**
BURAR	**Bucovina Array**	**31.28**	**316**	P		**P**	**05 45 13.9**	**-0.8**
BUR08	**Bucovina Ar. S**	**31.30**	**316**	P		**P**	**05 45 13.8**	**-1.1**
ZAA0	**Zalesovo Array**	**32.47**	**31**	P		**P**	**05 45 28.2**	**+3.3**
ZAA0				IAmb		IAmb	05 45 39.3	
	comp=Z,4.7nm,1.4s							
ZALV	**Zalesovo Beam**	**32.47**	**31**	P		**P**	**05 45 25.9**	**+1.0**
	comp=Z,0.5nm,0.4s,baz=246,slow=11,SNR=4.1							
	comp=Z,0.5nm,0.4s							
ZALV	**Zalesovo Beam**	**32.47**	**31**	P		**P**	**05 45 29.0**	**+4.1**
ZALV	**Zalesovo Beam**	**32.47**	**31**	*i* P		**P**	**05 45 28.3**	**+3.4**
ZALV				pmax		pmax		
	comp=Z,1.0nm,0.4s							
KOLS	**Kolonicke sedl**	**33.62**	**317**	*e*P		**P**	**05 45 35.6**	**+0.5**
KOLS				pmax		pmax		
	comp=Z,13nm,0.7s							
KOLS	**Kolonicke sedl**	**33.62**	**317**	*e*P		**P**	**05 45 35.6**	**+0.5**
SCTE	**Santa Cesarea**	**33.77**	**300**	P		**P**	**05 45 35.1**	**-1.3**
TIP	**Timpagrande**	**34.98**	**298**	P		**P**	**05 45 46.2**	**-0.8**
OJC	**Ojcow**	**35.62**	**318**	P		**P**	**05 45 51.2**	**-1.1**
OJC	**Ojcow**	**35.62**	**318**	P		**P**	**05 45 51.2**	**-1.1**
OJC				pmax		pmax		
	comp=Z,8.0nm,0.6s							
CUC	**Castrocucco**	**35.78**	**300**	P		**P**	**05 45 53.9**	**0.0**
CUC				IAmb		IAmb	05 46 16.3	
	comp=Z,6.3nm,1.3s							
VALR	**Valaam**	**37.25**	**339**	*i* P		**P**	**05 46 05.5**	**-0.5**
VALR				pmax		pmax		
	comp=Z,6.0nm,0.9s							
DPC	**Dobruska-Polom**	**37.74**	**317**	*e*P		**P**	**05 46 09.1**	**-1.3**
DPC	**Dobruska-Polom**	**37.74**	**317**	*e*P		**P**	**05 46 09.1**	**-1.3**
OSTC	**Ostas**	**37.87**	**317**	*e*P		**P**	**05 46 10.5**	**-1.0**
CHVC	**Chvalec**	**37.98**	**317**	*e*P		**P**	**05 46 11.7**	**-0.7**
NRCA	**Norcia**	**38.12**	**304**	P		**P**	**05 46 13.3**	**-0.5**
NRCA				IAmb		IAmb	05 46 14.3	
	comp=Z,3.1nm,0.8s							
CKRC	**Cesky Krumlov**	**38.52**	**314**	*e*P		**P**	**05 46 16.6**	**-0.3**
FIA1	**FINESS Array S**	**38.90**	**337**	P		**P**	**05 46 20.5**	**+0.6**
FIA1				IAmb		IAmb	05 46 22.6	
	comp=Z,6.2nm,1.2s							
FINES	**FINESS Array B**	**38.90**	**337**	P		**P**	**05 46 19.1**	**-0.7**
	comp=Z,2.4nm,0.6s,baz=137,slow=10,SNR=31							
	comp=Z,2.4nm,0.6s							
FINES	**FINESS Array B**	**38.90**	**337**	P		**P**	**05 46 19.0**	**-0.9**
FINES	**FINESS Array B**	**38.90**	**337**	*i* P		**P**	**05 46 19.3**	**-0.6**
FINES				pmax		pmax		
	comp=Z,2.0nm,0.6s							
GERES	**GERESS Array B**	**38.91**	**314**	P		**P**	**05 46 19.3**	**-1.0**
	comp=Z,0.8nm,0.7s,baz=108,slow=8.6,SNR=11							
	comp=Z,0.8nm,0.7s							
GERES	**GERESS Array B**	**38.91**	**314**	P		**P**	**05 46 18.5**	**-1.8**
KHC	**Kasperske Hory**	**39.06**	**314**	P		**P**	**05 46 20.1**	**-1.4**
KHC				IAmb		IAmb	05 46 21.3	
	comp=Z,3.9nm,0.7s							
KHC	**Kasperske Hory**	**39.06**	**314**	*i* P		**P**	**05 46 19.6**	**-1.9**
KHC				pmax		pmax		
	comp=Z,9.0nm,0.7s							
KHC	**Kasperske Hory**	**39.06**	**314**	*e*P		**P**	**05 46 20.1**	**-1.4**
CLL	**Collm**	**40.04**	**317**	*i* P		**P**	**05 46 28.3**	**-1.2**
CLL				pmax		pmax		
	comp=Z,4.0nm,0.8s							
CLL	**Collm**	**40.04**	**317**	*i* P		**P**	**05 46 28.3**	**-1.2**
	comp=Z,4.0nm,0.8s							
CLL				L		L	06 24 00.0	
	comp=Z,100nm,20.6s							
MOTA	**Moosalm**	**40.26**	**311**	*i* P		**P**	**05 46 29.6**	**-2.0**
	comp=Z,1.2nm,0.3s							
SALO	**Salr**	**40.36**	**308**	P		**P**	**05 46 32.7**	**+0.4**
FETA	**Feichten**	**40.45**	**310**	*e*P		**P**	**05 46 32.0**	**-1.3**
	comp=Z,0.6nm,0.3s							
FUORN	**Ofenpass-Fuorn**	**40.70**	**309**	P		**P**	**05 46 34.6**	**-0.8**
DAVA	**Damuels**	**41.07**	**310**	*e*P		**P**	**05 46 36.7**	**-1.6**
	comp=Z,3.1nm,0.3s							
ULN	**Ulaanbaatar**	**42.88**	**49**	*i* P		**P**	**05 46 52.9**	**-0.2**
ULN				pmax		pmax		
	comp=Z,2.0nm,0.7s							
LPL	**La Plagne**	**42.99**	**307**	*e*P		**P**	**05 46 53.1**	**-1.0**
LPL				pmax		pmax		
	comp=Z,4.0nm,0.7s							
NB2	**NORSAR Subarra**	**44.58**	**330**	P		**P**	**05 47 04.9**	**-1.5**
	comp=Z,0.6nm,0.4s,baz=114,slow=7.9							
NOA	**NORSAR Array B**	**44.58**	**330**	P		**P**	**05 47 05.1**	**-1.4**
	comp=Z,0.6nm,0.6s,baz=116,slow=7.8,SNR=5.8							
	comp=Z,0.6nm,0.6s							
ARCES	**ARCESS Array B**	**44.96**	**345**	P		**P**	**05 47 08.7**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=138,slow=8.6,SNR=6.7							
	comp=Z,0.2nm,0.3s							
SSF	**Saint Saulge**	**45.35**	**309**	*e*P		**P**	**05 47 10.9**	**-1.8**
SSF				pmax		pmax		
	comp=Z,4.0nm,0.6s							
HHC	**Hu-ho-hao-te**	**45.73**	**59**	*e*P		**P**	**05 47 17.5**	**+1.6**
HHC				pmax		pmax		
	comp=Z,18nm,0.8s							
HHC				pmax		pmax		
	comp=Z,140nm,6.5s							
CAF	**Calviac**	**46.25**	**306**	*e*P		**P**	**05 47 18.5**	**-1.4**
CAF				pmax		pmax		
	comp=Z,7.0nm,0.8s							
LFF	**La Frestale**	**47.19**	**306**	*e*P		**P**	**05 47 25.9**	**-1.3**
LFF				pmax		pmax		
	comp=Z,10.0nm,0.6s							
XLT	**XiLinHaoTe**	**48.96**	**55**	*e*P		**P**	**05 47 43.0**	**+2.0**
XLT				pP		pP	05 47 47.0	-6.1
XLT				sP		sP	05 47 50.3	-7.6
XLT				pmax		pmax		
	comp=Z,10.0nm,1.0s							
XLT				pmax		pmax		
	comp=Z,120nm,4.7s							
ESDC	**Sonseca Array**	**50.98**	**300**	P		**P**	**05 47 55.8**	**-0.6**
	comp=Z,1.2nm,0.6s,baz=69,slow=7.3,SNR=12							
	comp=Z,1.2nm,0.6s							
TOA0	**Torodi Ar. Sit**	**53.62**	**266**	P		**P**	**05 48 13.8**	**-2.4**
TOA0				IAmb		IAmb	05 48 25.2	
	comp=Z,7.6nm,1.4s							
TORD	**Torodi Ar. Bea**	**53.62**	**266**	P		**P**	**05 48 14.5**	**-1.7**
	comp=Z,1.5nm,0.6s,baz=59,slow=7.3,SNR=9.9							
	comp=Z,1.5nm,0.6s							
TORD	**Torodi Ar. Bea**	**53.62**	**266**	P		**P**	**05 48 14.4**	**-1.8**
TORD				IAmb		IAmb	05 48 42.9	
	comp=Z,1.5nm,0.9s							
TIXI	**Tiksi**	**57.48**	**21**	P		**P**	**05 48 43.0**	**0.0**
	comp=Z,0.6nm,0.3s,baz=270,slow=23,SNR=2.3							
	comp=Z,0.6nm,0.3s							
TIXI	**Tiksi**	**57.48**	**21**	P		**P**	**05 48 42.3**	**-0.7**
TIXI				IAmb		IAmb	05 49 02.5	
	comp=Z,5.3nm,1.5s							
TIXI	**Tiksi**	**57.48**	**21**	P		**P**	**05 48 43.0**	**0.0**
KLR	**Kul'dur**	**59.21**	**47**	*i* P		**P**	**05 48 56.6**	**+1.1**
KLR				pmax		pmax		
	comp=Z,2.0nm,0.9s							
BORG	**Borgarnes**	**59.75**	**331**	LR		LR	06 17 30.4	
	comp=Z,31nm,18.4s,baz=354,slow=39							
SEY	**Seymchan**	**67.33**	**30**	LR		LR	06 21 38.6	
	comp=Z,63nm,19.6s,baz=176,slow=38							
INK	**Inuvik**	**83.17**	**4**	LR		LR	06 31 42.2	
	comp=Z,99nm,19.1s,baz=212,slow=38							
WRA	**Warramunga Arr**	**88.67**	**113**	P		**P**	**05 51 48.6**	**+0.6**
	comp=Z,0.3nm,0.8s,baz=316,slow=4.0,SNR=1.1							
	comp=Z,0.3nm,0.8s							
YKA	**Yellowknife Ar**	**89.10**	**356**	P		**P**	**05 51 49.0**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=1.9,slow=4.8,SNR=5.5							
	comp=Z,0.5nm,0.8s							
YKA	**Yellowknife Ar**	**89.10**	**356**	P		**P**	**05 51 48.6**	**-0.6**
ASAR	**Alice Springs**	**90.23**	**117**	P		**P**	**05 51 56.8**	**+1.5**
	comp=Z,0.3nm,0.8s,baz=284,slow=4.7,SNR=1.8							
	comp=Z,0.3nm,0.8s							
ASAR	**Alice Springs**	**90.23**	**117**	P		**P**	**05 51 54.1**	**-1.2**
TXAR	**Lajitas Array**	**119.66**	**341**	PKP		**PKiKP**	**05 57 46.0**	**+1.2**
	comp=Z,0.2nm,0.9s,baz=119,slow=1.1,SNR=1.7							

*INET **26** 05:41:50.6±0.5, 13˚.98N×88˚.70W, h95km±4km, MW3.3*
*SNET **26** 05:41:51.7±1.0, 12˚.98N×89˚.16W, h35km±3km, ML4.0*
*UCR **26** 05:41:51.7±1.0, 12˚.98N×89˚.16W, h34km±4km, ML4.0*
ISC 26 05:41:51.2±2.0, **12˚.94N**±0˚.09×**89˚.17W**±0˚.04, **h31**km±12km, **n76**, σ**0˚.34**/122, **2C-14D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LFRS	**El Faro**	**0.69**	**8**	*e*P		**Pn**	**05 42 04.5**		**-0.3**
LFRS	**El Faro**	**0.69**	**8**	*e*P		**Pn**	**05 42 04.5**		**-0.3**
SJTE	**Alcalda de S**	**0.69**	**13**	*e*P		**Pn**	**05 42 04.4**		**-0.5**
SJTE				*e*S		**Sb**	**05 42 14.2**		**+0.2**
SJTE	**Alcalda de S**	**0.69**	**13**	*e*P		**Pn**	**05 42 04.4**		**-0.5**
SJTE				*e*S		**Sb**	**05 42 14.2**		**+0.2**
COEG	**Centro de Oper**	**0.73**	**22**	*e*P		**Pn**	**05 42 05.0**		**-0.5**
COEG				*e*S		**Sb**	**05 42 15.4**		**+0.2**
COEG	**Centro de Oper**	**0.73**	**22**	*e*P		**Pn**	**05 42 05.0**		**-0.5**
COEG				*e*S		**Sb**	**05 42 15.4**		**+0.2**
COEG	**Centro de Oper**	**0.73**	**22**	*e*P		**Pn**	**05 42 05.0**		**-0.5**
ITCA	**Escuela Especi**	**0.74**	**351**	*e*P		**Pn**	**05 42 05.2**		**-0.4**
ITCA				*e*S		**Sb**	**05 42 15.9**		**+0.5**
ITCA	**Escuela Especi**	**0.74**	**351**	*e*P		**Pn**	**05 42 05.2**		**-0.4**
ITCA				*e*S		**Sb**	**05 42 15.9**		**+0.5**
SNET	**Serv Nac Est T**	**0.74**	**355**	*e*P		**Pn**	**05 42 05.3**		**-0.3**
SNET				*e*S		**Sb**	**05 42 15.6**		**0.0**
SNET				*i* Sg		**Sn**	**05 42 16.2**		**+0.2**
SNET	**Serv Nac Est T**	**0.74**	**355**	*e*P		**Pn**	**05 42 05.3**		**-0.3**
SNET				*e*S		**Sb**	**05 42 15.6**		**0.0**
SNET				*i* Sg		**Sn**	**05 42 16.2**		**+0.2**
SNET	**Serv Nac Est T**	**0.74**	**355**	*e*P		**Pn**	**05 42 05.5**		**-0.2**
AEIL	**Aeropuerto Ilo**	**0.75**	**4**	*e*P		**Pb**	**05 42 05.8**		**-0.1**
AEIL				*e*S		**Sb**	**05 42 16.3**		**+0.4**
AEIL	**Aeropuerto Ilo**	**0.75**	**4**	*e*P		**Pb**	**05 42 05.8**		**-0.1**
AEIL				*e*S		**Sb**	**05 42 16.3**		**+0.4**
UTEC	**Universidad Te**	**0.76**	**357**	*e*P		**Pn**	**05 42 05.5**		**-0.3**
UTEC				*e*S		**Sb**	**05 42 16.4**		**+0.4**
UTEC	**Universidad Te**	**0.76**	**357**	*e*P		**Pn**	**05 42 05.5**		**-0.3**
UTEC				*e*S		**Sb**	**05 42 16.4**		**+0.4**
SEMO	**Seminario San**	**0.76**	**356**	*e*P		**Pn**	**05 42 05.5**		**-0.4**
SEMO				*e*S		**Sb**	**05 42 16.2**		**+0.1**
JAYA	**Jayaque - finc**	**0.76**	**339**	*e*P		**Pn**	**05 42 05.7**		**-0.3**
JAYA				*e*S		**Sb**	**05 42 16.5**		**+0.3**
JAYA				IAML			05 42 17.3		
	comp=Z,9µm,0.2s								
JAYA	**Jayaque - finc**	**0.76**	**339**	*e*P		**Pn**	**05 42 05.7**		**-0.3**
JAYA				*e*S		**Sb**	**05 42 16.5**		**+0.3**
JAYA				IAML			05 42 17.3		
	comp=Z,9µm,0.2s								
IGN	**Direccin Gen**	**0.77**	**360**	*e*P		**Pn**	**05 42 05.6**		**-0.3**
IGN	**Direccin Gen**	**0.77**	**360**	*e*P		**Pn**	**05 42 05.6**		**-0.3**
UEES	**Universidad Ev**	**0.77**	**355**	*e*P		**Pn**	**05 42 05.9**		**-0.2**
UEES	**Universidad Ev**	**0.77**	**355**	*e*P		**Pn**	**05 42 05.9**		**-0.2**
UESS	**Universidad de**	**0.78**	**357**	*e*P		**Pn**	**05 42 05.9**		**-0.2**
UESS				*e*S		**Sb**	**05 42 17.2**		**+0.7**
UESS	**Universidad de**	**0.78**	**357**	*e*P		**Pn**	**05 42 05.9**		**-0.2**
UESS				*e*S		**Sb**	**05 42 17.2**		**+0.7**
PMON	**Piamonte**	**0.78**	**349**	*e*P		**Pn**	**05 42 06.1**		**-0.1**
PMON				*e*S		**Sb**	**05 42 17.6**		**+0.9**
PMON	**Piamonte**	**0.78**	**349**	*e*P		**Pn**	**05 42 06.1**		**-0.1**
PMON				*e*S		**Sb**	**05 42 17.6**		**+0.9**
UESV	**Universidad de**	**0.78**	**28**	*e*P		**Pn**	**05 42 05.8**	

JHJ	**Hachijo jima 2**	**2.75**	**230**	Pn		**Pn**	**05 51 28.2**	**+0.4**
	17nm,0.3s,baz=305,slow=20,SNR=6.0							
JHJ				Sn		**Sn**	**05 51 58.1**	**-2.8**
	58nm,0.3s,baz=64,slow=20,SNR=8.7							
	149nm,0.8s							
JAG	**Ashikaga**	**2.75**	**304**	P		**Pn**	**05 51 27.7**	**-0.2**
JRY	**Ryogami san**	**2.97**	**293**	P		**Pn**	**05 51 31.1**	**+0.1**
JFT	**Otama**	**3.03**	**329**	P		**Pn**	**05 51 31.3**	**-0.6**
JFT				eS		**Sn**	**05 52 03.5**	**-4.6**
JYN	**Shimob**	**3.12**	**282**	P		**Pn**	**05 51 32.8**	**-0.3**
MJAR	**Matsushiro Arr**	**3.69**	**297**	Pn		**Pn**	**05 51 40.1**	**-0.7**
	0.7nm,0.3s,baz=90,slow=21,SNR=15							
MJAR				Sn		**Sn**	**05 52 22.3**	**-1.9**
	0.3nm,0.3s,baz=163,slow=30,SNR=4.6							
MJAR				LR		LR	05 53 04.3	
	comp=Z,39nm,20.8s,baz=189,slow=39							
	2.9nm,0.3s							
JCJ	**Chichijima**	**7.80**	**181**	Pn		**Pn**	**05 52 37.1**	**-0.2**
	1.8nm,0.3s,baz=70,slow=23,SNR=2.6							
JCJ				Sn		**Sn**	**05 53 59.5**	**-6.0**
	2.7nm,0.3s,baz=122,slow=22,SNR=2.0							
	90nm,1.0s							
KSRS	**Korea Array**	**11.88**	**286**	Pn		**Pn**	**05 53 32.0**	**-1.1**
	0.1nm,0.3s,baz=99,slow=15,SNR=1.5							
KSRS				LR		LR	05 57 57.9	
	comp=Z,37nm,20.4s,baz=110,slow=37							
	0.4nm,0.4s							
SONM	**Songino Array**	**29.58**	**307**	P		**P**	**05 56 50.3**	**+1.4**
	0.6nm,0.5s,baz=111,slow=7.9,SNR=3.5							
	0.6nm,0.5s							
CMAR	**Chiang Mai Arr**	**41.70**	**258**	P		**P**	**05 58 32.9**	**+0.1**
	0.8nm,0.3s,baz=67,slow=6.9,SNR=5.0							
	0.8nm,0.3s							
MKAR	**Makanchi Array**	**45.86**	**304**	P		**P**	**05 59 06.9**	**+0.9**
	0.5nm,0.7s,baz=83,slow=10,SNR=4.6							
MKAR				LR		LR	06 17 53.8	
	comp=Z,39nm,20.2s,baz=88,slow=36							
	0.5nm,0.7s							
ILAR	**Eielson Array**	**50.91**	**31**	P		**P**	**05 59 46.1**	**+1.4**
	0.2nm,0.6s,baz=264,slow=7.3,SNR=2.6							
	0.2nm,0.6s							
WRA	**Warramunga Arr**	**55.08**	**189**	P		**P**	**06 00 16.9**	**+1.1**
	0.8nm,0.7s,baz=8.1,slow=7.5,SNR=13							
	0.8nm,0.7s							
ASAR	**Alice Springs**	**58.80**	**189**	P		**P**	**06 00 44.2**	**+1.9**
	0.4nm,0.8s,baz=7.8,slow=7.5,SNR=2.8							
	0.4nm,0.8s							
YKA	**Yellowknife Ar**	**65.28**	**30**	LR		LR	06 32 35.3	
	comp=Z,56nm,19.8s,baz=310,slow=38							
BELG	**Belogornoye**	**65.83**	**318**	LR		LR	06 31 30.6	
	comp=Z,40nm,19.6s,baz=164,slow=37							
FINES	**FINESS Array B**	**71.01**	**333**	P		**P**	**06 02 02.2**	**+0.9**
	1.4nm,0.9s,baz=67,slow=5.0,SNR=2.5							
	1.4nm,0.9s							
AKASG	**Malin Array Be**	**76.40**	**323**	P		**P**	**06 02 34.0**	**+0.9**
	0.7nm,0.6s,baz=46,slow=5.9,SNR=5.1							
	0.7nm,0.6s							
NB2	**NORSAR Subarra**	**76.41**	**338**	P		P	06 02 46.6	+14
	comp=Z,0.4nm,0.6s,baz=40,slow=5.6							
NOA	**NORSAR Array B**	**76.41**	**338**	P		**P**	**06 02 33.8**	**+0.8**
	comp=Z,0.6nm,0.8s,baz=59,slow=5.5,SNR=1.0							
	comp=Z,0.6nm,0.8s							
TXAR	**Lajitas Array**	**90.84**	**53**	P		**P**	**06 03 47.1**	**-0.6**
	comp=Z,0.1nm,0.6s,baz=297,slow=4.0,SNR=2.6							
	comp=Z,0.1nm,0.6s							
LPAZ	**La Paz**	**147.08**	**63**	PKPbc		**PKPab**	**06 10 29.1**	**-0.5**
	comp=Z,1.0nm,0.7s,baz=40,slow=4.9,SNR=4.3							

*IDC **26** 06:06:48.1±2.4, 47°.52N×92°.55E, h0km, mbtmp3.2/4, ML2.9/4, Error ellipse: s-maj=47.1km s-min=22.3km az=0.0*
*ASRS **26** 06:06:57.2±0.3, 48°.N±2°.×9°.2E±°, h11km, MLh4.2/13, Error ellipse: s-maj=4.1km s-min=2.5km az=167.6, confirmed*
ISC 26 06:06:51.0±1.2, 47°.44N±0°.07×92°.63E±0.04, h10km, n24, σ2s80/54, Mongolia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ERNS	**Erzin**	**3.28**	**30**	Pn		**Pn**	**06 07 45.0**	**+2.5**
ERNS				Sg		**Sn**	**06 08 24.7**	**+3.1**
CUR	**Chagan-Uzun**	**3.89**	**315**	Pn		**Pn**	**06 07 50.7**	**-0.2**
CUR				Pg		**Pb**	**06 08 00.4**	**+0.7**
CUR				S		Sn	06 08 28.5	-8.2
CUR				Sg		**Sb**	**06 08 45.4**	**-1.4**
DGZ	**Jazzator, Alta**	**4.13**	**305**	Pn		**Pn**	**06 07 54.7**	**+0.5**
DGZ				Pg		**Pb**	**06 08 03.9**	**+0.1**
DGZ				Sg		**Sb**	**06 08 53.2**	**-0.6**
AKAR	**Aktash**	**4.39**	**313**	Pn		**Pn**	**06 07 57.7**	**0.0**
AKAR				Pg		**Pb**	**06 08 10.9**	**+2.7**
AKAR				S		**Sn**	**06 08 47.6**	**-1.3**
AKAR				Sg		**Sb**	**06 09 00.7**	**-0.4**
ULGR	**Ulagan, Altay**	**4.43**	**318**	Pn		**Pn**	**06 07 59.3**	**+1.1**
ULGR				Pg		**Pb**	**06 08 08.2**	**-0.6**
ULGR				Sg		**Sb**	**06 09 04.1**	**+1.8**
CHBI	**Chibit, Altay**	**4.44**	**312**	Pn		**Pn**	**06 07 59.7**	**+1.2**
CHBI				Pg		**Pb**	**06 08 11.4**	**+2.3**
CHBI				Sg		**Sb**	**06 09 04.7**	**+2.0**
KNGR	**Kungurtug, Tuv**	**4.51**	**44**	Pn		**Pn**	**06 08 03.6**	**+4.1**
KNGR				Pg		**Pb**	**06 08 09.8**	**-0.5**
KNGR				Sg		**Sb**	**06 09 07.6**	**+2.8**
ARDR	**Aradan**	**5.17**	**5**	Pn		**Pn**	**06 08 07.9**	**-0.5**
ARDR				Pg		**Pb**	**06 08 19.6**	**-1.9**
ARDR				Sg		**Sb**	**06 09 18.1**	**-5.5**
DJOS	**Djoyskaya Sosn**	**5.42**	**352**	Pg		**Pb**	**06 08 26.6**	**+0.9**
DJOS				Sg		**Sb**	**06 09 28.1**	**-2.6**
DJO	**Djoy, Khakassi**	**5.42**	**351**	Pg		**Pb**	**06 08 25.3**	**-0.5**
DJO				Sg		**Sb**	**06 09 27.6**	**-3.3**
CERR	**Cheremushki**	**5.48**	**352**	Pg		**Pb**	**06 08 26.1**	**-0.5**
CERR				Sg		**Sb**	**06 09 32.2**	**-0.1**
ARTR	**Artybash**	**5.58**	**323**	Pn		**Pn**	**06 08 14.6**	**+0.6**
ARTR				Pg		**Pb**	**06 08 28.5**	**+0.1**
ARTR				Sg		**Sb**	**06 09 39.9**	**+4.6**
TASR	**Tashtagol**	**6.14**	**332**	Pn		**Pn**	**06 08 22.3**	**+0.6**
TASR				Pg		**Pb**	**06 08 37.5**	**-0.5**
TASR				Sg		**Sb**	**06 09 54.6**	**+3.2**
UKR	**Ust'-Kan**	**6.23**	**307**	Pn		**Pn**	**06 08 26.5**	**+3.5**
UKR				Pg		**Pb**	**06 08 41.7**	**+2.2**
UKR				Sg		**Sb**	**06 10 01.5**	**+7.5**
GALT	**Gorno-Altaysk,**	**6.26**	**319**	Sg		**Sb**	**06 10 01.3**	**+6.3**
LUZB	**Luzhba, Kemero**	**6.67**	**340**	Pg		**Pb**	**06 08 46.4**	**-0.5**
LUZB				Sg		**Sb**	**06 10 09.0**	**+2.5**
MOY	**Mondy**	**6.89**	**49**	Pg		**Pb**	**06 08 52.4**	**+1.7**
MOY				Sg		Sb	06 10 22.2	+9.2
MKAR	**Makanchi Array**	**7.09**	**269**	Pn		**Pn**	**06 08 33.3**	**-1.5**
	0.2nm,0.3s,baz=88,slow=16,SNR=7.7							
MKAR				Pg		Pb	06 08 47.2	-6.9
	0.4nm,0.3s,baz=82,slow=15,SNR=6.2							
MKAR				Lg		Lg	06 10 27.7	
	1.1nm,0.3s,baz=79,slow=37,SNR=3.6							
	0.3nm,0.4s							
MKAR	**Makanchi Array**	**7.09**	**269**	Pn		**Pn**	**06 08 36.5**	**+1.7**
MKAR				Sg		**Sg**	**06 10 32.9**	**-5.5**
ELT	**Eltsovka**	**7.12**	**327**	Pn		**Pn**	**06 08 33.6**	**-1.5**
ELT				Pg		**Pb**	**06 08 56.0**	**+1.4**
ELT				Sg		**Sb**	**06 10 25.1**	**+5.7**
MAKZ	**Makanchi**	**7.30**	**269**	Pg		**Pg**	**06 09 09.9**	**-0.7**
MAKZ				Sg		**Sg**	**06 10 38.6**	**-6.5**
ZALV	**Zalesovo Beam**	**8.19**	**326**	Pn		Pn	06 08 45.2	-4.5
	0.4nm,0.3s,baz=144,slow=14,SNR=6.5							
ZALV				Pg		**Pb**	**06 09 15.0**	**+2.3**
	0.4nm,0.3s,baz=150,slow=15,SNR=5.5							
ZALV				Lg		Lg	06 10 56.6	
	0.4nm,0.3s,baz=144,slow=27,SNR=1.8							
	1.3nm,0.5s							
SONM	**Songino Array**	**9.30**	**83**	Pn		**Pn**	**06 09 04.4**	**-0.7**
	0.1nm,0.3s,baz=277,slow=15,SNR=1.4							
SONM				Pg			06 09 37.8	
	0.2nm,0.3s,baz=277,slow=15,SNR=2.2							
SONM				Lg		Lg	06 11 39.6	
	0.8nm,0.3s,baz=266,slow=27,SNR=4.3							
	0.2nm,0.4s							
KURBB	**Kurchatov Arra**	**9.79**	**294**	Pn		**Pn**	**06 09 09.7**	**-2.1**
	0.3nm,0.3s,baz=100,slow=14,SNR=23							
KURBB				Sn		Sn	06 10 53.0	-8.8
	0.1nm,0.3s,baz=103,slow=24,SNR=4.3							
KURBB				Lg		Lg	06 11 52.3	
	0.2nm,0.3s,baz=98,slow=33,SNR=8.8							
	1.7nm,0.4s							

IDC 26 06:34:21.9±2.2, 4°.06N×126°.45E, h0km, mb3.7/3, mbtmp3.7/3, 1C, Error ellipse: s-maj=196.7km s-min=24.3km az=66.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KCP	**Kidapawan**	**3.23**	**335**	⇑eP		Pg	06 35 22.0	-1.8
KCP				*i* S		Sg	06 36 03.0	-2.7
WRA	**Warramunga Arr**	**25.08**	**162**	P		P	06 39 48.3	-0.1
	0.5nm,0.4s,baz=341,slow=11,SNR=14							
	0.5nm,0.4s							
ASAR	**Alice Springs**	**28.50**	**166**	P		P	06 40 19.1	-0.1
	0.3nm,0.5s,baz=346,slow=6.7,SNR=8.0							
	0.3nm,0.5s							
MKAR	**Makanchi Array**	**57.13**	**325**	P		P	06 44 10.4	0.0
	0.6nm,0.4s,baz=124,slow=7.7,SNR=12							
	0.6nm,0.4s							

*IDC **26** 06:45:43.9±0.8, 23°.08S×68°.86W, h103km±4km, mb3.3/5, mbtmp3.8/9, Error ellipse: s-maj=22.5km s-min=16.5km az=49.0*
*GUC **26** 06:45:43.7±0.7, 23°.09S×69°.13W, h111km±4km, ML4.2*
*NEIC **26** 06:45:43.6±1.6, 23°.13S±0°.04×69°.17W±0°.05, h106km±4km, mb4.2/9, ML4.2(GUC), Error ellipse: s-maj=6.3km s-min=6.0km az=88.0*
*VAO **26** 06:45:44.7±0.6, 23°.12S×69°.10W, h104km, mb4.3*
ISC 26 06:45:43.3±0.5, 23°.15S±0°.04×69°.11W±0°.04, h102km±4km, n88, σ1s14/105, mb3.9/8, 5C-4D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PB15	**IPOC Station P**	**0.34**	**260**			**Pn**	**06 45 59.6**	**+1.0**
PB15	**IPOC Station P**	**0.34**	**260**	⇓*i*P		**Pn**	**06 45 59.5**	**+1.0**
PB15				*i* S		**Sn**	**06 46 11.4**	**+1.3**
LVC	**Limon Verde**	**0.57**	**19**	P		**Pn**	**06 46 01.0**	**+0.7**
	4μm,0.5s,baz=197,slow=5.9,SNR=5475							
LVC				LR		LR	06 46 11.0	
	comp=Z,117nm,19.6s,baz=101,slow=58							
LVC				S		**Sn**	**06 46 14.0**	**+1.0**
	6μm,0.4s,baz=59,slow=23,SNR=49							
LVC	**Limon Verde**	**0.57**	**19**	*e*P		**Pn**	**06 46 00.2**	**-0.1**
LVC				*i* S		**Sn**	**06 46 13.8**	**+0.8**
LVC	**Limon Verde**	**0.57**	**19**	*e*P		**Pn**	**06 46 00.7**	**+0.4**
PB06	**IPOC Station P**	**0.61**	**316**			**Pn**	**06 46 01.0**	**+0.6**
PB06					Sn	**Sn**	**06 46 13.5**	**+0.3**
PB06	**IPOC Station P**	**0.61**	**316**	⇓*i*P		**Pn**	**06 46 01.1**	**+0.6**
PB06				*i* S		**Sn**	**06 46 14.0**	**+0.8**
PB06				IAML			06 46 15.3	
	comp=N,14μm,0.4s							
AF01	**San Pedro de A**	**0.88**	**77**			**Pn**	**06 46 04.2**	**+1.1**
AF01					Sn	**Sn**	**06 46 19.6**	**+1.8**
AF01	**San Pedro de A**	**0.88**	**77**	⇓*i*P		**Pn**	**06 46 04.2**	**+1.1**
AF01				*i* S		**Sn**	**06 46 19.0**	**+1.2**
AF01				IAML			06 46 22.2	
	comp=E,10μm,0.3s							
PB04	**IPOC Station P**	**1.26**	**310**			**Pn**	**06 46 07.3**	**+0.4**
PB04	**IPOC Station P**	**1.26**	**310**	⇑*i*P		**Pn**	**06 46 07.3**	**+0.4**
PB04				*i* S		**Sn**	**06 46 24.7**	**-0.1**
PB04				IAML			06 46 27.4	
	comp=N,7μm,0.5s							
PB02	**IPOC Station P**	**1.96**	**338**			**Pn**	**06 46 15.4**	**-0.2**
PB02					Sn	**Sn**	**06 46 39.4**	**-0.8**
PB02	**IPOC Station P**	**1.96**	**338**	⇓*i*P		**Pn**	**06 46 15.6**	**0.0**
PB02				*i* S		**Sn**	**06 46 39.7**	**-0.5**
PB02				IAML			06 46 41.2	
	comp=E,4μm,0.2s							
GO02	**Mina Guanaco**	**2.05**	**192**			**Pn**	**06 46 17.5**	**+0.6**
GO02	**Mina Guanaco**	**2.05**	**192**	*e*P		**Pn**	**06 46 17.8**	**+0.8**
GO02				*i* S		**Sn**	**06 46 43.9**	**+1.4**
GO02				IAML			06 46 45.1	
	comp=N,812nm,0.2s							
PATCX	**Punta Patache**	**2.51**	**337**			**Pn**	**06 46 21.7**	**-1.1**
PATCX	**Punta Patache**	**2.51**	**337**	⇑*i*P		**Pn**	**06 46 21.5**	**-1.3**
PATCX				IAML			06 46 56.7	
	comp=N,1μm,0.3s							
TA01	**Diego Aracena**	**2.76**	**339**			**Pn**	**06 46 24.5**	**-1.4**
TA01	**Diego Aracena**	**2.76**	**339**	⇑*i*P		**Pn**	**06 46 24.7**	**-1.2**
TA01				IAML			06 47 17.6	
	comp=N,757nm,0.4s							
PB08	**IPOC Station P**	**3.00**	**359**			**Pn**	**06 46 29.4**	**-0.1**
PB08	**IPOC Station P**	**3.00**	**359**	*e*P		**Pn**	**06 46 29.4**	**-0.1**
PB08				IAML			06 47 07.7	
	comp=E,471nm,0.6s							
TA02	**Huaiquique**	**3.02**	**342**			**Pn**	**06 46 28.3**	**-1.1**
TA02	**Huaiquique**	**3.02**	**342**	*e*P		**Pn**	**06 46 28.4**	**-1.0**
TA02				IAML			06 47 05.6	
	comp=N,990nm,0.2s							
AC01	**Pan de Azucar**	**3.28**	**204**			**Pn**	**06 46 32.1**	**-0.7**
AC01	**Pan de Azucar**	**3.28**	**204**	*e*P		**Pn**	**06 46 32.1**	**-0.7**
AC01				IAML			06 47 10.3	
	comp=E,202nm,0.7s							
PB11	**IPOC Station P**	**3.41**	**351**			**Pn**	**06 46 33.8**	**-1.0**
PB11	**IPOC Station P**	**3.41**	**351**	⇑*i*P		**Pn**	**06 46 33.7**	**-1.1**
PB11				IAML			06 47 43.1	
	comp=E,672nm,0.4s							
GO01	**Chusmiza**	**3.46**	**359**			**Pn**	**06 46 35.3**	**-0.6**
GO01	**Chusmiza**	**3.46**	**359**	*e*P		**Pn**	**06 46 35.2**	**-0.6**
AC02	**Maricunga**	**3.67**	**180**			**Pn**	**06 46 39.4**	**+0.8**
AC02	**Maricunga**	**3.67**	**180**	⇑*i*P		**Pn**	**06 46 39.6**	**+1.0**
GO03	**Copiap**	**4.54**	**193**			**Pn**	**06 46 48.7**	**-1.2**
GO03	**Copiap**	**4.54**	**193**	*e*P		**Pn**	**06 46 48.5**	**-1.4**
PB12	**IPOC Station P**	**4.65**	**346**	Pn		**Pn**	**06 46 49.3**	**-2.2**
PB16	**IPOC Station P**	**4.80**	**356**	Pn		**Pn**	**06 46 54.0**	**+0.1**
AC04	**Llanos de Chal**	**5.33**	**199**	Pn		**Pn**	**06 46 57.8**	**-2.8**
LCO	**Las Campanas**	**6.01**	**193**	Pn		**Pn**	**06 47 06.9**	**-3.1**
CO01	**Juntas del Tor**	**6.86**	**187**	Pn		**Pn**	**06 47 20.0**	**-1.5**
LPAZ	**La Paz**	**6.89**	**8**	P		**Pn**	**06 47 22.9**	**+0.6**
	comp=E,2.7nm,0.3s,baz=202,slow=7.6,SNR=32							
LPAZ	**La Paz**	**6.89**	**8**	*e*P		**Pn**	**06 47 22.9**	**+0.6**
CO03	**El Pedregal**	**7.79**	**190**	Pn		**Pn**	**06 47 31.0**	**-3.0**
SIV	**San Ignacio**	**10.40**	**48**	P		**Pn**	**06 48 05.7**	**-3.8**
	comp=E,3.3nm,0.5s,baz=247,slow=5.9,SNR=19							
SIV				S		Sn	06 49 52.9	-11
	comp=E,3.3nm,0.4s,baz=150,slow=23,SNR=8.2							
CPUP	**Villa Florida**	**11.17**	**109**	P		**Pn**	**06 48 17.4**	**-2.4**
	comp=E,5.7nm,0.9s,baz=287,slow=11,SNR=8.7							
CPUP	**Villa Florida**	**11.17**	**109**			**Pn**	**06 48 18.0**	**-1.8**
CPUP	**Villa Florida**	**11.17**	**109**	*e*P		**Pn**	**06 48 20.1**	**+0.3**
TRCB	**Terra Rica**	**15.18**	**92**	*e*P		**P**	**06 49 13.8**	**-1.2**
PTGB	**Pitanga**	**15.67**	**99**	*e*P		**Pn**	**06 49 18.8**	**+0.3**
ITAB	**Concordia**	**15.90**	**108**	Pn		**Pn**	**06 49 19.6**	**-1.6**
TRQA	**Tornquist**	**16.07**	**159**			**Pn**	**06 49 22.2**	**-1.0**
PDRB	**Porto dos Gac**	**16.46**	**48**	*e*P		**Pn**	**06 49 28.2**	**0.0**
PCMB	**Pacaembu**	**16.58**	**88**	*e*P		**Pn**	**06 49 28.8**	**-0.9**
CNLB	**Canela**	**17.49**	**114**	*e*P		**P**	**06 49 39.5**	**-0.9**
PLCA	**Paso Flores**	**17.57**	**184**	P		**Pn**	**06 49 41.9**	**+0.1**
	comp=E,2.0nm,0.8s,baz=358,slow=11,SNR=6.4							
PLCA	**Paso Flores**	**17.57**	**184**	P		**P**	**06 49 40.3**	**-1.0**
PLCA	**Paso Flores**	**17.57**	**184**	*e*P		**Pn**	**06 49 42.2**	**+0.4**
CLDB	**Colider**	**17.62**	**48**	*e*P		**P**	**06 49 41.2**	**-0.8**
ITRB	**Iturama**	**17.79**	**82**	*e*P		**P**	**06 49 43.5**	**-0.3**
FRTB	**Fartura**	**17.97**	**94**	*e*P		**P**	**06 49 45.7**	**-0.1**
LL05	**Los Muermos**	**18.57**	**190**	P		**P**	**06 49 51.7**	**-0.4**
TER01	**Tubaro-SC**	**18.76**	**111**	*e*P		**P**	**06 49 54.4**	**0.0**
RCLB	**Santo Claro- Sao**	**19.91**	**92**	*e*P		**P**	**06 50 06.9**	**-0.3**
PET01	**Itanhaem-SP**	**20.03**	**98**	*e*P		**P**	**06 50 09.3**	**+1.2**
IPMB	**Ipameri, GO**	**20.23**	**79**	*e*P		**P**	**06 50 10.7**	**+0.2**
BDFB	**Brasilia**	**21.24**	**73**	P		**P**	**06 50 19.7**	**-1.7**
	comp=E,2.7nm,0.6s,baz=226,slow=10,SNR=5.0							
	comp=E,2.7nm,0.6s							
BDFB	**Brasilia**	**21.24**	**73**	P		**P**	**06 50 20.6**	**-0.8**
BDFB					IAmb	IAmb	06 50 46.5	
	comp=Z,12nm,1.4s							
BDFB	**Brasilia**	**21.24**	**73**	*e*P		**P**	**06 50 22.2**	**+0.8**
MACA	**Manacapuru-AM**	**21.48**	**24**	*e*P		**P**	**06 50 24.2**	**+0.4**
PARB	**Paraibuna**	**21.58**	**95**	*e*P		**P**	**06 50 25.4**	**+0.4**
PEXB	**Peixe**	**22.64**	**65**	*e*P		**P**	**06 50 35.7**	**-0.3**
JANB	**Januaria**	**24.75**	**75**	*e*P		**P**	**06 50 55.3**	**-0.3**
SMTB	**Santa Maria do**	**25.04**	**59**	*e*P		**P**	**06 50 57.0**	**-1.2**
SDBA	**SAO DESIDERIO**	**25.37**	**69**	*e*P		**P**	**06 51 02.0**	**+0.8**
MALB	**Monte Alegre**	**25.61**	**36**	*e*P		**P**	**06 51 04.1**	**+0.9**
SNAA	**Sanae**	**60.79**	**161**	P		**P**	**06 55 44.6**	**+0.4**
SNAA					IAmb	IAmb	06 55 50.6	
	comp=Z,4.8nm,1.4s							
TXAR	**Lajitas Array**	**61.88**	**326**	P		**P**	**06 55 52.9**	**+0.8**
	comp=Z,0.1nm,0.5s,baz=158,slow=9.7,SNR=1.8							
TXAR				pP		**pP**	**06 56 19.7**	**+1.8**
	comp=Z,0.2nm,0.7s,baz=170,slow=7.3,SNR=2.7							
TXAR				sP		**sP**	**06 56 30.2**	**+0.9**
	comp=Z,0.3nm,0.8s,baz=157,slow=6.8,SNR=3.4							
	comp=Z,0.1nm,0.5s							
QSPA	**South Pole Qui**	**67.05**	**180**	P		**P**	**06 56 26.6**	**+1.2**
QSPA					IAmb	IAmb	06 56 27.4	
	comp=Z,10nm,1.4s							
NVAR	**Mina Array Bea**	**76.67**	**322**	P		**P**	**06 57 25.6**	**+2.3**
	comp=Z,0.1nm,0.5s,baz=102,slow=7.5,SNR=2.4							
	comp=Z,0.1nm,0.5s							
TOA0	**Torodi Ar. Sit**	**78.09**	**70**	P		**P**	**06 57 30.4**	**-1.0**
TOA0					IAmb	IAmb	06 57 56.6	
	comp=Z,5.3nm,1.4s							
TORD	**Torodi Ar. Bea**	**78.09**	**70**	P		**P**	**06 57 30.9**	**-0.5**
	comp=Z,1.4nm,0.6s,baz=256,slow=5.6,SNR=9.3							
TORD				pP		**pP**	**06 57 57.0**	**-1.9**
	comp=Z,0.8nm,0.6s,baz=240,slow=5.3,SNR=3.2							
TORD				sP		**sP**	**06 58 08.8**	**-1.5**
	comp=Z,1.2nm,0.6s,baz=248,slow=4.8,SNR=3.5							
	comp=Z,1.4nm,0.6s							
TORD	**Torodi Ar. Bea**	**78.09**	**70**	P		**P**	**06 57 31.1**	**-0.4**
TORD					IAmb	IAmb	06 57 57.5	
	comp=Z,2.7nm,1.4s							
YKA	**Yellowknife Ar**	**92.67**	**341**	P		**P**	**06 58 43.1**	**0.0**
	comp=Z,0.4nm,0.8s,baz=136,slow=4.2,SNR=4.1							
	comp=Z,0.4nm,0.8s							
YKA	**Yellowknife Ar**	**92.67**	**341**	P		**P**	**06 58 43.3**	**+0.2**
ASAR	**Alice Springs**	**128.37**	**207**	PKP		**PKPdf**	**07 04 38.4**	**-0.3**
	comp=Z,0.4nm,0.9s,baz=125,slow=2.2,SNR=4.5							
ASAR	**Alice Springs**	**128.37**	**207**			**PKiKP**	**07 04 39.3**	**0.0**
WRA	**Warramunga Arr**	**131.44**	**210**	PKP		**PKPdf**	**07 04 44.5**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=155,slow=1.7,SNR=6.7							
WRA	**Warramunga Arr**	**131.44**	**210**			**PKPdf**	**07 04 44.3**	**-0.2**
MKAR	**Makanchi Array**	**147.06**	**37**	PKPbc		**PKPdf**	**07 05 12.9**	**+0.9**
	comp=Z,0.7nm,0.8s,baz=322,slow=2.0,SNR=5.7							
MKAR				pPKPbc		**pPKPbc**	**07 05 42.7**	**-0.4**
	comp=Z,0.6nm,0.7s,baz=336,slow=2.7,SNR=4.1							
MKAR				sPKPbc		**sPKPbc**	**07 05 54.4**	**+0.3**
	comp=Z,0.3nm,0.7s,baz=342,slow=1.9,SNR=4.1							
MKAR	**Makanchi Array**	**147.06**	**37**			**PKPbc**	**07 05 14.8**	**+0.6**

*DNK **26** 06:50:38.7±4.8, 68°.41N×50°.58W, h13km±66km, ML3.0*
*IDC **26** 06:50:43.9±0.8, 69°.28N×49°.40W, h0km, mb3.5/12, mbtmp3.5/14, ML3.2/2, MS3.6/36, Error ellipse: s-maj=25.5km s-min=15.2km az=161.0*
ISC 26 06:50:45.1±0.6, 69°.18N±0°.06×49°.29W±0°.06, h10km, n50, σ1s13/22, mb3.5/12, MS3.6/33, Western Kalaallit Nunaat

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SFJD	**Kangerlussuaq**	**2.25**	**193**	Pn		**Pn**	**06 51 23.7**	**+1.5**
	7.9nm,0.3s,baz=24,slow=16,SNR=7.9							
SFJD				Sn		**Sn**	**06 51 49.9**	**-0.1**
	11nm,0.3s,baz=107,slow=21,SNR=4.6							
	120nm,0.7s							
SFJD	**Kangerlussuaq**	**2.25**	**193**	*e*S		**Pn**	**06 51 23.7**	**+1.5**
SFJD					IAML		06 51 32.5	
	comp=Z,132nm,0.7s							
NUUG	**Nuugaatsiaq**	**2.71**	**333**	*e*P		**Pn**	**06 51 29.2**	**+0.6**
NUUG				*e*S		**Sb**	**06 52 06.9**	**0.0**
NUUG				IAML			06 52 24.3	
	comp=Z,129nm,0.8s							
DY2G	**Dye2**	**2.95**	**156**	*e*P		Pn	06 51 17.4	-15
ICESG	**Greenland Ices**	**3.45**	**87**	*i* P		**Pb**	**06 51 43.5**	**-2.9**
UPNV	**Upernavik**	**4.26**	**331**	*e*P	

comp=Z,29nm,18.6s,baz=1.0,slow=38
KSRS Korea Array 73.66 2 LR LR 07 37 45.3
comp=Z,29nm,18.8s,baz=120,slow=38

*NEIC **26** 07:03:00.6±1.5,2.°79N±0.°10×128.°6E±0.°1,h224km±8km, mb4.4/36, Error ellipse: s-maj=17.1km s-min=13.0km az=66.0*
*IDC **26** 07:03:02.0±2.6,2.°75N×128.°71E,h246km±25km,mb3.5/15, mbtmp4.1/15, Error ellipse: s-maj=25.1km s-min=10.1km az=77.0*
ISC 26 07:03:02.4±0.4,2.°71N±0.°06×128.°54E±0.°09,h250km,n67, σ1$02/69,mb4.1/33,2C,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.25**	**211**	Pn	**Pn**	**07 03 44.3**	**-2.9**
KCP	**Kidapawan**	**5.48**	**321**	⇑*i*P	**Pn**	**07 04 21.7**	**-2.5**
FAKI	**Fak Fak**	**6.71**	**146**	Pn	**Pn**	**07 04 38.8**	**-0.6**
MTN	**Manton Dam**	**15.66**	**171**	P	**P**	**07 06 29.1**	**-0.5**
MTN				IAmb	IAmb	07 06 31.3	
	comp=Z,37nm,1.3s						
KSM	**Kuching**	**18.26**	**267**	P	**P**	**07 06 58.2**	**+0.2**
KSM				IAmb	IAmb	07 07 01.5	
	comp=Z,11nm,1.0s						
KNRA	**Kununurra**	**18.27**	**179**	P	**P**	**07 06 58.1**	**+0.1**
MANU	**Manus Island**	**19.41**	**104**	P	**P**	**07 07 07.8**	**-2.5**
MANU				IAmb	IAmb	07 07 36.2	
	comp=Z,17nm,1.4s						
YULB	**Yu-li**	**21.72**	**342**	P	**P**	**07 07 32.0**	**-2.0**
YULB				IAmb	IAmb	07 07 57.8	
	comp=Z,16nm,1.4s						
WB0	**Warramunga Arr**	**23.06**	**166**	P	**P**	**07 07 45.6**	**-0.7**
WB0				IAmb	IAmb	07 07 48.0	
	comp=Z,6.5nm,0.5s						
WRA	**Warramunga Arr**	**23.22**	**166**	P	**P**	**07 07 47.4**	**-0.2**
	comp=Z,1.8nm,0.4s,baz=344,slow=10,SNR=54						
	comp=Z,1.8nm,0.4s						
WRA	**Warramunga Arr**	**23.22**	**166**	P	**P**	**07 07 47.7**	**+0.1**
AS31	**Alice Springs**	**26.73**	**169**	P	**P**	**07 08 19.6**	**+0.3**
ASAR	**Alice Springs**	**26.73**	**169**	P	**P**	**07 08 19.2**	**0.0**
ASAR				ScP	**ScP**	**07 14 52.2**	**+0.2**
	comp=Z,2.3nm,0.5s,baz=352,slow=7.3,SNR=45						
	comp=Z,0.6nm,0.6s,baz=351,slow=3.4,SNR=7.1						
	comp=Z,2.3nm,0.5s						
ASAR	**Alice Springs**	**26.73**	**169**	P	**P**	**07 08 19.4**	**+0.1**
CMAR	**Chiang Mai Arr**	**32.94**	**300**	P	**P**	**07 09 15.6**	**+1.6**
	comp=Z,2.4nm,0.7s,baz=113,slow=7.3,SNR=9.3						
	comp=Z,2.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**32.94**	**300**	P	**P**	**07 09 15.7**	**+1.8**
CHTO	**Chiang Mai**	**33.09**	**301**	P	**P**	**07 09 16.7**	**+1.5**
CHTO				IAmb	IAmb	07 09 17.5	
	comp=Z,5.7nm,0.8s						
FORT	**Forrest**	**33.30**	**181**	P	**P**	**07 09 16.8**	**-0.1**
KSRS	**Korea Array**	**34.58**	**359**	P	**P**	**07 09 27.2**	**-0.5**
	comp=Z,1.5nm,0.4s,baz=171,slow=8.9,SNR=7.4						
	comp=Z,1.5nm,0.4s						
MJAR	**Matsushiro Arr**	**34.83**	**14**	P	**P**	**07 09 28.2**	**-1.7**
	comp=Z,2.1nm,0.6s,baz=180,slow=9.6,SNR=7.7						
	comp=Z,2.1nm,0.6s						
BBOO	**Buckleboo**	**36.04**	**169**	P	**P**	**07 09 40.2**	**+0.1**
BBOO				IAmb	IAmb	07 09 50.2	
	comp=Z,30nm,1.3s						
XAN	**Xi'an**	**36.15**	**332**	⇑P	**P**	**07 09 41.3**	**+0.1**
XAN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
STKA	**Stephens Creek**	**36.56**	**161**	P	**P**	**07 09 44.5**	**-0.2**
	comp=Z,2.2nm,0.4s,baz=346,slow=10,SNR=3.3						
	comp=Z,2.2nm,0.4s						
STKA	**Stephens Creek**	**36.56**	**161**	P	**P**	**07 09 45.2**	**+0.6**
JMM	**Marumori**	**36.75**	**16**	P	**P**	**07 09 46.8**	**+0.7**
NWAO	**Narrogin (SRO)**	**37.02**	**196**	P	**P**	**07 09 49.4**	**+0.9**
BJT	**Baijiatuan**	**38.80**	**345**	P	**P**	**07 10 02.5**	**-0.6**
BJT				IAmb	IAmb	07 10 02.7	
	comp=Z,8.1nm,0.4s						
JTM	**Tenmabayashi**	**39.56**	**15**	P	**P**	**07 10 08.8**	**-0.6**
ARMA	**Armidale**	**39.64**	**148**	P	**P**	**07 10 09.9**	**-0.5**
ARMA				IAmb	IAmb	07 10 23.4	
	comp=Z,14nm,1.3s						
LZH	**Lanzhou**	**40.30**	**328**	*e*P	**P**	**07 10 17.5**	**+1.7**
LZH				pP	pP	07 11 06.8	-0.2
LZH				sP	sP	07 11 31.3	-3.9
LZH				pmax	pmax		
	comp=Z,25nm,1.4s						
HHC	**Hu-ho-hao-te**	**40.95**	**340**	*e*P	**P**	**07 10 23.5**	**+2.6**
HHC				pmax	pmax		
	comp=Z,13nm,0.8s						
HHC				pmax	pmax		
	comp=Z,150nm,7.1s						
USRK	**Ussuriysk Ar.**	**41.43**	**4**	P	**P**	**07 10 24.5**	**-0.1**
	comp=Z,2.5nm,0.7s,baz=166,slow=5.4,SNR=3.5						
	comp=Z,2.5nm,0.7s						
USRK	**Ussuriysk Ar.**	**41.43**	**4**	P	**P**	**07 10 25.1**	**+0.5**
SHL	**Shillong**	**41.93**	**306**	P	**P**	**07 10 30.4**	**+1.1**
ULN	**Ulaanbaatar**	**48.66**	**341**	P	**P**	**07 11 21.6**	**+0.1**
SONM	**Songino Array**	**48.85**	**340**	P	**P**	**07 11 23.3**	**+0.4**
	comp=Z,0.9nm,0.6s,baz=149,slow=6.9,SNR=5.4						
	comp=Z,0.9nm,0.6s						
SONM	**Songino Array**	**48.85**	**340**	P	**P**	**07 11 22.7**	**-0.2**
WMQ	**Urumqi**	**54.59**	**324**	*e*P	**P**	**07 12 07.3**	**+2.0**
MK31	**Makanchi Array**	**59.42**	**325**	P	**P**	**07 12 39.3**	**+0.3**
MKAR	**Makanchi Array**	**59.42**	**325**	P	**P**	**07 12 39.3**	**+0.3**
	comp=Z,1.8nm,0.4s,baz=117,slow=8.4,SNR=32						
MKAR				PcP	**PcP**	**07 13 23.6**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=106,slow=5.1,SNR=2.1						
	comp=Z,1.8nm,0.4s						
MKAR	**Makanchi Array**	**59.42**	**325**	P	**P**	**07 12 39.4**	**+0.4**
MAKZ	**Makanchi**	**59.61**	**325**	P	**P**	**07 12 40.8**	**+0.6**
MAKZ				IAmb	IAmb	07 12 40.9	
	comp=Z,3.1nm,0.5s						
LBZ	**Lake Benmore**	**59.84**	**147**	P	**P**	**07 12 43.0**	**+1.2**
KSH	**Kashi**	**60.04**	**315**	P	**P**	**07 12 44.8**	**+1.4**
KSH				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KDJ	**Kajisay**	**60.30**	**318**	P	**P**	**07 12 46.1**	**+0.9**
KDJ				IAmb	IAmb	07 12 46.7	
	comp=Z,5.0nm,1.3s						
ZAA0	**Zalesovo Array**	**62.31**	**333**	P	**P**	**07 12 57.5**	**-0.7**
ZAA0				IAmb	IAmb	07 12 57.7	
	comp=Z,1.6nm,0.6s						
ZALV	**Zalesovo Beam**	**62.31**	**333**	P	**P**	**07 12 57.5**	**-0.6**
	comp=Z,1.1nm,0.3s,baz=125,slow=6.2,SNR=6.5						
	comp=Z,1.1nm,0.3s						
SEY	**Seymchan**	**62.63**	**12**	P	**P**	**07 13 00.8**	**+0.7**
	comp=Z,1.0nm,0.6s,baz=225,slow=11,SNR=5.0						
	comp=Z,1.0nm,0.6s						
KURK	**Kurchatov**	**63.57**	**327**	P	**P**	**07 13 06.8**	**+0.3**
KURK				IAmb	IAmb	07 13 07.2	
	comp=Z,5.9nm,0.7s						
KK31	**Karatay Array**	**65.20**	**317**	P	**P**	**07 13 16.6**	**-0.7**
KKAR	**Karatay Array**	**65.20**	**317**	P	**P**	**07 13 17.0**	**-0.3**
TIXI	**Tiksi**	**68.84**	**0**	P	**P**	**07 13 39.0**	**-0.5**
TIXI				IAmb	IAmb	07 13 39.5	
	comp=Z,3.0nm,0.4s						
ABKAR	**Akbulak array**	**74.08**	**321**	P	**P**	**07 14 10.9**	**-0.3**
Q19K	**Cape Douglas,**	**81.41**	**31**	P	**P**	**07 14 51.3**	**0.0**
KDAK	**Kodiak Island**	**81.79**	**32**	P	**P**	**07 14 54.2**	**+0.9**
KDAK				IAmb	IAmb	07 15 02.0	
	comp=Z,25nm,1.4s						
VNDA	**Vanda**	**82.20**	**173**	P	**P**	**07 14 55.3**	**+0.3**
	comp=Z,0.7nm,1.0s,baz=296,slow=5.5,SNR=3.6						
	comp=Z,0.7nm,1.0s						
VNDA	**Vanda**	**82.20**	**173**	P	**P**	**07 14 55.7**	**+0.7**
IMAR	**Indian Mountai**	**82.54**	**24**	P	**P**	**07 14 58.4**	**+1.3**
SML	**Sawmill**	**84.37**	**28**	P	**P**	**07 15 06.9**	**+0.4**
SML				IAmb	IAmb	07 15 07.9	
	comp=Z,6.6nm,0.9s						
TOLK	**Toolik Lake Re**	**84.53**	**21**	P	**P**	**07 15 08.2**	**+1.0**
SCM	**Sheep Creek Mo**	**84.85**	**28**	P	**P**	**07 15 09.7**	**+0.8**
SCM				IAmb	IAmb	07 15 29.8	
	comp=Z,15nm,1.4s						
ILAR	**Eielson Array**	**85.25**	**25**	P	**P**	**07 15 11.0**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=252,slow=5.5,SNR=4.8						
	comp=Z,0.2nm,0.5s						
BMAR	**Burnt Mountain**	**86.32**	**23**	P	**P**	**07 15 16.6**	**+0.6**
ARCES	**ARCESS Array B**	**92.02**	**340**	P	**P**	**07 15 42.1**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=74,slow=6.0,SNR=11						
	comp=Z,0.4nm,0.3s						
ARCES	**ARCESS Array B**	**92.02**	**340**	P	**P**	**07 15 42.2**	**-0.4**
ARCES				IAmb	IAmb	07 15 52.0	
	comp=Z,12nm,1.4s						
FINES	**FINESS Array B**	**93.58**	**332**	P	**P**	**07 15 49.1**	**-0.8**
	comp=Z,0.8nm,0.8s,baz=35,slow=7.0,SNR=4.6						
	comp=Z,0.8nm,0.8s						
TORD	**Torodi Ar. Bea**	**124.95**	**288**	PKP	**PKPdf**	**07 21 34.2**	**+0.4**

comp=Z,0.2nm,0.3s,baz=64,slow=2.3,SNR=2.2

IDC 26 07:04:04.1±2.6,56.°61S×145.°70E,h0km,mb3.7/3, mbtmp3.7/3,MS3.7/3,Error ellipse: s-maj=242.4km s-min=26.9km az=78.0,West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPZ	**Rata Peaks**	**20.59**	**62**	LR	LR	07 14 50.8	
	comp=Z,122nm,19.2s,baz=234,slow=31						
VNDA	**Vanda**	**21.75**	**171**	P	P	07 08 56.9	+0.3
	1.3nm,0.9s,baz=333,slow=12,SNR=4.5						
VNDA				LR	LR	07 16 28.8	
	comp=Z,466nm,18.2s,baz=26,slow=34						
	1.3nm,0.9s						
STKA	**Stephens Creek**	**24.89**	**352**	LR	LR	07 18 39.9	
	comp=Z,124nm,18.4s,baz=194,slow=35						
H01W1	**Cape Leeuwin H**	**30.48**	**302**	T	T	07 43 16.1	
	baz=143,slow=75,SNR=30						
H01W2	**Cape Leeuwin H**	**30.48**	**302**	T	T	07 43 16.3	
	baz=143,slow=75,SNR=27						
H01W3	**Cape Leeuwin H**	**30.49**	**302**	T	T	07 43 17.3	
	baz=143,slow=75,SNR=28						
ASAR	**Alice Springs**	**34.02**	**340**	P	P	07 10 50.1	+0.5
	0.9nm,0.8s,baz=167,slow=10,SNR=4.9						
	0.9nm,0.8s						
WRA	**Warramunga Arr**	**37.58**	**342**	P	P	07 11 19.9	-0.3
	2.8nm,1.0s,baz=171,slow=6.9,SNR=7.5						
	2.8nm,1.0s						
H08S2	**Diego Garcia H**	**74.43**	**280**	T	T	08 38 23.9	
	baz=147,slow=76,SNR=22						
H08S1	**Diego Carcia H**	**74.44**	**280**	T	T	08 38 18.6	
	baz=147,slow=76,SNR=11						
H08S3	**Diego Garcia H**	**74.45**	**280**	T	T	08 38 25.4	
	baz=147,slow=76,SNR=22						
FINES	**FINESS Array B**	**149.55**	**304**	PKPbc	PKPbc	07 23 53.2	-0.7
	2.7nm,0.9s,baz=64,slow=4.4,SNR=6.9						
GERES	**GERESS Array B**	**150.45**	**275**	PKPbc	PKPbc	07 23 56.4	-0.2
	1.1nm,1.1s,baz=247,slow=6.9,SNR=5.0						
ARCES	**ARCESS Array B**	**151.38**	**321**	PKPbc	PKPbc	07 23 57.4	-0.7
	1.4nm,0.8s,baz=62,slow=2.9,SNR=3.5						

*IDC **26** 07:17:48.1±0.9,56.°64S×147.°01E,h0km,mb4.2/6, mbtmp4.2/6,Error ellipse: s-maj=70.9km s-min=16.5km az=81.0*
*NEIC **26** 07:17:49.6±1.8,56.°59S±0.°06×147.°3E±0.°2,h10km±1km, mb4.4/16, Error ellipse: s-maj=23.3km s-min=9.9km az=102.0*
ISC 26 07:17:49.4±0.5,56.°60S±0.°08×147.°3E±0.°1,h10km,n50, σ0$85/43,mb4.4/11,West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla**	**6.95**	**77**	Pn	**Pn**	**07 19 30.8**	**-0.3**
CASY	**Casey**	**19.75**	**226**	P	**P**	**07 22 18.7**	**-0.2**
CAN	**Canberra**	**21.31**	**4**	P	**P**	**07 22 35.6**	**-0.6**
VNDA	**Vanda**	**21.62**	**171**	P	**P**	**07 22 39.4**	**+0.2**
	2.5nm,0.9s,baz=335,slow=8.8,SNR=12						
	2.5nm,0.9s						
VNDA	**Vanda**	**21.62**	**171**	P	**P**	**07 22 39.5**	**+0.3**
VNDA				IAmb	IAmb	07 22 56.0	
	comp=Z,12nm,1.2s						
SBA	**Scott Base**	**22.38**	**169**	P	**P**	**07 22 48.1**	**+0.8**
SBA				IAmb	IAmb	07 23 05.0	
	comp=Z,16nm,1.4s						
BBOO	**Buckleboo**	**25.02**	**337**	P	**P**	**07 23 13.2**	**-0.1**
STKA	**Stephens Creek**	**25.03**	**348**	P	**P**	**07 23 14.8**	**+1.4**
	comp=Z,18nm,1.2s,baz=165,slow=10,SNR=6.9						
	comp=Z,18nm,1.2s						
STKA	**Stephens Creek**	**25.03**	**348**	P	**P**	**07 23 13.9**	**+0.4**
H01W1	**Cape Leeuwin H**	**31.22**	**300**	T	T	07 57 02.9	
	baz=144,slow=75,SNR=91						
H01W2	**Cape Leeuwin H**	**31.23**	**300**	T	T	07 57 03.3	
	baz=144,slow=75,SNR=104						
H01W3	**Cape Leeuwin H**	**31.24**	**300**	T	T	07 57 05.1	
	baz=144,slow=75,SNR=104						
EIDS	**Eidsvold**	**31.32**	**7**	P	**P**	**07 24 10.7**	**+1.0**
EIDS				IAmb	IAmb	07 24 14.7	
	comp=Z,8.5nm,1.4s						
QSPA	**South Pole Qui**	**33.51**	**180**	P	**P**	**07 24 27.5**	**-1.2**
	comp=Z,2.5nm,1.0s,baz=93,slow=5.2,SNR=11						
	comp=Z,2.5nm,1.0s						
QSPA	**South Pole Qui**	**33.51**	**180**	P	**P**	**07 24 27.6**	**-1.2**
QSPA				IAmb	IAmb	07 24 30.2	
	comp=Z,6.3nm,1.2s						
ASAR	**Alice Springs**	**34.32**	**338**	P	**P**	**07 24 35.7**	**-0.3**
	comp=Z,4.4nm,0.9s,baz=165,slow=9.7,SNR=21						
ASAR				PcP	**PcP**	**07 27 11.1**	**-0.8**
	comp=Z,0.7nm,0.8s,baz=113,slow=2.1,SNR=4.9						
	comp=Z,4.4nm,0.9s						
ASAR	**Alice Springs**	**34.32**	**338**	P	**P**	**07 24 36.4**	**+0.4**
AS31	**Alice Springs**	**34.32**	**338**	P	**P**	**07 24 34.5**	**-1.5**
WR0	**Warramunga Arr**	**37.80**	**340**	P	**P**	**07 25 05.3**	**-0.5**
WB2	**Warramunga Arr**	**37.85**	**340**	P	**P**	**07 25 05.3**	**-0.9**
WB2				IAmb	IAmb	07 25 09.4	
	comp=Z,7.0nm,0.8s						
WRA	**Warramunga Arr**	**37.85**	**340**	P	**P**	**07 25 05.8**	**-0.5**
	comp=Z,3.2nm,0.5s,baz=164,slow=7.3,SNR=24						
WRA				PcP	**PcP**	**07 27 22.3**	**-0.2**
	comp=Z,1.0nm,0.8s,baz=172,slow=2.5,SNR=5.2						
	comp=Z,3.2nm,0.5s						
WRA	**Warramunga Arr**	**37.85**	**340**	P	**P**	**07 25 05.7**	**-0.5**
WB0	**Warramunga Arr**	**38.02**	**340**	P	**P**	**07 25 07.1**	**-0.5**
WB0				IAmb	IAmb	07 25 10.6	
	comp=Z,7.7nm,0.9s						
PSA00	**Pilbara Seismi**	**40.41**	**319**	P	**P**	**07 25 27.9**	**+0.4**
PSA00				IAmb	IAmb	07 25 32.5	
	comp=Z,9.9nm,1.2s						
TROLL	**Troll, Antarti**	**49.34**	**194**	P	**P**	**07 26 36.9**	**-1.4**
SNAA	**Sanae**	**50.31**	**192**	P	**P**	**07 26 46.2**	**+0.6**
SNAA	**Sanae**	**50.31**	**192**	P	**P**	**07 26 46.2**	**+0.6**
	comp=Z,2.1nm,0.9s,baz=164,slow=10,SNR=5.5						
	comp=Z,2.1nm,0.9s						
SNAA	**Sanae**	**50.31**	**192**	P	**P**	**07 26 46.3**	**+0.6**
SNAA				IAmb	IAmb	07 27 07.3	
	comp=Z,5.1nm,1.2s						
VNA3	**Neumayer Olymp**	**51.41**	**189**	P	**P**	**07 26 56.1**	**+2.3**
VNA1	**Neumayer--Stat**	**51.85**	**190**	P	**P**	**07 26 57.7**	**+0.6**
KAPI	**Kappang**	**55.88**	**326**	P	**P**	**07 27 26.7**	**-0.4**
H08S2	**Diego Garcia H**	**75.29**	**279**	T	T	08 52 09.3	
	baz=147,slow=76,SNR=63						
H08S1	**Diego Carcia H**	**75.30**	**279**	T	T	08 52 07.5	
	baz=147,slow=76,SNR=43						
H08S3	**Diego Garcia H**	**75.31**	**279**	T	T	08 52 10.4	
	baz=147,slow=76,SNR=61						
H03S2	**Juan Fernandez**	**81.77**	**143**	T	T	09 00 56.1	
	baz=201						
H03S1	**Juan Fernandez**	**81.77**	**143**	T	T	09 00 56.8	
	baz=201						
H03S3	**Juan Fernandez**	**81.78**	**143**	T	T	09 00 58.4	
	baz=201						
ILAR	**Eielson Array**	**130.97**	**31**	PKP	**PKiKP**	**07 37 00.0**	**-0.4**
	comp=Z,0.5nm,0.9s,baz=221,slow=1.2,SNR=4.7						
AKASG	**Malin Array Be**	**143.94**	**288**	PKhKP	PKPpre	07 37 20.6	
	comp=Z,1.6nm,0.8s,baz=100,slow=1.9,SNR=6.1						
KEST	**Kesra**	**144.93**	**252**	PKP	**PKPdf**	**07 37 26.1**	**0.0**
	comp=Z,5.7nm,1.0s,baz=153,slow=14,SNR=4.6						
SADO	**Sadowa**	**148.90**	**92**	PKPbc	**PKPbc**	**07 37 36.7**	**+0.3**
	comp=Z,3.1nm,0.8s,baz=283,slow=1.0,SNR=3.2						
MORC	**Moravsky Berou**	**149.72**	**279**	*e*PKP	**PKPdf**	**07 37 35.9**	**+2.3**
KRUC	**Moravsky**	**149.96**	**277**	*e*PKP	**PKPbc**	**07 37 38.5**	**-0.4**
VRAC	**Vranov**	**149.99**	**277**	PKPbc	**PKPbc**	**07 37 38.9**	**0.0**
	comp=Z,2.5nm,0.9s,baz=147,slow=2.7,SNR=2.5						
VRAC	**Vranov**	**149.99**	**277**	*e*PKP	**PKPbc**	**07 37 38.7**	**-0.3**
FINES	**FINESS Array B**	**150.27**	**304**	PKPbc	**PKPbc**	**07 37 39.3**	**+0.1**
	comp=Z,7.3nm,0.9s,baz=79,slow=4.1,SNR=15						
FINES	**FINESS Array B**	**150.27**	**304**		**PKPbc**	**07 37 39.5**	**+0.3**
GERES	**GERESS Array B**	**151.32**	**274**	PKPbc	**PKPbc**	**07 37 41.6**	**-0.6**
	comp=Z,1.1nm,0.8s,baz=196,slow=3.5,SNR=8.9						
GERES	**GERESS Array B**	**151.32**	**274**	PKPdf	**PKPdf**	**07 37 37.1**	**+0.9**
GERES					**PKPbc**	**07 37 41.4**	**-0.9**
ARCES	**ARCESS Array B**	**151.93**	**321**	PKPbc	**PKPbc**	**07 37 42.5**	**-0.3**
	comp=Z,2.5nm,0.8s,baz=77,slow=7.6,SNR=5.6						

*IDC **26** 07:21:11.0±0.5,56.°53S×147.°17E,h0km,mb4.6/12, mbtmp4.6/12,MS4.5/31,Error ellipse: s-maj=25.4km s-min=14.2km az=85.0*
*BJI **26** 07:21:12.7±0.0,56.°54S×147.°17E,h14km,mb5.2/8, mB5.4/5,Ms4.9/3,Ms7 4.6/4*
*NEIC **26** 07:21:13.0±1.4,56.°62S±0.°03×146.°9E±0.°2,h10km±1km, mb5.0/38,Error ellipse: s-maj=16.7km s-min=3.3km az=108.0*

*MOS **26** 07:21:12.5±1.6,56.°55S×146.°96E,h14km,mb5.1/13,Error ellipse: s-maj=27.7km s-min=8.8km az=92.5*
*GCMT **26** 07:21:13.0±0.2,56.°61S±0.°01×147.°31E±0.°03,h14km, MW5.2/106,Moment Tensor Solution. s43,c52; s106,c178; Duration: 0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.69±.03; $M_{\theta\theta}$0.71±.02; $M_{\phi\phi}$-0.02±.02; $M_{r\theta}$-0.06±.03; $M_{\theta\phi}$-0.16±.01; $M_{\phi r}$-0.10±.04; Best double couple: $M_0$0.73000×10^{17} NP1:ϕ_s291.00000°,δ44.00000°, λ-77.00000°. NP2:ϕ_s93.00000°,δ47.00000°, λ-102.00000°. Principal axes: T 0.7490, Plg2.0000°, Azm191.0000°; N -0.0370, Plg9.0000°, Azm101.0000°; P -0.7120, Plg81.0000°, Azm291.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 26 07:21:13.0±0.3,56.°59S±0.°05×147.°01E±0.°08,h11km,n292, σ0$98/255,mb4.9/31,MS4.5/36,9C-11D,West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla**	**7.10**	**78**	P	**Pn**	**07 22 56.8**	**+0.2**
	baz=7.1						
MCQ	**Macquarie Isla**	**7.10**	**78**	Pn	**Pn**	**07 22 57.7**	**+1.1**
MCQ	**Macquarie Isla**	**7.10**	**78**	P	**Pn**	**07 22 57.7**	**+1.1**
TAU	**Tasmania Unive**	**13.69**	**1**	Pn	**Pn**	**07 24 28.0**	**+1.1**
TAU	**Tasmania Unive**	**13.69**	**1**	P	**Pn**	**07 24 28.0**	**+1.1**
MOO	**Moorlands**	**14.16**	**1**	P	**Pn**	**07 24 31.9**	**-1.4**
	baz=14						
GLAD	**Gladstone**	**15.63**	**3**	P	**P**	**07 24 57.8**	**+0.6**
PYZ	**Puysegur Point**	**16.05**	**58**	P	**P**	**07 25 01.8**	**-0.1**
WKZ	**Wanaka**	**18.15**	**59**	P	**P**	**07 25 25.5**	**+0.4**
WKZ				IAmb	IAmb	07 25 31.8	
	comp=Z,204nm,1.5s						
ODZ	**Otahua Downs**	**18.77**	**62**	P	**Pn**	**07 25 33.6**	**+1.3**
ODZ				IAmb	IAmb	07 25 34.6	
	comp=Z,213nm,1.9s						
TOO	**Toolangi**	**19.05**	**356**	P	**P**	**07 25 35.0**	**0.0**
	baz=19,SNR=9.6						
TOO	**Toolangi**	**19.05**	**356**	P	**P**	**07 25 34.8**	**-0.3**
TOO	**Toolangi**	**19.05**	**356**	P	**P**	**07 25 34.8**	**-0.3**
TOO				pmax	pmax		
	comp=Z,63nm,1.2s						
TOO	**Toolangi**	**19.05**	**356**	P	**P**	**07 25 35.3**	**+0.3**
CASY	**Casey**	**19.64**	**226**	P	**P**	**07 25 39.5**	**-1.7**
RPZ	**Rata Peaks**	**19.95**	**60**	LR	LR	07 31 51.3	
	comp=Z,3μm,20.4s,baz=224,slow=32						
ARPS	**Mount Arapiles**	**20.13**	**348**	P	**P**	**07 25 46.9**	**+0.1**
	baz=20,SNR=5.0						
ARPS	**Mount Arapiles**	**20.13**	**348**	P	**P**	**07 25 47.1**	**+0.4**
CAN	**Canberra**	**21.31**	**4**	P	**P**	**07 26 02.8**	**+3.1**
CNB	**Canberra Magne**	**21.34**	**5**	P	**P**	**07 25 59.6**	**-0.3**
	baz=21,SNR=5.1						
CNB	**Canberra Magne**	**21.34**	**5**	P	**P**	**07 26 02.8**	**+2.9**
VNDA	**Vanda**	**21.66**	**171**	P	**P**	**07 26 02.8**	**-0.1**
	comp=Z,7.2nm,1.0s,baz=336,slow=10,SNR=17						
VNDA				LR	LR	07 33 29.2	
	comp=Z,3μm,20.8s,baz=3.0,slow=34						
	comp=Z,7.2nm,1.0s						
VNDA	**Vanda**	**21.66**	**171**	P	**P**	**07 26 02.6**	**-0.4**
VNDA				IAmb	IAmb	07 26 09.7	
	comp=Z,136nm,1.8s						
VNDA	**Vanda**	**21.66**	**171**	P	**P**	**07 26 02.6**	**-0.4**
VNDA				pmax	pmax		
	comp=Z,136nm,1.8s						
SBA	**Scott Base**	**22.42**	**169**	P	**P**	**07 26 10.8**	**-0.3**
SBA				IAmb	IAmb	07 26 19.4	
	comp=Z,95nm,1.6s						
SBA	**Scott Base**	**22.42**	**169**	P	**P**	**07 26 10.8**	**-0.3**
SBA				pmax	pmax		
	comp=Z,95nm,1.7s						
SYDH	**Sydney Hard Ro**	**22.97**	**8**	P	**P**	**07 26 18.5**	**+1.3**
HTT	**Hallett**	**23.82**	**343**	P	**P**	**07 26 25.6**	**-0.2**
	baz=24,SNR=3.8						
WHYH	**Whyalla**	**24.44**	**341**	P	**P**	**07 26 33.0**	**+1.5**
STKA	**Stephens Creek**	**24.99**	**349**	P	**P**	**07 26 36.8**	**+0.3**
	comp=Z,12nm,0.7s,baz=164,slow=9.0,SNR=24						
STKA				LR	LR	07 34 27.3	
	comp=Z,1μm,19.6s,baz=171,slow=32						
	comp=Z,12nm,0.7s						
STKA	**Stephens Creek**	**24.99**	**349**	P	**P**	**07 26 37.0**	**+0.5**
	baz=25,SNR=19						
STKA	**Stephens Creek**	**24.99**	**349**	P	**P**	**07 26 36.8**	**+0.3**
STKA	**Stephens Creek**	**24.99**	**349**	*e*P	**P**	**07 26 37.0**	**+0.5**
STKA	**Stephens Creek**	**24.99**	**349**	P	**P**	**07 26 37.0**	**+0.5**
CMSA	**Cobar Meteorol**	**25.06**	**357**	P	**P**	**07 26 37.1**	**0.0**
	baz=25,SNR=8.8						
CMSA	**Cob

WR0 IAmb IAmb 07 28 34.2
comp=Z,19nm,1.1s
WB2 Warramunga Arr 37.79 340 P **P** **07 28 28.2 -0.8**
baz=38
WB2 Warramunga Arr 37.79 340 P **P** **07 28 27.7 -1.4**
WB2 IAmb IAmb 07 28 32.2
comp=Z,20nm,0.7s
WRA Warramunga Arr 37.79 340 P **P** **07 28 27.5 -1.6**
comp=Z,14nm,0.8s,baz=165,slow=7.5,SNR=36
WRA PcP **PcP** **07 30 44.7 -1.0**
comp=Z,2.5nm,0.8s,baz=173,slow=2.5,SNR=8.7
WRA LR LR 07 42 11.0
comp=Z,1μm,21.7s,baz=208,slow=33
comp=Z,14nm,0.8s
WRA Warramunga Arr 37.79 340 P **P** **07 28 27.8 -1.3**
WRA Warramunga Arr 37.79 340 P **P** **07 28 27.8 -1.3**
WRAB Tennant Creek 37.80 340 P **P** **07 28 27.7 -1.4**
WRAB IAmb IAmb 07 28 32.2
comp=Z,19nm,0.7s
WRAB Tennant Creek 37.80 340 *d* iP **P** **07 28 28.2 -0.9**
WRAB pmax pmax
comp=Z,35nm,1.3s
WRAB Tennant Creek 37.80 340 P **P** **07 28 28.0 -1.1**
WB0 Warramunga Arr 37.95 340 P **P** **07 28 29.7 -0.8**
WB0 IAmb IAmb 07 28 33.0
comp=Z,18nm,1.0s
KOUNC **Koumac, New Ca 38.21 27** P **P** **07 28 32.7 +0.1**
MTSU Mount Surprise 38.44 356 P **P** **07 28 35.6 +1.0**
baz=38,SNR=8.0
MTSU Mount Surprise 38.44 356 P **P** **07 28 34.6 0.0**
PSA00 Pilbara Seismi 40.30 319 P **P** **07 28 49.7 -0.4**
PSA00 Pilbara Seismi 40.30 319 P **P** **07 28 50.5 +0.4**
MBWA Marble Bar 40.72 319 P **P** **07 28 53.4 -0.1**
MBWA IAmb IAmb 07 29 04.4
comp=Z,59nm,1.4s
MBWA Marble Bar 40.72 319 P **P** **07 28 54.1 +0.6**
COEN Coen 42.64 355 P **P** **07 29 08.8 -0.6**
COEN IAmb IAmb 07 29 10.8
comp=Z,75nm,2.0s
KNRA Kununurra 43.13 334 P **P** **07 29 13.3 +0.2**
baz=43,SNR=4.9
KNRA Kununurra 43.13 334 P **P** **07 29 13.6 +0.3**
KNRA IAmb IAmb 07 29 14.1
comp=Z,19nm,1.0s
KNRA Kununurra 43.13 334 P **P** **07 29 13.4 +0.2**
KDU Kakadu 45.22 340 P **P** **07 29 29.8 -0.2**
baz=45,SNR=4.6
KDU Kakadu 45.22 340 P **P** **07 29 29.9 -0.1**
MSVF Nonsavu 45.26 44 LR LR 07 45 04.0
comp=Z,444nm,19.1s,baz=193,slow=32
MTN Manton Dam 45.33 338 P **P** **07 29 31.3 +0.4**
baz=45,SNR=3.1
MTN Manton Dam 45.33 338 P **P** **07 29 30.8 -0.1**
MTN Manton Dam 45.33 338 P **P** **07 29 30.6 -0.3**
BELA Belgrano 2 45.79 180 P **P** **07 29 34.0 +0.1**
PMG Port Moresby 47.07 0 LR LR 07 48 25.7
comp=Z,1μm,18.1s,baz=186,slow=35
HNR Honiara 48.12 17 LR LR 07 45 22.5
comp=Z,303nm,21.6s,baz=174,slow=30
NVL N'lazarevskaya 49.01 198 *eP* **P** **07 29 58.5 -0.5**
NVL *eS* **S** **07 37 06.7 +4.0**
NVL pmax pmax
comp=Z,10.0nm,0.8s
NVL MLR MLR
comp=Z,3μm,16.0s
TROLL Troll, Antarti 49.32 194 P **P** **07 30 01.0 -0.5**
SOEI Soe 49.97 330 P **P** **07 30 06.8 -0.2**
SNAA Sanae 50.29 192 P **P** **07 30 08.0 -0.9**
SNAA Sanae 50.29 192 P **P** **07 30 08.5 -0.4**
comp=Z,7.8nm,1.1s,baz=174,slow=16,SNR=14
SNAA LR LR 07 51 27.8
comp=Z,3μm,18.1s,baz=210,slow=36
comp=Z,7.8nm,1.1s
SNAA Sanae 50.29 192 P **P** **07 30 08.3 -0.6**
SNAA IAmb IAmb 07 30 18.7
comp=Z,16nm,1.2s
SNAA Sanae 50.29 192 *ce* P **P** **07 30 09.2 +0.4**
SNAA pmax pmax
comp=Z,17nm,1.2s
VNA3 Neumayer Olymp 51.40 189 P **P** **07 30 18.1 +1.0**
VNA2 Neumayer--Watz 51.49 190 P **P** **07 30 18.8 +1.0**
baz=150,slow=7.0
VNA1 Neumayer--Stat 51.84 190 P **P** **07 30 20.4 +0.1**
KRVT Keravat (AS076 52.29 6 LR LR 07 50 38.0
comp=Z,262nm,20.5s,baz=306,slow=34
RAR Rarotonga 52.50 70 LR LR 07 48 48.0
comp=Z,316nm,20.9s,baz=236,slow=32
AFI Afiamalu 52.91 53 LR LR 07 51 15.1
comp=Z,138nm,19.1s,baz=217,slow=34
FAKI Fak Fak 54.80 342 P **P** **07 30 42.5 -0.2**
KAPI Kappang 55.78 327 LR LR 07 54 43.6
comp=Z,509nm,19.0s,baz=182,slow=36
KAPI Kappang 55.78 327 P **P** **07 30 50.0 +0.1**
KAPI Kappang 55.78 327 *ce* P **P** **07 30 50.3 +0.4**
KAPI pmax pmax
comp=Z,41nm,1.8s
TBI Tubuai 56.30 81 *e*LR LR 07 47 18.4
comp=Z,3μm,24.0s
TBI *e*LR LR 07 47 19.0
comp=Z,143nm,23.0s
PMSA Palmer Station 56.66 165 LR LR 07 52 39.7
comp=Z,617nm,18.1s,baz=204,slow=33
PPT Papeete 60.92 77 LR LR 07 51 39.7
comp=Z,228nm,21.7s,baz=220,slow=30
TOLI2 Tolitoli 61.30 330 P **P** **07 31 28.0 -0.3**
TOLI2 IAmb IAmb 07 31 32.2
comp=Z,15nm,1.0s
KSM Kuching 65.03 319 P **P** **07 31 52.9 -0.1**
KSM IAmb IAmb 07 31 54.8
comp=Z,15nm,1.0s
SBUM Sibu 65.25 321 P **P** **07 31 53.6 -0.9**
SBUM IAmb IAmb 07 31 56.5
comp=Z,8.4nm,1.0s
DAV Davao City (W) 65.84 337 LR LR 08 00 29.6
comp=Z,294nm,21.9s,baz=164,slow=36
GUMO Guam 69.93 358 LR LR 08 03 21.7
comp=Z,150nm,18.2s,baz=162,slow=36
TAOE Nuku Hiva Isla 73.22 80 *e*LR LR 07 55 10.1
comp=Z,153nm,25.9s
H08S2 Diego Garcia H 75.14 279 T T 08 55 34.7
baz=147,slow=76,SNR=100
H08S1 Diego Garcia H 75.14 279 T T 08 55 30.6
baz=147,slow=76,SNR=63
H08S3 Diego Garcia H 75.16 279 T T 08 55 36.2
baz=147,slow=76,SNR=80
PLCA Paso Flores 77.98 152 P **P** **07 33 11.8 +0.8**
comp=Z,5.0nm,1.1s,baz=237,slow=8.8,SNR=5.3
comp=Z,5.0nm,1.1s
PLCA Paso Flores 77.98 152 P **P** **07 33 10.9 -0.1**
PLCA IAmb IAmb 07 34 03.0
comp=Z,41nm,2.0s
PLCA Paso Flores 77.98 152 P **P** **07 33 10.9 -0.1**
PLCA pmax pmax
comp=Z,41nm,2.0s
H03S2 Juan Fernandez 81.87 143 T T 09 04 17.5
baz=202
H03S1 Juan Fernandez 81.87 143 T T 09 04 18.9
baz=202
H03S3 Juan Fernandez 81.89 143 T T 09 04 22.5
baz=202
BOSA Boshof 81.90 229 P **P** **07 33 33.1 +0.6**
comp=Z,2.8nm,0.8s,baz=190,slow=7.2,SNR=4.3
BOSA LR LR 08 04 43.2
comp=Z,164nm,19.7s,baz=178,slow=32
comp=Z,2.8nm,0.8s
BOSA Boshof 81.90 229 P **P** **07 33 32.1 -0.4**
BOSA Boshof 81.90 229 P **P** **07 33 32.1 -0.4**
BOSA pmax pmax
comp=Z,49nm,2.0s
PALK Pallekele 83.35 294 LR LR 08 04 13.3
comp=Z,164nm,18.9s,baz=239,slow=31
JCJ Chichijima 83.45 356 LR LR 08 09 19.1
comp=Z,66nm,20.7s,baz=152,slow=35
CMAR Chiang Mai Arr 84.90 315 P **P** **07 33 48.4 +0.7**
comp=Z,2.3nm,0.2s,baz=181,slow=4.0,SNR=10
CMAR LR LR 08 11 14.1
comp=Z,197nm,19.8s,baz=150,slow=35
comp=Z,2.3nm,0.2s
CMAR Chiang Mai Arr 84.90 315 P **P** **07 33 47.6 -0.1**
CMAR Chiang Mai Arr 84.90 315 *i* P **P** **07 33 48.5 +0.8**
CMAR pmax pmax
comp=Z,3.0nm,0.2s
LBTB Lobatse 84.91 231 LR LR 08 07 16.8
comp=Z,125nm,18.5s,baz=155,slow=32
CHTO Chiang Mai 85.23 315 P **P** **07 33 48.4 -0.9**
CHTO IAmb IAmb 07 33 50.8
comp=Z,11nm,1.1s
CHTO Chiang Mai 85.23 315 P **P** **07 33 48.4 -0.9**
CHTO pmax pmax
comp=Z,11nm,1.2s
GYA Guiyang 89.49 325 ⇓P **P** **07 34 13.5 +3.6**
GYA pmax pmax
comp=Z,14nm,0.7s
PZH PanZhiHua 91.19 320 P **P** **07 34 19.8 +2.0**
PZH pmax pmax
comp=Z,10.0nm,0.6s
PZH pmax pmax
comp=Z,90nm,6.5s
NJ2 Nanjing 91.47 336 *e*P **P** **07 34 19.8 +1.0**
NJ2 pmax pmax
comp=Z,11nm,0.8s
LSZ Lusaka 92.25 238 LR LR 08 08 50.4
comp=Z,405nm,21.6s,baz=150,slow=31
MJAR Matsushiro Arr 93.07 353 P **P** **07 34 26.2 +0.1**
comp=Z,2.5nm,1.1s,baz=182,slow=4.7,SNR=4.1
comp=Z,2.5nm,1.1s
CPUP Villa Florida 94.87 158 LR LR 08 14 18.7
comp=Z,121nm,19.3s,baz=188,slow=34
LVC Limon Verde 95.49 147 LR LR 08 08 20.5
comp=Z,87nm,21.9s,baz=198,slow=30
HHC Hu-ho-hao-te 101.58 333 *e*P **Pdif** **07 35 07.8 +3.2**
HHC LR LR
comp=Z,230nm,15.2s
HHC LR LR
comp=Z,430nm,16.5s
WMQ Urumqi 111.74 318 *e*PKP **PKiKP** **07 39 48.0 +1.1**
WMQ LR LR
comp=Z,170nm,21.7s
MK31 Makanchi Array 116.29 316 ⇑ *i*PKiKP **PKiKP** **07 39 55.8 +0.4**
MKAR Makanchi Array 116.29 316 PKP **PKPdf** **07 39 54.1 -1.3**
comp=Z,0.3nm,0.6s,baz=146,slow=2.4,SNR=3.8
MKAR Makanchi Array 116.29 316 **PKPdf** **07 39 54.6 -0.8**
MKAR Makanchi Array 116.29 316 PKiKP **PKPdf** **07 39 54.6 -0.8**
KURK Kurchatov 120.89 316 ⇑ *i*PKiKP **PKiKP** **07 40 04.9 +0.7**
NVAR Mina Array Bea 123.45 70 PKP **PKPdf** **07 40 09.4 -0.3**
comp=Z,0.6nm,0.9s,baz=206,slow=9.9,SNR=4.2
KVN Kaiserville 124.02 69 **PKiKP** **07 40 12.0 +1.0**
KVN Kaiserville 124.02 69 PKiKP **PKiKP** **07 40 12.0 +1.0**
HUMO Hull Mountain 124.20 63 **PKPdf** **07 40 10.4 -0.3**
TXAR Lajitas Array 124.47 88 PKP **PKPdf** **07 40 11.3 -0.5**
comp=Z,0.6nm,0.8s,baz=182,slow=5.7,SNR=8.7
TXAR Lajitas Array 124.47 88 **PKPdf** **07 40 11.5 -0.3**
TXAR Lajitas Array 124.47 88 PKiKP **PKPdf** **07 40 11.5 -0.3**
BILL Bilibino 125.13 9 *i* PKiKP **PKiKP** **07 40 13.6 +1.6**
BILL pmax pmax
comp=Z,4.0nm,1.6s
MNTX Cornudas Mount 125.33 85 **PKPdf** **07 40 13.0 -0.3**
PSUT Pine Spring 125.86 73 **PKPdf** **07 40 14.3 0.0**
WVOR Wild Horse Val 126.24 66 **PKPdf** **07 40 14.3 -0.5**
WVOR Wild Horse Val 126.24 66 PKiKP **PKPdf** **07 40 14.3 -0.5**
MSU Marysvale 126.73 74 **PKiKP** **07 40 16.6 +0.1**
MSU Marysvale 126.73 74 PKiKP **PKiKP** **07 40 16.6 +0.1**
ELK Elko 126.75 70 **PKPdf** **07 40 15.3 -0.7**
ELK Elko 126.75 70 PKiKP **PKPdf** **07 40 15.3 -0.7**
ANMO Albuquerque 127.18 81 ⇑ *i*PKiKP **PKiKP** **07 40 17.1 -0.4**
DUG Dugway, Tooele 127.62 72 **PKPdf** **07 40 17.0 -0.6**
DUG Dugway, Tooele 127.62 72 PKiKP **PKPdf** **07 40 17.0 -0.6**
MSTX Muleshoe 128.48 85 **PKPdf** **07 40 18.6 -0.8**
TIXI Tiksi 128.58 353 **PKPdf** **07 40 17.0 -1.2**
TIXI Tiksi 128.58 353 ⇓ *e*PKiKP **PKPdf** **07 40 17.0 -1.2**
GNI Garni 128.69 286 ⇓ *i*PKiKP **PKiKP** **07 40 21.1 +0.8**
TORD Torodi Ar. Bea 129.15 226 PKP **PKiKP** **07 40 21.3 -0.5**
comp=Z,1.4nm,1.1s,baz=248,slow=1.6,SNR=5.0
TORD Torodi Ar. Bea 129.15 226 **PKiKP** **07 40 22.5 +0.7**
MAK Makhachkala 129.25 291 *i* P **Pdif** **07 37 03.4 -4.0**
MAK *i* 07 40 18.5
MAK *e* 07 47 23.2
BPAW Bear Paw Mtn. 129.37 30 **PKPdf** **07 40 19.5 -0.5**
RDMU Red Mountain 129.61 74 **PKPdf** **07 40 21.2 -0.3**
IMAR Indian Mountai 130.11 27 **PKiKP** **07 40 21.7 -0.4**
ILAR Eielson Array 131.04 31 PKP **PKPdf** **07 40 22.1 -1.0**
comp=Z,0.7nm,0.8s,baz=269,slow=2.8,SNR=5.0
ILAR Eielson Array 131.04 31 **PKPdf** **07 40 22.9 -0.2**
ILAR Eielson Array 131.04 31 PKiKP **PKPdf** **07 40 22.9 -0.2**
SCRK Sand Creek 131.31 33 PKPdf **PKiKP** **07 40 24.5 -0.2**
KBZ Khabaz 132.19 288 ⇑ *e*PKiKP **PKPdf** **07 40 24.8 -1.1**
KIV Kislovodsk 132.45 288 *e*PKiKP **PKPdf** **07 40 26.7 +0.2**
KIV *e*PPP PPP 07 45 41.1
KIV pmax pmax
comp=Z,6.0nm,1.0s
ARU Arti 133.18 310 *i* PKiKP **PKiKP** **07 40 29.2 +0.7**
ARU 07 42 55.5
BR131 Keskin Array S 134.39 278 ⇓ *e*PKiKP **PKPdf** **07 40 29.6 -0.8**
HHAR Hobbs 135.06 90 **PKPdf** **07 40 30.5 -1.1**
KIRV Kirov 138.41 309 ⇓ *e*PKiKP **PKPdf** **07 40 37.7 +0.8**
YKA Yellowknife Ar 140.83 47 PKhKP PKPpre 07 40 38.2
comp=Z,0.5nm,0.8s,baz=239,slow=2.9,SNR=3.8
OBN Obninsk 142.45 298 *i* PKiKP **PKPdf** **07 40 40.6 -3.8**
OBN *i* 07 43 51.3
OBN pmax pmax
comp=Z,7.0nm,1.2s
AKASG **Malin Array Be 143.79 288** PKhKP PKPpre 07 40 43.5
comp=Z,2.2nm,0.7s,baz=98,slow=2.6,SNR=13
AKBB Malin Array Si 143.79 288 *de*PKiKP PKPab 07 40 44.0 +0.1
KLMR Klimovskoe 143.88 308 *e*PKiKP PKPab 07 40 43.4 -0.5
KLMR pmax pmax
comp=Z,24nm,1.3s
KLMR Klimovskoe 143.88 308 *e*PKPdf PKPab 07 40 43.4 -0.5
KLMR AMP 07 40 53.3
comp=Z,24nm,1.3s
BUR08 Bucovina Ar. S 144.18 281 PKPbc 07 40 46.0 -0.1
COWI Conover 144.37 83 **PKPab** **07 40 45.3 -1.0**
KEST Kesra 144.79 252 PKP **PKPdf** **07 40 49.9 +0.6**
comp=Z,13nm,1.0s,baz=131,slow=2.1,SNR=11
AAM Ann Arbor 144.96 92 **PKPab** **07 40 47.1 -1.5**
AAM Ann Arbor 144.96 92 PKiKP **PKPab** **07 40 47.1 -1.5**
SGRT San Giovanni R 145.66 266 **PKPdf** **07 40 50.1 -0.5**
M53A WI Miller and 146.03 96 **PKPdf** **07 40 50.2 -0.9**
UZH Uzhgorod 146.34 280 ⇑ *i*PKP2 **PKPbc** **07 40 52.5 -0.2**
KOLS Kolonicke sedl 146.52 281 *e*PKP2 **PKPab** **07 40 53.8 -0.5**
KOLS Kolonicke sedl 146.52 281 *e*PKP **PKPab** **07 40 53.8 -0.5**
CRVS Cervenica-Dubn 146.94 280 *e*PKP2 **PKPab** **07 40 55.3 -0.6**
CRVS Cervenica-Dubn 146.94 280 *e*PKP **PKPab** **07 40 55.3 -0.6**
SSPA Standing Stone 147.00 100 **PKPdf** **07 40 52.5 -0.3**
NACGM **Naroch 147.23 293** ⇓ *e*PKP **PKPbc** **07 40 55.4 +0.4**
baz=118
VALR Valaam 147.92 305 *de*PKP2 **PKPbc** **07 40 55.9 -0.8**
VYHS Vyhne 148.15 278 *e*PKP2 **PKPbc** **07 40 58.1 +0.3**
VYHS Vyhne 148.15 278 *e*PKP **PKPbc** **07 40 58.1 +0.3**
FCC Fort Churchill 148.25 60 **PKPdf** **07 40 55.0 +0.8**
FCC Fort Churchill 148.25 60 PKiKP **PKPdf** **07 40 55.0 +0.8**
LUPA Lehigh Univers 148.34 102 **PKPdf** **07 40 56.4 +1.4**
SUW Suwalki 148.67 289 *e*P **PKPbc** **07 40 58.8 -0.1**
VSU Vasula 148.79 299 *co* iPKP2 **PKPbc** **07 40 59.0 0.0**
VSU Vasula 148.79 299 *e*P **PKPbc** **07 40 59.5 +0.5**
MODS Modra-Piesok 148.94 276 *e*PKP2 **PKiKP** **07 41 00.5 -0.6**
MODS Modra-Piesok 148.94 276 *e*PKP **PKiKP** **07 41 00.5 -0.6**
PABE Paberze 148.94 292 *e*P **PKPbc** **07 40 59.9 +0.4**
JAVC Velka Javorina 148.99 277 *e*PKP **PKPbc** **07 41 00.1 +0.1**
SADO Sadowa 149.06 93 PKPbc **PKPbc** **07 40 58.8 -1.4**
comp=Z,7.9nm,0.7s,baz=225,slow=0.7,SNR=10.0
SADO Sadowa 149.06 93 **PKPdf** **07 40 56.9 +0.8**
RONA Rosalia, Austr 149.09 275 *e*P **PKPbc** **07 40 59.6 -0.7**
comp=Z,10nm,1.4s
SOKA Soboth 149.19 272 *i* P **PKPbc** **07 41 00.6 +0.1**
comp=Z,18nm,1.3s,SNR=7.4
CONA Conrad Observa 149.46 275 *e*P **PKiKP** **07 41 02.8 +0.5**
comp=Z,6.3nm,1.2s
MORC Moravsky Berou 149.56 279 **PKPdf** **07 40 57.9 +1.2**
MORC Moravsky Berou 149.56 279 PKHKP PKPpre 07 40 57.9
MORC Moravsky Berou 149.56 279 *e*PKP **PKPbc** **07 41 01.1 -0.2**
PECO Prince Edward 149.71 96 **PKPdf** **07 40 59.0 +1.9**
KRUC Moravsky 149.81 277 *e*PKP **PKPbc** **07 41 01.4 -0.5**
VRAC Vranov 149.83 277 PKPbc **PKPbc** **07 41 01.5 -0.5**
comp=Z,4.1nm,0.9s,baz=147,slow=4.0,SNR=10
VRAC Vranov 149.83 277 *e*PKP **PKPbc** **07 41 01.6 -0.4**
MYKA Terra Mystica 149.93 271 *e*P **PKPbc** **07 41 02.6 +0.2**
comp=Z,20nm,1.9s
FIA1 FINESS Array S 150.13 304 **PKiKP** **07 41 02.7 -0.4**
FINES FINESS Array B 150.13 304 PKPbc **PKPbc** **07 41 02.1 -0.1**
comp=Z,8.7nm,0.7s,baz=93,slow=4.2,SNR=36
KRLC Kraliky 150.14 279 *e*PKiKP **PKPbc** **07 41 02.8 +0.1**
KRLC Kraliky 150.14 279 *e*PKP **PKPbc** **07 41 02.8 +0.1**
PBUR Paburge 150.21 292 *e*P **PKPdf** **07 40 58.8 +1.3**
J58A Remsen 150.27 98 **PKPbc** **07 41 02.2 -1.0**
MOA Molln 150.30 273 *e*P **PKPbc** **07 41 02.8 -0.4**
comp=Z,8.2nm,1.1s
MTSE Matsula 150.30 298 *e*P **PKPbc** **07 41 02.6 -0.1**
KBA Koelnbreinsper 150.36 271 *e*P **PKPbc** **07 41 02.4 -1.1**
comp=Z,9.0nm,1.1s
KLNR Kaliningrad 150.50 289 ⇑ *i*PKiKP **PKiKP** **07 41 05.5 +1.5**
DPC Dobruska-Polom 150.54 279 *e*PKiKP **PKiKP** **07 41 04.1 -0.3**
DPC Dobruska-Polom 150.54 279 *e*PKP **PKiKP** **07 41 04.1 -0.3**
BIOA Bad Ischl, Aus 150.55 273 *e*P **PKiKP** **07 41 04.7 +0.2**
comp=Z,7.2nm,1.3s
ABTA Abfaltersbach 150.62 270 *i* P **PKPbc** **07 41 03.6 -0.5**
comp=Z,6.5nm,0.8s,SNR=6.4
OSTC Ostas 150.70 279 *e*PKP **PKiKP** **07 41 04.3 -0.4**
RES Resolute Bay 150.73 29 PKPbc **PKPbc** **07 41 02.1 -1.2**
comp=Z,4.7nm,0.8s,baz=228,slow=3.7,SNR=6.9
CHVC Chvalec 150.81 279 *e*PKP **PKPbc** **07 41 04.3 0.0**
CKRC Cesky Krumlov 150.82 275 *e*PKP **PKPbc** **07 41 03.7 -0.7**
GEC2 GERESS Array S 151.17 275 **PKPbc** **07 41 04.8 -0.5**
GERES **GERESS Array B 151.17 275** PKPbc **PKPbc** **07 41 04.6 -0.7**
comp=Z,2.2nm,0.8s,baz=149,slow=3.1,SNR=17
GERES **GERESS Array B 151.17 275** **PKPbc** **07 41 04.8 -0.5**
GERES **GERESS Array B 151.17 275** PKiKP **PKPbc** **07 41 04.8 -0.5**
KHC Kasperske Hory 151.39 275 *e*PKiKP **PKPbc** **07 41 05.1 -0.6**
KHC Kasperske Hory 151.39 275 *e*PKP **PKPbc** **07 41 05.1 -0.6**
WTTA Wattenberg 151.41 270 *e*P **PKPbc** **07 41 05.8 -0.2**
comp=Z,10nm,1.4s
WATA Walderalm 151.49 270 *e*P **PKPbc** **07 41 05.6 -0.6**
comp=Z,6.1nm,0.8s
SQTA Sankt Quirin 151.62 270 *i* P **PKPbc** **07 41 06.1 -0.3**
comp=Z,9.7nm,0.7s,SNR=4.3
MOTA Moosalm 151.75 270 *i* P **PKPbc** **07 41 06.1 -0.6**
comp=Z,4.9nm,0.7s,SNR=5.3
FETA Feichten 151.77 269 *e*P **PKPbc** **07 41 06.3 -0.5**
comp=Z,8.3nm,0.8s
ARCES **ARCESS Array B 151.82 321** PKPbc **PKPbc** **07 41 05.7 -0.4**
comp=Z,5.2nm,0.8s,baz=66,slow=3.0,SNR=11
ARCES **ARCESS Array B 151.82 321** **PKiKP** **07 41 06.1 -0.3**
ARCES **ARCESS Array B 151.82 321** PKiKP **PKiKP** **07 41 06.1 -0.3**
RAF Rauma 152.01 302 *e*P **PKPbc** **07 41 03.6 -3.0**
DAVOX **Davos/Dischmat 152.10 268** PKPbc **PKPbc** **07 41 07.3 -0.3**
comp=Z,4.2nm,0.8s,baz=208,slow=8.5,SNR=6.1
BRG Berggiesshubel 152.11 278 *e*PKP **PKPbc** **07 41 06.8 -0.5**
BRG Amp 07 41 11.0
comp=Z,3.2nm,0.8s
BRG *ex* x 07 41 19.9
BRG Amp 07 41 22.9
comp=Z,6.9nm,1.0s
BRG Berggiesshubel 152.11 278 *e*PKiKP **PKPbc** **07 41 06.7 -0.5**
BRG pmax pmax
comp=Z,3.0nm,0.8s
SPITS Spitsbergen Ar 152.80 340 PKPbc **PKiKP** **07 41 08.0 -0.2**
comp=Z,6.1nm,0.8s,baz=245,slow=1.8,SNR=4.8
CLL Collm 152.84 278 *i* PKiKP **PKiKP** **07 41 09.7 +0.7**
CLL *i* 07 41 19.7
CLL pmax pmax
comp=Z,8.0nm,1.1s
CLL pmax pmax
comp=Z,16nm,1.6s
CLL MLR MLR
comp=Z,500nm,19.0s
CLL Collm 152.84 278 *i* PKPbc **PKiKP** **07 41 09.7 +0.7**
comp=Z,8.0nm,1.1s
CLL *i* PKPab **PKPab** **07 41 19.7 -0.3**
comp=Z,16nm,1.6s
CLL Lm MLR 08 30 00.0
comp=Z,500nm,19.0s
BFO Black Forest 153.85 269 **PKPab** **07 41 24.8 +0.3**
BFO Black Forest 153.85 269 PKP2 **PKPab** **07 41 24.8 +0.3**
ESDC Sonseca Array 154.56 241 PKPbc **PKiKP** **07 41 13.2 +0.2**
comp=Z,0.8nm,0.9s,baz=132,slow=1.9,SNR=2.8
HFS Hagfors 155.66 298 PKPab **PKPab** **07 41 31.4 -0.4**
comp=Z,2.8nm,0.8s,baz=253,slow=4.5,SNR=3.8
BMRD Maredsous 156.88 270 *d* PKP **PKPab** **07 41 37.6 +0.4**
NOA NORSAR Array B 157.03 300 PKPab **PKPab** **07 41 37.0 -0.7**
comp=Z,1.1nm,0.7s,baz=100,slow=5.0,SNR=4.8
DAG Danmarks Havn 159.08 351 *i* P **PKPab** **07 41 44.0 -2.1**

*IDC **26** 07:34:27.2±1.1,57.˚20N×33.˚09W,h0km,mb3.5/9, mbtmp3.5/10,ML2.4/1,MS3.2/9,Error ellipse: s-maj=36.9km s-min=19.2km az=4.0*

ISC 26 07:34:28.6±0.9,57.˚2N±0.˚2×33.˚1W±0.˚1,h10km,n21, σ0s65/13,mb3.5/9,MS3.1/6,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SFJD	**Kangerlussuaq**	**12.75**	**328**	LR		LR	07 41 30.3	
	comp=Z,63nm,19.4s,baz=182,slow=33							
EKA	**Eskdalemuir Ar**	**16.68**	**84**	LR		LR	07 43 50.8	
	comp=Z,64nm,18.3s,baz=288,slow=34							
SCHQ	**Scheffervill**	**18.89**	**277**	P		Pn	**07 38 50.1**	**+0.6**
	0.1nm,0.3s,baz=113,slow=1.1,SNR=3.8							
SCHQ				LR		LR	07 44 57.6	
	comp=Z,93nm,21.4s,baz=116,slow=33							
	2.0nm,0.9s							
NOA	**NORSAR Array B**	**22.74**	**62**	LR		LR	07 46 30.7	
	comp=Z,22nm,21.2s,baz=300,slow=32							
HFS	**Hagfors**	**24.12**	**63**	P		P	**07 39 44.2**	**0.0**
	2.2nm,0.8s,baz=233,slow=7.0,SNR=3.1							
	2.2nm,0.8s							
DAVOX	**Davos/Dischmat**	**27.99**	**93**	LR		LR	07 51 40.9	
	comp=Z,37nm,18.1s,baz=259,slow=37							
VRAC	**Vranov**	**30.16**	**84**	LR		LR	07 52 55.0	
	comp=Z,35nm,18.8s,baz=326,slow=37							
SADO	**Sadowa**	**30.91**	**266**	LR		LR	07 51 42.1	
	comp=Z,54nm,18.5s,baz=57,slow=34							
IIGN	**Ignalina**	**32.10**	**68**	*eP*		P	**07 40 57.1**	**+1.6**
IDID	**Didziasalis**	**32.38**	**67**	*eP*		P	**07 40 57.8**	**-0.1**
AKASG	**Malin Array Be**	**36.09**	**73**	P		P	**07 41 29.5**	**-0.6**
	0.4nm,0.5s,baz=294,slow=9.0,SNR=1.6							
	0.4nm,0.5s							
YKA	**Yellowknife Ar**	**38.71**	**313**	P		P	**07 41 52.2**	**0.0**
	1.0nm,1.0s,baz=60,slow=8.8,SNR=4.8							
	1.0nm,1.0s							
ILAR	**Eielson Array**	**48.41**	**328**	P		P	**07 43 10.4**	**+0.2**
	0.8nm,0.9s,baz=30,slow=7.5,SNR=7.0							
	0.8nm,0.9s							
PDAR	**Pinedale Array**	**48.59**	**287**	P		P	**07 43 11.9**	**-0.3**
	0.3nm,0.7s,baz=45,slow=12,SNR=2.9							
	0.3nm,0.7s							
TORD	**Torodi Ar. Bea**	**51.31**	**135**	P		P	**07 43 33.2**	**+0.4**
	0.6nm,0.9s,baz=332,slow=8.1,SNR=2.9							
	0.6nm,0.9s							
TXAR	**Lajitas Array**	**55.45**	**271**	P		P	**07 44 02.9**	**-0.4**
	0.1nm,0.3s,baz=34,slow=9.8,SNR=1.9							
	0.1nm,0.3s							
MKAR	**Makanchi Array**	**63.32**	**44**	P		P	**07 44 57.3**	**-0.1**
	0.3nm,0.6s,baz=304,slow=8.5,SNR=2.6							
	0.3nm,0.6s							
SONM	**Songino Array**	**70.07**	**28**	P		P	**07 45 40.9**	**+0.4**
	0.8nm,1.0s,baz=334,slow=9.6,SNR=4.5							
	0.8nm,1.0s							
KLR	**Kul'dur**	**73.21**	**10**	LR		LR	08 18 23.8	
	comp=Z,94nm,21.2s,baz=164,slow=36							
ATAH	**Atahualpa**	**73.94**	**227**	LR		LR	08 19 29.3	
	comp=Z,31nm,19.8s,baz=206,slow=36							
ASAR	**Alice Springs**	**145.21**	**21**	PKPbc		**PKPbc**	**07 54 05.3**	**-0.5**
	1.0nm,1.0s,baz=25,slow=3.3,SNR=4.5							

*RSNC **26** 07:41:23.3±0.9,6.˚80N×73.˚17W,h150km±3km,ML3.3, Mw3.6*

*IDC **26** 07:41:24.7±4.5,6.˚60N×73.˚40W,h175km±35km,mb2.8/2, mbtmp3.3/2,Error ellipse: s-maj=88.5km s-min=43.1km az=82.0*

ISC 26 07:41:21.9±0.9,6.˚81N±0.˚03×73.˚12W±0.˚04,h156km±6km, n37,σ1s51/71,2C-2D,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BRRC	**Barranca, Sant**	**0.66**	**297**	⇑ *iP*		**Pn**	**07 41 45.2**	**+0.4**
BRRC				*eS*		**Sn**	**07 42 01.9**	**-0.3**
BRRC				*i*			07 42 09.7	
	comp=Z,185nm,0.4s							
PAMC	**Pamplona, Colo**	**0.67**	**38**	⇓ *iP*		**Pn**	**07 41 46.3**	**+0.8**
PAMC				*eS*		**Sn**	**07 42 03.4**	**-0.1**
PAMC				*i*			07 42 05.6	
	comp=Z,658nm,0.5s							
RUSC	**La Rusia**	**0.91**	**178**	⇑ *iP*		**Pn**	**07 41 47.5**	**+0.3**
RUSC				*eS*		**Sn**	**07 42 06.1**	**-0.3**
RUSC				*i*			07 42 07.3	
	comp=Z,326nm,0.3s							
PTBC	**PUERTO BERRIO,**	**1.35**	**259**	*eP*		**Pn**	**07 41 50.0**	**-0.5**
PTBC				*eS*		**Sn**	**07 42 11.3**	**-1.0**
PTBC				*i*			07 42 16.4	
	comp=Z,124nm,0.3s							
TAMC	**Tame, Arauca**	**1.37**	**106**	⇓ *iP*		**Pn**	**07 41 51.8**	**+1.1**
TAMC				*eS*		**Sn**	**07 42 13.5**	**+0.7**
SPBC	**San Pablo de B**	**1.49**

SPBC *i* 07 42 17.0
comp=Z,404nm,0.4s
ZARC **Zaragoza, Cauc** **1.85 292** *e*P **Pn** **07 41 55.6 -0.2**
ZARC *e*S **Sn** **07 42 20.9 -0.9**
ZARC *i* 07 42 23.8
comp=Z,115nm,0.5s
NORC **Norcasia** **2.13 235** *e*P **Pn** **07 41 59.5 +0.4**
NORC *e*S **Sn** **07 42 26.7 -1.0**
NORC *i* 07 42 33.2
comp=Z,172nm,0.2s
CHIC **Chingaza** **2.25 196** *e*P **Pn** **07 42 01.6 +0.8**
CHIC *e*S **Sn** **07 42 30.6 -0.1**
CHIC *i* 07 42 34.4
comp=Z,125nm,0.5s
ROSC **El Rosal** **2.29 211** P **Pn** **07 42 03.2 +2.0**
comp=Z,105nm,0.3s,baz=72,slow=13,SNR=280
ROSC S **Sn** **07 42 29.9 -1.7**
comp=Z,104nm,0.4s,baz=132,slow=18,SNR=10
HELC **Santa Helena** **2.47 256** *e*P **Pn** **07 42 04.0 +0.6**
HELC *e*S **Sn** **07 42 34.9 -0.4**
HELC *i* 07 42 42.2
comp=Z,100nm,0.4s
UREC **San Jos de Ur** **2.57 292** *e*P **Pn** **07 42 03.2 -1.0**
UREC *e*S **Sn** **07 42 36.1 -0.8**
UREC *i* 07 42 46.2
comp=Z,113nm,0.2s
GUY2C **Guyana, Caldas** **2.73 235** *e*P **Pn** **07 42 08.4 +1.7**
GUY2C *e*S **Sn** **07 42 42.4 +1.2**
GUY2C *i* 07 42 49.6
comp=Z,112nm,0.3s
LL1C **La Loma 1 Cana** **2.75 351** *e*P **Pn** **07 42 08.4 +2.0**
LL1C *e*S **Sn** **07 42 43.8 +2.9**
PTGC **Puerto Gaitan,** **2.77 159** *e*P **Pn** **07 42 06.5 -0.2**
PTGC *e*S **Sn** **07 42 39.2 -2.3**
PTGC *i* 07 42 44.9
comp=Z,169nm,0.3s
LL5C **La Loma 5 El P** **2.98 349** *e*P **Pn** **07 42 09.8 +0.5**
LL5C *e*S **Sn** **07 42 46.2 +0.1**
LL5C *i* 07 42 54.9
comp=Z,121nm,0.3s
CBOC **Ciudad Bolivar** **3.02 252** *e*P **Pn** **07 42 11.0 +1.0**
CBOC *e*S **Sn** **07 42 45.9 -1.3**
CBOC *i* 07 42 51.7
comp=Z,28nm,0.1s
DBBC **Dabeiba** **3.07 274** *e*P **Pn** **07 42 10.8 +0.2**
DBBC *e*S **Sn** **07 42 46.6 -1.6**
DBBC *i* 07 42 55.4
comp=Z,172nm,0.6s
SDV **Santo Domingo** **3.21 50** *e*P **Pn** **07 42 13.1 +0.6**
SDV *e*S **Sn** **07 42 50.7 -0.9**
SDV *i* 07 42 53.6
comp=Z,46nm,0.4s
ARGC **Ariguani, Magd** **3.23 340** *e*P **Pn** **07 42 13.9 +1.4**
ARGC *e*S **Sn** **07 42 51.9 +0.3**
ARGC *i* 07 43 03.7
comp=Z,36nm,0.3s
ANIL **Santa Ana** **3.23 225** *e*P **Pn** **07 42 14.7 +1.9**
ANIL *e*S **Sn** **07 42 53.8 +1.5**
PRAC **Prado** **3.54 210** *e*P **Pn** **07 42 16.5 0.0**
PRAC *e*S **Sn** **07 42 59.1 +0.2**
PRAC *i* 07 43 06.0
comp=Z,64nm,0.2s
ORTC **Ortega, Tolima** **3.58 216** *e*P **Pn** **07 42 17.7 +0.7**
ORTC *e*S **Sn** **07 43 01.2 +1.6**
ORTC *i* 07 43 04.8
comp=Z,73nm,0.3s
PLMC **San Jos del P** **3.67 239** *e*P **Pn** **07 42 18.7 +0.5**
PLMC *e*S **Sn** **07 43 02.0 +0.1**
PLMC *i* 07 43 05.0
comp=Z,36nm,0.2s
SJCC **San Jacinto, C** **3.68 327** *e*P **Pn** **07 42 17.0 -1.3**
SJCC *e*S **Sn** **07 42 58.5 -3.7**
SJCC *i* 07 43 03.1
comp=Z,37nm,0.6s
CRJC **Cerrejon, Guaj** **4.19 3** *e*P **Pn** **07 42 23.6 -1.4**
CRJC *e*S **Sn** **07 43 11.4 -2.7**
CRJC *i* 07 43 18.8
comp=Z,52nm,0.2s
YOTC **Yotoco, Valle** **4.26 229** *e*P **Pn** **07 42 25.7 -0.3**
YOTC *e*S **Sn** **07 43 20.4 +4.6**
GUVC **San Jose del G** **4.26 173** *e*P **Pn** **07 42 26.0 +0.1**
GUVC *e*S **Sn** **07 43 14.2 -1.6**
GUVC *i* 07 43 18.5
comp=Z,80nm,0.2s
SMRC **Santa Marta, M** **4.46 346** *e*P **Pn** **07 42 27.3 -1.1**
SMRC *e*S **Sn** **07 43 16.4 -3.8**
SMRC *i* 07 43 19.9
comp=Z,39nm,0.2s
MACC **Macarena, Meta** **4.69 189** *e*P **Pn** **07 42 30.3 -1.1**
MACC *e*S **Sn** **07 43 22.4 -3.3**
MACC *i* 07 43 25.1
comp=Z,18nm,0.3s
GARC **Garzon, Huila** **5.17 207** *e*P **Pn** **07 42 37.5 -0.5**
GARC *e*S **Sn** **07 43 33.1 -4.2**
GARC *i* 07 43 39.8
comp=Z,35nm,0.2s
POPC **Popayan, Colom** **5.53 220** *e*P **Pn** **07 42 42.6 0.0**
POPC *e*S **Sn** **07 43 45.5 -0.3**
FLOC **Florencia** **5.77 206** *e*P **Pn** **07 42 46.0 +0.2**
FLOC *e*S **Sn** **07 43 51.8 +0.3**
FLOC *i* 07 44 23.3
comp=Z,5.7nm,0.5s
BBAC **Balboa, Cauca** **6.29 221** *e*P **Pn** **07 42 54.1 +1.3**
BBAC *e*S **Sn** **07 44 03.4 -0.6**
BBAC *i* 07 44 10.3
comp=Z,3.1nm,0.3s
TXAR **Lajitas Array** **36.47 312** P **P** **07 48 13.2 +1.0**
comp=Z,0.1nm,0.4s,baz=128,slow=8.9,SNR=3.9
comp=Z,0.1nm,0.4s
YKA **Yellowknife Ar** **63.27 340** P **P** **07 51 33.7 0.0**
comp=Z,0.2nm,0.5s,baz=131,slow=6.4,SNR=3.5
comp=Z,0.2nm,0.5s
WRA **Warramunga Arr** **150.33 241** PKPbc **PKPbc** **08 00 55.3 -0.5**
comp=Z,0.1nm,0.3s,baz=106,slow=2.8,SNR=0.9

DJA 26 07:50:32.7±0.4,**9°S**±3″×**12°0E**±″,**h120**km±5km,**M3.6**/12,
mb3.7/1,**MLv3.5**/12,**Flores region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WBSI	**Waikabubak, Su**	**1.11**	**186**	P	Pn	07 50 56.0	+0.1
WBSI				S	Sn	07 51 14.0	+0.5
PLAI	**Plampang**	**1.74**	**260**	P	Pn	07 51 02.9	-0.1
BASI	**Baing, Sumba**	**1.98**	**148**	P	Pn	07 51 06.1	+0.2
EDFI	**Ende, Flores**	**2.17**	**96**	P	Pn	07 51 08.3	-0.1
BSSI	**Bau Bau, Buton**	**2.56**	**22**	P	Pn	07 51 13.2	-0.2
TWSI	**Taliwang, Sumb**	**2.61**	**265**	P	Pn	07 51 13.5	-0.4
MMRI	**Maumere**	**2.70**	**92**	P	Pn	07 51 14.8	-0.3
BKSI	**Bulukumba**	**3.25**	**11**	P	Pn	07 51 22.1	-0.1
BNSI	**Bone**	**4.14**	**8**	P	Pn	07 51 34.5	+0.3
BATI	**Baumata**	**4.42**	**112**	P	Pn	07 51 37.8	-0.2
SOEI	**Soe**	**4.85**	**105**	P	Pn	07 51 44.0	+0.2
GMJI	**Gumukmas**	**6.01**	**272**	P	Pn	07 51 59.0	-0.3

*JMA **26** 07:52:49.5±0.2,25°N±1°×122°5E±0°3,h19km±1km,*
MV2.1/9,NW OFF ISHIGAKIJIMA IS
*TAP **26** 07:52:50.0,24°46N×122°46E,h21km±1km,ML2.5,D*
ISC 26 07:52:50.1±1.1,**24°49N**±0°05×**122°46E**±0°02,**h22**km±12km,
n40,σ0°**61**/72,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.45**	**95**	P	**Pb**	**07 52 59.0**	**-0.3**
JYNG				S	**Sb**	**07 53 06.1**	**+0.5**
YOJ	**Yonaguni jima**	**0.51**	**93**	*i* P	**Pb**	**07 53 00.0**	**-0.3**
	baz=81						
YOJ				S	**Sb**	**07 53 07.4**	**+0.1**
	baz=81						
YOJ	**Yonaguni jima**	**0.51**	**93**	P	**Pb**	**07 53 00.1**	**-0.3**
YOJ				*e*S	**Sb**	**07 53 07.4**	**+0.1**
TWC	**Suao**	**0.56**	**282**	P	**Pb**	**07 53 00.6**	**-0.8**
	baz=287						
TWC				*e*S	**Sn**	**07 53 09.9**	**-1.6**
	baz=287						
EGS		**0.59**	**307**	*e*P	**Pn**	**07 53 02.3**	**-1.0**
	baz=303						
EGS				*e*S	**Sn**	**07 53 12.2**	**-0.1**
	baz=303						
EWUT	**Wuta**	**0.62**	**266**	P	**Pb**	**07 53 02.0**	**-0.3**
	baz=280						
EWUT				*e*S	**Sb**	**07 53 11.1**	**+0.5**
	baz=280						
ENA	**Nanau**	**0.65**	**265**	*e*P	**Pb**	**07 53 02.8**	**-0.1**
	baz=278						
ENA				*e*S	**Sn**	**07 53 12.6**	**-1.2**
	baz=278						
TWB1	**Santiao Chiao**	**0.67**	**321**	P	**Pn**	**07 53 03.4**	**-0.9**
	baz=333						
TWB1				*e*S	**Sn**	**07 53 13.4**	**-0.7**
	baz=333						
NTC	**Toucheng**	**0.68**	**303**	*e*P	**Pn**	**07 53 03.3**	**-1.1**
	baz=306						
NTC				S	**Sn**	**07 53 14.0**	**-0.2**
	baz=306						
NDS	**Dongshan**	**0.69**	**282**	*e*P	**Pb**	**07 53 03.3**	**-0.2**
	baz=286						
NDS				*e*S	**Sn**	**07 53 13.8**	**-0.8**
	baz=286						
TIPB	**Shuangxi**	**0.75**	**310**	*e*P	**Pn**	**07 53 04.9**	**-0.5**
	baz=313						
TIPB				*e*S	**Sn**	**07 53 16.0**	**-0.1**
	baz=313						
TWE	**Neicheng**	**0.75**	**288**	*e*P	**Pn**	**07 53 05.1**	**-0.3**
	baz=292						
TWE				*e*S	**Sn**	**07 53 15.3**	**-0.9**
	baz=292						
SXI1	**Grass Mountain**	**0.80**	**319**	P	**Pn**	**07 53 06.2**	**0.0**
	baz=333						
SXI1				*e*S	**Sn**	**07 53 17.1**	**-0.3**
	baz=333						
FUSB	**Fushanzhiwuyua**	**0.83**	**289**	*e*P	**Pn**	**07 53 06.3**	**-0.3**
	baz=293						
FUSB				*e*S	**Sn**	**07 53 17.6**	**-0.7**
	baz=293						
NWF	**Wu-fen Shan**	**0.84**	**313**	P	**Pn**	**07 53 06.8**	**+0.1**
	baz=316						
NWF				*e*S	**Sn**	**07 53 18.6**	**+0.1**
	baz=316						
WFSB	**Wu-fen Shan**	**0.84**	**313**	*e*P	**Pn**	**07 53 06.8**	**+0.2**
	baz=316						
WFSB				*e*S	**Sn**	**07 53 18.9**	**+0.4**
	baz=316						
NACB	**Ninganchiao**	**0.85**	**248**	P	**Pb**	**07 53 06.3**	**+0.2**
	baz=258						
NACB				S	**Sb**	**07 53 17.6**	**+0.5**
	baz=258						
LATG	**Datong**	**0.85**	**273**	*e*P	**Pn**	**07 53 06.2**	**-0.7**
	baz=277						
LATG				S	**Sn**	**07 53 18.0**	**-0.7**
	baz=277						
NDT	**Datong Townshi**	**0.87**	**278**	P	**Pn**	**07 53 06.5**	**-0.5**
	baz=282						
NDT				*e*S	**Sn**	**07 53 18.5**	**-0.4**
	baz=282						
NWLT	**Wulai**	**0.91**	**288**	P	**Pn**	**07 53 08.0**	**+0.3**
	baz=292						
NWLT				*e*S	**Sn**	**07 53 20.0**	**-0.2**
	baz=292						
ETLH	**Xiulin Townshi**	**0.93**	**253**	*e*P	**Pn**	**07 53 07.8**	**-0.2**
	baz=256						
NNSB	**Datong**	**0.98**	**267**	*e*P	**Pn**	**07 53 08.6**	**0.0**
	baz=270						
NNS	**Nan Shan**	**0.99**	**267**	*e*P	**Pn**	**07 53 08.9**	**+0.1**
	baz=271						
YHNB	**Yeheng**	**1.00**	**281**	*e*P	**Pn**	**07 53 09.5**	**+0.6**
	baz=294						
YHNB				*e*S	**Sn**	**07 53 22.9**	**+0.5**
	baz=294						
TATO	**Taipei**	**1.00**	**299**	*e*P	**Pn**	**07 53 09.2**	**+0.3**
	baz=302						
TATO				*e*S	**Sn**	**07 53 23.0**	**+0.6**
	baz=302						
NSK	**Sanguang**	**1.02**	**281**	*e*P	**Pn**	**07 53 09.5**	**+0.4**
	baz=296						
NSK				*e*S	**Sn**	**07 53 22.9**	**+0.2**
	baz=296						
YM01	**YM01**	**1.04**	**309**	P	**Pn**	**07 53 10.0**	**+0.6**
	baz=312						
YM01				*e*S	**Sn**	**07 53 23.8**	**+0.5**
	baz=312						
TWY	**Chenhua**	**1.10**	**315**	*e*P	**Pn**	**07 53 10.6**	**+0.4**
	baz=318						
TWY				*e*S	**Sn**	**07 53 25.9**	**+1.1**
	baz=318						
FUSS	**Fushou**	**1.13**	**258**	*e*P	**Pb**	**07 53 11.2**	**+0.1**
	baz=262						
FUSS				*e*S	**Sn**	**07 53 25.8**	**-0.1**
	baz=262						
WHF	**Hehuan Shan**	**1.14**	**253**	*e*P	**Pb**	**07 53 11.3**	**-0.1**
	baz=256						
WHF				*e*S	**Sb**	**07 53 25.5**	**-0.5**
	baz=256						
IRIF	**Iriomote-Funau**	**1.17**	**97**	P	**Pn**	**07 53 11.1**	**-0.1**
IRIF				*e*S	**Sb**	**07 53 26.2**	**-0.3**
NFF	**Wufeng Townshi**	**1.23**	**277**	*e*P	**Pb**	**07 53 13.7**	**+1.0**
	baz=280						
CHGB	**Renai**	**1.25**	**250**	*e*P	**Pb**	**07 53 14.0**	**+0.9**
	baz=237						
HATJ	**Hateruma jima**	**1.30**	**109**	P	**Pb**	**07 53 14.2**	**+0.2**
HATJ				*e*S	**Sb**	**07 53 31.6**	**+1.4**
WUSB	**Renai**	**1.32**	**248**	*e*P	**Pb**	**07 53 15.3**	**+1.1**
	baz=237						
JKRS	**Kuro-shima**	**1.44**	**100**	P	**Pn**	**07 53 15.2**	**+0.4**
JKRS				S	**Sn**	**07 53 33.3**	**+0.2**
YULB	**Yu-li**	**1.52**	**224**	*e*P	**Pn**	**07 53 15.3**	**-0.7**
	baz=215						
SSLB	**Suanglung**	**1.54**	**243**	*e*P	**Pn**	**07 53 16.5**	**+0.2**
	baz=231						
JIJ	**Ishigaki jima**	**1.54**	**94**	P	**Pn**	**07 53 16.4**	**+0.1**
JIJ				*e*S	**Sn**	**07 53 34.2**	**-1.5**
JISG	**Ishigakijimahi**	**1.69**	**86**	P	**Pn**	**07 53 19.0**	**+0.6**
JISG				S	**Sb**	**07 53 41.1**	**-0.3**

*IDC **26** 08:13:42.9±0.4,57°51N×33°13W,h0km,mb4.4/29,*
mbtmp4.4/33,ML3.8/4,MS4.0/55,Error ellipse:
s-maj=12.6km s-min=9.5km az=172.0
*BJI **26** 08:13:43.4±0.0,57°85N×33°25W,h12km,mb4.8/48,*
mB5.1/21,Ms4.6/5,Ms7 4.3/5
*NEIC **26** 08:13:45.0±1.1,57°52N±0°09×33°2W±0°1,h10km±1km,*
mb4.9/377,Error ellipse: s-maj=15.2km s-min=12.1km
az=150.0
ISC 26 08:13:43.6±3.4,**57°49N**±0°06×**33°11W**±0°05,**h3**km±20km,
n548,σ0°**85**/399,**mb4.9**/209,**MS4.0**/49,**5C-3D,Reykjanes**
Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	**9.23**	**33**	Pn	**Pn**	**08 15 58.1**	**+0.8**
	2.3nm,0.3s,baz=193,slow=6.2,SNR=19						
BORG				Sn	**Sn**	**08 17 42.9**	**+1.4**
	0.2nm,0.3s,baz=162,slow=19,SNR=1.5						
BORG				LR	LR	08 18 30.0	
	comp=Z,983nm,19.5s,baz=276,slow=31						
	8.5nm,0.4s						
BORG	**Borgarnes**	**9.23**	**33**	Pn	**Pn**	**08 15 58.8**	**+1.5**
ICESG	**Greenland Ices**	**12.00**	**349**	*i* P	**Pn**	**08 16 36.7**	**+1.1**
SFJD	**Kangerlussuaq**	**12.49**	**327**	LR	LR	08 20 44.7	
	comp=Z,1μm,18.8s,baz=134,slow=34						
SFJD	**Kangerlussuaq**	**12.49**	**327**	Pn	**Pn**	**08 16 43.2**	**+1.2**
SUMG	**Summit**	**15.30**	**354**	Pn	**Pn**	**08 17 19.4**	**-1.1**
SUMG	**Summit**	**15.30**	**354**	*i* P	**Pn**	**08 17 18.0**	**-2.5**
ESK	**Eskdalemuir**	**16.63**	**85**		**Pn**	**08 17 38.9**	**+1.6**
EKA	**Eskdalemuir Ar**	**16.65**	**85**	Pn	**Pn**	**08 17 36.5**	**-1.1**
	baz=286,slow=12						
EKA				LR	LR	08 22 56.9	
	comp=Z,834nm,18.6s,baz=258,slow=33						
	1.7nm,0.6s						
DRLN	**Deer Lake**	**16.65**	**251**	Pn	**Pn**	**08 17 37.9**	**+0.2**
JMIC	**Jan Mayen**	**17.04**	**28**	LR	LR	08 22 31.8	
	comp=Z,159nm,19.9s,baz=250,slow=31						
DBG	**Daneborg**	**17.61**	**12**	*i* P	**P**	**08 17 53.2**	**+2.7**
FRB	**Frobisher Bay**	**18.29**	**305**	P	**P**	**08 17 58.4**	**+0.3**
	0.2nm,0.3s,baz=78,slow=9.5,SNR=4.3						
FRB				LR	LR	08 24 03.4	
	comp=Z,603nm,18.6s,baz=66,slow=34						
	15nm,1.0s						
SCHQ	**Schefferville**	**18.86**	**276**	P	**P**	**08 18 04.4**	**-0.1**
	0.8nm,0.3s,baz=54,slow=7.8,SNR=14						
SCHQ				LR	LR	08 24 12.4	
	comp=Z,874nm,18.4s,baz=70,slow=33						
	12nm,0.8s						
SCHQ	**Schefferville**	**18.86**	**276**	P	**P**	**08 18 04.2**	**-0.3**
DAG	**Danmarks Havn**	**20.04**	**10**	*i* P	Pn	08 18 19.4	+0.5
GBN	**Guysborough**	**21.25**	**248**	P	**P**	**08 18 30.6**	**0.0**
GBN				lAmb	lAmb	08 18 36.0	
	comp=Z,65nm,1.2s						
KONO	**Kongsberg**	**22.09**	**66**	P	**P**	**08 18 41.1**	**+1.6**
KONO				lAmb	lAmb	08 18 43.6	
	comp=Z,76nm,1.4s						
NC204	**NORSAR Array S**	**22.33**	**62**	P	**P**	**08 18 43.1**	**+1.0**
BATG	**Bathurst New B**	**22.34**	**257**	P	**P**	**08 18 41.8**	**-0.4**
BATG				lAmb	lAmb	08 18 45.5	
	comp=Z,75nm,1.7s						
NBO00	**NORSAR Array S**	**22.38**	**62**	P	**P**	**08 18 44.0**	**+1.4**
NAO01	**NORSAR Array S**	**22.47**	**63**	P	**P**	**08 18 44.8**	**+1.2**
NB2	**NORSAR Subarra**	**22.59**	**62**	P	**P**	**08 18 44.3**	**-0.5**
	comp=Z,59nm,1.4s,baz=281,slow=10						
NOA	**NORSAR Array B**	**22.59**	**62**	P	**P**	**08 18 45.2**	**+0.3**
	comp=Z,6.7nm,1.1s,baz=281,slow=9.7,SNR=9.6						
NOA				LR	LR	08 26 07.9	
	comp=Z,232nm,21.4s,baz=275,slow=33						
	comp=Z,6.7nm,1.1s						
LMN	**Caledonia Moun**	**22.62**	**253**	P	**P**	**08 18 44.7**	**-0.6**
NB201	**NORSAR Array S**	**22.62**	**62**	P	**P**	**08 18 45.7**	**+0.5**
NC303	**NORSAR Array S**	**22.63**	**62**	P	**P**	**08 18 46.0**	**+0.8**
NC303				lAmb	lAmb	08 18 47.8	
	comp=Z,40nm,1.2s						
NC602	**NORSAR Array S**	**22.80**	**63**	P	**P**	**08 18 47.8**	**+0.7**
NC602				lAmb	lAmb	08 18 51.0	
	comp=Z,90nm,1.4s						
NC405	**NORSAR Array S**	**22.81**	**62**	P	**P**	**08 18 47.3**	**+0.1**
NC405				lAmb	lAmb	08 18 49.7	
	comp=Z,79nm,1.2s						
HAL	**Halifax**	**22.84**	**249**	P	**P**	**08 18 47.4**	**-0.2**
CLF	**Chambon-Foret**	**23.15**	**99**	P	**P**	**08 18 52.0**	**+1.3**
CLF				lAmb	lAmb	08 18 54.4	
	comp=Z,49nm,1.2s						
PQI	**Presque Isle**	**23.76**	**258**	P	**P**	**08 18 56.5**	**-0.4**
HFS	**Hagfors**	**23.98**	**64**	P	**P**	**08 18 58.9**	**0.0**
	comp=Z,9.6nm,0.8s,baz=262,slow=10,SNR=11						
HFS				LR	LR	08 27 00.3	
	comp=Z,216nm,21.1s,baz=282,slow=33						
	comp=Z,9.6nm,0.8s						
D62A	**Allapoint, All**	**24.05**	**260**	P	**P**	**08 18 59.3**	**-0.2**
D62A				lAmb	lAmb	08 19 01.9	
	comp=Z,28nm,1.1s						
F64A	**Sherman**	**24.46**	**257**	P	**P**	**08 19 03.1**	**-0.3**
E62A	**Clayton Lake**	**24.59**	**260**	P	**P**	**08 19 05.4**	**+0.8**
E62A				lAmb	lAmb	08 19 06.8	
	comp=Z,35nm,1.4s						
NOR	**Nord**	**24.68**	**6**	*i* P	**P**	**08 19 04.0**	**-1.1**
NOR				lAmb	lAmb	08 19 08.5	
	comp=Z,2.0nm,0.9s						
EMMW	**East Machias**	**24.77**	**254**	P	**P**	**08 19 05.8**	**-0.3**
F63A	**Nahmakanta, Br**	**24.96**	**257**	P	**P**	**08 19 07.8**	**-0.1**
PESTR	**Estremoz**	**24.98**	**127**	P	**P**	**08 19 09.4**	**+1.3**
F62A	**Pittston Farm,**	**25.29**	**259**	lAmb	lAmb	08 19 14.0	
	comp=Z,46nm,1.1s						
PKME	**Peaks-Kenny Pk**	**25.35**	**257**	P	**P**	**08 19 11.8**	**+0.4**
PKME				lAmb	lAmb	08 19 14.3	
	comp=Z,27nm,0.9s						
PKME	**Peaks-Kenny Pk**	**25.35**	**257**	P	**P**	**08 19 12.7**	**+1.3**
	baz=48,SNR=14						
LATQ	**La Tuque**	**25.86**	**264**	P	**P**	**08 19 15.6**	**-0.4**
LATQ				lAmb	lAmb	08 19 20.0	
	comp=Z,26nm,1.4s						
ESBB	**Sonseca Array**	**25.95**	**121**	P	**P**	**08 19 16.9**	**0.0**
ESDC	**Sonseca Array**	**25.95**	**121**	P	**P**	**08 19 17.4**	**+0.4**
	comp=Z,3.3nm,0.8s,baz=316,slow=8.7,SNR=15						
ESDC				LR	LR	08 27 27.6	
	comp=Z,272nm,20.7s,baz=308,slow=32						
	comp=Z,3.3nm,0.8s						
ESDC	**Sonseca Array**	**25.95**	**121**	P	**P**	**08 19 17.9**	**+0.9**
G62A	**West of Eustis**	**26.04**	**258**	P	**P**	**08 19 17.9**	**+0.2**
G62A				lAmb	lAmb	08 19 21.2	
	comp=Z,28nm,1.1s						
BFO	**Black Forest**	**26.23**	**92**	P	**P**	**08 19 19.6**	**+0.1**
CLL	**Collm**	**27.10**	**83**	*i* P	**P**	**08 19 26.5**	**-0.7**
	comp=Z,30nm,2.1s						
CLL				*e*S	**S**	**08 24 11.0**	**+5.3**
I62A	**Tamworth**	**27.37**	**257**	P	**P**	**08 19 30.3**	**+0.6**
ARCES	**ARCESS Array B**	**27.52**	**41**	P	**P**	**08 19 30.4**	**-0.5**
	comp=Z,2.8nm,0.7s,baz=264,slow=8.4,SNR=24						
ARCES				LR	LR	08 28 14.8	
	comp=Z,191nm,19.9s,baz=296,slow=32						
	comp=Z,2.8nm,0.7s						
ARCES	**ARCESS Array B**	**27.52**	**41**	P	**P**	**08 19 30.2**	**-0.7**
ARCES				lAmb	lAmb	08 19 32.5	
	comp=Z,58nm,1.8s						
BRG	**Berggiesshubel**	**27.84**	**83**	*e*P	P	08 19 44.8	+11
BRG				Amp		08 19 46.6	
	comp=Z,1.5nm,0.9s						
BRG				*ex*	x	08 19 58.1	
BRG				Amp		08 20 00.4	
	comp=Z,4.7nm,1.2s						
BRG				Amp		08 31 07.0	
	comp=N,0.3nm,15.3s						
BRG				Amp		08 31 12.0	
	comp=Z,0.6nm,16.1s						
BRG				Amp		08 31 16.0	
	comp=E,0.4nm,17.5s						
TUE	**Stuetta**	**27.91**	**95**	P	**P**	**08 19 36.1**	**+1.3**
TUE				lAmb	lAmb	08 20 04.4	
	comp=Z,41nm,1.8s						
VLDQ	**Val d'Or**	**27.93**	**270**	P	**P**	**08 19 35.5**	**+0.8**
VLDQ				lAmb	lAmb	08 19 36.8	
	comp=Z,19nm,1.2s						
DAVOX	**Davos/Dischmat**	**28.01**	**94**	LR	LR	08 30 06.6	
	comp=Z,539nm,20.2s,baz=279,slow=35						
KEV	**Kevo**	**28.03**	**40**	P	**P**	**08 19 35.5**	**+0.2**
KEV				lAmb	lAmb	08 19 58.1	
	comp=Z,50nm,1.6s						
GERES	**GERESS Array B**	**28.83**	**87**	P	**P**	**08 19 42.9**	**0.0**
	comp=Z,0.5nm,0.8s,baz=260,slow=7.6,SNR=4.7						
GERES				LR	LR	08 31 04.5	
	comp=Z,346nm,18.6s,baz=293,slow=36						
	comp=Z,0.5nm,0.8s						
GERES	**GERESS Array B**	**28.83**	**87**	P	**P**	**08 19 43.0**	**+0.2**
FINES	**FINESS Array B**	**29.42**	**57**	P	**P**	**08 19 47.5**	**-0.3**
	comp=Z,5.9nm,0.7s,baz=293,slow=7.1,SNR=16						
FINES				LR	LR	08 31 02.9	
	comp=Z,172nm,18.0s,baz=299,slow=35						
	comp=Z,5.9nm,0.7s						
FINES	**FINESS Array B**	**29.42**	**57**	P	**P**	**08 19 47.6**	**-0.1**
FIA1	**FINESS Array S**	**29.42**	**57**	P	**P**	**08 19 47.6**	**-0.1**
FIA1				lAmb	lAmb	08 19 52.3	
	comp=Z,15nm,1.0s						
CLUD	**Cludinico**	**29.83**	**92**	P	**P**	**08 19 52.9**	**+1.3**
VRAC	**Vranov**	**30.12**	**84**	LR	LR	08 32 00.1	
	comp=Z,427nm,18.6s,baz=306,slow=36						
DELO	**Deloro Mine**	**30.28**	**264**	P	**P**	**08 19 55.7**	**+0.2**
MORC	**Moravsky Berou**	**30.37**	**83**	P	**P**	**08 19 57.4**	**+1.0**
J56A	**Wolcott**	**30.71**	**262**	P	**P**	**08 19 59.6**	**+0.3**
J56A				lAmb	lAmb	08 20 01.6	
	comp=Z,15nm,1.1s						
K57A	**Scipio Center**	**30.90**	**260**	lAmb	lAmb	08 20 02.9	
	comp=Z,30nm,1.4s						
SADO	**Sadowa**	**30.93**	**266**	LR	LR	08 31 08.3	
	comp=Z,585nm,19.2s,baz=54,slow=34						
MMNY	**Mt. Morris Dam**	**31.64**	**262**	lAmb	lAmb	08 20 09.4	
	comp=Z,22nm,1.1s						
NACGM	**Naroch**	**32.48**	**68**	*e*P	**P**	**08 20 14.3**	**-0.5**
	baz=300						
PSZ	**Piszkesteto**	**32.71**	**84**	P	**P**	**08 20 17.5**	**+0.4**
KOVH	**Kovagotottos**	**32.88**	**88**	P	**P**	**08 20 26.1**	**+7.8**
MORH	**Mrgy, Hungar**	**33.09**	**87**	P	**P**	**08 20 19.8**	**-0.4**
M53A	**WI Miller and**	**34.02**	**263**	P	**P**	**08 20 27.9**	**-0.5**
M53A	**WI Miller and**	**34.02**	**263**	P	**P**	**08 20 30.5**	**+2.1**
	baz=45						
SGRT	**San Giovanni R**	**34.48**	**96**	P	**P**	**08 20 32.1**	**-0.4**
SGRT				lAmb	lAmb	08 20 33.7

BURAR **Bucovina Array** 35.74 80 P P 08 20 43.8 +0.4
AKASG **Malin Array Be** 36.00 73 P P 08 20 44.5 -0.8
comp=Z,2.4nm,0.6s,baz=308,slow=8.6,SNR=21
AKASG LR LR 08 35 01.8
comp=Z,200nm,20.2s,baz=238,slow=36
comp=Z,2.4nm,0.6s
P52A **Corning** 36.08 262 IAmb IAmb 08 20 48.9
comp=Z,23nm,1.4s
P52A **Corning** 36.08 262 P P 08 20 47.3 +1.1
baz=44
N49A **Columbus Grove** 36.27 265 IAmb IAmb 08 20 50.3
comp=Z,29nm,1.4s
ULM **Lac du Bonnet** 36.49 286 P P 08 20 49.0 -0.6
comp=Z,3.5nm,0.5s,baz=39,slow=5.9,SNR=5.0
ULM LR LR 08 34 33.8
comp=Z,453nm,18.1s,baz=95,slow=34
comp=Z,3.5nm,0.5s
ULM **Lac du Bonnet** 36.49 286 P P 08 20 49.1 -0.5
ULM IAmb IAmb 08 20 50.7
comp=Z,42nm,1.8s
B35A **Bob, Littlefor** 36.50 282 IAmb IAmb 08 20 51.3
comp=Z,29nm,1.6s
G40A **Rib Lake** 36.57 276 P P 08 20 50.7 +0.3
P51A **Williamsport** 36.69 263 IAmb IAmb 08 20 53.1
comp=Z,22nm,1.3s
VAE **Valguarnera** 36.86 102 LR LR 08 34 34.4
comp=Z,312nm,19.4s,baz=328,slow=34
O49A **Covington** 36.87 265 IAmb IAmb 08 20 54.7
comp=Z,22nm,1.1s
OBN **Obninsk** 37.19 63 LR LR 08 35 22.4
comp=Z,59nm,20.2s,baz=312,slow=35
O48B **Farmland** 37.26 265 P P 08 20 56.5 +0.3
baz=44
MLR **Muntele Rosu** 37.48 83 LR LR 08 37 25.1
comp=Z,469nm,18.3s,baz=329,slow=38
P49A **Miami Univ. Ec** 37.54 264 P P 08 20 59.5 +0.9
baz=44
AGMN **Agassiz Nation** 37.67 284 P P 08 20 59.8 +0.2
AGMN **Agassiz Nation** 37.67 284 P P 08 20 59.9 +0.3
baz=52
SPMN **Marine on St.** 38.00 278 IAmb IAmb 08 21 04.9
comp=Z,68nm,1.9s
SPMN **Marine on St.** 38.00 278 P P 08 21 03.1 +0.7
baz=49
M44A **Midewin, Midew** 38.02 269 IAmb IAmb 08 21 05.0
comp=Z,52nm,1.4s
JFWS **Jewell Farm** 38.16 273 P P 08 21 04.2 +0.3
baz=47
C36M **Paulatuk** 38.40 325 P P 08 21 05.4 -0.1
baz=60
L42A **Oliver, Polo** 38.47 271 IAmb IAmb 08 21 08.2
comp=Z,35nm,1.2s
YKA **Yellowknife Ar** 38.51 312 P P 08 21 05.8 -0.7
comp=Z,7.0nm,0.9s,baz=60,slow=8.9,SNR=52
YKA PcP PcP 08 23 18.2 -0.9
comp=Z,3.2nm,1.1s,baz=50,slow=3.4,SNR=7.4
comp=Z,7.0nm,0.9s
YKA **Yellowknife Ar** 38.51 312 P P 08 21 06.0 -0.5
TZTN **Tazewell** 39.11 260 IAmb IAmb 08 21 14.9
comp=Z,56nm,1.6s
TZTN **Tazewell** 39.11 260 P P 08 21 13.2 +1.4
baz=41
HDIL **Hopedale** 39.28 269 P P 08 21 14.6 +1.4
baz=45
K38A **Parkersburg** 39.70 275 IAmb IAmb 08 21 18.3
comp=Z,43nm,1.4s
TKL **Tuckaleechee C** 39.90 259 LR LR 08 36 48.5
comp=Z,526nm,19.4s,baz=37,slow=35
P43A **Skaggs, Pawnee** 40.05 269 P P 08 21 20.5 +0.8
P43A IAmb IAmb 08 21 22.4
comp=Z,38nm,1.6s
ECSD **EROS Data Cent** 41.03 279 P P 08 21 28.6 +0.9
baz=47,SNR=13
W50A **Signal Mountai** 41.06 260 P P 08 21 29.0 +0.9
KIRV **Kirov** 41.08 52 P P 08 21 26.9 -1.0
comp=Z,11nm,0.5s,baz=288,slow=14,SNR=8.2
comp=Z,11nm,0.5s
SIUC **Southern Illin** 41.28 266 IAmb IAmb 08 21 32.3
comp=Z,58nm,1.7s
E28A **Huff** 41.29 285 IAmb IAmb 08 21 32.2
comp=Z,25nm,1.1s
S44A **Carbondale** 41.32 266 IAmb IAmb 08 21 32.5
comp=Z,42nm,1.6s
GOGA **Godfrey** 41.46 257 P P 08 21 32.5 +1.2
baz=39
P40A **Paris** 41.49 271 IAmb IAmb 08 21 33.0
comp=Z,23nm,1.1s
WVT **Waverly** 41.71 263 P P 08 21 32.8 -0.6
WVT **Waverly** 41.71 263 P P 08 21 33.6 +0.3
baz=41
FVM **French Village** 41.74 268 IAmb IAmb 08 21 36.1
comp=Z,38nm,1.8s
SUSD **Miller** 41.79 281 P P 08 21 33.8 -0.2
SUSD IAmb IAmb 08 21 42.5
comp=Z,17nm,0.5s
INK **Inuvik** 41.84 327 P P 08 21 33.0 -1.0
comp=Z,7.5nm,1.1s,baz=29,slow=8.0,SNR=8.8
comp=Z,7.5nm,1.1s
INK **Inuvik** 41.84 327 P P 08 21 33.3 -0.7
INK **Inuvik** 41.84 327 P P 08 21 33.4 -0.7
baz=53,SNR=7.7
DGMT **Dagmar** 41.87 289 P P 08 21 36.1 +1.5
baz=50
CCM **Cathedral Cave** 42.12 268 P P 08 21 37.0 +0.2
CCM **Cathedral Cave** 42.12 268 P P 08 21 37.4 +0.7
baz=43
P38A **Dawn** 42.23 272 P P 08 21 37.4 -0.2
EDM **Edmonton** 43.32 300 IAmb IAmb 08 21 47.5
comp=Z,31nm,1.3s
S39A **Bolivar** 43.51 270 IAmb IAmb 08 21 50.0
comp=Z,23nm,1.4s
LRAL **Lakeview Retre** 43.62 260 IAmb IAmb 08 21 50.7
comp=Z,26nm,1.3s
LRAL **Lakeview Retre** 43.62 260 P P 08 21 49.8 +0.9
baz=39,SNR=6.5
EPYK **Eagle Plains** 44.03 326 IAmb IAmb 08 21 53.4
comp=Z,30nm,1.2s
EPYK **Eagle Plains** 44.03 326 P P 08 21 51.7 -0.1
baz=49,SNR=14
Z47A **Carrollton** 44.06 261 IAmb IAmb 08 21 53.3
comp=Z,22nm,1.2s
LAO **LASA Array** 44.08 289 IAmb IAmb 08 21 54.8
comp=Z,21nm,1.1s
LAO **LASA Array** 44.08 289 P P 08 21 54.0 +1.5
baz=48
BELG **Belogornoye** 44.08 60 LR LR 08 39 08.7
comp=Z,193nm,21.8s,baz=291,slow=35
FCAR **Ozark Folk Cen** 44.20 267 P P 08 21 53.7 +0.1
KSU1 **Kansas State U** 44.26 274 IAmb IAmb 08 21 54.8
comp=Z,30nm,1.2s
KSU1 **Kansas State U** 44.26 274 P P 08 21 53.9 -0.2
baz=44,SNR=5.5
MMPY **Sheldon Lake,** 44.69 319 P P 08 21 58.8 +1.6
baz=49,SNR=19
WHAR **Wooly Hollow** 44.73 267 IAmb IAmb 08 22 12.3
comp=Z,39nm,1.6s
W41B **Gary Mavity, V** 44.80 266 IAmb IAmb 08 21 59.7
comp=Z,21nm,1.4s
W41B **Gary Mavity, V** 44.80 266 P P 08 21 58.7 +0.3
baz=41,SNR=6.3
HHAR **Hobbs** 44.89 269 IAmb IAmb 08 22 00.0
comp=Z,22nm,1.2s
EGMT **Eagleton** 44.97 292 IAmb IAmb 08 22 01.2
comp=Z,20nm,1.2s
EGMT **Eagleton** 44.97 292 P P 08 22 00.1 +0.4
baz=48,SNR=7.6
C24K **Franklin Bluff** 44.97 334 P P 08 21 59.3 +0.1
baz=44,SNR=19
U38A **Gravette** 45.01 269 IAmb IAmb 08 22 01.7
comp=Z,25nm,1.4s
BRAL **Brewton** 45.10 258 P P 08 22 01.9 +1.2
baz=38
I29M **Ogilvie Camp,** 45.19 325 IAmb IAmb 08 22 02.8
comp=Z,18nm,1.1s
I29M **Ogilvie Camp,** 45.19 325 P P 08 22 01.1 -0.1
baz=47,SNR=20
C23K **Itkillik River** 45.34 334 P P 08 22 03.3 +1.1
baz=42,SNR=16
D24K **Happy Valley** 45.41 333 P P 08 22 03.2 +0.4
baz=43,SNR=9.3
BR131 **Keskin Array S** 45.56 83 P P 08 22 05.1 +0.6
BR131 IAmb IAmb 08 22 10.9
comp=Z,12nm,0.9s
BRTR **Keskin Array B** 45.56 83 P P 08 22 05.6 +1.1
comp=Z,3.2nm,0.7s,baz=318,slow=5.3,SNR=16
BRTR LR LR 08 40 57.7
comp=Z,154nm,21.6s,baz=290,slow=36
comp=Z,3.2nm,0.7s

BRTR **Keskin Array B** 45.56 83 P P 08 22 04.8 +0.3
BMAR **Burnt Mountain** 45.56 330 P P 08 22 04.3 +0.2
W39A **Magazine** 45.61 268 P P 08 22 04.8 0.0
W39A **Magazine** 45.61 268 P P 08 22 05.4 +0.6
baz=41,SNR=11
R32A **Long Quarter,** 45.89 275 IAmb IAmb 08 22 07.2
comp=Z,19nm,1.2s
TOLK **Toolik Lake Re** 45.98 333 P P 08 22 07.7 +0.4
baz=42,SNR=16
MIAR **Mount Ida** 45.99 267 IAmb IAmb 08 22 09.3
comp=Z,24nm,1.2s
MIAR **Mount Ida** 45.99 267 P P 08 22 08.2 +0.4
baz=41,SNR=11
D23K **Nanushuk River** 46.00 334 P P 08 22 08.0 +0.5
baz=42
M31M **Drury Creek, Y** 46.06 320 P P 08 22 08.9 +0.9
baz=47
CBYP **Canovanas** 46.07 226 P P 08 22 08.8 +0.2
VBMS **Vicksburg** 46.12 262 P P 08 22 08.2 -0.6
baz=39
TUL1 **Leonard** 46.16 270 P P 08 22 09.1 -0.1
baz=42,SNR=11
ARU **Arti** 46.28 50 LR LR 08 40 23.0
comp=Z,192nm,18.5s,baz=336,slow=35
ARU **Arti** 46.28 50 P P 08 22 09.9 0.0
ARU IAmb IAmb 08 22 11.5
comp=Z,23nm,1.2s
DAWY **Dawson** 46.42 324 P P 08 22 11.2 +0.3
DAWY **Dawson** 46.42 324 P P 08 22 11.6 +0.6
baz=46,SNR=22
Z41A **Richland Creek** 46.55 265 P P 08 22 12.5 +0.3
baz=40
M30M **Minto, Yukon** 46.62 322 IAmb IAmb 08 22 14.4
comp=Z,15nm,1.3s
M30M **Minto, Yukon** 46.62 322 P P 08 22 13.2 +0.7
baz=46,SNR=8.0
I26K **Coal Creek Min** 46.68 327 IAmb IAmb 08 22 15.2
comp=Z,27nm,1.5s
I26K **Coal Creek Min** 46.68 327 P P 08 22 13.4 +0.5
baz=44
RLMT **Red Lodge** 46.70 289 IAmb IAmb 08 22 16.1
comp=Z,32nm,1.6s
RLMT **Red Lodge** 46.70 289 P P 08 22 14.5 +1.0
baz=46,SNR=11
P33M **Teslin, Yukon** 46.86 318 P P 08 22 14.5 0.0
P33M IAmb IAmb 08 22 16.8
comp=Z,29nm,1.7s
P33M **Teslin, Yukon** 46.86 318 P P 08 22 15.0 +0.6
baz=47
HRY **Holter Researc** 46.89 292 P P 08 22 14.9 -0.1
X37A **Clayton** 46.92 269 IAmb IAmb 08 22 43.9
comp=Z,9.2nm,1.1s
K22A **Casper** 47.01 285 IAmb IAmb 08 22 16.6
comp=Z,14nm,1.3s
K22A **Casper** 47.01 285 P P 08 22 15.9 -0.1
baz=45,SNR=5.3
DLBC **Dease Lake** 47.03 314 LR LR 08 41 47.0
comp=Z,730nm,18.4s,baz=97,slow=36
DLBC **Dease Lake** 47.03 314 P P 08 22 17.0 +1.2
baz=47
N31M **Braeburn, Yuko** 47.03 320 P P 08 22 16.6 +0.8
baz=46,SNR=9.7
K27K **Chicken** 47.28 325 IAmb IAmb 08 22 20.0
comp=Z,18nm,1.4s
K27K **Chicken** 47.28 325 P P 08 22 18.1 +0.6
baz=44
BNN **Bunyan** 47.37 82 P P 08 22 20.3 +1.6
J26L **Joseph Creek** 47.39 327 IAmb IAmb 08 22 19.9
comp=Z,16nm,1.4s
J26L **Joseph Creek** 47.39 327 P P 08 22 18.0 -0.5
baz=43,SNR=11
JTMT **Jette** 47.39 295 IAmb IAmb 08 22 19.4
comp=Z,12nm,1.3s
N30M **Aishikik Lake** 47.50 321 P P 08 22 20.2 +0.8
baz=45
KSCO **Kaye Shedlock'** 47.56 279 P P 08 22 20.5 +0.3
baz=43,SNR=7.0
BOZ **Bozeman (W)** 47.56 291 IAmb IAmb 08 22 22.4
comp=Z,26nm,1.6s
BOZ **Bozeman (W)** 47.56 291 P P 08 22 20.6 +0.4
baz=46,SNR=16
KBZ **Khabaz** 47.59 72 P P 08 22 21.4 +1.2
comp=Z,6.1nm,0.9s,baz=308,slow=6.9,SNR=15
KBZ LR LR 08 42 10.2
comp=Z,119nm,19.4s,baz=346,slow=36
comp=Z,6.1nm,0.9s
H24K **Noodor Dome** 47.63 330 IAmb IAmb 08 22 21.9
comp=Z,21nm,1.4s
H24K **Noodor Dome** 47.63 330 P P 08 22 20.6 +0.2
baz=42,SNR=13
O30N **Mendenhall** 47.64 320 P P 08 22 21.2 +0.7
baz=45,SNR=12
J25K **Salcha River,** 47.84 327 P P 08 22 22.0 +0.1
baz=42,SNR=10
MSO **Missoula** 47.86 294 P P 08 22 21.8 -0.6
baz=46
YHL **Hebgen Lake** 47.86 290 IAmb IAmb 08 22 25.1
comp=Z,17nm,1.5s
H17A **Grant Village** 47.87 289 P P 08 22 25.4 +2.7
baz=45,SNR=5.2
YMR **Madison River** 47.88 290 P P 08 22 23.1 +0.4
YMR IAmb IAmb 08 22 31.2
comp=Z,15nm,1.5s
SCRK **Sand Creek** 47.90 326 P P 08 22 23.1 +0.6
baz=43,SNR=27
L27K **Beaver Creek,** 47.91 324 IAmb IAmb 08 22 24.6
comp=Z,21nm,1.3s
L27K **Beaver Creek,** 47.91 324 P P 08 22 23.5 +1.0
baz=44,SNR=12
N23A **Red Feather La** 47.96 283 P P 08 22 24.5 +1.1
baz=44,SNR=7.3
POKR **Poker Plat Res** 48.05 329 P P 08 22 24.5 +1.0
baz=41,SNR=5.7
RWWY **Rawlins** 48.05 284 IAmb IAmb 08 22 25.4
comp=Z,10.0nm,1.1s
BVCY **Beaver Creek** 48.07 323 P P 08 22 25.2 +1.5
baz=44,SNR=10
YPP **Pitchstone Pla** 48.08 289 P P 08 22 24.2 -0.1
YPP IAmb IAmb 08 22 27.8
comp=Z,17nm,1.5s
H23K **Yukon River** 48.09 330 P P 08 22 24.6 +0.7
baz=40,SNR=18
HYT **Haines Junctio** 48.09 320 P P 08 22 25.5 +1.4
baz=45,SNR=9.6
YUK4 **Talbot Arm** 48.11 321 P P 08 22 24.8 +0.6
baz=44,SNR=7.1
T35M **Bob Quinn** 48.12 313 P P 08 22 25.8 +1.6
baz=46
ILAR **Eielson Array** 48.16 328 P P 08 22 24.5 +0.2
comp=Z,11nm,1.1s,baz=35,slow=6.2,SNR=43
ILAR PcP PcP 08 23 51.0 -0.6
comp=Z,2.7nm,0.9s,baz=356,slow=7,SNR=6.3
ILAR LR LR 08 41 31.0
comp=Z,186nm,19.6s,baz=136,slow=35
comp=Z,11nm,1.1s
DOT **Dot Lake** 48.16 326 IAmb IAmb 08 22 26.9
comp=Z,16nm,1.1s
SKAG **Skagway** 48.30 318 IAmb IAmb 08 22 27.9
comp=Z,29nm,1.7s
SKAG **Skagway** 48.30 318 P P 08 22 26.4 +0.9
baz=45
YUK6 **Outpost Mounta** 48.30 321 P P 08 22 26.9 +1.1
baz=44
RIDG **Independent Ri** 48.33 326 P P 08 22 26.9 +1.1
baz=42,SNR=7.7
COLA **College** 48.35 329 P P 08 22 26.0 +0.2
COLA IAmb IAmb 08 22 27.8
comp=Z,11nm,0.8s
TCOL **CIGO, UAF Yank** 48.35 329 IAmb IAmb 08 22 27.8
comp=Z,14nm,0.9s
TCOL **CIGO, UAF Yank** 48.35 329 P P 08 22 26.1 +0.3
baz=41
YUK3 **Moose Creek** 48.40 323 P P 08 22 27.6 +1.0
baz=44,SNR=11
L26K **Log Cabin Wild** 48.41 325 IAmb IAmb 08 22 29.1
comp=Z,12nm,1.2s
L26K **Log Cabin Wild** 48.41 325 P P 08 22 27.2 +0.9
baz=43
P30M **Million Dollar** 48.41 319 P P 08 22 27.5 +1.1
baz=44
NEW **Newport** 48.41 297 LR LR 08 41 52.2
comp=Z,288nm,19.1s,baz=38,slow=35
NEW **Newport** 48.41 297 P P 08 22 26.5 -0.1
baz=46
MOOW **Moose Ponds** 48.41 289 P P 08 22 26.3 -0.6
M27K **Edge Creek, AK** 48.44 324 P P 08 22 27.5 +0.8
baz=43
LOHW **Long Hollow** 48.44 289 IAmb IAmb 08 22 28.3
comp=Z,12nm,1.4s
HDA **Harding Lake** 48.45 328 IAmb IAmb 08 22 29.4
comp=Z,7.1nm,0.9s
HDA **Harding Lake** 48.45 328 P P 08 22 26.7 +0.1
baz=41,SNR=6.8
PDAR **Pinedale Array** 48.50 287 P P 08 22 26.6 -1.0
comp=Z,2.1nm,0.7s,baz=54,slow=7.5,SNR=23
PDAR LR LR 08 41 51.3
comp=Z,343nm,18.2s,baz=25,slow=35
comp=Z,2.1nm,0.7s
PDAR **Pinedale Array** 48.50 287 P P 08 22 26.4 -1.2
BW06 **Boulder Array** 48.50 287 IAmb IAmb 08 22 27.9
comp=Z,10nm,1.2s
BW06 **Boulder Array** 48.50 287 P P 08 22 27.0 -0.6
baz=44,SNR=10
CCB **Clear Creek Bu** 48.51 329 IAmb IAmb 08 22 41.9
comp=Z,14nm,1.4s
H22K **Ishtalitna Cre** 48.52 331 P P 08 22 28.0 +0.8
baz=39,SNR=11
YUK8 **Steele Glacier** 48.53 322 P P 08 22 30.0 +2.4
baz=44
I23K **Minto, Yukon-K** 48.56 330 P P 08 22 28.2 +0.8
baz=40,SNR=13
K24K **Donnelly Dome** 48.56 327 P P 08 22 28.7 +1.2
baz=42,SNR=20
ISCO **Idaho Springs** 48.57 281 IAmb IAmb 08 22 30.3
comp=Z,16nm,1.2s
ISCO **Idaho Springs** 48.57 281 P P 08 22 29.1 +0.9
baz=43,SNR=14
SNOW **Snow King Moun** 48.62 289 IAmb IAmb 08 22 30.0
comp=Z,15nm,1.4s
WMOK **Wichita Mounta** 48.65 272 IAmb IAmb 08 22 29.9
comp=Z,24nm,1.2s
WMOK **Wichita Mounta** 48.65 272 P P 08 22 29.0 +0.4
baz=41,SNR=9.3
ONI **Oni** 48.68 73 P P 08 22 28.9 +0.1
ONI IAmb IAmb 08 22 31.6
comp=Z,11nm,1.2s
TPAW **Teton Pass** 48.70 289 IAmb IAmb 08 22 31.0
comp=Z,10nm,1.1s
WRH **Wood River Hil** 48.72 328 IAmb IAmb 08 22 29.8
comp=Z,14nm,1.2s
REDW **Red Top Meadow** 48.74 289 IAmb IAmb 08 22 35.6
comp=Z,20nm,1.7s
M26K **Nabesna, AK** 48.76 324 IAmb IAmb 08 22 31.1
comp=Z,22nm,1.3s
M26K **Nabesna, AK** 48.76 324 P P 08 22 30.2 +1.1
baz=42,SNR=9.0
NEA2 **Nenana** 48.91 329 IAmb IAmb 08 22 32.1
comp=Z,14nm,1.2s
NEA2 **Nenana** 48.91 329 P P 08 22 31.0 +0.9
baz=40,SNR=9.9
MLY **Manley** 49.02 330 IAmb IAmb 08 22 32.3
comp=Z,15nm,1.3s
MLY **Manley** 49.02 330 P P 08 22 30.9 -0.2
baz=39,SNR=12
H21K **Melozitna Rive** 49.08 332 P P 08 22 30.9 -0.4
H21K IAmb IAmb 08 22 33.0
comp=Z,16nm,1.3s
H21K **Melozitna Rive** 49.08 332 P P 08 22 31.0 -0.4
baz=38,SNR=9.0
PAX **Paxson** 49.10 326 P P 08 22 31.1 -0.6
PAX IAmb IAmb 08 22 34.1
comp=Z,13nm,1.1s
PAX **Paxson** 49.10 326 P P 08 22 32.3 +0.6
baz=41,SNR=8.1
I21K **Tanana** 49.24 331 IAmb IAmb 08 22 34.7
comp=Z,17nm,1.1s
I21K **Tanana** 49.24 331 P P 08 22 33.4 +0.7
baz=39,SNR=11
C09A **Chrisman Ranch** 49.29 298 IAmb IAmb 08 22 33.9
comp=Z,18nm,1.2s
AHID **Auburn Hather** 49.30 288 IAmb IAmb 08 22 53.6
comp=Z,12nm,1.3s
BARN **Barnard Glacie** 49.32 323 IAmb IAmb 08 22 36.1
comp=Z,18nm,1.0s
B08A **Colville Reser** 49.40 299 IAmb IAmb 08 22 34.9
comp=Z,19nm,1.4s
RDOG **Red Dog Mine** 49.46 338 P P 08 22 28.9 -5.4
baz=33
MCK **McKinley** 49.53 328 P P 08 22 35.8 +0.9
baz=40,SNR=7.7
DHY **Denali Highway** 49.58 327 IAmb IAmb 08 22 37.0
comp=Z,13nm,1.2s
DHY **Denali Highway** 49.58 327 P P 08 22 36.2 +0.6
baz=40
O20A **White River Ci** 49.72 284 IAmb IAmb 08 22 38.5
comp=Z,21nm,1.4s
O20A **White River Ci** 49.72 284 P P 08 22 37.5 +0.7
baz=43,SNR=6.6
RND **Reindeer** 49.76 328 IAmb IAmb 08 22 38.2
comp=Z,18nm,0.9s
BPAW **Bear Paw Mtn.** 49.82 329 IAmb IAmb 08 22 39.1
comp=Z,16nm,1.3s
BPAW **Bear Paw Mtn.** 49.82 329 P P 08 22 38.0 +0.9
baz=39
N25K **Chitina, Valde** 49.86 324 P P 08 22 38.3 +0.8
baz=41,SNR=8.8
ISLE **Juniper Island** 49.88 322 P P 08 22 37.9 +0.1
T25A **Trinidad** 49.89 278 IAmb IAmb 08 22 40.1
comp=Z,21nm,1.2s
T25A **Trinidad** 49.89 278 P P 08 22 39.0 +0.8
baz=42,SNR=12
CRQE **Cirque** 50.02 323 P P 08 22 38.9 +0.1
baz=41
SDCO **Great Sand Dun** 50.02 280 IAmb IAmb 08 24 30.8
comp=Z,18nm,1.6s
SDCO **Great Sand Dun** 50.02 280 P P 08 22 40.0 +0.7
baz=42,SNR=5.4
WAT6 **Susitna Watana** 50.07 327 P P 08 22 39.1 -0.1
baz=40
PLID **Pearl Lake** 50.11 294 IAmb IAmb 08 22 40.6
comp=Z,20nm,1.4s
AMTX **Amarillo** 50.11 274 IAmb IAmb 08 22 42.2
comp=Z,24nm,1.0s
AMTX **Amarillo** 50.11 274 P P 08 22 40.7 +0.9
baz=41
WAT1 **Susitna Watana** 50.12 327 P P 08 22 39.8 +0.3
baz=39
WAX **Waxell Ridge** 50.17 323 P P 08 22 40.2 +0.3
AKTO **Aktyubinsk** 50.19 56 LR LR 08 43 17.9
comp=Z,172nm,18.3s,baz=4.7,slow=35
BMRM **Bremner River** 50.34 324 P P 08 22 41.5 +0.3
baz=41
CHUM **Lake Minchumin** 50.35 330 P P 08 22 41.5 +0.4
baz=38,SNR=5.5
KLU **Klutina** 50.36 325 IAmb IAmb 08 22 42.6
comp=Z,28nm,1.3s
KLU **Klutina** 50.36 325 P P 08 22 41.9 +0.6
baz=40,SNR=5.3
HWUT **Hardware Ranch** 50.37 287 IAmb IAmb 08 22 42.4
comp=Z,14nm,1.2s
HLID **Hailey** 50.41 291 P P 08 22 42.9 +0.8
baz=44,SNR=12
SCM **Sheep Creek Mo** 50.52 326 P P 08 22 43.1 +0.6
baz=40
TIXI **Tiksi** 50.53 7 P P 08 22 42.4 +0.1
TIXI IAmb IAmb 08 22 43.8
comp=Z,20nm,1.3s
J20K **Nowinta River** 50.60 331 P P 08 22 43.4 +0.4
baz=37,SNR=6.8
BBB **Bella Bella** 50.64 308 LR LR 08 42 13.3
comp=Z,134nm,18.8s,baz=68,slow=34
CAST **Castle Rocks** 50.66 329 P P 08 22 43.2 -0.3
baz=38
S22A **4UR Ranch, Cre** 50.73 281 P P 08 22 45.9 +1.2
baz=42,SNR=14
ABTX **Abilene, Hawle** 50.73 271 IAmb IAmb 08 22 45.2
comp=Z,31nm,1.4s
ABTX **Abilene, Hawle** 50.73 271 P P 08 22 44.4 0.0
baz=40,SNR=5.8
HKT **Hockley** 50.74 265 P P 08 22 44.6 +0.2
HKT IAmb IAmb 08 22 45.9
comp=Z,25nm,1.4s
SML **Sawmill** 50.85 326 P P 08 22 45.8 +0.8
baz=39
GNI **Garni** 51.12 74 LR LR 08 44 48.4
comp=Z,101nm,19.9s,baz=354,slow=36
MARD **Mardin** 51.13 80 P P 08 22 48.5 +1.0
MARD IAmb IAmb 08 22 50.3
comp=Z,16nm,1.0s
K20K **Telida** 51.24 330 P P 08 22 48.1 +0.2
baz=36,SNR=5.8
PMR **Palmer** 51.25 327 IAmb IAmb 08 22 49.6
comp=Z,16nm,1.2s
PMR **Palmer** 51.25 327 P P 08 22 48.1 +0.2
baz=38
TLCB **Telegraph Cove** 51.27 305 IAmb IAmb 08 22 51.9

comp=Z,27nm,1.6s
MSTX Muleshoe 51.39 274 P **P** **08 22 50.3 +0.8**
baz=40,SNR=6.5
M22K Willow 51.42 327 P **P** **08 22 49.4 +0.3**
baz=38
MMAI Mount Meron Ar 51.49 88 LR LR 08 45 41.5
comp=Z,142nm,21.9s,baz=110,slow=37
TOA0 Torodi Ar. Sit 51.52 135 P **P** **08 22 49.2 -1.3**
TORD Torodi Ar. Bea 51.52 135 P **P** **08 22 49.6 -0.9**
comp=Z,4.3nm,0.8s,baz=342,slow=7.2,SNR=18
comp=Z,4.3nm,0.8s
TORD Torodi Ar. Bea 51.52 135 P **P** **08 22 49.1 -1.4**
TORD IAmb IAmb 08 22 50.4
comp=Z,17nm,1.5s
MPU Maple Canyon 51.57 286 IAmb IAmb 08 22 52.1
comp=Z,22nm,1.3s
SKT Skwentna 51.65 328 IAmb IAmb 08 22 52.2
comp=Z,16nm,1.0s
SKT Skwentna 51.65 328 P **P** **08 22 50.7 -0.2**
baz=37,SNR=7.8
RC01 Rabbit Creek A 51.83 326 P **P** **08 22 53.4 +1.1**
baz=38
SUA Susitna One 51.83 327 P **P** **08 22 53.3 +0.8**
baz=38,SNR=7.9
NLU North Lily Min 51.85 286 IAmb IAmb 08 22 54.3
comp=Z,23nm,1.3s
TMUT Trail Mountain 51.88 285 IAmb IAmb 08 22 54.5
comp=Z,30nm,1.5s
ABKAR Akbulak array 51.90 56 P **P** **08 22 53.2 +0.3**
ABKAR IAmb IAmb 08 22 58.0
comp=Z,12nm,0.8s
L20K Farewell, AK 51.90 330 P **P** **08 22 52.3 -0.5**
baz=36
MVCO Mesa Verde 52.01 281 P **P** **08 22 55.5 +1.3**
baz=41,SNR=14
DUG Dugway, Tooele 52.05 287 P **P** **08 22 54.5 +0.1**
DUG Dugway, Tooele 52.05 287 P **P** **08 22 54.6 +0.3**
baz=42
TTA Tatalina 52.11 331 IAmb IAmb 08 22 55.3
comp=Z,18nm,1.4s
TTA Tatalina 52.11 331 P **P** **08 22 54.4 0.0**
baz=35
JCT Junction City 52.47 269 P **P** **08 22 57.1 -0.4**
JCT IAmb IAmb 08 22 58.2
comp=Z,28nm,1.2s
JCT Junction City 52.47 269 P **P** **08 22 57.6 +0.1**
baz=38,SNR=12
M19K Big River Lodg 52.51 329 P **P** **08 22 56.8 -0.5**
baz=36
J08A Circle Bar Ran 52.59 294 IAmb IAmb 08 22 59.4
comp=Z,12nm,1.0s
ANMO Albuquerque 52.63 278 LR LR 08 44 28.0
comp=Z,487nm,18.6s,baz=38,slow=35
ANMO Albuquerque 52.63 278 P **P** **08 22 59.0 +0.2**
ANMO IAmb IAmb 08 23 01.6
comp=Z,23nm,1.9s
ANMO Albuquerque 52.63 278 P **P** **08 23 00.0 +1.2**
baz=40
HOOD Mount Hood Mea 52.69 298 P **P** **08 22 58.7 -0.4**
HOOD IAmb IAmb 08 23 08.0
comp=Z,50nm,1.9s
ELK Elko 52.89 289 LR LR 08 44 43.7
comp=Z,480nm,18.3s,baz=26,slow=35
MTPU Mount Pierson 53.33 285 IAmb IAmb 08 23 05.9
comp=Z,16nm,1.5s
WVOR Wild Horse Val 53.35 293 IAmb IAmb 08 23 05.1
comp=Z,14nm,1.2s
N19K Bonanza Creek 53.43 329 IAmb IAmb 08 23 04.7
comp=Z,27nm,1.4s
N19K Bonanza Creek 53.43 329 P **P** **08 23 03.7 -0.5**
baz=35,SNR=6.3
BVAR Borovoye Array 53.51 47 LR LR 08 43 44.6
comp=Z,96nm,21.6s,baz=276,slow=34
PSUT Pine Spring 53.83 286 IAmb IAmb 08 23 10.1
comp=Z,27nm,1.8s
J05D Fort Rock, OR 53.99 296 P **P** **08 23 09.7 +1.0**
baz=42,SNR=9.8
W18A Petrified Fore 54.24 281 P **P** **08 23 11.5 +0.8**
baz=40
K05A Summer Lake 54.24 295 P **P** **08 23 10.8 +0.2**
O18K Koktuh Hills 54.43 328 P **P** **08 23 10.8 -0.6**
baz=34,SNR=6.4
MNTX Cornudas Mount 54.53 275 P **P** **08 23 12.5 -0.1**
baz=39,SNR=10
MOD Modoc Plateau 54.57 294 P **P** **08 23 12.3 -0.6**
MOD IAmb IAmb 08 23 14.0
comp=Z,26nm,1.5s
LCMT Little Creek M 54.65 285 IAmb IAmb 08 23 14.5
comp=Z,15nm,1.4s
Q19K Cape Douglas, 54.74 327 P **P** **08 23 13.3 -0.4**
baz=35
WUAZ Wupatki 54.81 282 IAmb IAmb 08 23 17.0
comp=Z,25nm,1.3s
WUAZ Wupatki 54.81 282 P **P** **08 23 15.5 +0.8**
baz=40,SNR=11
P18K Big Mountain, 54.82 328 P **P** **08 23 13.2 -1.1**
baz=34
R11A Troy Canyon, C 54.86 288 P **P** **08 23 15.4 +0.3**
baz=41,SNR=9.4
121A Cookes Peak, D 55.18 277 P **P** **08 23 18.7 +1.3**
baz=39,SNR=7.3
DBIC Dimbokro 55.27 145 P **P** **08 23 17.4 -0.6**
comp=Z,6.8nm,0.8s,baz=12,slow=5.6,SNR=4.8
DBIC LR LR 08 43 52.2
comp=Z,266nm,19.7s,baz=1.0,slow=33
comp=Z,6.8nm,0.8s
DBIC Dimbokro 55.27 145 P **P** **08 23 17.9 -0.1**
DBIC IAmb IAmb 08 23 21.4
comp=Z,13nm,0.9s
O16K Kokwok River B 55.45 330 P **P** **08 23 19.6 +0.8**
baz=32
TX32 Lajitas Array 55.45 271 IAmb IAmb 08 23 54.1
comp=Z,16nm,1.7s
TXAR Lajitas Array 55.45 271 P **P** **08 23 19.6 +0.3**
comp=Z,2.8nm,0.9s,baz=57,slow=4.6,SNR=18
TXAR LR LR 08 45 36.5
comp=Z,101nm,18.2s,baz=356,slow=34
comp=Z,2.8nm,0.9s
X16A Lo Mia Camp, P 55.68 281 IAmb IAmb 08 23 23.3
comp=Z,11nm,1.2s
PAHR Pah Rah Range 55.77 291 IAmb IAmb 08 23 23.4
comp=Z,22nm,1.2s
YBH Yreka Blue Hor 55.88 295 LR LR 08 48 25.5
comp=Z,70nm,18.8s,baz=37,slow=37
NV11 Mina Array Sit 56.11 290 IAmb IAmb 08 23 35.2
comp=Z,13nm,1.4s
NVAR Mina Array Bea 56.19 290 P **P** **08 23 24.6 -0.1**
comp=Z,1.1nm,0.7s,baz=42,slow=5.7,SNR=11
NVAR LR LR 08 46 48.0
comp=Z,264nm,18.3s,baz=28,slow=35
comp=Z,1.1nm,0.7s
TPNV Topopah Spring 56.26 287 IAmb IAmb 08 23 38.5
comp=Z,15nm,1.4s
TPNV Topopah Spring 56.26 287 P **P** **08 23 25.5 +0.3**
baz=40
SDV Santo Domingo 56.47 226 LR LR 08 47 19.1
comp=Z,127nm,19.9s,baz=117,slow=36
SDV Santo Domingo 56.47 226 *eP* **P** **08 23 27.8 +0.9**
EMB Emerald Bay 56.68 291 IAmb IAmb 08 23 30.5
comp=Z,16nm,1.3s
LCH Last Change Ra 56.76 288 IAmb IAmb 08 23 29.9
comp=Z,15nm,1.7s
GRAC Grapevine Rang 56.80 288 P **P** **08 23 29.4 +0.6**
baz=40,SNR=7.7
319A Douglas 56.88 277 IAmb IAmb 08 23 32.2
comp=Z,21nm,1.4s
FURC Furnace Creek, 56.95 287 P **P** **08 23 30.2 +0.4**
baz=40
TUC Tucson 56.96 279 P **P** **08 23 30.3 +0.2**
TUC Tucson 56.96 279 P **P** **08 23 31.1 +1.0**
baz=39
GWY Greenwater Val 57.06 287 IAmb IAmb 08 23 32.4
comp=Z,27nm,1.3s
PDMCI Parker Dam,Lak 57.19 283 P **P** **08 23 32.2 +0.6**
baz=39
QSM Queen of Sheba 57.34 287 IAmb IAmb 08 23 35.0
comp=Z,16nm,1.4s
SJCC San Jacinto, C 57.41 232 P **P** **08 23 34.7 +1.4**
SJCC IAmb IAmb 08 23 35.8
comp=Z,22nm,1.2s
MPMC Manual Prospec 57.59 287 P **P** **08 23 35.1 +0.5**
baz=39,SNR=9.2
CWC Cottonwood Cre 57.60 288 P **P** **08 23 34.7 +0.1**
baz=39
GMRC Granite Mounta 57.62 285 P **P** **08 23 35.1 +0.3**
baz=39,SNR=5.1
GSC Goldstone, Bar 57.81 286 IAmb IAmb 08 23 37.8
comp=Z,17nm,1.3s
GSC Goldstone, Bar 57.81 286 P **P** **08 23 37.0 +1.0**
baz=39,SNR=6.9
BLYC Blythe 57.82 283 IAmb IAmb 08 23 38.5
comp=Z,27nm,1.4s
ZALV Zalesovo Beam 58.03 38 P **P** **08 23 37.1 -0.1**
comp=Z,1.4nm,0.6s,baz=319,slow=7.0,SNR=6.5
ZALV PcP **PcP** **08 24 28.7 -0.4**
comp=Z,0.8nm,0.6s,baz=305,slow=5.2,SNR=4.7
comp=Z,1.4nm,0.6s
ZALV Zalesovo Beam 58.03 38 P **P** **08 23 36.9 -0.3**
LRMC Laurel Mtn Rad 58.13 287 P **P** **08 23 38.4 +0.1**
baz=39
214A Organ Pipe Nat 58.31 281 IAmb IAmb 08 23 41.3
comp=Z,20nm,1.4s
214A Organ Pipe Nat 58.31 281 P **P** **08 23 40.1 +0.6**
baz=38,SNR=6.8
BC3 Big Chuckawall 58.38 284 P **P** **08 23 40.9 +0.7**
baz=39,SNR=6.2
ISA Isabella, Lake 58.40 288 IAmb IAmb 08 23 42.9
comp=Z,14nm,1.4s
ISA Isabella, Lake 58.40 288 P **P** **08 23 41.5 +1.3**
baz=39
BELC Belle Mtn. Jos 58.40 285 P **P** **08 23 41.6 +1.4**
baz=39,SNR=8.9
KURK Kurchatov 58.49 44 P **P** **08 23 39.9 -0.6**
KURK IAmb IAmb 08 23 44.8
comp=Z,8.9nm,0.8s
GLA Glamis 58.52 283 P **P** **08 23 41.9 +0.9**
baz=39,SNR=6.1
KURBB Kurchatov Arra 58.53 44 LR LR 08 48 12.4
comp=Z,64nm,19.2s,baz=42,slow=35
VES Vestal, Richgr 58.57 288 P **P** **08 23 41.0 -0.2**
baz=39
BBRC Big Bear Solar 58.68 285 P **P** **08 23 43.4 +1.1**
baz=39
EDW2 Edwards Air Fo 58.76 287 P **P** **08 23 43.5 +0.9**
baz=39,SNR=7.1
PFO Pinyon Flats O 58.94 285 LR LR 08 48 52.4
comp=Z,214nm,18.1s,baz=52,slow=36
PFO Pinyon Flats O 58.94 285 P **P** **08 23 44.0 0.0**
PFO IAmb IAmb 08 23 45.8
comp=Z,16nm,1.1s
PFO Pinyon Flats O 58.94 285 P **P** **08 23 44.9 +0.8**
baz=39,SNR=6.4
TPFO Pinon Flats 58.95 285 P **P** **08 23 44.8 +0.7**
baz=39,SNR=6.0
BOAV Boa Vista 59.08 212 *eP* **P** **08 23 45.0 +0.1**
SWSC Sam W. Stewart 59.12 284 P **P** **08 23 45.2 +0.1**
baz=38,SNR=9.9
MURC Murrieta 59.34 285 P **P** **08 23 47.9 +1.2**
baz=38
YUH Yuha Desert 59.41 284 IAmb IAmb 08 23 49.8
comp=Z,17nm,1.4s
ZARC Zaragoza, Cauc 59.44 230 P **P** **08 23 47.2 -0.3**
ZARC IAmb IAmb 08 23 49.3
comp=Z,9.2nm,1.0s
ZARC Zaragoza, Cauc 59.44 230 *eP* **P** **08 23 47.4 0.0**
MONP2 Monument Peak 59.48 284 P **P** **08 23 49.5 +1.6**
baz=38,SNR=5.5
IKP In-Ko-Pah, Jac 59.51 284 P **P** **08 23 49.5 +1.6**
baz=38
GEYT Alibeck 59.60 66 LR LR 08 50 11.7
comp=Z,78nm,20.3s,baz=344,slow=37
GEYT Alibeck 59.60 66 IAmb IAmb 08 23 51.4
comp=Z,11nm,1.4s
GYA0B ALIBECK ARRAY 59.60 66 P **P** **08 23 48.6 +0.2**
GYA0B IAmb IAmb 08 23 51.4
comp=Z,15nm,1.3s
HSIG 59.62 277 P **P** **08 23 48.1 -0.5**
MCPB Macapa, AP 59.64 202 *eP* **P** **08 23 49.5 +0.8**
BAR Barrett 59.78 284 IAmb IAmb 08 23 52.3
comp=Z,24nm,1.4s
SEY Seymchan 59.83 357 LR LR 08 51 13.3
comp=Z,66nm,18.6s,baz=340,slow=38
ZAIG Zacatecas 60.08 266 P **P** **08 23 52.8 +0.6**
ZAIG IAmb IAmb 08 23 54.6
comp=Z,18nm,1.3s
PTBC PUERTO BERRIO, 60.13 229 *eP* **P** **08 23 51.0 -1.2**
DBBC Dabeiba 60.43 231 *eP* **P** **08 23 54.0 -0.3**
CMIG Matias Romero 60.66 255 LR LR 08 49 21.5
comp=Z,127nm,21.5s,baz=22,slow=35
SPBC San Pablo de B 60.78 228 *eP* **P** **08 23 56.1 -0.7**
HELC Santa Helena 60.89 230 *eP* **P** **08 23 58.5 +0.7**
NORC Norcasia 61.19 229 *eP* **P** **08 23 59.5 0.0**
KKAR Karatay Array 61.32 54 P **P** **08 24 00.5 +0.4**
KKAR Karatay Array 61.32 54 IAmb IAmb 08 24 05.4
comp=Z,9.3nm,1.2s
JTS Las Juntas de 61.47 242 LR LR 08 50 49.7
comp=Z,101nm,18.1s,baz=229,slow=36
ROSC El Rosal 61.62 228 P **P** **08 24 04.0 +1.2**
comp=Z,14nm,0.7s,baz=26,slow=5.6,SNR=17
comp=Z,14nm,0.7s
ROSC El Rosal 61.62 228 P **P** **08 24 03.9 +1.2**
GUY2C Guyana, Caldas 61.70 230 *eP* **P** **08 24 03.5 +0.1**
PLMC San Jos del P 62.36 230 *eP* **P** **08 24 08.9 +1.5**
PRAC Prado 62.87 228 *eP* **P** **08 24 10.6 -0.1**
MAKZ Makanchi 62.97 44 P **P** **08 24 10.7 -0.4**
MAKZ IAmb IAmb 08 24 12.5
comp=Z,13nm,1.3s
MK31 Makanchi Array 63.10 44 P **P** **08 24 11.3 -0.7**
MK31 IAmb IAmb 08 24 13.2
comp=Z,14nm,1.6s
MKAR Makanchi Array 63.10 44 P **P** **08 24 11.4 -0.6**
comp=Z,2.6nm,0.6s,baz=334,slow=5.8,SNR=34
MKAR LR LR 08 49 12.1
comp=Z,68nm,19.8s,baz=330,slow=34
comp=Z,2.6nm,0.6s
LPIG La Paz 63.19 273 LR LR 08 51 14.7
comp=Z,117nm,18.5s,baz=52,slow=36
MA2 Magadan 63.24 358 LR LR 08 51 06.3
comp=Z,54nm,18.5s,baz=52,slow=36
MA2 Magadan 63.24 358 P **P** **08 24 12.5 -0.1**
MA2 IAmb IAmb 08 24 13.4
comp=Z,17nm,1.2s
AAK Ala-Archa 63.41 52 P **P** **08 24 14.8 +0.5**
AAK IAmb IAmb 08 24 17.0
comp=Z,16nm,1.3s
BTK Batken 63.91 56 P **P** **08 24 17.5 0.0**
BOOM Boomskoye usch 64.14 51 IAmb IAmb 08 24 21.8
comp=Z,20nm,1.5s
ITTB Itaituba 64.32 205 *eP* **P** **08 24 20.0 -0.3**
RAYN Ar Rayn 64.41 86 P **P** **08 24 21.1 +0.2**
PRPB Parauapebas 64.89 198 *eP* **P** **08 24 24.1 +0.1**
KDJ Kajisay 64.96 50 IAmb IAmb 08 24 26.9
comp=Z,14nm,1.3s
KSH Kashi 66.62 53 P **P** **08 24 36.8 +1.7**
KSH pP pwP 08 24 41.3 +3.2
KSH pmax pmax
comp=Z,17nm,1.4s
NPGB Novo Progresso 66.83 204 *eP* **P** **08 24 35.2 -1.3**
H10N2 ASCENSION HYDR 66.85 160 T T 09 36 53.1
baz=350,slow=75,SNR=8.4
H10N3 ASCENSION HYDR 66.86 160 T T 09 36 59.4
baz=350,slow=75,SNR=7.4
H10N1 ASCENSION HYDR 66.87 160 T T 09 36 54.0
baz=350,slow=75,SNR=7.7
SMTB Santa Maria do 67.18 196 *eP* **P** **08 24 38.9 +0.3**
OTAV Otavalo 67.48 230 P **P** **08 24 40.6 -0.6**
OTAV Otavalo 67.48 230 *eP* **P** **08 24 41.9 +0.7**
KBL Kabul 67.59 61 P **P** **08 24 41.1 -0.4**
KBL IAmb IAmb 08 24 43.6
comp=Z,16nm,1.2s
WMQ Urumqi 67.63 42 *eP* **P** **08 24 40.3 -1.1**
WMQ pP pwP 08 24 48.5 +4.1
WMQ pmax pmax
comp=Z,9.0nm,0.6s
TBTG Tabatinga, AM 68.27 220 *eP* **P** **08 24 44.9 -0.7**
NBLA Lagarto - SE 68.34 185 *eP* **P** **08 24 46.0 +0.1**
UOSS Minazif 68.97 77 P **P** **08 24 49.2 -0.7**
SONM Songino Array 69.80 28 P **P** **08 24 54.9 0.0**
comp=Z,12nm,1.2s,baz=323,slow=6.0,SNR=31
SONM LR LR 08 56 59.5
comp=Z,64nm,19.8s,baz=8.5,slow=37
comp=Z,12nm,1.2s
SONM Songino Array 69.80 28 P **P** **08 24 54.7 -0.3**
SONM IAmb IAmb 08 24 56.4
comp=Z,17nm,1.3s
ULN Ulaanbaatar 69.94 27 P **P** **08 24 55.9 +0.1**
SDBA SAO DESIDERIO 70.32 192 *eP* **P** **08 24 57.9 -0.4**
BOSC San Juan Bosco 70.57 229 P **P** **08 25 00.5 +0.5**
CLDB Colider 70.63 204 *eP* **P** **08 24 59.6 -0.6**
SAML Samuel 70.63 212 P **P** **08 24 59.0 -1.1**
SNDB Serra Nova Dou 70.82 199 *eP* **P** **08 25 01.2 0.0**
PDRB Porto dos Gac 71.55 204 *eP* **P** **08 25 05.4 -0.3**
ETMB Extrema 72.35 214 *eP* **P** **08 25 09.5 -1.0**
VILB Vilhena 73.67 208 *eP* **P** **08 25 18.5 +0.2**
BDFB Brasilia 73.90 195 P **P** **08 25 20.0 +0.2**
comp=Z,5.4nm,0.7s,baz=12,slow=6.6,SNR=6.2
comp=Z,5.4nm,0.7s
BDFB Brasilia 73.90 195 P **P** **08 25 19.9 +0.2**
BDFB IAmb IAmb 08 25 20.9
comp=Z,25nm,1.4s
BDFB Brasilia 73.90 195 *eP* **P** **08 25 20.4 +0.6**
NBRS Nobres 73.97 203 *eP* **P** **08 25 20.0 -0.1**
ATAH Atahualpa 74.15 227 LR LR 08 57 39.3
comp=Z,48nm,20.0s,baz=14,slow=36
ARAG Araguaiana, MT 74.56 199 *eP* **P** **08 25 24.3 +0.9**
VBST Vila Bela da S 75.14 207 *eP* **P** **08 25 27.1 +0.3**
PTET Porto Estrela 75.29 204 *eP* **P** **08 25 27.9 +0.2**
SALV Santo Antonio 75.49 202 *eP* **P** **08 25 28.6 -0.2**
DVLD Doverlandia 75.53 199 *eP* **P** **08 25 30.3 +1.2**
GTA Gaotai 75.68 36 ⇑P **P** **08 25 29.8 -0.2**
GTA pP sP 08 25 34.5 +3.8
GTA sP pwP 08 25 37.3 +4.3
GTA pmax pmax
comp=Z,11nm,1.6s
XLT XiLinHaoTe 75.74 22 *eP* **P** **08 25 29.5 -0.7**
XLT pP pP 08 25 33.5 +2.8
XLT sP pwP 08 25 35.8 +2.6
XLT pmax pmax
comp=Z,10.0nm,0.8s
XLT pmax pmax
comp=Z,270nm,4.6s
PTLB Pontes e Lacer 75.81 206 *eP* **P** **08 25 31.1 +0.5**
BNX BinXian 75.86 14 ⇑P **P** **08 25 30.3 -0.5**
BNX pmax pmax
comp=Z,10.0nm,1.1s
POCN Pocone 76.41 203 *eP* **P** **08 25 34.9 +0.8**
SIV San Ignacio 76.80 208 LR LR 08 55 24.7
comp=Z,73nm,18.3s,baz=281,slow=31
GOMU GeErMu 76.91 41 P **P** **08 25 35.0 -2.4**
GOMU PcP **PcP** **08 25 46.3 -2.2**
GOMU pmax pmax
comp=Z,3.0nm,0.8s
HHC Hu-ho-hao-te 77.63 27 *eP* **P** **08 25 41.3 +0.3**
HHC pmax pmax
comp=Z,29nm,0.9s
HHC pmax pmax
comp=Z,290nm,5.5s
NNA Nana 77.99 224 LR LR 09 01 37.0
comp=Z,38nm,19.3s,baz=346,slow=37
RVDE Rio Verde (Bra 78.38 201 *eP* **P** **08 25 46.1 +1.0**
PANT Pantanal (Braz 78.68 203 *eP* **P** **08 25 46.9 +0.2**
LPAZ La Paz 79.04 214 P **P** **08 25 49.3 -0.2**
comp=Z,5.4nm,1.2s,baz=11,slow=7.3,SNR=7.4
comp=Z,5.4nm,1.2s
LPAZ La Paz 79.04 214 IAmb IAmb 08 25 50.2
comp=Z,24nm,1.8s
LPAZ La Paz 79.04 214 *eP* **P** **08 25 49.1 -0.4**
CAM01 Campos-RJ 79.33 188 *eP* **P** **08 25 51.7 +1.5**
BJI Beijing 79.46 24 P **P** **08 25 50.5 -0.4**
BJI pmax pmax
comp=Z,8.0nm,1.2s
AQDB Aquidauana 79.94 201 *eP* **P** **08 25 54.4 +0.8**
LZH Lanzhou 79.98 34 *eP* **P** **08 25 53.8 -0.3**
LZH pP pwP 08 25 58.8 +1.7
LZH pmax pmax
comp=Z,23nm,1.5s
HNS HongShan 81.66 25 ⇑P **P** **08 26 03.8 +1.0**
HNS pmax pmax
comp=Z,20nm,1.0s
TIA Tai'an 83.34 24 ⇓P **P** **08 26 11.3 -0.3**
TIA pmax pmax
comp=Z,8.0nm,1.2s
XAN Xi'an 83.37 31 ⇑P **P** **08 26 11.3 -0.5**
XAN pP pwP 08 26 18.8 +4.0
XAN pmax pmax
comp=Z,13nm,0.9s
LYN LuoYang 83.83 28 ⇓P **P** **08 26 13.5 -0.6**
LYN pmax pmax
comp=Z,10.0nm,1.2s
LYN pmax pmax
comp=Z,120nm,4.7s
KSRS Korea Array 84.07 15 P **P** **08 26 14.9 -0.3**
comp=Z,6.9nm,1.0s,baz=348,slow=5.3,SNR=22
comp=Z,6.9nm,1.0s
KSAR Wonju Array Be 84.08 15 P **P** **08 26 14.4 -0.9**
CD2 Chengdu 84.75 36 P **P** **08 26 18.8 -0.1**
CD2 pmax pmax
comp=Z,10.0nm,0.6s
CPUP Villa Florida 85.95 202 P **P** **08 26 23.7 -0.8**
comp=Z,6.1nm,1.0s,baz=32,slow=6.2,SNR=8.3
CPUP LR LR 09 01 55.4
comp=Z,28nm,20.5s,baz=172,slow=34
comp=Z,6.1nm,1.0s
CPUP Villa Florida 85.95 202 P **P** **08 26 24.0 -0.6**
CPUP IAmb IAmb 08 26 24.4
comp=Z,21nm,1.4s
MJAR Matsushiro Arr 86.04 7 P **P** **08 26 25.0 -0.3**
comp=Z,1.7nm,1.0s,baz=10,slow=7.4,SNR=2.7
comp=Z,1.7nm,1.0s
MJAR Matsushiro Arr 86.04 7 IAmb IAmb 08 28 29.0
comp=Z,16nm,2.0s
ENH Enshi 87.07 32 P **P** **08 26 30.1 -0.3**
PZH PanZhiHua 88.15 39 P **P** **08 26 35.5 -0.3**
PZH pmax pmax
comp=Z,20nm,1.0s
PZH pmax pmax
comp=Z,80nm,4.1s
GYA Guiyang 89.81 35 ⇓P **P** **08 26 43.8 +0.3**
GYA pmax pmax
comp=Z,13nm,1.3s
VNA3 Neumayer Olymp 129.50 170 PKPdf **PKPdf** **08 32 51.3 -0.6**
SNAA Sanae 130.61 168 PKP **PKPdf** **08 32 54.3 +0.2**
comp=Z,5.2nm,1.1s,baz=32,slow=5.1,SNR=6.7
SNAA Sanae 130.61 168 PKPdf **PKPdf** **08 32 54.1 +0.1**
TROLL Troll, Antarti 131.57 166 PKPdf **PKPdf** **08 32 56.2 +0.3**
WRA Warramunga Arr 141.38 19 PKP **PKPdf** **08 33 14.5 -1.1**
comp=Z,1.3nm,1.0s,baz=348,slow=3.0,SNR=4.8
WRA Warramunga Arr 141.38 19 **PKPdf** **08 33 14.6 -1.0**
ASAR Alice Springs 144.93 21 PKP **PKPab** **08 33 20.1 -0.8**
comp=Z,8.7nm,1.0s,baz=356,slow=2.8,SNR=34
ASAR Alice Springs 144.93 21 PKPdf **PKPab** **08 33 20.6 -0.3**
QSPA South Pole Qui 147.39 180 PKPbc **PKPdf** **08 33 24.9 +0.3**
comp=Z,21nm,1.1s,baz=224,slow=1.4,SNR=16
VNDA Vanda 159.23 189 PKP **PKPdf** **08 33 39.6 -1.6**
comp=Z,1.5nm,1.1s,baz=141,slow=1.5,SNR=3.7
VNDA PKPab **PKPab** **08 34 18.4 -0.2**
comp=Z,3.0nm,1.1s,baz=202,slow=3.6,SNR=6.1
VNDA Vanda 159.23 189 **PKPab** **08 34 20.0 +1.3**

IDC ***26*** *08:17:38.4±0.9, 57.44N×33.44W, h0km, mb3.6/10, mbtmp3.7/11, ML3.5/1, Error ellipse: s-maj=30.2km s-min=17.2km az=13.0*

ISC 26 08:17:40.8±0.8, 57.4N±0.2×33.4W±0.1, h16km, n12, σ0s74/12, mb3.7/10, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	**9.37**	**34**	Pn	**Pn**	**08 19 55.1**	**+0.2**
	0.4nm,0.3s,baz=193,slow=7.7,SNR=8.2						
	12nm,0.9s						
HFS	**Hagfors**	**24.17**	**64**	P	**P**	**08 22 56.6**	**+0.7**
	3.4nm,0.9s,baz=111,slow=6.5,SNR=3.5						
	3.4nm,0.9s						
ESDC	**Sonseca Array**	**26.08**	**120**	P	**P**	**08 23 13.6**	**+0.2**
	1.2nm,0.9s,baz=316,slow=8.3,SNR=5.0						
	1.2nm,0.9s						
AKASG	**Malin Array Be**	**36.19**	**73**	P	**P**	**08 24 42.9**	**+0.7**
	1.0nm,0.7s,baz=308,slow=8.5,SNR=5.1						
	1.0nm,0.7s						
YKA	**Yellowknife Ar**	**38.41**	**312**	P	**P**	**08 25 00.5**	**-0.4**
	1.2nm,0.8s,baz=61,slow=9.0,SNR=5.8						
	1.2nm,0.8s						
ILAR	**Eielson Array**	**48.10**	**328**	P	**P**	**08 26 19.7**	**+0.6**
	1.3nm,0.9s,baz=34,slow=5.9,SNR=6.1						
	1.3nm,0.9s						
PDAR	**Pinedale Array**	**48.34**	**287**	P	**P**	**08 26 21.8**	**+0.3**
	0.6nm,0.7s,baz=65,slow=7.0,SNR=5.1						
	0.6nm,0.7s						
TORD	**Torodi Ar. Bea**	**51.62**	**134**	P	**P**	**08 26 46.2**	**-0.2**
	0.6nm,0.7s,baz=338,slow=7.7,SNR=2.9						
	0.6nm,0.7s						
TXAR	**Lajitas Array**	**55.27**	**271**	P	**P**	**08 27 13.3**	**+0.1**
	0.4nm,1.0s,baz=66,slow=5.0,SNR=3.1						
	0.4nm,1.0s						
NVAR	**Mina Array Bea**	**56.03**	**289**	P	**P**	**08 27 19.0**	**+0.3**
	0.2nm,0.5s,baz=54,slow=9.1,SNR=2.5						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**63.26**	**44**	P	**P**	**08 28 06.8**	**-1.3**
	0.3nm,0.6s,baz=353,slow=7.1,SNR=2.7						

0.3nm,0.6s
ASAR Alice Springs 145.03 21 PKPbc **PKPbc 08 37 15.2 -1.2**
1.3nm,0.9s,baz=342,slow=1.7,SNR=7.3

*IDC **26** 08:23:47.2±1.8,29°.22S×177°.90W,h0km,mb4.3/4, mbtmp4.3/4, Error ellipse: s-maj=59.1km s-min=35.9km az=18.0*
*NEIC **26** 08:23:57.2±1.6,29°.73S±0°.10×178°.0W±0°.2,h64km±10km, mb4.2/13, Error ellipse: s-maj=24.3km s-min=13.7km az=85.0*
ISC 26 08:23:57.4±0.8,29°.7S±0°.1×178°.1W±0°.1,h63km,n22, σ1§03/23,mb4.2/9,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.48**	**24**		**Pn**	**08 24 08.8**	**-0.6**
RAO				Sn	**Sn**	**08 24 20.5**	**+2.3**
OUZ	**Omahuta**	**8.89**	**230**	Pn	**Pn**	**08 26 03.8**	**+0.6**
EIDS	**Eidsvold**	**27.59**	**272**	P	**P**	**08 29 39.4**	**+0.6**
EIDS				IAmb	IAmb	08 29 54.5	
	comp=Z,13nm,1.4s						
STKA	**Stephens Creek**	**34.52**	**256**	P	**P**	**08 30 40.0**	**+0.2**
	comp=Z,3.1nm,0.5s,baz=103,slow=14,SNR=14						
	comp=Z,3.1nm,0.5s						
STKA	**Stephens Creek**	**34.52**	**256**	P	**P**	**08 30 40.2**	**+0.4**
STKA				IAmb	IAmb	08 30 41.1	
	comp=Z,1.4nm,0.9s						
AS31	**Alice Springs**	**43.03**	**266**	P	**P**	**08 31 50.9**	**-0.2**
ASAR	**Alice Springs**	**43.03**	**266**	P	**P**	**08 31 50.7**	**-0.4**
	comp=Z,1.5nm,0.4s,baz=104,slow=7.5,SNR=40						
	comp=Z,1.5nm,0.4s						
ASAR	**Alice Springs**	**43.03**	**266**	P	**P**	**08 31 50.5**	**-0.6**
WR0	**Warramunga Arr**	**43.77**	**272**	P	**P**	**08 31 57.2**	**+0.2**
WR0				IAmb	IAmb	08 31 58.0	
	comp=Z,12nm,1.4s						
WB2	**Warramunga Arr**	**43.94**	**272**	P	**P**	**08 31 57.8**	**-0.7**
WRAB	**Tennant Creek**	**43.95**	**272**	P	**P**	**08 31 58.4**	**-0.1**
WRAB				IAmb	IAmb	08 31 59.3	
	comp=Z,3.7nm,0.8s						
WRA	**Warramunga Arr**	**43.95**	**271**	P	**P**	**08 31 58.0**	**-0.5**
	comp=Z,3.0nm,0.3s,baz=110,slow=8.2,SNR=178						
	comp=Z,3.0nm,0.3s						
WRA	**Warramunga Arr**	**43.95**	**271**	P	**P**	**08 31 57.6**	**-1.0**
WB0	**Warramunga Arr**	**43.97**	**272**	P	**P**	**08 31 58.0**	**-0.7**
WB0				IAmb	IAmb	08 32 00.1	
	comp=Z,4.3nm,0.6s						
SBA	**Scott Base**	**48.73**	**184**	P	**P**	**08 32 34.6**	**-0.5**
SBA				IAmb	IAmb	08 32 37.2	
	comp=Z,1.6nm,0.8s						
VNDA	**Vanda**	**48.78**	**186**	P	**P**	**08 32 35.7**	**+0.2**
KNRA	**Kununurra**	**50.53**	**274**	P	**P**	**08 32 50.2**	**+0.5**
QSPA	**South Pole Qui**	**60.41**	**180**	P	**P**	**08 34 01.2**	**+1.1**
SNAA	**Sanae**	**78.86**	**178**	P	**P**	**08 35 54.6**	**+1.3**
	comp=Z,0.3nm,0.5s,baz=198,slow=13,SNR=6.7						
	comp=Z,0.3nm,0.5s						
SNAA	**Sanae**	**78.86**	**178**	P	**P**	**08 35 51.5**	**-1.8**
SNAA				IAmb	IAmb	08 36 17.6	
	comp=Z,2.6nm,1.2s						
FINES	**FINESS Array B**	**144.44**	**340**	PKP	**PKPab**	**08 43 22.9**	**-1.2**
	comp=Z,2.3nm,0.5s,baz=54,slow=3.6,SNR=31						
AKASG	**Malin Array Be**	**150.67**	**323**	PKPbc	**PKPbc**	**08 43 40.1**	**-1.9**
	comp=Z,0.6nm,0.4s,baz=49,slow=3.0,SNR=3.5						

*AEIC **26** 08:34:44.8±1.5,51°.5N±0°.1×179°.44W±0°.05,h76km±4km, ML3.8/36,mb4.0/45(NEIC), Error ellipse: s-maj=19.8km s-min=4.4km az=180.0*
*NEIC **26** 08:34:45.8±1.5,51°.6N±0°.2×179°.45W±0°.02,h77km±5km, Error ellipse: s-maj=23.2km s-min=1.7km az=179.0*
*IDC **26** 08:34:47.8±2.7,51°.97N×179°.40W,h91km±23km,mb3.4/9, mbtmp3.8/11, Error ellipse: s-maj=43.5km s-min=13.4km az=3.0*
ISC 26 08:34:44.9±0.9,51°.5N±0°.1×179°.44W±0°.03,h81km±6km, n103,σ0§92/105,mb4.0/20,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAKI	**Gareloi-Kavalg**	**0.40**	**80**		**Pn**	**08 34 57.8**	**0.0**
GASW	**Gareloi Southw**	**0.47**	**52**		**Pn**	**08 34 58.3**	**-0.1**
GASW					**Sn**	**08 35 08.8**	**+0.4**
GALAA	**Gareloi Lava P**	**0.50**	**57**		**Pn**	**08 34 58.8**	**+0.2**
GAEA	**Gareloi East**	**0.52**	**56**		**Pn**	**08 34 59.0**	**+0.2**
CERAA	**Semis' Rag'd T**	**0.68**	**308**		**Pn**	**08 35 00.5**	**+0.1**
CERAA					**Sn**	**08 35 11.6**	**-0.4**
CERB	**Semis' Cerberu**	**0.73**	**308**		**Pn**	**08 35 01.5**	**+0.7**
CERB					**Sn**	**08 35 12.7**	**0.0**
CESW	**Semis' Southwe**	**0.74**	**304**		**Pn**	**08 35 01.1**	**+0.1**
AMKA	**Amchitka**	**0.79**	**262**		**Pn**	**08 35 01.6**	**+0.1**
AMKA					**Sn**	**08 35 13.8**	**-0.2**
CEAP	**Semis' Anvil P**	**0.80**	**311**		**Pn**	**08 35 01.9**	**+0.3**
TASE	**Tanaga Southea**	**0.94**	**68**		**Pn**	**08 35 03.6**	**+0.3**
TAFP	**Tanaga Falls P**	**1.00**	**65**		**Pn**	**08 35 04.0**	**0.0**
TAFP					**Sn**	**08 35 18.2**	**+0.1**
TAPA	**Tanaga Point A**	**1.07**	**72**		**Pn**	**08 35 05.0**	**+0.2**
LSPA	**Little Sitkin**	**1.32**	**292**		**Pn**	**08 35 08.5**	**+0.6**
LSPA					**Sn**	**08 35 25.9**	**+0.7**
LSSA	**Little Sitkin**	**1.35**	**291**		**Pn**	**08 35 08.8**	**+0.5**
LSNW	**Little Sitkin**	**1.36**	**292**		**Pn**	**08 35 08.7**	**+0.3**
KIMD	**Kanaga Island**	**1.40**	**78**		**Pn**	**08 35 09.2**	**+0.2**
KICM	**Kanaga Island**	**1.46**	**72**		**Pn**	**08 35 10.1**	**+0.4**
KICM					**Sn**	**08 35 29.2**	**+0.8**
KIKV	**Kanaga Island**	**1.47**	**74**		**Pn**	**08 35 10.1**	**+0.3**
KIWB	**Kanaga Island**	**1.47**	**75**		**Pn**	**08 35 10.1**	**+0.3**
ADK	**Adak**	**1.76**	**76**		**Pn**	**08 35 13.6**	**0.0**
ETKA	**Kagalaska Isla**	**1.93**	**78**		**Pn**	**08 35 18.6**	**+0.4**
GSCK	**Great Sitkin C**	**2.11**	**74**		**Pn**	**08 35 18.6**	**+0.4**
GSTD	**Great Sitkin T**	**2.13**	**73**		**Pn**	**08 35 18.5**	**0.0**
GSTR	**Great Sitkin T**	**2.19**	**73**		**Pn**	**08 35 19.5**	**+0.3**
ATKA	**Atka Island**	**3.33**	**76**		**Pn**	**08 35 35.0**	**+0.4**
KOKL	**Mount Kliuchef**	**3.35**	**74**		**Pn**	**08 35 35.7**	**+0.7**
KOSE	**Korovin Southe**	**3.45**	**74**		**Pn**	**08 35 37.3**	**+1.0**
SHEM	**Shemya Is, Ala**	**4.17**	**290**	P	**Pn**	**08 35 47.6**	**+1.6**
	10nm,0.7s,baz=205,slow=17,SNR=1.8						
SHEM				S	**Sn**	**08 36 34.6**	**+1.1**
	7.4nm,0.3s,baz=277,slow=16,SNR=1.2						
NIKH	**Nikolski High**	**6.67**	**73**	Pn	**Pn**	**08 36 20.7**	**+0.6**
SPIA	**Saint Paul Isl**	**7.83**	**40**		**Pn**	**08 36 38.0**	**+2.2**
UNV	**Unalaska Valle**	**8.21**	**68**		**Pn**	**08 36 40.9**	**-0.2**
SDPT	**Sand Point**	**11.95**	**64**	Pn	**Pn**	**08 37 31.5**	**-0.5**
CNBA	**Chernabura Isl**	**12.37**	**67**	Pn	**Pn**	**08 37 35.9**	**-1.7**
KDAK	**Kodiak Island**	**16.70**	**57**	P	**Pn**	**08 38 30.8**	**-2.7**
	3.5nm,0.3s,baz=286,slow=2.7,SNR=57						
KDAK	**Kodiak Island**	**16.70**	**57**		**Pn**	**08 38 30.7**	**-2.7**
M19K	**Big River Lodg**	**17.14**	**43**		**P**	**08 38 39.4**	**+0.1**
M19K				IAmb	IAmb	08 38 41.9	
	comp=Z,6.7nm,1.3s						
CNPM	**China Poot**	**17.77**	**52**	P	**Pn**	**08 38 46.9**	**+0.3**
CNPM				IAmb	IAmb	08 38 53.9	
	comp=Z,21nm,1.2s						
J20K	**Nowinta River**	**18.34**	**36**	P	**Pn**	**08 38 53.2**	**-0.2**
SKT	**Skwentna**	**18.41**	**44**	P	**Pn**	**08 38 54.6**	**+0.4**
SKT				IAmb	IAmb	08 38 58.3	
	comp=Z,15nm,1.4s						
PPLA	**Purkeypile**	**18.50**	**41**	P	**P**	**08 38 54.6**	**+0.2**
PPLA				IAmb	IAmb	08 39 02.0	
	comp=Z,13nm,1.5s						
SEW	**Seward**	**18.79**	**51**	P	**P**	**08 38 57.8**	**+0.4**
SEW				IAmb	IAmb	08 38 58.4	
	comp=Z,13nm,1.1s						
KTH	**Kantishna Hill**	**19.30**	**40**	P	**P**	**08 39 03.9**	**+0.9**
KTH				IAmb	IAmb	08 39 04.7	
	comp=Z,5.9nm,0.9s						
IMAR	**Indian Mountai**	**19.49**	**32**	P	**P**	**08 39 05.7**	**+0.6**
BPAW	**Bear Paw Mtn.**	**19.51**	**39**	P	**P**	**08 39 06.2**	**+0.8**
I21K	**Tanana**	**19.66**	**35**	P	**P**	**08 39 08.1**	**+1.1**
I21K				IAmb	IAmb	08 39 29.7	
	comp=Z,7.0nm,1.5s						
MLY	**Manley**	**20.05**	**36**	P	**P**	**08 39 12.1**	**+0.9**
BWN	**Browne**	**20.14**	**39**	P	**P**	**08 39 12.7**	**+0.5**
BWN				IAmb	IAmb	08 39 25.8	
	comp=Z,7.5nm,0.8s						
SCM	**Sheep Creek Mo**	**20.24**	**47**	P	**P**	**08 39 12.4**	**-0.9**
SCM				IAmb	IAmb	08 39 33.9	
	comp=Z,26nm,1.5s						
FID	**Port Fidalgo**	**20.37**	**50**	P	**P**	**08 39 14.1**	**-0.5**
NEA2	**Nenana**	**20.48**	**39**	P	**P**	**08 39 15.0**	**-0.8**
NEA2				IAmb	IAmb	08 39 17.6	
	comp=Z,3.9nm,0.8s						
DHY	**Denali Highway**	**20.60**	**43**	P	**P**	**08 39 16.9**	**-0.3**
I23K	**Minto, Yukon-K**	**20.62**	**37**	P	**P**	**08 39 17.4**	**+0.2**
M24K	**Tolsona, Glenn**	**20.84**	**46**	P	**P**	**08 39 19.2**	**-0.5**
M24K				IAmb	IAmb	08 39 21.2	
	comp=Z,11nm,0.9s						
MDM	**Murphy Dome**	**20.96**	**38**	P	**P**	**08 39 20.2**	**-0.8**
PAX	**Paxson**	**21.39**	**44**	P	**P**	**08 39 25.9**	**+0.2**
ILAR	**Eielson Array**	**21.41**	**39**	P	**P**	**08 39 23.9**	**-1.8**
	comp=Z,0.3nm,0.7s,baz=242,slow=9.3,SNR=5.3						
	comp=Z,0.3nm,0.7s						
ILAR	**Eielson Array**	**21.41**	**39**	P	**P**	**08 39 24.9**	**-0.9**
N25K	**Chitina, Valde**	**21.44**	**48**	P	**P**	**08 39 25.7**	**-0.5**
N25K				IAmb	IAmb	08 39 27.9	
	comp=Z,11nm,1.4s						
H24K	**Noodor Dome**	**21.48**	**36**	P	**P**	**08 39 26.6**	**0.0**
GLB	**Gilahina Butte**	**21.78**	**49**	P	**P**	**08 39 29.9**	**+0.1**
GLB				IAmb	IAmb	08 39 49.4	
	comp=Z,7.9nm,1.1s						
RIDG	**Independent Ri**	**21.89**	**43**	P	**P**	**08 39 29.8**	**-1.1**
RIDG				IAmb	IAmb	08 39 48.9	
	comp=Z,6.7nm,1.3s						
J25K	**Salcha River,**	**21.96**	**40**	P	**P**	**08 39 31.1**	**-0.6**
DOT	**Dot Lake**	**22.19**	**43**	P	**P**	**08 39 33.1**	**-1.0**
SCRK	**Sand Creek**	**22.32**	**42**	P	**P**	**08 39 33.6**	**-2.1**
TOLK	**Toolik Lake Re**	**22.36**	**29**	P	**P**	**08 39 36.0**	**+0.1**
TOLK				IAmb	IAmb	08 39 36.4	
	comp=Z,2.0nm,0.6s						
BCAR	**Beaver Creek A**	**23.04**	**45**	P	**P**	**08 39 42.6**	**-0.4**
BMAR	**Burnt Mountain**	**23.37**	**34**	P	**P**	**08 39 45.7**	**-0.3**
H11N2	**WAKE ISLAND Hy**	**33.47**	**204**	T	T	09 17 07.8	
	baz=17,slow=74						
H11N3	**WAKE ISLAND Hy**	**33.48**	**204**	T	T	09 17 08.4	
	baz=17,slow=74						
H11N1	**WAKE ISLAND Hy**	**33.48**	**204**	T	T	09 17 08.9	
	baz=17						
H11S1	**WAKE ISLAND Hy**	**34.69**	**204**	T	T	09 18 39.6	
	baz=16,slow=74						
H11S2	**WAKE ISLAND Hy**	**34.70**	**204**	T	T	09 18 40.7	
	baz=16,slow=74						
H11S3	**WAKE ISLAND Hy**	**34.70**	**204**	T	T	09 18 40.0	
	baz=16						
YKA	**Yellowknife Ar**	**35.45**	**46**	P	**P**	**08 41 32.0**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=283,slow=7.0,SNR=9.0						
	comp=Z,0.2nm,0.4s						
YKA	**Yellowknife Ar**	**35.45**	**46**	P	**P**	**08 41 32.4**	**-0.4**
PNTR	**Pine Nut**	**42.73**	**83**	P	**P**	**08 42 36.0**	**+1.9**
KVN	**Kaiserville**	**43.68**	**82**	P	**P**	**08 42 43.3**	**+1.5**
KVN				IAmb	IAmb	08 42 43.7	
	comp=Z,3.6nm,1.5s						
NVAR	**Mina Array Bea**	**43.94**	**82**	P	**P**	**08 42 45.5**	**+1.7**
	comp=Z,0.9nm,0.7s,baz=298,slow=6.8,SNR=8.4						
	comp=Z,0.9nm,0.7s						
HVU	**Hansel Valley**	**45.31**	**75**	P	**P**	**08 42 55.9**	**+1.2**
HVU				IAmb	IAmb	08 42 56.5	
	comp=Z,2.3nm,0.6s						
R11A	**Troy Canyon, C**	**45.67**	**81**	P	**P**	**08 42 58.2**	**+0.7**
R11A				IAmb	IAmb	08 43 00.2	
	comp=Z,1.1nm,0.8s						
TPNV	**Topopah Spring**	**46.13**	**83**	P	**P**	**08 43 03.3**	**+2.1**
TPNV				IAmb	IAmb	08 43 05.3	
	comp=Z,1.4nm,0.8s						
SONM	**Songino Array**	**46.23**	**296**	P	**P**	**08 43 02.5**	**+0.7**
	comp=Z,1.4nm,0.5s,baz=62,slow=9.4,SNR=8.1						
	comp=Z,1.4nm,0.5s						
SONM	**Songino Array**	**46.23**	**296**	P	**P**	**08 43 02.8**	**+0.9**
SONM				IAmb	IAmb	08 43 02.8	
	comp=Z,1.3nm,0.8s						
DUG	**Dugway, Tooele**	**46.24**	**77**	P	**P**	**08 43 03.4**	**+1.5**
DUG				IAmb	IAmb	08 43 04.8	
	comp=Z,5.4nm,1.3s						
PDAR	**Pinedale Array**	**46.66**	**72**	P	**P**	**08 43 05.8**	**+0.4**
	comp=Z,1.3nm,0.7s,baz=319,slow=3.0,SNR=14						
	comp=Z,1.3nm,0.7s						
PDAR	**Pinedale Array**	**46.66**	**72**	P	**P**	**08 43 05.3**	**0.0**
RDMU	**Red Mountain**	**47.97**	**74**	P	**P**	**08 43 17.0**	**+1.5**
SRU	**San Rafael Swe**	**48.30**	**76**	P	**P**	**08 43 19.8**	**+1.8**
O20A	**White River Ci**	**49.04**	**74**	P	**P**	**08 43 24.4**	**+0.7**
PV11	**David Mesa, Pa**	**49.81**	**76**	P	**P**	**08 43 30.6**	**+1.0**
PV13	**Radium Mtn., P**	**49.93**	**76**	P	**P**	**08 43 31.8**	**+1.2**
ARCES	**ARCESS Array B**	**57.91**	**350**	P	**P**	**08 44 26.8**	**-1.1**
	comp=Z,1.9nm,1.0s,baz=1.7,slow=9.2,SNR=1.8						
	comp=Z,1.9nm,1.0s						
P40A	**Paris**	**58.89**	**64**	P	**P**	**08 44 34.6**	**-0.5**
TXAR	**Lajitas Array**	**59.03**	**81**	P	**P**	**08 44 37.1**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=300,slow=5.1,SNR=10.0						
	comp=Z,0.5nm,0.6s						
TXAR	**Lajitas Array**	**59.03**	**81**	P	**P**	**08 44 37.4**	**+1.0**
MKAR	**Makanchi Array**	**59.65**	**308**	P	**P**	**08 44 39.7**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=44,slow=6.9,SNR=9.8						
	comp=Z,0.3nm,0.3s						
MKAR	**Makanchi Array**	**59.65**	**308**	P	**P**	**08 44 39.9**	**-0.4**
T50A	**Nancy**	**64.68**	**62**	P	**P**	**08 45 13.9**	**-0.1**
T50A				IAmb	IAmb	08 45 38.0	
	comp=Z,5.2nm,1.2s						
L56A	**Greenwood**	**64.79**	**54**	P	**P**	**08 45 14.5**	**-0.2**
CPCT	**Cooper Cave**	**65.99**	**63**	P	**P**	**08 45 22.3**	**-0.3**
CPCT				IAmb	IAmb	08 45 26.5	
	comp=Z,5.2nm,1.4s						
H62A	**Milan**	**66.07**	**48**	P	**P**	**08 45 22.2**	**-0.7**
AKASG	**Malin Array Be**	**75.32**	**342**	P	**P**	**08 46 17.9**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=20,slow=6.6,SNR=3.1						
	comp=Z,0.4nm,0.4s						
BOSA	**Boshof**	**150.60**	**312**	PKPbc	**PKPbc**	**08 54 27.8**	**+0.5**
	comp=Z,2.9nm,1.0s,baz=292,slow=5.4,SNR=4.3						

*IDC **26** 08:55:36.8±0.7, 45°.50N×151°.54E, h0km, mb3.9/22, mbtmp3.9/27, ML3.0/5, MS3.3/8, Error ellipse: s-maj=19.1km s-min=14.8km az=152.0*
*SKHL **26** 08:55:39.4±0.4,45°.30N×152°.00E,h50km±5km,mb5.0/6, mbv5.3/2, msh4.8/2*
*JMA **26** 08:55:39.2±1.0,46°.N±5°.×15°.2E±°, h30km, MV4.8/13, KURILE ISLANDS REGION*
*NIED **26** 08:55:39.2,45°.84N×151°.60E,h30km,MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr0.64; Mθθ-0.22; Mφφ-0.42; Mrθ-0.32; Mθφ-0.81; Mφr1.76; Fault plane solution: Mo2.03000×10¹⁵ NP1: φs251.00000°, δ26.00000°, λ159.00000°. NP2: φs360.00000°, δ81.00000°, λ65.00000°.*
*MOS **26** 08:55:41.9±1.1,45°.49N×151°.60E,h52km,mb4.7/25 Error ellipse: s-maj=7.0km s-min=6.2km az=87.7*
*NEIC **26** 08:55:43.1±1.1,45°.49N±0°.09×151°.54E±0°.03,h41km±8km, mb4.6/35, Error ellipse: s-maj=12.7km s-min=2.8km az=182.0*
ISC 26 08:55:41.2±0.5,45°.43N±0°.07×151°.58E±0°.05,h32km,n198, σ1§56/208,mb4.4/57,MS3.4/6,9C-8D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.63**	**267**	*e*PN	**Pn**	**08 56 22.2**	**+0.9**
KUR				*i* S	**Sn**	**08 56 55.6**	**+3.4**
KUR				pmax	pmax		
	comp=N,112nm,0.3s						
KUR				pmax	pmax		
	comp=Z,244nm,0.3s						
KUR				pmax	pmax		
	comp=E,84nm,0.2s						
KUR				smax	smax		
	comp=N,1μm,0.6s						
KUR				smax	smax		
	comp=E,541nm,0.4s						
KUR	**Kuril'sk**	**2.63**	**267**	*e*P	**Pn**	**08 56 22.7**	**+1.4**
KUR				AMB	AMB	08 56 28.9	
	comp=E,240nm,0.3s						
KUR				*i* S	**Sn**	**08 56 55.5**	**+3.4**
KUR				A	A	08 57 02.5	
	comp=E,1μm,0.6s						
KUR				A	A	08 57 02.5	
	comp=E,540nm,0.6s						
SHO	**Shikotan**	**3.73**	**247**	*c* iPN	**Pn**	**08 56 36.3**	**-0.2**
SHO				*i* S	**Sn**	**08 57 19.0**	**-0.4**
SHO				pmax	pmax		
	comp=Z,103nm,0.4s						
SHO				pmax	pmax		
	comp=N,50nm,0.3s						
SHO				smax	smax		
	comp=N,234nm,0.4s						
SHO				smax	smax		
	comp=E,77nm,0.2s						
SHO	**Shikotan**	**3.73**	**247**	*e*P	**Pn**	**08 56 37.7**	**+1.2**
SHO				AMB	AMB	08 56 39.3	
	comp=E,600nm,3.0s						
SHO				AMB	AMB	08 56 40.9	
	comp=E,130nm,0.4s						
SHO				*e*S	**Sn**	**08 57 21.1**	**+1.7**
SHO				A	A	08 57 25.0	
	comp=E,700nm,4.0s						
SHO				A	A	08 57 25.0	
	comp=E,600nm,4.0s						
SHO				A	A	08 57 26.7	
	comp=E,280nm,0.4s						
SHO				A	A	08 57 26.7	
	comp=E,280nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**4.31**	**253**	*e*PN	**Pn**	**08 56 46.7**	**+2.3**
YUK				*e*S	**Sn**	**08 57 37.3**	**+3.8**
YUK				pmax	pmax		
	comp=Z,231nm,0.2s						
YUK				pmax	pmax		
	comp=N,53nm,0.1s						
YUK				smax	smax		
	comp=N,356nm,0.3s						
YUK				smax	smax		
	comp=E,634nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**4.31**	**253**	*e*P	**Pn**	**08 56 46.7**	**+2.3**
YUK				AMB	AMB	08 56 49.7	
	comp=E,140nm,0.4s						
YUK				*e*S	**Sn**	**08 57 36.1**	**+2.5**
YUK				A	A	08 57 41.5	
	comp=E,900nm,3.0s						
YUK				A	A	08 57 41.5	
	comp=E,1μm,3.0s						
YUK				A	A	08 57 46.7	
	comp=E,530nm,0.6s						
YUK				A	A	08 57 46.7	
	comp=E,620nm,0.6s						
GLVR	**Golovnino**	**4.65**	**251**	*e*PN	**Pn**	**08 56 50.4**	**+1.3**
GLVR				*e*S	**Sn**	**08 57 45.9**	**+4.0**
GLVR				pmax	pmax		
	comp=Z,298nm,0.3s						
GLVR				pmax	pmax		
	comp=E,101nm,0.4s						
GLVR				smax	smax		
	comp=N,423nm,0.3s						
GLVR				smax	smax		
	comp=E,292nm,0.3s						
GLVR	**Golovnino**	**4.65**	**251**	*e*P	**Pn**	**08 56 50.4**	**+1.3**
GLVR				AMB	AMB	08 56 54.0	
	comp=E,220nm,0.3s						
GLVR				*e*S	**Sn**	**08 57 45.9**	**+4.0**
GLVR				A	A	08 57 48.1	
	comp=E,420nm,0.3s						
GLVR				A	A	08 57 48.1	
	comp=E,290nm,0.3s						
NEM2	**Nemuro 2**	**4.67**	**246**	*e*P	**Pn**	**08 56 49.2**	**-0.2**
NEM2				*e*S	**Sn**	**08 57 40.8**	**-1.6**
NMR	**Nemuro--Hokkai**	**4.67**	**246**	*e*PN	**Pn**	**08 56 48.8**	**-0.7**
NMR	**Nemuro--Hokkai**	**4.67**	**246**	*e*P	**Pn**	**08 56 49.2**	**-0.3**
NMR				*e*S	**Sn**	**08 57 43.2**	**+0.7**
RUSJ	**Misakicho**	**4.70**	**256**	*e*PN	**Pn**	**08 56 52.3**	**+2.5**
RUSJ				*e*S	**Sn**	**08 57 47.0**	**+3.8**
JRA	**Rausu**	**4.84**	**254**	*e*P	**Pn**	**08 56 53.9**	**+2.1**
JNK	**Nakash**	**5.24**	**252**	*e*P	**Pn**	**08 56 58.8**	**+1.4**
AKK	**Akkeshi**	**5.41**	**246**	*e*P	**Pn**	**08 57 01.2**	**+1.6**
AKK				*e*S	**Sn**	**08 58 01.5**	**+0.8**
JAK	**Akkeshi**	**5.51**	**246**	*e*P	**Pn**	**08 57 00.8**	**-0.2**
JAK				*e*S	**Sn**	**08 58 01.7**	**-1.6**
JTKR	**Abashiri--Toko**	**5.66**	**258**	*e*P	**Pn**	**08 57 05.4**	**+2.4**
JAR	**Ashorobuto**	**5.99**	**252**	*e*P	**Pn**	**08 57 09.5**	**+1.9**
SKR	**Severo-Kuril's**	**6.07**	**28**	*e*PN	**Pn**	**08 57 06.8**	**-1.8**
SKR				pmax	pmax		
	comp=Z,200nm,3.0s						
SKR				pmax	pmax		
	comp=Z,73nm,0.8s						
SKR				MLR	MLR		
	comp=Z,200nm,13.0s						
SKR	**Severo-Kuril's**	**6.07**	**28**	AMS	AMS	08 00 45.2	
	comp=Z,200nm,13.0s						
SKR				*e*P	**Pn**	**08 57 06.8**	**-1.8**
SKR				AMB	AMB	08 57 08.5	
	comp=Z,200nm,3.0s						
SKR				AMB	AMB	08 57 10.8	
	comp=Z,50nm,0.5s						
SKR				*e*S	**Sn**	**08 58 12.8**	**-4.1**
SKR				A	A	08 58 25.8	
	comp=Z,50nm,0.5s						
SKR				A	A	08 58 25.8	
	comp=Z,40nm,0.5s						
JOB	**Onbets**	**6.12**	**248**	*e*P	**Pn**	**08 57 10.2**	**+0.9**
YSS	**Yuzh-Sakhalins**	**6.32**	**287**	Pn	Pn	08 57 16.0	+4.0
YSS	**Yuzh-Sakhalins**	**6.32**	**287**	*e*PN	**Pn**	**08 57 15.2**	**+3.2**
YSS				*e*S	**Sn**	**08 58 26.7**	**+3.7**
YSS				pmax	pmax		
	comp=Z,25nm,0.5s						
YSS				MLR	MLR		
	comp=Z,500nm,10.0s						
YSS	**Yuzh-Sakhalins**	**6.32**	**287**	*e*P	**Pn**	**08 57 15.2**	**+3.2**
YSS				AMB	AMB	08 57 17.9	
	comp=Z,40nm,0.4s						
YSS				*e*S	**Sn**	**08 58 26.7**	**+3.7**
YSS				A	A	08 58 32.7	
	comp=Z,10.0nm,0.4s						
YSS				A	A	08 58 32.7	
	comp=Z,10.0nm,0.4s						
YSS				A	A	08 58 32.7	
	comp=Z,10.0nm,0.4s						
YSS				AMS	AMS	08 59 10.0	
	comp=Z,500nm,20.0s						
JKK2	**Kamakawa 2**	**6.49**	**259**	*e*P	**Pn**	**08 57 17.2**	**+2.7**
JKA	**Kamikawa-asahi**	**6.53**	**262**	Pn	**Pn**	**08 57 18.6**	**+3.7**
ASAJ	**Asahikawa**	**6.53**	**262**	LR	LR	09 00 02.1	
	comp=Z,207nm,18.3s,baz=62,slow=41						
ASAJ	**Asahikawa**	**6.53**	**262**	PN	**Pn**	**08 57 18.6**	**+3.6**
JCH	**Churui**	**6.56**	**248**	*e*P	**Pn**	**08 57 16.3**	**+0.9**
JCH				*e*S	**Sn**	**08 58 27.5**	**-1.5**
PAU	**Pauzhetka**	**6.97**	**28**

	comp=Z,10.0nm,1.1s							
CN2					pmax	pmax		
	comp=Z,100nm,3.0s							
CN2					LR	LR		
	comp=N,200nm,10.0s							
CN2					LR	LR		
	comp=E,200nm,10.0s							
CN2					LR	LR		
	comp=Z,100nm,12.4s							
KSRS	**Korea Array**	**19.40**	**254**		P	**Pn**	**09 00 04.6**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=59,slow=12,SNR=6.9							
	comp=Z,1.4nm,0.7s							
KSRS	**Korea Array**	**19.40**	**254**	*e*P		**Pn**	**09 00 08.3**	**+2.6**
KSRS					pmax	pmax		
	comp=Z,2.0nm,0.8s							
KSRS	**Korea Array**	**19.40**	**254**	*e*P		**Pn**	**09 00 08.3**	**+2.6**
YAK	**Yakutsk**	**20.90**	**330**	P		**P**	**09 00 19.5**	**-1.1**
YAK	**Yakutsk**	**20.90**	**330**	*d i*P		**P**	**09 00 19.4**	**-1.1**
YAK					pmax	pmax		
	comp=Z,10.0nm,0.4s							
BILL	**Bilibino**	**23.92**	**14**	*i* P		**P**	**09 00 51.2**	**-0.7**
BILL				*i* *PP		sP	09 01 11.0	+7.4
BILL				*i*			09 01 21.1	
BILL					pmax	pmax		
	comp=Z,4.0nm,1.1s							
BILL					MLR	MLR		
	comp=Z,97nm,16.0s							
BILL	**Bilibino**	**23.92**	**14**	*e*P		**P**	**09 00 51.2**	**-0.7**
BJT	**Baijiatuau**	**26.43**	**271**	P		**P**	**09 01 17.2**	**+2.3**
BJT	**Baijiatuau**	**26.43**	**271**	P		**P**	**09 01 17.2**	**+2.3**
BJT					pmax	pmax		
	comp=Z,12nm,1.1s							
H11N2	**WAKE ISLAND Hy**	**28.59**	**149**		T	T	09 32 16.5	
	baz=335,slow=74,SNR=289							
NJ2	**Nanjing**	**28.60**	**254**	*e*P		**P**	**09 01 33.0**	**-1.4**
NJ2					pmax	pmax		
	comp=Z,11nm,0.5s							
H11N1	**WAKE ISLAND Hy**	**28.60**	**149**		T	T	09 32 20.7	
	baz=335,slow=74							
H11N3	**WAKE ISLAND Hy**	**28.61**	**149**		T	T	09 32 17.1	
	baz=335							
H11S1	**WAKE ISLAND Hy**	**29.64**	**150**		T	T	09 33 39.6	
	baz=338,slow=76,SNR=241							
H11S3	**WAKE ISLAND Hy**	**29.65**	**150**		T	T	09 33 40.8	
	baz=338,slow=76,SNR=214							
H11S2	**WAKE ISLAND Hy**	**29.66**	**150**		T	T	09 33 42.0	
	baz=338,slow=76,SNR=155							
ULN	**Ulaanbaatar**	**30.35**	**291**	⇑*e*P		**P**	**09 01 50.5**	**+0.5**
ULN					pmax	pmax		
	comp=Z,9.0nm,2.8s							
ULN	**Ulaanbaatar**	**30.35**	**291**	*e*P		**P**	**09 01 50.5**	**+0.5**
SONM	**Songino Array**	**30.79**	**291**	P		**P**	**09 01 54.8**	**+1.0**
	comp=Z,0.9nm,0.6s,baz=69,slow=7.9,SNR=3.7							
SONM					LR	LR	09 14 29.0	
	comp=Z,74nm,19.9s,baz=49,slow=37							
	comp=Z,0.9nm,0.6s							
GUMO	**Guam**	**32.24**	**192**		LR	LR	09 18 37.5	
	comp=Z,29nm,18.0s,baz=84,slow=43							
RND	**Reindeer**	**37.38**	**40**	P		**P**	**09 02 51.1**	**+0.4**
RND	**Reindeer**	**37.38**	**40**	P		**P**	**09 02 51.1**	**+0.4**
RND					pmax	pmax		
	comp=Z,7.0nm,0.5s							
DHY	**Denali Highway**	**38.06**	**40**	P		**P**	**09 02 56.7**	**+0.2**
GTA	**Gaotai**	**38.13**	**280**	⇑P		**P**	**09 02 58.5**	**+1.1**
GTA					pP	sP	09 03 08.8	-0.4
GTA					pmax	pmax		
	comp=Z,6.0nm,1.0s							
GTA					pmax	pmax		
	comp=Z,76nm,4.0s							
GTA					LR	LR		
	comp=N,160nm,18.5s							
GTA					LR	LR		
	comp=E,220nm,20.4s							
GTA					LR	LR		
	comp=Z,370nm,21.8s							
ILAR	**Eielson Array**	**38.24**	**37**	P		**P**	**09 02 57.5**	**-0.4**
	comp=Z,0.4nm,0.9s,baz=264,slow=8.1,SNR=3.0							
	comp=Z,0.4nm,0.9s							
BMAR	**Burnt Mountain**	**39.21**	**33**	P		**P**	**09 03 06.9**	**+0.9**
K27K	**Chicken**	**40.37**	**39**	P		**P**	**09 03 16.9**	**+1.4**
L27K	**Beaver Creek,**	**40.58**	**40**	P		**P**	**09 03 19.2**	**+1.9**
BCAR	**Beaver Creek A**	**40.60**	**40**	P		**P**	**09 03 19.7**	**+2.1**
ZALV	**Zalesovo Beam**	**42.53**	**307**	P		**P**	**09 03 32.6**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=54,slow=7.3,SNR=1.5							
ZALV					PcP	**PcP**	**09 05 25.7**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=103,slow=3.1,SNR=2.6							
	comp=Z,0.4nm,0.4s							
ZALV	**Zalesovo Beam**	**42.53**	**307**	P		**P**	**09 03 32.4**	**-0.9**
GOMU	**GeErMu**	**43.14**	**278**	P		**P**	**09 03 37.8**	**-1.2**
GOMU					pP	sP	09 03 51.5	+0.5
GOMU					sP	pwP	09 03 59.0	+7.4
GOMU					pmax	pmax		
	comp=Z,9.0nm,0.9s							
INK	**Inuvik**	**43.33**	**32**	P		**P**	**09 03 39.8**	**+0.1**
	comp=Z,1.7nm,0.9s,baz=237,slow=7.3,SNR=3.6							
	comp=Z,1.7nm,0.9s							
C36M	**Paulatuk**	**46.49**	**29**	P		**P**	**09 04 05.2**	**+0.4**
C36M					IAmb	IAmb	09 04 13.2	
	comp=Z,9.5nm,1.5s							
MK31	**Makanchi Array**	**46.61**	**298**	P		**P**	**09 04 06.4**	**+0.3**
MK31	**Makanchi Array**	**46.61**	**298**	P		**P**	**09 04 06.4**	**+0.3**
MK31					pmax	pmax		
	comp=Z,1.0nm,0.6s							
MKAR	**Makanchi Array**	**46.61**	**298**	P		**P**	**09 04 06.0**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=74,slow=7.9,SNR=13							
MKAR					PcP	**PcP**	**09 05 40.0**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=73,slow=2.8,SNR=4.8							
	comp=Z,0.8nm,0.5s							
MKAR	**Makanchi Array**	**46.61**	**298**	*e*P		**P**	**09 04 06.6**	**+0.5**
MKAR					pmax	pmax		
	comp=Z,1.0nm,0.5s							
MKAR	**Makanchi Array**	**46.61**	**298**	*e*P		**P**	**09 04 06.6**	**+0.5**
KURK	**Kurchatov**	**47.22**	**304**	P		**P**	**09 04 10.4**	**-0.3**
KURK	**Kurchatov**	**47.22**	**304**	P		**P**	**09 04 10.4**	**-0.3**
KURK					pmax	pmax		
	comp=Z,4.0nm,1.3s							
KURK	**Kurchatov**	**47.22**	**304**	*e*P		**P**	**09 04 10.4**	**-0.3**
KDJ	**Kajisay**	**52.02**	**295**	P		**P**	**09 04 48.8**	**+1.1**
KDJ					IAmb	IAmb	09 04 49.5	
	comp=Z,4.3nm,0.7s							
KDJ	**Kajisay**	**52.02**	**295**	P		**P**	**09 04 48.8**	**+1.1**
KDJ					pmax	pmax		
	comp=Z,4.0nm,0.7s							
YKA	**Yellowknife Ar**	**52.62**	**36**	P		**P**	**09 04 52.0**	**+0.5**
	comp=Z,1.1nm,0.8s,baz=302,slow=7.3,SNR=11							
	comp=Z,1.1nm,0.8s							
YKA	**Yellowknife Ar**	**52.62**	**36**	*e*P		**P**	**09 04 52.2**	**+0.7**
YKA					pmax	pmax		
	comp=Z,1.0nm,0.8s							
AAK	**Ala-Archa**	**53.47**	**296**	P		**P**	**09 04 58.2**	**-0.1**
AAK					IAmb	IAmb	09 05 00.4	
	comp=Z,3.2nm,0.8s							
AAK	**Ala-Archa**	**53.47**	**296**	⇑*e*P		**P**	**09 04 58.6**	**+0.3**
AAK					pmax	pmax		
	comp=Z,4.0nm,0.9s							
AAK	**Ala-Archa**	**53.47**	**296**	*e*P		**P**	**09 04 58.6**	**+0.3**
KSH	**Kashi**	**54.17**	**292**	P		P	09 05 08.3	+4.8
KSH					pmax	pmax		
	comp=Z,4.0nm,0.7s							
ARU	**Arti**	**55.27**	**318**	P		**P**	**09 05 10.1**	**-0.8**
	comp=Z,2.1nm,0.4s,baz=74,slow=2.1,SNR=4.6							
	comp=Z,2.1nm,0.4s							
ARU	**Arti**	**55.27**	**318**	P		**P**	**09 05 10.3**	**-0.7**
ARU					IAmb	IAmb	09 05 11.6	
	comp=Z,3.5nm,0.8s							
ARU	**Arti**	**55.27**	**318**	*c i*P		**P**	**09 05 10.5**	**-0.5**
ARU							09 06 10.0	
ARU							09 07 12.1	
ARU					S	**S**	**09 12 50.5**	**-1.7**
ARU					SS	**SS**	**09 16 32.8**	**-3.3**
ARU					pmax	pmax		
	comp=Z,3.0nm,0.7s							
ARU	**Arti**	**55.27**	**318**	*e*P		**P**	**09 05 10.5**	**-0.5**
KK31	**Karatay Array**	**55.70**	**299**	P		**P**	**09 05 14.4**	**+0.1**
KK31					IAmb	IAmb	09 05 15.5	
	comp=Z,3.5nm,0.8s							
KK31	**Karatay Array**	**55.70**	**299**	P		**P**	**09 05 14.5**	**+0.1**
KK31					pmax	pmax		
	comp=Z,3.0nm,0.8s							
KKAR	**Karatay Array**	**55.70**	**299**	P		**P**	**09 05 14.4**	**+0.1**
KKAR	**Karatay Array**	**55.70**	**299**	P		**P**	**09 05 14.3**	**0.0**
KKAR					IAmb	IAmb	09 05 15.5	
	comp=Z,3.5nm,0.8s							
KKAR	**Karatay Array**	**55.70**	**299**	P		**P**	**09 05 14.5**	**+0.1**
KKAR					pmax	pmax		
	comp=Z,3.0nm,0.8s							
BTK	**Batken**	**57.19**	**296**	P		**P**	**09 05 25.3**	**+0.2**
BTK					IAmb	IAmb	09 05 29.9	
	comp=Z,7.2nm,1.1s							
BTK	**Batken**	**57.19**	**296**	P		**P**	**09 05 25.3**	**+0.2**
BTK					pmax	pmax		
	comp=Z,7.0nm,1.2s							
EDM	**Edmonton**	**58.00**	**45**	P		**P**	**09 05 31.5**	**+1.0**
EDM					IAmb	IAmb	09 05 50.5	
	comp=Z,10nm,1.4s							
EDM	**Edmonton**	**58.00**	**45**	P		**P**	**09 05 31.5**	**+1.0**
EDM					pmax	pmax		
	comp=Z,10.0nm,1.4s							
GAR	**Garm**	**58.11**	**295**	P		**P**	**09 05 32.6**	**+1.0**
ABKAR	**Akbulak array**	**58.45**	**310**	P		**P**	**09 05 33.7**	**0.0**
ABKAR					IAmb	IAmb	09 05 35.0	
	comp=Z,2.3nm,0.5s							
ARCES	**ARCESS Array B**	**58.75**	**341**	P		**P**	**09 05 35.0**	**-0.5**
	comp=Z,2.1nm,0.9s,baz=47,slow=6.8,SNR=5.6							
	comp=Z,2.1nm,0.9s							
ARCES	**ARCESS Array B**	**58.75**	**341**	P		**P**	**09 05 35.0**	**-0.5**
ARCES	**ARCESS Array B**	**58.75**	**341**	*e*P		**P**	**09 05 35.1**	**-0.3**
ARCES					pmax	pmax		
	comp=Z,2.0nm,0.9s							
AKTO	**Aktyubinsk**	**58.81**	**312**	P		**P**	**09 05 36.6**	**+0.5**
	comp=Z,1.0nm,0.6s,baz=67,slow=7.8,SNR=3.8							
	comp=Z,1.0nm,0.6s							
CHGR	**Chuyangaron**	**59.04**	**295**	P		**P**	**09 05 38.6**	**+0.5**
CHGR	**Chuyangaron**	**59.04**	**295**	P		**P**	**09 05 38.6**	**+0.5**
CHGR					pmax	pmax		
	comp=Z,30nm,1.0s							
KBL	**Kabul**	**61.56**	**291**	P		**P**	**09 05 55.6**	**+0.2**
KBL	**Kabul**	**61.56**	**291**	P		**P**	**09 05 55.7**	**+0.2**
KBL					pmax	pmax		
	comp=Z,8.0nm,0.8s							
SUMG	**Summit**	**62.09**	**3**	P		**P**	**09 05 59.0**	**+0.3**
SUMG					IAmb	IAmb	09 06 01.6	
	comp=Z,6.2nm,1.1s							
SUMG	**Summit**	**62.09**	**3**	P		**P**	**09 05 59.0**	**+0.3**
SUMG					pmax	pmax		
	comp=Z,6.0nm,1.1s							
SUMG	**Summit**	**62.09**	**3**	*i* P		**P**	**09 05 58.0**	**-0.7**
VALR	**Valaam**	**63.32**	**332**	⇓*e*P		**P**	**09 06 05.9**	**-0.6**
VALR					pmax	pmax		
	comp=Z,12nm,1.1s							
NVAR	**Mina Array Bea**	**64.00**	**61**	P		**P**	**09 06 12.7**	**+1.0**
	comp=Z,0.7nm,0.7s,baz=287,slow=6.7,SNR=8.3							
	comp=Z,0.7nm,0.7s							
NVAR	**Mina Array Bea**	**64.00**	**61**	P		**P**	**09 06 13.1**	**+1.4**
FIA1	**FINESS Array S**	**64.77**	**334**	P		**P**	**09 06 15.7**	**-0.4**
FIA1					IAmb	IAmb	09 06 16.5	
	comp=Z,7.4nm,1.0s							
FINES	**FINESS Array B**	**64.78**	**334**	P		**P**	**09 06 15.6**	**-0.5**
	comp=Z,3.5nm,0.7s,baz=34,slow=8.8,SNR=23							
	comp=Z,3.5nm,0.7s							
FINES	**FINESS Array B**	**64.78**	**334**	P		**P**	**09 06 15.7**	**-0.4**
FINES	**FINESS Array B**	**64.78**	**334**	P		**P**	**09 06 15.7**	**-0.4**
ICESG	**Greenland Ices**	**65.50**	**4**	*i* P		**P**	**09 06 22.3**	**+1.2**
PDAR	**Pinedale Array**	**66.39**	**53**	P		**P**	**09 06 27.7**	**+0.5**
	comp=Z,0.1nm,0.4s,baz=352,slow=5.5,SNR=2.3							
	comp=Z,0.1nm,0.4s							
WB0	**Warramunga Arr**	**66.74**	**198**	P		**P**	**09 06 29.9**	**+0.7**
WB0					IAmb	IAmb	09 06 53.2	
	comp=Z,6.7nm,1.2s							
WB2	**Warramunga Arr**	**66.92**	**198**	P		**P**	**09 06 31.0**	**+0.7**
WB2					IAmb	IAmb	09 06 52.3	
	comp=Z,8.0nm,1.4s							
WRA	**Warramunga Arr**	**66.92**	**198**	P		**P**	**09 06 30.7**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=16,slow=6.6,SNR=4.9							
	comp=Z,0.4nm,0.6s							
WRA	**Warramunga Arr**	**66.92**	**198**	P		**P**	**09 06 31.0**	**+0.7**
WRA	**Warramunga Arr**	**66.92**	**198**	*i* P		**P**	**09 06 31.5**	**+1.2**
WRA					pmax	pmax		
	comp=Z,1.0nm,0.8s							
NC303	**NORSAR Array S**	**68.93**	**341**	P		**P**	**09 06 42.6**	**+0.1**
NB2	**NORSAR Subarra**	**69.13**	**341**	P		**P**	**09 06 42.8**	**-1.0**
	comp=Z,0.9nm,0.5s,baz=28,slow=6.2							
NOA	**NORSAR Array B**	**69.13**	**341**	P		**P**	**09 06 43.6**	**-0.2**
	comp=Z,3.0nm,0.8s,baz=28,slow=6.4,SNR=10							
NOA					LR	LR	09 42 16.8	
	comp=Z,23nm,18.5s,baz=100,slow=41							
	comp=Z,3.0nm,0.8s							
HFS	**Hagfors**	**69.31**	**339**	P		**P**	**09 06 44.5**	**-0.4**
	comp=Z,5.5nm,0.7s,baz=54,slow=7.5,SNR=18							
	comp=Z,5.5nm,0.7s							
ASAR	**Alice Springs**	**70.62**	**197**	P		**P**	**09 06 54.4**	**+1.0**
	comp=Z,0.6nm,0.7s,baz=19,slow=6.5,SNR=5.8							
	comp=Z,0.6nm,0.7s							
ASAR	**Alice Springs**	**70.62**	**197**	P		**P**	**09 06 54.5**	**+1.1**
ASAR	**Alice Springs**	**70.62**	**197**	P		**P**	**09 06 54.5**	**+1.1**
KIV	**Kislovodsk**	**70.95**	**314**	⇓*e*P		**P**	**09 06 56.7**	**+1.3**
KIV				*e*	*e*PP	**PcP**	**09 07 11.0**	**-4.7**
KIV				*e*			09 07 15.7	
KIV				*e*	*e*SP	sP	09 07 18.9	+12
KIV				*e*	*e*PPP	PPP	09 11 15.0	
KIV				*e*	*e*S	**S**	**09 16 07.1**	**-1.7**
KIV					pmax	pmax		
	comp=Z,7.0nm,0.6s							
KIV					MLR	MLR		
	comp=Z,30nm,17.0s							
KBZ	**Khabaz**	**71.00**	**313**	P		**P**	**09 06 56.7**	**+1.2**
	comp=Z,9.9nm,0.8s,baz=53,slow=3.9,SNR=21							
KBZ	**Khabaz**	**71.00**	**313**	*ce*P		**P**	**09 06 56.3**	**+0.8**
KBZ					pmax	pmax		
	comp=Z,11nm,0.9s							
KBZ	**Khabaz**	**71.00**	**313**	*e*P		**P**	**09 06 56.3**	**+0.8**
AKASG	**Malin Array Be**	**72.04**	**326**	P		**P**	**09 07 01.4**	**-0.3**
	comp=Z,1.8nm,0.5s,baz=34,slow=6.9,SNR=9.9							
	comp=Z,1.8nm,0.5s							
AKASG	**Malin Array Be**	**72.04**	**326**	*e*P		**P**	**09 07 01.1**	**-0.6**
AKASG					pmax	pmax		
	comp=Z,2.0nm,0.5s							
AKBB	**Malin Array Si**	**72.04**	**326**	⇑*e*P		**P**	**09 07 01.1**	**-0.6**
AKBB					pmax	pmax		
	comp=Z,4.0nm,0.7s							
GNI	**Garni**	**72.56**	**310**	⇓*e*P		**P**	**09 07 05.5**	**+0.3**
GNI					pmax	pmax		
	comp=Z,7.0nm,0.8s							
OJC	**Ojcow**	**75.95**	**330**	*e*P		**P**	**09 07 24.6**	**+0.1**
OJC	**Ojcow**	**75.95**	**330**	IAmb	IAmb	09 07 25.6		
	comp=Z,11nm,1.1s							
BUR08	**Bucovina Ar. S**	**76.08**	**326**	P		**P**	**09 07 25.8**	**+0.3**
BUR08					IAmb	IAmb	09 07 26.6	
	comp=Z,5.1nm,0.8s							
BURAR	**Bucovina Array**	**76.09**	**326**	P		**P**	**09 07 25.6**	**+0.1**
BURAR					IAmb	IAmb	09 07 27.0	
	comp=Z,4.8nm,0.8s							
KOLS	**Kolonicke sedl**	**76.14**	**328**	*e*P		**P**	**09 07 26.5**	**+0.8**
KOLS					pmax	pmax		
	comp=Z,7.0nm,0.9s							
KOLS	**Kolonicke sedl**	**76.14**	**328**	*e*P		**P**	**09 07 26.5**	**+0.8**
CHVC	**Chvalec**	**76.89**	**333**	*e*P		**P**	**09 07 30.8**	**+0.9**
LANS	**Liptovska Anna**	**76.97**	**330**	*e*P		**P**	**09 07 32.3**	**+1.9**
LANS					pmax	pmax		
	comp=Z,6.0nm,1.1s							
LANS	**Liptovska Anna**	**76.97**	**330**	*e*P		**P**	**09 07 32.3**	**+1.9**
DPC	**Dobruska-Polom**	**77.01**	**332**	*e*P		**P**	**09 07 30.9**	**+0.3**
DPC	**Dobruska-Polom**	**77.01**	**332**	*e*P		**P**	**09 07 30.9**	**+0.3**
MORC	**Moravsky Berou**	**77.10**	**331**	P		**P**	**09 07 31.3**	**+0.1**
MORC					IAmb	IAmb	09 07 33.2	
	comp=Z,5.4nm,0.9s							
MORC	**Moravsky Berou**	**77.10**	**331**	P		**P**	**09 07 31.3**	**+0.1**
MORC					pmax	pmax		
	comp=Z,5.0nm,0.9s							
MORC	**Moravsky Berou**	**77.10**	**331**	*e*P		**P**	**09 07 31.2**	**+0.1**
CLL	**Collm**	**77.22**	**335**	⇓*i*P		**P**	**09 07 31.8**	**+0.1**
CLL					pmax	pmax		
	comp=Z,8.0nm,1.1s							
CLL	**Collm**	**77.22**	**335**	⇓*i*P		**P**	**09 07 31.8**	**+0.1**
	comp=Z,8.0nm,1.1s							
CLL				*i*	pP	**pwP**	**09 07 44.1**	**-0.2**
	comp=Z,4.0nm,0.9s							
MLR	**Muntele Rosu**	**77.52**	**324**	P		**P**	**09 07 33.9**	**+0.2**
	comp=Z,3.5nm,0.8s,baz=140,slow=17,SNR=4.3							
	comp=Z,3.5nm,0.8s							
VRAC	**Vranov**	**77.82**	**332**	P		**P**	**09 07 35.4**	**+0.3**
	comp=Z,2.2nm,0.7s,baz=163,slow=18,SNR=4.8							
	comp=Z,2.2nm,0.7s							
VRAC	**Vranov**	**77.82**	**332**	*e*P		**P**	**09 07 35.5**	**+0.3**
JAVC	**Velka Javorina**	**77.84**	**331**	*e*P		**P**	**09 07 36.5**	**+1.2**
KRUC	**Moravsky**	**78.10**	**332**	*e*P		**P**	**09 07 37.2**	**+0.6**
MODS	**Modra-Piesok**	**78.39**	**331**	*e*P		**P**	**09 07 40.0**	**+1.7**
MODS	**Modra-Piesok**	**78.39**	**331**	*e*P		**P**	**09 07 40.0**	**+1.7**
BRTR	**Keskin Array B**	**78.61**	**316**	P		**P**	**09 07 40.1**	**+0.3**
	comp=Z,1.2nm,0.8s,baz=69,slow=6.8,SNR=5.5							
	comp=Z,1.2nm,0.8s							
BRTR	**Keskin Array B**	**78.61**	**316**	*e*P		**P**	**09 07 40.8**	**+1.0**
BRTR					pmax	pmax		
	comp=Z,1.0nm,0.9s							
KHC	**Kasperske Hory**	**78.95**	**333**	P		**P**	**09 07 41.8**	**+0.4**
KHC	**Kasperske Hory**	**78.95**	**333**	P		**P**	**09 07 41.8**	**+0.4**
KHC					pmax	pmax		
	comp=Z,4.0nm,1.0s							
KHC	**Kasperske Hory**	**78.95**	**333**	*e*P		**P**	**09 07 42.0**	**+0.6**
TXAR	**Lajitas Array**	**79.08**	**59**	P		**P**	**09 07 43.0**	**+0.5**
	comp=Z,0.3nm,0.8s,baz=311,slow=3.8,SNR=4.5							
	comp=Z,0.3nm,0.8s							
TXAR	**Lajitas Array**	**79.08**	**59**	P		**P**	**09 07 42.7**	**+0.2**
TXAR	**Lajitas Array**	**79.08**	**59**	P		**P**	**09 07 43.0**	**+0.5**
GERES	**GERESS Array B**	**79.16**	**333**	P		**P**	**09 07 42.6**	**0.0**
	comp=Z,0.5nm,0.5s,baz=38,slow=6.8,SNR=6.6							
	comp=Z,0.5nm,0.5s							
GERES	**GERESS Array B**	**79.16**	**333**	P		**P**	**09 07 43.1**	**+0.5**
GERES	**GERESS Array B**	**79.16**	**333**	*e*P		**P**	**09 07 43.0**	**+0.4**
GERES					pmax	pmax		
	comp=Z,1.0nm,0.5s							

*IDC **26** 09:10:04.9±0.7, 4°.60N×62°.74E, h0km, mb4.2/13, mbtmp4.2/13, MS3.8/22, Error ellipse: s-maj=24.1km s-min=17.7km az=49.0*
*NEIC **26** 09:10:07.7±2.1, 4°.4N±0°.1×62°.5E±0°.1, h12km±4km, mb4.8/18, Error ellipse: s-maj=19.3km s-min=18.7km az=55.0*

ISC 26 09:10:08.3±0.7, 4°.6N±0°.1×62°.6E±0°.1, h22km, n60, σ0°.97/39, mb4.5/22, MS3.9/21, 1D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSEY	**Mahe Island**	**11.66**	**218**	Pn	Pn	09 12 46.3	-7.3
PALK	**Pallekele**	**18.16**	**81**	LR	LR	09 19 43.7	
	comp=Z,459nm,21.0s,baz=357,slow=32						
ATD	**Arta Tunnel**	**20.76**	**291**	LR	LR	09 21 48.1	
	comp=Z,105nm,18.5s,baz=89,slow=34						
RAYN	**Ar Rayn**	**25.05**	**320**	P	P	**09 15 31.4**	**+0.2**
KMBO	**Kilima Mbogo**	**25.99**	**258**	P	P	**09 15 41.1**	**+0.9**
	3.0nm,0.7s,baz=61,slow=12,SNR=6.1						
KMBO				LR	LR	09 24 47.6	
	comp=Z,254nm,20.7s,baz=90,slow=34						
	3.0nm,0.7s						
KMBO	**Kilima Mbogo**	**25.99**	**258**	P	P	**09 15 40.2**	**+0.1**
MBAR	**Mbarara**	**32.29**	**262**	LR	LR	09 28 46.8	
	comp=Z,183nm,21.6s,baz=120,slow=35						
CMAR	**Chiang Mai Arr**	**38.04**	**66**	LR	LR	09 33 01.5	
	comp=Z,68nm,18.1s,baz=270,slow=36						
MARD	**Mardin**	**38.22**	**331**	P	P	**09 17 28.6**	**+1.8**
MARD					IAmb	IAmb	09 17 30.1
	comp=Z,9.9nm,0.7s						
AAK	**Ala-Archa**	**39.32**	**14**	LR	LR	09 34 00.5	
	comp=Z,114nm,19.5s,baz=200,slow=36						
MATP	**Matopo**	**41.74**	**232**	P	P	**09 17 57.9**	**+1.6**
	comp=Z,2.2nm,0.9s,baz=63,slow=9.0,SNR=3.4						
	comp=Z,2.2nm,0.9s						
BNN	**Bunyan**	**41.88**	**328**	P	P	**09 17 58.1**	**+0.9**
KBZ	**Khabaz**	**42.69**	**339**	P	P	**09 18 04.5**	**+1.0**
	comp=Z,2.7nm,0.9s,baz=219,slow=3.7,SNR=6.0						
	comp=Z,2.7nm,0.9s						
BR131	**Keskin Array S**	**43.69**	**327**	P	P	**09 18 12.2**	**+0.3**
BRTR	**Keskin Array B**	**43.69**	**327**	P	P	**09 18 12.4**	**+0.5**
	comp=Z,3.8nm,0.9s,baz=144,slow=11,SNR=14						
	comp=Z,3.8nm,0.9s						
BRTR	**Keskin Array B**	**43.69**	**327**	P	P	**09 18 12.8**	**+0.9**
MKAR	**Makanchi Array**	**45.34**	**19**	LR	LR	09 38 03.4	
	comp=Z,72nm,20.8s,baz=244,slow=37						
IDI	**Anoyia**	**46.32**	**316**	P	P	**09 18 34.0**	**+1.2**
	comp=Z,12nm,0.9s,baz=136,slow=11,SNR=5.5						
	comp=Z,12nm,0.9s						
IDI	**Anoyia**	**46.32**	**316**	P	P	**09 18 34.3**	**+1.5**
LBTB	**Lobatse**	**46.50**	**229**	LR	LR	09 34 45.4	
	comp=Z,139nm,18.7s,baz=48,slow=32						
LBTB	**Lobatse**	**46.50**	**229**	P	P	**09 18 35.1**	**+0.7**
LBTB					IAmb	IAmb	09 20 13.2
	comp=Z,32nm,1.8s						
KURBB	**Kurchatov Arra**	**47.77**	**14**	LR	LR	09 39 22.3	
	comp=Z,87nm,21.3s,baz=223,slow=37						
BVAR	**Borovoye Array**	**48.69**	**6**	LR	LR	09 40 11.5	
	comp=Z,82nm,20.0s,baz=74,slow=37						
ALN	**Alexandroupoli**	**48.80**	**323**	P	P	**09 18 53.0**	**+1.0**
ALN					IAmb	IAmb	09 20 34.7
	comp=Z,16nm,1.2s						
BOSA	**Boshof**	**48.82**	**225**	P	P	**09 18 51.9**	**-0.5**
	comp=Z,1.5nm,0.7s,baz=45,slow=11,SNR=3.5						
BOSA					L

SOME 26 09:13:48.6, 42.27N×81.17E, h0km, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KPKS	**Kokpek**	**2.18**	**304**	*e*P	Pb	09 14 29.0	0.0
	3.2nm,0.3s						
KPKS				*e*S	Sg	09 14 58.0	-0.8
	5.5nm,0.3s						
DJR	**Jarkent**	**2.30**	**334**	*e*P	Pb	09 14 31.6	+0.6
	1.3nm,0.2s						
DJR				*e*S	Sg	09 15 02.6	+0.3
	4.2nm,0.5s						

*BJI **26** 09:14:04.7±0.0, 36.59N×70.14E, h214km, mb4.9/68, mB4.8/38*
*MOS **26** 09:14:04.3±0.9, 36.53N×70.19E, h211km, mb5.0/67, Error ellipse: s-maj=4.4km s-min=3.0km az=86.2*
*NEIC **26** 09:14:06.0±1.5, 36.51N±0.06×70.10E±0.08, h215km±5km, mb4.9/149, Error ellipse: s-maj=9.6km s-min=8.5km az=134.0*
*GCMT **26** 09:14:07.0±0.4, 36.60N±0.02×69.96E±0.04, h206km±4km, MW5.0/85, Moment Tensor Solution. s12,c13; s85,c104; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.52±.18; $M_{\theta\theta}$-1.29±.21; $M_{\phi\phi}$-0.23±.21; $M_{r\theta}$3.50±.15; $M_{r\phi}$-1.45±.20; $M_{\theta\phi}$0.12±.14; Best double couple: M_o4.04700×10^{16} NP1:ϕ_s205.00000°, δ22.00000°, λ33.00000°. NP2: ϕ_s84.00000°, δ78.00000°, λ109.00000°. Principal axes: T 4.0130, Plg53.0000°, Azm17.0000°; N 0.0630, Plg19.0000°, Azm260.0000°; P -4.0820, Plg30.0000°, Azm158.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **26** 09:14:07.3±1.0, 36.50N×70.20E, h228km±9km, mb4.6/43, mbtmp5.2/48 Error ellipse: s-maj=6.9km s-min=5.4km az=165.0*
*NNC **26** 09:14:10.3±1.8, 36.98N×70.23E, h219km±16km, mb4.5, mpv5.4, Error ellipse: s-maj=16.6km s-min=10.5km az=1.0*
ISC 26 09:14:05.0±0.3, 36.48N±0.03×70.18E±0.03, h209km±2km, h209km:pP-P,n954,σ1936/1096, mb4.9/272, 176C-212D, Fault plane solution: NP1:ϕ_s183.25687°, δ29.83422°, λ18.42111°. **NP2:**ϕ_s77.14162°, δ80.95519°, λ118.55117°. **Principal axes:** T Plg46.4318°, Azm16.5052°; N Plg28.1642°, Azm252.2525°; P Plg30.1477°, Azm144.1360°; **Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.15**	**206**	Pn	**Pn**	**09 14 46.7**	**+0.7**
KBL	**Kabul**	**2.15**	**206**	PN	**Pn**	**09 14 46.7**	**+0.7**
KBL	**Kabul**	**2.15**	**206**	P	**Pn**	**09 14 46.8**	**+0.8**
	SNR=1042						
KBL				S	**S**	**09 15 17.5**	**+0.1**
CHGR	**Chuyangaron**	**2.32**	**340**	Pn	**Pn**	**09 14 47.1**	**-0.5**
CHGR	**Chuyangaron**	**2.32**	**340**	PN	**Pn**	**09 14 47.1**	**-0.5**
GAR	**Garm**	**2.52**	**2**		**Pn**	**09 14 49.8**	**0.0**
CEP	**Cherat**	**3.01**	**151**	P	**Pn**	**09 14 57.3**	**+1.9**
CEP				S	**S**	**09 15 36.0**	**+1.7**
DRK	**Karamyk**	**3.26**	**23**		**Pn**	**09 14 58.8**	**+0.4**
BTK	**Batken**	**3.61**	**8**	Pn	**Pn**	**09 15 03.1**	**+0.8**
BTK	**Batken**	**3.61**	**8**	PN	**Pn**	**09 15 03.1**	**+0.8**
CHCP	**Chirah Chowk**	**3.79**	**137**	P	**Pn**	**09 15 06.6**	**+2.0**
THW	**Thamme Wali**	**3.90**	**160**	P	**Pn**	**09 15 07.1**	**+1.2**
TAS	**Tashkent**	**4.89**	**352**	Pn	**Pn**	**09 15 18.1**	**0.0**
TAS	**Tashkent**	**4.89**	**352**	PN	**Pn**	**09 15 18.1**	**0.0**
SARP	**Sargodha**	**5.00**	**155**	P	**Pn**	**09 15 20.4**	**+0.8**
JMU	**Jammu**	**5.41**	**133**	*e*S	**S**	**09 16 22.5**	**-5.2**
KSH	**Kashi**	**5.49**	**55**	P	**Pn**	**09 15 21.5**	**-4.4**
KSH				S	S	09 16 19.3	-10
KSH				pmax	pmax		
	comp=Z,300nm,0.6s						
KSH				smax	smax		
	comp=N,4μm,0.9s						
KSH				smax	smax		
	comp=E,3μm,0.8s						
IUG	**Iuzhnay**	**5.66**	**359**	*de*PN	**Pn**	**09 15 28.1**	**+0.1**
IUG				*e*S	**S**	**09 16 31.5**	**-2.1**
IUG	**Iuzhnay**	**5.66**	**359**	⇓*e*P	**Pn**	**09 15 28.2**	**+0.2**
	baz=358						
IUG				*e*S	**S**	**09 16 31.6**	**-2.1**
	baz=358						
CHM	**Chimkent**	**5.85**	**356**	*e*PN	**Pn**	**09 15 28.4**	**-1.9**
CHM				*e*S	**S**	**09 16 35.3**	**-2.5**
CHM	**Chimkent**	**5.85**	**356**	*e*P	**Pn**	**09 15 28.5**	**-1.9**
	baz=355						
CHM				*e*S	**S**	**09 16 35.4**	**-2.5**
	baz=355						
AML	**Almayashu**	**6.27**	**25**	P	**Pn**	**09 15 35.9**	**-0.2**
	SNR=480						
AML	**Almayashu**	**6.27**	**25**	P	**Pn**	**09 15 36.0**	**-0.2**
AML				S	**S**	**09 16 43.9**	**-4.2**
AML	**Almayashu**	**6.27**	**25**	*i* P	**Pn**	**09 15 35.9**	**-0.2**
	SNR=245						
DZA	**Taraz**	**6.46**	**8**	*e*PN	**Pn**	**09 15 36.6**	**-1.7**
DZA	**Taraz**	**6.46**	**8**	*e*P	**Pn**	**09 15 36.7**	**-1.7**
	baz=7.6						
DZA				*e*S	**S**	**09 16 47.8**	**-4.5**
	baz=7.6						
BRLS	**Boroldaу**	**6.55**	**358**	*e*PN	**Pn**	**09 15 34.6**	**-4.7**
BRLS	**Boroldaу**	**6.55**	**358**	*e*P	**Pn**	**09 15 34.7**	**-4.7**
	baz=356						
BRLS				*e*S	S	09 16 44.6	-10
	baz=356						
KK31	**Karatay Array**	**6.62**	**2**	Pn	**Pn**	**09 15 39.6**	**-0.7**
KK31	**Karatay Array**	**6.62**	**2**	PN	**Pn**	**09 15 39.4**	**-0.9**
KK31	**Karatay Array**	**6.62**	**2**	⇑P	**Pn**	**09 15 39.5**	**-0.9**
	62nm,0.6s,baz=197,slow=18,SNR=643						
KK31				⇓S	**S**	**09 16 50.8**	**-5.1**
	231nm,0.8s,baz=192,slow=22,SNR=8.6						
KKAR	**Karatay Array**	**6.62**	**2**	Pn	**Pn**	**09 15 39.3**	**-1.0**
KKAR	**Karatay Array**	**6.62**	**2**		**Pn**	**09 15 39.6**	**-0.7**
KKAR	**Karatay Array**	**6.62**	**2**	PN	**Pn**	**09 15 39.3**	**-1.0**
UCH	**Uchtor**	**6.65**	**29**	P	**Pn**	**09 15 41.3**	**+0.2**
	SNR=173						
EKS2	**Erkin-Say**	**6.77**	**23**	P	**Pn**	**09 15 42.2**	**-0.1**
	SNR=186						
HRA	**Herat**	**6.80**	**254**	Pn	**Pn**	**09 15 41.7**	**-1.3**
AAK	**Ala-Archa**	**6.99**	**27**	P	**Pn**	**09 15 45.5**	**+0.2**
	SNR=99						
AAK	**Ala-Archa**	**6.99**	**27**	P	**Pn**	**09 15 45.6**	**+0.4**
	119nm,0.4s,baz=214,slow=13,SNR=100						
AAK				S	**S**	**09 17 02.4**	**-2.5**
	448nm,0.9s,baz=338,slow=23,SNR=17						
AAK	**Ala-Archa**	**6.99**	**27**	Pn	**Pn**	**09 15 45.3**	**+0.1**
AAK	**Ala-Archa**	**6.99**	**27**	P	**Pn**	**09 15 45.5**	**+0.2**
AAK				S	**S**	**09 17 01.0**	**-3.9**
AAK	**Ala-Archa**	**6.99**	**27**	*i* P	**Pn**	**09 15 45.2**	**0.0**
	SNR=33						
KBK	**Karagaybulak**	**7.18**	**29**	P	**Pn**	**09 15 48.2**	**+0.5**
	SNR=88						
FRU1	**Bishkek**	**7.19**	**27**	Pn	**Pn**	**09 15 47.6**	**-0.2**
FRU1	**Bishkek**	**7.19**	**27**	PN	**Pn**	**09 15 47.6**	**-0.2**
CHMS	**Chumysh**	**7.40**	**27**	P	**Pn**	**09 15 50.1**	**-0.3**
	SNR=128						
CHMS	**Chumysh**	**7.40**	**27**	PN	**Pn**	**09 15 49.9**	**-0.5**
CHMS	**Chumysh**	**7.40**	**27**	⇑P	**Pn**	**09 15 49.9**	**-0.5**
	181nm,0.7s						
CHMS				⇑S	**S**	**09 17 09.6**	**-4.8**
	782nm,1.1s						
ULHL	**Ulahol**	**7.43**	**37**	P	**Pn**	**09 15 51.0**	**0.0**
	SNR=35						
BOOM	**Boomskoye usch**	**7.47**	**35**	Pn	**Pn**	**09 15 51.4**	**-0.1**
BOOM	**Boomskoye usch**	**7.47**	**35**	PN	**Pn**	**09 15 51.4**	**-0.1**
USP	**Ospenovka**	**7.55**	**25**	P	**Pn**	**09 15 51.5**	**-0.8**
	SNR=138						
TKM2	**Tokmak 2**	**7.67**	**31**	P	**Pn**	**09 15 53.7**	**-0.3**
	SNR=317						
TKM2	**Tokmak 2**	**7.67**	**31**	PN	**Pn**	**09 15 53.9**	**-0.2**
TKM2				S	**S**	**09 17 16.8**	**-4.1**
TKM2	**Tokmak 2**	**7.67**	**31**	⇓P	**Pn**	**09 15 53.9**	**-0.2**
	263nm,0.8s						
TKM2				⇓S	**S**	**09 17 16.8**	**-4.1**
	572nm,1.1s						
SGDS	**Sogindy**	**7.75**	**25**	*de*PN	**Pn**	**09 15 54.0**	**-1.0**
SGDS				pmax	pmax		
	comp=Z,42nm,0.8s						
SGDS	**Sogindy**	**7.75**	**25**	⇓*e*P	**Pn**	**09 15 54.1**	**-1.0**
	comp=Z,42nm,0.8s,baz=26						
SGDS				*e*S	**S**	**09 17 17.4**	**-5.4**
	baz=26						
KDJ	**Kajisay**	**7.83**	**42**	Pn	**Pn**	**09 15 55.5**	**-0.6**
KDJ	**Kajisay**	**7.83**	**42**	PN	**Pn**	**09 15 55.5**	**-0.6**
SMLA	**Simla**	**7.89**	**131**	*e*S	**S**	**09 17 20.9**	**-5.2**
SMLA				IAML		09 17 25.1	
	comp=E,2μm,0.6s						
TARG	**Taragay, Kyrgy**	**7.91**	**46**	Pn	**Pn**	**09 15 56.9**	**-0.5**
TARG	**Taragay, Kyrgy**	**7.91**	**46**	PN	**Pn**	**09 15 56.9**	**-0.5**
TNSS	**Tian-Shan**	**8.37**	**36**	*e*PN	**Pn**	**09 16 03.4**	**+0.1**
TNSS				*e*S	**S**	**09 17 36.4**	**-1.4**
TNSS	**Tian-Shan**	**8.37**	**36**	*e*P	**Pn**	**09 16 03.4**	**+0.1**
	baz=38						
TNSS				*e*S	**S**	**09 17 36.4**	**-1.4**
	baz=38						
AAA	**Alma-Ata**	**8.48**	**36**	*e*PN	**Pn**	**09 16 05.0**	**+0.6**
AAA				*e*S	**S**	**09 17 38.2**	**-1.8**
AAA	**Alma-Ata**	**8.48**	**36**	*e*P	**Pn**	**09 16 05.1**	**+0.6**
	baz=37						
AAA				*e*S	**S**	**09 17 38.3**	**-1.8**
	baz=37						
KNDC	**Almaty**	**8.51**	**36**	PN	**Pn**	**09 16 05.5**	**+0.7**
KNDC	**Almaty**	**8.51**	**36**	⇑P	**Pn**	**09 16 05.5**	**+0.7**
	comp=E,567nm,1.1s						
PRZ	**Przheval'sk**	**8.73**	**44**	Pn	**Pn**	**09 16 08.8**	**+1.0**
PRZ	**Przheval'sk**	**8.73**	**44**	PN	**Pn**	**09 16 08.8**	**+1.0**
KUU	**Kurty**	**8.77**	**31**	*de*PN	**Pn**	**09 16 07.0**	**-1.2**
KUU	**Kurty**	**8.77**	**31**	⇓*e*P	**Pn**	**09 16 07.0**	**-1.2**
	baz=32						
DDI	**Dehra Dun**	**9.00**	**131**	*e*P	**Pn**	**09 16 11.8**	**+0.4**
DDI				*e*S	**S**	**09 17 46.8**	**-5.7**
DDI				IAML		09 17 50.8	
	comp=N,2μm,0.8s						
DDI				IAML		09 17 51.5	
	comp=E,2μm,0.7s						
CHKK	**Chushkaly**	**9.02**	**33**	*e*PN	**Pn**	**09 16 10.4**	**-0.9**
CHKK	**Chushkaly**	**9.02**	**33**	*e*P	**Pn**	**09 16 10.4**	**-0.9**
	baz=34						
BTLS	**Baital**	**9.04**	**18**	*e*PN	**Pn**	**09 16 10.9**	**-0.7**
BTLS	**Baital**	**9.04**	**18**	*e*P	**Pn**	**09 16 10.9**	**-0.7**
	baz=18						
SATY	**Saty**	**9.12**	**41**	*de*P	**Pn**	**09 16 12.4**	**-0.4**
SATY				*e*S	**S**	**09 17 53.2**	**-2.1**
SATY				pmax	pmax		
	comp=Z,39nm,1.0s						
SATY	**Saty**	**9.12**	**41**	⇓*e*P	**Pn**	**09 16 12.4**	**-0.4**
	comp=Z,39nm,1.0s,baz=43						
SATY				*e*S	**S**	**09 17 53.3**	**-2.1**
	baz=43						
ZHN	**Zhinishke**	**9.21**	**41**	*e*P	**Pn**	**09 16 12.4**	**-1.5**
ZHN				*e*S	**S**	**09 17 54.8**	**-2.6**
ZHN	**Zhinishke**	**9.21**	**41**	*e*P	**Pn**	**09 16 12.4**	**-1.5**
	baz=42						
ZHN				*e*S	**S**	**09 17 54.9**	**-2.6**
	baz=42						
KPKS	**Kokpek**	**9.55**	**40**	*de*P	**Pn**	**09 16 17.9**	**-0.4**
KPKS				*e*S	S	**09 18 03.5**	**-1.9**
KPKS				pmax	pmax		
	comp=Z,49nm,0.7s						
KPKS	**Kokpek**	**9.55**	**40**	⇓*e*P	**Pn**	**09 16 18.0**	**-0.4**
	comp=Z,49nm,0.7s,baz=42						
KPKS				*e*S	**S**	**09 18 03.6**	**-1.9**
	baz=42						
ARXS	**Arharly**	**9.68**	**35**	*e*P	**Pn**	**09 16 19.2**	**-0.7**
GEYT	**Alibeck**	**9.73**	**282**	P	**Pn**	**09 16 19.0**	**-1.6**
	comp=Z,13nm,0.7s,baz=111,slow=12,SNR=14						
GEYT				S	**S**	**09 18 05.8**	**-3.9**
	comp=Z,14nm,0.6s,baz=152,slow=16,SNR=2.1						
GEYT	**Alibeck**	**9.73**	**282**		**Pn**	**09 16 19.4**	**-1.2**
GYA0	**ALIBECK ARRAY**	**9.73**	**282**	P	**Pn**	**09 16 19.8**	**-0.8**
NDI	**New Delhi**	**9.78**	**141**	*e*P	**Pn**	**09 16 22.0**	**+0.7**
NDI				*e*S	**S**	**09 18 03.0**	**-8.0**
PDGK	**Podgornoye**	**9.89**	**43**	P	**Pn**	**09 16 21.9**	**-0.8**
PDGK				S	**S**	**09 18 09.5**	**-4.1**
PDGK	**Podgornoye**	**9.89**	**43**	⇑P	**Pn**	**09 16 21.9**	**-0.8**
	comp=Z,136nm,1.1s						
PDGK				⇓S	**S**	**09 18 09.5**	**-4.1**
	comp=Z,465nm,1.1s						
TDK	**Taldyqorghan**	**10.55**	**34**	*e*P	**Pn**	**09 16 29.9**	**-1.1**
TDK				pmax	pmax		
	comp=Z,35nm,0.7s						
TDK	**Taldyqorghan**	**10.55**	**34**	*e*P	**Pn**	**09 16 30.0**	**-1.1**
	comp=Z,35nm,0.7s,baz=34						
OTUK	**Ortayu**	**11.86**	**7**	P	**Pn**	**09 16 46.9**	**-0.9**
OTUK	**Ortayu**	**11.86**	**7**	⇑P	**Pn**	**09 16 46.9**	**-0.9**
	comp=Z,155nm,0.9s						
JHNI	**Jhansi**	**13.11**	**145**	*e*P	**P**	**09 17 08.2**	**+1.9**
JHNI				*e*S	S	09 19 19.0	-10
NGCH	**Negor - Chabah**	**13.52**	**217**	P	**P**	**09 17 10.4**	**-0.5**
	SNR=6.3						
MAKZ	**Makanchi**	**13.56**	**37**		**Pn**	**09 17 08.6**	**-0.4**
MAKZ	**Makanchi**	**13.56**	**37**	P	**Pn**	**09 17 08.6**	**-0.4**
BRZS	**Berezniki**	**13.62**	**7**	*e*P	**Pn**	**09 17 08.7**	**-1.0**
BRZS				*e*S	**S**	**09 19 36.3**	**-4.2**
BRZS	**Berezniki**	**13.62**	**7**	*e*P	**Pn**	**09 17 08.7**	**-1.0**
	baz=6.9						
BRZS				*e*S	**S**	**09 19 36.4**	**-4.1**
	baz=6.9						
PYUN	**Piuthan**	**13.67**	**124**	*e*Pg	**Pn**	**09 17 10.1**	**-0.7**
MK31	**Makanchi Array**	**13.70**	**37**		**Pn**	**09 17 10.0**	**-0.7**
MK31	**Makanchi Array**	**13.70**	**37**	*c i* P	**Pn**	**09 17 10.2**	**-0.6**
MKAR	**Makanchi Array**	**13.70**	**37**	P	**Pn**	**09 17 11.0**	**+0.2**
	comp=Z,127nm,0.6s,baz=220,slow=14,SNR=150						
MKAR				S	**S**	**09 19 45.4**	**+2.8**
	comp=Z,4.2nm,0.5s,baz=248,slow=25,SNR=1.6						
MKAR	**Makanchi Array**	**13.70**	**37**		**Pn**	**09 17 10.0**	**-0.7**
DANN	**Dangsing**	**14.04**	**121**	*e*P	**Pn**	**09 17 15.2**	**-0.2**
KOLN	**Koldanda**	**14.30**	**124**	*e*P	**Pn**	**09 17 18.1**	**-0.4**
KOLN	**Koldanda**	**14.30**	**124**	*e*P	**Pn**	**09 17 18.2**	**-0.3**
KOLN	**Koldanda**	**14.30**	**124**	*e*P	**Pn**	**09 17 18.8**	**+0.3**
BHPL	**Bhopal**	**14.61**	**153**	*e*P	**Pn**	**09 17 22.5**	**+0.4**
BHPL				*e*S	**S**	**09 19 56.0**	**-8.0**
VLK	**Valmikinagar**	**14.77**	**124**	*e*P	**Pn**	**09 17 23.7**	**-0.3**
AB31	**Akbulak array**	**14.79**	**333**	*i* P	**Pn**	**09 17 22.2**	**-1.9**
AB31	**Akbulak array**	**14.79**	**333**	P	**Pn**	**09 17 22.2**	**-1.9**
	comp=Z,43nm,0.7s,baz=146,slow=12,SNR=277						
ABKAR	**Akbulak array**	**14.79**	**333**		**Pn**	**09 17 22.5**	**-1.6**
ABKAR	**Akbulak array**	**14.79**	**333**		**Pn**	**09 17 22.4**	**-1.6**
GKN	**Gorkha**	**14.86**	**121**	*e*P	**Pn**	**09 17 25.3**	**0.0**
WMQ	**Urumqi**	**15.25**	**56**	P	**P**	**09 17 31.0**	**+0.9**
WMQ				sP	sP	09 18 27.0	-5.0
WMQ				S	**S**	**09 20 19.3**	**+0.6**
WMQ				pmax	pmax		
	comp=Z,250nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,630nm,5.1s						
KURBB	**Kurchatov Arra**	**15.36**	**20**	P	**Pn**	**09 17 30.3**	**-0.7**
	comp=Z,111nm,0.7s,baz=210,slow=10,SNR=170						
KURBB				S	**S**	**09 20 22.1**	**+1.1**
	comp=Z,4.8nm,0.8s,baz=206,slow=18,SNR=4.5						
KURBB				PKiKP	**PKiKP**	**09 30 14.1**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=211,slow=0.6,SNR=5.0						
KURBB	**Kurchatov Arra**	**15.36**	**20**	P	**Pn**	**09 17 29.4**	**-1.6**
KURBB	**Kurchatov Arra**	**15.36**	**20**	⇓P	**Pn**	**09 17 29.5**	**-1.6**
	comp=Z,172nm,0.7s						
DMN	**Daman**	**15.43**	**121**	*e*P	**P**	**09 17 32.4**	**+0.1**
KKN	**Kakani**	**15.44**	**120**	*e*P	**Pn**	**09 17 32.0**	**-0.4**
ZSN	**Zaisan**	**15.45**	**40**	*e*P	**P**	**09 17 31.1**	**-1.0**
ZSN				*e*S	**S**	**09 20 18.6**	**-4.4**
ZSN				pmax	pmax		
	comp=Z,25nm,0.6s						
ZSN	**Zaisan**	**15.45**	**40**	*e*P	**P**	**09 17 31.1**	**-1.0**
	comp=Z,25nm,0.6s,baz=41						
ZSN				*e*S	**S**	**09 20 18.7**	**-4.4**
	baz=41						
KURK	**Kurchatov**	**15.47**	**20**	P	**P**	**09 17 30.9**	**-1.4**
KURK	**Kurchatov**	**15.47**	**20**	P	**P**	**09 17 30.3**	**-2.0**
KURK				S	**S**	**09 20 22.1**	**-1.3**
PKIN	**Phulchoki**	**15.65**	**120**	*e*P	**Pn**	**09 17 35.0**	**0.0**
SEM	**Semipalatinsk**	**15.70**	**24**	*e*P	**P**	**09 17 33.5**	**-1.6**
SEM				*e*S	**S**	**09 20 26.0**	**-3.1**
SEM				pmax	pmax		
	comp=Z,35nm,0.7s						
SEM	**Semipalatinsk**	**15.70**	**24**	*e*P	**P**	**09 17 33.5**	**-1.6**
	comp=Z,35nm,0.7s,baz=25						
SEM				*e*S	**S**	**09 20 26.0**	**-3.1**
	baz=25						
JBP	**Jabalpur**	**15.75**	**145**	*e*P	**P**	**09 17 35.4**	**-0.2**
JBP				*e*S	**S**	**09 20 21.5**	**-8.7**
GUN	**Gumba**	**15.79**	**118**	*e*P	**Pn**	**09 17 36.6**	**-0.1**
BANOM	**Banah**	**15.85**	**232**	P	**Pn**	**09 17 37.0**	**-0.2**
	SNR=48						
BANOM	**Banah**	**15.85**	**232**	*i* P	**Pn**	**09 17 37.0**	**-0.2**
	SNR=48						
SHME	**Shamm**	**15.86**	**233**	P	**Pn**	**09 17 37.5**	**+0.2**
	SNR=8.6						
SHME	**Shamm**	**15.86**	**233**	*i* P	**P**	**09 17 36.6**	**-0.2**
	SNR=21						
MASF	**Masafi**	**16.33**	**231**	P	**P**	**09 17 42.4**	**+0.4**
	SNR=29						
MSFE	**Esma-Masafi**	**16.34**	**231**	*i* P	**P**	**09 17 42.4**	**+0.3**
	SNR=29						
AKTO	**Aktyubinsk**	**16.48**	**332**	P	**P**	**09 17 43.9**	**+0.5**
	comp=Z,164nm,0.8s,baz=143,slow=11,SNR=392						
AKTO				S	**S**	**09 20 41.8**	**-3.2**
	comp=Z,24nm,0.9s,baz=357,slow=20,SNR=4.3						
AKTO	**Aktyubinsk**	**16.48**	**332**	⇓P	**P**	**09 17 43.7**	**+0.3**
	comp=Z,146nm,0.7s						
WSAR	**Wadi Sarin**	**16.55**	**220**	P	**Pn**	**09 17 45.1**	**-0.4**
	comp=Z,67nm,0.6s,baz=84,slow=9.5,SNR=70						
WSAR				S	**S**	**09 20 48.0**	**+1.0**
	comp=Z,9.8nm,0.7s,baz=281,slow=2.8,SNR=4.0						
WSAR	**Wadi Sarin**	**16.55**	**220**	P	**Pn**	**09 17 46.6**	**+1.0**
	SNR=10						
BIDO	**Bidbid**	**16.59**	**222**	P	**Pn**	**09 17 46.4**	**+0.4**
	SNR=9.0						
UOSS	**Minazif**	**16.61**	**230**	P	**P**	**09 17 44.5**	**-0.6**
UOSS	**Minazif**	**16.61**	**230**	*i* P	**P**	**09 17 45.3**	**+0.2**
	SNR=11						
HATD	**Hatta, Dubai**	**16.74**	**230**	P	**Pn**	**09 17 48.0**	**+0.2**
	SNR=41						
HATD	**Hatta, Dubai**	**16.74**	**230**	*i* P	**Pn**	**09 17 48.0**	**+0.2**
	SNR=41						
ASHO	**Ashiyiah**	**16.89**	**230**	P	**Pn**	**09 17 49.2**	**-0.4**
	SNR=181						
ASHO	**Ashiyiah**	**16.89**	**230**	*i* P	**Pn**	**09 17 49.0**	**-0.6**
	SNR=33						
WBK	**Wadi Bani Khal**	**16.90**	**218**	P	**Pn**	**09 17 50.1**	**+0.5**
	SNR=30						
NAZ	**Nazwa, Dubai**	**16.92**	**231**	P	**Pn**	**09 17 51.0**	**+1.1**
	SNR=32						
NAZ	**Nazwa, Dubai**	**16.92**	**231**	*i* P	**Pn**	**09 17 50.3**	**+0.5**
	SNR=32						
HOQ	**Hoqain**	**16.99**	**224**	P	**Pn**	**09 17 51.3**	**+0.6**
	SNR=13						
SMDO	**Samad**	**17.00**	**221**	P	**Pn**	**09 17 51.0**	**0.0**
	SNR=23						
SOHO	**SOHO**	**17.01**	**227**	*i* P	**P**	**09 17 49.0**	**-0.5**
	SNR=20						
JLN	**Jalan Bani Buh**	**17.07**	**216**	P	**Pn**	**09 17 52.2**	**+0.5**
	SNR=28						
FAQ	**Al Faqa, Dubai**	**17.13**	**231**	P	**Pn**	**09 17 52.6**	**+0.1**
	SNR=12						
FAQ	**Al Faqa, Dubai**	**17.13**	**231**	*i* P	**Pn**	**09 17 52.4**	**0.0**
	SNR=12						
ASUD	**Al Ashush, Dub**	**17.39**	**231**	P	**Pn**	**09 17 54.7**	**-0.7**
	SNR=31						
ASUD	**Al Ashush, Dub**	**17.39**	**231**	*i* P	**Pn**	**09 17 54.8**	**-0.6**
	SNR=31						
JMDO	**Jabal Madar**	**17.54**	**220**	P	**Pn**	**09 17 57.1**	**0.0**
	SNR=8.6						
ALNE	**Al Ain**	**17.54**	**229**	P	**Pn**	**09 17 56.3**	**-1.0**
	SNR=26						
ALNE	**Al Ain**	**17.54**	**229**	*i* P	**P**	**09 17 55.4**	**+0.1**
	SNR=92						
AJN	**Ajban**	**17.65**	**232**	P	**Pn**	**09 17 57.4**	**-1.0**
	SNR=28						
AJN	**Ajban**	**17.65**	**232**	*i* P	**Pn**	**09 17 57.4**	**-1.0**
	SNR=13						
GTK	**Tadong**	**18.09**	**115**	*e*P	**Pn**	**09 18 03.4**	**-0.3**
POO	**Poona**	**18.17**	**169**	*e*P	**Pn**	**09 18 04.2**	**-0.5**
BOK	**Bokaro**	**18.53**	**129**	*e*P	**P**	**09 18 07.2**	**+1.3**
BOK				*e*S	**S**	**09 21 21.4**	**-4.8**
MAK	**Makhachkala**	**18.57**	**297**	*e*P	**P**	**09 18 05.5**	**-0.8**
MAK				*e*S	**S**	**09 21 27.8**	**+1.0**
MAK				pmax	pmax		
	comp=Z,112nm,1.2s						
MAK				MLR	MLR		
	comp=Z,74nm,12.0s						
MHTO	**MHTO**	**18.76**	**218**	P	**Pn**	**09 18 10.5**	**-1.0**
	SNR=17						
JRN	**Qarnain Island**	**18.79**	**237**	P	**P**	**09 18 08.3**	**-0.5**
	SNR=32						
LSA	**Lhasa**	**18.81**	**105**	P	**Pn**	**09 18 12.3**	**-0.2**
LSA	**Lhasa**	**18.81**	**105**	P	**Pn**	**09 18 12.3**	**-0.2**
LSA				pmax	pmax		
	comp=Z,83nm,0.5s						
MZR	**Muzera**	**19.72**	**232**	P	**P**	**09 18 19.7**	**+0.8**
	SNR=13						
MZR	**Muzera**	**19.72**	**232**	*i* P	**P**	**09 18 18.2**	**-0.6**
	SNR=5.9						
GOMU	**GeErMu**	**19.84**	**83**	P	**P**	**09 18 21.0**	**+0.6**
GOMU				pmax	pmax		
	comp=Z,33nm,1.0s						
GROC	**Groznyy**	**19.85**	**297**	*e*P	**P**	**09 18 21.0**	**+1.0**
GROC				*e*S	**S**	**09 21 55.6**	**+3.7**
GROC				pmax	pmax		
	comp=Z,112nm,0.9s						
DHUB	**DHUBRI**	**19.86**	**116**	*e*P	**P**	**09 18 21.2**	**+1.0**
DQM	**DQM**	**19.87**	**217**	P	**P**	**09 18 21.8**	**+1.5**
	SNR=6.1						
ZAA0	**Zalesovo Array**	**20.21**	**26**	⇑P	**P**	**09 18 23.8**	**+0.1**

KIV Kislovodsk 22.21 298 *i* P **P** **09 18 45.1 +0.7**
SNR=5.3
BELG Belogornoye 22.49 322 P **P** **09 18 47.0 +0.3**
comp=Z,318nm,0.8s,baz=351,slow=0.5,SNR=142
comp=Z,318nm,0.8s
BELG Belogornoye 22.49 322*c* *i*P **P** **09 18 46.7 0.0**
BELG pmax pmax
comp=Z,58nm,0.8s
BATM Batumi 22.65 292 ⇓P **P** **09 18 50.1 +1.8**
DOK Doka 22.73 223 P **P** **09 18 49.6 +0.5**
SNR=5.3
KOHI KOHIMA 23.07 111⇑ *e*P **P** **09 18 53.2 +0.8**
AZL Aizawl 23.18 117⇓ *e*P **P** **09 18 54.5 +1.1**
IMP Imphal 23.45 113 *e*P **P** **09 18 57.4 +1.6**
GTA Gaotai 23.51 74 P **P** **09 18 58.0 +1.8**
GTA pP pP 09 19 40.8 +4.8
GTA sP sP 09 20 08.0 +5.3
GTA pmax pmax
comp=Z,49nm,0.8s
GTA pmax pmax
comp=Z,180nm,4.0s
KNGR Kungurtug, Tuv 24.16 46*c* *i*P **P** **09 19 04.4 +2.4**
ABTO Aybut 24.21 223 P **P** **09 19 05.3 +2.7**
SNR=6.7
SOC Sochi 24.29 296 *e*P **P** **09 19 04.6 +1.5**
SOC *e*S **S** **09 23 10.4 +4.1**
SOC pmax pmax
comp=Z,20nm,0.8s
RAYN Ar Rayn 24.89 246 P **P** **09 19 09.1 +0.3**
RAYN pmax pmax
comp=Z,9.0nm,1.0s
RAYN Ar Rayn 24.89 246 *i* P **P** **09 19 07.8 -0.9**
SNR=43
VRH Novokhopyorsk 25.05 315 *e*P **P** **09 19 09.5 -0.4**
VRH pmax pmax
comp=Z,50nm,0.8s
KIRV Kirov 25.97 335 P **P** **09 19 18.9 +0.8**
comp=Z,279nm,0.6s,baz=132,slow=2.9,SNR=82
KIRV Kirov 25.97 335*c* *i*P **P** **09 19 18.5 +0.5**
ANN Anapa 26.06 299 *e*P **P** **09 19 14.2 -4.8**
ANN *e**PP **pP** **09 19 58.9 -2.0**
ANN *e* 09 20 09.3
ANN *e*S **S** **09 23 27.5 -6.8**
ANN pmax pmax
comp=Z,35nm,0.8s
PCHI Peechi 26.43 166⇓ *e*P **P** **09 19 23.7 +1.1**
VSR Storozhevoye 26.53 314 *e*P **P** **09 19 22.9 -0.3**
VSR pmax pmax
comp=Z,60nm,0.7s
VORR Voronezh 26.68 314 *e*P **P** **09 19 24.6 +0.1**
VORR *i* *PP **pP** **09 20 08.5 +2.0**
VORR pmax pmax
comp=Z,41nm,1.4s
LZH Lanzhou 27.07 81 *e*P **P** **09 19 29.8 +1.5**
LZH sP sP 09 20 43.0 +6.1
LZH S **S** **09 23 55.3 +4.6**
LZH pmax pmax
comp=Z,30nm,1.6s
LZH LR LR
comp=Z,190nm,9.3s
LZH LR LR
comp=Z,180nm,10.0s
LZH LR LR
comp=Z,110nm,11.0s
LPSR Galich'ya Gora 27.21 316 *e*P **P** **09 19 29.1 0.0**
LPSR pmax pmax
comp=Z,100nm,0.8s
ZAK Zakamensk 27.50 49 *e*P **P** **09 19 33.2 +1.2**
ZAK pmax pmax
comp=Z,43nm,1.0s
CD2 Chengdu 28.39 91 P **P** **09 19 42.0 +2.0**
CD2 pmax pmax
comp=Z,40nm,0.6s
PZH PanZhiHua 28.58 101 P **P** **09 19 44.3 +2.5**
PZH pmax pmax
comp=Z,20nm,0.9s
PZH pmax pmax
comp=Z,90nm,5.3s
MMAI Mount Meron Ar 28.69 273 P **P** **09 19 43.6 +1.0**
comp=Z,1.0nm,0.2s,baz=78,slow=9.0,SNR=1.2
MMAI PcP **PcP** **09 22 48.7 +1.0**
comp=Z,0.7nm,0.3s,baz=57,slow=5.3,SNR=2.5
MMAI ScP **ScP** **09 26 07.8 -1.1**
comp=Z,2.7nm,0.5s,baz=39,slow=5.4,SNR=5.0
comp=Z,1.0nm,0.2s
BR131 Keskin Array S 28.81 288 P **P** **09 19 44.0 +0.3**
BR131 Keskin Array S 28.81 288 P **P** **09 19 44.0 +0.3**
BR131 pmax pmax
comp=Z,13nm,1.3s
BRTR Keskin Array B 28.81 288 P **P** **09 19 44.6 +0.9**
comp=Z,2.1nm,0.6s,baz=100,slow=9.2,SNR=9.5
BRTR PcP **PcP** **09 22 47.9 -0.1**
comp=Z,1.2nm,0.5s,baz=125,slow=4.4,SNR=4.1
BRTR ScP **ScP** **09 26 07.2 -2.1**
comp=Z,0.9nm,0.7s,baz=137,slow=4.2,SNR=3.8
BRTR Keskin Array B 28.81 288 P **P** **09 19 44.0 +0.3**
SONM Songino Array 28.89 55 P **P** **09 19 46.3 +2.0**
comp=Z,35nm,0.6s,baz=269,slow=9.1,SNR=196
comp=Z,35nm,0.6s
SONM Songino Array 28.89 55 P **P** **09 19 46.3 +2.0**
MOS Moscow 29.26 321 *e*P **P** **09 19 46.6 -0.7**
MOS *e**PP **pP** **09 20 27.0 -2.7**
MOS *e*S **S** **09 24 20.9 -3.4**
MOS *e* 09 30 02.3
MOS pmax pmax
comp=Z,200nm,1.2s
MOS pmax pmax
comp=Z,102nm,1.1s
ULN Ulaanbaatar 29.33 56 P **P** **09 19 49.8 +1.5**
ULN Ulaanbaatar 29.33 56*c* *i*P **P** **09 19 49.9 +1.6**
ULN pmax pmax
comp=Z,93nm,1.7s
ULN Ulaanbaatar 29.33 56 ⇑P **P** **09 19 50.1 +1.8**
PRGR Permogore 29.52 336⇑ *i*P **P** **09 19 50.0 +0.5**
PRGR *e* 09 20 59.9
OBN Obninsk 29.52 320 ⇓P **P** **09 19 50.4 +0.8**
OBN Obninsk 29.52 320 P **P** **09 19 50.2 +0.6**
comp=Z,28nm,0.4s,baz=51,slow=2.5,SNR=32
comp=Z,28nm,0.4s
OBN Obninsk 29.52 320 P **P** **09 19 49.8 +0.2**
OBN Obninsk 29.52 320*c* *i*P **P** **09 19 49.6 0.0**
OBN *e**PP **pP** **09 20 29.7 -2.4**
OBN *i* 09 20 52.1
OBN *i* 09 22 47.2
OBN *i* SS SS 09 26 15.3 -25
OBN pmax pmax
comp=Z,93nm,1.1s
OBN Obninsk 29.52 320 P **P** **09 19 50.2 +0.6**
KMI Kunming 30.04 103 ⇑P **P** **09 19 56.0 +1.2**
KMI pmax pmax
comp=Z,22nm,0.7s
PALK Pallekele 30.62 159 P **P** **09 20 01.2 +1.4**
comp=Z,25nm,0.8s,baz=91,slow=7.8,SNR=9.3
comp=Z,25nm,0.8s
CHTO Chiang Mai 30.80 117 P **P** **09 20 01.8 +0.5**
CHTO IAmb IAmb 09 20 03.7
comp=Z,17nm,0.5s
CHTO Chiang Mai 30.80 117 P **P** **09 20 01.8 +0.5**
CHTO pmax pmax
comp=Z,17nm,0.5s
CHTO Chiang Mai 30.80 117 P **P** **09 20 02.4 +1.1**
CHTO Chiang Mai 30.80 117 P **P** **09 20 02.5 +1.2**
CHTO ScP **ScP** **09 26 15.5 -0.4**
CM31 Chiang Mai Arr 31.03 118 P **P** **09 20 03.7 +0.4**
CM31 IAmb IAmb 09 20 06.1
comp=Z,32nm,0.9s
CM31 Chiang Mai Arr 31.03 118 P **P** **09 20 06.4 +3.1**
SNR=5.8
CMAR Chiang Mai Arr 31.03 118 P **P** **09 20 04.2 +0.9**
comp=Z,16nm,0.6s,baz=296,slow=8.0,SNR=55
CMAR PcP **PcP** **09 22 54.2 +0.4**
comp=Z,6.4nm,0.7s,baz=301,slow=4.3,SNR=8.3
CMAR ScP **ScP** **09 26 14.9 -1.8**
comp=Z,10nm,0.9s,baz=295,slow=4.9,SNR=18
comp=Z,16nm,0.6s
CMAR Chiang Mai Arr 31.03 118 *i* P **P** **09 20 04.4 +1.1**
CMAR pmax pmax
comp=Z,22nm,0.8s
KLMR Klimovskoe 31.18 331 *e*P **P** **09 20 01.3 -2.8**
KLMR *e* 09 22 51.7
KLMR *e*S **S** **09 24 52.8 -1.3**
KLMR pmax pmax
comp=Z,112nm,0.9s
KLMR Klimovskoe 31.18 331 *e*P **P** **09 20 01.3 -2.8**
KLMR AMP 09 20 05.0
comp=Z,112nm,0.9s
KLMR *e*PcP **PcP** **09 22 51.7 -1.8**
KLMR *e*S **S** **09 24 52.8 -1.3**
KLMR *e*S **S** **09 24 52.8 -1.3**
BTO Baotou 31.25 70 *e*P **P** **09 20 04.5 -0.6**
BTO S **S** **09 24 56.8 +0.8**
BTO LR LR
comp=Z,480nm,5.1s
BTO LR LR
comp=Z,560nm,12.1s
XAN Xi'an 31.59 83 ⇑P **P** **09 20 08.8 +0.7**
XAN sP PP 09 21 20.5 -3.3
XAN pmax pmax
comp=Z,44nm,0.8s
XAN Xi'an 31.59 83 P **P** **09 20 08.9 +0.7**
MILM Milestii Mici 32.26 302 ⇓P **P** **09 20 14.1 +0.4**
MILM Milestii Mici 32.26 302 P **P** **09 20 14.1 +0.4**
HHC Hu-ho-hao-te 32.39 69 *e*P **P** **09 20 17.5 +2.4**
HHC pmax pmax
comp=Z,24nm,0.9s
HHC pmax pmax
comp=Z,200nm,5.2s
AKASG Malin Array Be 32.44 309 P **P** **09 20 15.5 +0.3**
comp=Z,25nm,0.6s,baz=82,slow=7.2,SNR=125
AKASG PcP **PcP** **09 22 56.4 -0.8**
comp=Z,3.5nm,0.6s,baz=77,slow=3.1,SNR=7.8
AKASG ScP **ScP** **09 26 18.1 -2.8**
comp=Z,2.1nm,0.7s,baz=77,slow=3.9,SNR=9.4
comp=Z,25nm,0.6s
AKASG Malin Array Be 32.44 309 *i* P **P** **09 20 15.1 -0.2**
AKASG pmax pmax
comp=Z,35nm,0.6s
AKBB Malin Array Si 32.44 309*c* *i*P **P** **09 20 15.1 -0.2**
AKBB pmax pmax
comp=Z,33nm,0.6s
TPGR Topolog 32.46 298 ⇓P **P** **09 20 16.6 +1.0**
GYA Guiyang 32.52 97 ⇓P **P** **09 20 17.8 +1.4**
GYA sP sP 09 21 27.8 +3.3
GYA S **S** **09 25 17.5 +1.5**
GYA pmax pmax
comp=Z,31nm,0.7s
GYA LR LR
comp=Z,110nm,4.9s
GYA LR LR
comp=Z,120nm,4.4s
GYA LR LR
comp=Z,110nm,10.0s
CFR Carcaliu 32.67 299 ⇓P **P** **09 20 18.3 +1.1**
SORM Soroca 32.67 304 ⇓P **P** **09 20 17.4 +0.2**
ENH Enshi 33.24 89 P **P** **09 20 22.9 +0.4**
ENH IAmb IAmb 09 20 24.6
comp=Z,29nm,0.9s
ENH Enshi 33.24 89 P **P** **09 20 23.7 +1.2**
ENH pP **pP** **09 21 07.1 +0.5**
VRI Vrincioaia 33.66 300 ⇓P **P** **09 20 27.7 +1.8**
VRI Vrincioaia 33.66 300 P **P** **09 20 27.9 +2.0**
PLOR Plostina 33.72 300 ⇓P **P** **09 20 28.5 +2.1**
PLOR Plostina 33.72 300 P **P** **09 20 28.5 +2.1**
ISR Istrita 33.79 299 ⇓P **P** **09 20 29.4 +2.2**
COVR Voineasa-Covas 34.03 300 ⇓P **P** **09 20 30.8 +1.7**
MNK Minsk 34.05 315 *i* P **P** **09 20 30.1 +1.0**
MNK *i* *PP **pP** **09 21 12.8 +0.7**
MNK *i* 09 21 50.9
MNK *i* 09 23 02.2
MNK *i* S **S** **09 25 41.1 +2.4**
MNK *i* *SS **sS** **09 26 58.0 +1.4**
MNK pmax pmax
comp=N,20nm,0.8s
MNK pmax pmax
comp=Z,51nm,0.8s
MNK pmax pmax
comp=E,7.0nm,1.3s
MNK MLR MLR
comp=E,53nm,22.0s
MNK MLR MLR
comp=Z,3μm,14.0s
MNK MLR MLR
comp=N,507nm,24.0s
MNK Minsk 34.05 315 *i* P **P** **09 20 30.1 +1.0**
comp=E,7.0nm,1.3s
MNK *i* P **P** **09 20 30.1 +1.0**
comp=N,20nm,0.8s
MNK *i* P **P** **09 20 30.1 +1.0**
comp=Z,51nm,0.8s,baz=104
MNK *i* pP **pP** **09 21 12.8 +0.7**
MNK *i* PP **PnPn** **09 21 51.0 +0.2**
MNK *i* S **S** **09 25 41.1 +2.4**
MNK *i* sS **sS** **09 26 58.0 +1.4**
MNK *i* SS **SS** **09 28 15.0 +2.9**
MNK *i* LRM MLR 09 36 00.6
comp=E,53nm,22.2s
MNK *i* LRM MLR 09 36 12.0
comp=Z,3μm,14.0s
MNK *i* LRM MLR 09 36 37.5
comp=N,507nm,24.2s
BIZ Bicaz 34.11 302 ⇓P **P** **09 20 30.9 +1.1**
MLR Muntele Rosu 34.21 299 P **P** **09 20 32.6 +1.8**
comp=N,33nm,0.9s,baz=89,slow=2.1,SNR=38
comp=N,33nm,0.9s
MLR Muntele Rosu 34.21 299 P **P** **09 20 32.0 +1.2**
MLR IAmb IAmb 09 20 34.0
comp=Z,43nm,0.9s
MLR Muntele Rosu 34.21 299 P **P** **09 20 32.0 +1.2**
MLR pmax pmax
comp=Z,43nm,0.9s
LYN LuoYang 34.28 80 ⇑P **P** **09 20 33.0 +1.6**
LYN sP sP 09 21 40.0 -0.2
LYN S **S** **09 25 36.3 -6.4**
LYN ScP **ScP** **09 26 25.5 -2.2**
LYN pmax pmax
comp=Z,20nm,1.0s
LYN pmax pmax
comp=Z,120nm,7.8s
PUL Pulkovo 34.55 325⇓ *i*P **P** **09 20 34.2 +0.9**
PUL pmax pmax
comp=Z,145nm,1.1s
BURAR Bucovina Array 34.74 303 ⇓P **P** **09 20 36.4 +1.2**
BURAR Bucovina Array 34.74 303 P **P** **09 20 35.8 +0.5**
BURAR Bucovina Array 34.74 303 P **P** **09 20 35.8 +0.5**
BURAR pmax pmax
comp=Z,13nm,0.8s
BUR08 Bucovina Ar. S 34.75 303 P **P** **09 20 35.2 -0.1**
NACGM Naroch 34.77 316⇑ *e*P **P** **09 20 34.7 -0.5**
baz=102
IDID Didziasalis 34.89 317 *e*P **P** **09 20 37.3 +1.0**
ATD Arta Tunnel 34.99 232 P **P** **09 20 41.7 +4.1**
comp=Z,4.1nm,0.4s,baz=22,slow=7.1,SNR=3.7
VALR Valaam 34.99 328*c* *i*P **P** **09 20 37.2 +0.2**
VALR pmax pmax
comp=Z,101nm,0.8s
ARR Arges 35.14 299 ⇓P **P** **09 20 40.0 +1.3**
IIGN Ignalina 35.19 317 *e*P **P** **09 20 39.6 +0.7**
ISAL Salakas 35.29 317 *e*P **P** **09 20 40.4 +0.7**
ARCR ARCALIA 35.31 302 ⇓P **P** **09 20 42.1 +2.1**
HNS HongShan 35.35 75 ⇑P **P** **09 20 42.0 +1.5**
HNS pmax pmax
comp=Z,18nm,1.0s
XLT XiLinHaoTe 35.47 63 *e*P **P** **09 20 43.5 +2.0**
XLT pP pP 09 21 27.5 +1.6
XLT sP sP 09 21 50.5 +0.1
XLT S **S** **09 26 05.3 +4.5**
XLT sS sS 09 27 22.8 +3.7
XLT ScS **ScS** **09 30 38.5 +1.5**
XLT pmax pmax
comp=Z,17nm,0.9s
XLT pmax pmax
comp=Z,91nm,4.2s
APE Apeiranthos 35.52 285 ⇓P **P** **09 20 42.0 0.0**
APE Apeiranthos 35.52 285 P **P** **09 20 42.0 0.0**
LVV L'vov 35.64 307 *e*P **P** **09 20 43.1 +0.3**
BOD Bodaibo 35.78 39 *e*P **P** **09 20 44.4 +0.5**
BOD pmax pmax
comp=Z,95nm,1.1s
VSU Vasula 35.79 322*c* *i*P **P** **09 20 43.8 -0.1**
VSU pmax pmax
comp=Z,262nm,0.7s
VSU Vasula 35.79 322 *e*P **P** **09 20 44.2 +0.3**
BMR Baia Mare 35.90 303 ⇓P **P** **09 20 46.4 +1.4**
BJT Baijiatuan 35.98 70 P **P** **09 20 47.2 +1.4**
BJT Baijiatuan 35.98 70 P **P** **09 20 47.2 +1.4**
BJT pmax pmax
comp=Z,13nm,1.0s
BJT Baijiatuan 35.98 70 P **P** **09 20 47.6 +1.8**
BJT ScP **ScP** **09 26 32.1 -1.6**
BJI Beijing 35.98 70 P **P** **09 20 47.3 +1.5**
BJI PcP **PcP** **09 23 07.8 +0.2**
BJI pmax pmax
comp=Z,13nm,0.8s
DEV Deva 36.33 300 ⇓P **P** **09 20 50.5 +1.8**
DRGR 36.44 302 ⇓P **P** **09 20 51.2 +1.5**
IDI Anoyia 36.45 282 P **P** **09 20 50.0 0.0**
comp=Z,6.0nm,0.7s,baz=55,slow=12,SNR=2.6
comp=Z,6.0nm,0.7s
IDI Anoyia 36.45 282 P **P** **09 20 49.5 -0.5**
PABE Paberze 36.47 316 P **P** **09 20 49.9 +0.2**
PABE Paberze 36.47 316 *e*P **P** **09 20 49.9 +0.2**
VSVD Vaisvydziai 36.59 317 *e*P **P** **09 20 51.5 +0.7**
SUW Suwalki 36.65 314 *e*P **P** **09 20 50.9 -0.3**
SUW Suwalki 36.65 314 P **P** **09 20 50.4 -0.9**
SUW IAmb IAmb 09 20 52.0
comp=Z,65nm,1.0s
SUW Suwalki 36.65 314 P **P** **09 20 50.4 -0.9**
SUW pmax pmax
comp=Z,65nm,1.0s
SUW Suwalki 36.65 314 *e*P **P** **09 20 51.2 0.0**
UZH Uzhgorod 36.73 305⇑ *i*P **P** **09 20 52.8 +0.8**
KOLS Kolonicke sedl 36.74 305 *e*P **P** **09 20 53.5 +1.3**
KOLS pmax pmax
comp=Z,19nm,0.8s
KOLS Kolonicke sedl 36.74 305 *e*P **P** **09 20 53.5 +1.3**
WHN Wuhan 37.05 86⇓ *i*P **P** **09 20 56.5 +1.5**
WHN pmax pmax
comp=Z,52nm,1.0s
FIA1 FINESS Array S 37.13 326 P **P** **09 20 55.4 +0.2**
FINES FINESS Array B 37.13 326 P **P** **09 20 55.5 +0.3**
comp=Z,62nm,0.6s,baz=114,slow=9.8,SNR=362
FINES PcP **PcP** **09 23 10.7 +0.1**
comp=Z,8.1nm,0.7s,baz=117,slow=6.6,SNR=3.9
comp=Z,62nm,0.6s
FINES FINESS Array B 37.13 326 P **P** **09 20 55.2 0.0**
SIRR Siria 37.18 301 ⇓P **P** **09 20 57.8 +1.9**
LVZ Lovozero 37.23 339 P **P** **09 20 56.2 +0.1**
LVZ Lovozero 37.23 339*c* *i*P **P** **09 20 56.1 +0.1**
LVZ pmax pmax
comp=Z,121nm,0.7s
LVZ Lovozero 37.23 339 P **P** **09 20 56.6 +0.6**
BZS Buzias 37.25 300 ⇓P **P** **09 20 57.7 +1.3**
CRVS Cervenica-Dubn 37.28 305 *e*P **P** **09 20 58.9 +2.2**
CRVS Cervenica-Dubn 37.28 305 *e*P **P** **09 20 58.9 +2.2**
MTSE Matsula 37.32 321 *e*P **P** **09 20 57.1 +0.2**
BOVS Bovan 37.34 296 ⇓P **P** **09 20 58.0 +0.7**
APA Apatity 37.40 338⇑ *i*P **P** **09 20 56.8 -0.6**
APA *i* *PP **pP** **09 21 40.3 -0.9**
APA pmax pmax
comp=Z,48nm,0.7s
APA MLR MLR
comp=Z,200nm,10.0s
TIA Tai'an 37.52 76 ⇑P **P** **09 21 00.0 +1.2**
TIA pmax pmax
comp=Z,46nm,0.9s
PBUR Paburge 37.70 317 *e*P **P** **09 21 00.3 +0.2**
SLIT Slitere, Latvi 37.84 319 *e*P **P** **09 21 01.0 -0.2**
NIE Niedzica 38.05 306 *e*P **P** **09 21 04.3 +1.2**
OJC Ojcow 38.39 307 *e*P **P** **09 21 05.9 0.0**
OJC Ojcow 38.39 307 P **P** **09 21 05.8 -0.1**
OJC IAmb IAmb 09 21 07.1
comp=Z,28nm,1.1s
OJC Ojcow 38.39 307 P **P** **09 21 05.8 -0.1**
OJC pmax pmax
comp=Z,28nm,1.1s
DIVS Divibare 38.53 297 P **P** **09 21 08.1 +0.9**
SRIT Nakonsritamara 38.55 129 P **P** **09 21 08.8 +1.2**
SRIT IAmb IAmb 09 21 09.3
comp=Z,32nm,0.6s
LANS Liptovska Anna 38.59 305 *e*P **P** **09 21 09.7 +2.0**
LANS Liptovska Anna 38.59 305 *e*P **P** **09 21 09.7 +2.0**
QIZ Qiongzhong 38.85 106 P **P** **09 21 10.3 +0.2**
RAF Rauma 38.96 325 *e*P **P** **09 21 10.4 0.0**
VYHS Vyhne 39.02 304 *e*P **P** **09 21 12.8 +1.6**
VYHS pmax pmax
comp=Z,7.0nm,1.5s
VYHS Vyhne 39.02 304 *e*P **P** **09 21 12.8 +1.6**
MORH Mrgy, Hungar 39.27 301 P **P** **09 21 13.7 +0.5**
KOLL Kolacno 39.31 305 *e*P **P** **09 21 15.1 +1.6**
SRO2 Moca 39.35 303 *e*P **P** **09 21 14.9 +1.1**
SRO2 pmax pmax
comp=Z,35nm,1.2s
SRO2 Moca 39.35 303 *e*P **P** **09 21 14.9 +1.1**
SRO Srobarova 39.40 303 *e*P **P** **09 21 15.8 +1.5**
SRO pmax pmax
comp=Z,22nm,1.0s
SRO Srobarova 39.40 303 *e*P **P** **09 21 15.8 +1.5**
MAUC Maruska 39.66 306 *e*P **P** **09 21 18.1 +1.6**
JAVC Velka Javorina 39.78 305 *e*P **P** **09 21 19.1 +1.6**
MORC Moravsky Berou 39.84 306 ⇓P **P** **09 21 19.0 +1.0**
MORC Moravsky Berou 39.84 306 P **P** **09 21 18.5 +0.5**
MORC Moravsky Berou 39.84 306 P **P** **09 21 18.5 +0.5**
MORC pmax pmax
comp=Z,12nm,0.7s
MORC Moravsky Berou 39.84 306 *e*P **P** **09 21 18.6 +0.5**
MORC *e* 09 26 46.5
MPLH Magyarpolny 39.96 302 P **P** **09 21 19.9 +1.0**
MODS Modra-Piesok 40.06 304 *e*P **P** **09 21 21.0 +1.2**
MODS pmax pmax
comp=Z,14nm,0.9s
MODS Modra-Piesok 40.06 304 *e*P **P** **09 21 21.0 +1.2**
GKP Gorka Klasztor 40.09 312 *e*P **P** **09 21 20.5 +0.6**
GKP Gorka Klasztor 40.09 312 *e*P **P** **09 21 20.1 +0.3**
NJ2 Nanjing 40.13 82 ⇑P **P** **09 21 21.8 +1.3**
NJ2 pmax pmax
comp=Z,32nm,0.9s
KRLC Kraliky 40.33 307 *e*P **P** **09 21 23.0 +1.0**
KRLC Kraliky 40.33 307 *e*P **P** **09 21 23.0 +1.0**
VRAC Vranov 40.47 306 *e*P **P** **09 21 24.0 +0.9**
VRAC *e* 09 26 48.8
KEV Kevo 40.58 339 P **P** **09 21 23.9 +0.3**
KEV Kevo 40.58 339 P **P** **09 21 23.9 +0.3**
KEV pmax pmax
comp=Z,107nm,1.0s
KEV Kevo 40.58 339 ⇑P **P** **09 21 24.2 +0.6**
KRUC Moravsky 40.61 305 *e*P **P** **09 21 25.2 +0.9**
KRUC *e* 09 26 49.3
DPC Dobruska-Polom 40.62 307 *e*P **P** **09 21 25.4 +1.1**
DPC *e* 09 30 23.2
DPC Dobruska-Polom 40.62 307 *e*P **P** **09 21 25.4 +1.1**
DPC *e*SS SS 09 30 23.2 -3.5
KSP Ksiaz 40.63 308 *e*P **P** **09 21 24.8 +0.5**
OSTC Ostas 40.68 308 *e*P **P** **09 21 26.0 +1.2**
RONA Rosalia, Austr 40.76 303 *i* P **P** **09 21 26.1 +0.6**
comp=Z,9.6nm,1.3s
RONA *e*S **ScP** **09 26 49.4 -2.6**
comp=Z,4.5nm,1.3s
CHVC Chvalec 40.78 308 *e*P **P** **09 21 26.6 +0.9**
UPC Upice 40.81 308 *e*P **P** **09 21 27.0 +1.1**
UPC Upice 40.81 308 *e*P **P** **09 21 27.0 +1.1**
ARA0 ARCESS Array S 40.91 338 *e*P **P** **09 21 27.2 +0.8**
ARCES ARCESS Array B 40.91 338 P **P** **09 21 27.1 +0.7**
comp=Z,118nm,0.7s,baz=110,slow=7.6,SNR=481
comp=Z,118nm,0.7s
ARCES ARCESS Array B 40.91 338 P **P** **09 21 27.1 +0.7**
CONA Conrad Observa 41.04 304 *i* P **P** **09 21 28.3 +0.4**
comp=Z,19nm,1.1s,SNR=16
BLEU Blekinge 41.13 316 *i* P **P** **09 21 27.2 -1.1**
KTK1 Kautokeino 41.37 337 *e*P **P** **09 21 30.5 +0.4**
KCSI Kotacane, Aceh 41.49 136 P **P** **09 21 29.7 -2.1**
comp=Z,32nm,0.7s
BSD Bornholm Skovb 41.55 315⇓ *e*P **P** **09 21 29.6 -2.1**
PERS Pernice 41.66 302 *i* P **P** **09 21 33.4 +0.5**
SOKA Soboth 41.72 302 *e*P **P** **09 21 31.3 -2.1**
comp=Z,7.6nm,0.5s,SNR=6.4
SOKA *e*P **PcP** **09 23 25.9 +0.2**
comp=Z,5.5nm,0.9s
KULM Kulim 41.76 131 P **P** **09 21 34.0 0.0**
PRU Pruhonice 41.77 307 *e*P **P** **09 21 34.7 +1.0**
PRU Pruhonice 41.77 307 *e*P **P** **09 21 34.7 +1.0**
CKRC Cesky Krumlov 42.00 305 *e*P **P** **09 21 36.8 +1.2**
CKRC *ex* x 09 30 59.6
HAMF Hammerfest 42.00 339 *e*P **P** **09 21 36.3 +1.0**
OBKA Obir 42.07 302 *e*P **P** **09 21 37.2 +1.0**
comp=Z,15nm,1.7s
BRG Berggiesshubel 42.12 308 *i* P **P** **09 21 37.2 +0.8**
BRG Amp 09 21 38.3
comp=Z,18nm,0.9s
BRG *ex* x 09 22 38.7
BRG Amp 09 22 41.5
comp=Z,4.6nm,0.9s
BRG ⇑SP **ScP** **09 26 55.5 -1.7**

BRG Amp 09 26 56.2
comp=Z,10.0nm,1.2s
BRG Berggiesshubel 42.12 308 *i* P **P** **09 21 37.2 +0.8**
BRG pmax pmax
comp=Z,18nm,0.9s
MOA Molln 42.12 304 *i* P **P** **09 21 36.7 +0.1**
comp=Z,6.9nm,0.8s,SNR=6.7
MOA P **PcP** **09 23 25.7 -1.3**
comp=Z,7.3nm,1.0s
LJU Ljubljana 42.14 301 *eP* **P** **09 21 37.2 +0.5**
CN2 Changchun 42.20 62 *eP* **P** **09 21 37.0 -0.2**
CN2 pmax pmax
comp=Z,10.0nm,1.4s
DEL Delary 42.22 317 *eP* **P** **09 21 37.0 -0.1**
DEL Delary 42.22 317 *i* P **P** **09 21 37.0 -0.1**
CUC Castrocucco 42.29 292 P **P** **09 21 39.1 +1.0**
CRNS Crni Vrh 42.32 301 *eP* **P** **09 21 38.6 +0.4**
GEC2 GERESS Array S 42.40 305 P **P** **09 21 39.1 +0.2**
GERES GERESS Array B 42.40 305 P **P** **09 21 39.6 +0.7**
comp=Z,1.4nm,0.6s,baz=101,slow=6.9,SNR=16
GERES PcP **PcP** **09 23 27.7 -0.2**
comp=Z,3.6nm,0.8s,baz=105,slow=3.2,SNR=8.8
GERES ScP **ScP** **09 26 56.5 -2.1**
comp=Z,1.2nm,0.8s,baz=105,slow=4.6,SNR=6.2
GERES GERESS Array B 42.40 305 P **P** **09 21 38.9 0.0**
KHC Kasperske Hory 42.46 306 P **P** **09 21 39.2 -0.1**
KHC Kasperske Hory 42.46 306 ⇓ *iP* **P** **09 21 39.9 +0.6**
KHC pmax pmax
comp=Z,16nm,1.6s
KHC Kasperske Hory 42.46 306 *eP* **P** **09 21 40.2 +0.9**
JETT Jettan, Norway 42.51 337 *eP* **P** **09 21 39.9 +0.5**
BIOA Bad Ischl, Aus 42.55 304 *eP* **P** **09 21 40.7 +0.7**
comp=Z,4.1nm,0.4s
ZEA Zeya 42.57 47 *eP* **P** **09 21 42.2 +2.2**
ZEA pmax pmax
comp=E,20nm,0.6s
ZEA pmax pmax
comp=N,20nm,0.7s
ZEA pmax pmax
comp=Z,50nm,0.8s
BJUU Bjuv 42.67 316 *i* P **P** **09 21 40.6 -0.2**
MYKA Terra Mystica 42.67 302 *eP* **P** **09 21 41.5 +0.4**
comp=Z,5.7nm,0.9s
CLL Collm 42.69 309 P **P** **09 21 41.5 +0.5**
CLL Collm 42.69 309 P **P** **09 21 41.5 +0.5**
CLL pmax pmax
comp=Z,10.0nm,0.9s
CLL Collm 42.69 309 *i* P **P** **09 21 41.1 +0.1**
comp=Z,10.0nm,1.0s
CLL *e*PP **PcP** **09 23 28.0 -0.7**
comp=Z,23nm,1.8s
CLL *e*SS SS 09 31 24.0 +17
PSI Prapat 42.73 135 P **P** **09 21 42.8 +0.9**
KBA Koelnbreinsper 42.82 303 *eP* **P** **09 21 43.2 +0.8**
comp=Z,4.1nm,0.6s
KBA *i* P **PP** **09 23 27.0 +0.9**
comp=Z,5.2nm,1.0s
BORU Boraas 42.90 318 *i* P **P** **09 21 41.7 -0.9**
TRO Tromso 43.02 336 *eP* **P** **09 21 43.8 +0.4**
CLUD Cludinico 43.22 302 P **P** **09 21 45.9 +0.5**
GSI Gunungsitoli 43.22 138 P **P** **09 21 46.9 +1.2**
GSI Gunungsitoli 43.22 138 P **P** **09 21 47.1 +1.4**
comp=Z,156nm,0.6s
GSI Gunungsitoli 43.22 138 P **P** **09 21 47.2 +1.5**
BNX BinXian 43.27 59 ⇓ **P** **09 21 47.3 +1.5**
BNX pmax pmax
comp=Z,11nm,0.9s
BNX pmax pmax
comp=Z,280nm,4.3s
ONAU Onsala 43.34 318 *i* P **P** **09 21 45.5 -0.7**
ABTA Abfaltersbach 43.43 302 *eP* **P** **09 21 47.9 +0.7**
comp=Z,2.6nm,0.7s
ABTA *eP* **PcP** **09 23 30.3 -1.1**
comp=Z,6.6nm,1.0s
MOR8 Moi Rana 43.51 331 *eP* **P** **09 21 46.9 -0.5**
FAUS Fauske 43.52 333 *eP* **P** **09 21 47.6 +0.2**
STEI Steigen 43.69 333 *eP* **P** **09 21 49.1 +0.4**
NC405 NORSAR Array S 43.76 323 P **P** **09 21 49.5 -0.1**
NC405 IAmb IAmb 09 21 50.5
comp=Z,70nm,0.8s
STRU Stroemstad 43.83 320 *i* P **P** **09 21 49.5 -0.6**
GRFO Grafenberg 43.94 307 P **P** **09 21 52.3 +1.3**
GRFO IAmb IAmb 09 21 53.6
comp=Z,52nm,1.6s
GRFO Grafenberg 43.94 307 P **P** **09 21 52.3 +1.3**
GRFO pmax pmax
comp=Z,52nm,1.6s
WTTA Wattenberg 43.95 303 *eP* **P** **09 21 51.5 0.0**
comp=Z,13nm,1.2s
WTTA *eP* **PcP** **09 23 32.4 -0.9**
comp=Z,3.5nm,0.6s
WTTA *eS* **ScP** **09 27 02.2 -2.8**
comp=Z,6.2nm,0.9s
WATA Walderalm 43.98 303 *eP* **P** **09 21 51.8 +0.2**
comp=Z,8.1nm,1.1s
WATA *eP* **PcP** **09 23 32.3 -1.1**
comp=Z,1.8nm,0.5s
NB2 NORSAR Subarra 44.00 323 P **P** **09 21 50.8 -0.6**
baz=98,slow=7.9
NB2 NORSAR Subarra 44.00 323 P **P** **09 21 50.8 -0.6**
comp=Z,28nm,0.5s,baz=98,slow=7.9
NOA NORSAR Array B 44.00 323 P **P** **09 21 51.6 +0.2**
comp=Z,22nm,0.5s,baz=98,slow=7.7,SNR=198
comp=Z,22nm,0.5s
KONS Konsvik 44.11 331 *eP* **P** **09 21 52.6 +0.5**
CTI Castel Tesino 44.12 301 P **P** **09 21 52.5 -0.2**
CTI Castel Tesino 44.12 301 P **P** **09 21 52.5 -0.2**
CTI pmax pmax
comp=Z,7.0nm,0.7s
NAO01 NORSAR Array S 44.14 323 P **P** **09 21 52.2 -0.3**
NAO01 IAmb IAmb 09 21 53.0
comp=Z,48nm,0.8s
NAO01 NORSAR Array S 44.14 323 *eP* **P** **09 21 51.7 -0.7**
NSS Namsos 44.16 328 *eP* **P** **09 21 52.2 -0.3**
SQTA Sankt Quirin 44.25 303 *eP* **P** **09 21 53.7 0.0**
comp=Z,4.4nm,0.6s
SQTA *eP* **PcP** **09 23 33.6 -0.6**
comp=Z,4.5nm,0.7s
SQTA *eS* **ScP** **09 27 04.0 -2.1**
comp=Z,5.2nm,0.7s
OVD Östervraa, Den 44.27 318 *i* P **P** **09 21 53.4 0.0**
MOTA Moosalm 44.30 303 *eP* **P** **09 21 53.8 -0.3**
comp=Z,6.9nm,0.8s
MOTA *eP* **PcP** **09 23 33.1 -1.4**
comp=Z,5.2nm,0.9s
MOTA *eS* **ScP** **09 27 03.6 -2.8**
comp=Z,5.2nm,0.8s
LOF Lofoten 44.36 333 *eP* **P** **09 21 53.7 -0.4**
YAK Yakutsk 44.37 36 P **P** **09 21 54.4 +0.2**
comp=Z,23nm,0.3s,baz=204,slow=1.3,SNR=29
comp=Z,23nm,0.3s
YAK Yakutsk 44.37 36 P **P** **09 21 54.6 +0.4**
YAK Yakutsk 44.37 36 *c iP* **P** **09 21 54.4 +0.2**
YAK *e*PP **PP** **09 23 43.0 +1.0**
YAK *e*S **S** **09 28 12.8 +0.6**
YAK pmax pmax
comp=Z,122nm,0.9s
YAK Yakutsk 44.37 36 P **P** **09 21 54.5 +0.3**
YAK pP **pP** **09 22 40.6 +0.3**
RETA Reutte 44.51 304 *eS* **ScP** **09 27 04.6 -2.6**
comp=Z,4.5nm,1.4s
FETA Feichten 44.60 303 *eP* **P** **09 21 56.3 -0.2**
comp=Z,2.6nm,0.4s
FETA *eP* **PcP** **09 23 35.3 -0.3**
comp=Z,12nm,1.0s
FETA *eS* **ScP** **09 27 05.2 -2.4**
comp=Z,6.1nm,1.0s
KONO Kongsberg 44.68 321 *eP* **P** **09 21 56.9 +0.1**
KONO Kongsberg 44.68 321 P **P** **09 21 56.9 +0.1**
TBLU Trondheim 44.71 326 *eP* **P** **09 21 56.8 -0.2**
GOET G??ttrup 44.80 317 *i* P **P** **09 21 59.2 +1.5**
HOPEN Hopen 44.86 346 *eP* **P** **09 21 59.9 +2.0**
FUORN Ofenpass-Fuorn 44.98 302 P **P** **09 21 59.0 -0.6**
BJO1 Bjornoya 45.09 343 *eP* **P** **09 22 00.6 +0.9**
DOMB Dombas 45.12 324 *eP* **P** **09 22 00.6 +0.3**
DAVA Damuels 45.13 303 *i* P **P** **09 22 00.4 -0.3**
comp=Z,14nm,0.5s,SNR=8.5
DAVA *eP* **PcP** **09 23 37.0 -0.4**
comp=Z,6.0nm,0.7s
DAVA *eS* **ScP** **09 27 07.7 -2.1**
comp=Z,4.1nm,0.8s
SKAR Skarsla 45.39 322 *eP* **P** **09 22 03.1 +0.7**
TJN Taejon 45.41 72 *c iP* **P** **09 22 02.4 -0.4**
TJN Taejon 45.41 72 P **P** **09 22 03.0 +0.2**
KS19 Wonju Array Si 45.45 71 P **P** **09 22 04.1 +0.9**
KS19 IAmb IAmb 09 22 04.8
comp=Z,27nm,0.6s
KSAR Wonju Array Be 45.49 71 P **P** **09 22 03.3 -0.1**
KSAR Wonju Array Be 45.49 71 P **P** **09 22 03.3 -0.1**
KSRS Korea Array 45.51 71 P **P** **09 22 03.8 +0.2**
comp=Z,21nm,0.5s,baz=273,slow=6.9,SNR=149
KSRS PcP **PcP** **09 23 38.3 -0.3**
comp=Z,4.1nm,0.8s,baz=295,slow=2.7,SNR=6.1
KSRS ScP **ScP** **09 27 09.2 -2.1**
comp=Z,2.7nm,1.1s,baz=256,slow=3.4,SNR=5.9
comp=Z,21nm,0.5s
SEHB SEOHWA 45.52 69 P **P** **09 22 04.5 +0.8**
SEHB IAmb IAmb 09 22 05.6
comp=Z,39nm,0.7s
KLR Kul'dur 45.69 54 P **P** **09 22 05.8 +1.0**
comp=Z,29nm,0.6s,baz=282,slow=8.0,SNR=106
comp=Z,29nm,0.6s
KLR Kul'dur 45.69 54 *d iP* **P** **09 22 04.9 +0.1**
KLR pmax pmax
comp=Z,26nm,0.6s
KSCHJ Chungju 45.73 71 P **P** **09 22 05.2 -0.1**
KSCHJ IAmb IAmb 09 22 06.4
comp=Z,40nm,0.6s
NAWB Namwon 45.73 74 P **P** **09 22 05.1 -0.3**
NAWB IAmb IAmb 09 22 06.1
comp=Z,21nm,0.6s
MOL Molde 45.87 325 *eP* **P** **09 22 06.7 +0.7**
SNART Snartemo 45.88 319 *i* P **P** **09 22 06.0 -0.2**
SNART Snartemo 45.88 319 *eP* **P** **09 22 06.6 +0.5**
LODK Lodwar 45.92 232 P **P** **09 22 08.5 +1.4**
LODK IAmb IAmb 09 22 09.6
comp=Z,37nm,0.8s
LODK Lodwar 45.92 232 P **P** **09 22 08.9 +1.7**
SNR=7.3
BFO Black Forest 46.00 305 P **P** **09 22 07.9 +0.6**
BFO Black Forest 46.00 305 P **P** **09 22 07.9 +0.6**
BFO pmax pmax
comp=Z,5.0nm,0.9s
TIXI Tiksi 46.04 22 P **P** **09 22 07.6 +0.4**
comp=Z,86nm,0.7s,baz=270,slow=20,SNR=242
comp=Z,86nm,0.7s
TIXI Tiksi 46.04 22 P **P** **09 22 07.0 -0.2**
TIXI Tiksi 46.04 22 *c iP* **P** **09 22 07.6 +0.4**
TIXI pmax pmax
comp=Z,111nm,0.8s
TIXI Tiksi 46.04 22 ⇑ P **P** **09 22 07.7 +0.5**
TIXI pP **pP** **09 22 55.3 +1.8**
TIXI PP **PP** **09 23 58.1 -0.1**
AKN Aaknes 46.10 324 *eP* **P** **09 22 08.4 +0.5**
BLS5 Blasjo 46.28 321 *eP* **P** **09 22 10.3 +1.0**
HYA Hoyanger 46.44 323 *eP* **P** **09 22 10.6 +0.1**
MSHR Mys Shultsa 46.54 63 ⇓ *eP* **P** **09 22 13.7 +2.2**
MSHR pmax pmax
comp=Z,32nm,1.7s
USA0B Ussuriysk Arra 46.76 60 P **P** **09 22 13.9 +0.7**
USA0B Ussuriysk Arra 46.76 60 P **P** **09 22 13.9 +0.7**
USA0B pmax pmax
comp=Z,15nm,0.8s
USRK Ussuriysk Ar. 46.76 60 P **P** **09 22 13.8 +0.6**
comp=Z,14nm,0.8s,baz=274,slow=7.1,SNR=38
USRK PcP **PcP** **09 23 42.1 -0.9**
comp=Z,1.7nm,0.5s,baz=335,slow=5.3,SNR=2.4
comp=Z,14nm,0.8s
USRK Ussuriysk Ar. 46.76 60 P **P** **09 22 13.1 -0.1**
BER Bergen 46.85 322 *eP* **P** **09 22 13.4 -0.3**
KMY Karmoy 46.90 320 *eP* **P** **09 22 14.8 +0.7**
ASK Askoy 46.92 322 *eP* **P** **09 22 14.4 +0.2**
VLA Vladivostok 46.93 62 *c iP* **P** **09 22 15.4 +0.8**
VLA pmax pmax
comp=Z,82nm,0.8s
HSPB Hornsund (broa 46.99 345 *eP* **P** **09 22 15.9 +1.4**
HSPB *e*pP **pP** **09 23 01.0 +0.9**
HSPB Hornsund (broa 46.99 345 *eP* **P** **09 22 15.8 +1.3**
FOO Floro 47.00 324 *eP* **P** **09 22 15.1 +0.3**
SENIN Lac Senin/Sane 47.04 303 P **P** **09 22 15.5 -0.1**
BTNL Ternell 47.08 308 *dP* **P** **09 22 15.3 -0.4**
comp=Z,8.2nm,0.8s
MEM Membach 47.16 309 *dP* **P** **09 22 17.0 +0.8**
comp=Z,7.2nm,0.9s
MEM *d*pP **pP** **09 23 01.4 -0.3**
WLF Walferdange 47.21 307 P **P** **09 22 17.3 +0.7**
WLF Walferdange 47.21 307 P **P** **09 22 17.3 +0.7**
WLF pmax pmax
comp=Z,15nm,0.9s
WLF Walferdange 47.21 307 *dP* **P** **09 22 17.7 +1.1**
comp=Z,12nm,1.0s
SPB2 Spitsbergen Ar 47.36 347 P **P** **09 22 18.1 +0.7**
SPA0 Spitsbergen Ar 47.36 347 *eP* **P** **09 22 18.7 +1.3**
SPITS Spitsbergen Ar 47.36 347 P **P** **09 22 18.7 +1.3**
SPITS pmax pmax
comp=Z,91nm,0.8s
LPL La Plagne 47.60 302 *eP* **P** **09 22 19.8 -0.2**
LPL pmax pmax
comp=Z,16nm,1.0s
BCLA Clavier 47.63 308 *dP* **P** **09 22 19.3 -0.5**
RCHB Rochefort 47.72 308 *dP* **P** **09 22 20.9 +0.4**
BMRD Maredsous 47.99 308 *dP* **P** **09 22 23.4 +0.8**
comp=Z,8.5nm,1.1s
DOU Dourbes 48.13 308 *dP* **P** **09 22 24.3 +0.6**
DOU *d*PP **PP** **09 24 17.1 -0.6**
JMJ Miyako jima 2 48.24 88 P **P** **09 22 26.8 +1.9**
SNF Seneffe 48.26 309 *dP* **P** **09 22 25.5 +0.8**
comp=Z,12nm,0.9s
KMBO Kilima Mbogo 48.33 227 P **P** **09 22 27.1 +1.2**
comp=Z,35nm,0.6s,baz=34,slow=11,SNR=83
comp=Z,35nm,0.6s
KMBO Kilima Mbogo 48.33 227 P **P** **09 22 26.9 +1.0**
KMBO IAmb IAmb 09 22 27.9
comp=Z,34nm,0.7s
KMBO Kilima Mbogo 48.33 227 P **P** **09 22 26.9 +1.0**
KMBO pmax pmax
comp=Z,34nm,0.7s
KMBO Kilima Mbogo 48.33 227 *i* P **P** **09 22 27.2 +1.2**
SNR=32
KMBO Kilima Mbogo 48.33 227 P **P** **09 22 27.1 +1.2**
KEST Kesra 48.41 288 P **P** **09 22 26.8 +0.7**
comp=Z,5.6nm,0.8s,baz=261,slow=0.3,SNR=7.4
comp=Z,5.6nm,0.8s
KEST Kesra 48.41 288 P **P** **09 22 26.9 +0.7**
GRNR Gornyy 48.44 51 ⇑ *iP* **P** **09 22 27.3 +1.3**
GRNR pmax pmax
comp=Z,30nm,1.1s
KBS Kingsbay 48.48 347 P **P** **09 22 27.3 +1.3**
KBS Kingsbay 48.48 347 P **P** **09 22 27.3 +1.3**
KBS pmax pmax
comp=Z,130nm,0.8s
KBS Kingsbay 48.48 347 *i* P **P** **09 22 26.2 +0.2**
KBS Kingsbay 48.48 347 *eP* **P** **09 22 27.2 +1.3**
KBS Kingsbay 48.48 347 P **P** **09 22 27.2 +1.3**
KBS pP **pP** **09 23 17.2 +5.3**
KBS sP **sP** **09 23 37.1 +1.8**
DSRI Dabo 48.70 131 P **P** **09 22 29.3 +0.9**
comp=Z,3µmcomp=Z,48nm,0.8s
KIBK Kibwezi 48.86 225 P **P** **09 22 30.6 +0.9**
KIBK IAmb IAmb 09 22 31.8
comp=Z,57nm,0.6s
KIBK Kibwezi 48.86 225 P **P** **09 22 31.1 +1.4**
SNR=6.5
SSB Saint Sauveur 49.16 302 P **P** **09 22 32.0 +0.4**
SSB x x 09 23 25.2
JNU Nakatsue 49.24 75 P **P** **09 22 33.0 +0.6**
comp=Z,45nm,0.7s,baz=330,slow=3.6,SNR=9.2
comp=Z,45nm,0.7s
SSF Saint Saulge 49.44 304 *eP* **P** **09 22 33.5 -0.2**
SSF pmax pmax
comp=Z,35nm,1.7s
JSU Suzuyama 49.52 77 P **P** **09 22 34.8 +0.3**
JSU IAmb IAmb 09 22 36.8
comp=Z,28nm,0.8s
JOW Kunigami 49.73 84 P **P** **09 22 36.5 +0.4**
comp=Z,9.1nm,0.3s,baz=136,slow=15,SNR=12
comp=Z,9.1nm,0.3s
JOW Kunigami 49.73 84 P **P** **09 22 36.6 +0.4**
ELMS Elmsett, Ipswi 50.02 311 *eP* **P** **09 22 38.3 +0.3**
ELMS IAmb IAmb 09 22 38.7
comp=Z,37nm,0.7s
LRW Lerwick 50.10 322 *eP* **P** **09 22 38.3 -0.1**
LRW IAmb IAmb 09 22 39.0
comp=Z,28nm,0.8s
JHS Saijyo 50.28 72 P **P** **09 22 39.4 -0.8**
JHS IAmb IAmb 09 22 41.7
comp=Z,27nm,0.7s
KSM Kuching 50.87 124 P **P** **09 22 45.5 +0.7**
MNAI Manna 50.88 136 P **P** **09 22 47.1 +2.3**
comp=Z,229nm,0.8s
CAF Calviac 50.95 302 *eP* **P** **09 22 45.3 +0.2**
CAF pmax pmax
comp=Z,9.0nm,0.9s
PPBI Pangkal Pinang 50.97 131 P **P** **09 22 45.3 -0.2**
comp=Z,23µmcomp=Z,85nm,0.8s
DRUM Mains of Drumt 51.19 318 *eP* **P** **09 22 46.5 -0.2**
DRUM IAmb IAmb 09 22 47.1
comp=Z,16nm,0.8s
HPK Haverah Park 51.22 314 *eP* **P** **09 22 46.8 -0.1**
HPK IAmb IAmb 09 22 47.5
comp=Z,33nm,0.6s
EDMD Edmundbyers 51.26 315 *eP* **P** **09 22 46.8 -0.3**
EDMD IAmb IAmb 09 22 47.6
comp=Z,25nm,0.7s
LBWR Ladybower, Pea 51.39 313 *eP* **P** **09 22 47.7 -0.4**
ESY Stoneypath 51.43 317 *eP* **P** **09 22 48.2 -0.2**
MLA1 Latheron 51.44 320 *eP* **P** **09 22 48.7 +0.3**
SBUM Sibu 51.45 121 P **P** **09 22 50.2 +1.1**
MCD Coleburn Disti 51.50 319 *eP* **P** **09 22 49.2 +0.3**
EBL Broad Law 51.69 316 *eP* **P** **09 22 50.4 0.0**
BIGH Upper Bighouse 51.70 320 *eP* **P** **09 22 50.3 0.0**
EDI Edinburgh 51.74 317 *eP* **P** **09 22 50.8 +0.1**
LFF La Frestale 51.85 302 *eP* **P** **09 22 52.4 +0.7**
LFF pmax pmax
comp=Z,5.0nm,0.4s
ESK Eskdalemuir 51.87 316 *eP* **P** **09 22 51.4 -0.3**
ESK IAmb IAmb 09 22 52.0
comp=Z,21nm,1.2s
KESW Keswick, Cumbr 51.95 315 *eP* **P** **09 22 52.1 -0.2**
MBAR Mbarara 51.96 234 P **P** **09 22 53.6 +0.6**
comp=Z,24nm,0.7s,baz=27,slow=10,SNR=15
comp=Z,24nm,0.7s
MBAR Mbarara 51.96 234 P **P** **09 22 53.0 -0.1**
MBAR IAmb IAmb 09 22 54.5
comp=Z,24nm,0.6s
MBAR Mbarara 51.96 234 P **P** **09 22 53.0 -0.1**
MBAR pmax pmax
comp=Z,25nm,0.6s
MBAR Mbarara 51.96 234 P **P** **09 22 53.5 +0.4**
LWLI Liwa 52.04 135 P **P** **09 22 51.4 -2.1**
comp=Z,79nm,0.5s
INVG Invergeldie, C 52.12 317 *eP* **P** **09 22 52.8 -0.8**
TYV Tymovskoe 52.29 50 *eP* **P** **09 22 56.3 +1.5**
TYV pmax pmax
comp=Z,22nm,0.6s
TYV pmax pmax
comp=Z,200nm,3.2s
EAB Aberfoyle 52.33 317 *eP* **P** **09 22 55.1 +0.1**
TPI Tanjungpandan 52.37 130 P **P** **09 22 55.7 -0.1**
comp=Z,413nmcomp=Z,27nm,0.9s
MONM Monmouth 52.37 311 *eP* **P** **09 22 55.1 -0.3**
MCH1 Michaelchurch 52.45 312 *eP* **P** **09 22 55.3 -0.6**
MCH1 IAmb IAmb 09 22 56.3
comp=Z,28nm,0.8s
NEWG New Galloway 52.48 316 *eP* **P** **09 22 56.3 +0.2**
NEWG IAmb IAmb 09 22 56.9
comp=Z,22nm,0.7s
PGBU Glenifferbraes 52.48 317 *eP* **P** **09 22 56.3 +0.1**
PGBU IAmb IAmb 09 22 56.7
comp=Z,23nm,1.0s
KAC Achnashellach 52.60 319 *eP* **P** **09 22 57.0 0.0**
STKI Sintang 52.69 124 P **P** **09 22 59.4 +1.2**
KPL Plockton 52.82 319 *eP* **P** **09 22 58.4 -0.1**
KPL IAmb IAmb 09 22 59.4
comp=Z,17nm,0.8s
IOMK Kirk Michael 52.86 315 *eP* **P** **09 22 59.1 +0.2**
IOMK IAmb IAmb 09 22 59.2
comp=Z,44nm,0.9s
LAWE Loch Awe, Argy 52.90 317 *eP* **P** **09 22 59.2 0.0**
LAWE IAmb IAmb 09 22 59.9
comp=Z,16nm,0.7s
WLF1 Llynfaes 52.98 314 *eP* **P** **09 22 60.0 +0.2**
WLF1 IAmb IAmb 09 23 03.3
comp=Z,65nm,1.2s
YRC Rhoscolyn 53.09 314 *eP* **P** **09 23 00.6 0.0**
INU Inuyama 53.12 70 P **P** **09 23 01.5 +0.3**
INU IAmb IAmb 09 23 03.9
comp=Z,18nm,0.8s
INU Inuyama 53.12 70 P **P** **09 23 01.4 +0.3**
YSS Yuzh-Sakhalins 53.38 55 P **P** **09 23 03.5 +0.7**
YSS Yuzh-Sakhalins 53.38 55 *eP* **P** **09 23 03.1 +0.3**
YSS *eS* **S** **09 30 17.4 -0.8**
YSS pmax pmax
comp=Z,100nm,4.1s
YSS MLR MLR
comp=Z,300nm,14.0s
YSS Yuzh-Sakhalins 53.38 55 P **P** **09 23 04.2 +1.4**
YSS Yuzh-Sakhalins 53.38 55 P **P** **09 23 03.8 +0.9**
RSBS Rosebush, Pemb 53.51 312 *eP* **P** **09 23 03.4 -0.3**
RSBS IAmb IAmb 09 23 04.2
comp=Z,72nm,1.7s
MJB9 Matsu-Tunnel 53.57 68 P **P** **09 23 04.6 +0.1**
MJB9 IAmb IAmb 09 23 05.6
comp=Z,30nm,0.7s
MAJO Matsushiro 53.58 68 P **P** **09 23 04.5 0.0**
MAJO IAmb IAmb 09 23 05.6
comp=Z,32nm,0.8s
MAJO Matsushiro 53.58 68 P **P** **09 23 04.5 0.0**
MAJO pmax pmax
comp=Z,31nm,0.8s
MAJO Matsushiro 53.58 68 P **P** **09 23 04.4 -0.1**
MJAR Matsushiro Arr 53.58 68 P **P** **09 23 04.0 -0.5**
comp=Z,17nm,0.8s,baz=293,slow=8.9,SNR=25
comp=Z,17nm,0.8s
MJAR Matsushiro Arr 53.58 68 P **P** **09 23 03.9 -0.6**
MJAR Matsushiro Arr 53.58 68 P **P** **09 23 03.9 -0.6**
MJAR pmax pmax
comp=Z,7.0nm,0.8s
HTL Hartland 53.59 311 *eP* **P** **09 23 04.1 -0.2**
HTL IAmb IAmb 09 23 05.3
comp=Z,19nm,0.8s
NOR Nord 53.70 350 *i* P **P** **09 23 03.8 -0.9**
NOR IAmb IAmb 09 23 05.6
comp=Z,11nm,0.7s
ILTH Belurgan, Co L 53.92 315 *eP* **P** **09 23 05.6 -1.0**
MYLDM Lahad Datu 54.07 113 P **P** **09 23 09.9 +1.7**
MYLDM IAmb IAmb 09 23 28.4
comp=Z,32nm,1.0s
IDGL Inch Island, C 54.33 316 *eP* **P** **09 23 09.9 +0.4**
DAG Danmarks Havn 54.56 344 *i* P **P** **09 23 10.2 -0.7**
DAG IAmb IAmb 09 23 12.1
comp=Z,43nm,0.7s
MA2 Magadan 54.79 38 P **P** **09 23 13.2 +0.5**
comp=Z,5.2nm,0.3s,baz=293,slow=7.3,SNR=11
comp=Z,5.2nm,0.3s
MA2 Magadan 54.79 38 P **P** **09 23 13.5 +0.7**
MA2 IAmb IAmb 09 23 14.5
comp=Z,113nm,1.9s
MA2 Magadan 54.79 38 P **P** **09 23 14.0 +1.2**
MA2 Magadan 54.79 38 P **P** **09 23 13.3 +0.5**
SEY Seymchan 54.80 34 P **P** **09 23 13.9 +1.1**
comp=Z,20nm,0.8s,baz=274,slow=7.7,SNR=58
comp=Z,20nm,0.8s
SEY Seymchan 54.80 34 *c iP* **P** **09 23 13.9 +1.1**
SEY pmax pmax
comp=Z,29nm,0.9s
JMM Marumori 55.00 66 P **P** **09 23 15.0 +0.3**
JYT Yasato 55.18 68 P **P** **09 23 15.7 -0.3**
ERM Erimo 55.21 60 P **P** **09 23 17.8 +1.7**
DBG Daneborg 55.38 341 *i* P **P** **09 23 16.9 +0.1**
ESDC Sonseca Array 56.88 298 P **P** **09 23 28.3 +0.2**
comp=Z,2.2nm,0.6s,baz=56,slow=7.5,SNR=17
ESDC ScP **ScP** **09 27 58.4 -2.0**
comp=Z,1.2nm,0.9s,baz=60,slow=3.4,SNR=5.0
comp=Z,2.2nm,0.6s
ESDC Sonseca Array 56.88 298 P **P** **09 23 27.8 -0.2**
KUR Kuril'sk 57.30 55 ⇑ *eP* **P** **09 23 31.1 +0.3**
KUR pmax pmax
comp=Z,30nm,0.9s
BBKI Banjar Baru 57.54 124 P **P** **09 23 33.3 +0.4**
comp=Z,62nm,0.7s
UGM Wanagama 58.16 131 P **P** **09 23 38.7 +1.5**
MPSI Mapaga 58.36 116 P **P** **09 23 39.9 +1.3**
comp=Z,1µmcomp=Z,25nm,0.4s
TOLI2 Tolitoli 58.48 115 P **P** **09 23 40.1 +0.7**
OPO Ambohidratompo 58.91 206 P **P** **09 23 43.5 +1.1**
comp=Z,24nm,0.7s,baz=26,slow=6.8,SNR=23
comp=Z,24nm,0.7s
BILL Bilibino 58.91 26 *d iP* **P** **09 23 42.7 +1.0**
BILL *i* *PP **pP** **09 24 31.5 +1.5**
BILL *i* 09 24 31.8
BILL *i* 09 25 53.8
BILL pmax pmax
comp=Z,45nm,1.1s
BILL Bilibino 58.91 26 P **P** **09 23 42.7 +1.0**

ABPO Ambohimpanom 59.31 205 P P 09 23 45.7 +0.6
ABPO IAmb IAmb 09 23 47.0
comp=Z,34nm,0.7s
ABPO Ambohimpanom 59.31 205 P P 09 23 45.7 +0.6
ABPO pmax pmax
comp=Z,34nm,0.7s
ABPO Ambohimpanom 59.31 205 P P 09 23 46.0 +0.9
MRSI Marisa 59.76 115 P P 09 23 48.9 +0.7
comp=Z,900nmcomp=Z,47nm,0.5s
PETK Petropavlovsk- 60.44 44 P P 09 23 51.9 -0.4
comp=Z,6.9nm,0.6s,baz=267,slow=2.8,SNR=12
comp=Z,6.9nm,0.6s
PETK Petropavlovsk- 60.44 44 P P 09 23 52.0 -0.3
PETK Petropavlovsk- 60.44 44 P P 09 23 52.0 -0.3
APSI Ampana 60.49 116 P P 09 23 53.4 +0.3
comp=Z,42nm,0.7s
TTSI Tana Toraja 60.66 119 P P 09 23 54.1 -0.2
comp=Z,1µmcomp=Z,25nm,0.6s
SUMG Summit 60.86 341 P P 09 23 55.9 +0.6
SUMG IAmb IAmb 09 23 57.5
comp=Z,39nm,0.9s
SUMG Summit 60.86 341 P P 09 23 55.9 +0.6
SUMG pmax pmax
comp=Z,39nm,0.9s
SUMG Summit 60.86 341 *i* P P 09 23 55.6 +0.3
SUMG IAmb IAmb 09 23 57.0
comp=Z,18nm,0.7s
PET Petropavlovsk 61.01 44 ⇓ *e* P P 09 23 54.8 -1.3
PET pmax pmax
comp=Z,54nm,1.3s
SPSI Sidrap Palu 61.28 120 P P 09 23 57.9 -0.5
comp=Z,15nm,1.0s
BNSI Bone 61.82 120 P P 09 24 01.1 -1.0
comp=Z,14nm,0.5s
KAPI Kappang 62.01 121 P P 09 24 04.0 +0.7
VOI Vohitsoka 62.13 205 P P 09 24 04.6 +0.5
VOI Vohitsoka 62.13 205 P P 09 24 05.2 +1.2
BKSI Bulukumba 62.49 121 P P 09 24 05.4 -1.1
comp=Z,21nm,0.6s
ICESG Greenland Ices 62.98 338 *i* P P 09 24 09.4 +0.1
ICESG IAmb IAmb 09 24 11.7
comp=Z,11nm,0.9s
BSSI Bau Bau, Buton 63.33 121 P P 09 24 12.7 +0.7
comp=Z,20nm,0.4s
PLAI Plampang 63.46 125 P P 09 24 12.2 -0.6
SANI Sanana 64.43 114 P P 09 24 18.9 -0.3
comp=Z,30nm,0.6s
SANI Sanana 64.43 114 P P 09 24 19.1 -0.1
FOMA Nahampoana Res 64.93 203 P P 09 24 23.3 +1.2
FOMA Nahampoana Res 64.93 203 P P 09 24 23.2 +1.1
FOMA pP **pP 09 25 08.1 -3.6**
FOMA sP **sP 09 25 29.0 -5.7**
LSZ Lusaka 64.97 225 P P 09 24 22.8 +0.1
TOA0 Torodi Ar. Sit 65.06 268 P P 09 24 22.4 -0.9
TOA0 IAmb IAmb 09 24 24.9
comp=Z,10.0nm,0.6s
TORD Torodi Ar. Bea 65.06 268 P P 09 24 22.6 -0.7
comp=Z,8.5nm,0.5s,baz=48,slow=5.4,SNR=85
comp=Z,8.5nm,0.5s
TORD Torodi Ar. Bea 65.06 268 P P 09 24 22.4 -0.9
WBSI Waikabubak, Su 65.12 125 P P 09 24 22.3 -1.4
comp=Z,119nm,0.9s
DY2G Dye2 66.54 337 *i* P P 09 24 32.1 -0.2
DY2G IAmb IAmb 09 24 34.2
comp=Z,24nm,0.5s
A21K Barrow 67.50 15 P P 09 24 38.5 +0.6
baz=321
SWI Sorong 67.61 109 P P 09 24 39.5 0.0
comp=Z,1µmcomp=Z,20nm,1.0s
BATI Baumata 68.42 122 P P 09 24 45.1 +0.6
comp=Z,45nm,0.5s
SOEI Soe 68.51 121 P P 09 24 44.5 -0.7
BLWY Bulawayo 68.66 222 ⇓ *i* P P 09 24 45.5 -0.5
BLWY IAmb IAmb 09 24 46.2
comp=Z,65nm,0.8s
TNA Tin City 68.83 22 P P 09 24 46.8 +0.6
baz=313
MATP Matopo 68.95 222 ⇓ *i* P P 09 24 47.6 -0.1
FAKI Fak Fak 69.69 110 P P 09 24 52.3 -0.1
C23K Itkillik River 69.90 14 P P 09 24 53.9 +1.2
baz=326,SNR=55
MOPA Mopani 70.01 218 ⇓ *i* P P 09 24 54.0 0.0
MOPA IAmb IAmb 09 24 54.5
comp=Z,20nm,0.5s
ANM Nome 70.30 22 P P 09 24 56.1 +0.8
ANM IAmb IAmb 09 24 57.5
comp=Z,19nm,0.8s
ANM Nome 70.30 22 P P 09 24 56.1 +0.8
ANM pmax pmax
comp=Z,19nm,0.8s
ANM Nome 70.30 22 P P 09 24 56.4 +1.1
baz=315
C24K Franklin Bluff 70.36 13 P P 09 24 56.8 +1.2
baz=328
D23K Nanushuk River 70.61 14 P P 09 24 58.0 +0.9
baz=326,SNR=31
D24K Happy Valley 70.82 14 P P 09 24 59.3 +0.9
baz=328,SNR=14
TOLK Toolik Lake Re 71.11 14 P P 09 25 00.8 +0.6
TOLK Toolik Lake Re 71.11 14 P P 09 25 01.1 +1.0
baz=327,SNR=54
A36M Sachs Harbour 71.28 5 P P 09 25 02.0 +0.9
A36M Sachs Harbour 71.28 5 P P 09 25 01.9 +0.9
baz=347
CNG Changalane 71.97 216 *e* P P 09 25 05.9 +0.2
CNG IAmb IAmb 09 25 08.1
comp=Z,3.9nm,0.9s
COLD Coldfoot 72.17 15 P P 09 25 07.4 +1.1
COLD IAmb IAmb 09 25 08.1
comp=Z,31nm,0.8s
COLD Coldfoot 72.17 15 P P 09 25 07.5 +1.1
baz=327,SNR=10
MAGG Maguga Dam 72.23 216 *e* P P 09 25 07.5 +0.2
MAGG IAmb IAmb 09 25 08.0
comp=Z,30nm,1.3s
IMAR Indian Mountai 72.39 17 P P 09 25 07.5 -0.2
GCSA Galena City Sc 72.59 19 P P 09 25 09.9 +1.0
baz=322,SNR=7.0
CRLN Carolina, Mapu 72.76 217 *e* P P 09 25 11.2 +0.5
CRLN IAmb IAmb 09 25 11.3
comp=Z,9.1nm,0.6s
H21K Melozitna Rive 72.88 17 P P 09 25 10.9 +0.2
H21K IAmb IAmb 09 25 12.2
comp=Z,26nm,1.0s
H21K Melozitna Rive 72.88 17 P P 09 25 11.2 +0.5
baz=325,SNR=30
H22K Ishtalitna Cre 73.02 17 P P 09 25 12.3 +0.8
baz=326
POGA Pongola 73.09 215 ⇓ *i* P P 09 25 12.5 +0.2
POGA IAmb IAmb 09 25 13.0
comp=Z,24nm,0.6s
BMAR Burnt Mountain 73.11 13 P P 09 25 12.9 +0.9
SLR Silverton 73.41 219 *e* P P 09 25 15.5 +1.1
SLR IAmb IAmb 09 25 16.1
comp=Z,5.5nm,0.6s
I21K Tanana 73.47 17 P P 09 25 14.6 +0.5
I21K IAmb IAmb 09 25 15.7
comp=Z,18nm,1.0s
I21K Tanana 73.47 17 P P 09 25 14.8 +0.7
baz=326,SNR=16
H23K Yukon River 73.49 16 P P 09 25 15.2 +0.9
H23K IAmb IAmb 09 25 16.4
comp=Z,22nm,0.8s
H23K Yukon River 73.49 16 P P 09 25 15.5 +1.3
baz=328,SNR=38
J20K Nowinta River 73.76 19 P P 09 25 16.7 +0.9
baz=324,SNR=26
H24K Noodor Dome 73.84 15 P P 09 25 17.5 +1.1
baz=329,SNR=24
HRAO HartRAO 73.84 219 ⇓ *i* P P 09 25 17.3 +0.3
HRAO IAmb IAmb 09 25 17.8
comp=Z,27nm,0.7s
MLY Manley 73.89 17 P P 09 25 17.3 +0.6
baz=327,SNR=26
C36M Paulatuk 73.96 5 P P 09 25 16.7 -0.1
C36M Paulatuk 73.96 5 P P 09 25 16.8 0.0
baz=348
MBWA Marble Bar 74.00 132 P P 09 25 19.8 +2.0
INK Inuvik 74.03 9 P P 09 25 17.8 +0.6
comp=Z,30nm,0.5s,baz=348,slow=6.2,SNR=121
comp=Z,30nm,0.5s
INK Inuvik 74.03 9 P P 09 25 17.7 +0.5
INK Inuvik 74.03 9 P P 09 25 17.7 +0.5
INK pmax pmax
comp=Z,43nm,0.7s
INK Inuvik 74.03 9 P P 09 25 18.2 +1.0
baz=340
DBIC Dimbokro 74.03 266 *e* P P 09 25 17.5 -0.7
DBIC IAmb IAmb 09 25 18.3
comp=Z,4.8nm,0.6s
DBIC Dimbokro 74.03 266 P P 09 25 17.8 -0.4
comp=Z,5.1nm,0.6s,baz=48,slow=6.2,SNR=13
comp=Z,5.1nm,0.6s
SMPI Sami 74.08 105 P P 09 25 19.0 +0.6
comp=Z,16nm,0.6s
I23K Minto, Yukon-K 74.11 16 P P 09 25 18.8 +1.0
baz=328,SNR=29
KIC Kosan Boka 74.12 266 ⇑ *e* P P 09 25 17.5 -1.2
comp=Z,16nm,0.5s
TIC Toumodi 74.18 267 ⇑ *e* P P 09 25 18.0 -1.1
comp=Z,1.5nm,0.2s
KSR Koster 74.22 220 *e* P P 09 25 19.6 +0.4
KSR IAmb IAmb 09 25 23.5
comp=Z,21nm,1.6s
LBTB Lobatse 74.22 221 ⇓ *i* P P 09 25 19.4 +0.3
LBTB IAmb IAmb 09 25 20.2
comp=Z,27nm,0.7s
LBTB Lobatse 74.22 221 P P 09 25 19.0 -0.1
LBTB IAmb IAmb 09 25 20.4
comp=Z,28nm,0.7s
LBTB Lobatse 74.22 221 P P 09 25 19.0 -0.1
LBTB pmax pmax
comp=Z,28nm,0.7s
TTA Tatalina 74.27 20 P P 09 25 19.4 +0.5
TTA Tatalina 74.27 20 P P 09 25 19.4 +0.5
TTA pmax pmax
comp=Z,15nm,1.2s
TTA Tatalina 74.27 20 P P 09 25 19.6 +0.8
baz=323,SNR=8.7
NWCL Newcastle 74.28 217 *e* P P 09 25 19.4 0.0
NWCL IAmb IAmb 09 25 20.0
comp=Z,14nm,0.7s
TSUM Tsumeb 74.39 231 *e* P P 09 25 19.4 -0.8
TSUM IAmb IAmb 09 25 23.2
comp=Z,182nm,1.4s
TSUM Tsumeb 74.39 231 P P 09 25 20.3 +0.2
LIC Lamto 74.43 266 ⇑ *i* P P 09 25 20.3 -0.2
comp=Z,5.3nm,0.6s
K20K Telida 74.45 19 P P 09 25 20.5 +0.7
K20K IAmb IAmb 09 25 21.6
comp=Z,42nm,1.1s
K20K Telida 74.45 19 P P 09 25 20.8 +0.9
baz=324,SNR=29
CHUM Lake Minchumin 74.47 18 P P 09 25 20.7 +0.9
baz=326,SNR=23
POKR Poker Plat Res 74.56 16 P P 09 25 20.9 +0.5
POKR IAmb IAmb 09 25 22.3
comp=Z,35nm,0.8s
POKR Poker Plat Res 74.56 16 P P 09 25 21.5 +1.1
baz=329,SNR=10
BPAW Bear Paw Mtn. 74.61 17 P P 09 25 20.1 -0.7
BPAW IAmb IAmb 09 25 21.8
comp=Z,26nm,1.1s
BPAW Bear Paw Mtn. 74.61 17 P P 09 25 20.9 +0.2
baz=327,SNR=20
NEA2 Nenana 74.65 16 P P 09 25 21.4 +0.5
baz=328,SNR=23
TCOL CIGO, UAF Yank 74.68 16 P P 09 25 21.5 +0.4
TCOL CIGO, UAF Yank 74.68 16 P P 09 25 21.8 +0.8
baz=329,SNR=16
COLA College 74.68 16 P P 09 25 21.5 +0.5
COLA College 74.68 16 P P 09 25 21.5 +0.5
COLA pmax pmax
comp=Z,40nm,0.8s
CAST Castle Rocks 74.91 18 P P 09 25 23.3 +0.9
CAST Castle Rocks 74.91 18 P P 09 25 23.5 +1.1
baz=326,SNR=7.3
IL31 74.98 16 P P 09 25 22.6 -0.1
IL31 IAmb IAmb 09 25 23.5
comp=Z,23nm,1.1s
ILAR Eielson Array 74.98 16 P P 09 25 22.5 -0.3
comp=Z,12nm,0.9s,baz=318,slow=4.3,SNR=92
ILAR PP **PP 09 28 10.1 -2.7**
comp=Z,4.8nm,1.0s,baz=320,slow=6.3,SNR=7.4
comp=Z,12nm,0.9s
ILAR Eielson Array 74.98 16 P P 09 25 22.1 -0.7
KTH Kantishna Hill 75.09 18 P P 09 25 23.2 -0.3
KTH IAmb IAmb 09 25 24.7
comp=Z,46nm,1.2s
L19K White Mountain 75.19 20 P P 09 25 24.0 -0.1
L19K IAmb IAmb 09 25 26.0
comp=Z,22nm,1.2s
L19K White Mountain 75.19 20 P P 09 25 25.0 +0.9
baz=324,SNR=9.7
L20K Farewell, AK 75.22 20 P P 09 25 25.0 +0.7
baz=325,SNR=14
I26K Coal Creek Min 75.27 14 P P 09 25 25.4 +0.9
I26K IAmb IAmb 09 25 26.1
comp=Z,19nm,0.8s
I26K Coal Creek Min 75.27 14 P P 09 25 25.3 +0.9
baz=333
HDA Harding Lake 75.28 16 P P 09 25 24.1 -0.4
baz=330,SNR=9.1
PPLA Purkeypile 75.32 19 P P 09 25 25.2 +0.3
baz=326,SNR=7.2
TRF Thorofare Moun 75.33 18 P P 09 25 25.9 +0.9
baz=327
N16K Nishlik Lake 75.40 23 P P 09 25 27.1 +1.8
baz=321,SNR=9.8
ATKA Atka Island 75.40 35 P P 09 25 26.1 +0.7
EPYK Eagle Plains 75.40 11 P P 09 25 25.7 +0.4
EPYK IAmb IAmb 09 25 26.4
comp=Z,18nm,0.8s
EPYK Eagle Plains 75.40 11 P P 09 25 25.6 +0.4
baz=338
MCK McKinley 75.41 17 P P 09 25 25.4 +0.1
MCK IAmb IAmb 09 25 26.3
comp=Z,14nm,0.6s
MCK McKinley 75.41 17 P P 09 25 25.4 +0.1
MCK pmax pmax
comp=Z,14nm,0.6s
MCK McKinley 75.41 17 P P 09 25 25.8 +0.4
baz=328,SNR=8.2
J25K Salcha River, 75.44 15 P P 09 25 25.5 0.0
baz=331,SNR=24
M19K Big River Lodg 75.55 20 P P 09 25 27.0 +0.9
baz=324,SNR=5.9
SNKL Senekal, Frees 75.76 218 *e* P P 09 25 28.1 +0.2
SNKL IAmb IAmb 09 25 28.6
comp=Z,21nm,0.6s
KNRA Kununurra 75.78 122 P P 09 25 27.6 -0.4
SVW2 Sparrevohn 75.86 21 P P 09 25 28.1 +0.2
J26L Joseph Creek 75.90 14 P P 09 25 28.2 +0.1
J26L IAmb IAmb 09 25 29.5
comp=Z,25nm,0.9s
J26L Joseph Creek 75.90 14 P P 09 25 28.7 +0.5
baz=333,SNR=35
M20K Styx River 75.91 20 P P 09 25 28.7 +0.5
baz=325
K24K Donnelly Dome 76.06 16 P P 09 25 28.9 -0.1
baz=331,SNR=29
I29M Ogilvie Camp, 76.09 12 P P 09 25 29.4 +0.3
I29M IAmb IAmb 09 25 30.3
comp=Z,28nm,0.9s
I29M Ogilvie Camp, 76.09 12 P P 09 25 29.5 +0.4
baz=337
N18K Kiana Creek 76.11 21 P P 09 25 29.9 +0.6
baz=323
SWZ Schweizer 76.11 220 *e* P P 09 25 29.9 0.0
SWZ IAmb IAmb 09 25 30.1
comp=Z,20nm,0.8s
CUT Chulitna 76.22 18 P P 09 25 29.6 -0.2
baz=328
SKT Skwentna 76.25 19 P P 09 25 30.0 -0.1
SKT IAmb IAmb 09 25 30.6
comp=Z,31nm,1.0s
SKT Skwentna 76.25 19 P P 09 25 29.8 -0.3
baz=327
WAT1 Susitna Watana 76.28 17 P P 09 25 29.6 -0.6
baz=329
SCRK Sand Creek 76.28 15 P P 09 25 30.6 +0.2
SCRK IAmb IAmb 09 25 31.8
comp=Z,17nm,0.8s
SCRK Sand Creek 76.28 15 P P 09 25 30.8 +0.4
baz=332,SNR=30
O16K Kokwok River B 76.30 23 P P 09 25 31.9 +1.5
baz=322,SNR=13
RIDG Independent Ri 76.32 15 P P 09 25 30.3 -0.1
baz=332,SNR=14
DHY Denali Highway 76.34 17 P P 09 25 30.6 -0.2
DHY IAmb IAmb 09 25 32.0
comp=Z,22nm,0.8s
DHY Denali Highway 76.34 17 P P 09 25 30.4 -0.3
baz=330,SNR=25
N19K Bonanza Creek 76.41 21 P P 09 25 32.1 +1.0
N19K IAmb IAmb 09 25 32.9
comp=Z,42nm,1.6s
N19K Bonanza Creek 76.41 21 P P 09 25 31.5 +0.4
baz=324,SNR=8.4
O17K Koliganek Bris 76.47 22 P P 09 25 32.3 +1.0
baz=323
DOT Dot Lake 76.56 15 P P 09 25 31.9 0.0
DOT IAmb IAmb 09 25 32.9
comp=Z,14nm,0.9s
K27K Chicken 76.62 14 P P 09 25 32.6 +0.5
K27K IAmb IAmb 09 25 34.1
comp=Z,30nm,1.0s
K27K Chicken 76.62 14 P P 09 25 33.2 +1.1
baz=334
WAT6 Susitna Watana 76.68 17 P P 09 25 32.3 -0.4
baz=330,SNR=13
P16K Nushagak River 76.78 23 P P 09 25 34.0 +0.9
baz=322
M22K Willow 76.81 18 P P 09 25 32.9 -0.3
baz=328
PAX Paxson 76.86 16 P P 09 25 33.8 +0.2
baz=331,SNR=20
SUA Susitna One 76.89 19 P P 09 25 33.8 0.0
SUA IAmb IAmb 09 25 34.4
comp=Z,24nm,1.1s
SUA Susitna One 76.89 19 P P 09 25 33.7 -0.1
baz=327
O19K Port Alsworth 76.96 21 P P 09 25 34.8 +0.8
baz=325
KSTD Kokstad 76.97 215 *e* P P 09 25 35.2 +0.6
KSTD IAmb IAmb 09 25 35.4
comp=Z,36nm,0.9s
O18K Koktuh Hills 76.98 22 P P 09 25 35.1 +0.9
baz=324,SNR=9.4
DAWY Dawson 77.09 13 P P 09 25 34.8 0.0
DAWY IAmb IAmb 09 25 36.2
comp=Z,29nm,1.1s
DAWY Dawson 77.09 13 P P 09 25 35.2 +0.4
baz=336,SNR=29
P17K Kvichak River 77.14 23 P P 09 25 36.6 +1.6
baz=323,SNR=18
PMR Palmer 77.19 18 P P 09 25 35.3 +0.1
baz=328,SNR=7.0
SML Sawmill 77.21 18 P P 09 25 35.8 +0.3
baz=329,SNR=13
L26K Log Cabin Wild 77.27 15 P P 09 25 36.4 +0.6
baz=333,SNR=12
BOSA Boshof 77.31 220 ⇓ *i* P P 09 25 36.4 -0.1
BOSA IAmb IAmb 09 25 37.0
comp=Z,16nm,0.9s
BOSA Boshof 77.31 220 P P 09 25 36.4 -0.1
comp=Z,7.8nm,0.5s,baz=27,slow=4.3,SNR=36
comp=Z,7.8nm,0.5s
P18K Big Mountain, 77.35 22 P P 09 25 37.0 +0.8
P18K IAmb IAmb 09 25 37.6
comp=Z,19nm,0.8s
P18K Big Mountain, 77.35 22 P P 09 25 36.9 +0.7
baz=324,SNR=12
M23K Glacier View 77.36 17 P P 09 25 36.5 +0.2
baz=330,SNR=12
SCM Sheep Creek Mo 77.43 17 P P 09 25 37.2 +0.5
SCM IAmb IAmb 09 25 37.7
comp=Z,22nm,0.8s
SCM Sheep Creek Mo 77.43 17 P P 09 25 37.2 +0.5
SCM pmax pmax
comp=Z,21nm,0.8s
SCM Sheep Creek Mo 77.43 17 P P 09 25 36.7 -0.1
baz=330,SNR=8.6
HARP HAARP 77.43 16 P P 09 25 37.8 +1.1
baz=332,SNR=16
M24K Tolsona, Glenn 77.46 17 P P 09 25 37.5 +0.6
M24K Tolsona, Glenn 77.46 17 P P 09 25 38.2 +1.3
baz=331,SNR=14
RC01 Rabbit Creek A 77.47 19 P P 09 25 35.5 -1.3
RC01 IAmb IAmb 09 25 37.5
comp=Z,21nm,0.7s
RC01 Rabbit Creek A 77.47 19 P P 09 25 36.6 -0.2
baz=328
Q16K King Salmon 77.48 23 P P 09 25 38.2 +1.3
baz=323,SNR=10
KNK Knik Glacier 77.51 18 P P 09 25 37.7 +0.5
baz=329,SNR=6.4
L27K Beaver Creek, 77.54 14 P P 09 25 37.9 +0.6
L27K IAmb IAmb 09 25 39.2
comp=Z,18nm,0.9s
L27K Beaver Creek, 77.54 14 P P 09 25 38.2 +0.9
baz=334,SNR=20
BCAR Beaver Creek A 77.55 14 P P 09 25 37.5 +0.2
M26K Nabesna, AK 77.90 15 P P 09 25 40.1 +0.8
baz=333,SNR=5.8
Q18K Katmai Hardscr 78.02 22 P P 09 25 39.2 -0.8
baz=324
KLU Klutina 78.06 17 P P 09 25 40.6 +0.4
KLU IAmb IAmb 09 25 41.8
comp=Z,27nm,1.0s
KLU Klutina 78.06 17 P P 09 25 41.1 +0.9
baz=331,SNR=8.3
MORW Morawa 78.16 140 P P 09 25 41.4 +0.4
MORW IAmb IAmb 09 25 43.0
comp=Z,19nm,0.6s
M27K Edge Creek, AK 78.17 15 P P 09 25 41.8 +0.9
M27K IAmb IAmb 09 25 42.9
comp=Z,46nm,1.1s
M27K Edge Creek, AK 78.17 15 P P 09 25 42.2 +1.3
baz=334,SNR=24
Q19K Cape Douglas, 78.20 22 P P 09 25 39.9 -1.1
baz=325
N25K Chitina, Valde 78.26 16 P P 09 25 42.2 +0.8
baz=332,SNR=5.7
BRLK Bradley Lake 78.29 20 P P 09 25 40.4 -1.0
BRLK IAmb IAmb 09 25 41.5
comp=Z,21nm,0.6s
GLI Glacier Island 78.31 18 P P 09 25 41.8 +0.3
baz=330,SNR=5.6
BVCY Beaver Creek 78.32 14 P P 09 25 42.9 +1.3
baz=335,SNR=9.9
BRSE Bradley Lake S 78.34 20 P P 09 25 41.3 -0.5
baz=328
SEW Seward 78.38 19 P P 09 25 41.2 -0.7
baz=328
R17K Ugashik Creek 78.40 23 P P 09 25 42.1 +0.1
baz=323
HVD Gariep Dam 78.80 218 *e* P P 09 25 44.6 -0.1
HVD IAmb IAmb 09 25 45.4
comp=Z,74nm,2.0s
MCARA McCarthy VSAT 78.80 16 P P 09 25 45.1 +0.9
baz=333
BMRM Bremner River 78.82 16 P P 09 25 45.3 +1.0
baz=332,SNR=5.6
Q20K Shuyak Island 78.83 21 P P 09 25 44.4 0.0
baz=326
VRDI Verde Repeater 78.85 16 P P 09 25 44.4 -0.3
EYAK Cordova Ski Ar 78.92 17 P P 09 25 46.0 +1.2
baz=331,SNR=6.5
M30M Minto, Yukon 78.92 12 P P 09 25 45.5 +0.6
baz=338,SNR=7.5
YUK3 Moose Creek 78.98 14 P P 09 25 46.3 +0.9
baz=335,SNR=13
UPI Upington 79.23 223 *e* P P 09 25 47.1 +0.1
UPI IAmb IAmb 09 25 47.5
comp=Z,3.6nm,0.7s
CRQE Cirque 79.35 16 P P 09 25 48.1 +0.8
baz=333
KDAK Kodiak Island 79.46 22 P P 09 25 47.7 -0.1
KDAK IAmb IAmb 09 25 48.4
comp=Z,40nm,0.9s
KDAK Kodiak Island 79.46 22 P P 09 25 47.7 -0.1
KDAK pmax pmax
comp=Z,40nm,1.0s
KDAK Kodiak Island 79.46 22 P P 09 25 48.3 +0.5
baz=326
CHNA Chernabura Isl 79.53 27 P P 09 25 48.2 0.0
baz=321
CTG Chitna Glacier 79.54 15 P P 09 25 49.2 +0.8
baz=335
KEIM Keimoes 79.65 223 *e* P P 09 25 49.6 +0.4
KEIM IAmb IAmb 09 25 52.6
comp=Z,12nm,0.7s
GRNC Granite Creek 79.66 15 P P 09 25 49.6 +0.4
M31M Drury Creek, Y 79.67 11 P P 09 25 49.0 +0.1
M31M IAmb IAmb 09 25 50.4
comp=Z,24nm,1.1s
M31M Drury Creek, Y 79.67 11 P P 09 25 49.5 +0.5
baz=340,SNR=19
OHAK Old Harbor 79.72 22 P P 09 25 49.7 +0.5

baz=326
YUK4 **Talbot Arm** 79.73 14 P P 09 25 50.3 +0.8
baz=337,SNR=10
LOGN **Logan Glacier** 79.74 15 P P 09 25 50.0 +0.6
LOGN IAmb IAmb 09 25 51.1
comp=Z,16nm,0.9s
MMPY **Sheldon Lake,** 79.74 10 P P 09 25 50.6 +1.3
baz=343,SNR=9.5
N30M **Aishikik Lake** 79.91 13 P P 09 25 51.6 +1.3
baz=338,SNR=8.3
SII **Sitkinak Islan** 79.98 23 P P 09 25 51.4 +0.7
baz=325
SII **Sitkinak Islan** 79.98 23 P P 09 25 51.4 +0.7
N31M **Braeburn, Yuko** 80.12 12 P P 09 25 51.7 +0.4
N31M IAmb IAmb 09 25 53.3
comp=Z,26nm,0.9s
N31M **Braeburn, Yuko** 80.12 12 P P 09 25 52.0 +0.7
baz=339,SNR=11
YUK6 **Outpost Mounta** 80.15 14 P P 09 25 52.8 +1.0
baz=337
HYT **Haines Junctio** 80.42 13 P P 09 25 54.4 +1.3
HYT IAmb IAmb 09 25 55.0
comp=Z,17nm,0.9s
HYT **Haines Junctio** 80.42 13 P P 09 25 54.4 +1.3
baz=338,SNR=14
PINM **Pinnacle** 80.56 15 P P 09 25 54.6 +0.9
baz=336
O30N **Mendenhall** 80.73 13 P P 09 25 55.5 +0.8
baz=339,SNR=12
WHY **Whitehorse** 81.05 12 P P 09 25 56.5 +0.1
baz=340,SNR=7.0
PNL **Peninsula** 81.12 15 P P 09 25 58.0 +1.3
baz=336
TGTN **Hyland Airport** 81.19 9 P P 09 25 58.4 +1.4
baz=345
YKA **Yellowknife Ar** 81.29 2 P P 09 25 57.8 +0.3
comp=Z,16nm,0.7s,baz=349,slow=5.2,SNR=232
YKA PP PP 09 29 05.0 -0.3
comp=Z,3.5nm,0.7s,baz=352,slow=7.8,SNR=8.1
YKA PKKPbc PKKPbc 09 44 30.5 -0.5
comp=Z,0.1nm,0.4s,baz=133,slow=3.0,SNR=9.2
comp=Z,16nm,0.7s
YKA **Yellowknife Ar** 81.29 2 P P 09 25 57.7 +0.3
YKA **Yellowknife Ar** 81.29 2 *i* P P 09 25 57.7 +0.3
YKA pmax pmax
comp=Z,17nm,0.7s
P33M **Teslin, Yukon** 81.81 11 P P 09 25 59.0 -1.4
P33M IAmb IAmb 09 26 01.4
comp=Z,39nm,0.9s
P33M **Teslin, Yukon** 81.81 11 P P 09 26 00.8 +0.4
baz=342,SNR=34
GRAN **Grantham** 81.85 219 *e*P P 09 26 01.4 +0.6
GRAN IAmb IAmb 09 26 04.6
comp=Z,6.9nm,0.6s
SCHQ **Schefferville** 81.85 337 P P 09 26 00.8 +0.2
comp=Z,9.0nm,0.8s,baz=37,slow=4.5,SNR=18
SCHQ PP PP 09 29 06.3 -3.8
comp=Z,3.2nm,0.6s,baz=22,slow=4.3,SNR=5.4
comp=Z,9.0nm,0.8s
SCHQ **Schefferville** 81.85 337 P P 09 26 00.0 -0.6
NWAO **Narrogin (SRO)** 81.86 142 P P 09 26 01.5 +0.7
PLBC **Pleasant Camp** 81.91 13 P P 09 26 01.9 +1.1
baz=339,SNR=15
SKAG **Skagway** 82.10 13 P P 09 26 02.9 +1.2
baz=340,SNR=5.4
P32M **Atlin** 82.25 12 P P 09 26 03.0 +0.4
baz=341,SNR=6.0
CVNA **Calvinia** 82.47 222 *e*P P 09 26 04.0 0.0
CVNA IAmb IAmb 09 26 05.5
comp=Z,797nm,4.1s
WRA **Warramunga Arr** 82.55 121 P P 09 26 03.5 -1.2
comp=Z,12nm,0.5s,baz=322,slow=4.9,SNR=38
WRA PKKPbc PKKPbc 09 44 28.6 +0.4
comp=Z,0.9nm,0.5s,baz=121,slow=2.5,SNR=18
comp=Z,12nm,0.5s
WRA **Warramunga Arr** 82.55 121 *i* P P 09 26 03.0 -1.6
WRA pmax pmax
comp=Z,13nm,0.5s
WRAB **Tennant Creek** 82.55 121 *de*P P 09 26 03.1 -1.5
WRAB pmax pmax
comp=Z,15nm,0.6s
WRAB **Tennant Creek** 82.55 121 P P 09 26 03.8 -0.8
WB2 **Warramunga Arr** 82.55 121 P P 09 26 03.5 -1.1
WB2 IAmb IAmb 09 26 05.4
comp=Z,24nm,0.5s
MATJ **Matjiesfontein** 83.42 220 *e*P P 09 26 09.2 +0.3
MATJ IAmb IAmb 09 26 09.4
comp=Z,20nm,1.1s
DLBC **Dease Lake** 83.94 11 P P 09 26 11.8 +0.5
DLBC **Dease Lake** 83.94 11 P P 09 26 12.4 +1.1
baz=344
FCC **Fort Churchill** 84.21 352 P P 09 26 12.8 +0.3
FCC IAmb IAmb 09 26 13.9
comp=Z,17nm,0.9s
FCC **Fort Churchill** 84.21 352 P P 09 26 12.8 +0.3
FCC pmax pmax
comp=Z,17nm,0.9s
AS31 **Alice Springs** 84.79 124 P P 09 26 14.7 -1.3
AS31 IAmb IAmb 09 26 17.0
comp=Z,8.3nm,0.6s
ASAR **Alice Springs** 84.79 124 P P 09 26 15.0 -1.0
comp=Z,16nm,0.5s,baz=311,slow=4.9,SNR=138
ASAR PKiKP PKiKP 09 31 26.9 -0.5
comp=Z,0.6nm,0.9s,baz=345,slow=1.0,SNR=4.2
ASAR PKKPbc PKKPbc 09 44 23.4 +0.2
comp=Z,0.5nm,0.5s,baz=127,slow=2.6,SNR=8.2
comp=Z,16nm,0.5s
ASAR **Alice Springs** 84.79 124 P P 09 26 14.3 -1.7
ELIM **Elim** 84.90 220 *e*P P 09 26 16.5 +0.2
ELIM IAmb IAmb 09 26 19.8
comp=Z,914nm,3.7s
T35M **Bob Quinn** 85.31 11 P P 09 26 19.5 +1.4
baz=344
FORT **Forrest** 86.14 133 P P 09 26 21.9 -0.5
MULG **Mulgathing** 89.43 129 P P 09 26 37.0 -1.0
EDM **Edmonton** 90.61 2 P P 09 26 43.7 +0.3
EDM **Edmonton** 90.61 2 P P 09 26 43.7 +0.3
EDM pmax pmax
comp=Z,35nm,0.6s
PKME **Peaks-Kenny Pk** 90.77 333 P P 09 26 45.9 +1.7
baz=32
VLDQ **Val d'Or** 90.96 339 P P 09 26 45.0 0.0
VLDQ IAmb IAmb 09 26 46.4
comp=Z,8.8nm,0.8s
CTA **Charters Tower** 91.14 114 P P 09 26 45.8 -0.4
CTAO **Charters Tower** 91.14 114 P P 09 26 45.8 -0.4
INKA **Innaminka** 92.09 123 P P 09 26 50.2 -0.2
comp=Z,10nm,1.0s
LCRK **Leigh Creek** 92.19 127 P P 09 26 49.9 -0.9
BBOO **Buckleboo** 92.40 130 P P 09 26 51.6 -0.2
ULM **Lac du Bonnet** 92.77 351 P P 09 26 52.1 -1.2
comp=Z,6.6nm,0.7s,baz=341,slow=7.1,SNR=5.4
comp=Z,6.6nm,0.7s
LONY **Lake Ozonia** 93.19 336 P P 09 26 55.8 +0.3
baz=28
EYMN **Ely** 94.37 348 P P 09 27 00.7 -0.1
baz=15
HTT **Hallett** 94.60 129 P P 09 27 02.5 +0.5
AGMN **Agassiz Nation** 94.68 351 P P 09 27 02.1 -0.1
AGMN IAmb IAmb 09 27 02.8
comp=Z,10nm,1.1s
AGMN **Agassiz Nation** 94.68 351 P P 09 27 02.0 -0.1
baz=11
WALA **Waterton Lakes** 94.76 3 P P 09 27 02.3 -0.3
WALA IAmb IAmb 09 27 03.4
comp=Z,6.3nm,0.8s
STKA **Stephens Creek** 95.31 126 P P 09 27 04.3 -0.9
comp=Z,2.2nm,0.5s,baz=336,slow=5.2,SNR=6.9
comp=Z,2.2nm,0.5s
NEW **Newport** 95.38 5 P P 09 27 05.7 +0.3
baz=354
EGMT **Eagleton** 95.87 360 P P 09 27 07.0 -0.7
baz=0.1
RMQ **Roma** 96.87 118 P P 09 27 11.3 -1.1
HRY **Holter Researc** 97.16 1 P Pdif 09 27 14.2 +0.6
CMSA **Cobar Meteorol** 97.81 123 P P 09 27 16.1 -0.4
BOZ **Bozeman (W)** 98.28 1 P P 09 27 18.6 -0.1
BOZ IAmb IAmb 09 31 19.1
comp=Z,15nm,1.9s
BOZ **Bozeman (W)** 98.28 1 P P 09 27 18.6 -0.1
BOZ pmax pmax
comp=Z,15nm,1.9s
BOZ **Bozeman (W)** 98.28 1 Pdiff Pdif 09 27 19.3 +0.6
baz=359
ECSD **EROS Data Cent** 99.26 350 Pdiff **Pdif** 09 27 22.8 -0.1
baz=11
MCWV **Mont Chateau** 99.36 337 Pdiff **Pdif** 09 27 23.4 0.0
baz=24
PDAR **Pinedale Array** 101.13 360 P **Pdif** 09 27 31.7 +0.2
comp=Z,0.3nm,0.5s,baz=57,slow=4.1,SNR=4.8
TXAR **Lajitas Array** 114.28 354 PKP PKPdf 09 32 20.1 +0.1
comp=Z,0.2nm,0.6s,baz=222,slow=1.2,SNR=2.2
TXAR PKKPbc **PKKPbc** 09 43 00.4 +0.4
comp=Z,0.2nm,0.5s,baz=189,slow=8.1,SNR=3.6
TROLL **Troll, Antarti** 117.87 199 PKPdf **PKPdf** 09 32 25.3 -0.2
SNAA **Sanae** 119.15 200 PKPdf **PKiKP** 09 32 28.1 +0.2
VNA2 **Neumayer--Watz** 120.13 202 PKPdf **PKiKP** 09 32 29.8 0.0
baz=18,slow=3.0
VNA1 **Neumayer--Stat** 120.28 202 PKPdf **PKiKP** 09 32 30.8 +0.8
VNA3 **Neumayer Olymp** 120.94 202 PKPdf **PKPdf** 09 32 30.5 -0.7
BDFB **Brasilia** 121.70 274 PKP **PKPdf** 09 32 33.9 -0.6
comp=Z,0.7nm,0.3s,baz=36,slow=3.1,SNR=3.2
BDFB **Brasilia** 121.70 274 **PKPdf** 09 32 33.5 -0.9
PARB **Paraibuna** 123.75 264 *e*P **PKPdf** 09 32 36.3 -1.9
VNDA **Vanda** 125.66 164 PKP **PKPdf** 09 32 39.2 -1.0
comp=Z,1.7nm,0.8s,baz=264,slow=5.8,SNR=9.7
ROSC **El Rosal** 127.17 313 PKP **PKPdf** 09 32 45.2 -0.2
comp=Z,12nm,0.8s,baz=137,slow=7.3,SNR=6.6
TBTG **Tabatinga, AM** 131.26 302 *e*P **PKPdf** 09 32 52.0 -0.7
CPUP **Villa Florida** 134.55 267 PKP **PKPdf** 09 32 57.9 -0.6
comp=Z,4.7nm,0.7s,baz=75,slow=1.2,SNR=16
LPAZ **La Paz** 137.99 287 PKP **PKPdf** 09 33 04.7 -1.2
comp=Z,0.8nm,0.5s,baz=225,slow=11,SNR=3.9
LPAZ **La Paz** 137.99 287 **PKPdf** 09 33 04.4 -1.5
PMSA **Palmer Station** 140.87 209 *e*P **PKPdf** 09 33 08.0 -0.9
PLCA **Paso Flores** 149.20 250 PKP **PKPdf** 09 33 24.8 +0.7
comp=Z,9.0nm,0.8s,baz=163,slow=3.4,SNR=2.9
PLCA PKPbc **PKPbc** 09 33 29.0 +0.5
comp=Z,10nm,0.9s,baz=131,slow=2.9,SNR=4.7

*JMA **26** 09:16:29.4±0.5,23°N±1°×12°1E±°, h0km,MV4.4/15, TAIWAN REGION*
*NIED **26** 09:16:29.4,22°.86N×121°.29E, h0km,MW3.9,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr0.41; Mθθ5.30; Mθφ -5.71; Mrθ -3.64; Mφφ5.98; Mrφ-1.83; Fault plane solution: M₀9.03000×10¹⁴ NP1: φs294.00000°,δ72.00000°,λ16.00000°. NP2: φs199.00000°,δ75.00000°,λ162.00000°.*
*TAP **26** 09:16:33.5,22°.93N×121°.27E, h16km,ML4.0,B*
ISC 26 09:16:33.2±0.8,22°.89N±0°.01×121°.31E±0°.02,h18km±2km, n160,σ0s91/224,9C-18D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EDH	**Donghe**	**0.08**	**356**		*i*	P	**Pb**	**09 16 36.8**	**+0.1**
baz=38									
EDH					*i*	S	**Sb**	**09 16 39.0**	**+0.1**
baz=38									
LONT	**Longtian**	**0.17**	**276**		⇓*i*	P	**Pg**	**09 16 37.9**	**+0.3**
baz=269									
LONT						S	**Sg**	**09 16 41.2**	**+0.5**
baz=269									
TTN	**Taitung**	**0.20**	**228**	P			**Pg**	**09 16 39.1**	**+1.0**
baz=207									
TTN						*e*S	**Sg**	**09 16 43.8**	**+2.3**
baz=207									
CHKT	**Chengkung**	**0.21**	**14**		⇑*i*	P	**Pg**	**09 16 38.6**	**+0.3**
baz=27									
CHKT					*i*	S	**Sg**	**09 16 42.4**	**+0.6**
baz=27									
ECS	**Chishang**	**0.22**	**338**		⇑*i*	P	**Pg**	**09 16 38.7**	**+0.3**
baz=337									
ECS						*e*S	**Sb**	**09 16 43.3**	**+1.1**
baz=337									
TWGBT	**Beinan**	**0.23**	**251**		⇓*i*	P	**Pb**	**09 16 38.7**	**+0.1**
baz=249									
TWGBT					*i*	S	**Sb**	**09 16 42.7**	**+0.4**
baz=249									
TWG	**Pinlang**	**0.23**	**253**		⇓*i*	P	**Pb**	**09 16 38.8**	**0.0**
baz=249									
TWG						S	**Sb**	**09 16 42.8**	**+0.3**
baz=249									
LDUT	**Ludao**	**0.26**	**146**		⇑	P	**Pb**	**09 16 40.6**	**+1.3**
baz=133									
LDUT						S	**Sn**	**09 16 46.0**	**-1.7**
baz=133									
FULB	**Fuli**	**0.31**	**357**		⇑*e*	P	**Pg**	**09 16 39.5**	**-0.4**
baz=350									
FULB						*e*S	**Sg**	**09 16 44.8**	**+0.4**
baz=350									
ELDTW	**Lidau**	**0.40**	**318**		⇓*i*	P	**Pg**	**09 16 40.7**	**-0.9**
baz=318									
ELDTW						*e*S	**Sg**	**09 16 45.2**	**-2.0**
baz=318									
ECBN	**Changbin**	**0.44**	**17**	*e*	P		**Pg**	**09 16 42.9**	**+0.6**
baz=20									
ECBN						*e*S	**Sg**	**09 16 48.8**	**+0.5**
baz=20									
EYUL	**Yuli**	**0.46**	**1**		⇑*e*	P	**Pg**	**09 16 42.8**	**+0.3**
baz=351									
EYUL						*e*S	**Sg**	**09 16 49.3**	**+0.6**
baz=351									
TWF1	**Yuli**	**0.46**	**358**		⇑*e*	P	**Pg**	**09 16 42.0**	**-0.5**
baz=353									
YULB	**Yu-li**	**0.50**	**359**	*e*	P		**Pg**	**09 16 42.5**	**-0.8**
baz=355									
STYH	**Taoyuan**	**0.57**	**300**		⇓*i*	P	**Pg**	**09 16 43.8**	**-0.7**
baz=302									
STYH						*e*S	**Sg**	**09 16 50.8**	**-1.3**
baz=302									
STYT	**Tauyuan**	**0.58**	**298**		⇓*i*	P	**Pg**	**09 16 44.0**	**-0.7**
baz=301									
STYT					*i*	S	**Sg**	**09 16 51.4**	**-1.1**
baz=301									
HGSD	**Ruisui**	**0.61**	**10**	*e*	P		**Pb**	**09 16 45.6**	**+0.3**
baz=358									
EHY	**Hungye**	**0.61**	**1**	*e*	P		**Pg**	**09 16 44.5**	**-0.9**
baz=4.0									
SLGT	**Liugui**	**0.62**	**280**	*e*	P		**Pg**	**09 16 45.1**	**-0.3**
baz=274									
SLGT						*e*S	**Sg**	**09 16 52.8**	**-1.0**
baz=274									
TSMG	**Majia**	**0.64**	**254**		⇓	P	**Pg**	**09 16 45.2**	**-0.7**
baz=250									
TSMG						S	**Sg**	**09 16 52.7**	**-1.7**
baz=250									
SSD	**Sandimen**	**0.64**	**257**		⇓*i*	P	**Pg**	**09 16 45.0**	**-0.8**
baz=254									
SSD						*e*S	**Sg**	**09 16 51.9**	**-2.6**
baz=254									
TAW	**Tawu**	**0.65**	**216**	P			**Pb**	**09 16 45.8**	**-0.2**
baz=221									
TAW						*e*S	**Sb**	**09 16 55.0**	**+0.2**
baz=221									
EAST	**Anshuo**	**0.66**	**220**		⇑*i*	P	**Pb**	**09 16 46.0**	**-0.3**
baz=227									
EAST						*e*S	**Sb**	**09 16 54.4**	**-0.7**
baz=227									
TAWH	**Dawu Township**	**0.67**	**216**		⇑*i*	P	**Pb**	**09 16 46.1**	**-0.2**
baz=223									
TAWH						*e*S	**Sb**	**09 16 55.3**	**-0.1**
baz=223									
YUS	**Yu-Shan**	**0.68**	**331**		⇓	P	**Pg**	**09 16 46.2**	**-0.6**
baz=331									
YUS						S	**Sg**	**09 16 54.0**	**-2.0**
baz=331									
MASBT	**Mashibuluo**	**0.68**	**246**		⇓*i*	P	**Pb**	**09 16 46.1**	**-0.5**
baz=237									
MASBT						*e*S	**Sg**	**09 16 53.9**	**-1.8**
baz=237									
SGST	**Jiashian**	**0.70**	**286**		⇓*i*	P	**Pb**	**09 16 45.7**	**-1.1**
baz=284									
SGST						S	**Sg**	**09 16 56.0**	**-0.2**
baz=284									
WTP	**Ta-pu**	**0.73**	**299**		⇓*i*	P	**Pb**	**09 16 47.2**	**-0.2**
baz=297									
WTP						*e*S	**Sg**	**09 16 57.4**	**+0.1**
baz=297									
TPUB	**Ta-pu**	**0.75**	**303**	P			**Pb**	**09 16 47.4**	**-0.3**
TPUB	**Ta-pu**	**0.75**	**303**		⇓*i*	P	**Pb**	**09 16 47.5**	**-0.3**
baz=301									
TPUB					*i*	S	**Sb**	**09 16 57.4**	**-0.3**
baz=301									
SCST	**Cishan**	**0.75**	**270**		⇓*e*	P	**Pg**	**09 16 48.0**	**+0.1**
baz=265									
SCST						*e*S	**Sg**	**09 16 58.0**	**+0.1**
baz=265									
ALS	**Alishan**	**0.77**	**323**		⇓*i*	P	**Pb**	**09 16 47.9**	**-0.4**
baz=322									
ALS						S	**Sb**	**09 16 57.1**	**-1.5**
baz=322									
SGLT	**Jiouru**	**0.77**	**258**	*e*	P		**Pn**	**09 16 48.5**	**-0.8**
baz=257									
CHN1	**Nanshi**	**0.78**	**292**		⇓	P	**Pg**	**09 16 48.5**	**0.0**
baz=293									
CHN1						*e*S	**Sg**	**09 16 59.0**	**+0.2**
baz=293									
TSPT	**Pingtung City**	**0.78**	**254**	*e*	P		**Pn**	**09 16 49.2**	**-0.1**
baz=246									
EGFH	**Guangfu**	**0.78**	**8**	*e*	P		**Pb**	**09 16 48.8**	**+0.5**
baz=357									
SSPT	**Xinbi**	**0.80**	**240**	*e*	P		**Pn**	**09 16 48.7**	**-0.8**
baz=238									
SSPT						*e*S	**Sn**	**09 16 59.7**	**-1.3**
baz=238									
CHN4	**Tsaushan**	**0.81**	**305**		⇓	P	**Pb**	**09 16 48.7**	**0.0**
baz=309									
CHN4						*e*S	**Sb**	**09 16 59.1**	**-0.1**
baz=309									
SNST	**Tainan City**	**0.82**	**294**	*e*	P		**Pg**	**09 16 49.3**	**+0.1**
baz=292									
SCZT	**Fangliau**	**0.82**	**231**	P			**Pg**	**09 16 48.9**	**-0.3**
baz=224									
SCZT						*e*S	**Sn**	**09 17 00.0**	**-1.5**
baz=224									
SLIU	**Shizi**	**0.82**	**215**	*e*	P		**Pg**	**09 16 48.6**	**-0.6**
baz=214									
TWM1	**Shoushan**	**0.82**	**266**	*e*	P		**Pn**	**09 16 49.8**	**-0.1**
baz=264									
TEGC	**Jichi Village**	**0.84**	**14**	*e*	P		**Pb**	**09 16 49.5**	**+0.2**
baz=358									
TEGC						*e*S	**Sn**	**09 17 02.6**	**+0.5**
baz=358									
TWK	**Hsinying**	**0.85**	**296**		⇓	P	**Pb**	**09 16 49.3**	**0.0**
baz=295									
LAY	**Lan-yu**	**0.88**	**165**	*e*	P		**Pg**	**09 16 50.1**	**-0.2**
baz=153									
LAY						*e*S	**Sn**	**09 17 03.4**	**+0.5**
baz=153									
CHN3	**Shinhua**	**0.89**	**282**	*e*	P		**Pn**	**09 16 51.5**	**+0.7**
baz=281									
CHN3						*e*S	**Sn**	**09 17 06.2**	**+2.9**
baz=281									
SHHT	**Tainan City**	**0.90**	**279**	*e*	P		**Pn**	**09 16 51.7**	**+0.8**
baz=277									
SHHT						*e*S	**Sn**	**09 17 06.4**	**+2.9**
baz=277									
CHN5	**Tsauling**	**0.91**	**321**	*e*	P		**Pb**	**09 16 50.3**	**-0.2**
baz=319									
CHN5						*e*S	**Sb**	**09 17 02.8**	**+0.3**
baz=319									
LYUB	**Lan-yu**	**0.92**	**164**	*e*	P		**Pb**	**09 16 49.2**	**-1.3**
baz=153									
LYUB						*e*S	**Sg**	**09 17 02.9**	**-0.3**
baz=153									
ESL	**Shilin**	**0.93**	**7**	*e*	P		**Pb**	**09 16 49.7**	**-1.1**
baz=8.0									
SSLB	**Suanglung**	**0.95**	**340**	P			**Pb**	**09 16 50.7**	**-0.5**
SSLB	**Suanglung**	**0.95**	**340**	*e*	P		**Pb**	**09 16 50.4**	**-0.8**
baz=339									
WSSB	**Gushan**	**1.00**	**256**	*e*	P		**Pg**	**09 16 54.3**	**+1.7**
baz=256									
CHN2	**Minshiung**	**1.00**	**310**	*e*	P		**Pb**	**09 16 52.0**	**+0.1**
baz=309									
TEYL	**Yanliau Villag**	**1.01**	**15**	*e*	P		**Pb**	**09 16 52.6**	**+0.4**
baz=13									
WLCH	**Liuqiu**	**1.01**	**238**	*e*	P		**Pg**	**09 16 55.9**	**+3.1**
baz=233									
CHY	**Chiayi**	**1.02**	**307**	*e*	P		**Pn**	**09 16 52.5**	**-0.1**
baz=305									
CHY						*e*S	**Sn**	**09 17 06.3**	**-0.1**
baz=305									
HEN	**Hengchun**	**1.03**	**211**	*e*	P		**Pg**	**09 16 53.8**	**+0.7**
baz=211									
TWP	**Hsiaoliuchiu**	**1.03**	**238**	*e*	P		**Pg**	**09 16 55.7**	**+2.5**
baz=233									
WGK	**Gukeng**	**1.05**	**319**	*e*	P		**Pn**	**09 16 53.3**	**+0.3**
baz=318									
TWKBT	**Hengchun**	**1.05**	**206**	*e*	P		**Pb**	**09 16 52.5**	**-0.4**
baz=195									
TSEB	**Hengchuen, Pin**	**1.06**	**201**	*e*	P		**Pg**	**09 16 53.5**	**-0.2**
baz=195									
TSEB						*e*S	**Sn**	**09 17 08.3**	**+1.0**
baz=195									
SMLT	**Sun Moon Lake**	**1.06**	**339**	*e*	P		**Pb**	**09 16 53.0**	**-0.1**
baz=344									
ICHU	**Yijhu**	**1.06**	**296**	*e*	P		**Pg**	**09 16 53.4**	**-0.3**
baz=295									
ICHU						*e*S	**Sg**	**09 17 08.2**	**+0.5**
baz=295									
WDLH	**Douliu**	**1.07**	**318**	*e*	P		**Pn**	**09 16 53.6**	**+0.4**
baz=316									
WDLH						*e*S	**Sn**	**09 17 07.6**	**0.0**
baz=316									
OWD	**Renai**	**1.07**	**353**	*e*	P		**Pb**	**09 16 52.9**	**-0.4**
baz=2.0									
WJS	**Zhushan**	**1.07**	**330**	*e*	P		**Pg**	**09 16 54.1**	**+0.1**
baz=333									
WJS						*e*S	**Sg**	**09 17 09.0**	**+1.0**
baz=333									
ETM	**Tongmen**	**1.08**	**9**	*e*	P		**Pn**	**09 16 53.0**	**-0.6**
baz=8.0									
TYC	**Yuchr**	**1.09**	**338**	*e*	P		**Pn**	**09 16 54.1**	**+0.5**
baz=345									
TYC						*e*S	**Sg**	**09 17 09.2**	**+0.5**
baz=345									
CHN8	**Yiju**	**1.11**	**294**	*e*	P		**Pb**	**09 16 53.1**	**-0.7**
baz=293									
CHN8						*e*S	**Sg**	**09 17 10.6**	**+1.4**
baz=293									
WUSB	**Renai**	**1.11**	**351**	P			**Pn**	**09 16 53.4**	**-0.6**
baz=358									
WUSB						*e*S	**Sb**	**09 17 07.4**	**-0.8**
baz=358									
HWA	**Hwalien**	**1.11**	**14**	*e*	P		**Pn**	**09 16 54.1**	**+0.2**
baz=12									
WNT	**Mingjian**	**1.14**	**330**	P			**Pg**	**09 16 55.2**	**-0.1**
baz=327									
WNT						*e*S	**Sg**	**09 17 11.3**	**+1.1**
baz=327									
WTK	**Tuku**	**1.16**	**313**	*e*	P		**Pb**	**09 16 55.0**	**+0.3**
baz=311									
WTK						*e*S	**Sg**	**09 17 10.8**	**0.0**
baz=311									
WPL	**Puli Township**	**1.16**	**344**	*e*	P		**Pn**	**09 16 54.7**	**+0.1**
baz=349									
WNT1	**Nantou City**	**1.17**	**330**	*e*	P		**Pb**	**09 16 55.2**	**+0.3**
baz=316									
CHGB	**Renai**	**1.17**	**354**	*e*	P		**Pn**	**09 16 54.5**	**-0.5**
baz=1.0									
WSL	**Shuilin Townsh**	**1.18**	**303**	*e*	P		**Pb**	**09 16 55.3**	**+0.3**
baz=300									
WSL						*e*S	**Sg**	**09 17 11.9**	**+0.5**
baz=300									
DPDB	**Guoxing**	**1.19**	**343**	*e*	P		**Pn**	**09 16 55.5**	**+0.5**
baz=341									
TWD	**Chiawan**	**1.21**	**12**	*e*	P		**Pn**	**09 16 54.3**	**-0.9**
baz=10.0									
WCS	**Beigang Elemen**	**1.22**	**343**	*e*	P		**Pn**	**09 16 55.9**	**+0.5**
baz=341									
WSF	**Szhu**	**1.25**	**307**	*e*	P		**Pn**	**09 16 56.0**	**+0.2**
baz=306									
WHF	**Hehuan Shan**	**1.25**	**358**	*e*	P		**Pn**	**09 16 55.3**	**-0.9**
baz=8.0									
WWF	**Wufeng**	**1.28**	**334**	*e*	P		**Pb**	**09 16 57.3**	**+0.5**
baz=332									
NACB	**Ninganchiao**	**1.30**	**11**	*e*	P		**Pn**	**09 16 55.0**	**-1.5**
baz=6.0									
NACB						*e*S	**Sn**	**09 17 11.7**	**-1.8**
baz=6.0									
ETLH	**Xiulin Townshi**	**1.32**	**7**	*e*	P		**Pn**	**09 16 56.5**	**-0.3**
baz=20									
WRL	**Guolierlin Hig**	**1.32**	**320**	*e*	P		**Pb**	**09 16 57.3**	**-0.2**
baz=317									
WRL						*e*S	**Sg**	**09 17 15.4**	**-0.6**
baz=317									
FUSS	**Fushou**	**1.35**	**357**	*e*	P		**Pn**	**09 16 57.6**	**+0.2**
baz=6.0									
TWT	**Tachien**	**1.36**	**355**	*e*	P		**Pb**	**09 16 58.5**	**+0.2**
baz=4.0									
TDCB	**Techi**	**1.36**	**354**	*e*	P		**Pb**	**09 16 58.5**	**+0.2**
baz=4.0									
WCHH	**Zhanghua**	**1.37**	**330**	*e*	P		**Pb**	**09 16 58.6**	**+0.3**
baz=319									
TCU	**Taichung**	**1.38**	**335**	*e*	P		**Pg**	**09 16 59.6**	**-0.2**
baz=333									
WHP	**Taichung City**	**1.42**	**346**	*e*	P		**Pb**	**09 17 00.2**	**+1.0**
baz=356									
NNSB	**Datong**	**1.53**	**2**	*e*	P		**Pn**	**09 16 59.2**	**-0.6**
baz=14									
NNSH	**Datong**	**1.53**	**2**	*e*	P		**Pn**	**09 17 00.3**	**+0.5**

	baz=13								
TWQ1	**Liyutan**	**1.53**	**341**	*e*P		**Pb**	09 17 01.5	+0.4
	baz=338								
NNS	**Nan Shan**	**1.54**	**2**	*e*P		**Pn**	09 17 00.1	+0.1
	baz=14								
WDGT	**Dungji**	**1.56**	**284**	*e*P		**Pn**	09 17 00.2	+0.1
	baz=283								
WDJ	**Daijia District**	**1.58**	**337**	*e*P		**Pb**	09 17 02.0	+0.2
	baz=334								
ENA	**Nanau**	**1.58**	**14**	*e*P		**Pn**	09 16 59.7	-0.6
	baz=10.0								
NSY	**Sanyi**	**1.60**	**342**	*e*P		**Pb**	09 17 03.0	+0.8
	baz=337								
NSY				*e*S		**Sg**	09 17 24.4	-0.4
	baz=337								
EWUT	**Wuta**	**1.61**	**15**	*e*P		**Pn**	09 17 01.0	+0.3
	baz=1.0								
LATG	**Datong**	**1.65**	**7**	*e*P		**Pn**	09 17 01.5	+0.1
	baz=18								
NMLH	**Miaoli**	**1.71**	**344**	*e*P		**Pb**	09 17 04.0	0.0
	baz=340								
NDT	**Datong Townshi**	**1.71**	**6**	*e*P		**Pn**	09 17 03.1	+0.9
	baz=16								
NFF	**Wufeng Townshi**	**1.74**	**354**	*e*P		**Pb**	09 17 04.3	-0.4
	baz=359								
PNG	**Penghu**	**1.75**	**293**	P		**Pn**	09 17 02.6	0.0
	baz=278								
PNG				*e*S		**Sn**	09 17 24.8	+0.3
	baz=278								
NSTT	**Nanjuang**	**1.76**	**351**	*e*P		**Pb**	09 17 05.1	+0.2
	baz=359								
VCHM	**Qimei**	**1.76**	**281**	*e*P		**Pn**	09 17 02.6	-0.2
	baz=280								
VCHM				*e*S		**Sn**	09 17 24.1	-0.7
	baz=280								
YHNB	**Yeheng**	**1.77**	**2**	P		**Pb**	09 17 05.0	-0.2
YHNB	**Yeheng**	**1.77**	**2**	*e*P		**Pn**	09 17 03.5	+0.4
	baz=13								
NSK	**Sanguang**	**1.78**	**1**	*e*P		**Pn**	09 17 03.5	+0.4
	baz=13								
TWC	**Suao**	**1.78**	**16**	*e*P		**Pn**	09 17 04.0	+0.9
	baz=12								
TWE	**Neicheng**	**1.85**	**10**	*e*P		**Pn**	09 17 05.4	+1.4
	baz=6.0								
FUSB	**Fushanzhiwuyua**	**1.88**	**8**	*e*P		**Pn**	09 17 04.5	0.0
	baz=20								
NWLT	**Wulai**	**1.89**	**5**	*e*P		**Pn**	09 17 05.8	+1.2
	baz=16								
NTC	**Toucheng**	**2.01**	**14**	*e*P		**Pn**	09 17 08.2	+1.9
	baz=8.0								
EGS		**2.03**	**16**	*e*P		**Pn**	09 17 08.6	+2.2
	baz=11								
NHDH	**Xindian Distri**	**2.07**	**5**	*e*P		**Pn**	09 17 09.2	+2.2
	baz=16								
TATO	**Taipei**	**2.08**	**4**	*e*P		**Pn**	09 17 07.9	+0.7
	baz=15								
TWA	**Mucha**	**2.10**	**7**	*e*P		**Pn**	09 17 09.0	+1.5
	baz=15								
TIPB	**Shuangxi**	**2.13**	**13**	*e*P		**Pn**	09 17 08.5	+0.7
	baz=7.0								
JYNG	**Yonagunijimaku**	**2.16**	**44**	P		**Pn**	09 17 09.0	+0.7
JYNG				S		**Sn**	09 17 35.4	+0.8
TWB1	**Santiao Chiao**	**2.20**	**16**	*e*P		**Pn**	09 17 09.9	+1.1
	baz=11								
TWS1	**Kuangyinshan**	**2.20**	**3**	*e*P		**Pn**	09 17 08.6	-0.3
	baz=15								
YOJ	**Yonaguni jima**	**2.21**	**45**	P		**Pn**	09 17 10.2	+1.2
YOJ	**Yonaguni jima**	**2.21**	**45**	*e*P		**Pn**	09 17 09.3	+0.3
	baz=58								
YOJ				*e*S		**Sn**	09 17 36.1	+0.3
	baz=58								
YOJ	**Yonaguni jima**	**2.21**	**45**	P		**Pn**	09 17 09.2	+0.3
YOJ				*e*S		**Sn**	09 17 36.3	+0.5
NWF	**Wu-fen Shan**	**2.21**	**11**	*e*P		**Pn**	09 17 10.9	+1.7
	baz=6.0								
SXI1	**Grass Mountain**	**2.25**	**13**	*e*P		**Pn**	09 17 11.2	+1.6
	baz=8.0								
YM01	**YM01**	**2.26**	**6**	*e*P		**Pn**	09 17 10.2	+0.5
	baz=17								
NTST	**Danshui**	**2.27**	**3**	*e*P		**Pn**	09 17 11.4	+1.6
	baz=14								
TNOU	**National Taiwa**	**2.29**	**11**	*e*P		**Pn**	09 17 10.9	+0.9
	baz=5.0								
YM08	**YM08**	**2.30**	**6**	*e*P		**Pn**	09 17 11.8	+1.5
	baz=16								
HATJ	**Hateruma jima**	**2.57**	**63**	P		**Pn**	09 17 13.8	-0.1
HATJ				*e*S		**Sn**	09 17 43.5	-1.2
IRIF	**Iriomote-Funau**	**2.64**	**57**	P		**Pn**	09 17 15.3	+0.3
IRIF				*e*S		**Sn**	09 17 46.8	+0.3
VWUC	**VWUC**	**2.70**	**321**	*e*P		**Pn**	09 17 16.2	+0.5
	baz=306								
PCYT	**Pengchaiyu**	**2.81**	**14**	*e*P		**Pn**	09 17 18.5	+1.2
	baz=8.0								
JKRS	**Kuro-shima**	**2.82**	**61**	P		**Pn**	09 17 17.6	+0.3
JKRS				*e*S		**Sn**	09 17 51.4	+0.6
PTMZ	**Houxiangcun**	**2.93**	**317**	*e*P		**Pn**	09 17 19.3	+0.4
	baz=316								
JIJ	**Ishigaki jima**	**2.98**	**60**	P		**Pn**	09 17 19.3	-0.3
JIJ				*e*S		**Sn**	09 17 53.1	-1.9
KNM	**Kinmen**	**3.04**	**301**	*e*P		**Pn**	09 17 23.0	+2.5
	baz=297								
KNMB	**Chin-men Tao**	**3.10**	**301**	*e*P		**Pn**	09 17 22.1	+0.8
	baz=299								
JISG	**Ishigakijimahi**	**3.23**	**58**	P		**Pn**	09 17 22.8	-0.2
JISG				*e*S		**Sn**	09 18 00.6	-0.3
ZPLA	**Ao Xicun**	**3.43**	**288**	*e*P		**Pn**	09 17 26.5	+0.7
	baz=287								
JTJ	**Tarama**	**3.56**	**60**	P		**Pn**	09 17 27.7	+0.1
JTJ				*e*S		**Sn**	09 18 09.4	+0.2
AXDP	**Jialang**	**3.65**	**304**	*e*P		**Pn**	09 17 29.4	+0.6
	baz=302								
MHZQ	**Yeshan**	**3.81**	**327**	*e*P		**Pn**	09 17 31.6	+0.6
	baz=328								
LYJJ	**Jianjiangzhen**	**3.91**	**339**	*e*P		**Pn**	09 17 32.8	+0.5
	baz=339								
JIRB	**Irabujima**	**4.03**	**61**	P		**Pn**	09 17 34.1	+0.1
JIRB				*e*S		**Sn**	09 18 20.8	0.0
JMJ2	**Miyako jima3**	**4.11**	**63**	P		**Pn**	09 17 35.5	+0.3
JMJ2				*e*S		**Sn**	09 18 22.5	-0.4
JMJ	**Miyako jima 2**	**4.12**	**61**	P		**Pn**	09 17 36.5	+1.3
JMJ	**Miyako jima 2**	**4.12**	**61**	*e*P		**Pn**	09 17 35.3	+0.1
	baz=70								
JIKM	**Ikemajima**	**4.13**	**60**	*e*P		**Pn**	09 17 35.3	-0.1
XPSS	**Dashiqiu**	**4.15**	**346**	*e*P		**Pn**	09 17 36.3	+0.6
	baz=345								
JOGS	**Gusukube**	**4.19**	**63**	P		**Pn**	09 17 36.6	+0.5
VDOS	**Pratas Island**	**4.78**	**244**	*e*P		**Pn**	09 17 46.5	+2.2
	baz=243								
SXFK	**Yanhouchang**	**4.83**	**317**	*e*P		**Pn**	09 17 45.5	+0.4
	baz=315								
JOW	**Kunigami**	**7.44**	**57**	P		**Pn**	09 18 20.7	-0.2
JOW	**Kunigami**	**7.44**	**57**	*e*P		**Pn**	09 18 19.9	-1.0
	baz=65								

TAP 26 09:17:00.9, 22.93N×121.27E, h16km, ML3.9, 1C-3D, B, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDH	**Donghe**	**0.06**	**37**	⇑*i*P	Pg	09 17 04.1	+0.2
	baz=37						
EDH				*i* S	Sg	09 17 06.4	+0.5
	baz=37						
LONT	**Longtian**	**0.13**	**260**	⇓*i*P	Pb	09 17 05.4	+0.4
	baz=269						
LONT				S	Sb	09 17 09.1	+1.4
	baz=269						
ECS	**Chishang**	**0.17**	**345**	P	Pb	09 17 06.3	+0.5
	baz=337						
ECS				S	Sb	09 17 10.2	+1.1
	baz=337						
CHKT	**Chengkung**	**0.19**	**28**	*i* P	Pb	09 17 06.0	-0.1
	baz=27						
CHKT				S	Sb	09 17 09.7	+0.1
	baz=27						
TTN	**Taitung**	**0.21**	**213**	P	Pb	09 17 07.2	+0.9
	baz=207						
TTN				*e*S	Sb	09 17 12.6	+2.7
	baz=207						
TWG	**Pinlang**	**0.21**	**239**	⇓*i*P	Pb	09 17 06.2	-0.2
	baz=249						
TWG				*i* S	Sb	09 17 10.1	+0.1
	baz=249						
FULB	**Fuli**	**0.27**	**5**	*e*P	Pb	09 17 07.5	0.0
	baz=350						
FULB				*e*S	Sb	09 17 12.4	+0.6
	baz=350						
LDUT	**Ludao**	**0.31**	**144**	P	Pb	09 17 08.0	-0.2
	baz=133						
LDUT				*e*S	Sb	09 17 13.1	+0.1
	baz=133						
ELDTW	**Lidau**	**0.35**	**318**	P	Pg	09 17 08.0	-0.2
	baz=318						
ELDTW				*e*S	Sg	09 17 12.9	-0.2
	baz=318						
EYUL	**Yuli**	**0.42**	**6**	*e*P	Pb	09 17 10.2	+0.2
	baz=351						
EYUL				*e*S	Sb	09 17 16.8	+0.6
	baz=351						
ECBN	**Changbin**	**0.42**	**24**	*e*P	Pb	09 17 09.8	-0.3
	baz=20						
ECBN				S	Sb	09 17 16.2	+0.1
	baz=20						
TWF1	**Yuli**	**0.42**	**4**	P	Pg	09 17 09.7	+0.2
	baz=349						
TWF1				*e*S	Sb	09 17 16.2	0.0
	baz=349						
YULB	**Yu-li**	**0.46**	**3**	*e*S	Sb	09 17 17.7	+0.3
	baz=348						
STYH	**Taoyuan**	**0.51**	**298**	P	Pg	09 17 11.2	+0.1
	baz=303						
STYH				S	Sg	09 17 18.4	+0.4
	baz=303						
STYT	**Tauyuan**	**0.53**	**297**	⇓*i*P	Pg	09 17 11.4	0.0
	baz=301						
STYT				S	Sg	09 17 18.4	0.0
	baz=301						
EHY	**Hungye**	**0.58**	**5**	*e*P	Pg	09 17 12.4	0.0
	baz=4.0						
SLGT	**Liugui**	**0.58**	**277**	*e*P	Pg	09 17 12.4	+0.1
	baz=274						
SLGT				*e*S	Sg	09 17 19.8	-0.2
	baz=274						
SSD	**Sandimen**	**0.61**	**253**	P	Pg	09 17 12.4	-0.6
	baz=254						
TSMG	**Majia**	**0.62**	**249**	*e*P	Pg	09 17 12.5	-0.5
	baz=250						
TSMG				*e*S	Sg	09 17 20.4	-0.9
	baz=250						
YUS	**Yu-Shan**	**0.63**	**333**	P	Pb	09 17 14.0	+0.1
	baz=331						
YUS				*e*S	Sg	09 17 21.2	-0.7
	baz=331						
SGST	**Jiashian**	**0.65**	**284**	P	Pg	09 17 13.8	+0.1
	baz=284						
SGST				S	Sb	09 17 23.2	+0.5
	baz=284						
MASBT	**Mashibuluo**	**0.67**	**242**	*e*P	Pg	09 17 13.6	-0.4
	baz=237						
MASBT				*e*S	Sg	09 17 21.8	-1.0
	baz=237						
EAST	**Anshuo**	**0.67**	**216**	*e*P	Pb	09 17 14.7	+0.5
	baz=225						
WTP	**Ta-pu**	**0.68**	**298**	*e*P	Pb	09 17 14.6	+0.1
	baz=298						
TAWH	**Dawu Township**	**0.68**	**211**	*e*P	Pn	09 17 16.3	+0.4
	baz=224						
TPUB	**Ta-pu**	**0.69**	**302**	P	Pb	09 17 14.8	+0.1
	baz=302						
TPUB				S	Sb	09 17 24.5	+0.4
	baz=302						
SCST	**Cishan**	**0.71**	**267**	*e*P	Pb	09 17 15.2	+0.2
	baz=265						
SCST				*e*S	Sn	09 17 25.9	-1.1
	baz=265						
ALS	**Alishan**	**0.72**	**324**	P	Pb	09 17 15.4	+0.1
	baz=323						
CHN4	**Tsaushan**	**0.75**	**304**	*e*P	Pn	09 17 16.3	-0.6
	baz=311						
CHN4				*e*S	Sn	09 17 27.3	-0.7
	baz=311						
TSPT	**Pingtung City**	**0.76**	**251**	*e*P	Pn	09 17 17.2	+0.3
	baz=246						
SNST	**Tainan City**	**0.77**	**292**	*e*P	Pb	09 17 16.0	+0.1
	baz=292						
SNST				*e*S	Sn	09 17 28.0	-0.3
	baz=292						
SSPT	**Xinbi**	**0.78**	**236**	*e*P	Pn	09 17 17.4	+0.1
	baz=231						
TWM1	**Shoushan**	**0.79**	**263**	*e*P	Pn	09 17 18.6	+1.3
	baz=264						
TWK	**Hsinying**	**0.79**	**295**	*e*P	Pn	09 17 17.1	-0.5
	baz=296						
SCZT	**Fangliau**	**0.81**	**227**	*e*P	Pg	09 17 16.8	0.0
	baz=229						
TEGC	**Jichi Village**	**0.82**	**18**	*e*P	Pn	09 17 17.7	-0.1
	baz=15						
SHHT	**Tainan City**	**0.85**	**276**	*e*P	Pn	09 17 20.3	+2.0
	baz=277						
CHN5	**Tsauling**	**0.86**	**321**	*e*P	Pn	09 17 18.3	-0.2
	baz=320						
SSLB	**Suanglung**	**0.90**	**341**	*e*P	Pb	09 17 17.4	-0.8
	baz=339						
LYUB	**Lan-yu**	**0.97**	**162**	*e*P	Pb	09 17 18.7	-0.6
	baz=153						
TEYL	**Yanliau Villag**	**0.98**	**18**	*e*P	Pn	09 17 20.5	+0.5
	baz=13						
ICHU	**Yijhu**	**1.01**	**296**	*e*P	Pg	09 17 21.2	+0.8
	baz=296						
TYC	**Yuchr**	**1.04**	**339**	*e*P	Pg	09 17 21.9	+0.8
	baz=342						
WUSB	**Renai**	**1.07**	**353**	*e*P	Pb	09 17 20.6	-0.5
	baz=358						
WUSB				*e*S	Sb	09 17 34.6	-0.4
	baz=358						
WNT	**Mingjian**	**1.09**	**331**	*e*P	Pg	09 17 22.1	+0.2
	baz=328						
WTK	**Tuku**	**1.11**	**313**	*e*P	Pn	09 17 21.8	0.0
	baz=312						
WSL	**Shuilin Townsh**	**1.12**	**302**	*e*P	Pg	09 17 22.6	-0.1
	baz=301						

TAP ***26*** *09:22:20.8, 24.18N×122.30E, h21km, ML3.9, D*
NIED ***26*** *09:22:21.1, 24.13N×122.29E, h26km, MW3.8, Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁴Nm; Mrr3.99; Mθθ-5.94; Mφφ1.95; Mrθ-2.37; Mθφ-1.81; Mφr1.77; Fault plane solution: M₀6.23000×10¹⁴ NP1:φs47.00000°, δ44.00000°, λ41.00000°. NP2:φs286.00000°, δ63.00000°, λ126.00000°.*
JMA ***26*** *09:22:21.1±0.1, 24.1°N±1.1°×122.3°E±0.4, h26km±3km, MV3.7/15, TAIWAN REGION*
ISC 26 09:22:18.4±1.1, 24.06N±0.02×122.30E±0.01, h5km±9km, n130, σ0.83/245, 6C-5D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.57**	**296**	*e*P	**Pb**	**09 22 31.6**	**+0.7**
	baz=283						
EHP				*e*S	**Sb**	**09 22 40.2**	**+1.0**
	baz=283						
EWUT	**Wuta**	**0.61**	**309**	P	**Pb**	**09 22 31.8**	**+0.2**
	baz=306						
EWUT				S	**Sb**	**09 22 39.4**	**-1.1**
	baz=306						
ENA	**Nanau**	**0.62**	**306**	*i* P	**Pb**	**09 22 31.8**	**-0.1**
	baz=303						
ENA				*i* S	**Sb**	**09 22 40.1**	**-0.9**
	baz=303						
ETL	**Fush Village**	**0.62**	**279**	P	**Pn**	**09 22 33.6**	**-0.4**
	baz=250						
ETL				*e*S	**Sn**	**09 22 44.9**	**+0.4**
	baz=250						
HWA	**Hwalien**	**0.64**	**262**	P	**Pn**	**09 22 34.2**	**0.0**
	baz=252						
TWD	**Chiawan**	**0.64**	**272**	⇑*i*P	**Pn**	**09 22 33.7**	**-0.5**
	baz=246						
TWD				*i* S	**Sn**	**09 22 43.4**	**-1.4**
	baz=246						
NACB	**Ninganchiao**	**0.65**	**280**	⇑P	**Pn**	**09 22 33.9**	**-0.5**
	baz=252						
NACB				S	**Sn**	**09 22 43.8**	**-1.3**
	baz=252						
TEYL	**Yanliau Villag**	**0.67**	**253**	P	**Pn**	**09 22 34.7**	**+0.1**
	baz=234						
TEYL				*e*S	**Sn**	**09 22 45.2**	**-0.2**
	baz=234						
TWC	**Suao**	**0.68**	**323**	⇓*i*P	**Pb**	**09 22 32.2**	**-0.6**
	baz=316						
TWC				*i* S	**Sg**	**09 22 39.5**	**-0.9**
	baz=316						
JYNG	**Yonagunijimaku**	**0.70**	**57**	P	**Pb**	**09 22 33.9**	**+0.7**
JYNG				*e*S	**Sb**	**09 22 42.9**	**-0.3**
	baz=272						
ETLH	**Xiulin Townshi**	**0.76**	**281**	P	**Pn**	**09 22 35.7**	**-0.3**
	baz=272						
ETLH				S	**Sn**	**09 22 47.3**	**-0.6**
	baz=272						
YOJ	**Yonaguni jima**	**0.76**	**58**	⇑P	**Pb**	**09 22 35.0**	**+0.8**
	baz=76						
YOJ				S	**Sb**	**09 22 44.6**	**-0.3**
	baz=76						
YOJ	**Yonaguni jima**	**0.76**	**58**	P	**Pb**	**09 22 35.0**	**+0.8**
YOJ				S	**Sb**	**09 22 44.8**	**-0.1**
NDS	**Dongshan**	**0.78**	**317**	*e*P	**Pb**	**09 22 34.4**	**-0.1**
	baz=309						
NDS				*e*S	**Sg**	**09 22 43.0**	**-0.5**
	baz=309						
EGS		**0.85**	**337**	*i* P	**Pb**	**09 22 35.4**	**-0.2**
	baz=332						
EGS				*i* S	**Sg**	**09 22 45.1**	**-0.6**
	baz=332						
LATG	**Datong**	**0.85**	**304**	⇓P	**Pb**	**09 22 36.0**	**+0.3**
	baz=303						
LATG				S	**Sb**	**09 22 47.8**	**+0.3**
	baz=303						
ILA	**Ilan**	**0.86**	**324**	*i* P	**Pb**	**09 22 35.5**	**-0.3**
	baz=318						
ILA				*i* S	**Sg**	**09 22 45.9**	**-0.3**
	baz=318						
TWE	**Neicheng**	**0.87**	**319**	*i* P	**Pb**	**09 22 35.9**	**-0.2**
	baz=312						
TWE				S	**Sb**	**09 22 47.4**	**-0.7**
	baz=312						
EGFH	**Guangfu**	**0.89**	**244**	P	**Pn**	**09 22 37.1**	**-0.5**
	baz=227						
EGFH				S	**Sn**	**09 22 50.6**	**-0.3**
	baz=227						
NTC	**Toucheng**	**0.90**	**332**	*i* P	**Pb**	**09 22 36.4**	**-0.1**
	baz=326						
NTC				S	**Sg**	**09 22 47.6**	**+0.3**
	baz=326						
NNSB	**Datong**	**0.91**	**294**	⇑P	**Pn**	**09 22 37.8**	**-0.3**
	baz=285						
NNSB				S	**Sn**	**09 22 50.3**	**-1.3**
	baz=285						
NNS	**Nan Shan**	**0.93**	**294**	⇑*i*P	**Pn**	**09 22 38.1**	**-0.2**
	baz=286						
NNS				*i* S	**Sb**	**09 22 50.5**	**+0.8**
	baz=286						
WHF	**Hehuan Shan**	**0.95**	**275**	*i* P	**Pn**	**09 22 38.3**	**-0.5**
	baz=268						
WHF				S	**Sn**	**09 22 52.9**	**0.0**
	baz=268						
FUSB	**Fushanzhiwuyua**	**0.95**	**317**	⇓P	**Pb**	**09 22 37.7**	**+0.2**
	baz=310						
FUSB				S	**Sg**	**09 22 49.0**	**0.0**
	baz=310						
FUSS	**Fushou**	**0.98**	**281**	*i* P	**Pn**	**09 22 39.0**	**-0.1**
	baz=273						
FUSS				S	**Sn**	**09 22 52.4**	**-1.2**
	baz=273						
TWB1	**Santiao Chiao**	**0.98**	**343**	*i* P	**Pb**	**09 22 37.7**	**-0.2**
	baz=340						
TWB1				S	**Sg**	**09 22 49.1**	**-0.9**
	baz=340						
HGSD	**Ruisui**	**0.98**	**235**	P	**Pn**	**09 22 40.1**	**+1.2**
	baz=231						
HGSD				S	**Sn**	**09 22 52.9**	**-0.3**
	baz=231						
TIPB	**Shuangxi**	**1.00**	**335**	*i* P	**Pb**	**09 22 38.3**	**0.0**
	baz=322						
TIPB				*i* S	**Sg**	**09 22 49.6**	**-1.0**
	baz=322						
NWLT	**Wulai**	**1.02**	**315**	*i* P	**Pn**	**09 22 39.1**	**-0.3**
	baz=308						
NWLT				S	**Sg**	**09 22 50.5**	**-0.7**
	baz=308						
CHGB	**Renai**	**1.03**	**270**	P	**Pn**	**09 22 39.7**	**-0.1**
	baz=250						
CHGB				S	**Sb**	**09 22 53.3**	**+0.5**
	baz=250						
OWD	**Renai**	**1.03**	**264**	*i* P	**Pn**	**09 22 40.1**	**+0.3**
	baz=258						
OWD				S	**Sn**	**09 22 54.3**	**-0.4**
	baz=258						
YHNB	**Yeheng**	**1.04**	**306**	P	**Pn**	**09 22 39.8**	**+0.1**
	baz=283						
YHNB				S	**Sn**	**09 22 53.8**	**-0.9**
	baz=283						
TWT	**Tachien**	**1.04**	**281**	*i* P	**Pn**	**09 22 40.2**	**+0.3**
	baz=273						
TWT				*i* S	**Sn**	**09 22 54.7**	**-0.3**
	baz=273						
EHY	**Hungye**	**1.05**	**238**	*i* P	**Pn**	**09 22 39.8**	**-0.1**
	baz=225						
EHY				*i* S	**Sn**	**09 22 54.2**	**-0.8**
	baz=225						
NSK	**Sanguang**	**1.05**	**306**	*i* P	**Pn**	**09 22 39.9**	**0.0**
	baz=282						
NSK				*i* S	**Sb**	**09 22 53.3**	**0.0**
	baz=282						
TDCB	**Techi**	**1.06**	**281**	P	**Pn**	**09 22 40.6**	**+0.5**
	baz=273						
TDCB				S	**Sb**	**09 22 53.5**	**-0.1**
	baz=273						
WUSB	**Renai**	**1.08**	**266**	⇑P	**Pn**	**09 22 40.7**	**+0.3**
	baz=261						
WUSB				S	**Sn**	**09 22 55.9**	**+0.1**
	baz=261						
SXI1	**Grass Mountain**	**1.10**	**339**	⇓P	**Pb**	**09 22 39.7**	**-0.3**
	baz=335						
SXI1				S	**Sg**	**09 22 53.5**	**-0.2**
	baz=335						
NWF	**Wu-fen Shan**	**1.11**	**335**	⇓*i*P	**Pb**	**09 22 40.2**	**+0.1**
	baz=330						
NWF				*i* S	**Sg**	**09 22 54.0**	**-0.1**
	baz=330						
TWA	**Mucha**	**1.12**	**325**	*i* P	**Pn**	**09 22 40.9**	**+0.1**
	baz=319						
TWA				*i* S	**Sb**	**09 22 55.0**	**-0.3**
	baz=319						
YULB	**Yu-li**	**1.14**	**234**	P	**Pn**	**09 22 41.1**	**0.0**
	baz=247						
YULB				S	**Sn**	**09 22 57.0**	**0.0**
	baz=247						
NHDH	**Xindian Distri**	**1.14**	**322**	*i* P	**Pn**	**09 22 41.6**	**+0.5**
	baz=306						
NHDH				S	**Sg**	**09 22 55.1**	**0.0**
	baz=306						
EYUL	**Yuli**	**1.15**	**232**	P	**Pn**	**09 22 42.1**	**+1.0**
	baz=246						
EYUL				S	**Sn**	**09 22 58.0**	**+0.7**
	baz=246						
NFF	**Wufeng Townshi**	**1.22**	**298**	P	**Pn**	**09 22 42.8**	**+0.6**
	baz=291						
NFF				S	**Sb**	**09 22 58.0**	**-0.1**
	baz=291						
WHP	**Taichung City**	**1.25**	**280**	P	**Pn**	**09 22 43.8**	**+1.0**
	baz=262						
WHP				S	**Sn**	**09 22 59.6**	**-0.4**
	baz=262						
FULB	**Fuli**	**1.26**	**227**	*i* P	**Pn**	**09 22 42.7**	**-0.1**
	baz=212						
FULB				S	**Sn**	**09 23 00.5**	**+0.3**
	baz=212						
SSLB	**Suanglung**	**1.26**	**258**	P	**Pn**	**09 22 43.4**	**+0.6**
	baz=253						
SSLB				S	**Sn**	**09 22 59.9**	**-0.2**
	baz=253						
YM01	**YM01**	**1.27**	**329**	P	**Pg**	**09 22 42.5**	**-0.2**
	baz=337						
YM01				S	**Sg**	**09 22 58.6**	**-0.6**
	baz=337						
WCS	**Beigang Elemen**	**1.27**	**270**	P	**Pn**	**09 22 43.5**	**+0.7**
	baz=255						
WCS				S	**Sb**	**09 22 59.4**	**-0.1**
	baz=255						
SMLT	**Sun Moon Lake**	**1.29**	**262**	*i* P	**Pn**	**09 22 44.2**	**+0.9**
	baz=247						
SMLT				*i* S	**Sn**	**09 23 00.9**	**-0.2**
	baz=247						
TWS1	**Kuangyinshan**	**1.31**	**322**	*i* P	**Pb**	**09 22 43.9**	**+0.4**
	baz=329						
TWS1				*i* S	**Sb**	**09 23 00.6**	**0.0**
	baz=329						
NSTT	**Nanjuang**

TYC				S		Sg	09 22 59.8	-1.4
	baz=259							
IRIF	**Iriomote-Funau**	**1.33**	**78**	P		**Pb**	**09 22 44.4**	**+0.4**
IRIF				*e*S		**Sg**	**09 23 01.0**	**-0.4**
NTST	**Danshui**	**1.34**	**325**	P		**Pn**	**09 22 43.4**	**-0.4**
	baz=335							
NTST				*e*S		**Sg**	**09 23 00.5**	**-1.1**
	baz=335							
NCU	**National Centr**	**1.36**	**312**	*e*P		**Pn**	**09 22 43.8**	**-0.2**
	baz=305							
NCU				*e*S		**Sg**	**09 23 01.5**	**-0.6**
	baz=305							
NCUH	**Zhongli**	**1.36**	**312**	P		**Pb**	**09 22 44.9**	**+0.5**
	baz=305							
NCUH				*e*S		**Sn**	**09 23 04.0**	**+1.5**
	baz=305							
YUS	**Yu-Shan**	**1.36**	**245**	*i* P		**Pb**	**09 22 45.4**	**+0.7**
	baz=242							
YUS				S		**Sn**	**09 23 02.5**	**-0.7**
	baz=242							
TWY	**Chenhua**	**1.36**	**332**	P		**Pg**	**09 22 44.3**	**-0.3**
	baz=328							
TWY				S		**Sb**	**09 23 02.2**	**0.0**
	baz=328							
HATJ	**Hateruma jima**	**1.38**	**90**	P		**Pg**	**09 22 45.6**	**+0.8**
HATJ				*e*S		**Sn**	**09 23 03.7**	**+0.7**
SBCB	**Hsinchu**	**1.40**	**301**	P		**Pg**	**09 22 45.0**	**-0.3**
	baz=294							
SBCB				S		**Sn**	**09 23 04.4**	**+0.9**
	baz=294							
HSN	**Hsinchu**	**1.42**	**302**	P		**Pg**	**09 22 45.7**	**+0.1**
	baz=296							
HSN				*e*S		**Sg**	**09 23 03.5**	**-0.6**
	baz=296							
EDH	**Donghe**	**1.42**	**220**	*e*P		**Pb**	**09 22 44.9**	**-0.5**
	baz=209							
EDH				S		**Sb**	**09 23 03.3**	**-0.5**
	baz=209							
NSY	**Sanyi**	**1.45**	**284**	P		**Pg**	**09 22 47.3**	**+1.1**
	baz=278							
NSY				*e*S		**Sn**	**09 23 05.8**	**+1.1**
	baz=278							
NMLH	**Miaoli**	**1.46**	**289**	*e*P		**Pg**	**09 22 47.0**	**+0.7**
	baz=283							
WJS	**Zhushan**	**1.46**	**261**	P		**Pg**	**09 22 47.9**	**+1.5**
	baz=257							
WJS				S		**Sn**	**09 23 09.5**	**+4.5**
	baz=257							
ELDTW	**Lidau**	**1.46**	**234**	*i* P		**Pb**	**09 22 45.8**	**-0.4**
	baz=219							
ELDTW				*i* S		**Sn**	**09 23 05.5**	**+0.3**
	baz=219							
ALS	**Alishan**	**1.48**	**248**	*i* P		**Pg**	**09 22 47.5**	**+0.7**
	baz=245							
ALS				*i* S		**Sn**	**09 23 06.2**	**+0.4**
	baz=245							
TCU	**Taichung**	**1.48**	**274**	*e*P		**Pg**	**09 22 47.7**	**+0.8**
	baz=269							
TCU				*e*S		**Sg**	**09 23 07.8**	**+1.6**
	baz=269							
WNT	**Mingjian**	**1.49**	**263**	P		**Pg**	**09 22 47.3**	**+0.3**
	baz=259							
WNT				*i* S		**Sg**	**09 23 07.6**	**+1.3**
	baz=259							
WDJ	**Dajia District**	**1.54**	**281**	P		**Pg**	**09 22 48.4**	**+0.4**
	baz=275							
WDJ				S		**Sg**	**09 23 09.5**	**+1.5**
	baz=275							
CHN5	**Tsauling**	**1.56**	**253**	P		**Pg**	**09 22 48.7**	**+0.4**
	baz=250							
CHN5				S		**Sg**	**09 23 09.8**	**+1.3**
	baz=250							
JKRS	**Kuro-shima**	**1.57**	**83**	P		**Pg**	**09 22 48.6**	**0.0**
JKRS				S		**Sn**	**09 23 08.3**	**+0.5**
LONT	**Longtian**	**1.57**	**223**	*e*P		**Pb**	**09 22 47.5**	**-0.6**
	baz=223							
LONT				*e*S		**Sn**	**09 23 07.6**	**-0.3**
	baz=223							
LDUT	**Ludao**	**1.58**	**209**	*e*P		**Pb**	**09 22 47.5**	**-0.7**
	baz=209							
LDUT				*e*S		**Sn**	**09 23 06.6**	**-1.3**
	baz=209							
WCHH	**Zhanghua**	**1.59**	**271**	*e*P		**Pg**	**09 22 49.2**	**+0.3**
	baz=267							
WCHH				*e*S		**Sg**	**09 23 09.5**	**-0.1**
	baz=267							
WDLH	**Douliu**	**1.65**	**257**	P		**Pg**	**09 22 50.5**	**+0.3**
	baz=241							
WDLH				S		**Sg**	**09 23 13.7**	**+2.1**
	baz=241							
STYH	**Taoyuan**	**1.66**	**238**	P		**Pg**	**09 22 49.8**	**-0.4**
	baz=236							
STYH				S		**Sb**	**09 23 10.3**	**-0.3**
	baz=236							
TWGBT	**Beinan**	**1.67**	**222**	P		**Pb**	**09 22 49.5**	**-0.2**
	baz=222							
TWGBT				S		**Sb**	**09 23 10.4**	**-0.6**
	baz=222							
TWG	**Pinlang**	**1.67**	**223**	P		**Pb**	**09 22 49.2**	**-0.5**
	baz=222							
TWG				*e*S		**Sn**	**09 23 09.1**	**-1.2**
	baz=222							
TTN	**Taitung**	**1.68**	**219**	*e*S		**Sn**	**09 23 09.9**	**-0.5**
	baz=210							
TPUB	**Ta-pu**	**1.71**	**244**	P		**Pg**	**09 22 50.8**	**-0.4**
	baz=242							
TPUB				S		**Sg**	**09 23 13.6**	**+0.2**
	baz=242							
JIJ	**Ishigaki jima**	**1.71**	**80**	P		**Pn**	**09 22 49.5**	**+0.6**
JIJ				*e*S		**Sn**	**09 23 09.6**	**-1.6**
WTP	**Ta-pu**	**1.75**	**243**	*i* P		**Pg**	**09 22 51.7**	**-0.2**
	baz=241							
WTP				S		**Sg**	**09 23 14.8**	**+0.2**
	baz=241							
CHN2	**Minshiung**	**1.75**	**253**	*i* P		**Pg**	**09 22 52.7**	**+0.6**
	baz=250							
CHN2				*i* S		**Sg**	**09 23 15.8**	**+1.0**
	baz=250							
WRL	**Guolierlin Hig**	**1.77**	**265**	*e*P		**Pb**	**09 22 51.3**	**0.0**
	baz=262							
WRL				*e*S		**Sg**	**09 23 14.3**	**-0.9**
	baz=262							
WTK	**Tuku**	**1.79**	**258**	*e*P		**Pg**	**09 22 52.7**	**-0.1**
	baz=243							
WTK				S		**Sg**	**09 23 15.5**	**-0.4**
	baz=243							
CHY	**Chiayi**	**1.81**	**252**	*e*P		**Pg**	**09 22 52.5**	**-0.6**
	baz=250							
CHY				*e*S		**Sg**	**09 23 17.7**	**+1.2**
	baz=250							
SGST	**Jiashian**	**1.85**	**239**	*i* P		**Pg**	**09 22 52.9**	**-1.0**
	baz=238							
SGST				S		**Sg**	**09 23 17.7**	**-0.3**
	baz=238							
SNST	**Tainan City**	**1.85**	**243**	P		**Pg**	**09 22 53.9**	**-0.1**
	baz=242							
SNST				S		**Sg**	**09 23 18.6**	**+0.6**
	baz=242							
JISG	**Ishigakijimahi**	**1.91**	**74**	P		**Pn**	**09 22 51.8**	**+0.2**
JISG				S		**Sn**	**09 23 14.3**	**-1.7**
WSF	**Szhu**	**1.95**	**258**	P		**Pb**	**09 22 54.6**	**+0.2**
	baz=270							
WSF				S		**Sg**	**09 23 20.6**	**-0.5**
	baz=270							
WSL	**Shuilin Townsh**	**1.97**	**255**	*e*P		**Pb**	**09 22 54.7**	**-0.1**
	baz=253							
WSL				S		**Sb**	**09 23 20.1**	**+0.4**
	baz=253							
ICHU	**Yijhu**	**1.98**	**250**	P		**Pb**	**09 22 55.0**	**0.0**
	baz=248							
ICHU				*e*S		**Sg**	**09 23 20.7**	**-1.3**
	baz=248							
CHN3	**Shinhua**	**2.03**	**241**	*e*S		**Sg**	**09 23 23.8**	**+0.2**
	baz=241							
SCST	**Cishan**	**2.03**	**235**	*e*P		**Pg**	**09 22 57.5**	**+0.1**
	baz=222							
SCST				*e*S		**Sg**	**09 23 24.8**	**+1.1**
	baz=222							
TSMG	**Majia**	**2.03**	**229**	P		**Pg**	**09 22 56.9**	**-0.5**
	baz=221							
TSMG				*e*S		**Sg**	**09 23 22.5**	**-1.3**
	baz=221							
CHN8	**Yiju**	**2.04**	**250**	*e*P		**Pb**	**09 22 56.1**	**+0.1**
	baz=249							
CHN8				*e*S		**Sb**	**09 23 21.9**	**+0.2**
	baz=249							
SHHT	**Tainan City**	**2.07**	**240**	*e*P		**Pg**	**09 22 57.6**	**-0.5**
	baz=241							
SHHT				*e*S		**Sg**	**09 23 24.8**	**-0.1**
	baz=241							
MASBT	**Mashibuluo**	**2.10**	**227**	P		**Pb**	**09 22 57.0**	**-0.1**
	baz=220							
MASBT				S		**Sg**	**09 23 24.4**	**-1.7**
	baz=220							
TWM1	**Shoushan**	**2.12**	**235**	P		**Pg**	**09 22 59.0**	**-0.1**
	baz=232							
TWM1				*e*S		**Sg**	**09 23 26.6**	**0.0**
	baz=232							
SCLT	**Jiali**	**2.12**	**246**	*e*S		**Sb**	**09 23 24.5**	**+0.4**
	baz=245							
LAY	**Lan-yu**	**2.13**	**199**	P		**Pn**	**09 22 54.7**	**0.0**
	baz=201							
TAW	**Tawu**	**2.13**	**218**	*e*P		**Pn**	**09 22 55.3**	**+0.5**
	baz=218							
EAST	**Anshuo**	**2.14**	**219**	P		**Pn**	**09 22 55.1**	**+0.3**
	baz=220							
EAST				S		**Sn**	**09 23 21.2**	**-0.6**
	baz=220							
TAWH	**Dawu Township**	**2.15**	**217**	*e*P		**Pn**	**09 22 55.5**	**+0.6**
	baz=219							
TAWH				*e*S		**Sb**	**09 23 23.2**	**-1.7**
	baz=219							
LYUB	**Lan-yu**	**2.15**	**198**	*e*P		**Pn**	**09 22 54.9**	**-0.2**
	baz=209							
LYUB				S		**Sn**	**09 23 21.5**	**-0.6**
	baz=209							
SSPT	**Xinbi**	**2.24**	**226**	*e*P		**Pb**	**09 22 59.0**	**-0.4**
	baz=220							
SSPT				*e*S		**Sb**	**09 23 26.3**	**-1.1**
	baz=220							
JTJ	**Tarama**	**2.27**	**75**	P		**Pn**	**09 22 57.8**	**+1.2**
JTJ				S		**Sn**	**09 23 24.3**	**-0.6**
SCZT	**Fangliau**	**2.29**	**223**	*e*P		**Pb**	**09 22 58.4**	**-1.8**
	baz=217							
SCZT				*e*S		**Sb**	**09 23 27.4**	**-1.3**
	baz=217							
SLIU	**Shizi**	**2.30**	**217**	*e*P		**Pn**	**09 22 58.3**	**+1.2**
	baz=219							
SLIU				*e*S		**Sn**	**09 23 27.0**	**+1.3**
	baz=219							
WLCH	**Liuqiu**	**2.46**	**226**	*e*P		**Pb**	**09 23 03.1**	**0.0**
	baz=228							
TSEB	**Hengchuen, Pin**	**2.51**	**211**	*e*P		**Pb**	**09 23 01.8**	**-2.2**
	baz=214							
TSEB				*e*S		**Sn**	**09 23 32.5**	**+1.6**
	baz=214							
TWKBT	**Hengchun**	**2.52**	**213**	*e*P		**Pn**	**09 23 01.1**	**+1.1**
	baz=215							
TWKBT				*e*S		**Sn**	**09 23 31.4**	**+0.2**
	baz=215							
WDGT	**Dungji**	**2.55**	**252**	P		**Pn**	**09 23 01.8**	**+1.4**
	baz=252							
WDGT				*e*S		**Sn**	**09 23 31.5**	**-0.4**
	baz=252							
PHUB	**P'eng-hu**	**2.56**	**258**	P		**Pn**	**09 23 01.7**	**+1.1**
	baz=257							
PHUB				S		**Sn**	**09 23 32.7**	**+0.7**
	baz=257							
PNG	**Penghu**	**2.56**	**259**	P		**Pn**	**09 23 01.8**	**+1.2**
	baz=258							
PNG				S		**Sn**	**09 23 33.0**	**+0.8**
	baz=258							
JIRB	**Irabujima**	**2.73**	**73**	P		**Pn**	**09 23 04.0**	**+1.0**
JIRB				*e*S		**Sn**	**09 23 35.1**	**-1.2**
VWUC	**VWUC**	**2.75**	**290**	P		**Pn**	**09 23 03.2**	**-0.1**
	baz=285							
VCHM	**Qimei**	**2.77**	**253**	*e*P		**Pn**	**09 23 04.8**	**+1.4**
	baz=240							
VCHM				*e*S		**Sn**	**09 23 38.3**	**+1.1**
	baz=240							
JIKM	**Ikemajima**	**2.82**	**72**	P		**Pn**	**09 23 05.4**	**+1.2**
JIKM				S		**Sn**	**09 23 38.2**	**-0.3**
JMJ2	**Miyako jima3**	**2.84**	**76**	P		**Pn**	**09 23 06.0**	**+1.5**
JMJ2				*e*S		**Sn**	**09 23 39.1**	**-0.1**
JOGS	**Gusukube**	**2.92**	**76**	P		**Pn**	**09 23 07.3**	**+1.8**
JOGS				*e*S		**Sn**	**09 23 40.6**	**-0.3**
PTMZ	**Houxiangcun**	**3.05**	**289**	*e*P		**Pn**	**09 23 07.3**	**-0.1**
	baz=284							
XPSS	**Dashiqiu**	**3.43**	**327**	*e*P		**Pn**	**09 23 12.1**	**-0.5**
	baz=321							
KNM	**Kinmen**	**3.55**	**276**	*e*P		**Pn**	**09 23 16.3**	**+2.2**
	baz=274							
KNMB	**Chin-men Tao**	**3.59**	**277**	*e*P		**Pn**	**09 23 14.5**	**-0.2**
	baz=275							
MHZQ	**Yeshan**	**3.59**	**305**	*e*P		**Pn**	**09 23 14.4**	**-0.4**
	baz=298							
MHZQ				*e*S		**Sn**	**09 23 55.2**	**-2.4**
	baz=298							
AXDP	**Jialang**	**4.03**	**283**	*e*P		**Pn**	**09 23 21.5**	**+0.7**
	baz=279							
ZPLA	**Ao Xicun**	**4.16**	**269**	*e*P		**Pn**	**09 23 22.8**	**+0.1**
	baz=267							

IDC ***26*** *09:53:58.8±2.2, 12°.86N×87°.22W, h0km, mb3.2/3, mbtmp3.2/4, ML3.0/1, Error ellipse: s-maj=155.7km s-min=23.0km az=52.0*
SNET ***26*** *09:54:01.4±0.8, 12°.24N×88°.03W, h15km±4km, ML3.1*
INET ***26*** *09:54:03.5±0.3, 12°.28N×87°.72W, h13km±5km, MW3.4*
ISC 26 09:54:02.3±1.5**, 12°.21N**±0°.09×**87°.89W**±0°.07**, h45**km±18km**, n17**, σ0**s75/24, mb3.1/3, 1D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CSGN	**Cosiguina Volc**	**0.83**	**23**	*e*P		**Pn**	**09 54 17.3**	**-0.5**
CRIN	**San Cristobal**	**0.95**	**59**	*e*P		**Pn**	**09 54 19.2**	**-0.2**
TEL3	**Telica 3**	**1.08**	**70**	*e*P		**Pn**	**09 54 20.2**	**-0.9**
LCND	**La Caada**	**1.10**	**360**	*e*P		**Pn**	**09 54 20.8**	**-0.5**
LCND				*e*S		**Sn**	**09 54 35.3**	**0.0**
LCND				IAML			09 54 39.4	
	comp=Z,788nm,0.5s							
CNGN	**Cerro Negro**	**1.20**	**76**	*e*P		**Pn**	**09 54 22.4**	**-0.3**
COPN	**Copaltepe**	**1.27**	**91**	*e*P		**Pn**	**09 54 22.9**	**-0.7**
COEB	**Comit de Eme**	**1.43**	**334**	*e*P		**Pn**	**09 54 25.1**	**-0.8**
COEB				*e*S		**Sn**	**09 54 43.9**	**+0.2**
COEB				IAML			09 54 54.8	
	comp=Z,206nm,0.4s							
PQSS	**Presa 15 de Se**	**1.56**	**335**	*e*P		**Pn**	**09 54 27.2**	**-0.3**
PQSS				*e*S		**Sn**	**09 54 47.4**	**+0.8**
SCLA	**Alcaldia de Sa**	**1.70**	**331**	*e*P		**Pn**	**09 54 29.4**	**-0.2**
SCLA				*e*S		**Sn**	**09 54 51.0**	**+0.8**
COEG	**Centro de Oper**	**1.71**	**325**	*e*P		**Pn**	**09 54 29.3**	**-0.4**
COEG				*e*S		**Sn**	**09 54 51.4**	**+1.0**
SJTE	**Alcalda de S**	**1.77**	**322**	*e*P		**Pn**	**09 54 30.0**	**-0.7**
PAVA	**Las Pavas**	**1.81**	**326**	*e*P		**Pn**	**09 54 30.9**	**-0.3**
PAVA				*e*S		**Sn**	**09 54 53.7**	**+0.6**
PAVA				IAML			09 55 05.2	
	comp=Z,181nm,0.4s							
JAYA	**Jayaque - finc**	**2.10**	**314**	*e*P		**Pn**	**09 54 33.7**	**-1.4**
JTS	**Las Juntas de**	**3.45**	**123**	Pn		**Pn**	**09 54 53.9**	**+0.2**
	comp=Z,1.4nm,0.3s,baz=180,slow=22,SNR=9.7							
JTS				Sn		**Sn**	**09 55 33.3**	**0.0**
	comp=Z,2.6nm,0.3s,baz=346,slow=22,SNR=6.3							
	comp=Z,3.1nm,0.3s							
TXAR	**Lajitas Array**	**22.50**	**322**	P		**P**	**09 58 59.6**	**+1.4**
	comp=Z,1.1nm,0.6s,baz=138,slow=10,SNR=21							
	comp=Z,1.1nm,0.6s							
PDAR	**Pinedale Array**	**35.79**	**332**	P		**P**	**10 00 57.8**	**+0.3**
	comp=Z,0.2nm,0.7s,baz=132,slow=12,SNR=2.6							
	comp=Z,0.2nm,0.7s							
YKA	**Yellowknife Ar**	**53.73**	**345**	P		**P**	**10 03 18.6**	**-1.0**
	comp=Z,0.1nm,0.6s,baz=152,slow=6.5,SNR=4.3							
	comp=Z,0.1nm,0.6s							

SNET ***26*** *10:00:37.3±1.0, 13°.70N×91°.16W, h18km±5km, ML3.1*
GCG ***26*** *10:00:39.1±0.7, 14°.15N×91°.36W, h63km±11km, MD3.2*
ISC 26 10:00:33.4±2.8**, 13°.7N**±0°.1×**91°.38W**±0°.09**, h15**km±12km**, n14**, σ1s61/21, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FUG	**Fuego 3**	**0.92**	**34**	*e*P		**Pb**	**10 00 52.4**	**+1.2**
FUG				*e*S		**Sn**	**10 01 07.3**	**+2.2**
PCG	**Pacaya**	**1.03**	**46**	*e*P		**Pg**	**10 00 54.3**	**+1.0**
PCG				*e*S		**Sn**	**10 01 08.0**	**+0.2**
STG3	**Santiaguito 3,**	**1.04**	**350**	*e*P		**Pb**	**10 00 53.0**	**-0.3**
STG3				*e*S		**Sb**	**10 01 03.7**	**-3.1**
NBG	**Las Nubes**	**1.34**	**48**	*e*P		**Pb**	**10 00 59.5**	**+1.0**
NBG				*e*S		**Sg**	**10 01 17.2**	**+0.3**
NUBE	**Las Nubes**	**1.56**	**82**	*e*P		**Pn**	**10 01 01.0**	**+0.2**
NUBE				*e*S		**Sn**	**10 01 19.3**	**-1.7**
NUBE				IAML			10 01 20.8	
	comp=Z,127nm,0.2s							
SLOZ	**Alcaldia de Sa**	**1.58**	**77**	*e*P		**Pn**	**10 01 01.2**	**+0.2**
SLOZ				*e*S		**Sg**	**10 01 20.9**	**-3.5**
SLOZ				IAML			10 01 24.2	
	comp=Z,88nm,0.2s							
CEVE	**Cerro Verde**	**1.71**	**85**	*e*P		**Pn**	**10 01 03.4**	**+0.6**
CEVE				*e*S		**Sb**	**10 01 24.4**	**-1.7**
CEVE				IAML			10 01 30.6	
	comp=Z,610nm,0.2s							
JAYA	**Jayaque - finc**	**1.87**	**91**	*e*P		**Pn**	**10 01 04.9**	**-0.2**
JAYA				IAML			10 01 30.9	
	comp=Z,459nm,0.2s							
UEES	**Universidad Ev**	**2.08**	**89**	*e*P		**Pn**	**10 01 09.1**	**+1.3**
UEES				IAML			10 01 38.9	
	comp=Z,194nm,0.2s							
SJTE	**Alcalda de S**	**2.30**	**91**	*e*P		**Pn**	**10 01 11.2**	**+0.3**
COEG	**Centro de Oper**	**2.42**	**91**	*e*P		**Pn**	**10 01 14.1**	**+1.5**
COEG				IAML			10 01 47.1	
	comp=Z,110nm,0.3s							
SCLA	**Alcaldia de Sa**	**2.57**	**89**	*e*P		**Pn**	**10 01 15.9**	**+1.3**
COEB	**Comit de Eme**	**2.77**	**93**	*e*P		**Pn**	**10 01 18.3**	**+0.9**
LCND	**La Caada**	**3.41**	**96**	*e*P		**Pn**	**10 01 27.1**	**+1.0**
LCND				IAML			10 02 16.6	
	comp=Z,46nm,0.4s							

IDC ***26*** *10:01:59.0±0.8, 4°.85S×133°.61E, h0km, mb4.0/7, mbtmp4.2/11, ML4.2/4, MS4.0/34, Error ellipse: s-maj=36.2km s-min=17.1km az=70.0*
NEIC ***26*** *10:02:02.6±2.1, 4°.65S±0°.06×133°.97E±0°.08, h33km±5km, mb4.5/28, Error ellipse: s-maj=13.0km s-min=6.4km az=55.0*
DJA ***26*** *10:02:02.3±0.3, 5°.S±4°×13°.4E±°, h97km±18km, M4.5/14, mb4.7/14, mB4.9/7, MLv4.6/8, Mw(mB)4.2/7, MwMwp4.5/1, Mwp4.9/1*
ISC 26 10:02:03.0±0.4**, 4°.82S**±0°.05×**133°.90E**±0°.07**, h35km, n113, σ2s15/89, mb4.4/21, MS3.9/28, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FAKI	**Fak Fak**	**2.51**	**319**			**Pn**	**10 02 38.2**	**-3.1**
FAKI	**Fak Fak**	**2.51**	**319**	P		**Pn**	**10 02 38.0**	**-3.4**
FAKI	**Fak Fak**	**2.51**	**319**	P		**Pn**	**10 02 38.4**	**-3.0**
BNDI	**Bandanaira**	**4.00**	**274**	P		**Pn**	**10 03 03.1**	**+1.3**
BAKI	**Biak**	**4.23**	**31**	P		**Pn**	**10 03 02.8**	**-2.2**
SWI	**Sorong**	**4.74**	**326**	P		**Pn**	**10 03 09.7**	**-2.3**
WAMI	**Wamena**	**4.88**	**79**	P		**Pn**	**10 03 17.2**	**+3.1**
	912nm,0.8s							
MSAI	**Masohi**	**5.17**	**286**	P		**Pn**	**10 03 17.8**	**-0.2**
	0.1nm1μm20nm,0.5s							
SMPI	**Sarmi**	**5.56**	**60**	P		**Pn**	**10 03 24.0**	**+0.6**
	0.7nm2μm24nm,1.2s							
AAI	**Ambon**	**5.80**	**281**	P		**Pn**	**10 03 25.9**	**-0.8**
	0.5nm2μm130nm,0.6s							
NLAI	**Namlea**	**6.96**	**283**	P		**Pn**	**10 03 42.5**	**-0.1**
	0.3nm1μm66nm,0.7s							
LBMI	**Labuha**	**7.62**	**303**	P		**Pn**	**10 03 50.2**	**-1.5**
	0.2nm516nm29nm,0.6s							
KDU	**Kakadu**	**7.94**	**190**	P		**Pn**	**10 03 57.0**	**+1.0**
SANI	**Sanana**	**8.37**	**289**	P		**Pn**	**10 03 58.9**	**-3.0**
	24nm,0.6s							
SANI	**Sanana**	**8.37**	**289**	P		**Pn**	**10 03 59.1**	**-2.8**
MTN	**Manton Dam**	**8.43**	**199**	Pn		**Pn**	**10 04 03.2**	**+0.5**
MTN				Sn		**Sn**	**10 05 42.4**	**+5.8**
MTN	**Manton Dam**	**8.43**	**199**	P		**Pn**	**10 04 03.3**	**+0.6**
SOEI	**Soe**	**10.74**	**242**			**Pn**	**10 04 34.4**	**-0.2**
SOEI	**Soe**	**10.74**	**242**	P		**Pn**	**10 04 36.0**	**+1.5**
	84nm,0.8s							
SOEI	**Soe**	**10.74**	**242**	P		**Pn**	**10 04 35.8**	**+1.3**
BATI	**Baumata**	**11.47**	**242**	P		**Pn**	**10 04 44.6**	**+0.1**
KNRA	**Kununurra**	**11.91**	**205**	Pn		**Pn**	**10 04 49.4**	**-1.0**
KNRA	**Kununurra**	**11.91**	**205**	P		**Pn**	**10 04 49.5**	**-1.0**
EDFI	**Ende, Flores**	**12.74**	**252**	P		**Pn**	**10 05 03.1**	**+1.2**
	7.6nm,1.4s							
APSI	**Ampana**	**12.84**	**287**	P		**Pn**	**10 05 01.9**	**-1.3**
	405nm29nm,1.2s							
COEN	**Coen**	**12.88**	**135**			**Pn**	**10 05 01.0**	**-2.8**
PMG	**Port Moresby**	**13.92**	**110**	Pn		**Pn**	**10 05 18.5**	**+0.6**
	0.8nm,0.3s,baz=303,slow=9.6,SNR=3.5							
PMG				LR		LR	10 12 57.3	
	comp=Z,2μm,18.3s,baz=328,slow=46							
PMG	**Port Moresby**	**13.92**	**110**	Pn		**Pn**	**10 05 15.5**	**-2.4**
KAPI	**Kappang**	**14.10**	**269**	Pn		**Pn**	**10 05 18.1**	**-2.3**
	0.4nm,0.3s,baz=56,slow=11,SNR=1.3							
	1.4nm,0.3s							
DAV	**Davao City (W)**	**14.44**	**325**	LR		LR	10 11 10.3	
	comp=Z,304nm,20.8s,baz=152,slow=39							
WB0	**Warramunga Arr**	**14.86**	**178**	Pn		**Pn**	**10 05 27.5**	**-3.2**
WB0				IAmb		IAmb	10 05 39.3	
	comp=Z,37nm,1.2s							
WRAB	**Tennant Creek**	**15.03**	**178**			**Pn**	**10 05 30.0**	**-2.9**
WRAB				IAmb		IAmb	10 05 40.6	
	comp=Z,23nm,0.6s							
WRA	**Warramunga Arr**	**15.04**	**178**	Pn		**Pn**	**10 05 29.0**	**-4.1**
	comp=Z,0.8nm,0.3s,baz=1.7,slow=13,SNR=54							
WRA				Sn		**Sn**	**10 08 08.7**	**-10**
	comp=Z,1.0nm,0.3s,baz=359,slow=23,SNR=7.1							
WRA				LR		LR	10 12 01.8	
	comp=Z,557nm,20.1s,baz=30,slow=40							
WRA	**Warramunga Arr**	**15.04**	**178**			**Pn**	**10 05 28.8**	**-4.3**
WB2	**Warramunga Arr**	**15.04**	**178**	Pn		**Pn**	**10 05 30.1**	**-3.0**
WB2				IAmb		IAmb	10 05 46.5	
	comp=Z,25nm,0.8s							
WR0	**Warramunga Arr**	**15.06**	**178**	Pn		**Pn**	**10 05 30.5**	**-2.8**
WR0				IAmb		IAmb	10 05 41.5	
	comp=Z,26nm,0.9s							
QIS	**Mount Isa**	**16.59**	**161**	P		**Pn**	**10 05 51.3**	**-1.9**
MTSU	**Mount Surprise**	**16.70**	**143**	P		**Pn**	**10 05 52.5**	**-1.9**
KRVT	**Keravat (AS076**	**18.07**	**89**	Pn		**P**	**10 06 15.7**	**+3.9**
	comp=Z,1.4nm,0.3s,baz=339,slow=14,SNR=3.9							
KRVT				LR		LR	10 13 18.2	
	comp=Z,474nm,19.5s,baz=45,slow=37							
	comp=Z,15nm,0.7s							
AS31	**Alice Spring

comp=Z,64nm,19.4s,baz=135,slow=40
KSRS Korea Array 42.43 353 LR LR 10 27 06.2
comp=Z,170nm,19.9s,baz=130,slow=36
PZH PanZhiHua 44.04 317 P **P** **10 10 09.5 +1.7**
PZH pmax pmax
comp=Z,10.0nm,0.6s
PZH pmax pmax
comp=Z,100nm,5.3s
MSVF Nonsavu 45.03 110 LR LR 10 27 50.1
comp=Z,341nm,19.4s,baz=355,slow=34
USRK Ussuriysk Ar. 48.83 358 P **P** **10 10 46.5 +1.5**
USRK comp=Z,1.8nm,0.8s,baz=161,slow=9.2,SNR=1.9
LR LR 10 30 41.2
comp=Z,72nm,19.2s,baz=166,slow=35
comp=Z,1.8nm,0.8s
USRK Ussuriysk Ar. 48.83 358 P **P** **10 10 41.8 -3.1**
HHC Hu-ho-hao-te 49.85 338 *eP* **P** **10 10 55.5 +2.6**
HHC pmax pmax
comp=Z,12nm,0.8s
HHC pmax pmax
comp=Z,120nm,6.5s
RPZ Rata Peaks 50.70 146 LR LR 10 32 10.1
comp=Z,463nm,19.9s,baz=306,slow=36
XLT XiLinHaoTe 51.09 343 *eP* **P** **10 11 05.0 +2.8**
XLT pP pP 10 11 09.5 -2.5
XLT sP pwP 10 11 12.0 -3.1
XLT pmax pmax
comp=Z,11nm,0.9s
XLT pmax pmax
comp=Z,150nm,5.7s
URZ Urewera 51.44 136 LR LR 10 34 08.8
comp=Z,477nm,18.1s,baz=31,slow=37
RAO Raoul Island 51.59 124 LR LR 10 31 36.9
comp=Z,116nm,21.2s,baz=330,slow=34
GTA Gaotai 54.09 328 *eP* P 10 11 31.3 +6.7
GTA pP pwP 10 11 36.0 -1.2
GTA sP sP 10 11 38.3 -0.1
GTA pmax pmax
comp=Z,3.0nm,1.0s
AFI Afiamalu 54.24 104 LR LR 10 33 11.8
comp=Z,120nm,19.3s,baz=271,slow=34
PALK Pallekele 54.43 282 LR LR 10 36 23.9
comp=Z,56nm,20.1s,baz=218,slow=38
SONM Songino Array 57.74 338 P **P** **10 11 51.4 +0.8**
comp=Z,0.3nm,0.5s,baz=165,slow=6.0,SNR=2.2
comp=Z,0.3nm,0.5s
SONM Songino Array 57.74 338 P **P** **10 11 49.5 -1.0**
PETK Petropavlovsk- 61.11 16 LR LR 10 36 08.7
comp=Z,34nm,21.7s,baz=203,slow=34
PETK Petropavlovsk- 61.11 16 P **P** **10 12 12.4 -1.2**
CASY Casey 63.48 190 P **P** **10 12 28.9 -0.3**
CASY IAmb IAmb 10 12 35.6
comp=Z,7.2nm,1.4s
WMQ Urumqi 63.80 324 *eP* **P** **10 12 33.3 +1.5**
MA2 Magadan 65.58 9 LR LR 10 42 56.8
comp=Z,38nm,18.1s,baz=164,slow=37
SHEM Shemya Is, Ala 66.63 25 LR LR 10 37 13.0
comp=Z,56nm,21.7s,baz=233,slow=32
YAK Yakutsk 66.74 358 LR LR 10 44 31.3
comp=Z,57nm,18.1s,baz=110,slow=38
MK31 Makanchi Array 68.62 325 P **P** **10 13 02.0 -0.6**
MKAR Makanchi Array 68.62 325 P **P** **10 13 02.3 -0.4**
comp=Z,1.7nm,0.6s,baz=117,slow=7.2,SNR=17
comp=Z,1.7nm,0.6s
MKAR Makanchi Array 68.62 325 P **P** **10 13 02.4 -0.3**
MAKZ Makanchi 68.81 325 P **P** **10 13 03.2 -0.6**
MAKZ IAmb IAmb 10 13 12.5
comp=Z,3.0nm,0.8s
SEY Seymchan 69.02 9 LR LR 10 44 51.4
comp=Z,48nm,18.3s,baz=188,slow=37
KSH Kashi 69.12 315 P P 10 13 12.0 +5.9
KSH sP sP 10 13 19.5 -0.6
KSH pmax pmax
comp=Z,3.0nm,0.9s
ZALV Zalesovo Beam 71.43 332 P **P** **10 13 21.0 +1.3**
comp=Z,0.7nm,0.6s,baz=108,slow=4.8,SNR=3.6
comp=Z,0.7nm,0.6s
ZALV Zalesovo Beam 71.43 332 P **P** **10 13 19.1 -0.6**
AAK Ala-Archa 71.47 318 LR LR 10 48 18.3
comp=Z,58nm,19.5s,baz=112,slow=39
VNDA Vanda 74.16 174 P **P** **10 13 36.8 +1.2**
comp=Z,0.6nm,0.7s,baz=314,slow=5.9,SNR=5.6
VNDA LR LR 10 43 39.5
comp=Z,120nm,21.5s,baz=356,slow=34
comp=Z,0.6nm,0.7s
VNDA Vanda 74.16 174 P **P** **10 13 36.7 +1.2**
KKAR Karatay Array 74.33 317 P **P** **10 13 37.1 -0.1**
PPT Papeete 75.72 107 LR LR 10 45 29.7
comp=Z,108nm,18.8s,baz=281,slow=34
MAW Mawson 78.39 202 P **P** **10 14 00.8 +1.1**
comp=Z,4.0nm,0.8s,baz=340,slow=2.9,SNR=4.2
MAW LR LR 10 45 52.0
comp=Z,180nm,19.5s,baz=22,slow=34
comp=Z,4.0nm,0.8s
MAW Mawson 78.39 202 P **P** **10 13 59.8 +0.1**
MAW IAmb IAmb 10 14 04.1
comp=Z,5.0nm,1.4s
WSAR Wadi Sarin 78.45 295 LR LR 10 56 00.4
comp=Z,20nm,18.4s,baz=140,slow=42
GEYT Alibeck 81.81 309 LR LR 10 53 35.7
comp=Z,29nm,20.8s,baz=192,slow=38
ABKAR Akbulak array 83.26 321 P **P** **10 14 24.6 -1.4**
QSPA South Pole Qui 85.14 180 LR LR 10 52 44.3
comp=Z,185nm,19.2s,baz=7.0,slow=36
QSPA South Pole Qui 85.14 180 P **P** **10 14 35.4 -0.1**
QSPA IAmb IAmb 10 15 00.0
comp=Z,4.7nm,1.2s
KDAK Kodiak Island 85.36 31 LR LR 10 50 25.6
comp=Z,165nm,21.2s,baz=239,slow=34
J20K Nowinta River 86.55 25 P **P** **10 14 42.4 +0.1**
IMAR Indian Mountai 87.28 23 P **P** **10 14 44.4 -1.4**
MLY Manley 88.21 24 P **P** **10 14 49.7 -0.6**
MLY IAmb IAmb 10 15 12.3
comp=Z,2.5nm,1.0s
I23K Minto, Yukon-K 88.80 24 P **P** **10 14 52.1 -0.9**
I23K IAmb IAmb 10 14 56.2
comp=Z,2.9nm,1.1s
ILAR Eielson Array 89.74 25 P **P** **10 14 55.6 -1.9**
comp=Z,0.6nm,1.0s,baz=245,slow=4.7,SNR=4.6
ILAR LR LR 10 55 15.9
comp=Z,33nm,19.8s,baz=248,slow=36
BMAR Burnt Mountain 91.16 22 P **P** **10 15 03.4 -0.7**
LPAZ La Paz 149.75 134 PKPbc **PKiKP** **10 21 54.0 +1.9**
comp=Z,0.8nm,0.7s,baz=156,slow=1.9,SNR=1.8

*NEIC **26** 10:43:06.2±0.7, 4.°80S±0.°09×144.°1E±0.°1, h126km±7km, mb4.1/12, Error ellipse: s-maj=20.6km s-min=12.6km az=104.0*
*IDC **26** 10:43:08.4±3.8, 5.°02S×144.°21E, h160km±44km, mb3.3/6, mbtmp3.8/8, MS3.6/1, Error ellipse: s-maj=41.2km s-min=16.3km az=115.0*
ISC 26 10:43:07.7±0.6, 4.°92S±0.°06×144.°16E±0.°09, h150km, n38, σ1s26/39, mb3.7/8, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MANU	**Manus Island**	**4.29**	**48**	Pn	**Pn**	**10 44 09.1**	**-2.7**
PMG	**Port Moresby**	**5.36**	**146**	P	**Pn**	**10 44 24.9**	**-1.0**
	12nm,0.4s,baz=40,slow=6.2,SNR=14						
PMG				S	**Sn**	**10 45 25.6**	**-1.4**
	12nm,0.5s,baz=117,slow=22,SNR=1.4						
PMG	**Port Moresby**	**5.36**	**146**		**Pn**	**10 44 25.3**	**-0.6**
COEN	**Coen**	**9.03**	**186**	Pn	**Pn**	**10 45 16.1**	**+1.2**
COEN	**Coen**	**9.03**	**186**	P	**Pn**	**10 45 16.4**	**+1.5**
KDU	**Kakadu**	**13.88**	**235**	P	**Pn**	**10 46 15.9**	**-2.3**
WB0	**Warramunga Arr**	**17.56**	**212**	P	**P**	**10 47 02.6**	**+0.4**
WB0				IAmb	IAmb	10 47 06.2	
	comp=Z,7.3nm,0.9s						
WR0	**Warramunga Arr**	**17.64**	**211**	P	**P**	**10 47 03.6**	**+0.5**
WR0				IAmb	IAmb	10 47 11.6	
	comp=Z,5.3nm,0.9s						
WRAB	**Tennant Creek**	**17.72**	**212**	P	**P**	**10 47 04.5**	**+0.5**
WRAB				IAmb	IAmb	10 47 05.3	
	comp=Z,7.0nm,1.1s						
WRAB	**Tennant Creek**	**17.72**	**212**	P	**P**	**10 47 04.5**	**+0.5**
WB2	**Warramunga Arr**	**17.72**	**212**	P	**P**	**10 47 04.8**	**+0.8**
WB2				IAmb	IAmb	10 47 20.3	
	comp=Z,5.6nm,0.7s						
WRA	**Warramunga Arr**	**17.73**	**212**	P	**P**	**10 47 04.3**	**+0.2**
	comp=Z,3.2nm,0.9s,baz=25,slow=12,SNR=28						
WRA				S	**S**	**10 50 17.8**	**-2.9**
	comp=Z,0.5nm,0.6s,baz=43,slow=19,SNR=3.4						
WRA	**Warramunga Arr**	**17.73**	**212**	P	**P**	**10 47 03.6**	**-0.5**
KNRA	**Kununurra**	**18.52**	**234**	P	**P**	**10 47 12.8**	**0.0**
KNRA	**Kununurra**	**18.52**	**234**	P	**P**	**10 47 12.7**	**0.0**
SOEI	**Soe**	**20.30**	**255**	P	**P**	**10 47 30.7**	**-1.5**
AS31	**Alice Springs**	**21.10**	**207**	P	**P**	**10 47 41.9**	**+1.3**
ASAR	**Alice Springs**	**21.10**	**207**	P	**P**	**10 47 41.0**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=38,slow=8.1,SNR=16						
	comp=Z,0.5nm,0.5s						
ASAR	**Alice Springs**	**21.10**	**207**	P	**P**	**10 47 41.2**	**+0.7**
OOD	**Oodnadatta**	**24.14**	**199**	P	**P**	**10 48 12.3**	**+2.5**
WRKA	**Warakurna**	**25.14**	**216**	P	**P**	**10 48 20.2**	**+1.1**
MBWA	**Marble Bar**	**28.68**	**234**	P	**P**	**10 48 50.9**	**+0.2**
MBWA				IAmb	IAmb	10 48 53.2	
	comp=Z,14nm,1.0s						
MBWA	**Marble Bar**	**28.68**	**234**	P	**P**	**10 48 51.7**	**+1.0**
PSA00	**Pilbara Seismi**	**28.80**	**233**	P	**P**	**10 48 52.2**	**+0.4**
MSVF	**Nonsavu**	**35.51**	**114**	LR	LR	11 03 01.1	
	comp=Z,86nm,19.5s,baz=20,slow=34						
KSRS	**Korea Array**	**44.79**	**342**	P	**P**	**10 51 06.0**	**-0.5**
	comp=Z,1.2nm,0.8s,baz=163,slow=9.5,SNR=5.6						
	comp=Z,1.2nm,0.8s						
PETK	**Petropavlovsk-**	**58.93**	**9**	P	**P**	**10 52 51.9**	**+0.9**
	comp=Z,1.9nm,0.7s,baz=206,slow=9.0,SNR=2.5						
	comp=Z,1.9nm,0.7s						
MK31	**Makanchi Array**	**74.88**	**321**	P	**P**	**10 54 31.8**	**-0.2**
MKAR	**Makanchi Array**	**74.88**	**321**	P	**P**	**10 54 32.6**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=101,slow=8.7,SNR=4.3						
	comp=Z,0.4nm,0.5s						
MKAR	**Makanchi Array**	**74.88**	**321**	P	**P**	**10 54 32.0**	**0.0**
ZALV	**Zalesovo Beam**	**76.61**	**328**	P	**P**	**10 54 41.7**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=92,slow=5.4,SNR=4.4						
	comp=Z,0.9nm,0.6s						
ZALV	**Zalesovo Beam**	**76.61**	**328**	P	**P**	**10 54 41.0**	**-0.6**
IMAR	**Indian Mountai**	**83.50**	**21**	P	**P**	**10 55 19.8**	**+1.5**
QSPA	**South Pole Qui**	**85.04**	**180**	P	**P**	**10 55 28.1**	**+1.7**
QSPA				IAmb	IAmb	10 55 52.8	
	comp=Z,3.9nm,1.4s						
ILAR	**Eielson Array**	**85.62**	**24**	P	**P**	**10 55 29.0**	**0.0**
	comp=Z,0.7nm,0.7s,baz=260,slow=5.1,SNR=8.6						
	comp=Z,0.7nm,0.7s						
ILAR	**Eielson Array**	**85.62**	**24**	P	**P**	**10 55 28.6**	**-0.5**
BCAR	**Beaver Creek A**	**87.20**	**26**	P	**P**	**10 55 38.7**	**+1.8**
BMAR	**Burnt Mountain**	**87.42**	**21**	P	**P**	**10 55 39.7**	**+1.9**

*NIED **26** 11:07:35.5, 22.°97N×121.°36E, h0km, MW3.6, Moment Tensor Solution. s2 Moment tensor: Scale 1014Nm; Mrr0.69; Mθθ1.97; Mθθ-2.66; Mrθ-1.27; Mθφ1.34; Mφr0.54; Fault plane solution: M03.06000×1014 NP1: φs208.00000°, δ61.00000°, λ169.00000°. NP2: φs303.00000°, δ80.00000°, λ29.00000°.*
*JMA **26** 11:07:35.5±0.3, 23.°0N±0.°9×12.°1E±.°, h0km, MV3.8/12, TAIWAN REGION*
*TAP **26** 11:07:37.9, 22.°93N×121.°27E, h16km, ML3.7, B*
ISC 26 11:07:38.1±0.9, 22.°92N±0.°02×121.°32E±0.°02, h20km±1km, n121, σ1s11/193, 12C-16D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EDH	**Donghe**	**0.06**	**345**	⇓	*i* P	**Pb**	**11 07 41.1**	**-0.8**
	baz=42						
EDH					*i* S	**Sb**	**11 07 43.3**	**-1.1**
	baz=42						
LONT	**Longtian**	**0.18**	**267**	⇓	*i* P	**Pb**	**11 07 42.0**	**-1.7**
	baz=258						
LONT					*e* S	**Sb**	**11 07 45.6**	**-2.1**
	baz=258						
ECS	**Chishang**	**0.20**	**333**	⇑	*e* P	**Pb**	**11 07 43.3**	**-0.6**
	baz=345						
ECS					*e* S	**Sb**	**11 07 48.2**	**+0.3**
	baz=345						
TTN	**Taitung**	**0.23**	**225**	⇑	*i* P	**Pb**	**11 07 43.4**	**-0.6**
	baz=210						
TTN					*e* S	**Sb**	**11 07 49.2**	**+1.2**
	baz=210						
TWGBT	**Beinan**	**0.24**	**246**	⇓	*i* P	**Pb**	**11 07 43.2**	**-0.9**
	baz=236						
TWGBT					S	**Sb**	**11 07 47.2**	**-1.1**
	baz=236						
TWG	**Pinlang**	**0.25**	**248**	⇓	*i* P	**Pb**	**11 07 43.2**	**-1.0**
	baz=236						
TWG					*i* S	**Sb**	**11 07 47.2**	**-1.1**
	baz=236						
LDUT	**Ludao**	**0.28**	**150**		*i* P	**Pb**	**11 07 44.9**	**+0.4**
	baz=144						
LDUT					S	**Sb**	**11 07 50.1**	**+1.2**
	baz=144						
FULB	**Fuli**	**0.28**	**355**	⇑	*i* P	**Pb**	**11 07 44.2**	**-0.5**
	baz=6.0						
FULB					*e* S	**Sb**	**11 07 50.0**	**+0.9**
	baz=6.0						
ELDTW	**Lidau**	**0.39**	**314**	⇑	*i* P	**Pb**	**11 07 45.2**	**-1.2**
	baz=319						
ELDTW					*i* S	**Sb**	**11 07 50.1**	**-1.8**
	baz=319						
ECBN	**Changbin**	**0.42**	**17**	*eP*		**Pb**	**11 07 47.1**	**+0.4**
	baz=24						
ECBN					*e* S	**Sn**	**11 07 54.3**	**-1.7**
	baz=24						
EYUL	**Yuli**	**0.43**	**360**	⇑	*i* P	**Pb**	**11 07 46.5**	**-0.5**
	baz=7.0						
EYUL					*e* S	**Sb**	**11 07 53.0**	**0.0**
	baz=7.0						
TWF1	**Yuli**	**0.44**	**357**	⇑	*i* P	**Pb**	**11 07 46.4**	**-0.7**
	baz=5.0						
TWF1					*e* S	**Sb**	**11 07 53.3**	**+0.2**
	baz=5.0						
YULB	**Yu-li**	**0.48**	**357**	⇑	*i* P	**Pb**	**11 07 46.9**	**-0.9**
	baz=4.0						
YULB					*e* S	**Sb**	**11 07 53.3**	**-1.1**
	baz=4.0						
STYH	**Taoyuan**	**0.56**	**297**	⇓	*i* P	**Pb**	**11 07 48.2**	**-1.1**
	baz=299						
STYH					*e* S	**Sb**	**11 07 55.6**	**-1.4**
	baz=299						
STYT	**Tauyuan**	**0.57**	**296**	⇓	*i* P	**Pb**	**11 07 48.4**	**-1.2**
	baz=296						
STYT					*i* S	**Sb**	**11 07 56.0**	**-1.5**
	baz=296						
HGSD	**Ruisui**	**0.58**	**9**	*eP*		**Pb**	**11 07 49.4**	**-0.3**
	baz=15						
HGSD					*e* S	**Sn**	**11 07 58.8**	**-1.4**
	baz=15						
EHY	**Hungye**	**0.59**	**0**	*eP*		**Pb**	**11 07 48.5**	**-1.3**
	baz=6.0						
EHY					*e* S	**Sb**	**11 07 58.4**	**+0.6**
	baz=6.0						
SLGT	**Liugui**	**0.63**	**277**	P		**Pb**	**11 07 49.6**	**-0.8**
	baz=276						
SLGT					*e* S	**Sb**	**11 07 57.5**	**-1.4**
	baz=276						
SSD	**Sandimen**	**0.66**	**255**	⇓	P	**Pb**	**11 07 49.5**	**-1.5**
	baz=252						
SSD					*e* S	**Sb**	**11 07 57.1**	**-2.6**
	baz=252						
TSMG	**Majia**	**0.66**	**252**	⇓	P	**Pb**	**11 07 49.6**	**-1.4**
	baz=248						
TSMG					*e* S	**Sb**	**11 07 57.2**	**-2.5**
	baz=248						
YUS	**Yu-Shan**	**0.67**	**329**	*eP*		**Pb**	**11 07 50.2**	**-1.2**
	baz=333						
YUS					*e* S	**Sb**	**11 07 58.7**	**-1.7**
	baz=333						
TAW	**Tawu**	**0.68**	**215**	*eP*		**Pb**	**11 07 50.3**	**-1.0**
	baz=210						
TAW					*e* S	**Sb**	**11 07 58.9**	**-1.4**
	baz=210						
EAST	**Anshuo**	**0.69**	**220**	⇑	P	**Pb**	**11 07 50.3**	**-1.1**
	baz=215						
EAST					*e* S	**Sb**	**11 08 01.1**	**+0.6**
	baz=215						
TAWH	**Dawu Township**	**0.70**	**215**	⇑	P	**Pb**	**11 07 50.5**	**-1.2**
	baz=211						
TAWH					*e* S	**Sb**	**11 07 59.5**	**-1.3**
	baz=211						
SGST	**Jiashian**	**0.70**	**284**	*eP*		**Pb**	**11 07 50.0**	**-1.7**
	baz=283						
SGST					*e* S	**Sb**	**11 08 00.5**	**-0.4**
	baz=283						
MASBT	**Mashibuluo**	**0.70**	**245**	⇓	*i* P	**Pb**	**11 07 50.5**	**-1.2**
	baz=241						
MASBT					*e* S	**Sb**	**11 07 59.1**	**-1.8**
	baz=241						
WTP	**Ta-pu**	**0.73**	**297**	⇓	*i* P	**Pb**	**11 07 51.7**	**-0.5**
	baz=298						
WTP					*e* S	**Sb**	**11 08 02.4**	**+0.7**
	baz=298						
TPUB	**Ta-pu**	**0.74**	**301**	P		**Pb**	**11 07 52.0**	**-0.4**
TPUB	**Ta-pu**	**0.74**	**301**	⇓	*e* P	**Pb**	**11 07 51.9**	**-0.4**
	baz=302						
TPUB					*e* S	**Sb**	**11 08 01.9**	**-0.2**
	baz=302						
EGFH	**Guangfu**	**0.76**	**7**	*eP*		**Pb**	**11 07 51.5**	**-1.1**
	baz=11						
EGFH					*e* S	**Sn**	**11 08 06.0**	**+1.5**
	baz=11						
ALS	**Alishan**	**0.76**	**321**	⇑	P	**Pb**	**11 07 52.3**	**-0.5**
	baz=324						
ALS					*e* S	**Sb**	**11 08 02.3**	**-0.5**
	baz=324						
SCST	**Cishan**	**0.76**	**268**	⇓	*e* P	**Pb**	**11 07 52.5**	**-0.2**
	baz=266						
SCST					*e* S	**Sb**	**11 08 02.8**	**+0.2**
	baz=266						
CHN1	**Nanshi**	**0.78**	**290**	⇓	*e* P	**Pb**	**11 07 52.8**	**-0.2**
	baz=290						
CHN1					*e* S	**Sn**	**11 08 04.2**	**-0.9**
	baz=290						
TSPT	**Pingtung City**	**0.80**	**253**	*eP*		**Pb**	**11 07 52.7**	**-0.6**
	baz=250						
CHN4	**Tsaushan**	**0.80**	**303**	⇓	*e* P	**Pb**	**11 07 53.0**	**-0.3**
	baz=304						
CHN4					*e* S	**Sb**	**11 08 04.2**	**+0.5**
	baz=304						
TEGC	**Jichi Village**	**0.82**	**14**	*eP*		**Pn**	**11 07 54.1**	**-0.3**
	baz=19						
SNST	**Tainan City**	**0.82**	**292**	⇓	*e* P	**Pb**	**11 07 53.4**	**-0.2**
	baz=292						
SNST					*e* S	**Sn**	**11 08 04.9**	**-1.1**
	baz=292						
SSPT	**Xinbi**	**0.82**	**238**	*eP*		**Pb**	**11 07 53.2**	**-0.4**
	baz=235						
SSPT					*e* S	**Sb**	**11 08 04.2**	**0.0**
	baz=235						
TWM1	**Shoushan**	**0.83**	**264**	*eP*		**Pn**	**11 07 54.4**	**-0.3**
	baz=262						
TWM1					*e* S	**Sn**	**11 08 07.9**	**+1.6**
	baz=262						
SCZT	**Fangliau**	**0.84**	**230**	⇑	*e* P	**Pb**	**11 07 53.2**	**-0.8**
	baz=226						
SCZT					*e* S	**Sb**	**11 08 05.2**	**+0.2**
	baz=226						
TWK	**Hsinying**	**0.84**	**295**	⇓	*e* P	**Pb**	**11 07 53.8**	**-0.3**
	baz=295						
TWK					*e* S	**Sn**	**11 08 05.9**	**-0.7**
	baz=295						
SLIU	**Shizi**	**0.85**	**215**	*eP*		**Pb**	**11 07 52.6**	**-1.5**
	baz=211						
SLIU					*e* S	**Sb**	**11 08 04.3**	**-0.7**
	baz=211						
CHN3	**Shinhua**	**0.90**	**281**	*eP*		**Pn**	**11 07 56.1**	**+0.6**
	baz=280						
CHN3					*e* S	**Sn**	**11 08 11.4**	**+3.5**
	baz=280						
LAY	**Lan-yu**	**0.90**	**166**	*eP*		**Pb**	**11 07 54.3**	**-0.7**
	baz=163						
LAY					*e* S	**Sb**	**11 08 07.0**	**+0.4**
	baz=163						
ESL	**Shilin**	**0.90**	**7**	*eP*		**Pb**	**11 07 54.7**	**-0.4**
	baz=10.0						
ESL					*e* S	**Sn**	**11 08 07.4**	**-0.7**
	baz=10.0						
SHHT	**Tainan City**	**0.90**	**277**	*eP*		**Pn**	**11 07 56.4**	**+0.7**
	baz=276						
SHHT					*e* S	**Sn**	**11 08 10.3**	**+2.3**
	baz=276						
SSLB	**Suanglung**	**0.93**	**339**	P		**Pb**	**11 07 55.1**	**-0.5**
SSLB	**Suanglung**	**0.93**	**339**	*eP*		**Pb**	**11 07 54.8**	**-0.8**
	baz=341						
SSLB					*e* S	**Sn**	**11 08 07.9**	**-1.0**
	baz=341						
LYUB	**Lan-yu**	**0.94**	**165**	*eP*		**Pb**	**11 07 53.9**	**-1.8**
	baz=162						
LYUB					*e* S	**Sb**	**11 08 06.8**	**-0.9**
	baz=162						
TEYL	**Yanliau Villag**	**0.98**	**15**	*eP*		**Pn**	**11 07 57.3**	**+0.5**
	baz=18						
CHN2	**Minshiung**	**0.99**	**308**	*eP*		**Pn**	**11 07 57.7**	**+0.9**
	baz=309						
CHN2					*e* S	**Sn**	**11 08 11.6**	**+1.4**
	baz=309						
CHY	**Chiayi**	**1.01**	**305**	*eP*		**Pn**	**11 07 57.2**	**+0.1**
	baz=306						
CHY					*e* S	**Sn**	**11 08 11.1**	**+0.5**
	baz=306						
TAI1	**Yung-k'ang**	**1.01**	**277**	*eP*		**Pn**	**11 07 57.1**	**-0.1**
	baz=276						
WLCH	**Liuqiu**	**1.03**	**237**	*eP*		**Pb**	**11 08 00.5**	**+3.1**
	baz=235						
WGK	**Gukeng**	**1.04**	**318**	*eP*		**Pb**	**11 07 58.7**	**+1.3**
	baz=319						
SMLT	**Sun Moon Lake**	**1.04**	**338**	*eP*		**Pb**	**11 07 57.1**	**-0.3**
	baz=341						
SMLT					*e* S	**Sn**	**11 08 13.1**	**+1.5**
	baz=341						
OWD	**Renai**	**1.04**	**353**	*eP*		**Pb**	**11 07 56.5**	**-1.1**
	baz=355						
OWD					*e* S	**Sn**	**11 08 11.4**	**-0.4**
	baz=355						
TWP	**Hsiaoliuchiu**	**1.05**	**238**	*eP*		**Pb**	**11 08 00.6**	**+3.0**
	baz=235						
HEN	**Hengchun**	**1.05**	**211**	*eP*		**Pb**	**11 07 58.0**	**+0.3**
	baz=207						
WDLH	**Douliu**	**1.05**	**317**	*eP*		**Pb**	**11 07 58.1**	**+0.4**
	baz=318						
WDLH					*e* S	**Sn**	**11 08 13.2**	**+1.4**
	baz=318						
WJS	**Zhushan**	**1.05**	**329**	*eP*		**Pb**	**11 07 58.5**	**+0.8**
	baz=331						
ICHU	**Yijhu**	**1.06**	**295**	⇓	*e* P	**Pb**	**11 07 57.8**	**+0.1**
	baz=295						
ETM	**Tongmen**	**1.06**	**9**	*eP*		**Pn**	**11 07 56.9**	**-0.9**
	baz=11						
SCLT	**Jiali**	**1.07**	**284**	*eP*		**Pb**	**11 07 59.0**	**+1.1**
	baz=284						
SCLT					*e* S	**Sn**	**11 08 14.6**	**+2.5**
	baz=284						
TYC	**Yuchr**	**1.07**	**337**	*eP*		**Pn**	**11 07 57.3**	**-0.6**
	baz=339						
TYC					*e* S	**Sn**	**11 08 14.7**	**+2.4**
	baz=339						
TWKBT	**Hengchun**	**1.08**	**206**	*eP*		**Pn**	**11 07 57.3**	**-0.7**
	baz=203						
TSEB	**Hengchuen, Pin**	**1.08**	**201**	*eP*		**Pb**	**11 08 00.3**	**+2.2**
	baz=200						
WUSB	**Renai**	**1.09**	**350**	*eP*		**Pn**	**11 07 57.4**	**-0.9**
	baz=353						
WUSB					*e* S	**Sb**	**11 08 11.7**	**-0.5**
	baz=353						
CHN8	**Yiju**	**1.11**	**293**	*eP*		**Pn**	**11 07 58.1**	**-0.4**
	baz=293						
WNT	**Mingjian**	**1.12**	**329**	*eP*		**Pb**	**11 07 59.8**	**+1.0**
	baz=331						
CHGB	**Renai**	**1.15**	**353**	*eP*		**Pn**	**11 07 58.5**	**-0.8**
	baz=356						
CHGB					*e* S	**Sn**	**11 08 14.7**	**+0.2**
	baz=356						
WNT1	**Nantou City**	**1.15**	**329**	*eP*		**Pb**	**11 07 59.9**	**+0.6**
	baz=331						
WTK	**Tuku**	**1.15**	**312**	*eP*		**Pb**	**11 07 59.6**	**+0.3**
	baz=313						
WTK					*e* S	**Sn**	**11 08 15.5**	**+1.3**
	baz=313						
DPDB	**Guoxing**	**1.17**	**342**	*eP*		**Pb**	**11 08 00.0**	**+0.3**
	baz=344						
WSL	**Shuilin Townsh**	**1.17**	**301**	*eP*		**Pb**	**11 08 00.1**	**+0.4**
	baz=302						
WSL					*e* S	**Sn**	**11 08 16.3**	**+1.6**
	baz=302						
TWD	**Chiawan**	**1.19**	**12**	*eP*		**Pn**	**11 07 58.1**	**-1.5**
	baz=15						
WCS	**Beigang Elemen**	**1.20**	**342**	*eP*		**Pb**	**11 08 00.0**	**-0.1**
	baz=344						
WCS					*e* S	**Sn**	**11 08 16.7**	**+1.3**
	baz=344						
WHF	**Hehuan Shan**	**1.23**	**358**	*eP*		**Pn**	**11 07 59.7**	**-0.8**
WSF	**Szhu**	**1.24**	**306**	*eP*		**Pb**	**11 08 00.7**	**-0.1**
	baz=306						
NACB	**Ninganchiao**	**1.28**	**11**	*eP*		**Pn**	**11 07 59.0**	**-1.8**
	baz=14						
ETLH	**Xiulin Townshi**	**1.29**	**7**	*eP

	baz=359								
TDCB	**Techi**	**1.34**	**354**	*e*P		**Pb**	**11 08 02.5**	**-0.1**	
	baz=356								
WCHH	**Zhanghua**	**1.35**	**329**	*e*P		**Pb**	**11 08 04.1**	**+1.3**	
	baz=330								
TCU	**Taichung**	**1.36**	**334**	*e*P		**Pn**	**11 08 01.1**	**-0.8**	
	baz=336								
TCU				*e*S		**Sb**	**11 08 23.6**	**+3.6**	
	baz=336								
WHP	**Taichung City**	**1.40**	**346**	*e*P		**Pb**	**11 08 04.3**	**+0.7**	
	baz=348								
NNSH	**Datong**	**1.51**	**2**	*e*P		**Pb**	**11 08 05.1**	**-0.4**	
	baz=4.0								
TWQ1	**Liyutan**	**1.51**	**341**	*e*P		**Pb**	**11 08 06.3**	**+0.8**	
	baz=342								
WDGT	**Dungji**	**1.57**	**283**	*e*P		**Pn**	**11 08 03.7**	**-1.1**	
	baz=282								
WDGT				*e*S		**Sn**	**11 08 23.8**	**-0.7**	
	baz=282								
EWUT	**Wuta**	**1.58**	**15**	*e*P		**Pb**	**11 08 05.8**	**-0.9**	
	baz=17								
NSY	**Sanyi**	**1.58**	**341**	*e*P		**Pb**	**11 08 06.5**	**-0.2**	
	baz=343								
LATG	**Datong**	**1.62**	**7**	*e*P		**Pn**	**11 08 05.6**	**-0.1**	
	baz=9.0								
NMLH	**Miaoli**	**1.69**	**343**	*e*P		**Pb**	**11 08 08.7**	**+0.2**	
	baz=345								
PHUB	**P'eng-hu**	**1.71**	**291**	*e*P		**Pn**	**11 08 06.8**	**0.0**	
	baz=290								
PHUB				*e*S		**Sn**	**11 08 27.2**	**-0.9**	
	baz=290								
NFF	**Wufeng Townshi**	**1.72**	**354**	*e*P		**Pb**	**11 08 09.1**	**0.0**	
	baz=355								
NSTT	**Nanjuang**	**1.73**	**350**	*e*P		**Pb**	**11 08 08.8**	**-0.5**	
	baz=352								
YHNB	**Yeheng**	**1.75**	**2**	P		**Pb**	**11 08 09.3**	**-0.3**	
YHNB	**Yeheng**	**1.75**	**2**	*e*P		**Pn**	**11 08 08.0**	**+0.6**	
	baz=3.0								
NDS	**Dongshan**	**1.75**	**12**	*e*P		**Pb**	**11 08 08.9**	**-0.6**	
	baz=14								
NSK	**Sanguang**	**1.75**	**1**	*e*P		**Pb**	**11 08 08.4**	**-1.2**	
	baz=3.0								
TWC	**Suao**	**1.75**	**16**	*e*P		**Pn**	**11 08 08.0**	**+0.6**	
	baz=18								
VCHM	**Qimei**	**1.77**	**280**	*e*P		**Pn**	**11 08 07.5**	**0.0**	
	baz=279								
VCHM				*e*S		**Sb**	**11 08 30.2**	**-1.3**	
	baz=279								
TWE	**Neicheng**	**1.83**	**10**	*e*P		**Pb**	**11 08 10.8**	**0.0**	
	baz=12								
FUSB	**Fushanzhiwuyua**	**1.85**	**8**	*e*P		**Pn**	**11 08 09.5**	**+0.7**	
	baz=9.0								
NWLT	**Wulai**	**1.86**	**5**	*e*P		**Pb**	**11 08 10.7**	**-0.7**	
	baz=7.0								
TIPB	**Shuangxi**	**2.10**	**13**	*e*P		**Pb**	**11 08 13.5**	**-2.1**	
	baz=14								
YOJ	**Yonaguni jima**	**2.18**	**45**	P		**Pn**	**11 08 14.4**	**+1.1**	
YOJ	**Yonaguni jima**	**2.18**	**45**	*e*P		**Pn**	**11 08 13.6**	**+0.4**	
	baz=46								
YOJ				*e*S		**Sn**	**11 08 40.7**	**+1.0**	
	baz=46								
YOJ	**Yonaguni jima**	**2.18**	**45**	*e*P		**Pn**	**11 08 13.6**	**+0.4**	
YOJ				*e*S		**Sn**	**11 08 40.4**	**+0.7**	
NWF	**Wu-fen Shan**	**2.19**	**11**	*e*P		**Pb**	**11 08 15.9**	**-1.1**	
	baz=12								
SXI1	**Grass Mountain**	**2.23**	**13**	*e*P		**Pn**	**11 08 15.4**	**+1.4**	
	baz=15								
SXI1				*e*S		**Sb**	**11 08 45.1**	**+0.1**	
	baz=15								
HATJ	**Hateruma jima**	**2.55**	**63**	P		**Pn**	**11 08 17.9**	**-0.3**	
HATJ				*e*S		**Sn**	**11 08 49.1**	**+0.4**	
IRIF	**Iriomote-Funau**	**2.62**	**57**	*e*P		**Pn**	**11 08 19.8**	**+0.5**	
IRIF				S		**Sn**	**11 08 52.2**	**+1.6**	
JKRS	**Kuro-shima**	**2.80**	**61**	P		**Pn**	**11 08 21.7**	**0.0**	
JKRS				*e*S		**Sn**	**11 08 56.1**	**+1.3**	
JIJ	**Ishigaki jima**	**2.96**	**60**	P		**Pn**	**11 08 23.6**	**-0.4**	
JIJ				*e*S		**Sn**	**11 08 59.2**	**+0.3**	
JISG	**Ishigakijimahi**	**3.21**	**58**	P		**Pn**	**11 08 27.1**	**-0.2**	
JISG				S		**Sn**	**11 09 04.3**	**-0.6**	
JTJ	**Tarama**	**3.54**	**60**	P		**Pn**	**11 08 32.0**	**+0.1**	
JTJ				*e*S		**Sn**	**11 09 14.0**	**+0.8**	
JIRB	**Irabujima**	**4.01**	**61**	P		**Pn**	**11 08 39.1**	**+0.8**	
JIRB				*e*S		**Sn**	**11 09 26.0**	**+1.3**	
JMJ2	**Miyako jima3**	**4.09**	**63**	P		**Pn**	**11 08 39.8**	**+0.2**	
JMJ	**Miyako jima 2**	**4.10**	**62**	P		**Pn**	**11 08 40.2**	**+0.6**	

JMA ***26*** *11:14:32.6±0.3,23°.2N±0°.9×121°.6E±0°.9, h9km, MV3.1/12, TAIWAN REGION*
TAP ***26*** *11:14:33.9,23°.11N×121°.53E, h24km, ML3.0, C*
ISC 26 11:14:31.9±1.0,**23°.10N**±0°.01×**121°.63E**±0°.02,**h15**km±8km,
n114,**σ0.93**/215,**3C-3D**,**Taiwan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**0.25**	**270**	⇓*e*P		**Pb**		**11 14 38.8**	**+0.7**
	baz=267								
CHKT				*e*S		**Sb**		**11 14 42.1**	**-0.1**
	baz=267								
ECBN	**Changbin**	**0.27**	**322**	*e*P		**Pb**		**11 14 40.6**	**+2.0**
	baz=346								
ECBN				S		**Sb**		**11 14 44.1**	**+1.0**
	baz=346								
FULB	**Fuli**	**0.33**	**288**	*i* P		**Pb**		**11 14 39.8**	**+0.3**
	baz=293								
FULB				*i* S		**Sb**		**11 14 44.4**	**-0.3**
	baz=293								
EDH	**Donghe**	**0.33**	**248**	*i* P		**Pb**		**11 14 40.2**	**+0.7**
	baz=238								
EDH				*i* S		**Sb**		**11 14 44.7**	**+0.1**
	baz=238								
EYUL	**Yuli**	**0.38**	**311**	*i* P		**Pb**		**11 14 41.5**	**+1.1**
	baz=326								
EYUL				S		**Sb**		**11 14 47.1**	**+0.9**
	baz=326								
ECS	**Chishang**	**0.38**	**270**	P		**Pb**		**11 14 41.1**	**+0.7**
	baz=264								
ECS				S		**Sb**		**11 14 47.0**	**+0.8**
	baz=264								
TWF1	**Yuli**	**0.40**	**309**	*i* P		**Pb**		**11 14 41.3**	**+0.6**
	baz=324								
TWF1				*i* S		**Sb**		**11 14 46.8**	**+0.1**
	baz=324								
YULB	**Yu-li**	**0.42**	**313**	P		**Pb**		**11 14 41.9**	**+0.7**
	baz=327								
YULB				S		**Sb**		**11 14 47.7**	**+0.3**
	baz=327								
HGSD	**Ruisui**	**0.44**	**334**	⇑P		**Pb**		**11 14 42.0**	**+0.6**
	baz=352								
HGSD				S		**Sb**		**11 14 47.6**	**-0.1**
	baz=352								
LDUT	**Ludao**	**0.45**	**200**	⇑*i*P		**Pb**		**11 14 42.5**	**+0.9**
	baz=188								
LDUT				*i* S		**Sb**		**11 14 49.1**	**+0.9**
	baz=188								
EHY	**Hungye**	**0.50**	**325**	*i* P		**Pb**		**11 14 43.2**	**+0.8**
	baz=322								
EHY				*i* S		**Sb**		**11 14 49.8**	**+0.3**
	baz=322								
LONT	**Longtian**	**0.50**	**248**	*i* P		**Pb**		**11 14 43.2**	**+0.7**
	baz=255								
LONT				*i* S		**Sb**		**11 14 50.0**	**+0.4**
	baz=255								
TTN	**Taitung**	**0.56**	**233**	*i* P		**Pb**		**11 14 44.0**	**+0.4**
	baz=217								
TTN				*i* S		**Sg**		**11 14 51.8**	**+1.2**
	baz=217								
ELDTW	**Lidau**	**0.57**	**279**	⇓*i*P		**Pg**		**11 14 43.3**	**0.0**
	baz=280								
ELDTW				*i* S		**Sg**		**11 14 49.9**	**-1.0**
	baz=280								
TWGBT	**Beinan**	**0.58**	**241**	⇑P		**Pg**		**11 14 44.0**	**+0.6**
	baz=247								
TWGBT				S		**Sg**		**11 14 51.5**	**+0.4**
	baz=247								
TWG	**Pinlang**	**0.59**	**242**	*i* P		**Pg**		**11 14 44.0**	**+0.6**
	baz=247								
TWG				*i* S		**Sg**		**11 14 51.5**	**+0.3**
	baz=247								
EGFH	**Guangfu**	**0.60**	**342**	*e*P		**Pn**		**11 14 45.0**	**-0.9**
	baz=334								
EGFH				*e*S		**Sn**		**11 14 53.5**	**-1.9**
	baz=334								
ESL	**Shilin**	**0.73**	**346**	*i* P		**Pn**		**11 14 47.3**	**-0.5**
	baz=340								
ESL				*i* S		**Sb**		**11 14 56.2**	**-0.2**
	baz=340								
STYH	**Taoyuan**	**0.79**	**275**	P		**Pg**		**11 14 47.4**	**+0.1**
	baz=276								
STYH				S		**Sg**		**11 14 56.9**	**-0.9**
	baz=276								
ALS	**Alishan**	**0.86**	**298**	⇓*i*P		**Pb**		**11 14 49.2**	**+0.3**
	baz=302								
ALS				*i* S		**Sb**		**11 15 00.8**	**+0.4**
	baz=302								
HWA	**Hwalien**	**0.87**	**358**	*e*P		**Pn**		**11 14 49.6**	**-0.1**
	baz=17								
HWA				*e*S		**Sn**		**11 15 02.8**	**+0.5**
	baz=17								
SSLB	**Suanglung**	**0.93**	**318**	P		**Pb**		**11 14 49.9**	**+0.1**
	baz=331								
SSLB				S		**Sg**		**11 15 00.9**	**-1.2**
	baz=331								
TPUB	**Ta-pu**	**0.94**	**282**	P		**Pg**		**11 14 50.5**	**+0.2**
	baz=291								
TPUB				S		**Sb**		**11 15 02.4**	**0.0**
	baz=291								
OWD	**Renai**	**0.95**	**334**	*i* P		**Pn**		**11 14 50.6**	**-0.3**
	baz=339								
OWD				S		**Sb**		**11 15 02.4**	**-0.3**
	baz=339								
WTP	**Ta-pu**	**0.95**	**279**	*i* P		**Pb**		**11 14 50.2**	**+0.1**
	baz=280								
WTP				*i* S		**Sb**		**11 15 03.0**	**+0.4**
	baz=280								
SGST	**Jiashian**	**0.97**	**269**	*i* P		**Pb**		**11 14 50.0**	**-0.4**
	baz=270								
SGST				*i* S		**Sb**		**11 15 02.2**	**-0.8**
	baz=270								
TWD	**Chiawan**	**0.98**	**358**	*i* P		**Pn**		**11 14 50.9**	**-0.2**
	baz=15								
TWD				S		**Sn**		**11 15 04.5**	**-0.3**
	baz=15								
SSD	**Sandimen**	**0.99**	**249**	*i* P		**Pb**		**11 14 50.1**	**-0.7**
	baz=243								
SSD				*i* S		**Sb**		**11 15 01.1**	**-2.5**
	baz=243								
TSMG	**Majia**	**0.99**	**247**	*i* P		**Pb**		**11 14 50.5**	**-0.3**
	baz=244								
TSMG				S		**Sb**		**11 15 01.1**	**-2.7**
	baz=244								
TAW	**Tawu**	**1.00**	**223**	P		**Pb**		**11 14 49.7**	**-1.3**
	baz=218								
TAW				*i* S		**Sb**		**11 15 02.8**	**-1.3**
	baz=218								
WUSB	**Renai**	**1.01**	**332**	P		**Pn**		**11 14 52.0**	**+0.3**
	baz=328								
WUSB				S		**Sg**		**11 15 03.1**	**-1.5**
	baz=328								
EAST	**Anshuo**	**1.02**	**226**	*i* P		**Pb**		**11 14 50.5**	**-0.8**
	baz=221								
EAST				S		**Sb**		**11 15 02.3**	**-2.2**
	baz=221								
CHN1	**Nanshi**	**1.02**	**275**	*i* P		**Pg**		**11 14 51.8**	**+0.1**
	baz=275								
CHN1				*i* S		**Sg**		**11 15 05.0**	**0.0**
	baz=275								
TAWH	**Dawu Township**	**1.02**	**222**	P		**Pb**		**11 14 50.7**	**-0.7**
	baz=218								
TAWH				*e*S		**Sb**		**11 15 02.8**	**-1.8**
	baz=218								
SMLT	**Sun Moon Lake**	**1.03**	**319**	*i* P		**Pn**		**11 14 52.2**	**+0.2**
	baz=330								
SMLT				*i* S		**Sg**		**11 15 04.7**	**-0.7**
	baz=330								
MASBT	**Mashibuluo**	**1.04**	**242**	P		**Pb**		**11 14 51.3**	**-0.4**
	baz=234								
MASBT				S		**Sb**		**11 15 02.9**	**-2.3**
	baz=234								
CHGB	**Renai**	**1.05**	**336**	P		**Pn**		**11 14 52.2**	**-0.1**
	baz=351								
CHGB				S		**Sb**		**11 15 04.7**	**-0.8**
	baz=351								
SNST	**Tainan City**	**1.05**	**277**	P		**Pb**		**11 14 52.1**	**+0.3**
	baz=277								
SNST				S		**Sn**		**11 15 07.8**	**+1.2**
	baz=277								
ETL	**Fush Village**	**1.05**	**359**	P		**Pg**		**11 14 52.1**	**-0.2**
	baz=15								
ETL				*e*S		**Sn**		**11 15 06.0**	**-0.8**
	baz=15								
LAY	**Lan-yu**	**1.06**	**184**	*i* P		**Pb**		**11 14 51.2**	**-0.8**
	baz=171								
LAY				S		**Sb**		**11 15 04.0**	**-1.7**
	baz=171								
TWK	**Hsinying**	**1.07**	**279**	*i* P		**Pb**		**11 14 52.2**	**+0.1**
	baz=280								
TWK				*i* S		**Sg**		**11 15 06.6**	**+0.1**
	baz=280								
NACB	**Ninganchiao**	**1.07**	**358**	P		**Pb**		**11 14 52.1**	**-0.1**
	baz=14								
NACB				S		**Sb**		**11 15 05.0**	**-1.0**
	baz=14								
SCST	**Cishan**	**1.07**	**259**	*e*P		**Pn**		**11 14 53.0**	**+0.5**
	baz=257								
SCST				*e*S		**Sn**		**11 15 07.9**	**+0.8**
	baz=257								
TYC	**Yuchr**	**1.07**	**318**	P		**Pn**		**11 14 53.1**	**+0.6**
	baz=332								
TYC				S		**Sg**		**11 15 06.0**	**-0.7**
	baz=332								
LYUB	**Lan-yu**	**1.09**	**182**	P		**Pb**		**11 14 51.1**	**-1.5**
	baz=179								
WHF	**Hehuan Shan**	**1.09**	**342**	*i* P		**Pb**		**11 14 52.6**	**-0.3**
	baz=347								
WHF				S		**Sb**		**11 15 06.4**	**-0.8**
	baz=347								
WJS	**Zhushan**	**1.10**	**311**	*e*P		**Pn**		**11 14 53.7**	**+0.8**
	baz=315								
WJS				*e*S		**Sn**		**11 15 07.9**	**+0.1**
	baz=315								
ETLH	**Xiulin Townshi**	**1.11**	**353**	P		**Pb**		**11 14 52.9**	**-0.1**
	baz=358								
ETLH				*e*S		**Sb**		**11 15 06.1**	**-1.2**
	baz=358								
SGLT	**Jiouru**	**1.12**	**251**	*e*P		**Pb**		**11 14 53.2**	**+0.2**
	baz=248								
SGLT				S		**Sb**		**11 15 07.3**	**0.0**
	baz=248								
TWM1	**Shoushan**	**1.15**	**256**	P		**Pg**		**11 14 55.0**	**+0.9**
	baz=254								
TWM1				S		**Sn**		**11 15 10.8**	**+1.7**
	baz=254								
SSPT	**Xinbi**	**1.16**	**238**	*e*P		**Pn**		**11 14 53.7**	**+0.1**
	baz=231								
SSPT				*e*S		**Sb**		**11 15 08.2**	**-0.4**
	baz=231								
WCS	**Beigang Elemen**	**1.16**	**325**	*e*P		**Pg**		**11 14 54.3**	**0.0**
	baz=335								
WCS				S		**Sg**		**11 15 08.6**	**-0.8**
	baz=335								
WDLH	**Douliu**	**1.17**	**300**	*e*P		**Pg**		**11 14 55.2**	**+0.8**
	baz=316								
WDLH				*e*S		**Sn**		**11 15 09.8**	**+0.4**
	baz=316								
WNT	**Mingjian**	**1.17**	**312**	P		**Pg**		**11 14 54.9**	**+0.5**
	baz=316								
WNT				S		**Sn**		**11 15 10.0**	**+0.5**
	baz=316								
CHN3	**Shinhua**	**1.17**	**269**	P		**Pg**		**11 14 56.0**	**+1.5**
	baz=269								
CHN3				S		**Sn**		**11 15 12.7**	**+3.2**
	baz=269								
SLIU	**Shizi**	**1.17**	**221**	*e*P		**Pn**		**11 14 52.2**	**-1.5**
	baz=218								
SLIU				*e*S		**Sb**		**11 15 07.7**	**-1.2**
	baz=218								
CHY	**Chiayi**	**1.18**	**290**	*e*P		**Pg**		**11 14 54.8**	**+0.1**
	baz=292								
CHY				*e*S		**Sn**		**11 15 11.3**	**+1.5**
	baz=292								
SCZT	**Fangliau**	**1.18**	**232**	*i* P		**Pn**		**11 14 53.7**	**-0.3**
	baz=223								
SCZT				S		**Sb**		**11 15 08.4**	**-0.8**
	baz=223								
SHHT	**Tainan City**	**1.19**	**267**	P		**Pg**		**11 14 56.4**	**+1.6**
	baz=266								
SHHT				S		**Sg**		**11 15 13.1**	**+2.8**
	baz=266								
FUSS	**Fushou**	**1.20**	**343**	P		**Pg**		**11 14 54.6**	**-0.4**
	baz=347								
FUSS				S		**Sb**		**11 15 09.0**	**-0.9**
	baz=347								
TWT	**Tachien**	**1.22**	**340**	*i* P		**Pg**		**11 14 55.7**	**+0.2**
	baz=344								
TWT				*i* S		**Sb**		**11 15 10.1**	**-0.5**
	baz=344								
TDCB	**Techi**	**1.23**	**339**	P		**Pg**		**11 14 55.4**	**-0.3**
	baz=344								
TDCB				*e*S		**Sg**		**11 15 10.7**	**-1.0**
	baz=344								
SMST	**Manzhou Townsh**	**1.30**	**215**	*e*P		**Pn**		**11 14 54.5**	**-1.1**
	baz=202								
ENA	**Nanau**	**1.33**	**4**	P		**Pb**		**11 14 56.3**	**-0.2**
	baz=20								
ENA				*e*S		**Sn**		**11 15 13.3**	**-0.1**
	baz=20								
SCLT	**Jiali**	**1.33**	**274**	*e*P		**Pg**		**11 14 57.5**	**0.0**
	baz=273								
CHN8	**Yiju**	**1.33**	**281**	*e*S		**Sg**		**11 15 14.3**	**-0.6**
	baz=282								
WHP	**Taichung City**	**1.33**	**332**	P		**Pg**		**11 14 58.2**	**+0.6**
	baz=345								
WHP				*e*S		**Sg**		**11 15 14.9**	**-0.1**
	baz=345								
NNSB	**Datong**	**1.34**	**350**	*e*P		**Pb**		**11 14 57.0**	**+0.1**
	baz=354								
NNSB				*e*S		**Sb**		**11 15 12.9**	**-1.1**
	baz=354								
EWUT	**Wuta**	**1.35**	**6**	*e*P		**Pn**		**11 14 56.3**	**+0.1**
	baz=9.0								
EWUT				*e*S		**Sn**		**11 15 13.7**	**-0.2**
	baz=9.0								
NNS	**Nan Shan**	**1.36**	**350**	P		**Pb**		**11 14 56.9**	**-0.2**
	baz=354								
NNS				S		**Sb**		**11 15 13.6**	**-0.8**
	baz=354								
WSL	**Shuilin Townsh**	**1.36**	**288**	*e*P		**Pb**		**11 14 57.5**	**+0.4**
	baz=290								
WSL				S		**Sn**		**11 15 14.4**	**+0.2**
	baz=290								
TCU	**Taichung**	**1.36**	**320**	*e*P		**Pg**		**11 14 59.5**	**+1.4**
	baz=324								
TCU				*e*S		**Sg**		**11 15 15.7**	**-0.3**
	baz=324								
TSEB	**Hengchuen, Pin**	**1.37**	**210**	*e*P		**Pn**		**11 14 56.6**	**0.0**
	baz=208								
TSEB				S		**Sn**		**11 15 14.6**	**+0.1**
	baz=208								
WLCH	**Liuqiu**	**1.38**	**238**	*e*P		**Pb**		**11 14 58.5**	**+1.1**
	baz=234								
TWKBT	**Hengchun**	**1.38**	**214**	P		**Pn**		**11 14 56.1**	**-0.6**
	baz=210								
TWKBT				S		**Sn**		**11 15 14.2**	**-0.6**
	baz=210								
WCHH	**Zhanghua**	**1.39**	**315**	*e*P		**Pg**		**11 14 59.1**	**+0.4**
	baz=318								
WCHH				*e*S		**Sg**		**11 15 16.1**	**-0.6**
	baz=318								
WRL	**Guolierlin Hig**	**1.40**	**305**	*e*P		**Pg**		**11 14 59.4**	**+0.5**
	baz=308								
WRL				*e*S		**Sb**		**11 15 15.9**	**+0.3**
	baz=308								
LATG	**Datong**	**1.43**	**356**	P		**Pb**		**11 14 58.0**	**-0.5**
	baz=359								
TWQ1	**Liyutan**	**1.47**	**328**	P		**Pg**		**11 15 00.0**	**-0.2**
	baz=332								
TWQ1				S		**Sg**		**11 15 19.1**	**-0.4**
	baz=332								
TWC	**Suao**	**1.52**	**7**	P		**Pb**		**11 14 59.3**	**-0.5**
	baz=11								
TWC				S		**Sn**		**11 15 18.0**	**-0.1**
	baz=11								
NDS	**Dongshan**	**1.53**	**3**	*e*P		**Pb**		**11 14 59.4**	**-0.6**
	baz=355								
NDS				*e*S		**Sg**		**11 15 20.2**	**-1.0**
	baz=355								
NSY	**Sanyi**	**1.54**	**329**	P		**Pg**		**11 15 01.0**	**-0.5**
	baz=333								
NSY				S		**Sg**		**11 15 21.2**	**-0.2**
	baz=333								
WDJ	**Dajia District**	**1.54**	**324**	*e*P		**Pb**		**11 15 00.5**	**+0.3**
	baz=328								
WDJ				*e*S		**Sg**		**11 15 21.7**	**+0.1**
	baz=328								
YHNB	**Yeheng**	**1.58**	**351**	P		**Pb**		**11 15 00.6**	**-0.3**
	baz=6.0								
YHNB				S		**Sn**		**11 15 19.8**	**-0.1**
	baz=6.0								
NSK	**Sanguang**	**1.59**	**351**	*i* P		**Pb**		**11 15 00.8**	**-0.3**
	baz=6.0								
NSK				S		**Sn**		**11 15 19.5**	**-0.5**
	baz=6.0								
NFF	**Wufeng Townshi**	**1.60**	**343**	*e*P		**Pg**		**11 15 02.3**	**-0.3**
	baz=355								
NFF				*e*S		**Sb**		**11 15 20.6**	**-0.7**
	baz=355								
TWE	**Neicheng**	**1.61**	**1**	P		**Pb**		**11 15 01.6**	**+0.1**
	baz=5.0								
TWE				*e*S		**Sg**		**11 15 22.5**	**-1.5**
	baz=5.0								
NMLH	**Miaoli**	**1.63**	**332**	*e*P		**Pb**		**11 15 00.9**	**-0.8**
	baz=336								
NMLH				*e*S		**Sg**		**11 15 22.6**	**-1.7**
	baz=336								
NSTT	**Nanjuang**	**1.63**	**339**	P		**Pb**		**11 15 02.2**	**+0.4**
	baz=352								
NSTT				S		**Sb**		**11 15 21.8**	**-0.4**
	baz=352								
FUSB	**Fushanzhiwuyua**	**1.65**	**359**	P		**Pb**		**11 15 01.6**	**-0.6**
	baz=2.0								
FUSB				*e*S		**Sb**		**11 15 23.2**	**+0.3**
	baz=2.0								
NWLT	**Wulai**	**1.68**	**356**	*e*P		**Pb**		**11 15 02.7**	**+0.1**
	baz=360								
NWLT				*e*S		**Sb**		**11 15 22.4**	**-1.1**
	baz=360								
NTC	**Toucheng**	**1.76**	**6**	*e*P		**Pb**		**11 15 03.5**	**-0.4**
	baz=356								
EGS		**1.76**	**9**	P		**Pb**		**11 15 03.6**	**-0.3**
	baz=24								
EGS				S		**Sb**		**11 15 25.9**	**0.0**
	baz=24								
WDGT	**Dungji**	**1.82**	**275**	*e*P		**Pn**		**11 15 03.0**	**+0.2**
	baz=275								
WDGT				*e*S		**Sn**		**11 15 24.2**	**-1.4**
	baz=275								
YOJ	**Yonaguni jima**	**1.85**	**43**	P		**Pb**		**11 15 05.0**	**-0.5**
	baz=55								
YOJ				S		**Sb**		**11 15 29.0**	**+0.5**
	baz=55								
YOJ	**Yonaguni jima**	**1.85**	**43**	P		**Pb**		**11 15 04.9**	**-0.6**
YOJ				S		**Sb**		**11 15 28.6**	**+0.1**
TIPB	**Shuangxi**	**1.87**	**5**	P		**Pb**		**11 15 05.9**	**0.0**
	baz=357								
TWB1	**Santiao Chiao**	**1.93**	**10**	*e*P		**Pb**		**11 15 05.8**	**-1.0**
	baz=11								
PHUB	**P'eng-hu**	**1.94**	**283**	*e*P		**Pn**		**11 15 04.6**	**+0.2**
	baz=284								
PHUB				*e*S		**Sn**		**11 15 26.6**	**-1.9**
	baz=284								
PNG	**Penghu**	**1.97**	**284**	P		**Pn**		**11 15 04.9**	**+0.2**
	baz=285								
PNG				S		**Sn**		**11 15 27.2**	**-2.0**
	baz=285								
NWF	**Wu-fen Shan**	**1.97**	**4**	P		**Pb**		**11 15 07.6**	**0.0**
	baz=6.0								
SXI1	**Grass Mountain**	**

JTJ	**Tarama**	**3.20**	**61**	P		**Pn**	**11 15 23.6**	**+1.8**
JTJ				*e*S		**Sn**	**11 16 00.2**	**+0.5**
JMJ2	**Miyako jima3**	**3.75**	**63**	*e*P		**Pn**	**11 15 31.7**	**+2.3**
JMJ2				S		**Sn**	**11 16 14.5**	**+1.2**
AXDP	**Jialang**	**3.80**	**299**	*e*P		**Pn**	**11 15 29.6**	**-0.4**
	baz=300							

ISU ***26*** *11:17:05.7, 39.59N×73.77E, h6km*
IDC ***26*** *11:17:08.5±0.3, 39.40N×73.49E, h0km, mb5.4/52, mbtmp5.4/58, ML4.4/5, MS6.4/90, Error ellipse: s-maj=6.0km s-min=4.7km az=175.0*
SOME ***26*** *11:17:08.1, 39.23N×73.57E, h20km, MS6.4*
MOS ***26*** *11:17:08.8±1.0, 39.45N×73.46E, h11km, mb6.4/93, MS6.5/79, Mw6.5, Error ellipse: s-maj=3.6km s-min=2.9km az=103.9 Broadband fault plane solution: P waves. M_o6.80000×10^18 NP1:φ200.00000°, δ62.00000°, λ56.00000°. NP2:φ75.00000°, δ42.00000°, λ137.00000°. Principal axes: T Plg58.0000°, Azm62.0000°; N Plg29.0000°, Azm217.0000°; P Plg11.0000°, Azm313.0000°;*
BJI ***26*** *11:17:09.6±0.0, 39.43N×73.40E, h10km, mb5.7/75, mB6.4/64, ML6.8/5, Ms6.9/95, Ms7 6.8/89*
KRNET ***26*** *11:17:09.4±0.1, 39.43N×73.32E, mb6.7*
NEIC ***26*** *11:17:11.7, 39.49N×73.31E, h20km, Moment Tensor Solution. Moment tensor: Scale 10^18Nm; M_{rr}2.29; $M_{\theta\theta}$-1.95; $M_{\phi\phi}$-0.34; $M_{r\theta}$0.33; $M_{\theta\phi}$-0.20; $M_{\phi r}$0.98; Fault plane solution: M_o2.39000×10^18 NP1:φ64.63000°, δ53.86000°, λ68.78000°. NP2:φ277.98000°, δ41.16000°, λ116.36000°. Principal axes: T 2.6304, Plg72.0000°, Azm280.0000°; N -0.6011, Plg17.0000°, Azm78.0000°; P -2.0292, Plg7.0000°, Azm170.0000°;*
NEIC ***26*** *11:17:11.3±2.3, 39.48N±0.04×73.34E±0.07, h13km±1km, mb6.3/215, Ms_20 6.6/461, Mwb6.2/61, Mww6.4 Error ellipse: s-maj=9.5km s-min=5.5km az=121.0*
NNC ***26*** *11:17:17.1±2.7, 39.57N×73.53E, h0km, mb6.8, mpv6.5, Error ellipse: s-maj=22.5km s-min=11.2km az=171.0*
GCMT ***26*** *11:17:19.3±0.1, 39.47N×73.43E, h17km, MW6.4/160, Moment Tensor Solution. s154, c366; s160, c607; Duration: 4±1 Moment tensor: Scale 10^18Nm; M_{rr}3.43±.03; $M_{\theta\theta}$-4.68±.03; $M_{\phi\phi}$1.25±.03; $M_{r\theta}$-3.06±.09; $M_{\theta\phi}$-3.21±.02; $M_{\phi r}$-1.21±.08; Best double couple: M_o5.78700×10^18 NP1:φ61.00000°, δ28.00000°, λ83.00000°. NP2:φ249.00000°, δ62.00000°, λ94.00000°. Principal axes: T 4.4630, Plg72.0000°, Azm168.0000°; N 2.6480, Plg3.0000°, Azm68.0000°; P -7.1110, Plg17.0000°, Azm337.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
NEIC ***26*** *11:17:23, 39.39N×73.33E, h16km, Moment Tensor Solution. Duration: 22s0 Moment tensor: Scale 10^18Nm; M_{rr}4.03; $M_{\theta\theta}$-3.35; $M_{\phi\phi}$-0.68; $M_{r\theta}$-1.62; $M_{\theta\phi}$-1.99; $M_{\phi r}$-0.35; Fault plane solution: M_o4.55000×10^18 NP1: φ55.00000°, δ35.00000°, λ79.00000°. NP2:φ248.00000°, δ56.00000°, λ97.00000°. Principal axes: T 4.3758, Plg78.0000°, Azm184.0000°; N 0.3337, Plg6.0000°, Azm64.0000°; P -4.7095, Plg10.0000°, Azm333.0000°;*
ISC 26 11:17:11.2±0.2, 39°39N±0°02×73°51E±0°01, h9km±1km, h9km:pP-P, n2360, σ2s40/2707, mb6.2/428, MS6.6/433, 438C-296D, Fault plane solution: NP1:φ306.82089°, δ56.56801°, λ129.84059°. NP2:φ70.25828°, δ50.14962°, λ45.85997°. Principal axes: T Plg57.4244°, Azm274.1073°; N Plg32.3203°, Azm102.1330°; P Plg3.6422°, Azm9.8249°; Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OHH	**Osh**	**1.26**	**334**	⇓*i*P		**Pn**	**11 17 31.5**	**-3.7**
	baz=40							
OHH				⇓*i*S		**Sb**	**11 17 48.1**	**-3.6**
	baz=40							
OHH	**Osh**	**1.26**	**334**	*i* PG		**Pn**	**11 17 31.5**	**-3.7**
OHH				*i* S		**Sb**	**11 17 49.7**	**-2.0**
OHH	**Osh**	**1.26**	**334**	P		**Pn**	**11 17 30.9**	**-4.3**
OHH				S		**Sb**	**11 17 47.8**	**-3.9**
DRK	**Karamyk**	**1.33**	**274**	⇑*i*P		**Pn**	**11 17 31.7**	**-4.6**
	baz=73							
DRK				⇑*i*S		**Sb**	**11 17 48.5**	**-5.3**
	baz=73							
DRK	**Karamyk**	**1.33**	**274**	Pn		**Pn**	**11 17 32.3**	**-4.0**
SHAK	**Shakhimardan**	**1.48**	**293**	P		**Pn**	**11 17 34.1**	**-4.2**
ANR	**Andizhan**	**1.62**	**327**	P		**Pn**	**11 17 39.0**	**-1.1**
FRG	**Fergana**	**1.65**	**307**	P		**Pn**	**11 17 38.3**	**-2.2**
KSH	**Kashi**	**1.91**	**85**	Pg		**Pn**	**11 17 40.8**	**-3.4**
KSH				Sg		**Sn**	**11 18 05.5**	**-2.9**
KSH				smax	smax			
	comp=N,797μm,1.0s							
KSH				smax	smax			
	comp=E,929μm,1.1s							
BTK	**Batken**	**2.18**	**289**	⇓*e*P		**Pn**	**11 17 46.5**	**-1.3**
	baz=89							
BTK				⇓*e*S		**Sn**	**11 18 14.4**	**-0.6**
	baz=89							
BTK	**Batken**	**2.18**	**289**			**Pn**	**11 17 46.4**	**-1.4**
BTK	**Batken**	**2.18**	**289**	PN		**Pn**	**11 17 46.4**	**-1.3**
BTK	**Batken**	**2.18**	**289**	P		**Pn**	**11 17 46.6**	**-1.3**
BTK				S		**Sg**	**11 18 20.4**	**-0.9**
MINT	**Mingtut**	**2.23**	**300**	P		**Pn**	**11 17 49.1**	**+0.7**
GAR	**Garm**	**2.51**	**262**	⇑*i*P		**Pn**	**11 17 51.6**	**-0.8**
	baz=60							
GAR				⇑*i*S		**Sn**	**11 18 22.4**	**-0.8**
	baz=60							
GAR	**Garm**	**2.51**	**262**			**Pn**	**11 17 52.7**	**+0.3**
ARLS	**Aral**	**2.54**	**14**	⇑*i*P		**Pn**	**11 17 53.7**	**+0.8**
	baz=17							
ARLS				⇑*i*S		**Sb**	**11 18 26.4**	**-2.3**
	baz=17							
ARLS	**Aral**	**2.54**	**14**	*i* PN		**Pn**	**11 17 50.6**	**-2.3**
ARLS				*i* S		**Sn**	**11 18 22.4**	**-1.7**
ARK	**Arkit**	**2.68**	**334**	⇑*e*P		**Pn**	**11 17 54.6**	**-0.1**
	baz=37							
ARK				⇑*e*S		**Sn**	**11 18 27.5**	**+0.1**
	baz=37							
ARK	**Arkit**	**2.68**	**334**	P		**Pn**	**11 17 54.3**	**-0.4**
ARK				S		**Sb**	**11 18 31.9**	**-0.6**
AML	**Almayashu**	**2.74**	**3**	P		**Pn**	**11 17 56.8**	**+0.9**
	SNR=539							
AML	**Almayashu**	**2.74**	**3**	*i* PN		**Pn**	**11 17 53.7**	**-2.1**
AML				*i* S		**Sn**	**11 18 28.3**	**-1.0**
AML	**Almayashu**	**2.74**	**3**	P		**Pn**	**11 17 57.0**	**+1.1**
AML				S		**Sn**	**11 18 25.2**	**-4.1**
AML	**Almayashu**	**2.74**	**3**	*e*P		**Pn**	**11 17 56.7**	**+0.9**
	SNR=1151							
TRKS	**Terek-Say**	**2.80**	**321**	⇓*i*P		**Pn**	**11 17 54.9**	**-1.5**
	baz=22							
TRKS				⇓*i*S		**Sn**	**11 18 28.0**	**-2.4**
	baz=22							
TRKS	**Terek-Say**	**2.80**	**321**	*i* PN		**Pn**	**11 17 54.9**	**-1.5**
TRKS				*i* S		**Sn**	**11 18 30.2**	**-0.2**
UCH	**Uchtor**	**2.94**	**15**	P		**Pn**	**11 17 60.0**	**+1.5**
UCH	**Uchtor**	**2.94**	**15**	⇓*i*P		**Pn**	**11 17 59.8**	**+1.3**
	baz=18							
UCH				⇓*i*S		**Sn**	**11 18 36.2**	**+2.0**
	baz=18							
UCH	**Uchtor**	**2.94**	**15**	*i* PN		**Pn**	**11 17 55.9**	**-2.6**
UCH				*i* S		**Sn**	**11 18 32.4**	**-1.8**
EKS2	**Erkin-Say**	**3.27**	**3**	P		**Pn**	**11 18 04.5**	**+1.5**
	SNR=1274							
EKS2	**Erkin-Say**	**3.27**	**3**	⇓*i*P		**Pn**	**11 18 03.7**	**+0.8**
	baz=6.0							
EKS2				⇓*i*S		**Sn**	**11 18 43.3**	**+1.2**
	baz=6.0							
EKS2	**Erkin-Say**	**3.27**	**3**	*i* PN		**Pn**	**11 18 00.9**	**-2.0**
EKS2				*i* S		**Sn**	**11 18 40.7**	**-1.4**
AAK	**Ala-Archa**	**3.33**	**13**	P		**Pn**	**11 18 05.8**	**+2.1**
	SNR=126							
AAK	**Ala-Archa**	**3.33**	**13**	Pn		**Pn**	**11 18 05.8**	**+2.1**
	6μm,0.5s,baz=190,slow=8.5,SNR=1058							
AAK					Sn	**Sb**	**11 18 49.4**	**-1.9**
	1μm,0.3s,baz=107,slow=19,SNR=4.2							
AAK					LR	LR	11 18 54.0	
	comp=Z,149μm,19.9s,baz=202,slow=32							
AAK					Lg	Lg	11 19 01.5	
	3μm,0.3s,baz=6.9,slow=13,SNR=11							
AAK	**Ala-Archa**	**3.33**	**13**	⇑*i*P		**Pn**	**11 18 05.0**	**+1.3**
	baz=15							
AAK				⇑*i*S		**Sn**	**11 18 45.3**	**+1.8**
	baz=15							
AAK	**Ala-Archa**	**3.33**	**13**			**Pb**	**11 18 07.6**	**-2.9**
AAK	**Ala-Archa**	**3.33**	**13**	*i* PN		**Pn**	**11 18 01.5**	**-2.2**
AAK				*i* S		**Sn**	**11 18 41.6**	**-1.9**
AAK	**Ala-Archa**	**3.33**	**13**	P		**Pn**	**11 18 04.8**	**+1.2**
AAK	**Ala-Archa**	**3.33**	**13**	*i* P		**Pn**	**11 18 05.8**	**+2.1**
	SNR=703							
AAK	**Ala-Archa**	**3.33**	**13**	⇑P		**Pn**	**11 18 05.7**	**+2.1**
KBK	**Karagaybulak**	**3.44**	**18**	P		**Pn**	**11 18 07.1**	**+1.9**
	SNR=397							
KBK	**Karagaybulak**	**3.44**	**18**	⇑*i*P		**Pn**	**11 18 06.4**	**+1.2**
	baz=20							
KBK				⇑*i*S		**Sn**	**11 18 48.3**	**+2.1**
	baz=20							
KBK	**Karagaybulak**	**3.44**	**18**	*i* PN		**Pn**	**11 18 02.6**	**-2.6**
KBK				*i* S		**Sn**	**11 18 43.8**	**-2.4**
CHGR	**Chuyangaron**	**3.47**	**259**	⇓*i*P		**Pn**	**11 18 05.0**	**-0.5**
	baz=58							
CHGR				⇓*e*S		**Sn**	**11 18 45.3**	**-1.5**
	baz=58							
CHGR	**Chuyangaron**	**3.47**	**259**	Pn		**Pn**	**11 18 05.3**	**-0.2**
CHGR	**Chuyangaron**	**3.47**	**259**	PN		**Pn**	**11 18 05.3**	**-0.2**
FRU1	**Bishkek**	**3.52**	**14**	PN		**Pn**	**11 18 08.8**	**+2.6**
ULHL	**Ulahol**	**3.53**	**35**	P		**Pn**	**11 18 08.1**	**+1.7**
	SNR=752							
ULHL	**Ulahol**	**3.53**	**35**	⇑*i*P		**Pn**	**11 18 08.4**	**+2.0**
	baz=37							
ULHL				⇑*i*S		**Sn**	**11 18 51.5**	**+3.1**
	baz=37							
ULHL	**Ulahol**	**3.53**	**35**	*i* PN		**Pn**	**11 18 03.4**	**-3.0**
ULHL				*i* S		**Sn**	**11 18 45.2**	**-3.2**
BOOM	**Boomskoye usch**	**3.60**	**30**	Pn		**Pn**	**11 18 10.0**	**+2.6**
BOOM	**Boomskoye usch**	**3.60**	**30**	*i* PN		**Pn**	**11 18 04.9**	**-2.6**
BOOM				*i* S		**Sn**	**11 18 47.0**	**-3.2**
TGS	**TashGRES**	**3.66**	**305**	P		**Pn**	**11 18 08.6**	**+0.5**
TAS	**Tashkent**	**3.76**	**302**	⇓*i*P		**Pn**	**11 18 08.9**	**-0.5**
	baz=3.0							
TAS				⇓*e*S		**Sn**	**11 18 52.4**	**-1.4**
	baz=3.0							
TAS	**Tashkent**	**3.76**	**302**	Pn		**Pn**	**11 18 08.9**	**-0.5**
TAS	**Tashkent**	**3.76**	**302**	*i* PN		**Pn**	**11 18 09.1**	**-0.3**
TAS				*i* S		**Sn**	**11 18 55.2**	**+1.4**
TAS	**Tashkent**	**3.76**	**302**	P		**Pn**	**11 18 09.4**	**0.0**
IUG	**luzhnay**	**3.82**	**317**	*d* PN		**Pn**	**11 18 10.1**	**-0.2**
IUG				*e*			11 18 16.3	
IUG				*e*			11 19 08.0	
IUG	**luzhnay**	**3.82**	**317**	*e*P		**Pb**	**11 18 17.7**	**-1.1**
	113μm,0.6s							
IUG				*e*S		**Sb**	**11 19 06.7**	**+1.4**
	143μm,1.1s							
IUG	**luzhnay**	**3.82**	**317**	⇓*i*Pn		**Pn**	**11 18 10.2**	**-0.2**
	baz=315							
IUG				*e*Pg		**Pb**	**11 18 16.3**	**-2.5**
	baz=315							
IUG				*e*Lg		Lg	11 19 08.0	
	baz=315							
IUG	**luzhnay**	**3.82**	**317**	Pg		**Pg**	**11 18 26.5**	**+2.1**
	52μm,0.3s							
IUG				Lg		Lg	11 19 13.3	
	65μm,1.1s							
NZBK	**Nazarbek**	**3.83**	**300**	P		**Pn**	**11 18 11.8**	**+1.4**
TKM2	**Tokmak 2**	**3.86**	**23**	P		**Pn**	**11 18 12.8**	**+1.7**
	SNR=3429							
TKM2	**Tokmak 2**	**3.86**	**23**	⇑*i*P		**Pn**	**11 18 12.7**	**+1.7**
	baz=26							
TKM2				⇑*i*S		**Sn**	**11 18 58.9**	**+2.2**
	baz=26							
TKM2	**Tokmak 2**	**3.86**	**23**	*i* PN		**Pn**	**11 18 08.6**	**-2.5**
TKM2				*i* S		**Sn**	**11 18 53.6**	**-3.1**
TKM2	**Tokmak 2**	**3.86**	**23**	⇑Pn		**Pn**	**11 18 12.7**	**+1.7**
TKM2				⇑Pg		**Pb**	**11 18 19.9**	**+0.2**
TKM2				⇓Lg		Lg	11 19 15.7	
DZA	**Taraz**	**3.87**	**336**	*e*PN		**Pn**	**11 18 11.7**	**+0.8**
DZA				*e*			11 18 19.8	
DZA	**Taraz**	**3.87**	**336**	*e*P		**Pg**	**11 18 25.1**	**-0.2**
	17μm,0.5s							
DZA				*e*S		**Sg**	**11 19 20.1**	**+4.7**
	113μm,0.5s							
DZA	**Taraz**	**3.87**	**336**	*e*Pn		**Pn**	**11 18 11.7**	**+0.8**
	baz=334							
DZA				*e*Pg		**Pb**	**11 18 19.9**	**+0.2**
	baz=334							
DZA	**Taraz**	**3.87**	**336**	Pg		**Pg**	**11 18 27.5**	**+2.2**
	17μm,0.5s							
DZA				Lg		Lg	11 19 15.2	
	13μm,0.5s							
KDJ	**Kajisay**	**3.91**	**44**	⇑*i*P		**Pn**	**11 18 13.9**	**+2.3**
	baz=46							
KDJ				⇑*i*S		**Sn**	**11 19 01.4**	**+3.7**
	baz=46							
KDJ	**Kajisay**	**3.91**	**44**	Pn		**Pn**	**11 18 14.2**	**+2.5**
KDJ	**Kajisay**	**3.91**	**44**	*i* PN		**Pn**	**11 18 09.1**	**-2.5**
KDJ				*i* S		**Sn**	**11 18 54.0**	**-3.7**
USP	**Ospenovka**	**3.94**	**11**	P		**Pn**	**11 18 13.5**	**+1.4**
	SNR=909							
TARG	**Taragay, Kyrgy**	**4.02**	**53**	⇓*i*P		**Pn**	**11 18 15.8**	**+2.4**
	baz=55							
TARG				⇓*i*S		**Sn**	**11 19 04.6**	**+3.7**
	baz=55							
TARG	**Taragay, Kyrgy**	**4.02**	**53**	Pn		**Pn**	**11 18 16.6**	**+3.1**
TARG	**Taragay, Kyrgy**	**4.02**	**53**	*i* PN		**Pn**	**11 18 10.3**	**-3.1**
TARG				*i* S		**Sn**	**11 18 56.6**	**-4.3**
KST	**Kastek**	**4.09**	**26**	*e*P		**Pg**	**11 18 26.7**	**-2.9**
	10μm,0.7s							
KST				*e*S		**Sg**	**11 19 21.7**	**-0.9**
	68μm,1.3s							
KST	**Kastek**	**4.09**	**26**	Pg		**Pg**	**11 18 30.3**	**+0.7**
	10μm,0.7s							
KST				Lg		Lg	11 19 20.5	
	68μm,1.3s							
SGDS	**Sogindy**	**4.14**	**11**	*e*PN		**Pn**	**11 18 15.9**	**+1.1**
SGDS				*e*			11 18 23.6	
SGDS	**Sogindy**	**4.14**	**11**	*e*P		**Pg**	**11 18 27.8**	**-2.8**
	6μm,0.9s							
SGDS				*e*S		**Sg**	**11 19 23.8**	**-0.5**
	32μm,1.0s							
SGDS	**Sogindy**	**4.14**	**11**	*e*Pn		**Pn**	**11 18 16.0**	**+1.1**
	baz=13							
SGDS				*e*Pg		**Pb**	**11 18 23.7**	**-0.7**
	baz=13							
SGDS				*e*Lg		Lg	11 19 20.6	
	baz=13							
SGDS	**Sogindy**	**4.14**	**11**	Pg		**Pg**	**11 18 32.2**	**+1.6**
	7μm,1.2s							
SGDS				Lg		Lg	11 19 23.8	
	9μm,0.6s							
CHM	**Chimkent**	**4.16**	**316**	*e*P		**Pg**	**11 18 30.5**	**-0.5**
	19nm,0.5s							
CHM				*e*S		**Sg**	**11 19 29.4**	**+4.5**
	72μm,0.7s							
DGS	**Degeres**	**4.21**	**23**	*e*P		**Pb**	**11 18 26.8**	**+1.2**
	10μm,0.5s							
DGS				*e*S		**Sg**	**11 19 23.1**	**-3.3**
	20μm,0.8s							
DGS	**Degeres**	**4.21**	**23**	Pg		**Pg**	**11 18 31.8**	**0.0**
	10μm,0.5s							
DGS				Lg		Lg	11 19 23.1	
	20μm,0.8s							
BXML	**Bakhmal**	**4.25**	**276**	P		**Pn**	**11 18 19.8**	**+3.5**
MTBS	**Maitube**	**4.34**	**30**	*e*P		**Pg**	**11 18 32.1**	**-2.1**
	18μm,1.2s							
MTBS				*e*S		**Sg**	**11 19 30.8**	**+0.4**
	47μm,1.1s							
MTBS	**Maitube**	**4.34**	**30**	Pg		**Pg**	**11 18 36.3**	**+2.1**
	18μm,1.2s							
MTBS				Lg		Lg	11 19 30.8	
	47μm,1.1s							
KK31	**Karatay Array**	**4.34**	**330**			**Pn**	**11 18 16.9**	**-0.6**
KK31	**Karatay Array**	**4.34**	**330**	PN		**Pn**	**11 18 16.9**	**-0.6**
KK31	**Karatay Array**	**4.34**	**330**	⇑Pn		**Pn**	**11 18 18.1**	**+0.6**
	162nm,0.4s,baz=131,slow=12							
KK31				Pg		**Pb**	**11 18 26.9**	**-0.9**
	4μm,0.7s,baz=141,slow=13,SNR=35							
KK31				⇓Lg		Lg	11 19 23.7	
	12μm,0.7s,baz=151,slow=29,SNR=3.6							
KKAR	**Karatay Array**	**4.34**	**330**	⇓*i*P		**Pn**	**11 18 17.3**	**-0.2**
	baz=31							
KKAR				⇓*i*S		**Sn**	**11 19 07.0**	**-1.3**
	baz=31							
KKAR	**Karatay Array**	**4.34**	**330**			**Pn**	**11 18 17.4**	**0.0**
KKAR	**Karatay Array**	**4.34**	**330**			**Pn**	**11 18 17.7**	**+0.2**
KKAR	**Karatay Array**	**4.34**	**330**	*i* PN		**Pn**	**11 18 16.8**	**-0.7**
KKAR				*i* S		**Sn**	**11 19 08.2**	**-0.1**
KKAR	**Karatay Array**	**4.34**	**330**	⇑P		**Pn**	**11 18 15.9**	**-1.6**
TNSS	**Tian-Shan**	**4.47**	**34**	*e*PN		**Pn**	**11 18 21.9**	**+2.3**
TNSS				*e*			11 18 30.0	
TNSS				*e*			11 19 34.3	
TNSS	**Tian-Shan**	**4.47**	**34**	*e*P		**Pg**	**11 18 34.1**	**-2.8**
	7μm,0.7s							
TNSS				*e*S		**Sg**	**11 19 34.3**	**-0.5**
	12μm,0.9s							
TNSS	**Tian-Shan**	**4.47**	**34**	*e*Pn		**Pn**	**11 18 21.1**	**+1.5**
	baz=37							
TNSS				*e*Pg		**Pb**	**11 18 30.0**	**-0.2**
	baz=37							
TNSS				*e*Lg		Lg	11 19 34.4	
	baz=37							
TNSS	**Tian-Shan**	**4.47**	**34**	Pg		**Pg**	**11 18 38.2**	**+1.3**
	7μm,0.7s							
TNSS				Lg		Lg	11 19 34.3	
	12μm,0.9s							
BRLS	**Boroldaу**	**4.57**	**324**	*e*PN		**Pb**	**11 18 27.4**	**-4.2**
BRLS	**Boroldaу**	**4.57**	**324**	*e*P		**Pb**	**11 18 35.1**	**+3.5**
	3μm,0.7s							
BRLS				*e*S		**Sg**	**11 19 37.8**	**-0.2**
	27μm,0.9s							
BRLS	**Boroldaу**	**4.57**	**324**	*e*Pg		**Pb**	**11 18 27.5**	**-4.2**
	baz=319							
BRLS	**Boroldaу**	**4.57**	**324**	Pg		**Pg**	**11 18 41.1**	**+2.3**
	3μm,0.7s							
BRLS				Lg		Lg	11 19 39.0	
	27μm,0.9s							
AAA	**Alma-Ata**	**4.60**	**33**	*e*PN		**Pn**	**11 18 23.9**	**+2.9**
AAA				*e*			11 18 30.1	
AAA					MLR	MLR		
	comp=Z,707μm,11.0s							
AAA	**Alma-Ata**	**4.60**	**33**	*e*P		**Pg**	**11 18 35.8**	**-3.5**
	comp=Z,21μm,1.5s							
AAA				*e*S		**Sg**	**11 19 38.6**	**-0.2**
	comp=Z,43μm,0.8s							
AAA	**Alma-Ata**	**4.60**	**33**	*e*Pn		**Pn**	**11 18 23.9**	**+2.9**
	baz=36							
AAA				*e*Pg		**Pb**	**11 18 30.1**	**-2.0**
	comp=Z,32μm,1.8s,baz=36							
AAA				*e*Lg		Lg	11 19 37.2	
	baz=36							
AAA				*e*LR		LR	11 19 56.0	
	comp=Z,707μm,11.0s,baz=36							
KRBS	**Karabastau**	**4.60**	**20**	*e*P		**Pg**	**11 18 35.8**	**-3.5**
	comp=Z,0.3nm,0.1s							
KRBS				*e*S		**Sg**	**11 19 37.2**	**-1.6**
	comp=Z,42μm,0.8s							
KRBS	**Karabastau**	**4.60**	**20**	Pg		**Pg**	**11 18 40.0**	**+0.7**
	comp=Z,6μm,0.7s							
KRBS				Lg		Lg	11 19 36.3	
	comp=Z,15μm,0.8s							
ANVS	**Anan'yevo**	**4.62**	**41**	⇑*e*P		**Pn**	**11 18 23.7**	**+2.2**
	baz=43							
ANVS				⇑*e*S		**Sn**	**11 19 18.2**	**+2.8**
	baz=43							
KNDC	**Almaty**	**4.62**	**33**	⇓Pn		**Pn**	**11 18 24.7**	**+3.3**
	comp=Z,5μm,0.8s							
KNDC				⇑Pg		**Pg**	**11 18 38.7**	**-1.1**
KNDC				⇓Lg		Lg	11 19 40.1	
PRZ	**Przheval'sk**	**4.82**	**49**	⇑*i*P		**Pn**	**11 18 27.3**	**+3.1**
	baz=50							
PRZ				⇑*i*S		**Sn**	**11 19 23.6**	**+3.3**
	baz=50							
PRZ	**Przheval'sk**	**4.82**	**49**	Pn		**Pn**	**11 18 27.5**	**+3.2**
PRZ	**Przheval'sk**	**4.82**	**49**	*i* PN		**Pn**	**11 18 22.0**	**-2.2**
PRZ				*i* S		**Sn**	**11 19 16.2**	**-4.1**
KTBS	**Karatobe**	**4.93**	**28**	*e*P		**Pg**	**11 18 42.5**	**-3.2**
	comp=Z,6μm,0.7s							
KTBS				*e*S		**Sg**	**11 19 48.1**	**-1.4**
	comp=Z,55μm,0.7s							
KTBS	**Karatobe**	**4.93**	**28**	Pg		**Pg**	**11 18 46.4**	**+0.8**
	comp=Z,6μm,0.7s							
KTBS				Lg		Lg	11 19 48.1	
	comp=Z,55μm,0.7s							
KUU	**Kurty**	**4.97**	**24**	*e*PN		**Pn**	**11 18 26.7**	**+0.6**
KUU				*e*			11 18 42.1	
KUU					MLR	MLR		
	comp=Z,310μm,9.0s							
KUU	**Kurty**	**4.97**	**24**	*e*P		**Pb**	**11 18 42.4**	**+3.9**
	comp=Z,3μm,0.8s							
KUU				*e*S		**Sg**	**11 19 49.0**	**-1.9**
	comp=Z,64μm,1.6s							
KUU	**Kurty**	**4.97**	**24**	*e*Pn		**Pn**	**11 18 26.8**	**+0.6**
	baz=26							
KUU				*e*Pg		**Pb**	**11 18 42.2**	**+3.7**
	baz=26							
KUU				*e*Lg		Lg	11 19 47.1	
	baz=26							
KUU				*i* LR		LR	11 20 08.1	
	comp=Z,310μm,9.0s,baz=26							
KUU	**Kurty**	**4.97**	**24**	Pg		**Pg**	**11 18 47.4**	**+1.0**
KUU				Lg		Lg	11 19 48.9	
	comp=Z,64μm,1.6s							
SAM	**Samarkand**	**5.05**	**275**	P		**Pn**	**11 18 29.7**	**+2.5**
AGL	**Agalyk**	**5.13**	**274**	P		**Pn**	**11 18 28.4**	**0.0**
AGL				S		**Sb**	**11 19 44.0**	**+0.9**
KTAB	**Kitab**	**5.15**	**269**	P		**Pn**	**11 18 28.7**	**+0.1**
KTAB				S		**Sb**	**11 19 43.8**	**+0.3**
CHKK	**Chushkaly**	**5.17**	**29**	*e*PN		**Pn**	**11 18 29.5**	**+0.7**
CHKK				*e*			11 18 44.9	
CHKK	**Chushkaly**	**5.17**	**29**	*e*P		**Pb**	**11 18 44.8**	**+3.0**
	comp=Z,5μm,0.8s							
CHKK				*e*S		**Sg**	**11 19 53.2**	**-3.8**
	comp=Z,16μm,0.8s							
CHKK	**Chushkaly**	**5.17**	**29**	*e*Pn		**Pn**	**11 18 29.5**	**+0.7**
	baz=32							
CHKK				*e*Pg		**Pb**	**11 18 44.9**	**+3.2**
	baz=32							
CHKK				*e*Lg		Lg	11 19 54.8	
	baz=32							
CHKK	**Chushkaly**	**5.17**

KPKS Lg Lg 11 20 04.3
comp=Z,12µm,1.1s

BTLS Baital 5.66 4 *e*PN **Pn** **11 18 35.4 -0.1**
BTLS *e* 11 18 53.2
BTLS Baital 5.66 4 *e*P **Pb** **11 18 54.8 +4.6**
comp=Z,3µm,1.1s
BTLS *e*S **Sg** **11 20 10.3 -2.7**
comp=Z,4µm,1.5s
BTLS Baital 5.66 4 *e*Pn **Pn** **11 18 35.5 -0.1**
baz=4.7
BTLS *e*Pg **Pb** **11 18 53.2 +3.0**
baz=4.7
BTLS *e*Lg Lg 11 20 05.7
baz=4.7
BTLS Baital 5.66 4 Pg **Pg** **11 18 59.8 +0.2**
comp=Z,3µm,1.1s
BTLS Lg Lg 11 20 10.3
comp=Z,4µm,1.5s
CEP Cherat 5.70 194 P Pn 11 18 41.6 +5.3
CEP S **Sn** **11 19 45.0 +3.0**
CHCP Chirah Chowk 5.72 182 P Pn 11 18 41.8 +5.3
ARXS Arharly 5.80 32 *e*P **Pb** **11 18 56.9 +4.3**
comp=Z,14µm,1.4s
ARXS *e*S **Sg** **11 20 13.5 -3.8**
comp=Z,45µm,1.1s
ARXS Arharly 5.80 32 Pg **Pg** **11 19 01.1 -1.1**
comp=Z,14µm,1.4s
ARXS Lg Lg 11 20 13.5
comp=Z,45µm,1.1s
PDGK Podgornoye 5.98 47 Pg **Pg** **11 19 06.1 +0.4**
comp=Z,4µm,1.1s
PDGK Lg Lg 11 20 21.7
comp=Z,16µm,1.0s
BLB Baldybastay 5.99 37 *e*P **Pb** **11 18 59.8 +3.8**
comp=Z,11µm,1.2s
BLB *e*S **Sg** **11 20 20.0 -3.6**
comp=Z,24µm,1.3s
BLB Baldybastay 5.99 37 Pg **Pg** **11 19 05.4 -0.6**
comp=Z,11µm,1.2s
BLB Lg Lg 11 20 20.0
comp=Z,24µm,1.3s
KBL Kabul 6.02 218 **Pn** **11 18 43.4 +2.7**
KBL Kabul 6.02 218 PN **Pn** **11 18 43.4 +2.7**
TDK Taldyqorghan 6.68 31 *e*PN **Pn** **11 18 47.4 -2.2**
TDK *e* 11 19 09.1
TDK MLR MLR
comp=Z,520µm,12.0s
TDK Taldyqorghan 6.68 31 *e*Pn **Pn** **11 18 47.5 -2.2**
baz=33
TDK *e*Pg **Pb** **11 19 09.1 +1.6**
baz=33
TDK *e*LR LR 11 21 09.1
comp=Z,520µm,12.0s,baz=33
THW Thamme Wali 6.74 193 P **Pn** **11 18 53.8 +3.4**
JMU Jammu 6.75 170 *e*P **Pn** **11 18 49.0 -1.6**
DJR Jarkent 6.81 41 *e*P Pb 11 19 15.1 +5.3
comp=Z,4µm,1.2s
DJR *e*S **Sg** **11 20 46.7 -3.0**
comp=Z,25µm,1.5s
DJR Jarkent 6.81 41 Pg **Pg** **11 19 21.1 -0.5**
comp=Z,4µm,1.2s
DJR Lg Lg 11 20 46.7
comp=Z,25µm,1.5s
SARP Sargodha 7.48 185 P **Pn** **11 19 02.4 +1.8**
SMLA Simla 8.77 159 *e*P **Pn** **11 19 20.2 +2.0**
SMLA IAML 11 21 06.0
comp=E,12µm,0.6s
MAKZ Makanchi 9.65 37 Pn **Pn** **11 19 31.2 +0.8**
MAKZ Makanchi 9.65 37 P **Pn** **11 19 31.2 +0.8**
MAKZ Makanchi 9.65 37 ⇑Lg Lg 11 22 19.7
MAKZ Makanchi 9.65 37 ⇑P **Pn** **11 19 30.0 -0.4**
DDI Dehra Dun 9.78 156 *e*P **Pn** **11 19 33.4 +1.2**
DDI IAML 11 21 35.0
comp=N,27µm,1.0s
DDI IAML 11 21 43.5
comp=E,38µm,1.4s
MK31 Makanchi Array 9.79 38 Pn **Pn** **11 19 32.7 +0.5**
MK31 Makanchi Array 9.79 38 *c i*P **Pn** **11 19 33.1 +0.8**
MK31 Makanchi Array 9.79 38 ⇑Pn **Pn** **11 19 33.0 +0.8**
comp=E,278nm,1.1s,baz=212,slow=10,SNR=1431
MK31 ⇑Pg 11 20 13.9
comp=E,920nm,0.8s,baz=227,slow=15,SNR=4.3
MK31 ⇑Lg Lg 11 22 23.4
comp=E,7µm,1.3s,baz=213,slow=24,SNR=5.0
MKAR Makanchi Array 9.79 38 Pn **Pn** **11 19 32.6 +0.4**
comp=E,3.8nm,0.3s,baz=214,slow=13,SNR=133
MKAR Lg Lg 11 22 17.5
comp=E,25nm,0.3s,baz=220,slow=22,SNR=3.8
MKAR LR LR 11 23 50.1
comp=E,431µm,19.0s,baz=225,slow=41
comp=E,110nm,0.9s
MKAR Makanchi Array 9.79 38 Pn **Pn** **11 19 33.4 +1.1**
MKAR Makanchi Array 9.79 38 *i*P **Pn** **11 19 33.9 +1.6**
MKAR pmax pmax
comp=Z,109nm,0.9s
HRA Herat 10.31 245 Pn **Pn** **11 19 37.3 -2.3**
BRZS Berezniki 10.61 357 *e*P **Pn** **11 19 41.5 -1.8**
BRZS Berezniki 10.61 357 *e*P **Pn** **11 19 41.6 -1.8**
baz=357
WMQ Urumqi 11.50 63 ⇓P **Pn** **11 19 56.8 +1.1**
WMQ pP 11 20 05.5
WMQ PP **PnPn** **11 20 10.5 +7.2**
WMQ S **Sn** **11 22 11.5 +7.1**
WMQ pmax pmax
comp=Z,7µm,4.9s
WMQ LR LR
comp=Z,344µm,8.3s
WMQ LR LR
comp=Z,305µm,10.9s
WMQ LR LR
comp=Z,156µm,13.3s
ZSN Zaisan 11.53 42 *e*P **Pn** **11 19 55.4 -0.6**
ZSN Zaisan 11.53 42 *e*Pn **Pn** **11 19 55.4 -0.6**
baz=43
ZSN *e*Pg 11 20 38.8
baz=43
ZSN *e*Lg Lg 11 23 16.5
baz=43
ZSN Zaisan 11.53 42 Pg Pg 11 20 45.6
comp=Z,633nm,1.5s
KURBB Kurchatov Arra 11.78 16 Pn **Pn** **11 19 56.5 -2.9**
comp=Z,1.0nm,0.3s,baz=208,slow=12,SNR=112
KURBB Sn Sn 11 21 58.3 -13
comp=Z,3.3nm,0.3s,baz=195,slow=27,SNR=4.6
KURBB Lg Lg 11 23 23.3
comp=Z,11nm,0.3s,baz=201,slow=27,SNR=6.6
KURBB LR LR 11 24 57.9
comp=Z,414µm,20.4s,baz=179,slow=40
comp=Z,43nm,0.9s
KURBB Kurchatov Arra 11.78 16 ⇑Lg Lg 11 23 21.9
comp=Z,5µm,1.1s
KURK Kurchatov 11.88 16 Pn **Pn** **11 19 58.7 -2.0**
KURK Kurchatov 11.88 16 *c i*P **Pn** **11 19 58.5 -2.3**
KURK pmax pmax
comp=Z,250nm,1.7s
KURK Kurchatov 11.88 16 ⇓Lg Lg 11 23 20.4
comp=Z,3µm,1.4s
KURK Kurchatov 11.88 16 ⇑P **Pn** **11 19 58.4 -2.4**
SEM Semipalatinsk 12.00 21 *e*P **Pn** **11 20 00.8 -1.8**
SEM MLR MLR
comp=Z,110µm,11.0s
SEM Semipalatinsk 12.00 21 *e*Pn **Pn** **11 20 00.9 -1.8**
baz=22
SEM *e*Lg Lg 11 23 26.7
baz=22
SEM *e*LR LR 11 24 22.9
comp=Z,110µm,10.8s,baz=22
GEYT Alibeck 12.12 268 Pn Pn 11 19 59.1 -5.1
comp=Z,9.8nm,0.3s,baz=96,slow=14,SNR=39
GEYT Sn **Sn** **11 22 18.6 -1.0**
comp=Z,34nm,0.3s,baz=68,slow=43,SNR=1.8
GEYT LR LR 11 25 47.0
comp=Z,182µm,18.5s,baz=81,slow=43
GEYT Alibeck 12.12 268 Pn Pn 11 19 59.2 -5.0
GYA0 ALIBECK ARRAY 12.12 268 P Pn 11 19 58.5 -5.7
GYA0B ALIBECK ARRAY 12.12 268 Pn Pn 11 19 58.5 -5.7
PYUN Piuthan 13.74 142 *e*P **Pn** **11 20 23.3 -3.1**
comp=Z,436nm,0.5s
BVAR Borovoye Array 13.81 352 LR LR 11 26 01.4
comp=Z,214µm,18.6s,baz=51,slow=39
AB31 Akbulak array 13.82 320 P **Pn** **11 20 22.8 -4.4**
AB31 Akbulak array 13.82 320 Pn **Pn** **11 20 22.8 -4.4**
comp=Z,233nm,0.5s,baz=131,slow=12,SNR=3482
ABKAR Akbulak array 13.82 320 Pn 11 20 22.4 -4.9
ABKAR Akbulak array 13.82 320 Pn **Pn** **11 20 22.6 -4.6**

ABKAR Akbulak array 13.82 320 ⇓P Pn 11 20 22.3 -4.9
DANN Dangsing 13.91 139 *e*P **Pn** **11 20 25.4 -3.4**
comp=Z,396nm,0.4s
KOLN Koldanda 14.31 141 *e*P **Pn** **11 20 31.3 -2.9**
KOLN Koldanda 14.31 141 *e*P **Pn** **11 20 31.4 -2.8**
KOLN Koldanda 14.31 141 *e*P **Pn** **11 20 31.6 -2.6**
JHNI Jhansi 14.52 162 *e*P **Pn** **11 20 34.1 -2.8**
JHNI *e*S **Sn** **11 23 12.1 -5.9**
GKN Gorkha 14.64 138 *e*P **Pn** **11 20 35.3 -3.4**
comp=Z,306nm,0.5s
VLK Valmikinagar 14.81 141 *e*P **Pn** **11 20 38.2 -2.7**
VLK *e*S **Sn** **11 23 16.8 -8.4**
KKN Kakani 15.15 136 *e*P **Pn** **11 20 42.3 -3.4**
DMN Daman 15.20 137 *e*P **Pn** **11 20 42.7 -3.7**
comp=Z,251nm,0.4s
PKIN Phulchoki 15.38 136 *e*P **Pn** **11 20 45.3 -3.5**
comp=Z,196nm,0.4s
GUN Gumba 15.38 134 *e*P **Pn** **11 20 45.6 -3.3**
comp=Z,454nm,0.5s
I31KZ AKTYUBINSK INF 15.51 320 *i* 12 50 10.0
baz=129,slow=322,SNR=0.9
AKTO Aktyubinsk 15.53 320 Pn **Pn** **11 20 45.7 -4.7**
comp=Z,7.7nm,0.3s,baz=131,slow=15,SNR=122
AKTO Sn **Sn** **11 23 38.8 -3.8**
comp=Z,14nm,0.3s,baz=152,slow=14,SNR=1.9
AKTO LR LR 11 27 29.9
comp=Z,205µm,18.2s,baz=136,slow=40
comp=Z,107nm,0.7s
AKTO Aktyubinsk 15.53 320 ⇑Pn **Pn** **11 20 46.6 -3.8**
comp=Z,1µm,0.8s
VAR Varanasi 16.17 148 *e*S **Sn** **11 23 50.0 -8.2**
BHPL Bhopal 16.44 167 *e*P **Pn** **11 20 59.9 -2.4**
BHPL IAmb IAmb 11 21 13.1
comp=Z,1µm,1.1s
BHPL *e*S **Sn** **11 23 59.6 -5.3**
ZAA0 Zalesovo Array 16.47 24 Pn **Pn** **11 21 00.2 -2.1**
ZAA0 IAmb IAmb 11 21 08.4
comp=Z,4µm,1.9s
ZALV Zalesovo Beam 16.47 24 Pn **Pn** **11 20 60.0 -2.4**
comp=Z,7.9nm,0.3s,baz=212,slow=8.1,SNR=232
ZALV Lg Lg 11 25 53.0
baz=226,slow=24
ZALV LR LR 11 27 48.3
comp=Z,299µm,19.4s,baz=214,slow=39
comp=Z,326nm,1.2s
ZALV Zalesovo Beam 16.47 24 **Pn** **11 21 00.6 -1.8**
ZALV Zalesovo Beam 16.47 24 *i* P **Pn** **11 21 00.6 -1.8**
ZALV pmax pmax
comp=Z,309nm,1.1s
I46RU ZALESOVO INFRA 16.47 24 Pn **Pn** **11 20 58.8 -3.6**
baz=206,slow=9.1
I46RU *i* 13 06 50.0
baz=219,slow=306,SNR=1.1
JBP Jabalpur 17.08 159 ⇓*e*S **Sn** **11 24 15.9 -4.5**
GOMU GeErMu 17.13 94 *e*P **Pn** **11 21 10.0 -1.3**
GOMU S **S** **11 24 27.5 -4.3**
GOMU pmax pmax
comp=Z,120nm,1.1s
GOMU pmax pmax
comp=Z,14µm,7.5s
GOMU LR LR
comp=Z,183µm,15.3s
GOMU LR LR
comp=Z,119µm,13.7s
GOMU LR LR
comp=Z,129µm,13.7s
LSA Lhasa 17.43 118 P **Pn** **11 21 14.6 -0.5**
LSA Lhasa 17.43 118 P **Pn** **11 21 14.6 -0.5**
LSA pmax pmax
comp=Z,480nm,1.1s
NGCH Negor - Chabah 17.44 220 P **P** **11 21 16.5 +0.5**
SNR=14
BOK Bokaro 18.75 142 *e*P **P** **11 21 27.6 -3.0**
BOK IAmb IAmb 11 22 02.3
comp=Z,2µm,1.2s
JASK Jask - Hormozg 18.81 229 P **Pn** **11 21 31.9 +0.2**
DHUB DHUBRI 19.20 129 *e*P **P** **11 21 34.8 -0.6**
LKRN Lenkeran, Azer 19.21 276 P **P** **11 21 33.6 -1.8**
SVE Sverdlovsk 19.39 338 *de*P **P** **11 21 35.6 -1.7**
SVE *e*S **Sn** **11 25 14.8 -1.0**
SVE pmax pmax
comp=Z,1µm,1.1s
SVE pmax pmax
comp=Z,14µm,12.6s
SVE MLR MLR
comp=Z,191µm,13.0s
SVE MLR MLR
comp=N,119µm,14.0s
ARU Arti 19.70 335 P **P** **11 21 38.3 -2.3**
comp=N,0.1nm,0.3s,baz=144,slow=8.1,SNR=55
ARU S **S** **11 25 22.2 -0.5**
comp=N,64nm,0.6s,baz=160,slow=22,SNR=1.3
ARU Lg Lg 11 27 33.2
comp=N,0.1nm,0.3s,baz=3.5,slow=17,SNR=2.5
ARU LR LR 11 29 48.8
comp=N,213µm,19.0s,baz=140,slow=39
comp=N,146nm,0.7s
ARU Arti 19.70 335 P **P** **11 21 38.7 -2.0**
ARU IAmb IAmb 11 21 51.2
comp=Z,2µm,1.0s
ARU Arti 19.70 335 *c i*P **P** **11 21 39.4 -1.3**
ARU S **S** **11 25 22.9 +0.2**
ARU pmax pmax
comp=Z,167nm,0.8s
ARU Arti 19.70 335 ⇓P **P** **11 21 38.5 -2.2**
BANOM Banah 19.71 232 P **Pn** **11 21 42.8 +0.3**
SNR=41
BANOM P **Pn** **11 21 42.8 +0.3**
SNR=41
BANOM P **Pn** **11 21 42.8 +0.3**
SNR=41
BANOM Banah 19.71 232 *i* P **P** **11 21 41.2 +0.1**
SNR=38
SHME Shamm 19.71 233 P **P** **11 21 41.5 +0.5**
SNR=61
SHME P **P** **11 21 41.5 +0.5**
SNR=61
SHME P **P** **11 21 41.5 +0.5**
SNR=61
SHME Shamm 19.71 233 *i* P **P** **11 21 40.2 -0.8**
SNR=20
MAK Makhachkala 19.87 289 *e*P **P** **11 21 39.6 -3.0**
MAK *e*S **S** **11 25 23.9 -2.4**
MAK pmax pmax
comp=Z,1µm,0.8s
MAK MLR MLR
comp=Z,81µm,14.0s
GUWA GUWAHATI 20.12 125 *e*P **P** **11 21 45.1 -0.4**
SEKA Sheki 20.13 284 P **P** **11 21 44.2 -1.4**
MASF Masafi 20.20 231 P Pn 11 21 48.1 -0.2
SNR=123
MASF P Pn 11 21 48.1 -0.2
SNR=123
MASF P Pn 11 21 48.1 -0.2
SNR=123
MSFE Esma-Masafi 20.21 231 *i* P **P** **11 21 46.3 -0.3**
SNR=21
MNGR Mingechevir, A 20.25 282 P **P** **11 21 45.1 -1.6**
KNGR Kungurtug, Tuv 20.25 49 *c i*P **P** **11 21 47.2 +0.3**
GTA Gaotai 20.31 82 ⇑P Pn 11 21 49.0 -0.6
GTA pP sP 11 21 53.5 +0.5
GTA sP pP 11 21 56.8 +5.5
GTA S Sn 11 25 40.5 +2.1
GTA sS pS 11 25 46.8 0.0
GTA pmax pmax
comp=Z,1µm,0.9s
GTA pmax pmax
comp=Z,26µm,6.7s
GTA LR LR
comp=Z,134µm,14.5s
GTA LR LR
comp=Z,157µm,14.5s
GTA LR LR
comp=Z,192µm,15.3s
UMQ Umm Al-Quwin 20.39 233 P Pn 11 21 52.9 +2.4
SNR=21
UMQ P Pn 11 21 52.9 +2.4
SNR=21
UMQ P Pn 11 21 52.9 +2.4
SNR=21
UMQ Umm Al-Quwin 20.39 233 *i* P **P** **11 21 49.2 +0.8**
SNR=31
WSAR Wadi Sarin 20.47 222 P **P** **11 21 47.7 -1.6**
comp=Z,49nm,0.8s,baz=75,slow=10,SNR=34
WSAR S **S** **11 25 39.3 +0.8**
comp=Z,44nm,1.0s,baz=98,slow=7.1,SNR=1.0

comp=Z,49nm,0.8s
WSAR Wadi Sarin 20.47 222 P Pn 11 21 50.5 -1.0
SNR=103
WSAR S Sn 11 25 41.3 -0.9
UOSS Minazif 20.49 230 P **P** **11 21 47.8 -1.7**
UOSS Minazif 20.49 230 P **P** **11 21 50.4 +0.9**
UOSS P P **11 21 50.4 +0.9**
UOSS P **P** **11 21 50.4 +0.9**
UOSS S **S** **11 25 40.8 +1.8**
UOSS S **S** **11 25 40.8 +1.8**
UOSS S **S** **11 25 40.8 +1.8**
UOSS Minazif 20.49 230 *i* P **P** **11 21 47.5 -2.0**
SNR=29
UOSS Minazif 20.49 230 ⇓P **P** **11 21 47.4 -2.2**
BIDO Bidbid 20.51 224 P Pn 11 21 51.3 -0.6
SNR=39
BIDO P Pn 11 21 51.3 -0.6
SNR=39
BIDO P Pn 11 21 51.3 -0.6
SNR=39
TEZP TEZPUR 20.54 123 *e*P **P** **11 21 49.8 -0.2**
ZKTA Zakatala 20.54 285 P **P** **11 21 48.9 -1.1**
HATD Hatta, Dubai 20.62 230 P Pn 11 21 53.0 -0.3
SNR=122
HATD P Pn 11 21 53.0 -0.3
SNR=122
HATD P Pn 11 21 53.0 -0.3
SNR=122
HATD Hatta, Dubai 20.62 230 *i* P **P** **11 21 49.1 -1.8**
SNR=30
ZIRO ZIRO 20.64 119 *e*P **P** **11 21 51.0 -0.2**
SHL Shillong 20.69 126 P **P** **11 21 50.7 -1.1**
SHL Shillong 20.69 126 P **P** **11 21 50.7 -1.1**
SHL pmax pmax
comp=Z,4µm,1.5s
SHL Shillong 20.69 126 *e*P **P** **11 21 50.2 -1.6**
SHL IAmb IAmb 11 22 12.0
comp=Z,2µm,1.2s
ASHO Ashiyiah 20.77 230 P Pn 11 21 54.2 -0.8
SNR=292
ASHO P Pn 11 21 54.2 -0.8
SNR=292
ASHO P Pn 11 21 54.2 -0.8
SNR=292
ASHO Ashiyiah 20.77 230 *i* P **P** **11 21 51.0 -1.6**
SNR=44
NAZ Nazwa, Dubai 20.79 232 P Pn 11 21 56.0 +0.9
SNR=84
NAZ P Pn 11 21 56.0 +0.9
SNR=84
NAZ P Pn 11 21 56.0 +0.9
SNR=84
NAZ Nazwa, Dubai 20.79 232 *i* P **P** **11 21 52.3 -0.4**
SNR=57
POO Poona 20.79 179 *e*P **P** **11 21 52.2 -0.6**
POO IAmb IAmb 11 22 01.5
comp=Z,673nm,0.9s
ITAN ITANAGAR 20.80 120 *e*P **P** **11 21 52.6 -0.2**
WBK Wadi Bani Khal 20.81 221 P Pn 11 21 56.0 +0.5
SNR=116
WBK P Pn 11 21 56.0 +0.5
SNR=116
GANJ Ganja 20.84 282 P **P** **11 21 52.6 -0.6**
HOQ Hoqain 20.90 226 P **P** **11 21 54.3 +0.3**
SNR=45
HOQ P **P** **11 21 54.3 +0.3**
SNR=45
HOQ P **P** **11 21 54.3 +0.3**
SNR=45
SOHO SOHO 20.91 228 P Pn 11 21 55.8 -0.8
SOHO P Pn 11 21 55.8 -0.8
SOHO P Pn 11 21 55.8 -0.8
SOHO SOHO 20.91 228 *i* P **P** **11 21 51.5 -2.6**
SNR=11
SMDO Samad 20.92 223 P Pn 11 21 56.9 +0.1
SNR=45
SMDO P Pn 11 21 56.9 +0.1
SNR=45
SMDO P Pn 11 21 56.9 +0.1
SNR=45
DDFL Dedoflistskaro 20.93 284 P **P** **11 21 53.8 -0.4**
JLN Jalan Bani Buh 20.98 219 P **P** **11 21 55.4 +0.6**
SNR=97
FAQ Al Faqa, Dubai 21.01 231 P **P** **11 21 57.6 +2.4**
SNR=74
FAQ P **P** **11 21 57.6 +2.4**
SNR=74
FAQ P **P** **11 21 57.6 +2.4**
SNR=74
FAQ Al Faqa, Dubai 21.01 231 *i* P **P** **11 21 54.9 -0.2**
SNR=16
GROC Groznyy 21.13 289 *e*P **P** **11 21 54.1 -2.2**
GROC *e* 11 22 13.6
GROC *e*S **S** **11 25 50.0 -1.4**
GROC pmax pmax
comp=Z,1µm,0.7s
ASUD Al Ashush, Dub 21.26 232 P **P** **11 21 58.8 +1.0**
SNR=55
ASUD P **P** **11 21 58.8 +1.0**
SNR=55
ASUD P **P** **11 21 58.8 +1.0**
SNR=55
ASUD Al Ashush, Dub 21.26 232 *i* P **P** **11 21 55.8 -2.0**
SNR=24
ALNE Al Ain 21.43 230 P **P** **11 22 00.1 +0.4**
SNR=112
ALNE P **P** **11 22 00.1 +0.4**
SNR=112
ALNE P **P** **11 22 00.1 +0.4**
SNR=112
ALNE Al Ain 21.43 230 *i* P **P** **11 21 57.9 -1.8**
SNR=27
JMDO Jabal Madar 21.46 222 P **P** **11 22 03.0 +3.0**
SNR=82
JMDO P **P** **11 22 03.0 +3.0**
SNR=82
AJN Ajban 21.51 232 P **P** **11 22 02.1 +1.6**
SNR=55
AJN P **P** **11 22 02.1 +1.6**
SNR=55
AJN P **P** **11 22 02.1 +1.6**
SNR=55
AJN Ajban 21.51 232 *i* P **P** **11 21 59.4 -1.1**
SNR=42
NAX Nakhchivan 21.66 278 P **P** **11 22 00.5 -1.6**
MOKO MOKOCHONG 21.87 120 *e*P **P** **11 22 04.3 -0.2**
KOHI KOHIMA 22.01 122 *e*P **P** **11 22 06.2 +0.2**
BELG Belogornoye 22.07 315 P **P** **11 22 03.4 -3.0**
comp=Z,993nm,1.1s,baz=323,slow=0.5,SNR=114
BELG S **S** **11 26 06.5 -3.2**
comp=Z,138nm,0.8s,baz=343,slow=20,SNR=1.0
BELG LR LR 11 32 04.8
comp=Z,93µm,18.8s,baz=108,slow=41
comp=Z,993nm,1.1s
GNI Garni 22.09 281 P **P** **11 22 05.5 -1.3**
comp=Z,181nm,0.9s,baz=58,slow=1.5,SNR=43
GNI S **S** **11 26 08.5 -2.0**
comp=Z,135nm,1.0s,baz=170,slow=18,SNR=1.3
GNI LR LR 11 32 13.3
comp=Z,23µm,19.5s,baz=103,slow=41
comp=Z,181nm,0.9s
GNI Garni 22.09 281 *e*P **P** **11 22 10.4 +3.6**
GNI Garni 22.09 281 P **P** **11 22 06.1 -0.8**
GNI Garni 22.09 281 ⇓P **P** **11 22 05.9 -0.9**
LKP Lekhapani 22.13 116 *e*P **P** **11 22 06.9 -0.3**
KZRT Kazreti 22.22 285 P **P** **11 22 08.5 +0.4**
HYBB Hyderabad (bro 22.33 167 *e*P **P** **11 22 10.0 +0.6**
HYBB IVmB_BB 11 22 11.7
comp=Z,2µm,3.8s
HYBB *e*sP **sP** **11 22 15.5 +0.6**
HYBB *e*S S **11 26 17.1 +2.0**
HYBB IVMs_BB IVMs_BB 11 29 00.7
comp=Z,24µm,8.0s
HYB Hyderabad 22.33 167 *e*P **P** **11 22 09.3 -0.1**
HYB IAmb IAmb 11 22 23.9
comp=Z,2µm,1.2s
TASB TASBURUN-IGDIR 22.49 281 *e*P P 11 22 23.0 +12
IMP Imphal 22.52 124 *e*P **P** **11 22 11.4 0.0**
ZEI Tsey 22.52 288 *e*P **P** **11 22 07.8 -3.7**
ZEI pmax pmax
comp=Z,429nm,0.7s
JRN Qarnain Island 22.59 237 P **P** **11 22 09.8 -2.2**
SNR=108
JRN P **P** **11 22 09.8 -2.2**
SNR=108
MHTO MHTO 22.68 221 P **P** **11 22 15.0 +2.0**

	SNR=56								
MHTO					P		**P**	**11 22 15.0**	**+2.0**
	SNR=56								
MHTO					P		**P**	**11 22 15.0**	**+2.0**
	SNR=56								
NCK	**Nalchik**	**22.73**	**290**	⇓	*e*P		**P**	**11 22 11.4**	**-2.2**
NCK					pmax	pmax			
	comp=Z,707nm,0.6s								
NCK					MLR	MLR			
	comp=Z,65µm,18.0s								
MZWR	**Madinat Zayed**	**22.78**	**233**		P		**P**	**11 22 13.9**	**-0.2**
MZWR					P		**P**	**11 22 13.9**	**-0.2**
MZWR					P		**P**	**11 22 13.9**	**-0.2**
UMZA	**Um Al Zommool**	**22.81**	**229**		P		**P**	**11 22 13.5**	**-0.9**
UMZA					P		**P**	**11 22 13.5**	**-0.9**
UMZA					P		**P**	**11 22 13.5**	**-0.9**
ONI	**Oni**	**22.86**	**288**		P		**P**	**11 22 13.7**	**-1.2**
ONI	**Oni**	**22.86**	**288**		P		**P**	**11 22 13.7**	**-1.2**
ONI					pmax	pmax			
	comp=Z,2µm,0.7s								
CLDR	**Caldiran**	**22.87**	**279**		P		P	11 22 25.6	+10
AKH	**Akhalkalaki**	**22.90**	**285**	⇑	P		**P**	**11 22 14.7**	**-0.7**
AKH	**Akhalkalaki**	**22.90**	**285**		*e*P		**P**	**11 22 14.4**	**-1.1**
AKH	**Akhalkalaki**	**22.90**	**285**		P		**P**	**11 22 14.7**	**-0.7**
KHOR	**Al-Khor Airpor**	**23.00**	**240**		P		**P**	**11 22 15.2**	**-1.2**
GOF	**Gofitskoye**	**23.18**	**294**	⇑	*i*P		**P**	**11 22 16.1**	**-2.0**
GOF					pmax	pmax			
	comp=Z,2µm,0.9s								
SHMA	**Al-Shehemyia**	**23.22**	**241**		P		**P**	**11 22 17.2**	**-1.4**
VIS	**Vishakhapatnam**	**23.22**	**156**		*e*P		**P**	**11 22 19.1**	**+0.5**
VIS					IAmb	IAmb		11 22 33.9	
	comp=Z,2µm,1.2s								
KBZ	**Khabaz**	**23.24**	**291**		P		**P**	**11 22 13.5**	**-5.2**
	comp=Z,34nm,0.8s,baz=119,slow=7.4,SNR=58								
KBZ					S		**S**	**11 26 29.1**	**-1.8**
	comp=Z,90nm,1.0s,baz=90,slow=15,SNR=1.3								
KBZ					LR	LR		11 33 45.0	
	comp=Z,71µm,18.4s,baz=93,slow=43								
KBZ	**Khabaz**	**23.24**	**291**	*d*	*i*P		**P**	**11 22 14.2**	**-4.5**
KBZ					pmax	pmax			
	comp=Z,317nm,0.9s								
KBZ					MLR	MLR			
	comp=Z,70µm,18.0s								
GHWR	**Ruwais**	**23.26**	**235**		P		**P**	**11 22 20.6**	**+1.5**
GHWR					P		**P**	**11 22 20.6**	**+1.5**
GHWR					P		**P**	**11 22 20.6**	**+1.5**
KARS	**Kars**	**23.29**	**283**		P		**P**	**11 22 20.7**	**+1.2**
KARS	**Kars**	**23.29**	**283**		P		**P**	**11 22 18.7**	**-0.8**
KARS	**Kars**	**23.29**	**283**		P		**P**	**11 22 18.7**	**-0.8**
KARS					pmax	pmax			
	comp=Z,4µm,1.0s								
VANB	**Van**	**23.38**	**278**		*e*P		P	11 22 28.6	+8.3
KVAR	**Kislovodsk Arr**	**23.39**	**291**		P		**P**	**11 22 16.9**	**-3.5**
	comp=Z,41nm,0.8s,baz=86,slow=23,SNR=19								
KVAR					S		**S**	**11 26 32.3**	**-1.3**
	comp=Z,191nm,1.0s,baz=240,slow=20,SNR=1.8								
KVAR					LR	LR		11 32 28.5	
	comp=Z,76µm,21.4s,baz=166,slow=39								
	comp=Z,41nm,0.8s								
KIV	**Kislovodsk**	**23.40**	**291**	⇑	P		**P**	**11 22 19.5**	**-1.0**
KIV	**Kislovodsk**	**23.40**	**291**		P		**P**	**11 22 17.5**	**-2.9**
KIV					IAmb	IAmb		11 22 42.6	
	comp=Z,725nm,0.8s								
KIV	**Kislovodsk**	**23.40**	**291**	*d*	*e*P		**P**	**11 22 16.7**	**-3.7**
KIV					*i* *PP		**pP**	**11 22 21.4**	**-2.8**
KIV					*i* *SP		**sP**	**11 22 23.3**	**-2.6**
KIV					*i* PPP		PPP	11 22 50.0	
KIV					*i* S		**S**	**11 26 32.7**	**-1.0**
KIV					*i*			11 26 41.7	
KIV					*e*SS		**SnSn**	**11 27 07.3**	**-1.1**
KIV					*e*SSS		SSS	11 27 22.6	
KIV					pmax	pmax			
	comp=Z,146nm,0.9s								
KIV					pmax	pmax			
	comp=Z,652nm,0.9s								
KIV					MLR	MLR			
	comp=Z,60µm,17.0s								
KIV	**Kislovodsk**	**23.40**	**291**	*i*	P		**P**	**11 22 18.1**	**-2.3**
	SNR=78								
KIV	**Kislovodsk**	**23.40**	**291**	⇓	P		**P**	**11 22 16.9**	**-3.5**
SAKB	**Bahrain**	**23.43**	**242**		P		**P**	**11 22 19.7**	**-1.0**
AGRB	**Hanur-Agry**	**23.50**	**280**		*e*P		**P**	**11 22 21.3**	**-0.4**
CUKT	**Cukurca**	**23.51**	**274**		P		**P**	**11 22 25.6**	**+3.9**
MZR	**Muzera**	**23.59**	**232**		P		**P**	**11 22 21.3**	**-1.1**
	SNR=56								
MZR					P		**P**	**11 22 21.3**	**-1.1**
	SNR=56								
MZR					P		**P**	**11 22 21.3**	**-1.1**
	SNR=56								
MZR	**Muzera**	**23.59**	**232**	*i*	P		**P**	**11 22 19.7**	**-2.7**
	SNR=39								
ZAK	**Zakamensk**	**23.63**	**52**		*e*P		**P**	**11 22 22.4**	**-0.3**
ZAK					pmax	pmax			
	comp=Z,885nm,1.6s								
GEVA	**Gevas**	**23.69**	**277**		P		**P**	**11 22 22.5**	**-1.0**
GEVA					IAmb	IAmb		11 22 45.9	
	comp=Z,1µm,1.4s								
AKDM	**Akdamar-Van**	**23.75**	**277**		*e*P		**P**	**11 22 24.6**	**+0.6**
DQM	**DQM**	**23.78**	**220**		P		**P**	**11 22 27.2**	**+2.9**
DQM					P		**P**	**11 22 27.2**	**+2.9**
DQM					P		**P**	**11 22 27.2**	**+2.9**
DQM					P		**pP**	**11 22 27.5**	**-0.6**
	SNR=36								
DQM					P		**pP**	**11 22 27.5**	**-0.6**
	SNR=36								
DQM					P		**pP**	**11 22 27.5**	**-0.6**
	SNR=36								
GOA	**Goa**	**23.81**	**179**		*e*P		**P**	**11 22 27.5**	**+3.0**
GOA					IAmb	IAmb		11 22 39.4	
	comp=Z,8µm,2.4s								
CHVG	**Ch'k'valeri**	**23.86**	**288**	⇑	P		**P**	**11 22 24.1**	**-0.8**
CHVG	**Ch'k'valeri**	**23.86**	**288**		P		**P**	**11 22 24.1**	**-0.8**
MLAZ	**Malazgirt-MUS**	**23.92**	**279**		*e*P		**P**	**11 22 27.1**	**+1.4**
SMRA	**Abu-Samra**	**24.05**	**239**		P		**P**	**11 22 25.7**	**-1.0**
LZH	**Lanzhou**	**24.16**	**88**	⇑	P		**P**	**11 22 29.3**	**+1.3**
LZH					pP	sP		11 22 33.5	0.0
LZH					sP	pP		11 22 36.3	+4.4
LZH					PP	S	**PnPn**	**11 23 04.5**	**+7.5**
LZH					SS	S		11 27 31.8	+46
LZH					pmax	pmax			
	comp=Z,470nm,1.5s								
LZH					pmax	pmax			
	comp=Z,25µm,5.2s								
LZH					LR	LR			
	comp=Z,222µm,15.2s								
LZH					LR	LR			
	comp=Z,84µm,14.5s								
LZH					LR	LR			
	comp=Z,70µm,15.2s								
BATM	**Batumi**	**24.23**	**286**	⇑	P		**P**	**11 22 28.2**	**-0.1**
BATM	**Batumi**	**24.23**	**286**		*e*P		**P**	**11 22 28.6**	**+0.3**
BATM	**Batumi**	**24.23**	**286**		P		**P**	**11 22 28.2**	**-0.1**
KOPR	**Koprukoy-ERZUR**	**24.31**	**282**		*e*P		**P**	**11 22 29.3**	**0.0**
GURO	**Guroymak-BITLI**	**24.43**	**278**		*e*P		P	11 22 39.4	+9.0
GURO	**Guroymak-BITLI**	**24.43**	**278**		P		**P**	**11 22 30.0**	**-0.4**
KIRV	**Kirov**	**24.64**	**329**		P		**P**	**11 22 30.2**	**-1.7**
	comp=Z,90nm,0.8s,baz=128,slow=14,SNR=42								
KIRV					S		**S**	**11 26 52.6**	**-0.5**
	comp=Z,53nm,0.9s,baz=158,slow=20,SNR=1.0								
KIRV					LR	LR		11 33 05.6	
	comp=Z,227µm,19.1s,baz=131,slow=39								
	comp=Z,90nm,0.8s								
VRTB	**Varto-Mus**	**24.75**	**280**		*e*P		P	11 22 44.4	+11
IRK	**Irkutsk**	**24.78**	**49**	⇑	*i*P		**P**	**11 22 32.8**	**-0.5**
IRK					pmax	pmax			
	comp=Z,2µm,3.1s								
CHOM	**Cayeli-Rize**	**24.98**	**284**		*e*P		**P**	**11 22 41.7**	**+6.5**
VRH	**Novokhopyorsk**	**25.08**	**309**		*e*P		**P**	**11 22 33.4**	**-2.6**
VRH					*e*			11 22 34.3	
VRH					*e*S		**S**	**11 27 01.5**	**+1.1**
VRH					pmax	pmax			
	comp=Z,880nm,1.2s								
VRH					smax	smax			
	comp=N,32µm,9.2s								
VRH					MLR	MLR			
	comp=Z,183µm,15.0s								
SONM	**Songino Array**	**25.11**	**60**		P		**P**	**11 22 36.4**	**0.0**
	comp=Z,146nm,0.7s,baz=266,slow=8.2,SNR=338								
SONM					S		**S**	**11 27 04.3**	**+3.1**
	comp=Z,92nm,1.3s,baz=240,slow=16,SNR=2.1								
SONM					LR	LR		11 33 24.4	
	comp=Z,384µm,19.1s,baz=267,slow=39								
	comp=Z,146nm,0.7s								
SONM	**Songino Array**	**25.11**	**60**		P		**P**	**11 22 35.8**	**-0.6**
SVAN	**Silvan-Diyarba**	**25.16**	**278**		*e*P		P	11 22 47.2	+10
BNGB	**Bingl**	**25.38**	**280**		*i* P		**P**	**11 22 39.0**	**+0.1**
ULN	**Ulaanbaatar**	**25.55**	**60**		P		**P**	**11 22 40.5**	**0.0**
ULN					IAmb	IAmb		11 22 53.6	
	comp=Z,719nm,1.1s								
ULN	**Ulaanbaatar**	**25.55**	**60**		P		**P**	**11 22 40.5**	**0.0**
ULN					pmax	pmax			
	comp=Z,719nm,1.1s								
ULN					MLR	MLR			
	comp=Z,371µm,19.0s								
ULN	**Ulaanbaatar**	**25.55**	**60**		P		**P**	**11 22 40.5**	**0.0**
ULN					P		**P**	**11 22 40.5**	**0.0**
ULN					P		**P**	**11 22 40.5**	**0.0**
ULN	**Ulaanbaatar**	**25.55**	**60**	⇑	P		**P**	**11 22 39.2**	**-1.3**
SOC	**Sochi**	**25.55**	**290**		*e*P		**P**	**11 22 38.1**	**-2.2**
SOC					*e*PPP		PPP	11 23 18.6	
SOC					*e*S		**S**	**11 27 07.0**	**-1.0**
SOC					*e*SSS		SSS	11 28 10.6	
SOC					pmax	pmax			
	comp=Z,305nm,0.8s								
SOC					MLR	MLR			
	comp=Z,59µm,18.0s								
MARD	**Mardin**	**25.68**	**276**		P		**P**	**11 22 41.0**	**-0.7**
MARD					IAmb	IAmb		11 22 54.1	
	comp=Z,376nm,0.7s								
KTUT	**Trabzon**	**25.74**	**284**	⇑	P		**P**	**11 22 41.7**	**-0.3**
KTUT	**Trabzon**	**25.74**	**284**		P		P	11 22 52.3	+10
MAZI	**Mazidag**	**25.90**	**276**		*e*P		**P**	**11 22 43.6**	**-0.1**
DYBB	**Diyarbakir**	**26.01**	**278**		*e*P		**P**	**11 22 47.0**	**+2.3**
CD2	**Chengdu**	**26.05**	**100**		P		**P**	**11 22 46.5**	**+1.5**
CD2					pP	sP		11 22 52.5	+1.9
CD2					S	S		**11 27 18.5**	**+2.3**
CD2					sS	sS		11 27 29.3	+6.6
CD2					pmax	pmax			
	comp=Z,260nm,0.9s								
CD2					pmax	pmax			
	comp=Z,5µm,5.8s								
CD2					LR	LR			
	comp=Z,173µm,16.2s								
CD2					LR	LR			
	comp=Z,112µm,14.2s								
SHAO	**Shalim**	**26.35**	**221**		P		**P**	**11 22 51.7**	**+4.0**
SHAO					P		**P**	**11 22 51.7**	**+4.0**
SHAO					P		**P**	**11 22 51.7**	**+4.0**
SHAO	**Shalim**	**26.35**	**221**		P		**P**	**11 22 49.3**	**+1.6**
ESPY	**Espiye-Giresun**	**26.53**	**285**		P		**P**	**11 22 49.2**	**0.0**
SVRC	**Sivrice-ELAZID**	**26.55**	**279**		*e*P		**P**	**11 22 43.2**	**-6.5**
DOK	**Doka**	**26.64**	**225**		P		**P**	**11 22 56.2**	**+5.8**
	SNR=18								
DOK					P		**P**	**11 22 56.2**	**+5.8**
	SNR=18								
VSR	**Storozhevoye**	**26.64**	**308**		*e*P		**P**	**11 22 47.5**	**-2.6**
VSR					*e*			11 22 48.5	
VSR					*e*S		**S**	**11 27 26.2**	**+1.1**
VSR					pmax	pmax			
	comp=Z,440nm,0.8s								
VSR					smax	smax			
	comp=E,31µm,10.7s								
VSR					MLR	MLR			
	comp=Z,213µm,15.0s								
VORR	**Voronezh**	**26.72**	**309**		*e*P		**P**	**11 22 49.5**	**-1.3**
VORR					pmax	pmax			
	comp=Z,622nm,1.5s								
PZH	**PanZhiHua**	**26.83**	**110**		P		**P**	**11 22 53.5**	**+1.3**
PZH					pP		**sP**	**11 22 59.5**	**+1.7**
PZH					sP		**pP**	**11 23 01.5**	**+5.3**
PZH					S		**S**	**11 27 34.0**	**+5.2**
PZH					ScS		**ScS**	**11 33 47.3**	**+1.2**
PZH					pmax	pmax			
	comp=Z,550nm,1.5s								
PZH					pmax	pmax			
	comp=Z,15µm,10.6s								
PZH					LR	LR			
	comp=Z,160µm,22.4s								
PZH					LR	LR			
	comp=Z,108µm,21.6s								
PZH					LR	LR			
	comp=Z,103µm,20.2s								
MDRS	**Chennai**	**26.89**	**165**		*e*P		**P**	**11 22 53.6**	**+1.1**
ILIC	**ilic-Erzincan**	**26.89**	**281**		*e*P		P	11 23 03.3	+11
DMTO	**DMTO**	**26.95**	**222**		P		P	11 23 00.7	+7.6
DMTO					P		P	11 23 00.7	+7.6
DMTO					P		P	11 23 00.7	+7.6
LPSR	**Galich'ya Gora**	**27.12**	**311**		*e*P		**P**	**11 22 51.8**	**-2.6**
LPSR					*e*			11 22 53.1	
LPSR					*e*S		**S**	**11 27 36.7**	**+4.0**
LPSR					pmax	pmax			
	comp=Z,1µm,1.0s								
LPSR					smax	smax			
	comp=E,17µm,9.2s								
LPSR					MLR	MLR			
	comp=Z,68µm,13.0s								
ARPR	**Arapgir-MALATY**	**27.14**	**281**		*e*P		**P**	**11 22 56.0**	**+1.1**
URFA	**Urfa**	**27.15**	**277**		P		**P**	**11 23 01.3**	**+6.3**
ANN	**Anapa**	**27.16**	**293**		*e*P		**P**	**11 22 52.8**	**-2.0**
ANN					*e*PPP		PPP	11 23 43.0	
ANN					*i* S		**S**	**11 27 32.2**	**-1.1**
ANN					pmax	pmax			
	comp=Z,254nm,1.1s								
ANN					MLR	MLR			
	comp=Z,73µm,14.0s								
ANN					MLR	MLR			
	comp=E,39µm,14.0s								
ANN					MLR	MLR			
	comp=N,44µm,18.0s								
WHFO	**Wadi Hawf**	**27.41**	**224**		P		P	11 23 04.8	+7.5
	SNR=12								
WHFO					P		P	11 23 04.8	+7.5
	SNR=12								
WHFO					P		P	11 23 04.8	+7.5
	SNR=12								
RBK	**Rabkut**	**27.52**	**223**		P		**P**	**11 23 03.2**	**+4.8**
	SNR=6.8								
RBK					P		**P**	**11 23 03.2**	**+4.8**
	SNR=6.8								
RBK					P		**P**	**11 23 03.2**	**+4.8**
	SNR=6.8								
RSDY	**Resadiye-TOKAT**	**27.66**	**284**		*e*P		P	11 23 06.8	+7.4
BTO	**Baotou**	**27.87**	**76**		*e*P		**P**	**11 23 00.3**	**-1.1**
BTO					S		**S**	**11 27 45.8**	**+0.9**
BTO					LR	LR			
	comp=N,755µm,14.9s								
BTO					LR	LR			
	comp=N,740µm,12.9s								
DARE	**Darende-Malaty**	**27.91**	**280**		P		**P**	**11 23 06.3**	**+4.6**
SVSK	**Karacayir**	**28.00**	**283**		P		**P**	**11 23 02.3**	**0.0**
PRGR	**Permogore**	**28.06**	**332**	⇑	*i*P		**P**	**11 23 03.5**	**+0.8**
ABTO	**Aybut**	**28.13**	**224**		P		P	11 23 12.0	+8.2
	SNR=13								
ABTO					P		P	11 23 12.0	+8.2
	SNR=13								
TOKT	**Tokat**	**28.26**	**284**		*e*P		P	11 23 14.6	+10
TOKA	**Tokat**	**28.31**	**284**		P		**P**	**11 23 04.8**	**-0.4**
KMI	**Kunming**	**28.37**	**111**	⇓	P		**P**	**11 23 05.8**	**-0.3**
KMI					pP	sP		11 23 13.5	+1.8
KMI					PcP		**PcP**	**11 26 19.0**	**+0.3**
KMI					S		**S**	**11 27 52.5**	**-0.7**
KMI					pmax	pmax			
	comp=N,8µm,6.9s								
KMI					LR	LR			
	comp=N,131µm,17.4s								
KMI					LR	LR			
	comp=N,140µm,17.2s								
KMI					LR	LR			
	comp=N,94µm,20.4s								
RAYN	**Ar Rayn**	**28.50**	**245**		P		**P**	**11 23 05.5**	**-1.5**
RAYN					IAmb	IAmb		11 23 32.3	
	comp=Z,395nm,1.1s								
RAYN	**Ar Rayn**	**28.50**	**245**		IAMs_20	IAMs_20		11 36 26.0	
	comp=Z,102µm,18.0s								
RAYN	**Ar Rayn**	**28.50**	**245**		P		**P**	**11 23 05.5**	**-1.5**
RAYN					pmax	pmax			
	comp=Z,395nm,1.2s								
RAYN					MLR	MLR			
	comp=Z,102µm,18.0s								
RAYN	**Ar Rayn**	**28.50**	**245**		P		**P**	**11 23 10.2**	**+3.2**
RAYN	**Ar Rayn**	**28.50**	**245**	*i*	P		**P**	**11 23 05.8**	**-1.2**
	SNR=60								
RAYN	**Ar Rayn**	**28.50**	**245**	⇑	P		**P**	**11 23 06.0**	**-1.1**
SARI	**SarD1z-Kayseri**	**28.76**	**280**		*e*P		P	11 22 57.8	-12
XAN	**Xi'an**	**28.76**	**90**	⇑	P		**P**	**11 23 09.5**	**+0.2**
XAN					pP	sP		11 23 15.8	+0.9
XAN					sP	pP		11 23 18.0	+4.7
XAN					S	S		**11 28 03.0**	**+4.1**
XAN					pmax	pmax			
	comp=Z,69nm,0.8s								
XAN					pmax	pmax			
	comp=Z,7µm,7.6s								
XAN					LR	LR			
	comp=Z,383µm,16.5s								
XAN					LR	LR			
	comp=Z,271µm,17.1s								
XAN					LR	LR			
	comp=Z,183µm,15.9s								
MOS	**Moscow**	**28.80**	**317**		*e*P		**P**	**11 23 06.4**	**-2.9**
MOS					*e*			11 23 56.8	
MOS					*e*S		**S**	**11 27 54.5**	**-4.4**
MOS					pmax	pmax			
	comp=Z,642nm,1.2s								
MOS					MLR	MLR			
	comp=Z,124µm,16.0s								
MOS					MLR	MLR			
	comp=N,74µm,15.0s								
MOS					MLR	MLR			
	comp=E,89µm,15.0s								
PCHI	**Peechi**	**28.85**	**174**		*e*P		**P**	**11 23 12.7**	**+2.6**
PCHI					*e*S		**S**	**11 28 04.3**	**+4.0**
HHC	**Hu-ho-hao-te**	**28.99**	**75**		*e*P		**P**	**11 23 11.5**	**+0.2**
HHC					S		**S**	**11 28 04.3**	**+1.8**
HHC					SS		**SnSn**	**11 29 28.5**	**+3.4**
HHC					pmax	pmax			
	comp=E,91nm,1.2s								
HHC					pmax	pmax			
	comp=E,7µm,6.6s								
HHC					LR	LR			
	comp=E,123µm,15.9s								
HHC					LR	LR			
	comp=E,359µm,14.6s								
HHC					LR	LR			
	comp=E,430µm,14.0s								
DIKM	**Dikmen**	**29.01**	**287**		*e*P		P	11 23 19.6	+8.2
BNN	**Bunyan**	**29.09**	**281**	⇑	P		P	11 23 17.5	+5.2
OBN	**Obninsk**	**29.17**	**315**	⇓	P		**P**	**11 23 11.1**	**-1.5**
OBN	**Obninsk**	**29.17**	**315**		P		**P**	**11 23 10.8**	**-1.8**
	comp=E,8.8nm,0.5s,baz=103,slow=14,SNR=15								
OBN					S		**S**	**11 28 06.4**	**+1.6**
	comp=E,16nm,0.8s,baz=248,slow=23,SNR=1.2								
OBN					LR	LR		11 36 12.0	
	comp=E,12µm,18.4s,baz=92,slow=39								
	comp=E,8.8nm,0.5s								
OBN	**Obninsk**	**29.17**	**315**		P		**P**	**11 23 10.1**	**-2.5**
OBN					IAmb	IAmb		11 24 03.9	
	comp=Z,752nm,1.2s								
OBN	**Obninsk**	**29.17**	**315**	*c*	*i*P		**P**	**11 23 10.6**	**-2.0**
OBN					*i*			11 24 02.9	
OBN					*i*			11 26 15.9	
OBN					*i* S		**S**	**11 28 08.5**	**+3.7**
OBN					pmax	pmax			
	comp=Z,104nm,1.4s								
OBN					pmax	pmax			
	comp=Z,453nm,1.2s								
OBN					MLR	MLR			
	comp=Z,87µm,14.0s								
OBN	**Obninsk**	**29.17**	**315**	⇑	P		**P**	**11 23 10.8**	**-1.8**
YOZ	**Yozgat**	**29.32**	**283**		*e*P		**P**	**11 23 13.5**	**-0.8**
KOZT	**Kozan**	**29.44**	**278**		*e*P		P	11 23 21.8	+6.5
TAHT	**Tahtakopru-Hat**	**29.48**	**276**		P		P	11 23 25.6	+10
SIM	**Simferopol'**	**29.51**	**294**		*e*P		**P**	**11 23 15.5**	**-0.3**
SIM					*e*S		**S**	**11 28 09.9**	**-0.5**
SIM					pmax	pmax			
	comp=Z,625nm,1.1s								
YAYL	**Yayladag**	**29.64**	**275**		*e*P		P	11 23 24.4	+7.2
CORM	**Corum**	**29.73**	**284**		*i* P		**P**	**11 23 17.2**	**-0.7**
BZK	**Bozkurt**	**29.89**	**288**	⇑	P		**P**	**11 23 17.8**	**-1.4**
BZK	**Bozkurt**	**29.89**	**288**		P		**P**	**11 23 17.0**	**-2.1**
BZK	**Bozkurt**	**29.89**	**288**	⇓	P		**P**	**11 23 17.8**	**-1.4**
CMRD	**Camardi-Nigde**	**30.04**	**279**		*e*P		**P**	**11 23 20.3**	**-0.4**
KLMR	**Klimovskoe**	**30.04**	**327**		*e*P		**P**	**11 23 17.7**	**-2.5**
KLMR					*e*S		**S**	**11 28 14.8**	**-3.5**
KLMR					pmax	pmax			
	comp=Z,477nm,1.3s								
KLMR					MLR	MLR			
	comp=Z,67µm,13.0s								
KLMR	**Klimovskoe**	**30.04**	**327**		*e*P		**P**	**11 23 17.8**	**-2.5**
KLMR					AMP			11 23 28.9	
	comp=Z,477nm,1.3s								
KLMR					*e*S		**S**	**11 28 14.9**	**-3.4**
KLMR					*e*S		**S**	**11 28 14.9**	**-3.4**
KLMR					LQ	LQ		11 32 50.5	
KLMR					LQ	LQ		11 32 50.5	
KLMR					LR	LR		11 35 09.3	
KLMR					AMP			11 35 56.0	
	comp=Z,67µm,12.6s								
CHTO	**Chiang Mai**	**30.06**	**126**		P		**P**	**11 23 25.4**	**+4.5**
CHTO					P		**P**	**11 23 25.4**	**+4.5**
CHTO	**Chiang Mai**	**30.06**	**126**		P		**P**	**11 23 19.7**	**-1.2**
CHTO	**Chiang Mai**	**30.06**	**126**	⇑	P		**P**	**11 23 21.1**	**+0.2**
ILGA	**Ilgaz**	**30.25**	**286**		P		**P**	**11 23 21.7**	**-1.0**
CIT	**Chita**	**30.28**	**52**		*e*P		**P**	**11 23 22.2**	**-0.4**
CIT					*e*			11 24 22.9	
CIT					*e*			11 24 37.4	
CIT					pmax	pmax			
	comp=Z,1µm,2.3s								
CM31	**Chiang Mai Arr**	**30.32**	**126**		P		**P**	**11 23 27.5**	**+4.3**
	SNR=28								
CM31					P		**P**	**11 23 27.5**	**+4.3**
	SNR=28								
CMAR	**Chiang Mai Arr**	**30.32**	**126**		P		**P**	**11 23 21.7**	**-1.5**
	comp=Z,13nm,0.9s,baz=312,slow=8.6,SNR=29								
	comp=Z,13nm,0.9s								
TIY	**Taiyuan**	**30.33**	**81**	⇑	P		**P**	**11 23 23.8**	**+0.6**
TIY					pP		**sP**	**11 23 31.0**	**+2.2**
TIY					sP		**pP**	**11 23 33.5**	**+6.3**
TIY					S		**S**	**11 28 31.0**	**+7.4**
TIY					pmax	pmax			
	comp=Z,54nm,0.9s								
TIY					pmax	pmax			
	comp=Z,1µm,6.9s								
TIY					LR	LR			
	comp=Z,147µm,19.9s								
TIY					LR	LR			
	comp=Z,36µm,14.4s								
TIY					LR	LR			
	comp=Z,106µm,19.2s								
HWQ	**Hawqa**	**30.34**	**272**		*e*P		**P**	**11 23 25.3**	**+1.9**
ASF	**Jabal al Asfar**	**30.41**	**268**		P		**P**	**11 23 23.3**	**-0.7**
	comp=Z,9.7nm,0.9s,

comp=Z,116µm,20.0s
SHBL Chebaa 30.84 271 *e*P **P** **11 23 27.6 -0.3**
ANTO Ankara 31.17 284 ⇑P **P** **11 23 30.1 -0.5**
ANTO Ankara 31.17 284 P **P** **11 23 29.9 -0.8**
ANTO P **P** **11 23 29.9 -0.8**
MMAI Mount Meron Ar 31.23 270 P **P** **11 23 33.5 +2.3**
comp=Z,1.2nm,0.3s,baz=65,slow=8.1,SNR=3.1
MMAI S **S** **11 28 35.2 -2.6**
comp=Z,2.8nm,0.3s,baz=67,slow=16,SNR=2.3
EREN Erenkoy 31.29 275 *e*P P 11 23 41.0 +9.4
LYN LuoYang 31.33 86 ⇑P **P** **11 23 32.8 +0.8**
LYN pP sP 11 23 39.3 +1.7
LYN S **S** **11 28 45.5 +6.4**
LYN pmax pmax
comp=Z,40nm,1.0s
LYN pmax pmax
comp=Z,6µm,7.6s
LYN LR LR
comp=Z,172µm,13.2s
LYN LR LR
comp=Z,55µm,12.4s
LYN LR LR
comp=Z,95µm,14.1s
MALK Mahakanadarawa 31.50 167 ⇑P P 11 23 38.4 +4.8
BOD Bodaibo 31.86 41 ⇓*i*P **P** **11 23 35.0 -1.4**
BOD pmax pmax
comp=Z,888nm,1.4s
XLT XiLinHaoTe 31.87 68 *e*P **P** **11 23 37.3 +0.6**
XLT pP pP 11 23 41.3 +0.6
XLT sP sP 11 23 45.0 +2.7
XLT PcP **PcP** **11 26 28.0 +0.7**
XLT S **S** **11 28 52.5 +5.0**
XLT sS sS 11 28 59.0 +4.8
XLT pmax pmax
comp=Z,37nm,1.2s
XLT pmax pmax
comp=Z,4µm,7.9s
XLT LR LR
comp=Z,27µm,10.1s
XLT LR LR
comp=Z,187µm,12.2s
XLT LR LR
comp=Z,235µm,12.2s
CSS Mathiatis 32.13 275 P **P** **11 23 37.4 -1.7**
CSS Mathiatis 32.13 275 ⇑P **P** **11 23 41.4 +2.4**
HNS HongShan 32.15 80 ⇑P **P** **11 23 39.8 +0.6**
HNS pP **sP** **11 23 46.5 +1.7**
HNS S **S** **11 28 58.8 +6.9**
HNS PcS **PcS** **11 30 10.0 -2.8**
HNS SS **SnSn** **11 30 45.0 +3.0**
HNS pmax pmax
comp=Z,72nm,1.2s
HNS LR LR
comp=Z,111µm,13.1s
HNS LR LR
comp=Z,97µm,12.7s
HNS LR LR
comp=Z,135µm,13.8s
MDUB Mudurnu 32.24 286 P **P** **11 23 38.8 -1.3**
PURM Purcari 32.39 297 ⇑P **P** **11 23 40.0 -1.1**
PBA Port Blair 32.47 143 P P 11 23 50.4 +8.3
SNR=10
PBA Port Blair 32.47 143 *e*P **P** **11 23 46.2 +4.1**
PBA IAmb IAmb 11 23 59.0
comp=Z,586nm,1.1s
PBA Port Blair 32.47 143 ⇑P **P** **11 23 45.8 +3.7**
BJI Beijing 32.60 75 P **P** **11 23 43.5 +0.5**
BJI PP **PnPn** **11 24 51.0 +0.6**
BJI S **S** **11 29 05.0 +6.3**
BJI SS **SnSn** **11 30 57.0 +4.3**
BJI pmax pmax
comp=Z,69nm,0.8s
BJI pmax pmax
comp=Z,4µm,8.4s
BJI LR LR
comp=Z,31µm,15.8s
BJI LR LR
comp=Z,90µm,14.4s
BJI LR LR
comp=Z,118µm,13.1s
BJT Baijiatuau 32.60 75 P **P** **11 23 43.5 +0.4**
BJT Baijiatuau 32.60 75 IAMs_20 IAMs_20 11 38 56.4
comp=Z,125µm,21.0s
BJT Baijiatuau 32.60 75 P **P** **11 23 43.5 +0.4**
BJT pmax pmax
comp=Z,106nm,0.9s
BJT MLR MLR
comp=Z,125µm,21.0s
PALK Pallekele 32.62 167 P **P** **11 23 43.3 -0.2**
comp=Z,20nm,0.8s,baz=95,slow=8.5,SNR=4.6
PALK S **S** **11 29 01.3 +1.8**
comp=Z,32nm,1.1s,baz=279,slow=5.0,SNR=1.9
PALK LR LR 11 37 42.9
comp=Z,201µm,18.8s,baz=99,slow=38
comp=Z,20nm,0.8s
PALK Pallekele 32.62 167 ⇓P P 11 23 48.4 +4.9
AKASG Malin Array Be 32.80 305 P **P** **11 23 42.2 -2.5**
comp=Z,12nm,0.5s,baz=78,slow=7.5,SNR=262
AKASG S **S** **11 29 07.4 +5.7**
comp=Z,6.9nm,0.8s,baz=47,slow=23,SNR=1.6
AKASG LR LR 11 39 51.1
comp=Z,76µm,19.4s,baz=85,slow=42
comp=Z,12nm,0.5s
AKBB Malin Array Si 32.80 305 *d i*P **P** **11 23 41.8 -2.9**
AKBB pmax pmax
comp=Z,221nm,0.6s
AKBB MLR MLR
comp=Z,75µm,15.0s
EIL Elat 33.00 265 P **P** **11 23 46.6 -0.1**
comp=Z,24nm,0.3s,baz=84,slow=0.1,SNR=0.8
EIL S **S** **11 29 07.6 +2.3**
comp=Z,25nm,0.4s,baz=193,slow=1.2,SNR=0.8
EIL LR LR 11 38 54.6
comp=Z,170µm,21.8s,baz=70,slow=40
comp=Z,24nm,0.3s
EIL Elat 33.00 265 ⇑P **P** **11 23 46.4 -0.3**
KIS Kishinev 33.09 298 *e*P **P** **11 23 45.0 -2.2**
comp=Z,390nm,1.1s
KIS Kishinev 33.09 298 *e*PP PP 11 25 00.0 -1.9
KIS *i* S **S** **11 29 15.0 +8.8**
KIS *e*L L 11 37 08.0
KIS LQM 11 38 31.0
KIS comp=Z,22µm,17.0s
LRM MLR 11 41 16.0
comp=Z,19µm,16.0s
KIS Kishinev 33.09 298 ⇓P **P** **11 23 44.6 -2.6**
KIS Kishinev 33.09 298 *e*P **P** **11 23 45.0 -2.2**
KIS *e* 11 25 00.0
KIS *e* 11 29 09.0
KIS *i* S **S** **11 29 15.0 +8.8**
KIS pmax pmax
comp=Z,2µm,7.0s
KIS MLR MLR
comp=Z,19µm,16.0s
KIS MLR MLR
comp=E,17µm,15.5s
MILM Milestii Mici 33.09 298 ⇓*e*P **P** **11 23 44.0 -3.3**
comp=E,900nm,1.0s
MILM *i* S **S** **11 29 15.0 +8.7**
comp=E,15µm,7.6s
MILM LQM 11 38 25.0
comp=E,55µm,18.5s
MILM LRM MLR 11 41 15.0
comp=E,38µm,14.5s
MILM Milestii Mici 33.09 298 ⇑P **P** **11 23 45.3 -1.9**
MILM Milestii Mici 33.09 298 *de*P **P** **11 23 44.0 -3.3**
MILM *e* 11 29 11.0
MILM *i* S **S** **11 29 15.0 +8.7**
MILM pmax pmax
comp=Z,900nm,1.0s
MILM MLR MLR
comp=Z,42µm,15.0s
MILM MLR MLR
comp=E,38µm,14.5s
TLCR 33.23 295 ⇓P **P** **11 23 47.1 -1.5**
JURR Jurilovca 33.24 294 ⇑P **P** **11 23 47.9 -0.7**
SORM Soroca 33.35 300 ⇓P **P** **11 23 46.7 -2.8**
ISP Isparta 33.40 281 P **P** **11 23 48.4 -1.8**
ISP IAmb IAmb 11 23 59.9
comp=Z,262nm,0.7s
ISP Isparta 33.40 281 P **P** **11 23 48.4 -1.8**
ISP pmax pmax
comp=Z,262nm,0.7s
ISP MLR MLR
comp=Z,25µm,20.0s
ISP Isparta 33.40 281 ⇓P **P** **11 23 48.4 -1.8**

LEOM Leova 33.51 297 ⇑P **P** **11 23 50.2 -0.7**
TPGR Topolog 33.55 294 ⇑P **P** **11 23 50.3 -1.1**
TIRR Tirgusor 33.60 294 ⇓P **P** **11 23 51.0 -0.8**
TIRR Tirgusor 33.60 294 ⇓P **P** **11 23 51.0 -0.8**
TIRR Tirgusor 33.60 294 ⇓P **P** **11 23 50.8 -1.0**
GIUM Giurgiulesti 33.63 295 ⇑P **P** **11 23 51.2 -0.8**
MFTR Murfatlar 33.63 293 ⇑P **P** **11 23 51.3 -0.8**
VLDR Vladesti 33.68 296 ⇑P **P** **11 23 51.5 -1.0**
ISK Istanbul-Kandi 33.70 287 P **P** **11 23 56.1 +3.4**
CFR Carcaliu 33.71 295 ⇑P **P** **11 23 51.5 -1.2**
TATR Tatarca 33.73 296 ⇑P **P** **11 23 52.0 -0.8**
HALK Hakmana 33.78 167 ⇑P P 11 24 00.1 +6.5
PUL Pulkovo 33.79 321 ⇓*e*P **P** **11 23 52.8 -0.4**
PUL pmax pmax
comp=Z,331nm,0.6s
PUL MLR MLR
comp=Z,47µm,15.0s
VASR Vaslui 33.81 298 ⇑P **P** **11 23 52.4 -1.2**
VARL Varlezi 33.84 296 ⇓P **P** **11 23 53.4 -0.4**
TLBR Topalu 33.85 294 ⇓P **P** **11 23 53.1 -0.8**
HARR Harsova 33.91 294 ⇑P **P** **11 23 53.6 -0.8**
GULI GuiLin 33.92 103 P P 11 23 46.0 -8.7
GULI S S 11 29 06.5 -13
GULI LR LR
comp=N,86µm,18.0s
GULI LR LR
comp=E,97µm,14.9s
GULI LR LR
comp=Z,107µm,14.1s
IAS Iasi 33.93 299 ⇑P **P** **11 23 52.6 -2.0**
IZVR Izvoarele 33.93 296 ⇑P **P** **11 23 53.3 -1.3**
MNK Minsk 33.95 312 *i* P **P** **11 23 51.9 -2.8**
MNK *i* 11 25 04.4
MNK *i* 11 26 29.5
MNK *i* S **S** **11 29 16.2 -3.3**
MNK *i* SS **SnSn** **11 31 22.8 -2.4**
MNK pmax pmax
comp=N,52nm,0.8s
MNK pmax pmax
comp=Z,495nm,1.1s
MNK pmax pmax
comp=E,67nm,1.1s
MNK MLR MLR
comp=N,30µm,15.0s
MNK MLR MLR
comp=E,13µm,14.0s
MNK MLR MLR
comp=Z,140µm,20.0s
MNK Minsk 33.95 312 *i* P **P** **11 23 52.0 -2.8**
comp=E,67nm,1.1s
MNK *i* P **P** **11 23 52.0 -2.8**
comp=N,52nm,0.8s
MNK *i* P **P** **11 23 52.0 -2.8**
comp=Z,495nm,1.1s,baz=98
MNK *i* PP **PnPn** **11 25 04.4 -3.0**
MNK *i* PPP PPP 11 25 14.8
MNK *i* PcP **PcP** **11 26 29.5 -3.2**
MNK *i* S **S** **11 29 16.3 -3.3**
MNK *i* SS **SnSn** **11 31 22.9 -2.4**
MNK *i* SSS SSS 11 31 39.1
MNK *i* LQ LQ 11 35 00.1
MNK *i* LR LR 11 37 07.1
MNK *i* LRM MLR 11 38 33.8
comp=N,30µm,14.8s
MNK *i* LRM MLR 11 38 47.3
comp=E,13µm,13.5s
MNK *i* LRM MLR 11 38 51.8
BIR Birlad 33.96 297 ⇑P **P** **11 23 54.2 -0.6**
HIA Hailar 34.03 58 P **P** **11 23 54.8 -0.7**
HIA Hailar 34.03 58 P **P** **11 23 54.8 -0.7**
HIA pmax pmax
comp=Z,249nm,1.4s
HIA MLR MLR
comp=Z,216µm,19.0s
VALR Valaam 34.05 324 *ce*P **P** **11 23 53.6 -1.8**
VALR pmax pmax
comp=Z,309nm,1.1s
VALR MLR MLR
comp=Z,42µm,15.0s
ICOR Ion Corvin 34.09 293 ⇑P **P** **11 23 56.1 +0.1**
ELL Elmali 34.18 280 ⇓P **P** **11 23 56.0 -1.1**
PANC Panciu 34.33 296 ⇑P **P** **11 23 57.8 -0.3**
AMRR Amara 34.35 294 ⇑P **P** **11 23 58.7 +0.5**
TIA Tai'an 34.36 81 ⇑P **P** **11 23 59.0 +0.5**
TIA pP **sP** **11 24 06.0 +1.9**
TIA sP **pP** **11 24 09.0 +6.5**
TIA S **S** **11 29 33.5 +7.3**
TIA sS **sS** **11 29 39.5 +6.8**
TIA pmax pmax
comp=Z,170nm,0.9s
TIA pmax pmax
comp=Z,5µm,4.8s
TIA LR LR
comp=Z,112µm,19.8s
TIA LR LR
comp=Z,65µm,19.4s
TIA LR LR
comp=Z,58µm,23.3s
CNSH ChangSha 34.37 97 ⇓P **P** **11 23 57.5 -1.1**
CNSH S **S** **11 29 25.8 -0.7**
CNSH PcS **PcS** **11 30 23.0 +2.2**
CNSH ScS **ScS** **11 34 23.0 +0.7**
CNSH pmax pmax
comp=Z,51nm,0.9s
CNSH LR LR
comp=Z,196µm,19.2s
CNSH LR LR
comp=Z,113µm,19.2s
CNSH LR LR
comp=Z,107µm,15.3s
WHN Wuhan 34.37 92 ⇑*i*P **P** **11 23 59.5 +0.9**
WHN pP **sP** **11 24 03.5 -0.7**
WHN S **S** **11 29 33.3 +6.9**
WHN SS **SnSn** **11 31 39.3 +3.3**
WHN pmax pmax
comp=Z,350nm,0.8s
WHN LR LR
comp=Z,110µm,11.2s
WHN LR LR
comp=Z,180µm,12.5s
WHN LR LR
comp=Z,234µm,14.0s
GRER 34.50 295 ⇑P **P** **11 24 00.3 +0.7**
PRD Provadia 34.52 292 P **P** **11 24 02.0 +2.3**
AKAS Kas 34.58 279 P **P** **11 23 58.4 -2.1**
AKAS IAmb IAmb 11 24 08.9
comp=Z,580nm,0.9s
VRI Vrinceipaia 34.62 296 ⇓P **P** **11 23 59.7 -0.9**
NACGM Narooch 34.64 312 ⇑*e*P **P** **11 23 58.9 -1.8**
baz=96
BISRR Bisoca 34.67 296 ⇓P **P** **11 24 01.6 +0.5**
PLOR Plostina 34.68 296 ⇑P **P** **11 24 00.8 -0.3**
IDID Didziasalis 34.71 313 *e*P **P** **11 24 00.2 -1.0**
ISR Istrita 34.84 295 ⇑P **P** **11 24 03.0 +0.5**
BIZ Bicaz 34.94 298 ⇑P **P** **11 24 02.3 -1.1**
NEHR Nehoiu 34.97 296 ⇑P **P** **11 24 04.1 +0.4**
COVR Voineasa-Covas 34.99 296 ⇑P **P** **11 24 03.4 -0.5**
IIGN Ignalina 35.01 313 *e*P **P** **11 24 02.8 -1.1**
ISAL Salakas 35.09 313 *e*P **P** **11 24 03.6 -1.0**
RAZG Razgrad 35.09 292 ⇑P **P** **11 24 04.2 -0.5**
SECR 35.18 295 ⇓P **P** **11 24 06.2 +0.7**
MLR Muntele Rosu 35.21 296 ⇑P **P** **11 24 06.1 +0.2**
MLR Muntele Rosu 35.21 296 P **P** **11 24 05.5 -0.3**
comp=Z,86nm,0.6s,baz=86,slow=4.0,SNR=101
MLR S **S** **11 29 42.5 +3.2**
comp=Z,66nm,1.1s,baz=291,slow=19,SNR=1.7
MLR LR LR 11 40 43.0
comp=Z,50µm,20.4s,baz=76,slow=40
comp=Z,86nm,0.6s
MLR Muntele Rosu 35.21 296 P **P** **11 24 04.3 -1.5**
JMB Yambol 35.24 290 P **P** **11 24 06.0 0.0**
EDRB Edirne 35.24 289 P P 11 24 11.0 +5.0
OZUR 35.25 297 ⇑P **P** **11 24 05.8 -0.3**
VSU Vasula 35.25 318 *de*P **P** **11 24 03.6 -2.2**
VSU pmax pmax
comp=Z,988nm,0.8s
VSU MLR MLR
comp=Z,206µm,15.0s
VSU Vasula 35.25 318 *e*P **P** **11 24 04.5 -1.3**
VSU Vasula 35.25 318 ⇓P **P** **11 24 03.8 -2.1**
YER Yerkesik 35.30 281 P **P** **11 24 10.4 +3.7**
SGRR Singureni 35.37 294 ⇓P **P** **11 24 06.9 -0.1**
BURAR Bucovina Array 35.49 300 ⇑P **P** **11 24 06.8 -1.4**
BURAR Bucovina Array 35.49 300 P **P** **11 24 06.3 -1.9**

BURAR Bucovina Array 35.49 300 P **P** **11 24 06.3 -1.9**
BURAR pmax pmax
comp=Z,140nm,1.0s
BUR08 Bucovina Ar. S 35.50 300 P **P** **11 24 06.1 -2.2**
DOPR Dopca 35.54 297 ⇑P **P** **11 24 08.0 -0.5**
SZH Strazhica 35.56 292 P **P** **11 24 08.0 -0.7**
LVZ Lovozero 35.57 336 P **P** **11 24 07.6 -1.0**
LVZ IAmb IAmb 11 24 26.0
comp=Z,432nm,0.8s
LVZ Lovozero 35.57 336 *d i*P **P** **11 24 07.0 -1.6**
LVZ pmax pmax
comp=Z,535nm,0.9s
LVZ MLR MLR
comp=Z,144µm,18.0s
LVZ Lovozero 35.57 336 ⇓P **P** **11 24 09.7 +1.1**
ARG Arkhangelos 35.71 280 P P 11 24 16.5 +6.4
ARG Arkhangelos 35.71 280 ⇓P P 11 24 16.4 +6.3
APA Apatity 35.80 335 ⇑*i*P **P** **11 24 13.4 +3.0**
APA *i* 11 25 26.0
APA *i* S **S** **11 29 50.0 +2.4**
APA *i* SS **SS** **11 32 26.0 +2.9**
APA pmax pmax
comp=Z,59nm,0.8s
APA MLR MLR
comp=Z,223µm,12.0s
VOIR 35.84 296 ⇑P **P** **11 24 10.2 -1.0**
MTUR Matau 35.86 295 ⇑P **P** **11 24 10.7 -0.7**
COPA Copaceanca 35.92 294 ⇑P **P** **11 24 11.7 -0.1**
ALN Alexandroupoli 35.97 288 P **P** **11 24 15.4 +3.2**
ALN Alexandroupoli 35.97 288 P **P** **11 24 10.8 -1.4**
ALN Alexandroupoli 35.97 288 P **P** **11 24 10.8 -1.4**
ALN pmax pmax
comp=Z,141nm,1.0s
ALN Alexandroupoli 35.97 288 ⇑P **P** **11 24 11.2 -1.1**
DAT Datca 35.97 281 P **P** **11 24 17.0 +4.6**
STFAR Stefanesti-Arg 35.99 295 ⇑P **P** **11 24 13.0 +0.5**
HUMR Humele 36.02 294 ⇑P **P** **11 24 11.9 -0.8**
BODT Bodrum 36.07 281 P **P** **11 24 17.0 +3.8**
TGMR Targu Mures 36.07 298 ⇑P **P** **11 24 13.2 +0.1**
ARCR ARCALIA 36.12 299 ⇑P **P** **11 24 13.3 -0.2**
LVV L'vov 36.13 303 *e*P **P** **11 24 11.7 -1.9**
LVV *e* 11 25 49.5
LVV *e*S **S** **11 29 49.5 -3.6**
LVV MLR MLR
comp=Z,85µm,14.0s
ARR Arges 36.14 296 ⇑P **P** **11 24 13.3 -0.5**
PRK Paraskevi 36.22 285 P P 11 24 19.2 +4.8
SMG Samos 36.23 283 P **P** **11 24 17.0 +2.5**
FIA1 FINESS Array S 36.27 323 P **P** **11 24 12.1 -2.5**
FIA1 IAmb IAmb 11 24 28.6
comp=Z,178nm,0.7s
FINES FINESS Array B 36.27 323 P **P** **11 24 12.7 -1.9**
comp=Z,33nm,0.6s,baz=113,slow=8.7,SNR=188
FINES S **S** **11 29 58.5 +3.5**
comp=Z,31nm,0.9s,baz=108,slow=13,SNR=2.2
FINES LR LR 11 40 21.7
comp=Z,51µm,20.1s,baz=105,slow=38
comp=Z,33nm,0.6s
FINES FINESS Array B 36.27 323 P **P** **11 24 12.3 -2.3**
RDO Rodhopi 36.28 289 P P 11 24 20.9 +6.0
RDO Rodhopi 36.28 289 P **P** **11 24 13.4 -1.6**
RDO Rodhopi 36.28 289 ⇑P **P** **11 24 13.8 -1.1**
PABE Paberze 36.31 313 P **P** **11 24 12.6 -2.3**
PABE IAmb IAmb 11 24 25.2
comp=Z,698nm,1.1s
PABE IAMs_20 IAMs_20 11 40 18.9
comp=Z,65µm,19.0s
PABE Paberze 36.31 313 *e*P **P** **11 24 13.7 -1.3**
MQOL MQOL 36.35 250 *i*P **P** **11 24 16.1 +0.3**
MQOL *i* 11 24 28.9
baz=271,slow=11
MQOL AMP 11 26 06.8
comp=Z,328nm,1.5s
MQOL *i* S **S** **11 29 55.9 -1.1**
VSVD Vaisvydziai 36.37 314 *e*P **P** **11 24 14.2 -1.3**
SMTH Samothraki Isl 36.45 287 P **P** **11 24 20.4 +4.0**
VLAD Vladila 36.52 294 ⇑P **P** **11 24 15.2 -1.7**
CHOS Chios island 36.62 284 P **P** **11 24 20.4 +2.5**
BMR Baia Mare 36.64 300 ⇑P **P** **11 24 17.0 -0.9**
SUW Suwalki 36.66 310 *e*P **P** **11 24 15.5 -2.5**
SUW *e*PP **PP** **11 25 42.3 +1.1**
SUW *e*S **S** **11 29 58.8 -2.3**
SUW *e*L L 11 42 16.3
comp=Z,114µm,16.8s
SUW Suwalki 36.66 310 P **P** **11 24 15.8 -2.1**
SUW IAmb IAmb 11 25 34.8
comp=Z,585nm,1.1s
SUW IAMs_20 IAMs_20 11 40 06.3
comp=Z,68µm,19.0s
SUW Suwalki 36.66 310 P **P** **11 24 15.8 -2.1**
SUW pmax pmax
comp=Z,585nm,1.1s
SUW MLR MLR
comp=Z,68µm,19.0s
SUW Suwalki 36.66 310 *e*P **P** **11 24 15.9 -2.1**
SUW Suwalki 36.66 310 ⇑P **P** **11 24 15.9 -2.1**
KARP Karpathos 36.68 279 P **P** **11 24 14.3 -4.1**
KARP Karpathos 36.68 279 P **P** **11 24 16.6 -1.8**
KARP Karpathos 36.68 279 ⇓P **P** **11 24 16.2 -2.2**
CJR Cluj-Napoca 36.68 298 ⇑P **P** **11 24 18.0 -0.4**
PLD Plovdiv 36.68 290 P **P** **11 24 20.0 +1.7**
CBBR Cluj-Babes-Bol 36.70 298 ⇓P **P** **11 24 18.3 -0.2**
LOT Lotru 36.73 296 ⇑P **P** **11 24 18.2 -0.7**
RZN Rozhen 36.76 290 P **P** **11 24 22.0 +2.7**
MTSE Matsula 36.80 318 *e*P **P** **11 24 17.8 -1.3**
LIA Limnos Island 36.85 287 P P 11 24 24.8 +5.0
DL2 Dalian 36.97 75 P **P** **11 24 21.0 +0.2**
DL2 PP **PnPn** **11 25 46.0 +1.0**
DL2 S **S** **11 30 10.5 +4.4**
DL2 pmax pmax
comp=Z,210nm,1.0s
DL2 pmax pmax
comp=Z,5µm,7.9s
DL2 LR LR
comp=Z,83µm,15.7s
DL2 LR LR
comp=Z,59µm,13.0s
DL2 LR LR
comp=Z,123µm,18.0s
PGB Panagyurishte 36.97 291 P **P** **11 24 24.0 +3.1**
THAS Thassos island 37.02 288 P **P** **11 24 24.2 +3.0**
MESR Meseseni 37.07 299 ⇑P **P** **11 24 21.1 -0.5**
NJ2 Nanjing 37.22 87 ⇑P **P** **11 24 23.8 +0.8**
NJ2 pP **sP** **11 24 30.0 +1.3**
NJ2 sP **pP** **11 24 32.5 +5.5**
NJ2 PP **PnPn** **11 25 52.8 +4.6**
NJ2 S **S** **11 30 13.3 +3.2**
NJ2 sS **sS** **11 30 19.0 +2.4**
NJ2 pmax pmax
comp=Z,48nm,0.9s
NJ2 pmax pmax
comp=Z,6µm,5.7s
NJ2 LR LR
comp=Z,211µm,15.2s
NJ2 LR LR
comp=Z,90µm,14.2s
NJ2 LR LR
comp=Z,164µm,13.3s
DEV Deva 37.27 297 ⇑P **P** **11 24 23.0 -0.3**
DRGR 37.27 298 ⇑P **P** **11 24 22.7 -0.8**
DRGR 37.27 298 P **P** **11 24 22.6 -0.8**
QIZ Qiongzhong 37.30 112 P **P** **11 24 24.8 +0.9**
QIZ IAmb IAmb 11 24 56.9
comp=Z,1µm,1.9s
QIZ Qiongzhong 37.30 112 P **P** **11 24 24.3 +0.4**
QIZ PP **PnPn** **11 25 50.5 +1.1**
QIZ S **S** **11 30 14.3 +2.7**
QIZ pmax pmax
comp=Z,190nm,1.7s
QIZ pmax pmax
comp=Z,4µm,6.4s
QIZ LR LR
comp=Z,111µm,15.3s
QIZ LR LR
comp=Z,84µm,14.9s
QIZ LR LR
comp=Z,149µm,13.8s
KOLS Kolonicke sedl 37.34 302 *e*P **P** **11 24 22.4 -1.4**
KOLS *e* 11 24 28.7
KOLS pmax pmax
comp=Z,172nm,0.8s
KOLS Kolonicke sedl 37.34 302 *e*P **P** **11 24 22.4 -1.4**
KOLS *e* 11 24 28.7

UZH	**Uzhgorod**	**37.35**	**302**	*e*P	**P**	**11 24 20.8**	**-3.1**
UZH				*e*		11 24 22.3	
UZH				*i* S	**S**	**11 30 05.7**	**-6.0**
UZH				*i* SSS	SSS	11 32 43.5	
UZH				MLR	MLR		
	comp=N,8μm,15.0s						
UZH				MLR	MLR		
	comp=E,11μm,15.0s						
UZH				MLR	MLR		
	comp=Z,7μm,15.0s						
GZH	**Guangzhou**	**37.40**	**104**	P	**P**	**11 24 24.3**	**-0.3**
GZH				S	**S**	**11 30 13.3**	**+0.3**
GZH				LR	LR		
	comp=Z,96μm,14.6s						
GZH				LR	LR		
	comp=Z,83μm,13.5s						
APE	**Apeiranthos**	**37.41**	**282**	⇑P	**P**	**11 24 23.5**	**-1.2**
APE	**Apeiranthos**	**37.41**	**282**	P	**P**	**11 24 22.6**	**-2.1**
APE	**Apeiranthos**	**37.41**	**282**	⇑P	**P**	**11 24 23.1**	**-1.6**
APE				⇓S	**S**	**11 30 19.9**	**+6.9**
SLIT	**Slitere, Latvi**	**37.45**	**316**	*e*P	**P**	**11 24 22.4**	**-2.2**
SLIT	**Slitere, Latvi**	**37.45**	**316**	⇓P	**P**	**11 24 22.3**	**-2.3**
NVR	**Nevrokopi**	**37.46**	**289**	P	**P**	**11 24 24.2**	**-0.9**
KOKK	**Kokkinochori,**	**37.49**	**288**	P	P	11 24 30.3	+5.0
PBUR	**Paburge**	**37.50**	**314**	*e*P	**P**	**11 24 23.6**	**-1.4**
MMB	**Musomiste**	**37.50**	**290**	P	**P**	**11 24 28.0**	**+2.6**
PUNG	**Punghina**	**37.51**	**294**	⇓P	**P**	**11 24 24.7**	**-0.7**
ZKR	**Zakros**	**37.55**	**279**	P	**P**	**11 24 24.8**	**-1.0**
RMGR	**Halanga-Turnu**	**37.61**	**295**	⇓P	**P**	**11 24 24.9**	**-1.3**
STIA	**Sitia Lasithi**	**37.62**	**279**	P	**P**	**11 24 27.5**	**+1.2**
OUR	**Ouranopolis**	**37.63**	**288**	P	**P**	**11 24 27.5**	**+1.1**
VTS	**Vitosha**	**37.63**	**292**	P	**P**	**11 24 25.0**	**-1.6**
SNY	**Shenyang**	**37.66**	**70**	⇑P	**P**	**11 24 25.8**	**-0.8**
SNY				S	**S**	**11 30 20.8**	**+4.3**
SNY				pmax	pmax		
	comp=Z,76nm,0.6s						
SNY				pmax	pmax		
	comp=Z,5μm,8.0s						
SNY				LR	LR		
	comp=Z,94μm,16.7s						
SNY				LR	LR		
	comp=Z,154μm,17.3s						
SNY				LR	LR		
	comp=Z,196μm,16.9s						
SANT	**Santorini**	**37.70**	**281**	⇑P	**P**	**11 24 24.7**	**-2.4**
SANT	**Santorini**	**37.70**	**281**	P	**P**	**11 24 24.7**	**-2.4**
SANT				IAmb	IAmb	11 24 39.9	
	comp=Z,299nm,0.8s						
SANT	**Santorini**	**37.70**	**281**	⇑P	**P**	**11 24 31.5**	**+4.5**
SRS	**Serrai**	**37.72**	**289**	P	**P**	**11 24 25.9**	**-1.3**
DJES	**Djerdap**	**37.73**	**295**	⇑P	**P**	**11 24 25.7**	**-1.6**
LTVH	**Ltavrtes, Hu**	**37.75**	**300**	⇑P	**P**	**11 24 27.3**	**0.0**
LTVH	**Ltavrtes, Hu**	**37.75**	**300**	P	**P**	**11 24 27.0**	**-0.3**
HERR	**Herculane**	**37.77**	**295**	⇑P	**P**	**11 24 25.7**	**-1.8**
BORR	**Bors**	**37.86**	**299**	⇑P	**P**	**11 24 27.5**	**-0.8**
CRVS	**Cervenica-Dubn**	**37.87**	**302**	*e*P	**P**	**11 24 27.8**	**-0.6**
CRVS				*e*		11 24 34.5	
CRVS				*e*		11 25 55.5	
CRVS				*e*S	**S**	**11 30 22.2**	**+2.5**
CRVS				pmax	pmax		
	comp=Z,127nm,1.2s						
CRVS				MLR	MLR		
	comp=Z,46μm,23.2s						
CRVS	**Cervenica-Dubn**	**37.87**	**302**	*e*P	**P**	**11 24 27.8**	**-0.6**
CRVS				*e*		11 24 34.5	
CRVS				*e*PP	**PnPn**	**11 25 55.5**	**-0.4**
CRVS				*e*S	**S**	**11 30 22.2**	**+2.5**
CRVS				*e*SS	**SS**	**11 33 03.9**	**-1.8**
CRVS				*e*L	L	11 40 51.1	
NPS	**Neapolis**	**37.96**	**279**	P	**P**	**11 24 28.6**	**-0.7**
PAIG	**Paliouri**	**37.96**	**287**	P	**P**	**11 24 29.7**	**+0.5**
PLG	**Polygyros**	**38.01**	**288**	P	**P**	**11 24 28.6**	**-1.1**
SIRR	**Siria**	**38.07**	**298**	⇑P	**P**	**11 24 29.9**	**-0.2**
BEL	**Belsk**	**38.10**	**307**	*e*P	**P**	**11 24 28.5**	**-1.7**
BEL				*e*PP	**PnPn**	**11 25 59.8**	**+1.2**
BEL				*e*S	**S**	**11 30 29.1**	**+6.1**
BEL				*e*SS	**SS**	**11 33 08.8**	**-1.3**
BEL				*e*L	L	11 40 15.1	
	comp=Z,84μm,25.0s						
BEL	**Belsk**	**38.10**	**307**	⇑P	**P**	**11 24 28.4**	**-1.9**
MCO	**Taipa Grande**	**38.12**	**105**	P	**P**	**11 24 34.0**	**+3.3**
BZS	**Buzias**	**38.20**	**297**	⇑P	**P**	**11 24 30.5**	**-0.7**
HORT	**Hortiatis**	**38.21**	**288**	P	**P**	**11 24 34.7**	**+3.3**
RAF	**Rauma**	**38.22**	**322**	*e*P	**P**	**11 24 29.0**	**-2.1**
MDVR	**Moldovita**	**38.28**	**295**	⇑P	**P**	**11 24 31.2**	**-0.7**
PTL	**Penteli**	**38.37**	**284**	P	**P**	**11 24 33.0**	**+0.3**
VAY	**Valandovo**	**38.41**	**290**	*i* P	**P**	**11 24 31.4**	**-1.6**
TIM	**Timisoara**	**38.45**	**297**	⇑P	**P**	**11 24 34.1**	**+0.9**
XOR	**Xorichti**	**38.48**	**286**	P	**P**	**11 24 32.5**	**-1.1**
VLY	**Voula,Athens**	**38.48**	**284**	P	**P**	**11 24 32.5**	**-1.1**
IDI	**Anoyia**	**38.50**	**280**	⇑P	**P**	**11 24 32.5**	**-1.5**
IDI	**Anoyia**	**38.50**	**280**	P	**P**	**11 24 30.9**	**-3.0**
	comp=Z,22nm,0.6s,baz=50,slow=8.3,SNR=24						
IDI				S	**S**	**11 30 30.1**	**+0.4**
	comp=Z,19nm,1.0s,baz=84,slow=17,SNR=1.6						
IDI				LR	LR	11 44 52.0	
	comp=Z,20μm,19.2s,baz=74,slow=43						
	comp=Z,22nm,0.6s						
IDI	**Anoyia**	**38.50**	**280**	P	**P**	**11 24 33.0**	**-0.9**
IDI	**Anoyia**	**38.50**	**280**	P	**P**	**11 24 30.8**	**-3.2**
IDI	**Anoyia**	**38.50**	**280**	⇑P	**P**	**11 24 31.3**	**-2.7**
BOVS	**Bovan**	**38.51**	**294**	⇑P	**P**	**11 24 32.7**	**-1.0**
SRIT	**Nakonsritamara**	**38.55**	**136**	P	**P**	**11 24 35.0**	**+0.7**
SRIT				IAmb	IAmb	11 24 42.2	
	comp=Z,628nm,1.4s						
KECS	**Kecovo**	**38.56**	**301**	*e*P	P	11 24 39.8	+5.6
KECS	**Kecovo**	**38.56**	**301**	*e*	P	11 24 39.8	+5.6
CN2	**Changchun**	**38.57**	**66**	*e*P	**P**	**11 24 33.3**	**-1.0**
CN2				PP	**PnPn**	**11 26 09.0**	**+4.7**
CN2				*e*S	**S**	**11 30 28.5**	**-1.8**
CN2				pmax	pmax		
	comp=Z,30nm,1.2s						
CN2				pmax	pmax		
	comp=Z,2μm,9.6s						
CN2				LR	LR		
	comp=Z,119μm,16.0s						
CN2				LR	LR		
	comp=Z,146μm,16.0s						
CN2				LR	LR		
	comp=Z,31μm,18.0s						
BANR	**Banloc**	**38.57**	**296**	⇑P	**P**	**11 24 36.8**	**+2.6**
NIE	**Niedzica**	**38.58**	**303**	*e*P	**P**	**11 24 33.4**	**-1.0**
NIE				*e*PP	**PnPn**	**11 26 08.4**	**+4.0**
NIE				*e*S	**S**	**11 30 37.1**	**+6.6**
ZEA	**Zeya**	**38.67**	**50**	*e*P	**P**	**11 24 35.3**	**+0.2**
ZEA				*e*S	**S**	**11 30 27.5**	**-4.2**
ZEA				*e*SS	**SnSn**	**11 33 15.6**	**-3.8**
ZEA				pmax	pmax		
	comp=E,40nm,0.9s						
ZEA				pmax	pmax		
	comp=N,30nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,70nm,1.0s						
ZEA				pmax	pmax		
	comp=E,1μm,3.7s						
ZEA				pmax	pmax		
	comp=N,600nm,5.2s						
ZEA				pmax	pmax		
	comp=Z,3μm,9.6s						
ZEA				smax	smax		
	comp=N,5μm,9.2s						
ZEA				smax	smax		
	comp=E,5μm,9.8s						
ZEA				MLR	MLR		
	comp=N,35μm,9.0s						
ZEA				MLR	MLR		
	comp=E,55μm,16.0s						
ZEA				MLR	MLR		
	comp=Z,69μm,16.0s						
KAAM	**Kaadhehdhoo**	**38.72**	**181**	IAMs_20	IAMs_20	11 39 43.9	
	comp=Z,97μm,19.0s						
SUJ	**Sinuiju**	**38.76**	**72**	P	**P**	**11 24 35.5**	**-0.5**
SUJ				sP	**sP**	**11 24 42.1**	**+0.6**
SUJ				S	**S**	**11 30 33.1**	**-0.2**
SUJ				AmB			
	comp=Z,3μm,2.1s						
SUJ				AMS	AMS		
	comp=N,74μm,8.6s						
SUJ				AMS	AMS		
	comp=E,94μm,10.9s						
SUJ				AMS	AMS		
	comp=Z,65μm,7.5s						
LIT	**Litokhoron**	**38.79**	**288**	P	**P**	**11 24 34.6**	**-1.7**
LIT	**Litokhoron**	**38.79**	**288**	P	**P**	**11 24 34.6**	**-1.7**
LIT				pmax	pmax		
	comp=Z,214nm,1.2s						
LIT	**Litokhoron**	**38.79**	**288**	⇑P	**P**	**11 24 34.6**	**-1.7**
OJC	**Ojcow**	**38.83**	**304**	*e*P	**P**	**11 24 34.0**	**-2.5**
OJC				*e*PP	**PnPn**	**11 26 15.0**	**+7.6**
OJC				*e*S	**S**	**11 30 34.9**	**+0.8**
OJC				*e*SS	**SS**	**11 33 38.9**	**+14**
OJC				*e*L	L	11 41 04.8	
	comp=Z,50μm,20.4s						
OJC	**Ojcow**	**38.83**	**304**	P	**P**	**11 24 34.2**	**-2.2**
OJC	**Ojcow**	**38.83**	**304**	P	**P**	**11 24 34.2**	**-2.2**
OJC				pmax	pmax		
	comp=Z,464nm,1.2s						
OJC	**Ojcow**	**38.83**	**304**	⇓P	**P**	**11 24 34.2**	**-2.2**
ATD	**Arta Tunnel**	**38.85**	**233**	P	**P**	**11 24 38.4**	**+1.5**
	comp=Z,46nm,1.0s,baz=54,slow=13,SNR=4.0						
ATD				S	**S**	**11 30 39.3**	**+4.2**
	comp=Z,4.8nm,0.3s,baz=43,slow=20,SNR=1.6						
ATD				LR	LR	11 44 02.1	
	comp=Z,32μm,18.3s,baz=50,slow=42						
ATD	**Arta Tunnel**	**38.85**	**233**	⇓P	**P**	**11 24 40.2**	**+3.3**
ATD				*e*S	S	11 30 49.5	+14
ATD	**Arta Tunnel**	**38.85**	**233**	*e*P	P	11 24 46.8	+10
ATD	**Arta Tunnel**	**38.85**	**233**	*e*P	P	11 24 44.9	+7.9
ATD	**Arta Tunnel**	**38.85**	**233**	*e*P	P	11 24 45.1	+8.2
ATD				*e*S	S	11 30 54.2	+19
ATD	**Arta Tunnel**	**38.85**	**233**	⇑P	**P**	**11 24 41.0**	**+4.0**
KEV	**Kevo**	**38.91**	**336**	P	**P**	**11 24 34.9**	**-1.9**
KEV				IAMs_20	IAMs_20	11 41 46.1	
	comp=Z,53μm,18.0s						
KEV	**Kevo**	**38.91**	**336**	P	**P**	**11 24 34.9**	**-1.9**
KEV				pmax	pmax		
	comp=Z,193nm,1.0s						
KEV				MLR	MLR		
	comp=Z,53μm,18.0s						
KEV	**Kevo**	**38.91**	**336**	⇓P	**P**	**11 24 35.6**	**-1.2**
KEV				⇑S	S	11 30 44.6	+10
PSZ	**Piszkesteto**	**39.02**	**301**	⇑P	**P**	**11 24 37.5**	**-0.7**
PSZ	**Piszkesteto**	**39.02**	**301**	P	**P**	**11 24 37.1**	**-1.1**
PSZ	**Piszkesteto**	**39.02**	**301**	P	**P**	**11 24 37.1**	**-1.1**
PSZ				pmax	pmax		
	comp=Z,127nm,0.9s						
PSZ				MLR	MLR		
	comp=Z,28μm,19.0s						
PSZ	**Piszkesteto**	**39.02**	**301**	P	**P**	**11 24 36.8**	**-1.4**
PSZ	**Piszkesteto**	**39.02**	**301**	⇓P	**P**	**11 24 36.5**	**-1.6**
SKO	**Skopje**	**39.07**	**291**	*i* P	**P**	**11 24 37.4**	**-1.1**
LANS	**Liptovska Anna**	**39.15**	**303**	*e*P	**P**	**11 24 38.6**	**-0.6**
LANS	**Liptovska Anna**	**39.15**	**303**	*e*P	**P**	**11 24 38.5**	**-0.6**
AGG	**Agios Georgios**	**39.22**	**286**	P	**P**	**11 24 38.1**	**-1.7**
AGG	**Agios Georgios**	**39.22**	**286**	P	**P**	**11 24 38.2**	**-1.7**
KZN	**Kozani**	**39.27**	**288**	P	**P**	**11 24 45.0**	**+4.7**
ARA0	**ARCESS Array S**	**39.28**	**336**	*e*P	**P**	**11 24 38.5**	**-1.4**
ARA0				*e*S	**S**	**11 30 41.7**	**+1.2**
ARCES	**ARCESS Array B**	**39.28**	**336**	P	**P**	**11 24 38.5**	**-1.4**
	comp=Z,20nm,0.5s,baz=110,slow=6.9,SNR=100						
ARCES				S	**S**	**11 30 42.8**	**+2.3**
	comp=Z,33nm,0.9s,baz=138,slow=8.5,SNR=4.2						
ARCES				LR	LR	11 41 46.4	
	comp=Z,106μm,18.7s,baz=112,slow=38						
	comp=Z,20nm,0.5s						
ARCES	**ARCESS Array B**	**39.28**	**336**	P	**P**	**11 24 38.3**	**-1.6**
ARCES				IAmb	IAmb	11 24 55.5	
	comp=Z,652nm,1.2s						
THL	**Klokotos Trika**	**39.29**	**287**	P	**P**	**11 24 40.8**	**+0.4**
FNA	**Florina**	**39.42**	**289**	*i* P	P	11 24 49.8	+8.3
SSE	**Sheshan**	**39.43**	**87**	P	**P**	**11 24 42.5**	**+0.9**
SSE				S	**S**	**11 30 46.5**	**+3.0**
SSE				pmax	pmax		
	comp=Z,45nm,1.4s						
FRGS	**Fruska Gora**	**39.53**	**296**	⇑P	**P**	**11 24 41.7**	**-0.7**
FRGS	**Fruska Gora**	**39.53**	**296**	*e*P	**P**	**11 24 41.0**	**-1.4**
BNX	**BinXian**	**39.56**	**63**	P	**P**	**11 24 42.0**	**-0.6**
BNX				pP	**sP**	**11 24 48.5**	**+0.3**
BNX				sP	**pP**	**11 24 52.0**	**+5.4**
BNX				S	**S**	**11 30 43.0**	**-2.2**
BNX				SS	**SS**	**11 33 32.3**	**-7.3**
BNX				pmax	pmax		
	comp=Z,110nm,0.9s						
BNX				pmax	pmax		
	comp=Z,5μm,10.9s						
BNX				LR	LR		
	comp=Z,111μm,12.8s						
BNX				LR	LR		
	comp=Z,185μm,15.4s						
BNX				LR	LR		
	comp=Z,250μm,15.1s						
DIVS	**Divibare**	**39.62**	**295**	P	**P**	**11 24 41.7**	**-1.5**
DIVS				IAmb	IAmb	11 24 53.8	
	comp=Z,434nm,0.9s						
DIVS	**Divibare**	**39.62**	**295**	*e*P	**P**	**11 24 41.7**	**-1.5**
DIVS	**Divibare**	**39.62**	**295**	⇓P	**P**	**11 24 41.8**	**-1.4**
VYHS	**Vyhne**	**39.65**	**302**	*e*P	**P**	**11 24 42.1**	**-1.2**
VYHS				*e*		11 24 48.5	
VYHS				pmax	pmax		
	comp=Z,113nm,1.2s						
VYHS	**Vyhne**	**39.65**	**302**	*e*P	**P**	**11 24 42.1**	**-1.2**
VYHS				*e*		11 24 48.5	
BUD	**Budapest**	**39.67**	**300**	P	**P**	**11 24 42.8**	**-0.6**
OHR	**Ohrid**	**39.76**	**290**	*i* P	**P**	**11 24 42.2**	**-2.1**
SJES	**Sjenica**	**39.82**	**293**	*e*P	**P**	**11 24 43.4**	**-1.5**
KTK1	**Kautokeino**	**39.82**	**334**	*e*P	**P**	**11 24 43.0**	**-1.5**
KTK1				*e*PP	**PnPn**	**11 26 19.4**	**+0.5**
KTK1				*e*S	**S**	**11 30 49.5**	**+0.9**
KTK1				*i*		11 33 41.1	
KTK1				IVMs_BB	IVMs_BB	11 41 41.3	
	comp=Z,63μm,25.0s						
TEKS	**Tekeris**	**39.85**	**296**	*e*P	**P**	**11 24 42.8**	**-2.3**
PHP	**Peshkopia**	**39.87**	**291**	*i* P	P	11 24 52.3	+7.0
KOLL	**Kolacno**	**39.92**	**302**	*e*P	**P**	**11 24 44.5**	**-1.0**
KOLL				*e*		11 24 51.6	
OKC	**Ostrava-Krasne**	**39.93**	**304**	*e*P	**P**	**11 24 44.1**	**-1.5**
OKC				*e*		11 24 50.4	
OKC				MLR	MLR		
	comp=Z,30μm,14.6s						
OKC	**Ostrava-Krasne**	**39.93**	**304**	*e*P	**P**	**11 24 44.1**	**-1.5**
OKC				*e*pP	**sP**	**11 24 50.4**	**-0.8**
OKC				AMS	AMS	11 42 00.0	
	comp=Z,30μm,14.6s						
BCI	**Bajram Curri**	**39.97**	**292**	*i* P	**P**	**11 24 46.7**	**+0.7**
IVA	**Berane**	**39.97**	**293**	*e*P	**P**	**11 24 45.0**	**-1.1**
PVY	**Plav**	**39.99**	**292**	*e*P	**P**	**11 24 45.5**	**-0.8**
PYAG	**Pyongyang**	**40.00**	**73**	P	**P**	**11 24 45.6**	**-0.7**
PYAG				sP	**sP**	**11 24 52.1**	**+0.5**
PYAG				S	**S**	**11 30 52.5**	**+0.5**
PYAG				AmB			
	comp=Z,3μm,2.4s						
PYAG				AMS	AMS		
	comp=N,29μm,13.9s						
PYAG				AMS	AMS		
	comp=E,5μm,2.2s						
PYAG				AMS	AMS		
	comp=Z,11μm,5.4s						
SRO2	**Moca**	**40.05**	**301**	*e*P	**P**	**11 24 45.2**	**-1.4**
SRO2				*e*		11 24 51.8	
SRO2	**Moca**	**40.05**	**301**	*e*P	**P**	**11 24 45.2**	**-1.4**
SRO2				*e*		11 24 51.8	
LHMI	**Lhok Sumawe**	**40.07**	**142**	P	**P**	**11 24 46.9**	**-0.2**
LHMI				IAmb	IAmb	11 24 54.5	
	comp=Z,1μm,1.6s						
LHMI	**Lhok Sumawe**	**40.07**	**142**	P	**P**	**11 24 46.6**	**-0.4**
	comp=Z,47μmcomp=Z,14μmcomp=Z,358nm,1.0s						
LHMI	**Lhok Sumawe**	**40.07**	**142**	P	**P**	**11 24 47.7**	**+0.7**
LHMI	**Lhok Sumawe**	**40.07**	**142**	⇑P	**P**	**11 24 47.1**	**0.0**
BBLS	**Lazići**	**40.09**	**295**	*e*P	**P**	**11 24 45.5**	**-1.6**
SRO	**Srobarova**	**40.09**	**301**	*e*P	**P**	**11 24 46.5**	**-0.4**
SRO				*e*		11 24 53.1	
SRO				pmax	pmax		
	comp=Z,450nm,1.5s						
SRO	**Srobarova**	**40.09**	**301**	*e*P	**P**	**11 24 46.5**	**-0.4**
SRO				*e*		11 24 53.1	
ITM	**Ithomi**	**40.10**	**284**	P	**P**	**11 24 44.2**	**-2.9**
ITM	**Ithomi**	**40.10**	**284**	⇑P	**P**	**11 24 43.9**	**-3.3**
MORH	**Mrgy, Hungar**	**40.14**	**298**	⇑P	**P**	**11 24 46.3**	**-1.0**
MORH	**Mrgy, Hungar**	**40.14**	**298**	*e*P	**P**	**11 24 45.7**	**-1.6**
MORH	**Mrgy, Hungar**	**40.14**	**298**	P	**P**	**11 24 45.9**	**-1.5**
RUDO	**Rudo**	**40.17**	**294**	*e*P	P	11 24 38.9	-8.8
LSK	**Leskovik**	**40.17**	**289**	*i* P	**P**	**11 24 47.2**	**-0.6**
MAUC	**Maruska**	**40.19**	**303**	*e*P	**P**	**11 24 46.7**	**-1.1**
MAUC				*e*x	x	11 24 53.0	
MAUC				AMS	AMS	11 45 10.0	
	comp=Z,97μm,15.1s						
CSKK	**Cskako**	**40.20**	**300**	P	**P**	**11 24 47.6**	**-0.3**
GKP	**Gorka Klasztor**	**40.20**	**309**	*e*P	**P**	**11 24 45.7**	**-2.1**
GKP				*e*PP	**PnPn**	**11 26 26.1**	**+2.4**
GKP				*e*S	**S**	**11 31 01.0**	**+6.4**
GKP				*e*SS	**SnSn**	**11 34 02.2**	**+5.9**
GKP	**Gorka Klasztor**	**40.20**	**309**	*e*P	**P**	**11 24 46.1**	**-1.7**
PLE	**Pljevlja**	**40.22**	**294**	*e*P	**P**	**11 24 44.0**	**-4.2**
KOME	**Kolasin**	**40.24**	**293**	⇑*i*P	**P**	**11 24 47.2**	**-1.2**
HJU	**Haeju**	**40.29**	**75**	P	**P**	**11 24 48.7**	**0.0**
HJU				sP	**sP**	**11 24 55.0**	**+0.6**
HJU				S	**S**	**11 30 57.2**	**+0.9**
HJU				AmB			
	comp=Z,4μm,2.2s						
HJU				AMS	AMS		
	comp=N,202μm,10.7s						
HJU				AMS	AMS		
	comp=E,167μm,8.8s						
HJU				AMS	AMS		
	comp=Z,237μm,12.5s						
HAMF	**Hammerfest**	**40.31**	**337**	*e*P	**P**	**11 24 47.7**	**-0.7**
HAMF				IVmB_BB		11 25 04.3	
	comp=Z,8μm,4.7s						
HAMF				*e*PP	**PnPn**	**11 26 25.2**	**+0.6**
HAMF				*e*S	**S**	**11 30 58.6**	**+2.8**
HAMF				*i*		11 33 54.6	
HAMF				IVMs_BB	IVMs_BB	11 41 51.4	
	comp=Z,50μm,12.4s						
MORC	**Moravsky Berou**	**40.32**	**304**	⇑P	**P**	**11 24 47.7**	**-1.2**
MORC	**Moravsky Berou**	**40.32**	**304**	P	**P**	**11 24 47.3**	**-1.6**
MORC	**Moravsky Berou**	**40.32**	**304**	P	**P**	**11 24 47.3**	**-1.6**
MORC				pmax	pmax		
	comp=Z,486nm,1.5s						
MORC	**Moravsky Berou**	**40.32**	**304**	⇓*i*P	**P**	**11 24 47.1**	**-1.8**
MORC				*e*PP	**PnPn**	**11 26 26.3**	**+1.1**
MORC				*e*S	**S**	**11 30 52.0**	**-4.7**
MORC	**Moravsky Berou**	**40.32**	**304**	⇑P	**P**	**11 24 47.1**	**-1.8**
JAVC	**Velka Javorina**	**40.36**	**302**	⇓*i*P	**P**	**11 24 48.8**	**-0.5**
JAVC				*e*PP	**PnPn**	**11 26 28.9**	**+3.2**
JAVC				*e*S	**S**	**11 30 53.3**	**-4.0**
TIR	**Tirane**	**40.37**	**291**	⇑P	**P**	**11 24 46.5**	**-2.9**
TIR	**Tirane**	**40.37**	**291**	P	**P**	**11 24 48.9**	**-0.5**
TIR	**Tirane**	**40.37**	**291**	P	**P**	**11 24 48.9**	**-0.5**
TIR				pmax	pmax		
	comp=Z,126nm,0.8s						
TIR				MLR	MLR		
	comp=Z,8μm,21.0s						
TIR	**Tirane**	**40.37**	**291**	*i* P	P	11 24 55.0	+5.6
TIR	**Tirane**	**40.37**	**291**	⇑P	**P**	**11 24 53.9**	**+4.5**
QZH	**Quanzhou**	**40.38**	**97**	⇓*i*P	**P**	**11 24 52.3**	**+2.7**
QZH				PP	**PnPn**	**11 26 29.8**	**+3.7**
QZH				S	**S**	**11 31 00.3**	**+2.5**
QZH				pmax	pmax		
	comp=Z,110nm,1.0s						
QZH				pmax	pmax		
	comp=Z,5μm,8.0s						
QZH				LR	LR		
	comp=Z,112μm,18.9s						
QZH				LR	LR		
	comp=Z,52μm,18.5s						
QZH				LR	LR		
	comp=Z,87μm,15.2s						
YAK	**Yakutsk**	**40.47**	**37**	P	**P**	**11 24 47.7**	**-2.2**
	comp=Z,144nm,0.8s,baz=241,slow=2.0,SNR=64						
YAK				S	**S**	**11 30 56.3**	**-2.0**
	comp=Z,7.6nm,0.5s,baz=53,slow=16,SNR=1.4						
YAK				LR	LR	11 42 42.0	
	comp=Z,93μm,18.2s,baz=268,slow=38						
YAK				SKKP		11 52 13.5	
	comp=Z,3.2nm,0.3s,baz=328,slow=3.7,SNR=6.0						
	comp=Z,144nm,0.8s						
YAK	**Yakutsk**	**40.47**	**37**	P	**P**	**11 24 48.2**	**-1.6**
YAK				IAmb	IAmb	11 25 00.7	
	comp=Z,731nm,0.9s						
YAK				IAMs_20	IAMs_20	11 42 19.9	
	comp=Z,98μm,20.0s						
YAK	**Yakutsk**	**40.47**	**37**	*c i*P	**P**	**11 24 47.9**	**-1.9**
YAK				*e*		11 26 28.2	
YAK				*e*S	**S**	**11 30 55.6**	**-2.7**
YAK				*e*SS	**SS**	**11 33 52.4**	**-4.8**
YAK				*e*		11 34 52.8	
YAK				pmax	pmax		
	comp=Z,792nm,1.0s						
YAK				pmax	pmax		
	comp=N,108nm,1.0s						
YAK				pmax	pmax		
	comp=E,250nm,0.9s						
YAK				pmax	pmax		
	comp=Z,813nm,1.6s						
YAK				pmax	pmax		
	comp=N,104nm,1.9s						
YAK				pmax	pmax		
	comp=E,630nm,1.5s						
YAK				smax	smax		
	comp=E,6μm,6.2s						
YAK				smax	smax		
	comp=N,4μm,4.8s						
YAK				MLR	MLR		
	comp=Z,91μm,18.0s						
YAK				MLR	MLR		
	comp=N,28μm,15.0s						
YAK				MLR	MLR		
	comp=E,56μm,15.0s						
YAK	**Yakutsk**	**40.47**	**37**	⇑P	**P**	**11 24 48.0**	**-1.8**
KNMB	**Chin-men Tao**	**40.48**	**98**	P	**P**	**11 24 50.4**	**0.0**
KNMB				IAmb	IAmb	11 24 57.7	
	comp=Z,2μm,1.9s						
KNMB				IAMs_20	IAMs_20	11 43 36.7	
	comp=Z,73μm,22.0s						
KOVH	**Kovagotottos**	**40.53**	**298**	P	**P**	**11 24 48.7**	**-2.0**
PDG	**Podgorica**	**40.53**	**292**	⇑P	**P**	**11 24 49.2**	**-1.4**
PDG	**Podgorica**	**40.53**	**292**	P	**P**	**11 24 49.1**	**-1.6**
PDG				IAmb	IAmb	11 25 05.8	
	comp=Z,370nm,0.9s						
PDG	**Podgorica**	**40.53**	**292**	*e*P	**P**	**11 24 48.7**	**-2.0**
PDG	**Podgorica**	**40.53**	**292**	⇑P	**P**	**11 24 48.8**	**-1.8**
TTG	**Podgorica**	**40.53**	**292**	⇑*i*P	**P**	**11 24 49.3**	**-1.4**
IGT	**Igoumenitsa**	**40.55**	**288**	*i* P	**P**	**11 24 47.1**	**-3.8**
SMOL	**Smolenice**	**40.57**	**302**	*e*P	P	11 24 56.7	+

comp=Z,246nm,1.1s
ZST Bratislava 40.83 302 *e*P **P** **11 24 51.9 -1.2**
ZST *e* 11 24 58.7
ZST *e*PP **PP** **11 26 27.3 +0.3**
ZST *e*S S 11 31 13.9 +10
ZST *e*SS **SnSn** **11 34 09.6 -2.0**
KEK Kerkira 40.89 288 P **P** **11 24 50.7 -2.9**
KEK Kerkira 40.89 288 ⇓P **P** **11 24 55.1 +1.5**
VLO Vlora 40.89 289 P **P** **11 24 52.2 -1.4**
VLO IAmb IAmb 11 25 06.7
comp=Z,620nm,0.8s
VLO Vlora 40.89 289 P **P** **11 24 52.2 -1.4**
VLO pmax pmax
comp=Z,620nm,0.8s
BRY Bratogost 40.93 293 *e*P **P** **11 24 53.0 -1.1**
BRY Bratogost 40.93 293 *e*P **P** **11 24 52.7 -1.4**
JETT Jettan, Norway 40.95 335 *e*P **P** **11 24 52.5 -1.4**
JETT IVmB_BB 11 25 06.6
comp=Z,4μm,0.0s
JETT *e*S **S** **11 31 04.5 -1.0**
JETT *i* 11 34 04.7
JETT IVMs_BB IVMs_BB 11 42 35.2
comp=Z,68μm,25.0s
KSP Ksiaz 40.99 306 *e*P **P** **11 24 52.8 -1.6**
KSP *e*PP **PnPn** **11 26 41.8 +8.8**
KSP *e*S **S** **11 31 11.6 +5.1**
KSP *e*SS SS 11 33 49.7 -18
KSP *e*L L 11 41 05.8
comp=Z,43μm,26.6s
KSP Ksiaz 40.99 306 ⇓P **P** **11 24 52.5 -1.9**
VRAC Vranov 41.00 303 ⇓P **P** **11 24 53.3 -1.2**
VRAC Vranov 41.00 303 P **P** **11 24 52.6 -1.8**
comp=Z,22nm,0.9s,baz=80,slow=8.6,SNR=32
VRAC S **S** **11 31 05.6 -1.0**
comp=Z,5.2nm,0.8s,baz=343,slow=17,SNR=1.0
VRAC LR LR 11 43 31.2
comp=Z,40μm,19.5s,baz=82,slow=39
comp=Z,22nm,0.9s
VRAC Vranov 41.00 303 ⇓*i*P **P** **11 24 53.0 -1.5**
VRAC *e*PP **PnPn** **11 26 32.5 -0.6**
VRAC *e*S **S** **11 31 03.0 -3.7**
DPC Dobruska-Polom 41.03 305 *e*P **P** **11 24 53.5 -1.3**
DPC *e* 11 25 00.5
DPC *e*S **S** **11 31 07.3 +0.1**
DPC MLR MLR
comp=Z,62μm,13.5s
DPC Dobruska-Polom 41.03 305 *e*P **P** **11 24 53.5 -1.3**
DPC *e*pP **sP** **11 25 00.5 +0.1**
DPC *e*S **S** **11 31 07.3 +0.1**
DPC AMS AMS 11 43 10.0
comp=Z,62μm,13.5s
HHU Hamhung 41.05 71 P **P** **11 24 55.0 +0.1**
HHU sP **pP** **11 24 59.4 +0.4**
HHU S **S** **11 31 11.9 +4.4**
HHU AmB
comp=Z,4μm,1.7s
HHU AMS AMS
comp=N,65μm,14.7s
HHU AMS AMS
comp=E,27μm,6.0s
HHU AMS AMS
comp=Z,24μm,5.4s
HCY Herceg Novi 41.07 293 *e*P **P** **11 24 54.1 -1.1**
HCY Herceg Novi 41.07 293 ⇑*i*P **P** **11 24 53.3 -1.9**
OSTC Ostas 41.08 305 *e*P **P** **11 24 54.3 -0.8**
OSTC *e*x x 11 25 00.6
OSTC AMS AMS 11 43 10.0
comp=Z,65μm,13.6s
TREB Trebinje 41.11 293 *e*P **P** **11 24 53.7 -1.7**
INCN Inchon 41.16 75 IAMs_20 IAMs_20 11 44 39.2
comp=Z,105μm,19.0s
INCN Inchon 41.16 75 P **P** **11 24 56.0 +0.1**
INCN Inchon 41.16 75 ⇑P **P** **11 24 55.4 -0.5**
KRUC Moravsky 41.16 303 ⇓*i*P **P** **11 24 54.5 -1.3**
KRUC *e*PP **PnPn** **11 26 38.7 +3.7**
KRUC *e*S **S** **11 31 06.0 -3.1**
CHVC Chvalec 41.17 305 *e*P **P** **11 24 54.4 -1.5**
CHVC *e*x x 11 25 01.5
CHVC AMS AMS 11 43 20.0
comp=Z,72μm,13.8s
DESE Dese 41.19 236 ⇓*e*P P 11 25 05.5 +8.8
DESE *e*S S 11 31 25.5 +15
DESE Dese 41.19 236 *e*P P 11 25 04.9 +8.2
DESE Dese 41.19 236 *e*P P 11 25 03.3 +6.6
DESE Dese 41.19 236 *e*P P 11 25 03.2 +6.5
DESE *e*S S 11 31 23.0 +12
UPC Upice 41.21 305 *e*P **P** **11 24 54.8 -1.4**
UPC *e*S **S** **11 31 11.5 +1.7**
UPC MLR MLR
comp=Z,74μm,13.5s
UPC Upice 41.21 305 *e*P **P** **11 24 54.8 -1.4**
UPC *e*S **S** **11 31 11.5 +1.7**
UPC AMS AMS 11 43 20.0
comp=Z,74μm,13.5s
SOP Sopron 41.28 301 P **P** **11 24 55.6 -1.2**
MDJ Mudanjiang 41.30 64 P **P** **11 24 56.5 -0.5**
MDJ Mudanjiang 41.30 64 P **P** **11 24 56.0 -1.0**
MDJ pP pP 11 25 00.0 -1.0
MDJ sP sP 11 25 03.0 +0.4
MDJ PP **PP** **11 26 31.8 -0.4**
MDJ S **S** **11 31 14.3 +3.1**
MDJ pmax pmax
comp=Z,91nm,1.4s
MDJ pmax pmax
comp=Z,3μm,10.3s
MDJ LR LR
comp=Z,179μm,14.8s
MDJ LR LR
comp=Z,135μm,14.9s
MDJ LR LR
comp=Z,183μm,19.6s
BEHE Becsehely 41.36 299 *e*P **P** **11 24 56.0 -1.5**
BEHE Becsehely 41.36 299 P **P** **11 24 56.5 -1.0**
BLY Banja Luka 41.44 296 *e*P **P** **11 24 56.3 -1.9**
BLY Banja Luka 41.44 296 ⇓P **P** **11 24 56.6 -1.6**
RONA Rosalia, Austr 41.45 301 *i*P **P** **11 24 56.8 -1.5**
comp=Z,38nm,1.2s,SNR=22
RONA *i*S **pP** **11 25 03.5 +1.3**
comp=Z,157nm,1.1s
BSD Bornholm Skovb 41.47 312 *e*P **P** **11 24 58.5 +0.3**
BSD Bornholm Skovb 41.47 312 *i*P **P** **11 25 00.9 +2.7**
BSD IAmb IAmb 11 25 07.7
comp=Z,154nm,0.5s
BSD Bornholm Skovb 41.47 312 ⇑P **P** **11 24 56.0 -2.2**
TRO Tromso 41.47 334 *e*P **P** **11 24 56.5 -1.5**
TRO IVmB_BB 11 25 09.7
comp=Z,2μm,2.1s
TRO *e*PP **PnPn** **11 26 38.2 -0.1**
TRO *e*S **S** **11 31 12.5 -0.6**
TRO *i* 11 34 21.1
TRO IVMs_BB IVMs_BB 11 42 53.3
comp=Z,70μm,23.2s
STON Ston 41.53 293 *e*P **P** **11 24 56.0 -2.9**
MGRS Mrkonjic Grad 41.59 296 *e*P **P** **11 24 58.7 -0.7**
SRKY Kupres RS 41.61 295 *e*P **P** **11 24 58.3 -1.4**
CONA Conrad Observa 41.70 301 *i*P **P** **11 24 58.7 -1.6**
comp=Z,45nm,1.0s,SNR=42
CONA *i*S **pP** **11 25 05.6 +1.3**
comp=Z,311nm,0.9s
TREC Trest 41.72 303 AMS AMS 11 46 10.0
comp=Z,47μm,17.4s
KOGS Kog 41.72 299 *i*P **P** **11 24 58.5 -1.9**
SCTE Santa Cesarea 41.76 289 *i*P **P** **11 25 03.7 +2.9**
KLR Kul'dur 41.87 57 P **P** **11 25 01.0 -0.5**
comp=Z,92nm,0.7s,baz=281,slow=8.3,SNR=243
KLR S **S** **11 31 18.9 -0.6**
comp=Z,4.2nm,0.9s,baz=146,slow=22,SNR=0.9
KLR LR LR 11 44 03.6
comp=Z,135μm,20.1s,baz=280,slow=39
comp=Z,92nm,0.7s
KLR Kul'dur 41.87 57*c* *i*P **P** **11 25 01.1 -0.5**
KLR pmax pmax
comp=Z,512nm,1.6s
KLR MLR MLR
comp=Z,129μm,17.0s
KULM Kulim 41.88 137 P **P** **11 25 01.2 -0.8**
KULM IAmb IAmb 11 25 10.5
comp=Z,497nm,1.3s
KULM Kulim 41.88 137 ⇑P **P** **11 25 01.3 -0.7**
KCSI Kotacane, Aceh 41.95 142 P **P** **11 24 59.2 -3.4**
comp=Z,21μmcomp=Z,5μmcomp=Z,238nm,0.8s
DEL Delary 42.00 314 *e*P **P** **11 25 00.7 -1.8**
KS19 Wonju Array Si 42.07 75 P **P** **11 25 03.5 +0.1**
KS19 IAmb IAmb 11 25 15.1
comp=Z,664nm,1.6s
HFS Hagfors 42.08 320 P **P** **11 25 01.0 -2.2**
comp=Z,79nm,0.6s,baz=102,slow=11,SNR=174
HFS LR LR 11 43 31.8
comp=Z,80μm,18.4s,baz=93,slow=38
comp=Z,79nm,0.6s
HFS Hagfors 42.08 320 P **P** **11 25 01.0 -2.2**
TJN Taejon 42.09 76 P **P** **11 25 02.0 -1.5**
TJN Taejon 42.09 76 P **P** **11 25 02.0 -1.5**
TJN pmax pmax
comp=Z,3μm,1.6s
TJN Taejon 42.09 76 P **P** **11 25 02.9 -0.6**
SEHB SEOHWA 42.10 73 P **P** **11 25 03.6 -0.1**
SEHB IAmb IAmb 11 25 15.6
comp=Z,633nm,1.5s
KSAR Wonju Array Be 42.11 75 P **P** **11 25 02.3 -1.3**
KSAR Wonju Array Be 42.11 75 P **P** **11 25 02.3 -1.3**
PVCC Panska Ves 42.12 305 *e*P **P** **11 25 03.0 -0.6**
PVCC *e* 11 25 09.3
PVCC *e*S **S** **11 31 29.2 +6.0**
PVCC MLR MLR
comp=Z,62μm,13.0s
PVCC Panska Ves 42.12 305 *e*P **P** **11 25 03.0 -0.6**
PVCC *e*pP **sP** **11 25 09.3 +0.1**
PVCC *e*S **S** **11 31 29.2 +6.0**
PVCC AMS AMS 11 43 50.0
comp=Z,62μm,13.0s
KSRS Korea Array 42.13 75 P **P** **11 25 03.0 -0.9**
comp=Z,39nm,0.7s,baz=284,slow=7.7,SNR=198
KSRS LR LR 11 45 38.3
comp=Z,68μm,18.3s,baz=280,slow=41
comp=Z,39nm,0.7s
KSRS Korea Array 42.13 75 P **P** **11 25 03.0 -0.9**
FAUS Fauske 42.21 331 *e*P **P** **11 25 02.8 -1.3**
FAUS IVmB_BB 11 25 20.0
comp=Z,7μm,4.0s
FAUS *e*PP **PP** **11 26 45.4 +3.9**
FAUS *e*S **S** **11 31 23.6 -0.5**
FAUS *i* 11 34 28.7
FAUS IVMs_BB IVMs_BB 11 43 09.8
comp=Z,65μm,10.7s
PRU Pruhonice 42.22 305 *e*P **P** **11 25 03.1 -1.3**
PRU *e* 11 25 09.7
PRU *e*S **S** **11 31 29.5 +4.8**
PRU MLR MLR
comp=Z,52μm,13.8s
PRU Pruhonice 42.22 305 *e*P **P** **11 25 03.1 -1.3**
PRU *e*x x 11 25 09.7
PRU *e*S **S** **11 31 29.5 +4.8**
PRU AMS AMS 11 44 00.0
comp=Z,52μm,13.8s
ANKE Ethiopia-Afar 42.28 235 *e*P P 11 25 12.6 +6.9
MOR8 Moi Rana 42.32 329 *e*P **P** **11 25 02.7 -2.4**
MOR8 IVmB_BB 11 25 15.9
comp=Z,4μm,1.6s
MOR8 *e*PP **PP** **11 26 41.5 -1.4**
MOR8 *e*S **S** **11 31 21.4 -4.4**
MOR8 *i* 11 34 30.1
MOR8 IVMs_BB IVMs_BB 11 43 15.9
comp=Z,49μm,19.9s
STEI Steigen 42.34 331 *e*P **P** **11 25 03.6 -1.5**
STEI *e*S **S** **11 31 27.8 +1.9**
STEI *i* 11 34 33.7
STEI IVMs_BB IVMs_BB 11 43 13.9
comp=Z,55μm,14.8s
TSI Tuntungan 42.35 141 P **P** **11 25 02.5 -3.3**
comp=Z,24μmcomp=Z,6μmcomp=Z,324nm,1.1s
TIXI Tiksi 42.35 23 P **P** **11 25 03.5 -1.8**
comp=Z,50nm,0.6s,baz=264,slow=23,SNR=177
TIXI S **S** **11 31 26.3 +0.3**
comp=Z,53nm,1.1s,baz=272,slow=23,SNR=1.8
TIXI LR LR 11 43 47.7
comp=Z,141μm,19.4s,baz=185,slow=38
comp=Z,50nm,0.6s
TIXI Tiksi 42.35 23 P **P** **11 25 02.9 -2.3**
TIXI IAmb IAmb 11 25 17.3
comp=Z,354nm,0.8s
TIXI Tiksi 42.35 23*c* *i*P **P** **11 25 03.2 -2.0**
TIXI pmax pmax
comp=Z,434nm,0.8s
TIXI MLR MLR
comp=Z,142μm,18.0s
TIXI Tiksi 42.35 23 ⇑P **P** **11 25 03.4 -1.8**
RUE Ruedersdorf 42.36 308 ⇓P **P** **11 25 08.3 +2.9**
CRES Cresnjev 42.39 298 *e*P **P** **11 25 04.1 -1.8**
RGN Rugen 42.43 311 IAMs_20 IAMs_20 11 44 21.8
comp=Z,56μm,20.0s
RGN Rugen 42.43 311 ⇓P **P** **11 25 09.7 +3.6**
LEGS Legarje 42.46 299 *e*P **P** **11 25 04.8 -1.7**
LEGS *es*S **sS** **11 31 38.5 +3.4**
NAWB Namwon 42.46 78 P **P** **11 25 05.4 -1.2**
BRG Berggiesshubel 42.47 306 *i*P **P** **11 25 05.0 -1.5**
BRG Amp 11 25 06.1
comp=Z,24nm,0.8s
BRG *ex* x 11 25 11.2
BRG Amp 11 25 15.5
comp=Z,156nm,0.8s
BRG *ex* x 11 25 21.7
BRG Amp 11 25 22.6
comp=Z,357nm,1.1s
BRG ⇑PP **PcP** **11 27 02.4 +3.2**
BRG Amp 11 27 05.2
comp=Z,1μm,2.3s
BRG Berggiesshubel 42.47 306 SS SS 11 34 43.0 +5.8
BRG Amp 11 44 26.0
comp=N,43nm,15.0s
BRG Amp 11 44 34.0
comp=E,58nm,20.8s
BRG Amp 11 44 39.0
comp=Z,79nm,16.7s
BRG Berggiesshubel 42.47 306 *i*P **P** **11 25 04.9 -1.5**
BRG *e* 11 25 11.1
BRG 11 27 02.3
BRG S **S** **11 31 33.0 +4.7**
BRG pmax pmax
comp=Z,24nm,0.8s
BRG MLR MLR
comp=E,58nm,20.8s
BRG MLR MLR
comp=Z,79μm,16.7s
SOKA Soboth 42.50 300 *i*P **P** **11 25 05.2 -1.6**
comp=Z,66nm,1.5s,SNR=23
SOKA *e*S **pP** **11 25 12.2 +1.3**
comp=Z,255nm,1.0s
CKRC Cesky Krumlov 42.56 303 *e*P **P** **11 25 06.1 -1.2**
CKRC *ex* x 11 25 13.2
CKRC *e*S **S** **11 31 35.1 +5.3**
CKRC AMS AMS 11 46 40.0
comp=Z,47μm,15.5s
BOJS Bojanci 42.60 298 *e*P **P** **11 25 05.8 -1.8**
YHNB Yeheng 42.66 95 P **P** **11 25 09.4 +0.9**
YHNB IAMs_20 IAMs_20 11 45 46.7
comp=Z,45μm,18.0s
YHNB Yeheng 42.66 95 P **P** **11 25 10.4 +1.9**
HOPEN Hopen 42.70 345 *e*P **P** **11 25 07.8 -0.2**
HOPEN IVmB_BB 11 25 25.1
comp=Z,5μm,2.0s
HOPEN *e*PP **PP** **11 26 51.3 +4.6**
HOPEN *e*S **S** **11 31 32.5 +1.4**
HOPEN *i* 11 34 40.9
HOPEN IVMs_BB IVMs_BB 11 45 15.3
comp=Z,49μm,12.2s
MOA Molln 42.77 302 *i*P **P** **11 25 07.5 -1.5**
comp=Z,13nm,0.8s,SNR=42
MOA *e*S **pP** **11 25 14.0 +0.9**
comp=Z,289nm,1.2s
SSLB Suanglung 42.81 97 IAMs_20 IAMs_20 11 45 33.6
comp=Z,94μm,21.0s
TPUB Ta-pu 42.83 98 IAMs_20 IAMs_20 11 44 40.0
comp=Z,63μm,19.0s
COP Copenhagen 42.85 313 *i*P **P** **11 25 12.2 +2.8**
OBKA Obir 42.86 300 *e*P **P** **11 25 07.8 -2.0**
comp=Z,25nm,0.8s,SNR=31
OBKA *e*S **pP** **11 25 15.3 +1.5**
comp=Z,212nm,0.9s
MATE Matera 42.87 291 ⇑P **P** **11 25 08.8 -0.9**
MATE Matera 42.87 291 ⇓P **P** **11 25 07.0 -2.7**
KONS Konsvik 42.90 329 *e*P **P** **11 25 08.2 -1.5**
KONS *e*PP **PP** **11 26 48.2 -0.8**
KONS *e*S **S** **11 31 33.6 -0.6**
KONS *i* 11 34 46.2
MSHR Mys Shultsa 42.91 66*ce*P **P** **11 25 10.1 -0.1**
MSHR pmax pmax
comp=Z,429nm,1.7s
MSHR MLR MLR
comp=Z,64μm,14.0s
STOK Stokkvaagen 42.92 329 *e*P **P** **11 25 08.5 -1.4**
STOK *e*S **S** **11 31 37.7 +3.2**
GEC2 GERESS Array S 42.95 303 P **P** **11 25 08.6 -1.9**
GERES GERESS Array B 42.95 303 P **P** **11 25 09.0 -1.5**
comp=Z,14nm,0.9s,baz=66,slow=7.6,SNR=96
GERES LR LR 11 44 41.3
comp=Z,42μm,21.0s,baz=86,slow=38
comp=Z,14nm,0.9s
LJU Ljubljana 42.98 299 *e*P **P** **11 25 09.3 -1.4**
LJU Ljubljana 42.98 299 *i*P **P** **11 25 09.2 -1.4**
LJU *e*SS SS 11 35 09.5 +22
KHC Kasperske Hory 42.98 304 P **P** **11 25 09.2 -1.5**
KHC Kasperske Hory 42.98 304 *e*P **P** **11 25 09.1 -1.6**
KHC *e* 11 25 16.3
KHC *e* 11 27 05.0
KHC *e*S **S** **11 31 37.9 +1.9**
KHC MLR MLR
comp=Z,47μm,19.2s
KHC Kasperske Hory 42.98 304 *e*P **P** **11 25 09.1 -1.6**
KHC *e*pP **sP** **11 25 16.3 0.0**
KHC *ex* x 11 27 05.0
KHC *e*S **S** **11 31 37.9 +1.9**
KHC AMS AMS 11 44 00.0
comp=Z,47μm,19.2s
KHC Kasperske Hory 42.98 304 ⇓P **P** **11 25 09.2 -1.6**
CLL Collm 42.99 307 P **P** **11 25 08.3 -2.4**
CLL IAMs_20 IAMs_20 11 46 07.4
comp=Z,80μm,20.0s
CLL Collm 42.99 307 *e*P **P** **11 25 09.0 -1.7**
CLL *e*S **S** **11 31 37.0 +1.1**
CLL pmax pmax
comp=Z,317nm,1.1s
CLL MLR MLR
comp=Z,104μm,17.9s
CLL Collm 42.99 307 *e*P **P** **11 25 09.0 -1.7**
comp=Z,26nm,1.0s
CLL *i* P(2) 11 25 14.1
CLL *e*Plp 11 25 16.0
comp=Z,4μm,12.2s
CLL *i* P(3) 11 25 18.6
comp=Z,292nm,1.3s
CLL *e*Pmax 11 25 20.0
CLL *i* P(4) 11 25 25.3
comp=Z,317nm,1.1s
CLL *e*PP(2) 11 26 55.0
CLL *e*PPlp 11 27 04.0
comp=E,9μm,17.6s
CLL *e*PPlp 11 27 04.0
comp=Z,9μm,19.1s
CLL *e*PPP PPP 11 27 19.0
CLL *e*PPP(3) 11 27 28.0
CLL *e*S **S** **11 31 37.0 +1.1**
CLL *e*S **S** **11 31 37.0 +1.1**
comp=E,9μm,13.0s
CLL *e*SS **SS** **11 34 48.0 +0.6**
CLL Lmax 11 44 00.0
LOF Lofoten 43.00 332 *e*P **P** **11 25 14.1 +3.6**
LOF IVmB_BB 11 25 26.1
comp=Z,5μm,3.0s
LOF *e*PP **PP** **11 26 52.0 +1.9**
LOF *e*S **S** **11 31 35.4 -0.3**
LOF *i* 11 34 44.6
LOF IVMs_BB IVMs_BB 11 43 35.3
comp=Z,58μm,16.5s
USA0B Ussuriysk Arra 43.07 64 P **P** **11 25 10.7 -0.7**
USA0B Ussuriysk Arra 43.07 64 P **P** **11 25 10.7 -0.7**
USA0B pmax pmax
comp=Z,407nm,1.8s
USRK Ussuriysk Ar. 43.07 64 P **P** **11 25 10.2 -1.2**
comp=Z,31nm,0.5s,baz=268,slow=7.8,SNR=104
USRK LR LR 11 45 09.7
comp=Z,146μm,19.2s,baz=273,slow=39
comp=Z,31nm,0.5s
NC405 NORSAR Array S 43.08 321 P **P** **11 25 09.7 -1.6**
NC405 IAmb IAmb 11 25 32.2
comp=Z,839nm,1.1s
MRVN Minervino Murg 43.11 291 ⇑P **P** **11 25 10.0 -1.9**
CEY Cerknica 43.11 298 *e*P **P** **11 25 10.0 -1.8**
PSI Prapat 43.13 141 P **P** **11 25 11.1 -1.2**
BJO1 Bjornoya 43.14 341 *e*P **P** **11 25 10.5 -1.0**
BJO1 IVmB_BB 11 25 19.5
comp=Z,3μm,1.3s
BJO1 *e*PP **PcP** **11 26 57.7 -3.3**
BJO1 *e*S **S** **11 31 39.3 +1.7**
BJO1 *i* 11 34 50.5
BJO1 IVMs_BB IVMs_BB 11 44 33.7
comp=Z,29μm,14.9s
NSS Namsos 43.15 326 *e*P **P** **11 25 09.5 -2.2**
NSS IVmB_BB 11 25 27.6
comp=Z,4μm,3.2s
NSS *e*S **S** **11 31 39.1 +1.1**
NSS *i* 11 34 43.4
NSS IVMs_BB IVMs_BB 11 43 58.7
comp=Z,48μm,11.3s
JAWL J.Aulia 43.16 248 *i*P P 11 25 18.9 +6.5
JAWL *i* 11 25 28.8
baz=247,slow=5.1
NC602 NORSAR Array S 43.16 321 *e*P **P** **11 25 09.4 -2.6**
NC602 *e*PP **PP** **11 26 49.6 -2.4**
NC602 *e*S **S** **11 31 37.3 -0.9**
NC602 *i* 11 34 46.9
NC602 IVMs_BB IVMs_BB 11 44 02.6
comp=Z,40μm,11.9s
BIOA Bad Ischl, Aus 43.22 301 *i*P **P** **11 25 10.7 -1.9**
comp=Z,14nm,0.8s,SNR=14
BIOA *e*S **pP** **11 25 17.5 +0.9**
comp=Z,164nm,0.7s
RPSI Rantau Prapat 43.22 141 IAMs_20 IAMs_20 11 44 04.0
comp=Z,65μm,22.0s
SGRT San Giovanni R 43.23 292 P **P** **11 25 10.3 -2.5**
VLA Vladivostok 43.28 65*c* *i*P **P** **11 25 12.4 -0.7**
VLA pmax pmax
comp=Z,558nm,1.3s
VLA MLR MLR
comp=Z,98μm,15.0s
TIP Timpagrande 43.29 289 ⇑P **P** **11 25 11.6 -1.7**
TIP Timpagrande 43.29 289 P **P** **11 25 11.0 -2.3**
TIP Timpagrande 43.29 289 ⇓P **P** **11 25 10.8 -2.5**
YULB Yu-li 43.29 97 IAMs_20 IAMs_20 11 45 34.2
comp=Z,90μm,18.0s
AAE Adis Abeba 43.32 235 ⇓*e*P P 11 25 19.0 +4.9
AAE *e*S S 11 31 59.8 +18
AAE Adis Abeba 43.32 235 *e*P P 11 25 22.4 +8.3
AAE Adis Abeba 43.32 235 *e*P P 11 25 21.2 +7.1
AAE Adis Abeba 43.32 235 *e*P P 11 25 20.1 +6.0
AAE *e*S S 11 31 54.5 +12
NB2 NORSAR Subarra 43.32 321 P **P** **11 25 10.8 -2.5**
baz=94,slow=8.6
NB2 NORSAR Subarra 43.32 321 P **P** **11 25 10.8 -2.5**
comp=Z,165nm,0.6s,baz=94,slow=8.6
NOA NORSAR Array B 43.32 321 P **P** **11 25 10.8 -2.5**
comp=Z,31nm,0.6s,baz=91,slow=7.9,SNR=240
NOA LR LR 11 44 19.5
comp=Z,69μm,18.7s,baz=90,slow=38
comp=Z,31nm,0.6s
VOJS Vojsko 43.41 299 *es*S **sS** **11 31 53.4 +4.0**
VOJS *es*S **ScS** **11 35 14.6 +0.1**
TWG Pinlang 43.43 98 IAMs_20 IAMs_20 11 45 00.2
comp=Z,66μm,20.0s
SKDS Skadanscina 43.44 298 *e*P P 11 25 09.2 -5.2
MYKA Terra Mystica 43.44 300 *i*P **P** **11 25 13.0 -1.5**
comp=Z,9.4nm,0.8s,SNR=17
MYKA *e*S **pP** **11 25 19.7 +1.1**
comp=Z,128nm,1.4s
FURI Furi 43.48 235 IAMs_20 IAMs_20 11 46 07.6
comp=Z,64μm,19.0s
FURI Furi 43.48 235 ⇓*e*P P 11 25 21.7 +6.3
FURI *e*S S 11 31 59.8 +15
FURI Furi 43.48 235 *e*P P 11 25 24.1 +8.8
FURI Furi 43.48 235 *e*P P 11 25 22.4 +7.0
FURI Furi 43.48 235 *e*P P 11 25 20.9 +5.5
FURI *e*S S 11 31 57.2 +13
NAO01 NORSAR Array S 43.48 321 *e*P **P** **11 25 12.2 -2.4**
NKC Novy Kostel 43.51 305 AMS AMS 11 44 50.0
comp=Z,74μm,14.1s
KBA Koelnbreinsper 43.54 301 *i*P **P** **11 25 13.8 -1.6**
comp=Z,7.6nm,0.7s,SNR=8.7
KBA *e*S **pP** **11 25 19.6 +0.2**
comp=Z,132nm,1.0s
KBA Koelnbreinsper 43.54 301 ⇑P **P** **11 25 13.7 -1.8**
TRI Trieste 43.57 299 P **P** **11 25 13.4 -2.0**
TRI IAmb IAmb 11 25 25.2
comp=Z,498nm,0.9s

TRI **Trieste** 43.57 299 P **P** 11 25 13.4 -2.0
TRI pmax pmax
comp=Z,498nm,0.9s
OSL **Oslo** 43.57 319 *e*P **P** 11 25 13.6 -1.6
OSL IVmB_BB 11 25 30.9
comp=Z,4μm,4.8s
OSL *e*PP **PP** 11 26 54.2 -2.1
OSL *e*S **S** 11 31 45.7 +1.5
OSL *i* 11 34 54.8
OSL IVMs_BB IVMs_BB 11 43 48.5
comp=Z,34μm,11.9s
ROBS **Robic** 43.62 299 *i* P **P** 11 25 13.6 -2.3
PTCC **Patocco-Chiusa** 43.69 300 ⇑P **P** 11 25 14.4 -2.0
CUC **Castrocucco** 43.72 290 P **P** 11 25 15.3 -1.4
CUC IAmb IAmb 11 25 26.9
comp=Z,469nm,0.7s
GSI **Gunungsitoli** 43.81 144 P **P** 11 25 17.0 -0.6
GSI IAMs_20 IAMs_20 11 44 53.4
comp=Z,76μm,20.0s
GSI **Gunungsitoli** 43.81 144 P **P** 11 25 17.4 -0.2
comp=Z,50μmcomp=Z,20μmcomp=Z,1μm,1.3s
GSI **Gunungsitoli** 43.81 144 P **P** 11 25 17.7 +0.1
GSI **Gunungsitoli** 43.81 144 ⇑P **P** 11 25 17.3 -0.3
TBLU **Trondheim** 43.82 324 *e*P **P** 11 25 15.3 -1.9
TBLU IVmB_BB 11 25 33.1
comp=Z,5μm,2.9s
TBLU *e*PP **PcP** 11 27 02.4 -1.1
TBLU *e*S **S** 11 31 47.3 -0.6
TBLU *i* 11 34 55.3
TBLU IVMs_BB IVMs_BB 11 43 57.4
comp=Z,32μm,10.3s
FLTG **Flechtingen** 43.92 308 ⇓P **P** 11 25 15.9 -2.2
OVD **Ostervraa, Den** 43.96 316 *i* P **P** 11 25 22.4 +4.0
CLUD **Cludinico** 43.99 300 P **P** 11 25 17.0 -1.9
YOJ **Yonaguni jima** 44.04 95 P **P** 11 25 20.9 +1.5
YOJ IAmb IAmb 11 25 39.0
comp=Z,572nm,1.5s
YOJ **Yonaguni jima** 44.04 95 P **P** 11 25 20.9 +1.5
YOJ pmax pmax
comp=Z,572nm,1.5s
YOJ **Yonaguni jima** 44.04 95 P **P** 11 25 20.0 +0.6
YOJ **Yonaguni jima** 44.04 95 ⇑P **P** 11 25 20.0 +0.6
KONO **Kongsberg** 44.15 319 P **P** 11 25 18.0 -1.9
KONO IAmb IAmb 11 25 28.3
comp=Z,289nm,0.9s
KONO **Kongsberg** 44.15 319 IAMs_20 IAMs_20 11 44 23.5
comp=Z,74μm,18.0s
KONO **Kongsberg** 44.15 319 P **P** 11 25 18.0 -1.9
KONO pmax pmax
comp=Z,289nm,1.0s
KONO MLR MLR
comp=Z,74μm,18.0s
KONO **Kongsberg** 44.15 319 *e*P **P** 11 25 17.9 -2.0
KONO IVmB_BB 11 25 27.6
comp=Z,2μm,0.7s
KONO *e*PP **PP** 11 27 02.0 -0.5
KONO *e*S **S** 11 31 53.1 +0.4
KONO *i* 11 35 06.4
KONO IVMs_BB IVMs_BB 11 44 07.8
comp=Z,40μm,13.8s
KONO **Kongsberg** 44.15 319 ⇑P **P** 11 25 17.8 -2.0
STAL **STALIGIAL** 44.15 300 P **P** 11 25 17.8 -2.3
ABTA **Abfaltersbach** 44.17 300 *i* P **P** 11 25 18.1 -2.3
comp=Z,8.9nm,0.7s,SNR=10
ABTA *e*S **pP** 11 25 24.6 +0.2
comp=Z,88nm,0.7s
CEL **Celeste** 44.23 288 P **P** 11 25 19.5 -1.5
CEL **Celeste** 44.23 288 ⇓P **P** 11 25 19.1 -1.9
JTU **Tsushima** 44.32 78 ⇓P **P** 11 25 21.4 -0.2
DOMB **Dombas** 44.36 323 ⇑P **P** 11 25 19.8 -1.8
DOMB IVmB_BB 11 25 37.6
comp=Z,5μm,3.7s
DOMB *e*S **S** 11 31 55.0 -0.8
DOMB IVMs_BB IVMs_BB 11 44 18.9
comp=Z,50μm,14.2s
GRA1 **Grafenberg Arr** 44.38 305 P **P** 11 25 20.5 -1.5
GRA1 IAmb IAmb 11 25 38.7
comp=Z,378nm,0.9s
GRA1 IAMs_20 IAMs_20 11 46 22.4
comp=Z,54μm,20.0s
GRF **Grafenberg Arr** 44.38 305 P **P** 11 25 20.5 -1.5
GRF pmax pmax
comp=Z,378nm,0.9s
GRF MLR MLR
comp=Z,54μm,20.0s
GRFO **Grafenberg** 44.39 305 P **P** 11 25 21.4 -0.6
GRFO IAmb IAmb 11 25 38.6
comp=Z,402nm,1.0s
GRFO IAMs_20 IAMs_20 11 46 31.4
comp=Z,57μm,18.0s
GRFO **Grafenberg** 44.39 305 P **P** 11 25 21.4 -0.6
GRFO pmax pmax
comp=Z,402nm,1.0s
GRFO MLR MLR
comp=Z,57μm,18.0s
GRNR **Gornyy** 44.57 54 ⇓*i*P **P** 11 25 23.7 +0.2
GRNR *e*S **S** 11 32 02.8 +3.6
GRNR pmax pmax
comp=E,20nm,0.8s
GRNR smax smax
comp=N,9.0nm,0.9s
GRNR MLR MLR
comp=E,77μm,14.0s
GRNR MLR MLR
comp=N,40μm,16.0s
GRNR MLR MLR
comp=Z,106μm,16.0s
MUD **Monsted U'grnd** 44.60 315 *i* P **P** 11 25 27.0 +3.5
MUD IAmb IAmb 11 25 32.3
comp=Z,96nm,0.6s
MUD **Monsted U'grnd** 44.60 315 ⇑P **P** 11 25 27.5 +4.0
WTTA **Wattenberg** 44.63 301 *i* P **P** 11 25 21.6 -2.6
comp=Z,20nm,0.9s,SNR=15
WTTA *e*S **pP** 11 25 28.7 +0.5
comp=Z,283nm,0.9s
WATA **Walderalm** 44.66 301 *i* P **P** 11 25 22.2 -2.2
comp=Z,16nm,0.9s,SNR=11
WATA *e*S **pP** 11 25 28.7 +0.3
comp=Z,133nm,0.8s
SKAR **Skarslia** 44.75 321 *e*P **P** 11 25 23.9 -0.9
SKAR IVmB_BB 11 25 42.0
comp=Z,5μm,3.7s
SKAR *e*PP **PP** 11 27 11.2 +2.2
SKAR *e*S **S** 11 32 02.2 +0.6
SKAR *i* 11 35 22.4
SKAR IVMs_BB IVMs_BB 11 44 54.0
comp=Z,33μm,13.9s
NRCA **Norcia** 44.78 295 P **P** 11 25 23.8 -1.5
NRCA IAmb IAmb 11 25 38.8
comp=Z,332nm,0.9s
HOMB **Homborsund** 44.80 317 *e*P **P** 11 25 23.2 -1.8
HOMB IVmBBB 11 25 32.9
comp=Z,2μm,1.1s
HOMB *e*PP **PP** 11 27 08.0 -1.4
HOMB *e*S **S** 11 32 00.2 -1.9
HOMB IVMs_BB IVMs_BB 11 44 38.6
comp=Z,50μm,15.5s
HSPB **Hornsund (broa** 44.87 344 *e*P **P** 11 25 24.5 -0.9
HSPB *e*S **S** 11 32 08.8 +5.9
HSPB *e*L L 11 46 20.6
comp=Z,85μm,16.6s
HSPB **Hornsund (broa** 44.87 344 *e*P **P** 11 25 24.7 -0.7
SQTA **Sankt Quirin** 44.93 301 *i* P **P** 11 25 24.2 -2.2
comp=Z,12nm,0.8s,SNR=11
SQTA *e*S **pP** 11 25 31.0 +0.5
comp=Z,185nm,1.1s
MOTA **Moosalm** 44.97 301 *i* P **P** 11 25 24.5 -2.3
comp=Z,13nm,0.8s,SNR=16
MOTA *e*S **pP** 11 25 31.3 +0.4
comp=Z,190nm,0.9s
MOL **Molde** 45.06 323 *e*P **P** 11 25 25.8 -1.3
MOL IVmBBB 11 25 35.4
comp=Z,2μm,1.1s
MOL *e*PP **PP** 11 27 15.4 +3.3
MOL *e*S **S** 11 32 08.1 +2.3
MOL *i* 11 35 25.8
MOL IVMs_BB IVMs_BB 11 44 49.0
comp=Z,46μm,12.6s
MURB **Monte Urbino** 45.07 296 P **P** 11 25 26.3 -1.3
TEOL **Teolo** 45.08 299 P **P** 11 25 26.0 -1.6
SPB2 **Spitsbergen Ar** 45.15 346 P **P** 11 25 26.9 -0.7
SPB2 IAmb IAmb 11 25 48.4
comp=Z,428nm,0.9s
SPA0 **Spitsbergen Ar** 45.16 346 *e*P **P** 11 25 27.6 -0.2
SPA0 IVmB_BB 11 25 44.2
comp=Z,5μm,1.6s
SPA0 *e*PP **PP** 11 27 16.5 +3.5
SPA0 *e*S **S** 11 32 05.4 -1.6
SPA0 *i* 11 35 27.8
SPA0 IVMs_BB IVMs_BB 11 47 52.4
comp=Z,59μm,14.6s
SPITS **Spitsbergen Ar** 45.16 346 LR LR 11 47 03.2
comp=Z,75μm,19.4s,baz=52,slow=40
SPITS **Spitsbergen Ar** 45.16 346 P **P** 11 25 27.2 -0.5
SPITS pmax pmax
comp=Z,405nm,1.1s
RETA **Reutte** 45.16 302 *i* P **P** 11 25 25.7 -2.6
comp=Z,12nm,1.2s,SNR=14
RETA *e*S **pP** 11 25 33.1 +0.8
comp=Z,112nm,0.7s
MNSI **Mandailing Nat** 45.19 142 P **P** 11 25 27.2 -1.5
comp=Z,26μmcomp=Z,13μmcomp=Z,1μm,0.8s
FETA **Feichten** 45.29 301 *i* P **P** 11 25 27.2 -2.2
comp=Z,7.4nm,0.9s,SNR=14
FETA *e*S **pP** 11 25 34.3 +0.8
comp=Z,87nm,1.1s
AKN **Aaknes** 45.33 323 *e*P **P** 11 25 28.1 -1.2
AKN IVmB_BB 11 25 46.0
comp=Z,4μm,3.5s
AKN *e*PP **PP** 11 27 16.8 +1.8
AKN *e*S **S** 11 32 10.7 +0.9
AKN *i* 11 35 29.4
AKN IVMs_BB IVMs_BB 11 45 16.0
comp=Z,52μm,9.8s
MGAB **Montegabbione** 45.47 295 ⇑P **P** 11 25 29.0 -1.6
SNART **Snartemo** 45.47 317 *e*P **P** 11 25 28.9 -1.6
SNART *e*S **S** 11 32 13.2 +1.3
VAE **Valguarnera** 45.61 287 S **S** 11 32 16.2 +1.7
comp=Z,3.5nm,0.4s,baz=265,slow=21,SNR=1.3
VAE LR LR 11 48 04.6
comp=Z,10μm,19.6s,baz=56,slow=41
DILA **Dilla** 45.62 233 *e*P P 11 25 40.0 +7.7
JMJ **Miyako jima 2** 45.62 93 P **P** 11 25 33.1 +1.1
HLG **Helgoland** 45.63 311 ⇑P P 11 25 38.6 +6.9
ODD1 **Odda** 45.63 320 *e*P **P** 11 25 30.9 -0.9
ODD1 *e*S **S** 11 32 16.9 +2.6
FUORN **Ofenpass-Fuorn** 45.70 301 P **P** 11 25 30.0 -2.8
RAFF **Raffo Rosso** 45.74 287 P **P** 11 25 31.3 -1.6
BLS5 **Blasjo** 45.76 319 *e*P **P** 11 25 32.0 -0.8
BLS5 IVmB_BB 11 25 49.6
comp=Z,6μm,4.2s
BLS5 *e*PP **PP** 11 27 21.0 +1.4
BLS5 *e*S **S** 11 32 14.8 -1.3
BLS5 *i* 11 35 36.7
BLS5 IVMs_BB IVMs_BB 11 45 14.5
comp=Z,43μm,12.5s
HYA **Hoyanger** 45.76 321 *e*P **P** 11 25 31.9 -0.8
HYA IVmB_BB 11 25 40.9
comp=Z,2μm,1.3s
HYA *e*S **S** 11 32 16.1 +0.2
HYA *i* 11 35 43.4
HYA IVMs_BB IVMs_BB 11 44 53.6
comp=Z,26μm,11.4s
DAVA **Damuels** 45.79 302 *i* P **P** 11 25 31.2 -2.2
comp=Z,37nm,0.7s,SNR=30
DAVA *e*S **pP** 11 25 38.2 +0.9
comp=Z,758nm,1.2s
DAVA **Damuels** 45.79 302 ⇓P **P** 11 25 30.9 -2.5
SALO **Salr** 45.79 299 ⇑P **P** 11 25 35.2 +2.0
STU **Stuttgart** 45.88 304 ⇓P **P** 11 25 34.5 +0.7
DAVOX **Davos/Dischmat** 45.92 301 LR LR 11 47 21.3
comp=Z,23μm,20.3s,baz=76,slow=40
JNU **Nakatsue** 46.02 79 P **P** 11 25 34.6 -0.6
comp=Z,179nm,0.9s,baz=306,slow=5.2,SNR=44
JNU S **S** 11 32 24.9 +4.4
comp=Z,28nm,0.6s,baz=92,slow=0.2,SNR=5.5
JNU LR LR 11 45 55.9
comp=Z,36μm,18.2s,baz=297,slow=38
comp=Z,179nm,0.9s
JNU **Nakatsue** 46.02 79 P **P** 11 25 34.9 -0.4
JNU **Nakatsue** 46.02 79 P **P** 11 25 35.6 +0.4
JNU **Nakatsue** 46.02 79 P **P** 11 25 34.8 -0.4
IBBN **Ibbenburen** 46.03 309 ⇑P **P** 11 25 33.5 -1.5
BER **Bergen** 46.24 320 *e*P **P** 11 25 39.7 +3.2
BER IVmB_BB 11 25 57.5
comp=Z,3μm,2.1s
BER *e* 11 27 31.2
BER *i* 11 35 47.0
BER IVMs_BB IVMs_BB 11 45 56.7
comp=Z,33μm,16.8s
KBS **Kingsbay** 46.26 346 P **P** 11 25 35.4 -0.9
KBS IAmb IAmb 11 25 55.9
comp=Z,376nm,0.9s
KBS **Kingsbay** 46.26 346 IAMs_20 IAMs_20 11 47 45.9
comp=Z,85μm,20.0s
KBS **Kingsbay** 46.26 346 P **P** 11 25 35.4 -0.9
KBS pmax pmax
comp=Z,376nm,1.0s
KBS MLR MLR
comp=Z,85μm,20.0s
KBS **Kingsbay** 46.26 346 *i* P **P** 11 25 36.7 +0.3
KBS **Kingsbay** 46.26 346 *e*P **P** 11 25 35.5 -0.9
KBS IVmB_BB 11 25 52.5
comp=Z,7μm,4.0s
KBS *e* 11 27 35.8
KBS *e*S **S** 11 32 29.6 +6.9
KBS *i* 11 35 47.3
KBS IVMs_BB IVMs_BB 11 47 28.4
comp=Z,41μm,14.2s
KBS **Kingsbay** 46.26 346 ⇑P **P** 11 25 35.3 -1.1
FOO **Floro** 46.28 322 *e*P **P** 11 25 35.5 -1.3
FOO IVmBBB 11 25 45.0
comp=Z,2μm,0.7s
FOO *e*S **S** 11 32 23.2 -0.2
FOO *i* 11 35 48.0
FOO IVMs_BB IVMs_BB 11 45 10.4
comp=Z,27μm,8.8s
ASK **Askoy** 46.30 320 *e*P **P** 11 25 35.4 -1.5
ASK *e*PP **PP** 11 27 22.3 -3.0
ASK *e*S **S** 11 32 27.7 +4.0
ASK *i* 11 35 45.7
BKNI **Bangkinang** 46.31 140 P **P** 11 25 36.6 -0.9
BKNI **Bangkinang** 46.31 140 P **P** 11 25 36.1 -1.4
comp=Z,30μmcomp=Z,14μmcomp=Z,1μm,0.8s
BKNI **Bangkinang** 46.31 140 P **P** 11 25 36.9 -0.6
comp=Z,1μm,0.8s
BKNI **Bangkinang** 46.31 140 ⇓P **P** 11 25 34.9 -2.7
TUE **Stuetta** 46.35 301 IAMs_20 IAMs_20 11 46 41.6
comp=Z,44μm,18.0s
TUE **Stuetta** 46.35 301 ⇑P **P** 11 25 35.3 -2.5
JSU **Suzuyama** 46.39 81 P **P** 11 25 37.7 -0.4
JSU IAmb IAmb 11 25 51.2
comp=Z,764nm,1.5s
JSU **Suzuyama** 46.39 81 ⇓P **P** 11 25 37.9 -0.2
JSU **Suzuyama** 46.39 81 P **P** 11 25 37.9 -0.2
KMY **Karmoy** 46.40 319 *e*P **P** 11 25 36.8 -0.9
KMY *e*S **S** 11 32 24.8 -0.4
CLTB **Caltabellotta** 46.45 288 ⇑P **P** 11 25 41.5 +2.9
SUE **Sulen** 46.46 321 *e*P **P** 11 25 36.8 -1.4
SUE IVmB_BB 11 25 54.5
comp=Z,4μm,3.9s
SUE *e*PP PP 11 27 42.0 +15
SUE *e*S **S** 11 32 26.9 +0.8
SUE *i* 11 35 48.7
SUE IVMs_BB IVMs_BB 11 45 17.2
comp=Z,42μm,11.0s
BFO **Black Forest** 46.54 303 ⇑P **P** 11 25 37.2 -1.9
DGAR **Diego Garcia** 46.58 181 IAMs_20 IAMs_20 11 45 59.1
comp=Z,54μm,21.0s
NKL **Nikolayevsk** 46.71 50 *e*P **P** 11 25 37.7 -2.6
NKL *e* 11 27 11.0
NKL *e*S S 11 32 20.9 -8.9
NKL *e*SS **SS** 11 35 52.0 -3.7
NKL smax smax
comp=E,3.0nm,1.5s
NKL smax smax
comp=N,655nm,2.3s
NKL MLR MLR
comp=N,7μm,17.0s
NKL MLR MLR
comp=Z,105μm,13.0s
BOB **Bobbio (Coli)** 46.76 298 ⇓P **P** 11 25 39.7 -1.2
SISI **Saibi** 46.82 144 P **P** 11 25 40.6 -0.9
comp=Z,25μmcomp=Z,9μmcomp=Z,368nm,1.2s
MSEY **Mahe Island** 46.90 205 IAMs_20 IAMs_20 11 43 15.9
comp=Z,50μm,22.0s
JOW **Kunigami** 46.90 88 P **P** 11 25 41.7 -0.4
comp=Z,72nm,0.4s,baz=296,slow=5.6,SNR=31
JOW S **S** 11 32 33.5 +0.3
comp=Z,11nm,0.8s,baz=274,slow=24,SNR=1.7
JOW LR LR 11 47 47.1
comp=Z,60μm,19.0s,baz=300,slow=39
comp=Z,72nm,0.4s
JOW **Kunigami** 46.90 88 P **P** 11 25 41.5 -0.6
JOW IAmb IAmb 11 25 49.5
comp=Z,195nm,0.6s
JOW **Kunigami** 46.90 88 P **P** 11 25 42.1 0.0
JOW **Kunigami** 46.90 88 ⇓P **P** 11 25 41.9 -0.3
JHS **Saijyo** 46.94 76 P **P** 11 25 41.1 -1.3
JHS IAmb IAmb 11 25 53.2
comp=Z,486nm,1.1s
JHS **Saijyo** 46.94 76 ⇑P **P** 11 25 41.1 -1.3
JHS **Saijyo** 46.94 76 P **P** 11 25 41.1 -1.3
ECH **Echery** 47.33 304 ⇑P **P** 11 25 43.4 -1.8
BTNL **Ternell** 47.39 307 *d*P **P** 11 25 44.0 -1.7
comp=Z,140nm,1.0s
MEM **Membach** 47.46 307 *d*P **P** 11 25 44.5 -1.7
comp=Z,132nm,0.9s
MEM *d*sP **sP** 11 25 51.9 +0.1
BHOU **Houvegnez** 47.52 307 *d*P **P** 11 25 45.3 -1.4
comp=Z,126nm,1.2s
WLF **Walferdange** 47.60 306 IAMs_20 IAMs_20 11 47 34.5
comp=Z,64μm,18.0s
WLF **Walferdange** 47.60 306 P **P** 11 25 46.2 -1.1
WLF **Walferdange** 47.60 306 *d*P **P** 11 25 46.2 -1.1
comp=Z,225nm,1.0s
WLF **Walferdange** 47.60 306 ⇑P **P** 11 25 46.2 -1.1
TPRI **Tanjung Pinang** 47.62 136 P **P** 11 25 47.4 -0.3
comp=Z,11μmcomp=Z,413nm,1.2s
MONC **Moncucco Torin** 47.70 299 ⇓P **P** 11 25 49.5 +1.3
BSTI **Sart Tilman** 47.74 307 *d*P **P** 11 25 47.1 -1.3
comp=Z,25nm,0.8s
SENIN **Lac Senin/Sane** 47.74 301 P **P** 11 25 46.2 -2.5
SENIN IAmb IAmb 11 26 03.7
comp=Z,188nm,0.8s
SENIN IAMs_20 IAMs_20 11 48 19.4
comp=Z,49μm,20.0s
JAD **Aida** 47.75 75 P **P** 11 25 48.0 -0.6
BCLA **Clavier** 47.95 307 *d*P **P** 11 25 48.3 -1.6
comp=Z,74nm,0.9s
JMN **Monobe** 48.04 77 P **P** 11 25 50.7 -0.3
RCHB **Rochefort** 48.06 307 *d*P **P** 11 25 49.2 -1.6
comp=Z,73nm,0.9s
BMRD **Maredsous** 48.31 307 *d*P **P** 11 25 51.2 -1.5
comp=Z,157nm,0.9s
LPL **La Plagne** 48.37 300 *e*P **P** 11 25 51.6 -2.0
LPL pmax pmax
comp=Z,55nm,0.7s
TYV **Tymovskoe** 48.41 52 *e*P **P** 11 25 54.0 +0.5
TYV *e*S **S** 11 32 58.2 +4.1
TYV pmax pmax
comp=Z,4μm,5.6s
TYV pmax pmax
comp=Z,249nm,1.8s
TYV smax smax
comp=N,10μm,8.1s
TYV smax smax
comp=E,7μm,8.1s
TYV MLR MLR
comp=E,105μm,12.0s
TYV MLR MLR
comp=Z,86μm,12.0s
DOU **Dourbes** 48.47 307 *d*P **P** 11 25 52.5 -1.5
comp=Z,153nm,0.7s
UGL **Uglegorsk** 48.51 55 *e*P **P** 11 25 53.8 -0.5
UGL *e*S **S** 11 32 56.9 +1.4
UGL *e* 11 35 48.7
UGL pmax pmax
comp=Z,4μm,3.5s
UGL pmax pmax
comp=Z,750nm,1.3s
UGL smax smax
comp=E,5μm,7.5s
UGL smax smax
comp=N,9μm,9.5s
UGL MLR MLR
comp=E,119μm,13.0s
UGL MLR MLR
comp=N,96μm,15.0s
UGL MLR MLR
comp=Z,131nm,16.0s
PPSI **Pulau Pagai** 48.51 143 P **P** 11 25 57.7 +3.0
comp=Z,37μmcomp=Z,29μmcomp=Z,2μm,1.2s
JWT **Wachi** 48.54 74 P **P** 11 25 54.6 -0.1
BNI **Bardonecchia** 48.55 300 ⇓P **P** 11 25 52.8 -2.1
SNF **Seneffe** 48.55 307 *d*P **P** 11 25 53.0 -1.6
comp=Z,171nm,0.7s
TGY **Tagaytay City** 48.57 108 P **P** 11 25 55.0 -0.2
comp=Z,285nm,0.7s,baz=222,slow=3.0,SNR=4.4
TGY LR LR 11 49 47.7
comp=Z,41μm,20.6s,baz=320,slow=40
comp=Z,285nm,0.7s
KRJI **Kerinci** 48.61 141 P **P** 11 25 54.2 -1.3
comp=Z,24μmcomp=Z,23μmcomp=Z,3μm,1.1s
DSRI **Dabo** 48.81 137 P **P** 11 25 57.2 +0.2
comp=Z,18μmcomp=Z,6μmcomp=Z,252nm,1.3s
JSH **Shimam** 49.13 64 P **P** 11 25 57.7 -1.5
JMBI **JAMBI** 49.30 139 P **P** 11 26 01.1 +0.4
comp=Z,12μmcomp=Z,514nm,1.3s
LRW **Lerwick** 49.49 321 *e*P **P** 11 25 59.8 -1.9
LRW IAmb IAmb 11 26 09.9
comp=Z,329nm,1.0s
LRW IAMs_20 IAMs_20 11 47 53.0
comp=Z,64μm,13.4s
LRW **Lerwick** 49.49 321 ⇑P **P** 11 25 59.9 -1.7
JSD **Sado** 49.55 70 P **P** 11 26 01.0 -1.4
JSD IAmb IAmb 11 26 13.6
comp=Z,423nm,1.2s
JSD **Sado** 49.55 70 ⇓P **P** 11 26 01.1 -1.3
YSS **Yuzh-Sakhalins** 49.57 57 P **P** 11 26 01.5 -0.9
YSS **Yuzh-Sakhalins** 49.57 57α *i*P **P** 11 26 01.6 -0.9
YSS *e**SP **sP** 11 26 08.9 +0.8
YSS *e*S **S** 11 33 08.7 -1.7
YSS *e* 11 35 55.0
YSS pmax pmax
comp=Z,180nm,1.2s
YSS smax smax
comp=N,2μm,8.6s
YSS MLR MLR
comp=Z,103μm,17.0s
YSS **Yuzh-Sakhalins** 49.57 57 P **P** 11 26 02.3 -0.1
YSS **Yuzh-Sakhalins** 49.57 57 ⇑P **P** 11 26 01.6 -0.9
JGN **Niukaw** 49.57 72 P P 11 25 57.5 -5.3
TAMR **Tamra** 49.68 289 ⇑P **P** 11 26 01.8 -1.6
INU **Inuyama** 49.71 74 P **P** 11 26 02.8 -1.0
INU IAmb IAmb 11 26 13.0
comp=Z,258nm,0.8s
INU IAMs_20 IAMs_20 11 49 20.0
comp=Z,56μm,19.0s
INU **Inuyama** 49.71 74 P **P** 11 26 03.2 -0.5
INU **Inuyama** 49.71 74 ⇑P **P** 11 26 02.5 -1.2
LODK **Lodwar** 49.77 234 P **P** 11 26 04.0 -0.5
LODK IAmb IAmb 11 26 15.0
comp=Z,400nm,1.0s
LODK **Lodwar** 49.77 234 P P 11 26 09.6 +5.1
SNR=120
LODK **Lodwar** 49.77 234 *e*P P 11 26 10.3 +5.9
LODK *e*S **S** 11 33 19.0 +4.9
LODK **Lodwar** 49.77 234 *e*P P 11 26 11.3 +6.8
LODK **Lodwar** 49.77 234 *e*P P 11 26 10.8 +6.4
LODK **Lodwar** 49.77 234 *e*P **P** 11 26 08.7 +4.2
LODK *e*S S 11 33 25.5 +11
JGF **Kuroka** 49.86 73 P **P** 11 26 03.8 -1.1
JGF IAmb IAmb 11 26 15.9
comp=Z,297nm,0.9s
JGF **Kuroka** 49.86 73 ⇑P **P** 11 26 03.6 -1.3
JGF **Kuroka** 49.86 73 P **P** 11 26 03.6 -1.3
JIE **Ise** 49.88 75 P **P** 11 26 04.2 -0.8
SSB **Saint Sauveur** 49.91 301 P **P** 11 26 03.4 -1.8
SSB IAmb IAmb 11 26 14.4
comp=Z,543nm,1.5s
SSB **Saint Sauveur** 49.91 301 P **P** 11 26 03.4 -1.8
SSB pmax pmax
comp=Z,543nm,1.5s
SSB MLR MLR
comp=Z,32μm,18.0s
SSB **Saint Sauveur** 49.91 301 ⇑P **P** 11 26 03.4 -1.8
SSF **Saint Saulge** 50.03 303 *e*P **P** 11 26 03.0 -3.0
SSF pmax pmax
comp=Z,16nm,0.6s
JEW **Eniwo** 50.04 63 P **P** 11 26 05.3 -0.7
JEW **Eniwo** 50.04 63 ⇓P **P** 11 26 05.4 -0.7
KEST **Kesra** 50.04 287 P **P** 11 26 04.4 -1.9
comp=Z,25nm,0.7s,baz=281,slow=1.7,SNR=32
KEST S **S** 11 33 21.5 +4.0

comp=Z,5.6nm,0.9s,baz=311,slow=24,SNR=1.6
KEST LR LR 11 52 50.3
comp=Z,18μm,19.0s,baz=5.0,slow=43
comp=Z,25nm,0.7s
KEST Kesra 50.04 287 P **P** **11 26 04.9 -1.5**
KEST IAmb IAmb 11 26 15.9
comp=Z,406nm,1.1s
KEST Kesra 50.04 287 P **P** **11 26 05.5 -0.9**
SNR=122
MJB9 Matsu-Tunnel 50.10 72 P **P** **11 26 05.3 -1.3**
MJB9 IAmb IAmb 11 26 15.5
comp=Z,238nm,0.7s
MAJO Matsushiro 50.10 72 P **P** **11 26 05.3 -1.5**
MAJO IAmb IAmb 11 26 15.5
comp=Z,250nm,0.7s
MAJO Matsushiro 50.10 72 P **P** **11 26 05.3 -1.5**
MAJO pmax pmax
comp=Z,250nm,0.7s
MAJO MLR MLR
comp=Z,33μm,18.0s
MAJO Matsushiro 50.10 72 P **P** **11 26 05.6 -1.1**
MAJO Matsushiro 50.10 72 ⇑P **P** **11 26 05.2 -1.5**
MAT Matsushiro 50.10 72 P **P** **11 26 05.0 -1.7**
MJAR Matsushiro Arr 50.10 72 P **P** **11 26 04.8 -1.9**
comp=Z,129nm,0.7s,baz=294,slow=8.7,SNR=178
MJAR LR LR 11 49 41.4
comp=Z,39μm,18.4s,baz=302,slow=39
comp=Z,129nm,0.7s
MJAR Matsushiro Arr 50.10 72 P **P** **11 26 05.4 -1.3**
MJAR IAmb IAmb 11 26 17.7
comp=Z,306nm,1.1s
MJAR Matsushiro Arr 50.10 72 P **P** **11 26 05.4 -1.3**
MJAR pmax pmax
comp=Z,306nm,1.1s
ELMS Elmsett, Ipswi 50.13 310 *e*P **P** **11 26 04.5 -2.1**
ELMS IAMs_20 IAMs_20 11 51 58.2
comp=Z,106μm,17.2s
ELSH Elham, Standar 50.30 309 *e*P **P** **11 26 06.1 -1.8**
ELSH IAMs_20 IAMs_20 11 49 55.5
comp=Z,83μm,18.0s
ASAJ Asahikawa 50.38 61 LR LR 11 49 16.1
comp=Z,130μm,18.1s,baz=292,slow=38
ASAJ Asahikawa 50.38 61 P **P** **11 26 07.9 -0.8**
ASAJ pmax pmax
comp=Z,411nm,1.2s
JKA Kamikawa-asahi 50.38 61 P **P** **11 26 07.9 -0.8**
JKA IAmb IAmb 11 26 39.3
comp=Z,411nm,1.2s
KSM Kuching 50.47 129 P **P** **11 26 09.7 +0.1**
KSM IAmb IAmb 11 26 23.8
comp=Z,492nm,1.3s
KSM Kuching 50.47 129 P **P** **11 26 10.0 +0.3**
KSM Kuching 50.47 129 P **P** **11 26 10.4 +0.7**
KSM Kuching 50.47 129 ⇓P **P** **11 26 09.1 -0.5**
TATN Tataouine 50.51 283 ⇓P **P** **11 26 07.9 -2.0**
JTM Tenmabayashi 50.51 65 P **P** **11 26 08.5 -1.2**
JTM Tenmabayashi 50.51 65 ⇓P **P** **11 26 08.5 -1.2**
JTM Tenmabayashi 50.51 65 P **P** **11 26 08.0 -1.7**
CLF Chambon-Foret 50.53 305 P **P** **11 26 07.1 -2.6**
CLF IAMs_20 IAMs_20 11 49 02.9
comp=Z,41μm,19.0s
CLF Chambon-Foret 50.53 305 ⇑P **P** **11 26 07.7 -2.0**
LMK Market Rasen 50.54 312 *e*P **P** **11 26 07.8 -1.9**
LMK IAMs_20 IAMs_20 11 52 49.4
comp=Z,54μm,15.0s
GDLE Glaisdale, N Y 50.56 313 *e*P **P** **11 26 07.8 -2.1**
GDLE IAMs_20 IAMs_20 11 53 40.5
comp=Z,52μm,16.7s
JMIC Jan Mayen 50.77 335 LR LR 11 47 53.1
comp=Z,38μm,19.5s,baz=106,slow=36
JMIC Jan Mayen 50.77 335 *e*P **P** **11 26 08.4 -2.8**
JMIC *i* 11 28 26.7
JMIC *e* 11 31 31.5
JMIC *e*S **S** **11 33 33.0 +6.4**
JMIC *e* 11 36 04.3
JMIC *i* 11 37 39.4
JMIC IVMs_BB IVMs_BB 11 47 41.4
comp=Z,16μm,15.5s
JRY Ryogami san 50.83 72 P **P** **11 26 07.5 -4.7**
DRUM Mains of Drumt 50.85 317 *e*P **P** **11 26 09.9 -2.1**
DRUM IAMs_20 IAMs_20 11 49 07.8
comp=Z,53μm,14.8s
HMNX Herstmonceux 50.87 309 *e*P **P** **11 26 10.9 -1.3**
HMNX IAMs_20 IAMs_20 11 50 14.0
comp=Z,73μm,17.9s
MA2 Magadan 50.87 40 P **P** **11 26 10.7 -1.4**
comp=Z,72nm,0.9s,baz=289,slow=7.7,SNR=41
MA2 S **S** **11 33 28.7 +0.4**
comp=Z,7.3nm,0.9s,baz=260,slow=16,SNR=2.0
MA2 LR LR 11 48 43.7
comp=Z,116μm,18.1s,baz=280,slow=37
comp=Z,72nm,0.9s
MA2 Magadan 50.87 40 P **P** **11 26 10.7 -1.4**
MA2 IAmb IAmb 11 26 23.6
comp=Z,449nm,1.2s
MA2 Magadan 50.87 40*c i*P **P** **11 26 10.6 -1.6**
MA2 pmax pmax
comp=Z,197nm,1.7s
MA2 MLR MLR
comp=Z,130μm,17.0s
MA2 Magadan 50.87 40 P **P** **11 26 11.5 -0.7**
SBUM Sibu 50.88 126 P **P** **11 26 12.5 -0.2**
SBUM IAmb IAmb 11 26 29.4
comp=Z,482nm,1.4s
SBUM Sibu 50.88 126 P **P** **11 26 14.0 +1.3**
SBUM Sibu 50.88 126 ⇓P **P** **11 26 12.6 -0.2**
SEY Seymchan 50.92 35 P **P** **11 26 11.2 -1.2**
comp=Z,27nm,0.8s,baz=280,slow=9.9,SNR=74
SEY S **S** **11 33 28.8 0.0**
comp=Z,10nm,1.1s,baz=92,slow=14,SNR=1.5
SEY LR LR 11 47 17.1
comp=Z,77μm,18.8s,baz=280,slow=36
comp=Z,27nm,0.8s
SEY Seymchan 50.92 35*c i*P **P** **11 26 11.1 -1.3**
SEY pmax pmax
comp=Z,243nm,1.4s
SEY MLR MLR
comp=Z,91nm,16.0s
JMP Maruseppu 50.93 61 P **P** **11 26 12.4 -0.5**
MLA1 Latheron 50.97 319 *e*P **P** **11 26 11.0 -1.9**
PMBI Palembang 50.99 138 IAMs_20 IAMs_20 11 49 09.3
comp=Z,55μm,22.0s
PMBI Palembang 50.99 138 P **P** **11 26 12.7 -0.8**
comp=Z,32μmcomp=Z,27μmcomp=Z,2μm,1.2s
PMBI Palembang 50.99 138 P **P** **11 26 15.3 +1.8**
PPBI Pangkal Pinang 51.06 136 P **P** **11 26 13.6 -0.5**
comp=Z,22μmcomp=Z,11μmcomp=Z,450nm,1.0s
MCD Coleburn Disti 51.09 318 *e*P **P** **11 26 12.0 -1.8**
EDMD Edmundbyers 51.10 314 *e*P **P** **11 26 11.8 -2.1**
EDMD IAmb IAmb 11 26 23.2
comp=Z,408nm,1.1s
EDMD IAMs_20 IAMs_20 11 50 26.2
comp=Z,82μm,14.5s
HPK Haverah Park 51.14 313 *e*P **P** **11 26 12.2 -2.1**
HPK IAMs_20 IAMs_20 11 49 57.2
comp=Z,45μm,18.0s
ESY Stoneypath 51.17 315 *e*P **P** **11 26 12.4 -2.0**
JOM Ohasama 51.17 67 P **P** **11 26 12.8 -1.9**
BIGH Upper Bighouse 51.21 319 *e*P **P** **11 26 12.9 -1.7**
BIGH IAMs_20 IAMs_20 11 48 56.1
comp=Z,79μm,15.8s
EDU Dundee 51.22 316 *e*P **P** **11 26 12.8 -2.1**
JOD2 Odawara 2 51.28 73 *e*P **P** **11 26 15.6 -0.1**
CWF Charnwood Fore 51.30 311 *e*P **P** **11 26 13.5 -2.0**
CWF IAMs_20 IAMs_20 11 52 58.4
comp=Z,57μm,16.8s
MNAI Manna 51.31 141 P **P** **11 26 15.1 -0.8**
NOR Nord 51.33 349 *i*P **P** **11 26 16.2 +0.8**
NOR IAmb IAmb 11 26 24.3
comp=Z,45nm,0.7s
NOR Nord 51.33 349 ⇑P **P** **11 26 13.7 -1.6**
LBWR Ladybower, Pea 51.36 312 *e*P **P** **11 26 13.7 -2.2**
LBWR IAmb IAmb 11 26 30.5
comp=Z,332nm,0.8s
LBWR IAMs_20 IAMs_20 11 50 24.7
comp=Z,61μm,15.8s
EBL Broad Law 51.44 315 *e*P **P** **11 26 14.3 -2.2**
JMM Marumori 51.45 69 P **P** **11 26 16.0 -0.8**
JMM Marumori 51.45 69 ⇑P **P** **11 26 15.6 -1.2**
JMM Marumori 51.45 69 P **P** **11 26 15.7 -1.2**
EDI Edinburgh 51.48 316 *e*P **P** **11 26 14.7 -2.1**
EDI IAMs_20 IAMs_20 11 53 06.4
comp=Z,50μm,14.3s
ERM Erimo 51.51 63*de*P **P** **11 26 16.4 -0.8**
ERM pmax pmax
comp=Z,325nm,1.0s
ERM MLR MLR
comp=Z,141μm,17.0s
ERM Erimo 51.51 63 P **P** **11 26 16.9 -0.3**
ERM Erimo 51.51 63 ⇑P **P** **11 26 16.5 -0.8**
JEM Erimo 51.51 63 *e*P **P** **11 26 18.3 +1.1**
EKA Eskdalemuir Ar 51.62 315 LR LR 11 50 18.8
comp=Z,52μm,18.6s,baz=74,slow=39
ESK Eskdalemuir 51.66 315 *e*P **P** **11 26 15.8 -2.3**
ESK IAMs_20 IAMs_20 11 50 35.6
comp=Z,80μm,15.8s
ESK Eskdalemuir 51.66 315 P **P** **11 26 15.4 -2.7**
ESK IAmb IAmb 11 26 32.9
comp=Z,278nm,0.9s
ESK Eskdalemuir 51.66 315 IAMs_20 IAMs_20 11 50 07.5
comp=Z,50μm,19.0s
ESK Eskdalemuir 51.66 315 P **P** **11 26 15.4 -2.7**
ESK pmax pmax
comp=Z,279nm,0.9s
ESK MLR MLR
comp=Z,50μm,19.0s
ESK Eskdalemuir 51.66 315 ⇓P **P** **11 26 15.7 -2.4**
CAF Calviac 51.68 301 *e*P **P** **11 26 16.4 -2.1**
CAF pmax pmax
comp=Z,95nm,1.2s
JYT Yasato 51.69 71 P **P** **11 26 16.9 -1.7**
JYT Yasato 51.69 71 ⇑P **P** **11 26 16.9 -1.7**
JYT Yasato 51.69 71 P **P** **11 26 14.2 -4.4**
MDO Dochfour 51.71 318 *e*P **P** **11 26 16.2 -2.3**
STNC Stoke 51.72 312 *e*P **P** **11 26 17.4 -1.3**
STNC IAMs_20 IAMs_20 11 53 33.3
comp=Z,64μm,15.2s
KESW Keswick, Cumbr 51.80 314 *e*P **P** **11 26 17.4 -1.8**
KESW IAmb IAmb 11 26 28.8
comp=Z,471nm,1.0s
KESW IAMs_20 IAMs_20 11 54 30.2
comp=Z,44μm,14.9s
INVG Invergeldie, C 51.81 316 *e*P **P** **11 26 17.1 -2.1**
INVG IAmb IAmb 11 26 28.1
comp=Z,128nm,0.8s
INVG IAMs_20 IAMs_20 11 49 37.8
comp=Z,57μm,15.9s
SPMM Sapulut 51.92 120 P **P** **11 26 21.0 +0.4**
LINV Loch Inver, As 51.95 319 *e*P **P** **11 26 18.5 -1.7**
LINV IAmb IAmb 11 26 28.7
comp=Z,505nm,1.3s
LINV IAMs_20 IAMs_20 11 49 27.2
comp=Z,69μm,15.3s
SWN1 Swindon 51.96 310 *e*P **P** **11 26 21.1 +0.7**
EAB Aberfoyle 52.03 316 *e*P **P** **11 26 18.8 -2.1**
MAHO Mahon 52.04 294 P **P** **11 26 24.2 +3.0**
MAHO S **S** **11 33 43.7 -1.2**
STRD Stroud 52.09 310 *e*P **P** **11 26 19.0 -2.4**
STRD IAMs_20 IAMs_20 11 52 59.9
comp=Z,91μm,17.0s
KAC Achnashellach 52.18 318 *e*P **P** **11 26 19.8 -2.2**
PGBU Glenifferbraes 52.21 316 *e*P **P** **11 26 20.4 -1.9**
PGBU IAmb IAmb 11 26 30.1
comp=Z,296nm,0.6s
PGBU IAMs_20 IAMs_20 11 50 04.4
comp=Z,54μm,14.4s
KMBO Kilima Mbogo 52.24 228 P **P** **11 26 22.0 -1.2**
comp=Z,32nm,0.9s,baz=37,slow=12,SNR=30
KMBO S **S** **11 33 51.4 +2.8**
comp=Z,1.4nm,0.7s,baz=38,slow=20,SNR=1.3
KMBO LR LR 11 50 34.3
comp=Z,21μm,20.1s,baz=39,slow=38
comp=Z,32nm,0.9s
KMBO Kilima Mbogo 52.24 228 *e*P **P** **11 26 26.5 +3.3**
KMBO *e*S **S** **11 33 56.8 +8.3**
KMBO Kilima Mbogo 52.24 228 *e*P **P** **11 26 23.5 +0.3**
KMBO Kilima Mbogo 52.24 228 *e*P **P** **11 26 26.2 +3.1**
KMBO Kilima Mbogo 52.24 228 *e*P **P** **11 26 24.1 +0.9**
KMBO *e*S **S** **11 33 53.4 +4.9**
KMBO Kilima Mbogo 52.24 228 *i*P **P** **11 26 22.5 -0.7**
SNR=30
KMBO Kilima Mbogo 52.24 228 ⇑P **P** **11 26 22.3 -0.9**
NEWG New Galloway 52.27 315 *e*P **P** **11 26 20.7 -2.0**
NEWG IAmb IAmb 11 26 31.7
comp=Z,427nm,1.0s
NEWG IAMs_20 IAMs_20 11 51 03.2
comp=Z,72μm,15.1s
STKI Sintang 52.29 129 P **P** **11 26 24.0 +0.7**
comp=Z,16μmcomp=Z,10μmcomp=Z,293nm,1.7s
TPI Tanjungpandan 52.38 135 P **P** **11 26 23.9 0.0**
comp=Z,5μmcomp=Z,108nm,1.8s
KPL Plockton 52.41 318 *e*P **P** **11 26 21.5 -2.1**
KPL IAmb IAmb 11 26 31.6
comp=Z,573nm,1.5s
KPL IAMs_20 IAMs_20 11 49 44.6
comp=Z,55μm,15.1s
LWLI Liwa 52.41 140 P **P** **11 26 24.4 +0.1**
comp=Z,9μmcomp=Z,5μmcomp=Z,346nm,0.8s
MONM Monmouth 52.45 311 *e*P **P** **11 26 21.8 -2.3**
MONM IAmb IAmb 11 26 33.1
comp=Z,508nm,1.0s
MONM IAMs_20 IAMs_20 11 53 20.7
comp=Z,99μm,16.8s
DAG Danmarks Havn 52.53 343 *i*P **P** **11 26 22.8 -1.5**
DAG IAmb IAmb 11 26 33.2
comp=Z,183nm,0.7s
DAG Danmarks Havn 52.53 343 ⇑P **P** **11 26 22.6 -1.8**
LFF La Frestale 52.56 301 *e*P **P** **11 26 22.8 -2.2**
LFF pmax pmax
comp=Z,56nm,0.6s
LAWE Loch Awe, Argy 52.58 316 *e*P **P** **11 26 23.0 -1.9**
LAWE IAmb IAmb 11 26 33.2
comp=Z,679nm,1.4s
LAWE IAMs_20 IAMs_20 11 50 08.9
comp=Z,59μm,15.5s
YUK Yuzh-Kuril'sk 52.61 60*d i*P **P** **11 26 23.5 -1.8**
YUK *e* 11 28 20.4
YUK *i* PPP PPP 11 29 23.8
YUK *i* S **S** **11 33 51.3 -1.3**
YUK *i* 11 36 11.3
YUK *i* SS **SS** **11 37 28.0 -2.4**
YUK *e*SSS SSS 11 39 13.8
YUK pmax pmax
comp=N,498nm,1.1s
YUK pmax pmax
comp=Z,2μm,1.1s
YUK pmax pmax
comp=E,870nm,1.0s
GAL1 Galloway 52.61 315 *e*P **P** **11 26 23.2 -2.0**
GAL1 IAMs_20 IAMs_20 11 51 14.3
comp=Z,72μm,15.0s
KLI Kotabumi 52.68 139 P **P** **11 26 25.9 -0.2**
comp=Z,19μmcomp=Z,7μmcomp=Z,304nm,0.8s
IOMK Kirk Michael 52.72 314 *e*P **P** **11 26 23.9 -2.1**
IOMK IAmb IAmb 11 26 34.4
comp=Z,1μm,1.2s
IOMK IAMs_20 IAMs_20 11 51 33.5
comp=Z,79μm,14.5s
JHJ Hachijo jima 2 52.74 75 P **P** **11 26 24.6 -1.9**
comp=Z,49nm,0.8s,baz=350,slow=5.1,SNR=1.7
JHJ LR LR 11 51 54.6
comp=Z,42nm,18.4s,baz=303,slow=40
comp=Z,49nm,0.8s
KIBK Kibwezi 52.77 227 P **P** **11 26 30.5 +3.5**
SNR=37
LEWI Lewis, Hebride 52.80 319 *e*P **P** **11 26 25.1 -1.5**
LEWI IAmb IAmb 11 26 41.8
comp=Z,639nm,1.6s
LEWI IAMs_20 IAMs_20 11 49 52.8
comp=Z,64μm,17.2s
WIM Isle of Man 52.81 314 *e*P **P** **11 26 25.0 -1.7**
WME Myndd Eilian 52.83 313 *e*P **P** **11 26 26.2 -0.7**
YLL Llanberis 52.84 312 *e*P **P** **11 26 24.8 -2.1**
WLF1 Llynfaes 52.92 313 *e*P **P** **11 26 25.1 -2.4**
WLF1 IAmb IAmb 11 26 36.9
comp=Z,334nm,0.9s
WLF1 IAMs_20 IAMs_20 11 53 22.3
comp=Z,92μm,15.6s
JSA Saint Aubin 52.93 307 *e*P **P** **11 26 24.9 -2.7**
JSA IAmb IAmb 11 26 34.9
comp=Z,160nm,0.5s
JSA IAMs_20 IAMs_20 11 52 02.1
comp=Z,50μm,18.5s
JSA Saint Aubin 52.93 307 ⇓P **P** **11 26 25.2 -2.5**
WPS Cemaes, Angles 52.94 313 *e*P **P** **11 26 25.7 -1.9**
WPS IAMs_20 IAMs_20 11 53 16.2
comp=Z,43μm,16.1s
MYLDM Lahad Datu 52.95 118 P **P** **11 26 29.8 +1.6**
MYLDM Lahad Datu 52.95 118 ⇓P **P** **11 26 30.3 +2.1**
YRC Rhoscolyn 53.03 313 *e*P **P** **11 26 26.5 -1.9**
KASI Kota Agung 53.07 140 P **P** **11 26 29.6 +0.6**
comp=Z,14μmcomp=Z,5μmcomp=Z,384nm,0.8s
BLSI Bandar Lampung 53.31 139 P **P** **11 26 32.2 +1.4**
comp=Z,12μmcomp=Z,4μmcomp=Z,152nm,0.5s
CLGH Cloghs, Cushen 53.32 315 *e*P **P** **11 26 28.3 -2.1**
CLGH IAMs_20 IAMs_20 11 51 44.5
comp=Z,66μm,14.5s
GMM Mts of Mourne 53.49 314 *e*P **P** **11 26 29.6 -2.1**
KUR Kuril'sk 53.49 58 *e*P **P** **11 26 29.9 -1.9**
KUR *e* 11 27 36.4
KUR *e* 11 28 30.6
KUR *e*S **S** **11 34 03.9 -0.7**
KUR *e* 11 34 12.8
KUR pmax pmax
comp=Z,599nm,2.0s
KUR pmax pmax
comp=E,104nm,2.1s
KUR pmax pmax
comp=Z,5μm,10.1s
KUR MLR MLR
comp=E,50μm,14.0s
KUR MLR MLR
comp=Z,63μm,14.0s
KUR MLR MLR
comp=N,31μm,13.0s
DBG Daneborg 53.52 340 *i*P **P** **11 26 31.1 -0.6**
DBG IAmb IAmb 11 26 39.2
comp=Z,37nm,0.6s
DBG Daneborg 53.52 340 ⇑P **P** **11 26 30.4 -1.3**
DBG ⇓P **pP** **11 26 30.8 -5.0**
RSBS Rosebush, Pemb 53.55 311 *e*P **P** **11 26 29.9 -2.3**
RSBS IAmb IAmb 11 26 41.4
comp=Z,365nm,0.9s
RSBS IAMs_20 IAMs_20 11 54 04.9
comp=Z,93μm,16.6s
DYA Yadsworthy 53.58 309 *e*P **P** **11 26 29.7 -2.7**
DYA IAMs_20 IAMs_20 11 52 07.1
comp=Z,77μm,16.3s
HTL Hartland 53.72 310 *e*P **P** **11 26 31.0 -2.4**
HTL IAMs_20 IAMs_20 11 54 27.4
comp=Z,69μm,16.5s
ILTH Belurgan, Co L 53.78 314 *e*P **P** **11 26 31.4 -2.3**
AKET Djebel Ketaf 53.92 290 P **P** **11 26 33.2**
DSB Dublin 54.06 313 ⇓P **P** **11 26 36.8 +0.9**
IDGL Inch Island, C 54.08 315 *e*P **P** **11 26 34.4 -1.6**
IDGL IAMs_20 IAMs_20 11 51 05.8
comp=Z,56μm,16.5s
ADJB Djebel Djouab 54.20 290 P 11 26 35.0
ABA Alger-Bouzarea 54.21 291 P 11 26 40.0
CCA1 Carnmenellis 54.45 309 *e*P **P** **11 26 36.8 -2.0**
CCA1 IAMs_20 IAMs_20 11 55 03.0
comp=Z,57μm,14.3s
EMHD Djebel Mahouad 54.53 291 P 11 26 38.3
PBKI Pangkalan Bun 54.62 131 P **P** **11 26 42.5 +2.1**
comp=Z,12μmcomp=Z,635nm,1.8s
DBJI Dramaga 55.09 138 P **P** **11 26 45.2 +1.4**
comp=Z,162nm,1.4s
BILL Bilibino 55.14 27 P **P** **11 26 42.6 -0.9**
BILL IAmb IAmb 11 26 56.5
comp=Z,372nm,1.1s
BILL Bilibino 55.14 27*d i*P **P** **11 26 42.3 -1.2**
BILL *i* 11 27 40.3
BILL *i* 11 28 42.9
BILL *i*S **S** **11 34 29.7 +3.5**
BILL pmax pmax
comp=Z,126nm,1.3s
BILL pmax pmax
comp=Z,1μm,1.8s
BILL MLR MLR
comp=Z,109μm,15.0s
MTKI Muara Teweh, K 55.18 126 P **P** **11 26 46.6 +2.1**
comp=Z,12μmcomp=Z,7μmcomp=Z,89nm,2.2s
SCO Scoresbysund 55.22 336 IAMs_20 IAMs_20 11 49 53.6
comp=Z,56μm,19.0s
SCO Scoresbysund 55.22 336 ⇓P **P** **11 26 47.0 +3.1**
COCO West Island 55.73 152 IAMs_20 IAMs_20 11 49 08.2
comp=Z,47μm,20.0s
MBAR Mbarara 55.79 235 S **S** **11 34 33.4 -3.1**
comp=Z,1.9nm,0.3s,baz=162,slow=24,SNR=1.3
MBAR LR LR 11 53 41.7
comp=Z,61μm,18.9s,baz=25,slow=39
MBAR Mbarara 55.79 235 IAMs_20 IAMs_20 11 53 21.0
comp=Z,62μm,20.0s
MBAR Mbarara 55.79 235*ce*P **P** **11 26 47.9 -1.2**
MBAR pmax pmax
comp=Z,18nm,0.7s
MBAR Mbarara 55.79 235 P **P** **11 26 52.7 +3.6**
MBAR P **P** **11 26 52.7 +3.6**
MBAR Mbarara 55.79 235 *e*P **P** **11 26 52.6 +3.6**
MBAR *e*S **S** **11 34 41.9 +5.4**
MBAR Mbarara 55.79 235 *e*P **P** **11 26 52.5 +3.4**
MBAR Mbarara 55.79 235 *e*P P 11 26 54.8 +5.7
MBAR Mbarara 55.79 235 *e*P **P** **11 26 51.2 +2.1**
MBAR *e*S S 11 34 45.7 +9.2
MBAR Mbarara 55.79 235 ⇑P **P** **11 26 47.6 -1.5**
SMKI Samarinda 56.27 124 P **P** **11 26 53.0 +0.7**
OKGL Djebel Kef Gue 56.27 291 P 11 26 49.0
OJGS Djebel Guires 56.44 291 P 11 26 50.0
PEA0B Petropavlovsk- 56.52 46 P **P** **11 26 51.9 -1.8**
PEA0B IAmb IAmb 11 27 05.3
comp=Z,378nm,1.2s
PEA0B Petropavlovsk- 56.52 46 P **P** **11 26 51.9 -1.8**
PEA0B pmax pmax
comp=Z,378nm,1.2s
PETK Petropavlovsk- 56.52 46 P **P** **11 26 51.6 -2.0**
comp=Z,52nm,0.9s,baz=302,slow=3.3,SNR=39
PETK LR LR 11 52 20.4
comp=Z,110μm,18.5s,baz=291,slow=37
comp=Z,52nm,0.9s
SKR Severo-Kuril's 56.56 49 *e*P **P** **11 26 49.8 -4.1**
SKR *i*S **S** **11 34 45.1 -0.4**
SKR *e*SS **ScS** **11 36 44.6 +1.4**
SKR pmax pmax
comp=Z,88nm,0.9s
SKR pmax pmax
comp=Z,500nm,6.0s
SKR smax smax
comp=N,2μm,13.8s
SKR smax smax
comp=E,3μm,11.7s
SKR MLR MLR
comp=Z,31μm,17.0s
DAV Davao City (W) 56.63 110 LR LR 11 54 42.9
comp=Z,61μm,19.5s,baz=354,slow=40
DAV Davao City (W) 56.63 110 IAMs_20 IAMs_20 11 54 31.1
comp=Z,60μm,19.0s
DAV Davao City (W) 56.63 110 P P 11 27 00.7 +5.8
DAV P P 11 27 00.7 +5.8
BKB Balikpapan 56.69 125 IAMs_20 IAMs_20 11 56 02.0
comp=Z,53μm,19.0s
OJBR Djebel Berber 56.70 291 P 11 26 52.0
VAL Valentia 56.73 313 ⇑P **P** **11 26 53.9 -1.2**
CART Cartagena 56.75 294 P P 11 27 00.6 +5.1
CART S **S** **11 34 49.6 +1.1**
CART Cartagena 56.75 294 P **P** **11 26 53.8 -1.7**
CART Cartagena 56.75 294 ⇑P **P** **11 26 53.7 -1.8**
KPJI Karang Pucung 56.89 137 P **P** **11 26 57.1 +0.5**
comp=Z,19μmcomp=Z,6μmcomp=Z,102nm,1.0s
SBV Sambava 56.99 208 P P 11 27 02.4 +5.1
PET Petropavlovsk 57.09 46 P **P** **11 26 55.7 -1.9**
PET IAmb IAmb 11 27 07.3
comp=Z,256nm,1.2s
PET IAMs_20 IAMs_20 11 52 26.6
comp=Z,57μm,20.0s
PET Petropavlovsk 57.09 46 *e*P **P** **11 26 54.9 -2.7**
PET *e* 11 27 48.3
PET *e* 11 29 09.1
PET *e*S S 11 34 43.4 -9.1
PET *e* 11 36 47.2
PET *e*SS **SS** **11 38 46.2 +5.6**
PET pmax pmax
comp=Z,4μm,10.0s
PET pmax pmax
comp=Z,250nm,1.3s
PET pmax pmax
comp=Z,2μm,12.0s
PET pmax pmax
comp=Z,2μm,11.2s
PET MLR MLR
comp=Z,79μm,18.0s
PET MLR MLR
comp=Z,72μm,18.0s
PET Petropavlovsk 57.09 46 P **P** **11 26 55.3 -2.3**
PET Petropavlovsk 57.09 46 ⇑P **P** **11 26 54.5 -3.1**
UCM Universidad Co 57.11 298 P P 11 27 03.0 +4.9

UCM S **S** **11 34 58.7 +5.4**
BBKI Banjar Baru 57.12 128 P **P** **11 26 58.0 -0.3**
comp=Z,16µmcomp=Z,11µmcomp=Z,529nm,1.3s
BORG Borgarnes 57.12 329 LR LR 11 51 37.6
comp=Z,78µm,18.6s,baz=69,slow=36
ODJA Bouhanifia 57.17 291 P 11 26 56.0
UWJI Ujung Watu 57.23 134 P **P** **11 27 02.0 +2.9**
comp=Z,13µmcomp=Z,411nm,1.7s
USTO Uran 57.27 292 P 11 27 02.0
MPSI Mapaga 57.44 121 P **P** **11 27 01.1 +0.5**
comp=Z,19µmcomp=Z,8µmcomp=Z,476nm,1.5s
TOLI2 Tolitoli 57.46 119 P **P** **11 27 01.8 +1.0**
SMRI Semarang 57.47 135 P **P** **11 26 59.5 -1.3**
comp=Z,28µmcomp=Z,11µmcomp=Z,186nm,1.2s
SMRI Semarang 57.47 135 P **P** **11 26 59.0 -1.8**
JCJ Chichijima 57.48 80 P **P** **11 26 58.9 -1.9**
comp=Z,27nm,0.6s,baz=300,slow=13,SNR=1.8
JCJ LR LR 11 54 25.7
comp=Z,16µm,18.3s,baz=316,slow=39
comp=Z,27nm,0.6s
JCJ Chichijima 57.48 80 P **P** **11 26 59.2 -1.6**
OTSS Djebel Tessala 57.66 291 P 11 26 54.0
ESBB Sonseca Array 57.88 297 P **P** **11 27 01.3 -2.3**
ESDC Sonseca Array 57.88 297 P **P** **11 27 01.5 -2.1**
comp=Z,18nm,0.6s,baz=56,slow=7.1,SNR=184
ESDC LR LR 11 55 50.0
comp=Z,10µm,19.2s,baz=58,slow=40
comp=Z,18nm,0.6s
ESDC Sonseca Array 57.88 297 P **P** **11 27 01.3 -2.2**
TBJI Tambak Boyo 58.06 133 P **P** **11 27 08.0 +3.1**
comp=Z,16µmcomp=Z,9µmcomp=Z,164nm,2.7s
PAB San Pablo 58.21 297 P **P** **11 27 03.7 -2.1**
PAB San Pablo 58.21 297 P **P** **11 27 03.7 -2.1**
PAB pmax pmax
comp=Z,172nm,1.2s
PAB MLR MLR
comp=Z,16µm,19.0s
PAB San Pablo 58.21 297 P **P** **11 27 03.8 -2.1**
PAB San Pablo 58.21 297 ⇑P **P** **11 27 03.8 -2.1**
UGM Wanagama 58.23 135 IAMs_20 IAMs_20 11 53 59.9
comp=Z,30µm,20.0s
GRJI Gresik 58.49 133 P **P** **11 27 06.3 -1.6**
comp=Z,602nmcomp=Z,2µmcomp=Z,97nm,1.1s
MRSI Marisa 58.71 119 P **P** **11 27 09.1 -0.4**
comp=Z,23µmcomp=Z,10µmcomp=Z,337nm,1.1s
PBRG Braganca 58.81 301 *e*P **P** **11 27 08.0 -2.0**
comp=Z,188nm,1.6s
PBRG *es*P **sP** **11 27 15.9 +0.2**
PBRG Braganca 58.81 301 *e*PP **PP** **11 29 20.2 +0.5**
PBRG *e*S **S** **11 35 17.8 +2.3**
PBRG *e*SS **SS** **11 39 16.6 +8.3**
CHAS Isla Isabel II 58.89 292 P P 11 27 15.6 +5.1
CHAS S **S** **11 35 24.5 +8.0**
SGSI Sangihe 58.92 113 P **P** **11 27 13.7 +2.7**
comp=Z,210nm,0.8s
SUMG Summit 58.98 341 P **P** **11 27 09.9 -1.2**
SUMG IAmb IAmb 11 27 21.9
comp=Z,309nm,1.0s
SUMG IAMs_20 IAMs_20 11 57 17.3
comp=Z,27µm,18.0s
SUMG Summit 58.98 341 P **P** **11 27 09.9 -1.2**
SUMG pmax pmax
comp=Z,309nm,1.0s
SUMG MLR MLR
comp=Z,27µm,18.0s
SUMG Summit 58.98 341 *i* P **P** **11 27 09.3 -1.8**
SUMG IAmb IAmb 11 27 11.4
comp=Z,59nm,0.7s
SUMG Summit 58.98 341 ⇑P **P** **11 27 09.8 -1.2**
PWJI Pagerwojo 59.02 134 P **P** **11 27 13.8 +2.2**
comp=Z,3µmcomp=Z,115nm,1.2s
TAF Taforalt 59.05 291 P **P** **11 27 10.5 -1.3**
TAF Taforalt 59.05 291 P P 11 27 20.3 +8.5
WMELI Melilla 59.20 292 P **P** **11 27 16.5 +3.8**
WMELI S **S** **11 35 23.2 +2.7**
SOEG Soedalen 59.20 335 *i* P P 11 27 17.9 +5.6
GOG Mont Gurugu 59.27 292 P P 11 27 21.0 +7.6
MVO Moncorvo 59.30 300 *e*P **P** **11 27 11.9 -1.5**
comp=Z,283nm,1.2s
MVO *es*P **sP** **11 27 18.8 -0.3**
MVO Moncorvo 59.30 300 *e*PP PP 11 29 16.1 -8.0
MVO *e*S **S** **11 35 22.7 +0.9**
MVO *e*SS **SS** **11 39 25.7 +10**
MVO *e*LR LR 11 46 36.5
comp=Z,12µm,18.0s
JBK JBK 59.39 291 P **P** **11 27 13.0 -1.3**
FIGM Figuig 59.52 288 P **P** **11 27 13.0 -2.2**
APSI Ampana 59.53 120 P **P** **11 27 15.0 -0.2**
comp=Z,12µmcomp=Z,7µmcomp=Z,250nm,1.3s
TDRA Tendrara 59.63 289 P **P** **11 27 15.0 -1.0**
PVRL Vila Real 59.70 300 *e*P **P** **11 27 14.6 -1.6**
comp=Z,167nm,1.6s
PVRL *es*P **sP** **11 27 22.0 +0.1**
PCAB Cabril 59.71 301 *e*P **P** **11 27 15.1 -1.1**
comp=Z,554nm,1.2s
PCAB *es*P **sP** **11 27 22.3 +0.4**
POLO Lamas de Olo 59.71 301 *e*P **P** **11 27 14.4 -1.9**
comp=Z,81nm,1.3s
POLO *es*P **sP** **11 27 22.1 +0.1**
POLO *e*S **S** **11 35 32.8 +5.5**
POLO *e*SS SS 11 39 33.4 +11
PGAV Gavieira, Arco 59.76 301 *e*P **P** **11 27 15.2 -1.4**
comp=Z,403nm,1.6s
PGAV *es*P **sP** **11 27 22.7 +0.4**
PGAV Gavieira, Arco 59.76 301 *e*PP PP 11 29 38.0 +10
PGAV *e*S **S** **11 35 32.3 +4.5**
PGAV *e*SS **SS** **11 39 29.8 +6.6**
PGAV *e*LR LR 11 46 31.3
comp=Z,11µm,20.0s
BLJI Banyuglugur 59.81 132 P **P** **11 27 18.2 +1.2**
comp=Z,13µmcomp=Z,6µmcomp=Z,221nm,1.1s
TTSI Tana Toraja 59.92 123 P **P** **11 27 17.3 -0.6**
comp=Z,17µmcomp=Z,8µmcomp=Z,248nm,1.2s
PALE Palemas 59.95 293 P **P** **11 27 16.0 -2.0**
PALE Palemas 59.95 293 P P 11 27 26.0 +8.1
MTE Manteigas 60.00 299 *e*P **P** **11 27 16.9 -1.3**
comp=Z,380nm,1.4s
MTE *es*P **sP** **11 27 24.1 +0.1**
MTE Manteigas 60.00 299 *e*PP PP 11 29 38.8 +8.5
MTE *e*S **S** **11 35 33.9 +3.0**
MTE *e*SS **SS** **11 39 34.0 +7.0**
MTE *e*LR LR 11 47 00.4
comp=Z,15µm,18.0s
MTE Manteigas 60.00 299 ⇓P **P** **11 27 23.0 +4.8**
KMSI Cibinong 60.03 117 P **P** **11 27 19.3 +0.6**
comp=Z,636nmcomp=Z,6µmcomp=Z,362nm,1.0s
PVIS Viseu 60.08 300 *e*P **P** **11 27 17.1 -1.7**
comp=Z,314nm,1.4s
PVIS *es*P **sP** **11 27 25.0 +0.5**
GMJI Gumukmas 60.15 133 P **P** **11 27 20.6 +1.2**
comp=Z,4µmcomp=Z,134nm,1.4s
PCBR Castelo Branco 60.21 299 *e*P **P** **11 27 17.7 -1.9**
comp=Z,164nm,1.9s
PCBR *es*P **sP** **11 27 25.6 +0.3**
ABJI Asem Bagus 60.21 132 P **P** **11 27 21.5 +1.7**
comp=Z,30µmcomp=Z,17µmcomp=Z,458nm,2.6s
PVLZ Peæn de 60.23 293 P **P** **11 27 24.3 +4.5**
PVLZ S **S** **11 35 39.9 +6.0**
EUNU Eureka 60.27 356 P **P** **11 27 18.5 -1.1**
EUNU IAmb IAmb 11 27 32.6
comp=Z,148nm,0.9s
EUNU Eureka 60.27 356 ⇑P **P** **11 27 18.5 -1.1**
PMRV Marv??o 60.35 298 *e*P **P** **11 27 19.3 -1.3**
comp=Z,352nm,1.2s
PMRV *es*P **sP** **11 27 26.7 +0.4**
PMRV Marv??o 60.35 298 *e*PP **PP** **11 29 38.4 +5.1**
PMRV *e*S **S** **11 35 40.2 +4.8**
PMRV *e*SS **SS** **11 39 39.0 +6.6**
PMRV *e*LR LR 11 47 07.6
comp=Z,11µm,18.0s
PTO Porto 60.36 301 *e*P **P** **11 27 19.4 -1.2**
comp=Z,166nm,1.3s
PTO *es*P **sP** **11 27 26.9 +0.6**
LUWI Luwuk 60.38 119 P **P** **11 27 23.3 +2.3**
comp=Z,15µmcomp=Z,6µmcomp=Z,302nm,1.3s
LUWI Luwuk 60.38 119 P **P** **11 27 23.0 +2.0**
SPSI Sidrap Palu 60.59 124 P **P** **11 27 23.5 +1.1**
comp=Z,17µmcomp=Z,6µmcomp=Z,126nm,1.6s
CEU Ceuta 60.64 294 P **P** **11 27 27.0 +4.4**
CEU S **S** **11 35 39.3 +0.2**
COI Coimbra 60.67 300 *e*P **P** **11 27 21.7 -1.1**
comp=Z,481nm,1.9s
COI *es*P **sP** **11 27 29.3 +0.8**
COI Coimbra 60.67 300 *e*PP PP 11 29 46.5 +10
COI *e*S **S** **11 35 43.7 +4.3**
COI *es*S **SS** **11 39 47.9 +11**
COI Coimbra 60.67 300 P **P** **11 27 21.0 -1.7**
COI Coimbra 60.67 300 P **P** **11 27 21.0 -1.7**
COI pmax pmax
comp=Z,369nm,0.8s
COI MLR MLR
comp=Z,19µm,22.0s
COI Coimbra 60.67 300 ⇑P **P** **11 27 21.6 -1.2**
JAGI Jajag, Banyuwa 60.71 132 P **P** **11 27 22.5 -0.8**
comp=Z,16µmcomp=Z,5µmcomp=Z,131nm,1.4s
JAGI Jajag, Banyuwa 60.71 132 P **P** **11 27 24.5 +1.2**
JAGI Jajag, Banyuwa 60.71 132 ⇑P **P** **11 27 25.2 +2.0**
PESTR Estremoz 60.75 298 *e*P **P** **11 27 21.9 -1.5**
comp=Z,182nm,1.3s
PESTR *es*P **sP** **11 27 29.6 +0.5**
PESTR Estremoz 60.75 298 *e*PP PP 11 29 45.4 +8.5
PESTR *e*S **S** **11 35 45.0 +4.5**
PESTR *e*SS SS 11 39 55.4 +17
PESTR Estremoz 60.75 298 P P 11 27 29.0 +5.6
PESTR Estremoz 60.75 298 ⇓P P 11 27 28.5 +5.2
SMIR Smir Dam 60.75 294 P P **11 27 21.1 -2.3**
SMIR Smir Dam 60.75 294 P P 11 27 31.0 +7.7
PCAS Casmilo, Conde 60.80 299 *e*P **P** **11 27 22.4 -1.3**
comp=Z,275nm,1.4s
PCAS *es*P **sP** **11 27 30.2 +0.8**
PCAS Casmilo, Conde 60.80 299 *e*PP **PP** **11 29 39.0 +1.7**
PCAS *e*S **S** **11 35 40.7 -0.4**
PCAS *e*SS **SS** **11 39 46.8 +7.3**
SFS San Fernando 60.95 295 P P 11 27 30.4 +5.7
SFS S **S** **11 35 44.1 +1.1**
SFS San Fernando 60.95 295 IAMs_20 IAMs_20 11 57 54.2
comp=Z,47µm,18.0s
CHEFC Chefchaouen 61.01 293 P P 11 27 33.0 +7.7
SRBI Singaraja 61.02 131 P **P** **11 27 27.4 +2.1**
comp=Z,24µmcomp=Z,10µmcomp=Z,378nm,1.7s
PMTG Montargil 61.09 298 *e*S **S** **11 35 47.5 +2.7**
PMTG *e*SS SS 11 39 55.7 +12
BNSI Bone 61.13 124 P **P** **11 27 23.8 -2.3**
comp=Z,16µmcomp=Z,5µmcomp=Z,114nm,1.3s
EVO Evora 61.20 298 P **P** **11 27 31.2 +4.8**
EVO S **S** **11 35 52.6 +6.3**
EVO Evora 61.20 298 *e*P **P** **11 27 24.6 -1.8**
comp=Z,169nm,2.1s
EVO *es*P **sP** **11 27 33.5 +1.4**
PSBE So Bento 61.26 299 *e*P **P** **11 27 25.6 -1.2**
comp=Z,443nm,2.2s
PSBE *es*P **sP** **11 27 32.9 +0.3**
PSBE So Bento 61.26 299 *e*PP PP 11 29 52.2 +11
PSBE *e*S **S** **11 35 48.8 +1.8**
PSBE *e*SS SS 11 40 03.2 +16
ICESG Greenland Ices 61.28 338 *i* P **P** **11 27 26.2 -0.6**
ICESG Greenland Ices 61.28 338 ⇑P **P** **11 27 25.4 -1.4**
PBEJ Beja 61.35 297 *e*P **P** **11 27 25.5 -1.9**
comp=Z,227nm,1.2s
PBEJ *es*P **sP** **11 27 33.0 -0.1**
LCRM LCR 61.37 291 P **P** **11 27 27.0 -0.8**
LCRM LCR 61.37 291 P P 11 27 36.1 +8.3
KAPI Kappang 61.38 125 S **S** **11 35 47.4 -1.4**
comp=Z,3.1nm,0.3s,baz=152,slow=18,SNR=1.8
KAPI LR LR 11 56 56.6
comp=Z,15µm,20.9s,baz=304,slow=39
KAPI Kappang 61.38 125 P **P** **11 27 30.4 +2.6**
KAPI P **P** **11 27 30.4 +2.6**
PVAQ Vaqueiros 61.55 296 *e*P **P** **11 27 27.2 -1.6**
comp=Z,339nm,1.3s
PVAQ *es*P **sP** **11 27 34.4 -0.1**
PVAQ Vaqueiros 61.55 296 *e*PP **PP** **11 29 49.9 +5.9**
PVAQ *e*S **S** **11 35 55.8 +5.1**
PVAQ *e*SS **SS** **11 39 43.4 -7.9**
PVAQ Vaqueiros 61.55 296 *e*LR LR 11 51 56.1
comp=Z,14µm,18.0s
PVAQ Vaqueiros 61.55 296 P **P** **11 27 27.2 -1.6**
PVAQ Vaqueiros 61.55 296 P P 11 27 34.6 +5.8
PVAQ Vaqueiros 61.55 296 ⇓P **P** **11 27 27.2 -1.6**
MDT Midelt 61.62 291 LR LR 11 57 55.0
comp=Z,7µm,21.3s,baz=54,slow=40
MDT Midelt 61.62 291 P **P** **11 27 28.0 -1.5**
MDT Midelt 61.62 291 P P 11 27 38.4 +8.9
IFR Ifrane 61.65 291 P **P** **11 27 33.7 +4.0**
IFR S **S** **11 35 57.9 +5.5**
PACT Alcochete 61.65 298 *e*P **P** **11 27 28.5 -0.9**
comp=Z,533nm,1.3s
PACT *es*P **sP** **11 27 35.8 +0.7**
PCVE Castro Verde 61.66 297 *e*PP **PP** **11 29 52.5 +7.6**
PCVE *e*S **S** **11 35 54.3 +2.2**
MESJ Messejana 61.68 297 *e*P **P** **11 27 27.8 -1.8**
MESJ *e*S **S** **11 35 49.5 -2.8**
MESJ IAMs_20 IAMs_20 11 53 21.3
comp=N,30µm,24.3s
MESJ Messejana 61.68 297 *e*P **P** **11 27 28.2 -1.4**
comp=N,168nm,2.2s
MESJ *es*P **sP** **11 27 35.4 0.0**
MESJ Messejana 61.68 297 *e*P **P** **11 27 27.8 -1.8**
MESJ *e*S **S** **11 35 49.5 -2.8**
MESJ Messejana 61.68 297 ⇑P **P** **11 27 28.2 -1.4**
PNCL Nicolau / Gran 61.76 298 *e*P **P** **11 27 29.1 -1.1**
PNCL *es*P **sP** **11 27 36.9 +1.0**
PNCL Nicolau / Gran 61.76 298 *e*PP PP 11 29 53.6 +7.8
PNCL *e*S **S** **11 35 59.7 +6.4**
PBDV Barranco-do-Ve 61.78 296 *e*P **P** **11 27 28.8 -1.5**
comp=N,422nm,1.1s
PBDV *es*P **sP** **11 27 36.3 +0.2**
PBDV Barranco-do-Ve 61.78 296 *e*PP PP 11 29 54.4 +8.4
PBDV *e*S **S** **11 35 56.3 +2.7**
CZD Col de Zad 61.83 291 P **P** **11 27 30.4 -0.7**
CZD Col de Zad 61.83 291 P P 11 27 40.0 +8.9
BKSI Bulukumba 61.85 125 P **P** **11 27 29.0 -2.0**
comp=N,17µmcomp=N,7µmcomp=N,160nm,1.5s
PMAFR Mafra 61.86 299 *e*P **P** **11 27 30.4 -0.5**
comp=N,396nm,1.3s
PMAFR *es*P **sP** **11 27 36.9 +0.3**
PMAFR Mafra 61.86 299 *e*PP **PP** **11 29 53.7 +7.0**
PMAFR *e*S **S** **11 35 58.6 +4.0**
PMAFR *e*SS SS 11 40 11.4 +15
LIS Lisbon 61.89 298 *e*P **P** **11 27 29.1 -1.9**
LIS *e*S **S** **11 35 52.0 -2.9**
LIS IAMs_20 IAMs_20 11 52 38.9
comp=N,33µm,21.0s
LIS Lisbon 61.89 298 *e*P **P** **11 27 29.1 -1.9**
LIS *e*S **S** **11 35 52.0 -2.9**
PMST Lisbon--Monsan 61.90 298 *e*P **P** **11 27 30.2 -0.9**
comp=N,435nm,1.2s
PMST *es*P **sP** **11 27 37.8 +0.9**
TULEG Thule 61.92 351 IAMs_20 IAMs_20 11 57 24.2
comp=Z,31µm,18.0s
TULEG Thule 61.92 351 *i* P P 11 27 35.9 +5.3
TULEG Thule 61.92 351 ⇑P **P** **11 27 35.4 +4.8**
ARF Arif 62.04 289 P P 11 27 41.0 +8.6
PTEO Sao Teotonio 62.17 297 *e*P **P** **11 27 32.8 -0.2**
comp=Z,262nm,1.4s
PTEO *es*P **sP** **11 27 39.2 +0.5**
MORF Marmelete 62.24 297 *e*S **S** **11 35 56.8 -2.7**
MORF IAMs_20 IAMs_20 11 53 46.0
comp=N,27µm,19.0s
MORF Marmelete 62.24 297 *e*P **P** **11 27 33.1 -0.4**
MORF *es*P **sP** **11 27 39.8 +0.6**
MORF Marmelete 62.24 297 *e*PP PP 11 30 01.3 +11
MORF *e*S **S** **11 36 04.9 +5.3**
MORF *e*SS SS 11 40 21.1 +19
TNTI Ternate 62.26 114 P **P** **11 27 33.7 0.0**
comp=N,11µmcomp=N,19µmcomp=N,1µm,1.6s
TNTI Ternate 62.26 114 P **P** **11 27 35.5 +1.7**
TNTI Ternate 62.26 114 ⇑P **P** **11 27 33.8 0.0**
GOLM Goulmima 62.44 290 P **P** **11 27 34.1 -1.0**
PFVI Vila Bisbo 62.45 297 *e*P **P** **11 27 33.2 -1.6**
PFVI *es*P **sP** **11 27 42.0 +1.4**
PFVI Vila Bisbo 62.45 297 *e*PP PP 11 30 00.3 +8.4
PFVI *e*S **S** **11 36 04.2 +2.1**
PFVI *e*SS SS 11 40 18.7 +13
RER Riviere de l'E 62.48 199 P P 11 27 41.7 +6.6
TWSI Taliwang, Sumb 62.52 130 P **P** **11 27 34.0 -1.4**
comp=N,9µmcomp=N,2µmcomp=N,54nm,2.6s
ANGG Ammassalik, Gr 62.68 334 IAMs_20 IAMs_20 11 54 07.9
comp=Z,35µm,19.0s
ANGG Ammassalik, Gr 62.68 334 ⇓P **P** **11 27 35.0 -0.9**
OPO Ambohidratompo 62.69 208 LR LR 11 53 33.0
comp=Z,23µm,18.8s,baz=184,slow=35
BSSI Bau Bau, Buton 62.71 125 P **P** **11 27 34.9 -1.8**
comp=Z,11µmcomp=Z,6µmcomp=Z,155nm,1.7s
ZHG ZHG 62.77 292 P **P** **11 27 36.0 -1.2**
ZHG ZHG 62.77 292 P P 11 27 45.4 +8.2
UPNV Upernavik 62.86 345 *i* P **P** **11 27 35.6 -1.4**
ABPO Ambohimpanom 63.09 208 IAMs_20 IAMs_20 11 51 40.8
comp=Z,39µm,22.0s
ABPO Ambohimpanom 63.09 208 ⇑P **P** **11 27 40.9 +1.6**
PLAI Plampang 63.12 129 P **P** **11 27 41.1 +1.6**
comp=Z,15µmcomp=Z,5µmcomp=Z,130nm,1.1s
PLAI Plampang 63.12 129 P **P** **11 27 39.8 +0.3**
SANI Sanana 63.31 117 P **P** **11 27 39.8 -1.0**
comp=Z,24µmcomp=Z,15µmcomp=Z,388nm,1.7s
SANI Sanana 63.31 117 P **P** **11 27 40.1 -0.6**
SANI Sanana 63.31 117 ⇑P **P** **11 27 39.7 -1.0**
LBMI Labuha 63.35 115 P **P** **11 27 41.1 +0.1**
comp=Z,10µmcomp=Z,10µmcomp=Z,364nm,2.1s
TZRR Tazzarine 63.37 289 P **P** **11 27 40.0 -1.2**
TZRR Tazzarine 63.37 289 P P 11 27 49.0 +7.8
AVE Averroes 63.40 292 P **P** **11 27 45.1 +3.9**
AVE S **S** **11 36 18.8 +4.7**
AVE Averroes 63.40 292 P **P** **11 27 39.1 -2.1**
AVE IAmb IAmb 11 27 49.7
comp=Z,288nm,1.0s
AVE Averroes 63.40 292 P P 11 27 49.2 +8.0
AVE Averroes 63.40 292 ⇑P **P** **11 27 39.5 -1.8**
BBSI Bau Bau 63.55 123 P **P** **11 27 44.4 +2.1**
comp=Z,530nmcomp=Z,38nm,1.0s
ZGR Zagora 63.76 288 P **P** **11 27 43.0 -0.8**
ZGR Zagora 63.76 288 P P 11 27 52.0 +8.2
A21K Barrow 64.00 16 P **P** **11 27 42.9 -1.7**
A21K IAMs_20 IAMs_20 11 59 20.2
comp=Z,35µm,19.0s
A21K Barrow 64.00 16 P **P** **11 27 43.0 -1.5**
baz=319
A21K S **S** **11 36 21.9 +1.5**
baz=319
OUZM OUZ 64.17 290 P P 11 27 55.0 +8.5
ILULI Ilulissat 64.33 341 P **P** **11 27 45.3 -1.4**
ILULI IAmb IAmb 11 28 02.4
comp=Z,316nm,1.1s
ILULI IAMs_20 IAMs_20 12 00 25.5
comp=Z,41µm,18.0s
ILULI Ilulissat 64.33 341 P **P** **11 27 45.3 -1.4**
ILULI pmax pmax
comp=Z,316nm,1.1s
ILULI MLR MLR
comp=Z,41µm,18.0s
ILULI Ilulissat 64.33 341 *i* P **P** **11 27 46.8 +0.1**
WBSI Waikabubak, Su 64.74 128 P **P** **11 27 47.3 -2.9**
comp=Z,11µmcomp=Z,445nm,1.6s
OUK Oukaimeden 64.82 291 P **P** **11 27 50.0 -1.0**
RDOG Red Dog Mine 64.88 20 IAMs_20 IAMs_20 11 55 32.7
comp=Z,47µm,19.0s
RDOG Red Dog Mine 64.88 20 P P 11 27 42.5 -7.9
baz=315
RDOG S **S** **11 36 28.0 -3.3**
baz=315
DY2G Dye2 64.89 337 *i* P **P** **11 27 50.1 -0.6**
DY2G Dye2 64.89 337 ⇑P **P** **11 27 49.2 -1.5**
NLAI Namlea 64.93 117 P **P** **11 27 52.9 +1.5**
comp=Z,12µmcomp=Z,178nm,1.5s
GAMB Gambell 65.05 26 P P 11 27 56.3 +4.9
baz=309
GAMB S **S** **11 36 34.2 +0.7**
baz=309
TNA Tin City 65.13 24 P **P** **11 27 51.4 -0.6**
TNA Tin City 65.13 24 P **P** **11 27 50.7 -1.3**
baz=312,SNR=6.5
TNA S **S** **11 36 35.2 +0.8**
baz=312
TNA Tin City 65.13 24 ⇑P **P** **11 27 50.9 -1.0**
EDFI Ende, Flores 65.46 126 P **P** **11 27 50.8 -4.2**
comp=Z,7µmcomp=Z,2µmcomp=Z,57nm,0.9s
SHEM Shemya Is, Ala 65.47 41 P **P** **11 27 51.3 -3.1**
comp=Z,165nm,1.1s,baz=352,slow=6.1,SNR=11
SHEM S **S** **11 36 37.2 -1.9**
comp=Z,9.2nm,0.7s,baz=129,slow=22,SNR=1.5
SHEM LR LR 11 57 09.2
comp=Z,29µm,19.0s,baz=306,slow=37
comp=Z,165nm,1.1s
TTIG Tnine Tigouga, 65.59 290 P **P** **11 27 54.2 -1.5**
TTIG Tnine Tigouga, 65.59 290 P P 11 28 04.0 +8.3
MMRI Maumere 65.72 125 P **P** **11 27 53.6 -2.9**
comp=Z,13µmcomp=Z,7µmcomp=Z,317nm,1.2s
MMRI Maumere 65.72 125 P **P** **11 27 57.1 +0.6**
comp=Z,317nm,1.2s
MMRI Maumere 65.72 125 ⇑P **P** **11 27 56.6 +0.1**
SFJD Kangerlussuaq 65.78 339 P **P** **11 27 54.5 -1.6**
SFJD Kangerlussuaq 65.78 339 P **P** **11 27 54.5 -1.6**
SFJD pmax pmax
comp=Z,1µm,2.0s
SFJD Kangerlussuaq 65.78 339 *i* P **P** **11 27 54.3 -1.9**
SFJD IAmb IAmb 11 27 55.5
comp=Z,32nm,0.8s
SFJD Kangerlussuaq 65.78 339 ⇓P **P** **11 27 54.5 -1.6**
VOI Vohitsoka 65.90 207 P P 11 28 05.0 +7.4
SNR=8.8
VOI Vohitsoka 65.90 207 P **P** **11 27 57.6 0.0**
VOI Vohitsoka 65.90 207 ⇑P **P** **11 27 56.4 -1.2**
BASI Baing, Sumba 65.91 128 P **P** **11 27 55.4 -2.3**
comp=Z,8µmcomp=Z,11µmcomp=Z,666nm,1.2s
RES Resolute Bay 65.95 357 LR LR 11 59 28.8
comp=Z,41µm,20.0s,baz=354,slow=38
RES Resolute Bay 65.95 357 P **P** **11 27 55.9 -1.3**
RES Resolute Bay 65.95 357 P **P** **11 27 55.9 -1.3**
RES pmax pmax
comp=Z,69nm,0.9s
RES Resolute Bay 65.95 357 ⇑P **P** **11 27 55.3 -1.8**
AAI Ambon 66.00 117 P **P** **11 28 00.3 +1.9**
comp=Z,16µmcomp=Z,7µmcomp=Z,209nm,1.2s
SWI Sorong 66.17 112 P **P** **11 27 59.3 -0.1**
comp=Z,12µmcomp=Z,14µmcomp=Z,598nm,1.8s
SIJI Sorong 66.18 112 LR LR 11 57 05.9
comp=Z,11µm,21.9s,baz=322,slow=36
MSAI Masohi 66.27 116 P **P** **11 28 00.5 +0.4**
comp=Z,453nmcomp=Z,36nm,1.0s
C23K Itkillik River 66.43 15 P **P** **11 27 59.0 -1.3**
baz=324,SNR=70
C23K S **S** **11 36 55.2 +5.0**
baz=324
CGR Cap Guir 66.59 291 P P 11 28 10.0 +8.0
ANM Nome 66.60 24 P **P** **11 28 00.7 -0.8**
ANM IAmb IAmb 11 28 14.9
comp=Z,391nm,1.2s
ANM IAMs_20 IAMs_20 11 59 28.6
comp=Z,36µm,20.0s
ANM Nome 66.60 24 P **P** **11 28 00.7 -0.8**
ANM pmax pmax
comp=Z,391nm,1.2s
ANM MLR MLR
comp=Z,36µm,20.0s
ANM Nome 66.60 24 P **P** **11 28 00.6 -0.8**
baz=314,SNR=23
ANM S **S** **11 36 60.0 +7.5**
baz=314
C24K Franklin Bluff 66.90 15 P **P** **11 28 02.1 -1.3**
baz=326
C24K S **S** **11 36 58.4 +2.4**
baz=326
D23K Nanushuk River 67.12 16 P **P** **11 28 03.2 -1.6**
baz=324,SNR=46
D23K S **S** **11 37 02.3 +3.7**
baz=324
GUMO Guam 67.14 91 P **P** **11 28 03.4 -2.3**
comp=Z,162nm,1.1s,baz=42,slow=4.5,SNR=3.9
GUMO LR LR 11 57 43.7
comp=Z,15µm,21.3s,baz=306,slow=36
comp=Z,162nm,1.1s
D24K Happy Valley 67.35 15 P **P** **11 28 04.4 -1.8**
baz=326,SNR=12
D24K S **S** **11 37 06.1 +4.7**
baz=326
EKNA AfricaArray - 67.48 256 ⇑*e*P P 11 28 15.6 +7.7
SFNM Sidi Ifni 67.51 290 P P 11 28 16.0 +8.2
TOLK Toolik Lake Re 67.62 16 P **P** **11 28 06.3 -1.7**
TOLK IAmb IAmb 11 28 22.6
comp=Z,248nm,0.9s
TOLK Toolik Lake Re 67.62 16 P **P** **11 28 06.3 -1.7**
baz=325,SNR=164
TOLK S **S** **11 37 07.8 +3.0**
baz=325
TOA0 Torodi Ar. Sit 67.76 269 P **P** **11 28 06.6 -3.1**
TOA0 Torodi Ar. Sit 67.76 269 P **P** **11 28 09.7 +0.1**
SNR=71
TORD Torodi Ar. Bea 67.76 269 P **P** **11 28 06.6 -3.0**
comp=Z,30nm,0.6s,baz=46,slow=5.1,SNR=294
TORD PKPPKP **P'P'df** **11 56 29.8 -3.2**
comp=Z,0.9nm,0.8s,baz=227,slow=1.7,SNR=4.2
TORD LR LR 12 03 05.3
comp=Z,17µm,18.0s,baz=58,slow=41
comp=Z,30nm,0.6s

TORD	**Torodi Ar. Bea**	**67.76**	**269**	P	**P**	**11 28 06.5**	**-3.1**
	comp=Z,8µmcomp=Z,5µmcomp=Z,240nm,1.2s						
BNDI	**Bandanaira**	**67.78**	**116**	P	**P**	**11 28 09.8**	**+0.1**
BNDI	**Bandanaira**	**67.78**	**116**	⇑P	**P**	**11 28 11.3**	**+1.6**
BATI	**Baumata**	**67.82**	**125**	P	**P**	**11 28 08.4**	**-1.5**
	comp=Z,8µmcomp=Z,5µmcomp=Z,240nm,1.2s						
SOEI	**Soe**	**67.86**	**124**	P	**P**	**11 28 08.5**	**-1.8**
SOEI	**Soe**	**67.86**	**124**	P	**P**	**11 28 08.3**	**-2.0**
	comp=Z,16µmcomp=Z,11µmcomp=Z,331nm,1.2s						
SOEI	**Soe**	**67.86**	**124**	P	**P**	**11 28 09.6**	**-0.7**
SOEI	**Soe**	**67.86**	**124**	⇓P	**P**	**11 28 08.5**	**-1.8**
NUUK	**Nuuk**	**68.14**	**337**	⇑P	P	11 28 17.5	+6.3
A36M	**Sachs Harbour**	**68.14**	**6**	P	**P**	**11 28 09.5**	**-1.6**
A36M				IAMs_20	IAMs_20	11 59 16.5	
	comp=Z,42µm,22.0s						
A36M	**Sachs Harbour**	**68.14**	**6**	P	**P**	**11 28 09.4**	**-1.6**
	baz=345						
A36M				S	**S**	**11 37 13.3**	**+2.6**
	baz=345						
NRS	**Narsarsuaq**	**68.22**	**333**	P	**P**	**11 28 10.4**	**-1.4**
NRS				IAmb	IAmb	11 28 34.0	
	comp=Z,304nm,1.1s						
NRS				IAMs_20	IAMs_20	11 57 12.3	
	comp=Z,33µm,19.0s						
NRS	**Narsarsuaq**	**68.22**	**333**	P	**P**	**11 28 10.4**	**-1.4**
NRS				pmax	pmax		
	comp=Z,304nm,1.1s						
NRS	**Narsarsuaq**	**68.22**	**333**	⇑P	**P**	**11 28 10.8**	**-1.0**
FAKI	**Fak Fak**	**68.31**	**113**	P	**P**	**11 28 12.9**	**-0.1**
	comp=Z,15µmcomp=Z,11µmcomp=Z,308nm,1.1s						
FAKI	**Fak Fak**	**68.31**	**113**	P	**P**	**11 28 12.8**	**-0.2**
FAKI	**Fak Fak**	**68.31**	**113**	⇓P	**P**	**11 28 12.6**	**-0.4**
COLD	**Coldfoot**	**68.65**	**17**	P	**P**	**11 28 12.8**	**-1.6**
COLD				IAmb	IAmb	11 28 26.1	
	comp=Z,249nm,0.9s						
COLD	**Coldfoot**	**68.65**	**17**	P	**P**	**11 28 12.8**	**-1.6**
	baz=325,SNR=46						
COLD				S	**S**	**11 37 20.2**	**+3.2**
	baz=325						
FOMA	**Nahampoana Res**	**68.66**	**206**	P	P	11 28 20.9	+6.0
IMAR	**Indian Mountai**	**68.81**	**19**	P	**P**	**11 28 13.7**	**-1.8**
LSZ	**Lusaka**	**68.88**	**227**	LR	LR	12 02 22.9	
	comp=Z,28µm,18.0s,baz=36,slow=39						
LSZ	**Lusaka**	**68.88**	**227**	IAMs_20	IAMs_20	12 02 03.5	
	comp=Z,29µm,19.0s						
LSZ	**Lusaka**	**68.88**	**227**	*i* P	**P**	**11 28 13.7**	**-2.9**
LSZ	**Lusaka**	**68.88**	**227**	*i* P	**P**	**11 28 13.7**	**-2.9**
AMKA	**Amchitka**	**68.88**	**40**	P	**P**	**11 28 14.0**	**-2.0**
GCSA	**Galena City Sc**	**68.96**	**21**	P	**P**	**11 28 14.8**	**-1.5**
	baz=320,SNR=24						
GCSA				S	**S**	**11 37 25.8**	**+5.1**
	baz=320						
IVI	**Ivigtut**	**69.15**	**334**	*i* P	**P**	**11 28 21.8**	**+4.3**
IVI	**Ivigtut**	**69.15**	**334**	⇑P	**P**	**11 28 16.8**	**-0.8**
H21K	**Melozitna Rive**	**69.31**	**19**	P	**P**	**11 28 16.2**	**-2.4**
H21K				IAmb	IAmb	11 28 33.1	
	comp=Z,308nm,1.2s						
H21K				IAMs_20	IAMs_20	12 02 52.6	
	comp=Z,37µm,18.0s						
H21K	**Melozitna Rive**	**69.31**	**19**	P	**P**	**11 28 16.6**	**-1.9**
	baz=323,SNR=66						
H21K				S	**S**	**11 37 27.6**	**+2.7**
	baz=323						
H22K	**Ishtalitna Cre**	**69.47**	**18**	P	**P**	**11 28 17.7**	**-1.8**
	baz=324,SNR=39						
H22K				S	**S**	**11 37 30.2**	**+3.4**
	baz=324						
BMAR	**Burnt Mountain**	**69.66**	**15**	P	**P**	**11 28 19.3**	**-1.4**
PMPST	**Porto Santo, M**	**69.81**	**297**	*e*P	**P**	**11 28 22.1**	**-0.1**
	comp=Z,476nm,1.3s						
PMPST				*es*P	**sP**	**11 28 29.6**	**+1.6**
PMPS	**Porto Santo**	**69.82**	**297**	*e*P	**P**	**11 28 23.1**	**+0.9**
	comp=Z,459nm,1.4s						
PMPS				*es*P	**sP**	**11 28 29.6**	**+1.6**
I21K	**Tanana**	**69.90**	**19**	P	**P**	**11 28 20.5**	**-1.7**
I21K				IAmb	IAmb	11 28 39.4	
	comp=Z,232nm,1.1s						
I21K				IAMs_20	IAMs_20	12 04 10.2	
	comp=Z,39µm,20.0s						
I21K	**Tanana**	**69.90**	**19**	P	**P**	**11 28 20.4**	**-1.7**
	baz=324,SNR=53						
I21K				S	**S**	**11 37 34.5**	**+2.7**
	baz=324						
BAKI	**Biak**	**69.91**	**109**	P	**P**	**11 28 23.3**	**+0.3**
SPIA	**Saint Paul Isl**	**69.91**	**31**	S	**S**	**11 37 40.8**	**+8.7**
	baz=312						
H23K	**Yukon River**	**69.95**	**17**	P	**P**	**11 28 21.3**	**-1.3**
H23K				IAmb	IAmb	11 28 53.7	
	comp=Z,435nm,1.4s						
H23K				IAMs_20	IAMs_20	11 58 35.6	
	comp=Z,40µm,20.0s						
H23K	**Yukon River**	**69.95**	**17**	P	**P**	**11 28 21.2**	**-1.3**
	baz=326,SNR=170						
H23K				S	**S**	**11 37 36.8**	**+4.3**
	baz=326						
J20K	**Nowinta River**	**70.15**	**20**	P	**P**	**11 28 21.6**	**-2.1**
J20K				IAMs_20	IAMs_20	12 01 31.0	
	comp=Z,41µm,22.0s						
J20K	**Nowinta River**	**70.15**	**20**	P	**P**	**11 28 22.2**	**-1.5**
	baz=323,SNR=115						
J20K				S	**S**	**11 37 38.7**	**+4.0**
	baz=323						
H24K	**Noodor Dome**	**70.32**	**17**	P	**P**	**11 28 23.4**	**-1.4**
H24K				IAmb	IAmb	11 28 55.9	
	comp=Z,242nm,1.2s						
H24K				IAMs_20	IAMs_20	12 02 52.3	
	comp=Z,37µm,19.0s						
H24K	**Noodor Dome**	**70.32**	**17**	P	**P**	**11 28 23.4**	**-1.4**
	baz=327,SNR=69						
H24K				S	**S**	**11 37 41.1**	**+4.2**
	baz=327						
MLY	**Manley**	**70.33**	**18**	P	**P**	**11 28 23.0**	**-1.9**
MLY				IAmb	IAmb	11 28 46.3	
	comp=Z,289nm,1.3s						
MLY				IAMs_20	IAMs_20	11 59 49.5	
	comp=Z,33µm,20.0s						
MLY	**Manley**	**70.33**	**18**	P	**P**	**11 28 22.9**	**-1.9**
	baz=325,SNR=90						
MLY				S	**S**	**11 37 40.6**	**+3.7**
	baz=325						
PMAR	**Madeira**	**70.41**	**297**	*e*P	**P**	**11 28 25.1**	**-1.0**
	comp=Z,726nm,1.1s						
PMAR				*es*P	**sP**	**11 28 33.9**	**+2.0**
SRPI	**Serui, Papua**	**70.47**	**109**	P	**P**	**11 28 28.3**	**+1.9**
	comp=Z,9µmcomp=Z,8µmcomp=Z,402nm,1.7s						
ADK	**Adak**	**70.53**	**38**	IAMs_20	IAMs_20	12 00 26.8	
	comp=Z,27µm,19.0s						
PMOZ	**Porto Moniz, M**	**70.55**	**297**	*e*P	**P**	**11 28 25.9**	**-1.0**
	comp=Z,394nm,1.7s						
PMOZ				*es*P	**sP**	**11 28 34.5**	**+1.9**
PMOZ				*e*S	**S**	**11 37 45.0**	**+4.3**
PMOZ				*e*SS	**SS**	**11 42 13.9**	**+2.5**
PMOZ				*e*LR	LR	11 51 52.1	
	comp=Z,8µm,18.0s						
I23K	**Minto, Yukon-K**	**70.56**	**18**	P	**P**	**11 28 24.6**	**-1.6**
I23K				IAmb	IAmb	11 28 43.6	
	comp=Z,340nm,1.1s						
I23K	**Minto, Yukon-K**	**70.56**	**18**	P	**P**	**11 28 24.7**	**-1.5**
	baz=326,SNR=86						
I23K				S	**S**	**11 37 43.5**	**+4.0**
	baz=326						
TTA	**Tatalina**	**70.62**	**22**	P	**P**	**11 28 25.1**	**-1.6**
	baz=322,SNR=17						
TTA				S	**S**	**11 37 46.1**	**+5.7**
	baz=322						
TTA	**Tatalina**	**70.62**	**22**	⇑P	**P**	**11 28 25.1**	**-1.6**
INK	**Inuvik**	**70.72**	**10**	S	**S**	**11 37 39.6**	**-1.6**
	comp=Z,4.0nm,1.1s,baz=252,slow=31,SNR=1.3						
INK				LR	LR	12 01 33.1	
	comp=Z,20µm,21.3s,baz=310,slow=38						
INK	**Inuvik**	**70.72**	**10**	P	**P**	**11 28 25.6**	**-1.6**
INK				IAmb	IAmb	11 29 00.3	
	comp=Z,379nm,1.1s						
INK	**Inuvik**	**70.72**	**10**	P	**P**	**11 28 25.6**	**-1.6**
INK				pmax	pmax		
	comp=Z,379nm,1.1s						
INK	**Inuvik**	**70.72**	**10**	P	**P**	**11 28 25.5**	**-1.6**
	baz=338						
INK				S	**S**	**11 37 45.3**	**+4.0**
	baz=338						
INK	**Inuvik**	**70.72**	**10**	⇑P	**P**	**11 28 25.4**	**-1.7**
C36M	**Paulatuk**	**70.80**	**7**	P	**P**	**11 28 25.3**	**-2.3**
C36M				IAmb	IAmb	11 28 39.5	
	comp=Z,300nm,0.8s						
C36M	**Paulatuk**	**70.80**	**7**	P	**P**	**11 28 25.2**	**-2.3**
	baz=346						
C36M				S	**S**	**11 37 44.4**	**+2.3**
	baz=346						
K20K	**Telida**	**70.82**	**21**	P	**P**	**11 28 26.3**	**-1.5**
K20K				IAMs_20	IAMs_20	12 02 04.9	
	comp=Z,35µm,19.0s						
K20K	**Telida**	**70.82**	**21**	P	**P**	**11 28 26.4**	**-1.5**
	baz=323,SNR=52						
K20K				S	**S**	**11 37 48.0**	**+5.3**
	baz=323						
CHUM	**Lake Minchumin**	**70.87**	**20**	P	**P**	**11 28 26.5**	**-1.6**
	baz=324,SNR=10						
CHUM				S	**S**	**11 37 45.4**	**+2.3**
	baz=324						
BPAW	**Bear Paw Mtn.**	**71.03**	**19**	P	**P**	**11 28 26.9**	**-2.2**
	baz=325,SNR=46						
BPAW				S	**S**	**11 37 47.4**	**+2.4**
	baz=325						
POKR	**Poker Plat Res**	**71.03**	**17**	P	**P**	**11 28 27.7**	**-1.4**
	baz=328,SNR=69						
POKR				S	**S**	**11 37 48.9**	**+3.8**
	baz=328						
NEA2	**Nenana**	**71.09**	**18**	P	**P**	**11 28 27.4**	**-2.1**
	baz=326,SNR=185						
NEA2				S	**S**	**11 37 48.7**	**+3.0**
	baz=326						
TCOL	**CIGO, UAF Yank**	**71.14**	**17**	P	**P**	**11 28 27.9**	**-1.8**
	baz=327,SNR=28						
TCOL				S	**S**	**11 37 49.7**	**+3.5**
	baz=327						
COLA	**College**	**71.14**	**17**	P	**P**	**11 28 28.1**	**-1.6**
COLA				IAmb	IAmb	11 28 41.3	
	comp=Z,298nm,0.9s						
COLA	**College**	**71.14**	**17**	P	**P**	**11 28 28.1**	**-1.6**
COLA				pmax	pmax		
	comp=Z,298nm,0.9s						
COLA				MLR	MLR		
	comp=Z,44µm,19.0s						
COLA	**College**	**71.14**	**17**	⇑P	**P**	**11 28 27.8**	**-2.0**
CAST	**Castle Rocks**	**71.31**	**20**	IAMs_20	IAMs_20	11 59 01.5	
	comp=Z,31µm,19.0s						
CAST	**Castle Rocks**	**71.31**	**20**	P	**P**	**11 28 29.0**	**-1.8**
	baz=324,SNR=9.3						
BWN	**Browne**	**71.35**	**18**	IAMs_20	IAMs_20	12 01 39.5	
	comp=Z,28µm,20.0s						
IL31		**71.45**	**17**	P	**P**	**11 28 29.4**	**-2.2**
ILAR	**Eielson Array**	**71.45**	**17**	P	**P**	**11 28 28.9**	**-2.7**
	comp=Z,28nm,0.8s,baz=323,slow=4.6,SNR=312						
ILAR				LR	LR	12 04 16.3	
	comp=Z,40µm,19.4s,baz=302,slow=40						
	comp=Z,28nm,0.8s						
ILAR	**Eielson Array**	**71.45**	**17**	P	**P**	**11 28 29.8**	**-1.8**
ILAR	**Eielson Array**	**71.45**	**17**	P	**P**	**11 28 29.8**	**-1.8**
KTH	**Kantishna Hill**	**71.50**	**19**	IAMs_20	IAMs_20	12 05 15.5	
	comp=Z,29µm,21.0s						
ATKA	**Atka Island**	**71.50**	**37**	P	**P**	**11 28 30.8**	**-1.3**
ATKA	**Atka Island**	**71.50**	**37**	⇑P	**P**	**11 28 30.0**	**-2.2**
L19K	**White Mountain**	**71.54**	**22**	P	**P**	**11 28 30.9**	**-1.3**
L19K				IAmb	IAmb	11 28 49.8	
	comp=Z,261nm,1.2s						
L19K				IAMs_20	IAMs_20	12 02 47.9	
	comp=Z,39µm,20.0s						
L19K	**White Mountain**	**71.54**	**22**	P	**P**	**11 28 30.9**	**-1.3**
	baz=323,SNR=37						
L19K				S	**S**	**11 37 57.1**	**+6.0**
	baz=323						
L20K	**Farewell, AK**	**71.58**	**21**	P	**P**	**11 28 30.8**	**-1.7**
	baz=323,SNR=89						
L20K				S	**S**	**11 37 54.6**	**+3.1**
	baz=323						
N16K	**Nishlik Lake**	**71.69**	**24**	P	**P**	**11 28 32.6**	**-0.6**
	baz=320,SNR=102						
N16K				S	**S**	**11 37 59.9**	**+7.1**
	baz=320						
PPLA	**Purkeypile**	**71.70**	**20**	P	**P**	**11 28 31.3**	**-2.1**
	baz=324,SNR=38						
PPLA				S	**S**	**11 37 56.5**	**+3.4**
	baz=324						
TRF	**Thorofare Moun**	**71.74**	**19**	IAMs_20	IAMs_20	12 05 57.0	
	comp=Z,30µm,18.0s						
TRF	**Thorofare Moun**	**71.74**	**19**	P	**P**	**11 28 30.9**	**-2.7**
	baz=326,SNR=13						
TRF				S	**S**	**11 37 57.0**	**+3.4**
	baz=326						
HDA	**Harding Lake**	**71.75**	**17**	IAMs_20	IAMs_20	12 02 40.9	
	comp=Z,32µm,20.0s						
HDA	**Harding Lake**	**71.75**	**17**	P	**P**	**11 28 30.4**	**-3.0**
	baz=328,SNR=47						
HDA				S	**S**	**11 37 55.0**	**+1.7**
	baz=328						
HDA				S	**S**	**11 37 55.0**	**+1.7**
	baz=328						
I26K	**Coal Creek Min**	**71.79**	**15**	P	**P**	**11 28 32.1**	**-1.7**
I26K				IAmb	IAmb	11 29 05.1	
	comp=Z,188nm,1.1s						
I26K				IAMs_20	IAMs_20	12 02 25.9	
	comp=Z,36µm,20.0s						
I26K	**Coal Creek Min**	**71.79**	**15**	P	**P**	**11 28 32.0**	**-1.7**
	baz=331						
I26K				S	**S**	**11 37 59.8**	**+6.0**
	baz=331						
MCK	**McKinley**	**71.84**	**18**	IAMs_20	IAMs_20	12 04 11.6	
	comp=Z,34µm,18.0s						
MCK	**McKinley**	**71.84**	**18**	P	**P**	**11 28 32.0**	**-2.1**
	baz=327,SNR=11						
MCK				S	**S**	**11 37 56.9**	**+2.4**
	baz=327						
M19K	**Big River Lodg**	**71.89**	**22**	P	**P**	**11 28 33.3**	**-1.1**
M19K				IAmb	IAmb	11 28 46.6	
	comp=Z,517nm,1.8s						
M19K				IAMs_20	IAMs_20	12 03 00.3	
	comp=Z,36µm,20.0s						
M19K	**Big River Lodg**	**71.89**	**22**	P	**P**	**11 28 33.0**	**-1.4**
	baz=323						
M19K				S	**S**	**11 38 00.4**	**+5.3**
	baz=323						
J25K	**Salcha River,**	**71.93**	**17**	IAMs_20	IAMs_20	12 03 29.6	
	comp=Z,34µm,20.0s						
J25K	**Salcha River,**	**71.93**	**17**	P	**P**	**11 28 32.0**	**-2.6**
	baz=329,SNR=83						
J25K				S	**S**	**11 37 57.5**	**+2.0**
	baz=329						
EPYK	**Eagle Plains**	**72.03**	**12**	P	**P**	**11 28 32.9**	**-2.3**
	baz=336,SNR=20						
EPYK				S	**S**	**11 37 59.7**	**+3.1**
	baz=336						
RND	**Reindeer**	**72.14**	**19**	IAMs_20	IAMs_20	12 00 20.4	
	comp=Z,34µm,21.0s						
M20K	**Styx River**	**72.27**	**21**	IAMs_20	IAMs_20	11 59 34.1	
	comp=Z,43µm,21.0s						
M20K	**Styx River**	**72.27**	**21**	P	**P**	**11 28 35.6**	**-1.1**
	baz=324,SNR=13						
M20K				S	**S**	**11 38 02.5**	**+2.9**
	baz=324						
SMPI	**Sarmi**	**72.36**	**108**	P	**P**	**11 28 37.9**	**+0.1**
	comp=Z,13µmcomp=Z,9µmcomp=Z,285nm,1.8s						
J26L	**Joseph Creek**	**72.41**	**16**	IAMs_20	IAMs_20	12 00 24.4	
	comp=Z,43µm,22.0s						
J26L	**Joseph Creek**	**72.41**	**16**	P	**P**	**11 28 35.4**	**-2.1**
	baz=331,SNR=63						
J26L				S	**S**	**11 38 04.1**	**+2.9**
	baz=331						
N18K	**Kilae Creek**	**72.42**	**23**	IAMs_20	IAMs_20	12 00 07.4	
	comp=Z,30µm,21.0s						
N18K	**Kilae Creek**	**72.42**	**23**	P	**P**	**11 28 36.3**	**-1.3**
	baz=322,SNR=13						
N18K				S	**SKiKP**	**11 38 08.2**	**-4.7**
	baz=322						
GIRL	**Giralia**	**72.50**	**141**	P	**P**	**11 28 39.4**	**+1.0**
GIRL	**Giralia**	**72.50**	**141**	⇑P	**P**	**11 28 39.2**	**+0.8**
K24K	**Donnelly Dome**	**72.53**	**17**	P	**P**	**11 28 35.5**	**-2.7**
	baz=329,SNR=66						
K24K				S	**S**	**11 38 03.8**	**+1.4**
	baz=329						
BLWY	**Bulawayo**	**72.58**	**224**	*e*P	**P**	**11 28 37.7**	**-1.4**
BLWY				IAmb	IAmb	11 28 47.0	
	comp=Z,1µm,1.0s						
BLWY	**Bulawayo**	**72.58**	**224**	*i* P	**P**	**11 28 37.3**	**-1.8**
BLWY	**Bulawayo**	**72.58**	**224**	*i* P	**P**	**11 28 37.3**	**-1.8**
O16K	**Kokwok River B**	**72.58**	**25**	P	**P**	**11 28 37.7**	**-0.8**
	baz=321,SNR=50						
O16K				S	**S**	**11 38 07.4**	**+4.5**
	baz=321						
CUT	**Chulitna**	**72.61**	**20**	IAMs_20	IAMs_20	11 59 53.1	
	comp=Z,26µm,19.0s						
CUT	**Chulitna**	**72.61**	**20**	P	**P**	**11 28 36.0**	**-2.6**
	baz=326,SNR=14						
CUT				S	**S**	**11 38 03.6**	**+0.3**
	baz=326						
SKT	**Skwentna**	**72.63**	**20**	IAMs_20	IAMs_20	12 02 58.6	
	comp=Z,34µm,20.0s						
SKT	**Skwentna**	**72.63**	**20**	P	**P**	**11 28 36.2**	**-2.5**
	baz=325						
SKT				S	**S**	**11 38 04.9**	**+1.4**
	baz=325						
I29M	**Ogilvie Camp,**	**72.68**	**13**	P	**P**	**11 28 36.8**	**-2.2**
	baz=335,SNR=80						
I29M				S	**S**	**11 38 07.0**	**+3.1**
	baz=335						
WAT1	**Susitna Watana**	**72.70**	**19**	P	**P**	**11 28 36.2**	**-3.0**
	baz=327						
WAT1				S	**S**	**11 38 04.5**	**+0.1**
	baz=327						
N19K	**Bonanza Creek**	**72.74**	**22**	P	**P**	**11 28 38.1**	**-1.5**
	baz=323,SNR=25						
N19K				S	**SKiKP**	**11 38 09.7**	**-3.8**
	baz=323						
O17K	**Koliganek Bris**	**72.76**	**24**	P	**P**	**11 28 38.8**	**-0.8**
	baz=321,SNR=15						
O17K				S	**SKiKP**	**11 38 12.4**	**-0.9**
	baz=321						
DHY	**Denali Highway**	**72.78**	**18**	P	**P**	**11 28 37.2**	**-2.6**
	baz=328,SNR=51						
DHY				S	**S**	**11 38 06.0**	**+0.5**
	baz=328						
SCRK	**Sand Creek**	**72.78**	**16**	P	**P**	**11 28 37.8**	**-2.0**
SCRK				IAMs_20	IAMs_20	12 03 42.2	
	comp=Z,40µm,20.0s						
SCRK	**Sand Creek**	**72.78**	**16**	P	**P**	**11 28 37.9**	**-1.9**
	baz=331,SNR=74						
SCRK				S	**S**	**11 38 08.0**	**+2.6**
	baz=331						
RIDG	**Independent Ri**	**72.80**	**17**	IAMs_20	IAMs_20	12 04 35.6	
	comp=Z,36µm,18.0s						
RIDG	**Independent Ri**	**72.80**	**17**	P	**P**	**11 28 37.3**	**-2.5**
	baz=330,SNR=33						
RIDG				S	**S**	**11 38 07.0**	**+1.5**
	baz=330						
MATP	**Matopo**	**72.87**	**224**	*e*P	**P**	**11 28 39.4**	**-1.4**
MATP	**Matopo**	**72.87**	**224**	LR	LR	12 00 44.3	
	comp=Z,22µm,19.5s,baz=44,slow=36						
MATP	**Matopo**	**72.87**	**224**	*i* P	**P**	**11 28 39.5**	**-1.4**
MATP	**Matopo**	**72.87**	**224**	*i* P	**P**	**11 28 39.5**	**-1.4**
FRB	**Frobisher Bay**	**72.88**	**343**	LR	LR	12 04 55.1	
	comp=Z,25µm,20.4s,baz=20,slow=39						
FRB	**Frobisher Bay**	**72.88**	**343**	⇑P	**P**	**11 28 37.9**	**-2.2**
BART	**Pico Bartolome**	**72.97**	**305**	*e*P	P	11 28 49.4	+8.1
	comp=Z,294nm,1.2s						
P16K	**Nushagak River**	**73.05**	**25**	P	**P**	**11 28 40.6**	**-0.6**
	baz=321						
P16K				S	**SKiKP**	**11 38 16.4**	**+2.6**
	baz=321						
WAT6	**Susitna Watana**	**73.11**	**19**	P	**P**	**11 28 39.1**	**-2.7**
	baz=328,SNR=39						
WAT6				S	**S**	**11 38 10.6**	**+1.2**
	baz=328						
K27K	**Chicken**	**73.14**	**16**	P	**P**	**11 28 40.2**	**-1.5**
K27K				IAmb	IAmb	11 28 53.8	
	comp=Z,576nm,1.6s						
K27K	**Chicken**	**73.14**	**16**	P	**P**	**11 28 40.3**	**-1.4**
	baz=332						
K27K				S	**SKiKP**	**11 38 13.5**	**-0.4**
	baz=332						
PCALD	**Caldeiras da R**	**73.16**	**305**	*e*P	P	11 28 52.0	+10
	comp=Z,296nm,1.6s						
M22K	**Willow**	**73.20**	**20**	IAMs_20	IAMs_20	12 04 54.5	
	comp=Z,31µm,18.0s						
M22K	**Willow**	**73.20**	**20**	P	**P**	**11 28 39.6**	**-2.5**
	baz=326,SNR=10						
M22K				S	**S**	**11 38 11.1**	**+1.2**
	baz=326						
GRON	**Grota Negra**	**73.20**	**305**	*e*P	P	11 28 51.0	+8.4
	comp=Z,207nm,1.9s						
SUA	**Susitna One**	**73.27**	**20**	P	**P**	**11 28 40.2**	**-2.5**
SUA				IAmb	IAmb	11 28 58.0	
	comp=Z,183nm,1.0s						
SUA				IAMs_20	IAMs_20	12 03 19.5	
	comp=Z,42µm,22.0s						
SUA	**Susitna One**	**73.27**	**20**	P	**P**	**11 28 40.5**	**-2.2**
	baz=326						
SUA				S	**SKiKP**	**11 38 12.7**	**-1.5**
	baz=326						
O19K	**Port Alsworth**	**73.28**	**23**	P	**P**	**11 28 41.3**	**-1.3**
	baz=323						
O19K				S	**SKiKP**	**11 38 14.6**	**+0.5**
	baz=323						
O18K	**Koktuh Hills**	**73.29**	**23**	P	**P**	**11 28 41.5**	**-1.2**
O18K				IAmb	IAmb	11 29 13.1	
	comp=Z,570nm,1.4s						
O18K				IAMs_20	IAMs_20	12 04 09.3	
	comp=Z,38µm,18.0s						
O18K	**Koktuh Hills**	**73.29**	**23**	P	**P**	**11 28 41.8**	**-0.9**
	baz=323,SNR=53						
O18K				S	**SKiKP**	**11 38 18.1**	**+3.9**
	baz=323						
PSET	**Sete Cidades**	**73.29**	**305**	*e*P	P	11 28 51.7	+8.6
	comp=Z,520nm,1.7s						
PDA	**Ponta Delgada**	**73.30**	**305**	*e*P	P	11 28 55.8	+13
	comp=Z,460nm,1.6s						
PAX	**Paxson**	**73.32**	**17**	P	**P**	**11 28 40.6**	**-2.3**
PAX				IAmb	IAmb	11 28 57.1	
	comp=Z,379nm,1.3s						
PAX	**Paxson**	**73.32**	**17**	P	**P**	**11 28 40.6**	**-2.3**
PAX				pmax	pmax		
	comp=Z,379nm,1.3s						
PAX	**Paxson**	**73.32**	**17**	P	**P**	**11 28 40.7**	**-2.3**
	baz=330,SNR=46						
PAX				S	**SKiKP**	**11 38 13.7**	**-0.6**
	baz=330						
PSMN	**Pico do Norte,**	**73.36**	**304**	*e*P	P	11 28 51.7	+8.1
	comp=Z,387nm,1.5s						
PSMA	**Santa Maria**	**73.41**	**304**	*e*P	P	11 28 51.7	+7.9
	comp=Z,245nm,2.8s						
P17K	**Kvichak River**	**73.42**	**24**	P	**P**	**11 28 42.9**	**-0.5**
	baz=322,SNR=74						
P17K				S	**SKiKP**	**11 38 20.6**	**+6.3**
	baz=322						
GHO	**Glory Hole Cre**	**73.49**	**20**	P	**P**	**11 28 41.9**	**-2.1**
GHO				IAMs_20	IAMs_20	12 01 45.4	
	comp=Z,26µm,19.0s						
J29M	**Klondike Camp**	**73.52**	**14**	IAMs_20	IAMs_20	12 02 49.4	
	comp=Z,36µm,19.0s						
J29M	**Klondike Camp**	**73.52**	**14**	P	**P**	**11 28 42.6**	**-1.5**
	baz=335						
J29M				S	**SKiKP**	**11 38 16.9**	**+2.4**
	baz=335						
PMR	**Palmer**	**73.59**	**20**	P	**P**	**11 28 42.1**	**-2.3**
	baz=327,SNR=19						
PMR				S	**SKiKP**	**11 38 16.0**	**+1.4**
	baz=327						
SML	**Sawmill**	**73.62**	**19**	IAMs_20	IAMs_20	12 04 17.5	
	comp=Z,28µm,19.0s						
SML	**Sawm

baz=322
M23K Glacier View 73.78 19 P P 11 28 43.4 -2.2
baz=328,SNR=49
M23K S S 11 38 17.9 +1.2
baz=328
GENI Genyem 73.84 107 P P 11 28 46.9 +0.3
comp=Z,18µmcomp=Z,21µmcomp=Z,772nm,1.1s
GENI Genyem 73.84 107 P P 11 28 47.5 +0.9
comp=Z,778nm,1.0s
GENI Genyem 73.84 107 ⇑P P 11 28 47.5 +0.9
SCM Sheep Creek Mo 73.85 19 P P 11 28 44.0 -2.1
SCM IAmb IAmb 11 28 55.4
comp=Z,282nm,0.8s
SCM Sheep Creek Mo 73.85 19 P P 11 28 44.0 -2.1
SCM pmax pmax
comp=Z,282nm,0.8s
SCM MLR MLR
comp=Z,44µm,18.0s
SCM Sheep Creek Mo 73.85 19 P P 11 28 44.0 -2.1
baz=328,SNR=32
SCM S S 11 38 19.0 +1.4
baz=328
RC01 Rabbit Creek A 73.85 20 IAMs_20 IAMs_20 12 03 02.8
comp=Z,29µm,22.0s
RC01 Rabbit Creek A 73.85 20 P P 11 28 43.7 -2.3
baz=327,SNR=9.3
RC01 S S 11 38 19.0 +1.6
baz=327
O20K Slope Mountain 73.88 22 S S 11 38 21.0 +3.1
baz=325
HARP HAARP 73.89 18 P P 11 28 45.2 -1.0
baz=330,SNR=44
HARP S S 11 38 22.8 +5.0
baz=330
M24K Tolsona, Glenn 73.90 18 IAMs_20 IAMs_20 12 05 13.9
comp=Z,31µm,18.0s
M24K Tolsona, Glenn 73.90 18 P P 11 28 45.2 -1.2
baz=329,SNR=27
M24K S S 11 38 21.1 +3.1
baz=329
KNK Knik Glacier 73.92 20 IAMs_20 IAMs_20 12 02 08.5
comp=Z,25µm,19.0s
KNK Knik Glacier 73.92 20 P P 11 28 44.7 -1.7
baz=328,SNR=11
KNK S S 11 38 21.3 +3.1
baz=328
MOPA Mopani 73.92 220 eP P 11 28 45.5 -1.3
MOPA IAmb IAmb 11 28 55.0
comp=Z,255nm,1.0s
MOPA Mopani 73.92 220 *i* P P 11 28 45.5 -1.3
MOPA Mopani 73.92 220 *i* P P 11 28 45.5 -1.3
PGRA Graciosa 73.97 307 eP P 11 28 56.3 +9.2
comp=Z,955nm,1.6s
SRBC Serra Branca 74.00 307 eP P 11 28 56.5 +9.2
comp=Z,618nm,1.4s
L27K Beaver Creek, 74.05 16 IAMs_20 IAMs_20 12 04 27.7
comp=Z,39µm,19.0s
L27K Beaver Creek, 74.05 16 P P 11 28 45.8 -1.4
baz=332,SNR=38
L27K S S 11 38 24.0 +4.3
baz=332
BCAR Beaver Creek A 74.06 16 P P 11 28 45.8 -1.5
MBWA Marble Bar 74.12 136 P P 11 28 54.5 +6.6
MBWA Marble Bar 74.12 136 P P 11 28 47.9 -0.1
MBWA Marble Bar 74.12 136 ⇑P P 11 28 47.0 -1.0
FALS False Pass 74.27 30 S S 11 38 25.6 +3.5
baz=318
PMAN Manadas 74.28 307 eP P 11 28 57.3 +8.4
comp=Z,306nm,1.1s
Q18K Katmai Hardscr 74.31 24 P P 11 28 46.4 -2.4
baz=323
Q18K S S 11 38 26.5 +3.6
baz=323
ROSA Rosais 74.32 307 eP P 11 28 56.5 +7.4
comp=Z,293nm,1.2s
O22K Cooper Landing 74.36 21 IAMs_20 IAMs_20 12 04 05.5
comp=Z,37µm,20.0s
O22K Cooper Landing 74.36 21 P P 11 28 46.6 -2.3
baz=327
O22K S S 11 38 24.2 +1.1
baz=327
M26K Nabesna, AK 74.38 17 IAMs_20 IAMs_20 12 02 11.5
comp=Z,31µm,22.0s
M26K Nabesna, AK 74.38 17 P P 11 28 47.7 -1.4
baz=332,SNR=11
M26K S S 11 38 27.1 +3.7
baz=332
PID Ribeirinha 74.42 307 eP P 11 28 58.0 +8.3
comp=Z,343nm,1.1s
PPNO Prainha do Nor 74.49 307 eP P 11 28 59.5 +9.3
comp=Z,204nm,1.3s
KLU Klutina 74.49 18 IAMs_20 IAMs_20 12 05 32.6
comp=Z,36µm,18.0s
KLU Klutina 74.49 18 P P 11 28 48.2 -1.6
baz=330,SNR=18
KLU S S 11 38 28.8 +4.0
baz=330
HOM Homer 74.51 22 IAMs_20 IAMs_20 12 04 30.4
comp=Z,31µm,18.0s
HOM Homer 74.51 22 S S 11 38 27.9 +3.1
baz=325
Q19K Cape Douglas, 74.51 23 IAMs_20 IAMs_20 12 06 46.5
comp=Z,32µm,18.0s
Q19K Cape Douglas, 74.51 23 P P 11 28 48.3 -1.6
baz=324
Q19K S S 11 38 27.4 +2.5
baz=324
PSA00 Pilbara Seismi 74.52 136 P P 11 28 50.1 -0.2
PSA00 IAmb IAmb 11 28 58.2
comp=Z,727nm,1.6s
PSA00 Pilbara Seismi 74.52 136 P P 11 28 49.9 -0.4
PICO Pico 74.57 307 eP P 11 28 59.0 +8.3
comp=Z,446nm,1.3s
MTN Manton Dam 74.63 121 P P 11 28 50.2 -0.9
MTN Manton Dam 74.63 121 ⇓P P 11 28 50.1 -0.9
PCAN Candelaria 74.63 307 eP P 11 29 00.8 +10
comp=Z,667nm,1.4s
S14K Fog Glacier 74.64 28 P P 11 28 49.9 -0.8
baz=320
S14K S S 11 38 31.1 +4.5
baz=320
BRLK Bradley Lake 74.64 22 IAMs_20 IAMs_20 12 05 08.9
comp=Z,37µm,18.0s
PCED Cedros 74.66 307 eP P 11 29 00.8 +10
comp=Z,545nm,1.9s
M27K Edge Creek, AK 74.67 16 IAMs_20 IAMs_20 12 04 58.9
comp=Z,35µm,20.0s
M27K Edge Creek, AK 74.67 16 P P 11 28 49.7 -1.2
baz=332,SNR=22
M27K S S 11 38 30.7 +3.9
baz=332
R17K Ugashik Creek 74.67 25 P P 11 28 48.9 -1.8
baz=322,SNR=7.9
R17K S S 11 38 30.2 +3.6
baz=322
CALA Caldeira 74.69 307 eP P 11 28 59.0 +7.6
comp=Z,822nm,1.2s
BRSE Bradley Lake S 74.70 21 P P 11 28 48.0 -2.9
baz=326
BRSE S S 11 38 27.9 +0.9
baz=326
N25K Chitina, Valde 74.71 18 IAMs_20 IAMs_20 12 05 19.3
comp=Z,36µm,19.0s
N25K Chitina, Valde 74.71 18 P P 11 28 49.9 -1.2
baz=330,SNR=21
N25K S S 11 38 31.8 +4.6
baz=330
GLI Glacier Island 74.72 19 IAMs_20 IAMs_20 12 05 12.8
comp=Z,31µm,21.0s
GLI Glacier Island 74.72 19 P P 11 28 48.7 -2.4
baz=329,SNR=16
GLI S S 11 38 29.6 +2.4
baz=329
SEW Seward 74.75 21 P P 11 28 49.3 -1.9
baz=327
SEW S S 11 38 29.1 +1.7
baz=327
BVCY Beaver Creek 74.83 16 P P 11 28 50.6 -1.1
baz=333,SNR=19
BVCY S S 11 38 32.6 +4.1
baz=333
DIV Divide 74.84 19 P P 11 28 50.4 -1.4
DIV IAmb IAmb 11 29 20.8
comp=Z,262nm,1.3s
SDPT Sand Point 75.02 29 P P 11 28 54.1 +1.3
baz=320
SDPT S S 11 38 33.4 +2.9
baz=320

GLB Gilahina Butte 75.04 18 IAMs_20 IAMs_20 12 05 05.9
comp=Z,27µm,20.0s
Q20K Shuyak Island 75.15 23 S S 11 38 32.6 +0.6
baz=325
KNRA Kununurra 75.18 125 P P 11 28 54.0 -0.3
KNRA Kununurra 75.18 125 P P 11 28 53.7 -0.6
BMRM Bremner River 75.27 18 P P 11 28 53.1 -1.2
baz=331,SNR=14
BMRM S S 11 38 34.9 +1.5
baz=331
MCARA McCarthy VSAT 75.27 17 IAMs_20 IAMs_20 12 02 28.1
comp=Z,29µm,20.0s
MCARA McCarthy VSAT 75.27 17 P P 11 28 52.9 -1.3
baz=332,SNR=9.0
MCARA S S 11 38 37.8 +4.6
baz=332
HIN Hinchinbrook I 75.29 19 IAMs_20 IAMs_20 12 05 40.7
comp=Z,37µm,19.0s
VRDI Verde Repeater 75.31 18 P P 11 28 52.7 -2.0
VRDI IAMs_20 IAMs_20 12 06 49.1
comp=Z,36µm,20.0s
EYAK Cordova Ski Ar 75.35 19 P P 11 28 53.6 -1.0
baz=330,SNR=8.5
EYAK S S 11 38 37.4 +3.3
baz=330
KDU Kakadu 75.40 120 P P 11 28 54.7 -0.9
KDU Kakadu 75.40 120 ⇑P P 11 28 54.6 -1.0
H07N1 FLORES T-PHASE 75.46 310 eP P 11 29 03.3 +7.6
YUK3 Moose Creek 75.49 16 P P 11 28 54.1 -1.6
baz=334,SNR=20
YUK3 S S 11 38 39.5 +3.3
baz=334
M30M Minto, Yukon 75.50 14 P P 11 28 53.7 -1.9
baz=336,SNR=24
M30M S S 11 38 38.6 +2.8
baz=336
H07S1 FLORES T-PHASE 75.71 309 eP P 11 29 05.6 +8.4
CHNA Chernabura Isl 75.74 29 P P 11 28 55.2 -1.7
baz=320,SNR=6.8
CHNA S S 11 38 43.4 +4.8
baz=320
KDAK Kodiak Island 75.77 23 S S 11 38 40.2 +1.4
comp=Z,4.6nm,0.8s,baz=327,slow=22,SNR=1.3
KDAK LR LR 12 07 12.1
comp=Z,38µm,18.1s,baz=330,slow=40
KDAK Kodiak Island 75.77 23 P P 11 28 55.7 -1.4
KDAK Kodiak Island 75.77 23 P P 11 28 55.7 -1.4
KDAK pmax pmax
comp=Z,1µm,1.8s
KDAK MLR MLR
comp=Z,42µm,19.0s
KDAK Kodiak Island 75.77 23 P P 11 28 55.5 -1.6
baz=325
KDAK S S 11 38 42.2 +3.4
baz=325
KDAK Kodiak Island 75.77 23 ⇓P P 11 28 55.7 -1.4
CRQM Cirque 75.80 18 IAMs_20 IAMs_20 12 03 32.5
comp=Z,30µm,21.0s
CRQE Cirque 75.81 18 P P 11 28 56.0 -1.5
baz=332,SNR=11
CRQE S S 11 38 43.0 +3.4
baz=332
BARN Barnard Glacie 75.87 17 P P 11 28 56.5 -1.4
BARN IAmb IAmb 11 29 12.9
comp=Z,274nm,1.3s
BARN IAMs_20 IAMs_20 12 05 50.8
comp=Z,37µm,20.0s
TGL Tana Glacier 75.87 17 IAMs_20 IAMs_20 12 03 34.0
comp=Z,28µm,22.0s
CNG Changalane 75.88 218 eP P 11 28 57.8 -0.2
CNG IAmb IAmb 11 29 06.2
comp=Z,119nm,1.4s
OHAK Old Harbor 76.01 24 P P 11 28 57.4 -1.1
baz=325,SNR=10
OHAK S S 11 38 45.9 +4.4
baz=325
CTG Chitna Glacier 76.03 17 P P 11 28 57.3 -1.4
baz=333,SNR=8.1
CTG S S 11 38 46.3 +4.4
baz=333
CTGM Chitina Glacie 76.03 17 IAMs_20 IAMs_20 12 05 55.9
comp=Z,35µm,20.0s
YUK8 Steele Glacier 76.08 16 P P 11 28 57.7 -1.5
baz=334,SNR=10
YUK8 S S 11 38 45.7 +2.9
baz=334
ISLE Juniper Island 76.12 17 P P 11 28 57.3 -2.0
ISLE IAMs_20 IAMs_20 12 06 23.6
comp=Z,24µm,18.0s
MAGG Maguga Dam 76.14 219 eP P 11 28 58.4 -1.2
MAGG IAmb IAmb 11 29 07.7
comp=Z,433nm,1.5s
WAX Waxell Ridge 76.14 18 P P 11 28 58.7 -0.6
GRNC Granite Creek 76.14 17 P P 11 28 58.3 -1.2
GRNC IAMs_20 IAMs_20 12 06 11.0
comp=Z,24µm,19.0s
MMAL MMAL 76.14 219 eP P 11 28 58.0 -1.7
MMAL IAmb IAmb 11 29 07.9
comp=Z,504nm,1.5s
Q23K Middleton Isla 76.16 20 IAMs_20 IAMs_20 12 07 12.9
comp=Z,31µm,20.0s
SII Sitkinak Islan 76.26 25 P P 11 28 59.1 -0.8
baz=324
SII S S 11 38 49.9 +5.5
baz=324
SII Sitkinak Islan 76.26 25 P P 11 28 59.3 -0.7
YUK4 Talbot Arm 76.26 15 P P 11 28 58.5 -1.6
baz=335,SNR=22
M31M Drury Creek, Y 76.28 13 IAMs_20 IAMs_20 12 04 15.2
comp=Z,29µm,19.0s
M31M Drury Creek, Y 76.28 13 P P 11 28 58.7 -1.3
baz=338,SNR=26
M31M S S 11 38 47.8 +3.4
baz=338
CHIR Chirikof Islan 76.37 26 P P 11 28 59.9 -0.7
CHIR Chirikof Islan 76.37 26 P P 11 28 59.9 -0.7
baz=323
CHIR S S 11 38 50.7 +5.2
baz=323
MMPY Sheldon Lake, 76.40 11 P P 11 28 59.5 -1.2
baz=341,SNR=20
MMPY S S 11 38 50.9 +5.1
baz=341
N30M Aishikik Lake 76.47 15 P P 11 28 59.9 -1.2
baz=336,SNR=13
N30M S S 11 38 50.5 +4.0
baz=336
TABL Table Mountain 76.54 17 IAMs_20 IAMs_20 12 03 08.5
comp=Z,41µm,22.0s
MESA MESA 76.59 17 IAMs_20 IAMs_20 12 06 47.9
comp=Z,35µm,19.0s
MESA MESA 76.59 17 P P 11 29 01.4 -0.6
baz=333
MESA S S 11 38 53.0 +4.8
baz=333
CRLN Carolina, Mapu 76.67 220 eP P 11 29 04.2 +1.4
CRLN IAmb IAmb 11 29 11.3
comp=Z,1µm,2.3s
YUK6 Outpost Mounta 76.68 15 P P 11 29 01.1 -1.4
baz=335,SNR=6.8
YUK6 S S 11 38 51.2 +1.9
baz=335
N31M Braeburn, Yuko 76.69 14 P P 11 29 00.5 -1.9
N31M IAmb IAmb 11 29 36.4
comp=Z,223nm,0.9s
N31M IAMs_20 IAMs_20 12 08 17.2
comp=Z,33µm,19.0s
N31M Braeburn, Yuko 76.69 14 P P 11 29 00.7 -1.7
baz=337,SNR=52
N31M S S 11 38 51.8 +2.8
baz=337
DBIC Dimbokro 76.81 268 eP P 11 29 01.3 -2.4
DBIC IAmb IAmb 11 29 11.7
comp=Z,410nm,1.2s
DBIC Dimbokro 76.81 268 P P 11 29 01.0 -2.7
comp=Z,17nm,0.7s,baz=55,slow=6.8,SNR=19
DBIC S S 11 38 51.8 +0.2
comp=Z,2.9nm,0.8s,baz=342,slow=23,SNR=1.3
DBIC LR LR 12 08 20.6
comp=Z,22µm,18.2s,baz=43,slow=40
comp=Z,17nm,0.7s
DBIC Dimbokro 76.81 268 P P 11 29 01.5 -2.3
DBIC IAmb IAmb 11 29 16.2
comp=Z,262nm,0.9s
DBIC Dimbokro 76.81 268 ⇑P P 11 29 01.3 -2.4
KIC Kosan Boka 76.92 267 ⇑eP P 11 29 01.9 -2.4
comp=Z,22nm,0.5s

TIC Toumodi 76.95 268 ⇑eP P 11 29 02.1 -2.5
comp=Z,9.7nm,0.3s
HYT Haines Junctio 76.96 15 P P 11 29 02.9 -1.1
HYT IAmb IAmb 11 29 14.7
comp=Z,186nm,0.8s
HYT Haines Junctio 76.96 15 P P 11 29 02.9 -1.1
baz=336,SNR=46
HYT S S 11 38 55.7 +3.5
baz=336
POGA Pongola 77.00 217 eP P 11 29 03.0 -1.4
POGA IAmb IAmb 11 29 12.8
comp=Z,346nm,1.1s
PINM Pinnacle 77.05 17 P P 11 29 03.3 -1.1
baz=334,SNR=6.6
PINM S S 11 38 57.2 +4.3
baz=334
LIC Lamto 77.22 268 ⇑eP P 11 29 04.2 -1.8
comp=Z,25nm,0.7s
O30N Mendenhall 77.29 14 P P 11 29 04.2 -1.6
baz=337,SNR=18
O30N S S 11 38 59.5 +3.9
baz=337
BCPM Bancas Point 77.31 16 IAMs_20 IAMs_20 12 06 31.8
comp=Z,28µm,20.0s
SLR Silverton 77.33 221 eP P 11 29 06.1 -0.3
SLR IAmb IAmb 11 29 14.9
comp=Z,1µm,2.0s
N32M Quiet Lake 77.49 13 S S 11 39 00.3 +2.6
baz=339
PNL Peninsula 77.62 16 P P 11 29 06.6 -1.0
baz=335,SNR=5.9
PNL S S 11 39 04.1 +5.0
baz=335
WHY Whitehorse 77.62 14 P P 11 29 05.6 -2.1
baz=338,SNR=10
WHY S S 11 39 01.2 +1.9
baz=338
WHY Whitehorse 77.62 14 ⇑P P 11 29 05.2 -2.6
P30M Million Dollar 77.72 15 P P 11 29 07.2 -1.0
baz=336
P30M S S 11 39 04.3 +4.1
baz=336
HRAO HartRAO 77.76 221 eP P 11 29 08.0 -0.9
HRAO IAmb IAmb 11 29 17.5
comp=Z,653nm,1.0s
TGTN Hyland Airport 77.88 10 P P 11 29 08.4 -0.7
baz=343,SNR=9.1
TGTN S S 11 39 06.8 +4.8
baz=343
KSR Koster 78.14 222 eP P 11 29 13.9 +2.9
KSR IAmb IAmb 11 29 19.6
comp=Z,166nm,1.1s
LBTB Lobatse 78.14 223 eP P 11 29 10.1 -0.9
LBTB IAmb IAmb 11 29 20.0
comp=Z,661nm,1.1s
LBTB Lobatse 78.14 223 LR LR 12 03 56.7
comp=Z,25µm,19.4s,baz=26,slow=36
LBTB Lobatse 78.14 223 P P 11 29 10.0 -0.9
LBTB Lobatse 78.14 223 P P 11 29 10.0 -0.9
LBTB pmax pmax
comp=Z,594nm,1.0s
LBTB Lobatse 78.14 223 *i* P P 11 29 10.3 -0.7
LBTB Lobatse 78.14 223 *i* P P 11 29 10.3 -0.7
LBTB Lobatse 78.14 223 ⇑P P 11 29 09.8 -1.1
NWCL Newcastle 78.19 219 eP P 11 29 09.6 -1.6
NWCL IAmb IAmb 11 29 19.4
comp=Z,371nm,1.0s
TSUM Tsumeb 78.25 233 eP P 11 29 10.7 -1.0
TSUM IAmb IAmb 11 29 24.6
comp=Z,886nm,0.9s
TSUM Tsumeb 78.25 233 LR LR 12 07 18.0
comp=Z,32µm,19.9s,baz=43,slow=38
TSUM Tsumeb 78.25 233 IAMs_20 IAMs_20 12 06 57.4
comp=Z,33µm,20.0s
TSUM Tsumeb 78.25 233 ⇓P P 11 29 10.5 -1.2
YKA Yellowknife Ar 78.25 4 P P 11 29 09.0 -2.0
comp=Z,56nm,0.8s,baz=351,slow=5.7,SNR=502
YKA S S 11 39 11.2 +5.5
comp=Z,2.1nm,0.9s,baz=358,slow=10,SNR=4.4
YKA PKKPbc **PKKPbc** 11 48 06.3 -2.5
comp=Z,0.4nm,0.6s,baz=153,slow=2.4,SNR=5.0
YKA LR LR 12 08 01.8
comp=Z,36µm,18.0s,baz=346,slow=39
comp=Z,56nm,0.8s
YKA Yellowknife Ar 78.25 4 P P 11 29 08.9 -2.0
WDLM Western Deep L 78.33 221 eP P 11 29 14.6 +2.5
WDLM IAmb IAmb 11 29 20.6
comp=Z,145nm,1.0s
P33M Teslin, Yukon 78.42 13 IAMs_20 IAMs_20 12 05 16.7
comp=Z,22µm,19.0s
P33M Teslin, Yukon 78.42 13 P P 11 29 10.3 -1.7
baz=340,SNR=88
P33M S S 11 39 09.9 +2.1
baz=340
PLBC Pleasant Camp 78.45 15 P P 11 29 11.1 -1.1
baz=337,SNR=17
PLBC S S 11 39 11.2 +3.3
baz=337
SKAG Skagway 78.65 15 P P 11 29 12.6 -0.7
baz=338,SNR=11
SKAG S S 11 39 14.6 +4.5
baz=338
SKAG Skagway 78.65 15 ⇑P P 11 29 12.1 -1.1
MORW Morawa 78.79 143 P P 11 29 13.6 -0.8
MORW Morawa 78.79 143 P P 11 29 13.0 -1.3
MORW Morawa 78.79 143 ⇑P P 11 29 13.4 -0.9
P32M Atlin 78.84 14 P P 11 29 12.3 -2.0
baz=339
P32M S S 11 39 14.9 +2.7
baz=339
SNKL Senekal, Frees 79.68 220 eP P 11 29 17.6 -1.9
SNKL IAmb IAmb 11 29 27.8
comp=Z,499nm,1.0s
JIS Juneau Island 79.94 15 IAMs_20 IAMs_20 12 04 13.1
comp=Z,23µm,18.0s
SWZ Schweizer 80.03 222 eP P 11 29 19.5 -1.9
SWZ IAmb IAmb 11 29 29.9
comp=Z,472nm,1.0s
SCHQ Schefferville 80.19 338 P P 11 29 20.0 -1.8
comp=Z,12nm,0.8s,baz=27,slow=5.4,SNR=17
SCHQ S S 11 39 28.0 +1.3
comp=Z,2.8nm,0.9s,baz=233,slow=12,SNR=1.2
SCHQ LR LR 12 04 40.8
comp=Z,37µm,21.1s,baz=24,slow=36
comp=Z,12nm,0.8s
SCHQ Schefferville 80.19 338 P P 11 29 19.8 -2.0
SCHQ Schefferville 80.19 338 ⇓P P 11 29 19.8 -2.0
BLDU Ballidu 80.40 143 P P 11 29 21.3 -1.8
DLBC Dease Lake 80.57 12 S S 11 39 30.7 0.0
comp=Z,3.0nm,1.1s,baz=182,slow=17,SNR=1.7
DLBC LR LR 12 11 48.2
comp=Z,21µm,18.2s,baz=324,slow=41
DLBC Dease Lake 80.57 12 P P 11 29 22.3 -1.5
DLBC Dease Lake 80.57 12 P P 11 29 22.3 -1.5
baz=342,SNR=14
KSTD Kokstad 80.87 217 eP P 11 29 24.1 -1.7
KSTD IAmb IAmb 11 29 34.6
comp=Z,256nm,1.1s
SIT Sitka 80.88 15 P P 11 29 24.8 -0.6
baz=338
BOSA Boshof 81.23 222 eP P 11 29 29.3 +1.6
BOSA IAmb IAmb 11 29 36.0
comp=Z,432nm,1.1s
BOSA Boshof 81.23 222 P P 11 29 26.0 -1.7
comp=Z,47nm,0.9s,baz=37,slow=6.0,SNR=20
BOSA S S 11 39 35.7 -2.5
comp=Z,3.2nm,1.0s,baz=116,slow=18,SNR=2.1
BOSA LR LR 12 04 44.8
comp=Z,29µm,21.7s,baz=42,slow=35
comp=Z,47nm,0.9s
BOSA Boshof 81.23 222 ⇓P P 11 29 26.2 -1.5
MUN Mundaring 81.32 144 P P 11 29 26.1 -1.8
MBO M'Bour 81.37 281 ⇑P P 11 29 31.6 +3.0
PATS Pohnpei 81.69 88 P P 11 29 30.7 +0.3
DRLN Deer Lake 81.70 330 ⇓P P 11 29 28.6 -1.3
KLBR Kellerberrin 81.71 143 P P 11 29 28.2 -1.8
WB0 Warramunga Arr 81.80 124 P P 11 29 29.5 -1.3
WRA Warramunga Arr 81.89 124 P P 11 29 29.7 -1.5
comp=Z,86nm,0.9s,baz=325,slow=5.0,SNR=243
WRA S S 11 39 45.0 -0.2
comp=Z,2.2nm,1.2s,baz=341,slow=9.9,SNR=2.7
comp=Z,86nm,0.9s
WRA Warramunga Arr 81.89 124 P P 11 29 29.9 -1.3
WRA Warramunga Arr 81.89 124 P P 11 29 29.9 -1.3
WRA pmax pmax
comp=Z,102nm,1.7s

WRAB	**Tennant Creek**	**81.89**	**124**	P	**P**	**11**	**29**	**29.9**	**-1.3**
WRAB	**Tennant Creek**	**81.89**	**124**	*d* P	**P**	**11**	**29**	**29.9**	**-1.3**
WRAB				pmax	pmax				
	comp=Z,660nm,1.5s								
WRAB				MLR	MLR				
	comp=Z,18µm,24.0s								
WRAB	**Tennant Creek**	**81.89**	**124**	P	**P**	**11**	**29**	**30.3**	**-0.9**
WRAB	**Tennant Creek**	**81.89**	**124**	⇑P	**P**	**11**	**29**	**29.8**	**-1.5**
WRAB				⇓P	**P**	**11**	**29**	**30.0**	**-1.3**
WRAB				⇑P	**PcP**	**11**	**29**	**33.6**	**-3.2**
WRAB				⇓P	**sP**	**11**	**29**	**34.8**	**-2.3**
WRAB				⇑P	P	11	29	37.4	+6.2
WB2	**Warramunga Arr**	**81.90**	**124**	P	**P**	**11**	**29**	**30.1**	**-1.1**
WB2				IAmb	IAmb	11	29	43.7	
	comp=Z,240nm,0.8s								
T35M	**Bob Quinn**	**81.92**	**13**	P	**P**	**11**	**29**	**30.4**	**-0.6**
	baz=342,SNR=7.0								
WRKA	**Warakurna**	**81.99**	**132**	P	**P**	**11**	**29**	**31.0**	**-0.7**
WRKA	**Warakurna**	**81.99**	**132**	⇑P	**P**	**11**	**29**	**30.8**	**-0.9**
WR0	**Warramunga Arr**	**82.03**	**124**	P	**P**	**11**	**29**	**30.7**	**-1.3**
WRAK	**Wrangell Islan**	**82.07**	**14**	P	**P**	**11**	**29**	**31.1**	**-0.6**
WRAK				IAmb	IAmb	11	30	07.3	
	comp=Z,201nm,1.1s								
WRAK	**Wrangell Islan**	**82.07**	**14**	IAMs_20	IAMs_20	12	09	27.5	
	comp=Z,19µm,20.0s								
WRAK	**Wrangell Islan**	**82.07**	**14**	P	**P**	**11**	**29**	**30.9**	**-0.8**
	baz=340								
NWAO	**Narrogin (SRO)**	**82.58**	**144**	P	**P**	**11**	**29**	**33.1**	**-1.5**
NWAO	**Narrogin (SRO)**	**82.58**	**144**	P	**P**	**11**	**29**	**33.1**	**-1.5**
NWAO				pmax	pmax				
	comp=Z,827nm,1.6s								
NWAO	**Narrogin (SRO)**	**82.58**	**144**	P	P	11	29	39.6	+5.0
NWAO	**Narrogin (SRO)**	**82.58**	**144**	P	**P**	**11**	**29**	**33.3**	**-1.3**
HVD	**Gariep Dam**	**82.72**	**220**	*eP*	**P**	**11**	**29**	**36.2**	**+0.7**
HVD				IAmb	IAmb	11	29	43.9	
	comp=Z,320nm,1.1s								
CRAG	**Craig**	**82.81**	**15**	P	**P**	**11**	**29**	**34.7**	**-0.9**
	baz=340								
UPI	**Upington**	**83.15**	**225**	*eP*	**P**	**11**	**29**	**36.3**	**-1.4**
UPI				IAmb	IAmb	11	29	46.7	
	comp=Z,308nm,1.5s								
PMG	**Port Moresby**	**83.53**	**108**	LR	LR	12	07	48.3	
	comp=Z,2µm,20.8s,baz=298,slow=36								
PMG	**Port Moresby**	**83.53**	**108**	P	**P**	**11**	**29**	**39.5**	**-0.4**
PMG				IAmb	IAmb	11	29	47.0	
	comp=Z,583nm,1.9s								
PMG	**Port Moresby**	**83.53**	**108**	P	**P**	**11**	**29**	**39.5**	**-0.4**
PMG				pmax	pmax				
	comp=Z,583nm,1.9s								
PMG	**Port Moresby**	**83.53**	**108**	P	**P**	**11**	**29**	**40.7**	**+0.8**
KEIM	**Keimoes**	**83.57**	**225**	*eP*	**P**	**11**	**29**	**39.1**	**-0.7**
KEIM				IAmb	IAmb	11	29	48.9	
	comp=Z,1µm,1.9s								
COEN	**Coen**	**83.69**	**114**	P	**P**	**11**	**29**	**40.1**	**-0.6**
COEN	**Coen**	**83.69**	**114**	P	**P**	**11**	**29**	**40.2**	**-0.5**
COEN	**Coen**	**83.69**	**114**	⇓P	**P**	**11**	**29**	**39.9**	**-0.8**
AUGR	**Augrabies**	**83.83**	**225**	*eP*	P	11	29	47.5	+6.4
AUGR				IAmb	IAmb	11	29	50.0	
	comp=Z,2µm,2.3s								
KRVT	**Keravat (AS076**	**83.87**	**101**	S	**S**	**11**	**40**	**05.8**	**+0.1**
	comp=Z,7.8nm,0.6s,baz=25,slow=17,SNR=1.8								
KRVT				LR	LR	12	06	06.0	
	comp=Z,7µm,21.6s,baz=88,slow=35								
RKGY	**Rocky Gully**	**83.88**	**145**	P	**P**	**11**	**29**	**42.1**	**+0.9**
RABL	**Rabaul**	**83.91**	**100**	P	**P**	**11**	**29**	**41.6**	**-0.3**
RABL				IAmb	IAmb	11	29	54.0	
	comp=Z,414nm,1.3s								
RABL	**Rabaul**	**83.91**	**100**	P	**P**	**11**	**29**	**41.9**	**0.0**
RABL	**Rabaul**	**83.91**	**100**	⇑P	**P**	**11**	**29**	**45.4**	**+3.4**
RABL				⇑P	**sP**	**11**	**29**	**47.8**	**0.0**
AS31	**Alice Springs**	**84.33**	**127**	P	**P**	**11**	**29**	**42.4**	**-1.4**
ASAR	**Alice Springs**	**84.33**	**127**	P	**P**	**11**	**29**	**42.4**	**-1.4**
	comp=Z,56nm,0.9s,baz=324,slow=5.3,SNR=144								
ASAR				LR	LR	12	11	04.9	
	comp=Z,9µm,21.8s,baz=314,slow=38								
	comp=Z,56nm,0.9s								
SOE	**Somerset East**	**84.40**	**219**	*eP*	**P**	**11**	**29**	**45.1**	**+1.1**
SOE				IAmb	IAmb	11	29	53.0	
	comp=Z,342nm,1.2s								
ICQ	**Pointe Anglais**	**84.94**	**336**	⇑P	**P**	**11**	**29**	**45.1**	**-1.4**
GRNB	**Grenville Isla**	**84.95**	**14**	P	**P**	**11**	**29**	**45.0**	**-1.6**
GRAN	**Grantham**	**85.77**	**222**	*eP*	**P**	**11**	**29**	**50.3**	**-0.5**
GRAN				IAmb	IAmb	11	30	00.8	
	comp=Z,65nm,0.9s								
QIS	**Mount Isa**	**85.78**	**121**	P	**P**	**11**	**29**	**50.9**	**-0.2**
MIDW	**Midway**	**85.80**	**57**	IAMs_20	IAMs_20	12	06	08.7	
	comp=Z,25µm,22.0s								
KROM	**Kromhout**	**86.02**	**219**	*eP*	**P**	**11**	**29**	**52.9**	**+1.0**
KROM				IAmb	IAmb	11	30	01.0	
	comp=Z,372nm,1.2s								
ROSN	**Rosenhof**	**86.02**	**219**	*eP*	**P**	**11**	**29**	**52.1**	**+0.2**
ROSN				IAmb	IAmb	11	30	01.0	
	comp=Z,269nm,1.2s								
FORT	**Forrest**	**86.27**	**135**	P	**P**	**11**	**29**	**52.7**	**-0.6**
FORT	**Forrest**	**86.27**	**135**	P	**P**	**11**	**29**	**52.5**	**-0.8**
FORT	**Forrest**	**86.27**	**135**	⇓P	**P**	**11**	**29**	**52.2**	**-1.1**
FORT				⇓P	**sP**	**11**	**29**	**59.5**	**+0.3**
CVNA	**Calvinia**	**86.39**	**224**	*eP*	**P**	**11**	**29**	**57.3**	**+3.3**
CVNA				IAmb	IAmb	11	30	03.0	
	comp=Z,925nm,2.0s								
GBN	**Guysborough**	**86.42**	**330**	P	**P**	**11**	**29**	**53.4**	**-0.6**
GBN				IAmb	IAmb	11	30	11.6	
	comp=Z,278nm,1.2s								
SUR	**Sutherland**	**86.53**	**222**	LR	LR	12	08	15.6	
	comp=Z,29µm,21.1s,baz=34,slow=35								
SUR	**Sutherland**	**86.53**	**222**	IAMs_20	IAMs_20	12	07	53.7	
	comp=Z,29µm,20.0s								
SUR	**Sutherland**	**86.53**	**222**	P	P	11	30	00.0	+5.2
BBB	**Bella Bella**	**86.88**	**13**	S	**SKSac**	**11**	**40**	**23.6**	**+0.5**
	comp=Z,9.4nm,1.1s,baz=64,slow=20,SNR=1.6								
BBB				LR	LR	12	13	36.0	
	comp=Z,17µm,20.0s,baz=334,slow=39								
BBB	**Bella Bella**	**86.88**	**13**	⇑P	P	11	30	01.8	+5.7
BBB				⇑P	sP	11	30	02.4	+0.5
LMN	**Caledonia Moun**	**87.27**	**332**	P	**P**	**11**	**29**	**57.0**	**-1.2**
MTSU	**Mount Surprise**	**87.32**	**116**	P	**P**	**11**	**29**	**58.7**	**-0.1**
MATJ	**Matjiesfontein**	**87.34**	**222**	*eP*	**P**	**11**	**29**	**58.7**	**+0.1**
MATJ				IAmb	IAmb	11	30	08.8	
	comp=Z,7µm,3.4s								
EDM	**Edmonton**	**87.57**	**4**	P	**P**	**11**	**29**	**57.8**	**-1.8**
EDM				IAmb	IAmb	11	30	14.7	
	comp=Z,172nm,0.8s								
EDM	**Edmonton**	**87.57**	**4**	P	**P**	**11**	**29**	**57.8**	**-1.8**
EDM				pmax	pmax				
	comp=Z,172nm,0.8s								
LMQ	**La Malbaie**	**87.64**	**336**	P	**P**	**11**	**29**	**59.0**	**-1.0**
LMQ				IAmb	IAmb	11	30	10.3	
	comp=Z,235nm,1.1s								
D62A	**Allapoint, All**	**87.65**	**335**	P	**P**	**11**	**29**	**59.5**	**-0.5**
	baz=28,SNR=36								
D62A				P	**P**	**11**	**29**	**59.5**	**-0.5**
	baz=28,SNR=36								
D62A				S	**S**	**11**	**40**	**33.5**	**-8.4**
	baz=28								
D62A				S	**S**	**11**	**40**	**33.5**	**-8.4**
	baz=28								
PQI	**Presque Isle**	**87.68**	**335**	IAMs_20	IAMs_20	12	09	38.0	
	comp=Z,24µm,18.0s								
E63A	**Oxbow**	**88.03**	**335**	P	**P**	**11**	**30**	**00.7**	**-1.1**
	baz=28,SNR=17								
E63A				P	**P**	**11**	**30**	**00.7**	**-1.1**
	baz=28,SNR=17								
E63A				S	**S**	**11**	**40**	**36.6**	**-9.0**
	baz=28								
E63A				S	**S**	**11**	**40**	**36.6**	**-9.0**
	baz=28								
CER	**Ceres**	**88.09**	**223**	*eP*	**P**	**11**	**30**	**01.8**	**-0.3**
CER				IAmb	IAmb	11	30	11.8	
	comp=Z,887nm,2.2s								
E62A	**Clayton Lake**	**88.21**	**336**	P	**P**	**11**	**30**	**01.1**	**-1.6**
	baz=28,SNR=6.7								
E62A				P	**P**	**11**	**30**	**01.1**	**-1.6**
	baz=28,SNR=6.7								
E62A				S	**SKSac**	**11**	**40**	**36.1**	**+4.5**
	baz=28								
E62A				S	**SKSac**	**11**	**40**	**36.1**	**+4.5**
	baz=28								
HOLB	**Holberg**	**88.35**	**14**	P	**P**	**11**	**30**	**02.0**	**-1.3**
PAF	**Port-aux-Franc**	**88.41**	**182**	IAMs_20	IAMs_20	12	03	01.0	
	comp=Z,24µm,21.0s								
OOD	**Oodnadatta**	**88.44**	**128**	P	**P**	**11**	**30**	**02.6**	**-1.2**
F64A	**Sherman**	**88.50**	**334**	P	**P**	**11**	**30**	**02.2**	**-1.8**
	baz=29,SNR=12								
F64A				P	**P**	**11**	**30**	**02.2**	**-1.8**
	baz=29,SNR=12								
F64A				S	**SKSac**	**11**	**40**	**35.7**	**+2.5**
	baz=29								
F64A				S	**SKSac**	**11**	**40**	**35.7**	**+2.5**
	baz=29								
TLCB	**Telegraph Cove**	**88.67**	**13**	P	**P**	**11**	**30**	**03.3**	**-1.4**
TLCB				IAmb	IAmb	11	30	36.6	
	comp=Z,175nm,1.6s								
G65A	**Princeton**	**88.81**	**334**	P	**P**	**11**	**30**	**03.7**	**-1.8**
	baz=29,SNR=8.4								
G65A				P	**P**	**11**	**30**	**03.7**	**-1.8**
	baz=29,SNR=8.4								
G65A				S	**SKSac**	**11**	**40**	**36.0**	**+0.8**
	baz=29								
G65A				S	**SKSac**	**11**	**40**	**36.0**	**+0.8**
	baz=29								
ELIM	**Elim**	**88.82**	**222**	*eP*	**P**	**11**	**30**	**06.6**	**+1.1**
ELIM				IAmb	IAmb	11	30	14.5	
	comp=Z,2µm,2.2s								
F62A	**Pittston Farm,**	**89.00**	**335**	P	**P**	**11**	**30**	**05.1**	**-1.3**
	baz=28								
F62A				P	**P**	**11**	**30**	**05.1**	**-1.3**
	baz=28								
KAPO	**Kapuskasing**	**89.04**	**345**	⇓P	P	11	30	12.1	+5.6
KAPO				⇑P	sP	11	30	13.1	+0.8
VLDQ	**Val d'Or**	**89.14**	**341**	P	**P**	**11**	**30**	**05.2**	**-1.8**
VLDQ				IAmb	IAmb	11	30	17.1	
	comp=Z,219nm,1.1s								
MULG	**Mulgathing**	**89.28**	**131**	P	**P**	**11**	**30**	**06.4**	**-1.4**
PKME	**Peaks-Kenny Pk**	**89.34**	**335**	IAMs_20	IAMs_20	12	16	02.9	
	comp=Z,28µm,19.0s								
PKME	**Peaks-Kenny Pk**	**89.34**	**335**	P	**P**	**11**	**30**	**07.1**	**-0.9**
	baz=28,SNR=7.2								
G62A	**West of Eustis**	**89.78**	**335**	P	**P**	**11**	**30**	**09.2**	**-0.9**
	baz=27,SNR=9.7								
G62A				P	**P**	**11**	**30**	**09.2**	**-0.9**
	baz=27,SNR=9.7								
CTA	**Charters Tower**	**89.98**	**116**	LR	LR	12	15	00.4	
	comp=Z,7µm,20.1s,baz=293,slow=39								
CTA	**Charters Tower**	**89.98**	**116**	P	**P**	**11**	**30**	**11.1**	**-0.2**
CTAO	**Charters Tower**	**89.98**	**116**	P	**P**	**11**	**30**	**10.5**	**-0.8**
CTAO	**Charters Tower**	**89.98**	**116**	P	**P**	**11**	**30**	**10.5**	**-0.8**
CTAO				pmax	pmax				
	comp=Z,535nm,1.8s								
CTAO	**Charters Tower**	**89.98**	**116**	P	**P**	**11**	**30**	**11.2**	**-0.1**
CTAO	**Charters Tower**	**89.98**	**116**	⇑P	**P**	**11**	**30**	**10.6**	**-0.7**
CTAO				⇓P	**P**	**11**	**30**	**10.6**	**-0.7**
WVL	**Waterville**	**90.08**	**335**	IAMs_20	IAMs_20	12	17	05.5	
	comp=Z,25µm,20.0s								
ULM	**Lac du Bonnet**	**90.25**	**353**	P	**P**	**11**	**30**	**09.8**	**-2.4**
	comp=Z,14nm,0.8s,baz=9.3,slow=5.0,SNR=14								
ULM				S	**SKSac**	**11**	**40**	**42.3**	**-1.2**
	comp=Z,2.2nm,0.5s,baz=281,slow=19,SNR=1.8								
ULM				LR	LR	12	13	20.1	
	comp=Z,25µm,20.6s,baz=5.0,slow=37								
	comp=Z,14nm,0.8s								
ULM	**Lac du Bonnet**	**90.25**	**353**	⇑P	**P**	**11**	**30**	**09.8**	**-2.4**
ULM				⇓P	**PcP**	**11**	**30**	**10.1**	**-3.3**
ULM				⇑P	**pP**	**11**	**30**	**15.1**	**-1.4**
ULM				⇓P	**sP**	**11**	**30**	**18.2**	**+0.2**
MNTQ	**Montreal, Queb**	**90.48**	**338**	⇓P	P	11	30	19.1	+5.8
H62A	**Milan**	**90.56**	**336**	P	**P**	**11**	**30**	**12.1**	**-1.6**
	baz=27,SNR=6.5								
H62A				P	**P**	**11**	**30**	**12.1**	**-1.6**
	baz=27,SNR=6.5								
GAC	**Glen Almond**	**90.83**	**339**	⇓P	**P**	**11**	**30**	**13.7**	**-1.2**
GAC				⇓P	**sP**	**11**	**30**	**20.2**	**-0.5**
GAC				⇓P	**pP**	**11**	**30**	**21.7**	**+2.4**
I63A	**Otisfield**	**90.84**	**335**	P	**P**	**11**	**30**	**13.2**	**-1.8**
	baz=27								
I63A				P	**P**	**11**	**30**	**13.2**	**-1.8**
	baz=27								
PNT	**Penticton**	**90.91**	**9**	⇑P	**P**	**11**	**30**	**13.7**	**-1.7**
PNT				⇓P	**PcP**	**11**	**30**	**14.1**	**-2.3**
PNT				⇓P	**sP**	**11**	**30**	**20.6**	**-0.6**
LBNH	**Lisbon**	**91.10**	**336**	IAMs_20	IAMs_20	12	10	56.6	
	comp=Z,24µm,20.0s								
LBNH	**Lisbon**	**91.10**	**336**	P	**P**	**11**	**30**	**15.4**	**-0.8**
	baz=26								
LBNH				S	**S**	**11**	**41**	**18.6**	**+4.3**
	baz=26								
I62A	**Tamworth**	**91.24**	**335**	P	**P**	**11**	**30**	**14.7**	**-2.2**
	baz=26,SNR=7.2								
I62A				P	**P**	**11**	**30**	**14.7**	**-2.2**
	baz=26,SNR=7.2								
I62A				S	**S**	**11**	**41**	**19.0**	**+3.5**
	baz=26								
I62A				S	**S**	**11**	**41**	**19.0**	**+3.5**
	baz=26								
VT1	**Waterbury**	**91.28**	**337**	IAMs_20	IAMs_20	12	11	13.5	
	comp=Z,22µm,20.0s								
INKA	**Innaminka**	**91.54**	**125**	P	**P**	**11**	**30**	**17.6**	**-0.7**
LONY	**Lake Ozonia**	**91.57**	**338**	IAMs_20	IAMs_20	12	14	53.9	
	comp=Z,16µm,20.0s								
LONY	**Lake Ozonia**	**91.57**	**338**	P	**P**	**11**	**30**	**17.2**	**-1.2**
	baz=24,SNR=11								
LONY				S	**S**	**11**	**41**	**21.2**	**+2.7**
	baz=24								
WALA	**Waterton Lakes**	**91.69**	**5**	P	**P**	**11**	**30**	**17.2**	**-1.8**
WALA				IAmb	IAmb	11	30	53.1	
	comp=Z,195nm,1.2s								
WALA	**Waterton Lakes**	**91.69**	**5**	⇑P	**P**	**11**	**30**	**16.9**	**-2.1**
WALA				⇑P	**PcP**	**11**	**30**	**17.1**	**-2.8**
WALA				⇑P	**pP**	**11**	**30**	**23.9**	**+0.6**
HNH	**Hanover**	**91.70**	**336**	IAMs_20	IAMs_20	12	11	03.3	
	comp=Z,27µm,20.0s								
LCRK	**Leigh Creek**	**91.88**	**129**	P	**P**	**11**	**30**	**18.7**	**-1.1**
B35A	**Bob, Littlefor**	**91.90**	**352**	P	**P**	**11**	**30**	**16.8**	**-3.0**
	baz=9.9								
B35A				S	**S**	**11**	**41**	**17.8**	**-3.5**
	baz=9.9								
EYMN	**Ely**	**92.03**	**350**	P	**P**	**11**	**30**	**18.8**	**-1.6**
	baz=12								
EYMN				S	**S**	**11**	**41**	**24.9**	**+2.4**
	baz=12								
J61A	**Chester**	**92.11**	**336**	P	**P**	**11**	**30**	**19.8**	**-1.1**
	baz=26,SNR=10								
J61A				P	**P**	**11**	**30**	**19.8**	**-1.1**
	baz=26,SNR=10								
J61A				S	**S**	**11**	**41**	**22.5**	**-0.8**
	baz=26								
J61A				S	**S**	**11**	**41**	**22.5**	**-0.8**
	baz=26								
AGMN	**Agassiz Nation**	**92.18**	**353**	IAMs_20	IAMs_20	12	13	20.4	
	comp=Z,20µm,21.0s								
AGMN	**Agassiz Nation**	**92.18**	**353**	P	**P**	**11**	**30**	**19.4**	**-1.8**
	baz=8.3								
NEW	**Newport**	**92.22**	**7**	P	**P**	**11**	**30**	**19.6**	**-1.8**
NEW				LR	LR	12	14	46.0	
	comp=Z,43µm,21.2s,baz=356,slow=38								
NEW	**Newport**	**92.22**	**7**	P	**P**	**11**	**30**	**20.0**	**-1.4**
	baz=352,SNR=65								
NEW				S	**S**	**11**	**41**	**23.6**	**-0.7**
	baz=352								
NLWA	**Neilton Lookou**	**92.22**	**12**	IAMs_20	IAMs_20	12	16	50.7	
	comp=Z,23µm,20.0s								
NLWA	**Neilton Lookou**	**92.22**	**12**	⇓P	**P**	**11**	**30**	**21.1**	**-0.3**
NLWA				⇑P	**sP**	**11**	**30**	**28.6**	**+1.3**
BBOO	**Buckleboo**	**92.29**	**132**	P	**P**	**11**	**30**	**20.9**	**-0.8**
BBOO	**Buckleboo**	**92.29**	**132**	P	**P**	**11**	**30**	**20.9**	**-0.8**
E46A	**Sault Ste Mari**	**92.34**	**345**	P	**P**	**11**	**30**	**19.8**	**-2.2**
	baz=17								
E46A				S	**S**	**11**	**41**	**27.8**	**+2.4**
	baz=17								
D41A	**Chassel**	**92.45**	**348**	P	**P**	**11**	**30**	**19.8**	**-2.6**
	baz=14								
DGMT	**Dagmar**	**92.50**	**358**	P	**P**	**11**	**30**	**22.1**	**-0.6**
	baz=1.9								
DGMT				S	**S**	**11**	**41**	**31.6**	**+4.9**
	baz=1.9								
HRV	**Adam Dziewonsk**	**92.54**	**335**	IAMs_20	IAMs_20	12	19	26.5	
	comp=Z,16µm,18.0s								
HRV	**Adam Dziewonsk**	**92.54**	**335**	S	**S**	**11**	**41**	**33.0**	**+5.7**
	baz=26								
BCX	**Boston College**	**92.56**	**335**	IAMs_20	IAMs_20	12	11	33.3	
	comp=Z,17µm,18.0s								
WES	**Weston**	**92.57**	**335**	IAMs_20	IAMs_20	12	11	35.4	
	comp=Z,18µm,19.0s								
J59A	**Piesco**	**92.60**	**337**	P	**P**	**11**	**30**	**21.9**	**-1.4**
	baz=24,SNR=10								
J59A				P	**P**	**11**	**30**	**21.9**	**-1.4**
	baz=24,SNR=10								
K62A	**Royalston**	**92.62**	**335**	P	**P**	**11**	**30**	**22.5**	**-0.8**
	baz=26,SNR=6.4								
K62A				P	**P**	**11**	**30**	**22.5**	**-0.8**
	baz=26,SNR=6.4								
SADO	**Sadowa**	**92.67**	**341**	LR	LR	12	16	53.6	
	comp=Z,20µm,18.5s,baz=15,slow=39								
EGMT	**Eagleton**	**92.92**	**2**	IAMs_20	IAMs_20	12	17	00.4	
	comp=Z,25µm,18.0s								
EGMT	**Eagleton**	**92.92**	**2**	P	**P**	**11**	**30**	**23.3**	**-1.4**
	baz=358								
EGMT				S	**S**	**11**	**41**	**32.8**	**+2.2**
	baz=358								
J58A	**Remsen**	**92.92**	**338**	P	**P**	**11**	**30**	**23.2**	**-1.6**
	baz=24,SNR=6.2								
J58A				P	**P**	**11**	**30**	**23.2**	**-1.6**
	baz=24,SNR=6.2								
MDND	**Maddock**	**92.93**	**355**	P	**P**	**11**	**30**	**23.1**	**-1.5**
	baz=5.4								
MDND				S	**S**	**11**	**41**	**34.4**	**+3.8**
	baz=5.4								
JTMT	**Jette**	**92.97**	**5**	P	**P**	**11**	**30**	**23.5**	**-1.5**
QLP	**Quilpie**	**92.99**	**122**	P	**P**	**11**	**30**	**25.6**	**+0.5**
QUA2	**Belchertown**	**93.00**	**335**	IAMs_20	IAMs_20	12	12	33.9	
	comp=Z,23µm,20.0s								
TRY	**Troy**	**93.01**	**336**	IAMs_20	IAMs_20	12	12	06.0	
	comp=Z,26µm,21.0s								
BRYW	**Bryant College**	**93.06**	**335**	IAMs_20	IAMs_20	12	11	48.4	
	comp=Z,20µm,19.0s								
J57A	**Williamstown**	**93.08**	**338**	P	**P**	**11**	**30**	**24.1**	**-1.3**
	baz=23,SNR=9.8								
J57A				P	**P**	**11**	**30**	**24.1**	**-1.3**
	baz=23,SNR=9.8								
HNR	**Honiara**	**93.17**	**100**	P	**P**	**11**	**30**	**28.4**	**+2.2**
	comp=Z,43nm,0.7s,baz=315,slow=7.1,SNR=4.2								
HNR				S	**SKSac**	**11**	**41**	**02.0**	**+1.1**
	comp=Z,17nm,0.4s,baz=94,slow=12,SNR=1.3								
HNR				LR	LR	12	11	47.2	
	comp=Z,4µm,21.7s,baz=302,slow=35								
HNR	**Honiara**	**93.17**	**100**	P	**P**	**11**	**30**	**25.7**	**-0.5**
HNR				IAmb	IAmb	11	31	05.8	
	comp=Z,204nm,1.0s								
HNR	**Honiara**	**93.17**	**100**	P	**P**	**11**	**30**	**25.7**	**-0.5**
HNR				pmax	pmax				
	comp=Z,204nm,1.0s								
HNR	**Honiara**	**93.17**	**100**	⇑P	P	11	30	31.4	+5.1
E38A	**The Farm, Brul**	**93.35**	**350**	P	**P**	**11**	**30**	**24.4**	**-2.2**
	baz=12								
E38A				S	**S**	**11**	**41**	**32.5**	**-1.9**
	baz=12								
J56A	**Wolcott**	**93.45**	**339**	P	**P**	**11**	**30**	**25.6**	**-1.5**
	baz=23,SNR=8.7								
J56A				P	**P**	**11**	**30**	**25.6**	**-1.5**
	baz=23,SNR=8.7								
F04D	**Rainier, OR**	**93.63**	**11**	S	**S**	**11**	**41**	**42.3**	**+5.5**
	baz=347								
F42A	**Maple Grove Fa**	**93.65**	**347**	P	**P**	**11**	**30**	**25.9**	**-2.1**
	baz=14								
J55A	**Hilton**	**93.73**	**339**	P	**P**	**11**	**30**	**26.7**	**-1.6**
	baz=22,SNR=8.8								
J55A				P	**P**	**11**	**30**	**26.7**	**-1.6**
	baz=22,SNR=8.8								
NAPP	**Napperby**	**93.78**	**131**	P	**P**	**11**	**30**	**28.3**	**-0.3**
HAWA	**Hanford**	**93.80**	**9**	⇑P	**P**	**11**	**30**	**32.1**	**+3.4**
HAWA				⇓P	**sP**	**11**	**30**	**34.0**	**-0.5**
K57A	**Scipio Center**	**93.86**	**338**	P	**P**	**11**	**30**	**27.5**	**-1.6**
	baz=23,SNR=6.9								
GLMI	**Grayling**	**93.88**	**345**	IAMs_20	IAMs_20	12	15	04.2	
	comp=Z,21µm,20.0s								
MSO	**Missoula**	**93.90**	**5**	P	**P**	**11**	**30**	**27.7**	**-1.6**
	baz=354,SNR=21								
MSO				S	**S**	**11**	**41**	**40.2**	**+0.8**
	baz=354								
YLE	**Yale**	**94.06**	**335**	IAMs_20	IAMs_20	12	13	47.5	
	comp=Z,20µm,20.0s								
BINY	**Binghamton**	**94.19**	**338**	IAMs_20	IAMs_20	12	16	11.4	
	comp=Z,19µm,21.0s								
BINY	**Binghamton**	**94.19**	**338**	P	**P**	**11**	**30**	**28.8**	**-1.8**
	baz=23								
E28A	**Huff**	**94.26**	**356**	P	**P**	**11**	**30**	**29.6**	**-1.3**
	baz=4.6,SNR=18								
LAO	**LASA Array**	**94.30**	**360**	P	**P**	**11**	**30**	**30.7**	**-0.3**
	baz=0.3								
LAO				S	**S**	**11**	**41**	**44.8**	**+2.0**
	baz=0.3								
WSPT	**Westport, CT**	**94.32**	**336**

comp=Z,22µm,22.0s
SSPA Standing Stone 96.19 339 P **P** 11 30 37.6 -2.1
baz=22
SSPA S **S** 11 42 01.9 +2.6
baz=22
SSPA Standing Stone 96.19 339 ⇓P **P** 11 30 44.1 +4.4
SSPA ⇓P **sP** 11 30 45.1 -0.5
M53A WI Miller and 96.19 341 S **S** 11 42 01.4 +2.2
baz=20
SUSD Miller 96.27 355 P **P** 11 30 39.0 -1.1
baz=6.0
SUSD S **S** 11 42 02.7 +2.8
baz=6.0
J01E Myrtle Point 96.32 13 IAMs_20 IAMs_20 12 17 30.5
comp=Z,24µm,21.0s
H17A Grant Village 96.51 3 P **P** 11 30 42.0 +0.6
baz=357,SNR=10
H17A S S 11 42 15.6 +13
baz=357
J04D Umpqua Nationa 96.54 11 IAMs_20 IAMs_20 12 19 29.1
comp=Z,25µm,20.0s
L48A N Adams 96.60 344 P **P** 11 30 39.9 -1.7
baz=17
L48A P **P** 11 30 39.9 -1.7
baz=17
L48A S **S** 11 41 59.8 -3.0
baz=17
L48A S **S** 11 41 59.8 -3.0
baz=17
J05D Fort Rock, OR 96.63 11 P **P** 11 30 41.1 -0.8
baz=349
J05D S **S** 11 42 07.8 +4.4
baz=349
JFWS Jewell Farm 96.76 348 P **P** 11 30 40.4 -1.8
baz=13
JFWS S **S** 11 42 04.9 +0.7
baz=13
ECSD EROS Data Cent 96.78 353 P **P** 11 30 40.5 -1.8
ECSD IAmb IAmb 11 30 57.7
comp=Z,129nm,1.1s
ECSD EROS Data Cent 96.78 353 IAMs_20 IAMs_20 12 18 06.0
comp=Z,22µm,20.0s
ECSD EROS Data Cent 96.78 353 P **P** 11 30 40.5 -1.8
baz=7.8,SNR=22
EIDS Eidsvold 96.80 117 P **P** 11 30 44.0 +1.4
FLWY Flagg Ranch 96.82 3 IAMs_20 IAMs_20 12 17 54.8
comp=Z,24µm,20.0s
K02D Willamette Mer 96.82 13 S **S** 11 42 09.1 +4.2
baz=347
RSSD Black Hills 96.84 358 P **P** 11 30 41.7 -1.2
baz=2.0
RSSD S **S** 11 42 09.7 +4.5
baz=2.0
RSSD Black Hills 96.84 358 ⇑P **P** 11 30 41.4 -1.5
RSSD ⇓P **P** 11 30 41.7 -1.2
HUMO Hull Mountain 97.03 12 IAMs_20 IAMs_20 12 17 38.9
comp=Z,17µm,20.0s
L44A Lake County Fo 97.08 346 IAMs_20 IAMs_20 12 17 44.7
comp=Z,19µm,20.0s
L44A Lake County Fo 97.08 346 S **S** 11 42 09.1 +2.3
baz=14
N51A Ashland 97.10 342 S **S** 11 42 07.5 +0.4
baz=19
N51A S **S** 11 42 07.5 +0.4
baz=19
HLID Hailey 97.12 6 P **P** 11 30 42.2 -1.9
baz=354
HLID S **S** 11 42 10.3 +2.7
baz=354
MFID Camas Ranch 97.14 7 IAMs_20 IAMs_20 12 18 40.6
comp=Z,25µm,19.0s
K04D Chiloquin, OR 97.20 11 S **S** 11 42 11.9 +3.8
baz=348
CMSA Cobar Meteorol 97.27 125 P Pdif 11 30 44.8 +0.2
P57A Homestead Farm 97.29 338 P **P** 11 30 41.9 -2.8
baz=22,SNR=6.0
P57A P **P** 11 30 41.9 -2.8
baz=22,SNR=6.0
L02F Cave Junction 97.40 13 S **S** 11 42 16.5 +6.8
baz=347
TPAW Teton Pass 97.40 3 IAMs_20 IAMs_20 12 18 22.1
comp=Z,24µm,20.0s
O53A New Philadelph 97.44 341 S **S** 11 42 13.6 +3.5
baz=20
L04D Klamath Falls 97.51 12 IAMs_20 IAMs_20 12 20 11.8
comp=Z,19µm,20.0s
L04D Klamath Falls 97.51 12 P **P** 11 30 44.5 -1.4
baz=348
L04D S **S** 11 42 14.6 +3.7
baz=348
N49A Columbus Grove 97.52 343 P **P** 11 30 44.1 -1.6
baz=17,SNR=6.5
N49A P **P** 11 30 44.1 -1.6
baz=17,SNR=6.5
L42A Oliver, Polo 97.56 347 P **P** 11 30 43.2 -2.7
baz=13
MCWV Mont Chateau 97.64 340 P **P** 11 30 44.5 -1.8
baz=20,SNR=5.8
MCWV S **S** 11 42 16.1 +4.3
baz=20
WVOR Wild Horse Val 97.81 9 IAMs_20 IAMs_20 12 19 46.5
comp=Z,20µm,20.0s
WVOR Wild Horse Val 97.81 9 ⇓P **P** 11 30 45.6 -1.6
ACSO Alum Creek Sta 97.90 342 IAMs_20 IAMs_20 12 19 18.4
comp=Z,18µm,20.0s
ACSO Alum Creek Sta 97.90 342 P **P** 11 30 45.6 -1.8
baz=18
ACSO S **S** 11 42 17.3 +3.3
baz=18
YBH Yreka Blue Hor 97.92 12 P **P** 11 30 47.2 -0.5
comp=Z,1.5nm,1.0s,baz=295,slow=14,SNR=1.7
YBH S **SKSac** 11 41 22.7 -3.0
comp=Z,3.3nm,1.1s,baz=50,slow=11,SNR=2.2
YBH LR LR 12 18 36.6
comp=Z,18µm,20.3s,baz=340,slow=38
comp=Z,1.5nm,1.0s
YBH Yreka Blue Hor 97.92 12 IAMs_20 IAMs_20 12 18 34.6
comp=Z,21µm,20.0s
AHID Auburn Hatcher 98.12 3 IAMs_20 IAMs_20 12 18 00.1
comp=Z,20µm,22.0s
MOD Modoc Plateau 98.12 10 IAMs_20 IAMs_20 12 16 01.7
comp=Z,18µm,21.0s
BW06 Boulder Array 98.18 2 P **P** 11 30 46.8 -2.2
baz=358
BW06 S **S** 11 42 20.2 +3.5
baz=358
PDAR Pinedale Array 98.18 2 P **P** 11 30 47.0 -2.0
comp=Z,1.9nm,0.8s,baz=43,slow=2.7,SNR=18
PDAR PKKPbc **PKKPbc** 11 47 18.1 -2.4
comp=Z,0.7nm,0.7s,baz=198,slow=2.7,SNR=3.5
PDAR LR LR 12 19 21.8
comp=Z,26µm,20.4s,baz=1.0,slow=38
comp=Z,1.9nm,0.8s
SCIA State Center 98.19 350 S **S** 11 42 18.2 +1.8
baz=10
P52A Corning 98.26 341 P **P** 11 30 47.0 -2.1
baz=19,SNR=6.0
P52A S **S** 11 42 18.9 +1.8
baz=19
CBN Corbin Frederi 98.28 337 IAMs_20 IAMs_20 12 14 36.6
comp=Z,21µm,20.0s
CBN Corbin Frederi 98.28 337 S **S** 11 42 20.6 +3.4
baz=22
K22A Casper 98.34 0 P **P** 11 30 47.7 -1.9
baz=0.1
K22A S **S** 11 42 21.4 +3.3
baz=0.1
O48B Farmland 98.37 344 P **P** 11 30 47.4 -2.2
baz=17,SNR=9.4
O48B S **S** 11 42 14.0 -4.0
baz=17
O48B Farmland 98.37 344 P **P** 11 30 47.5 -2.1
baz=17,SNR=9.4
O48B S **S** 11 42 18.6 +0.6
baz=17
ARPS Mount Arapiles 98.45 131 P Pdif 11 30 50.2 +0.5
JCC Jacoby Creek, 98.58 13 IAMs_20 IAMs_20 12 19 18.3
comp=Z,14µm,19.0s
P51A Williamsport 98.63 342 S **S** 11 42 14.6 -5.6
baz=18
P51A S **S** 11 42 14.6 -5.6
baz=18
SFIN Lafayette 98.66 345 S **S** 11 42 17.7 -2.6
baz=15
SFIN Lafayette 98.66 345 S **S** 11 42 21.9 +1.5
baz=15
HDIL Hopedale 98.90 347 S **S** 11 42 24.6 +2.1
baz=14

Q52A Bidwell 98.92 341 S **S** 11 42 22.9 +0.2
baz=19
Q52A S **S** 11 42 22.9 +0.2
baz=19
P49A Miami Univ. Ec 98.96 343 IAMs_20 IAMs_20 12 16 22.7
comp=Z,23µm,19.0s
P49A Miami Univ. Ec 98.96 343 S **S** 11 42 18.4 -4.7
baz=17
P49A Miami Univ. Ec 98.96 343 Pdiff **P** 11 30 50.6 -1.7
baz=17
P49A S **S** 11 42 24.0 +1.0
baz=17
R53A Hurricane 99.44 341 S **S** 11 42 26.7 -0.4
baz=19
R53A S **S** 11 42 26.7 -0.4
baz=19
ELK Elko 99.84 7 LR LR 12 19 59.2
comp=Z,31µm,19.7s,baz=356,slow=38
N23A Red Feather La 100.09 360 Pdiff **Pdif** 11 30 57.0 -0.6
baz=0.6
ORV Oroville 100.24 12 IAMs_20 IAMs_20 12 21 35.0
comp=Z,21µm,20.0s
ARMA Armidale 100.41 121 P **Pdif** 11 30 58.8 +0.1
DUG Dugway, Tooele 100.58 5 Pdiff **Pdif** 11 30 59.0 -0.7
baz=355
O20A White River Ci 100.84 1 Pdiff **Pdif** 11 31 00.3 -0.5
baz=359
CNNC Cliffs of the 101.18 336 IAMs_20 IAMs_20 12 17 06.3
comp=Z,17µm,21.0s
ISCO Idaho Springs 101.18 359 Pdiff **Pdif** 11 31 01.9 -0.7
baz=0.8
KSU1 Kansas State U 101.36 352 Pdiff **Pdif** 11 31 02.6 -0.3
baz=7.9
MCCM Marconi Confer 101.39 13 IAMs_20 IAMs_20 12 16 58.4
comp=Z,16µm,21.0s
CCM Cathedral Cave 101.67 348 IAMs_20 IAMs_20 12 18 50.3
comp=Z,22µm,21.0s
CCM Cathedral Cave 101.67 348 Pdiff **Pdif** 11 31 04.5 +0.2
baz=12
NVAR Mina Array Bea 101.80 9 P **Pdif** 11 31 03.2 -2.0
comp=Z,0.8nm,0.7s,baz=349,slow=2.6,SNR=8.6
NVAR PKKPbc **PKKPbc** 11 47 08.7 -1.4
comp=Z,1.3nm,0.8s,baz=189,slow=4.6,SNR=3.6
CAN Canberra 101.83 126 IAMs_20 IAMs_20 12 20 37.8
comp=Z,16µm,20.0s
CMB Columbia Colle 101.90 11 IAMs_20 IAMs_20 12 22 16.9
comp=Z,13µm,19.0s
CBKS Cedar Bluff 101.93 355 Pdiff **Pdif** 11 31 04.4 -1.1
baz=5.4
R11A Troy Canyon, C 102.19 7 Pdiff **Pdif** 11 31 06.1 -0.7
baz=353
SDCO Great Sand Dun 103.23 359 Pdiff **Pdif** 11 31 10.9 -0.8
baz=0.9
S22A 4UR Ranch, Cre 103.24 0 Pdiff **Pdif** 11 31 10.8 -0.8
baz=360
NHSC New Hope 103.85 337 IAMs_20 IAMs_20 12 25 16.1
comp=Z,21µm,18.0s
MPMC Manual Prospec 104.24 9 Pdiff **Pdif** 11 31 16.6 +0.5
baz=351
TUL1 Leonard 104.42 351 IAMs_20 IAMs_20 12 21 12.3
comp=Z,22µm,21.0s
WUAZ Wupatki 105.33 4 IAMs_20 IAMs_20 12 23 19.0
comp=Z,23µm,21.0s
WUAZ Wupatki 105.33 4 Pdiff **Pdif** 11 31 22.3 +1.4
baz=356
POHA Pohakuloa 105.43 48 IAMs_20 IAMs_20 12 18 11.4
comp=Z,13µm,20.0s
TAU Tasmania Unive 105.67 133 IAMs_20 IAMs_20 12 21 32.2
comp=Z,13µm,19.0s
LRAL Lakeview Retre 105.71 343 IAMs_20 IAMs_20 12 24 15.0
comp=Z,14µm,21.0s
GMRC Granite Mounta 105.71 8 PKiKP **PKiKP** 11 35 37.4 +2.0
baz=353
DZM Mont Dzumac 105.84 106 *e*P **Pdif** 11 31 21.6 -1.5
comp=Z,408nm,26.5s
DZM Mont Dzumac 105.84 106 *e*PP **PP** 11 35 42.7 -3.7
comp=Z,936nm,27.7s
DZM Mont Dzumac 105.84 106 *e*LR LR 12 06 19.7
comp=Z,19µm,26.7s
WMOK Wichita Mounta 105.90 353 IAMs_20 IAMs_20 12 23 22.4
comp=Z,19µm,21.0s
PASC Pasadena Art C 106.01 10 IAMs_20 IAMs_20 12 22 29.6
comp=Z,19µm,22.0s
ANMO Albuquerque 106.03 360 PKKPab PKKPab 11 47 15.4 -2.6
comp=Z,3.5nm,1.0s,baz=191,slow=7.2,SNR=5.1
PFO Pinyon Flats O 106.78 9 IAMs_20 IAMs_20 12 26 30.9
comp=Z,20µm,19.0s
MAW Mawson 106.97 184 Pdiff **Pdif** 11 31 26.9 +0.1
comp=Z,1.3nm,0.7s,baz=333,slow=4.5,SNR=1.3
TUC Tucson 108.55 4 IAMs_20 IAMs_20 12 25 57.3
comp=Z,18µm,20.0s
DWPF Disney Wildern 108.90 337 IAMs_20 IAMs_20 12 26 56.7
comp=Z,19µm,19.0s
TRIS Tristan da Cun 109.53 238 IAMs_20 IAMs_20 12 19 55.4
comp=Z,14µm,21.0s
JCT Junction City 110.21 354 IAMs_20 IAMs_20 12 25 07.6
comp=Z,22µm,21.0s
GDSD La Dsirade Is 110.23 313 IAMs_20 IAMs_20 12 20 40.2
comp=Z,15µm,20.0s
SEUS St. Eustatius 110.34 316 IAMs_20 IAMs_20 12 21 08.8
comp=Z,12µm,21.0s
TDBA Terre de Bas, 110.93 313 IAMs_20 IAMs_20 12 21 31.5
comp=Z,12µm,20.0s
GRTK Grand Turk 110.98 325 IAMs_20 IAMs_20 12 29 03.3
comp=Z,16µm,19.0s
TXAR Lajitas Array 111.58 357 Pdiff **Pdif** 11 31 46.8 -1.9
comp=Z,0.4nm,0.7s,baz=23,slow=2.9,SNR=5.4
TXAR PKKPbc **PKKPbc** 11 46 38.9 -0.9
comp=Z,1.4nm,0.9s,baz=180,slow=4.5,SNR=6.1
SDDR Presa de Saban 113.26 324 IAMs_20 IAMs_20 12 31 00.6
comp=Z,21µm,20.0s
MTDJ Mount Denham 116.61 329 IAMs_20 IAMs_20 12 34 48.3
comp=Z,11µm,19.0s
SLBS Sierra La Lagu 117.17 4 IAMs_20 IAMs_20 12 30 48.6
comp=Z,17µm,20.0s
XMAS Kiritimati 117.74 61 IAMs_20 IAMs_20 12 22 36.8
comp=Z,12µm,22.0s
HATO Hato, Curacao 117.93 318 IAMs_20 IAMs_20 12 28 17.8
comp=Z,10µm,20.0s
OUZ Omahuta 118.29 114 IAMs_20 IAMs_20 12 31 06.9
comp=Z,12µm,20.0s
NVL N'lazarevskaya 118.33 199 *e*PKiKP PKiKP 11 36 06.2 +8.4
NVL *e* 11 42 48.4
NVL *e*SP SP 11 47 04.7 +6.2
NVL *e*SS SS 11 53 43.8 +13
NVL *e* 11 53 45.1
NVL *e*SSS SSS 11 57 54.7
NVL MLR MLR
comp=Z,12µm,19.0s
FOZ Fox Glacier 119.72 124 IAMs_20 IAMs_20 12 31 27.3
comp=Z,12µm,20.0s
QRZ Quartz Range 120.25 120 IAMs_20 IAMs_20 12 28 12.6
comp=Z,13µm,21.0s
RIB01 Linhares ES 120.29 269 *e*P **PKPdf** 11 36 03.1 -0.1
LBZ Lake Benmore 120.34 124 IAMs_20 IAMs_20 12 31 20.9
comp=Z,11µm,20.0s
SJMB Sao Joao De Ma 120.55 270 *e*P **PKPdf** 11 36 03.1 -0.6
RPZ Rata Peaks 120.60 123 IAMs_20 IAMs_20 12 31 47.7
comp=Z,11µm,20.0s
BOAV Boa Vista 120.79 303 *e*P **PKPdf** 11 36 04.0 -0.4
JANB Januaria 120.84 276 *e*P **PKPdf** 11 36 03.4 -1.0
THZ Tophouse 120.93 121 IAMs_20 IAMs_20 12 29 41.6
comp=Z,12µm,20.0s
LTZ Lake Taylor 120.97 122 IAMs_20 IAMs_20 12 32 45.7
comp=Z,11µm,20.0s
NNZ Nelson 121.00 120 IAMs_20 IAMs_20 12 28 12.5
comp=Z,15µm,22.0s
UNM Universidad Na 121.19 352 IAMs_20 IAMs_20 12 33 52.4
comp=Z,9µm,20.0s
ALF01 Guarapari-ES 121.28 268 *e*P **PKPdf** 11 36 03.7 -1.3
TROLL Troll, Antarti 121.48 200 PKPdf **PKPdf** 11 36 03.2 -0.9
SDV Santo Domingo 121.58 317 PKP **PKiKP** 11 36 06.3 +0.1
comp=Z,9.8nm,0.4s,baz=7.6,slow=2.5,SNR=1.8
SDV Santo Domingo 121.58 317 *e*P **PKiKP** 11 36 10.6 +4.3
SDV Santo Domingo 121.58 317 *e*P **PKPdf** 11 36 04.8 -1.3
KHZ Kahutara 121.65 121 IAMs_20 IAMs_20 12 27 30.6
comp=Z,14µm,22.0s
SNZO South Karori 121.94 119 IAMs_20 IAMs_20 12 29 04.3
comp=Z,16µm,22.0s
PEXB Peixe 122.09 281 *e*P **PKPdf** 11 36 04.5 -2.3
BKZ Black Stump Fm 122.20 116 IAMs_20 IAMs_20 12 35 57.4
comp=Z,9µm,19.0s
URZ Urewera 122.22 115 IAMs_20 IAMs_20 12 30 31.9
comp=Z,12µm,22.0s
ITTB Itaituba 122.46 294 *e*P **PKPdf** 11 36 07.6 +0.1
CAM01 Campos-RJ 122.67 268 *e*P **PKiKP** 11 36 11.3 +3.5
BFZ Birch Farm 122.71 118 IAMs_20 IAMs_20 12 34 03.6

comp=Z,14µm,21.0s
MXZ Matakaoa Point 122.75 114 IAMs_20 IAMs_20 12 35 22.9
comp=Z,10µm,22.0s
CMIG Matias Romero 122.78 347 PKP **PKiKP** 11 36 08.5 +0.2
baz=3.4,slow=4.3
SNAA Sanae 122.80 201 PKKPbc PKKPbc 11 45 56.6 -3.8
SNAA Sanae 122.80 201 PKPdf **PKPdf** 11 36 04.9 -1.6
SNAA Sanae 122.80 201 *e*P **PKPdf** 11 36 04.9 -1.6
SNAA Sanae 122.80 201 **PKPdf** 11 36 05.0 -1.5
SNAA Sanae 122.80 201 PKiKP **PKPdf** 11 36 05.0 -1.5
SJCC San Jacinto, C 122.98 322 *e*P **PKiKP** 11 36 11.2 +2.3
DUB01 Friburgo-RJ 123.37 268 *e*P **PKPdf** 11 36 09.0 0.0
VNA2 Neumayer--Watz 123.82 203 PKPdf **PKPdf** 11 36 06.8 -1.6
baz=31,slow=3.0
TGUH Tegucigalpa,Un 123.89 337 *e*P **PKPdf** 11 36 09.0 -1.4
VNA1 Neumayer--Stat 123.98 203 PKPdf **PKPdf** 11 36 07.7 -1.0
NPGB Novo Progresso 124.03 291 *e*P **PKPdf** 11 36 10.4 -0.1
BDFB Brasilia 124.04 278 PKP **PKiKP** 11 36 12.1 +1.2
comp=Z,1.9nm,0.4s,baz=33,slow=8.1,SNR=2.3
BDFB Brasilia 124.04 278 *e*P **PKPdf** 11 36 10.2 -0.4
TAMC Tame, Arauca 124.25 317 *e*P **PKiKP** 11 36 15.6 +4.2
SNDB Serra Nova Dou 124.27 284 *e*P **PKPdf** 11 36 10.7 -0.2
VAS01 Vassouras-RJ 124.30 268 *e*P **PKPdf** 11 36 10.0 -0.7
BSCB Bom Sucesso 124.63 270 *e*P **PKPdf** 11 36 10.2 -1.4
VNA3 Neumayer Olymp 124.63 203 PKPdf **PKPdf** 11 36 08.6 -1.4
BRRC Barranca, Sant 124.67 319 *e*P **PKiKP** 11 36 16.2 +4.1
SNET Serv Nac Est T 124.80 339 IAMs_20 IAMs_20 12 40 07.9
comp=Z,11µm,20.0s
ZARC Zaragoza, Cauc 124.92 321 *e*P **PKiKP** 11 36 14.4 +1.8
UREC San Jos de Ur 125.02 322 *e*P **PKiKP** 11 36 16.5 +3.6
RUSC La Rusia 125.39 318 *e*P **PKiKP** 11 36 17.2 +3.0
ESAR Angra dos Reis 125.48 268 *e*P **PKiKP** 11 36 13.3 -0.1
PTBC PUERTO BERRIO 125.54 320 *e*P **PKiKP** 11 36 16.9 +3.0
IPMB Ipameri, GO 125.57 276 *e*P **PKPdf** 11 36 12.2 -1.3
DBBC Dabeiba 125.98 322 *e*P **PKiKP** 11 36 13.6 -0.9
SPBC San Pablo de B 126.10 319 *e*P **PKiKP** 11 36 18.5 +3.4
HELC Santa Helena 126.37 321 *e*P **PKiKP** 11 36 18.6 +2.6
NORC Norcasia 126.58 319 *e*P **PKiKP** 11 36 20.5 +4.5
HDC Heredia 126.64 332 IAMs_20 IAMs_20 12 37 53.8
comp=Z,11µm,19.0s
JTS Las Juntas de 126.67 333 PKP **PKiKP** 11 36 17.3 +1.2
comp=Z,3.2nm,0.5s,baz=229,slow=16,SNR=2.8
JTS Las Juntas de 126.67 333 IAMs_20 IAMs_20 12 37 05.6
comp=Z,12µm,20.0s
CHIC Chingaza 126.79 318 *e*P **PKiKP** 11 36 22.9 +6.0
CBOC Ciudad Bolivar 126.89 321 *e*P **PKiKP** 11 36 17.4 +0.6
CLDB Colider 126.92 288 *e*P **PKPdf** 11 36 15.0 -1.1
ROSC El Rosal 126.92 318 PKP **PKPdf** 11 36 15.4 -1.3
comp=Z,22nm,1.0s,baz=8.2,slow=6.8,SNR=3.8
ROSC El Rosal 126.92 318 *e*P **PKiKP** 11 36 19.5 +2.4
GUY2C Guyana, Caldas 127.12 320 *e*P **PKiKP** 11 36 20.8 +3.2
VAO Valinhos 127.42 270 *e*P **PKPdf** 11 36 16.1 -0.8
RCLB Rio Claro- Sao 127.55 271 *e*P **PKPdf** 11 36 15.5 -1.5
BB19B Bebedouro 127.58 273 *e*P **PKPdf** 11 36 16.1 -1.0
VNDA Vanda 127.74 164 PKhKP PKPpre 11 36 07.2
comp=Z,2.0nm,0.9s,baz=267,slow=4.1,SNR=6.5
ANIL Santa Ana 127.77 319 *e*P **PKiKP** 11 36 23.6 +4.8
DVLD Doverlandia 127.81 280 *e*P **PKPdf** 11 36 16.2 -1.5
PLMC San Jos del P 127.85 321 *e*P **PKiKP** 11 36 22.0 +3.4
PDRB Porto dos Gac 128.09 288 *e*P **PKPdf** 11 36 17.2 -1.1
PRAC Prado 128.17 318 *e*P **PKiKP** 11 36 20.3 +1.1
ORTC Ortega, Tolima 128.19 319 *e*P **PKiKP** 11 36 15.9 -2.7
ITRB Iturama 128.22 275 *e*P **PKPdf** 11 36 18.1 -0.3
PET01 Itanhaem-SP 128.35 268 *e*P **PKPdf** 11 36 17.5 -1.0
YOTC Yotoco, Valle 128.68 320 *e*P **PKiKP** 11 36 16.6 -3.1
SBA Scott Base 128.83 164 IAMs_20 IAMs_20 12 31 52.5
comp=Z,11µm,19.0s
MACC Macarena, Meta 128.94 316 *e*P **PKiKP** 11 36 24.6 +3.9
NBRS Nobres 129.12 285 *e*P **PKPdf** 11 36 19.4 -0.9
QSPA South Pole Qui 129.18 180 PKP **PKPdf** 11 36 17.6 -1.3
comp=Z,9.7nm,1.0s,baz=8.0,slow=0.4,SNR=14
QSPA South Pole Qui 129.18 180 **PKiKP** 11 36 22.0 +2.4
MARP Paez Belalcaza 129.46 319 *e*P **PKiKP** 11 36 27.4 +5.4
FRTB Fartura 129.62 271 *e*P **PKPdf** 11 36 20.1 -0.9
GARC Garzon, Huila 129.78 318 *e*P **PKiKP** 11 36 25.8 +3.1
PCMB Pacaembu 129.99 274 *e*P **PKPdf** 11 36 20.9 -0.8
SALV Santo Antonio 130.05 283 *e*P **PKPdf** 11 36 21.5 -0.4
POPC Popayan, Colom 130.08 320 *e*P **PKiKP** 11 36 23.8 +0.5
PCON Cinco Dias 130.12 319 *e*P **PKiKP** 11 36 28.6 +4.8
TIJ01 Guaruva-PR 130.23 268 *e*P **PKPdf** 11 36 20.9 -1.3
FLOC Florencia 130.38 318 *e*P **PKiKP** 11 36 28.0 +4.4
SOTA Rioblanco 130.40 319 *e*P **PKiKP** 11 36 28.1 +3.9
GR1C Gorgona, Isla 130.42 322 *e*P **PKiKP** 11 36 27.3 +3.7
BBAC Balboa, Cauca 130.81 320 *e*P **PKPdf** 11 36 21.9 -1.9
SAML Samuel 130.91 296 IAMs_20 IAMs_20 12 32 53.6
comp=Z,11µm,22.0s
PTLC Puerto Leguiza 131.11 316 *e*P **PKiKP** 11 36 28.0 +3.0
POCN Pocone 131.28 283 *e*P **PKPdf** 11 36 23.4 -0.9
RVDE Rio Verde (Bra 131.35 279 *e*P **PKPdf** 11 36 22.8 -1.6
VILB Vilhena 131.51 290 *e*P **PKPdf** 11 36 24.0 -0.8
GCUF Volcan Galeras 131.55 319 *e*P **PKiKP** 11 36 32.4 +5.8
TRCB Terra Rica 131.70 273 *e*P **PKPdf** 11 36 24.0 -0.9
TUMC Tumaco 131.71 321 *e*P PKPpre 11 36 12.1
TBTG Tabatinga, AM 131.80 307 *e*P **PKPdf** 11 36 25.3 0.0
HOPE Hope Point 131.87 228 IAMs_20 IAMs_20 12 35 14.8
comp=Z,10µm,21.0s
TER01 Tubaro-SC 131.92 265 *e*P **PKPdf** 11 36 24.6 -0.6
TULM Tulcn-Chalpat 132.21 320 *e*P **PKiKP** 11 36 31.1 +3.3
PTGB Pitanga 132.28 271 *e*P **PKPdf** 11 36 24.0 -2.0
PTLB Pontes e Lacer 132.34 286 *e*P **PKPdf** 11 36 25.4 -0.8
VBST Vila Bela da S 132.41 288 *e*P **PKPdf** 11 36 25.5 -0.9
PANT Pantanal (Braz 132.61 281 *e*P **PKPdf** 11 36 25.9 -0.8
AQDB Aquidauana 132.77 278 *e*P **PKPdf** 11 36 25.8 -1.2
OTAV Otavalo 132.95 320 *e*P **PKiKP** 11 36 33.7 +4.4
OTAV Otavalo 132.95 320 *e*P **PKPdf** 11 36 26.9 -1.3
AMBA Amambai (Brazi 133.60 275 *e*P **PKPdf** 11 36 27.3 -1.2
ETMB Extrema 133.61 298 *e*P **PKPdf** 11 36 28.3 -0.5
ITAB Concordia 133.61 268 *e*P **PKPdf** 11 36 28.5 +0.2
CNLB Canela 133.62 265 *e*P **PKPdf** 11 36 27.4 -1.0
ANTJ Antonio Joao (133.87 277 *e*P **PKPdf** 11 36 28.2 -0.9
SIV San Ignacio 134.12 287 PKP **PKPdf** 11 36 28.0 -1.7
comp=Z,2.3nm,0.5s,baz=82,slow=4.8,SNR=9.2
ALGR Alto Alegre (B 135.06 267 *e*P **PKPdf** 11 36 29.5 -1.7
CRSM Crissiumal (Br 135.22 269 *e*P **PKPdf** 11 36 30.6 -0.8
CPSB Cacapava Do Su 136.12 265 *e*P **PKPdf** 11 36 31.6 -1.3
CZSB Cruzeiro do Su 136.28 307 *e*P **PKPdf** 11 36 32.8 -1.0
PLTB Pedras Altas 136.84 263 *e*P **PKPdf** 11 36 33.1 -1.2
CPUP Villa Florida 137.19 272 PKhKP PKPpre 11 36 28.7
comp=Z,5.5nm,0.7s,baz=44,slow=2.4,SNR=10
CPUP Villa Florida 137.19 272 **PKPdf** 11 36 32.3 -2.8
CPUP Villa Florida 137.19 272 PKiKP **PKPdf** 11 36 32.3 -2.8
CPUP Villa Florida 137.19 272 *e*P **PKPdf** 11 36 33.9 -1.2
TAOE Nuku Hiva Isla 137.23 54 *e*P **PKPdf** 11 36 31.2 -4.4
comp=Z,2µm,25.1s
TAOE Nuku Hiva Isla 137.23 54 *e*PP **PP** 11 39 19.3 -0.4
TAOE Nuku Hiva Isla 137.23 54 *e*SS SS 11 57 23.7 -2.7
comp=Z,3µm,25.1s
TAOE Nuku Hiva Isla 137.23 54 *e*LR LR 12 20 50.9
comp=Z,24µm,23.1s
ITQB Itaqui 138.25 268 *e*P **PKPdf** 11 36 35.9 -1.0
ATAH Atahualpa 139.15 314 PKP **PKPdf** 11 36 39.5 -0.1
comp=Z,5.9nm,0.8s,baz=14,slow=5.5,SNR=3.3
LPAZ La Paz 139.44 294 PKP **PKPdf** 11 36 38.6 -1.6
comp=Z,1.9nm,0.5s,baz=16,slow=2.2,SNR=2.0
LPAZ La Paz 139.44 294 *e*P **PKPdf** 11 36 38.7 -1.6
TBI Tubuai 140.37 79 *e*P **PKPdf** 11 36 37.0 -4.0
comp=Z,893nm,14.5s
TBI Tubuai 140.37 79 *e*PP **PP** 11 39 36.7 -2.9
comp=Z,2µm,16.8s
TBI Tubuai 140.37 79 *e*SS SS 11 58 13.3 +9.1
comp=Z,8µm,29.0s
TBI Tubuai 140.37 79 *e*LR LR 12 22 25.0
comp=Z,17µm,22.8s
LPA La Plata 141.41 261 PKiKP **PKPdf** 11 36 43.3 +0.8
LPA PP **PP** 11 39 46.9 +1.0
LPA pPP 11 39 58.4
LPA SKiKP 11 40 10.8
LPA SKP 11 40 27.6
LPA PKS PKSdf 11 40 33.2 +15
LPA PPP PPP 11 42 53.9
LPA SKiKS 11 43 56.5
LPA SKS SKSdf 11 44 05.6 +13
LPA SDIFF **Sdif** 11 48 29.0 +12
LPA PSP PSP 11 52 17.7
LPA PPS PPS 11 52 23.9
LPA SS SS 11 58 30.2 +14
LPA SSS SSS 12 03 27.0
NNA Nana 142.13 308 PKP **PKPdf** 11 36 44.2 -0.2
comp=Z,22nm,0.9s,baz=3.8,slow=5.5,SNR=5.4
NNA Nana 142.13 308 **PKPdf** 11 36 43.2 -1.3
NNA Nana 142.13 308 PKiKP **PKPdf** 11 36 43.2 -1.3
LVC Limon Verde 144.01 286 PKP **PKPdf** 11 36 47.8 -0.1

comp=Z,15nm,0.6s,baz=75,slow=3.4,SNR=3.4

LVC	**Limon Verde**	**144.01 286**	*eP*	PKPbc	11 36 46.6	+0.8
EFI	**East Falkland**	**144.56 233**	IAMs_20	IAMs_20	12 38 07.5	
	comp=Z,14μm,22.0s					
TRQA	**Tornquist**	**145.51 258**		**PKPdf**	**11 36 48.0**	**-1.6**
TRQA			IAMs_20	IAMs_20	12 45 00.1	
	comp=Z,9μm,20.0s					
TRQA	**Tornquist**	**145.51 258**	PKIKP	**PKPdf**	**11 36 48.0**	**-1.6**
TRQA	**Tornquist**	**145.51 258**	*eP*	**PKPdf**	**11 36 48.0**	**-1.6**
AC02	**Maricunga**	**146.53 281**		**PKPdf**	**11 36 51.9**	**-0.4**
GO03	**Copiap**	**147.76 280**		**PKPdf**	**11 36 54.8**	**+1.0**
AC04	**Llanos de Chal**	**148.71 280**		**PKPdf**	**11 36 57.1**	**+1.8**
LCO	**Las Campanas**	**148.82 278**	IAMs_20	IAMs_20	12 49 04.6	
	comp=Z,9μm,20.0s					
VA03	**San Esteban**	**150.35 272**		**PKPbc**	**11 37 01.6**	**-1.6**
PEL	**Peldehue**	**150.60 271**	IAMs_20	IAMs_20	12 46 50.0	
	comp=Z,10μm,22.0s					
PLCA	**Paso Flores**	**152.58 256**	PKPbc	**PKPbc**	**11 37 06.5**	**-1.4**
	comp=Z,8.8nm,0.7s,baz=104,slow=0.8,SNR=43					
PLCA	**Paso Flores**	**152.58 256**		**PKPbc**	**11 37 07.2**	**-0.8**
PLCA			PKPab	**PKPab**	**11 37 17.5**	**-1.0**
PLCA	**Paso Flores**	**152.58 256**	*eP*	**PKPdf**	**11 36 59.9**	**-1.1**
MG05	**Puerto Natales**	**153.46 231**		**PKPbc**	**11 37 08.4**	**-1.0**
COYC	**Coyhaique**	**154.02 245**	IAMs_20	IAMs_20	12 44 13.6	
	comp=Z,10μm,21.0s					

MAN 26 11:19:56.5,15.30N×120.32E,h121km,mb4.2,ML3.1, MS2.8,13C-1D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCPH	**Palayan**	**0.79**	**70**	⇓*iP*	Pn	11 20 16.9	+1.1
PCPH				*eS*		11 20 32.2	
SMPP	**San Manuel, Pa**	**0.92**	**22**	⇑*eP*	Pn	11 20 18.4	+1.3
SMPP				*eS*		11 20 34.5	
QVP	**Quezon City--P**	**0.94**	**135**	⇑*eP*	Pn	11 20 19.4	+1.7
QVP				*eS*		11 20 36.7	
MACP	**Maragondon, Ca**	**1.10**	**159**	⇑*eP*	Pn	11 20 20.8	+1.2
MACP				*eS*		11 20 40.7	
BOLP	**Bolinao**	**1.15**	**340**	⇑*eP*	Pn	11 20 21.1	+1.4
BOLP				*eS*		11 20 40.1	
BALP	**Baler**	**1.29**	**70**	⇑*eP*	Pn	11 20 22.6	+1.8
TGY	**Tagaytay City**	**1.33**	**153**	⇑*eP*	Pn	11 20 24.2	+2.1
LUBP	**Lubang**	**1.56**	**183**	⇑*eP*	Pn	11 20 24.9	+0.1
LUBP				*eS*		11 20 48.0	
SAMP	**Sagada Mountai**	**1.86**	**17**	⇑*eP*	Pn	11 20 28.6	+0.8
CAUP	**Cauayan**	**2.18**	**41**	⇑*eP*	Pn	11 20 33.0	+1.3
BOAC	**Boac**	**2.35**	**141**	⇑*eP*	Pn	11 20 35.5	+1.0
PALP	**Palanan**	**2.68**	**49**	⇑*eP*	Pn	11 20 39.3	+1.2
SJMP	**San Jose**	**2.92**	**165**	⇑*eP*	Pn	11 20 42.4	+0.1
SJMP				*eS*		11 21 16.7	
ENPP	**El Nido**	**4.16**	**192**	⇑*eP*	Pn	11 20 59.0	+0.2

*IDC **26** 11:24:21.8±0.8,39.47N×73.62E,h0km,mb4.5/18, mbtmp4.6/20,ML4.2/1,Error ellipse: s-maj=17.0km s-min=13.7km az=166.0*
*KRNET **26** 11:24:22.7±0.1,39.41N×73.43E,mb5.2*
ISC 26 11:24:23.2±0.7,**39.45N**±0.06×**73.56E**±0.05,**h10**km,**n29,** σ1§**18**/39,**mb4.5**/18,**16C-2D,Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.23**	**331**	⇑*eP*	**Pb**	**11 24 45.6**	**-1.0**
	baz=36						
OHH				⇑*eS*	**Sb**	**11 25 02.2**	**-0.3**
	baz=36						
DRK	**Karamyk**	**1.36**	**272**	⇑*eP*	**Pn**	**11 24 46.6**	**-2.0**
	baz=74						
DRK				⇑*eS*	**Sb**	**11 25 03.9**	**-2.7**
	baz=74						
BTK	**Batken**	**2.20**	**287**	⇓*eP*	**Pn**	**11 25 00.8**	**+0.9**
	baz=89						
BTK				⇓*eS*	**Sn**	**11 25 28.5**	**+1.3**
	baz=89						
ARLS	**Aral**	**2.48**	**13**	⇑*iP*	**Pb**	**11 25 06.4**	**-1.6**
	baz=15						
ARLS				⇑*eS*	**Sb**	**11 25 38.6**	**0.0**
	baz=15						
GAR	**Garm**	**2.56**	**261**	⇑*eP*	**Pn**	**11 25 05.3**	**+0.4**
	baz=61						
GAR				⇑*eS*	**Sn**	**11 25 36.6**	**+0.5**
	baz=61						
ARK	**Arkit**	**2.64**	**333**	⇑*eP*	**Pn**	**11 25 07.9**	**+1.9**
	baz=35						
ARK				⇑*iS*	**Sb**	**11 25 41.2**	**-2.1**
	baz=35						
TRKS	**Terek-Say**	**2.78**	**319**	⇑*eP*	**Pn**	**11 25 08.7**	**+0.8**
	baz=21						
TRKS				⇑*eS*	**Sn**	**11 25 42.1**	**+0.5**
	baz=21						
UCH	**Uchtor**	**2.87**	**14**	⇑*eP*	**Pb**	**11 25 12.1**	**-2.7**
	baz=16						
UCH				⇑*eS*	**Sb**	**11 25 48.4**	**-1.7**
	baz=16						
AAK	**Ala-Archa**	**3.26**	**12**	Pn	**Pn**	**11 25 16.4**	**+1.8**
	26nm,0.3s,baz=80,slow=21,SNR=1.5						
AAK				Sn	**Sb**	**11 26 00.2**	**-1.0**
	31nm,0.3s,baz=174,slow=22,SNR=1.5						
	365nm,0.7s						
TAS	**Tashkent**	**3.76**	**301**	⇑*eP*	**Pn**	**11 25 22.5**	**+1.3**
	baz=3.0						
TAS				⇑*iS*	**Sn**	**11 26 06.1**	**+0.6**
	baz=3.0						
MKAR	**Makanchi Array**	**9.72**	**38**	Pn	**Pn**	**11 26 41.7**	**-1.4**
	154nm,1.0s,baz=230,slow=13,SNR=1.7						
BRTR	**Keskin Array B**	**30.59**	**283**	P	**P**	**11 30 38.5**	**+1.1**
	12nm,0.9s,baz=94,slow=7.6,SNR=3.6						
	12nm,0.9s						
AKASG	**Malin Array Be**	**32.80**	**305**	P	**P**	**11 30 56.3**	**-0.1**
	9.3nm,0.8s,baz=77,slow=8.7,SNR=8.0						
	9.3nm,0.8s						
MLR	**Muntele Rosu**	**35.22**	**296**	P	**P**	**11 31 18.8**	**+1.1**
	38nm,0.9s,baz=138,slow=14,SNR=2.7						
	38nm,0.9s						
FINES	**FINESS Array B**	**36.25**	**323**	P	**P**	**11 31 26.1**	**0.0**
	13nm,0.9s,baz=106,slow=6.6,SNR=6.2						
	13nm,0.9s						
IDI	**Anoyia**	**38.53**	**280**	P	**P**	**11 31 46.3**	**+0.4**
	7.2nm,0.6s,baz=250,slow=9.6,SNR=0.9						
	7.2nm,0.6s						
ARCES	**ARCESS Array B**	**39.25**	**336**	P	**P**	**11 31 52.1**	**+0.7**
	14nm,1.0s,baz=108,slow=8.8,SNR=1.3						
	14nm,1.0s						
KLR	**Kul'dur**	**41.80**	**57**	P	**P**	**11 32 13.5**	**+0.7**
	2.8nm,0.5s,baz=266,slow=7.4,SNR=7.1						
	2.8nm,0.5s						
HFS	**Hagfors**	**42.06**	**320**	P	**P**	**11 32 15.1**	**+0.3**
	12nm,0.8s,baz=95,slow=16,SNR=1.4						
	12nm,0.8s						
KSRS	**Korea Array**	**42.08**	**75**	P	**P**	**11 32 15.6**	**+0.4**
	2.6nm,0.9s,baz=273,slow=7.3,SNR=1.6						
	2.6nm,0.9s						
GERES	**GERESS Array B**	**42.95**	**303**	P	**P**	**11 32 23.3**	**+1.0**
	1.4nm,0.8s,baz=64,slow=8.9,SNR=1.1						
	1.4nm,0.8s						
NOA	**NORSAR Array B**	**43.30**	**321**	P	**P**	**11 32 25.0**	**+0.1**
	6.7nm,0.9s,baz=88,slow=7.8,SNR=1.9						
	6.7nm,0.9s						
MJAR	**Matsushiro Arr**	**50.05**	**72**	P	**P**	**11 33 18.8**	**+0.7**
	3.8nm,0.9s,baz=274,slow=7.6,SNR=6.1						
	3.8nm,0.9s						
ESDC	**Sonseca Array**	**57.89**	**297**	P	**P**	**11 34 15.2**	**-0.2**
	2.1nm,0.8s,baz=54,slow=7.0,SNR=1.9						
	2.1nm,0.8s						
TORD	**Torodi Ar. Bea**	**67.80**	**269**	P	**P**	**11 35 21.2**	**-0.5**
	5.2nm,0.7s,baz=49,slow=6.0,SNR=2.8						
	5.2nm,0.7s						
ILAR	**Eielson Array**	**71.38**	**17**	P	**P**	**11 35 42.6**	**-0.4**
	4.5nm,1.1s,baz=340,slow=5.0,SNR=1.7						
	4.5nm,1.1s						
YKA	**Yellowknife Ar**	**78.19**	**4**	P	**P**	**11 36 22.6**	**+0.2**
	4.8nm,1.0s,baz=349,slow=5.5,SNR=2.3						
	4.8nm,1.0s						
WRA	**Warramunga Arr**	**81.89**	**124**	P	**P**	**11 36 43.1**	**+0.1**
	2.3nm,0.7s,baz=305,slow=3.6,SNR=6.5						
	2.3nm,0.7s						
ASAR	**Alice Springs**	**84.34**	**127**	P	**P**	**11 36 54.9**	**-0.7**
	2.2nm,0.8s,baz=323,slow=4.1,SNR=1.5						
	2.2nm,0.8s						

TAP 26 11:24:43.6,22.92N×121.27E,h18km,ML3.6,7C-8D,B, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDH	**Donghe**	**0.06**	**31**	⇑*iP*	Pg	11 24 46.9	+0.1
	baz=26						
EDH				S	Sg	11 24 49.5	+0.5
	baz=26						
LONT	**Longtian**	**0.13**	**262**	⇓*iP*	Pb	11 24 48.1	+0.5
	baz=271						
LONT				S	Sb	11 24 52.1	+1.9
	baz=271						
ECS	**Chishang**	**0.18**	**344**	P	Pb	11 24 49.1	+0.7
	baz=331						
ECS				S	Sb	11 24 53.9	+2.3
	baz=331						
TTN	**Taitung**	**0.20**	**214**	P	Pb	11 24 49.3	+0.5
	baz=213						
TTN				*e*S	Sb	11 24 53.5	+1.1
	baz=213						
TWGBT	**Beinan**	**0.21**	**239**	⇓*iP*	Pb	11 24 48.9	0.0
	baz=255						
TWGBT				S	Sb	11 24 52.7	+0.3
	baz=255						
TWG	**Pinlang**	**0.21**	**241**	⇓*iP*	Pb	11 24 48.9	-0.1
	baz=255						
TWG				*i* S	Sb	11 24 53.0	+0.5
	baz=255						
FULB	**Fuli**	**0.27**	**4**	P	Pb	11 24 50.0	-0.1
	baz=350						
FULB				S	Sb	11 24 55.5	+1.1
	baz=350						
LDUT	**Ludao**	**0.31**	**144**	P	Pb	11 24 50.7	+0.1
	baz=132						
LDUT				S	Sb	11 24 56.0	+0.6
	baz=132						
ELDTW	**Lidau**	**0.35**	**318**	⇑*iP*	Pg	11 24 50.8	-0.3
	baz=318						
ELDTW				S	Sg	11 24 55.8	-0.4
	baz=318						
EYUL	**Yuli**	**0.42**	**6**	P	Pb	11 24 52.6	0.0
	baz=350						
EYUL				S	Sb	11 24 60.0	+1.3
	baz=350						
TWF1	**Yuli**	**0.43**	**3**	⇑*iP*	Pg	11 24 52.0	-0.3
	baz=349						
TWF1				S	Sb	11 24 59.3	+0.5
	baz=349						
YULB	**Yu-li**	**0.47**	**3**	⇑*iP*	Pg	11 24 52.5	-0.5
	baz=348						
YULB				S	Sg	11 24 58.8	-0.7
	baz=348						
STYH	**Taoyuan**	**0.52**	**298**	*eP*	Pg	11 24 53.9	-0.1
	baz=298						
STYT	**Tauyuan**	**0.53**	**297**	⇓*iP*	Pg	11 24 54.1	-0.1
	baz=301						
STYT				*i* S	Sg	11 25 01.6	+0.2
	baz=301						
EHY	**Hungye**	**0.58**	**5**	P	Pg	11 24 54.5	-0.6
	baz=352						
EHY				*e*S	Sb	11 25 03.2	-0.1
	baz=352						
HGSD	**Ruisui**	**0.58**	**14**	*eP*	Pg	11 24 55.1	0.0
	baz=355						
HGSD				S	Sn	11 25 04.8	-1.3
	baz=355						
SSD	**Sandimen**	**0.62**	**253**	P	Pg	11 24 55.1	-0.7
	baz=255						
SSD				S	Sg	11 25 02.7	-1.3
	baz=255						
TSMG	**Majia**	**0.62**	**250**	*eP*	Pg	11 24 55.3	-0.6
	baz=254						
TSMG				*e*S	Sg	11 25 01.6	-2.4
	baz=254						
YUS	**Yu-Shan**	**0.64**	**332**	⇑*iP*	Pg	11 24 56.0	-0.4
	baz=331						
YUS				S	Sg	11 25 04.2	-0.7
	baz=331						
SGST	**Jiashian**	**0.65**	**284**	P	Pg	11 24 56.0	-0.5
	baz=284						
SGST				S	Sb	11 25 06.0	+0.7
	baz=284						
TAW	**Tawu**	**0.66**	**212**	*eP*	Pg	11 24 55.4	-1.3
	baz=221						
TAW				*e*S	Sg	11 25 04.2	-1.2
	baz=221						
EAST	**Anshuo**	**0.67**	**216**	⇑*iP*	Pg	11 24 55.9	-0.8
	baz=227						
EAST				*e*S	Sb	11 25 06.9	+1.2
	baz=227						
MASBT	**Mashibuluo**	**0.67**	**242**	⇓*iP*	Pg	11 24 56.2	-0.6
	baz=240						
MASBT				S	Sg	11 25 04.5	-1.1
	baz=240						
TAWH	**Dawu Township**	**0.68**	**211**	P	Pb	11 24 56.1	-0.9
	baz=213						
WTP	**Ta-pu**	**0.69**	**298**	⇓*iP*	Pg	11 24 57.4	+0.3
	baz=302						
WTP				S	Sn	11 25 07.7	-1.1
	baz=302						
TPUB	**Ta-pu**	**0.70**	**302**	⇓*iP*	Pg	11 24 57.7	+0.3
	baz=302						
TPUB				*i* S	Sg	11 25 07.7	+1.0
	baz=302						
SCST	**Cishan**	**0.72**	**267**	*eP*	Pg	11 24 58.0	+0.3
	baz=266						
ALS	**Alishan**	**0.72**	**324**	⇑*iP*	Pb	11 24 57.9	0.0
	baz=328						
ALS				S	Sb	11 25 07.6	0.0
	baz=328						
CHN1	**Nanshi**	**0.73**	**291**	⇓*iP*	Pg	11 24 58.4	+0.4
	baz=295						
CHN1				S	Sn	11 25 09.9	0.0
	baz=295						
SGLT	**Jiouru**	**0.75**	**255**	*eP*	Pn	11 25 00.2	+0.9
	baz=257						
SGLT				*e*S	Sn	11 25 11.8	+1.6
	baz=257						
EGFH	**Guangfu**	**0.76**	**11**	*eP*	Pn	11 24 59.0	-0.4
	baz=355						
EGFH				*e*S	Sn	11 25 09.8	-0.7
	baz=355						
SNST	**Tainan City**	**0.77**	**293**	P	Pn	11 24 59.3	-0.4
	baz=296						
SNST				S	Sn	11 25 11.1	+0.2
	baz=296						
SSPT	**Xinbi**	**0.78**	**236**	*eP*	Pg	11 24 59.0	+0.1
	baz=232						
TWM1	**Shoushan**	**0.79**	**263**	P	Pn	11 25 00.2	+0.3
	baz=264						
TWK	**Hsinying**	**0.80**	**295**	P	Pg	11 24 59.5	+0.3
	baz=302						
TWK				S	Sn	11 25 11.5	-0.1
	baz=302						
SCZT	**Fangliau**	**0.81**	**228**	*eP*	Pb	11 24 58.9	-0.4
	baz=229						
SLIU	**Shizi**	**0.83**	**212**	*eP*	Pb	11 24 58.4	-1.1
	baz=214						
CHN3	**Shinhua**	**0.85**	**280**	*eP*	Pn	11 25 02.2	+1.5
	baz=281						
CHN3				*e*S	Sn	11 25 17.0	+4.2
	baz=281						
SHHT	**Tainan City**	**0.86**	**277**	*eP*	Pn	11 25 02.6	+1.8
	baz=278						
SHHT				*e*S	Sn	11 25 17.1	+4.2
	baz=278						
ESL	**Shilin**	**0.90**	**9**	*eP*	Pn	11 25 01.6	+0.2
	baz=8.0						
SSLB	**Suanglung**	**0.91**	**341**	*eP*	Pb	11 25 00.8	-0.1
	baz=339						
LAY	**Lan-yu**	**0.92**	**164**	P	Pb	11 24 59.7	-1.4
	baz=182						
LAY				S	Sb	11 25 12.9	0.0
	baz=182						
LYUB	**Lan-yu**	**0.96**	**162**	*eP*	Pb	11 24 59.2	-2.6
	baz=180						
LYUB				*e*S	Sb	11 25 11.5	-2.6
	baz=180						
CHY	**Chiayi**	**0.97**	**306**	P	Pg	11 25 02.9	+0.6
	baz=305						
CHY				S	Sn	11 25 17.3	+1.7
	baz=305						
SMST	**Manzhou Townsh**	**0.98**	**204**	*eP*	Pb	11 25 01.4	-0.8
	baz=194						
ICHU	**Yijhu**	**1.01**	**296**	*eP*	Pg	11 25 03.7	+0.5
	baz=295						
ICHU				*e*S	Sn	11 25 18.1	+1.4
	baz=295						
SMLT	**Sun Moon Lake**	**1.01**	**340**	*eP*	Pg	11 25 03.3	0.0
	baz=343						
SMLT				*e*S	Sn	11 25 18.0	+1.0
	baz=343						
WDLH	**Douliu**	**1.02**	**319**	*eP*	Pg	11 25 04.0	+0.7
	baz=316						
WDLH				*e*S	Sn	11 25 18.8	+1.9
	baz=316						
SCLT	**Jiali**	**1.02**	**284**	*eP*	Pg	11 25 06.1	+2.7
	baz=285						
SCLT				*e*S	Sn	11 25 20.2	+3.1
	baz=285						
WJS	**Zhushan**	**1.02**	**331**	*eP*	Pg	11 25 04.0	+0.5
	baz=331						
WJS				*e*S	Sn	11 25 19.0	+1.9
	baz=331						
OWD	**Renai**	**1.03**	**355**	*eP*	Pb	11 25 02.6	-0.4
	baz=2.0						
HEN	**Hengchun**	**1.04**	**208**	*eP*	Pb	11 25 02.9	-0.2
	baz=199						
TYC	**Yuchr**	**1.05**	**339**	P	Pg	11 25 04.3	+0.4
	baz=345						
TYC				S	Sg	11 25 19.6	+1.9
	baz=345						
CHN8	**Yiju**	**1.06**	**293**	*eP*	Pn	11 25 03.6	0.0
	baz=293						
CHN8				*e*S	Sg	11 25 20.5	+2.4
	baz=293						
TWKBT	**Hengchun**	**1.07**	**204**	*eP*	Pb	11 25 02.8	-0.8
	baz=194						
WUSB	**Renai**	**1.07**	**352**	P	Pb	11 25 03.6	-0.1
	baz=359						
WUSB				*e*S	Sb	11 25 17.4	-0.1
	baz=359						
TSEB	**Hengchuen, Pin**	**1.08**	**199**	*eP*	Pb	11 25 03.0	-0.7
	baz=192						
WNT	**Mingjian**	**1.09**	**330**	P	Pg	11 25 05.7	+0.9
	baz=328						
WNT				S	Sg	11 25 21.2	+2.1
	baz=328						
WTK	**Tuku**	**1.11**	**313**	*eP*	Pb	11 25 05.0	-0.1
	baz=311						
WTK				*e*S	Sg	11 25 21.1	+1.4
	baz=311						
WSL	**Shuilin Townsh**	**1.13**	**302**	P	Pg	11 25 05.9	+0.4
	baz=301						
WSL				S	Sg	11 25 21.8	+1.5
	baz=301						
CHGB	**Renai**	**1.14**	**355**	*eP*	Pb	11 25 05.1	+0.3
	baz=1.0						
CHGB				*e*S	Sb	11 25 18.0	-1.4
	baz=1.0						
WCS	**Beigang Elemen**	**1.18**	**344**	*eP*	Pg	11 25 06.2	-0.2
	baz=347						
WCS				*e*S	Sg	11 25 21.7	0.0
	baz=347						
TWD	**Chiawan**	**1.19**	**14**	*eP*	Pn	11 25 04.7	-0.7
	baz=360						
TWD				*e*S	Sg	11 25 21.7	-0.4
	baz=360						
WHF	**Hehuan Shan**	**1.22**	**360**	*eP*	Pn	11 25 05.5	-0.6
	baz=8.0						
ETL	**Fush Village**	**1.27**	**15**	*eP*	Pn	11 25 06.7	+0.2
	baz=11						
WRL	**Guoliierlin Hig**	**1.27**	**320**	*eP*	Pb	11 25 07.5	+0.4
	baz=308						
NACB	**Ninganchiao**	**1.28**	**13**	*eP*	Pn	11 25 05.2	-1.4
	baz=9.0						
ETLH	**Xiulin Townshi**	**1.29**	**9**	*eP*	Pn	11 25 06.4	-0.5
	baz=20						
FUSS	**Fushou**	**1.32**	**359**	*eP*	Pn	11 25 07.5	+0.1
	baz=6.0						
WCHH	**Zhanghua**	**1.32**	**330**	*eP*	Pg	11 25 08.9	-0.2
	baz=327						
WCHH				*e*S	Sg	11 25 28.3	+1.9
	baz=327						
TCU	**Taichung**	**1.33**	**336**	*eP*	Pg	11 25 08.9	-0.5
	baz=333						
WHP	**Taichung City**	**1.38**	**348**	*eP*	Pg	11 25 10.4	+0.2
	baz=357						
TWQ1	**Liyutan**	**1.49**	**342**	P	Pg	11 25 12.2	-0.1
	baz=338						
TWQ1				*e*S	Sg	11 25 33.4	+1.6
	baz=338						
NNSB	**Datong**	**1.50**	**4**	*eP*	Pb	11 25 10.8	-0.2
	baz=15						
NNS	**Nan Shan**	**1.51**	**3**	*eP*	Pn	11 25 10.1	+0.2
	baz=15						
WDGT	**Dungji**	**1.52**	**283**	*eP*	Pn	11 25 10.1	+0.1
	baz=283						
NSY	**Sanyi**	**1.56**	**343**	*eP*	Pg	11 25 12.9	-0.7
	baz=338						
NSY				*e*S	Sg	11 25 35.4	+1.5
	baz=338						
EWUT	**Wuta**	**1.58**	**17**	*eP*	Pb	11 25 12.0	-0.4
	baz=12						
LATG	**Datong**	**1.62**	**8**	*eP*	Pn	11 25 11.7	+0.2
	baz=18						
NMLH	**Miaoli**	**1.67**	**345**	*eP*	Pg	11 25 15.0	-0.7
	baz=341						
PNG	**Penghu**	**1.70**	**292**	*eP*	Pb	11 25 13.5	-0.9
	baz=292						
NFF	**Wufeng Townshi**	**1.71**	**355**	*eP*	Pg	11 25 16.2	-0.2
	baz=360						
NSTT	**Nanjuang**	**1.72**	**352**	*eP*	Pb	11 25 13.9	-0.8
	baz=348						
YHNB	**Yeheng**	**1.74**	**3**	*eP*	Pn	11 25 13.7	+0.7
	baz=14						
NSK	**Sanguang**	**1.75**	**3**	*eP*	Pn	11 25 13.7	+0.6
	baz=13						
TWC	**Suao**	**1.76**	**17**	*eP*	Pb	11 25 14.6	-0.8
	baz=13						
TWE	**Neicheng**	**1.82**	**11**	*eP*	Pn	11 25 14.4	+0.3
	baz=7.0						
FUSB	**Fushanzhiwuyua**	**1.85**	**9**	*eP*	Pn	11 25 13.3	-1.2
	baz=21						
NWLT	**Wulai**	**1.86**	**6**	*eP*	Pn	11 25 15.1	+0.5
	baz=17						
EGS		**2.00**	**17**	*eP*	Pn	11 25 17.8	+1.2
	baz=13						
NWF	**Wu-fen Shan**	**2.19**	**12**	*eP*	Pn	11 25 18.4	-0.7
	baz=7.0						
YOJ	**Yonaguni jima**	**2.21**	**46**	*eP*	Pn	11 25 19.0	-0.4
	baz=45						
YM01	**YM01**	**2.23**	**7**	*eP*	Pn	11 25 20.9	+1.2
	baz=18						

*KRNET **26** 11:25:11.5±0.1,39.36N×73.46E,mb5.3*
*NEIC **26** 11:25:13.5±0.9,39.4N±0.1×73.2E±0.1,h10km±1km, mb4.9/14,Error ellipse: s-maj=26.3km s-min=11.1km az=149.0*
*IDC **26** 11:25:19.0±3.2,39.95N×72.39E,h0km,mb4.6/9, mbtmp4.6/9,Error ellipse: s-maj=63.9km s-min=42.2km az=144.0*
ISC 26 11:25:12.4±0.8,**39.24N**±0.06×**73.34E**±0.05,**h10**km,**n42,** σ1§**24**/51,**mb4.8**/15,**12C-8D,Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**1.22**	**282**	⇓*iP*	**Pg**	**11 25 35.9**	**+0.1**
	baz=76						
DRK				⇓*iS*	**Sn**	**11 25 54.1**	**+1.6**
	baz=76						
OHH	**Osh**	**1.35**	**342**	⇑*iP*	**Pn**	**11 25 35.9**	**-1.5**
	baz=36						
OHH				⇑*eS*	**Sb**	**11 25 53.2**	**-2.0**
	baz=36						
BTK	**Batken**	**2.11**	**293**	⇑*eP*	**Pb**	**11 25 50.3**	**-0.5**
	baz=90						
BTK				⇑*eS*	**Sg**	**11 26 19.1**	**-1.1**
	baz=90						
GAR	**Garm**	**2.37**	**265**	⇑*eP*	**Pb**	**11 25 55.0**	**-0.2**
	baz=63						
GAR				⇑*eS*	**Sg**	**11 26 26.7**	**-1.7**
	baz=63						
GAR	**Garm**	**2.37**	**265**	Pn	**Pn**	**11 25 49.4**	**-2.0**
ARLS	**Aral**	**2.72**	**16**	⇓*eP*	**Pn**	**11 25 56.5**	**+0.2**
	baz=15						
ARLS				⇓*eS*	**Sn**	**11 26 28.9**	**-0.4**
	baz=15						
ARK	**Arkit**	**2.76**	**338**	⇑*iP*	**Pn**	**11 25 57.8**	**+1.0**

baz=21
UCH Uchtor 3.11 16⇑*e*P Pn 11 26 02.2 +0.3
baz=15
UCH ⇑*e*S Sn 11 26 39.2 -0.2
baz=15
AAK Ala-Archa 3.50 14 Sn Sn 11 26 51.6 +3.0
29nm,0.3s,baz=38,slow=23,SNR=1.0
AAK Ala-Archa 3.50 14⇓*e*P Pn 11 26 07.5 +0.5
baz=13
AAK ⇓*e*S Sn 11 26 48.0 -0.6
baz=13
TAS Tashkent 3.73 305⇓*i*P Pn 11 26 12.3 +2.3
baz=3.0
TAS ⇓*e*S Sn 11 26 57.2 +3.2
baz=3.0
BOOM Boomskoye usch 3.79 30 Pn Pn 11 26 10.7 -0.4
KDJ Kajisay 4.10 44 Pn Pn 11 26 15.9 +0.6
BR131 Keskin Array S 30.48 284 P P 11 31 25.8 +0.3
BR131 IAmb IAmb 11 31 32.0
comp=Z,28nm,1.1s
BRTR Keskin Array B 30.48 284 P P 11 31 24.9 -0.6
AKASG Malin Array Be 32.78 305 P P 11 31 45.8 +0.4
comp=Z,2.2nm,0.4s,baz=77,slow=8.2,SNR=4.8
comp=Z,2.2nm,0.4s
FIA1 FINESS Array S 36.31 323 P P 11 32 15.0 -0.9
FINES FINESS Array B 36.31 323 P P 11 32 15.5 -0.4
comp=Z,30nm,1.0s,baz=106,slow=10,SNR=6.5
comp=Z,30nm,1.0s
FINES FINESS Array B 36.31 323 P P 11 32 15.2 -0.6
ARCES ARCESS Array B 39.36 336 P P 11 32 41.3 -0.3
comp=Z,7.9nm,0.7s,baz=109,slow=8.3,SNR=6.3
comp=Z,7.9nm,0.7s
ARCES ARCESS Array B 39.36 336 P P 11 32 40.6 -1.0
ARCES IAmb IAmb 11 32 57.1
comp=Z,24nm,1.1s
HFS Hagfors 42.11 320 P P 11 33 03.2 -1.1
comp=Z,19nm,0.5s,baz=105,slow=11,SNR=11
comp=Z,19nm,0.5s
GEC2 GERESS Array S 42.92 303 P P 11 33 09.9 -1.3
GERES GERESS Array B 42.92 303 P P 11 33 12.7 +1.5
comp=Z,1.5nm,0.5s,baz=65,slow=10.0,SNR=6.1
comp=Z,1.5nm,0.5s
GERES GERESS Array B 42.92 303 P P 11 33 11.2 0.0
CLL Collm 42.97 307 P P 11 33 11.0 -0.5
NC405 NORSAR Array S 43.11 321 P P 11 33 11.5 -1.0
NC303 NORSAR Array S 43.28 321 P P 11 33 12.5 -1.4
NC303 IAmb IAmb 11 33 14.8
comp=Z,36nm,0.8s
NB2 NORSAR Subarra 43.36 321 P P 11 33 14.0 -0.5
comp=Z,2.3nm,0.4s,baz=90,slow=8.6
NOA NORSAR Array B 43.36 321 P P 11 33 13.9 -0.5
comp=Z,6.2nm,0.6s,baz=101,slow=7.3,SNR=5.6
comp=Z,6.2nm,0.6s
KONO Kongsberg 44.17 319 P P 11 33 20.0 -1.0
SENIN Lac Senin/Sane 47.71 301 P P 11 33 49.1 -0.2
SENIN IAmb IAmb 11 33 51.0
comp=Z,12nm,0.8s
ESK Eskdalemuir 51.66 315 P P 11 34 18.3 -0.8
ESK IAmb IAmb 11 34 30.2
comp=Z,25nm,1.2s
ESBB Sonseca Array 57.83 297 P P 11 35 04.0 -0.1
ESBB IAmb IAmb 11 35 19.9
comp=Z,13nm,1.4s
ESDC Sonseca Array 57.84 297 P P 11 35 04.5 +0.4
comp=Z,2.4nm,0.7s,baz=58,slow=6.6,SNR=4.6
comp=Z,2.4nm,0.7s
TOA0 Torodi Ar. Sit 67.63 269 P P 11 36 10.0 +0.3
TOA0 IAmb IAmb 11 36 13.7
comp=Z,10.0nm,1.1s
TORD Torodi Ar. Bea 67.63 269 P P 11 36 13.0 +3.3
comp=Z,3.4nm,0.6s,baz=46,slow=6.2,SNR=2.4
comp=Z,3.4nm,0.6s
TORD Torodi Ar. Bea 67.63 269 P P 11 36 09.2 -0.5
TORD IAmb IAmb 11 36 13.7
comp=Z,12nm,1.2s
ILAR Eielson Array 71.63 17 P P 11 36 39.7 +6.1
comp=Z,4.9nm,1.1s,baz=327,slow=4.8,SNR=2.4
comp=Z,4.9nm,1.1s
ILAR Eielson Array 71.63 17 P P 11 36 33.7 0.0
LBTB Lobatse 77.95 223 P P 11 37 11.9 +1.1

*IDC **26** 11:28:25.5±1.1,39.˚24N×73.˚73E,h0km,mb4.2/13, mbtmp4.2/15,ML3.6/2,MS5.6/1,Error ellipse: s-maj=23.5km s-min=19.1km az=143.0*
*KRNET **26** 11:28:25.2±0.1,39.˚45N×73.˚68E,mb4.7*
*NEIC **26** 11:28:28.0±1.0,39.˚41N±0.˚10×73.˚53E±0.˚08,h10km±1km, mb4.9/12,Error ellipse: s-maj=18.6km s-min=6.4km az=151.0*
ISC 26 11:28:27.8±0.7,39.˚43N±0.˚05×73.˚58E±0.˚04,h10km,n50, σ1s10/60,mb4.5/18,16C-6D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OHH	**Osh**	**1.26**	**331**	⇑*e*P		**Pn**	**11 28 49.2**	**-2.3**
OHH	baz=28			⇑*e*S		**Sb**	**11 29 06.9**	**-1.0**
DRK	**Karamyk**	**1.38**	**273**	⇑*e*P		**Pn**	**11 28 52.8**	**-0.6**
DRK	baz=72			⇑*e*S		**Sg**	**11 29 12.7**	**+0.4**
DRK	**Karamyk**	**1.38**	**273**	Pn		**Pn**	**11 28 52.8**	**-0.6**
BTK	**Batken**	**2.22**	**287**	⇓*e*P		**Pn**	**11 29 06.0**	**+1.2**
BTK	baz=86			⇓*e*S		**Sb**	**11 29 35.9**	**+0.1**
BTK	**Batken**	**2.22**	**287**	Pn		**Pn**	**11 29 05.0**	**+0.2**
ARLS	**Aral**	**2.50**	**13**	⇑*e*P		**Pn**	**11 29 08.4**	**-0.2**
ARLS	baz=11			⇑*i*S		**Sn**	**11 29 39.8**	**+0.6**
GAR	**Garm**	**2.57**	**262**	⇓*e*P		**Pn**	**11 29 11.2**	**+1.5**
GAR	baz=61			⇓*e*S		**Sb**	**11 29 44.5**	**-1.4**
GAR	**Garm**	**2.57**	**262**	Pn		**Pn**	**11 29 08.8**	**-0.8**
ARK	**Arkit**	**2.67**	**333**	⇑*i*P		**Pn**	**11 29 11.8**	**+0.8**
ARK	baz=32			⇑*i*S		**Sn**	**11 29 45.6**	**+2.1**
TRKS	**Terek-Say**	**2.81**	**319**	⇓*i*P		**Pn**	**11 29 12.8**	**-0.1**
TRKS	baz=17			⇓*i*S		**Sn**	**11 29 47.6**	**+0.6**
UCH	**Uchtor**	**2.89**	**14**	⇑*i*P		**Pn**	**11 29 14.0**	**-0.3**
UCH	baz=13			⇑*i*S		**Sn**	**11 29 49.9**	**+0.6**
EKS2	**Erkin-Say**	**3.24**	**3**	⇑*e*P		**Pn**	**11 29 18.8**	**0.0**
EKS2	baz=1.0			⇑*e*S		**Sn**	**11 29 58.1**	**+0.7**
AAK	**Ala-Archa**	**3.28**	**12**	Pn		**Pb**	**11 29 23.8**	**-2.4**
AAK	19nm,0.3s,baz=317,slow=21,SNR=1.8			Sn		**Sb**	**11 30 06.6**	**+0.3**
	7.1nm,0.3s,baz=170,slow=18,SNR=1.2 92nm,0.4s							
AAK	**Ala-Archa**	**3.28**	**12**	⇑*e*P		**Pn**	**11 29 19.2**	**-0.2**
AAK	baz=11			⇑*e*S		**Sn**	**11 29 58.9**	**+0.3**
AAK	**Ala-Archa**	**3.28**	**12**			**Pn**	**11 29 19.4**	**-0.1**
CHGR	**Chuyangaron**	**3.53**	**259**	Pn		**Pn**	**11 29 22.0**	**-0.8**
BOOM	**Boomskoye usch**	**3.54**	**29**	Pn		**Pn**	**11 29 23.7**	**+0.6**
TAS	**Tashkent**	**3.79**	**301**	⇑*e*P		**Pn**	**11 29 27.3**	**+1.1**
TAS	baz=1.0			⇑*e*S		**Sn**	**11 30 13.1**	**+2.3**
KDJ	**Kajisay**	**3.84**	**44**	Pn		**Pn**	**11 29 28.2**	**+1.0**
KK31	**Karatay Array**	**4.34**	**329**	Pn		**Pn**	**11 29 33.9**	**+0.1**
KKAR	**Karatay Array**	**4.34**	**329**	Pn		**Pn**	**11 29 34.4**	**+0.5**
ABKAR	**Akbulak array**	**13.83**	**320**	Pn		**Pn**	**11 31 41.5**	**-2.3**
ZALV	**Zalesovo Beam**	**16.41**	**24**	Pn		**P**	**11 32 20.6**	**-0.3**
	0.3nm,0.3s,baz=207,slow=12,SNR=1.9 20nm,0.9s							
KIRV	**Kirov**	**24.64**	**329**	LR		LR	11 44 08.2	
	comp=Z,11μm,18.2s,baz=166,slow=38							
RAYN	**Ar Rayn**	**28.57**	**245**	P		**P**	**11 34 22.1**	**-1.9**
RAYN	comp=Z,28nm,1.4s			IAmb		IAmb	11 34 27.7	
BRTR	**Keskin Array B**	**30.62**	**284**	P		**P**	**11 34 43.4**	**+1.2**
	comp=Z,1.3nm,0.8s,baz=99,slow=7.9,SNR=2.7 comp=Z,1.3nm,0.8s							
AKASG	**Malin Array Be**	**32.83**	**305**	P		**P**	**11 35 01.5**	**+0.2**
	comp=Z,1.1nm,0.5s,baz=77,slow=8.7,SNR=1.9 comp=Z,1.1nm,0.5s							
MLR	**Muntele Rosu**	**35.24**	**296**	P		**P**	**11 35 25.1**	**+2.6**
	comp=Z,4.9nm,0.7s,baz=62,slow=18,SNR=1.4 comp=Z,4.9nm,0.7s							
FINES	**FINESS Array B**	**36.28**	**323**	P		**P**	**11 35 31.6**	**+0.6**
	comp=Z,24nm,1.0s,baz=110,slow=11,SNR=1.9 comp=Z,24nm,1.0s							
ARCES	**ARCESS Array B**	**39.27**	**336**	P		**P**	**11 35 57.3**	**+1.0**
	comp=Z,16nm,1.1s,baz=108,slow=8.6,SNR=1.6 comp=Z,16nm,1.1s							
KLR	**Kul'dur**	**41.80**	**57**	P		**P**	**11 36 18.1**	**+0.8**
	comp=Z,2.0nm,0.5s,baz=286,slow=7.4,SNR=6.4 comp=Z,2.0nm,0.5s							
HFS	**Hagfors**	**42.09**	**320**	P		**P**	**11 36 20.4**	**+0.8**
	comp=Z,13nm,0.9s,baz=105,slow=11,SNR=8.5 comp=Z,13nm,0.9s							
NOA	**NORSAR Array B**	**43.33**	**321**	P		**P**	**11 36 30.6**	**+0.9**
	comp=Z,4.3nm,1.0s,baz=94,slow=7.6,SNR=2.0 comp=Z,4.3nm,1.0s							
ESDC	**Sonseca Array**	**57.92**	**297**	P		**P**	**11 38 21.1**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=51,slow=6.3,SNR=1.3 comp=Z,0.5nm,0.7s							
TOLK	**Toolik Lake Re**	**67.57**	**16**	P		**P**	**11 39 24.9**	**+0.9**
TOA0	**Torodi Ar. Sit**	**67.82**	**269**	P		**P**	**11 39 26.1**	**-0.2**
TORD	**Torodi Ar. Bea**	**67.82**	**269**	P		**P**	**11 39 25.8**	**-0.5**
	comp=Z,0.9nm,0.5s,baz=48,slow=5.0,SNR=1.9 comp=Z,0.9nm,0.5s							
TORD	**Torodi Ar. Bea**	**67.82**	**269**	P		**P**	**11 39 25.9**	**-0.5**
A36M	**Sachs Harbour**	**68.09**	**6**	P		**P**	**11 39 27.6**	**+0.4**
NRS	**Narsarsuaq**	**68.22**	**333**	P		**P**	**11 39 28.4**	**+0.3**
IMAR	**Indian Mountai**	**68.76**	**19**	P		**P**	**11 39 31.8**	**+0.3**
INK	**Inuvik**	**70.68**	**10**	P		**P**	**11 39 44.2**	**+1.0**
	comp=Z,1.1nm,0.6s,baz=335,slow=9.2,SNR=4.3 comp=Z,1.1nm,0.6s							
INK	**Inuvik**	**70.68**	**10**	IAmb		IAmb	11 40 00.9	
	comp=Z,12nm,1.3s							
C36M	**Paulatuk**	**70.76**	**7**	P		**P**	**11 39 44.0**	**+0.4**
C36M	comp=Z,11nm,1.2s			IAmb		IAmb	11 39 47.2	
YKA	**Yellowknife Ar**	**78.21**	**4**	P		**P**	**11 40 26.6**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=350,slow=5.5,SNR=4.5 comp=Z,0.5nm,0.6s							
WB0	**Warramunga Arr**	**81.77**	**124**	P		**P**	**11 40 46.6**	**-0.3**
WB0	comp=Z,16nm,1.4s			IAmb		IAmb	11 40 55.8	
WRA	**Warramunga Arr**	**81.86**	**124**	P		**P**	**11 40 44.5**	**-3.0**
	comp=Z,0.6nm,0.8s,baz=328,slow=5.0,SNR=1.2 comp=Z,0.6nm,0.8s							
WRAB	**Tennant Creek**	**81.86**	**124**	P		**P**	**11 40 47.8**	**+0.3**
WRAB	comp=Z,19nm,1.5s			IAmb		IAmb	11 40 48.9	
WB2	**Warramunga Arr**	**81.87**	**124**	P		**P**	**11 40 47.6**	**+0.1**
WB2	comp=Z,20nm,1.4s			IAmb		IAmb	11 41 01.8	
WR0	**Warramunga Arr**	**82.01**	**124**	P		**P**	**11 40 47.6**	**-0.5**

*KRNET **26** 11:29:56.4±0.1,39.˚43N×73.˚66E,mb4.8*
*IDC **26** 11:29:58.0±1.0,39.˚41N×73.˚38E,h0km,mb4.2/11, mbtmp4.2/13,ML3.9/2,Error ellipse: s-maj=22.0km s-min=18.2km az=105.0*
ISC 26 11:29:58.1±1.8,39.˚51N±0.˚06×73.˚41E±0.˚05,h0km±11km, n24,σ1s54/35,mb4.2/11,14C-6D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OHH	**Osh**	**1.12**	**335**	⇑*e*P		**Pb**	**11 30 20.2**	**-0.3**
OHH	baz=29			⇑*e*S		**Sn**	**11 30 38.0**	**+0.6**
DRK	**Karamyk**	**1.25**	**269**	⇑*i*P		**Pg**	**11 30 23.2**	**+1.2**
DRK	baz=73			⇑*e*S		**Sn**	**11 30 42.8**	**+2.0**
BTK	**Batken**	**2.07**	**286**	⇑*i*P		**Pb**	**11 30 36.4**	**-0.3**
BTK	baz=87			⇑*e*S		**Sg**	**11 31 05.8**	**+1.1**
ARLS	**Aral**	**2.45**	**16**	⇑*e*P		**Pn**	**11 30 39.1**	**-0.5**
ARLS	baz=12			⇑*e*S		**Sn**	**11 31 10.4**	**+0.1**
GAR	**Garm**	**2.46**	**259**	⇑*e*P		**Pb**	**11 30 41.4**	**-1.8**
GAR	baz=62			⇑*i*S		**Sg**	**11 31 14.3**	**-2.7**
ARK	**Arkit**	**2.54**	**335**	⇓*e*P		**Pn**	**11 30 42.4**	**+1.7**
ARK	baz=32			⇓*i*S		**Sb**	**11 31 15.8**	**-0.7**
TRKS	**Terek-Say**	**2.66**	**320**	⇑*e*P		**Pn**	**11 30 43.6**	**+1.2**
TRKS	baz=18			⇑*e*S		**Sb**	**11 31 18.0**	**-2.0**
UCH	**Uchtor**	**2.84**	**17**	⇑*e*P		**Pn**	**11 30 44.8**	**-0.4**
UCH	baz=13			⇑*e*S		**Sn**	**11 31 20.1**	**-0.3**
AAK	**Ala-Archa**	**3.23**	**14**	Pn		**Pb**	**11 30 54.9**	**-1.6**
AAK	21nm,0.3s,baz=174,slow=20,SNR=1.8			Sn		**Sb**	**11 31 38.2**	**+1.7**
	30nm,0.3s,baz=15,slow=20,SNR=2.3 95nm,0.5s							
AAK	**Ala-Archa**	**3.23**	**14**	⇓*e*P		**Pn**	**11 30 50.2**	**-0.1**
AAK	baz=11			⇓*e*S		**Sn**	**11 31 29.6**	**0.0**
TAS	**Tashkent**	**3.63**	**301**	⇓*i*P		**Pn**	**11 30 58.1**	**+2.5**
TAS	baz=1.0			⇓*i*S		**Sb**	**11 31 43.0**	**-4.7**
WMQ	**Urumqi**	**11.52**	**63**	*e*P		**Pn**	**11 32 45.5**	**+1.6**
ZALV	**Zalesovo Beam**	**16.39**	**24**	Pn		**P**	**11 33 51.6**	**-0.8**
	1.4nm,0.3s,baz=224,slow=12,SNR=10 7.4nm,0.8s							
FINES	**FINESS Array B**	**36.14**	**323**	P		**P**	**11 37 02.0**	**+0.4**
	34nm,1.2s,baz=104,slow=12,SNR=1.9 34nm,1.2s							
ARCES	**ARCESS Array B**	**39.15**	**336**	P		**P**	**11 37 28.6**	**+1.6**
	14nm,1.1s,baz=122,slow=8.6,SNR=2.0 14nm,1.1s							
KLR	**Kul'dur**	**41.87**	**57**	P		**P**	**11 37 49.6**	**-0.2**
	1.0nm,0.4s,baz=11,slow=15,SNR=1.7 1.0nm,0.4s							
HFS	**Hagfors**	**41.94**	**320**	P		**P**	**11 37 50.7**	**+0.5**
	6.0nm,0.8s,baz=103,slow=11,SNR=1.4 6.0nm,0.8s							
GERES	**GERESS Array B**	**42.82**	**303**	P		**P**	**11 37 58.9**	**+1.2**
	2.0nm,1.0s,baz=74,slow=10,SNR=1.7 2.0nm,1.0s							
ESDC	**Sonseca Array**	**57.76**	**297**	P		**P**	**11 39 50.0**	**-0.9**
	0.6nm,0.7s,baz=64,slow=7.6,SNR=4.7 0.6nm,0.7s							
TORD	**Torodi Ar. Bea**	**67.69**	**269**	P		**P**	**11 40 56.8**	**-0.7**
	0.7nm,0.5s,baz=46,slow=6.2,SNR=1.4 0.7nm,0.5s							
ILAR	**Eielson Array**	**71.36**	**17**	P		**P**	**11 41 18.5**	**-0.9**
	0.6nm,0.8s,baz=336,slow=2.0,SNR=2.5 0.6nm,0.8s							
YKA	**Yellowknife Ar**	**78.14**	**4**	P		**P**	**11 41 57.9**	**-0.8**
	0.6nm,0.7s,baz=349,slow=4.9,SNR=2.0 0.6nm,0.7s							
WRA	**Warramunga Arr**	**82.02**	**124**	P		**P**	**11 42 19.9**	**-0.3**
	2.0nm,0.8s,baz=327,slow=4.3,SNR=5.2 2.0nm,0.8s							
ASAR	**Alice Springs**	**84.47**	**127**	P		**P**	**11 42 34.2**	**+1.4**
	1.4nm,0.9s,baz=328,slow=3.9,SNR=3.8 1.4nm,0.9s							

*IDC **26** 11:30:19.4±0.7,39.˚28N×73.˚57E,h0km,mb4.4/26, mbtmp4.4/32,ML3.7/6,Error ellipse: s-maj=15.1km s-min=10.7km az=164.0*
*MOS **26** 11:30:21.9±1.1,39.˚44N×73.˚58E,h22km,mb4.9/6,Error ellipse: s-maj=11.5km s-min=8.2km az=43.8*
*KRNET **26** 11:30:22.1±0.1,39.˚50N×73.˚49E,mb4.8*
*NEIC **26** 11:30:22.2±1.1,39.˚5N±0.˚1×73.˚6E±0.˚1,h10km±1km, mb4.9/24,Error ellipse: s-maj=20.8km s-min=8.3km az=214.0*
ISC 26 11:30:20.4±2.8,39.˚42N±0.˚05×73.˚54E±0.˚04,h1km±17km, n91,σ1s13/102,mb4.6/39,10C-10D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OHH	**Osh**	**1.24**	**333**	⇑*e*P		**Pn**	**11 30 43.9**	**-1.1**
OHH	baz=32			⇑*e*S		**Sb**	**11 31 00.1**	**-1.2**
DRK	**Karamyk**	**1.35**	**273**	⇓*e*P		**Pn**	**11 30 46.7**	**+0.1**
DRK	baz=70			⇓*e*S		**Sb**	**11 31 05.0**	**+0.5**
DRK	**Karamyk**	**1.35**	**273**	Pn		**Pn**	**11 30 46.7**	**+0.1**
BTK	**Batken**	**2.19**	**288**	⇓*i*P		**Pb**	**11 31 00.8**	**-0.1**
BTK	baz=86			⇓*e*S		**Sb**	**11 31 28.8**	**+0.2**
BTK	**Batken**	**2.19**	**288**	Pn		**Pb**	**11 31 00.9**	**0.0**
BTK	**Batken**	**2.19**	**288**	PN		**Pb**	**11 31 00.9**	**0.0**
ARLS	**Aral**	**2.51**	**14**	⇑*e*P		**Pb**	**11 31 05.0**	**-1.4**
ARLS	baz=15			⇑*e*S		**Sb**	**11 31 36.2**	**-1.6**
GAR	**Garm**	**2.54**	**261**	⇑*e*P		**Pn**	**11 31 05.8**	**+2.9**
GAR	baz=60			⇑*e*S		**Sb**	**11 31 37.9**	**-0.7**
ARK	**Arkit**	**2.66**	**334**	⇑*i*P		**Pn**	**11 31 06.7**	**+2.2**
ARK	baz=34			⇑*i*S		**Sn**	**11 31 39.6**	**+2.1**
TRKS	**Terek-Say**	**2.79**	**320**	⇑*e*P		**Pn**	**11 31 07.8**	**+1.4**
TRKS	baz=19			⇑*i*S		**Sn**	**11 31 41.2**	**+0.4**
UCH	**Uchtor**	**2.90**	**14**	⇓*e*P		**Pn**	**11 31 10.6**	**+2.5**
UCH	baz=16			⇓*e*S		**Sn**	**11 31 45.9**	**+2.0**
AAK	**Ala-Archa**	**3.29**	**12**	Pn		**Pb**	**11 31 18.8**	**-0.9**
AAK	49nm,0.3s,baz=146,slow=3.8,SNR=5.3			Sn		**Sb**	**11 32 01.4**	**+1.0**
	20nm,0.3s,baz=353,slow=22,SNR=2.3 161nm,0.5s							
AAK	**Ala-Archa**	**3.29**	**12**	⇓*e*P		**Pn**	**11 31 15.9**	**+2.6**
AAK	baz=13			⇓*e*S		**Sn**	**11 31 55.1**	**+1.9**
TAS	**Tashkent**	**3.76**	**302**	⇓*i*P		**Pn**	**11 31 22.1**	**+2.6**
TAS	baz=1.0			⇓*i*S		**Sn**	**11 32 06.0**	**+1.6**
MKAR	**Makanchi Array**	**9.76**	**38**	Pn		**Pn**	**11 32 43.3**	**+1.4**
	0.5nm,0.3s,baz=230,slow=16,SNR=1.0							
MKAR	0.9nm,0.3s,baz=228,slow=23,SNR=2.0 5.8nm,0.7s			Lg		Lg	11 35 30.8	
WMQ	**Urumqi**	**11.47**	**63**	*e*P		**Pn**	**11 33 09.0**	**+3.6**
GEYT	**Alibeck**	**12.15**	**268**	Pn		**Pn**	**11 33 12.7**	**-1.9**
	1.1nm,0.3s,baz=79,slow=15,SNR=0.8 9.1nm,0.7s							
ABKAR	**Akbulak array**	**13.81**	**320**	Pn		**Pn**	**11 33 35.7**	**-1.5**
ABKAR	**Akbulak array**	**13.81**	**320**	Pn		**Pn**	**11 33 35.5**	**-1.7**
AKTO	**Aktyubinsk**	**15.52**	**320**	Pn		**Pn**	**11 33 59.9**	**-0.5**
	0.9nm,0.3s,baz=122,slow=18,SNR=1.4 21nm,0.9s							
ZALV	**Zalesovo Beam**	**16.43**	**24**	Pn		**Pn**	**11 34 11.8**	**-0.3**
	0.7nm,0.3s,baz=209,slow=11,SNR=4.1 7.3nm,0.8s							
ARU	**Arti**	**19.68**	**335**	P		**Pn**	**11 34 52.6**	**+0.5**
	baz=159,slow=23,SNR=1.6 23nm,0.8s							
BELG	**Belogornoye**	**22.07**	**315**	P		**P**	**11 35 17.2**	**+0.7**
	60nm,1.1s,baz=90,slow=6.1,SNR=1.2 60nm,1.1s							
GNI	**Garni**	**22.10**	**281**	P		**P**	**11 35 18.5**	**+1.2**
	13nm,0.7s,baz=24,slow=12,SNR=2.5 13nm,0.7s							
ONI	**Oni**	**22.86**	**288**	P		**P**	**11 35 26.4**	**+1.1**
ONI	**Oni**	**22.86**	**288**	P		**P**	**11 35 26.4**	**+1.1**
ONI	comp=Z,47nm,0.6s			pmax		pmax		
KBZ	**Khabaz**	**23.25**	**291**	P		**P**	**11 35 30.8**	**+1.6**
	comp=Z,7.6nm,0.8s,baz=101,slow=10,SNR=1.4 comp=Z,7.6nm,0.8s							
KVAR	**Kislovodsk Arr**	**23.40**	**291**	P		**P**	**11 35 32.4**	**+1.6**
	comp=Z,36nm,1.1s,baz=157,slow=6.4,SNR=1.7 comp=Z,36nm,1.1s							
KIV	**Kislovodsk**	**23.40**	**291**	*e*P		**P**	**11 35 31.3**	**+0.5**
KIV	comp=Z,21nm,1.1s			pmax		pmax		
SONM	**Songino Array**	**25.07**	**60**	P		**P**	**11 35 47.7**	**+1.2**
	comp=Z,5.4nm,0.8s,baz=260,slow=9.4,SNR=1.4 comp=Z,5.4nm,0.8s							
ASF	**Jabal al Asfar**	**30.43**	**268**	P		**P**	**11 36 33.7**	**-0.8**
	comp=Z,2.3nm,0.7s,baz=99,slow=6.4,SNR=1.9 comp=Z,2.3nm,0.7s							
BR131	**Keskin Array S**	**30.58**	**284**	P		**P**	**11 36 36.1**	**+0.3**
BR131	comp=Z,11nm,0.7s			IAmb		IAmb	11 36 37.9	
BR131	**Keskin Array S**	**30.58**	**284**	P		**P**	**11 36 36.2**	**+0.3**
BR131	comp=Z,11nm,0.7s			pmax		pmax		
BRTR	**Keskin Array B**	**30.58**	**284**	P		**P**	**11 36 36.3**	**+0.4**
	comp=Z,6.4nm,0.7s,baz=87,slow=8.0,SNR=9.6 comp=Z,6.4nm,0.7s							
BRTR	**Keskin Array B**	**30.58**	**284**	P		**P**	**11 36 37.0**	**+1.2**
AKASG	**Malin Array Be**	**32.80**	**305**	P		**P**	**11 36 54.5**	**-0.5**
	comp=Z,1.4nm,0.4s,baz=80,slow=8.2,SNR=11 comp=Z,1.4nm,0.4s							
MLR	**Muntele Rosu**	**35.21**	**296**	P		**P**	**11 37 14.8**	**-1.4**
	comp=Z,6.5nm,0.7s,baz=142,slow=12,SNR=1.7 comp=Z,6.5nm,0.7s							
BUR08	**Bucovina Ar. S**	**35.50**	**300**	P		**P**	**11 37 18.9**	**+0.2**
BUR08	comp=Z,24nm,1.2s			IAmb		IAmb	11 37 30.1	
FIA1	**FINESS Array S**	**36.26**	**323**	P		**P**	**11 37 25.6**	**+0.8**
FINES	**FINESS Array B**	**36.26**	**323**	P		**P**	**11 37 25.0**	**+0.1**
	comp=Z,4.7nm,0.6s,baz=112,slow=8.7,SNR=7.4 comp=Z,4.7nm,0.6s							
FINES	**FINESS Array B**	**36.26**	**323**	P		**P**	**11 37 24.6**	**-0.3**
FINES	**FINESS Array B**	**36.26**	**323**	P		**P**	**11 37 24.6**	**-0.3**
KARP	**Karpathos**	**36.69**	**279**	P		**P**	**11 37 28.9**	**0.0**
IDI	**Anoyia**	**38.52**	**280**	P		**P**	**11 37 43.3**	**-1.1**
	comp=Z,7.2nm,0.8s,baz=22,slow=18,SNR=2.0 comp=Z,7.2nm,0.8s							
ARCES	**ARCESS Array B**	**39.26**	**336**	P		**P**	**11 37 49.5**	**-0.6**
	comp=Z,6.0nm,0.9s,baz=112,slow=6.8,SNR=9.1 comp=Z,6.0nm,0.9s							
KLR	**Kul'dur**	**41.83**	**57**	P		**P**	**11 38 11.5**	**-0.2**
	comp=Z,2.3nm,0.4s,baz=266,slow=7.2,SNR=9.5 comp=Z,2.3nm,0.4s							
HFS	**Hagfors**	**42.07**	**320**	P		**P**	**11 38 13.6**	**+0.2**
	comp=Z,9.0nm,0.6s,baz=100,slow=12,SNR=19 comp=Z,9.0nm,0.6s							
GEC2	**GERESS Array S**	**42.95**	**303**	P		**P**	**11 38 21.6**	**+0.7**
GERES	**GERESS Array B**	**42.95**	**303**	P		**P**	**11 38 21.1**	**+0.2**
	comp=Z,1.2nm,0.5s,baz=65,slow=9.2,SNR=9.9 comp=Z,1.2nm,0.5s							
GERES	**GERESS Array B**	**42.95**	**303**	P		**P**	**11 38 21.4**	**+0.5**
GERES	**GERESS Array B**	**42.95**	**303**	P		**P**	**11 38 21.4**	**+0.5**
NC405	**NORSAR Array S**	**43.07**	**321**	P		**P**	**11 38 21.7**	**+0.1**
NB2	**NORSAR Subarra**	**43.31**	**321**	P		**P**	**11 38 23.0**	**-0.6**
	comp=Z,3.2nm,0.5s,baz=91,slow=7.9							
NOA	**NORSAR Array B**	**43.31**	**321**	P		**P**	**11 38 22.7**	**-0.9**
	comp=Z,5.1nm,0.7s,baz=92,slow=7.9,SNR=7.3 comp=Z,5.1nm,0.7s							
KONO	**Kongsberg**	**44.14**	**319**	P		**P**	**11 38 30.1**	**-0.1**
KONO	**Kongsberg**	**44.14**	**319**	P		**P**	**11 38 30.1**	**-0.1**
KONO	comp=Z,97nm,1.3s			pmax		pmax		
DAVOX	**Davos/Dischmat**	**45.92**	**301**	P		**P**	**11 38 43.9**	**-0.9**
	comp=Z,3.5nm,0.4s,baz=99,slow=6.0,SNR=8.2 comp=Z,3.5nm,0.4s							
SENIN	**Lac Senin/Sane**	**47.75**	**301**	P		**P**	**11 38 59.0**	**-0.1**
SENIN	comp=Z,17nm,1.2s			IAmb		IAmb	11 39 09.0	
BNI	**Bardonecchia**	**48.55**	**300**	P		**P**	**11 39 05.2**	**-0.1**
BNI	comp=Z,24nm,1.5s			IAmb		IAmb	11 39 15.1	
BNI	**Bardonecchia**	**48.55**	**300**	P		**P**	**11 39 05.2**	**-0.

ESBB	**Sonseca Array**	**57.89**	**297**	P	**P**	**11 40 13.1**	**-1.0**
ESBB				IAmb	IAmb	11 40 20.9	
	comp=Z,11nm,1.5s						
ESDC	**Sonseca Array**	**57.89**	**297**	P	**P**	**11 40 13.6**	**-0.4**
	comp=Z,2.2nm,0.6s,baz=55,slow=7.2,SNR=15						
	comp=Z,2.2nm,0.6s						
ESDC	**Sonseca Array**	**57.89**	**297**	P	**P**	**11 40 13.3**	**-0.7**
EUNU	**Eureka**	**60.24**	**356**	P	**P**	**11 40 31.4**	**+1.6**
TOLK	**Toolik Lake Re**	**67.58**	**16**	P	**P**	**11 41 17.9**	**-0.3**
TOLK				IAmb	IAmb	11 41 28.5	
	comp=Z,11nm,1.4s						
TOA0	**Torodi Ar. Sit**	**67.78**	**269**	P	**P**	**11 41 19.4**	**-0.8**
TORD	**Torodi Ar. Bea**	**67.78**	**269**	P	**P**	**11 41 18.5**	**-1.7**
	comp=Z,1.8nm,0.6s,baz=58,slow=5.0,SNR=10						
	comp=Z,1.8nm,0.6s						
TORD	**Torodi Ar. Bea**	**67.78**	**269**	P	**P**	**11 41 18.7**	**-1.5**
IMAR	**Indian Mountai**	**68.78**	**19**	P	**P**	**11 41 25.1**	**-0.6**
BMAR	**Burnt Mountain**	**69.62**	**15**	P	**P**	**11 41 31.2**	**+0.3**
INK	**Inuvik**	**70.69**	**10**	P	**P**	**11 41 37.2**	**-0.2**
	comp=Z,2.4nm,0.5s,baz=348,slow=5.4,SNR=11						
	comp=Z,2.4nm,0.5s						
INK	**Inuvik**	**70.69**	**10**	P	**P**	**11 41 38.4**	**+1.0**
INK	**Inuvik**	**70.69**	**10**	P	**P**	**11 41 38.4**	**+1.0**
INK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
C36M	**Paulatuk**	**70.77**	**7**	P	**P**	**11 41 37.6**	**-0.2**
C36M				IAmb	IAmb	11 41 55.8	
	comp=Z,13nm,1.3s						
ILAR	**Eielson Array**	**71.41**	**17**	P	**P**	**11 41 40.9**	**-1.0**
	comp=Z,1.8nm,0.8s,baz=320,slow=5.2,SNR=7.0						
	comp=Z,1.8nm,0.8s						
BCAR	**Beaver Creek A**	**74.02**	**16**	P	**P**	**11 41 57.6**	**+0.2**
LBTB	**Lobatse**	**78.18**	**223**	P	**P**	**11 42 21.8**	**+0.2**
LBTB				IAmb	IAmb	11 42 23.1	
	comp=Z,6.7nm,1.1s						
LBTB	**Lobatse**	**78.18**	**223**	P	**P**	**11 42 21.8**	**+0.2**
LBTB				pmax	pmax		
	comp=Z,7.0nm,1.1s						
YKA	**Yellowknife Ar**	**78.22**	**4**	P	**P**	**11 42 20.5**	**-0.7**
	comp=Z,1.7nm,0.6s,baz=352,slow=5.7,SNR=11						
	comp=Z,1.7nm,0.6s						
WB0	**Warramunga Arr**	**81.80**	**124**	P	**P**	**11 42 40.7**	**-0.5**
WB0				IAmb	IAmb	11 43 05.2	
	comp=Z,20nm,1.4s						
WRA	**Warramunga Arr**	**81.89**	**124**	P	**P**	**11 42 40.6**	**-1.1**
	comp=Z,1.3nm,0.7s,baz=329,slow=5.4,SNR=8.8						
	comp=Z,1.3nm,0.7s						
WRA	**Warramunga Arr**	**81.89**	**124**	P	**P**	**11 42 41.2**	**-0.5**
WRA	**Warramunga Arr**	**81.89**	**124**	P	**P**	**11 42 41.2**	**-0.5**
WRA				pmax	pmax		
	comp=Z,1.0nm,1.2s						
WB2	**Warramunga Arr**	**81.90**	**124**	P	**P**	**11 42 41.3**	**-0.5**
WB2				IAmb	IAmb	11 42 47.6	
	comp=Z,12nm,1.1s						
WR0	**Warramunga Arr**	**82.03**	**124**	P	**P**	**11 42 42.0**	**-0.5**
WR0				IAmb	IAmb	11 42 44.6	
	comp=Z,21nm,1.4s						
ASAR	**Alice Springs**	**84.34**	**127**	P	**P**	**11 42 53.5**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=304,slow=5.0,SNR=5.2						
	comp=Z,0.5nm,0.6s						
PLCA	**Paso Flores**	**152.60**	**256**	PKPbc	**PKPbc**	**11 50 18.0**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=314,slow=0.2,SNR=6.3						
PLCA	**Paso Flores**	**152.60**	**256**	PKIKP	**PKPbc**	**11 50 18.0**	**-0.6**

*IDC **26** 11:32:43.4±0.5,39.°33N×73.°77E,h0km,mb4.5/36, mbtmp4.5/42,ML3.8/6,Error ellipse: s-maj=11.8km s-min=9.1km az=154.0*

*MOS **26** 11:32:43.8±1.4,39.°20N×73.°66E,h10km,mb4.9/27,Error ellipse: s-maj=6.3km s-min=4.3km az=93.1*

MOS Felt (IV) at Bordobo; (III-IV) at Nura.

*NEIC **26** 11:32:46.1±2.0,39.°44N±0.°04×73.°74E±0.°07,h10km±1km, mb4.8/53,Error ellipse: s-maj=9.2km s-min=7.6km az=273.0*

*NNC **26** 11:32:46.9±2.4,39.°59N×73.°63E,h0km,mb5.4,mpv4.9, Error ellipse: s-maj=17.5km s-min=8.6km az=171.0*

*SOME **26** 11:32:47.7,39.°70N×73.°62E,h5km,MS4.8*

*KRNET **26** 11:32:47.8±0.1,39.°57N×73.°53E,mb5.0*

ISC 26 11:32:44.6±1.3,39.°51N±0.°03×73.°84E±0.°02,h4km±8km, n272,σ1§57/328,mb4.7/77,28C-25D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.30**	**322**	**⇓*i*P**		**Pn**	**11 33 08.9**	**-0.7**
	baz=29							
OHH				⇓*i*S		**Sn**	**11 33 24.8**	**-2.7**
	baz=29							
OHH	**Osh**	**1.30**	**322**	*i* PG		**Pn**	**11 33 08.9**	**-0.7**
DRK	**Karamyk**	**1.58**	**269**	**⇑*i*P**		**Pn**	**11 33 13.3**	**-0.4**
	baz=67							
DRK				⇑*i*S		**Sn**	**11 33 31.9**	**-2.8**
	baz=67							
DRK	**Karamyk**	**1.58**	**269**	Pn		**Pn**	**11 33 14.8**	**+1.1**
ARLS	**Aral**	**2.38**	**9**	**⇑*i*P**		**Pg**	**11 33 30.0**	**-0.1**
	baz=15							
ARLS				⇑*i*S		**Sg**	**11 34 00.6**	**-0.3**
	baz=15							
ARLS	**Aral**	**2.38**	**9**	*i* PN		**Pg**	**11 33 30.0**	**-0.1**
ARLS				*i* S		**Sg**	**11 34 00.6**	**-0.3**
BTK	**Batken**	**2.39**	**284**	**⇑*i*P**		**Pn**	**11 33 27.0**	**+2.3**
	baz=84							
BTK				⇑*i*S		**Sn**	**11 33 55.3**	**+0.8**
	baz=84							
BTK	**Batken**	**2.39**	**284**	Pn		**Pn**	**11 33 27.0**	**+2.3**
BTK	**Batken**	**2.39**	**284**	*i* PN		**Pn**	**11 33 27.0**	**+2.3**
BTK				*i* S		**Sn**	**11 33 55.3**	**+0.8**
AML	**Almayashu**	**2.62**	**358**	P		**Pb**	**11 33 32.2**	**-0.1**
	SNR=10							
AML	**Almayashu**	**2.62**	**358**	*i* PN		**Pb**	**11 33 32.8**	**+0.4**
AML				*i* S		**Sb**	**11 34 05.9**	**+0.9**
ARK	**Arkit**	**2.69**	**329**	**⇓*i*P**		**Pb**	**11 33 32.2**	**-1.3**
	baz=32							
ARK				⇓*i*S		**Sn**	**11 34 04.6**	**+2.6**
	baz=32							
UCH	**Uchtor**	**2.76**	**10**	P		**Pb**	**11 33 36.0**	**+1.2**
	SNR=8.0							
UCH	**Uchtor**	**2.76**	**10**	**⇓*i*P**		**Pb**	**11 33 35.8**	**+1.0**
	baz=15							
UCH				⇓*i*S		**Sb**	**11 34 10.6**	**+1.4**
	baz=15							
UCH	**Uchtor**	**2.76**	**10**	*i* PN		**Pb**	**11 33 35.8**	**+1.0**
UCH				*i* S		**Sb**	**11 34 10.6**	**+1.4**
GAR	**Garm**	**2.78**	**261**	**⇓*i*P**		**Pn**	**11 33 32.7**	**+2.6**
	baz=58							
GAR				⇓*i*S		**Sn**	**11 34 05.3**	**+1.1**
	baz=58							
GAR	**Garm**	**2.78**	**261**	Pn		**Pn**	**11 33 33.5**	**+3.4**
GAR	**Garm**	**2.78**	**261**	*i* PN		**Pn**	**11 33 32.7**	**+2.6**
GAR				*i* S		**Sn**	**11 34 05.3**	**+1.1**
TRKS	**Terek-Say**	**2.88**	**315**	**⇑*i*P**		**Pn**	**11 33 33.4**	**+1.9**
	baz=17							
TRKS				⇑*i*S		**Sn**	**11 34 06.8**	**+0.1**
	baz=17							
TRKS	**Terek-Say**	**2.88**	**315**	*i* PN		**Pn**	**11 33 33.4**	**+1.9**
TRKS				*i* S		**Sn**	**11 34 06.8**	**+0.1**
EKS2	**Erkin-Say**	**3.15**	**359**	P		**Pb**	**11 33 41.4**	**+0.2**
	SNR=6.5							
EKS2	**Erkin-Say**	**3.15**	**359**	**⇓*i*P**		**Pb**	**11 33 40.1**	**-1.1**
	baz=3.0							
EKS2				⇓*i*S		**Sb**	**11 34 18.3**	**-1.7**
	baz=3.0							
EKS2	**Erkin-Say**	**3.15**	**359**	*i* PN		**Pb**	**11 33 40.1**	**-1.1**
EKS2				*i* S		**Sb**	**11 34 18.3**	**-1.7**
AAK	**Ala-Archa**	**3.16**	**9**	P		**Pb**	**11 33 42.6**	**+1.2**
	SNR=9.0							
AAK	**Ala-Archa**	**3.16**	**9**	Pn		**Pb**	**11 33 41.2**	**-0.2**
	89nm,0.3s,baz=178,slow=10,SNR=9.6							
AAK				Sn		**Sb**	**11 34 21.6**	**+1.2**
	50nm,0.3s,baz=316,slow=23,SNR=1.5							
	263nm,0.4s							
AAK	**Ala-Archa**	**3.16**	**9**	**⇑*i*P**		**Pb**	**11 33 41.0**	**-0.5**
	baz=13							
AAK				⇑*i*S		**Sb**	**11 34 19.8**	**-0.6**
	baz=13							
AAK	**Ala-Archa**	**3.16**	**9**			**Pb**	**11 33 41.5**	**0.0**
KBK	**Karagaybulak**	**3.25**	**15**	P		**Pb**	**11 33 44.1**	**+1.1**
	SNR=5.6							
KBK	**Karagaybulak**	**3.25**	**15**	**⇓*i*P**		**Pb**	**11 33 42.5**	**-0.5**
	baz=19							
KBK				⇓*i*S		**Sb**	**11 34 22.4**	**-0.6**
	baz=19							
KBK	**Karagaybulak**	**3.25**	**15**	*i* PN		**Pb**	**11 33 42.5**	**-0.5**
KBK				*i* S		**Sb**	**11 34 22.4**	**-0.6**

ULHL	**Ulahol**	**3.28**	**33**	P		**Pg**	**11 33 47.8**	**+0.3**
	SNR=14								
ULHL	**Ulahol**	**3.28**	**33**	**⇑*i*P**		**Pb**	**11 33 43.9**	**+0.4**
	baz=37								
ULHL				⇑*i*S		**Sb**	**11 34 25.0**	**+1.1**
	baz=37								
ULHL	**Ulahol**	**3.28**	**33**	*i* PN		**Pb**	**11 33 43.9**	**+0.4**
ULHL				*i* S		**Sb**	**11 34 25.0**	**+1.1**
FRU1	**Bishkek**	**3.35**	**10**	Pn		**Pb**	**11 33 43.0**	**-1.5**
FRU1	**Bishkek**	**3.35**	**10**	PN		**Pb**	**11 33 43.1**	**-1.5**
BOOM	**Boomskoye usch**	**3.37**	**27**	**⇓*i*P**		**Pb**	**11 33 45.0**	**-0.1**
	baz=31								
BOOM				⇓*i*S		**Sb**	**11 34 26.6**	**+0.1**
	baz=31								
BOOM	**Boomskoye usch**	**3.37**	**27**	Pn		**Pb**	**11 33 42.8**	**-2.2**
BOOM	**Boomskoye usch**	**3.37**	**27**	*i* PN		**Pb**	**11 33 45.0**	**-0.1**
BOOM				*i* S		**Sb**	**11 34 26.6**	**+0.1**
CHMS	**Chumysh**	**3.55**	**11**	P		**Pb**	**11 33 48.0**	**-0.1**
	SNR=8.9								
CHMS	**Chumysh**	**3.55**	**11**	**⇓*i*P**		**Pb**	**11 33 46.4**	**-1.6**
	baz=15								
CHMS				⇓*i*S		**Sb**	**11 34 29.0**	**-2.5**
	baz=15								
CHMS	**Chumysh**	**3.55**	**11**	*i* PN		**Pb**	**11 33 46.4**	**-1.6**
CHMS				*i* S		**Sb**	**11 34 29.0**	**-2.5**
CHMS	**Chumysh**	**3.55**	**11**	Pg		Pg	11 34 07.5	+15
	8.5nm,0.8s								
CHMS				Lg		Lg	11 35 07.4		
	2µm,0.6s								
KDJ	**Kajisay**	**3.64**	**43**	**⇑*i*P**		**Pb**	**11 33 49.7**	**+0.1**
	baz=46								
KDJ				⇑*i*S		**Sb**	**11 34 34.7**	**+0.5**
	baz=46								
KDJ	**Kajisay**	**3.64**	**43**	Pn		**Pb**	**11 33 48.1**	**-1.5**
KDJ	**Kajisay**	**3.64**	**43**	*i* PN		**Pb**	**11 33 49.7**	**+0.1**
KDJ				*i* S		**Sb**	**11 34 34.7**	**+0.5**
TKM2	**Tokmak 2**	**3.65**	**21**	**⇑*i*P**		**Pb**	**11 33 48.4**	**-1.5**
	baz=24								
TKM2				⇑*i*S		**Sb**	**11 34 32.8**	**-1.8**
	baz=24								
TKM2	**Tokmak 2**	**3.65**	**21**	*i* PN		**Pb**	**11 33 48.4**	**-1.5**
TKM2				*i* S		**Sb**	**11 34 32.8**	**-1.8**
TKM2	**Tokmak 2**	**3.65**	**21**	⇑Pg		**Pg**	**11 33 54.8**	**+0.2**
	251nm,0.8s								
TKM2				⇑Lg		Lg	11 34 40.6		
	342nm,0.7s								
TARG	**Taragay, Kyrgy**	**3.74**	**52**	**⇓*i*P**		**Pb**	**11 33 51.3**	**-0.2**
	baz=55								
TARG				⇓*i*S		**Sb**	**11 34 38.0**	**+0.6**
	baz=55								
TARG	**Taragay, Kyrgy**	**3.74**	**52**	*i* PN		**Pb**	**11 33 51.3**	**-0.2**
TARG				*i* S		**Sb**	**11 34 38.0**	**+0.6**
CHGR	**Chuyangaron**	**3.74**	**258**	Pn		**Pn**	**11 33 44.9**	**+1.7**
CHGR	**Chuyangaron**	**3.74**	**258**	PN		**Pn**	**11 33 44.9**	**+1.7**
USP	**Ospenovka**	**3.78**	**7**	P		**Pb**	**11 33 49.8**	**-2.2**
	SNR=5.2								
USP	**Ospenovka**	**3.78**	**7**	**⇓*i*P**		**Pb**	**11 33 49.4**	**-2.6**
	baz=11								
USP				⇓*i*S		**Sb**	**11 34 34.3**	**-3.9**
	baz=11								
USP	**Ospenovka**	**3.78**	**7**	*i* PN		**Pb**	**11 33 49.4**	**-2.6**
USP				*i* S		**Sb**	**11 34 34.3**	**-3.9**
DZA	**Taraz**	**3.87**	**332**	*e*P		**Pb**	**11 33 55.5**	**+2.0**
	173nm,0.4s								
DZA				*e*S		**Sb**	**11 34 44.1**	**+3.4**
	1µm,0.5s								
DZA	**Taraz**	**3.87**	**332**	Pg		**Pb**	**11 33 50.0**	**-3.5**
	893nm,0.6s								
DZA				Lg		Lg	11 34 37.3		
	1µm,0.5s								
KST	**Kastek**	**3.87**	**24**	*e*P		**Pg**	**11 33 58.9**	**+0.1**
	179nm,0.6s								
KST				*e*S		**Sg**	**11 34 50.0**	**+1.0**
	856nm,0.5s								
KST	**Kastek**	**3.87**	**24**	Pg		**Pg**	**11 33 57.4**	**-1.4**
	277nm,0.7s								
KST				Lg		Lg	11 34 50.0		
	856nm,0.5s								
IUG	**Iuzhnay**	**3.91**	**314**	*e*P		**Pb**	**11 33 50.7**	**-3.4**
	5µm,0.3s								
IUG				*e*S		**Sn**	**11 34 36.3**	**+4.3**
	1µm,0.8s								
TAS	**Tashkent**	**3.92**	**299**	**⇓*i*P**		**Pn**	**11 33 48.0**	**+2.5**
	baz=0.0								
TAS				⇓*i*S		**Sn**	**11 34 32.1**	**+0.2**
	baz=0.0								
TAS	**Tashkent**	**3.92**	**299**	*i* PN		**Pn**	**11 33 48.0**	**+2.5**
TAS				*i* S		**Sn**	**11 34 32.1**	**+0.2**
SGDS	**Sogindy**	**3.98**	**8**	*e*P		**Pg**	**11 33 59.4**	**-1.5**
	186nm,0.5s								
SGDS				*e*S		**Sg**	**11 34 50.8**	**-1.7**
	154nm,0.4s								
SGDS	**Sogindy**	**3.98**	**8**	Pg		**Pb**	**11 33 57.9**	**+2.5**
	186nm,0.5s								
SGDS				Lg		Lg	11 34 51.6		
	154nm,0.4s								
DGS	**Degeres**	**4.00**	**21**	*e*P		**Pg**	**11 34 01.7**	**+0.5**
	474nm,0.6s								
DGS				*e*S		**Sg**	**11 34 55.1**	**+2.1**
	580nm,0.6s								
DGS	**Degeres**	**4.00**	**21**	Pg		**Pg**	**11 33 59.6**	**-1.6**
	474nm,0.6s								
DGS				Lg		Lg	11 34 53.8		
	580nm,0.6s								
MTBS	**Maitube**	**4.11**	**27**	*e*P		**Pg**	**11 34 03.1**	**-0.2**
	279nm,0.5s								
MTBS				*e*S		**Sg**	**11 34 58.0**	**+1.5**
	569nm,0.5s								
MTBS	**Maitube**	**4.11**	**27**	Pg		**Pg**	**11 34 02.1**	**-1.2**
	279nm,0.5s								
MTBS				Lg		Lg	11 34 58.0		
	569nm,0.5s								
TNSS	**Tian-Shan**	**4.23**	**33**	*e*P		**Pg**	**11 34 05.6**	**0.0**
	231nm,0.3s								
TNSS				*e*S		**Sg**	**11 35 02.2**	**+1.8**
	151nm,0.7s								
TNSS	**Tian-Shan**	**4.23**	**33**	Pg		**Pg**	**11 34 04.8**	**-0.8**
	231nm,0.3s								
TNSS				Lg		Lg	11 35 03.1		
	151nm,0.7s								
CHM	**Chimkent**	**4.26**	**312**	*e*P		**Pg**	**11 34 05.2**	**-1.1**
	286nm,0.4s								
CHM				*e*S		**Sg**	**11 35 00.6**	**-0.9**
	2µm,0.6s								
KK31	**Karatay Array**	**4.38**	**326**	Pn		**Pn**	**11 33 55.8**	**+3.9**
KK31	**Karatay Array**	**4.38**	**326**	Pg		**Pb**	**11 34 05.1**	**+3.0**
	70nm,0.4s,baz=146,slow=16,SNR=14								
KK31				⇑Sn		**Sn**	**11 34 47.3**	**+4.0**
	104nm,0.5s,baz=132,slow=27								
KK31				⇑Lg		Lg	11 35 02.3		
	180nm,0.6s,baz=144,slow=28								
KKAR	**Karatay Array**	**4.38**	**326**	**⇑*i*P**		**Pn**	**11 33 55.3**	**+3.4**
	baz=28								
KKAR				⇑*i*S		**Sn**	**11 34 44.8**	**+1.4**
	baz=28								
KKAR	**Karatay Array**	**4.38**	**326**	Pn		**Pn**	**11 33 54.9**	**+3.0**
KKAR	**Karatay Array**	**4.38**	**326**	*i* PN		**Pn**	**11 33 55.3**	**+3.4**
KNDC	**Almaty**	**4.38**	**31**	⇑Pg		**Pg**	**11 34 09.2**	**+0.5**
	767nm,0.9s								
KNDC				⇑Lg		Lg	11 35 08.5		
	2µm,0.8s								
KRBS	**Karabastau**	**4.40**	**18**	*e*P		**Pg**	**11 34 07.6**	**-1.3**
	86nm,0.5s								
KRBS				*e*S		**Sg**	**11 35 05.3**	**-0.6**
	247nm,0.7s								
KRBS	**Karabastau**	**4.40**	**18**	Pg		**Pg**	**11 34 06.2**	**-2.8**
	3.2nm,1.0s								
KRBS				Lg		Lg	11 35 05.0		
	247nm,0.7s								
PRZ	**Przheval'sk**	**4.55**	**48**	**⇓*i*P**		**Pb**	**11 34 02.6**	**-2.5**
	baz=50								
PRZ				⇓*i*S		**Sb**	**11 34 57.1**	**-3.3**
	baz=50								
PRZ	**Przheval'sk**	**4.55**	**48**	*i* PN		**Pb**	**11 34 02.6**	**-2.5**
PRZ				*i* S		**Sb**	**11 34 57.1**	**-3.3**
BRLS	**Borolday**	**4.63**	**321**	*e*P		**Pb**	**11 34 09.8**	**+3.4**
	88nm,0.6s								
BRLS				*e*S		**Sb**	**11 35 08.6**	**+6.0**
	300nm,0.7s								
KTBS	**Karatobe**	**4.71**	**26**	*e*P		**Pg**	**11 34 14.7**	**0.0**
	158nm,0.6s								
KTBS				*e*S		**Sg**	**11 35 16.9**	**+1.2**
	558nm,0.5s								
KTBS	**Karatobe**	**4.71**	**26**	Pg		**Pg**	**11 34 12.7**	**-2.0**
	158nm,0.6s								
KTBS				Lg		Lg	11 35 16.9		
	558nm,0.5s								

KUU	**Kurty**	**4.76**	**22**	*e*P		**Pg**	**11 34 15.4**	**-0.4**
	243nm,0.6s								
KUU				*e*S		**Sg**	**11 35 17.8**	**+0.4**
	565nm,0.5s								
KUU	**Kurty**	**4.76**	**22**	Pg		**Pg**	**11 34 13.6**	**-2.1**
	243nm,0.6s								
KUU				Lg		Lg	11 35 17.8		
	565nm,0.5s								
CHKK	**Chushkaly**	**4.94**	**27**	*e*P		**Pg**	**11 34 18.4**	**-0.8**
	75nm,0.5s								
CHKK				*e*S		**Sg**	**11 35 23.6**	**+0.4**
	494nm,0.5s								
CHKK	**Chushkaly**	**4.94**	**27**	Pg		**Pg**	**11 34 17.0**	**-2.2**
	75nm,0.5s								
CHKK				Lg		Lg	11 35 23.5		
	494nm,0.5s								
SATY	**Saty**	**4.94**	**43**	*e*P		**Pg**	**11 34 19.7**	**+0.5**
	180nm,0.9s								
SATY				*e*S		**Sg**	**11 35 25.6**	**+2.5**
	249nm,0.9s								
SATY	**Saty**	**4.94**	**43**	Pg		**Pg**	**11 34 18.1**	**-1.1**
	180nm,0.9s								
SATY				Lg		Lg	11 35 25.6		
	249nm,0.9s								
KPKS	**Kokpek**	**5.37**	**41**	*e*P		**Pg**	**11 34 27.5**	**+0.1**
	66nm,0.5s								
KPKS				*e*S		**Sg**	**11 35 38.7**	**+1.7**
	304nm,0.6s								
BTLS	**Baital**	**5.53**	**2**	*e*P		**Pb**	**11 34 25.5**	**+3.9**
	77nm,1.1s								
BTLS				*e*S		**Sg**	**11 35 35.4**	**-6.7**
	129nm,0.7s								
ARXS	**Arharly**	**5.56**	**31**	*e*P		**Pg**	**11 34 29.8**	**-1.3**
	187nm,0.7s								
ARXS				*e*S		**Sg**	**11 35 42.2**	**-0.9**
	349nm,0.8s								
ARXS	**Arharly**	**5.56**	**31**	Pg		**Pg**	**11 34 28.5**	**-2.6**
	187nm,0.7s								
ARXS				Lg		Lg	11 35 43.2		
	349nm,0.8s								
BLB	**Baldybastay**	**5.74**	**36**	*e*P		**Pg**	**11 34 33.2**	**-1.4**
	179nm,0.5s								
BLB				*e*S		**Sg**	**11 35 49.3**	**+0.3**
	183nm,0.7s								
BLB	**Baldybastay**	**5.74**	**36**	Pg		**Pg**	**11 34 32.0**	**-2.6**
	179nm,0.5s								
BLB				Lg		Lg	11 35 49.3		
	183nm,0.7s								
CHCP	**Chirah Chowk**	**5.86**	**185**	P		Pn	11 34 17.7	+5.4
CEP	**Cherat**	**5.89**	**196**	P		Pn	11 34 18.3	+5.6
CEP				S		**Sn**	**11 35 26.0**	**+5.3**
KBL	**Kabul**	**6.27**	**219**	Pn		**Pn**	**11 34 19.8**	**+1.7**
KBL	**Kabul**	**6.27**	**219**	PN		**Pn**	**11 34 19.8**	**+1.7**
THW	**Thamme Wali**	**6.92**	**195**	⇓P		**Pn**	**11 34 30.4**	**+3.6**
SARP	**Sargodha**	**7.63**	**188**	P		**Pn**	**11 34 38.6**	**+2.0**
MK31	**Makanchi Array**	**9.54**	**38**	*i* P		Pn	11 35 06.8	+4.1
MKAR	**Makanchi Array**	**9.54**	**38**	Pn		**Pn**	**11 35 06.2**	**+3.5**
	0.6nm,0.3s,baz=239,slow=17,SNR=2.6								
MKAR				Lg		Lg	11 37 51.9		
	1.0nm,0.3s,baz=214,slow=25,SNR=5.3								
	5.6nm,0.9s								
WMQ	**Urumqi**	**11.22**	**63**	*e*P		**Pn**	**11 35 28.8**	**+3.0**
KURBB	**Kurchatov Arra**	**11.59**	**15**	Pn		**Pn**	**11 35 32.7**	**+1.9**
	0.1nm,0.3s,baz=196,slow=9.6,SNR=1.5								
KURBB				Lg		Lg	11 38 55.0		
	0.3nm,0.3s,baz=206,slow=31,SNR=6.0								
	3.8nm,0.9s								
KURK	**Kurchatov**	**11.70**	**15**	P		**Pn**	**11 35 32.7**	**+0.5**
AB31	**Akbulak array**	**13.89**	**319**	⇑P		**Pn**	**11 36 00.6**	**-1.6**
	32nm,0.9s,baz=128,slow=14,SNR=9.8								
ABKAR	**Akbulak array**	**13.89**	**319**	Pn		**Pn**	**11 36 01.9**	**-0.3**
AKTO	**Aktyubinsk**	**15.61**	**320**	Pn		**Pn**	**11 36 24.6**	**-0.7**
	1.3nm,0.3s,baz=115,slow=15,SNR=4.6								
	12nm,0.7s								
ZAA0	**Zalesovo Array**	**16.25**	**24**			**P**	**11 36 36.9**	**+0.2**
ZALV	**Zalesovo Beam**	**16.25**	**24**	Pn		**P**	**11 36 35.8**	**-1.0**
	3.0nm,0.3s,baz=217,slow=8.9,SNR=19								
	18nm,0.5s								
ZALV	**Zalesovo Beam**	**16.25**	**24**			**P**	**11 36 36.1**	**-0.7**
ZALV	**Zalesovo Beam**	**16.25**	**24**	*i* P		**P**	**11 36 37.5**	**+0.7**
ZALV				pmax	pmax				
	comp=Z,18nm,0.5s								
ARU	**Arti**	**19.70**	**334**	P		**Pn**	**11 37 17.2**	**+1.1**
	baz=134,slow=8.3,SNR=4.4								
	comp=Z,6.0nm,0.5s								
ARU	**Arti**	**19.70**	**334**	P		**Pn**	**11 37 16.5**	**+0.3**
ARU				IAmb	IAmb		11 37 23.3		
	comp=Z,106nm,1.3s								
ARU	**Arti**	**19.70**	**334**	P		**Pn**	**11 37 16.4**	**+0.3**
ARU				S		**Sn**	**11 41 00.2**	**+2.7**
WSAR	**Wadi Sarin**	**20.73**	**223**	P		**P**	**11 37 25.1**	**-1.0**
	comp=Z,9.0nm,0.8s,baz=72,slow=8.5,SNR=4.7								
	comp=Z,9.0nm,0.8s								
**U

KARP **Karpathos** 36.91 279 P P 11 39 54.1 -0.4
ZEA **Zeya** 38.40 50 *i* P P 11 40 06.1 -0.7
IDI **Anoyia** 38.74 280 P P 11 40 08.6 -1.3
comp=Z,10nm,0.9s,baz=61,slow=5.4,SNR=6.6
comp=Z,10nm,0.9s
IDI **Anoyia** 38.74 280 P P 11 40 08.7 -1.3
IDI IAmb IAmb 11 40 10.1
comp=Z,17nm,1.0s
OJC **Ojcow** 38.97 304 P P 11 40 11.2 -0.5
OJC **Ojcow** 38.97 304 P P 11 40 11.2 -0.5
OJC pmax pmax
comp=Z,10.0nm,1.3s
ARCES **ARCESS Array B** 39.28 335 P P 11 40 14.8 +0.8
comp=Z,11nm,1.0s,baz=109,slow=8.5,SNR=19
comp=Z,11nm,1.0s
ARCES **ARCESS Array B** 39.28 335 P P 11 40 14.0 0.0
DIVS **Divibare** 39.80 295 P P 11 40 18.8 0.0
YAK **Yakutsk** 40.21 37 *i* P P 11 40 24.2 +2.3
YAK pmax pmax
comp=Z,13nm,0.9s
MORC **Moravsky Berou** 40.47 304 P P 11 40 24.5 +0.2
MORC **Moravsky Berou** 40.47 304 P P 11 40 24.5 +0.2
PDG **Podgorica** 40.72 292 P P 11 40 26.4 0.0
PDG IAmb IAmb 11 40 27.1
comp=Z,13nm,0.7s
KEK **Kerkira** 41.09 288 P P 11 40 28.1 -1.3
KEK IAmb IAmb 11 40 39.1
comp=Z,11nm,0.7s
DPC **Dobruska-Polom** 41.17 305 *eP* P 11 40 30.1 +0.1
DPC **Dobruska-Polom** 41.17 305 *eP* P 11 40 30.1 +0.1
KLR **Kul'dur** 41.59 57 P P 11 40 35.1 +1.7
comp=Z,3.7nm,0.6s,baz=12,slow=22,SNR=6.8
comp=Z,3.7nm,0.6s
KLR **Kul'dur** 41.59 57 *i* P P 11 40 33.3 -0.1
KLR pmax pmax
comp=Z,4.0nm,1.2s
KSRS **Korea Array** 41.85 75 P P 11 40 37.1 +1.5
comp=Z,0.4nm,0.5s,baz=268,slow=10.0,SNR=4.1
comp=Z,0.4nm,0.5s
KSRS **Korea Array** 41.85 75 *eP* P 11 40 38.4 +2.7
CONA **Conrad Observa** 41.86 301 *eP* P 11 40 36.0 +0.3
comp=Z,2.5nm,0.6s
TIXI **Tiksi** 42.14 23 P P 11 40 38.2 +0.6
comp=Z,8.9nm,0.6s,baz=90,slow=23,SNR=2.7
comp=Z,8.9nm,0.6s
TIXI **Tiksi** 42.14 23 P P 11 40 38.7 +1.2
HFS **Hagfors** 42.16 320 P P 11 40 37.4 -0.5
comp=Z,10nm,0.6s,baz=103,slow=11,SNR=18
comp=Z,10nm,0.6s
PRU **Pruhonice** 42.36 305 *eP* P 11 40 39.5 -0.2
PRU **Pruhonice** 42.36 305 *eP* P 11 40 39.5 -0.2
USRK **Ussuriysk Ar.** 42.79 64 P P 11 40 41.7 -1.5
comp=Z,1.4nm,0.8s,baz=294,slow=11,SNR=5.4
comp=Z,1.4nm,0.8s
MOA **Molln** 42.92 301 *eP* P 11 40 44.5 +0.2
comp=Z,0.8nm,0.4s
GEC2 **GERESS Array S** 43.10 303 P P 11 40 46.0 +0.1
GEC2 IAmb IAmb 11 40 51.9
comp=Z,23nm,1.4s
GERES **GERESS Array B** 43.10 303 P P 11 40 46.5 +0.6
comp=Z,2.7nm,0.6s,baz=62,slow=8.8,SNR=14
comp=Z,2.7nm,0.6s
GERES **GERESS Array B** 43.10 303 P P 11 40 46.2 +0.3
CLL **Collm** 43.12 307 *eP* P 11 40 44.0 -1.8
CLL **Collm** 43.12 307 *i* P P 11 40 44.4 -1.4
KHC **Kasperske Hory** 43.13 303 *eP* P 11 40 46.2 +0.2
KHC **Kasperske Hory** 43.13 303 *eP* P 11 40 46.2 +0.2
NC405 **NORSAR Array S** 43.15 321 P P 11 40 45.8 -0.2
NB2 **NORSAR Subarra** 43.39 321 P P 11 40 47.7 -0.3
comp=Z,4.3nm,0.6s,baz=91,slow=8.6
NOA **NORSAR Array B** 43.39 321 P P 11 40 47.2 -0.8
comp=Z,4.7nm,0.6s,baz=91,slow=7.9,SNR=11
comp=Z,4.7nm,0.6s
CUC **Castrocucco** 43.91 290 P P 11 40 53.0 +0.5
CUC IAmb IAmb 11 40 54.4
comp=Z,17nm,0.7s
KONO **Kongsberg** 44.23 319 P P 11 40 54.4 -0.2
KONO **Kongsberg** 44.23 319 P P 11 40 54.4 -0.2
KONO pmax pmax
comp=Z,118nm,1.5s
ABTA **Abfaltersbach** 44.33 300 *eP* P 11 40 55.2 -0.6
comp=Z,1.8nm,0.6s
GRA1 **Grafenberg Arr** 44.53 305 P P 11 40 57.5 +0.3
GRA1 IAmb IAmb 11 40 59.4
comp=Z,11nm,0.7s
GRF **Grafenberg Arr** 44.53 305 P P 11 40 57.5 +0.3
GRF pmax pmax
comp=Z,11nm,0.7s
GRFO **Grafenberg** 44.53 305 P P 11 40 58.1 +0.9
GRFO **Grafenberg** 44.53 305 P P 11 40 58.1 +0.9
GRFO pmax pmax
comp=Z,41nm,1.5s
WTTA **Wattenberg** 44.79 301 *eP* P 11 40 59.3 -0.3
comp=Z,5.3nm,0.6s
WATA **Walderalm** 44.81 301 *eP* P 11 40 58.3 -1.4
comp=Z,1.7nm,0.4s
NRCA **Norcia** 44.97 295 P P 11 41 01.2 +0.4
NRCA IAmb IAmb 11 41 01.9
comp=Z,8.3nm,0.8s
MOTA **Moosalm** 45.12 301 *eP* P 11 41 00.9 -1.3
comp=Z,2.8nm,0.6s
RETA **Reutte** 45.31 302 *eP* P 11 41 03.2 -0.4
comp=Z,1.5nm,0.4s
FETA **Feichten** 45.45 301 *eP* P 11 41 04.2 -0.6
comp=Z,1.9nm,0.7s
VAE **Valguarnera** 45.82 287 P P 11 41 07.8 +0.1
comp=Z,6.4nm,0.6s,baz=211,slow=12,SNR=2.6
comp=Z,6.4nm,0.6s
FUORN **Ofenpass-Fuorn** 45.86 301 P P 11 41 07.9 -0.2
DAVA **Damuels** 45.95 302 *eP* P 11 41 08.3 -0.4
comp=Z,10nm,0.7s
OSSC **Osservatorio P** 46.06 296 P P 11 41 09.3 -0.2
DAVOX **Davos/Dischmat** 46.08 301 P P 11 41 08.9 -0.8
comp=Z,9.5nm,0.4s,baz=97,slow=4.6,SNR=20
comp=Z,9.5nm,0.4s
MSSA **Maissana** 47.02 298 P P 11 41 16.8 -0.3
CDF **Champ du Feu** 47.35 304 *eP* P 11 41 18.7 -0.9
CDF pmax pmax
comp=Z,221nm,3.2s
SENIN **Lac Senin/Sane** 47.90 301 P P 11 41 23.5 -0.6
SENIN IAmb IAmb 11 41 24.8
comp=Z,5.4nm,0.7s
LPL **La Plagne** 48.53 300 *eP* P 11 41 28.5 -0.5
LPL pmax pmax
comp=Z,6.0nm,0.4s
BNI **Bardonecchia** 48.72 300 P P 11 41 29.1 -1.2
BNI **Bardonecchia** 48.72 300 P P 11 41 29.1 -1.2
BNI pmax pmax
comp=Z,33nm,1.5s
MJAR **Matsushiro Arr** 49.82 72 P P 11 41 38.7 0.0
comp=Z,3.5nm,0.8s,baz=293,slow=9.1,SNR=7.3
comp=Z,3.5nm,0.8s
MJA0 **Matsu Arr-Jizo** 49.85 72 *eP* P 11 41 39.8 +0.9
MJA0 pmax pmax
comp=Z,4.0nm,0.8s
SSF **Saint Saulge** 50.18 303 *eP* P 11 41 39.8 -1.4
SSF pmax pmax
comp=Z,7.0nm,1.0s
KEST **Kesra** 50.25 287 P P 11 41 41.6 -0.4
comp=Z,5.6nm,0.7s,baz=67,slow=0.5,SNR=7.9
comp=Z,5.6nm,0.7s
KEST **Kesra** 50.25 287 P P 11 41 41.7 -0.3
KEST IAmb IAmb 11 42 01.4
comp=Z,9.0nm,1.1s
CAF **Calviac** 51.84 301 *eP* P 11 41 53.3 -0.5
CAF pmax pmax
comp=Z,5.0nm,0.7s
DAG **Danmarks Havn** 52.49 343 *i* P P 11 41 58.0 -0.1
KMBO **Kilima Mbogo** 52.51 229 P P 11 41 57.5 -1.8
comp=Z,1.2nm,0.6s,baz=47,slow=19,SNR=1.9
comp=Z,1.2nm,0.6s
MFF **Saint Martin d** 52.69 304 *eP* P 11 41 58.9 -1.2
MFF pmax pmax
comp=Z,65nm,2.0s
BILL **Bilibino** 54.91 27 *i* P P 11 42 14.1 -1.9
BILL pmax pmax
comp=Z,4.0nm,0.9s
PETK **Petropavlovsk-** 56.26 46 P P 11 42 26.9 +1.0
PETK **Petropavlovsk-** 56.26 46 P P 11 42 26.9 +1.0
ESBB **Sonseca Array** 58.06 297 P P 11 42 37.6 -1.3
ESDC **Sonseca Array** 58.06 297 P P 11 42 37.8 -1.1
comp=Z,2.3nm,0.7s,baz=56,slow=7.2,SNR=14
comp=Z,2.3nm,0.7s
ESDC **Sonseca Array** 58.06 297 P P 11 42 37.6 -1.3
TOLK **Toolik Lake Re** 67.43 16 P P 11 43 41.7 +0.8
TOLK IAmb IAmb 11 43 42.4
comp=Z,7.9nm,0.8s
A36M **Sachs Harbour** 67.99 6 P P 11 43 44.9 +0.6
TOA0 **Torodi Ar. Sit** 68.02 269 P P 11 43 43.8 -1.6
TOA0 IAmb IAmb 11 43 45.5
comp=Z,5.7nm,0.7s
TORD **Torodi Ar. Bea** 68.02 269 P P 11 43 43.4 -2.0
comp=Z,5.3nm,0.6s,baz=54,slow=5.5,SNR=21
comp=Z,5.3nm,0.6s
TORD **Torodi Ar. Bea** 68.02 269 P P 11 43 43.8 -1.6
TORD IAmb IAmb 11 43 45.5
comp=Z,4.0nm,0.7s
IMAR **Indian Mountai** 68.61 19 P P 11 43 48.7 +0.4
INK **Inuvik** 70.56 10 P P 11 44 00.7 +0.4
comp=Z,3.7nm,0.5s,baz=344,slow=5.4,SNR=15
comp=Z,3.7nm,0.5s
INK **Inuvik** 70.56 10 P P 11 44 00.8 +0.6
INK IAmb IAmb 11 44 01.7
comp=Z,5.4nm,0.9s
INK **Inuvik** 70.56 10 P P 11 44 00.8 +0.6
INK pmax pmax
comp=Z,5.0nm,0.9s
C36M **Paulatuk** 70.65 7 P P 11 44 00.8 0.0
ILAR **Eielson Array** 71.26 17 P P 11 44 04.2 -0.4
comp=Z,2.5nm,0.7s,baz=323,slow=4.8,SNR=15
comp=Z,2.5nm,0.7s
PSA00 **Pilbara Seismi** 74.42 136 P P 11 44 23.5 -0.4
KNRA **Kununurra** 75.04 125 P P 11 44 27.2 -0.4
KNRA IAmb IAmb 11 44 34.9
comp=Z,12nm,0.9s
KDAK **Kodiak Island** 75.56 24 P P 11 44 29.6 -0.4
comp=Z,4.3nm,0.8s,baz=0.0,slow=5.1,SNR=1.0
comp=Z,4.3nm,0.8s
KDAK **Kodiak Island** 75.56 24 P P 11 44 30.6 +0.6
KDAK IAmb IAmb 11 44 52.3
comp=Z,15nm,1.2s
KDAK **Kodiak Island** 75.56 24 P P 11 44 30.6 +0.6
KDAK pmax pmax
comp=Z,15nm,1.3s
HYT **Haines Junctio** 76.78 15 P P 11 44 38.2 +1.0
HYT IAmb IAmb 11 44 38.9
comp=Z,7.4nm,0.7s
DBIC **Dimbokro** 77.07 268 P P 11 44 37.8 -1.5
comp=Z,3.4nm,0.6s,baz=54,slow=6.1,SNR=6.1
comp=Z,3.4nm,0.6s
DBIC **Dimbokro** 77.07 268 P P 11 44 38.7 -0.6
DBIC IAmb IAmb 11 44 45.9
comp=Z,14nm,1.1s
DBIC **Dimbokro** 77.07 268 P P 11 44 38.7 -0.6
DBIC pmax pmax
comp=Z,14nm,1.1s
KIC **Kosan Boka** 77.18 268⇑ *eP* P 11 44 38.4 -1.6
comp=Z,13nm,0.6s
TIC **Toumodi** 77.22 268⇑ *eP* P 11 44 38.3 -1.9
comp=Z,1.0nm,0.2s
LIC **Lamto** 77.48 268⇑ *eP* P 11 44 41.5 -0.2
comp=Z,4.9nm,0.5s
YKA **Yellowknife Ar** 78.11 4 P P 11 44 44.5 +0.1
comp=Z,1.7nm,0.5s,baz=350,slow=5.5,SNR=19
comp=Z,1.7nm,0.5s
YKA **Yellowknife Ar** 78.11 4 P P 11 44 44.6 +0.3
LBTB **Lobatse** 78.41 224 P P 11 44 45.9 -0.7
LBTB IAmb IAmb 11 44 47.5
comp=Z,12nm,1.1s
LBTB **Lobatse** 78.41 224 P P 11 44 45.9 -0.7
LBTB pmax pmax
comp=Z,12nm,1.2s
SCHQ **Schefferville** 80.17 338 P P 11 44 55.9 0.0
comp=Z,2.9nm,1.0s,baz=18,slow=12,SNR=2.2
comp=Z,2.9nm,1.0s
DLBC **Dease Lake** 80.39 12 P P 11 44 57.4 +0.4
comp=Z,2.8nm,0.7s,baz=352,slow=1.9,SNR=4.2
comp=Z,2.8nm,0.7s
BOSA **Boshof** 81.49 222 P P 11 45 00.9 -2.3
comp=Z,2.3nm,0.8s,baz=41,slow=4.9,SNR=2.9
comp=Z,2.3nm,0.8s
BOSA **Boshof** 81.49 222 P P 11 45 02.1 -1.1
BOSA **Boshof** 81.49 222 P P 11 45 02.1 -1.1
BOSA pmax pmax
comp=Z,3.0nm,0.9s
WB0 **Warramunga Arr** 81.65 124 P P 11 45 03.3 -0.9
WB0 IAmb IAmb 11 45 05.1
comp=Z,13nm,1.3s
WRA **Warramunga Arr** 81.75 124 P P 11 45 03.9 -0.7
comp=Z,5.5nm,0.7s,baz=330,slow=5.6,SNR=32
comp=Z,5.5nm,0.7s
WRA **Warramunga Arr** 81.75 124 P P 11 45 04.5 -0.1
WRAB **Tennant Creek** 81.75 124 P P 11 45 04.5 -0.1
WRAB IAmb IAmb 11 45 06.2
comp=Z,8.6nm,0.7s
WRAB **Tennant Creek** 81.75 124 P P 11 45 04.5 -0.1
WRAB pmax pmax
comp=Z,9.0nm,0.7s
WB2 **Warramunga Arr** 81.75 124 P P 11 45 04.5 -0.2
WB2 IAmb IAmb 11 45 06.2
comp=Z,8.3nm,0.7s
WR0 **Warramunga Arr** 81.89 124 P P 11 45 04.7 -0.7
WR0 IAmb IAmb 11 45 06.1
comp=Z,11nm,1.1s
AS31 **Alice Springs** 84.20 127 P P 11 45 17.1 -0.3
ASAR **Alice Springs** 84.20 127 P P 11 45 16.8 -0.6
comp=Z,2.9nm,0.6s,baz=314,slow=5.0,SNR=22
comp=Z,2.9nm,0.6s
FORT **Forrest** 86.18 136 P P 11 45 26.4 -0.6
TLCB **Telegraph Cove** 88.50 13 P P 11 45 38.5 +0.4
TLCB IAmb IAmb 11 45 51.8
comp=Z,8.5nm,1.3s
VLDQ **Val d'Or** 89.10 341 P P 11 45 40.8 -0.1
PLCA **Paso Flores** 152.85 256 PKPbc PKiKP 11 52 42.4 -0.6
comp=Z,1.0nm,0.5s,baz=33,slow=2.8,SNR=14
PLCA **Paso Flores** 152.85 256 PKPbc PKPbc 11 52 42.1 -0.7
PLCA **Paso Flores** 152.85 256 PKIKP PKPbc 11 52 42.1 -0.7

*IDC **26** 11:35:26.1±0.7,39.°43N×73.°33E,h0km,mb4.1/26, mbtmp4.1/30,ML3.4/4,Error ellipse: s-maj=13.6km s-min=11.8km az=160.0*
*KRNET **26** 11:35:26.1±0.1,39.°47N×73.°51E,mb4.7*
*MOS **26** 11:35:27.7±1.2,39.°68N×73.°46E,h16km,mb4.8/6,Error ellipse: s-maj=10.3km s-min=8.4km az=121.8*
*NEIC **26** 11:35:28.1±1.9,39.°64N±0.°07×73.°56E±0.°09,h10km±1km, mb4.6/17,Error ellipse: s-maj=13.9km s-min=9.3km az=137.0*
ISC 26 11:35:27.8±0.5,39.°61N±0.°04×73.°58E±0.°04,h10km,n89, σ1§50/104,**mb4.3/33,18C-12D,Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.10**	**326**	⇓ *i* P		**Pn**	**11 35 48.8**	**-0.6**
baz=32								
OHH				⇓ *e* S		**Sn**	**11 36 05.4**	**+0.7**
baz=32								
DRK	**Karamyk**	**1.38**	**265**	⇑ *e* P		**Pn**	**11 35 51.4**	**-2.1**
baz=71								
DRK				⇑ *e* S		**Sb**	**11 36 10.1**	**-1.7**
baz=71								
DRK	**Karamyk**	**1.38**	**265**	Pn		**Pn**	**11 35 53.2**	**-0.3**
BTK	**Batken**	**2.17**	**283**	⇑ *e* P		**Pn**	**11 36 05.2**	**+1.0**
baz=87								
BTK				⇑ *e* S		**Sb**	**11 36 33.9**	**-0.5**
baz=87								
BTK	**Batken**	**2.17**	**283**	Pn		**Pn**	**11 36 04.7**	**+0.6**
BTK	**Batken**	**2.17**	**283**	PN		**Pn**	**11 36 04.7**	**+0.6**
ARLS	**Aral**	**2.32**	**14**	⇓ *e* P		**Pb**	**11 36 09.4**	**-0.4**
baz=14								
ARLS				⇓ *e* S		**Sg**	**11 36 41.2**	**-1.1**
baz=14								
ARK	**Arkit**	**2.51**	**331**	⇓ *i* P		**Pb**	**11 36 11.6**	**-1.4**
baz=34								
ARK				⇓ *i* S		**Sb**	**11 36 44.8**	**+0.8**
baz=34								
GAR	**Garm**	**2.60**	**258**	⇑ *e* P		**Pn**	**11 36 10.4**	**+0.3**
baz=60								
GAR				⇑ *e* S		**Sn**	**11 36 42.7**	**+0.8**
baz=60								
GAR	**Garm**	**2.60**	**258**	Pn		**Pn**	**11 36 11.3**	**+1.2**
TRKS	**Terek-Say**	**2.67**	**317**	⇑ *i* P		**Pn**	**11 36 12.5**	**+1.4**
baz=19								
TRKS				⇑ *e* S		**Sb**	**11 36 46.4**	**-2.3**
baz=19								
UCH	**Uchtor**	**2.71**	**15**	⇓ *e* P		**Pb**	**11 36 15.2**	**-1.4**
baz=15								
UCH				⇓ *e* S		**Sg**	**11 36 51.2**	**-3.7**
baz=15								
EKS2	**Erkin-Say**	**3.05**	**3**	⇑ *e* P		**Pb**	**11 36 19.6**	**-2.7**
baz=4.0								
EKS2				⇑ *e* S		**Sb**	**11 36 58.7**	**-1.0**
baz=4.0								
AAK	**Ala-Archa**	**3.10**	**13**	Pn		**Pb**	**11 36 23.3**	**+0.1**
9.4nm,0.3s,baz=167,slow=14,SNR=1.9								
AAK				Sn		**Sg**	**11 37 06.4**	**-1.0**
13nm,0.3s,baz=349,slow=22,SNR=1.8								
AAK				Lg		Lg	11 37 10.8	
16nm,0.3s,baz=44,slow=8.6,SNR=6.4								
68nm,0.7s								
AAK	**Ala-Archa**	**3.10**	**13**	⇓ *e* P		**Pb**	**11 36 20.6**	**-2.6**
baz=13								
AAK				⇓ *e* S		**Sb**	**11 37 00.1**	**-1.0**
baz=13								
AAK	**Ala-Archa**	**3.10**	**13**			**Pn**	**11 36 16.0**	**-1.0**
AAK	**Ala-Archa**	**3.10**	**13**	PN		**Pn**	**11 36 16.0**	**-1.0**
KBK	**Karagaybulak**	**3.21**	**18**	⇓ *e* P		**Pb**	**11 36 22.1**	**-3.0**
baz=18								
KBK				⇓ *e* S		**Sb**	**11 37 02.9**	**-1.5**
baz=18								
ULHL	**Ulahol**	**3.31**	**37**	⇑ *e* P		**Pb**	**11 36 23.5**	**-3.4**
baz=36								
ULHL				⇑ *e* S		**Sb**	**11 37 05.4**	**-1.9**
baz=36								
CHGR	**Chuyangaron**	**3.57**	**256**	⇑ *e* P		**Pn**	**11 36 23.6**	**+0.3**
baz=58								
CHGR				⇑ *e* S		**Sn**	**11 37 05.8**	**+0.2**
baz=58								
TAS	**Tashkent**	**3.69**	**299**	⇑ *e* P		**Pn**	**11 36 26.9**	**+2.0**
baz=1.0								
TAS				⇑ *e* S		**Sn**	**11 37 11.2**	**+2.7**
baz=1.0								
KKAR	**Karatay Array**	**4.18**	**327**	⇑ *e* P		**Pn**	**11 36 34.5**	**+2.8**
baz=29								
KKAR				⇑ *e* S		**Sn**	**11 37 24.7**	**+4.0**
baz=29								
MAKZ	**Makanchi**	**9.45**	**38**	Pn		**Pn**	**11 37 44.3**	**+0.4**
MAKZ	**Makanchi**	**9.45**	**38**	P		**Pn**	**11 37 44.3**	**+0.4**
WMQ	**Urumqi**	**11.36**	**64**	*eP*		**Pn**	**11 38 12.3**	**+2.2**
KURBB	**Kurchatov Arra**	**11.55**	**16**	Lg		Lg	11 41 40.9	
0.1nm,0.3s,baz=196,slow=32,SNR=4.7								
AKTO	**Aktyubinsk**	**15.40**	**320**	Pn		**Pn**	**11 39 04.2**	**-0.9**
0.4nm,0.3s,baz=224,slow=23,SNR=0.7								
3.1nm,0.6s								
ZAA0	**Zalesovo Array**	**16.25**	**24**			**P**	**11 39 18.0**	**-1.1**
ZALV	**Zalesovo Beam**	**16.25**	**24**	Pn		**P**	**11 39 17.8**	**-1.3**
0.4nm,0.3s,baz=223,slow=9.6,SNR=3.9								
5.2nm,0.7s								
ZALV	**Zalesovo Beam**	**16.25**	**24**			**P**	**11 39 19.8**	**+0.7**
ARU	**Arti**	**19.52**	**334**	P		**Pn**	**11 39 57.1**	**+0.7**
baz=133,slow=19,SNR=2.5								
5.7nm,0.6s								
ARU	**Arti**	**19.52**	**334**	P		**Pn**	**11 39 58.5**	**+2.1**
ARU				IAmb	IAmb		11 40 02.4	
comp=Z,80nm,1.5s								
WSAR	**Wadi Sarin**	**20.67**	**222**	P		**P**	**11 40 05.6**	**-2.2**
comp=Z,3.6nm,0.9s,baz=25,slow=19,SNR=2.0								
comp=Z,3.6nm,0.9s								
BELG	**Belogornoye**	**21.96**	**314**	P		**P**	**11 40 21.8**	**+0.3**
comp=Z,19nm,0.8s,baz=144,slow=21,SNR=2.0								
comp=Z,19nm,0.8s								
GNI	**Garni**	**22.10**	**281**	P		**P**	**11 40 21.5**	**-1.8**
comp=Z,7.7nm,0.6s,baz=131,slow=20,SNR=2.5								
comp=Z,7.7nm,0.6s								
ONI	**Oni**	**22.84**	**287**	P		**P**	**11 40 33.8**	**+2.7**
ONI	**Oni**	**22.84**	**287**	P		**P**	**11 40 33.8**	**+2.7**
ONI				pmax	pmax			
comp=Z,31nm,0.7s								
KBZ	**Khabaz**	**23.22**	**290**	P		**P**	**11 40 34.5**	**-0.4**
comp=Z,2.7nm,0.8s,baz=52,slow=17,SNR=1.2								
comp=Z,2.7nm,0.8s								
KIV	**Kislovodsk**	**23.37**	**291**	*eP*		**P**	**11 40 36.3**	**-0.3**
KIV				pmax	pmax			
comp=Z,12nm,0.9s								
SONM	**Songino Array**	**24.95**	**60**	P		**P**	**11 40 54.6**	**+3.2**
comp=Z,3.5nm,1.1s,baz=269,slow=9.2,SNR=2.1								
comp=Z,3.5nm,1.1s								
BR131	**Keskin Array S**	**30.57**	**283**	P		**P**	**11 41 42.1**	**+0.3**
BR131				IAmb	IAmb		11 41 42.5	
comp=Z,4.2nm,0.6s								
BR131	**Keskin Array S**	**30.57**	**283**	P		**P**	**11 41 42.1**	**+0.3**
BR131				pmax	pmax			
comp=Z,4.0nm,0.6s								
BRTR	**Keskin Array B**	**30.57**	**283**	P		**P**	**11 41 41.1**	**-0.6**
comp=Z,3.0nm,0.7s,baz=91,slow=7.7,SNR=7.4								
comp=Z,3.0nm,0.7s								
BRTR	**Keskin Array B**	**30.57**	**283**	P		**P**	**11 41 41.3**	**-0.5**
AKASG	**Malin Array Be**	**32.72**	**305**	P		**P**	**11 41 58.9**	**-1.5**
comp=Z,0.5nm,0.4s,baz=77,slow=7.5,SNR=6.2								
comp=Z,0.5nm,0.4s								
MLR	**Muntele Rosu**	**35.16**	**296**	P		**P**	**11 42 21.0**	**-0.8**
comp=Z,5.8nm,0.8s,baz=159,slow=4.1,SNR=3.8								
comp=Z,5.8nm,0.8s								
FIA1	**FINESS Array S**	**36.13**	**323**	P		**P**	**11 42 29.4**	**-0.4**
FINES	**FINESS Array B**	**36.13**	**323**	P		**P**	**11 42 29.3**	**-0.5**
comp=Z,2.0nm,0.5s,baz=116,slow=9.0,SNR=3.4								
comp=Z,2.0nm,0.5s								
FINES	**FINESS Array B**	**36.13**	**323**	P		**P**	**11 42 30.1**	**+0.3**
FINES	**FINESS Array B**	**36.13**	**323**	P		**P**	**11 42 30.1**	**+0.3**
ARCES	**ARCESS Array B**	**39.11**	**335**	P		**P**	**11 42 55.5**	**+0.6**
comp=Z,1.2nm,0.6s,baz=96,slow=5.5,SNR=1.3								
comp=Z,1.2nm,0.6s								
KLR	**Kul'dur**	**41.70**	**57**	P		**P**	**11 43 19.8**	**+3.2**
comp=Z,1.0nm,0.5s,baz=155,slow=12,SNR=1.1								
comp=Z,1.0nm,0.5s								
HFS	**Hagfors**	**41.95**	**320**	P		**P**	**11 43 18.3**	**-0.1**
comp=Z,3.9nm,0.5s,baz=99,slow=9.5,SNR=6.2								
comp=Z,3.9nm,0.5s								
KSRS	**Korea Array**	**42.02**	**75**	P		**P**	**11 43 21.4**	**+2.1**
comp=Z,0.4nm,0.5s,baz=284,slow=7.0,SNR=2.2								
comp=Z,0.4nm,0.5s								
TIXI	**Tiksi**	**42.13**	**23**	P		**P**	**11 43 22.2**	**+2.5**
comp=Z,5.0nm,1.0s,baz=270,slow=24,SNR=2.0								
comp=Z,5.0nm,1.0s								
GERES	**GERESS Array B**	**42.88**	**303**	P		**P**	**11 43 25.4**	**-0.9**
comp=Z,0.5nm,0.5s,baz=72,slow=10,SNR=4.5								
comp=Z,0.5nm,0.5s								
GERES	**GERESS Array B**	**42.88**	**303**	P		**P**	**11 43 25.8**	**-0.5**
GERES	**GERESS Array B**	**42.88**	**303**	P		**P**	**11 43 25.8**	**-0.5**
NB2	**NORSAR Subarra**	**43.19**	**321**	P		**P**	**11 43 28.2**	**-0.4**
comp=Z,1.4nm,0.6s,baz=91,slow=8.6								
NOA	**NORSAR Array B**	**43.19**	**321**	P		**P**	**11 43 28.1**	**-0.5**
comp=Z,2.3nm,0.7s,baz=91,slow=7.9,SNR=4.6								
comp=Z,2.3nm,0.7s								
CUC	**Castrocucco**	**43.69**	**290**	P		**P**	**11 43 31.8**	**-1.2**
DAVOX	**Davos/Dischmat**	**45.85**	**301**	P		**P**	**11 43 49.1**	**-1.2**
comp=Z,1.9nm,0.5s,baz=144,slow=17,SNR=2.8								
comp=Z,1.9nm,0.5s								
BNI	**Bardonecchia**	**48.49**	**299**	P		**P**	**11 44 10.2**	**-0.6**
BNI	**Bardonecchia**	**48.49**	**299**	P		**P**	**11 44 10.2**	**-0.6**
BNI				pmax	pmax			
comp=Z,21nm,1.5s								
MJAR	**Matsushiro Arr**	**49.98**	**72**	P		**P**	**11 44 22.5**	**+0.3**
comp=Z,1.8nm,0.6s,baz=286,slow=8.7,SNR=4.2								
comp=Z,1.8nm,0.6s								
KEST	**Kesra**	**50.03**	**287**	P		**P**	**11 44 22.5**	**-0.1**
comp=Z,1.1nm,0.6s,baz=83,slow=17,SNR=1.6								
comp=Z,1.1nm,0.6s								
ESDC	**Sonseca Array**	**57.83**	**297**	P		**P**	**11 45 18.1**	**-1.5**
comp=Z,1.1nm,0.6s,baz=57,slow=6.9,SNR=6.0								
comp=Z,1.1nm,0.6s								
TOA0	**Torodi Ar. Sit**	**67.82**	**269**	P		**P**	**11 46 24.8**	**-1.6**
TOA0				IAmb	IAmb		11 46 48.4	
comp=Z,6.4nm,1.5s								
TORD	**Torodi Ar. Bea**	**67.82**	**269**	P		**P**	**11 46 23.3**	**-3.1**
comp=Z,1.2nm,0.8s,baz=52,slow=6.8,SNR=3.6								
comp=Z,1.2nm,0.8s								
TORD	**Torodi Ar. Bea**	**67.82**	**269**	P		**P**	**11 46 23.9**	**-2.5**
TORD				IAmb	IAmb		11 46 24.5	
comp=Z,5.0nm,1.2s								
INK	**Inuvik**	**70.50**	**10**	P		**P**	**11 46 42.0**	**-0.1**
comp=Z,1.3nm,0.7s,baz=318,slow=4.1,SNR=2.2								
comp=Z,1.3nm,0.7s								
INK	**Inuvik**	**70.50**	**10**	P		**P**	**11 46 42.6**	**+0.5**
INK				IAmb	IAmb		11 46 56.1	
comp=Z,6.1nm,1.3s								
INK	**Inuvik**	**70.50**	**10**	P		**P**	**11 46 42.6**	**+0.5**
INK				pmax	pmax			
comp=Z,6.0nm,1.3s								
C36M	**Paulatuk**	**70.58**	**7**	P		**P**	**11 46 42.4**	**-0.2**
C36M				IAmb	IAmb		11 46 57.9	
comp=Z,4.6nm,1.0s								
ILAR	**Eielson Array**	**71.22**	**17**	P		**P**	**11 46 46.3**	**-0.4**
comp=Z,1.1nm,0.8s,baz=309,slow=5.4,SNR=4.1								
comp=Z,1.1nm,0.8s								
YKA	**Yellowknife Ar**	**78.03**	**4**	P		**P**	**11 47 25.9**	**-0.2**
comp=Z,1.

YKA	**Yellowknife Ar**	**78.03**	**4**	P	**P**	**11 47 26.2**	**+0.1**
WB0	**Warramunga Arr**	**81.88**	**124**	P	**P**	**11 47 47.2**	**-0.4**
WRA	**Warramunga Arr**	**81.97**	**124**	P	**P**	**11 47 48.0**	**-0.1**
	comp=Z,1.7nm,0.7s,baz=325,slow=4.9,SNR=8.6						
	comp=Z,1.7nm,0.7s						
WRA	**Warramunga Arr**	**81.97**	**124**	P	**P**	**11 47 47.7**	**-0.3**
WRA	**Warramunga Arr**	**81.97**	**124**	P	**P**	**11 47 47.7**	**-0.3**
WRA				pmax	pmax		
	comp=Z,1.0nm,1.2s						
WRAB	**Tennant Creek**	**81.97**	**124**	P	**P**	**11 47 47.9**	**-0.1**
WRAB	**Tennant Creek**	**81.97**	**124**	P	**P**	**11 47 47.9**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,11nm,1.3s						
WB2	**Warramunga Arr**	**81.98**	**124**	P	**P**	**11 47 48.3**	**+0.3**
WB2				IAmb	IAmb	11 48 15.5	
	comp=Z,9.8nm,1.1s						
WR0	**Warramunga Arr**	**82.11**	**124**	P	**P**	**11 47 49.3**	**+0.5**
WR0				IAmb	IAmb	11 48 09.5	
	comp=Z,6.0nm,1.1s						
AS31	**Alice Springs**	**84.42**	**127**	P	**P**	**11 48 02.0**	**+1.3**
ASAR	**Alice Springs**	**84.42**	**127**	P	**P**	**11 48 02.3**	**+1.7**
	comp=Z,0.6nm,0.7s,baz=125,slow=2.5,SNR=15						
	comp=Z,0.6nm,0.7s						
ASAR	**Alice Springs**	**84.42**	**127**	P	**P**	**11 48 02.0**	**+1.4**

*IDC **26** 11:39:50.1±1.6,53.˚55N×163.˚68W,h0km,mb3.9/9, mbtmp3.8/12,ML3.2/3,Error ellipse: s-maj=41.8km s-min=18.3km az=167.0*
*NEIC **26** 11:39:53.3±1.2,53.˚45N±0.˚04×163.˚40W±0.˚07,h29km±6km, ML3.9/10,ML3.6/29(AEIC),Error ellipse: s-maj=7.1km s-min=4.4km az=46.0*
*AEIC **26** 11:39:53.1±1.5,53.˚43N±0.˚04×163.˚46W±0.˚07,h30km±4km, Error ellipse: s-maj=7.1km s-min=4.7km az=49.0*
ISC 26 11:39:53.0±2.6,53.˚46N±0.˚09×163.˚41W±0.˚04, h24km±18km,n53,σ1s05.˚51,mb4.1/9,Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRPK	**Brown Peak**	**1.21**	**351**		**Pn**	**11 40 14.0**	**-0.4**
WESE	**West Dahl East**	**1.23**	**326**		**Pn**	**11 40 14.3**	**-0.5**
WESP	**Westdahl Peak**	**1.29**	**324**		**Pn**	**11 40 15.2**	**-0.5**
WESP					**Sn**	**11 40 32.1**	**-0.2**
WECS	**Westdahl Cape**	**1.34**	**324**		**Pn**	**11 40 16.0**	**-0.4**
WECS					**Sb**	**11 40 35.3**	**+0.9**
SSLW	**Shishaldin Wes**	**1.38**	**343**		**Pn**	**11 40 16.7**	**-0.1**
ISNN	**Isanotski Nort**	**1.39**	**351**		**Pn**	**11 40 17.6**	**+0.6**
SSLN	**Shishaldin Nor**	**1.40**	**346**		**Pn**	**11 40 17.4**	**+0.3**
FALS	**False Pass**	**1.40**	**360**		**Pn**	**11 40 17.3**	**+0.3**
AKSA	**Akutan Strait**	**1.52**	**297**		**Pn**	**11 40 18.3**	**-0.4**
AKSA					**Sn**	**11 40 36.4**	**-1.3**
AKSA	**Akutan Strait**	**1.52**	**297**		**Pn**	**11 40 18.2**	**-0.5**
AKUT	**Akutan**	**1.56**	**297**		**Pn**	**11 40 18.9**	**-0.4**
AKUT					**Sb**	**11 40 38.8**	**-1.5**
AKUT	**Akutan**	**1.56**	**297**	IAML		11 40 39.2	
	comp=E,1μm,0.8s						
AKUT				IAML		11 40 49.8	
	comp=N,771nm,0.9s						
AKBBA	**Akutan Broad B**	**1.63**	**294**		**Pn**	**11 40 19.9**	**-0.4**
AKLV	**Akutan Long Va**	**1.67**	**296**		**Pn**	**11 40 20.4**	**-0.4**
AKLV					**Sn**	**11 40 41.0**	**-0.4**
AKGG	**Akutan Green G**	**1.70**	**297**		**Pn**	**11 40 21.1**	**-0.1**
UNV	**Unalaska Valle**	**1.88**	**283**		**Pn**	**11 40 23.2**	**-0.5**
MTBL	**Makushin Table**	**2.01**	**286**		**Pn**	**11 40 25.7**	**+0.2**
MSW	**Makushin Switc**	**2.06**	**284**		**Pn**	**11 40 26.2**	**+0.1**
HAG	**Hague Volcano**	**2.06**	**25**		**Pn**	**11 40 27.4**	**+1.3**
MGOD	**Makushin Gods**	**2.09**	**281**		**Pn**	**11 40 26.9**	**+0.3**
SDPT	**Sand Point**	**2.55**	**41**		**Pn**	**11 40 34.0**	**+1.1**
SDPT	**Sand Point**	**2.55**	**41**	IAML		11 41 20.9	
	comp=N,498nm,1.1s						
SDPT				IAML		11 41 29.0	
	comp=E,501nm,1.3s						
CNBA	**Chernabura Isl**	**2.63**	**57**		**Pn**	**11 40 33.5**	**-0.4**
NIKH	**Nikolski High**	**3.31**	**264**		**Pn**	**11 40 43.5**	**+0.2**
CHIR	**Chirikof Islan**	**5.10**	**59**	Pn	**Pn**	**11 41 07.5**	**-0.4**
SPIA	**Saint Paul Isl**	**5.40**	**316**	Pn	**Pn**	**11 41 12.5**	**+0.6**
SII	**Sitkinak Islan**	**6.15**	**56**	Pn	**Pn**	**11 41 20.8**	**-1.5**
OHAK	**Old Harbor**	**6.89**	**53**	Pn	**Pn**	**11 41 32.7**	**+0.3**
P18K	**Big Mountain,**	**7.47**	**34**	Pn	**Pn**	**11 41 40.4**	**-0.1**
KDAK	**Kodiak Island**	**7.50**	**50**	Pn	**Pn**	**11 41 39.9**	**-0.9**
KDAK	comp=E,0.4nm,0.3s,baz=189,slow=5.2,SNR=20				Sn	**Sn**	**11 43 00.7**	**-4.3**
	comp=E,0.8nm,0.3s,baz=153,slow=22,SNR=6.3						
	comp=E,4.0nm,0.7s						
KDAK	**Kodiak Island**	**7.50**	**50**		**Pn**	**11 41 39.4**	**-1.4**
Q19K	**Cape Douglas,**	**7.72**	**41**	Pn	**Pn**	**11 41 42.7**	**-1.2**
O18K	**Koktuh Hills**	**7.84**	**32**	Pn	**Pn**	**11 41 46.2**	**+0.8**
N18K	**Kilae Creek**	**8.31**	**26**	Pn	**Pn**	**11 41 52.5**	**+0.6**
SVW2	**Sparrevohn**	**8.75**	**26**	Pn	**Pn**	**11 41 56.8**	**-1.1**
K20K	**Telida**	**11.05**	**22**		**Pn**	**11 42 30.5**	**+1.1**
ILAR	**Eielson Array**	**14.10**	**30**	Pn	**Pn**	**11 43 11.4**	**+0.4**
	baz=222,slow=11,SNR=1.7						
	comp=E,0.2nm,0.6s						
DLBC	**Dease Lake**	**19.21**	**62**	P	**Pn**	**11 44 16.2**	**+0.1**
	comp=E,0.1nm,0.3s,baz=299,slow=10,SNR=1.8						
	comp=E,1.1nm,0.6s						
PETK	**Petropavlovsk-**	**23.07**	**285**	P	**P**	**11 44 55.7**	**-0.8**
	comp=E,2.3nm,0.6s,baz=78,slow=13,SNR=9.4						
	comp=E,2.3nm,0.6s						
YKA	**Yellowknife Ar**	**26.78**	**51**	P	**P**	**11 45 33.1**	**+2.4**
	comp=E,0.7nm,0.9s,baz=266,slow=7.4,SNR=5.9						
	comp=E,0.7nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**40.69**	**226**	T	T	12 31 17.1	
	baz=26,slow=76,SNR=25						
H11N3	**WAKE ISLAND Hy**	**40.69**	**226**	T	T	12 31 13.2	
	baz=26,slow=76,SNR=30						
H11N1	**WAKE ISLAND Hy**	**40.70**	**226**	T	T	12 31 13.2	
	baz=26,slow=76,SNR=33						
H11S1	**WAKE ISLAND Hy**	**41.85**	**225**	T	T	12 32 39.5	
	baz=25,slow=76,SNR=42						
H11S2	**WAKE ISLAND Hy**	**41.87**	**225**	T	T	12 32 40.6	
	baz=25,slow=76,SNR=67						
H11S3	**WAKE ISLAND Hy**	**41.87**	**225**	T	T	12 32 40.8	
	baz=25,slow=76,SNR=47						
KSRS	**Korea Array**	**48.82**	**280**	P	**P**	**11 48 36.6**	**+0.5**
	comp=E,1.7nm,0.9s,baz=48,slow=7.3,SNR=6.9						
	comp=E,1.7nm,0.9s						
TXAR	**Lajitas Array**	**49.17**	**95**	P	**P**	**11 48 40.9**	**+1.8**
	comp=E,0.7nm,0.8s,baz=310,slow=4.6,SNR=1.4						
	comp=E,0.7nm,0.8s						
FINES	**FINESS Array B**	**65.20**	**355**	P	**P**	**11 50 30.7**	**-1.0**
	comp=E,2.4nm,0.9s,baz=5.7,slow=7.0,SNR=3.7						
	comp=E,2.4nm,0.9s						
MKAR	**Makanchi Array**	**65.59**	**317**	P	**P**	**11 50 33.7**	**-0.8**
	comp=E,1.7nm,0.9s,baz=44,slow=5.6,SNR=2.5						
	comp=E,1.7nm,0.9s						
NOA	**NORSAR Array B**	**65.77**	**3**	P	**P**	**11 50 35.9**	**+0.4**
	comp=E,1.0nm,0.9s,baz=356,slow=6.3,SNR=3.8						
	comp=E,1.0nm,0.9s						
HFS	**Hagfors**	**66.73**	**2**	P	**P**	**11 50 41.3**	**-0.3**
	comp=E,1.6nm,0.6s,baz=46,slow=4.3,SNR=4.4						
	comp=E,1.6nm,0.6s						
AKASG	**Malin Array Be**	**75.67**	**352**	P	**P**	**11 51 35.3**	**-0.5**
	comp=E,1.1nm,0.5s,baz=13,slow=6.4,SNR=6.9						
	comp=E,1.1nm,0.5s						

IDC 26 11:40:06.6±29.0,36.˚46N×69.˚53E,h0km,mb3.7/3, mbtmp3.8/4,ML3.9/1,Error ellipse: s-maj=551.4km s-min=37.5km az=163.0,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**14.04**	**39**	Pn	Pn	11 43 26.9	+0.2
	0.5nm,0.3s,baz=220,slow=14,SNR=6.4						
	2.9nm,0.6s						
FINES	**FINESS Array B**	**36.86**	**327**	P	P	11 47 15.1	-1.2
	0.5nm,0.4s,baz=118,slow=10,SNR=4.6						
	0.5nm,0.4s						
HFS	**Hagfors**	**42.37**	**322**	P	P	11 48 03.4	+1.1
	1.1nm,0.4s,baz=108,slow=9.5,SNR=5.4						
	1.1nm,0.4s						
NOA	**NORSAR Array B**	**43.70**	**323**	P	P	11 48 12.6	-0.4
	0.3nm,0.6s,baz=107,slow=7.5,SNR=1.9						
	0.3nm,0.6s						

*IDC **26** 11:40:37.8±1.0,39.˚34N×73.˚72E,h0km,mb3.6/11, mbtmp3.6/12,ML4.2/1,Error ellipse: s-maj=26.2km s-min=21.6km az=55.0*
ISC 26 11:40:43.3±1.1,39.˚3N±0.˚2×73.˚6E±0.˚2,h35km,n12, σ0s75/12,mb3.7/11,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**3.45**	**11**	Pn	**Pn**	**11 41 34.9**	**+0.3**
	24nm,0.3s,baz=169,slow=10,SNR=4.9						
	18nm,0.4s						
BRTR	**Keskin Array B**	**30.66**	**284**	P	**P**	**11 46 55.0**	**+0.4**
	0.5nm,0.5s,baz=84,slow=8.8,SNR=2.5						
	0.5nm,0.5s						
FINES	**FINESS Array B**	**36.42**	**323**	P	**P**	**11 47 43.5**	**-0.7**
	0.5nm,0.4s,baz=117,slow=11,SNR=4.0						
	0.5nm,0.4s						
ARCES	**ARCESS Array B**	**39.43**	**336**	P	**P**	**11 48 08.8**	**-0.6**
	1.6nm,0.8s,baz=101,slow=8.5,SNR=2.4						
	1.6nm,0.8s						
HFS	**Hagfors**	**42.23**	**320**	P	**P**	**11 48 31.7**	**-0.8**
	1.8nm,0.8s,baz=108,slow=13,SNR=5.3						
	1.8nm,0.8s						
GERES	**GERESS Array B**	**43.08**	**303**	P	**P**	**11 48 40.1**	**+0.3**
	0.3nm,0.5s,baz=67,slow=8.6,SNR=1.9						
	0.3nm,0.5s						
NOA	**NORSAR Array B**	**43.47**	**321**	P	**P**	**11 48 41.4**	**-1.3**
	0.3nm,0.5s,baz=110,slow=7.6,SNR=1.8						
	0.3nm,0.5s						
TORD	**Torodi Ar. Bea**	**67.83**	**269**	P	**P**	**11 51 38.6**	**+0.5**
	0.5nm,0.5s,baz=45,slow=6.1,SNR=2.4						
	0.5nm,0.5s						
ILAR	**Eielson Array**	**71.56**	**17**	P	**P**	**11 52 01.0**	**+0.7**
	0.3nm,0.9s,baz=327,slow=6.5,SNR=2.0						
	0.3nm,0.9s						
YKA	**Yellowknife Ar**	**78.38**	**4**	P	**P**	**11 52 40.1**	**+0.4**
	0.2nm,0.6s,baz=352,slow=5.5,SNR=2.3						
	0.2nm,0.6s						
WRA	**Warramunga Arr**	**81.76**	**124**	P	**P**	**11 52 58.0**	**-0.5**
	0.4nm,0.5s,baz=328,slow=4.7,SNR=6.6						
	0.4nm,0.5s						
ASAR	**Alice Springs**	**84.20**	**127**	P	**P**	**11 53 10.8**	**-0.3**
	0.4nm,0.7s,baz=316,slow=4.5,SNR=1.9						
	0.4nm,0.7s						

*SOME **26** 11:40:44.3,39.˚48N×73.˚67E,h5km,MS4.7*
*KRNET **26** 11:40:44.9±0.1,39.˚35N×73.˚55E,mb4.6*
*IDC **26** 11:40:46.7±0.7,39.˚36N×73.˚79E,h0km,mb4.1/22, mbtmp4.1/27,ML3.0/4,MS5.2/1,Error ellipse: s-maj=13.9km s-min=11.3km az=104.0*
*ISU **26** 11:40:46.7,39.˚58N×73.˚66E,h5km*
*MOS **26** 11:40:47.5±1.5,39.˚36N×73.˚61E,h11km,mb4.5/17,Error ellipse: s-maj=6.9km s-min=4.6km az=91.6*
MOS Felt (III) at Bordobo.
*NEIC **26** 11:40:48.9±1.7,39.˚34N±0.˚05×73.˚61E±0.˚06,h10km±1km, mb4.6/16,Error ellipse: s-maj=8.8km s-min=8.1km az=25.0*
*NNC **26** 11:40:50.4±2.4,39.˚63N×73.˚65E,h0km,mb5.0,mpv4.5, Error ellipse: s-maj=17.8km s-min=8.5km az=169.0*
ISC 26 11:40:49.2±0.4,39.˚39N±0.˚03×73.˚51E±0.˚02,h10km,n179, σ1s81/244,mb4.3/34,28C-24D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.26**	**334**	⇓*i* P	**Pn**	**11 41 09.7**	**-3.3**
	baz=34						
OHH				⇓*i* S	**Sb**	**11 41 27.8**	**-1.7**
	baz=34						
OHH	**Osh**	**1.26**	**334**	*i* PG	**Pn**	**11 41 09.7**	**-3.3**
OHH				*i* S	**Sb**	**11 41 27.8**	**-1.7**
OHH	**Osh**	**1.26**	**334**	P	**Pn**	**11 41 09.7**	**-3.3**
OHH				S	**Sb**	**11 41 25.6**	**-3.9**
DRK	**Karamyk**	**1.32**	**274**	⇑*i* P	**Pn**	**11 41 10.5**	**-3.6**
	baz=76						
DRK				⇑*i* S	**Sb**	**11 41 29.5**	**-2.0**
	baz=76						
DRK	**Karamyk**	**1.32**	**274**	Pn	**Pn**	**11 41 13.8**	**-0.2**
TSTA	**Tashata**	**1.43**	**327**	P	**Pn**	**11 41 12.6**	**-2.6**
TSTA				S	**Sn**	**11 41 32.4**	**-1.7**
SHAK	**Shakhimardan**	**1.48**	**293**	S	**Sb**	**11 41 36.8**	**+1.0**
FRG	**Fergana**	**1.65**	**307**	P	**Pn**	**11 41 18.0**	**-0.3**
FRG				S	**Sb**	**11 41 41.7**	**+1.1**
CHMI	**Chimion**	**1.76**	**300**	P	**Pn**	**11 41 19.6**	**-0.2**
CHMI				S	**Sb**	**11 41 45.3**	**+1.5**
BTK	**Batken**	**2.18**	**289**	⇓*i* P	**Pn**	**11 41 24.9**	**-0.7**
	baz=89						
BTK				⇓*i* S	**Sn**	**11 41 54.0**	**+1.3**
	baz=89						
BTK	**Batken**	**2.18**	**289**		**Pn**	**11 41 25.0**	**-0.7**
BTK	**Batken**	**2.18**	**289**	*i* PN	**Pn**	**11 41 24.9**	**-0.7**
BTK				*i* S	**Sn**	**11 41 54.0**	**+1.3**
BTK	**Batken**	**2.18**	**289**	P	**Pb**	**11 41 28.2**	**-0.6**
BTK				S	**Sg**	**11 41 59.5**	**+0.3**
MINT	**Mingtut**	**2.22**	**300**	P	**Pb**	**11 41 28.6**	**-0.9**
MINT				S	**Sg**	**11 42 00.4**	**-0.3**
GAR	**Garm**	**2.51**	**262**	⇑*i* P	**Pn**	**11 41 29.2**	**-1.0**
	baz=63						
GAR				⇑*i* S	**Sn**	**11 42 01.5**	**+0.6**
	baz=63						
GAR	**Garm**	**2.51**	**262**		**Pn**	**11 41 29.9**	**-0.3**
GAR	**Garm**	**2.51**	**262**	*i* PN	**Pn**	**11 41 29.2**	**-1.0**
GAR				*i* S	**Sn**	**11 42 01.5**	**+0.6**
ARLS	**Aral**	**2.54**	**14**	⇑*i* P	**Pn**	**11 41 29.8**	**-0.9**
	baz=13						
ARLS				⇑*i* S	**Sn**	**11 42 02.4**	**+0.6**
	baz=13						
ARLS	**Aral**	**2.54**	**14**	*i* PN	**Pn**	**11 41 29.8**	**-0.9**
ARLS				*i* S	**Sn**	**11 42 02.4**	**+0.6**
ARK	**Arkit**	**2.68**	**334**	⇓*i* P	**Pn**	**11 41 31.9**	**-0.6**
	baz=34						
ARK				⇓*i* S	**Sn**	**11 42 06.1**	**+1.1**
	baz=34						
AML	**Almayashu**	**2.74**	**3**	*i* PN	**Pn**	**11 41 32.5**	**-1.1**
AML				*i* S	**Sn**	**11 42 07.4**	**+0.4**
TRKS	**Terek-Say**	**2.80**	**321**	⇑*i* P	**Pn**	**11 41 32.6**	**-1.6**
	baz=20						
TRKS				⇑*i* S	**Sn**	**11 42 07.7**	**-0.4**
	baz=20						
TRKS	**Terek-Say**	**2.80**	**321**	*i* PN	**Pn**	**11 41 32.6**	**-1.6**
TRKS				*i* S	**Sn**	**11 42 07.7**	**-0.4**
UCH	**Uchtor**	**2.93**	**15**	⇑*i* P	**Pn**	**11 41 35.4**	**-0.9**
	baz=14						
UCH				⇑*i* S	**Sn**	**11 42 12.1**	**+0.2**
	baz=14						
UCH	**Uchtor**	**2.93**	**15**	*i* PN	**Pn**	**11 41 35.4**	**-0.9**
UCH				*i* S	**Sn**	**11 42 12.1**	**+0.2**
EKS2	**Erkin-Say**	**3.27**	**3**	⇓*i* P	**Pn**	**11 41 40.0**	**-0.7**
	baz=3.0						
EKS2				⇓*i* S	**Sn**	**11 42 20.1**	**+0.3**
	baz=3.0						
EKS2	**Erkin-Say**	**3.27**	**3**	*i* PN	**Pn**	**11 41 40.0**	**-0.7**
EKS2				*i* S	**Sn**	**11 42 20.1**	**+0.3**
AAK	**Ala-Archa**	**3.33**	**13**	Pn	**Pn**	**11 41 43.7**	**+2.2**
	77nm,0.5s,baz=162,slow=3.8,SNR=6.4						
AAK				Sn	**Sn**	**11 42 24.8**	**+3.6**
	27nm,0.3s,baz=7.1,slow=21,SNR=3.9						
AAK				Lg	Lg	11 42 31.6	
	60nm,0.3s,baz=110,slow=22,SNR=9.8						
AAK	**Ala-Archa**	**3.33**	**13**	⇓*i* P	**Pn**	**11 41 40.7**	**-0.8**
	baz=12						
AAK				⇓*i* S	**Sn**	**11 42 21.4**	**+0.2**
	baz=12						
AAK	**Ala-Archa**	**3.33**	**13**		**Pn**	**11 41 41.0**	**-0.4**
KBK	**Karagaybulak**	**3.44**	**18**	⇑*i* P	**Pn**	**11 41 42.0**	**-1.0**
	baz=17						
KBK				⇑*i* S	**Sn**	**11 42 24.0**	**+0.1**
	baz=17						
KBK	**Karagaybulak**	**3.44**	**18**	*i* PN	**Pn**	**11 41 42.0**	**-1.0**
KBK				*i* S	**Sn**	**11 42 24.0**	**+0.1**
CHGR	**Chuyangaron**	**3.47**	**259**	⇓*i* P	**Pn**	**11 41 42.4**	**-0.9**
	baz=60						
CHGR				⇓*i* S	**Sn**	**11 42 24.3**	**-0.2**
	baz=60						
CHGR	**Chuyangaron**	**3.47**	**259**	Pn	**Pn**	**11 41 45.6**	**+2.3**
CHGR	**Chuyangaron**	**3.47**	**259**	*i* PN	**Pn**	**11 41 42.4**	**-0.9**
CHGR				*i* S	**Sn**	**11 42 24.3**	**-0.2**
FRU1	**Bishkek**	**3.52**	**14**	PN	**Pb**	**11 41 50.1**	**-1.5**
ULHL	**Ulahol**	**3.53**	**35**	⇓*i* P	**Pn**	**11 41 43.0**	**-1.3**
	baz=34						
ULHL				⇓*i* S	**Sn**	**11 42 25.6**	**-0.5**
	baz=34						
ULHL	**Ulahol**	**3.53**	**35**	*i* PN	**Pn**	**11 41 43.0**	**-1.3**
ULHL				*i* S	**Sn**	**11 42 25.6**	**-0.5**
BOOM	**Boomskoye usch**	**3.60**	**30**	⇓*i* P	**Pn**	**11 41 44.4**	**-0.9**
	baz=29						
BOOM				⇓*i* S	**Sn**	**11 42 27.7**	**-0.2**
	baz=29						
BOOM	**Boomskoye usch**	**3.60**	**30**		**Pn**	**11 41 44.8**	**-0.4**
BOOM				*i* PN	**Pn**	**11 41 44.9**	**-0.9**
BOOM				*i* S	**Sn**	**11 42 27.7**	**-0.2**
CHMS	**Chumysh**	**3.72**	**14**	⇓*i* P	**Pn**	**11 41 45.9**	**-0.9**
	baz=14						
CHMS				⇓*i* S	**Sn**	**11 42 30.6**	**-0.1**
	baz=14						
CHMS	**Chumysh**	**3.72**	**14**	*i* PN	**Pn**	**11 41 45.9**	**-0.9**
CHMS				*i* S	**Sn**	**11 42 30.6**	**-0.1**
CHMS	**Chumysh**	**3.72**	**14**	⇑Pg	**Pn**	**11 41 48.8**	**+2.0**
	42nm,0.5s						
CHMS				⇓Lg	Lg	11 42 41.1	
	316nm,0.7s						
TAS	**Tashkent**	**3.75**	**302**	⇓*i* P	**Pn**	**11 41 47.0**	**-0.2**
	baz=3.0						
TAS				⇓*i* S	**Sn**	**11 42 32.0**	**+0.6**
	baz=3.0						
TAS	**Tashkent**	**3.75**	**302**	Pn	**Pn**	**11 41 48.3**	**+1.1**
TAS	**Tashkent**	**3.75**	**302**	*i* PN	**Pn**	**11 41 47.0**	**-0.2**
TAS				*i* S	**Sn**	**11 42 32.0**	**+0.6**
IUG	**luzhnay**	**3.81**	**317**	*e*P	**Pb**	**11 41 56.4**	**-0.2**
	2μm,0.5s						
IUG				*e*S	**Sb**	**11 42 48.6**	**+5.6**
	588nm,0.7s						
IUG	**luzhnay**	**3.81**	**317**	Pg	**Pg**	**11 42 00.2**	**-2.1**
	4μm,0.7s						
IUG				Lg	Lg	11 42 52.3	
	588nm,0.7s						
TKM2	**Tokmak 2**	**3.86**	**23**	⇑*i* P	**Pn**	**11 41 48.0**	**-0.9**
	baz=23						
TKM2				⇑*i* S	**Sn**	**11 42 34.1**	**-0.3**
	baz=23						
TKM2	**Tokmak 2**	**3.86**	**23**	*i* PN	**Pn**	**11 41 48.0**	**-0.9**
TKM2				*i* S	**Sn**	**11 42 34.1**	**-0.3**
TKM2	**Tokmak 2**	**3.86**	**23**	⇑Pg	**Pb**	**11 41 58.4**	**+0.8**
	56nm,0.6s						
TKM2				⇓Lg	Lg	11 42 46.6	
	176nm,0.7s						
DZA	**Taraz**	**3.86**	**336**	*e*P	**Pb**	**11 41 56.7**	**-0.7**
	99nm,0.2s						
DZA				*e*S	**Sb**	**11 42 48.6**	**+4.2**
	592nm,0.4s						
DZA	**Taraz**	**3.86**	**336**	Pg	**Pb**	**11 41 57.6**	**+0.2**
	135nm,0.1s						
DZA				Lg	Lg	11 42 47.9	
	592nm,0.4s						
KDJ	**Kajisay**	**3.91**	**44**	⇓*i* P	**Pn**	**11 41 48.3**	**-1.2**
	baz=44						
KDJ				⇓*i* S	**Sn**	**11 42 34.8**	**-0.7**
	baz=44						
KDJ	**Kajisay**	**3.91**	**44**	Pn	**Pn**	**11 41 49.1**	**-0.4**
KDJ	**Kajisay**	**3.91**	**44**	*i* PN	**Pn**	**11 41 48.3**	**-1.2**
KDJ				*i* S	**Sn**	**11 42 34.8**	**-0.7**
USP	**Ospenovka**	**3.94**	**11**	⇑*i* P	**Pn**	**11 41 49.2**	**-0.6**
	baz=10.0						
USP				⇑*i* S	**Sn**	**11 42 36.0**	**-0.2**
	baz=10.0						
USP	**Ospenovka**	**3.94**	**11**	*i* PN	**Pn**	**11 41 49.2**	**-0.6**
USP				*i* S	**Sn**	**11 42 36.0**	**-0.2**
TARG	**Taragay, Kyrgy**	**4.02**	**53**	⇑*i* P	**Pn**	**11 41 50.1**	**-1.1**
	baz=52						
TARG				⇑*i* S	**Sn**	**11 42 37.4**	**-1.2**
	baz=52						
TARG	**Taragay, Kyrgy**	**4.02**	**53**	Pn	**Pn**	**11 41 50.1**	**-1.1**
TARG	**Taragay, Kyrgy**	**4.02**	**53**	*i* PN	**Pn**	**11 41 50.1**	**-1.1**
TARG				*i* S	**Sn**	**11 42 37.4**	**-1.2**
KST	**Kastek**	**4.09**	**26**	*e*P	**Pb**	**11 41 58.8**	**-2.6**
	62nm,0.5s						
KST				*e*S	**Sb**	**11 42 52.8**	**+1.8**
	305nm,0.6s						
KST	**Kastek**	**4.09**	**26**	Pg	**Pb**	**11 42 00.5**	**-0.9**
	62nm,0.5s						
KST				Lg	Lg	11 42 52.8	
	305nm,0.6s						
SGDS	**Sogindy**	**4.14**	**11**	*e*P	**Pb**	**11 41 59.9**	**-2.3**
	47nm,0.6s						
SGDS				*e*S	**Sb**	**11 42 53.7**	**+1.3**
	111nm,0.8s						
SGDS	**Sogindy**	**4.14**	**11**	Pg	**Pb**	**11 42 00.3**	**-2.0**
	47nm,0.6s						
SGDS				Lg	Lg	11 42 52.1	
	111nm,0.8s						
CHM	**Chimkent**	**4.16**	**316**	*e*P	**Pb**	**11 42 03.6**	**+1.1**
	2.8nm,0.5s						
CHM				*e*S	**Sg**	**11 43 01.0**	**-1.8**
	893nm,0.5s						
DGS	**Degeres**	**4.21**	**23**	*e*P	**Pb**	**11 42 01.9**	**-1.5**
	74nm,0.5s						
DGS				*e*S	**Sb**	**11 42 57.8**	**+3.5**
	332nm,1.0s						
DGS	**Degeres**	**4.21**	**23**	Pg	**Pb**	**11 42 03.7**	**+0.3**
	74nm,0.5s						
DGS				Lg	Lg	11 42 58.9	
	332nm,1.0s						
MTBS	**Maitube**	**4.33**	**30**	*e*P	**Pb**	**11 42 03.5**	**-2.0**
	77nm,0.7s						
MTBS				*e*S	**Sb**	**11 43 00.4**	**+2.5**
	244nm,0.5s						
KK31	**Karatay Array**	**4.34**	**330**	Pn	**Pn**	**11 41 59.6**	**+4.4**
KK31	**Karatay Array**	**4.34**	**330**	PN	**Pn**	**11 41 59.7**	**+4.4**
KK31	**Karatay Array**	**4.34**	**330**	⇑

133nm,1.1s
SATY **Saty** 5.20 44 Pg Pb 11 42 21.0 +0.7
94nm,0.7s
SATY Lg Lg 11 43 28.8
133nm,1.1s
KURS **Kuram** 5.39 39 eP Pb 11 42 23.8 +0.3
30nm,1.1s
KURS eS Sg 11 43 35.7 -6.5
124nm,1.2s
BTLS **Baital** 5.66 4 eP Pb 11 42 25.9 -2.1
12nm,0.9s
BTLS eS Sb 11 43 39.5 +3.6
65nm,1.0s
BTLS **Baital** 5.66 4 Pg Pb 11 42 28.2 +0.1
21nm,0.5s
BTLS Lg Lg 11 43 40.3
65nm,1.0s
ARXS **Arharly** 5.80 32 eP Pb 11 42 30.6 +0.1
42nm,0.7s
ARXS eS Sb 11 43 46.6 +6.7
78nm,0.7s
ARXS **Arharly** 5.80 32 Pg Pb 11 42 31.7 +1.2
42nm,0.7s
ARXS Lg Lg 11 43 46.7
78nm,0.7s
KBL **Kabul** 6.02 218 Pn Pn 11 42 17.3 -1.2
KBL **Kabul** 6.02 218 PN Pn 11 42 17.3 -1.2
MKAR **Makanchi Array** 9.79 38 Lg Lg 11 45 50.8
0.2nm,0.3s,baz=229,slow=24,SNR=2.5
WMQ **Urumqi** 11.50 63 eP Pn 11 43 32.8 -0.8
KURBB **Kurchatov Arra** 11.78 16 Pn Pn 11 43 35.6 -1.6
baz=214,slow=12,SNR=1.6
KURBB Lg Lg 11 46 57.5
0.1nm,0.3s,baz=202,slow=26,SNR=6.2
1.6nm,0.9s
KURK **Kurchatov** 11.88 16 P Pn 11 43 35.6 -3.0
AB31 **Akbulak array** 13.82 320 Pn Pn 11 44 03.0 -2.0
7.8nm,0.7s,baz=132,slow=13,SNR=7.7
ABKAR **Akbulak array** 13.82 320 Pn Pn 11 44 02.7 -2.3
AKTO **Aktyubinsk** 15.53 320 Pn Pn 11 44 28.6 +0.4
0.3nm,0.3s,baz=121,slow=18,SNR=2.8
AKTO Sn Sn 11 47 16.8 -3.4
0.2nm,0.3s,baz=200,slow=8.7,SNR=4.0
4.8nm,0.6s
ZALV **Zalesovo Beam** 16.47 24 Pn Pn 11 44 39.7 -0.5
0.3nm,0.3s,baz=214,slow=12,SNR=5.5
4.8nm,0.8s
ZALV **Zalesovo Beam** 16.47 24 Pn Pn 11 44 39.2 -1.0
ZALV **Zalesovo Beam** 16.47 24 *i* P P 11 44 42.4 -0.5
ZALV pmax pmax
comp=Z,8.0nm,1.0s
ARU **Arti** 19.70 335 P P 11 45 17.8 -0.6
baz=146,slow=16,SNR=1.9
comp=Z,6.2nm,0.7s
ARU **Arti** 19.70 335 *i* P Pn 11 45 22.1 +2.2
ARU pmax pmax
comp=Z,56nm,2.1s
WSAR **Wadi Sarin** 20.47 222 P P 11 45 27.0 -0.1
comp=Z,3.4nm,0.6s,baz=80,slow=13,SNR=4.1
comp=Z,3.4nm,0.6s
BELG **Belogornoye** 22.07 315 P P 11 45 45.0 +0.9
comp=Z,52nm,0.9s,baz=147,slow=1.0,SNR=11
BELG LR LR 11 54 24.8
comp=Z,5μm,18.9s,baz=94,slow=37
comp=Z,52nm,0.9s
BELG **Belogornoye** 22.07 315 *i* P P 11 45 46.7 +2.6
BELG pmax pmax
comp=Z,13nm,0.9s
GNI **Garni** 22.09 281 P P 11 45 47.0 +2.4
comp=Z,6.4nm,0.5s,baz=56,slow=18,SNR=2.4
comp=Z,6.4nm,0.5s
GNI **Garni** 22.09 281 *ce* P P 11 45 47.3 +2.7
GNI pmax pmax
comp=Z,14nm,0.8s
ONI **Oni** 22.85 288 P P 11 45 53.5 +0.9
ONI IAmb IAmb 11 45 59.9
comp=Z,24nm,0.9s
ONI **Oni** 22.85 288 P P 11 45 53.5 +0.9
ONI pmax pmax
comp=Z,24nm,0.9s
KBZ **Khabaz** 23.24 291 P P 11 45 58.9 +2.4
comp=Z,1.1nm,0.7s,baz=101,slow=16,SNR=1.7
comp=Z,1.1nm,0.7s
KVAR **Kislovodsk Arr** 23.39 291 P P 11 46 01.0 +2.9
comp=Z,4.6nm,0.7s,baz=307,slow=7.1,SNR=1.6
comp=Z,4.6nm,0.7s
KIV **Kislovodsk** 23.39 291 *i* P P 11 46 00.2 +2.0
KIV pmax pmax
comp=Z,9.0nm,0.9s
SHA1 **Shidzhatmaz** 23.41 291 *i* P P 11 46 01.2 +2.6
KIRV **Kirov** 24.64 329 P P 11 46 11.7 +2.1
comp=Z,8.5nm,0.4s,baz=140,slow=1.0,SNR=3.1
comp=Z,8.5nm,0.4s
SONM **Songino Array** 25.11 60 P P 11 46 13.4 -0.8
comp=Z,0.6nm,0.4s,baz=251,slow=8.8,SNR=2.6
comp=Z,0.6nm,0.4s
SONM **Songino Array** 25.11 60 P P 11 46 11.9 -2.3
RAYN **Ar Rayn** 28.50 245 P P 11 46 45.3 +0.5
RAYN **Ar Rayn** 28.50 245 P P 11 46 45.3 +0.5
RAYN pmax pmax
comp=Z,5.0nm,1.3s
OBN **Obninsk** 29.17 315 *i* P P 11 46 48.8 -1.6
OBN pmax pmax
comp=Z,4.0nm,1.0s
BR131 **Keskin Array S** 30.57 284 P P 11 47 03.4 +0.3
BR131 IAmb IAmb 11 47 07.8
comp=Z,9.7nm,1.0s
BR131 **Keskin Array S** 30.57 284 P P 11 47 03.4 +0.3
BR131 pmax pmax
comp=Z,10.0nm,1.0s
BRTR **Keskin Array B** 30.57 284 P P 11 47 04.0 +0.9
comp=Z,4.2nm,0.8s,baz=90,slow=8.2,SNR=15
comp=Z,4.2nm,0.8s
BRTR **Keskin Array B** 30.57 284 P P 11 47 04.2 +1.1
BRTR **Keskin Array B** 30.57 284 *ce* P P 11 47 07.0 +3.9
BRTR pmax pmax
comp=Z,4.0nm,0.8s
AKASG **Malin Array Be** 32.80 305 P P 11 47 22.2 -0.2
comp=Z,0.3nm,0.5s,baz=79,slow=7.4,SNR=5.3
comp=Z,0.3nm,0.5s
AKASG **Malin Array Be** 32.80 305 *ce* P P 11 47 26.1 +3.7
AKASG pmax pmax
comp=Z,2.0nm,0.6s
MLR **Muntele Rosu** 35.21 296 P P 11 47 45.4 +1.8
comp=Z,4.2nm,0.7s,baz=156,slow=8.2,SNR=6.4
comp=Z,4.2nm,0.7s
VSU **Vasula** 35.25 318 *i* P P 11 47 42.1 -1.5
VSU pmax pmax
comp=Z,16nm,1.0s
FINES **FINESS Array B** 36.27 323 P P 11 47 52.1 -0.2
comp=Z,2.0nm,0.8s,baz=111,slow=8.7,SNR=5.2
comp=Z,2.0nm,0.8s
FINES **FINESS Array B** 36.27 323 *ce* P P 11 47 55.0 +2.6
FINES pmax pmax
comp=Z,2.0nm,0.7s
ARCES **ARCESS Array B** 39.28 336 P P 11 48 16.9 -0.8
comp=Z,1.3nm,0.6s,baz=110,slow=7.8,SNR=6.2
comp=Z,1.3nm,0.6s
ARCES **ARCESS Array B** 39.28 336 P P 11 48 17.0 -0.8
KLR **Kul'dur** 41.87 57 *i* P P 11 48 42.5 +3.1
KLR pmax pmax
comp=Z,27nm,6.8s
HFS **Hagfors** 42.08 320 P P 11 48 39.8 -1.1
comp=Z,3.0nm,0.6s,baz=105,slow=9.8,SNR=6.5
comp=Z,3.0nm,0.6s
TIXI **Tiksi** 42.35 23 *i* P P 11 48 45.1 +2.1
TIXI pmax pmax
comp=Z,15nm,2.6s
GERES **GERESS Array B** 42.95 303 P P 11 48 48.3 0.0
comp=Z,0.7nm,0.7s,baz=74,slow=7.2,SNR=3.6
comp=Z,0.7nm,0.7s
NC303 **NORSAR Array S** 43.25 321 P P 11 48 50.0 -0.4
NB2 **NORSAR Subarra** 43.32 321 P P 11 48 50.5 -0.5
comp=Z,2.0nm,0.7s,baz=91,slow=8.6
NOA **NORSAR Array B** 43.32 321 P P 11 48 50.5 -0.5
comp=Z,1.8nm,0.7s,baz=91,slow=8.0,SNR=7.6
comp=Z,1.8nm,0.7s
KMBO **Kilima Mbogo** 52.24 228 *i* P P 11 50 02.5 +1.6
DAG **Danmarks Havn** 52.53 343 *i* P P 11 50 03.0 +0.9
BILL **Biiibino** 55.14 27 *i* P P 11 50 22.2 +0.9
BILL pmax pmax
comp=Z,2.0nm,1.1s
ESDC **Sonseca Array** 57.88 297 P P 11 50 42.0 +0.7
comp=Z,0.9nm,0.6s,baz=58,slow=7.4,SNR=3.0
comp=Z,0.9nm,0.6s
TOA0 **Torodi Ar. Sit** 67.76 269 P P 11 51 46.3 -1.1
TOA0 IAmb IAmb 11 51 50.2
comp=Z,4.4nm,1.1s

TORD **Torodi Ar. Bea** 67.76 269 P P 11 51 46.8 -0.6
comp=Z,1.1nm,0.5s,baz=47,slow=5.5,SNR=4.9
comp=Z,1.1nm,0.5s
TORD **Torodi Ar. Bea** 67.76 269 P P 11 51 45.9 -1.5
BMAR **Burnt Mountain** 69.66 15 P P 11 51 57.8 -0.7
INK **Inuvik** 70.72 10 P P 11 52 04.0 -0.9
INK IAmb IAmb 11 52 10.3
comp=Z,4.6nm,1.1s
INK **Inuvik** 70.72 10 P P 11 52 04.0 -0.9
INK pmax pmax
comp=Z,5.0nm,1.1s
ILAR **Eielson Array** 71.45 17 P P 11 52 07.0 -2.3
comp=Z,0.8nm,0.9s,baz=322,slow=5.7,SNR=4.1
comp=Z,0.8nm,0.9s
PSA00 **Pilbara Seismi** 74.52 136 P P 11 52 27.3 -0.8
KNRA **Kununurra** 75.19 125 P P 11 52 31.4 -0.6
LBTB **Lobatse** 78.14 223 P P 11 52 47.9 -0.8
LBTB IAmb IAmb 11 52 50.4
comp=Z,6.1nm,0.8s
LBTB **Lobatse** 78.14 223 P P 11 52 47.9 -0.8
LBTB pmax pmax
comp=Z,6.0nm,0.9s
YKA **Yellowknife Ar** 78.25 4 P P 11 52 47.1 -1.7
comp=Z,0.4nm,0.6s,baz=350,slow=5.5,SNR=6.2
comp=Z,0.4nm,0.6s
YKA **Yellowknife Ar** 78.25 4 *i* P P 11 52 49.0 +0.3
YKA pmax pmax
comp=Z,1.0nm,0.9s
MORW **Morawa** 78.79 143 P P 11 52 51.0 -1.1
BOSA **Boshof** 81.23 222 P P 11 53 05.3 -0.1
comp=Z,2.6nm,0.8s,baz=56,slow=3.6,SNR=3.6
comp=Z,2.6nm,0.8s
BOSA **Boshof** 81.23 222 P P 11 53 05.6 +0.2
BOSA **Boshof** 81.23 222 P P 11 53 05.6 +0.2
BOSA pmax pmax
comp=Z,14nm,1.5s
WB0 **Warramunga Arr** 81.80 124 P P 11 53 07.3 -1.3
WRA **Warramunga Arr** 81.89 124 P P 11 53 07.5 -1.5
comp=Z,3.7nm,0.9s,baz=326,slow=5.1,SNR=19
comp=Z,3.7nm,0.9s
WRAB **Tennant Creek** 81.89 124 P P 11 53 08.4 -0.6
WRAB IAmb IAmb 11 53 08.7
comp=Z,8.0nm,1.1s
WRAB **Tennant Creek** 81.89 124 P P 11 53 08.4 -0.6
WRAB pmax pmax
comp=Z,8.0nm,1.1s
WB2 **Warramunga Arr** 81.90 124 P P 11 53 08.0 -1.1
WB2 IAmb IAmb 11 53 08.3
comp=Z,4.1nm,0.7s
WR0 **Warramunga Arr** 82.04 124 P P 11 53 08.9 -0.9
WR0 IAmb IAmb 11 53 20.1
comp=Z,8.5nm,1.4s
ASAR **Alice Springs** 84.34 127 P P 11 53 20.0 -1.6
comp=Z,1.6nm,0.8s,baz=315,slow=4.9,SNR=11
comp=Z,1.6nm,0.8s
ASAR **Alice Springs** 84.34 127 P P 11 53 20.5 -1.1
FORT **Forrest** 86.28 135 P P 11 53 29.8 -1.2

*JMA **26** 11:42:46.9±0.7,23°N±2°×12°1E±°, h0km, MV3.5/13,*
TAIWAN REGION
*TAP **26** 11:42:48.9,22°.94N×121°.29E, h18km, ML3.1, B*
ISC 26 11:42:49.0±0.9, 22°.90N±0°.02×121°.33E±0°.02, h22km±2km,
n101,σ1s04/152, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
EDH	**Donghe**	**0.07**	**341**	*i* P	**Pb**	**11 42 52.2**	**-0.9**
EDH	baz=21			S	**Sb**	**11 42 54.6**	**-1.2**
LONT	**Longtian**	**0.18**	**271**	*i* P	**Pb**	**11 42 53.5**	**-1.0**
LONT	baz=266			S	**Sb**	**11 42 57.3**	**-1.0**
CHKT	**Chengkung**	**0.20**	**10**	*i* P	**Pb**	**11 42 54.0**	**-0.6**
CHKT	baz=38			S	**Sb**	**11 42 57.7**	**-0.7**
ECS	**Chishang**	**0.21**	**332**	*eP*	**Pb**	**11 42 54.2**	**-0.6**
	baz=325						
TTN	**Taitung**	**0.23**	**228**	P	**Pb**	**11 42 55.4**	**+0.6**
TTN	baz=215			*eS*	**Sb**	**11 42 59.6**	**+0.7**
TWGBT	**Beinan**	**0.25**	**249**	*i* P	**Pb**	**11 42 54.2**	**-0.9**
TWGBT	baz=253			*eS*	**Sb**	**11 42 58.2**	**-1.0**
TWG	**Pinlang**	**0.25**	**251**	P	**Pb**	**11 42 54.3**	**-0.9**
TWG	baz=253			*eS*	**Sb**	**11 42 58.3**	**-1.1**
LDUT	**Ludao**	**0.26**	**151**	P	**Pb**	**11 42 55.8**	**+0.5**
LDUT	baz=135			*eS*	**Sb**	**11 43 01.4**	**+1.8**
FULB	**Fuli**	**0.29**	**354**	P	**Pb**	**11 42 55.1**	**-0.7**
FULB	baz=347			S	**Sb**	**11 43 00.3**	**-0.1**
ELDTW	**Lidau**	**0.40**	**315**	P	**Pb**	**11 42 56.1**	**-1.4**
	baz=315						
EYUL	**Yuli**	**0.44**	**359**	*eP*	**Pb**	**11 42 57.9**	**-0.2**
EYUL	baz=348			*eS*	**Sb**	**11 43 03.9**	**-0.4**
TWF1	**Yuli**	**0.45**	**356**	*i* P	**Pb**	**11 42 57.4**	**-0.9**
TWF1	baz=347			S	**Sb**	**11 43 03.7**	**-0.8**
YULB	**Yu-li**	**0.49**	**357**	*eP*	**Pb**	**11 42 57.9**	**-1.1**
YULB	baz=346			S	**Sb**	**11 43 04.4**	**-1.3**
STYH	**Taoyuan**	**0.57**	**298**	P	**Pb**	**11 42 59.3**	**-1.2**
STYH	baz=301			S	**Sb**	**11 43 06.8**	**-1.5**
STYT	**Tauyuan**	**0.59**	**296**	*i* P	**Pb**	**11 42 59.4**	**-1.3**
STYT	baz=300			S	**Sb**	**11 43 07.0**	**-1.7**
HGSD	**Ruisui**	**0.59**	**8**	*eP*	**Pb**	**11 43 00.3**	**-0.4**
	baz=32						
EHY	**Hungye**	**0.60**	**359**	*eP*	**Pb**	**11 43 00.2**	**-0.7**
EHY	baz=350			*eS*	**Sb**	**11 43 09.1**	**+0.2**
SSD	**Sandimen**	**0.66**	**256**	P	**Pb**	**11 43 00.5**	**-1.4**
SSD	baz=254			*eS*	**Sb**	**11 43 08.2**	**-2.5**
TSMG	**Majia**	**0.66**	**253**	*eP*	**Pb**	**11 43 00.8**	**-1.2**
TSMG	baz=253			*eS*	**Sb**	**11 43 08.8**	**-1.9**
TAW	**Tawu**	**0.68**	**216**	*eP*	**Pb**	**11 43 01.2**	**-1.0**
	baz=224						
YUS	**Yu-Shan**	**0.68**	**329**	P	**Pb**	**11 43 01.4**	**-1.2**
YUS	baz=329			S	**Sb**	**11 43 09.9**	**-1.7**
EAST	**Anshuo**	**0.68**	**221**	*eP*	**Pb**	**11 43 01.3**	**-1.0**
EAST	baz=227			*eS*	**Sb**	**11 43 12.3**	**+0.9**
TAWH	**Dawu Township**	**0.69**	**216**	*eP*	**Pb**	**11 43 01.6**	**-0.9**
TAWH	baz=224			*eS*	**Sb**	**11 43 10.4**	**-1.2**
MASBT	**Mashibuluo**	**0.71**	**246**	P	**Pb**	**11 43 01.5**	**-1.1**
MASBT	baz=240			*eS*	**Sb**	**11 43 09.9**	**-2.0**
SGST	**Jiashian**	**0.71**	**285**	P	**Pb**	**11 43 01.4**	**-1.3**
SGST	baz=283			*eS*	**Sb**	**11 43 11.5**	**-0.6**
WTP	**Ta-pu**	**0.74**	**297**	*eP*	**Pb**	**11 43 02.8**	**-0.5**
WTP	baz=301			*eS*	**Sb**	**11 43 13.7**	**+0.7**
TPUB	**Ta-pu**	**0.76**	**302**	P	**Pb**	**11 43 03.0**	**-0.5**
TPUB	**Ta-pu**	**0.76**	**302**	*eP*	**Pb**	**11 43 02.9**	**-0.7**
TPUB	baz=307			*eS*	**Sb**	**11 43 13.3**	**-0.1**

EGFH	**Guangfu**	**0.77**	**7**	*eP*	**Pb**	**11 43 03.1**	**-0.6**
	baz=355						
SCST	**Cishan**	**0.77**	**269**	*eP*	**Pb**	**11 43 03.5**	**-0.3**
	baz=265						
ALS	**Alishan**	**0.77**	**321**	P	**Pb**	**11 43 03.5**	**-0.5**
	baz=327						
ALS				*eS*	**Sb**	**11 43 13.5**	**-0.6**
	baz=327						
CHN1	**Nanshi**	**0.79**	**291**	*eP*	**Pb**	**11 43 03.9**	**-0.2**
	baz=293						
CHN1				*eS*	**Sn**	**11 43 15.5**	**-0.5**
	baz=293						
SGLT	**Jiouru**	**0.79**	**257**	*eP*	**Pb**	**11 43 03.7**	**-0.5**
	baz=257						
SSPT	**Xinbi**	**0.82**	**239**	*eP*	**Pb**	**11 43 04.3**	**-0.3**
	baz=235						
SSPT				*eS*	**Sb**	**11 43 15.4**	**+0.2**
	baz=235						
SNST	**Tainan City**	**0.83**	**292**	*eP*	**Pb**	**11 43 04.7**	**-0.1**
	baz=295						
SNST				*eS*	**Sn**	**11 43 17.7**	**+0.8**
	baz=295						
TWM1	**Shoushan**	**0.84**	**265**	*eP*	**Pn**	**11 43 06.1**	**+0.6**
	baz=263						
SLIU	**Shizi**	**0.84**	**216**	*eP*	**Pb**	**11 43 03.5**	**-1.5**
	baz=215						
SCZT	**Fangliau**	**0.84**	**231**	*eP*	**Pb**	**11 43 04.1**	**-0.9**
	baz=229						
TWK	**Hsinying**	**0.85**	**295**	*eP*	**Pb**	**11 43 04.9**	**-0.4**
	baz=294						
LAY	**Lan-yu**	**0.89**	**167**	*eP*	**Pb**	**11 43 05.3**	**-0.5**
	baz=152						
LAY				*eS*	**Sn**	**11 43 19.0**	**+0.6**
	baz=152						
CHN3	**Shinhua**	**0.91**	**281**	*eP*	**Pn**	**11 43 06.9**	**+0.5**
	baz=280						
CHN3				*eS*	**Sn**	**11 43 22.6**	**+3.8**
	baz=280						
ESL	**Shilin**	**0.91**	**6**	*eP*	**Pn**	**11 43 06.4**	**-0.2**
	baz=6.0						
SHHT	**Tainan City**	**0.91**	**278**	*eP*	**Pn**	**11 43 07.5**	**+1.0**
	baz=276						
SHHT				*eS*	**Sn**	**11 43 22.5**	**+3.5**
	baz=276						
LYUB	**Lan-yu**	**0.93**	**165**	*eP*	**Pb**	**11 43 04.3**	**-2.1**
	baz=151						
LYUB				*eS*	**Sb**	**11 43 17.9**	**-0.5**
	baz=151						
SSLB	**Suanglung**	**0.94**	**339**	P	**Pb**	**11 43 06.3**	**-0.5**
SSLB	**Suanglung**	**0.94**	**339**	*eP*	**Pb**	**11 43 06.1**	**-0.6**
	baz=345						
SSLB				*eS*	**Sb**	**11 43 18.4**	**-0.4**
	baz=345						
CHY	**Chiayi**	**1.02**	**306**	*eP*	**Pn**	**11 43 07.4**	**-0.6**
	baz=305						
CHY				*eS*	**Sn**	**11 43 22.5**	**+0.8**
	baz=305						
WLCH	**Liuqiu**	**1.04**	**238**	*eP*	**Pb**	**11 43 11.6**	**+3.3**
	baz=233						
SMLT	**Sun Moon Lake**	**1.05**	**338**	*eP*	**Pn**	**11 43 08.3**	**-0.2**
	baz=342						
SMLT				*eS*	**Sn**	**11 43 23.2**	**+0.6**
	baz=342						
OWD	**Renai**	**1.05**	**352**	*eP*	**Pn**	**11 43 08.0**	**-0.7**
	baz=1.0						
WDLH	**Douliu**	**1.07**	**317**	*eP*	**Pb**	**11 43 09.0**	**+0.2**
	baz=316						
WDLH				*eS*	**Sn**	**11 43 24.4**	**+1.6**
	baz=316						
ICHU	**Yijhu**	**1.07**	**295**	*eP*	**Pn**	**11 43 08.2**	**-0.5**
	baz=294						
WJS	**Zhushan**	**1.07**	**329**	*eP*	**Pb**	**11 43 08.9**	**+0.1**
	baz=340						
TWKBT	**Hengchun**	**1.07**	**207**	*eP*	**Pb**	**11 43 09.1**	**+0.2**
	baz=188						
TWKBT				*eS*	**Sn**	**11 43 23.3**	**+0.3**
	baz=188						
TYC	**Yuchr**	**1.09**	**337**	*eP*	**Pb**	**11 43 10.0**	**+0.9**
	baz=340						
WUSB	**Renai**	**1.10**	**350**	*eP*	**Pn**	**11 43 08.8**	**-0.5**
	baz=358						
WUSB				*eS*	**Sb**	**11 43 22.8**	**-0.6**
	baz=358						
WNT	**Mingjian**	**1.14**	**329**	*eP*	**Pb**	**11 43 11.8**	**+1.8**
	baz=327						
WNT				*eS*	**Sn**	**11 43 26.8**	**+2.2**
	baz=327						
CHGB	**Renai**	**1.16**	**353**	*eP*	**Pn**	**11 43 09.8**	**-0.4**
WSL	**Shuilin Townsh**	**1.19**	**301**	*eP*	**Pb**	**11 43 10.8**	**0.0**
	baz=301						
WSL				*eS*	**Sb**	**11 43 27.5**	**+1.7**
	baz=301						
TWD	**Chiawan**	**1.20**	**12**	*eP*	**Pn**	**11 43 10.1**	**-0.4**
	baz=10.0						
WCS	**Beigang Elemen**	**1.21**	**342**	*eP*	**Pb**	**11 43 11.2**	**-0.1**
	baz=340						
WHF	**Hehuan Shan**	**1.24**	**357**	*eP*	**Pn**	**11 43 10.6**	**-0.8**
	baz=6.0						
WHF				*eS*	**Sn**	**11 43 26.2**	**-1.5**
	baz=6.0						
NACB	**Ninganchiao**	**1.29**	**11**	*eP*	**Pn**	**11 43 10.3**	**-1.4**
	baz=8.0						
NACB				*eS*	**Sb**	**11 43 28.2**	**-0.5**
	baz=8.0						
ETLH	**Xiulin Townshi**	**1.30**	**6**	*eP*	**Pn**	**11 43 12.2**	**+0.2**
	baz=25						
FUSS	**Fushou**	**1.34**	**357**	*eP*	**Pn**	**11 43 12.2**	**-0.4**
	baz=4.0						
TWQ1	**Liyutan**	**1.52**	**341**	*eP*	**Pn**	**11 43 15.1**	**+0.1**
	baz=338						
NNS	**Nan Shan**	**1.53**	**1**	*eP*	**Pn**	**11 43 15.4**	**+0.2**
	baz=14						
ENA	**Nanau**	**1.56**	**14**	*eP*	**Pn**	**11 43 15.8**	**+0.3**
	baz=11						
WDGT	**Dungji**	**1.58**	**283**	*eP*	**Pn**	**11 43 15.6**	**-0.1**
	baz=283						
WDGT				*eS*	**Sn**	**11 43 35.1**	**-0.3**
	baz=283						
EWUT	**Wuta**	**1.59**	**15**	*eP*	**Pb**	**11 43 16.8**	**-0.9**
	baz=12						
NSY	**Sanyi**	**1.59**	**341**	*eP*	**Pb**	**11 43 18.4**	**+0.6**
	baz=338						
NSY				*eS*	**Sb**	**11 43 40.6**	**+3.1**
	baz=338						
LATG	**Datong**	**1.63**	**6**	*eP*	**Pn**	**11 43 17.0**	**+0.5**
	baz=20						
PHUB	**P'eng-hu**	**1.73**	**291**	*eP*	**Pn**	**11 43 17.7**	**-0.1**
	baz=290						
PHUB				*eS*	**Sn**	**11 43 38.5**	**-0.6**
	baz=290						
NFF	**Wufeng Townshi**	**1.73**	**354**	*eP*	**Pn**	**11 43 18.3**	**+0.4**
	baz=359						
NSTT	**Nanjuang**	**1.75**	**350**	*eP*	**Pn**	**11 43 18.3**	**+0.3**
	baz=358						
YHNB	**Yeheng**	**1.76**	**1**	P	**Pb**	**11 43 19.6**	**-1.1**
YHNB	**Yeheng**	**1.76**	**1**	*eP*	**Pn**	**11 43 18.8**	**+0.6**
	baz=13						
PNG	**Penghu**	**1.76**	**292**	*eP*	**Pn**	**11 43 18.1**	**-0.1**
	baz=291						
PNG				*eS*	**Sn**	**11 43 39.9**	**0.0**
	baz=291						
TWC	**Suao**	**1.76**	**16**	*eP*	**Pn**	**11 43 18.9**	**+0.7**
	baz=13						
NSK	**Sanguang**	**1.76**	**1**	*eP*	**Pn**	**11 43 18.7**	**+0.3**
	baz=13						
VCHM	**Qimei**	**1.78**	**280**	*eP*	**Pn**	**11 43 18.6**	**+0.1**
	baz=280						
VCHM				*eS*	**Sn**	**11 43 39.9**	**-0.4**
	baz=280						
TWE	**Neicheng**	**1.83**	**10**	*eP*	**Pn**	**11 43 19.6**	**+0.4**
	baz=7.0						
FUSB	**Fushanzhiwuyua**	**1.86**	**7**	*eP*	**Pn**	**11 43 20.3**	**+0.6**
	baz=24						
NWLT	**Wulai**	**1.87**	**5**	*eP*	**Pn**	**11 43 20.6**	**+0.8**
	baz=19						
TIPB	**Shuangxi**	**2.11**	**12**	*eP*	**Pn**	**11 43 24.0**	**+1.0**
	baz=9.0						
JYNG	**Yonagunijimaku**	**2.14**	**44**	P	**Pn**	**11 43 23.7**	**+0.3**
JYNG				S	**Sn**	**11 43 50.2**	**+1.0**
YOJ	**Yonaguni jima**	**2.19**	**45**	P	**Pn**	**11 43 25.5**	**+1.4**
YOJ	**Yonaguni jima**	**2.19**	**45**	P	**Pn**	**11 43 24.6**	**+0.5**
YOJ				*eS*	**Sn**	**11 43 51.5**	**+1.0**
SXI1	**Grass Mountain**	**2.24**	**13**	*eP*	**Pn**	**11 43 25.5**	**+0.7**
	baz=9.0						
HATJ	**Hateruma jima**	**2.55**	**63**	P	**Pn**	**11 43 29.2**	**+0.2**
HATJ				*eS*	**Sn**	**11 43 58.5**	**-0.8**
IRIF	**Iriomote-Funau**	**2.62**	**57**	P	**Pn**	**11 43 30.8**	**+0.7**

VWUC	VWUC baz=320	2.70	321	*e*P		Pn	11 43 31.5	+0.4
JKRS	Kuro-shima	2.79	61	P		Pn	11 43 32.9	+0.5
PTMZ	Houxiangcun baz=316	2.93	317	*e*P		Pn	11 43 35.2	+0.9
JIJ	Ishigaki jima	2.96	60	P		Pn	11 43 34.9	+0.2
JIJ				S		Sn	11 44 09.0	-0.6
JISG	Ishigakijimahi	3.20	58	P		Pn	11 43 37.9	-0.2
JISG				S		Sn	11 44 16.0	+0.4
JTJ	Tarama	3.54	60	P		Pn	11 43 42.7	0.0
JIRB	Irabujima	4.01	61	P		Pn	11 43 49.5	+0.4
JMJ2	Miyako jima3	4.09	63	P		Pn	11 43 50.9	+0.6
JMJ	Miyako jima 2	4.10	62	P		Pn	11 43 51.7	+1.4
JIKM	Ikemajima	4.11	60	*e*P		Pn	11 43 51.3	+0.8

IDC ***26*** *11:43:12.1±1.1,39°.22N×73°.69E,h0km,mb3.8/9, mbtmp3.8/10,ML3.5/1,Error ellipse: s-maj=25.9km s-min=20.0km az=88.0*
KRNET ***26*** *11:43:14.0±0.1,39°.45N×73°.53E,mb4.1*
NEIC ***26*** *11:43:15.2±0.9,39°.30N±0°.05×73°.45E±0°.07,h10km±1km, mb4.5/6,Error ellipse: s-maj=9.5km s-min=7.0km az=50.0*
ISC 26 11:43:13.4±2.1,39°.31N±0°.06×73°.49E±0°.05,h4km±13km, n43,σ1§35/57,mb3.8/13,18C-8D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DRK	**Karamyk** baz=72	**1.32**	**278**	⇑*e*P			**Pg**	**11 43 39.5**	**+0.7**
DRK				⇑*e*S			**Sn**	**11 43 57.8**	**+0.6**
DRK	**Karamyk** baz=72	**1.32**	**278**	Pn			**Pb**	**11 43 39.1**	**+0.2**
OHH	**Osh** baz=32	**1.33**	**336**	⇓*e*P			**Pn**	**11 43 37.1**	**-1.7**
OHH				⇓*e*S			**Sb**	**11 43 54.1**	**-2.3**
BTK	**Batken** baz=87	**2.19**	**291**	⇑*e*P			**Pb**	**11 43 53.4**	**-0.3**
BTK				⇑*e*S			**Sb**	**11 44 22.0**	**+0.7**
BTK	**Batken** baz=87	**2.19**	**291**	Pn			**Pb**	**11 43 52.1**	**+1.4**
GAR	**Garm** baz=61	**2.49**	**264**	⇑*e*P			**Pb**	**11 43 58.2**	**-0.5**
GAR				⇑*e*S			**Sb**	**11 44 30.7**	**+0.9**
GAR	**Garm** baz=61	**2.49**	**264**	Pn			**Pn**	**11 43 56.0**	**+1.2**
ARLS	**Aral** baz=14	**2.62**	**14**	⇑*e*P			**Pn**	**11 43 57.5**	**+0.8**
ARLS				⇑*e*S			**Sn**	**11 44 29.1**	**0.0**
ARK	**Arkit** baz=34	**2.75**	**335**	⇑*i*P			**Pn**	**11 43 59.6**	**+1.3**
ARK				⇑*i*S			**Sn**	**11 44 33.0**	**+1.0**
TRKS	**Terek-Say** baz=19	**2.85**	**322**	⇑*e*P			**Pn**	**11 44 00.6**	**+0.7**
TRKS				⇑*e*S			**Sn**	**11 44 34.6**	**-0.2**
UCH	**Uchtor** baz=15	**3.02**	**15**	⇑*e*P			**Pn**	**11 44 03.1**	**+0.7**
UCH				⇑*e*S			**Sn**	**11 44 39.0**	**-0.2**
EKS2	**Erkin-Say** baz=3.0	**3.35**	**4**	⇓*i*P			**Pn**	**11 44 07.6**	**+0.9**
EKS2				⇓*e*S			**Sn**	**11 44 46.9**	**-0.2**
AAK	**Ala-Archa** 4.7nm,0.3s,baz=157,slow=15,SNR=1.2	**3.41**	**13**	Pn			**Pn**	**11 44 11.2**	**+3.7**
AAK	6.4nm,0.3s,baz=340,slow=22,SNR=2.5 23nm,0.5s					Sn	**Sb**	**11 44 55.0**	**-1.3**
AAK	**Ala-Archa** baz=13	**3.41**	**13**	⇑*e*P			**Pn**	**11 44 08.1**	**+0.6**
AAK				⇑*e*S			**Sn**	**11 44 48.0**	**-0.5**
AAK	**Ala-Archa**	**3.41**	**13**				**Pn**	**11 44 08.8**	**+1.3**
CHGR	**Chuyangaron** baz=58	**3.44**	**260**	⇑*e*P			**Pb**	**11 44 11.7**	**-3.2**
CHGR				⇑*e*S			**Sb**	**11 44 53.8**	**-3.4**
KBK	**Karagaybulak** baz=18	**3.52**	**18**	⇓*e*P			**Pn**	**11 44 10.1**	**+1.1**
KBK				⇓*e*S			**Sn**	**11 44 50.8**	**-0.4**
ULHL	**Ulahol** baz=35	**3.60**	**35**	⇓*e*P			**Pn**	**11 44 11.3**	**+1.1**
ULHL				⇓*e*S			**Sn**	**11 44 53.3**	**+0.1**
BOOM	**Boomskoye usch**	**3.68**	**29**	Pn			**Pn**	**11 44 12.9**	**+1.7**
KDJ	**Kajisay**	**3.97**	**44**	Pn			**Pn**	**11 44 17.0**	**+1.7**
MAKZ	**Makanchi**	**9.73**	**37**	Pn			**Pn**	**11 45 35.6**	**+1.5**
MKAR	**Makanchi Array**	**9.86**	**38**	Pn			**Pn**	**11 45 38.1**	**+2.2**
GEYT	**Alibeck**	**12.11**	**268**	Pn			**Pn**	**11 46 05.4**	**-1.3**
GYA0B	**ALIBECK ARRAY**	**12.11**	**268**	Pn			**Pn**	**11 46 04.9**	**-1.8**
ABKAR	**Akbulak array**	**13.87**	**320**	Pn			**Pn**	**11 46 30.4**	**-0.3**
BRTR	**Keskin Array B** 1.1nm,0.7s,baz=74,slow=7.9,SNR=4.1 1.1nm,0.7s	**30.57**	**284**	P			**P**	**11 49 30.3**	**+2.0**
CSS	**Mathiatis**	**32.12**	**275**	P			**P**	**11 49 42.6**	**+0.7**
FIA1	**FINESS Array S**	**36.33**	**323**	P			**P**	**11 50 18.7**	**+0.7**
FIA1						IAmb	IAmb	11 50 33.3	
FINES	**FINESS Array B** comp=Z,5.2nm,1.1s	**36.33**	**323**	P			**P**	**11 50 18.6**	**+0.7**
	comp=Z,1.0nm,0.3s,baz=112,slow=9.3,SNR=4.0 comp=Z,1.0nm,0.3s								
FINES	**FINESS Array B**	**36.33**	**323**	P			**P**	**11 50 18.5**	**+0.5**
ARCES	**ARCESS Array B** comp=Z,0.8nm,0.7s,baz=101,slow=7.7,SNR=1.4 comp=Z,0.8nm,0.7s	**39.35**	**336**	P			**P**	**11 50 44.5**	**+1.1**
HFS	**Hagfors** comp=Z,2.3nm,0.5s,baz=107,slow=9.7,SNR=9.8 comp=Z,2.3nm,0.5s	**42.13**	**320**	P			**P**	**11 51 06.7**	**+0.2**
GERES	**GERESS Array B** comp=Z,0.2nm,0.5s,baz=50,slow=11,SNR=2.0 comp=Z,0.2nm,0.5s	**42.98**	**303**	P			**P**	**11 51 14.7**	**+1.1**
NB201	**NORSAR Array S**	**43.34**	**321**	P			**P**	**11 51 16.6**	**+0.2**
NB2	**NORSAR Subarra** comp=Z,0.5nm,0.4s,baz=90,slow=7.9	**43.38**	**321**	P			**P**	**11 51 16.5**	**-0.1**
NOA	**NORSAR Array B** comp=Z,0.9nm,0.6s,baz=92,slow=7.8,SNR=4.2 comp=Z,0.9nm,0.6s	**43.38**	**321**	P			**P**	**11 51 16.5**	**-0.1**
NC204	**NORSAR Array S**	**43.60**	**321**	P			**P**	**11 51 18.6**	**+0.1**
NC204	comp=Z,8.5nm,1.1s					IAmb	IAmb	11 51 42.7	
TOA0	**Torodi Ar. Sit**	**67.75**	**269**	P			**P**	**11 54 12.1**	**-0.3**
TOA0	comp=Z,8.8nm,1.5s					IAmb	IAmb	11 54 18.8	
TORD	**Torodi Ar. Bea** comp=Z,0.3nm,0.4s,baz=46,slow=5.9,SNR=4.5 comp=Z,0.3nm,0.4s	**67.75**	**269**	P			**P**	**11 54 11.9**	**-0.6**
TORD	**Torodi Ar. Bea**	**67.75**	**269**	P			**P**	**11 54 12.1**	**-0.3**
WRA	**Warramunga Arr** comp=Z,0.4nm,0.7s,baz=327,slow=4.9,SNR=1.1 comp=Z,0.4nm,0.7s	**81.86**	**124**	P			**P**	**11 55 34.0**	**0.0**
WB2	**Warramunga Arr**	**81.87**	**124**	P			**P**	**11 55 34.4**	**+0.4**
WB2	comp=Z,7.7nm,1.3s					IAmb	IAmb	11 55 46.4	
ASAR	**Alice Springs** comp=Z,0.4nm,0.9s,baz=316,slow=2.6,SNR=1.9 comp=Z,0.4nm,0.9s	**84.30**	**127**	P			**P**	**11 55 43.7**	**-2.9**

IDC ***26*** *11:45:00.8±8.3,39°.33N×73°.65E,h0km,mb3.8/6, mbtmp3.8/6,Error ellipse: s-maj=169.5km s-min=50.8km az=113.0*
KRNET ***26*** *11:45:02.2±0.1,39°.42N×73°.51E,mb4.0*
ISC 26 11:45:03.3±1.3,39°.50N±0°.07×73°.46E±0°.06,h10km,n15, σ1§33/23,mb3.7/6,12C-4D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OHH	**Osh** baz=34	**1.14**	**333**	⇓*e*P			**Pg**	**11 45 25.7**	**+0.4**
OHH				⇓*e*S			**Sn**	**11 45 42.9**	**+1.6**
DRK	**Karamyk** baz=73	**1.28**	**270**	⇑*e*P			**Pg**	**11 45 27.2**	**-0.8**
DRK				⇑*e*S			**Sg**	**11 45 45.5**	**+0.8**
BTK	**Batken** baz=88	**2.11**	**286**	⇑*i*P			**Pb**	**11 45 41.5**	**-0.2**
BTK				⇑*e*S			**Sg**	**11 46 10.3**	**-0.8**
ARLS	**Aral** baz=14	**2.45**	**15**	⇓*e*P			**Pb**	**11 45 46.3**	**-1.2**
ARLS				⇓*e*S			**Sb**	**11 46 18.5**	**+0.7**
GAR	**Garm** baz=61	**2.49**	**259**	⇑*e*P			**Pb**	**11 45 46.3**	**-1.9**
GAR				⇑*e*S			**Sb**	**11 46 18.5**	**-0.5**
ARK	**Arkit** baz=34	**2.56**	**334**	⇑*e*P			**Pb**	**11 45 48.2**	**-1.2**
ARK				⇑*i*S			**Sb**	**11 46 21.8**	**+0.8**
TRKS	**Terek-Say** baz=20	**2.69**	**320**	⇑*e*P			**Pb**	**11 45 49.0**	**-2.6**
TRKS				⇑*e*S			**Sb**	**11 46 23.0**	**-1.7**
UCH	**Uchtor** baz=15	**2.84**	**16**	⇑*e*P			**Pb**	**11 45 51.8**	**-2.6**
UCH				⇑*e*S			**Sb**	**11 46 28.0**	**-1.4**
BRTR	**Keskin Array B** 0.6nm,0.6s,baz=96,slow=7.5,SNR=2.8 0.6nm,0.6s	**30.50**	**283**	P			**P**	**11 51 17.9**	**+1.2**
FINES	**FINESS Array B** 0.5nm,0.3s,baz=114,slow=9.6,SNR=4.9 0.5nm,0.3s	**36.16**	**323**	P			**P**	**11 52 06.6**	**+1.0**
ARCES	**ARCESS Array B** 1.8nm,0.9s,baz=100,slow=8.6,SNR=2.1 1.8nm,0.9s	**39.16**	**336**	P			**P**	**11 52 32.0**	**+1.1**
HFS	**Hagfors** 1.9nm,0.5s,baz=107,slow=9.8,SNR=6.9 1.9nm,0.5s	**41.97**	**320**	P			**P**	**11 52 54.6**	**+0.5**
NB2	**NORSAR Subarra** comp=Z,0.4nm,0.5s,baz=90,slow=7.9	**43.21**	**321**	P			**P**	**11 53 04.5**	**+0.2**
NOA	**NORSAR Array B** comp=Z,0.6nm,0.6s,baz=110,slow=7.6,SNR=3.7 comp=Z,0.6nm,0.6s	**43.21**	**321**	P			**P**	**11 53 04.4**	**+0.2**
TORD	**Torodi Ar. Bea** comp=Z,0.3nm,0.6s,baz=51,slow=5.8,SNR=2.0 comp=Z,0.3nm,0.6s	**67.72**	**269**	P			**P**	**11 56 01.3**	**0.0**

IDC ***26*** *11:46:06.1±0.8,39°.34N×73°.56E,h0km,mb3.9/14, mbtmp3.9/19,ML3.0/4,Error ellipse: s-maj=15.5km s-min=13.1km az=122.0*
KRNET ***26*** *11:46:07.8±0.1,39°.42N×73°.42E,mb4.2*
NEIC ***26*** *11:46:08.1±1.6,39°.29N±0°.07×73°.49E±0°.06,h10km±1km, mb4.5/6,Error ellipse: s-maj=12.9km s-min=4.0km az=149.0*
ISC 26 11:46:07.7±0.7,39°.33N±0°.05×73°.42E±0°.04,h10km,n50, σ1§21/63,mb4.0/18,12C-12D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DRK	**Karamyk** baz=73	**1.27**	**277**	⇑*i*P			**Pn**	**11 46 31.4**	**-0.3**
DRK				⇑*e*S			**Sg**	**11 46 48.4**	**-0.1**
OHH	**Osh** baz=36	**1.29**	**338**	⇓*e*P			**Pn**	**11 46 30.1**	**-1.7**
OHH				⇓*e*S			**Sb**	**11 46 46.6**	**-2.1**
BTK	**Batken** baz=88	**2.13**	**291**	⇓*e*P			**Pb**	**11 46 45.4**	**-1.1**
BTK				⇓*e*S			**Sb**	**11 47 12.6**	**-0.5**
BTK	**Batken** baz=88	**2.13**	**291**	Pn			**Pn**	**11 46 43.8**	**+0.2**
GAR	**Garm** baz=61	**2.44**	**263**	⇑*e*P			**Pb**	**11 46 49.9**	**-1.8**
GAR				⇑*e*S			**Sb**	**11 47 20.9**	**-0.9**
GAR	**Garm**	**2.44**	**263**	Pn			**Pn**	**11 46 48.0**	**+0.3**
ARLS	**Aral** baz=16	**2.62**	**15**	⇑*e*P			**Pn**	**11 46 51.1**	**+0.9**
ARLS				⇑*e*S			**Sn**	**11 47 22.6**	**+0.5**
ARK	**Arkit** baz=35	**2.70**	**336**	⇓*e*P			**Pn**	**11 46 52.5**	**+1.2**
ARK				⇓*i*S			**Sn**	**11 47 25.1**	**+1.0**
TRKS	**Terek-Say** baz=21	**2.80**	**322**	⇓*e*P			**Pn**	**11 46 53.0**	**+0.3**
TRKS				⇓*e*S			**Sn**	**11 47 26.0**	**-0.7**
UCH	**Uchtor** baz=16	**3.01**	**16**	⇑*e*P			**Pn**	**11 46 56.9**	**+1.1**
UCH				⇑*e*S			**Sn**	**11 47 32.4**	**+0.2**
EKS2	**Erkin-Say** baz=5.0	**3.34**	**5**	⇑*e*P			**Pn**	**11 47 01.2**	**+1.1**
EKS2				⇑*e*S			**Sn**	**11 47 40.2**	**+0.4**
CHGR	**Chuyangaron**	**3.39**	**260**	Pn			**Pn**	**11 47 00.9**	**+0.2**
AAK	**Ala-Archa** 10nm,0.3s,baz=175,slow=1.3,SNR=2.6	**3.40**	**13**	Pn			**Pn**	**11 47 03.1**	**+2.2**
AAK	4.9nm,0.3s,baz=11,slow=20,SNR=1.9					Sn	**Sn**	**11 47 45.9**	**+4.5**
AAK	17nm,0.3s,baz=258,slow=22,SNR=5.5 29nm,0.4s					Lg	Lg	11 47 51.5	
AAK	**Ala-Archa** baz=14	**3.40**	**13**	⇓*e*P			**Pn**	**11 47 02.0**	**+1.0**
AAK				⇓*e*S			**Sn**	**11 47 41.8**	**+0.4**
AAK	**Ala-Archa** baz=14	**3.40**	**13**				**Pn**	**11 47 02.5**	**+1.5**
KBK	**Karagaybulak** baz=19	**3.52**	**19**	⇑*e*P			**Pn**	**11 47 03.6**	**+1.0**
KBK				⇑*e*S			**Sn**	**11 47 44.6**	**+0.3**
ULHL	**Ulahol** baz=36	**3.61**	**35**	⇓*e*P			**Pn**	**11 47 05.2**	**+1.3**
ULHL				⇓*e*S			**Sn**	**11 47 47.2**	**+0.5**
BOOM	**Boomskoye usch**	**3.69**	**30**	Pn			**Pn**	**11 47 05.9**	**+1.0**
KDJ	**Kajisay**	**3.99**	**44**	Pn			**Pn**	**11 47 08.4**	**-0.8**
TARG	**Taragay, Kyrgy**	**4.11**	**53**	Pn			**Pn**	**11 47 10.0**	**-0.9**
KKAR	**Karatay Array**	**4.36**	**331**	Pn			**Pn**	**11 47 15.1**	**+1.0**
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=210,slow=14,SNR=1.9	**9.88**	**38**	Pn			**Pn**	**11 48 31.5**	**+1.7**
MKAR	0.2nm,0.3s,baz=220,slow=26,SNR=3.1 1.0nm,0.6s					Lg	Lg	11 51 15.1	
KURBB	**Kurchatov Arra** 1.1nm,0.7s,baz=212,slow=12,SNR=1.1	**11.85**	**16**	Pn			**Pn**	**11 48 55.9**	**-0.7**
KURBB	0.1nm,0.3s,baz=207,slow=34,SNR=4.8					Lg	Lg	11 52 18.5	
KURK	**Kurchatov**	**11.96**	**16**	Pn			**Pn**	**11 48 58.5**	**+0.4**
ZALV	**Zalesovo Beam** 0.2nm,0.3s,baz=203,slow=11,SNR=3.6 2.4nm,0.6s	**16.55**	**24**	Pn			**Pn**	**11 49 57.5**	**-2.2**
ARU	**Arti** baz=112,slow=22,SNR=1.5 1.1nm,0.2s	**19.72**	**335**	P			**P**	**11 50 36.9**	**-0.3**
BELG	**Belogornoye** 6.6nm,0.6s,baz=127,slow=18,SNR=2.1 6.6nm,0.6s	**22.07**	**315**	P			**P**	**11 51 02.3**	**-0.2**
SONM	**Songino Array** 0.4nm,0.4s,baz=268,slow=10,SNR=3.0 0.4nm,0.4s	**25.20**	**59**	P			**P**	**11 51 33.6**	**+0.1**
BRTR	**Keskin Array B** 1.4nm,0.7s,baz=97,slow=7.1,SNR=6.5 1.4nm,0.7s	**30.52**	**284**	P			**P**	**11 52 22.8**	**+1.6**
BRTR	**Keskin Array B**	**30.52**	**284**	P			**P**	**11 52 23.7**	**+2.5**
AKASG	**Malin Array Be** 0.5nm,0.5s,baz=78,slow=7.3,SNR=2.6 0.5nm,0.5s	**32.78**	**305**	P			**P**	**11 52 40.8**	**0.0**
MLR	**Muntele Rosu** 1.3nm,0.6s,baz=233,slow=14,SNR=1.7 1.3nm,0.6s	**35.17**	**296**	P			**P**	**11 53 02.3**	**+0.5**
FIA1	**FINESS Array S**	**36.28**	**323**	P			**P**	**11 53 11.0**	**+0.1**
FINES	**FINESS Array B** 0.7nm,0.5s,baz=108,slow=12,SNR=4.8 0.7nm,0.5s	**36.28**	**323**	P			**P**	**11 53 11.9**	**+1.0**
FINES	**FINESS Array B**	**36.28**	**323**	P			**P**	**11 53 11.6**	**+0.7**
ARCES	**ARCESS Array B** 1.4nm,0.8s,baz=103,slow=5.4,SNR=4.1 1.4nm,0.8s	**39.31**	**336**	P			**P**	**11 53 36.5**	**+0.1**
VRAC	**Vranov** 1.6nm,0.4s,baz=117,slow=9.7,SNR=4.9 1.6nm,0.4s	**40.97**	**303**	P			**P**	**11 53 51.9**	**+1.4**
KLR	**Kul'dur** 1.0nm,0.4s,baz=269,slow=9.0,SNR=4.6 1.0nm,0.4s	**41.96**	**57**	P			**P**	**11 53 57.0**	**-1.6**
HFS	**Hagfors** 2.4nm,0.7s,baz=112,slow=11,SNR=3.0 2.4nm,0.7s	**42.08**	**320**	P			**P**	**11 53 59.2**	**-0.3**
NB2	**NORSAR Subarra** comp=Z,0.5nm,0.6s,baz=90,slow=7.9	**43.33**	**321**	P			**P**	**11 54 09.7**	**+0.1**
NOA	**NORSAR Array B** comp=Z,0.5nm,0.6s,baz=92,slow=7.7,SNR=4.0 comp=Z,0.5nm,0.6s	**43.33**	**321**	P			**P**	**11 54 09.4**	**-0.2**
LODK	**Lodwar**	**49.69**	**234**	P			**P**	**11 55 02.1**	**+2.1**
LODK	comp=Z,3.4nm,0.7s					IAmb	IAmb	11 55 03.4	
LBTB	**Lobatse**	**78.06**	**223**	P			**P**	**11 58 07.7**	**+0.9**
LBTB	comp=Z,6.4nm,1.2s					IAmb	IAmb	11 58 25.4	
YKA	**Yellowknife Ar** comp=Z,0.6nm,0.8s,baz=354,slow=5.5,SNR=5.3 comp=Z,0.6nm,0.8s	**78.31**	**4**	P			**P**	**11 58 07.3**	**-0.3**
WB0	**Warramunga Arr**	**81.83**	**124**	P			**P**	**11 58 27.0**	**-0.1**
WB0	comp=Z,7.0nm,1.3s					IAmb	IAmb	11 58 37.7	
WRA	**Warramunga Arr** comp=Z,0.9nm,0.6s,baz=326,slow=4.9,SNR=13 comp=Z,0.9nm,0.6s	**81.92**	**124**	P			**P**	**11 58 27.0**	**-0.6**
WRAB	**Tennant Creek**	**81.92**	**124**	P			**P**	**11 58 26.7**	**-0.9**
WB2	**Warramunga Arr**	**81.92**	**124**	P			**P**	**11 58 26.9**	**-0.7**
WR0	**Warramunga Arr**	**82.06**	**124**	P			**P**	**11 58 27.6**	**-0.7**
WR0	comp=Z,5.3nm,1.2s					IAmb	IAmb	11 58 29.7	
ASAR	**Alice Springs** comp=Z,0.5nm,0.7s,baz=306,slow=4.3,SNR=8.2 comp=Z,0.5nm,0.7s	**84.36**	**127**	P			**P**	**11 58 38.9**	**-1.3**

IDC ***26*** *11:47:06.7±1.2,39°.37N×73°.75E,h0km,mb3.7/9, mbtmp3.7/9,Error ellipse: s-maj=46.4km s-min=24.8km az=46.0*
KRNET ***26*** *11:47:08.7±0.1,39°.44N×73°.40E,mb4.1*
ISC 26 11:47:07.7±2.4,39°.44N±0°.07×73°.49E±0°.06,h5km±14km, n17,σ1§24/24,mb3.6/9,8C-6D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OHH	**Osh** baz=37	**1.21**	**334**	⇓*e*P			**Pg**	**11 47 31.2**	**+0.3**
OHH				⇓*e*S			**Sn**	**11 47 47.7**	**-0.5**
DRK	**Karamyk** baz=72	**1.31**	**272**	⇑*e*P			**Pn**	**11 47 32.3**	**-0.6**
DRK				⇑*e*S			**Sb**	**11 47 49.7**	**-0.5**
BTK	**Batken** baz=88	**2.15**	**287**	⇓*e*P			**Pb**	**11 47 46.8**	**-0.4**
BTK				⇓*i*S			**Sb**	**11 48 14.9**	**+0.7**
ARLS	**Aral** baz=16	**2.50**	**14**	⇑*i*P			**Pb**	**11 47 52.9**	**-0.3**
ARLS				⇑*i*S			**Sb**	**11 48 25.3**	**+1.0**
ARK	**Arkit** baz=36	**2.62**	**334**	⇓*i*P			**Pb**	**11 47 54.2**	**-1.1**
ARK				⇓*i*S			**Sb**	**11 48 27.2**	**-0.7**
TRKS	**Terek-Say** baz=21	**2.75**	**320**	⇑*e*P			**Pn**	**11 47 54.5**	**+1.9**
TRKS				⇑*e*S			**Sb**	**11 48 28.4**	**-3.1**
UCH	**Uchtor** baz=17	**2.89**	**15**	⇑*e*P			**Pb**	**11 47 58.7**	**-1.3**
UCH				⇑*e*S			**Sb**	**11 48 35.2**	**-0.6**
AAK	**Ala-Archa** 2.4nm,0.3s,baz=186,slow=21,SNR=1.0	**3.28**	**13**	Sn			**Sb**	**11 48 46.1**	**-0.8**
FINES	**FINESS Array B** 0.6nm,0.4s,baz=111,slow=9.6,SNR=3.9 0.6nm,0.4s	**36.22**	**323**	P			**P**	**11 54 12.8**	**+1.6**
ARCES	**ARCESS Array B** 0.3nm,0.3s,baz=113,slow=8.9,SNR=5.4 0.3nm,0.3s	**39.23**	**336**	P			**P**	**11 54 38.1**	**+1.5**
HFS	**Hagfors** 1.2nm,0.4s,baz=104,slow=11,SNR=5.3 1.2nm,0.4s	**42.03**	**320**	P			**P**	**11 55 01.5**	**+1.7**
NOA	**NORSAR Array B** 0.5nm,0.6s,baz=110,slow=7.2,SNR=1.9 0.5nm,0.6s	**43.27**	**321**	P			**P**	**11 55 10.9**	**+1.0**
TORD	**Torodi Ar. Bea** 2.5nm,1.1s,baz=45,slow=5.5,SNR=1.8 2.5nm,1.1s	**67.75**	**269**	P			**P**	**11 58 07.0**	**+0.4**
ILAR	**Eielson Array** 0.2nm,0.7s,baz=320,slow=7.6,SNR=1.1 0.2nm,0.7s	**71.41**	**17**	P			**P**	**11 58 27.7**	**-0.7**
YKA	**Yellowknife Ar** 0.1nm,0.5s,baz=356,slow=5.5,SNR=1.6 0.1nm,0.5s	**78.20**	**4**	P			**P**	**11 59 07.4**	**-0.4**
WRA	**Warramunga Arr** 0.3nm,0.6s,baz=314,slow=3.6,SNR=1.1 0.3nm,0.6s	**81.94**	**124**	P			**P**	**11 59 27.8**	**-0.7**
ASAR	**Alice Springs** 1.1nm,1.1s,baz=327,slow=4.9,SNR=2.5 1.1nm,1.1s	**84.38**	**127**	P			**P**	**11 59 40.2**	**-0.9**

JMA 26 11:47:15.6±0.4,24°.N±2°.×122°.3E±°,h48km±4km,NEAR ISHIGAKIJIMA ISLAND,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**0.62**	**30**	P			Pn	11 47 28.2	0.0
HATJ				*e*S			Sn	11 47 37.6	+0.1
IRIF	**Iriomote-Funau**	**0.85**	**17**	P			Pn	11 47 31.3	0.0
IRIF				S			Sn	11 47 43.0	+0.3
JKRS	**Kuro-shima**	**0.88**	**35**	P			Pn	11 47 32.2	+0.6
JKRS				S			Sn	11 47 44.0	+0.6
JIJ	**Ishigaki jima**	**1.05**	**36**	*e*S			Sn	11 47 47.8	+0.3
JISG	**Ishigakijimahi**	**1.32**	**36**	P			Pn	11 47 38.0	+0.4
JISG				*e*S			Sn	11 47 52.8	-1.3

TAP 26 11:48:00.7,22°.93N×121°.27E,h15km,ML2.0,B,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
EDH	**Donghe** baz=41	**0.05**	**40**	P			Pg	11 48 03.8	+0.2
EDH				S			Sg	11 48 06.0	+0.5
LONT	**Longtian** baz=267	**0.13**	**258**	P			Pb	11 48 05.1	+0.2
LONT				*e*S			Sb	11 48 08.9	+1.2
ECS	**Chishang** baz=337	**0.17**	**344**	*e*P			Pb	11 48 06.0	+0.5
ECS				*e*S			Sb	11 48 10.5	+1.7
CHKT	**Chengkung** baz=30	**0.19**	**28**	P			Pg	11 48 05.5	+0.3
CHKT				S			Sb	11 48 09.4	0.0
TWGBT	**Beinan** baz=247	**0.21**	**237**	P			Pg	11 48 05.8	+0.3
TWGBT				*e*S			Sb	11 48 09.9	0.0
TTN	**Taitung** baz=205	**0.21**	**212**	*e*P			Pb	11 48 06.9	+0.7
TTN				S			Sb	11 48 10.5	+0.5
TWG	**Pinlang** baz=247	**0.21**	**238**	*e*P			Pg	11 48 05.8	+0.2
TWG				S			Sb	11 48 10.0	-0.1
LDUT	**Ludao** baz=133	**0.32**	**144**	*e*P			Pg	11 48 07.4	0.0
LDUT				S			Sb	11 48 13.0	0.0
ELDTW	**Lidau** baz=318	**0.34**	**318**	P			Pg	11 48 07.8	-0.1
ELDTW				S			Sg	11 48 12.7	-0.1
EYUL	**Yuli** baz=352	**0.41**	**6**	*e*P			Pb	11 48 09.8	0.0
EYUL				*e*S			Sb	11 48 16.8	+0.9
TWF1	**Yuli** baz=350	**0.42**	**4**	*e*P			Pg	11 48 08.9	-0.3
TWF1				*e*S			Sg	11 48 15.3	+0.3
YULB	**Yu-li** baz=349	**0.46**	**3**	P			Pg	11 48 09.5	-0.4
YULB				S			Sg	11 48 16.1	0.0
STYH	**Taoyuan** baz=302	**0.51**	**298**	P			Pg	11 48 10.9	+0.1

STYH				S		Sb	11 48 18.3	-0.4
	baz=302							
STYT	**Tauyuan**	**0.52**	**296**	P		Pg	11 48 11.1	0.0
	baz=296							
STYT				*eS*		Sg	11 48 18.6	+0.4
	baz=296							
EHY	**Hungye**	**0.57**	**5**	*eP*		Pg	11 48 12.1	+0.1
	baz=4.0							
SSD	**Sandimen**	**0.62**	**253**	*eP*		Pg	11 48 12.2	-0.6
	baz=258							
SSD				*eS*		Sg	11 48 21.2	+0.2
	baz=258							
TSMG	**Majia**	**0.62**	**249**	*eP*		Pg	11 48 12.2	-0.7
	baz=249							
YUS	**Yu-Shan**	**0.62**	**332**	P		Pg	11 48 13.0	-0.2
	baz=332							
YUS				*eS*		Sg	11 48 21.8	+0.2
	baz=332							
MASBT	**Mashibuluo**	**0.67**	**242**	*eP*		Pg	11 48 13.1	-0.7
	baz=236							
MASBT				*eS*		Sg	11 48 21.6	-1.0
	baz=236							
TAW	**Tawu**	**0.67**	**211**	*eP*		Pg	11 48 12.8	-1.0
	baz=220							
TAW				*eS*		Sg	11 48 22.0	-0.7
	baz=220							
EAST	**Anshuo**	**0.67**	**215**	*eP*		Pg	11 48 12.8	-1.1
	baz=227							
WTP	**Ta-pu**	**0.68**	**297**	*eP*		Pb	11 48 14.5	+0.2
	baz=302							
WTP				*eS*		Sb	11 48 24.7	+1.2
	baz=302							
TAWH	**Dawu Township**	**0.69**	**211**	*eP*		Pg	11 48 13.0	-1.2
	baz=221							
TAWH				*eS*		Sg	11 48 22.2	-1.0
	baz=221							
TPUB	**Ta-pu**	**0.69**	**302**	*eP*		Pg	11 48 14.2	-0.1
	baz=301							
TPUB				*eS*		Sb	11 48 25.0	+1.1
	baz=301							
ALS	**Alishan**	**0.71**	**324**	*eP*		Pb	11 48 15.0	-0.1
	baz=323							
ALS				*eS*		Sb	11 48 24.8	0.0
	baz=323							
CHN1	**Nanshi**	**0.73**	**290**	*eS*		Sn	11 48 27.1	-0.2
	baz=290							
CHN4	**Tsaushan**	**0.75**	**304**	*eP*		Pb	11 48 15.6	+0.2
	baz=311							
CHN4				*eS*		Sb	11 48 26.6	+1.1
	baz=311							
SNST	**Tainan City**	**0.77**	**292**	*eS*		Sn	11 48 28.6	+0.3
	baz=292							
SSPT	**Xinbi**	**0.79**	**235**	*eP*		Pb	11 48 16.3	+0.2
	baz=231							
SSPT				*eS*		Sn	11 48 28.1	-0.6
	baz=231							

*KRNET **26** 11:48:40.0±0.1, 39.˙40N×73.˙54E, mb4.2*
*IDC **26** 11:48:40.8±1.1, 39.˙57N×73.˙52E, h0km, mb3.5/10, mbtmp3.6/12, ML3.0/2, MS4.3/1, Error ellipse: s-maj=22.5km s-min=19.2km az=99.0*
ISC 26 11:48:42.0±0.9, 39.˙43N±0.˙06×73.˙49E±0.˙05, h10km, n23, σ1§21/34, mb3.6/10, 18C-4D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.23**	**334**	⇑*eP*	**Pn**	**11 49 03.5**	**-1.8**
	baz=33						
OHH				⇑*eS*	**Sb**	**11 49 20.8**	**-0.4**
	baz=33						
DRK	**Karamyk**	**1.31**	**273**	⇑*eP*	**Pn**	**11 49 05.2**	**-1.5**
	baz=74						
DRK				⇑*eS*	**Sb**	**11 49 23.3**	**-0.7**
	baz=74						
BTK	**Batken**	**2.16**	**288**	⇑*eP*	**Pn**	**11 49 18.8**	**+0.7**
	baz=88						
BTK				⇑*eS*	**Sn**	**11 49 47.2**	**+2.2**
	baz=88						
GAR	**Garm**	**2.50**	**261**	⇓*eP*	**Pn**	**11 49 23.3**	**+0.4**
	baz=62						
GAR				⇓*eS*	**Sn**	**11 49 55.3**	**+1.7**
	baz=62						
ARLS	**Aral**	**2.51**	**14**	⇑*eP*	**Pn**	**11 49 23.5**	**+0.4**
	baz=14						
ARLS				⇑*eS*	**Sn**	**11 49 55.0**	**+1.1**
	baz=14						
ARK	**Arkit**	**2.64**	**334**	⇓*eP*	**Pn**	**11 49 25.5**	**+0.7**
	baz=34						
ARK				⇓*iS*	**Sn**	**11 49 58.9**	**+1.9**
	baz=34						
TRKS	**Terek-Say**	**2.76**	**320**	⇑*iP*	**Pn**	**11 49 26.4**	**-0.2**
	baz=20						
TRKS				⇑*eS*	**Sn**	**11 50 00.3**	**+0.2**
	baz=20						
UCH	**Uchtor**	**2.90**	**15**	⇑*eP*	**Pn**	**11 49 29.0**	**+0.2**
	baz=14						
UCH				⇑*eS*	**Sn**	**11 50 04.9**	**+1.0**
	baz=14						
EKS2	**Erkin-Say**	**3.24**	**4**	⇑*eP*	**Pn**	**11 49 33.6**	**+0.5**
	baz=3.0						
EKS2				⇑*eS*	**Sn**	**11 50 13.0**	**+1.2**
	baz=3.0						
AAK	**Ala-Archa**	**3.30**	**13**	Pn	**Pn**	**11 49 35.3**	**+1.4**
	5.2nm,0.3s,baz=180,slow=20,SNR=1.5						
AAK				LR	LR	11 50 13.0	
	comp=Z,4μm,20.0s,baz=8.5,slow=29						
AAK				Lg	Lg	11 50 21.7	
	3.9nm,0.3s,baz=321,slow=13,SNR=1.6 23nm,0.4s						
AAK	**Ala-Archa**	**3.30**	**13**	⇑*eP*	**Pn**	**11 49 34.2**	**+0.3**
	baz=12						
AAK				⇑*eS*	**Sn**	**11 50 14.1**	**+0.9**
	baz=12						
TAS	**Tashkent**	**3.73**	**302**	⇑*iP*	**Pn**	**11 49 40.7**	**+1.1**
	baz=2.0						
TAS				⇑*iS*	**Sn**	**11 50 24.7**	**+1.1**
	baz=2.0						
ZALV	**Zalesovo Beam**	**16.44**	**24**	Pn	**Pn**	**11 52 31.1**	**-1.6**
	0.1nm,0.3s,baz=203,slow=14,SNR=3.8 2.3nm,0.8s						
SONM	**Songino Array**	**25.10**	**60**	P	**P**	**11 54 07.4**	**+0.4**
	0.2nm,0.3s,baz=247,slow=7.4,SNR=1.4 0.2nm,0.3s						
BRTR	**Keskin Array B**	**30.55**	**283**	P	**P**	**11 54 55.8**	**0.0**
	0.4nm,0.4s,baz=76,slow=11,SNR=2.2 0.4nm,0.4s						
FINES	**FINESS Array B**	**36.24**	**323**	P	**P**	**11 55 44.1**	**-0.8**
	0.6nm,0.6s,baz=108,slow=7.5,SNR=1.2 0.6nm,0.6s						
ARCES	**ARCESS Array B**	**39.25**	**336**	P	**P**	**11 56 11.0**	**+0.7**
	2.6nm,1.0s,baz=101,slow=7.7,SNR=2.6 2.6nm,1.0s						
HFS	**Hagfors**	**42.05**	**320**	P	**P**	**11 56 32.8**	**-0.6**
	0.8nm,0.6s,baz=98,slow=10,SNR=1.4 0.8nm,0.6s						
NOA	**NORSAR Array B**	**43.29**	**321**	P	**P**	**11 56 41.5**	**-2.1**
	0.5nm,0.7s,baz=110,slow=7.6,SNR=2.0 0.5nm,0.7s						
ESDC	**Sonseca Array**	**57.86**	**297**	P	**P**	**11 58 35.4**	**+1.4**
	0.4nm,0.6s,baz=54,slow=6.5,SNR=1.2 0.4nm,0.6s						
YKA	**Yellowknife Ar**	**78.22**	**4**	P	**P**	**12 00 39.3**	**-2.1**
	0.1nm,0.5s,baz=350,slow=5.3,SNR=1.7 0.1nm,0.5s						
WRA	**Warramunga Arr**	**81.92**	**124**	P	**P**	**12 01 03.5**	**+1.5**
	0.6nm,0.9s,baz=327,slow=4.6,SNR=2.5 0.6nm,0.9s						
ASAR	**Alice Springs**	**84.36**	**127**	P	**P**	**12 01 14.4**	**-0.2**
	0.1nm,0.6s,baz=325,slow=4.7,SNR=1.1 0.1nm,0.6s						

*KRNET **26** 11:51:52.9±0.1, 39.˙38N×73.˙79E, mb3.9*
*IDC **26** 11:51:54.6±3.5, 39.˙05N×73.˙79E, h0km, mb3.5/5, mbtmp3.7/9, ML3.2/3, Error ellipse: s-maj=63.3km s-min=23.6km az=124.0*
ISC 26 11:51:56.8±2.8, 39.˙44N±0.˙07×73.˙65E±0.˙07, h3km±17km, n19, σ1§22/30, mb3.6/5, 16C-4D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.27**	**329**	⇑*eP*	**Pn**	**11 52 18.6**	**-3.0**
	baz=26						
OHH				⇑*eS*	**Sb**	**11 52 37.8**	**-0.4**
	baz=26						
DRK	**Karamyk**	**1.43**	**272**	⇑*eP*	**Pn**	**11 52 21.8**	**-2.2**
	baz=74						
DRK				⇑*eS*	**Sn**	**11 52 43.1**	**-0.5**
	baz=74						
BTK	**Batken**	**2.27**	**287**	⇑*eP*	**Pn**	**11 52 35.2**	**-0.1**
	baz=87						
BTK				⇑*eS*	**Sb**	**11 53 05.8**	**-1.2**
	baz=87						
ARLS	**Aral**	**2.47**	**12**	⇓*eP*	**Pn**	**11 52 36.7**	**-1.4**
	baz=9.0						
ARLS				⇓*iS*	**Sn**	**11 53 08.8**	**-0.1**
	baz=9.0						
GAR	**Garm**	**2.63**	**261**	⇓*eP*	**Pn**	**11 52 39.8**	**-0.5**
	baz=63						
GAR				⇓*iS*	**Sn**	**11 53 14.0**	**+1.2**
	baz=63						
ARK	**Arkit**	**2.68**	**332**	⇑*iP*	**Pn**	**11 52 40.6**	**-0.4**
	baz=31						
ARK				⇑*iS*	**Sn**	**11 53 15.5**	**+1.4**
	baz=31						
TRKS	**Terek-Say**	**2.83**	**318**	⇑*eP*	**Pn**	**11 52 42.1**	**-1.0**
	baz=17						
TRKS				⇑*eS*	**Sn**	**11 53 17.8**	**0.0**
	baz=17						
UCH	**Uchtor**	**2.86**	**13**	⇑*eP*	**Pn**	**11 52 42.1**	**-1.6**
	baz=11						
UCH				⇑*eS*	**Sn**	**11 53 18.4**	**-0.5**
	baz=11						
EKS2	**Erkin-Say**	**3.22**	**2**	⇑*iP*	**Pn**	**11 52 47.4**	**-1.0**
	baz=60						
EKS2				⇑*eS*	**Sn**	**11 53 27.3**	**0.0**
	baz=60						
AAK	**Ala-Archa**	**3.25**	**11**	Pn	**Pb**	**11 52 56.4**	**+1.1**
	4.5nm,0.3s,baz=172,slow=3.2,SNR=2.8						
AAK				Sn	**Sg**	**11 53 41.6**	**+0.3**
	15nm,0.3s,baz=108,slow=20,SNR=5.5 11nm,0.3s						
AAK	**Ala-Archa**	**3.25**	**11**	⇑*eP*	**Pn**	**11 52 47.7**	**-1.2**
	baz=9.0						
AAK				⇑*eS*	**Sn**	**11 53 27.8**	**-0.5**
	baz=9.0						
GEYT	**Alibeck**	**12.24**	**268**	Pn	**Pn**	**11 54 50.8**	**-1.2**
	9.8nm,0.7s,baz=182,slow=12,SNR=11						
AKTO	**Aktyubinsk**	**15.56**	**320**	Pn	**Pn**	**11 55 38.5**	**+1.4**
	0.2nm,0.3s,baz=138,slow=16,SNR=3.4 1.9nm,0.6s						
ZALV	**Zalesovo Beam**	**16.37**	**24**	Pn	**P**	**11 55 50.4**	**-0.1**
	0.1nm,0.3s,baz=218,slow=11,SNR=3.5 1.0nm,0.5s						
FINES	**FINESS Array B**	**36.30**	**323**	P	**P**	**11 59 02.9**	**+1.6**
	0.3nm,0.4s,baz=111,slow=7.6,SNR=3.6 0.3nm,0.4s						
ARCES	**ARCESS Array B**	**39.28**	**336**	P	**P**	**11 59 26.8**	**+0.4**
	1.4nm,0.9s,baz=108,slow=8.6,SNR=4.4 1.4nm,0.9s						
HFS	**Hagfors**	**42.11**	**320**	P	**P**	**11 59 51.4**	**+1.5**
	0.6nm,0.5s,baz=106,slow=9.4,SNR=4.6 0.6nm,0.5s						
NOA	**NORSAR Array B**	**43.35**	**321**	P	**P**	**12 00 00.0**	**0.0**
	0.4nm,0.7s,baz=93,slow=7.7,SNR=1.9 0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**67.87**	**269**	P	**P**	**12 02 56.5**	**-0.3**
	0.2nm,0.4s,baz=51,slow=7.0,SNR=1.8 0.2nm,0.4s						

*IDC **26** 11:52:20.7±1.0, 39.˙24N×73.˙64E, h0km, mb3.6/11, mbtmp3.7/14, ML3.2/3, Error ellipse: s-maj=21.3km s-min=17.3km az=119.0*
*KRNET **26** 11:52:22.7±0.1, 39.˙45N×73.˙70E, mb4.2*
ISC 26 11:52:21.9±2.0, 39.˙31N±0.˙07×73.˙71E±0.˙05, h6km±12km, n24, σ1§19/35, mb3.6/11, 16C-4D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.41**	**330**	⇑*eP*	**Pn**	**11 52 47.0**	**-1.2**
	baz=27						
OHH				⇑*eS*	**Sb**	**11 53 05.0**	**-1.9**
	baz=27						
DRK	**Karamyk**	**1.49**	**277**	⇑*iP*	**Pg**	**11 52 50.6**	**+0.1**
	baz=72						
DRK				⇑*eS*	**Sg**	**11 53 10.7**	**+0.9**
	baz=72						
BTK	**Batken**	**2.35**	**289**	⇑*eP*	**Pb**	**11 53 03.9**	**-0.9**
	baz=86						
BTK				⇑*iS*	**Sb**	**11 53 34.1**	**-0.1**
	baz=86						
ARLS	**Aral**	**2.59**	**10**	⇓*eP*	**Pn**	**11 53 05.9**	**+1.3**
	baz=11						
ARLS				⇓*eS*	**Sn**	**11 53 37.4**	**+0.9**
	baz=11						
GAR	**Garm**	**2.66**	**264**	⇓*iP*	**Pb**	**11 53 08.8**	**-1.2**
	baz=61						
GAR				⇓*eS*	**Sb**	**11 53 42.8**	**-0.1**
	baz=61						
ARK	**Arkit**	**2.82**	**332**	⇑*iP*	**Pn**	**11 53 09.3**	**+1.6**
	baz=31						
ARK				⇑*iS*	**Sn**	**11 53 43.4**	**+1.3**
	baz=31						
TRKS	**Terek-Say**	**2.96**	**319**	⇑*eP*	**Pn**	**11 53 10.6**	**+0.9**
	baz=17						
TRKS				⇑*eS*	**Sn**	**11 53 45.7**	**0.0**
	baz=17						
UCH	**Uchtor**	**2.98**	**12**	⇑*iP*	**Pn**	**11 53 11.6**	**+1.4**
	baz=12						
UCH				⇑*iS*	**Sn**	**11 53 47.2**	**+0.7**
	baz=12						
AAK	**Ala-Archa**	**3.38**	**10**	Pn	**Pb**	**11 53 21.2**	**-1.1**
	12nm,0.3s,baz=203,slow=12,SNR=7.2						
AAK				Sn	**Sb**	**11 54 04.6**	**+0.9**
	19nm,0.3s,baz=55,slow=18,SNR=4.3 52nm,0.5s						
AAK	**Ala-Archa**	**3.38**	**10**	⇑*eP*	**Pn**	**11 53 16.9**	**+1.5**
	baz=10.0						
AAK				⇑*iS*	**Sn**	**11 53 56.6**	**+0.7**
	baz=10.0						
TAS	**Tashkent**	**3.93**	**302**	⇑*iP*	**Pn**	**11 53 25.2**	**+2.4**
	baz=1.0						
TAS				⇑*iS*	**Sn**	**11 54 10.7**	**+1.4**
	baz=1.0						
MKAR	**Makanchi Array**	**9.76**	**37**	Pn	**Pn**	**11 54 42.5**	**-0.4**
	0.1nm,0.3s,baz=223,slow=12,SNR=1.9 0.7nm,0.6s						
ZALV	**Zalesovo Beam**	**16.48**	**24**	Pn	**Pn**	**11 56 13.9**	**+0.3**
	0.3nm,0.3s,baz=221,slow=11,SNR=4.7 1.5nm,0.5s						
BRTR	**Keskin Array B**	**30.74**	**284**	P	**P**	**11 58 39.0**	**+1.0**
	0.5nm,0.3s,baz=94,slow=9.6,SNR=4.3 0.5nm,0.3s						
AKASG	**Malin Array Be**	**32.98**	**305**	P	**P**	**11 58 55.2**	**-2.1**
	0.1nm,0.3s,baz=107,slow=6.5,SNR=1.9 0.1nm,0.3s						
FINES	**FINESS Array B**	**36.43**	**323**	P	**P**	**11 59 26.2**	**-0.9**
	0.5nm,0.5s,baz=108,slow=11,SNR=4.6 0.5nm,0.5s						
ARCES	**ARCESS Array B**	**39.42**	**336**	P	**P**	**11 59 52.2**	**-0.1**
	1.0nm,0.8s,baz=107,slow=8.0,SNR=6.5 1.0nm,0.8s						
HFS	**Hagfors**	**42.24**	**320**	P	**P**	**12 00 15.4**	**-0.2**
	1.5nm,0.7s,baz=99,slow=9.5,SNR=5.2 1.5nm,0.7s						
NOA	**NORSAR Array B**	**43.48**	**321**	P	**P**	**12 00 24.9**	**-0.8**
	0.4nm,0.5s,baz=92,slow=7.8,SNR=3.5 0.4nm,0.5s						
TORD	**Torodi Ar. Bea**	**67.92**	**269**	P	**P**	**12 03 21.0**	**-0.7**
	0.4nm,0.6s,baz=55,slow=5.5,SNR=2.6 0.4nm,0.6s						
ILAR	**Eielson Array**	**71.48**	**17**	P	**P**	**12 03 45.1**	**+2.1**
	0.3nm,0.8s,baz=349,slow=4.1,SNR=2.9 0.3nm,0.8s						
YKA	**Yellowknife Ar**	**78.32**	**4**	P	**P**	**12 04 21.4**	**-1.2**
	0.4nm,0.7s,baz=348,slow=5.5,SNR=3.0 0.4nm,0.7s						
WRA	**Warramunga Arr**	**81.72**	**124**	P	**P**	**12 04 41.5**	**0.0**
	0.6nm,0.9s,baz=323,slow=4.3,SNR=2.5 0.6nm,0.9s						
ASAR	**Alice Springs**	**84.16**	**127**	P	**P**	**12 04 54.4**	**+0.3**
	0.7nm,1.0s,baz=318,slow=6.6,SNR=4.4 0.7nm,1.0s						

*IDC **26** 11:56:47.8±0.8, 39.˙29N×73.˙68E, h0km, mb3.8/20, mbtmp3.9/26, ML3.2/6, Error ellipse: s-maj=15.6km s-min=11.9km az=140.0*
*KRNET **26** 11:56:48.8±0.1, 39.˙44N×73.˙56E, mb4.6*
*SOME **26** 11:56:48.7, 39.˙55N×73.˙58E, h5km*
*ISU **26** 11:56:50.5, 39.˙58N×73.˙66E, h5km*

*NEIC **26** 11:56:51.3±1.3, 39.˙37N±0.˙05×73.˙37E±0.˙07, h10km±1km, mb4.2/11, Error ellipse: s-maj=9.7km s-min=8.7km az=112.0*
*NNC **26** 11:56:54.6±1.9, 39.˙68N×73.˙58E, h0km, mb4.8, mpv4.5, Error ellipse: s-maj=15.4km s-min=7.0km az=169.0*
ISC 26 11:56:50.1±0.5, 39.˙31N±0.˙03×73.˙47E±0.˙02, h10km, n146, σ1§71/182, mb3.9/23, 17C-18D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk**	**1.30**	**278**	⇑*eP*	**Pb**	**11 57 14.8**	**-0.1**
	baz=72						
DRK				⇑*eS*	**Sn**	**11 57 32.9**	**+0.6**
	baz=72						
DRK	**Karamyk**	**1.30**	**278**	Pn	**Pn**	**11 57 14.2**	**-0.5**
OHH	**Osh**	**1.32**	**337**	⇓*iP*	**Pn**	**11 57 12.3**	**-2.5**
	baz=32						
OHH				⇓*iS*	**Sb**	**11 57 29.7**	**-2.5**
	baz=32						
OHH	**Osh**	**1.32**	**337**	P	**Pn**	**11 57 13.0**	**-1.8**
OHH				S	**Sb**	**11 57 30.5**	**-1.7**
TSTA	**Tashata**	**1.48**	**329**	P	**Pb**	**11 57 18.1**	**+0.3**
TSTA				S	**Sg**	**11 57 38.0**	**+0.2**
FRG	**Fergana**	**1.68**	**310**	P	**Pg**	**11 57 21.8**	**-0.5**
FRG				S	**Sg**	**11 57 44.8**	**+0.7**
CHMI	**Chimion**	**1.78**	**303**	P	**Pb**	**11 57 22.9**	**0.0**
CHMI				S	**Sg**	**11 57 47.5**	**+0.1**
BTK	**Batken**	**2.18**	**291**	⇓*eP*	**Pb**	**11 57 28.7**	**-1.0**
	baz=87						
BTK				⇓*eS*	**Sb**	**11 57 57.8**	**+1.0**
	baz=87						
BTK	**Batken**	**2.18**	**291**	Pn	**Pn**	**11 57 26.6**	**+0.1**
BTK	**Batken**	**2.18**	**291**	P	**Pb**	**11 57 30.2**	**+0.5**
BTK				S	**Sg**	**11 58 01.9**	**+1.8**
MINT	**Mingtut**	**2.24**	**302**	P	**Pb**	**11 57 31.5**	**+0.8**
MINT				S	**Sg**	**11 58 03.2**	**+1.1**
GAR	**Garm**	**2.47**	**264**	⇑*eP*	**Pb**	**11 57 33.7**	**-1.0**
	baz=61						
GAR				⇑*eS*	**Sb**	**11 58 06.4**	**+1.2**
	baz=61						
ARLS	**Aral**	**2.63**	**14**	⇑*eP*	**Pn**	**11 57 32.5**	**-0.3**
	baz=13						
ARLS				⇑*eS*	**Sn**	**11 58 04.5**	**-0.4**
	baz=13						
CHDK	**Chadak**	**2.67**	**309**	P	**Pb**	**11 57 38.8**	**+0.8**
CHDK				S	**Sg**	**11 58 17.0**	**+1.3**
AML	**Almayashu**	**2.83**	**3**	P	**Pn**	**11 57 37.8**	**+2.1**
	SNR=11						
TRKS	**Terek-Say**	**2.84**	**322**	⇑*eP*	**Pn**	**11 57 35.8**	**+0.1**
	baz=19						
TRKS				⇑*eS*	**Sn**	**11 58 10.5**	**+0.4**
	baz=19						
UCH	**Uchtor**	**3.02**	**15**	P	**Pn**	**11 57 41.1**	**+2.6**
	SNR=8.1						
UCH	**Uchtor**	**3.02**	**15**	⇑*eP*	**Pn**	**11 57 38.3**	**-0.1**
	baz=14						
UCH				⇑*eS*	**Sn**	**11 58 14.1**	**-0.8**
	baz=14						
EKS2	**Erkin-Say**	**3.36**	**4**	P	**Pn**	**11 57 44.2**	**+1.4**
	SNR=7.2						
EKS2	**Erkin-Say**	**3.36**	**4**	⇓*eP*	**Pn**	**11 57 42.8**	**0.0**
	baz=3.0						
EKS2				⇓*eS*	**Sn**	**11 58 22.2**	**-0.6**
	baz=3.0						
AAK	**Ala-Archa**	**3.42**	**13**	P	**Pn**	**11 57 45.7**	**+2.1**
	SNR=6.2						
AAK	**Ala-Archa**	**3.42**	**13**	Pn	**Pn**	**11 57 45.6**	**+2.1**
	17nm,0.3s,baz=188,slow=9.2,SNR=10						
AAK				Sn	**Sb**	**11 58 29.7**	**-2.8**
	31nm,0.3s,baz=120,slow=22,SNR=10 54nm,0.5s						
AAK	**Ala-Archa**	**3.42**	**13**	⇑*eP*	**Pn**	**11 57 43.7**	**+0.1**
	baz=12						
AAK				⇑*eS*	**Sn**	**11 58 23.6**	**-0.6**
	baz=12						
AAK	**Ala-Archa**	**3.42**	**13**	Pn	**Pn**	**11 57 44.4**	**+0.8**
CHGR	**Chuyangaron**	**3.42**	**260**	⇑*eP*	**Pn**	**11 57 46.7**	**+3.1**
	baz=59						
CHGR				⇑*eS*	**Sb**	**11 58 29.4**	**-3.2**
	baz=59						
CHGR	**Chuyangaron**	**3.42**	**260**	Pn	**Pn**	**11 57 44.5**	**+0.9**
KBK	**Karagaybulak**	**3.53**	**18**	P	**Pb**	**11 57 50.2**	**-2.5**
	SNR=8.9						
KBK	**Karagaybulak**	**3.53**	**18**	⇓*iP*	**Pn**	**11 57 45.2**	**+0.1**
	baz=18						
KBK				⇓*eS*	**Sn**	**11 58 26.3**	**-0.7**
	baz=18						
ULHL	**Ulahol**	**3.61**	**35**	P	**Pb**	**11 57 52.5**	**-1.6**
	SNR=11						
BOOM	**Boomskoye usch**	**3.69**	**30**	⇑*eP*	**Pn**	**11 57 47.4**	**0.0**
	baz=30						
BOOM				⇑*iS*	**Sn**	**11 58 30.0**	**-1.0**
	baz=30						
BOOM	**Boomskoye usch**	**3.69**	**30**	Pn	**Pn**	**11 57 49.3**	**+2.0**
TAS	**Tashkent**	**3.77**	**304**	⇓*iP*	**Pn**	**11 57 50.3**	**+1.9**
	baz=2.0						
TAS				⇓*iS*	**Sn**	**11 58 35.3**	**+2.5**
	baz=2.0						
IUG	**Iuzhnay**	**3.86**	**318**	*eP*	**Pb**	**11 58 00.3**	**+2.0**
	4μm,0.7s						
IUG				*eS*	**Sg**	**11 58 52.0**	**-1.9**
	320nm,0.8s						
IUG	**Iuzhnay**	**3.86**	**318**	Pg	**Pb**	**11 58 00.3**	**+2.0**
	4μm,0.7s						
IUG				Lg	Lg	11 58 48.0	
	368nm,0.5s						
DZA	**Taraz**	**3.93**	**336**	*eP*	**Pb**	**11 57 58.4**	**-1.0**
	85nm,0.1s						
DZA				*eS*	**Sb**	**11 58 48.1**	**+1.0**
	393nm,0.4s						
DZA	**Taraz**	**3.93**	**336**	Pg	**Pb**	**11 58 00.3**	**+0.9**
	85nm,0.1s						
DZA				Lg	Lg	11 58 48.1	
	393nm,0.4s						
TKM2	**Tokmak 2**	**3.95**	**23**	⇓Pg	**Pg**	**11 58 05.9**	**+0.1**
	35nm,0.5s						
TKM2				⇓Lg	Lg	11 58 49.0	
	122nm,0.6s						
KDJ	**Kajisay**	**3.99**	**44**	⇓*iP*	**Pn**	**11 57 51.7**	**+0.2**
	baz=45						
KDJ				⇓*iS*	**Sn**	**11 58 37.3**	**-1.0**
	baz=45						
KDJ	**Kajisay**	**3.99**	**44**	Pn	**Pn**	**11 57 53.5**	**+2.1**
USP	**Ospenovka**	**4.03**	**11**	P	**Pb**	**11 58 00.6**	**-0.6**
	SNR=6.7						
TARG	**Taragay, Kyrgy**	**4.09**	**52**	Pn	**Pn**	**11 57 54.7**	**+1.6**
KST	**Kastek**	**4.18**	**26**	*eP*	**Pb**	**11 58 02.5**	**-1.3**
	35nm,0.7s						
KST				*eS*	**Sb**	**11 58 55.3**	**+0.9**
	308nm,0.8s						
KST	**Kastek**	**4.18**	**26**	Pg	**Pb**	**11 58 05.1**	**+1.3**
	40nm,0.5s						
KST				Lg	Lg	11 58 56.3	
	308nm,0.8s						
CHM	**Chimkent**	**4.20**	**317**	*eP*	**Pb**	**11 58 07.0**	**+2.8**
	3.7nm,0.3s						
CHM				*eS*	**Sg**	**11 59 02.9**	**-2.1**
	307nm,0.3s						
SGDS	**Sogindy**	**4.23**	**12**	*eP*	**Pb**	**11 58 03.8**	**-0.9**
	50nm,0.5s						
SGDS				*eS*	**Sb**	**11 58 57.7**	**+1.9**
	170nm,0.7s						
SGDS	**Sogindy**	**4.23**	**12**	Pg	**Pb**	**11 58 06.4**	**+1.8**
	50nm,0.5s						
SGDS				Lg	Lg	11 58 58.5	
	170nm,0.7s						
DGS	**Degeres**	**4.30**	**23**	*eP*	**Pb**	**11 58 05.2**	**-0.6**
	74nm,0.4s						
DGS	

	169nm,0.5s								
IZV	**Izvestkoviy**	**4.42**	**31**	Pg		**Pb**	**11 58 10.3**	**+2.4**	
	39nm,0.3s								
IZV				Lg		Lg	11 59 05.0		
	169nm,0.5s								
MTBS	**Maitube**	**4.42**	**29**	*e*P		**Pb**	**11 58 06.5**	**-1.4**	
	45nm,0.4s								
MTBS				*e*S		**Sb**	**11 59 02.4**	**+1.1**	
	83nm,0.6s								
MTBS	**Maitube**	**4.42**	**29**	Pg		**Pb**	**11 58 07.3**	**-0.6**	
	45nm,0.4s								
MTBS				Lg		Lg	11 59 01.5		
	83nm,0.6s								
TNSS	**Tian-Shan**	**4.56**	**34**	*e*P		**Pb**	**11 58 09.2**	**-1.2**	
	50nm,0.6s								
TNSS				*e*S		**Sb**	**11 59 07.2**	**+1.7**	
	58nm,0.7s								
TNSS	**Tian-Shan**	**4.56**	**34**	Pg		**Pb**	**11 58 09.6**	**-0.8**	
	50nm,0.6s								
TNSS				Lg		Lg	11 59 04.6		
	58nm,0.7s								
BRLS	**Boroldaу**	**4.62**	**325**	*e*P		**Pb**	**11 58 12.4**	**+1.2**	
	20nm,0.6s								
BRLS				*e*S		**Sb**	**11 59 12.4**	**+5.5**	
	100nm,0.4s								
BRLS	**Boroldaу**	**4.62**	**325**	Pg		**Pb**	**11 58 14.3**	**+3.1**	
	20nm,0.6s								
BRLS				Lg		Lg	11 59 13.7		
	100nm,0.4s								
KRBS	**Karabastau**	**4.69**	**20**	*e*P		**Pb**	**11 58 11.6**	**-0.8**	
	16nm,0.6s								
KRBS				*e*S		**Sb**	**11 59 11.5**	**+2.6**	
	96nm,0.7s								
KRBS	**Karabastau**	**4.69**	**20**	Pg		**Pb**	**11 58 13.0**	**+0.6**	
	26nm,0.6s								
KRBS				Lg		Lg	11 59 12.0		
	96nm,0.7s								
KNDC	**Almaty**	**4.71**	**33**	⇓Pg		**Pb**	**11 58 12.9**	**+0.1**	
	81nm,0.6s								
KNDC				⇓Lg		Lg	11 59 13.6		
	962nm,1.0s								
PRZ	**Przheval'sk**	**4.90**	**48**	Pn		**Pn**	**11 58 06.0**	**+2.0**	
KTBS	**Karatobe**	**5.02**	**28**	*e*P		**Pb**	**11 58 16.9**	**-1.1**	
	42nm,0.6s								
KTBS				*e*S		**Sb**	**11 59 20.7**	**+2.3**	
	287nm,1.0s								
KTBS	**Karatobe**	**5.02**	**28**	Pg		**Pb**	**11 58 19.3**	**+1.3**	
	42nm,0.6s								
KTBS				Lg		Lg	11 59 20.7		
	287nm,1.0s								
KUU	**Kurty**	**5.06**	**24**	*e*P		**Pb**	**11 58 17.6**	**-1.2**	
	22nm,0.3s								
KUU				*e*S		**Sb**	**11 59 22.0**	**+2.3**	
	73nm,0.4s								
KUU	**Kurty**	**5.06**	**24**	Pg		**Pb**	**11 58 20.1**	**+1.3**	
	22nm,0.3s								
KUU				Lg		Lg	11 59 22.0		
	73nm,0.4s								
CHKK	**Chushkaly**	**5.25**	**29**	*e*P		**Pb**	**11 58 21.4**	**-0.6**	
	34nm,0.6s								
CHKK				*e*S		**Sb**	**11 59 28.4**	**+3.2**	
	72nm,0.7s								
CHKK	**Chushkaly**	**5.25**	**29**	Pg		**Pb**	**11 58 23.4**	**+1.4**	
	34nm,0.6s								
CHKK				Lg		Lg	11 59 27.6		
	72nm,0.7s								
SATY	**Saty**	**5.28**	**43**	*e*P		**Pb**	**11 58 22.6**	**0.0**	
	35nm,0.8s								
SATY				*e*S		**Sb**	**11 59 30.5**	**+4.3**	
	166nm,1.1s								
SATY	**Saty**	**5.28**	**43**	Pg		**Pb**	**11 58 24.6**	**+2.0**	
	35nm,0.8s								
SATY				Lg		Lg	11 59 31.1		
	166nm,1.1s								
KURS	**Kuram**	**5.47**	**39**	*e*P		**Pb**	**11 58 26.1**	**+0.3**	
	26nm,0.9s								
KURS				*e*S		**Sb**	**11 59 35.9**	**+4.4**	
	73nm,0.9s								
KURS	**Kuram**	**5.47**	**39**	Pg		**Pb**	**11 58 28.2**	**+2.5**	
	35nm,0.8s								
KURS				Lg		Lg	11 59 35.9		
	73nm,0.9s								
CEP	**Cherat**	**5.62**	**193**	P		Pn	11 58 20.7	+6.9	
CHCP	**Chirah Chowk**	**5.64**	**182**	⇑P		Pn	11 58 21.1	+7.1	
KPKS	**Kokpek**	**5.71**	**42**	*e*P		**Pb**	**11 58 29.6**	**-0.3**	
	23nm,0.4s								
KPKS				*e*S		**Sb**	**11 59 42.4**	**+4.0**	
	100nm,0.4s								
KPKS	**Kokpek**	**5.71**	**42**	Pg		**Pb**	**11 58 32.0**	**+2.1**	
	23nm,0.4s								
KPKS				Lg		Lg	11 59 42.4		
	100nm,0.4s								
BTLS	**Baital**	**5.75**	**4**	*e*P		**Pb**	**11 58 29.2**	**-1.2**	
	3.3nm,0.6s								
BTLS				*e*S		**Sb**	**11 59 41.6**	**+2.3**	
	66nm,0.7s								
BTLS	**Baital**	**5.75**	**4**	Pg		**Pb**	**11 58 32.5**	**+2.1**	
	20nm,0.5s								
BTLS				Lg		Lg	11 59 43.3		
	66nm,0.7s								
ARXS	**Arharly**	**5.88**	**32**	*e*P		**Pb**	**11 58 32.7**	**-0.1**	
	24nm,0.6s								
ARXS				*e*S		**Sb**	**11 59 47.6**	**+4.2**	
	93nm,0.5s								
ARXS	**Arharly**	**5.88**	**32**	Pg		**Pb**	**11 58 35.0**	**+2.2**	
	40nm,0.6s								
ARXS				Lg		Lg	11 59 48.0		
	93nm,0.5s								
KBL	**Kabul**	**5.93**	**218**	Pn		**Pn**	**11 58 19.7**	**+1.5**	
PDGK	**Podgornoye**	**6.06**	**47**	Pg		**Pb**	**11 58 38.3**	**+2.6**	
	11nm,0.6s								
PDGK				Lg		Lg	11 59 53.3		
	29nm,0.9s								
BLB	**Baldybastay**	**6.08**	**36**	*e*P		**Pb**	**11 58 36.9**	**+0.7**	
	60nm,0.5s								
BLB				*e*S		**Sb**	**11 59 53.8**	**+4.8**	
	97nm,0.9s								
BLB	**Baldybastay**	**6.08**	**36**	Pg		**Pb**	**11 58 39.0**	**+2.9**	
	60nm,0.5s								
BLB				Lg		Lg	11 59 55.0		
	97nm,0.9s								
THW	**Thamme Wali**	**6.65**	**193**	P		Pn	11 58 36.1	+8.2	
DJR	**Jarkent**	**6.89**	**41**	*e*P		**Pb**	**11 58 52.3**	**+2.4**	
	10nm,0.8s								
DJR				*e*S		Sb	12 00 21.9	+10	
	40nm,1.0s								
DJR	**Jarkent**	**6.89**	**41**	Pg		Pb	11 58 55.1	+5.1	
	10nm,0.8s								
DJR				Lg		Lg	12 00 21.9		
	40nm,1.0s								
SARP	**Sargodha**	**7.40**	**185**	P		Pn	11 58 43.1	+5.0	
SMLA	**Simla**	**8.70**	**159**	*e*P		Pn	11 59 01.8	+5.8	
SMLA				*e*S		**Sn**	**12 00 35.1**	**+0.9**	
SMLA				IAML			12 00 38.8		
	comp=E,310nm,0.5s								
SMLA				IAML			12 00 41.9		
	comp=N,276nm,0.4s								
MK31	**Makanchi Array**	**9.88**	**38**	Pn		**Pn**	**11 59 12.8**	**+0.7**	
MKAR	**Makanchi Array**	**9.88**	**38**	Pn		**Pn**	**11 59 11.1**	**-1.0**	
	comp=N,0.1nm,0.3s,baz=221,slow=15,SNR=3.0								
MKAR				Lg		Lg	12 01 55.4		
	comp=N,0.1nm,0.3s,baz=210,slow=28,SNR=1.8 comp=N,0.4nm,0.6s								
MKAR	**Makanchi Array**	**9.88**	**38**	Pn		**Pn**	**11 59 12.6**	**+0.5**	
WMQ	**Urumqi**	**11.57**	**62**	*e*P		**Pn**	**11 59 35.5**	**+0.2**	
KURBB	**Kurchatov Arra**	**11.86**	**16**	Pn		**Pn**	**11 59 35.8**	**-3.4**	
	baz=206,slow=12,SNR=1.4								
KURBB				Lg		Lg	12 02 57.3		
	comp=N,0.1nm,0.3s,baz=204,slow=27,SNR=2.3 comp=N,0.5nm,0.2s								
AB31	**Akbulak array**	**13.86**	**320**	P		**Pn**	**12 00 04.5**	**-2.0**	
	comp=N,3.6nm,0.6s,baz=131,slow=9.9,SNR=14								
ABKAR	**Akbulak array**	**13.86**	**320**	Pn		**Pn**	**12 00 05.9**	**-0.7**	
ABKAR	**Akbulak array**	**13.86**	**320**	Pn		**Pn**	**12 00 05.5**	**-1.0**	
AKTO	**Aktyubinsk**	**15.58**	**321**	Pn		**Pn**	**12 00 28.6**	**-1.1**	
	comp=N,0.6nm,0.3s,baz=139,slow=14,SNR=14 comp=N,10.0nm,0.8s								
AKTO	**Aktyubinsk**	**15.58**	**321**	⇓P		**Pn**	**12 00 28.5**	**-1.1**	
	comp=N,18nm,0.8s								
ZALV	**Zalesovo Beam**	**16.56**	**24**	Pn		**Pn**	**12 00 40.5**	**-1.7**	
	comp=N,0.1nm,0.3s,baz=213,slow=9.9,SNR=9.3 comp=N,2.0nm,0.6s								
ZALV	**Zalesovo Beam**	**16.56**	**24**	Pn		**Pn**	**12 00 43.4**	**+1.2**	
GOMU	**GeErMu**	**17.16**	**94**	P		Pn	**12 00 45.5**	**-4.8**	
ARU	**Arti**	**19.76**	**335**	P		**P**	**12 01 19.4**	**-0.6**	
	baz=156,slow=6.4,SNR=14 comp=N,10nm,0.7s								
ARU	**Arti**	**19.76**	**335**	P		**P**	**12 01 19.9**	**-0.1**	
ARU				IAmb		IAmb	12 01 22.7		
	comp=Z,10nm,0.7s								
GTA	**Gaotai**	**20.35**	**81**	*e*P		Pn	12 01 30.0	+1.2	
GTA				pP		sP	12 01 33.8	+0.9	
GTA				sP		pP	12 01 37.3	+6.3	
GTA				pmax		pmax			
	comp=Z,4.0nm,1.2s								
WSAR	**Wadi Sarin**	**20.39**	**223**	P		Pn	12 01 28.8	-0.3	
	comp=Z,3.2nm,0.6s,baz=105,slow=14,SNR=2.4 comp=Z,3.2nm,0.6s								
GNI	**Garni**	**22.07**	**281**	P		**P**	**12 01 47.6**	**+2.2**	
	comp=Z,6.7nm,0.6s,baz=72,slow=20,SNR=1.7 comp=Z,6.7nm,0.6s								
BELG	**Belogornoye**	**22.11**	**315**	P		**P**	**12 01 47.5**	**+2.1**	
	comp=Z,53nm,0.9s,baz=309,slow=0.1,SNR=9.1								
ONI	**Oni**	**22.85**	**288**	P		**P**	**12 01 54.2**	**+0.7**	
KBZ	**Khabaz**	**23.24**	**291**	P		**P**	**12 01 59.9**	**+2.5**	
	comp=Z,1.2nm,0.6s,baz=94,slow=5.0,SNR=2.3 comp=Z,1.2nm,0.6s								
SONM	**Songino Array**	**25.18**	**59**	P		**P**	**12 02 15.4**	**-0.3**	
	comp=Z,1.3nm,0.9s,baz=250,slow=7.5,SNR=3.7 comp=Z,1.3nm,0.9s								
BR131	**Keskin Array S**	**30.56**	**284**	P		**P**	**12 03 04.2**	**+0.2**	
BR131				IAmb		IAmb	12 03 11.2		
	comp=Z,4.1nm,0.9s								
BRTR	**Keskin Array B**	**30.56**	**284**	P		**P**	**12 03 04.5**	**+0.6**	
	comp=Z,1.3nm,0.7s,baz=81,slow=7.6,SNR=6.3 comp=Z,1.3nm,0.7s								
BRTR	**Keskin Array B**	**30.56**	**284**	P		**P**	**12 03 04.0**	**0.0**	
AKASG	**Malin Array Be**	**32.82**	**305**	P		**P**	**12 03 23.5**	**0.0**	
	comp=Z,0.2nm,0.4s,baz=80,slow=7.8,SNR=3.8 comp=Z,0.2nm,0.4s								
MLR	**Muntele Rosu**	**35.22**	**296**	P		**P**	**12 03 46.9**	**+2.3**	
	comp=Z,1.7nm,0.5s,baz=103,slow=14,SNR=4.9 comp=Z,1.7nm,0.5s								
BUR08	**Bucovina Ar. S**	**35.51**	**300**	P		**P**	**12 03 47.1**	**+0.1**	
BUR08				IAmb		IAmb	12 03 52.1		
	comp=Z,2.1nm,1.1s								
FIA1	**FINESS Array S**	**36.32**	**323**	P		**P**	**12 03 53.4**	**-0.3**	
FIA1				IAmb		IAmb	12 04 08.8		
	comp=Z,3.1nm,0.8s								
FINES	**FINESS Array B**	**36.32**	**323**	P		**P**	**12 03 53.0**	**-0.6**	
	comp=Z,1.2nm,0.6s,baz=113,slow=11,SNR=7.8 comp=Z,1.2nm,0.6s								
FINES	**FINESS Array B**	**36.32**	**323**	P		**P**	**12 03 53.5**	**-0.2**	
ARCES	**ARCESS Array B**	**39.35**	**336**	P		**P**	**12 04 18.8**	**-0.4**	
	comp=Z,0.8nm,0.5s,baz=109,slow=9.1,SNR=4.6 comp=Z,0.8nm,0.5s								
HFS	**Hagfors**	**42.12**	**320**	P		**P**	**12 04 42.0**	**-0.1**	
	comp=Z,1.9nm,0.5s,baz=97,slow=12,SNR=3.7 comp=Z,1.9nm,0.5s								
TIXI	**Tiksi**	**42.44**	**23**	P		**P**	**12 04 43.4**	**-1.1**	
	comp=Z,2.7nm,0.6s,baz=90,slow=22,SNR=8.3 comp=Z,2.7nm,0.6s								
TIXI	**Tiksi**	**42.44**	**23**	P		**P**	**12 04 45.4**	**+0.8**	
GERES	**GERESS Array B**	**42.97**	**303**	P		**P**	**12 04 48.3**	**-1.0**	
	comp=Z,0.1nm,0.3s,baz=70,slow=8.5,SNR=2.0 comp=Z,0.1nm,0.3s								
NC303	**NORSAR Array S**	**43.30**	**321**	P		**P**	**12 04 51.9**	**+0.2**	
NB2	**NORSAR Subarra**	**43.37**	**321**	P		**P**	**12 04 51.6**	**-0.7**	
	comp=Z,1.8nm,0.9s,baz=92,slow=8.6								
NOA	**NORSAR Array B**	**43.37**	**321**	P		**P**	**12 04 51.2**	**-1.1**	
	comp=Z,0.2nm,0.5s,baz=90,slow=7.9,SNR=4.2 comp=Z,0.7nm,0.5s								
ESDC	**Sonseca Array**	**57.89**	**297**	P		**P**	**12 06 41.0**	**-1.3**	
	comp=Z,0.8nm,0.7s,baz=53,slow=8.5,SNR=4.3 comp=Z,0.8nm,0.7s								
TOA0	**Torodi Ar. Sit**	**67.73**	**269**	P		**P**	**12 07 47.8**	**-0.3**	
TOA0				IAmb		IAmb	12 07 58.1		
	comp=Z,2.0nm,0.8s								
TORD	**Torodi Ar. Bea**	**67.73**	**269**	P		**P**	**12 07 47.0**	**-1.0**	
	comp=Z,0.8nm,0.7s,baz=42,slow=4.9,SNR=5.5 comp=Z,0.8nm,0.7s								
TORD	**Torodi Ar. Bea**	**67.73**	**269**	P		**P**	**12 07 48.0**	**-0.1**	
TORD				IAmb		IAmb	12 07 54.6		
	comp=Z,1.3nm,0.8s								
IMAR	**Indian Mountai**	**68.90**	**19**	P		**P**	**12 07 55.4**	**+0.7**	
BMAR	**Burnt Mountain**	**69.75**	**15**	P		**P**	**12 08 00.5**	**+0.6**	
INK	**Inuvik**	**70.81**	**10**	P		**P**	**12 08 04.9**	**-1.4**	
	comp=Z,1.2nm,0.7s,baz=34,slow=5.1,SNR=3.8 comp=Z,1.2nm,0.7s								
INK	**Inuvik**	**70.81**	**10**	P		**P**	**12 08 08.0**	**+1.7**	
INK				IAmb		IAmb	12 08 15.5		
	comp=Z,1.9nm,0.9s								
ILAR	**Eielson Array**	**71.54**	**17**	P		**P**	**12 08 10.7**	**-0.1**	
	comp=Z,0.3nm,0.7s,baz=324,slow=4.5,SNR=3.2 comp=Z,0.3nm,0.7s								
ILAR	**Eielson Array**	**71.54**	**17**	P		**P**	**12 08 11.7**	**+0.9**	
BCAR	**Beaver Creek A**	**74.14**	**16**	P		**P**	**12 08 26.9**	**+0.5**	
YKA	**Yellowknife Ar**	**78.34**	**4**	P		**P**	**12 08 50.2**	**+0.1**	
	comp=Z,0.6nm,0.7s,baz=350,slow=5.7,SNR=6.9 comp=Z,0.6nm,0.7s								
WRA	**Warramunga Arr**	**81.87**	**124**	P		**P**	**12 09 07.9**	**-1.9**	
	comp=Z,0.8nm,0.9s,baz=318,slow=5.5,SNR=4.6 comp=Z,0.8nm,0.9s								
AS31	**Alice Springs**	**84.31**	**127**	P		**P**	**12 09 22.2**	**-0.2**	
ASAR	**Alice Springs**	**84.31**	**127**	P		**P**	**12 09 20.9**	**-1.5**	
	comp=Z,1.0nm,0.9s,baz=320,slow=5.7,SNR=7.0 comp=Z,1.0nm,0.9s								
ASAR	**Alice Springs**	**84.31**	**127**	P		**P**	**12 09 22.8**	**+0.5**	

*IDC **26** 11:59:42.1±0.9,39°.34N×73°.63E,h0km,mb3.7/11, mbtmp3.7/13,ML3.3/2,Error ellipse: s-maj=21.5km s-min=18.2km az=90.0*
*KRNET **26** 11:59:43.5±0.1,39°.44N×73°.49E,mb4.0*
ISC 26 11:59:42.3±3.3,39°.29N±0°.06×73°.50E±0°.04,h0km±21km, n25,σ1§59/38,mb3.7/11,6C-18D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**1.33**	**279**	⇓*e*P			**Pn**	**12 00 08.5**	**+0.1**
	baz=72								
DRK				⇓*e*S			**Sn**	**12 00 26.7**	**-0.2**
	baz=72								
OHH	**Osh**	**1.35**	**336**	⇓*e*P			**Pn**	**12 00 06.6**	**-1.9**
	baz=34								
OHH				⇓*i*S			**Sb**	**12 00 23.3**	**-3.1**
	baz=34								
BTK	**Batken**	**2.21**	**291**	⇓*e*P			**Pb**	**12 00 22.6**	**-0.5**
	baz=87								
BTK				⇓*e*S			**Sb**	**12 00 51.2**	**+0.2**
	baz=87								
GAR	**Garm**	**2.49**	**264**	⇑*e*P			**Pb**	**12 00 27.6**	**-0.4**
	baz=61								
GAR				⇑*e*S			**Sb**	**12 00 59.8**	**+0.6**
	baz=61								
ARLS	**Aral**	**2.65**	**13**	⇓*e*P			**Pn**	**12 00 27.5**	**+1.1**
	baz=15								
ARLS				⇓*i*S			**Sn**	**12 00 59.5**	**+0.2**
	baz=15								
TRKS	**Terek-Say**	**2.88**	**322**	⇓*e*P			**Pn**	**12 00 30.0**	**+0.5**
	baz=19								
TRKS				⇓*e*S			**Sn**	**12 01 04.1**	**-0.8**
	baz=19								
UCH	**Uchtor**	**3.04**	**14**	⇓*e*P			**Pn**	**12 00 32.9**	**+0.9**
	baz=15								
UCH				⇓*e*S			**Sn**	**12 01 09.1**	**-0.2**
	baz=15								
AAK	**Ala-Archa**	**3.43**	**12**	Pn			**Pn**	**12 00 39.7**	**+2.5**
	10nm,0.3s,baz=168,slow=7.7,SNR=3.1								
AAK				Sn			**Sn**	**12 01 22.2**	**+3.6**
	0.4nm,0.3s,baz=1.1,slow=19,SNR=1.7 24nm,0.4s								
AAK	**Ala-Archa**	**3.43**	**12**	⇓*e*P			**Pn**	**12 00 38.4**	**+1.2**
	baz=13								
AAK				⇓*i*S			**Sn**	**12 01 18.5**	**-0.1**
	baz=13								
BOOM	**Boomskoye usch**	**3.70**	**29**	⇓*i*P			**Pn**	**12 00 42.2**	**+1.4**
	baz=31								
BOOM				⇓*i*S			**Sn**	**12 01 25.2**	**0.0**
	baz=31								
TAS	**Tashkent**	**3.80**	**304**	⇑*i*P			**Pn**	**12 00 44.3**	**+2.2**
	baz=2.0								
TAS				⇑*i*S			**Sn**	**12 01 28.7**	**+1.1**
	baz=2.0								
KDJ	**Kajisay**	**3.99**	**43**	⇑*e*P			**Pn**	**12 00 46.7**	**+1.9**
	baz=45								
KDJ				⇑*i*S			**Sn**	**12 01 33.0**	**+0.7**
	baz=45								
KK31	**Karatay Array**	**4.43**	**330**	⇓Pn			**Pn**	**12 00 53.6**	**+2.8**
	9.5nm,0.4s,baz=145,slow=15,SNR=4.2								
KK31				⇓Sn			**Sn**	**12 01 47.3**	**+4.3**
	11nm,0.4s,baz=144,slow=25,SNR=2.6								
ZALV	**Zalesovo Beam**	**16.57**	**24**	Pn			**Pn**	**12 03 35.6**	**-0.2**
	0.1nm,0.3s,baz=195,slow=9.0,SNR=3.0 1.6nm,0.7s								
BRTR	**Keskin Array B**	**30.58**	**284**	P			**P**	**12 05 59.5**	**+1.7**
	0.9nm,0.6s,baz=79,slow=9.0,SNR=4.2 0.9nm,0.6s								
FINES	**FINESS Array B**	**36.35**	**323**	P			**P**	**12 06 47.8**	**+0.2**
	0.4nm,0.4s,baz=115,slow=9.4,SNR=4.3 0.4nm,0.4s								
ARCES	**ARCESS Array B**	**39.37**	**336**	P			**P**	**12 07 13.1**	**0.0**
	0.8nm,0.6s,baz=95,slow=11,SNR=1.4 0.8nm,0.6s								
KLR	**Kul'dur**	**41.93**	**57**	P			**P**	**12 07 34.3**	**-0.2**
	0.9nm,0.5s,baz=286,slow=7.4,SNR=4.5 0.9nm,0.5s								
HFS	**Hagfors**	**42.16**	**320**	P			**P**	**12 07 35.9**	**-0.2**
	1.1nm,0.5s,baz=113,slow=11,SNR=1.9 1.1nm,0.5s								
NOA	**NORSAR Array B**	**43.40**	**321**	P			**P**	**12 07 46.4**	**+0.1**
	0.6nm,0.6s,baz=90,slow=7.7,SNR=3.4 0.6nm,0.6s								
TORD	**Torodi Ar. Bea**	**67.75**	**269**	P			**P**	**12 10 41.8**	**-0.2**
	0.7nm,0.6s,baz=45,slow=5.8,SNR=1.7 0.7nm,0.6s								
ILAR	**Eielson Array**	**71.55**	**17**	P			**P**	**12 11 02.2**	**-2.5**
	0.2nm,0.7s,baz=319,slow=6.3,SNR=2.0 0.2nm,0.7s								
YKA	**Yellowknife Ar**	**78.36**	**4**	P			**P**	**12 11 43.6**	**-0.4**
	0.4nm,0.9s,baz=350,slow=5.5,SNR=3.0 0.4nm,0.9s								
WRA	**Warramunga Arr**	**81.84**	**124**	P			**P**	**12 12 03.2**	**-0.2**
	0.4nm,0.6s,baz=324,slow=5.5,SNR=7.2 0.4nm,0.6s								
ASAR	**Alice Springs**	**84.28**	**127**	P			**P**	**12 12 15.6**	**-0.4**
	0.4nm,0.7s,baz=308,slow=4.1,SNR=4.2 0.4nm,0.7s								

*IDC **26** 12:00:43.0±1.5,39°.09N×73°.23E,h0km,mb3.6/6, mbtmp3.6/6,Error ellipse: s-maj=57.8km s-min=32.9km az=43.0*
*KRNET **26** 12:00:45.2±0.1,39°.44N×73°.54E,mb4.0*
ISC 26 12:00:45.4±2.2,39°.33N±0°.08×73°.48E±0°.06,h10km±13km, n14,σ1§21/22,mb3.6/6,16C,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.31**	**336**	⇑*e*P			**Pn**	**12 01 08.4**	**-1.4**
	baz=32								
OHH				⇑*e*S			**Sb**	**12 01 25.5**	**-1.5**
	baz=32								
DRK	**Karamyk**	**1.31**	**277**	⇑*e*P			**Pg**	**12 01 10.7**	**+0.1**
	baz=72								
DRK				⇑*e*S			**Sn**	**12 01 29.3**	**+1.5**
	baz=72								
BTK	**Batken**	**2.18**	**290**	⇑*i*P			**Pb**	**12 01 24.6**	**-0.4**
	baz=87								
BTK				⇑*e*S			**Sb**	**12 01 53.5**	**+1.4**
	baz=87								
GAR	**Garm**	**2.48**	**263**	⇑*e*P			**Pb**	**12 01 29.8**	**-0.3**
	baz=61								
GAR				⇑*e*S			**Sb**	**12 02 02.1**	**+1.3**
	baz=61								
ARLS	**Aral**	**2.61**	**14**	⇑*e*P			**Pn**	**12 01 28.8**	**+1.0**
	baz=14								
ARLS				⇑*e*S			**Sn**	**12 02 00.6**	**+1.0**
	baz=14								
TRKS	**Terek-Say**	**2.84**	**322**	⇑*e*P			**Pn**	**12 01 31.8**	**+1.0**
	baz=19								
TRKS				⇑*e*S			**Sn**	**12 02 06.2**	**+1.1**
	baz=19								
UCH	**Uchtor**	**3.00**	**15**	⇑*e*P			**Pn**	**12 01 34.6**	**+1.2**
	baz=15								
UCH				⇑*e*S			**Sn**	**12 02 10.5**	**+0.9**
	baz=15								
BOOM	**Boomskoye usch**	**3.67**	**30**	⇑*e*P			**Pn**	**12 01 43.6**	**+1.3**
	baz=30								
BOOM				⇑*i*S			**Sn**	**12 02 26.3**	**+0.6**
	baz=30								
FINES	**FINESS Array B**	**36.31**	**323**	P			**P**	**12 07 48.2**	**-0.6**
	1.1nm,0.8s,baz=112,slow=13,SNR=4.3 1.1nm,0.8s								
HFS	**Hagfors**	**42.12**	**320**	P			**P**	**12 08 38.3**	**+1.0**
	0.5nm,0.4s,baz=81,slow=9.2,SNR=1.2 0.5nm,0.4s								
NOA	**NORSAR Array B**	**43.36**	**321**	P			**P**	**12 08 46.2**	**-1.3**
	0.4nm,0.5s,baz=92,slow=7.9,SNR=2.5 0.4nm,0.5s								
TORD	**Torodi Ar. Bea**	**67.74**	**269**	P			**P**	**12 11 41.4**	**-2.0**
	0.2nm,0.6s,baz=44,slow=4.7,SNR=1.5 0.2nm,0.6s								
YKA	**Yellowknife Ar**	**78.32**	**4**	P			**P**	**12 12 45.8**	**+0.5**
	0.2nm,0.6s,baz=2.4,slow=6.2,SNR=2.9 0.2nm,0.6s								
WRA	**Warramunga Arr**	**81.87**	**124**	P			**P**	**12 13 04.6**	**-0.4**
	0.8nm,1.2s,baz=321,slow=5.6,SNR=1.6 0.8nm,1.2s								

*IDC **26** 12:02:17.1±1.4,39°.24N×73°.66E,h0km,mb3.5/7, mbtmp3.5/8,ML3.4/1,Error ellipse: s-maj=27.3km s-min=21.7km az=113.0*
*SOME **26** 12:02:17.4,39°.50N×73°.63E,h10km*
*KRNET **26** 12:02:18.1±0.1,39°.41N×73°.59E,mb4.0*
ISC 26 12:02:18.3±1.8,39°.28N±0°.06×73°.49E±0°.03,h3km±11km, n32,σ1§98/57,mb3.5/7,20C-4D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**1.33**	**279**	⇑*i*P			**P

	94nm,0.5s							
SGDS	**Sogindy**	**4.26**	**11**	*e*P		**Pb**	**12 03 33.2**	**-0.8**
	13nm,0.7s							
SGDS				*e*S		**Sb**	**12 04 27.8**	**+2.0**
	23nm,0.5s							
MTBS	**Maitube**	**4.44**	**29**	*e*P		**Pb**	**12 03 36.3**	**-0.7**
	28nm,0.5s							
MTBS				*e*S		**Sb**	**12 04 33.6**	**+2.5**
	33nm,0.4s							
TNSS	**Tian-Shan**	**4.57**	**34**	*e*P		**Pb**	**12 03 39.7**	**+0.2**
	21nm,0.9s							
TNSS				*e*S		**Sb**	**12 04 38.9**	**+3.8**
	16nm,0.5s							
KRBS	**Karabastau**	**4.71**	**20**	*e*P		**Pb**	**12 03 40.9**	**-0.7**
	1.2nm,0.6s							
KRBS				*e*S		**Sb**	**12 04 41.2**	**+2.4**
	38nm,0.7s							
KTBS	**Karatobe**	**5.04**	**27**	*e*P		**Pb**	**12 03 46.6**	**-0.6**
	18nm,0.5s							
KTBS				*e*S		**Sb**	**12 04 50.8**	**+2.6**
	0.6nm,0.2s							
KUU	**Kurty**	**5.08**	**24**	*e*P		**Pb**	**12 03 46.6**	**-1.4**
	13nm,0.8s							
KUU				*e*S		**Sb**	**12 04 50.7**	**+1.2**
	68nm,0.7s							
CHKK	**Chushkaly**	**5.27**	**29**	*e*P		**Pb**	**12 03 50.5**	**-0.7**
	16nm,0.7s							
CHKK				*e*S		**Sb**	**12 04 56.9**	**+2.0**
	31nm,0.7s							
SATY	**Saty**	**5.29**	**43**	*e*P		**Pb**	**12 03 51.4**	**-0.2**
	15nm,0.5s							
SATY				*e*S		**Sb**	**12 04 58.9**	**+3.3**
	34nm,0.5s							
KURS	**Kuram**	**5.49**	**38**	*e*P		**Pb**	**12 03 55.1**	**+0.3**
	14nm,0.6s							
KURS				*e*S		**Sb**	**12 05 05.8**	**+4.8**
	33nm,0.6s							
KPKS	**Kokpek**	**5.72**	**41**	*e*P		**Pb**	**12 04 00.4**	**+1.5**
	22nm,0.5s							
KPKS				*e*S		**Sb**	**12 05 14.1**	**+6.1**
	26nm,0.6s							
SONM	**Songino Array**	**25.18**	**59**	P		**P**	**12 07 43.8**	**-1.3**
	0.2nm,0.3s,baz=243,slow=9.5,SNR=1.9 0.2nm,0.3s							
MLR	**Muntele Rosu**	**35.25**	**296**	P		**P**	**12 09 15.5**	**+1.3**
	1.1nm,0.5s,baz=158,slow=19,SNR=1.3 1.1nm,0.5s							
FINES	**FINESS Array B**	**36.36**	**323**	P		**P**	**12 09 23.9**	**+0.6**
	0.9nm,0.8s,baz=120,slow=8.2,SNR=2.1 0.9nm,0.8s							
ARCES	**ARCESS Array B**	**39.38**	**336**	P		**P**	**12 09 47.0**	**-1.8**
	0.9nm,0.8s,baz=102,slow=8.4,SNR=1.3 0.9nm,0.8s							
NOA	**NORSAR Array B**	**43.40**	**321**	P		**P**	**12 10 22.3**	**+0.3**
	0.5nm,0.8s,baz=91,slow=7.8,SNR=1.8 0.5nm,0.8s							
TORD	**Torodi Ar. Bea**	**67.75**	**269**	P		**P**	**12 13 17.1**	**-0.5**
	0.3nm,0.8s,baz=45,slow=5.6,SNR=3.2 0.3nm,0.8s							
ASAR	**Alice Springs**	**84.28**	**127**	P		**P**	**12 14 50.4**	**-1.3**
	0.1nm,0.7s,baz=322,slow=5.3,SNR=0.9 0.1nm,0.7s							

*IDC **26** 12:02:26.4±1.1,39.°70N×74.°20E,h0km, mb3.7/7, mbtmp3.7/7, Error ellipse: s-maj=55.2km s-min=23.6km az=47.0*
*KRNET **26** 12:02:30.3±0.1,39.°45N×73.°38E,mb4.1*

ISC 26 12:02:25.8±3.2,39.°30N±0.°07×73.°68E±0.°05,h3km±20km, n17,σ1≤80/25,mb3.8/7,16C-2D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.40**	**331**	⇑*e*P	**Pn**	**12 02 52.4**	**0.0**
	baz=37						
OHH				⇑*e*S	**Sb**	**12 03 08.6**	**-2.5**
	baz=37						
DRK	**Karamyk**	**1.47**	**278**	⇓*e*P	**Pn**	**12 02 53.6**	**+0.1**
	baz=72						
DRK				⇓*e*S	**Sn**	**12 03 10.6**	**-2.8**
	baz=72						
BTK	**Batken**	**2.33**	**290**	⇑*e*P	**Pb**	**12 03 08.4**	**-0.2**
	baz=88						
BTK				⇑*i*S	**Sn**	**12 03 35.8**	**+1.3**
	baz=88						
ARLS	**Aral**	**2.60**	**11**	⇑*e*P	**Pb**	**12 03 14.4**	**+1.1**
	baz=16						
ARLS				⇑*e*S	**Sb**	**12 03 46.5**	**+0.8**
	baz=16						
GAR	**Garm**	**2.63**	**264**	⇑*e*P	**Pb**	**12 03 13.0**	**-0.7**
	baz=60						
GAR				⇑*e*S	**Sb**	**12 03 44.6**	**-1.9**
	baz=60						
TRKS	**Terek-Say**	**2.95**	**320**	⇑*e*P	**Pn**	**12 03 15.9**	**+2.1**
	baz=21						
TRKS				⇑*e*S	**Sn**	**12 03 49.4**	**-0.5**
	baz=21						
BOOM	**Boomskoye usch**	**3.62**	**28**	⇑*e*P	**Pb**	**12 03 29.6**	**-0.9**
	baz=32						
BOOM				⇑*e*S	**Sb**	**12 04 12.7**	**-2.2**
	baz=32						
KDJ	**Kajisay**	**3.88**	**42**	⇑*i*P	**Pb**	**12 03 34.3**	**-0.7**
	baz=46						
KDJ				⇑*i*S	**Sb**	**12 04 21.1**	**-1.4**
	baz=46						
TAS	**Tashkent**	**3.91**	**302**	⇑*i*P	**Pn**	**12 03 29.9**	**+3.0**
	baz=2.0						
TAS				⇑*i*S	**Sn**	**12 04 13.5**	**+0.1**
	baz=2.0						
GTA	**Gaotai**	**20.19**	**81**	*e*P	Pn	12 07 06.5	+2.9
GTA				pP	sP	12 07 11.0	+6.3
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
FINES	**FINESS Array B**	**36.42**	**323**	P	**P**	**12 09 33.1**	**+1.7**
	comp=Z,0.5nm,0.4s,baz=114,slow=8.8,SNR=6.3 comp=Z,0.5nm,0.4s						
ARCES	**ARCESS Array B**	**39.42**	**336**	P	**P**	**12 09 55.6**	**-1.0**
	comp=Z,2.5nm,0.9s,baz=109,slow=8.3,SNR=5.1 comp=Z,2.5nm,0.9s						
NOA	**NORSAR Array B**	**43.48**	**321**	P	**P**	**12 10 31.3**	**+1.3**
	comp=Z,0.5nm,0.8s,baz=93,slow=7.6,SNR=2.7 comp=Z,0.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**67.89**	**269**	P	**P**	**12 13 28.4**	**+2.4**
	comp=Z,0.7nm,0.8s,baz=54,slow=6.3,SNR=2.0 comp=Z,0.7nm,0.8s						
YKA	**Yellowknife Ar**	**78.33**	**4**	P	**P**	**12 14 23.7**	**-3.3**
	comp=Z,0.2nm,0.4s,baz=339,slow=7.1,SNR=2.4 comp=Z,0.2nm,0.4s						
WRA	**Warramunga Arr**	**81.73**	**124**	P	**P**	**12 14 47.3**	**+1.3**
	comp=Z,0.6nm,0.7s,baz=324,slow=5.2,SNR=5.4 comp=Z,0.6nm,0.7s						
ASAR	**Alice Springs**	**84.17**	**127**	P	**P**	**12 14 59.3**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=312,slow=4.9,SNR=6.8 comp=Z,0.4nm,0.6s						

IDC 26 12:02:43.7±1.8,39.°26N×73.°67E,h0km,mb3.6/5, mbtmp3.6/5,Error ellipse: s-maj=116.7km s-min=33.0km az=46.0,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FINES	**FINESS Array B**	**36.46**	**323**	P	P	12 09 50.8	+0.8
	0.7nm,0.4s,baz=115,slow=10,SNR=4.2 0.7nm,0.4s						
ARCES	**ARCESS Array B**	**39.46**	**336**	P	P	12 10 15.4	+0.1
	0.9nm,0.6s,baz=101,slow=9.3,SNR=1.9 0.9nm,0.6s						
GERES	**GERESS Array B**	**43.13**	**303**	P	P	12 10 45.7	-0.1
	0.4nm,0.6s,baz=70,slow=9.8,SNR=3.1 0.4nm,0.6s						
NOA	**NORSAR Array B**	**43.51**	**321**	P	P	12 10 47.2	-1.4
	0.5nm,0.6s,baz=91,slow=8.1,SNR=3.5 0.5nm,0.6s						
ASAR	**Alice Springs**	**84.15**	**127**	P	P	12 15 16.9	0.0
	0.3nm,0.6s,baz=316,slow=5.1,SNR=2.1 0.3nm,0.6s						

*IDC **26** 12:03:20.2±1.0,39.°22N×73.°76E,h0km,mb3.8/11, mbtmp3.8/13,ML3.3/2,Error ellipse: s-maj=34.9km s-min=20.5km az=39.0*
*KRNET **26** 12:03:20.7±0.1,39.°38N×73.°52E,mb4.5*
*NEIC **26** 12:03:23.2±1.9,39.°47N±0.°07×73.°81E±0.°06,h10km±1km, mb4.5/9,Error ellipse: s-maj=12.9km s-min=7.4km az=159.0*

ISC 26 12:03:22.9±2.0,39.°38N±0.°06×73.°55E±0.°05,h11km±12km, n40,σ1≤54/49,mb3.9/16,12C-6D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.29**	**333**	⇑*e*P	**Pn**	**12 03 44.7**	**-2.2**
	baz=34						
OHH				⇑*e*S	**Sb**	**12 04 02.4**	**-1.4**
	baz=34						
DRK	**Karamyk**	**1.36**	**275**	⇓*e*P	**Pn**	**12 03 46.0**	**-2.1**
	baz=75						
DRK				⇓*e*S	**Sb**	**12 04 04.6**	**-1.5**
	baz=75						
DRK	**Karamyk**	**1.36**	**275**	Pn	**Pg**	**12 03 50.2**	**+1.2**
BTK	**Batken**	**2.21**	**289**	⇑*e*P	**Pn**	**12 04 00.1**	**+0.4**
	baz=89						
BTK				⇑*e*S	**Sb**	**12 04 29.1**	**-1.4**
	baz=89						
BTK	**Batken**	**2.21**	**289**	Pn	**Pb**	**12 04 02.3**	**-0.7**
GAR	**Garm**	**2.54**	**262**	⇑*e*P	**Pn**	**12 04 04.8**	**+0.6**
	baz=62						
GAR				⇑*e*S	**Sn**	**12 04 37.0**	**+1.8**
	baz=62						
GAR	**Garm**	**2.54**	**262**	Pn	**Pb**	**12 04 06.5**	**-2.1**
ARLS	**Aral**	**2.55**	**13**	⇑*e*P	**Pn**	**12 04 05.2**	**+0.8**
	baz=14						
ARLS				⇑*e*S	**Sn**	**12 04 37.9**	**+2.4**
	baz=14						
TRKS	**Terek-Say**	**2.83**	**320**	⇓*e*P	**Pn**	**12 04 08.1**	**-0.1**
	baz=20						
TRKS				⇓*e*S	**Sn**	**12 04 42.6**	**+0.2**
	baz=20						
BOOM	**Boomskoye usch**	**3.60**	**29**	⇑*e*P	**Pn**	**12 04 20.0**	**+1.2**
	baz=30						
BOOM				⇑*i*S	**Sn**	**12 05 02.9**	**+1.6**
	baz=30						
BOOM	**Boomskoye usch**	**3.60**	**29**	Pn	**Pn**	**12 04 15.3**	**-3.4**
TAS	**Tashkent**	**3.79**	**302**	⇑*e*P	**Pn**	**12 04 22.0**	**+0.7**
	baz=2.0						
TAS				⇑*e*S	**Sn**	**12 05 06.9**	**+1.1**
	baz=2.0						
KDJ	**Kajisay**	**3.89**	**44**	⇓*e*P	**Pn**	**12 04 24.2**	**+1.3**
	baz=44						
KDJ				⇓*i*S	**Sn**	**12 05 10.5**	**+1.9**
	baz=44						
KKAR	**Karatay Array**	**4.37**	**329**	Pn	**Pn**	**12 04 30.1**	**+0.8**
KBL	**Kabul**	**6.03**	**218**	Pn	**Pn**	**12 04 56.3**	**+4.1**
ABKAR	**Akbulak array**	**13.85**	**320**	Pn	**Pn**	**12 06 38.5**	**-0.5**
AKTO	**Aktyubinsk**	**15.56**	**320**	Pn	**Pn**	**12 07 02.2**	**0.0**
	0.3nm,0.3s,baz=119,slow=13,SNR=1.8 2.1nm,0.6s						
ZALV	**Zalesovo Beam**	**16.47**	**24**	Pn	**Pn**	**12 07 13.2**	**-0.5**
	0.2nm,0.3s,baz=213,slow=10,SNR=5.0 0.2nm,0.7s						
ONI	**Oni**	**22.89**	**288**	P	**P**	**12 08 29.8**	**+3.2**
ONI				IAmb	IAmb	12 08 31.4	
	comp=Z,10nm,0.7s						
BRTR	**Keskin Array B**	**30.60**	**284**	P	**P**	**12 09 38.6**	**+1.6**
	comp=Z,1.5nm,0.7s,baz=94,slow=8.2,SNR=5.8 comp=Z,1.5nm,0.7s						
BRTR	**Keskin Array B**	**30.60**	**284**	P	**P**	**12 09 38.0**	**+0.9**
FIA1	**FINESS Array S**	**36.30**	**323**	P	**P**	**12 10 27.3**	**+1.1**
FIA1				IAmb	IAmb	12 10 35.0	
	comp=Z,10nm,1.4s						
FINES	**FINESS Array B**	**36.30**	**323**	P	**P**	**12 10 27.1**	**+0.9**
	comp=Z,0.5nm,0.3s,baz=113,slow=9.6,SNR=5.7 comp=Z,0.5nm,0.3s						
FINES	**FINESS Array B**	**36.30**	**323**	P	**P**	**12 10 26.9**	**+0.7**
ARCES	**ARCESS Array B**	**39.31**	**336**	P	**P**	**12 10 52.5**	**+1.0**
	comp=Z,0.6nm,0.4s,baz=109,slow=7.1,SNR=3.7 comp=Z,0.6nm,0.4s						
HFS	**Hagfors**	**42.11**	**320**	P	**P**	**12 11 15.0**	**+0.3**
	comp=Z,1.3nm,0.5s,baz=102,slow=10,SNR=2.1 comp=Z,1.3nm,0.5s						
GERES	**GERESS Array B**	**42.98**	**303**	P	**P**	**12 11 22.7**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=252,slow=29,SNR=1.9 comp=Z,0.2nm,0.5s						
USA0B	**Ussuriysk Arra**	**43.05**	**64**	P	**P**	**12 11 20.2**	**-2.3**
USA0B				IAmb	IAmb	12 11 31.0	
	comp=Z,19nm,1.5s						
NB2	**NORSAR Subarra**	**43.35**	**321**	P	**P**	**12 11 24.4**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=91,slow=8.6 comp=Z,0.4nm,0.5s						
NOA	**NORSAR Array B**	**43.35**	**321**	P	**P**	**12 11 24.7**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=91,slow=8.0,SNR=3.4 comp=Z,0.4nm,0.5s						
ESDC	**Sonseca Array**	**57.92**	**297**	P	**P**	**12 13 15.3**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=57,slow=7.3,SNR=4.3 comp=Z,0.5nm,0.7s						
TOA0	**Torodi Ar. Sit**	**67.79**	**269**	P	**P**	**12 14 20.6**	**-0.5**
TOA0				IAmb	IAmb	12 14 42.5	
	comp=Z,5.0nm,1.4s						
TORD	**Torodi Ar. Bea**	**67.79**	**269**	P	**P**	**12 14 20.6**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=52,slow=5.7,SNR=2.1 comp=Z,0.7nm,0.5s						
TORD	**Torodi Ar. Bea**	**67.79**	**269**	P	**P**	**12 14 20.6**	**-0.5**
YKA	**Yellowknife Ar**	**78.26**	**4**	P	**P**	**12 15 22.4**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=350,slow=6.1,SNR=4.5 comp=Z,0.4nm,0.7s						
WRA	**Warramunga Arr**	**81.86**	**124**	P	**P**	**12 15 39.3**	**-3.1**
	comp=Z,0.5nm,0.7s,baz=324,slow=4.9,SNR=5.2 comp=Z,0.5nm,0.7s						
WRAB	**Tennant Creek**	**81.86**	**124**	P	**P**	**12 15 41.7**	**-0.6**
WRAB				IAmb	IAmb	12 16 02.5	
	comp=Z,6.3nm,1.4s						
WB2	**Warramunga Arr**	**81.87**	**124**	P	**P**	**12 15 42.4**	**0.0**
WR0	**Warramunga Arr**	**82.00**	**124**	P	**P**	**12 15 42.9**	**-0.2**
ASAR	**Alice Springs**	**84.30**	**127**	P	**P**	**12 15 54.5**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=312,slow=4.8,SNR=3.8 comp=Z,0.5nm,0.7s						

TAP 26 12:05:05.5,23.°08N×121.°54E,h22km,ML1.6,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**0.16**	**276**	*e*P	Pb	12 05 11.0	+0.2
CHKT	baz=275			*e*S	Sb	12 05 14.5	0.0
	baz=275						
EDH	**Donghe**	**0.24**	**243**	P	Pb	12 05 12.2	+0.7
EDH	baz=242			*i* S	Sb	12 05 16.6	+0.9
	baz=242						
ECBN	**Changbin**	**0.24**	**341**	*e*P	Pb	12 05 11.6	0.0
ECBN	baz=341			*e*S	Sb	12 05 16.4	+0.6
	baz=341						
FULB	**Fuli**	**0.25**	**297**	*i* P	Pb	12 05 12.1	+0.4
FULB	baz=297			*e*S	Sb	12 05 16.4	+0.4
	baz=297						
ECS	**Chishang**	**0.29**	**272**	P	Pb	12 05 13.1	+0.8
ECS	baz=272			S	Sb	12 05 18.4	+1.6
	baz=272						
EYUL	**Yuli**	**0.33**	**323**	*i* P	Pb	12 05 13.5	+0.7
EYUL	baz=322			*i* S	Sb	12 05 19.1	+1.3
	baz=322						
TWF1	**Yuli**	**0.35**	**320**	*i* P	Pb	12 05 13.6	+0.5
TWF1	baz=321			*i* S	Sb	12 05 19.3	+1.1
	baz=321						
YULB	**Yu-li**	**0.38**	**324**	*i* P	Pb	12 05 14.2	+0.6
YULB	baz=324			S	Sb	12 05 20.1	+1.0
	baz=324						
LDUT	**Ludao**	**0.41**	**189**	P	Pb	12 05 14.5	+0.3
LDUT	baz=188			S	Sb	12 05 21.2	+1.2
	baz=188						
LONT	**Longtian**	**0.41**	**245**	*e*P	Pn	12 05 15.2	-1.0
LONT	baz=244			S	Sn	12 05 22.0	-1.2
	baz=244						
HGSD	**Ruisui**	**0.42**	**346**	*i* P	Pb	12 05 15.0	+0.7
HGSD	baz=345			S	Sn	12 05 22.1	-1.3
	baz=345						
ELDTW	**Lidau**	**0.49**	**282**	P	Pb	12 05 15.8	+0.2
ELDTW	baz=282			S	Sb	12 05 23.4	+1.0
	baz=282						
TWGBT	**Beinan**	**0.50**	**238**	P	Pn	12 05 16.6	-0.8
TWGBT	baz=237			S	Sb	12 05 23.7	+1.2
	baz=237						
TWG	**Pinlang**	**0.50**	**239**	P	Pb	12 05 16.5	+0.8
TWG	baz=237			S	Sb	12 05 23.8	+1.2
	baz=237						
STYT	**Tauyuan**	**0.72**	**276**	P	Pb	12 05 19.8	+0.3
STYT	baz=276			*e*S	Sb	12 05 29.4	+0.4
	baz=276						
ALS	**Alishan**	**0.80**	**302**	*e*P	Pn	12 05 21.9	+0.1
ALS	baz=302			*e*S	Sb	12 05 31.9	+0.6
	baz=302						
TPUB	**Ta-pu**	**0.86**	**285**	*e*P	Pn	12 05 22.8	+0.4
TPUB	baz=284			*e*S	Sn	12 05 35.1	+0.8
	baz=284						
SSLB	**Suanglung**	**0.88**	**323**	P	Pb	12 05 22.4	+0.2
SSLB	baz=322			*e*S	Sn	12 05 34.5	-0.4
	baz=322						
OWD	**Renai**	**0.93**	**339**	*e*P	Pb	12 05 22.7	-0.3
OWD	baz=339			S	Sn	12 05 36.5	+0.4
	baz=339						
WUSB	**Renai**	**0.98**	**337**	P	Pb	12 05 23.9	0.0
	baz=336						
CHGB	**Renai**	**1.03**	**341**	P	Pb	12 05 24.6	-0.2
CHGB	baz=341			S	Sn	12 05 39.2	+0.5
	baz=341						
WHF	**Hehuan Shan**	**1.08**	**347**	P	Pn	12 05 25.4	-0.5
WHF	baz=347			S	Sn	12 05 40.2	-0.2
	baz=347						
YOJ	**Yonaguni jima**	**1.93**	**44**	*e*P	Pn	12 05 37.8	+0.8
	baz=44						

IDC 26 12:05:18.1±1.2,25.°55N×142.°08E,h0km,mb3.6/4, mbtmp3.6/4,Error ellipse: s-maj=70.7km s-min=28.3km az=96.0,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11N1	**WAKE ISLAND Hy**	**23.61**	**99**	T	T	12 35 58.0	
	baz=282,slow=74						
H11N2	**WAKE ISLAND Hy**	**23.61**	**99**	T	T	12 35 57.1	
	baz=282,slow=74						
H11N3	**WAKE ISLAND Hy**	**23.62**	**99**	T	T	12 35 59.5	
	baz=282						
H11S3	**WAKE ISLAND Hy**	**23.85**	**102**	T	T	12 36 05.3	
	baz=284,slow=75,SNR=8.9						
H11S1	**WAKE ISLAND Hy**	**23.85**	**102**	T	T	12 36 05.8	
	baz=284,slow=75,SNR=9.3						
H11S2	**WAKE ISLAND Hy**	**23.86**	**102**	T	T	12 36 05.8	
	baz=284,slow=75,SNR=10						
WRA	**Warramunga Arr**	**45.84**	**190**	P	P	12 13 42.0	-0.1
	1.2nm,0.7s,baz=8.5,slow=8.3,SNR=22 1.2nm,0.7s						
ASAR	**Alice Springs**	**49.56**	**190**	P	P	12 14 10.9	-0.2
	0.2nm,0.6s,baz=13,slow=9.7,SNR=1.9 0.2nm,0.6s						
FINES	**FINESS Array B**	**79.29**	**334**	P	P	12 17 25.5	+0.3
	0.4nm,0.4s,baz=81,slow=4.9,SNR=6.8 0.4nm,0.4s						
NVAR	**Mina Array Bea**	**81.55**	**52**	P	P	12 17 37.9	-0.3
	0.2nm,0.6s,baz=283,slow=8.2,SNR=1.8 0.2nm,0.6s						

JMA 26 12:05:35.9±0.1,24.°3N±0.°6×123.°4E±0.°2,h20km±1km, MV2.4/9,NW OFF ISHIGAKIJIMA IS,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.34**	**292**	P	Pb	12 05 43.1	-0.1
YOJ				S	Sb	12 05 47.8	-0.3
IRIF	**Iriomote-Funau**	**0.35**	**90**	P	Pb	12 05 43.2	-0.2
IRIF				S	Sb	12 05 48.5	0.0
JYNG	**Yonagunijimaku**	**0.39**	**288**	P	Pb	12 05 44.0	-0.1
JYNG				*e*S	Sb	12 05 49.0	-0.6
HATJ	**Hateruma jima**	**0.50**	**124**	P	Pb	12 05 45.6	-0.4
HATJ				S	Sb	12 05 52.6	-0.2
JKRS	**Kuro-shima**	**0.61**	**99**	P	Pb	12 05 47.8	-0.1
JKRS				*e*S	Sb	12 05 55.9	-0.1
JIJ	**Ishigaki jima**	**0.72**	**88**	P	Pb	12 05 49.3	-0.6
JIJ				S	Sb	12 05 59.2	-0.2
JISG	**Ishigakijimahi**	**0.91**	**74**	P	Pb	12 05 52.9	-0.2
JISG				S	Sn	12 06 05.5	-0.6
JTJ	**Tarama**	**1.27**	**76**	P	Pn	12 05 58.8	+0.2
JTJ				*e*S	Sb	12 06 16.0	+1.0

*IDC **26** 12:08:10.0±0.8,39.°28N×73.°77E,h0km,mb3.9/15, mbtmp3.9/21,ML3.5/5,Error ellipse: s-maj=16.5km s-min=13.8km az=150.0*
*MOS **26** 12:08:11.5±1.4,39.°48N×73.°84E,h14km,mb4.2/11,Error ellipse: s-maj=8.1km s-min=5.6km az=82.5*
*KRNET **26** 12:08:12.9±0.1,39.°50N×73.°65E,mb4.2*
*NEIC **26** 12:08:12.3±1.0,39.°42N±0.°06×73.°98E±0.°08,h10km±1km, mb4.2/14,Error ellipse: s-maj=12.2km s-min=8.8km az=141.0*
*SOME **26** 12:08:12.3,39.°55N×73.°62E,h5km*
*NNC **26** 12:08:15.9±1.9,39.°67N×73.°64E,h0km,mb4.6,mpv4.3, Error ellipse: s-maj=15.5km s-min=7.6km az=170.0*

ISC 26 12:08:11.5±1.3,39.°57N±0.°04×73.°77E±0.°02,h3km±8km, n174,σ1≤94/215,mb4.0/24,26C-16D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.22**	**322**	⇑*i*P	**Pn**	**12 08 35.7**	**+0.1**
	baz=27						
OHH				⇑*e*S	**Sn**	**12 08 52.6**	**0.0**
	baz=27						
DRK	**Karamyk**	**1.53**	**267**	⇓*e*P	**Pn**	**12 08 39.8**	**-0.2**
	baz=70						
DRK				⇓*e*S	**Sn**	**12 08 59.2**	**-1.3**
	baz=70						
DRK	**Karamyk**	**1.53**	**267**	Pn	**Pg**	**12 08 41.9**	**+1.0**
KSH	**Kashi**	**1.70**	**91**	Pg	**Pn**	**12 08 40.5**	**-1.8**
KSH				Sg	**Sn**	**12 09 00.0**	**-4.6**
KSH				pmax	pmax		
	comp=Z,140nm,0.7s						
KSH				smax	smax		
	comp=N,880nm,0.6s						
KSH				smax	smax		
	comp=E,1μm,0.9s						
BTK	**Batken**	**2.33**	**283**	⇑*e*P	**Pn**	**12 08 53.0**	**+2.2**
	baz=85						
BTK				⇑*e*S	**Sn**	**12 09 22.2**	**+2.2**
	baz=85						
BTK	**Batken**	**2.33**	**283**	Pn	**Pb**	**12 08 53.8**	**-0.4**
BTK	**Batken**	**2.33**	**283**	PN	**Pb**	**12 08 53.8**	**-0.4**
ARLS	**Aral**	**2.33**	**10**	⇑*e*P	**Pg**	**12 08 55.3**	**-0.8**
	baz=12						
ARLS				⇑*e*S	**Sg**	**12 09 26.1**	**-0.2**
	baz=12						
AML	**Almayashu**	**2.56**	**359**	P	**Pg**	**12 09 00.2**	**-0.4**
	SNR=5.7						
ARK	**Arkit**	**2.62**	**329**	⇑*e*P	**Pb**	**12 08 58.2**	**-0.9**
	baz=31						
ARK				⇑*e*S	**Sb**	**12 09 31.2**	**-0.5**
	baz=31						
UCH	**Uchtor**	**2.71**	**12**	P	**Pg**	**12 09 03.0**	**-0.5**
	SNR=8.8						
UCH	**Uchtor**	**2.71**	**12**	⇓*e*P	**Pb**	**12 09 00.9**	**-0.1**
	baz=13						
UCH				⇓*e*S	**Sg**	**12 09 35.8**	**-2.9**
	baz=13						
GAR	**Garm**	**2.74**	**259**	⇑*e*P	**Pn**	**12 08 58.4**	**+1.9**
	baz=60						
GAR				⇑*e*S	**Sn**	**12 09 31.6**	**+1.4**
	baz=60						
GAR	**Garm**	**2.74**	**259**		**Pn**	**12 08 58.2**	**+1.7**
TRKS	**Terek-Say**	**2.80**	**315**	⇑*e*P	**Pn**	**12 08 59.7**	**+2.3**
	baz=17						
TRKS				⇑*e*S	**Sn**	**12 09 33.6**	**+1.8**
	baz=17						
EKS2	**Erkin-Say**	**3.09**	**0**

baz=2.0
AAK Ala-Archa 3.11 10 Pn Pb 12 09 07.8 +0.1
comp=E,25nm,0.3s,baz=177,slow=7.7,SNR=13
AAK Sn **Sg 12 09 50.1 -1.4**
comp=E,13nm,0.3s,baz=48,slow=19,SNR=2.3
comp=E,50nm,0.5s
AAK Ala-Archa 3.11 10⇑eP Pb 12 09 06.2 -1.4
baz=11
AAK ⇑eS **Sb 12 09 45.0 -1.1**
baz=11
AAK Ala-Archa 3.11 10 Pn Pn 12 09 04.1 +2.4
AAK Ala-Archa 3.11 10 PN Pn 12 09 04.1 +2.4
ULHL Ulahol 3.26 34⇓eP Pb 12 09 08.6 -1.6
baz=35
ULHL ⇓eS **Sb 12 09 49.6 -0.8**
baz=35
BOOM Boomskoye usch 3.35 29⇑iP Pb 12 09 10.0 -1.6
baz=29
BOOM ⇑iS **Sb 12 09 51.5 -1.3**
baz=29
BOOM Boomskoye usch 3.35 29 Pn Pn 12 09 04.7 -0.2
BOOM Boomskoye usch 3.35 29 PN Pn 12 09 04.7 -0.2
CHMS Chumysh 3.50 12 P Pb 12 09 13.7 -0.5
SNR=5.5
TKM2 Tokmak 2 3.62 22 PN Pb 12 09 15.4 -0.9
TKM2 Tokmak 2 3.62 22 ⇓Pg Pb 12 09 15.4 -0.9
comp=E,35nm,0.6s
TKM2 ⇑Lg Lg 12 10 10.3
comp=E,68nm,0.5s
KDJ Kajisay 3.64 44⇑iP Pb 12 09 13.6 -3.0
baz=45
KDJ ⇑iS **Sb 12 09 58.1 -3.0**
baz=45
KDJ Kajisay 3.64 44 Pn Pn 12 09 09.1 +0.2
KDJ Kajisay 3.64 44 PN Pn 12 09 09.1 +0.2
CHGR Chuyangaron 3.70 257 Pn 12 09 11.3 +1.6
CHGR Chuyangaron 3.70 257 PN Pn 12 09 11.3 +1.6
USP Ospenovka 3.73 8 P Pb 12 09 17.6 -0.6
SNR=5.8
TARG Taragay, Kyrgy 3.75 54 Pn 12 09 09.9 -0.8
TARG Taragay, Kyrgy 3.75 54 PN Pn 12 09 09.9 -0.8
DZA Taraz 3.79 332 eP Pb 12 09 20.1 +1.0
comp=E,120nm,0.1s
DZA eS **Sg 12 10 08.9 -4.5**
comp=E,246nm,0.3s
DZA Taraz 3.79 332 Pg Pb 12 09 20.8 +1.6
comp=E,120nm,0.1s
DZA Lg Lg 12 10 09.8
comp=E,246nm,0.3s
IUG Iuzhnay 3.83 313 eP Pg 12 09 23.2 -1.7
comp=E,1μm,0.5s
IUG eS **Sg 12 10 13.9 -0.6**
comp=E,430nm,0.8s
TAS Tashkent 3.84 299⇓eP Pn 12 09 14.3 +2.8
baz=0.0
TAS ⇓eS **Sn 12 09 59.1 +1.9**
baz=0.0
KST Kastek 3.84 25 eP Pg 12 09 25.3 +0.2
comp=E,17nm,0.4s
KST eS **Sg 12 10 17.5 +2.6**
comp=E,158nm,0.9s
SGDS Sogindy 3.93 9 ePN Pn 12 09 14.3 +1.5
SGDS e 12 09 26.2
SGDS Sogindy 3.93 9 ePn Pn 12 09 14.3 +1.5
baz=9.9
SGDS ePg **Pg 12 09 26.2 -0.6**
baz=9.9
SGDS eLg Lg 12 10 21.7
baz=9.9
DGS Degeres 3.96 22 eP Pg 12 09 28.0 +0.5
comp=E,28nm,0.4s
DGS eS **Sg 12 10 22.1 +3.2**
comp=E,117nm,0.7s
DGS Degeres 3.96 22 Pg Pg 12 09 27.1 -0.4
comp=E,57nm,0.6s
DGS Lg Lg 12 10 19.3
comp=E,117nm,0.7s
IZV Izvestkoviy 4.07 31 eP Pg 12 09 32.9 +3.4
comp=E,18nm,0.2s
IZV eS Sg 12 10 31.2 +8.9
comp=E,98nm,0.5s
IZV Izvestkoviy 4.07 31 Pg Pg 12 09 32.3 +2.8
comp=E,42nm,0.6s
IZV Lg Lg 12 10 28.6
comp=E,98nm,0.5s
MTBS Maitube 4.08 28 eP Pg 12 09 29.0 -0.7
comp=E,23nm,0.5s
MTBS eS **Sg 12 10 24.7 +2.1**
comp=E,59nm,0.3s
MTBS Maitube 4.08 28 Pg Pg 12 09 30.5 +0.7
comp=E,23nm,0.5s
MTBS Lg Lg 12 10 24.8
comp=E,59nm,0.3s
TNSS Tian-Shan 4.21 34 ePN Pn 12 09 20.3 +3.3
TNSS e 12 10 31.0
TNSS Tian-Shan 4.21 34 eP Pg 12 09 32.2 0.0
comp=E,38nm,0.3s
TNSS eS **Sg 12 10 29.5 +2.8**
comp=E,21nm,0.4s
TNSS Tian-Shan 4.21 34 ePn Pn 12 09 20.3 +3.3
baz=33
TNSS eLg Lg 12 10 31.0
baz=33
TNSS Tian-Shan 4.21 34 Pg Pg 12 09 31.5 -0.7
comp=E,38nm,0.3s
TNSS Lg Lg 12 10 28.2
comp=E,21nm,0.4s
KK31 Karatay Array 4.30 326 Pn Pn 12 09 22.3 +4.4
KK31 Karatay Array 4.30 326 PN Pn 12 09 22.3 +4.4
KK31 Karatay Array 4.30 326 ⇑Pg Pb 12 09 30.0 +2.3
comp=E,20nm,0.6s,baz=151,slow=19,SNR=11
KK31 ⇓Lg Lg 12 10 28.0
comp=E,31nm,0.5s,baz=156,slow=29,SNR=4.0
KKAR Karatay Array 4.30 326 Pn Pn 12 09 20.7 +2.8
KKAR Karatay Array 4.30 326 Pn Pn 12 09 20.9 +3.1
KKAR Karatay Array 4.30 326 PN Pn 12 09 20.9 +3.1
AAA Alma-Ata 4.34 32 ePN Pg 12 09 33.0 -1.6
AAA Alma-Ata 4.34 32 eP Pg 12 09 34.9 +0.2
comp=E,28nm,0.1s
AAA eS **Sg 12 10 34.2 +3.4**
comp=E,187nm,0.7s
AAA Alma-Ata 4.34 32 ePg Pg 12 09 33.0 -1.6
baz=32
AAA Alma-Ata 4.34 32 Pg Pg 12 09 35.9 +1.3
comp=E,28nm,0.1s
AAA Lg Lg 12 10 34.2
comp=E,187nm,0.7s
KRBS Karabastau 4.36 18 eP Pg 12 09 34.4 -0.8
comp=E,22nm,0.5s
KRBS eS **Sg 12 10 33.4 +1.8**
comp=E,101nm,0.6s
KRBS Karabastau 4.36 18 Pg Pg 12 09 35.2 0.0
comp=E,22nm,0.5s
KRBS Lg Lg 12 10 32.7
comp=E,101nm,0.6s
KNDC Almaty 4.37 32 ⇑Pg Pg 12 09 35.5 +0.4
comp=E,76nm,0.6s
KNDC ⇓Lg Lg 12 10 34.4
comp=E,222nm,0.6s
BRLS Boroldaу 4.55 321 ePN Pb 12 09 33.9 +1.8
BRLS e 12 10 35.0
BRLS Boroldaу 4.55 321 eP Pg 12 09 36.1 -2.7
comp=E,15nm,0.4s
BRLS eS **Sg 12 10 35.7 -2.1**
comp=E,95nm,0.5s
BRLS Boroldaу 4.55 321 ePg Pb 12 09 34.0 +1.8
baz=320
BRLS eLg Lg 12 10 35.0
baz=320
BRLS Boroldaу 4.55 321 Pg Pg 12 09 36.8 -1.9
comp=E,15nm,0.4s
BRLS Lg Lg 12 10 35.8
comp=E,95nm,0.5s
KTBS Karatobe 4.68 27 eP Pg 12 09 40.4 -0.7
comp=E,15nm,0.6s
KTBS eS **Sg 12 10 44.1 +2.3**
comp=E,154nm,0.6s
KTBS Karatobe 4.68 27 Pg Pg 12 09 40.8 -0.3
comp=E,35nm,0.6s
KTBS Lg Lg 12 10 42.4
comp=E,154nm,0.6s
KUU Kurty 4.73 23 ePN Pn 12 09 25.1 +1.4
KUU e 12 09 41.0
KUU Kurty 4.73 23 eP Pg 12 09 40.3 -1.8
comp=E,22nm,0.5s
KUU eS **Sg 12 10 43.2 -0.2**
comp=E,51nm,0.6s
baz=23
KUU ePg **Pg 12 09 41.0 -1.1**
baz=23
KUU eLg Lg 12 10 46.9
baz=23
KUU Kurty 4.73 23 Pg Pg 12 09 42.0 0.0
comp=E,22nm,0.5s
KUU Lg Lg 12 10 44.6
comp=E,51nm,0.6s
CHKK Chushkaly 4.91 28 eP Pg 12 09 44.7 -0.9
comp=E,19nm,0.5s
CHKK eS **Sg 12 10 50.8 +1.6**
comp=E,53nm,0.6s
CHKK Chushkaly 4.91 28 ePg Pg 12 09 45.2 -0.4
baz=28
CHKK eLg Lg 12 10 51.0
baz=28
CHKK Chushkaly 4.91 28 Pg Pg 12 09 45.6 0.0
comp=E,19nm,0.5s
CHKK Lg Lg 12 10 50.8
comp=E,53nm,0.6s
SATY Saty 4.93 44 eP Pg 12 09 44.8 -1.2
comp=E,19nm,0.6s
SATY eS **Sg 12 10 51.2 +1.3**
comp=E,52nm,1.1s
SATY Saty 4.93 44 ePg Pg 12 09 44.6 -1.4
baz=43
SATY eLg Lg 12 10 52.1
baz=43
SATY Saty 4.93 44 Pg Pg 12 09 45.9 -0.1
comp=E,19nm,0.6s
SATY Lg Lg 12 10 51.2
comp=E,52nm,1.1s
ZHN Zhinishke 5.02 43 ePg Pg 12 09 45.2 -2.6
baz=42
ZHN eLg Lg 12 10 54.6
baz=42
KURS Kuram 5.12 39 eP Pg 12 09 48.5 -1.1
comp=E,6.1nm,0.6s
KURS eS **Sg 12 10 57.2 +1.2**
comp=E,24nm,1.1s
KURS Kuram 5.12 39 Pg Pg 12 09 49.8 +0.2
comp=E,6.1nm,0.6s
KURS Lg Lg 12 10 57.8
comp=E,24nm,1.1s
KPKS Kokpek 5.36 42 ePN Pn 12 09 35.0 +2.5
KPKS e 12 09 52.1
KPKS Kokpek 5.36 42 eP Pg 12 09 52.3 -2.0
comp=E,29nm,0.7s
KPKS eS **Sg 12 11 04.5 +0.8**
comp=E,70nm,0.7s
KPKS Kokpek 5.36 42 ePn Pn 12 09 35.0 +2.5
baz=41
KPKS ePg **Pg 12 09 52.2 -2.0**
baz=41
KPKS eLg Lg 12 11 04.7
baz=41
KPKS Kokpek 5.36 42 Pg Pg 12 09 53.7 -0.6
comp=E,29nm,0.7s
KPKS Lg Lg 12 11 04.5
comp=E,70nm,0.7s
BTLS Baital 5.47 2 ePN Pn 12 09 33.5 -0.4
BTLS e 12 09 52.8
BTLS pmax pmax
comp=Z,2.0nm,0.5s
BTLS Baital 5.47 2 eP Pg 12 09 52.8 -3.5
comp=E,9.3nm,0.5s
BTLS eS **Sg 12 11 05.6 -1.6**
comp=E,32nm,0.7s
BTLS Baital 5.47 2 ePn Pn 12 09 33.6 -0.4
baz=2.8
BTLS ePg **Pg 12 09 52.8 -3.5**
comp=Z,1.7nm,0.5s,baz=2.8
BTLS eLg Lg 12 11 08.1
baz=2.8
BTLS Baital 5.47 2 Pg Pg 12 09 55.4 -1.0
comp=E,9.3nm,0.5s
BTLS Lg Lg 12 11 07.6
comp=E,32nm,0.7s
ARXS Arharly 5.54 32 eP Pg 12 09 54.9 -2.7
comp=E,27nm,0.6s
ARXS eS **Sg 12 11 08.5 -0.9**
comp=E,71nm,0.6s
ARXS Arharly 5.54 32 Pg Pg 12 09 55.9 -1.7
comp=E,27nm,0.6s
ARXS Lg Lg 12 11 09.3
comp=E,71nm,0.6s
SHLS Shalkode 5.58 48 eP Pg 12 10 01.4 +2.9
comp=E,13nm,0.6s
SHLS eS Sg 12 11 19.4 +8.6
comp=E,27nm,0.7s
SHLS Shalkode 5.58 48 ePg Pg 12 09 59.9 +1.4
baz=49
SHLS eLg Lg 12 11 21.4
baz=49
PDGK Podgornoye 5.71 47 Pg Pg 12 10 00.3 -0.5
comp=E,6.3nm,0.7s
PDGK Lg Lg 12 11 15.9
comp=E,20nm,0.8s
BLB Baldybastay 5.73 36 eP Pg 12 09 58.0 -3.3
comp=E,28nm,0.5s
BLB eS **Sg 12 11 14.2 -1.3**
comp=E,59nm,0.6s
BLB Baldybastay 5.73 36 Pg Pg 12 09 59.2 -2.0
comp=E,28nm,0.5s
BLB Lg Lg 12 11 14.2
comp=E,59nm,0.6s
CHCP Chirah Chowk 5.91 184 P Pn 12 09 44.3 +4.2
CEP Cherat 5.93 195 P Pn 12 09 43.5 +3.2
KTMS Ketmen 6.28 50 eP Pg 12 10 13.2 +1.4
comp=Z,1.3nm,0.6s
KTMS eS **Sg 12 11 41.3 +8.2**
comp=Z,7.6nm,0.7s
KBL Kabul 6.28 218 Pn Pn 12 09 45.8 +0.5
KBL Kabul 6.28 218 PN Pn 12 09 45.8 +0.5
TDK Taldyqorghan 6.42 31 eP Pg 12 10 11.7 -2.9
comp=E,27nm,0.1s
TDK eS **Sg 12 11 37.0 -0.8**
comp=E,63nm,0.6s
TDK Taldyqorghan 6.42 31 ePg Pg 12 10 10.5 -4.1
baz=31
TDK eLg Lg 12 11 40.4
baz=31
DJR Jarkent 6.54 41 eP Pg 12 10 14.1 -2.7
comp=Z,4.0nm,0.6s
DJR eS **Sg 12 11 42.0 +0.6**
comp=E,26nm,0.6s
DJR Jarkent 6.54 41 Pg Pg 12 10 15.8 -1.0
comp=Z,9.2nm,0.6s
DJR Lg Lg 12 11 42.4
comp=E,26nm,0.6s
THW Thamme Wali 6.96 194 P Pn 12 09 57.0 +2.6
SMLA Simla 8.87 161 eP Pn 12 10 22.4 +1.8
SMLA eS **Sn 12 11 54.9 -6.1**
SMLA IAML 12 12 03.2
comp=N,284nm,0.5s
SMLA IAML 12 12 04.6
comp=E,279nm,0.5s
MKAR Makanchi Array 9.53 38 Pn Pn 12 10 34.3 +4.7
comp=E,0.8nm,0.7s,baz=215,slow=12,SNR=2.3
MKAR Lg Lg 12 13 18.9
comp=E,0.2nm,0.3s,baz=221,slow=30,SNR=2.8
MKAR Makanchi Array 9.53 38 Pn 12 10 29.4 -0.2
MKAR Makanchi Array 9.53 38 P Pn 12 10 29.4 -0.2
WMQ Urumqi 11.24 63 eP Pn 12 10 57.3 +4.2
KURBB Kurchatov Arra 11.55 15 Lg Lg 12 14 18.5
comp=E,0.1nm,0.3s,baz=194,slow=29,SNR=10
GEYT Alibeck 12.33 267 Pn Pn 12 11 08.0 0.0
comp=E,0.5nm,0.3s,baz=141,slow=6.5,SNR=2.1
comp=E,2.4nm,0.5s
AB31 Akbulak array 13.81 319 P Pn 12 11 27.7 -0.5
AB31 Akbulak array 13.81 319 ⇓P Pn 12 11 27.7 -0.5
comp=E,1.4nm,0.6s,baz=129,slow=14,SNR=6.4
ABKAR Akbulak array 13.81 319 Pn Pn 12 11 29.5 +1.4
AKTO Aktyubinsk 15.53 320 Pn Pn 12 11 52.8 +1.5
comp=E,0.3nm,0.3s,baz=109,slow=11,SNR=9.1
comp=E,6.2nm,0.8s
AKTO Aktyubinsk 15.53 320 ⇓P P 12 11 54.8 -1.0
comp=E,8.6nm,0.8s
ZAA0 Zalesovo Array 16.22 24 P Pn 12 12 00.8 +0.5
ZALV Zalesovo Beam 16.22 24 Pn P 12 12 02.4 -1.1
comp=E,0.3nm,0.3s,baz=203,slow=11,SNR=13
comp=E,5.8nm,0.6s
ZALV Zalesovo Beam 16.22 24 P Pn 12 12 01.7 +1.4
ARU Arti 19.62 334 P Pn 12 12 42.4 +0.1
baz=128,slow=4.1,SNR=6.3
comp=E,2.7nm,0.4s
ARU Arti 19.62 334 *d* iP **Pn 12 12 42.3 +0.1**
ARU S **S 12 16 26.9 +4.1**
ARU pmax pmax
comp=Z,7.0nm,0.9s
KNGR Kungurtug, Tuv 19.98 49⇑eP P 12 12 45.3 +0.3
GTA Gaotai 20.08 82 eP Pn 12 12 50.0 +2.0
GTA pP sP 12 12 53.0 +3.8
GTA sP pP 12 12 56.5 +8.2
GTA pmax pmax
comp=Z,6.0nm,0.9s
GNI Garni 22.25 281⇑eP P 12 13 06.3 -3.4
ONI Oni 22.99 287 P P 12 13 19.2 +1.8
ONI IAmb IAmb 12 13 21.0
comp=Z,9.5nm,0.7s
ONI Oni 22.99 287 P P 12 13 19.2 +1.8
ONI pmax pmax
comp=Z,10.0nm,0.7s
KIV Kislovodsk 23.52 291 eP P 12 13 20.8 -2.0
KIV ePPP PPP 12 13 56.0
KIV pmax pmax
comp=Z,7.0nm,1.1s
SONM Songino Array 24.84 60 P P 12 13 36.9 +1.7
comp=Z,1.5nm,0.8s,baz=254,slow=10,SNR=6.2
comp=Z,1.5nm,0.8s
ULN Ulaanbaatar 25.29 60⇓eP P 12 13 40.4 +1.2
ULN pmax pmax
comp=Z,15nm,3.7s
OBN Obninsk 29.19 315 *i* P **P 12 14 10.5 -3.4**
OBN pmax pmax
comp=Z,6.0nm,0.8s
BRTR Keskin Array B 30.72 283 P P 12 14 28.3 +0.4
comp=Z,0.8nm,0.7s,baz=60,slow=7.3,SNR=4.2
comp=Z,0.8nm,0.7s
AKASG Malin Array Be 32.86 305 P P 12 14 46.9 +0.4
comp=Z,0.1nm,0.2s,baz=80,slow=7.9,SNR=5.3
comp=Z,0.1nm,0.2s
AKASG Malin Array Be 32.86 305 *i* P **P 12 14 47.5 +1.1**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKBB Malin Array Si 32.86 305⇓eP P 12 14 45.0 -1.4
AKBB pmax pmax
comp=Z,3.0nm,0.9s
MLR Muntele Rosu 35.31 296 P P 12 15 08.5 +0.6
comp=Z,2.7nm,0.6s,baz=159,slow=13,SNR=4.0
comp=Z,2.7nm,0.6s
FIA1 FINESS Array S 36.25 323 P P 12 15 16.6 +1.0
FIA1 IAmb IAmb 12 15 19.5
comp=Z,5.8nm,1.4s
FINES FINESS Array B 36.25 323 P P 12 15 16.5 +0.9
comp=Z,2.0nm,0.6s,baz=112,slow=10,SNR=14
comp=Z,2.0nm,0.6s
ARCES ARCESS Array B 39.20 335 P P 12 15 41.5 +1.0
comp=Z,2.0nm,0.6s,baz=108,slow=8.7,SNR=9.3
comp=Z,2.0nm,0.6s
ARCES ARCESS Array B 39.20 335 P P 12 15 41.9 +1.4
ARCES IAmb IAmb 12 15 54.5
comp=Z,9.2nm,1.4s
ARCES ARCESS Array B 39.20 335 P P 12 15 41.9 +1.4
ARCES pmax pmax
comp=Z,9.0nm,1.5s
TIXI Tiksi 42.11 23 P P 12 16 05.2 +0.8
TIXI IAmb IAmb 12 16 06.4
comp=Z,2.5nm,0.8s
TIXI Tiksi 42.11 23⇑eP P 12 16 05.2 +0.8
TIXI pmax pmax
comp=Z,29nm,6.7s
GERES GERESS Array B 43.02 303 P P 12 16 12.8 +0.5
comp=Z,0.7nm,0.6s,baz=70,slow=7.7,SNR=6.7
comp=Z,0.7nm,0.6s
GERES GERESS Array B 43.02 303 P P 12 16 13.2 +0.9
GERES GERESS Array B 43.02 303 P P 12 16 13.2 +0.9
CLL Collm 43.04 307 eP P 12 16 11.0 -1.3
NB2 NORSAR Subarra 43.31 321 P P 12 16 14.5 +0.1
comp=Z,1.1nm,0.6s,baz=91,slow=7.9
NOA NORSAR Array B 43.31 321 P P 12 16 14.4 +0.1
comp=Z,1.4nm,0.6s,baz=91,slow=7.8,SNR=9.1
comp=Z,1.4nm,0.6s
ESDC Sonseca Array 57.98 297 P P 12 18 03.5 -2.0
comp=Z,0.7nm,0.8s,baz=60,slow=6.4,SNR=3.1
comp=Z,0.7nm,0.8s
TOLK Toolik Lake Re 67.39 16 P P 12 19 08.0 +0.2
TOLK IAmb IAmb 12 19 15.0
comp=Z,1.7nm,1.0s
TOA0 Torodi Ar. Sit 67.97 269 P P 12 19 11.3 -0.8
TORD Torodi Ar. Bea 67.97 269 P P 12 19 10.5 -1.6
comp=Z,0.6nm,0.6s,baz=50,slow=5.6,SNR=6.5
comp=Z,0.6nm,0.6s
TORD Torodi Ar. Bea 67.97 269 P P 12 19 12.4 +0.2
IMAR Indian Mountai 68.58 19 P P 12 19 15.0 -0.2
BMAR Burnt Mountain 69.43 15 P P 12 19 21.3 +0.7
INK Inuvik 70.51 10 P P 12 19 26.9 -0.1
comp=Z,1.9nm,0.9s,baz=26,slow=4.3,SNR=4.4
comp=Z,1.9nm,0.9s
INK Inuvik 70.51 10 P P 12 19 27.0 -0.1
C36M Paulatuk 70.60 7 P P 12 19 28.0 +0.4
ILAR Eielson Array 71.22 17 P P 12 19 31.3 -0.2
comp=Z,0.7nm,0.8s,baz=316,slow=5.6,SNR=9.7
comp=Z,0.7nm,0.8s
DAWY Dawson 73.42 15 P P 12 19 44.4 -0.3
DAWY IAmb IAmb 12 19 46.2
comp=Z,2.5nm,1.1s
BCAR Beaver Creek A 73.83 16 P P 12 19 47.3 +0.2
YKA Yellowknife Ar 78.06 4 P P 12 20 11.3 +0.1
comp=Z,0.7nm,0.7s,baz=349,slow=5.7,SNR=6.4
comp=Z,0.7nm,0.7s
YKA Yellowknife Ar 78.06 4 P P 12 20 10.8 -0.3
WRA Warramunga Arr 81.83 124 P P 12 20 30.0 -2.1
comp=Z,0.5nm,0.7s,baz=326,slow=5.0,SNR=6.4
comp=Z,0.5nm,0.7s
WB2 Warramunga Arr 81.83 124 P P 12 20 30.4 -1.8
WB2 IAmb IAmb 12 20 38.4
comp=Z,3.8nm,1.2s
WR0 Warramunga Arr 81.97 124 P P 12 20 31.1 -1.8
ASAR Alice Springs 84.28 127 P P 12 20 43.4 -1.4
comp=Z,0.5nm,0.7s,baz=316,slow=4.9,SNR=5.1
comp=Z,0.5nm,0.7s

KRNET ***26*** *12:16:09.8±0.1, 39˚.46N×73˚.69E, mb4.2*
SOME ***26*** *12:16:09.6, 39˚.47N×73˚.73E, h20km*
IDC ***26*** *12:16:09.2±0.7, 39˚.30N×73˚.59E, h0km, mb3.9/20, mbtmp3.9/25, ML3.2/7, Error ellipse: s-maj=14.6km s-min=11.4km az=161.0*
NEIC ***26*** *12:16:11.6±1.9, 39˚.25N±0˚.06×73˚.50E±0˚.08, h10km±1km, mb4.3/15, Error ellipse: s-maj=11.1km s-min=9.0km az=133.0*
ISU ***26*** *12:16:12.6, 40˚.56N×73˚.65E, h3km*
NNC ***26*** *12:16:18.3±2.0, 39˚.81N×73˚.45E, h0km, mb4.4, mpv4.2, Error ellipse: s-maj=16.3km s-min=9.0km az=170.0*
ISC 26 12:16:11.4±1.3, 39˚.53N±0˚.03×73˚.53E±0˚.02, h7km±8km, n151, σ1s99/206, mb4.0/25, 35C-33D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.15**	**330**	**⇓eP**		**Pg**	**12 16 33.2**	**-0.2**
baz=32								
OHH				⇓eS		**Sn**	**12 16 50.5**	**+0.5**
baz=32								
OHH	**Osh**	**1.15**	**330**	**⇓eP**		**Pg**	**12 16 33.2**	**-0.2**
baz=27								
OHH				⇓eS		**Sn**	**12 16 50.4**	**+0.5**
baz=27								
DRK	**Karamyk**	**1.34**	**269**	**⇑eP**		**Pn**	**12 16 34.6**	**-2.2**
baz=75								
DRK				⇑eS		**Sb**	**12 16 53.0**	**-1.5**
baz=75								
DRK	**Karamyk**	**1.34**	**269**	**⇓eP**		**Pn**	**12 16 36.8**	**0.0**
baz=72								
DRK				⇓eS		**Sn**	**12 16 56.2**	**+1.2**
baz=72								
DRK	**Karamyk**	**1.34**	**269**			**Pn**	**12 16 36.2**	**-0.6**
FRG	**Fergana**	**1.59**	**303**	P		**Pg**	**12 16 42.0**	**+0.2**
FRG				S		**Sg**	**12 17 02.4**	**0.0**
CHMI	**Chimion**	**1.71**	**296**	P		**Pb**	**12 16 42.9**	**-0.3**
CHMI				S		**Sb**	**12 17 06.0**	**+1.0**
BTK	**Batken**	**2.16**	**285**	**⇓eP**		**Pn**	**12 16 47.9**	**+0.1**
baz=89								
BTK				⇓eS		**Sn**	**12 17 16.2**	**+1.4**
baz=89								
BTK	**Batken**	**2.16**	**285**	**⇑eP**		**Pn**	**12 16 49.2**	**+1.4**
baz=86								
BTK				⇑eS		**Sb**	**12 17 17.6**	**-0.2**
baz=86								

BTK	Batken	2.16	285		Pn	12 16 48.6	+0.8
MINT	Mingtut	2.18	296	P	Pb	12 16 52.0	+0.9
ARLS	Aral	2.41	14⇑	eP	Pn	12 16 52.0	+0.7
	baz=13						
ARLS			⇑	eS	Sb	12 17 23.5	-1.6
	baz=13						
ARLS	Aral	2.41	14⇑	eP	Pn	12 16 51.2	-0.1
	baz=11						
ARLS			⇑	eS	Sn	12 17 21.3	+0.2
	baz=11						
GAR	Garm	2.55	259⇑	eP	Pn	12 16 52.4	-0.9
	baz=63						
GAR			⇑	eS	Sn	12 17 24.3	-0.3
	baz=63						
GAR	Garm	2.55	259⇓	eP	Pn	12 16 54.2	+0.9
	baz=61						
GAR			⇓	eS	Sn	12 17 26.6	+2.0
	baz=61						
GAR	Garm	2.55	259		Pn	12 16 52.4	-0.9
ARK	Arkit	2.56	333⇑	eP	Pn	12 16 54.5	+1.0
	baz=34						
ARK			⇑	eS	Sb	12 17 27.7	-1.8
	baz=34						
ARK	Arkit	2.56	333⇑	eP	Pn	12 16 54.4	+1.0
	baz=31						
ARK			⇑	eS	Sn	12 17 27.2	+2.3
	baz=31						
TRKS	Terek-Say	2.71	318⇓	eP	Pn	12 16 55.4	0.0
	baz=19						
TRKS			⇓	eS	Sn	12 17 29.5	+1.0
	baz=19						
TRKS	Terek-Say	2.71	318⇑	eP	Pn	12 16 55.6	+0.2
	baz=17						
TRKS			⇑	eS	Sn	12 17 29.5	+1.0
	baz=17						
UCH	Uchtor	2.80	15⇑	eP	Pn	12 16 57.6	+0.6
	baz=13						
UCH			⇑	eS	Sn	12 17 33.4	+2.2
	baz=13						
UCH	Uchtor	2.80	15⇓	eP	Pn	12 16 56.8	-0.2
	baz=12						
UCH			⇓	eS	Sn	12 17 31.1	-0.1
	baz=12						
EKS2	Erkin-Say	3.14	3	⇓iP	Pn	12 17 02.3	+1.0
	baz=2.0						
EKS2			⇓	eS	Sn	12 17 41.3	+2.2
	baz=2.0						
EKS2	Erkin-Say	3.14	3⇑	eP	Pn	12 17 01.6	+0.3
	baz=1.0						
EKS2			⇑	eS	Sn	12 17 39.6	+0.5
	baz=1.0						
AAK	Ala-Archa	3.19	13	Pn	Pb	12 17 07.3	-1.1
	7.7nm,0.3s,baz=194,slow=13,SNR=12						
AAK				Sn	Sb	12 17 48.7	+1.1
	8.0nm,0.3s,baz=222,slow=13,SNR=2.5						
	26nm,0.4s						
AAK	Ala-Archa	3.19	13⇓	eP	Pn	12 17 03.0	+0.9
	baz=12						
AAK			⇓	eS	Sn	12 17 42.4	+1.9
	baz=12						
AAK	Ala-Archa	3.19	13⇓	eP	Pn	12 17 02.1	0.0
	baz=11						
AAK			⇓	eS	Sn	12 17 40.4	-0.1
	baz=11						
AAK	Ala-Archa	3.19	13	Pn	Pb	12 17 06.2	-2.3
KBK	Karagaybulak	3.30	18⇓	eP	Pn	12 17 04.5	+0.8
	baz=17						
KBK			⇓	eS	Sn	12 17 45.1	+1.8
	baz=17						
KBK	Karagaybulak	3.30	18⇓	eP	Pn	12 17 03.6	-0.1
	baz=16						
KBK			⇓	eS	Sn	12 17 42.8	-0.5
	baz=16						
ULHL	Ulahol	3.40	36⇑	eP	Pn	12 17 05.5	+0.4
	baz=34						
ULHL			⇑	eS	Sn	12 17 46.6	+0.8
	baz=34						
ULHL	Ulahol	3.40	36⇑	eP	Pn	12 17 04.4	-0.7
	baz=34						
ULHL			⇑	eS	Sn	12 17 44.2	-1.6
	baz=34						
BOOM	Boomskoye usch	3.48	31⇓	eP	Pn	12 17 06.6	+0.6
	baz=29						
BOOM			⇓	iS	Sn	12 17 48.7	+1.2
	baz=29						
BOOM	Boomskoye usch	3.48	31⇑	eP	Pn	12 17 05.9	-0.1
	baz=29						
BOOM			⇑	iS	Sn	12 17 46.0	-1.5
	baz=29						
BOOM	Boomskoye usch	3.48	31	Pn	Pb	12 17 10.1	-3.3
CHGR	Chuyangaron	3.51	257	Pn	Pn	12 17 06.5	+0.1
TAS	Tashkent	3.70	300⇑	eP	Pn	12 17 09.6	+0.7
	baz=2.0						
TAS			⇑	eS	Sn	12 17 54.1	+1.3
	baz=2.0						
TAS	Tashkent	3.70	300⇓	eP	Pn	12 17 10.4	+1.5
	baz=1.0						
TAS			⇓	eS	Sn	12 17 54.7	+1.9
	baz=1.0						
IUG	luzhnay	3.73	316	eP	Pg	12 17 23.8	+1.0
	3μm,0.4s						
IUG				eS	Sg	12 18 17.6	+6.5
	375nm,0.8s						
TKM2	Tokmak 2	3.73	24	⇑Pg	Pg	12 17 26.8	+4.0
	33nm,0.7s						
TKM2				⇑Lg	Lg	12 18 10.9	
	73nm,0.7s						
DZA	Taraz	3.75	334	eP	Pb	12 17 20.6	+2.7
	106nm,0.1s						
DZA				eS	Sg	12 18 11.2	-0.6
	228nm,0.6s						
DZA	Taraz	3.75	334	Pg	Pb	12 17 17.6	-0.3
	83nm,0.1s						
DZA				Lg	Lg	12 18 01.2	
	300nm,0.3s						
KDJ	Kajisay	3.80	46⇑	eP	Pn	12 17 10.5	+0.1
	baz=44						
KDJ			⇑	eS	Sn	12 17 55.5	+0.1
	baz=44						
KDJ	Kajisay	3.80	46⇑	iP	Pn	12 17 09.4	-1.0
	baz=44						
KDJ			⇑	iS	Sn	12 17 52.7	-2.7
	baz=44						
KDJ	Kajisay	3.80	46	Pn	Pn	12 17 13.4	+3.0
TARG	Taragay, Kyrgy	3.92	55	Pn	Pn	12 17 15.1	+2.7
KST	Kastek	3.96	27	eP	Pb	12 17 24.3	+2.8
	28nm,0.5s						
KST				eS	Sg	12 18 17.5	-1.0
	172nm,0.7s						
KST	Kastek	3.96	27	Pg	Pg	12 17 26.8	-0.4
	29nm,0.6s						
KST				Lg	Lg	12 18 17.6	
	172nm,0.7s						
SGDS	Sogindy	4.01	12	eP	Pb	12 17 24.3	+2.0
	21nm,0.7s						
SGDS				eS	Sg	12 18 18.1	-1.9
	102nm,1.0s						
SGDS	Sogindy	4.01	12	Pg	Pg	12 17 27.5	-0.7
	18nm,0.4s						
SGDS				Lg	Lg	12 18 17.6	
	102nm,1.0s						
DGS	Degeres	4.08	24	eP	Pb	12 17 26.3	+2.8
	33nm,0.7s						
DGS				eS	Sg	12 18 21.9	-0.3
	148nm,0.7s						
DGS	Degeres	4.08	24	Pg	Pg	12 17 29.2	-0.3
	36nm,0.4s						
DGS				Lg	Lg	12 18 22.0	
	148nm,0.7s						
CHM	Chimkent	4.08	314	eP	Pg	12 17 26.9	-2.6
	128nm,0.2s						
CHM				eS	Sg	12 18 21.6	-0.7
	409nm,0.4s						
MTBS	Maitube	4.21	30	eP	Pg	12 17 28.9	-3.1
	24nm,0.5s						
MTBS				eS	Sg	12 18 26.0	-0.5
	54nm,0.5s						
MTBS	Maitube	4.21	30	Pg	Pg	12 17 33.0	+1.0
	19nm,0.5s						
MTBS				Lg	Lg	12 18 26.6	
	54nm,0.5s						
KK31	Karatay Array	4.24	328	Pn	Pn	12 17 19.6	+3.3
KK31	Karatay Array	4.24	328	Pn	Pb	12 17 22.3	-3.8
	6.9nm,0.5s,baz=151,slow=12,SNR=10						
KK31				⇑Sn	Sb	12 18 14.1	-3.4
	15nm,0.3s,baz=248,slow=73,SNR=5.3						
KK31				⇓Lg	Lg	12 18 27.1	
	60nm,0.6s,baz=149,slow=30,SNR=3.6						
KKAR	Karatay Array	4.24	328	Pn	Pn	12 17 19.2	+2.9
KKAR	Karatay Array	4.24	328		Pn	12 17 19.8	+3.5
TNSS	Tian-Shan	4.35	35	eP	Pb	12 17 31.2	+2.9
	27nm,0.5s						
TNSS				eS	Sg	12 18 30.4	-0.6
	34nm,0.5s						
TNSS	Tian-Shan	4.35	35	Pg	Pg	12 17 32.1	-2.6
	27nm,0.4s						
TNSS				Lg	Lg	12 18 27.2	
	34nm,0.5s						
KRBS	Karabastau	4.46	20	eP	Pb	12 17 33.2	+3.1
	12nm,0.6s						
KRBS				eS	Sg	12 18 33.0	-1.7
	49nm,0.6s						
KRBS	Karabastau	4.46	20	Pg	Pg	12 17 36.4	-0.5
	31nm,0.6s						
KRBS				Lg	Lg	12 18 33.6	
	49nm,0.6s						
AAA	Alma-Ata	4.47	34	eP	Pg	12 17 33.9	-3.1
	26nm,0.1s						
AAA				eS	Sg	12 18 33.8	-1.2
	22nm,0.5s						
AAA	Alma-Ata	4.47	34	Pg	Pg	12 17 36.6	-0.5
	26nm,0.1s						
AAA				Lg	Lg	12 18 34.0	
	22nm,0.5s						
BRLS	Borolday	4.47	323	eP	Pb	12 17 31.9	+1.7
	12nm,0.6s						
BRLS				eS	Sg	12 18 30.8	-4.2
	74nm,0.5s						
KNDC	Almaty	4.50	34	⇓Pg	Pg	12 17 34.7	-2.9
	45nm,0.5s						
KNDC				⇓Lg	Lg	12 18 35.0	
	236nm,0.7s						
KTBS	Karatobe	4.80	28	eP	Pb	12 17 39.3	+3.5
	17nm,0.7s						
KTBS				eS	Sg	12 18 43.7	-1.8
	122nm,0.7s						
KTBS	Karatobe	4.80	28	Pg	Pg	12 17 42.0	-1.3
	23nm,0.6s						
KTBS				Lg	Lg	12 18 43.7	
	122nm,0.7s						
KUU	Kurty	4.84	25	eP	Pb	12 17 40.0	+3.5
	12nm,0.7s						
KUU				eS	Sg	12 18 44.9	-1.9
	66nm,0.5s						
KUU	Kurty	4.84	25	Pg	Pg	12 17 44.1	0.0
	22nm,0.5s						
KUU				Lg	Lg	12 18 45.5	
	66nm,0.5s						
CHKK	Chushkaly	5.04	30	eP	Pb	12 17 42.7	+2.8
	13nm,0.7s						
CHKK				eS	Sg	12 18 49.9	-3.2
	35nm,0.8s						
CHKK	Chushkaly	5.04	30	Pg	Pg	12 17 46.0	-1.9
	13nm,0.7s						
CHKK				Lg	Lg	12 18 49.9	
	35nm,0.8s						
SATY	Saty	5.09	45	eP	Pg	12 17 48.2	-0.7
	39nm,0.8s						
SATY				eS	Sg	12 18 58.9	+4.0
	58nm,0.8s						
SATY	Saty	5.09	45	Pg	Pg	12 17 48.9	0.0
	39nm,0.8s						
SATY				Lg	Lg	12 18 54.4	
	58nm,0.8s						
ZHN	Zhinishke	5.18	44	eP	Pb	12 17 45.3	+3.0
	16nm,0.1s						
ZHN				eS	Sg	12 18 54.2	-3.5
	26nm,0.8s						
ZHN	Zhinishke	5.18	44	Pg	Pg	12 17 48.3	-2.3
	16nm,0.1s						
ZHN				Lg	Lg	12 18 53.5	
	26nm,0.8s						
KURS	Kuram	5.27	40	eP	Pb	12 17 47.2	+3.4
	16nm,0.8s						
KURS				eS	Sg	12 18 57.9	-2.7
	16nm,0.6s						
KURS	Kuram	5.27	40	Pg	Pg	12 17 50.9	-1.4
	16nm,0.8s						
KURS				Lg	Lg	12 18 57.9	
	16nm,0.6s						
KPKS	Kokpek	5.52	43	eP	Pb	12 17 51.0	+3.0
	12nm,0.5s						
KPKS				eS	Sg	12 19 04.1	-4.4
	25nm,0.6s						
KPKS	Kokpek	5.52	43	Pg	Pg	12 17 54.2	-2.8
	12nm,0.5s						
KPKS				Lg	Lg	12 19 04.1	
	25nm,0.6s						
BTLS	Baital	5.52	4	eP	Pb	12 17 50.4	+2.3
	14nm,0.7s						
BTLS				eS	Sg	12 19 03.2	-5.4
	26nm,0.7s						
BTLS	Baital	5.52	4	Pg	Pg	12 17 53.7	-3.4
	14nm,0.7s						
BTLS				Lg	Lg	12 19 03.2	
	26nm,0.7s						
ARXS	Arharly	5.67	33	eP	Pb	12 17 53.8	+3.1
	22nm,0.6s						
ARXS				eS	Sg	12 19 08.9	-4.6
	49nm,0.7s						
ARXS	Arharly	5.67	33	Pg	Pg	12 17 57.3	-2.8
	22nm,0.6s						
ARXS				Lg	Lg	12 19 09.9	
	49nm,0.7s						
SHLS	Shalkode	5.75	49	eP	Pg	12 18 01.9	+0.4
	4.5nm,0.6s						
SHLS				eS	Sg	12 19 21.9	+6.0
	18nm,0.7s						
SHLS	Shalkode	5.75	49	Pg	Pg	12 18 05.7	+4.2
	14nm,0.7s						
SHLS				Lg	Lg	12 19 22.4	
	18nm,0.7s						
CEP	Cherat	5.84	193	⇓P	Pn	12 17 43.7	+5.2
PDGK	Podgornoye	5.87	48	Pg	Pg	12 18 01.8	-2.0
	2.0nm,0.4s						
PDGK				Lg	Lg	12 19 16.5	
	9.3nm,0.7s						
BLB	Baldybastay	5.87	37	eP	Pb	12 17 58.0	+3.8
	28nm,0.7s						
BLB				eS	Sg	12 19 16.1	-3.8
	63nm,0.5s						
BLB	Baldybastay	5.87	37	Pg	Pg	12 18 01.2	-2.6
	28nm,0.7s						
BLB				Lg	Lg	12 19 16.1	
	63nm,0.5s						
KBL	Kabul	6.14	217	Pn	Pn	12 17 39.1	-3.6
TDK	Taldyqorghan	6.56	32	Pg	Pg	12 18 14.8	-2.1
	53nm,0.3s						
TDK				Lg	Lg	12 19 38.6	
	67nm,0.7s						
DJR	Jarkent	6.69	42	Pg	Pg	12 18 20.3	+0.8
	3.8nm,0.7s						
THW	Thamme Wali	6.87	193	P	Pn	12 17 53.5	+0.9
SMLA	Simla	8.89	159	eP	Pn	12 18 21.9	+1.7
SMLA				eS	Sn	12 19 57.3	-3.3
SMLA				IAML		12 20 02.5	
	comp=E,30nm,0.5s						
SMLA				IAML		12 20 06.5	
	comp=N,62nm,0.5s						
MKAR	Makanchi Array	9.67	39	Pn	Pn	12 18 34.5	+3.5
	baz=221,slow=14,SNR=2.5						
MKAR				Lg	Lg	12 21 20.7	
	comp=N,0.2nm,0.3s,baz=223,slow=25,SNR=6.6						
MKAR	Makanchi Array	9.67	39	Pn	Pn	12 18 33.7	+2.8
WMQ	Urumqi	11.43	63	eP	Pn	12 18 56.8	+1.8
WMQ				smax	smax		
	comp=N,23nm,0.5s						
WMQ				smax	smax		
	comp=E,17nm,0.7s						
KURBB	Kurchatov Arra	11.64	16	Pn	Pn	12 18 58.3	+0.6
	baz=210,slow=13,SNR=2.5						
KURBB				Lg	Lg	12 22 20.2	
	comp=E,0.1nm,0.3s,baz=207,slow=31,SNR=9.2						
GEYT	Alibeck	12.15	267	Pn	Pn	12 19 03.6	-1.2
	comp=E,0.6nm,0.3s,baz=79,slow=15,SNR=2.4						
	comp=E,1.6nm,0.3s						
AB31	Akbulak array	13.73	320	P	Pn	12 19 25.7	-0.6
	comp=E,2.1nm,0.7s,baz=130,slow=13,SNR=11						
ABKAR	Akbulak array	13.73	320	Pn	Pn	12 19 26.4	+0.1
ABKAR	Akbulak array	13.73	320	Pn	Pn	12 19 26.3	+0.1
AKTO	Aktyubinsk	15.44	320	Pn	Pn	12 19 49.1	-0.4
	comp=E,0.2nm,0.3s,baz=118,slow=16,SNR=2.5						
	comp=E,0.7nm,0.4s						
AKTO	Aktyubinsk	15.44	320	⇓P	P	12 19 54.3	+0.2
	comp=E,5.3nm,0.6s						
ZAA0	Zalesovo Array	16.34	24	P	P	12 20 05.1	+1.1
ZALV	Zalesovo Beam	16.34	24	Pn	Pn	12 20 02.3	+1.3
	comp=E,0.4nm,0.3s,baz=213,slow=11,SNR=9.5						
	comp=E,2.4nm,0.7s						
ZALV	Zalesovo Beam	16.34	24	P	P	12 20 05.2	+1.2
ARU	Arti	19.58	335	P	Pn	12 20 41.9	+0.8
	baz=121,slow=15,SNR=3.0						
	comp=E,1.6nm,0.3s						
ARU	Arti	19.58	335	P	Pn	12 20 42.5	+1.4
GTA	Gaotai	20.27	82	eP	Pn	12 20 49.3	-0.2
GTA				pP	sP	12 20 54.0	+1.8
GTA				sP	pP	12 20 57.5	+6.7
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BELG	Belogornoye	21.99	314	P	P	12 21 07.5	+1.7
	comp=Z,11nm,0.7s,baz=270,slow=7.0,SNR=3.1						
	comp=Z,11nm,0.7s						
GNI	Garni	22.08	281	P	P	12 21 08.5	+1.4
	comp=Z,7.3nm,0.9s,baz=331,slow=18,SNR=2.1						
	comp=Z,7.3nm,0.9s						
ONI	Oni	22.83	287	P	P	12 21 15.5	+0.5
KBZ	Khabaz	23.21	290	P	P	12 21 19.6	+0.8
	comp=Z,0.6nm,0.4s,baz=155,slow=9.3,SNR=2.0						
	comp=Z,0.6nm,0.4s						
SONM	Songino Array	25.02	60	P	P	12 21 36.4	+0.4
	comp=Z,1.4nm,0.7s,baz=260,slow=8.6,SNR=4.6						
	comp=Z,1.4nm,0.7s						
BR131	Keskin Array S	30.55	283	P	P	12 22 26.5	+0.9
BR131				IAmb	IAmb	12 22 27.2	
	comp=Z,3.9nm,0.8s						
BRTR	Keskin Array B	30.55	283	P	P	12 22 26.1	+0.5
	comp=Z,1.9nm,0.7s,baz=100,slow=7.6,SNR=9.3						
	comp=Z,1.9nm,0.7s						
BRTR	Keskin Array B	30.55	283	P	P	12 22 26.5	+0.9
AKASG	Malin Array Be	32.74	305	P	P	12 22 44.5	+0.1
	comp=Z,0.3nm,0.3s,baz=78,slow=7.5,SNR=5.5						
	comp=Z,0.3nm,0.3s						
MLR	Muntele Rosu	35.16	296	P	P	12 23 05.7	-0.1
	comp=Z,2.7nm,0.7s,baz=157,slow=12,SNR=4.1						
	comp=Z,2.7nm,0.7s						
FIA1	FINESS Array S	36.17	323	P	P	12 23 14.1	0.0
FIA1				IAmb	IAmb	12 23 43.0	
	comp=Z,8.0nm,1.2s						
FINES	FINESS Array B	36.17	323	P	P	12 23 15.1	+1.0
	comp=Z,0.5nm,0.3s,baz=116,slow=9.0,SNR=11						
	comp=Z,0.5nm,0.3s						
FINES	FINESS Array B	36.17	323	P	P	12 23 14.7	+0.6
ARCES	ARCESS Array B	39.16	336	P	P	12 23 40.0	+0.6
	comp=Z,1.4nm,0.7s,baz=108,slow=7.6,SNR=9.2						
	comp=Z,1.4nm,0.7s						
ARCES	ARCESS Array B	39.16	336	P	P	12 23 39.5	+0.2
ARCES				IAmb	IAmb	12 23 54.8	
	comp=Z,10nm,1.4s						
KLR	Kul'dur	41.78	57	P	P	12 24 01.4	+0.2
	comp=Z,1.5nm,0.5s,baz=282,slow=7.5,SNR=6.2						
	comp=Z,1.5nm,0.5s						
HFS	Hagfors	41.99	320	P	P	12 24 03.0	+0.2
	comp=Z,2.7nm,0.6s,baz=105,slow=11,SNR=8.4						
	comp=Z,2.7nm,0.6s						
GERES	GERESS Array B	42.89	303	P	P	12 24 11.5	+1.1
	comp=Z,0.4nm,0.5s,baz=63,slow=6.4,SNR=5.2						
	comp=Z,0.4nm,0.5s						
GERES	GERESS Array B	42.89	303	P	P	12 24 11.1	+0.7
NB2	NORSAR Subarra	43.23	321	P	P	12 24 12.5	-0.4
	comp=Z,2.6nm,0.8s,baz=88,slow=7.9						
NOA	NORSAR Array B	43.23	321	P	P	12 24 12.8	-0.1
	comp=Z,1.2nm,0.7s,baz=91,slow=7.9,SNR=6.1						
	comp=Z,1.2nm,0.7s						
MJAR	Matsushiro Arr	50.04	72	P	P	12 25 06.0	-0.7
	comp=Z,1.5nm,0.5s,baz=305,slow=6.6,SNR=4.1						
	comp=Z,1.5nm,0.5s						
ESDC	Sonseca Array	57.84	297	P	P	12 26 03.2	-0.4
	comp=Z,0.6nm,0.6s,baz=57,slow=7.1,SNR=8.4						
	comp=Z,0.6nm,0.6s						
TOA0	Torodi Ar. Sit	67.78	269	P	P	12 27 08.3	-1.8
TORD	Torodi Ar. Bea	67.78	269	P	P	12 27 08.4	-1.7
	comp=Z,0.8nm,0.6s,baz=47,slow=5.4,SNR=11						
	comp=Z,0.8nm,0.6s						
TORD	Torodi Ar. Bea	67.78	269	P	P	12 27 08.3	-1.8
TORD				IAmb	IAmb	12 27 09.6	
	comp=Z,2.4nm,1.2s						
IMAR	Indian Mountai	68.68	19	P	P	12 27 14.2	-0.7
INK	Inuvik	70.59	10	P	P	12 27 26.6	-0.1
INK				IAmb	IAmb	12 27 27.8	
	comp=Z,1.2nm,0.7s						
ILAR	Eielson Array	71.31	17	P	P	12 27 30.4	-0.8
	comp=Z,0.6nm,0.8s,baz=295,slow=3.9,SNR=7.6						
	comp=Z,0.6nm,0.8s						
SCRK	Sand Creek	72.64	16	P	P	12 27 38.8	-0.6
SCRK				IAmb	IAmb	12 27 57.3	
	comp=Z,3.0nm,1.4s						
BCAR	Beaver Creek A	73.92	16	P	P	12 27 47.1	+0.3
KNRA	Kununurra	75.25	125	P	P	12 27 54.4	-0.6
YKA	Yellowknife Ar	78.11	4	P	P	12 28 10.4	-0.2
	comp=Z,0.8nm,0.8s,baz=348,slow=6.0,SNR=7.2						
	comp=Z,0.8nm,0.8s						
WRA	Warramunga Arr	81.95	124	P	P	12 28 30.2	-1.7
	comp=Z,0.5nm,0.6s,baz=324,slow=5.1,SNR=13						
	comp=Z,0.5nm,0.6s						
WRA	Warramunga Arr	81.95	124	P	P	12 28 30.6	-1.3
WB2	Warramunga Arr	81.96	124	P	P	12 28 30.1	-1.9
WB2				IAmb	IAmb	12 28 39.5	
	comp=Z,4.4nm,1.1s						
WR0	Warramunga Arr	82.10	124	P	P	12 28 30.8	-1.9
WR0				IAmb	IAmb	12 28 49.0	
	comp=Z,4.6nm,1.4s						
ASAR	Alice Springs	84.40	127	P	P	12 28 42.5	-2.1
	comp=Z,0.5nm,0.7s,baz=312,slow=4.8,SNR=8.6						
	comp=Z,0.5nm,0.7s						
ASAR	Alice Springs	84.40	127	P	P	12 28 42.0	-2.6

SOME **26** *12:18:29.8,39.°50N×73.°58E,h15km*
KRNET **26** *12:18:30.0±0.1,39.°47N×73.°69E,mb3.9*

ISC 26 12:18:33.7±1.4,39.°54N±0.°07×73.°59E±0.°04,h10km,n17,
σ1°74/34,18C-8D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OHH	Osh	1.16	328	⇓eP	P		Pb	12 18 54.0	-2.0
	baz=27								
OHH				⇓eS			Sb	12 19 11.5	+0.4
	baz=27								
DRK	Karamyk	1.39	268	⇑iP			Pn	12 18 57.6	-1.8
	baz=71								
DRK				⇑eS			Sn	12 19 17.6	-0.3
	baz=71								
BTK	Batken	2.20	285	⇑eP			Pn	12 19 10.8	+0.4
	baz=86								
BTK				⇑eS			Sb	12 19 41.1	+0.2
	baz=86								
ARLS	Aral	2.39	13	⇓eP			Pn	12 19 12.9	-0.1
	baz=11								
ARLS				⇓eS			Sn	12 19 44.4	+2.0
	baz=11								
ARK	Arkit	2.58	332	⇑eP			Pn	12 19 16.3	+0.7
	baz=31								
ARK				⇑eS			Sn	12 19 50.4	+3.4
	baz=31								
GAR	Garm	2.60	259	⇑eP			Pn	12 19 16.2	+0.3
	baz=61								
GAR				⇑eS			Sn	12 19 49.8	+2.2
	baz=61								
TRKS	Terek-Say	2.73	318	⇑eP			Pn	12 19 17.6	-0.1
	baz=17								
TRKS				⇑eS			Sn	12 19 52.4	+1.5
	baz=17								
UCH	Uchtor	2.78	14	⇓eP			Pn	12 19 18.7	0.0
	baz=13								
UCH				⇓eS			Sn	12 19 53.8	+1.3
	baz=13								
AAK	Ala-Archa	3.17	12	⇑eP			Pn	12 19 24.1	+0.3
	baz=11								
AAK				⇑eS			Sn	12 20 03.5	+1.7
	baz=11								
ULHL	Ulahol	3.37	36	⇑eP			Pn	12 19 26.3	-0.3
	baz=34								
ULHL				⇑eS			Sn	12 20 07.5	+0.7
	baz=34								
BOOM	Boom

KDJ ⇑*i*S **Sn** **12 20 16.3 0.0**
baz=44
KST **Kastek** **3.93 26** *e*P **Pb** **12 19 44.3 +1.2**
30nm,0.7s
KST *e*S **Sg** **12 20 39.0 -0.9**
104nm,0.9s
BRLS **Borolday** **4.49 322** *e*P **Pb** **12 19 53.4 +0.7**
8.6nm,0.6s
BRLS *e*S **Sg** **12 20 54.7 -3.2**
51nm,0.5s
KUU **Kurty** **4.81 24** *e*P **Pb** **12 19 59.9 +1.7**
13nm,0.6s
KUU *e*S **Sg** **12 21 04.5 -3.7**
26nm,0.4s
CHKK **Chushkaly** **5.01 29** *e*P **Pb** **12 20 03.1 +1.7**
6.5nm,0.6s
CHKK *e*S **Sg** **12 21 10.4 -4.0**
24nm,0.7s

KRNET ***26*** *12:21:56.0±0.1,39°.41N×73°.48E,mb4.4*
IDC ***26*** *12:21:55.1±0.8,39°.38N×73°.54E,h0km,mb3.9/19, mbtmp3.9/26,ML3.1/7,Error ellipse: s-maj=15.7km s-min=11.7km az=150.0*
MOS ***26*** *12:21:57.5±1.4,39°.39N×73°.40E,h20km,mb4.3/15,Error ellipse: s-maj=7.5km s-min=5.7km az=103.0*
NEIC ***26*** *12:21:58.3±1.4,39°.43N±0°.06×73°.38E±0°.08,h10km±1km, mb4.3/11,Error ellipse: s-maj=11.3km s-min=8.8km az=141.0*
SOME ***26*** *12:22:00.2,39°.68N×73°.52E,h5km*
NNC ***26*** *12:22:01.6±1.6,39°.68N×73°.41E,h0km,mb4.5,mpv4.2, Error ellipse: s-maj=12.7km s-min=6.8km az=169.0*
ISC 26 12:21:56.5±1.5,39°.33N±0°.04×73°.26E±0°.03,h3km±9km, n183,σ2s07/226,mb4.1/31,30C-21D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
DRK	**Karamyk**	**1.14**	**278**	⇑*i*P		**Pn**	**12 22 20.4**	**+0.7**
	baz=74							
DRK				⇑*e*S		**Sn**	**12 22 38.2**	**+2.1**
	baz=74							
DRK	**Karamyk**	**1.14**	**278**			**Pn**	**12 22 21.3**	**+1.6**
OHH	**Osh**	**1.25**	**343**	⇓*e*P		**Pn**	**12 22 18.9**	**-2.0**
	baz=34							
OHH				⇓*e*S		**Sb**	**12 22 35.7**	**-1.5**
	baz=34							
BTK	**Batken**	**2.02**	**292**	⇓*e*P		**Pb**	**12 22 34.3**	**+0.4**
	baz=88							
BTK				⇓*e*S		**Sg**	**12 23 02.3**	**+0.9**
	baz=88							
BTK	**Batken**	**2.02**	**292**	Pn		**Pb**	**12 22 34.1**	**+0.2**
BTK	**Batken**	**2.02**	**292**	PN		**Pb**	**12 22 34.1**	**+0.2**
KSH	**Kashi**	**2.11**	**84**	Pg		Pn	12 22 27.0	-5.8
KSH				Sg		Sn	12 22 47.5	-12
KSH				pmax		pmax		
	comp=Z,130nm,0.5s							
KSH				smax		smax		
	comp=N,830nm,0.8s							
KSH				smax		smax		
	comp=E,630nm,0.7s							
GAR	**Garm**	**2.31**	**263**	⇓*e*P		**Pb**	**12 22 38.9**	**-0.1**
	baz=61							
GAR				⇓*e*S		**Sg**	**12 23 10.5**	**-0.3**
	baz=61							
GAR	**Garm**	**2.31**	**263**			**Pb**	**12 22 38.4**	**-0.6**
ARLS	**Aral**	**2.65**	**17**	⇑*e*P		**Pn**	**12 22 39.4**	**-0.9**
	baz=15							
ARLS				⇑*e*S		**Sn**	**12 23 11.4**	**-1.7**
	baz=15							
ARK	**Arkit**	**2.65**	**339**	⇑*e*P		**Pn**	**12 22 41.1**	**+0.8**
	baz=35							
ARK				⇑*e*S		**Sn**	**12 23 14.2**	**+1.1**
	baz=35							
TRKS	**Terek-Say**	**2.73**	**324**	⇑*e*P		**Pn**	**12 22 41.8**	**+0.4**
	baz=20							
TRKS				⇑*e*S		**Sn**	**12 23 15.4**	**+0.4**
	baz=20							
AML	**Almayashu**	**2.81**	**7**	P		**Pn**	**12 22 43.8**	**+1.0**
	SNR=16							
UCH	**Uchtor**	**3.04**	**18**	P		**Pn**	**12 22 47.0**	**+1.0**
	SNR=14							
UCH	**Uchtor**	**3.04**	**18**	⇑*e*P		**Pn**	**12 22 45.1**	**-0.9**
	baz=15							
UCH				⇑*e*S		**Sn**	**12 23 20.9**	**-2.3**
	baz=15							
CHGR	**Chuyangaron**	**3.27**	**259**	⇓*e*P		**Pb**	**12 22 52.2**	**-3.0**
	baz=59							
CHGR				⇓*e*S		**Sb**	**12 23 33.3**	**-2.2**
	baz=59							
CHGR	**Chuyangaron**	**3.27**	**259**	Pn		**Pn**	**12 22 52.0**	**+3.2**
CHGR	**Chuyangaron**	**3.27**	**259**	PN		**Pn**	**12 22 52.0**	**+3.2**
EKS2	**Erkin-Say**	**3.35**	**7**	P		**Pn**	**12 22 52.0**	**+2.1**
	SNR=5.8							
EKS2	**Erkin-Say**	**3.35**	**7**	⇓*e*P		**Pn**	**12 22 49.5**	**-0.4**
	baz=4.0							
EKS2				⇓*e*S		**Sn**	**12 23 28.7**	**-1.5**
	baz=4.0							
AAK	**Ala-Archa**	**3.43**	**15**	P		**Pn**	**12 22 52.2**	**+1.2**
	SNR=14							
AAK	**Ala-Archa**	**3.43**	**15**	Pn		**Pn**	**12 22 51.5**	**+0.4**
	comp=E,11nm,0.3s,baz=162,slow=5.0,SNR=11							
AAK				Sn		**Sn**	**12 23 33.1**	**+0.8**
	comp=E,8.6nm,0.3s,baz=46,slow=23,SNR=5.7 comp=E,39nm,0.6s							
AAK	**Ala-Archa**	**3.43**	**15**	⇑*e*P		**Pn**	**12 22 50.4**	**-0.6**
	baz=13							
AAK				⇑*e*S		**Sn**	**12 23 30.1**	**-2.2**
	baz=13							
AAK	**Ala-Archa**	**3.43**	**15**	Pn		**Pn**	**12 22 50.4**	**-0.6**
KBK	**Karagaybulak**	**3.56**	**20**	P		**Pb**	**12 22 59.5**	**-0.6**
	SNR=11							
KBK	**Karagaybulak**	**3.56**	**20**	⇑*e*P		**Pn**	**12 22 52.0**	**-0.8**
	baz=18							
KBK				⇑*e*S		**Sn**	**12 23 32.3**	**-3.2**
	baz=18							
TAS	**Tashkent**	**3.63**	**305**	⇑*i*P		**Pn**	**12 22 56.1**	**+2.5**
	baz=2.0							
TAS				⇑*i*S		**Sn**	**12 23 39.7**	**+2.7**
	baz=2.0							
TAS	**Tashkent**	**3.63**	**305**			**Pn**	**12 22 55.4**	**+1.8**
TAS	**Tashkent**	**3.63**	**305**	PN		**Pn**	**12 22 55.4**	**+1.8**
ULHL	**Ulahol**	**3.69**	**37**	P		**Pb**	**12 23 00.4**	**-2.0**
	SNR=23							
IUG	**Iuzhnay**	**3.73**	**320**	*e*P		**Pg**	**12 23 07.3**	**-0.7**
	comp=E,4μm,1.0s							
IUG				*e*S		**Sg**	**12 23 55.9**	**-0.4**
	comp=E,356nm,1.0s							
BOOM	**Boomskoye usch**	**3.75**	**32**	⇑*i*P		**Pn**	**12 22 54.3**	**-1.2**
	baz=30							
BOOM				⇑*i*S		**Sn**	**12 23 36.9**	**-3.3**
	baz=30							
BOOM	**Boomskoye usch**	**3.75**	**32**	Pn		**Pn**	**12 22 55.8**	**+0.4**
BOOM	**Boomskoye usch**	**3.75**	**32**	PN		**Pn**	**12 22 55.8**	**+0.4**
DZA	**Taraz**	**3.84**	**338**	*e*PN		**Pb**	**12 23 01.6**	**-3.4**
DZA				*e*			12 23 55.9	
DZA	**Taraz**	**3.84**	**338**	*e*P		**Pb**	**12 23 04.1**	**-0.9**
	comp=E,138nm,0.1s							
DZA				*e*S		**Sb**	**12 23 50.2**	**-1.7**
	comp=E,283nm,0.5s							
DZA	**Taraz**	**3.84**	**338**	*e*Pg		**Pb**	**12 23 01.7**	**-3.3**
	baz=335							
DZA				*e*Lg		Lg	12 23 56.0	
	baz=335							
DZA	**Taraz**	**3.84**	**338**	Pg		**Pb**	**12 23 04.1**	**-0.9**
	comp=E,138nm,0.1s							
DZA				Lg		Lg	12 23 50.2	
	comp=E,283nm,0.5s							
TKM2	**Tokmak 2**	**3.99**	**25**	⇑*e*P		**Pn**	**12 22 57.9**	**-0.9**
	baz=24							
TKM2				⇑*e*S		**Sn**	**12 23 43.2**	**-3.1**
	baz=24							
TKM2	**Tokmak 2**	**3.99**	**25**	PN		**Pb**	**12 23 10.4**	**+2.7**
TKM2				LG		Lg	12 23 58.4	
TKM2	**Tokmak 2**	**3.99**	**25**	⇑Pg		**Pb**	**12 23 10.4**	**+2.7**
	comp=E,24nm,0.5s							
TKM2				⇓Lg		Lg	12 23 58.4	
	comp=E,87nm,0.8s							
CHM	**Chimkent**	**4.07**	**318**	*e*P		**Pg**	**12 23 14.4**	**-0.1**
	comp=E,4.7nm,0.5s							
CHM				*e*S		**Sg**	**12 24 08.1**	**+0.8**
	comp=E,435nm,0.6s							
KDJ	**Kajisay**	**4.08**	**46**	⇓*i*P		**Pn**	**12 22 58.6**	**-1.4**
	baz=45							
KDJ				⇓*i*S		**Sn**	**12 23 44.6**	**-3.8**
	baz=45							
KDJ	**Kajisay**	**4.08**	**46**	Pn		**Pn**	**12 22 59.8**	**-0.2**
KDJ	**Kajisay**	**4.08**	**46**	PN		**Pn**	**12 22 59.8**	**-0.2**
TARG	**Taragay, Kyrgy**	**4.21**	**54**	Pn		**Pn**	**12 23 02.4**	**+0.4**
TARG	**Taragay, Kyrgy**	**4.21**	**54**	PN		**Pn**	**12 23 02.4**	**+0.4**
KST	**Kastek**	**4.23**	**28**	*e*P		**Pb**	**12 23 12.7**	**+1.1**
	comp=E,29nm,0.6s							
KST				*e*S		**Sb**	**12 24 04.9**	**+1.8**
	comp=E,125nm,0.8s							
KST	**Kastek**	**4.23**	**28**	Pg		**Pb**	**12 23 12.7**	**+1.1**
	comp=E,29nm,0.6s							
KST				Lg		Lg	12 24 04.9	
	comp=E,125nm,0.8s							
SGDS	**Sogindy**	**4.24**	**14**	*e*PN		**Pn**	**12 22 59.3**	**-2.8**
SGDS				*e*			12 23 10.6	
SGDS				*e*			12 24 05.1	
SGDS	**Sogindy**	**4.24**	**14**	*e*P		**Pb**	**12 23 12.5**	**+0.7**
	comp=E,33nm,0.6s							
SGDS				*e*S		**Sb**	**12 24 04.5**	**+1.1**
	comp=E,91nm,0.9s							
SGDS	**Sogindy**	**4.24**	**14**	*e*Pn		**Pn**	**12 22 59.3**	**-2.8**
	baz=13							
SGDS				*e*Pg		**Pb**	**12 23 10.6**	**-1.2**
	baz=13							
SGDS				*e*Lg		Lg	12 24 05.1	
	baz=13							
SGDS	**Sogindy**	**4.24**	**14**	Pg		**Pb**	**12 23 12.5**	**+0.7**
	comp=E,33nm,0.6s							
SGDS				Lg		Lg	12 24 04.5	
	comp=E,91nm,0.9s							
KK31	**Karatay Array**	**4.30**	**332**	Pn		**Pn**	**12 23 03.4**	**+0.6**
KK31	**Karatay Array**	**4.30**	**332**	PN		**Pn**	**12 23 06.7**	**+3.8**
KK31				PG		**Pg**	**12 23 17.5**	**-1.4**
KK31				SN		**Sn**	**12 23 58.5**	**+4.9**
KK31				LG		Lg	12 24 11.9	
KK31	**Karatay Array**	**4.30**	**332**	⇑Pn		**Pn**	**12 23 06.1**	**+3.2**
	comp=E,2.5nm,0.3s,baz=173,slow=11,SNR=8.3							
KK31				Pg		**Pg**	**12 23 17.5**	**-1.4**
	comp=E,17nm,0.6s,baz=149,slow=16,SNR=5.5							
KK31				⇑Sn		**Sn**	**12 23 58.5**	**+4.9**
	comp=E,38nm,0.6s,baz=154,slow=20,SNR=4.2							
KK31				⇑Lg		Lg	12 24 12.0	
	comp=E,62nm,0.6s							
KKAR	**Karatay Array**	**4.30**	**332**	⇓*e*P		**Pn**	**12 23 04.0**	**+1.1**
	baz=30							
KKAR				⇓*e*S		**Sn**	**12 23 54.0**	**+0.4**
	baz=30							
KKAR	**Karatay Array**	**4.30**	**332**	Pn		**Pn**	**12 23 03.9**	**+1.0**
KKAR	**Karatay Array**	**4.30**	**332**			**Pn**	**12 23 03.2**	**+0.3**
KKAR	**Karatay Array**	**4.30**	**332**	PN		**Pn**	**12 23 03.2**	**+0.3**
DGS	**Degeres**	**4.34**	**25**	*e*P		**Pb**	**12 23 15.3**	**+1.9**
	comp=E,42nm,0.5s							
DGS				*e*S		**Sb**	**12 24 09.1**	**+2.8**
	comp=E,122nm,0.7s							
DGS	**Degeres**	**4.34**	**25**	Pg		**Pb**	**12 23 14.0**	**+0.5**
	comp=E,45nm,0.9s							
DGS				Lg		Lg	12 24 09.3	
	comp=E,122nm,0.7s							
IZV	**Izvestkoviy**	**4.48**	**33**	*e*P		**Pb**	**12 23 19.4**	**+3.5**
	comp=E,12nm,0.3s							
IZV				*e*S		**Sb**	**12 24 16.0**	**+5.6**
	comp=E,161nm,0.7s							
IZV	**Izvestkoviy**	**4.48**	**33**	Pg		**Pb**	**12 23 19.4**	**+3.5**
	comp=E,12nm,0.3s							
IZV				Lg		Lg	12 24 17.0	
	comp=E,161nm,0.7s							
MTBS	**Maitube**	**4.48**	**31**	*e*P		**Pb**	**12 23 17.5**	**+1.6**
	comp=E,37nm,0.6s							
MTBS				*e*S		**Sb**	**12 24 13.1**	**+2.8**
	comp=E,75nm,0.7s							
MTBS	**Maitube**	**4.48**	**31**	Pg		**Pb**	**12 23 17.5**	**+1.6**
	comp=E,37nm,0.6s							
MTBS				Lg		Lg	12 24 13.1	
	comp=E,75nm,0.7s							
BRLS	**Borolday**	**4.51**	**326**	*e*P		**Pb**	**12 23 20.1**	**+3.8**
	comp=E,10nm,0.6s							
BRLS				*e*S		**Sg**	**12 24 17.5**	**-3.8**
	comp=E,73nm,0.7s							
TNSS	**Tian-Shan**	**4.63**	**36**	*e*PN		**Pn**	**12 23 06.2**	**-1.5**
TNSS				*e*			12 24 17.7	
TNSS	**Tian-Shan**	**4.63**	**36**	*e*P		**Pb**	**12 23 19.7**	**+1.1**
	comp=E,26nm,0.5s							
TNSS				*e*S		**Sb**	**12 24 16.6**	**+1.8**
	comp=E,41nm,0.7s							
TNSS	**Tian-Shan**	**4.63**	**36**	*e*Pn		**Pn**	**12 23 06.2**	**-1.5**
	baz=37							
TNSS				*e*Pg		**Pb**	**12 23 16.8**	**-1.8**
	baz=37							
TNSS				*e*Lg		Lg	12 24 17.8	
	baz=37							
TNSS	**Tian-Shan**	**4.63**	**36**	Pg		**Pb**	**12 23 17.9**	**-0.7**
	comp=E,27nm,0.6s							
TNSS				Lg		Lg	12 24 14.9	
	comp=E,41nm,0.7s							
KRBS	**Karabastau**	**4.72**	**22**	*e*P		**Pb**	**12 23 21.1**	**+1.2**
	comp=E,1.0nm,0.6s							
KRBS				*e*S		**Sb**	**12 24 19.2**	**+2.0**
	comp=E,48nm,0.6s							
KRBS	**Karabastau**	**4.72**	**22**	Pg		**Pb**	**12 23 20.0**	**0.0**
	comp=E,1.6nm,0.6s							
KRBS				Lg		Lg	12 24 19.2	
	comp=E,48nm,0.6s							
AAA	**Alma-Ata**	**4.75**	**34**	*e*PN		**Pb**	**12 23 19.6**	**-0.8**
AAA				*e*			12 24 23.0	
AAA	**Alma-Ata**	**4.75**	**34**	*e*P		**Pb**	**12 23 23.0**	**+2.5**
	comp=E,56nm,0.4s							
AAA				*e*S		**Sb**	**12 24 22.6**	**+4.6**
	comp=E,157nm,0.7s							
AAA	**Alma-Ata**	**4.75**	**34**	*e*Pg		**Pb**	**12 23 19.7**	**-0.8**
	baz=35							
AAA				*e*Lg		Lg	12 24 23.1	
	baz=35							
AAA	**Alma-Ata**	**4.75**	**34**	Pg		**Pb**	**12 23 23.0**	**+2.5**
	comp=E,56nm,0.4s							
AAA				Lg		Lg	12 24 22.6	
	comp=E,157nm,0.7s							
KNDC	**Almaty**	**4.78**	**35**	⇓Pg		**Pb**	**12 23 20.4**	**-0.6**
	comp=E,67nm,0.6s							
KNDC				⇓Lg		Lg	12 24 22.8	
	comp=E,413nm,0.8s							
KTBS	**Karatobe**	**5.07**	**29**	*e*P		**Pb**	**12 23 25.5**	**-0.4**
	comp=E,18nm,0.7s							
KTBS				*e*S		**Sb**	**12 24 27.2**	**0.0**
	comp=E,109nm,0.5s							
KTBS	**Karatobe**	**5.07**	**29**	Pg		**Pb**	**12 23 25.5**	**-0.4**
	comp=E,18nm,0.7s							
KTBS				Lg		Lg	12 24 28.5	
	comp=E,109nm,0.5s							
KUU	**Kurty**	**5.11**	**26**	*e*PN		**Pb**	**12 23 25.7**	**-0.8**
KUU				*e*			12 24 32.9	
KUU				pmax		pmax		
	comp=Z,14nm,0.8s							
KUU	**Kurty**	**5.11**	**26**	*e*P		**Pb**	**12 23 28.2**	**+1.7**
	comp=Z,23nm,0.7s							
KUU				*e*S		**Sb**	**12 24 31.4**	**+3.2**
	comp=Z,60nm,0.9s							
KUU	**Kurty**	**5.11**	**26**	*e*Pg		**Pb**	**12 23 25.7**	**-0.8**
	comp=Z,14nm,0.8s,baz=26							
KUU				*e*Lg		Lg	12 24 32.9	
	baz=26							
KUU	**Kurty**	**5.11**	**26**	Pg		**Pb**	**12 23 28.1**	**+1.7**
	comp=Z,23nm,0.7s							
KUU				Lg		Lg	12 24 33.0	
	comp=Z,60nm,0.9s							
CHKK	**Chushkaly**	**5.31**	**31**	*e*PN		**Pb**	**12 23 28.9**	**-1.1**
CHKK				*e*			12 24 37.1	
CHKK	**Chushkaly**	**5.31**	**31**	*e*P		**Pb**	**12 23 31.2**	**+1.3**
	comp=Z,14nm,0.8s							
CHKK				*e*S		**Sb**	**12 24 37.3**	**+3.2**
	comp=Z,48nm,0.8s							
CHKK	**Chushkaly**	**5.31**	**31**	*e*Pg		**Pb**	**12 23 28.9**	**-1.1**
	baz=31							
CHKK				*e*Lg		Lg	12 24 37.1	
	baz=31							
CHKK	**Chushkaly**	**5.31**	**31**	Pg		**Pb**	**12 23 31.2**	**+1.3**
	comp=Z,14nm,0.8s							
CHKK				Lg		Lg	12 24 37.3	
	comp=Z,48nm,0.8s							
SATY	**Saty**	**5.38**	**45**	*e*P		**Pb**	**12 23 33.9**	**+2.7**
	comp=Z,29nm,0.6s							
SATY				*e*S		**Sb**	**12 24 41.2**	**+5.1**
	comp=Z,84nm,1.2s							
SATY	**Saty**	**5.38**	**45**	*e*Pg		**Pb**	**12 23 29.9**	**-1.2**
	baz=46							
SATY				*e*Lg		Lg	12 24 40.0	
	baz=46							
SATY	**Saty**	**5.38**	**45**	Pg		**Pb**	**12 23 33.9**	**+2.7**
	comp=Z,29nm,0.6s							
SATY				Lg		Lg	12 24 41.2	
	comp=Z,84nm,1.2s							
ZHN	**Zhinishke**	**5.46**	**44**	*e*P		**Pb**	**12 23 34.6**	**+2.0**
	comp=Z,9.1nm,0.1s							
ZHN				*e*S		**Sb**	**12 24 42.2**	**+3.5**
	comp=Z,50nm,1.1s							
KURS	**Kuram**	**5.55**	**40**	*e*P		**Pb**	**12 23 36.9**	**+2.8**
	comp=Z,29nm,1.0s							
KURS				*e*S		**Sb**	**12 24 46.4**	**+5.3**
	comp=Z,36nm,1.3s							
KURS	**Kuram**	**5.55**	**40**	Pg		**Pb**	**12 23 36.9**	**+2.8**
	comp=Z,29nm,1.0s							
KURS				Lg		Lg	12 24 46.4	
	comp=Z,36nm,1.3s							
BTLS	**Baital**	**5.73**	**6**	*e*P		**Pb**	**12 23 39.5**	**+2.3**
	comp=Z,15nm,0.7s							
BTLS				*e*S		**Sb**	**12 24 50.7**	**+4.4**
	comp=Z,28nm,0.6s							
BTLS	**Baital**	**5.73**	**6**	*e*Pg		**Pb**	**12 23 38.9**	**+1.7**
	baz=4.7							
BTLS				*e*Lg		Lg	12 24 52.6	
	baz=4.7							
BTLS	**Baital**	**5.73**	**6**	Pg		**Pb**	**12 23 39.4**	**+2.3**
	comp=Z,15nm,0.7s							
BTLS				Lg		Lg	12 24 50.7	
	comp=Z,28nm,0.6s							
KPKS	**Kokpek**	**5.80**	**43**	*e*PN		Pn	12 23 18.6	-5.0
KPKS				*e*			12 24 53.9	
KPKS	**Kokpek**	**5.80**	**43**	*e*P		**Pb**	**12 23 41.7**	**+3.3**
	comp=Z,10nm,0.6s							
KPKS				*e*S		**Sb**	**12 24 54.5**	**+6.2**
	comp=Z,38nm,0.6s							
KPKS	**Kokpek**	**5.80**	**43**	*e*Pn		Pn	12 23 18.7	-4.9
	baz=44							
KPKS				*e*Pg		**Pb**	**12 23 36.8**	**-1.6**
	baz=44							
KPKS				*e*Lg		Lg	12 24 54.0	
	baz=44							
KPKS	**Kokpek**	**5.80**	**43**	Pg		**Pb**	**12 23 40.7**	**+2.4**
	comp=Z,20nm,0.9s							
KPKS				Lg		Lg	12 24 54.6	
	comp=Z,38nm,0.6s							
KBL	**Kabul**	**5.86**	**217**			**Pn**	**12 23 26.4**	**+2.0**
KBL	**Kabul**	**5.86**	**217**	PN		**Pn**	**12 23 26.4**	**+2.0**
ARXS	**Arharly**	**5.95**	**34**	*e*P		**Pb**	**12 23 42.5**	**+1.6**
	comp=Z,45nm,0.6s							
ARXS				*e*S		**Sb**	**12 24 56.6**	**+4.0**
	comp=Z,56nm,0.7s							
ARXS	**Arharly**	**5.95**	**34**	Pg		**Pb**	**12 23 42.5**	**+1.6**
	comp=Z,45nm,0.6s							
ARXS				Lg		Lg	12 24 56.6	
	comp=Z,56nm,0.7s							
SHLS	**Shalkode**	**6.03**	**49**	*e*Pg		Pb	12 23 47.5	+5.1
	comp=Z,5.4nm,0.9s,baz=52							
SHLS				*e*Lg		Lg	12 25 10.5	
	baz=52							
PDGK	**Podgornoye**	**6.16**	**48**	Pg		**Pb**	**12 23 49.0**	**+4.6**
	comp=Z,5.8nm,0.8s							
PDGK				Lg		Lg	12 25 07.1	
	comp=Z,15nm,0.7s							
TDK	**Taldyqorghan**	**6.83**	**32**	*e*P		**Pb**	**12 23 59.6**	**+3.7**
	comp=Z,44nm,0.3s							
TDK				*e*S		**Sb**	**12 25 25.3**	**+7.4**
	comp=Z,59nm,0.8s							
TDK	**Taldyqorghan**	**6.83**	**32**	Pg		**Pb**	**12 23 59.6**	**+3.7**
	comp=Z,44nm,0.3s							
TDK				Lg		Lg	12 25 25.3	
	comp=Z,59nm,0.8s							
MKAR	**Makanchi Array**	**9.96**	**39**	Pn		**Pn**	**12 24 17.9**	**-2.6**
	baz=225,slow=16,SNR=2.1 comp=Z,1.8nm,0.9s							
WMQ	**Urumqi**	**11.70**	**63**	*e*P		**Pn**	**12 24 45.3**	**+0.9**
KURBB	**Kurchatov Arra**	**11.88**	**16**	Pn		**Pn**	**12 24 44.1**	**-2.7**
	comp=Z,0.1nm,0.3s,baz=203,slow=29,SNR=5.7							
KURBB				Lg		Lg	12 28 05.3	
	comp=Z,0.1nm,0.3s,baz=186,slow=29,SNR=5.1 comp=Z,1.0nm,0.8s							
GEYT	**Alibeck**	**11.93**	**268**	Pn		**Pn**	**12 24 47.9**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=103,slow=17,SNR=1.7 comp=Z,1.2nm,0.3s							
GEYT	**Alibeck**	**11.93**	**268**			**Pn**	**12 24 49.5**	**+1.9**
KURK	**Kurchatov**	**11.99**	**17**	P		**Pn**	**12 24 44.1**	**-4.1**
AB31	**Akbulak array**	**13.74**	**321**	P		**Pn**	**12 25 11.7**	**-0.4**
AB31	**Akbulak array**	**13.74**	**321**	P		**Pn**	**12 25 11.1**	**-1.1**
	comp=Z,2.2nm,0.6s,baz=125,slow=13,SNR=16							
ABKAR	**Akbulak array**	**13.74**	**321**	Pn		**Pn**	**12 25 11.6**	**-0.6**
AKTO	**Aktyubinsk**	**15.46**	**321**	Pn		**Pn**	**12 25 35.1**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=114,slow=14,SNR=2.9 comp=Z,1.9nm,0.7s							
AKTO	**Aktyubinsk**	**15.46**	**321**	⇑P		**P**	**12 25 39.0**	**-1.1**
	comp=Z,7.6nm,0.7s							
ZALV	**Zalesovo Beam**	**16.60**	**24**	Pn		**Pn**	**12 25 48.6**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=223,slow=15,SNR=2.6							
ZALV				Lg		Lg	12 30 38.4	
	comp=Z,0.2nm,0.3s,baz=220,slow=36,SNR=1.4 comp=Z,1.5nm,0.8s							
ZALV	**Zalesovo Beam**	**16.60**	**24**	P		**P**	**12 25 52.0**	**-0.7**
ZALV	**Zalesovo Beam**	**16.60**	**24**	P		**P**	**12 25 52.0**	**-0.7**
ARU	**Arti**	**19.67**	**335**	P		**P**	**12 26 25.9**	**-0.5**
	baz=132,slow=6.3,SNR=7.4 comp=Z,4.3nm,0.6s							
ARU	**Arti**	**19.67**	**335**	P		**P**	**12 26 26.9**	**+0.5**
ARU	**Arti**	**19.67**	**335**	*d*P		**Pn**	**12 26 28.0**	**+0.2**
ARU				S		**Sn**	**12 30 10.6**	**+1.7**
ARU				pmax		pmax		
	comp=Z,6.0nm,0.7s							
GTA	**Gaotai**	**20.51**	**81**	*e*P		Pn	12 26 38.3	+0.3
GTA				pP		sP	12 26 42.8	+4.0
GTA				sP		pP	12 26 46.3	+8.5
GTA				pmax		pmax		
	comp=Z,5.0nm,0.9s							
GROC	**Groznyy**	**20.96**	**290**	*e*P		**P**	**12 26 40.3**	**-0.3**
GROC				*e*			12 26 59.4	
GROC				pmax		pmax		
	comp=Z,22nm,0.5s							
GNI	**Garni**	**21.91**	**281**	P		**P**	**12 26 52.6**	**+1.5**
	comp=Z,3.1nm,0.4s,baz=166,slow=6.7,SNR=1.9 comp=Z,3.1nm,0.4s							
BELG	**Belogornoye**	**21.98**	**315**	P		**P**	**12 26 51.0**	**-0.5**
	comp=Z,22nm,1.1s,baz=152,slow=14,SNR=4.0 comp=Z,22nm,1.1s							
BELG	**Belogornoye**	**21.98**	**315

FINES	**FINES Array B**	**36.21**	**323**	P		**P**	**12 29 00.5**	**+0.2**	
	comp=Z,1.0nm,0.4s,baz=114,slow=10.0,SNR=13								
	comp=Z,1.0nm,0.4s								
KARP	**Karpathos**	**36.49**	**279**	P		**P**	**12 29 04.3**	**+1.2**	
ARCES	**ARCESS Array B**	**39.26**	**336**	P		**P**	**12 29 25.5**	**-0.4**	
	comp=Z,1.0nm,0.7s,baz=96,slow=7.8,SNR=6.9								
	comp=Z,1.0nm,0.7s								
ARCES	**ARCESS Array B**	**39.26**	**336**	P		**P**	**12 29 25.6**	**-0.4**	
ARCES				IAmb		IAmb	12 29 41.4		
	comp=Z,4.9nm,1.2s								
ARCES	**ARCESS Array B**	**39.26**	**336**	P		**P**	**12 29 25.6**	**-0.4**	
ARCES				pmax		pmax			
	comp=Z,5.0nm,1.2s								
HFS	**Hagfors**	**42.00**	**320**	P		**P**	**12 29 48.8**	**+0.1**	
	comp=Z,2.9nm,0.6s,baz=96,slow=11,SNR=11								
	comp=Z,2.9nm,0.6s								
TIXI	**Tiksi**	**42.48**	**23**⇑	*eP*		**P**	**12 29 53.4**	**+1.0**	
TIXI				pmax		pmax			
	comp=Z,2.0nm,0.9s								
GERES	**GERESS Array B**	**42.82**	**303**	P		**P**	**12 29 56.5**	**+0.8**	
	comp=Z,0.7nm,0.7s,baz=77,slow=5.8,SNR=6.6								
	comp=Z,0.7nm,0.7s								
GERES	**GERESS Array B**	**42.82**	**303**	P		**P**	**12 29 56.0**	**+0.4**	
KHC	**Kasperske Hory**	**42.85**	**304**⇑	*eP*		**P**	**12 29 57.7**	**+1.9**	
KHC				pmax		pmax			
	comp=Z,5.0nm,0.8s								
CLL	**Collm**	**42.87**	**307**	*i* P		**P**	**12 29 57.1**	**+1.2**	
NB2	**NORSAR Subarra**	**43.25**	**321**	P		**P**	**12 29 58.2**	**-0.7**	
	comp=Z,0.9nm,0.5s,baz=91,slow=7.9								
NOA	**NORSAR Array B**	**43.25**	**321**	P		**P**	**12 29 58.5**	**-0.4**	
	comp=Z,1.1nm,0.6s,baz=91,slow=8.0,SNR=10.0								
	comp=Z,1.1nm,0.6s								
KBS	**Kingsbay**	**46.27**	**346**⇑	*eP*		**P**	**12 30 25.6**	**+2.9**	
KBS				pmax		pmax			
	comp=Z,18nm,1.3s								
MJAR	**Matsushiro Arr**	**50.30**	**71**	P		**P**	**12 30 52.1**	**-2.4**	
	comp=Z,1.1nm,0.7s,baz=293,slow=10,SNR=4.7								
	comp=Z,1.1nm,0.7s								
DAG	**Danmarks Havn**	**52.53**	**343**	*i* P		**P**	**12 31 10.0**	**-0.5**	
BILL	**Bilibino**	**55.28**	**27**	*i* P		**P**	**12 31 29.4**	**-1.3**	
BILL				pmax		pmax			
	comp=Z,2.0nm,1.4s								
ESDC	**Sonseca Array**	**57.74**	**297**	P		**P**	**12 31 48.9**	**+0.1**	
	comp=Z,1.0nm,0.6s,baz=54,slow=6.8,SNR=12								
	comp=Z,1.0nm,0.6s								
TOA0	**Torodi Ar. Sit**	**67.57**	**269**	P		**P**	**12 32 54.6**	**0.0**	
TOA0				IAmb		IAmb	12 33 05.6		
	comp=Z,4.4nm,1.3s								
TORD	**Torodi Ar. Bea**	**67.57**	**269**	P		**P**	**12 32 53.8**	**-0.8**	
	comp=Z,1.3nm,0.9s,baz=55,slow=5.9,SNR=7.1								
	comp=Z,1.3nm,0.9s								
TORD	**Torodi Ar. Bea**	**67.57**	**269**	P		**P**	**12 32 54.0**	**-0.7**	
TORD				IAmb		IAmb	12 33 15.8		
	comp=Z,1.5nm,1.1s								
IMAR	**Indian Mountai**	**68.93**	**19**	P		**P**	**12 33 01.9**	**-0.5**	
BMAR	**Burnt Mountain**	**69.76**	**15**	P		**P**	**12 33 07.2**	**-0.4**	
INK	**Inuvik**	**70.81**	**10**	P		**P**	**12 33 12.9**	**-1.0**	
INK				IAmb		IAmb	12 33 19.5		
	comp=Z,4.2nm,1.2s								
INK	**Inuvik**	**70.81**	**10**	P		**P**	**12 33 12.9**	**-1.0**	
INK				pmax		pmax			
	comp=Z,4.0nm,1.3s								
ILAR	**Eielson Array**	**71.56**	**17**	P		**P**	**12 33 16.3**	**-2.2**	
	comp=Z,0.5nm,0.8s,baz=327,slow=4.2,SNR=7.0								
	comp=Z,0.5nm,0.8s								
ILAR	**Eielson Array**	**71.56**	**17**	P		**P**	**12 33 17.3**	**-1.2**	
ILAR	**Eielson Array**	**71.56**	**17**	P		**P**	**12 33 17.3**	**-1.2**	
YKA	**Yellowknife Ar**	**78.32**	**4**	P		**P**	**12 33 56.3**	**-1.3**	
	comp=Z,0.9nm,0.7s,baz=352,slow=5.7,SNR=11								
	comp=Z,0.9nm,0.7s								
WRA	**Warramunga Arr**	**82.02**	**124**	P		**P**	**12 34 16.3**	**-1.9**	
	comp=Z,0.8nm,0.9s,baz=322,slow=5.0,SNR=4.9								
	comp=Z,0.8nm,0.9s								
WRA	**Warramunga Arr**	**82.02**	**124**	P		**P**	**12 34 17.4**	**-0.8**	
WRA	**Warramunga Arr**	**82.02**	**124**	*i* P		**P**	**12 34 17.7**	**-0.5**	
WRA				pmax		pmax			
	comp=Z,2.0nm,0.8s								
WR0	**Warramunga Arr**	**82.16**	**124**	P		**P**	**12 34 18.5**	**-0.5**	
WR0				IAmb		IAmb	12 34 40.3		
	comp=Z,7.2nm,1.5s								
ASAR	**Alice Springs**	**84.45**	**127**	P		**P**	**12 34 29.2**	**-1.5**	
	comp=Z,0.6nm,1.0s,baz=310,slow=6.0,SNR=2.3								
	comp=Z,0.6nm,1.0s								
ASAR	**Alice Springs**	**84.45**	**127**	P		**P**	**12 34 31.2**	**+0.5**	
ASAR	**Alice Springs**	**84.45**	**127**	P		**P**	**12 34 31.2**	**+0.5**	

KRNET 26 12:22:47.2±0.1, 39°39N×73°61E, mb4.5, 12C-4D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OHH	**Osh**	**1.30**	**331**⇑	*eP*		Pg	12 23 11.7	-0.5
	baz=31							
OHH				⇑*e*S		Sg	12 23 29.3	+0.2
	baz=31							
DRK	**Karamyk**	**1.41**	**274**⇑	*i*P		Pg	12 23 13.4	-0.8
	baz=75							
DRK				⇑*e*S		Sg	12 23 32.6	+0.2
	baz=75							
BTK	**Batken**	**2.26**	**288**⇑	*eP*		Pn	12 23 27.3	+1.4
	baz=88							
BTK				⇑*e*S		Sb	12 23 56.4	-1.0
	baz=88							
ARLS	**Aral**	**2.53**	**12**⇑	*eP*		Pn	12 23 30.9	+1.1
	baz=12							
ARLS				⇑*e*S		Sn	12 24 02.6	+1.2
	baz=12							
GAR	**Garm**	**2.59**	**262**⇓	*eP*		Pn	12 23 31.6	+1.1
	baz=62							
GAR				⇓*e*S		Sn	12 24 04.3	+1.6
	baz=62							
TRKS	**Terek-Say**	**2.85**	**319**⇑	*i*P		Pn	12 23 34.5	+0.3
	baz=19							
TRKS				⇑*i*S		Sn	12 24 09.2	-0.1
	baz=19							
BOOM	**Boomskoye usch**	**3.57**	**29**⇓	*eP*		Pn	12 23 45.4	+1.4
	baz=29							
BOOM				⇓*i*S		Sn	12 24 27.9	+0.9
	baz=29							
TAS	**Tashkent**	**3.83**	**302**⇑	*i*P		Pn	12 23 48.9	+1.5
	baz=2.0							
TAS				⇑*i*S		Sn	12 24 33.7	+0.6
	baz=2.0							

KRNET ***26*** *12:30:28.4±0.1, 39°31N×73°71E, mb4.3*
SOME ***26*** *12:30:29.0, 39°52N×73°65E, h10km*
IDC ***26*** *12:30:30.1±0.9, 39°23N×73°56E, h0km, mb3.7/13, mbtmp3.7/19, ML3.2/6, Error ellipse: s-maj=18.5km s-min=14.8km az=137.0*
ISU ***26*** *12:30:32.1, 39°56N×73°61E, h5km*
NEIC ***26*** *12:30:36.8±0.9, 39°59N±0°06×73°23E±0°08, h10km±1km, mb4.4/7, Error ellipse: s-maj=11.2km s-min=8.5km az=126.0*
NNC ***26*** *12:30:37.4±1.6, 39°72N×73°68E, h0km, mb4.4, mpv4.1, Error ellipse: s-maj=13.2km s-min=6.1km az=165.0*
ISC 26 12:30:31.8±0.6, 39°52N±0°04×73°73E±0°02, h10km, n127, σ2s 01/176, mb3.9/17, 41C-29D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OHH	**Osh**	**1.24**	**324**⇑	*i*P		**Pb**	**12 30 54.5**	**-0.8**
	baz=26							
OHH				⇑*e*S		**Sn**	**12 31 12.7**	**+0.6**
	baz=26							
OHH	**Osh**	**1.24**	**324**⇑	*eP*		**Pg**	**12 30 54.9**	**-0.7**
	baz=30							
OHH				⇑*e*S		**Sn**	**12 31 14.0**	**+1.9**
	baz=30							
OHH	**Osh**	**1.24**	**324**	P		**Pb**	**12 30 54.5**	**-0.8**
OHH				S		**Sn**	**12 31 11.0**	**-1.1**
TSTA	**Tashata**	**1.43**	**318**	P		**Pb**	**12 30 58.0**	**-0.6**
TSTA				S		**Sg**	**12 31 17.8**	**0.0**
DRK	**Karamyk**	**1.49**	**269**⇑	*eP*		**Pn**	**12 30 57.3**	**-1.7**
	baz=74							
DRK				⇑*e*S		**Sn**	**12 31 17.9**	**-0.8**
	baz=74							
DRK	**Karamyk**	**1.49**	**269**⇑	*eP*		**Pn**	**12 30 56.4**	**-2.6**
	baz=77							
DRK				⇑*e*S		**Sn**	**12 31 17.0**	**-1.7**
	baz=77							
DRK	**Karamyk**	**1.49**	**269**			**Pn**	**12 30 58.3**	**-0.7**
SHAK	**Shakhimardan**	**1.59**	**286**	P		**Pn**	**12 31 00.4**	**+0.1**
SHAK				S		**Sb**	**12 31 21.9**	**+0.1**
FRG	**Fergana**	**1.72**	**300**	P		**Pg**	**12 31 03.8**	**-1.0**
FRG				S		**Sg**	**12 31 26.2**	**-1.0**
BTK	**Batken**	**2.31**	**284**⇑	*eP*		**Pn**	**12 31 09.7**	**-0.3**
	baz=87							
BTK				⇑*e*S		**Sn**	**12 31 39.2**	**+0.8**
	baz=87							
BTK	**Batken**	**2.31**	**284**⇑	*eP*		**Pn**	**12 31 09.9**	**-0.1**
	baz=89							
BTK				⇑*e*S		**Sb**	**12 31 40.6**	**-1.5**
	baz=89							
BTK	**Batken**	**2.31**	**284**	Pn		**Pn**	**12 31 09.1**	**-0.8**
BTK	**Batken**	**2.31**	**284**	P		**Pb**	**12 31 13.1**	**-0.5**
BTK				S		**Sg**	**12 31 43.9**	**-2.0**
ARLS	**Aral**	**2.38**	**11**⇑	*eP*		**Pn**	**12 31 11.5**	**+0.4**
	baz=10.0							
ARLS				⇑*e*S		**Sb**	**12 31 42.5**	**-1.9**
	baz=10.0							
ARLS	**Aral**	**2.38**	**11**⇑	*eP*		**Pb**	**12 31 13.3**	**-1.6**
	baz=10.0							
ARLS				⇑*e*S		**Sg**	**12 31 45.9**	**-2.4**
	baz=10.0							
AML	**Almayashu**	**2.61**	**359**	P		**Pg**	**12 31 20.4**	**-1.5**
	SNR=7.2							
ARK	**Arkit**	**2.64**	**330**⇓	*eP*		**Pn**	**12 31 15.4**	**+0.8**
	baz=31							
ARK				⇓*e*S		**Sb**	**12 31 49.2**	**-2.7**
	baz=31							
ARK	**Arkit**	**2.64**	**330**⇑	*eP*		**Pb**	**12 31 16.6**	**-2.7**
	baz=32							
ARK				⇑*e*S		**Sb**	**12 31 51.9**	**0.0**
	baz=32							
GAR	**Garm**	**2.70**	**260**⇑	*eP*		**Pn**	**12 31 14.4**	**-1.0**
	baz=63							
GAR				⇑*e*S		**Sn**	**12 31 47.4**	**-0.8**
	baz=63							
GAR	**Garm**	**2.70**	**260**⇓	*iP*		**Pn**	**12 31 14.2**	**-1.2**
	baz=64							
GAR				⇓*e*S		**Sn**	**12 31 47.7**	**-0.5**
	baz=64							
GAR	**Garm**	**2.70**	**260**			**Pn**	**12 31 14.7**	**-0.7**
UCH	**Uchtor**	**2.77**	**12**	P		**Pg**	**12 31 25.1**	**+0.2**
	SNR=7.1							
UCH	**Uchtor**	**2.77**	**12**⇑	*eP*		**Pn**	**12 31 17.2**	**+0.5**
	baz=11							
UCH				⇑*i*S		**Sb**	**12 31 52.3**	**-3.5**
	baz=11							
UCH	**Uchtor**	**2.77**	**12**⇓	*eP*		**Pb**	**12 31 19.1**	**-2.6**
	baz=12							
UCH				⇓*e*S		**Sb**	**12 31 56.1**	**+0.3**
	baz=12							
TRKS	**Terek-Say**	**2.81**	**316**⇑	*eP*		**Pn**	**12 31 16.6**	**-0.4**
	baz=17							
TRKS				⇑*e*S		**Sn**	**12 31 51.5**	**+0.4**
	baz=17							
TRKS	**Terek-Say**	**2.81**	**316**⇑	*eP*		**Pn**	**12 31 17.6**	**+0.6**
	baz=19							
TRKS				⇑*e*S		**Sb**	**12 31 53.5**	**-3.4**
	baz=19							
EKS2	**Erkin-Say**	**3.14**	**1**	P		**Pb**	**12 31 26.9**	**-0.9**
	SNR=7.9							
EKS2	**Erkin-Say**	**3.14**	**1**⇓	*eP*		**Pn**	**12 31 22.2**	**+0.8**
	baz=0.0							
EKS2				⇓*e*S		**Sn**	**12 32 01.0**	**+2.0**
	baz=0.0							
EKS2	**Erkin-Say**	**3.14**	**1**⇑	*eP*		**Pb**	**12 31 24.0**	**-3.8**
	baz=1.0							
EKS2				⇑*e*S		**Sb**	**12 32 04.5**	**-1.6**
	baz=1.0							
AAK	**Ala-Archa**	**3.17**	**10**	Pn		**Pb**	**12 31 27.7**	**-0.6**
	12nm,0.3s,baz=198,slow=5.3,SNR=10							
AAK						Sn	**12 32 12.1**	**-1.4**
	30nm,0.3s,baz=50,slow=18,SNR=8.9							
	27nm,0.3s							
AAK	**Ala-Archa**	**3.17**	**10**⇑	*eP*		**Pn**	**12 31 22.7**	**+0.8**
	baz=9.0							
AAK				⇑*e*S		**Sn**	**12 32 01.7**	**+1.9**
	baz=9.0							
AAK	**Ala-Archa**	**3.17**	**10**⇓	*eP*		**Pb**	**12 31 24.4**	**-3.9**
	baz=10.0							
AAK				⇓*e*S		**Sb**	**12 32 05.2**	**-1.8**
	baz=10.0							
AAK	**Ala-Archa**	**3.17**	**10**	Pn		**Pb**	**12 31 27.3**	**-1.0**
KBK	**Karagaybulak**	**3.27**	**16**	P		**Pg**	**12 31 34.1**	**-0.3**
	SNR=6.6							
KBK	**Karagaybulak**	**3.27**	**16**⇑	*eP*		**Pn**	**12 31 23.6**	**+0.4**
	baz=15							
KBK				⇑*e*S		**Sn**	**12 32 03.8**	**+1.6**
	baz=15							
KBK	**Karagaybulak**	**3.27**	**16**⇓	*eP*		**Pn**	**12 31 25.8**	**+2.6**
	baz=15							
KBK				⇓*e*S		**Sb**	**12 32 07.4**	**-2.4**
	baz=15							
ULHL	**Ulahol**	**3.32**	**34**	P		**Pg**	**12 31 35.4**	**-0.1**
	SNR=8.1							
ULHL	**Ulahol**	**3.32**	**34**⇓	*eP*		**Pn**	**12 31 24.4**	**+0.3**
	baz=32							
ULHL				⇓*e*S		**Sn**	**12 32 04.3**	**+0.6**
	baz=32							
BOOM	**Boomskoye usch**	**3.41**	**29**⇑	*iP*		**Pn**	**12 31 25.6**	**+0.4**
	baz=27							
BOOM				⇑*i*S		**Sn**	**12 32 06.6**	**+0.9**
	baz=27							
BOOM	**Boomskoye usch**	**3.41**	**29**⇑	*iP*		**Pn**	**12 31 27.4**	**+2.2**
	baz=27							
BOOM				⇑*i*S		**Sb**	**12 32 10.7**	**-3.2**
	baz=27							
BOOM	**Boomskoye usch**	**3.41**	**29**	Pn		**Pb**	**12 31 31.7**	**-0.7**
CHMS	**Chumysh**	**3.56**	**12**⇓	*eP*		**Pn**	**12 31 29.6**	**+2.5**
	baz=12							
CHMS				⇓*e*S		**Sb**	**12 32 14.3**	**-3.9**
	baz=12							
CHGR	**Chuyangaron**	**3.66**	**258**	Pn		**Pn**	**12 31 29.1**	**+0.5**
TKM2	**Tokmak 2**	**3.68**	**22**⇓	*eP*		**Pn**	**12 31 29.6**	**+0.7**
	baz=21							
TKM2				⇓*e*S		**Sn**	**12 32 13.6**	**+1.1**
	baz=21							
TKM2	**Tokmak 2**	**3.68**	**22**⇓	*eP*		**Pn**	**12 31 31.4**	**+2.5**
	baz=21							
TKM2				⇓*e*S		**Sb**	**12 32 17.2**	**-4.5**
	baz=21							
TKM2	**Tokmak 2**	**3.68**	**22**	⇓Pg		**Pg**	**12 31 39.9**	**-2.4**
	12nm,0.3s							
TKM2				⇓Lg		Lg	12 32 30.7	
	81nm,0.7s							
KDJ	**Kajisay**	**3.69**	**44**⇓	*iP*		**Pn**	**12 31 29.2**	**+0.1**
	baz=42							
KDJ				⇓*i*S		**Sn**	**12 32 12.9**	**+0.1**
	baz=42							
KDJ	**Kajisay**	**3.69**	**44**⇑	*iP*		**Pn**	**12 31 31.0**	**+1.9**
	baz=42							
KDJ				⇑*i*S		**Sb**	**12 32 16.9**	**-5.3**
	baz=42							
KDJ	**Kajisay**	**3.69**	**44**	Pn		**Pb**	**12 31 37.8**	**+0.5**
TARG	**Taragay, Kyrgy**	**3.81**	**53**	Pn		**Pb**	**12 31 38.6**	**-0.7**
TAS	**Tashkent**	**3.83**	**299**⇑	*iP*		**Pn**	**12 31 31.4**	**+0.5**
	baz=1.0							
TAS				⇑*i*S		**Sn**	**12 32 16.8**	**+0.8**
	baz=1.0							
TAS	**Tashkent**	**3.83**	**299**⇓	*eP*		**Pn**	**12 31 31.9**	**+1.0**
	baz=2.0							
TAS				⇓*i*S		**Sn**	**12 32 18.3**	**+2.3**
	baz=2.0							
IUG	**Iuzhnay**	**3.84**	**314**	*eP*		**Pb**	**12 31 41.6**	**+1.9**
	512nm,0.6s							
IUG				*e*S		**Sg**	**12 32 33.8**	**-1.4**
	218nm,0.4s							
IUG	**Iuzhnay**	**3.84**	**314**	Pg		**Pg**	**12 31 44.9**	**-0.5**
	2μm,0.7s							
IUG				Lg		Lg	12 32 33.7	
	218nm,0.4s							
KST	**Kastek**	**3.90**	**25**	*eP*		**Pg**	**12 31 43.5**	**-3.0**
	21nm,0.3s							
KST				*e*S		**Sg**	**12 32 37.3**	**+0.2**
	116nm,0.6s							
KST	**Kastek**	**3.90**	**25**	Pg		**Pg**	**12 31 45.2**	**-1.3**
	21nm,0.3s							
KST				Lg		Lg	12 32 35.0	
	116nm,0.6s							
SGDS	**Sogindy**	**3.99**	**9**	*eP*		**Pb**	**12 31 43.5**	**+1.3**
	7.1nm,0.4s							
SGDS				*e*S		**Sg**	**12 32 37.9**	**-1.9**
	39nm,0.4s							
SGDS	**Sogindy**	**3.99**	**9**	Pg		**Pg**	**12 31 48.1**	**0.0**
	13nm,0.4s							
SGDS				Lg		Lg	12 32 39.0	
	39nm,0.4s							
DGS	**Degeres**	**4.02**	**22**	*eP*		**Pg**	**12 31 45.2**	**-3.7**
	17nm,0.5s							
DGS	**Degeres**	**4.02**	**22**	Pg		**Pg**	**12 31 47.4**	**-1.4**
	26nm,0.5s							
DGS				Lg		Lg	12 32 38.1	
	51nm,0.6s							
MTBS	**Maitube**	**4.14**	**29**	*eP*		**Pb**	**12 31 46.0**	**+1.2**
	28nm,0.5s							
MTBS				*e*S		**Sg**	**12 32 41.5**	**-3.2**
	76nm,0.4s							
MTBS	**Maitube**	**4.14**	**29**	Pg		**Pg**	**12 31 49.0**	**-2.1**
	28nm,0.5s							
MTBS				Lg		Lg	12 32 43.3	
	76nm,0.4s							
TNSS	**Tian-Shan**	**4.27**	**34**	*eP*		**Pg**	**12 31 50.3**	**-3.3**
	12nm,0.5s							
TNSS				*e*S		**Sg**	**12 32 48.0**	**-0.9**
	38nm,0.5s							
TNSS	**Tian-Shan**	**4.27**	**34**	Pg		**Pg**	**12 31 53.0**	**-0.6**
	26nm,0.4s							
TNSS				Lg		Lg	12 32 48.1	
	38nm,0.5s							
KK31	**Karatay Array**	**4.32**	**327**	Pn		**Pn**	**12 31 38.8**	**+1.2**
KK31	**Karatay Array**	**4.32**	**327**	Pn		**Pn**	**12 31 41.3**	**+3.7**
	4.3nm,0.4s,baz=123,slow=12,SNR=11							
KK31						Pg	**12 31 52.1**	**-2.5**
	4.9nm,0.3s,baz=145,slow=14,SNR=7.9							
KK31						⇓Sn	**12 32 34.3**	**-5.8**
	14nm,0.3s,baz=349,slow=27,SNR=4.7							
KKAR	**Karatay Array**	**4.32**	**327**	Pn		**Pn**	**12 31 38.8**	**+1.2**
KKAR	**Karatay Array**	**4.32**	**327**			**Pn**	**12 31 39.2**	**+1.6**
AAA	**Alma-Ata**	**4.40**	**32**	*eP*		**Pg**	**12 31 53.7**	**-2.3**
	26nm,0.3s							
AAA				*e*S		**Sg**	**12 32 54.2**	**+1.2**
	35nm,0.6s							
AAA	**Alma-Ata**	**4.40**	**32**	Pg		**Pg**	**12 31 56.8**	**+0.8**
	32nm,0.1s							
AAA				Lg		Lg	12 32 54.2	
	35nm,0.6s							
KRBS	**Karabastau**	**4.42**	**19**	*eP*		**Pg**	**12 31 52.5**	**-3.9**
	18nm,0.7s							
KRBS				*e*S		**Sg**	**12 32 53.1**	**-0.6**
	50nm,0.4s							
KRBS	**Karabastau**	**4.42**	**19**	Pg		**Pg**	**12 31 54.9**	**-1.5**
	18nm,0.7s							
KRBS				Lg		Lg	12 32 50.6	
	50nm,0.4s							
BRLS	**Boroldav**	**4.57**	**321**	*eP*		**Pb**	**12 31 54.3**	**+2.2**
	6.0nm,0.5s							
BRLS				*e*S		**Sg**	**12 32 55.6**	**-2.9**
	5.8nm,0.6s							
BRLS	**Boroldav**	**4.57**	**321**	Pg		**Pg**	**12 31 57.7**	**-1.7**
BRLS				Lg		Lg	12 32 55.6	
	5.8nm,0.6s							
KTBS	**Karatobe**	**4.74**	**27**	*eP*		**Pg**	**12 31 58.9**	**-3.6**
	15nm,0.7s							
KTBS				*e*S		**Sg**	**12 33 04.4**	**+0.5**
	67nm,0.3s							
KTBS	**Karatobe**	**4.74**	**27**	Pg		**Pg**	**12 31 59.9**	**-2.6**
	15nm,0.7s							
KTBS				Lg		Lg	12 32 59.2	
	67nm,0.3s							
KUU	**Kurty**	**4.79**	**23**	*eP*		**Pg**	**12 31 59.3**	**-4.1**
	11nm,0.5s							
KUU				*e*S		**Sg**	**12 33 04.6**	**-0.9**
	119nm,0.7s							
KUU	**Kurty**	**4.79**	**23**	Pg		**Pg**	**12 32 02.8**	**-0.7**
	8.5nm,0.3s							
KUU				Lg		Lg	12 33 04.1	
	119nm,0.7s							
CHKK	**Chushkaly**	**4.97**	**28**	*eP*		**Pg**	**12 32 03.1**	**-3.9**
	4.3nm,0.3s							
CHKK				*e*S		**Sg**	**12 33 10.7**	**-0.6**
	68nm,0.5s							
CHKK	**Chushkaly**	**4.97**	**28**	Pg		**Pg**	**12 32 05.9**	**-1.1**
	17nm,0.5s							
CHKK				Lg		Lg	12 33 09.8	
	68nm,0.5s							
KPKS	**Kokpek**	**5.42**	**42**	*eP*		**Pg**	**12 32 11.3**	**-4.3**
	6.8nm,0.6s							
KPKS				*e*S		**Sg**	**12 33 25.4**	**-0.4**
	46nm,0.5s							
KPKS	**Kokpek**	**5.42**	**42**	Pg		**Pg**	**12 32 15.1**	**-0.5**
	11nm,0.5s							
KPKS				Lg		Lg	12 33 25.4	
	46nm,0.5s							
BTLS	**Baital**	**5.52**	**2**	*eP*		**Pg**	**12 32 12.8**	**-4.8**
	4.2nm,0.4s							
BTLS				*e*S		**Sg**	**12 33 27.0**	**-2.0**
	37nm,0.5s							
BTLS	**Baital**	**5.52**	**2**	Pg		**Pg**	**12 32 15.1**	**-2.5**
	10nm,0.4s							
BTLS				Lg		Lg	12 33 26.5	
	37nm,0.5s							
ARXS	**Arharly**	**5.60**	**32**	*eP*		**Pg**	**12 32 14.3**	**-4.7**
	10nm,0.6s							
ARXS				*e*S		**Sg**	**12 33 29.1**	**-2.4**
	40nm,0.5s							
ARXS	**Arharly**	**5.60**	**32**	Pg		**Pg**	**12 32 16.3**	**-2.7**
	32nm,0.7s							
ARXS				Lg		Lg	12 33 28.8	
	40nm,0.5s							
PDGK	**Podgornoye**	**5.76**	**47**	⇓Pg		**Pg**	**12 32 20.8**	**-1.4**
	15nm,1.1s							
PDGK				⇓Lg		Lg	12 33 35.0	
	61nm,0.8s							
BLB	**Baldybastay**	**5.79**	**36**	*eP*		**Pg**	**12 32 18.2**	**-4.4**
	34nm,0.5s							
BLB				*e*S		**Sg**	**12 33 35.8**	**-1.8**
	60nm,0.5s							
BLB	**Baldybastay**	**5.79**	**36**	Pg		**Pg**	**12 32 21.2**	**-1.4**
	34nm,0.5s							
BLB				Lg		Lg	12 33 36.7	
	60nm,0.5s							
KBL	**Kabul**	**6.22**	**218**	Pn		**Pn**	**12 32 06.5**	**+2.6**
DJR	**Jarkent**	**6.60**	**41**	*eP*		**Pg**	**12 32 33.8**	**-4.3**
	2.5nm,0.6s							
DJR				*e*S		**Sg**	**12 34 03.1**	**-0.4**

comp=Z,8.9nm,1.3s
ARCES P P 12 38 03.0 +3.1
GERES GERESS Array B 43.02 303 P P 12 38 32.0 +0.5
comp=Z,0.1nm,0.3s,baz=64,slow=6.7,SNR=2.0
comp=Z,0.1nm,0.3s
NC303 NORSAR Array S 43.26 321 P P 12 38 35.1 +2.0
NC303 IAmb IAmb 12 38 49.2
comp=Z,5.9nm,0.9s
NB2 NORSAR Subarra 43.33 321 P P 12 38 33.7 0.0
comp=Z,0.7nm,0.5s,baz=91,slow=7.9
NOA NORSAR Array B 43.33 321 P P 12 38 33.5 -0.2
comp=Z,0.8nm,0.5s,baz=91,slow=7.9,SNR=5.4
comp=Z,0.8nm,0.5s
ESDC Sonseca Array 57.98 297 P P 12 40 24.2 -0.4
comp=Z,0.3nm,0.7s,baz=56,slow=8.4,SNR=1.5
comp=Z,0.3nm,0.7s
TOA0 Torodi Ar. Sit 67.94 269 P P 12 41 32.4 +1.3
TOA0 IAmb IAmb 12 41 57.1
comp=Z,4.5nm,1.3s
TORD Torodi Ar. Bea 67.94 269 P P 12 41 29.9 -1.2
comp=Z,0.7nm,0.6s,baz=58,slow=5.9,SNR=8.2
comp=Z,0.7nm,0.6s
TORD Torodi Ar. Bea 67.94 269 P P 12 41 33.2 +2.2
BMAR Burnt Mountain 69.49 15 P P 12 41 45.4 +5.4
INK Inuvik 70.57 10 P P 12 41 51.9 +5.4
INK IAmb IAmb 12 42 06.0
comp=Z,6.5nm,1.5s
ILAR Eielson Array 71.28 17 P P 12 41 54.4 +3.4
comp=Z,0.3nm,0.7s,baz=319,slow=4.0,SNR=4.1
comp=Z,0.3nm,0.7s
BCAR Beaver Creek A 73.89 16 P P 12 42 11.4 +4.9
YKA Yellowknife Ar 78.11 4 P P 12 42 32.7 +2.2
comp=Z,0.3nm,0.7s,baz=352,slow=5.6,SNR=3.0
comp=Z,0.3nm,0.7s
WRA Warramunga Arr 81.82 124 P P 12 42 51.1 -0.1
comp=Z,0.5nm,0.8s,baz=325,slow=5.1,SNR=4.9
comp=Z,0.5nm,0.8s
ASAR Alice Springs 84.28 127 P P 12 43 01.9 -1.9
comp=Z,0.3nm,0.8s,baz=316,slow=5.2,SNR=1.9
comp=Z,0.3nm,0.8s

*IDC **26** 12:31:22.1±1.1,39.°33N×73.°86E,h0km,mb3.6/10, mbtmp3.6/14,ML2.9/4,Error ellipse: s-maj=25.5km s-min=21.8km az=54.0*
*KRNET **26** 12:31:25.6±0.1,39.°44N×73.°68E,mb4.7*
*SOME **26** 12:31:25.5,39.°58N×73.°63E,h10km*
ISC 26 12:31:23.8±1.8,39.°49N±0.°06×73.°90E±0.°04,h10km±11km, n41,σ1°62/63,mb3.6/10,6C-10D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.34**	**321**	⇑	*eP*		**Pb**	**12 31 48.9**	**-0.2**
OHH	baz=28			⇑	*eS*		**Sn**	**12 32 06.2**	**-0.4**
DRK	**Karamyk**	**1.62**	**270**	⇑	*eP*		**Pn**	**12 31 52.2**	**-0.6**
DRK	baz=72			⇑	*eS*		**Sn**	**12 32 11.3**	**-2.6**
ARLS	**Aral**	**2.39**	**8**	⇓	*eP*		**Pb**	**12 32 06.4**	**-0.6**
ARLS	baz=11			⇓	*eS*		**Sb**	**12 32 36.3**	**-0.3**
BTK	**Batken**	**2.44**	**284**	⇓	*eP*		**Pn**	**12 32 04.0**	**+0.2**
BTK	baz=86			⇓	*eS*		**Sn**	**12 32 32.3**	**-1.5**
UCH	**Uchtor**	**2.77**	**9**	⇓	*eP*		**Pb**	**12 32 12.3**	**-1.4**
UCH	baz=13			⇓	*eS*		**Sb**	**12 32 46.2**	**-1.8**
GAR	**Garm**	**2.82**	**261**	⇓	*eP*		**Pn**	**12 32 09.2**	**+0.1**
GAR	baz=61			⇓	*eS*		**Sn**	**12 32 41.1**	**-2.2**
TRKS	**Terek-Say**	**2.93**	**315**	⇑	*eP*		**Pn**	**12 32 11.0**	**+0.4**
TRKS	baz=17			⇑	*iS*		**Sn**	**12 32 44.1**	**-1.8**
BOOM	**Boomskoye usch**	**3.37**	**27**	⇓	*iP*		**Pb**	**12 32 20.8**	**-2.9**
BOOM	baz=29			⇓	*iS*		**Sb**	**12 33 01.7**	**-3.2**
KST	**Kastek**	**3.88**	**23**		*eP*		**Pg**	**12 32 38.2**	**+0.3**
KST	69nm,0.6s				*eS*		**Sg**	**12 33 31.0**	**+2.8**
IUG	**luzhnay**	**3.96**	**313**		*eP*		**Pb**	**12 32 36.5**	**+2.8**
IUG	2μm,0.6s 303nm,0.7s				*eS*		**Sg**	**12 33 28.0**	**-2.8**
SGDS	**Sogindy**	**4.00**	**8**		*eP*		**Pg**	**12 32 39.5**	**-0.8**
SGDS	37nm,0.4s				*eS*		**Sg**	**12 33 33.6**	**+1.5**
DGS	**Degeres**	**4.00**	**20**		*eP*		**Pg**	**12 32 40.4**	**-0.1**
DGS	80nm,0.5s 152nm,0.7s				*eS*		**Sg**	**12 33 34.7**	**+2.4**
DGS	**Degeres**	**4.00**	**20**		*eS*		**Pg**	**12 32 40.4**	**-0.1**
MTBS	**Maitube**	**4.11**	**27**		*eP*		**Pg**	**12 32 42.2**	**-0.1**
MTBS	39nm,0.5s 71nm,0.4s				*eS*		**Sg**	**12 33 37.7**	**+2.1**
TNSS	**Tian-Shan**	**4.22**	**32**		*eP*		**Pg**	**12 32 44.7**	**0.0**
TNSS	30nm,0.4s 44nm,0.6s				*eS*		**Sg**	**12 33 41.9**	**+2.5**
KRBS	**Karabastau**	**4.41**	**17**		*eP*		**Pg**	**12 32 46.8**	**-1.4**
KRBS	0.2nm,0.5s 75nm,0.6s				*eS*		**Sg**	**12 33 46.0**	**+0.7**
BRLS	**Borolday**	**4.68**	**320**		*eP*		**Pb**	**12 32 46.9**	**+1.0**
BRLS	9.8nm,0.3s 83nm,0.5s				*eS*		**Sb**	**12 33 46.2**	**+3.9**
KTBS	**Karatobe**	**4.71**	**25**		*eP*		**Pg**	**12 32 52.8**	**-1.0**
KTBS	13nm,0.4s 154nm,0.8s				*eS*		**Sg**	**12 33 56.2**	**+1.4**
KUU	**Kurty**	**4.76**	**22**		*eP*		**Pg**	**12 32 53.3**	**-1.7**
KUU	26nm,0.5s 108nm,1.0s				*eS*		**Sg**	**12 33 57.3**	**+0.6**
CHKK	**Chushkaly**	**4.94**	**27**		*eP*		**Pg**	**12 32 56.5**	**-1.8**
CHKK	13nm,0.3s 73nm,0.7s				*eS*		**Sg**	**12 34 02.6**	**+0.4**
KURS	**Kuram**	**5.12**	**37**		*eP*		**Pg**	**12 33 01.4**	**-0.4**
KURS	20nm,0.8s 58nm,1.0s				*eS*		**Sg**	**12 34 11.2**	**+3.1**
KPKS	**Kokpek**	**5.36**	**41**		*eP*		**Pg**	**12 33 05.3**	**-1.0**
KPKS	24nm,0.4s 48nm,0.8s				*eS*		**Sg**	**12 34 17.2**	**+1.5**
BTLS	**Baital**	**5.55**	**1**		*eP*		**Pg**	**12 33 07.0**	**-3.0**
BTLS	17nm,0.5s 6.9nm,0.7s				*eS*		**Sg**	**12 34 20.9**	**-0.9**
ARXS	**Arharly**	**5.56**	**31**		*eP*		**Pg**	**12 33 08.1**	**-2.1**
ARXS	23nm,0.8s 50nm,0.8s				*eS*		**Sg**	**12 34 22.8**	**+0.7**
BLB	**Baldybastay**	**5.74**	**35**		*eP*		**Pg**	**12 33 12.1**	**-1.5**
BLB	29nm,0.5s 61nm,0.7s				*eS*		**Sg**	**12 34 28.9**	**+1.1**
WMQ	**Urumqi**	**11.19**	**63**		*eP*		Pn	12 34 11.5	+7.7
KURBB	**Kurchatov Arra**	**11.60**	**15**		Pn		**Pn**	**12 34 10.2**	**+0.9**
KURBB	baz=203,slow=12,SNR=1.8 0.1nm,0.3s,baz=208,slow=26,SNR=4.6 0.6nm,0.7s				Lg		Lg	12 37 32.8	
AKTO	**Aktyubinsk**	**15.65**	**320**		Pn		**Pn**	**12 35 03.8**	**-0.5**
	0.3nm,0.3s,baz=105,slow=12,SNR=1.8 1.2nm,0.5s								
ZALV	**Zalesovo Beam**	**16.25**	**24**		Pn		**Pn**	**12 35 12.6**	**+0.5**
	0.1nm,0.3s,baz=217,slow=10,SNR=1.7 1.7nm,0.5s								
ARU	**Arti**	**19.74**	**334**		P		**P**	**12 35 53.3**	**-0.2**
	baz=144,slow=14,SNR=1.7 2.1nm,0.4s								
GTA	**Gaotai**	**20.00**	**82**		*eP*		Pn	12 36 03.5	+5.2
GTA					pP		sP	12 36 07.5	+5.2
GTA					sP		pP	12 36 10.8	+10
GTA					pmax		pmax		
	comp=Z,3.0nm,1.3s								
BRTR	**Keskin Array B**	**30.84**	**284**		P		**P**	**12 37 39.9**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=97,slow=6.1,SNR=1.9 comp=Z,0.5nm,0.5s								
FINES	**FINESS Array B**	**36.38**	**323**		P		**P**	**12 38 29.0**	**+1.2**
	comp=Z,0.5nm,0.3s,baz=114,slow=9.8,SNR=6.0 comp=Z,0.5nm,0.3s								
ARCES	**ARCESS Array B**	**39.32**	**335**		P		**P**	**12 38 54.5**	**+1.9**
	comp=Z,0.6nm,0.5s,baz=108,slow=8.1,SNR=4.6 comp=Z,0.6nm,0.5s								
NOA	**NORSAR Array B**	**43.44**	**321**		P		**P**	**12 39 26.6**	**0.0**
	comp=Z,0.3nm,0.7s,baz=91,slow=7.8,SNR=1.7 comp=Z,0.3nm,0.7s								
TORD	**Torodi Ar. Bea**	**68.07**	**269**		P		**P**	**12 42 23.2**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=51,slow=5.9,SNR=2.9 comp=Z,0.5nm,0.5s								
INK	**Inuvik**	**70.57**	**10**		P		**P**	**12 42 38.1**	**-0.4**
	comp=Z,1.3nm,1.1s,baz=344,slow=6.4,SNR=1.4 comp=Z,1.3nm,1.1s								
ILAR	**Eielson Array**	**71.27**	**17**		P		**P**	**12 42 43.5**	**+0.6**
	comp=Z,0.3nm,0.9s,baz=330,slow=5.2,SNR=2.1 comp=Z,0.3nm,0.9s								
YKA	**Yellowknife Ar**	**78.13**	**4**		P		**P**	**12 43 24.2**	**+1.5**
	comp=Z,0.5nm,0.7s,baz=300,slow=11,SNR=3.8 comp=Z,0.5nm,0.7s								
WRA	**Warramunga Arr**	**81.70**	**124**		P		**P**	**12 43 42.8**	**+0.3**
	comp=Z,0.2nm,0.7s,baz=328,slow=5.2,SNR=1.2 comp=Z,0.2nm,0.7s								
ASAR	**Alice Springs**	**84.15**	**127**		P		**P**	**12 43 55.1**	**-0.2**
	comp=Z,0.3nm,0.9s,baz=323,slow=4.8,SNR=2.4 comp=Z,0.3nm,0.9s								

MAN 26 12:32:40.8,17.°75N×120.°63E,h6km,mb4.3,ML3.2,MS2.9, 6C,Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SIPP	**Brgy, Tapao**	**0.24**	**315**	⇑	*eP*		Pb	12 32 45.7	+5.6
SIPP					*eS*			12 32 51.8	
APYP	**Conner**	**0.59**	**79**	⇑	*eP*		Pn	12 32 53.0	+0.4
APYP					*iS*			12 33 02.7	
SAMP	**Sagada Mountai**	**0.72**	**159**	⇑	*eP*		Pn	12 32 54.7	+0.2
SAMP					*eS*			12 33 04.9	
BOLP	**Bolinao**	**1.53**	**207**	⇑	*eP*		Pn	12 33 08.3	+0.7
BOLP					*eS*			12 33 27.7	
SMPP	**San Manuel, Pa**	**1.59**	**178**	⇑	*eP*		Pn	12 33 07.5	+0.3
SMPP					*eS*			12 33 34.9	
BALP	**Baler**	**2.20**	**156**	⇑	*eP*		Pb	12 33 19.6	+1.6
BALP					*eS*			12 33 54.9	

TAP 26 12:33:22.0,24.°23N×121.°74E,h7km,ML1.2,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.08**	**2**		*eP*		Pg	12 33 24.4	+0.5
	baz=7.0								
ETL	**Fush Village**	**0.13**	**236**		P		Pg	12 33 24.9	+0.2
ETL	baz=236				S		Sg	12 33 28.4	+1.8
NACB	**Ninganchiao**	**0.14**	**247**		*eP*		Pg	12 33 26.0	+1.0
NACB	baz=247				S		Sg	12 33 28.8	+1.8
TWD	**Chiawan**	**0.20**	**221**		*i* P		Pg	12 33 26.6	+0.6
TWD	baz=219				*i* S		Sg	12 33 29.9	+1.3
ENA	**Nanau**	**0.20**	**1**		*i* P		Pg	12 33 27.1	+1.0
ENA	baz=2.0				*i* S		Sg	12 33 30.6	+1.9
ETLH	**Xiulin Townshi**	**0.23**	**265**		*eP*		Pg	12 33 27.6	+0.9
ETLH	baz=264				S		Sg	12 33 31.9	+2.1
ETM	**Tongmen**	**0.34**	**221**		*eP*		Pb	12 33 29.7	-0.8
ETM	baz=220				*eS*		Sb	12 33 35.9	-0.3
LATG	**Datong**	**0.36**	**328**		P		Pb	12 33 30.3	-0.6
LATG	baz=327				S		Sb	12 33 36.1	-0.8
NNSB	**Datong**	**0.38**	**302**		*eP*		Pb	12 33 30.9	-0.3
NNSB	baz=301				*eS*		Sb	12 33 37.4	0.0
NNSH	**Datong**	**0.38**	**302**		*eP*		Pb	12 33 30.7	-0.5
NNSH	baz=301				*eS*		Sb	12 33 36.9	-0.5
NNS	**Nan Shan**	**0.39**	**302**		P		Pb	12 33 31.3	-0.2
NNS	baz=302				S		Sb	12 33 37.9	+0.1
NDS	**Dongshan**	**0.40**	**357**		*eS*		Sb	12 33 37.3	-0.7
	baz=357								
WHF	**Hehuan Shan**	**0.44**	**259**		*i* P		Pb	12 33 31.9	-0.5
WHF	baz=258				*i* S		Sb	12 33 38.6	-0.8
FUSS	**Fushou**	**0.45**	**272**		P		Pg	12 33 31.6	+0.8
FUSS	baz=272				S		Sb	12 33 39.1	-0.5
ESL	**Shilin**	**0.50**	**214**		P		Pb	12 33 33.5	+0.4
	baz=213								
CHGB	**Renai**	**0.54**	**252**		*eP*		Pb	12 33 33.9	-0.1
CHGB	baz=251				*eS*		Sb	12 33 41.6	-0.5
FUSB	**Fushanzhiwuyua**	**0.55**	**345**		*eP*		Pb	12 33 33.5	-0.5
FUSB	baz=345				*eS*		Sb	12 33 42.0	-0.1
YHNB	**Yeheng**	**0.55**	**323**		P		Pb	12 33 34.1	+0.1
YHNB	baz=323				S		Sb	12 33 42.2	0.0
NSK	**Sanguang**	**0.56**	**322**		*eP*		Pb	12 33 34.3	0.0
NSK	baz=322				S		Sb	12 33 42.6	0.0
OWD	**Renai**	**0.58**	**242**		*eS*		Sb	12 33 44.6	+1.4
NWLT	**Wulai**	**0.59**	**339**		*eS*		Sb	12 33 43.4	+0.1
	baz=338								
WUSB	**Renai**	**0.61**	**248**		P		Pb	12 33 35.5	+0.3
WUSB	baz=247				*eS*		Sg	12 33 42.8	+0.9

JMA 26 12:33:32.6±0.2,24.°0N±0.°7×123.°6E±0.°5,h31km±1km, MV2.0/9,NEAR ISHIGAKIJIMA ISLAND,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**0.22**	**67**		P		Pb	12 33 38.9	-0.3
HATJ					S		Sb	12 33 43.7	+0.1
IRIF	**Iriomote-Funau**	**0.39**	**20**		P		Pb	12 33 41.1	-0.3
IRIF					S		Sb	12 33 47.3	-0.1
JKRS	**Kuro-shima**	**0.47**	**55**		P		Pb	12 33 42.6	0.0
JKRS					S		Sb	12 33 49.6	+0.1
JIJ	**Ishigaki jima**	**0.64**	**52**		P		Pb	12 33 44.8	-0.6
JIJ					S		Sb	12 33 53.5	-0.7
YOJ	**Yonaguni jima**	**0.72**	**313**		P		Pn	12 33 46.2	-0.3
YOJ					S		Sn	12 33 56.4	-0.1
JYNG	**Yonagunijimaku**	**0.76**	**309**		P		Pn	12 33 46.8	-0.3
JYNG					S		Sn	12 33 57.9	+0.4
JISG	**Ishigakijimahi**	**0.90**	**47**		P		Pn	12 33 48.9	-0.2
JISG					S		Sn	12 34 00.7	-0.4
JTJ	**Tarama**	**1.22**	**56**		P		Pb	12 33 54.6	-0.4
JTJ					S		Sb	12 34 10.4	0.0

*IDC **26** 12:36:54.4±2.3,14.°05N×92.°62W,h0km,mb3.9/7, mbtmp3.8/9,ML3.6/2,Error ellipse: s-maj=80.6km s-min=38.4km az=47.0*
*MEX **26** 12:37:01.4±1.1,14.°13N×93.°05W,h16km±185km,MD4.3*
*NEIC **26** 12:37:02.4±2.1,14.°13N±0.°08×92.°96W±0.°08,h45km±9km, mb4.2/24,Md4.3/12(MEX),Error ellipse: s-maj=11.9km s-min=10.9km az=208.0*
*GCG **26** 12:37:05.9±1.5,14.°49N×92.°61W,h20km,MD4.5*
ISC 26 12:36:57.9±3.2,14.°10N±0.°07×93.°05W±0.°05,h15km±20km, n63,σ1°57/72,mb4.2/15,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
THIG		**1.10**	**43**				**Pb**	**12 37 18.5**	**-0.2**
THIG							**Sn**	**12 37 35.7**	**+1.9**
THIG		**1.10**	**43**		*eP*		**Pb**	**12 37 17.6**	**-1.1**
THIG					*iS*		**Sn**	**12 37 35.7**	**+1.9**
PATR	**El Naranjo**	**1.28**	**38**		*iP*		**Pn**	**12 37 20.9**	**-0.5**
PATR					*iS*		**Sb**	**12 37 36.5**	**-1.8**
CHUJ	**Union Juarez**	**1.34**	**43**		*iP*		**Pn**	**12 37 21.7**	**-0.6**
CHUJ					*iS*		**Sb**	**12 37 36.8**	**-3.3**
PAVE	**Pavencul**	**1.37**	**38**		*iP*		**Pn**	**12 37 22.3**	**-0.5**
PAVE					*iS*		**Sb**	**12 37 38.3**	**-2.6**
RTAL	**Retalhuleu**	**1.38**	**72**				**Pn**	**12 37 22.3**	**-0.3**
STG3	**Santiaguito 3,**	**1.55**	**67**		*eP*		**Pn**	**12 37 25.2**	**0.0**
PCIG		**1.60**	**354**				**Pn**	**12 37 24.3**	**-1.4**
PCIG							Sn	12 37 37.7	-8.4
PCIG		**1.60**	**354**		*iP*		**Pn**	**12 37 24.3**	**-1.4**
PCIG					*eS*		Sn	12 37 35.9	-10
HUEH	**Huehuetenango**	**1.92**	**51**				**Pn**	**12 37 31.4**	**+1.1**
FUG	**Fuego 3**	**2.17**	**81**		*eP*		**Pn**	**12 37 33.7**	**+0.1**
FUG					*eS*		**Sn**	**12 38 00.6**	**+0.3**
CCIG	**Comitan**	**2.34**	**22**				**Pn**	**12 37 37.9**	**+1.9**
CCIG							**Sn**	**12 38 06.1**	**+1.6**
CCIG	**Comitan**	**2.34**	**22**		*eP*		**Pn**	**12 37 37.9**	**+1.9**
CCIG					*iS*		**Sn**	**12 38 06.1**	**+1.6**
PCG	**Pacaya**	**2.38**	**83**		*eP*		**Pn**	**12 37 34.4**	**-2.3**
NBG	**Las Nubes**	**2.66**	**79**		*eP*		**Pn**	**12 37 42.2**	**+1.6**
MRL	**Marmol**	**3.40**	**73**		*eP*		**Pb**	**12 37 56.6**	**-1.5**
CMIG	**Matias Romero**	**3.46**	**329**		Pn		**Pn**	**12 37 51.5**	**+0.2**
	3.6nm,0.3s,baz=176,slow=12,SNR=35								
CMIG					Sn		**Sn**	**12 38 29.8**	**-2.2**
	6.6nm,0.3s,baz=61,slow=20,SNR=6.0 11nm,0.4s								
MTO3	**Montecristo**	**3.59**	**85**				**Pn**	**12 37 54.4**	**+1.2**
PETF	**Flores**	**4.15**	**47**				**Pn**	**12 38 01.8**	**+1.1**
SRBA	**San Rafael, Bu**	**10.65**	**116**				**Pn**	**12 39 32.4**	**+2.3**
833A	**Chaparral WMA,**	**15.33**	**338**		Pn		**Pn**	**12 40 35.5**	**+1.6**
833A					IAmb	IAmb	IAmb	12 40 49.6	
	comp=Z,14nm,1.0s								
TXAR	**Lajitas Array**	**18.07**	**329**		P		**P**	**12 41 11.3**	**+2.4**
	comp=Z,0.1nm,0.3s,baz=143,slow=9.6,SNR=10 comp=Z,1.4nm,0.9s								
TXAR	**Lajitas Array**	**18.07**	**329**		P		**P**	**12 41 12.3**	**+3.3**
TX31	**Lajitas Ar. Si**	**18.07**	**329**		P		**P**	**12 41 11.6**	**+2.7**
TX31					IAmb	IAmb	IAmb	12 41 29.2	
	comp=Z,22nm,1.1s								
TX32	**Lajitas Array**	**18.07**	**329**		P		**P**	**12 41 11.8**	**+2.8**
MIAR	**Mount Ida**	**20.36**	**359**		P		**P**	**12 41 34.0**	**+0.1**
MIAR					IAmb	IAmb	IAmb	12 41 50.0	
	comp=Z,8.6nm,0.9s								
MNTX	**Cornudas Mount**	**20.84**	**329**		P		**P**	**12 41 41.0**	**+1.8**
GOGA	**Godfrey**	**21.11**	**23**		P		**P**	**12 41 42.3**	**+0.3**
GOGA					IAmb	IAmb	IAmb	12 41 55.8	
	comp=Z,10nm,1.3s								
WHAR	**Wooly Hollow**	**21.11**	**2**		P		**P**	**12 41 42.6**	**+0.6**
WMOK	**Wichita Mounta**	**21.19**	**347**		P		**P**	**12 41 43.2**	**+0.3**
FNO	**Franklin**	**21.43**	**350**				**P**	**12 41 46.8**	**+1.3**
FCAR	**Ozark Folk Cen**	**21.71**	**2**		P		**P**	**12 41 48.5**	**+0.1**
FCAR					IAmb	IAmb	IAmb	12 41 51.5	
	comp=Z,6.2nm,0.7s								
HHAR	**Hobbs**	**22.10**	**358**		P		**P**	**12 41 52.3**	**-0.4**
HHAR					IAmb	IAmb	IAmb	12 42 03.7	
	comp=Z,9.3nm,1.3s								
AMTX	**Amarillo**	**22.11**	**341**		P		**P**	**12 41 54.1**	**+1.2**
AMTX					IAmb	IAmb	IAmb	12 41 55.9	
	comp=Z,9.1nm,0.9s								
121A	**Cookes Peak, D**	**22.75**	**326**		P		**P**	**12 42 02.7**	**+2.8**
121A					IAmb	IAmb	IAmb	12 42 11.7	
	comp=Z,6.8nm,1.0s								
S39A	**Bolivar**	**23.50**	**359**		P		**P**	**12 42 05.9**	**-1.3**
S39A					IAmb	IAmb	IAmb	12 42 07.5	
	comp=Z,12nm,0.8s								
LENM	**Lemitar**	**23.62**	**330**		P		**P**	**12 42 11.2**	**+2.5**
ANMO	**Albuquerque**	**24.02**	**332**		P		**P**	**12 42 13.0**	**+0.5**
	comp=Z,0.8nm,0.8s,baz=164,slow=12,SNR=5.3 comp=Z,0.8nm,0.8s								
ANMO	**Albuquerque**	**24.02**	**332**		P		**P**	**12 42 12.2**	**-0.3**
R40A	**Maddies Statio**	**24.10**	**2**		P		**P**	**12 42 11.1**	**-1.9**
R40A					IAmb	IAmb	IAmb	12 42 13.3	
	comp=Z,4.5nm,0.7s								
SDCO	**Great Sand Dun**	**26.02**	**337**		P		**P**	**12 42 31.0**	**+0.2**
PDAR	**Pinedale Array**	**31.91**	**337**		P		**P**	**12 43 22.5**	**-0.6**
	comp=Z,0.4nm,0.8s,baz=141,slow=13,SNR=3.6 comp=Z,0.4nm,0.8s								
PDAR	**Pinedale Array**	**31.91**	**337**		P		**P**	**12 43 21.9**	**-1.2**
NVAR	**Mina Array Bea**	**32.96**	**322**		P		**P**	**12 43 34.9**	**+2.5**
	comp=Z,1.5nm,0.8s,baz=142,slow=8.9,SNR=12 comp=Z,1.5nm,0.8s								
NVAR	**Mina Array Bea**	**32.96**	**322**		P		**P**	**12 43 32.6**	**+0.3**
SNOW	**Snow King Moun**	**32.97**	**336**		P		**P**	**12 43 34.0**	**+1.5**
MCMT	**McKenzie Canyo**	**34.94**	**335**		P		**P**	**12 43 52.0**	**+2.4**
LRM	**Limekiln Ridge**	**35.61**	**336**		P		**P**	**12 43 57.0**	**+1.8**
EDM	**Edmonton**	**42.22**	**342**		P		**P**	**12 44 51.0**	**+0.7**
FCC	**Fort Churchill**	**44.59**	**359**		P		**P**	**12 45 07.9**	**-1.3**
FCC					IAmb	IAmb	IAmb	12 45 19.2	
	comp=Z,4.4nm,0.8s								
YKA	**Yellowknife Ar**	**50.70**	**347**		P		**P**	**12 45 56.7**	**+0.1**
	comp=Z,4.1nm,0.8s,baz=150,slow=7.6,SNR=40 comp=Z,4.1nm,0.8s								
YKA	**Yellowknife Ar**	**50.70**	**347**		P		**P**	**12 45 56.1**	**-0.5**
BCAR	**Beaver Creek A**	**59.54**	**337**		P		**P**	**12 46 59.4**	**-1.2**
INK	**Inuvik**	**60.06**	**344**		P		**P**	**12 47 04.0**	**+0.1**
	comp=Z,3.2nm,0.9s,baz=122,slow=7.1,SNR=12 comp=Z,3.2nm,0.9s								
INK	**Inuvik**	**60.06**	**344**		P		**P**	**12 47 04.2**	**+0.3**
INK					IAmb	IAmb	IAmb	12 47 14.4	
	comp=Z,3.2nm,0.8s								
ILAR	**Eielson Array**	**62.35**	**337**		P		**P**	**12 47 20.1**	**+0.5**
	comp=Z,1.0nm,0.9s,baz=124,slow=4.0,SNR=7.2 comp=Z,1.0nm,0.9s								
ILAR	**Eielson Array**	**62.35**	**337**		P		**P**	**12 47 19.7**	**+0.2**
BMAR	**Burnt Mountain**	**62.85**	**340**		P		**P**	**12 47 23.5**	**+0.5**
ARCES	**ARCESS Array B**	**86.36**	**18**		P		**P**	**12 49 37.6**	**-1.6**
	comp=Z,1.4nm,0.9s,baz=270,slow=4.9,SNR=6.2 comp=Z,1.4nm,0.9s								
ARCES	**ARCESS Array B**	**86.36**	**18**		P		**P**	**12 49 39.0**	**-0.2**
WRA	**Warramunga Arr**	**134.43**	**256**		PKP		**PKPdf**	**12 56 13.9**	**-2.5**
	comp=Z,0.6nm,0.8s,baz=93,slow=1.6,SNR=3.9								
WRA	**Warramunga Arr**	**134.43**	**256**				**PKPdf**	**12 56 14.2**	**-2.2**
CMAR	**Chiang Mai Arr**	**145.56**	**340**		PKPbc		**PKPdf**	**12 56 36.2**	**-0.3**
	comp=Z,2.0nm,0.8s,baz=339,slow=3.0,SNR=9.8								

*IDC **26** 12:38:31.9±1.1,39.°36N×73.°64E,h0km,mb3.6/7, mbtmp3.6/8,Error ellipse: s-maj=26.9km s-min=17.9km az=95.0*
*SOME **26** 12:38:31.3,39.°52N×73.°57E,h15km*
*KRNET **26** 12:38:31.9±0.1,39.°41N×73.°74E,mb3.8*
ISC 26 12:38:34.6±2.1,39.°50N±0.°06×73.°64E±0.°05,h13km±13km, n27,σ1°65/47,mb3.6/7,12C-10D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.22**	**328**	⇓	*iP*		**Pn**	**12 38 56.2**	**-1.3**
OHH	baz=27			⇓	*iS*		**Sn**	**12 39 14.1**	**+0.2**
DRK	**Karamyk**	**1.43**	**270**	⇑	*iP*		**Pn**	**12 38 59.5**	**-1.0**
DRK	baz=73			⇑	*iS*		**Sn**	**12 39 19.3**	**0.

UCH	**Uchtor**	**2.81**	**13**	⇓*e*P	**Pn**	**12 39 19.5**	**-0.2**
	baz=12							
UCH				⇓*e*S	**Sn**	**12 39 54.0**	**+0.4**
	baz=12							
EKS2	**Erkin-Say**	**3.16**	**2**	⇑*e*P	**Pn**	**12 39 24.5**	**+0.2**
	baz=1.0							
EKS2				⇑*i*S	**Sn**	**12 40 02.6**	**+0.7**
	baz=1.0							
AAK	**Ala-Archa**	**3.20**	**11**	Pn	**Pb**	**12 39 29.0**	**-2.5**
	14nm,0.4s,baz=191,slow=10							
AAK				Sn	**Sb**	**12 40 11.1**	**+0.6**
	1.9nm,0.3s,baz=257,slow=20,SNR=2.0							
AAK	**Ala-Archa**	**3.20**	**11**	⇓*e*P	**Pn**	**12 39 24.7**	**-0.1**
	baz=10.0							
AAK				⇓*i*S	**Sn**	**12 40 03.2**	**+0.2**
	baz=10.0							
BOOM	**Boomskoye usch**	**3.46**	**29**	⇑*e*P	**Pn**	**12 39 27.9**	**-0.5**
	baz=28							
BOOM				⇑*i*S	**Sn**	**12 40 08.7**	**-0.6**
	baz=28							
KDJ	**Kajisay**	**3.76**	**44**	⇑*e*P	**Pn**	**12 39 31.5**	**-1.0**
	baz=43							
KDJ				⇑*i*S	**Sn**	**12 40 15.2**	**-1.5**
	baz=43							
KST	**Kastek**	**3.95**	**26**	*e*P	**Pb**	**12 39 46.5**	**+2.2**
	12nm,0.5s							
KST				*e*S	**Sg**	**12 40 40.7**	**-0.8**
	52nm,0.6s							
DGS	**Degeres**	**4.07**	**22**	*e*P	**Pb**	**12 39 48.9**	**+2.7**
	19nm,0.4s							
DGS				*e*S	**Sg**	**12 40 44.8**	**-0.6**
	37nm,0.7s							
TNSS	**Tian-Shan**	**4.33**	**34**	*e*P	**Pb**	**12 39 53.7**	**+2.9**
	14nm,0.4s							
TNSS				*e*S	**Sg**	**12 40 52.9**	**-0.7**
	12nm,0.5s							
KRBS	**Karabastau**	**4.46**	**19**	*e*P	**Pb**	**12 39 55.9**	**+3.0**
	0.9nm,0.7s							
KRBS				*e*S	**Sg**	**12 40 56.7**	**-1.2**
	20nm,0.8s							
KTBS	**Karatobe**	**4.79**	**27**	*e*P	**Pb**	**12 40 01.6**	**+3.2**
	8.8nm,0.6s							
KTBS				*e*S	**Sg**	**12 41 07.2**	**-1.1**
	32nm,0.6s							
KUU	**Kurty**	**4.83**	**24**	*e*P	**Pb**	**12 40 02.0**	**+2.9**
	4.6nm,0.3s							
KUU				*e*S	**Sg**	**12 41 08.0**	**-1.8**
	22nm,0.5s							
CHKK	**Chushkaly**	**5.02**	**29**	*e*P	**Pb**	**12 40 05.8**	**+3.4**
	5.0nm,0.4s							
CHKK				*e*S	**Sg**	**12 41 14.1**	**-1.8**
	22nm,0.7s							
ARXS	**Arharly**	**5.66**	**32**	*e*P	**Pb**	**12 40 17.1**	**+3.9**
	9.0nm,0.6s							
ARXS				*e*S	**Sg**	**12 41 33.2**	**-2.9**
	15nm,0.5s							
BRTR	**Keskin Array B**	**30.64**	**283**	P	**P**	**12 44 49.1**	**+0.4**
	0.7nm,0.6s,baz=81,slow=8.9,SNR=3.3							
	0.7nm,0.6s							
FINES	**FINESS Array B**	**36.25**	**323**	P	**P**	**12 45 37.6**	**+0.5**
	1.1nm,0.8s,baz=126,slow=9.8,SNR=5.3							
	1.1nm,0.8s							
ARCES	**ARCESS Array B**	**39.23**	**336**	P	**P**	**12 46 02.7**	**+0.5**
	0.7nm,0.8s,baz=123,slow=11,SNR=3.5							
	0.7nm,0.8s							
TORD	**Torodi Ar. Bea**	**67.87**	**269**	P	**P**	**12 49 31.1**	**-1.9**
	0.2nm,0.4s,baz=50,slow=6.2,SNR=2.0							
	0.2nm,0.4s							
YKA	**Yellowknife Ar**	**78.14**	**4**	P	**P**	**12 50 33.4**	**+0.3**
	0.3nm,0.8s,baz=353,slow=5.7,SNR=2.8							
	0.3nm,0.8s							
WRA	**Warramunga Arr**	**81.87**	**124**	P	**P**	**12 50 53.3**	**-0.5**
	0.3nm,0.6s,baz=331,slow=4.9,SNR=6.3							
	0.3nm,0.6s							
ASAR	**Alice Springs**	**84.31**	**127**	P	**P**	**12 51 05.4**	**-1.0**
	0.3nm,0.7s,baz=316,slow=5.2,SNR=2.5							
	0.3nm,0.7s							

*IDC **26** 12:39:22.8±2.2,28°.52N×130°.25E,h0km,mb3.9/4, mbtmp3.7/7,ML3.1/2,MS4.4/1,Error ellipse: s-maj=56.1km s-min=21.6km az=120.0*
*JMA **26** 12:39:27.5±0.1,28°.5N±0'.8×130°.2E±0'.7,h31km±1km, MV3.1/25,NEAR AMAMI-OSHIMA ISLAND*
ISC 26 12:39:24.6±1.4,28°.50N±0'.03×130°.27E±0'.04,h14km±9km, n27,σ0s94/42,mb3.9/4,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JZK	**Kikaishima**	**0.32**	**234**		*e*P		**Pn**	**12 39 34.6**	**-0.3**
JZK					*e*S		**Sn**	**12 39 40.2**	**-1.2**
JAM	**Amami Oshima**	**0.59**	**261**		*e*P		**Pn**	**12 39 38.1**	**-0.5**
JAM					*e*S		**Sb**	**12 39 45.4**	**+0.4**
JAMN	**Amaminishikomi**	**0.99**	**255**		*e*P		**Pn**	**12 39 44.6**	**+0.4**
JAMN					*e*S		**Sg**	**12 39 56.9**	**0.0**
JTAJ	**Takarajima**	**1.14**	**305**		*e*P		**Pg**	**12 39 46.6**	**+0.1**
JTK	**Tokunoshima**	**1.36**	**239**		*e*P		**Pg**	**12 39 50.9**	**0.0**
JTK					*e*S		**Sb**	**12 40 07.3**	**0.0**
JNN	**Nakanoshima**	**1.38**	**346**		*e*P		**Pg**	**12 39 51.1**	**-0.1**
JYAK	**Yakushimahirau**	**1.74**	**7**		*e*P		**Pb**	**12 39 56.6**	**+0.2**
JYAK					*e*S		**Sn**	**12 40 16.9**	**+0.3**
JOKE	**Okinoerabujima**	**1.88**	**233**		*e*P		**Pb**	**12 39 57.9**	**-0.9**
JKC	**Kuchinoerabu**	**1.95**	**358**		*e*P		**Pb**	**12 39 59.9**	**-0.1**
JKC					*e*S		**Sb**	**12 40 23.2**	**-1.1**
JMTN	**Minamitane**	**1.97**	**16**		*e*P		**Pb**	**12 40 00.1**	**-0.2**
JYRO	**Yoronjima**	**2.18**	**228**		*e*P		**Pn**	**12 40 01.9**	**+1.4**
JYRO					*e*S		**Sn**	**12 40 28.0**	**+0.7**
JTN	**Tanegashima 3**	**2.23**	**16**		*e*P		**Pb**	**12 40 03.9**	**-1.0**
JTN					*e*S		**Sb**	**12 40 30.5**	**-1.8**
JOW	**Kunigami**	**2.43**	**227**		Pn		**Pn**	**12 40 05.2**	**+1.3**
	4.6nm,0.3s,baz=93,slow=22,SNR=15								
JOW					Sn		**Sn**	**12 40 33.3**	**-0.1**
	9.1nm,0.3s,baz=35,slow=24,SNR=3.9								
	21nm,0.3s								
JOW	**Kunigami**	**2.43**	**227**		*e*P		**Pn**	**12 40 05.2**	**+1.3**
JOW					*e*S		**Sn**	**12 40 33.6**	**+0.2**
JIH	**Iheya**	**2.51**	**235**		*e*P		**Pn**	**12 40 05.8**	**+0.8**
JIH					*e*S		**Sn**	**12 40 35.3**	**-0.1**
JKDJ	**Kitadaitoujima**	**2.70**	**160**		*e*P		**Pn**	**12 40 08.4**	**+0.7**
JKDJ					*e*S		**Sn**	**12 40 39.4**	**-0.9**
JMZ	**Minamidaito 2**	**2.80**	**162**		*e*P		**Pn**	**12 40 10.8**	**+1.6**
JMZ					*e*S		**Sn**	**12 40 41.7**	**-1.1**
JNTH	**Nagotoyohara**	**2.81**	**226**		P		**Pn**	**12 40 10.1**	**+0.9**
JNTH					*e*S		**Sn**	**12 40 42.3**	**-0.5**
JAGN	**Aguni-jima**	**3.29**	**235**		*e*P		**Pn**	**12 40 18.2**	**+2.4**
JKE	**Kume jima 2**	**3.78**	**236**		*e*P		**Pn**	**12 40 23.9**	**+1.4**
JKE					*e*S		**Sn**	**12 41 05.9**	**-0.9**
JNU	**Nakatsue**	**4.63**	**6**		Pn		**Pn**	**12 40 35.2**	**+0.9**
	1.9nm,0.3s,baz=235,slow=2.6,SNR=2.9								
JNU					Sn		**Sn**	**12 41 29.4**	**+1.4**
	0.4nm,0.3s,baz=237,slow=13,SNR=1.2								
	5.6nm,0.4s								
KSRS	**Korea Array**	**9.14**	**348**		Pn		**Pn**	**12 41 36.3**	**+0.2**
	0.2nm,0.5s,baz=166,slow=14,SNR=1.3								
KAPI	**Kappang**	**34.83**	**199**		LR		LR	12 59 42.9	
	comp=Z,667nm,21.8s,baz=306,slow=35								
ZALV	**Zalesovo Beam**	**41.59**	**321**		P		**P**	**12 47 11.6**	**-0.4**
	0.8nm,0.3s,baz=107,slow=9.2,SNR=4.6								
	0.8nm,0.3s								
FINES	**FINESS Array B**	**71.78**	**331**		P		**P**	**12 50 45.8**	**-0.6**
	0.4nm,0.3s,baz=64,slow=4.8,SNR=5.3								
	0.4nm,0.3s								
AKASG	**Malin Array Be**	**74.98**	**320**		P		**P**	**12 51 05.9**	**+0.4**
	0.6nm,0.3s,baz=59,slow=4.5,SNR=5.3								
	0.6nm,0.3s								
YKA	**Yellowknife Ar**	**75.70**	**26**		P		**P**	**12 51 09.8**	**+0.3**
	0.5nm,0.8s,baz=302,slow=5.4,SNR=5.2								
	0.5nm,0.8s								

*IDC **26** 12:40:00.9±1.2,39°.16N×73°.76E,h0km,mb3.6/6, mbtmp3.7/9,ML3.2/3,Error ellipse: s-maj=30.4km s-min=19.6km az=75.0*
*KRNET **26** 12:40:03.0±0.1,39°.48N×73°.75E,mb4.0*
ISC 26 12:40:02.5±2.0,39°.32N±0'.07×73°.74E±0'.05,h7km±12km, n18,σ1s35/28,mb3.6/6,12C-6D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.41**	**329**	⇑	*i*P		**Pn**	**12 40 27.3**	**-1.3**
	baz=25								
OHH				⇑	*i*S		**Sn**	**12 40 45.4**	**-2.1**
	baz=25								
DRK	**Karamyk**	**1.51**	**277**	⇑	*i*P		**Pg**	**12 40 31.6**	**+0.1**
	baz=71								
DRK				⇑	*i*S		**Sg**	**12 40 52.1**	**+0.9**
	baz=71								
BTK	**Batken**	**2.38**	**289**	⇑	*i*P		**Pb**	**12 40 44.6**	**-1.0**
	baz=85								
BTK				⇑	*i*S		**Sb**	**12 41 15.0**	**-0.1**
	baz=85								
ARLS	**Aral**	**2.58**	**10**	⇓	*i*P		**Pn**	**12 40 46.1**	**+1.3**
	baz=10.0								
ARLS				⇓	*i*S		**Sn**	**12 41 17.5**	**+1.1**
	baz=10.0								
GAR	**Garm**	**2.68**	**264**	⇑	*i*P		**Pb**	**12 40 49.8**	**-1.1**
	baz=61								
GAR				⇑	*i*S		**Sb**	**12 41 24.1**	**+0.1**
	baz=61								
UCH	**Uchtor**	**2.96**	**11**	⇓	*i*P		**Pn**	**12 40 51.7**	**+1.4**
	baz=12								
UCH				⇓	*i*S		**Sn**	**12 41 27.2**	**+0.8**
	baz=12								
TRKS	**Terek-Say**	**2.97**	**319**	⇑	*e*P		**Pn**	**12 40 51.2**	**+1.0**
	baz=16								
TRKS				⇑	*i*S		**Sn**	**12 41 26.3**	**+0.2**
	baz=16								
AAK	**Ala-Archa**	**3.36**	**9**		Pn		**Pb**	**12 41 00.9**	**-1.6**
	3.7nm,0.3s,baz=154,slow=9.7,SNR=1.7								
AAK					Sn		**Sb**	**12 41 43.0**	**-0.7**
	6.2nm,0.3s,baz=52,slow=18,SNR=1.8								
	15nm,0.4s								
BOOM	**Boomskoye usch**	**3.58**	**27**	⇓	*i*P		**Pn**	**12 41 00.3**	**+1.8**
	baz=28								
BOOM				⇓	*e*S		**Sn**	**12 41 42.0**	**+0.9**
	baz=28								
TAS	**Tashkent**	**3.95**	**302**	⇑	*i*P		**Pn**	**12 41 06.0**	**+2.6**
	baz=0.0								
TAS				⇑	*i*S		**Sn**	**12 41 51.9**	**+1.9**
	baz=0.0								
AKTO	**Aktyubinsk**	**15.71**	**320**		Pn		**Pn**	**12 43 43.3**	**-0.7**
	0.1nm,0.3s,baz=107,slow=13,SNR=1.6								
	0.7nm,0.5s								
ARU	**Arti**	**19.84**	**335**		P		**Pn**	**12 44 34.7**	**-0.5**
	baz=228,slow=8.1,SNR=3.2								
	2.1nm,0.4s								
FINES	**FINESS Array B**	**36.44**	**323**		P		**P**	**12 47 08.3**	**+0.9**
	0.3nm,0.4s,baz=98,slow=10.0,SNR=1.6								
	0.3nm,0.4s								
ARCES	**ARCESS Array B**	**39.42**	**336**		P		**P**	**12 47 34.4**	**+1.8**
	2.0nm,1.1s,baz=99,slow=7.5,SNR=4.4								
	2.0nm,1.1s								
HFS	**Hagfors**	**42.25**	**320**		P		**P**	**12 47 56.8**	**+0.8**
	0.7nm,0.5s,baz=93,slow=12,SNR=5.1								
	0.7nm,0.5s								
TORD	**Torodi Ar. Bea**	**67.94**	**269**		P		**P**	**12 51 00.2**	**-2.0**
	0.3nm,0.4s,baz=52,slow=4.8,SNR=3.1								
	0.3nm,0.4s								
WRA	**Warramunga Arr**	**81.70**	**124**		P		**P**	**12 52 21.1**	**-0.6**
	0.6nm,1.1s,baz=330,slow=4.5,SNR=2.8								
	0.6nm,1.1s								
ASAR	**Alice Springs**	**84.15**	**127**		P		**P**	**12 52 33.6**	**-0.8**
	0.1nm,0.6s,baz=303,slow=4.7,SNR=0.9								
	0.1nm,0.6s								

*ISU **26** 12:43:25.1,39°.59N×73°.46E,h1km*
*SOME **26** 12:43:27.4,39°.53N×73°.47E,h10km*
*KRNET **26** 12:43:27.3±0.1,39°.46N×73°.43E,mb3.8*
*IDC **26** 12:43:28.2±1.6,39°.50N×73°.08E,h0km,mb3.6/4, mbtmp3.6/5,ML3.3/1,Error ellipse: s-maj=35.9km s-min=21.2km az=115.0*
ISC 26 12:43:25.9±1.5,39°.49N±0'.05×73°.54E±0'.03,h5km±10km, n39,σ1s60/70,mb3.6/4,20C,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.19**	**331**	⇑	*i*P		**Pg**	**12 43 49.7**	**+1.0**
	baz=35								
OHH				⇑	*i*S		**Sn**	**12 44 06.0**	**+0.1**
	baz=35								
OHH	**Osh**	**1.19**	**331**		P		Pb	12 43 37.2	-12
OHH					S		Sb	12 43 54.0	-11
DRK	**Karamyk**	**1.34**	**270**	⇑	*i*P		**Pn**	**12 43 51.4**	**-0.2**
	baz=71								
DRK				⇑	*i*S		**Sn**	**12 44 09.1**	**-0.9**
	baz=71								
TSTA	**Tashata**	**1.36**	**324**		P		**Pg**	**12 43 52.8**	**+0.8**
TSTA					S		**Sg**	**12 44 10.0**	**+0.3**
FRG	**Fergana**	**1.61**	**304**		P		**Pn**	**12 43 55.3**	**+0.2**
FRG					S		**Sb**	**12 44 16.3**	**-0.6**
CHMI	**Chimion**	**1.74**	**297**		S		**Sb**	**12 44 19.9**	**-0.5**
BTK	**Batken**	**2.17**	**286**	⇑	*i*P		**Pb**	**12 44 05.8**	**+0.1**
	baz=87								
BTK				⇑	*i*S		**Sb**	**12 44 33.9**	**+0.9**
	baz=87								
BTK	**Batken**	**2.17**	**286**		P		**Pb**	**12 44 06.5**	**+0.8**
BTK					S		**Sg**	**12 44 35.2**	**-0.4**
MINT	**Mingtut**	**2.20**	**297**		P		**Pg**	**12 44 07.8**	**-0.2**
MINT					S		**Sg**	**12 44 36.2**	**-0.3**
ARLS	**Aral**	**2.45**	**14**	⇑	*i*P		**Pb**	**12 44 11.0**	**+0.5**
	baz=16								
ARLS				⇑	*i*S		**Sg**	**12 44 43.1**	**-1.4**
	baz=16								
GAR	**Garm**	**2.55**	**260**	⇑	*i*P		**Pb**	**12 44 10.9**	**-1.3**
	baz=60								
GAR				⇑	*i*S		**Sb**	**12 44 42.6**	**-1.2**
	baz=60								
CHDK	**Chadak**	**2.60**	**306**		P		**Pb**	**12 44 13.4**	**+0.4**
CHDK					S		**Sg**	**12 44 48.3**	**-1.0**
ARK	**Arkit**	**2.60**	**333**	⇑	*i*P		**Pb**	**12 44 12.6**	**-0.5**
	baz=35								
ARK				⇑	*i*S		**Sb**	**12 44 45.7**	**+0.2**
	baz=35								
TRKS	**Terek-Say**	**2.74**	**319**	⇑	*e*P		**Pb**	**12 44 13.3**	**-2.2**
	baz=20								
TRKS				⇑	*i*S		**Sb**	**12 44 46.9**	**-2.6**
	baz=20								
UCH	**Uchtor**	**2.84**	**15**	⇑	*e*P		**Pb**	**12 44 16.8**	**-0.5**
	baz=16								
UCH				⇑	*i*S		**Sb**	**12 44 52.9**	**+0.3**
	baz=16								
AAK	**Ala-Archa**	**3.23**	**13**		Pn		**Pb**	**12 44 24.1**	**+0.2**
	3.4nm,0.3s,baz=172,slow=12,SNR=4.2								
AAK					Sn		**Sg**	**12 45 07.2**	**-2.5**
	1.9nm,0.3s,baz=156,slow=22,SNR=2.4								
	16nm,0.5s								
AAK	**Ala-Archa**	**3.23**	**13**	⇑	*i*P		**Pb**	**12 44 22.0**	**-1.9**
	baz=14								
AAK				⇑	*i*S		**Sb**	**12 45 02.0**	**-1.6**
	baz=14								
BOOM	**Boomskoye usch**	**3.51**	**30**	⇑	*i*P		**Pb**	**12 44 26.4**	**-2.2**
	baz=31								
BOOM				⇑	*i*S		**Sb**	**12 45 09.5**	**-2.1**
	baz=31								
IUG	**Iuzhnay**	**3.76**	**316**		*e*P		**Pg**	**12 44 38.3**	**+0.4**
	480nm,0.6s								
IUG					*e*S		**Sg**	**12 45 28.8**	**+2.2**
	144nm,0.8s								
DZA	**Taraz**	**3.79**	**335**		*e*P		**Pg**	**12 44 38.9**	**+0.4**
	45nm,0.1s								
DZA					*e*S		**Sg**	**12 45 29.7**	**+2.1**
	127nm,0.3s								
KST	**Kastek**	**4.00**	**26**		*e*P		**Pg**	**12 44 43.5**	**+1.0**
	6.5nm,0.4s								
KST					*e*S		**Sg**	**12 45 37.8**	**+3.5**
	48nm,0.8s								
SGDS	**Sogindy**	**4.05**	**11**		*e*P		**Pg**	**12 44 42.7**	**-0.8**
	4.2nm,0.6s								
SGDS					*e*S		**Sg**	**12 45 36.3**	**+0.5**
	15nm,0.8s								
DGS	**Degeres**	**4.11**	**23**		*e*P		**Pg**	**12 44 45.4**	**+0.7**
	22nm,0.4s								
DGS					*e*S		**Sg**	**12 45 41.2**	**+3.2**
	57nm,0.6s								
MTBS	**Maitube**	**4.24**	**30**		*e*P		**Pg**	**12 44 48.3**	**+1.1**
	6.4nm,0.4s								
MTBS					*e*S		**Sg**	**12 45 45.7**	**+3.5**
	26nm,0.3s								
TNSS	**Tian-Shan**	**4.38**	**35**		*e*P		**Pg**	**12 44 50.8**	**+0.9**
	7.6nm,0.4s								
TNSS					*e*S		**Sg**	**12 45 50.5**	**+3.8**
	18nm,0.4s								
KRBS	**Karabastau**	**4.50**	**20**		*e*P		**Pg**	**12 44 51.2**	**-0.9**
	12nm,0.2s								
KRBS					*e*S		**Sg**	**12 45 51.3**	**+0.8**
	13nm,0.6s								
KTBS	**Karatobe**	**4.84**	**28**		*e*P		**Pg**	**12 44 57.9**	**-0.7**
	6.1nm,0.6s								
KTBS					*e*S		**Sg**	**12 46 02.9**	**+1.7**
	48nm,0.5s								

KUU	**Kurty**	**4.88**	**25**	*e*P		**Pg**	**12 44 58.2**	**-1.1**
	5.9nm,0.3s							
KUU				*e*S		**Sg**	**12 46 03.8**	**+1.3**
	29nm,0.6s							
CHKK	**Chushkaly**	**5.07**	**30**	*e*P		**Pg**	**12 45 02.6**	**-0.4**
	2.8nm,0.3s							
CHKK				*e*S		**Sg**	**12 46 10.9**	**+2.1**
	10nm,0.3s							
SATY	**Saty**	**5.12**	**44**	*e*P		**Pg**	**12 45 03.0**	**-1.0**
	28nm,0.8s							
SATY				*e*S		**Sg**	**12 46 11.7**	**+1.5**
	22nm,0.8s							
KURS	**Kuram**	**5.30**	**40**	*e*P		**Pg**	**12 45 06.3**	**-1.1**
	4.6nm,1.1s							
KURS				*e*S		**Sg**	**12 46 17.3**	**+1.2**
	10nm,0.5s							
KPKS	**Kokpek**	**5.55**	**43**	*e*P		**Pg**	**12 45 10.0**	**-2.1**
	9.5nm,0.6s							
KPKS				*e*S		**Sg**	**12 46 23.7**	**-0.2**
	20nm,0.5s							
BTLS	**Baital**	**5.57**	**4**	*e*P		**Pg**	**12 45 08.8**	**-3.7**
	4.1nm,0.5s							
BTLS				*e*S		**Sg**	**12 46 21.9**	**-2.6**
	14nm,0.9s							
ARXS	**Arharly**	**5.71**	**33**	*e*P		**Pg**	**12 45 13.6**	**-1.6**
	9.0nm,0.5s							
ARXS				*e*S		**Sg**	**12 46 29.7**	**+0.6**
	22nm,1.1s							
BLB	**Baldybastay**	**5.91**	**37**	*e*P		**Pg**	**12 45 17.3**	**-1.7**
	9.7nm,0.9s							
BLB				*e*S		**Sg**	**12 46 37.0**	**+1.5**
	25nm,1.0s							
FINES	**FINESS Array B**	**36.21**	**323**	P		**P**	**12 50 31.8**	**+2.4**
	0.4nm,0.5s,baz=116,slow=9.4,SNR=1.5							
	0.4nm,0.5s							
HFS	**Hagfors**	**42.02**	**320**	P		**P**	**12 51 19.4**	**+1.5**
	0.9nm,0.7s,baz=99,slow=6.3,SNR=1.7							
	0.9nm,0.7s							
TORD	**Torodi Ar. Bea**	**67.78**	**269**	P		**P**	**12 54 24.7**	**-0.3**
	0.4nm,0.8s,baz=43,slow=2.8,SNR=2.7							
	0.4nm,0.8s							
WRA	**Warramunga Arr**	**81.93**	**124**	P		P	12 55 52.2	+5.5
	0.5nm,1.0s,baz=321,slow=5.2,SNR=2.8							
	0.5nm,1.0s							

*IDC **26** 12:45:02.3±1.5,39°.25N×73°.70E,h0km,mb3.6/7, mbtmp3.6/10,ML3.2/3,Error ellipse: s-maj=29.0km s-min=20.7km az=108.0*
*KRNET **26** 12:45:03.1±0.1,39°.43N×73°.73E,mb4.1*
ISC 26 12:45:03.7±2.6,39°.32N±0'.07×73°.67E±0'.05,h7km±16km, n20,σ1s13/31,mb3.6/7,12C-8D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.38**	**331**	⇑	*i*P		**Pn**	**12 45 28.1**	**-1.4**
	baz=27								
OHH				⇑	*i*S		**Sb**	**12 45 46.2**	**-1.6**
	baz=27								
DRK	**Karamyk**	**1.46**	**277**	⇑	*i*P		**Pb**	**12 45 31.2**	**-0.2**
	baz=73								
DRK				⇑	*i*S		**Sg**	**12 45 51.8**	**+1.1**
	baz=73								
BTK	**Batken**	**2.32**	**289**	⇑	*e*P		**Pb**	**12 45 44.7**	**-1.3**
	baz=87								
BTK				⇑	*i*S		**Sb**	**12 46 15.1**	**+0.2**
	baz=87								
ARLS	**Aral**	**2.58**	**11**	⇓	*i*P		**Pn**	**12 45 46.9**	**+0.8**
	baz=10.0								
ARLS				⇓	*i*S		**Sn**	**12 46 18.7**	**+0.8**
	baz=10.0								
GAR	**Garm**	**2.63**	**264**	⇓	*i*P		**Pb**	**12 45 49.7**	**-1.5**
	baz=62								
GAR				⇓	*i*S		**Sb**	**12 46 23.6**	**-0.2**
	baz=62								
TRKS	**Terek-Say**	**2.93**	**320**	⇑	*i*P		**Pn**	**12 45 51.6**	**+0.7**
	baz=17								
TRKS				⇑	*i*S		**Sn**	**12 46 26.9**	**+0.4**
	baz=17								
UCH	**Uchtor**	**2.97**	**12**	⇓	*i*P		**Pn**	**12 45 52.2**	**+0.5**
	baz=12								
UCH				⇓	*i*S		**Sn**	**12 46 27.7**	**-0.1**
	baz=12								
AAK	**Ala-Archa**	**3.37**	**10**		Pn		**Pn**	**12 46 00.2**	**+3.2**
	5.3nm,0.3s,baz=165,slow=12,SNR=1.7								
AAK					Sn		**Sb**	**12 46 44.5**	**-0.6**
	4.3nm,0.3s,baz=332,slow=17,SNR=1.7								
	18nm,0.4s								
BOOM	**Boomskoye usch**	**3.60**	**28**	⇓	*i*P		**Pn**	**12 46 00.7**	**+0.6**
	baz=28								
BOOM				⇓	*i*S		**Sn**	**12 46 42.9**	**-0.1**
	baz=28								
KDJ	**Kajisay**	**3.87**	**42**	⇑	*i*P		**Pn**	**12 46 04.7**	**+0.9**
	baz=43								
KDJ				⇑	*i*S		**Sn**	**12 46 49.5**	**-0.1**
	baz=43								
TAS	**Tashkent**	**3.90**	**302**	⇑	*e*P		**Pn**	**12 46 05.7**	**+1.6**
	baz=1.0								
TAS				⇑	*i*S		**Sn**	**12 46 52.1**	**+2.0**
	baz=1.0								
AKTO	**Aktyubinsk**	**15.66**	**320**		Pn		**Pn**	**12 48 43.9**	**-1.0**
	0.1nm,0.3s,baz=127,slow=10.0,SNR=4.0								
	2.3nm,0.8s								
ZALV	**Zalesovo Beam**	**16.48**	**24**		Pn		**Pn**	**12 48 56.2**	**+1.0**

AAK **Ala-Archa** 3.26 10 Pn Pb 12 48 42.2 -1.5
3.9nm,0.3s,baz=107,slow=1.7,SNR=3.2
AAK Sn Sb 12 49 24.6 +1.2
4.0nm,0.3s,baz=128,slow=18,SNR=1.9
10nm,0.3s
AAK **Ala-Archa** 3.26 10⇑*i*P Pn 12 48 37.1 +0.2
baz=10.0
AAK ⇑*i*S Sn 12 49 15.6 -0.3
baz=10.0
BOOM **Boomskoye usch** 3.50 28⇑*i*P Pn 12 48 40.2 0.0
baz=27
BOOM ⇑*i*S Sn 12 49 21.3 -0.4
baz=27
KDJ **Kajisay** 3.77 43⇑*i*P Pn 12 48 43.7 -0.3
baz=42
KDJ ⇑*i*S Sn 12 49 27.5 -1.1
baz=42
KURBB **Kurchatov Arra** 11.70 15 Lg Lg 12 53 57.8
baz=208,slow=29,SNR=4.4
AKTO **Aktyubinsk** 15.60 320 Pn Pn 12 51 24.9 -0.6
0.2nm,0.3s,baz=106,slow=12,SNR=2.1
0.9nm,0.5s
ZALV **Zalesovo Beam** 16.37 24 Pn P 12 51 37.5 -0.8
0.2nm,0.3s,baz=214,slow=12,SNR=1.5
0.5nm,0.4s
BELG **Belogornoye** 22.15 314 P P 12 52 40.6 -0.7
7.3nm,0.7s,baz=172,slow=7.1,SNR=2.5
7.3nm,0.7s
MLR **Muntele Rosu** 35.32 296 P P 12 54 42.8 +1.8
2.3nm,0.8s,baz=176,slow=8.2,SNR=3.5
2.3nm,0.8s
FINES **FINESS Array B** 36.33 323 P P 12 54 50.1 +0.9
0.6nm,0.4s,baz=111,slow=10.0,SNR=8.3
0.6nm,0.4s
IDI **Anoyia** 38.64 280 LR LR 13 15 17.3
comp=Z,497nm,20.0s,baz=10.0,slow=43
ARCES **ARCESS Array B** 39.31 336 P P 12 55 15.4 +1.1
3.8nm,1.1s,baz=109,slow=8.6,SNR=5.8
3.8nm,1.1s
HFS **Hagfors** 42.15 320 P P 12 55 37.8 0.0
0.9nm,0.7s,baz=116,slow=9.8,SNR=1.2
0.9nm,0.7s
NOA **NORSAR Array B** 43.38 321 P P 12 55 48.0 0.0
0.4nm,0.7s,baz=93,slow=8.0,SNR=2.1
0.4nm,0.7s
ESDC **Sonseca Array** 58.00 297 P P 12 57 38.8 +0.3
0.3nm,0.6s,baz=59,slow=7.2,SNR=1.5
0.3nm,0.6s
TORD **Torodi Ar. Bea** 67.91 269 P P 12 58 43.8 -1.0
0.4nm,0.6s,baz=45,slow=5.3,SNR=4.3
0.4nm,0.6s
YKA **Yellowknife Ar** 78.20 4 P P 12 59 45.7 +0.9
0.3nm,0.7s,baz=9.7,slow=6.2,SNR=2.7
0.3nm,0.7s
DLBC **Dease Lake** 80.50 12 LR LR 13 41 23.5
comp=Z,267nm,18.4s,baz=146,slow=40

KRNET ***26*** *12:50:01.9±0.1,39°.35N×73°.58E,mb4.3*
SOME ***26*** *12:50:01.4,39°.43N×73°.58E,h10km*
IDC ***26*** *12:50:02.1±0.8,39°.23N×73°.59E,h0km,mb3.9/19, mbtmp3.9/26,ML2.9/6,Error ellipse: s-maj=16.2km s-min=12.6km az=147.0*
NEIC ***26*** *12:50:05.2±1.7,39°.41N±0°.06×73°.60E±0°.08,h10km±1km, mb4.4/11,Error ellipse: s-maj=12.4km s-min=9.0km az=137.0*
NNC ***26*** *12:50:06.7±1.7,39°.52N×73°.63E,h0km,mb4.5,mpv4.1, Error ellipse: s-maj=14.6km s-min=9.1km az=154.0*
ISC 26 12:50:04.0±1.6,39°.13N±0°.05×73°.52E±0°.03,h16km±10km, n123,σ1$81/149,mb4.1/23,15C-16D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**1.38**	**285**	⇑*i*P			**Pn**	**12 50 28.3**	**-0.7**
	baz=76								
DRK				⇑*i*S			**Sb**	**12 50 47.4**	**+0.2**
	baz=76								
DRK	**Karamyk**	**1.38**	**285**	Pn			**Pg**	**12 50 31.6**	**+1.0**
OHH	**Osh**	**1.50**	**338**	⇓*i*P			**Pn**	**12 50 27.1**	**-3.4**
	baz=33								
OHH				⇓*i*S			**Sn**	**12 50 45.2**	**-4.6**
	baz=33								
BTK	**Batken**	**2.29**	**295**	⇑*i*P			**Pn**	**12 50 42.4**	**+1.2**
	baz=89								
BTK				⇑*i*S			**Sn**	**12 51 11.9**	**+2.8**
	baz=89								
BTK	**Batken**	**2.29**	**295**	Pn			**Pn**	**12 50 42.9**	**+1.7**
GAR	**Garm**	**2.50**	**268**	⇓*i*P			**Pb**	**12 50 46.8**	**-1.8**
	baz=63								
GAR				⇓*i*S			**Sb**	**12 51 19.5**	**+0.3**
	baz=63								
GAR	**Garm**	**2.50**	**268**	Pn			**Pb**	**12 50 48.1**	**-0.6**
ARLS	**Aral**	**2.80**	**12**	⇓*i*P			**Pn**	**12 50 46.8**	**-1.5**
	baz=13								
ARLS				⇓*i*S			**Sn**	**12 51 19.7**	**-2.1**
	baz=13								
AML	**Almayashu**	**3.00**	**2**	P			**Pn**	**12 50 51.5**	**+0.1**
	SNR=10								
TRKS	**Terek-Say**	**3.01**	**324**	⇑*i*P			**Pn**	**12 50 50.0**	**-1.2**
	baz=20								
TRKS				⇑*i*S			**Sn**	**12 51 25.2**	**-1.9**
	baz=20								
UCH	**Uchtor**	**3.19**	**13**	P			**Pn**	**12 50 54.5**	**+0.5**
	SNR=16								
UCH	**Uchtor**	**3.19**	**13**	⇑*i*P			**Pn**	**12 50 52.5**	**-1.4**
	baz=14								
UCH				⇑*i*S			**Sn**	**12 51 29.5**	**-2.3**
	baz=14								
CHGR	**Chuyangaron**	**3.44**	**263**	Pn			**Pb**	**12 51 01.0**	**-3.6**
EKS2	**Erkin-Say**	**3.53**	**3**	P			**Pn**	**12 51 00.5**	**+2.1**
	SNR=15								
AAK	**Ala-Archa**	**3.58**	**12**	P			**Pn**	**12 51 00.1**	**+1.0**
	SNR=11								
AAK	**Ala-Archa**	**3.58**	**12**	Pn			**Pn**	**12 51 00.5**	**+1.4**
	73nm,0.5s,baz=154,slow=7.2,SNR=13								
AAK					Sn		**Sn**	**12 51 45.6**	**+4.5**
	10nm,0.3s,baz=22,slow=20,SNR=5.3								
AAK	**Ala-Archa**	**3.58**	**12**	⇓*i*P			**Pn**	**12 50 58.0**	**-1.1**
	baz=12								
AAK				⇓*i*S			**Sn**	**12 51 38.7**	**-2.4**
	baz=12								
AAK	**Ala-Archa**	**3.58**	**12**	Pn			**Pn**	**12 50 57.8**	**-1.3**
KBK	**Karagaybulak**	**3.69**	**17**	P			**Pn**	**12 51 02.8**	**+2.3**
	SNR=7.8								
ULHL	**Ulahol**	**3.74**	**33**	P			**Pb**	**12 51 07.6**	**-2.1**
	SNR=18								
BOOM	**Boomskoye usch**	**3.83**	**28**	⇓*e*P			**Pn**	**12 51 01.2**	**-1.2**
	baz=29								
BOOM				⇓*i*S			**Sn**	**12 51 44.7**	**-2.5**
	baz=29								
BOOM	**Boomskoye usch**	**3.83**	**28**	Pn			**Pn**	**12 51 01.8**	**-0.7**
TAS	**Tashkent**	**3.91**	**305**	⇑*i*P			**Pn**	**12 51 03.9**	**+0.5**
	baz=2.0								
TAS				⇑*i*S			**Sn**	**12 51 49.9**	**+0.9**
	baz=2.0								
CHMS	**Chumysh**	**3.98**	**13**	P			**Pn**	**12 51 05.4**	**+1.0**
	SNR=6.6								
KDJ	**Kajisay**	**4.09**	**42**	⇓*e*P			**Pn**	**12 51 05.3**	**-0.8**
	baz=44								
KDJ				⇓*i*S			**Sn**	**12 51 52.0**	**-1.7**
	baz=44								
KDJ	**Kajisay**	**4.09**	**42**	Pn			**Pn**	**12 51 05.7**	**-0.4**
TKM2	**Tokmak 2**	**4.10**	**22**	P			**Pn**	**12 51 10.0**	**+3.7**
	SNR=5.3								
TKM2	**Tokmak 2**	**4.10**	**22**	⇑Pg			**Pb**	**12 51 18.3**	**+2.3**
	20nm,0.5s								
TKM2				⇑Lg			Lg	12 52 05.2	
	56nm,0.7s								
KST	**Kastek**	**4.32**	**24**	*e*P			**Pb**	**12 51 17.6**	**-2.1**
	25nm,0.5s								
KST				*e*S			**Sb**	**12 52 12.4**	**+0.7**
	135nm,0.7s								
KST	**Kastek**	**4.32**	**24**	Pg			**Pb**	**12 51 17.9**	**-1.9**
	26nm,0.5s								
KST				Lg			Lg	12 52 13.2	
	135nm,0.7s								
CHM	**Chimkent**	**4.36**	**318**	*e*P			**Pb**	**12 51 19.6**	**-0.6**
	4.7nm,0.6s								
CHM				*e*S			**Sb**	**12 52 16.5**	**+3.9**
	384nm,0.3s								
SGDS	**Sogindy**	**4.40**	**11**	*e*P			**Pb**	**12 51 18.0**	**-3.0**
	20nm,0.8s								
SGDS				*e*S			**Sb**	**12 52 12.9**	**-0.9**
	41nm,0.8s								
SGDS	**Sogindy**	**4.40**	**11**	Pg			**Pb**	**12 51 18.0**	**-3.0**
	36nm,0.5s								
SGDS				Lg			Lg	12 52 11.2	
	41nm,0.8s								
DGS	**Degeres**	**4.45**	**22**	*e*P			**Pb**	**12 51 20.3**	**-1.5**
	43nm,0.5s								
DGS				*e*S			**Sb**	**12 52 16.8**	**+1.6**
	102nm,0.8s								
DGS	**Degeres**	**4.45**	**22**	Pg			**Pb**	**12 51 21.1**	**-0.7**
	43nm,0.5s								
DGS				Lg			Lg	12 52 16.8	
	102nm,0.8s								
MTBS	**Maitube**	**4.56**	**28**	*e*P			**Pb**	**12 51 22.2**	**-1.6**
	35nm,0.7s								
MTBS				*e*S			**Sb**	**12 52 20.7**	**+2.2**
	51nm,0.5s								
MTBS	**Maitube**	**4.56**	**28**	Pg			**Pb**	**12 51 22.4**	**-1.4**
	35nm,0.7s								
MTBS				Lg			Lg	12 52 19.3	
	51nm,0.5s								
KK31	**Karatay Array**	**4.57**	**331**	Pn			**Pn**	**12 51 11.9**	**-0.7**
KK31	**Karatay Array**	**4.57**	**331**	⇑Pn			**Pn**	**12 51 14.5**	**+1.9**
	7.9nm,0.4s,baz=137,slow=13,SNR=9.9								
KK31				⇑Pg			**Pb**	**12 51 24.0**	**0.0**
	13nm,0.4s,baz=149,slow=16,SNR=2.8								
KK31				⇓Sn			**Sn**	**12 52 06.8**	**+1.4**
	11nm,0.3s,baz=307,slow=36,SNR=5.7								
KKAR	**Karatay Array**	**4.57**	**331**	Pn			**Pn**	**12 51 11.5**	**-1.1**
KKAR	**Karatay Array**	**4.57**	**331**	Pn			**Pn**	**12 51 11.3**	**-1.3**
TNSS	**Tian-Shan**	**4.68**	**32**	*e*P			**Pb**	**12 51 24.8**	**-1.2**
	42nm,0.4s								
TNSS				*e*S			**Sb**	**12 52 25.1**	**+2.8**
	24nm,0.5s								
TNSS	**Tian-Shan**	**4.68**	**32**	Pg			**Pb**	**12 51 25.1**	**-0.9**
	42nm,0.4s								
TNSS				Lg			Lg	12 52 23.5	
	24nm,0.5s								
KNDC	**Almaty**	**4.84**	**31**	⇓Pg			**Pb**	**12 51 28.1**	**-0.4**
	54nm,0.6s								
KNDC				⇑Lg			Lg	12 52 29.6	
	280nm,0.9s								
KRBS	**Karabastau**	**4.84**	**19**	*e*P			**Pb**	**12 51 26.7**	**-1.8**
	17nm,0.6s								
KRBS				*e*S			**Sb**	**12 52 28.4**	**+1.9**
	25nm,0.6s								
KRBS	**Karabastau**	**4.84**	**19**	Pg			**Pb**	**12 51 27.2**	**-1.3**
	17nm,0.6s								
KRBS				Lg			Lg	12 52 27.1	
	25nm,0.6s								
KTBS	**Karatobe**	**5.16**	**26**	*e*P			**Pb**	**12 51 32.5**	**-1.4**
	13nm,0.4s								
KTBS				*e*S			**Sb**	**12 52 37.9**	**+2.3**
	118nm,0.5s								
KTBS	**Karatobe**	**5.16**	**26**	Pg			**Pb**	**12 51 33.4**	**-0.4**
	13nm,0.4s								
KTBS				Lg			Lg	12 52 37.9	
	118nm,0.5s								
KUU	**Kurty**	**5.21**	**23**	*e*P			**Pb**	**12 51 33.6**	**-1.1**
	24nm,0.8s								
KUU				*e*S			**Sb**	**12 52 40.1**	**+3.1**
	38nm,0.5s								
KUU	**Kurty**	**5.21**	**23**	Pg			**Pb**	**12 51 34.8**	**0.0**
	24nm,0.8s								
KUU				Lg			Lg	12 52 40.1	
	38nm,0.5s								
SATY	**Saty**	**5.39**	**42**	*e*P			**Pb**	**12 51 37.6**	**-0.2**
	20nm,0.5s								
SATY				*e*S			**Sb**	**12 52 46.9**	**+4.6**
	35nm,1.2s								
SATY	**Saty**	**5.39**	**42**	Pg			**Pb**	**12 51 38.8**	**+0.9**
	20nm,0.5s								
SATY				Lg			Lg	12 52 46.9	
	35nm,1.2s								
CHKK	**Chushkaly**	**5.39**	**28**	*e*P			**Pb**	**12 51 36.4**	**-1.4**
	14nm,0.4s								
CHKK				*e*S			**Sb**	**12 52 45.0**	**+2.8**
	33nm,0.6s								
CHKK	**Chushkaly**	**5.39**	**28**	Pg			**Pb**	**12 51 36.4**	**-1.4**
	14nm,0.4s								
CHKK				Lg			Lg	12 52 43.3	
	33nm,0.6s								
CEP	**Cherat**	**5.45**	**194**	P			**Pb**	**12 51 35.3**	**-3.7**
CHCP	**Chirah Chowk**	**5.46**	**182**	P			**Pb**	**12 51 36.4**	**-2.7**
KURS	**Kuram**	**5.59**	**37**	*e*P			**Pb**	**12 51 40.5**	**-0.6**
	10.0nm,0.6s								
KURS				*e*S			**Sb**	**12 52 51.8**	**+3.8**
	27nm,1.2s								
KURS	**Kuram**	**5.59**	**37**	Pg			**Pb**	**12 51 41.8**	**+0.6**
	15nm,1.1s								
KURS				Lg			Lg	12 52 52.3	
	27nm,1.2s								
KBL	**Kabul**	**5.82**	**219**				Pn	12 51 35.6	+5.7
KPKS	**Kokpek**	**5.82**	**40**	*e*P			**Pb**	**12 51 43.6**	**-1.6**
	19nm,0.5s								
KPKS				*e*S			**Sb**	**12 52 57.2**	**+2.5**
	42nm,0.7s								
KPKS	**Kokpek**	**5.82**	**40**	Pg			**Pb**	**12 51 44.7**	**-0.5**
	19nm,0.5s								
BTLS	**Baital**	**5.92**	**4**	*e*P			**Pb**	**12 51 45.0**	**-1.9**
	13nm,0.6s								
BTLS				*e*S			**Sb**	**12 52 59.7**	**+2.3**
	17nm,0.5s								
BTLS	**Baital**	**5.92**	**4**	Pg			**Pb**	**12 51 47.2**	**+0.4**
	13nm,0.6s								
ARXS	**Arharly**	**6.01**	**31**	*e*P			**Pb**	**12 51 48.7**	**+0.2**
	27nm,0.6s								
ARXS				*e*S			**Sb**	**12 53 06.0**	**+5.8**
	52nm,0.9s								
ARXS	**Arharly**	**6.01**	**31**	Pg			**Pb**	**12 51 49.0**	**+0.5**
	24nm,0.5s								
PDGK	**Podgornoye**	**6.15**	**45**	Pg			**Pb**	**12 51 54.0**	**+3.1**
	6.6nm,0.6s								
THW	**Thamme Wali**	**6.49**	**193**	P			Pb	12 51 48.5	-8.0
DJR	**Jarkent**	**7.00**	**40**	*e*P			**Pb**	**12 52 07.1**	**+1.9**
	4.5nm,0.5s								
DJR				*e*S			Sb	12 53 37.1	+8.6
	13nm,0.5s								
DJR	**Jarkent**	**7.00**	**40**	Pg			**Pb**	**12 52 08.0**	**+2.8**
	4.5nm,0.5s								
MKAR	**Makanchi Array**	**9.99**	**37**	Pn			**Pn**	**12 52 27.2**	**+0.3**
	0.1nm,0.3s,baz=224,slow=12,SNR=3.7								
MKAR						Lg	Lg	12 55 10.4	
	0.1nm,0.3s,baz=222,slow=38,SNR=2.9								
	1.1nm,0.8s								
MKAR	**Makanchi Array**	**9.99**	**37**				**Pn**	**12 52 24.6**	**-2.3**
WMQ	**Urumqi**	**11.62**	**62**	*e*P			**Pn**	**12 52 51.5**	**+2.3**
KURBB	**Kurchatov Arra**	**12.02**	**15**	Pn			**Pn**	**12 52 53.0**	**-1.6**
	baz=210,slow=12,SNR=1.7								
KURBB						Lg	Lg	12 56 16.6	
	0.1nm,0.3s,baz=206,slow=25,SNR=4.9								
	0.3nm,0.6s								
GEYT	**Alibeck**	**12.13**	**269**	Pn			**Pn**	**12 52 55.5**	**-0.6**
	0.3nm,0.3s,baz=84,slow=5.9,SNR=2.3								
	1.2nm,0.3s								
GEYT	**Alibeck**	**12.13**	**269**				**Pn**	**12 52 57.7**	**+1.5**
KURK	**Kurchatov**	**12.13**	**16**				**Pn**	**12 52 53.7**	**-2.4**
AB31	**Akbulak array**	**14.03**	**321**	⇓P			**Pn**	**12 53 20.8**	**-1.2**
	0.9nm,0.5s,baz=130,slow=13,SNR=10								
ABKAR	**Akbulak array**	**14.03**	**321**	Pn			**Pn**	**12 53 21.1**	**-0.9**
ABKAR	**Akbulak array**	**14.03**	**321**	Pn			**Pn**	**12 53 20.8**	**-1.2**
AKTO	**Aktyubinsk**	**15.74**	**321**	Pn			**Pn**	**12 53 44.2**	**-0.8**
	0.2nm,0.3s,baz=129,slow=14,SNR=3.2								
	2.7nm,0.6s								
AKTO	**Aktyubinsk**	**15.74**	**321**	⇓P			**Pn**	**12 53 45.0**	**0.0**
	5.6nm,0.7s								
ZALV	**Zalesovo Beam**	**16.70**	**24**	Pn			**Pn**	**12 53 55.2**	**-2.0**
	0.1nm,0.3s,baz=216,slow=11,SNR=8.7								
	3.2nm,0.7s								
ZALV	**Zalesovo Beam**	**16.70**	**24**				**Pn**	**12 53 56.0**	**-1.2**
ARU	**Arti**	**19.94**	**335**	P			**P**	**12 54 34.7**	**-0.3**
	baz=170,slow=12,SNR=3.8								
	1.4nm,0.4s								
GTA	**Gaotai**	**20.34**	**81**	*e*P			Pn	12 54 42.0	+0.2
GTA						pP	sP	12 54 50.0	+1.9
GTA						sP	pP	12 54 53.0	+7.6
GTA						pmax	pmax		
	comp=Z,2.0nm,1.1s								
GNI	**Garni**	**22.15**	**282**	P			**P**	**12 54 59.8**	**+0.5**
	comp=Z,4.1nm,0.3s,baz=181,slow=24,SNR=1.6								
	comp=Z,4.1nm,0.3s								
ONI	**Oni**	**22.95**	**288**	P			**P**	**12 55 09.0**	**+1.5**
ONI						IAmb	IAmb	12 55 12.5	
	comp=Z,15nm,0.6s								
KBZ	**Khabaz**	**23.34**	**291**	P			**P**	**12 55 10.8**	**-0.7**
	comp=Z,1.0nm,0.5s,baz=109,slow=5.0,SNR=2.1								
	comp=Z,1.0nm,0.5s								
BRTR	**Keskin Array B**	**30.64**	**284**	P			**P**	**12 56 19.7**	**+2.0**
	comp=Z,1.7nm,0.5s,baz=173,slow=18,SNR=5.4								
	comp=Z,1.7nm,0.5s								
BRTR	**Keskin Array B**	**30.64**	**284**	P			**P**	**12 56 18.7**	**+1.0**
AKASG	**Malin Array Be**	**32.96**	**305**	P			**P**	**12 56 38.1**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=76,slow=7.6,SNR=5.9								
	comp=Z,0.4nm,0.4s								
MLR	**Muntele Rosu**	**35.33**	**296**	P			**P**	**12 57 00.4**	**+1.8**
	comp=Z,1.9nm,0.6s,baz=172,slow=8.2,SNR=3.7								
	comp=Z,1.9nm,0.6s								
FIA1	**FINESS Array S**	**36.49**	**323**	P			**P**	**12 57 08.1**	**0.0**
FIA1						IAmb	IAmb	12 57 23.9	
	comp=Z,9.5nm,1.4s								
FINES	**FINESS Array B**	**36.49**	**323**	P			**P**	**12 57 08.6**	**+0.5**
	comp=Z,0.8nm,0.3s,baz=111,slow=9.6,SNR=20								
	comp=Z,0.8nm,0.3s								
FINES	**FINESS Array B**	**36.49**	**323**	P			**P**	**12 57 08.3**	**+0.2**
IDI	**Anoyia**	**38.56**	**280**	P			**P**	**12 57 26.0**	**0.0**
	comp=Z,6.2nm,0.8s,baz=268,slow=10,SNR=3.4								
	comp=Z,6.2nm,0.8s								
IDI	**Anoyia**	**38.56**	**280**	P			**P**	**12 57 26.1**	**0.0**
ARCES	**ARCESS Array B**	**39.52**	**336**	P			**P**	**12 57 34.0**	**+0.3**
	comp=Z,2.3nm,0.9s,baz=108,slow=8.8,SNR=8.8								
	comp=Z,2.3nm,0.9s								
ARCES	**ARCESS Array B**	**39.52**	**336**	P			**P**	**12 57 33.8**	**+0.2**
ARCES						IAmb	IAmb	12 57 39.8	
	comp=Z,9.1nm,1.4s								
HFS	**Hagfors**	**42.29**	**320**	P			**P**	**12 57 56.6**	**+0.1**
	comp=Z,3.0nm,0.6s,baz=102,slow=11,SNR=16								
	comp=Z,3.0nm,0.6s								
GERES	**GERESS Array B**	**43.10**	**303**	P			**P**	**12 58 04.5**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=66,slow=3.3,SNR=3.9								
	comp=Z,0.2nm,0.4s								
GERES	**GERESS Array B**	**43.10**	**303**	P			**P**	**12 58 04.0**	**+0.6**
NB2	**NORSAR Subarra**	**43.53**	**321**	P			**P**	**12 58 06.1**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=91,slow=7.9								
NOA	**NORSAR Array B**	**43.53**	**321**	P			**P**	**12 58 06.2**	**-0.5**
	comp=Z,1.7nm,0.8s,baz=91,slow=7.9,SNR=7.1								
	comp=Z,1.7nm,0.8s								
PETK	**Petropavlovsk-**	**56.70**	**46**	P			**P**	**12 59 44.5**	**-2.0**
	comp=Z,1.3nm,0.7s,baz=316,slow=10,SNR=2.2								
	comp=Z,1.3nm,0.7s								
ESDC	**Sonseca Array**	**58.01**	**297**	P			**P**	**12 59 56.3**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=57,slow=6.9,SNR=8.8								
	comp=Z,0.6nm,0.6s								
TOA0	**Torodi Ar. Sit**	**67.77**	**269**	P			**P**	**13 01 01.6**	**+0.4**
TOA0						IAmb	IAmb	13 01 02.2	
	comp=Z,7.4nm,1.4s								
TORD	**Torodi Ar. Bea**	**67.77**	**269**	P			**P**	**13 01 01.6**	**+0.3**
	comp=Z,0.6nm,0.4s,baz=50,slow=5.7,SNR=9.5								
	comp=Z,0.6nm,0.4s								
TORD	**Torodi Ar. Bea**	**67.77**	**269**	P			**P**	**13 01 01.6**	**+0.3**
TORD						IAmb	IAmb	13 01 03.1	
	comp=Z,1.6nm,1.2s								
IMAR	**Indian Mountai**	**69.06**	**19**	P			**P**	**13 01 08.0**	**-0.6**
BMAR	**Burnt Mountain**	**69.91**	**15**	P			**P**	**13 01 13.0**	**-0.9**
INK	**Inuvik**	**70.98**	**10**	P			**P**	**13 01 20.3**	**0.0**
	comp=Z,0.8nm,0.6s,baz=299,slow=4.7,SNR=6.9								
	comp=Z,0.8nm,0.6s								
INK	**Inuvik**	**70.98**	**10**	P			**P**	**13 01 20.8**	**+0.5**
INK						IAmb	IAmb	13 01 39.0	
	comp=Z,3.3nm,1.2s								
ILAR	**Eielson Array**	**71.70**	**17**	P			**P**	**13 01 23.9**	**-0.8**
	comp=Z,0.4nm,0.9s,baz=322,slow=33,SNR=2.4								
	comp=Z,0.4nm,0.9s								
BCAR	**Beaver Creek A**	**74.31**	**16**	P			**P**	**13 01 40.0**	**-0.3**
YKA	**Yellowknife Ar**	**78.51**	**4**	P			**P**	**13 02 04.0**	**0.0**
	comp=Z,0.4nm,0.4s,baz=350,slow=5.6,SNR=12								
	comp=Z,0.4nm,0.4s								
YKA	**Yellowknife Ar**	**78.51**	**4**	P			**P**	**13 02 03.2**	**-0.8**
WRA	**Warramunga Arr**	**81.74**	**124**	P			**P**	**13 02 23.6**	**+1.5**
	comp=Z,0.8nm,0.7s,baz=328,slow=5.1,SNR=9.5								
	comp=Z,0.8nm,0.7s								
WRA	**Warramunga Arr**	**81.74**	**124**	P			**P**	**13 02 24.0**	**+1.9**
WB2	**Warramunga Arr**	**81.75**	**124**	P			**P**	**13 02 24.7**	**+2.6**
WB2						IAmb	IAmb	13 02 37.7	
	comp=Z,6.1nm,1.2s								
WR0	**Warramunga Arr**	**81.88**	**124**	P			**P**	**13 02 24.1**	**+1.3**
ASAR	**Alice Springs**	**84.17**	**127**	P			**P**	**13 02 36.3**	**+1.7**
	comp=Z,0.5nm,0.8s,baz=316,slow=4.4,SNR=6.6								
	comp=Z,0.5nm,0.8s								
ASAR	**Alice Springs**	**84.17**	**127**	P			**P**	**13 02 35.2**	**+0.6**

KRNET ***26*** *12:52:46.4±0.1,39°.46N×73°.84E,mb3.8*
IDC ***26*** *12:52:46.3±1.0,39°.27N×73°.85E,h0km,mb3.6/7, mbtmp3.7/10,ML3.4/3,MS4.2/1,Error ellipse: s-maj=26.8km s-min=16.6km az=77.0*
ISC 26 12:52:46.9±2.7,39°.41N±0°.06×73°.80E±0°.05,h1km±17km, n22,σ1$14/32,mb3.6/8,16C-4D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.36**	**325**	⇑*i*P			**Pn**	**12 53 11.6**	**-1.5**
	baz=23								
OHH				⇑*i*S			**Sb**	**12 53 30.3**	**-0.9**
	baz=23								
DRK	**Karamyk**	**1.55**	**273**	⇑*i*P			**Pn**	**12 53 16.1**	**+0.2**
	baz=72								
DRK				⇑*i*S			**Sg**	**12 53 37.8**	**+1.1**
	baz=72								
BTK	**Batken**	**2.39**	**287**	⇑*i*P			**Pn**	**12 53 29.2**	**+2.0**
	baz=85								
BTK				⇑*i*S			**Sb**	**12 54 00.3**	**-0.5**
	baz=85								
ARLS	**Aral**	**2.48**	**9**	⇓*i*P			**Pn**	**12 53 29.5**	**+0.9**
	baz=9.0								
ARLS				⇓*i*S			**Sn**	**12 54 00.8**	**+1.1**
	baz=9.0								
GAR	**Garm**	**2.74**	**263**	⇓

*KRNET **26** 12:56:34.8±0.1,39.°32N×73.°69E,mb3.8*
*IDC **26** 12:56:34.6±1.2,39.°16N×73.°82E,h0km,mb3.7/7,*
mbtmp3.7/10,ML3.2/3,Error ellipse: s-maj=26.9km
s-min=18.5km az=83.0

ISC 26 12:56:36.7±1.0,39.°33N±0.°07×73.°67E±0.°05,h10km,n21,σt=92/32,mb3.6/7,16C-4D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OHH	**Osh** baz=30	**1.37**	**331**	⇑	*e*	P	**Pn**	**12 57 00.6**	**-1.4**
OHH				⇑	*i*	S	**Sb**	**12 57 19.3**	**-0.9**
DRK	**Karamyk** baz=77	**1.45**	**277**	⇓	*i*	P	**Pn**	**12 57 01.8**	**-1.5**
DRK				⇓	*i*	S	**Sn**	**12 57 21.8**	**-0.8**
BTK	**Batken** baz=89	**2.31**	**289**	⇑	*i*	P	**Pn**	**12 57 15.3**	**+0.3**
BTK				⇑	*i*	S	**Sn**	**12 57 45.1**	**+1.5**
ARLS	**Aral** baz=11	**2.58**	**11**	⇑		P	**Pn**	**12 57 18.7**	**0.0**
ARLS				⇑	*i*	S	**Sn**	**12 57 51.0**	**+0.8**
GAR	**Garm** baz=64	**2.62**	**264**	⇑	*i*	P	**Pn**	**12 57 19.6**	**+0.3**
GAR				⇑	*i*	S	**Sn**	**12 57 52.3**	**+1.1**
TRKS	**Terek-Say** baz=19	**2.92**	**320**	⇑	*i*	P	**Pn**	**12 57 23.0**	**-0.4**
TRKS				⇑	*i*	S	**Sn**	**12 57 58.2**	**-0.5**
UCH	**Uchtor** baz=12	**2.97**	**12**	⇓	*i*	P	**Pn**	**12 57 24.5**	**+0.2**
UCH				⇓	*i*	S	**Sn**	**12 58 00.4**	**+0.2**
AAK	**Ala-Archa** 3.0nm,0.3s,baz=181,slow=6.6,SNR=3.4	**3.37**	**10**	Pn			**Pb**	**12 57 34.7**	**-1.8**
AAK	6.5nm,0.3s,baz=302,slow=22,SNR=6.1 9.1nm,0.4s			Sn			**Sb**	**12 58 18.1**	**+0.5**
AAK	**Ala-Archa** baz=10.0	**3.37**	**10**	⇑	*e*	P	**Pn**	**12 57 29.9**	**+0.4**
AAK				⇑	*i*	S	**Sn**	**12 58 10.0**	**+0.4**
BOOM	**Boomskoye usch** baz=28	**3.60**	**28**	⇑	*e*	P	**Pn**	**12 57 33.2**	**+0.5**
BOOM				⇑	*i*	S	**Sn**	**12 58 15.4**	**0.0**
TAS	**Tashkent** baz=2.0	**3.89**	**302**	⇑	*e*	P	**Pn**	**12 57 37.2**	**+0.6**
TAS				⇑	*e*	S	**Sn**	**12 58 22.8**	**+0.5**
AKTO	**Aktyubinsk** 0.2nm,0.3s,baz=122,slow=12,SNR=4.5 2.1nm,0.6s	**15.66**	**320**	Pn			**Pn**	**13 00 18.7**	**+1.3**
ZALV	**Zalesovo Beam** 0.1nm,0.3s,baz=216,slow=12,SNR=3.7 0.5nm,0.4s	**16.48**	**24**	Pn			**Pn**	**13 00 27.8**	**0.0**
FINES	**FINESS Array B** 0.9nm,0.3s,baz=112,slow=10,SNR=15 0.9nm,0.3s	**36.40**	**323**	P			**P**	**13 03 41.8**	**+0.8**
ARCES	**ARCESS Array B** 1.0nm,0.6s,baz=106,slow=8.9,SNR=5.0 1.0nm,0.6s	**39.39**	**336**	P			**P**	**13 04 07.6**	**+1.5**
HFS	**Hagfors** 1.6nm,0.4s,baz=94,slow=10,SNR=13 1.6nm,0.4s	**42.21**	**320**	P			**P**	**13 04 30.2**	**+0.8**
NB2	**NORSAR Subarra** comp=Z,0.5nm,0.5s,baz=91,slow=8.6	**43.45**	**321**	P			**P**	**13 04 39.9**	**+0.3**
NOA	**NORSAR Array B** comp=Z,0.6nm,0.5s,baz=92,slow=7.9,SNR=5.1 comp=Z,0.6nm,0.5s	**43.45**	**321**	P			**P**	**13 04 39.8**	**+0.3**
TORD	**Torodi Ar. Bea** comp=Z,0.2nm,0.5s,baz=60,slow=5.8,SNR=2.7 comp=Z,0.2nm,0.5s	**67.88**	**269**	P			**P**	**13 07 35.5**	**-0.1**
WRA	**Warramunga Arr** comp=Z,0.2nm,0.7s,baz=303,slow=7.5,SNR=1.9 comp=Z,0.2nm,0.7s	**81.76**	**124**	P			**P**	**13 08 54.0**	**-1.8**
ASAR	**Alice Springs** comp=Z,0.2nm,0.8s,baz=308,slow=4.5,SNR=1.5 comp=Z,0.2nm,0.8s	**84.20**	**127**	P			**P**	**13 09 08.0**	**-0.4**

MAN 26 12:57:34.6,14.°16N×119.°98E,h45km,mb4.0,ML2.7,MS2.3,3C,Luzon

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.50**	**148**	⇑	*e*	P	Pn	12 57 48.0	+2.3
LUBP					*e*	S		12 58 01.3	
MACP	**Maragondon, Ca**	**0.73**	**82**	⇑	*e*	P	Pn	12 57 50.0	+1.4
MACP					*e*	S		12 58 31.0	
SJMP	**San Jose**	**2.02**	**146**	⇑	*e*	P	Pn	12 58 07.7	+1.3

*JMA **26** 13:08:11.1±0.4,23.°1N×121.°2E±.°,h0km,MV3.8/15,*
TAIWAN REGION
*TAP **26** 13:08:14.1,22.°93N×121.°27E,h16km,ML3.3,B*

ISC 26 13:08:14.0±0.9,22.°90N±0.°02×121.°32E±0.°02,h21km±1km,n110,σt=94/175,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EDH	**Donghe** baz=37	**0.08**	**350**		*i*	P	**Pb**	**13 08 17.3**	**-0.7**
EDH					*i*	S	**Sb**	**13 08 19.7**	**-1.0**
LONT	**Longtian** baz=268	**0.17**	**273**			P	**Pb**	**13 08 18.6**	**-1.4**
LONT					*e*	S	**Sb**	**13 08 22.3**	**-1.9**
CHKT	**Chengkung** baz=26	**0.21**	**12**			P	**Pb**	**13 08 19.0**	**-1.0**
CHKT					*i*	S	**Sb**	**13 08 22.9**	**-1.2**
TTN	**Taitung** baz=208	**0.21**	**228**			P	**Pb**	**13 08 20.4**	**+0.5**
TTN					*e*	S	**Sb**	**13 08 26.0**	**+1.9**
ECS	**Chishang** baz=335	**0.22**	**335**			P	**Pb**	**13 08 19.4**	**-0.7**
ECS						S	**Sb**	**13 08 23.6**	**-0.6**
TWGBT	**Beinan** baz=249	**0.23**	**250**			P	**Pb**	**13 08 19.3**	**-0.8**
TWGBT						S	**Sb**	**13 08 23.3**	**-1.0**
TWG	**Pinlang** baz=249	**0.24**	**252**			P	**Pb**	**13 08 19.3**	**-0.9**
TWG						S	**Sb**	**13 08 23.3**	**-1.1**
LDUT	**Ludao** baz=133	**0.26**	**148**		*e*	P	**Pb**	**13 08 21.0**	**+0.7**
LDUT						S	**Sb**	**13 08 26.4**	**+1.8**
FULB	**Fuli** baz=351	**0.30**	**356**		*e*	P	**Pb**	**13 08 20.4**	**-0.4**
ELDTW	**Lidau** baz=317	**0.40**	**316**		*i*	P	**Pb**	**13 08 21.3**	**-1.1**
ELDTW					*i*	S	**Sb**	**13 08 26.2**	**-2.0**
ECBN	**Changbin** baz=19	**0.44**	**16**		*e*	P	**Pb**	**13 08 23.5**	**+0.5**
ECBN					*e*	S	**Sb**	**13 08 30.2**	**+1.2**
EYUL	**Yuli** baz=350	**0.45**	**0**			P	**Pb**	**13 08 22.5**	**-0.7**
EYUL					*e*	S	**Sb**	**13 08 30.5**	**+1.1**
TWF1	**Yuli** baz=348	**0.45**	**358**			P	**Pb**	**13 08 22.4**	**-0.9**
TWF1					*e*	S	**Sb**	**13 08 28.6**	**-1.1**
YULB	**Yu-li** baz=347	**0.49**	**358**			P	**Pb**	**13 08 22.9**	**-1.1**
YULB						S	**Sb**	**13 08 29.4**	**-1.5**
STYH	**Taoyuan** baz=302	**0.57**	**299**		*e*	P	**Pb**	**13 08 24.5**	**-0.9**
STYH						S	**Sb**	**13 08 31.7**	**-1.5**
STYT	**Tauyuan** baz=303	**0.58**	**297**			P	**Pb**	**13 08 24.5**	**-1.2**
STYT						S	**Sb**	**13 08 32.0**	**-1.6**
HGSD	**Ruisui** baz=354	**0.60**	**9**			P	**Pb**	**13 08 25.7**	**-0.3**
HGSD					*e*	S	**Sb**	**13 08 34.5**	**+0.4**
EHY	**Hungye** baz=353	**0.61**	**0**		*e*	P	**Pb**	**13 08 24.9**	**-1.2**
EHY					*e*	S	**Sb**	**13 08 33.2**	**-1.1**
SLGT	**Liugui** baz=274	**0.63**	**279**			P	**Pb**	**13 08 25.7**	**-0.7**
SLGT						S	**Sb**	**13 08 33.8**	**-1.0**
SSD	**Sandimen** baz=254	**0.65**	**257**		*e*	P	**Pb**	**13 08 25.4**	**-1.4**
SSD					*e*	S	**Sb**	**13 08 33.1**	**-2.3**
TSMG	**Majia** baz=249	**0.65**	**253**		*e*	P	**Pb**	**13 08 25.7**	**-1.1**
TAW	**Tawu** baz=223	**0.66**	**216**		*e*	P	**Pb**	**13 08 26.1**	**-0.9**
EAST	**Anshuo** baz=225	**0.67**	**220**			P	**Pb**	**13 08 26.4**	**-0.8**
YUS	**Yu-Shan** baz=331	**0.68**	**330**			P	**Pb**	**13 08 26.4**	**-1.1**
YUS						S	**Sb**	**13 08 35.0**	**-1.8**
TAWH	**Dawu Township** baz=223	**0.68**	**216**		*e*	P	**Pb**	**13 08 26.4**	**-0.9**
TAWH					*e*	S	**Sb**	**13 08 35.7**	**-0.6**
MASBT	**Mashibuluo** baz=238	**0.69**	**246**		*e*	P	**Pb**	**13 08 26.6**	**-0.9**
MASBT					*e*	S	**Sb**	**13 08 35.1**	**-1.5**
SGST	**Jiashian** baz=284	**0.70**	**285**		*e*	P	**Pb**	**13 08 26.8**	**-0.9**
SGST						S	**Sb**	**13 08 36.7**	**-0.2**
WTP	**Ta-pu** baz=297	**0.74**	**298**			P	**Pb**	**13 08 27.9**	**-0.3**
WTP					*e*	S	**Sb**	**13 08 38.6**	**+0.7**
TPUB	**Ta-pu** baz=307	**0.75**	**303**		*e*	P	**Pb**	**13 08 28.5**	**+0.1**
TPUB					*e*	S	**Sb**	**13 08 38.6**	**+0.3**
SCST	**Cishan** baz=265	**0.76**	**269**		*e*	P	**Pb**	**13 08 28.2**	**-0.4**
ALS	**Alishan** baz=322	**0.77**	**322**			P	**Pb**	**13 08 28.3**	**-0.7**
ALS					*e*	S	**Sb**	**13 08 37.8**	**-1.4**
EGFH	**Guangfu** baz=357	**0.78**	**7**		*e*	P	**Pn**	**13 08 29.1**	**-0.7**
CHN1	**Nanshi** baz=292	**0.78**	**292**		*e*	P	**Pb**	**13 08 29.0**	**0.0**
CHN1					*e*	S	**Sn**	**13 08 40.6**	**-0.4**
SSPT	**Xinbi** baz=232	**0.81**	**239**		*e*	P	**Pb**	**13 08 28.8**	**-0.5**
SNST	**Tainan City** baz=297	**0.82**	**293**		*e*	P	**Pb**	**13 08 29.1**	**-0.5**
SNST					*e*	S	**Sn**	**13 08 42.2**	**+0.3**
TWM1	**Shoushan** baz=264	**0.83**	**265**		*e*	P	**Pn**	**13 08 30.5**	**0.0**
SCZT	**Fangliau** baz=229	**0.83**	**231**		*e*	P	**Pb**	**13 08 29.1**	**-0.7**
SLIU	**Shizi** baz=214	**0.83**	**215**		*e*	P	**Pb**	**13 08 28.6**	**-1.1**
TEGC	**Jichi Village** baz=24	**0.83**	**14**		*e*	P	**Pb**	**13 08 29.8**	**0.0**
TEGC					*e*	S	**Sn**	**13 08 42.2**	**0.0**
TWK	**Hsinying** baz=295	**0.85**	**296**		*e*	P	**Pb**	**13 08 29.7**	**-0.4**
LAY	**Lan-yu** baz=154	**0.88**	**166**		*e*	P	**Pb**	**13 08 30.8**	**+0.2**
LAY					*e*	S	**Sn**	**13 08 44.1**	**+0.7**
CHN3	**Shinhua** baz=281	**0.90**	**282**		*e*	P	**Pb**	**13 08 30.5**	**-0.3**
SHHT	**Tainan City** baz=277	**0.90**	**278**		*e*	P	**Pn**	**13 08 31.6**	**+0.1**
ESL	**Shilin** baz=5.0	**0.92**	**7**		*e*	P	**Pn**	**13 08 31.3**	**-0.5**
ESL					*e*	S	**Sb**	**13 08 41.0**	**-2.1**
LYUB	**Lan-yu** baz=154	**0.92**	**165**		*e*	P	**Pb**	**13 08 29.8**	**-1.6**
LYUB					*e*	S	**Sb**	**13 08 42.7**	**-0.4**
SSLB	**Suanglung** baz=344	**0.95**	**339**		*e*	P	**Pb**	**13 08 30.9**	**-0.9**
SSLB					*e*	S	**Sb**	**13 08 43.9**	**0.0**
SMST	**Manzhou Townsh** baz=200	**0.98**	**207**		*e*	S	**Sn**	**13 08 47.1**	**+1.3**
CHN2	**Minshiung** baz=308	**1.00**	**309**		*e*	P	**Pb**	**13 08 33.5**	**+0.8**
CHN2					*e*	S	**Sn**	**13 08 47.6**	**+1.3**
TEYL	**Yanliau Villag** baz=359	**1.00**	**15**		*e*	P	**Pb**	**13 08 33.4**	**+0.7**
TEYL					*e*	S	**Sn**	**13 08 47.6**	**+1.3**
CHY	**Chiayi** baz=305	**1.02**	**306**		*e*	P	**Pb**	**13 08 32.9**	**0.0**
CHY					*e*	S	**Sn**	**13 08 47.0**	**+0.2**
WLCH	**Liuqiu** baz=233	**1.02**	**238**		*e*	P	**Pb**	**13 08 36.0**	**+3.0**
HEN	**Hengchun** baz=199	**1.04**	**211**		*e*	P	**Pb**	**13 08 34.1**	**+0.9**
SMLT	**Sun Moon Lake** baz=343	**1.05**	**339**		*e*	P	**Pn**	**13 08 33.2**	**-0.5**
SMLT					*e*	S	**Sn**	**13 08 48.0**	**+0.2**
TWKBT	**Hengchun** baz=198	**1.06**	**206**		*e*	P	**Pb**	**13 08 33.4**	**-0.3**
TWKBT					*e*	S	**Sn**	**13 08 47.9**	**+0.1**
OWD	**Renai** baz=1.0	**1.06**	**353**		*e*	P	**Pn**	**13 08 33.1**	**-0.7**
OWD					*e*	S	**Sn**	**13 08 47.5**	**-0.6**
ICHU	**Yijhu** baz=295	**1.06**	**296**		*e*	P	**Pb**	**13 08 34.1**	**+0.4**
ICHU					*e*	S	**Sn**	**13 08 48.6**	**+0.8**
TSEB	**Hengchuen, Pin** baz=196	**1.06**	**201**		*e*	S	**Sn**	**13 08 48.7**	**+0.8**
WDLH	**Douliu** baz=316	**1.07**	**318**		*e*	P	**Pb**	**13 08 34.5**	**+0.7**
WDLH					*e*	S	**Sn**	**13 08 48.9**	**+1.0**
WJS	**Zhushan** baz=332	**1.07**	**330**		*e*	P	**Pb**	**13 08 34.2**	**+0.4**
WJS					*e*	S	**Sn**	**13 08 49.3**	**+1.3**
ETM	**Tongmen** baz=7.0	**1.08**	**9**		*e*	P	**Pn**	**13 08 33.3**	**-0.6**
TYC	**Yuchr** baz=345	**1.09**	**337**		*e*	P	**Pb**	**13 08 35.0**	**+0.8**
TYC					*e*	S	**Sn**	**13 08 49.6**	**+1.1**
WUSB	**Renai** baz=358	**1.11**	**350**		*e*	P	**Pn**	**13 08 33.8**	**-0.6**
WUSB					*e*	S	**Sb**	**13 08 47.3**	**-1.3**
CHN8	**Yiju** baz=293	**1.11**	**294**		*e*	P	**Pb**	**13 08 35.3**	**+0.7**
CHN8					*e*	S	**Sb**	**13 08 51.0**	**+2.3**
WNT	**Mingjian** baz=327	**1.14**	**329**		*e*	P	**Pb**	**13 08 35.7**	**+0.7**
WNT					*e*	S	**Sb**	**13 08 51.2**	**+1.8**
WTK	**Tuku** baz=310	**1.16**	**313**		*e*	P	**Pb**	**13 08 35.4**	**0.0**
WTK					*e*	S	**Sb**	**13 08 50.8**	**+0.7**
WNT1	**Nantou City** baz=327	**1.16**	**330**		*e*	P	**Pb**	**13 08 35.8**	**+0.3**
WNT1					*e*	S	**Sb**	**13 08 51.8**	**+1.7**
CHGB	**Renai** baz=360	**1.17**	**354**		*e*	P	**Pn**	**13 08 34.8**	**-0.6**
CHGB					*e*	S	**Sn**	**13 08 48.6**	**-2.1**
WSL	**Shuilin Townsh** baz=300	**1.18**	**302**		*e*	P	**Pb**	**13 08 35.8**	**+0.1**
WSL					*e*	S	**Sb**	**13 08 52.1**	**+1.5**
DPDB	**Guoxing** baz=348	**1.19**	**342**		*e*	P	**Pn**	**13 08 35.3**	**-0.2**
DPDB					*e*	S	**Sb**	**13 08 50.7**	**-0.1**
TWD	**Chiawan** baz=358	**1.21**	**12**		*e*	P	**Pn**	**13 08 35.1**	**-0.6**
TWD					*e*	S	**Sb**	**13 08 51.3**	**0.0**
WCS	**Beigang Elemen** baz=341	**1.21**	**342**		*e*	P	**Pb**	**13 08 35.8**	**-0.5**
WHF	**Hehuan Shan** baz=8.0	**1.24**	**358**		*e*	P	**Pn**	**13 08 35.5**	**-1.1**
WWF	**Wufeng** baz=332	**1.27**	**334**		*e*	P	**Pb**	**13 08 38.4**	**+1.0**
ETL	**Fush Village** baz=7.0	**1.29**	**12**		*e*	S	**Sb**	**13 08 53.5**	**-0.2**
NACB	**Ninganchiao** baz=9.0	**1.30**	**11**		*e*	P	**Pn**	**13 08 35.2**	**-1.7**
ETLH	**Xiulin Townshi** baz=2.0	**1.31**	**7**		*e*	P	**Pn**	**13 08 37.1**	**-0.1**
ETLH					*e*	S	**Sn**	**13 08 52.8**	**-1.4**
FUSS	**Fushou** baz=3.0	**1.35**	**357**		*e*	P	**Pn**	**13 08 37.3**	**-0.5**
FUSS					*e*	S	**Sn**	**13 08 54.8**	**-0.5**
WHP	**Taichung City** baz=356	**1.42**	**346**		*e*	P	**Pb**	**13 08 40.3**	**+0.5**
NNSB	**Datong** baz=14	**1.53**	**2**		*e*	P	**Pn**	**13 08 40.4**	**+0.2**
NNSH	**Datong** baz=14	**1.53**	**2**		*e*	P	**Pn**	**13 08 39.7**	**-0.5**
TWQ1	**Liyutan** baz=338	**1.53**	**341**		*e*	P	**Pb**	**13 08 41.0**	**-0.7**
NNS	**Nan Shan** baz=14	**1.54**	**2**		*e*	P	**Pn**	**13 08 40.4**	**0.0**
WDGT	**Dungji** baz=283	**1.57**	**284**		*e*	P	**Pn**	**13 08 40.7**	**0.0**
ENA	**Nanau** baz=11	**1.57**	**14**		*e*	P	**Pn**	**13 08 40.1**	**-0.6**
NSY	**Sanyi** baz=337	**1.60**	**341**		*e*	P	**Pb**	**13 08 43.7**	**+0.8**
NSY					*e*	S	**Sb**	**13 09 05.0**	**+2.4**
EWUT	**Wuta** baz=11	**1.60**	**15**		*e*	P	**Pn**	**13 08 41.5**	**+0.5**
LATG	**Datong** baz=18	**1.64**	**7**		*e*	P	**Pn**	**13 08 41.5**	**-0.3**
NDT	**Datong Townshi** baz=16	**1.71**	**6**		*e*	P	**Pn**	**13 08 43.0**	**+0.4**
PHUB	**P'eng-hu** baz=290	**1.72**	**291**		*e*	P	**Pn**	**13 08 42.5**	**-0.3**
PHUB					*e*	S	**Sn**	**13 09 03.6**	**-0.5**
NFF	**Wufeng Townshi** baz=359	**1.74**	**354**		*e*	P	**Pn**	**13 08 43.2**	**+0.1**
NSTT	**Nanjuang** baz=358	**1.75**	**351**		*e*	P	**Pn**	**13 08 43.5**	**+0.3**
PNG	**Penghu** baz=278	**1.75**	**293**		*e*	P	**Pn**	**13 08 43.2**	**0.0**
PNG					*e*	S	**Sn**	**13 09 04.1**	**-0.8**
NDS	**Dongshan** baz=8.0	**1.77**	**12**		*e*	P	**Pn**	**13 08 44.0**	**+0.6**
VCHM	**Qimei** baz=280	**1.77**	**281**		*e*	P	**Pn**	**13 08 43.9**	**+0.5**
VCHM					*e*	S	**Sn**	**13 09 05.2**	**0.0**
NSK	**Sanguang** baz=12	**1.77**	**1**		*e*	P	**Pn**	**13 08 44.0**	**+0.5**
TWC	**Suao** baz=12	**1.77**	**16**		*e*	P	**Pn**	**13 08 44.1**	**+0.6**
FUSB	**Fushanzhiwuyua** baz=20	**1.87**	**8**		*e*	P	**Pn**	**13 08 45.0**	**+0.1**
TIPB	**Shuangxi** baz=7.0	**2.12**	**13**		*e*	P	**Pn**	**13 08 48.6**	**+0.3**
YOJ	**Yonaguni jima**	**2.20**	**45**			P	**Pn**	**13 08 50.0**	**+0.6**
YOJ					*e*	S	**Sn**	**13 09 16.5**	**+0.6**
SXI1	**Grass Mountain** baz=8.0	**2.25**	**13**		*e*	P	**Pn**	**13 08 50.8**	**+0.7**
HATJ	**Hateruma jima**	**2.56**	**63**			P	**Pn**	**13 08 54.1**	**-0.2**
HATJ					*e*	S	**Sn**	**13 09 23.8**	**-1.0**
IRIF	**Iriomote-Funau**	**2.63**	**57**			P	**Pn**	**13 08 55.0**	**-0.3**
IRIF					*e*	S	**Sn**	**13 09 26.8**	**+0.2**
JKRS	**Kuro-shima**	**2.81**	**61**			P	**Pn**	**13 08 57.9**	**+0.2**
JKRS						S	**Sn**	**13 09 31.0**	**+0.1**
JIJ	**Ishigaki jima**	**2.97**	**60**			P	**Pn**	**13 08 60.0**	**0.0**
JIJ					*e*	S	**Sn**	**13 09 33.7**	**-1.3**
JISG	**Ishigakijimahi**	**3.22**	**58**			P	**Pn**	**13 09 03.1**	**-0.3**
JISG					*e*	S	**Sn**	**13 09 40.6**	**-0.4**
JTJ	**Tarama**	**3.55**	**60**			P	**Pn**	**13 09 08.0**	**0.0**
JTJ					*e*	S	**Sn**	**13 09 49.6**	**+0.3**
JIRB	**Irabujima**	**4.02**	**61**			P	**Pn**	**13 09 14.9**	**+0.5**
JMJ2	**Miyako jima3**	**4.11**	**63**			P	**Pn**	**13 09 15.7**	**+0.2**
JIKM	**Ikemajima**	**4.12**	**60**		*e*	P	**Pn**	**13 09 16.4**	**+0.6**
JOGS	**Gusukube**	**4.18**	**63**			P	**Pn**	**13 09 17.4**	**+0.9**

*IDC **26** 13:09:27.3±1.1,39.°23N×74.°22E,h0km,mb3.6/7,*
mbtmp3.6/10,ML3.2/3,Error ellipse: s-maj=30.1km
s-min=14.6km az=93.0
*SOME **26** 13:09:29.0,39.°43N×73.°67E,h10km*
*KRNET **26** 13:09:29.5±0.1,39.°45N×73.°68E,mb4.0*

ISC 26 13:09:33.2±1.8,39.°60N±0.°06×73.°53E±0.°03,h5km±10km,n38,σt=91/62,mb3.5/6,16C-2D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OHH	**Osh** baz=28	**1.09**	**328**	⇑	*i*	P	**Pg**	**13 09 53.7**	**-0.4**
OHH				⇑	*i*	S	**Sn**	**13 10 11.6**	**+0.9**
DRK	**Karamyk** baz=72	**1.34**	**265**	⇑	*i*	P	**Pn**	**13 09 56.7**	**-2.2**
DRK				⇑	*i*	S	**Sb**	**13 10 17.1**	**+0.4**
BTK	**Batken** baz=86	**2.14**	**283**	⇑	*e*	P	**Pn**	**13 10 10.7**	**+1.0**
BTK				⇑	*i*	S	**Sb**	**13 10 40.6**	**+1.2**
ARLS	**Aral** baz=11	**2.34**	**15**	⇑	*e*	P	**Pn**	**13 10 12.9**	**+0.4**
ARLS				⇑	*i*	S	**Sb**	**13 10 44.5**	**-0.7**
GAR	**Garm** baz=61	**2.57**	**258**	⇑	*i*	P	**Pn**	**13 10 15.6**	**0.0**
GAR				⇑	*i*	S	**Sn**	**13 10 49.2**	**+2.0**
TRKS	**Terek-Say** baz=17	**2.65**	**317**	⇓	*i*	P	**Pn**	**13 10 17.6**	**+0.8**
TRKS				⇓	*i*	S	**Sn**	**13 10 52.3**	**+2.8**
UCH	**Uchtor** baz=13	**2.73**	**15**	⇑	*e*	P	**Pn**	**13 10 18.6**	**+0.5**
UCH				⇑	*i*	S	**Sb**	**13 10 54.3**	**-2.4**
AAK	**Ala-Archa** 4.4nm,0.3s,baz=194,slow=12,SNR=5.8	**3.12**	**13**	Pn			**Pn**	**13 10 25.1**	**+1.9**
AAK	5.6nm,0.3s,baz=195,slow=8.4,SNR=6.1			Pg			**Pb**	**13 10 29.4**	**+0.1**
AAK	4.1nm,0.3s,baz=158,slow=19,SNR=1.8			Sn			**Sb**	**13 11 07.7**	**0.0**
AAK	7.9nm,0.3s,baz=129,slow=23,SNR=7.6 15nm,0.3s			Lg			Lg	13 11 15.4	
BOOM	**Boomskoye usch** baz=29	**3.41**	**31**	⇑	*i*	P	**Pn**	**13 10 27.2**	**-0.1**
BOOM				⇑	*i*	S	**Sn**	**13 11 09.4**	**+1.2**
TAS	**Tashkent** baz=1.0	**3.66**	**299**	⇑	*i*	P	**Pn**	**13 10 31.8**	**+1.2**
TAS				⇑	*i*	S	**Sn**	**13 11 17.5**	**+3.4**
IUG	**luzhnay** 665nm,0.7s	**3.68**	**315**		*e*	P	**Pb**	**13 10 40.7**	**+1.9**
IUG	118nm,0.5s				*e*	S	**Sg**	**13 11 32.5**	**+1.1**
KST	**Kastek** 13nm,0.5s	**3.90**	**27**		*e*	P	**Pb**	**13 10 44.6**	**+2.1**
KST					*e*	S	**Sg**	**13 11 39.0**	**+0.6**

45nm,0.8s
SGDS Sogindy 3.94 12 *e*P **Pb** 13 10 44.0 +0.9
6.5nm,0.6s
SGDS *e*S **Sg** 13 11 38.2 -1.5
23nm,0.5s
DGS Degeres 4.01 24 *e*P **Pb** 13 10 46.3 +1.9
11nm,0.7s
DGS *e*S **Sg** 13 11 42.1 +0.1
33nm,0.8s
MTBS Maitube 4.15 31 *e*P **Pb** 13 10 48.1 +1.4
9.8nm,0.5s
MTBS *e*S **Sg** 13 11 45.5 -0.9
24nm,0.6s
TNSS Tian-Shan 4.29 36 *e*P **Pb** 13 10 51.5 +2.2
8.1nm,0.4s
TNSS *e*S **Sg** 13 11 50.9 -0.1
14nm,0.6s
KRBS Karabastau 4.40 21 *e*P **Pb** 13 10 53.9 +3.0
0.3nm,0.1s
KRBS *e*S **Sg** 13 11 54.4 0.0
11nm,0.6s
BRLS Borolday 4.42 322 *e*P **Pb** 13 10 52.6 +1.3
4.6nm,0.5s
BRLS *e*S **Sg** 13 11 52.3 -2.7
37nm,0.5s
KTBS Karatobe 4.74 29 *e*P **Pb** 13 10 59.0 +2.2
8.4nm,0.8s
KTBS *e*S **Sg** 13 12 03.8 -1.6
28nm,0.8s
KUU Kurty 4.78 25 *e*P **Pb** 13 10 59.3 +1.9
5.5nm,0.5s
KUU *e*S **Sg** 13 12 04.6 -2.0
16nm,0.6s
CHKK Chushkaly 4.98 30 *e*P **Pb** 13 11 03.2 +2.4
3.6nm,0.4s
CHKK *e*S **Sg** 13 12 10.7 -2.3
13nm,0.4s
SATY Saty 5.04 45 *e*P **Pb** 13 11 05.3 +3.3
4.9nm,0.4s
SATY *e*S **Sg** 13 12 14.5 -0.6
20nm,0.5s
BTLS Baital 5.45 4 *e*P **Pb** 13 11 11.4 +2.5
2.0nm,0.3s
BTLS *e*S **Sg** 13 12 25.5 -2.7
7.9nm,0.5s
KPKS Kokpek 5.46 43 *e*P **Pb** 13 11 13.2 +4.1
6.9nm,0.5s
KPKS *e*S **Sg** 13 12 28.1 -0.6
10nm,0.6s
ARXS Arharly 5.61 33 *e*P **Pb** 13 11 14.9 +3.2
12nm,0.5s
ARXS *e*S **Sg** 13 12 31.7 -1.7
14nm,0.4s
BLB Baldybastay 5.82 38 *e*P **Pb** 13 11 19.9 +4.7
12nm,0.5s
BLB *e*S **Sg** 13 12 39.8 -0.2
14nm,0.8s
DJR Jarkent 6.64 43 *e*P Pb 13 11 34.8 +5.6
1.2nm,0.4s
DJR *e*S **Sg** 13 13 05.2 -1.2
3.6nm,0.6s
KURBB Kurchatov Arra 11.57 16 Lg Lg 13 15 41.2
baz=203,slow=30
AKTO Aktyubinsk 15.39 320 Pn **Pn** 13 13 12.3 +1.5
0.2nm,0.3s,baz=114,slow=13,SNR=3.5
2.3nm,0.6s
ZALV Zalesovo Beam 16.27 24 Pn **Pn** 13 13 20.1 -2.2
0.2nm,0.3s,baz=159,slow=16,SNR=1.8
0.5nm,0.4s
ARU Arti 19.52 335 P **P** 13 14 02.2 +1.0
1.5nm,0.3s,baz=114,slow=7.9,SNR=4.0
1.5nm,0.3s
FINES FINESS Array B 36.12 323 P **P** 13 16 35.6 -0.2
0.7nm,0.6s,baz=119,slow=11,SNR=5.1
0.7nm,0.6s
ARCES ARCESS Array B 39.10 336 P **P** 13 17 00.6 -0.4
0.7nm,0.7s,baz=95,slow=6.8,SNR=3.7
0.7nm,0.7s
NOA NORSAR Array B 43.17 321 P **P** 13 17 33.7 -0.9
0.5nm,0.6s,baz=90,slow=8.0,SNR=2.5
0.5nm,0.6s
TORD Torodi Ar. Bea 67.78 269 P **P** 13 20 30.0 -2.4
0.2nm,0.4s,baz=46,slow=5.3,SNR=2.4
0.2nm,0.4s
YKA Yellowknife Ar 78.04 4 P **P** 13 21 30.7 -1.7
0.3nm,0.5s,baz=351,slow=5.6,SNR=4.6
0.3nm,0.5s
WRA Warramunga Arr 81.99 124 P P 13 21 45.3 -9.1
0.2nm,0.6s,baz=324,slow=5.9,SNR=1.5
0.2nm,0.6s
VNDA Vanda 127.93 164 PKP PKPdf 13 28 32.3 -6.4
0.6nm,0.7s,baz=291,slow=5.3,SNR=4.8

*IDC **26** 13:14:30.3±0.7,38°.07N×144°.76E,h0km,mb3.8/10, mbtmp3.8/15,ML3.1/5,Error ellipse: s-maj=21.2km s-min=15.4km az=121.0*
*NEIC **26** 13:14:33.6±1.4,38°.13N±0°.07×144°.7E±0°.1,h22km±5km, mb4.5/16,Error ellipse: s-maj=16.7km s-min=9.1km az=114.0*
*MOS **26** 13:14:33.8±1.7,38°.30N×144°.66E,h31km,mb4.2/9,Error ellipse: s-maj=10.7km s-min=6.2km az=89.9*
*JMA **26** 13:14:34.7±0.2,38°.2N±0°.8×14°.5E±°,h53km,MV4.4/33, FAR E OFF NORTH HONSHU*
ISC 26 13:14:32.1±0.6,38°.23N±0°.06×144°.69E±0°.06,h10km,n102, σ2s42/120,mb4.2/22,7C-6D,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**2.51**	**291**	*i* P	**Pn**	**13 15 12.9**	**-0.2**
JIKH	**Ishinomakikobu**	**2.54**	**273**	*i* P	**Pn**	**13 15 12.7**	**-0.7**
JIKH				S	**Sn**	**13 15 40.5**	**-3.8**
JKMT	**Kesennumamotoy**	**2.59**	**284**	*i* P	**Pn**	**13 15 13.7**	**-0.4**
JKMT				S	**Sn**	**13 15 42.6**	**-3.0**
MIYJ	**Miyakonagasawa**	**2.61**	**302**	P	**Pn**	**13 15 14.0**	**-0.4**
MIYJ				S	**Sn**	**13 15 43.6**	**-2.6**
JIO	**Ouri**	**2.64**	**276**	P	**Pn**	**13 15 14.3**	**-0.5**
JIO				S	**Sn**	**13 15 43.5**	**-3.2**
JMK	**Ichinoseki**	**2.81**	**286**	P	**Pn**	**13 15 17.1**	**0.0**
JMK				S	**Sn**	**13 15 48.8**	**-2.3**
JOM	**Ohasama**	**2.93**	**296**	*i* P	**Pn**	**13 15 18.9**	**+0.2**
JOM				S	**Sn**	**13 15 52.8**	**-1.2**
JMM	**Marumori**	**3.10**	**264**	P	**Pn**	**13 15 20.1**	**-1.0**
JANG	**Nango**	**3.26**	**312**	P	**Pn**	**13 15 23.4**	**0.0**
JANG				S	**Sn**	**13 16 00.1**	**-2.1**
JYK	**Kaneyama**	**3.46**	**283**	P	**Pn**	**13 15 26.4**	**+0.3**
JYK				*e*S	**Sn**	**13 16 05.9**	**-1.3**
JFT	**Otama**	**3.52**	**260**	P	**Pn**	**13 15 26.9**	**0.0**
JFT				S	**Sn**	**13 16 05.5**	**-3.1**
JTM	**Tenmabayashi**	**3.79**	**313**		**Pn**	**13 15 30.5**	**-0.1**
ERM	**Erimo**	**3.96**	**343**		**Pn**	**13 15 33.0**	**+0.1**
ERM	**Erimo**	**3.96**	**343**	*i* P	**Pn**	**13 15 33.6**	**+0.7**
JYT	**Yasato**	**4.11**	**242**		**Pn**	**13 15 32.7**	**-2.2**
JOT	**Ohata**	**4.21**	**319**	*e*P	**Pn**	**13 15 36.3**	**-0.1**
JOT				*e*S	**Sn**	**13 16 22.4**	**-3.3**
JCH	**Churui**	**4.49**	**347**	*e*P	**Pn**	**13 15 39.5**	**-0.7**
JCH				S	**Sn**	**13 16 29.6**	**-3.0**
BSO1	**Boso 1**	**4.66**	**221**	*e*P	**Pn**	**13 15 40.0**	**-2.1**
JSD	**Sado**	**5.07**	**270**	Pn	**Pn**	**13 15 48.0**	**-0.3**
JRY	**Ryogami san**	**5.13**	**246**	P	**Pn**	**13 15 48.2**	**-0.8**
JRY				S	**Sn**	**13 16 41.5**	**-6.8**
NEM2	**Nemuro 2**	**5.19**	**9**	*e*P	**Pn**	**13 15 47.8**	**-1.9**
NEM2				*e*S	**Sn**	**13 16 43.4**	**-6.3**
NMR	**Nemuro--Hokkai**	**5.19**	**8**	*e*P	**Pn**	**13 15 47.9**	**-1.9**
NMR				*e*S	**Sn**	**13 16 43.2**	**-6.5**
JEW	**Eniwo**	**5.22**	**333**		**Pn**	**13 15 49.9**	**-0.4**
JOD2	**Odawara 2**	**5.39**	**238**	*e*P	**Pn**	**13 15 51.4**	**-1.2**
JOD2				*e*S	**Sn**	**13 16 48.1**	**-6.6**
MJA0	**Matsu Arr-Jizo**	**5.40**	**254**	*e*P	**Pn**	**13 15 54.0**	**+1.2**
MJA0				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR	**Matsushiro Arr**	**5.43**	**254**	Pn	**Pn**	**13 15 52.5**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=82,slow=16,SNR=25						
MJAR				Sn	**Sn**	**13 16 50.3**	**-5.4**
	comp=Z,0.1nm,0.3s,baz=89,slow=30,SNR=1.6						
	comp=Z,5.4nm,0.6s						
MJAR	**Matsushiro Arr**	**5.43**	**254**		**Pn**	**13 15 52.7**	**-0.5**
MJAR	**Matsushiro Arr**	**5.43**	**254**	P	**Pn**	**13 15 52.7**	**-0.5**
MAJO	**Matsushiro**	**5.43**	**254**		**Pn**	**13 15 52.2**	**-1.0**
MAJO	**Matsushiro**	**5.43**	**254**	*c i* P	**Pn**	**13 15 54.2**	**+1.0**
MJB9	**Matsu-Tunnel**	**5.43**	**254**		**Pn**	**13 15 51.9**	**-1.3**
GLVR	**Golovnino**	**5.54**	**6**	ǁ *i* P	**Pn**	**13 15 53.2**	**-1.4**
GLVR				*i* S	**Sn**	**13 16 51.1**	**-7.1**
GLVR				pmax	pmax		
	comp=Z,130nm,0.1s						
GLVR				smax	smax		
	comp=N,735nm,0.3s						
GLVR				smax	smax		
	comp=E,264nm,0.3s						
JOSM	**Okushiri--Mats**	**5.54**	**316**	P	**Pn**	**13 15 55.7**	**+1.0**
JTKR	**Abashiri--Toko**	**5.76**	**354**	P	**Pn**	**13 15 57.2**	**-0.4**
JTKR				*e*S	**Sn**	**13 16 59.5**	**-4.4**
SHO	**Shikotan**	**5.86**	**15**	*c i* P	**Pn**	**13 15 56.9**	**-2.1**
SHO				*i* S	**Sn**	**13 16 58.9**	**-7.3**
SHO				pmax	pmax		
	comp=N,13nm,0.2s						
SHO				pmax	pmax		
	comp=E,20nm,0.2s						
SHO				pmax	pmax		
	comp=Z,63nm,0.2s						
SHO				smax	smax		
	comp=E,175nm,0.2s						
SHO				smax	smax		
	comp=N,192nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**5.86**	**8**	*c i* P	**Pn**	**13 15 57.9**	**-1.1**
YUK				*i* S	**Sn**	**13 16 59.7**	**-6.6**
YUK				pmax	pmax		
	comp=N,66nm,0.2s						
YUK				pmax	pmax		
	comp=E,113nm,0.2s						
YUK				pmax	pmax		
	comp=Z,237nm,0.2s						
YUK				smax	smax		
	comp=N,350nm,0.3s						
YUK				smax	smax		
	comp=E,628nm,0.5s						
RUSJ	**Misakicho**	**5.88**	**4**	*e*P	**Pn**	**13 15 58.4**	**-0.9**
RUSJ				*e*S	**Sn**	**13 17 02.3**	**-4.4**
JHR	**Hokuryu**	**5.94**	**339**	*e*P	**Pn**	**13 16 01.8**	**+1.6**
JHR				*e*S	**Sn**	**13 17 07.0**	**-1.3**
JKA	**Kamikawa-asahi**	**6.08**	**346**		**Pn**	**13 16 02.4**	**+0.3**
ASAJ	**Asahikawa**	**6.09**	**346**	P	**Pn**	**13 16 02.4**	**+0.3**
JGF	**Kuroka**	**6.43**	**248**	Pn	**Pn**	**13 16 05.5**	**-1.5**
JHJ2	**Mitsune**	**6.47**	**219**	Pn	**Pn**	**13 16 04.8**	**-2.6**
JHJ	**Hachijo jima 2**	**6.48**	**220**	Pn	**Pn**	**13 16 05.8**	**-1.8**
	comp=E,8.2nm,0.3s,baz=43,slow=19,SNR=7.0						
JHJ				Sn	Sn	13 17 13.9	-7.6
	comp=E,19nm,0.3s,baz=60,slow=20,SNR=7.9						
	comp=E,39nm,0.4s						
INU	**Inuyama**	**6.80**	**247**	Pn	**Pn**	**13 16 12.6**	**+0.7**
KUR	**Kuril'sk**	**7.39**	**18**	*e*P	**Pn**	**13 16 18.6**	**-1.3**
KUR				*e*S	**Sn**	**13 17 36.0**	**-7.8**
KUR				pmax	pmax		
	comp=Z,35nm,0.7s						
KUR				smax	smax		
	comp=N,96nm,0.6s						
KUR				smax	smax		
	comp=E,62nm,0.3s						
YSS	**Yuzh-Sakhalins**	**8.83**	**351**	Pn	**Pn**	**13 16 40.5**	**+0.8**
USA0B	**Ussuriysk Arra**	**11.27**	**306**	ǁ *e*P	**Pn**	**13 17 15.1**	**+2.0**
USRK	**Ussuriysk Ar.**	**11.27**	**306**	Pn	**Pn**	**13 17 15.3**	**+2.1**
	comp=E,0.3nm,0.3s,baz=99,slow=14,SNR=7.3						
	comp=E,5.2nm,0.7s						
USRK	**Ussuriysk Ar.**	**11.27**	**306**		**Pn**	**13 17 13.7**	**+0.6**
USRK	**Ussuriysk Ar.**	**11.27**	**306**	P	**Pn**	**13 17 13.7**	**+0.6**
KSRS	**Korea Array**	**13.28**	**272**	Pn	**Pn**	**13 17 42.4**	**+1.7**
	comp=E,0.1nm,0.3s,baz=74,slow=14,SNR=5.2						
	comp=E,0.9nm,0.7s						
KSRS	**Korea Array**	**13.28**	**272**	*e*P	**Pn**	**13 17 43.4**	**+2.7**
KLR	**Kul'dur**	**14.41**	**324**	Pn	**Pn**	**13 17 56.6**	**+0.5**
	comp=E,0.1nm,0.3s,baz=154,slow=14,SNR=3.5						
	comp=E,2.0nm,0.9s						
KLR	**Kul'dur**	**14.41**	**324**	ǁ *e*P	**Pn**	**13 17 56.5**	**+0.5**
KLR				pmax	pmax		
	comp=Z,8.0nm,1.3s						
ZEA	**Zeya**	**19.59**	**328**	*e*P	**Pn**	**13 19 02.0**	**+0.4**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MA2	**Magadan**	**21.71**	**8**	ǁ *e*P	**P**	**13 19 24.7**	**+1.6**
MA2				pmax	pmax		
	comp=Z,13nm,1.3s						
SEY	**Seymchan**	**25.17**	**8**	P	**P**	**13 19 58.8**	**+1.5**
	comp=Z,3.5nm,0.8s,baz=178,slow=7.5,SNR=11						
	comp=Z,3.5nm,0.8s						
SEY	**Seymchan**	**25.17**	**8**	ǁ *e*P	**P**	**13 19 59.3**	**+2.0**
SEY				pmax	pmax		
	comp=Z,11nm,2.0s						
YAK	**Yakutsk**	**25.56**	**344**	ǁ *e*P	**P**	**13 20 03.4**	**+2.5**
YAK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**26.66**	**128**	T	T	13 47 42.7	
	baz=319,slow=74,SNR=19						
H11N1	**WAKE ISLAND Hy**	**26.67**	**128**	T	T	13 47 43.0	
	baz=319,slow=74,SNR=14						
H11N3	**WAKE ISLAND Hy**	**26.68**	**128**	T	T	13 47 45.2	
	baz=319,slow=74,SNR=18						
H11S1	**WAKE ISLAND Hy**	**27.47**	**130**	T	T	13 48 56.5	
	baz=320						
H11S3	**WAKE ISLAND Hy**	**27.47**	**130**	T	T	13 48 53.1	
	baz=320						
H11S2	**WAKE ISLAND Hy**	**27.48**	**130**	T	T	13 49 02.2	
	baz=320						
TIXI	**Tiksi**	**34.46**	**351**	ǁ *e*P	**P**	**13 21 21.7**	**+2.1**
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ZALV	**Zalesovo Beam**	**43.05**	**312**	PcP	**PcP**	**13 24 22.0**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=90,slow=3.5,SNR=1.9						
O18K	**Koktuh Hills**	**43.10**	**40**	P	**P**	**13 22 30.6**	**-1.6**
O18K				IAmb	IAmb	13 22 36.6	
	comp=Z,6.7nm,0.9s						
KDAK	**Kodiak Island**	**44.46**	**43**	P	**P**	**13 22 43.4**	**+0.3**
KDAK	**Kodiak Island**	**44.46**	**43**	P	**P**	**13 22 43.4**	**+0.3**
KDAK				pmax	pmax		
	comp=Z,13nm,0.7s						
CAST	**Castle Rocks**	**44.76**	**35**	P	**P**	**13 22 45.2**	**-0.3**
SKT	**Skwentna**	**44.96**	**37**	P	**P**	**13 22 45.5**	**-1.6**
SKT				IAmb	IAmb	13 23 00.8	
	comp=Z,4.3nm,0.8s						
MKAR	**Makanchi Array**	**45.70**	**302**	P	**P**	**13 22 52.9**	**-0.2**
	comp=Z,1.0nm,0.8s,baz=96,slow=1.4,SNR=3.5						
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**45.70**	**302**	*ce*P	**P**	**13 22 56.2**	**+3.0**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ILAR	**Eielson Array**	**47.08**	**33**	P	**P**	**13 23 03.6**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=263,slow=6.9,SNR=5.2						
	comp=Z,0.4nm,0.7s						
ILAR	**Eielson Array**	**47.08**	**33**	*e*P	**P**	**13 23 04.2**	**+0.4**
KURK	**Kurchatov**	**47.25**	**308**	P	**P**	**13 23 06.8**	**+1.6**
KURK	**Kurchatov**	**47.25**	**308**	IAmb	IAmb	13 23 40.4	
	comp=Z,5.2nm,1.1s						
KURK	**Kurchatov**	**47.25**	**308**	P	**P**	**13 23 06.9**	**+1.6**
KURK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KURBB	**Kurchatov Arra**	**47.33**	**308**	P	**P**	**13 23 06.8**	**+1.0**
	comp=Z,0.8nm,0.5s,baz=86,slow=9.2,SNR=5.1						
	comp=Z,0.8nm,0.5s						
BMAR	**Burnt Mountain**	**48.02**	**29**	P	**P**	**13 23 12.2**	**+1.1**
SCRK	**Sand Creek**	**48.37**	**34**	P	**P**	**13 23 13.5**	**-0.4**
MTN	**Manton Dam**	**52.37**	**197**	P	**P**	**13 23 42.8**	**-1.7**
KNRA	**Kununurra**	**55.67**	**199**	P	**P**	**13 24 07.9**	**-0.6**
WB0	**Warramunga Arr**	**58.50**	**191**	P	**P**	**13 24 26.4**	**-2.2**
WB0				IAmb	IAmb	13 24 27.3	
	comp=Z,2.5nm,0.7s						
WR0	**Warramunga Arr**	**58.66**	**191**	P	**P**	**13 24 27.8**	**-1.9**
WR0				IAmb	IAmb	13 24 34.7	
	comp=Z,8.8nm,1.4s						
WB2	**Warramunga Arr**	**58.68**	**191**	P	**P**	**13 24 27.9**	**-1.9**
WB2				IAmb	IAmb	13 25 00.2	
	comp=Z,9.6nm,1.4s						
WRA	**Warramunga Arr**	**58.68**	**191**	P	**P**	**13 24 27.9**	**-1.9**
	comp=Z,1.2nm,0.6s,baz=14,slow=7.4,SNR=16						
WRA				PcP	**PcP**	**13 25 19.1**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=0.7,slow=4.1,SNR=2.3						
	comp=Z,1.2nm,0.6s						
YKA	**Yellowknife Ar**	**61.45**	**31**	P	**P**	**13 24 48.2**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=294,slow=5.9,SNR=4.2						
	comp=Z,0.5nm,0.8s						
YKA	**Yellowknife Ar**	**61.45**	**31**	*e*P	**P**	**13 24 51.3**	**+2.9**
YKA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ASAR	**Alice Springs**	**62.40**	**191**	P	**P**	**13 24 53.9**	**-1.3**
	comp=Z,0.6nm,0.9s,baz=6.3,slow=6.8,SNR=11						
ASAR				PcP	**PcP**	**13 25 34.5**	**-0.1**
	comp=Z,0.4nm,0.9s,baz=15,slow=4.3,SNR=4.5						
	comp=Z,0.6nm,0.9s						
FINES	**FINESS Array B**	**68.94**	**333**	*ce*P	**P**	**13 25 37.7**	**+0.7**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NVAR	**Mina Array Bea**	**72.18**	**55**	P	**P**	**13 25 58.2**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=295,slow=4.9,SNR=6.6						
	comp=Z,0.7nm,0.8s						
BW06	**Boulder Array**	**74.96**	**47**	P	**P**	**13 26 13.7**	**0.0**
PD31	**Pinedale Array**	**74.96**	**47**	P	**P**	**13 26 13.8**	**0.0**
PDAR	**Pinedale Array**	**74.96**	**47**	P	**P**	**13 26 14.4**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=262,slow=1.8,SNR=10						
	comp=Z,0.8nm,0.7s						
PDAR	**Pinedale Array**	**74.96**	**47**	P	**P**	**13 26 14.0**	**+0.2**
SRU	**San Rafael Swe**	**76.65**	**51**	P	**P**	**13 26 23.9**	**+0.4**
SRU				IAmb	IAmb	13 26 24.8	
	comp=Z,2.2nm,0.6s						
SRU	**San Rafael Swe**	**76.65**	**51**	P	**P**	**13 26 23.9**	**+0.4**
SRU				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ANMO	**Albuquerque**	**81.81**	**52**	*ce*P	**P**	**13 26 54.3**	**+2.5**
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.3s						
319A	**Douglas**	**82.34**	**56**	P	**P**	**13 26 54.0**	**-0.5**
319A				IAmb	IAmb	13 26 56.2	
	comp=Z,2.9nm,0.7s						
TXAR	**Lajitas Array**	**87.32**	**54**	P	**P**	**13 27 19.5**	**0.0**
	comp=Z,0.6nm,1.0s,baz=280,slow=2.7,SNR=4.4						
	comp=Z,0.6nm,1.0s						

*MDD **26** 13:15:28.8±0.2,36°.32N×3°.54W,h12km,mb_Lg3.0/21, Error ellipse: s-maj=1.9km s-min=1.5km az=149.0*
*CNRM **26** 13:15:28.8,36°.00N×2°.96W,h105km,ml2.7*
*SFS **26** 13:15:28.0,36°.31N×3°.53W,ML3.0,ALBORAN NORTE*
*IGIL **26** 13:15:29.4,36°.32N×3°.54W,h5km,ML2.5*
*INMG **26** 13:15:29.8±1.4,36°.36N×3°.50W,h17km±3km,ML2.5,Error ellipse: s-maj=2.1km s-min=1.7km az=178.0*
ISC 26 13:15:29.6±1.1,36°.32N±0°.02×3°.50W±0°.02,h35km±3km, n73,σ1s62/133,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ISC	Time	Res
				Op		h m s	ISC
EALB	**Alboran**	**0.53**	**135**	Pg	**Pb**	**13 15 40.6**	**-0.2**
EALB				Sg	**Sb**	**13 15 47.5**	**-1.0**
EALB				*i* Vmb_Lg		13 15 49.0	
ELGU	**Los Guajares,**	**0.56**	**349**	Pg	**Pb**	**13 15 38.1**	**-3.2**
ELGU				Sg	**Sb**	**13 15 45.7**	**-3.6**
ELGU				*i* Vmb_Lg		13 15 46.6	
EBER	**Berja**	**0.76**	**40**	Pg	**Pn**	**13 15 43.5**	**-0.6**
EBER				Sg	**Sn**	**13 15 53.4**	**-0.9**
EBER				*i* Vmb_Lg		13 15 55.4	
EQUE	**Quentar**	**0.88**	**3**	Pg	**Pn**	**13 15 44.6**	**-1.1**
EQUE				Sg	**Sn**	**13 15 56.4**	**-1.0**
EQUE				*i* Vmb_Lg		13 15 57.7	
EGOR	**Sierra Gorda,**	**0.93**	**328**	Pg	**Pn**	**13 15 43.8**	**-2.5**
EGOR				Sg	**Sn**	**13 15 56.6**	**-1.9**
EGOR				*i* Vmb_Lg		13 15 59.0	
EMIJ	**Mijas**	**1.06**	**284**	Pg	**Pn**	**13 15 46.0**	**-2.0**
EMIJ				Sg	**Sn**	**13 15 59.1**	**-2.5**
EMIJ				*i* Vmb_Lg		13 16 00.3	
WMELI	**Melilla**	**1.09**	**156**	P	**Pn**	**13 15 49.0**	**+0.5**
WMELI				S	**Sb**	**13 16 06.9**	**+2.8**
EMEL	**Melilla**	**1.11**	**156**	Pg	**Pb**	**13 15 50.1**	**-0.2**
EMEL				Sg	**Sb**	**13 16 04.5**	**0.0**
PALE	**Palemas**	**1.16**	**198**	P	**Pn**	**13 15 50.5**	**+1.1**
PALE				S	**Sb**	**13 16 06.5**	**+0.6**
GOG	**Mont Gurugu**	**1.17**	**159**	P	**Pn**	**13 15 50.0**	**+0.4**
GOG				S	**Sn**	**13 16 02.3**	**-2.1**
ENIJ	**Nijar**	**1.22**	**58**	Pg	**Pn**	**13 15 50.1**	**-0.2**
ENIJ				Sg	**Sb**	**13 16 06.8**	**-1.0**
ENIJ				*i* Vmb_Lg		13 16 10.0	
CHAS	**Isla Isabel II**	**1.43**	**142**	P	**Pb**	**13 15 57.2**	**+1.5**
CHAS				S	**Sb**	**13 16 12.7**	**-0.9**
EQES	**Quesada**	**1.52**	**13**	Pg	**Pb**	**13 15 56.0**	**-1.3**
EQES				Sg	**Sb**	**13 16 15.5**	**-0.7**
EQES				*i* Vmb_Lg		13 16 19.5	
CEU	**Ceuta**	**1.58**	**255**	P	**Pn**	**13 15 53.7**	**-1.4**
CEU				S	**Sn**	**13 16 11.8**	**-3.3**
EJIF	**Jimena Fronter**	**1.60**	**275**	Pn	**Pn**	**13 15 55.5**	**+0.1**
EJIF				Sn	**Sn**	**13 16 15.4**	**+0.6**
CHEFC	**Chefchaouen**	**1.93**	**232**	P	**Pn**	**13 16 01.5**	**+1.4**
TLOR	**Lorca, Murcia**	**1.97**	**47**	Pn	**Pn**	**13 16 02.1**	**+1.6**
TLOR				Sn	**Sn**	**13 16 25.4**	**+1.4**
ESPR	**Espera**	**1.98**	**287**	Pn	**Pn**	**13 16 01.8**	**+1.3**
ESPR				Sn	**Sn**	**13 16 25.4**	**+1.3**
EADA	**Adamuz**	**2.04**	**335**	Pn	**Pn**	**13 16 02.1**	**+0.7**
EADA				Sn	**Sn**	**13 16 26.6**	**+0.9**
EADA				*i* Vmb_Lg		13 16 34.3	
EZAR	**Zarzadilla de**	**2.12**	**42**	Pn	**Pn**	**13 16 02.3**	**-0.3**
EZAR				Sn	**Sn**	**13 16 28.4**	**+0.6**
JBK	**JBK**	**2.12**	**159**	S	**Sn**	**13 16 23.1**	**-5.0**
ECAB	**El Cabril**	**2.33**	**319**	Pn	**Pn**	**13 16 05.7**	**+0.2**
ECAB				Sn	**Sn**	**13 16 33.6**	**+0.7**
ECAB				*i* Vmb_Lg		13 16 43.3	
EMUR	**La Murta**	**2.36**	**49**	Pn	**Pn**	**13 16 06.0**	**0.0**
EMUR				Sn	**Sn**	**13 16 33.6**	**-0.1**
EMUR				*i* Vmb_Lg		13 16 36.5	
CART	**Cartagena**	**2.37**	**57**	P	**Pn**	**13 16 05.0**	**-1.0**
CART				S	**Sn**	**13 16 31.1**	**-2.6**
ETOB	**Tobarra**	**2.79**	**33**	Pn	**Pn**	**13 16 14.4**	**+2.5**
ETOB				Sn	**Sn**	**13 16 45.7**	**+1.3**
ETOB				*i* Vmb_Lg		13 16 57.0	
LCRM	**LCR**	**2.86**	**203**	P	**Pn**	**13 16 14.2**	**+1.3**
EMIN	**Mina Concepcio**	**2.92**	**301**	Pn	**Pn**	**13 16 13.6**	**-0.1**
EMIN				Sn	**Sn**	**13 16 47.2**	**-0.3**
EMIN				*i* Vmb_Lg		13 16 50.6	
AFON	**Font Roja**	**3.32**	**44**	Pn	**Pn**	**13 16 19.1**	**-0.1**
AFON				Sn	**Sn**	**13 16 57.4**	**0.0**
AFON				*i* Vmb_Lg		13 17 02.8	
ESDC	**Sonseca Array**	**3.37**	**354**	Pn	**Pn**	**13 16 20.9**	**+1.1**
ESDC				Sn	**Sn**	**13 16 58.6**	**-0.1**
ESDC				*i* Vmb_Lg		13 17 17.4	
PBAR	**Barrancos**	**3.38**	**304**	*e*Pn	Pn	13 16 04.3	-15
PBAR				*e*Sn	Sn	13 16 42.3	-16
PBAR				A	A	13 16 59.1	
	5.5nm,0.6s						
EGRO	**El Granado**	**3.42**	**292**	Pn	**Pn**	**13 16 20.7**	**+0.3**
EGRO				Sn	**Sn**	**13 16 58.4**	**-1.2**
EGRO				*i* Vmb_Lg		13 17 01.1	
CZD	**Col de Zad**	**3.52**	**202**	P	**Pn**	**13 16 20.7**	**-1.4**
CZD				S	**Sn**	**13 16 59.9**	**-2.7**
EBEN2	**Beniarda presa**	**3.53**	**47**	Sn	**Sn**	**13

MORF				*e*Sn	**Sn**	13 17 20.1	-0.3
MORF				A	A	13 17 26.0	
	comp=N,8.0nm,0.3s						
EPLA	**Plasencia**	**4.25**	**332**	Pn	**Pn**	**13 16 32.4**	**+0.4**
EPLA				Sn	**Sn**	**13 17 19.4**	**-1.0**
EPLA				Sg	**Sb**	**13 17 39.3**	**+4.7**
GUD	**Guadarrama**	**4.35**	**353**	Pn	**Pn**	**13 16 34.4**	**+1.1**
GUD				Sn	**Sn**	**13 17 21.4**	**-1.5**
GUD				Sg	**Sb**	**13 17 42.0**	**+4.6**
PFVI	**Vila Bisbo**	**4.36**	**282**	*e*Pn	**Pn**	**13 16 34.5**	**+1.2**
PFVI				*e*Sn	**Sn**	**13 17 22.6**	**-0.3**
PFVI				A	A	13 17 26.9	
	comp=N,11nm,0.8s						
PTEO	**Sao Teotonio**	**4.36**	**288**	*e*Pn	**Pn**	**13 16 34.9**	**+1.5**
PTEO				*e*Sn	**Sn**	**13 17 23.4**	**+0.4**
PTEO				A	A	13 17 26.9	
	comp=N,8.7nm,0.7s						
PMRV	**Marv??o**	**4.37**	**316**	*e*Pn	**Pn**	**13 16 34.5**	**+0.9**
PMRV				*e*Sn	**Sn**	**13 17 22.7**	**-0.6**
PMRV				A	A	13 17 57.2	
	comp=N,4.3nm,0.4s						
PNCL	**Nicolau / Gran**	**4.40**	**295**	*e*Pn	**Pn**	**13 16 34.7**	**+0.8**
PNCL				*e*Sn	**Sn**	**13 17 22.8**	**-1.0**
PNCL				A	A	13 17 27.2	
	comp=N,4.4nm,0.4s						
FIGM	**Figuig**	**4.57**	**155**	P	Pn	13 16 31.8	-4.6
FIGM				S	Sn	13 17 12.9	-15
ETOR	**Torete**	**4.63**	**14**	Pn	**Pn**	**13 16 38.8**	**+1.6**
ETOR				Sn	**Sn**	**13 17 29.5**	**-0.4**
ETOR				Sg	**Sb**	**13 17 50.6**	**+5.1**
PMTG	**Montargil**	**4.65**	**308**	*e*Pn	**Pn**	**13 16 38.2**	**+0.9**
PMTG				*e*Sn	**Sn**	**13 17 28.8**	**-1.2**
PMTG				A	A	13 17 57.8	
	comp=N,4.3nm,0.6s						
EMOS	**Mosqueruela**	**4.69**	**30**	Pn	**Pn**	**13 16 38.5**	**+0.5**
EMOS				Sn	**Sn**	**13 17 30.6**	**-0.7**
EIBI	**Ibiza**	**4.70**	**53**	Pn	**Pn**	**13 16 38.7**	**+0.7**
EIBI				Sn	**Sn**	**13 17 29.1**	**-2.2**
PCBR	**Castelo Branco**	**4.71**	**319**	*e*Pn	**Pn**	**13 16 39.1**	**+0.9**
PCBR				*e*Sn	**Sn**	**13 17 29.9**	**-1.7**
PCBR				A	A	13 17 31.9	
	comp=N,4.3nm,0.5s						
PACT	**Alcochete**	**4.89**	**302**	*e*Pn	**Pn**	**13 16 41.9**	**+1.2**
PACT				*e*Sn	**Sn**	**13 17 35.5**	**-0.6**
PSBE	**So Bento**	**5.26**	**309**	*e*Pn	**Pn**	**13 16 46.9**	**+1.1**
PSBE				*e*Sn	**Sn**	**13 17 43.2**	**-2.1**
PMAFR	**Mafra**	**5.29**	**302**	*e*Pn	**Pn**	**13 16 47.7**	**+1.5**
PMAFR				*e*Sn	**Sn**	**13 17 44.5**	**-1.4**
PCAS	**Casmilo, Conde**	**5.42**	**315**	*e*Pn	**Pn**	**13 16 49.1**	**+1.1**
PCAS				*e*Sn	**Sn**	**13 17 47.1**	**-2.1**
MVO	**Moncorvo**	**5.57**	**331**	*e*Pn	**Pn**	**13 16 51.3**	**+1.2**
PVIS	**Viseu**	**5.58**	**323**	*e*Pn	**Pn**	**13 16 51.1**	**+0.9**
PVIS				*e*Sn	**Sn**	**13 17 52.1**	**-1.0**
PBRG	**Braganca**	**6.03**	**336**	*e*Pn	**Pn**	**13 16 57.7**	**+1.3**
OUZM	**OUZ**	**6.04**	**208**	P	**Pn**	**13 16 59.8**	**+3.1**
POLO	**Lamas de Olo**	**6.06**	**328**	*e*Pn	**Pn**	**13 16 57.9**	**+1.1**
ECAL	**Calabor**	**6.15**	**337**	Pn	**Pn**	**13 16 59.1**	**+1.1**
ECAL				Sn	**Sn**	**13 18 04.5**	**-2.7**
OUK	**Oukaimeden**	**6.26**	**217**	P	**Pn**	**13 17 00.8**	**+0.9**
ELOB	**Lobios**	**6.58**	**329**	Pn	**Pn**	**13 17 02.3**	**-1.6**
ELOB				Sn	**Sn**	**13 18 13.4**	**-4.3**
PGAV	**Gavieira, Arco**	**6.75**	**328**	*e*Pn	**Pn**	**13 17 07.8**	**+1.6**
PGAV				*e*Sn	**Sn**	**13 18 21.5**	**-0.4**

*IDC **26** 13:16:22.2±5.4,38°.86N×75°.63E,h0km,mb3.5/3, mbtmp3.5/5,ML3.2/2, Error ellipse: s-maj=107.4km s-min=27.0km az=98.0*
*KRNET **26** 13:16:34.0±0.1,39°.41N×73°.74E,mb3.6*
ISC 26 13:16:35.7±1.4,**39°.45N**±0°.08×**73°.70E**±0°.07,**h10**km,**n13,** σ0**89**/**22**,**mb3.5/3**,**16C**,**Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.28**	**327**	⇑*i*P		**Pn**	**13 16 58.4**	**-1.3**
	baz=27							
OHH				⇑*i*S		**Sb**	**13 17 16.6**	**+0.1**
	baz=27							
DRK	**Karamyk**	**1.47**	**272**	⇑*i*P		**Pn**	**13 17 01.6**	**-0.9**
	baz=73							
DRK				⇑*i*S		**Sb**	**13 17 21.9**	**-0.2**
	baz=73							
BTK	**Batken**	**2.30**	**286**	⇑*i*P		**Pn**	**13 17 14.3**	**+0.5**
	baz=87							
BTK				⇑*i*S		**Sn**	**13 17 43.7**	**+1.5**
	baz=87							
ARLS	**Aral**	**2.45**	**11**	⇑*i*P		**Pn**	**13 17 16.2**	**+0.2**
	baz=10.0							
ARLS				⇑*i*S		**Sn**	**13 17 47.0**	**+0.9**
	baz=10.0							
GAR	**Garm**	**2.66**	**261**	⇑*e*P		**Pn**	**13 17 19.3**	**+0.5**
	baz=62							
GAR				⇑*i*S		**Sn**	**13 17 52.3**	**+1.1**
	baz=62							
UCH	**Uchtor**	**2.84**	**12**	⇑*e*P		**Pn**	**13 17 21.9**	**+0.3**
	baz=11							
UCH				⇑*i*S		**Sn**	**13 17 57.0**	**+0.9**
	baz=11							
TRKS	**Terek-Say**	**2.85**	**318**	⇑*e*P		**Pn**	**13 17 21.1**	**-0.3**
	baz=17							
TRKS				⇑*i*S		**Sn**	**13 17 55.5**	**-0.3**
	baz=17							
AAK	**Ala-Archa**	**3.24**	**10**	Pn		**Pn**	**13 17 25.5**	**-1.2**
	0.8nm,0.3s,baz=214,slow=11,SNR=1.4							
AAK				Sn		**Sb**	**13 18 13.6**	**+0.6**
	2.2nm,0.3s,baz=135,slow=10.0,SNR=2.1 3.0nm,0.4s							
BOOM	**Boomskoye usch**	**3.48**	**29**	⇑*i*P		**Pn**	**13 17 30.4**	**+0.3**
	baz=28							
BOOM				⇑*i*S		**Sn**	**13 18 11.4**	**0.0**
	baz=28							
AKTO	**Aktyubinsk**	**15.58**	**320**	Pn		**P**	**13 20 20.2**	**+0.7**
	0.2nm,0.3s,baz=129,slow=13,SNR=4.0 1.1nm,0.4s							
BRTR	**Keskin Array B**	**30.69**	**284**	P		**P**	**13 22 51.4**	**+0.7**
	0.4nm,0.5s,baz=91,slow=7.1,SNR=2.2 0.4nm,0.5s							
FINES	**FINESS Array B**	**36.31**	**323**	P		**P**	**13 23 38.9**	**-0.3**
	0.4nm,0.6s,baz=107,slow=12,SNR=4.2 0.4nm,0.6s							
TORD	**Torodi Ar. Bea**	**67.91**	**269**	P		**P**	**13 27 33.0**	**-1.7**
	0.2nm,0.7s,baz=51,slow=7.0,SNR=4.1 0.2nm,0.7s							

KRNET 26 13:17:24.6±0.1,**39°.38N**×**73°.67E**,**mb3.8**,**11C-2D**, **Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.33**	**330**	⇑*i*P		Pg	13 17 49.9	-0.3
	baz=30							
OHH				⇑*i*S		Sb	13 18 08.3	+0.1
	baz=30							
DRK	**Karamyk**	**1.45**	**275**	⇑*i*P		Pn	13 17 51.8	-0.6
	baz=75							
DRK				⇑*i*S		Sb	13 18 11.8	-0.1
	baz=75							
BTK	**Batken**	**2.30**	**288**	⇑*e*P		Pb	13 18 05.6	-1.5
	baz=88							
ARLS	**Aral**	**2.53**	**11**	⇑*e*P		Pn	13 18 08.7	+1.6
	baz=11							
ARLS				⇑*i*S		Sb	13 18 41.1	-1.7
	baz=11							
GAR	**Garm**	**2.63**	**263**	⇑*e*P		Pn	13 18 10.5	+2.0
	baz=63							
GAR				⇑*i*S		Sb	13 18 43.6	-2.1
	baz=63							
TRKS	**Terek-Say**	**2.89**	**319**	⇓*e*P		Pn	13 18 13.2	+1.1
	baz=18							
TRKS				⇓*i*S		Sn	13 18 48.5	+0.9
	baz=18							
BOOM	**Boomskoye usch**	**3.55**	**28**	⇑*i*P		Pn	13 18 22.9	+1.7
	baz=28							
BOOM				⇑*i*S		Sn	13 19 06.2	+2.2
	baz=28							

*IDC **26** 13:17:55.9±1.5,39°.18N×73°.66E,h0km,mb3.6/6, mbtmp3.5/10,ML3.3/3, Error ellipse: s-maj=28.8km s-min=18.1km az=117.0*
*KRNET **26** 13:17:56.1±0.1,39°.36N×73°.80E,mb3.9*
ISC 26 13:17:58.0±2.3,**39°.43N**±0°.08×**73°.72E**±0°.06,**h11**km±12km,
n22,σ0**79**/31,**mb3.5/6**,**16C-2D**,**Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.30**	**327**	⇑*i*P		**Pn**	**13 18 21.6**	**-0.6**
	baz=26							
OHH				⇑*i*S		**Sg**	**13 18 40.0**	**0.0**
	baz=26							
DRK	**Karamyk**	**1.48**	**272**	⇑*i*P		**Pn**	**13 18 24.2**	**-0.7**
	baz=75							
DRK				⇑*i*S		**Sb**	**13 18 44.9**	**+0.2**
	baz=75							
BTK	**Batken**	**2.32**	**287**	⇑*e*P		**Pn**	**13 18 36.0**	**-0.2**
	baz=88							
BTK	**Batken**	**2.32**	**287**	⇑*i*S		**Pn**	**13 18 35.7**	**-0.5**
	baz=88							
ARLS	**Aral**	**2.47**	**11**	⇑*e*P		**Pn**	**13 18 37.7**	**-0.6**
	baz=9.0							
ARLS				⇑*i*S		**Sn**	**13 19 08.2**	**-0.3**
	baz=9.0							
GAR	**Garm**	**2.68**	**262**	⇑*i*P		**Pn**	**13 18 40.6**	**-0.5**
	baz=63							
GAR				⇑*i*S		**Sn**	**13 19 13.2**	**-0.4**
	baz=63							
UCH	**Uchtor**	**2.86**	**12**	⇑*i*P		**Pn**	**13 18 43.6**	**-0.3**
	baz=10.0							
UCH				⇑*i*S		**Sn**	**13 19 18.2**	**-0.3**
	baz=10.0							
TRKS	**Terek-Say**	**2.87**	**318**	⇑*i*P		**Pn**	**13 18 43.0**	**-0.8**
	baz=17							
TRKS				⇑*i*S		**Sn**	**13 19 17.4**	**-1.1**
	baz=17							
AAK	**Ala-Archa**	**3.25**	**10**	Pn		**Pb**	**13 18 56.0**	**+0.1**
	4.8nm,0.3s,baz=180,slow=15,SNR=2.3							
AAK				Pg		**Pg**	**13 18 60.0**	**-0.4**
	7.5nm,0.3s,baz=202,slow=14,SNR=4.4 20nm,0.4s							
AAK	**Ala-Archa**	**3.25**	**10**	⇓*i*P		**Pn**	**13 18 48.9**	**-0.2**
	baz=9.0							
AAK				⇓*i*S		**Sn**	**13 19 27.3**	**-0.6**
	baz=9.0							
BOOM	**Boomskoye usch**	**3.49**	**28**	⇑*i*P		**Pn**	**13 18 51.5**	**-0.8**
	baz=27							
BOOM				⇑*i*S		**Sn**	**13 19 32.4**	**-1.2**
	baz=27							
KURBB	**Kurchatov Arra**	**11.69**	**15**	Pn		**Pn**	**13 20 47.2**	**+2.6**
	0.1nm,0.4s,baz=208,slow=12,SNR=1.5							
KURBB				Lg		Lg	13 24 13.2	
	baz=209,slow=31,SNR=6.7							
AKTO	**Aktyubinsk**	**15.60**	**320**	Pn		**Pn**	**13 21 37.6**	**-0.2**
	0.2nm,0.3s,baz=128,slow=15,SNR=2.8 0.9nm,0.5s							
ZALV	**Zalesovo Beam**	**16.36**	**24**	Pn		**P**	**13 21 50.7**	**+0.4**
	0.1nm,0.3s,baz=207,slow=13,SNR=1.6 0.4nm,0.3s							
BRTR	**Keskin Array B**	**30.71**	**284**	P		**P**	**13 24 13.7**	**+0.6**
	0.4nm,0.6s,baz=61,slow=6.8,SNR=2.7 0.4nm,0.6s							
FINES	**FINESS Array B**	**36.34**	**323**	P		**P**	**13 25 02.3**	**+0.8**
	0.5nm,0.4s,baz=115,slow=9.7,SNR=8.2 0.5nm,0.4s							
ARCES	**ARCESS Array B**	**39.31**	**336**	P		**P**	**13 25 27.7**	**+1.1**
	1.5nm,0.8s,baz=131,slow=18,SNR=3.6 1.5nm,0.8s							
NB2	**NORSAR Subarra**	**43.39**	**321**	P		**P**	**13 26 00.2**	**0.0**
	comp=Z,0.4nm,0.5s,baz=91,slow=7.9							
NOA	**NORSAR Array B**	**43.39**	**321**	P		**P**	**13 26 00.4**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=91,slow=7.9,SNR=4.0 comp=Z,0.5nm,0.5s							
NOA	**NORSAR Array B**	**43.39**	**321**	P		**P**	**13 26 00.4**	**+0.2**
TORD	**Torodi Ar. Bea**	**67.92**	**269**	P		**P**	**13 28 56.3**	**-0.7**
	comp=Z,0.2nm,0.6s,baz=38,slow=7.9,SNR=3.0 comp=Z,0.2nm,0.6s							
WRA	**Warramunga Arr**	**81.78**	**124**	P		**P**	**13 30 16.2**	**-0.8**
	comp=Z,0.4nm,0.9s,baz=325,slow=5.2,SNR=3.0 comp=Z,0.4nm,0.9s							

*SOME **26** 13:18:23.4,39°.52N×73°.60E,h15km*
*IDC **26** 13:18:23.1±0.9,39°.27N×73°.63E,h0km,mb3.7/9, mbtmp3.8/16,ML3.1/6,MS4.3/2, Error ellipse: s-maj=18.3km s-min=12.7km az=115.0*
*KRNET **26** 13:18:23.7±0.1,39°.40N×73°.74E,mb4.4*
*NNC **26** 13:18:26.9±2.1,39°.69N×73°.39E,h0km,mb4.7,mpv4.4, Error ellipse: s-maj=17.0km s-min=8.3km az=176.0*
*NEIC **26** 13:18:27.9±2.1,39°.53N±0°.07×73°.3E±0°.1,h10km±1km, mb4.4/10, Error ellipse: s-maj=15.9km s-min=9.4km az=126.0*
ISC 26 13:18:26.4±1.3,**39°.49N**±0°.04×**73°.31E**±0°.03,**h8**km±8km, **n96**,σ2**37**/125,**mb3.9**/13,**19C-10D**,**Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.11**	**339**	⇑*i*P		**Pn**	**13 18 48.7**	**+0.3**
	baz=27							
OHH				⇑*i*S		**Sn**	**13 19 07.1**	**+3.1**
	baz=27							
DRK	**Karamyk**	**1.17**	**270**	⇑*i*P		**Pn**	**13 18 51.2**	**+1.9**
	baz=74							
DRK				⇑*i*S		**Sn**	**13 19 12.4**	**+6.8**
	baz=74							
BTK	**Batken**	**2.00**	**287**	⇓*e*P		**Pg**	**13 19 05.0**	**+0.2**
	baz=87							
BTK				⇓*i*S		**Sg**	**13 19 35.2**	**+4.4**
	baz=87							
BTK	**Batken**	**2.00**	**287**	⇑*i*S		**Pg**	**13 19 05.5**	**+0.7**
	baz=88							
GAR	**Garm**	**2.38**	**259**	⇑*i*P		**Pb**	**13 19 09.8**	**+0.3**
	baz=63							
GAR				⇑*i*S		**Sg**	**13 19 42.8**	**+0.1**
	baz=63							
ARLS	**Aral**	**2.50**	**18**	⇓*i*P		**Pn**	**13 19 07.2**	**-0.3**
	baz=10.0							
ARLS				⇓*i*S		**Sn**	**13 19 38.4**	**+0.2**
	baz=10.0							
TRKS	**Terek-Say**	**2.63**	**322**	⇑*i*P		**Pb**	**13 19 11.8**	**-2.0**
	baz=17							
TRKS				⇑*i*S		**Sb**	**13 19 46.9**	**+0.5**
	baz=17							
UCH	**Uchtor**	**2.89**	**18**	⇑*i*P		**Pn**	**13 19 12.4**	**-0.7**
	baz=11							
UCH				⇑*i*S		**Sn**	**13 19 48.2**	**-0.1**
	baz=11							
EKS2	**Erkin-Say**	**3.19**	**6**	⇑*i*P		**Pn**	**13 19 17.6**	**+0.6**
	baz=0.0							
EKS2				⇑*i*S		**Sn**	**13 19 56.8**	**+1.5**
	baz=0.0							
AAK	**Ala-Archa**	**3.27**	**15**	Pn		**Pn**	**13 19 20.6**	**+2.4**
	56nm,0.4s,baz=189,slow=13,SNR=7.8							
AAK				Sn		**Sb**	**13 20 03.6**	**-1.3**
	4.0nm,0.3s,baz=156,slow=24,SNR=1.3							
AAK				Lg		Lg	13 20 12.6	
	16nm,0.3s,baz=346,slow=17,SNR=5.1							
AAK	**Ala-Archa**	**3.27**	**15**			**Pn**	**13 19 20.0**	**+1.8**
CHGR	**Chuyangaron**	**3.34**	**257**	Pn		**Pb**	**13 19 23.3**	**-2.6**
TAS	**Tashkent**	**3.58**	**302**	⇓*e*P		**Pb**	**13 19 26.3**	**-3.6**
	baz=1.0							
TAS				⇓*i*S		**Sb**	**13 20 12.2**	**-1.2**
	baz=1.0							
BOOM	**Boomskoye usch**	**3.60**	**33**	⇓*e*P		**Pn**	**13 19 21.2**	**-1.5**
	baz=28							
BOOM				⇓*i*S		**Sn**	**13 20 02.8**	**-2.7**
	baz=28							
BOOM	**Boomskoye usch**	**3.60**	**33**			**Pn**	**13 19 23.8**	**+1.1**
IUG	**Iuzhnay**	**3.64**	**318**	*e*P		**Pb**	**13 19 28.8**	**-2.2**
	954nm,0.4s							
IUG				*e*S		**Sb**	**13 20 16.1**	**+0.6**
	313nm,0.6s							
IUG	**Iuzhnay**	**3.64**	**318**	Pg		**Pb**	**13 19 28.6**	**-2.4**
	894nm,0.4s							
IUG				Lg		Lg	13 20 14.4	
	271nm,0.5s							
DZA	**Taraz**	**3.72**	**337**	*e*P		**Pb**	**13 19 29.5**	**-2.8**
	54nm,0.1s							
DZA				*e*S		**Sb**	**13 20 17.1**	**-0.4**
	406nm,0.3s							
DZA	**Taraz**	**3.72**	**337**	Pg		**Pb**	**13 19 30.3**	**-2.0**
	52nm,0.1s							
DZA				Lg		Lg	13 20 16.3	
	406nm,0.3s							
TKM2	**Tokmak 2**	**3.84**	**26**	⇑Pn		**Pn**	**13 19 25.4**	**-0.6**
	27nm,0.6s							
TKM2				⇑Lg		Lg	13 20 27.4	
	125nm,1.1s							
KDJ	**Kajisay**	**3.95**	**47**	Pn		**Pn**	**13 19 28.3**	**+0.8**

KST	**Kastek**	**4.08**	**28**	*e*P		**Pb**	**13 19 37.3**	**-1.2**
	43nm,0.5s							
KST				*e*S		**Sb**	**13 20 30.3**	**+2.3**
	116nm,0.5s							
KST	**Kastek**	**4.08**	**28**	Pg		**Pb**	**13 19 36.6**	**-1.9**
	43nm,0.5s							
KST				Lg		Lg	13 20 29.8	
	116nm,0.5s							
SGDS	**Sogindy**	**4.09**	**14**	*e*P		**Pb**	**13 19 38.7**	**+0.1**
	41nm,0.7s							
SGDS				*e*S		**Sb**	**13 20 32.7**	**+4.6**
	37nm,0.8s							
SGDS	**Sogindy**	**4.09**	**14**	Pg		**Pb**	**13 19 37.7**	**-0.9**
	41nm,0.7s							
SGDS				Lg		Lg	13 20 28.9	
	36nm,0.9s							
TARG	**Taragay, Kyrgy**	**4.09**	**55**			**Pn**	**13 19 32.4**	**+2.8**
KK31	**Karatay Array**	**4.18**	**331**	⇑Pg		**Pg**	**13 19 45.9**	**-0.6**
	11nm,0.4s							
KK31				⇑Lg		Lg	13 20 40.0	
	36nm,0.5s,baz=139,slow=30,SNR=3.5							
DGS	**Degeres**	**4.19**	**25**	*e*P		**Pb**	**13 19 40.7**	**+0.4**
	62nm,0.5s							
DGS				*e*S		**Sb**	**13 20 36.4**	**+5.3**
	82nm,0.8s							
MTBS	**Maitube**	**4.33**	**32**	*e*P		**Pb**	**13 19 42.3**	**-0.5**
	68nm,0.5s							
MTBS				*e*S		**Sb**	**13 20 39.6**	**+4.3**
	36nm,0.5s							
MTBS	**Maitube**	**4.33**	**32**	Pg		**Pb**	**13 19 41.9**	**-0.9**
	68nm,0.5s							
MTBS				Lg		Lg	13 20 38.9	
	36nm,0.5s							
BRLS	**Borolday**	**4.41**	**325**	*e*P		**Pb**	**13 19 46.4**	**+2.4**
	6.3nm,0.4s							
BRLS				*e*S		**Sg**	**13 20 46.5**	**-1.2**
	85nm,0.5s							
TNSS	**Tian-Shan**	**4.48**	**37**	*e*P		**Pb**	**13 19 44.9**	**-0.7**
	72nm,0.3s							
TNSS				*e*S		**Sb**	**13 20 43.3**	**+3.4**
	19nm,0.5s							
TNSS	**Tian-Shan**	**4.48**	**37**	Pg		**Pb**	**13 19 45.0**	**-0.5**
	72nm,0.3s							
TNSS				Lg		Lg	13 20 41.5	
	19nm,0.5s							
KRBS	**Karabastau**	**4.57**	**22**	*e*P		**Pb**	**13 19 47.0**	**+0.2**
	30nm,0.6s							
KRBS				*e*S		**Sb**	**13 20 47.1**	**+5.1**
	46nm,0.7s							
KRBS	**Karabastau**	**4.57**	**22**	Pg		**Pb**	**13 19 46.4**	**-0.4**
	30nm,0.6s							
KRBS				Lg		Lg	13 20 43.6	
	46nm,0.7s							
AAA	**Alma-Ata**	**4.60**	**35**	*e*P		**Pb**	**13 19 47.4**	**0.0**
	53nm,0.4s							
AAA				*e*S		**Sb**	**13 20 48.0**	**+4.9**
	108nm,0.7s							
KNDC	**Almaty**	**4.63**	**35**	⇑Pg		**Pb**	**13 19 48.1**	**+0.1**
	76nm,0.5s							
KNDC				⇓Lg		Lg	13 20 47.2	
	233nm,0.7s							
KTBS	**Karatobe**	**4.92**	**30**	*e*P		**Pb**	**13 19 52.5**	**-0.3**
	36nm,0.8s							
KTBS				*e*S		**Sb**	**13 20 56.7**	**+4.5**
	62nm,0.4s							
KTBS	**Karatobe**	**4.92**	**30**	Pg		**Pb**	**13 19 52.9**	**+0.1**
	36nm,0.8s							
KTBS				Lg		Lg	13 20 56.8	
	62nm,0.4s							
KUU	**Kurty**	**4.95**	**26**	*e*P		**Pb**	**13 19 52.8**	**-0.6**
	48nm,0.6s							
KUU				*e*S		**Sb**	**13 20 57.0**	**+3.9**
	73nm,0.5s							
KUU	**Kurty**	**4.95**	**26**	Pg		**Pb**	**13 19 53.8**	**+0.5**
	48nm,0.6s							
KUU				Lg		Lg	13 20 58.4	
	73nm,0.5s							
CHKK	**Chushkaly**	**5.16**	**31**	*e*P		**Pb**	**13 19 56.9**	**0.0**
	29nm,0.5s							
CHKK				*e*S		**Sb**	**13 21 04.2**	**+5.2**
	55nm,0.6s							
CHKK	**Chushkaly**	**5.16**	**31**	Pg		**Pb**	**13 19 58.1**	**+1.2**
	29nm,0.5s							
CHKK				Lg		Lg	13 21 04.2	
	55nm,0.6s							
SATY	**Saty**	**5.24**	**45**	*e*P		**Pb**	**13 19 57.8**	**-0.6**
	36nm,0.5s							
SATY				*e*S		**Sb**	**13 21 05.4**	**+3.9**
	79nm,1.1s							
SATY	**Saty**	**5.24**	**45**	Pg		**Pb**	**13 19 59.0**	**+0.6**
	36nm,0.5s							
ZHN	**Zhinishke**	**5.33**	**45**	*e*P		**Pb**	**13 19 59.5**	**-0.4**
	36nm,0.1s							
ZHN				*e*S		**Sb**	**13 21 08.3**	**+4.3**
	33nm,0.5s							
KURS	**Kuram**	**5.41**	**41**	*e*P		**Pb**	**13 20 00.5**	**-0.8**
	14nm,0.9s							
KURS				*e*S		**Sb**	**13 21 10.4**	**+4.0**
	21nm,0.8s							
KURS	**Kuram**	**5.41**	**41**	Pg		**Pb**	**13 20 01.6**	**+0.4**
	18nm,0.7s							
BTLS	**Baital**	**5.58**	**5**	*e*P		**Pb**	**13 20 04.1**	**+0.1**
	5.9nm,0.6s							
BTLS				*e*S		**Sb**	**13 21 16.7**	**+5.7**
	36nm,0.5s							
BTLS	**Baital**	**5.58**	**5**	Pg		**Pb**	**13 20 05.6**	**+1.6**
	5.9nm,0.6s							
KPKS	**Kokpek**	**5.67**	**44**	*e*P		**Pb**	**13 20 04.7**	**-0.9**
	22nm,0.6s							
KPKS				*e*S		**Sb**	**13 21 17.7**	**+4.1**
	39nm,0.5s							
KPKS	**Kokpek**	**5.67**	**44**	Pg		**Pb**	**13 20 05.9**	**+0.4**
	22nm,0.6s							
ARXS	**Arharly**	**5.80**	**34**	*e*P		**Pb**	**13 20 06.7**	**-1.2**
	37nm,0.9s							
ARXS				*e*S		**Sb**	**13 21 21.2**	**+3.6**
	33nm,0.8s							
ARXS	**Arharly**	**5.80**	**34**	Pg		**Pb**	**13 20 08.0**	**+0.1**
	37nm,0.9s							
SHLS	**Shalkode**	**5.91**	**50**	*e*P		**Pg**	**13 20 15.5**	**-4.0**
	14nm,0.4s							
SHLS				*e*S		**Sg**	**13 21 35.4**	**-0.6**
	30nm,0.9s							
SHLS	**Shalkode**	**5.91**	**50**	Pg		**Pg**	**13 20 16.5**	**-3.0**
	14nm,0.4s							
KBL	**Kabul**	**6.00**	**216**	Pn		**Pn**	**13 19 58.5**	**+2.9**
BLB	**Baldybastay**	**6.01**	**38**	*e*P		**Pb**	**13 20 11.6**	**+0.1**
	52nm,0.5s							
BLB				*e

ARU	**Arti**	**19.55**	**335**	P		**P**	**13 22 54.5**	**+0.3**
	baz=126,slow=19,SNR=1.3							
	2.2nm,0.3s							
ARU	**Arti**	**19.55**	**335**	IAmb		IAmb	13 23 00.6	
	comp=Z,4.6nm,0.8s							
BRTR	**Keskin Array B**	**30.40**	**283**	P		**P**	**13 24 41.0**	**+1.9**
	comp=Z,1.1nm,0.6s,baz=83,slow=6.6,SNR=5.8							
	comp=Z,1.1nm,0.6s							
MLR	**Muntele Rosu**	**35.03**	**296**	P		**P**	**13 25 18.1**	**-1.5**
MLR				IAmb		IAmb	13 25 48.2	
	comp=Z,6.4nm,1.1s							
FINES	**FINESS Array B**	**36.11**	**323**	P		**P**	**13 25 29.5**	**+1.1**
	comp=Z,0.5nm,0.4s,baz=106,slow=10,SNR=6.3							
	comp=Z,0.5nm,0.4s							
FINES	**FINESS Array B**	**36.11**	**323**	P		**P**	**13 25 29.4**	**+0.9**
ARCES	**ARCESS Array B**	**39.13**	**336**	P		**P**	**13 25 54.2**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=93,slow=7.9,SNR=5.9							
	comp=Z,0.5nm,0.5s							
ARCES	**ARCESS Array B**	**39.13**	**336**	P		**P**	**13 25 54.5**	**+0.5**
ARCES				IAmb		IAmb	13 26 31.8	
	comp=Z,13nm,1.5s							
NC303	**NORSAR Array S**	**43.08**	**321**	P		**P**	**13 26 26.9**	**+0.4**
NC303				IAmb		IAmb	13 26 46.9	
	comp=Z,4.7nm,0.9s							
NOA	**NORSAR Array B**	**43.15**	**321**	P		**P**	**13 26 27.3**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=91,slow=7.9,SNR=3.6							
	comp=Z,0.7nm,0.7s							
NC204	**NORSAR Array S**	**43.38**	**321**	P		**P**	**13 26 28.7**	**-0.3**
MYLDM	**Lahad Datu**	**53.13**	**118**	P		**P**	**13 27 47.0**	**+2.2**
ESDC	**Sonseca Array**	**57.70**	**297**	LR		LR	13 56 48.4	
	comp=Z,620nm,19.9s,baz=242,slow=40							
TORD	**Torodi Ar. Bea**	**67.61**	**269**	P		**P**	**13 29 22.1**	**-1.8**
	comp=Z,0.7nm,0.7s,baz=69,slow=7.3,SNR=4.1							
	comp=Z,0.7nm,0.7s							
TORD	**Torodi Ar. Bea**	**67.61**	**269**	IAmb		IAmb	13 29 27.6	
	comp=Z,2.4nm,1.2s							
PMOZ	**Porto Moniz, M**	**70.37**	**297**	P		**P**	**13 29 39.5**	**-1.6**
INK	**Inuvik**	**70.66**	**10**	P		**P**	**13 29 43.7**	**+1.7**
	comp=Z,1.0nm,0.6s,baz=331,slow=5.8,SNR=4.3							
INK	**Inuvik**	**70.66**	**10**	P		**P**	**13 29 43.7**	**+1.7**
INK				IAmb		IAmb	13 29 59.7	
	comp=Z,4.7nm,1.4s							
C36M	**Paulatuk**	**70.72**	**6**	P		**P**	**13 29 41.5**	**-0.8**
C36M				IAmb		IAmb	13 29 57.6	
	comp=Z,7.0nm,1.2s							
ILAR	**Eielson Array**	**71.41**	**17**	P		**P**	**13 29 45.3**	**-1.3**
	comp=Z,0.5nm,1.0s,baz=317,slow=5.2,SNR=3.3							
	comp=Z,0.5nm,1.0s							
YKA	**Yellowknife Ar**	**78.17**	**4**	P		**P**	**13 30 24.5**	**-1.3**
	comp=Z,0.4nm,0.7s,baz=351,slow=5.4,SNR=4.8							
	comp=Z,0.4nm,0.7s							
WRA	**Warramunga Arr**	**82.07**	**124**	P		**P**	**13 30 43.8**	**-3.7**
	comp=Z,0.5nm,0.6s,baz=326,slow=4.9,SNR=6.9							
	comp=Z,0.5nm,0.6s							
ASAR	**Alice Springs**	**84.51**	**127**	P		**P**	**13 30 56.4**	**-3.7**
	comp=Z,0.3nm,0.6s,baz=315,slow=5.0,SNR=6.4							
	comp=Z,0.3nm,0.6s							

JMA 26 13:19:44.9±0.2, 38°2N±0°8×14°5E±°, h41km, MV3.5/29,
FAR E OFF NORTH HONSHU, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OFUJ	**Ofunato**	**2.40**	**293**	P		Pn	13 20 23.1	+1.5
OFUJ				*e*S		Sn	13 20 51.5	+1.7
JIKH	**Ishinomakikobu**	**2.41**	**274**	P		Pn	13 20 22.9	+1.2
JIKH				S		Sn	13 20 51.4	+1.4
JKMT	**Kesennumamotoy**	**2.47**	**285**	P		Pn	13 20 24.1	+1.6
JKMT				*e*S		Sn	13 20 53.0	+1.6
JIO	**Ouri**	**2.51**	**277**	P		Pn	13 20 24.5	+1.4
JIO				S		Sn	13 20 53.7	+1.3
MIYJ	**Miyakonagasawa**	**2.52**	**304**	P		Pn	13 20 24.4	+1.2
MIYJ				S		Sn	13 20 54.1	+1.4
JMK	**Ichinoseki**	**2.69**	**287**	P		Pn	13 20 27.5	+1.8
JMK				S		Sn	13 20 59.7	+2.7
JOM	**Ohasama**	**2.82**	**298**	P		Pn	13 20 29.4	+2.0
JOM				S		Sn	13 21 03.1	+2.8
JANG	**Nango**	**3.19**	**314**	*e*P		Pn	13 20 33.8	+1.4
JANG				S		Sn	13 21 10.3	+1.0
JYK	**Kaneyama**	**3.34**	**284**	*e*P		Pn	13 20 37.1	+2.6
JYK				*e*S		Sn	13 21 16.0	+3.0
JFT	**Otama**	**3.38**	**260**	P		Pn	13 20 37.3	+2.2
JFT				S		Sn	13 21 15.9	+2.0
JOT	**Ohata**	**4.16**	**321**	*e*S		Sn	13 21 32.6	-0.5
JCH	**Churui**	**4.50**	**349**	*e*P		Pn	13 20 50.0	-0.5
JCH				*e*S		Sn	13 21 40.4	-1.2
JRY	**Ryogami san**	**4.99**	**246**	P		Pn	13 20 58.5	+1.3
JRY				*e*S		Sn	13 21 52.1	-1.4
NEM2	**Nemuro 2**	**5.25**	**10**	*e*P		Pn	13 20 58.4	-2.4
NEM2				*e*S		Sn	13 21 54.0	-6.0
JTKR	**Abashiri--Toko**	**5.79**	**356**	*e*P		Pn	13 21 08.1	-0.1
JTKR				*e*S		Sn	13 22 09.6	-3.7

*KRNET **26** 13:23:44.1±0.1, 39°.35N×73°.63E, mb3.6*
*SOME **26** 13:23:48.3, 39°.65N×73°.75E, h0km*
ISC 26 13:23:44.1±2.1, 39°.49N±0°.08×73°.69E±0°.04, h2km±15km,
n21, σ1s11/41, 11C-2D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OHH	**Osh**	**1.24**	**326**	⇑*i*P		**Pg**	**13 24 09.5**	**+1.7**
	baz=31							
DRK	**Karamyk**	**1.46**	**270**	⇑*i*P		**Pn**	**13 24 11.0**	**-0.7**
	baz=76							
DRK				⇑*i*S		**Sn**	**13 24 30.9**	**-0.6**
	baz=76							
BTK	**Batken**	**2.28**	**285**	⇓*i*P		**Pb**	**13 24 25.0**	**-1.0**
	baz=89							
BTK				⇓*i*S		**Sb**	**13 24 55.0**	**+0.4**
	baz=89							
ARLS	**Aral**	**2.42**	**11**	⇑*i*P		**Pb**	**13 24 28.9**	**+0.6**
	baz=12							
ARLS				⇑*i*S		**Sg**	**13 25 01.6**	**0.0**
	baz=12							
GAR	**Garm**	**2.66**	**260**	⇑*e*P		**Pn**	**13 24 29.5**	**+1.5**
	baz=63							
GAR				⇑*i*S		**Sn**	**13 25 02.5**	**+1.6**
	baz=63							
TRKS	**Terek-Say**	**2.81**	**317**	⇑*i*P		**Pn**	**13 24 32.6**	**+2.5**
	baz=19							
TRKS				⇑*i*S		**Sb**	**13 25 08.3**	**-1.7**
	baz=19							
BOOM	**Boomskoye usch**	**3.45**	**29**	⇑*i*P		**Pb**	**13 24 43.6**	**-2.3**
	baz=28							
BOOM				⇑*i*S		**Sb**	**13 25 26.4**	**-1.9**
	baz=28							
IUG	**Iuzhnay**	**3.84**	**315**	*e*P		**Pg**	**13 24 57.4**	**-0.1**
	287nm,0.4s							
IUG				*e*S		**Sg**	**13 25 47.2**	**0.0**
	37nm,0.3s							
KST	**Kastek**	**3.94**	**25**	*e*P		**Pg**	**13 25 00.4**	**+0.9**
	4.2nm,0.5s							
KST				*e*S		**Sg**	**13 25 52.4**	**+1.7**
	39nm,0.5s							
SGDS	**Sogindy**	**4.02**	**10**	*e*P		**Pg**	**13 25 01.2**	**+0.1**
	5.6nm,0.7s							
SGDS				*e*S		**Sg**	**13 25 53.6**	**+0.5**
	7.5nm,0.4s							
DGS	**Degeres**	**4.06**	**22**	*e*P		**Pg**	**13 25 01.9**	**0.0**
	11nm,0.7s							
DGS				*e*S		**Sg**	**13 25 54.6**	**+0.1**
	27nm,0.7s							
MTBS	**Maitube**	**4.18**	**29**	*e*P		**Pg**	**13 25 04.4**	**+0.2**
	4.7nm,0.2s							
MTBS				*e*S		**Sg**	**13 25 59.2**	**+0.9**
	23nm,0.3s							
TNSS	**Tian-Shan**	**4.31**	**34**	*e*P		**Pg**	**13 25 07.4**	**+0.8**
	6.3nm,0.3s							
TNSS				*e*S		**Sg**	**13 26 04.3**	**+1.8**
	9.2nm,0.7s							
KRBS	**Karabastau**	**4.46**	**19**	*e*P		**Pg**	**13 25 09.2**	**-0.2**
	3.6nm,0.5s							
KRBS				*e*S		**Sg**	**13 26 07.8**	**+0.6**
	18nm,0.5s							
BRLS	**Borolday**	**4.57**	**322**	*e*P		**Pg**	**13 25 10.3**	**-1.3**
	3.2nm,0.2s							
BRLS				*e*S		**Sg**	**13 26 09.5**	**-1.4**
	14nm,0.4s							
KTBS	**Karatobe**	**4.78**	**27**	*e*P		**Pg**	**13 25 15.2**	**-0.4**
	3.7nm,0.4s							
KTBS				*e*S		**Sg**	**13 26 17.6**	**+0.2**
	24nm,0.3s							
KUU	**Kurty**	**4.82**	**23**	*e*P		**Pg**	**13 25 15.8**	**-0.7**
	3.5nm,0.5s							
KUU				*e*S		**Sg**	**13 26 18.7**	**-0.3**
	18nm,0.5s							
CHKK	**Chushkaly**	**5.01**	**29**	*e*P		**Pg**	**13 25 20.1**	**+0.1**
	3.2nm,0.4s							
CHKK				*e*S		**Sg**	**13 26 26.2**	**+1.2**
	30nm,0.6s							
KURS	**Kuram**	**5.22**	**39**	*e*P		**Pg**	**13 25 23.9**	**-0.2**
	3.9nm,0.6s							
KURS				*e*S		**Sg**	**13 26 32.6**	**+0.8**
	8.6nm,1.2s							
KPKS	**Kokpek**	**5.46**	**42**	*e*P		**Pg**	**13 25 28.1**	**-0.6**
	5.5nm,0.6s							
KPKS				*e*S		**Sg**	**13 26 39.9**	**+0.4**
	15nm,0.6s							
ARXS	**Arharly**	**5.64**	**32**	*e*P		**Pg**	**13 25 30.7**	**-1.4**
	4.1nm,0.5s							
ARXS				*e*S		**Sg**	**13 26 44.7**	**-0.5**
	17nm,0.6s							

KRNET 26 13:23:58.6±0.1, 39°.30N×74°.08E, mb3.7, 13C-4D,
Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OHH	**Osh**	**1.58**	**321**	⇑*i*P		Pn	13 24 28.3	+0.3
	baz=21							
OHH				⇑*i*S		Sg	13 24 50.3	+0.9
	baz=21							
OHH	**Osh**	**1.58**	**321**	⇑*i*S		Pn	13 24 28.1	+0.1
	baz=31							
DRK	**Karamyk**	**1.78**	**277**	⇑*e*P		Pb	13 24 32.0	-0.3
	baz=77							
DRK				⇑*i*S		Sg	13 24 56.3	+0.6
	baz=77							
ARLS	**Aral**	**2.57**	**4**	⇑*i*P		Pn	13 24 43.5	+1.9
	baz=4.0							
ARLS				⇑*i*S		Sb	13 25 16.6	-1.2
	baz=4.0							
BTK	**Batken**	**2.63**	**288**	⇑*e*P		Pb	13 24 44.6	-2.1
	baz=88							
BTK				⇑*i*S		Sb	13 25 18.2	-1.4
	baz=88							
GAR	**Garm**	**2.94**	**265**	⇑*i*P		Pn	13 24 49.1	+2.4
	baz=65							
GAR				⇑*i*S		Sn	13 25 25.7	+2.8
	baz=65							
TRKS	**Terek-Say**	**3.16**	**316**	⇑*e*P		Pn	13 24 51.2	+1.4
	baz=15							
TRKS				⇑*i*S		Sn	13 25 29.6	+1.2
	baz=15							
BOOM	**Boomskoye usch**	**3.48**	**23**	⇓*e*P		Pn	13 24 56.9	+2.6
	baz=23							
BOOM				⇓*e*S		Sn	13 25 38.9	+2.6
	baz=23							
KDJ	**Kajisay**	**3.68**	**39**	⇓*i*P		Pn	13 24 59.3	+2.4
	baz=39							
KDJ				⇓*i*S		Sn	13 25 43.7	+2.6
	baz=39							

*IDC **26** 13:30:57.5±1.3, 39°.36N×74°.04E, h0km, mb3.6/8,*
mbtmp3.5/12, ML2.8/4, Error ellipse: s-maj=27.4km
s-min=15.2km az=108.0
*SOME **26** 13:30:58.8, 39°.38N×73°.65E, h10km*
*KRNET **26** 13:30:59.5±0.1, 39°.48N×73°.77E, mb3.8*
ISC 26 13:30:59.0±1.5, 39°.41N±0°.06×73°.75E±0°.04, h2km±9km,
n36, σ1s81/61, mb3.6/8, 16C-4D, Tajikistan-Xinjiang
border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OHH	**Osh**	**1.34**	**327**	⇑*i*P		**Pn**	**13 31 23.8**	**-1.0**
	baz=24							
OHH				⇑*i*S		**Sb**	**13 31 41.7**	**-0.8**
	baz=24							
DRK	**Karamyk**	**1.51**	**273**	⇑*i*P		**Pg**	**13 31 28.3**	**+0.4**
	baz=71							
DRK				⇑*i*S		**Sg**	**13 31 49.1**	**+1.7**
	baz=71							
BTK	**Batken**	**2.35**	**287**	⇑*i*P		**Pb**	**13 31 41.3**	**-0.8**
	baz=85							
BTK				⇑*i*S		**Sb**	**13 32 11.8**	**+0.2**
	baz=85							
ARLS	**Aral**	**2.49**	**10**	⇑*i*P		**Pn**	**13 31 42.2**	**+1.5**
	baz=10.0							
ARLS				⇑*i*S		**Sn**	**13 32 13.3**	**+1.5**
	baz=10.0							
GAR	**Garm**	**2.69**	**262**	⇑*i*P		**Pb**	**13 31 46.5**	**-1.5**
	baz=61							
GAR				⇑*i*S		**Sb**	**13 32 20.9**	**-0.6**
	baz=61							
UCH	**Uchtor**	**2.88**	**11**	⇑*e*P		**Pn**	**13 31 47.7**	**+1.4**
	baz=11							
UCH				⇑*i*S		**Sn**	**13 32 23.0**	**+1.3**
	baz=11							
TRKS	**Terek-Say**	**2.91**	**318**	⇓*e*P		**Pn**	**13 31 47.7**	**+1.3**
	baz=16							
TRKS				⇓*i*S		**Sn**	**13 32 23.0**	**+1.0**
	baz=16							
AAK	**Ala-Archa**	**3.28**	**10**	Pn		**Pn**	**13 31 52.2**	**+0.7**
	1.6nm,0.3s,baz=146,slow=3.6,SNR=1.3							
AAK				Sn		**Sb**	**13 32 35.2**	**-3.2**
	0.8nm,0.3s,baz=217,slow=20,SNR=1.0							
AAK				Lg		Lg	13 32 43.5	
	2.3nm,0.3s,baz=169,slow=5.2,SNR=5.6							
	13nm,0.6s							
BOOM	**Boomskoye usch**	**3.50**	**28**	⇑*i*P		**Pn**	**13 31 56.3**	**+1.7**
	baz=28							
BOOM				⇑*i*S		**Sn**	**13 32 37.5**	**+0.8**
	baz=28							
KDJ	**Kajisay**	**3.77**	**43**	⇓*e*P		**Pn**	**13 32 00.3**	**+2.0**
	baz=43							
KDJ				⇓*i*S		**Sn**	**13 32 44.7**	**+1.4**
	baz=43							
TAS	**Tashkent**	**3.90**	**301**	⇑*i*P		**Pn**	**13 32 02.6**	**+2.6**
	baz=0.0							
TAS				⇑*i*S		**Sn**	**13 32 48.4**	**+2.0**
	baz=0.0							
IUG	**Iuzhnay**	**3.93**	**315**	*e*P		**Pb**	**13 32 09.7**	**+0.7**
	458nm,0.8s							
IUG				*e*S		**Sb**	**13 33 00.2**	**+3.2**
	41nm,0.7s							
KST	**Kastek**	**4.00**	**24**	*e*P		**Pg**	**13 32 13.3**	**-2.3**
	8.5nm,0.8s							
KST				*e*S		**Sg**	**13 33 06.7**	**-0.8**
	39nm,0.6s							
SGDS	**Sogindy**	**4.10**	**9**	*e*P		**Pb**	**13 32 14.6**	**+2.8**
	5.9nm,0.4s							
SGDS				*e*S		**Sg**	**13 33 08.4**	**-2.1**
	14nm,0.6s							
DGS	**Degeres**	**4.12**	**21**	*e*P		**Pg**	**13 32 17.1**	**-0.9**
	11nm,0.3s							
DGS				*e*S		**Sg**	**13 33 13.2**	**+1.7**
	28nm,0.7s							
IZV	**Izvestkoviy**	**4.22**	**30**	*e*P		**Pg**	**13 32 20.3**	**+0.4**
	40nm,0.1s							
IZV				*e*S		**Sg**	**13 33 18.2**	**+3.6**
	23nm,0.8s							
MTBS	**Maitube**	**4.23**	**28**	*e*P		**Pg**	**13 32 19.0**	**-1.1**
	13nm,0.4s							
MTBS				*e*S		**Sg**	**13 33 16.2**	**+1.3**
	14nm,0.5s							
TNSS	**Tian-Shan**	**4.36**	**33**	*e*P		**Pg**	**13 32 21.1**	**-1.3**
	10nm,0.5s							
TNSS				*e*S		**Sg**	**13 33 20.5**	**+1.6**
	5.6nm,0.7s							
KRBS	**Karabastau**	**4.52**	**18**	*e*P		**Pg**	**13 32 22.9**	**-2.7**
	6.1nm,0.7s							
KRBS				*e*S		**Sg**	**13 33 23.1**	**-1.1**
	18nm,0.6s							
KTBS	**Karatobe**	**4.83**	**26**	*e*P		**Pg**	**13 32 29.8**	**-1.8**
	6.1nm,0.8s							
KTBS				*e*S		**Sg**	**13 33 34.5**	**+0.3**
	24nm,0.6s							
KUU	**Kurty**	**4.88**	**23**	*e*P		**Pg**	**13 32 29.0**	**-3.5**
	5.7nm,0.5s							
KUU				*e*S		**Sg**	**13 33 33.5**	**-2.3**
	19nm,0.8s							
CHKK	**Chushkaly**	**5.06**	**28**	*e*P		**Pg**	**13 32 33.8**	**-2.1**
	7.4nm,0.6s							
CHKK				*e*S		**Sg**	**13 33 41.8**	**+0.2**
	7.4nm,0.3s							
KURS	**Kuram**	**5.26**	**38**	*e*P		**Pg**	**13 32 40.3**	**+0.5**
	4.1nm,0.7s							
KURS				*e*S		**Sg**	**13 33 52.4**	**+4.6**
	10nm,1.2s							
KPKS	**Kokpek**	**5.50**	**41**	*e*P		**Pg**	**13 32 43.7**	**-0.6**
	4.9nm,0.6s							
KPKS				*e*S		**Sg**	**13 33 58.7**	**+3.2**
	9.3nm,0.8s							
ARXS	**Arharly**	**5.69**	**31**	*e*P		**Pg**	**13 32 46.1**	**-1.8**
	7.1nm,0.8s							
ARXS				*e*S		**Sg**	**13 34 02.8**	**+1.2**
	18nm,0.8s							
KURBB	**Kurchatov Arra**	**11.71**	**15**	Pn		**Pn**	**13 33 44.3**	**-2.7**
	baz=193,slow=7.6,SNR=1.1							
KURBB				Lg		Lg	13 37 08.4	
	baz=202,slow=30,SNR=3.0							
	0.1nm,0.2s							
AKTO	**Aktyubinsk**	**15.64**	**320**	Pn		**Pn**	**13 34 39.8**	**-0.5**
	0.2nm,0.3s,baz=95,slow=11,SNR=2.2							
	0.5nm,0.3s							
ZALV	**Zalesovo Beam**	**16.38**	**24**	Pn		**Pn**	**13 34 48.5**	**-1.4**
	0.1nm,0.3s,baz=195,slow=8.0,SNR=1.8							
	0.2nm,0.2s							
BRTR	**Keskin Array B**	**30.74**	**284**	P		**P**	**13 37 16.0**	**+0.3**
	0.6nm,0.7s,baz=55,slow=11,SNR=2.8							
	0.6nm,0.7s							
FINES	**FINESS Array B**	**36.37**	**323**	P		**P**	**13 38 04.8**	**+0.7**
	0.4nm,0.4s,baz=114,slow=9.3,SNR=8.8							
	0.4nm,0.4s							
ARCES	**ARCESS Array B**	**39.34**	**336**	P		**P**	**13 38 29.1**	**-0.1**
	1.0nm,0.8s,baz=79,slow=23,SNR=3.9							
	1.0nm,0.8s							
HFS	**Hagfors**	**42.19**	**320**	P		**P**	**13 38 53.5**	**+0.7**
	1.1nm,0.5s,baz=120,slow=8.5,SNR=7.4							
	1.1nm,0.5s							
NOA	**NORSAR Array B**	**43.42**	**321**	P		**P**	**13 39 03.5**	**+0.6**
	1.1nm,0.9s,baz=91,slow=7.6,SNR=3.4							
	1.1nm,0.9s							
TORD	**Torodi Ar. Bea**	**67.94**	**269**	P		**P**	**13 41 58.8**	**-0.8**
	0.2nm,0.5s,baz=62,slow=6.8,SNR=2.3							
	0.2nm,0.5s							
YKA	**Yellowknife Ar**	**78.22**	**4**	P		**P**	**13 42 58.7**	**-0.9**
	0.2nm,0.4s,baz=348,slow=5.5,SNR=2.5							
	0.2nm,0.4s							
WRA	**Warramunga Arr**	**81.75**	**124**	P		**P**	**13 43 17.7**	**-1.6**
	0.2nm,0.7s,baz=313,slow=3.6,SNR=2.1							
	0.2nm,0.7s							

*KRNET **26** 13:35:23.2±0.1, 39°.45N×73°.70E, mb3.5*
*SOME **26** 13:35:31.8, 39°.68N×73°.72E, h0km*
ISC 26 13:35:25.8±1.8, 39°.48N±0°.07×73°.65E±0°.04, h0km±12km,
n23, σ1s15/46, 14C, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OHH	**Osh**	**1.24**	**328**	⇑*i*P		**Pg**	**13 35 47.6**	**-2.0**
	baz=27							
OHH				⇑*i*S		**Sg**	**13 36 05.5**	**-0.2**
	baz=27							
DRK	**Karamyk**	**1.43**	**271**	⇑*i*P		**Pn**	**13 35 51.1**	**-2.2**
	baz=72							
DRK				⇑*i*S		**Sg**	**13 36 11.2**	**-0.7**
	baz=72							
BTK	**Batken**	**2.26**	**286**	⇑*i*P		**Pn**	**13 36 04.4**	**-0.1**
	baz=86							
BTK				⇑*i*S		**Sn**	**13 36 34.6**	**+1.5**
	baz=86							
ARLS	**Aral**	**2.44**	**12**	⇑*i*P		**Pn**	**13 36 06.5**	**-0.5**
	baz=11							
ARLS				⇑*i*S		**Sn**	**13 36 38.4**	**+0.8**
	baz=11							
GAR	**Garm**	**2.63**	**261**	⇑*i*P		**Pn**	**13 36 09.6**	**-0.1**
	baz=61							
GAR				⇑*i*S		**Sn**	**13 36 43.1**	**+0.7**
	baz=61							
TRKS	**Terek-Say**	**2.81**	**318**	⇑*e*P		**Pn**	**13 36 11.3**	**-0.8**
	baz=17							
TRKS				⇑*i*S		**Sn**	**13 36 46.4**	**-0.3**
	baz=17							
BOOM	**Boomskoye usch**	**3.47**	**29**	⇑*e*P		**Pn**	**13 36 20.9**	**-0.3**
	baz=28							
BOOM				⇑*i*S		**Sn**	**13 37 02.9**	**-0.3**
	baz=28							
IUG	**Iuzhnay**	**3.83**	**315**	*e*P		**Pg**	**13 36 41.1**	**+1.9**
	197nm,0.3s							
IUG				*e*S		**Sg**	**13 37 31.2**	**+2.3**
	91nm,0.5s							
KST	**Kastek**	**3.97**	**25**	*e*P		**Pg**	**13 36 41.2**	**-0.6**
	3.8nm,0.2s							
KST				*e*S		**Sg**	**13 37 31.5**	**-1.7**
	16nm,0.4s							
SGDS	**Sogindy**	**4.04**	**10**	*e*P		**Pg**	**13 36 43.1**	**-0.1**
	3.5nm,0.3s							
SGDS				*e*S		**Sg**	**13 37 34.2**	**-1.4**
	12nm,0.6s							
DGS	**Degeres**	**4.09**	**22**	*e*P		**Pg**	**13 36 45.1**	**+1.0**
	7.3nm,0.5s							
DGS				*e*S		**Sg**	**13 37 38.1**	**+1.0**
	22nm,0.7s							
IZV	**Izvestkoviy**	**4.20**	**31**	*e*P		**Pg**	**13 36 47.9**	**+1.7**
	43nm,0.1s							
IZV				*e*S		**Sg**	**13 37 42.7**	**+2.0**
	33nm,0.6s							
MTBS	**Maitube**	**4.21**	**29**	*e*P		**Pg**	**13 36 47.7**	**+1.3**
	7.1nm,0.3s							
MTBS				*e*S		**Sg**	**13 37 42.4**	**+1.4**
	16nm,0.5s							
TNSS	**Tian-Shan**	**4.34**	**34**	*e*P		**Pg**	**13 36 49.4**	**+0.5**
	4.1nm,0.5s							
TNSS				*e*S		**Sg**	**13 37 45.5**	**+0.3**
	9.5nm,0.8s							
KRBS	**Karabastau**	**4.48**	**19**	*e*P		**Pg**	**13 36 52.5**	**+0.8**
	3.9nm,0.4s							
KRBS				*e*S		**Sg**	**13 37 50.9**	**+1.2**
	12nm,0.5s							
KTBS	**Karatobe**	**4.80**	**27**	*e*P		**Pg**	**13 36 57.6**	**-0.2**
	2.9nm,0.4s							
KTBS				*e*S		**Sg**	**13 37 59.4**	**-0.7**
	33nm,0.7s							
KUU	**Kurty**	**4.85**	**24**	*e*P		**Pg**	**13 36 58.5**	**-0.2**
	4.0nm,0.2s							
KUU				*e*S		**Sg**	**13 38 00.7**	**-0.8**
	17nm,0.5s							
SATY	**Saty**	**5.06**	**43**	*e*P		**Pg**	**13 37 03.3**	**+0.5**
	2.2nm,0.2s							
SATY				*e*S		**Sg**	**13 38 08.8**	**+0.4**
	12nm,1.0s							
KURS	**Kuram**	**5.25**	**39**	*e*P		**

ARLS					⇑*i*S		**Sn**	**13 38 45.3**	**+1.2**
	baz=8.0								
GAR	**Garm**	**2.78**	**262**	⇑*i*P			**Pn**	**13 38 20.5**	**+2.3**
GAR	baz=61				⇑*i*S		**Sb**	**13 38 55.9**	**-1.7**
	baz=61								
TRKS	**Terek-Say**	**2.94**	**316**	⇑*e*P			**Pn**	**13 38 21.0**	**+0.6**
TRKS	baz=14				⇑*i*S		**Sn**	**13 38 56.8**	**+0.5**
	baz=14								
AAK	**Ala-Archa**	**3.23**	**8**	Pn			**Pb**	**13 38 30.6**	**-0.2**
	5.1nm,0.3s,baz=171,slow=6.8,SNR=4.1								
AAK				Pg			**Pg**	**13 38 34.0**	**-0.6**
	6.2nm,0.3s,baz=176,slow=8.8,SNR=4.0								
AAK				Sn			**Sb**	**13 39 12.6**	**+2.1**
	1.6nm,0.3s,baz=123,slow=20,SNR=1.5								
AAK				Lg			Lg	13 39 20.3	
	5.3nm,0.3s,baz=332,slow=6.5,SNR=4.3								
	14nm,0.5s								
BOOM	**Boomskoye usch**	**3.43**	**27**	⇑*e*P			**Pn**	**13 38 28.2**	**+0.9**
	baz=27								
BOOM					⇑*i*S		**Sn**	**13 39 09.4**	**+0.9**
	baz=27								
KDJ	**Kajisay**	**3.69**	**42**	⇓*i*P			**Pn**	**13 38 31.8**	**+1.0**
KDJ	baz=43				⇓*i*S		**Sn**	**13 39 15.5**	**+0.6**
	baz=43								
TAS	**Tashkent**	**3.95**	**300**	⇑*i*P			**Pn**	**13 38 36.1**	**+1.8**
TAS	baz=99				⇑*i*S		**Sn**	**13 39 23.0**	**+1.8**
	baz=99								
ZALV	**Zalesovo Beam**	**16.32**	**24**	Pn			**P**	**13 41 24.9**	**-0.8**
	0.2nm,0.3s,baz=210,slow=13,SNR=2.5								
	0.6nm,0.4s								
ARCES	**ARCESS Array B**	**39.34**	**336**	P			**P**	**13 45 03.6**	**+0.7**
	0.7nm,0.7s,baz=106,slow=9.5,SNR=1.5								
	0.7nm,0.7s								
NOA	**NORSAR Array B**	**43.45**	**321**	P			**P**	**13 45 35.8**	**-0.9**
	0.6nm,0.8s,baz=94,slow=7.7,SNR=1.7								
	0.6nm,0.8s								
TORD	**Torodi Ar. Bea**	**68.03**	**269**	P			**P**	**13 48 32.4**	**-1.3**
	0.3nm,0.4s,baz=45,slow=6.5,SNR=4.3								
	0.3nm,0.4s								
YKA	**Yellowknife Ar**	**78.18**	**4**	P			**P**	**13 49 32.5**	**-0.5**
	0.2nm,0.8s,baz=355,slow=5.5,SNR=2.9								
	0.2nm,0.8s								
WRA	**Warramunga Arr**	**81.70**	**124**	P			**P**	**13 49 52.8**	**+0.1**
	0.3nm,0.7s,baz=324,slow=5.2,SNR=5.2								
	0.3nm,0.7s								
ASAR	**Alice Springs**	**84.16**	**127**	P			**P**	**13 50 05.2**	**-0.1**
	0.3nm,0.8s,baz=317,slow=4.7,SNR=4.3								
	0.3nm,0.8s								

SOME ***26*** *13:42:16.7, 39˚.45N×73˚.70E, h10km*
IDC ***26*** *13:42:17.1±0.9, 39˚.33N×73˚.65E, h0km, mb3.6/8, mbtmp3.7/14, ML2.5/5, Error ellipse: s-maj=19.6km s-min=12.9km az=111.0*
KRNET ***26*** *13:42:17.3±0.1, 39˚.43N×73˚.78E, mb4.4*
NNC ***26*** *13:42:21.2±1.9, 39˚.58N×73˚.72E, h0km, mb4.5, mpv4.2, Error ellipse: s-maj=14.7km s-min=7.9km az=170.0*

ISC 26 13:42:18.3±1.5, 39˚24N±0˚.05×73˚.59E±0˚.03, h9km±9km, n85, σ2s31/121, mb3.6/8, 23C-15D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DRK	**Karamyk**	**1.41**	**281**	⇑*i*P		**Pg**	**13 42 46.0**	**+0.7**
DRK	baz=73			⇑*i*S		**Sg**	**13 43 07.3**	**+3.7**
	baz=73							
OHH	**Osh**	**1.43**	**335**	⇑*i*P		**Pn**	**13 42 42.4**	**-2.0**
OHH	baz=25			⇑*i*S		**Sn**	**13 43 00.9**	**-2.4**
	baz=25							
BTK	**Batken**	**2.29**	**292**	⇑*i*P		**Pb**	**13 42 59.3**	**-0.5**
BTK	baz=86			⇑*i*S		**Sg**	**13 43 30.0**	**-1.9**
	baz=86							
GAR	**Garm**	**2.56**	**266**	⇑*i*P		**Pb**	**13 43 04.2**	**-0.1**
GAR	baz=62			⇑*i*S		**Sg**	**13 43 38.6**	**-1.8**
	baz=62							
ARLS	**Aral**	**2.68**	**12**	⇓*e*P		**Pn**	**13 43 00.6**	**-1.1**
ARLS	baz=10.0			⇓*i*S		**Sn**	**13 43 32.2**	**-2.2**
	baz=10.0							
AML	**Almayashu**	**2.89**	**2**	P		**Pn**	**13 43 07.2**	**+2.3**
	SNR=22							
TRKS	**Terek-Say**	**2.96**	**322**	⇑*i*P		**Pn**	**13 43 05.9**	**+0.4**
TRKS	baz=16			⇑*i*S		**Sn**	**13 43 41.5**	**+0.3**
	baz=16							
UCH	**Uchtor**	**3.07**	**13**	P		**Pn**	**13 43 10.0**	**+2.7**
	SNR=11							
UCH	**Uchtor**	**3.07**	**13**	⇑*e*P		**Pn**	**13 43 06.2**	**-1.1**
UCH	baz=11			⇑*i*S		**Sn**	**13 43 41.9**	**-2.5**
	baz=11							
EKS2	**Erkin-Say**	**3.42**	**2**	P		**Pn**	**13 43 14.7**	**+2.8**
	SNR=11							
EKS2	**Erkin-Say**	**3.42**	**2**	⇓*e*P		**Pn**	**13 43 11.3**	**-0.6**
EKS2	baz=60			⇓*i*S		**Sn**	**13 43 50.6**	**-2.1**
	baz=60							
AAK	**Ala-Archa**	**3.47**	**11**	P		**Pn**	**13 43 14.5**	**+2.0**
	SNR=12							
AAK	**Ala-Archa**	**3.47**	**11**	Pn		**Pn**	**13 43 15.0**	**+2.5**
	30nm,0.4s,baz=174,slow=12,SNR=12							
AAK				Sn		**Sn**	**13 43 56.9**	**+3.2**
	5.3nm,0.3s,baz=145,slow=18,SNR=1.9							
AAK				Lg		Lg	13 44 03.2	
	8.2nm,0.3s,baz=133,slow=22,SNR=6.4							
AAK	**Ala-Archa**	**3.47**	**11**	⇓*e*P		**Pn**	**13 43 11.6**	**-0.9**
AAK	baz=9.0			⇓*i*S		**Sn**	**13 43 51.2**	**-2.6**
	baz=9.0							
CHGR	**Chuyangaron**	**3.50**	**262**	⇓*i*P		**Pb**	**13 43 17.6**	**-2.9**
CHGR	baz=59			⇓*e*S		**Sb**	**13 44 01.6**	**-1.5**
	baz=59							
KBK	**Karagaybulak**	**3.57**	**16**	P		**Pn**	**13 43 16.6**	**+2.7**
	SNR=11							
KBK	**Karagaybulak**	**3.57**	**16**	⇓*i*P		**Pn**	**13 43 12.8**	**-1.1**
KBK	baz=15			⇓*i*S		**Sn**	**13 43 53.5**	**-2.8**
	baz=15							
ULHL	**Ulahol**	**3.62**	**33**	P		**Pb**	**13 43 21.7**	**-0.8**
	SNR=20							
ULHL	**Ulahol**	**3.62**	**33**	⇑*e*P		**Pn**	**13 43 13.4**	**-1.3**
ULHL	baz=33			⇑*i*S		**Sn**	**13 43 54.3**	**-3.3**
	baz=33							
BOOM	**Boomskoye usch**	**3.71**	**28**	⇑*e*P		**Pn**	**13 43 14.6**	**-1.2**
	baz=27							
BOOM				⇑*i*S		**Sn**	**13 43 56.5**	**-3.2**
	baz=27							
CHMS	**Chumysh**	**3.86**	**13**	P		**Pn**	**13 43 20.5**	**+2.7**
	SNR=12							
TAS	**Tashkent**	**3.89**	**304**	⇑*i*P		**Pn**	**13 43 20.8**	**+2.6**
	baz=0.0							
TAS				⇑*i*S		**Sn**	**13 44 06.6**	**+2.6**
	baz=0.0							
IUG	**luzhnay**	**3.97**	**318**	*e*P		**Pg**	**13 43 32.5**	**-1.9**
	1μm,0.8s							
IUG				*e*S		**Sg**	**13 44 26.7**	**+1.0**
	506nm,0.9s							
KDJ	**Kajisay**	**3.98**	**42**	⇓*e*P		**Pn**	**13 43 18.4**	**-1.1**
KDJ	baz=43			⇓*e*S		**Sn**	**13 44 03.0**	**-3.3**
	baz=43							
TKM2	**Tokmak 2**	**3.98**	**22**	P		**Pn**	**13 43 21.6**	**+1.9**
	SNR=7.7							
TKM2	**Tokmak 2**	**3.98**	**22**	⇓Pg		**Pn**	**13 43 21.9**	**+2.2**
	35nm,0.8s							
TKM2				⇑Lg		Lg	13 44 17.4	
	58nm,0.7s							
DZA	**Taraz**	**4.03**	**336**	*e*P		**Pb**	**13 43 30.8**	**+1.4**
	67nm,0.1s							
DZA				*e*S		**Sg**	**13 44 24.1**	**-3.5**
	288nm,0.5s							
DZA	**Taraz**	**4.03**	**336**	Pg		**Pb**	**13 43 31.5**	**+2.0**
	67nm,0.1s							
DZA				Lg		Lg	13 44 23.1	
	288nm,0.5s							
USP	**Ospenovka**	**4.09**	**9**	P		**Pb**	**13 43 30.0**	**-0.4**
	SNR=7.3							
KST	**Kastek**	**4.21**	**24**	*e*P		**Pb**	**13 43 31.0**	**-1.4**
	26nm,0.6s							
KST				*e*S		**Sb**	**13 44 24.6**	**+1.3**
	154nm,0.6s							
KST	**Kastek**	**4.21**	**24**	Pg		**Pb**	**13 43 31.5**	**-0.9**
	26nm,0.6s							
KST				Lg		Lg	13 44 25.8	
	154nm,0.6s							
SGDS	**Sogindy**	**4.29**	**10**	*e*P		**Pb**	**13 43 32.6**	**-1.1**
	30nm,0.4s							
SGDS				*e*S		**Sb**	**13 44 27.4**	**+1.9**
	24nm,0.6s							
SGDS	**Sogindy**	**4.29**	**10**	Pg		**Pb**	**13 43 32.2**	**-1.6**
	30nm,0.4s							
SGDS				Lg		Lg	13 44 24.5	
	24nm,0.6s							
CHM	**Chimkent**	**4.32**	**317**	*e*P		**Pb**	**13 43 36.9**	**+2.6**
	2.5nm,0.4s							
CHM				*e*S		**Sg**	**13 44 34.5**	**-2.4**
	304nm,0.4s							
DGS	**Degeres**	**4.33**	**22**	*e*P		**Pb**	**13 43 33.5**	**-1.0**
	53nm,0.7s							
DGS				*e*S		**Sb**	**13 44 28.9**	**+2.1**
	77nm,0.8s							
DGS	**Degeres**	**4.33**	**22**	Pg		**Pb**	**13 43 34.3**	**-0.2**
	53nm,0.7s							
DGS				Lg		Lg	13 44 28.4	
	77nm,0.8s							
MTBS	**Maitube**	**4.44**	**28**	*e*P		**Pb**	**13 43 35.4**	**-1.1**
	31nm,0.8s							
MTBS				*e*S		**Sb**	**13 44 32.2**	**+2.1**
	61nm,0.3s							
MTBS	**Maitube**	**4.44**	**28**	Pg		**Pb**	**13 43 36.2**	**-0.2**
	68nm,0.6s							
MTBS				Lg		Lg	13 44 31.5	
	61nm,0.3s							
KK31	**Karatay Array**	**4.51**	**330**	Pg		**Pb**	**13 43 39.8**	**+2.2**
	9.0nm,0.5s,baz=143,slow=15,SNR=6.9							
KK31				⇓Lg		Lg	13 44 34.9	
	24nm,0.5s,baz=142,slow=30,SNR=4.8							
TNSS	**Tian-Shan**	**4.57**	**33**	*e*P		**Pb**	**13 43 38.3**	**-0.5**
	36nm,0.5s							
TNSS				*e*S		**Sb**	**13 44 37.1**	**+3.1**
	23nm,0.7s							
TNSS	**Tian-Shan**	**4.57**	**33**	Pg		**Pb**	**13 43 39.6**	**+0.8**
	36nm,0.5s							
TNSS				Lg		Lg	13 44 37.1	
	23nm,0.7s							
AAA	**Alma-Ata**	**4.70**	**31**	*e*P		**Pb**	**13 43 41.0**	**+0.2**
	30nm,0.3s							
AAA				*e*S		**Sb**	**13 44 41.2**	**+3.8**
	166nm,0.9s							
KNDC	**Almaty**	**4.72**	**32**	⇑Pg		**Pb**	**13 43 41.8**	**+0.6**
	79nm,0.7s							
KNDC				⇓Lg		Lg	13 44 42.3	
	408nm,0.8s							
KRBS	**Karabastau**	**4.72**	**19**	*e*P		**Pb**	**13 43 40.5**	**-0.7**
	27nm,0.6s							
KRBS				*e*S		**Sb**	**13 44 40.9**	**+2.7**
	44nm,0.8s							
KRBS	**Karabastau**	**4.72**	**19**	Pg		**Pb**	**13 43 40.9**	**-0.3**
	27nm,0.6s							
KRBS				Lg		Lg	13 44 40.2	
	44nm,0.8s							
BRLS	**Borolday**	**4.73**	**324**	*e*P		**Pb**	**13 43 40.9**	**-0.5**
	9.1nm,0.6s							
BRLS				*e*S		**Sb**	**13 44 40.9**	**+2.5**
	66nm,0.5s							
BRLS	**Borolday**	**4.73**	**324**	Pg		**Pb**	**13 43 41.5**	**+0.2**
	9.1nm,0.6s							
BRLS				Lg		Lg	13 44 41.0	
	66nm,0.5s							
KTBS	**Karatobe**	**5.04**	**26**	*e*P		**Pb**	**13 43 46.3**	**-0.3**
	27nm,0.6s							
KTBS				*e*S		**Sb**	**13 44 50.6**	**+3.4**
	99nm,1.0s							
KTBS	**Karatobe**	**5.04**	**26**	Pg		**Pb**	**13 43 47.4**	**+0.8**
	27nm,0.6s							
KTBS				Lg		Lg	13 44 50.6	
	99nm,1.0s							
KUU	**Kurty**	**5.09**	**23**	*e*P		**Pb**	**13 43 46.2**	**-1.2**
	23nm,0.7s							
KUU				*e*S		**Sb**	**13 44 51.1**	**+2.5**
	43nm,0.5s							
KUU	**Kurty**	**5.09**	**23**	Pg		**Pb**	**13 43 46.6**	**-0.9**
	23nm,0.7s							
KUU				Lg		Lg	13 44 49.2	
	43nm,0.5s							
CHKK	**Chushkaly**	**5.27**	**28**	*e*P		**Pb**	**13 43 49.8**	**-0.7**
	16nm,0.5s							
CHKK				*e*S		**Sb**	**13 44 57.0**	**+3.1**
	44nm,0.6s							
CHKK	**Chushkaly**	**5.27**	**28**	Pg		**Pb**	**13 43 50.9**	**+0.4**
	16nm,0.5s							
CHKK				Lg		Lg	13 44 57.6	
	44nm,0.6s							
SATY	**Saty**	**5.27**	**42**	*e*P		**Pb**	**13 43 50.9**	**+0.3**
	18nm,0.5s							
SATY				*e*S		**Sb**	**13 44 59.3**	**+5.3**
	62nm,0.8s							
SATY	**Saty**	**5.27**	**42**	Pg		**Pb**	**13 43 52.5**	**+1.9**
	18nm,0.5s							
SATY				Lg		Lg	13 44 59.3	
	62nm,0.8s							
KURS	**Kuram**	**5.47**	**38**	*e*P		**Pb**	**13 43 53.9**	**0.0**
	22nm,0.7s							
KURS				*e*S		**Sb**	**13 45 04.5**	**+4.8**
	29nm,1.1s							
KURS	**Kuram**	**5.47**	**38**	Pg		**Pb**	**13 43 54.8**	**+0.9**
	22nm,0.7s							
KURS				Lg		Lg	13 45 03.3	
	29nm,1.1s							
KPKS	**Kokpek**	**5.71**	**41**	*e*P		**Pb**	**13 43 59.0**	**+1.0**
	20nm,0.5s							
KPKS				*e*S		**Sb**	**13 45 12.3**	**+5.8**
	50nm,0.7s							
KPKS	**Kokpek**	**5.71**	**41**	Pg		**Pb**	**13 44 00.1**	**+2.1**
	20nm,0.5s							
KPKS				Lg		Lg	13 45 12.3	
	50nm,0.7s							
BTLS	**Baital**	**5.81**	**3**	*e*P		**Pb**	**13 44 00.2**	**+0.5**
	9.8nm,0.7s							
BTLS				*e*S		**Sb**	**13 45 15.1**	**+5.7**
	24nm,0.9s							
ARXS	**Arharly**	**5.90**	**31**	*e*P		**Pb**	**13 44 01.6**	**+0.4**
	28nm,0.7s							
ARXS				*e*S		**Sb**	**13 45 16.8**	**+4.8**
	54nm,0.6s							
ARXS	**Arharly**	**5.90**	**31**	Pg		**Pb**	**13 44 02.3**	**+1.0**
	28nm,0.7s							
ARXS				Lg		Lg	13 45 17.6	
	54nm,0.6s							
PDGK	**Podgornoye**	**6.04**	**45**	Pg		**Pb**	**13 44 05.2**	**+1.6**
	3.7nm,0.6s							
PDGK				Lg		Lg	13 45 21.1	
	17nm,0.6s							
PDGK	**Podgornoye**	**6.04**	**45**	⇑Pg		**Pb**	**13 44 05.9**	**+2.2**
	14nm,0.7s							
PDGK				⇑Lg		Lg	13 45 21.2	
	67nm,1.1s							
BLB	**Baldybastay**	**6.08**	**35**	*e*P		**Pb**	**13 44 05.4**	**+1.0**
	44nm,0.8s							
BLB				*e*S		**Sb**	**13 45 22.9**	**+5.6**
	45nm,0.9s							
BLB	**Baldybastay**	**6.08**	**35**	Pg		**Pb**	**13 44 05.8**	**+1.4**
	44nm,0.8s							
BLB				Lg		Lg	13 45 22.9	
	45nm,0.9s							
KTMS	**Ketmen**	**6.60**	**48**	*e*P		Pg	13 44 19.8	-4.8
	0.9nm,0.5s							
KTMS				*e*S		**Sg**	**13 45 48.3**	**-1.8**
	13nm,0.8s							
KTMS	**Ketmen**	**6.60**	**48**	Pg		Pb	13 44 19.7	+6.5
	5.5nm,0.8s							
DJR	**Jarkent**	**6.88**	**40**	*e*P		**Pb**	**13 44 19.3**	**+1.3**
	3.4nm,0.6s							
DJR				*e*S		**Sb**	**13 45 47.9**	**+7.6**
	20nm,1.0s							
DJR	**Jarkent**	**6.88**	**40**	Pg		**Pb**	**13 44 21.7**	**+3.7**
	6.2nm,0.5s							
MKAR	**Makanchi Array**	**9.88**	**37**	Pn		**Pn**	**13 44 41.5**	**+1.1**
	baz=224,slow=12,SNR=4.2							
MKAR				Lg		Lg	13 47 25.7	
	0.1nm,0.3s,baz=241,slow=28,SNR=3.2							
	0.8nm,0.8s							
KURBB	**Kurchatov Arra**	**11.91**	**15**	Pn		**Pn**	**13 45 06.5**	**-1.5**
	baz=204,slow=12,SNR=2.8							
KURBB				Lg		Lg	13 48 28.4	
	baz=199,slow=29,SNR=7.4							
	0.4nm,0.6s							
AB31	**Akbulak array**	**13.98**	**320**	P		**Pn**	**13 45 35.8**	**-0.6**
	1.3nm,0.6s,baz=128,slow=13,SNR=7.3							
AKTO	**Aktyubinsk**	**15.69**	**321**	Pn		**Pn**	**13 45 56.0**	**-3.3**
	baz=157,slow=7.7,SNR=1.9							
	1.9nm,0.6s							
AKTO	**Aktyubinsk**	**15.69**	**321**	⇑P		**Pn**	**13 45 56.3**	**-3.0**
	3.1nm,0.6s							
ZALV	**Zalesovo Beam**	**16.58**	**24**	Pn		**Pn**	**13 46 10.4**	**-0.4**
	0.3nm,0.3s,baz=195,slow=8.7,SNR=11							
	2.7nm,0.7s							
ARU	**Arti**	**19.86**	**335**	P		**P**	**13 46 48.7**	**-0.7**
	baz=151,slow=10,SNR=4.0							
	3.4nm,0.8s							
BRTR	**Keskin Array B**	**30.66**	**284**	P		**P**	**13 48 34.9**	**+1.7**
	0.7nm,0.7s,baz=64,slow=6.6,SNR=4.0							
	0.7nm,0.7s							
FINES	**FINESS Array B**	**36.44**	**323**	P		**P**	**13 49 22.9**	**0.0**
	0.6nm,0.5s,baz=102,slow=13,SNR=7.7							
	0.6nm,0.5s							
ARCES	**ARCESS Array B**	**39.45**	**336**	P		**P**	**13 49 48.3**	**0.0**
	0.6nm,0.5s,baz=107,slow=8.9,SNR=8.0							
	0.6nm,0.5s							
TORD	**Torodi Ar. Bea**	**67.82**	**269**	P		**P**	**13 53 17.3**	**+0.4**
	0.4nm,0.6s,baz=51,slow=5.3,SNR=6.1							
	0.4nm,0.6s							
ILAR	**Eielson Array**	**71.58**	**17**	P		**P**	**13 53 38.0**	**-1.3**
	0.5nm,0.9s,baz=332,slow=5.5,SNR=6.0							
	0.5nm,0.9s							
YKA	**Yellowknife Ar**	**78.40**	**4**	P		**P**	**13 54 17.4**	**-1.4**
	0.3nm,0.6s,baz=360,slow=6.1,SNR=4.1							
	0.3nm,0.6s							
WRA	**Warramunga Arr**	**81.75**	**124**	P		**P**	**13 54 37.5**	**0.0**
	0.5nm,0.7s,baz=325,slow=5.0,SNR=6.2							
	0.5nm,0.7s							
ASAR	**Alice Springs**	**84.19**	**127**	P		**P**	**13 54 51.0**	**+0.9**
	0.2nm,0.7s,baz=303,slow=4.8,SNR=4.7							
	0.2nm,0.7s							

SOME ***26*** *13:46:17.5, 39˚.30N×73˚.63E, h15km*
KRNET ***26*** *13:46:17.2±0.1, 39˚.48N×73˚.79E, mb4.3*
IDC ***26*** *13:46:18.0±0.7, 39˚.40N×73˚.56E, h0km, mb3.9/19, mbtmp4.0/26, ML3.1/7, Error ellipse: s-maj=13.6km s-min=10.5km az=136.0*
MOS ***26*** *13:46:19.1±1.3, 39˚.47N×73˚.50E, h14km, mb4.4/19, Error ellipse: s-maj=7.0km s-min=5.3km az=78.3*
BJI ***26*** *13:46:19.0±0.0, 39˚.38N×73˚.30E, h15km, mb3.7/10, ML3.5/5*
NEIC ***26*** *13:46:20.8±1.5, 39˚.51N±0˚.06×73˚.45E±0˚.04, h10km±1km, mb4.3/17, Error ellipse: s-maj=10.0km s-min=4.7km az=181.0*
NNC ***26*** *13:46:24.2±2.5, 39˚.66N×73˚.38E, h0km, mb4.3, mpv4.0, Error ellipse: s-maj=24.0km s-min=13.2km az=163.0*

ISC 26 13:46:20.1±0.9, 39.60N±0.03×73.57E±0.02, h8km±6km, n186, σ2s10/228, mb4.1/37, 20C-22D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OHH	**Osh**	**1.10**	**327**	⇑*i*P		**Pn**	**13 46 41.8**	**-0.2**
OHH	baz=24			⇑*i*S		**Sn**	**13 46 59.7**	**+2.3**
	baz=24							
DRK	**Karamyk**	**1.37**	**265**	Pn		**Pn**	**13 46 44.6**	**-1.3**
KSH	**Kashi**	**1.86**	**92**	Pg		**Pn**	**13 46 48.3**	**-4.1**
KSH				Sg		**Sn**	**13 47 12.5**	**-3.7**
KSH	comp=N,1μm,0.7s			smax		smax		
KSH	comp=E,890nm,0.7s			smax		smax		
BTK	**Batken**	**2.17**	**283**	⇑*i*P		**Pb**	**13 46 59.3**	**-0.4**
BTK	baz=85			⇑*i*S		**Sg**	**13 47 30.0**	**+0.3**
	baz=85							
BTK	**Batken**	**2.17**	**283**	Pn		**Pn**	**13 46 56.4**	**-0.2**
BTK	**Batken**	**2.17**	**283**	PN		**Pn**	**13 46 56.4**	**-0.2**
ARLS	**Aral**	**2.33**	**14**	⇑*i*P		**Pn**	**13 47 00.0**	**+1.1**
ARLS	baz=10.0			⇑*i*S		**Sb**	**13 47 31.0**	**-0.4**
	baz=10.0							
AML	**Almayashu**	**2.53**	**2**	P		**Pb**	**13 47 06.4**	**+0.4**
	SNR=12							
GAR	**Garm**	**2.59**	**258**	⇑*i*P		**Pn**	**13 47 04.5**	**+2.0**
GAR	baz=61			⇑*i*S		**Sb**	**13 47 39.0**	**-0.1**
	baz=61							
GAR	**Garm**	**2.59**	**258**			**Pn**	**13 47 01.3**	**-1.2**
TRKS	**Terek-Say**	**2.67**	**317**	⇑*e*P		**Pn**	**13 47 05.5**	**+1.9**
TRKS	baz=16			⇑*i*S		**Sb**	**13 47 40.8**	**-0.5**
	baz=16							
UCH	**Uchtor**	**2.72**	**15**	P		**Pb**	**13 47 10.0**	**+0.7**
	SNR=16							
UCH	**Uchtor**	**2.72**	**15**	⇓*e*P		**Pn**	**13 47 05.5**	**+1.0**
UCH	baz=11			⇓*i*S		**Sb**	**13 47 40.8**	**-2.2**
	baz=11							
EKS2	**Erkin-Say**	**3.06**	**3**	P		**Pb**	**13 47 14.2**	**-0.7**
	SNR=12							
EKS2	**Erkin-Say**	**3.06**	**3**	⇑*e*P		**Pn**	**13 47 10.4**	**+1.5**
EKS2	baz=60			⇑*i*S		**Sb**	**13 47 49.4**	**-3.1**
	baz=60							
AAK	**Ala-Archa**	**3.11**	**13**	P		**Pb**	**13 47 15.6**	**-0.2**
	SNR=19							
AAK	**Ala-Archa**	**3.11**	**13**	Pn		**Pb**	**13 47 15.0**	**-0.8**
	11nm,0.3s,baz=196,slow=14,SNR=14							
AAK				Sn		**Sb**	**13 47 54.7**	**+0.7**
	13nm,0.3s,baz=182,slow=3.4,SNR=2.4							
AAK				Lg		Lg	13 48 03.3	
	26nm,0.3s,baz=21,slow=17,SNR=12							
	51nm,0.5s							
AAK	**Ala-Archa**	**3.11**	**13**			**Pn**	**13 47 12.2**	**+2.5**
AAK	**Ala-Archa**	**3.11**	**13**	PN		**Pn**	**13 47 12.2**	**+2.5**
AAK							13 47 54.7	
KBK	**Karagaybulak**	**3.22**	**18**	P		**Pg**	**13 47 24.2**	**+2.3**
	SNR=6.7							
FRU1	**Bishkek**	**3.30**	**14**	PN		**Pn**	**13 47 14.0**	**+1.8**
ULHL	**Ulahol**	**3.33**	**37**	P		**Pg**	**13 47 22.8**	**-1.0**
	SNR=14							
BOOM	**Boomskoye usch**	**3.40**	**31**	⇓*e*P		**Pn**	**13 47 13.9**	**+0.3**
	baz=28							
BOOM				⇓*i*S		**Sn**	**13 47 55.1**	**+0.9**
	baz=28							
BOOM	**Boomskoye usch**	**3.40**	**31**			**Pn**	**13 47 15.2**	**+1.6**
BOOM	**Boomskoye usch**	**3.40**	**31**	PN		**Pn**	**13 47 15.2**	**+1.6**
CHMS	**Chumysh**	**3.51**	**14**	P		**Pb**	**13 47 20.8**	**-1.7**
	SNR=14							
CHMS	**Chumysh**	**3.51**	**14**	PN		**Pb**	**13 47 20.4**	**-2.1**
CHMS				LG		Lg	13 48 14.9	
CHMS	**Chumysh**	**3.51**	**14**	⇑Pn		**Pb**	**13 47 20.4**	**-2.1**
	27n

KDJ	**Kajisay**	**3.72**	**46**	PN	**Pn**	**13 47 20.7**	**+2.6**
USP	**Ospenovka**	**3.73**	**11**	P	**Pb**	**13 47 22.9**	**-3.3**
	SNR=13						
TARG	**Taragay, Kyrgy**	**3.86**	**55**	Pn	**Pn**	**13 47 23.1**	**+2.9**
TARG	**Taragay, Kyrgy**	**3.86**	**55**	PN	**Pn**	**13 47 23.1**	**+2.9**
KST	**Kastek**	**3.88**	**27**	*e*P	**Pg**	**13 47 32.7**	**-1.7**
	29nm,0.5s						
KST				*e*S	**Sg**	**13 48 27.4**	**+2.7**
	173nm,0.8s						
SGDS	**Sogindy**	**3.93**	**11**	*e*PN	**Pn**	**13 47 24.9**	**+4.1**
SGDS				*e*		13 47 34.6	
SGDS	**Sogindy**	**3.93**	**11**	*e*P	**Pg**	**13 47 33.3**	**-2.0**
	21nm,0.5s						
SGDS				*e*S	**Sg**	**13 48 27.0**	**+0.8**
	93nm,0.8s						
SGDS	**Sogindy**	**3.93**	**11**	*e*Pn	**Pn**	**13 47 24.9**	**+4.1**
	baz=12						
SGDS				*e*Pg	**Pg**	**13 47 34.7**	**-0.7**
	baz=12						
SGDS				*e*Lg	Lg	13 48 29.7	
	baz=12						
DGS	**Degeres**	**4.00**	**24**	*e*P	**Pg**	**13 47 34.6**	**-2.0**
	42nm,0.3s						
DGS				*e*S	**Sg**	**13 48 30.8**	**+2.3**
	134nm,0.7s						
CHM	**Chimkent**	**4.05**	**313**	*e*P	**Pg**	**13 47 38.7**	**+1.1**
	4.1nm,0.5s						
CHM				*e*S	**Sg**	**13 48 37.2**	**+7.1**
	918nm,0.7s						
IZV	**Izvestkoviy**	**4.12**	**33**	*e*P	**Pg**	**13 47 41.2**	**+2.0**
	43nm,0.1s						
IZV				*e*S	**Sg**	**13 48 41.2**	**+8.6**
	97nm,0.9s						
MTBS	**Maitube**	**4.13**	**30**	*e*P	**Pg**	**13 47 37.5**	**-1.7**
	30nm,0.6s						
MTBS				*e*S	**Sg**	**13 48 34.7**	**+2.0**
	70nm,0.5s						
KK31	**Karatay Array**	**4.19**	**328**	Pn	**Pn**	**13 47 25.7**	**+1.3**
KK31	**Karatay Array**	**4.19**	**328**	PN	**Pn**	**13 47 28.4**	**+4.1**
KK31				PG	**Pg**	**13 47 38.4**	**-1.9**
KK31				LG	Lg	13 48 33.6	
KK31	**Karatay Array**	**4.19**	**328**	⇓Pn	**Pn**	**13 47 28.4**	**+4.1**
	4.8nm,0.3s,baz=161,slow=14,SNR=9.4						
KK31				⇑Pg	**Pg**	**13 47 38.4**	**-1.9**
	17nm,0.6s,baz=140,slow=16,SNR=6.4						
KK31				⇓Lg	Lg	13 48 33.6	
	33nm,0.5s,baz=143,slow=23,SNR=4.2						
KKAR	**Karatay Array**	**4.19**	**328**	Pn	**Pn**	**13 47 25.5**	**+1.2**
KKAR	**Karatay Array**	**4.19**	**328**	PN	**Pn**	**13 47 25.5**	**+1.2**
TNSS	**Tian-Shan**	**4.27**	**35**	*e*PN	**Pn**	**13 47 29.6**	**+3.8**
TNSS				*e*		13 47 41.1	
TNSS	**Tian-Shan**	**4.27**	**35**	*e*P	**Pg**	**13 47 40.8**	**-1.2**
	30nm,0.6s						
TNSS				*e*S	**Sg**	**13 48 39.8**	**+2.6**
	28nm,0.6s						
TNSS	**Tian-Shan**	**4.27**	**35**	*e*Pn	**Pn**	**13 47 29.7**	**+3.8**
	baz=36						
TNSS				*e*Pg	**Pg**	**13 47 41.1**	**-0.8**
	baz=36						
TNSS				*e*Lg	Lg	13 48 40.1	
	baz=36						
KRBS	**Karabastau**	**4.38**	**20**	*e*P	**Pg**	**13 47 42.2**	**-1.9**
	19nm,0.6s						
KRBS				*e*S	**Sg**	**13 48 42.0**	**+1.1**
	36nm,0.5s						
AAA	**Alma-Ata**	**4.39**	**34**	*e*P	**Pg**	**13 47 43.4**	**-0.9**
	17nm,0.2s						
AAA				*e*S	**Sg**	**13 48 44.5**	**+3.3**
	152nm,0.5s						
AAA	**Alma-Ata**	**4.39**	**34**	*e*Pg	**Pg**	**13 47 43.2**	**-1.0**
	baz=34						
AAA				*e*Lg	Lg	13 48 44.0	
	baz=34						
KNDC	**Almaty**	**4.42**	**34**	⇑Pg	**Pg**	**13 47 44.2**	**-0.6**
	91nm,0.7s						
KNDC				⇑Lg	Lg	13 48 44.9	
	270nm,0.8s						
BRLS	**Borolday**	**4.43**	**322**	*e*PN	**Pb**	**13 47 40.0**	**+1.8**
BRLS				*e*		13 48 38.5	
BRLS	**Borolday**	**4.43**	**322**	*e*P	**Pb**	**13 47 40.3**	**+2.1**
	12nm,0.8s						
BRLS				*e*S	**Sg**	**13 48 39.6**	**-2.8**
	82nm,0.6s						
BRLS	**Borolday**	**4.43**	**322**	*e*Pg	**Pb**	**13 47 40.1**	**+1.8**
	baz=319						
BRLS				*e*Lg	Lg	13 48 38.6	
	baz=319						
KTBS	**Karatobe**	**4.72**	**29**	*e*P	**Pg**	**13 47 48.0**	**-2.6**
	13nm,0.3s						
KTBS				*e*S	**Sg**	**13 48 52.6**	**+0.9**
	134nm,0.7s						
KUU	**Kurty**	**4.76**	**25**	*e*P	**Pg**	**13 47 48.7**	**-2.6**
	22nm,0.7s						
KUU				*e*S	**Sg**	**13 48 54.4**	**+1.4**
	54nm,0.5s						
KUU	**Kurty**	**4.76**	**25**	*e*Pg	**Pg**	**13 47 50.1**	**-1.2**
	baz=26						
KUU				*e*Lg	Lg	13 48 55.9	
	baz=26						
CHKK	**Chushkaly**	**4.96**	**30**	*e*P	**Pg**	**13 47 51.6**	**-3.5**
	13nm,0.6s						
CHKK				*e*S	**Sg**	**13 49 00.0**	**+0.7**
	64nm,0.5s						
CHKK	**Chushkaly**	**4.96**	**30**	*e*Pg	**Pg**	**13 47 51.1**	**-3.9**
	baz=31						
CHKK				*e*Lg	Lg	13 48 59.6	
	baz=31						
SATY	**Saty**	**5.02**	**45**	*e*P	**Pg**	**13 47 55.7**	**-0.5**
	13nm,0.8s						
SATY				*e*S	**Sg**	**13 49 06.1**	**+4.9**
	62nm,1.2s						
SATY	**Saty**	**5.02**	**45**	*e*Pg	**Pg**	**13 47 54.8**	**-1.4**
	baz=46						
SATY				*e*Lg	Lg	13 49 05.2	
	baz=46						
ZHN	**Zhinishke**	**5.11**	**44**	*e*Pg	**Pg**	**13 47 55.3**	**-2.6**
	baz=45						
ZHN				*e*Lg	Lg	13 49 05.5	
	baz=45						
KURS	**Kuram**	**5.19**	**40**	*e*P	**Pg**	**13 47 59.2**	**-0.4**
	25nm,0.7s						
KURS				*e*S	**Sg**	**13 49 12.6**	**+5.7**
	27nm,1.1s						
KPKS	**Kokpek**	**5.44**	**43**	*e*PN	**Pn**	**13 47 42.6**	**+1.0**
KPKS				*e*		13 48 00.5	
KPKS	**Kokpek**	**5.44**	**43**	*e*P	**Pg**	**13 48 00.3**	**-4.1**
	17nm,0.7s						
KPKS				*e*S	**Sg**	**13 49 15.0**	**+0.1**
	34nm,0.6s						
KPKS	**Kokpek**	**5.44**	**43**	*e*Pn	**Pn**	**13 47 42.6**	**+1.0**
	baz=44						
KPKS				*e*Pg	**Pg**	**13 48 00.6**	**-3.8**
	baz=44						
KPKS				*e*Lg	Lg	13 49 17.3	
	baz=44						
BTLS	**Baital**	**5.45**	**4**	*e*P	**Pg**	**13 48 00.1**	**-4.3**
	11nm,1.0s						
BTLS				*e*S	**Sg**	**13 49 13.7**	**-1.3**
	10.0nm,0.9s						
BTLS	**Baital**	**5.45**	**4**	*e*Pg	**Pg**	**13 48 01.9**	**-2.5**
	baz=4.0						
BTLS				*e*Lg	Lg	13 49 15.1	
	baz=4.0						
ARXS	**Arharly**	**5.59**	**33**	*e*P	**Pg**	**13 48 03.2**	**-4.0**
	36nm,0.8s						
ARXS				*e*S	**Sg**	**13 49 19.3**	**-0.4**
	86nm,0.4s						
SHLS	**Shalkode**	**5.68**	**49**	*e*P	**Pg**	**13 48 12.3**	**+3.5**
	6.4nm,0.4s						
SHLS				*e*S	Sg	13 49 35.4	+13
	32nm,0.8s						
SHLS	**Shalkode**	**5.68**	**49**	*e*Pg	**Pg**	**13 48 12.0**	**+3.2**
	baz=52						
SHLS				*e*Lg	Lg	13 49 32.3	
	baz=52						
BLB	**Baldybastay**	**5.80**	**38**	*e*P	**Pg**	**13 48 07.6**	**-3.5**
	25nm,0.5s						
BLB				*e*S	**Sg**	**13 49 26.0**	**-0.1**
	62nm,0.9s						
CEP	**Cherat**	**5.92**	**194**	P	**Pn**	**13 47 50.5**	**+2.2**
CEP				S	**Sn**	**13 48 58.0**	**+1.6**
CHCP	**Chirah Chowk**	**5.94**	**182**	P	**Pn**	**13 47 50.8**	**+2.4**
CHCP				S	**Sn**	**13 49 00.0**	**+3.4**
KBL	**Kabul**	**6.21**	**217**	Pn	**Pn**	**13 47 50.9**	**-1.4**
KBL	**Kabul**	**6.21**	**217**	PN	**Pn**	**13 47 50.9**	**-1.4**
TDK	**Taldyqorghan**	**6.48**	**32**	*e*P*	**Pg**	**13 48 21.3**	**-2.8**
TDK	**Taldyqorghan**	**6.48**	**32**	*e*Pg	**Pg**	**13 48 21.4**	**-2.7**
	baz=32						
TDK				*e*Lg	Lg	13 49 50.2	
	baz=32						
DJR	**Jarkent**	**6.62**	**42**	*e*P	**Pg**	**13 48 24.5**	**-2.4**
	4.9nm,0.5s						
DJR				*e*S	**Sg**	**13 49 55.2**	**+2.7**
	19nm,0.8s						
THW	**Thamme Wali**	**6.95**	**193**	P	**Pn**	**13 48 04.3**	**+2.0**
MK31	**Makanchi Array**	**9.60**	**39**	Pn	**Pn**	**13 48 40.8**	**+2.2**
MK31	**Makanchi Array**	**9.60**	**39**	P	**Pn**	**13 48 40.8**	**+2.2**
MKAR	**Makanchi Array**	**9.60**	**39**	Pn	**Pn**	**13 48 42.1**	**+3.5**
	baz=246,slow=20,SNR=2.5						
MKAR				Lg	Lg	13 51 29.6	
	0.1nm,0.3s,baz=217,slow=22,SNR=3.9						
	1.1nm,0.8s						
MKAR	**Makanchi Array**	**9.60**	**39**	Pn	**Pn**	**13 48 41.0**	**+2.4**
MKAR	**Makanchi Array**	**9.60**	**39**	P	**Pn**	**13 48 41.0**	**+2.4**
BRZS	**Berezniki**	**10.40**	**357**	*e*Pg	Pg	13 49 31.8	
	baz=357						
BRZS				*e*Lg	Lg	13 51 54.1	
	baz=357						
WMQ	**Urumqi**	**11.37**	**64**	*e*P	**Pn**	**13 49 04.8**	**+2.0**
KURBB	**Kurchatov Arra**	**11.56**	**16**	Pn	**Pn**	**13 49 07.6**	**+2.3**
	baz=201,slow=13,SNR=1.6						
KURBB				Lg	Lg	13 52 29.9	
	0.1nm,0.3s,baz=198,slow=30,SNR=5.0						
	0.9nm,0.7s						
KURK	**Kurchatov**	**11.67**	**16**	P	**Pn**	**13 49 07.6**	**+0.8**
GEYT	**Alibeck**	**12.18**	**267**	Pn	**Pn**	**13 49 13.6**	**-0.3**
	0.3nm,0.3s,baz=77,slow=20,SNR=1.5						
	1.7nm,0.5s						
GEYT	**Alibeck**	**12.18**	**267**	Pn	**Pn**	**13 49 12.9**	**-1.0**
GYA0	**ALIBECK ARRAY**	**12.18**	**267**	P	**Pn**	**13 49 13.3**	**-0.7**
GYA0B	**ALIBECK ARRAY**	**12.18**	**267**	Pn	**Pn**	**13 49 13.3**	**-0.6**
AB31	**Akbulak array**	**13.69**	**319**	P	**Pn**	**13 49 32.5**	**-1.9**
AB31	**Akbulak array**	**13.69**	**319**	⇑P	**Pn**	**13 49 32.5**	**-1.9**
	1.5nm,0.4s,baz=131,slow=13,SNR=14						
ABKAR	**Akbulak array**	**13.69**	**319**	Pn	**Pn**	**13 49 34.3**	**-0.2**
AKTO	**Aktyubinsk**	**15.40**	**320**	Pn	**Pn**	**13 49 57.9**	**+0.3**
	0.1nm,0.3s,baz=121,slow=16,SNR=1.6						
	1.4nm,0.5s						
AKTO	**Aktyubinsk**	**15.40**	**320**	⇓P	**P**	**13 50 00.6**	**-1.7**
ZAA0	**Zalesovo Array**	**16.26**	**24**	Pn	**P**	**13 50 10.7**	**-1.1**
ZALV	**Zalesovo Beam**	**16.26**	**24**	Pn	**P**	**13 50 10.6**	**-1.2**
	0.4nm,0.3s,baz=189,slow=8.4,SNR=16						
	4.5nm,0.7s						
ZALV	**Zalesovo Beam**	**16.26**	**24**	Pn	**P**	**13 50 11.2**	**-0.5**
GOMU	**GeErMu**	**17.10**	**95**	P	**P**	**13 50 24.3**	**+2.6**
GOMU				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ARU	**Arti**	**19.53**	**335**	P	**Pn**	**13 50 49.2**	**+0.2**
	baz=146,slow=11,SNR=12						
	7.4nm,0.6s						
ARU	**Arti**	**19.53**	**335**	*d*P	**P**	**13 50 48.2**	**+0.4**
ARU				S	**S**	**13 54 29.3**	**+0.9**
ARU				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KNGR	**Kungurtug, Tuv**	**20.07**	**49**	⇓*e*P	Pn	13 50 55.5	-0.2
GTA	**Gaotai**	**20.23**	**82**	*e*P	Pn	13 50 57.5	-0.2
GTA				pP	sP	13 51 02.3	+1.8
GTA				sP	pP	13 51 05.0	+6.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
WSAR	**Wadi Sarin**	**20.66**	**222**	P	**P**	**13 50 59.0**	**-1.4**
	comp=Z,5.7nm,1.0s,baz=90,slow=11,SNR=2.6						
	comp=Z,5.7nm,1.0s						
BELG	**Belogornoye**	**21.96**	**314**	P	**P**	**13 51 13.8**	**-0.2**
	comp=Z,20nm,0.9s,baz=162,slow=20,SNR=3.8						
	comp=Z,20nm,0.9s						
BELG	**Belogornoye**	**21.96**	**314**	*de*P	**P**	**13 51 14.1**	**0.0**
BELG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GNI	**Garni**	**22.09**	**281**	P	**P**	**13 51 16.5**	**+0.6**
	comp=Z,8.8nm,0.7s,baz=43,slow=19,SNR=1.8						
	comp=Z,8.8nm,0.7s						
NCK	**Nalchik**	**22.71**	**290**	⇓*e*P	**P**	**13 51 22.4**	**+0.2**
NCK				pmax	pmax		
	comp=Z,9.0nm,0.3s						
KBZ	**Khabaz**	**23.21**	**290**	P	**P**	**13 51 27.6**	**+0.2**
	comp=Z,2.1nm,0.8s,baz=72,slow=2.8,SNR=4.4						
	comp=Z,2.1nm,0.8s						
KBZ	**Khabaz**	**23.21**	**290**	*e*P	**P**	**13 51 28.3**	**+0.9**
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KIV	**Kislovodsk**	**23.36**	**291**	*e*P	**P**	**13 51 30.0**	**+0.9**
KIV				*e*PPP	PPP	13 52 02.9	
KIV				*e*		13 55 16.0	
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
LZH	**Lanzhou**	**24.11**	**89**	*e*P	**P**	**13 51 38.5**	**+2.0**
LZH				pP	sP	13 51 43.8	+2.4
LZH				pmax	pmax		
	comp=Z,15nm,1.5s						
SONM	**Songino Array**	**24.96**	**60**	P	**P**	**13 51 42.9**	**-1.2**
	comp=Z,1.3nm,0.7s,baz=250,slow=11,SNR=5.3						
	comp=Z,1.3nm,0.7s						
VRH	**Novokhopyorsk**	**24.99**	**308**	*e*P	**P**	**13 51 43.7**	**-0.4**
VRH				pmax	pmax		
	comp=Z,5.0nm,0.4s						
ULN	**Ulaanbaatar**	**25.41**	**60**	⇓*e*P	**P**	**13 51 50.0**	**+1.9**
ULN				pmax	pmax		
	comp=Z,5.0nm,2.1s						
VSR	**Storozhevoye**	**26.55**	**307**	*e*P	**P**	**13 51 56.9**	**-1.4**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
LPSR	**Galich'ya Gora**	**27.02**	**310**	*e*P	**P**	**13 52 00.6**	**-1.9**
LPSR				pmax	pmax		
	comp=Z,7.0nm,1.3s						
ANN	**Anapa**	**27.12**	**293**	*e*P	**P**	**13 51 59.3**	**-4.1**
ANN				*e**PP	**pP**	**13 52 04.9**	**-1.9**
ANN				*e*S	**S**	**13 56 36.2**	**-5.6**
ANN				pmax	pmax		
	comp=Z,36nm,1.2s						
HHC	**Hu-ho-hao-te**	**28.89**	**75**	*e*P	**P**	**13 52 21.5**	**+2.0**
BR131	**Keskin Array S**	**30.56**	**283**	⇓*e*P	**P**	**13 52 34.8**	**+0.4**
BRTR	**Keskin Array B**	**30.56**	**283**	P	**P**	**13 52 33.8**	**-0.6**
	comp=Z,2.1nm,0.7s,baz=83,slow=8.3,SNR=10						
	comp=Z,2.1nm,0.7s						
BRTR	**Keskin Array B**	**30.56**	**283**	*e*P	**P**	**13 52 34.7**	**+0.4**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKASG	**Malin Array Be**	**32.72**	**305**	P	**P**	**13 52 52.5**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=78,slow=7.5,SNR=7.6						
	comp=Z,0.4nm,0.4s						
AKASG	**Malin Array Be**	**32.72**	**305**	*e*P	**P**	**13 52 52.8**	**-0.2**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKBB	**Malin Array Si**	**32.72**	**305**	⇓*i*P	**P**	**13 52 52.7**	**-0.3**
AKBB				pmax	pmax		
	comp=Z,3.0nm,0.7s						
FINES	**FINESS Array B**	**36.13**	**323**	P	**P**	**13 53 23.1**	**+0.6**
	comp=Z,0.9nm,0.4s,baz=112,slow=11,SNR=14						
	comp=Z,0.9nm,0.4s						
FINES	**FINESS Array B**	**36.13**	**323**	*i*P	**P**	**13 53 23.3**	**+0.9**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NJ2	**Nanjing**	**37.16**	**87**	*e*P	**P**	**13 53 30.3**	**-1.2**
ARCES	**ARCESS Array B**	**39.11**	**335**	P	**P**	**13 53 48.3**	**+0.8**
	comp=Z,1.7nm,0.7s,baz=104,slow=7.7,SNR=6.6						
	comp=Z,1.7nm,0.7s						
ARCES	**ARCESS Array B**	**39.11**	**335**	lAmb	lAmb	13 54 07.4	
	comp=Z,12nm,1.4s						
ARCES	**ARCESS Array B**	**39.11**	**335**	P	**P**	**13 53 48.3**	**+0.8**
ARCES				pmax	pmax		
	comp=Z,12nm,1.4s						
KLR	**Kul'dur**	**41.71**	**57**	P	**P**	**13 54 10.1**	**+0.8**
	comp=Z,0.9nm,0.5s,baz=271,slow=8.7,SNR=1.9						
	comp=Z,0.9nm,0.5s						
TIXI	**Tiksi**	**42.14**	**23**	⇓*i*P	**P**	**13 54 12.9**	**+0.4**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GERES	**GERESS Array B**	**42.87**	**303**	P	**P**	**13 54 18.8**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=72,slow=6.3,SNR=6.9						
	comp=Z,0.7nm,0.7s						
GERES	**GERESS Array B**	**42.87**	**303**	*e*P	**P**	**13 54 19.8**	**+0.9**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KHC	**Kasperske Hory**	**42.90**	**303**	⇓*e*P	**P**	**13 54 16.9**	**-2.2**
KHC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NC303	**NORSAR Array S**	**43.12**	**321**	P	**P**	**13 54 20.2**	**-0.4**
NB2	**NORSAR Subarra**	**43.19**	**321**	P	**P**	**13 54 20.8**	**-0.4**
	comp=Z,1.0nm,0.5s,baz=90,slow=7.9						
NOA	**NORSAR Array B**	**43.19**	**321**	P	**P**	**13 54 21.1**	**-0.1**
	comp=Z,1.9nm,0.7s,baz=92,slow=7.8,SNR=9.0						
	comp=Z,1.9nm,0.7s						
NOA	**NORSAR Array B**	**43.19**	**321**	*e*P	**P**	**13 54 21.1**	**-0.1**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NC204	**NORSAR Array S**	**43.41**	**321**	P	**P**	**13 54 23.0**	**0.0**
MJAR	**Matsushiro Arr**	**49.99**	**72**	P	**P**	**13 55 14.5**	**-0.4**
	comp=Z,1.2nm,0.7s,baz=297,slow=7.1,SNR=4.2						
	comp=Z,1.2nm,0.7s						
MJA0	**Matsu Arr-Jizo**	**50.02**	**72**	*e*P	**P**	**13 55 18.2**	**+3.1**
MJA0				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BILL	**Bilibino**	**54.93**	**27**	*i*P	**P**	**13 55 49.6**	**-1.4**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ESDC	**Sonseca Array**	**57.83**	**297**	P	**P**	**13 56 11.5**	**-0.7**
	comp=Z,0.8nm,0.6s,baz=54,slow=7.4,SNR=9.2						
	comp=Z,0.8nm,0.6s						
SUMG	**Summit**	**58.79**	**341**	P	**P**	**13 56 20.0**	**+1.2**
SUMG	**Summit**	**58.79**	**341**	P	**P**	**13 56 20.0**	**+1.2**
SUMG				pmax	pmax		
	comp=Z,9.0nm,1.4s						
TOA0	**Torodi Ar. Sit**	**67.81**	**269**	P	**P**	**13 57 17.8**	**-1.2**
TOA0				lAmb	lAmb	13 57 23.7	
	comp=Z,4.1nm,1.3s						
TORD	**Torodi Ar. Bea**	**67.81**	**269**	P	**P**	**13 57 16.8**	**-2.1**
	comp=Z,0.4nm,0.4s,baz=52,slow=5.8,SNR=4.2						
	comp=Z,0.4nm,0.4s						
TORD	**Torodi Ar. Bea**	**67.81**	**269**	P	**P**	**13 57 18.2**	**-0.8**
TORD				lAmb	lAmb	13 57 23.1	
	comp=Z,2.2nm,1.3s						
IMAR	**Indian Mountai**	**68.60**	**19**	P	**P**	**13 57 22.8**	**-0.3**
INK	**Inuvik**	**70.51**	**10**	P	**P**	**13 57 35.2**	**+0.4**
INK				lAmb	lAmb	13 57 38.9	
	comp=Z,2.1nm,0.9s						
INK	**Inuvik**	**70.51**	**10**	P	**P**	**13 57 35.2**	**+0.4**
INK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
C36M	**Paulatuk**	**70.59**	**7**	P	**P**	**13 57 35.4**	**+0.1**
K20K	**Telida**	**70.61**	**21**	P	**P**	**13 57 36.0**	**+0.4**
K20K				lAmb	lAmb	13 57 39.9	
	comp=Z,2.4nm,1.1s						
COLA	**College**	**70.93**	**17**	⇓*e*P	**P**	**13 57 37.5**	**+0.1**
COLA				pmax	pmax		
	comp=Z,10.0nm,2.6s						
ILAR	**Eielson Array**	**71.23**	**17**	P	**P**	**13 57 38.8**	**-0.6**
	comp=Z,1.1nm,0.9s,baz=317,slow=4.6,SNR=12						
	comp=Z,1.1nm,0.9s						
ILAR	**Eielson Array**	**71.23**	**17**	P	**P**	**13 57 38.9**	**-0.5**
J26L	**Joseph Creek**	**72.20**	**16**	P	**P**	**13 57 45.2**	**-0.1**
J26L				lAmb	lAmb	13 58 08.6	
	comp=Z,4.2nm,1.4s						
DAWY	**Dawson**	**73.43**	**14**	P	**P**	**13 57 53.1**	**+0.6**
DAWY				lAmb	lAmb	13 58 01.9	
	comp=Z,5.2nm,1.4s						
L27K	**Beaver Creek,**	**73.83**	**16**	P	**P**	**13 57 55.9**	**+1.0**
BCAR	**Beaver Creek A**	**73.84**	**16**	P	**P**	**13 57 55.5**	**+0.5**
HYT	**Haines Junctio**	**76.75**	**15**	P	**P**	**13 58 11.8**	**0.0**
HYT				lAmb	lAmb	13 58 13.9	
	comp=Z,3.8nm,0.9s						
DBIC	**Dimbokro**	**76.87**	**268**	P	**P**	**13 58 11.5**	**-1.6**
DBIC	**Dimbokro**	**76.87**	**268**	P	**P**	**13 58 11.5**	**-1.6**
DBIC				pmax	pmax		
	comp=Z,12nm,1.4s						
YKA	**Yellowknife Ar**	**78.04**	**4**	P	**P**	**13 58 18.7**	**-0.1**
	comp=Z,1.6nm,0.8s,baz=350,slow=5.7,SNR=12						
	comp=Z,1.6nm,0.8s						
YKA	**Yellowknife Ar**	**78.04**	**4**	P	**P**	**13 58 19.1**	**+0.2**
YKA	**Yellowknife Ar**	**78.04**	**4**	*e*P	**P**	**13 58 18.8**	**-0.1**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	**Warramunga Arr**	**81.97**	**124**	P	**P**	**13 58 39.4**	**-1.3**
	comp=Z,0.8nm,0.6s,baz=323,slow=5.3,SNR=9.9						
	comp=Z,0.8nm,0.6s						
WRA	**Warramunga Arr**	**81.97**	**124**	*i*P	**P**	**13 58 41.2**	**+0.5**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	**Alice Springs**	**84.42**	**127**	P	**P**	**13 58 52.4**	**-0.9**
	comp=Z,0.7nm,0.7s,baz=315,slow=4.2,SNR=7.2						
	comp=Z,0.7nm,0.7s						

NEIC ***26*** *13:49:13.3±2.1,28.88S±0.09×177.3W±0.1,h64km±6km, mb4.4/18, Error ellipse: s-maj=15.1km s-min=10.1km az=135.0*

IDC ***26*** *13:49:14.5±1.9,28.94S×177.46W,h68km±10km,mb3.6/3, mbtmp4.1/4, Error ellipse: s-maj=46.3km s-min=30.3km az=130.0*

ISC 26 13:49:13.0±0.6,28.88S±0.07×177.22W±0.10,h64km,n38, σ1§18/41,mb4.3/8,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
RAO	**Raoul Island**	**0.72**	**239**	P	**Pn**	**13 49 27.7**	**0.0**
	8μm,0.2s,baz=83,slow=17,SNR=166						
RAO				S	**Sn**	**13 49 38.8**	**+0.4**
	14μm,0.3s,baz=76,slow=22,SNR=19						
RAO	**Raoul Island**	**0.72**	**239**		**Pn**	**13 49 27.6**	**-0.1**
RAO					Sn	**Sn**	**13 49 38.5**	**0.0**
MXZ	**Matakaoa Point**	**9.43**	**202**		Pn	**Pn**	**13 51 26.4**	**+0.3**
QUZ	**Omahuta**	**10.03**	**229**		Pn	**Pn**	**13 51 33.3**	**-1.0**
BKZ	**Black Stump Fm**	**11.50**	**205**		Pn	**Pn**	**13 51 53.2**	**-1.3**
NIUE	**Niue**	**11.81**	**36**		Pn	**Pn**	**13 51 56.8**	**-1.9**
MSVF	**Nonsavu**	**11.92**	**338**		P	**Pn**	**13 52 02.6**	**+2.4**
	8.8nm,0.7s,baz=160,slow=17,SNR=6.7						
MSVF	**Nonsavu**	**11.92**	**338**		Pn	**Pn**	**13 52 02.5**	**+2.2**
BFZ	**Birch Farm**	**12.93**	**203**		Pn	**Pn**	**13 52 15.

BRTR	**Keskin Array B**	**152.44**	**301**	PKPbc	**PKiKP**	**14 09 03.8 +1.5**
	comp=Z,1.1nm,0.5s,baz=134,slow=4.3,SNR=5.0					
BRTR	**Keskin Array B**	**152.44**	**301**		**PKPbc**	**14 09 01.8 -0.3**

*SOME **26** 13:52:43.2, 39.°52N × 73.°82E, h0km*
*KRNET **26** 13:52:43.3±0.1, 39.°45N × 73.°75E, mb3.6*
ISC 26 13:52:38.5±1.6, **39.°30N**±0.°07 × **73.°94E**±0.°04, **h11**km±12km, **n24**, σ1°**43**/48, **14C-2D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.51**	**324**	⇑*iP*	**Pg**	**13 53 07.6**	**+0.2**
	baz=26						
OHH				⇑*iS*	**Sn**	**13 53 25.4**	**+0.2**
	baz=26						
DRK	**Karamyk**	**1.67**	**277**	⇑*iP*	**Pg**	**13 53 11.3**	**+0.8**
	baz=72						
DRK				⇑*iS*	**Sg**	**13 53 31.8**	**-0.3**
	baz=72						
BTK	**Batken**	**2.52**	**288**	⇑*iP*	**Pb**	**13 53 24.3**	**+0.5**
	baz=86						
BTK				⇑*iS*	**Sb**	**13 53 54.2**	**-0.7**
	baz=86						
ARLS	**Aral**	**2.57**	**6**	⇑*iP*	**Pb**	**13 53 25.7**	**+1.0**
	baz=10.0						
ARLS				⇑*iS*	**Sb**	**13 53 56.8**	**+0.4**
	baz=10.0						
GAR	**Garm**	**2.83**	**265**	⇑*iP*	**Pb**	**13 53 29.2**	**+0.1**
	baz=62						
GAR				⇑*iS*	**Sb**	**13 54 02.8**	**-1.0**
	baz=62						
TRKS	**Terek-Say**	**3.08**	**317**	⇑*iP*	**Pb**	**13 53 30.9**	**-2.5**
	baz=16						
TRKS				⇑*iS*	**Sn**	**13 54 05.6**	**+1.4**
	baz=16						
BOOM	**Boomskoye usch**	**3.53**	**25**	⇑*iP*	**Pb**	**13 53 39.8**	**-1.2**
	baz=28						
BOOM				⇑*iS*	**Sb**	**13 54 21.1**	**-2.8**
	baz=28						
KDJ	**Kajisay**	**3.75**	**40**	⇓*iP*	**Pb**	**13 53 43.8**	**-1.0**
	baz=43						
KDJ				⇓*iS*	**Sb**	**13 54 27.8**	**-2.4**
	baz=43						
KST	**Kastek**	**4.04**	**22**	*eP*	**Pg**	**13 53 56.5**	**+0.7**
	4.8nm,0.4s						
KST				*eS*	**Sg**	**13 54 49.6**	**+1.5**
	19nm,0.6s						
IUG	**luzhnay**	**4.11**	**315**	*eP*	**Pg**	**13 53 55.6**	**-1.5**
	193nm,0.5s						
IUG				*eS*	**Sg**	**13 54 47.8**	**-2.6**
	49nm,0.7s						
DGS	**Degeres**	**4.17**	**19**	*eP*	**Pg**	**13 53 58.6**	**+0.3**
	13nm,0.7s						
DGS				*eS*	**Sg**	**13 54 53.0**	**+0.6**
	12nm,0.5s						
SGDS	**Sogindy**	**4.18**	**7**	*eP*	**Pg**	**13 53 57.7**	**-0.8**
	6.0nm,0.5s						
SGDS				*eS*	**Sg**	**13 54 51.5**	**-1.1**
	9.7nm,0.4s						
IZV	**Izvestkoviy**	**4.24**	**28**	*eP*	**Pg**	**13 54 01.1**	**+1.4**
	56nm,0.1s						
IZV				*eS*	**Sg**	**13 54 57.1**	**+2.4**
	23nm,0.6s						
MTBS	**Maitube**	**4.26**	**25**	*eP*	**Pg**	**13 54 00.8**	**+0.7**
	4.7nm,0.3s						
MTBS				*eS*	**Sg**	**13 54 56.5**	**+1.3**
	17nm,0.5s						
TNSS	**Tian-Shan**	**4.37**	**30**	*eP*	**Pg**	**13 54 02.9**	**+0.8**
	8.2nm,0.3s						
TNSS				*eS*	**Sg**	**13 55 00.5**	**+1.8**
	7.0nm,0.8s						
BRLS	**Borolday**	**4.84**	**322**	*eP*	**Pb**	**13 54 05.7**	**+2.4**
	3.2nm,0.2s						
BRLS				*eS*	**Sb**	**13 55 05.1**	**+3.6**
	13nm,0.6s						
KTBS	**Karatobe**	**4.86**	**24**	*eP*	**Pg**	**13 54 11.0**	**-0.6**
	2.7nm,0.5s						
KTBS				*eS*	**Sg**	**13 55 14.0**	**-0.6**
	25nm,0.4s						
KUU	**Kurty**	**4.93**	**21**	*eP*	**Pg**	**13 54 11.5**	**-1.3**
	3.1nm,0.6s						
KUU				*eS*	**Sg**	**13 55 14.9**	**-1.7**
	21nm,0.7s						
SATY	**Saty**	**5.04**	**41**	*eP*	**Pg**	**13 54 16.0**	**+1.0**
	5.2nm,0.4s						
SATY				*eS*	**Sg**	**13 55 22.9**	**+2.5**
	13nm,0.6s						
CHKK	**Chushkaly**	**5.09**	**26**	*eP*	**Pg**	**13 54 15.8**	**-0.1**
	3.1nm,0.3s						
CHKK				*eS*	**Sg**	**13 55 22.4**	**+0.6**
	15nm,0.6s						
KPKS	**Kokpek**	**5.48**	**39**	*eP*	**Pg**	**13 54 22.6**	**-0.8**
	3.3nm,0.5s						
KPKS				*eS*	**Sg**	**13 55 34.2**	**-0.2**
	13nm,0.5s						
ARXS	**Arharly**	**5.70**	**29**	*eP*	**Pg**	**13 54 26.9**	**-0.7**
	2.1nm,0.4s						
ARXS				*eS*	**Sg**	**13 55 41.6**	**+0.1**
	9.6nm,0.6s						
BTLS	**Baital**	**5.73**	**1**	*eP*	**Pg**	**13 54 28.0**	**-0.3**
	2.5nm,0.4s						
BTLS				*eS*	**Sg**	**13 55 43.3**	**+0.8**
	4.2nm,0.6s						
BLB	**Baldybastay**	**5.87**	**34**	*eP*	**Pg**	**13 54 30.3**	**-0.6**
	4.2nm,0.4s						
BLB				*eS*	**Sg**	**13 55 47.4**	**+0.5**
	8.6nm,0.5s						

*KRNET **26** 14:09:52.6±0.1, 39.°46N × 73.°80E, mb3.7*
*IDC **26** 14:09:52.3±1.4, 39.°47N × 73.°80E, h0km, mb3.6/7, mbtmp3.5/10, ML2.9/4, Error ellipse: s-maj=24.1km s-min=16.1km az=129.0*
*SOME **26** 14:09:53.5, 39.°43N × 73.°62E, h5km*
*NNC **26** 14:09:56.6±1.7, 39.°56N × 73.°64E, h0km, mb4.1, mpv3.7, Error ellipse: s-maj=13.6km s-min=6.5km az=171.0*
ISC 26 14:09:53.2±1.6, **39.°47N**±0.°06 × **73.°76E**±0.°03, **h0**km±10km, **n58**, σ1°**64**/82, **mb3.5**/7, **16C-5D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.29**	**325**	⇑*iP*	**Pg**	**14 10 17.5**	**-0.4**
	baz=24						
OHH				⇑*iS*	**Sg**	**14 10 35.9**	**+1.3**
	baz=24						
DRK	**Karamyk**	**1.52**	**271**	⇑*iP*	**Pn**	**14 10 21.8**	**0.0**
	baz=72						
DRK				⇑*iS*	**Sg**	**14 10 42.8**	**+0.9**
	baz=72						
BTK	**Batken**	**2.34**	**285**	⇓*eP*	**Pn**	**14 10 34.8**	**+1.9**
	baz=86						
BTK				⇓*iS*	**Sb**	**14 11 05.4**	**-0.3**
	baz=86						
ARLS	**Aral**	**2.42**	**10**	⇑*iP*	**Pn**	**14 10 35.5**	**+1.4**
	baz=9.0						
ARLS				⇑*iS*	**Sb**	**14 11 06.8**	**-1.3**
	baz=9.0						
GAR	**Garm**	**2.71**	**261**	⇑*eP*	**Pn**	**14 10 39.8**	**+1.7**
	baz=62						
GAR				⇑*iS*	**Sn**	**14 11 14.4**	**+2.7**
	baz=62						
TRKS	**Terek-Say**	**2.86**	**317**	⇑*eP*	**Pn**	**14 10 41.1**	**+0.9**
	baz=16						
TRKS				⇑*iS*	**Sn**	**14 11 16.5**	**+1.1**
	baz=16						
AAK	**Ala-Archa**	**3.21**	**10**	Pn	**Pb**	**14 10 48.6**	**-2.5**
	2.7nm,0.3s,baz=184,slow=11,SNR=6.0						
AAK				Lg	Lg	14 11 33.7	
	4.0nm,0.3s,baz=348,slow=22,SNR=9.4						
	11nm,0.5s						
BOOM	**Boomskoye usch**	**3.44**	**28**	⇑*iP*	**Pn**	**14 10 49.6**	**+1.6**
	baz=27						
BOOM				⇑*iS*	**Sn**	**14 11 31.3**	**+1.8**
	baz=27						
KDJ	**Kajisay**	**3.71**	**43**	⇓*iP*	**Pn**	**14 10 53.2**	**+1.3**
	baz=43						
KDJ				⇓*iS*	**Sn**	**14 11 37.5**	**+1.1**
	baz=43						
TKM2	**Tokmak 2**	**3.71**	**21**	⇑Pg	**Pb**	**14 11 00.1**	**+0.5**
	8.8nm,0.6s						
TKM2				⇓Lg	Lg	14 11 51.2	
	21nm,0.7s						
IUG	**luzhnay**	**3.89**	**315**	*eP*	**Pg**	**14 11 06.2**	**-1.5**
	240nm,0.4s						
IUG				*eS*	**Sg**	**14 11 58.0**	**-0.1**
	72nm,0.5s						
IUG	**luzhnay**	**3.89**	**315**	Pg	**Pg**	**14 11 06.2**	**-1.5**
	240nm,0.4s						
IUG				Lg	Lg	14 11 59.2	
	72nm,0.5s						
KST	**Kastek**	**3.93**	**24**	*eP*	**Pg**	**14 11 07.2**	**-1.3**
	11nm,0.5s						
KST				*eS*	**Sg**	**14 12 00.1**	**+0.6**
	16nm,0.7s						
KST	**Kastek**	**3.93**	**24**	Pg	**Pg**	**14 11 07.2**	**-1.3**
	11nm,0.5s						
KST				Lg	Lg	14 12 00.1	
	16nm,0.7s						
SGDS	**Sogindy**	**4.03**	**9**	*eP*	**Pg**	**14 11 08.8**	**-1.5**
	8.3nm,0.5s						
SGDS				*eS*	**Sg**	**14 12 02.9**	**+0.4**
	23nm,0.7s						
SGDS	**Sogindy**	**4.03**	**9**	Pg	**Pg**	**14 11 08.8**	**-1.5**
	8.3nm,0.5s						
SGDS				Lg	Lg	14 12 02.9	
	23nm,0.7s						
DGS	**Degeres**	**4.06**	**21**	*eP*	**Pg**	**14 11 10.5**	**-0.5**
	10.0nm,0.9s						
DGS				*eS*	**Sg**	**14 12 05.9**	**+2.4**
	18nm,0.7s						
DGS	**Degeres**	**4.06**	**21**	Pg	**Pg**	**14 11 10.5**	**-0.5**
	10.0nm,0.9s						
DGS				Lg	Lg	14 12 05.9	
	18nm,0.7s						
IZV	**Izvestkoviy**	**4.16**	**30**	*eP*	**Pg**	**14 11 12.5**	**-0.4**
	101nm,0.3s						
IZV				*eS*	**Sg**	**14 12 08.9**	**+2.2**
	24nm,0.7s						
MTBS	**Maitube**	**4.17**	**28**	*eP*	**Pg**	**14 11 12.1**	**-1.0**
	6.3nm,0.3s						
MTBS				*eS*	**Sg**	**14 12 08.5**	**+1.4**
	14nm,0.4s						
MTBS	**Maitube**	**4.17**	**28**	Pg	**Pg**	**14 11 12.0**	**-1.0**
	6.3nm,0.3s						
MTBS				Lg	Lg	14 12 08.5	
	14nm,0.4s						
TNSS	**Tian-Shan**	**4.29**	**33**	*eP*	**Pg**	**14 11 15.0**	**-0.4**
	8.2nm,0.4s						
TNSS				*eS*	**Sg**	**14 12 13.2**	**+2.1**
	12nm,0.7s						
KK31	**Karatay Array**	**4.37**	**327**	Pg	**Pg**	**14 11 14.8**	**-2.1**
	3.8nm,0.5s,baz=145,slow=15,SNR=6.8						
KK31				Lg	Lg	14 12 09.9	
	14nm,0.6s,baz=155,slow=30,SNR=5.6						
BRLS	**Borolday**	**4.62**	**321**	*eP*	**Pb**	**14 11 16.6**	**+1.6**
	3.6nm,0.3s						
BRLS				*eS*	**Sb**	**14 12 16.0**	**+4.8**
	15nm,0.7s						
BRLS	**Borolday**	**4.62**	**321**	Pg	**Pb**	**14 11 16.6**	**+1.6**
	3.6nm,0.3s						
BRLS				Lg	Lg	14 12 16.0	
	15nm,0.7s						
KTBS	**Karatobe**	**4.77**	**26**	*eP*	**Pg**	**14 11 22.3**	**-2.2**
	4.3nm,0.8s						
KTBS				*eS*	**Sg**	**14 12 26.1**	**-0.2**
	17nm,0.7s						
KTBS	**Karatobe**	**4.77**	**26**	Pg	**Pg**	**14 11 22.3**	**-2.2**
	4.3nm,0.8s						
KTBS				Lg	Lg	14 12 26.6	
	17nm,0.7s						
KUU	**Kurty**	**4.82**	**23**	*eP*	**Pg**	**14 11 24.2**	**-1.3**
	7.2nm,0.7s						
KUU				*eS*	**Sg**	**14 12 29.3**	**+1.4**
	22nm,0.8s						
KUU	**Kurty**	**4.82**	**23**	Pg	**Pg**	**14 11 24.2**	**-1.3**
	7.2nm,0.7s						
KUU				Lg	Lg	14 12 29.3	
	22nm,0.8s						
CHKK	**Chushkaly**	**5.00**	**28**	*eP*	**Pg**	**14 11 27.6**	**-1.3**
	3.8nm,0.3s						
CHKK				*eS*	**Sg**	**14 12 34.9**	**+1.2**
	16nm,0.4s						
SATY	**Saty**	**5.01**	**43**	*eP*	**Pg**	**14 11 27.0**	**-2.1**
	5.3nm,0.7s						
SATY				*eS*	**Sg**	**14 12 34.2**	**+0.2**
	14nm,1.1s						
SATY	**Saty**	**5.01**	**43**	Pg	**Pg**	**14 11 27.0**	**-2.1**
SATY				Lg	Lg	14 12 34.8	
KURS	**Kuram**	**5.20**	**38**	*eP*	**Pg**	**14 11 31.5**	**-1.3**
	4.4nm,0.6s						
KURS				*eS*	**Sg**	**14 12 41.7**	**+1.6**
	6.4nm,1.0s						
KURS	**Kuram**	**5.20**	**38**	Pg	**Pg**	**14 11 31.5**	**-1.3**
	4.4nm,0.6s						
KURS				Lg	Lg	14 12 41.7	
	6.4nm,1.0s						
KPKS	**Kokpek**	**5.44**	**41**	*eP*	**Pg**	**14 11 36.0**	**-1.4**
	2.6nm,0.5s						
KPKS				*eS*	**Sg**	**14 12 49.3**	**+1.5**
	11nm,0.7s						
KPKS	**Kokpek**	**5.44**	**41**	Pg	**Pg**	**14 11 36.0**	**-1.4**
	2.6nm,0.5s						
KPKS				Lg	Lg	14 12 49.3	
	11nm,0.7s						
ARXS	**Arharly**	**5.62**	**31**	*eP*	**Pg**	**14 11 39.3**	**-1.6**
	8.7nm,0.6s						
ARXS				*eS*	**Sg**	**14 12 55.4**	**+1.6**
	11nm,0.7s						
ARXS	**Arharly**	**5.62**	**31**	Pg	**Pg**	**14 11 39.3**	**-1.6**
	8.7nm,0.6s						
ARXS				Lg	Lg	14 12 55.4	
	11nm,0.7s						
SHLS	**Shalkode**	**5.65**	**48**	*eP*	**Pg**	**14 11 45.9**	**+4.4**
	5.8nm,0.3s						
SHLS				*eS*	Sg	14 13 06.2	+11
	8.0nm,0.6s						
PDGK	**Podgornoye**	**5.78**	**46**	Pg	**Pg**	**14 11 42.2**	**-1.7**
PDGK				Lg	Lg	14 13 01.2	
PDGK	**Podgornoye**	**5.78**	**46**	⇑Pg	**Pg**	**14 11 45.7**	**+1.9**
	6.9nm,1.1s						
PDGK				⇑Lg	Lg	14 12 58.5	
	12nm,0.8s						
BLB	**Baldybastay**	**5.81**	**36**	*eP*	**Pg**	**14 11 43.2**	**-1.3**
	9.5nm,0.6s						
BLB				*eS*	**Sg**	**14 13 02.2**	**+2.4**
	6.2nm,0.7s						
BLB	**Baldybastay**	**5.81**	**36**	Pg	**Pg**	**14 11 43.2**	**-1.3**
	9.5nm,0.6s						
BLB				Lg	Lg	14 13 02.2	
	6.2nm,0.7s						
KNOS	**Konyrlen**	**6.34**	**38**	*eP*	**Pg**	**14 11 52.2**	**-2.3**
	1.5nm,0.6s						
KNOS				*eS*	**Sg**	**14 13 17.8**	**+1.2**
	18nm,1.1s						
MKAR	**Makanchi Array**	**9.61**	**38**	Pn	**Pn**	**14 12 12.3**	**-0.3**
	baz=228,slow=15,SNR=2.1						
MKAR				Lg	Lg	14 14 56.9	
	baz=227,slow=21,SNR=2.0						
KURBB	**Kurchatov Arra**	**11.64**	**15**	Lg	Lg	14 16 00.8	
	baz=205,slow=29,SNR=5.6						
AB31	**Akbulak array**	**13.88**	**319**	P	**Pn**	**14 13 10.0**	**-1.0**
	0.7nm,0.7s,baz=131,slow=14,SNR=4.1						
AKTO	**Aktyubinsk**	**15.59**	**320**	Pn	**Pn**	**14 13 30.6**	**-3.5**
	0.1nm,0.3s,baz=118,slow=18,SNR=1.1						
	0.6nm,0.4s						
AKTO	**Aktyubinsk**	**15.59**	**320**	⇑P	**Pn**	**14 13 33.7**	**-0.4**
	2.9nm,1.0s						
ZALV	**Zalesovo Beam**	**16.31**	**24**	Pn	**Pn**	**14 13 43.3**	**-0.1**
	0.1nm,0.3s,baz=218,slow=9.4,SNR=1.4						
	0.4nm,0.4s						
KBZ	**Khabaz**	**23.39**	**291**	P	**P**	**14 15 02.0**	**-1.4**
	0.3nm,0.3s,baz=343,slow=9.9,SNR=1.3						
	0.3nm,0.3s						
AKASG	**Malin Array Be**	**32.91**	**305**	P	**P**	**14 16 29.0**	**+0.2**
	0.2nm,0.3s,baz=93,slow=9.6,SNR=1.4						
	0.2nm,0.3s						
FINES	**FINESS Array B**	**36.32**	**323**	P	**P**	**14 16 57.5**	**-0.7**
	0.4nm,0.4s,baz=111,slow=11,SNR=8.4						
	0.4nm,0.4s						
ARCES	**ARCESS Array B**	**39.29**	**336**	P	**P**	**14 17 22.2**	**-1.0**
	1.6nm,0.9s,baz=97,slow=7.6,SNR=1.8						
	1.6nm,0.9s						
NB2	**NORSAR Subarra**	**43.38**	**321**	P	**P**	**14 17 56.6**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=92,slow=8.6						
NOA	**NORSAR Array B**	**43.38**	**321**	P	**P**	**14 17 56.6**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=92,slow=7.9,SNR=3.7						
	comp=Z,0.5nm,0.6s						
TORD	**Torodi Ar. Bea**	**67.96**	**269**	P	**P**	**14 20 54.1**	**0.0**
	comp=Z,0.4nm,0.5s,baz=41,slow=4.6,SNR=2.1						
	comp=Z,0.4nm,0.5s						
WRA	**Warramunga Arr**	**81.78**	**124**	P	**P**	**14 22 12.7**	**-1.2**
	comp=Z,0.4nm,0.9s,baz=328,slow=5.4,SNR=2.2						
	comp=Z,0.4nm,0.9s						

DJA 26 14:12:03.5±0.4, **0.°N**±4.° × **12.°3E**±.°, **h200**km±5km, **M3.8**/12, **mb3.7**/1, **mBA4.5**/1, **MLv3.9**/12, **Mw(mB)3.7**/1, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**0.79**	**57**	P	Pn	14 12 33.3	+1.3
KMSI				S	Sn	14 12 57.2	+3.2
LUWI	**Luwuk**	**1.30**	**205**	P	Pn	14 12 36.1	+0.6
LUWI				S	Sn	14 13 00.2	-0.2
MRSI	**Marisa**	**1.42**	**284**	P	Pn	14 12 36.3	-0.2
MRSI				S	Sn	14 13 02.2	+0.2
APSI	**Ampana**	**1.97**	**238**	P	Pn	14 12 42.2	+0.5
APSI				S	Sn	14 13 11.2	-0.2
MPSI	**Mapaga**	**3.43**	**273**	P	Pn	14 12 58.2	-0.1
MPSI				S	Sn	14 13 40.2	-0.9
SANI	**Sanana**	**3.44**	**129**	P	Pn	14 12 57.6	-0.8
TNTI	**Ternate**	**4.09**	**81**	P	Pn	14 13 06.5	0.0
LBMI	**Labuha**	**4.25**	**100**	P	Pn	14 13 08.9	+0.4
LBMI				S	Sn	14 13 58.7	-0.8
TTSI	**Tana Toraja**	**4.72**	**228**	P	Pn	14 13 15.3	+1.0
NLAI	**Namlea**	**5.05**	**132**	P	Pn	14 13 20.1	+1.5

*IDC **26** 14:15:53.6±2.3, 39.°31N × 73.°54E, h0km, mb3.7/4, mbtmp3.6/10, ML3.0/6, MS4.4/2, Error ellipse: s-maj=37.7km s-min=16.1km az=134.0*
*KRNET **26** 14:15:57.3±0.1, 39.°46N × 73.°63E, mb3.7*
*NEIC **26** 14:16:00.2±1.9, 39.°46N±0.°07 × 73.°44E±0.°10, h10km±2km, mb4.3/3, Error ellipse: s-maj=15.1km s-min=8.8km az=129.0*
*NNC **26** 14:16:00.8±2.2, 39.°58N × 73.°84E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=18.4km s-min=9.4km az=163.0*
*SOME **26** 14:16:00.7, 39.°52N × 73.°97E, h5km*
ISC 26 14:15:56.8±1.7, **39.°50N**±0.°06 × **73.°88E**±0.°03, **h17**km±10km, **n79**, σ1°**51**/102, **mb3.8**/5, **18C-7D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.33**	**321**	⇑*iP*	**Pb**	**14 16 21.0**	**-0.3**
	baz=29						
OHH				⇑*iS*	**Sb**	**14 16 38.1**	**0.0**
	baz=29						
DRK	**Karamyk**	**1.61**	**270**	⇑*eP*	**Pn**	**14 16 23.9**	**-0.8**
	baz=72						
DRK				⇑*iS*	**Sn**	**14 16 43.2**	**-2.1**
	baz=72						
DRK	**Karamyk**	**1.61**	**270**	Pn	**Pn**	**14 16 23.9**	**-0.8**
ARLS	**Aral**	**2.39**	**8**	⇑*eP*	**Pb**	**14 16 40.5**	**+1.1**
	baz=12						
ARLS				⇑*iS*	**Sg**	**14 17 11.9**	**-1.7**
	baz=12						
BTK	**Batken**	**2.43**	**284**	⇑*eP*	**Pn**	**14 16 37.5**	**+1.8**
	baz=86						
BTK				⇑*iS*	**Sn**	**14 17 06.8**	**+1.7**
	baz=86						
BTK	**Batken**	**2.43**	**284**		**Pn**	**14 16 35.6**	**-0.2**
AML	**Almayashu**	**2.64**	**357**	P	**Pb**	**14 16 43.6**	**-0.2**
	SNR=16						
UCH	**Uchtor**	**2.77**	**10**	P	**Pb**	**14 16 46.8**	**+0.6**
	SNR=21						
GAR	**Garm**	**2.81**	**261**	⇑*iP*	**Pn**	**14 16 42.6**	**+1.5**
	baz=61						
GAR				⇑*iS*	**Sn**	**14 17 15.6**	**+1.0**
	baz=61						
GAR	**Garm**	**2.81**	**261**		**Pn**	**14 16 40.7**	**-0.4**
TRKS	**Terek-Say**	**2.92**	**315**	⇑*iP*	**Pn**	**14 16 44.5**	**+2.0**
	baz=18						
TRKS				⇑*iS*	**Sn**	**14 17 18.9**	**+1.6**
	baz=18						
EKS2	**Erkin-Say**	**3.17**	**359**	P	**Pb**	**14 16 51.6**	**-1.0**
	SNR=15						
AAK	**Ala-Archa**	**3.17**	**8**	P	**Pb**	**14 16 52.3**	**-0.5**
	SNR=11						
AAK	**Ala-Archa**	**3.17**	**8**	Pn	**Pb**	**14 16 52.5**	**-0.3**
	7.6nm,0.3s,baz=150,slow=8.1,SNR=15						
AAK				Sn	**Sg**	**14 17 35.0**	**-3.7**
	3.6nm,0.3s,baz=110,slow=22,SNR=1.7						
AAK				Lg	Lg	14 17 39.9	
	7.9nm,0.3s,baz=76,slow=17,SNR=8.2						
	19nm,0.4s						
AAK	**Ala-Archa**	**3.17**	**8**		**Pb**	**14 16 52.1**	**-0.7**
KBK	**Karagaybulak**	**3.26**	**14**	P	**Pb**	**14 16 53.7**	**-0.6**
	SNR=6.5						
ULHL	**Ulahol**	**3.28**	**32**	P	**Pg**	**14 16 58.4**	**-1.2**
	SNR=17						
BOOM	**Boomskoye usch**	**3.37**	**27**	⇑*iP*	**Pb**	**14 16 54.7**	**-1.5**
	baz=29						
BOOM				⇑*iS*	**Sb**	**14 17 37.0**	**-0.1**
	baz=29						
BOOM	**Boomskoye usch**	**3.37**	**27**		**Pb**	**14 16 55.0**	**-1.3**
CHMS	**Chumysh**	**3.56**	**10**	P	**Pb**	**14 16 57.4**	**-1.9**
	SNR=9.8						
KDJ	**Kajisay**	**3.63**	**43**	⇓*iP*	**Pb**	**14 16 59.0**	**-1.7**
	baz=44						
KDJ				⇓*iS*	**Sb**	**14 17 44.4**	**-0.1**
	baz=44						
KDJ	**Kajisay**	**3.63**	**43**		**Pb**	**14 17 00.2**	**-0.5**
TKM2	**Tokmak 2**	**3.66**	**20**	P	**Pb**	**14 16 59.3**	**-1.8**
	SNR=7.9						
TKM2	**Tokmak 2**	**3.66**	**20**	⇓Pg	**Pb**	**14 16 58.7**	**-2.4**
	11nm,0.8s						
TKM2				⇑Lg	Lg	14 17 55.5	
	17nm,0.7s						
TARG	**Taragay, Kyrgy**	**3.73**	**52**		**Pb**	**14 17 02.5**	**+0.1**
CHGR	**Chuyangaron**	**3.77**	**259**		**Pn**	**14 16 54.4**	**+0.1**
USP	**Ospenovka**	**3.80**	**7**	P	**Pb**	**14 17 00.5**	**-2.9**
	SNR=5.9						
KST	**Kastek**	**3.88**	**23**	*eP*	**Pg**	**14 17 10.4**	**-0.7**
	5.8nm,0.5s						
KST				*eS*	**Sg**	**14 18 00.5**	**-0.8**
	52nm,0.9s						
KST	**Kastek**	**3.88**	**23**	Pg	**Pg**	**14 17 10.4**	**-0.7**
	5.8nm,0.5s						
KST				Lg	Lg	14 18 01.4	
	52nm,0.9s						
IUG	**luzhnay**	**3.94**	**313**	*eP*	**Pg**	**14 17 13.9**	**+1.6**
	192nm,0.4s						
IUG				*eS*	**Sg**	**14 18 06.7**	**+3.3**
	75nm,0.8s						
IUG	**luzhnay**	**3.94**	**313**	Pg	**Pg**	**14 17 13.9**	**+1.6**
	192nm,0.4s						
IUG				Lg	Lg	14 18 06.7	
	75nm,0.8s						
TAS	**Tashkent**	**3.95**	**299**	⇓*iP*	**Pn**	**14 16 58.8**	**+2.2**
	baz=1.0						
TAS				⇓*iS*	**Sn**	**14 17 44.0**	**+1.4**
	baz=1.0						
SGDS	**Sogindy**	**3.99**	**8**	*eP*	**Pg**	**14 17 12.6**	**-0.6**
	7.1nm,0.5s						
SGDS				*eS*	**Sg**	**14 18 04.8**	**-0.2**
	18nm,0.8s						
SGDS	**Sogindy**	**3.99**	**8**	Pg	**Pg**	**14 17 12.6**	**-0.6**
	7.1nm,0.5s						
SGDS				Lg	Lg	14 18 04.8	
	18nm,0

KK31					Lg		Lg	14 18 11.6
	9.4nm,0.5s,baz=152,slow=28,SNR=4.0							
KKAR	**Karatay Array**	**4.41**	**326**				**Pn**	**14 17 05.5 +2.6**
KRBS	**Karabastau**	**4.41**	**17**	*e*	P		**Pg**	**14 17 20.2 -0.9**
	0.1nm,0.1s							
KRBS				*e*	S		**Sg**	**14 18 17.1 -1.2**
	32nm,0.7s							
KTBS	**Karatobe**	**4.71**	**26**	*e*	P		**Pg**	**14 17 25.8 -1.1**
	3.4nm,0.5s							
KTBS				*e*	S		**Sg**	**14 18 27.1 -0.8**
	34nm,0.4s							
KTBS	**Karatobe**	**4.71**	**26**	Pg			**Pg**	**14 17 25.8 -1.1**
	3.4nm,0.5s							
KTBS				Lg			Lg	14 18 27.7
	34nm,0.4s							
KUU	**Kurty**	**4.76**	**22**	*e*	P		**Pg**	**14 17 26.3 -1.7**
	5.1nm,0.5s							
KUU				*e*	S		**Sg**	**14 18 28.2 -1.5**
	25nm,0.8s							
KUU	**Kurty**	**4.76**	**22**	Pg			**Pg**	**14 17 26.3 -1.7**
	5.1nm,0.5s							
KUU				Lg			Lg	14 18 28.2
	25nm,0.8s							
SATY	**Saty**	**4.93**	**42**	*e*	P		**Pg**	**14 17 31.9 +0.8**
	6.4nm,0.6s							
SATY				*e*	S		**Sg**	**14 18 37.9 +2.9**
	19nm,0.6s							
SATY	**Saty**	**4.93**	**42**	Pg			**Pg**	**14 17 31.9 +0.8**
	6.4nm,0.6s							
SATY				Lg			Lg	14 18 38.3
	19nm,0.6s							
CHKK	**Chushkaly**	**4.94**	**27**	*e*	P		**Pg**	**14 17 30.4 -0.9**
	1.5nm,0.1s							
CHKK				*e*	S		**Sg**	**14 18 34.8 -0.4**
	24nm,0.8s							
CHKK	**Chushkaly**	**4.94**	**27**	Pg			**Pg**	**14 17 30.4 -0.9**
CHKK				Lg			Lg	14 18 34.8
KURS	**Kuram**	**5.13**	**38**	*e*	P		**Pg**	**14 17 35.3 +0.4**
	4.1nm,0.6s							
KURS				*e*	S		**Sg**	**14 18 43.0 +1.6**
	8.9nm,0.6s							
KPKS	**Kokpek**	**5.36**	**41**	*e*	P		**Pg**	**14 17 39.1 -0.3**
	5.8nm,0.5s							
KPKS				*e*	S		**Sg**	**14 18 49.5 +0.7**
	16nm,0.6s							
ARXS	**Arharly**	**5.56**	**31**	*e*	P		**Pg**	**14 17 41.6 -1.6**
	4.4nm,0.5s							
ARXS				*e*	S		**Sg**	**14 18 54.1 -1.1**
	13nm,0.4s							
ARXS	**Arharly**	**5.56**	**31**	Pg			**Pg**	**14 17 41.6 -1.6**
	4.4nm,0.5s							
ARXS				Lg			Lg	14 18 54.1
	13nm,0.4s							
PDGK	**Podgornoye**	**5.70**	**46**	Pg			**Pg**	**14 17 44.4 -1.5**
	1.7nm,0.5s							
PDGK				Lg			Lg	14 18 59.5
	5.1nm,1.1s							
PDGK	**Podgornoye**	**5.70**	**46**	⇑Pg			**Pb**	**14 17 40.0 +4.2**
	2.0nm,0.7s							
PDGK				⇑Lg			Lg	14 18 59.1
	14nm,0.8s							
DJR	**Jarkent**	**6.54**	**40**	*e*	P		**Pg**	**14 18 00.9 -1.0**
	0.9nm,0.1s							
DJR				*e*	S		**Sg**	**14 19 27.3 +0.7**
	4.9nm,0.8s							
DJR	**Jarkent**	**6.54**	**40**	Pg			**Pg**	**14 18 00.9 -1.0**
MKAR	**Makanchi Array**	**9.53**	**37**	Pn			**Pn**	**14 18 17.5 +4.2**
	baz=234,slow=17,SNR=2.8							
MKAR				Lg			Lg	14 21 09.2
	0.1nm,0.3s,baz=218,slow=18,SNR=6.1							
	0.7nm,1.0s							
KURBB	**Kurchatov Arra**	**11.60**	**15**	Pn			**Pn**	**14 18 41.3 -0.1**
	baz=206,slow=13,SNR=2.7							
KURBB				Lg			Lg	14 22 09.2
	baz=209,slow=31,SNR=6.4							
	0.2nm,0.7s							
AB31	**Akbulak array**	**13.93**	**319**	⇑P			**Pn**	**14 19 12.0 -1.2**
	0.6nm,0.6s,baz=124,slow=14,SNR=5.0							
ABKAR	**Akbulak array**	**13.93**	**319**	Pn			**Pn**	**14 19 12.3 -0.9**
AKTO	**Aktyubinsk**	**15.64**	**320**	Pn			**Pn**	**14 19 33.0 -3.3**
	0.1nm,0.3s,baz=119,slow=12,SNR=1.5							
	0.5nm,0.5s							
AKTO	**Aktyubinsk**	**15.64**	**320**	⇓P			**P**	**14 19 39.1 -1.2**
	1.5nm,0.7s							
ZALV	**Zalesovo Beam**	**16.26**	**24**	Pn			**P**	**14 19 46.6 -0.6**
	1.1nm,0.3s,baz=211,slow=12,SNR=7.4							
	1.6nm,0.3s							
ARU	**Arti**	**19.73**	**334**	P			**Pn**	**14 20 26.4 -0.4**
	baz=10.0,slow=8.5,SNR=3.1							
	1.0nm,0.3s							
ARU	**Arti**	**19.73**	**334**	IAmb			IAmb	14 20 50.2
	comp=Z,2.5nm,1.0s							
FIA1	**FINESS Array S**	**36.36**	**323**	P			**P**	**14 23 00.3 +0.6**
FIA1				IAmb			IAmb	14 23 13.9
	comp=Z,11nm,1.4s							
FINES	**FINESS Array B**	**36.36**	**323**	P			**P**	**14 22 58.7 -0.9**
	comp=Z,0.6nm,0.4s,baz=111,slow=11,SNR=9.8							
	comp=Z,0.6nm,0.4s							
FINES	**FINESS Array B**	**36.36**	**323**	P			**P**	**14 23 00.3 +0.6**
ARCES	**ARCESS Array B**	**39.31**	**335**	P			**P**	**14 23 24.4 0.0**
	comp=Z,1.4nm,0.8s,baz=105,slow=9.1,SNR=5.5							
	comp=Z,1.4nm,0.8s							
ARCES	**ARCESS Array B**	**39.31**	**335**	P			**P**	**14 23 25.6 +1.1**
ARCES				IAmb			IAmb	14 23 51.7
	comp=Z,16nm,1.5s							
KLR	**Kul'dur**	**41.57**	**57**	LR			LR	14 43 27.6
	comp=Z,643nm,20.1s,baz=180,slow=40							
NB2	**NORSAR Subarra**	**43.42**	**321**	P			**P**	**14 23 58.6 +0.2**
	comp=Z,0.5nm,0.6s,baz=89,slow=7.9							
NOA	**NORSAR Array B**	**43.42**	**321**	P			**P**	**14 23 57.0 -1.3**
	comp=Z,0.5nm,0.6s,baz=93,slow=7.6,SNR=3.6							
	comp=Z,0.5nm,0.6s							
ESDC	**Sonseca Array**	**58.09**	**297**	P			**P**	**14 25 47.4 -1.8**
	comp=Z,0.2nm,0.5s,baz=58,slow=6.0,SNR=1.8							
	comp=Z,0.2nm,0.5s							
HNR	**Honiara**	**92.91**	**100**	LR			LR	15 10 15.4
	comp=Z,119nm,21.1s,baz=83,slow=35							

*IDC **26** 14:18:43.4±4.0, 39.°27N×73.°62E, h0km, mb3.8/3, mbtmp3.6/7, ML2.9/4, Error ellipse: s-maj=63.7km s-min=22.0km az=134.0*
*SOME **26** 14:18:43.5, 39.°43N×73.°72E, h10km*
*KRNET **26** 14:18:43.9±0.1, 39.°43N×73.°74E, mb4.1*
*NNC **26** 14:18:49.0±2.0, 39.°55N×73.°74E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=17.3km s-min=8.1km az=170.0*
ISC 26 14:18:42.6±1.0, 39.°36N±0.°05×73.°87E±0.°03, h10km, n56, σ1§84/82, mb3.6/3, 21C-5D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OHH	**Osh**	**1.43**	**325**	⇑*i*	P	**Pg**	**14 19 09.0**	**-1.1**
	baz=26							
OHH				⇑*i*	S	**Sg**	**14 19 27.5**	**-1.2**
	baz=26							
DRK	**Karamyk**	**1.60**	**275**	⇑*i*	P	**Pg**	**14 19 12.3**	**-1.1**
	baz=73							
DRK				⇑*i*	S	**Sg**	**14 19 33.1**	**-1.2**
	baz=73							
BTK	**Batken**	**2.45**	**288**	⇑*e*	P	**Pb**	**14 19 25.7**	**-1.2**
	baz=86							
BTK				⇑*i*	S	**Sb**	**14 19 56.2**	**-1.0**
	baz=86							
ARLS	**Aral**	**2.53**	**8**	⇑*i*	P	**Pb**	**14 19 27.6**	**-0.6**
	baz=10.0							
ARLS				⇑*i*	S	**Sb**	**14 19 59.4**	**0.0**
	baz=10.0							
AML	**Almayashu**	**2.77**	**357**	P		**Pg**	**14 19 33.7**	**-2.1**
	SNR=21							
GAR	**Garm**	**2.78**	**264**	⇑*i*	P	**Pb**	**14 19 30.6**	**-1.9**
	baz=62							
GAR				⇑*i*	S	**Sb**	**14 20 04.8**	**-1.8**
	baz=62							
UCH	**Uchtor**	**2.91**	**10**	P		**Pg**	**14 19 36.7**	**-1.7**
	SNR=11							
TRKS	**Terek-Say**	**3.01**	**317**	⇑*i*	P	**Pb**	**14 19 32.5**	**-3.8**
	baz=17							
TRKS				⇑*i*	S	**Sn**	**14 20 08.0**	**+1.4**
	baz=17							
EKS2	**Erkin-Say**	**3.30**	**359**	P		**Pb**	**14 19 41.2**	**-0.1**
	SNR=8.4							
AAK	**Ala-Archa**	**3.31**	**8**	P		**Pb**	**14 19 42.1**	**+0.5**
	SNR=11							
AAK	**Ala-Archa**	**3.31**	**8**	Pn		**Pb**	**14 19 41.7**	**+0.2**
	5.1nm,0.3s,baz=192,slow=14,SNR=8.4							
AAK				Sn		**Sg**	**14 20 25.7**	**-3.3**
	9.7nm,0.3s,baz=76,slow=17,SNR=7.4							
	18nm,0.3s							
KBK	**Karagaybulak**	**3.40**	**14**	P		**Pb**	**14 19 44.0**	**+1.0**
	SNR=14							
ULHL	**Ulahol**	**3.40**	**31**	P		**Pg**	**14 19 48.4**	**+0.6**
	SNR=26							
BOOM	**Boomskoye usch**	**3.50**	**26**	⇓*e*	P	**Pb**	**14 19 41.9**	**-2.9**
	baz=28							
BOOM				⇓*e*	S	**Sb**	**14 20 23.8**	**-3.7**
	baz=28							
CHMS	**Chumysh**	**3.70**	**10**	P		**Pb**	**14 19 47.0**	**-1.0**
	SNR=6.6							
KDJ	**Kajisay**	**3.74**	**41**	⇑*e*	P	**Pb**	**14 19 45.7**	**-3.2**
	baz=43							
KDJ				⇑*i*	S	**Sb**	**14 20 30.7**	**-3.7**
	baz=43							
TKM2	**Tokmak 2**	**3.79**	**20**	P		**Pb**	**14 19 48.1**	**-1.7**
	SNR=6.1							
TKM2	**Tokmak 2**	**3.79**	**20**	⇑Pn		**Pb**	**14 19 48.0**	**-1.7**
	8.4nm,0.7s							
TKM2				⇓Pg		**Pg**	**14 19 58.4**	**+3.1**
	14nm,0.6s							
TKM2				⇓Lg		Lg	14 20 43.4	
	63nm,0.7s							
USP	**Ospenovka**	**3.94**	**7**	P		**Pg**	**14 19 56.3**	**-1.7**
	SNR=6.6							
KST	**Kastek**	**4.01**	**23**	*e*	P	**Pg**	**14 19 57.5**	**-1.9**
	12nm,0.5s							
KST				*e*	S	**Sg**	**14 20 50.9**	**-0.4**
	115nm,0.8s							
KST	**Kastek**	**4.01**	**23**	Pg		**Pg**	**14 19 58.7**	**-0.7**
	12nm,0.5s							
KST				Lg		Lg	14 20 51.9	
	115nm,0.8s							
TAS	**Tashkent**	**4.01**	**301**	⇑*i*	P	Pb	14 19 47.4	-5.9
	baz=1.0							
TAS				⇑*i*	S	**Sn**	**14 20 33.4**	**+2.3**
	baz=1.0							
IUG	**Iuzhnay**	**4.03**	**315**	*e*	P	**Pg**	**14 19 58.7**	**-1.1**
	548nm,0.5s							
IUG				*e*	S	**Sg**	**14 20 53.6**	**+1.6**
	223nm,0.6s							
IUG	**Iuzhnay**	**4.03**	**315**	Pg		**Pg**	**14 20 00.7**	**+0.9**
	548nm,0.5s							
IUG				Lg		Lg	14 20 55.2	
	116nm,0.5s							
SGDS	**Sogindy**	**4.13**	**8**	*e*	P	**Pg**	**14 19 59.4**	**-2.4**
	21nm,0.6s							
SGDS				*e*	S	**Sg**	**14 20 54.3**	**-0.9**
	27nm,0.7s							
SGDS	**Sogindy**	**4.13**	**8**	Pg		**Pg**	**14 20 01.1**	**-0.7**
	21nm,0.6s							
SGDS				Lg		Lg	14 20 55.9	
	27nm,0.7s							
DGS	**Degeres**	**4.14**	**20**	*e*	P	**Pg**	**14 19 59.8**	**-2.1**
	23nm,0.9s							
DGS				*e*	S	**Sg**	**14 20 55.8**	**+0.3**
	28nm,0.5s							
DGS	**Degeres**	**4.14**	**20**	Pg		**Pg**	**14 20 01.6**	**-0.3**
	23nm,0.9s							
DGS				Lg		Lg	14 20 56.2	
	28nm,0.5s							
MTBS	**Maitube**	**4.24**	**26**	*e*	P	**Pg**	**14 20 02.1**	**-1.7**
	22nm,0.6s							
MTBS				*e*	S	**Sg**	**14 20 58.9**	**+0.2**
	44nm,0.5s							
TNSS	**Tian-Shan**	**4.35**	**31**	*e*	P	**Pg**	**14 20 04.8**	**-1.1**
	25nm,0.4s							
TNSS				*e*	S	**Sg**	**14 21 03.6**	**+1.3**
	38nm,0.6s							
AAA	**Alma-Ata**	**4.48**	**30**	*e*	P	**Pg**	**14 20 07.5**	**-0.9**
	30nm,0.3s							
AAA				*e*	S	**Sg**	**14 21 08.3**	**+1.7**
	96nm,0.7s							
KK31	**Karatay Array**	**4.52**	**327**	Pn		Pb	14 19 55.2	-6.8
	1.1nm,0.3s,baz=56,slow=13,SNR=11							
KK31				⇑Pg		**Pg**	**14 20 05.8**	**-3.3**
	5.0nm,0.4s,baz=138,slow=14,SNR=6.2							
KK31				⇑Lg		Lg	14 21 01.3	
	10nm,0.4s,baz=141,slow=30,SNR=4.7							
BRLS	**Borolday**	**4.76**	**322**	*e*	P	**Pb**	**14 20 06.8**	**+0.6**
	3.0nm,0.2s							
BRLS				*e*	S	**Sb**	**14 21 06.8**	**+3.2**
	32nm,0.5s							
BRLS	**Borolday**	**4.76**	**322**	Pg		**Pg**	**14 20 09.6**	**-4.3**
	3.0nm,0.2s							
BRLS				Lg		Lg	14 21 09.1	
	32nm,0.5s							
KUU	**Kurty**	**4.90**	**21**	*e*	P	**Pg**	**14 20 13.7**	**-2.7**
	9.4nm,0.6s							
KUU				*e*	S	**Sg**	**14 21 18.7**	**-1.1**
	66nm,1.0s							
SATY	**Saty**	**5.04**	**41**	*e*	P	**Pg**	**14 20 18.1**	**-1.0**
	13nm,0.7s							
SATY				*e*	S	**Sg**	**14 21 26.1**	**+1.6**
	40nm,0.8s							
SATY	**Saty**	**5.04**	**41**	Pg		**Pg**	**14 20 19.3**	**+0.1**
	13nm,0.7s							
SATY				Lg		Lg	14 21 27.1	
	40nm,0.8s							
CHKK	**Chushkaly**	**5.07**	**27**	*e*	P	**Pg**	**14 20 17.4**	**-2.2**
	5.5nm,0.6s							
CHKK				*e*	S	**Sg**	**14 21 24.4**	**-0.8**
	36nm,0.6s							
CHKK	**Chushkaly**	**5.07**	**27**	Pg		**Pg**	**14 20 18.6**	**-1.0**
	5.5nm,0.6s							
CHKK				Lg		Lg	14 21 24.8	
	36nm,0.6s							
ZHN	**Zhinishke**	**5.13**	**41**	*e*	P	**Pg**	**14 20 19.5**	**-1.4**
	8.6nm,0.1s							
ZHN				*e*	S	**Sg**	**14 21 28.1**	**+0.7**
	35nm,0.7s							
KURS	**Kuram**	**5.24**	**37**	*e*	P	**Pg**	**14 20 21.8**	**-1.3**
	12nm,0.7s							
KURS				*e*	S	**Sg**	**14 21 31.9**	**+0.9**
	21nm,1.6s							
KPKS	**Kokpek**	**5.47**	**40**	*e*	P	**Pg**	**14 20 26.1**	**-1.3**
	15nm,0.8s							
KPKS				*e*	S	**Sg**	**14 21 40.0**	**+1.7**
	44nm,0.8s							
KPKS	**Kokpek**	**5.47**	**40**	Pg		**Pg**	**14 20 27.3**	**-0.2**
	15nm,0.8s							
KPKS				Lg		Lg	14 21 40.6	
	44nm,0.8s							
PDGK	**Podgornoye**	**5.80**	**45**	⇑Pg		**Pg**	**14 20 32.9**	**-0.8**
	5.3nm,0.7s							
PDGK				⇓Lg		Lg	14 21 51.1	
	39nm,0.9s							
BLB	**Baldybastay**	**5.86**	**35**	*e*	P	**Pg**	**14 20 32.1**	**-2.7**
	21nm,0.6s							
BLB				*e*	S	**Sg**	**14 21 50.1**	**-0.6**
	23nm,0.5s							
BLB	**Baldybastay**	**5.86**	**35**	Pg		**Pg**	**14 20 33.8**	**-1.0**
	21nm,0.6s							
DJR	**Jarkent**	**6.65**	**40**	*e*	P	**Pg**	**14 20 47.0**	**-2.9**
	1.6nm,0.7s							
DJR				*e*	S	**Sg**	**14 22 16.0**	**-0.1**
	12nm,0.7s							
DJR	**Jarkent**	**6.65**	**40**	Pg		**Pg**	**14 20 48.1**	**-1.9**
KURBB	**Kurchatov Arra**	**11.74**	**15**	Pn		**Pn**	**14 21 32.9**	**+2.9**
	baz=206,slow=10,SNR=2.6							
KURBB				Lg		Lg	14 24 53.5	
	0.1nm,0.3s,baz=202,slow=30,SNR=8.0							
	0.2nm,0.7s							
AB31	**Akbulak array**	**14.02**	**319**	P		**Pn**	**14 22 01.4**	**+0.2**
	0.5nm,0.5s,baz=130,slow=14,SNR=6.8							
AKTO	**Aktyubinsk**	**15.74**	**320**	Pn		**Pn**	**14 22 22.7**	**-1.6**
	0.1nm,0.3s,baz=138,slow=15,SNR=5.5							
	1.2nm,0.5s							
AKTO	**Aktyubinsk**	**15.74**	**320**	⇑P		**P**	**14 22 26.3**	**-1.9**
	3.1nm,0.8s							
ZALV	**Zalesovo Beam**	**16.39**	**23**	Pn		**P**	**14 22 35.5**	**+0.1**
	0.1nm,0.3s,baz=219,slow=11,SNR=2.1							
	0.6nm,0.4s							
BRTR	**Keskin Array B**	**30.84**	**284**	P		**P**	**14 25 00.1**	**+1.1**
	0.5nm,0.6s,baz=78,slow=7.8,SNR=2.6							
	0.5nm,0.6s							
FINES	**FINESS Array B**	**36.47**	**323**	P		**P**	**14 25 48.6**	**+1.2**
	1.7nm,0.9s,baz=108,slow=8.9,SNR=2.8							
	1.7nm,0.9s							
ARCES	**ARCESS Array B**	**39.43**	**336**	P		**P**	**14 26 15.6**	**+3.2**
	1.2nm,0.9s,baz=106,slow=9.8,SNR=5.2							
	1.2nm,0.9s							

*BJI **26** 14:18:40.9±0.0, 12.°09N×143.°34E, h11km, mb4.9/66, mB5.1/33, Ms4.8/46, Ms7 4.7/45*
*NEIC **26** 14:18:42.8±1.5, 12.°06N±0.°07×143.°34E±0.°08, h10km±1km, mb5.5/333, Mwc5.4(GCMT), Error ellipse: s-maj=13.4km s-min=12.1km az=250.0*
*MOS **26** 14:18:43.3±1.0, 12.°08N×143.°19E, h28km, mb5.5/88, MS4.8/6, Error ellipse: s-maj=7.5km s-min=4.4km az=103.2*
*IDC **26** 14:18:44.8±2.5, 12.°08N×143.°26E, h25km±15km, mb4.9/38, mbtmp5.0/42, ML5.0/4, MS4.5/50, Error ellipse: s-maj=14.0km s-min=9.6km az=89.0*
*GCMT **26** 14:18:46.8±0.2, 12.°07N±0.°02×143.°18E±0.°01, h22km, MW5.4/112, Moment Tensor Solution. s56,c66; s112,c168; Duration: 1§2 Moment tensor: Scale 10^17 Nm; Mrr=1.20±.06; Mθθ=0.07±.03; Mϕϕ=1.13±.04; Mrθ=0.28±.06; Mθϕ=-0.40±.02; Mϕr=0.56±.05; Best double couple: M=1.38200×10^17 NP1:ϕs325.00000°,δ38.00000°, λ-119.00000°. NP2:ϕs179.00000°,δ58.00000°, λ-70.00000°. Principal axes: T 1.3440, Plg11.0000°, Azm255.0000°; N 0.0750, Plg17.0000°, Azm348.0000°; P -1.4200, Plg70.0000°, Azm135.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DJA **26** 14:18:47.0±0.4, 12.°N±2.°×14.°3E±.°, h47km±5km, M5.2/68, mB5.6/23, mb5.1/68, MLv5.6/1, Mw(mB)5.0/23*
ISC 26 14:18:45.6±0.5, 12.°06N±0.°03×143.°31E±0.°04, h32km±3km, h32km:pP-P, n1012, σ1§24/1010, mb5.4/305, MS4.6/80, 95C-153D, Fault plane solution: NP1:ϕs349.79730°, δ38.96560°, λ-83.18449°. NP2:ϕs161.05846°, δ51.36112°, λ-95.48254°. Principal axes: T Plg6.2155°, Azm254.9552°; N Plg4.2798°, Azm164.4882°; P Plg82.4439°, Azm40.1433°; South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GUMO	**Guam**	**2.15**	**45**	Pn		**Pn**	**14 19 19.9**	**+0.6**
	1μm,0.3s,baz=232,slow=4.4,SNR=336							
GUMO				Sn		**Sn**	**14 19 45.9**	**+0.9**
	1μm,0.3s,baz=266,slow=23,SNR=15							
GUMO				LR		LR	14 20 18.1	
	comp=Z,14μm,19.1s,baz=124,slow=43							
	7μm,0.5s							
GUMO	**Guam**	**2.15**	**45**			**Pn**	**14 19 19.7**	**+0.4**
GUMO	**Guam**	**2.15**	**45**	P		**Pn**	**14 19 20.3**	**+1.0**
SMPI	**Sarmi**	**14.68**	**198**	P		**Pn**	**14 22 13.8**	**+2.6**
	1μm43nm,1.4s							
GENI	**Genyem**	**14.88**	**192**	P		**Pn**	**14 22 15.2**	**+1.3**
	2μm80nm,1.5s							
GENI	**Genyem**	**14.88**	**192**	P		**P**	**14 22 17.5**	**-1.8**
JCJ	**Chichijima**	**15.00**	**356**	Pn		**Pn**	**14 22 14.3**	**-1.0**
	1.8nm,0.3s,baz=283,slow=23,SNR=2.2							
JCJ				Sn		**Sn**	**14 25 08.3**	**+7.9**
	1.7nm,0.3s,baz=132,slow=23,SNR=2.0							
JCJ				LR		LR	14 25 51.8	
	comp=Z,719nm,20.1s,baz=131,slow=28							
	19nm,0.6s							
JCJ	**Chichijima**	**15.00**	**356**	Pn		**Pn**	**14 22 15.2**	**-0.1**
JCJ				IAmb		IAmb	14 22 30.4	
	comp=Z,152nm,1.0s							
JCJ	**Chichijima**	**15.00**	**356**	P		**Pn**	**14 22 17.7**	**+2.4**
PATS	**Pohnpei**	**15.68**	**108**	Pn		**Pn**	**14 22 21.4**	**-2.9**
PATS				IAmb		IAmb	14 22 36.7	
	comp=Z,256nm,1.1s							
PATS	**Pohnpei**	**15.68**	**108**	P		**Pn**	**14 22 24.0**	**-0.4**
SWI	**Sorong**	**17.55**	**224**	P		**P**	**14 22 50.3**	**+1.5**
	comp=Z,1μmcomp=Z,58nm,1.5s							
DAV	**Davao City (W)**	**18.16**	**256**	P		**Pn**	**14 22 55.5**	**0.0**
	comp=Z,45nm,0.3s,baz=176,slow=20,SNR=2.2							
DAV				LR		LR	14 28 20.3	
	comp=Z,2μm,21.8s,baz=96,slow=32							
	comp=Z,106nm,0.4s							
RABL	**Rabaul**	**18.39**	**151**	P		**P**	**14 22 58.0**	**-0.1**
RABL	**Rabaul**	**18.39**	**151**	P		**Pn**	**14 23 00.2**	**+1.9**
KRVT	**Keravat (AS076**	**18.43**	**151**	P		**Pn**	**14 22 58.8**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=92,slow=8.9,SNR=8.8							
KRVT				LR		LR	14 28 42.4	
	comp=Z,956nm,20.4s,baz=90,slow=32							
	comp=Z,26nm,0.8s							
FAKI	**Fak Fak**	**18.50**	**217**			**P**	**14 22 59.3**	**0.0**
FAKI	**Fak Fak**	**18.50**	**217**	P		**Pn**	**14 23 00.2**	**+0.6**
	comp=Z,3μmcomp=Z,52nm,0.6s							
FAKI	**Fak Fak**	**18.50**	**217**	P		**Pn**	**14 23 01.4**	**+1.8**
TNTI	**Ternate**	**19.39**	**236**	P		**P**	**14 23 08.1**	**-0.9**
	comp=Z,2μmcomp=Z,28nm,0.7s							
TNTI	**Ternate**	**19.39**	**236**	P		**Pn**	**14 23 13.3**	**+3.0**
LBMI	**Labuha**	**20.13**	**232**	P		**P**	**14 23 17.7**	**+0.5**
	comp=Z,2μmcomp=Z,55nm,1.1s							
JOW	**Kunigami**	**20.39**	**318**	P		**P**	**14 23 19.6**	**-0.2**
	comp=Z,63nm,0.8s,baz=158,slow=9.0,SNR=8.2							
JOW				LR		LR	14 29 38.6	
	comp=Z,1μm,21.6s,baz=142,slow=32							
	comp=Z,63nm,0.8s							
JOW	**Kunigami**	**20.39**	**318**	Pn		Pn	14 23 21.7	-0.4
JOW				IAmb		IAmb	14 23 23.5	
	comp=Z,194nm,1.3s							
JOW	**Kunigami**	**20.39**	**318**	P		Pn	14 23 22.4	+0.3
MSAI	**Masohi**	**20.94**	**224**	P		Pn	14 23 28.2	-0.4
	comp=Z,330nmcomp=Z,21nm,0.9s							
PMG	**Port Moresby**	**21.67**	**170**	P		**P**	**14 23 32.5**	**-1.2**
	comp=Z,14nm,0.6s,baz=3.9,slow=10,SNR=5.8							
	comp=Z,14nm,0.6s							
PMG	**Port Moresby**	**21.67**	**170**	P		**P**	**14 23 32.0**	**-1.7**
PMG	**Port Moresby**	**21.67**	**170**	P		**P**	**14 23 32.0**	**-1.7**
PMG				pmax		pmax		
	comp=Z,50nm,1.0s							
AAI	**Ambon**	**21.69**	**225**	P		**P**	**14 23 34.4**	**+0.4**
	comp=Z,2μmcomp=Z,156nm,1.1s							
TGY	**Tagaytay City**	**21.88**	**278**	P		**P**	**14 23 38.0**	**+1.9**
	comp=Z,214nm,0.3s,baz=122,slow=7.1,SNR=5.3							
SANI	**Sanana**	**22.19**	**232**	P		**P**	**14 23 39.7**	**+0.3**
	comp=Z,774nmcomp=Z,22nm,1.3s							
SANI	**Sanana**	**22.19**	**232**	P		**P**	**14 23 43.5**	**+4.1**
JSU	**Suzuyama**	**22.70**	**331**	P		**P**	**14 23 44.4**	**-0.3**
JSU				IAmb		IAmb	14 23 47.0	
	comp=Z,99nm,0.9s						

TPUB Ta-pu 24.29 300 P P 14 23 59.4 -0.9
TPUB Ta-pu 24.29 300 P P 14 24 01.7 +1.4
JHS Saijyo 24.64 340 P P 14 24 02.0 -1.4
MJAR Matsushiro Arr 24.81 350 P P 14 24 02.8 -2.1
comp=Z,24nm,1.0s,baz=174,slow=11,SNR=48
MJAR PcP PcP 14 27 40.7 -0.1
comp=Z,7.2nm,0.9s,baz=148,slow=3.1,SNR=8.4
MJAR ScP ScP 14 31 18.6 +1.1
comp=Z,2.2nm,0.9s,baz=164,slow=2.9,SNR=5.5
MJAR LR LR 14 33 12.4
comp=Z,1μm,18.1s,baz=158,slow=35
comp=Z,24nm,1.0s
MAJO Matsushiro 24.81 350 P P 14 24 03.3 -1.6
MAJO IAmb IAmb 14 24 04.8
comp=Z,64nm,0.9s
MAJO Matsushiro 24.81 350 P P 14 24 03.3 -1.6
MAJO pmax pmax
comp=Z,64nm,0.9s
MAJO Matsushiro 24.81 350 P P 14 24 04.2 -0.7
MJB9 Matsu-Tunnel 24.81 350 P P 14 24 03.2 -1.7
MJB9 IAmb IAmb 14 24 04.8
comp=Z,61nm,0.9s
TOLI2 Tolitoli 24.85 246 P P 14 24 04.7 -0.7
TOLI2 Tolitoli 24.85 246 P P 14 24 05.5 +0.1
APSI Ampana 25.07 241 P P 14 24 06.6 -0.8
comp=Z,776nmcomp=Z,48nm,0.7s
MYLDM Lahad Datu 25.44 257 P P 14 24 12.1 +1.2
MYLDM IAmb IAmb 14 24 20.6
comp=Z,134nm,1.0s
JTU Tsushima 25.70 333 P P 14 24 12.8 0.0
JMM Marumori 25.80 355 P P 14 24 13.2 -0.6
JMM IAmb IAmb 14 24 17.5
comp=Z,87nm,1.0s
COEN Coen 25.85 180 P P 14 24 13.6 -0.8
COEN Coen 25.85 180 P P 14 24 15.4 +1.0
MPSI Mapaga 25.98 245 P P 14 24 15.5 -0.2
comp=Z,30nm,1.0s
JSD Sado 26.26 351 P P 14 24 16.8 -1.2
JSD IAmb IAmb 14 24 20.2
comp=Z,81nm,1.0s
KDU Kakadu 26.83 204 P P 14 24 24.4 +1.1
HNR Honiara 27.01 142 LR LR 14 35 14.0
comp=Z,570nm,18.8s,baz=308,slow=37
NAWB Namwon 27.36 331 P P 14 24 27.4 -0.6
MTN Manton Dam 27.53 206 P P 14 24 28.8 -0.8
MTN IAmb IAmb 14 24 32.9
comp=Z,84nm,1.5s
MTN Manton Dam 27.53 206 P P 14 24 29.5 -0.1
TTSI Tana Toraja 27.75 239 P P 14 24 32.1 +0.5
comp=Z,664nmcomp=Z,24nm,1.6s
TJN Taejon 28.16 332 P P 14 24 34.5 -0.5
TJN Taejon 28.16 332 P P 14 24 34.5 -0.5
TJN pmax pmax
comp=Z,244nm,1.0s
TJN Taejon 28.16 332 P P 14 24 35.1 +0.1
BNSI Bone 28.27 236 P P 14 24 37.0 +0.7
comp=Z,37nm,1.2s
SPSI Sidrap Palu 28.30 237 P P 14 24 36.0 -0.5
comp=Z,15nm,1.2s
JTM Tenmabayashi 28.68 356 P P 14 24 39.0 -0.6
JTM IAmb IAmb 14 24 59.4
comp=Z,134nm,1.4s
SOEI Soe 28.77 222 P P 14 24 40.1 -0.7
BKSI Bulukumba 28.80 234 P P 14 24 40.6 -0.4
comp=Z,14nm,0.9s
KSRS Korea Array 28.80 334 P P 14 24 40.4 -0.4
comp=Z,5.3nm,0.6s,baz=148,slow=9.5,SNR=36
KSRS PcP PcP 14 27 49.6 -0.5
comp=Z,4.5nm,0.9s,baz=183,slow=2.4,SNR=13
KSRS ScP ScP 14 31 30.2 +0.9
comp=Z,2.5nm,1.0s,baz=174,slow=4.8,SNR=7.3
comp=Z,5.3nm,0.6s
KSAR Wonju Array Be 28.81 334 P P 14 24 40.0 -0.8
KSAR Wonju Array Be 28.81 334 P P 14 24 40.0 -0.8
KS19 Wonju Array Si 28.87 334 P P 14 24 40.3 -1.1
KAPI Kappang 28.92 235 P P 14 24 41.7 -0.3
comp=Z,15nm,0.8s,baz=47,slow=3.7,SNR=14
comp=Z,15nm,0.8s
KAPI Kappang 28.92 235 P P 14 24 41.3 -0.7
KAPI Kappang 28.92 235 P P 14 24 41.3 -0.7
KAPI pmax pmax
comp=Z,19nm,1.0s
KAPI Kappang 28.92 235 P P 14 24 42.5 +0.5
BSSI Bau Bau, Buton 29.01 233 P P 14 24 42.5 -0.4
comp=Z,26nm,1.5s
SEHB SEOHWA 29.36 335 P P 14 24 45.7 0.0
INCN Inchon 29.40 332 P P 14 24 45.5 -0.6
INCN Inchon 29.40 332 P P 14 24 45.5 -0.6
INCN pmax pmax
comp=Z,31nm,1.1s
BATI Baumata 29.50 222 P P 14 24 46.2 -1.0
comp=Z,28nm,1.2s
EDFI Ende, Flores 29.82 227 P P 14 24 50.0 -0.1
comp=Z,10nm,0.9s
NJ2 Nanjing 30.03 315 eP P 14 24 51.8 +0.1
NJ2 pmax pmax
comp=Z,10.0nm,0.7s
KNRA Kununurra 31.09 208 P P 14 25 01.1 0.0
KNRA IAmb IAmb 14 25 02.8
comp=Z,73nm,1.1s
KNRA Kununurra 31.09 208 P P 14 25 02.0 +0.8
ASAJ Asahikawa 31.95 359 LR LR 14 39 10.7
comp=Z,464nm,20.9s,baz=180,slow=38
CTA Charters Tower 32.08 175 LR LR 14 40 09.1
comp=Z,898nm,18.0s,baz=337,slow=40
CTA Charters Tower 32.08 175 P P 14 25 11.0 +1.2
comp=Z,39nm,1.3s
CTAO Charters Tower 32.08 175 P P 14 25 09.2 -0.6
CTAO Charters Tower 32.08 175 P P 14 25 09.2 -0.6
CTAO pmax pmax
comp=Z,37nm,1.1s
CTAO Charters Tower 32.08 175 P P 14 25 11.0 +1.2
comp=Z,34nm,1.3s
SBUM Sibu 32.24 255 P P 14 25 10.1 -1.3
WHN Wuhan 32.50 309 ⇓P P 14 25 14.0 +0.5
WHN S S 14 30 29.5 +2.9
WHN LR LR
comp=Z,2μm,13.7s
WHN LR LR
comp=Z,3μm,19.6s
WHN LR LR
comp=Z,4μm,17.5s
QIS Mount Isa 32.62 186 P P 14 25 15.0 +0.4
WB0 Warramunga Arr 32.82 196 P P 14 25 15.2 -1.2
WB0 IAmb IAmb 14 25 17.5
comp=Z,37nm,0.8s
QIZ Qiongzhong 32.93 286 P P 14 25 16.8 -0.7
QIZ S S 14 30 36.0 +2.4
QIZ LR LR
comp=Z,830nm,17.3s
QIZ LR LR
comp=Z,790nm,16.5s
QIZ LR LR
comp=Z,1μm,22.6s
DL2 Dalian 32.95 328 P P 14 25 18.0 +0.6
DL2 S S 14 30 37.0 +3.5
DL2 pmax pmax
comp=Z,47nm,0.9s
DL2 pmax pmax
comp=Z,180nm,4.1s
DL2 LR LR
comp=Z,480nm,19.9s
DL2 LR LR
comp=Z,540nm,21.8s
DL2 LR LR
comp=Z,840nm,17.1s
WR0 Warramunga Arr 32.97 195 P P 14 25 17.3 -0.3
WR0 IAmb IAmb 14 25 18.8
comp=Z,54nm,1.2s
WRAB Tennant Creek 32.99 196 P P 14 25 17.5 -0.3
WRAB IAmb IAmb 14 25 19.1
comp=Z,48nm,0.8s
WRAB Tennant Creek 32.99 196 P P 14 25 17.5 -0.3
WRAB pmax pmax
comp=Z,48nm,0.8s
WRAB Tennant Creek 32.99 196 P P 14 25 18.3 +0.4
WB2 Warramunga Arr 33.00 196 P P 14 25 17.7 -0.2
WB2 IAmb IAmb 14 25 19.1
comp=Z,52nm,0.8s
WRA Warramunga Arr 33.00 196 P P 14 25 17.9 0.0
comp=Z,44nm,0.9s,baz=16,slow=9.3,SNR=121
WRA LR LR 14 39 31.2
comp=Z,2μm,18.6s,baz=29,slow=38
comp=Z,44nm,0.9s
WRA Warramunga Arr 33.00 196 P P 14 25 16.7 -1.2
WRA Warramunga Arr 33.00 196 i P P 14 25 17.8 -0.2
WRA pmax pmax
comp=Z,36nm,0.8s
USA0B Ussuriysk Arra 33.48 345 P P 14 25 22.4 +0.6
USA0B IAmb IAmb 14 25 23.7
comp=Z,48nm,0.9s
USA0B Ussuriysk Arra 33.48 345 P P 14 25 22.4 +0.6
USA0B pmax pmax
comp=Z,48nm,1.0s
USRK Ussuriysk Ar. 33.48 345 P P 14 25 22.4 +0.6
comp=Z,29nm,0.8s,baz=163,slow=8.5,SNR=42
USRK LR LR 14 37 01.9
comp=Z,987nm,19.6s,baz=168,slow=33
comp=Z,29nm,0.8s
USRK Ussuriysk Ar. 33.48 345 P P 14 25 22.3 +0.5
USRK Ussuriysk Ar. 33.48 345 P P 14 25 22.3 +0.5
TIA Tai'an 33.69 320 ⇓P P 14 25 24.0 +0.1
TIA pmax pmax
comp=Z,16nm,0.9s
STKI Sintang 33.76 252 P P 14 25 25.6 +0.9
comp=Z,16nm,0.8s
KSM Kuching 34.36 255 P P 14 25 30.0 +0.1
KSM Kuching 34.36 255 P P 14 25 30.3 +0.3
MDJ Mudanjiang 34.51 343 P P 14 25 44.0 +13
MDJ pmax pmax
comp=Z,6μm,1.2s
MDJ AMB AMB
comp=Z,140nm,5.3s
YSS Yuzh-Sakhalins 34.78 359 eP P 14 25 32.4 -0.7
YSS pmax pmax
comp=Z,10.0nm,1.0s
YSS MLR MLR
comp=Z,800nm,18.0s
CN2 Changchun 35.18 337 eP P 14 25 36.5 -0.1
CN2 pmax pmax
comp=Z,10.0nm,0.7s
JAGI Jajag, Banyuwa 35.44 236 P P 14 25 35.8 -3.4
LYN LuoYang 35.86 314 ⇑P P 14 25 42.5 -0.1
LYN PcP PcP 14 28 10.3 +0.7
LYN pmax pmax
comp=Z,20nm,1.3s
LYN LR LR
comp=Z,1μm,18.2s
LYN LR LR
comp=Z,950nm,18.9s
LYN LR LR
comp=Z,1μm,18.0s
GMJI Gumukmas 35.91 237 P P 14 25 43.0 -0.2
comp=Z,43nm,1.1s
RK1H Rockhampton Ha 35.92 169 P P 14 25 43.5 +0.3
comp=Z,28nm,1.0s
HNS HongShan 35.95 320 ⇓P P 14 25 43.8 +0.5
HNS PcP PcP 14 28 11.0 +1.2
HNS eS S 14 31 20.0 +0.3
HNS pmax pmax
comp=Z,55nm,1.1s
HNS LR LR
comp=Z,680nm,16.3s
HNS LR LR
comp=Z,750nm,17.9s
HNS LR LR
comp=Z,600nm,21.6s
BNX BinXian 36.19 341 ⇓P P 14 25 45.5 +0.2
BNX pP sP 14 25 55.8 -1.4
BNX pmax pmax
comp=Z,63nm,1.2s
BNX pmax pmax
comp=Z,180nm,4.1s
AS31 Alice Springs 36.67 195 P P 14 25 49.8 +0.1
ASAR Alice Springs 36.68 195 P P 14 25 49.8 +0.1
comp=Z,6.1nm,0.8s,baz=25,slow=12,SNR=145
ASAR PcP PcP 14 28 13.1 +0.9
comp=Z,3.6nm,0.9s,baz=30,slow=4.3,SNR=5.3
ASAR LR LR 14 41 46.1
comp=Z,1μm,18.1s,baz=342,slow=38
comp=Z,6.1nm,0.8s
ASAR Alice Springs 36.68 195 P P 14 25 49.0 -0.7
BJI Beijing 36.74 324 P P 14 25 49.5 -0.5
BJI PcP PcP 14 28 12.0 -0.1
BJI pmax pmax
comp=Z,36nm,1.1s
BJI LR LR
comp=Z,150nm,17.4s
BJI LR LR
comp=Z,600nm,19.1s
BJI LR LR
comp=Z,1μm,16.8s
PWJI Pagerwojo 37.13 239 P P 14 25 52.3 -1.4
comp=Z,33nm,1.3s
GYA Guiyang 37.29 298 ⇑P P 14 25 56.8 +1.8
GYA sP pP 14 26 03.3 -0.2
GYA PcP PcP 14 28 16.0 +1.8
GYA S S 14 31 43.0 +2.3
GYA pmax pmax
comp=Z,15nm,1.0s
GYA LR LR
comp=Z,640nm,19.5s
GYA LR LR
comp=Z,630nm,21.1s
GYA LR LR
comp=Z,650nm,20.0s
TIY Taiyuan 37.60 318 eP P 14 25 58.0 +0.5
TIY pmax pmax
comp=Z,25nm,0.7s
TIY pmax pmax
comp=Z,170nm,4.6s
TIY LR LR
comp=Z,490nm,18.6s
TIY LR LR
comp=Z,370nm,17.2s
TIY LR LR
comp=Z,460nm,25.4s
PCJI Pacitan 37.75 239 P P 14 25 58.4 -0.5
comp=Z,40nm,1.1s
EIDS Eidsvold 37.97 169 P P 14 25 59.5 -1.0
EIDS Eidsvold 37.97 169 P P 14 26 01.9 +1.4
XAN Xi'an 38.18 311 ⇑P P 14 26 02.0 -0.4
XAN pP pP 14 26 06.5 -4.4
XAN sP sP 14 26 09.0 -5.2
XAN PcP PcP 14 28 17.8 +1.1
XAN pmax pmax
comp=Z,9.0nm,0.9s
XAN LR LR
comp=Z,790nm,16.8s
XAN LR LR
comp=Z,930nm,16.8s
XAN LR LR
comp=Z,1μm,19.0s
KLR Kul'dur 38.28 348 P P 14 26 03.4 +0.4
comp=Z,30nm,0.9s,baz=149,slow=7.2,SNR=55
KLR PcP PcP 14 28 17.0 +0.4
comp=Z,13nm,1.0s,baz=181,slow=2.6,SNR=8.5
comp=Z,30nm,0.9s
KLR Kul'dur 38.28 348 d iP P 14 26 03.2 +0.3
KLR pmax pmax
comp=Z,44nm,1.0s
TPI Tanjungpandan 38.37 250 P P 14 26 05.7 +1.6
comp=Z,21nm,1.3s
QLP Quilpie 38.42 179 P P 14 26 05.8 +1.5
RMQ Roma 38.68 172 P P 14 26 07.1 +0.6
TYV Tymovskoe 38.70 359 eP P 14 26 06.4 0.0
TYV eS S 14 32 01.5 +0.4
TYV pmax pmax
comp=Z,24nm,1.6s
TYV pmax pmax
comp=Z,400nm,3.4s
TYV smax smax
comp=N,11nm,1.8s
TYV smax smax
comp=E,300nm,4.7s
GRNR Gornyy 39.01 353 ⇓i P P 14 26 09.3 +0.2
GRNR pmax pmax
comp=N,7.0nm,0.8s
GRNR pmax pmax
comp=Z,20nm,0.7s
XLT XiLinHaoTe 39.45 329 eP P 14 26 12.0 -0.9
XLT pP pP 14 26 16.5 -4.7
XLT sP sP 14 26 19.3 -5.5
XLT S S 14 32 15.5 +2.7
XLT sS pS 14 32 21.0 -1.5
XLT pmax pmax
comp=Z,53nm,0.8s
XLT pmax pmax
comp=Z,300nm,5.8s
XLT LR LR
comp=Z,63nm,19.4s
XLT LR LR
comp=Z,570nm,17.7s
XLT LR LR
comp=Z,930nm,18.6s
INKA Innaminka 39.64 184 P P 14 26 15.9 +1.4
WRKA Warakurna 39.67 202 P P 14 26 15.9 +1.0
HHC Hu-ho-hao-te 39.97 322 eP P 14 26 17.8 +0.4
HHC pmax pmax
comp=Z,40nm,0.9s
HHC pmax pmax
comp=Z,360nm,7.1s
HHC LR LR
comp=Z,630nm,18.4s
HHC LR LR
comp=Z,710nm,17.8s
HHC LR LR
comp=Z,2μm,17.8s
OOD Oodnadatta 40.30 190 P P 14 26 20.3 +0.3
MBWA Marble Bar 40.33 215 P P 14 26 20.1 -0.2
DSRI Dabo 40.41 255 P P 14 26 21.2 0.0
comp=Z,13nm,1.2s
KMI Kunming 40.42 295 ⇓P P 14 26 23.0 +1.5
KMI pP pP 14 26 29.0 -0.9
KMI pmax pmax
comp=Z,12nm,1.0s
KMI LR LR
comp=Z,410nm,16.7s
KMI LR LR
comp=Z,520nm,19.5s
KMI LR LR
comp=Z,820nm,18.5s
PSA00 Pilbara Seismi 40.59 215 P P 14 26 22.1 -0.5
PSA00 Pilbara Seismi 40.59 215 P P 14 26 22.7 +0.2
NOUC Port Laguerre 40.76 146 P P 14 26 24.3 +0.4
BTO Baotou 40.78 320 eP P 14 26 25.8 +1.7
BTO S S 14 32 36.8 +3.8
BTO LR LR
comp=Z,2μm,14.7s
BTO LR LR
comp=Z,2μm,17.8s
DZM Mont Dzumac 40.81 146 eP P 14 26 25.7 +1.2
comp=Z,159nm,1.1s
DZM Mont Dzumac 40.81 146 P P 14 26 23.7 -0.8
CD2 Chengdu 41.02 304 P P 14 26 25.0 -1.2
CD2 S S 14 32 37.5 +0.8
CD2 pmax pmax
comp=Z,40nm,0.6s
CD2 LR LR
comp=Z,750nm,15.2s
CD2 LR LR
comp=Z,1μm,19.6s
PZH PanZhiHua 41.58 296 P P 14 26 31.5 +0.6
PZH S S 14 32 47.8 +2.6
PZH pmax pmax
comp=Z,10.0nm,0.9s
PZH LR LR
comp=Z,460nm,17.4s
PZH LR LR
comp=Z,380nm,16.5s
PZH LR LR
comp=Z,670nm,17.7s
PETK Petropavlovsk- 42.54 13 P P 14 26 37.8 -0.3
comp=Z,8.1nm,0.9s,baz=188,slow=3.0,SNR=6.7
PETK PcP PcP 14 28 30.0 -0.3
comp=Z,14nm,0.8s,baz=205,slow=5.9,SNR=12
PETK LR LR 14 45 42.4
comp=Z,756nm,18.7s,baz=194,slow=38
comp=Z,8.1nm,0.9s
PETK Petropavlovsk- 42.54 13 P P 14 26 39.1 +1.0
LCRK Leigh Creek 42.54 187 P P 14 26 39.1 +0.7
KULM Kulim 42.66 265 P P 14 26 40.7 +1.0
PET Petropavlovsk 42.67 14 P P 14 26 39.3 +0.1
PET Petropavlovsk 42.67 14 eP P 14 26 39.7 +0.5
PET e 14 28 31.3
PET eS S 14 33 01.6 +1.3
PET pmax pmax
comp=Z,50nm,1.3s
LZH Lanzhou 42.82 311 eP P 14 26 42.8 +1.9
LZH pP pP 14 26 47.3 -2.1
LZH pmax pmax
comp=Z,35nm,1.6s
ARMA Armidale 42.98 169 P P 14 26 42.5 +0.4
ARMA IAmb IAmb 14 26 43.7
comp=Z,78nm,1.3s
ARMA Armidale 42.98 169 P P 14 26 42.8 +0.7
MULG Mulgathing 43.03 192 P P 14 26 43.1 +0.8
CM31 Chiang Mai Arr 43.18 284 P P 14 26 44.6 +0.7
CMAR Chiang Mai Arr 43.18 284 P P 14 26 44.7 +0.8
comp=Z,9.1nm,1.0s,baz=86,slow=6.3,SNR=38
CMAR PcP PcP 14 28 34.0 +0.8
comp=Z,5.5nm,0.9s,baz=94,slow=2.1,SNR=6.4
CMAR LR LR 14 43 15.1
comp=Z,709nm,20.9s,baz=100,slow=34
comp=Z,9.1nm,1.0s
CMAR Chiang Mai Arr 43.18 284 P P 14 26 43.8 -0.1
CMAR Chiang Mai Arr 43.18 284 i P P 14 26 45.0 +1.1
CMAR pmax pmax
comp=Z,10.0nm,1.0s
CMSA Cobar Meteorol 43.41 177 P P 14 26 46.5 +1.1
ZEA Zeya 43.49 346 eP P 14 26 46.0 +0.2
ZEA pmax pmax
comp=E,10.0nm,0.9s
ZEA pmax pmax
comp=N,20nm,1.1s
ZEA pmax pmax
comp=Z,30nm,1.1s
BKNI Bangkinang 43.52 258 P P 14 26 47.1 +0.4
comp=Z,3μmcomp=Z,59nm,0.4s
STKA Stephens Creek 43.72 182 P P 14 26 47.4 -0.4
comp=Z,6.6nm,0.4s,baz=7.7,slow=7.9,SNR=35
comp=Z,6.6nm,0.4s
STKA Stephens Creek 43.72 182 P P 14 26 47.3 -0.6
STKA Stephens Creek 43.72 182 P P 14 26 47.3 -0.6
STKA Stephens Creek 43.72 182 P P 14 26 47.9 0.0
KRJI Kerinci 43.88 254 P P 14 26 50.5 +0.8
comp=Z,5μmcomp=Z,222nm,0.6s
MNSI Mandailing Nat 44.79 259 P P 14 26 56.9 +0.1
PSI Prapat 44.90 262 P P 14 26 57.8 0.0
PSI pmax pmax
comp=Z,22nm,0.6s
PSI Prapat 44.90 262 P P 14 26 58.4 +0.6
RPSI Rantau Prapat 44.92 262 P P 14 26 57.8 -0.1
RPSI IAmb IAmb 14 27 00.6
comp=Z,22nm,0.6s
FORT Forrest 45.04 199 P P 14 26 58.6 +0.1
FORT IAmb IAmb 14 27 14.3
comp=Z,35nm,0.9s
TSI Tuntungan 45.08 263 P P 14 26 59.6 +0.5
comp=Z,3μmcomp=Z,25nm,0.4s
BBOO Buckleboo 45.15 189 P P 14 26 59.1 -0.2
BBOO IAmb IAmb 14 27 00.5
comp=Z,37nm,0.8s
BBOO Buckleboo 45.15 189 P P 14 27 01.7 +2.4
MSVF Nonsavu 45.31 130 LR LR 14 42 25.3
comp=Z,718nm,21.8s,baz=323,slow=31
MSVF Nonsavu 45.31 130 P P 14 26 59.9 -1.1
MSVF IAmb IAmb 14 27 03.3
comp=Z,35nm,1.0s
MSVF Nonsavu 45.31 130 P P 14 26 59.9 -1.1
MSVF pmax pmax
comp=Z,35nm,1.0s
MSVF Nonsavu 45.31 130 P P 14 27 03.1 +2.2
comp=Z,37nm,1.3s
KCSI Kotacane, Aceh 45.84 263 P P 14 27 05.4 +0.2
comp=Z,51nm,0.9s
SISI Saibi 45.88 256 P P 14 27 04.8 -0.7
comp=Z,70nm,0.6s
GSI Gunungsitoli 46.58 260 P P 14 27 10.0 -1.0
GSI IAmb IAmb 14 27 11.3
comp=Z,36nm,1.0s
GSI Gunungsitoli 46.58 260 P P 14 27 10.5 -0.5
comp=Z,42nm,0.8s
GSI Gunungsitoli 46.58 260 P P 14 27 13.1 +2.1
ULN Ulaanbaatar 46.79 327 P P 14 27 12.1 -0.3
ULN Ulaanbaatar 46.79 327 P P 14 27 12.1 -0.3
ULN pmax pmax
comp=Z,26nm,1.1s
GTA Gaotai 47.07 313 ⇑P P 14 27 15.5 +0.8
GTA pP pP 14 27 20.5 -2.7
GTA sP sP 14 27 22.5 -4.1
GTA PcP PcP 14 28 47.8 +1.4
GTA ScP ScP 14 32 38.8 +0.7
GTA sS pS 14 34 13.5 -1.1
GTA pmax pmax
comp=Z,16nm,1.0s
GTA pmax pmax

comp=Z,95nm,6.0s
GTA LR LR
comp=Z,440nm,18.2s
GTA LR LR
comp=Z,480nm,18.5s
GTA LR LR
comp=Z,840nm,20.7s
SONM Songino Array 47.13 326 P **P** **14 27 15.3 +0.4**
comp=Z,6.7nm,0.8s,baz=145,slow=7.1,SNR=19
SONM PcP **PcP** **14 28 46.1 -0.3**
comp=Z,7.3nm,1.1s,baz=158,slow=4.2,SNR=5.8
SONM ScP **ScP** **14 32 36.8 -1.3**
comp=Z,1.2nm,0.9s,baz=127,slow=4.3,SNR=2.9
SONM LR LR 14 48 35.7
comp=Z,648nm,18.4s,baz=193,slow=38
comp=Z,6.7nm,0.8s
SONM Songino Array 47.13 326 P **P** **14 27 14.4 -0.5**
CAN Canberra 47.43 174 P **P** **14 27 17.4 +0.2**
CAN IAmb IAmb 14 27 19.2
comp=Z,44nm,1.3s
CAN Canberra 47.43 174 P **P** **14 27 17.4 +0.2**
CAN pmax pmax
comp=Z,44nm,1.3s
SHEM Shemya Is, Ala 47.48 25 LR LR 14 46 10.7
comp=Z,570nm,20.1s,baz=272,slow=35
MA2 Magadan 47.75 5 P **P** **14 27 18.1 -1.3**
MA2 Magadan 47.75 5*c iP* **P** **14 27 20.1 +0.7**
MA2 pmax pmax
comp=Z,19nm,0.9s
MA2 Magadan 47.75 5 P **P** **14 27 20.8 +1.4**
comp=Z,23nm,1.1s
ARPS Mount Arapiles 48.59 182 P **P** **14 27 28.4 +2.3**
comp=Z,43nm,1.1s
MORW Morawa 48.63 212 P **P** **14 27 26.8 +0.2**
MORW IAmb IAmb 14 27 28.1
comp=Z,67nm,1.1s
MORW Morawa 48.63 212 P **P** **14 27 27.4 +0.8**
AMKA Amchitka 48.87 29 P **P** **14 27 27.6 -0.6**
BRAT Ballarat 49.35 179 P **P** **14 27 33.6 +1.7**
TOO Toolangi 49.41 178 P **P** **14 27 32.6 +0.2**
TOO IAmb IAmb 14 27 35.2
comp=Z,93nm,1.4s
TOO Toolangi 49.41 178 P **P** **14 27 32.6 +0.2**
TOO pmax pmax
comp=Z,93nm,1.4s
TOO Toolangi 49.41 178 P **P** **14 27 33.5 +1.0**
BLDU Ballidu 49.54 210 P **P** **14 27 34.3 +0.7**
GOMU GeErMu 49.73 307 P **P** **14 27 36.3 +0.8**
GOMU PcP **PcP** **14 28 57.5 +1.2**
GOMU pmax pmax
comp=Z,8.0nm,1.0s
GOMU pmax pmax
comp=Z,130nm,7.4s
KLBR Kellerberrin 49.84 209 P **P** **14 27 36.3 +0.5**
GEXS Deakin Univers 50.00 179 P **P** **14 27 37.7 +0.8**
SHL Shillong 50.20 293 P **P** **14 27 38.4 -0.6**
SHL Shillong 50.20 293 P **P** **14 27 38.4 -0.6**
SHL pmax pmax
comp=Z,14nm,0.7s
ZAK Zakamensk 50.28 328 *eP* **P** **14 27 38.7 -0.4**
ZAK pmax pmax
comp=Z,45nm,1.1s
BOD Bodaibo 50.81 340 *eP* **P** **14 27 42.7 -0.1**
BOD pmax pmax
comp=Z,42nm,1.2s
YAK Yakutsk 50.86 352 P **P** **14 27 43.0 0.0**
comp=Z,29nm,0.7s,baz=141,slow=2.2,SNR=35
YAK PcP **PcP** **14 28 59.9 +0.5**
comp=Z,21nm,0.8s,baz=88,slow=0.3,SNR=6.5
YAK LR LR 14 48 24.0
comp=Z,453nm,18.0s,baz=259,slow=35
comp=Z,29nm,0.7s
YAK Yakutsk 50.86 352 P **P** **14 27 42.5 -0.5**
YAK IAmb IAmb 14 27 43.8
comp=Z,70nm,0.8s
YAK Yakutsk 50.86 352*d iP* **P** **14 27 42.0 -1.1**
YAK *e* 14 28 59.1
YAK *eS* **S** **14 34 53.8 -3.2**
YAK *e**SS **sS** **14 35 14.0 +3.0**
YAK *e* 14 37 25.5
YAK *e*SS **SS** **14 38 33.4 +1.6**
YAK pmax pmax
comp=Z,77nm,0.9s
YAK pmax pmax
comp=N,20nm,1.0s
YAK pmax pmax
comp=E,4.0nm,0.9s
YAK smax smax
comp=N,37nm,1.6s
YAK smax smax
comp=E,54nm,1.8s
IRK Irkutsk 50.88 330 *eP* **P** **14 27 42.3 -1.2**
IRK pmax pmax
comp=Z,44nm,1.5s
KIWB Kanaga Island 50.90 31 P **P** **14 27 43.6 0.0**
SEY Seymchan 51.21 5*d iP* **P** **14 27 45.8 +0.1**
SEY pmax pmax
comp=Z,17nm,1.0s
AFI Afiamalu 51.46 119 LR LR 14 46 02.3
comp=Z,482nm,19.0s,baz=296,slow=32
MOY Mondy 52.20 328 *eP* **P** **14 27 53.7 +0.2**
MOY pmax pmax
comp=Z,30nm,2.3s
ATKA Atka Island 52.59 32 P **P** **14 27 57.4 +1.2**
GLAD Gladstone 52.95 176 P **P** **14 28 01.5 +2.6**
comp=Z,72nm,1.0s
KNGR Kungurtug, Tuv 53.51 325⚠ *eP* **P** **14 28 04.1 +0.9**
TAU Tasmania Unive 54.82 176 P **P** **14 28 13.2 +0.7**
TAU IAmb IAmb 14 28 14.8
comp=Z,46nm,1.1s
TAU Tasmania Unive 54.82 176 P **P** **14 28 13.2 +0.7**
TAU pmax pmax
comp=Z,46nm,1.1s
RAO Raoul Island 55.56 138 LR LR 14 49 21.3
comp=Z,694nm,20.5s,baz=322,slow=33
GUN Gumba 55.75 296 *eP* **P** **14 28 20.4 +0.3**
comp=Z,89nm,0.9s
PKIN Phulchoki 56.16 295 *eP* **P** **14 28 22.7 -0.2**
DMN Daman 56.42 295 *eP* **P** **14 28 24.8 0.0**
KIP Kipapa 56.69 72⚠ *eP* **P** **14 28 26.9 +0.4**
KIP pmax pmax
comp=Z,152nm,1.7s
GKN Gorkha 56.86 296 *eP* **P** **14 28 27.6 -0.2**
WMQ Urumqi 57.10 315 *eP* **P** **14 28 30.8 +1.7**
WMQ pP pP 14 28 35.8 -2.1
WMQ pmax pmax
comp=Z,47nm,1.3s
UNV Unalaska Valle 57.43 33 P **P** **14 28 30.4 -0.7**
UNV IAmb IAmb 14 28 52.6
comp=Z,60nm,1.5s
DANN Dangsing 57.65 296 *eP* **P** **14 28 33.6 0.0**
comp=Z,44nm,0.6s
BILL Bilibino 57.92 10 P **P** **14 28 33.7 -0.7**
BILL Bilibino 57.92 10*c iP* **P** **14 28 33.1 -1.3**
BILL *i* 14 28 40.0
BILL *i* 14 29 23.6
BILL pmax pmax
comp=Z,15nm,0.8s
BILL MLR MLR
comp=Z,340nm,19.0s
PYUN Piuthan 58.32 296 *eP* **P** **14 28 37.2 -0.9**
comp=Z,80nm,0.9s
TIXI Tiksi 60.20 355 P **P** **14 28 48.2 -1.8**
TIXI Tiksi 60.20 355*d iP* **P** **14 28 49.1 -1.0**
TIXI pmax pmax
comp=Z,16nm,2.5s
TUWZ Tuamarina 60.26 154 P **P** **14 28 49.8 -1.1**
LTZ Lake Taylor 60.68 156 P **P** **14 28 53.7 -0.2**
LTZ IAmb IAmb 14 28 56.2
comp=Z,35nm,0.8s
RPZ Rata Peaks 61.00 157 P **P** **14 28 55.9 -0.1**
OXZ Oxford 61.05 156 P **P** **14 28 55.7 -0.5**
OXZ IAmb IAmb 14 28 56.8
comp=Z,85nm,1.2s
SDPT Sand Point 61.25 33 P **P** **14 28 56.7 -0.7**
SDPT Sand Point 61.25 33 P **P** **14 28 57.4 -0.1**
baz=248
LBZ Lake Benmore 61.26 158 P **P** **14 28 57.6 -0.1**
LBZ IAmb IAmb 14 28 58.8
comp=Z,84nm,1.1s
MLZ Mavora Lakes 61.40 160 P **P** **14 28 58.9 +0.3**
MLZ IAmb IAmb 14 29 00.1
comp=Z,70nm,1.1s
CNBA Chernabura Isl 61.53 34 P **P** **14 28 59.1 -0.3**
CNBA IAmb IAmb 14 29 26.7
comp=Z,44nm,1.4s
CHNA Chernabura Isl 61.53 34 P **P** **14 28 59.5 +0.1**
baz=249
MK31 Makanchi Array 61.54 317 P **P** **14 28 59.7 0.0**
MK31 Makanchi Array 61.54 317 P **P** **14 28 59.7 0.0**
MK31 pmax pmax
comp=Z,19nm,1.1s
MKAR Makanchi Array 61.54 317 P **P** **14 29 00.2 +0.5**
comp=Z,20nm,1.1s,baz=98,slow=7.8,SNR=19
MKAR LR LR 14 58 34.6
comp=Z,329nm,18.1s,baz=197,slow=39
comp=Z,20nm,1.1s
MKAR Makanchi Array 61.54 317 P **P** **14 28 59.6 -0.1**
WHZ Wether Hill Ro 61.81 161 P **P** **14 29 01.2 -0.2**
WHZ IAmb IAmb 14 29 25.2
comp=Z,26nm,1.3s
ZAA0 Zalesovo Array 61.99 325 P **P** **14 29 01.8 -0.7**
ZALV Zalesovo Beam 61.99 325 P **P** **14 29 02.2 -0.3**
comp=Z,9.8nm,0.4s,baz=105,slow=7.4,SNR=25
ZALV PcP **PcP** **14 29 42.8 -0.1**
comp=Z,11nm,0.7s,baz=123,slow=4.1,SNR=9.0
ZALV LR LR 14 55 59.0
comp=Z,491nm,19.5s,baz=118,slow=36
comp=Z,9.8nm,0.4s
ZALV Zalesovo Beam 61.99 325 P **P** **14 29 01.8 -0.7**
HYBB Hyderabad (bro 62.61 283 *eP* **P** **14 29 07.5 +0.1**
HYBB *ep*P **pP** **14 29 10.7 -5.4**
ANM Nome 63.18 22 P **P** **14 29 10.3 +0.1**
ANM IAmb IAmb 14 29 11.6
comp=Z,20nm,0.9s
ANM Nome 63.18 22 P **P** **14 29 10.4 +0.1**
ANM pmax pmax
comp=Z,20nm,0.9s
ANM Nome 63.18 22 P **P** **14 29 11.3 +1.0**
baz=239,SNR=7.6
P16K Nushagak River 63.87 29 P **P** **14 29 15.9 +0.9**
baz=249
O16K Kokwok River B 64.03 29 P **P** **14 29 16.7 +0.7**
baz=248,SNR=7.5
N16K Nishlik Lake 64.05 28 P **P** **14 29 17.2 +1.1**
baz=247,SNR=9.1
R17K Ugashik Creek 64.18 31 P **P** **14 29 16.8 -0.2**
baz=251
KDJ Kajisay 64.33 311 P **P** **14 29 17.3 -1.2**
KDJ Kajisay 64.33 311 P **P** **14 29 17.3 -1.2**
KDJ pmax pmax
comp=Z,15nm,0.9s
O17K Koliganek Bris 64.56 29 P **P** **14 29 20.4 +1.0**
baz=249,SNR=11
Q17K Contact Creek 64.64 31 P **P** **14 29 19.1 -1.0**
baz=251
KURK Kurchatov 64.78 321 P **P** **14 29 20.5 -0.5**
KURK Kurchatov 64.78 321 P **P** **14 29 20.5 -0.5**
KURK pmax pmax
comp=Z,79nm,1.0s
KURBB Kurchatov Arra 64.81 320 P **P** **14 29 21.4 +0.1**
comp=Z,39nm,0.8s,baz=104,slow=6.6,SNR=26
KURBB LR LR 14 57 26.4
comp=Z,436nm,21.2s,baz=89,slow=36
comp=Z,39nm,0.8s
RAR Rarotonga 64.94 120 LR LR 14 52 20.3
comp=Z,257nm,21.4s,baz=285,slow=31
SII Sitkinak Islan 64.99 33 P **P** **14 29 22.7 +0.4**
SII Sitkinak Islan 64.99 33 P **P** **14 29 23.4 +1.0**
baz=253
Q18K Katmai Hardscr 65.20 30 P **P** **14 29 22.9 -0.9**
baz=252
P18K Big Mountain, 65.33 30 P **P** **14 29 23.7 -0.8**
P18K Big Mountain, 65.33 30 P **P** **14 29 24.1 -0.4**
baz=251
N18K Kilae Creek 65.45 28 P **P** **14 29 25.9 +0.6**
N18K IAmb IAmb 14 29 27.4
comp=Z,30nm,1.1s
N18K Kilae Creek 65.45 28 P **P** **14 29 26.5 +1.2**
baz=250,SNR=12
O18K Koktuh Hills 65.49 29 P **P** **14 29 25.6 0.0**
O18K IAmb IAmb 14 29 27.3
comp=Z,43nm,1.1s
O18K Koktuh Hills 65.49 29 P **P** **14 29 26.7 +1.2**
baz=251,SNR=12
OHAK Old Harbor 65.65 32 P **P** **14 29 26.8 +0.2**
OHAK IAmb IAmb 14 29 28.1
comp=Z,28nm,1.0s
OHAK Old Harbor 65.65 32 P **P** **14 29 27.1 +0.5**
baz=254
SVW2 Sparrevohn 65.73 28 P **P** **14 29 27.4 +0.3**
SVW2 IAmb IAmb 14 29 29.2
comp=Z,42nm,1.3s
RDOG Red Dog Mine 65.82 19 P **P** **14 29 23.1 -4.4**
baz=240,SNR=12
Q19K Cape Douglas, 65.96 30 P **P** **14 29 26.7 -1.9**
Q19K IAmb IAmb 14 29 30.6
comp=Z,26nm,0.7s
Q19K Cape Douglas, 65.96 30 P **P** **14 29 27.8 -0.8**
baz=253
O19K Port Alsworth 66.02 29 P **P** **14 29 30.0 +1.1**
baz=252
N19K Bonanza Creek 66.14 28 P **P** **14 29 29.8 0.0**
N19K IAmb IAmb 14 29 32.1
comp=Z,72nm,1.4s
N19K Bonanza Creek 66.14 28 P **P** **14 29 31.2 +1.3**
baz=251,SNR=14
KDAK Kodiak Island 66.17 32 LR LR 14 54 13.0
comp=Z,279nm,22.0s,baz=264,slow=32
KDAK Kodiak Island 66.17 32 P **P** **14 29 29.9 0.0**
KDAK IAmb IAmb 14 29 36.2
comp=Z,30nm,1.1s
KDAK Kodiak Island 66.17 32 P **P** **14 29 29.9 0.0**
KDAK pmax pmax
comp=Z,30nm,1.2s
KDAK Kodiak Island 66.17 32 P **P** **14 29 30.6 +0.7**
baz=254
TTA Tatalina 66.19 26 P **P** **14 29 30.0 -0.1**
TTA IAmb IAmb 14 29 31.8
comp=Z,35nm,1.2s
TTA Tatalina 66.19 26 P **P** **14 29 30.0 -0.1**
TTA pmax pmax
comp=Z,35nm,1.2s
TTA Tatalina 66.19 26 P **P** **14 29 30.7 +0.6**
baz=249,SNR=13
AAK Ala-Archa 66.36 311 LR LR 15 00 44.4
comp=Z,850nm,19.1s,baz=92,slow=38
AAK Ala-Archa 66.36 311⚠ *eP* **P** **14 29 31.5 -0.2**
AAK pmax pmax
comp=Z,11nm,1.0s
L19K White Mountain 66.43 27 P **P** **14 29 31.9 +0.4**
L19K IAmb IAmb 14 29 33.5
comp=Z,51nm,0.9s
L19K White Mountain 66.43 27 P **P** **14 29 32.5 +0.9**
baz=250,SNR=40
Q20K Shuyak Island 66.49 31 P **P** **14 29 32.7 +0.7**
baz=254
GCSA Galena City Sc 66.52 24 P **P** **14 29 32.6 +0.6**
baz=247,SNR=17
M19K Big River Lodg 66.54 27 P **P** **14 29 33.2 +0.9**
M19K IAmb IAmb 14 29 34.5
comp=Z,35nm,0.9s
M19K Big River Lodg 66.54 27 P **P** **14 29 33.7 +1.4**
baz=251
O20K Slope Mountain 66.80 29 P **P** **14 29 33.7 -0.3**
baz=253
RSO Redoubt South 66.84 29 P **P** **14 29 33.9 -0.5**
L20K Farewell, AK 66.96 27 P **P** **14 29 36.1 +1.2**
baz=251,SNR=18
M20K Styx River 67.10 27 P **P** **14 29 36.2 +0.3**
M20K IAmb IAmb 14 29 38.2
comp=Z,48nm,0.9s
M20K Styx River 67.10 27 P **P** **14 29 37.2 +1.3**
baz=252,SNR=31
HOM Homer 67.15 30 P **P** **14 29 35.9 -0.3**
HOM IAmb IAmb 14 29 38.5
comp=Z,62nm,0.9s
HOM Homer 67.15 30 P **P** **14 29 36.5 +0.4**
baz=254
K20K Telida 67.17 26 P **P** **14 29 36.3 +0.1**
K20K IAmb IAmb 14 29 38.6
comp=Z,51nm,0.9s
K20K Telida 67.17 26 P **P** **14 29 37.3 +1.1**
baz=250,SNR=36
CNPM China Poot 67.31 30 P **P** **14 29 36.9 -0.3**
SPU Mount Spurr 67.38 28 P **P** **14 29 37.6 0.0**
J20K Nowinta River 67.41 25 P **P** **14 29 38.2 +0.4**
J20K Nowinta River 67.41 25 P **P** **14 29 38.6 +0.8**
baz=250,SNR=76
BRLK Bradley Lake 67.55 30 P **P** **14 29 38.3 -0.5**
BRLK IAmb IAmb 14 29 39.4
comp=Z,74nm,1.3s
BRSE Bradley Lake S 67.61 30 P **P** **14 29 39.2 +0.1**
baz=255,SNR=7.4
PPLA Purkeypile 67.83 27 P **P** **14 29 40.5 0.0**
PPLA IAmb IAmb 14 29 42.2
comp=Z,56nm,0.8s
PPLA Purkeypile 67.83 27 P **P** **14 29 41.2 +0.6**
baz=252,SNR=12
SKT Skwentna 67.85 28 P **P** **14 29 40.1 -0.5**
SKT IAmb IAmb 14 29 41.3
comp=Z,54nm,1.0s
SKT Skwentna 67.85 28 P **P** **14 29 40.4 -0.2**
baz=253,SNR=11
CAST Castle Rocks 68.03 26 P **P** **14 29 41.6 -0.1**
CAST Castle Rocks 68.03 26 P **P** **14 29 42.3 +0.6**
baz=252,SNR=29
SUA Susitna One 68.07 28 P **P** **14 29 41.4 -0.7**
SUA IAmb IAmb 14 29 43.3
comp=Z,53nm,0.8s
SUA Susitna One 68.07 28 P **P** **14 29 42.4 +0.4**
baz=254,SNR=11
CHUM Lake Minchumin 68.08 25 P **P** **14 29 43.0 +1.1**
baz=252,SNR=28
IMAR Indian Mountai 68.19 23 P **P** **14 29 42.6 0.0**
O22K Cooper Landing 68.30 29 P **P** **14 29 43.2 -0.1**
O22K Cooper Landing 68.30 29 P **P** **14 29 43.8 +0.5**
baz=256,SNR=13
SEW Seward 68.33 30 P **P** **14 29 43.7 +0.1**
SEW Seward 68.33 30 P **P** **14 29 44.1 +0.5**
baz=256,SNR=10
M22K Willow 68.43 28 P **P** **14 29 43.6 -0.5**
M22K Willow 68.43 28 P **P** **14 29 44.7 +0.5**
baz=255
RC01 Rabbit Creek A 68.44 29 P **P** **14 29 44.0 -0.3**
RC01 Rabbit Creek A 68.44 29 P **P** **14 29 44.5 +0.3**
baz=255,SNR=24
H21K Melozitna Rive 68.45 24 P **P** **14 29 44.2 0.0**
H21K Melozitna Rive 68.45 24 P **P** **14 29 45.0 +0.8**
baz=251,SNR=90
CUT Chulitna 68.54 27 P **P** **14 29 43.9 -0.9**
CUT Chulitna 68.54 27 P **P** **14 29 44.4 -0.4**
baz=254,SNR=6.7
KTH Kantishna Hill 68.57 26 P **P** **14 29 44.8 -0.4**
I21K Tanana 68.62 24 P **P** **14 29 45.5 +0.3**
I21K Tanana 68.62 24 P **P** **14 29 46.0 +0.8**
baz=252,SNR=111
BPAW Bear Paw Mtn. 68.70 25 P **P** **14 29 45.7 -0.2**
BPAW Bear Paw Mtn. 68.70 25 P **P** **14 29 46.4 +0.6**
baz=253,SNR=48
TRF Thorofare Moun 68.81 26 P **P** **14 29 46.1 -0.7**
TRF Thorofare Moun 68.81 26 P **P** **14 29 46.6 -0.1**
baz=254,SNR=28
PMR Palmer 68.85 28 P **P** **14 29 46.5 -0.3**
PMR Palmer 68.85 28 P **P** **14 29 46.5 -0.3**
PMR pmax pmax
comp=Z,75nm,0.7s
PMR Palmer 68.85 28 P **P** **14 29 46.8 +0.1**
baz=256,SNR=28
GHO Glory Hole Cre 68.99 28 P **P** **14 29 47.4 -0.4**
MLY Manley 69.08 25 P **P** **14 29 48.1 -0.1**
MLY Manley 69.08 25 P **P** **14 29 48.5 +0.3**
baz=253,SNR=133
H22K Ishtalitna Cre 69.08 24 P **P** **14 29 48.9 +0.7**
baz=252
KNK Knik Glacier 69.12 29 P **P** **14 29 48.2 -0.3**
KNK Knik Glacier 69.12 29 P **P** **14 29 49.2 +0.7**
baz=256,SNR=20
SML Sawmill 69.27 28 P **P** **14 29 49.3 -0.2**
SML Sawmill 69.27 28 P **P** **14 29 50.0 +0.6**
baz=256,SNR=39
A21K Barrow 69.28 17 P **P** **14 29 49.5 +0.2**
A21K Barrow 69.28 17 P **P** **14 29 50.7 +1.4**
baz=245,SNR=8.2
KKAR Karatay Array 69.31 312 P **P** **14 29 49.3 -0.8**
KKAR Karatay Array 69.31 312 P **P** **14 29 49.3 -0.8**
BWN Browne 69.36 26 P **P** **14 29 50.1 +0.1**
WAT1 Susitna Watana 69.42 27 P **P** **14 29 50.5 +0.2**
baz=256
RND Reindeer 69.43 26 P **P** **14 29 49.8 -0.7**
RND IAmb IAmb 14 29 51.8
comp=Z,49nm,0.8s
RND Reindeer 69.43 26 P **P** **14 29 49.8 -0.7**
RND pmax pmax
comp=Z,49nm,0.8s
MCK McKinley 69.47 26 P **P** **14 29 50.1 -0.6**
MCK IAmb IAmb 14 29 52.2
comp=Z,48nm,0.9s
MCK McKinley 69.47 26 P **P** **14 29 50.1 -0.6**
MCK pmax pmax
comp=Z,48nm,0.9s
MCK McKinley 69.47 26 P **P** **14 29 50.7 0.0**
baz=255,SNR=20
M23K Glacier View 69.55 28 P **P** **14 29 51.7 +0.6**
baz=257,SNR=16
NEA2 Nenana 69.64 25 P **P** **14 29 50.9 -0.8**
NEA2 IAmb IAmb 14 29 53.8
comp=Z,37nm,1.2s
NEA2 Nenana 69.64 25 P **P** **14 29 51.8 +0.1**
baz=255,SNR=16
GLI Glacier Island 69.64 29 P **P** **14 29 51.3 -0.5**
GLI IAmb IAmb 14 29 53.1
comp=Z,61nm,0.8s
GLI Glacier Island 69.64 29 P **P** **14 29 52.0 +0.2**
baz=258,SNR=10
I23K Minto, Yukon-K 69.67 25 P **P** **14 29 51.8 0.0**
I23K Minto, Yukon-K 69.67 25 P **P** **14 29 52.8 +1.0**
baz=255,SNR=104
WAT6 Susitna Watana 69.72 27 P **P** **14 29 52.6 +0.3**
baz=257,SNR=46
SCM Sheep Creek Mo 69.74 28 P **P** **14 29 52.5 +0.1**
SCM Sheep Creek Mo 69.74 28 P **P** **14 29 52.5 +0.1**
SCM pmax pmax
comp=Z,206nm,1.0s
SCM Sheep Creek Mo 69.74 28 P **P** **14 29 53.2 +0.8**
baz=257,SNR=34
H23K Yukon River 69.78 24 P **P** **14 29 52.9 +0.4**
H23K Yukon River 69.78 24 P **P** **14 29 53.5 +0.9**
baz=254,SNR=116
FID Port Fidalgo 69.92 29 P **P** **14 29 53.2 -0.2**
COLD Coldfoot 69.94 22 P **P** **14 29 53.7 +0.3**
COLD Coldfoot 69.94 22 P **P** **14 29 54.7 +1.3**
baz=253,SNR=80
WRH Wood River Hil 70.02 25 P **P** **14 29 53.6 -0.4**
MDM Murphy Dome 70.08 25 P **P** **14 29 53.8 -0.6**
CCB Clear Creek Bu 70.18 25 P **P** **14 29 54.4 -0.5**
CCB IAmb IAmb 14 29 56.2
comp=Z,68nm,1.0s
BVAR Borovoye Array 70.18 322 LR LR 15 02 49.8
comp=Z,552nm,18.0s,baz=342,slow=38
TCOL CIGO, UAF Yank 70.21 25 P **P** **14 29 54.7 -0.4**
TCOL IAmb IAmb 14 29 58.4
comp=Z,41nm,0.8s
TCOL CIGO, UAF Yank 70.21 25 P **P** **14 29 55.4 +0.2**
baz=256,SNR=17
COLA College 70.22 25 P **P** **14 29 54.7 -0.4**
COLA IAmb IAmb 14 29 58.4
comp=Z,41nm,0.8s
COLA College 70.22 25 P **P** **14 29 54.7 -0.4**
COLA pmax pmax
comp=Z,41nm,0.8s
EYAK Cordova Ski Ar 70.23 30 P **P** **14 29 55.0 -0.3**
EYAK IAmb IAmb 14 29 57.1
comp=Z,65nm,0.8s
EYAK Cordova Ski Ar 70.23 30 P **P** **14 29 56.1 +0.9**
baz=259,SNR=12
D23K Nanushuk River 70.30 21 P **P** **14 29 56.9 +1.3**
baz=252
KLU Klutina 70.33 29 P **P** **14 29 56.2 +0.2**
KLU Klutina 70.33 29 P **P** **14 29 57.1 +1.1**
baz=259,SNR=35
DIV Divide 70.33 29 P **P** **14 29 56.3 +0.3**
M24K Tolsona, Glenn 70.33 28 P **P** **14 29 56.2 +0.2**
M24K Tolsona, Glenn 70.33 28 P **P** **14 29 57.2 +1.2**
baz=258,SNR=15
KBL Kabul 70.36 302 P **P** **14 29 55.9 -1.0**
KBL Kabul 70.36 302 P **P** **14 29 55.9 -1.0**
KBL pmax pmax
comp=Z,10.0nm,0.9s
H24K Noodor Dome 70.45 24 P **P** **14 29 57.1 +0.4**
H24K Noodor Dome 70.45 24 P **P** **14 29 57.5 +0.9**
baz=256,SNR=123
POKR Poker Plat Res 70.45 25 P **P** **14 29 56.0 -0.7**
POKR IAmb IAmb 14 29 58.8
comp=Z,38nm,1.0s
POKR Poker Plat Res 70.45 25 P **P** **14 29 56.5 -0.1**
baz=256,SNR=6.2

HDA Harding Lake 70.49 26 P P 14 29 55.9 -0.9
HDA IAmb IAmb 14 29 57.2
comp=Z,65nm,0.8s
HDA Harding Lake 70.49 26 P P 14 29 56.2 -0.6
baz=257,SNR=68
TOLK Toolik Lake Re 70.58 21 P P 14 29 57.5 +0.1
TOLK Toolik Lake Re 70.58 21 P P 14 29 58.3 +0.9
baz=253,SNR=75
IL31 70.59 25 P P 14 29 56.3 -1.1
ILAR Eielson Array 70.59 25 P P 14 29 56.8 -0.7
comp=Z,62nm,0.7s,baz=254,slow=5.1,SNR=480
ILAR LR LR 15 01 06.0
comp=Z,431nm,19.1s,baz=272,slow=36
ILAR Eielson Array 70.59 25 P P 14 29 56.3 -1.2
C23K Itkillik River 70.60 20 P P 14 29 58.6 +1.2
baz=252,SNR=113
PAX Paxson 70.82 27 P P 14 29 58.7 -0.3
PAX Paxson 70.82 27 P P 14 29 58.7 -0.3
PAX pmax pmax
comp=Z,69nm,0.8s
PAX Paxson 70.82 27 P P 14 29 59.5 +0.5
baz=259,SNR=58
HARP HAARP 70.86 28 P P 14 30 00.4 +1.2
baz=259,SNR=43
K24K Donnelly Dome 70.86 26 P P 14 29 59.4 +0.3
baz=258,SNR=73
BMRM Bremner River 70.86 29 P P 14 29 59.3 +0.1
BMRM Bremner River 70.86 29 P P 14 30 00.2 +1.0
baz=260,SNR=24
HMT Hamilton 70.92 30 P P 14 29 59.9 +0.4
N25K Chitina, Valde 70.97 29 P P 14 30 00.2 +0.3
N25K IAmb IAmb 14 30 02.0
comp=Z,42nm,0.8s
N25K Chitina, Valde 70.97 29 P P 14 30 01.2 +1.2
baz=260,SNR=16
D24K Happy Valley 70.99 21 P P 14 30 01.5 +1.7
baz=253,SNR=118
C24K Franklin Bluff 71.19 20 P P 14 30 02.1 +1.1
baz=253
J25K Salcha River, 71.20 26 P P 14 30 00.3 -0.9
J25K IAmb IAmb 14 30 01.7
comp=Z,63nm,1.2s
J25K Salcha River, 71.20 26 P P 14 30 00.6 -0.7
baz=258,SNR=51
RIDG Independent Ri 71.25 27 P P 14 30 01.2 -0.4
RIDG Independent Ri 71.25 27 P P 14 30 01.9 +0.3
baz=259,SNR=62
GLB Gilahina Butte 71.31 29 P P 14 30 02.4 +0.4
VRDI Verde Repeater 71.45 29 P P 14 30 03.1 +0.1
CRQM Cirque 71.53 30 P P 14 30 04.0 +0.5
CRQE Cirque 71.55 30 P P 14 30 04.2 +0.7
baz=262,SNR=20
DOT Dot Lake 71.58 27 P P 14 30 03.7 +0.2
MENT Mentasta 71.60 27 P P 14 30 04.0 +0.3
MENT IAmb IAmb 14 30 05.5
comp=Z,49nm,0.9s
WAX Waxell Ridge 71.63 30 P P 14 30 04.4 +0.4
SCRK Sand Creek 71.67 26 P P 14 30 04.1 -0.1
SCRK IAmb IAmb 14 30 05.5
comp=Z,60nm,0.8s
SCRK Sand Creek 71.67 26 P P 14 30 04.4 +0.3
baz=260,SNR=81
MCARA McCarthy VSAT 71.68 29 P P 14 30 04.5 +0.4
MCARA McCarthy VSAT 71.68 29 P P 14 30 05.7 +1.5
baz=262,SNR=23
TGL Tana Glacier 71.68 30 P P 14 30 04.4 +0.1
L26K Log Cabin Wild 71.79 27 P P 14 30 05.1 +0.3
L26K Log Cabin Wild 71.79 27 P P 14 30 05.6 +0.8
baz=261,SNR=44
M26K Nabesna, AK 71.85 28 P P 14 30 05.5 +0.4
M26K IAmb IAmb 14 30 09.3
comp=Z,23nm,0.8s
M26K Nabesna, AK 71.85 28 P P 14 30 06.0 +0.8
baz=261,SNR=16
ISLE Juniper Island 71.90 30 P P 14 30 06.0 +0.3
ISLE IAmb IAmb 14 30 07.4
comp=Z,76nm,0.9s
J26L Joseph Creek 71.94 26 P P 14 30 05.5 -0.3
J26L Joseph Creek 71.94 26 P P 14 30 05.8 +0.1
baz=260,SNR=115
MESA MESA 72.03 30 P P 14 30 06.3 -0.2
MESA MESA 72.03 30 P P 14 30 08.4 +1.9
baz=263,SNR=6.6
BMAR Burnt Mountain 72.09 23 P P 14 30 07.5 +0.9
GRNC Granite Creek 72.20 30 P P 14 30 08.3 +0.7
I26K Coal Creek Min 72.25 25 P P 14 30 07.0 -0.5
baz=260
BARN Barnard Glacie 72.29 30 P P 14 30 08.4 +0.4
BARN IAmb IAmb 14 30 10.1
comp=Z,50nm,0.9s
M27K Edge Creek, AK 72.36 28 P P 14 30 08.9 +0.6
M27K IAmb IAmb 14 30 10.3
comp=Z,65nm,0.9s
M27K Edge Creek, AK 72.36 28 P P 14 30 09.3 +0.9
baz=262,SNR=40
CTG Chitna Glacier 72.43 30 P P 14 30 10.3 +1.5
baz=263,SNR=37
CTGM Chitina Glacie 72.44 30 P P 14 30 09.7 +0.8
TABL Table Mountain 72.47 30 P P 14 30 09.8 +0.7
L27K Beaver Creek, 72.48 27 P P 14 30 09.3 +0.4
L27K IAmb IAmb 14 30 10.9
comp=Z,47nm,0.8s
L27K Beaver Creek, 72.48 27 P P 14 30 09.8 +0.9
baz=262,SNR=45
BCAR Beaver Creek A 72.50 27 P P 14 30 09.1 +0.1
K27K Chicken 72.51 26 P P 14 30 10.3 +1.3
baz=262
PPT Papeete 72.51 113 LR LR 14 55 42.2
comp=Z,468nm,19.2s,baz=283,slow=31
PPT2 Papeete2 72.52 113 eLR LR 14 52 19.8
comp=Z,576nm,22.8s
LOGN Logan Glacier 72.58 30 P P 14 30 10.4 +0.7
BVCY Beaver Creek 72.83 28 P P 14 30 12.2 +1.1
baz=263,SNR=43
PCA Pinnacle 72.87 31 P P 14 30 12.2 +0.8
PINM Pinnacle 72.87 31 P P 14 30 12.7 +1.4
baz=264,SNR=8.0
YUK3 Moose Creek 72.95 29 P P 14 30 13.1 +1.1
baz=264,SNR=72
BCPM Bancas Point 73.17 31 P P 14 30 13.7 +0.6
BCPM IAmb IAmb 14 30 15.1
comp=Z,76nm,1.0s
YUK8 Steele Glacier 73.23 29 P P 14 30 15.1 +1.4
baz=264,SNR=39
PNL Peninsula 73.26 31 P P 14 30 14.9 +1.3
baz=265,SNR=6.9
DAWY Dawson 73.68 27 P P 14 30 16.4 +0.4
DAWY Dawson 73.68 27 P P 14 30 17.3 +1.3
baz=264,SNR=110
YUK4 Talbot Arm 73.77 29 P P 14 30 19.0 +2.2
baz=266,SNR=30
YUK6 Outpost Mounta 73.88 30 P P 14 30 19.3 +1.8
baz=266,SNR=20
J29M Klondike Camp 74.23 26 P P 14 30 19.8 +0.6
J29M IAmb IAmb 14 30 21.8
comp=Z,90nm,0.9s
J29M Klondike Camp 74.23 26 P P 14 30 21.3 +2.0
baz=265
I29M Ogilvie Camp, 74.28 25 P P 14 30 20.9 +1.4
baz=265,SNR=53
HYT Haines Junctio 74.29 30 P P 14 30 20.1 +0.4
HYT Haines Junctio 74.29 30 P P 14 30 21.7 +2.0
baz=267,SNR=92
P30M Million Dollar 74.52 31 P P 14 30 23.0 +2.0
baz=267
N30M Aishikik Lake 74.53 29 P P 14 30 22.7 +1.7
baz=267,SNR=60
TBI Tubuai 74.57 118 eLR LR 14 53 15.7
comp=Z,218nm,22.2s
TBI eLR LR 14 53 16.7
comp=Z,6μm,21.2s
M30M Minto, Yukon 74.73 28 P P 14 30 22.5 +0.3
M30M IAmb IAmb 14 30 24.6
comp=Z,73nm,0.8s
M30M Minto, Yukon 74.73 28 P P 14 30 23.7 +1.5
baz=267,SNR=88
PLBC Pleasant Camp 74.79 31 P P 14 30 24.1 +1.6
baz=268,SNR=42
O30N Mendenhall 74.98 30 P P 14 30 25.2 +1.6
baz=268,SNR=15
EPYK Eagle Plains 75.01 24 P P 14 30 23.7 -0.1
EPYK Eagle Plains 75.01 24 P P 14 30 25.0 +1.3
baz=266,SNR=20
N31M Braeburn, Yuko 75.15 29 P P 14 30 25.3 +0.7
N31M Braeburn, Yuko 75.15 29 P P 14 30 26.6 +1.9
baz=268,SNR=44

SIT Sitka 75.28 34 P P 14 30 26.9 +1.5
baz=270
SKAG Skagway 75.32 31 P P 14 30 26.1 +0.6
SKAG IAmb IAmb 14 30 28.2
comp=Z,69nm,0.9s
SKAG Skagway 75.32 31 P P 14 30 27.4 +1.8
baz=269,SNR=16
BESE Bessie Mountai 75.55 32 P P 14 30 28.0 +1.0
WHY Whitehorse 75.57 30 P P 14 30 27.9 +0.7
WHY Whitehorse 75.57 30 P P 14 30 29.0 +1.9
baz=269,SNR=59
JIS Juneau Island 75.80 33 P P 14 30 29.3 +1.0
M31M Drury Creek, Y 75.83 29 P P 14 30 28.9 +0.4
M31M IAmb IAmb 14 30 30.6
comp=Z,66nm,0.8s
M31M Drury Creek, Y 75.83 29 P P 14 30 29.9 +1.4
baz=269,SNR=62
HRA Herat 75.97 303 P P 14 30 29.6 -0.5
HRA IAmb IAmb 14 30 31.9
comp=Z,33nm,1.4s
SVE Sverdlovsk 75.99 326 ceP P 14 30 29.8 +0.3
SVE pmax pmax
comp=Z,45nm,1.4s
P32M Atlin 76.14 31 P P 14 30 32.1 +1.7
baz=270,SNR=38
INK Inuvik 76.35 22 P P 14 30 31.7 +0.4
comp=Z,51nm,0.9s,baz=272,slow=4.9,SNR=116
INK LR LR 15 02 17.9
comp=Z,349nm,21.8s,baz=268,slow=34
comp=Z,51nm,0.9s
INK Inuvik 76.35 22 P P 14 30 31.3 +0.1
INK IAmb IAmb 14 30 32.7
comp=Z,59nm,0.9s
INK Inuvik 76.35 22 P P 14 30 31.3 +0.1
INK pmax pmax
comp=Z,59nm,0.9s
INK Inuvik 76.35 22 P P 14 30 31.7 +0.4
baz=268,SNR=74
N32M Quiet Lake 76.45 30 P P 14 30 33.7 +1.7
baz=270
P33M Teslin, Yukon 76.59 31 P P 14 30 33.2 +0.3
P33M IAmb IAmb 14 30 35.1
comp=Z,53nm,0.9s
P33M Teslin, Yukon 76.59 31 P P 14 30 34.1 +1.2
baz=271,SNR=43
ABKAR Akbulak array 76.65 318 P P 14 30 32.7 -0.6
ABKAR Akbulak array 76.65 318 P P 14 30 33.0 -0.4
ABKAR IAmb IAmb 14 30 34.3
comp=Z,23nm,0.8s
WRAK Wrangell Islan 76.93 35 P P 14 30 36.4 +1.7
baz=272,SNR=20
DIB Dawson Inlet, 76.99 38 P P 14 30 35.6 +0.4
DIB IAmb IAmb 14 30 37.6
comp=Z,45nm,0.9s
ARU Arti 77.15 325 P P 14 30 35.9 -0.1
comp=Z,17nm,0.8s,baz=78,slow=3.1,SNR=24
comp=Z,17nm,0.8s
ARU Arti 77.15 325 P P 14 30 35.5 -0.6
ARU IAmb IAmb 14 30 37.0
comp=Z,32nm,1.0s
ARU Arti 77.15 325 di P P 14 30 35.7 -0.3
ARU *PP PcP 14 30 46.8 +0.1
ARU S S 14 40 23.2 +0.2
ARU SS SS 14 45 17.8 -2.8
ARU pmax pmax
comp=Z,52nm,1.4s
MMPY Sheldon Lake, 77.29 28 P P 14 30 38.4 +1.6
baz=272,SNR=55
AKTO Aktyubinsk 77.82 319 P P 14 30 39.7 -0.2
comp=Z,9.1nm,0.7s,baz=102,slow=8.5,SNR=9.6
comp=Z,9.1nm,0.7s
HG4B Hotspring 77.82 39 P P 14 30 40.8 +1.0
HG4B IAmb IAmb 14 30 42.2
comp=Z,97nm,1.3s
T35M Bob Quinn 78.06 34 P P 14 30 43.0 +1.9
baz=274,SNR=27
DLBC Dease Lake 78.09 32 P P 14 30 42.4 +1.0
DLBC IAmb IAmb 14 30 44.0
comp=Z,71nm,0.9s
DLBC Dease Lake 78.09 32 P P 14 30 43.1 +1.8
baz=274,SNR=42
RUBB Prince Rupert 78.24 37 P P 14 30 43.2 +1.1
RUBB IAmb IAmb 14 30 44.5
comp=Z,52nm,1.2s
GRNB Grenville Isla 78.45 37 P P 14 30 44.1 +0.7
GRNB IAmb IAmb 14 30 45.7
comp=Z,29nm,1.0s
TGTN Hyland Airport 78.75 29 P P 14 30 46.7 +1.8
baz=274,SNR=16
TAOE Nuku Hiva Isla 78.86 102 eLR LR 14 55 15.2
comp=Z,356nm,20.4s
GEYT Alibeck 78.93 307 P P 14 30 47.0 +0.7
comp=Z,14nm,1.0s,baz=216,slow=9.0,SNR=7.1
GEYT LR LR 15 09 19.5
comp=Z,484nm,20.3s,baz=86,slow=38
comp=Z,14nm,1.0s
GEYT Alibeck 78.93 307 P P 14 30 45.9 -0.5
GYA0 ALIBECK ARRAY 78.93 307 P P 14 30 45.9 -0.5
GYA0 pmax pmax
comp=Z,29nm,1.2s
GYA0B ALIBECK ARRAY 78.93 307 P P 14 30 45.9 -0.5
A36M Sachs Harbour 79.07 18 P P 14 30 44.6 -1.7
A36M IAmb IAmb 14 30 47.9
comp=Z,66nm,0.8s
A36M Sachs Harbour 79.07 18 P P 14 30 47.1 +0.8
baz=275
BBB Bella Bella 79.72 39 LR LR 15 00 06.4
comp=Z,535nm,21.1s,baz=290,slow=31
BBB Bella Bella 79.72 39 P P 14 30 49.8 -0.4
BBB IAmb IAmb 14 30 52.5
comp=Z,40nm,1.3s
C36M Paulatuk 79.74 21 P P 14 30 49.9 -0.2
C36M IAmb IAmb 14 30 51.2
comp=Z,45nm,0.8s
C36M Paulatuk 79.74 21 P P 14 30 50.5 +0.5
baz=277,SNR=24
HOLB Holberg 79.88 40 P P 14 30 52.0 +0.7
WSAR Wadi Sarin 80.50 292 P P 14 30 55.5 +0.4
comp=Z,4.8nm,1.0s,baz=182,slow=12,SNR=2.3
WSAR LR LR 15 10 15.8
comp=Z,194nm,18.8s,baz=100,slow=38
comp=Z,4.8nm,1.0s
TLCB Telegraph Cove 80.72 40 P P 14 30 56.3 +0.7
TLCB IAmb IAmb 14 30 59.1
comp=Z,83nm,1.5s
CBB Campbell River 81.72 41 P P 14 31 01.4 +0.4
CBB IAmb IAmb 14 31 04.6
comp=Z,31nm,0.9s
CASY Casey 81.78 193 P P 14 31 01.1 +0.3
OZB Mount Ozzard 81.80 42 P P 14 31 03.0 +1.4
OZB IAmb IAmb 14 31 05.1
comp=Z,54nm,0.9s
KIRV Kirov 81.83 328 P P 14 31 01.1 -0.3
comp=Z,35nm,1.0s,baz=122,slow=2.6,SNR=30
KIRV LR LR 15 10 31.9
comp=Z,302nm,19.0s,baz=92,slow=38
comp=Z,35nm,1.0s
KIRV Kirov 81.83 328 di P P 14 31 01.6 +0.2
UOSS Minazif 82.42 294 P P 14 31 04.8 -0.4
PRGR Permogore 83.11 332 ↓↓iP P 14 31 08.3 +0.3
PRGR eS S 14 41 22.4 -3.0
PGC Sidney 83.19 42 P P 14 31 09.1 +0.4
PGC IAmb IAmb 14 31 12.2
comp=Z,45nm,0.9s
B04A Port Angeles 83.26 42 P P 14 31 10.0 +0.9
B04A IAmb IAmb 14 31 13.1
comp=Z,62nm,0.9s
E03A Lebam 83.49 44 P P 14 31 11.0 +0.6
E03A IAmb IAmb 14 31 14.2
comp=Z,62nm,0.9s
I02E Swisshome, OR 83.75 46 P P 14 31 13.7 +2.0
baz=281
LLLB Lillooet 83.82 40 P P 14 31 12.3 +0.3
LLLB IAmb IAmb 14 31 14.8
comp=Z,31nm,0.9s
KBO Bosley Butte 83.82 48 P P 14 31 11.5 -0.7
J01E Myrtle Point 83.86 47 P P 14 31 14.1 +1.8
baz=281
G03D McMinnville, O 83.95 45 P P 14 31 13.1 +0.4
G03D IAmb IAmb 14 31 16.5
comp=Z,31nm,0.9s
G03D McMinnville, O 83.95 45 P P 14 31 15.1 +2.4
baz=281
BELG Belogorsnoye 83.99 322 P P 14 31 12.6 -0.2
comp=Z,98nm,1.0s,baz=276,slow=1.4,SNR=27
BELG LR LR 15 09 46.0
comp=Z,471nm,20.5s,baz=87,slow=36
comp=Z,98nm,1.0s
K02D Willamette Mer 84.14 48 P P 14 31 15.4 +1.5
baz=281
I03D Drain, OR 84.18 47 P P 14 31 15.8 +1.9
baz=281
L02F Cave Junction 84.32 48 P P 14 31 17.0 +2.3
baz=281
BUCK Buck Mountain 84.34 46 P P 14 31 16.0 +1.1
D05A Enumclaw 84.43 43 P P 14 31 14.9 -0.2
KHMM Horse Mountain 84.44 50 P P 14 31 15.0 -0.6
KHMM IAmb IAmb 14 31 18.9
comp=Z,22nm,0.9s
H04D Lebanon 84.45 46 P P 14 31 18.3 +3.0
baz=281
B06A Marblemount 84.49 42 P P 14 31 15.4 0.0
B06A IAmb IAmb 14 31 17.9
comp=Z,40nm,0.8s
EUNU Eureka 84.58 8 P P 14 31 15.3 -0.1
EUNU IAmb IAmb 14 31 18.5
comp=Z,66nm,1.5s
HOPEN Hopen 84.67 348 eP P 14 31 16.2 +0.5
H04A Detroit Lake 84.80 46 P P 14 31 17.4 +0.3
H04A IAmb IAmb 14 31 20.4
comp=Z,50nm,1.1s
I04A Tendick Farm, 84.82 46 P P 14 31 19.2 +1.9
baz=282,SNR=5.6
YKA Yellowknife Ar 84.91 27 P P 14 31 17.6 +0.4
comp=Z,40nm,0.8s,baz=290,slow=5.2,SNR=22
YKA LR LR 15 09 37.6
comp=Z,473nm,19.6s,baz=296,slow=36
comp=Z,40nm,0.8s
YKA Yellowknife Ar 84.91 27 P P 14 31 17.2 0.0
HOOD Mount Hood Mea 85.04 45 P P 14 31 18.3 -0.1
HOOD IAmb IAmb 14 31 21.3
comp=Z,51nm,1.1s
J04D Umpqua Nationa 85.15 47 P P 14 31 18.7 -0.4
J04D IAmb IAmb 14 31 22.9
comp=Z,47nm,0.9s
J04D Umpqua Nationa 85.15 47 P P 14 31 21.0 +1.9
baz=282,SNR=8.8
L04D Klamath Falls 85.22 48 P P 14 31 20.9 +1.4
baz=282,SNR=8.5
G05D Wamic, OR 85.29 45 P P 14 31 21.8 +2.3
baz=282,SNR=6.3
LTY Liberty 85.30 43 P P 14 31 19.1 -0.5
LTY IAmb IAmb 14 31 22.1
comp=Z,46nm,0.9s
SPA0 Spitsbergen Ar 85.30 350 eP P 14 31 19.2 +0.3
SPB2 Spitsbergen Ar 85.30 350 P P 14 31 18.1 -0.8
SPITS Spitsbergen Ar 85.30 350 P P 14 31 18.5 -0.5
SPITS pmax pmax
comp=Z,167nm,1.3s
I05D Terrebonne, OR 85.47 46 P P 14 31 23.2 +2.7
baz=282,SNR=9.7
KBS Kingsbay 85.49 352 P P 14 31 20.4 +0.5
KBS Kingsbay 85.49 352 di P P 14 31 20.5 +0.7
KBS pmax pmax
comp=Z,89nm,1.2s
KBS Kingsbay 85.49 352 i P P 14 31 19.4 -0.5
K04D Chiloquin, OR 85.53 48 P P 14 31 23.2 +2.2
baz=282
J05D Fort Rock, OR 85.77 47 P P 14 31 24.0 +1.8
baz=282,SNR=24
LVZ Lovozero 85.77 339 P P 14 31 20.3 -1.1
LVZ IAmb IAmb 14 31 21.9
comp=Z,44nm,1.0s
LVZ Lovozero 85.77 339 deP P 14 31 20.5 -1.0
LVZ pmax pmax
comp=Z,52nm,1.0s
B08A Colville Reser 85.92 42 P P 14 31 23.2 +0.5
NOR Nord 85.98 357 i P P 14 31 21.6 -0.7
NOR IAmb IAmb 14 31 23.4
comp=Z,4.0nm,0.8s
E07A Sunnyside 86.00 43 P P 14 31 23.4 +0.4
E07A IAmb IAmb 14 31 26.6
comp=Z,61nm,0.9s
MAK Makhachkala 86.08 313 eP P 14 31 22.2 -1.2
MAK e 14 34 42.1
MAK ePPP PPP 14 36 34.4
MAK e 14 41 44.9
MAK eSS SS 14 47 27.5 -6.5
MAK eSSS SSS 14 50 56.9
MAK pmax pmax
comp=Z,43nm,0.4s
F07A Phinny Hill Vi 86.10 44 P P 14 31 23.9 +0.4
F07A IAmb IAmb 14 31 26.5
comp=Z,41nm,1.1s
KLMR Klimovskoe 86.17 332 eP P 14 31 20.7 -2.8
KLMR pmax pmax
comp=Z,64nm,1.3s
KLMR Klimovskoe 86.17 332 eP P 14 31 20.7 -2.8
KLMR AMP 14 31 24.6
comp=Z,64nm,1.3s
HSPB Hornsund (broa 86.18 350 eP P 14 31 23.6 +0.3
HSPB Hornsund (broa 86.18 350 eP P 14 31 24.1 +0.8
HAWA Hanford 86.25 43 P P 14 31 24.1 -0.1
HAWA IAmb IAmb 14 31 27.7
comp=Z,47nm,0.8s
APA Apatity 86.34 339 ↓↓iP P 14 31 21.0 -3.2
APA i 14 31 35.4
APA pmax pmax
comp=Z,19nm,1.0s
ORV Oroville 86.38 50 P P 14 31 25.1 +0.1
ORV Oroville 86.38 50 P P 14 31 25.1 +0.1
ORV pmax pmax
comp=Z,24nm,1.4s
RES Resolute Bay 86.38 13 P P 14 31 24.6 +0.3
RES IAmb IAmb 14 31 26.2
comp=Z,47nm,0.8s
RES Resolute Bay 86.38 13 P P 14 31 24.6 +0.3
RES pmax pmax
comp=Z,47nm,0.9s
D08A Wollman Farm, 86.50 43 P P 14 31 25.5 0.0
D08A IAmb IAmb 14 31 28.3
comp=Z,62nm,1.0s
E08A Dider Farm, El 86.55 43 P P 14 31 25.8 +0.1
E08A IAmb IAmb 14 31 28.6
comp=Z,64nm,1.1s
SEKA Sheki 86.69 311 P P 14 31 26.9 +0.3
MOD Modoc Plateau 86.74 48 P P 14 31 26.8 -0.2
MOD IAmb IAmb 14 31 28.9
comp=Z,34nm,1.5s
C09A Chrisman Ranch 86.75 42 P P 14 31 27.1 +0.4
MNGR Mingechevir, A 86.87 311 P P 14 31 27.9 +0.5
ZKTA Zakatala 87.02 312 P P 14 31 27.9 -0.2
BJO1 Bjornoya 87.04 347 eP P 14 31 26.9 -0.7
E09A Wood Farm, Sta 87.15 43 P P 14 31 28.4 -0.3
BEKR Beckworth 87.17 50 P P 14 31 29.4 +0.3
BEKR IAmb IAmb 14 31 32.6
comp=Z,24nm,0.8s
NEW Newport 87.38 41 LR LR 15 04 38.2
comp=Z,300nm,20.7s,baz=324,slow=32
NEW Newport 87.38 41 P P 14 31 30.3 +0.5
NEW Newport 87.38 41 P P 14 31 30.3 +0.5
NEW pmax pmax
comp=Z,79nm,1.1s
NEW Newport 87.38 41 P P 14 31 31.1 +1.3
baz=285,SNR=82
GANJ Ganja 87.47 311 P P 14 31 30.9 +0.5
KEV Kevo 87.49 342 P P 14 31 29.5 -0.3
KEV IAmb IAmb 14 31 30.5
comp=Z,36nm,1.1s
KEV Kevo 87.49 342 P P 14 31 29.5 -0.3
KEV pmax pmax
comp=Z,36nm,1.1s
CMB Columbia Colle 87.57 52 P P 14 31 31.1 +0.2
CMB IAmb IAmb 14 31 32.9
comp=Z,17nm,1.1s
CMB Columbia Colle 87.57 52 P P 14 31 31.1 +0.2
CMB pmax pmax
comp=Z,17nm,1.1s
J08A Circle Bar Ran 87.71 46 P P 14 31 31.9 +0.4
J08A IAmb IAmb 14 31 35.3
comp=Z,27nm,1.0s
WVOR Wild Horse Val 87.82 47 P P 14 31 32.4 +0.2
WVOR IAmb IAmb 14 31 36.0
comp=Z,32nm,1.0s
WVOR Wild Horse Val 87.82 47 P P 14 31 32.4 +0.2
WVOR pmax pmax
comp=Z,32nm,1.0s
VRH Novokhopyorsk 87.83 322 eP P 14 31 29.6 -2.2
VRH pmax pmax
comp=Z,60nm,0.6s
PNTR Pine Nut 87.92 51 P P 14 31 32.6 -0.2

PNTR IAmb IAmb 14 31 35.8
comp=Z,28nm,0.9s
PAHR Pah Rah Range 87.93 50 P P 14 31 32.5 -0.2
PAHR IAmb IAmb 14 31 35.4
comp=Z,23nm,1.0s
HAMF Hammerfest 88.03 343 eP P 14 31 32.0 -0.3
ARA0 ARCESS Array S 88.06 342 eP P 14 31 31.6 -1.0
ARCES ARCESS Array B 88.06 342 P P 14 31 32.0 -0.6
comp=Z,14nm,0.8s,baz=60,slow=7.2,SNR=31
comp=Z,14nm,0.8s
ARCES ARCESS Array B 88.06 342 P P 14 31 31.9 -0.6
ARCES IAmb IAmb 14 31 33.5
comp=Z,26nm,1.0s
ARCES ARCESS Array B 88.06 342 P P 14 31 31.9 -0.6
ARCES pmax pmax
comp=Z,26nm,1.0s
BMO Blue Mountains 88.14 45 P P 14 31 33.7 +0.1
BMO Blue Mountains 88.14 45 P P 14 31 33.7 +0.1
BMO pmax pmax
comp=Z,69nm,1.2s
EDM Edmonton 88.28 36 P P 14 31 34.4 +0.4
EDM Edmonton 88.28 36 P P 14 31 34.4 +0.4
EDM pmax pmax
comp=Z,71nm,0.9s
NAX Nakhchivan 88.44 310 P P 14 31 35.4 +0.3
SMMC Simmler 88.50 54 P P 14 31 38.3 +2.9
baz=284
ZEI Tsey 88.69 313 eP P 14 31 34.6 -1.8
ZEI pmax pmax
comp=Z,13nm,0.9s
NCK Nalchik 88.72 314 eP P 14 31 35.6 -0.6
NCK pmax pmax
comp=Z,9.0nm,0.3s
VOG Valley Oaks Go 88.75 53 P P 14 31 38.5 +2.1
baz=284
PKM Mcpherson Peak 88.75 55 P P 14 31 39.2 +2.5
baz=284,SNR=12
GNI Garni 88.76 311 P P 14 31 36.7 +0.1
comp=Z,3.3nm,0.5s,baz=249,slow=4.5,SNR=5.1
GNI LR LR 15 15 05.2
comp=Z,133nm,20.0s,baz=73,slow=38
comp=Z,3.3nm,0.5s
GNI Garni 88.76 311 P P 14 31 36.3 -0.4
GNI IAmb IAmb 14 31 44.6
comp=Z,26nm,1.4s
GNI Garni 88.76 311 P P 14 31 36.3 -0.4
GNI pmax pmax
comp=Z,26nm,1.4s
MOS Moscow 88.76 327 eP P 14 31 34.0 -2.1
MOS *e* 14 35 07.8
MOS *e*S **S 14 42 17.0 -3.9**
MOS pmax pmax
comp=Z,100nm,1.0s
MOS pmax pmax
comp=Z,77nm,0.9s
RYN Ryan 88.85 51 P P 14 31 37.3 +0.2
RYN IAmb IAmb 14 31 40.1
comp=Z,30nm,0.9s
MLAC Mammoth, Mammo 88.85 52 P P 14 31 40.0 +2.8
baz=284
PLID Pearl Lake 88.97 44 P P 14 31 37.4 -0.3
PLID IAmb IAmb 14 31 40.4
comp=Z,35nm,1.2s
KTK1 Kautokeino 89.02 342 eP P 14 31 36.6 -0.5
KVN Kaiserville 89.06 50 P P 14 31 37.6 -0.5
KVN IAmb IAmb 14 31 41.0
comp=Z,34nm,1.0s
KVN Kaiserville 89.06 50 P P 14 31 37.6 -0.5
KVN pmax pmax
comp=Z,34nm,1.0s
LPSR Galich'ya Gora 89.06 324 eP P 14 31 35.8 -1.8
LPSR pmax pmax
comp=Z,50nm,0.9s
NVAR Mina Array Bea 89.06 51 P P 14 31 39.9 +1.7
comp=Z,30nm,0.8s,baz=263,slow=5.9,SNR=194
NVAR PP PP 14 35 08.3 +0.1
comp=Z,2.0nm,0.9s,baz=272,slow=6.9,SNR=5.5
NVAR Mina Array Bea 89.06 51 P P 14 31 38.8 +0.6
ONI Oni 89.06 313 P P 14 31 37.4 -0.5
ONI Oni 89.06 313 P P 14 31 37.4 -0.5
ONI pmax pmax
comp=Z,16nm,1.1s
VES Vestal, Richgr 89.10 54 P P 14 31 39.5 +1.3
baz=284,SNR=13
KBZ Khabaz 89.15 315 P P 14 31 37.1 -1.0
comp=Z,4.5nm,0.9s,baz=342,slow=3.8,SNR=8.6
KBZ LR LR 15 16 39.5
comp=Z,226nm,18.6s,baz=65,slow=39
comp=Z,4.5nm,0.9s
KBZ Khabaz 89.15 315 *d* iP P 14 31 36.9 -1.3
KBZ pmax pmax
comp=Z,9.0nm,1.0s
NV11 Mina Array Sit 89.17 51 P P 14 31 39.6 +1.0
NV11 IAmb IAmb 14 31 41.6
comp=Z,31nm,0.9s
VORR Voronezh 89.19 323 eP P 14 31 36.2 -2.0
VORR pmax pmax
comp=Z,43nm,1.3s
WALA Waterton Lakes 89.20 40 P P 14 31 38.9 +0.3
WALA IAmb IAmb 14 31 43.2
comp=Z,41nm,1.4s
KVAR Kislovodsk Arr 89.23 315 LR LR 15 12 46.5
comp=Z,182nm,21.2s,baz=265,slow=36
KIV Kislovodsk 89.23 315 *d* iP P 14 31 37.6 -1.1
KIV *e**PP **pwP 14 31 52.5 -0.1**
KIV *e* 14 35 09.9
KIV *e*PPP PPP 14 37 03.5
KIV pmax pmax
comp=Z,8.0nm,1.0s
KIV MLR MLR
comp=Z,224nm,21.0s
AKH Akhalkalaki 89.35 312 P P 14 31 38.3 -1.1
AKH Akhalkalaki 89.35 312 P P 14 31 38.3 -1.1
JTMT Jette 89.36 41 P P 14 31 39.5 +0.3
BMN Battle Mountai 89.36 49 P P 14 31 39.7 +0.2
BMN IAmb IAmb 14 31 42.4
comp=Z,19nm,1.0s
BMN Battle Mountai 89.36 49 P P 14 31 39.7 +0.2
BMN pmax pmax
comp=Z,19nm,1.0s
VSR Storozhevoye 89.36 322 eP P 14 31 36.9 -2.1
VSR pmax pmax
comp=Z,70nm,0.7s
ARVC Arvin 89.47 54 P P 14 31 42.0 +2.1
baz=284,SNR=7.2
OBN Obninsk 89.54 327 P P 14 31 37.9 -1.8
OBN Obninsk 89.54 327 P P 14 31 38.9 -0.8
comp=Z,4.6nm,0.6s,baz=70,slow=3.4,SNR=19
OBN LR LR 15 14 04.5
comp=Z,49nm,19.2s,baz=9.5,slow=37
comp=Z,4.6nm,0.6s
OBN Obninsk 89.54 327 P P 14 31 38.6 -1.1
OBN IAmb IAmb 14 31 39.8
comp=Z,65nm,1.1s
OBN Obninsk 89.54 327 *d* iP P 14 31 38.6 -1.1
OBN pmax pmax
comp=Z,49nm,1.1s
MFID Camas Ranch 89.56 46 P P 14 31 40.5 +0.2
JETT Jettan, Norway 89.56 343 eP P 14 31 39.5 -0.1
ISA Isabella, Lake 89.62 54 P P 14 31 40.8 +0.1
ISA IAmb IAmb 14 31 43.0
comp=Z,22nm,1.1s
ISA Isabella, Lake 89.62 54 P P 14 31 40.8 +0.1
ISA pmax pmax
comp=Z,22nm,1.1s
ISA Isabella, Lake 89.62 54 P P 14 31 42.1 +1.4
baz=285,SNR=10
OSI Osito Audit: C 89.69 55 P P 14 31 43.2 +2.2
baz=284
CWC Cottonwood Cre 89.74 53 P P 14 31 43.1 +1.8
baz=285
MSO Missoula 89.85 42 P P 14 31 41.5 -0.1
MSO Missoula 89.85 42 P P 14 31 43.0 +1.4
baz=288
LCH Last Change Ra 89.87 52 P P 14 31 41.8 -0.1
LCH IAmb IAmb 14 31 44.8
comp=Z,21nm,1.2s
VALR Valaam 89.88 334 *d* iP P 14 31 39.8 -1.4
VALR pmax pmax
comp=Z,48nm,0.9s
TRO Tromso 89.94 343 eP P 14 31 40.8 -0.5
VNDA Vanda 90.05 176 P P 14 31 40.6 -1.0
comp=Z,3.3nm,1.0s,baz=322,slow=6.1,SNR=10
comp=Z,3.3nm,1.0s
VNDA Vanda 90.05 176 P P 14 31 42.0 +0.4
VNDA Vanda 90.05 176 P P 14 31 42.0 +0.4
VNDA pmax pmax
comp=Z,9.0nm,1.2s
DECC Green Verdugo 90.09 55 P P 14 31 44.7 +1.8
baz=285,SNR=6.5
GRAC Grapevine Rang 90.15 52 P P 14 31 44.9 +1.8
baz=285,SNR=6.8
EDW2 Edwards Air Fo 90.20 54 P P 14 31 45.5 +2.1
baz=285,SNR=24
PASC Pasadena Art C 90.23 55 P P 14 31 43.9 +0.5
PASC IAmb IAmb 14 31 46.1
comp=Z,47nm,1.1s
CIS Catalina Islan 90.24 56 P P 14 31 45.1 +1.6
baz=285,SNR=11
LRMC Laurel Mtn Rad 90.29 54 P P 14 31 45.6 +1.7
baz=285,SNR=40
MPMC Manual Prospec 90.30 53 P P 14 31 45.8 +1.8
baz=285,SNR=48
GEVA Gevas 90.50 309 P P 14 31 44.5 -0.4
HLID Hailey 90.50 45 P P 14 31 45.1 +0.4
HLID Hailey 90.50 45 P P 14 31 46.2 +1.4
baz=287,SNR=23
FURC Furnace Creek, 90.68 53 P P 14 31 47.4 +2.0
baz=286,SNR=39
DAG Danmarks Havn 90.70 356 *i* P P 14 31 42.8 -1.9
DAG IAmb IAmb 14 31 45.3
comp=Z,18nm,0.8s
ELK Elko 90.73 48 LR LR 15 07 35.5
comp=Z,375nm,20.5s,baz=306,slow=32
ELK Elko 90.73 48 P P 14 31 45.9 0.0
ELK IAmb IAmb 14 31 48.8
comp=Z,26nm,1.2s
ELK Elko 90.73 48 P P 14 31 45.9 0.0
ELK pmax pmax
comp=Z,26nm,1.3s
SBA Scott Base 90.73 175 P P 14 31 45.9 +1.2
SBA Scott Base 90.73 175 P P 14 31 45.9 +1.2
SBA pmax pmax
comp=Z,2.0nm,1.2s
QSM Queen of Sheba 90.81 53 P P 14 31 46.3 +0.1
QSM IAmb IAmb 14 31 49.0
comp=Z,46nm,1.0s
GWY Greenwater Val 90.90 53 P P 14 31 47.3 +0.5
GWY IAmb IAmb 14 31 49.6
comp=Z,44nm,1.1s
ELS Elsinore Mount 90.97 55 P P 14 31 47.6 +0.6
ELS IAmb IAmb 14 31 49.5
comp=Z,20nm,0.9s
RRX Edison Barstow 90.99 54 P P 14 31 49.7 +2.7
baz=285
TPNV Topopah Spring 91.02 52 P P 14 31 48.1 +0.8
TPNV IAmb IAmb 14 31 51.5
comp=Z,41nm,1.1s
TPNV Topopah Spring 91.02 52 P P 14 31 48.1 +0.8
TPNV pmax pmax
comp=Z,41nm,1.1s
TPNV Topopah Spring 91.02 52 P P 14 31 49.0 +1.6
baz=286,SNR=47
GSC Goldstone, Bar 91.03 54 P P 14 31 48.2 +0.9
GSC Goldstone, Bar 91.03 54 P P 14 31 48.2 +0.9
GSC pmax pmax
comp=Z,65nm,1.1s
GSC Goldstone, Bar 91.03 54 P P 14 31 49.0 +1.7
baz=286,SNR=45
LRM Limekiln Ridge 91.14 43 P P 14 31 46.5 -1.2
R11A Troy Canyon, C 91.14 51 P P 14 31 48.2 +0.3
R11A Troy Canyon, C 91.14 51 P P 14 31 49.4 +1.5
baz=286,SNR=21
MURC Murrieta 91.17 55 P P 14 31 49.5 +1.6
baz=285,SNR=11
MCMT McKenzie Canyo 91.19 44 P P 14 31 47.4 -0.7
BBRC Big Bear Solar 91.22 55 P P 14 31 50.0 +1.6
baz=286
HRY Holter Researc 91.26 42 P P 14 31 48.0 -0.1
SHOC Shoshone, Teco 91.29 53 P P 14 31 50.3 +2.0
baz=286,SNR=27
109C Camp Elliot, M 91.43 56 P P 14 31 49.5 +0.5
109C Camp Elliot, M 91.43 56 P P 14 31 50.9 +1.9
baz=285,SNR=8.3
HEC Hector,Ludlow 91.53 54 P P 14 31 51.3 +1.7
baz=286,SNR=58
TUQ Turquoise Moun 91.69 53 P P 14 31 52.2 +1.8
baz=286,SNR=32
PFO Pinyon Flats O 91.76 55 LR LR 15 07 55.4
comp=Z,281nm,19.4s,baz=308,slow=32
PFO Pinyon Flats O 91.76 55 *d* iP P 14 31 52.1 +1.3
PFO pmax pmax
comp=Z,72nm,1.1s
PFO Pinyon Flats O 91.76 55 P P 14 31 52.4 +1.7
baz=286,SNR=25
BOZ Bozeman (W) 91.76 43 P P 14 31 51.0 +0.4
BOZ IAmb IAmb 14 31 53.2
comp=Z,20nm,1.1s
BOZ Bozeman (W) 91.76 43 P P 14 31 51.0 +0.4
BOZ pmax pmax
comp=Z,20nm,1.2s
BOZ Bozeman (W) 91.76 43 P P 14 31 51.9 +1.4
baz=289,SNR=20
TPFO Pinon Flats 91.77 55 P P 14 31 52.1 +1.4
baz=286,SNR=24
PRN Pahroc Range 91.81 51 P P 14 31 51.2 +0.2
PRN IAmb IAmb 14 31 54.2
comp=Z,18nm,1.1s
BAR Barrett 91.84 56 P P 14 31 51.1 +0.1
BAR IAmb IAmb 14 31 53.5
comp=Z,26nm,1.0s
FIA1 FINESS Array S 91.89 335 P P 14 31 48.7 -1.9
FIA1 IAmb IAmb 14 31 50.4
comp=Z,28nm,0.9s
FINES FINESS Array B 91.89 335 P P 14 31 49.3 -1.3
comp=Z,16nm,0.8s,baz=72,slow=6.2,SNR=46
comp=Z,16nm,0.8s
FINES FINESS Array B 91.89 335 P P 14 31 48.4 -2.2
TKX Tecate 91.92 56 P P 14 31 51.2 -0.1
TKX IAmb IAmb 14 31 53.8
comp=Z,24nm,0.9s
CBX Cerro Bola 91.94 57 P P 14 31 51.4 -0.2
MONP2 Monument Peak 91.98 56 P P 14 31 53.6 +1.7
baz=286,SNR=32
BELC Belle Mtn. Jos 92.02 55 P P 14 31 53.5 +1.5
baz=286,SNR=33
STEI Steigen 92.05 343 eP P 14 31 50.9 -0.3
GMRC Granite Mounta 92.08 54 P P 14 31 54.0 +1.8
baz=286,SNR=45
QLMT Earthquake Lak 92.14 43 P P 14 31 52.5 +0.1
EGMT Eagleton 92.15 40 P P 14 31 51.8 -0.4
EGMT IAmb IAmb 14 31 54.4
comp=Z,27nm,1.2s
EGMT Eagleton 92.15 40 P P 14 31 54.0 +1.8
baz=291,SNR=9.4
HVU Hansel Valley 92.19 47 P P 14 31 52.0 -0.6
HVU Hansel Valley 92.19 47 P P 14 31 52.0 -0.6
HVU pmax pmax
comp=Z,9.0nm,0.9s
RAYN Ar Rayn 92.26 294 P P 14 31 52.2 -1.0
RAYN Ar Rayn 92.26 294 P P 14 31 52.2 -1.0
RAYN pmax pmax
comp=Z,9.0nm,1.2s
BGU Big Grassy Mou 92.27 47 P P 14 31 53.4 +0.4
IKP In-Ko-Pah, Jac 92.30 56 P P 14 31 54.8 +1.6
baz=286,SNR=14
FAUS Fauske 92.39 342 eP P 14 31 52.1 -0.6
PSUT Pine Spring 92.39 50 P P 14 31 53.3 -0.4
PSUT IAmb IAmb 14 31 56.3
comp=Z,14nm,1.0s
YUH Yuha Desert 92.45 56 P P 14 31 53.7 -0.1
YUH IAmb IAmb 14 31 56.5
comp=Z,32nm,1.0s
SWSC Sam W. Stewart 92.47 56 P P 14 31 55.6 +1.7
baz=286,SNR=10
YMR Madison River 92.51 43 P P 14 31 54.7 +0.6
YMR IAmb IAmb 14 31 58.4
comp=Z,43nm,1.1s
BC3 Big Chuckawall 92.55 55 P P 14 31 56.2 +1.8
baz=286,SNR=36
ANN Anapa 92.56 317 eP P 14 31 48.9 -5.1
ANN *e**PP pP 14 32 02.5 -0.6
ANN *e* 14 35 34.4
ANN *e*S **SKSac 14 42 17.0 -8.4**
ANN pmax pmax
comp=Z,44nm,1.2s
DUG Dugway, Tooele 92.66 48 P P 14 31 54.9 +0.1
DUG Dugway, Tooele 92.66 48 P P 14 31 54.9 +0.1
DUG pmax pmax
comp=Z,10.0nm,1.0s
DUG Dugway, Tooele 92.66 48 P P 14 31 56.3 +1.5
baz=288,SNR=9.3
IRM Iron Mountain 92.66 54 P P 14 31 56.6 +1.8
baz=286,SNR=61
YPP Pitchstone Pla 92.75 44 P P 14 31 56.1 +0.8
H17A Grant Village 92.86 44 P P 14 31 59.4 +3.5
baz=290,SNR=13
FLWY Flagg Ranch 92.89 44 P P 14 31 56.1 +0.2
FLWY IAmb IAmb 14 32 00.0
comp=Z,23nm,0.8s
NEE2 Needles Airpor 92.90 54 P P 14 31 58.4 +2.5
baz=287
TPAW Teton Pass 92.91 45 P P 14 31 56.1 0.0
GCMT Greycliff 92.99 42 P P 14 31 56.7 +0.5
REDW Red Top Meadow 93.02 45 P P 14 31 56.9 +0.3
LOHW Long Hollow 93.11 44 P P 14 31 57.0 +0.1
DBG Daneborg 93.19 356 *i* P P 14 31 53.5 -2.9
GLA Glamis 93.23 55 P P 14 31 57.9 +0.5
GLA Glamis 93.23 55 P P 14 31 57.9 +0.5
GLA pmax pmax
comp=Z,45nm,0.9s
GLA Glamis 93.23 55 P P 14 31 59.7 +2.3
baz=287,SNR=12
LCMT Little Creek M 93.31 51 P P 14 31 57.0 -0.9
PDMCI Parker Dam,Lak 93.42 54 P P 14 32 00.3 +2.1
baz=287,SNR=17
MOR8 Moi Rana 93.42 342 eP P 14 31 56.1 -1.5
RLMT Red Lodge 93.49 43 P P 14 31 58.6 0.0
RLMT IAmb IAmb 14 32 03.6
comp=Z,16nm,0.7s
RLMT Red Lodge 93.49 43 P P 14 32 00.6 +1.9
baz=291,SNR=25
MPU Maple Canyon 93.57 48 P P 14 31 59.0 -0.1
MSU Marysvale 93.65 50 P P 14 31 59.3 -0.2
MSU Marysvale 93.65 50 P P 14 31 59.3 -0.2
MTPU Mount Pierson 93.79 50 P P 14 32 00.3 0.0
BW06 Boulder Array 94.12 45 P P 14 31 59.8 -1.8
BW06 Boulder Array 94.12 45 P P 14 32 02.3 +0.7
baz=290,SNR=6.0
PD31 Pinedale Array 94.12 45 P P 14 32 00.0 -1.6
PDAR Pinedale Array 94.12 45 P P 14 32 01.8 +0.2
comp=Z,1.0nm,0.6s,baz=253,slow=0.7,SNR=16
PDAR PP PP 14 35 48.0 +0.1
comp=Z,0.5nm,0.9s,baz=308,slow=3.6,SNR=4.2
PDAR LR LR 15 08 59.8
comp=Z,201nm,20.2s,baz=325,slow=32
comp=Z,1.0nm,0.6s
PDAR Pinedale Array 94.12 45 P P 14 32 00.9 -0.7
Q16A Castle Valley 94.27 49 P P 14 32 02.7 +0.4
Q16A IAmb IAmb 14 32 05.1
comp=Z,21nm,1.4s
MNK Minsk 94.38 328 *i* P P 14 32 01.0 -1.2
MNK *i* *PP **pwP 14 32 15.6 -0.2**
MNK *i* 14 35 48.7
MNK *i* PPP PPP 14 37 50.1
MNK *i* S **SKSac 14 42 31.3 -3.7**
MNK *i* *SS **SKKSac 14 42 58.2 +1.9**
MNK *i* SS **SS 14 49 31.3 -1.8**
MNK *i* SSS SSS 14 53 12.1
MNK pmax pmax
comp=E,27nm,1.0s
MNK pmax pmax
comp=E,4.0nm,1.5s
MNK pmax pmax
comp=N,20nm,0.8s
MNK Minsk 94.38 328 *i* P P 14 32 01.0 -1.2
comp=E,4.0nm,1.5s
MNK *i* P P 14 32 01.0 -1.2
comp=N,20nm,0.8s,baz=62
MNK *i* P P 14 32 01.0 -1.2
comp=Z,27nm,1.0s
MNK *i* pP **pwP 14 32 15.7 -0.2**
MNK *i* PP **PP 14 35 48.7 -0.5**
MNK *i* PPP PPP 14 37 50.1
MNK *i* S **SKSac 14 42 31.4 -3.7**
MNK *i* sS **SKKSac 14 42 58.3 +1.9**
MNK *i* SS **SS 14 49 31.4 -1.8**
MNK *i* SSS SSS 14 53 12.2
MNK *i* LQ LQ 15 08 43.9
MNK *i* LR LR 15 15 54.8
MNK *i* LRM MLR 15 18 54.9
MNK comp=E,78nm,20.6s *i* LRM MLR 15 19 20.6
comp=Z,5µm,16.8s
Y14A Wickenburg 94.42 54 P P 14 32 04.0 +1.1
Y14A IAmb IAmb 14 32 05.8
comp=Z,14nm,0.9s
SRU San Rafael Swe 94.68 49 P P 14 32 04.5 +0.3
SRU San Rafael Swe 94.68 49 P P 14 32 04.5 +0.3
SRU pmax pmax
comp=Z,6.0nm,1.0s
SIM Simferopol' 94.71 318 eP P 14 32 00.5 -3.4
SIM pmax pmax
comp=Z,22nm,1.0s
NACGM Naroch 94.75 329 eP P 14 32 02.7 -1.2
RDMU Red Mountain 94.87 47 P P 14 32 04.9 -0.2
LAO LASA Array 94.87 40 P P 14 32 06.9 +2.2
baz=293,SNR=7.5
214A Organ Pipe Nat 95.17 56 P P 14 32 06.7 +0.3
214A IAmb IAmb 14 32 09.3
comp=Z,21nm,1.1s
214A Organ Pipe Nat 95.17 56 P P 14 32 08.4 +2.0
baz=288,SNR=15
WUAZ Wupatki 95.21 52 P P 14 32 06.9 +0.2
WUAZ IAmb IAmb 14 32 09.8
comp=Z,20nm,1.2s
WUAZ Wupatki 95.21 52 P P 14 32 08.8 +2.2
baz=289,SNR=8.7
AKASG Malin Array Be 95.37 324 P P 14 32 05.0 -1.8
comp=Z,0.2nm,0.3s,baz=52,slow=5.2,SNR=16
AKASG PP PP 14 35 56.6 -0.4
comp=Z,0.2nm,0.3s,baz=55,slow=3.5,SNR=4.3
AKASG LR LR 15 17 54.2
comp=Z,467nm,18.1s,baz=66,slow=37
comp=Z,0.2nm,0.3s
AKASG Malin Array Be 95.37 324 *i* P P 14 32 04.5 -2.3
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKBB Malin Array Si 95.37 324 *i* P P 14 32 05.2 -1.6
AKBB pmax pmax
comp=Z,11nm,1.5s
DGMT Dagmar 95.41 38 P P 14 32 07.3 +0.2
DGMT IAmb IAmb 14 32 08.6
comp=Z,16nm,0.9s
DGMT Dagmar 95.41 38 P P 14 32 08.4 +1.3
baz=295
SUMG Summit 95.55 1 P P 14 32 06.8 -0.8
SUMG Summit 95.55 1 P P 14 32 06.9 -0.8
SUMG pmax pmax
comp=Z,7.0nm,0.9s
SUMG Summit 95.55 1 *i* P P 14 32 05.4 -2.3
PV23 Carpenter Ridg 96.01 49 P P 14 32 09.9 -0.5
PV23 IAmb IAmb 14 32 12.5
comp=Z,15nm,1.0s
TUC Tucson 96.70 55 P P 14 32 15.5 +2.1
baz=289
MVCO Mesa Verde 96.83 50 P P 14 32 15.9 +1.8
baz=291
BR131 Keskin Array S 96.99 313 P P 14 32 12.7 -2.0
BR131 Keskin Array S 96.99 313 P P 14 32 12.7 -2.0
BR131 pmax pmax
comp=Z,9.0nm,1.2s
BRTR Keskin Array B 96.99 313 P P 14 32 13.8 -0.8
comp=Z,3.2nm,0.9s,baz=46,slow=3.6,SNR=12
comp=Z,3.2nm,0.9s
BRTR Keskin Array B 96.99 313 P P 14 32 12.9 -1.7
SUW Suwalki 97.02 329 eP P 14 32 12.6 -1.6
SORM Soroca 97.03 322 P P 14 32 11.9 -2.5
ASF Jabal al Asfar 97.14 305 P P 14 32 14.1 -1.3
comp=Z,3.2nm,0.7s,baz=166,slow=1.6,SNR=3.8
comp=Z,3.2nm,0.7s
N23A Red Feather La 97.32 46 P Pdif 14 32 18.0 +1.6
baz=293
RSSD Black Hills 97.32 42 P P 14 32 14.8 -1.3
RSSD Black Hills 97.32 42 P P 14 32 14.8 -1.3
RSSD pmax pmax
comp=Z,9.0nm,1.4s
RSSD Black Hills 97.32 42 P Pdif 14 32 17.3 +1.1
baz=295
MAW Mawson 97.44 202 LR LR 15 15 50.7
comp=Z,184nm,18.2s,baz=28,slow=35
HSIG 97.60 58 P P 14 32 15.4 -2.0
HSIG IAmb IAmb 14 32 20.0
comp=Z,27nm,1.5s
HFS Hagfors 97.61 337 LR LR 15 18 35.0
comp=Z,154nm,21.6s,baz=64,slow=37
NC405 NORSAR Array S 97.69 339 P P 14 32 15.5 -1.7

NC405 IAmb IAmb 14 32 17.2
comp=Z,25nm,1.1s
S22A 4UR Ranch, Cre 97.87 49 P Pdif 14 32 20.1 +1.2
baz=292
NB2 NORSAR Subarra 97.92 339 P **P** **14 32 16.3 -1.9**
baz=57,slow=5.1
NB2 NORSAR Subarra 97.92 339 P **P** **14 32 16.3 -1.9**
comp=Z,4.8nm,0.8s,baz=57,slow=5.1
NOA NORSAR Array B 97.92 339 P **P** **14 32 16.6 -1.6**
comp=Z,3.4nm,0.8s,baz=48,slow=4.6,SNR=8.8
NOA PP **PP** **14 36 15.7 -0.6**
comp=Z,1.8nm,1.1s,baz=44,slow=8.0,SNR=3.4
NOA LR LR 15 19 50.8
comp=Z,103nm,19.2s,baz=85,slow=38
comp=Z,3.4nm,0.8s
SDCO Great Sand Dun 98.85 48 Pdiff Pdif 14 32 24.4 +1.2
baz=293
121A Cookes Peak, D 99.02 54 Pdiff **Pdif** **14 32 26.5 +2.6**
baz=291,SNR=8.0
VRI Vrincioaia 99.05 321 ⇑P **Pdif** **14 32 23.3 -0.2**
BUR08 Bucovina Ar. S 99.13 323 **Pdif** **14 32 22.7 -1.4**
BURAR Bucovina Array 99.14 323 ⇓P **Pdif** **14 32 23.1 -1.0**
BURAR Bucovina Array 99.14 323 **Pdif** **14 32 23.0 -1.0**
BURAR Bucovina Array 99.14 323 P **Pdif** **14 32 22.0 -2.0**
BURAR pmax pmax
comp=Z,5.0nm,1.0s
ANMO Albuquerque 99.19 51 LR LR 15 14 18.7
comp=Z,224nm,18.7s,baz=325,slow=34
ANMO Albuquerque 99.19 51 P **Pdif** **14 32 23.8 -0.9**
ANMO Albuquerque 99.19 51 P **Pdif** **14 32 23.8 -0.9**
ANMO pmax pmax
comp=Z,5.0nm,1.1s
ANMO Albuquerque 99.19 51 Pdiff **Pdif** **14 32 26.7 +2.1**
baz=292
ULM Lac du Bonnet 99.36 34 P **Pdif** **14 32 24.9 0.0**
comp=Z,9.5nm,0.9s,baz=280,slow=2.2,SNR=6.2
comp=Z,9.5nm,0.9s
ULM Lac du Bonnet 99.36 34 P **Pdif** **14 32 24.7 -0.1**
ULM IAmb IAmb 14 32 26.1
comp=Z,14nm,1.1s
ULM Lac du Bonnet 99.36 34 P **Pdif** **14 32 24.7 -0.1**
ULM pmax pmax
comp=Z,14nm,1.1s
LPIG La Paz 99.67 63 LR LR 15 11 31.7
comp=Z,192nm,19.7s,baz=335,slow=32
UZH Uzhgorod 100.31 325 *e*P **Pdif** **14 32 26.4 -2.7**
CRVS Cervenica-Dubn 100.64 325 *i* P **Pdif** **14 32 30.5 -0.1**
CRVS Cervenica-Dubn 100.64 325 *e*PDIFF **Pdif** **14 32 30.5 -0.1**
OJC Ojcow 100.83 327 *e*P **Pdif** **14 32 30.3 -1.1**
NIE Niedzica 101.00 326 *e*P **Pdif** **14 32 31.4 -0.8**
DRGR 101.03 323 ⇑P **Pdif** **14 32 30.3 -2.1**
DRGR 101.03 323 P **Pdif** **14 32 30.3 -2.1**
MNTX Cornudas Mount 101.22 54 Pdiff **Pdif** **14 32 35.5 +2.0**
baz=292,SNR=16
OKC Ostrava-Krasne 101.92 327 AMS AMS 15 25 20.0
comp=Z,500nm,18.1s
SIRR Siria 101.92 323 ⇓P **Pdif** **14 32 35.3 -1.0**
HERR Herculane 102.18 321 ⇓P **Pdif** **14 32 37.2 -0.3**
MORC Moravsky Berou 102.27 327 ⇑P **Pdif** **14 32 36.6 -1.3**
MORC Moravsky Berou 102.27 327 P **Pdif** **14 32 36.5 -1.3**
KSP Ksiaz 102.29 329 *e*P **Pdif** **14 32 37.1 -0.7**
VYHS Vyhne 102.31 326 *i* P **Pdif** **14 32 37.9 -0.1**
VYHS Vyhne 102.31 326 *e*PDIFF **Pdif** **14 32 37.9 -0.1**
MAUC Maruska 102.36 327 *e*PDIFF **Pdif** **14 32 38.7 +0.4**
MAUC AMS AMS 15 25 30.0
comp=Z,900nm,19.9s
OSTC Ostas 102.50 329 AMS AMS 15 26 00.0
comp=Z,300nm,17.4s
CHVC Chvalec 102.56 329 AMS AMS 15 26 10.0
comp=Z,400nm,16.9s
DPC Dobruska-Polom 102.57 328 AMS AMS 15 21 40.0
comp=Z,300nm,17.7s
UPC Upice 102.63 329 AMS AMS 15 26 10.0
comp=Z,400nm,16.8s
VRAC Vranov 103.05 327 ⇑P **Pdif** **14 32 39.2 -2.1**
PVCC Panska Ves 103.35 329 AMS AMS 15 26 40.0
comp=Z,300nm,20.6s
TXAR Lajitas Array 103.47 56 Pdiff **Pdif** **14 32 45.4 +1.7**
comp=Z,1.7nm,1.0s,baz=264,slow=3.8,SNR=11
TXAR PP **PP** **14 36 59.0 -0.5**
comp=Z,0.3nm,0.8s,baz=288,slow=5.1,SNR=3.5
CLL Collm 103.63 330 *i* P **Pdif** **14 32 43.1 -0.7**
CLL pmax pmax
comp=Z,5.0nm,1.2s
CLL MLR MLR
comp=Z,400nm,19.2s
CLL Collm 103.63 330 *i* Pdif **Pdif** **14 32 43.1 -0.7**
comp=Z,5.0nm,1.2s
CLL LmV 15 23 00.0
comp=Z,400nm,19.2s
CLL LmH 17 16 00.0
comp=N,100nm,19.4s
CLL LmH 17 16 00.0
comp=E,100nm,18.8s
CLL LmV 20 28 00.0
comp=Z,100nm,18.5s
PRU Pruhonice 103.70 329 AMS AMS 15 26 50.0
comp=Z,300nm,16.7s
KOVH Kovagotottos 104.09 324 P **Pdif** **14 32 44.6 -1.3**
CKRC Cesky Krumlov 104.54 328 AMS AMS 15 26 40.0
comp=Z,300nm,19.4s
KHC Kasperske Hory 104.72 329 *i* P **Pdif** **14 32 47.4 -1.4**
KHC MLR MLR
comp=Z,400nm,17.5s
KHC Kasperske Hory 104.72 329 *e*PDIFF **Pdif** **14 32 47.4 -1.4**
KHC AMS AMS 15 27 20.0
comp=Z,400nm,17.5s
GERES GERESS Array B 104.84 328 Pdiff **Pdif** **14 32 48.5 -0.9**
comp=Z,0.6nm,0.8s,baz=2.6,slow=2.9,SNR=5.3
GERES PP **PP** **14 37 08.0 -0.9**
comp=Z,0.2nm,0.4s,baz=37,slow=6.7,SNR=2.2
MBAR Mbarara 112.18 274 PKIKP **PKiKP** **14 37 17.9 -1.3**
comp=Z,3.3nm,0.3s,baz=63,slow=2.3,SNR=2.0
LRAL Lakeview Retre 114.34 45 P PKPdf 14 37 23.7 +1.0
baz=304
KEST Kesra 115.58 320 PKP **PKPdf** **14 37 26.1 +1.0**
comp=Z,4.3nm,0.9s,baz=132,slow=1.3,SNR=5.7
TROLL Troll, Antarti 115.64 193 PKKPbc PKKPbc 14 47 57.4 -2.2
L61B Northampton 116.50 29 P **PKiKP** **14 37 27.3 +0.7**
baz=320
SNAA Sanae 117.00 191 PKKPbc PKKPbc 14 47 52.3 -2.4
LSZ Lusaka 117.07 259 PKP **PKiKP** **14 37 29.7 +1.2**
comp=Z,1.0nm,0.3s,baz=115,slow=1.4,SNR=5.9
VNA2 Neumayer--Watz 118.46 191 PKKPbc PKKPbc 14 47 47.3 -2.1
VNA3 Neumayer Olymp 118.58 190 PKKPbc PKKPbc 14 47 46.6 -2.4
ESDC Sonseca Array 120.21 331 PKP **PKPdf** **14 37 33.6 -0.3**
comp=Z,1.1nm,0.8s,baz=38,slow=2.7,SNR=6.6
ESDC PP **PP** **14 38 57.7 -0.7**
comp=Z,1.1nm,0.9s,baz=29,slow=6.8,SNR=5.0
ESDC Sonseca Array 120.21 331 PKPdf **PKiKP** **14 37 34.0 0.0**
BOSA Boshof 120.22 244 PKP **PKiKP** **14 37 34.6 +0.3**
comp=Z,2.0nm,0.9s,baz=296,slow=14,SNR=2.1
TORD Torodi Ar. Bea 134.43 302 PKhKP PKPpre 14 37 52.0
comp=Z,0.7nm,0.8s,baz=32,slow=1.4,SNR=3.6
TORD PKP **PKPdf** **14 38 01.3 -0.2**
comp=Z,4.4nm,0.9s,baz=27,slow=1.0,SNR=15
OTAV Otavalo 136.79 77 *e*P **PKPdf** **14 38 01.1 -5.5**
OTAV Otavalo 136.79 77 *e*P **PKPdf** **14 38 05.7 -0.9**
PLMC San Jos del P 137.18 69 *e*P **PKPdf** **14 38 06.9 +0.1**
ZARC Zaragoza, Cauc 137.37 65 *e*P **PKiKP** **14 38 08.3 -0.7**
YOTC Yotoco, Valle 137.48 70 *e*P **PKPdf** **14 38 05.7 -1.8**
POPC Popayan, Colom 137.71 73 *e*P **PKPdf** **14 38 08.2 +0.2**
GUY2C Guyana, Caldas 137.89 68 *e*P **PKPdf** **14 38 02.2 -6.4**
ORTC Ortega, Tolima 138.52 70 *e*P **PKPdf** **14 38 10.0 +0.7**
PLCA Paso Flores 138.79 140 PKhKP PKPpre 14 38 06.4
comp=Z,5.5nm,1.0s,baz=204,slow=4.4,SNR=6.7
SPBC San Pablo de B 138.88 67 *e*P **PKiKP** **14 38 11.3 -0.9**
PRAC Prado 138.93 70 *e*P **PKPdf** **14 38 10.0 0.0**
ROSC El Rosal 139.00 68 PKP **PKPdf** **14 38 10.8 +0.3**
comp=Z,8.4nm,0.6s,baz=240,slow=12,SNR=4.2
RUSC La Rusia 139.66 66 *e*P **PKPdf** **14 38 11.3 -0.6**
MACC Macarena, Meta 140.48 72 *e*P **PKPdf** **14 38 06.1 -6.7**
BAUV El Baul 142.50 58 PKPpre PKPpre 14 38 12.0
CO02 Combarbal 143.07 127 PKPbc 14 38 14.7 +0.7
DBIC Dimbokro 143.28 299 PKhKP PKPpre 14 38 14.8
comp=Z,8.3nm,0.7s,baz=66,slow=3.2,SNR=10
DBIC Dimbokro 143.28 299 PKPbc 14 38 14.4 -0.4
DBIC Dimbokro 143.28 299 PKIKP PKPbc 14 38 14.4 -0.4
KIC Kosan Boka 143.33 298⇑ *e*P PKPab 14 38 14.0 +0.2
comp=Z,0.9nm,0.2s
TIC Toumodi 143.43 299⇑ *e*P PKPab 14 38 14.7 +0.5
comp=Z,1.8nm,0.2s
CO03 El Pedregal 143.46 126 PKPbc 14 38 15.6 +0.6
GO04 Tololo Observa 143.63 125 PKPbc 14 38 16.0 +0.3
LIC Lamto 143.65 298⇑ *e*P PKPbc 14 38 15.5 -0.3
comp=Z,42nm,0.7s
25nm,0.7s
TKM2 ⇑Pg **Pb** **14 22 41.9 +0.9**
40nm,0.5s
TKM2 ⇑Lg Lg 14 23 32.4
120nm,0.7s
IUG luzhnay 3.81 316 *e*P **Pg** **14 22 47.9 +1.6**
2μm,0.5s
IUG *e*S **Sg** **14 23 42.3 +6.6**
542nm,1.0s
KDJ Kajisay 3.83 44⇓ *i*P **Pn** **14 22 33.2 -0.3**
baz=43
KDJ ⇓ *i*S **Sn** **14 23 18.8 -0.3**
baz=43
KDJ Kajisay 3.83 44 Pn **Pn** **14 22 36.7 +3.2**
KDJ Kajisay 3.83 44 PN **Pn** **14 22 36.7 +3.2**
DZA Taraz 3.83 334 *e*PN **Pg** **14 22 44.6 -2.2**
DZA Taraz 3.83 334 *e*P **Pg** **14 22 47.0 +0.1**
129nm,0.1s
DZA *e*S **Sg** **14 23 40.7 +4.1**
400nm,0.4s
DZA Taraz 3.83 334 *e*Pg **Pg** **14 22 44.7 -2.2**
baz=333
DZA *e*Lg Lg 14 23 34.1
baz=333
USP Ospenovka 3.88 10 P **Pb** **14 22 44.2 +1.7**
SNR=7.1
TARG Taragay, Kyrgy 3.94 53 Pn **Pn** **14 22 38.5 +3.2**
TARG Taragay, Kyrgy 3.94 53 PN **Pn** **14 22 38.5 +3.2**
KST Kastek 4.02 26 *e*P **Pb** **14 22 47.0 +2.1**
77nm,0.6s
KST *e*S **Sg** **14 23 40.7 -1.6**
237nm,1.0s
SGDS Sogindy 4.08 11 *e*PN **Pn** **14 22 39.4 +2.7**
SGDS *e* 14 22 47.4
SGDS Sogindy 4.08 11 *e*P **Pb** **14 22 47.4 +1.5**
42nm,0.6s
SGDS *e*S **Sg** **14 23 40.9 -3.5**
87nm,0.6s
SGDS Sogindy 4.08 11 *e*Pn **Pn** **14 22 39.5 +2.7**
baz=11
SGDS *e*Pg **Pb** **14 22 47.4 +1.5**
baz=11
CHM Chimkent 4.16 315 *e*P **Pg** **14 22 50.9 -2.1**
5.3nm,0.6s
CHM *e*S **Sg** **14 23 46.8 -0.1**
979nm,1.2s
MTBS Maitube 4.26 29 *e*P **Pb** **14 22 51.2 +2.2**
93nm,0.7s
MTBS *e*S **Sg** **14 23 48.0 -2.2**
65nm,0.6s
KK31 Karatay Array 4.32 329 Pn **Pn** **14 22 38.3 -1.7**
KK31 Karatay Array 4.32 329 PN **Pn** **14 22 38.3 -1.7**
KK31 P **Pg** **14 22 53.0 -3.1**
KK31 Karatay Array 4.32 329⇓ Pn **Pn** **14 22 43.8 +3.7**
4.2nm,0.3s,baz=188,slow=15,SNR=12
KK31 ⇑Pg **Pg** **14 22 53.6 -2.5**
18nm,0.5s,baz=148,slow=16,SNR=8.6
KK31 ⇑Lg Lg 14 23 48.1
107nm,0.6s,baz=150,slow=25,SNR=2.7
KKAR Karatay Array 4.32 329 **Pn** **14 22 38.1 -2.0**
KKAR Karatay Array 4.32 329 PN **Pn** **14 22 38.1 -2.0**
TNSS Tian-Shan 4.39 34 *e*PN **Pn** **14 22 44.7 +3.3**
TNSS *e* 14 22 54.0
TNSS *e* 14 23 52.6
TNSS Tian-Shan 4.39 34 *e*P **Pb** **14 22 54.0 +2.5**
54nm,0.6s
TNSS *e*S **Sg** **14 23 52.9 -1.6**
70nm,0.7s
TNSS Tian-Shan 4.39 34 *e*Pn **Pn** **14 22 44.8 +3.3**
baz=36
TNSS *e*Pg **Pb** **14 22 54.0 +2.5**
baz=36
TNSS *e*Lg Lg 14 23 52.6
baz=36
AAA Alma-Ata 4.52 33 *e*PN **Pb** **14 22 56.0 +2.6**
AAA *e* 14 23 56.0
AAA Alma-Ata 4.52 33 *e*P **Pb** **14 22 56.3 +2.9**
34nm,0.2s
AAA *e*S **Sg** **14 23 56.2 -2.3**
262nm,0.6s
AAA Alma-Ata 4.52 33 *e*Pg **Pb** **14 22 56.1 +2.6**
baz=34
AAA *e*Lg Lg 14 23 56.0
baz=34
KNDC Almaty 4.55 33 PN **Pb** **14 22 55.4 +1.5**
KNDC Almaty 4.55 33⇓ Pg **Pb** **14 22 55.4 +1.5**
167nm,0.7s
KNDC ⇓Lg Lg 14 23 57.1
844nm,0.8s
BRLS Boroldav 4.55 323 *e*P **Pb** **14 22 56.3 +2.3**
BRLS *e*S **Sg** **14 23 56.2 -3.4**
BRLS Borolday 4.55 323 *e*Pg **Pb** **14 22 55.5 +1.5**
baz=318
BRLS *e*Lg Lg 14 23 55.8
baz=318
KUU Kurty 4.90 24 *e*P **Pb** **14 23 02.4 +2.5**
39nm,0.7s
KUU *e*S **Sg** **14 24 06.7 -4.0**
143nm,0.5s
KUU Kurty 4.90 24⇓ *e*Pg **Pb** **14 23 02.5 +2.7**
baz=25
KUU *e*Lg Lg 14 24 07.9
baz=25
CHKK Chushkaly 5.09 29 *e*P **Pb** **14 23 06.0 +2.9**
25nm,0.7s
CHKK *e*S **Sg** **14 24 13.0 -3.8**
65nm,0.8s
CHKK Chushkaly 5.09 29 *e*Pg **Pb** **14 23 06.0 +2.9**
baz=30
CHKK *e*Lg Lg 14 24 13.1
baz=30
SATY Saty 5.12 44 *e*PN **Pn** **14 22 53.3 +2.1**
SATY *e* 14 23 07.0
SATY *e* 14 24 14.9
SATY Saty 5.12 44 *e*P **Pb** **14 23 07.2 +3.5**
32nm,0.7s
SATY *e*S **Sg** **14 24 15.4 -2.5**
189nm,0.9s
SATY Saty 5.12 44 *e*Pn **Pn** **14 22 53.3 +2.1**
baz=45
SATY *e*Pg **Pb** **14 23 07.0 +3.3**
baz=45
SATY *e*Lg Lg 14 24 15.0
baz=45
ZHN Zhinishke 5.21 43 *e*Pg **Pb** **14 23 08.0 +2.7**
baz=44
ZHN *e*Lg Lg 14 24 17.1
baz=44
KURS Kuram 5.31 39 *e*P **Pb** **14 23 09.8 +2.9**
22nm,0.8s
KURS *e*S **Sg** **14 24 19.6 -4.3**
64nm,1.2s
KPKS Kokpek 5.55 42 *e*PN **Pn** **14 22 58.4 +1.4**
KPKS *e* 14 23 15.1
KPKS Kokpek 5.55 42 *e*P **Pb** **14 23 14.1 +3.1**
11nm,0.3s
KPKS *e*S **Sg** **14 24 27.0 -4.7**
53nm,0.8s
KPKS Kokpek 5.55 42 *e*Pn **Pn** **14 22 58.4 +1.4**
baz=43
KPKS *e*Pg **Pb** **14 23 15.1 +4.1**
baz=43
KPKS *e*Lg Lg 14 24 31.0
baz=43
BTLS Baital 5.60 3⇑ *e*Pg **Pg** **14 23 16.6 -4.0**
baz=3.3
BTLS *e*Lg Lg 14 24 31.1
baz=3.3
CEP Cherat 5.77 194 P Pn 14 23 05.3 +5.2
SHLS Shalkode 5.78 48 *e*Pg **Pg** **14 23 25.8 +1.8**
baz=51
SHLS *e*Lg Lg 14 24 46.9
baz=51
CHCP Chirah Chowk 5.79 183 P Pn 14 23 05.4 +5.2
PDGK Podgornoye 5.90 47⇑ Pg **Pb** **14 23 21.3 +4.4**
43nm,0.8s
PDGK ⇑Lg Lg 14 24 38.4
175nm,1.0s
BLB Baldybastay 5.92 37 *e*P **Pb** **14 23 21.6 +4.4**
74nm,0.7s
BLB *e*S **Sg** **14 24 39.6 -3.7**
156nm,0.9s
KBL Kabul 6.09 218 **Pn** **14 23 07.8 +3.2**
KBL Kabul 6.09 218 PN **Pn** **14 23 07.8 +3.2**
TDK Taldyqorghan 6.61 31 *e*P* **Pg** **14 23 36.5 -3.3**
TDK Taldyqorghan 6.61 31 *e*Pg **Pg** **14 23 36.6 -3.3**
baz=32

SVN Savane Anatole 143.92 43 PKPdf **PKPdf** **14 38 18.0 -0.8**
FDF Fort de France 144.01 43 PKPbc 14 38 17.9 +1.0
FDF Fort de France 144.01 43 PKIKP PKPbc 14 38 17.9 +1.0
CO01 Juntas del Tor 144.27 125 PKPdf PKPbc 14 38 18.4 +0.8
CZSB Cruzeiro do Su 144.29 86 *e*P **PKPdf** **14 38 19.9 +0.4**
MPOM Morne Pois Mar 144.41 43 PKPbc 14 38 18.2 +0.2
ZON Zonda 144.73 128 PKPdf **PKPdf** **14 38 19.6 -0.3**
ZON Zonda 144.73 128 PKIKP **PKPdf** **14 38 19.6 -0.3**
TRQA Tornquist 145.66 143 **PKPbc** **14 38 21.5 0.0**
TRQA Tornquist 145.66 143 PKP2 **PKPbc** **14 38 21.5 0.0**
LVC Limon Verde 147.58 113 *e*P **PKPdf** **14 38 25.8 +0.5**
PB16 IPOC Station P 147.76 105 PKPbc **PKPbc** **14 38 27.9 -0.9**
PB08 IPOC Station P 147.84 109 PKPbc **PKPbc** **14 38 27.7 -1.1**
GO01 Chusmiza 147.88 108 PKPbc **PKPbc** **14 38 28.0 -1.1**
LPAZ La Paz 149.25 102 PKP **PKPdf** **14 38 28.0 -0.5**
comp=Z,54nm,1.0s,baz=19,slow=2.9,SNR=20
LPAZ PKPbc **PKiKP** **14 38 34.4 +0.4**
comp=Z,46nm,0.9s,baz=287,slow=2.3,SNR=65
LPAZ La Paz 149.25 102 **PKPdf** **14 38 30.1 +1.5**
LPAZ PKPab **PKiKP** **14 38 34.8 +0.8**
LPAZ La Paz 149.25 102 *e*P **PKPdf** **14 38 30.3 +1.8**
LPAZ La Paz 149.25 102 *e*P **PKPdf** **14 38 27.8 -0.7**
ETMB Extrema 150.94 89 *e*P **PKPdf** **14 38 30.9 +0.4**
BOAV Boa Vista 152.31 60 *e*P **PKPdf** **14 38 32.6 0.0**
CPUP Villa Florida 155.94 129 PKP **PKPdf** **14 38 37.5 +0.2**
comp=Z,0.6nm,0.3s,baz=199,slow=9.8,SNR=1.8
PTLB Pontes e Lacer 157.95 101 *e*P **PKPdf** **14 38 41.9 +1.8**
MCPB Macapa, AP 160.83 54 *e*P **PKPdf** **14 38 44.2 +0.6**
NPGB Novo Progresso 160.94 77 *e*P **PKPdf** **14 38 45.4 +1.7**
SALV Santo Antonio 161.18 104 *e*P **PKPdf** **14 38 46.3 +2.5**
CLDB Colider 161.24 88 *e*P **PKPdf** **14 38 45.7 +1.7**
TRCB Terra Rica 161.44 127 *e*P **PKPdf** **14 38 45.7 +1.7**
TIJ01 Guaruva-PR 162.41 140 *e*P **PKPdf** **14 38 46.3 +1.2**
PCMB Pacaembu 163.14 126 *e*P **PKPdf** **14 38 45.7 0.0**
ITRB Iturama 164.82 122 *e*P **PKPdf** **14 38 48.1 +0.8**
TMAB Tom-Au,PA,Br 165.16 50 *e*P **PKPdf** **14 38 48.7 +0.9**
RCLB Rio Claro- Sao 165.41 136 *e*P **PKPdf** **14 38 48.1 +0.3**
BB19B Bebedouro 165.56 130 *e*P **PKPdf** **14 38 48.7 +0.8**
SNDB Serra Nova Dou 165.72 91 *e*P **PKPdf** **14 38 49.6 +1.4**
PRPB Parauapebas 165.79 67 *e*P **PKPdf** **14 38 50.2 +1.9**
PARB Paraibuna 165.93 144 *e*P **PKPdf** **14 38 49.0 +0.8**
IPMB Ipameri, GO 167.42 119 *e*P **PKPdf** **14 38 50.8 +1.3**
BDFB Brasilia 168.45 109 PKP **PKPdf** **14 38 50.3 0.0**
comp=Z,5.2nm,0.8s,baz=267,slow=1.9,SNR=5.4
BDFB Brasilia 168.45 109 *e*P **PKPdf** **14 38 50.8 +0.5**
PEXB Peixe 168.65 91 *e*P **PKPdf** **14 38 52.0 +1.6**
SMTB Santa Maria do 168.83 75 *e*P **PKPdf** **14 38 52.0 +1.5**
RIB01 Linhares ES 171.96 154 *e*P **PKPdf** **14 38 52.9 +0.9**
JANB Januaria 172.02 113 *e*P **PKPdf** **14 38 52.9 +0.7**
NBPB Pedra_Branca-C 172.93 24 *e*P **PKPdf** **14 38 53.8 +1.1**
GUA01 Guaratinga, BA 174.59 147 *e*P **PKPdf** **14 38 53.8 +0.7**

KRNET ***26*** *14:21:31.3±0.1,39.˚38N×73.˚71E,mb4.6*
IDC ***26*** *14:21:32.7±1.0,39.˚37N×73.˚50E,h0km,mb3.7/17, mbtmp3.8/24,ML3.2/7,Error ellipse: s-maj=17.8km s-min=11.1km az=136.0*
BJI ***26*** *14:21:32.9±0.0,39.˚33N×73.˚40E,h12km,mb3.8/11, mB4.2/2,ML4.0/4*
SOME ***26*** *14:21:33.0,39.˚40N×73.˚83E,h5km,MS3.4*
MOS ***26*** *14:21:34.7±1.3,39.˚54N×73.˚38E,h13km,mb4.1/6,Error ellipse: s-maj=8.3km s-min=5.1km az=74.3*
NEIC ***26*** *14:21:36.8±1.6,39.˚64N±0.˚04×73.˚37E±0.˚08,h10km±1km, mb4.1/7,Error ellipse: s-maj=11.3km s-min=5.5km az=107.0*
NNC ***26*** *14:21:38.5±2.6,39.˚70N×73.˚61E,h0km,mb4.5,mpv4.2, Error ellipse: s-maj=24.2km s-min=12.8km az=165.0*
ISC 26 14:21:33.4±1.2,39.˚45N±0.˚03×73.˚58E±0.˚02,h2km±8km, n155,σ2s54/188,mb3.9/20,29C-14D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.23**	**331**	⇑	*i*P	**Pg**	**14 21 56.7**	**-0.3**
	baz=28							
OHH				⇑	*i*S	**Sn**	**14 22 15.2**	**+0.2**
	baz=28							
DRK	**Karamyk**	**1.38**	**272**	⇑	*i*P	**Pn**	**14 21 59.2**	**-0.6**
	baz=75							
DRK				⇑	*i*S	**Sn**	**14 22 19.8**	**+1.0**
	baz=75							
DRK	**Karamyk**	**1.38**	**272**			**Pg**	**14 21 58.9**	**-0.8**
KSH	**Kashi**	**1.86**	**87**	Pg		**Pn**	**14 22 02.5**	**-3.8**
KSH				Sg		**Sn**	**14 22 24.8**	**-5.6**
KSH				smax	smax			
	comp=N,3μm,1.0s							
KSH				smax	smax			
	comp=E,2μm,0.8s							
BTK	**Batken**	**2.21**	**287**	⇑	*e*P	**Pb**	**14 22 12.8**	**-1.3**
	baz=88							
BTK				⇑	*e*S	**Sg**	**14 22 43.2**	**-1.2**
	baz=88							
BTK	**Batken**	**2.21**	**287**			**Pn**	**14 22 10.5**	**-0.6**
BTK	**Batken**	**2.21**	**287**	PN		**Pn**	**14 22 10.5**	**-0.6**
ARLS	**Aral**	**2.48**	**13**	⇑	*e*P	**Pn**	**14 22 15.3**	**+0.5**
	baz=11							
ARLS				⇑	*i*S	**Sn**	**14 22 47.6**	**+1.9**
	baz=11							
GAR	**Garm**	**2.57**	**261**	⇓	*i*P	**Pb**	**14 22 17.5**	**-2.8**
	baz=63							
GAR				⇓	*i*S	**Sb**	**14 22 51.2**	**-1.2**
	baz=63							
GAR	**Garm**	**2.57**	**261**			**Pn**	**14 22 16.9**	**+0.8**
AML	**Almayashu**	**2.68**	**2**	P		**Pb**	**14 22 20.5**	**-1.8**
	SNR=28							
TRKS	**Terek-Say**	**2.79**	**319**	⇑	*i*P	**Pn**	**14 22 19.9**	**+0.8**
	baz=18							
TRKS				⇑	*i*S	**Sn**	**14 22 55.5**	**+2.1**
	baz=18							
UCH	**Uchtor**	**2.87**	**14**	P		**Pn**	**14 22 22.9**	**+2.4**
	SNR=28							
UCH	**Uchtor**	**2.87**	**14**	⇑	*e*P	**Pn**	**14 22 21.0**	**+0.5**
	baz=12							
UCH				⇑	*i*S	**Sn**	**14 22 57.5**	**+1.8**
	baz=12							
EKS2	**Ekkin-Say**	**3.21**	**3**	P		**Pb**	**14 22 28.8**	**-2.4**
	SNR=28							
AAK	**Ala-Archa**	**3.26**	**12**	P		**Pb**	**14 22 29.8**	**-2.2**
	SNR=14							
AAK	**Ala-Archa**	**3.26**	**12**	Pn		**Pb**	**14 22 29.2**	**-2.8**
	24nm,0.3s,baz=191,slow=8.4,SNR=14							
AAK				Sn		**Sb**	**14 23 10.7**	**-1.5**
	19nm,0.3s,baz=340,slow=8.2,SNR=4.5							
AAK				Lg		Lg	14 23 17.7	
	18nm,0.3s,baz=31,slow=13,SNR=3.6							
	98nm,0.4s							
AAK	**Ala-Archa**	**3.26**	**12**	Pn		**Pn**	**14 22 25.4**	**-0.3**
KBK	**Karagaybulak**	**3.37**	**17**	P		**Pb**	**14 22 31.4**	**-2.5**
	SNR=6.4							
ULHL	**Ulahol**	**3.45**	**35**	P		**Pb**	**14 22 36.7**	**+1.4**
	SNR=25							
BOOM	**Boomskoye usch**	**3.53**	**30**	⇑	*i*P	**Pn**	**14 22 29.7**	**+0.4**
	baz=28							
BOOM				⇑	*i*S	**Sn**	**14 23 11.9**	**+0.3**
	baz=28							
BOOM	**Boomskoye usch**	**3.53**	**30**	Pn		**Pn**	**14 22 30.8**	**+1.5**
BOOM	**Boomskoye usch**	**3.53**	**30**	PN		**Pn**	**14 22 30.8**	**+1.5**
CHGR	**Chuyangaron**	**3.53**	**258**			**Pn**	**14 22 30.6**	**+1.4**
CHGR	**Chuyangaron**	**3.53**	**258**	PN		**Pn**	**14 22 30.6**	**+1.4**
CHMS	**Chumysh**	**3.66**	**14**	P		**Pb**	**14 22 35.3**	**-3.4**
	SNR=9.7							
CHMS	**Chumysh**	**3.66**	**14**	PN		**Pn**	**14 22 33.8**	**+2.9**
CHMS				PG		**Pb**	**14 22 40.2**	**+1.5**
CHMS				LG		Lg	14 23 27.9	
CHMS	**Chumysh**	**3.66**	**14**	⇑	Pn	**Pn**	**14 22 33.8**	**+2.9**
	20nm,0.3s							
CHMS				⇓	Pg	**Pb**	**14 22 40.2**	**+1.5**
	49nm,0.3s							
CHMS				⇓	Lg	Lg	14 23 27.9	
	498nm,0.8s							
TAS	**Tashkent**	**3.77**	**301**	⇓	*e*P	**Pn**	**14 22 34.4**	**+1.9**
	baz=1.0							
TAS				⇓	*i*S	**Sn**	**14 23 20.2**	**+2.8**
	baz=1.0							
TAS	**Tashkent**	**3.77**	**301**	Pn		**Pn**	**14 22 28.8**	**-3.7**
TAS	**Tashkent**	**3.77**	**301**	PN		**Pn**	**14 22 28.8**	**-3.7**
TKM2	**Tokmak 2**	**3.79**	**23**	P		**Pb**	**14 22 37.5**	**-3.6**
	SNR=9.4							
TKM2	**Tokmak 2**	**3.79**	**23**	PN		**Pn**	**14 22 36.3**	**+3.4**
TKM2				PG		**Pb**	**14 22 41.9**	**+0.9**
TKM2				LG		Lg	14 23 32.4	
TKM2	**Tokmak 2**	**3.79**	**23**	⇑	Pn	**Pn**	**14 22 36.3**	**+3.4**

TDK eLg Lg 14 25 05.3
baz=32
THW Thamme Wali 6.80 193 P Pn 14 23 18.3 +4.1
THN Thein Dam 7.21 165 eP Pn 14 23 23.9 +4.1
THN eS **Sn** **14 24 40.7 -1.5**
SMLA Simla 8.80 159 eP **Pn** **14 23 45.2 +3.6**
SMLA eS **Sn** **14 25 16.3 -5.0**
SMLA eS **Sn** **14 25 17.8 -3.5**
SMLA IAML 14 25 29.5
comp=E,70nm,0.7s
SMLA IAML 14 25 31.4
comp=N,65nm,0.6s
MAKZ Makanchi 9.58 37 Pn **Pn** **14 23 54.4 +2.2**
MAKZ Makanchi 9.58 37 P **Pn** **14 23 54.4 +2.2**
MK31 Makanchi Array 9.71 38 **Pn** **14 23 56.1 +2.0**
MK31 Makanchi Array 9.71 38⇓ eP **Pn** **14 23 57.2 +3.1**
MKAR Makanchi Array 9.71 38 Pn **Pn** **14 23 57.8 +3.7**
comp=N,0.1nm,0.3s,baz=228,slow=16,SNR=7.0
MKAR Lg Lg 14 26 36.2
comp=N,0.1nm,0.3s,baz=221,slow=28,SNR=3.2
comp=N,2.2nm,0.8s
MKAR Makanchi Array 9.71 38 Pn **Pn** **14 23 56.2 +2.1**
BRZS Berezniki 10.55 357 eP **Pn** **14 24 05.6 +0.1**
BRZS Berezniki 10.55 357 ePn **Pn** **14 24 05.7 +0.1**
baz=357
BRZS ePg 14 24 47.8
baz=357
BRZS eLg Lg 14 27 09.9
baz=357
PTH Pithoragarh 11.29 149 eS Sn 14 26 07.1 -16
WMQ Urumqi 11.43 63 eP **Pn** **14 24 19.5 +1.9**
KUDL Kundal 11.53 167 eP **Pn** **14 24 19.0 0.0**
KUDL eS **Sn** **14 26 19.4 -9.0**
KURBB Kurchatov Arra 11.71 16 Pn **Pn** **14 24 21.6 +0.3**
baz=204,slow=12,SNR=4.7
KURBB Lg Lg 14 27 37.5
baz=96,slow=30,SNR=4.4
comp=N,1.1nm,0.9s
KURK Kurchatov 11.81 16 **Pn** **14 24 21.6 -1.1**
KURK Kurchatov 11.81 16 P **Pn** **14 24 21.6 -1.1**
SEM Semipalatinsk 11.93 21 eP **Pn** **14 24 25.9 +1.4**
SEM Semipalatinsk 11.93 21 ePn **Pn** **14 24 26.0 +1.4**
baz=21
SEM eLg Lg 14 27 52.2
baz=21
GEYT Alibeck 12.18 268 Pn **Pn** **14 24 26.0 -1.8**
comp=N,0.5nm,0.3s,baz=80,slow=19,SNR=2.1
GEYT Sn **Sn** **14 26 37.0 -7.2**
comp=N,0.3nm,0.3s,baz=198,slow=42,SNR=1.5
comp=N,1.1nm,0.3s
AB31 Akbulak array 13.81 320 eP **Pn** **14 24 50.2 +0.2**
AB31 Akbulak array 13.81 320 P **Pn** **14 24 50.2 +0.2**
comp=N,0.9nm,0.4s,baz=127,slow=14,SNR=12
ABKAR Akbulak array 13.81 320 Pn **Pn** **14 24 48.8 -1.2**
AKTO Aktyubinsk 15.52 320 Pn **Pn** **14 25 12.8 -0.4**
comp=N,0.2nm,0.3s,baz=113,slow=16,SNR=7.3
AKTO Sn Sn 14 27 53.5 -12
baz=184,slow=17,SNR=1.1
AKTO Lg Lg 14 29 46.9
baz=313,slow=23,SNR=1.6
comp=N,2.7nm,0.7s
AKTO Aktyubinsk 15.52 320 ⇑P **Pn** **14 25 13.1 0.0**
comp=N,7.7nm,0.8s
ZAA0 Zalesovo Array 16.39 24 Pn **Pn** **14 25 23.8 -0.6**
ZAA0 IAmb IAmb 14 25 28.5
comp=Z,6.7nm,0.7s
ZALV Zalesovo Beam 16.39 24 Pn **Pn** **14 25 24.6 +0.3**
comp=Z,0.4nm,0.3s,baz=206,slow=10,SNR=18
comp=Z,6.7nm,0.7s
ZALV Zalesovo Beam 16.39 24 Pn **Pn** **14 25 24.9 +0.5**
ZALV Zalesovo Beam 16.39 24 *i* P **P** **14 25 25.8 -1.5**
ZALV pmax pmax
comp=Z,7.0nm,0.7s
GOMU GeErMu 17.09 94 P **P** **14 25 39.3 +3.8**
GOMU pmax pmax
comp=Z,2.0nm,0.6s
ARU Arti 19.67 335 P **P** **14 26 03.1 -0.2**
baz=159,slow=5.0,SNR=6.7
ARU Lg Lg 14 31 50.8
baz=157,slow=20
comp=Z,2.7nm,0.5s
ARU Arti 19.67 335 P **P** **14 26 02.7 -0.6**
ARU IAmb IAmb 14 26 09.5
comp=Z,5.3nm,0.8s
ARU Arti 19.67 335 *c* iP **P** **14 26 03.1 -0.2**
ARU S **S** **14 29 42.0 -3.7**
ARU pmax pmax
comp=Z,6.0nm,0.9s
KNGR Kungurtug, Tuv 20.17 49⇑ eP Pn 14 26 12.4 +1.5
GTA Gaotai 20.25 82 ⇑P Pn 14 26 14.3 +2.4
GTA pP sP 14 26 19.3 +6.3
GTA sP pP 14 26 22.5 +11
GTA pmax pmax
comp=Z,5.0nm,1.1s
WSAR Wadi Sarin 20.55 223 P **P** **14 26 11.4 -1.8**
comp=Z,1.8nm,0.6s,baz=352,slow=2.3,SNR=1.5
comp=Z,1.8nm,0.6s
BELG Belogornoye 22.07 314 P **P** **14 26 29.9 +0.5**
comp=Z,12nm,0.9s,baz=142,slow=7.6,SNR=3.6
comp=Z,12nm,0.9s
BELG Belogornoye 22.07 314⇓ eP **P** **14 26 29.8 +0.5**
BELG pmax pmax
comp=Z,3.0nm,0.9s
GNI Garni 22.13 281 P **P** **14 26 29.8 -0.5**
comp=Z,4.8nm,0.6s,baz=31,slow=20,SNR=2.1
comp=Z,4.8nm,0.6s
KBZ Khabaz 23.27 291 P **P** **14 26 41.3 -0.8**
comp=Z,0.9nm,0.5s,baz=134,slow=3.9,SNR=1.7
comp=Z,0.9nm,0.5s
KVAR Kislovodsk Arr 23.42 291 P **P** **14 26 43.4 -0.3**
comp=Z,3.2nm,0.8s,baz=124,slow=17,SNR=1.8
comp=Z,3.2nm,0.8s
KIV Kislovodsk 23.42 291 eP **P** **14 26 49.0 +5.2**
KIV pmax pmax
comp=Z,5.0nm,0.9s
SONM Songino Array 25.03 60 P **P** **14 27 00.4 +1.6**
comp=Z,0.5nm,0.6s,baz=278,slow=10.0,SNR=2.3
comp=Z,0.5nm,0.6s
SONM Songino Array 25.03 60 IAmb IAmb 14 27 17.8
comp=Z,33nm,1.4s
SONM Songino Array 25.03 60 P **P** **14 27 00.4 +1.6**
SONM pmax pmax
comp=Z,33nm,1.4s
HHC Hu-ho-hao-te 28.92 75 eP **P** **14 27 37.0 +3.1**
BR131 Keskin Array S 30.60 283⇑ eP **P** **14 27 50.3 +1.5**
BRTR Keskin Array B 30.61 283 P **P** **14 27 48.5 -0.3**
comp=Z,2.0nm,0.8s,baz=88,slow=8.9,SNR=4.1
comp=Z,2.0nm,0.8s
BRTR Keskin Array B 30.61 283 *i* P P 14 27 53.5 +4.7
BRTR pmax pmax
comp=Z,2.0nm,0.7s
PALK Pallekele 32.67 167 *i* P **P** **14 28 08.5 +1.5**
AKASG Malin Array Be 32.81 305 P **P** **14 28 07.9 +0.1**
comp=Z,0.2nm,0.3s,baz=80,slow=7.3,SNR=8.1
comp=Z,0.2nm,0.3s
AKASG Malin Array Be 32.81 305 *i* P **P** **14 28 11.5 +3.6**
AKASG pmax pmax
comp=Z,1.0nm,0.6s
FINES FINESS Array B 36.26 323 P **P** **14 28 37.4 -0.1**
comp=Z,0.7nm,0.4s,baz=110,slow=9.7,SNR=9.0
comp=Z,0.7nm,0.4s
FINES FINESS Array B 36.26 323 *i* P **P** **14 28 38.7 +1.1**
FINES pmax pmax
comp=Z,1.0nm,0.4s
ARCES ARCESS Array B 39.25 336 P **P** **14 29 03.1 +0.3**
comp=Z,1.4nm,0.8s,baz=106,slow=8.2,SNR=8.3
comp=Z,1.4nm,0.8s
GERES GERESS Array B 42.96 303 P **P** **14 29 33.4 -0.4**
comp=Z,0.2nm,0.3s,baz=67,slow=10,SNR=1.7
comp=Z,0.2nm,0.3s
NC303 NORSAR Array S 43.24 321 P **P** **14 29 36.3 +0.7**
NC303 IAmb IAmb 14 30 04.8
comp=Z,5.5nm,1.0s
NB2 NORSAR Subarra 43.31 321 P **P** **14 29 36.0 -0.3**
comp=Z,1.3nm,0.8s,baz=89,slow=7.9
NOA NORSAR Array B 43.31 321 P **P** **14 29 36.2 -0.1**
comp=Z,0.6nm,0.6s,baz=91,slow=7.9,SNR=5.2
comp=Z,0.6nm,0.6s
NC204 NORSAR Array S 43.53 321 P **P** **14 29 37.8 -0.3**
NC204 IAmb IAmb 14 29 44.2
comp=Z,19nm,1.1s
MAJO Matsushiro 50.03 72⇑ eP **P** **14 30 33.2 +3.9**
MAJO pmax pmax
comp=Z,18nm,2.4s
ESDC Sonseca Array 57.90 297 P **P** **14 31 25.7 -1.2**
comp=Z,0.5nm,0.8s,baz=56,slow=7.0,SNR=2.1
comp=Z,0.5nm,0.8s
TORD Torodi Ar. Bea 67.82 269 P **P** **14 32 31.8 -1.3**
comp=Z,0.5nm,0.6s,baz=41,slow=6.0,SNR=2.7
comp=Z,0.5nm,0.6s
ILAR Eielson Array 71.38 17 P **P** **14 32 54.7 +0.3**
comp=Z,0.8nm,0.8s,baz=316,slow=3.8,SNR=2.5
comp=Z,0.8nm,0.8s
YKA Yellowknife Ar 78.19 4 P **P** **14 33 32.8 -1.0**
comp=Z,0.4nm,0.6s,baz=352,slow=5.4,SNR=1.7
comp=Z,0.4nm,0.6s
WRA Warramunga Arr 81.88 124 P **P** **14 33 53.6 -0.8**
comp=Z,0.6nm,0.7s,baz=327,slow=4.7,SNR=4.9
comp=Z,0.6nm,0.7s
WRA Warramunga Arr 81.88 124 IAmb IAmb 14 33 58.0
comp=Z,0.2nm,1.0s
WRA Warramunga Arr 81.88 124 *i* P **P** **14 33 55.0 +0.6**
WRA pmax pmax
comp=Z,1.0nm,0.7s

*NOU **26** 14:23:12.5, 14°.69S×167°.51E, h135km, MLv4.8/15, Vanuatu Islands*
*NEIC **26** 14:23:16.2±2.1, 15°.0S±0°.1×167°.4E±0°.2, h137km±13km, mb4.1/9, Error ellipse: s-maj=27.5km s-min=15.1km az=60.0*
*IDC **26** 14:23:19.5±5.9, 14°.68S×167°.28E, h190km±48km, mb3.5/7, mbtmp4.1/8, Error ellipse: s-maj=43.7km s-min=22.2km az=103.0*
ISC 26 14:23:14.7±0.8, 14°.81S±0°.09×167°.5E±0°.1, h150km, n36, σ1§41/36, mb3.9/8, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**2.96**	**168**	P	**Pn**	**14 24 00.6**	**-1.0**
LIFNC	**LIFOU**	**5.94**	**183**	Pn	**Pn**	**14 24 37.8**	**-2.8**
LIFNC	**LIFOU**	**5.94**	**183**	P	**Pn**	**14 24 38.0**	**-2.6**
KOUNC	**Koumac, New Ca**	**6.49**	**208**		**Pn**	**14 24 46.5**	**-1.5**
KOUNC	**Koumac, New Ca**	**6.49**	**208**	P	**Pn**	**14 24 47.1**	**-0.9**
MARNC	**Mare, Loyalty**	**6.65**	**176**	Pn	**Pn**	**14 24 47.0**	**-3.1**
MARNC	**Mare, Loyalty**	**6.65**	**176**	P	**Pn**	**14 24 47.9**	**-2.2**
YATNC	**Mamie plateau,**	**7.24**	**185**	P	**Pn**	**14 24 56.0**	**-1.9**
DZM	**Mont Dzumac**	**7.29**	**188**		**Pn**	**14 24 57.7**	**-1.1**
DZM	**Mont Dzumac**	**7.29**	**188**	P	**Pn**	**14 24 58.3**	**-0.5**
NOUC	**Port Laguerre**	**7.34**	**189**	P	**Pn**	**14 24 59.1**	**-0.3**
ONTNC	**Ouen Toro**	**7.53**	**188**		**Pn**	**14 25 01.7**	**-0.1**
ONTNC	**Ouen Toro**	**7.53**	**188**	P	**Pn**	**14 25 01.7**	**-0.1**
OUENC	**Ouen Island, N**	**7.60**	**185**	Pn	**Pn**	**14 25 02.5**	**-0.2**
OUENC	**Ouen Island, N**	**7.60**	**185**	P	**Pn**	**14 25 03.0**	**+0.3**
PINNC	**Pines Island,**	**7.76**	**181**		**Pn**	**14 25 04.2**	**-0.7**
PINNC	**Pines Island,**	**7.76**	**181**	P	**Pn**	**14 25 05.1**	**+0.2**
HNR	**Honiara**	**9.14**	**305**	P	**Pn**	**14 25 24.3**	**+0.9**
HNR	59nm,0.4s,baz=291,slow=8.6,SNR=6.3			S	**Sn**	**14 27 04.1**	**-0.8**
	76nm,0.7s,baz=156,slow=10.0,SNR=2.0						
HNR	**Honiara**	**9.14**	**305**		**Pn**	**14 25 25.0**	**+1.5**
EIDS	**Eidsvold**	**18.66**	**233**	P	**Pn**	**14 27 22.2**	**-1.2**
EIDS				IAmb	IAmb	14 27 23.7	
	comp=Z,9.1nm,0.7s						
PMG	**Port Moresby**	**20.63**	**283**	P	**P**	**14 27 43.7**	**+1.1**
PMG				IAmb	IAmb	14 27 44.4	
	comp=Z,18nm,0.9s						
BKZ	**Black Stump Fm**	**25.51**	**164**	P	**P**	**14 28 30.6**	**+1.3**
STKA	**Stephens Creek**	**29.14**	**230**	P	**P**	**14 29 02.8**	**+1.1**
	comp=Z,3.4nm,0.5s,baz=62,slow=11,SNR=6.4						
	comp=Z,3.4nm,0.5s						
STKA	**Stephens Creek**	**29.14**	**230**	IAmb	IAmb	14 29 04.1	
	comp=Z,3.7nm,1.4s						
WRA	**Warramunga Arr**	**32.05**	**256**	P	**P**	**14 29 26.5**	**-1.0**
	comp=Z,0.4nm,0.5s,baz=86,slow=9.9,SNR=1.9						
	comp=Z,0.4nm,0.5s						
AS31	**Alice Springs**	**32.88**	**249**	P	**P**	**14 29 33.9**	**-0.9**
ASAR	**Alice Springs**	**32.88**	**249**	P	**P**	**14 29 33.8**	**-1.0**
	comp=Z,1.2nm,0.5s,baz=80,slow=9.1,SNR=8.0						
	comp=Z,1.2nm,0.5s						
BBOO	**Buckleboo**	**33.73**	**232**	P	**P**	**14 29 42.6**	**+0.6**
VNDA	**Vanda**	**62.79**	**181**	P	**P**	**14 33 24.4**	**+0.7**
	comp=Z,0.7nm,0.5s,baz=353,slow=10.0,SNR=2.0						
	comp=Z,0.7nm,0.5s						
VNDA	**Vanda**	**62.79**	**181**	P	**P**	**14 33 25.0**	**+1.3**
VNDA				IAmb	IAmb	14 33 27.2	
	comp=Z,2.4nm,1.4s						
SBA	**Scott Base**	**63.06**	**180**	P	**P**	**14 33 27.9**	**+2.4**
QSPA	**South Pole Qui**	**75.22**	**180**	P	**P**	**14 34 41.9**	**+1.1**
QSPA				IAmb	IAmb	14 34 42.9	
	comp=Z,3.3nm,1.0s						
SONM	**Songino Array**	**82.71**	**323**	P	**P**	**14 35 20.4**	**-1.4**
	comp=Z,0.3nm,0.4s,baz=134,slow=4.2,SNR=2.0						
	comp=Z,0.3nm,0.4s						
ILAR	**Eielson Array**	**86.53**	**18**	P	**P**	**14 35 40.4**	**0.0**
	comp=Z,0.4nm,0.7s,baz=232,slow=4.4,SNR=2.6						
	comp=Z,0.4nm,0.7s						
MKAR	**Makanchi Array**	**97.44**	**316**	P	**P**	**14 36 30.1**	**-1.3**
	comp=Z,0.3nm,0.8s,baz=108,slow=4.7,SNR=2.2						
	comp=Z,0.3nm,0.8s						
ARCES	**ARCESS Array B**	**120.39**	**345**	PKP	**PKPdf**	**14 41 47.6**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=60,slow=2.2,SNR=10						

IDC 26 14:28:19.9±2.4, 3°.40S×149°.37E, h0km, mb3.1/2, mbtmp3.2/3, ML3.3/1, Error ellipse: s-maj=59.1km s-min=33.6km az=169.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**2.80**	**109**	Pn	Pn	14 29 06.3	+0.3
	4.3nm,0.3s,baz=180,slow=1.4,SNR=5.4						
	12nm,0.3s						
WRA	**Warramunga Arr**	**22.03**	**221**	P	P	14 33 15.7	-0.6
	1.1nm,0.9s,baz=46,slow=9.6,SNR=8.5						
	1.1nm,0.9s						
ASAR	**Alice Springs**	**25.09**	**215**	P	P	14 33 47.1	+0.7
	0.3nm,0.8s,baz=45,slow=9.2,SNR=1.8						
	0.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**146.62**	**289**	PKPbc	PKPdf	14 48 03.5	+0.4
	0.2nm,0.5s,baz=90,slow=2.9,SNR=1.7						

*KRNET **26** 14:32:53.7±0.1, 39°.54N×73°.89E, mb3.3*
*SOME **26** 14:32:55.7, 39°.52N×73°.78E, h5km*
ISC 26 14:32:56.0±1.5, 39°.56N±0°.08×73°.95E±0°.06, h10km, n15, σ1§76/30, 10C-2D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.32**	**317**	⇑ *i* P	**Pn**	**14 33 18.4**	**-2.2**
	baz=19						
OHH				⇑ *i* S	**Sb**	**14 33 36.3**	**-1.6**
	baz=19						
DRK	**Karamyk**	**1.67**	**268**	⇑ *i* P	**Pn**	**14 33 24.1**	**-1.5**
	baz=69						
DRK				⇑ *e* S	**Sn**	**14 33 46.4**	**-0.8**
	baz=69						
ARLS	**Aral**	**2.32**	**7**	⇓ *i* P	**Pn**	**14 33 35.3**	**+0.9**
	baz=8.0						
ARLS				⇓ *i* S	**Sb**	**14 34 05.7**	**-1.1**
	baz=8.0						
BTK	**Batken**	**2.47**	**283**	⇑ *i* P	**Pn**	**14 33 36.5**	**+0.1**
	baz=83						
BTK				⇑ *i* S	**Sn**	**14 34 08.0**	**+1.4**
	baz=83						
GAR	**Garm**	**2.88**	**260**	⇑ *i* P	**Pn**	**14 33 42.2**	**+0.2**
	baz=60						
GAR				⇑ *i* S	**Sn**	**14 34 17.7**	**+0.9**
	baz=60						
TRKS	**Terek-Say**	**2.91**	**313**	⇑ *i* P	**Pn**	**14 33 42.2**	**-0.4**
	baz=14						
TRKS				⇑ *i* S	**Sn**	**14 34 17.7**	**0.0**
	baz=14						
KST	**Kastek**	**3.80**	**23**	*e* P	**Pg**	**14 34 07.7**	**-1.0**
	4.7nm,0.6s						
KST				*e* S	**Sg**	**14 34 59.6**	**+1.6**
	8.8nm,0.8s						
SGDS	**Sogindy**	**3.92**	**7**	*e* P	**Pg**	**14 34 08.6**	**-2.6**
	2.0nm,0.3s						
SGDS				*e* S	**Sg**	**14 35 01.2**	**-0.8**
	4.6nm,0.6s						
IUG	**luzhnay**	**3.94**	**312**	*e* P	**Pb**	**14 34 05.9**	**+0.2**
	46nm,0.3s						
IUG				*e* S	**Sb**	**14 34 56.3**	**+2.9**
	17nm,0.6s						
TNSS	**Tian-Shan**	**4.14**	**32**	*e* P	**Pg**	**14 34 15.0**	**-0.4**
	3.5nm,0.3s						
TNSS				*e* S	**Sg**	**14 35 12.0**	**+2.9**
	2.8nm,0.5s						
KTBS	**Karatobe**	**4.63**	**25**	*e* P	**Pg**	**14 34 22.7**	**-1.9**
	3.1nm,0.7s						
KTBS				*e* S	**Sg**	**14 35 25.2**	**+0.7**
	7.1nm,0.7s						
BRLS	**Borolday**	**4.65**	**320**	*e* P	**Pb**	**14 34 18.3**	**+0.5**
	3.8nm,0.4s						
BRLS				*e* S	**Sb**	**14 35 18.0**	**+4.2**
	7.7nm,0.6s						
KUU	**Kurty**	**4.69**	**22**	*e* P	**Pg**	**14 34 23.4**	**-2.4**
	2.4nm,0.4s						
KUU				*e* S	**Sg**	**14 35 26.4**	**0.0**
	6.1nm,0.6s						
KPKS	**Kokpek**	**5.28**	**41**	*e* P	**Pg**	**14 34 35.6**	**-1.5**
	1.1nm,0.5s						
KPKS				*e* S	**Sg**	**14 35 47.4**	**+2.0**
	3.4nm,0.6s						
ARXS	**Arharly**	**5.48**	**31**	*e* P	**Pg**	**14 34 38.4**	**-2.4**
	2.9nm,0.8s						
ARXS				*e* S	**Sg**	**14 35 52.7**	**+1.0**
	3.8nm,0.7s						

*IDC **26** 14:40:17.2±1.4, 39°.35N×73°.64E, h0km, mb3.6/6, mbtmp3.5/10, ML2.7/4, MS4.3/1, Error ellipse: s-maj=26.8km s-min=14.5km az=121.0*
*KRNET **26** 14:40:18.2±0.1, 39°.49N×73°.67E, mb3.9*
*SOME **26** 14:40:19.5, 39°.52N×73°.80E, h0km*
*NEIC **26** 14:40:22.1±1.6, 39°.60N±0°.05×73°.42E±0°.06, h10km±2km, mb4.3/2, Error ellipse: s-maj=9.0km s-min=7.2km az=28.0*
*NNC **26** 14:40:22.4±1.5, 39°.60N×73°.72E, h0km, mb4.2, mpv3.8, Error ellipse: s-maj=12.3km s-min=6.2km az=169.0*
ISC 26 14:40:18.1±0.7, 39°.57N±0°.04×73°.73E±0°.03, h10km, n74, σ1§84/95, mb3.7/7, 25C-9D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.20**	**323**	⇑ *i* P	**Pn**	**14 40 41.9**	**+0.9**
	baz=27						
OHH				⇑ *i* S	**Sn**	**14 40 59.3**	**+2.0**
	baz=27						
DRK	**Karamyk**	**1.49**	**267**	⇑ *i* P	**Pb**	**14 40 45.7**	**-0.4**
	baz=70						
DRK				⇑ *i* S	**Sg**	**14 41 05.7**	**-0.4**
	baz=70						
DRK	**Karamyk**	**1.49**	**267**	Pn	**Pn**	**14 40 44.1**	**-1.2**
BTK	**Batken**	**2.29**	**283**	⇑ *e* P	**Pb**	**14 40 59.1**	**-0.5**
	baz=85						
BTK				⇑ *i* S	**Sb**	**14 41 29.0**	**+1.0**
	baz=85						
BTK	**Batken**	**2.29**	**283**	Pn	**Pb**	**14 40 58.5**	**-1.1**
ARLS	**Aral**	**2.33**	**11**	⇑ *e* P	**Pg**	**14 41 01.2**	**-1.6**
	baz=12						
ARLS				⇑ *i* S	**Sg**	**14 41 32.4**	**-0.7**
	baz=12						
AML	**Almayashu**	**2.56**	**359**	P	**Pg**	**14 41 05.5**	**-1.7**
	SNR=11						
GAR	**Garm**	**2.71**	**259**	⇑ *i* P	**Pb**	**14 41 04.4**	**-2.3**
	baz=60						
GAR				⇑ *i* S	**Sb**	**14 41 38.3**	**-1.7**
	baz=60						
GAR	**Garm**	**2.71**	**259**	Pn	**Pn**	**14 41 02.1**	**+0.3**
UCH	**Uchtor**	**2.72**	**12**	P	**Pg**	**14 41 09.5**	**-0.8**
	SNR=9.0						
UCH	**Uchtor**	**2.72**	**12**	⇓ *i* P	**Pb**	**14 41 06.8**	**-0.3**
	baz=13						
UCH				⇓ *i* S	**Sg**	**14 41 42.4**	**-3.2**
	baz=13						
TRKS	**Terek-Say**	**2.78**	**316**	⇑ *e* P	**Pb**	**14 41 05.8**	**-2.1**
	baz=17						
TRKS				⇑ *i* S	**Sb**	**14 41 40.5**	**-1.6**
	baz=17						
EKS2	**Erkin-Say**	**3.09**	**1**	P	**Pb**	**14 41 14.4**	**+1.2**
	SNR=7.9						
EKS2	**Erkin-Say**	**3.09**	**1**	⇑ *e* P	**Pb**	**14 41 11.6**	**-1.6**
	baz=1.0						
EKS2				⇑ *i* S	**Sb**	**14 41 50.7**	**-0.3**
	baz=1.0						
AAK	**Ala-Archa**	**3.12**	**10**	P	**Pb**	**14 41 14.2**	**+0.5**
	SNR=9.8						
AAK	**Ala-Archa**	**3.12**	**10**	Pn	**Pb**	**14 41 14.4**	**+0.6**
	3.7nm,0.3s,baz=204,slow=10,SNR=9.2						
AAK				Sn	**Sg**	**14 41 57.5**	**-0.8**
	6.3nm,0.3s,baz=332,slow=12,SNR=4.7						
AAK				Lg	Lg	14 42 02.6	
	7.8nm,0.3s,baz=118,slow=18,SNR=4.4						
	15nm,0.5s						
AAK	**Ala-Archa**	**3.12**	**10**	⇑ *e* P	**Pb**	**14 41 12.2**	**-1.6**
	baz=11						
AAK				⇑ *i* S	**Sb**	**14 41 51.5**	**-0.4**
	baz=11						
AAK	**Ala-Archa**	**3.12**	**10**		**Pb**	**14 41 12.8**	**-1.0**
KBK	**Karagaybulak**	**3.22**	**16**	P	**Pg**	**14 41 20.7**	**+0.9**
	SNR=5.6						
KBK	**Karagaybulak**	**3.22**	**16**	⇑ *e* P	**Pb**	**14 41 13.5**	**-2.0**
	baz=17						
KBK				⇑ *i* S	**Sb**	**14 41 53.9**	**-0.9**
	baz=17						
ULHL	**Ulahol**	**3.28**	**35**	P	**Pg**	**14 41 21.5**	**+0.4**
	SNR=24						
ULHL	**Ulahol**	**3.28**	**35**	⇓ *e* P	**Pb**	**14 41 14.5**	**-2.1**
	baz=34						
ULHL				⇓ *i* S	**Sb**	**14 41 55.6**	**-1.1**
	baz=34						
BOOM	**Boomskoye usch**	**3.36**	**29**	⇓ *e* P	**Pb**	**14 41 15.8**	**-2.1**
	baz=29						
BOOM				⇓ *i* S	**Sb**	**14 41 57.8**	**-1.2**
	baz=29						
BOOM	**Boomskoye usch**	**3.36**	**29**		**Pb**	**14 41 15.8**	**-2.1**
TKM2	**Tokmak 2**	**3.63**	**22**	P	**Pg**	**14 41 24.8**	**-2.9**
	SNR=11						
TKM2	**Tokmak 2**	**3.63**	**22**	⇓ Pn	**Pb**	**14 41 19.0**	**-3.5**
	10.0nm,0.6s						
TKM2				⇓ Lg	Lg	14 42 16.9	
	18nm,0.6s						
KDJ	**Kajisay**	**3.66**	**45**	⇑ *i* P	**Pb**	**14 41 19.8**	**-3.2**
	baz=44						
KDJ				⇑ *i* S	**Sb**	**14 42 05.0**	**-2.5**
	baz=44						
KDJ	**Kajisay**	**3.66**	**45**	Pn	**Pb**	**14 41 22.0**	**-1.0**
CHGR	**Chuyangaron**	**3.67**	**257**	Pn	**Pn**	**14 41 16.4**	**+1.4**
USP	**Ospenovka**	**3.74**	**9**	P	**Pg**	**14 41 28.9**	**-0.8**
	SNR=8.7						
TARG	**Taragay, Kyrgy**	**3.78**	**54**	Pn	**Pb**	**14 41 22.7**	**-2.5**
IUG	**luzhnay**	**3.81**	**314**	*e* P	**Pg**	**14 41 32.4**	**+1.4**
	504nm,0.5s						
IUG				*e* S	**Sg**	**14 42 24.8**	**+4.5**
	122nm,0.8s						
IUG	**luzhnay**	**3.81**	**314**	Pg	**Pg**	**14 41 32.4**	**+1.4**
	504nm,0.5s						
IUG				Lg	Lg	14 42 25.4	
	122nm,0.8s						
TAS	**Tashkent**	**3.81**	**299**	⇑ *i* P	Pb	14 41 20.6	-4.8
	baz=0.0						
TAS				⇑ *i* S	**Sb**	**14 42 05.9**	**-5.7**
	baz=0.0						
KST	**Kastek**	**3.86**	**25**	*e* P	**Pg**	**14 41 31.9**	**-0.1**
	8.7nm,0.5s						
KST				*e* S	**Sg**	**14 42 24.2**	**+2.2**
	84nm,1.0s						
KST	**Kastek**	**3.86**	**25**	Pg	**Pg**	**14 41 31.9**	**-0.1**
	8.7nm,0.5s						
KST				Lg	Lg	14 42 24.5	
	84nm,1.0s						
SGDS	**Sogindy**	**3.94**	**10**	*e* P	**Pg**	**14 41 33.5**	**0.0**
	13nm,0.6s						
SGDS				*e* S	**Sg**	**14 42 26.8**	**+2.3**
	24nm,0.8s						
SGDS	**Sogindy**	**3.94**	**10**	Pg	**Pg**	**14 41 33.5**	**0.0**
	13nm,0.6s						
SGDS				Lg	Lg	14 42 26.8	
	24nm,0.8s						
DGS	**Degeres**	**3.98**	**22**	*e* P	**Pg**	**14 41 36.2**	**+1.9**
	20nm,0.9s						
DGS				*e* S	**Sg**	**14 42 31.4**	**+5.5**
	65nm,0.8s						
DGS	**Degeres**	**3.98**	**22**	Pg	**Pg**	**14 41 36.2**	**+1.9**
	20nm,0.9s						
DGS				Lg	Lg	14 42 31.4	
	65nm,0.8s						
TNSS	**Tian-Shan**	**4.23**	**34**	*e* P	**Pg**	**14 41 39.1**	**0.0**
	12nm,0.4s						
TNSS				*e* S	**Sg**	**14 42 36.2**	**+2.3**
	16nm,0.7s						
TNSS	**Tian-Shan**	**4.23**	**34**	Pg	**Pg**	**14 41 39.1**	**0.0**
	12nm,0.4s						
TNSS			

KK31	**Karatay Array**	**4.28**	**327**	⇑Pn		**Pb**	14 41 28.1	-5.4
	6.3nm,0.6s,baz=139,slow=14,SNR=9.8							
KK31				⇓Lg		Lg	14 42 31.7	
	5.4nm,0.5s,baz=133,slow=24,SNR=4.3							
KKAR	**Karatay Array**	**4.28**	**327**			**Pn**	**14 41 26.3**	**+2.9**
BRLS	**Borolday**	**4.53**	**321**	*e*P		**Pg**	**14 41 41.9**	**-2.9**
	4.7nm,0.4s							
BRLS				*e*S		**Sg**	**14 42 41.3**	**-2.3**
	27nm,0.2s							
BRLS	**Borolday**	**4.53**	**321**	Pg		**Pg**	**14 41 41.9**	**-2.9**
	4.7nm,0.4s							
BRLS				Lg		Lg	14 42 41.3	
	27nm,0.2s							
KTBS	**Karatobe**	**4.69**	**27**	*e*P		**Pg**	**14 41 46.9**	**-1.1**
	8.7nm,0.7s							
KTBS				*e*S		**Sg**	**14 42 49.8**	**+1.0**
	61nm,0.6s							
KTBS	**Karatobe**	**4.69**	**27**	Pg		**Pg**	**14 41 46.8**	**-1.1**
	8.7nm,0.7s							
KTBS				Lg		Lg	14 42 50.5	
	61nm,0.6s							
CHKK	**Chushkaly**	**4.93**	**29**	*e*P		**Pg**	**14 41 51.6**	**-0.9**
	3.1nm,0.2s							
CHKK				*e*S		**Sg**	**14 42 57.7**	**+1.5**
	16nm,0.4s							
CHKK	**Chushkaly**	**4.93**	**29**	Pg		**Pg**	**14 41 51.6**	**-0.9**
	3.1nm,0.2s							
CHKK				Lg		Lg	14 42 57.7	
	16nm,0.4s							
SATY	**Saty**	**4.96**	**44**	*e*P		**Pg**	**14 41 52.2**	**-0.8**
	3.0nm,0.3s							
SATY				*e*S		**Sg**	**14 42 59.1**	**+1.9**
	25nm,0.9s							
SATY	**Saty**	**4.96**	**44**	Pg		**Pg**	**14 41 52.2**	**-0.8**
	3.0nm,0.3s							
SATY				Lg		Lg	14 42 59.5	
	25nm,0.9s							
BTLS	**Baital**	**5.47**	**2**	*e*P		**Pg**	**14 42 01.6**	**-1.2**
	5.6nm,0.6s							
BTLS				*e*S		**Sg**	**14 43 15.6**	**+1.9**
	15nm,0.8s							
BTLS	**Baital**	**5.47**	**2**	Pg		**Pg**	**14 42 01.7**	**-1.2**
	5.6nm,0.6s							
BTLS				Lg		Lg	14 43 15.6	
	15nm,0.8s							
ARXS	**Arharly**	**5.56**	**32**	*e*P		**Pg**	**14 42 03.0**	**-1.5**
	9.1nm,0.7s							
ARXS				*e*S		**Sg**	**14 43 17.5**	**+1.1**
	15nm,0.8s							
ARXS	**Arharly**	**5.56**	**32**	Pg		**Pg**	**14 42 03.0**	**-1.5**
	9.1nm,0.7s							
ARXS				Lg		Lg	14 43 17.5	
	15nm,0.8s							
PDGK	**Podgornoye**	**5.73**	**47**	Pg		**Pg**	**14 42 07.7**	**-0.1**
	1.5nm,0.5s							
PDGK				Lg		Lg	14 43 26.9	
	8.8nm,1.2s							
PDGK	**Podgornoye**	**5.73**	**47**	⇑Pg		**Pg**	**14 42 07.5**	**-0.3**
	9.6nm,0.7s							
PDGK				⇑Lg		Lg	14 43 22.8	
	29nm,0.9s							
BLB	**Baldybastay**	**5.75**	**37**	*e*P		**Pg**	**14 42 06.2**	**-2.0**
	10nm,0.6s							
BLB				*e*S		**Sg**	**14 43 23.1**	**+0.4**
	14nm,0.6s							
BLB	**Baldybastay**	**5.75**	**37**	Pg		**Pg**	**14 42 06.2**	**-2.0**
	10nm,0.6s							
BLB				Lg		Lg	14 43 23.1	
	14nm,0.6s							
MKAR	**Makanchi Array**	**9.55**	**38**	Pn		Pn	14 42 41.0	+5.4
	0.1nm,0.3s,baz=218,slow=12,SNR=3.2							
MKAR				Lg		Lg	14 45 22.9	
	baz=228,slow=25,SNR=2.9							
	0.3nm,0.7s							
KURBB	**Kurchatov Arra**	**11.56**	**15**	Pn		**Pn**	**14 43 05.6**	**+2.5**
	baz=203,slow=12,SNR=3.2							
KURBB				Lg		Lg	14 46 25.2	
	baz=200,slow=27,SNR=4.5							
	0.3nm,0.8s							
ABKAR	**Akbulak array**	**13.79**	**319**	Pn		**Pn**	**14 43 34.9**	**+1.4**
ZALV	**Zalesovo Beam**	**16.24**	**24**	Pn		**P**	**14 44 08.6**	**-0.6**
	0.2nm,0.3s,baz=206,slow=13,SNR=3.6							
	1.1nm,0.5s							
KVAR	**Kislovodsk Arr**	**23.48**	**291**	P		**P**	**14 45 29.5**	**+1.6**
	3.1nm,0.8s,baz=104,slow=18,SNR=1.7							
	3.1nm,0.8s							
CM31	**Chiang Mai Arr**	**30.30**	**127**	P		P	14 46 35.3	+5.7
CM31				IAmb		IAmb	14 46 40.9	
	comp=Z,9.5nm,1.4s							
BRTR	**Keskin Array B**	**30.69**	**283**	P		**P**	**14 46 35.1**	**+2.0**
	comp=Z,0.3nm,0.5s,baz=76,slow=6.1,SNR=1.5							
	comp=Z,0.3nm,0.5s							
FINES	**FINESS Array B**	**36.23**	**323**	P		**P**	**14 47 22.1**	**+1.2**
	comp=Z,1.5nm,1.1s,baz=107,slow=9.3,SNR=1.5							
	comp=Z,1.5nm,1.1s							
ARCES	**ARCESS Array B**	**39.19**	**335**	P		**P**	**14 47 47.0**	**+1.2**
	comp=Z,1.8nm,1.1s,baz=110,slow=7.9,SNR=1.6							
	comp=Z,1.8nm,1.1s							
SPITS	**Spitsbergen Ar**	**45.02**	**346**	LR		LR	15 09 17.1	
	comp=Z,378nm,19.4s,baz=56,slow=38							
TORD	**Torodi Ar. Bea**	**67.93**	**269**	P		**P**	**14 51 17.1**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=33,slow=6.6,SNR=1.4							
	comp=Z,0.2nm,0.4s							
TORD	**Torodi Ar. Bea**	**67.93**	**269**	IAmb		IAmb	14 51 23.3	
	comp=Z,2.4nm,1.5s							
WRA	**Warramunga Arr**	**81.85**	**124**	P		**P**	**14 52 37.9**	**+0.2**
	comp=Z,0.2nm,0.7s,baz=328,slow=5.1,SNR=1.4							
	comp=Z,0.2nm,0.7s							

*KRNET **26** 14:41:01.0±0.1,39°.47N×74°.15E,mb4.1*
*IDC **26** 14:41:05.8±5.2,39°.60N×75°.08E,h0km,mb3.6/3,*
mbtmp3.7/4,ML3.6/1,Error ellipse: s-maj=116.3km
s-min=54.6km az=90.0
ISC 26 14:41:06.7±3.4,39°.56N±0°.09×74°.06E±0°.06,h8km±20km,
n13,σ2§14/20,mb3.6/3,14C-2D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
OHH	**Osh**	**1.37**	**315**	⇑*i*P		**Pn**	**14 41 28.8**	**-3.5**
	baz=16							
OHH				⇑*i*S		**Sb**	**14 41 49.3**	**-1.2**
	baz=16							
DRK	**Karamyk**	**1.75**	**268**	⇓*i*P		**Pn**	**14 41 35.2**	**-2.4**
	baz=71							
DRK				⇓*i*S		**Sn**	**14 42 00.0**	**-0.2**
	baz=71							
ARLS	**Aral**	**2.31**	**5**	⇑*e*P		**Pn**	**14 41 43.4**	**-1.9**
	baz=3.0							
ARLS				⇑*i*S		**Sn**	**14 42 14.4**	**+0.4**
	baz=3.0							
BTK	**Batken**	**2.54**	**282**	⇑*e*P		**Pn**	**14 41 46.6**	**-1.8**
	baz=84							
BTK				⇑*i*S		**Sn**	**14 42 20.1**	**+0.5**
	baz=84							
GAR	**Garm**	**2.95**	**260**	⇑*i*P		**Pn**	**14 41 51.9**	**-2.1**
	baz=62							
GAR				⇑*i*S		**Sn**	**14 42 29.2**	**-0.5**
	baz=62							
TRKS	**Terek-Say**	**2.97**	**313**	⇑*i*P		**Pn**	**14 41 52.0**	**-2.3**
	baz=12							
TRKS				⇑*i*S		**Sn**	**14 42 29.6**	**-0.6**
	baz=12							
AAK	**Ala-Archa**	**3.10**	**6**	Sn		**Sg**	**14 42 47.8**	**+1.7**
	1.9nm,0.3s,baz=353,slow=22,SNR=1.0							
BOOM	**Boomskoye usch**	**3.26**	**25**	⇑*i*P		**Pn**	**14 41 55.9**	**-2.4**
	baz=24							
BOOM				⇑*i*S		**Sn**	**14 42 36.6**	**-0.8**
	baz=24							
KDJ	**Kajisay**	**3.50**	**42**	⇑*i*P		**Pn**	**14 41 59.4**	**-2.2**
	baz=40							
KDJ				⇑*i*S		**Sn**	**14 42 41.4**	**-1.8**
	baz=40							
AKTO	**Aktyubinsk**	**15.68**	**319**	Pn		**P**	**14 44 52.4**	**+0.4**
	0.2nm,0.3s,baz=102,slow=13,SNR=3.8							
	1.9nm,0.6s							
FINES	**FINESS Array B**	**36.40**	**323**	P		**P**	**14 48 13.4**	**+2.2**
	0.9nm,0.8s,baz=117,slow=11,SNR=1.7							
	0.9nm,0.8s							
ARCES	**ARCESS Array B**	**39.31**	**335**	P		**P**	**14 48 39.6**	**+3.8**
	0.8nm,0.7s,baz=95,slow=9.5,SNR=1.5							
	0.8nm,0.7s							
TORD	**Torodi Ar. Bea**	**68.19**	**269**	P		P	14 52 13.5	+5.7
	0.4nm,0.9s,baz=54,slow=6.1,SNR=1.7							
	0.4nm,0.9s							

*IDC **26** 14:43:26.3±1.1,39°.26N×73°.82E,h0km,mb3.5/9,*
mbtmp3.6/12,ML3.2/3,MS4.3/1,Error ellipse:
s-maj=24.5km s-min=18.1km az=90.0
*SOME **26** 14:43:27.2,39°.52N×73°.70E,h5km*
*NEIC **26** 14:43:27.9±1.4,39°.3N±0°.1×73°.84E±0°.09,h10km±1km,*
mb4.3/8,Error ellipse: s-maj=18.0km s-min=10.3km
az=160.0
*KRNET **26** 14:43:28.0±0.1,39°.51N×73°.86E,mb3.8*
ISC 26 14:43:28.3±0.7,39°.43N±0°.05×73°.89E±0°.03,h10km,n64,
σ1§90/86,mb3.6/11,14C-4D,Tajikistan-Xinjiang border
region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
OHH	**Osh**	**1.39**	**323**	⇑*i*P		**Pn**	**14 43 52.4**	**-1.4**
	baz=21							
OHH				⇑*i*S		**Sn**	**14 44 10.7**	**-1.5**
	baz=21							
DRK	**Karamyk**	**1.62**	**273**	⇑*i*P		**Pn**	**14 43 57.7**	**+0.5**
	baz=70							
DRK				⇑*i*S		**Sn**	**14 44 19.6**	**+1.3**
	baz=70							
DRK	**Karamyk**	**1.62**	**273**	Pn		**Pn**	**14 43 55.4**	**-1.8**
BTK	**Batken**	**2.45**	**286**	⇓*e*P		**Pn**	**14 44 10.1**	**+1.7**
	baz=84							
BTK				⇓*i*S		**Sn**	**14 44 41.2**	**+2.7**
	baz=84							
BTK	**Batken**	**2.45**	**286**			**Pn**	**14 44 07.3**	**-1.1**
ARLS	**Aral**	**2.45**	**8**	⇑*i*P		**Pn**	**14 44 09.8**	**+1.3**
	baz=9.0							
ARLS				⇑*i*S		**Sn**	**14 44 40.3**	**+1.6**
	baz=9.0							
AML	**Almayashu**	**2.71**	**357**	P		**Pb**	**14 44 16.0**	**-1.1**
	SNR=7.3							
GAR	**Garm**	**2.81**	**262**	⇓*i*P		**Pn**	**14 44 15.6**	**+2.2**
	baz=61							
GAR				⇓*i*S		**Sn**	**14 44 50.6**	**+3.2**
	baz=61							
GAR	**Garm**	**2.81**	**262**			**Pn**	**14 44 12.3**	**-1.1**
UCH	**Uchtor**	**2.84**	**9**	P		**Pb**	**14 44 19.7**	**+0.4**
	SNR=22							
TRKS	**Terek-Say**	**2.97**	**316**	⇑*i*P		**Pn**	**14 44 16.2**	**+0.6**
	baz=15							
TRKS				⇑*i*S		**Sn**	**14 44 51.5**	**+0.1**
	baz=15							
EKS2	**Erkin-Say**	**3.23**	**358**	P		**Pb**	**14 44 23.8**	**-2.0**
	SNR=16							
AAK	**Ala-Archa**	**3.24**	**8**	P		**Pb**	**14 44 25.6**	**-0.4**
	SNR=7.1							
AAK	**Ala-Archa**	**3.24**	**8**	Pn		**Pb**	**14 44 25.2**	**-0.7**
	6.6nm,0.3s,baz=150,slow=5.0,SNR=5.8							
AAK				Sn		**Sb**	**14 45 07.0**	**+1.5**
	4.4nm,0.3s,baz=335,slow=23,SNR=1.8							
	15nm,0.3s							
AAK	**Ala-Archa**	**3.24**	**8**			**Pb**	**14 44 22.6**	**-3.3**
KBK	**Karagaybulak**	**3.32**	**14**	P		**Pg**	**14 44 30.8**	**-1.1**
	SNR=7.1							
ULHL	**Ulahol**	**3.33**	**32**	P		**Pg**	**14 44 31.1**	**-1.1**
	SNR=12							
BOOM	**Boomskoye usch**	**3.43**	**26**	⇑*i*P		**Pn**	**14 44 24.1**	**+2.1**
	baz=27							
BOOM				⇑*i*S		**Sn**	**14 45 04.3**	**+1.5**
	baz=27							
BOOM	**Boomskoye usch**	**3.43**	**26**			**Pb**	**14 44 26.7**	**-2.5**
KDJ	**Kajisay**	**3.68**	**42**	⇑*e*P		**Pn**	**14 44 27.4**	**+2.0**
	baz=43							
KDJ				⇑*i*S		**Sn**	**14 45 11.2**	**+2.3**
	baz=43							
KDJ	**Kajisay**	**3.68**	**42**	Pn		**Pn**	**14 44 26.2**	**+0.8**
CHGR	**Chuyangaron**	**3.77**	**260**	Pn		**Pn**	**14 44 26.8**	**+0.3**
KST	**Kastek**	**3.94**	**23**	*e*P		**Pg**	**14 44 41.6**	**-2.1**
	11nm,0.4s							
KST				*e*S		**Sg**	**14 45 35.3**	**+0.6**
	24nm,0.6s							
TAS	**Tashkent**	**3.99**	**300**	⇑*i*P		**Pn**	**14 44 31.2**	**+1.7**
	baz=99							
TAS				⇑*i*S		**Sn**	**14 45 17.4**	**+1.1**
	baz=99							
IUG	**Iuzhnay**	**4.00**	**314**	*e*P		**Pb**	**14 44 40.1**	**+1.3**
	166nm,0.5s							
IUG				*e*S		**Sb**	**14 45 32.7**	**+5.4**
	61nm,0.8s							
SGDS	**Sogindy**	**4.06**	**8**	*e*P		**Pg**	**14 44 42.9**	**-3.2**
	12nm,0.6s							
SGDS				*e*S		**Sg**	**14 45 37.4**	**-1.2**
	22nm,0.6s							
DGS	**Degeres**	**4.07**	**20**	*e*P		**Pg**	**14 44 44.1**	**-2.0**
	16nm,0.6s							
DGS				*e*S		**Sg**	**14 45 39.3**	**+0.5**
	16nm,0.3s							
MTBS	**Maitube**	**4.16**	**27**	*e*P		**Pg**	**14 44 46.4**	**-1.7**
	14nm,0.6s							
MTBS				*e*S		**Sg**	**14 45 43.4**	**+1.4**
	25nm,0.5s							
TNSS	**Tian-Shan**	**4.28**	**32**	*e*P		**Pg**	**14 44 48.3**	**-2.0**
	13nm,0.3s							
TNSS				*e*S		**Sg**	**14 45 47.2**	**+1.5**
	8.6nm,0.5s							
KK31	**Karatay Array**	**4.47**	**326**	Pn		**Pn**	**14 44 38.8**	**+2.7**
KKAR	**Karatay Array**	**4.47**	**326**	Pn		**Pn**	**14 44 38.3**	**+2.2**
BRLS	**Borolday**	**4.72**	**321**	*e*P		**Pb**	**14 44 51.1**	**0.0**
	3.4nm,0.4s							
BRLS				*e*S		**Sb**	**14 45 51.7**	**+3.6**
	29nm,0.6s							
KTBS	**Karatobe**	**4.76**	**25**	*e*P		**Pg**	**14 44 56.7**	**-2.9**
	7.4nm,0.6s							
KTBS				*e*S		**Sg**	**14 46 01.2**	**0.0**
	24nm,0.5s							
KUU	**Kurty**	**4.82**	**22**	*e*P		**Pg**	**14 44 57.5**	**-3.1**
	13nm,0.5s							
KUU				*e*S		**Sg**	**14 46 02.8**	**-0.3**
	15nm,0.4s							
SATY	**Saty**	**4.97**	**42**	*e*P		**Pg**	**14 45 01.8**	**-1.7**
	4.5nm,0.5s							
SATY				*e*S		**Sg**	**14 46 10.2**	**+2.2**
	8.4nm,0.4s							
CHKK	**Chushkaly**	**4.99**	**27**	*e*P		**Pg**	**14 45 00.7**	**-3.2**
	4.1nm,0.7s							
CHKK				*e*S		**Sg**	**14 46 07.3**	**-1.3**
	17nm,0.7s							
KURS	**Kuram**	**5.18**	**37**	*e*P		**Pg**	**14 45 06.0**	**-1.4**
	2.1nm,0.4s							
KURS				*e*S		**Sg**	**14 46 16.3**	**+1.9**
	8.9nm,0.8s							
KPKS	**Kokpek**	**5.41**	**40**	*e*P		**Pg**	**14 45 09.6**	**-2.2**
	5.7nm,0.6s							
KPKS				*e*S		**Sg**	**14 46 23.8**	**+2.0**
	17nm,0.6s							
BTLS	**Baital**	**5.61**	**1**	*e*P		**Pb**	**14 45 09.6**	**+3.3**
	4.2nm,0.6s							
BTLS				*e*S		**Sg**	**14 46 23.7**	**-4.6**
	8.9nm,0.6s							
ARXS	**Arharly**	**5.61**	**30**	*e*P		**Pg**	**14 45 11.7**	**-4.0**
	5.9nm,0.6s							
ARXS				*e*S		**Sg**	**14 46 27.0**	**-1.4**
	13nm,0.8s							
KURBB	**Kurchatov Arra**	**11.66**	**15**	Lg		Lg	14 49 38.1	
	baz=205,slow=29,SNR=4.5							
ABKAR	**Akbulak array**	**13.98**	**319**	Pn		**Pn**	**14 46 44.9**	**-1.4**
AKTO	**Aktyubinsk**	**15.70**	**320**	Pn		**Pn**	**14 47 07.3**	**-2.1**
	0.1nm,0.3s,baz=29,slow=14,SNR=2.3							
	0.5nm,0.3s							
ZAA0	**Zalesovo Array**	**16.32**	**24**	Pn		**P**	**14 47 19.0**	**-1.2**
ZALV	**Zalesovo Beam**	**16.32**	**24**	Pn		**P**	**14 47 18.8**	**-1.5**
	0.1nm,0.3s,baz=206,slow=9.9,SNR=4.0							
	0.8nm,0.5s							
FIA1	**FINESS Array S**	**36.42**	**323**	P		**P**	**14 50 33.1**	**+0.4**
FIA1				IAmb		IAmb	14 50 39.0	
	comp=Z,14nm,1.5s							
FINES	**FINESS Array B**	**36.42**	**323**	P		**P**	**14 50 33.2**	**+0.5**
	comp=Z,0.6nm,0.4s,baz=113,slow=10.0,SNR=11							
	comp=Z,0.6nm,0.4s							
ARCES	**ARCESS Array B**	**39.37**	**336**	P		**P**	**14 50 58.1**	**+0.6**
	comp=Z,1.2nm,0.8s,baz=101,slow=8.4,SNR=4.6							
	comp=Z,1.2nm,0.8s							
ARCES	**ARCESS Array B**	**39.37**	**336**	IAmb		IAmb	14 51 25.5	
	comp=Z,16nm,1.5s							
TIXI	**Tiksi**	**42.20**	**23**	P		**P**	**14 51 22.1**	**+1.3**
	comp=Z,0.9nm,0.7s,baz=90,slow=22,SNR=3.8							
	comp=Z,0.9nm,0.7s							
GERES	**GERESS Array B**	**43.18**	**303**	P		**P**	**14 51 29.3**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=116,slow=3.1,SNR=3.8							
	comp=Z,0.2nm,0.5s							
NOA	**NORSAR Array B**	**43.48**	**321**	P		**P**	**14 51 30.8**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=91,slow=8.0,SNR=3.4							
	comp=Z,0.4nm,0.5s							
NC204	**NORSAR Array S**	**43.70**	**321**	P		**P**	**14 51 33.0**	**-0.2**
KMBO	**Kilima Mbogo**	**52.48**	**229**	LR		LR	15 18 01.0	
	comp=Z,264nm,19.8s,baz=88,slow=40							
TOA0	**Torodi Ar. Sit**	**68.06**	**269**	P		**P**	**14 54 26.8**	**-1.5**
TOA0				IAmb		IAmb	14 54 32.1	
	comp=Z,3.6nm,1.2s							
TORD	**Torodi Ar. Bea**	**68.06**	**269**	P		**P**	**14 54 28.0**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=62,slow=6.5,SNR=3.0							
	comp=Z,0.4nm,0.6s							
TORD	**Torodi Ar. Bea**	**68.06**	**269**	P		**P**	**14 54 26.9**	**-1.4**
TORD				IAmb		IAmb	14 55 10.1	
	comp=Z,0.6nm,1.0s							
IMAR	**Indian Mountai**	**68.68**	**19**	P		**P**	**14 54 31.6**	**+0.2**
C36M	**Paulatuk**	**70.73**	**7**	P		**P**	**14 54 43.9**	**0.0**
ILAR	**Eielson Array**	**71.33**	**17**	P		**P**	**14 54 48.0**	**+0.3**
YKA	**Yellowknife Ar**	**78.20**	**4**	P		**P**	**14 55 28.1**	**+0.6**
	comp=Z,0.1nm,0.4s,baz=0.0,slow=5.2,SNR=1.5							
	comp=Z,0.1nm,0.4s							
YKA	**Yellowknife Ar**	**78.20**	**4**	P		**P**	**14 55 27.6**	**+0.1**
WRA	**Warramunga Arr**	**81.67**	**124**	P		**P**	**14 55 46.2**	**-0.7**
	comp=Z,0.3nm,0.8s,baz=325,slow=4.9,SNR=1.8							
	comp=Z,0.3nm,0.8s							
ASAR	**Alice Springs**	**84.12**	**127**	P		**P**	**14 55 58.8**	**-0.8**
	comp=Z,0.2nm,0.7s,baz=302,slow=5.3,SNR=2.4							
	comp=Z,0.2nm,0.7s							

*KRNET **26** 14:46:47.6±0.1,39°.41N×73°.68E,mb3.8*
*SOME **26** 14:46:47.5,39°.45N×73°.75E,h10km*
ISC 26 14:46:44.7±1.8,39°.29N±0°.07×73°.96E±0°.04,h7km±12km,
n22,σ1§99/44,14C-4D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
OHH	**Osh**	**1.53**	**324**	⇑*i*P		**Pn**	**14 47 12.5**	**-0.1**
	baz=29							
OHH				⇑*i*S		**Sn**	**14 47 30.5**	**-2.3**
	baz=29							
DRK	**Karamyk**	**1.69**	**277**	⇑*i*P		**Pn**	**14 47 15.1**	**+0.2**
	baz=73							
DRK				⇑*i*S		**Sn**	**14 47 35.1**	**-1.9**
	baz=73							
BTK	**Batken**	**2.54**	**288**	⇑*e*P		**Pn**	**14 47 28.6**	**+2.1**
	baz=87							
BTK				⇑*i*S		**Sn**	**14 47 58.6**	**+0.8**
	baz=87							
ARLS	**Aral**	**2.58**	**6**	⇑*i*P		**Pb**	**14 47 31.5**	**0.0**
	baz=11							
ARLS				⇑*i*S		**Sb**	**14 48 03.5**	**0.0**
	baz=11							
GAR	**Garm**	**2.85**	**265**	⇓*i*P		**Pb**	**14 47 33.4**	**-2.6**
	baz=62							
GAR				⇓*i*S		**Sn**	**14 48 06.9**	**+1.5**
	baz=62							
TRKS	**Terek-Say**	**3.10**	**317**	⇑*i*P		**Pn**	**14 47 35.8**	**+1.5**
	baz=18							
TRKS				⇑*i*S		**Sn**	**14 48 10.8**	**-1.0**
	baz=18							
BOOM	**Boomskoye usch**	**3.53**	**25**	⇑*e*P		**Pb**	**14 47 45.4**	**-2.2**
	baz=28							
BOOM				⇑*i*S		**Sb**	**14 48 28.3**	**-2.5**
	baz=28							
KDJ	**Kajisay**	**3.74**	**40**	⇑*i*P		**Pb**	**14 47 49.5**	**-1.8**
	baz=43							
KDJ				⇑*e*S		**Sb**	**14 48 35.2**	**-1.8**
	baz=43							
KST	**Kastek**	**4.04**	**21**	*e*P		**Pg**	**14 48 01.7**	**-0.4**
	10nm,0.6s							
KST				*e*S		**Sg**	**14 48 55.0**	**+0.6**
	33nm,0.9s							
TAS	**Tashkent**	**4.10**	**301**	⇓*i*P		**Pn**	**14 47 50.1**	**+2.2**
	baz=1.0							
TAS				⇓*i*S		**Sn**	**14 48 36.1**	**-0.1**
	baz=1.0							
IUG	**Iuzhnay**	**4.13**	**315**	*e*P		**Pg**	**14 48 03.5**	**-0.4**
	487nm,0.3s							
IUG				*e*S		**Sg**	**14 48 58.2**	**+0.9**
	105nm,0.6s							
DGS	**Degeres**	**4.17**	**18**	*e*P		**Pg**	**14 48 05.0**	**+0.3**
	12nm,0.7s							
DGS				*e*S		**Sg**	**14 49 00.5**	**+1.7**
	54nm,0.7s							
SGDS	**Sogindy**	**4.19**	**7**	*e*P		**Pg**	**14 48 02.7**	**-2.2**
	9.7nm,0.7s							
SGDS				*e*S		**Sg**	**14 48 56.7**	**-2.4**
	14nm,0.4s							
MTBS	**Maitube**	**4.26**	**25**	*e*P		**Pg**	**14 48 06.8**	**+0.5**
	6.4nm,0.6s							
MTBS				*e*S		**Sg**	**14 49 03.6**	**+2.0**
	21nm,0.4s							
TNSS	**Tian-Shan**	**4.37**	**30**	*e*P		**Pg**	**14 48 08.9**	**+0.5**
	5.7nm,0.6s							
TNSS				*e*S		**Sg**	**14 49 07.9**	**+2.9**
	18nm,0.7s							
BRLS	**Borolday**	**4.86**	**322**	*e*P		**Pb**	**14 48 11.3**	**+1.0**
	1.2nm,0.1s							
BRLS				*e*S		**Sb**	**14 49 11.6**	**+2.7**
	20nm,0.4s							
KTBS	**Karatobe**	**4.87**	**24**	*e*P		**Pg**	**14 48 17.1**	**-0.8**
	2.9nm,0.5s							
KTBS				*e*S		**Sg**	**14 49 21.6**	**+0.7**
	33nm,0.7s							
KUU	**Kurty**	**4.93**	**20**	*e*P		**Pg**	**14 48 17.9**	**-1.2**
	6.4nm,0.4s							
KUU				*e*S		**Sg**	**14 49 23.2**	**+0.2**
	23nm,0.5s							
SATY	**Saty**	**5.04**	**40**	*e*P		**Pg**	**14 48 22.6**	**+1.3**
	3.5nm,0.3s							
SATY				*e*S		**Sg**	**14 49 30.2**	**+3.6**
	14nm,0.5s							
CHKK	**Chushkaly**	**5.09**	**26**	*e*P		**Pg**	**14 48 21.2**	**-1.0**
	2.4nm,0.4s							
CHKK				*e*S		**Sg**	**14 49 28.5**	**+0.3**
	23nm,0.7s							
ARXS	**Arharly**	**5.70**

AAK Sn **Sg** **14 50 44.1 -2.7**
4.6nm,0.3s,baz=8.1,slow=18,SNR=1.5
22nm,0.4s
TAS **Tashkent** **3.41 299**⇓*eP* **Pb** **14 50 06.2 -3.0**
baz=2.0
TAS ⇓*iS* **Sb** **14 50 50.8 -0.3**
baz=2.0
IUG **Iuzhnay** **3.44 316** *eP* **Pb** **14 50 08.3 -1.5**
45nm,0.5s
IUG *eS* **Sb** **14 50 54.6 +2.6**
234nm,0.7s
BOOM **Boomskoye usch** **3.44 35**⇓*iP* **Pn** **14 50 04.4 +1.7**
baz=30
BOOM ⇓*iS* **Sn** **14 50 47.5 +3.4**
baz=30
DZA **Taraz** **3.49 336** *eP* **Pb** **14 50 09.9 -0.6**
58nm,0.1s
DZA *eS* **Sg** **14 50 57.3 -2.9**
172nm,0.3s
KDJ **Kajisay** **3.84 50**⇑*iP* **Pn** **14 50 09.0 +0.8**
baz=45
KDJ ⇑*iS* **Sn** **14 50 54.8 +1.0**
baz=45
SGDS **Sogindy** **3.88 15** *eP* **Pb** **14 50 19.8 +2.6**
13nm,0.7s
SGDS *eS* **Sg** **14 51 14.1 +1.4**
38nm,0.8s
KST **Kastek** **3.91 31** *eP* **Pb** **14 50 17.2 -0.4**
12nm,0.5s
KST *eS* **Sg** **14 51 10.4 -3.2**
120nm,0.7s
MTBS **Maitube** **4.17 34** *eP* **Pb** **14 50 23.9 +1.7**
30nm,0.7s
MTBS *eS* **Sg** **14 51 21.8 -0.3**
36nm,0.6s
BRLS **Borolday** **4.19 323** *eP* **Pb** **14 50 19.0 -3.4**
8.2nm,0.5s
BRLS *eS* **Sb** **14 51 12.8 -0.7**
57nm,0.7s
TNSS **Tian-Shan** **4.33 39** *eP* **Pb** **14 50 27.0 +1.9**
16nm,0.5s
TNSS *eS* **Sg** **14 51 26.6 -0.8**
23nm,0.8s
AAA **Alma-Ata** **4.45 37** *eP* **Pb** **14 50 29.3 +2.4**
15nm,0.1s
AAA *eS* **Sg** **14 51 30.6 -0.4**
86nm,0.8s
KTBS **Karatobe** **4.75 32** *eP* **Pb** **14 50 34.2 +2.1**
4.9nm,0.6s
KTBS *eS* **Sg** **14 51 39.0 -1.8**
52nm,0.7s
KUU **Kurty** **4.78 28** *eP* **Pb** **14 50 35.6 +3.2**
7.3nm,0.5s
KUU *eS* **Sg** **14 51 41.8 +0.3**
34nm,0.7s
KURS **Kuram** **5.28 43** *eP* **Pb** **14 50 43.3 +2.3**
8.2nm,1.1s
KURS *eS* **Sg** **14 51 55.2 -2.4**
15nm,1.1s
BTLS **Baital** **5.36 6** *eP* **Pb** **14 50 44.2 +1.9**
3.7nm,0.5s
BTLS *eS* **Sg** **14 51 56.2 -4.0**
14nm,0.7s
ARXS **Arharly** **5.65 36** *eP* **Pb** **14 50 49.5 +2.2**
12nm,0.9s
ARXS *eS* **Sg** **14 52 05.6 -3.9**
27nm,0.8s
MKAR **Makanchi Array** **9.67 40** Pn **Pn** **14 51 28.3 +0.2**
baz=221,slow=15,SNR=1.8
MKAR Lg Lg 14 54 13.0
0.1nm,0.3s,baz=232,slow=26,SNR=2.1
0.6nm,0.9s
KURBB **Kurchatov Arra** **11.53 17** Pn **Pn** **14 51 55.1 +1.7**
baz=208,slow=12,SNR=1.5
KURBB Lg Lg 14 55 05.3
baz=196,slow=30,SNR=1.0
0.3nm,0.7s
GEYT **Alibeck** **11.94 266** Pn **Pn** **14 51 59.2 +0.1**
0.4nm,0.3s,baz=79,slow=18,SNR=1.8
0.9nm,0.3s
AKTO **Aktyubinsk** **15.16 320** Pn **Pn** **14 52 44.6 +1.7**
0.2nm,0.3s,baz=137,slow=9.2,SNR=1.7
AKTO Sn **Sn** **14 55 31.1 -0.1**
0.1nm,0.3s,baz=192,slow=21,SNR=2.2
1.6nm,0.5s
ZALV **Zalesovo Beam** **16.26 25** Pn **Pn** **14 52 55.8 -1.5**
0.1nm,0.3s,baz=210,slow=10,SNR=1.7
0.4nm,0.3s
ARU **Arti** **19.32 335** P **Pn** **14 53 36.5 +1.3**
baz=132,slow=7.3,SNR=3.4
1.1nm,0.3s
BELG **Belogornoye** **21.70 314** P **P** **14 54 02.9 +3.0**
9.9nm,0.5s,baz=295,slow=5.8,SNR=2.7
9.9nm,0.5s
KBZ **Khabaz** **22.94 290** P **P** **14 54 14.1 +0.8**
0.7nm,0.4s,baz=199,slow=5.2,SNR=2.3
0.7nm,0.4s
SONM **Songino Array** **25.12 60** P **P** **14 54 30.3 -3.9**
0.4nm,0.4s,baz=262,slow=8.2,SNR=1.8
0.4nm,0.4s
ASF **Jabal al Asfar** **30.22 267** P **P** **14 55 18.5 -1.4**
1.5nm,0.5s,baz=83,slow=12,SNR=1.9
1.5nm,0.5s
BRTR **Keskin Array B** **30.30 283** P **P** **14 55 20.0 -0.6**
1.0nm,0.5s,baz=95,slow=8.9,SNR=6.1
1.0nm,0.5s
AKASG **Malin Array Be** **32.45 305** P **P** **14 55 39.5 +0.2**
0.2nm,0.3s,baz=80,slow=6.8,SNR=3.1
0.2nm,0.3s
FINES **FINESS Array B** **35.90 323** P **P** **14 56 09.7 +0.7**
0.6nm,0.4s,baz=117,slow=10,SNR=10
0.6nm,0.4s
ARCES **ARCESS Array B** **38.91 336** P **P** **14 56 35.1 +0.6**
0.9nm,0.7s,baz=108,slow=8.0,SNR=3.5
0.9nm,0.7s
GERES **GERESS Array B** **42.60 303** P **P** **14 57 05.7 +0.3**
0.3nm,0.4s,baz=58,slow=5.9,SNR=3.1
0.3nm,0.4s
NB2 **NORSAR Subarra** **42.95 321** P **P** **14 57 07.8 -0.1**
comp=Z,0.4nm,0.4s,baz=92,slow=7.9
NOA **NORSAR Array B** **42.95 321** P **P** **14 57 08.1 +0.2**
comp=Z,0.5nm,0.4s,baz=91,slow=7.9,SNR=4.8
comp=Z,0.5nm,0.4s
ESDC **Sonseca Array** **57.55 297** P **P** **14 58 57.9 -1.0**
comp=Z,0.4nm,0.6s,baz=53,slow=6.8,SNR=6.2
comp=Z,0.4nm,0.6s
TORD **Torodi Ar. Bea** **67.56 269** P **P** **15 00 03.9 -2.2**
comp=Z,0.4nm,0.6s,baz=57,slow=6.2,SNR=2.2
comp=Z,0.4nm,0.6s
ILAR **Eielson Array** **71.20 17** P **P** **15 00 25.7 -2.1**
comp=Z,0.3nm,0.8s,baz=319,slow=3.6,SNR=3.2
comp=Z,0.3nm,0.8s
YKA **Yellowknife Ar** **77.94 4** P **P** **15 01 06.1 -0.9**
comp=Z,0.4nm,0.6s,baz=349,slow=5.7,SNR=5.4
comp=Z,0.4nm,0.6s
WRA **Warramunga Arr** **82.24 124** P P 15 01 24.3 -6.5
comp=Z,1.1nm,1.2s,baz=330,slow=5.2,SNR=2.2
comp=Z,1.1nm,1.2s

*KRNET **26** 14:50:47.2±0.1,39.˚36N×73.˚95E,mb3.8*
*IDC **26** 14:50:49.6±1.8,39.˚18N×73.˚64E,h0km,mb3.7/3,*
mbtmp3.7/5,ML3.3/2,MS4.1/1,Error ellipse: s-maj=43.6km
s-min=24.9km az=89.0
ISC 26 14:50:53.0±2.4,39.42N±0.˚08×73.84E±0.˚06,h23km±17km,
n13,σ2s06/20,mb3.7/3,10C-4D,Tajikistan-Xinjiang
border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.37**	**324**	⇑*iP*	**Pn**	**14 51 14.1**	**-2.6**
	baz=23						
OHH				⇑*iS*	**Sn**	**14 51 33.7**	**-0.5**
	baz=23						
DRK	**Karamyk**	**1.58**	**273**	⇑*iP*	**Pn**	**14 51 17.5**	**-2.3**
	baz=75						
DRK				⇑*iS*	**Sn**	**14 51 39.7**	**0.0**
	baz=75						
BTK	**Batken**	**2.41**	**286**	⇑*eP*	**Pn**	**14 51 29.4**	**-1.7**
	baz=87						
BTK				⇑*iS*	**Sn**	**14 52 00.4**	**+0.4**
	baz=87						
ARLS	**Aral**	**2.47**	**8**	⇑*eP*	**Pn**	**14 51 29.7**	**-2.2**
	baz=7.0						
ARLS				⇑*iS*	**Sn**	**14 52 00.7**	**-0.7**
	baz=7.0						
GAR	**Garm**	**2.77**	**262**	⇓*eP*	**Pn**	**14 51 33.9**	**-2.1**
	baz=64						
GAR				⇓*iS*	**Sn**	**14 52 08.3**	**-0.4**
	baz=64						
TRKS	**Terek-Say**	**2.94**	**317**	⇑*eP*	**Pn**	**14 51 36.2**	**-2.3**
	baz=16						
TRKS				⇑*iS*	**Sn**	**14 52 12.0**	**-1.2**
	baz=16						
AAK	**Ala-Archa**	**3.25**	**9**	Pn	**Pb**	**14 51 49.2**	**-1.0**
	2.7nm,0.3s,baz=182,slow=23,SNR=1.1						
AAK				Sn	**Sb**	**14 52 33.2**	**+3.9**
	1.7nm,0.3s,baz=164,slow=19,SNR=1.3						
	7.0nm,0.3s						
BOOM	**Boomskoye usch**	**3.46**	**27**	⇓*iP*	**Pn**	**14 51 43.2**	**-2.3**
	baz=25						
BOOM				⇓*iS*	**Sn**	**14 52 23.6**	**-2.2**
	baz=25						
ZALV	**Zalesovo Beam**	**16.34**	**24**	Pn	**P**	**14 54 45.9**	**+2.5**
	0.7nm,0.3s,baz=218,slow=11,SNR=2.8						
	0.9nm,0.5s						
FINES	**FINESS Array B**	**36.40**	**323**	P	**P**	**14 57 56.2**	**+0.9**
	0.4nm,0.4s,baz=108,slow=10,SNR=5.4						
	0.4nm,0.4s						
ARCES	**ARCESS Array B**	**39.36**	**336**	P	**P**	**14 58 21.7**	**+1.5**
	1.4nm,0.9s,baz=103,slow=7.9,SNR=1.7						
	1.4nm,0.9s						
DAVOX	**Davos/Dischmat**	**46.12**	**301**	LR	LR	15 22 11.2	
	comp=Z,240nm,21.4s,baz=80,slow=41						
WRA	**Warramunga Arr**	**81.70**	**124**	P	**P**	**15 03 10.0**	**+0.4**
	0.4nm,0.9s,baz=311,slow=6.6,SNR=2.0						
	0.4nm,0.9s						

*IDC **26** 14:51:02.6±0.5, 12.˚13N×143.˚19E, h0km, mb4.4/21,*
mbtmp4.4/22, ML5.2/1, MS3.5/2, Error ellipse:
s-maj=18.5km s-min=12.9km az=90.0
*MOS **26** 14:51:04.7±1.1, 12.˚07N×143.˚18E, h25km, mb5.0/27, Error*
ellipse: s-maj=11.6km s-min=6.8km az=96.0
*NEIC **26** 14:51:04.9±1.2, 12.˚08N±0.˚08×143.˚2E±0.˚1, h10km±1km,*
mb4.8/125, Error ellipse: s-maj=17.0km s-min=13.6km
az=288.0
*DJA **26** 14:51:09.0±0.5, 12.˚7N±4.˚×14.˚4E±.˚, h52km, 8km, M4.8/25,*
mB5.5/6, mb4.7/25, MLv4.7/1, Mw(mB)5.0/6
ISC 26 14:51:04.4±0.3, 12.10N±0.˚05×143.28E±0.˚06, h10km, n342,
σ1s18/331, mb4.8/124, 23C-32D, Fault plane solution:
NP1:ϕs145.70421°,δ31.55876°,λ-119.72477°. **NP2:**
ϕs359.52878°,δ62.96685°,λ-73.06202°. **Principal axes:**
T Plg16.3285°, Azm77.1329°; N Plg15.0408°,
Azm171.6481°; P Plg67.5050°, Azm302.1057°; **South of**
Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.14**	**46**	Pn	**Pn**	**14 51 41.2**	**+1.0**
	745nm,0.3s,baz=188,slow=6.3,SNR=378						
GUMO					LR	14 52 07.9	
	comp=Z,636nm,20.2s,baz=149,slow=30						
GUMO				Sn	**Sn**	**14 52 08.1**	**+1.2**
	306nm,0.3s,baz=32,slow=20,SNR=8.4						
	3μm,0.5s						
GUMO	**Guam**	**2.14**	**46**	Pn	**Pn**	**14 51 41.4**	**+1.2**
GUMO	**Guam**	**2.14**	**46**	P	**Pn**	**14 51 41.2**	**+1.0**
GUMO						14 52 08.1	
GUMO	**Guam**	**2.14**	**46**	P	**Pn**	**14 51 41.9**	**+1.7**
SMPI	**Sarmi**	**14.72**	**198**	P	**Pn**	**14 54 34.3**	**+1.5**
	14nm,1.0s						
GENI	**Genyem**	**14.92**	**192**	P	**Pn**	**14 54 36.5**	**+0.9**
	29nm,1.4s						
PATS	**Pohnpei**	**15.72**	**108**	Pn	**Pn**	**14 54 43.8**	**-2.3**
PATS	**Pohnpei**	**15.72**	**108**	P	**Pn**	**14 54 44.0**	**-2.1**
WAMI	**Wamena**	**16.52**	**196**	P	**P**	**14 54 58.8**	**-0.1**
	2μm90nm,0.6s						
SWI	**Sorong**	**17.56**	**224**	P	**P**	**14 55 13.0**	**+2.5**
	25nm,1.2s						
RABL	**Rabaul**	**18.44**	**151**	P	**Pn**	**14 55 21.4**	**+1.1**
FAKI	**Fak Fak**	**18.52**	**217**	P	**Pn**	**14 55 21.2**	**0.0**
FAKI	**Fak Fak**	**18.52**	**217**	P	**Pn**	**14 55 21.9**	**+0.7**
	36nm,0.9s						
FAKI	**Fak Fak**	**18.52**	**217**	P	**Pn**	**14 55 26.8**	**+5.6**
LBMI	**Labuha**	**20.14**	**232**	P	**Pn**	**14 55 41.5**	**+0.8**
	20nm,1.3s						
JOW	**Kunigami**	**20.33**	**318**	P	**P**	**14 55 40.2**	**-0.7**
	13nm,0.5s,baz=121,slow=13,SNR=2.8						
	13nm,0.5s						
JOW	**Kunigami**	**20.33**	**318**	P	**P**	**14 55 41.9**	**+1.0**
JOW				IAmb	IAmb	14 56 08.4	
	comp=Z,80nm,1.4s						
JOW	**Kunigami**	**20.33**	**318**	P	Pn	14 55 44.3	+1.4
MSAI	**Masohi**	**20.95**	**224**	P	Pn	14 55 50.2	0.0
	comp=Z,892nmcomp=Z,5.7nm,0.7s						
AAI	**Ambon**	**21.70**	**225**	P	**P**	**14 55 56.6**	**+0.9**
	comp=Z,43nm,0.8s						
KMSI	**Cibinong**	**22.31**	**241**	P	**P**	**14 56 05.4**	**+3.1**
	comp=Z,50nm,0.9s						
JSU	**Suzuyama**	**22.64**	**331**	P	**P**	**14 56 05.9**	**+0.1**
YOJ	**Yonaguni jima**	**22.80**	**305**	P	**P**	**14 56 07.6**	**+0.2**
YOJ	**Yonaguni jima**	**22.80**	**305**	P	**P**	**14 56 07.6**	**+0.2**
YOJ				pmax	pmax		
	comp=Z,49nm,0.9s						
YOJ	**Yonaguni jima**	**22.80**	**305**	P	**P**	**14 56 08.1**	**+0.7**
H11S3	**WAKE ISLAND Hy**	**23.45**	**71**	T	T	15 20 41.1	
	baz=253,slow=73						
H11S1	**WAKE ISLAND Hy**	**23.46**	**71**	T	T	15 20 44.7	
	baz=253,slow=73						
H11S2	**WAKE ISLAND Hy**	**23.46**	**71**	T	T	15 20 36.8	
	baz=253,slow=73,SNR=44						
YULB	**Yu-li**	**23.72**	**301**	P	**P**	**14 56 16.4**	**-0.4**
YULB				IAmb	IAmb	14 56 19.1	
	comp=Z,29nm,1.5s						
JNU	**Nakatsue**	**23.80**	**333**	P	**P**	**14 56 16.0**	**-1.6**
NACB	**Ninganchiao**	**23.80**	**303**	P	**P**	**14 56 16.9**	**-0.7**
H11N1	**WAKE ISLAND Hy**	**23.92**	**69**	T	T	15 21 10.7	
	baz=255,slow=75,SNR=68						
H11N2	**WAKE ISLAND Hy**	**23.93**	**69**	T	T	15 21 06.5	
	baz=255,slow=75,SNR=45						
H11N3	**WAKE ISLAND Hy**	**23.94**	**69**	T	T	15 21 08.0	
	baz=255,slow=75,SNR=22						
MRSI	**Marisa**	**24.11**	**243**	P	**P**	**14 56 24.5**	**+3.9**
	comp=Z,864nmcomp=Z,44nm,1.1s						
SSLB	**Suanglung**	**24.17**	**302**	P	**P**	**14 56 20.3**	**-0.8**
SSLB				IAmb	IAmb	14 56 23.1	
	comp=Z,22nm,0.6s						
SSLB	**Suanglung**	**24.17**	**302**	P	**P**	**14 56 22.5**	**+1.4**
LUWI	**Luwuk**	**24.19**	**239**	P	**P**	**14 56 20.0**	**-1.3**
LUWI	**Luwuk**	**24.19**	**239**	P	**P**	**14 56 23.9**	**+2.6**
	comp=Z,2μmcomp=Z,84nm,0.9s						
YHNB	**Yeheng**	**24.21**	**304**	P	**P**	**14 56 21.1**	**-0.4**
YHNB				IAmb	IAmb	14 56 24.7	
	comp=Z,26nm,1.2s						
JHS	**Saijyo**	**24.59**	**340**	P	**P**	**14 56 25.1**	**+0.3**
JHS				IAmb	IAmb	14 56 50.6	
	comp=Z,22nm,1.3s						
MJAR	**Matsushiro Arr**	**24.76**	**350**	P	**P**	**14 56 23.7**	**-2.6**
	comp=Z,0.6nm,0.5s,baz=184,slow=12,SNR=1.3						
	comp=Z,0.6nm,0.5s						
MJAR	**Matsushiro Arr**	**24.76**	**350**	P	**P**	**14 56 26.4**	**+0.1**
MAJO	**Matsushiro**	**24.76**	**350**	P	**P**	**14 56 25.9**	**-0.4**
MAJO	**Matsushiro**	**24.76**	**350**	P	**P**	**14 56 25.9**	**-0.4**
MAJO				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MJB9	**Matsu-Tunnel**	**24.76**	**350**	P	**P**	**14 56 26.0**	**-0.4**
APSI	**Ampana**	**25.07**	**240**	P	**P**	**14 56 30.2**	**+1.0**
	comp=Z,18nm,1.3s						
MYLDM	**Lahad Datu**	**25.43**	**256**	P	**P**	**14 56 31.9**	**-0.6**
MYLDM				IAmb	IAmb	14 56 49.9	
	comp=Z,31nm,1.0s						
JTU	**Tsushima**	**25.64**	**333**	P	**P**	**14 56 34.1**	**-0.2**
COEN	**Coen**	**25.89**	**180**	P	**P**	**14 56 36.2**	**-0.5**
COEN	**Coen**	**25.89**	**180**	P	**P**	**14 56 36.3**	**-0.4**
MPSI	**Mapaga**	**25.98**	**245**	P	**P**	**14 56 37.6**	**+0.1**
	comp=Z,1μmcomp=Z,6.9nm,0.4s						
MTN	**Manton Dam**	**27.56**	**206**	P	**P**	**14 56 50.4**	**-1.3**
MTN	**Manton Dam**	**27.56**	**206**	P	**P**	**14 56 50.9**	**-0.8**
TTSI	**Tana Toraja**	**27.75**	**239**	P	**P**	**14 56 52.7**	**-0.8**
	comp=Z,8.9nm,0.8s						
BNSI	**Bone**	**28.27**	**236**	P	**P**	**14 57 01.4**	**+3.2**
	comp=Z,8.1nm,0.4s						
SPSI	**Sidrap Palu**	**28.30**	**237**	P	**P**	**14 57 00.5**	**+2.1**
	comp=Z,5.7nm,0.6s						
KSRS	**Korea Array**	**28.75**	**334**	P	**P**	**14 57 00.3**	**-1.9**
	comp=Z,0.8nm,0.6s,baz=141,slow=8.8,SNR=3.6						
	comp=Z,0.8nm,0.6s						
KSRS	**Korea Array**	**28.75**	**334**	*eP*	**P**	**14 57 04.7**	**+2.5**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BSSI	**Bau Bau, Buton**	**29.02**	**233**	P	**P**	**14 57 06.6**	**+1.8**
	comp=Z,3.9nm,1.3s						
NJ2	**Nanjing**	**29.98**	**315**	*eP*	**P**	**14 57 11.0**	**-2.1**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KNRA	**Kununurra**	**31.11**	**208**	P	**P**	**14 57 23.2**	**-0.1**
KNRA				IAmb	IAmb	14 57 24.1	
	comp=Z,18nm,1.0s						
CTAO	**Charters Tower**	**32.12**	**175**	P	**P**	**14 57 32.5**	**+0.4**
CTAO				IAmb	IAmb	14 57 43.4	
	comp=Z,15nm,1.4s						
CTAO	**Charters Tower**	**32.12**	**175**	P	**P**	**14 57 32.5**	**+0.4**
CTAO				pmax	pmax		
	comp=Z,15nm,1.4s						
WB0	**Warramunga Arr**	**32.85**	**196**	P	**P**	**14 57 37.8**	**-0.8**
WB0				IAmb	IAmb	14 57 38.7	
	comp=Z,9.8nm,0.7s						
WR0	**Warramunga Arr**	**33.00**	**195**	P	**P**	**14 57 39.1**	**-0.7**
WR0				IAmb	IAmb	14 57 39.7	
	comp=Z,10nm,0.6s						
WRAB	**Tennant Creek**	**33.02**	**196**	P	**P**	**14 57 39.7**	**-0.3**
WRAB	**Tennant Creek**	**33.02**	**196**	P	**P**	**14 57 39.7**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,20nm,0.8s						
WB2	**Warramunga Arr**	**33.03**	**196**	P	**P**	**14 57 39.5**	**-0.6**
WRA	**Warramunga Arr**	**33.04**	**196**	P	**P**	**14 57 39.6**	**-0.5**
	comp=Z,15nm,0.8s,baz=19,slow=9.7,SNR=69						
WRA				PcP	**PcP**	**15 00 24.5**	**+0.6**
	comp=Z,0.4nm,0.8s,baz=17,slow=3.4,SNR=2.2						
	comp=Z,15nm,0.8s						
HNS	**HongShan**	**35.90**	**319**	⇑*iP*	**P**	**14 58 05.5**	**+0.7**
HNS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GRJI	**Gresik**	**35.98**	**240**	P	**P**	**14 58 08.2**	**+2.4**
	comp=Z,30nm,0.5s						
BJI	**Beijing**	**36.69**	**324**	P	**P**	**14 58 11.5**	**0.0**
BJI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
AS31	**Alice Springs**	**36.71**	**194**	P	**P**	**14 58 11.2**	**-0.6**
ASAR	**Alice Springs**	**36.71**	**194**	P	**P**	**14 58 11.5**	**-0.4**
	comp=Z,4.0nm,0.7s,baz=20,slow=12,SNR=115						
ASAR				PcP	**PcP**	**15 00 35.0**	**+0.4**
	comp=Z,1.2nm,0.8s,baz=47,slow=3.2,SNR=5.6						
	comp=Z,4.0nm,0.7s						
ASAR	**Alice Springs**	**36.71**	**194**	P	**P**	**14 58 11.1**	**-0.8**
EIDS	**Eidsvold**	**38.01**	**168**	P	**P**	**14 58 22.2**	**-0.6**
KLR	**Kul'dur**	**38.23**	**348**	P	**P**	**14 58 24.4**	**0.0**
	comp=Z,1.2nm,0.5s,baz=170,slow=12,SNR=2.8						
	comp=Z,1.2nm,0.5s						
KLR	**Kul'dur**	**38.23**	**348**	*ceP*	**P**	**14 58 25.0**	**+0.5**
KLR				pmax	pmax		
	comp=Z,6.0nm,2.2s						
XLT	**XiLinHaoTe**	**39.40**	**329**	⇑*iP*	**P**	**14 58 35.0**	**+0.6**
XLT				pP	sP	14 58 39.0	+1.7
XLT				pmax	pmax		
	comp=Z,9.0nm,1.2s						
XLT				pmax	pmax		
	comp=Z,63nm,3.6s						
HHC	**Hu-ho-hao-te**	**39.92**	**322**	*eP*	**P**	**14 58 38.5**	**-0.4**
HHC				pmax	pmax		
	comp=Z,19nm,0.8s						
HHC				pmax	pmax		
	comp=Z,220nm,6.7s						
MBWA	**Marble Bar**	**40.34**	**215**	P	**P**	**14 58 41.7**	**-0.8**
MBWA				IAmb	IAmb	14 58 58.0	
	comp=Z,25nm,1.3s						
PSA00	**Pilbara Seismi**	**40.61**	**215**	P	**P**	**14 58 43.8**	**-0.9**
CD2	**Chengdu**	**40.98**	**303**	P	**P**	**14 58 48.0**	**+0.3**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
OUENC	**Ouen Island, N**	**41.36**	**146**	P	**P**	**14 58 51.5**	**+0.7**
PZH	**PanZhiHua**	**41.54**	**296**	P	**P**	**14 58 53.3**	**+0.8**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,100nm,6.7s						
KULM	**Kulim**	**42.63**	**265**	P	**P**	**14 59 01.8**	**+0.4**
KULM				IAmb	IAmb	14 59 02.2	
	comp=Z,25nm,1.4s						
LZH	**Lanzhou**	**42.77**	**311**	*eP*	P	14 58 55.8	-6.7
LZH				sP	pP	14 59 02.3	-2.2
LZH				pmax	pmax		
	comp=Z,14nm,1.6s						
ARMA	**Armidale**	**43.03**	**169**	P	**P**	**14 59 04.0**	**-0.5**
ARMA				IAmb	IAmb	14 59 14.2	
	comp=Z,19nm,1.4s						
CMAR	**Chiang Mai Arr**	**43.15**	**284**	P	**P**	**14 59 05.1**	**-0.4**
	comp=Z,1.4nm,0.5s,baz=90,slow=6.2,SNR=13						
CMAR				PcP	**PcP**	**15 00 54.5**	**-0.8**
	comp=Z,1.4nm,0.7s,baz=90,slow=1.8,SNR=7.2						
	comp=Z,1.4nm,0.5s						
CMAR	**Chiang Mai Arr**	**43.15**	**284**	*eP*	**P**	**14 59 06.5**	**+1.0**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ZEA	**Zeya**	**43.45**	**346**	*eP*	**P**	**14 59 08.0**	**+0.6**
STKA	**Stephens Creek**	**43.76**	**182**	P	**P**	**14 59 09.1**	**-1.1**
	comp=Z,3.3nm,0.5s,baz=2.3,slow=7.4,SNR=14						
	comp=Z,3.3nm,0.5s						
STKA	**Stephens Creek**	**43.76**	**182**	P	**P**	**14 59 09.1**	**-1.1**
STKA	**Stephens Creek**	**43.76**	**182**	P	**P**	**14 59 09.1**	**-1.1**
STKA				pmax	pmax		
	comp=Z,2.0nm,1.4s						
PSI	**Prapat**	**44.87**	**262**	P	**P**	**14 59 19.5**	**-0.1**
PSI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
RPSI	**Rantau Prapat**	**44.90**	**262**	P	**P**	**14 59 19.5**	**-0.2**
RPSI				IAmb	IAmb	14 59 20.2	
	comp=Z,6.3nm,0.7s						
FORT	**Forrest**	**45.07**	**199**	P	**P**	**14 59 20.7**	**0.0**
BBOO	**Buckleboo**	**45.19**	**189**	P	**P**	**14 59 20.9**	**-0.7**
GSI	**Gunungsitoli**	**46.56**	**260**	P	**P**	**14 59 31.6**	**-1.2**
ULN	**Ulaanbaatar**	**46.74**	**327**	⇓*eP*	**P**	**14 59 33.1**	**-0.8**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.3s						
GTA	**Gaotai**	**47.02**	**313**	*eP*	**P**	**14 59 36.5**	**+0.2**
GTA				pP	pwP	14 59 43.5	+0.4
GTA				sP	sP	14 59 46.5	+7.4
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONM	**Songino Array**	**47.08**	**326**	P	**P**	**14 59 36.9**	**+0.4**
	comp=Z,1.7nm,0.5s,baz=146,slow=7.6,SNR=8.1						
SONM				PcP	**PcP**	**15 01 08.0**	**-0.5**
	comp=Z,1.1nm,0.8s,baz=125,slow=4.1,SNR=4.4						
	comp=Z,1.7nm,0.5s						
SONM	**Songino Array**	**47.08**	**326**	P	**P**	**14 59 36.7**	**+0.2**
SHEM	**Shemya Is, Ala**	**47.46**	**25**	LR	LR	15 17 30.8	
	comp=Z,81nm,20.6s,baz=308,slow=34						
CAN	**Canberra**	**47.47**	**174**	P	**P**	**14 59 39.5**	**-0.1**
CAN	**Canberra**	**47.47**	**174**	P	**P**	**14 59 39.5**	**-0.1**
CAN				pmax	pmax		
	comp=Z,27nm,1.4s						
MORW	**Morawa**	**48.65**	**212**	P	**P**	**14 59 48.5**	**-0.3**
TOO	**Toolangi**	**49.45**	**178**	P	**P**	**14 59 55.4**	**+0.6**
TOO	**Toolangi**	**49.45**	**178**	P	**P**	**14 59 55.4**	**+0.6**
TOO				pmax	pmax		
	comp=Z,27nm,1.3s						
SHL	**Shillong**	**50.16**	**293**	P	**P**	**15 00 00.0**	**-0.7**
SHL	**Shillong**	**50.16**	**293**	P	**P**	**15 00 00.0**	**-0.7**
SHL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
YAK	**Yakutsk**	**50.81**	**352**	P	**P**	**15 00 04.2**	**-0.5**
YAK				IAmb	IAmb	15 00 15.7	
	comp=Z,9.6nm,0.8s						
YAK	**Yakutsk**	**50.81**	**352**	⇓*eP*	**P**	**15 00 03.8**	**-0.9**
YAK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
NWAO	**Narrogin (SRO)**	**51.22**	**208**	P	**P**	**15 00 07.2**	**-0.9**
NWAO	**Narrogin (S

MKAR	Makanchi Array	61.49	317	P		P		15 01 20.3	-1.2
	comp=Z,4.8nm,1.1s,baz=116,slow=6.6,SNR=8.8								
	comp=Z,4.8nm,1.1s								
MKAR	Makanchi Array	61.49	317	P		P		15 01 19.6	-1.9
MKAR	Makanchi Array	61.49	317	*e*P		P		15 01 22.4	+0.9
MKAR				pmax		pmax			
	comp=Z,2.0nm,0.9s								
WHZ	Wether Hill Ro	61.86	161	P		P		15 01 22.6	-1.1
ZAA0	Zalesovo Array	61.94	325	P		P		15 01 23.4	-0.8
ZAA0				IAmb		IAmb		15 01 24.1	
	comp=Z,3.2nm,0.5s								
ZALV	Zalesovo Beam	61.94	325	P		P		15 01 23.7	-0.6
	comp=Z,3.4nm,0.4s,baz=107,slow=7.6,SNR=16								
ZALV				PcP		PcP		15 02 03.9	-1.1
	comp=Z,2.8nm,0.5s,baz=118,slow=3.8,SNR=8.2								
	comp=Z,3.4nm,0.4s								
ZALV	Zalesovo Beam	61.94	325	P		P		15 01 23.5	-0.8
ANM	Nome	63.15	22	P		P		15 01 32.6	+0.4
ANM				IAmb		IAmb		15 01 33.9	
	comp=Z,4.9nm,0.7s								
ANM	Nome	63.15	22	P		P		15 01 32.6	+0.4
ANM				pmax		pmax			
	comp=Z,5.0nm,0.7s								
KURK	Kurchatov	64.73	321	*d i*P		P		15 01 42.3	-0.5
KURK				pmax		pmax			
	comp=Z,10.0nm,1.0s								
KURBB	Kurchatov Arra	64.76	320	P		P		15 01 42.8	-0.2
	comp=Z,3.3nm,0.4s,baz=104,slow=6.7,SNR=33								
	comp=Z,3.3nm,0.4s								
O18K	Koktuh Hills	65.47	29	P		P		15 01 48.0	+0.5
O18K				IAmb		IAmb		15 02 10.8	
	comp=Z,9.5nm,1.2s								
O18K	Koktuh Hills	65.47	29	P		P		15 01 48.9	+1.4
	baz=251								
SVW2	Sparrevohn	65.71	28	P		P		15 01 49.6	+0.6
N19K	Bonanza Creek	66.12	28	P		P		15 01 52.9	+1.1
N19K				IAmb		IAmb		15 02 03.5	
	comp=Z,9.8nm,1.5s								
N19K	Bonanza Creek	66.12	28	P		P		15 01 53.2	+1.4
	baz=251								
L19K	White Mountain	66.40	27	P		P		15 01 55.2	+1.7
	baz=250,SNR=5.3								
RSO	Redoubt South	66.82	29	P		P		15 01 56.7	+0.3
L20K	Farewell, AK	66.93	27	P		P		15 01 57.9	+1.0
	baz=251								
M20K	Styx River	67.08	27	P		P		15 01 58.9	+1.0
M20K				IAmb		IAmb		15 02 01.5	
	comp=Z,9.5nm,1.2s								
M20K	Styx River	67.08	27	P		P		15 01 59.6	+1.8
	baz=252								
K20K	Telida	67.14	26	P		P		15 01 58.7	+0.5
K20K				IAmb		IAmb		15 02 01.9	
	comp=Z,5.1nm,0.9s								
K20K	Telida	67.14	26	P		P		15 02 00.0	+1.8
	baz=251								
CNPM	China Poot	67.29	30	P		P		15 01 59.1	-0.1
J20K	Nowinta River	67.38	25	P		P		15 02 00.7	+1.1
J20K				IAmb		IAmb		15 02 01.9	
	comp=Z,3.6nm,0.7s								
J20K	Nowinta River	67.38	25	P		P		15 02 01.1	+1.4
	baz=250,SNR=5.6								
PPLA	Purkeypile	67.80	27	P		P		15 02 02.8	+0.3
PPLA				IAmb		IAmb		15 02 18.6	
	comp=Z,7.9nm,1.2s								
SKT	Skwentna	67.83	28	P		P		15 02 03.3	+0.8
	baz=254								
CAST	Castle Rocks	68.01	26	P		P		15 02 04.1	+0.5
CAST	Castle Rocks	68.01	26	P		P		15 02 04.7	+1.0
	baz=252								
SUA	Susitna One	68.04	28	P		P		15 02 04.3	+0.3
SUA	Susitna One	68.04	28	P		P		15 02 04.8	+0.8
	baz=254								
CHUM	Lake Minchumin	68.05	25	P		P		15 02 05.8	+2.0
	baz=252								
IMAR	Indian Mountai	68.16	23	P		P		15 02 05.0	+0.4
SEW	Seward	68.31	30	P		P		15 02 06.3	+0.8
RC01	Rabbit Creek A	68.42	29	P		P		15 02 06.3	+0.1
RC01	Rabbit Creek A	68.42	29	P		P		15 02 06.6	+0.4
	baz=256								
H21K	Melozitna Rive	68.42	24	P		P		15 02 06.7	+0.5
H21K				IAmb		IAmb		15 02 08.6	
	comp=Z,6.7nm,1.1s								
H21K	Melozitna Rive	68.42	24	P		P		15 02 07.3	+1.1
	baz=251,SNR=6.0								
KTH	Kantishna Hill	68.55	26	P		P		15 02 07.6	+0.5
KTH				IAmb		IAmb		15 02 08.6	
	comp=Z,7.7nm,0.8s								
I21K	Tanana	68.59	24	P		P		15 02 07.9	+0.7
I21K				IAmb		IAmb		15 02 09.7	
	comp=Z,7.1nm,1.1s								
I21K	Tanana	68.59	24	P		P		15 02 08.2	+1.0
	baz=252,SNR=6.8								
BPAW	Bear Paw Mtn.	68.67	25	P		P		15 02 08.0	+0.1
BPAW				IAmb		IAmb		15 02 09.6	
	comp=Z,4.9nm,0.7s								
BPAW	Bear Paw Mtn.	68.67	25	P		P		15 02 09.3	+1.5
	baz=253								
TRF	Thorofare Moun	68.79	26	P		P		15 02 08.2	-0.5
TRF				IAmb		IAmb		15 02 20.4	
	comp=Z,7.7nm,1.0s								
TRF	Thorofare Moun	68.79	26	P		P		15 02 08.6	-0.2
	baz=254								
PMR	Palmer	68.82	28	P		P		15 02 09.2	+0.5
PMR				IAmb		IAmb		15 02 15.1	
	comp=Z,8.9nm,1.0s								
PMR	Palmer	68.82	28	P		P		15 02 09.2	+0.5
PMR				pmax		pmax			
	comp=Z,9.0nm,1.0s								
PMR	Palmer	68.82	28	P		P		15 02 09.4	+0.7
	baz=256								
MLY	Manley	69.05	25	P		P		15 02 10.5	+0.3
MLY				IAmb		IAmb		15 02 12.3	
	comp=Z,8.2nm,1.0s								
MLY	Manley	69.05	25	P		P		15 02 10.9	+0.7
	baz=253,SNR=12								
H22K	Ishtalitna Cre	69.05	24	P		P		15 02 11.0	+0.8
	baz=252								
KNK	Knik Glacier	69.09	29	P		P		15 02 11.4	+0.9
	baz=257								
BWN	Browne	69.34	26	P		P		15 02 12.1	+0.2
WAT1	Susitna Watana	69.39	27	P		P		15 02 12.2	-0.1
	baz=256								
RND	Reindeer	69.40	26	P		P		15 02 12.0	-0.4
RND				IAmb		IAmb		15 02 17.2	
	comp=Z,4.5nm,0.9s								
RND	Reindeer	69.40	26	P		P		15 02 12.0	-0.4
RND				pmax		pmax			
	comp=Z,4.0nm,0.9s								
I23K	Minto, Yukon-K	69.64	25	P		P		15 02 14.3	+0.6
I23K				IAmb		IAmb		15 02 16.0	
	comp=Z,7.7nm,1.0s								
I23K	Minto, Yukon-K	69.64	25	P		P		15 02 14.6	+0.8
	baz=254,SNR=7.8								
WAT6	Susitna Watana	69.69	27	P		P		15 02 14.5	+0.2
	baz=257								
SCM	Sheep Creek Mo	69.72	28	P		P		15 02 15.4	+1.0
	baz=258								
H23K	Yukon River	69.75	24	P		P		15 02 15.2	+0.7
H23K				IAmb		IAmb		15 02 16.9	
	comp=Z,5.3nm,0.8s								
H23K	Yukon River	69.75	24	P		P		15 02 15.5	+1.0
	baz=254,SNR=8.0								
COLD	Coldfoot	69.91	22	P		P		15 02 16.5	+1.1
COLD				IAmb		IAmb		15 02 21.6	
	comp=Z,7.2nm,0.8s								
COLD	Coldfoot	69.91	22	P		P		15 02 16.9	+1.6
	baz=253								
DHY	Denali Highway	69.97	27	P		P		15 02 17.0	+1.0
	baz=257								
WRH	Wood River Hil	69.99	25	P		P		15 02 15.5	-0.5
WRH				IAmb		IAmb		15 02 16.5	
	comp=Z,14nm,1.3s								
MDM	Murphy Dome	70.06	25	P		P		15 02 15.8	-0.6
MDM				IAmb		IAmb		15 02 18.9	
	comp=Z,5.0nm,0.7s								
CCB	Clear Creek Bu	70.16	25	P		P		15 02 16.0	-0.9
COLA	College	70.19	25	*ce*P		P		15 02 17.3	+0.2
COLA				pmax		pmax			
	comp=Z,7.0nm,1.3s								
D23K	Nanushuk River	70.27	21	P		P		15 02 19.3	+1.8
	baz=252,SNR=8.0								
KLU	Klutina	70.30	29	P		P		15 02 18.5	+0.5
KLU				IAmb		IAmb		15 02 23.2	
	comp=Z,9.5nm,1.0s								
KLU	Klutina	70.30	29	P		P		15 02 19.6	+1.6
	baz=259								
H24K	Noodor Dome	70.42	24	P		P		15 02 19.1	+0.5
H24K				IAmb		IAmb		15 02 21.0	
	comp=Z,8.4nm,1.1s								
H24K	Noodor Dome	70.42	24	P		P		15 02 20.1	+1.5
	baz=256,SNR=8.5								
POKR	Poker Plat Res	70.42	25	P		P		15 02 20.5	+2.0
	baz=256								
HDA	Harding Lake	70.46	26	P		P		15 02 17.8	-1.0
HDA				IAmb		IAmb		15 02 22.6	
	comp=Z,5.3nm,0.8s								
HDA	Harding Lake	70.46	26	P		P		15 02 18.1	-0.7
	baz=257								
TOLK	Toolik Lake Re	70.55	21	P		P		15 02 19.9	+0.6
TOLK				IAmb		IAmb		15 02 25.2	
	comp=Z,5.9nm,0.7s								
TOLK	Toolik Lake Re	70.55	21	P		P		15 02 20.5	+1.2
	baz=253,SNR=8.8								
C23K	Itkillik River	70.57	20	P		P		15 02 20.6	+1.3
	baz=252								
IL31		70.57	25	P		P		15 02 18.2	-1.2
IL31				IAmb		IAmb		15 02 23.0	
	comp=Z,4.4nm,0.8s								
ILAR	Eielson Array	70.57	25	P		P		15 02 18.4	-1.1
	comp=Z,3.1nm,0.4s,baz=247,slow=5.8,SNR=139								
	comp=Z,3.1nm,0.4s								
ILAR	Eielson Array	70.57	25	P		P		15 02 18.2	-1.2
PAX	Paxson	70.80	27	P		P		15 02 21.2	+0.2
PAX	Paxson	70.80	27	P		P		15 02 21.2	+0.2
PAX				pmax		pmax			
	comp=Z,20nm,1.5s								
PAX	Paxson	70.80	27	P		P		15 02 21.5	+0.5
	baz=259,SNR=8.2								
K24K	Donnelly Dome	70.83	26	P		P		15 02 21.4	+0.3
	baz=258,SNR=5.4								
HARP	HAARP	70.83	28	P		P		15 02 22.0	+0.8
	baz=259								
D24K	Happy Valley	70.96	21	P		P		15 02 23.0	+1.3
	baz=254,SNR=9.6								
C24K	Frklin Bluff	71.17	20	P		P		15 02 24.1	+1.1
	baz=253								
J25K	Salcha River,	71.17	26	P		P		15 02 22.3	-0.9
J25K				IAmb		IAmb		15 02 27.4	
	comp=Z,7.9nm,1.4s								
J25K	Salcha River,	71.17	26	P		P		15 02 22.6	-0.6
	baz=258,SNR=6.7								
RIDG	Independent Ri	71.22	27	P		P		15 02 23.5	-0.1
RIDG	Independent Ri	71.22	27	P		P		15 02 23.9	+0.3
	baz=259,SNR=6.7								
GLB	Gilahina Butte	71.29	29	P		P		15 02 24.0	0.0
GLB				IAmb		IAmb		15 02 26.0	
	comp=Z,10.0nm,1.1s								
VRDI	Verde Repeater	71.43	29	P		P		15 02 25.0	0.0
VRDI				IAmb		IAmb		15 02 38.8	
	comp=Z,6.4nm,1.0s								
CRQM	Cirque	71.51	30	P		P		15 02 25.8	+0.4
SCRK	Sand Creek	71.64	26	P		P		15 02 26.3	+0.2
SCRK	Sand Creek	71.64	26	P		P		15 02 26.8	+0.6
	baz=260,SNR=7.1								
L26K	Log Cabin Wild	71.76	27	P		P		15 02 27.3	+0.5
	baz=261								
J26L	Joseph Creek	71.92	26	P		P		15 02 27.6	-0.1
J26L				IAmb		IAmb		15 02 29.4	
	comp=Z,6.0nm,0.7s								
J26L	Joseph Creek	71.92	26	P		P		15 02 28.1	+0.3
	baz=260,SNR=11								
BMAR	Burnt Mountain	72.06	23	P		P		15 02 29.4	+0.9
GRNC	Granite Creek	72.18	30	P		P		15 02 30.4	+0.8
GRNC				IAmb		IAmb		15 02 32.2	
	comp=Z,8.8nm,0.8s								
I26K	Coal Creek Min	72.23	25	P		P		15 02 29.0	-0.5
	baz=260								
BARN	Barnard Glacie	72.27	30	P		P		15 02 30.7	+0.7
BARN				IAmb		IAmb		15 02 45.4	
	comp=Z,6.2nm,0.9s								
M27K	Edge Creek, AK	72.33	28	P		P		15 02 30.8	+0.5
M27K				IAmb		IAmb		15 02 34.8	
	comp=Z,6.6nm,1.1s								
CTG	Chitna Glacier	72.41	30	P		P		15 02 32.8	+1.9
	baz=263								
L27K	Beaver Creek,	72.45	27	P		P		15 02 31.4	+0.4
L27K	Beaver Creek,	72.45	27	P		P		15 02 31.7	+0.8
	baz=262								
BCAR	Beaver Creek A	72.47	27	P		P		15 02 31.3	+0.2
K27K	Chicken	72.48	26	P		P		15 02 32.8	+1.8
	baz=262								
LOGN	Logan Glacier	72.56	30	P		P		15 02 32.1	+0.3
BVCY	Beaver Creek	72.81	28	P		P		15 02 34.0	+1.0
	baz=263								
PCA	Pinnacle	72.85	31	P		P		15 02 33.1	-0.2
YUK3	Moose Creek	72.92	29	P		P		15 02 34.9	+1.0
	baz=264,SNR=5.8								
YUK8	Steele Glacier	73.20	29	P		P		15 02 36.8	+1.1
	baz=264								
DAWY	Dawson	73.66	27	P		P		15 02 38.1	0.0
DAWY				IAmb		IAmb		15 02 40.6	
	comp=Z,7.6nm,1.0s								
DAWY	Dawson	73.66	27	P		P		15 02 39.2	+1.2
	baz=264,SNR=7.4								
YUK4	Talbot Arm	73.75	29	P		P		15 02 40.7	+1.8
	baz=266								
YUK6	Outpost Mounta	73.85	30	P		P		15 02 41.7	+2.2
	baz=265								
HYT	Haines Junctio	74.26	30	P		P		15 02 43.0	+1.3
HYT				IAmb		IAmb		15 02 47.8	
	comp=Z,8.8nm,0.8s								
HYT	Haines Junctio	74.26	30	P		P		15 02 43.5	+1.8
	baz=267								
P30M	Million Dollar	74.49	31	P		P		15 02 45.4	+2.3
	baz=267								
N30M	Aishikik Lake	74.50	29	P		P		15 02 45.1	+2.1
	baz=267								
M30M	Minto, Yukon	74.70	28	P		P		15 02 44.6	+0.4
M30M	Minto, Yukon	74.70	28	P		P		15 02 45.4	+1.2
	baz=267								
PLBC	Pleasant Camp	74.77	31	P		P		15 02 46.6	+2.1
	baz=268								
EPYK	Eagle Plains	74.99	24	P		P		15 02 46.3	+0.6
EPYK				IAmb		IAmb		15 02 48.0	
	comp=Z,8.2nm,1.1s								
EPYK	Eagle Plains	74.99	24	P		P		15 02 46.4	+0.7
	baz=266								
N31M	Braeburn, Yuko	75.13	29	P		P		15 02 48.1	+1.4
	baz=268								
WHY	Whitehorse	75.54	30	P		P		15 02 50.3	+1.2
WHY				IAmb		IAmb		15 03 02.5	
	comp=Z,18nm,1.5s								
WHY	Whitehorse	75.54	30	P		P		15 02 50.5	+1.3
	baz=269								
JIS	Juneau Island	75.78	33	P		P		15 02 51.8	+1.5
M31M	Drury Creek, Y	75.81	29	P		P		15 02 51.1	+0.5
M31M				IAmb		IAmb		15 02 55.9	
	comp=Z,4.3nm,0.7s								
M31M	Drury Creek, Y	75.81	29	P		P		15 02 51.4	+0.9
	baz=269								
P33M	Teslin, Yukon	76.57	31	P		P		15 02 55.9	+1.0
P33M	Teslin, Yukon	76.57	31	P		P		15 02 55.8	+0.8
	baz=271								
ABKAR	Akbulak array	76.60	318	P		P		15 02 54.3	-0.9
MMPY	Sheldon Lake,	77.26	28	P		P		15 03 00.6	+1.8
	baz=272								
DLBC	Dease Lake	78.06	32	P		P		15 03 04.2	+0.9
DLBC				IAmb		IAmb		15 03 09.8	
	comp=Z,8.3nm,1.1s								
DLBC	Dease Lake	78.06	32	P		P		15 03 04.7	+1.3
	baz=274								
BBB	Bella Bella	79.70	39	P		P		15 03 13.2	+0.8
BBB				IAmb		IAmb		15 03 28.5	
	comp=Z,15nm,1.2s								
C36M	Paulatuk	79.71	21	P		P		15 03 11.8	-0.3
C36M				IAmb		IAmb		15 03 17.3	
	comp=Z,10nm,1.4s								
C36M	Paulatuk	79.71	21	P		P		15 03 12.0	0.0
	baz=277								
KIRV	Kirov	81.78	328	P		P		15 03 23.5	+0.1
	comp=Z,5.1nm,0.5s,baz=152,slow=6.9,SNR=3.6								
	comp=Z,5.1nm,0.5s								
KIRV	Kirov	81.78	328	*ce*P		P		15 03 24.9	+1.6
CASY	Casey	81.82	193	P		P		15 03 22.5	-0.7
PRGR	Permogore	83.06	332	*e*P		P		15 03 25.6	-4.4
BELG	Belogornoye	83.94	322	P		P		15 03 34.3	-0.4
	comp=Z,12nm,0.7s,baz=106,slow=3.3,SNR=4.5								
	comp=Z,12nm,0.7s								
YKA	Yellowknife Ar	84.89	27	P		P		15 03 39.5	+0.2
	comp=Z,1.6nm,0.5s,baz=287,slow=4.9,SNR=22								
	comp=Z,1.6nm,0.5s								
YKA	Yellowknife Ar	84.89	27	P		P		15 03 39.4	+0.1
L04D	Klamath Falls	85.21	48	P		P		15 03 42.2	+0.6
L04D				IAmb		IAmb		15 03 57.8	
	comp=Z,9.1nm,1.1s								
L04D	Klamath Falls	85.21	48	P		P		15 03 42.6	+1.0
	baz=282								
SPITS	Spitsbergen Ar	85.25	350	P		P		15 03 42.0	+1.1
SPITS				pmax		pmax			
	comp=Z,31nm,1.4s								
J05D	Fort Rock, OR	85.76	47	P		P		15 03 45.7	+1.4
	baz=283								
PINE	Pine Mountain	85.86	46	P		P		15 03 44.5	-0.3
PINE				IAmb		IAmb		15 03 52.4	
	comp=Z,4.9nm,0.8s								
B08A	Colville Reser	85.91	42	P		P		15 03 45.3	+0.5
B08A				IAmb		IAmb		15 03 46.7	
	comp=Z,5.5nm,0.8s								
RES	Resolute Bay	86.34	13	P		P		15 03 46.8	+0.5
RES				IAmb		IAmb		15 03 52.1	
	comp=Z,12nm,1.4s								
RES	Resolute Bay	86.34	13	P		P		15 03 46.8	+0.5
RES				pmax		pmax			
	comp=Z,12nm,1.5s								
BEKR	Beckworth	87.16	50	P		P		15 03 51.6	+0.3
NEW	Newport	87.36	41	P		P		15 03 51.4	-0.6
NEW				IAmb		IAmb		15 03 58.2	
	comp=Z,5.3nm,0.9s								
NEW	Newport	87.36	41	P		P		15 03 51.4	-0.6
NEW				pmax		pmax			
	comp=Z,5.0nm,1.0s								
NEW	Newport	87.36	41	P		P		15 03 53.1	+1.2
	baz=285								
KEV	Kevo	87.44	342	P		P		15 03 50.8	-1.0
KEV	Kevo	87.44	342	P		P		15 03 50.8	-1.0
KEV				pmax		pmax			
	comp=Z,14nm,1.2s								
VRH	Novokhopyorsk	87.78	322	*e*P		P		15 03 49.8	-4.0
VRH				pmax		pmax			
	comp=Z,20nm,0.6s								
ARCES	ARCESS Array B	88.01	342	P		P		15 03 53.8	-0.8
	comp=Z,1.6nm,0.6s,baz=69,slow=7.3,SNR=24								
	comp=Z,1.6nm,0.6s								
ARCES	ARCESS Array B	88.01	342	P		P		15 03 53.7	-0.8
ARCES	ARCESS Array B	88.01	342	P		P		15 03 53.7	-0.8
ARCES				pmax		pmax			
	comp=Z,3.0nm,1.2s								
LPSR	Galich'ya Gora	89.01	324	*e*P		P		15 03 56.9	-2.7
LPSR				pmax		pmax			
	comp=Z,9.0nm,0.8s								
KVN	Kaiserville	89.05	50	P		P		15 04 01.6	+1.2
KVN	Kaiserville	89.05	50	P		P		15 04 01.6	+1.2
KVN				pmax		pmax			
	comp=Z,2.0nm,0.7s								
NVAR	Mina Array Bea	89.06	51	P		P		15 04 01.6	+1.2
	comp=Z,2.2nm,0.5s,baz=262,slow=5.9,SNR=28								
	comp=Z,2.2nm,0.5s								
NVAR	Mina Array Bea	89.06	51	P		P		15 04 02.0	+1.6
VORR	Voronezh	89.14	323	*e*P		P		15 03 58.7	-1.5
NV11	Mina Array Sit	89.17	51	P		P		15 04 02.0	+1.1
KIV	Kislovodsk	89.18	315	*e*P		P		15 04 00.2	-0.5
KIV				*e*				15 07 30.4	
KIV				*e*PPP		PPP		15 09 29.0	
KIV				pmax		pmax			
	comp=Z,4.0nm,0.9s								
VSR	Storozhevoye	89.31	322	*e*P		P		15 03 57.8	-3.2
VSR				pmax		pmax			
	comp=Z,10.0nm,0.6s								
OBN	Obninsk	89.49	327	*i* P		P		15 03 58.7	-3.0
OBN				*i*				15 04 03.7	
OBN				pmax		pmax			
	comp=Z,12nm,1.2s								
MFID	Camas Ranch	89.55	46	P		P		15 04 03.4	+0.9
MFID				IAmb		IAmb		15 04 04.6	
	comp=Z,4.2nm,1.1s								
VNDA	Vanda	90.09	176	P		P		15 04 03.2	-0.8
	comp=Z,0.6nm,0.7s,baz=320,slow=4.4,SNR=4.7								
	comp=Z,0.6nm,0.7s								
VNDA	Vanda	90.09	176	IAmb		IAmb		15 04 09.9	
	comp=Z,2.8nm,1.5s								
VNDA	Vanda	90.09	176	P		P		15 04 03.2	-0.8
VNDA				pmax		pmax			
	comp=Z,3.0nm,1.5s								
LRMC	Laurel Mtn Rad	90.29	54	P		P		15 04 07.6	+1.4
	baz=285								
MPMC	Manual Prospec	90.29	53	P		P		15 04 07.9	+1.6
	baz=285								
HLID	Hailey	90.49	45	P		P		15 04 08.5	+1.6
	baz=287								
TPNV	Topopah Spring	91.02	52	P		P		15 04 10.9	+1.4
	baz=286								
GSC	Goldstone, Bar	91.03	54	P		P		15 04 10.3	+0.8
	baz=286								
LRM	Limekiln Ridge	91.13	43	P		P		15 04 10.4	+0.5
R11A	Troy Canyon, C	91.14	50	P		P		15 04 10.2	+0.2
	baz=286								
TUQ	Turquoise Moun	91.69	53	P		P		15 04 14.1	+1.5
	baz=286								
BOZ	Bozeman (W)	91.75	43	P		P		15 04 14.0	+1.3
	baz=289								
PFO	Pinyon Flats O	91.76	55	*e*P		P		15 04 14.3	+1.3
PFO				pmax		pmax			
	comp=Z,6.0nm,1.1s								
FINES	FINESS Array B	91.84	335	P		P		15 04 10.6	-1.9
	comp=Z,4.0nm,0.8s,baz=62,slow=5.1,SNR=20								
	comp=Z,4.0nm,0.8s								
FINES	FINESS Array B	91.84	335	*e*P		P		15 04 10.9	-1.6
FINES				pmax		pmax			
	comp=Z,3.0nm,0.6s								
MONP2	Monument Peak	91.98	56	P		P		15 04 15.1	+1.0
	baz=286								
BELC	Belle Mtn. Jos	92.02	55	P		P		15 04 15.0	+0.8
	baz=286								
GMRC	Granite Mounta	92.07	54	P		P		15 04 15.5	+1.0
	baz=286								
YHL	Hebgen Lake	92.29	43	P		P		15 04 16.3	+0.8
YHL				IAmb		IAmb		15 04 27.1	
	comp=Z,6.3nm,1.2s								
BC3	Big Chuckawall	92.55	55	P		P		15 04 17.4	+0.8
	baz=286								
IRM	Iron Mountain	92.66	54	P		P		15 04 18.3	+1.3
	baz=286								
RLMT	Red Lodge	93.47	43	P		P		15 04 22.5	+1.7
	ba

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Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
DRK	**Karamyk**	**1.33**	**283**	⇑*iP*	**Pn**	**14 58 40.5**	**+0.2**
	baz=74						
DRK				⇑*iS*	**Sb**	**14 58 59.1**	**+1.2**
	baz=74						
DRK	**Karamyk**	**1.33**	**283**	Pn	**Pn**	**14 58 40.7**	**+0.3**
OHH	**Osh**	**1.43**	**338**	⇑*iP*	**Pn**	**14 58 38.7**	**-2.8**
	baz=33						
OHH				⇑*iS*	**Sn**	**14 58 56.5**	**-3.8**
	baz=33						
KSH	**Kashi**	**1.96**	**80**	Pg	**Pn**	**14 58 46.3**	**-2.6**
KSH				Sg	**Sn**	**14 59 08.8**	**-4.8**
KSH				smax	smax		
	comp=N,2μm,0.6s						
KSH				smax	smax		
	comp=E,1μm,0.7s						
BTK	**Batken**	**2.23**	**293**	⇑*eP*	**Pn**	**14 58 54.6**	**+2.1**
	baz=88						
BTK				⇑*iS*	**Sb**	**14 59 23.6**	**+0.2**
	baz=88						
BTK	**Batken**	**2.23**	**293**	Pn	**Pn**	**14 58 53.2**	**+0.7**
BTK	**Batken**	**2.23**	**293**	PN	**Pn**	**14 58 53.2**	**+0.7**
GAR	**Garm**	**2.47**	**266**	⇑*eP*	**Pb**	**14 58 59.2**	**-0.7**
	baz=62						
GAR				⇑*iS*	**Sb**	**14 59 31.7**	**+1.3**
	baz=62						
GAR	**Garm**	**2.47**	**266**	Pn	**Pb**	**14 58 58.4**	**-1.6**
ARLS	**Aral**	**2.73**	**13**	⇑*eP*	**Pn**	**14 58 59.1**	**-0.4**
	baz=14						
ARLS				⇑*iS*	**Sn**	**14 59 31.6**	**-1.1**
	baz=14						
AML	**Almayashu**	**2.93**	**3**	P	**Pn**	**14 59 03.0**	**+0.6**
	SNR=40						
TRKS	**Terek-Say**	**2.93**	**323**	⇑*iP*	**Pn**	**14 59 02.2**	**-0.1**
	baz=20						
TRKS				⇑*iS*	**Sn**	**14 59 36.7**	**-0.9**
	baz=20						
UCH	**Uchtor**	**3.12**	**14**	P	**Pn**	**14 59 06.3**	**+1.1**
	SNR=71						
UCH	**Uchtor**	**3.12**	**14**	⇑*eP*	**Pn**	**14 59 05.0**	**-0.2**
	baz=14						
UCH				⇑*eS*	**Sn**	**14 59 41.6**	**-1.2**
	baz=14						
CHGR	**Chuyangaron**	**3.41**	**262**	Pn	**Pn**	**14 59 11.0**	**+2.2**
CHGR	**Chuyangaron**	**3.41**	**262**	PN	**Pn**	**14 59 11.0**	**+2.2**
EKS2	**Erkin-Say**	**3.46**	**4**	P	**Pn**	**14 59 11.1**	**+1.6**
	SNR=42						
EKS2	**Erkin-Say**	**3.46**	**4**	⇑*eP*	**Pn**	**14 59 09.3**	**-0.2**
	baz=3.0						
EKS2				⇑*eS*	**Sn**	**14 59 49.4**	**-1.3**
	baz=3.0						
AAK	**Ala-Archa**	**3.52**	**12**	P	**Pn**	**14 59 11.6**	**+1.3**
	SNR=29						
AAK	**Ala-Archa**	**3.52**	**12**	Pn	**Pn**	**14 59 11.9**	**+1.6**
	15nm,0.3s,baz=185,slow=9.9,SNR=37						
AAK				Sn	**Sn**	**14 59 53.7**	**+1.6**
	9.0nm,0.3s,baz=341,slow=23,SNR=11						
AAK				Lg	Lg	15 00 00.7	
	22nm,0.3s,baz=160,slow=22,SNR=5.8						
	77nm,0.5s						
AAK	**Ala-Archa**	**3.52**	**12**	⇑*iP*	**Pn**	**14 59 10.3**	**0.0**
	baz=12						
AAK				⇑*iS*	**Sn**	**14 59 50.8**	**-1.3**
	baz=12						
AAK	**Ala-Archa**	**3.52**	**12**	Pn	**Pn**	**14 59 07.8**	**-2.5**
KBK	**Karagaybulak**	**3.63**	**17**	P	**Pn**	**14 59 15.0**	**+3.1**
	SNR=18						
KBK	**Karagaybulak**	**3.63**	**17**	⇑*eP*	**Pn**	**14 59 11.5**	**-0.3**
	baz=18						
KBK				⇑*iS*	**Sn**	**14 59 53.2**	**-1.6**
	baz=18						
ULHL	**Ulahol**	**3.70**	**34**	P	**Pb**	**14 59 19.8**	**-1.1**
	SNR=32						
ULHL	**Ulahol**	**3.70**	**34**	⇑*eP*	**Pn**	**14 59 12.9**	**+0.1**
	baz=35						
ULHL				⇑*iS*	**Sn**	**14 59 55.3**	**-1.2**
	baz=35						
BOOM	**Boomskoye usch**	**3.78**	**29**	⇑*eP*	**Pn**	**14 59 14.1**	**+0.2**
	baz=30						
BOOM				⇑*iS*	**Sn**	**14 59 57.1**	**-1.4**
	baz=30						
TAS	**Tashkent**	**3.84**	**305**	⇓*iP*	**Pn**	**14 59 16.5**	**+1.9**
	baz=2.0						
TAS				⇓*iS*	**Sn**	**15 00 01.2**	**+1.4**
	baz=2.0						
CHMS	**Chumysh**	**3.92**	**14**	P	**Pn**	**14 59 16.9**	**+1.3**
	SNR=16						
CHMS	**Chumysh**	**3.92**	**14**	PN	**Pn**	**14 59 17.4**	**+1.8**
CHMS				SN	**Sb**	**15 00 13.6**	**+1.6**
CHMS	**Chumysh**	**3.92**	**14**	⇓Pn	**Pn**	**14 59 17.4**	**+1.8**
	17nm,0.4s						
CHMS				⇑Sn	**Sb**	**15 00 13.6**	**+1.6**
	172nm,0.9s						
IUG	**luzhnay**	**3.94**	**319**	*eP*	**Pb**	**14 59 24.2**	**-0.8**
	921nm,0.7s						
IUG				*eS*	**Sb**	**15 00 13.7**	**+0.9**
	222nm,0.5s						
DZA	**Taraz**	**4.03**	**337**	*eP*	**Pb**	**14 59 25.2**	**-1.3**
	50nm,0.1s						
DZA				*eS*	**Sb**	**15 00 15.6**	**+0.3**
	234nm,0.4s						
TKM2	**Tokmak 2**	**4.05**	**23**	P	**Pn**	**14 59 22.1**	**+4.5**
	SNR=12						
TKM2	**Tokmak 2**	**4.05**	**23**	⇑*eP*	**Pn**	**14 59 17.6**	**0.0**
	baz=23						
TKM2				⇑*iS*	**Sn**	**15 00 03.4**	**-1.8**
	baz=23						
TKM2	**Tokmak 2**	**4.05**	**23**	PN	**Pn**	**14 59 18.3**	**+0.7**
TKM2				SN	**Sb**	**15 00 18.2**	**+2.2**
TKM2	**Tokmak 2**	**4.05**	**23**	⇑Pn	**Pn**	**14 59 18.3**	**+0.7**
	14nm,0.6s						
TKM2				⇑Sn	**Sb**	**15 00 18.2**	**+2.2**
	48nm,0.5s						
KDJ	**Kajisay**	**4.06**	**43**	⇑*eP*	**Pn**	**14 59 18.2**	**+0.4**
	baz=44						
KDJ				⇑*iS*	**Sn**	**15 00 04.4**	**-1.1**
	baz=44						
KDJ	**Kajisay**	**4.06**	**43**	Pn	**Pn**	**14 59 16.9**	**-0.9**
KDJ	**Kajisay**	**4.06**	**43**	PN	**Pn**	**14 59 16.9**	**-0.9**
USP	**Ospenovka**	**4.13**	**10**	P	**Pn**	**14 59 19.8**	**+1.1**
	SNR=19						
TARG	**Taragay, Kyrgy**	**4.16**	**51**	Pn	**Pn**	**14 59 18.8**	**-0.5**
TARG	**Taragay, Kyrgy**	**4.16**	**51**	PN	**Pn**	**14 59 18.8**	**-0.5**
KST	**Kastek**	**4.27**	**25**	*eP*	**Pb**	**14 59 29.5**	**-1.2**
	23nm,0.6s						
KST				*eS*	**Sb**	**15 00 23.4**	**+1.1**
	164nm,0.9s						
CHM	**Chimkent**	**4.28**	**318**	*eP*	**Pb**	**14 59 32.5**	**+1.7**
	5.4nm,0.4s						
CHM				*eS*	**Sb**	**15 00 27.9**	**+5.3**
	455nm,0.4s						
SGDS	**Sogindy**	**4.33**	**11**	*eP*	**Pb**	**14 59 30.2**	**-1.6**
	18nm,0.8s						
SGDS				*eS*	**Sb**	**15 00 24.2**	**+0.1**
	38nm,0.5s						
DGS	**Degeres**	**4.39**	**22**	*eP*	**Pb**	**14 59 32.4**	**-0.4**
	38nm,0.6s						
DGS				*eS*	**Sb**	**15 00 27.7**	**+1.9**
	161nm,1.0s						
KK31	**Karatay Array**	**4.50**	**331**	Pn	**Pn**	**14 59 20.7**	**-2.9**
KK31	**Karatay Array**	**4.50**	**331**	PN	**Pn**	**14 59 25.2**	**+1.6**
KK31				SN	**Sn**	**15 00 18.9**	**+3.0**
KK31	**Karatay Array**	**4.50**	**331**	Pn	**Pn**	**14 59 25.2**	**+1.6**
	5.7nm,0.5s,baz=130,slow=11,SNR=24						
KK31				Pg	**Pb**	**14 59 36.8**	**+2.3**
	28nm,0.6s,baz=147,slow=16,SNR=8.6						
KK31				⇓Sn	**Sn**	**15 00 18.9**	**+3.0**
	27nm,0.5s,baz=159,slow=23,SNR=4.3						
KKAR	**Karatay Array**	**4.50**	**331**		**Pn**	**14 59 20.7**	**-2.9**
KKAR	**Karatay Array**	**4.50**	**331**	Pn	**Pn**	**14 59 20.9**	**-2.7**
KKAR	**Karatay Array**	**4.50**	**331**	PN	**Pn**	**14 59 20.7**	**-2.9**
MTBS	**Maitube**	**4.51**	**29**	*eP*	**Pb**	**14 59 34.0**	**-0.8**
	35nm,0.5s						
MTBS				*eS*	**Sb**	**15 00 30.4**	**+1.1**
	85nm,0.8s						
TNSS	**Tian-Shan**	**4.64**	**33**	*eP*	**Pb**	**14 59 36.7**	**-0.4**
	29nm,0.7s						
TNSS				*eS*	**Sb**	**15 00 34.8**	**+1.5**
	40nm,0.7s						
AAA	**Alma-Ata**	**4.77**	**32**	*eP*	**Pb**	**14 59 38.9**	**-0.2**
	34nm,0.5s						
AAA				*eS*	**Sb**	**15 00 39.7**	**+3.0**
	163nm,0.9s						
KRBS	**Karabastau**	**4.79**	**19**	*eP*	**Pb**	**14 59 39.0**	**-0.4**
	11nm,0.5s						
KRBS				*eS*	**Sb**	**15 00 38.8**	**+1.7**
	41nm,0.7s						
KNDC	**Almaty**	**4.80**	**32**	PN	**Pb**	**14 59 39.4**	**-0.2**
KNDC				SN	**Sb**	**15 00 40.9**	**+3.5**
KNDC	**Almaty**	**4.80**	**32**	⇑Pn	**Pb**	**14 59 39.4**	**-0.2**
	74nm,0.8s						
KNDC				⇓Sn	**Sb**	**15 00 41.0**	**+3.5**
	202nm,0.7s						
KTBS	**Karatobe**	**5.11**	**27**	*eP*	**Pb**	**14 59 45.4**	**+0.4**
	14nm,0.7s						
KTBS				*eS*	**Sb**	**15 00 49.7**	**+3.3**
	110nm,0.7s						
KUU	**Kurty**	**5.16**	**24**	*eP*	**Pb**	**14 59 46.0**	**+0.3**
	23nm,0.8s						
KUU				*eS*	**Sb**	**15 00 50.6**	**+3.0**
	50nm,0.7s						
CHKK	**Chushkaly**	**5.34**	**28**	*eP*	**Pb**	**14 59 49.0**	**+0.2**
	5.3nm,0.6s						
CHKK				*eS*	**Sb**	**15 00 55.9**	**+2.9**
	27nm,0.7s						
SATY	**Saty**	**5.36**	**42**	*eP*	**Pb**	**14 59 49.6**	**+0.5**
	11nm,0.6s						
SATY				*eS*	**Sb**	**15 00 56.9**	**+3.3**
	38nm,0.8s						
ZHN	**Zhinishke**	**5.45**	**42**	*eP*	**Pb**	**14 59 52.5**	**+1.8**
	8.5nm,0.3s						
ZHN				*eS*	**Sb**	**15 01 01.8**	**+5.6**
	26nm,1.0s						
KURS	**Kuram**	**5.55**	**38**	*eP*	**Pb**	**14 59 54.5**	**+2.0**
	12nm,0.6s						
KURS				*eS*	**Sb**	**15 01 05.2**	**+6.2**
	31nm,1.6s						
KPKS	**Kokpek**	**5.79**	**41**	*eP*	**Pb**	**14 59 57.6**	**+1.1**
	11nm,0.7s						
KPKS				*eS*	**Sb**	**15 01 10.8**	**+4.9**
	26nm,0.8s						
BTLS	**Baital**	**5.85**	**4**	*eP*	**Pb**	**14 59 56.0**	**-1.5**
	8.7nm,0.6s						
BTLS				*eS*	**Sb**	**15 01 08.8**	**+1.2**
	28nm,0.9s						
KBL	**Kabul**	**5.85**	**219**	Pn	Pn	14 59 46.3	+3.9
KBL	**Kabul**	**5.85**	**219**	PN	Pn	14 59 46.3	+3.9
ARXS	**Arharly**	**5.97**	**32**	*eP*	**Pb**	**14 59 59.6**	**0.0**
	20nm,0.6s						
ARXS				*eS*	**Sb**	**15 01 16.2**	**+5.0**
	64nm,0.9s						
SHLS	**Shalkode**	**6.00**	**47**	*eP*	**Pg**	**15 00 08.1**	**-2.2**
	8.2nm,0.3s						
SHLS				*eS*	**Sg**	**15 01 28.4**	**+0.4**
	25nm,0.9s						
PDGK	**Podgornoye**	**6.13**	**46**	PN	**Pn**	**14 59 47.3**	**+1.2**
PDGK	**Podgornoye**	**6.13**	**46**	⇑Pn	**Pn**	**14 59 47.3**	**+1.2**
	9.4nm,0.6s						
PDGK				⇓Lg	Lg	15 01 22.9	
	35nm,0.8s						
BLB	**Baldybastay**	**6.16**	**36**	*eP*	**Pb**	**15 00 03.5**	**+0.7**
	38nm,0.6s						
BLB				*eS*	**Sb**	**15 01 22.3**	**+5.6**
	33nm,0.9s						
KNOS	**Konyrlen**	**6.69**	**38**	*eP*	**Pb**	**15 00 14.3**	**+2.5**
	7.3nm,0.7s						
KNOS				*eS*	**Sb**	**15 01 39.0**	**+7.2**
	43nm,0.9s						
KTMS	**Ketmen**	**6.69**	**48**	*eP*	Pb	15 00 17.3	+5.5
	0.8nm,0.5s						
KTMS				*eS*	**Sg**	**15 01 44.1**	**-5.9**
	4.3nm,0.6s						
TDK	**Taldyqorghan**	**6.86**	**31**	*eP*	**Pb**	**15 00 18.7**	**+4.1**
	25nm,0.3s						
TDK				*eS*	Sb	15 01 46.7	+10
	79nm,1.0s						
DJR	**Jarkent**	**6.97**	**41**	*eP*	**Pb**	**15 00 18.6**	**+2.1**
	2.2nm,0.3s						
DJR				*eS*	**Sb**	**15 01 46.9**	**+7.1**
	16nm,1.1s						
MK31	**Makanchi Array**	**9.96**	**38**	Pn	**Pn**	**15 00 35.8**	**-2.8**
MK31	**Makanchi Array**	**9.96**	**38**	⇑*eP*	**Pn**	**15 00 40.6**	**+2.1**
MKAR	**Makanchi Array**	**9.96**	**38**	Pn	**Pn**	**15 00 40.7**	**+2.2**
	baz=222,slow=13,SNR=6.4						
MKAR				Lg	Lg	15 03 19.8	
	baz=217,slow=29						
	0.9nm,0.8s						
MKAR	**Makanchi Array**	**9.96**	**38**	Pn	**Pn**	**15 00 36.3**	**-2.2**
MKAR	**Makanchi Array**	**9.96**	**38**	P	**Pn**	**15 00 36.3**	**-2.2**
WMQ	**Urumqi**	**11.61**	**62**	*eP*	**Pn**	**15 01 04.5**	**+3.3**
KURBB	**Kurchatov Arra**	**11.96**	**16**	Pn	**Pn**	**15 01 04.4**	**-1.6**
	0.1nm,0.3s,baz=210,slow=13,SNR=2.6						
KURBB				Lg	Lg	15 04 23.6	
	0.1nm,0.3s,baz=210,slow=29,SNR=4.2						
	0.8nm,0.2s						
KURK	**Kurchatov**	**12.07**	**16**		**Pn**	**15 01 04.4**	**-3.0**
KURK	**Kurchatov**	**12.07**	**16**	P	**Pn**	**15 01 04.4**	**-3.0**
GEYT	**Alibeck**	**12.09**	**269**	Pn	**Pn**	**15 01 08.4**	**+0.6**
	0.4nm,0.3s,baz=70,slow=22,SNR=1.5						
	1.2nm,0.5s						
GEYT	**Alibeck**	**12.09**	**269**	Pn	**Pn**	**15 01 08.1**	**+0.3**
GYA0	**ALIBECK ARRAY**	**12.09**	**269**	P	**Pn**	**15 01 08.2**	**+0.4**
GYA0B	**ALIBECK ARRAY**	**12.09**	**269**	Pn	**Pn**	**15 01 08.2**	**+0.4**
AB31	**Akbulak array**	**13.95**	**321**	P	**Pn**	**15 01 30.8**	**-2.2**
AB31	**Akbulak array**	**13.95**	**321**	P	**Pn**	**15 01 30.8**	**-2.2**
	1.6nm,0.5s,baz=129,slow=13,SNR=19						
ABKAR	**Akbulak array**	**13.95**	**321**	Pn	**Pn**	**15 01 30.9**	**-2.1**
AKTO	**Aktyubinsk**	**15.66**	**321**	Pn	**Pn**	**15 01 52.4**	**-3.7**
	0.3nm,0.3s,baz=119,slow=16,SNR=4.3						
AKTO				Sn	**Sn**	**15 04 41.0**	**-8.7**
	0.2nm,0.3s,baz=150,slow=23,SNR=1.9						
	1.0nm,0.4s						
AKTO	**Aktyubinsk**	**15.66**	**321**	⇑P	**Pn**	**15 01 55.6**	**-0.5**
	4.8nm,0.7s						
ARU	**Arti**	**19.86**	**335**	P	**P**	**15 02 46.5**	**+0.1**
	baz=131,slow=11,SNR=3.4						
ARU				Lg	Lg	15 08 40.4	
	baz=131,slow=16,SNR=1.4						
	3.6nm,0.6s						
ARU	**Arti**	**19.86**	**335**	*c iP*	**Pn**	**15 02 48.5**	**+0.5**
ARU				S	**Sn**	**15 06 34.6**	**+3.6**
ARU				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GTA	**Gaotai**	**20.36**	**81**	*eP*	Pn	15 02 54.5	+0.3
GTA				pP	sP	15 02 59.0	+0.8
GTA				sP	pP	15 03 01.8	+5.5
GTA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BELG	**Belogornoye**	**22.19**	**315**	P	**P**	**15 03 10.9**	**-0.6**
	comp=Z,9.7nm,0.5s,baz=82,slow=7.1,SNR=1.8						
	comp=Z,9.7nm,0.5s						
BELG	**Belogornoye**	**22.19**	**315**	*eP*	**P**	**15 03 14.4**	**+2.8**
BELG				pmax	pmax		
	comp=Z,5.0nm,1.2s						
ONI	**Oni**	**22.89**	**288**	P	**P**	**15 03 20.6**	**+1.4**
ONI	**Oni**	**22.89**	**288**	P	**P**	**15 03 20.6**	**+1.4**
ONI				pmax	pmax		
	comp=Z,15nm,0.6s						
KBZ	**Khabaz**	**23.29**	**291**	P	**P**	**15 03 23.1**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=94,slow=13,SNR=1.8						
	comp=Z,0.8nm,0.5s						
KBZ	**Khabaz**	**23.29**	**291**	⇑*eP*	**P**	**15 03 24.4**	**+1.2**
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SONM	**Songino Array**	**25.23**	**59**	P	**P**	**15 03 41.2**	**-0.3**
	comp=Z,1.7nm,0.8s,baz=251,slow=9.7,SNR=7.0						
	comp=Z,1.7nm,0.8s						
ULN	**Ulaanbaatar**	**25.67**	**59**	⇓*eP*	**P**	**15 03 46.4**	**+0.9**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.9s						
HHC	**Hu-ho-hao-te**	**29.06**	**74**	*eP*	**P**	**15 04 15.0**	**-1.0**
BRTR	**Keskin Array B**	**30.59**	**284**	P	**P**	**15 04 30.7**	**+1.2**
	comp=Z,1.7nm,0.6s,baz=80,slow=6.8,SNR=9.3						
	comp=Z,1.7nm,0.6s						
BRTR	**Keskin Array B**	**30.59**	**284**	P	**P**	**15 04 31.6**	**+2.0**
BRTR	**Keskin Array B**	**30.59**	**284**	*i* P	**P**	**15 04 31.7**	**+2.2**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKASG	**Malin Array Be**	**32.89**	**305**	P	**P**	**15 04 49.8**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=77,slow=7.6,SNR=5.8						
	comp=Z,0.4nm,0.4s						
AKASG	**Malin Array Be**	**32.89**	**305**	*i* P	**P**	**15 04 49.7**	**+0.3**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKBB	**Malin Array Si**	**32.89**	**305**	⇓*eP*	**P**	**15 04 49.6**	**+0.2**
FIA1	**FINESS Array S**	**36.41**	**323**	P	**P**	**15 05 20.2**	**+0.5**
FIA1				IAmb	IAmb	15 05 29.2	
	comp=Z,7.4nm,1.2s						
FINES	**FINESS Array B**	**36.41**	**323**	P	**P**	**15 05 19.8**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=115,slow=9.0,SNR=10						
	comp=Z,0.9nm,0.3s						
FINES	**FINESS Array B**	**36.41**	**323**	P	**P**	**15 05 20.0**	**+0.3**
FINES	**FINESS Array B**	**36.41**	**323**	*i* P	**P**	**15 05 20.3**	**+0.6**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ARCES	**ARCESS Array B**	**39.45**	**336**	P	**P**	**15 05 45.0**	**-0.2**
	comp=Z,2.2nm,0.8s,baz=111,slow=8.6,SNR=7.1						
	comp=Z,2.2nm,0.8s						
ARCES	**ARCESS Array B**	**39.45**	**336**	P	**P**	**15 05 45.1**	**-0.2**
ARCES				IAmb	IAmb	15 05 51.6	
	comp=Z,8.7nm,1.4s						
ARCES	**ARCESS Array B**	**39.45**	**336**	P	**P**	**15 05 45.1**	**-0.2**
ARCES				pmax	pmax		
	comp=Z,9.0nm,1.4s						
SCTE	**Santa Cesarea**	**41.79**	**289**	P	**P**	**15 06 05.7**	**+0.7**
KLR	**Kul'dur**	**41.99**	**56**	P	**P**	**15 06 06.7**	**+0.1**
	comp=Z,1.4nm,0.5s,baz=284,slow=7.1,SNR=8.8						
	comp=Z,1.4nm,0.5s						
SEHB	**SEOHWA**	**42.18**	**73**	P	**P**	**15 06 08.7**	**+0.4**
SEHB				IAmb	IAmb	15 06 32.3	
	comp=Z,15nm,1.2s						
TIXI	**Tiksi**	**42.53**	**23**	P	**P**	**15 06 09.7**	**-1.0**
TIXI	**Tiksi**	**42.53**	**23**	⇓*iP*	**P**	**15 06 08.9**	**-1.8**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.9s						
GERES	**GERESS Array B**	**43.03**	**303**	P	**P**	**15 06 15.9**	**+0.7**
	comp=Z,0.3nm,0.4s,baz=64,slow=11,SNR=6.0						
	comp=Z,0.3nm,0.4s						
GERES	**GERESS Array B**	**43.03**	**303**	P	**P**	**15 06 16.4**	**+1.3**
GERES	**GERESS Array B**	**43.03**	**303**	P	**P**	**15 06 16.4**	**+1.3**
KHC	**Kasperske Hory**	**43.06**	**304**	P	**P**	**15 06 16.2**	**+0.9**
KHC	**Kasperske Hory**	**43.06**	**304**	P	**P**	**15 06 16.2**	**+0.9**
KHC				pmax	pmax		
	comp=Z,4.0nm,1.5s						
CLL	**Collm**	**43.08**	**307**	P	**P**	**15 06 15.8**	**+0.4**
CLL	**Collm**	**43.08**	**307**	P	**P**	**15 06 15.8**	**+0.4**
CLL				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NC405	**NORSAR Array S**	**43.21**	**321**	P	**P**	**15 06 16.3**	**0.0**
NC303	**NORSAR Array S**	**43.38**	**321**	P	**P**	**15 06 18.1**	**+0.3**
NC303				IAmb	IAmb	15 06 39.9	
	comp=Z,8.7nm,1.1s						
NB2	**NORSAR Subarra**	**43.45**	**321**	P	**P**	**15 06 17.8**	**-0.5**
	comp=Z,1.0nm,0.5s,baz=91,slow=8.6						
NOA	**NORSAR Array B**	**43.45**	**321**	P	**P**	**15 06 18.1**	**-0.2**
	comp=Z,1.5nm,0.7s,baz=91,slow=7.9,SNR=7.8						
	comp=Z,1.5nm,0.7s						
NBO00	**NORSAR Array S**	**43.67**	**321**	P	**P**	**15 06 19.8**	**-0.2**
NC204	**NORSAR Array S**	**43.68**	**322**	P	**P**	**15 06 20.1**	**0.0**
NC204				IAmb	IAmb	15 06 27.7	
	comp=Z,13nm,1.2s						
KONO	**Kongsberg**	**44.27**	**319**	P	**P**	**15 06 24.6**	**-0.3**
KONO	**Kongsberg**	**44.27**	**319**	P	**P**	**15 06 24.6**	**-0.3**
KONO				pmax	pmax		
	comp=Z,22nm,1.3s						
BNI	**Bardonecchia**	**48.62**	**300**	P	**P**	**15 07 00.4**	**+1.0**
BNI				IAmb	IAmb	15 07 13.9	
	comp=Z,8.6nm,1.4s						
BNI	**Bardonecchia**	**48.62**	**300**	P	**P**	**15 07 00.4**	**+1.0**
BNI				pmax	pmax		
	comp=Z,9.0nm,1.4s						
KEST	**Kesra**	**50.07**	**287**	LR	LR	15 31 03.5	
	comp=Z,117nm,18.9s,baz=22,slow=39						
MJAR	**Matsushiro Arr**	**50.19**	**71**	P	**P**	**15 07 10.8**	**-0.5**
	comp=Z,1.5nm,0.7s,baz=297,slow=9.5,SNR=3.5						
	comp=Z,1.5nm,0.7s						
SEY	**Seymchan**	**51.09**	**35**	⇓*eP*	**P**	**15 07 18.6**	**+0.9**
SEY				pmax	pmax		
	comp=Z,4.0nm,1.5s						
ERM	**Erimo**	**51.62**	**63**	P	**P**	**15 07 21.8**	**-0.2**
ERM	**Erimo**	**51.62**	**63**	P	**P**	**15 07 21.8**	**-0.2**
DSB	**Dublin**	**54.17**	**313**	P	**P**	**15 07 41.3**	**+0.6**
ESDC	**Sonseca Array**	**57.95**	**297**	P	**P**	**15 08 08.1**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=55,slow=7.3,SNR=9.6						
	comp=Z,0.6nm,0.6s						
TORD	**Torodi Ar. Bea**	**67.73**	**269**	P	**P**	**15 09 12.2**	**-1.2**
	comp=Z,0.4nm,0.5s,baz=51,slow=5.6,SNR=6.0						
	comp=Z,0.4nm,0.5s						
TORD	**Torodi Ar. Bea**	**67.73**	**269**	IAmb	IAmb	15 09 26.1	
	comp=Z,2.8nm,1.4s						
TOLK	**Toolik Lake Re**	**67.81**	**16**	P	**P**	**15 09 13.0**	**-0.1**
TOLK				IAmb	IAmb	15 09 13.4	
	comp=Z,5.7nm,1.2s						
IMAR	**Indian Mountai**	**69.00**	**19**	P	**P**	**15 09 19.6**	**-1.0**
H21K	**Melozitna Rive**	**69.50**	**19**	P	**P**	**15 09 23.2**	**-0.5**
H21K				IAmb	IAmb	15 09 24.5	
	comp=Z,2.3nm,1.3s						
BMAR	**Burnt Mountain**	**69.85**	**15**	P	**P**	**15 09 26.1**	**+0.3**
I21K	**Tanana**	**70.09**	**19**	P	**P**	**15 09 26.9**	**-0.4**
H23K	**Yukon River**	**70.14**	**17**	P	**P**	**15 09 27.8**	**+0.2**
H23K				IAmb	IAmb	15 09 57.0	
	comp=Z,2.6nm,1.3s						
H24K	**Noodor Dome**	**70.51**	**17**	P	**P**	**15 09 29.6**	**-0.3**
H24K				IAmb	IAmb	15 09 56.1	
	comp=Z,2.9nm,1.5s						
INK	**Inuvik**	**70.92**	**10**	P	**P**	**15 09 32.1**	**-0.1**
INK				IAmb	IAmb	15 09 32.4	
	comp=Z,1.5nm,0.8s						
INK	**Inuvik**	**70.92**	**10**	P	**P**	**15 09 32.1**	**-0.1**
INK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
C36M	**Paulatuk**	**70.99**	**6**	P	**

σ0.97/20, mb3.5/4, 10C-6D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.27**	**331**	↑*eP*	**Pn**	**15 06 03.2**	**-1.5**
	baz=30						
OHH				↑*iS*	**Sb**	**15 06 21.3**	**-0.1**
	baz=30						
DRK	**Karamyk**	**1.39**	**273**	↑*eP*	**Pn**	**15 06 05.2**	**-1.3**
	baz=75						
DRK				↑*eS*	**Sn**	**15 06 24.6**	**-0.5**
	baz=75						
BTK	**Batken**	**2.23**	**288**	↑*eP*	**Pn**	**15 06 18.7**	**+0.8**
	baz=88						
BTK				↑*eS*	**Sn**	**15 06 48.0**	**+2.4**
	baz=88						
ARLS	**Aral**	**2.51**	**13**	↓*eP*	**Pn**	**15 06 22.0**	**+0.2**
	baz=12						
ARLS				↓*eS*	**Sn**	**15 06 53.6**	**+1.0**
	baz=12						
GAR	**Garm**	**2.58**	**262**	↓*eP*	**Pn**	**15 06 23.0**	**+0.3**
	baz=63						
GAR				↓*eS*	**Sn**	**15 06 55.6**	**+1.5**
	baz=63						
TRKS	**Terek-Say**	**2.82**	**319**	↑*eP*	**Pn**	**15 06 26.4**	**+0.3**
	baz=19						
TRKS				↑*iS*	**Sn**	**15 07 00.5**	**+0.2**
	baz=19						
UCH	**Uchtor**	**2.90**	**14**	↓*eP*	**Pn**	**15 06 27.7**	**+0.2**
	baz=13						
UCH				↓*eS*	**Sn**	**15 07 03.6**	**+1.0**
	baz=13						
BOOM	**Boomskoye usch**	**3.55**	**29**	↑*iP*	**Pn**	**15 06 36.4**	**+0.2**
	baz=28						
BOOM				↑*iS*	**Sn**	**15 07 18.7**	**+0.3**
	baz=28						
BRTR	**Keskin Array B**	**30.62**	**284**	P	**P**	**15 11 55.5**	**+0.2**
	0.5nm,0.7s,baz=64,slow=9.7,SNR=2.7						
	0.5nm,0.7s						
FINES	**FINESS Array B**	**36.30**	**323**	P	**P**	**15 12 44.1**	**0.0**
	0.3nm,0.4s,baz=116,slow=9.4,SNR=8.1						
	0.3nm,0.4s						
ARCES	**ARCESS Array B**	**39.29**	**336**	P	**P**	**15 13 08.9**	**-0.5**
	0.8nm,0.8s,baz=110,slow=7.8,SNR=3.6						
	0.8nm,0.8s						
NOA	**NORSAR Array B**	**43.35**	**321**	P	**P**	**15 13 42.1**	**-0.8**
	0.3nm,0.6s,baz=108,slow=7.4,SNR=1.5						
	0.3nm,0.6s						

*IDC **26** 15:06:29.5±1.2, 39.°53N×73.°51E, h0km, mb3.7/12, mbtmp3.8/16, ML3.2/4, Error ellipse: s-maj=22.8km s-min=15.8km az=134.0*
*NEIC **26** 15:06:29.5±1.8, 39.°31N±0.°07×73.°79E±0.°09, h10km±2km, mb4.1/9, Error ellipse: s-maj=14.0km s-min=10.2km az=137.0*
*KRNET **26** 15:06:29.3±0.1, 39.°49N×73.°83E, mb4.2*
*NNC **26** 15:06:29.3±1.9, 39.°49N×73.°63E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=14.7km s-min=7.5km az=173.0*
*SOME **26** 15:06:29.1, 39.°58N×73.°57E, h15km*

ISC 26 15:06:29.9±1.4, 39.°55N±0.°04×73.°68E±0.°02, h7km±9km, n101, σ2.916/135, mb3.8/14, 26C-11D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.19**	**325**	↑*eP*	**Pn**	**15 06 53.0**	**-0.2**
	baz=23						
OHH				↑*iS*	**Sb**	**15 07 10.5**	**+1.8**
	baz=23						
DRK	**Karamyk**	**1.46**	**268**	↑*iP*	**Pn**	**15 06 57.8**	**+0.8**
	baz=70						
DRK				↑*eS*	**Sb**	**15 07 18.2**	**+1.8**
	baz=70						
DRK	**Karamyk**	**1.46**	**268**	Pn	**Pn**	**15 06 56.6**	**-0.4**
BTK	**Batken**	**2.26**	**284**	↓*eP*	**Pn**	**15 07 09.0**	**+1.1**
	baz=85						
BTK				↓*eS*	**Sn**	**15 07 37.9**	**+1.8**
	baz=85						
BTK	**Batken**	**2.26**	**284**	Pn	**Pn**	**15 07 09.7**	**+1.7**
ARLS	**Aral**	**2.36**	**12**	↑*eP*	**Pn**	**15 07 09.0**	**-0.3**
	baz=9.0						
ARLS				↑*eS*	**Sn**	**15 07 37.9**	**-0.8**
	baz=9.0						
GAR	**Garm**	**2.67**	**259**	↑*eP*	**Pn**	**15 07 14.5**	**+1.0**
	baz=61						
GAR				↑*eS*	**Sn**	**15 07 46.9**	**+0.7**
	baz=61						
GAR	**Garm**	**2.67**	**259**	Pn	**Pb**	**15 07 16.4**	**-1.7**
UCH	**Uchtor**	**2.75**	**13**	↑*eP*	**Pn**	**15 07 14.8**	**-0.1**
	baz=11						
UCH				↑*eS*	**Sn**	**15 07 47.8**	**-0.9**
	baz=11						
TRKS	**Terek-Say**	**2.77**	**316**	↑*eP*	**Pn**	**15 07 15.2**	**+0.3**
	baz=15						
TRKS				↑*eS*	**Sn**	**15 07 48.4**	**-0.3**
	baz=15						
AAK	**Ala-Archa**	**3.15**	**11**	Pn	**Pn**	**15 07 23.2**	**+3.1**
	7.6nm,0.3s,baz=180,slow=9.1,SNR=8.8						
AAK				Lg	Lg	15 08 11.7	
	11nm,0.3s,baz=72,slow=12,SNR=12						
	24nm,0.4s						
AAK	**Ala-Archa**	**3.15**	**11**	↑*eP*	**Pn**	**15 07 20.2**	**+0.1**
	baz=9.0						
AAK				↑*eS*	**Sn**	**15 07 57.3**	**-0.8**
	baz=9.0						
AAK	**Ala-Archa**	**3.15**	**11**	Pn	**Pn**	**15 07 22.9**	**+2.8**
KBK	**Karagaybulak**	**3.25**	**17**	↑*eP*	**Pn**	**15 07 21.4**	**-0.1**
	baz=15						
KBK				↑*eS*	**Sn**	**15 07 59.4**	**-1.2**
	baz=15						
ULHL	**Ulahol**	**3.32**	**35**	↑*eP*	**Pn**	**15 07 21.7**	**-0.9**
	baz=33						
ULHL				↑*eS*	**Sn**	**15 07 59.9**	**-2.5**
	baz=33						
BOOM	**Boomskoye usch**	**3.40**	**29**	↑*eP*	**Pn**	**15 07 23.0**	**-0.6**
	baz=27						
BOOM				↑*iS*	**Sn**	**15 08 02.3**	**-2.0**
	baz=27						
BOOM	**Boomskoye usch**	**3.40**	**29**	Pn	**Pn**	**15 07 24.8**	**+1.2**
CHGR	**Chuyangaron**	**3.63**	**257**	↓*eP*	**Pn**	**15 07 27.4**	**+0.7**
	baz=59						
CHGR				↓*eS*	**Sn**	**15 08 10.2**	**+0.3**
	baz=59						
CHGR	**Chuyangaron**	**3.63**	**257**	Pn	**Pn**	**15 07 27.1**	**+0.5**
TKM2	**Tokmak 2**	**3.67**	**23**	↓*eP*	**Pn**	**15 07 26.9**	**-0.4**
	baz=21						
TKM2				↓*eS*	**Sn**	**15 08 09.1**	**-1.8**
	baz=21						
TKM2	**Tokmak 2**	**3.67**	**23**	↓*Pg*	**Pg**	**15 07 40.4**	**+0.2**
	23nm,0.8s						
TKM2				↑*Lg*	Lg	15 08 29.4	
	46nm,0.6s						
KDJ	**Kajisay**	**3.70**	**45**	↑*eP*	**Pn**	**15 07 26.6**	**-1.2**
	baz=43						
KDJ				↑*eS*	**Sn**	**15 08 09.0**	**-2.7**
	baz=43						
USP	**Ospenovka**	**3.77**	**9**	↓*eP*	**Pn**	**15 07 28.5**	**0.0**
	baz=7.0						
USP				↓*eS*	**Sn**	**15 08 12.0**	**-1.2**
	baz=7.0						
DZA	**Taraz**	**3.78**	**333**	*eP*	**Pb**	**15 07 39.6**	**+2.6**
	29nm,0.2s						
DZA				*eS*	**Sg**	**15 08 30.7**	**-0.7**
	282nm,0.4s						
DZA	**Taraz**	**3.78**	**333**	Pg	**Pb**	**15 07 38.0**	**+0.9**
	20nm,0.2s						
DZA				Lg	Lg	15 08 30.7	
	282nm,0.4s						
TAS	**Tashkent**	**3.79**	**299**	↑*iP*	**Pn**	**15 07 30.3**	**+1.5**
	baz=99						
TAS				↑*iS*	**Sn**	**15 08 14.5**	**+0.8**
	baz=99						
IUG	**Iuzhnay**	**3.79**	**314**	*eP*	**Pb**	**15 07 40.3**	**+3.0**
	388nm,0.2s						
IUG				*eS*	**Sg**	**15 08 31.5**	**-0.3**
	309nm,0.5s						
IUG	**Iuzhnay**	**3.79**	**314**	Pg	**Pb**	**15 07 37.7**	**+0.4**
	750nm,0.4s						
IUG				Lg	Lg	15 08 30.1	
	309nm,0.5s						
KST	**Kastek**	**3.89**	**25**	*eP*	**Pg**	**15 07 42.1**	**-2.4**
	15nm,0.7s						
KST				*eS*	**Sg**	**15 08 34.2**	**-0.7**
	54nm,0.8s						
KST	**Kastek**	**3.89**	**25**	Pg	**Pb**	**15 07 40.2**	**+1.2**
	4.1nm,0.5s						
KST				Lg	Lg	15 08 34.6	
	54nm,0.8s						
SGDS	**Sogindy**	**3.96**	**10**	*eP*	**Pb**	**15 07 43.6**	**+3.4**
	19nm,0.6s						
SGDS				*eS*	**Sg**	**15 08 37.3**	**+0.1**
	69nm,1.0s						
SGDS	**Sogindy**	**3.96**	**10**	Pg	**Pb**	**15 07 42.2**	**+2.0**
	8.5nm,0.5s						
SGDS				Lg	Lg	15 08 37.3	
	69nm,1.0s						
DGS	**Degeres**	**4.01**	**22**	*eP*	**Pg**	**15 07 45.5**	**-1.3**
	22nm,0.8s						
DGS				*eS*	**Sg**	**15 08 40.3**	**+1.6**
	57nm,0.9s						
DGS	**Degeres**	**4.01**	**22**	Pg	**Pb**	**15 07 43.9**	**+2.9**
	33nm,0.6s						
DGS				Lg	Lg	15 08 41.3	
	57nm,0.9s						
MTBS	**Maitube**	**4.13**	**29**	*eP*	**Pg**	**15 07 47.1**	**-2.0**
	24nm,0.7s						
MTBS				*eS*	**Sg**	**15 08 44.0**	**+1.4**
	32nm,0.6s						
MTBS	**Maitube**	**4.13**	**29**	Pg	**Pb**	**15 07 46.1**	**+3.0**
	14nm,0.6s						
MTBS				Lg	Lg	15 08 44.0	
	32nm,0.6s						
CHM	**Chimkent**	**4.15**	**313**	*eP*	**Pb**	**15 07 46.6**	**+3.4**
	2.2nm,0.7s						
CHM				*eS*	**Sg**	**15 08 42.4**	**-0.7**
	246nm,0.5s						
TNSS	**Tian-Shan**	**4.27**	**34**	*eP*	**Pg**	**15 07 50.0**	**-1.7**
	16nm,0.3s						
TNSS				*eS*	**Sg**	**15 08 48.5**	**+1.5**
	29nm,0.7s						
TNSS	**Tian-Shan**	**4.27**	**34**	Pg	**Pg**	**15 07 49.2**	**-2.5**
	16nm,0.3s						
TNSS				Lg	Lg	15 08 49.2	
	29nm,0.7s						
KK31	**Karatay Array**	**4.28**	**327**	Pn	**Pn**	**15 07 39.3**	**+3.8**
KK31	**Karatay Array**	**4.28**	**327**	Pg	**Pg**	**15 07 51.6**	**-0.3**
	17nm,0.6s,baz=148,slow=21,SNR=7.2						
KK31				↓*Lg*	Lg	15 08 42.4	
	22nm,0.5s,baz=130,slow=25,SNR=5.0						
KKAR	**Karatay Array**	**4.28**	**327**	Pn	**Pn**	**15 07 39.9**	**+4.3**
AAA	**Alma-Ata**	**4.39**	**33**	*eP*	**Pg**	**15 07 52.4**	**-1.6**
	14nm,0.1s						
AAA				*eS*	**Sg**	**15 08 53.1**	**+2.1**
	132nm,0.8s						
KRBS	**Karabastau**	**4.41**	**19**	*eP*	**Pg**	**15 07 52.2**	**-2.1**
	13nm,0.4s						
KRBS				*eS*	**Sg**	**15 08 51.8**	**+0.4**
	34nm,0.9s						
KRBS	**Karabastau**	**4.41**	**19**	Pg	**Pb**	**15 07 50.5**	**+2.8**
	13nm,0.4s						
KRBS				Lg	Lg	15 08 51.8	
	34nm,0.9s						
KUU	**Kurty**	**4.78**	**24**	*eP*	**Pg**	**15 07 58.2**	**-3.2**
	14nm,0.6s						
KUU				*eS*	**Sg**	**15 09 02.5**	**-0.7**
	57nm,1.0s						
KUU	**Kurty**	**4.78**	**24**	Pg	**Pb**	**15 07 56.9**	**+2.9**
	10.0nm,0.8s						
KUU				Lg	Lg	15 09 02.6	
	57nm,1.0s						
CHKK	**Chushkaly**	**4.96**	**29**	*eP*	**Pg**	**15 08 01.6**	**-3.4**
	3.6nm,0.6s						
CHKK				*eS*	**Sg**	**15 09 08.3**	**-0.9**
	38nm,0.5s						
CHKK	**Chushkaly**	**4.96**	**29**	Pg	**Pb**	**15 08 00.3**	**+3.1**
	3.6nm,0.6s						
CHKK				Lg	Lg	15 09 09.2	
	38nm,0.5s						
SATY	**Saty**	**5.00**	**44**	*eP*	**Pg**	**15 08 03.1**	**-2.5**
	12nm,1.5s						
SATY				*eS*	**Sg**	**15 09 10.7**	**+0.3**
	37nm,1.1s						
SATY	**Saty**	**5.00**	**44**	Pg	**Pg**	**15 08 01.7**	**-3.9**
	10.0nm,0.9s						
SATY				Lg	Lg	15 09 10.7	
	37nm,1.1s						
ZHN	**Zhinishke**	**5.09**	**43**	*eP*	**Pg**	**15 08 04.0**	**-3.4**
	6.3nm,0.2s						
ZHN				*eS*	**Sg**	**15 09 13.1**	**-0.1**
	33nm,1.1s						
KURS	**Kuram**	**5.18**	**39**	*eP*	**Pg**	**15 08 06.4**	**-2.8**
	15nm,0.9s						
KURS				*eS*	**Sg**	**15 09 15.7**	**-0.6**
	13nm,1.1s						
KURS	**Kuram**	**5.18**	**39**	Pg	**Pb**	**15 08 04.5**	**+3.6**
	4.2nm,0.9s						
KURS				Lg	Lg	15 09 15.7	
	13nm,1.1s						
KPKS	**Kokpek**	**5.42**	**42**	*eP*	**Pg**	**15 08 11.2**	**-2.6**
	11nm,0.7s						
KPKS				*eS*	**Sg**	**15 09 24.7**	**+0.6**
	34nm,0.9s						
BTLS	**Baital**	**5.50**	**3**	*eP*	Pb	15 08 11.3	+5.1
	7.6nm,0.7s						
BTLS				*eS*	**Sg**	**15 09 24.2**	**-2.1**
	36nm,0.8s						
BTLS	**Baital**	**5.50**	**3**	Pg	**Pb**	**15 08 09.5**	**+3.2**
	7.6nm,0.7s						
BTLS				Lg	Lg	15 09 24.2	
	36nm,0.8s						
ARXS	**Arharly**	**5.59**	**32**	*eP*	**Pg**	**15 08 13.9**	**-3.2**
	22nm,0.7s						
ARXS				*eS*	**Sg**	**15 09 29.0**	**-0.5**
	34nm,0.8s						
ARXS	**Arharly**	**5.59**	**32**	Pg	**Pb**	**15 08 11.4**	**+3.4**
	22nm,0.7s						
ARXS				Lg	Lg	15 09 27.5	
	34nm,0.8s						
SHLS	**Shalkode**	**5.65**	**48**	*eP*	**Pg**	**15 08 19.4**	**+1.3**
	4.9nm,0.5s						
SHLS				*eS*	**Sg**	**15 09 38.3**	**+7.0**
	26nm,0.8s						
PDGK	**Podgornoye**	**5.77**	**47**	Pg	**Pb**	**15 08 14.2**	**+3.1**
	2.5nm,0.8s						
PDGK				Lg	Lg	15 09 32.1	
	11nm,0.7s						
PDGK	**Podgornoye**	**5.77**	**47**	↓*Pg*	**Pg**	**15 08 21.1**	**+0.7**
	10nm,0.7s						
PDGK				↑*Lg*	Lg	15 09 33.8	
	54nm,1.1s						
BLB	**Baldybastay**	**5.79**	**37**	*eP*	**Pg**	**15 08 17.4**	**-3.4**
	18nm,0.8s						
BLB				*eS*	**Sg**	**15 09 35.3**	**-0.4**
	36nm,0.9s						
CEP	**Cherat**	**5.89**	**195**	P	**Pn**	**15 08 01.6**	**+3.8**
CHCP	**Chirah Chowk**	**5.89**	**183**	P	**Pn**	**15 08 00.9**	**+3.2**
KBL	**Kabul**	**6.22**	**218**	Pn	**Pn**	**15 08 02.9**	**+0.5**
KNOS	**Konyrlen**	**6.32**	**39**	*eP*	**Pg**	**15 08 27.4**	**-3.5**
	2.9nm,0.4s						
KNOS				*eS*	**Sg**	**15 09 52.4**	**-0.3**
	41nm,0.8s						
KTMS	**Ketmen**	**6.34**	**50**	*eP*	**Pg**	**15 08 32.0**	**+0.6**
	1.3nm,0.6s						
KTMS				*eS*	**Sg**	**15 10 00.5**	**+7.0**
	7.9nm,0.9s						
TDK	**Taldyqorghan**	**6.48**	**31**	*eP*	**Pg**	**15 08 30.0**	**-4.0**
	19nm,0.3s						
TDK				*eS*	**Sg**	**15 09 57.3**	**-0.6**
	56nm,1.1s						
DJR	**Jarkent**	**6.60**	**42**	*eP*	Pg	15 08 30.6	-5.7
	2.2nm,1.0s						
DJR				*eS*	**Sg**	**15 09 57.8**	**-4.0**
	6.6nm,0.7s						
DJR	**Jarkent**	**6.60**	**42**	Pg	**Pb**	**15 08 28.8**	**+3.7**
	1.9nm,0.6s						
MKAR	**Makanchi Array**	**9.59**	**38**	Lg	Lg	15 11 33.4	
	0.1nm,0.3s,baz=218,slow=28,SNR=2.3						
KURBB	**Kurchatov Arra**	**11.59**	**16**	Lg	Lg	15 12 36.0	
	baz=206,slow=29,SNR=9.4						
GEYT	**Alibeck**	**12.26**	**267**	Pn	**Pn**	**15 09 21.7**	**-3.3**
	0.4nm,0.3s,baz=95,slow=10,SNR=2.7						
	2.0nm,0.5s						
AB31	**Akbulak array**	**13.79**	**319**	P	**Pn**	**15 09 45.6**	**-0.1**
	0.6nm,0.5s,baz=130,slow=14,SNR=5.7						
ABKAR	**Akbulak array**	**13.79**	**319**	Pn	**Pn**	**15 09 45.2**	**-0.5**
AKTO	**Aktyubinsk**	**15.50**	**320**	Pn	**Pn**	**15 10 08.6**	**-0.3**
	0.1nm,0.3s,baz=144,slow=14,SNR=1.7						
ZAA0	**Zalesovo Array**	**16.27**	**24**	Pn	**P**	**15 10 20.8**	**-1.1**
ZALV	**Zalesovo Beam**	**16.27**	**24**	Pn	**P**	**15 10 21.1**	**-0.8**
	0.3nm,0.3s,baz=218,slow=9.7,SNR=5.9						
	1.3nm,0.6s						
ARU	**Arti**	**19.61**	**334**	P	**Pn**	**15 11 00.6**	**+0.5**
	baz=108,slow=20,SNR=3.6						
	1.0nm,0.3s						
ARU	**Arti**	**19.61**	**334**	IAmb	IAmb	15 11 07.7	
	comp=Z,5.0nm,0.9s						
BELG	**Belogornoye**	**22.06**	**314**	P	**P**	**15 11 26.2**	**+1.0**
	comp=Z,9.1nm,0.7s,baz=186,slow=10,SNR=2.6						
	comp=Z,9.1nm,0.7s						
KBZ	**Khabaz**	**23.31**	**290**	P	**P**	**15 11 36.0**	**-2.4**
	comp=Z,1.2nm,0.6s,baz=117,slow=6.8,SNR=2.1						
	comp=Z,1.2nm,0.6s						
SONM	**Songino Array**	**24.91**	**60**	P	**P**	**15 11 56.9**	**+3.2**
	comp=Z,0.5nm,0.4s,baz=271,slow=10,SNR=3.3						
	comp=Z,0.5nm,0.4s						
CHTO	**Chiang Mai**	**30.05**	**126**	P	**P**	**15 12 36.2**	**-3.5**
CHTO				IAmb	IAmb	15 12 50.8	
	comp=Z,5.5nm,1.4s						
BRTR	**Keskin Array B**	**30.66**	**283**	P	**P**	**15 12 46.2**	**+1.0**
	comp=Z,1.3nm,0.8s,baz=79,slow=9.0,SNR=4.9						
	comp=Z,1.3nm,0.8s						
AKASG	**Malin Array Be**	**32.82**	**305**	P	**P**	**15 13 03.4**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=78,slow=7.6,SNR=4.5						
	comp=Z,0.1nm,0.3s						
FIA1	**FINESS Array S**	**36.23**	**323**	P	**P**	**15 13 33.8**	**+0.6**
FIA1				IAmb	IAmb	15 14 00.7	
	comp=Z,4.6nm,1.0s						
FINES	**FINESS Array B**	**36.23**	**323**	P	**P**	**15 13 33.8**	**+0.5**
	comp=Z,0.9nm,0.4s,baz=111,slow=10,SNR=14						
	comp=Z,0.9nm,0.4s						
ARCES	**ARCESS Array B**	**39.19**	**335**	P	**P**	**15 13 59.2**	**+1.0**
	comp=Z,1.1nm,0.7s,baz=114,slow=9.0,SNR=2.2						
	comp=Z,1.1nm,0.7s						
ARCES	**ARCESS Array B**	**39.19**	**335**	IAmb	IAmb	15 14 40.6	
	comp=Z,8.5nm,1.2s						
GERES	**GERESS Array B**	**42.98**	**303**	P	**P**	**15 14 30.5**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=60,slow=7.9,SNR=4.4						
	comp=Z,0.3nm,0.5s						
KHC	**Kasperske Hory**	**43.00**	**303**	P	**P**	**15 14 30.8**	**+0.9**
NC303	**NORSAR Array S**	**43.21**	**321**	P	**P**	**15 14 31.9**	**+0.5**
NB2	**NORSAR Subarra**	**43.28**	**321**	P	**P**	**15 14 31.4**	**-0.6**
	comp=Z,0.9nm,0.5s,baz=90,slow=8.6						
NOA	**NORSAR Array B**	**43.28**	**321**	P	**P**	**15 14 31.7**	**-0.3**
	comp=Z,1.3nm,0.6s,baz=92,slow=8.0,SNR=8.0						
	comp=Z,1.3nm,0.6s						
NC204	**NORSAR Array S**	**43.50**	**321**	P	**P**	**15 14 33.6**	**-0.2**
ESDC	**Sonseca Array**	**57.93**	**297**	P	**P**	**15 16 22.3**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=71,slow=8.3,SNR=4.1						
	comp=Z,0.4nm,0.6s						
TORD	**Torodi Ar. Bea**	**67.90**	**269**	P	**P**	**15 17 27.9**	**-1.6**
	comp=Z,0.5nm,0.9s,baz=59,slow=6.2,SNR=2.4						
	comp=Z,0.5nm,0.9s						
IMAR	**Indian Mountai**	**68.62**	**19**	P	**P**	**15 17 33.0**	**-0.3**
WRA	**Warramunga Arr**	**81.87**	**124**	P	**P**	**15 18 51.2**	**+1.0**
	comp=Z,0.9nm,0.7s,baz=329,slow=4.4,SNR=2.6						
	comp=Z,0.8nm,0.7s						

*SOME **26** 15:08:55.3, 39.°28N×73.°83E, h0km*
*IDC **26** 15:09:00.9±4.6, 39.°33N×73.°50E, h0km, mb3.6/3, mbtmp3.6/5, ML2.9/2, Error ellipse: s-maj=98.6km s-min=22.4km az=123.0*
*KRNET **26** 15:09:03.7±0.1, 39.°50N×73.°56E, mb3.7*

ISC 26 15:09:03.2±1.1, 39.°53N±0.°06×73.°67E±0.°04, h10km, n30, σ1.986/52, mb3.6/3, 8C-12D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.20**	**326**	↓*iP*	**Pb**	**15 09 25.6**	**-0.5**
	baz=30						
OHH				↓*iS*	**Sn**	**15 09 41.8**	**-0.8**
	baz=30						
DRK	**Karamyk**	**1.45**	**269**	↓*eP*	**Pn**	**15 09 28.8**	**-0.9**
	baz=70						
DRK				↓*eS*	**Sb**	**15 09 47.0**	**-2.0**
	baz=70						
BTK	**Batken**	**2.26**	**284**	↓*eP*	**Pn**	**15 09 42.2**	**+1.5**
	baz=86						
BTK				↓*eS*	**Sn**	**15 10 10.2**	**+1.6**
	baz=86						
ARLS	**Aral**	**2.38**	**12**	↓*eP*	**Pb**	**15 09 45.4**	**-0.9**
	baz=14						
ARLS				↓*eS*	**Sb**	**15 10 15.6**	**-0.1**
	baz=14						
GAR	**Garm**	**2.66**	**260**	↓*eP*	**Pn**	**15 09 47.5**	**+1.3**
	baz=60						
GAR				↓*eS*	**Sn**	**15 10 19.3**	**+0.8**
	baz=60						
UCH	**Uchtor**	**2.77**	**13**	↑*eP*	**Pb**	**15 09 51.0**	**-2.1**
	baz=15						
UCH				↑*eS*	**Sb**	**15 10 25.8**	**-1.4**
	baz=15						
TRKS	**Terek-Say**	**2.77**	**317**	↓*eP*	**Pn**	**15 09 49.1**	**+1.2**
	baz=18						
TRKS				↓*eS*	**Sn**	**15 10 22.0**	**+0.5**
	baz=18						
AAK	**Ala-Archa**	**3.17**	**11**	Pn	**Pb**	**15 09 58.7**	**-0.9**
	2.1nm,0.3s,baz=207,slow=9.8,SNR=2.0						
AAK				Sn	**Sg**	**15 10 41.1**	**-3.7**
	1.4nm,0.3s,baz=152,slow=24,SNR=1.1						
	9.4nm,0.5s						
AAK	**Ala-Archa**	**3.17**	**11**	↑*eP*	**Pn**	**15 09 56.5**	**+3.3**
	baz=12						
AAK				↑*eS*	**Sb**	**15 10 34.8**	**-3.5**
	baz=12						
BOOM	**Boomskoye usch**	**3.42**	**29**	↑*iP*	**Pn**	**15 10 00.1**	**+3.4**
	baz=30						
BOOM				↑*iS*	**Sn**	**15 10 41.4**	**+4.0**
	baz=30						
TAS	**Tashkent**	**3.79**	**300**	↑*iP*	**Pn**	**15 10 03.3**	**+1.6**
	baz=1.0						
TAS				↑*iS*	**Sn**	**15 10 47.3**	**+1.0**
	baz=1.0						
IUG	**Iuzhnay**	**3.80**	**315**	*eP*	**Pb**	**15 10 12.2**	**+1.8**
	256nm,1.1s						
IUG				*eS*	**Sg**	**15 11 07.5**	**+2.3**
	94nm,0.7s						
KST	**Kastek**	**3.91**	**26**	*eP*	**Pb**	**15 10 12.3**	**0.0**
	3.9nm,0.7s						
KST				*eS*	**Sg**	**15 11 07.7**	**-1.1**
	30nm,0.9s						
SGDS	**Sogindy**	**3.98**	**10**	*eP*	**Pb**	**15 10 14.4**	**+0.9**
	6.6nm,1.1s						
SGDS				*eS*	**Sg**	**15 11 11.2**	**+0.1**
	21nm,1.2s						
DGS	**Degeres**	**4.03**	**22**	*eP*	**Pb**	**15 10 14.9**	**+0.5**
	5.8nm,0.6s						
DGS				*eS*	**Sg**	**15 11 12.2**	**-0.4**
	22nm,0.6s						
MTBS	**Maitube**	**4.15**	**29**	*eP*	**Pb**	**15 10 16.4**	**0.0**
	5.1nm,0.3s						
MTBS				*eS*	**Sg**	**15 11 14.6**	**-1.9**
	14nm,0.7s						
TNSS	**Tian-Shan**	**4.29**	**34**	*eP*	**Pb**	**15 10 19.9**	**+1.1**
	6.9nm,0.4s						
TNSS				*eS*	**Sg**	**15 11 20.7**	**-0.2**
	5.2nm,0.6s						
KRBS	**Karabastau**	**4.42**	**19**	*eP*	**Pb**	**15 10 20.9**	**-0.1**
	2.4

MILM	**Milestii Mici**	**33.13**	**298**	*e*L	L	15 15 28.0		
MILM				LRM	MLR	15 18 25.0		
	300nm,18.0s							
FINES	**FINESS Array B**	**36.23**	**323**	P	**P**	**15 16 06.7**	**+0.6**	
	0.8nm,0.6s,baz=112,slow=11,SNR=4.8							
	0.8nm,0.6s							
NOA	**NORSAR Array B**	**43.29**	**321**	P	**P**	**15 17 04.2**	**-0.6**	
	0.9nm,0.8s,baz=91,slow=7.9,SNR=3.4							
	0.9nm,0.8s							
TORD	**Torodi Ar. Bea**	**67.89**	**269**	P	**P**	**15 20 00.3**	**-1.8**	
	0.2nm,0.6s,baz=49,slow=5.7,SNR=1.3							
	0.2nm,0.6s							

DJA 26 15:09:14.6±0.3, 2°N±3°×12°6E±°, h42km±45km, M3.9/11, mb4.3/5, mB4.6/3, MLv3.7/11, Mw(mB)3.8/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.31**	**335**	P	Pn	15 09 36.4	-0.1
SGSI				S	Sn	15 09 52.8	0.0
TNTI	**Ternate**	**2.13**	**143**	P	Pn	15 09 48.1	+0.4
KMSI	**Cibinong**	**2.84**	**228**	P	Pn	15 09 57.4	-0.1
LBMI	**Labuha**	**3.41**	**156**	P	Pn	15 10 06.0	+0.6
SANI	**Sanana**	**4.51**	**181**	P	Pn	15 10 19.8	-0.6
LUWI	**Luwuk**	**4.83**	**223**	P	Pn	15 10 01.5	-23
NLAI	**Namlea**	**5.78**	**170**	P	Pn	15 10 37.1	-0.8
	0.1nm733nm21nm,0.5s						
MPSI	**Mapaga**	**6.55**	**251**	P	Pn	15 10 49.0	+0.6
	0.1nm384nm16nm,0.7s						

*IDC **26** 15:09:59.4±2.5, 7°24S×127°56E, h0km, mb3.5/1, mbtmp4.0/3, ML4.2/2, Error ellipse: s-maj=300.0km s-min=32.9km az=64.0*

ISC 26 15:10:18.7±1.5, 7°7S±0°1×128°1E±0°2, h200km, n11, σ1§59/12, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MTN	**Manton Dam**	**5.87**	**150**	P	**Pn**	**15 11 43.1**	**-1.2**
KDU	**Kakadu**	**6.51**	**139**	P	**Pn**	**15 11 51.3**	**-1.3**
KNRA	**Kununurra**	**7.91**	**176**	P	**Pn**	**15 12 10.1**	**-0.8**
WRAB	**Tennant Creek**	**13.54**	**154**	P	**Pn**	**15 13 22.8**	**-0.2**
WRA	**Warramunga Arr**	**13.54**	**154**	Pn	**Pn**	**15 13 21.3**	**-1.7**
	1.0nm,0.3s,baz=328,slow=12,SNR=30						
WRA				Sn	S	15 15 45.6	-8.4
	1.5nm,0.3s,baz=336,slow=21,SNR=11						
	3.8nm,0.7s						
COEN	**Coen**	**16.00**	**114**	P	**Pn**	**15 13 54.7**	**+1.5**
ASAR	**Alice Springs**	**16.78**	**161**	P	**Pn**	**15 14 05.0**	**+2.5**
	1.2nm,0.3s,baz=342,slow=11,SNR=153						
ASAR				S	**S**	**15 17 05.5**	**-0.8**
	1.2nm,0.6s,baz=326,slow=25,SNR=6.1						
	5.6nm,0.6s						
QIS	**Mount Isa**	**16.89**	**140**	P	**Pn**	**15 14 05.4**	**+1.5**
	4.5nm,1.0s						
WRKA	**Warakurna**	**17.20**	**180**	P	**Pn**	**15 14 09.6**	**+2.1**
MTSU	**Mount Surprise**	**18.83**	**125**	P	**Pn**	**15 14 26.4**	**-0.2**
MKAR	**Makanchi Array**	**67.85**	**328**	P	**P**	**15 20 54.9**	**-0.4**
	0.3nm,0.5s,baz=129,slow=7.5,SNR=2.3						
	0.3nm,0.5s						

*KRNET **26** 15:11:39.5±0.1, 39°43N×73°73E, mb3.6*
*IDC **26** 15:11:39.6±1.7, 39°37N×73°69E, h0km, mb3.6/4, mbtmp3.6/5, ML3.1/1, Error ellipse: s-maj=38.6km s-min=23.2km az=93.0*
*SOME **26** 15:11:42.8, 39°55N×73°73E, h0km*

ISC 26 15:11:40.8±1.8, 39°56N±0°06×73°75E±0°03, h5km±11km, n32, σ2§09/58, mb3.4/4, 12C-14D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.22**	**323**	⇓*e*P	**Pb**	**15 12 04.3**	**-0.1**
	baz=27						
OHH				⇓*e*S	**Sn**	**15 12 22.6**	**+1.1**
	baz=27						
DRK	**Karamyk**	**1.51**	**268**	⇑*e*P	**Pn**	**15 12 07.8**	**-1.1**
	baz=73						
DRK				⇑*e*S	**Sn**	**15 12 28.5**	**-0.6**
	baz=73						
BTK	**Batken**	**2.31**	**283**	⇓*e*P	**Pn**	**15 12 21.2**	**+1.5**
	baz=87						
BTK				⇓*e*S	**Sb**	**15 12 51.6**	**-0.4**
	baz=87						
ARLS	**Aral**	**2.34**	**11**	⇓*e*P	**Pb**	**15 12 22.8**	**-0.8**
	baz=10.0						
ARLS				⇓*e*S	**Sg**	**15 12 54.7**	**-1.2**
	baz=10.0						
GAR	**Garm**	**2.72**	**259**	⇑*e*P	**Pn**	**15 12 26.0**	**+0.6**
	baz=62						
GAR				⇑*e*S	**Sn**	**15 13 00.0**	**+1.2**
	baz=62						
UCH	**Uchtor**	**2.73**	**12**	⇓*e*P	**Pb**	**15 12 28.4**	**-1.9**
	baz=12						
UCH				⇓*e*S	**Sb**	**15 13 04.6**	**+0.3**
	baz=12						
TRKS	**Terek-Say**	**2.80**	**316**	⇓*e*P	**Pn**	**15 12 28.0**	**+1.6**
	baz=17						
TRKS				⇓*e*S	**Sb**	**15 13 03.3**	**-2.7**
	baz=17						
EKS2	**Erkin-Say**	**3.10**	**0**	⇓*e*P	**Pb**	**15 12 33.7**	**-2.8**
	baz=1.0						
EKS2				⇓*e*S	**Sb**	**15 13 13.1**	**-1.5**
	baz=1.0						
AAK	**Ala-Archa**	**3.12**	**10**	Pn	**Pb**	**15 12 36.7**	**-0.3**
	2.0nm,0.3s,baz=194,slow=8.3,SNR=3.1						
AAK				Sn	**Sg**	**15 13 18.1**	**-3.0**
	3.1nm,0.3s,baz=128,slow=19,SNR=3.7						
	14nm,0.3s						
AAK	**Ala-Archa**	**3.12**	**10**	⇓*e*P	**Pb**	**15 12 34.0**	**-3.0**
	baz=10.0						
AAK				⇓*e*S	**Sb**	**15 13 13.8**	**-1.6**
	baz=10.0						
KBK	**Karagaybulak**	**3.22**	**16**	⇑*i*P	**Pb**	**15 12 35.3**	**-3.3**
	baz=16						
KBK				⇑*i*S	**Sb**	**15 13 16.0**	**-2.3**
	baz=16						
BOOM	**Boomskoye usch**	**3.36**	**29**	⇑*e*P	**Pn**	**15 12 37.4**	**+3.2**
	baz=28						
BOOM				⇑*i*S	**Sb**	**15 13 19.3**	**-3.0**
	baz=28						
KDJ	**Kajisay**	**3.65**	**44**	⇑*i*P	**Pn**	**15 12 41.0**	**+2.8**
	baz=43						
KDJ				⇑*i*S	**Sb**	**15 13 25.9**	**-4.8**
	baz=43						
IUG	**luzhnay**	**3.83**	**314**	*e*P	**Pg**	**15 12 54.4**	**+0.3**
	205nm,0.2s						
IUG				*e*S	**Sg**	**15 13 46.2**	**+2.5**
	46nm,0.5s						
TAS	**Tashkent**	**3.83**	**299**	⇑*i*P	**Pn**	**15 12 42.4**	**+1.9**
	baz=1.0						
TAS				⇑*i*S	**Sn**	**15 13 28.5**	**+2.6**
	baz=1.0						
KST	**Kastek**	**3.86**	**25**	*e*P	**Pg**	**15 12 53.7**	**-1.0**
	6.7nm,0.8s						
KST				*e*S	**Sg**	**15 13 44.9**	**+0.2**
	23nm,0.8s						
SGDS	**Sogindy**	**3.94**	**9**	*e*P	**Pg**	**15 12 54.9**	**-1.4**
	7.7nm,0.5s						
SGDS				*e*S	**Sg**	**15 13 46.7**	**-0.8**
	13nm,0.6s						
DGS	**Degeres**	**3.98**	**22**	*e*P	**Pg**	**15 12 58.6**	**+1.5**
	14nm,0.6s						
DGS				*e*S	**Sg**	**15 13 53.2**	**+4.6**
	25nm,0.8s						
MTBS	**Maitube**	**4.10**	**29**	*e*P	**Pg**	**15 13 00.3**	**+1.1**
	6.5nm,0.4s						
MTBS				*e*S	**Sg**	**15 13 56.0**	**+3.7**
	6.8nm,0.5s						
TNSS	**Tian-Shan**	**4.22**	**34**	*e*P	**Pg**	**15 13 02.7**	**+0.9**
	6.5nm,0.5s						
TNSS				*e*S	**Sg**	**15 14 00.2**	**+3.7**
	6.8nm,0.6s						
KRBS	**Karabastau**	**4.38**	**19**	*e*P	**Pg**	**15 13 03.5**	**-1.1**
	6.4nm,0.6s						
KRBS				*e*S	**Sg**	**15 14 01.7**	**+0.4**
	12nm,0.6s						
KTBS	**Karatobe**	**4.69**	**27**	*e*P	**Pg**	**15 13 09.3**	**-1.4**
	7.1nm,0.8s						
KTBS				*e*S	**Sg**	**15 14 12.0**	**+0.5**
	14nm,0.7s						
KUU	**Kurty**	**4.74**	**23**	*e*P	**Pg**	**15 13 10.8**	**-0.8**
	5.0nm,0.7s						
KUU				*e*S	**Sg**	**15 14 14.2**	**+1.2**
	15nm,0.7s						
KURS	**Kuram**	**5.14**	**39**	*e*P	**Pg**	**15 13 20.4**	**+1.3**
	3.8nm,0.6s						
KURS				*e*S	**Sg**	**15 14 30.6**	**+4.9**
	6.7nm,0.8s						
KPKS	**Kokpek**	**5.38**	**42**	*e*P	**Pg**	**15 13 22.2**	**-1.6**
	5.0nm,0.6s						
KPKS				*e*S	**Sg**	**15 14 34.2**	**+0.7**
	7.6nm,0.6s						
ARXS	**Arharly**	**5.55**	**32**	*e*P	**Pg**	**15 13 25.9**	**-1.2**
	10nm,0.9s						
ARXS				*e*S	**Sg**	**15 14 40.5**	**+1.4**
	6.0nm,0.7s						
BLB	**Baldybastay**	**5.74**	**36**	*e*P	**Pg**	**15 13 29.9**	**-0.9**
	16nm,0.6s						
BLB				*e*S	**Sg**	**15 14 46.5**	**+1.3**
	5.6nm,0.9s						
KURBB	**Kurchatov Arra**	**11.56**	**15**	Lg	Lg	15 17 49.0	
	baz=207,slow=31,SNR=3.5						
FINES	**FINESS Array B**	**36.25**	**323**	P	**P**	**15 18 45.6**	**+1.0**
	0.4nm,0.3s,baz=116,slow=9.6,SNR=12						
	0.4nm,0.3s						
ARCES	**ARCESS Array B**	**39.21**	**335**	P	**P**	**15 19 10.2**	**+0.7**
	0.5nm,0.7s,baz=108,slow=8.6,SNR=1.1						
	0.5nm,0.7s						
NOA	**NORSAR Array B**	**43.31**	**321**	P	**P**	**15 19 42.9**	**-0.5**
	0.5nm,0.6s,baz=92,slow=8.1,SNR=3.3						
	0.5nm,0.6s						
WRA	**Warramunga Arr**	**81.83**	**124**	P	**P**	**15 24 00.5**	**-0.7**
	0.2nm,0.6s,baz=322,slow=5.3,SNR=1.4						
	0.2nm,0.6s						

*NOU **26** 15:14:58.4, 14°73S×167°60E, h120km, mb4.6/18, Vanuatu Islands*
*NEIC **26** 15:14:59.3±2.4, 14°9S±0°1×167°5E±0°1, h122km±8km, mb4.3/21, Error ellipse: s-maj=20.9km s-min=15.1km az=77.0*
*IDC **26** 15:15:01.1±4.2, 14°80S×167°38E, h143km±37km, mb3.8/9, mbtmp4.3/10, Error ellipse: s-maj=27.0km s-min=19.6km az=71.0*

ISC 26 15:14:59.6±0.8, 14°86S±0°09×167°5E±0°1, h129km, n54, σ1§01/56, mb4.3/13, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**2.93**	**167**	P	**Pn**	**15 15 45.7**	**+0.4**
LIFNC	**LIFOU**	**5.89**	**182**	Pn	**Pn**	**15 16 23.0**	**-1.6**
KOUNC	**Koumac, New Ca**	**6.43**	**208**	Pn	**Pn**	**15 16 31.0**	**-0.9**
KOUNC	**Koumac, New Ca**	**6.43**	**208**	P	**Pn**	**15 16 32.7**	**+0.8**
MARNC	**Mare, Loyalty**	**6.61**	**176**		**Pn**	**15 16 32.0**	**-2.3**
NOUC	**Port Laguerre**	**7.29**	**189**	P	**Pn**	**15 16 44.1**	**+0.6**
ONTNC	**Ouen Toro**	**7.47**	**187**		**Pn**	**15 16 46.3**	**+0.3**
ONTNC	**Ouen Toro**	**7.47**	**187**	P	**Pn**	**15 16 46.5**	**+0.5**
OUENC	**Ouen Island, N**	**7.54**	**185**		**Pn**	**15 16 46.7**	**-0.3**
PINNC	**Pines Island,**	**7.71**	**180**		**Pn**	**15 16 47.8**	**-1.4**
HNR	**Honiara**	**9.13**	**305**	P	**Pn**	**15 17 09.3**	**+0.9**
	102nm,0.9s,baz=190,slow=11,SNR=2.3						
HNR				S	**Sn**	**15 18 47.8**	**-1.6**
	49nm,0.4s,baz=82,slow=22,SNR=5.9						
HNR	**Honiara**	**9.13**	**305**	Pn	**Pn**	**15 17 09.1**	**+0.8**
EIDS	**Eidsvold**	**18.59**	**233**	P	**P**	**15 19 07.9**	**+0.9**
EIDS				IAmb	IAmb	15 19 09.4	
	comp=Z,6.9nm,0.7s						
CTA	**Charters Tower**	**20.90**	**253**	P	**P**	**15 19 32.5**	**+0.6**
	comp=Z,9.0nm,0.8s,baz=71,slow=11,SNR=8.1						
	comp=Z,9.0nm,0.8s						
CTAO	**Charters Tower**	**20.90**	**253**	P	**P**	**15 19 32.8**	**+0.9**
CTAO				IAmb	IAmb	15 19 33.7	
	comp=Z,15nm,0.9s						
ARMA	**Armidale**	**21.26**	**221**	P	**P**	**15 19 35.9**	**+0.1**
ARMA				IAmb	IAmb	15 20 01.8	
	comp=Z,23nm,1.4s						
MGCD	**Mangrove Creek**	**23.55**	**216**	P	**P**	**15 20 00.0**	**+1.6**
URZ	**Urewera**	**24.82**	**162**	P	**P**	**15 20 09.8**	**+0.1**
	comp=Z,8.1nm,0.7s,baz=300,slow=20,SNR=1.4						
	comp=Z,8.1nm,0.7s						
URZ	**Urewera**	**24.82**	**162**	P	**P**	**15 20 09.3**	**-0.5**
BKZ	**Black Stump Fm**	**25.48**	**164**	P	**P**	**15 20 16.4**	**+0.5**
BKZ	**Black Stump Fm**	**25.48**	**164**	P	**P**	**15 20 16.6**	**+0.8**
CMSA	**Cobar Meteorol**	**25.93**	**226**	P	**P**	**15 20 20.8**	**+0.8**
CNB	**Canberra Magne**	**26.07**	**215**	P	**P**	**15 20 22.0**	**+0.7**
BFZ	**Birch Farm**	**26.84**	**165**	P	**P**	**15 20 27.2**	**-0.8**
BFZ	**Birch Farm**	**26.84**	**165**	P	**P**	**15 20 27.5**	**-0.5**
KHZ	**Kahutara**	**27.95**	**170**	P	**P**	**15 20 38.0**	**+0.1**
LTZ	**Lake Taylor**	**28.13**	**173**	P	**P**	**15 20 39.9**	**+0.4**
RPZ	**Rata Peaks**	**28.92**	**175**	P	**P**	**15 20 47.4**	**+0.9**
	comp=Z,7.7nm,0.8s,baz=1.8,slow=5.3,SNR=1.6						
	comp=Z,7.7nm,0.8s						
RPZ	**Rata Peaks**	**28.92**	**175**	P	**P**	**15 20 47.7**	**+1.2**
STKA	**Stephens Creek**	**29.07**	**230**	P	**P**	**15 20 48.5**	**+0.5**
	comp=Z,3.0nm,0.5s,baz=47,slow=10.0,SNR=14						
	comp=Z,3.0nm,0.5s						
STKA	**Stephens Creek**	**29.07**	**230**	P	**P**	**15 20 48.8**	**+0.9**
WB0	**Warramunga Arr**	**31.93**	**256**	P	**P**	**15 21 11.6**	**-1.7**
WB2	**Warramunga Arr**	**31.98**	**256**	P	**P**	**15 21 12.3**	**-1.5**
WB2				IAmb	IAmb	15 21 21.1	
	comp=Z,9.5nm,1.4s						
WRA	**Warramunga Arr**	**31.99**	**256**	P	**P**	**15 21 12.2**	**-1.7**
	comp=Z,1.9nm,1.2s,baz=85,slow=9.2,SNR=4.4						
	comp=Z,1.9nm,1.2s						
AS31	**Alice Springs**	**32.82**	**249**	P	**P**	**15 21 19.6**	**-1.5**
ASAR	**Alice Springs**	**32.82**	**249**	P	**P**	**15 21 19.7**	**-1.4**
	comp=Z,1.6nm,0.7s,baz=79,slow=8.9,SNR=12						
ASAR				PcP	**PcP**	**15 24 03.2**	**0.0**
	comp=Z,0.2nm,0.5s,baz=84,slow=2.5,SNR=4.4						
	comp=Z,1.6nm,0.7s						
ASAR	**Alice Springs**	**32.82**	**249**	P	**P**	**15 21 19.3**	**-1.8**
BBOO	**Buckleboo**	**33.66**	**232**	P	**P**	**15 21 28.5**	**+0.2**
BBOO	**Buckleboo**	**33.66**	**232**	P	**P**	**15 21 29.5**	**+1.2**
KNRA	**Kununurra**	**37.33**	**264**	P	**P**	**15 21 58.4**	**-1.3**
VNDA	**Vanda**	**62.74**	**181**	P	**P**	**15 25 11.1**	**+0.6**
	comp=Z,1.7nm,0.5s,baz=6.3,slow=7.9,SNR=26						
	comp=Z,1.7nm,0.5s						
VNDA	**Vanda**	**62.74**	**181**	P	**P**	**15 25 11.0**	**+0.4**
VNDA				IAmb	IAmb	15 25 12.8	
	comp=Z,2.3nm,0.7s						
SBA	**Scott Base**	**63.01**	**180**	P	**P**	**15 25 13.6**	**+1.3**
CASY	**Casey**	**63.49**	**202**	P	**P**	**15 25 15.7**	**+0.1**
QSPA	**South Pole Qui**	**75.17**	**180**	P	**P**	**15 26 27.9**	**+0.2**
QSPA				IAmb	IAmb	15 26 28.9	
	comp=Z,5.8nm,0.8s						
MAW	**Mawson**	**81.84**	**202**	P	**P**	**15 27 04.2**	**+0.1**
	comp=Z,2.5nm,0.9s,baz=140,slow=7.9,SNR=1.8						
	comp=Z,2.5nm,0.9s						
I21K	**Tanana**	**85.46**	**16**	P	**P**	**15 27 23.2**	**+0.8**
IMAR	**Indian Mountai**	**85.64**	**15**	P	**P**	**15 27 24.0**	**+0.7**
WRH	**Wood River Hil**	**86.01**	**18**	P	**P**	**15 27 26.2**	**+1.1**
WRH				IAmb	IAmb	15 27 26.4	
	comp=Z,5.3nm,1.4s						
BELA	**Belgrano 2**	**86.58**	**175**	P	**P**	**15 27 27.4**	**-0.5**
BELA				IAmb	IAmb	15 27 54.4	
	comp=Z,5.5nm,1.5s						
ILAR	**Eielson Array**	**86.58**	**18**	P	**P**	**15 27 27.4**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=238,slow=5.2,SNR=5.0						
	comp=Z,0.4nm,0.7s						
TROLL	**Troll, Antarti**	**92.75**	**185**	P	**P**	**15 27 56.7**	**-0.4**
SNAA	**Sanae**	**93.43**	**183**	P	**P**	**15 27 58.9**	**-1.3**
ARCES	**ARCESS Array B**	**120.43**	**345**	PKP	**PKPdf**	**15 33 35.1**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=85,slow=2.0,SNR=5.2						

*KRNET **26** 15:15:21.0±0.1, 39°41N×73°59E, mb3.3*
*SOME **26** 15:15:23.4, 39°52N×73°90E, h0km*

ISC 26 15:15:20.5±1.8, 39°20N±0°08×73°44E±0°05, h4km±13km, n18, σ2§06/36, 8C-6D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk**	**1.31**	**283**	⇓*e*P	**Pn**	**15 15 47.1**	**+1.3**
	baz=74						
DRK				⇓*e*S	**Sn**	**15 16 06.4**	**+2.5**
	baz=74						
OHH	**Osh**	**1.42**	**339**	⇑*e*P	**Pn**	**15 15 45.1**	**-2.1**
	baz=31						
OHH				⇑*e*S	**Sb**	**15 16 02.7**	**-3.5**
	baz=31						
BTK	**Batken**	**2.20**	**294**	⇑*e*P	**Pg**	**15 16 01.1**	**-1.7**
	baz=88						
BTK				⇑*i*S	**Sg**	**15 16 30.5**	**-0.8**
	baz=88						
GAR	**Garm**	**2.44**	**266**	⇓*e*P	**Pg**	**15 16 05.7**	**-1.6**
	baz=62						
GAR				⇓*e*S	**Sg**	**15 16 38.6**	**-0.4**
	baz=62						
ARLS	**Aral**	**2.75**	**14**	⇓*e*P	**Pn**	**15 16 04.7**	**-0.8**
	baz=13						
ARLS				⇓*i*S	**Sn**	**15 16 36.9**	**-2.3**
	baz=13						
TRKS	**Terek-Say**	**2.92**	**324**	⇑*e*P	**Pn**	**15 16 08.4**	**+0.5**
	baz=19						
TRKS				⇑*e*S	**Sn**	**15 16 43.0**	**-0.6**
	baz=19						
UCH	**Uchtor**	**3.14**	**15**	⇑*e*P	**Pn**	**15 16 10.8**	**-0.4**
	baz=14						
UCH				⇑*e*S	**Sn**	**15 16 46.4**	**-2.9**
	baz=14						
IUG	**luzhnay**	**3.93**	**320**	*e*P	**Pg**	**15 16 36.9**	**+1.1**
	262nm,0.4s						
IUG				*e*S	**Sg**	**15 17 29.7**	**+3.0**
	38nm,0.7s						
KST	**Kastek**	**4.29**	**26**	*e*P	**Pb**	**15 16 34.0**	**-2.5**
	2.2nm,0.4s						
KST				*e*S	**Sb**	**15 17 25.0**	**-3.7**
	18nm,0.9s						
SGDS	**Sogindy**	**4.34**	**11**	*e*P	**Pb**	**15 16 36.9**	**-0.6**
	2.7nm,0.5s						
SGDS				*e*S	**Sb**	**15 17 29.8**	**-0.5**
	6.6nm,0.5s						
DGS	**Degeres**	**4.41**	**23**	*e*P	**Pb**	**15 16 38.4**	**-0.2**
	2.2nm,0.5s						
DGS				*e*S	**Sb**	**15 17 32.4**	**+0.3**
	18nm,0.7s						
MTBS	**Maitube**	**4.53**	**29**	*e*P	**Pb**	**15 16 41.4**	**+0.7**
	2.0nm,0.3s						
MTBS				*e*S	**Sb**	**15 17 37.7**	**+2.0**
	13nm,0.7s						
TNSS	**Tian-Shan**	**4.66**	**33**	*e*P	**Pb**	**15 16 42.8**	**-0.3**
	5.0nm,0.4s						
TNSS				*e*S	**Sb**	**15 17 40.0**	**+0.3**
	4.5nm,0.8s						
KRBS	**Karabastau**	**4.80**	**20**	*e*P	**Pb**	**15 16 45.1**	**-0.1**
	2.1nm,0.5s						
KRBS				*e*S	**Sb**	**15 17 44.0**	**+0.7**
	9.6nm,0.8s						
KTBS	**Karatobe**	**5.13**	**27**	*e*P	**Pb**	**15 16 51.1**	**+0.4**
	1.3nm,0.7s						
KTBS				*e*S	**Sb**	**15 17 54.2**	**+1.5**
	14nm,0.6s						
CHKK	**Chushkaly**	**5.36**	**29**	*e*P	**Pb**	**15 16 56.1**	**+1.4**
	1.4nm,0.3s						
CHKK				*e*S	**Sb**	**15 18 03.0**	**+3.6**
	3.4nm,0.7s						
KPKS	**Kokpek**	**5.81**	**41**	*e*P	**Pb**	**15 17 03.5**	**+1.1**
	2.0nm,0.5s						
KPKS				*e*S	**Sb**	**15 18 15.7**	**+3.3**
	3.6nm,0.7s						
BTLS	**Baital**	**5.86**	**4**	*e*P	**Pb**	**15 17 05.1**	**+1.9**
	2.2nm,0.8s						
BTLS				*e*S	**Sb**	**15 18 18.2**	**+4.5**
	4.4nm,0.5s						

*IDC **26** 15:17:05.1±1.6, 39°35N×73°52E, h0km, mb3.5/4, mbtmp3.5/5, ML3.3/1, Error ellipse: s-maj=37.2km s-min=21.0km az=106.0*
*SOME **26** 15:17:07.7, 39°55N×73°55E, h0km*
*KRNET **26** 15:17:08.1±0.1, 39°53N×73°53E, mb3.6*

ISC 26 15:17:05.6±1.5, 39°55N±0°05×73°59E±0°03, h3km±10km, n27, σ1§64/50, mb3.4/4, 16C-2D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.15**	**328**	⇑*i*P	**Pn**	**15 17 29.8**	**+1.1**
	baz=30						
OHH				⇑*e*S	**Sn**	**15 17 45.6**	**+0.6**
	baz=30						
DRK	**Karamyk**	**1.38**	**268**	⇑*e*P	**Pg**	**15 17 33.3**	**+1.2**
	baz=69						
DRK				⇑*i*S	**Sn**	**15 17 51.6**	**+0.5**
	baz=69						
BTK	**Batken**	**2.19**	**284**	⇑*i*P	**Pg**	**15 17 46.8**	**-0.8**
	baz=85						
BTK				⇑*i*S	**Sg**	**15 18 14.9**	**-1.1**
	baz=85						
ARLS	**Aral**	**2.37**	**13**	⇑*e*P	**Pb**	**15 17 50.2**	**+1.1**
	baz=14						
ARLS				⇑*e*S	**Sg**	**15 18 21.2**	**-0.6**
	baz=14						
GAR	**Garm**	**2.60**	**259**	⇓*e*P	**Pb**	**15 17 52.4**	**-0.5**
	baz=59						
GAR				⇓*e*S	**Sb**	**15 18 24.7**	**-0.5**
	baz=59						
TRKS	**Terek-Say**	**2.72**	**317**	⇑*e*P	**Pb**	**15 17 53.4**	**-1.5**
	baz=18						
TRKS				⇑*e*S	**Sb**	**15 18 26.8**	**-1.9**
	baz=18						
UCH	**Uchtor**	**2.76**	**14**	⇑*e*P	**Pb**	**15 17 55.9**	**0.0**
	baz=15						
UCH				⇑*e*S	**Sb**	**15 18 31.0**	**+0.7**
	baz=15						
AAK	**Ala-Archa**	**3.16**	**12**	Pn	**Pb**	**15 18 02.5**	**0.0**
	3.2nm,0.3s,baz=180,slow=12,SNR=4.0						
AAK				Sn	**Sg**	**15 18 45.6**	**-1.4**
	1.7nm,0.3s,baz=345,slow=22,SNR=1.7						
	7.9nm,0.4s						
BOOM	**Boomskoye usch**	**3.43**	**30**	⇑*i*P	**Pb**	**15 18 05.5**	**-1.6**
	baz=31						
BOOM				⇑*i*S	**Sb**	**15 18 46.8**	**-2.5**
	baz=31						
IUG	**luzhnay**	**3.74**	**315**	*e*P	**Pg**	**15 18 16.6**	**-0.6**
	257nm,0.6s						
IUG				*e*S	**Sg**	**15 19 06.4**	**+0.6**
	46nm,1.2s						
KDJ	**Kajisay**	**3.75**	**45**	⇑*e*P	**Pb**	**15 18 09.9**	**-2.6**
	baz=46						
KDJ				⇑*i*S	**Sb**	**15 18 54.8**	**-3.6**
	baz=46						
KST	**Kastek**	**3.92**	**26**	*e*P	**Pg**	**15 18 20.9**	**+0.2**
	7.3nm,0.4s						
KST				*e*S	**Sg**	**15 19 13.8**	**+2.3**
	41nm,0.8s						
SGDS	**Sogindy**	**3.97**	**11**	*e*P	**Pg**	**15 18 21.4**	**-0.4**
	5.9nm,0.8s						
SGDS				*e*S	**Sg**	**15 19 14.8**	**+1.5**
	18nm,1.0s						
DGS	**Degeres**	**4.04**	**23**	*e*P	**Pg**	**15 18 23.9**	**+1.0**

0.5nm,0.7s
TORD **Torodi Ar. Bea** 67.83 269 P P 15 28 04.6 -0.7
0.1nm,0.3s,baz=45,slow=5.4,SNR=1.7
0.1nm,0.3s
WRA **Warramunga Arr** 81.93 124 P P 15 29 26.7 0.0
0.1nm,0.6s,baz=328,slow=4.9,SNR=1.3
0.1nm,0.6s

IDC ***26*** *15:20:51.2±0.8,39°.33N×73°.66E,h0km,mb3.7/11, mbtmp3.7/13,ML3.3/2,Error ellipse: s-maj=19.6km s-min=14.3km az=97.0*
SOME ***26*** *15:20:52.3,39°.42N×73°.65E,h15km*
KRNET ***26*** *15:20:52.9±0.1,39°.46N×73°.76E,mb4.1*
NNC ***26*** *15:20:57.0±2.2,39°.54N×73°.78E,h0km,mb4.2,mpv3.8, Error ellipse: s-maj=17.7km s-min=9.7km az=165.0*
ISC 26 15:20:51.8±1.4,39°.50N±0°.04×73°.69E±0°.03,h3km±8km, n81,σ1s65/111,mb3.7/11,29C-8D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.24**	**326**	⇑	*e*P	**Pg**	**15 21 16.5**	**+0.9**
	baz=25							
OHH				⇑	*e*S	**Sg**	**15 21 34.3**	**+2.6**
	baz=25							
DRK	**Karamyk**	**1.47**	**270**	⇑	*e*P	**Pg**	**15 21 20.6**	**+0.7**
	baz=72							
DRK				⇑	*e*S	**Sg**	**15 21 40.7**	**+1.8**
	baz=72							
BTK	**Batken**	**2.29**	**285**	⇑	*e*P	**Pb**	**15 21 32.6**	**-1.2**
	baz=86							
BTK				⇑	*e*S	**Sb**	**15 22 01.4**	**-1.1**
	baz=86							
ARLS	**Aral**	**2.41**	**11**	⇑	*e*P	**Pb**	**15 21 33.7**	**-2.2**
	baz=10.0							
ARLS				⇑	*i*S	**Sb**	**15 22 03.5**	**-2.6**
	baz=10.0							
AML	**Almayashu**	**2.63**	**0**	P		**Pg**	**15 21 41.1**	**-1.2**
	SNR=11							
GAR	**Garm**	**2.67**	**260**	⇑	*e*P	**Pb**	**15 21 37.7**	**-2.6**
	baz=61							
GAR				⇑	*e*S	**Sb**	**15 22 10.3**	**-3.2**
	baz=61							
UCH	**Uchtor**	**2.80**	**13**	P		**Pg**	**15 21 44.3**	**-1.1**
	SNR=20							
UCH	**Uchtor**	**2.80**	**13**	⇑	*e*P	**Pn**	**15 21 39.2**	**+1.3**
	baz=11							
UCH				⇑	*e*S	**Sn**	**15 22 13.2**	**+0.8**
	baz=11							
TRKS	**Terek-Say**	**2.81**	**317**	⇑	*e*P	**Pn**	**15 21 39.0**	**+1.2**
	baz=16							
TRKS				⇑	*e*S	**Sn**	**15 22 12.6**	**+0.2**
	baz=16							
EKS2	**Erkin-Say**	**3.16**	**1**	P		**Pb**	**15 21 47.6**	**-1.1**
	SNR=9.4							
AAK	**Ala-Archa**	**3.19**	**11**	P		**Pb**	**15 21 49.3**	**0.0**
	SNR=19							
AAK	**Ala-Archa**	**3.19**	**11**	Pn		**Pb**	**15 21 49.5**	**+0.2**
	10nm,0.3s,baz=161,slow=5.5,SNR=19							
AAK				Sn		**Sb**	**15 22 30.9**	**+2.2**
	6.4nm,0.3s,baz=342,slow=20,SNR=4.0							
AAK				Lg		Lg	15 22 37.2	
	12nm,0.3s,baz=315,slow=22,SNR=5.6							
	24nm,0.5s							
AAK	**Ala-Archa**	**3.19**	**11**	⇑	*e*P	**Pn**	**15 21 44.9**	**+1.8**
	baz=10.0							
AAK				⇑	*e*S	**Sn**	**15 22 22.3**	**+0.5**
	baz=10.0							
KBK	**Karagaybulak**	**3.29**	**16**	P		**Pb**	**15 21 52.3**	**+1.3**
	SNR=6.0							
KBK	**Karagaybulak**	**3.29**	**16**	⇓	*e*P	**Pn**	**15 21 46.2**	**+1.7**
	baz=15							
KBK				⇓	*e*S	**Sn**	**15 22 24.9**	**+0.6**
	baz=15							
ULHL	**Ulahol**	**3.36**	**34**	P		**Pg**	**15 21 56.1**	**0.0**
	SNR=8.5							
ULHL	**Ulahol**	**3.36**	**34**	⇑	*e*P	**Pn**	**15 21 46.6**	**+1.2**
	baz=33							
ULHL				⇑	*e*S	**Sn**	**15 22 25.7**	**-0.2**
	baz=33							
BOOM	**Boomskoye usch**	**3.44**	**29**	⇑	*e*P	**Pn**	**15 21 48.0**	**+1.5**
	baz=28							
BOOM				⇑	*i*S	**Sn**	**15 22 27.8**	**0.0**
	baz=28							
CHMS	**Chumysh**	**3.59**	**12**	P		**Pb**	**15 21 54.5**	**-1.4**
	SNR=8.5							
CHGR	**Chuyangaron**	**3.63**	**258**	⇑	*e*P	**Pn**	**15 21 51.0**	**+2.0**
	baz=59							
CHGR				⇑	*e*S	**Sn**	**15 22 33.4**	**+1.0**
	baz=59							
TKM2	**Tokmak 2**	**3.71**	**22**	⇑	*e*P	**Pn**	**15 21 51.7**	**+1.5**
	baz=21							
TKM2				⇑	*e*S	**Sn**	**15 22 34.8**	**+0.3**
	baz=21							
TKM2	**Tokmak 2**	**3.71**	**22**	⇓	Pg	**Pg**	**15 22 06.2**	**+3.3**
	9.7nm,0.3s							
TKM2				⇓	Lg	Lg	15 22 56.5	
	23nm,0.6s							
KDJ	**Kajisay**	**3.73**	**44**	⇓	*e*P	**Pn**	**15 21 51.1**	**+0.6**
	baz=43							
KDJ				⇓	*i*S	**Sn**	**15 22 34.5**	**-0.5**
	baz=43							
USP	**Ospenovka**	**3.81**	**9**	P		**Pb**	**15 21 59.4**	**-0.4**
	SNR=11							
TAS	**Tashkent**	**3.82**	**300**	⇑	*i*P	**Pn**	**15 21 53.9**	**+2.3**
	baz=0.0							
TAS				⇑	*i*S	**Sn**	**15 22 38.0**	**+1.0**
	baz=0.0							
IUG	**Iuzhnay**	**3.84**	**315**	*e*P		**Pg**	**15 22 04.4**	**-0.9**
	22nm,0.7s							
IUG				*e*S		**Sg**	**15 22 57.1**	**+2.0**
	188nm,0.7s							
IUG	**Iuzhnay**	**3.84**	**315**	Pg		Pg	15 22 11.0	+5.7
	42nm,0.6s							
IUG				Lg		Lg	15 23 05.8	
	188nm,0.7s							
KST	**Kastek**	**3.93**	**25**	*e*P		**Pg**	**15 22 06.2**	**-1.0**
	14nm,0.7s							
KST				*e*S		**Sg**	**15 22 59.5**	**+1.4**
	64nm,0.8s							
KST	**Kastek**	**3.93**	**25**	Pg		**Pg**	**15 22 07.3**	**+0.2**
	14nm,0.7s							
KST				Lg		Lg	15 22 59.5	
	64nm,0.8s							
SGDS	**Sogindy**	**4.01**	**10**	*e*P		**Pg**	**15 22 07.0**	**-1.7**
	9.2nm,0.5s							
SGDS				*e*S		**Sg**	**15 23 01.7**	**+1.0**
	22nm,1.0s							
SGDS	**Sogindy**	**4.01**	**10**	Pg		**Pg**	**15 22 08.7**	**0.0**
	9.2nm,0.5s							
SGDS				Lg		Lg	15 23 01.7	
	22nm,1.0s							
DGS	**Degeres**	**4.05**	**22**	*e*P		**Pg**	**15 22 09.8**	**+0.3**
	31nm,0.6s							
DGS				*e*S		**Sg**	**15 23 06.0**	**+4.0**
	69nm,0.8s							
DGS	**Degeres**	**4.05**	**22**	Pg		**Pg**	**15 22 11.1**	**+1.6**
	31nm,0.6s							
DGS				Lg		Lg	15 23 06.0	
	69nm,0.8s							
MTBS	**Maitube**	**4.17**	**29**	*e*P		**Pg**	**15 22 10.7**	**-1.0**
	22nm,0.6s							
MTBS				*e*S		**Sg**	**15 23 07.5**	**+1.7**
	28nm,0.6s							
MTBS	**Maitube**	**4.17**	**29**	Pg		**Pg**	**15 22 12.1**	**+0.4**
	22nm,0.6s							
MTBS				Lg		Lg	15 23 07.5	
	28nm,0.6s							
TNSS	**Tian-Shan**	**4.30**	**34**	*e*P		**Pg**	**15 22 13.3**	**-0.9**
	13nm,0.4s							
TNSS				*e*S		**Sg**	**15 23 12.3**	**+2.3**
	29nm,0.7s							
TNSS	**Tian-Shan**	**4.30**	**34**	Pg		**Pg**	**15 22 14.9**	**+0.6**
	13nm,0.4s							
TNSS				Lg		Lg	15 23 12.3	
	29nm,0.7s							
KK31	**Karatay Array**	**4.33**	**327**	Pn		Pn	15 22 02.6	+4.1
	2.8nm,0.3s,baz=132,slow=12,SNR=29							
KK31				⇑	Pg	**Pg**	**15 22 12.3**	**-2.4**
	4.3nm,0.3s,baz=143,slow=16,SNR=7.9							
KK31				⇓	Lg	Lg	15 23 07.5	
	13nm,0.3s							
KRBS	**Karabastau**	**4.45**	**19**	*e*P		**Pg**	**15 22 15.4**	**-1.7**
	15nm,0.7s							
KRBS				*e*S		**Sg**	**15 23 15.0**	**+0.3**
	36nm,0.7s							
KRBS	**Karabastau**	**4.45**	**19**	Pg		**Pg**	**15 22 15.7**	**-1.4**
	15nm,0.7s							
KRBS				Lg		Lg	15 23 14.4	
	36nm,0.7s							
KTBS	**Karatobe**	**4.77**	**27**	*e*P		**Pg**	**15 22 21.2**	**-1.9**
	13nm,0.8s							
KTBS				*e*S		**Sg**	**15 23 25.5**	**+0.5**
	51nm,0.5s							
KTBS	**Karatobe**	**4.77**	**27**	Pg		**Pg**	**15 22 21.8**	**-1.4**
	13nm,0.8s							
KTBS				Lg		Lg	15 23 24.9	
	51nm,0.5s							
KUU	**Kurty**	**4.82**	**23**	*e*P		**Pg**	**15 22 21.7**	**-2.4**
	8.6nm,0.9s							
KUU				*e*S		**Sg**	**15 23 26.4**	**-0.1**
	40nm,0.7s							
KUU	**Kurty**	**4.82**	**23**	Pg		**Pg**	**15 22 22.2**	**-1.8**
	8.6nm,0.9s							
KUU				Lg		Lg	15 23 25.5	
	40nm,0.7s							
CHKK	**Chushkaly**	**5.00**	**28**	*e*P		**Pg**	**15 22 25.2**	**-2.4**
	6.6nm,0.6s							
CHKK				*e*S		**Sg**	**15 23 31.9**	**-0.5**
	24nm,0.7s							
CHKK	**Chushkaly**	**5.00**	**28**	Pg		**Pg**	**15 22 26.3**	**-1.3**
	6.6nm,0.6s							
CHKK				Lg		Lg	15 23 31.9	
	24nm,0.7s							
SATY	**Saty**	**5.03**	**43**	*e*P		**Pg**	**15 22 27.1**	**-1.0**
	5.5nm,0.3s							
SATY				*e*S		**Sg**	**15 23 34.7**	**+1.5**
	45nm,1.1s							
SATY	**Saty**	**5.03**	**43**	Pg		**Pg**	**15 22 27.9**	**-0.2**
	5.5nm,0.3s							
KURS	**Kuram**	**5.21**	**39**	*e*P		**Pg**	**15 22 31.2**	**-0.5**
	11nm,1.3s							
KURS				*e*S		**Sg**	**15 23 41.9**	**+2.7**
	17nm,1.1s							
KURS	**Kuram**	**5.21**	**39**	Pg		**Pg**	**15 22 31.2**	**-0.5**
	11nm,1.3s							
KURS				Lg		Lg	15 23 40.3	
	17nm,1.1s							
KPKS	**Kokpek**	**5.46**	**42**	*e*P		**Pg**	**15 22 34.5**	**-1.7**
	11nm,0.7s							
KPKS				*e*S		**Sg**	**15 23 47.6**	**+0.7**
	25nm,0.6s							
KPKS	**Kokpek**	**5.46**	**42**	Pg		**Pg**	**15 22 34.8**	**-1.5**
	11nm,0.7s							
KPKS				Lg		Lg	15 23 46.6	
	25nm,0.6s							
BTLS	**Baital**	**5.54**	**3**	*e*P		**Pg**	**15 22 34.0**	**-4.0**
	7.6nm,0.7s							
BTLS				*e*S		**Sg**	**15 23 46.8**	**-3.0**
	16nm,0.6s							
BTLS	**Baital**	**5.54**	**3**	Pg		**Pg**	**15 22 39.1**	**+1.1**
	11nm,0.6s							
BTLS				Lg		Lg	15 23 54.1	
	16nm,0.6s							
ARXS	**Arharly**	**5.63**	**32**	*e*P		**Pg**	**15 22 37.2**	**-2.4**
	13nm,0.9s							
ARXS				*e*S		**Sg**	**15 23 52.5**	**-0.1**
	29nm,0.6s							
ARXS	**Arharly**	**5.63**	**32**	Pg		**Pg**	**15 22 37.7**	**-2.0**
	13nm,0.9s							
ARXS				Lg		Lg	15 23 52.1	
	29nm,0.6s							
SHLS	**Shalkode**	**5.67**	**48**	*e*P		**Pg**	**15 22 43.6**	**+3.1**
	3.1nm,0.1s							
SHLS				*e*S		Sg	15 24 03.1	+9.1
	24nm,0.8s							
PDGK	**Podgornoye**	**5.80**	**47**	Pg		**Pg**	**15 22 41.4**	**-1.5**
	1.6nm,0.8s							
PDGK	**Podgornoye**	**5.80**	**47**	⇑	Pg	**Pg**	**15 22 42.8**	**-0.1**
	7.8nm,0.8s							
PDGK				⇑	Lg	Lg	15 23 58.2	
	34nm,0.9s							
BLB	**Baldybastay**	**5.82**	**36**	*e*P		**Pg**	**15 22 40.1**	**-3.2**
	16nm,0.8s							
BLB				*e*S		**Sg**	**15 23 57.6**	**-1.1**
	13nm,1.1s							
BLB	**Baldybastay**	**5.82**	**36**	Pg		**Pg**	**15 22 41.0**	**-2.3**
	16nm,0.8s							
BLB				Lg		Lg	15 23 57.6	
	13nm,1.1s							
DJR	**Jarkent**	**6.63**	**41**	*e*P		**Pg**	**15 22 55.9**	**-2.9**
	2.2nm,0.4s							
DJR				*e*S		**Sg**	**15 24 25.3**	**+0.5**
	9.1nm,0.7s							
DJR	**Jarkent**	**6.63**	**41**	Pg		**Pg**	**15 22 57.2**	**-1.7**
	2.2nm,0.4s							
MKAR	**Makanchi Array**	**9.62**	**38**	Lg		Lg	15 25 58.8	
	baz=218,slow=26,SNR=2.7							
KURBB	**Kurchatov Arra**	**11.63**	**15**	Lg		Lg	15 27 01.3	
	baz=208,slow=29,SNR=4.3							
AB31	**Akbulak array**	**13.83**	**319**	P		**Pn**	**15 24 09.0**	**+0.3**
	0.6nm,0.5s,baz=125,slow=14,SNR=12							
AKTO	**Aktyubinsk**	**15.54**	**320**	Pn		**P**	**15 24 34.2**	**-2.1**
	0.2nm,0.3s,baz=127,slow=17,SNR=2.6							
AKTO	**Aktyubinsk**	**15.54**	**320**	⇓	P	**P**	**15 24 34.1**	**-2.2**
	2.2nm,0.6s							
ZALV	**Zalesovo Beam**	**16.31**	**24**	Pn		**P**	**15 24 42.6**	**-2.1**
	0.2nm,0.3s,baz=140,slow=21,SNR=2.3							
	0.7nm,0.5s							
SONM	**Songino Array**	**24.93**	**60**	P		**P**	**15 26 18.6**	**+2.3**
	0.7nm,0.7s,baz=251,slow=9.0,SNR=3.1							
	0.7nm,0.7s							
BRTR	**Keskin Array B**	**30.68**	**283**	P		**P**	**15 27 08.1**	**+0.3**
	0.9nm,0.7s,baz=85,slow=8.6,SNR=5.9							
	0.9nm,0.7s							
FINES	**FINESS Array B**	**36.27**	**323**	P		**P**	**15 27 57.3**	**+1.3**
	0.7nm,0.3s,baz=114,slow=10,SNR=16							
	0.7nm,0.3s							
ARCES	**ARCESS Array B**	**39.24**	**336**	P		**P**	**15 28 22.8**	**+1.7**
	0.7nm,0.4s,baz=111,slow=8.3,SNR=11							
	0.7nm,0.4s							
NB2	**NORSAR Subarra**	**43.33**	**321**	P		**P**	**15 28 55.4**	**+0.6**
	comp=Z,0.5nm,0.4s,baz=91,slow=7.9							
NOA	**NORSAR Array B**	**43.33**	**321**	P		**P**	**15 28 55.8**	**+1.0**
	comp=Z,0.9nm,0.6s,baz=92,slow=7.6,SNR=6.2							
	comp=Z,0.9nm,0.6s							
ESDC	**Sonseca Array**	**57.96**	**297**	P		**P**	**15 30 46.1**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=59,slow=6.9,SNR=2.5							
	comp=Z,0.6nm,0.8s							
TORD	**Torodi Ar. Bea**	**67.91**	**269**	P		**P**	**15 31 50.9**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=42,slow=5.3,SNR=2.6							
	comp=Z,0.5nm,0.7s							
ILAR	**Eielson Array**	**71.31**	**17**	P		**P**	**15 32 12.8**	**+0.5**
	comp=Z,0.3nm,0.7s,baz=316,slow=5.0,SNR=3.0							
	comp=Z,0.3nm,0.7s							
YKA	**Yellowknife Ar**	**78.14**	**4**	P		**P**	**15 32 51.5**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=350,slow=5.5,SNR=4.2							
	comp=Z,0.2nm,0.4s							
WRA	**Warramunga Arr**	**81.83**	**124**	P		**P**	**15 33 12.0**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=327,slow=5.3,SNR=11							
	comp=Z,0.5nm,0.6s							
ASAR	**Alice Springs**	**84.28**	**127**	P		**P**	**15 33 24.6**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=312,slow=5.0,SNR=11							
	comp=Z,0.3nm,0.6s							

IDC ***26*** *15:33:43.8±4.5,32°.15N×27°.69E,h0km,mb3.6/1, mbtmp3.4/5,ML3.7/4,Error ellipse: s-maj=63.4km s-min=36.9km az=10.0*
HLW ***26*** *15:33:43.7,32°.02N×27°.56E,h9km±6km,Md3.4*
GII ***26*** *15:33:50.6±0.7,32°.18N×27°.99E,h40km,Mm3.0/2*
ISC 26 15:33:43.4±0.8,31°.98N±0°.04×27°.70E±0°.05,h10km,n55, σ2s02/66,Egypt

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MATC	**Matruh**	**0.74**	**212**	P		**Pg**	**15 33 58.0**	**+0.2**
	baz=203							
MATC				S		**Sg**	**15 34 07.9**	**+0.4**
	baz=203							
SLUM	**Salum**	**2.17**	**258**	P		**Pn**	**15 34 18.0**	**-1.6**
	baz=256							
SWA2		**3.34**	**216**	P		**Pn**	**15 34 35.1**	**-0.6**
	baz=214							
ZKR	**Zakros**	**3.37**	**339**	*e*P		**Pn**	**15 34 36.8**	**+0.7**
HMYD	**Mayadein**	**3.44**	**128**	P		**Pn**	**15 34 40.0**	**+2.8**
	baz=127							
KARP	**Karpathos**	**3.59**	**353**	*e*P		**Pn**	**15 34 40.5**	**+1.3**
KARP	**Karpathos**	**3.59**	**353**	*e*S		**Sn**	**15 35 21.7**	**0.0**
RYAN	**Fayoum**	**3.64**	**142**	P		**Pn**	**15 34 40.8**	**+0.9**
	baz=140							
HSAF	**As Saff**	**4.07**	**124**	P		**Pn**	**15 34 48.2**	**+2.5**
	baz=123							
ARG	**Arkhangelos**	**4.25**	**5**	*e*P		**Pn**	**15 34 49.5**	**+1.4**
ARG	**Arkhangelos**	**4.25**	**5**	*e*S		**Sn**	**15 35 37.9**	**+0.1**
AKAS	**Kas**	**4.53**	**20**	*e*P		**Pn**	**15 34 54.7**	**+2.5**
DAT	**Datca**	**4.74**	**359**	*e*P		**Pn**	**15 34 55.7**	**+0.6**
SANT	**Santorini**	**4.76**	**338**	*e*P		**Pn**	**15 34 55.2**	**-0.1**
TURN	**Turunc**	**4.81**	**5**	*e*P		**Pn**	**15 34 57.8**	**+1.9**
HFRF	**Wahat Farafira**	**4.84**	**173**	P		**Pn**	**15 34 57.4**	**+1.0**
	baz=172							
DALY	**Dalyan (Mula)**	**4.89**	**9**	*e*P		**Pn**	**15 34 58.7**	**+1.7**
SUZ	**Suez**	**4.90**	**114**	P		**Pn**	**15 34 58.5**	**+1.3**
	baz=114							
BODT	**Bodrum**	**5.08**	**357**	*e*P		**Pn**	**15 35 00.7**	**+1.0**
ELL	**Elmali**	**5.10**	**20**	*e*P		**Pn**	**15 35 02.2**	**+2.2**
YER	**Yerkesik**	**5.17**	**5**	*e*P		**Pn**	**15 35 02.4**	**+1.5**
LEF	**Lefka**	**5.35**	**53**	*e*P		**Pn**	**15 35 06.1**	**+2.7**
APE	**Apeiranthos**	**5.39**	**341**	*e*P		**Pn**	**15 35 03.8**	**-0.1**
KORT	**Korkueli**	**5.47**	**23**	*e*P		**Pn**	**15 35 07.5**	**+2.4**
CSS	**Mathiatis**	**5.57**	**56**	*e*P		**Pn**	**15 35 09.6**	**+3.2**
APMY	**Acipayam-Deniz**	**5.64**	**13**	*e*P		**Pn**	**15 35 09.2**	**+1.8**
GAZI	**Gazipasa**	**5.72**	**41**	*e*P		**Pn**	**15 35 11.6**	**+3.1**
LFK	**Lefkose**	**5.88**	**54**	*e*P		**Pn**	**15 35 14.1**	**+3.4**
AYDB	**Zeytinkoy-Aydi**	**5.96**	**1**	*e*P		**Pn**	**15 35 12.7**	**+0.9**
TEKE	**Tekeli-Mersin**	**6.12**	**46**	*e*P		**Pn**	**15 35 17.2**	**+3.2**
SUTC	**Sutluce-Ispart**	**6.12**	**25**	*e*P		**Pn**	**15 35 16.2**	**+2.1**
OFRI	**`Ofer**	**6.21**	**82**	Pn		**Pn**	**15 35 15.9**	**+0.8**
OFRI				Sn		**Sn**	**15 36 22.1**	**-4.1**
BERE	**Bereket-Mersin**	**6.32**	**45**	*e*P		**Pn**	**15 35 19.5**	**+2.6**
HDMB	**Hadim**	**6.36**	**37**	*e*P		**Pn**	**15 35 20.1**	**+2.7**
AKKU	**Akkuyu-Mersin**	**6.40**	**48**	*e*P		**Pn**	**15 35 20.7**	**+2.9**
HKAT	**Jabal Katrina**	**6.44**	**121**	P		**Pn**	**15 35 19.8**	**+1.2**
	baz=120							
IKL	**Isikli**	**6.54**	**48**	*e*P		**Pn**	**15 35 22.6**	**+2.9**
DSI	**Dead Sea**	**6.56**	**92**	Pn		**Pn**	**15 35 21.6**	**+1.7**
DSI				Sn		**Sn**	**15 36 33.4**	**-1.4**
MMLI	**Mount Malkishu**	**6.56**	**84**	Pn		**Pn**	**15 35 21.3**	**+1.2**
MMLI				Sn		**Sn**	**15 36 32.1**	**-2.9**
MSBI	**Mazada**	**6.57**	**94**	Pn		**Pn**	**15 35 21.4**	**+1.4**
HDK1	**Dakhla**	**6.58**	**166**	P		**Pn**	**15 35 22.2**	**+1.8**
	baz=165							
HRFI	**Mount Harif**	**6.59**	**105**	Pn		**Pn**	**15 35 22.9**	**+2.5**
HRFI				Sn		**Sn**	**15 36 36.0**	**+0.3**
MMA0B	**Mount Meron ar**	**6.59**	**79**	Pn		**Pn**	**15 35 22.3**	**+1.8**
MMAI	**Mount Meron Ar**	**6.59**	**79**	Pn		**Pn**	**15 35 22.1**	**+1.5**
	2.9nm,0.3s,baz=268,slow=14,SNR=6.6							
MMAI				Sn		**Sn**	**15 36 34.0**	**-1.9**
	8.9nm,0.3s,baz=259,slow=23,SNR=8.3							
	1.8nm,0.3s							
HMDT	**Nahal Hemdat**	**6.65**	**86**	Pn		**Pn**	**15 35 22.5**	**+1.3**
HMDT				Sn		**Sn**	**15 36 34.6**	**-2.4**
GHAJ	**Ghor Haditha**	**6.75**	**94**	Pn		**Pn**	**15 35 24.3**	**+1.8**
GHAJ				Sn		**Sn**	**15 36 37.8**	**-1.6**
SILI	**Silifke-Mersin**	**6.77**	**48**	*e*P		**Pn**	**15 35 25.7**	**+2.9**
GEM	**Giv'at Ha'Em**	**6.84**	**78**	Pn		**Pn**	**15 35 25.1**	**+1.3**
GEM				Sn		**Sn**	**15 36 39.8**	**-1.9**
NATI	**Neve Ativ**	**6.90**	**77**	Pn		**Pn**	**15 35 25.9**	**+1.2**
NATI				Sn		**Sn**	**15 36 40.6**	**-2.7**
KSHT	**Keshet**	**6.93**	**80**	Pn		**Pn**	**15 35 27.2**	**+2.1**
ASF	**Jabal al Asfar**	**7.81**	**86**	Sn		**Sn**	**15 37 03.3**	**-2.5**
	0.4nm,0.3s,baz=347,slow=8.3,SNR=2.6							
BRTR	**Keskin Array B**	**9.11**	**30**	Pn		**Pn**	**15 35 57.2**	**+2.1**
	0.2nm,0.3s,baz=212,slow=15,SNR=4.6							
BRTR				Sn		**Sn**	**15 37 34.6**	**-3.2**
	0.2nm,0.3s,baz=209,slow=26,SNR=2.8							
	0.8nm,0.5s							
AKASG	**Malin Array Be**	**18.74**	**3**	P		**P**	**15 38 02.1**	**-0.2**
	0.4nm,0.3s,baz=190,slow=11,SNR=3.2							
	0.3nm,0.4s							
GERES	**GERESS Array B**	**19.88**	**332**	P		**Pn**	**15 38 15.3**	**-1.2**
	0.1nm,0.3s,baz=146,slow=11,SNR=7.0							
	0.4nm,0.6s							
ARCES	**ARCESS Array B**	**37.63**	**359**	P		**P**	**15 40 57.8**	**-0.3**
	0.6nm,0.7s,baz=186,slow=7.9,SNR=3.5							
	0.6nm,0.7s							

IDC ***26*** *15:33:42.6±1.4,39°.26N×73°.69E,h0km,mb3.6/7, mbtmp3.5/12,ML3.3/4,Error ellipse: s-maj=26.7km s-min=18.3km az=139.0*
KRNET ***26*** *15:33:43.7±0.1,39°.40N×73°.64E,mb3.8*
SOME ***26*** *15:33:46.6,39°.58N×73°.85E,h0km*
NNC ***26*** *15:33:48.5±1.2,39°.62N×73°.77E,h0km,mb3.9,mpv3.5, Error ellipse: s-maj=9.6km s-min=5.1km az=165.0*
ISC 26 15:33:44.2±1.6,39°.23N±0°.05×73°.50E±0°.03,h9km±9km, n73,σ1s60/106,mb3.5/7,24C-6D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**1.34**	**281**	⇑	*e*P	**Pg**	**15 34 10.6**	**+0.6**
	baz=74							
DRK				⇑	*e*S	**Sg**	**15 34 30.4**	**+3.0**
	baz=74							
OHH	**Osh**	**1.40**	**337**	⇑	*e*P	**Pn**	**15 34 08.0**	**-2.1**
	baz=30							
OHH				⇑	*e*S	**Sb**	**15 34 26.1**	**-2.6**
	baz=30							
BTK	**Batken**	**2.23**	**293**	⇑	*e*P	**Pb**	**15 34 24.3**	**-0.4**
	baz=88							
BTK				⇑	*e*S	**Sb**	**15 34 53.9**	**+1.4**
	baz=88							
GAR	**Garm**	**2.49**	**266**	⇑	*e*P	**Pb**	**15 34 29.0**	**-0.2**
	baz=62							
GAR				⇑	*i*S	**Sg**	**15 35 02.0**	**-2.1**
	baz=62							
ARLS	**Aral**	**2.70**	**13**	⇑	*e*P	**Pn**	**15 34 27.7**	**-0.3**
	baz=12							
ARLS				⇑	*i*S	**Sn**

TKM2	12nm,0.7s				⇑Lg		Lg	15 35 42.9	
KDJ	21nm,0.6s **Kajisay** baz=44	**4.03**	**43**	⇑*e*P			**Pn**	**15 34 46.1**	**-0.2**
KDJ	baz=44			⇑*i*S			**Sn**	**15 35 31.3**	**-2.4**
USP	**Ospenovka** SNR=9.9	**4.10**	**10**	P			**Pn**	**15 34 49.0**	**+1.9**
KST	**Kastek**	**4.24**	**25**	*e*P			**Pb**	**15 34 57.4**	**-1.6**
KST	9.3nm,0.4s			*e*S			**Sb**	**15 35 48.8**	**-1.6**
KST	39nm,0.8s **Kastek**	**4.24**	**25**	Pg			**Pb**	**15 34 57.4**	**-1.6**
KST	9.3nm,0.4s			Lg			Lg	15 35 48.8	
SGDS	39nm,0.8s **Sogindy**	**4.30**	**11**	*e*P			**Pb**	**15 34 60.0**	**-0.1**
SGDS	6.0nm,0.8s			*e*S			**Sb**	**15 35 53.0**	**+0.9**
SGDS	20nm,0.5s **Sogindy**	**4.30**	**11**	Pg			**Pb**	**15 34 60.0**	**-0.1**
SGDS	6.0nm,0.8s			Lg			Lg	15 35 53.0	
DGS	20nm,0.5s **Degeres**	**4.36**	**22**	*e*P			**Pb**	**15 35 00.6**	**-0.4**
DGS	16nm,0.4s			*e*S			**Sb**	**15 35 54.5**	**+0.8**
DGS	36nm,0.7s **Degeres**	**4.36**	**22**	Pg			**Pb**	**15 35 00.6**	**-0.4**
DGS	16nm,0.4s			Lg			Lg	15 35 54.5	
KK31	36nm,0.7s **Karatay Array**	**4.47**	**331**	Pn			**Pn**	**15 34 54.4**	**+2.1**
KK31	1.1nm,0.3s,baz=124,slow=13,SNR=15			Pg			**Pg**	**15 35 06.9**	**-3.1**
KK31	4.9nm,0.5s,baz=146,slow=16,SNR=8.6			Sn			**Sn**	**15 35 47.0**	**+2.5**
KK31	5.9nm,0.4s,baz=129,slow=18,SNR=6.0			⇓Lg			Lg	15 35 58.8	
MTBS	10nm,0.5s,baz=148,slow=26,SNR=4.2 **Maitube**	**4.48**	**29**	*e*P			**Pb**	**15 35 02.6**	**-0.5**
MTBS	9.5nm,0.6s			*e*S			**Sb**	**15 35 57.6**	**+0.4**
MTBS	32nm,0.4s **Maitube**	**4.48**	**29**	Pg			**Pb**	**15 35 02.6**	**-0.5**
MTBS	9.5nm,0.6s			Lg			Lg	15 35 57.6	
TNSS	32nm,0.4s **Tian-Shan**	**4.61**	**33**	*e*P			**Pb**	**15 35 05.0**	**-0.5**
TNSS	9.7nm,0.3s			*e*S			**Sb**	**15 36 01.6**	**+0.3**
TNSS	12nm,0.4s **Tian-Shan**	**4.61**	**33**	Pg			**Pb**	**15 35 05.0**	**-0.5**
TNSS	9.7nm,0.3s			Lg			Lg	15 36 01.6	
KRBS	12nm,0.4s **Karabastau**	**4.75**	**19**	*e*P			**Pb**	**15 35 07.0**	**-0.8**
KRBS	5.6nm,0.6s			*e*S			**Sb**	**15 36 05.4**	**+0.3**
KRBS	27nm,0.6s **Karabastau**	**4.75**	**19**	Pg			**Pb**	**15 35 06.9**	**-0.8**
KRBS	5.6nm,0.6s			Lg			Lg	15 36 05.8	
KTBS	27nm,0.6s **Karatobe**	**5.07**	**27**	*e*P			**Pb**	**15 35 12.9**	**-0.3**
KTBS	6.8nm,0.6s			*e*S			**Sb**	**15 36 15.3**	**+1.0**
KTBS	36nm,0.9s **Karatobe**	**5.07**	**27**	Pg			**Pb**	**15 35 12.9**	**-0.3**
KTBS	6.8nm,0.6s			Lg			Lg	15 36 15.3	
KUU	36nm,0.9s **Kurty**	**5.12**	**24**	*e*P			**Pb**	**15 35 13.6**	**-0.4**
KUU	3.3nm,0.8s			*e*S			**Sb**	**15 36 16.4**	**+0.8**
KUU	19nm,0.5s **Kurty**	**5.12**	**24**	Pg			**Pb**	**15 35 13.6**	**-0.4**
KUU	3.3nm,0.8s			Lg			Lg	15 36 16.4	
CHKK	19nm,0.5s **Chushkaly**	**5.31**	**28**	*e*P			**Pb**	**15 35 17.5**	**+0.3**
CHKK	5.4nm,0.5s			*e*S			**Sb**	**15 36 23.5**	**+2.5**
CHKK	14nm,0.4s **Chushkaly**	**5.31**	**28**	Pg			**Pb**	**15 35 17.5**	**+0.3**
CHKK	5.4nm,0.5s			Lg			Lg	15 36 23.5	
SATY	14nm,0.4s **Saty**	**5.32**	**43**	*e*P			**Pb**	**15 35 18.4**	**+0.9**
SATY	4.2nm,0.5s			*e*S			**Sb**	**15 36 24.7**	**+3.1**
SATY	14nm,0.6s **Saty**	**5.32**	**43**	Pg			**Pb**	**15 35 18.4**	**+0.9**
SATY	4.2nm,0.5s			Lg			Lg	15 36 24.7	
KURS	14nm,0.6s **Kuram**	**5.51**	**38**	*e*P			**Pb**	**15 35 20.9**	**+0.1**
KURS	2.6nm,0.7s			*e*S			**Sb**	**15 36 29.0**	**+2.0**
KURS	5.4nm,0.9s **Kuram**	**5.51**	**38**	Pg			**Pb**	**15 35 20.9**	**+0.1**
KURS	2.6nm,0.7s			Lg			Lg	15 36 29.0	
KPKS	5.4nm,0.9s **Kokpek**	**5.75**	**41**	*e*P			**Pb**	**15 35 25.0**	**+0.2**
KPKS	4.0nm,0.6s			*e*S			**Sb**	**15 36 36.2**	**+2.3**
KPKS	14nm,0.9s **Kokpek**	**5.75**	**41**	Pg			**Pb**	**15 35 25.0**	**+0.2**
KPKS	4.0nm,0.6s			Lg			Lg	15 36 36.2	
BTLS	14nm,0.9s **Baital**	**5.82**	**4**	*e*P			**Pb**	**15 35 26.3**	**+0.5**
BTLS	3.5nm,0.7s			*e*S			**Sb**	**15 36 38.5**	**+2.9**
BTLS	8.5nm,0.7s **Baital**	**5.82**	**4**	Pg			**Pb**	**15 35 26.3**	**+0.5**
BTLS	3.5nm,0.7s			Lg			Lg	15 36 39.5	
ARXS	8.5nm,0.7s **Arharly**	**5.94**	**32**	*e*P			**Pb**	**15 35 28.2**	**+0.3**
ARXS	7.3nm,0.5s			*e*S			**Sb**	**15 36 42.0**	**+2.8**
ARXS	25nm,0.8s **Arharly**	**5.94**	**32**	Pg			**Pb**	**15 35 28.2**	**+0.3**
ARXS	7.3nm,0.5s			Lg			Lg	15 36 42.0	
PDGK	25nm,0.8s **Podgornoye**	**6.09**	**46**	Pg			**Pb**	**15 35 31.7**	**+1.1**
PDGK	0.7nm,0.5s			Lg			Lg	15 36 48.5	
BLB	3.8nm,0.9s **Baldybastay**	**6.12**	**36**	*e*P			**Pb**	**15 35 32.4**	**+1.3**
BLB	9.2nm,0.6s			*e*S			**Sb**	**15 36 48.5**	**+3.9**
DJR	17nm,0.9s **Jarkent**	**6.93**	**41**	*e*P			**Pb**	**15 35 46.7**	**+1.8**
DJR	0.6nm,0.3s			*e*S			**Sb**	**15 37 13.1**	**+5.3**
DJR	4.9nm,0.9s **Jarkent**	**6.93**	**41**	Pg			**Pb**	**15 35 46.7**	**+1.8**
MKAR	0.6nm,0.3s **Makanchi Array**	**9.92**	**38**	Pn			**Pn**	**15 36 06.9**	**-0.1**
MKAR	0.1nm,0.3s,baz=210,slow=13,SNR=2.3			Lg			Lg	15 38 48.7	
KURBB	0.1nm,0.3s,baz=225,slow=32,SNR=2.1 **Kurchatov Arra**	**11.93**	**16**	Pn			**Pn**	**15 36 32.7**	**-1.8**
KURBB	0.2nm,0.6s,baz=204,slow=11,SNR=2.7			Lg			Lg	15 39 50.7	
AB31	baz=206,slow=29,SNR=4.4 **Akbulak array**	**13.94**	**320**	P			**Pn**	**15 37 00.5**	**-1.4**
AKTO	0.2nm,0.3s,baz=129,slow=13,SNR=9.4 **Aktyubinsk**	**15.65**	**321**	Pn			**Pn**	**15 37 24.6**	**-0.3**
AKTO	0.3nm,0.3s,baz=134,slow=12,SNR=2.9 **Aktyubinsk**	**15.65**	**321**	⇑P			**Pn**	**15 37 24.9**	**0.0**
ZALV	1.4nm,0.5s 1.6nm,0.6s **Zalesovo Beam**	**16.61**	**24**	Pn			**Pn**	**15 37 34.9**	**-2.3**
BRTR	0.3nm,0.3s,baz=205,slow=14,SNR=7.6 1.5nm,0.6s **Keskin Array B**	**30.60**	**284**	P			**P**	**15 40 00.9**	**+2.2**
FINES	0.5nm,0.7s,baz=98,slow=7.6,SNR=2.8 0.5nm,0.7s **FINESS Array B**	**36.40**	**323**	P			**P**	**15 40 48.5**	**-0.1**
ARCES	0.8nm,0.4s,baz=106,slow=10,SNR=9.1 0.8nm,0.4s **ARCESS Array B**	**39.42**	**336**	P			**P**	**15 41 13.2**	**-1.0**
	1.9nm,0.9s,baz=104,slow=9.6,SNR=5.7								
GERES	1.9nm,0.9s **GERESS Array B**	**43.03**	**303**	P			**P**	**15 41 45.0**	**+0.8**
NB2	0.3nm,0.6s,baz=74,slow=9.8,SNR=3.7 0.3nm,0.6s **NORSAR Subarra**	**43.44**	**321**	P			**P**	**15 41 46.5**	**-0.8**
NOA	comp=Z,0.5nm,0.5s,baz=92,slow=7.9 **NORSAR Array B**	**43.44**	**321**	P			**P**	**15 41 46.8**	**-0.5**
TORD	comp=Z,0.7nm,0.6s,baz=92,slow=7.7,SNR=4.5 comp=Z,0.7nm,0.6s **Torodi Ar. Bea**	**67.75**	**269**	P			**P**	**15 44 42.4**	**-0.2**
WRA	comp=Z,0.2nm,0.6s,baz=54,slow=7.3,SNR=1.5 comp=Z,0.2nm,0.6s **Warramunga Arr**	**81.81**	**124**	P			**P**	**15 46 03.3**	**-0.6**
	comp=Z,0.5nm,1.1s,baz=326,slow=5.1,SNR=1.8 comp=Z,0.5nm,1.1s								

*NEIC **26** 15:34:59.8±2.1,5.95N±0.08×127.2E±0.1,h38km±9km, mb4.2/14, Error ellipse: s-maj=18.6km s-min=12.0km az=81.0*
*MAN **26** 15:35:01.0,5.44N×126.96E,h13km,mb4.6,ML3.5,MS3.3*
*IDC **26** 15:35:02.8±6.5,5.95N×127.38E,h77km±52km,mb3.6/8, mbtmp3.9/9,ML4.0/1, Error ellipse: s-maj=103.8km s-min=15.6km az=63.0*

ISC 26 15:34:59.4±0.7,5.92N±0.08×127.52E±0.10,h50km,n31, σ1§44/31,mb4.1/15,3C,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**2.24**	**301**	P		**Pn**	**15 35 36.1**	**+2.0**
DAV	48nm,0.3s,baz=72,slow=9.6,SNR=1.9			S		**Sn**	**15 36 02.2**	**+1.5**
DAV	281nm,0.5s,baz=69,slow=22,SNR=2.8 138nm,0.4s **Davao City (W)**	**2.24**	**301**	Pn		**Pn**	**15 35 30.8**	**-3.3**
GSPH	**General Santos**	**2.56**	**274**	⇑*e*P		Pn	15 35 33.6	-5.0
KCP	**Kidapawan**	**2.65**	**294**	⇑*i*P		**Pn**	**15 35 39.4**	**-0.3**
KCP				*i*S		**Sn**	**15 36 11.4**	**+0.7**
CTBH	**Cotabato--PC H**	**3.50**	**292**	⇑*e*P		**Pn**	**15 35 53.9**	**+2.5**
TOLI2	**Tolitoli**	**8.25**	**235**	Pn		Pn	15 36 52.2	-4.3
LUWI	**Luwuk**	**8.38**	**215**	Pn		**Pn**	**15 36 58.4**	**-0.1**
SBUM	**Sibu**	**15.64**	**258**	P		**Pn**	**15 38 37.4**	**+0.7**
KSM	**Kuching**	**17.73**	**256**	P		**Pn**	**15 39 00.7**	**-2.2**
YOJ	**Yonaguni jima**	**18.94**	**347**	P		**Pn**	**15 39 17.2**	**-0.2**
MTN	**Manton Dam**	**18.98**	**169**	P		**P**	**15 39 17.9**	**+1.0**
MTN	comp=Z,13nm,1.2s			IAmb		IAmb	15 39 46.9	
KNRA	**Kununurra**	**21.49**	**177**	P		**P**	**15 39 44.4**	**+0.3**
KNRA	comp=Z,22nm,1.4s			IAmb		IAmb	15 40 27.5	
WB0	**Warramunga Arr**	**26.41**	**165**	P		**P**	**15 40 32.0**	**+0.5**
WB0	comp=Z,5.5nm,1.2s			IAmb		IAmb	15 40 39.0	
WRA	**Warramunga Arr**	**26.56**	**166**	P		**P**	**15 40 34.6**	**+1.7**
	comp=Z,0.6nm,0.7s,baz=342,slow=10,SNR=5.1 comp=Z,0.6nm,0.7s							
WB2	**Warramunga Arr**	**26.56**	**166**	P		**P**	**15 40 35.5**	**+2.5**
WB2	comp=Z,12nm,1.4s			IAmb		IAmb	15 41 06.5	
WR0	**Warramunga Arr**	**26.63**	**165**	P		**P**	**15 40 36.0**	**+2.5**
WR0	comp=Z,4.7nm,1.2s			IAmb		IAmb	15 40 60.0	
ASAR	**Alice Springs**	**30.06**	**168**	P		**P**	**15 41 04.8**	**+0.6**
ASAR	comp=Z,0.2nm,0.6s,baz=343,slow=6.7,SNR=8.6			PcP		**PcP**	**15 44 06.2**	**+0.9**
	comp=Z,0.5nm,0.5s,baz=349,slow=2.3,SNR=15 comp=Z,0.2nm,0.6s							
PEA0B	**Petropavlovsk-**	**53.12**	**22**	P		**P**	**15 44 13.8**	**+1.8**
PETK	**Petropavlovsk-**	**53.12**	**22**	P		**P**	**15 44 12.6**	**+0.6**
MK31	**Makanchi Array**	**56.24**	**324**	P		**P**	**15 44 34.9**	**+0.2**
MK31	comp=Z,1.7nm,1.4s			IAmb		IAmb	15 44 59.1	
MKAR	**Makanchi Array**	**56.24**	**324**	P		**P**	**15 44 35.2**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=120,slow=7.2,SNR=10 comp=Z,0.6nm,0.5s							
MAKZ	**Makanchi**	**56.43**	**324**	P		**P**	**15 44 35.7**	**-0.3**
MAKZ	comp=Z,3.0nm,1.4s			IAmb		IAmb	15 45 18.2	
KURK	**Kurchatov**	**60.34**	**327**	P		**P**	**15 45 03.2**	**0.0**
KURK	**Kurchatov**	**60.34**	**327**	IAmb		IAmb	15 45 05.0	
KURBB	comp=Z,2.3nm,0.6s **Kurchatov Arra**	**60.35**	**326**	P		**P**	**15 45 03.2**	**0.0**
	comp=Z,0.8nm,0.5s,baz=126,slow=6.8,SNR=12 comp=Z,0.8nm,0.5s							
ABKAR	**Akbulak array**	**70.97**	**320**	P		**P**	**15 46 11.3**	**-0.6**
AKTO	**Aktyubinsk**	**72.45**	**321**	P		**P**	**15 46 20.3**	**-0.4**
	comp=Z,1.5nm,0.7s,baz=116,slow=7.2,SNR=4.3 comp=Z,1.5nm,0.7s							
ARCES	**ARCESS Array B**	**88.68**	**340**	P		**P**	**15 47 46.8**	**-0.3**
	comp=Z,1.9nm,0.9s,baz=89,slow=7.4,SNR=3.8 comp=Z,1.9nm,0.9s							
BRTR	**Keskin Array B**	**89.24**	**310**	P		**P**	**15 47 49.3**	**-1.2**
	comp=Z,0.2nm,0.4s,baz=114,slow=3.5,SNR=2.1 comp=Z,0.2nm,0.4s							
FINES	**FINESS Array B**	**90.28**	**332**	P		**P**	**15 47 52.8**	**-2.0**
	comp=Z,1.1nm,0.9s,baz=69,slow=7.6,SNR=4.2 comp=Z,1.1nm,0.9s							
TORD	**Torodi Ar. Bea** comp=Z,0.2nm,0.3s,baz=48,slow=2.1,SNR=1.7	**122.96**	**290**	PKP		**PKPdf**	**15 53 50.6**	**-0.7**

*SOME **26** 15:37:04.5,39.60N×73.33E,h0km*
*KRNET **26** 15:37:04.5±0.1,39.43N×73.37E,mb3.6*

ISC 26 15:37:02.2±1.5,39.47N±0.06×73.42E±0.03,h9km±12km, n27,σ2§03/54,10C-8D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.16**	**335**	⇑*e*P		**Pg**	**15 37 27.0**	**+2.6**
OHH	baz=38			⇑*e*S		**Sn**	**15 37 43.2**	**+2.6**
DRK	baz=38 **Karamyk**	**1.25**	**271**	⇑*e*P		**Pg**	**15 37 27.6**	**+1.3**
DRK	baz=73			⇑*e*S		**Sn**	**15 37 44.5**	**+1.2**
BTK	baz=73 **Batken**	**2.09**	**287**	⇑*e*P		**Pg**	**15 37 42.4**	**+0.2**
BTK	baz=88			⇑*e*S		**Sg**	**15 38 10.1**	**+0.8**
GAR	baz=88 **Garm**	**2.46**	**260**	⇓*e*P		**Pg**	**15 37 47.2**	**-2.1**
GAR	baz=61			⇓*e*S		**Sb**	**15 38 18.2**	**+1.2**
ARLS	baz=61 **Aral**	**2.48**	**16**	⇓*e*P		**Pg**	**15 37 49.0**	**-0.7**
ARLS	baz=17			⇓*e*S		**Sg**	**15 38 21.3**	**-0.6**
TRKS	baz=17 **Terek-Say**	**2.69**	**320**	⇓*e*P		**Pb**	**15 37 50.3**	**-0.3**
TRKS	baz=21			⇓*i*S		**Sb**	**15 38 23.6**	**-0.2**
UCH	baz=21 **Uchtor**	**2.87**	**16**	⇑*e*P		**Pb**	**15 37 54.8**	**+0.9**
UCH	baz=17			⇑*e*S		**Sb**	**15 38 31.2**	**+1.9**
BOOM	baz=17 **Boomskoye usch**	**3.56**	**32**	⇓*e*P		**Pb**	**15 38 03.4**	**-2.1**
BOOM	baz=32			⇓*i*S		**Sb**	**15 38 47.0**	**-1.9**
IUG	baz=32 **Iuzhnay**	**3.71**	**317**	*e*P		**Pg**	**15 38 11.1**	**-2.1**
IUG	32nm,0.5s			*e*S		**Sg**	**15 38 59.0**	**-2.2**
KDJ	78nm,0.7s **Kajisay**	**3.90**	**46**	⇑*e*P		**Pb**	**15 38 09.0**	**-2.1**
KDJ	baz=46			⇑*i*S		**Sb**	**15 38 55.9**	**-2.6**
KST	baz=46 **Kastek**	**4.05**	**27**	*e*P		**Pg**	**15 38 19.6**	**-0.1**
KST	7.8nm,0.6s			*e*S		**Sg**	**15 39 13.8**	**+1.7**
SGDS	37nm,0.5s **Sogindy**	**4.08**	**12**	*e*P		**Pg**	**15 38 19.9**	**-0.4**
SGDS	7.2nm,0.9s			*e*S		**Sg**	**15 39 14.0**	**+0.9**
DGS	20nm,0.7s **Degeres**	**4.16**	**24**	*e*P		**Pg**	**15 38 23.6**	**+1.8**
DGS	10nm,0.6s			*e*S		**Sg**	**15 39 20.8**	**+5.1**
MTBS	38nm,0.6s **Maitube**	**4.30**	**31**	*e*P		**Pg**	**15 38 24.4**	**-0.1**
MTBS	2.7nm,0.5s			*e*S		**Sg**	**15 39 21.8**	**+1.7**
TNSS	15nm,0.4s **Tian-Shan** 4.9nm,0.5s	**4.44**	**36**	*e*P		**Pg**	**15 38 27.3**	**+0.1**
TNSS	14nm,0.6s			*e*S		**Sg**	**15 39 26.7**	**+1.9**
KRBS	**Karabastau**	**4.54**	**21**	*e*P		**Pg**	**15 38 28.3**	**-0.9**
KRBS	1.4nm,0.7s			*e*S		**Sg**	**15 39 29.1**	**+1.1**
KTBS	11nm,0.7s **Karatobe**	**4.89**	**29**	*e*P		**Pg**	**15 38 35.4**	**-0.4**
KTBS	5.4nm,0.5s			*e*S		**Sg**	**15 39 40.8**	**+1.7**
KUU	36nm,0.5s **Kurty**	**4.93**	**25**	*e*P		**Pg**	**15 38 35.6**	**-0.9**
KUU	2.1nm,0.3s			*e*S		**Sg**	**15 39 41.1**	**+0.8**
CHKK	18nm,0.8s **Chushkaly**	**5.13**	**30**	*e*P		**Pg**	**15 38 39.3**	**-1.0**
CHKK	3.0nm,0.3s			*e*S		**Sg**	**15 39 47.8**	**+1.1**
SATY	10nm,0.6s **Saty**	**5.19**	**45**	*e*P		**Pg**	**15 38 40.8**	**-0.8**
SATY	5.2nm,0.7s			*e*S		**Sg**	**15 39 49.8**	**+1.1**
KURS	14nm,0.8s **Kuram**	**5.37**	**40**	*e*P		**Pg**	**15 38 43.2**	**-1.7**
KURS	4.4nm,0.6s			*e*S		**Sg**	**15 39 54.1**	**-0.3**
BTLS	7.5nm,1.0s **Baital**	**5.58**	**5**	*e*P		**Pg**	**15 38 45.7**	**-3.3**
BTLS	1.8nm,0.6s			*e*S		**Sg**	**15 39 59.1**	**-2.3**
KPKS	6.6nm,1.1s **Kokpek**	**5.61**	**43**	*e*P		**Pg**	**15 38 48.0**	**-1.7**
KPKS	5.5nm,0.7s			*e*S		**Sg**	**15 40 02.4**	**0.0**
ARXS	10nm,0.8s **Arharly**	**5.76**	**33**	*e*P		**Pg**	**15 38 50.4**	**-2.1**
ARXS	2.9nm,0.6s			*e*S		**Sg**	**15 40 07.1**	**0.0**
SHLS	19nm,0.6s **Shalkode**	**5.85**	**49**	*e*P		**Pg**	**15 38 56.6**	**+2.5**
SHLS	2.6nm,0.1s			*e*S		**Sg**	**15 40 16.9**	**+7.0**
BLB	5.4nm,0.7s **Baldybastay**	**5.97**	**38**	*e*P		**Pg**	**15 38 56.0**	**-0.5**
BLB	4.9nm,0.5s			*e*S		**Sg**	**15 40 16.4**	**+2.8**
DJR	20nm,1.0s **Jarkent**	**6.79**	**42**	*e*P		**Pg**	**15 39 09.2**	**-3.0**
DJR	2.1nm,1.1s			*e*S		**Sg**	**15 40 39.2**	**-0.8**
	8.2nm,0.8s							

*VAO **26** 15:38:52.7±0.4,21.22S×68.60W,h122km±6km, mb4.4*
*IDC **26** 15:38:53.8±0.8,21.38S×68.25W,h114km±8km, mb3.7/9, mbtmp4.2/12, Error ellipse: s-maj=19.6km s-min=10.1km az=104.0*
*NEIC **26** 15:38:53.8±1.9,21.39S±0.04×68.36W±0.09,h111km±6km, mb4.2/23, ML4.1(GUC), Error ellipse: s-maj=12.4km s-min=6.1km az=85.0*
*GUC **26** 15:38:54.5±0.6,21.42S×68.46W,h126km±4km, ML4.1*

ISC 26 15:38:53.2±0.6,21.38S±0.03×68.45W±0.05,h120km±6km, n112,σ1§68/113,mb4.1/15,12C,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.29**	**199**	P		**Pn**	**15 39 20.0**	**+1.3**
LVC	2µm,0.3s,baz=25,slow=9.7,SNR=2641 baz=198,slow=20			S		**Sn**	**15 39 38.9**	**+0.9**
LVC	**Limon Verde**	**1.29**	**199**			**Pn**	**15 39 19.8**	**+1.1**
LVC	**Limon Verde**	**1.29**	**199**	⇑*i*P		**Pn**	**15 39 19.8**	**+1.1**
LVC				*i*S		**Sn**	**15 39 39.3**	**+1.3**
LVC	**Limon Verde**	**1.29**	**199**	*e*P		**Pn**	**15 39 19.6**	**+0.9**
LVC				*e*S		**Sn**	**15 39 39.8**	**+1.8**
PB02	**IPOC Station P**	**1.35**	**272**			**Pn**	**15 39 19.8**	**+0.7**
PB02	**IPOC Station P**	**1.35**	**272**	⇑*i*P		**Pn**	**15 39 19.8**	**+0.7**
PB02				*i*S		**Sn**	**15 39 39.3**	**+0.6**
PB02	comp=E,7µm,0.3s			IAML			15 39 42.8	
PB08	**IPOC Station P**	**1.40**	**332**	Pn		**Pn**	**15 39 21.7**	**+1.8**
PB08	**IPOC Station P**	**1.40**	**332**	⇑*i*P		**Pn**	**15 39 21.8**	**+1.9**
PB08				*i*S		**Sn**	**15 39 42.4**	**+2.2**
PB08	comp=N,1µm,0.2s			IAML			15 39 45.9	
AF01	**San Pedro de A**	**1.58**	**171**			**Pn**	**15 39 23.8**	**+1.9**
AF01	**San Pedro de A**	**1.58**	**171**	⇑*i*P		**Pn**	**15 39 24.1**	**+2.2**
AF01	comp=N,2µm,0.6s			IAML			15 40 05.5	
PB06	**IPOC Station P**	**1.68**	**218**			**Pn**	**15 39 23.7**	**+0.8**
PB06	**IPOC Station P**	**1.68**	**218**	⇑*i*P		**Pn**	**15 39 23.8**	**+0.8**
PB06				*i*S		**Sn**	**15 39 46.7**	**+1.1**
PB06	comp=E,1µm,0.4s			IAML			15 39 48.1	
PATCX	**Punta Patache**	**1.69**	**289**			**Pn**	**15 39 24.0**	**+1.1**
PATCX	**Punta Patache**	**1.69**	**289**	⇑*i*P		**Pn**	**15 39 24.0**	**+1.1**
PATCX				*i*S		**Sn**	**15 39 46.5**	**+0.9**
PATCX	comp=E,4µm,0.6s			IAML			15 39 48.3	
HMBC	**Humberstone**	**1.74**	**309**	*e*P		**Pn**	**15 39 24.4**	**+0.8**
TA01	**Diego Aracena**	**1.81**	**296**			**Pn**	**15 39 25.1**	**+0.7**
TA01	**Diego Aracena**	**1.81**	**296**	⇑*i*P		**Pn**	**15 39 25.2**	**+0.9**
TA01				*i*S		**Sn**	**15 39 48.5**	**+0.4**
TA01	comp=E,5µm,0.2s			IAML			15 39 50.0	
PB04	**IPOC Station P**	**1.84**	**239**			**Pn**	**15 39 25.1**	**+0.2**
PB04	**IPOC Station P**	**1.84**	**239**	⇑*i*P		**Pn**	**15 39 25.2**	**+0.4**
PB04				*i*S		**Sn**	**15 39 49.4**	**+0.3**
PB04	comp=N,1µm,0.4s			IAML			15 39 54.6	
GO01	**Chusmiza**	**1.84**	**338**			**Pn**	**15 39 26.6**	**+1.4**
GO01	**Chusmiza**	**1.84**	**338**	⇑*i*P		**Pn**	**15 39 26.8**	**+1.6**
GO01				*i*S		**Sn**	**15 39 51.7**	**+2.1**
GO01	comp=E,2µm,0.2s			IAML			15 39 56.9	
TA02	**Huaiquique**	**1.92**	**305**			**Pn**	**15 39 26.1**	**+0.4**
TA02	**Huaiquique**	**1.92**	**305**	*e*P		**Pn**	**15 39 26.4**	**+0.7**
TA02				*i*S		**Sn**	**15 39 51.4**	**+0.8**
TA02	comp=N,3µm,0.5s			IAML			15 39 52.4	
PB11	**IPOC Station P**	**1.97**	**325**			**Pn**	**15 39 27.2**	**+0.7**
PB11	**IPOC Station P**	**1.97**	**325**	⇑*e*P		**Pn**	**15 39 27.5**	**+1.0**
PB11				*e*S		**Sn**	**15 39 53.0**	**+1.1**
PB11	comp=E,2µm,0.2s			IAML			15 39 55.0	
PB15	**IPOC Station P**	**2.05**	**207**	Pn		**Pn**	**15 39 28.2**	**+0.8**
PB15	**IPOC Station P**	**2.05**	**207**	⇑*i*P		**Pn**	**15 39 28.5**	**+1.0**
PB15				*i*S		**Sn**	**15 39 55.3**	**+1.6**
PB10	**IPOC Station P**	**2.88**	**222**	Pn		**Pn**	**15 39 37.3**	**0.0**
PB10	**IPOC Station P**	**2.88**	**222**	*e*P		**Pn**	**15 39 38.4**	**+0.5**
PB10	comp=N,200nm,0.3s			IAML			15 40 29.8	
PB16	**IPOC Station P**	**3.19**	**342**			**Pn**	**15 39 44.4**	**+1.8**
PB16	**IPOC Station P**	**3.19**	**342**	*e*P		**Pn**	**15 39 44.5**	**+1.9**
PB16				*i*S		**Sn**	**15 40 23.2**	**+2.6**
PB16	comp=N,211nm,0.3s			IAML			15 40 29.6	
PB12	**IPOC Station P**	**3.27**	**327**			**Pn**	**15 39 42.7**	**-0.5**
PB12	**IPOC Station P**	**3.27**	**327**	*e*P		**Pn**	**15 39 42.5**	**-0.7**
PB12				*i*S		**Sn**	**15 40 21.3**	**-0.5**
PB12	comp=E,420nm,0.5s			IAML			15 40 30.7	
AP01	**Chacalluta**	**3.49**	**329**	Pn		**Pn**	**15 39 44.9**	**-1.0**
GO02	**Mina Guanaco**	**3.91**	**195**	Pn		**Pn**	**15 39 51.7**	**-0.1**
GO02	**Mina Guanaco**	**3.91**	**195**	⇑*e*P		**Pn**	**15 39 51.9**	**+0.2**
LPAZ	**La Paz**	**5.08**	**3**	P		**Pn**	**15 40 09.9**	**+2.1**
LPAZ	comp=E,29nm,0.3s,baz=186,slow=5.2,SNR=161 comp=E,6.4nm,0.5s,baz=94,slow=25,SNR=1.1			S		**Sn**	**15 41 07.3**	**+1.5**
LPAZ	**La Paz**	**5.08**	**3**			**Pn**	**15 40 09.8**	**+2.0**
AC01	**Pan de Azucar**	**5.13**	**202**	Pn		**Pn**	**15 40 06.3**	**-1.6**
AC02	**Maricunga**	**5.46**	**186**	Pn		**Pn**	**15 40 12.6**	**-0.2**
GO03	**Copiap**	**6.39**	**194**			**Pn**	**15 40 22.8**	**-2.1**
AC04	**Llanos de Chal**	**7.20**	**199**	Pn		Pn	15 40 31.8	-4.0
LCO	**Las Campanas

CPUP	**Villa Florida**	**11.30**	**118**	*eP*	**Pn**	**15 41 33.3**	**+2.1**
VA03	**San Esteban**	**11.49**	**189**	Pn	**Pn**	**15 41 29.9**	**-3.7**
VILB	**Vilhena**	**11.50**	**45**	*eP*	**Pn**	**15 41 32.7**	**-1.2**
ETMB	**Extrema**	**11.70**	**11**	*eP*	**Pn**	**15 41 34.6**	**-1.8**
ROC1	**El Roble**	**11.77**	**191**	Pn	Pn	15 41 31.2	-6.3
MT02	**Curacav**	**12.07**	**191**	Pn	Pn	15 41 36.4	-4.9
MT09	**Talagante**	**12.55**	**190**	Pn	Pn	15 41 42.2	-5.4
MT01	**Popeta**	**12.68**	**191**	Pn	Pn	15 41 43.7	-5.4
BO01	**Tunca**	**13.17**	**190**	Pn	**Pn**	**15 41 52.0**	**-3.5**
SALV	**Santo Antonio**	**13.26**	**68**	*eP*	**Pn**	**15 41 56.4**	**-0.5**
SAML	**Samuel**	**13.36**	**23**	Pn	**Pn**	**15 41 55.3**	**-2.9**
ITQB	**Itaqui**	**13.49**	**130**	*eP*	**P**	**15 42 01.9**	**-2.7**
PDRB	**Porto dos Gac**	**14.85**	**51**	*eP*	**Pn**	**15 42 16.6**	**-0.5**
PTGB	**Pitanga**	**15.44**	**106**	*eP*	**P**	**15 42 28.0**	**+1.5**
ITAB	**Concordia**	**15.97**	**115**	Pn	**Pn**	**15 42 28.0**	**-3.1**
ITAB				IAmb	IAmb	15 42 37.2	
	comp=Z,18nm,1.4s						
ITAB	**Concordia**	**15.97**	**115**	*eP*	**P**	**15 42 32.7**	**+0.5**
PCMB	**Pacaembu**	**16.00**	**94**	*eP*	**P**	**15 42 32.8**	**+0.2**
CLDB	**Colider**	**16.02**	**51**	*eP*	**P**	**15 42 32.7**	**-0.1**
CPSB	**Cacapava Do Su**	**16.21**	**127**	*eP*	**P**	**15 42 35.7**	**+0.8**
SNDB	**Serra Nova Dou**	**18.89**	**63**	*eP*	**P**	**15 43 03.9**	**-0.6**
NPGB	**Novo Progresso**	**19.06**	**44**	*eP*	**P**	**15 43 05.3**	**-1.0**
PLCA	**Paso Flores**	**19.37**	**185**	P	**P**	**15 43 11.1**	**+1.6**
	comp=Z,1.7nm,0.8s,baz=355,slow=13,SNR=5.7						
PLCA	**Paso Flores**	**19.37**	**185**	P	**P**	**15 43 04.2**	**-5.4**
MACA	**Manacapuru-AM**	**19.62**	**24**	*eP*	**P**	**15 43 10.5**	**-1.9**
BDFB	**Brasilia**	**20.20**	**77**	P	**P**	**15 43 17.8**	**-0.9**
	comp=Z,1.8nm,0.3s,baz=242,slow=9.3,SNR=4.8						
	comp=Z,1.8nm,0.3s						
BDFB	**Brasilia**	**20.20**	**77**	IAmb	IAmb	15 43 19.0	
	comp=Z,8.5nm,1.1s						
BOSC	**San Juan Bosco**	**20.59**	**330**	P	**P**	**15 43 18.3**	**-4.7**
ITTB	**Itaituba**	**20.94**	**38**	*eP*	**P**	**15 43 25.6**	**-1.0**
PEXB	**Peixe**	**21.36**	**68**	*eP*	**P**	**15 43 30.3**	**-0.8**
PRPB	**Parauapebas**	**23.54**	**53**	*eP*	**P**	**15 43 51.5**	**-1.3**
SMTB	**Santa Maria do**	**23.64**	**61**	*eP*	**P**	**15 43 53.6**	**-0.1**
JANB	**Januaria**	**23.76**	**79**	*eP*	**P**	**15 43 54.2**	**-0.6**
MALB	**Monte Alegre**	**23.83**	**37**	*eP*	**P**	**15 43 55.2**	**-0.2**
SDIA	**SAO DESIDERIO**	**24.21**	**72**	*eP*	**P**	**15 43 59.1**	**+0.3**
BAUV	**El Baul**	**30.14**	**1**	P	P	15 44 46.2	-5.6
BAUV				IAmb	IAmb	15 44 53.7	
	comp=Z,9.2nm,0.8s						
MG04	**Isla Riesco**	**31.51**	**184**	P	**P**	15 44 57.2	-6.3
RCBR	**Riachuelo**	**35.10**	**69**	P	**P**	**15 45 34.9**	**-0.3**
	comp=Z,4.2nm,0.5s,baz=270,slow=18,SNR=5.6						
	comp=Z,4.2nm,0.5s						
RPN	**Rapa Nui**	**37.59**	**253**	P	P	15 45 50.5	-5.7
TXAR	**Lajitas Array**	**60.78**	**325**	P	**P**	**15 48 53.5**	**+0.8**
	comp=Z,0.2nm,0.6s,baz=145,slow=9.5,SNR=2.7						
	comp=Z,0.2nm,0.6s						
SNAA	**Sanae**	**62.25**	**161**	P	**P**	**15 49 03.3**	**+1.4**
SNAA	**Sanae**	**62.25**	**161**	P	**P**	**15 49 03.0**	**+1.1**
	comp=Z,1.4nm,0.8s,baz=270,slow=8.8,SNR=13						
	comp=Z,1.4nm,0.8s						
SNAA	**Sanae**	**62.25**	**161**	P	**P**	**15 49 02.9**	**+1.0**
SNAA				IAmb	IAmb	15 49 04.0	
	comp=Z,1.5nm,0.7s						
TROLL	**Troll, Antarti**	**63.96**	**161**	P	**P**	**15 49 14.9**	**+1.6**
DBIC	**Dimbokro**	**68.29**	**73**	P	**P**	**15 49 41.5**	**-0.2**
	comp=Z,5.0nm,0.6s,baz=236,slow=4.5,SNR=7.4						
	comp=Z,5.0nm,0.6s						
DBIC	**Dimbokro**	**68.29**	**73**	P	**P**	**15 49 41.7**	**0.0**
DBIC				IAmb	IAmb	15 49 42.7	
	comp=Z,6.5nm,0.8s						
QSPA	**South Pole Qui**	**68.81**	**180**	P	**P**	**15 49 46.5**	**+2.3**
QSPA				IAmb	IAmb	15 49 47.2	
	comp=Z,1.8nm,0.6s						
P18A	**Preston Nutter**	**72.16**	**327**	P	**P**	**15 50 07.6**	**+2.4**
P18A				IAmb	IAmb	15 50 08.7	
	comp=Z,2.5nm,0.7s						
CCUT	**Cedar City**	**72.27**	**324**	P	**P**	**15 50 09.0**	**+3.2**
CCUT				IAmb	IAmb	15 50 10.1	
	comp=Z,2.0nm,0.7s						
P17A	**Butcher Ranch,**	**72.30**	**327**	P	**P**	**15 50 07.8**	**+2.0**
P17A				IAmb	IAmb	15 50 09.2	
	comp=Z,2.5nm,0.9s						
PDAR	**Pinedale Array**	**74.22**	**330**	P	**P**	**15 50 19.2**	**+2.1**
	comp=Z,0.2nm,0.5s,baz=132,slow=6.2,SNR=2.4						
	comp=Z,0.2nm,0.5s						
TOA0	**Torodi Ar. Sit**	**76.91**	**70**	P	**P**	**15 50 32.5**	**-0.2**
TOA0				IAmb	IAmb	15 50 34.6	
	comp=Z,2.8nm,0.6s						
TORD	**Torodi Ar. Bea**	**76.91**	**70**	P	**P**	**15 50 33.0**	**+0.2**
	comp=Z,1.7nm,0.5s,baz=257,slow=5.2,SNR=19						
	comp=Z,1.7nm,0.5s						
TORD	**Torodi Ar. Bea**	**76.91**	**70**	P	**P**	**15 50 32.8**	**0.0**
TORD				IAmb	IAmb	15 50 34.6	
	comp=Z,2.4nm,0.8s						
PAHR	**Pah Rah Range**	**77.15**	**322**	P	**P**	**15 50 36.1**	**+2.4**
PAHR				IAmb	IAmb	15 50 37.7	
	comp=Z,3.6nm,0.8s						
HLID	**Hailey**	**77.17**	**328**	P	**P**	**15 50 36.5**	**+2.7**
PLID	**Pearl Lake**	**79.06**	**328**	P	**P**	**15 50 46.5**	**+2.2**
MAW	**Mawson**	**84.32**	**163**	P	**P**	**15 51 13.1**	**+1.8**
	comp=Z,1.7nm,0.6s,baz=252,slow=9.6,SNR=2.2						
	comp=Z,1.7nm,0.6s						
MAW	**Mawson**	**84.32**	**163**	IAmb	IAmb	15 51 15.3	
	comp=Z,1.9nm,1.2s						
YKA	**Yellowknife Ar**	**91.22**	**340**	P	**P**	**15 51 44.9**	**+0.6**
	comp=Z,1.4nm,0.5s,baz=133,slow=4.6,SNR=27						
	comp=Z,1.4nm,0.5s						
ASAR	**Alice Springs**	**130.21**	**207**	PKP	**PKiKP**	**15 57 51.4**	**+0.7**
	comp=Z,0.6nm,0.5s,baz=134,slow=1.7,SNR=4.4						
WRA	**Warramunga Arr**	**133.27**	**210**	PKP	**PKiKP**	**15 57 57.6**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=167,slow=3.5,SNR=2.7						
MKAR	**Makanchi Array**	**145.29**	**36**	PKPbc	**PKPab**	**15 58 18.4**	**+1.4**
	comp=Z,1.3nm,0.8s,baz=323,slow=3.1,SNR=11						

*KRNET **26** 15:39:36.2±0.1,39.˚39N×73.˚56E,mb3.6*
*SOME **26** 15:39:37.9,39.˚58N×73.˚58E,h0km*
ISC 26 15:39:36.8±1.6,39.˚19N±0.˚08×73.˚45E±0.˚04,h14km±12km,
n24,σ2s17/48,8C-10D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**1.31**	**283**	⇑	*e*	P	**Pg**	**15 40 01.7**	**-0.4**
	baz=74								
DRK				⇑	*e*	S	**Sb**	**15 40 20.2**	**+2.0**
	baz=74								
OHH	**Osh**	**1.43**	**339**	⇓	*e*	P	**Pn**	**15 40 00.1**	**-2.3**
	baz=33								
OHH				⇓	*e*	S	**Sn**	**15 40 17.3**	**-3.8**
	baz=33								
BTK	**Batken**	**2.21**	**294**	⇓	*e*	P	**Pb**	**15 40 15.4**	**-1.2**
	baz=88								
BTK				⇓	*i*	S	**Sn**	**15 40 44.2**	**+3.9**
	baz=88								
GAR	**Garm**	**2.44**	**267**	⇑	*e*	P	**Pb**	**15 40 20.1**	**-0.5**
	baz=62								
GAR				⇑	*e*	S	**Sb**	**15 40 52.0**	**+1.4**
	baz=62								
ARLS	**Aral**	**2.75**	**14**	⇑	*e*	P	**Pn**	**15 40 19.9**	**-0.8**
	baz=13								
ARLS				⇑	*e*	S	**Sn**	**15 40 51.6**	**-2.2**
	baz=13								
TRKS	**Terek-Say**	**2.93**	**324**	⇑	*e*	P	**Pn**	**15 40 23.0**	**-0.1**
	baz=19								
TRKS				⇑	*i*	S	**Sn**	**15 40 57.2**	**-1.0**
	baz=19								
UCH	**Uchtor**	**3.14**	**15**	⇓	*e*	P	**Pn**	**15 40 25.4**	**-0.9**
	baz=14								
UCH				⇓	*e*	S	**Sn**	**15 41 01.7**	**-2.2**
	baz=14								
BOOM	**Boomskoye usch**	**3.80**	**29**	⇓	*e*	P	**Pn**	**15 40 34.5**	**-0.6**
	baz=29								
BOOM				⇓	*i*	S	**Sn**	**15 41 16.9**	**-2.8**
	baz=29								
IUG	**luzhnay**	**3.94**	**320**	*e*	P		**Pb**	**15 40 47.2**	**+1.2**
	283nm,0.6s								
IUG				*e*	S		**Sb**	**15 41 36.8**	**+3.2**
	20nm,0.6s								
KDJ	**Kajisay**	**4.09**	**43**	⇓	*i*	P	**Pn**	**15 40 38.7**	**-0.3**
	baz=44								
KDJ				⇓	*i*	S	**Sn**	**15 41 24.3**	**-2.4**
	baz=44								
KST	**Kastek**	**4.30**	**25**	*e*	P		**Pb**	**15 40 51.0**	**-1.2**
	5.3nm,0.9s								
KST				*e*	S		**Sb**	**15 41 43.8**	**-0.1**
	19nm,0.6s								
SGDS	**Sogindy**	**4.35**	**11**	*e*	P		**Pb**	**15 40 51.7**	**-1.4**
	2.5nm,0.5s								
SGDS				*e*	S		**Sb**	**15 41 44.4**	**-1.1**
	8.5nm,0.7s								
DGS	**Degeres**	**4.42**	**23**	*e*	P		**Pb**	**15 40 54.7**	**+0.5**
	7.3nm,0.7s								
DGS				*e*	S		**Sb**	**15 41 50.0**	**+2.7**
	20nm,0.8s								
MTBS	**Maitube**	**4.54**	**29**	*e*	P		**Pb**	**15 40 56.5**	**+0.2**
	4.4nm,0.4s								
MTBS				*e*	S		**Sb**	**15 41 52.9**	**+2.1**
	13nm,0.6s								
TNSS	**Tian-Shan**	**4.67**	**33**	*e*	P		**Pb**	**15 40 59.4**	**+0.8**
	4.4nm,0.5s								
TNSS				*e*	S		**Sb**	**15 41 58.0**	**+3.1**
	5.8nm,0.6s								
KRBS	**Karabastau**	**4.81**	**20**	*e*	P		**Pb**	**15 41 01.1**	**+0.3**
	3.7nm,0.5s								
KRBS				*e*	S		**Sb**	**15 42 01.2**	**+2.7**
	7.4nm,0.7s								
KTBS	**Karatobe**	**5.13**	**27**	*e*	P		**Pb**	**15 41 06.2**	**-0.1**
	2.6nm,0.8s								
KTBS				*e*	S		**Sb**	**15 42 10.3**	**+2.4**
	20nm,0.7s								
KUU	**Kurty**	**5.18**	**24**	*e*	P		**Pb**	**15 41 07.6**	**+0.5**
	3.9nm,0.8s								
KUU				*e*	S		**Sb**	**15 42 12.1**	**+2.9**
	13nm,0.6s								
CHKK	**Chushkaly**	**5.37**	**29**	*e*	P		**Pb**	**15 41 11.0**	**+0.7**
	1.6nm,0.2s								
CHKK				*e*	S		**Sb**	**15 42 18.0**	**+3.4**
	7.9nm,0.7s								
KPKS	**Kokpek**	**5.81**	**41**	*e*	P		**Pb**	**15 41 18.9**	**+0.9**
	2.0nm,0.5s								
KPKS				*e*	S		**Sb**	**15 42 31.5**	**+4.0**
	6.2nm,0.5s								
BTLS	**Baital**	**5.87**	**4**	*e*	P		**Pb**	**15 41 19.5**	**+0.6**
	1.4nm,0.5s								
BTLS				*e*	S		**Sb**	**15 42 32.2**	**+3.2**
	4.3nm,0.8s								
ARXS	**Arharly**	**6.00**	**32**	*e*	P		**Pb**	**15 41 21.8**	**+0.7**
	1.4nm,0.4s								
ARXS				*e*	S		**Sb**	**15 42 36.8**	**+4.1**
	6.6nm,0.5s								
SHLS	**Shalkode**	**6.03**	**47**	*e*	P		**Pg**	**15 41 30.5**	**-1.7**
	1.5nm,0.3s								
SHLS				*e*	S		**Sg**	**15 42 51.0**	**+0.8**
	2.7nm,0.6s								
BLB	**Baldybastay**	**6.18**	**36**	*e*	P		**Pb**	**15 41 25.0**	**+0.7**
	2.8nm,0.6s								
BLB				*e*	S		**Sb**	**15 42 42.3**	**+4.1**
	4.7nm,1.0s								

*IDC **26** 15:48:10.6±1.3,39.˚38N×73.˚49E,h0km,mb3.5/7,*
mbtmp3.5/12,ML3.0/5,Error ellipse: s-maj=22.1km
s-min=16.0km az=136.0
*KRNET **26** 15:48:11.9±0.1,39.˚45N×73.˚55E,mb4.0*
*BJI **26** 15:48:11.6±0.0,39.˚29N×73.˚49E,h26km,mb4.0/7*
*NEIC **26** 15:48:12.3±1.9,39.˚51N±0.˚05×73.˚71E±0.˚08,h10km±2km,*
mb4.4/4,Error ellipse: s-maj=13.1km s-min=3.8km
az=127.0
*SOME **26** 15:48:12.5,39.˚65N×73.˚33E,h10km*
*NNC **26** 15:48:15.6±1.5,39.˚61N×73.˚68E,h0km,mb4.2,mpv3.8,*
Error ellipse: s-maj=12.2km s-min=6.3km az=166.0
ISC 26 15:48:10.4±1.4,39.˚55N±0.˚04×73.˚72E±0.˚03,h3km±9km,
n106,σ1s78/135,mb3.6/10,22C-14D,Tajikistan-Xinjiang
border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.21**	**324**	⇑	*e*	P	**Pg**	**15 48 34.6**	**+0.9**
	baz=32								
OHH				⇑	*e*	S	**Sg**	**15 48 51.1**	**+1.7**
	baz=32								
DRK	**Karamyk**	**1.49**	**268**	⇓	*e*	P	**Pn**	**15 48 37.1**	**-1.2**
	baz=72								
DRK				⇓	*e*	S	**Sn**	**15 48 55.4**	**-3.0**
	baz=72								
DRK	**Karamyk**	**1.49**	**268**			Pn	**Pn**	**15 48 37.9**	**-0.4**
KSH	**Kashi**	**1.74**	**90**			Pg	**Pn**	**15 48 40.0**	**-1.6**
KSH						Sg	**Sg**	**15 49 07.5**	**+1.2**
BTK	**Batken**	**2.29**	**284**	⇑	*e*	P	**Pn**	**15 48 50.3**	**+1.1**
	baz=87								
BTK				⇑	*e*	S	**Sn**	**15 49 18.4**	**+0.4**
	baz=87								
BTK	**Batken**	**2.29**	**284**			Pn	**Pn**	**15 48 51.1**	**+1.9**
ARLS	**Aral**	**2.36**	**11**	⇓	*e*	P	**Pg**	**15 48 54.3**	**-1.3**
	baz=14								
ARLS				⇓	*e*	S	**Sg**	**15 49 25.2**	**-0.9**
	baz=14								
AML	**Almayashu**	**2.58**	**360**			P	**Pg**	**15 48 59.9**	**0.0**
	SNR=22								
GAR	**Garm**	**2.70**	**259**	⇑	*e*	P	**Pn**	**15 48 55.2**	**+0.4**
	baz=61								
GAR				⇑	*e*	S	**Sn**	**15 49 27.1**	**-0.9**
	baz=61								
GAR	**Garm**	**2.70**	**259**				**Pn**	**15 48 56.2**	**+1.4**
UCH	**Uchtor**	**2.75**	**12**			P	**Pg**	**15 49 02.5**	**-0.5**
	SNR=41								
UCH	**Uchtor**	**2.75**	**12**	⇓	*e*	P	**Pb**	**15 49 00.0**	**-0.4**
	baz=15								
UCH				⇓	*e*	S	**Sg**	**15 49 35.3**	**-3.3**
	baz=15								
TRKS	**Terek-Say**	**2.79**	**316**	⇑	*e*	P	**Pn**	**15 48 57.7**	**+1.6**
	baz=19								
TRKS				⇑	*e*	S	**Sn**	**15 49 30.9**	**+0.5**
	baz=19								
EKS2	**Erkin-Say**	**3.11**	**1**			P	**Pb**	**15 49 07.5**	**+1.0**
	SNR=22								
EKS2	**Erkin-Say**	**3.11**	**1**	⇑		P	**Pb**	**15 49 04.8**	**-1.6**
	baz=3.0								
EKS2				⇑	*e*	S	**Sb**	**15 49 43.2**	**-1.6**
	baz=3.0								
AAK	**Ala-Archa**	**3.14**	**10**			P	**Pg**	**15 49 08.2**	**-2.4**
	SNR=17								
AAK	**Ala-Archa**	**3.14**	**10**			Pn	**Pb**	**15 49 06.4**	**-0.5**
	7.7nm,0.3s,baz=183,slow=7.8,SNR=16								
AAK						Sn	**Sg**	**15 49 49.6**	**-1.8**
	8.8nm,0.3s,baz=303,slow=21,SNR=6.0								
	18nm,0.5s								
AAK	**Ala-Archa**	**3.14**	**10**	⇓	*e*	P	**Pb**	**15 49 05.4**	**-1.6**
	baz=12								
AAK				⇓	*e*	S	**Sb**	**15 49 44.5**	**-1.2**
	baz=12								
AAK	**Ala-Archa**	**3.14**	**10**			Pn	**Pb**	**15 49 06.1**	**-0.9**
KBK	**Karagaybulak**	**3.24**	**16**			P	**Pb**	**15 49 09.4**	**+0.7**
	SNR=15								
KBK	**Karagaybulak**	**3.24**	**16**	⇑	*e*	P	**Pb**	**15 49 06.8**	**-1.9**
	baz=18								
KBK				⇑	*e*	S	**Sb**	**15 49 47.0**	**-1.6**
	baz=18								
ULHL	**Ulahol**	**3.30**	**34**			P	**Pb**	**15 49 10.2**	**+0.5**
	SNR=25								
FRU1	**Bishkek**	**3.33**	**12**			Pn	**Pb**	**15 49 08.2**	**-2.0**
BOOM	**Boomskoye usch**	**3.39**	**29**	⇓	*e*	P	**Pb**	**15 49 09.0**	**-2.1**
	baz=30								
BOOM				⇓	*i*	S	**Sb**	**15 49 51.3**	**-1.4**
	baz=30								
BOOM	**Boomskoye usch**	**3.39**	**29**			Pn	**Pb**	**15 49 09.2**	**-2.0**
CHMS	**Chumysh**	**3.54**	**12**			P	**Pb**	**15 49 12.7**	**-0.9**
	SNR=14								
CHMS	**Chmysh**	**3.54**	**12**	⇓	*e*	P	**Pb**	**15 49 10.7**	**-2.9**
	baz=14								
CHMS				⇓	*e*	S	**Sb**	**15 49 53.5**	**-3.4**
	baz=14								
TKM2	**Tokmak 2**	**3.66**	**22**			P	**Pb**	**15 49 15.2**	**-0.6**
	SNR=5.6								
TKM2	**Tokmak 2**	**3.66**	**22**	⇑	*e*	P	**Pb**	**15 49 12.6**	**-3.1**
	baz=23								
TKM2				⇑	*e*	S	**Sb**	**15 49 57.3**	**-3.2**
	baz=23								
TKM2	**Tokmak 2**	**3.66**	**22**	⇓		Pn	**Pb**	**15 49 14.7**	**-1.1**
	8.9nm,0.4s								
TKM2				⇑		Lg	Lg	15 50 10.1	
	40nm,0.5s								
CHGR	**Chuyangaron**	**3.66**	**257**	⇑	*e*	P	**Pn**	**15 49 08.9**	**+0.9**
	baz=58								
CHGR				⇑	*e*	S	**Sn**	**15 49 50.4**	**-1.3**
	baz=58								
CHGR	**Chuyangaron**	**3.66**	**257**			Pn	**Pn**	**15 49 07.7**	**-0.3**
KDJ	**Kajisay**	**3.68**	**44**	⇑	*i*	P	**Pb**	**15 49 13.5**	**-2.6**
	baz=45								
KDJ				⇑	*i*	S	**Sb**	**15 49 58.6**	**-2.6**
	baz=45								
KDJ	**Kajisay**	**3.68**	**44**			Pn	**Pb**	**15 49 13.7**	**-2.4**
TARG	**Taragay, Kyrgy**	**3.79**	**54**			Pn	**Pb**	**15 49 15.5**	**-2.7**
DZA	**Taraz**	**3.80**	**332**	*e*		P	**Pb**	**15 49 16.3**	**-1.7**
DZA				*e*		S	**Sb**	**15 50 01.8**	**-2.6**
TAS	**Tashkent**	**3.82**	**299**	⇑	*e*	P	**Pn**	**15 49 11.7**	**+1.6**
	baz=1.0								
TAS				⇑	*i*	S	**Sn**	**15 49 55.9**	**+0.5**
	baz=1.0								
IUG	**luzhnay**	**3.82**	**314**	*e*	P		Pb	15 49 14.1	-4.3
	679nm,0.3s								
IUG				*e*	S		**Sn**	**15 49 58.1**	**+2.5**
	40nm,0.5s								
IUG	**luzhnay**	**3.82**	**314**			Pg	**Pg**	**15 49 25.7**	**+2.2**
	29nm,0.9s								
IUG						Lg	Lg	15 50 18.2	
	95nm,0.6s								
KST	**Kastek**	**3.88**	**25**	*e*	P		**Pg**	**15 49 24.4**	**-0.3**
	15nm,0.5s								
KST				*e*	S		**Sg**	**15 50 15.9**	**+0.9**
	69nm,0.7s								
KST	**Kastek**	**3.88**	**25**			Pg	**Pg**	**15 49 24.4**	**-0.3**
	15nm,0.5s								
KST						Lg	Lg	15 50 16.8	
	69nm,0.7s								
SGDS	**Sogindy**	**3.96**	**10**	*e*	P		**Pg**	**15 49 26.6**	**+0.3**
	8.2nm,0.5s								
SGDS				*e*	S		**Sg**	**15 50 19.5**	**+1.9**
	48nm,0.6s								
SGDS	**Sogindy**	**3.96**	**10**			Pg	**Pg**	**15 49 26.6**	**+0.3**
	8.2nm,0.5s								
SGDS						Lg	Lg	15 50 19.5	
	48nm,0.6s								
DGS	**Degeres**	**4.00**	**22**	*e*	P		**Pg**	**15 49 28.7**	**+1.6**
	14nm,0.5s								
DGS				*e*	S		**Sg**	**15 50 23.4**	**+4.5**
	95nm,0.7s								
DGS	**Degeres**	**4.00**	**22**			Pg	**Pg**	**15 49 28.7**	**+1.6**
	14nm,0.5s								
DGS						Lg	Lg	15 50 23.5	
	95nm,0.7s								
MTBS	**Maitube**	**4.12**	**29**	*e*	P		**Pg**	**15 49 30.7**	**+1.3**
	14nm,0.5s								
MTBS				*e*	S		**Sg**	**15 50 26.6**	**+3.9**
	40nm,0.6s								
MTBS	**Maitube**	**4.12**	**29**			Pg	**Pg**	**15 49 30.7**	**+1.3**
	14nm,0.5s								
MTBS						Lg	Lg	15 50 26.6	
	40nm,0.6s								
TNSS	**Tian-Shan**	**4.25**	**34**	*e*	P		**Pg**	**15 49 31.7**	**-0.2**
	25nm,0.5s								
TNSS				*e*	S		**Sg**	**15 50 28.6**	**+1.7**
	18nm,0.9s								
TNSS	**Tian-Shan**	**4.25**	**34**			Pg	**Pg**	**15 49 31.7**	**-0.2**
	25nm,0.5s								
TNSS						Lg	Lg	15 50 29.2	
	18nm,0.9s								
KK31	**Karatay Array**	**4.30**	**327**			Pn	**Pn**	**15 49 18.7**	**+2.0**
KK31	**Karatay Array**	**4.30**	**327**			Pn	Pb	15 49 21.1	-5.4
	2.0nm,0.2s,baz=140,slow=13,SNR=34								
KK31						Pg	**Pg**	**15 49 31.0**	**-1.8**
	4.9nm,0.3s,baz=158,slow=13,SNR=11								
KK31						Sn	**Sb**	**15 50 15.0**	**-3.8**
	13nm,0.3s,baz=146,slow=25,SNR=7.0								
KK31				⇓		Lg	Lg	15 50 28.0	
	10.0nm,0.3s								
KKAR	**Karatay Array**	**4.30**	**327**			Pn	**Pn**	**15 49 19.0**	**+2.3**
KKAR	**Karatay Array**	**4.30**	**327**				**Pn**	**15 49 17.9**	**+1.3**
AAA	**Alma-Ata**	**4.38**	**32**	*e*	P		**Pg**	**15 49 37.3**	**+3.1**
	17nm,0.2s								
AAA				*e*	S		Sg	15 50 38.7	+7.7
	97nm,0.6s								
AAA	**Alma-Ata**	**4.38**	**32**			Pg	**Pg**	**15 49 37.3**	**+3.1**
	17nm,0.2s								
AAA						Lg	Lg	15 50 39.0	
	97nm,0.6s								
KRBS	**Karabastau**	**4.40**	**19**	*e*	P		**Pg**	**15 49 34.4**	**-0.2**
	6.5nm,0.7s								
KRBS				*e*	S		**Sg**	**15 50 33.5**	**+1.9**
	50nm,0.7s								
KRBS	**Karabastau**	**4.40**	**19**			Pg	**Pg**	**15 49 34.4**	**-0.2**
	6.5nm,0.7s								
KRBS						Lg	Lg	15 50 33.5	
	50nm,0.7s								
KTBS	**Karatobe**	**4.72**	**27**	*e*	P		**Pg**	**15 49 40.0**	**-0.8**
	17nm,0.7s								
KTBS				*e*	S		**Sg**	**15 50 42.5**	**+0.6**
	66nm,0.4s								
KTBS	**Karatobe**	**4.72**	**27**			Pg	**Pg**	**15 49 40.0**	**-0.8**
	17nm,0.7s								
KTBS						Lg	Lg	15 50 42.5	
	66nm,0.4s								
KUU	**Kurty**	**4.76**	**23**	*e*	P		**Pg**	**15 49 41.6**	**-0.1**
	12nm,0.5s								
KUU				*e*	S		**Sg**	**15 50 45.3**	**+2.0**
	68nm,1.0s								
KUU	**Kurty**	**4.76**	**23**			Pg	**Pg**	**15 49 41.6**	**-0.1**
	12nm,0.5s								
KUU						Lg	Lg	15 50 45.3	

0.1nm,0.3s,baz=229,slow=26,SNR=1.6
0.6nm,0.7s
WMQ **Urumqi** **11.29** **63** *e*P Pn 15 50 56.5 +3.9
WMQ pmax pmax
comp=Z,13nm,0.7s
KURBB **Kurchatov Arra** **11.58** **15** Pn **Pn** **15 50 59.7 +3.2**
baz=202,slow=12,SNR=3.9
KURBB Lg Lg 15 54 18.1
baz=203,slow=29,SNR=8.3
0.3nm,0.7s
AB31 **Akbulak array** **13.81** **319** P **Pn** **15 51 26.7 -0.2**
0.5nm,0.4s,baz=132,slow=13,SNR=16
ABKAR **Akbulak array** **13.81** **319** Pn **Pn** **15 51 26.6 -0.3**
AKTO **Aktyubinsk** **15.52** **320** Pn **Pn** **15 51 49.5 -0.6**
0.3nm,0.3s,baz=105,slow=8.8,SNR=4.2
1.6nm,0.6s
AKTO **Aktyubinsk** **15.52** **320** ⇑P **P** **15 51 52.0 -2.6**
2.4nm,0.7s
ZAA0 **Zalesovo Array** **16.26** **24** Pn **P** **15 52 00.9 -1.7**
ZALV **Zalesovo Beam** **16.26** **24** Pn **P** **15 52 01.1 -1.6**
0.1nm,0.3s,baz=203,slow=14,SNR=3.9
1.8nm,0.6s
ZALV **Zalesovo Beam** **16.26** **24** Pn **P** **15 52 00.8 -1.9**
GTA **Gaotai** **20.12** **82** *e*P Pn 15 52 50.5 +3.2
GTA pP sP 15 52 57.0 +8.3
GTA sP pP 15 53 00.3 +13
GTA pmax pmax
comp=Z,3.0nm,1.5s
SONM **Songino Array** **24.89** **60** P **P** **15 53 38.2 +3.8**
0.7nm,0.8s,baz=251,slow=9.0,SNR=2.2
0.7nm,0.8s
HHC **Hu-ho-hao-te** **28.79** **75** *e*P **P** **15 54 11.5 +2.0**
HHC pmax pmax
comp=Z,21nm,0.9s
AKASG **Malin Array Be** **32.85** **305** P **P** **15 54 45.4 +0.3**
0.2nm,0.3s,baz=78,slow=7.9,SNR=2.2
0.2nm,0.3s
FIA1 **FINESS Array S** **36.25** **323** P **P** **15 55 15.6 +1.3**
FIA1 IAmb IAmb 15 55 39.6
comp=Z,10nm,1.4s
FINES **FINESS Array B** **36.25** **323** P **P** **15 55 15.7 +1.3**
comp=Z,0.4nm,0.3s,baz=116,slow=8.7,SNR=11
comp=Z,0.4nm,0.3s
FINES **FINESS Array B** **36.25** **323** P **P** **15 55 15.6 +1.2**
ARCES **ARCESS Array B** **39.21** **335** P **P** **15 55 41.1 +1.8**
comp=Z,1.2nm,0.8s,baz=108,slow=6.9,SNR=5.6
comp=Z,1.2nm,0.8s
NC303 **NORSAR Array S** **43.23** **321** P **P** **15 56 13.5 +1.0**
NC303 IAmb IAmb 15 56 16.7
comp=Z,8.1nm,1.2s
NOA **NORSAR Array B** **43.31** **321** P **P** **15 56 13.7 +0.5**
comp=Z,0.4nm,0.6s,baz=90,slow=7.8,SNR=2.4
comp=Z,0.4nm,0.6s
NC204 **NORSAR Array S** **43.53** **321** P **P** **15 56 15.3 +0.3**
TORD **Torodi Ar. Bea** **67.93** **269** P **P** **15 59 09.5 -1.2**
comp=Z,0.3nm,0.6s,baz=43,slow=6.4,SNR=2.1
comp=Z,0.3nm,0.6s
ILAR **Eielson Array** **71.25** **17** P **P** **15 59 30.6 +0.1**
WRA **Warramunga Arr** **81.84** **124** P **P** **16 00 31.5 +0.5**
comp=Z,0.4nm,0.9s,baz=324,slow=5.3,SNR=1.7
comp=Z,0.4nm,0.9s

MAN 26 15:50:13.4, 9.52N×126.59E, h14km, mb3.8, ML2.5, MS2.1, Mindanao

DJA 26 15:50:38.5±0.5, 2.7°N±4.4°, 12.8°E±.°, h155km±5km, M4.0/8, mb4.1/4, mB5.4/1, MLv4.0/8, Mw(mB)4.9/1, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
TNTI	**Ternate**	**1.84**	**207**	P	Pn		15 51 12.7	+0.6
SGSI	**Sangihe**	**2.95**	**295**	P	Pn		15 51 25.7	+0.3
SGSI				S	Sn		15 52 02.9	+1.1
LBMI	**Labuha**	**3.12**	**193**	P	Pn		15 51 27.1	-0.5
KMSI	**Cibinong**	**4.60**	**247**	P	Pn		15 51 46.7	0.0
SANI	**Sanana**	**4.96**	**206**	P	Pn		15 51 49.5	-2.0
SANI				S	Sn		15 52 42.3	-6.2
SANI	**Sanana**	**4.96**	**206**	P	Pn		15 51 49.8	-1.7
TTSI	**Tana Toraja** 2µm15nm,0.7s	**9.98**	**237**	P	Pn		15 52 57.7	-0.6
SPSI	**Sidrap Palu** 9.5nm,0.7s	**10.55**	**233**	P	Pn		15 53 06.4	+0.7
BKSI	**Bulukumba** 7.3nm,0.6s	**11.15**	**226**	P	**Pn**		**15 53 15.4**	**+4.0**
BKSI	**Bulukumba** 7.3nm,0.6s	**11.15**	**226**	P	Pn		15 53 15.3	+1.7
BSSI	**Bau Bau, Buton**	**11.47**	**222**	P	Pn		15 53 17.2	-0.7

*IDC **26** 15:50:54.5±3.6, 3.94S×129.81E, h33km±26km, mb3.9/14, mbtmp4.1/15, ML4.3/1, Error ellipse: s-maj=29.0km s-min=14.2km az=70.0*
*DJA **26** 15:50:55.3±0.7, 4.°S±2.°×13.°0E±.°, h30km±7km, M4.1/10, mb4.2/10, MLv4.1/10*
*NEIC **26** 15:50:57.0±0.8, 4.08S±0.06×129.88E±0.07, h60km±6km, mb4.3/28, Error ellipse: s-maj=11.8km s-min=5.4km az=132.0*
ISC 26 15:50:54.2±0.4, 4.01S±0.05×129.76E±0.04, h35km, n79, σ1§97/88, mb4.2/20, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
BNDI	**Bandanaira**	**0.53**	**165**	P	**Pn**		**15 51 07.1**	**+1.8**
MSAI	**Masohi**	**1.06**	**308**	P	**Pn**		**15 51 10.3**	**-2.4**
MSAI				S	**Sn**		**15 51 21.5**	**-4.8**
AAI	**Ambon**	**1.60**	**282**	P	**Pn**		**15 51 18.4**	**-1.6**
AAI				S	**Sn**		**15 51 37.1**	**-2.4**
FAKI	**Fak Fak**	**2.71**	**66**		**Pn**		**15 51 37.0**	**+1.6**
FAKI	**Fak Fak**	**2.71**	**66**	P	**Pn**		**15 51 37.2**	**+1.9**
FAKI				S	**Sn**		**15 52 06.6**	**-0.3**
FAKI	**Fak Fak**	**2.71**	**66**	P	**Pn**		**15 51 37.4**	**+2.1**
NLAI	**Namlea**	**2.77**	**286**	P	**Pn**		**15 51 39.2**	**+3.1**
NLAI				S	**Sn**		**15 52 09.4**	**+1.1**
SWI	**Sorong**	**3.47**	**26**	P	**Pn**		**15 51 45.7**	**-0.1**
SWI				S	**Sn**		**15 52 22.6**	**-3.0**
SWI	**Sorong**	**3.47**	**26**	P	**Pn**		**15 51 45.5**	**-0.3**
LBMI	**Labuha**	**4.04**	**326**	P	**Pn**		**15 51 53.8**	**+0.1**
LBMI				S	**Sn**		**15 52 37.9**	**-2.0**
SANI	**Sanana**	**4.24**	**297**	P	**Pn**		**15 51 55.8**	**-0.7**
SANI				S	**Sn**		**15 52 41.1**	**-3.7**
KMSI	**Cibinong** 0.4nm113nm,0.8s	**7.36**	**308**	P	**Pn**		**15 52 40.5**	**+1.3**
KMSI	**Cibinong**	**7.36**	**308**	S	**Sn**		**15 52 40.6**	**+1.3**
SOEI	**Soe** 39nm,2.1s	**7.89**	**223**	P	**Pn**		**15 52 50.8**	**+4.1**
BATI	**Baumata** 21nm,1.2s	**8.63**	**224**	P	**Pn**		**15 52 58.7**	**+1.9**
APSI	**Ampana** 17nm,0.9s	**8.67**	**291**	P	**Pn**		**15 52 58.3**	**+1.0**
MTN	**Manton Dam**	**8.88**	**171**		**Pn**		**15 53 01.4**	**+1.3**
MTN	**Manton Dam**	**8.88**	**171**	P	**Pn**		**15 53 02.6**	**+2.5**
KDU	**Kakadu**	**9.03**	**163**	P	**Pn**		**15 53 03.1**	**+0.9**
EDFI	**Ende, Flores** 7.2nm,1.3s	**9.30**	**239**	P	**Pn**		**15 53 08.9**	**+2.9**
BSSI	**Bau Bau, Buton** 7.6nm,1.0s	**9.48**	**257**	P	**Pn**		**15 53 09.1**	**+0.7**
KAPI	**Kappang** 2.3nm,0.3s,baz=168,slow=6.3,SNR=5.8 6.8nm,0.4s	**10.03**	**264**	Pn	**Pn**		**15 53 18.0**	**+2.1**
KAPI	**Kappang**	**10.03**	**264**		**Pn**		**15 53 19.5**	**+3.5**
TOLI2	**Tolitoli**	**10.32**	**299**	Pn	**Pn**		**15 53 23.9**	**+4.0**
KNRA	**Kununurra**	**11.63**	**185**		**Pn**		**15 53 39.0**	**+1.1**
KNRA	**Kununurra**	**11.63**	**185**	P	**Pn**		**15 53 39.2**	**+1.3**
MYLDM	**Lahad Datu**	**14.49**	**309**	P	**P**		**15 54 25.1**	**+1.9**
WB0	**Warramunga Arr**	**16.30**	**164**	Pn	**Pn**		**15 54 37.1**	**-3.5**
WRA	**Warramunga Arr** 0.3nm,0.3s,baz=349,slow=13,SNR=11	**16.45**	**165**	Pn	**Pn**		**15 54 39.0**	**-3.5**
WRA					Sn		**15 57 36.8**	**-7.4**
	0.1nm,0.3s,baz=334,slow=23,SNR=3.0							
WRA	**Warramunga Arr**	**16.45**	**165**	P	**Pn**		**15 54 39.5**	**-3.0**
WB2	**Warramunga Arr**	**16.45**	**165**	Pn	**Pn**		**15 54 39.3**	**-3.3**
COEN	**Coen**	**16.51**	**128**	Pn	**Pn**		**15 54 42.4**	**-1.0**
COEN				IAmb	IAmb		15 55 20.2	
	comp=Z,20nm,1.4s							
WR0	**Warramunga Arr**	**16.52**	**164**	Pn	**Pn**		**15 54 40.1**	**-3.3**
QIS	**Mount Isa**	**19.03**	**151**	P	**Pn**		**15 55 15.2**	**+0.8**
PSA00	**Pilbara Seismi**	**19.94**	**208**	P	**P**		**15 55 23.1**	**-0.2**
PSA00				IAmb	IAmb		15 55 45.5	
	comp=Z,31nm,1.3s							
AS31	**Alice Springs**	**19.94**	**169**		**P**		**15 55 24.6**	**+1.2**
ASAR	**Alice Springs** comp=Z,3.9nm,0.4s,baz=347,slow=11,SNR=215	**19.95**	**169**	P	**P**		**15 55 24.4**	**+0.9**
ASAR				S	**S**		**15 59 01.6**	**-4.5**
	comp=Z,0.4nm,0.8s,baz=353,slow=22,SNR=3.2							
ASAR				PcP	**PcP**		**15 59 40.0**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=3.6,slow=1.5,SNR=5.1							
ASAR				ScP	**ScP**		**16 03 14.5**	**+1.2**
	comp=Z,0.1nm,0.6s,baz=349,slow=2.0,SNR=1.6 comp=Z,3.9nm,0.4s							
MTSU	**Mount Surprise**	**20.00**	**136**	P	**Pn**		**15 55 25.9**	**0.0**
KSM	**Kuching**	**20.19**	**285**	P	**P**		**15 55 27.0**	**+0.9**
KSM				IAmb	IAmb		15 55 39.0	
	comp=Z,6.6nm,0.9s							
WRKA	**Warakurna**	**20.95**	**184**	P	**P**		**15 55 35.4**	**+1.1**
CTA	**Charters Tower**	**22.66**	**136**	P	**P**		**15 55 54.3**	**+1.6**
	comp=Z,2.2nm,0.9s,baz=315,slow=15,SNR=1.4 comp=Z,2.2nm,0.9s							
OOD	**Oodnadatta**	**24.32**	**167**	P	**P**		**15 56 09.5**	**+0.8**
INKA	**Innaminka**	**25.82**	**157**	P	**P**		**15 56 23.8**	**+1.5**
BBOO	**Buckleboo**	**29.25**	**169**	P	**P**		**15 56 53.1**	**0.0**
STKA	**Stephens Creek**	**29.86**	**159**	P	**P**		**15 56 59.1**	**+0.6**
	comp=Z,1.0nm,0.4s,baz=322,slow=9.2,SNR=5.5 comp=Z,1.0nm,0.4s							
CM31	**Chiang Mai Arr**	**37.69**	**307**	P	**P**		**15 58 06.9**	**+0.3**
CMAR	**Chiang Mai Arr**	**37.69**	**307**	P	**P**		**15 58 07.3**	**+0.6**
	comp=Z,1.7nm,0.7s,baz=137,slow=7.2,SNR=14 comp=Z,1.7nm,0.7s							
CMAR	**Chiang Mai Arr**	**37.69**	**307**	P	**P**		**15 58 06.8**	**+0.1**
CHTO	**Chiang Mai**	**37.89**	**308**	P	**P**		**15 58 08.7**	**+0.4**
CHTO				IAmb	IAmb		15 58 10.1	
	comp=Z,4.1nm,0.8s							
MJAR	**Matsushiro Arr**	**41.11**	**10**	P	**P**		**15 58 34.0**	**-0.9**
	comp=Z,1.6nm,0.8s,baz=178,slow=10.0,SNR=6.8 comp=Z,1.6nm,0.8s							
MJAR	**Matsushiro Arr**	**41.11**	**10**	P	**P**		**15 58 36.2**	**+1.3**
MJAR				IAmb	IAmb		15 58 52.6	
	comp=Z,5.0nm,1.4s							
MAJO	**Matsushiro**	**41.11**	**10**	P	**P**		**15 58 33.7**	**-1.2**
MAJO				IAmb	IAmb		15 58 43.4	
	comp=Z,6.3nm,1.1s							
MJB9	**Matsu-Tunnel**	**41.11**	**10**	P	**P**		**15 58 33.6**	**-1.3**
MJB9				IAmb	IAmb		15 58 43.4	
	comp=Z,6.2nm,1.1s							
KSRS	**Korea Array**	**41.29**	**358**	P	**P**		**15 58 36.5**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=170,slow=8.6,SNR=5.3 comp=Z,0.7nm,0.6s							
JMM	**Marumori**	**42.91**	**13**	P	**P**		**15 58 50.5**	**+1.0**
USRK	**Ussuriysk Ar.**	**48.03**	**2**	P	**P**		**15 59 30.6**	**+0.6**
	comp=Z,1.9nm,0.6s,baz=188,slow=8.9,SNR=5.2 comp=Z,1.9nm,0.6s							
KLR	**Kul'dur**	**53.05**	**2**	P	**P**		**16 00 08.8**	**+0.9**
	comp=Z,0.5nm,0.5s,baz=198,slow=3.2,SNR=2.0 comp=Z,0.5nm,0.5s							
SONM	**Songino Array**	**55.55**	**341**	P	**P**		**16 00 26.2**	**0.0**
	comp=Z,1.7nm,1.1s,baz=157,slow=8.0,SNR=5.1 comp=Z,1.7nm,1.1s							
SONM	**Songino Array**	**55.55**	**341**	IAmb	IAmb		16 00 28.0	
	comp=Z,2.1nm,1.1s							
MK31	**Makanchi Array**	**65.62**	**326**	P	**P**		**16 01 35.0**	**+0.2**
MK31				IAmb	IAmb		16 02 13.6	
	comp=Z,7.2nm,1.4s							
MKAR	**Makanchi Array**	**65.62**	**326**	P	**P**		**16 01 35.1**	**+0.2**
	comp=Z,1.9nm,0.5s,baz=121,slow=7.9,SNR=13 comp=Z,1.9nm,0.5s							
MKAR	**Makanchi Array**	**65.62**	**326**	P	**P**		**16 01 34.8**	**-0.1**
MAKZ	**Makanchi**	**65.80**	**326**	P	**P**		**16 01 35.8**	**-0.2**
MAKZ				IAmb	IAmb		16 02 09.2	
	comp=Z,7.4nm,1.4s							
YAK	**Yakutsk**	**65.86**	**360**	P	**P**		**16 01 36.1**	**+0.2**
ZALV	**Zalesovo Beam**	**68.82**	**333**	P	**P**		**16 01 53.7**	**-1.2**
	comp=Z,1.3nm,0.8s,baz=122,slow=7.0,SNR=3.1 comp=Z,1.3nm,0.8s							
ZALV	**Zalesovo Beam**	**68.82**	**333**	P	**P**		**16 01 53.2**	**-1.6**
KURBB	**Kurchatov Arra**	**69.86**	**328**	P	**P**		**16 02 01.7**	**+0.3**
	comp=Z,4.0nm,0.7s,baz=128,slow=5.6,SNR=38 comp=Z,4.0nm,0.7s							
KURK	**Kurchatov**	**69.87**	**328**	P	**P**		**16 02 01.5**	**+0.1**
VNDA	**Vanda**	**75.42**	**173**	P	**P**		**16 02 33.4**	**-0.6**
TIXI	**Tiksi**	**75.52**	**360**	P	**P**		**16 02 34.4**	**-0.2**
	comp=Z,0.8nm,0.3s,baz=153,slow=4.5,SNR=8.6 comp=Z,0.8nm,0.3s							
TIXI	**Tiksi**	**75.52**	**360**	IAmb	IAmb		16 02 35.1	
	comp=Z,1.1nm,0.6s							
ABKAR	**Akbulak array**	**80.04**	**321**	P	**P**		**16 03 00.0**	**-0.2**
AKTO	**Aktyubinsk**	**81.58**	**322**	P	**P**		**16 03 09.3**	**+0.8**
	comp=Z,1.1nm,0.5s,baz=158,slow=11,SNR=3.0 comp=Z,1.1nm,0.5s							
QSPA	**South Pole Qui**	**85.94**	**180**	P	**P**		**16 03 30.5**	**-0.2**
QSPA				IAmb	IAmb		16 03 52.1	
	comp=Z,4.1nm,1.3s							
RAYN	**Ar Rayn**	**86.33**	**294**	P	**P**		**16 03 33.5**	**+0.2**
RAYN				IAmb	IAmb		16 03 34.7	
	comp=Z,3.3nm,0.8s							
N19K	**Bonanza Creek**	**86.57**	**28**		**P**		**16 03 35.3**	**+1.5**
TORD	**Torodi Ar. Bea**	**127.94**	**283**	PKP	**PKPdf**		**16 09 57.1**	**-0.4**
	comp=Z,0.7nm,0.6s,baz=52,slow=1.6,SNR=4.6							
CPUP	**Villa Florida**	**149.06**	**168**	PKPbc	**PKPbc**		**16 10 40.4**	**+0.8**
	comp=Z,3.0nm,1.0s,baz=198,slow=3.2,SNR=3.8							
LPAZ	**La Paz**	**153.17**	**139**	PKPbc	**PKPbc**		**16 10 49.5**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=224,slow=0.6,SNR=2.1							

*KRNET **26** 15:56:49.6±0.1, 39.32N×73.52E, mb4.1*
*SOME **26** 15:56:49.7, 39.43N×73.65E, h5km*
*IDC **26** 15:56:50.0±0.9, 39.22N×73.58E, h0km, mb3.6/11, mbtmp3.6/16, ML3.0/5, MS3.2/1, Error ellipse: s-maj=18.2km s-min=15.8km az=79.0*
ISC 26 15:56:51.5±1.9, 39.24N±0.06×73.43E±0.03, h8km±11km, n47, σ1§85/76, mb3.5/11, 16C-6D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
DRK	**Karamyk** baz=77	**1.28**	**281**	⇑*e*P	**Pn**		**15 57 15.4**	**-0.7**
DRK				⇑*e*S	**Sn**		**15 57 34.0**	**+0.4**
	baz=77							
OHH	**Osh** baz=35	**1.37**	**339**	⇓*i*P	**Pn**		**15 57 14.9**	**-2.2**
OHH				⇓*e*S	**Sb**		**15 57 33.3**	**-2.0**
	baz=35							
BTK	**Batken** baz=90	**2.17**	**293**	⇑*e*P	**Pb**		**15 57 29.7**	**-1.5**
BTK				⇑*e*S	**Sb**		**15 57 58.9**	**+0.6**
	baz=90							
GAR	**Garm** baz=64	**2.43**	**265**	⇑*e*P	**Pb**		**15 57 34.2**	**-1.4**
GAR				⇑*e*S	**Sb**		**15 58 06.3**	**+0.5**
	baz=64							
ARLS	**Aral** baz=13	**2.71**	**14**	⇑*e*P	**Pn**		**15 57 35.2**	**-0.3**
ARLS				⇑*e*S	**Sn**		**15 58 08.4**	**-0.1**
	baz=13							
TRKS	**Terek-Say** baz=21	**2.88**	**323**	⇓*e*P	**Pn**		**15 57 37.9**	**0.0**
TRKS				⇓*i*S	**Sn**		**15 58 13.0**	**+0.2**
	baz=21							
UCH	**Uchtor** baz=14	**3.10**	**15**	⇑*e*P	**Pn**		**15 57 41.0**	**-0.1**
UCH				⇑*e*S	**Sn**		**15 58 18.1**	**-0.5**
	baz=14							
AAK	**Ala-Archa** 6.6nm,0.3s,baz=190,slow=12,SNR=6.5	**3.49**	**13**	Pn	**Pb**		**15 57 50.2**	**-3.4**
AAK				Sn	**Sb**		**15 58 32.3**	**-4.0**
	3.1nm,0.3s,baz=139,slow=20,SNR=3.6 23nm,0.5s							
KBK	**Karagaybulak** baz=18	**3.60**	**18**	⇑*e*P	**Pn**		**15 57 47.8**	**0.0**
KBK				⇑*i*S	**Sn**		**15 58 30.0**	**-0.6**
	baz=18							
BOOM	**Boomskoye usch** baz=29	**3.76**	**30**	⇓*i*P	**Pn**		**15 57 49.6**	**-0.5**
BOOM				⇓*i*S	**Sn**		**15 58 33.9**	**-0.7**
	baz=29							
TAS	**Tashkent** baz=3.0	**3.79**	**305**	⇑*i*P	**Pn**		**15 57 50.3**	**+0.1**
TAS				⇑*i*S	**Sn**		**15 58 36.9**	**+2.0**
	baz=3.0							
IUG	**Iuzhnay** 2µm,0.7s	**3.88**	**319**	*e*P	**Pg**		**15 58 05.6**	**-0.4**
IUG				*e*S	**Sg**		**15 59 00.7**	**+4.4**
	255nm,1.3s							
KDJ	**Kajisay** baz=44	**4.06**	**43**	⇑*i*P	**Pn**		**15 57 54.0**	**-0.1**
KDJ				⇑*e*S	**Sn**		**15 58 40.6**	**-1.3**
	baz=44							
CHM	**Chimkent** 5.2nm,0.4s	**4.23**	**318**	*e*P	**Pb**		**15 58 09.0**	**+2.9**
CHM				*e*S	**Sg**		**15 59 05.8**	**-1.5**
	201nm,0.5s							
KST	**Kastek** 19nm,0.7s	**4.25**	**26**	*e*P	**Pb**		**15 58 04.6**	**-2.0**
KST				*e*S	**Sb**		**15 58 58.5**	**+0.3**
	67nm,0.9s							
SGDS	**Sogindy** 10nm,0.6s	**4.30**	**12**	*e*P	**Pb**		**15 58 05.7**	**-1.8**
SGDS				*e*S	**Sb**		**15 58 59.8**	**+0.2**
	40nm,0.9s							
DGS	**Degeres** 15nm,0.6s	**4.37**	**23**	*e*P	**Pb**		**15 58 07.8**	**-0.8**
DGS				*e*S	**Sb**		**15 59 03.5**	**+1.9**
	88nm,0.8s							
MTBS	**Maitube** 24nm,0.7s	**4.50**	**29**	*e*P	**Pb**		**15 58 09.6**	**-1.2**
MTBS				*e*S	**Sb**		**15 59 07.6**	**+2.4**
	58nm,0.8s							
TNSS	**Tian-Shan** 10nm,0.4s	**4.63**	**34**	*e*P	**Pb**		**15 58 11.0**	**-2.3**
TNSS				*e*S	**Sb**		**15 59 09.4**	**+0.1**
	22nm,0.7s							
AAA	**Alma-Ata** 25nm,0.2s	**4.76**	**32**	*e*P	**Pb**		**15 58 15.3**	**+0.1**
AAA				*e*S	**Sb**		**15 59 16.8**	**+4.2**
	73nm,0.5s							
KTBS	**Karatobe** 6.6nm,0.7s	**5.09**	**28**	*e*P	**Pb**		**15 58 20.1**	**-0.8**
KTBS				*e*S	**Sb**		**15 59 24.8**	**+2.5**
	50nm,0.5s							
KUU	**Kurty** 11nm,0.8s	**5.14**	**24**	*e*P	**Pb**		**15 58 19.9**	**-1.8**
KUU				*e*S	**Sb**		**15 59 25.4**	**+2.0**
	42nm,0.8s							
CHKK	**Chushkaly** 4.8nm,0.5s	**5.33**	**29**	*e*P	**Pb**		**15 58 23.3**	**-1.6**
CHKK				*e*S	**Sb**		**15 59 30.6**	**+1.6**
	20nm,0.7s							
SATY	**Saty** 15nm,0.7s	**5.35**	**43**	*e*P	**Pb**		**15 58 25.0**	**-0.4**
SATY				*e*S	**Sb**		**15 59 33.0**	**+3.1**
	46nm,1.3s							
ZHN	**Zhinishke** 7.4nm,0.2s	**5.45**	**42**	*e*P	**Pb**		**15 58 26.4**	**-0.5**
ZHN				*e*S	**Sb**		**15 59 36.4**	**+3.9**
	22nm,1.0s							
KURS	**Kuram** 10.0nm,0.7s	**5.54**	**39**	*e*P	**Pb**		**15 58 28.8**	**+0.2**
KURS				*e*S	**Sb**		**15 59 39.9**	**+4.6**
	19nm,1.0s							
KPKS	**Kokpek** 8.7nm,0.5s	**5.78**	**41**	*e*P	**Pb**		**15 58 32.0**	**-0.7**
KPKS				*e*S	**Sb**		**15 59 45.2**	**+3.0**
	36nm,0.7s							
BTLS	**Baital** 8.4nm,0.7s	**5.81**	**4**	*e*P	**Pb**		**15 58 32.6**	**-0.6**
BTLS				*e*S	**Sb**		**15 59 46.3**	**+3.4**
	18nm,0.7s							
ARXS	**Arharly** 15nm,0.7s	**5.96**	**32**	*e*P	**Pb**		**15 58 34.9**	**-0.8**
ARXS				*e*S	**Sb**		**15 59 50.5**	**+3.3**
	24nm,0.8s							
BLB	**Baldybastay** 15nm,0.7s	**6.15**	**36**	*e*P	**Pb**		**15 58 37.9**	**-1.0**
BLB				*e*S	**Sb**		**15 59 55.7**	**+2.9**
	24nm,0.8s							
KURBB	**Kurchatov Arra** baz=206,slow=12,SNR=2.9	**11.94**	**16**	Pn	**Pn**		**15 59 40.0**	**-1.9**
KURBB				Lg	Lg		16 02 59.8	
	baz=214,slow=31 0.3nm,0.8s							
AKTO	**Aktyubinsk** 0.3nm,0.3s,baz=129,slow=13,SNR=5.7 2.2nm,0.7s	**15.61**	**321**	Pn	**Pn**		**16 00 30.5**	**-1.2**
ZALV	**Zalesovo Beam** 0.2nm,0.3s,baz=230,slow=11,SNR=3.6 0.7nm,0.5s	**16.63**	**24**	Pn	**Pn**		**16 00 43.0**	**-1.8**
ARU	**Arti** baz=189,slow=5.8,SNR=5.6 2.7nm,0.6s	**19.81**	**335**	P	**P**		**16 01 21.6**	**-0.6**
KIRV	**Kirov** comp=Z,51nm,19.0s,baz=15,slow=38	**24.74**	**329**	LR	LR		16 12 37.8	
SONM	**Songino Array** 0.5nm,0.6s,baz=256,slow=11,SNR=2.7 0.5nm,0.6s	**25.24**	**59**	P	**P**		**16 02 18.3**	**+0.3**
BRTR	**Keskin Array B** 0.6nm,0.8s,baz=63,slow=7.3,SNR=2.6 0.6nm,0.8s	**30.54**	**284**	P	**P**		**16 03 07.8**	**+2.3**
AKASG	**Malin Array Be** 0.1nm,0.3s,baz=77,slow=7.5,SNR=3.1 0.1nm,0.3s	**32.83**	**305**	P	**P**		**16 03 26.0**	**+0.6**
FINES	**FINESS Array B** 0.6nm,0.4s,baz=112,slow=9.2,SNR=14 0.6nm,0.4s	**36.36**	**323**	P	**P**		**16 03 56.3**	**+0.6**
ARCES	**ARCESS Array B** 0.6nm,0.6s,baz=100,slow=10.0,SNR=8.6 0.6nm,0.6s	**39.39**	**336**	P	**P**		**16 04 21.3**	**0.0**
NB2	**NORSAR Subarra** comp=Z,0.6nm,0.5s,baz=91,slow=8.6	**43.40**	**321**	P	**P**		**16 04 54.1**	**-0.2**
NOA	**NORSAR Array B** comp=Z,0.7nm,0.6s,baz=91,slow=8.0,SNR=5.0 comp=Z,0.7nm,0.6s	**43.40**	**321**	P	**P**		**16 04 54.3**	**0.0**
ESDC	**Sonseca Array** comp=Z,0.4nm,0.8s,baz=62,slow=6.0,SNR=1.8 comp=Z,0.4nm,0.8s	**57.90**	**297**	P	**P**		**16 06 45.1**	**+1.0**
TORD	**Torodi Ar. Bea** comp=Z,0.5nm,0.6s,baz=64,slow=6.6,SNR=2.6 comp=Z,0.5nm,0.6s	**67.70**	**269**	P	**P**		**16 07 49.3**	**-0.3**
YKA	**Yellowknife Ar** comp=Z,0.3nm,0.8s,baz=345,slow=6.4,SNR=3.1 comp=Z,0.3nm,0.8s	**78.41**	**4**	P	**P**		**16 08 51.6**	**-0.7**
WRA	**Warramunga Arr** comp=Z,0.6nm,0.6s,baz=324,slow=4.9,SNR=12 comp=Z,0.6nm,0.6s	**81.86**	**124**	P	**P**		**16 09 10.8**	**-0.7**
ASAR	**Alice Springs** comp=Z,0.4nm,0.6s,baz=314,slow=4.8,SNR=10 comp=Z,0.4nm,0.6s	**84.30**	**127**	P	**P**		**16 09 22.9**	**-1.1**

MAN 26 15:59:20.5, 5.47N×126.99E, h70km, mb4.6, ML3.4, MS3.3, Mindanao

*IDC **26** 16:01:58.0±0.6, 39.56N×73.71E, h0km, mb3.8/18, mbtmp3.8/24, ML3.1/7, Error ellipse: s-maj=12.6km s-min=11.5km az=145.0*
*KRNET **26** 16:01:58.3±0.1, 39.41N×73.65E, mb4.4*
*SOME **26** 16:01:58.5, 39.60N×73.53E, h5km*
*BJI **26** 16:01:59.9±0.0, 39.68N×73.47E, h16km, mb4.0/13, mB4.4/5, ML3.6/5, Ms3.5/2, Ms7 3.3/2*
*NEIC **26** 16:02:01.2±1.9, 39.53N±0.06×73.55E±0.07, h10km±1km, mb4.4/25, Error ellipse: s-maj=11.5km s-min=7.6km az=140.0*
*NNC **26** 16:02:03.5±1.4, 39.66N×73.61E, h0km, mb4.5, mpv4.1, Error ellipse: s-maj=12.9km s-min=7.7km az=158.0*
**ISC 26 16:01:58.9±1.1, 39.56N±0.04×73.64E±0.02, h2km±7km, n148

	SNR=26									
GAR	**Garm**	**2.64**	**259**	⇑	*e*P		**Pn**	**16 02 42.6**	**0.0**	
	baz=62									
GAR				⇑	*i*S		**Sn**	**16 03 14.9**	**-0.3**	
	baz=62									
GAR	**Garm**	**2.64**	**259**				**Pn**	**16 02 42.7**	**0.0**	
TRKS	**Terek-Say**	**2.74**	**317**	⇓	*e*P		**Pn**	**16 02 45.1**	**+1.0**	
	baz=18									
TRKS				⇓	*e*S		**Sn**	**16 03 19.2**	**+1.4**	
	baz=18									
UCH	**Uchtor**	**2.75**	**14**		P		**Pb**	**16 02 49.1**	**0.0**	
	SNR=19									
UCH	**Uchtor**	**2.75**	**14**	⇓	*i*P		**Pn**	**16 02 46.6**	**+2.1**	
	baz=13									
UCH				⇓	*e*S		**Sb**	**16 03 22.0**	**-1.4**	
	baz=13									
EKS2	**Erkin-Say**	**3.10**	**2**		P		**Pb**	**16 02 54.1**	**-0.8**	
	SNR=35									
EKS2	**Erkin-Say**	**3.10**	**2**	⇑	*i*P		**Pn**	**16 02 51.3**	**+2.3**	
	baz=2.0									
EKS2				⇑	*e*S		**Sb**	**16 03 30.1**	**-3.2**	
	baz=2.0									
AAK	**Ala-Archa**	**3.15**	**12**		P		**Pb**	**16 02 54.9**	**-0.7**	
	SNR=29									
AAK	**Ala-Archa**	**3.15**	**12**		Pn		**Pb**	**16 02 53.0**	**-2.6**	
	12nm,0.3s,baz=154,slow=6.5,SNR=22									
AAK					Lg		Lg	16 03 35.9		
	12nm,0.3s,baz=190,slow=7.7,SNR=2.1									
	24nm,0.3s									
AAK	**Ala-Archa**	**3.15**	**12**				**Pn**	**16 02 51.7**	**+2.1**	
KBK	**Karagaybulak**	**3.25**	**17**		P		**Pb**	**16 02 57.2**	**-0.3**	
	SNR=42									
KBK	**Karagaybulak**	**3.25**	**17**	⇑	*e*P		**Pn**	**16 02 53.4**	**+2.3**	
	baz=16									
KBK				⇑	*e*S		**Sb**	**16 03 33.8**	**-3.8**	
	baz=16									
ULHL	**Ulahol**	**3.33**	**35**		P		**Pg**	**16 03 02.4**	**-0.4**	
	SNR=46									
ULHL	**Ulahol**	**3.33**	**35**	⇑	*e*P		**Pn**	**16 02 54.0**	**+1.7**	
	baz=34									
ULHL				⇑	*e*S		**Sn**	**16 03 35.1**	**+2.6**	
	baz=34									
BOOM	**Boomskoye usch**	**3.41**	**30**	⇑	*e*P		**Pn**	**16 02 55.5**	**+2.2**	
	baz=29									
BOOM				⇑	*i*S		**Sn**	**16 03 37.3**	**+3.0**	
	baz=29									
BOOM	**Boomskoye usch**	**3.41**	**30**				**Pb**	**16 02 57.3**	**-2.9**	
CHMS	**Chumysh**	**3.54**	**13**		P		**Pb**	**16 03 00.7**	**-1.6**	
	SNR=7.6									
CHGR	**Chuyangaron**	**3.60**	**257**	⇑	*i*P		**Pn**	**16 02 55.7**	**-0.1**	
	baz=59									
CHGR				⇑	*e*S		**Sn**	**16 03 38.0**	**-0.9**	
	baz=59									
CHGR	**Chuyangaron**	**3.60**	**257**		Pn		**Pn**	**16 02 57.3**	**+1.5**	
TKM2	**Tokmak 2**	**3.67**	**23**		P		**Pb**	**16 03 04.2**	**-0.5**	
	SNR=6.4									
TKM2	**Tokmak 2**	**3.67**	**23**	⇓	*e*P		**Pn**	**16 02 59.0**	**+2.1**	
	baz=22									
TKM2				⇓	*e*S		**Sn**	**16 03 43.8**	**+2.9**	
	baz=22									
TKM2	**Tokmak 2**	**3.67**	**23**	⇑	Pn		**Pb**	**16 03 02.6**	**-2.0**	
	18nm,0.6s									
TKM2					Pg		**Pg**	**16 03 11.9**	**+2.6**	
	23nm,0.5s									
TKM2					Lg		Lg	16 03 57.2		
	67nm,0.6s									
KDJ	**Kajisay**	**3.72**	**45**	⇓	*i*P		**Pn**	**16 02 59.5**	**+2.0**	
	baz=44									
KDJ				⇓	*i*S		**Sn**	**16 03 44.0**	**+2.0**	
	baz=44									
KDJ	**Kajisay**	**3.72**	**45**		Pn		**Pn**	**16 03 01.2**	**+3.7**	
TAS	**Tashkent**	**3.75**	**299**	⇓	*e*P		**Pn**	**16 02 59.8**	**+1.9**	
	baz=1.0									
TAS				⇓	*e*S		**Sn**	**16 03 44.0**	**+1.4**	
	baz=1.0									
TAS	**Tashkent**	**3.75**	**299**		Pn		**Pn**	**16 02 59.0**	**+1.1**	
DZA	**Taraz**	**3.76**	**333**		*e*P		**Pb**	**16 03 08.2**	**+2.2**	
	43nm,0.1s									
DZA					*e*S		**Sg**	**16 03 58.8**	**-0.8**	
	487nm,0.4s									
USP	**Ospenovka**	**3.76**	**10**		P		**Pb**	**16 03 04.9**	**-1.2**	
	SNR=10									
IUG	**Iuzhnay**	**3.77**	**315**		*e*P		**Pb**	**16 03 07.5**	**+1.3**	
	1µm,0.3s									
IUG					*e*S		**Sg**	**16 03 57.5**	**-2.4**	
	158nm,0.8s									
TARG	**Taragay, Kyrgy**	**3.84**	**54**				**Pn**	**16 03 02.2**	**+2.8**	
KST	**Kastek**	**3.90**	**26**		*e*P		**Pg**	**16 03 12.0**	**-1.7**	
	36nm,0.6s									
KST					*e*S		**Sg**	**16 04 05.5**	**+1.3**	
	200nm,0.9s									
KST	**Kastek**	**3.90**	**26**		Pg		**Pg**	**16 03 12.8**	**-0.9**	
	36nm,0.6s									
KST					Lg		Lg	16 04 06.2		
	200nm,0.9s									
SGDS	**Sogindy**	**3.96**	**11**		*e*P		**Pg**	**16 03 12.9**	**-2.0**	
	23nm,0.6s									
SGDS					*e*S		**Sg**	**16 04 06.5**	**+0.3**	
	89nm,0.6s									
SGDS	**Sogindy**	**3.96**	**11**		Pg		**Pg**	**16 03 12.9**	**-2.0**	
	23nm,0.6s									
SGDS					Lg		Lg	16 04 06.9		
	89nm,0.6s									
DGS	**Degeres**	**4.02**	**23**		*e*P		**Pg**	**16 03 14.5**	**-1.4**	
	53nm,0.8s									
DGS					*e*S		**Sg**	**16 04 10.2**	**+2.3**	
	151nm,0.9s									
DGS	**Degeres**	**4.02**	**23**		Pg		**Pg**	**16 03 14.9**	**-1.0**	
	53nm,0.8s									
DGS					Lg		Lg	16 04 09.6		
	151nm,0.9s									
CHM	**Chimkent**	**4.12**	**313**		*e*P		**Pg**	**16 03 16.3**	**-1.5**	
	6.5nm,0.8s									
CHM					*e*S		**Sg**	**16 04 11.9**	**+0.8**	
	370nm,0.4s									
MTBS	**Maitube**	**4.14**	**30**		*e*P		**Pg**	**16 03 16.6**	**-1.7**	
	34nm,0.5s									
MTBS					*e*S		**Sg**	**16 04 13.5**	**+1.5**	
	93nm,0.6s									
MTBS	**Maitube**	**4.14**	**30**		Pg		**Pg**	**16 03 17.1**	**-1.2**	
	34nm,0.5s									
MTBS					Lg		Lg	16 04 14.1		
	93nm,0.6s									
KK31	**Karatay Array**	**4.25**	**327**				**Pn**	**16 03 05.8**	**+1.1**	
KK31	**Karatay Array**	**4.25**	**327**	⇑	Pn		**Pn**	**16 03 09.1**	**+4.4**	
	3.7nm,0.3s,baz=135,slow=12,SNR=42									
KK31					⇓Pg		**Pg**	**16 03 22.2**	**+1.8**	
	7.4nm,0.3s,baz=147,slow=16,SNR=11									
KK31					⇓Lg		Lg	16 04 14.1		
	38nm,0.4s,baz=152,slow=32,SNR=4.9									
KKAR	**Karatay Array**	**4.25**	**327**				**Pn**	**16 03 06.7**	**+2.0**	
KKAR	**Karatay Array**	**4.25**	**327**				**Pn**	**16 03 07.0**	**+2.3**	
TNSS	**Tian-Shan**	**4.28**	**35**		*e*P		**Pg**	**16 03 19.4**	**-1.5**	
	36nm,0.5s									
TNSS					*e*S		**Sg**	**16 04 17.6**	**+1.2**	
	35nm,0.5s									
TNSS	**Tian-Shan**	**4.28**	**35**		Pg		**Pg**	**16 03 19.6**	**-1.3**	
	36nm,0.5s									
TNSS					Lg		Lg	16 04 17.6		
	35nm,0.5s									
AAA	**Alma-Ata**	**4.40**	**33**		*e*P		**Pg**	**16 03 21.9**	**-1.4**	
	58nm,0.3s									
AAA					*e*S		**Sg**	**16 04 21.5**	**+1.2**	
	89nm,0.5s									
AAA	**Alma-Ata**	**4.40**	**33**		Pg		**Pg**	**16 03 21.9**	**-1.4**	
	58nm,0.3s									
AAA					Lg		Lg	16 04 21.5		
	89nm,0.5s									
PRZ	**Przheval'sk**	**4.64**	**49**		Pn		Pn	16 03 15.1	+4.9	
KTBS	**Karatobe**	**4.74**	**28**		*e*P		**Pg**	**16 03 28.0**	**-1.7**	
	26nm,0.3s									
KTBS					*e*S		**Sg**	**16 04 32.3**	**+1.2**	
	128nm,0.7s									
KTBS	**Karatobe**	**4.74**	**28**		Pg		**Pg**	**16 03 28.0**	**-1.7**	
	26nm,0.3s									
KTBS					Lg		Lg	16 04 32.7		
	128nm,0.7s									
KUU	**Kurty**	**4.78**	**24**		*e*P		**Pg**	**16 03 27.7**	**-2.8**	
	22nm,0.8s									
KUU					*e*S		**Sg**	**16 04 32.0**	**-0.5**	
	95nm,0.7s									
KUU	**Kurty**	**4.78**	**24**		Pg		**Pg**	**16 03 27.7**	**-2.8**	
	22nm,0.8s									
KUU					Lg		Lg	16 04 32.0		
	95nm,0.7s									
CHKK	**Chushkaly**	**4.97**	**29**		*e*P		**Pg**	**16 03 32.0**	**-2.2**	
	9.3nm,0.4s									
CHKK					*e*S		**Sg**	**16 04 38.4**	**-0.2**	
	61nm,0.5s									
CHKK	**Chushkaly**	**4.97**	**29**		Pg		**Pg**	**16 03 32.0**	**-2.2**	
	9.3nm,0.4s									
CHKK					Lg		Lg	16 04 38.4		
	61nm,0.5s									
SATY	**Saty**	**5.01**	**44**		*e*P		**Pg**	**16 03 32.6**	**-2.4**	
	11nm,0.5s									
SATY					*e*S		**Sg**	**16 04 40.0**	**0.0**	
	52nm,0.9s									
SATY	**Saty**	**5.01**	**44**		Pg		**Pg**	**16 03 32.6**	**-2.4**	
	11nm,0.5s									
SATY					Lg		Lg	16 04 40.0		
	52nm,0.9s									
ZHN	**Zhinishke**	**5.10**	**43**		*e*P		**Pg**	**16 03 34.5**	**-2.2**	
	11nm,0.3s									
ZHN					*e*S		**Sg**	**16 04 43.1**	**+0.3**	
	38nm,0.8s									
ZHN	**Zhinishke**	**5.10**	**43**		Pg		**Pg**	**16 03 34.5**	**-2.2**	
	11nm,0.3s									
ZHN					Lg		Lg	16 04 43.1		
	38nm,0.8s									
KURS	**Kuram**	**5.20**	**39**		*e*P		**Pg**	**16 03 38.8**	**+0.3**	
	16nm,0.9s									
KURS					*e*S		**Sg**	**16 04 50.8**	**+5.0**	
	36nm,1.3s									
KURS	**Kuram**	**5.20**	**39**		Pg		**Pg**	**16 03 38.8**	**+0.3**	
	16nm,0.9s									
KURS					Lg		Lg	16 04 51.3		
	36nm,1.3s									
KPKS	**Kokpek**	**5.44**	**42**		*e*P		**Pg**	**16 03 39.7**	**-3.5**	
	9.5nm,0.4s									
KPKS					*e*S		**Sg**	**16 04 52.3**	**-1.4**	
	36nm,0.7s									
KPKS	**Kokpek**	**5.44**	**42**		Pg		**Pg**	**16 03 39.7**	**-3.5**	
	9.5nm,0.4s									
KPKS					Lg		Lg	16 04 52.9		
	36nm,0.7s									
BTLS	**Baital**	**5.49**	**3**		*e*P		**Pb**	**16 03 39.5**	**+4.0**	
	4.4nm,0.3s									
BTLS					*e*S		**Sg**	**16 04 51.5**	**-3.7**	
	21nm,0.6s									
BTLS	**Baital**	**5.49**	**3**		Pg		**Pb**	**16 03 39.5**	**+4.0**	
	4.4nm,0.3s									
BTLS					Lg		Lg	16 04 51.5		
	21nm,0.6s									
ARXS	**Arharly**	**5.61**	**33**		*e*P		**Pg**	**16 03 43.6**	**-2.7**	
	33nm,0.6s									
ARXS					*e*S		**Sg**	**16 04 58.5**	**-0.5**	
	39nm,0.7s									
ARXS	**Arharly**	**5.61**	**33**		Pg		**Pg**	**16 03 43.6**	**-2.7**	
	33nm,0.6s									
ARXS					Lg		Lg	16 04 58.5		
	39nm,0.7s									
SHLS	**Shalkode**	**5.67**	**49**		*e*P		**Pg**	**16 03 51.2**	**+3.7**	
SHLS					*e*S		Sg	16 05 11.8	+11	
SHLS	**Shalkode**	**5.67**	**49**		Pg		**Pg**	**16 03 51.2**	**+3.7**	
SHLS					Lg		Lg	16 05 11.8		
PDGK	**Podgornoye**	**5.79**	**48**		Pg		**Pg**	**16 03 46.9**	**-3.0**	
	6.7nm,0.5s									
PDGK					Lg		Lg	16 05 04.5		
	12nm,0.9s									
PDGK	**Podgornoye**	**5.79**	**48**		Pn		Pn	16 03 30.8	+4.8	
	12nm,0.6s									
PDGK				⇑	Lg		Lg	16 05 04.1		
	30nm,0.7s									
BLB	**Baldybastay**	**5.80**	**37**		*e*P		**Pg**	**16 03 48.1**	**-2.0**	
	44nm,0.8s									
BLB					*e*S		**Sg**	**16 05 06.4**	**+1.2**	
	32nm,0.8s									
BLB	**Baldybastay**	**5.80**	**37**		Pg		**Pg**	**16 03 48.1**	**-2.0**	
	44nm,0.8s									
BLB					Lg		Lg	16 05 06.4		
	32nm,0.8s									
CEP	**Cherat**	**5.89**	**194**		P		Pn	16 03 32.9	+5.6	
CHCP	**Chirah Chowk**	**5.89**	**183**		P		Pn	16 03 32.3	+5.0	
KBL	**Kabul**	**6.21**	**218**				**Pn**	**16 03 35.0**	**+3.2**	
DJR	**Jarkent**	**6.62**	**42**		*e*P		Pg	16 04 01.2	-4.4	
	4.3nm,0.7s									
DJR					*e*S		**Sg**	**16 05 28.6**	**-2.8**	
	21nm,0.6s									
THW	**Thamme Wali**	**6.92**	**193**		P		**Pn**	**16 03 46.0**	**+4.6**	
MKAR	**Makanchi Array**	**9.60**	**38**		Pn		**Pn**	**16 04 15.6**	**-2.5**	
	0.1nm,0.3s,baz=220,slow=13,SNR=3.9									
MKAR					Lg		Lg	16 07 03.8		
	0.1nm,0.3s,baz=239,slow=18,SNR=3.7									
WMQ	**Urumqi**	**11.34**	**63**		*e*P		**Pn**	**16 04 44.5**	**+2.5**	
WMQ					pmax		pmax			
	comp=Z,14nm,0.7s									
KURBB	**Kurchatov Arra**	**11.59**	**16**		Pn		**Pn**	**16 04 41.7**	**-3.6**	
	baz=207,slow=12,SNR=2.8									
KURBB					Lg		Lg	16 08 04.5		
	0.1nm,0.3s,baz=114,slow=20,SNR=2.3									
	0.5nm,1.0s									
GEYT	**Alibeck**	**12.23**	**267**		Pn		**Pn**	**16 04 52.2**	**-2.0**	
	0.4nm,0.3s,baz=90,slow=13,SNR=2.6									
GEYT					Sn		**Sn**	**16 07 06.7**	**-4.3**	
	0.5nm,0.3s,baz=79,slow=26,SNR=1.7									
	0.9nm,0.3s									
GEYT	**Alibeck**	**12.23**	**267**		Pn		**Pn**	**16 04 53.2**	**-0.9**	
AB31	**Akbulak array**	**13.76**	**319**	⇓	P		**Pn**	**16 05 14.8**	**-0.1**	
	1.0nm,0.5s,baz=129,slow=14,SNR=15									
ABKAR	**Akbulak array**	**13.76**	**319**		Pn		**Pn**	**16 05 14.5**	**-0.3**	
AKTO	**Aktyubinsk**	**15.47**	**320**		Pn		**Pn**	**16 05 37.0**	**-1.1**	
	0.2nm,0.3s,baz=114,slow=13,SNR=4.0									
	2.2nm,0.8s									
AKTO	**Aktyubinsk**	**15.47**	**320**	⇓	P		**Pn**	**16 05 40.0**	**+2.0**	
	4.5nm,0.8s									
ZAA0	**Zalesovo Array**	**16.28**	**24**				**P**	**16 05 53.1**	**+1.5**	
ZALV	**Zalesovo Beam**	**16.28**	**24**		Pn		**Pn**	**16 05 47.6**	**-0.9**	
	0.1nm,0.3s,baz=200,slow=17,SNR=1.7									
ZALV					Lg		Lg	16 10 35.9		
	0.1nm,0.3s,baz=28,slow=27,SNR=1.7									
	0.4nm,0.4s									
ZALV	**Zalesovo Beam**	**16.28**	**24**				**P**	**16 05 53.2**	**+1.6**	
ARU	**Arti**	**19.59**	**334**		P		**P**	**16 06 27.2**	**-0.9**	
	baz=256,slow=19,SNR=2.5									
	1.9nm,0.4s									
GTA	**Gaotai**	**20.19**	**82**		*e*P		Pn	16 06 40.5	+3.8	
GTA					pP		sP	16 06 47.0	+9.4	
GTA					sP		pP	16 06 50.5	+14	
GTA					pmax		pmax			
	comp=Z,5.0nm,1.0s									
BELG	**Belogornoye**	**22.03**	**314**		P		**P**	**16 06 54.0**	**-0.4**	
	7.3nm,0.8s,baz=257,slow=19,SNR=1.7									
	7.3nm,0.8s									
GNI	**Garni**	**22.15**	**281**		P		**P**	**16 06 55.2**	**-0.9**	
	2.9nm,0.4s,baz=42,slow=20,SNR=1.7									
	2.9nm,0.4s									
GNI	**Garni**	**22.15**	**281**		P		**P**	**16 06 57.4**	**+1.3**	
GNI					IAmb		IAmb	16 07 08.6		
	comp=Z,12nm,0.8s									
ONI	**Oni**	**22.90**	**287**		P		**P**	**16 07 04.0**	**+0.1**	
ONI					IAmb		IAmb	16 07 15.7		
	comp=Z,10nm,0.8s									
KBZ	**Khabaz**	**23.28**	**290**		P		**P**	**16 07 06.5**	**-1.2**	
	comp=Z,0.5nm,0.4s,baz=170,slow=6.9,SNR=2.0									
	comp=Z,0.5nm,0.4s									
SONM	**Songino Array**	**24.94**	**60**		P		**P**	**16 07 22.5**	**-1.1**	
	comp=Z,0.7nm,0.7s,baz=263,slow=10,SNR=3.0									
	comp=Z,0.7nm,0.7s									
RAYN	**Ar Rayn**	**28.66**	**244**		P		**P**	**16 07 57.5**	**+0.4**	
HHC	**Hu-ho-hao-te**	**28.85**	**75**		*e*P		**P**	**16 08 00.5**	**+1.7**	
HHC					pmax		pmax			
	comp=Z,15nm,1.0s									
HHC					pmax		pmax			
	comp=Z,180nm,5.8s									
BR131	**Keskin Array S**	**30.62**	**283**		P		**P**	**16 08 15.0**	**+0.5**	
BR131					IAmb		IAmb	16 08 16.6		
	comp=Z,3.6nm,0.9s									
BRTR	**Keskin Array B**	**30.62**	**283**		P		**P**	**16 08 15.0**	**+0.5**	
	comp=Z,1.2nm,0.8s,baz=84,slow=6.8,SNR=7.5									
	comp=Z,1.2nm,0.8s									
BRTR	**Keskin Array B**	**30.62**	**283**		P		**P**	**16 08 15.3**	**+0.8**	
AKASG	**Malin Array Be**	**32.79**	**305**		P		**P**	**16 08 33.4**	**+0.1**	
	comp=Z,0.3nm,0.3s,baz=82,slow=7.9,SNR=4.6									
	comp=Z,0.3nm,0.3s									
MLR	**Muntele Rosu**	**35.23**	**296**		P		**P**	**16 08 55.0**	**+0.4**	
MLR					IAmb		IAmb	16 09 04.0		
	comp=Z,4.0nm,0.7s									
FIA1	**FINESS Array S**	**36.20**	**323**		P		**P**	**16 09 03.5**	**+0.9**	
FIA1					IAmb		IAmb	16 09 08.1		
	comp=Z,13nm,1.4s									
FINES	**FINESS Array B**	**36.20**	**323**		P		**P**	**16 09 02.5**	**-0.2**	
	comp=Z,0.7nm,0.3s,baz=114,slow=9.0,SNR=18									
	comp=Z,0.7nm,0.3s									
FINES	**FINESS Array B**	**36.20**	**323**		P		**P**	**16 09 03.5**	**+0.8**	
ARCES	**ARCESS Array B**	**39.17**	**336**		P		**P**	**16 09 28.5**	**+0.7**	
	comp=Z,0.7nm,0.4s,baz=107,slow=8.1,SNR=25									
	comp=Z,0.7nm,0.4s									
ARCES	**ARCESS Array B**	**39.17**	**336**		P		**P**	**16 09 28.6**	**+0.9**	
ARCES					IAmb		IAmb	16 09 39.4		
	comp=Z,6.9nm,1.4s									
TIXI	**Tiksi**	**42.16**	**23**		P		**P**	**16 09 52.5**	**+0.1**	
	comp=Z,0.9nm,0.6s,baz=270,slow=23,SNR=3.1									
	comp=Z,0.9nm,0.6s									
TIXI	**Tiksi**	**42.16**	**23**		P		**P**	**16 09 53.4**	**+1.1**	
GERES	**GERESS Array B**	**42.94**	**303**		P		**P**	**16 09 57.4**	**-1.8**	
	comp=Z,0.2nm,0.3s,baz=62,slow=10,SNR=4.4									
	comp=Z,0.2nm,0.3s									
NC303	**NORSAR Array S**	**43.18**	**321**		P		**P**	**16 10 01.7**	**+0.9**	
NC303					IAmb		IAmb	16 10 16.0		
	comp=Z,12nm,1.2s									
NB2	**NORSAR Subarra**	**43.26**	**321**		P		**P**	**16 10 01.6**	**+0.1**	
	comp=Z,1.2nm,0.6s,baz=91,slow=8.6									
NOA	**NORSAR Array B**	**43.26**	**321**		P		**P**	**16 10 00.7**	**-0.8**	
	comp=Z,1.6nm,0.8s,baz=101,slow=7.3,SNR=5.1									
	comp=Z,1.6nm,0.8s									
NAO01	**NORSAR Array S**	**43.42**	**321**		P		**P**	**16 10 03.0**	**+0.3**	
NC204	**NORSAR Array S**	**43.48**	**321**		P		**P**	**16 10 03.5**	**+0.3**	
NC204					IAmb		IAmb	16 10 11.2		
	comp=Z,10nm,1.1s									
CUC	**Castrocucco**	**43.75**	**290**		P		**P**	**16 10 06.3**	**+0.5**	
CUC					IAmb		IAmb	16 10 21.6		
	comp=Z,7.6nm,1.5s									
MJAR	**Matsushiro Arr**	**49.96**	**72**		P		**P**	**16 10 54.4**	**+0.1**	
	comp=Z,1.7nm,0.8s,baz=275,slow=6.4,SNR=4.2									
	comp=Z,1.7nm,0.8s									
MJAR	**Matsushiro Arr**	**49.96**	**72**		IAmb		IAmb	16 10 56.6		
	comp=Z,6.8nm,1.4s									
DAV	**Davao City (W)**	**56.59**	**111**		P		**P**	**16 11 42.9**	**-0.5**	
DAV	**Davao City (W)**	**56.59**	**111**		IAmb		IAmb	16 11 43.6		
	comp=Z,161nm,0.4s									
ESDC	**Sonseca Array**	**57.90**	**297**		P		**P**	**16 11 52.2**	**-0.2**	
	comp=Z,0.4nm,0.5s,baz=54,slow=7.3,SNR=6.1									
	comp=Z,0.4nm,0.5s									
ESDC	**Sonseca Array**	**57.90**	**297**		IAmb		IAmb	16 11 52.7		
	comp=Z,2.2nm,1.3s									
TOA0	**Torodi Ar. Sit**	**67.86**	**269**		P		**P**	**16 12 57.9**	**-1.1**	
TORD	**Torodi Ar. Bea**	**67.86**	**269**		P		**P**	**16 12 57.8**	**-1.3**	
	comp=Z,1.2nm,0.4s,baz=50,slow=5.5,SNR=12									
	comp=Z,1.2nm,0.4s									
TORD	**Torodi Ar. Bea**	**67.86**	**269**		P		**P**	**16 12 57.8**	**-1.3**	
TORD					IAmb		IAmb	16 13 02.4		
	comp=Z,4.0nm,1.4s									
IMAR	**Indian Mountai**	**68.62**	**19**		P		**P**	**16 13 02.8**	**-0.2**	
C36M	**Paulatuk**	**70.62**	**7**		P		**P**	**16 13 15.1**	**-0.2**	
ILAR	**Eielson Array**	**71.26**	**17**		P		**P**	**16 13 19.0**	**-0.3**	
	comp=Z,0.3nm,0.7s,baz=324,slow=4.5,SNR=2.9									
	comp=Z,0.3nm,0.7s									
PSA00	**Pilbara Seismi**	**74.57**	**136**		P		**P**	**16 13 40.2**	**+0.9**	
YKA	**Yellowknife Ar**	**78.08**	**4**		P		**P**	**16 13 58.9**	**+0.1**	
	comp=Z,0.2nm,0.4s,baz=350,slow=5.4,SNR=7.0									
	comp=Z,0.2nm,0.4s									
WRA	**Warramunga Arr**	**81.90**	**124**		P		**P**	**16 14 19.0**	**-1.1**	
	comp=Z,0.8nm,0.6s,baz=325,slow=5.3,SNR=16									
	comp=Z,0.8nm,0.6s									
WRA	**Warramunga Arr**	**81.90**	**124**		P		**P**	**16 14 19.1**	**-1.0**	
WB2	**Warramunga Arr**	**81.91**	**124**		P		**P**	**16 14 19.2**	**-0.9**	
WR0	**Warramunga Arr**	**82.05**	**124**		P		**P**	**16 14 19.9**	**-0.9**	
AS31	**Alice Springs**	**84.35**	**127**		P		**P**	**16 14 31.9**	**-0.8**	
ASAR	**Alice Springs**	**84.35**	**127**		P		**P**	**16 14 31.6**	**-1.1**	
	comp=Z,0.4nm,0.6s,baz=315,slow=5.1,SNR=11									
	comp=Z,0.4nm,0.6s									
ASAR	**Ice Springs**	**84.35**	**127**		P		**P**	**16 14 31.4**	**-1.3**	
PLCA	**Paso Flores**	**152.71**	**256**		PKPbc		**PKPbc**	**16 21 56.7**	**-0.4**	
	comp=Z,0.6nm,0.7s,baz=4.2,slow=3.2,SNR=8.0									

*IDC **26** 16:03:11.8±1.1,39.°38N×73.°68E,h0km,mb3.6/11, mbtmp3.6/12,ML1.8/1,Error ellipse: s-maj=36.2km s-min=23.4km az=33.0*

*KRNET **26** 16:03:11.9±0.1,39.°44N×73.°63E,

*KRNET **26** 16:03:56.0±0.1,39°.53N×73°.64E,mb4.2*
ISC 26 16:03:53.3±2.0,39°.45N±0°.07×73°.76E±0°.06,h10km±11km, n14,σ1§09/21,mb3.5/6,8C-6D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.31**	**326**	⇑*e*P	**Pg**	**16 04 18.5**	**0.0**
	baz=27						
OHH				⇑*e*S	**Sn**	**16 04 34.8**	**-0.5**
	baz=27						
DRK	**Karamyk**	**1.52**	**272**	⇓*e*P	**Pg**	**16 04 22.7**	**+0.3**
	baz=69						
DRK				⇓*i*S	**Sg**	**16 04 42.4**	**+0.3**
	baz=69						
BTK	**Batken**	**2.35**	**286**	⇑*e*P	**Pb**	**16 04 36.5**	**+0.8**
	baz=84						
BTK				⇑*e*S	**Sb**	**16 05 05.1**	**+0.4**
	baz=84						
ARLS	**Aral**	**2.45**	**10**	⇓*e*P	**Pb**	**16 04 37.7**	**+0.2**
	baz=13						
ARLS				⇓*e*S	**Sb**	**16 05 08.6**	**+0.7**
	baz=13						
GAR	**Garm**	**2.71**	**262**	⇓*e*P	**Pb**	**16 04 41.2**	**-0.7**
	baz=59						
GAR				⇓*e*S	**Sb**	**16 05 14.6**	**-0.6**
	baz=59						
UCH	**Uchtor**	**2.84**	**11**	⇑*i*P	**Pb**	**16 04 43.6**	**-0.7**
	baz=14						
UCH				⇑*e*S	**Sb**	**16 05 18.3**	**-1.0**
	baz=14						
TRKS	**Terek-Say**	**2.88**	**317**	⇑*e*P	**Pb**	**16 04 42.1**	**-2.8**
	baz=17						
TRKS				⇑*e*S	**Sn**	**16 05 16.2**	**+2.0**
	baz=17						
ZALV	**Zalesovo Beam**	**16.34**	**24**	Pn	**Pn**	**16 07 43.9**	**+1.4**
	0.2nm,0.3s,baz=220,slow=10,SNR=2.3 1.0nm,0.5s						
BRTR	**Keskin Array B**	**30.74**	**284**	P	**P**	**16 10 09.1**	**+0.4**
	0.4nm,0.6s,baz=90,slow=8.6,SNR=1.9 0.4nm,0.6s						
FINES	**FINESS Array B**	**36.35**	**323**	P	**P**	**16 10 57.1**	**+0.1**
	0.4nm,0.4s,baz=101,slow=9.9,SNR=1.3 0.4nm,0.4s						
ARCES	**ARCESS Array B**	**39.31**	**336**	P	**P**	**16 11 22.5**	**+0.5**
	3.2nm,1.1s,baz=106,slow=8.9,SNR=4.4 3.2nm,1.1s						
TORD	**Torodi Ar. Bea**	**67.95**	**269**	P	**P**	**16 14 51.3**	**-1.3**
	0.5nm,0.6s,baz=44,slow=5.8,SNR=2.9 0.5nm,0.6s						
WRA	**Warramunga Arr**	**81.76**	**124**	P	**P**	**16 16 12.3**	**-0.1**
	0.2nm,0.6s,baz=326,slow=4.7,SNR=1.7 0.2nm,0.6s						
ASAR	**Alice Springs**	**84.21**	**127**	P	**P**	**16 16 24.5**	**-0.5**
	0.2nm,0.8s,baz=332,slow=5.8,SNR=1.4 0.2nm,0.8s						

*IDC **26** 16:09:16.0±1.4,39°.45N×73°.68E,h0km,mb3.8/11, mbtmp3.8/18,ML3.1/7,Error ellipse: s-maj=24.7km s-min=12.8km az=140.0*
*SOME **26** 16:09:17.8,39°.62N×73°.60E,h10km*
*NEIC **26** 16:09:18.1±1.8,39°.51N±0°.03×73°.65E±0°.08,h10km±1km, mb4.3/18,Error ellipse: s-maj=11.3km s-min=4.6km az=111.0*
*KRNET **26** 16:09:18.1±0.1,39°.48N×73°.57E,mb4.1*
*NNC **26** 16:09:22.5±1.2,39°.67N×73°.60E,h0km,mb4.2,mpv3.8, Error ellipse: s-maj=10.3km s-min=4.9km az=169.0*
ISC 26 16:09:17.6±0.6,39°.58N±0°.04×73°.69E±0°.03,h10km,n101, σ1§63/130,mb4.1/19,17C-15D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.17**	**324**	⇓*e*P	**Pn**	**16 09 40.8**	**+0.6**
	baz=30						
OHH				⇓*e*S	**Sn**	**16 09 57.2**	**+1.0**
	baz=30						
DRK	**Karamyk**	**1.47**	**267**	⇓*e*P	**Pn**	**16 09 44.0**	**-0.4**
	baz=71						
DRK				⇓*i*S	**Sn**	**16 10 02.3**	**-1.5**
	baz=71						
DRK	**Karamyk**	**1.47**	**267**		**Pn**	**16 09 44.0**	**-0.4**
BTK	**Batken**	**2.26**	**283**	⇓*e*P	**Pn**	**16 09 57.2**	**+2.0**
	baz=86						
BTK				⇓*e*S	**Sb**	**16 10 25.8**	**-0.9**
	baz=86						
BTK	**Batken**	**2.26**	**283**	Pn	**Pn**	**16 09 55.1**	**-0.1**
ARLS	**Aral**	**2.33**	**12**	⇓*e*P	**Pg**	**16 10 00.6**	**-1.7**
	baz=13						
ARLS				⇓*e*S	**Sg**	**16 10 31.9**	**-0.5**
	baz=13						
AML	**Almayashu**	**2.55**	**0**	P	**Pg**	**16 10 05.3**	**-1.1**
	SNR=8.1						
GAR	**Garm**	**2.68**	**259**	⇑*e*P	**Pn**	**16 10 02.3**	**+1.3**
	baz=60						
GAR				⇑*i*S	**Sn**	**16 10 34.7**	**+1.1**
	baz=60						
GAR	**Garm**	**2.68**	**259**		**Pn**	**16 10 00.3**	**-0.7**
UCH	**Uchtor**	**2.72**	**13**	P	**Pg**	**16 10 08.4**	**-1.4**
	SNR=8.3						
UCH	**Uchtor**	**2.72**	**13**	⇑*e*P	**Pb**	**16 10 06.2**	**-0.4**
	baz=14						
UCH				⇑*e*S	**Sg**	**16 10 41.6**	**-3.3**
	baz=14						
TRKS	**Terek-Say**	**2.75**	**316**	⇑*e*P	**Pb**	**16 10 04.1**	**-2.9**
	baz=18						
TRKS				⇑*e*S	**Sb**	**16 10 38.0**	**-2.8**
	baz=18						
EKS2	**Erkin-Say**	**3.08**	**1**	P	**Pb**	**16 10 13.2**	**+0.7**
	SNR=17						
EKS2	**Erkin-Say**	**3.08**	**1**	⇑*e*P	**Pb**	**16 10 10.7**	**-1.9**
	baz=3.0						
EKS2				⇑*i*S	**Sb**	**16 10 49.5**	**-0.7**
	baz=3.0						
AAK	**Ala-Archa**	**3.11**	**11**	P	**Pb**	**16 10 13.8**	**+0.6**
	SNR=6.5						
AAK	**Ala-Archa**	**3.11**	**11**	Pn	**Pb**	**16 10 13.3**	**+0.1**
	11nm,0.3s,baz=161,slow=7.6,SNR=12						
AAK				Lg	Lg	16 10 56.3	
	7.8nm,0.3s,baz=295,slow=23,SNR=6.1 24nm,0.3s						
AAK	**Ala-Archa**	**3.11**	**11**	⇓*e*P	**Pb**	**16 10 11.5**	**-1.7**
	baz=12						
AAK				⇓*e*S	**Sb**	**16 10 50.7**	**-0.6**
	baz=12						
ULHL	**Ulahol**	**3.29**	**35**	P	**Pg**	**16 10 19.8**	**-0.9**
	SNR=5.2						
BOOM	**Boomskoye usch**	**3.37**	**30**	⇓*e*P	**Pb**	**16 10 15.6**	**-1.9**
	baz=30						
BOOM				⇓*i*S	**Sb**	**16 10 57.4**	**-1.2**
	baz=30						
CHMS	**Chumysh**	**3.51**	**13**	P	**Pb**	**16 10 18.7**	**-1.1**
	SNR=6.7						
CHMS	**Chumysh**	**3.51**	**13**	⇑*e*P	**Pb**	**16 10 17.2**	**-2.6**
	baz=14						
CHMS				⇑*e*S	**Sb**	**16 11 00.2**	**-2.3**
	baz=14						
TKM2	**Tokmak 2**	**3.63**	**23**	⇓Pn	**Pb**	**16 10 20.4**	**-1.7**
	18nm,0.6s						
TKM2				⇑Lg	Lg	16 11 17.2	
	58nm,0.7s						
KDJ	**Kajisay**	**3.67**	**45**	⇓*e*P	**Pb**	**16 10 19.8**	**-2.9**
	baz=45						
KDJ				⇓*i*S	**Sb**	**16 11 04.8**	**-2.6**
	baz=45						
KDJ	**Kajisay**	**3.67**	**45**	Pn	**Pn**	**16 10 15.9**	**+1.2**
USP	**Ospenovka**	**3.73**	**9**	P	**Pb**	**16 10 21.3**	**-2.4**
	SNR=6.7						
IUG	**Iuzhnay**	**3.78**	**314**	*e*P	**Pb**	**16 10 24.6**	**+0.2**
	452nm,0.4s						
IUG				*e*S	**Sb**	**16 11 12.5**	**+2.2**
	146nm,0.9s						
IUG	**Iuzhnay**	**3.78**	**314**	Pg	**Pg**	**16 10 30.0**	**0.0**
	532nm,0.4s						
IUG				Lg	Lg	16 11 19.4	
	131nm,0.6s						
TAS	**Tashkent**	**3.78**	**299**	⇑*i*P	**Pn**	**16 10 18.6**	**+2.6**
	baz=1.0						
TAS				⇑*i*S	**Sn**	**16 11 02.9**	**+2.4**
	baz=1.0						
KST	**Kastek**	**3.86**	**26**	*e*P	**Pg**	**16 10 29.6**	**-1.9**
	19nm,0.7s						
KST				*e*S	**Sg**	**16 11 21.7**	**+0.1**
	114nm,0.8s						
KST	**Kastek**	**3.86**	**26**	Pg	**Pg**	**16 10 32.0**	**+0.5**
	19nm,0.7s						
KST				Lg	Lg	16 11 22.0	
	114nm,0.8s						
SGDS	**Sogindy**	**3.93**	**10**	*e*P	**Pg**	**16 10 31.4**	**-1.5**
	18nm,0.7s						
SGDS				*e*S	**Sg**	**16 11 24.2**	**+0.4**
	58nm,0.8s						
SGDS	**Sogindy**	**3.93**	**10**	Pg	**Pg**	**16 10 32.9**	**0.0**
	18nm,0.7s						
SGDS				Lg	Lg	16 11 25.3	
	58nm,0.8s						
MTBS	**Maitube**	**4.10**	**29**	*e*P	**Pg**	**16 10 35.2**	**-1.0**
	16nm,0.8s						
MTBS				*e*S	**Sg**	**16 11 31.1**	**+1.8**
	65nm,0.5s						
MTBS	**Maitube**	**4.10**	**29**	Pg	**Pg**	**16 10 37.3**	**+1.2**
	16nm,0.8s						
MTBS				Lg	Lg	16 11 32.0	
	65nm,0.5s						
CHM	**Chimkent**	**4.13**	**313**	*e*P	**Pg**	**16 10 34.9**	**-1.8**
	4.1nm,0.5s						
CHM				*e*S	**Sg**	**16 11 30.5**	**+0.3**
	428nm,1.1s						
TNSS	**Tian-Shan**	**4.24**	**34**	*e*P	**Pg**	**16 10 37.4**	**-1.4**
	11nm,0.6s						
TNSS				*e*S	**Sg**	**16 11 35.8**	**+2.2**
	25nm,0.7s						
TNSS	**Tian-Shan**	**4.24**	**34**	Pg	**Pg**	**16 10 40.0**	**+1.2**
	11nm,0.6s						
TNSS				Lg	Lg	16 11 36.5	
	25nm,0.7s						
KK31	**Karatay Array**	**4.25**	**327**	⇑Pn	**Pn**	**16 10 26.0**	**+3.5**
	3.0nm,0.3s,baz=117,slow=12,SNR=7.4						
KK31				⇑Pg	**Pg**	**16 10 38.8**	**-0.3**
	11nm,0.6s,baz=143,slow=15,SNR=6.2						
KK31				⇑Lg	Lg	16 11 33.3	
	38nm,0.6s,baz=253,slow=82,SNR=4.0						
AAA	**Alma-Ata**	**4.36**	**33**	*e*P	**Pg**	**16 10 40.2**	**-0.9**
	18nm,0.1s						
AAA				*e*S	**Sg**	**16 11 39.5**	**+1.9**
	101nm,0.5s						
BRLS	**Borolday**	**4.50**	**321**	*e*P	**Pb**	**16 10 39.2**	**+2.4**
	3.7nm,0.3s						
BRLS				*e*S	**Sg**	**16 11 38.3**	**-3.9**
	36nm,0.6s						
BRLS	**Borolday**	**4.50**	**321**	Pg	**Pg**	**16 10 40.9**	**-3.0**
	3.7nm,0.3s						
BRLS				Lg	Lg	16 11 38.8	
	36nm,0.6s						
KUU	**Kurty**	**4.74**	**24**	*e*P	**Pg**	**16 10 45.5**	**-3.0**
	12nm,0.6s						
KUU				*e*S	**Sg**	**16 11 49.5**	**-0.4**
	66nm,0.7s						
KUU	**Kurty**	**4.74**	**24**	Pg	**Pg**	**16 10 47.5**	**-0.9**
	12nm,0.6s						
KUU				Lg	Lg	16 11 49.5	
	42nm,0.6s						
CHKK	**Chushkaly**	**4.93**	**29**	*e*P	**Pg**	**16 10 49.4**	**-2.6**
	3.2nm,0.6s						
CHKK				*e*S	**Sg**	**16 11 55.4**	**-0.5**
	32nm,0.7s						
CHKK	**Chushkaly**	**4.93**	**29**	Pg	**Pg**	**16 10 50.9**	**-1.2**
	3.2nm,0.6s						
CHKK				Lg	Lg	16 11 55.8	
	32nm,0.7s						
SATY	**Saty**	**4.97**	**44**	*e*P	**Pg**	**16 10 50.4**	**-2.3**
	8.2nm,0.2s						
SATY				*e*S	**Sg**	**16 11 57.5**	**+0.4**
	43nm,1.3s						
ZHN	**Zhinishke**	**5.06**	**43**	*e*P	**Pg**	**16 10 52.1**	**-2.4**
	5.0nm,0.2s						
ZHN				*e*S	**Sg**	**16 12 00.0**	**0.0**
	34nm,0.9s						
KURS	**Kuram**	**5.15**	**39**	*e*P	**Pg**	**16 10 53.0**	**-3.2**
	5.9nm,0.6s						
KURS				*e*S	**Sg**	**16 12 02.0**	**-0.9**
	16nm,1.1s						
KPKS	**Kokpek**	**5.39**	**42**	*e*P	**Pg**	**16 10 58.9**	**-2.1**
	4.7nm,0.6s						
KPKS				*e*S	**Sg**	**16 12 11.2**	**+0.4**
	26nm,0.9s						
KPKS	**Kokpek**	**5.39**	**42**	Pg	**Pg**	**16 11 00.1**	**-0.8**
	4.7nm,0.6s						
KPKS				Lg	Lg	16 12 11.2	
	26nm,0.9s						
BTLS	**Baital**	**5.46**	**3**	*e*P	**Pg**	**16 11 00.0**	**-2.2**
	2.8nm,0.5s						
BTLS				*e*S	**Sg**	**16 12 13.3**	**+0.4**
	25nm,0.4s						
BTLS	**Baital**	**5.46**	**3**	Pg	**Pg**	**16 11 01.5**	**-0.7**
	2.8nm,0.5s						
BTLS				Lg	Lg	16 12 14.0	
	25nm,0.4s						
SHLS	**Shalkode**	**5.62**	**49**	*e*P	**Pg**	**16 11 08.9**	**+3.6**
	7.2nm,0.6s						
SHLS				*e*S	Sg	16 12 28.2	+10
	21nm,1.1s						
PDGK	**Podgornoye**	**5.74**	**47**	Pg	**Pg**	**16 11 06.5**	**-1.1**
	3.2nm,0.5s						
PDGK				Lg	Lg	16 12 22.0	
	8.5nm,1.0s						
BLB	**Baldybastay**	**5.76**	**37**	*e*P	**Pg**	**16 11 05.2**	**-2.6**
	17nm,0.6s						
BLB				*e*S	**Sg**	**16 12 21.9**	**-0.5**
	32nm,1.0s						
BLB	**Baldybastay**	**5.76**	**37**	Pg	**Pg**	**16 11 06.3**	**-1.5**
	17nm,0.6s						
BLB				Lg	Lg	16 12 23.2	
	32nm,1.0s						
KBL	**Kabul**	**6.25**	**218**	Pn	**Pn**	**16 10 48.4**	**-1.8**
TDK	**Taldygorghan**	**6.45**	**31**	*e*P	**Pg**	**16 11 17.4**	**-3.6**
	22nm,0.1s						
TDK				*e*S	**Sg**	**16 12 43.1**	**-1.4**
	52nm,0.8s						
DJR	**Jarkent**	**6.57**	**42**	*e*P	Pg	16 11 18.5	-5.0
	1.8nm,0.7s						
DJR				*e*S	**Sg**	**16 12 45.5**	**-3.0**
	16nm,0.9s						
DJR	**Jarkent**	**6.57**	**42**	Pg	**Pg**	**16 11 23.2**	**-0.2**
DJR				Lg	Lg	16 12 51.0	
MKAR	**Makanchi Array**	**9.56**	**38**	Pn	**Pn**	**16 11 38.5**	**+3.3**
	0.1nm,0.3s,baz=230,slow=11,SNR=3.4						
MKAR				Lg	Lg	16 14 19.8	
	0.1nm,0.3s,baz=239,slow=22,SNR=1.8 0.7nm,0.8s						
KURBB	**Kurchatov Arra**	**11.55**	**16**	Pn	**Pn**	**16 12 01.1**	**-1.5**
	baz=204,slow=11,SNR=1.9						
KURBB				Lg	Lg	16 15 23.6	
	baz=208,slow=30,SNR=7.9 0.3nm,0.8s						
GEYT	**Alibeck**	**12.27**	**267**	Pn	**Pn**	**16 12 12.8**	**+0.3**
	0.3nm,0.3s,baz=173,slow=5.8,SNR=1.3						
GEYT				Sn	**Sn**	**16 14 28.3**	**-1.0**
	0.5nm,0.3s,baz=192,slow=38,SNR=3.1 1.2nm,0.4s						
AB31	**Akbulak array**	**13.77**	**319**	P	**Pn**	**16 12 33.1**	**+0.4**
	1.1nm,0.5s,baz=124,slow=13,SNR=16						
ABKAR	**Akbulak array**	**13.77**	**319**	Pn	**Pn**	**16 12 33.2**	**+0.5**
AKTO	**Aktyubinsk**	**15.48**	**320**	Pn	**Pn**	**16 12 54.9**	**-1.0**
	0.3nm,0.3s,baz=104,slow=13,SNR=2.9 1.4nm,0.5s						
AKTO	**Aktyubinsk**	**15.48**	**320**	⇑P	**P**	**16 12 58.5**	**-1.9**
	5.4nm,0.8s						
ZAA0	**Zalesovo Array**	**16.24**	**24**	Pn	**P**	**16 13 07.6**	**-1.2**
ZALV	**Zalesovo Beam**	**16.24**	**24**	Pn	**P**	**16 13 07.3**	**-1.4**
	0.2nm,0.3s,baz=208,slow=11,SNR=13						
ZALV				Lg	Lg	16 17 53.4	
	0.1nm,0.3s,baz=57,slow=11,SNR=1.4 4.1nm,0.6s						
ARU	**Arti**	**19.59**	**334**	P	**Pn**	**16 13 46.8**	**-0.2**
	baz=149,slow=7.6,SNR=7.8 2.2nm,0.3s						
ARU	**Arti**	**19.59**	**334**	IAmb	IAmb	16 13 50.6	
	comp=Z,4.9nm,0.8s						
BELG	**Belogornoye**	**22.04**	**314**	P	**P**	**16 14 13.6**	**+1.4**
	comp=Z,20nm,0.8s,baz=248,slow=3.5,SNR=5.7 comp=Z,20nm,0.8s						
SONM	**Songino Array**	**24.89**	**60**	P	**P**	**16 14 41.8**	**+1.2**
	comp=Z,0.4nm,0.4s,baz=276,slow=13,SNR=3.7 comp=Z,0.4nm,0.4s						
BRTR	**Keskin Array B**	**30.66**	**283**	P	**P**	**16 15 31.0**	**-1.3**
	comp=Z,0.8nm,0.8s,baz=97,slow=9.6,SNR=4.3 comp=Z,0.8nm,0.8s						
AKASG	**Malin Array Be**	**32.81**	**305**	P	**P**	**16 15 51.5**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=80,slow=7.5,SNR=4.4 comp=Z,0.2nm,0.3s						
FIA1	**FINESS Array S**	**36.20**	**323**	P	**P**	**16 16 21.5**	**+1.3**
FIA1				IAmb	IAmb	16 16 32.5	
	comp=Z,5.2nm,1.1s						
FINES	**FINESS Array B**	**36.21**	**323**	P	**P**	**16 16 21.6**	**+1.4**
	comp=Z,1.6nm,0.4s,baz=113,slow=9.3,SNR=21 comp=Z,1.6nm,0.4s						
PABE	**Paberze**	**36.28**	**313**	P	**P**	**16 16 22.3**	**+1.4**
PABE				IAmb	IAmb	16 16 34.0	
	comp=Z,13nm,1.3s						
ARCES	**ARCESS Array B**	**39.17**	**335**	P	**P**	**16 16 46.6**	**+1.4**
	comp=Z,1.1nm,0.6s,baz=110,slow=9.6,SNR=9.4 comp=Z,1.1nm,0.6s						
ARCES	**ARCESS Array B**	**39.17**	**335**	IAmb	IAmb	16 16 47.6	
	comp=Z,5.5nm,1.1s						
TIXI	**Tiksi**	**42.12**	**23**	P	**P**	**16 17 10.8**	**+1.3**
GERES	**GERESS Array B**	**42.96**	**303**	P	**P**	**16 17 17.8**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=65,slow=7.6,SNR=6.0 comp=Z,0.4nm,0.5s						
NC303	**NORSAR Array S**	**43.19**	**321**	P	**P**	**16 17 19.0**	**+0.7**
NC303				IAmb	IAmb	16 17 23.3	
	comp=Z,5.3nm,0.9s						
NB201	**NORSAR Array S**	**43.23**	**321**	P	**P**	**16 17 19.4**	**+0.7**
NB2	**NORSAR Subarra**	**43.26**	**321**	P	**P**	**16 17 19.6**	**+0.6**
	comp=Z,0.9nm,0.5s,baz=91,slow=8.6						
NOA	**NORSAR Array B**	**43.26**	**321**	P	**P**	**16 17 19.6**	**+0.6**
	comp=Z,1.5nm,0.7s,baz=90,slow=7.9,SNR=6.4 comp=Z,1.5nm,0.7s						
NC204	**NORSAR Array S**	**43.48**	**321**	P	**P**	**16 17 21.5**	**+0.7**
CUC	**Castrocucco**	**43.78**	**290**	P	**P**	**16 17 24.9**	**+1.4**
CUC				IAmb	IAmb	16 17 37.2	
	comp=Z,3.1nm,0.9s						
ANM	**Nome**	**66.37**	**24**	P	**P**	**16 20 06.3**	**+0.1**
TORD	**Torodi Ar. Bea**	**67.91**	**269**	P	**P**	**16 20 15.5**	**-1.2**
	comp=Z,0.3nm,0.5s,baz=44,slow=6.3,SNR=4.7 comp=Z,0.3nm,0.5s						
TORD	**Torodi Ar. Bea**	**67.91**	**269**	IAmb	IAmb	16 20 37.4	
	comp=Z,1.7nm,1.3s						
IMAR	**Indian Mountai**	**68.59**	**19**	P	**P**	**16 20 20.2**	**0.0**
BMAR	**Burnt Mountain**	**69.44**	**15**	P	**P**	**16 20 25.8**	**+0.3**
H23K	**Yukon River**	**69.73**	**18**	P	**P**	**16 20 28.6**	**+1.3**
H23K				IAmb	IAmb	16 20 37.7	
	comp=Z,1.5nm,1.0s						
C36M	**Paulatuk**	**70.59**	**7**	P	**P**	**16 20 33.0**	**+0.5**
C36M				IAmb	IAmb	16 21 15.4	
	comp=Z,8.0nm,1.4s						
MDM	**Murphy Dome**	**70.76**	**18**	P	**P**	**16 20 34.5**	**+0.9**
MDM				IAmb	IAmb	16 21 16.4	
	comp=Z,3.4nm,1.4s						
WRH	**Wood River Hil**	**71.20**	**18**	P	**P**	**16 20 37.1**	**+0.8**
WRH				IAmb	IAmb	16 20 59.0	
	comp=Z,4.7nm,1.4s						
ILAR	**Eielson Array**	**71.23**	**17**	P	**P**	**16 20 36.2**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=329,slow=5.7,SNR=5.2 comp=Z,0.4nm,0.8s						
BCAR	**Beaver Creek A**	**73.83**	**16**	P	**P**	**16 20 52.8**	**+0.7**
YKA	**Yellowknife Ar**	**78.05**	**4**	P	**P**	**16 21 16.4**	**+0.3**
	comp=Z,0.8nm,0.9s,baz=356,slow=5.9,SNR=4.8 comp=Z,0.8nm,0.9s						
WB2	**Warramunga Arr**	**81.89**	**124**	P	**P**	**16 21 38.1**	**+0.7**

*IDC **26** 16:14:10.2±0.8,4°.96S×133°.67E,h0km,mb3.9/8, mbtmp4.1/13,ML4.1/4,MS3.9/35,Error ellipse: s-maj=32.8km s-min=14.6km az=67.0*
*NEIC **26** 16:14:10.8±1.8,4°.73S±0°.09×133°.97E±0°.06,h10km±1km, mb4.5/16,Error ellipse: s-maj=17.3km s-min=4.7km az=34.0*
*DJA **26** 16:14:15.4±0.6,5°.5S±2°.3×13°.4E±°,h36km±9km,M4.4/24, mB4.9/8,mb4.6/24,MLv4.5/12,Mw(mB)4.2/8*
ISC 26 16:14:11.4±0.5,4°.89S±0°.05×133°.87E±0°.05,h10km,n106, σ1§96/82,mb4.3/16,MS3.9/29,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**2.54**	**320**	Pn	**Pn**	**16 14 50.7**	**-2.0**
FAKI	**Fak Fak**	**2.54**	**320**	P	**Pn**	**16 14 50.5**	**-2.2**
FAKI				S	**Sn**	**16 15 21.2**	**-2.4**
FAKI	**Fak Fak**	**2.54**	**320**	P	**Pn**	**16 14 51.3**	**-1.4**
SRPI	**Serui, Papua**	**3.82**	**38**	P	**Pn**	**16 15 12.7**	**+2.4**
BNDI	**Bandanaira**	**3.97**	**275**	P	**Pn**	**16 15 14.8**	**+2.5**
BAKI	**Biak**	**4.30**	**31**	P	**Pn**	**16 15 16.3**	**-0.6**
SIJI	**Sorong**	**4.76**	**327**	LR	LR	16 17 40.6	
	comp=Z,2μm,20.6s,baz=114,slow=45						
SWI	**Sorong**	**4.77**	**327**	P	**Pn**	**16 15 22.8**	**-0.6**
MSAI	**Masohi**	**5.16**	**287**	P	**Pn**	**16 15 29.9**	**+1.2**
	0.1nm205nm13nm,0.6s						
MSAI				S	**Sn**	**16 16 27.5**	**-0.9**
	0.1nm205nm13nm,0.6s						
SMPI	**Sarmi**	**5.62**	**59**	P	**Pn**	**16 15 38.0**	**+2.9**
	0.2nm18nm,1.4s						
SMPI				S	**Sn**	**16 16 36.3**	**-3.6**
	0.2nm18nm,1.4s						
AAI	**Ambon**	**5.78**	**282**	P	**Pn**	**16 15 38.5**	**+1.2**
	0.6nm2μm121nm,0.4s						
GENI	**Genyem**	**6.69**	**70**	P	**Pn**	**16 15 51.8**	**+2.1**
	0.9nm69nm,1.1s						
NLAI	**Namlea**	**6.95**	**283**	P	**Pn**	**16 15 56.4**	**+3.1**
	0.3nm2μm54nm,0.4s						
LBMI	**Labuha**	**7.63**	**303**	P	**Pn**	**16 16 03.5**	**+0.7**
	0.1nm382nm34nm,0.6s						
KDU	**Kakadu**	**7.87**	**190**	P	**Pn**	**16 16 08.6**	**+2.6**
MTN	**Manton Dam**	**8.35**	**199**	Pn	**Pn**	**16 16 14.4**	**+1.7**
MTN	**Manton Dam**	**8.35**	**199**	P	**Pn**	**16 16 14.9**	**+2.3**
SANI	**Sanana**	**8.36**	**289**	P	**Pn**	**16 16 11.5**	**-1.2**
	474nm23nm,0.5s						
SANI	**Sanana**	**8.36**	**289**	P	**Pn**	**16 16 11.1**	**-1.6**
SOEI	**Soe**	**10.68**	**243**	Pn	**Pn**	**16 16 46.1**	**+1.4**
SOEI	**Soe**	**10.68**	**243**	P	**Pn**	**16 16 45.2**	**+0.6**
	30nm,1.4s						
SOEI	**Soe**	**10.68**	**243**	P	**Pn**	**16 16 47.3**	**+2.6**
KMSI	**Cibinong**	**11.27**	**299**	P	**Pn**	**16 16 52.5**	**-0.1**
	2μm21nm,0.5s						
BATI	**Baumata**	**11.41**	**242**	P	**Pn**	**16 16 55.4**	**+0.8**
	24nm,0.8s						
KNRA	**Kununurra**	**11.84**	**205**	Pn	**Pn**	**16 17 00.6**	**+0.2**
KNRA	**Kununurra**	**11.84**	**205**	P	**Pn**	**16 17 01.9**	**+1.5**
APSI	**Ampana**	**12.82**	**288**	P	**Pn**	**16 17 14.8**	**+0.9**
	18nm,1.1s						
COEN	**Coen**	**12.86**	**135**		**Pn**	**16 17 13.0**	**-1.4**
COEN	**Coen**	**12.86**	**135**	P	**Pn**	**16 17 14.5**	**+0.1**
BKSI	**Bulukumba**	**13.70**	**268**	P	**Pn**	**16 17 27.0**	**+1.1**
	5.8nm,1.1s						
PMG	**Port Moresby**	**13.93**	**110**	Pn	**Pn**	**16 17 30.1**	**+1.1**
	9.7nm,0.9s,baz=154,slow=21,SNR=1.7						
PMG				LR	LR	16 24 12.4	
	comp=Z,790nm,18.4s,baz=328,slow=43						
KAPI	**Kappang**	**14.06**	**269**	LR

comp=Z,25nm,0.4s
CTA Charters Tower 19.33 142 P Pn 16 18 38.7 +0.6
comp=Z,0.3nm,0.3s,baz=336,slow=11,SNR=6.5
CTA Lg Lg 16 24 26.1
comp=Z,0.1nm,0.3s,baz=241,slow=22,SNR=3.5
CTA LR LR 16 26 58.4
comp=Z,857nm,21.3s,baz=322,slow=40
comp=Z,11nm,0.9s
CTAO Charters Tower 19.33 142 P P 16 18 36.4 -0.6
WRKA Warakurna 20.74 194 P P 16 18 54.6 +2.3
MBWA Marble Bar 21.21 219 P P 16 18 58.7 +1.2
MBWA IAmb IAmb 16 19 06.5
comp=Z,23nm,1.2s
MBWA Marble Bar 21.21 219 P P 16 18 59.9 +2.4
GUMO Guam 21.36 31 LR LR 16 27 32.4
comp=Z,159nm,18.0s,baz=216,slow=37
PSA00 Pilbara Seismi 21.45 218 P P 16 19 01.5 +1.5
PSA00 Pilbara Seismi 21.45 218 P P 16 19 02.4 +2.4
OOD Oodnadatta 22.85 176 P P 16 19 17.1 +2.2
INKA Innaminka 23.65 165 P P 16 19 25.2 +2.2
MULG Mulgathing 25.26 180 P P 16 19 41.3 +3.5
LCRK Leigh Creek 25.75 171 P P 16 19 44.7 +2.4
HNR Honiara 26.26 101 LR LR 16 31 35.2
comp=Z,350nm,18.3s,baz=262,slow=40
STKA Stephens Creek 27.81 166 P P 16 20 01.6 +0.7
comp=Z,2.9nm,0.8s,baz=343,slow=14,SNR=4.5
STKA LR LR 16 32 00.9
comp=Z,317nm,20.8s,baz=341,slow=38
comp=Z,2.9nm,0.8s
STKA Stephens Creek 27.81 166 P P 16 20 00.5 -0.4
BBOO Buckleboo 27.86 176 P P 16 20 01.4 +0.1
BBOO Buckleboo 27.86 176 P P 16 20 03.1 +1.8
BLDU Ballidu 30.27 210 P P 16 20 25.2 +2.4
JOW Kunigami 32.00 351 LR LR 16 31 34.2
comp=Z,381nm,21.4s,baz=129,slow=33
MJAR Matsushiro Arr 41.41 5 LR LR 16 38 09.0
comp=Z,181nm,19.0s,baz=188,slow=35
CMAR Chiang Mai Arr 41.51 305 P P 16 21 57.7 -1.5
comp=Z,0.3nm,0.5s,baz=146,slow=9.8,SNR=3.3
CMAR LR LR 16 42 01.6
comp=Z,59nm,19.1s,baz=95,slow=40
comp=Z,0.3nm,0.5s
KSRS Korea Array 42.49 353 P P 16 22 08.9 +2.1
comp=Z,1.2nm,1.0s,baz=165,slow=9.6,SNR=4.5
KSRS LR LR 16 39 08.0
comp=Z,148nm,20.0s,baz=175,slow=35
comp=Z,1.2nm,1.0s
MSVF Nonsavu 45.04 110 LR LR 16 40 03.1
comp=Z,283nm,19.9s,baz=154,slow=34
XAN Xi'an 45.33 330 P P 16 22 36.5 +6.7
XAN pmax pmax
comp=Z,4.0nm,0.8s
USRK Ussuriysk Ar. 48.89 358 P P 16 22 58.5 +1.1
comp=Z,1.6nm,0.8s,baz=196,slow=9.7,SNR=4.1
comp=Z,1.6nm,0.8s
HHC Hu-ho-hao-te 49.90 338 *eP* **P 16 23 05.3 0.0**
HHC pmax pmax
comp=Z,24nm,1.1s
HHC pmax pmax
comp=Z,190nm,6.4s
RPZ Rata Peaks 50.66 145 LR LR 16 44 53.0
comp=Z,346nm,19.4s,baz=300,slow=36
URZ Urewera 51.42 136 LR LR 16 46 21.4
comp=Z,377nm,18.2s,baz=30,slow=38
RAO Raoul Island 51.58 124 LR LR 16 43 59.6
comp=Z,78nm,19.2s,baz=305,slow=35
GTA Gaotai 54.12 328 *eP* **P 16 23 39.0 +2.1**
GTA pP pwP 16 23 45.3 +2.0
GTA sP sP 16 23 48.5 +8.6
GTA pmax pmax
comp=Z,3.0nm,1.0s
GTA pmax pmax
comp=Z,32nm,4.9s
GTA LR LR
comp=N,90nm,18.2s
GTA LR LR
comp=E,88nm,18.9s
GTA LR LR
comp=Z,99nm,18.2s
AFI Afiamalu 54.26 104 LR LR 16 45 15.0
comp=Z,93nm,20.9s,baz=156,slow=34
PALK Pallekele 54.41 282 LR LR 16 48 38.5
comp=Z,72nm,20.4s,baz=222,slow=38
CASY Casey 63.41 190 P P 16 24 39.9 -1.0
CASY IAmb IAmb 16 24 49.5
comp=Z,5.0nm,1.1s
WMQ Urumqi 63.83 324 *eP* **P 16 24 45.8 +1.7**
MA2 Magadan 65.65 9 LR LR 16 53 45.7
comp=Z,56nm,18.5s,baz=172,slow=36
SHEM Shemya Is, Ala 66.71 25 LR LR 16 49 26.3
comp=Z,46nm,21.7s,baz=156,slow=32
YAK Yakutsk 66.81 358 LR LR 16 56 51.7
comp=Z,39nm,18.0s,baz=240,slow=38
MK31 Makanchi Array 68.66 325 P P 16 25 13.8 -1.2
MK31 IAmb IAmb 16 25 24.6
comp=Z,4.5nm,1.2s
MKAR Makanchi Array 68.66 325 P P 16 25 14.5 -0.5
comp=Z,0.9nm,0.4s,baz=110,slow=7.6,SNR=14
comp=Z,0.9nm,0.4s
MKAR Makanchi Array 68.66 325 P P 16 25 14.0 -1.0
MAKZ Makanchi 68.85 325 P P 16 25 15.4 -0.7
MAKZ IAmb IAmb 16 25 21.8
comp=Z,4.5nm,1.1s
SEY Seymchan 69.09 9 LR LR 16 56 36.1
comp=Z,34nm,18.0s,baz=183,slow=37
ZALV Zalesovo Beam 71.47 332 P P 16 25 32.5 +0.4
comp=Z,0.5nm,0.5s,baz=147,slow=2.9,SNR=2.3
ZALV LR LR 16 59 43.9
comp=Z,25nm,20.1s,baz=170,slow=38
comp=Z,0.5nm,0.5s
AAK Ala-Archa 71.49 318 LR LR 17 01 57.5
comp=Z,41nm,18.2s,baz=104,slow=40
VNDA Vanda 74.10 174 P P 16 25 47.0 -0.3
comp=Z,0.9nm,0.9s,baz=302,slow=5.9,SNR=5.7
comp=Z,0.9nm,0.9s
VNDA Vanda 74.10 174 IAmb IAmb 16 25 54.5
comp=Z,5.5nm,1.5s
PPT Papeete 75.74 107 LR LR 16 58 45.1
comp=Z,39nm,18.3s,baz=314,slow=35
TIXI Tiksi 76.46 358 LR LR 17 01 02.7
comp=Z,69nm,18.1s,baz=180,slow=37
MAW Mawson 78.32 202 LR LR 16 58 41.8
comp=Z,239nm,18.6s,baz=48,slow=34
WSAR Wadi Sarin 78.44 295 LR LR 17 04 54.9
comp=Z,37nm,19.3s,baz=154,slow=39
GEYT Alibeck 81.83 309 P P 16 26 28.6 -2.6
GEYT IAmb IAmb 16 26 51.4
comp=Z,5.1nm,1.4s
GYA0B ALIBECK ARRAY 81.83 309 P P 16 26 28.6 -2.6
ABKAR Akbulak array 83.29 321 P P 16 26 36.6 -1.8
AKTO Aktyubinsk 84.80 321 P P 16 26 46.5 +0.4
comp=Z,1.2nm,0.7s,baz=90,slow=10,SNR=4.3
AKTO LR LR 17 06 12.7
comp=Z,28nm,21.5s,baz=85,slow=37
comp=Z,1.2nm,0.7s
QSPA South Pole Qui 85.07 180 LR LR 17 05 05.0
comp=Z,180nm,18.7s,baz=8.0,slow=36
KDAK Kodiak Island 85.43 31 LR LR 17 02 58.5
comp=Z,136nm,19.0s,baz=255,slow=34
KMBO Kilima Mbogo 96.50 268 LR LR 17 08 28.7
comp=Z,62nm,20.4s,baz=99,slow=34
SNAA Sanae 98.58 193 LR LR 17 12 08.1
comp=Z,126nm,18.2s,baz=132,slow=35

IDC ***26*** *16:18:59.4±0.9, 39°.35N×73°.66E, h0km, mb3.7/11, mbtmp3.6/18, ML3.1/7, MS3.4/2, Error ellipse: s-maj=17.3km s-min=15.0km az=153.0*
KRNET ***26*** *16:18:59.4±0.1, 39°.43N×73°.73E, mb4.1*
NEIC ***26*** *16:19:01.9±1.5, 39°.45N±0°.06×73°.74E±0°.04, h10km±1km, mb4.2/24, Error ellipse: s-maj=9.8km s-min=5.4km az=194.0*
SOME ***26*** *16:19:01.6, 39°.50N×73°.75E, h0km*
NNC ***26*** *16:19:04.6±1.3, 39°.57N×73°.75E, h0km, mb4.3, mpv4.0, Error ellipse: s-maj=10.8km s-min=5.3km az=170.0*
ISC 26 16:19:01.0±1.3, 39°.36N±0°.04×73°.47E±0°.02, h5km±8km, n130, n2≥24/167, mb4.0/22, 22C-16D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OHH	**Osh**			**1.28 336**	⇓*eP*	**Pn**		**16 19 24.5**	**-1.1**
OHH	baz=27				⇓*eS*	**Sb**		**16 19 42.9**	**+0.5**
DRK	**Karamyk**			**1.30 276**	⇑*iP*	**Pg**		**16 19 27.7**	**+1.8**
DRK	baz=73				⇑*iS*	**Sn**		**16 19 48.3**	**+4.3**
DRK	**Karamyk**			**1.30 276**		**Pg**		**16 19 28.1**	**+2.2**
KSH	**Kashi**			**1.94 85**	Pg	Pn		16 19 28.8	-6.0
KSH					sP	Pb		16 19 36.0	-1.0
KSH					Sg	Sn		16 19 48.5	-11
KSH					pmax	pmax			
KSH	comp=Z,130nm,0.6s				smax	smax			
KSH	comp=N,690nm,0.6s				smax	smax			
BTK	comp=E,600nm,0.5s **Batken**			**2.16 290**	⇑*eP*	**Pb**		**16 19 41.2**	**+0.5**
BTK	baz=87				⇑*eS*	**Sg**		**16 20 11.8**	**+1.3**
BTK	baz=87 **Batken**			**2.16 290**	Pn	**Pb**		**16 19 39.6**	**-1.1**
GAR	**Garm**			**2.48 263**	⇓*iP*	**Pb**		**16 19 46.4**	**+0.3**
GAR	baz=62				⇓*iS*	**Sg**		**16 20 20.3**	**-0.3**
GAR	baz=62 **Garm**			**2.48 263**		**Pb**		**16 19 45.2**	**-0.9**
ARLS	**Aral**			**2.58 14**	⇓*eP*	**Pn**		**16 19 43.3**	**-0.3**
ARLS	baz=10.0				⇓*eS*	**Sn**		**16 20 14.8**	**-0.7**
AML	baz=10.0 **Almayashu**			**2.77 3**	P	**Pn**		**16 19 48.8**	**+2.4**
TRKS	SNR=16 **Terek-Say**			**2.81 321**	⇑*eP*	**Pn**		**16 19 48.2**	**+1.5**
TRKS	baz=17				⇑*eS*	**Sb**		**16 20 23.7**	**-2.7**
UCH	baz=17 **Uchtor**			**2.97 15**	P	**Pn**		**16 19 51.1**	**+1.9**
UCH	SNR=29 **Uchtor**			**2.97 15**	⇑*eP*	**Pn**		**16 19 49.0**	**-0.2**
UCH	baz=12				⇑*eS*	**Sn**		**16 20 24.9**	**-0.6**
EKS2	baz=12 **Erkin-Say**			**3.31 4**	P	**Pn**		**16 19 55.7**	**+2.2**
EKS2	SNR=17 **Erkin-Say**			**3.31 4**	⇓*eP*	**Pn**		**16 19 53.8**	**+0.3**
EKS2	baz=1.0				⇓*eS*	**Sn**		**16 20 33.2**	**-0.1**
AAK	baz=1.0 **Ala-Archa**			**3.37 13**	P	**Pn**		**16 19 57.8**	**+3.4**
AAK	SNR=23 **Ala-Archa**			**3.37 13**	Pn	**Pn**		**16 19 56.8**	**+2.4**
AAK	comp=E,16nm,0.3s,baz=163,slow=6.7,SNR=39				Lg	Lg		16 20 40.4	
AAK	comp=E,12nm,0.3s,baz=93,slow=21,SNR=8.8 comp=E,29nm,0.3s **Ala-Archa**			**3.37 13**	⇑*eP*	**Pn**		**16 19 54.4**	**0.0**
AAK	baz=10.0				⇑*eS*	**Sn**		**16 20 34.1**	**-0.7**
AAK	baz=10.0 **Ala-Archa**			**3.37 13**	Pn	**Pn**		**16 19 53.4**	**-1.0**
CHGR	**Chuyangaron**			**3.43 260**	⇑*eP*	**Pb**		**16 19 59.6**	**-2.7**
CHGR	baz=59				⇑*eS*	**Sb**		**16 20 43.1**	**-1.2**
CHGR	baz=59 **Chuyangaron**			**3.43 260**	Pn	**Pb**		**16 19 58.7**	**-3.6**
KBK	**Karagaybulak**			**3.48 18**	P	**Pn**		**16 19 59.0**	**+3.1**
KBK	SNR=7.2 **Karagaybulak**			**3.48 18**	⇑*eP*	**Pn**		**16 19 55.8**	**-0.1**
KBK	baz=16				⇑*eS*	**Sn**		**16 20 36.2**	**-1.4**
ULHL	baz=16 **Ulahol**			**3.57 35**	P	**Pb**		**16 20 01.6**	**-3.1**
BOOM	SNR=9.5 **Boomskoye usch**			**3.65 30**	⇓*eP*	**Pn**		**16 19 57.0**	**-1.2**
BOOM	baz=28				⇓*iS*	**Sn**		**16 20 39.1**	**-2.6**
BOOM	baz=28 **Boomskoye usch**			**3.65 30**	Pn	**Pn**		**16 19 57.7**	**-0.5**
TAS	**Tashkent**			**3.75 303**	⇓*iP*	**Pn**		**16 20 02.9**	**+3.4**
TAS	baz=1.0				⇓*iS*	**Sb**		**16 20 48.6**	**-4.7**
CHMS	baz=1.0 **Chumysh**			**3.76 14**	P	**Pn**		**16 20 02.0**	**+2.3**
CHMS	SNR=18 **Chumysh**			**3.76 14**	⇑*eP*	**Pn**		**16 19 59.6**	**-0.1**
CHMS	baz=12				⇑*eS*	**Sn**		**16 20 43.2**	**-1.2**
IUG	baz=12 **luzhnay**			**3.82 318**	*eP*	**Pg**		**16 20 14.3**	**+0.1**
IUG	comp=E,446nm,0.4s				*eS*	**Sg**		**16 21 06.5**	**+2.9**
IUG	comp=E,136nm,1.0s **luzhnay**			**3.82 318**	Pg	**Pg**		**16 20 14.3**	**+0.1**
IUG	comp=E,446nm,0.4s				Lg	Lg		16 21 07.3	
TKM2	comp=E,136nm,1.0s **Tokmak 2**			**3.90 24**	P	**Pn**		**16 20 03.7**	**+1.8**
TKM2	SNR=11 **Tokmak 2**			**3.90 24**	⇓Pn	**Pn**		**16 20 03.6**	**+1.8**
TKM2	comp=E,24nm,0.7s				⇓Lg	Lg		16 21 01.1	
KDJ	comp=E,27nm,0.5s **Kajisay**			**3.95 44**	⇑*iP*	**Pn**		**16 20 01.2**	**-1.2**
KDJ	baz=43				⇑*iS*	**Sn**		**16 20 46.3**	**-2.9**
KDJ	baz=43 **Kajisay**			**3.95 44**	Pn	**Pn**		**16 20 00.5**	**-1.9**
USP	**Ospenovka**			**3.98 11**	P	**Pn**		**16 20 05.0**	**+2.3**
TARG	SNR=5.9 **Taragay, Kyrgy**			**4.06 53**	Pn	**Pn**		**16 20 04.4**	**+0.2**
KST	**Kastek**			**4.13 26**	*eP*	**Pb**		**16 20 14.5**	**+0.2**
KST	comp=E,20nm,0.4s				*eS*	**Sb**		**16 21 07.2**	**+2.6**
KST	comp=E,113nm,0.7s **Kastek**			**4.13 26**	Pg	**Pb**		**16 20 14.5**	**+0.2**
KST	comp=E,20nm,0.4s				Lg	Lg		16 21 07.6	
CHM	comp=E,113nm,0.7s **Chimkent**			**4.17 316**	*eP*	**Pg**		**16 20 19.6**	**-1.2**
CHM	comp=E,6.4nm,0.6s				*eS*	**Sg**		**16 21 15.4**	**+0.6**
SGDS	comp=E,118nm,0.2s **Sogindy**			**4.18 12**	*eP*	**Pb**		**16 20 15.5**	**+0.4**
SGDS	comp=E,16nm,0.6s				*eS*	**Sb**		**16 21 09.1**	**+3.2**
SGDS	comp=E,40nm,0.5s **Sogindy**			**4.18 12**	Pg	**Pb**		**16 20 15.5**	**+0.4**
SGDS	comp=E,16nm,0.6s				Lg	Lg		16 21 09.6	
DGS	comp=E,40nm,0.5s **Degeres**			**4.25 23**	*eP*	**Pb**		**16 20 16.2**	**-0.1**
DGS					*eS*	**Sb**		**16 21 10.3**	**+2.4**
DGS	**Degeres**			**4.25 23**	Pg	**Pb**		**16 20 16.2**	**-0.1**
DGS					Lg	Lg		16 21 10.3	
KK31	**Karatay Array**			**4.36 330**	Pn	**Pn**		**16 20 07.4**	**-0.4**
KK31	**Karatay Array**			**4.36 330**	Pn	**Pn**		**16 20 11.0**	**+3.2**
KK31	comp=E,2.2nm,0.3s,baz=134,slow=12,SNR=22				⇓Pg	**Pb**		**16 20 20.3**	**+2.3**
KK31	comp=E,13nm,0.5s,baz=158,slow=15,SNR=10				⇑Sn	**Sb**		**16 21 05.5**	**-5.3**
KK31	comp=E,14nm,0.5s,baz=159,slow=27,SNR=4.6				⇑Lg	Lg		16 21 19.6	
KKAR	comp=E,9.9nm,0.3s **Karatay Array**			**4.36 330**	Pn	**Pn**		**16 20 07.1**	**-0.7**
MTBS	**Maitube**			**4.38 30**	*eP*	**Pb**		**16 20 18.9**	**+0.4**
MTBS	comp=E,18nm,0.6s				*eS*	**Sb**		**16 21 14.4**	**+2.8**
MTBS	comp=E,47nm,0.4s **Maitube**			**4.38 30**	Pg	**Pb**		**16 20 18.9**	**+0.4**
MTBS	comp=E,18nm,0.6s				Lg	Lg		16 21 14.4	
TNSS	comp=E,47nm,0.4s **Tian-Shan**			**4.51 34**	*eP*	**Pb**		**16 20 20.9**	**-0.1**
TNSS	comp=E,19nm,0.4s				*eS*	**Sb**		**16 21 18.1**	**+2.3**
TNSS	comp=E,17nm,0.4s **Tian-Shan**			**4.51 34**	Pg	**Pb**		**16 20 20.9**	**-0.1**
TNSS	comp=E,19nm,0.4s				Lg	Lg		16 21 18.9	
BRLS	comp=E,17nm,0.4s **Borolday**			**4.58 324**	*eP*	**Pg**		**16 20 26.0**	**-2.7**
BRLS	comp=E,14nm,0.5s				*eS*	**Sg**		**16 21 26.4**	**-1.7**
BRLS	comp=E,27nm,0.6s **Borolday**			**4.58 324**	Pg	**Pg**		**16 20 26.9**	**-1.8**
BRLS	comp=E,14nm,0.5s				Lg	Lg		16 21 28.6	
AAA	comp=E,27nm,0.6s **Alma-Ata**			**4.64 33**	*eP*	**Pb**		**16 20 24.0**	**+1.2**
AAA	comp=E,11nm,0.1s				*eS*	**Sb**		**16 21 23.2**	**+4.1**
KTBS	comp=E,76nm,0.6s **Karatobe**			**4.97 28**	*eP*	**Pb**		**16 20 29.5**	**+1.0**
KTBS	comp=E,5.5nm,0.5s				*eS*	**Sb**		**16 21 32.8**	**+4.2**
KTBS	comp=E,100nm,0.4s **Karatobe**			**4.97 28**	Pg	**Pb**		**16 20 29.5**	**+1.0**
KTBS	comp=E,5.5nm,0.5s				Lg	Lg		16 21 32.8	
KUU	comp=E,100nm,0.4s **Kurty**			**5.01 24**	*eP*	**Pb**		**16 20 31.4**	**+2.2**
KUU	comp=E,16nm,0.4s				*eS*	**Sb**		**16 21 36.0**	**+6.2**
KUU	comp=E,70nm,0.5s **Kurty**			**5.01 24**	Pg	**Pb**		**16 20 31.4**	**+2.2**
KUU	comp=E,16nm,0.4s				Lg	Lg		16 21 36.0	
CHKK	comp=E,70nm,0.5s **Chushkaly**			**5.21 29**	*eP*	**Pb**		**16 20 33.7**	**+1.2**
CHKK	comp=E,7.9nm,0.5s				*eS*	**Sb**		**16 21 40.0**	**+4.7**
CHKK	comp=E,36nm,0.6s **Chushkaly**			**5.21 29**	Pg	**Pb**		**16 20 33.7**	**+1.2**
CHKK	comp=E,7.9nm,0.5s				Lg	Lg		16 21 40.0	
SATY	comp=E,36nm,0.6s **Saty**			**5.25 44**	*eP*	**Pb**		**16 20 34.6**	**+1.4**
SATY	comp=E,8.3nm,0.5s				*eS*	**Sb**		**16 21 41.4**	**+4.9**
SATY	comp=E,28nm,0.9s **Saty**			**5.25 44**	Pg	**Pb**		**16 20 34.6**	**+1.4**
SATY	comp=E,8.3nm,0.5s				Lg	Lg		16 21 41.4	
KURS	comp=E,28nm,0.9s **Kuram**			**5.43 39**	*eP*	**Pb**		**16 20 38.0**	**+1.6**
KURS					*eS*	**Sb**		**16 21 47.2**	**+5.4**
KURS	**Kuram**			**5.43 39**	Pg	**Pb**		**16 20 38.0**	**+1.6**
KURS					Lg	Lg		16 21 47.2	
KPKS	**Kokpek**			**5.67 42**	*eP*	**Pb**		**16 20 41.0**	**+0.5**
KPKS	comp=E,4.3nm,0.5s				*eS*	**Sb**		**16 21 52.9**	**+4.0**
KPKS	comp=E,30nm,0.7s **Kokpek**			**5.67 42**	Pg	**Pb**		**16 20 41.0**	**+0.5**
KPKS	comp=E,4.3nm,0.5s				Lg	Lg		16 21 53.6	
BTLS	comp=E,30nm,0.7s **Baital**			**5.70 4**	*eP*	**Pb**		**16 20 44.0**	**+3.2**
BTLS	comp=E,5.2nm,0.5s				*eS*	**Sg**		**16 21 58.0**	**-5.9**
BTLS	comp=E,5.6nm,0.7s **Baital**			**5.70 4**	Pg	**Pb**		**16 20 44.0**	**+3.2**
BTLS	comp=E,5.2nm,0.5s				Lg	Lg		16 21 58.0	
ARXS	comp=E,5.6nm,0.7s **Arharly**			**5.84 32**	*eP*	**Pb**		**16 20 45.1**	**+1.8**
ARXS	comp=E,19nm,0.8s				*eS*	**Sb**		**16 22 00.0**	**+6.4**
ARXS	comp=E,37nm,0.8s **Arharly**			**5.84 32**	Pg	**Pb**		**16 20 45.1**	**+1.8**
ARXS	comp=E,19nm,0.8s				Lg	Lg		16 22 00.0	
SHLS	comp=E,37nm,0.8s **Shalkode**			**5.90 48**	*eP*	**Pg**		**16 20 52.9**	**-1.1**
SHLS					*eS*	**Sg**		**16 22 12.6**	**+2.2**
SHLS	**Shalkode**			**5.90 48**	Pg	**Pg**		**16 20 52.9**	**-1.1**
PDGK	**Podgornoye**			**6.02 47**	Pg	**Pb**		**16 20 47.5**	**+1.0**
PDGK	comp=E,2.7nm,0.6s				Lg	Lg		16 22 03.4	
PDGK	comp=E,10nm,0.8s **Podgornoye**			**6.02 47**	⇓Pg	**Pg**		**16 20 53.2**	**-3.1**
PDGK	comp=E,9.6nm,0.7s				⇑Lg	Lg		16 22 05.4	
BLB	comp=E,50nm,1.0s **Baldybastay**			**6.04 37**	*eP*	**Pb**		**16 20 48.1**	**+1.4**
BLB	comp=E,7.9nm,0.5s				*eS*	**Sb**		**16 22 05.1**	**+5.8**
BLB	comp=E,30nm,0.8s **Baldybastay**			**6.04 37**	Pg	**Pb**		**16 20 48.1**	**+1.4**
BLB	comp=E,7.9nm,0.5s				Lg	Lg		16 22 05.1	
DJR	comp=E,30nm,0.8s **Jarkent**			**6.85 41**	*eP*	**Pb**		**16 21 05.2**	**+4.7**
DJR					*eS*	**Sg**		**16 22 34.7**	**-6.2**
DJR	**Jarkent**			**6.85 41**	Pg	**Pb**		**16 21 05.2**	**+4.7**
MKAR	**Makanchi Array**			**9.84 38**	Pn	**Pn**		**16 21 24.1**	**+1.0**
MKAR	comp=E,0.1nm,0.3s,baz=219,slow=16,SNR=3.5				Lg	Lg		16 23 58.4	
MKAR	comp=E,0.1nm,0.3s,baz=227,slow=26,SNR=2.5				LR	LR		16 25 31.7	
WMQ	comp=E,65nm,19.5s,baz=104,slow=40 comp=E,0.4nm,0.7s **Urumqi**			**11.54 63**	*eP*	**Pn**		**16 21 46.8**	**+0.3**
KURBB	**Kurchatov Arra**			**11.81 16**	Pn	**Pn**		**16 21 46.4**	**-3.7**
KURBB	baz=201,slow=12,SNR=2.0				Lg	Lg		16 25 09.2	
GEYT	comp=E,0.1nm,0.3s,baz=230,slow=38,SNR=3.0 comp=E,0.1nm,0.4s **Alibeck**			**12.09 268**	Pn	**Pn**		**16 21 54.3**	**+0.3**
GEYT	comp=E,0.3nm,0.3s,baz=45,slow=55,SNR=2.8				Sn	**Sn**		**16 24 11.4**	**+2.2**
AB31	comp=E,0.2nm,0.3s,baz=356,slow=40,SNR=1.4 comp=E,0.7nm,0.4s **Akbulak array**			**13.82 320**	P	**Pn**		**16 22 17.6**	**+0.2**
ABKAR	comp=E,0.9nm,0.6s,baz=127,slow=13,SNR=9.3 **Akbulak array**			**13.82 320**	Pn	**Pn**		**16 22 17.8**	**+0.3**
AKTO	**Aktyubinsk**			**15.54 320**	Pn	**Pn**		**16 22 37.8**	**-2.9**
AKTO	comp=E,0.1nm,0.3s,baz=143,slow=10,SNR=2.0 comp=E,0.4nm,0.4s **Aktyubinsk**			**15.54 320**	⇑P	**Pn**		**16 22 42.4**	**+1.8**
ZAA0	comp=E,3.9nm,1.1s **Zalesovo Array**			**16.51 24**		**Pn**		**16 22 54.3**	**+1.2**
ZALV	**Zalesovo Beam**			**16.51 24**	Pn	**Pn**		**16 22 52.3**	**-0.8**
ZALV	comp=E,0.5nm,0.3s,baz=211,slow=12,SNR=11 comp=E,1.9nm,0.5s **Zalesovo Beam**			**16.51 24**		**Pn**		**16 22 54.3**	**+1.2**
ARU	**Arti**			**19.71 335**	P	**P**		**16 23 29.7**	**-1.4**
SONM	baz=125,slow=21,SNR=1.8 comp=E,1.0nm,0.3s **Songino Array**			**25.15 60**	P	**P**		**16 24 24.7**	**-2.3**
HHC	comp=E,1.0nm,0.7s,baz=280,slow=12,SNR=4.3 comp=E,1.0nm,0.7s **Hu-ho-hao-te**			**29.03 75**	*eP*	**P**		**16 25 00.3**	**-1.7**
HHC	comp=Z,13nm,1.0s				pmax	pmax			
HHC	comp=Z,160nm,6.1s				pmax	pmax			
BRTR	**Keskin Array B**			**30.55 284**	P	**P**		**16 25 16.6**	**+1.1**
FIA1	comp=Z,0.4nm,0.3s,baz=101,slow=8.4,SNR=8.6 comp=Z,0.4nm,0.3s **FINESS Array S**			**36.28 323**	P	**P**		**16 26 03.9**	**-1.0**
FIA1	comp=Z,6.3nm,1.1s				IAmb	IAmb		16 26 12.6	
FINES	**FINESS Array B**			**36.28 323**	P	**P**		**16 26 05.5**	**+0.5**
FINES	comp=Z,0.4nm,0.3s,baz=114,slow=9.9,SNR=9.7 comp=Z,0.4nm,0.3s **FINESS Array B**			**36.28 323**	P	**P**		**16 26 03.7**	**-1.2**
IDI	**Anoyia**			**38.48 280**	P	**P**		**16 26 25.5**	**+1.5**
ARCES	**ARCESS Array B**			**39.30 336**	P	**P**		**16 26 30.6**	**+0.2**
ARCES	comp=Z,1.2nm,0.7s,baz=108,slow=7.8,SNR=8.2 comp=Z,1.2nm,0.7s **ARCESS Array B**			**39.30 336**	P	**P**		**16 26 30.6**	**+0.2**
ARCES	comp=Z,7.6nm,1.3s				IAmb	IAmb		16 26 57.4	
TIXI	**Tiksi**			**42.39 23**	P	**P**		**16 26 54.7**	**-1.1**
GERES	**GERESS Array B**			**42.94 303**	P	**P**		**16 27 01.9**	**+1.1**
NC303	comp=Z,0.3nm,0.5s,baz=59,slow=8.1,SNR=1.4 comp=Z,0.3nm,0.5s **NORSAR Array S**			**43.26 321**	P	**P**		**16 27 03.9**	**+0.9**
NC303	comp=Z,6.7nm,1.1s				IAmb	IAmb		16 27 08.6	
NB2	**NORSAR Subarra**			**43.33 321**	P	**P**		**16 27 02.8**	**-0.8**
NOA	comp=Z,0.3nm,0.4s,baz=93,slow=7.9 **NORSAR Array B**			**43.33 321**	P	**P**		**16 27 03.4**	**-0.3**
CUC	comp=Z,0.6nm,0.6s,baz=91,slow=7.9,SNR=4.1 comp=Z,0.6nm,0.6s **Castrocucco**			**43.70 290**	P	**P**		**16 27 09.5**	**+2.6**
TOA0	**Torodi Ar. Sit**			**67.73 269**	P	**P**		**16 30 00.2**	**+0.5**
TOA0	comp=Z,3.2nm,1.4s				IAmb	IAmb		16 30 21.6	
TORD	**Torodi Ar. Bea**			**67.73 269**	P	**P**		**16 30 00.1**	**+0.4**
TORD	comp=Z,0.6nm,0.6s,baz=45,slow=4.3,SNR=4.9 comp=Z,0.6nm,0.6s **Torodi Ar. Bea**			**67.73 269**	P	**P**		**16 30 00.2**	**+0.5**
IMAR	**Indian Mountai**			**68.85 19**	P	**P**		**16 30 04.5**	**-1.5**
H21K	**Melozitna Rive**			**69.35 19**	P	**P**		**16 30 09.9**	**+0.8**
H21K	comp=Z,3.4nm,1.4s				IAmb	IAmb		16 30 14.8	
BMAR	**Burnt Mountain**			**69.70 15**	P	**P**		**16 30 10.9**	**-0.4**
J20K	**Nowinta River**			**70.19 20**	P	**P**		**16 30 14.3**	**0.0**

J20K					IAmb	IAmb	16 30 14.8	
	comp=Z,1.6nm,0.9s							
H24K	**Noodor Dome**	**70.36**	**17**	P		**P**	**16 30 15.3**	**-0.1**
H24K					IAmb	IAmb	16 30 25.4	
	comp=Z,2.2nm,1.4s							
C36M	**Paulatuk**	**70.84**	**6**	P		**P**	**16 30 17.1**	**-1.0**
K20K	**Telida**	**70.86**	**21**	P		**P**	**16 30 17.6**	**-0.9**
K20K					IAmb	IAmb	16 30 24.7	
	comp=Z,2.4nm,1.1s							
MDM	**Murphy Dome**	**71.02**	**17**	P		**P**	**16 30 18.7**	**-0.7**
MDM					IAmb	IAmb	16 30 26.4	
	comp=Z,2.9nm,1.2s							
ILAR	**Eielson Array**	**71.49**	**17**	P		**P**	**16 30 19.7**	**-2.5**
	comp=Z,0.5nm,0.8s,baz=336,slow=4.2,SNR=5.1							
ILAR					LR	LR	17 08 22.6	
	comp=Z,81nm,18.8s,baz=244,slow=42							
	comp=Z,0.5nm,0.8s							
ILAR	**Eielson Array**	**71.49**	**17**	P		**P**	**16 30 20.6**	**-1.6**
J26L	**Joseph Creek**	**72.45**	**16**	P		**P**	**16 30 27.1**	**-1.0**
J26L					IAmb	IAmb	16 30 45.6	
	comp=Z,4.5nm,1.5s							
SCRK	**Sand Creek**	**72.82**	**16**	P		**P**	**16 30 29.6**	**-0.8**
SCRK					IAmb	IAmb	16 30 30.4	
	comp=Z,2.9nm,1.3s							
L27K	**Beaver Creek,**	**74.09**	**16**	P		**P**	**16 30 37.3**	**-0.4**
BCAR	**Beaver Creek A**	**74.10**	**16**	P		**P**	**16 30 37.1**	**-0.7**
HYT	**Haines Junctio**	**77.00**	**15**	P		**P**	**16 30 54.4**	**-0.2**
YKA	**Yellowknife Ar**	**78.29**	**4**	P		**P**	**16 31 00.3**	**-1.2**
	comp=Z,0.3nm,0.7s,baz=347,slow=5.4,SNR=2.8							
	comp=Z,0.3nm,0.7s							
WB0	**Warramunga Arr**	**81.81**	**124**	P		**P**	**16 31 19.8**	**-1.3**
WRA	**Warramunga Arr**	**81.90**	**124**	P		**P**	**16 31 20.0**	**-1.6**
	comp=Z,0.4nm,0.6s,baz=325,slow=5.1,SNR=8.7							
	comp=Z,0.4nm,0.6s							
WRA	**Warramunga Arr**	**81.90**	**124**	P		**P**	**16 31 20.3**	**-1.3**
WB2	**Warramunga Arr**	**81.91**	**124**	P		**P**	**16 31 20.4**	**-1.2**
WR0	**Warramunga Arr**	**82.04**	**124**	P		**P**	**16 31 20.7**	**-1.6**
ASAR	**Alice Springs**	**84.34**	**127**	P		**P**	**16 31 33.0**	**-1.2**
	comp=Z,0.4nm,0.6s,baz=320,slow=5.0,SNR=7.5							
	comp=Z,0.4nm,0.6s							

*IDC **26** 16:21:04.2±2.3, 1°.74N×127°.33E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=211.6km s-min=25.3km az=66.0*
*DJA **26** 16:21:23.6±0.7, 2°.N±3°×12°.7E±°, h134km±7km, M3.5/8, MLv3.5/8*
ISC 26 16:21:21.9±1.1, 1°.58N±0°.07×127°.3E±0°.1, h150km, n10, σ2§00/13, mb3.3/4, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.81**	**174**	P	**Pn**	**16 21 47.6**	**+2.4**
LBMI	**Labuha**	**2.22**	**174**	P	**Pn**	**16 22 02.1**	**+2.5**
LBMI				S	**Sn**	**16 22 30.7**	**+2.0**
SGSI	**Sangihe**	**2.73**	**320**	P	**Pn**	**16 22 08.1**	**+2.2**
SGSI				S	**Sn**	**16 22 38.9**	**-0.9**
KMSI	**Cibinong**	**3.45**	**253**	P	**Pn**	**16 22 17.6**	**+2.6**
SANI	**Sanana**	**3.83**	**200**	P	**Pn**	**16 22 20.8**	**+0.8**
SANI				S	**Sn**	**16 23 03.3**	**-1.9**
NLAI	**Namlea**	**4.79**	**182**	P	**Pn**	**16 22 34.4**	**+1.8**
WRA	**Warramunga Arr**	**22.48**	**162**	P	**P**	**16 26 08.0**	**-1.1**
	0.9nm,0.5s,baz=341,slow=11,SNR=12						
	0.9nm,0.5s						
ASAR	**Alice Springs**	**25.91**	**166**	P	**P**	**16 26 39.4**	**-0.9**
	0.3nm,0.5s,baz=344,slow=11,SNR=4.7						
	0.3nm,0.5s						
STKA	**Stephens Creek**	**35.94**	**159**	P	**P**	**16 28 06.5**	**-1.6**
	2.6nm,0.9s,baz=332,slow=11,SNR=3.9						
	2.6nm,0.9s						
MKAR	**Makanchi Array**	**59.63**	**326**	P	**P**	**16 31 09.5**	**-0.7**
	0.1nm,0.3s,baz=105,slow=7.7,SNR=4.6						
	0.1nm,0.3s						

*SOME **26** 16:27:44.8, 39°.58N×73°.50E, h10km*
*KRNET **26** 16:27:45.4±0.1, 39°.49N×73°.49E, mb3.7*
*NNC **26** 16:27:52.4±3.8, 39°.34N×72°.27E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=36.0km s-min=15.7km az=9.0*
ISC 26 16:27:43.2±1.4, 39°.54N±0°.05×73°.52E±0°.03, h8km±11km, n34, σ2§01/65, 11C-15D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.13**	**330**	⇓*eP*	**Pn**	**16 28 07.2**	**+1.7**
	baz=33						
OHH				⇓*eS*	**Sn**	**16 28 23.5**	**+2.2**
	baz=33						
DRK	**Karamyk**	**1.33**	**268**	⇑*iP*	**Pg**	**16 28 09.5**	**+0.7**
	baz=70						
DRK				⇑*iS*	**Sg**	**16 28 27.4**	**+1.3**
	baz=70						
BTK	**Batken**	**2.15**	**285**	⇓*eP*	**Pg**	**16 28 23.3**	**-1.0**
	baz=86						
BTK				⇓*eS*	**Sg**	**16 28 51.1**	**-1.0**
	baz=86						
ARLS	**Aral**	**2.40**	**14**	⇑*eP*	**Pb**	**16 28 27.4**	**+0.7**
	baz=15						
ARLS				⇑*eS*	**Sb**	**16 28 58.3**	**+1.9**
	baz=15						
GAR	**Garm**	**2.55**	**259**	⇑*eP*	**Pb**	**16 28 28.6**	**-0.6**
	baz=60						
GAR				⇑*eS*	**Sb**	**16 29 00.1**	**-0.6**
	baz=60						
TRKS	**Terek-Say**	**2.69**	**318**	⇓*eP*	**Pb**	**16 28 30.6**	**-1.1**
	baz=19						
TRKS				⇓*eS*	**Sb**	**16 29 03.6**	**-1.3**
	baz=19						
UCH	**Uchtor**	**2.79**	**15**	⇓*eP*	**Pb**	**16 28 33.0**	**-0.5**
	baz=16						
UCH				⇓*eS*	**Sb**	**16 29 08.0**	**0.0**
	baz=16						
BOOM	**Boomskoye usch**	**3.47**	**31**	⇑*eP*	**Pb**	**16 28 42.9**	**-2.0**
	baz=31						
BOOM				⇑*iS*	**Sb**	**16 29 25.1**	**-2.2**
	baz=31						
IUG	**Iuzhnay**	**3.71**	**316**	*eP*	**Pg**	**16 28 54.0**	**-0.3**
	351nm,0.3s						
IUG				*eS*	**Sg**	**16 29 44.5**	**+2.1**
	109nm,0.6s						
TKM2	**Tokmak 2**	**3.72**	**24**	⇓Pn	Pg	16 29 01.2	+6.7
	7.9nm,0.6s						
TKM2				⇑Sn	**Sg**	**16 29 42.4**	**-0.3**
	10nm,0.5s						
KDJ	**Kajisay**	**3.79**	**46**	⇓*iP*	**Pb**	**16 28 47.6**	**-2.9**
	baz=46						
KDJ				⇓*iS*	**Sb**	**16 29 32.3**	**-4.4**
	baz=46						
KDJ	**Kajisay**	**3.79**	**46**	⇓*iP*	**Pb**	**16 28 47.6**	**-2.9**
	baz=46						
KDJ				⇓*iS*	**Sb**	**16 29 32.3**	**-4.4**
	baz=46						
KST	**Kastek**	**3.95**	**27**	*eP*	**Pg**	**16 28 59.6**	**+0.7**
	4.7nm,0.4s						
KST				*eS*	**Sg**	**16 29 53.5**	**+3.4**
	28nm,0.4s						
SGDS	**Sogindy**	**3.99**	**12**	*eP*	**Pg**	**16 28 59.4**	**-0.3**
	2.8nm,0.3s						
SGDS				*eS*	**Sg**	**16 29 52.9**	**+1.4**
	19nm,0.7s						
CHM	**Chimkent**	**4.06**	**314**	*eP*	**Pg**	**16 29 01.1**	**+0.1**
	10nm,0.8s						
CHM				*eS*	**Sg**	**16 29 55.8**	**+2.2**
	157nm,0.3s						
DGS	**Degeres**	**4.07**	**24**	*eP*	**Pg**	**16 29 02.1**	**+1.0**
	7.7nm,0.6s						
DGS				*eS*	**Sg**	**16 29 57.8**	**+4.1**
	45nm,0.8s						
MTBS	**Maitube**	**4.20**	**30**	*eP*	**Pg**	**16 29 03.4**	**-0.3**
	8.7nm,0.4s						
MTBS				*eS*	**Sg**	**16 29 60.0**	**+1.9**
	19nm,0.5s						
KK31	**Karatay Array**	**4.22**	**328**	Pn	**Pb**	**16 28 54.8**	**-2.8**
	0.9nm,0.3s,baz=130,slow=12,SNR=9.3						
KK31				Pg	**Pg**	**16 29 03.8**	**-0.2**
	3.6nm,0.4s,baz=144,slow=15,SNR=7.2						
KK31				⇓Sn	**Sb**	**16 29 45.5**	**-3.2**
	4.1nm,0.4s,baz=157,slow=17,SNR=4.1						
KK31				Lg	Lg	16 29 59.2	
	12nm,0.5s,baz=145,slow=28,SNR=4.6						
TNSS	**Tian-Shan**	**4.34**	**35**	*eP*	**Pg**	**16 29 06.0**	**-0.3**
	8.5nm,0.6s						
TNSS				*eS*	**Sg**	**16 30 04.6**	**+2.0**
	15nm,0.6s						
BRLS	**Boroldaу**	**4.46**	**323**	*eP*	**Pg**	**16 29 05.1**	**-3.4**
	3.2nm,0.3s						
BRLS				*eS*	**Sg**	**16 30 03.1**	**-3.1**
	16nm,0.4s						
AAA	**Alma-Ata**	**4.46**	**34**	*eP*	**Pg**	**16 29 09.3**	**+0.6**
	14nm,0.1s						
AAA				*eS*	**Sg**	**16 30 10.0**	**+3.4**
	68nm,0.8s						
KTBS	**Karatobe**	**4.79**	**29**	*eP*	**Pg**	**16 29 13.8**	**-1.2**
	1.9nm,0.4s						
KTBS				*eS*	**Sg**	**16 30 18.6**	**+1.6**
	28nm,0.6s						
KUU	**Kurty**	**4.83**	**25**	*eP*	**Pg**	**16 29 15.1**	**-0.6**
	3.0nm,0.5s						
KUU				*eS*	**Sg**	**16 30 19.9**	**+1.6**
	21nm,0.4s						
CHKK	**Chushkaly**	**5.03**	**30**	*eP*	**Pg**	**16 29 18.7**	**-0.8**
	2.2nm,0.6s						
CHKK				*eS*	**Sg**	**16 30 26.4**	**+1.8**
	12nm,0.6s						
SATY	**Saty**	**5.09**	**45**	*eP*	**Pg**	**16 29 19.4**	**-1.2**
	6.3nm,0.7s						
SATY				*eS*	**Sg**	**16 30 27.8**	**+1.3**
	14nm,0.5s						
KURS	**Kuram**	**5.26**	**40**	*eP*	**Pg**	**16 29 22.7**	**-1.3**
	2.0nm,0.6s						
KURS				*eS*	**Sg**	**16 30 33.6**	**+1.5**
	9.3nm,1.1s						
BTLS	**Baital**	**5.51**	**4**	*eP*	**Pg**	**16 29 27.1**	**-1.6**
	1.1nm,0.2s						
BTLS				*eS*	**Sg**	**16 30 40.4**	**+0.4**
	5.9nm,0.5s						
KPKS	**Kokpek**	**5.51**	**43**	*eP*	**Pg**	**16 29 29.0**	**+0.3**
	4.4nm,0.9s						
KPKS				*eS*	**Sg**	**16 30 43.4**	**+3.3**
	14nm,0.7s						
ARXS	**Arharly**	**5.67**	**33**	*eP*	**Pg**	**16 29 29.5**	**-2.2**
	3.3nm,0.6s						
ARXS				*eS*	**Sg**	**16 30 45.1**	**+0.1**
	22nm,0.5s						
SHLS	**Shalkode**	**5.75**	**49**	*eP*	**Pg**	**16 29 36.4**	**+3.2**
	4.5nm,0.2s						
SHLS				*eS*	Sg	16 30 56.8	+9.1
	7.7nm,0.7s						
BLB	**Baldybastay**	**5.87**	**38**	*eP*	**Pg**	**16 29 34.0**	**-1.5**
	4.9nm,0.5s						
BLB				*eS*	**Sg**	**16 30 51.6**	**+0.1**
	14nm,0.7s						
PDGK	**Podgornoye**	**5.87**	**48**	⇑Pn	**Pg**	**16 29 34.1**	**-1.5**
	5.4nm,0.7s						
PDGK				⇑Sn	**Sg**	**16 30 50.3**	**-1.2**
	12nm,0.8s						
AB31	**Akbulak array**	**13.71**	**320**	P	**Pn**	**16 31 00.3**	**+2.5**
	0.4nm,0.5s,baz=129,slow=14,SNR=5.6						
AKTO	**Aktyubinsk**	**15.42**	**320**	⇓P	**P**	**16 31 24.0**	**-1.6**
	1.4nm,0.9s						

*KRNET **26** 16:31:58.8±0.1, 39°.48N×73°.54E, mb3.5*
*SOME **26** 16:31:59.5, 39°.53N×73°.53E, h0km*
*NNC **26** 16:32:02.4±1.7, 39°.58N×73°.50E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=13.8km s-min=6.7km az=171.0*
ISC 26 16:31:58.5±1.3, 39°.56N±0°.06×73°.49E±0°.03, h10km, n36, σ1§74/55, 10C-7D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.11**	**331**	⇑*eP*	**Pn**	**16 32 21.5**	**+1.3**
	baz=31						
OHH				⇑*eS*	**Sn**	**16 32 38.4**	**+2.8**
	baz=31						
BTK	**Batken**	**2.12**	**285**	⇓*eP*	**Pg**	**16 32 38.5**	**-0.7**
	baz=86						
BTK				⇓*eS*	**Sg**	**16 33 07.4**	**+0.7**
	baz=86						
ARLS	**Aral**	**2.39**	**15**	⇓*eP*	**Pg**	**16 32 42.1**	**-2.2**
	baz=14						
ARLS				⇓*eS*	**Sg**	**16 33 13.8**	**-1.4**
	baz=14						
GAR	**Garm**	**2.53**	**258**	⇑*eP*	**Pb**	**16 32 43.6**	**-0.4**
	baz=60						
GAR				⇑*eS*	**Sb**	**16 33 16.3**	**+1.1**
	baz=60						
TRKS	**Terek-Say**	**2.67**	**318**	⇓*eP*	**Pb**	**16 32 45.4**	**-1.0**
	baz=18						
TRKS				⇓*eS*	**Sb**	**16 33 19.4**	**+0.1**
	baz=18						
UCH	**Uchtor**	**2.78**	**16**	⇑*eP*	**Pb**	**16 32 47.9**	**-0.6**
	baz=15						
UCH				⇑*eS*	**Sb**	**16 33 23.4**	**+0.6**
	baz=15						
IUG	**Iuzhnay**	**3.69**	**316**	*eP*	**Pg**	**16 33 08.8**	**-0.3**
	96nm,0.3s						
IUG				*eS*	**Sg**	**16 33 59.0**	**+2.1**
	25nm,0.6s						
IUG	**Iuzhnay**	**3.69**	**316**	Pg	**Pg**	**16 33 08.8**	**-0.3**
	96nm,0.3s						
IUG				Lg	Lg	16 33 59.5	
	25nm,0.6s						
TKM2	**Tokmak 2**	**3.72**	**25**	⇑Pg	Pg	16 33 14.4	+4.7
	2.3nm,0.3s						
TKM2				⇑Lg	Lg	16 34 00.1	
	6.6nm,0.6s						
KST	**Kastek**	**3.95**	**27**	*eP*	**Pg**	**16 33 13.3**	**-0.9**
	4.8nm,0.4s						
KST				*eS*	**Sg**	**16 34 06.6**	**+1.3**
	11nm,0.7s						
KST	**Kastek**	**3.95**	**27**	Pg	**Pg**	**16 33 13.3**	**-0.9**
	4.8nm,0.4s						
KST				Lg	Lg	16 34 06.6	
	11nm,0.7s						
SGDS	**Sogindy**	**3.99**	**12**	*eP*	**Pg**	**16 33 14.0**	**-0.9**
	2.7nm,0.5s						
SGDS				*eS*	**Sg**	**16 34 08.0**	**+1.5**
	2.7nm,0.4s						
SGDS	**Sogindy**	**3.99**	**12**	Pg	**Pg**	**16 33 14.0**	**-0.9**
	2.7nm,0.5s						
SGDS				Lg	Lg	16 34 08.7	
	2.7nm,0.4s						
DGS	**Degeres**	**4.06**	**24**	*eP*	**Pg**	**16 33 16.2**	**-0.1**
	2.1nm,0.3s						
DGS				*eS*	**Sg**	**16 34 11.8**	**+2.9**
	42nm,0.2s						
DGS	**Degeres**	**4.06**	**24**	Pg	**Pg**	**16 33 16.2**	**-0.1**
	2.1nm,0.3s						
DGS				Lg	Lg	16 34 11.8	
	42nm,0.2s						
KK31	**Karatay Array**	**4.20**	**329**	Pn	**Pb**	**16 33 09.4**	**-2.9**
	0.5nm,0.2s,baz=130,slow=12,SNR=14						
KK31				Pg	**Pg**	**16 33 19.1**	**+0.3**
	0.5nm,0.2s,baz=152,slow=16,SNR=4.5						
KK31				⇓Lg	Lg	16 34 15.1	
	6.8nm,0.6s,baz=151,slow=26,SNR=3.7						
MTBS	**Maitube**	**4.20**	**31**	*eP*	**Pg**	**16 33 18.8**	**-0.1**
	3.6nm,0.2s						
MTBS				*eS*	**Sg**	**16 34 15.8**	**+2.5**
	6.8nm,0.3s						
MTBS	**Maitube**	**4.20**	**31**	Pg	**Pg**	**16 33 18.8**	**-0.1**
MTBS				Lg	Lg	16 34 15.8	
TNSS	**Tian-Shan**	**4.34**	**36**	*eP*	**Pg**	**16 33 20.9**	**-0.8**
	3.0nm,0.3s						
TNSS				*eS*	**Sg**	**16 34 19.7**	**+1.7**
	3.2nm,0.8s						
TNSS	**Tian-Shan**	**4.34**	**36**	Pg	**Pg**	**16 33 20.9**	**-0.8**
TNSS				Lg	Lg	16 34 20.2	
BRLS	**Boroldaу**	**4.43**	**323**	*eP*	**Pg**	**16 33 19.5**	**-3.9**
	1.6nm,0.1s						
BRLS				*eS*	**Sg**	**16 34 17.4**	**-3.3**
	3.4nm,0.3s						
BRLS	**Boroldaу**	**4.43**	**323**	Pg	**Pg**	**16 33 19.5**	**-3.9**
BRLS				Lg	Lg	16 34 17.4	
KTBS	**Karatobe**	**4.79**	**29**	*eP*	**Pg**	**16 33 29.0**	**-1.2**
	2.5nm,0.5s						
KTBS				*eS*	**Sg**	**16 34 33.4**	**+1.1**
	18nm,0.6s						
KTBS	**Karatobe**	**4.79**	**29**	Pg	**Pg**	**16 33 29.0**	**-1.2**
	2.5nm,0.5s						
KTBS				Lg	Lg	16 34 34.1	
	18nm,0.6s						
KUU	**Kurty**	**4.83**	**25**	*eP*	**Pg**	**16 33 29.5**	**-1.5**
	3.0nm,0.5s						
KUU				*eS*	**Sg**	**16 34 34.1**	**+0.7**
	7.4nm,0.5s						
KUU	**Kurty**	**4.83**	**25**	Pg	**Pg**	**16 33 29.5**	**-1.5**
	3.0nm,0.5s						
KUU				Lg	Lg	16 34 34.1	
	7.4nm,0.5s						
CHKK	**Chushkaly**	**5.03**	**30**	*eP*	**Pg**	**16 33 32.7**	**-2.1**
	0.6nm,0.1s						
CHKK				*eS*	**Sg**	**16 34 40.0**	**+0.1**
	5.7nm,0.5s						
CHKK	**Chushkaly**	**5.03**	**30**	Pg	**Pg**	**16 33 32.7**	**-2.1**
CHKK				Lg	Lg	16 34 40.0	
SATY	**Saty**	**5.09**	**45**	*eP*	**Pg**	**16 33 34.3**	**-1.7**
	1.1nm,0.1s						
SATY				*eS*	**Sg**	**16 34 42.3**	**+0.3**
	3.8nm,0.1s						
SATY	**Saty**	**5.09**	**45**	Pg	**Pg**	**16 33 34.3**	**-1.7**
SATY				Lg	Lg	16 34 42.2	
BTLS	**Baital**	**5.50**	**4**	*eP*	**Pg**	**16 33 42.5**	**-1.2**
	1.2nm,0.5s						
BTLS				*eS*	**Sg**	**16 34 56.8**	**+1.9**
	3.6nm,0.6s						
BTLS	**Baital**	**5.50**	**4**	Pg	**Pg**	**16 33 42.5**	**-1.2**
	1.2nm,0.5s						
BTLS				Lg	Lg	16 34 56.8	
	3.6nm,0.6s						
KPKS	**Kokpek**	**5.52**	**43**	*eP*	**Pg**	**16 33 42.5**	**-1.6**
	3.7nm,0.5s						
KPKS				*eS*	**Sg**	**16 34 57.0**	**+1.4**
	8.5nm,0.6s						
KPKS	**Kokpek**	**5.52**	**43**	Pg	**Pg**	**16 33 42.5**	**-1.6**
	3.7nm,0.5s						
KPKS				Lg	Lg	16 34 57.0	
	8.5nm,0.6s						
PDGK	**Podgornoye**	**5.88**	**48**	Pg	**Pg**	**16 33 48.2**	**-2.8**
PDGK				Lg	Lg	16 35 06.2	
PDGK	**Podgornoye**	**5.88**	**48**	⇑Pg	**Pg**	**16 33 47.7**	**-3.3**
	2.0nm,0.7s						
PDGK				⇑Lg	Lg	16 35 06.8	
	5.9nm,0.9s						

*KRNET **26** 16:38:00.3±0.1, 39°.37N×73°.35E, mb3.5*
*SOME **26** 16:38:03.2, 39°.75N×73°.40E, h0km*
*NNC **26** 16:38:05.1±1.6, 39°.70N×73°.40E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=12.4km s-min=5.6km az=173.0*
ISC 26 16:37:56.8±1.6, 39°.38N±0°.06×73°.56E±0°.04, h10km±11km, n39, σ1§63/64, 17C-13D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.29**	**333**	⇑*eP*	**Pn**	**16 38 20.8**	**-0.2**
	baz=35						
OHH				⇑*eS*	**Sn**	**16 38 39.2**	**+0.9**
	baz=35						
OHH	**Osh**	**1.29**	**333**	⇓*eP*	**Pg**	**16 38 22.8**	**+1.2**
	baz=40						
OHH				⇓*eS*	**Sn**	**16 38 39.2**	**+0.9**
	baz=40						
DRK	**Karamyk**	**1.37**	**275**	⇓*eP*	**Pn**	**16 38 20.5**	**-1.7**
	baz=79						
DRK				⇓*iS*	**Sb**	**16 38 38.9**	**-1.4**
	baz=79						
BTK	**Batken**	**2.22**	**289**	⇑*eP*	**Pn**	**16 38 34.7**	**+0.9**
	baz=91						
BTK				⇑*eS*	**Sb**	**16 39 03.2**	**-1.5**
	baz=91						
BTK	**Batken**	**2.22**	**289**	⇓*iP*	**Pn**	**16 38 34.9**	**+1.1**
	baz=90						
BTK				⇓*eS*	**Sn**	**16 39 00.4**	**-0.9**
	baz=90						
ARLS	**Aral**	**2.54**	**13**	⇑*eP*	**Pn**	**16 38 40.0**	**+1.7**
	baz=13						
ARLS				⇑*eS*	**Sb**	**16 39 12.6**	**-1.5**
	baz=13						
ARLS	**Aral**	**2.54**	**13**	⇓*eP*	**Pb**	**16 38 42.3**	**-0.4**
	baz=16						
ARLS				⇓*eS*	**Sb**	**16 39 12.8**	**-1.3**
	baz=16						
GAR	**Garm**	**2.55**	**262**	⇑*eP*	**Pn**	**16 38 38.6**	**+0.3**
	baz=64						
GAR				⇑*eS*	**Sn**	**16 39 09.9**	**+0.4**
	baz=64						
GAR	**Garm**	**2.55**	**262**	⇓*eP*	**Pn**	**16 38 39.4**	**+1.1**
	baz=62						
GAR				⇓*eS*	**Sn**	**16 39 07.8**	**-1.7**
	baz=62						
TRKS	**Terek-Say**	**2.83**	**320**	⇑*eP*	**Pn**	**16 38 42.8**	**+0.5**
	baz=21						
TRKS				⇑*eS*	**Sn**	**16 39 17.3**	**+0.8**
	baz=21						
TRKS	**Terek-Say**	**2.83**	**320**	⇑*eP*	**Pn**	**16 38 43.3**	**+1.0**
	baz=22						
TRKS				⇑*eS*	**Sn**	**16 39 14.9**	**-1.6**
	baz=22						
UCH	**Uchtor**	**2.94**	**14**	⇓*eP*	**Pn**	**16 38 46.0**	**+2.0**
	baz=14						
UCH				⇓*eS*	**Sb**	**16 39 22.7**	**-2.9**
	baz=14						
UCH	**Uchtor**	**2.94**	**14**	⇑*eP*	**Pb**	**16 38 47.8**	**-1.7**
	baz=17						
UCH				⇑*eS*	**Sb**	**16 39 22.9**	**-2.7**
	baz=17						
IUG	**Iuzhnay**	**3.85**	**317**	*eP*	**Pg**	**16 39 10.1**	**-0.5**
	138nm,0.6s						
IUG				*eS*	**Sg**	**16 39 57.6**	**-2.8**
	30nm,0.6s						
IUG	**Iuzhnay**	**3.85**	**317**	Pg	**Pg**	**16 39 10.1**	**-0.5**
	138nm,0.6s						
IUG				Lg	Lg	16 39 57.6	
	30nm,0.6s						
TKM2	**Tokmak 2**	**3.86**	**23**	⇑Pg	**Pg**	**16 39 09.7**	**-1.0**
	2.4nm,0.5s						
TKM2				⇑Lg	Lg	16 40 01.8	
	5.9nm,0.6s						
KST	**Kastek**	**4.08**	**26**	*eP*	**Pg**	**16 39 16.2**	**+1.2**
	2.1nm,0.7s						
KST				*eS*	**Sg**	**16 40 08.0**	**+0.1**
	16nm,0.4s						
KST	**Kastek**	**4.08**	**26**	Pg	**Pg**	**16 39 16.2**	**+1.2**
	2.1nm,0.7s						
KST				Lg	Lg	16 40 08.8	
	16nm,0.4s						
SGDS	**Sogindy**	**4.15**	**11**	*eP*	**Pg**	**16 39 15.1**	**-1.1**
	1.7nm,0.4s						
SGDS				*eS*	**Sg**	**16 40 06.1**	**-3.8**
	6.4nm,0.5s						
SGDS	**Sogindy**	**4.15**	**11**	Pg	**Pg**	**16 39 15.1**	**-1.1**
	1.7nm,0.4s						
SGDS				Lg	Lg	16 40 06.1	
	6.4nm,0.5s						
DGS	**Degeres**	**4.20**	**23**	*eP*	**Pg**	**16 39 18.9**	**+1.6**
	2.9nm,0.5s						
DGS				*eS*	**Sg**	**16 40 12.9**	**+1.2**
	15nm,0.7s						
DGS	**Degeres**	**4.20**	**23**	Pg	**Pg**	**16 39 18.9**	**+1.6**
DGS				Lg	Lg	16 40 12.9	
MTBS	**Maitube**	**4.33**	**29**	*eP*	**Pg**	**16 39 21.2**	**+1.6**
	1.6nm,0.2s						
MTBS				*eS*	**Sg**	**16 40 16.3**	**+0.6**
	12nm,0.3s						
KK31	**Karatay Array**	**4.37**	**329**	⇑Pg	**Pb**	**16 39 16.7**	**+3.0**
	1.4nm,0.4s,baz=145,slow=12,SNR=6.0						
KK31				⇓Lg	Lg	16 40 14.4	
	3.1nm,0.4s,baz=138,slow=29,SNR=3.5						
TNSS	**Tian-Shan**	**4.46**	**34**	*eP*	**Pg**	**16 39 24.3**

	1.9nm,0.3s							
KUU					Lg	Lg	16 40 34.8	
	11nm,0.8s							
CHKK	**Chushkaly**	**5.16**	**29**	*eP*	**Pg**		**16 39 34.9**	**-0.6**
	0.3nm,0.1s							
CHKK				*eS*	**Sg**		**16 40 40.5**	**-1.8**
	4.1nm,0.6s							
CHKK	**Chushkaly**	**5.16**	**29**	Pg	**Pg**		**16 39 34.9**	**-0.6**
	0.3nm,0.1s							
CHKK				Lg	Lg		16 40 40.5	
	4.1nm,0.6s							
SATY	**Saty**	**5.18**	**43**	*eP*	**Pg**		**16 39 36.6**	**+0.6**
	0.9nm,0.1s							
SATY				*eS*	**Sg**		**16 40 43.0**	**-0.1**
	3.1nm,0.1s							
SATY	**Saty**	**5.18**	**43**	Pg	**Pg**		**16 39 36.6**	**+0.6**
SATY				Lg	Lg		16 40 43.0	
KPKS	**Kokpek**	**5.61**	**42**	*eP*	**Pg**		**16 39 42.7**	**-1.6**
	2.0nm,0.6s							
KPKS				*eS*	**Sg**		**16 40 53.9**	**-3.0**
	4.8nm,0.8s							
KPKS	**Kokpek**	**5.61**	**42**	Pg	**Pg**		**16 39 42.7**	**-1.6**
	2.0nm,0.6s							
KPKS				Lg	Lg		16 40 54.9	
	4.8nm,0.8s							
PDGK	**Podgornoye**	**5.96**	**47**	Pg	**Pg**		**16 39 52.0**	**+1.2**
	0.8nm,0.8s							
PDGK				Lg	Lg		16 41 09.4	
	1.6nm,0.8s							

IDC 26 16:41:25.9±7.2, 36°62'S×95°90'W, h0km, mb3.8/4, mbtmp3.8/4, Error ellipse: s-maj=279.8km s-min=37.7km az=39.0, West Chile Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez** baz=251	**14.15**	**84**	T	T	16 59 35.8	
H03S1	**Juan Fernandez** baz=251	**14.17**	**84**	T	T	16 59 32.4	
H03S3	**Juan Fernandez** baz=251	**14.17**	**84**	T	T	16 59 30.1	
H03N2	**Juan Fernandez** baz=249,slow=72,SNR=38	**14.26**	**82**	T	T	16 59 39.1	
H03N3	**Juan Fernandez** baz=249,slow=72,SNR=30	**14.27**	**82**	T	T	16 59 41.2	
H03N1	**Juan Fernandez** baz=249,slow=72,SNR=29	**14.28**	**82**	T	T	16 59 38.0	
PLCA	**Paso Flores** 1.4nm,1.0s,baz=291,slow=8.6,SNR=2.1 1.4nm,1.0s	**20.19**	**109**	P	P	16 46 02.3	+0.1
TXAR	**Lajitas Array** 0.9nm,0.8s,baz=172,slow=6.9,SNR=11 0.9nm,0.6s	**66.01**	**353**	P	P	16 52 14.4	+0.2
NVAR	**Mina Array Bea** 1.0nm,0.6s,baz=171,slow=6.4,SNR=9.7 1.0nm,0.6s	**77.49**	**342**	P	P	16 53 23.8	+0.5
PDAR	**Pinedale Array** 1.0nm,0.6s,baz=154,slow=7.0,SNR=13 1.0nm,0.6s	**79.98**	**350**	P	P	16 53 36.4	-0.6
H01W1	**Cape Leeuwin H** baz=154,slow=75,SNR=6.0	**103.55**	**205**	T	T	18 51 14.7	
H01W2	**Cape Leeuwin H** baz=154,slow=75,SNR=6.6	**103.55**	**205**	T	T	18 51 18.9	
H01W3	**Cape Leeuwin H** baz=154,slow=75,SNR=6.5	**103.56**	**205**	T	T	18 51 18.7	

*KRNET **26** 16:46:19.9±0.1, 39°40N×73°50E, mb3.7*
*SOME **26** 16:46:22.8, 39°58N×73°45E, h0km*
*NNC **26** 16:46:24.4±1.4, 39°55N×73°48E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=10.8km s-min=4.9km az=173.0*
ISC 26 16:46:18.6±1.6, 39°47N±0'06×73°42E±0'03, h1km±13km, n40,σ1°48/61, 11C-5D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh** baz=34	**1.16**	**335**	⇑*iP*	**Pn**	**16 46 43.3**	**+1.2**
OHH				⇑*eS*	**Sn**	**16 47 00.5**	**+1.9**
BTK	**Batken** baz=88	**2.09**	**287**	⇑*iP*	**Pg**	**16 46 58.8**	**+0.1**
BTK				⇑*iS*	**Sg**	**16 47 27.0**	**+1.1**
GAR	**Garm** baz=62	**2.46**	**260**	⇓*eP*	**Pb**	**16 47 03.4**	**-0.3**
GAR				⇓*iS*	**Sb**	**16 47 35.0**	**+0.5**
ARLS	**Aral** baz=14	**2.48**	**16**	⇑*eP*	**Pb**	**16 47 03.6**	**-0.5**
ARLS				⇑*eS*	**Sb**	**16 47 35.4**	**+0.1**
AML	**Almayashu** SNR=8.9	**2.67**	**4**	P	**Pg**	**16 47 09.3**	**-0.5**
TRKS	**Terek-Say** baz=20	**2.69**	**320**	⇑*eP*	**Pb**	**16 47 06.5**	**-1.3**
TRKS				⇑*eS*	**Sb**	**16 47 40.4**	**-1.0**
UCH	**Uchtor** SNR=12	**2.88**	**16**	P	**Pb**	**16 47 11.8**	**+0.8**
UCH	**Uchtor** baz=15	**2.88**	**16**	⇓*eP*	**Pb**	**16 47 09.3**	**-1.7**
UCH				⇓*eS*	**Sb**	**16 47 45.2**	**-1.6**
EKS2	**Erkin-Say** SNR=9.5	**3.20**	**5**	P	**Pb**	**16 47 16.6**	**+0.3**
AAK	**Ala-Archa** SNR=6.2	**3.27**	**14**	P	**Pb**	**16 47 17.5**	**0.0**
KBK	**Karagaybulak** SNR=7.3	**3.38**	**19**	P	**Pg**	**16 47 24.9**	**+1.4**
ULHL	**Ulahol** SNR=7.3	**3.50**	**37**	P	**Pg**	**16 47 25.7**	**0.0**
IUG	**Iuzhnay** 173nm,0.5s	**3.71**	**317**	*eP*	**Pg**	**16 47 30.6**	**+0.8**
IUG	32nm,0.6s			*eS*	**Sg**	**16 48 19.2**	**+1.3**
IUG	**Iuzhnay** 173nm,0.5s	**3.71**	**317**	Pg	**Pg**	**16 47 30.6**	**+0.8**
IUG	32nm,0.6s			Lg	Lg	16 48 20.2	
TKM2	**Tokmak 2** SNR=5.6	**3.82**	**25**	P	**Pg**	**16 47 33.8**	**+2.0**
KST	**Kastek** 2.7nm,0.5s	**4.05**	**27**	*eP*	**Pg**	**16 47 36.7**	**+0.5**
KST	19nm,0.5s			*eS*	**Sg**	**16 48 29.9**	**+1.2**
KST	**Kastek** 2.7nm,0.5s	**4.05**	**27**	Pg	**Pg**	**16 47 36.7**	**+0.5**
KST	19nm,0.5s			Lg	Lg	16 48 31.0	
SGDS	**Sogindy** 2.5nm,0.3s	**4.08**	**12**	*eP*	**Pg**	**16 47 35.9**	**-0.9**
SGDS	5.6nm,0.6s			*eS*	**Sg**	**16 48 28.5**	**-1.2**
SGDS	**Sogindy** 2.5nm,0.3s	**4.08**	**12**	Pg	**Pg**	**16 47 35.9**	**-0.9**
SGDS	5.6nm,0.6s			Lg	Lg	16 48 29.2	
DGS	**Degeres** 5.9nm,0.7s	**4.16**	**24**	*eP*	**Pg**	**16 47 40.0**	**+1.6**
DGS	16nm,1.0s			*eS*	**Sg**	**16 48 35.8**	**+3.4**
DGS	**Degeres** 5.9nm,0.7s	**4.16**	**24**	Pg	**Pg**	**16 47 40.0**	**+1.6**
DGS	16nm,1.0s			Lg	Lg	16 48 35.7	
KK31	**Karatay Array** 0.5nm,0.3s,baz=132,slow=12,SNR=17	**4.24**	**330**	⇓Pn	**Pb**	**16 47 30.5**	**-3.5**
KK31	2.2nm,0.5s,baz=142,slow=15,SNR=12			⇑Pg	**Pg**	**16 47 39.9**	**0.0**
KK31	3.8nm,0.5s,baz=152,slow=24,SNR=6.3			⇑Sn	**Sb**	**16 48 22.3**	**-3.3**
KK31	3.0nm,0.3s,baz=144,slow=26,SNR=3.7			⇑Lg	Lg	16 48 39.4	
MTBS	**Maitube** 1.7nm,0.1s	**4.30**	**31**	*eP*	**Pg**	**16 47 42.2**	**+1.2**
MTBS	8.6nm,0.3s			*eS*	**Sg**	**16 48 39.0**	**+2.3**
TNSS	**Tian-Shan** 2.3nm,0.5s	**4.44**	**36**	*eP*	**Pg**	**16 47 44.6**	**+0.8**
TNSS	4.3nm,0.6s			*eS*	**Sg**	**16 48 43.3**	**+1.9**
TNSS	**Tian-Shan** 2.3nm,0.5s	**4.44**	**36**	Pg	**Pg**	**16 47 44.6**	**+0.8**
TNSS	4.3nm,0.6s			Lg	Lg	16 48 43.3	
BRLS	**Borolday** 2.7nm,0.3s	**4.47**	**324**	*eP*	**Pg**	**16 47 43.1**	**-1.1**
BRLS	8.1nm,0.5s			*eS*	**Sg**	**16 48 40.9**	**-1.2**
BRLS	**Borolday** 2.7nm,0.3s	**4.47**	**324**	Pg	**Pg**	**16 47 43.1**	**-1.1**
BRLS	8.1nm,0.5s			Lg	Lg	16 48 40.9	
KTBS	**Karatobe** 1.4nm,0.5s	**4.89**	**29**	*eP*	**Pg**	**16 47 52.1**	**-0.2**
KTBS	12nm,0.7s			*eS*	**Sg**	**16 48 56.5**	**+0.8**
KTBS	**Karatobe** 1.4nm,0.5s	**4.89**	**29**	Pg	**Pg**	**16 47 52.1**	**-0.2**
KTBS	12nm,0.7s			Lg	Lg	16 48 56.5	
KUU	**Kurty**	**4.93**	**25**	*eP*	**Pg**	**16 47 53.1**	**0.0**
KUU				*eS*	**Sg**	**16 48 58.1**	**+1.2**
KUU	**Kurty**	**4.93**	**25**	Pg	**Pg**	**16 47 53.1**	**0.0**
KUU				Lg	Lg	16 48 58.1	
CHKK	**Chushkaly** 0.6nm,0.2s	**5.13**	**30**	*eP*	**Pg**	**16 47 56.6**	**-0.2**
CHKK	7.6nm,0.7s			*eS*	**Sg**	**16 49 04.5**	**+1.1**
CHKK	**Chushkaly** 0.6nm,0.2s	**5.13**	**30**	Pg	**Pg**	**16 47 56.7**	**-0.2**
CHKK	7.6nm,0.7s			Lg	Lg	16 49 04.5	
SATY	**Saty** 1.2nm,0.2s	**5.19**	**45**	*eP*	**Pg**	**16 47 57.6**	**-0.5**
SATY	7.0nm,0.4s			*eS*	**Sg**	**16 49 05.7**	**+0.4**
SATY	**Saty**	**5.19**	**45**	Pg	**Pg**	**16 47 57.6**	**-0.5**
SATY				Lg	Lg	16 49 05.7	
BTLS	**Baital** 0.7nm,0.3s	**5.59**	**5**	*eP*	**Pg**	**16 48 05.7**	**+0.1**
BTLS	1.3nm,0.5s			*eS*	**Sg**	**16 49 20.1**	**+2.1**
BTLS	**Baital** 0.7nm,0.3s	**5.59**	**5**	Pg	**Pg**	**16 48 05.7**	**+0.1**
BTLS	1.3nm,0.5s			Lg	Lg	16 49 20.7	
KPKS	**Kokpek** 1.4nm,0.6s	**5.62**	**43**	*eP*	**Pg**	**16 48 03.2**	**-3.0**
KPKS	9.0nm,0.7s			*eS*	**Sg**	**16 49 15.8**	**-3.2**
KPKS	**Kokpek** 1.4nm,0.6s	**5.62**	**43**	Pg	**Pg**	**16 48 03.2**	**-3.0**
KPKS	9.0nm,0.7s			Lg	Lg	16 49 16.6	
PDGK	**Podgornoye**	**5.97**	**48**	Pg	**Pg**	**16 48 11.4**	**-1.6**
PDGK				Lg	Lg	16 49 29.5	

*KRNET **26** 16:50:40.6±0.1, 39°47N×73°57E, mb3.5*
*SOME **26** 16:50:41.7, 39°60N×73°67E, h0km*
ISC 26 16:50:35.7±1.6, 39°33N±0'07×73°77E±0'04, h8km±12km, n25,σ1°41/45, 14C-4D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh** baz=31	**1.41**	**328**	⇓*eP*	**Pg**	**16 51 03.4**	**+0.6**
OHH				⇓*eS*	**Sn**	**16 51 20.0**	**-0.7**
DRK	**Karamyk** baz=71	**1.53**	**276**	⇑*iP*	**Pg**	**16 51 06.1**	**+1.0**
DRK				⇑*iS*	**Sg**	**16 51 25.1**	**+0.1**
BTK	**Batken** baz=86	**2.39**	**289**	⇑*iP*	**Pb**	**16 51 19.8**	**+0.8**
BTK				⇑*eS*	**Sb**	**16 51 48.5**	**-0.2**
ARLS	**Aral** baz=13	**2.56**	**9**	⇑*eP*	**Pb**	**16 51 23.3**	**+1.3**
ARLS				⇑*eS*	**Sb**	**16 51 54.6**	**+0.9**
GAR	**Garm** baz=61	**2.71**	**264**	⇑*eP*	**Pb**	**16 51 25.0**	**+0.6**
GAR				⇑*eS*	**Sb**	**16 51 57.1**	**-0.7**
AML	**Almayashu** SNR=9.4	**2.80**	**359**	P	**Pg**	**16 51 30.2**	**+0.9**
UCH	**Uchtor** SNR=17	**2.95**	**11**	P	**Pg**	**16 51 33.7**	**+1.5**
UCH	**Uchtor** baz=14	**2.95**	**11**	⇑*iP*	**Pb**	**16 51 29.1**	**+0.3**
UCH				⇑*iS*	**Sb**	**16 52 04.5**	**-0.6**
TRKS	**Terek-Say** baz=18	**2.98**	**318**	⇓*iP*	**Pb**	**16 51 27.0**	**-2.1**
TRKS				⇓*iS*	**Sn**	**16 52 00.8**	**+1.5**
EKS2	**Erkin-Say** SNR=12	**3.33**	**0**	P	**Pb**	**16 51 35.0**	**-0.1**
KBK	**Karagaybulak** SNR=6.0	**3.44**	**15**	P	**Pg**	**16 51 42.7**	**+1.2**
ULHL	**Ulahol** SNR=16	**3.46**	**32**	P	**Pg**	**16 51 43.6**	**+1.6**
BOOM	**Boomskoye usch** baz=30	**3.56**	**27**	⇑*iP*	**Pb**	**16 51 38.2**	**-0.8**
BOOM				⇑*iS*	**Sb**	**16 52 20.4**	**-2.0**
KDJ	**Kajisay** baz=45	**3.81**	**42**	⇑*eP*	**Pb**	**16 51 42.5**	**-0.8**
KDJ				⇑*eS*	**Sb**	**16 52 27.7**	**-2.0**
IUG	**Iuzhnay** 134nm,0.4s	**4.00**	**316**	*eP*	**Pg**	**16 51 51.3**	**-0.9**
IUG	30nm,0.3s			*eS*	**Sg**	**16 52 41.7**	**-2.3**
KST	**Kastek** 7.7nm,0.4s	**4.06**	**23**	*eP*	**Pg**	**16 51 53.8**	**+0.4**
KST	19nm,0.5s			*eS*	**Sg**	**16 52 46.2**	**+0.1**
SGDS	**Sogindy** 3.5nm,0.3s	**4.17**	**9**	*eP*	**Pg**	**16 51 56.0**	**+0.5**
SGDS	7.2nm,0.3s			*eS*	**Sg**	**16 52 49.3**	**-0.2**
DGS	**Degeres** 8.2nm,0.7s	**4.19**	**20**	*eP*	**Pg**	**16 51 56.5**	**+0.6**
DGS	58nm,0.4s			*eS*	**Sg**	**16 52 50.6**	**+0.4**
MTBS	**Maitube** 6.3nm,0.4s	**4.29**	**27**	*eP*	**Pg**	**16 51 59.1**	**+1.2**
MTBS	7.3nm,0.2s			*eS*	**Sg**	**16 52 54.8**	**+1.4**
TNSS	**Tian-Shan** 8.6nm,0.5s	**4.41**	**32**	*eP*	**Pg**	**16 52 01.0**	**+0.8**
TNSS	3.5nm,0.6s			*eS*	**Sg**	**16 52 58.3**	**+0.9**
BRLS	**Borolday**	**4.74**	**322**	*eP*	**Pg**	**16 52 03.2**	**-3.3**
BRLS				*eS*	**Sb**	**16 53 01.5**	**+5.2**
KUU	**Kurty** 2.4nm,0.5s	**4.95**	**22**	*eP*	**Pg**	**16 52 10.1**	**-0.3**
KUU	12nm,0.7s			*eS*	**Sg**	**16 53 13.4**	**-1.1**
CHKK	**Chushkaly** 2.5nm,0.3s	**5.12**	**27**	*eP*	**Pg**	**16 52 14.0**	**+0.3**
CHKK	5.2nm,0.3s			*eS*	**Sg**	**16 53 20.2**	**+0.1**
KPKS	**Kokpek** 3.9nm,0.4s	**5.54**	**40**	*eP*	**Pg**	**16 52 21.4**	**-0.4**
KPKS	5.6nm,0.7s			*eS*	**Sg**	**16 53 33.2**	**-0.4**
BLB	**Baldybastay** 11nm,0.4s	**5.92**	**35**	*eP*	**Pg**	**16 52 28.4**	**-0.7**
BLB	4.4nm,0.4s			*eS*	**Sg**	**16 53 45.1**	**-0.7**

*SOME **26** 16:58:34.5, 38°47N×73°47E, h10km*
*KRNET **26** 16:58:50.4±0.1, 39°44N×73°64E, mb3.5*
ISC 26 16:58:53.2±1.9, 39°52N±0'07×73°52E±0'05, h5km±12km, n13,σ2°03/23, 10C-10D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh** baz=29	**1.16**	**331**	⇓*eP*	**Pg**	**16 59 14.1**	**-1.3**
OHH				⇓*eS*	**Sn**	**16 59 31.7**	**-0.7**
DRK	**Karamyk** baz=73	**1.33**	**269**	⇓*eP*	**Pg**	**16 59 17.4**	**-1.4**
DRK				⇓*iS*	**Sg**	**16 59 36.5**	**+0.4**
BTK	**Batken** baz=87	**2.15**	**285**	⇑*eP*	**Pn**	**16 59 30.5**	**+0.6**
BTK				⇑*eS*	**Sb**	**16 59 59.7**	**-0.1**
ARLS	**Aral** baz=12	**2.42**	**14**	⇑*eP*	**Pn**	**16 59 33.4**	**-0.2**
ARLS				⇑*eS*	**Sn**	**17 00 04.9**	**+1.2**
GAR	**Garm** baz=62	**2.54**	**259**	⇓*eP*	**Pn**	**16 59 35.5**	**+0.3**
GAR				⇓*eS*	**Sn**	**17 00 08.4**	**+1.8**
TRKS	**Terek-Say** baz=18	**2.71**	**319**	⇑*eP*	**Pn**	**16 59 37.6**	**0.0**
TRKS				⇑*iS*	**Sn**	**17 00 11.9**	**+1.0**
UCH	**Uchtor** baz=13	**2.81**	**15**	⇓*eP*	**Pn**	**16 59 39.0**	**-0.2**
UCH				⇓*eS*	**Sn**	**17 00 14.7**	**+1.0**
BOOM	**Boomskoye usch** baz=29	**3.49**	**31**	⇑*iP*	**Pn**	**16 59 47.9**	**-0.4**
BOOM				⇑*iS*	**Sn**	**17 00 29.6**	**-0.5**
IUG	**Iuzhnay** 203nm,0.8s	**3.73**	**316**	*eP*	**Pb**	**16 59 58.0**	**-1.6**
IUG	45nm,0.8s			*eS*	**Sg**	**17 00 58.5**	**+5.4**
TKM2	**Tokmak 2** 5.2nm,0.6s	**3.74**	**24**	⇓Pg	**Pb**	**17 00 00.4**	**+0.5**
TKM2	13nm,0.7s			⇑Lg	Lg	17 00 58.5	
KST	**Kastek** 2.9nm,0.3s	**3.97**	**27**	*eP*	**Pb**	**17 00 05.4**	**+1.5**
KST	23nm,0.8s			*eS*	Sg	17 01 10.8	+10
KK31	**Karatay Array** 1.9nm,0.4s,baz=139,slow=15,SNR=2.7	**4.24**	**329**	Pn	**Pn**	**17 00 01.1**	**+2.5**
KK31	2.4nm,0.4s,baz=141,slow=27			⇓Sn	**Sb**	**17 00 54.8**	**-5.0**
KK31	7.6nm,0.5s,baz=134,slow=27,SNR=3.8			⇑Lg	Lg	17 01 12.5	
BRLS	**Borolday** 3.3nm,0.6s	**4.48**	**323**	*eP*	Pb	17 00 09.8	-2.5
BRLS	17nm,0.7s			*eS*	**Sg**	**17 01 18.1**	**+1.1**

IDC 26 16:58:53.9±3.8, 11°27S×162°98E, h0km, mb4.0/3, mbtmp4.0/3, Error ellipse: s-maj=97.2km s-min=70.3km az=147.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek** 2.2nm,1.0s,baz=59,slow=12,SNR=2.1 2.2nm,1.0s	**28.46**	**221**	P	P	17 04 50.2	-0.6
WRA	**Warramunga Arr** 1.7nm,0.9s,baz=79,slow=9.1,SNR=13 1.7nm,0.9s	**28.86**	**249**	P	P	17 04 54.9	+0.4
H11S2	**WAKE ISLAND Hy** baz=184,slow=76,SNR=4.7	**29.80**	**7**	T	T	17 35 47.6	
H11S3	**WAKE ISLAND Hy** baz=184,slow=76,SNR=4.0	**29.80**	**7**	T	T	17 35 46.8	
H11S1	**WAKE ISLAND Hy** baz=184,slow=76,SNR=4.1	**29.82**	**7**	T	T	17 35 53.2	
ASAR	**Alice Springs** 1.5nm,1.0s,baz=64,slow=10,SNR=19	**30.28**	**242**	P	P	17 05 07.0	-0.1
ASAR	0.3nm,0.9s,baz=74,slow=2.0,SNR=5.5 1.5nm,1.0s			PcP	PcP	17 08 07.6	-0.3
H11N1	**WAKE ISLAND Hy** baz=183,SNR=3.6	**31.03**	**7**	T	T	17 37 14.2	
H11N3	**WAKE ISLAND Hy** baz=183	**31.04**	**7**	T	T	17 37 15.4	
H11N2	**WAKE ISLAND Hy** baz=183	**31.05**	**7**	T	T	17 37 18.2	

*KRNET **26** 17:05:25.9±0.1, 39°27N×73°71E, mb3.7*
*SOME **26** 17:05:37.6, 39°58N×73°67E, h10km*
*NNC **26** 17:05:40.7±1.7, 39°73N×73°65E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=13.2km s-min=6.5km az=170.0*
ISC 26 17:05:30.3±1.8, 39°39N±0'07×73°62E±0'03, h14km±11km, n42,σ1°36/64, 14C-10D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh** baz=31	**1.30**	**331**	⇑*eP*	**Pn**	**17 05 52.8**	**-1.4**
OHH				⇑*eS*	**Sg**	**17 06 12.3**	**0.0**
DRK	**Karamyk** baz=79	**1.42**	**274**	⇓*iP*	**Pn**	**17 05 53.2**	**-2.7**
DRK				⇓*iS*	**Sb**	**17 06 13.6**	**-1.1**
BTK	**Batken** baz=90	**2.26**	**288**	⇑*iP*	**Pn**	**17 06 07.3**	**-0.1**
BTK				⇑*eS*	**Sb**	**17 06 37.2**	**-1.7**
ARLS	**Aral** baz=10.0	**2.52**	**12**	⇓*eP*	**Pn**	**17 06 10.8**	**-0.2**
ARLS				⇓*eS*	**Sn**	**17 06 43.5**	**+1.8**
GAR	**Garm** baz=65	**2.60**	**262**	⇓*eP*	**Pn**	**17 06 11.2**	**-0.8**
GAR				⇓*eS*	**Sn**	**17 06 44.4**	**+0.9**
TRKS	**Terek-Say** baz=19	**2.86**	**319**	⇑*eP*	**Pn**	**17 06 15.0**	**-0.6**
TRKS				⇑*eS*	**Sn**	**17 06 50.9**	**+1.0**
UCH	**Uchtor** baz=11	**2.91**	**13**	⇓*iP*	**Pn**	**17 06 16.5**	**-0.2**
UCH				⇓*eS*	**Sn**	**17 06 53.3**	**+1.6**
AAK	**Ala-Archa** baz=10.0	**3.31**	**11**	⇑*eP*	**Pn**	**17 06 21.8**	**0.0**
AAK				⇑*eS*	**Sn**	**17 07 02.6**	**+1.5**
BOOM	**Boomskoye usch** baz=27	**3.56**	**29**	⇑*iP*	**Pn**	**17 06 24.9**	**-0.4**
BOOM				⇑*iS*	**Sn**	**17 07 08.0**	**+0.8**
TKM2	**Tokmak 2** 7.6nm,0.6s	**3.83**	**22**	⇓Pg	**Pg**	**17 06 42.5**	**-1.1**
TKM2	17nm,0.7s			⇓Lg	Lg	17 07 34.5	
TAS	**Tashkent** baz=3.0	**3.83**	**302**	⇑*iP*	**Pn**	**17 06 29.2**	**+0.4**
TAS				⇑*iS*	**Sn**	**17 07 15.1**	**+1.4**
KDJ	**Kajisay** baz=42	**3.84**	**43**	⇑*iP*	**Pn**	**17 06 28.4**	**-0.8**
KDJ				⇑*iS*	**Sn**	**17 07 14.2**	**-0.1**
IUG	**Iuzhnay** 177nm,0.5s	**3.88**	**316**	*eP*	**Pg**	**17 06 46.8**	**+2.3**
IUG	48nm,0.8s			*eS*	**Sg**	**17 07 36.6**	**+1.9**
IUG	**Iuzhnay** 177nm,0.5s	**3.88**	**316**	Pg	**Pg**	**17 06 46.8**	**+2.3**
IUG	48nm,0.8s			Lg	Lg	17 07 37.5	
KST	**Kastek** 4.9nm,0.5s	**4.05**	**25**	*eP*	**Pg**	**17 06 49.8**	**+1.9**
KST	46nm,1.1s			*eS*	**Sg**	**17 07 41.5**	**+1.1**
KST	**Kastek** 4.9nm,0.5s	**4.05**	**25**	Pg	**Pg**	**17 06 49.8**	**+1.9**
KST	46nm,1.1s			Lg	Lg	17 07 42.4	
SGDS	**Sogindy** 4.1nm,0.8s	**4.13**	**10**	*eP*	**Pg**	**17 06 48.9**	**-0.4**
SGDS	14nm,1.0s			*eS*	**Sg**	**17 07 40.2**	**-2.5**
SGDS	**Sogindy** 4.1nm,0.8s	**4.13**	**10**	Pg	**Pg**	**17 06 48.9**	**-0.4**
SGDS	14nm,1.0s			Lg	Lg	17 07 41.6	
DGS	**Degeres** 8.0nm,0.5s	**4.17**	**22**	*eP*	**Pg**	**17 06 49.3**	**-0.9**
DGS	10nm,0.9s			*eS*	**Sg**	**17 07 41.0**	**-3.3**
DGS	**Degeres**	**4.17**	**22**	Pg	**Pg**	**17 06 49.3**	**-0.9**
DGS				Lg	Lg	17 07 42.0	
MTBS	**Maitube**	**4.29**	**29**	*eP*	**Pg**	**17 06 54.2**	**+1.7**

	8.8nm,0.3s								
MTBS					*e*S		**Sg**	**17 07 49.3**	**+1.2**
	9.2nm,0.2s								
MTBS	**Maitube**	**4.29**	**29**		Pg		**Pg**	**17 06 54.2**	**+1.7**
	8.8nm,0.3s								
MTBS					Lg		Lg	17 07 49.3	
	9.2nm,0.2s								
KK31	**Karatay Array**	**4.39**	**329**		Pg		**Pg**	**17 06 56.0**	**+1.8**
	2.9nm,0.5s,baz=141,slow=16,SNR=4.9								
KK31					Lg		Lg	17 07 50.3	
	9.6nm,0.5s,baz=141,slow=29,SNR=6.1								
BRLS	**Boroldav**	**4.62**	**323**		*e*P		**Pg**	**17 06 58.6**	**-0.2**
	2.1nm,0.2s								
BRLS					*e*S		**Sg**	**17 07 57.1**	**-1.6**
	21nm,0.5s								
BRLS	**Borolday**	**4.62**	**323**		Pg		**Pg**	**17 06 58.6**	**-0.2**
	2.1nm,0.2s								
BRLS					Lg		Lg	17 07 57.6	
	21nm,0.5s								
KTBS	**Karatobe**	**4.89**	**27**		*e*P		**Pg**	**17 07 04.2**	**+0.4**
	3.7nm,0.8s								
KTBS					*e*S		**Sg**	**17 08 06.9**	**-0.3**
	40nm,0.6s								
KTBS	**Karatobe**	**4.89**	**27**		Pg		**Pg**	**17 07 04.3**	**+0.4**
	3.7nm,0.8s								
KTBS					Lg		Lg	17 08 06.9	
	40nm,0.6s								
KUU	**Kurty**	**4.94**	**23**		*e*P		**Pg**	**17 07 04.1**	**-0.7**
	3.1nm,0.5s								
KUU					*e*S		**Sg**	**17 08 06.3**	**-2.4**
	19nm,0.6s								
KUU	**Kurty**	**4.94**	**23**		Pg		**Pg**	**17 07 04.1**	**-0.7**
	3.1nm,0.5s								
KUU					Lg		Lg	17 08 07.7	
	19nm,0.6s								
SATY	**Saty**	**5.14**	**43**		*e*P		**Pg**	**17 07 09.7**	**+1.0**
	4.6nm,0.3s								
SATY					*e*S		**Sg**	**17 08 16.0**	**+0.8**
	18nm,0.8s								
SATY	**Saty**	**5.14**	**43**		Pg		**Pg**	**17 07 09.7**	**+1.0**
	4.6nm,0.3s								
SATY					Lg		Lg	17 08 16.0	
	18nm,0.8s								
KURS	**Kuram**	**5.33**	**38**		*e*P		**Pg**	**17 07 14.1**	**+1.8**
	3.7nm,0.7s								
KURS					*e*S		**Sg**	**17 08 23.7**	**+2.4**
	9.6nm,1.9s								
KURS	**Kuram**	**5.33**	**38**		Pg		**Pg**	**17 07 14.1**	**+1.8**
	3.7nm,0.7s								
KURS					Lg		Lg	17 08 23.7	
	9.6nm,1.9s								
KPKS	**Kokpek**	**5.57**	**41**		*e*P		**Pg**	**17 07 17.4**	**+0.5**
	5.3nm,0.7s								
KPKS					*e*S		**Sg**	**17 08 29.5**	**+0.4**
	14nm,0.5s								
KPKS	**Kokpek**	**5.57**	**41**		Pg		**Pg**	**17 07 17.4**	**+0.5**
	5.3nm,0.7s								
KPKS					Lg		Lg	17 08 29.5	
	14nm,0.5s								
BTLS	**Baital**	**5.66**	**3**		*e*P		**Pg**	**17 07 18.7**	**+0.1**
	4.2nm,0.8s								
BTLS					*e*S		**Sg**	**17 08 31.6**	**-0.2**
	4.0nm,0.6s								
BTLS	**Baital**	**5.66**	**3**		Pg		**Pg**	**17 07 18.7**	**+0.1**
	4.2nm,0.8s								
BTLS					Lg		Lg	17 08 31.6	
	4.0nm,0.6s								
ARXS	**Arharly**	**5.75**	**32**		*e*P		**Pg**	**17 07 19.7**	**-0.6**
	7.2nm,0.8s								
ARXS					*e*S		**Sg**	**17 08 33.1**	**-1.7**
	12nm,0.6s								
ARXS	**Arharly**	**5.75**	**32**		Pg		**Pg**	**17 07 19.7**	**-0.6**
	7.2nm,0.8s								
ARXS					Lg		Lg	17 08 34.1	
	12nm,0.6s								
SHLS	**Shalkode**	**5.79**	**48**		*e*P		Pg	17 07 28.8	+7.7
SHLS					*e*S		Sg	17 08 48.8	+13
SHLS	**Shalkode**	**5.79**	**48**		Pg		Pg	17 07 28.8	+7.7
SHLS					Lg		Lg	17 08 48.8	
PDGK	**Podgornoye**	**5.91**	**46**		Pg		**Pg**	**17 07 23.3**	**-0.1**
PDGK					Lg		Lg	17 08 39.4	

IDC ***26*** *17:11:54.3±0.8, 17°.69S×64°.60W, h0km, mb4.0/11, mbtmp4.0/13, ML4.3/3, MS3.1/6, Error ellipse: s-maj=19.9km s-min=13.1km az=1.0*
VAO ***26*** *17:11:58.5±0.2, 17°.47S×64°.58W, h10km, mb4.3*
SCB ***26*** *17:11:58.6±4.7, 17°.67S×64°.48W, h80km±999km, ML4.0/5, MW4.0, Error ellipse: s-maj=426.6km s-min=426.1km az=0.0*
NEIC ***26*** *17:11:59.9±2.1, 17°.68S±0°.07×64°.59W±0°.06, h36km±10km, mb4.4/9, Error ellipse: s-maj=10.0km s-min=7.6km az=187.0*

ISC 26 17:11:59.6±0.4, 17°.63S±0°.05×64°.62W±0°.05, h35km, n93, σ1253/93, mb4.1/13, Central Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BBOE	**La Paz, Chanca**	**3.32**	**284**	P		**Pn**	**17 12 50.9**	**+1.3**
BBOE				IAML			17 13 56.0	
	283nm,0.6s							
LPAZ	**La Paz**	**3.62**	**291**	Pn		**Pn**	**17 12 54.3**	**+0.5**
	13nm,0.3s,baz=88,slow=6.9,SNR=232							
LPAZ				Pg			17 13 02.5	
	43nm,0.3s,baz=106,slow=14,SNR=37							
LPAZ				Lg		Lg	17 13 50.2	
	70nm,0.3s,baz=219,slow=23,SNR=7.8							
LPAZ				LR		LR	17 14 35.6	
	comp=Z,268nm,19.7s,baz=94,slow=44							
	27nm,0.3s							
LPAZ	**La Paz**	**3.62**	**291**	P		**Pn**	**17 12 54.3**	**+0.5**
LPAZ				IAML			17 13 55.0	
	100nm,0.4s							
LPAZ	**La Paz**	**3.62**	**291**	*e*P		**Pn**	**17 12 54.6**	**+0.9**
MOCB	**Mochara**	**3.73**	**195**	P		**Pn**	**17 12 56.6**	**+1.4**
MOCB				S		**Sn**	**17 13 34.6**	**-3.5**
MOCB				IAML			17 13 59.2	
	240nm,0.5s							
MOCB				IAML			17 14 08.7	
	266nm,0.8s							
SIV	**San Ignacio**	**3.77**	**65**	Pn		**Pn**	**17 12 55.8**	**+0.5**
	20nm,0.3s,baz=257,slow=10,SNR=1647							
SIV				Pg			17 13 05.6	
	14nm,0.3s,baz=261,slow=13,SNR=18							
SIV				LR		LR	17 13 45.3	
	comp=Z,66nm,21.2s,baz=288,slow=29							
SIV				Lg		Lg	17 13 54.3	
	8.5nm,0.3s,baz=315,slow=21,SNR=6.9							
SIV	**San Ignacio**	**3.77**	**65**	P		**Pn**	**17 12 55.7**	**+0.4**
SIV				S		**Sn**	**17 13 32.8**	**-5.6**
SIV				IAML			17 14 01.7	
	315nm,0.4s							
YJA	**Yavi**	**4.60**	**190**	P		**Pn**	**17 13 08.4**	**+1.3**
PB16	**IPOC Station P**	**4.71**	**261**	Pn		**Pn**	**17 13 10.5**	**+1.8**
GO01	**Chusmiza**	**4.79**	**244**			**Pn**	**17 13 10.5**	**+0.7**
PB08	**IPOC Station P**	**4.97**	**239**	Pn		**Pn**	**17 13 12.7**	**+0.5**
PB08	**IPOC Station P**	**4.97**	**239**	P		**Pn**	**17 13 13.2**	**+1.1**
PB11	**IPOC Station P**	**5.23**	**245**			**Pn**	**17 13 15.8**	**+0.3**
PB11	**IPOC Station P**	**5.23**	**245**	P		**Pn**	**17 13 16.4**	**+0.9**
PB12	**IPOC Station P**	**5.52**	**259**	Pn		**Pn**	**17 13 20.3**	**+0.9**
PTLB	**Pontes e Lacer**	**5.69**	**68**	P		**Pn**	**17 13 21.5**	**-0.1**
PTLB	**Pontes e Lacer**	**5.69**	**68**	*e*P		**Pn**	**17 13 21.7**	**+0.1**
PB02	**IPOC Station P**	**6.19**	**233**			**Pn**	**17 13 28.9**	**+0.2**
PB02	**IPOC Station P**	**6.19**	**233**	P		**Pn**	**17 13 29.2**	**+0.6**
VILB	**Vilhena**	**6.31**	**43**	*e*P		**Pn**	**17 13 31.3**	**+1.1**
LVC	**Limon Verde**	**6.39**	**218**	Pn		**Pn**	**17 13 32.0**	**+0.4**
	6.6nm,0.3s,baz=22,slow=7.3,SNR=25							
LVC				LR		LR	17 15 51.8	
	comp=Z,55nm,20.4s,baz=24,slow=37							
LVC	**Limon Verde**	**6.39**	**218**	Pn		**Pn**	**17 13 31.8**	**+0.1**
LVC	**Limon Verde**	**6.39**	**218**	*e*P		**Pn**	**17 13 33.7**	**+2.0**
PB06	**IPOC Station P**	**6.87**	**222**			**Pn**	**17 13 36.7**	**-1.3**
PB06	**IPOC Station P**	**6.87**	**222**	P		**Pn**	**17 13 39.1**	**+1.1**
PB15	**IPOC Station P**	**7.18**	**219**			**Pn**	**17 13 43.2**	**+0.9**
PTET	**Porto Estrela**	**7.49**	**74**	*e*P		**Pn**	**17 13 46.6**	**+0.1**
POCN	**Pocone**	**7.60**	**84**	*e*P		**Pn**	**17 13 46.9**	**-1.1**
ETMB	**Extrema**	**7.92**	**349**	P		**Pn**	**17 13 51.8**	**-0.6**
ETMB	**Extrema**	**7.92**	**349**	*e*P		**Pn**	**17 13 51.8**	**-0.6**
SALV	**Santo Antonio**	**8.72**	**80**	*e*P		**Pn**	**17 14 03.1**	**-0.2**
SAML	**Samuel**	**8.74**	**9**	Pn		**Pn**	**17 14 03.1**	**-0.5**
GO02	**Mina Guanaco**	**8.81**	**211**	Pn		**Pn**	**17 14 03.1**	**-1.7**
AQDB	**Aquidauana**	**8.89**	**110**	*e*P		**Pn**	**17 14 06.4**	**+0.7**
NBRS	**Nobres**	**9.11**	**70**	*e*P		**Pn**	**17 14 09.7**	**+0.9**
PP1B	**Ponte de Pedra**	**9.29**	**91**	*e*P		**Pn**	**17 14 11.6**	**+0.5**
PDRB	**Porto dos Gac**	**9.70**	**53**	*e*P		**Pn**	**17 14 16.0**	**-0.8**
AC02	**Maricunga**	**10.07**	**204**	Pn		**Pn**	**17 14 20.6**	**-1.7**
AC01	**Pan de Azucar**	**10.13**	**212**	Pn		**Pn**	**17 14 18.6**	**-4.1**
AMBA	**Amambai (Brazi**	**10.46**	**122**	*e*P		**Pn**	**17 14 29.4**	**+2.2**
CLDB	**Colider**	**10.87**	**53**	*e*P		**Pn**	**17 14 32.5**	**-0.3**
CPUP	**Villa Florida**	**10.98**	**143**	Pn		**Pn**	**17 14 34.5**	**+0.2**
	0.2nm,0.3s,baz=302,slow=12,SNR=1.8							
CPUP				Lg		Lg	17 17 42.7	
	0.5nm,0.3s,baz=244,slow=9.2,SNR=3.3							
CPUP				LR		LR	17 18 18.2	
	comp=Z,84nm,21.9s,baz=331,slow=35							
CPUP	**Villa Florida**	**10.98**	**143**			**Pn**	**17 14 33.3**	**-1.0**
CPUP	**Villa Florida**	**10.98**	**143**	*e*P		**Pn**	**17 14 37.4**	**+3.1**
CZSB	**Cruzeiro do Su**	**12.61**	**320**	*e*P		**Pn**	**17 14 57.2**	**+0.6**
PCMB	**Pacaembu**	**13.19**	**110**	*e*P		**Pn**	**17 15 06.3**	**+1.8**
PTGB	**Pitanga**	**13.66**	**123**	*e*P		**Pn**	**17 15 13.3**	**+2.3**
ITRB	**Iturama**	**13.67**	**101**	*e*P		**Pn**	**17 15 11.9**	**+0.8**
ITQB	**Itaqui**	**14.04**	**150**	*e*P		**Pn**	**17 15 19.2**	**+3.2**
CO03	**El Pedregal**	**14.27**	**202**	Pn		**Pn**	**17 15 15.5**	**-3.7**
CO02	**Combarbal**	**14.71**	**202**	Pn		**Pn**	**17 15 22.0**	**-3.2**
MACA	**Manacapuru-AM**	**14.89**	**15**	*e*P		**Pn**	**17 15 26.4**	**-1.3**
ITAB	**Concordia**	**14.98**	**132**	*e*P		**P**	**17 15 32.0**	**-1.8**
BB19B	**Bebedouro**	**15.56**	**105**	*e*P		**Pn**	**17 15 37.0**	**+0.5**
BDFB	**Brasilia**	**16.03**	**85**	Pn		**Pn**	**17 15 40.3**	**-2.4**
	0.4nm,0.3s,baz=257,slow=13,SNR=2.1							
BDFB				Lg		Lg	17 20 21.9	
	0.3nm,0.3s,baz=131,slow=15,SNR=3.1							
	1.0nm,0.3s							
BDFB	**Brasilia**	**16.03**	**85**	*e*P		**P**	**17 15 44.8**	**-1.0**
CPSB	**Cacapava Do Su**	**16.30**	**143**	*e*P		**P**	**17 15 50.5**	**+2.0**
VAO	**Valinhos**	**17.39**	**111**	*e*P		**P**	**17 16 01.2**	**+0.4**
PARB	**Paraibuna**	**18.67**	**111**	*e*P		**Pn**	**17 16 15.9**	**+0.5**
MALB	**Monte Alegre**	**18.69**	**34**	*e*P		**P**	**17 16 14.3**	**-0.7**
SMTB	**Santa Maria do**	**18.71**	**64**	*e*P		**Pn**	**17 16 15.9**	**0.0**
JANB	**Januaria**	**19.65**	**85**	*e*P		**Pn**	**17 16 28.6**	**+1.4**
SDBA	**SAO DESIDERIO**	**19.73**	**77**	*e*P		**Pn**	**17 16 28.0**	**-0.2**
BOSC	**San Juan Bosco**	**19.81**	**315**	P		**P**	**17 16 27.7**	**+0.2**
BOAV	**Boa Vista**	**20.30**	**12**	*e*P		**P**	**17 16 32.8**	**+0.1**
VAS01	**Vassouras-RJ**	**20.43**	**107**	*e*P		Pn	17 16 36.1	-0.2
COHC	**Cochancay**	**20.82**	**315**	P		**P**	**17 16 39.0**	**+0.8**
MCPB	**Macapa, AP**	**21.15**	**37**	*e*P		**P**	**17 16 43.4**	**+1.6**
OTAV	**Otavalo**	**22.38**	**321**	*e*P		**P**	**17 16 55.0**	**-0.5**
ALF01	**Guarapari-ES**	**22.76**	**101**	*e*P		**P**	**17 17 02.8**	**+3.7**
NAN01	**Guarapari, ES**	**23.33**	**94**	*e*P		**P**	**17 17 06.8**	**+1.9**
PLCA	**Paso Flores**	**23.59**	**191**	P		**P**	**17 17 04.9**	**-2.4**
	2.3nm,0.6s,baz=18,slow=10,SNR=13							
	2.3nm,0.6s							
PLCA	**Paso Flores**	**23.59**	**191**	P		**P**	**17 17 05.8**	**-1.5**
PLCA				IAmb		IAmb	17 17 18.1	
	comp=Z,13nm,1.4s							
MDP	**Montagnes des**	**25.49**	**29**	P		**P**	**17 17 25.6**	**+0.7**
	comp=Z,2.0nm,0.6s,baz=163,slow=8.5,SNR=1.3							
MDP				LR		LR	17 27 33.2	
	comp=Z,88nm,18.8s,baz=186,slow=37							
	comp=Z,2.0nm,0.6s							
BAUV	**El Baul**	**26.62**	**352**	P		**P**	**17 17 34.8**	**-0.2**
NBMO	**Morrinhos-CE**	**27.98**	**62**	*e*P		**P**	**17 17 48.9**	**+1.5**
SJCC	**San Jacinto, C**	**29.27**	**338**	P		**P**	**17 17 58.3**	**-0.5**
SJCC				IAmb		IAmb	17 18 23.4	
	comp=Z,12nm,1.0s							
SJG	**San Juan**	**35.55**	**357**	P		**P**	**17 18 52.9**	**-0.6**
	comp=Z,4.0nm,0.3s,baz=221,slow=11,SNR=3.7							
	comp=Z,4.0nm,0.3s							
TKL	**Tuckaleechee C**	**56.02**	**341**	P		**P**	**17 21 34.5**	**-0.4**
	comp=Z,2.7nm,0.8s,baz=123,slow=8.2,SNR=2.4							
	comp=Z,2.7nm,0.8s							
TXAR	**Lajitas Array**	**60.00**	**321**	P		**P**	**17 22 03.4**	**+0.3**
	comp=Z,0.3nm,0.9s,baz=145,slow=8.9,SNR=2.4							
	comp=Z,0.3nm,0.9s							
DBIC	**Dinokro**	**63.75**	**73**	P		**P**	**17 22 28.8**	**+0.3**
	comp=Z,1.7nm,0.5s,baz=265,slow=6.1,SNR=1.9							
	comp=Z,1.7nm,0.5s							
TOA0	**Torodi Ar. Sit**	**72.23**	**70**	P		**P**	**17 23 20.8**	**-1.0**
TOA0				IAmb		IAmb	17 23 22.2	
	comp=Z,5.1nm,1.1s							
TORD	**Torodi Ar. Bea**	**72.23**	**70**	P		**P**	**17 23 21.5**	**-0.2**
	comp=Z,1.6nm,0.5s,baz=256,slow=5.9,SNR=24							
	comp=Z,1.6nm,0.5s							
TORD	**Torodi Ar. Bea**	**72.23**	**70**	P		**P**	**17 23 21.2**	**-0.5**
TORD				IAmb		IAmb	17 23 22.3	
	comp=Z,3.8nm,1.1s							
QSPA	**South Pole Qui**	**72.55**	**180**	P		**P**	**17 23 23.2**	**+0.2**
PDAR	**Pinedale Array**	**72.94**	**327**	P		**P**	**17 23 25.2**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=120,slow=10,SNR=2.6							
	comp=Z,0.2nm,0.5s							
ESDC	**Sonseca Array**	**80.25**	**43**	P		**P**	**17 24 07.4**	**+0.5**
	comp=Z,1.2nm,0.9s,baz=255,slow=7.0,SNR=5.1							
	comp=Z,1.2nm,0.9s							
VNDA	**Vanda**	**81.32**	**189**	P		**P**	**17 24 13.4**	**+1.5**
	comp=Z,0.4nm,0.8s,baz=104,slow=9.5,SNR=2.5							
	comp=Z,0.4nm,0.8s							
YKA	**Yellowknife Ar**	**88.96**	**339**	P		**P**	**17 24 49.9**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=124,slow=4.8,SNR=5.9							
	comp=Z,0.6nm,0.6s							
INK	**Inuvik**	**98.73**	**339**	LR		LR	18 14 16.4	
	comp=Z,44nm,18.4s,baz=190,slow=38							
ZALV	**Zalesovo Beam**	**136.73**	**26**	PKP		**PKPdf**	**17 31 19.1**	**+0.9**
	comp=Z,1.2nm,0.6s,baz=286,slow=2.9,SNR=5.4							
MKAR	**Makanchi Array**	**140.14**	**36**	PKP		**PKiKP**	**17 31 26.9**	**-0.3**
	comp=Z,0.6nm,0.4s,baz=349,slow=1.5,SNR=10							
SONM	**Songino Array**	**148.99**	**12**	PKPbc		**PKiKP**	**17 31 45.0**	**-0.4**
	comp=Z,2.5nm,0.7s,baz=321,slow=1.1,SNR=13							

KRNET 26 17:14:37.0±0.1, 39°.49N×73°.67E, mb3.0, 5C-2D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
OHH	**Osh**	**1.23**	**327**	⇑*i*P		Pg	17 15 00.3	-0.3
	baz=27							
BTK	**Batken**	**2.27**	**285**	⇓*e*P		Pn	17 15 17.2	+1.4
	baz=85							
BTK				⇓*e*S		Sb	17 15 46.9	-0.6
	baz=85							
ARLS	**Aral**	**2.42**	**12**	⇑*e*P		Pn	17 15 19.4	+1.5
	baz=12							
ARLS				⇑*e*S		Sb	17 15 50.2	-1.7
	baz=12							
GAR	**Garm**	**2.65**	**260**	⇑*e*P		Pn	17 15 22.9	+1.8
	baz=60							
GAR				⇑*e*S		Sb	17 15 56.3	-2.2
	baz=60							

IDC ***26*** *17:20:40.7±4.4, 39°.03N×74°.19E, h0km, mb3.5/3, mbtmp3.4/4, ML2.6/1, Error ellipse: s-maj=103.7km s-min=28.1km az=146.0*
KRNET ***26*** *17:20:44.6±0.1, 39°.29N×73°.36E, mb4.2*
SOME ***26*** *17:20:53.4, 39°.72N×73°.60E, h5km*
NNC ***26*** *17:20:54.3±1.5, 39°.71N×73°.55E, h0km, mb4.2, mpv3.8, Error ellipse: s-maj=11.5km s-min=5.2km az=177.0*

ISC 26 17:20:48.3±1.3, 39°.38N±0°.04×73°.21E±0°.02, h10km±9km, n83, σ2937/129, mb3.6/3, 41C-24D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DRK	**Karamyk**	**1.10**	**276**	⇓*i*P		**Pg**	**17 21 10.3**	**+0.8**
	baz=74							
DRK				⇓*i*S		**Sn**	**17 21 28.9**	**+3.5**
	baz=74							
OHH	**Osh**	**1.19**	**344**	⇑*e*P		**Pn**	**17 21 08.8**	**-2.4**
	baz=33							
OHH				⇑*e*S		**Sn**	**17 21 26.6**	**-0.9**
	baz=33							
OHH	**Osh**	**1.19**	**344**	⇑*e*P		**Pn**	**17 21 09.1**	**-2.1**
	baz=41							
OHH				⇑*e*S		**Sg**	**17 21 27.2**	**+0.4**
	baz=41							
BTK	**Batken**	**1.97**	**291**	⇑*e*P		**Pb**	**17 21 24.4**	**+0.1**
	baz=88							
BTK				⇑*e*S		**Sg**	**17 21 53.4**	**+1.8**
	baz=88							
BTK	**Batken**	**1.97**	**291**	⇓*e*P		**Pn**	**17 21 22.5**	**+0.7**
	baz=92							
BTK				⇓*i*S		**Sg**	**17 21 50.1**	**-1.5**
	baz=92							
GAR	**Garm**	**2.28**	**261**	⇑*e*P		**Pb**	**17 21 28.9**	**-0.8**
	baz=62							
GAR				⇑*e*S		**Sg**	**17 22 01.2**	**-0.4**
	baz=62							
GAR	**Garm**	**2.28**	**261**	⇓*e*P		**Pn**	**17 21 26.2**	**0.0**
	baz=64							
GAR				⇓*e*S		**Sb**	**17 21 56.8**	**-1.2**
	baz=64							
ARLS	**Aral**	**2.62**	**18**	⇓*e*P		**Pn**	**17 21 29.0**	**-1.9**
	baz=13							
ARLS				⇓*e*S		**Sn**	**17 22 01.5**	**-1.4**
	baz=13							
ARLS	**Aral**	**2.62**	**18**	⇑*e*P		**Pn**	**17 21 30.4**	**-0.5**
	baz=16							
ARLS				⇑*e*S		**Sn**	**17 22 03.8**	**+0.9**
	baz=16							
TRKS	**Terek-Say**	**2.67**	**324**	⇓*e*P		**Pn**	**17 21 32.0**	**+0.4**
	baz=20							
TRKS				⇓*e*S		**Sb**	**17 22 06.5**	**-2.7**
	baz=20							
TRKS	**Terek-Say**	**2.67**	**324**	⇓*e*P		**Pn**	**17 21 31.1**	**-0.5**
	baz=23							
TRKS				⇓*e*S		**Sn**	**17 22 05.4**	**+1.4**
	baz=23							
AML	**Almayashu**	**2.78**	**7**	P		**Pn**	**17 21 34.5**	**+1.3**
	SNR=11							
UCH	**Uchtor**	**3.02**	**19**	P		**Pn**	**17 21 38.2**	**+1.7**
	SNR=12							
UCH	**Uchtor**	**3.02**	**19**	⇓*e*P		**Pn**	**17 21 34.7**	**-1.9**
	baz=14							
UCH				⇓*e*S		**Sn**	**17 22 11.1**	**-1.9**
	baz=14							
UCH	**Uchtor**	**3.02**	**19**	⇑*e*P		**Pn**	**17 21 35.5**	**-1.1**
	baz=16							
UCH				⇑*e*S		**Sn**	**17 22 13.2**	**+0.2**
	baz=16							
CHGR	**Chuyangaron**	**3.24**	**258**	⇓*e*P		**Pn**	**17 21 42.1**	**+2.8**
	baz=59							
CHGR				⇓*e*S		**Sb**	**17 22 24.5**	**-1.0**
	baz=59							
CHGR	**Chuyangaron**	**3.24**	**258**	⇑*e*P		**Pn**	**17 21 39.4**	**+0.1**
	baz=60							
CHGR				⇑*e*S		**Sn**	**17 22 19.4**	**+1.4**
	baz=60							
EKS2	**Erkin-Say**	**3.31**	**7**	P		**Pn**	**17 21 41.4**	**+1.0**
	SNR=6.5							
EKS2	**Erkin-Say**	**3.31**	**7**	⇑*e*P		**Pn**	**17 21 39.1**	**-1.2**
	baz=3.0							
EKS2				⇑*e*S		**Sn**	**17 22 19.3**	**-0.5**
	baz=3.0							
EKS2	**Erkin-Say**	**3.31**	**7**	⇓*e*P		**Pn**	**17 21 40.1**	**-0.2**
	baz=5.0							
EKS2				⇓*e*S		**Sn**	**17 22 20.4**	**+0.6**
	baz=5.0							
AAK	**Ala-Archa**	**3.40**	**16**	P		**Pn**	**17 21 43.4**	**+1.8**
	SNR=12							
AAK	**Ala-Archa**	**3.40**	**16**	⇑*e*P		**Pn**	**17 21 39.8**	**-1.8**
	baz=12							
AAK				⇑*e*S		**Sn**	**17 22 20.5**	**-1.6**
	baz=12							
AAK	**Ala-Archa**	**3.40**	**16**	⇑*e*P		**Pn**	**17 21 40.9**	**-0.7**
	baz=14							
AAK				⇑*e*S		**Sn**	**17 22 22.3**	**+0.2**
	baz=14							
KBK	**Karagaybulak**	**3.53**	**21**	⇑*e*P		**Pn**	**17 21 41.4**	**-2.0**
	baz=18							
KBK				⇑*e*S		**Sn**	**17 22 23.0**	**-2.3**
	baz=18							
KBK	**Karagaybulak**	**3.53**	**21**	⇓*e*P		**Pn**	**17 21 42.7**	**-0.7**
	baz=19							
KBK				⇓*e*S		**Sn**	**17 22 25.1**	**-0.2**
	baz=19							
TAS	**Tashkent**	**3.57**	**304**	⇑*e*P		**Pn**	**17 21 46.1**	**+2.3**
	baz=2.0							
TAS				⇑*i*S		**Sb**	**17 22 30.8**	**-4.2**
	baz=2.0							
TAS	**Tashkent**	**3.57**	**304**	⇑*i*P		**Pn**	**17 21 44.9**	**+1.1**
	baz=5.0							
TAS				⇑*i*S		**Sn**	**17 22 28.6**	**+2.6**
	baz=5.0							
IUG	**luzhnay**	**3.67**	**320**	*e*P		**Pg**	**17 22 00.5**	**+1.8**
	739nm,0.3s							
IUG				*e*S		**Sg**	**17 22 48.9**	**+2.6**
	112nm,0.7s							
IUG	**luzhnay**	**3.67**	**320**	Pg		**Pg**	**17 22 00.5**	**+1.8**
	739nm,0.3s							
IUG				Lg		Lg	17 22 48.9	
	112nm,0.7s							
ULHL	**Ulahol**	**3.67**	**38**	P		**Pn**	**17 21 47.3**	**+1.9**
	SNR=8.2							
BOOM	**Boomskoye usch**	**3.73**	**33**	⇑*i*P		**Pn**	**17 21 43.7**	**-2.5**
	baz=30							
BOOM				⇑*e*S		**Sn**	**17 22 27.1**	**-3.2**
	baz=30							
BOOM	**Boomskoye usch**	**3.73**	**33**	⇑*e*P		**Pn**	**17 21 45.5**	**-0.7**
	baz=31							
BOOM				⇑*i*S		**Sn**	**17 22 30.0**	**-0.3**
	baz=31							
DZA	**Taraz**	**3.79**	**339**	*e*P	

	32nm,0.5s							
KNDC				⇑Lg		Lg	17 23 11.6	
	136nm,0.8s							
KTBS	**Karatobe**	**5.05**	**30**	*e*P		**Pb**	**17 22 19.2**	**+2.3**
	4.9nm,0.6s							
KTBS				*e*S		**Sb**	**17 23 21.1**	**+3.4**
	49nm,0.7s							
KTBS	**Karatobe**	**5.05**	**30**	Pg		**Pb**	**17 22 19.2**	**+2.3**
	4.9nm,0.6s							
KTBS				Lg		Lg	17 23 21.8	
	49nm,0.7s							
KUU	**Kurty**	**5.08**	**26**	*e*P		**Pb**	**17 22 20.4**	**+3.0**
	3.5nm,0.4s							
KUU				*e*S		**Sb**	**17 23 23.3**	**+4.8**
	47nm,0.6s							
KUU	**Kurty**	**5.08**	**26**	Pg		**Pb**	**17 22 20.3**	**+3.0**
	3.5nm,0.4s							
KUU				Lg		Lg	17 23 23.3	
	47nm,0.6s							
CHKK	**Chushkaly**	**5.29**	**31**	*e*P		**Pb**	**17 22 23.3**	**+2.3**
	4.2nm,0.4s							
CHKK				*e*S		**Sb**	**17 23 27.9**	**+3.4**
	29nm,0.6s							
CHKK	**Chushkaly**	**5.29**	**31**	Pg		**Pb**	**17 22 23.3**	**+2.3**
	4.2nm,0.4s							
CHKK				Lg		Lg	17 23 28.8	
	29nm,0.6s							
SATY	**Saty**	**5.37**	**45**	*e*P		**Pb**	**17 22 25.2**	**+2.8**
	3.2nm,0.4s							
SATY				*e*S		**Sb**	**17 23 31.6**	**+4.6**
	20nm,0.5s							
SATY	**Saty**	**5.37**	**45**	Pg		**Pb**	**17 22 25.2**	**+2.8**
	3.2nm,0.4s							
SATY				Lg		Lg	17 23 31.6	
	20nm,0.5s							
ZHN	**Zhinishke**	**5.46**	**44**	*e*P		**Pb**	**17 22 26.3**	**+2.4**
ZHN				*e*S		**Sb**	**17 23 32.9**	**+3.4**
ZHN	**Zhinishke**	**5.46**	**44**	Pg		**Pb**	**17 22 26.3**	**+2.4**
ZHN				Lg		Lg	17 23 32.9	
KURS	**Kuram**	**5.55**	**41**	*e*P		**Pb**	**17 22 28.5**	**+3.2**
	5.8nm,0.9s							
KURS				*e*S		**Sb**	**17 23 36.7**	**+4.8**
	16nm,0.8s							
KURS	**Kuram**	**5.55**	**41**	Pg		**Pb**	**17 22 28.5**	**+3.2**
	5.8nm,0.9s							
KURS				Lg		Lg	17 23 36.7	
	16nm,0.8s							
BTLS	**Baital**	**5.70**	**6**	*e*P		**Pb**	**17 22 30.7**	**+2.9**
	5.3nm,0.4s							
BTLS				*e*S		**Sb**	**17 23 40.9**	**+4.8**
	11nm,0.6s							
BTLS	**Baital**	**5.70**	**6**	Pg		**Pb**	**17 22 30.7**	**+2.9**
	5.3nm,0.4s							
BTLS				Lg		Lg	17 23 41.5	
	11nm,0.6s							
KPKS	**Kokpek**	**5.80**	**43**	*e*P		**Pb**	**17 22 31.7**	**+2.1**
	3.0nm,0.4s							
KPKS				*e*S		**Sb**	**17 23 42.4**	**+3.3**
	25nm,0.7s							
KPKS	**Kokpek**	**5.80**	**43**	Pg		**Pb**	**17 22 31.7**	**+2.1**
	3.0nm,0.4s							
KPKS				Lg		Lg	17 23 42.4	
	25nm,0.7s							
ARXS	**Arharly**	**5.94**	**34**	*e*P		**Pb**	**17 22 34.5**	**+2.5**
	7.7nm,0.4s							
ARXS				*e*S		**Sb**	**17 23 47.2**	**+4.1**
	22nm,0.7s							
ARXS	**Arharly**	**5.94**	**34**	Pg		**Pb**	**17 22 34.5**	**+2.5**
	7.7nm,0.4s							
ARXS				Lg		Lg	17 23 47.2	
	22nm,0.7s							
SHLS	**Shalkode**	**6.04**	**49**	*e*P		**Pg**	**17 22 41.4**	**-2.6**
	3.7nm,0.3s							
SHLS				*e*S		**Sg**	**17 23 58.8**	**-3.3**
	12nm,0.7s							
SHLS	**Shalkode**	**6.04**	**49**	Pg		**Pg**	**17 22 41.4**	**-2.6**
	3.7nm,0.3s							
SHLS				Lg		Lg	17 23 58.7	
	12nm,0.7s							
PDGK	**Podgornoye**	**6.16**	**48**	Pg		**Pb**	**17 22 37.0**	**+1.3**
	0.9nm,0.5s							
PDGK				Lg		Lg	17 23 51.7	
	4.9nm,0.7s							
PDGK	**Podgornoye**	**6.16**	**48**	⇓Pg		**Pb**	**17 22 38.8**	**+3.1**
	5.0nm,0.6s							
PDGK				⇓Lg		Lg	17 23 53.9	
	22nm,0.8s							
MKAR	**Makanchi Array**	**9.95**	**39**	Pn		Pn	17 23 03.7	-7.6
	0.1nm,0.3s,baz=206,slow=9.6,SNR=3.1							
MKAR				Lg		Lg	17 25 48.0	
	baz=222,slow=21,SNR=2.8							
	0.4nm,0.7s							
AB31	**Akbulak array**	**13.68**	**321**	P		**Pn**	**17 24 01.6**	**-0.7**
	0.3nm,0.3s,baz=130,slow=14,SNR=7.0							
ZALV	**Zalesovo Beam**	**16.58**	**25**	Pn		**Pn**	**17 24 38.0**	**-2.7**
	0.2nm,0.3s,baz=205,slow=6.6,SNR=5.1							
BRTR	**Keskin Array B**	**30.35**	**283**	P		**P**	**17 27 02.0**	**+1.7**
	0.3nm,0.5s,baz=92,slow=9.6,SNR=2.7							
	0.3nm,0.5s							
FINES	**FINESS Array B**	**36.15**	**323**	P		**P**	**17 27 50.1**	**-0.3**
	0.7nm,0.7s,baz=116,slow=8.5,SNR=1.8							
	0.7nm,0.7s							
TORD	**Torodi Ar. Bea**	**67.53**	**269**	P		**P**	**17 31 43.6**	**-1.4**
	0.2nm,0.4s,baz=40,slow=5.7,SNR=2.0							
	0.2nm,0.4s							

NEIC ***26*** *17:22:42.0±1.6, 19°.25N±0°.08×145°.5E±0°.3, h194km±12km, mb4.2/15, Error ellipse: s-maj=34.3km s-min=11.9km az=86.0*

IDC ***26*** *17:22:46.2±4.3, 19°.02N×145°.21E, h226km±30km, mb3.4/4, mbtmp4.1/5, Error ellipse: s-maj=158.0km s-min=32.7km az=91.0*

ISC 26 17:22:43.0±1.0, 19°.22N±0°.08×145°.5E±0°.3, h214km, n23, σ1§25/25, mb4.1/13, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.63**	**187**	P	**Pn**	**17 24 08.2**	**+2.4**
	40nm,0.6s,baz=182,slow=23,SNR=1.2						
GUMO				S	**S**	**17 25 09.0**	**-2.2**
	29nm,0.7s,baz=8.7,slow=21,SNR=1.5						
GUMO	**Guam**	**5.63**	**187**		**Pn**	**17 24 03.9**	**-1.9**
JCJ	**Chichijima**	**8.43**	**339**	Pn	**Pn**	**17 24 39.7**	**-2.0**
MANU	**Manus Island**	**21.20**	**175**	P	**P**	**17 27 10.6**	**-1.7**
MANU				IAmb	IAmb	17 27 13.2	
	comp=Z,5.4nm,0.6s						
FAKI	**Fak Fak**	**25.59**	**212**	P	**P**	**17 27 52.1**	**-0.6**
FAKI				IAmb	IAmb	17 28 34.6	
	comp=Z,6.0nm,1.0s						
USA0B	**Ussuriysk Arra**	**27.37**	**338**	P	**P**	**17 28 08.6**	**+0.3**
USA0B				IAmb	IAmb	17 28 48.9	
	comp=Z,4.1nm,0.8s						
USRK	**Ussuriysk Ar.**	**27.37**	**338**	P	**P**	**17 28 07.4**	**-0.9**
KNRA	**Kununurra**	**38.40**	**207**	P	**P**	**17 29 45.6**	**+1.7**
KNRA				IAmb	IAmb	17 29 46.3	
	comp=Z,5.0nm,0.8s						
WB0	**Warramunga Arr**	**40.25**	**196**	P	**P**	**17 29 59.1**	**-0.2**
WR0	**Warramunga Arr**	**40.40**	**196**	P	**P**	**17 30 00.7**	**+0.3**
WR0				IAmb	IAmb	17 30 25.6	
	comp=Z,4.3nm,1.1s						
WRAB	**Tennant Creek**	**40.42**	**196**	P	**P**	**17 30 01.2**	**+0.5**
WRAB				IAmb	IAmb	17 30 10.7	
	comp=Z,4.1nm,0.6s						
WB2	**Warramunga Arr**	**40.43**	**196**	P	**P**	**17 30 00.9**	**+0.2**
WB2				IAmb	IAmb	17 30 02.5	
	comp=Z,3.3nm,0.7s						
WRA	**Warramunga Arr**	**40.43**	**196**	P	**P**	**17 30 01.1**	**+0.4**
	comp=Z,1.4nm,0.5s,baz=7.4,slow=8.9,SNR=34						
WRA				PcP	**PcP**	**17 31 59.5**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=16,slow=3.5,SNR=2.1						
	comp=Z,1.4nm,0.5s						
WRA	**Warramunga Arr**	**40.43**	**196**	P	**P**	**17 30 00.1**	**-0.6**
AS31	**Alice Springs**	**44.10**	**195**	P	**P**	**17 30 29.4**	**-0.8**
ASAR	**Alice Springs**	**44.11**	**195**	P	**P**	**17 30 30.2**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=13,slow=6.9,SNR=35						
	comp=Z,0.7nm,0.5s						
OUENC	**Ouen Island, N**	**46.32**	**152**	P	**P**	**17 30 48.3**	**+0.7**
MBWA	**Marble Bar**	**47.42**	**213**	P	**P**	**17 30 57.0**	**+0.9**
MBWA				IAmb	IAmb	17 31 09.1	
	comp=Z,12nm,1.1s						
STKA	**Stephens Creek**	**50.94**	**184**	P	**P**	**17 31 21.5**	**-1.1**
	comp=Z,4.7nm,1.2s,baz=0.0,slow=13,SNR=2.1						
	comp=Z,4.7nm,1.2s						
FORT	**Forrest**	**52.47**	**199**	P	**P**	**17 31 35.1**	**+1.2**
MORW	**Morawa**	**55.81**	**211**	P	**P**	**17 31 59.1**	**+1.0**
MORW				IAmb	IAmb	17 32 10.2	
	comp=Z,4.7nm,1.0s						
NWAO	**Narrogin (SRO)**	**58.48**	**208**	P	**P**	**17 32 17.0**	**+0.2**
FINES	**FINESS Array B**	**86.36**	**335**	P	**P**	**17 35 02.4**	**+1.7**
	comp=Z,0.6nm,0.8s,baz=88,slow=4.3,SNR=3.4						
	comp=Z,0.6nm,0.8s						

KRNET ***26*** *17:23:15.2±0.1, 39°.38N×73°.57E, mb3.7*

SOME ***26*** *17:23:15.4, 39°.45N×73°.72E, h10km*

ISC 26 17:23:14.1±1.7, 39°.48N±0°.06×73°.70E±0°.03, h3km±12km, n33, σ1§94/65, 8C-14D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.26**	**327**	*e*P	**Pg**	**17 23 39.8**	**+1.5**
	baz=32						
OHH				⇓*e*S	**Sn**	**17 23 57.8**	**+1.5**
	baz=32						
DRK	**Karamyk**	**1.47**	**271**	⇑*i*P	**Pn**	**17 23 41.4**	**-0.4**
	baz=75						
DRK				⇑*i*S	**Sn**	**17 24 00.1**	**-1.6**
	baz=75						
BTK	**Batken**	**2.29**	**286**	⇑*e*P	**Pb**	**17 23 55.1**	**-1.1**
	baz=89						
BTK				⇑*e*S	**Sb**	**17 24 24.6**	**-0.4**
	baz=89						
ARLS	**Aral**	**2.43**	**11**	⇑*e*P	**Pg**	**17 24 00.0**	**-0.7**
	baz=13						
ARLS				⇑*e*S	**Sg**	**17 24 32.5**	**+0.3**
	baz=13						
GAR	**Garm**	**2.67**	**261**	⇓*e*P	**Pn**	**17 23 59.9**	**+1.7**
	baz=63						
GAR				⇓*e*S	**Sn**	**17 24 32.3**	**+1.2**
	baz=63						
UCH	**Uchtor**	**2.82**	**12**	⇓*e*P	**Pb**	**17 24 05.7**	**+0.3**
	baz=14						
UCH				⇓*e*S	**Sb**	**17 24 42.3**	**+1.8**
	baz=14						
TRKS	**Terek-Say**	**2.83**	**317**	⇓*e*P	**Pb**	**17 24 03.0**	**-2.4**
	baz=19						
TRKS				⇓*e*S	**Sb**	**17 24 37.9**	**-2.7**
	baz=19						
EKS2	**Erkin-Say**	**3.18**	**1**	⇓*e*P	**Pb**	**17 24 10.2**	**-1.2**
	baz=3.0						
EKS2				⇓*e*S	**Sb**	**17 24 50.3**	**-0.4**
	baz=3.0						
AAK	**Ala-Archa**	**3.22**	**11**	⇓*e*P	**Pb**	**17 24 10.9**	**-1.1**
	baz=12						
AAK				⇓*e*S	**Sb**	**17 24 51.5**	**-0.2**
	baz=12						
BOOM	**Boomskoye usch**	**3.46**	**29**	⇓*e*P	**Pb**	**17 24 14.1**	**-2.0**
	baz=29						
BOOM				⇓*i*S	**Sb**	**17 24 57.8**	**-0.8**
	baz=29						
KDJ	**Kajisay**	**3.75**	**44**	⇑*e*P	**Pb**	**17 24 18.1**	**-2.9**
	baz=44						
KDJ				⇑*e*S	**Sb**	**17 25 05.0**	**-1.9**
	baz=44						
IUG	**Iuzhnay**	**3.85**	**315**	*e*P	**Pg**	**17 24 28.2**	**+0.3**
	247nm,0.4s						
IUG				*e*S	**Sg**	**17 25 21.5**	**+3.6**
	56nm,0.7s						
KST	**Kastek**	**3.95**	**25**	*e*P	**Pg**	**17 24 28.7**	**-1.1**
	10nm,0.6s						
KST				*e*S	**Sg**	**17 25 22.1**	**+1.1**
	38nm,0.6s						
SGDS	**Sogindy**	**4.04**	**10**	*e*P	**Pg**	**17 24 31.2**	**-0.3**
	6.0nm,0.5s						
SGDS				*e*S	**Sg**	**17 25 26.4**	**+2.7**
	7.7nm,0.4s						
DGS	**Degeres**	**4.08**	**22**	*e*P	**Pg**	**17 24 31.1**	**-1.1**
	11nm,0.7s						
DGS				*e*S	**Sg**	**17 25 26.4**	**+1.5**
	27nm,0.8s						
MTBS	**Maitube**	**4.19**	**29**	*e*P	**Pg**	**17 24 33.4**	**-1.1**
	6.9nm,0.2s						
MTBS				*e*S	**Sg**	**17 25 29.9**	**+1.1**
	26nm,0.4s						
CHM	**Chimkent**	**4.21**	**314**	*e*P	**Pg**	**17 24 33.5**	**-1.2**
	5.6nm,0.5s						
CHM				*e*S	**Sg**	**17 25 30.1**	**+0.9**
	86nm,0.2s						
TNSS	**Tian-Shan**	**4.32**	**34**	*e*P	**Pg**	**17 24 35.6**	**-1.3**
	6.4nm,0.6s						
TNSS				*e*S	**Sg**	**17 25 33.6**	**+0.7**
	14nm,0.6s						
AAA	**Alma-Ata**	**4.45**	**32**	*e*P	**Pg**	**17 24 39.4**	**0.0**
	20nm,0.1s						
AAA				*e*S	**Sg**	**17 25 38.9**	**+2.0**
	28nm,0.1s						
BRLS	**Boroldaу**	**4.59**	**322**	*e*P	**Pb**	**17 24 38.0**	**+2.6**
	7.9nm,0.3s						
BRLS				*e*S	**Sg**	**17 25 36.6**	**-4.9**
	14nm,0.5s						
KTBS	**Karatobe**	**4.79**	**27**	*e*P	**Pg**	**17 24 44.0**	**-1.8**
	5.3nm,0.9s						
KTBS				*e*S	**Sg**	**17 25 47.2**	**-0.7**
	24nm,0.5s						
KUU	**Kurty**	**4.84**	**23**	*e*P	**Pg**	**17 24 45.1**	**-1.7**
	6.3nm,0.8s						
KUU				*e*S	**Sg**	**17 25 49.1**	**-0.3**
	18nm,0.8s						
CHKK	**Chushkaly**	**5.02**	**28**	*e*P	**Pg**	**17 24 48.5**	**-1.9**
	4.5nm,0.3s						
CHKK				*e*S	**Sg**	**17 25 54.9**	**-0.5**
	13nm,0.5s						
SATY	**Saty**	**5.04**	**43**	*e*P	**Pg**	**17 24 50.0**	**-0.7**
SATY				*e*S	**Sg**	**17 25 57.7**	**+1.7**
ZHN	**Zhinishke**	**5.13**	**43**	*e*P	**Pg**	**17 24 51.4**	**-1.0**
	4.9nm,0.2s						
ZHN				*e*S	**Sg**	**17 25 60.0**	**+1.1**
	12nm,0.8s						
KURS	**Kuram**	**5.23**	**39**	*e*P	**Pb**	**17 24 50.0**	**+3.8**
	3.4nm,0.8s						
KURS				*e*S	**Sg**	**17 25 57.8**	**-4.3**
	12nm,0.7s						
KPKS	**Kokpek**	**5.47**	**42**	*e*P	**Pg**	**17 24 56.6**	**-2.3**
	8.9nm,0.6s						
KPKS				*e*S	**Sg**	**17 26 08.8**	**-1.0**
	16nm,0.7s						
BTLS	**Baital**	**5.57**	**3**	*e*P	**Pg**	**17 25 00.1**	**-0.7**
	4.3nm,0.8s						
BTLS				*e*S	**Sg**	**17 26 14.4**	**+1.5**
	4.3nm,0.3s						
ARXS	**Arharly**	**5.65**	**32**	*e*P	**Pg**	**17 25 00.2**	**-2.2**
	8.1nm,0.7s						
ARXS				*e*S	**Sg**	**17 26 15.0**	**-0.5**
	24nm,0.6s						
SHLS	**Shalkode**	**5.69**	**48**	*e*P	**Pg**	**17 25 06.9**	**+3.8**
	3.5nm,0.3s						
SHLS				*e*S	Sg	17 26 26.7	+10
	9.2nm,1.0s						
BLB	**Baldybastay**	**5.84**	**36**	*e*P	**Pg**	**17 25 03.9**	**-2.1**
	13nm,0.5s						
BLB				*e*S	**Sg**	**17 26 21.2**	**-0.4**
	12nm,0.5s						
TDK	**Taldyqorghan**	**6.54**	**31**	*e*P	**Pg**	**17 25 19.3**	**0.0**
	13nm,0.1s						
TDK				*e*S	**Sg**	**17 26 47.9**	**+4.0**
	19nm,0.4s						
DJR	**Jarkent**	**6.65**	**41**	*e*P	**Pg**	**17 25 20.7**	**-0.8**
	1.0nm,0.3s						
DJR				*e*S	**Sg**	**17 26 51.3**	**+3.7**
	5.9nm,1.1s						

SOME ***26*** *17:26:54.2, 40°.50N×73°.48E, h5km*

KRNET 26 17:26:25.6±0.1, 39°.44N×73°.64E, mb3.4, 8C-10D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.27**	**329**	⇑*e*P	Pg	17 26 49.8	-0.1
	baz=29						
OHH				⇑*e*S	Sb	17 27 07.6	+0.2
	baz=29						
DRK	**Karamyk**	**1.43**	**272**	⇑*i*P	Pg	17 26 52.5	-0.4
	baz=73						
DRK				⇑*i*S	Sb	17 27 12.3	+0.2
	baz=73						
BTK	**Batken**	**2.26**	**287**	⇓*e*P	Pb	17 27 06.5	-0.9
	baz=87						
BTK				⇓*e*S	Sb	17 27 36.2	+0.2
	baz=87						
ARLS	**Aral**	**2.48**	**12**	⇓*e*P	Pn	17 27 09.2	+1.8
	baz=12						
ARLS				⇓*e*S	Sb	17 27 41.1	-1.1
	baz=12						
GAR	**Garm**	**2.62**	**262**	⇑*e*P	Pn	17 27 11.3	+2.0
	baz=61						
GAR				⇑*e*S	Sb	17 27 44.8	-1.4
	baz=61						
TRKS	**Terek-Say**	**2.83**	**318**	⇑*e*P	Pn	17 27 13.6	+1.4
	baz=18						
TRKS				⇑*e*S	Sn	17 27 48.5	+1.4
	baz=18						
UCH	**Uchtor**	**2.87**	**13**	⇓*e*P	Pn	17 27 15.1	+2.1
	baz=13						
UCH				⇓*e*S	Sn	17 27 51.0	+2.6
	baz=13						
AAK	**Ala-Archa**	**3.26**	**11**	⇓*i*P	Pn	17 27 20.3	+2.1
	baz=11						
AAK				⇓*e*S	Sn	17 28 00.2	+2.4
	baz=11						
BOOM	**Boomskoye usch**	**3.51**	**29**	⇓*e*P	Pn	17 27 23.9	+2.3
	baz=29						
BOOM				⇓*i*S	Sn	17 28 06.4	+2.4
	baz=29						
IUG	**Iuzhnay**	**3.85**	**316**	*e*P	Pg	17 27 49.5	+10
	314nm,0.7s						
IUG				*e*S	Sg	17 28 29.1	-0.3
	32nm,0.4s						
KST	**Kastek**	**4.01**	**25**	*e*P	Pg	17 27 51.4	+9.1
	5.7nm,0.4s						
KST				*e*S	Sg	17 28 32.8	-1.6
	12nm,0.4s						
SGDS	**Sogindy**	**4.08**	**10**	*e*P	Pg	17 27 52.9	+9.1
	4.7nm,0.5s						
SGDS				*e*S	Sg	17 28 35.0	-1.7
	11nm,0.6s						
DGS	**Degeres**	**4.13**	**22**	*e*P	Pg	17 27 55.8	+11
	6.3nm,0.6s						
DGS				*e*S	Sg	17 28 40.4	+2.2
	12nm,0.6s						
TNSS	**Tian-Shan**	**4.38**	**34**	*e*P	Pg	17 27 59.5	+10
	4.0nm,0.5s						
TNSS				*e*S	Sg	17 28 46.7	+0.5
	4.1nm,0.5s						
BRLS	**Boroldaу**	**4.60**	**323**	*e*P	Pg	17 28 01.3	+7.6
	4.2nm,0.4s						
BRLS				*e*S	Sg	17 28 49.3	-3.9
	21nm,0.6s						
KTBS	**Karatobe**	**4.84**	**27**	*e*P	Pg	17 28 07.0	+8.6
	1.5nm,0.4s						
KTBS				*e*S	Sg	17 28 59.7	-1.5
	11nm,0.6s						
KUU	**Kurty**	**4.89**	**24**	*e*P	Pg	17 28 08.3	+9.0
	2.2nm,0.4s						
KUU				*e*S	Sg	17 29 01.6	-1.1
	12nm,0.7s						
CHKK	**Chushkaly**	**5.08**	**29**	*e*P	Pg	17 28 13.2	+10
	2.2nm,0.3s						
CHKK				*e*S	Sg	17 29 09.6	+1.0
	5.6nm,0.5s						
KPKS	**Kokpek**	**5.53**	**42**	*e*P	Pg	17 28 22.1	+11
	1.5nm,0.3s						
KPKS				*e*S	Sg	17 29 25.4	+2.2
	5.8nm,0.5s						
BTLS	**Baital**	**5.61**	**3**	*e*P	Pg	17 28 19.2	+6.1
	0.9nm,0.3s						
BTLS				*e*S	Sg	17 29 20.4	-5.3
	2.2nm,0.6s						
ARXS	**Arharly**	**5.71**	**32**	*e*P	Pg	17 28 23.3	+8.4
	3.7nm,0.7s						
ARXS				*e*S	Sg	17 29 27.6	-1.3
	5.9nm,0.5s						
BLB	**Baldybastay**	**5.90**	**36**	*e*P	Pg	17 28 28.7	+10
	2.0nm,0.2s						
BLB				*e*S	Sg	17 29 36.5	+1.5
	6.5nm,0.8s						

KRNET ***26*** *17:33:19.3±0.1, 39°.42N×73°.59E, mb3.6*

SOME ***26*** *17:33:25.2, 39°.77N×73°.48E, h0km*

ISC 26 17:33:21.3±1.5, 39°.65N±0°.05×73°.38E±0°.03, h1km±12km, n26, σ2§09/50, 13C-7D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**0.99**	**333**	⇓*e*P	**Pn**	**17 33 42.7**	**+0.2**
	baz=31						
OHH				⇓*e*S	**Sn**	**17 33 59.9**	**+2.7**
	baz=31						
DRK	**Karamyk**	**1.23**	**263**	⇑*i*P	**Pb**	**17 33 44.8**	**-0.7**
	baz=73						
DRK				⇑*i*S	**Sn**	**17 34 03.6**	**+0.2**
	baz=73						
BTK	**Batken**	**2.01**	**283**	⇑*i*P	**Pb**	**17 33 58.2**	**-0.6**
	baz=87						
BTK				⇑*e*S	**Sg**	**17 34 26.7**	**+0.8**
	baz=87						
ARLS	**Aral**	**2.33**	**18**	⇑*e*P	**Pn**	**17 34 02.0**	**+1.0**
	baz=13						
ARLS				⇑*e*S	**Sb**	**17 34 33.0**	**-0.6**
	baz=13						
GAR	**Garm**	**2.46**	**256**	⇓*e*P	**Pn**	**17 34 03.2**	**+0.5**
	baz=62						
GAR				⇓*e*S	**Sb**	**17 34 35.4**	**-1.8**
	baz=62						
TRKS	**Terek-Say**	**2.54**	**319**	⇑*i*P	**Pb**	**17 34 05.8**	**-2.0**
	baz=19						
TRKS				⇑*i*S	**Sb**	**17 34 39.2**	**-0.4**
	baz=19						
UCH	**Uchtor**	**2.72**	**18**	⇑*e*P	**Pn**	**17 34 07.5**	**+0.9**
	baz=14						
UCH				⇑*e*S	**Sb**	**17 34 42.7**	**-2.4**
	baz=14						
BOOM	**Boomskoye usch**	**3.44**	**33**	⇓*i*P	**Pn**	**17 34 16.3**	**0.0**
	baz=29						
BOOM				⇓*i*S	**Sn**	**17 34 58.6**	**+0.8**
	baz=29						
IUG	**Iuzhnay**	**3.56**	**316**	*e*P	**Pg**	**17 34 29.7**	**+0.2**
	156nm,0.5s						
IUG				*e*S	**Sg**	**17 35 16.4**	**+0.7**
	48nm,0.5s						
DZA	**Taraz**	**3.59**	**335**	*e*P	**Pg**	**17 34 33.1**	**+2.9**
DZA				*e*S	**Sg**	**17 35 22.0**	**+5.3**
TKM2	**Tokmak 2**	**3.68**	**26**	⇑Pg	**Pg**	**17 34 30.2**	**-1.6**
	6.2nm,0.5s						
TKM2				⇓Lg	Lg	17 35 22.2	
	6.2nm,0.5s						
KST	**Kastek**	**3.91**	**29**	*e*P	**Pg**	**17 34 34.4**	**-1.9**
	2.7nm,0.5s						
KST				*e*S	**Sg**	**17 35 24.3**	**-2.8**
	14nm,0.8s						
DGS	**Degeres**	**4.02**	**26**	*e*P	**Pg**	**17 34 40.6**	**+2.3**
	12nm,0.5s						
DGS				*e*S	**Sg**	**17 35 34.7**	**+4.2**
	27nm,0.8s						
KK31	**Karatay Array**	**4.07**	**329**	⇑Pg	**Pg**	**17 34 38.8**	**-0.6**
	1.9nm,0.3s,baz=142,slow=16,SNR=4.1						
KK31				⇑Lg	Lg	17 35 32.0	
	8.4nm,0.5s,baz=134,slow=18,SNR=4.1						
MTBS	**Maitube**	**4.17**	**32**	*e*P	**Pg**	**17 34 42.2**	**+1.0**
	2.1nm,0.1s						
MTBS				*e*S	**Sg**	**17 35 37.7**	**+2.3**
	9.4nm,0.3s						
BRLS	**Boroldaу**	**4.30**	**323**	*e*P	**Pg**	**17 34 43.0**	**-0.8**
	1.3nm,0.2s						
BRLS				*e*S	**Sg**	**17 35 39.1**	**-0.5**
	13nm,0.4s						
TNSS	**Tian-Shan**	**4.33**	**37**	*e*P	**Pg**	**17

	2.9nm,0.4s								
ARXS					*e*S		**Sg**	**17 36 20.3**	**-2.3**
	6.5nm,0.6s								
SHLS	**Shalkode**	**5.77**	**51**	*e*P			**Pg**	**17 35 14.7**	**+2.9**
	3.5nm,0.3s								
SHLS					*e*S		**Sg**	**17 36 33.3**	**+6.7**
	5.7nm,0.8s								
BLB	**Baldybastay**	**5.86**	**39**	*e*P			**Pg**	**17 35 12.9**	**-0.6**
BLB					*e*S		**Sg**	**17 36 30.2**	**+0.8**

KRNET ***26*** *17:38:47.9±0.1,39˚39N×73˚60E,mb3.4*
SOME ***26*** *17:39:04.2,39˚88N×73˚58E,h10km*
NNC ***26*** *17:39:06.3±1.8,40˚00N×73˚53E,h0km,mb3.9,mpv3.5, Error ellipse: s-maj=14.0km s-min=6.3km az=169.0*

ISC 26 17:38:51.4±1.8,39˚45N±0˚07×73˚57E±0˚04,h9km±11km, n36,σ2s12/57,16C-6D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.23**	**331**	⇑*i*P	**Pb**	**17 39 12.7**	**-2.2**
	baz=31						
OHH				⇑*e*S	**Sg**	**17 39 30.9**	**-0.2**
	baz=31						
DRK	**Karamyk**	**1.37**	**272**	⇑*i*P	**Pn**	**17 39 14.1**	**-2.8**
	baz=74						
DRK				⇑*i*S	**Sb**	**17 39 33.6**	**-1.4**
	baz=74						
BTK	**Batken**	**2.20**	**287**	⇑*e*P	**Pn**	**17 39 28.6**	**+0.4**
	baz=88						
BTK				⇑*e*S	**Sb**	**17 39 58.5**	**-0.4**
	baz=88						
ARLS	**Aral**	**2.48**	**13**	⇓*i*P	**Pn**	**17 39 32.6**	**+0.5**
	baz=12						
ARLS				⇓*i*S	**Sb**	**17 40 04.8**	**-2.1**
	baz=12						
GAR	**Garm**	**2.56**	**261**	⇑*i*P	**Pn**	**17 39 33.5**	**+0.3**
	baz=62						
GAR				⇑*e*S	**Sn**	**17 40 06.3**	**+1.8**
	baz=62						
TRKS	**Terek-Say**	**2.79**	**319**	⇑*i*P	**Pn**	**17 39 35.9**	**-0.4**
	baz=19						
TRKS				⇑*i*S	**Sn**	**17 40 11.1**	**+1.0**
	baz=19						
UCH	**Uchtor**	**2.87**	**14**	⇑*e*P	**Pn**	**17 39 38.0**	**+0.3**
	baz=13						
UCH				⇑*e*S	**Sn**	**17 40 14.7**	**+2.1**
	baz=13						
EKS2	**Erkin-Say**	**3.22**	**3**	⇓*e*P	**Pn**	**17 39 42.7**	**+0.5**
	baz=2.0						
EKS2				⇓*e*S	**Sn**	**17 40 22.7**	**+2.0**
	baz=2.0						
AAK	**Ala-Archa**	**3.27**	**12**	⇑*e*P	**Pn**	**17 39 43.3**	**+0.4**
	baz=12						
AAK				⇑*e*S	**Sn**	**17 40 23.9**	**+2.0**
	baz=12						
TKM2	**Tokmak 2**	**3.80**	**23**	⇑Pg	**Pg**	**17 40 07.1**	**+2.9**
	2.1nm,0.4s						
TKM2				⇓Lg	Lg	17 40 49.4	
	5.9nm,0.7s						
IUG	**Iuzhnay**	**3.81**	**316**	*e*P	**Pg**	**17 40 08.2**	**+3.8**
	136nm,0.2s						
IUG				*e*S	**Sg**	**17 40 54.5**	**+0.9**
	21nm,0.3s						
IUG	**Iuzhnay**	**3.81**	**316**	Pg	**Pg**	**17 40 08.1**	**+3.8**
	136nm,0.2s						
IUG				Lg	Lg	17 40 54.5	
	21nm,0.3s						
KST	**Kastek**	**4.02**	**26**	*e*P	**Pg**	**17 40 10.7**	**+2.2**
	6.1nm,0.5s						
KST				*e*S	**Sg**	**17 40 58.8**	**-1.8**
	8.9nm,0.5s						
KST	**Kastek**	**4.02**	**26**	Pg	**Pg**	**17 40 10.7**	**+2.2**
	6.1nm,0.5s						
KST				Lg	Lg	17 40 59.1	
	8.9nm,0.5s						
SGDS	**Sogindy**	**4.08**	**11**	*e*P	**Pg**	**17 40 10.6**	**+1.0**
	3.1nm,0.6s						
SGDS				*e*S	**Sg**	**17 40 58.5**	**-4.0**
	3.8nm,0.4s						
SGDS	**Sogindy**	**4.08**	**11**	Pg	**Pg**	**17 40 10.6**	**+1.0**
	3.1nm,0.6s						
SGDS				Lg	Lg	17 40 58.5	
	3.8nm,0.4s						
DGS	**Degeres**	**4.14**	**23**	*e*P	**Pg**	**17 40 14.0**	**+3.2**
	6.2nm,0.6s						
DGS				*e*S	**Sg**	**17 41 04.6**	**+0.2**
	8.0nm,1.3s						
DGS	**Degeres**	**4.14**	**23**	Pg	**Pg**	**17 40 14.0**	**+3.2**
	6.2nm,0.6s						
DGS				Lg	Lg	17 41 04.6	
	8.0nm,1.3s						
KK31	**Karatay Array**	**4.32**	**329**	⇓Pg	**Pg**	**17 40 14.6**	**+0.5**
	1.7nm,0.4s,baz=141,slow=16,SNR=4.5						
KK31				⇑Lg	Lg	17 41 01.8	
	3.3nm,0.4s,baz=151,slow=26,SNR=3.6						
TNSS	**Tian-Shan**	**4.40**	**34**	*e*P	**Pg**	**17 40 19.1**	**+3.3**
	4.1nm,0.5s						
TNSS				*e*S	**Sg**	**17 41 12.8**	**0.0**
	3.4nm,0.7s						
TNSS	**Tian-Shan**	**4.40**	**34**	Pg	**Pg**	**17 40 19.1**	**+3.3**
	4.1nm,0.5s						
TNSS				Lg	Lg	17 41 12.8	
	3.4nm,0.7s						
BRLS	**Boroldey**	**4.55**	**323**	*e*P	**Pg**	**17 40 19.7**	**+1.1**
	4.7nm,0.9s						
BRLS				*e*S	**Sg**	**17 41 14.5**	**-3.1**
	3.2nm,0.2s						
BRLS	**Boroldey**	**4.55**	**323**	Pg	**Pg**	**17 40 19.7**	**+1.1**
BRLS				Lg	Lg	17 41 14.5	
KTBS	**Karatobe**	**4.86**	**28**	*e*P	**Pg**	**17 40 26.2**	**+1.7**
	3.1nm,0.4s						
KTBS				*e*S	**Sg**	**17 41 25.1**	**-2.4**
	6.0nm,0.6s						
KTBS	**Karatobe**	**4.86**	**28**	Pg	**Pg**	**17 40 26.2**	**+1.7**
	3.1nm,0.4s						
KTBS				Lg	Lg	17 41 25.9	
	6.0nm,0.6s						
KUU	**Kurty**	**4.91**	**24**	*e*P	**Pg**	**17 40 27.1**	**+1.8**
	2.4nm,0.4s						
KUU				*e*S	**Sg**	**17 41 26.5**	**-2.4**
	5.3nm,0.7s						
KUU	**Kurty**	**4.91**	**24**	Pg	**Pg**	**17 40 27.1**	**+1.8**
	2.4nm,0.4s						
KUU				Lg	Lg	17 41 27.6	
	5.3nm,0.7s						
CHKK	**Chushkaly**	**5.10**	**29**	*e*P	**Pg**	**17 40 30.9**	**+1.9**
	2.4nm,0.5s						
CHKK				*e*S	**Sg**	**17 41 32.9**	**-2.1**
	4.2nm,0.7s						
CHKK	**Chushkaly**	**5.10**	**29**	Pg	**Pg**	**17 40 30.9**	**+1.9**
CHKK				Lg	Lg	17 41 32.9	
BTLS	**Baital**	**5.60**	**3**	*e*P	**Pg**	**17 40 41.6**	**+2.9**
	1.1nm,0.2s						
BTLS				*e*S	**Sg**	**17 41 51.8**	**+0.6**
	1.9nm,0.4s						
BTLS	**Baital**	**5.60**	**3**	Pg	**Pg**	**17 40 41.6**	**+2.9**
	1.1nm,0.2s						
BTLS				Lg	Lg	17 41 51.0	
	1.9nm,0.4s						
ARXS	**Arharly**	**5.73**	**32**	*e*P	**Pg**	**17 40 41.5**	**+0.3**
	4.2nm,0.6s						
ARXS				*e*S	**Sg**	**17 41 51.6**	**-3.7**
	4.9nm,0.6s						
ARXS	**Arharly**	**5.73**	**32**	Pg	**Pg**	**17 40 41.5**	**+0.3**
	4.2nm,0.6s						
ARXS				Lg	Lg	17 41 51.3	
	4.9nm,0.6s						
PDGK	**Podgornoye**	**5.91**	**47**	Pg	**Pg**	**17 40 46.2**	**+1.6**
PDGK				Lg	Lg	17 41 59.4	
BLB	**Baldybastay**	**5.92**	**37**	*e*P	**Pg**	**17 40 46.6**	**+1.8**
	3.5nm,0.6s						
BLB				*e*S	**Sg**	**17 42 00.4**	**-1.1**
	3.1nm,0.6s						
BLB	**Baldybastay**	**5.92**	**37**	Pg	**Pg**	**17 40 46.6**	**+1.8**
BLB				Lg	Lg	17 42 00.4	

IDC ***26*** *17:56:59.6±7.2,12˚15N×143˚16E,h33km±56km,mb3.6/8, mbtmp3.8/9,ML3.8/1,MS2.7/2,Error ellipse: s-maj=43.3km s-min=19.2km az=115.0*

ISC 26 17:56:59.3±0.9,12˚1N±0˚2×143˚2E±0˚2,h31km,n16, σ0s76/10,mb4.0/8,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.19**	**49**	Pn	**Pn**	**17 57 33.8**	**+0.2**
	31nm,0.3s,baz=203,slow=7.7,SNR=61						
GUMO				Sn	**Sn**	**17 57 59.3**	**-0.4**
	70nm,0.3s,baz=3.3,slow=23,SNR=11						
GUMO				LR	LR	17 58 22.2	
	comp=Z,58nm,19.3s,baz=10,slow=38						
	71nm,0.3s						
H11S3	**WAKE ISLAND Hy**	**23.53**	**72**	T	T	18 26 14.0	
	baz=239,slow=26,SNR=12						
H11S1	**WAKE ISLAND Hy**	**23.55**	**72**	T	T	18 26 05.1	
	baz=239,slow=26,SNR=12						
H11S2	**WAKE ISLAND Hy**	**23.55**	**72**	T	T	18 26 20.9	
	baz=239,slow=26,SNR=17						
H11N1	**WAKE ISLAND Hy**	**24.00**	**69**	T	T	18 27 02.2	
	baz=255,slow=75,SNR=14						
H11N2	**WAKE ISLAND Hy**	**24.01**	**69**	T	T	18 27 01.3	
	baz=255,slow=75,SNR=19						
H11N3	**WAKE ISLAND Hy**	**24.02**	**69**	T	T	18 27 01.6	
	baz=255,slow=75,SNR=12						
WRA	**Warramunga Arr**	**33.05**	**195**	P	**P**	**18 03 32.1**	**-0.1**
	0.4nm,0.7s,baz=22,slow=9.3,SNR=2.7						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**36.73**	**194**	P	**P**	**18 04 03.8**	**-0.2**
	0.2nm,0.7s,baz=20,slow=13,SNR=5.3						
	0.2nm,0.7s						
ZALV	**Zalesovo Beam**	**61.84**	**325**	LR	LR	18 36 57.9	
	comp=Z,17nm,18.1s,baz=13,slow=39						
KURBB	**Kurchatov Arra**	**64.66**	**320**	P	**P**	**18 07 34.9**	**+0.7**
	0.3nm,0.6s,baz=106,slow=6.5,SNR=4.4						
	0.3nm,0.6s						
ILAR	**Eielson Array**	**70.57**	**25**	P	**P**	**18 08 10.5**	**-0.8**
	1.2nm,0.5s,baz=252,slow=5.7,SNR=23						
	1.2nm,0.5s						
YKA	**Yellowknife Ar**	**84.89**	**27**	P	**P**	**18 09 31.6**	**+0.6**
	0.6nm,0.6s,baz=285,slow=4.8,SNR=6.2						
	0.6nm,0.6s						
ARCES	**ARCESS Array B**	**87.94**	**342**	P	**P**	**18 09 45.4**	**-0.5**
	1.4nm,0.8s,baz=72,slow=7.8,SNR=6.1						
	1.4nm,0.8s						
NVAR	**Mina Array Bea**	**89.11**	**51**	P	**P**	**18 09 53.2**	**+0.8**
	0.4nm,0.5s,baz=271,slow=5.6,SNR=5.7						
	0.4nm,0.5s						
FINES	**FINESS Array B**	**91.76**	**335**	P	**P**	**18 10 02.6**	**-1.2**
	1.7nm,1.1s,baz=46,slow=5.5,SNR=5.4						
	1.7nm,1.1s						

IDC ***26*** *17:59:00.9±1.4,17˚94S×64˚72W,h0km,mb3.5/2, mbtmp3.5/3,ML3.0/1,MS3.2/3,Error ellipse: s-maj=39.1km s-min=18.4km az=25.0*
SCB ***26*** *17:59:03.7±6.1,17˚53S×64˚59W,h80km±999km,ML3.4/3, Error ellipse: s-maj=155.6km s-min=154.5km az=1.0*
VAO ***26*** *17:59:05.9±0.5,17˚72S×64˚75W,h296km,mb3.7*

ISC 26 17:59:04.7±0.8,17˚61S±0˚06×64˚57W±0˚05,h35km,n29, σ2s08/22,Central Bolivia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBOE	**La Paz, Chanca**	**3.36**	**283**	P	**Pn**	**17 59 56.3**	**+1.1**
LPAZ	**La Paz**	**3.65**	**291**	Pn	**Pn**	**18 00 00.3**	**+1.0**
	1.0nm,0.3s,baz=135,slow=7.7,SNR=29						
LPAZ				Pg		18 00 06.9	
	8.4nm,0.3s,baz=104,slow=11,SNR=48						
LPAZ				Sn	**Sn**	**18 00 43.4**	**+1.8**
	8.3nm,0.3s,baz=274,slow=15,SNR=4.2						
LPAZ				Lg	Lg	18 00 56.8	
	26nm,0.3s,baz=49,slow=25,SNR=6.8						
	2.6nm,0.3s						
LPAZ	**La Paz**	**3.65**	**291**	P	**Pn**	**18 00 00.1**	**+0.7**
LPAZ				S	**Sn**	**18 00 36.4**	**-5.2**
LPAZ				IAML		18 00 57.6	
	22nm,0.3s						
SIV	**San Ignacio**	**3.71**	**65**	LR	LR	18 01 45.8	
	comp=Z,281nm,19.2s,baz=286,slow=41						
SIV	**San Ignacio**	**3.71**	**65**	P	**Pn**	**18 00 01.3**	**+1.6**
SIV				S	**Sn**	**18 00 38.4**	**-3.9**
SIV				IAML		18 01 10.4	
	128nm,0.4s						
MOCB	**Mochara**	**3.76**	**195**	P	**Pn**	**18 00 02.4**	**+1.7**
MOCB				S	**Sn**	**18 00 41.4**	**-2.6**
MOCB				IAML		18 01 05.4	
	101nm,0.7s						
YJA	**Yavi**	**4.63**	**191**	P	**Pn**	**18 00 14.3**	**+1.6**
PB08	**IPOC Station P**	**5.02**	**239**	P	**Pn**	**18 00 19.0**	**+1.1**
PB11	**IPOC Station P**	**5.28**	**245**	P	**Pn**	**18 00 21.8**	**+0.5**
PTLB	**Pontes e Lacer**	**5.63**	**68**	P	**Pn**	**18 00 26.9**	**+0.9**
PB02	**IPOC Station P**	**6.24**	**233**	P	**Pn**	**18 00 36.0**	**+1.6**
VILB	**Vilhena**	**6.26**	**43**	*e*P	Pn	18 00 39.4	+4.8
LVC	**Limon Verde**	**6.43**	**219**	*e*P	**Pn**	**18 00 38.2**	**+0.8**
ETMB	**Extrema**	**7.91**	**348**	*e*P	**Pn**	**18 00 57.9**	**+0.6**
SALV	**Santo Antonio**	**8.67**	**80**	*e*P	**Pn**	**18 01 08.8**	**+1.1**
PDRB	**Porto dos Gac**	**9.64**	**53**	*e*P	**Pn**	**18 01 22.2**	**+1.0**
CLDB	**Coite**	**10.82**	**53**	*e*P	**Pn**	**18 01 37.0**	**-0.2**
CPUP	**Villa Florida**	**10.97**	**144**	LR	LR	18 06 44.7	
	comp=Z,99nm,19.2s,baz=321,slow=43						
NPGB	**Novo Progresso**	**13.82**	**42**	*e*P	Pn	18 02 13.2	-5.0
SNDB	**Serra Nova Dou**	**14.00**	**68**	*e*P	Pn	18 02 14.7	-6.1
IPMB	**Ipameri, GO**	**15.58**	**94**	*e*P	Pn	18 02 29.4	-13
ITTB	**Itaituba**	**15.75**	**34**	*e*P	Pn	18 02 34.0	-10
ESAR	**Angra dos Reis**	**19.62**	**109**	*e*P	P	18 03 14.9	-15
SDBA	**SAO DESIDERIO**	**19.68**	**77**	*e*P	P	18 03 14.5	-17
SJMB	**Sao Joao De Ma**	**22.25**	**96**	*e*P	P	18 03 40.2	-19
PLCA	**Paso Flores**	**23.62**	**191**	P	**P**	**18 04 09.9**	**-2.7**
	0.9nm,0.8s,baz=27,slow=16,SNR=1.5						
	0.9nm,0.8s						
MDP	**Montagnes des**	**25.45**	**29**	LR	LR	18 15 32.8	
	comp=Z,53nm,20.5s,baz=70,slow=38						
TORD	**Torodi Ar. Bea**	**72.18**	**69**	P	**P**	**18 10 28.6**	**+2.0**
	0.7nm,0.8s,baz=233,slow=7.6,SNR=3.6						
	0.7nm,0.8s						
SONM	**Songino Array**	**148.96**	**12**	PKPbc	**PKPab**	**18 18 53.0**	**-0.1**
	0.5nm,0.6s,baz=330,slow=2.0,SNR=2.3						

IDC 26 17:59:46.7±2.2,4˚31S×153˚02E,h0km,mb3.8/2, mbtmp3.8/2,Error ellipse: s-maj=45.7km s-min=28.4km az=7.0,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**0.99**	**270**	Pn	Pn	18 00 08.8	+1.0
	120nm,0.3s,baz=124,slow=3.6,SNR=752						
KRVT				Sn		18 00 21.6	-1.0
	395nm,0.3s,baz=285,slow=24,SNR=14						
WRA	**Warramunga Arr**	**23.93**	**228**	P	P	18 05 02.5	-0.2
	3.3nm,0.6s,baz=53,slow=9.6,SNR=50						
	3.3nm,0.6s						
H11S3	**WAKE ISLAND Hy**	**26.36**	**30**	T	T	18 33 00.9	
	baz=208						
H11S2	**WAKE ISLAND Hy**	**26.37**	**30**	T	T	18 33 07.5	
	baz=208						
H11S1	**WAKE ISLAND Hy**	**26.38**	**30**	T	T	18 33 16.6	
	baz=208						
ASAR	**Alice Springs**	**26.66**	**222**	P	P	18 05 27.6	+0.1
	0.5nm,0.5s,baz=54,slow=9.0,SNR=25						
	0.5nm,0.5s						
TORD	**Torodi Ar. Bea**	**150.36**	**289**	PKPbc	PKPbc	18 19 40.5	-0.7
	0.4nm,0.3s,baz=90,slow=2.8,SNR=11						

IDC ***26*** *18:04:10.3±1.1,39˚33N×73˚43E,h0km,mb3.7/8, mbtmp3.6/13,ML2.9/6,Error ellipse: s-maj=20.1km s-min=14.4km az=130.0*
KRNET ***26*** *18:04:10.7±0.1,39˚40N×73˚44E,mb4.2*
ISU ***26*** *18:04:10.2,39˚55N×73˚53E,h1km*
SOME ***26*** *18:04:11.2,39˚55N×73˚45E,h10km*
NNC ***26*** *18:04:24.6±2.0,39˚92N×73˚49E,h0km,mb4.3,mpv4.0, Error ellipse: s-maj=16.0km s-min=7.0km az=174.0*

ISC 26 18:04:11.2±1.4,39˚33N±0˚04×73˚30E±0˚02,h2km±9km, n92,σ2s17/131,mb3.6/8,17C-17D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk**	**1.17**	**278**	⇑*e*P	**Pb**	**18 04 34.4**	**+0.2**
	baz=74						
DRK				⇑*e*S	**Sn**	**18 04 51.7**	**+0.3**
	baz=74						
OHH	**Osh**	**1.26**	**342**	⇓*e*P	**Pg**	**18 04 33.4**	**-1.8**
	baz=36						
OHH				⇓*e*S	**Sg**	**18 04 50.2**	**-1.3**
	baz=36						
OHH	**Osh**	**1.26**	**342**	P	**Pg**	**18 04 33.2**	**-2.0**
OHH				S	**Sg**	**18 04 50.7**	**-0.8**
TSTA	**Tashata**	**1.40**	**333**	P	**Pn**	**18 04 36.0**	**-1.7**
TSTA				S	**Sg**	**18 04 54.8**	**-1.2**

FRG	**Fergana**	**1.56**	**312**	P			**Pb**	**18 04 40.4**	**-0.4**
FRG				S			**Sg**	**18 05 01.6**	**+0.2**
ANR	**Andizhan**	**1.59**	**334**	P			**Pb**	**18 04 41.1**	**-0.2**
CHMI	**Chimion**	**1.66**	**305**	P			**Pg**	**18 04 43.1**	**+0.2**
BTK	**Batken**	**2.05**	**292**	⇑*e*P			**Pb**	**18 04 48.2**	**-0.8**
	baz=89								
BTK				⇑*e*S			**Sb**	**18 05 15.8**	**+0.8**
	baz=89								
BTK	**Batken**	**2.05**	**292**	P			**Pb**	**18 04 49.5**	**+0.5**
BTK				S			**Sg**	**18 05 19.4**	**+2.5**
MINT	**Mingtut**	**2.12**	**303**	P			**Pg**	**18 04 51.5**	**-0.2**
GAR	**Garm**	**2.34**	**263**	⇑*e*P			**Pb**	**18 04 52.7**	**-1.4**
	baz=62								
GAR				⇑*e*S			**Sb**	**18 05 23.8**	**+0.4**
	baz=62								
CHDK	**Chadak**	**2.55**	**311**	P			**Pb**	**18 04 58.5**	**+0.9**
ARLS	**Aral**	**2.65**	**17**	⇓*e*P			**Pn**	**18 04 54.1**	**-0.9**
	baz=15								
ARLS				⇓*e*S			**Sn**	**18 05 25.5**	**-2.2**
	baz=15								
ARK	**Arkit**	**2.67**	**338**	P			**Pn**	**18 04 57.1**	**+1.9**
ARK				S			**Sb**	**18 05 32.5**	**-0.4**
AML	**Almayashu**	**2.81**	**6**	P			**Pn**	**18 04 58.6**	**+1.1**
	SNR=15								
UCH	**Uchtor**	**3.04**	**17**	P			**Pb**	**18 05 03.5**	**-2.7**
	SNR=14								
UCH	**Uchtor**	**3.04**	**17**	⇑*i*P			**Pn**	**18 04 59.7**	**-0.9**
	baz=16								
UCH				⇑*e*S			**Sn**	**18 05 35.7**	**-2.1**
	baz=16								
EKS2	**Erkin-Say**	**3.35**	**6**	P			**Pn**	**18 05 06.5**	**+2.0**
	SNR=7.2								
EKS2	**Erkin-Say**	**3.35**	**6**	⇑*e*P			**Pn**	**18 05 04.1**	**-0.5**
	baz=4.0								
EKS2				⇑*e*S			**Sn**	**18 05 43.2**	**-1.8**
	baz=4.0								
AAK	**Ala-Archa**	**3.43**	**15**	P			**Pn**	**18 05 07.8**	**+2.1**
	SNR=10								
AAK	**Ala-Archa**	**3.43**	**15**	Pn			**Pn**	**18 05 07.7**	**+2.1**
	6.7nm,0.3s,baz=196,slow=9.2,SNR=9.5								
AAK				Sn			**Sb**	**18 05 52.1**	**-2.7**
	8.1nm,0.3s,baz=122,slow=22,SNR=7.6								
	18nm,0.3s								
AAK	**Ala-Archa**	**3.43**	**15**	⇓*e*P			**Pn**	**18 05 05.0**	**-0.7**
	baz=14								
AAK				⇓*e*S			**Sn**	**18 05 44.7**	**-2.2**
	baz=14								
KBK	**Karagaybulak**	**3.55**	**20**	P			**Pb**	**18 05 13.9**	**-0.9**
	SNR=7.4								
KBK	**Karagaybulak**	**3.55**	**20**	⇓*e*P			**Pn**	**18 05 06.5**	**-0.9**
	baz=19								
KBK				⇓*e*S			**Sn**	**18 05 47.6**	**-2.4**
	baz=19								
TAS	**Tashkent**	**3.65**	**304**	⇓*i*P			**Pn**	**18 05 09.7**	**+1.1**
	baz=3.0								
TAS				⇓*i*S			**Sn**	**18 05 53.7**	**+1.5**
	baz=3.0								
ULHL	**Ulahol**	**3.67**	**37**	P			**Pb**	**18 05 16.0**	**-0.8**
	SNR=14								
BOOM	**Boomskoye usch**	**3.74**	**32**	⇑*e*P			**Pn**	**18 05 09.2**	**-0.8**
	baz=31								
BOOM				⇑*i*S			**Sn**	**18 05 51.9**	**-2.8**
	baz=31								
IUG	**Iuzhnay**	**3.75**	**320**	*e*P			**Pb**	**18 05 19.7**	**+1.6**
	874nm,0.4s								
IUG				*e*S			**Sg**	**18 06 09.5**	**-2.2**
	200nm,0.7s								
IUG	**Iuzhnay**	**3.75**	**320**	Pg			Pg	18 05 28.7	+5.6
	2µm,0.7s								
IUG				Lg			Lg	18 06 14.1	
	200nm,0.7s								
CHMS	**Chumysh**	**3.83**	**16**	P			**Pn**	**18 05 13.0**	**+2.0**
	SNR=10								
DZA	**Taraz**	**3.86**	**338**	*e*P			**Pb**	**18 05 20.5**	**+0.6**
	60nm,0.3s								
DZA				*e*S			**Sb**	**18 06 09.8**	**+2.9**
	200nm,0.4s								
DZA	**Taraz**	**3.86**	**338**	Pg			**Pg**	**18 05 27.7**	**+2.6**
DZA				Lg			Lg	18 06 12.5	
TKM2	**Tokmak 2**	**3.99**	**25**	⇓*e*P			**Pn**	**18 05 12.8**	**-0.6**
	baz=24								
TKM2				⇓*e*S			**Sn**	**18 05 58.0**	**-2.8**
	baz=24								
TKM2	**Tokmak 2**	**3.99**	**25**	⇓Pg			**Pb**	**18 05 23.0**	**+0.8**
	14nm,0.5s								
TKM2				⇑Lg			Lg	18 06 11.7	
	47nm,0.8s								
USP	**Ospenovka**	**4.04**	**13**	P			**Pn**	**18 05 15.4**	**+1.5**
	SNR=5.3								
KDJ	**Kajisay**	**4.07**	**45**	⇓*e*P			**Pn**	**18 05 13.8**	**-0.7**
	baz=45								
KDJ				⇓*i*S			**Sn**	**18 05 59.4**	**-3.3**
	baz=45								
KST	**Kastek**	**4.22**	**28**	*e*P			**Pb**	**18 05 26.0**	**-0.1**
	10nm,0.6s								
KST				*e*S			**Sb**	**18 06 19.5**	**+1.9**
	95nm,0.8s								
KST	**Kastek**	**4.22**	**28**	Pg			**Pg**	**18 05 31.8**	**-0.3**
	6.9nm,0.3s								
KST				Lg			Lg	18 06 20.6	
	95nm,0.8s								
SGDS	**Sogindy**	**4.24**	**13**	*e*P			**Pb**	**18 05 24.9**	**-1.5**
	12nm,0.6s								
SGDS				*e*S			**Sb**	**18 06 18.8**	**+0.7**
	42nm,0.7s								
SGDS	**Sogindy**	**4.24**	**13**	Pg			**Pg**	**18 05 32.0**	**-0.3**
	6.9nm,0.3s								
SGDS				Lg			Lg	18 06 20.1	
	42nm,0.7s								
KK31	**Karatay Array**	**4.32**	**332**	Pg			**Pb**	**18 05 30.4**	**+2.8**
	18nm,0.5s,baz=139,slow=16,SNR=9.6								
KK31				⇓Lg			Lg	18 06 24.5	
	30nm,0.4s,baz=138,slow=31,SNR=4.1								
KKAR	**Karatay Array**	**4.32**	**332**	⇑*e*P			**Pn**	**18 05 18.5**	**+0.7**
	baz=30								
KKAR				⇑*e*S			**Sn**	**18 06 08.1**	**-0.5**
	baz=30								
DGS	**Degeres**	**4.33**	**25**	*e*P			**Pb**	**18 05 29.0**	**+1.0**
	22nm,0.6s								
DGS				*e*S			**Sb**	**18 06 24.7**	**+4.0**
	90n

	71nm,0.6s								
KUU	**Kurty**	**5.10**	**26**	*e*P	**Pb**	**18 05 42.4**	**+1.4**
	4.3nm,0.7s								
KUU				*e*S	**Sb**	**18 06 47.6**	**+4.9**
	61nm,0.4s								
KUU	**Kurty**	**5.10**	**26**	Pg	**Pg**	**18 05 47.8**	**-1.0**
	6.8nm,0.6s								
KUU				Lg	Lg	18 06 47.6	
	61nm,0.4s								
CHKK	**Chushkaly**	**5.30**	**30**	*e*P	**Pb**	**18 05 45.9**	**+1.5**
	3.1nm,0.5s								
CHKK				*e*S	**Sb**	**18 06 53.5**	**+5.0**
	30nm,0.9s								
CHKK	**Chushkaly**	**5.30**	**30**	Pg	**Pg**	**18 05 51.8**	**-0.9**
	3.2nm,0.5s								
CHKK				Lg	Lg	18 06 54.3	
	30nm,0.9s								
SATY	**Saty**	**5.36**	**44**	*e*P	**Pb**	**18 05 46.8**	**+1.2**
	8.2nm,0.8s								
SATY				*e*S	**Sb**	**18 06 55.1**	**+4.7**
	24nm,0.7s								
SATY	**Saty**	**5.36**	**44**	Pg	**Pg**	**18 05 54.1**	**+0.2**
	16nm,0.8s								
SATY				Lg	Lg	18 06 58.0	
	24nm,0.7s								
ZHN	**Zhinishke**	**5.45**	**44**	*e*P	**Pb**	**18 05 47.6**	**+0.5**
	6.5nm,0.3s								
ZHN				*e*S	**Sb**	**18 06 57.3**	**+4.4**
	26nm,1.2s								
ZHN	**Zhinishke**	**5.45**	**44**	Pg	**Pg**	**18 05 53.5**	**-2.0**
	9.1nm,0.2s								
ZHN				Lg	Lg	18 06 57.3	
	26nm,1.2s								
KURS	**Kuram**	**5.54**	**40**	*e*P	**Pb**	**18 05 50.0**	**+1.4**
	5.9nm,0.6s								
KURS				*e*S	**Sb**	**18 07 00.4**	**+4.9**
	29nm,1.4s								
KURS	**Kuram**	**5.54**	**40**	Pg	**Pg**	**18 05 55.9**	**-1.3**
	7.2nm,0.6s								
KURS				Lg	Lg	18 07 02.0	
	29nm,1.4s								
BTLS	**Baital**	**5.73**	**5**	*e*P	**Pb**	**18 05 53.3**	**+1.5**
	7.8nm,0.6s								
BTLS				*e*S	**Sb**	**18 07 06.4**	**+5.5**
	8.3nm,0.3s								
BTLS	**Baital**	**5.73**	**5**	Pg	**Pg**	**18 05 59.6**	**-1.4**
	4.2nm,0.3s								
BTLS				Lg	Lg	18 07 07.7	
	8.3nm,0.3s								
KPKS	**Kokpek**	**5.79**	**43**	*e*P	**Pb**	**18 05 54.1**	**+1.3**
	8.5nm,0.8s								
KPKS				*e*S	**Sb**	**18 07 07.6**	**+5.1**
	22nm,0.7s								
KPKS	**Kokpek**	**5.79**	**43**	Pg	**Pg**	**18 05 59.4**	**-2.6**
	8.7nm,0.5s								
KPKS				Lg	Lg	18 07 07.6	
	22nm,0.7s								
SHLS	**Shalkode**	**6.02**	**49**	*e*P	**Pg**	**18 06 04.8**	**-1.7**
	4.7nm,0.5s								
SHLS				*e*S	**Sg**	**18 07 26.5**	**+2.1**
	13nm,0.8s								
SHLS	**Shalkode**	**6.02**	**49**	Pg	**Pg**	**18 06 10.3**	**+3.9**
PDGK	**Podgornoye**	**6.14**	**47**	Pg	**Pg**	**18 06 06.1**	**-2.6**
	2.6nm,0.5s								
BLB	**Baldybastay**	**6.14**	**37**	*e*P	**Pb**	**18 06 00.6**	**+1.8**
	7.4nm,0.6s								
BLB				*e*S	**Sb**	**18 07 19.7**	**+6.9**
	30nm,0.9s								
BLB	**Baldybastay**	**6.14**	**37**	Pg	**Pg**	**18 06 06.8**	**-2.0**
	9.8nm,0.9s								
DJR	**Jarkent**	**6.96**	**42**	*e*P	**Pb**	**18 06 14.0**	**+1.2**
	1.4nm,0.5s								
DJR				*e*S	**Sb**	**18 07 42.9**	**+6.5**
	8.3nm,1.2s								
DJR	**Jarkent**	**6.96**	**42**	Pg	**Pg**	**18 06 21.2**	**-3.3**
	3.5nm,0.4s								
MKAR	**Makanchi Array**	**9.94**	**38**	Pn	**Pn**	**18 06 35.0**	**+0.1**
	baz=227,slow=13,SNR=2.0								
MKAR				Lg	Lg	18 09 22.0	
	0.1nm,0.3s,baz=230,slow=28,SNR=5.9								
KURBB	**Kurchatov Arra**	**11.88**	**16**	Pn	**Pn**	**18 07 00.0**	**-1.4**
	baz=210,slow=12,SNR=2.5								
KURBB				Lg	Lg	18 10 18.8	
	baz=198,slow=28,SNR=5.0								
	0.3nm,0.8s								
GEYT	**Alibeck**	**11.96**	**268**	Pn	**Pn**	**18 07 03.6**	**+1.0**
	0.5nm,0.3s,baz=135,slow=57,SNR=2.2								
	1.4nm,0.5s								
AB31	**Akbulak array**	**13.76**	**320**	P	**Pn**	**18 07 25.6**	**-1.4**
	0.9nm,0.5s,baz=131,slow=13,SNR=11								
AKTO	**Aktyubinsk**	**15.47**	**321**	Pn	**Pn**	**18 07 51.1**	**+0.8**
	0.3nm,0.3s,baz=124,slow=15,SNR=2.9								
AKTO	**Aktyubinsk**	**15.47**	**321**	⇓P	**P**	**18 07 54.7**	**-0.2**
	3.2nm,0.7s								
ZALV	**Zalesovo Beam**	**16.59**	**24**	Pn	**Pn**	**18 08 03.5**	**-1.1**
	0.1nm,0.3s,baz=214,slow=11,SNR=4.3								
	0.9nm,0.6s								
ARU	**Arti**	**19.68**	**335**	P	**Pn**	**18 08 42.9**	**+0.2**
	baz=133,slow=19,SNR=1.8								
	1.7nm,0.5s								
KBZ	**Khabaz**	**23.11**	**291**	P	**P**	**18 09 18.5**	**+0.3**
	1.5nm,0.7s,baz=95,slow=6.1,SNR=3.7								
	1.5nm,0.7s								
BRTR	**Keskin Array B**	**30.42**	**284**	P	**P**	**18 10 26.2**	**+1.3**
	1.5nm,0.8s,baz=87,slow=8.0,SNR=8.6								
	1.5nm,0.8s								
AKASG	**Malin Array Be**	**32.70**	**305**	P	**P**	**18 10 44.2**	**-0.5**
	0.5nm,0.5s,baz=79,slow=7.5,SNR=7.0								
	0.5nm,0.5s								
FINES	**FINESS Array B**	**36.22**	**323**	P	**P**	**18 11 14.8**	**-0.3**
	0.6nm,0.4s,baz=111,slow=10,SNR=7.3								
	0.6nm,0.4s								
ARCES	**ARCESS Array B**	**39.27**	**336**	P	**P**	**18 11 40.4**	**-0.4**
	1.0nm,0.7s,baz=123,slow=9.0,SNR=5.8								
	1.0nm,0.7s								
YKA	**Yellowknife Ar**	**78.32**	**4**	P	**P**	**18 16 11.4**	**-0.9**
	0.2nm,0.5s,baz=351,slow=5.4,SNR=2.8								
	0.2nm,0.5s								
WRA	**Warramunga Arr**	**82.00**	**124**	P	**P**	**18 16 32.2**	**-0.6**
	0.6nm,0.9s,baz=329,slow=5.0,SNR=5.5								
	0.6nm,0.9s								
ASAR	**Alice Springs**	**84.43**	**127**	P	**P**	**18 16 44.4**	**-0.9**
	0.3nm,0.3s,baz=352,slow=5.6,SNR=2.4								
	0.3nm,0.9s								

*SOME **26** 18:09:28.8,39˚.68N×73˚.37E,h5km*
*KRNET **26** 18:09:29.3±0.1,39˚.47N×73˚.56E,mb3.7*

ISC 26 18:09:26.9±1.5,**39˚.56N**±0˚.05×**73˚.60E**±0˚.03,**h3**km±12km,
n34,σ1**961**/65,**12C-6D,Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.15**	**327**	⇑*e*P	**Pn**	**18 09 52.1**	**+2.1**
	baz=31						
OHH				⇑*e*S	**Sn**	**18 10 09.0**	**+2.6**
	baz=31						
DRK	**Karamyk**	**1.39**	**268**	⇓*e*P	**Pb**	**18 09 55.2**	**+1.4**
	baz=71						
DRK				⇓*e*S	**Sn**	**18 10 13.9**	**+1.3**
	baz=71						
BTK	**Batken**	**2.20**	**284**	⇑*e*P	**Pg**	**18 10 08.9**	**-0.2**
	baz=86						
BTK				⇑*e*S	**Sg**	**18 10 37.5**	**-0.1**
	baz=86						
ARLS	**Aral**	**2.37**	**13**	⇑*e*P	**Pg**	**18 10 12.4**	**+0.1**
	baz=14						
ARLS				⇑*e*S	**Sg**	**18 10 44.0**	**+1.0**
	baz=14						
GAR	**Garm**	**2.61**	**259**	⇓*e*P	**Pb**	**18 10 14.2**	**-0.1**
	baz=60						
GAR				⇓*e*S	**Sb**	**18 10 46.6**	**-0.2**
	baz=60						
TRKS	**Terek-Say**	**2.72**	**317**	⇑*e*P	**Pb**	**18 10 15.9**	**-0.4**
	baz=18						
TRKS				⇑*i*S	**Sb**	**18 10 50.0**	**-0.1**
	baz=18						
UCH	**Uchtor**	**2.76**	**14**	⇓*e*P	**Pb**	**18 10 18.2**	**+1.1**
	baz=14						
UCH				⇓*i*S	**Sg**	**18 10 53.8**	**-1.8**
	baz=14						
AAK	**Ala-Archa**	**3.15**	**12**	⇑*e*P	**Pb**	**18 10 23.4**	**-0.3**
	baz=12						
AAK				⇑*e*S	**Sb**	**18 11 03.0**	**+0.4**
	baz=12						
BOOM	**Boomskoye usch**	**3.43**	**30**	⇑*e*P	**Pb**	**18 10 26.9**	**-1.4**
	baz=30						
BOOM				⇑*i*S	**Sb**	**18 11 09.5**	**-0.9**
	baz=30						

IUG	**luzhnay**	**3.75**	**315**	*e*P	Pn	18 10 16.8	-8.9
	134nm,0.6s								
IUG				*e*S	**Sb**	**18 11 18.5**	**-1.1**
	42nm,0.8s								
IUG	**luzhnay**	**3.75**	**315**	*e*P	**Pb**	**18 10 33.2**	**-0.5**
	181nm,0.3s								
IUG				*e*S	**Sb**	**18 11 19.3**	**-0.3**
	43nm,0.6s								
KST	**Kastek**	**3.91**	**26**	*e*P	**Pn**	**18 10 26.2**	**-1.8**
	2.9nm,0.5s								
KST				*e*S	**Sg**	**18 11 34.3**	**+1.7**
	41nm,0.8s								
KST	**Kastek**	**3.91**	**26**	*e*P	**Pg**	**18 10 41.4**	**-0.5**
	4.3nm,0.4s								
KST				*e*S	**Sg**	**18 11 34.1**	**+1.5**
	41nm,0.9s								
SGDS	**Sogindy**	**3.97**	**11**	*e*P	**Pn**	**18 10 27.3**	**-1.4**
	2.0nm,0.5s								
SGDS				*e*S	**Sg**	**18 11 37.0**	**+2.6**
	15nm,0.9s								
SGDS	**Sogindy**	**3.97**	**11**	*e*P	**Pg**	**18 10 43.1**	**+0.2**
	2.9nm,0.7s								
SGDS				*e*S	**Sg**	**18 11 36.5**	**+2.1**
	15nm,0.9s								
DGS	**Degeres**	**4.03**	**23**	*e*P	**Pn**	**18 10 27.9**	**-1.7**
	6.7nm,0.6s								
DGS				*e*S	**Sg**	**18 11 37.5**	**+1.1**
	34nm,0.8s								
MTBS	**Maitube**	**4.16**	**30**	*e*P	**Pg**	**18 10 47.0**	**+0.4**
	8.9nm,0.5s								
MTBS				*e*S	**Sg**	**18 11 43.6**	**+3.2**
	20nm,0.7s								
TNSS	**Tian-Shan**	**4.30**	**35**	*e*P	**Pg**	**18 10 49.6**	**+0.3**
	5.6nm,0.7s								
TNSS				*e*S	**Sg**	**18 11 47.7**	**+2.8**
	13nm,0.5s								
KRBS	**Karabastau**	**4.42**	**20**	*e*P	**Pn**	**18 10 35.0**	**0.0**
	0.5nm,0.9s								
KRBS				*e*S	**Sg**	**18 11 50.2**	**+1.3**
	21nm,0.8s								
BRLS	**Boroldaу**	**4.48**	**322**	*e*P	**Pn**	**18 10 31.3**	**-4.4**
	3.8nm,0.3s								
BRLS				*e*S	**Sb**	**18 11 43.5**	**+2.8**
	14nm,0.5s								
BRLS	**Boroldaу**	**4.48**	**322**	*e*P	**Pb**	**18 10 44.9**	**-1.4**
	5.4nm,1.0s								
BRLS				*e*S	**Sb**	**18 11 39.3**	**-1.4**
	5.8nm,0.6s								
KTBS	**Karatobe**	**4.75**	**28**	*e*P	**Pg**	**18 10 57.5**	**-0.4**
	3.8nm,0.8s								
KTBS				*e*S	**Sg**	**18 12 01.7**	**+2.2**
	37nm,0.7s								
KUU	**Kurty**	**4.79**	**24**	*e*P	**Pg**	**18 10 57.7**	**-1.1**
	2.8nm,0.4s								
KUU				*e*S	**Sg**	**18 12 02.0**	**+1.1**
	33nm,0.8s								
CHKK	**Chushkaly**	**4.99**	**29**	*e*P	**Pg**	**18 11 01.4**	**-1.1**
	1.8nm,0.5s								
CHKK				*e*S	**Sg**	**18 12 08.3**	**+1.2**
	13nm,0.6s								
SATY	**Saty**	**5.04**	**44**	*e*P	**Pg**	**18 11 02.5**	**-0.9**
	5.3nm,0.3s								
SATY				*e*S	**Sg**	**18 12 10.4**	**+1.8**
	17nm,1.0s								
ZHN	**Zhinishke**	**5.12**	**44**	*e*P	**Pg**	**18 11 03.8**	**-1.3**
	4.3nm,0.2s								
ZHN				*e*S	**Sg**	**18 12 11.9**	**+0.5**
	16nm,0.7s								
KURS	**Kuram**	**5.22**	**40**	*e*P	**Pg**	**18 11 06.1**	**-0.8**
	1.9nm,0.5s								
KURS				*e*S	**Sg**	**18 12 16.4**	**+2.0**
	11nm,1.1s								
KPKS	**Kokpek**	**5.46**	**43**	*e*P	**Pg**	**18 11 09.6**	**-2.0**
	4.3nm,0.5s								
KPKS				*e*S	**Sg**	**18 12 22.4**	**+0.1**
	12nm,0.7s								
BTLS	**Baital**	**5.49**	**3**	*e*P	Pn	18 10 56.0	+6.4
	1.1nm,0.3s								
BTLS				*e*S	**Sg**	**18 12 25.6**	**+2.3**
	8.4nm,0.6s								
BTLS	**Baital**	**5.49**	**3**	*e*P	**Pg**	**18 11 10.9**	**-1.2**
	1.3nm,0.2s								
BTLS				*e*S	**Sg**	**18 12 23.9**	**+0.7**
	8.4nm,0.7s								
ARXS	**Arharly**	**5.62**	**33**	*e*P	**Pg**	**18 11 12.8**	**-1.8**
	4.5nm,0.6s								
ARXS				*e*S	**Sg**	**18 12 28.0**	**+0.5**
	9.9nm,0.8s								
SHLS	**Shalkode**	**5.69**	**49**	*e*P	**Pg**	**18 11 19.6**	**+3.7**
	2.5nm,0.5s								
SHLS				*e*S	Sg	18 12 39.1	+9.4
	5.9nm,0.7s								
BLB	**Baldybastay**	**5.82**	**37**	*e*P	**Pg**	**18 11 16.9**	**-1.5**
	11nm,0.7s								
BLB				*e*S	**Sg**	**18 12 34.3**	**+0.5**
	8.9nm,0.8s								
TDK	**Taldyqorghan**	**6.51**	**32**	*e*P	**Pg**	**18 11 29.1**	**-2.4**
	10nm,0.3s								
TDK				*e*S	**Sg**	**18 12 55.4**	**-0.4**
	21nm,0.4s								

ISU 26 18:14:50.6,40˚.31N×72˚.01E,h20km,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FRG	**Fergana**	**0.18**	**292**	P	Pb	18 14 53.4	-2.2
FRG				S	Sb	18 14 57.3	-1.7
CHMI	**Chimion**	**0.37**	**265**	P	Pb	18 14 58.2	-0.4
CHMI				S	Sb	18 15 04.1	+0.1
MINT	**Mingtut**	**0.81**	**282**	P	Pn	18 15 12.3	+5.4

KRNET 26 18:15:41.0±0.1,**39˚.48N**×**73˚.65E,mb2.9,6C-4D,**
Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.24**	**328**	⇑*e*P	Pg	18 16 04.6	-0.1
	baz=28						
OHH				⇑*e*S	Sb	18 16 21.5	-0.3
	baz=28						
DRK	**Karamyk**	**1.43**	**271**	⇑*e*P	Pg	18 16 07.9	-0.5
	baz=71						
DRK				⇑*e*S	Sb	18 16 27.6	0.0
	baz=71						
BTK	**Batken**	**2.26**	**286**	⇓*e*P	Pb	18 16 21.5	-1.2
	baz=86						
BTK				⇓*e*S	Sb	18 16 51.1	-0.1
	baz=86						
ARLS	**Aral**	**2.43**	**12**	⇑*e*P	Pn	18 16 23.8	+1.6
	baz=12						
ARLS				⇑*e*S	Sb	18 16 55.1	-1.3
	baz=12						
GAR	**Garm**	**2.63**	**261**	⇓*e*P	Pn	18 16 26.6	+1.8
	baz=61						
GAR				⇓*e*S	Sb	18 16 59.9	-2.1
	baz=61						

*IDC **26** 18:22:35.8±0.9,39˚.25N×73˚.60E,h0km,mb3.6/10,*
mbtmp3.6/16,ML2.9/6,MS2.9/3,Error ellipse:
s-maj=18.2km s-min=14.9km az=114.0
*KRNET **26** 18:22:36.7±0.1,39˚.43N×73˚.62E,mb4.4*
*SOME **26** 18:22:36.9,39˚.57N×73˚.57E,h5km*
*NNC **26** 18:22:39.8±1.4,39˚.64N×73˚.56E,h0km,mb4.6,mpv4.2,*
Error ellipse: s-maj=11.5km s-min=5.5km az=171.0

ISC 26 18:22:36.8±1.4,**39˚.29N**±0˚.05×**73˚.50E**±0˚.03,**h3**km±9km,
n101,σ2**05**/138,**mb3.6**/10,**25C-17D,Tajikistan-Xinjiang**
border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk**	**1.33**	**279**	⇓*e*P	**Pg**	**18 23 03.5**	**+1.2**
	baz=73						
DRK				⇓*i*S	**Sg**	**18 23 23.0**	**+3.4**
	baz=73						
OHH	**Osh**	**1.35**	**336**	⇑*e*P	**Pn**	**18 23 00.6**	**-2.0**
	baz=30						
OHH				⇑*i*S	**Sb**	**18 23 18.5**	**-1.9**
	baz=30						
BTK	**Batken**	**2.21**	**291**	⇑*i*P	**Pb**	**18 23 17.3**	**-0.1**
	baz=87						
BTK				⇑*i*S	**Sb**	**18 23 46.8**	**+1.6**
	baz=87						
GAR	**Garm**	**2.49**	**264**	⇑*e*P	**Pb**	**18 23 22.1**	**-0.2**
	baz=62						

GAR				⇑*i*S	**Sb**	**18 23 55.4**	**+1.9**
	baz=62								
ARLS	**Aral**	**2.64**	**13**	⇓*e*P	**Pn**	**18 23 20.3**	**-0.2**
	baz=12								
ARLS				⇓*e*S	**Sn**	**18 23 52.3**	**-0.8**
	baz=12								
ARK	**Arkit**	**2.76**	**335**	⇑*i*P	**Pn**	**18 23 23.1**	**+1.0**
	baz=32								
ARK				⇑*e*S	**Sn**	**18 23 57.2**	**+1.2**
	baz=32								
AML	**Almayashu**	**2.84**	**3**	P	**Pn**	**18 23 24.0**	**+0.6**
	SNR=35								
TRKS	**Terek-Say**	**2.87**	**322**	⇑*i*P	**Pn**	**18 23 24.6**	**+1.0**
	baz=18								
TRKS				⇑*i*S	**Sn**	**18 23 59.0**	**+0.2**
	baz=18								
UCH	**Uchtor**	**3.03**	**14**	P	**Pn**	**18 23 26.9**	**+0.8**
	SNR=35								
UCH	**Uchtor**	**3.03**	**14**	⇓*e*P	**Pn**	**18 23 26.1**	**0.0**
	baz=13								
UCH				⇓*e*S	**Sn**	**18 24 02.2**	**-0.9**
	baz=13								
EKS2	**Erkin-Say**	**3.37**	**3**	P	**Pn**	**18 23 31.9**	**+1.4**
	SNR=16								
EKS2	**Erkin-Say**	**3.37**	**3**	⇑*i*P	**Pn**	**18 23 30.8**	**+0.3**
	baz=2.0								
EKS2				⇑*i*S	**Sn**	**18 24 10.3**	**-0.8**
	baz=2.0								
AAK	**Ala-Archa**	**3.42**	**12**	P	**Pn**	**18 23 32.1**	**+0.9**
	SNR=24								
AAK	**Ala-Archa**	**3.42**	**12**	Pn	**Pn**	**18 23 33.5**	**+2.2**
	8.7nm,0.3s,baz=201,slow=11,SNR=27								
AAK				Sn	**Sb**	**18 24 18.1**	**-2.2**
	8.2nm,0.3s,baz=280,slow=22,SNR=3.9								
	68nm,0.5s								
AAK	**Ala-Archa**	**3.42**	**12**	⇑*e*P	**Pn**	**18 23 31.3**	**+0.1**
	baz=11								
AAK				⇑*e*S	**Sn**	**18 24 11.5**	**-0.9**
	baz=11								
CHGR	**Chuyangaron**	**3.44**	**261**	⇓*e*P	**Pb**	**18 23 35.4**	**-3.1**
	baz=59								
CHGR				⇓*e*S	**Sb**	**18 24 18.3**	**-2.5**
	baz=59								
KBK	**Karagaybulak**	**3.53**	**18**	P	**Pn**	**18 23 34.9**	**+2.2**
	SNR=42								
KBK	**Karagaybulak**	**3.53**	**18**	⇓*e*P	**Pn**	**18 23 32.8**	**0.0**
	baz=17								
KBK				⇓*e*S	**Sn**	**18 24 13.9**	**-1.3**
	baz=17								
ULHL	**Ulahol**	**3.61**	**34**	P	**Pb**	**18 23 39.9**	**-1.5**
	SNR=128								
ULHL	**Ulahol**	**3.61**	**34**	⇓*e*P	**Pn**	**18 23 33.7**	**-0.1**
	baz=34								
ULHL				⇓*e*S	**Sn**	**18 24 15.5**	**-1.6**
	baz=34								
BOOM	**Boomskoye usch**	**3.69**	**29**	⇑*i*P	**Pn**	**18 23 35.3**	**+0.4**
	baz=29								
BOOM				⇑*i*S	**Sn**	**18 24 17.1**	**-1.9**
	baz=29								
TAS	**Tashkent**	**3.80**	**304**	⇓*e*P	**Pn**	**18 23 38.9**	**+2.6**
	baz=1.0								
TAS				⇓*i*S	**Sn**	**18 24 24.0**	**+2.5**
	baz=1.0								
CHMS	**Chumysh**	**3.82**	**14**	P	**Pn**	**18 23 38.8**	**+2.2**
	SNR=16								
CHMS	**Chumysh**	**3.82**	**14**	⇑*e*P	**Pn**	**18 23 36.5**	**-0.1**
	baz=13								
CHMS				⇑*e*S	**Sn**	**18 24 20.6**	**-1.4**
	baz=13								
IUG	**luzhnay**	**3.88**	**318**	*e*P	**Pb**	**18 23 44.3**	**-1.7**
	877nm,0.5s								
IUG				*e*S	**Sb**	**18 24 32.6**	**-0.8**
	450nm,0.7s								
IUG	**luzhnay**	**3.88**	**318**	Pg	**Pb**	**18 23 44.3**	**-1.7**
	877nm,0.5s								
IUG				Lg	Lg	18 24 32.6			
	450nm,0.7s								
DZA	**Taraz**	**3.95**	**336**	*e*P	**Pb**	**18 23 45.5**	**-1.6**
	40nm,0.2s								
DZA				*e*S	**Sb**	**18 24 34.4**	**-0.9**
	243nm,0.3s								
DZA	**Taraz**	**3.95**	**336**	Pg	**Pb**	**18 23 45.5**	**-1.6**
	40nm,0.2s								
DZA				Lg	Lg	18 24 34.4			
	243nm,0.3s								
TKM2	**Tokmak 2**	**3.95**	**23**	P	**Pn**	**18 23 39.8**	**+1.2**
	SNR=34								
TKM2	**Tokmak 2**	**3.95**	**23**	⇓*e*P	**Pn**	**18 23 38.7**	**+0.1**
	baz=22								
TKM2				⇓*e*S	**Sn**	**18 24 23.8**	**-1.8**
	baz=22								
TKM2	**Tokmak 2**	**3.95**	**23**	⇑Pg	**Pn**	**18 23 41.5**	**+2.9**
	24nm,0.6s								
TKM2				⇑Lg	Lg	18 24 35.9			
	58nm,0.7s								
USP	**Ospenovka**	**4.04**	**10**	P	**Pn**	**18 23 41.9**	**+2.3**
	SNR=11								
KST	**Kastek**	**4.18**	**26**	*e*P	**Pb**	**18 23 50.6**	**-0.5**
	25nm,0.5s								
KST				*e*S	**Sb**	**18 24 43.4**	**+1.3**
	163nm,0.9s								
KST	**Kastek**	**4.18**	**26**	Pg	**Pb**	**18 23 50.6**	**-0.5**
	25nm,0.5s								
KST				Lg	Lg	18 24 43.4			
	163nm,0.9s								
SGDS	**Sogindy**	**4.24**	**11**	*e*P	**Pb**	**18 23 51.7**	**-0.3**
	14nm,0.5s								
SGDS				*e*S	**Sb**	**18 24 45.2**	**+1.5**
	73nm,0.9s								
SGDS	**Sogindy**	**4.24**	**11**	Pg	**Pb**	**18 23 51.7**	**-0.3**
	14nm,0.5s								
SGDS				Lg	Lg	18 24 45.2			
	73nm,0.9s								
DGS	**Degeres**	**4.30**	**23**	*e*P	**Pb**	**18 23 52.8**	**-0.3**
	68nm,0.6s								
DGS				*e*S	**Sb**	**18 24 47.0**	**+1.6**
	90nm,0.6s								
DGS	**Degeres**	**4.30**	**23**	Pg	**Pb**	**18 23 52.8**	**-0.3**
	68nm,0.6s								
DGS				Lg	Lg	18 24 47.0			
	90nm,0.6s								
KK31	**Karatay Array**	**4.42**	**330**	⇑Pn	**Pn**	**18 23 46.7**	**+1.9**
	3.0nm,0.3s,baz=139,slow=9.5,SNR=65								
KK31				Lg	Lg	18 24 52.2			
	35nm,0.5s,baz=152,slow=27,SNR=4.9								
MTBS	**Maitube**	**4.42**	**29**	*e*P	**Pb**	**18 23 54.2**	**-0.9**
	56nm,0.6s								
MTBS				*e*S	**Sb**	**18 24 50.2**	**+1.2**
	62nm,0.5s								
MTBS	**Maitube**	**4.42**	**29**	Pg	**Pb**	**18 23 54.2**	**-0.9**
	56nm,0.6s								
MTBS				Lg	Lg	18 24 50.2			
	62nm,0.5s								
TNSS	**Tian-Shan**	**4.55**	**34**	*e*P	**Pb**	**18 23 57.9**	**+0.2**
	25nm,0.3s								
TNSS				*e*S	**Sb**	**18 24 55.6**	**+2.5**
	49nm,0

KTBS	**Karatobe**	**5.02**	**27**	*e*P	**Pb**	**18 24 05.6**	**+0.3**
	31nm,0.7s							
KTBS				*e*S	**Sb**	**18 25 09.7**	**+3.7**
	97nm,0.5s							
KTBS	**Karatobe**	**5.02**	**27**	Pg	**Pb**	**18 24 05.6**	**+0.3**
	31nm,0.7s							
KTBS				Lg	Lg	18 25 09.7		
	97nm,0.5s							
KUU	**Kurty**	**5.06**	**24**	*e*P	**Pb**	**18 24 06.5**	**+0.4**
	26nm,0.6s							
KUU				*e*S	**Sb**	**18 25 10.7**	**+3.4**
	104nm,0.7s							
KUU	**Kurty**	**5.06**	**24**	Pg	**Pb**	**18 24 06.5**	**+0.4**
	26nm,0.6s							
KUU				Lg	Lg	18 25 10.7		
	104nm,0.7s							
CHKK	**Chushkaly**	**5.25**	**29**	*e*P	**Pb**	**18 24 09.7**	**+0.4**
	16nm,0.7s							
CHKK				*e*S	**Sb**	**18 25 16.4**	**+3.7**
	47nm,0.7s							
CHKK	**Chushkaly**	**5.25**	**29**	Pg	**Pb**	**18 24 09.7**	**+0.4**
	16nm,0.7s							
CHKK				Lg	Lg	18 25 16.4		
	47nm,0.7s							
SATY	**Saty**	**5.28**	**43**	*e*P	**Pb**	**18 24 10.5**	**+0.7**
	21nm,0.7s							
SATY				*e*S	**Sb**	**18 25 17.6**	**+4.1**
	80nm,1.1s							
SATY	**Saty**	**5.28**	**43**	Pg	**Pb**	**18 24 10.5**	**+0.7**
	21nm,0.7s							
SATY				Lg	Lg	18 25 17.6		
	80nm,1.1s							
ZHN	**Zhinishke**	**5.37**	**42**	*e*P	**Pb**	**18 24 11.8**	**+0.5**
	19nm,0.5s							
ZHN				*e*S	**Sb**	**18 25 19.8**	**+3.6**
	77nm,1.1s							
ZHN	**Zhinishke**	**5.37**	**42**	Pg	**Pb**	**18 24 11.8**	**+0.5**
	19nm,0.5s							
ZHN				Lg	Lg	18 25 19.8		
	77nm,1.1s							
KURS	**Kuram**	**5.47**	**38**	*e*P	**Pb**	**18 24 13.8**	**+0.8**
	17nm,0.8s							
KURS				*e*S	**Sb**	**18 25 23.3**	**+4.3**
	39nm,1.8s							
KURS	**Kuram**	**5.47**	**38**	Pg	**Pb**	**18 24 13.8**	**+0.8**
	17nm,0.8s							
KURS				Lg	Lg	18 25 23.3		
	39nm,1.8s							
KPKS	**Kokpek**	**5.71**	**41**	*e*P	**Pb**	**18 24 17.2**	**+0.1**
	22nm,0.5s							
KPKS				*e*S	**Sb**	**18 25 29.3**	**+3.4**
	54nm,0.8s							
KPKS	**Kokpek**	**5.71**	**41**	Pg	**Pb**	**18 24 17.2**	**+0.1**
	22nm,0.5s							
KPKS				Lg	Lg	18 25 29.3		
	54nm,0.8s							
BTLS	**Baital**	**5.76**	**4**	*e*P	**Pb**	**18 24 19.1**	**+1.2**
	13nm,0.8s							
BTLS				*e*S	**Sb**	**18 25 32.6**	**+5.4**
	24nm,0.6s							
BTLS	**Baital**	**5.76**	**4**	Pg	**Pb**	**18 24 19.1**	**+1.2**
	13nm,0.8s							
BTLS				Lg	Lg	18 25 32.6		
	24nm,0.6s							
ARXS	**Arharly**	**5.88**	**32**	*e*P	**Pb**	**18 24 21.0**	**+1.0**
	30nm,0.6s							
ARXS				*e*S	**Sb**	**18 25 36.0**	**+5.1**
	83nm,1.0s							
ARXS	**Arharly**	**5.88**	**32**	Pg	**Pb**	**18 24 21.0**	**+1.0**
	30nm,0.6s							
ARXS				Lg	Lg	18 25 36.0		
	83nm,1.0s							
SHLS	**Shalkode**	**5.92**	**47**	*e*P	**Pg**	**18 24 27.3**	**-3.0**
	20nm,0.6s							
SHLS				*e*S	**Sg**	**18 25 46.4**	**-0.6**
	37nm,0.8s							
SHLS	**Shalkode**	**5.92**	**47**	Pg	**Pg**	**18 24 27.3**	**-3.0**
	20nm,0.6s							
SHLS				Lg	Lg	18 25 46.4		
	37nm,0.8s							
PDGK	**Podgornoye**	**6.05**	**46**	Pg	**Pb**	**18 24 24.5**	**+1.6**
	7.7nm,0.6s							
PDGK				Lg	Lg	18 25 41.6		
	23nm,1.1s							
PDGK	**Podgornoye**	**6.05**	**46**	⇑Pg	**Pb**	**18 24 25.3**	**+2.4**
	20nm,0.7s							
PDGK				⇑Lg	Lg	18 25 41.0		
	73nm,0.9s							
BLB	**Baldybastay**	**6.07**	**36**	*e*P	**Pb**	**18 24 24.4**	**+1.1**
	37nm,0.7s							
BLB				*e*S	**Sb**	**18 25 41.8**	**+5.3**
	41nm,0.8s							
BLB	**Baldybastay**	**6.07**	**36**	Pg	**Pb**	**18 24 24.4**	**+1.1**
	37nm,0.7s							
BLB				Lg	Lg	18 25 41.8		
	41nm,0.8s							
KTMS	**Ketmen**	**6.61**	**49**	*e*P	Pg	18 24 39.1	-4.3	
	5.8nm,0.7s							
KTMS				*e*S	**Sg**	**18 26 06.8**	**-2.4**	
	8.0nm,0.4s							
KTMS	**Ketmen**	**6.61**	**49**	Pg	Pg	18 24 39.1	-4.3	
	5.8nm,0.7s							
KTMS				Lg	Lg	18 26 06.8		
	8.0nm,0.4s							
TDK	**Taldyqorghan**	**6.77**	**31**	*e*P	**Pb**	**18 24 37.6**	**+2.5**
	46nm,0.6s							
TDK				*e*S	**Sb**	**18 26 03.9**	**+7.6**
	87nm,0.8s							
TDK	**Taldyqorghan**	**6.77**	**31**	Pg	**Pb**	**18 24 37.6**	**+2.5**
	46nm,0.6s							
TDK				Lg	Lg	18 26 03.9		
	87nm,0.8s							
DJR	**Jarkent**	**6.88**	**41**	*e*P	**Pb**	**18 24 39.4**	**+2.3**
	5.4nm,0.7s							
DJR				*e*S	**Sb**	**18 26 07.5**	**+7.8**
	19nm,1.1s							
DJR	**Jarkent**	**6.88**	**41**	Pg	**Pb**	**18 24 39.4**	**+2.3**
	5.4nm,0.7s							
DJR				Lg	Lg	18 26 07.5		
	19nm,1.1s							
MK31	**Makanchi Array**	**9.87**	**38**	Pn	Pn	18 25 04.6	+5.0	
	1.5nm,0.6s,baz=217,slow=12,SNR=9.1							
MK31				Lg	Lg	18 27 48.1		
	4.9nm,0.9s,baz=216,slow=26,SNR=4.3							
MKAR	**Makanchi Array**	**9.87**	**38**	Pn	**Pn**	**18 25 01.6**	**+1.9**	
	baz=217,slow=13,SNR=5.1							
MKAR				Lg	Lg	18 27 41.0		
	baz=291,slow=18,SNR=2.7							
	1.3nm,0.8s							
KURBB	**Kurchatov Arra**	**11.87**	**16**	Pn	**Pn**	**18 25 25.2**	**-1.7**	
	baz=205,slow=12,SNR=6.0							
KURBB				Lg	Lg	18 28 43.1		
	baz=203,slow=29,SNR=7.9							
	0.3nm,0.6s							
GEYT	**Alibeck**	**12.11**	**268**	LR	LR	18 31 13.4		
	comp=Z,67nm,18.2s,baz=12,slow=42							
AB31	**Akbulak array**	**13.89**	**320**	P	**Pn**	**18 25 52.6**	**-1.9**	
	1.2nm,0.6s,baz=128,slow=13,SNR=15							
AKTO	**Aktyubinsk**	**15.60**	**321**	Pn	**Pn**	**18 26 16.5**	**-1.1**	
	0.2nm,0.3s,baz=125,slow=12,SNR=11							
AKTO					LR	LR	18 32 47.3	
	comp=Z,44nm,21.1s,baz=140,slow=39							
	3.7nm,0.9s							
AKTO	**Aktyubinsk**	**15.60**	**321**	⇓P	**Pn**	**18 26 17.8**	**+0.2**	
	4.4nm,0.9s							
ZALV	**Zalesovo Beam**	**16.56**	**24**	Pn	**Pn**	**18 26 29.6**	**-0.2**	
	0.2nm,0.3s,baz=216,slow=11,SNR=12							
	3.2nm,0.9s							
ARU	**Arti**	**19.78**	**335**	P	**Pn**	**18 27 09.7**	**+0.3**	
	baz=140,slow=4.1,SNR=6.1							
	3.2nm,0.6s							
CMAR	**Chiang Mai Arr**	**30.27**	**126**	LR	LR	18 41 02.3		
	comp=Z,17nm,21.5s,baz=330,slow=37							
BRTR	**Keskin Array B**	**30.58**	**284**	P	**P**	**18 28 53.9**	**+1.9**	
	0.6nm,0.7s,baz=82,slow=8.9,SNR=3.1							
	0.6nm,0.7s							
AKASG	**Malin Array Be**	**32.85**	**305**	P	**P**	**18 29 11.8**	**+0.2**	
	0.1nm,0.3s,baz=76,slow=7.2,SNR=2.8							
	0.1nm,0.3s							
FINES	**FINESS Array B**	**36.35**	**323**	P	**P**	**18 29 41.8**	**+0.1**	
	0.5nm,0.3s,baz=116,slow=9.7,SNR=11							
	0.5nm,0.3s							
ARCES	**ARCESS Array B**	**39.37**	**336**	P	**P**	**18 30 06.4**	**-0.7**	
	0.7nm,0.8s,baz=113,slow=8.9,SNR=6.2							
	0.7nm,0.8s							
NB2	**NORSAR Subarra**	**43.39**	**321**	P	**P**	**18 30 39.6**	**-0.7**	
	comp=Z,0.4nm,0.4s,baz=92,slow=8.6							
NOA	**NORSAR Array B**	**43.39**	**321**	P	**P**	**18 30 39.6**	**-0.7**	
	comp=Z,0.4nm,0.6s,baz=83,slow=6.3,SNR=2.1							
	comp=Z,0.4nm,0.6s							
TORD	**Torodi Ar. Bea**	**67.75**	**269**	P	**P**	**18 33 35.5**	**-0.6**	
	comp=Z,0.3nm,0.5s,baz=47,slow=5.1,SNR=6.0							
	comp=Z,0.3nm,0.5s							
ILAR	**Eielson Array**	**71.54**	**17**	P	**P**	**18 33 59.5**	**+0.8**	
	comp=Z,0.4nm,0.7s,baz=319,slow=4.1,SNR=4.9							
	comp=Z,0.4nm,0.7s							
YKA	**Yellowknife Ar**	**78.35**	**4**	P	**P**	**18 34 36.7**	**-1.3**	
	comp=Z,0.2nm,0.6s,baz=350,slow=5.9,SNR=2.3							
	comp=Z,0.2nm,0.6s							
WRA	**Warramunga Arr**	**81.84**	**124**	P	**P**	**18 34 56.5**	**-1.1**	
	comp=Z,0.3nm,0.6s,baz=323,slow=4.9,SNR=5.6							
	comp=Z,0.3nm,0.6s							
ASAR	**Alice Springs**	**84.28**	**127**	P	**P**	**18 35 09.0**	**-1.1**	
	comp=Z,0.4nm,0.7s,baz=308,slow=4.5,SNR=8.1							
	comp=Z,0.4nm,0.7s							

*NNC **26** 18:26:52.1±3.4,39.°29N×73.°50E,h0km,mb4.2,mpv3.7, Error ellipse: s-maj=26.5km s-min=12.0km az=173.0*
*IDC **26** 18:26:54.7±1.2,39.°27N×73.°63E,h0km,mb3.7/10, mbtmp3.7/14,ML2.9/4,Error ellipse: s-maj=24.7km s-min=18.8km az=118.0*
*SOME **26** 18:26:56.7,39.°40N×73.°48E,h15km*
*KRNET **26** 18:26:57.1±0.1,39.°46N×73.°53E,mb4.0*
ISC 26 18:26:57.2±0.7,39.°46N±0.°04×73.°52E±0.°03,h10km,n64, σ1s77/93,mb3.7/10,15C-15D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.20**	**332**	⇓*e*P		**Pb**	**18 27 19.3**	**-0.8**
	baz=32							
OHH				⇓*e*S		**Sb**	**18 27 35.7**	**-0.1**
	baz=32							
DRK	**Karamyk**	**1.33**	**271**	⇑*e*P		**Pn**	**18 27 21.5**	**-0.6**
	baz=72							
DRK				⇑*e*S		**Sb**	**18 27 39.3**	**-0.4**
	baz=72							
BTK	**Batken**	**2.17**	**287**	⇑*e*P		**Pn**	**18 27 34.1**	**+0.7**
	baz=87							
BTK				⇑*e*S		**Sn**	**18 28 00.9**	**+0.5**
	baz=87							
ARLS	**Aral**	**2.48**	**14**	⇓*e*P		**Pn**	**18 27 38.3**	**+0.6**
	baz=14							
ARLS				⇓*e*S		**Sn**	**18 28 08.5**	**+0.4**
	baz=14							
GAR	**Garm**	**2.53**	**261**	⇑*e*P		**Pn**	**18 27 38.9**	**+0.5**
	baz=61							
GAR				⇑*e*S		**Sn**	**18 28 09.7**	**+0.3**
	baz=61							
ARK	**Arkit**	**2.62**	**334**	⇓*e*P		**Pn**	**18 27 40.5**	**+0.9**
	baz=34							
ARK				⇓*i*S		**Sn**	**18 28 12.1**	**+0.5**
	baz=34							
AML	**Almayashu**	**2.67**	**3**	P		**Pb**	**18 27 44.7**	**-0.6**
	SNR=21							
TRKS	**Terek-Say**	**2.75**	**319**	⇓*i*P		**Pn**	**18 27 41.3**	**-0.2**
	baz=19							
TRKS				⇓*i*S		**Sn**	**18 28 13.8**	**-1.1**
	baz=19							
UCH	**Uchtor**	**2.87**	**15**	P		**Pb**	**18 27 48.8**	**+0.1**
	SNR=9.3							
UCH	**Uchtor**	**2.87**	**15**	⇓*e*P		**Pn**	**18 27 44.1**	**+0.8**
	baz=15							
UCH				⇓*e*S		**Sn**	**18 28 18.4**	**+0.3**
	baz=15							
EKS2	**Erkin-Say**	**3.20**	**3**	P		**Pb**	**18 27 52.2**	**-2.0**
	SNR=7.8							
AAK	**Ala-Archa**	**3.26**	**13**	P		**Pb**	**18 27 54.2**	**-1.0**
	SNR=6.8							
AAK	**Ala-Archa**	**3.26**	**13**	Pn		**Pb**	**18 27 53.4**	**-1.8**
	3.3nm,0.3s,baz=176,slow=8.4,SNR=5.2							
AAK				Sn		**Sb**	**18 28 36.9**	**+1.9**
	3.6nm,0.3s,baz=332,slow=19,SNR=8.6							
	15nm,0.4s							
AAK	**Ala-Archa**	**3.26**	**13**	⇑*e*P		**Pn**	**18 27 49.4**	**+0.9**
	baz=13							
AAK				⇑*e*S		**Sn**	**18 28 27.6**	**+0.2**
	baz=13							
ULHL	**Ulahol**	**3.46**	**36**	P		**Pg**	**18 28 03.0**	**-0.5**
	SNR=14							
CHGR	**Chuyangaron**	**3.49**	**258**	⇓*e*P		**Pn**	**18 27 52.3**	**+0.7**
	baz=58							
CHGR				⇓*e*S		**Sn**	**18 28 32.4**	**-0.6**
	baz=58							
BOOM	**Boomskoye usch**	**3.54**	**30**	⇑*e*P		**Pn**	**18 27 53.6**	**+1.3**
	baz=30							
BOOM				⇑*i*S		**Sn**	**18 28 34.5**	**+0.2**
	baz=30							
CHMS	**Chumysh**	**3.66**	**14**	P		**Pb**	**18 27 58.9**	**-3.0**
	SNR=5.5							
TAS	**Tashkent**	**3.73**	**301**	⇓*i*P		**Pn**	**18 27 55.6**	**+0.8**
	baz=1.0							
TAS				⇓*i*S		**Sn**	**18 28 38.3**	**-0.4**
	baz=1.0							
IUG	**Iuzhnay**	**3.77**	**316**	*e*P		**Pb**	**18 28 06.6**	**+2.7**
	711nm,0.7s							
IUG				*e*S		**Sg**	**18 28 56.6**	**-1.6**
	170nm,0.6s							
IUG	**Iuzhnay**	**3.77**	**316**	Pg		**Pn**	**18 27 59.2**	**+3.7**
	313nm,0.5s							
IUG				Lg		Lg	18 28 52.4	
	170nm,0.6s							
KDJ	**Kajisay**	**3.85**	**45**	⇑*e*P		**Pn**	**18 27 57.6**	**+1.0**
	baz=45							
KDJ				⇑*i*S		**Sn**	**18 28 41.7**	**-0.3**
	baz=45							
KST	**Kastek**	**4.03**	**26**	*e*P		**Pg**	**18 28 12.0**	**-2.2**
	8.5nm,0.5s							
KST				*e*S		**Sg**	**18 29 06.0**	**-0.4**
	43nm,0.9s							
KST	**Kastek**	**4.03**	**26**	Pg		**Pb**	**18 28 08.0**	**-0.2**
	8.5nm,0.5s							
KST				Lg		Lg	18 29 07.3	
	43nm,0.9s							
SGDS	**Sogindy**	**4.07**	**11**	*e*P		**Pb**	**18 28 11.2**	**+2.2**
	12nm,0.7s							
SGDS				*e*S		**Sg**	**18 29 05.4**	**-2.6**
	20nm,0.8s							
SGDS	**Sogindy**	**4.07**	**11**	Pg		**Pb**	**18 28 06.9**	**-2.1**
	3.6nm,0.7s							
SGDS				Lg		Lg	18 29 06.0	
	20nm,0.8s							
MTBS	**Maitube**	**4.27**	**30**	*e*P		**Pg**	**18 28 16.6**	**-2.4**
	11nm,0.6s							
MTBS				*e*S		**Sg**	**18 29 14.3**	**0.0**
	27nm,0.6s							
MTBS	**Maitube**	**4.27**	**30**	Pg		**Pb**	**18 28 12.0**	**-0.4**
	11nm,0.6s							
MTBS				Lg		Lg	18 29 14.3	
	27nm,0.6s							
KK31	**Karatay Array**	**4.29**	**329**	⇑Pn		**Pn**	**18 28 06.0**	**+3.6**
	2.7nm,0.4s,baz=129,slow=12,SNR=15							
KK31				⇓Pg		**Pb**	**18 28 14.6**	**+2.0**
	8.7nm,0.5s,baz=127,slow=14,SNR=12							
KK31				⇑Sn		**Sn**	**18 28 57.3**	**+4.8**
	28nm,0.7s,baz=157,slow=24,SNR=4.6							
KK31				⇑Lg		Lg	18 29 12.0	
	17nm,0.5s							
TNSS	**Tian-Shan**	**4.41**	**35**	*e*P		**Pg**	**18 28 19.2**	**-2.4**
	5.5nm,0.8s							
TNSS				*e*S		**Sg**	**18 29 18.2**	**-0.6**
	15nm,0.7s							
TNSS	**Tian-Shan**	**4.41**	**35**	Pg		**Pb**	**18 28 14.2**	**-0.7**
	5.9nm,0.5s							
TNSS				Lg		Lg	18 29 18.2	
	15nm,0.7s							
BRLS	**Borolday**	**4.52**	**323**	*e*P		**Pb**	**18 28 17.5**	**+0.9**
	5.7nm,0.6s							
BRLS				*e*S		**Sb**	**18 29 16.5**	**+5.4**
	29nm,0.3s							
BRLS	**Borolday**	**4.52**	**323**	Pg		**Pb**	**18 28 14.4**	**-2.2**
	5.4nm,0.8s							
BRLS				Lg		Lg	18 29 18.5	
	29nm,0.3s							
AAA	**Alma-Ata**	**4.53**	**33**	*e*P		**Pg**	**18 28 21.3**	**-2.7**
	6.6nm,0.2s							
AAA				*e*S		**Sg**	**18 29 22.3**	**-0.4**
	55nm,0.5s							
AAA	**Alma-Ata**	**4.53**	**33**	Pg		**Pb**	**18 28 17.2**	**+0.4**
	9.4nm,0.1s							
AAA				Lg		Lg	18 29 23.4	
	55nm,0.5s							
KTBS	**Karatobe**	**4.86**	**28**	*e*P		**Pg**	**18 28 26.7**	**-3.6**
	4.1nm,0.8s							
KTBS				*e*S		**Sg**	**18 29 31.9**	**-1.4**
	49nm,0.7s							
KTBS	**Karatobe**	**4.86**	**28**	Pg		**Pb**	**18 28 22.0**	**-0.5**
	2.0nm,0.8s							
KTBS				Lg		Lg	18 29 31.1	
	49nm,0.7s							
KUU	**Kurty**	**4.91**	**25**	*e*P		**Pg**	**18 28 27.3**	**-3.8**
	8.0nm,0.8s							
KUU				*e*S		**Sg**	**18 29 32.5**	**-2.1**
	45nm,0.8s							
KUU	**Kurty**	**4.91**	**25**	Pg		**Pb**	**18 28 22.4**	**-0.8**
	8.0nm,0.8s							
KUU				Lg		Lg	18 29 32.5	
	45nm,0.8s							
CHKK	**Chushkaly**	**5.10**	**29**	*e*P		**Pg**	**18 28 31.1**	**-3.7**
	7.8nm,0.6s							
CHKK				*e*S		**Sg**	**18 29 38.6**	**-2.2**
	20nm,0.7s							
CHKK	**Chushkaly**	**5.10**	**29**	Pg		**Pb**	**18 28 26.3**	**-0.2**
	7.8nm,0.6s							
CHKK				Lg		Lg	18 29 38.9	
	20nm,0.7s							
SATY	**Saty**	**5.14**	**44**	*e*P		**Pg**	**18 28 35.2**	**-0.5**
	14nm,0.6s							
SATY				*e*S		**Sg**	**18 29 45.5**	**+3.2**
	24nm,1.0s							
SATY	**Saty**	**5.14**	**44**	Pg		**Pb**	**18 28 29.9**	**+2.6**
	14nm,0.6s							
SATY				Lg		Lg	18 29 45.5	
	24nm,1.0s							
ZHN	**Zhinishke**	**5.24**	**43**	*e*P		**Pg**	**18 28 35.7**	**-1.7**
	6.8nm,0.5s							
ZHN				*e*S		**Sg**	**18 29 46.7**	**+1.5**
	14nm,0.4s							
ZHN	**Zhinishke**	**5.24**	**43**	Pg		**Pb**	**18 28 30.6**	**+1.8**
	2.2nm,0.2s							
ZHN				Lg		Lg	18 29 46.7	
	14nm,0.4s							
KURS	**Kuram**	**5.33**	**39**	*e*P		**Pg**	**18 28 35.7**	**-3.4**
	4.6nm,0.5s							
KURS				*e*S		**Sg**	**18 29 46.8**	**-1.4**
	16nm,0.9s							
KURS	**Kuram**	**5.33**	**39**	Pg		**Pb**	**18 28 30.6**	**+0.3**
	3.7nm,0.8s							
KURS				Lg		Lg	18 29 46.8	
	16nm,0.9s							
KPKS	**Kokpek**	**5.57**	**42**	*e*P		**Pg**	**18 28 41.0**	**-2.8**
	5.4nm,0.6s							
KPKS				*e*S		**Sg**	**18 29 56.3**	**+0.3**
	17nm,0.8s							
KPKS	**Kokpek**	**5.57**	**42**	Pg		**Pb**	**18 28 36.6**	**+2.1**
	1.8nm,0.4s							
KPKS				Lg		Lg	18 29 56.3	
	17nm,0.8s							
KURBB	**Kurchatov Arra**	**11.71**	**16**	Lg		Lg	18 33 07.5	
	baz=210,slow=31,SNR=4.2							
AKTO	**Aktyubinsk**	**15.49**	**320**	Pn		**Pn**	**18 30 35.8**	**+0.3**
	0.1nm,0.3s,baz=123,slow=14,SNR=2.1							
	1.7nm,0.8s							
ZALV	**Zalesovo Beam**	**16.40**	**24**	Pn		**Pn**	**18 30 46.3**	**-1.0**
	0.1nm,0.3s,baz=209,slow=18,SNR=2.5							
	1.3nm,0.9s							
ARU	**Arti**	**19.64**	**335**	P		**Pn**	**18 31 26.8**	**-0.3**
	baz=216,slow=8.7,SNR=2.2							
	1.5nm,0.5s							
BRTR	**Keskin Array B**	**30.56**	**283**	P		**P**	**18 33 12.4**	**+1.4**
	1.0nm,0.7s,baz=76,slow=8.2,SNR=5.4							
	1.0nm,0.7s							
AKASG	**Malin Array Be**	**32.77**	**305**	P		**P**	**18 33 30.1**	**0.0**
	0.3nm,0.4s,baz=78,slow=7.9,SNR=4.6							
	0.3nm,0.4s							
FINES	**FINESS Array B**	**36.22**	**323**	P		**P**	**18 34 00.4**	**+0.5**
	1.1nm,0.9s,baz=106,slow=6.8,SNR=6.0							
	1.1nm,0.9s							
ARCES	**ARCESS Array B**	**39.22**	**336**	P		**P**	**18 34 26.1**	**+0.9**
	1.6nm,0.9s,baz=101,slow=6.3,SNR=4.4							
	1.6nm,0.9s							
NB2	**NORSAR Subarra**	**43.27**	**321**	P		**P**	**18 34 58.9**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=91,slow=7.9							
NOA	**NORSAR Array B**	**43.27**	**321**	P		**P**	**18 34 58.5**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=91,slow=8.0,SNR=5.0							
	comp=Z,0.6nm,0.6s							
TORD	**Torodi Ar. Bea**	**67.77**	**269**	P		**P**	**18 37 54.4**	**-1.0**
	comp=Z,0.5nm,0.9s,baz=50,slow=6.4,SNR=4.6							
	comp=Z,0.5nm,0.9s							
INK	**Inuvik**	**70.65**	**10**	P		**P**	**18 38 12.9**	**+0.6**
	comp=Z,2.1nm,0.6s,baz=23,slow=4.9,SNR=3.6							
	comp=Z,2.1nm,0.6s							
ILAR	**Eielson Array**	**71.38**	**17**	P		**P**	**18 38 16.8**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=319,slow=5.1,SNR=4.5							
	comp=Z,0.3nm,0.7s							
YKA	**Yellowknife Ar**	**78.18**	**4**	P		**P**	**18 38 56.0**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=351,slow=5.4,SNR=5.3							
	comp=Z,0.5nm,0.7s							
WRA	**Warramunga Arr**	**81.92**	**124**	P		**P**	**18 39 16.4**	**-0.8**
	comp=Z,0.3nm,0.7s,baz=320,slow=5.2,SNR=2.3							
	comp=Z,0.3nm,0.7s							

*IDC **26** 18:28:38.4±1.0,36.°82N×137.°87E,h0km,mb3.4/5, mbtmp3.4/7,ML3.1/2,MS3.0/9,Error ellipse: s-maj=26.7km s-min=7.9km az=44.0*
*JMA **26** 18:28:38.4±0.1,36.°8N±0.°2×137.°8E±0.°3,h0km,MV3.4/20, SW NIIGATA PREF*
JMA Felt III J1 at SW NIIGATA PREF .
ISC 26 18:28:39.3±1.2,36.°81N±0.°04×137.°85E±0.°04,h5km±9km, n21,σ0s64/19,mb3.5/5,MS2.9/5,2D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MAT	**Matsushiro**	**0.39**	**132**	P		**Pg**	**18 28 46.4**	**-0.5**
MAT				S		**Sg**	**18 28 52.0**	**0.0**
MJAR	**Matsushiro Arr**	**0.40**	**132**	Pg		**Pg**	**18 28 47.0**	**+0.1**
	20nm,0.3s,baz=321,slow=15,SNR=487							
MJAR				Lg		Lg	18 28 51.9	
	146nm,0.3s,baz=73,slow=33,SNR=41							
JNG	**Nsakai**	**0.45**	**153**	*i* P		**Pg**	**18 28 47.6**	**-0.4**
JNG				S		**Sg**	**18 28 54.1**	**+0.2**
JTT	**Ttatey**	**0.46**	**244**	P		**Pg**	**18 28 47.9**	**-0.3**
JTT				S		**Sg**	**18 28 54.4**	**+0.3**
JGK	**Kuni**	**0.68**	**111**	⇓*i*P		**Pg**	**18 28 51.9**	**-0.5**
JGK				⇓*e*S		**Sg**	**18 29 01.6**	**+0.4**
JGN	**Niukaw**	**0.72**	**216**	*i* P		**Pg**	**18 28 52.3**	**-0.9**
JSZ	**Suzu**	**0.74**	**329**	*i* P		**Pg**	**18 28 52.9**	**-0.7**
JSZ				S		**Sg**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LDUT	**Ludao**	**0.30**	**352**	P	Pn	18 29 11.4	+0.4
LDUT	baz=351			S	Sn	18 29 22.0	+0.9
LAY	**Lan-yu**	**0.34**	**174**	P	Pn	18 29 11.8	+0.5
LAY	baz=173			S	Sn	18 29 21.8	+0.2
LYUB	**Lan-yu**	**0.38**	**170**	P	Pn	18 29 11.4	-0.1
LYUB	baz=170			S	Sn	18 29 21.1	-0.8
TTN	**Taitung**	**0.50**	**318**	*e*P	Pn	18 29 13.1	+0.8
TTN	baz=318			*e*S	Sn	18 29 24.4	+0.9
TAW	**Tawu**	**0.57**	**268**	P	Pn	18 29 13.0	+0.2
TAW	baz=267			S	Sn	18 29 23.7	-0.8
TAWH	**Dawu Township**	**0.58**	**266**	P	Pn	18 29 13.2	+0.3
TAWH	baz=266			S	Sn	18 29 24.9	+0.4
TWGBT	**Beinan**	**0.59**	**318**	P	Pn	18 29 12.9	-0.2
TWGBT	baz=317			*e*S	Sn	18 29 24.6	-0.2
TWG	**Pinlang**	**0.60**	**317**	P	Pn	18 29 12.8	-0.3
TWG	baz=317			*e*S	Sn	18 29 25.2	+0.3
EAST	**Anshuo**	**0.62**	**270**	P	Pn	18 29 13.7	+0.4
EAST	baz=270			S	Sn	18 29 25.7	+0.5
EDH	**Donghe**	**0.62**	**342**	P	Pn	18 29 13.6	+0.3
EDH	baz=341			S	Sn	18 29 25.9	+0.7
LONT	**Longtian**	**0.63**	**326**	P	Pn	18 29 13.3	-0.1
LONT	baz=325			*e*S	Sn	18 29 25.1	-0.3
SLIU	**Shizi**	**0.68**	**256**	P	Pn	18 29 14.4	+0.5
SLIU	baz=256			S	Sn	18 29 26.6	+0.4
SMST	**Manzhou Townsh**	**0.72**	**240**	P	Pn	18 29 15.0	+0.8
SMST	baz=240			S	Sn	18 29 28.1	+1.2
TSEB	**Hengchuen, Pin**	**0.74**	**230**	*e*P	Pn	18 29 15.3	+0.9
TSEB	baz=232			*e*S	Sn	18 29 28.6	+1.4
TWKBT	**Hengchun**	**0.78**	**236**	P	Pn	18 29 15.6	+0.8
TWKBT	baz=236			*e*S	Sn	18 29 28.4	+0.5
HEN	**Hengchun**	**0.81**	**243**	P	Pn	18 29 15.7	+0.6
HEN	baz=242			S	Sn	18 29 28.8	+0.4
SCZT	**Fangliau**	**0.83**	**270**	P	Pn	18 29 15.8	+0.6
SCZT	baz=269			S	Sn	18 29 28.4	-0.4
FULB	**Fuli**	**0.84**	**346**	P	Pn	18 29 16.4	+0.9
FULB	baz=346			*e*S	Sn	18 29 30.3	+1.2
MASBT	**Mashibuluo**	**0.85**	**286**	P	Pn	18 29 15.8	+0.3
MASBT	baz=285			*e*S	Sn	18 29 29.3	+0.2
TSMG	**Majia**	**0.87**	**292**	P	Pn	18 29 16.3	+0.6
TSMG	baz=292			*e*S	Sn	18 29 30.0	+0.5
SSPT	**Xinbi**	**0.88**	**277**	*e*P	Pn	18 29 16.6	+0.7
SSPT	baz=276			*e*S	Sn	18 29 30.1	+0.4
SSD	**Sandimen**	**0.89**	**294**	P	Pn	18 29 16.6	+0.6
SSD	baz=294			S	Sn	18 29 30.5	+0.5
ELDTW	**Lidau**	**0.93**	**330**	P	Pn	18 29 16.8	+0.3
ELDTW	baz=330			*e*S	Sn	18 29 31.3	+0.5
EYUL	**Yuli**	**0.98**	**349**	P	Pn	18 29 17.5	+0.5
EYUL	baz=349			*e*S	Sn	18 29 32.7	+1.0
SGLT	**Jiouru**	**1.01**	**290**	*e*P	Pn	18 29 18.4	+1.2
SGLT	baz=290			*e*S	Sn	18 29 32.6	+0.4
YULB	**Yu-li**	**1.03**	**349**	P	Pn	18 29 17.6	+0.1
YULB	baz=348			*e*S	Sn	18 29 33.2	+0.6
STYH	**Taoyuan**	**1.04**	**319**	P	Pn	18 29 18.2	+0.6
STYH	baz=319			S	Sn	18 29 33.8	+0.9
WLCH	**Liuqiu**	**1.05**	**269**	*e*P	Pn	18 29 18.5	+0.8
WLCH	baz=268			*e*S	Sn	18 29 34.2	+1.1
SCST	**Cishan**	**1.07**	**298**	P	Pn	18 29 18.7	+0.7
SCST	baz=298			S	Sn	18 29 34.2	+0.7
TWM1	**Shoushan**	**1.10**	**294**	P	Pn	18 29 19.4	+1.1
TWM1	baz=293			*e*S	Sn	18 29 34.5	+0.4
SGST	**Jiashian**	**1.11**	**309**	P	Pn	18 29 18.0	-0.4
SGST	baz=309			*e*S	Sn	18 29 33.3	-1.0
HGSD	**Ruisui**	**1.11**	**356**	P	Pn	18 29 19.1	+0.7
HGSD	baz=355			*e*S	Sn	18 29 35.1	+0.8
KAU	**Kaohsiung**	**1.13**	**280**	*e*P	Pn	18 29 19.4	+0.8
KAU	baz=279			*e*S	Sn	18 29 35.4	+0.6
EHY	**Hungye**	**1.14**	**351**	P	Pn	18 29 18.9	+0.1
EHY	baz=351			*e*S	Sn	18 29 34.9	+0.1
SNJT	**Kaohsiung City**	**1.15**	**289**	*e*P	Pn	18 29 19.8	+0.9
SNJT	baz=288			*e*S	Sn	18 29 35.8	+0.7
WSSB	**Gushan**	**1.19**	**283**	P	Pn	18 29 20.1	+0.7
WSSB	baz=282			*e*S	Sn	18 29 36.8	+0.9
WTP	**Ta-pu**	**1.20**	**316**	P	Pn	18 29 19.9	+0.4
WTP	baz=316			S	Sn	18 29 36.6	+0.4
CHN1	**Nanshi**	**1.21**	**312**	P	Pn	18 29 20.3	+0.7
CHN1	baz=311			S	Sn	18 29 36.7	+0.2
YUS	**Yu-Shan**	**1.22**	**335**	P	Pn	18 29 21.0	+0.7
YUS	baz=335			*e*S	Sn	18 29 37.7	+0.2
TPUB	**Ta-pu**	**1.23**	**319**	P	Pn	18 29 20.2	+0.3
TPUB	baz=318			S	Sn	18 29 37.4	+0.5
SHHT	**Tainan City**	**1.25**	**301**	*e*P	Pn	18 29 20.9	+0.8
SHHT	baz=300			*e*S	Sn	18 29 37.9	+0.6
SNST	**Tainan City**	**1.26**	**312**	P	Pn	18 29 20.6	+0.4
SNST	baz=311			S	Sn	18 29 37.4	0.0
CHN3	**Shinhua**	**1.27**	**303**	*e*P	Pn	18 29 21.1	+0.8
CHN3	baz=303			*e*S	Sn	18 29 38.1	+0.5
EGFH	**Guangfu**	**1.29**	**356**	P	Pn	18 29 20.9	+0.4
EGFH	baz=356			S	Sn	18 29 38.4	+0.3
CHN4	**Tsaushan**	**1.29**	**319**	*e*P	Pn	18 29 20.9	+0.3
CHN4	baz=318			*e*S	Sn	18 29 38.2	+0.1
TWK	**Hsinying**	**1.29**	**313**	*e*P	Pn	18 29 21.1	+0.4
TWK	baz=313			*e*S	Sn	18 29 38.9	+0.5
ALS	**Alishan**	**1.30**	**330**	P	Pn	18 29 21.5	+0.5
ALS	baz=330			*e*S	Sn	18 29 39.0	+0.1
TAI1	**Yung-k'ang**	**1.36**	**299**	*e*S	Sn	18 29 40.2	+0.7
SSHA	**Shanhua**	**1.36**	**304**	*e*P	Pn	18 29 22.4	+1.0
SSHA	baz=303			*e*S	Sn	18 29 40.3	+0.7
ESL	**Shilin**	**1.43**	**357**	*e*P	Pn	18 29 22.7	+0.4
ESL	baz=357			*e*S	Sn	18 29 42.0	+0.8
CHN5	**Tsauling**	**1.44**	**328**	*e*P	Pn	18 29 23.3	+0.8
CHN5	baz=327			*e*S	Sn	18 29 42.0	+0.5
SCLT	**Jiali**	**1.45**	**303**	*e*P	Pn	18 29 22.9	+0.4
SCLT	baz=303			*e*S	Sn	18 29 42.3	+0.6
SSLB	**Suanglung**	**1.49**	**340**	P	Pn	18 29 23.3	+0.1
SSLB	baz=339			*e*S	Sn	18 29 43.3	+0.6
CHN2	**Minshiung**	**1.50**	**320**	*e*P	Pn	18 29 23.8	+0.7
CHN2	baz=320			*e*S	Sn	18 29 43.3	+0.7
CHY	**Chiayi**	**1.50**	**318**	*e*P	Pn	18 29 23.7	+0.5
CHY	baz=318			*e*S	Sn	18 29 43.2	+0.5
ICHU	**Yijhu**	**1.50**	**311**	*e*P	Pn	18 29 23.9	+0.7
ICHU	baz=310			*e*S	Sn	18 29 43.3	+0.6
CHN8	**Yiju**	**1.54**	**309**	*e*P	Pn	18 29 24.4	+0.8
CHN8	baz=308			*e*S	Sn	18 29 44.2	+0.6
WDLH	**Douliu**	**1.58**	**326**	*e*P	Pn	18 29 24.7	+0.4
WDLH	baz=325			*e*S	Sn	18 29 45.2	+0.6
HWA	**Hwalien**	**1.59**	**3**	*e*P	Pn	18 29 25.1	+0.8
HWA	baz=3.0			*e*S	Sn	18 29 45.6	+0.8
OWD	**Renai**	**1.60**	**349**	P	Pn	18 29 25.2	+0.7
OWD	baz=348			*e*S	Sn	18 29 45.5	+0.3
SMLT	**Sun Moon Lake**	**1.60**	**339**	P	Pn	18 29 25.0	+0.4
SMLT	baz=339			S	Sn	18 29 45.4	+0.2
WJS	**Zhushan**	**1.61**	**333**	*e*P	Pn	18 29 25.2	+0.7
WJS	baz=333			*e*S	Sn	18 29 45.7	+0.5
TYC	**Yuchr**	**1.63**	**338**	*e*P	Pn	18 29 25.5	+0.6
TYC	baz=338			*e*S	Sn	18 29 46.3	+0.6
WSL	**Shuilin Townsh**	**1.64**	**314**	*e*P	Pn	18 29 25.3	+0.3
WSL	baz=313			*e*S	Sn	18 29 46.6	+0.6
WUSB	**Renai**	**1.65**	**347**	P	Pn	18 29 25.9	+0.7
WUSB	baz=347			S	Sn	18 29 46.7	+0.4
WTK	**Tuku**	**1.67**	**322**	*e*P	Pn	18 29 25.5	+0.2
WTK	baz=321			*e*S	Sn	18 29 46.5	+0.1
WNT	**Mingjian**	**1.68**	**333**	P	Pn	18 29 26.1	+0.7
WNT	baz=333			S	Sn	18 29 46.9	+0.1
TWD	**Chiawan**	**1.69**	**3**	P	Pn	18 29 26.3	+0.7
TWD	baz=2.0			*e*S	Sn	18 29 47.6	+0.5
CHGB	**Renai**	**1.70**	**349**	P	Pn	18 29 26.6	+0.6
CHGB	baz=349			*e*S	Sn	18 29 47.9	+0.2
WSF	**Szhu**	**1.73**	**317**	*e*P	Pn	18 29 26.1	+0.1
WSF	baz=316			*e*S	Sn	18 29 48.4	+0.5
WCS	**Beigang Elemen**	**1.76**	**342**	*e*P	Pn	18 29 27.2	+0.8
WCS	baz=341			*e*S	Sn	18 29 49.4	+0.7
WHF	**Hehuan Shan**	**1.77**	**353**	*e*P	Pn	18 29 27.5	+0.4
WHF	baz=352			*e*S	Sn	18 29 49.7	+0.1
ETL	**Fush Village**	**1.77**	**3**	*e*P	Pn	18 29 27.5	+0.8
ETL	baz=3.0			*e*S	Sn	18 29 49.5	+0.4
NACB	**Ninganchiao**	**1.79**	**2**	*e*P	Pn	18 29 27.5	+0.6
NACB	baz=2.0			*e*S	Sn	18 29 49.8	+0.5
ETLH	**Xiulin Townshi**	**1.82**	**359**	*e*P	Pn	18 29 28.1	+0.7
ETLH	baz=359			*e*S	Sn	18 29 50.7	+0.5
WRL	**Guolierlin Hig**	**1.84**	**326**	*e*P	Pn	18 29 27.1	-0.4
WRL	baz=325			*e*S	Sn	18 29 50.0	-0.5
FUSS	**Fushou**	**1.88**	**352**	*e*P	Pn	18 29 29.0	+0.8
FUSS	baz=352			*e*S	Sn	18 29 52.3	+0.6
TWT	**Tachien**	**1.89**	**351**	*e*P	Pn	18 29 28.8	+0.5
TWT	baz=350			*e*S	Sn	18 29 52.1	+0.2
TDCB	**Techi**	**1.89**	**350**	*e*P	Pn	18 29 29.1	+0.7
TDCB	baz=350			*e*S	Sn	18 29 52.3	+0.3
WCHH	**Zhanghua**	**1.91**	**333**	*e*P	Pn	18 29 29.2	+0.8
WCHH	baz=332			*e*S	Sn	18 29 53.1	+1.0
TCU	**Taichung**	**1.92**	**337**	*e*P	Pn	18 29 29.4	+0.8
TCU	baz=336			*e*S	Sn	18 29 52.8	+0.4
WDGT	**Dungji**	**1.92**	**297**	*e*P	Pn	18 29 28.4	-0.1
WDGT	baz=297			*e*S	Sn	18 29 51.0	-1.3
WHP	**Taichung City**	**1.96**	**345**	*e*P	Pn	18 29 29.9	+0.7
WHP	baz=344			*e*S	Sn	18 29 53.7	+0.3
NNSB	**Datong**	**2.04**	**357**	*e*P	Pn	18 29 31.2	+0.9
NNSB	baz=356			*e*S	Sn	18 29 55.8	+0.4
ENA	**Nanau**	**2.05**	**6**	*e*P	Pn	18 29 31.2	+1.0
ENA	baz=6.0			*e*S	Sn	18 29 55.8	+0.4
NNS	**Nan Shan**	**2.06**	**356**	*e*P	Pn	18 29 31.4	+0.9
NNS	baz=356			*e*S	Sn	18 29 56.2	+0.5
EWUT	**Wuta**	**2.07**	**7**	*e*P	Pn	18 29 31.7	+1.2
EWUT	baz=6.0			*e*S	Sn	18 29 56.6	+0.7
TWQ1	**Liyutan**	**2.08**	**341**	*e*P	Pn	18 29 31.4	+0.8
TWQ1	baz=340			*e*S	Sn	18 29 56.5	+0.5
VCHM	**Qimei**	**2.09**	**294**	*e*P	Pn	18 29 31.8	+1.0
VCHM	baz=293			*e*S	Sn	18 29 56.8	+0.5
PHUB	**P'eng-hu**	**2.12**	**303**	*e*P	Pn	18 29 32.0	+0.9
PHUB	baz=302			*e*S	Sn	18 29 57.2	+0.3
WDJ	**Dajia District**	**2.12**	**338**	*e*P	Pn	18 29 32.1	+1.0
WDJ	baz=337			*e*S	Sn	18 29 57.9	+0.9
NSY	**Sanyi**	**2.14**	**341**	*e*P	Pn	18 29 32.6	+1.1
NSY	baz=341			*e*S	Sn	18 29 58.3	+0.7
LATG	**Datong**	**2.15**	**0**	*e*P	Pn	18 29 32.5	+0.9
LATG				*e*S	Sn	18 29 58.1	+0.3
PNG	**Penghu**	**2.16**	**304**	*e*P	Pn	18 29 32.4	+0.8
PNG	baz=303			*e*S	Sn	18 29 57.9	-0.1
TWC	**Suao**	**2.24**	**8**	*e*P	Pn	18 29 33.6	+0.9
TWC	baz=8.0			*e*S	Sn	18 30 00.5	+0.7
NDS	**Dongshan**	**2.25**	**5**	*e*P	Pn	18 29 33.5	+0.6
NDS	baz=4.0			*e*S	Sn	18 30 00.8	+0.7
NFF	**Wufeng Townshi**	**2.27**	**351**	*e*P	Pn	18 29 34.2	+0.9
NFF	baz=350			*e*S	Sn	18 30 01.1	+0.4
YHNB	**Yeheng**	**2.28**	**357**	*e*P	Pn	18 29 34.2	+0.8
YHNB	baz=356			*e*S	Sn	18 30 01.6	+0.6
NSK	**Sanguang**	**2.29**	**356**	*e*P	Pn	18 29 34.3	+0.8
NSK	baz=356			*e*S	Sn	18 30 01.7	+0.6
NSTT	**Nanjuang**	**2.29**	**348**	*e*P	Pn	18 29 34.3	+0.9
NSTT	baz=348			*e*S	Sn	18 30 01.4	+0.4
TWE	**Neicheng**	**2.34**	**3**	*e*P	Pn	18 29 34.8	+0.8
TWE	baz=3.0			*e*S	Sn	18 30 02.6	+0.5
FUSB	**Fushanzhiwuyua**	**2.37**	**2**	*e*P	Pn	18 29 35.4	+0.8
FUSB	baz=1.0			*e*S	Sn	18 30 03.5	+0.4
NWLT	**Wulai**	**2.39**	**360**	*e*P	Pn	18 29 35.9	+1.2
NWLT	baz=359			*e*S	Sn	18 30 03.9	+0.6
EGS		**2.48**	**9**	*e*P	Pn	18 29 37.1	+1.1
EGS	baz=9.0			*e*S	Sn	18 30 06.1	+0.4
YOJ	**Yonaguni jima**	**2.49**	**33**	*e*P	Pn	18 29 37.3	+1.3
YOJ	baz=33			*e*S	Sn	18 30 06.1	+0.4
NHDH	**Xindian Distri**	**2.57**	**0**	*e*S	Sn	18 30 07.6	-0.1
TWA	**Mucha**	**2.59**	**1**	*e*S	Sn	18 30 08.6	+0.4
TIPB	**Shuangxi**	**2.60**	**6**	*e*P	Pn	18 29 38.1	+0.6
TIPB	baz=6.0			*e*S	Sn	18 30 08.6	+0.3
TWB1	**Santiao Chiao**	**2.65**	**9**	*e*P	Pn	18 29 38.8	+0.5
TWB1	baz=9.0			*e*S	Sn	18 30 10.2	+0.6
NWF	**Wu-fen Shan**	**2.69**	**5**	*e*S	Sn	18 30 10.7	0.0
TWS1	**Kuangyinshan**	**2.71**	**358**	*e*S	Sn	18 30 10.7	-0.4
SXI1	**Grass Mountain**	**2.72**	**7**	*e*P	Pn	18 29 40.1	+0.9
SXI1	baz=6.0			*e*S	Sn	18 30 11.2	-0.2
YM01	**YM01**	**2.75**	**1**	*e*P	Pn	18 29 40.3	+0.7
YM01	baz=1.0			*e*S	Sn	18 30 11.9	-0.3
NTST	**Danshui**	**2.77**	**359**	*e*S	Sn	18 30 12.5	0.0
VWUC	**VWUC**	**3.22**	**324**	*e*P	Pn	18 29 47.1	+1.3
VWUC	baz=323			*e*S	Sn	18 30 21.0	-2.2
PTMZ	**Houxiangcun**	**3.44**	**321**	*e*P	Pn	18 29 48.2	-0.6
PTMZ	baz=320			*e*S	Sn	18 30 26.2	-2.4
KNM	**Kinmen**	**3.48**	**306**	*e*P	Pn	18 29 51.5	+2.1
KNM	baz=304			*e*S	Sn	18 30 31.4	+1.8
KNMB	**Chin-men Tao**	**3.54**	**306**	*e*P	Pn	18 29 50.6	+0.4
KNMB	baz=305			*e*S	Sn	18 30 29.4	-1.7
ZPLA	**Ao Xicun**	**3.79**	**295**	*e*P	Pn	18 29 54.3	+0.7
ZPLA	baz=294			*e*S	Sn	18 30 36.0	-1.1
DSXP	**Dongshan**	**3.99**	**290**	*e*P	Pn	18 29 57.2	+1.0
DSXP	baz=289			*e*S	Sn	18 30 40.3	-1.7
AXDP	**Jialang**	**4.11**	**308**	*e*P	Pn	18 29 58.3	+0.5
AXDP	baz=307			*e*S	Sn	18 30 43.2	-1.5
MHZQ	**Yeshan**	**4.34**	**329**	*e*P	Pn	18 30 00.5	-0.5
MHZQ	baz=328			*e*S	Sn	18 30 47.2	-3.3
LYJJ	**Jianjiangzhen**	**4.45**	**339**	*e*P	Pn	18 30 03.3	+0.8
LYJJ	baz=339			*e*S	Sn	18 30 51.1	-1.9
XPSS	**Dashiqiu**	**4.69**	**345**	*e*P	Pn	18 30 06.2	+0.5
XPSS	baz=345			*e*S	Sn	18 30 55.8	-3.1
SXFK	**Yanhouchang**	**5.33**	**319**	*e*P	Pn	18 30 14.6	+0.1
	baz=318						

IDC ***26*** *18:34:39.8±0.8, 39°.22N×73°.58E, h0km, mb3.7/14, mbtmp3.7/19, ML2.8/6, Error ellipse: s-maj=16.1km s-min=13.9km az=149.0*

KRNET ***26*** *18:34:40.7±0.1, 39°.45N×73°.61E, mb4.2*

SOME ***26*** *18:34:40.4, 39°.67N×73°.37E, h5km*

NNC ***26*** *18:34:49.1±5.9, 39°.75N×73°.53E, h0km, mb4.2, mpv4.0, Error ellipse: s-maj=48.1km s-min=22.9km az=173.0*

ISC 26 18:34:43.5±1.3, 39°.64N±0°.04×73°.37E±0°.03, h3km±8km, n69, σ2s20/105, mb3.7/14**, 29C-14D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**0.99**	**333**	⇑*e*P	**Pn**	**18 35 04.5**	**+0.2**
OHH	baz=30			⇑*e*S	**Sn**	**18 35 21.6**	**+2.7**

baz=30
DRK **Karamyk** **1.23** **263**⇓*e*P **Pg** **18 35 07.0 0.0**
baz=72
DRK ⇓*e*S **Sn** **18 35 26.5 +1.5**
baz=72
BTK **Batken** **2.01** **283**⇑*e*P **Pb** **18 35 20.7 0.0**
baz=87
BTK ⇑*e*S **Sg** **18 35 50.1 +2.0**
baz=87
ARLS **Aral** **2.33** **18**⇓*e*P **Pn** **18 35 24.0 +1.2**
baz=13
ARLS ⇓*e*S **Sb** **18 35 55.8 +0.3**
baz=13
ARK **Arkit** **2.41** **334**⇑*e*P **Pb** **18 35 26.9 -0.6**
baz=33
ARK ⇑*e*S **Sg** **18 36 00.6 -0.2**
baz=33
GAR **Garm** **2.46** **256**⇑*e*P **Pn** **18 35 26.0 +1.5**
baz=61
GAR ⇑*e*S **Sb** **18 35 59.0 0.0**
baz=61
AML **Almayashu** **2.50** **5** P **Pb** **18 35 29.4 +0.2**
SNR=20
TRKS **Terek-Say** **2.54** **319**⇓*e*P **Pn** **18 35 28.1 +2.4**
baz=18
TRKS ⇓*e*S **Sb** **18 36 02.7 +1.2**
baz=18
UCH **Uchtor** **2.72** **18** P **Pb** **18 35 33.2 +0.1**
SNR=10.0
UCH **Uchtor** **2.72** **18**⇑*e*P **Pn** **18 35 30.0 +1.5**
baz=14
UCH ⇑*e*S **Sb** **18 36 05.7 -1.3**
baz=14
EKS2 **Erkin-Say** **3.03** **6** P **Pb** **18 35 37.1 -1.0**
SNR=9.9
EKS2 **Erkin-Say** **3.03** **6**⇓*e*P **Pn** **18 35 34.6 +2.2**
baz=2.0
EKS2 ⇓*e*S **Sb** **18 36 13.8 -1.8**
baz=2.0
AAK **Ala-Archa** **3.11** **15** P **Pb** **18 35 37.9 -1.6**
SNR=6.6
AAK **Ala-Archa** **3.11** **15** Pn **Pb** **18 35 38.8 -0.7**
8.9nm,0.3s,baz=156,slow=6.7,SNR=11
AAK Sn **Sg** **18 36 22.1 -1.3**
8.9nm,0.3s,baz=336,slow=23,SNR=5.8
24nm,0.4s
AAK **Ala-Archa** **3.11** **15**⇑*e*P **Pn** **18 35 35.0 +1.4**
baz=12
AAK ⇑*e*S **Sn** **18 36 15.0 +3.7**
baz=12
KBK **Karagaybulak** **3.24** **21** P **Pb** **18 35 40.6 -1.0**
SNR=12
KBK **Karagaybulak** **3.24** **21**⇑*e*P **Pn** **18 35 36.4 +1.1**
baz=17
KBK ⇑*e*S **Sn** **18 36 17.3 +2.8**
baz=17
ULHL **Ulahol** **3.39** **39** P **Pb** **18 35 44.2 0.0**
SNR=13
ULHL **Ulahol** **3.39** **39**⇑*e*P **Pn** **18 35 37.8 +0.4**
baz=35
ULHL ⇑*e*S **Sn** **18 36 19.2 +1.0**
baz=35
CHGR **Chuyangaron** **3.42** **255**⇓*e*P **Pn** **18 35 39.1 +1.3**
baz=59
CHGR ⇓*e*S **Sn** **18 36 22.1 +3.2**
baz=59
BOOM **Boomskoye usch** **3.44** **33**⇑*i*P **Pn** **18 35 38.9 +0.7**
baz=29
BOOM ⇑*i*S **Sn** **18 36 21.1 +1.6**
baz=29
TAS **Tashkent** **3.54** **300**⇓*i*P **Pn** **18 35 42.3 +3.0**
baz=1.0
TAS ⇓*e*S **Sb** **18 36 27.6 -2.4**
baz=1.0
IUG **Iuzhnay** **3.56** **316** *e*P **Pb** **18 35 45.2 -2.0**
203nm,0.4s
IUG *e*S **Sb** **18 36 31.7 +0.9**
140nm,0.4s
DZA **Taraz** **3.59** **335** *e*P **Pb** **18 35 45.5 -2.2**
31nm,0.2s
DZA *e*S **Sb** **18 36 32.5 +0.9**
141nm,0.3s
TKM2 **Tokmak 2** **3.68** **26** ⇑Pg **Pg** **18 35 54.9 +1.0**
13nm,0.5s
TKM2 ⇓Lg Lg 18 36 40.9
37nm,0.6s
KDJ **Kajisay** **3.81** **48**⇑*i*P **Pn** **18 35 43.2 0.0**
baz=44
KDJ ⇑*i*S **Sn** **18 36 28.2 -0.3**
baz=44
KST **Kastek** **3.92** **29** *e*P **Pb** **18 35 54.9 +1.6**
25nm,0.5s
KST *e*S **Sg** **18 36 48.3 -1.0**
119nm,0.7s
SGDS **Sogindy** **3.92** **14** *e*P **Pb** **18 35 56.0 +2.8**
16nm,0.4s
SGDS *e*S **Sg** **18 36 50.2 +0.8**
49nm,0.8s
DGS **Degeres** **4.02** **26** *e*P **Pb** **18 35 57.5 +2.4**
16nm,0.7s
DGS *e*S **Sg** **18 36 52.9 +0.2**
86nm,0.8s
KK31 **Karatay Array** **4.07** **329** Pg **Pb** **18 35 58.1 +2.3**
11nm,0.5s,baz=136,slow=13,SNR=4.3
KK31 ⇑Sn **Sb** **18 36 44.8 -0.6**
10nm,0.4s,baz=139,slow=26,SNR=5.2
KK31 ⇑Lg Lg 18 36 59.5
14nm,0.5s,baz=156,slow=31,SNR=4.0
KKAR **Karatay Array** **4.07** **329**⇑*e*P **Pn** **18 35 49.8 +3.1**
baz=28
KKAR ⇑*e*S **Sb** **18 36 40.6 -4.8**
baz=28
MTBS **Maitube** **4.17** **32** *e*P **Pb** **18 35 59.1 +1.5**
37nm,0.6s
MTBS *e*S **Sg** **18 36 56.3 -1.2**
33nm,0.6s
BRLS **Borolday** **4.31** **323** *e*P **Pb** **18 35 55.7 -4.1**
5.4nm,0.8s
BRLS *e*S **Sb** **18 36 49.5 -2.7**
48nm,0.5s
TNSS **Tian-Shan** **4.33** **37** *e*P **Pb** **18 36 01.7 +1.3**
25nm,0.5s
TNSS *e*S **Sg** **18 37 00.2 -2.3**
32nm,0.7s
AAA **Alma-Ata** **4.45** **36** *e*P **Pb** **18 36 04.3 +2.1**
34nm,0.4s
AAA *e*S **Sg** **18 37 04.7 -1.6**
46nm,0.8s
KNDC **Almaty** **4.48** **36** ⇑Pg **Pb** **18 36 05.9 +3.1**
75nm,0.8s
KNDC ⇑Lg Lg 18 37 05.5
54nm,0.5s
KUU **Kurty** **4.79** **27** *e*P **Pb** **18 36 10.8 +2.8**
9.8nm,0.8s
KUU *e*S **Sg** **18 37 16.4 -1.0**
62nm,0.9s
CHKK **Chushkaly** **5.00** **32** *e*P **Pb** **18 36 14.0 +2.4**
19nm,0.5s
CHKK *e*S **Sg** **18 37 21.8 -2.3**
29nm,0.8s
SATY **Saty** **5.10** **46** *e*P **Pb** **18 36 15.5 +2.1**
9.2nm,0.7s
SATY *e*S **Sg** **18 37 23.6 -3.6**
26nm,1.1s
ZHN **Zhinishke** **5.18** **46** *e*P **Pb** **18 36 16.9 +2.1**
8.4nm,0.2s
ZHN *e*S **Sg** **18 37 26.0 -4.0**
27nm,0.9s
KURS **Kuram** **5.26** **42** *e*P **Pb** **18 36 20.3 +4.2**
12nm,0.7s
KURS *e*S **Sg** **18 37 32.5 +0.1**
25nm,1.2s
BTLS **Baital** **5.42** **5** *e*P **Pb** **18 36 19.8 +1.1**
2.1nm,0.4s
BTLS *e*S **Sg** **18 37 31.3 -6.1**
20nm,0.8s
KPKS **Kokpek** **5.52** **44** *e*P **Pb** **18 36 22.6 +2.1**
11nm,0.6s
KPKS *e*S **Sg** **18 37 35.8 -4.9**
22nm,0.8s
SHLS **Shalkode** **5.77** **51** *e*P **Pg** **18 36 32.4 -1.6**
6.3nm,0.4s
SHLS *e*S **Sg** **18 37 52.5 +3.8**
8.6nm,0.8s
PDGK **Podgornoye** **5.89** **49** ⇓Pg **Pg** **18 36 37.6 +1.4**
8.5nm,0.7s
PDGK ⇑Lg Lg 18 37 47.4
24nm,0.8s
TDK **Taldyqorghan** **6.53** **33** *e*P **Pb** **18 36 42.2 +4.6**
16nm,0.1s
TDK *e*S **Sg** **18 38 10.1 -2.9**
31nm,0.5s
DJR **Jarkent** **6.69** **43** *e*P Pg 18 36 46.9 -4.8
2.6nm,0.6s
DJR *e*S **Sg** **18 38 18.1 -0.2**
16nm,1.2s
MKAR **Makanchi Array** **9.66** **39** Pn **Pn** **18 37 05.6 +2.3**
baz=229,slow=13,SNR=3.2
MKAR Lg Lg 18 39 47.2
0.1nm,0.3s,baz=229,slow=32,SNR=2.9
1.0nm,0.9s
KURBB **Kurchatov Arra** **11.56** **17** Pn **Pn** **18 37 29.9 +0.6**
baz=206,slow=12,SNR=3.4
KURBB Sn **Sn** **18 39 44.2 +5.4**
baz=203,slow=31,SNR=4.1
KURBB Lg Lg 18 40 51.2
baz=203,slow=31,SNR=9.4
AB31 **Akbulak array** **13.56** **320** P **Pn** **18 37 59.7 +3.1**
1.0nm,0.6s,baz=129,slow=13,SNR=9.7
AKTO **Aktyubinsk** **15.27** **320** Pn **Pn** **18 38 21.1 +1.3**
0.2nm,0.3s,baz=124,slow=11,SNR=3.8
0.7nm,0.4s
AKTO **Aktyubinsk** **15.27** **320** ⇑P **P** **18 38 25.2 +0.3**
1.9nm,0.7s
ZALV **Zalesovo Beam** **16.28** **25** Pn **Pn** **18 38 34.0 +1.1**
0.2nm,0.3s,baz=209,slow=12,SNR=7.6
1.6nm,0.7s
ARU **Arti** **19.43** **335** P **Pn** **18 39 13.6 +1.8**
baz=138,slow=16,SNR=2.1
0.9nm,0.4s
KBZ **Khabaz** **23.05** **290** P **P** **18 39 51.5 +1.6**
1.0nm,0.6s,baz=85,slow=11,SNR=1.9
1.0nm,0.6s
SONM **Songino Array** **25.07** **60** P **P** **18 40 08.2 -0.9**
1.0nm,0.8s,baz=266,slow=8.9,SNR=4.9
1.0nm,0.8s
BRTR **Keskin Array B** **30.41** **283** P **P** **18 40 57.0 0.0**
0.9nm,0.8s,baz=72,slow=9.8,SNR=5.7
0.9nm,0.8s
AKASG **Malin Array Be** **32.57** **305** P **P** **18 41 15.6 -0.2**
0.2nm,0.4s,baz=76,slow=7.4,SNR=2.8
0.2nm,0.4s
FINES **FINESS Array B** **36.01** **323** P **P** **18 41 46.0 +0.6**
1.1nm,0.3s,baz=113,slow=10,SNR=26
1.1nm,0.3s
ARCES **ARCESS Array B** **39.01** **336** P **P** **18 42 11.5 +0.7**
2.4nm,0.8s,baz=110,slow=8.8,SNR=12
2.4nm,0.8s
KLR **Kul'dur** **41.82** **57** P **P** **18 42 31.9 -2.3**
1.1nm,0.4s,baz=277,slow=7.7,SNR=7.2
1.1nm,0.4s
NB2 **NORSAR Subarra** **43.06** **321** P **P** **18 42 43.6 -0.7**
comp=Z,0.7nm,0.5s,baz=92,slow=7.9
NOA **NORSAR Array B** **43.06** **321** P **P** **18 42 43.9 -0.3**
comp=Z,1.2nm,0.6s,baz=91,slow=8.0,SNR=6.7
comp=Z,1.2nm,0.6s
ESDC **Sonseca Array** **57.68** **297** P **P** **18 44 34.0 -1.2**
comp=Z,0.3nm,0.6s,baz=57,slow=7.1,SNR=4.6
comp=Z,0.3nm,0.6s
TORD **Torodi Ar. Bea** **67.66** **269** P **P** **18 45 39.4 -2.8**
comp=Z,0.4nm,0.5s,baz=51,slow=5.2,SNR=7.7
comp=Z,0.4nm,0.5s
ILAR **Eielson Array** **71.24** **17** P **P** **18 46 01.2 -2.2**
comp=Z,0.4nm,0.8s,baz=308,slow=3.8,SNR=4.6
comp=Z,0.4nm,0.8s
YKA **Yellowknife Ar** **78.01** **4** P **P** **18 46 41.0 -1.8**
comp=Z,0.4nm,0.5s,baz=350,slow=5.5,SNR=8.6
comp=Z,0.4nm,0.5s
WRA **Warramunga Arr** **82.12** **124** P P 18 47 00.5 -5.0
comp=Z,0.6nm,0.8s,baz=322,slow=5.2,SNR=8.2
comp=Z,0.6nm,0.8s
ASAR **Alice Springs** **84.57** **127** P P 18 47 13.4 -4.7
comp=Z,0.3nm,0.7s,baz=327,slow=5.3,SNR=5.0
comp=Z,0.3nm,0.7s

*IDC **26** 18:35:35.0±1.1,37.°43N×98.°25W,h0km,mb3.3/1,*
mbtmp3.4/5,ML4.1/3,Error ellipse: s-maj=14.4km
s-min=12.4km az=6.0
*NEIC **26** 18:35:34.7±0.4,37.°354N±0.°010×98.°20W±0.°02,h5km±2km,*
mb_Lg3.4/98,Error ellipse: s-maj=3.1km s-min=2.7km
az=60.0
*ANF **26** 18:35:35.4±0.4,37.°39N×98.°13W,h5km,ML4.3/14,Error*
ellipse: s-maj=5.7km s-min=2.1km az=50.0
ISC 26 18:35:35.1±0.8,37.34N±0.04×98.23W±0.06,h10km,n97,
σ0.93/71,Kansas

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
R32A	**Long Quarter,**	**1.15**	**341**			**Pb**	**18 35 56.5**	**-0.5**
R32A	**Long Quarter,**	**1.15**	**341**	P		**Pb**	**18 35 56.6**	**-0.5**
	baz=159,SNR=263							
R32A				S		**Sn**	**18 36 12.0**	**-1.1**
	baz=159							
T35A	**Sooner Cattle**	**1.44**	**107**			**Pn**	**18 36 00.8**	**-0.4**
T35B	**Sooner Cattle**	**1.44**	**107**	P		**Pn**	**18 36 00.9**	**-0.3**
	baz=288,SNR=702							
T35B				S		**Sn**	**18 36 19.4**	**-0.7**
	baz=288							
OKCFA	**Oklahoma City**	**2.02**	**162**			**Pn**	**18 36 09.6**	**+0.3**
OKCSW	**OKLAHOMA CITY**	**2.03**	**161**			**Pn**	**18 36 09.0**	**-0.4**
KSU1	**Kansas State U**	**2.17**	**35**			**Pn**	**18 36 11.5**	**+0.1**
FNO	**Franklin**	**2.18**	**162**			**Pn**	**18 36 13.0**	**+1.5**
TUL1	**Leonard**	**2.42**	**125**	Pn		**Pn**	**18 36 15.4**	**+0.7**
TUL1	**Leonard**	**2.42**	**125**	P		**Pn**	**18 36 15.2**	**+0.4**
	baz=307,SNR=20							
TUL1				S		**Sn**	**18 36 45.5**	**+0.9**
	baz=307							
WMOK	**Wichita Mounta**	**2.63**	**190**			**Pn**	**18 36 18.7**	**+1.1**
U38A	**Gravette**	**3.21**	**105**			**Pn**	**18 36 25.9**	**+0.3**
U38A	**Gravette**	**3.21**	**105**	P		**Pn**	**18 36 26.0**	**+0.4**
	baz=288,SNR=109							
N33B	**J Bar K, Exete**	**3.45**	**10**	P		**Pn**	**18 36 28.9**	**0.0**
	baz=190,SNR=32							
N33B				S		**Sn**	**18 37 09.9**	**+0.1**
	baz=190							
N33A	**J Bar K, Exete**	**3.45**	**10**			**Pn**	**18 36 29.2**	**+0.3**
X37A	**Clayton**	**3.59**	**139**	Pn		**Pn**	**18 36 31.4**	**+0.6**
HHAR	**Hobbs**	**3.60**	**106**	Pn		**Pn**	**18 36 31.4**	**+0.4**
HHAR				IAmb_Lg			18 37 36.3	
	comp=Z,73nm,0.8s							
AMTX	**Amarillo**	**3.71**	**230**	IAmb_Lg			18 37 38.2	
	comp=Z,118nm,0.9s							
KSCO	**Kaye Shedlock'**	**3.85**	**297**	IAmb_Lg			18 37 42.6	
	comp=Z,63nm,0.7s							
KSCO	**Kaye Shedlock'**	**3.85**	**297**	P		**Pn**	**18 36 36.4**	**+1.9**
	baz=114,SNR=6.6							
S39A	**Bolivar**	**3.92**	**83**	Pn		**Pn**	**18 36 35.3**	**0.0**
S39A	**Bolivar**	**3.92**	**83**	P		**Pn**	**18 36 35.2**	**-0.1**
	baz=266,SNR=52							
N35A	**Tabor**	**4.05**	**29**			**Pn**	**18 36 37.3**	**+0.1**
N35A	**Tabor**	**4.05**	**29**	P		**Pn**	**18 36 38.0**	**+0.8**
	baz=210,SNR=20							
BGNE	**Belgrade**	**4.07**	**1**	Pn		**Pn**	**18 36 38.5**	**+1.1**
BGNE	**Belgrade**	**4.07**	**1**	P		**Pn**	**18 36 38.5**	**+1.1**
	baz=181,SNR=12							
Z35A	**Perchaven, San**	**4.08**	**168**	Pn		**Pn**	**18 36 39.0**	**+1.4**
W39A	**Magazine**	**4.18**	**119**			**Pn**	**18 36 39.1**	**+0.2**
W39A				IAmb_Lg			18 37 45.1	
	comp=Z,86nm,0.8s							
W39A	**Magazine**	**4.18**	**119**	P		**Pn**	**18 36 39.1**	**+0.2**
	baz=302							
P38A	**Dawn**	**4.34**	**57**			**Pn**	**18 36 41.4**	**+0.3**
P38A				IAmb_Lg			18 37 51.0	
	comp=Z,89nm,0.7s							
P38A	**Dawn**	**4.34**	**57**	P		**Pn**	**18 36 41.3**	**+0.2**
	baz=240,SNR=22							
OGNE	**Ogallala**	**4.66**	**322**	IAmb_Lg			18 38 13.5	
	comp=Z,86nm,0.8s							
MIAR	**Mount Ida**	**4.69**	**125**			**Pn**	**18 36 46.2**	**+0.2**
MIAR				IAmb_Lg			18 38 07.2	
	comp=Z,53nm,0.8s							
MGMO	**Mountain Grove**	**4.76**	**90**			**Pn**	**18 36 47.1**	**+0.1**
MGMO				IAmb_Lg			18 38 10.4	
	comp=Z,65nm,0.7s							
R40A	**Maddies Statio**	**4.82**	**77**	Pn		**Pn**	**18 36 47.5**	**-0.2**
R40A				IAmb_Lg			18 38 09.9	
	comp=Z,58nm,0.8s							
R40A	**Maddies Statio**	**4.82**	**77**	P		**Pn**	**18 36 47.4**	**-0.2**
	baz=260,SNR=30							
ABTX	**Abilene, Hawle**	**4.84**	**194**			**Pn**	**18 36 49.9**	**+1.8**
T25A	**Trinidad**	**4.94**	**270**			**Pn**	**18 36 51.2**	**+1.7**
T25A				IAmb_Lg			18 38 13.9	
	comp=Z,72nm,0.7s							
MSTX	**Muleshoe**	**5.00**	**229**			**Pn**	**18 36 52.0**	**+1.8**
FCAR	**Ozark Folk Cen**	**5.12**	**105**			**Pn**	**18 36 51.8**	**-0.1**
N38A	**Joes South For**	**5.20**	**47**			**Pn**	**18 36 52.9**	**-0.1**
N38A				IAmb_Lg			18 38 21.1	
	comp=Z,82nm,0.8s							
N38A	**Joes South For**	**5.20**	**47**	P		**Pn**	**18 36 52.8**	**-0.1**
	baz=230,SNR=6.9							
WHAR	**Wooly Hollow**	**5.22**	**111**			**Pn**	**18 36 53.2**	**0.0**
WHAR				IAmb_Lg			18 38 23.0	
	comp=Z,87nm,0.8s							
W41B	**Gary Mavity, V**	**5.29**	**112**			**Pn**	**18 36 54.4**	**+0.2**
W41B				IAmb_Lg			18 38 21.7	
	comp=Z,46nm,0.9s							
W41B	**Gary Mavity, V**	**5.29**	**112**	P		**Pn**	**18 36 54.2**	**0.0**
	baz=296,SNR=15							
P40A	**Paris**	**5.33**	**64**	Pn		**Pn**	**18 36 55.1**	**+0.4**
P40A				IAmb_Lg			18 38 27.9	
	comp=Z,85nm,0.8s							
WLAR	**White Oak Lake**	**5.54**	**130**	Pn		**Pn**	**18 36 57.7**	**+0.1**
WLAR				IAmb_Lg			18 38 33.1	
	comp=Z,61nm,0.8s							
CCM	**Cathedral Cave**	**5.59**	**81**	Pn		**Pn**	**18 36 59.1**	**+0.9**
CCM				IAmb_Lg			18 38 32.0	
	comp=Z,50nm,0.8s							
237A	**Washetta, Mont**	**5.69**	**159**	IAmb_Lg			18 38 47.2	
	comp=Z,34nm,0.8s							
Q24A	**Divide**	**5.69**	**289**	Pn		**Pn**	**18 37 01.6**	**+1.7**
SDCO	**Great Sand Dun**	**5.79**	**276**			**Pn**	**18 37 03.8**	**+2.4**
Z41A	**Richland Creek**	**6.02**	**131**	IAmb_Lg			18 38 54.4	
	comp=Z,42nm,1.1s							
FVM	**French Village**	**6.23**	**82**			**Pn**	**18 37 06.7**	**-0.3**
FVM				IAmb_Lg			18 39 06.0	
	comp=Z,33nm,0.9s							
PBMO	**Poplar Bluff**	**6.26**	**93**	Pn		**Pn**	**18 37 08.2**	**+0.6**
PBMO				IAmb_Lg			18 39 03.8	
	comp=Z,54nm,0.8s							
CCAR	**Cane Creek**	**6.27**	**121**	IAmb_Lg			18 39 10.8	
	comp=Z,34nm,0.7s							
ISCO	**Idaho Springs**	**6.29**	**295**	Pn		**Pn**	**18 37 09.1**	**+0.9**
NATX	**Nacogdoches**	**6.29**	**151**	IAmb_Lg			18 39 11.1	
	comp=Z,32nm,0.8s							
SLM	**Saint Louis**	**6.45**	**76**	IAmb_Lg			18 38 57.5	
	comp=Z,61nm,1.0s							
ECSD	**EROS Data Cent**	**6.51**	**10**	Pn		**Pn**	**18 37 10.5**	**-0.4**
435B	**Jarrell**	**6.56**	**175**	IAmb_Lg			18 39 17.8	
	comp=Z,41nm,0.9s							
GNAR	**Gosnell**	**6.74**	**99**	IAmb_Lg			18 39 20.6	
	comp=Z,61nm,0.9s							
K38A	**Parkersburg**	**6.76**	**37**	IAmb_Lg			18 39 12.6	
	comp=Z,67nm,0.9s							
PARMO	**Parma**	**6.82**	**93**	IAmb_Lg			18 39 16.7	
	comp=Z,62nm,0.7s							
PHWY	**Pilot Hill**	**6.86**	**307**	Pn		**Pn**	**18 37 15.7**	**-0.3**
PHWY				IAmb_Lg			18 39 28.4	
	comp=Z,35nm,1.0s							
N23A	**Red Feather La**	**6.97**	**303**	Pn		**Pn**	**18 37 19.1**	**+1.6**
ANMO	**Albuquerque**	**7.07**	**253**	Pn		**Pn**	**18 37 21.1**	**+2.2**
	comp=Z,0.3nm,0.3s,baz=85,slow=15,SNR=2.7							
ANMO				Pg		**Pg**	**18 37 48.6**	**-1.9**
	comp=Z,1.0nm,0.3s,baz=75,slow=17,SNR=7.4							
ANMO				Lg		Lg	18 39 17.4	
	comp=Z,1.3nm,0.3s,baz=158,slow=24,SNR=6.3							
S44A	**Carbondale**	**7.14**	**84**	Pn		**Pn**	**18 37 18.8**	**-0.8**
L40A	**Anamosa**	**7.17**	**47**	Pn		**Pn**	**18 37 19.6**	**-0.4**
L40A				IAmb_Lg			18 39 31.1	
	comp=Z,61nm,0.9s							
L40A	**Anamosa**	**7.17**	**47**	P		**Pn**	**18 37 19.8**	**-0.2**
	baz=231,SNR=5.4							
SIUC	**Southern Illin**	**7.17**	**84**	Pn		**Pn**	**18 37 18.9**	**-1.1**
P43A	**Skaggs, Pawnee**	**7.21**	**69**	IAmb_Lg			18 39 26.8	
	comp=Z,60nm,0.9s							
143A	**Socs Landing,**	**7.26**	**128**	IAmb_Lg			18 39 38.0	
	comp=Z,24nm,0.8s							
HALT	**Halls**	**7.29**	**99**	IAmb_Lg			18 39 38.0	
	comp=Z,46nm,0.8s							
I37A	**Lemond, Waseca**	**7.61**	**27**	IAmb_Lg			18 39 47.2	
	comp=Z,51nm,1.0s							
W45A	**Hickory Valley**	**7.62**	**104**	IAmb_Lg			18 39 38.2	
	comp=Z,43nm,0.8s							
OXF	**Oxford**	**7.69**	**109**	Pn		**Pn**	**18 37 25.9**	**-1.3**
OXF				IAmb_Lg			18 39 46.2	
	comp=Z,49nm,1.2s							
Y22D	**IRIS PASSCAL I**	**7.78**	**248**	IAmb_Lg			18 39 55.3	
	comp=Z,40nm,0.7s							
Y45A	**Yeager Farm, C**	**7.88**	**114**	IAmb_Lg			18 39 55.5	
	comp=Z,46nm,0.8s							
L42A	**Oliver, Polo**	**8.08**	**52**	P		**Pn**	**18 37 31.8**	**-0.7**
	baz=238,SNR=8.7							
RSSD	**Black Hills**	**8.08**	**329**	IAmb_Lg			18 40 03.5	
	comp=Z,26nm,1.0s							
O44A	**Mansfield**	**8.13**	**67**	IAmb_Lg			18 40 02.2	
	comp=Z,48nm,0.8s							
RWWY	**Rawlins**	**8.19**	**305**	IAmb_Lg			18 40 03.9	
	comp=Z,34nm,1.1s							
JFWS	**Jewell Farm**	**8.27**	**45**	IAmb_Lg			18 39 58.5	
	comp=Z,32nm,0.7s							
K22A	**Casper**	**8.28**	**312**	IAmb_Lg			18 40 08.5	
	comp=Z,28nm,0.9s							
735A	**Kenedy**	**8.47**	**177**	IAmb_Lg			18 40 11.9	
	comp=Z,23nm,0.9s							
F33A	**5 Mile Ranch,**	**8.62**	**9**	IAmb_Lg			18 40 10.0	
	comp=Z,27nm,0.9s							
I40A	**Norwalk**	**8.74**	**39**	IAmb_Lg			18 40 29.3	
	comp=Z,20nm,0.9s							
146A	**Union**	**8.87**	**119**	IAmb_Lg			18 40 28.6	
	comp=Z,20nm,1.1s							
833A	**Chaparral WMA,**	**9.04**	**187**	IAmb_Lg			18 40 32.7	
	comp=Z,35nm,1.0s							
TXAR	**Lajitas Array**	**9.18**	**211**	Pn		**Pn**	**18 37 48.3**	**+0.5**
	comp=Z,0.5nm,0.3s,baz=37,slow=10,SNR=25							
TXAR				Lg		Lg	18 40 20.0	
	comp=Z,0.6nm,0.3s,baz=2.1,slow=38,SNR=2.8							
	comp=Z,0.6nm,0.3s							
TXAR	**Lajitas Array**	**9.18**	**211**			**Pn**	**18 37 48.5**	**+0.7**
I42A	**Draeger Farm,**	**9.64**	**44**	IAmb_Lg			18 40 48.6	
	comp=Z,16nm,0.8s							
G40A	**Rib Lake**	**9.96**	**35**	IAmb_Lg			18 41 00.0	
	comp=Z,17nm,1.1s							
PDAR	**Pinedale Array**	**10.23**	**306**	Pn		**Pn**	**18 38 02.8**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=117,slow=14,SNR=6.2							
PDAR				Lg		Lg	18 40 55.5	
	comp=Z,0.8nm,0.3s,baz=116,slow=27,SNR=7.9							
	comp=Z,0.4nm,0.3s							
PDAR	**Pinedale Array**	**10.23**	**306**			**Pn**	**18 38 01.9**	**-0.3**
TKL	**Tuckaleechee C**	**11.76**	**94**	Pn		**Pn**	**18 38 22.3**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=264,slow=10,SNR=5.3							
TKL				Lg		Lg	18 41 41.1	
	comp=Z,0.8nm,0.3s,baz=15,slow=19,SNR=8.9							
	comp=Z,1.3nm,0.4s							
ILAR	**Eielson Array**	**39.53**	**330**	P		**P**	**18 43 07.5**	**+1.7**
	comp=Z,0.3nm,0.6s,baz=110,slow=6.7,SNR=4.9							
	comp=Z,0.3nm,0.6s							

KRNET 26 18:44:30.1±0.1,39.°40N×73.°49E,mb3.1,4C-3D,
Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
OHH	**Osh**	**1.25**	**335**	⇑*i*P		Pg	18 44 53.2	-0.9
	baz=35							
OHH				⇑*i*S		Sg	18 45 10.2	-0.1
	baz=35							
DRK	**Karamyk**	**1.31**	**274**	⇑*e*P		Pg	18 44 54.3	-0.9
	baz=74							
DRK				⇑*e*S		Sg	18 45 12.0	-0.2
	baz=74							
BTK	**Batken**	**2.16**	**289**	⇓*e*P		Pn	18 45 08.0	+0.5
	baz=89							
BTK				⇓*e*S		Sn	18 45 35.8	+0.8
	baz=89							
ARLS	**Aral**	**2.54**	**14**	⇓*e*P		Pn	18 45 13.4	+0.6
	baz=14							

*SOME **26** 18:45:01.8,39.°50N×73.°65E,h10km*
*KRNET **26** 18:45:01.2±0.1,39.°40N×73.°58E,mb3.8*
*NNC **26** 18:45:05.4±1.0,39.°61N×73.°67E,h0km,mb4.1,mpv3.7,*
Error ellipse: s-maj=7.8km s-min=4.9km az=171.0
ISC 26 18:44:58.6±1.4,39.41N±0.05×73.70E±0.03,h17km±14km,
n57,σ1.24/87,11C-26D,Tajikistan-Xinjiang border
region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
OHH	**Osh**	**1.32**	**328**	⇑*e*P		**Pg**	**18 45 25.5**	**+1.5**
	baz=32							
OHH				⇑*e*S		**Sg**	**18 45 43.4**	**+2.2**
	baz=32							

DRK	**Karamyk**	**1.48**	**273**	⇓*i*P		**Pg**	**18 45 27.4**	**+0.4**
	baz=74								
DRK				⇓*e*S		**Sg**	**18 45 46.3**	**0.0**
	baz=74								
BTK	**Batken**	**2.32**	**287**	⇓*i*P		**Pg**	**18 45 41.4**	**-1.6**
	baz=88								
BTK				⇓*e*S		**Sb**	**18 46 10.7**	**+2.4**
	baz=88								
ARLS	**Aral**	**2.49**	**11**	⇓*e*P		**Pg**	**18 45 45.5**	**-0.9**
	baz=13								
ARLS				⇓*e*S		**Sg**	**18 46 17.8**	**-1.0**
	baz=13								
ARLS	**Aral**	**2.49**	**11**	⇓*e*S		**Pg**	**18 45 45.0**	**-1.4**
	baz=14								
GAR	**Garm**	**2.66**	**262**	⇓*i*P		**Pb**	**18 45 45.8**	**0.0**
	baz=62								
GAR				⇓*e*S		**Sb**	**18 46 18.3**	**0.0**
	baz=62								
ARK	**Arkit**	**2.73**	**332**	⇓*e*P		**Pb**	**18 45 48.0**	**+1.0**
	baz=33								
ARK				⇓*e*S		**Sb**	**18 46 22.0**	**+1.8**
	baz=33								
UCH	**Uchtor**	**2.88**	**12**	⇓*e*P		**Pb**	**18 45 51.4**	**+1.6**
	baz=14								
UCH				⇓*e*S		**Sb**	**18 46 27.8**	**+2.9**
	baz=14								
TRKS	**Terek-Say**	**2.88**	**318**	⇑*i*P		**Pb**	**18 45 49.1**	**-0.5**
	baz=19								
TRKS				⇑*i*S		**Sb**	**18 46 23.6**	**-1.0**
	baz=19								
EKS2	**Erkin-Say**	**3.25**	**1**	⇓*e*P		**Pb**	**18 45 55.9**	**+0.1**
	baz=3.0								
EKS2				⇓*i*S		**Sb**	**18 46 35.7**	**+0.6**
	baz=3.0								
AAK	**Ala-Archa**	**3.28**	**10**	⇓*e*P		**Pb**	**18 45 56.5**	**+0.1**
	baz=12								
AAK				⇓*i*S		**Sb**	**18 46 36.7**	**+0.6**
	baz=12								
KBK	**Karagaybulak**	**3.38**	**16**	⇓*e*P		**Pb**	**18 45 57.9**	**-0.2**
	baz=17								
KBK				⇓*e*S		**Sb**	**18 46 39.6**	**+0.7**
	baz=17								
ULHL	**Ulahol**	**3.42**	**33**	⇓*e*P		**Pb**	**18 45 59.0**	**+0.1**
	baz=35								
ULHL				⇓*i*S		**Sb**	**18 46 41.2**	**+0.9**
	baz=35								
BOOM	**Boomskoye usch**	**3.51**	**28**	⇓*e*P		**Pb**	**18 46 00.1**	**-0.3**
	baz=29								
BOOM				⇓*i*S		**Sb**	**18 46 43.3**	**+0.5**
	baz=29								
TKM2	**Tokmak 2**	**3.79**	**22**	⇑Pg		**Pg**	**18 46 10.8**	**-0.3**
	3.5nm,0.3s								
TKM2				⇑Lg		Lg	18 47 02.1		
	14nm,0.5s								
KDJ	**Kajisay**	**3.79**	**43**	⇓*e*P		**Pb**	**18 46 04.1**	**-1.0**
	baz=44								
KDJ				⇓*i*S		**Sb**	**18 46 50.4**	**-0.3**
	baz=44								
IUG	**luzhnay**	**3.90**	**316**	*e*P		**Pg**	**18 46 13.3**	**-0.1**
	292nm,0.5s								
IUG				*e*S		**Sg**	**18 47 05.5**	**+1.6**
	69nm,0.8s								
KST	**Kastek**	**4.01**	**24**	*e*P		**Pg**	**18 46 14.6**	**-0.8**
	11nm,0.4s								
KST				*e*S		**Sg**	**18 47 07.5**	**+0.2**
	41nm,0.8s								
KST	**Kastek**	**4.01**	**24**	Pg		**Pg**	**18 46 15.0**	**-0.4**
	11nm,0.4s								
KST				Lg		Lg	18 47 07.5		
	41nm,0.8s								
SGDS	**Sogindy**	**4.10**	**9**	*e*P		**Pg**	**18 46 16.8**	**-0.3**
	16nm,0.5s								
SGDS				*e*S		**Sg**	**18 47 10.6**	**+0.5**
	14nm,0.7s								
SGDS	**Sogindy**	**4.10**	**9**	Pg		**Pg**	**18 46 16.8**	**-0.3**
	16nm,0.5s								
SGDS				Lg		Lg	18 47 10.6		
	14nm,0.7s								
MTBS	**Maitube**	**4.25**	**28**	*e*P		**Pg**	**18 46 19.7**	**-0.2**
	14nm,0.5s								
MTBS				*e*S		**Sg**	**18 47 15.6**	**+0.7**
	16nm,0.4s								
MTBS	**Maitube**	**4.25**	**28**	Pg		**Pg**	**18 46 19.7**	**-0.2**
	14nm,0.5s								
MTBS				Lg		Lg	18 47 15.6		
	16nm,0.4s								
TNSS	**Tian-Shan**	**4.37**	**33**	*e*P		**Pg**	**18 46 22.3**	**0.0**
	9.3nm,0.4s								
TNSS				*e*S		**Sg**	**18 47 19.6**	**+0.6**
	20nm,0.7s								
TNSS	**Tian-Shan**	**4.37**	**33**	Pg		**Pg**	**18 46 22.3**	**0.0**
	9.3nm,0.4s								
TNSS				Lg		Lg	18 47 19.6		
	20nm,0.7s								
KK31	**Karatay Array**	**4.40**	**328**	⇑Pg		**Pg**	**18 46 22.5**	**-0.4**
	2.8nm,0.4s,baz=143,slow=16,SNR=6.4								
KK31				⇑Lg		Lg	18 47 18.0		
	7.7nm,0.3s,baz=140,slow=30,SNR=2.7								
AAA	**Alma-Ata**	**4.50**	**31**	*e*P		**Pg**	**18 46 25.4**	**+0.6**
	20nm,0.2s								
AAA				*e*S		**Sg**	**18 47 24.7**	**+1.6**
	57nm,0.5s								
AAA	**Alma-Ata**	**4.50**	**31**	Pg		**Pg**	**18 46 25.4**	**+0.6**
	20nm,0.2s								
AAA				Lg		Lg	18 47 24.7		
	57nm,0.5s								
KNDC	**Almaty**	**4.53**	**32**	⇓Pg		**Pg**	**18 46 25.8**	**+0.5**
	26nm,0.5s								
KNDC				⇑Lg		Lg	18 47 25.8		
	83nm,0.7s								
KRBS	**Karabastau**	**4.53**	**18**	*e*P		**Pg**	**18 46 24.8**	**-0.5**
	0.4nm,0.9s								
KRBS				*e*S		**Sg**	**18 47 23.8**	**-0.3**
	29nm,0.8s								
KRBS	**Karabastau**	**4.53**	**18**	Pg		**Pg**	**18 46 24.8**	**-0.5**
	0.4nm,0.9s								
KRBS				Lg		Lg	18 47 23.8		
	29nm,0.8s								
BRLS	**Boroldaу**	**4.64**	**322**	*e*P		**Pg**	**18 46 25.2**	**-2.3**
	4.2nm,0.4s								
BRLS				*e*S		**Sg**	**18 47 24.3**	**-3.3**
	24nm,0.5s								
BRLS	**Boroldaу**	**4.64**	**322**	Pg		**Pg**	**18 46 25.2**	**-2.3**
	4.2nm,0.4s								
BRLS				Lg		Lg	18 47 24.3		
	24nm,0.5s								
KUU	**Kurty**	**4.89**	**23**	*e*P		**Pg**	**18 46 31.0**	**-1.3**
	7.9nm,0.6s								
KUU				*e*S		**Sg**	**18 47 34.9**	**-0.8**
	27nm,0.8s								
KUU	**Kurty**	**4.89**	**23**	Pg		**Pg**	**18 46 31.0**	**-1.3**
	7.9nm,0.6s								
KUU				Lg		Lg	18 47 34.9		
	27nm,0.8s								
CHKK	**Chushkaly**	**5.08**	**28**	*e*P		**Pg**	**18 46 34.3**	**-1.4**
	6.7nm,0.6s								
CHKK				*e*S		**Sg**	**18 47 40.7**	**-0.8**
	18nm,0.7s								
CHKK	**Chushkaly**	**5.08**	**28**	Pg		**Pg**	**18 46 34.3**	**-1.4**
	6.7nm,0.6s								
CHKK				Lg		Lg	18 47 40.7		
	18nm,0.7s								
SATY	**Saty**	**5.08**	**43**	*e*P		**Pg**	**18 46 35.5**	**-0.4**
	12nm,0.8s								
SATY				*e*S		**Sg**	**18 47 42.7**	**+0.9**
	23nm,0.9s								
SATY	**Saty**	**5.08**	**43**	Pg		**Pg**	**18 46 35.5**	**-0.4**
	12nm,0.8s								
SATY				Lg		Lg	18 47 42.7		
	23nm,0.9s								
ZHN	**Zhinishke**	**5.18**	**42**	*e*P		**Pg**	**18 46 36.9**	**-0.8**
	7.6nm,0.2s								
ZHN				*e*S		**Sg**	**18 47 45.1**	**+0.4**
	20nm,0.4s								
ZHN	**Zhinishke**	**5.18**	**42**	Pg		**Pg**	**18 46 36.9**	**-0.8**
	7.6nm,0.2s								
ZHN				Lg		Lg	18 47 45.1		
	20nm,0.4s								
KURS	**Kuram**	**5.28**	**38**	*e*P		**Pg**	**18 46 38.8**	**-0.8**
	3.8nm,0.5s								
KURS				*e*S		**Sg**	**18 47 48.4**	**+0.4**
	12nm,1.0s								
KURS	**Kuram**	**5.28**	**38**	Pg		**Pg**	**18 46 38.8**	**-0.8**
	3.8nm,0.5s								
KURS				Lg		Lg	18 47 48.4		
	12nm,1.0s								
KPKS	**Kokpek**	**5.52**	**41**	*e*P		**Pg**	**18 46 43.6**	**-0.5**
	10nm,0.5s								
KPKS				*e*S		**Sg**	**18 47 56.6**	**+1.0**
	27nm,0.9s								
KPKS	**Kokpek**	**5.52**	**41**	Pg		**Pg**	**18 46 43.6**	**-0.5**
	10nm,0.5s								
KPKS				Lg		Lg	18 47 56.6		
	27nm,0.9s								
BTLS	**Baital**	**5.63**	**2**	*e*P		**Pg**	**18 46 45.0**	**-1.4**
	4.1nm,0.8s								
BTLS				*e*S		**Sg**	**18 47 59.0**	**-0.3**
	7.7nm,0.7s								
BTLS	**Baital**	**5.63**	**2**	Pg		**Pg**	**18 46 45.0**	**-1.4**
	4.1nm,0.8s								
BTLS				Lg		Lg	18 47 59.0		
	7.7nm,0.7s								
ARXS	**Arharly**	**5.70**	**31**	*e*P		**Pg**	**18 46 45.6**	**-2.2**
	9.6nm,0.8s								
ARXS				*e*S		**Sg**	**18 47 59.9**	**-1.6**
	20nm,0.6s								
ARXS	**Arharly**	**5.70**	**31**	Pg		**Pg**	**18 46 45.6**	**-2.2**
	9.6nm,0.8s								
ARXS				Lg		Lg	18 47 59.9		
	20nm,0.6s								
SHLS	**Shalkode**	**5.73**	**47**	*e*P		Pg	18 46 52.5	+4.2	
	3.4nm,0.6s								
SHLS				*e*S		Sg	18 48 11.8	+9.4	
	9.6nm,0.6s								
SHLS	**Shalkode**	**5.73**	**47**	Pg		Pg	18 46 52.5	+4.2	
	3.4nm,0.6s								
SHLS				Lg		Lg	18 48 11.8		
	9.6nm,0.6s								
PDGK	**Podgornoye**	**5.85**	**46**	Pg		**Pg**	**18 46 49.0**	**-1.6**
	0.9nm,0.7s								
PDGK				Lg		Lg	18 48 05.8		
	7.1nm,1.1s								
PDGK	**Podgornoye**	**5.85**	**46**	⇑Pg		**Pg**	**18 46 54.3**	**+3.7**
	4.8nm,0.6s								
PDGK				⇑Lg		Lg	18 48 06.0		
	10nm,0.7s								
BLB	**Baldybastay**	**5.89**	**36**	*e*P		**Pg**	**18 46 49.7**	**-1.6**
	16nm,0.6s								
BLB				*e*S		**Sg**	**18 48 06.3**	**-1.2**
	16nm,0.7s								
BLB	**Baldybastay**	**5.89**	**36**	Pg		**Pg**	**18 46 49.7**	**-1.6**
	16nm,0.6s								
BLB				Lg		Lg	18 48 06.3		
	16nm,0.7s								
DJR	**Jarkent**	**6.69**	**41**	*e*P		**Pg**	**18 47 05.1**	**-1.6**
	1.8nm,0.4s								
DJR				*e*S		**Sg**	**18 48 33.8**	**+0.5**
	6.9nm,0.7s								
DJR	**Jarkent**	**6.69**	**41**	Pg		**Pg**	**18 47 05.7**	**-1.0**
	1.8nm,0.4s								
DJR				Lg		Lg	18 48 33.8		
	6.9nm,0.7s								

*KRNET **26** 18:51:08.0±0.1,39˚.38N×73˚.53E,mb4.6*
*SOME **26** 18:51:07.5,39˚.43N×73˚.53E,h10km,MS4.0*
*IDC **26** 18:51:09.1±0.7,39˚.28N×73˚.50E,h0km,mb4.0/22, mbtmp4.0/29,ML3.2/7,MS3.4/27,Error ellipse: s-maj=12.6km s-min=10.0km az=144.0*
*MOS **26** 18:51:10.3±1.0,39˚.39N×73˚.40E,h11km,mb4.4/14,Error ellipse: s-maj=5.7km s-min=3.8km az=81.2*
MOS Felt (III) at Bordobo; (II-III) at Nura.
*BJI **26** 18:51:11.0±0.0,39˚.40N×73˚.30E,h10km,mb4.2/20, mB4.5/12,ML4.0/6,Ms4.0/14,Ms7 3.7/14*
*NEIC **26** 18:51:12.7±2.9,39˚.44N±0˚.04×73˚.30E±0˚.07,h10km±1km, mb4.4/12,Error ellipse: s-maj=8.9km s-min=7.6km az=104.0*
*NNC **26** 18:51:12.2±2.3,39˚.65N×73˚.37E,h0km,mb4.6,mpv4.2, Error ellipse: s-maj=19.6km s-min=10.4km az=173.0*
ISC 26 18:51:09.7±1.0,**39˚33N**±0˚.03×**73˚41E**±0˚.02,**h2**km±6km, **n266,**σ**2**°**10**/332,**mb4.3**/42,**MS3.5**/27,**52C-24D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
				Op	ISC		ISC
DRK	**Karamyk**	**1.25**	**277**	⇑*i*P	**Pn**	**18 51 33.6**	**-0.9**
	baz=75						
DRK				⇑*i*S	**Sn**	**18 51 52.3**	**+0.1**
	baz=75						
DRK	**Karamyk**	**1.25**	**277**	Pn	**Pn**	**18 51 34.5**	**-0.1**
DRK				Sn	**Sn**	**18 51 52.2**	**+0.1**
OHH	**Osh**	**1.28**	**338**	⇑*i*P	**Pn**	**18 51 32.3**	**-2.4**
	baz=33						
OHH				⇑*i*S	**Sb**	**18 51 50.0**	**-1.6**
	baz=33						
OHH	**Osh**	**1.28**	**338**	*i* PG	**Pn**	**18 51 32.3**	**-2.4**
OHH				*i* S	**Sb**	**18 51 50.0**	**-1.6**
KSH	**Kashi**	**2.00**	**84**	Pg	**Pn**	**18 51 40.3**	**-4.3**
KSH				Sg	**Sn**	**18 52 04.8**	**-5.4**
KSH				smax	smax		
	comp=N,2μm,0.6s						
KSH				smax	smax		
	comp=E,2μm,0.9s						
BTK	**Batken**	**2.12**	**291**	⇑*i*P	**Pn**	**18 51 47.9**	**+1.6**
	baz=89						
BTK				⇑*i*S	**Sb**	**18 52 16.9**	**+1.1**
	baz=89						
BTK	**Batken**	**2.12**	**291**		**Pb**	**18 51 48.3**	**-0.7**
BTK	**Batken**	**2.12**	**291**	*i* PN	**Pn**	**18 51 47.0**	**+0.7**
BTK				*i* S	**Sb**	**18 52 16.9**	**+1.1**
GAR	**Garm**	**2.43**	**263**		**Pn**	**18 51 50.2**	**-0.3**
ARLS	**Aral**	**2.62**	**15**	⇑*i*P	**Pn**	**18 51 52.5**	**-0.7**
	baz=14						
ARLS				⇑*i*S	**Sn**	**18 52 25.2**	**-0.4**
	baz=14						
ARLS	**Aral**	**2.62**	**15**	*i* PN	**Pn**	**18 51 52.5**	**-0.7**
ARLS				*i* S	**Sn**	**18 52 25.2**	**-0.4**
ARK	**Arkit**	**2.70**	**336**	⇑*i*P	**Pn**	**18 51 54.7**	**+0.5**
	baz=34						
ARK				⇑*i*S	**Sn**	**18 52 28.8**	**+1.3**
	baz=34						
ARK	**Arkit**	**2.70**	**336**	*i* PN	**Pn**	**18 51 54.7**	**+0.5**
ARK				*i* S	**Sn**	**18 52 28.8**	**+1.3**
TRKS	**Terek-Say**	**2.79**	**322**	⇑*e*P	**Pn**	**18 51 55.7**	**+0.1**
	baz=20						
TRKS				⇑*i*S	**Sn**	**18 52 30.3**	**+0.3**
	baz=20						
AML	**Almayashu**	**2.80**	**4**	P	**Pn**	**18 51 57.6**	**+1.7**
	SNR=48						
AML	**Almayashu**	**2.80**	**4**	*i* PN	**Pn**	**18 51 55.8**	**-0.1**
AML				*i* S	**Sn**	**18 52 30.5**	**0.0**
UCH	**Uchtor**	**3.01**	**16**	P	**Pn**	**18 52 00.7**	**+1.9**
	SNR=44						
UCH	**Uchtor**	**3.01**	**16**	⇑*i*P	**Pn**	**18 51 58.2**	**-0.6**
	baz=14						
UCH				⇑*i*S	**Sn**	**18 52 35.1**	**-0.6**
	baz=14						
UCH	**Uchtor**	**3.01**	**16**	*i* PN	**Pn**	**18 51 58.2**	**-0.6**
UCH				*i* S	**Sn**	**18 52 35.1**	**-0.6**
EKS2	**Erkin-Say**	**3.34**	**5**	P	**Pn**	**18 52 05.1**	**+2.1**
	SNR=30						
EKS2	**Erkin-Say**	**3.34**	**5**	⇑*i*P	**Pn**	**18 52 02.8**	**-0.2**
	baz=3.0						
EKS2				⇑*i*S	**Sn**	**18 52 42.9**	**-0.4**
	baz=3.0						
EKS2	**Erkin-Say**	**3.34**	**5**	*i* PN	**Pn**	**18 52 02.8**	**-0.2**
EKS2				*i* S	**Sn**	**18 52 42.9**	**-0.4**
CHGR	**Chuyangaron**	**3.38**	**260**		**Pn**	**18 52 06.2**	**+2.6**
CHGR	**Chuyangaron**	**3.38**	**260**	PN	**Pn**	**18 52 06.2**	**+2.6**
AAK	**Ala-Archa**	**3.40**	**14**	P	**Pn**	**18 52 06.7**	**+2.8**
	SNR=68						
AAK	**Ala-Archa**	**3.40**	**14**	Pn	**Pn**	**18 52 06.3**	**+2.3**
	14nm,0.3s,baz=185,slow=8.4,SNR=61						
AAK				Sn	**Sb**	**18 52 51.4**	**-1.2**
	17nm,0.3s,baz=5.1,slow=18,SNR=11						
	91nm,0.5s						
AAK	**Ala-Archa**	**3.40**	**14**	⇓*i*P	**Pn**	**18 52 03.6**	**-0.3**
	baz=12						
AAK				⇓*i*S	**Sn**	**18 52 44.1**	**-0.8**
	baz=12						
AAK	**Ala-Archa**	**3.40**	**14**		**Pn**	**18 52 04.6**	**+0.7**
KBK	**Karagaybulak**	**3.52**	**19**	P	**Pn**	**18 52 08.3**	**+2.8**
	SNR=22						
KBK	**Karagaybulak**	**3.52**	**19**	⇓*i*P	**Pn**	**18 52 05.1**	**-0.4**
	baz=18						
KBK				⇓*i*S	**Sn**	**18 52 46.9**	**-0.9**
	baz=18						
KBK	**Karagaybulak**	**3.52**	**19**	*i* PN	**Pn**	**18 52 05.1**	**-0.4**
KBK				*i* S	**Sn**	**18 52 46.9**	**-0.9**
FRU1	**Bishkek**	**3.59**	**14**	PN	**Pn**	**18 52 07.0**	**+0.5**
ULHL	**Ulahol**	**3.62**	**36**	P	**Pn**	**18 52 09.8**	**+2.9**
	SNR=14						
ULHL	**Ulahol**	**3.62**	**36**	⇓*i*P	**Pn**	**18 52 06.1**	**-0.8**
	baz=35						
ULHL				⇓*i*S	**Sn**	**18 52 48.8**	**-1.5**
	baz=35						
ULHL	**Ulahol**	**3.62**	**36**	*i* PN	**Pn**	**18 52 06.1**	**-0.8**
ULHL				*i* S	**Sn**	**18 52 48.8**	**-1.5**
BOOM	**Boomskoye usch**	**3.69**	**31**	⇑*e*P	**Pn**	**18 52 07.2**	**-0.7**
	baz=30						
BOOM				⇑*i*S	**Sn**	**18 52 50.5**	**-1.6**
	baz=30						
BOOM	**Boomskoye usch**	**3.69**	**31**		**Pn**	**18 52 09.9**	**+2.0**
BOOM	**Boomskoye usch**	**3.69**	**31**	PN	**Pn**	**18 52 09.9**	**+2.0**
TAS	**Tashkent**	**3.72**	**304**	⇑*i*P	**Pn**	**18 52 09.7**	**+1.5**
	baz=2.0						
TAS				⇑*i*S	**Sn**	**18 52 54.6**	**+2.0**
	baz=2.0						
TAS	**Tashkent**	**3.72**	**304**	Pn	**Pn**	**18 52 10.8**	**+2.7**
TAS	**Tashkent**	**3.72**	**304**	*i* PN	**Pn**	**18 52 09.7**	**+1.5**
TAS				*i* S	**Sn**	**18 52 54.6**	**+2.0**
CHMS	**Chumysh**	**3.80**	**15**	P	**Pn**	**18 52 11.6**	**+2.3**
	SNR=14						
CHMS	**Chumysh**	**3.80**	**15**	⇑*i*P	**Pn**	**18 52 08.8**	**-0.5**
	baz=14						
CHMS				⇑*i*S	**Sn**	**18 52 53.5**	**-1.0**
	baz=14						
CHMS	**Chumysh**	**3.80**	**15**	*i* PN	**Pn**	**18 52 08.8**	**-0.5**
CHMS				*i* S	**Sn**	**18 52 53.5**	**-1.0**
CHMS	**Chumysh**	**3.80**	**15**	⇑Pn	**Pn**	**18 52 11.2**	**+1.9**
	54nm,1.0s						
CHMS				⇑Pg	**Pb**	**18 52 17.2**	**-0.3**
	87nm,0.7s						
CHMS				⇑Lg	Lg	18 53 06.6	
	186nm,0.8s						
IUG	**luzhnay**	**3.81**	**319**	*e*P	**Pb**	**18 52 18.3**	**+0.7**
	2μm,0.6s						
IUG				*e*S	**Sg**	**18 53 09.9**	**-2.0**
	1μm,1.2s						
IUG	**luzhnay**	**3.81**	**319**	Pg	**Pn**	**18 52 10.7**	**+1.3**
	893nm,0.3s						
IUG				Lg	Lg	18 52 59.0	
	631nm,0.5s						
DZA	**Taraz**	**3.89**	**337**	*e*PN	**Pb**	**18 52 21.8**	**+2.9**
DZA	**Taraz**	**3.89**	**337**	*e*P	**Pb**	**18 52 18.6**	**-0.3**
	95nm,0.4s						
DZA				*e*S	**Sb**	**18 53 10.0**	**+3.5**
	489nm,0.7s						
DZA	**Taraz**	**3.89**	**337**	*e*Pg	**Pb**	**18 52 21.9**	**+2.9**
	baz=336						
DZA				*e*Lg	Lg	18 53 13.3	
	baz=336						
DZA	**Taraz**	**3.89**	**337**	Pg	**Pn**	**18 52 13.0**	**+2.6**
	23nm,0.3s						
DZA				Lg	Lg	18 53 03.6	
	525nm,0.4s						
TKM2	**Tokmak 2**	**3.95**	**24**	P	**Pn**	**18 52 13.8**	**+2.3**
	SNR=22						
TKM2	**Tokmak 2**	**3.95**	**24**	⇑*i*P	**Pn**	**18 52 11.0**	**-0.5**
	baz=23						
TKM2				⇑*i*S	**Sn**	**18 52 57.1**	**-1.3**
	baz=23						
TKM2	**Tokmak 2**	**3.95**	**24**	*i* PN	**Pn**	**18 52 11.0**	**-0.5**
TKM2				*i* S	**Sn**	**18 52 57.1**	**-1.3**
TKM2	**Tokmak 2**	**3.95**	**24**	⇓Pn	**Pn**	**18 52 13.2**	**+1.8**
	16nm,0.8s						
TKM2				⇑Pg	**Pb**	**18 52 21.4**	**+1.3**
	64nm,0.7s						
TKM2				⇑Lg	Lg	18 53 10.0	
	249nm,0.6s						
KDJ	**Kajisay**	**4.00**	**45**	⇑*e*P	**Pn**	**18 52 11.4**	**-0.8**
	baz=44						
KDJ				⇑*i*S	**Sn**	**18 52 57.9**	**-1.8**
	baz=44						
KDJ	**Kajisay**	**4.00**	**45**		**Pn**	**18 52 15.1**	**+2.9**
KDJ	**Kajisay**	**4.00**	**45**	*e*PN	**Pn**	**18 52 11.4**	**-0.8**
KDJ				*i* S	**Sn**	**18 52 57.9**	**-1.8**
USP	**Ospenovka**	**4.01**	**11**	P	**Pn**	**18 52 14.4**	**+2.2**
	SNR=18						
USP	**Ospenovka**	**4.01**	**11**	⇑*i*P	**Pn**	**18 52 12.0**	**-0.2**
	baz=10.0						
USP				⇑*i*S	**Sn**	**18 52 58.9**	**-1.0**
	baz=10.0						
USP	**Ospenovka**	**4.01**	**11**	*i* PN	**Pn**	**18 52 12.0**	**-0.2**
USP				*i* S	**Sn**	**18 52 58.9**	**-1.0**
TARG	**Taragay, Kyrgy**	**4.12**	**53**	⇑*i*P	**Pn**	**18 52 13.1**	**-0.9**
	baz=53						
TARG				⇑*i*S	**Sn**	**18 53 00.4**	**-2.5**
	baz=53						
TARG	**Taragay, Kyrgy**	**4.12**	**53**		**Pn**	**18 52 15.9**	**+2.0**
TARG	**Taragay, Kyrgy**	**4.12**	**53**	*i* PN	**Pn**	**18 52 13.1**	**-0.9**
TARG				*i* S	**Sn**	**18 53 00.4**	**-2.5**
CHM	**Chimkent**	**4.15**	**317**	*e*P	**Pb**	**18 52 24.3**	**+0.8**
	2.8nm,0.4s						
CHM				*e*S	**Sg**	**18 53 20.0**	**-3.0**
	680nm,0.6s						
CHM	**Chimkent**	**4.15**	**317**	*e*Pg	**Pb**	**18 52 25.6**	**+2.1**
	baz=316						
CHM				*e*Lg	Lg	18 53 22.1	
	baz=316						
KST	**Kastek**	**4.18**	**27**	*e*P	**Pb**	**18 52 23.6**	**-0.4**
	36nm,0.5s						
KST				*e*S	**Sb**	**18 53 18.7**	**+3.8**
	457nm,0.8s						
KST	**Kastek**	**4.18**	**27**	Pg	**Pb**	**18 52 22.5**	**-1.5**
	16nm,0.4s						
KST				Lg	Lg	18 53 19.8	
	457nm,0.8s						
SGDS	**Sogindy**	**4.22**	**12**	*e*PN	**Pn**	**18 52 15.9**	**+0.9**
SGDS				*e*		18 52 26.9	
SGDS	**Sogindy**	**4.22**	**12**	*e*P	**Pb**	**18 52 24.4**	**-0.2**
	43nm,0.7s						
SGDS				*e*S	**Sb**	**18 53 19.4**	**+3.4**
	170nm,0.7s						
SGDS	**Sogindy**	**4.22**	**12**	*e*Pn	**Pn**	**18 52 15.9**	**+0.9**
	baz=12						
SGDS				*e*Pg	**Pb**	**18 52 27.0**	**+2.4**
	baz=12						
SGDS				*e*Lg	Lg	18 53 22.7	
	baz=12						
SGDS	**Sogindy**	**4.22**	**12**	Pg	**Pb**	**18 52 22.6**	**-2.0**
	43nm,0.7s						
SGDS				Lg	Lg	18 53 19.4	
	170nm,0.7s						
KK31	**Karatay Array**	**4.35**	**331**		**Pn**	**18 52 17.4**	**+0.5**
KK31	**Karatay Array**	**4.35**	**331**	PN	**Pn**	**18 52 19.2**	**+2.3**
KK31				PG	**Pb**	**18 52 28.9**	**+2.0**
KK31				SN	**Sn**	**18 53 12.2**	**+4.0**
KK31				LG	Lg	18 53 24.3	
KK31	**Karatay Array**	**4.35**	**331**	Pn	**Pn**	**18 52

BRLS	**Boroldaу**	**4.57**	**325**	*e*PN	**Pb**	**18 52 31.3**	**+0.7**
BRLS	**Boroldaу**	**4.57**	**325**	*e*P	**Pb**	**18 52 27.5**	**-3.1**
	5.0nm,0.4s						
BRLS				*e*S	**Sb**	**18 53 25.8**	**-0.4**
	86nm,0.9s						
BRLS	**Boroldaу**	**4.57**	**325**	*e*Pg	**Pb**	**18 52 31.3**	**+0.7**
	baz=321						
AAA	**Alma-Ata**	**4.69**	**33**	*e*P	**Pb**	**18 52 32.8**	**+0.1**
	53nm,0.7s						
AAA				*e*S	**Sb**	**18 53 34.5**	**+5.0**
	534nm,0.6s						
AAA	**Alma-Ata**	**4.69**	**33**	Pg	**Pb**	**18 52 31.1**	**-1.6**
	38nm,0.5s						
AAA				Lg	Lg	18 53 34.5	
	534nm,0.6s						
KNDC	**Almaty**	**4.71**	**33**	PN	**Pn**	**18 52 25.2**	**+3.3**
KNDC				PG	**Pb**	**18 52 34.2**	**+1.1**
KNDC				LG	Lg	18 53 34.6	
KNDC	**Almaty**	**4.71**	**33**	⇓Pn	**Pn**	**18 52 25.2**	**+3.3**
	36nm,0.6s						
KNDC				⇓Pg	**Pb**	**18 52 34.2**	**+1.1**
	110nm,0.6s						
KNDC				⇑Lg	Lg	18 53 34.6	
	2µm,1.1s						
KTBS	**Karatobe**	**5.02**	**28**	*e*P	**Pb**	**18 52 39.0**	**+0.8**
	25nm,0.8s						
KTBS				*e*S	**Sb**	**18 53 44.3**	**+5.3**
	277nm,0.7s						
KTBS	**Karatobe**	**5.02**	**28**	Pg	**Pb**	**18 52 36.8**	**-1.4**
	25nm,0.8s						
KTBS				Lg	Lg	18 53 44.3	
	277nm,0.7s						
KUU	**Kurty**	**5.06**	**25**	*e*PN	**Pb**	**18 52 38.2**	**-0.7**
KUU				*e*		18 52 42.2	
KUU	**Kurty**	**5.06**	**25**	*e*P	**Pb**	**18 52 39.5**	**+0.5**
	9.8nm,0.7s						
KUU				*e*S	**Sb**	**18 53 45.6**	**+5.5**
	340nm,0.8s						
KUU	**Kurty**	**5.06**	**25**	*e*Pb	**Pb**	**18 52 38.2**	**-0.7**
	baz=25						
KUU				*e*Pg	Pg	18 52 42.2	-4.3
	baz=25						
KUU				*e*Lg	Lg	18 53 49.8	
	baz=25						
KUU	**Kurty**	**5.06**	**25**	Pg	**Pb**	**18 52 37.5**	**-1.4**
	9.8nm,0.7s						
KUU				Lg	Lg	18 53 45.6	
	340nm,0.8s						
CHKK	**Chushkaly**	**5.25**	**30**	*e*P	**Pb**	**18 52 43.1**	**+0.8**
	6.7nm,0.7s						
CHKK				*e*S	**Sb**	**18 53 51.0**	**+5.3**
	233nm,0.4s						
CHKK	**Chushkaly**	**5.25**	**30**	*e*Pg	**Pb**	**18 52 42.6**	**+0.4**
	baz=30						
CHKK				*e*Lg	Lg	18 53 51.8	
	baz=30						
CHKK	**Chushkaly**	**5.25**	**30**	Pg	**Pb**	**18 52 41.2**	**-1.1**
	20nm,0.6s						
CHKK				Lg	Lg	18 53 51.8	
	233nm,0.4s						
SATY	**Saty**	**5.30**	**44**	*e*PN	**Pn**	**18 52 31.5**	**+1.6**
SATY				*e*		18 52 45.7	
SATY	**Saty**	**5.30**	**44**	*e*P	**Pb**	**18 52 43.7**	**+0.6**
	31nm,0.8s						
SATY				*e*S	**Sb**	**18 53 52.6**	**+5.4**
	233nm,1.1s						
SATY	**Saty**	**5.30**	**44**	*e*Pn	**Pn**	**18 52 31.5**	**+1.6**
	baz=44						
SATY				*e*Pg	**Pb**	**18 52 45.8**	**+2.7**
	baz=44						
SATY				*e*Lg	Lg	18 53 57.8	
	baz=44						
SATY	**Saty**	**5.30**	**44**	Pg	**Pb**	**18 52 42.1**	**-1.0**
	31nm,0.8s						
SATY				Lg	Lg	18 53 53.3	
	233nm,1.1s						
ZHN	**Zhinishke**	**5.39**	**43**	*e*P	**Pb**	**18 52 45.6**	**+1.0**
	17nm,0.5s						
ZHN				*e*S	**Sg**	**18 53 56.2**	**-6.5**
	112nm,0.8s						
ZHN	**Zhinishke**	**5.39**	**43**	*e*Pg	**Pb**	**18 52 47.4**	**+2.8**
	baz=43						
ZHN				*e*Lg	Lg	18 53 56.3	
	baz=43						
ZHN	**Zhinishke**	**5.39**	**43**	Pg	**Pb**	**18 52 44.0**	**-0.5**
	17nm,0.5s						
ZHN				Lg	Lg	18 53 56.2	
	112nm,0.8s						
KURS	**Kuram**	**5.48**	**39**	*e*P	**Pb**	**18 52 46.8**	**+0.7**
	14nm,0.8s						
KURS				*e*S	**Sb**	**18 53 58.0**	**+5.7**
	127nm,1.1s						
KURS	**Kuram**	**5.48**	**39**	Pg	**Pb**	**18 52 46.0**	**-0.1**
	14nm,0.8s						
KURS				Lg	Lg	18 54 00.1	
	127nm,1.1s						
CEP	**Cherat**	**5.63**	**193**	P	Pn	18 52 41.3	+6.8
CHCP	**Chirah Chowk**	**5.67**	**181**	P	Pn	18 52 42.2	+7.3
BTLS	**Baital**	**5.72**	**5**	*e*PN	**Pn**	**18 52 36.4**	**+0.8**
BTLS				*e*		18 52 53.1	
BTLS	**Baital**	**5.72**	**5**	*e*P	**Pb**	**18 52 49.8**	**-0.5**
	24nm,0.9s						
BTLS				*e*S	**Sb**	**18 54 02.8**	**+3.6**
	87nm,0.9s						
BTLS	**Baital**	**5.72**	**5**	*e*Pn	**Pn**	**18 52 36.4**	**+0.8**
	baz=4.1						
BTLS				*e*Pg	**Pb**	**18 52 53.2**	**+3.0**
	baz=4.1						
BTLS				*e*Lg	Lg	18 54 11.8	
	baz=4.1						
BTLS	**Baital**	**5.72**	**5**	Pg	**Pb**	**18 52 48.0**	**-2.3**
	24nm,0.9s						
BTLS				Lg	Lg	18 54 02.8	
	87nm,0.9s						
KPKS	**Kokpek**	**5.72**	**42**	*e*PN	**Pn**	**18 52 37.2**	**+1.4**
KPKS				*e*		18 52 54.6	
KPKS	**Kokpek**	**5.72**	**42**	*e*P	**Pb**	**18 52 50.9**	**+0.5**
	23nm,0.7s						
KPKS				*e*S	**Sb**	**18 54 05.4**	**+6.0**
	122nm,0.5s						
KPKS	**Kokpek**	**5.72**	**42**	*e*Pn	**Pn**	**18 52 37.2**	**+1.4**
	baz=42						
KPKS				*e*Pg	**Pb**	**18 52 54.6**	**+4.3**
	baz=42						
KPKS				*e*Lg	Lg	18 54 11.5	
	baz=42						
KPKS	**Kokpek**	**5.72**	**42**	Pg	**Pb**	**18 52 49.4**	**-0.9**
	23nm,0.7s						
KPKS				Lg	Lg	18 54 05.4	
	122nm,0.5s						
ARXS	**Arharly**	**5.89**	**33**	*e*P	**Pb**	**18 52 54.4**	**+1.3**
	33nm,0.7s						
ARXS				*e*S	**Sb**	**18 54 10.5**	**+6.4**
	235nm,1.2s						
ARXS	**Arharly**	**5.89**	**33**	Pg	**Pb**	**18 52 52.4**	**-0.7**
	15nm,0.5s						
ARXS				Lg	Lg	18 54 11.0	
	235nm,1.2s						
KBL	**Kabul**	**5.92**	**217**	Pn	**Pn**	**18 52 40.8**	**+2.1**
KBL	**Kabul**	**5.92**	**217**	PN	**Pn**	**18 52 40.8**	**+2.1**
SHLS	**Shalkode**	**5.95**	**48**	*e*P	**Pg**	**18 53 01.6**	**-2.0**
	10.0nm,0.5s						
SHLS				*e*S	**Sg**	**18 54 23.2**	**+2.4**
	95nm,1.1s						
SHLS	**Shalkode**	**5.95**	**48**	*e*Pg	**Pg**	**18 53 03.0**	**-0.7**
	baz=50						
SHLS				*e*Lg	Lg	18 54 26.9	
	baz=50						
SHLS	**Shalkode**	**5.95**	**48**	Pg	**Pg**	**18 53 00.6**	**-3.1**
	10.0nm,0.5s						
SHLS				Lg	Lg	18 54 24.6	
	95nm,1.1s						
PDGK	**Podgornoye**	**6.07**	**47**	PN	**Pn**	**18 52 41.7**	**+1.1**
PDGK				PG	**Pb**	**18 52 59.3**	**+3.0**
PDGK				LG	Lg	18 54 17.4	
PDGK	**Podgornoye**	**6.07**	**47**	Pg	**Pb**	**18 52 56.0**	**-0.2**
	5.1nm,0.8s						
PDGK				Lg	Lg	18 54 17.3	
	66nm,0.9s						
PDGK	**Podgornoye**	**6.07**	**47**	⇑Pn	**Pn**	**18 52 41.7**	**+1.1**
	24nm,0.7s						
PDGK				⇓Pg	**Pb**	**18 52 59.3**	**+3.0**
	26nm,0.6s						
PDGK				⇓Lg	Lg	18 54 17.4	
	199nm,0.9s						
BLB	**Baldybastay**	**6.08**	**37**	*e*P	**Pb**	**18 52 57.5**	**+1.0**
	42nm,0.5s						
BLB				*e*S	**Sb**	**18 54 16.6**	**+6.8**
	182nm,1.0s						
BLB	**Baldybastay**	**6.08**	**37**	Pg	**Pb**	**18 52 56.0**	**-0.4**
	42nm,0.5s						
BLB				Lg	Lg	18 54 16.5	
	182nm,1.0s						
THW	**Thamme Wali**	**6.66**	**192**	P	Pn	18 52 53.7	+5.1
TDK	**Taldyqorghan**	**6.77**	**32**	*e*P	**Pb**	**18 53 09.4**	**+1.3**
	38nm,0.3s						
TDK				*e*S	**Sb**	**18 54 37.0**	**+7.6**
	315nm,1.0s						
TDK	**Taldyqorghan**	**6.77**	**32**	*e*Pg	Pb	18 53 13.4	+5.4
	baz=32						
TDK				*e*Lg	Lg	18 54 44.7	
	baz=32						
TDK	**Taldyqorghan**	**6.77**	**32**	Pg	**Pb**	**18 53 08.2**	**+0.1**
	11nm,0.1s						
TDK				Lg	Lg	18 54 38.1	
	315nm,1.0s						
DJR	**Jarkent**	**6.90**	**42**	*e*P	**Pb**	**18 53 12.2**	**+1.9**
	10nm,0.7s						
DJR				*e*S	Sb	18 54 41.9	+8.6
	85nm,1.2s						
DJR	**Jarkent**	**6.90**	**42**	Pg	**Pb**	**18 53 10.4**	**0.0**
	6.1nm,0.7s						
DJR				Lg	Lg	18 54 41.8	
	85nm,1.2s						
MAKZ	**Makanchi**	**9.75**	**37**		**Pn**	**18 53 31.9**	**+1.0**
MAKZ	**Makanchi**	**9.75**	**37**	P	**Pn**	**18 53 33.3**	**+2.5**
MAKZ	**Makanchi**	**9.75**	**37**	⇓Pn	**Pn**	**18 53 33.4**	**+2.5**
	10.0nm,1.1s						
MAKZ				⇑Lg	Lg	18 56 11.2	
	35nm,1.6s						
MK31	**Makanchi Array**	**9.88**	**38**	Pn	**Pn**	**18 53 33.8**	**+1.0**
MK31	**Makanchi Array**	**9.88**	**38**	*i* P	**Pn**	**18 53 35.3**	**+2.6**
MK31	**Makanchi Array**	**9.88**	**38**	⇓Pn	**Pn**	**18 53 35.4**	**+2.6**
	1.9nm,0.7s,baz=206,slow=12,SNR=17						
MK31				⇓Lg	Lg	18 56 11.6	
	6.2nm,0.8s,baz=223,slow=27,SNR=4.8						
MKAR	**Makanchi Array**	**9.88**	**38**	Pn	**Pn**	**18 53 34.2**	**+1.4**
	0.1nm,0.3s,baz=206,slow=11,SNR=10						
MKAR				Lg	Lg	18 56 13.2	
	0.2nm,0.3s,baz=227,slow=25,SNR=1.6						
MKAR				LR	LR	18 57 03.8	
	comp=Z,89nm,21.2s,baz=225,slow=36						
	2.0nm,0.9s						
MKAR	**Makanchi Array**	**9.88**	**38**	Pn	**Pn**	**18 53 33.6**	**+0.9**
BRZS	**Berezniki**	**10.66**	**357**	*e*P	**Pn**	**18 53 42.7**	**-0.6**
BRZS	**Berezniki**	**10.66**	**357**	*e*Pn	**Pn**	**18 53 42.8**	**-0.6**
	baz=357						
BRZS				*e*Pg		18 54 24.1	
	baz=357						
BRZS				*e*Lg	Lg	18 56 48.5	
	baz=357						
WMQ	**Urumqi**	**11.60**	**63**	*e*P	Pn	18 54 01.5	+5.2
WMQ				pP		18 54 04.0	
WMQ				sP		18 54 08.3	
WMQ				pmax	pmax		
	comp=Z,13nm,0.6s						
WMQ				LR	LR		
	comp=N,470nm,8.3s						
WMQ				LR	LR		
	comp=E,460nm,11.7s						
WMQ				LR	LR		
	comp=Z,160nm,11.7s						
ZSN	**Zaisan**	**11.62**	**42**	*e*Pg	Pg	18 54 42.5	
	baz=42						
ZSN				*e*Lg	Lg	18 57 13.7	
	baz=42						
KURBB	**Kurchatov Arra**	**11.85**	**16**	Pn	**Pn**	**18 53 59.7**	**+0.1**
	0.1nm,0.3s,baz=208,slow=12,SNR=10						
KURBB				Sn	**Sn**	**18 56 09.6**	**-2.8**
	baz=196,slow=24,SNR=2.2						
KURBB				Lg	Lg	18 57 21.2	
	0.2nm,0.3s,baz=208,slow=32,SNR=6.3						
	1.0nm,0.7s						
KURBB	**Kurchatov Arra**	**11.85**	**16**	⇑Lg	Lg	18 57 18.6	
	80nm,0.8s						
KURK	**Kurchatov**	**11.96**	**16**		**Pn**	**18 53 58.6**	**-2.4**
KURK	**Kurchatov**	**11.96**	**16**	P	**Pn**	**18 53 59.7**	**-1.4**
KURK						18 56 09.6	
GEYT	**Alibeck**	**12.04**	**268**	Pn	**Pn**	**18 54 01.8**	**-0.5**
	0.7nm,0.3s,baz=96,slow=15,SNR=3.4						
GEYT				Sn	**Sn**	**18 56 21.6**	**+4.3**
	1.1nm,0.3s,baz=83,slow=28,SNR=6.0						
GEYT				LR	LR	18 59 31.0	
	comp=Z,240nm,18.4s,baz=69,slow=41						
	1.4nm,0.3s						
GYA0B	**ALIBECK ARRAY**	**12.04**	**268**	Pn	**Pn**	**18 54 02.0**	**-0.4**
SEM	**Semipalatinsk**	**12.08**	**21**	*e*P	**Pn**	**18 54 01.2**	**-1.8**
SEM	**Semipalatinsk**	**12.08**	**21**	*e*Pn	**Pn**	**18 54 01.2**	**-1.8**
	baz=21						
SEM				*e*Lg	Lg	18 57 32.8	
	baz=21						
AB31	**Akbulak array**	**13.81**	**320**	*e*P	**Pn**	**18 54 24.5**	**-1.9**
AB31	**Akbulak array**	**13.81**	**320**	⇑Pn	**Pn**	**18 54 24.5**	**-1.9**
	3.6nm,0.7s,baz=129,slow=13,SNR=27						
ABKAR	**Akbulak array**	**13.81**	**320**	Pn	**Pn**	**18 54 25.0**	**-1.4**
BVAR	**Borovoye Array**	**13.85**	**352**	LR	LR	19 00 00.8	
	comp=Z,88nm,18.3s,baz=60,slow=38						
AKTO	**Aktyubinsk**	**15.53**	**321**	Pn	**Pn**	**18 54 48.7**	**-0.9**
	0.4nm,0.3s,baz=127,slow=14,SNR=11						
AKTO				Sn	**Sn**	**18 57 37.0**	**-5.1**
	0.2nm,0.3s,baz=4.5,slow=16,SNR=4.8						
	2.1nm,0.4s						
AKTO	**Aktyubinsk**	**15.53**	**321**	⇑Pn	**Pn**	**18 54 48.0**	**-1.6**
	11nm,0.8s						
ZAA0	**Zalesovo Array**	**16.55**	**24**		**Pn**	**18 55 01.8**	**-1.0**
ZALV	**Zalesovo Beam**	**16.55**	**24**	Pn	**Pn**	**18 55 01.5**	**-1.3**
	0.3nm,0.3s,baz=218,slow=9.4,SNR=21						
ZALV				LR	LR	19 01 52.0	
	comp=Z,68nm,21.9s,baz=220,slow=39						
	9.0nm,0.9s						
ZALV	**Zalesovo Beam**	**16.55**	**24**		**Pn**	**18 55 02.8**	**+0.1**
ZALV	**Zalesovo Beam**	**16.55**	**24**	*i* P	**P**	**18 55 04.5**	**-0.9**
ZALV				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GOMU	**GeErMu**	**17.21**	**94**	P	**Pn**	**18 55 11.5**	**-0.1**
GOMU				pmax	pmax		
	comp=Z,85nm,4.0s						
LKRN	**Lenkeran, Azer**	**19.14**	**276**	P	**Pn**	**18 55 35.5**	**+0.7**
ARU	**Arti**	**19.72**	**335**	Pn	**Pn**	**18 55 41.4**	**-0.2**
	baz=182,slow=2.7,SNR=12						
ARU				LR	LR	19 03 44.4	
	comp=Z,66nm,21.1s,baz=144,slow=38						
	comp=Z,6.5nm,0.8s						
ARU	**Arti**	**19.72**	**335**	P	**P**	**18 55 40.8**	**+0.6**
ARU				IAmb	IAmb	18 55 47.5	
	comp=Z,14nm,0.9s						
ARU	**Arti**	**19.72**	**335**	*c i* P	**Pn**	**18 55 41.0**	**-0.6**
ARU				S	**Sn**	**18 59 23.9**	**+0.5**
ARU				pmax	pmax		
	comp=Z,18nm,1.0s						
MAK	**Makhachkala**	**19.81**	**289**	*e*P	**P**	**18 55 36.3**	**-5.1**
MAK				*e*S	**S**	**18 59 16.7**	**-8.4**
MAK				pmax	pmax		
	comp=Z,16nm,0.3s						
MAK				MLR	MLR		
	comp=Z,140nm,11.0s						
SEKA	**Sheki**	**20.07**	**284**	P	**P**	**18 55 45.1**	**+0.8**
MNGR	**Mingechevir, A**	**20.18**	**283**	P	**P**	**18 55 46.6**	**+1.2**
KNGR	**Kungurtug, Tuv**	**20.35**	**48**	⇑*e*P	Pn	18 55 49.1	-0.2
WSAR	**Wadi Sarin**	**20.37**	**222**	P	**P**	**18 55 49.0**	**+1.3**
	comp=Z,4.5nm,0.7s,baz=87,slow=8.7,SNR=3.7						
	comp=Z,4.5nm,0.7s						
GTA	**Gaotai**	**20.39**	**81**	⇑P	**P**	**18 55 49.0**	**+1.1**
GTA				pP	sP	18 55 53.8	+3.1
GTA				sP	pP	18 55 56.5	+6.6
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,61nm,4.2s						
GTA				LR	LR		
	comp=Z,140nm,18.5s						
GTA				LR	LR		
	comp=Z,150nm,18.2s						
GTA				LR	LR		
	comp=Z,160nm,16.7s						
ZKTA	**Zakatala**	**20.48**	**285**	P	**P**	**18 55 49.7**	**+1.0**
GANJ	**Ganja**	**20.77**	**282**	P	**P**	**18 55 52.9**	**+1.0**
GROC	**Groznyy**	**21.07**	**289**	*e*P	**P**	**18 55 56.6**	**+1.5**
GROC				*e*		18 56 15.3	
GROC				pmax	pmax		
	comp=Z,21nm,0.6s						
NAX	**Nakhchivan**	**21.59**	**278**	P	**P**	**18 56 01.9**	**+1.1**
GNI	**Garni**	**22.02**	**281**	P	**P**	**18 56 07.5**	**+2.0**
	comp=Z,10nm,0.9s,baz=182,slow=5.9,SNR=5.9						
GNI				LR	LR	19 06 14.1	
	comp=Z,38nm,19.4s,baz=96,slow=41						
	comp=Z,10nm,0.9s						
GNI	**Garni**	**22.02**	**281**	P	**P**	**18 56 06.0**	**+0.5**
GNI				IAmb	IAmb	18 56 13.1	
	comp=Z,20nm,1.1s						
GNI	**Garni**	**22.02**	**281**	*c e*P	**P**	**18 56 07.2**	**+1.7**
GNI				pmax	pmax		
	comp=Z,22nm,1.1s						
BELG	**Belogornoye**	**22.06**	**315**	P	**P**	**18 56 05.2**	**-0.4**
	comp=Z,17nm,0.8s,baz=24,slow=0.5,SNR=4.2						
	comp=Z,17nm,0.8s						
BELG	**Belogornoye**	**22.06**	**315**	*c i* P	**P**	**18 56 06.8**	**+1.3**
BELG				pmax	pmax		
	comp=Z,8.0nm,1.1s						
NCK	**Nalchik**	**22.68**	**290**	⇑*e*P	**P**	**18 56 14.0**	**+1.6**
NCK				pmax	pmax		
	comp=Z,14nm,0.7s						
ONI	**Oni**	**22.80**	**288**	P	**P**	**18 56 15.6**	**+1.9**
ONI	**Oni**	**22.80**	**288**	P	**P**	**18 56 15.6**	**+1.9**
ONI				pmax	pmax		
	comp=Z,40nm,1.0s						
GOF	**Gofitskoye**	**23.13**	**294**	⇑*e*P	**P**	**18 56 17.4**	**+0.4**
KBZ	**Khabaz**	**23.19**	**291**	P	**P**	**18 56 18.1**	**+0.6**
	comp=Z,2.1nm,0.8s,baz=104,slow=4.7,SNR=5.4						
KBZ				LR	LR	19 07 29.0	
	comp=Z,86nm,18.9s,baz=92,slow=42						
	comp=Z,2.1nm,0.8s						
KBZ	**Khabaz**	**23.19**	**291**	⇓*i* P	**P**	**18 56 18.7**	**+1.1**
KBZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KARS	**Kars**	**23.23**	**283**	P	**P**	**18 56 19.8**	**+1.6**
KARS	**Kars**	**23.23**	**283**	P	**P**	**18 56 19.8**	**+1.6**
KARS				pmax	pmax		
	comp=Z,94nm,1.2s						
KIV	**Kislovodsk**	**23.34**	**291**	*e*P	**P**	**18 56 20.5**	**+1.2**
KIV				*e*PPP	PPP	18 56 50.5	
KIV				*e*		19 00 03.9	
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,49nm,18.0s						
GEVA	**Gevas**	**23.62**	**277**	P	**P**	**18 56 21.7**	**-0.5**
ZAK	**Zakamensk**	**23.72**	**52**	*e*P	**P**	**18 56 24.7**	**+1.7**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.9s						
LZH	**Lanzhou**	**24.24**	**88**	*e*P	**P**	**18 56 32.5**	**+4.3**
LZH				pP	sP	18 56 37.8	+6.8
LZH				pmax	pmax		
	comp=Z,22nm,1.6s						
LZH				LR	LR		
	comp=Z,260nm,14.8s						
LZH				LR	LR		
	comp=Z,150nm,15.8s						
LZH				LR	LR		
	comp=Z,190nm,15.5s						
KIRV	**Kirov**	**24.65**	**329**	⇓*e*P	**P**	**18 56 33.1**	**+1.7**
VRH	**Novokhopyorsk**	**25.06**	**309**	*e*P	**P**	**18 56 38.4**	**+3.2**
VRH				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SONM	**Songino Array**	**25.20**	**59**	P	**P**	**18 56 37.2**	**+0.4**
	comp=Z,1.6nm,0.8s,baz=276,slow=8.7,SNR=6.1						
SONM				LR	LR	19 07 19.3	
	comp=Z,223nm,18.5s,baz=236,slow=38						
	comp=Z,1.6nm,0.8s						
ULN	**Ulaanbaatar**	**25.65**	**60**	*d i* P	**P**	**18 56 42.9**	**+2.1**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.7s						
VSR	**Storozhevoye**	**26.62**	**308**	*e*P	**P**	**18 56 47.9**	**-1.4**
ANN	**Anapa**	**27.11**	**293**	*e*P	**P**	**18 56 49.1**	**-4.7**
ANN				*e*PP	**pP**	**18 56 55.8**	**0.0**
ANN				*e*S	**S**	**19 01 24.8**	**-7.8**
ANN				pmax	pmax		
	comp=Z,25nm,1.0s						
HHC	**Hu-ho-hao-te**	**29.08**	**75**	*e*P	**P**	**18 57 14.3**	**+2.7**
HHC				pmax	pmax		
	comp=Z,23nm,0.9s						
HHC				pmax	pmax		
	comp=Z,130nm,5.5s						
HHC				LR	LR		
	comp=Z,220nm,14.0s						
HHC				LR	LR		
	comp=Z,270nm,12.7s						
HHC				LR	LR		
	comp=Z,310nm,13.3s						
CMAR	**Chiang Mai Arr**	**30.36**	**126**	LR	LR	19 12 05.9	
	comp=Z,30nm,20.8s,baz=305,slow=42						
BR131	**Keskin Array S**	**30.50**	**284**	P	**P**	**18 57 24.7**	**+0.4**
BR131	**Keskin Array S**	**30.50**	**284**	P	**P**	**18 57 24.7**	**+0.4**
BR131				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BRTR	**Keskin Array B**	**30.50**	**284**	P	**P**	**18 57 25.7**	**+1.4**
	comp=Z,3.5nm,0.9s,baz=91,slow=8.1,SNR=18						
	comp=Z,3.5nm,0.9s						
BRTR	**Keskin Array B**	**30.50**	**284**	P	**P**	**18 57 24.4**	**+0.2**
AKASG	**Malin Array Be**	**32.77**	**305**	P	**P**	**18 57 44.0**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=78,slow=7.7,SNR=8.9						
AKASG				LR	LR	19 12 18.1	
	comp=Z,67nm,19.5s,baz=68,slow=39						
	comp=Z,0.5nm,0.4s						
AKASG	**Malin Array Be**	**32.77**	**305**	P	**P**	**18 57 44.0**	**+0.1**
AKBB	**Malin Array Si**	**32.77**	**305**	⇑*e*P	**P**	**18 57 43.3**	**-0.6**
AKBB				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MNK	**Minsk**	**33.93**	**312**	*i* P	**P**	**18 57 53.1**	**-0.8**
MNK				*i*		18 59 06.5	
MNK				*i*		19 00 30.7	
MNK				*i* S	**S**	**19 03 18.3**	**-0.9**
MNK				*i* SS	**SnSn**	**19 05 26.3**	**+1.9**
MNK				pmax	pmax		
	comp=N,24nm,1.1s						
MNK				pmax	pmax		
	comp=E,2.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,38nm,1.4s						
MNK				MLR	MLR		
	comp=Z,6µm,15.0s						
MNK				MLR	MLR		
	comp=N,359nm,16.0s						
MNK				MLR	MLR		
	comp=E,8.0nm,15.0s						
MNK	**Minsk**	**33.93**	**312**	*i* P	**P**	**18 57 53.2**	**-0.8**
	comp=E,2.0nm,0.9s						
MNK				*i* P	**P**	**18 57 53.2**	**-0.8**
	comp=N,24nm,1.1s						
MNK				*i* P	**P**	**18 57 53.2**	**-0.8**
	comp=Z,38nm,1.4s,baz=97						
MNK				*i* PP	**PnPn**	**18 59 06.6**	**+0.1**
MNK				*i* PPP	PPP	18 59 17.9	
MNK				*i* PcP	**PcP**	**19 00 30.8**	**-1.4**
MNK				*i* S	**S**	**19 03 18.3**	**-0.9**
MNK				*i* SS	**SnSn**	**19 05 26.3**	**+1.9**
MNK				*i* LQ	LQ	19 09 05.9	
MNK				*i* LR	LR	19 10 47.3	
MNK				*i* LRM	MLR	19 12 04.9	
	comp=Z,6µm,15.5s						
MNK				*i* LRM	MLR	19 12 19.1	
	comp=N,359nm,16.1s						
MNK				*i* LRM	MLR	19 12 29.8	
	comp=E,8.0nm,14.5s						
MLR	**Muntele Rosu**	**35.16**	**296**	P	**P**	**18 58 05.9**	**+0.9**
	comp=E,4.8nm,0.8s,baz=69,slow=16						
	comp=E,4.8nm,0.8s						

comp=Z,0.6nm,0.5s,baz=275,slow=11,SNR=2.5
KLR LR LR 19 17 05.1
comp=Z,33nm,21.0s,baz=278,slow=37
comp=Z,0.6nm,0.5s
KLR Kul'dur 41.96 57⇓ *eP* **P 18 59 02.2 +0.4**
KLR pmax pmax
comp=Z,4.0nm,1.5s
HFS Hagfors 42.07 320 LR LR 19 17 15.3
comp=Z,58nm,18.2s,baz=88,slow=37
KSRS Korea Array 42.22 75 LR LR 19 19 32.3
comp=Z,35nm,20.6s,baz=280,slow=40
TIXI Tiksi 42.43 23 P **P 18 59 05.3 0.0**
TIXI IAmb IAmb 18 59 08.1
comp=Z,9.9nm,1.5s
TIXI Tiksi 42.43 23⇑ *eP* **P 18 59 05.1 -0.2**
TIXI pmax pmax
comp=Z,11nm,2.5s
GERES GERESS Array B 42.91 303 P **P 18 59 10.2 +0.4**
comp=Z,0.9nm,0.8s,baz=60,slow=6.5,SNR=7.8
comp=Z,0.9nm,0.8s
KHC Kasperske Hory 42.94 304⇑ *eP* **P 18 59 09.9 0.0**
KHC pmax pmax
comp=Z,11nm,1.6s
KHC Kasperske Hory 42.94 304 *eP* **P 18 59 10.5 +0.6**
NB2 NORSAR Subarra 43.32 321 P **P 18 59 12.0 -0.7**
comp=Z,11nm,1.7s,baz=92,slow=7.9
NOA NORSAR Array B 43.32 321 P **P 18 59 12.4 -0.3**
comp=Z,1.0nm,0.5s,baz=91,slow=7.8,SNR=6.1
NOA LR LR 19 17 41.2
comp=Z,60nm,20.2s,baz=95,slow=37
comp=Z,1.0nm,0.5s
SPITS Spitsbergen Ar 45.19 346 LR LR 19 21 40.2
comp=Z,49nm,18.1s,baz=82,slow=40
DAVOX Davos/Dischmat 45.88 301 LR LR 19 21 27.0
comp=Z,52nm,20.5s,baz=80,slow=40
MJAR Matsushiro Ar 50.20 72 P **P 19 00 06.8 -0.1**
comp=Z,1.1nm,0.7s,baz=302,slow=7.1,SNR=4.1
comp=Z,1.1nm,0.7s
ASAJ Asahikawa 50.48 61 LR LR 19 24 04.9
comp=Z,30nm,18.7s,baz=286,slow=39
BILL Bilibino 55.22 27 *i* P **P 19 00 43.8 +0.2**
BILL *i* 19 02 47.6
BILL pmax pmax
comp=Z,3.0nm,1.1s
MBAR Mbarara 55.69 235 LR LR 19 27 48.9
comp=Z,86nm,18.1s,baz=52,slow=40
PETK Petropavlovsk- 56.62 46 LR LR 19 26 03.7
comp=Z,43nm,21.3s,baz=68,slow=37
BORG Borgarnes 57.13 329 LR LR 19 24 41.1
comp=Z,30nm,20.0s,baz=48,slow=35
ESDC Sonseca Array 57.84 297 P **P 19 01 02.9 +0.2**
comp=Z,0.9nm,0.6s,baz=54,slow=6.4,SNR=7.4
comp=Z,0.9nm,0.6s
KAPI Kappang 61.41 125 LR LR 19 30 33.0
comp=Z,65nm,18.4s,baz=352,slow=38
TORD Torodi Ar. Bea 67.68 269 P **P 19 02 07.6 -1.0**
comp=Z,1.6nm,0.9s,baz=51,slow=4.1,SNR=10
comp=Z,1.6nm,0.9s
INK Inuvik 70.79 10 P **P 19 02 27.1 0.0**
comp=Z,1.5nm,0.5s,baz=70,slow=1.2,SNR=3.6
comp=Z,1.5nm,0.5s
COLA College 71.22 17⇓ *eP* **P 19 02 32.2 +2.5**
COLA pmax pmax
comp=Z,10.0nm,2.6s
ILAR Eielson Array 71.53 17 P **P 19 02 30.5 -1.1**
comp=Z,0.4nm,0.8s,baz=325,slow=3.1,SNR=7.1
comp=Z,0.4nm,0.8s
ILAR Eielson Array 71.53 17 P **P 19 02 30.6 -1.0**
ILAR Eielson Array 71.53 17 P **P 19 02 30.7 -1.0**
TSUM Tsumeb 78.15 233 LR LR 19 44 29.6
comp=Z,42nm,19.8s,baz=134,slow=41
YKA Yellowknife Ar 78.31 4 P **P 19 03 10.1 -0.7**
comp=Z,0.6nm,0.7s,baz=349,slow=5.6,SNR=6.2
YKA LR LR 19 42 29.0
comp=Z,48nm,18.1s,baz=358,slow=39
comp=Z,0.6nm,0.7s
SCHQ Schefferville 80.21 338 LR LR 19 38 15.2
comp=Z,64nm,20.4s,baz=151,slow=35
BOSA Boshof 81.13 222 P **P 19 03 26.6 -0.1**
comp=Z,3.0nm,0.9s,baz=124,slow=11,SNR=3.1
comp=Z,3.0nm,0.9s
WB0 Warramunga Arr 81.83 124 P **P 19 03 30.6 +0.1**
WB0 IAmb IAmb 19 03 34.0
comp=Z,6.2nm,1.3s
WRA Warramunga Arr 81.93 124 P **P 19 03 30.3 -0.7**
comp=Z,1.0nm,0.8s,baz=327,slow=4.9,SNR=7.7
comp=Z,1.0nm,0.8s
WRA Warramunga Arr 81.93 124 P **P 19 03 30.6 -0.4**
WRA Warramunga Arr 81.93 124 *i* P **P 19 03 31.3 +0.3**
WRA pmax pmax
comp=Z,1.0nm,0.8s
WRAB Tennant Creek 81.93 124⇓ *eP* **P 19 03 31.4 +0.4**
WRAB pmax pmax
comp=Z,12nm,1.7s
WB2 Warramunga Arr 81.93 124 P **P 19 03 30.5 -0.5**
WB2 IAmb IAmb 19 03 35.3
comp=Z,3.7nm,0.9s
ASAR Alice Springs 84.36 127 P **P 19 03 43.8 +0.2**
comp=Z,0.6nm,0.8s,baz=300,slow=4.8,SNR=8.0
comp=Z,0.6nm,0.8s
ASAR Alice Springs 84.36 127 P **P 19 03 44.0 +0.4**
ASAR Alice Springs 84.36 127 P **P 19 03 44.0 +0.4**

*CRAAG **26** 18:58:30.9, 36°.62N×2°.68E, MlI3.3, Hypocentre not reviewed by the ISC*
MDD 26 18:58:32.6±0.5, 36°.66N×2°.67E, h18km±5km, Mb3.8/21, M_mb3.0/22, 18C, Error ellipse: s-maj=6.0km s-min=2.7km az=151.0, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
EMHD	**Djebel Mahouad**	**0.51**	**153**	P			18 58 41.4		
ABMS	**Boumerdes**	**0.66**	**82**	P			18 58 43.8		
ADJB	**Djebel Djouab**	**0.80**	**128**	P			18 58 46.6		
EBNR	**Beni Rached**	**0.99**	**249**	P			18 58 51.1		
ECHA	**Ech Chlef**	**1.17**	**245**	P			18 58 53.5		
EANR	**'Ain N'Sour**	**1.45**	**241**	P			18 58 59.8		
EIBI	**Ibiza**	**2.59**	**337**	P		Pn	18 59 12.4	-1.2	
EIBI				*i*Vmb_V			18 59 14.6		
	568nm,SNR=1.3								
EIBI				S		Sn	18 59 40.6	-4.0	
EBEN2	**Beniarda presa**	**3.04**	**313**	P		Pn	18 59 17.8	-1.9	
EBEN2				*i*Vmb_V			18 59 19.7		
	423nm,SNR=1.0								
EBEN2				S		Sn	18 59 50.9	-4.7	
ETOS	**Mallorca**	**3.11**	**2**	P		Pn	18 59 18.9	-1.9	
ETOS				*i*Vmb_V			18 59 20.2		
	284nm,SNR=1.0								
ETOS				S		Sn	18 59 52.1	-5.4	
AFON	**Font Roja**	**3.24**	**309**	P		Pn	18 59 21.8	-0.8	
AFON				*i*Vmb_V			18 59 24.2		
	143nm,SNR=0.8								
AFON				S		Sn	18 59 56.1	-4.7	
EMUR	**La Murta**	**3.34**	**292**	P		Pn	18 59 23.2	-0.7	
EMUR				*i*Vmb_V			18 59 23.6		
	100nm,SNR=1.1								
EMUR				S		Sn	18 59 59.3	-3.8	
ECOL	**Islas Columbre**	**3.59**	**335**	P		Pn	18 59 26.0	-1.4	
ECOL				S		Sn	19 00 05.5	-3.9	
EZAR	**Zarzadilla de**	**3.69**	**291**	P		Pn	18 59 27.1	-1.6	
EZAR				S		Sn	19 00 08.3	-3.6	
ETOB	**Tobarra**	**3.89**	**302**	P		Pn	18 59 30.8	-0.7	
ETOB				S		Sn	19 00 13.1	-3.8	
ECHE	**Chera**	**4.10**	**317**	P		Pn	18 59 34.0	-0.4	
ECHE				*i*Vmb_V			18 59 36.0		
	155nm,SNR=1.0								
ECHE				S		Sn	19 00 17.4	-4.5	
EMOS	**Mosqueruela**	**4.45**	**327**	P		Pn	18 59 38.5	-0.8	
EMOS				*i*Vmb_V			18 59 39.9		
	175nm,SNR=1.2								
EMOS				S		Sn	19 00 25.8	-4.9	
EBER	**Berja**	**4.47**	**275**	P		Pn	18 59 38.1	-1.6	
EBER				*i*Vmb_V			18 59 39.8		
	107nm,SNR=0.7								
EBER				S		Sn	19 00 27.0	-4.2	
ERTA	**Horta de San J**	**4.67**	**338**	P		Pn	18 59 41.0	-1.2	
ERTA				*i*Vmb_V			18 59 44.6		
	32nm,SNR=0.3								
ERTA				S		Sn	19 00 30.7	-5.2	
EQES	**Quesada**	**4.72**	**286**	P		Pn	18 59 42.8	-0.2	
EQES				*i*Vmb_V			18 59 44.6		
	80nm,SNR=1.3								
EQES				S		Sn	19 00 33.5	-3.9	
EPOB	**Poblet**	**4.85**	**346**	P		Pn	18 59 43.2	-1.6	
EPOB				*i*Vmb_V			18 59 45.7		
	70nm,SNR=0.8								
EPOB				S		Sn	19 00 35.6	-4.9	
EQUE	**Quentar**	**4.92**	**278**	P		Pn	18 59 44.6	-1.2	
EQUE				*i*Vmb_V			18 59 45.8		
	8.2nm,SNR=0.2								
EQUE				S		Sn	19 00 37.7	-4.6	
EJON	**La Jonquera**	**5.79**	**2**	P		Pn	18 59 56.7	-0.9	
EJON				*i*Vmb_V			18 59 58.6		
	82nm,SNR=0.6								
EJON				S		Sn	19 00 57.6	-6.0	
EADA	**Adamuz**	**5.96**	**287**	P		Pn	18 59 58.5	-1.4	
EADA				*i*Vmb_V			18 59 59.8		
	26nm,SNR=0.5								
EADA				S		Sn	19 01 03.1	-4.8	
ESDC	**Sonseca Array**	**6.03**	**302**	P		Pn	18 59 59.6	-1.4	
ESDC				*i*Vmb_V			19 00 01.5		
	61nm,SNR=1.2								
ESDC				S		Sn	19 01 04.7	-4.8	
ECAB	**El Cabril**	**6.59**	**285**	P		Pn	19 00 07.5	-1.2	
ECAB				*i*Vmb_V			19 00 09.6		
	13nm,SNR=0.2								
ECAB				S		Sn	19 01 18.3	-5.1	
GUD	**Guadarrama**	**6.66**	**309**	P		Pn	19 00 08.8	-0.9	
GUD				*i*Vmb_V			19 00 10.2		
	28nm,SNR=0.8								
GUD				S		Sn	19 01 19.9	-5.2	
EARI	**Arriondas**	**8.98**	**320**	P		Pn	19 00 41.3	-0.1	
EARI				*i*Vmb_V			19 00 43.3		
	51nm,SNR=0.3								

*IDC **26** 19:04:32.7±0.9, 43°.82N×105°.53W, h0km, mb3.9/3, mbtmp3.5/9, ML3.3/6, MS2.8/2, Error ellipse: s-maj=24.0km s-min=7.9km az=147.0*
*NEIC **26** 19:04:33.5±0.7, 43°.78N±0°.05×105°.28W±0°.06, h0km±2km, ML3.4/40, Error ellipse: s-maj=9.5km s-min=7.0km az=157.0*
ISC 26 19:04:34.3±0.8, 43°.79N±0°.06×105°.25W±0°.07, h10km, n46, σ0s75/42, mb3.9/3, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
RSSD	**Black Hills**	**0.94**	**69**			**Pg**	**19 04 51.7**	**-0.7**	
K22A	**Casper**	**1.47**	**220**			**Pn**	**19 04 58.5**	**-2.5**	
K22A				IAML			19 05 23.6		
	comp=N,456nm,0.6s								
K22A				IAML			19 05 25.7		
	comp=E,496nm,0.9s								
PHWY	**Pilot Hill**	**2.49**	**184**			**Pn**	**19 05 15.1**	**0.0**	
PHWY				IAML			19 05 52.0		
	comp=E,116nm,0.4s								
RWWY	**Rawlins**	**2.54**	**215**			**Pn**	**19 05 16.3**	**+0.5**	
N23A	**Red Feather La**	**2.94**	**190**	Pn		**Pn**	**19 05 21.4**	**+0.2**	
N23A				IAML			19 06 07.5		
	comp=N,134nm,0.8s								
N23A				IAML			19 06 11.0		
	comp=E,145nm,0.8s								
LAO	**LASA Array**	**2.98**	**347**			**Pn**	**19 05 21.9**	**+0.3**	
RLMT	**Red Lodge**	**3.17**	**296**			**Pn**	**19 05 24.2**	**-0.2**	
RLMT				IAML			19 06 21.0		
	comp=E,86nm,0.8s								
BW06	**Boulder Array**	**3.31**	**254**			**Pn**	**19 05 26.0**	**-0.3**	
PD31	**Pinedale Array**	**3.31**	**254**			**Pn**	**19 05 26.1**	**-0.2**	
PDAR	**Pinedale Array**	**3.31**	**254**	Pn		**Pn**	**19 05 25.7**	**-0.6**	
	comp=E,2.7nm,0.3s,baz=70,slow=16,SNR=40								
PDAR				Lg		Lg	19 06 11.2		
	comp=E,12nm,0.3s,baz=78,slow=30,SNR=15								
PDAR				LR		LR	19 06 44.4		
	comp=E,77nm,21.8s,baz=116,slow=42								
	comp=E,2.8nm,0.3s								
OGNE	**Ogallala**	**3.71**	**139**	Pn		**Pn**	**19 05 32.8**	**+1.1**	
GCMT	**Greycliff**	**3.73**	**304**			**Pn**	**19 05 31.9**	**-0.1**	
LOHW	**Long Hollow**	**3.89**	**269**			**Pn**	**19 05 35.1**	**+0.8**	
LOHW				IAML			19 06 57.8		
	comp=E,36nm,1.3s								
FLWY	**Flagg Ranch**	**3.95**	**276**	Pn		**Pn**	**19 05 34.8**	**-0.3**	
FLWY				IAML			19 06 43.3		
	comp=E,86nm,1.5s								
FLWY				IAML			19 06 50.6		
	comp=E,57nm,1.1s								
MOOW	**Moose Ponds**	**3.98**	**271**			**Pn**	**19 05 36.7**	**+1.1**	
ISCO	**Idaho Springs**	**3.99**	**184**	Pn		**Pn**	**19 05 36.1**	**+0.3**	
ISCO				IAML			19 06 43.2		
	comp=E,38nm,0.8s								
REDW	**Red Top Meadow**	**4.09**	**266**			**Pn**	**19 05 37.7**	**+0.6**	
REDW				IAML			19 06 48.1		
	comp=E,71nm,1.1s								
REDW				IAML			19 07 00.7		
	comp=E,50nm,1.4s								
TPAW	**Teton Pass**	**4.15**	**268**			**Pn**	**19 05 38.5**	**+0.6**	
TPAW				IAML			19 06 58.9		
	comp=E,46nm,0.9s								
TPAW				IAML			19 07 05.2		
	comp=E,73nm,1.0s								
O20A	**White River Ci**	**4.28**	**212**	Pn		**Pn**	**19 05 38.8**	**-0.8**	
O20A				IAML			19 06 55.8		
	comp=E,60nm,0.7s								
O20A				IAML			19 07 30.8		
	comp=N,64nm,2.2s								
Q24A	**Divide**	**4.82**	**179**	Pn		**Pn**	**19 05 47.1**	**0.0**	
Q24A				IAML			19 07 05.8		
	comp=E,38nm,0.9s								
Q24A				IAML			19 07 14.8		
	comp=N,27nm,0.7s								
BOZ	**Bozeman (W)**	**4.89**	**294**	Pn		**Pn**	**19 05 48.5**	**+0.4**	
BOZ				IAML			19 07 05.4		
	comp=N,22nm,1.6s								
BOZ				IAML			19 07 07.7		
	comp=N,20nm,1.1s								
HWUT	**Hardware Ranch**	**5.14**	**247**			**Pn**	**19 05 51.3**	**-0.1**	
KSCO	**Kaye Shedlock'**	**5.16**	**157**			**Pn**	**19 05 51.8**	**+0.1**	
EGMT	**Eagleton**	**5.28**	**325**			**Pn**	**19 05 53.6**	**+0.4**	
HRY	**Holter Researc**	**5.49**	**304**			**Pn**	**19 05 56.2**	**+0.1**	
P18A	**Preston Nutter**	**5.59**	**224**			**Pn**	**19 05 57.6**	**-0.1**	
HVU	**Hansel Valley**	**5.89**	**253**			**Pn**	**19 06 01.5**	**-0.2**	
PV07	**Paradox Valley**	**5.93**	**227**			**Pn**	**19 05 57.1**	**-5.1**	
SRU	**San Rafael Swe**	**6.12**	**222**			**Pn**	**19 06 04.9**	**-0.1**	
ECSD	**EROS Data Cent**	**6.25**	**88**	Pn		**Pn**	**19 06 07.6**	**+1.0**	
Q16A	**Castle Valley**	**6.59**	**224**			**Pn**	**19 06 11.4**	**0.0**	
T25A	**Trinidad**	**6.67**	**174**	Pn		**Pn**	**19 06 12.7**	**+0.2**	
DUG	**Dugway, Tooele**	**6.68**	**240**	Pn		**Pn**	**19 06 11.0**	**-1.5**	
MSU	**Marysvale**	**7.42**	**227**	Pn		**Pn**	**19 06 22.9**	**+0.2**	
JTMT	**Jette**	**7.45**	**305**	Pn		**Pn**	**19 06 23.4**	**+0.3**	
ELK	**Elko**	**8.01**	**251**	Pn		**Pn**	**19 06 30.6**	**-0.3**	
	comp=N,0.2nm,0.3s,baz=62,slow=8.1,SNR=4.3								
	comp=N,0.5nm,0.3s								
ANMO	**Albuquerque**	**8.88**	**186**	Lg		Lg	19 09 12.1		
	comp=N,0.1nm,0.3s,baz=286,slow=4.9,SNR=3.4								
ULM	**Lac du Bonnet**	**9.10**	**41**	Pn		**Pn**	**19 06 45.4**	**-0.1**	
	comp=N,2.0nm,0.3s,baz=223,slow=12,SNR=9.8								
ULM				Lg		Lg	19 09 15.7		
	comp=N,0.7nm,0.3s,baz=143,slow=19,SNR=2.0								
	comp=N,5.5nm,0.4s								
I56US	**NEWPORT INFRAS 9.39**	**303**	*i*				20 04 00.0		
	baz=121,slow=322,SNR=2.4								
NVAR	**Mina Array Bea**	**11.20**	**246**	Pn		**Pn**	**19 07 14.9**	**+0.3**	
	comp=N,0.1nm,0.3s,baz=52,slow=12,SNR=6.4								
	comp=N,0.8nm,0.8s								
TXAR	**Lajitas Array**	**14.48**	**174**	Pn		**Pn**	**19 08 01.4**	**+2.1**	
	baz=359,slow=8.1,SNR=1.5								
TXAR				Lg		Lg	19 12 10.1		
	baz=350,slow=24,SNR=3.1								
YKA	**Yellowknife Ar**	**19.52**	**347**	P		**P**	**19 09 01.8**	**+0.3**	
	comp=N,0.1nm,0.3s,baz=156,slow=9.9,SNR=3.8								
	comp=N,0.4nm,0.8s								
TIXI	**Tiksi**	**58.70**	**343**	LR		LR	19 45 02.6		
	comp=N,17nm,18.6s,baz=183,slow=42								
ARCES	**ARCESS Array B**	**61.37**	**18**	P		**P**	**19 14 48.6**	**-1.1**	
	comp=N,1.8nm,1.0s,baz=308,slow=6.0,SNR=5.1								
	comp=N,1.8nm,1.0s								
ZALV	**Zalesovo Beam**	**82.26**	**354**	P		**P**	**19 16 54.9**	**-0.6**	
	comp=N,0.6nm,0.6s,baz=343,slow=4.5,SNR=2.2								
	comp=N,0.6nm,0.6s								
MKAR	**Makanchi Array**	**89.56**	**355**	P		**P**	**19 17 31.6**	**-0.2**	
	comp=N,0.5nm,0.7s,baz=359,slow=4.9,SNR=5.2								
	comp=N,0.5nm,0.7s								

*KRNET **26** 19:08:53.9±0.1, 39°.45N×73°.85E, mb3.6*
*SOME **26** 19:08:57.4, 39°.67N×73°.62E, h0km*
ISC 26 19:08:54.9±1.2, 39°.47N±0°.06×73°.81E±0°.04, h10km, n22, σ1s85/42, 16C-2D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
OHH	**Osh**	**1.32**	**324**	*i*P		**Pb**	**19 09 19.2**	**-0.6**	
	baz=23								
OHH				*i*S		**Sg**	**19 09 37.6**	**+0.3**	
	baz=23								
DRK	**Karamyk**	**1.56**	**271**	*i*P		**Pb**	**19 09 23.8**	**-0.2**	
	baz=72								
DRK				*i*S		**Sg**	**19 09 45.4**	**+0.4**	
	baz=72								
BTK	**Batken**	**2.38**	**285**	*i*P		**Pb**	**19 09 36.3**	**-1.6**	
	baz=86								
BTK				*i*S		**Sb**	**19 10 07.3**	**-0.1**	
	baz=86								
ARLS	**Aral**	**2.42**	**9**	*i*P		**Pb**	**19 09 36.5**	**-2.1**	
	baz=9.0								
ARLS				*i*S		**Sb**	**19 10 07.7**	**-0.9**	
	baz=9.0								
GAR	**Garm**	**2.75**	**261**	*e*P		**Pb**	**19 09 41.4**	**-2.9**	
	baz=62								
GAR				*i*S		**Sb**	**19 10 16.0**	**-2.2**	
	baz=62								
TRKS	**Terek-Say**	**2.90**	**316**	*e*P		**Pn**	**19 09 42.8**	**+1.6**	
	baz=15								
TRKS				*i*S		**Sn**	**19 10 18.4**	**+2.2**	
	baz=15								
BOOM	**Boomskoye usch**	**3.42**	**27⇓**	*e*P		**Pn**	**19 09 50.4**	**+2.0**	
	baz=27								
BOOM				⇓*i*S		**Sn**	**19 10 32.0**	**+2.9**	
	baz=27								
KDJ	**Kajisay**	**3.69**	**43⇑**	*e*P		**Pn**	**19 09 53.9**	**+1.8**	
	baz=42								
KDJ				*i*S		**Sn**	**19 10 38.2**	**+2.5**	
	baz=42								
TAS	**Tashkent**	**3.92**	**300**	*i*P		**Pn**	**19 09 57.6**	**+2.5**	
	baz=0.0								
TAS				*i*S		**Sn**	**19 10 44.0**	**+2.9**	
	baz=0.0								
KST	**Kastek**	**3.92**	**24**	*e*P		**Pg**	**19 10 09.2**	**-0.8**	
	5.8nm,0.6s								
KST				*e*S		**Sg**	**19 11 00.9**	**+0.1**	
	45nm,0.6s								
SGDS	**Sogindy**	**4.03**	**8**	*e*P		**Pg**	**19 10 10.1**	**-1.9**	
	4.3nm,0.7s								
SGDS				*e*S		**Sg**	**19 11 02.8**	**-1.4**	
	18nm,0.5s								
MTBS	**Maitube**	**4.16**	**27**	*e*P		**Pg**	**19 10 13.6**	**-0.8**	
	2.0nm,0.1s								
MTBS				*e*S		**Sg**	**19 11 08.6**	**+0.3**	
	36nm,0.5s								
TNSS	**Tian-Shan**	**4.28**	**33**	*e*P		**Pg**	**19 10 16.0**	**-0.8**	
	6.1nm,0.4s								
TNSS				*e*S		**Sg**	**19 11 12.6**	**+0.4**	
	14nm,0.5s								
AAA	**Alma-Ata**	**4.41**	**31**	*e*P		**Pg**	**19 10 19.1**	**-0.2**	
	9.2nm,0.2s								
AAA				*e*S		**Sg**	**19 11 17.7**	**+1.3**	
	49nm,0.7s								
BRLS	**Borolday**	**4.65**	**321**	*e*P		**Pb**	**19 10 17.2**	**+0.7**	
	3.0nm,0.4s								
BRLS				*e*S		**Sb**	**19 11 14.4**	**+1.8**	
	11nm,0.5s								
KUU	**Kurty**	**4.81**	**22**	*e*P		**Pg**	**19 10 24.7**	**-2.3**	
	6.1nm,0.6s								
KUU				*e*S		**Sg**	**19 11 27.6**	**-1.7**	
	28nm,0.8s								
SATY	**Saty**	**4.99**	**42**	*e*P		**Pg**	**19 10 29.3**	**-1.0**	
	2.7nm,0.4s								
SATY				*e*S		**Sg**	**19 11 35.7**	**+0.8**	
	13nm,0.6s								
CHKK	**Chushkaly**	**4.99**	**27**	*e*P		**Pg**	**19 10 27.9**	**-2.5**	
	3.2nm,0.6s								
CHKK				*e*S		**Sg**	**19 11 33.3**	**-1.6**	
	21nm,0.8s								
KURS	**Kuram**	**5.18**	**38**	*e*P		**Pg**	**19 10 32.0**	**-2.1**	
	1.9nm,0.5s								
KURS				*e*S		**Sg**	**19 11 40.0**	**-1.1**	
	8.1nm,0.8s								
KPKS	**Kokpek**	**5.42**	**41**	*e*P		**Pg**	**19 10 36.6**	**-1.9**	
	3.1nm,0.5s								
KPKS				*e*S		**Sg**	**19 11 47.9**	**-0.9**	
	20nm,0.6s								
BTLS	**Baital**	**5.57**	**2**	*e*P		**Pg**	**19 10 37.9**	**-3.6**	
	1.7nm,0.2s								
BTLS				*e*S		**Sg**	**19 11 50.0**	**-3.7**	
	7.7nm,0.8s								
SHLS	**Shalkode**	**5.63**	**47**	*e*P		Pg	19 10 46.8	+4.2	
	2.2nm,0.5s								
SHLS				*e*S		Sg	19 12 05.6	+10	
	6.7nm,0.6s								

*KRNET **26** 19:17:35.1±0.1, 39°.43N×73°.72E, mb3.6*
*SOME **26** 19:17:39.4, 39°.62N×73°.73E, h0km*
ISC 26 19:17:34.0±1.4, 39°.45N±0°.06×73°.74E±0°.03, h10km, n23, σ1s90/46, 10C-4D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
OHH	**Osh**	**1.30**	**326**	*i*P		**Pg**	**19 17 59.8**	**+0.9**	
	baz=27								
OHH				*i*S		**Sn**	**19 18 17.9**	**+2.2**	
	baz=27								
DRK	**Karamyk**	**1.50**	**272**	*e*P		**Pg**	**19 18 03.1**	**+0.3**	
	baz=73								
DRK				*i*S		**Sg**	**19 18 23.6**	**+1.3**	
	baz=73								
BTK	**Batken**	**2.33**	**286**	*e*P		**Pb**	**19 18 16.6**	**+0.4**	
	baz=87								
BTK				*i*S		**Sg**	**19 18 46.6**	**-2.3**	
	baz=87								
ARLS	**Aral**	**2.45**	**10**	*i*P		**Pb**	**19 18 18.5**	**+0.3**	
	baz=11								
ARLS				*i*S		**Sg**	**19 18 50.4**	**-2.2**	
	baz=11								
GAR	**Garm**	**2.70**	**261**	*i*P		**Pb**	**19 18 21.5**	**-0.9**	
	baz=62								
GAR				*i*S		**Sb**	**19 18 55.3**	**-0.3**	
	baz=62								
TRKS	**Terek-Say**	**2.87**	**317**	⇓*i*P		**Pb**	**19 18 23.3**	**-2.1**	
	baz=17								
TRKS				⇓*i*S		**Sb**	**19 18 58.4**	**-2.2**	
	baz=17								
BOOM	**Boomskoye usch**	**3.46**	**28**	*i*P		**Pb**	**19 18 32.7**	**-2.8**	
	baz=28								
BOOM				*i*S		**Sb**	**19 19 14.9**	**-2.8**	
	baz=28								
IUG	**Iuzhnay**	**3.89**	**315**	*e*P		**Pg**	**19 18 51.9**	**+3.4**	
	194nm,0.4s								
IUG				*e*S		**Sg**	**19 19 44.2**	**+5.2**	
	50nm,0.3s								
KST	**Kastek**	**3.96**	**24**	*e*P		**Pg**	**19 18 51.1**	**+1.3**	
	6.4nm,0.5s								
KST				*e*S		**Sg**	**19 19 42.9**	**+1.7**	
	26nm,0.8s								
SGDS	**Sogindy**	**4.05**	**9**	*e*P		**Pg**	**19 18 53.5**	**+1.9**	
SGDS				*e*S		**Sg**	**19 19 46.8**	**+2.7**	
MTBS	**Maitube**	**4.20**	**28**	*e*P		**Pg**	**19 18 55.8**	**+1.5**	
	4.1nm,0.5s								
MTBS				*e*S		**Sg**	**19 19 50.9**	**+2.1**	
	11nm,0.3s								
TNSS	**Tian-Shan**	**4.32**	**33**	*e*P		**

	2.3nm,0.2s							
SATY				*e*S		**Sg**	19 20 17.2	**+1.5**
	14nm,0.9s							
KURS	**Kuram**	**5.23**	**38**	*e*P		**Pg**	19 19 14.8	**+0.7**
	2.3nm,0.5s							
KURS				*e*S		**Sg**	19 20 23.8	**+2.0**
	7.4nm,0.8s							
KPKS	**Kokpek**	**5.47**	**41**	*e*P		**Pg**	19 19 19.1	**+0.4**
	3.5nm,0.6s							
KPKS				*e*S		**Sg**	19 20 31.0	**+1.6**
	12nm,0.5s							
BTLS	**Baital**	**5.59**	**2**	*e*P		**Pg**	19 19 21.6	**+0.6**
BTLS				*e*S		**Sg**	19 20 35.2	**+1.8**
ARXS	**Arharly**	**5.65**	**31**	*e*P		**Pg**	19 19 21.4	**-0.8**
	6.7nm,0.7s							
ARXS				*e*S		**Sg**	19 20 34.8	**-0.6**
	13nm,0.7s							

*IDC **26** 19:46:35.0±1.2,7°15S×130°11E, h0km, mb4.1/6, mbtmp4.0/8, ML4.1/2, Error ellipse: s-maj=102.1km s-min=20.7km az=66.0*
*DJA **26** 19:46:46.1±0.3,7°S±2°×13°0E±°, h66km±14km, M4.6/15, mB5.3/7, mb4.4/15, MLv4.6/13, Mw(mB)4.7/7*
ISC 26 19:46:44.9±0.6,7°46S±0°06×130°17E±0°08, h100km, n26, σ2§38/30, mb3.9/7, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**4.23**	**332**	P	**Pn**	**19 47 46.6**	**-0.7**
AAI				S	**Sn**	**19 48 29.9**	**-5.7**
MSAI	**Masohi**	**4.27**	**343**	P	**Pn**	**19 47 48.2**	**+0.4**
FAKI	**Fak Fak**	**4.96**	**25**	P	**Pn**	**19 47 56.7**	**-0.5**
FAKI				S	**Sn**	**19 48 49.8**	**-3.6**
NLAI	**Namlea**	**5.18**	**324**	P	**Pn**	**19 48 01.2**	**+1.0**
	0.1nm625nm36nm,0.7s						
SWI	**Sorong**	**6.64**	**9**	P	**Pn**	**19 48 18.6**	**-1.4**
	0.3nm2µm25nm,0.6s						
SANI	**Sanana**	**6.80**	**322**	P	**Pn**	**19 48 23.2**	**+1.1**
	0.1nm24nm,1.2s						
BATI	**Baumata**	**6.98**	**246**	P	**Pn**	**19 48 24.4**	**-0.3**
	0.4nm31nm,0.6s						
LBMI	**Labuha**	**7.28**	**338**	P	**Pn**	**19 48 30.6**	**+1.9**
	0.1nm26nm,0.9s						
MMRI	**Maumere**	**7.94**	**261**	P	**Pn**	**19 48 37.4**	**-0.3**
	0.2nm17nm,0.6s						
EDFI	**Ende, Flores**	**8.49**	**261**	P	**Pn**	**19 48 47.1**	**+1.8**
	6.2nm,1.0s						
BAKI	**Biak**	**8.59**	**44**	P	**Pn**	**19 48 48.6**	**+2.1**
	50nm,0.7s						
SMPI	**Sarmi**	**10.10**	**58**	P	**Pn**	**19 49 09.7**	**+2.7**
	13nm,1.0s						
WBSI	**Waikabubak, Su**	**10.88**	**258**	P	**Pn**	**19 49 17.6**	**-0.1**
	34nm,0.5s						
WRA	**Warramunga Arr**	**13.05**	**162**	Pn	**Pn**	**19 49 46.3**	**-0.4**
	1.1nm,0.3s,baz=346,slow=13,SNR=38						
WRA				Sn	**Sn**	**19 52 04.4**	**-5.9**
	3.4nm,0.3s,baz=335,slow=20,SNR=8.9						
	1.1nm,0.3s						
BBKI	**Banjar Baru**	**15.76**	**284**	P	**P**	**19 50 24.4**	**+1.1**
ASAR	**Alice Springs**	**16.51**	**168**	Pn	**P**	**19 50 32.9**	**+1.3**
	0.6nm,0.3s,baz=341,slow=8.8,SNR=37						
ASAR				Sn	**Sn**	**19 53 29.9**	**-4.0**
	0.8nm,0.3s,baz=349,slow=26,SNR=8.6						
	1.3nm,0.5s						
MTKI	**Muara Teweh, K**	**16.54**	**292**	P	**P**	**19 50 33.5**	**+1.6**
PBKI	**Pangkalan Bun**	**19.02**	**283**	P	**P**	**19 50 59.2**	**+0.1**
STKA	**Stephens Creek**	**26.53**	**158**	P	**P**	**19 52 17.3**	**+3.9**
	2.5nm,1.1s,baz=329,slow=15,SNR=2.2						
	2.5nm,1.1s						
CMAR	**Chiang Mai Arr**	**40.15**	**310**	P	**P**	**19 54 11.2**	**-0.2**
	0.9nm,0.5s,baz=138,slow=7.0,SNR=7.6						
	0.9nm,0.5s						
LZH	**Lanzhou**	**49.88**	**332**	*e*P	**P**	**19 55 26.8**	**-1.7**
LZH				sP	pP	19 55 35.3	-16
LZH				pmax	pmax		
	comp=Z,14nm,1.4s						
SONM	**Songino Array**	**58.92**	**342**	P	**P**	**19 56 35.2**	**+1.4**
	comp=Z,0.8nm,0.6s,baz=167,slow=7.0,SNR=2.3						
	comp=Z,0.8nm,0.6s						
MKAR	**Makanchi Array**	**68.70**	**327**	P	**P**	**19 57 39.4**	**+1.6**
	comp=Z,2.1nm,0.4s,baz=116,slow=8.4,SNR=59						
	comp=Z,2.1nm,0.4s						
ZALV	**Zalesovo Beam**	**72.06**	**334**	P	**P**	**19 57 57.9**	**-0.2**
	comp=Z,0.9nm,0.5s,baz=126,slow=7.5,SNR=4.6						
	comp=Z,0.9nm,0.5s						
KURBB	**Kurchatov Arra**	**72.98**	**329**	P	**P**	**19 58 04.1**	**+0.5**
	comp=Z,1.5nm,0.7s,baz=128,slow=5.2,SNR=5.8						
	comp=Z,1.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**129.06**	**281**	PKP	**PKiKP**	**20 05 44.8**	**+1.9**
	comp=Z,0.7nm,0.6s,baz=67,slow=3.1,SNR=9.2						

*TUL **26** 19:48:54.8±0.8,36°09N±0°01×97°68W±0°02, h6km±3km, ML3.0, mb_Lg3.2/96(NEIC), Error ellipse: s-maj=1.9km s-min=1.5km az=55.0*
NEIC 26 19:48:54.7±0.6,36°09N±0°006×97°68W±0°01, h7km±3km, Error ellipse: s-maj=2.0km s-min=0.3km az=62.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKCFA	**Oklahoma City**	**0.70**	**164**		Pg	19 49 08.2	-0.1
OKCFA				IAmb_Lg		19 49 18.2	
	comp=Z,193nm,0.9s						
OKCSW	**OKLAHOMA CITY**	**0.71**	**164**		Pg	19 49 08.4	0.0
FNO	**Franklin**	**0.86**	**165**		Pg	19 49 11.1	-0.3
FNO				IAmb_Lg		19 49 23.3	
	comp=Z,159nm,1.1s						
T35A	**Sooner Cattle**	**1.25**	**49**	Pg	Pn	19 49 18.2	-0.4
X34A	**Smith Ranch, M**	**1.49**	**185**	Pn	Pb	19 49 22.6	-0.2
TUL1	**Leonard**	**1.54**	**96**		Pn	19 49 22.5	-0.2
TUL1				IAmb_Lg		19 49 46.0	
	comp=Z,200nm,1.1s						
WMOK	**Wichita Mounta**	**1.62**	**214**		Pn	19 49 23.9	+0.1
X37A	**Clayton**	**2.41**	**128**		Pn	19 49 35.8	+1.2
X37A				IAmb_Lg		19 50 17.2	
	comp=Z,83nm,0.8s						
W39A	**Magazine**	**3.30**	**105**	Pn	Pn	19 49 47.1	+0.3
W39A				IAmb_Lg		19 50 47.6	
	comp=Z,85nm,0.8s						
AMTX	**Amarillo**	**3.48**	**251**	Pn	Pn	19 49 50.6	+1.2
Z38A	**Mt. Pleasant**	**3.59**	**141**	IAmb_Lg		19 50 58.3	
	comp=Z,51nm,0.8s						
MIAR	**Mount Ida**	**3.69**	**114**		Pn	19 49 53.2	+1.0
S39A	**Bolivar**	**3.84**	**64**	Pn	Pn	19 49 54.8	+0.6
WHTX	**Lake Whitney,**	**4.10**	**177**	Pn	Pn	19 49 58.1	+0.3
WLAR	**White Oak Lake**	**4.46**	**121**	IAmb_Lg		19 51 28.4	
	comp=Z,39nm,0.8s						
WHAR	**Wooly Hollow**	**4.46**	**99**	IAmb_Lg		19 51 22.2	
	comp=Z,70nm,1.1s						
MGMO	**Mountain Grove**	**4.48**	**75**	IAmb_Lg		19 51 20.8	
	comp=Z,61nm,0.9s						
FCAR	**Ozark Folk Cen**	**4.51**	**91**	IAmb_Lg		19 51 19.1	
	comp=Z,42nm,0.7s						
W41B	**Gary Mavity, V**	**4.52**	**100**	IAmb_Lg		19 51 30.1	
	comp=Z,53nm,0.9s						
UALR	**University of**	**4.55**	**105**	IAmb_Lg		19 51 27.3	
	comp=Z,41nm,0.9s						
N33A	**J Bar K, Exete**	**4.64**	**2**	IAmb_Lg		19 51 32.3	
	comp=Z,54nm,0.7s						
P38A	**Dawn**	**4.82**	**42**	IAmb_Lg		19 51 37.1	
	comp=Z,41nm,0.9s						
R40A	**Maddies Statio**	**4.85**	**61**	Pn	Pn	19 50 08.4	+0.4
KSCO	**Kaye Shedlock'**	**4.89**	**308**	IAmb_Lg		19 51 35.6	
	comp=Z,32nm,0.7s						
Z41A	**Richland Creek**	**4.92**	**124**	IAmb_Lg		19 51 39.8	
	comp=Z,38nm,1.0s						
LCAR	**Lake Charles**	**5.29**	**88**	IAmb_Lg		19 51 53.9	
	comp=Z,27nm,1.0s						
435B	**Jarrell**	**5.30**	**179**	IAmb_Lg		19 51 56.9	
	comp=Z,55nm,0.7s						
CCM	**Cathedral Cave**	**5.51**	**67**	IAmb_Lg		19 51 56.2	
	comp=Z,26nm,0.8s						
T25A	**Trinidad**	**5.51**	**283**	Pn	Pn	19 50 17.7	+0.2
T25A				IAmb_Lg		19 52 03.8	
	comp=Z,52nm,1.1s						
P40A	**Paris**	**5.63**	**51**	IAmb_Lg		19 51 55.9	
	comp=Z,44nm,0.8s						
OGNE	**Ogallala**	**5.92**	**326**	Pn	Pn	19 50 24.5	+1.6
OGNE				IAmb_Lg		19 52 05.8	
	comp=Z,44nm,0.8s						
FVM	**French Village**	**6.10**	**70**	IAmb_Lg		19 52 11.8	
	comp=Z,30nm,1.0s						
143A	**Socs Landing,**	**6.19**	**121**	IAmb_Lg		19 52 26.8	
	comp=Z,32nm,0.8s						

SLM	**Saint Louis**	**6.45**	**65**	IAmb_Lg			19 52 17.2	
	comp=Z,23nm,0.7s							
SDCO	**Great Sand Dun**	**6.48**	**287**	IAmb_Lg			19 52 25.2	
	comp=Z,30nm,1.2s							
Q24A	**Divide**	**6.59**	**298**	IAmb_Lg			19 52 40.0	
	comp=Z,26nm,0.7s							
S44A	**Carbondale**	**6.94**	**74**	IAmb_Lg			19 52 53.6	
	comp=Z,27nm,0.7s							
OXF	**Oxford**	**6.95**	**101**	IAmb_Lg			19 52 35.9	
	comp=Z,25nm,0.7s							
SIUC	**Southern Illin**	**6.97**	**74**	IAmb_Lg			19 52 33.6	
	comp=Z,28nm,0.8s							
W45A	**Hickory Valley**	**6.98**	**95**	IAmb_Lg			19 52 40.0	
	comp=Z,40nm,0.7s							
N41A	**Harden Midland**	**7.07**	**47**	IAmb_Lg			19 52 44.4	
	comp=Z,38nm,0.8s							
735A	**Kenedy**	**7.22**	**181**	IAmb_Lg			19 53 02.6	
	comp=Z,27nm,0.8s							
P43A	**Skaggs, Pawnee**	**7.36**	**59**	Pn	Pn		19 50 42.4	-0.2
MNTX	**Cornudas Mount**	**7.76**	**238**	Pn	Pn		19 50 49.1	+1.0
L40A	**Anamosa**	**7.79**	**38**	IAmb_Lg			19 53 15.2	
	comp=Z,26nm,0.7s							
833A	**Chaparral WMA,**	**7.88**	**191**	IAmb_Lg			19 53 10.1	
	comp=Z,26nm,1.1s							
PLAL	**Pickwick Lake**	**7.91**	**95**	IAmb_Lg			19 53 02.0	
	comp=Z,20nm,1.2s							
O44A	**Mansfield**	**8.31**	**58**	IAmb_Lg			19 53 31.8	
	comp=Z,22nm,0.8s							
SUSD	**Miller**	**8.40**	**354**	IAmb_Lg			19 53 21.6	
	comp=Z,24nm,0.8s							
I37A	**Lemond, Waseca**	**8.56**	**21**	IAmb_Lg			19 53 30.9	
	comp=Z,25nm,0.9s							
L42A	**Oliver, Polo**	**8.58**	**44**	IAmb_Lg			19 53 31.9	
	comp=Z,26nm,0.8s							
JFWS	**Jewell Farm**	**8.91**	**38**	IAmb_Lg			19 53 58.2	
	comp=Z,25nm,0.7s							
K22A	**Casper**	**9.47**	**316**	IAmb_Lg			19 54 11.7	
	comp=Z,14nm,0.8s							
I40A	**Norwalk**	**9.48**	**33**	IAmb_Lg			19 54 00.6	
	comp=Z,22nm,1.0s							
SPMN	**Marine on St.**	**9.84**	**21**	IAmb_Lg			19 54 14.4	
	comp=Z,14nm,1.0s							

IDC 26 19:50:02.8±3.0,17°09S×176°83W, h0km, mb3.9/4, mbtmp3.9/4, MS4.1/13, Error ellipse: s-maj=169.5km s-min=31.9km az=149.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.93**	**262**	LR	LR	19 52 58.2	
	comp=Z,3µm,20.1s,baz=81,slow=36						
AFI	**Afiamalu**	**5.81**	**58**	LR	LR	19 53 18.5	
	comp=Z,311nm,19.7s,baz=150,slow=34						
RAO	**Raoul Island**	**12.15**	**185**	LR	LR	19 56 49.4	
	comp=Z,1µm,20.0s,baz=360,slow=34						
RAR	**Rarotonga**	**16.63**	**107**	LR	LR	19 58 47.3	
	comp=Z,371nm,20.9s,baz=265,slow=32						
URZ	**Urewera**	**21.75**	**193**	LR	LR	20 01 59.5	
	comp=Z,755nm,20.7s,baz=31,slow=33						
HNR	**Honiara**	**23.83**	**286**	LR	LR	20 03 12.3	
	comp=Z,476nm,19.1s,baz=135,slow=33						
PPT	**Papeete**	**26.02**	**95**	LR	LR	20 02 55.8	
	comp=Z,274nm,21.9s,baz=277,slow=30						
RPZ	**Raoul Peaks**	**28.46**	**199**	LR	LR	20 06 57.6	
	comp=Z,943nm,18.3s,baz=36,slow=36						
KRVT	**Keravat (AS076**	**33.06**	**289**	LR	LR	20 08 45.8	
	comp=Z,438nm,21.2s,baz=281,slow=34						
CTA	**Charters Tower**	**35.07**	**259**	LR	LR	20 10 03.0	
	comp=Z,426nm,18.2s,baz=128,slow=34						
WRA	**Warramunga Arr**	**46.26**	**259**	LR	LR	20 16 43.4	
	comp=Z,268nm,18.4s,baz=248,slow=35						
ASAR	**Alice Springs**	**46.46**	**253**	P	P	19 58 31.0	-0.9
	4.5nm,0.8s,baz=84,slow=8.0,SNR=8.4						
ASAR				LR	LR	20 17 16.4	
	comp=Z,169nm,18.2s,baz=80,slow=35						
	4.5nm,0.8s						
SIJI	**Sorong**	**53.52**	**282**	LR	LR	20 21 06.9	
	comp=Z,142nm,21.8s,baz=84,slow=35						
NVAR	**Mina Array Bea**	**77.80**	**43**	P	P	20 02 02.5	+0.1
	0.6nm,0.8s,baz=229,slow=8.2,SNR=2.5						
	0.6nm,0.8s						
ILAR	**Eielson Array**	**84.76**	**12**	P	P	20 02 37.0	-1.4
	1.2nm,1.0s,baz=220,slow=6.9,SNR=8.7						
	1.2nm,1.0s						
PDAR	**Pinedale Array**	**85.73**	**43**	P	P	20 02 43.8	-0.3
	0.1nm,0.5s,baz=185,slow=4.5,SNR=2.5						
	0.1nm,0.5s						
BRTR	**Keskin Array B**	**145.25**	**317**	PKPbc	PKPdf	20 09 43.6	+0.6
	1.6nm,1.0s,baz=96,slow=1.4,SNR=5.2						
GERES	**GERESS Array B**	**147.18**	**347**	PKPbc	PKPbc	20 09 48.8	+0.7
	0.4nm,0.6s,baz=318,slow=1.8,SNR=4.3						

*IDC **26** 19:53:16.9±1.6,5°05S×133°41E, h0km, mb4.2/2, mbtmp4.2/5, ML4.1/3, MS3.6/8, Error ellipse: s-maj=91.2km s-min=26.9km az=67.0*
*DJA **26** 19:53:19.3±1.1,5°S±2°×13°4E±°, h23km±11km, M4.4/14, mB4.9/5, mb4.7/14, MLv4.3/12, Mw(mB)4.2/5*
ISC 26 19:53:18.3±0.7,4°74S±0°07×133°89E±0°08, h21km, n40, σ1§45/36, mb4.0/3, MS3.3/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**2.44**	**318**	P	**Pn**	**19 53 55.2**	**-1.7**
FAKI				S	**Sn**	**19 54 24.3**	**-1.8**
FAKI	**Fak Fak**	**2.44**	**318**	P	**Pn**	**19 53 56.0**	**-0.9**
SRPI	**Serui, Papua**	**3.69**	**40**	P	**Pn**	**19 54 14.1**	**0.0**
BNDI	**Bandanaira**	**3.98**	**273**	P	**Pn**	**19 54 19.5**	**+1.4**
BAKI	**Biak**	**4.16**	**32**	P	**Pn**	**19 54 20.7**	**+0.2**
SIJI	**Sorong**	**4.65**	**326**	LR	LR	19 56 44.9	
	comp=Z,709nm,20.4s,baz=110,slow=45						
SWI	**Sorong**	**4.66**	**326**	P	**Pn**	**19 54 26.9**	**-0.5**
SWI				S	**Sn**	**19 55 18.5**	**-2.4**
MSAI	**Masohi**	**5.14**	**285**	P	**Pn**	**19 54 34.3**	**+0.2**
	0.1nm449nm14nm,0.7s						
SMPI	**Sarmi**	**5.53**	**61**	P	**Pn**	**19 54 40.1**	**+0.7**
	0.1nm14nm,1.7s						
AAI	**Ambon**	**5.78**	**280**	P	**Pn**	**19 54 42.7**	**-0.1**
	0.4nm1µm94nm,0.7s						
GENI	**Genyem**	**6.62**	**71**	P	**Pn**	**19 54 55.5**	**+1.2**
	0.2nm32nm,0.6s						
NLAI	**Namlea**	**6.94**	**282**	P	**Pn**	**19 54 59.7**	**+0.9**
	0.2nm612nm44nm,0.6s						
LBMI	**Labuha**	**7.57**	**302**	P	**Pn**	**19 55 08.0**	**+0.5**
	0.1nm25nm,0.5s						
KDU	**Kadu**	**8.03**	**190**	P	**Pn**	**19 55 13.7**	**0.0**
SANI	**Sanana**	**8.33**	**288**	P	**Pn**	**19 55 15.8**	**-2.1**
	24nm,0.8s						
SANI	**Sanana**	**8.33**	**288**	P	**Pn**	**19 55 16.3**	**-1.6**
MTN	**Manton Dam**	**8.51**	**199**	P	**Pn**	**19 55 20.1**	**-0.2**
BATI	**Baumata**	**11.50**	**241**	P	**Pn**	**19 56 03.5**	**+2.0**
	20nm,0.6s						
KNRA	**Kununurra**	**11.98**	**204**	P	**Pn**	**19 56 06.7**	**-1.3**
APSI	**Ampana**	**12.80**	**287**	P	**Pn**	**19 56 16.8**	**-2.4**
	25nm,1.4s						
COEN	**Coen**	**12.95**	**136**	P	**Pn**	**19 56 20.1**	**-1.1**
PMG	**Port Moresby**	**13.96**	**110**	LR	LR	20 04 15.9	
	comp=Z,591nm,18.2s,baz=338,slow=46						
KAPI	**Kappang**	**14.09**	**268**	LR	LR	20 03 16.7	
	comp=Z,99nm,18.6s,baz=90,slow=44						
WRA	**Warramunga Arr**	**15.12**	**178**	Pn	**Pn**	**19 56 47.0**	**-3.8**
	0.6nm,0.3s,baz=360,slow=13,SNR=5.6						
WRA				Sn	Sn	19 59 25.2	-13
	0.4nm,0.3s,baz=3.5,slow=23,SNR=4.0						
WRA				LR	LR	20 02 29.8	
	comp=Z,276nm,21.0s,baz=100,slow=37						
	2.3nm,0.5s						
ASAR	**Alice Springs**	**18.82**	**180**	P	**P**	**19 57 34.6**	**-2.2**
	1.0nm,0.3s,baz=7.3,slow=10,SNR=28						
ASAR				S	Sn	20 00 51.4	-16
	1.4nm,0.9s,baz=4.1,slow=27,SNR=4.3						
ASAR				LR	LR	20 05 25.2	
	comp=Z,272nm,20.1s,baz=349,slow=39						
	8.4nm,0.7s						
CTA	**Charters Tower**	**19.44**	**143**	P	**Pn**	**19 57 45.2**	**+0.4**
	0.3nm,0.3s,baz=322,slow=13,SNR=4.0						
	6.9nm,0.9s						
WRKA	**Warakurna**	**20.89**	**194**	P	**P**	**19 57 59.4**	**+0.1**
GUMO	**Guam**	**21.22**	**31**	LR	LR	20 06 37.7	
	comp=Z,90nm,18.7s,baz=186,slow=37						
MBWA	**Marble Bar**	**21.34**	**219**	P	**P**	**19 58 05.1**	**+0.9**
PSA00	**Pilbara Seismi**	**21.58**	**218**	P	**P**	**19 58 07.5**	**+0.7**
OOD	**Oodnadatta**	**23.00**	**176**	P	**P**	**19 58 21.6**	**-0.2**
INKA	**Innaminka**	**23.79**	**165**	P	**P**	**19 58 29.8**	**+0.1**
LCRK	**Leigh Creek**	**25.90**	**171**	P	**P**	**19 58 49.8**	**+0.9**
STKA	**Stephens Creek**	**27.95**	**166**	P	**P**	**19 59 06.9**	**-0.4**

	2.1nm,0.8s,baz=328,slow=4.8,SNR=3.2							
	2.1nm,0.8s							
BLDU	**Ballidu**	**30.41**	**210**	P	**P**		**19 59 30.0**	**+0.8**
JOW	**Kunigami**	**31.85**	**350**	LR	LR		20 10 38.1	
	comp=Z,105nm,21.0s,baz=160,slow=32							
KSRS	**Korea Array**	**42.34**	**353**	LR	LR		20 18 21.9	
	comp=Z,43nm,20.4s,baz=130,slow=35							
GTA	**Gaotai**	**54.01**	**328**	*e*P	**P**		**20 02 44.0**	**+2.8**
GTA				pP	sP		20 02 49.3	-0.4
GTA				sP	pwP		20 02 53.0	+2.7
GTA				pmax	pmax			
	comp=Z,2.0nm,1.3s							
MKAR	**Makanchi Array**	**68.55**	**325**	P	**P**		**20 04 20.6**	**+1.1**
	comp=Z,1.9nm,0.7s,baz=117,slow=8.5,SNR=3.6							
	comp=Z,1.9nm,0.7s							
CPUP	**Villa Florida**	**147.26**	**161**	PKPbc	**PKiKP**		**20 13 04.1**	**+0.8**
	comp=Z,1.5nm,0.7s,baz=180,slow=6.1,SNR=3.2							

*KRNET **26** 19:53:39.8±0.1,39°41N×73°53E, mb3.5*
*NNC **26** 19:53:40.0±4.8,39°49N×73°31E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=37.7km s-min=17.2km az=172.0*
*SOME **26** 19:53:51.9,39°97N×73°47E, h0km*
ISC 26 19:53:43.6±1.1,39°59N±0°06×73°41E±0°03, h10km, n38, σ1§87/65, 16C-6D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.05**	**333**	⇓*i*P	**Pg**	**19 54 03.4**	**-0.4**
	baz=33						
OHH				⇓*i*S	**Sn**	**19 54 21.5**	**+2.3**
	baz=33						
DRK	**Karamyk**	**1.25**	**265**	⇑*i*P	**Pn**	**19 54 05.3**	**-2.2**
	baz=74						
DRK				⇑*i*S	**Sb**	**19 54 24.2**	**+0.4**
	baz=74						
BTK	**Batken**	**2.05**	**284**	⇑*e*P	**Pn**	**19 54 19.2**	**+0.9**
	baz=88						
BTK				⇑*i*S	**Sg**	**19 54 48.7**	**-0.9**
	baz=88						
ARLS	**Aral**	**2.37**	**17**	⇑*i*P	**Pn**	**19 54 23.4**	**+0.7**
	baz=14						
ARLS				⇑*i*S	**Sb**	**19 54 56.1**	**+0.2**
	baz=14						
GAR	**Garm**	**2.48**	**257**	⇓*i*P	**Pn**	**19 54 23.8**	**-0.3**
	baz=62						
GAR				⇓*i*S	**Sn**	**19 54 56.6**	**+2.1**
	baz=62						
TRKS	**Terek-Say**	**2.60**	**319**	⇑*i*P	**Pn**	**19 54 26.9**	**+1.0**
	baz=20						
TRKS				⇑*i*S	**Sb**	**19 55 01.8**	**-0.6**
	baz=20						
BOOM	**Boomskoye usch**	**3.47**	**33**	⇑*i*P	**Pn**	**19 54 39.4**	**+1.6**
	baz=30						
BOOM				⇑*i*S	**Sb**	**19 55 22.6**	**-4.9**
	baz=30						
IUG	**Iuzhnay**	**3.62**	**316**	*e*P	**Pg**	**19 54 55.5**	**+2.5**
	336nm,0.7s						
IUG				*e*S	**Sg**	**19 55 41.2**	**+1.4**
	41nm,0.9s						
IUG	**Iuzhnay**	**3.62**	**316**	Pg	**Pn**	**19 54 41.4**	**+1.6**
	45nm,0.4s						
IUG				Lg	Lg	19 55 30.3	
	75nm,0.5s						
TKM2	**Tokmak 2**	**3.71**	**26**	⇑Pg	**Pg**	**19 54 56.9**	**+2.2**
	4.7nm,0.6s						
TKM2				⇓Lg	Lg	19 55 41.2	
	11nm,0.8s						
KDJ	**Kajisay**	**3.82**	**47**	⇑*i*P	**Pn**	**19 54 43.6**	**+0.9**
	baz=45						
KDJ				⇑*i*S	**Sn**	**19 55 30.0**	**+2.3**
	baz=45						
KST	**Kastek**	**3.95**	**28**	*e*P	**Pg**	**19 55 00.4**	**+1.1**
	3.1nm,0.4s						
KST				*e*S	**Sg**	**19 55 49.6**	**-0.7**
	19nm,0.9s						
KST	**Kastek**	**3.95**	**28**	Pg	**Pb**	**19 54 51.9**	**-1.5**
	1.9nm,0.6s						
KST				Lg	Lg	19 55 48.9	
	17nm,0.6s						
SGDS	**Sogindy**	**3.96**	**13**	*e*P	**Pg**	**19 55 00.2**	**+0.7**
	5.3nm,0.7s						
SGDS				*e*S	**Sg**	**19 55 49.2**	**-1.7**
	10nm,0.6s						
SGDS	**Sogindy**	**3.96**	**13**	Pg	**Pb**	**19 54 52.9**	**-0.7**
	1.3nm,0.3s						
SGDS				Lg	Lg	19 55 49.8	
	10nm,0.6s						
DGS	**Degeres**	**4.05**	**25**	*e*P	**Pg**	**19 55 03.0**	**+1.8**
	8.1nm,0.5s						
DGS				*e*S	**Sg**	**19 55 54.3**	**+0.5**
	13nm,0.4s						
KK31	**Karatay Array**	**4.13**	**329**	⇓Pn	**Pn**	**19 54 50.8**	**+4.0**
	0.5nm,0.3s,baz=138,slow=12,SNR=14						
KK31				⇑Pg	**Pg**	**19 54 60.0**	**-2.8**
	1.6nm,0.3s,baz=151,slow=14,SNR=12						
KK31				⇑Sn	**Sb**	**19 55 46.5**	**0.0**
	2.9nm,0.4s,baz=155,slow=25,SNR=2.6						
KK31				⇑Lg	Lg	19 56 00.1	
	5.7nm,0.5s,baz=146,slow=25,SNR=3.9						
MTBS	**Maitube**	**4.20**	**32**	*e*P	**Pg**	**19 55 04.9**	**+0.8**
	7.5nm,0.5s						
MTBS				*e*S	**Sg**	**19 55 57.2**	**-1.3**
	12nm,0.4s						
MTBS	**Maitube**	**4.20

KPKS Kokpek 5.53 44 *e*P Pg 19 55 28.0 -1.6
1.8nm,0.5s
KPKS *e*S **Sg** 19 56 37.7 -3.5
6.5nm,0.5s
KPKS Kokpek 5.53 44 Pg **Pb** 19 55 21.0 +0.7
1.8nm,0.4s
KPKS Lg Lg 19 56 38.1
6.6nm,0.6s
ARXS Arharly 5.67 34 *e*P Pg 19 55 30.7 -1.4
1.5nm,0.7s
ARXS *e*S **Sg** 19 56 42.2 -3.4
9.1nm,0.6s
BLB Baldybastay 5.88 38 *e*P Pg 19 55 34.3 -1.9
3.2nm,0.2s
BLB *e*S **Sg** 19 56 48.2 -4.1
11nm,0.6s

KRNET ***26*** *19:57:55.9±0.1,39.37N×73.55E,mb3.5*
SOME ***26*** *19:57:57.8,39.48N×73.50E,h10km*
ISC 26 19:57:55.0±1.9,39.33N±0.08×73.78E±0.08,h12km±16km,
n18,σ1°39/35,14C-1D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
OHH	**Osh**	**1.42**	**328**	⇑*i*P		**Pn**	**19 58 19.9**	**-0.9**
	baz=33							
OHH				⇑*i*S		**Sn**	**19 58 37.8**	**-1.6**
	baz=33							
DRK	**Karamyk**	**1.54**	**276**	⇑*i*P		**Pn**	**19 58 21.3**	**-1.3**
	baz=76							
DRK				⇑*i*S		**Sn**	**19 58 39.7**	**-3.0**
	baz=76							
BTK	**Batken**	**2.40**	**289**	⇑*e*P		**Pn**	**19 58 35.2**	**+1.0**
	baz=89							
BTK				⇑*i*S		**Sn**	**19 59 03.8**	**+0.2**
	baz=89							
ARLS	**Aral**	**2.56**	**9**	⇑*i*P		**Pb**	**19 58 39.8**	**-1.3**
	baz=13							
ARLS				⇑*i*S		**Sb**	**19 59 12.1**	**-0.5**
	baz=13							
GAR	**Garm**	**2.71**	**264**	⇑*i*P		**Pn**	**19 58 39.7**	**+1.1**
	baz=63							
GAR				⇑*i*S		**Sn**	**19 59 11.5**	**+0.1**
	baz=63							
TRKS	**Terek-Say**	**2.98**	**318**	⇑*e*P		**Pn**	**19 58 42.9**	**+0.6**
	baz=20							
TRKS				⇑*i*S		**Sn**	**19 59 17.4**	**-0.7**
	baz=20							
TKM2	**Tokmak 2**	**3.84**	**20**	⇑Pg		**Pg**	**19 59 09.0**	**+0.3**
	5.5nm,0.7s							
TKM2				⇑Lg		Lg	20 00 00.1	
	8.1nm,0.7s							
IUG	**luzhnay**	**4.01**	**316**	*e*P		**Pb**	**19 59 05.3**	**-0.3**
	86nm,0.4s							
IUG				*e*S		**Sb**	**19 59 54.1**	**0.0**
	50nm,0.4s							
KST	**Kastek**	**4.06**	**23**	*e*P		**Pg**	**19 59 12.3**	**-0.5**
	3.0nm,0.4s							
KST				*e*S		**Sg**	**20 00 06.5**	**+1.0**
	18nm,0.5s							
SGDS	**Sogindy**	**4.17**	**9**	*e*P		**Pg**	**19 59 13.1**	**-1.8**
	3.7nm,0.4s							
SGDS				*e*S		**Sg**	**20 00 07.3**	**-1.7**
	5.9nm,0.5s							
MTBS	**Maitube**	**4.29**	**27**	*e*P		**Pg**	**19 59 17.3**	**+0.1**
	2.7nm,0.1s							
MTBS				*e*S		**Sg**	**20 00 14.9**	**+2.1**
	12nm,0.3s							
TNSS	**Tian-Shan**	**4.41**	**32**	*e*P		**Pg**	**19 59 19.0**	**-0.5**
	1.7nm,0.3s							
TNSS				*e*S		**Sg**	**20 00 18.0**	**+1.3**
	7.9nm,0.6s							
KK31	**Karatay Array**	**4.51**	**328**	Pg		**Pb**	**19 59 17.2**	**+3.2**
	1.0nm,0.3s,baz=142,slow=17,SNR=5.8							
KK31				⇓Sn		**Sn**	**19 59 58.0**	**+2.6**
	1.9nm,0.3s,baz=184,slow=23,SNR=3.5							
KK31				Lg		Lg	20 00 11.8	
	7.3nm,0.6s,baz=140,slow=29,SNR=2.8							
BRLS	**Boroldай**	**4.75**	**322**	*e*P		**Pb**	**19 59 18.4**	**+0.2**
	3.7nm,0.4s							
BRLS				*e*S		**Sb**	**20 00 16.7**	**+1.4**
	12nm,0.7s							
KTBS	**Karatobe**	**4.89**	**25**	*e*P		**Pg**	**19 59 27.6**	**-1.1**
	1.7nm,0.3s							
KTBS				*e*S		**Sg**	**20 00 32.7**	**+0.6**
	17nm,0.7s							
KUU	**Kurty**	**4.95**	**22**	*e*P		**Pg**	**19 59 28.4**	**-1.4**
	1.6nm,0.4s							
KUU				*e*S		**Sg**	**20 00 33.5**	**-0.4**
	16nm,0.6s							
CHKK	**Chushkaly**	**5.12**	**27**	*e*P		**Pg**	**19 59 32.0**	**-1.1**
	1.6nm,0.5s							
CHKK				*e*S		**Sg**	**20 00 40.0**	**+0.5**
	7.4nm,0.6s							
KURS	**Kuram**	**5.31**	**37**	*e*P		**Pg**	**19 59 36.1**	**-0.5**
	1.6nm,0.4s							
KURS				*e*S		**Sg**	**20 00 46.9**	**+1.5**
	5.2nm,0.9s							

SOME ***26*** *20:00:31.9,39.40N×73.65E,h15km,MS3.8*
IDC ***26*** *20:00:32.8±0.7,39.30N×73.55E,h0km,mb4.1/20,*
mbtmp4.1/26,ML3.2/6,MS3.2/14,Error ellipse:
s-maj=13.1km s-min=11.4km az=156.0
KRNET ***26*** *20:00:32.3±0.1,39.41N×73.65E,mb4.6*
BJI ***26*** *20:00:34.9±0.0,39.47N×73.52E,h18km,mb4.4/23,*
mB4.4/12,ML3.9/6,Ms3.8/15,Ms7 3.5/15
MOS ***26*** *20:00:34.3±1.1,39.33N×73.53E,h14km,mb4.4/14,Error*
ellipse: s-maj=5.8km s-min=4.0km az=75.1
NEIC ***26*** *20:00:36.8±2.4,39.51N±0.06×73.45E±0.05,h10km±1km,*
mb4.3/10,Error ellipse: s-maj=11.0km s-min=6.5km
az=349.0
NNC ***26*** *20:00:37.5±1.2,39.62N×73.51E,h0km,mb4.7,mpv4.4,*
Error ellipse: s-maj=11.2km s-min=7.1km az=158.0
ISC 26 20:00:33.5±0.9,39.35N±0.03×73.54E±0.02,h2km±5km,
n243,σ2°15/281,mb4.2/36,MS3.2/12,58C-21D,
Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
OHH	**Osh**	**1.31**	**334**	⇓*i*P		**Pn**	**20 00 56.6**	**-2.2**
	baz=29							
OHH				⇓*i*S		**Sb**	**20 01 14.6**	**-1.4**
	baz=29							
DRK	**Karamyk**	**1.35**	**276**	⇑*i*P		**Pb**	**20 00 59.4**	**-0.2**
	baz=73							
DRK				⇑*i*S		**Sg**	**20 01 19.0**	**+2.1**
	baz=73							
DRK	**Karamyk**	**1.35**	**276**			**Pb**	**20 00 59.7**	**0.0**
DRK					Sn	**Sb**	**20 01 13.8**	**-3.7**
KSH	**Kashi**	**1.90**	**84**		Pg	**Pn**	**20 01 03.8**	**-3.1**
KSH					Sg	**Sn**	**20 01 24.5**	**-6.9**
KSH					smax	smax		
	comp=N,3μm,0.9s							
KSH					smax	smax		
	comp=E,3μm,0.6s							
BTK	**Batken**	**2.21**	**289**	⇑*e*P		**Pb**	**20 01 12.8**	**-1.4**
	baz=87							
BTK				⇑*i*S		**Sb**	**20 01 42.5**	**+0.4**
	baz=87							
BTK	**Batken**	**2.21**	**289**			**Pb**	**20 01 13.4**	**-0.8**
BTK	**Batken**	**2.21**	**289**		PN	**Pb**	**20 01 13.4**	**-0.8**
GAR	**Garm**	**2.53**	**263**	⇑*e*P		**Pb**	**20 01 17.6**	**-2.0**
	baz=62							
GAR				⇑*i*S		**Sb**	**20 01 50.7**	**-0.4**
	baz=62							
GAR	**Garm**	**2.53**	**263**			**Pb**	**20 01 19.5**	**-0.1**
ARLS	**Aral**	**2.58**	**13**	⇑*e*P		**Pn**	**20 01 15.9**	**-0.4**
	baz=12							
ARLS				⇑*i*S		**Sn**	**20 01 47.7**	**-0.6**
	baz=12							
AML	**Almayashu**	**2.78**	**2**	P		**Pn**	**20 01 21.2**	**+1.9**
	SNR=26							
TRKS	**Terek-Say**	**2.84**	**321**	⇑*e*P		**Pn**	**20 01 19.8**	**-0.2**
	baz=18							
TRKS				⇑*i*S		**Sn**	**20 01 54.7**	**-0.1**
	baz=18							
UCH	**Uchtor**	**2.97**	**14**	P		**Pn**	**20 01 24.2**	**+2.2**
	SNR=27							
UCH	**Uchtor**	**2.97**	**14**	⇑*e*P		**Pn**	**20 01 21.6**	**-0.4**
	baz=13							
UCH				⇑*i*S		**Sn**	**20 01 57.4**	**-1.0**
	baz=13							
EKS2	**Erkin-Say**	**3.31**	**3**	P		**Pn**	**20 01 29.1**	**+2.7**
	SNR=50							
EKS2	**Erkin-Say**	**3.31**	**3**	⇑*e*P		**Pn**	**20 01 26.5**	**+0.1**
	baz=2.0							
EKS2				⇑*i*S		**Sn**	**20 02 05.9**	**-0.5**
	baz=2.0							
AAK	**Ala-Archa**	**3.36**	**12**	P		**Pn**	**20 01 29.9**	**+2.8**
	SNR=33							
AAK	**Ala-Archa**	**3.36**	**12**	Pn		**Pn**	**20 01 29.8**	**+2.7**
	14nm,0.3s,baz=189,slow=8.7,SNR=32							
AAK					Sn	**Sb**	**20 02 14.8**	**-0.5**
	23nm,0.3s,baz=56,slow=21,SNR=8.9							
AAK					LR	LR	20 03 00.2	
	comp=Z,402nm,19.1s,baz=217,slow=43							
	66nm,0.5s							
AAK	**Ala-Archa**	**3.36**	**12**	⇑*e*P		**Pn**	**20 01 26.9**	**-0.2**
	baz=11							
AAK				⇑*i*S		**Sn**	**20 02 06.8**	**-0.9**
	baz=11							
AAK	**Ala-Archa**	**3.36**	**12**			**Pn**	**20 01 28.2**	**+1.1**
KBK	**Karagaybulak**	**3.47**	**17**	P		**Pn**	**20 01 31.8**	**+3.1**
	SNR=13							
KBK	**Karagaybulak**	**3.47**	**17**	⇑*i*P		**Pn**	**20 01 28.3**	**-0.3**
	baz=16							
KBK				⇑*i*S		**Sn**	**20 02 09.3**	**-1.1**
	baz=16							
CHGR	**Chuyangaron**	**3.48**	**260**	⇑*i*P		**Pn**	**20 01 30.8**	**+2.1**
	baz=59							
CHGR				⇑*e*S		**Sb**	**20 02 13.6**	**-5.0**
	baz=59							
CHGR	**Chuyangaron**	**3.48**	**260**	Pn		**Pn**	**20 01 29.2**	**+0.5**
CHGR	**Chuyangaron**	**3.48**	**260**	PN		**Pn**	**20 01 29.2**	**+0.5**
ULHL	**Ulahol**	**3.55**	**35**	P		**Pb**	**20 01 34.4**	**-2.7**
	SNR=9.0							
ULHL	**Ulahol**	**3.55**	**35**	⇑*e*P		**Pn**	**20 01 29.2**	**-0.5**
	baz=34							
ULHL				⇑*i*S		**Sn**	**20 02 10.8**	**-1.5**
	baz=34							
BOOM	**Boomskoye usch**	**3.63**	**29**	⇑*i*P		**Pn**	**20 01 30.3**	**-0.5**
	baz=29							
BOOM				⇑*i*S		**Sn**	**20 02 12.7**	**-1.5**
	baz=29							
BOOM	**Boomskoye usch**	**3.63**	**29**	Pn		**Pn**	**20 01 32.2**	**+1.4**
BOOM	**Boomskoye usch**	**3.63**	**29**	PN		**Pn**	**20 01 32.2**	**+1.4**
CHMS	**Chumysh**	**3.76**	**14**	P		**Pn**	**20 01 35.2**	**+2.8**
	SNR=33							
CHMS	**Chumysh**	**3.76**	**14**	⇓*i*P		**Pn**	**20 01 32.1**	**-0.3**
	baz=13							
CHMS				⇓*e*S		**Sn**	**20 02 16.1**	**-1.1**
	baz=13							
CHMS	**Chumysh**	**3.76**	**14**	PN		**Pn**	**20 01 34.5**	**+2.1**
CHMS				PG		**Pb**	**20 01 41.2**	**+0.7**
CHMS				LG		Lg	20 02 31.1	
CHMS	**Chumysh**	**3.76**	**14**	⇑Pn		**Pn**	**20 01 34.5**	**+2.1**
	42nm,0.7s							
CHMS				⇑Pg		**Pb**	**20 01 41.0**	**+0.5**
	79nm,0.7s							
CHMS				⇑Lg		Lg	20 02 31.1	
	481nm,0.9s							
TAS	**Tashkent**	**3.79**	**303**	⇑*e*P		**Pn**	**20 01 34.3**	**+1.4**
	baz=1.0							
TAS				⇑*i*S		**Sn**	**20 02 19.7**	**+1.6**
	baz=1.0							
TAS	**Tashkent**	**3.79**	**303**			**Pn**	**20 01 34.9**	**+2.0**
TAS	**Tashkent**	**3.79**	**303**	PN		**Pn**	**20 01 34.9**	**+2.0**
IUG	**luzhnay**	**3.86**	**318**	*e*PN		**Pn**	**20 01 36.2**	**+2.3**
IUG	**luzhnay**	**3.86**	**318**	*e*P		**Pg**	**20 01 47.3**	**-0.1**
	5μm,0.9s							
IUG				*e*S		**Sg**	**20 02 40.8**	**+3.4**
	559nm,0.9s							
TKM2	**Tokmak 2**	**3.89**	**23**	P		**Pn**	**20 01 37.2**	**+2.8**
	SNR=20							
TKM2	**Tokmak 2**	**3.89**	**23**	⇑*e*P		**Pn**	**20 01 34.0**	**-0.4**
	baz=22							
TKM2				⇑*i*S		**Sn**	**20 02 19.1**	**-1.7**
	baz=22							
TKM2	**Tokmak 2**	**3.89**	**23**	PN		**Pn**	**20 01 37.0**	**+2.6**
TKM2	**Tokmak 2**	**3.89**	**23**	⇑Pn		**Pn**	**20 01 35.8**	**+1.4**
	19nm,0.6s							
TKM2				⇑Pg		**Pb**	**20 01 43.5**	**+0.6**
	86nm,0.8s							
TKM2				⇑Lg		Lg	20 02 33.8	
	176nm,0.8s							
DZA	**Taraz**	**3.91**	**336**	*e*PN		**Pn**	**20 01 35.5**	**+1.0**
DZA				*e*			20 01 45.2	
DZA				*e*			20 02 39.0	
DZA	**Taraz**	**3.91**	**336**	*e*Pn		**Pn**	**20 01 35.5**	**+1.0**
	baz=335							
DZA				*e*Pg		**Pb**	**20 01 45.2**	**+2.1**
	baz=335							
DZA				*e*Lg		Lg	20 02 39.0	
	baz=335							
KDJ	**Kajisay**	**3.92**	**44**	⇑*e*P		**Pn**	**20 01 34.3**	**-0.5**
	baz=44							
KDJ				⇑*e*S		**Sn**	**20 02 19.7**	**-1.8**
	baz=44							
KDJ	**Kajisay**	**3.92**	**44**	Pn		**Pn**	**20 01 37.0**	**+2.3**
KDJ	**Kajisay**	**3.92**	**44**	PN		**Pn**	**20 01 37.1**	**+2.3**
USP	**Ospenovka**	**3.98**	**10**	P		**Pn**	**20 01 37.8**	**+2.3**
	SNR=25							
USP	**Ospenovka**	**3.98**	**10**	⇓*e*P		**Pn**	**20 01 35.2**	**-0.3**
	baz=9.0							
USP				⇓*e*S		**Sn**	**20 02 21.5**	**-1.2**
	baz=9.0							
TARG	**Taragay, Kyrgy**	**4.03**	**53**	⇓*i*P		**Pn**	**20 01 35.7**	**-0.8**
	baz=53							
TARG				⇓*e*S		**Sn**	**20 02 22.4**	**-2.0**
	baz=53							
TARG	**Taragay, Kyrgy**	**4.03**	**53**	Pn		**Pn**	**20 01 38.8**	**+2.3**
TARG	**Taragay, Kyrgy**	**4.03**	**53**	PN		**Pn**	**20 01 38.8**	**+2.3**
KST	**Kastek**	**4.12**	**26**	*e*P		**Pb**	**20 01 46.9**	**+0.1**
	87nm,0.6s							
KST				*e*S		**Sb**	**20 02 41.0**	**+4.0**
	478nm,0.8s							
KST	**Kastek**	**4.12**	**26**	Pg		**Pb**	**20 01 48.9**	**+2.2**
	86nm,0.5s							
KST				Lg		Lg	20 02 42.4	
	476nm,0.8s							
SGDS	**Sogindy**	**4.18**	**11**	*e*PN		**Pn**	**20 01 39.3**	**+1.1**
SGDS				*e*			20 01 50.5	
SGDS				*e*			20 02 44.8	
SGDS	**Sogindy**	**4.18**	**11**	*e*P		**Pb**	**20 01 47.5**	**-0.2**
	33nm,0.7s							
SGDS				*e*S		**Sb**	**20 02 42.2**	**+3.6**
	140nm,0.9s							
SGDS	**Sogindy**	**4.18**	**11**	*e*Pn		**Pn**	**20 01 39.4**	**+1.1**
	baz=11							
SGDS				*e*Pb		**Pb**	**20 01 47.4**	**-0.4**
	baz=11							
SGDS				*e*Pg		**Pg**	**20 01 50.6**	**-3.0**
	baz=11							
SGDS				*e*Lg		Lg	20 02 44.9	
	baz=11							
SGDS	**Sogindy**	**4.18**	**11**	Pg		**Pb**	**20 01 49.5**	**+1.8**
	82nm,0.6s							
SGDS				Lg		Lg	20 02 42.9	
	140nm,0.9s							
CHM	**Chimkent**	**4.21**	**316**	*e*PN		**Pb**	**20 01 50.6**	**+2.5**
CHM				*e*			20 02 46.5	
CHM	**Chimkent**	**4.21**	**316**	*e*P		**Pb**	**20 01 50.3**	**+2.1**
	3.0nm,0.3s							
CHM				*e*S		**Sg**	**20 02 46.2**	**-2.3**
	400nm,0.5s							
CHM	**Chimkent**	**4.21**	**316**	*e*Pg		**Pb**	**20 01 50.6**	**+2.5**
	baz=315							
CHM				*e*Lg		Lg	20 02 46.5	
	baz=315							
DGS	**Degeres**	**4.24**	**23**	*e*P		**Pb**	**20 01 50.4**	**+1.6**
	99nm,0.6s							
DGS				*e*S		**Sg**	**20 02 46.9**	**-2.7**
	250nm,0.7s							
MTBS	**Maitube**	**4.36**	**29**	*e*P		**Pb**	**20 01 51.8**	**+1.0**
	34nm,0.5s							
MTBS				*e*S		**Sb**	**20 02 49.0**	**+5.1**
	176nm,0.6s							
MTBS	**Maitube**	**4.36**	**29**	Pg		**Pb**	**20 01 53.2**	**+2.4**
	35nm,0.3s							
MTBS				Lg		Lg	20 02 49.2	
	220nm,0.9s							
KK31	**Karatay Array**	**4.39**	**330**			**Pn**	**20 01 42.5**	**+1.4**
KK31	**Karatay Array**	**4.39**	**330**	PN		**Pn**	**20 01 42.5**	**+1.4**
KK31	**Karatay Array**	**4.39**	**330**	⇑Pn		**Pn**	**20 01 43.1**	**+2.0**
	12nm,0.5s,baz=125,slow=12,SNR=49							
KK31				⇑Pg		**Pb**	**20 01 51.8**	**+0.5**
	30nm,0.6s,baz=329,slow=76,SNR=7.4							
KK31				⇑Lg		Lg	20 02 49.3	
	106nm,0.8s,baz=134,slow=16,SNR=4.3							
KKAR	**Karatay Array**	**4.39**	**330**	⇑*e*P		**Pn**	**20 01 42.1**	**+1.0**
	baz=28							
KKAR				⇑*i*S		**Sn**	**20 02 32.8**	**+0.1**
	baz=28							
KKAR	**Karatay Array**	**4.39**	**330**			**Pn**	**20 01 42.8**	**+1.7**
KKAR	**Karatay Array**	**4.39**	**330**			**Pn**	**20 01 42.0**	**+0.9**
KKAR	**Karatay Array**	**4.39**	**330**	PN		**Pn**	**20 01 42.8**	**+1.7**
TNSS	**Tian-Shan**	**4.49**	**34**	*e*PN		**Pn**	**20 01 44.7**	**+1.9**
TNSS				*e*			20 01 54.8	
TNSS				*e*			20 02 54.0	
TNSS	**Tian-Shan**	**4.49**	**34**	*e*P		**Pb**	**20 01 53.5**	**+0.2**
	88nm,0.6s							
TNSS				*e*S		**Sb**	**20 02 52.4**	**+4.4**
	91nm,0.6s							
TNSS	**Tian-Shan**	**4.49**	**34**	*e*Pn		**Pn**	**20 01 44.8**	**+1.9**
	baz=34							
TNSS				*e*Pg		**Pb**	**20 01 54.8**	**+1.6**
	baz=34							
TNSS				*e*Lg		Lg	20 02 54.1	
	baz=34							
TNSS	**Tian-Shan**	**4.49**	**34**	Pg		**Pb**	**20 01 54.8**	**+1.6**
	87nm,0.5s							
TNSS				Lg		Lg	20 02 52.9	
	91nm,0.6s							
BRLS	**Boroldай**	**4.61**	**324**	*e*PN		**Pb**	**20 01 55.5**	**+0.4**
BRLS				*e*			20 02 55.5	
BRLS	**Boroldай**	**4.61**	**324**	*e*P		**Pb**	**20 01 55.8**	**+0.6**
	15nm,0.8s							
BRLS				*e*S		**Sb**	**20 02 56.5**	**+5.4**
	158nm,0.9s							
BRLS	**Boroldай**	**4.61**	**324**	*e*Pg		**Pb**	**20 01 55.6**	**+0.4**
	baz=320							
BRLS				*e*Lg		Lg	20 02 55.5	
	baz=320							
AAA	**Alma-Ata**	**4.62**	**32**	*e*PN		**Pb**	**20 01 58.1**	**+2.9**
AAA				*e*			20 02 58.9	
AAA	**Alma-Ata**	**4.62**	**32**	*e*P		**Pb**	**20 01 56.5**	**+1.2**
	88nm,0.4s							
AAA				*e*S		**Sg**	**20 02 57.4**	**-4.5**
	507nm,0.6s							
AAA	**Alma-Ata**	**4.62**	**32**	*e*Pg		**Pb**	**20 01 58.1**	**+2.9**
	baz=33							
AAA				*e*Lg		Lg	20 02 59.0	
	baz=33							
AAA	**Alma-Ata**	**4.62**	**32**	Pg		**Pb**	**20 01 58.1**	**+2.9**
	88nm,0.4s							
AAA				Lg		Lg	20 02 58.1	
	507nm,0.7s							
KRBS	**Karabastau**	**4.63**	**20**	*e*P		**Pb**	**20 01 56.7**	**+1.3**
	29nm,0.4s							
KRBS				*e*S		**Sg**	**20 02 58.3**	**-3.8**
	181nm,0.7s							
ANVS	**Anan'yevo**	**4.64**	**41**	⇑*e*P		**Pn**	**20 01 44.6**	**-0.1**
	baz=41							
ANVS				⇑*e*S		**Sn**	**20 02 36.7**	**-2.4**
	baz=41							
KNDC	**Almaty**	**4.65**	**33**	PN		**Pn**	**20 01 47.8**	**+3.1**
KNDC				PG		**Pb**	**20 01 57.8**	**+2.1**
KNDC				LG		Lg	20 02 58.7	
KNDC	**Almaty**	**4.65**	**33**	⇑Pn		**Pn**	**20 01 47.8**	**+3.1**
	88nm,0.6s							
KNDC				⇓Pg		**Pb**	**20 01 57.8**	**+2.1**
	298nm,0.8s							
KNDC				⇑Lg		Lg	20 02 58.7	
	993nm,0.8s							
PRZ	**Przheval'sk**	**4.83**	**48**	⇑*i*P		**Pn**	**20 01 46.9**	**-0.5**
	baz=48							
PRZ				⇑*e*S		**Sn**	**20 02 41.7**	**-2.3**
	baz=48							
PRZ	**Przheval'sk**	**4.83**	**48**	Pn		**Pn**	**20 01 49.3**	**+1.9**
PRZ	**Przheval'sk**	**4.83**	**48**	PN		**Pn**	**20 01 49.3**	**+1.9**
KTBS	**Karatobe**	**4.96**	**27**	*e*P		**Pb**	**20 02 02.4**	**+1.5**
	27nm,0.7s							
KTBS				*e*S		**Sg**	**20 03 07.7**	**-5.0**
	311nm,0.7s							
KTBS	**Karatobe**	**4.96**	**27**	Pg		**Pb**	**20 02 04.0**	**+3.1**
	32nm,0.4s							
KTBS				Lg		Lg	20 03 08.3	
	312nm,0.7s							
KUU	**Kurty**	**5.00**	**24**	*e*PN		**Pn**	**20 01 48.4**	**-1.1**
KUU				*e*			20 02 02.9	
KUU				*e*			20 03 10.1	
KUU	**Kurty**	**5.00**	**24**	*e*P		**Pb**	**20 02 02.4**	**+0.7**
	27nm,0.7s							
KUU				*e*S		**Sb**	**20 03 07.8**	**+5.6**
	278nm,1.2s							
KUU	**Kurty**	**5.00**	**24**	*e*Pn		**Pn**	**20 01 48.5**	**-1.1**
	baz=24							
KUU				*e*Pg		**Pb**	**20 02 03.0**	**+1.3**
	baz=24							
KUU				*e*Lg		Lg	20 03 10.2	
	baz=24							
KUU	**Kurty**	**5.00**	**24**	Pg		**Pb**	**20 02 04.4**	**+2.7**
	52nm,0.8s							
KUU				Lg		Lg	20 03 08.5	
	278nm,1.1s							
CHKK	**Chushkaly**	**5.19**	**29**	*e*PN		**Pn**	**20 01 53.8**	**+1.7**
CHKK				*e*			20 02 06.6	
CHKK				*e*			20 03 14.7	
CHKK	**Chushkaly**	**5.19**	**29**	*e*P		**Pb**	**20 02 06.3**	**+1.4**
	20nm,0.7s							
CHKK				*e*S		**Sg**	**20 03 14.6**	**-5.5**
	159nm,0.7s							
CHKK	**Chushkaly**	**5.19**	**29**	*e*Pn		**Pn**	**20 01 53.9**	**+1.7**
	baz=29							
CHKK				*e*Pg		**Pb**	**20 02 06.7**	**+1.7**
	baz=29							
CHKK				*e*Lg		Lg	20 03 14.7	
	baz=29							
CHKK	**Chushkaly**	**5.19**	**29**	Pg		**Pb**	**20 02 07.9**	**+3.0**
	15nm,0.6s							
CHKK				Lg		Lg	20 03 15.0	
	159nm,0.7s							
SATY	**Saty**	**5.22**	**43**	*e*PN		**Pn**	**20 01 54.1**	**+1.6**
SATY				*e*			20 02 09.4	
SATY	**Saty**	**5.22**	**43**	*e*P		**Pb**	**20 02 07.5**	**+2.1**
	28nm,0.6s							
SATY				*e*S		**Sg**	**20 03 16.4**	**-4.6**
	153nm,0.8s							
SATY	**Saty**	**5.22**	**43**	*e*Pn		**Pn**	**20 01 54.2**	**+1.6**
	baz=44							
SATY				*e*Pg		Pb	20 02 09.5	+4.0
	baz=44							
SATY				*e*Lg		Lg	20 03 21.4	
	baz=44							
SATY	**Saty**	**5.22**	**43**	Pg		Pb	20 02 09.1	+3.7
	99nm,0.8s							
SATY				Lg		Lg	20 03 16.5	
	153nm,1.0s							
ZHN	**Zhinishke**	**5.31**	**43**	*e*PN		**Pn**	**20 01 55.7**	**+1.9**
ZHN				*e*			20 02 11.6	
ZHN				*e*			20 03 18.9	
ZHN	**Zhinishke**	**5.31**	**43**	*e*P		**Pb**	**20 02 09.0**	**+2.0**
	24nm,0.3s							
ZHN				*e*S		**Sg**	**20 03 19.0**	**-4.9**
	102nm,0.8s							
ZHN	**Zhinishke**	**5.31**	**43**	*e*Pn		**Pn**	**20 01 55.8**	**+1.9**
	baz=43							

BTLS					*e*S	**Sg**	**20 03 30.2**	**-6.3**			
	67nm,1.1s										
BTLS	**Baital**	**5.70**	**4**	*e*Pn	**Pn**	**20 02 00.3**	**+1.3**				
	baz=3.5										
BTLS				*e*Pg	Pb	20 02 17.3	+3.8				
	baz=3.5										
BTLS				*e*Lg	Lg	20 03 33.1					
	baz=3.5										
ARXS	**Arharly**	**5.82**	**32**	*e*PN	**Pn**	**20 02 02.4**	**+1.6**				
ARXS	**Arharly**	**5.82**	**32**	*e*P	**Pb**	**20 02 17.2**	**+1.5**				
	96nm,0.9s										
ARXS				*e*S	**Sb**	**20 03 33.2**	**+7.3**				
	176nm,0.8s										
ARXS	**Arharly**	**5.82**	**32**	Pg	Pb	20 02 19.2	+3.5				
	44nm,1.0s										
SHLS	**Shalkode**	**5.87**	**48**	*e*PN	Pn	20 02 06.9	+5.4				
SHLS				*e*		20 02 26.1					
SHLS	**Shalkode**	**5.87**	**48**	*e*P	**Pg**	**20 02 24.6**	**-1.2**				
	15nm,0.6s										
SHLS				*e*S	**Sg**	**20 03 45.1**	**+3.3**				
	76nm,0.7s										
SHLS	**Shalkode**	**5.87**	**48**	*e*Pn	Pn	20 02 06.9	+5.4				
	baz=50										
SHLS				*e*Pg	**Pg**	**20 02 26.2**	**+0.4**				
	baz=50										
SHLS				*e*Lg	Lg	20 03 47.9					
	baz=50										
SHLS	**Shalkode**	**5.87**	**48**	Pg	**Pg**	**20 02 25.7**	**-0.1**				
	30nm,0.7s										
PDGK	**Podgornoye**	**5.99**	**47**	PN	**Pn**	**20 02 05.1**	**+1.9**				
PDGK				PG	Pb	20 02 22.9	+4.4				
PDGK				LG	Lg	20 03 37.7					
PDGK	**Podgornoye**	**5.99**	**47**	Pg	Pb	20 02 23.1	+4.5				
	5.7nm,0.8s										
PDGK	**Podgornoye**	**5.99**	**47**	⇓Pn	**Pn**	**20 02 05.1**	**+1.9**				
	23nm,0.6s										
PDGK				⇓Pg	Pb	20 02 23.0	+4.4				
	50nm,0.8s										
PDGK				⇑Lg	Lg	20 03 37.7					
	164nm,1.1s										
KBL	**Kabul**	**6.00**	**218**	Pn	Pn	20 02 07.5	+4.2				
KBL	**Kabul**	**6.00**	**218**	PN	Pn	20 02 07.6	+4.2				
BLB	**Baldybastay**	**6.01**	**36**	*e*P	**Pb**	**20 02 22.1**	**+3.1**				
	35nm,0.5s										
BLB				*e*S	**Sg**	**20 03 40.9**	**-5.7**				
	136nm,0.7s										
THW	**Thamme Wali**	**6.70**	**193**	P	Pn	20 02 18.2	+5.3				
TDK	**Taldyqorghan**	**6.71**	**31**	*e*P	Pb	20 02 35.0	+4.3				
	25nm,0.2s										
TDK				*e*S	**Sg**	**20 04 02.9**	**-5.8**				
	244nm,1.4s										
TDK	**Taldyqorghan**	**6.71**	**31**	*e*Pg	Pb	20 02 35.4	+4.7				
	baz=31										
TDK				*e*Lg	Lg	20 04 05.3					
	baz=31										
TDK	**Taldyqorghan**	**6.71**	**31**	Pg	**Pb**	**20 02 34.0**	**+3.3**				
	87nm,0.7s										
DJR	**Jarkent**	**6.82**	**41**	*e*P	**Pb**	**20 02 35.7**	**+2.9**				
	7.4nm,0.7s										
DJR				*e*S	Sg	20 04 05.0	-7.5				
	53nm,1.0s										
DJR	**Jarkent**	**6.82**	**41**	Pg	Pb	20 02 38.6	+5.8				
	7.3nm,0.5s										
MAKZ	**Makanchi**	**9.67**	**37**		**Pn**	**20 02 56.0**	**+2.4**				
MAKZ	**Makanchi**	**9.67**	**37**	P	**Pn**	**20 02 56.0**	**+2.4**				
MAKZ	**Makanchi**	**9.67**	**37**	⇑Pn	**Pn**	**20 02 56.8**	**+3.2**				
	2.9nm,0.8s										
MAKZ				⇑Pg		20 03 26.2					
	9.2nm,1.0s										
MAKZ				⇑Lg	Lg	20 05 30.8					
	26nm,1.1s										
MK31	**Makanchi Array**	**9.81**	**38**	Pn	**Pn**	**20 02 56.7**	**+1.2**				
MK31	**Makanchi Array**	**9.81**	**38**	⇓*e*P	**Pn**	**20 02 58.6**	**+3.1**				
MK31	**Makanchi Array**	**9.81**	**38**	Pn	**Pn**	**20 02 58.1**	**+2.6**				
	2.3nm,0.8s,baz=214,slow=12,SNR=17										
MK31				⇑Pg		20 03 33.1					
	3.2nm,0.7s,baz=225,slow=14,SNR=4.7										
MK31				⇑Lg	Lg	20 05 36.4					
	29nm,1.4s,baz=218,slow=28,SNR=4.0										
MKAR	**Makanchi Array**	**9.81**	**38**	Pn	**Pn**	**20 02 58.2**	**+2.7**				
	0.1nm,0.3s,baz=218,slow=12,SNR=15										
MKAR				Lg	Lg	20 05 38.8					
	0.1nm,0.3s,baz=293,slow=20,SNR=2.5										
MKAR				LR	LR	20 07 06.1					
	comp=Z,141nm,21.2s,baz=223,slow=40										
	2.2nm,0.8s										
MKAR	**Makanchi Array**	**9.81**	**38**		**Pn**	**20 02 56.8**	**+1.3**				
BRZS	**Berezniki**	**10.65**	**357**	*e*P	**Pn**	**20 03 05.6**	**-1.3**				
BRZS	**Berezniki**	**10.65**	**357**	*e*Pn	**Pn**	**20 03 05.6**	**-1.3**				
	baz=357										
BRZS				*e*Lg	Lg	20 06 10.9					
	baz=357										
WMQ	**Urumqi**	**11.50**	**63**	*e*P	Pn	20 03 24.3	+5.6				
WMQ				pmax	pmax						
	comp=Z,16nm,0.7s										
WMQ				LR	LR						
	comp=N,540nm,8.1s										
WMQ				LR	LR						
	comp=E,340nm,6.1s										
WMQ				LR	LR						
	comp=Z,90nm,15.5s										
KURBB	**Kurchatov Arra**	**11.81**	**16**	Pn	**Pn**	**20 03 21.3**	**-1.5**				
	0.1nm,0.3s,baz=204,slow=12,SNR=7.7										
KURBB				Lg	Lg	20 06 39.3					
	0.2nm,0.3s,baz=201,slow=29,SNR=9.4										
	1.0nm,0.9s										
KURK	**Kurchatov**	**11.91**	**16**	*e*P	**Pn**	**20 03 27.6**	**+3.4**				
SEM	**Semipalatinsk**	**12.03**	**21**	*e*P	**Pn**	**20 03 26.6**	**+0.6**				
SEM	**Semipalatinsk**	**12.03**	**21**	*e*Pn	**Pn**	**20 03 26.6**	**+0.6**				
	baz=21										
SEM				*e*Lg	Lg	20 06 55.1					
	baz=21										
GEYT	**Alibeck**	**12.14**	**268**	Sn	**Sn**	**20 05 42.2**	**-1.1**				
	0.3nm,0.3s,baz=250,slow=20,SNR=2.0										
GEYT				LR	LR	20 07 56.1					
	comp=Z,29nm,19.7s,baz=208,slow=36										
PYUN	**Piuthan**	**13.69**	**142**	*e*P	**Pn**	**20 03 48.2**	**-0.6**				
AB31	**Akbulak array**	**13.86**	**320**	P	**Pn**	**20 03 48.8**	**-2.0**				
AB31	**Akbulak array**	**13.86**	**320**	⇓Pn	**Pn**	**20 03 48.1**	**-2.7**				
	2.5nm,0.6s,baz=130,slow=13,SNR=20										
ABKAR	**Akbulak array**	**13.86**	**320**	Pn	**Pn**	**20 03 48.3**	**-2.6**				
DANN	**Dangsing**	**13.87**	**139**	*e*P	**Pn**	**20 03 52.3**	**+1.1**				
KOLN	**Koldanda**	**14.26**	**141**	*e*P	**Pn**	**20 03 55.8**	**-0.8**				
	9.8nm,0.8s										
KOLN	**Koldanda**	**14.26**	**141**	*e*P	**Pn**	**20 03 56.0**	**-0.6**				
KOLN	**Koldanda**	**14.26**	**141**	*e*P	**Pn**	**20 03 56.1**	**-0.6**				
GKN	**Gorkha**	**14.60**	**138**	*e*P	**Pn**	**20 04 00.7**	**-0.5**				
	18nm,0.6s										
KKN	**Kakani**	**15.11**	**136**	*e*P	**Pn**	**20 04 05.7**	**-2.4**				
AKTO	**Aktyubinsk**	**15.58**	**320**	Pn	**Pn**	**20 04 12.3**	**-1.7**				
	0.5nm,0.3s,baz=115,slow=13,SNR=14										
AKTO				LR	LR	20 10 44.4					
	comp=Z,113nm,20.2s,baz=137,slow=39										
	6.7nm,0.8s										
AKTO	**Aktyubinsk**	**15.58**	**320**	⇓Pn	**Pn**	**20 04 12.0**	**-2.0**				
	14nm,0.9s										
ZAA0	**Zalesovo Array**	**16.50**	**24**		**Pn**	**20 04 25.9**	**+0.1**				
ZALV	**Zalesovo Beam**	**16.50**	**24**	Pn	**Pn**	**20 04 25.3**	**-0.5**				
	0.5nm,0.3s,baz=212,slow=11,SNR=24										
ZALV				Lg	Lg	20 09 17.5					
	0.1nm,0.3s,baz=219,slow=21,SNR=5.2										
ZALV				LR	LR	20 11 03.7					
	comp=Z,84nm,18.6s,baz=218,slow=38										
	8.0nm,0.7s										
ZALV	**Zalesovo Beam**	**16.50**	**24**		**Pn**	**20 04 24.8**	**-1.0**				
ZALV	**Zalesovo Beam**	**16.50**	**24**	*i* P	**Pn**	**20 04 26.2**	**+0.4**				
ZALV				pmax	pmax						
	comp=Z,8.0nm,0.7s										
GOMU	**GeErMu**	**17.11**	**94**	P	**P**	**20 04 35.3**	**-0.6**				
GOMU				pP	pP	20 04 39.0	+1.1				
LKRN	**Lenkeran, Azer**	**19.23**	**276**	P	**Pn**	**20 04 59.6**	**-0.1**				
SVE	**Sverdlovsk**	**19.43**	**338**	*e*P	**Pn**	**20 05 03.1**	**+1.1**				
ARU	**Arti**	**19.74**	**335**	P	**P**	**20 05 03.5**	**-0.7**				
	baz=147,slow=5.0,SNR=19										
ARU				LR	LR	20 13 03.6					
	comp=Z,132nm,18.2s,baz=106,slow=38										
	comp=Z,10nm,0.8s										
ARU	**Arti**	**19.74**	**335**		**P**	**20 05 01.5**	**-2.7**				
ARU				IAmb	IAmb	20 05 12.5					
	comp=Z,13nm,0.8s										
ARU	**Arti**	**19.74**	**335**	*c i* P	**Pn**	**20 05 04.7**	**-1.0**				
ARU				S	**Sn**	**20 08 47.1**	**-0.6**				
ARU				pmax	pmax						
	comp=Z,10.0nm,0.7s										
SEKA	**Sheki**	**20.16**	**284**	P	**P**	**20 05 09.0**	**0.0**				
KNGR	**Kungurtug, Tuv**	**20.26**	**48**	⇓*e*P	Pn	20 05 11.9	-0.1				
MNGR	**Mingechevir, A**	**20.27**	**282**	P	Pn	20 05 11.9	-0.2				

GTA	**Gaotai**	**20.30**	**81**	⇑P	Pn	20 05 12.5	0.0				
GTA				pP	sP	20 05 20.8	+7.2				
GTA				sP	pP	20 05 25.5	+13				
GTA				pmax	pmax						
	comp=Z,14nm,0.9s										
GTA				pmax	pmax						
	comp=Z,48nm,4.4s										
GTA				LR	LR						
	comp=Z,120nm,16.0s										
GTA				LR	LR						
	comp=Z,100nm,15.6s										
GTA				LR	LR						
	comp=Z,68nm,16.4s										
ZKTA	**Zakatala**	**20.57**	**285**	P	Pn	20 05 15.0	-0.6				
GANJ	**Ganja**	**20.86**	**282**	P	Pn	20 05 17.4	-1.6				
NAX	**Nakhchivan**	**21.68**	**278**	P	**P**	**20 05 27.0**	**+1.5**				
BELG	**Belogornoye**	**22.11**	**315**	P	**P**	**20 05 29.2**	**-0.7**				
	comp=Z,29nm,0.9s,baz=327,slow=1.3,SNR=18										
BELG				LR	LR	20 15 18.1					
	comp=Z,54nm,19.5s,baz=194,slow=40										
	comp=Z,29nm,0.9s										
BELG	**Belogornoye**	**22.11**	**315**	*d i* P	**P**	**20 05 28.6**	**-1.3**				
BELG				pmax	pmax						
	comp=Z,9.0nm,0.9s										
GNI	**Garni**	**22.12**	**281**	P	**P**	**20 05 32.8**	**+2.6**				
	comp=Z,9.5nm,0.6s,baz=83,slow=2.9,SNR=7.4										
GNI	**Garni**	**22.12**	**281**	P	**P**	**20 05 30.6**	**+0.3**				
GNI				IAmb	IAmb	20 05 41.3					
	comp=Z,28nm,1.1s										
GNI	**Garni**	**22.12**	**281**	P	**P**	**20 05 30.6**	**+0.3**				
GNI				pmax	pmax						
	comp=Z,28nm,1.2s										
ONI	**Oni**	**22.89**	**288**	P	**P**	**20 05 38.7**	**+0.4**				
ONI	**Oni**	**22.89**	**288**	P	**P**	**20 05 38.7**	**+0.4**				
ONI				pmax	pmax						
	comp=Z,24nm,0.8s										
KBZ	**Khabaz**	**23.27**	**291**	P	**P**	**20 05 43.4**	**+1.2**				
	comp=Z,1.8nm,0.8s,baz=178,slow=8.8,SNR=2.1										
	comp=Z,1.8nm,0.8s										
KIV	**Kislovodsk**	**23.43**	**291**	*e*P	**P**	**20 05 44.7**	**+0.8**				
KIV				*e*PPP	PPP	20 06 19.9					
KIV				*e*		20 09 28.1					
KIV				pmax	pmax						
	comp=Z,4.0nm,0.9s										
KIV				MLR	MLR						
	comp=Z,20nm,6.0s										
LZH	**Lanzhou**	**24.14**	**88**	⇓P	**P**	**20 05 52.0**	**+1.0**				
LZH				sP	sP	20 05 58.3	+4.2				
LZH				pmax	pmax						
	comp=Z,19nm,1.4s										
LZH				LR	LR						
	comp=Z,160nm,11.7s										
LZH				LR	LR						
	comp=Z,160nm,12.0s										
LZH				LR	LR						
	comp=Z,170nm,11.7s										
KIRV	**Kirov**	**24.68**	**329**	P	**P**	**20 05 55.8**	**+0.3**				
	comp=Z,12nm,0.7s,baz=195,slow=2.2,SNR=4.9										
	comp=Z,12nm,0.7s										
KIRV	**Kirov**	**24.68**	**329**	⇓*i* P	**P**	**20 05 56.1**	**+0.7**				
SONM	**Songino Array**	**25.11**	**59**	P	**P**	**20 06 00.0**	**+0.4**				
	comp=Z,1.9nm,0.8s,baz=260,slow=10,SNR=6.3										
SONM				LR	LR	20 16 50.9					
	comp=Z,75nm,20.4s,baz=130,slow=39										
	comp=Z,1.9nm,0.8s										
VRH	**Novokhopyorsk**	**25.12**	**309**	*e*P	**P**	**20 05 59.2**	**-0.3**				
VRH				pmax	pmax						
	comp=Z,7.0nm,0.8s										
ULN	**Ulaanbaatar**	**25.55**	**60**	P	**P**	**20 06 04.7**	**+1.0**				
ULN				IAmb	IAmb	20 06 06.6					
	comp=Z,3.3nm,0.8s										
ULN	**Ulaanbaatar**	**25.55**	**60**	P	**P**	**20 06 04.7**	**+1.0**				
ULN				pmax	pmax						
	comp=Z,3.0nm,0.8s										
VSR	**Storozhevoye**	**26.68**	**308**	*e*P	**P**	**20 06 12.6**	**-1.0**				
VSR				pmax	pmax						
	comp=Z,10.0nm,1.3s										
VORR	**Voronezh**	**26.76**	**309**	*e*P	**P**	**20 06 16.9**	**+2.5**				
LPSR	**Galich'ya Gora**	**27.16**	**311**	*e*P	**P**	**20 06 16.6**	**-1.4**				
LPSR				pmax	pmax						
	comp=Z,8.0nm,0.9s										
HHC	**Hu-ho-hao-te**	**28.98**	**75**	*e*P	P	20 06 37.8	+3.3				
HHC				pmax	pmax						
	comp=Z,25nm,0.9s										
HHC				pmax	pmax						
	comp=Z,110nm,5.6s										
CMAR	**Chiang Mai Arr**	**30.29**	**126**	LR	LR	20 19 10.5					
	comp=Z,15nm,20.3s,baz=275,slow=37										
BR131	**Keskin Array S**	**30.60**	**284**	P	**P**	**20 06 49.3**	**+0.5**				
BR131	**Keskin Array S**	**30.60**	**284**	P	**P**	**20 06 49.3**	**+0.5**				
BR131				pmax	pmax						
	comp=Z,8.0nm,0.9s										
BRTR	**Keskin Array B**	**30.60**	**284**	P	**P**	**20 06 50.1**	**+1.2**				
	comp=Z,4.3nm,0.9s,baz=81,slow=7.7,SNR=14										
	comp=Z,4.3nm,0.9s										
BRTR	**Keskin Array B**	**30.60**	**284**	P	**P**	**20 06 49.5**	**+0.7**				
BRTR	**Keskin Array B**	**30.60**	**284**	*i* P	**P**	**20 06 50.0**	**+1.2**				
BRTR				pmax	pmax						
	comp=Z,5.0nm,0.9s										
AKASG	**Malin Array Be**	**32.84**	**305**	P	**P**	**20 07 08.0**	**-0.2**				
	comp=Z,0.1nm,0.3s,baz=78,slow=7.6,SNR=8.8										
AKASG				LR	LR	20 23 04.4					
	comp=Z,41nm,18.9s,baz=32,slow=41										
	comp=Z,0.1nm,0.3s										
AKASG	**Malin Array Be**	**32.84**	**305**	*c e* P	P	20 07 11.3	+3.1				
AKASG				pmax	pmax						
	comp=Z,1.0nm,0.6s										
AKBB	**Malin Array Si**	**32.84**	**305**	⇓*e*P	**P**	**20 07 10.3**	**+2.1**				
FINES	**FINESS Array B**	**36.32**	**323**	P	**P**	**20 07 38.6**	**+0.5**				
	comp=Z,1.5nm,0.7s,baz=113,slow=8.3,SNR=8.6										
FINES				LR	LR	20 22 21.5					
	comp=Z,34nm,20.7s,baz=125,slow=36										
	comp=Z,1.5nm,0.7s										
FINES	**FINESS Array B**	**36.32**	**323**	P	**P**	**20 07 38.3**	**+0.1**				
FINES	**FINESS Array B**	**36.32**	**323**	*i* P	**P**	**20 07 38.5**	**+0.3**				
FINES				pmax	pmax						
	comp=Z,2.0nm,0.7s										
NJ2	**Nanjing**	**37.20**	**87**	*e*P	**P**	**20 07 45.0**	**-1.1**				
NJ2				pmax	pmax						
	comp=Z,7.0nm,1.3s										
ARCES	**ARCESS Array B**	**39.33**	**336**	P	**P**	**20 08 04.2**	**+0.7**				
	comp=Z,1.9nm,0.7s,baz=115,slow=8.6,SNR=7.4										
	comp=Z,1.9nm,0.7s										
YAK	**Yakutsk**	**40.48**	**37**	⇓*e*P	**P**	**20 08 15.0**	**+1.8**				
YAK				pmax	pmax						
	comp=Z,7.0nm,0.7s										
PDG	**Podgorica**	**40.57**	**292**	P	**P**	**20 08 14.8**	**+0.7**				
PDG				IAmb	IAmb	20 08 18.7					
	comp=Z,11nm,1.2s										
KLR	**Kul'dur**	**41.87**	**57**	⇑*e*P	**P**	**20 08 24.7**	**-0.1**				
KLR				pmax	pmax						
	comp=Z,7.0nm,2.6s										
KSRS	**Korea Array**	**42.12**	**75**	P	**P**	**20 08 26.8**	**-0.2**				
	comp=Z,0.7nm,0.6s,baz=274,slow=8.1,SNR=4.2										
KSRS				LR	LR	20 28 23.5					
	comp=Z,26nm,18.6s,baz=140,slow=40										
	comp=Z,0.7nm,0.6s										
TIXI	**Tiksi**	**42.38**	**23**	P	**P**	**20 08 27.9**	**-0.7**				
TIXI				IAmb	IAmb	20 08 31.6					
	comp=Z,5.2nm,1.1s										
TIXI	**Tiksi**	**42.38**	**23**	⇑*e*P	**P**	**20 08 29.9**	**+1.3**				
TIXI				pmax	pmax						
	comp=Z,2.0nm,0.6s										
BRG	**Berggiesshubel**	**42.50**	**306**	*e*P	**P**	**20 08 33.0**	**+3.1**				
BRG				Amp		20 08 35.8					
	comp=Z,6.5nm,1.4s										
BRG	**Berggiesshubel**	**42.50**	**306**	*e*P	**P**	**20 08 33.0**	**+3.1**				
BRG				pmax	pmax						
	comp=Z,7.0nm,1.4s										
BRG				MLR	MLR						
	comp=E,150nm,16.0s										
BRG				MLR	MLR						
	comp=N,130nm,24.8s										
BRG				MLR	MLR						
	comp=Z,150nm,18.5s										
GERES	**GERESS Array B**	**42.99**	**303**	P	**P**	**20 08 35.2**	**+1.2**				
	comp=Z,0.5nm,0.6s,baz=79,slow=6.9,SNR=5.3										
	comp=Z,0.5nm,0.6s										
GERES	**GERESS Array B**	**42.99**	**303**	P	**P**	**20 08 34.2**	**+0.1**				
KHC	**Kasperske Hory**	**43.02**	**304**	P	**P**	**20 08 34.7**	**+0.5**				
KHC	**Kasperske Hory**	**43.02**	**304**	P	**P**	**20 08 34.7**	**+0.5**				
KHC				pmax	pmax						
	comp=Z,4.0nm,1.2s										
KHC	**Kasperske Hory**	**43.02**	**304**	*e*P	**P**	**20 08 35.0**	**+0.8**				
NB2	**NORSAR Subarra**	**43.37**	**321**	P	**P**	**20 08 36.5**	**-0.4**				
	comp=Z,4.4nm,1.0s,baz=92,slow=8.6										
NOA	**NORSAR Array B**	**43.37**	**321**	P	**P**	**20 08 36.7**	**-0.2**				
	comp=Z,3.1nm,1.0s,baz=91,slow=8.0,SNR=7.3										
NOA				LR	LR	20 27 33.6					
	comp=Z,35nm,19.8s,baz=235,slow=37										
	comp=Z,3.1nm,1.0s										
KEST	**Kesra**	**50.07**	**287**	P	**P**	**20 09 30.4**	**+0.7**				
	comp=Z,1.8nm,0.8s,baz=176,slow=7.4,SNR=2.7										
	comp=Z,1.8nm,0.8s										
MJAR	**Matsushiro Arr**	**50.10**	**72**	P	**P**	**20 09 29.9**	**0.0**				
	comp=Z,2.3nm,0.7s,baz=292,slow=9.0,SNR=7.0										
	comp=Z,2.3nm,0.7s										
MA2	**Magadan**	**50.89**	**40**	LR	LR	20 33 06.4					
	comp=Z,76nm,18.4s,baz=96,slow=38										
DAG	**Danmarks Havn**	**52.58**	**343**	*i* P	**P**	**20 09 48.0**	**+0.2**				
ESDC	**Sonseca Array**	**57.92**	**297**	P	**P**	**20 10 26.3**	**-0.8**				
	comp=Z,0.9nm,0.9s,baz=55,slow=6.2,SNR=8.5										
	comp=Z,0.9nm,0.9s										
SFJD	**Kangerlussuaq**	**65.82**	**339**	LR	LR	20 39 31.2					
	comp=Z,332nm,20.8s,baz=247,slow=36										
TORD	**Torodi Ar. Bea**	**67.78**	**269**	P	**P**	**20 11 32.0**	**-1.0**				
	comp=Z,2.2nm,0.7s,baz=44,slow=4.8,SNR=7.6										
	comp=Z,2.2nm,0.7s										
TORD	**Torodi Ar. Bea**	**67.78**	**269**	P	**P**	**20 11 32.2**	**-0.8**				
TORD				IAmb	IAmb	20 11 41.5					
	comp=Z,1.7nm,0.8s										
ILAR	**Eielson Array**	**71.48**	**17**	P	**P**	**20 11 54.5**	**-0.6**				
	comp=Z,1.3nm,0.9s,baz=319,slow=5.5,SNR=13										
	comp=Z,1.3nm,0.9s										
ILAR	**Eielson Array**	**71.48**	**17**	P	**P**	**20 11 53.8**	**-1.3**				
YKA	**Yellowknife Ar**	**78.29**	**4**	P	**P**	**20 12 34.2**	**-0.2**				
	comp=Z,1.7nm,0.8s,baz=349,slow=5.5,SNR=12										
	comp=Z,1.7nm,0.8s										
BOSA	**Boshof**	**81.21**	**222**	P	**P**	**20 12 50.1**	**-0.7**				
	comp=Z,1.9nm,0.8s,baz=31,slow=5.8,SNR=3.6										
	comp=Z,1.9nm,0.8s										
WRA	**Warramunga Arr**	**81.85**	**124**	P	**P**	**20 12 53.8**	**-0.6**				
	comp=Z,2.8nm,0.7s,baz=324,slow=5.2,SNR=36										
	comp=Z,2.8nm,0.7s										
ASAR	**Alice Springs**	**84.30**	**127**	P	**P**	**20 13 06.3**	**-0.6**				
	comp=Z,1.6nm,0.8s,baz=311,slow=4.7,SNR=20										
	comp=Z,1.6nm,0.8s										

IDC ***26*** *20:05:39.5±0.7, 19.°72N×109.°48W, h0km, mb4.1/11, mbtmp4.2/16, ML3.8/5, MS4.3/45, Error ellipse: s-maj=17.5km s-min=13.3km az=99.0*

MEX ***26*** *20:05:42.0±0.2, 19.°81N×109.°06W, h10km, MD4.6*

NEIC ***26*** *20:05:43.1±2.6, 19.°86N±0.°10×109.°3W±0.°1, h10km±2km, mb4.4/108, Error ellipse: s-maj=20.0km s-min=13.1km az=226.0*

GCMT ***26*** *20:05:44.2±0.2, 19.°92N±0.°01×109.°19W±0.°01, h24km, MW5.2/129, Moment Tensor Solution. s65,c86; s129,c192; Duration: 1↑0 Moment tensor: Scale 10^17 Nm; Mrr-0.09±.02; Mθθ-0.74±.02; Mφφ0.82±.02; Mrθ-0.07±.02; Mθφ-0.14±.01; Mφr-0.04±.02; Best double couple: M0:0.79800×10^17 NP1:φs130.00000°, δ84.00000°, λ-177.00000°. NP2:φs40.00000°, δ87.00000°, λ-6.00000°. Principal axes: T 0.8380, Plg2.0000°, Azm85.0000°; N -0.0790, Plg83.0000°, Azm195.0000°; P -0.7590, Plg7.0000°, Azm355.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 20:05:40.7±0.5, 19.°43N±0.°05×109.°40W±0.°05, h10km, n298, σ2ᵒ43/277, mb4.4/41, MS4.3/43, Revilla Gigedo Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H06E1	**SOCORRO T-PHAS**	**1.58**	**246**	Pn	**Pb**	**20 06 09.0**	**-1.

baz=204,SNR=6.1
BELC Belle Mtn. Jos 15.65 339 P Pn 20 09 21.2 -0.3
baz=155,SNR=19
ANMO Albuquerque 15.67 9 Pn Pn 20 09 20.2 -1.6
0.1nm,0.3s,baz=217,slow=9.2,SNR=12
6.7nm,1.0s
ANMO Albuquerque 15.67 9 P Pn 20 09 21.0 -0.9
ANMO baz=190 S S 20 12 27.6 -3.3
baz=190
MURC Murrieta 15.73 335 P P 20 09 26.5 +0.1
baz=150
ABTX Abilene, Hawle 15.78 32 P Pn 20 09 23.0 -0.1
baz=216
NEE2 Needles Airpor 15.96 344 P Pn 20 09 25.6 +0.2
baz=161
WUAZ Wupatki 16.12 354 Pn 20 09 26.3 -1.2
WUAZ IAmb IAmb 20 09 32.3
comp=Z,22nm,0.9s
WUAZ Wupatki 16.12 354 P Pn 20 09 27.4 -0.2
baz=172,SNR=21
GMRC Granite Mounta 16.27 341 P Pn 20 09 28.3 -1.1
baz=157,SNR=16
WHTX Lake Whitney, 16.48 38 P Pn 20 09 31.5 -0.6
baz=224
HEC Hector Ludlow 16.52 340 P Pn 20 09 32.5 -0.2
baz=155
CCIG Comitan 16.73 98 Pn 20 09 34.8 -0.7
CCIG IAmb IAmb 20 09 46.4
comp=Z,25nm,1.1s
DECC Green Verdugo 16.76 334 P P 20 09 37.3 -0.6
baz=148
AMTX Amarillo 16.84 22 Pn Pn 20 09 33.0 -3.8
AMTX IAmb IAmb 20 09 38.0
comp=Z,30nm,1.2s
AMTX Amarillo 16.84 22 P Pn 20 09 34.0 -2.7
baz=206
TUQ Turquoise Moun 16.95 341 P P 20 09 38.1 -2.0
baz=157,SNR=5.6
GSC Goldstone, Bar 17.11 339 P P 20 09 41.2 -0.6
baz=154
U15A North Rim 17.12 352 P Pn 20 09 39.3 -1.1
U15A IAmb IAmb 20 10 06.3
comp=Z,35nm,1.4s
EDW2 Edwards Air Fo 17.17 335 P P 20 09 41.4 -1.0
baz=150
SHOC Shoshone, Teco 17.49 341 P P 20 09 45.0 -0.9
baz=157
LRMC Laurel Mtn Rad 17.58 337 P P 20 09 47.2 +0.1
baz=152,SNR=5.5
MVCO Mesa Verde 17.73 2 Pn Pn 20 09 43.8 -4.2
MVCO IAmb IAmb 20 09 52.7
comp=Z,26nm,0.9s
MVCO Mesa Verde 17.73 2 P Pn 20 09 45.7 -2.3
baz=182,SNR=14
QSM Queen of Sheba 17.73 340 Pn 20 09 45.4 -2.4
QSM IAmb IAmb 20 09 49.8
comp=Z,37nm,1.4s
SHPR Sheep Range 17.74 345 Pn 20 09 44.6 -3.5
BCW Bitter Crk WRg 17.81 332 P Pn 20 09 47.5 -1.3
BCW IAmb IAmb 20 09 52.2
comp=Z,42nm,1.1s
LCMT Little Creek M 17.83 350 P Pn 20 09 46.6 -2.6
LCMT IAmb IAmb 20 09 51.3
comp=Z,36nm,1.4s
WMOK Wichita Mounta 17.92 30 P Pn 20 09 47.5 -2.6
baz=214
PKM Mcpherson Peak 17.95 331 P P 20 09 52.2 +1.1
baz=145
MPMC Manual Prospec 18.03 338 P P 20 09 51.5 -0.6
baz=154,SNR=9.5
MPMC S S 20 13 23.1 +4.1
baz=154
ISA Isabella, Lake 18.04 336 P P 20 09 56.4 +4.3
baz=150
ISA S S 20 13 22.7 +3.6
baz=150
NATX Nacogdoches 18.07 44 Pn 20 09 48.0 -4.0
NATX Nacogdoches 18.07 44 P P 20 09 51.7 -0.7
baz=231
NATX S S 20 13 21.8 +2.3
baz=231
T25A Trinidad 18.17 13 Pn 20 09 51.2 -2.2
T25A Trinidad 18.17 13 P Pn 20 09 51.9 -1.5
baz=195,SNR=16
T25A S S 20 13 26.6 +4.6
baz=195
FURC Furnace Creek, 18.19 340 P P 20 09 53.8 +0.2
baz=156
FURC S S 20 13 26.7 +4.8
baz=156
CCUT Cedar City 18.38 350 P Pn 20 09 54.6 -1.4
CCUT IAmb IAmb 20 09 58.5
comp=Z,40nm,1.5s
SZCU Shurtz Canyon 18.38 351 P P 20 09 55.9 -0.1
S22A 4UR Ranch, Cre 18.38 6 Pn 20 09 54.1 -2.0
S22A IAmb IAmb 20 09 58.9
comp=Z,31nm,1.3s
S22A 4UR Ranch, Cre 18.38 6 P Pn 20 09 54.8 -1.2
baz=187,SNR=19
VES Vestal, Richgr 18.44 334 P P 20 09 57.0 +0.6
baz=149
TPNV Topopah Spring 18.45 342 P 20 09 55.8 -0.9
TPNV Topopah Spring 18.45 342 P P 20 09 56.5 -0.2
baz=158,SNR=21
TPNV S S 20 13 29.3 +1.8
baz=158
SDCO Great Sand Dun 18.56 10 P P 20 09 55.4 -2.6
SDCO IAmb IAmb 20 10 00.7
comp=Z,40nm,1.3s
SDCO Great Sand Dun 18.56 10 P Pn 20 09 57.8 -0.4
baz=191,SNR=30
SDCO S S 20 13 36.3 +6.4
baz=191
PRN Pahroc Range 18.57 346 P Pn 20 09 58.6 +0.3
CWC Cottonwood Cre 18.58 338 P Pn 20 09 58.8 +0.5
baz=152
CWC S S 20 13 32.6 +2.5
baz=152
MTPU Mount Pierson 18.70 353 P P 20 09 58.3 -1.3
PV11 David Mesa, Pa 18.80 1 P P 20 09 58.5 -2.1
PV11 IAmb IAmb 20 10 05.5
comp=Z,28nm,1.2s
GRAC Grapevine Rang 18.84 340 P Pn 20 10 03.9 +2.6
baz=155
GRAC S S 20 13 43.1 +8.0
baz=155
PV15 Paradox Valley 18.86 2 P P 20 09 59.5 -1.8
PV10 Paradox Valley 18.88 1 P P 20 09 58.8 -2.7
PV10 IAmb IAmb 20 10 01.6
comp=Z,32nm,1.1s
PV07 Paradox Valley 18.95 2 P P 20 09 55.1 -7.1
PV23 Carpenter Ridg 18.95 1 P P 20 10 00.3 -2.0
S11A Rachel 18.97 344 P Pn 20 10 02.1 -0.9
S11A IAmb IAmb 20 10 20.4
comp=Z,29nm,1.3s
VOG Valley Oaks Go 18.97 335 S S 20 13 43.7 +5.9
baz=149
MSU Marysvale 19.16 353 P P 20 10 03.6 -1.0
TIN Tinemaha, Big 19.18 338 P Pn 20 10 05.8 +0.3
baz=153
TIN S S 20 13 49.0 +6.8
baz=153
PSUT Pine Spring 19.42 349 P P 20 10 06.3 -1.1
R11A Troy Canyon, C 19.60 345 P Pn 20 10 09.1 -1.5
baz=162,SNR=9.7
R11A S S 20 13 57.7 +7.0
baz=162
SRU San Rafael Swe 19.63 357 P P 20 10 07.2 -2.5
Q24A Divide 19.81 10 P Pn 20 10 12.8 -0.4
baz=192
Q24A S Sn 20 14 10.4 +14
baz=192
MTO3 Montecristo 19.81 102 P Pn 20 10 13.1 -0.2
MLAC Mammoth, Mammo 19.91 338 P Pn 20 10 17.1 +2.7
baz=152
MLAC S Sn 20 14 06.0 +7.6
baz=152
OMMB Old Mammoth Mi 19.96 337 P 20 10 11.2 -2.2
OMMB IAmb IAmb 20 10 24.0
comp=Z,23nm,1.4s
P17A Butcher Ranch, 20.00 357 P P 20 10 12.1 -1.6
P17A IAmb IAmb 20 10 16.6
comp=Z,31nm,1.1s
Z41A Richland Creek 20.23 44 P P 20 10 14.9 -1.1
baz=232
Z41A S S 20 14 02.5 -0.5
baz=232
TUL1 Leonard 20.33 33 P P 20 10 16.4 -0.6
baz=220
TUL1 S S 20 13 59.8 -5.1
baz=220
LHV Little Huntoon 20.35 339 P P 20 10 16.7 -0.6
LHV IAmb IAmb 20 10 22.2
comp=Z,22nm,1.0s
KSCO Kaye Shedlock' 20.37 15 P Pn 20 10 18.4 -1.3
baz=198
NVAR Mina Array Bea 20.45 340 P Pn 20 10 19.0 -1.7
comp=Z,13nm,0.9s,baz=163,slow=9.7,SNR=26
NVAR LR LR 20 17 16.4
comp=Z,991nm,21.6s,baz=152,slow=35
NVAR Mina Array Bea 20.45 340 P P 20 10 18.3 -0.3
ISCO Idaho Springs 20.56 8 P P 20 10 15.9 -4.0
ISCO Idaho Springs 20.56 8 P P 20 10 18.3 -1.5
baz=190,SNR=10
ISCO S Sn 20 14 15.4 +1.3
baz=190
NLU North Lily Min 20.58 354 P P 20 10 17.9 -2.1
NLU IAmb IAmb 20 10 40.4
comp=Z,20nm,1.4s
MIAR Mount Ida 20.58 40 P P 20 10 17.8 -2.0
MIAR Mount Ida 20.58 40 P P 20 10 19.1 -0.7
baz=227
MIAR S S 20 14 07.5 -2.5
baz=227
MPU Maple Canyon 20.60 355 P P 20 10 18.4 -1.9
MPU IAmb IAmb 20 10 25.1
comp=Z,30nm,1.2s
O20A White River Ci 20.66 3 P P 20 10 18.5 -2.3
O20A IAmb IAmb 20 10 26.9
comp=Z,21nm,0.9s
O20A White River Ci 20.66 3 P P 20 10 19.2 -1.6
baz=183,SNR=22
CMB Columbia Colle 20.86 335 P P 20 10 22.3 -0.5
DUG Dugway, Tooele 20.90 353 P P 20 10 21.8 -1.6
DUG Dugway, Tooele 20.90 353 P P 20 10 22.4 -1.0
baz=170,SNR=35
DUG S Sn 20 14 24.2 +2.2
baz=170
W39A Magazine 20.91 38 P P 20 10 20.1 -3.2
W39A IAmb IAmb 20 10 35.0
comp=Z,30nm,1.2s
W39A Magazine 20.91 38 S S 20 14 15.5 -1.0
baz=226
KVN Kaiserville 20.95 341 P P 20 10 23.1 -0.9
KVN IAmb IAmb 20 10 36.4
comp=Z,19nm,1.1s
CBKS Cedar Bluff 21.05 21 S Sn 20 14 22.9 -2.7
baz=206
RDMU Red Mountain 21.07 360 P P 20 10 23.8 -1.5
R32A Long Quarter, 21.08 24 P P 20 10 20.2 -5.0
R32A IAmb IAmb 20 10 27.5
comp=Z,13nm,0.8s
JLU Jordanelle 21.17 356 P P 20 10 23.6 -2.9
JLU IAmb IAmb 20 10 30.1
comp=Z,14nm,1.0s
VBMS Vicksburg 21.20 49 P P 20 10 26.1 -0.4
baz=238
VBMS S Sn 20 14 26.1 -2.9
baz=238
YERR Yerington 21.26 338 P P 20 10 25.4 -2.0
YERR IAmb IAmb 20 10 40.8
comp=Z,20nm,1.2s
CTU Camp Tracy 21.28 355 P P 20 10 24.6 -3.0
CTU IAmb IAmb 20 10 37.6
comp=Z,24nm,1.1s
U38A Gravette 21.47 35 P P 20 10 25.5 -4.0
PNTR Pine Nut 21.48 338 P P 20 10 29.2 -0.6
PNTR IAmb IAmb 20 10 34.6
comp=Z,25nm,1.0s
N23A Red Feather La 21.59 7 P P 20 10 28.0 -3.0
N23A IAmb IAmb 20 10 33.8
comp=Z,24nm,1.0s
N23A Red Feather La 21.59 7 P P 20 10 28.9 -2.1
baz=188,SNR=16
N23A S Sn 20 14 38.1 -0.8
baz=188
BGU Big Grassy Mou 21.64 353 P P 20 10 29.6 -1.9
BGU IAmb IAmb 20 10 39.1
comp=Z,18nm,1.2s
VCNR Virginia City 21.68 338 P P 20 10 32.3 +0.4
W41B Gary Mavity, V 21.81 41 P P 20 10 31.6 -1.5
baz=229,SNR=7.3
W41B S S 20 14 35.5 +1.2
baz=229
ELK Elko 21.82 348 P P 20 10 31.6 -1.8
comp=Z,3.7nm,0.9s,baz=174,slow=8.7,SNR=11
ELK LR LR 20 18 24.9
comp=Z,577nm,19.9s,baz=166,slow=36
comp=Z,3.7nm,0.9s
ELK Elko 21.82 348 P P 20 10 31.6 -1.8
TGUH Tegucigalpa,Un 21.85 101 P P 20 10 34.2 +0.5
WHAR Wooly Hollow 21.87 40 P P 20 10 30.5 -3.1
PHWY Pilot Hill 22.05 8 P P 20 10 32.4 -3.6
PHWY IAmb IAmb 20 10 38.5
comp=Z,15nm,0.9s
HWUT Hardware Ranch 22.18 356 P P 20 10 35.1 -2.1
HWUT IAmb IAmb 20 10 43.5
comp=Z,23nm,1.3s
RWWY Rawlins 22.26 4 P P 20 10 33.7 -4.5
RWWY IAmb IAmb 20 10 59.6
comp=Z,21nm,1.2s
BEKR Beckworth 22.44 337 P P 20 10 39.5 -0.5
BEKR IAmb IAmb 20 10 44.6
comp=Z,13nm,1.1s
HVU Hansel Valley 22.46 353 P P 20 10 37.7 -2.4
HVU IAmb IAmb 20 10 47.0
comp=Z,16nm,1.2s
ORV Oroville 22.61 335 P P 20 10 37.8 -3.7
LCAR Lake Charles 23.07 40 P P 20 10 42.6 -3.8
MGMO Mountain Grove 23.16 37 P P 20 10 44.0 -3.4
BW06 Boulder Array 23.26 360 P P 20 10 45.2 -3.5
BW06 Boulder Array 23.26 360 P P 20 10 48.4 -0.2
baz=179
BW06 S S 20 15 02.6 +1.6
baz=179
PD31 Pinedale Array 23.26 360 P P 20 10 45.4 -3.2
PDAR Pinedale Array 23.26 360 P P 20 10 46.0 -2.7
comp=Z,2.9nm,1.0s,baz=166,slow=8.6,SNR=15
PDAR LR LR 20 19 20.5
comp=Z,574nm,19.3s,baz=166,slow=36
comp=Z,2.9nm,1.0s
PDAR Pinedale Array 23.26 360 P P 20 10 45.6 -3.0
K22A Casper 23.27 5 P P 20 10 46.6 -2.1
K22A Casper 23.27 5 P P 20 10 47.3 -1.4
baz=186,SNR=19
ECR Eagle Creek 23.61 356 P P 20 10 49.7 -2.3
W45A Hickory Valley 23.76 45 P P 20 10 49.4 -4.0
BOAB BOACO BROADBAN 23.84 103 P P 20 10 54.6 +0.3
REDW Red Top Meadow 23.89 357 P P 20 10 51.6 -3.1
SNOW Snow King Moun 23.98 358 P P 20 10 53.2 -2.5
SNOW IAmb IAmb 20 10 59.9
comp=Z,18nm,1.1s
TPAW Teton Pass 24.02 357 P P 20 10 52.7 -3.3
TPAW IAmb IAmb 20 11 00.4
comp=Z,12nm,1.0s
LOHW Long Hollow 24.13 358 P P 20 10 54.9 -2.1
LOHW IAmb IAmb 20 11 06.8
comp=Z,15nm,1.2s
LRAL Lakeview Retre 24.17 51 P P 20 10 58.0 +0.7
baz=242
LRAL S S 20 15 16.9 +1.6
baz=242
WVOR Wild Horse Val 24.23 343 P P 20 10 56.8 -1.0
WVOR IAmb IAmb 20 10 59.9
comp=Z,9.6nm,1.0s
MOD Modoc Plateau 24.24 340 P P 20 10 56.3 -1.6
MOD IAmb IAmb 20 10 60.0
comp=Z,15nm,1.1s
250A Grady 24.24 54 P P 20 10 57.0 -0.9
MOOW Moose Ponds 24.27 358 P P 20 10 56.3 -2.0
CCM Cathedral Cave 24.37 37 P P 20 11 00.1 +1.1
baz=226
CCM S S 20 15 18.9 +0.5
baz=226
PLAL Pickwick Lake 24.41 46 P P 20 10 56.1 -3.3
PLAL IAmb IAmb 20 11 00.4
comp=Z,8.6nm,0.9s
HLID Hailey 24.42 351 P P 20 10 55.7 -4.0
HLID Hailey 24.42 351 P P 20 10 58.5 -1.2
baz=168,SNR=12
HLID S S 20 15 24.8 +5.2
baz=168
ACON Acoyapa 24.46 104 P P 20 11 00.6 +0.6
MFID Camas Ranch 24.51 349 P P 20 10 58.7 -1.7
MFID IAmb IAmb 20 11 01.5
comp=Z,12nm,1.4s
FLWY Flagg Ranch 24.60 358 P P 20 10 59.2 -2.1
FLWY IAmb IAmb 20 11 05.8
comp=Z,11nm,0.9s
X48A Hartselle 24.84 48 P P 20 11 00.7 -2.6
X48A IAmb IAmb 20 11 17.8
comp=Z,11nm,1.1s
YBH Yreka Blue Hor 24.94 336 LR LR 20 20 09.1
comp=Z,540nm,20.5s,baz=158,slow=35
P40A Paris 25.00 33 P P 20 11 01.8 -2.9
RSSD Black Hills 25.02 9 P P 20 11 02.8 -2.4
RSSD IAmb IAmb 20 11 08.2
comp=Z,6.9nm,0.9s
RSSD Black Hills 25.02 9 P P 20 11 03.1 -2.1
baz=192
RSSD S S 20 15 31.8 +2.4
baz=192
J08A Circle Bar Ran 25.04 344 P P 20 11 00.2 -5.0
J08A IAmb IAmb 20 11 08.3
comp=Z,6.9nm,1.0s
K05A Summer Lake 25.17 340 P P 20 11 07.0 +0.6
WVT Waverly 25.22 44 P P 20 11 03.5 -3.3
WVT IAmb IAmb 20 11 21.4
comp=Z,6.5nm,1.1s
JTS Las Juntas de 25.29 108 LR LR 20 19 37.6
comp=Z,301nm,18.8s,baz=352,slow=33
YHL Hebgen Lake 25.39 357 P P 20 11 06.0 -2.5
YHL IAmb IAmb 20 11 11.1
comp=Z,11nm,1.3s
MCMT McKenzie Canyo 25.48 354 P P 20 11 07.2 -2.1
RLMT Red Lodge 25.62 0 P P 20 11 07.6 -2.9
RLMT IAmb IAmb 20 11 22.5
comp=Z,8.4nm,1.2s
RLMT Red Lodge 25.62 0 P P 20 11 11.5 +1.0
baz=180
RLMT S S 20 15 42.3 +3.6
baz=180
I07A Izee 25.99 343 P P 20 11 13.8 0.0
PINE Pine Mountain 26.14 341 P P 20 11 14.7 -0.6
PINE IAmb IAmb 20 11 16.1
comp=Z,12nm,1.1s
BOZ Bozeman (W) 26.16 356 P P 20 11 11.6 -3.8
BOZ Bozeman (W) 26.16 356 P P 20 11 12.9 -2.4
baz=175
BOZ S S 20 15 53.1 +5.9
baz=175
PLID Pearl Lake 26.16 349 P P 20 11 11.2 -4.3
PLID IAmb IAmb 20 11 15.4
comp=Z,6.7nm,1.1s
T47A Sharon Grove 26.20 43 P P 20 11 13.7 -1.9
T47A IAmb IAmb 20 11 20.2
comp=Z,9.7nm,0.9s
GCMT Greycliff 26.29 360 P P 20 11 14.1 -2.4
W50A Signal Mountai 26.45 49 P P 20 11 14.6 -3.3
HRY Holter Researc 27.28 356 P P 20 11 23.4 -2.0
MSO Missoula 27.58 353 P P 20 11 27.3 -0.7
baz=170
TZTN Tazewell 28.36 48 P P 20 11 31.9 -3.1
LTY Liberty 29.24 344 P P 20 11 41.6 -1.2
NEW Newport 29.43 349 P P 20 11 44.0 -0.5
comp=Z,2.5nm,0.8s,baz=175,slow=9.7,SNR=4.1
NEW LR LR 20 23 31.8
comp=Z,452nm,18.1s,baz=174,slow=37
comp=Z,2.5nm,0.8s
NEW Newport 29.43 349 S S 20 16 37.8 -0.8
baz=164
SADO Sadowa 35.63 38 LR LR 20 28 27.6
comp=Z,124nm,21.3s,baz=243,slow=39
BBB Bella Bella 35.81 340 LR LR 20 26 39.5
comp=Z,472nm,19.9s,baz=161,slow=36
OTAV Otavalo 35.84 119 P P 20 12 44.9 +3.5
SDV Santo Domingo 38.94 100 LR LR 20 29 55.3
comp=Z,265nm,21.0s,baz=298,slow=37
ATAH Atahualpa 40.37 128 P P 20 13 25.6 +6.0
comp=Z,3.7nm,0.7s,baz=0.0,slow=6.1,SNR=3.0
SJG San Juan 40.89 85 LR LR 20 31 16.3
comp=Z,182nm,20.0s,baz=288,slow=38
TAOE Nuku Hiva Isla 41.33 230 eLR LR 20 25 07.8
comp=Z,448nm,22.4s
TAOE Nuku Hiva Isla 41.33 230 eT T 20 57 40.7
comp=Z,38nm,0.2s
YKA Yellowknife Ar 43.17 356 P P 20 13 38.2 -3.1
comp=Z,3.3nm,0.9s,baz=171,slow=7.8,SNR=14
YKA LR LR 20 32 00.1
comp=Z,572nm,20.0s,baz=182,slow=37
comp=Z,3.3nm,0.9s
NNA Nana 44.76 132 LR LR 20 28 28.5
comp=Z,372nm,21.5s,baz=322,slow=30
RPN Rapa Nui 46.28 180 LR LR 20 28 54.2
comp=Z,532nm,21.9s,baz=334,slow=30
SCHQ Schefferville 47.79 32 P P 20 14 16.2 -1.9
comp=Z,2.0nm,0.8s,baz=246,slow=11,SNR=4.3
SCHQ LR LR 20 35 12.3
comp=Z,212nm,18.0s,baz=246,slow=37
comp=Z,2.0nm,0.8s
SCHQ Schefferville 47.79 32 P P 20 14 16.8 -1.3
RIDG Independent Ri 50.34 340 P P 20 14 38.3 +0.7
baz=134,SNR=6.8
J26L Joseph Creek 50.49 342 P P 20 14 39.0 +0.2
baz=136,SNR=6.7
K24K Donnelly Dome 50.68 340 P P 20 14 40.5 +0.3
baz=133
INK Inuvik 51.15 349 P P 20 14 42.5 -1.0
baz=150
ILAR Eielson Array 51.70 341 P P 20 14 46.0 -1.7
comp=Z,3.5nm,0.8s,baz=149,slow=6.6,SNR=28
comp=Z,3.5nm,0.8s
ILAR Eielson Array 51.70 341 P P 20 14 46.8 -0.9
TRF Thorofare Moun 51.97 338 P P 20 14 49.0 -0.9
baz=128
N19K Bonanza Creek 52.05 334 P P 20 14 50.2 -0.4
N19K Bonanza Creek 52.05 334 P P 20 14 48.3 -2.2
baz=122
M20K Styx River 52.10 335 P P 20 14 50.0 -0.8
baz=124
FRB Frobisher Bay 52.14 22 LR LR 20 36 27.1
comp=Z,329nm,19.1s,baz=224,slow=36
NEA2 Nenana 52.28 340 P P 20 14 50.9 -1.2
baz=130,SNR=10
PPLA Purkeypile 52.32 337 P P 20 14 51.6 -1.0
PPLA Purkeypile 52.32 337 P P 20 14 52.2 -0.4
baz=126
N18K Kilae Creek 52.58 333 P P 20 14 53.8 -0.5
N18K Kilae Creek 52.58 333 P P 20 14 54.3 0.0
baz=120,SNR=5.9
BPAW Bear Paw Mtn. 52.62 338 P P 20 14 54.6 0.0
baz=128
L20K Farewell, AK 52.72 336 P P 20 14 54.1 -1.3
baz=123,SNR=7.6
H24K Noodor Dome 52.73 341 P P 20 14 55.8 +0.4
baz=132,SNR=5.9
I23K Minto, Yukon-K 52.74 340 P P 20 14 54.7 -0.8
baz=130,SNR=9.0
L19K White Mountain 52.94 335 P P 20 14 56.5 -0.5
L19K White Mountain 52.94 335 P P 20 14 56.5 -0.5
baz=122,SNR=6.1
MLY Manley 53.11 339 P P 20 14 58.5 +0.2
baz=128
H23K Yukon River 53.24 341 P P 20 14 58.7 -0.4
baz=130
K20K Telida 53.29 337 P P 20 14 57.7 -1.8
baz=124
I21K Tanana 53.62 339 P P 20 15 01.1 -0.8
baz=127,SNR=6.1
J20K Nowinta River 53.78 338 P P 20 15 01.3 -1.8
J20K Nowinta River 53.78 338 P P 20 15 03.0 -0.1
baz=124,SNR=5.4
TTA Tatalina 53.79 336 P P 20 15 01.9 -1.4
baz=121
H22K Ishtalitna Cre 53.86 340 P P 20 15 02.7 -1.0
baz=128
LPAZ La Paz 53.91 128 P P 20 15 06.9 +1.4
comp=Z,2.1nm,0.8s,baz=351,slow=7.0,SNR=6.4
LPAZ LR LR 20 34 56.9
comp=Z,424nm,21.8s,baz=305,slow=32
comp=Z,2.1nm,0.8s
H21K Melozitna Rive 54.18 339 P P 20 15 03.9 -2.1
H21K Melozitna Rive 54.18 339 P P 20 15 04.3 -1.7
baz=126,SNR=12
COLD Coldfoot 54.35 342 P P 20 15 07.9 +0.6
baz=130
IMAR Indian Mountai 54.69 339 P P 20 15 08.3 -1.4
TOLK Toolik Lake Re 55.12 343 P P 20 15 12.1 -0.8
baz=132

D23K	**Nanushuk River**	**55.63**	**343**	P		**P**	**20 15 16.2**	**-0.3**
	baz=131								
MDP	**Montagnes des**	**57.01**	**97**	LR		LR	20 40 50.6		
	comp=Z,210nm,21.4s,baz=276,slow=37								
TBI	**Tubuai**	**57.76**	**224**	*e*LR		LR	20 32 45.0		
	comp=Z,219nm,24.2s								
SIV	**San Ignacio**	**59.14**	**123**	LR		LR	20 38 15.4		
	comp=Z,245nm,19.1s,baz=310,slow=33								
H03N2	**Juan Fernandez**	**60.09**	**151**	T		T	21 21 19.1		
	baz=329,slow=77,SNR=87								
H03N1	**Juan Fernandez**	**60.09**	**151**	T		T	21 21 24.1		
	baz=329,slow=77,SNR=104								
H03N3	**Juan Fernandez**	**60.10**	**151**	T		T	21 21 18.8		
	baz=329,slow=77,SNR=96								
RAR	**Rarotonga**	**63.73**	**233**	LR		LR	20 38 34.2		
	comp=Z,224nm,18.3s,baz=45,slow=31								
CPUP	**Villa Florida**	**68.00**	**130**	P		**P**	**20 16 42.2**	**+1.9**
	comp=Z,1.8nm,0.8s,baz=328,slow=4.4,SNR=3.2								
CPUP				LR		LR	20 45 31.2		
	comp=Z,167nm,18.1s,baz=316,slow=35								
	comp=Z,1.8nm,0.8s								
BDFB	**Brasilia**	**69.71**	**116**	P		**P**	**20 16 53.0**	**+1.6**
	comp=Z,2.8nm,0.7s,baz=229,slow=2.9,SNR=3.4								
	comp=Z,2.8nm,0.7s								
AFI	**Afiamalu**	**69.76**	**246**	LR		LR	20 39 42.4		
	comp=Z,243nm,20.2s,baz=84,slow=29								
PLCA	**Paso Flores**	**69.91**	**149**	P		**P**	**20 16 56.0**	**+3.9**
	comp=Z,0.9nm,0.8s,baz=301,slow=12,SNR=2.0								
PLCA				LR		LR	20 40 51.5		
	comp=Z,430nm,18.8s,baz=316,slow=30								
	comp=Z,0.9nm,0.8s								
JMIC	**Jan Mayen**	**75.29**	**19**	LR		LR	20 50 03.6		
	comp=Z,150nm,18.6s,baz=292,slow=36								
RCBR	**Riachuelo**	**76.51**	**101**	LR		LR	20 54 11.3		
	comp=Z,108nm,18.8s,baz=87,slow=38								
SPITS	**Spitsbergen Ar**	**77.89**	**10**	LR		LR	20 51 33.3		
	comp=Z,253nm,18.3s,baz=285,slow=36								
MSVF	**Nonsavu**	**80.23**	**247**	LR		LR	20 45 03.0		
	comp=Z,326nm,20.8s,baz=63,slow=29								
TIXI	**Tiksi**	**81.00**	**344**	LR		LR	20 57 02.4		
	comp=Z,133nm,19.9s,baz=0.0,slow=38								
EKA	**Eskdalemuir Ar**	**83.07**	**34**	LR		LR	20 51 41.6		
	comp=Z,103nm,20.0s,baz=346,slow=33								
ARCES	**ARCESS Array B**	**85.68**	**14**	P		**P**	**20 18 17.6**	**-1.9**
	comp=Z,1.1nm,0.8s,baz=317,slow=5.1,SNR=5.4								
ARCES				LR		LR	20 56 23.8		
	comp=Z,160nm,19.8s,baz=330,slow=36								
	comp=Z,1.1nm,0.8s								
YAK	**Yakutsk**	**86.38**	**336**	LR		LR	20 55 48.7		
	comp=Z,69nm,19.7s,baz=88,slow=35								
NOA	**NORSAR Array B**	**86.85**	**25**	LR		LR	20 56 55.5		
	comp=Z,77nm,18.1s,baz=310,slow=36								
ESDC	**Sonseca Array**	**89.06**	**48**	LR		LR	20 56 03.1		
	comp=Z,108nm,21.8s,baz=298,slow=34								
URZ	**Urewera**	**89.59**	**229**	LR		LR	20 49 11.6		
	comp=Z,207nm,21.9s,baz=31,slow=29								
MDT	**Midelt**	**91.41**	**55**	LR		LR	20 59 25.8		
	comp=Z,64nm,18.1s,baz=318,slow=35								
CLL	**Collm**	**93.44**	**32**	*e*SS		SS	20 36 06.0	-14	
CLL				*e*(SSSS)			20 43 30.0		
DAVOX	**Davos/Dischmat**	**94.41**	**37**	LR		LR	21 00 05.6		
	comp=Z,252nm,18.9s,baz=299,slow=35								
MJAR	**Matsushiro Arr**	**95.36**	**312**	LR		LR	20 54 38.1		
	comp=Z,123nm,21.4s,baz=73,slow=31								
JHJ	**Hachijo jima 2**	**95.83**	**308**	LR		LR	20 56 23.3		
	comp=Z,116nm,19.6s,baz=91,slow=32								
RPZ	**Rata Peaks**	**95.94**	**226**	LR		LR	20 54 17.7		
	comp=Z,147nm,20.3s,baz=55,slow=30								
VRAC	**Vranov**	**96.49**	**32**	LR		LR	21 01 10.8		
	comp=Z,181nm,19.0s,baz=308,slow=35								
JCJ	**Chichijima**	**96.66**	**302**	LR		LR	20 53 13.5		
	comp=Z,157nm,20.5s,baz=108,slow=30								
GUMO	**Guam**	**99.88**	**288**	LR		LR	20 54 27.3		
	comp=Z,111nm,20.6s,baz=75,slow=29								
WRA	**Warramunga Arr**	**120.33**	**258**	PKP		**PKiKP**	**20 24 33.9**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=75,slow=2.6,SNR=7.8								
ASAR	**Alice Springs**	**121.38**	**254**	PKP		**PKiKP**	**20 24 35.8**	**+0.6**
	comp=Z,0.5nm,0.6s,baz=91,slow=2.1,SNR=4.6								

MAN 26 20:05:50.5, 16.20N×120.56E, h27km, mb3.9, ML2.7, MS2.2, 5C, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMPP	**San Manuel, Pa**	**0.12**	**114**	⇑*e*P	Pb	20 05 56.1	+0.1
PCPH	**Palayan**	**0.82**	**141**	⇑*e*P	Pn	20 06 06.3	+0.7
PCPH				*e*S		20 06 18.2	
SAMP	**Sagada Mountai**	**0.93**	**20**	⇑*e*P	Pb	20 06 07.7	+4.2
SAMP				*e*S		20 06 59.8	
BALP	**Baler**	**1.08**	**115**	⇑*e*P	Pn	20 06 11.5	+0.1
BALP				*e*S		20 06 38.8	
CAUP	**Cauayan**	**1.42**	**58**	⇑*e*P	Pn	20 06 17.7	+0.4
CAUP				*e*S		20 06 20.2	

KRNET ***26*** *20:11:22.3±0.1, 39.43N×73.71E, mb3.1*
SOME ***26*** *20:11:24.1, 39.70N×73.40E, h0km*
ISC 26 20:11:21.1±1.7, 39.45N±0.08×73.71E±0.05, h3km±14km, n20, σ1s20/32, 14C-1D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.29**	**327**	⇑*i*P	**Pg**	**20 11 47.1**	**+1.3**
	baz=27						
OHH				⇑*i*S	**Sn**	**20 12 05.4**	**+1.5**
	baz=27						
DRK	**Karamyk**	**1.48**	**272**	⇑*i*P	**Pg**	**20 11 50.4**	**+0.9**
	baz=73						
DRK				⇑*i*S	**Sg**	**20 12 10.8**	**+2.1**
	baz=73						
BTK	**Batken**	**2.31**	**286**	⇑*e*P	**Pb**	**20 12 03.8**	**+0.3**
	baz=87						
BTK				⇑*i*S	**Sg**	**20 12 34.2**	**-1.2**
	baz=87						
ARLS	**Aral**	**2.45**	**11**	⇑*i*P	**Pb**	**20 12 06.0**	**0.0**
	baz=11						
ARLS				⇑*i*S	**Sb**	**20 12 37.9**	**+1.2**
	baz=11						
GAR	**Garm**	**2.68**	**261**	⇑*e*P	**Pb**	**20 12 08.7**	**-1.0**
	baz=62						
GAR				⇑*i*S	**Sb**	**20 12 42.6**	**-0.4**
	baz=62						
AML	**Almayashu**	**2.68**	**360**	P	**Pb**	**20 12 10.9**	**+1.0**
	SNR=7.6						
UCH	**Uchtor**	**2.84**	**12**	P	**Pg**	**20 12 14.9**	**-0.7**
	SNR=7.7						
TRKS	**Terek-Say**	**2.86**	**317**	⇑*i*P	**Pb**	**20 12 10.7**	**-2.2**
	baz=17						
TRKS				⇑*i*S	**Sb**	**20 12 46.0**	**-2.3**
	baz=17						
EKS2	**Erkin-Say**	**3.21**	**1**	P	**Pb**	**20 12 19.4**	**+0.6**
	SNR=7.7						
KBK	**Karagaybulak**	**3.34**	**16**	P	**Pb**	**20 12 22.0**	**+1.0**
	SNR=5.5						
ULHL	**Ulahol**	**3.39**	**34**	P	**Pg**	**20 12 26.5**	**+0.5**
	SNR=7.2						
TKM2	**Tokmak 2**	**3.75**	**22**	⇓Pg	**Pg**	**20 12 31.9**	**-1.0**
	1.1nm,0.4s						
TKM2				⇑Lg	Lg	20 13 22.2	
	2.4nm,0.5s						
IUG	**luzhnay**	**3.88**	**315**	*e*P	**Pb**	**20 12 29.7**	**-0.6**
	66nm,0.3s						
IUG				*e*S	**Sb**	**20 13 16.9**	**-0.8**
	16nm,0.5s						
KST	**Kastek**	**3.97**	**25**	*e*P	**Pg**	**20 12 36.9**	**-0.3**
	2.2nm,0.3s						
KST				*e*S	**Sg**	**20 13 29.3**	**+0.7**
	10nm,0.7s						
TNSS	**Tian-Shan**	**4.33**	**33**	*e*P	**Pg**	**20 12 44.1**	**0.0**
	2.0nm,0.4s						
TNSS				*e*S	**Sg**	**20 13 42.2**	**+1.9**
	2.4nm,0.6s						
KK31	**Karatay Array**	**4.38**	**328**	Pn	Pb	20 12 33.6	-5.0
	0.6nm,0.4s,baz=134,slow=13,SNR=13						
KK31				⇑Lg	Lg	20 13 40.5	
	1.1nm,0.3s,baz=139,slow=27						
KRBS	**Karabastau**	**4.49**	**18**	*e*P	**Pg**	**20 12 46.5**	**-0.6**
	0.8nm,0.7s						
KRBS				*e*S	**Sg**	**20 13 45.8**	**+0.5**
	6.0nm,0.7s						
BRLS	**Borolday**	**4.62**	**322**	*e*P	**Pb**	**20 12 42.3**	**-0.5**
	5.4nm,0.6s						
BRLS				*e*S	**Sb**	**20 13 38.7**	**-0.1**
	3.1nm,0.5s						
CHKK	**Chushkaly**	**5.04**	**28**	*e*P	**Pg**	**20 12 56.3**	**-1.3**
	0.7nm,0.1s						
CHKK				*e*S	**Sg**	**20 14 02.7**	**-0.2**
	6.7nm,0.5s						
ARXS	**Arharly**	**5.67**	**32**	*e*P	**Pg**	**20 13 07.6**	**-2.0**
	2.3nm,0.7s						
ARXS				*e*S	**Sg**	**20 14 21.7**	**-1.3**
	5.2nm,0.5s						

IDC 26 20:15:11.3±3.2, 17.68S×176.73W, h0km, mb3.9/3, mbtmp3.8/4, ML4.6/1, MS4.0/30, Error ellipse: s-maj=139.7km s-min=30.7km az=148.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.98**	**269**	Pn	Pn	20 16 27.3	-0.1
	0.8nm,0.3s,baz=262,slow=23,SNR=1.8						
MSVF				Sn	Sn	20 17 22.4	-3.4
	1.6nm,0.3s,baz=192,slow=22,SNR=1.6						
	2.1nm,0.4s						
AFI	**Afiamalu**	**6.06**	**52**	LR	LR	20 18 27.1	
	comp=Z,619nm,20.3s,baz=210,slow=32						
RAO	**Raoul Island**	**11.57**	**185**	LR	LR	20 21 57.5	
	comp=Z,1μm,20.0s,baz=352,slow=35						
RAR	**Rarotonga**	**16.37**	**105**	LR	LR	20 24 05.1	
	comp=Z,288nm,18.5s,baz=270,slow=33						
URZ	**Urewera**	**21.20**	**194**	LR	LR	20 27 08.2	
	comp=Z,769nm,20.9s,baz=31,slow=34						
HNR	**Honiara**	**24.09**	**287**	LR	LR	20 28 22.1	
	comp=Z,520nm,19.5s,baz=121,slow=33						
KRVT	**Keravat (AS076**	**33.35**	**290**	LR	LR	20 34 05.3	
	comp=Z,356nm,19.9s,baz=266,slow=34						
CTA	**Charters Tower**	**35.06**	**260**	LR	LR	20 35 22.2	
	comp=Z,365nm,18.4s,baz=98,slow=34						
PMG	**Port Moresby**	**36.01**	**278**	LR	LR	20 34 30.8	
	comp=Z,180nm,19.4s,baz=105,slow=32						
WRA	**Warramunga Arr**	**46.25**	**259**	P	P	20 23 38.1	-0.7
	0.8nm,1.1s,baz=97,slow=6.3,SNR=4.5						
WRA				LR	LR	20 41 13.7	
	comp=Z,177nm,19.5s,baz=30,slow=34						
	0.8nm,1.1s						
ASAR	**Alice Springs**	**46.39**	**254**	P	P	20 23 39.7	-0.2
	2.2nm,0.7s,baz=88,slow=8.2,SNR=29						
ASAR				LR	LR	20 42 33.7	
	comp=Z,145nm,18.5s,baz=96,slow=35						
	2.2nm,0.7s						
ASAJ	**Asahikawa**	**71.86**	**330**	LR	LR	20 54 37.4	
	comp=Z,52nm,18.7s,baz=120,slow=33						
PETK	**Petropavlovsk-**	**73.89**	**344**	LR	LR	20 54 52.2	
	comp=Z,49nm,19.7s,baz=98,slow=32						
PFO	**Pinyon Flats O**	**76.81**	**48**	LR	LR	20 53 55.8	
	comp=Z,122nm,18.6s,baz=220,slow=30						
YBH	**Yreka Blue Hor**	**77.35**	**38**	LR	LR	20 55 53.2	
	comp=Z,78nm,18.5s,baz=246,slow=32						
KDAK	**Kodiak Island**	**77.81**	**13**	LR	LR	20 57 34.5	
	comp=Z,111nm,18.2s,baz=217,slow=33						
NVAR	**Mina Array Bea**	**78.16**	**43**	LR	LR	20 56 51.2	
	comp=Z,68nm,18.1s,baz=268,slow=32						
KLR	**Kul'dur**	**80.74**	**329**	LR	LR	20 58 16.2	
	comp=Z,63nm,21.3s,baz=56,slow=32						
BBB	**Bella Bella**	**81.36**	**28**	LR	LR	20 55 07.2	
	comp=Z,105nm,20.8s,baz=273,slow=29						
ELK	**Elko**	**81.40**	**42**	LR	LR	21 01 39.3	
	comp=Z,43nm,18.3s,baz=318,slow=34						
MA2	**Magadan**	**81.41**	**344**	LR	LR	21 00 07.5	
	comp=Z,73nm,19.2s,baz=88,slow=33						
NEW	**Newport**	**84.39**	**35**	LR	LR	20 59 02.4	
	comp=Z,66nm,19.9s,baz=240,slow=31						
TXAR	**Lajitas Array**	**84.53**	**57**	LR	LR	20 56 11.4	
	comp=Z,45nm,21.9s,baz=268,slow=29						
MAW	**Mawson**	**84.61**	**199**	LR	LR	21 03 10.3	
	comp=Z,98nm,19.0s,baz=110,slow=34						
ANMO	**Albuquerque**	**84.71**	**51**	LR	LR	20 59 13.4	
	comp=Z,95nm,18.5s,baz=248,slow=31						
DLBC	**Dease Lake**	**85.00**	**23**	LR	LR	20 57 31.4	
	comp=Z,182nm,21.5s,baz=257,slow=30						
ILAR	**Eielson Array**	**85.32**	**12**	P	P	20 27 48.8	-1.0
	1.0nm,1.0s,baz=218,slow=7.5,SNR=7.0						
ILAR				LR	LR	20 59 00.8	
	comp=Z,61nm,20.5s,baz=191,slow=31						
	1.0nm,1.0s						
INK	**Inuvik**	**91.25**	**15**	LR	LR	21 01 28.4	
	comp=Z,95nm,21.9s,baz=168,slow=30						
YKA	**Yellowknife Ar**	**93.46**	**24**	LR	LR	21 01 52.6	
	comp=Z,88nm,21.9s,baz=264,slow=30						
ATAH	**Atahualpa**	**95.73**	**99**	LR	LR	21 01 54.3	
	comp=Z,69nm,18.6s,baz=284,slow=29						
LVC	**Limon Verde**	**98.87**	**117**	LR	LR	21 03 31.4	
	comp=Z,96nm,21.4s,baz=239,slow=29						
BRTR	**Keskin Array B**	**145.75**	**316**	PKPbc	PKPbc	20 34 52.6	-0.1
	0.5nm,0.7s,baz=103,slow=2.7,SNR=4.4						
GERES	**GERESS Array B**	**147.78**	**347**	PKPbc	PKPbc	20 34 58.7	+0.5
	0.2nm,0.5s,baz=329,slow=1.1,SNR=4.8						

IDC ***26*** *20:15:38.3±0.8, 19.64N×109.41W, h0km, mb3.8/7, mbtmp3.9/11, ML3.5/4, MS3.8/13, Error ellipse: s-maj=19.7km s-min=14.2km az=120.0*
GCMT ***26*** *20:15:42.0±0.5, 19.88N±0.02×109.24W±0.02, h23km±1km, MW4.9/86, Moment Tensor Solution. s2,c2; s86,c112; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=0.35±.20; Mθθ=2.71±.14; Mϕϕ3.07±.15; Mrθ=0.51±.20; Mθϕ=0.35±.10; Mϕr0.44±.18; Best double couple: M₀2.99000×10^16 NP1:φs=132.00000°, δ88.00000°, λ-167.00000°. NP2: φs=41.00000°, δ77.00000°, λ-2.00000°. Principal axes: T 3.1550, Plg8.0000°, Azm266.0000°; N -0.3240, Plg76.0000°, Azm142.0000°; P -2.8260, Plg11.0000°, Azm357.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*
MEX ***26*** *20:15:42.6±0.3, 19.53N×109.03W, h10km, MD4.3*
ISC 26 20:15:41.3±0.7, 19.61N±0.08×109.23W±0.04, h26km, n30, σ2s53/27, mb3.8/6, MS3.8/8, Revilla Gigedo Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H06E1	**SOCORRO T-PHAS**	**1.80**	**243**	Pn	**Pn**	**20 16 09.5**	**-1.3**
H06E1				Sn	**Sn**	**20 16 30.6**	**-2.2**
H06E1				T	T	20 18 12.4	
	SNR=18						
H06N1	**SOCORRO T-PHAS**	**1.82**	**246**	Pn	**Pn**	**20 16 08.5**	**-2.4**
H06N1				Sn	**Sn**	**20 16 29.2**	**-4.0**
H06N1				T	T	20 18 18.9	
	SNR=10						
H06S1	**SOCORRO T**	**1.85**	**242**	Pn	**Pn**	**20 16 09.6**	**-1.8**
H06S1				Sn	**Sn**	**20 16 29.3**	**-4.7**
H06S1				T	T	20 18 17.5	
	SNR=6.1						
CJM	**Chamela**	**3.95**	**91**	*i* P	**Pn**	**20 16 37.9**	**-2.4**
CJM				*i* S	**Sn**	**20 17 21.4**	**-4.3**
LPIG	**La Paz**	**4.58**	**348**	Pn	**Pn**	**20 16 46.5**	**-2.5**
	4.8nm,0.3s,baz=44,slow=8.9,SNR=3.9						
LPIG				LR	LR	20 17 51.7	
	comp=Z,359nm,19.4s,baz=144,slow=30						
	28nm,0.5s						
ANIG	**Ahuacatlan**	**4.64**	**71**	*e*P	**Pn**	**20 16 49.2**	**-0.7**
ANIG				*e*S	**Sn**	**20 17 39.3**	**-3.8**
INCO	**Volcan de Coli**	**5.30**	**90**	*e*P	**Pn**	**20 16 58.3**	**-1.0**
INCO				*e*S	**Sn**	**20 17 55.9**	**-3.8**
JUBC	**Volcan de Coli**	**5.34**	**90**	*e*P	**Pn**	**20 16 57.8**	**-1.8**
JUBC				*e*S	**Sn**	**20 17 56.2**	**-4.2**
TXAR	**Lajitas Array**	**10.92**	**27**	Pn	**Pn**	**20 18 17.2**	**+1.2**
	0.1nm,0.3s,baz=201,slow=11,SNR=28						
TXAR				LR	LR	20 21 30.0	
	comp=Z,339nm,21.6s,baz=210,slow=32						
	4.0nm,1.0s						
CMIG	**Matias Romero**	**13.85**	**98**	Pn	**Pn**	**20 18 57.4**	**+1.4**
	0.2nm,0.3s,baz=295,slow=12,SNR=8.3						
CMIG				LR	LR	20 24 01.8	
	comp=Z,834nm,18.0s,baz=276,slow=36						
	6.4nm,0.9s						
PFO	**Pinyon Flats O**	**15.36**	**337**	LR	LR	20 24 50.3	
	comp=Z,693nm,18.7s,baz=153,slow=36						
ANMO	**Albuquerque**	**15.47**	**9**	Pn	**Pn**	**20 19 18.9**	**+0.9**
	baz=210,slow=6.9,SNR=4.4						
ANMO				LR	LR	20 25 24.1	
	comp=Z,257nm,19.4s,baz=188,slow=38						
	1.8nm,0.9s						
NVAR	**Mina Array Bea**	**20.34**	**339**	P	**P**	**20 20 16.9**	**+0.9**
	7.6nm,1.1s,baz=161,slow=10,SNR=20						
	7.6nm,1.1s						
ELK	**Elko**	**21.69**	**348**	P	**P**	**20 20 30.6**	**+0.2**
	1.7nm,0.8s,baz=180,slow=9.3,SNR=4.6						
ELK				LR	LR	20 28 43.0	
	comp=Z,271nm,21.4s,baz=162,slow=36						
	1.7nm,0.8s						
PDAR	**Pinedale Array**	**23.09**	**359**	P	**P**	**20 20 45.9**	**+0.6**
	1.0nm,0.9s,baz=178,slow=8.5,SNR=6.8						
PDAR				LR	LR	20 29 40.6	
	comp=Z,114nm,20.8s,baz=144,slow=36						
	1.0nm,0.9s						
YBH	**Yreka Blue Hor**	**24.85**	**335**	LR	LR	20 30 49.9	
	comp=Z,245nm,18.1s,baz=162,slow=37						
JTS	**Las Juntas de**	**25.19**	**108**	LR	LR	20 29 49.1	
	comp=Z,155nm,19.3s,baz=356,slow=34						
ULM	**Lac du Bonnet**	**32.37**	**16**	LR	LR	20 34 30.3	
	comp=Z,254nm,18.1s,baz=180,slow=35						
BBB	**Bella Bella**	**35.70**	**340**	LR	LR	20 36 19.0	
	comp=Z,224nm,21.3s,baz=156,slow=35						
ATAH	**Atahualpa**	**40.35**	**128**	LR	LR	20 36 04.7	
	comp=Z,319nm,21.8s,baz=307,slow=30						
YKA	**Yellowknife Ar**	**43.01**	**356**	P	**P**	**20 23 37.6**	**-0.7**
	1.1nm,0.8s,baz=171,slow=8.0,SNR=10						
	1.1nm,0.8s						
ILAR	**Eielson Array**	**51.59**	**340**	P	**P**	**20 24 45.9**	**+0.7**
	1.7nm,1.0s,baz=155,slow=6.3,SNR=12						
	1.7nm,1.0s						
LPAZ	**La Paz**	**53.89**	**129**	P	**P**	**20 25 06.2**	**+2.7**
	1.1nm,0.6s,baz=356,slow=8.6,SNR=4.3						
	1.1nm,0.6s						
PPT	**Papeete**	**54.18**	**230**	LR	LR	20 42 28.6	
	comp=Z,109nm,18.0s,baz=5.5,slow=30						
H03N2	**Juan Fernandez**	**60.16**	**151**	T	T	21 31 19.4	
	baz=329,slow=77,SNR=38						
H03N1	**Juan Fernandez**	**60.17**	**151**	T	T	21 31 20.2	
	baz=329,slow=77,SNR=60						
H03N3	**Juan Fernandez**	**60.17**	**151**	T	T	21 31 18.3	
	baz=329,slow=77,SNR=48						
CPUP	**Villa Florida**	**67.98**	**130**	P	**P**	**20 26 40.3**	**+1.9**
	2.9nm,1.0s,baz=20,slow=2.9,SNR=3.1						
	2.9nm,1.0s						
WRA	**Warramunga Arr**	**120.52**	**258**	PKP	**PKiKP**	**20 34 32.5**	**+1.0**
	0.3nm,0.7s,baz=79,slow=2.2,SNR=5.0						
ASAR	**Alice Springs**	**121.59**	**254**	PKP	**PKPdf**	**20 34 33.9**	**+0.5**
	0.3nm,0.6s,baz=48,slow=2.1,SNR=4.3						

IDC ***26*** *20:39:04.1±1.2, 39.27N×73.63E, h0km, mb3.7/11, mbtmp3.7/15, ML2.8/4, Error ellipse: s-maj=25.9km s-min=15.7km az=124.0*
KRNET ***26*** *20:39:05.4±0.1, 39.42N×73.57E, mb4.0*
SOME ***26*** *20:39:05.2, 39.48N×73.60E, h10km*
NNC ***26*** *20:39:10.6±4.8, 39.56N×73.51E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=40.7km s-min=23.6km az=163.0*
ISC 26 20:39:05.9±1.6, 39.21N±0.06×73.45E±0.03, h8km±10km, n58, σ1s97/87, mb3.7/12, 16C-10D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk**	**1.31**	**282**	⇑*i*P	**Pg**	**20 39 31.5**	**+0.4**
	baz=73						
DRK				⇑*i*S	**Sn**	**20 39 50.2**	**+1.6**
	baz=73						
OHH	**Osh**	**1.41**	**339**	⇑*i*P	**Pn**	**20 39 29.2**	**-2.8**
	baz=32						
OHH				⇑*i*S	**Sn**	**20 39 47.0**	**-3.8**
	baz=32						
BTK	**Batken**	**2.20**	**293**	⇑*e*P	**Pb**	**20 39 45.4**	**-0.7**
	baz=88						
BTK				⇑*i*S	**Sb**	**20 40 14.5**	**+1.0**
	baz=88						
GAR	**Garm**	**2.45**	**266**	⇓*i*P	**Pb**	**20 39 50.0**	**-0.3**
	baz=62						
GAR				⇓*i*S	**Sg**	**20 40 22.9**	**-1.7**
	baz=62						
ARLS	**Aral**	**2.73**	**14**	⇑*e*P	**Pn**	**20 39 49.5**	**-0.7**
	baz=13						
ARLS				⇑*i*S	**Sn**	**20 40 21.7**	**-1.8**
	baz=13						
TRKS	**Terek-Say**	**2.91**	**323**	⇓*i*P	**Pn**	**20 39 52.8**	**+0.1**
	baz=19						
TRKS				⇓*i*S	**Sn**	**20 40 27.4**	**-0.6**
	baz=19						
AML	**Almayashu**	**2.92**	**4**	P	**Pn**	**20 39 53.8**	**+0.7**
	SNR=21						
UCH	**Uchtor**	**3.12**	**15**	P	**Pn**	**20 39 56.4**	**+0.6**
	SNR=40						
UCH	**Uchtor**	**3.12**	**15**	⇓*i*P	**Pn**	**20 39 55.5**	**-0.3**
	baz=14						
UCH				⇓*i*S	**Sn**	**20 40 31.8**	**-1.7**
	baz=14						
EKS2	**Erkin-Say**	**3.46**	**4**	P	**Pn**	**20 40 01.2**	**+1.1**
	SNR=14						
AAK	**Ala-Archa**	**3.51**	**13**	P	**Pn**	**20 40 01.7**	**+0.7**
	SNR=24						
AAK	**Ala-Archa**	**3.51**	**13**	Pn	**Pn**	**20 40 01.8**	**+0.8**
	6.4nm,0.3s,baz=194,slow=9.8,SNR=10						
AAK				Sn	**Sn**	**20 40 46.4**	**+3.6**
	6.5nm,0.3s,baz=338,slow=23,SNR=9.5						
	49nm,0.6s						
KBK	**Karagaybulak**	**3.62**	**18**	P	**Pn**	**20 40 04.1**	**+1.6**
	SNR=7.6						
ULHL	**Ulahol**	**3.70**	**34**	P	**Pb**	**20 40 10.2**	**-1.5**
	SNR=41						
BOOM	**Boomskoye usch**	**3.78**	**29**	⇑*e*P	**Pn**	**20 40 04.1**	**-0.5**
	baz=30						
BOOM				⇑*i*S	**Sn**	**20 40 47.0**	**-2.4**
	baz=30						
TAS	**Tashkent**	**3.82**	**305**	⇑*i*P	**Pn**	**20 40 07.0**	**+2.0**
	baz=2.0						
TAS				⇑*i*S	**Sn**	**20 40 51.8**	**+1.7**
	baz=2.0						
CHMS	**Chumysh**	**3.91**	**14**	P	**Pn**	**20 40 07.3**	**+1.0**
	SNR=6.2						
IUG	**luzhnay**	**3.92

KUU					*e*S		**Sb**	**20 41 41.0**	**+2.7**
	33nm,0.8s									
CHKK	**Chushkaly**	**5.34**	**29**	*e*P			**Pb**	**20 40 38.6**	**-0.9**
	7.0nm,0.5s									
CHKK					*e*S		**Sb**	**20 41 46.6**	**+2.8**
	20nm,0.5s									
SATY	**Saty**	**5.36**	**43**	*e*P			**Pb**	**20 40 40.6**	**+0.7**
	12nm,0.6s									
SATY					*e*S		**Sb**	**20 41 49.0**	**+4.5**
	17nm,1.1s									
KURS	**Kuram**	**5.55**	**38**	*e*P			**Pb**	**20 40 43.9**	**+0.7**
	5.1nm,0.6s									
KURS					*e*S		**Sb**	**20 41 55.6**	**+5.6**
	13nm,1.0s									
KPKS	**Kokpek**	**5.79**	**41**	*e*P			**Pb**	**20 40 47.4**	**+0.2**
	5.0nm,0.6s									
KPKS					*e*S		**Sb**	**20 42 01.2**	**+4.4**
	17nm,0.5s									
BTLS	**Baital**	**5.84**	**4**	*e*P			**Pb**	**20 40 46.9**	**-1.1**
	6.2nm,0.6s									
BTLS					*e*S		**Sb**	**20 41 59.9**	**+1.7**
	21nm,0.5s									
ARXS	**Arharly**	**5.97**	**32**	*e*P			**Pb**	**20 40 50.7**	**+0.4**
	13nm,0.6s									
ARXS					*e*S		**Sb**	**20 42 06.9**	**+4.9**
	30nm,1.2s									
MKAR	**Makanchi Array**	**9.96**	**38**	Pn			**Pn**	**20 41 31.0**	**+1.7**
	baz=231,slow=16,SNR=3.3									
MKAR					Lg		Lg	20 44 16.3		
	0.1nm,0.3s,baz=231,slow=25,SNR=4.3									
KURBB	**Kurchatov Arra**	**11.96**	**16**	Pn			**Pn**	**20 41 54.9**	**-1.7**
	baz=208,slow=12,SNR=4.5									
KURBB					Lg		Lg	20 45 15.8		
	baz=211,slow=31,SNR=5.1									
	0.1nm,0.4s									
AB31	**Akbulak array**	**13.93**	**321**	P			**Pn**	**20 42 21.5**	**-2.0**
	1.7nm,0.8s,baz=126,slow=15,SNR=14									
AKTO	**Aktyubinsk**	**15.64**	**321**	Pn			**Pn**	**20 42 47.5**	**+0.9**
	0.4nm,0.3s,baz=122,slow=11,SNR=7.7									
AKTO	**Aktyubinsk**	**15.64**	**321**	⇓P			**P**	**20 42 49.8**	**-1.0**
	2.3nm,0.7s									
ZALV	**Zalesovo Beam**	**16.65**	**24**	Pn			**Pn**	**20 42 57.8**	**-1.6**
	0.2nm,0.3s,baz=207,slow=12,SNR=6.1									
	1.0nm,0.5s									
ARU	**Arti**	**19.84**	**335**	P			**P**	**20 43 34.6**	**-2.4**
	baz=134,slow=22,SNR=1.9									
	0.7nm,0.3s									
BELG	**Belogornoye**	**22.17**	**315**	P			**P**	**20 44 03.6**	**+1.5**
	5.1nm,0.7s,baz=153,slow=6.8,SNR=2.5									
	5.1nm,0.7s									
KBZ	**Khabaz**	**23.26**	**291**	P			**P**	**20 44 17.5**	**+3.8**
	1.5nm,0.6s,baz=104,slow=9.9,SNR=3.4									
BRTR	**Keskin Array B**	**30.57**	**284**	P			**P**	**20 45 21.5**	**+1.4**
	0.9nm,0.6s,baz=81,slow=7.2,SNR=7.0									
	0.9nm,0.6s									
FINES	**FINESS Array B**	**36.39**	**323**	P			**P**	**20 46 10.2**	**-0.2**
	0.4nm,0.3s,baz=117,slow=8.8,SNR=13									
	0.4nm,0.3s									
ARCES	**ARCESS Array B**	**39.43**	**336**	P			**P**	**20 46 35.2**	**-0.8**
	1.2nm,0.8s,baz=107,slow=8.2,SNR=5.2									
	1.2nm,0.8s									
GERES	**GERESS Array B**	**43.01**	**303**	P			**P**	**20 47 06.5**	**+0.7**
	0.3nm,0.5s,baz=66,slow=11,SNR=4.5									
	0.3nm,0.5s									
NB2	**NORSAR Subarra**	**43.44**	**321**	P			**P**	**20 47 08.3**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=91,slow=7.9									
NOA	**NORSAR Array B**	**43.44**	**321**	P			**P**	**20 47 08.6**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=91,slow=7.9,SNR=4.1									
	comp=Z,0.5nm,0.5s									
ESDC	**Sonseca Array**	**57.93**	**297**	P			**P**	**20 48 58.6**	**0.0**
	comp=Z,0.5nm,0.7s,baz=63,slow=6.5,SNR=5.6									
	comp=Z,0.5nm,0.7s									
TORD	**Torodi Ar. Bea**	**67.72**	**269**	P			**P**	**20 50 03.8**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=48,slow=5.6,SNR=13									
	comp=Z,0.3nm,0.4s									
ILAR	**Eielson Array**	**71.64**	**17**	P			**P**	**20 50 25.6**	**-1.9**
	comp=Z,0.4nm,0.8s,baz=288,slow=2.2,SNR=4.6									
	comp=Z,0.4nm,0.8s									
YKA	**Yellowknife Ar**	**78.43**	**4**	P			**P**	**20 51 06.1**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=346,slow=5.8,SNR=3.1									
	comp=Z,0.3nm,0.5s									
WRA	**Warramunga Arr**	**81.83**	**124**	P			**P**	**20 51 25.7**	**0.0**
	comp=Z,0.6nm,0.8s,baz=321,slow=5.7,SNR=3.1									
	comp=Z,0.6nm,0.8s									

*IDC **26** 20:42:28.1±1.0,5˚.80S×147˚.59E,h0km,mb3.8/6, mbtmp3.9/9,ML4.1/2,Error ellipse: s-maj=35.7km s-min=18.9km az=105.0*
*DJA **26** 20:42:37.3±0.4,6˚S±3˚×14˚8E±˚,h53km±6km,M4.3/19, mb4.4/19,MLv4.2/3*
ISC 26 20:42:34.0±1.1,5.86S±0.08×148.0E±0.1,h50km,n27, σ1§79/21,mb4.0/11,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.62**	**194**	Pn		**Pn**	**20 43 26.6**	**-1.0**
	149nm,0.6s,baz=357,slow=6.4,SNR=20							
PMG				Sn		**Sn**	**20 44 12.8**	**+3.6**
	52nm,0.3s,baz=322,slow=23,SNR=5.0							
KRVT	**Keravat (AS076**	**4.28**	**69**	Pn		Pn	20 43 41.2	+4.5
	8.2nm,0.3s,baz=163,slow=2.6,SNR=5.5							
	24nm,0.4s							
GENI	**Genyem**	**8.47**	**292**	P		**Pn**	**20 44 35.5**	**+1.2**
SMPI	**Sarmi**	**10.05**	**292**	P		**Pn**	**20 44 55.1**	**-0.7**
	13nm,1.1s							
SRPI	**Serui, Papua**	**12.40**	**288**	P		**Pn**	**20 45 28.1**	**+0.1**
	51nm,0.5s							
SWI	**Sorong**	**17.45**	**286**	P		**P**	**20 46 34.3**	**-0.4**
	19nm,0.9s							
WRA	**Warramunga Arr**	**19.30**	**222**	P		**P**	**20 46 52.6**	**-2.5**
	0.7nm,0.3s,baz=50,slow=11,SNR=24							
	1.9nm,0.5s							
AAI	**Ambon**	**19.87**	**275**	P		**Pn**	**20 47 02.2**	**-1.1**
	20nm,0.7s							
NLAI	**Namlea**	**21.01**	**276**	P		**P**	**20 47 15.5**	**+1.8**
	8.5nm,1.0s							
LBMI	**Labuha**	**21.12**	**283**	P		**P**	**20 47 17.9**	**+3.0**
	8.9nm,0.9s							
ASAR	**Alice Springs**	**22.31**	**216**	P		**P**	**20 47 25.6**	**-1.9**
	2.7nm,0.6s,baz=55,slow=8.9,SNR=76							
	2.7nm,0.6s							
BATI	**Baumata**	**24.49**	**258**	P		**P**	**20 47 48.6**	**-0.3**
	20nm,1.1s							
MMRI	**Maumere**	**25.72**	**262**	P		**P**	**20 47 58.3**	**-1.7**
	37nm,1.0s							
EDFI	**Ende, Flores**	**26.27**	**262**	P		**P**	**20 48 02.2**	**-2.9**
	7.1nm,1.0s							
STKA	**Stephens Creek**	**26.57**	**192**	P		**P**	**20 48 07.0**	**-0.4**
	1.9nm,0.3s,baz=42,slow=11,SNR=13							
	1.9nm,0.3s							
H11S3	**WAKE ISLAND Hy**	**30.41**	**37**	T		T	21 20 44.2	
	baz=220,slow=74,SNR=6.5							
H11S2	**WAKE ISLAND Hy**	**30.42**	**37**	T		T	21 20 46.1	
	baz=220,slow=74,SNR=4.5							
H11S1	**WAKE ISLAND Hy**	**30.43**	**37**	T		T	21 20 48.7	
	baz=220,slow=74,SNR=4.8							
H11N1	**WAKE ISLAND Hy**	**31.48**	**36**	T		T	21 22 03.3	
	baz=219,slow=76,SNR=4.6							
H11N3	**WAKE ISLAND Hy**	**31.50**	**36**	T		T	21 22 05.3	
	baz=219,slow=76,SNR=5.7							
H11N2	**WAKE ISLAND Hy**	**31.50**	**36**	T		T	21 22 04.7	
	baz=219,slow=76,SNR=5.7							
SRBI	**Singaraja**	**32.63**	**264**	P		**P**	**20 49 03.5**	**+2.0**
SONM	**Songino Array**	**64.78**	**330**	P		**P**	**20 53 08.4**	**+0.8**
	0.9nm,0.8s,baz=146,slow=8.7,SNR=3.6							
	0.9nm,0.8s							
MKAR	**Makanchi Array**	**78.04**	**320**	P		**P**	**20 54 27.2**	**-0.3**
	0.3nm,0.6s,baz=89,slow=6.1,SNR=3.1							
	0.3nm,0.6s							
ZALV	**Zalesovo Beam**	**79.44**	**328**	P		**P**	**20 54 34.2**	**-0.7**
	0.3nm,0.3s,baz=111,slow=6.8,SNR=2.7							
	0.3nm,0.3s							
ILAR	**Eielson Array**	**84.96**	**23**	P		**P**	**20 55 04.5**	**+0.9**
	0.3nm,0.7s,baz=264,slow=4.5,SNR=4.3							
	0.3nm,0.7s							
TORD	**Torodi Ar. Bea**	**146.04**	**285**	PKPbc		**PKPdf**	**21 02 08.2**	**-0.4**
	1.1nm,0.6s,baz=65,slow=2.9,SNR=16							

*TUL **26** 20:55:31±1.0,36˚.82N±0˚.02×97˚.62W±0˚.02,h7km±7km, ML2.7,mb_Lg2.5/35(NEIC),Error ellipse: s-maj=2.2km s-min=1.7km az=164.0*
NEIC 26 20:55:31.0±0.6,36˚.796N±0˚.009×97˚.62W±0˚.02,h6km±7km, Error ellipse: s-maj=2.1km s-min=0.9km az=117.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
T35A	**Sooner Cattle**	**0.90**	**82**		Pg	Pg	20 55 48.0	-0.2
OKCFA	**Oklahoma City**	**1.39**	**174**			Pn	20 55 56.6	-0.3
OKCFA				IAmb_Lg			20 56 19.5	
	comp=Z,26nm,0.9s							
OKCSW	**OKLAHOMA CITY**	**1.40**	**174**			Pn	20 55 57.1	0.0
FNO	**Franklin**	**1.55**	**173**	Pn		Pb	20 55 59.6	-0.4
TUL1	**Leonard**	**1.72**	**120**	Pn		Pn	20 56 02.1	+0.6
TUL1				IAmb_Lg			20 56 26.6	
	comp=Z,30nm,0.7s							
R32A	**Long Quarter.**	**1.84**	**332**			Pb	20 56 04.3	-0.8
WMOK	**Wichita Mounta**	**2.26**	**205**			Pn	20 56 10.0	+1.0
KSU1	**Kansas State U**	**2.44**	**19**			Pn	20 56 10.2	-1.2
CBKS	**Cedar Bluff**	**2.62**	**321**	IAmb_Lg			20 56 54.1	
	comp=Z,15nm,0.8s							
X37A	**Clayton**	**2.86**	**140**	IAmb_Lg			20 57 05.4	
	comp=Z,18nm,0.7s							
HHAR	**Hobbs**	**3.01**	**99**			Pn	20 56 19.7	+0.5
HHAR				IAmb_Lg			20 57 14.4	
	comp=Z,14nm,0.7s							
W39A	**Magazine**	**3.50**	**116**	IAmb_Lg			20 57 29.9	
	comp=Z,12nm,0.8s							
S39A	**Bolivar**	**3.54**	**74**	IAmb_Lg			20 57 26.2	
	comp=Z,11nm,0.7s							
MIAR	**Mount Ida**	**3.98**	**123**	IAmb_Lg			20 57 39.6	
	comp=Z,9.9nm,0.8s							
P38A	**Dawn**	**4.28**	**48**	IAmb_Lg			20 57 45.0	
	comp=Z,11nm,0.7s							
MGMO	**Mountain Grove**	**4.30**	**84**	IAmb_Lg			20 57 48.5	
	comp=Z,14nm,0.7s							
R40A	**Maddies Statio**	**4.51**	**69**	IAmb_Lg			20 58 01.6	
	comp=Z,9.8nm,1.0s							
KSCO	**Kaye Shedlock'**	**4.54**	**301**	IAmb_Lg			20 58 07.3	
	comp=Z,14nm,1.0s							
WHAR	**Wooly Hollow**	**4.58**	**108**	Pn		Pn	20 56 40.7	0.0
WHAR				IAmb_Lg			20 58 02.0	
	comp=Z,9.3nm,1.0s							
P40A	**Paris**	**5.17**	**56**	IAmb_Lg			20 58 20.0	
	comp=Z,7.9nm,0.8s							
T25A	**Trinidad**	**5.45**	**276**	IAmb_Lg			20 58 35.6	
	comp=Z,6.3nm,0.8s							
PBMO	**Poplar Bluff**	**5.77**	**88**	IAmb_Lg			20 58 40.0	
	comp=Z,7.8nm,0.8s							
FVM	**French Village**	**5.85**	**76**	IAmb_Lg			20 58 37.2	
	comp=Z,7.4nm,0.8s							
L40A	**Anamosa**	**7.22**	**41**	IAmb_Lg			20 59 33.4	
	comp=Z,5.5nm,0.7s							

*IDC **26** 21:01:03.0±1.1,39˚.28N×73˚.65E,h0km,mb3.7/9, mbtmp3.7/14,ML2.9/6,Error ellipse: s-maj=19.6km s-min=15.3km az=122.0*
*SOME **26** 21:01:02.9,39˚.53N×73˚.67E,h10km*
*KRNET **26** 21:01:04.0±0.1,39˚.45N×73˚.71E,mb4.0*
ISC 26 21:01:05.1±0.8,39˚.28N±0˚.06×73˚.57E±0˚.03,h10km,n57, σ2§37/84,mb3.5/9,15C-7D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.38**	**334**	⇑*i*P		**Pn**	**21 01 28.5**	**-2.1**
	baz=27							
OHH				⇑*i*S		**Sn**	**21 01 46.7**	**-2.3**
	baz=27							
DRK	**Karamyk**	**1.39**	**279**	⇑*e*P		**Pg**	**21 01 32.2**	**+0.4**
	baz=72							
DRK				⇑*i*S		**Sg**	**21 01 52.7**	**+2.8**
	baz=72							
BTK	**Batken**	**2.27**	**291**	⇑*i*P		**Pb**	**21 01 45.4**	**-0.8**
	baz=86							
BTK				⇑*i*S		**Sb**	**21 02 15.9**	**+1.6**
	baz=86							
GAR	**Garm**	**2.55**	**265**	⇓*i*P		**Pb**	**21 01 50.4**	**-0.6**
	baz=62							
ARLS	**Aral**	**2.64**	**12**	⇓*i*P		**Pn**	**21 01 47.3**	**-0.7**
	baz=11							
ARLS				⇓*i*S		**Sn**	**21 02 19.2**	**-0.9**
	baz=11							
AML	**Almayashu**	**2.85**	**2**	P		**Pn**	**21 01 53.0**	**+1.9**
	SNR=11							
TRKS	**Terek-Say**	**2.92**	**321**	⇓*i*P		**Pn**	**21 01 52.2**	**+0.5**
	baz=17							
UCH	**Uchtor**	**3.03**	**13**	P		**Pn**	**21 01 55.6**	**+2.0**
	SNR=35							
UCH	**Uchtor**	**3.03**	**13**	⇑*i*P		**Pn**	**21 01 52.9**	**-0.7**
	baz=12							
UCH				⇑*i*S		**Sn**	**21 02 28.7**	**-1.5**
	baz=12							
EKS2	**Erkin-Say**	**3.38**	**3**	P		**Pn**	**21 02 00.5**	**+2.4**
	SNR=12							
AAK	**Ala-Archa**	**3.43**	**11**	P		**Pn**	**21 02 01.3**	**+2.5**
	SNR=8.8							
AAK	**Ala-Archa**	**3.43**	**11**	Pn		**Pn**	**21 02 01.2**	**+2.5**
	12nm,0.3s,baz=165,slow=6.9,SNR=22							
AAK				Sn		**Sn**	**21 02 43.6**	**+4.1**
	13nm,0.3s,baz=334,slow=19,SNR=8.7							
	25nm,0.3s							
AAK	**Ala-Archa**	**3.43**	**11**	⇑*e*P		**Pn**	**21 01 58.1**	**-0.6**
	baz=10.0							
AAK				⇑*i*S		**Sn**	**21 02 38.1**	**-1.4**
	baz=10.0							
KBK	**Karagaybulak**	**3.53**	**17**	P		**Pn**	**21 02 02.5**	**+2.3**
	SNR=10							
ULHL	**Ulahol**	**3.59**	**34**	P		**Pb**	**21 02 07.1**	**-1.7**
	SNR=21							
BOOM	**Boomskoye usch**	**3.67**	**28**	⇓*i*P		**Pn**	**21 02 02.1**	**-0.1**
	baz=28							
BOOM				⇓*i*S		**Sn**	**21 02 44.1**	**-1.6**
	baz=28							
CHMS	**Chumysh**	**3.82**	**13**	P		**Pn**	**21 02 05.9**	**+1.9**
	SNR=15							
TAS	**Tashkent**	**3.86**	**303**	⇑*i*P		**Pn**	**21 02 06.6**	**+2.1**
	baz=1.0							
TAS				⇑*i*S		**Sn**	**21 02 52.5**	**+2.6**
	baz=1.0							
IUG	**Iuzhnay**	**3.93**	**318**	*e*P		**Pn**	**21 02 08.8**	**+3.2**
	818nm,0.4s							
IUG				*e*S		**Sn**	**21 02 56.4**	**+4.5**
	112nm,0.6s							
TKM2	**Tokmak 2**	**3.95**	**22**	P		**Pn**	**21 02 08.0**	**+2.0**
	SNR=6							
TKM2	**Tokmak 2**	**3.95**	**22**	⇑Pn		**Pn**	**21 02 07.5**	**+1.5**
	16nm,0.8s							
TKM2				⇓Sn		**Sn**	**21 02 55.3**	**+2.9**
	29nm,0.6s							
KDJ	**Kajisay**	**3.95**	**43**	⇑*e*P		**Pn**	**21 02 05.9**	**-0.1**
	baz=43							
KDJ				⇑*i*S		**Sn**	**21 02 50.3**	**-2.2**
	baz=43							
USP	**Ospenovka**	**4.04**	**10**	P		**Pn**	**21 02 09.1**	**+1.9**
	SNR=12							
KST	**Kastek**	**4.17**	**25**	*e*P		**Pb**	**21 02 17.2**	**-1.5**
	12nm,0.4s							
KST				*e*S		**Sb**	**21 03 11.1**	**+2.0**
	67nm,0.6s							
SGDS	**Sogindy**	**4.25**	**10**	*e*P		**Pb**	**21 02 18.4**	**-1.5**
	19nm,0.8s							
SGDS				*e*S		**Sb**	**21 03 12.8**	**+1.6**
	48nm,1.1s							
MTBS	**Maitube**	**4.41**	**28**	*e*P		**Pb**	**21 02 21.4**	**-1.3**
	12nm,0.7s							
MTBS				*e*S		**Sb**	**21 03 17.9**	**+2.0**
	48nm,0.7s							
KK31	**Karatay Array**	**4.46**	**330**	Pn		**Pn**	**21 02 15.0**	**+2.2**
	4.6nm,0.4s,baz=136,slow=13,SNR=12							
KK31				Lg		Lg	21 03 21.3	
	12nm,0.5s,baz=155,slow=28,SNR=3.8							
TNSS	**Tian-Shan**	**4.54**	**33**	*e*P		**Pb**	**21 02 24.1**	**-1.0**
	8.5nm,0.5s							
TNSS				*e*S		**Sb**	**21 03 22.6**	**+2.6**
	16nm,0.5s							
AAA	**Alma-Ata**	**4.67**	**32**	*e*P		**Pb**	**21 02 26.4**	**-0.7**
	19nm,0.4s							
AAA				*e*S		**Sb**	**21 03 27.2**	**+3.9**
	86nm,0.3s							
KRBS	**Karabastau**	**4.69**	**19**	*e*P		**Pb**	**21 02 26.2**	**-1.2**
	0.5nm,1.0s							
KRBS				*e*S		**Sb**	**21 03 26.5**	**+2.6**
	26nm,0.8s							
BRLS	**Borolday**	**4.69**	**324**	*e*P		Pb	21 02 23.7	-3.8
	3.3nm,0.9s							
BRLS				*e*S		**Sb**	**21 03 21.6**	**-2.4**
	27nm,0.7s							
KTBS	**Karatobe**	**5.01**	**27**	*e*P		**Pb**	**21 02 31.9**	**-1.0**
	6.1nm,0.8s							
KTBS				*e*S		**Sb**	**21 03 36.2**	**+3.1**
	78nm,0.6s							
KUU	**Kurty**	**5.05**	**23**	*e*P		**Pb**	**21 02 32.4**	**-1.3**
	7.0nm,0.8s							
KUU				*e*S		**Sb**	**21 03 36.7**	**+2.2**
	44nm,0.7s							
CHKK	**Chushkaly**	**5.24**	**28**	*e*P		**Pb**	**21 02 36.1**	**-0.7**
	6.2nm,0.6s							
CHKK				*e*S		**Sb**	**21 03 42.9**	**+3.2**
	17nm,0.7s							
SATY	**Saty**	**5.25**	**42**	*e*P		**Pb**	**21 02 36.9**	**-0.1**
	6.3nm,0.7s							
SATY				*e*S		**Sb**	**21 03 44.5**	**+4.4**
	30nm,0.9s							
KURS	**Kuram**	**5.44**	**38**	*e*P		**Pb**	**21 02 42.1**	**+1.8**
	6.1nm,0.7s							
KURS				*e*S		**Sb**	**21 03 53.3**	**+7.6**
	12nm,1.0s							
KPKS	**Kokpek**	**5.68**	**41**	*e*P		**Pb**	**21 02 44.2**	**-0.2**
	5.2nm,0.7s							
KPKS				*e*S		**Sb**	**21 03 57.3**	**+4.8**
	22nm,0.9s							
BTLS	**Baital**	**5.77**	**3**	*e*P		**Pb**	**21 02 43.0**	**-2.8**
	2.3nm,0.3s							
BTLS				*e*S		**Sb**	**21 03 54.7**	**-0.2**
	15nm,0.6s							
ARXS	**Arharly**	**5.87**	**31**	*e*P		**Pb**	**21 02 47.3**	**-0.2**
	12nm,0.8s							
ARXS				*e*S		**Sb**	**21 04 03.1**	**+5.3**
	32nm,0.5s							
SHLS	**Shalkode**	**5.89**	**47**	*e*P		**Pg**	**21 02 54.9**	**-3.0**
	4.4nm,0.9s							
SHLS				*e*S		**Sg**	**21 04 15.5**	**+1.3**
	20nm,0.7s							
TDK	**Taldyqorghan**	**6.75**	**31**	*e*P		**Pb**	**21 03 03.5**	**+1.0**
	17nm,0.3s							
TDK				*e*S		**Sb**	**21 04 30.5**	**+7.3**
	36nm,0.8s							
MKAR	**Makanchi Array**	**9.85**	**37**	Pn		**Pn**	**21 03 27.2**	**+0.4**
	baz=222,slow=15,SNR=2.5							
MKAR					Lg	Lg	21 06 07.3	
	0.1nm,0.3s,baz=210,slow=31,SNR=2.6							
KURBB	**Kurchatov Arra**	**11.87**	**16**	Pn		**Pn**	**21 03 52.4**	**-2.0**
	baz=208,slow=13,SNR=1.6							
KURBB					Lg	Lg	21 07 11.6	
	baz=207,slow=28,SNR=4.2							
	0.3nm,0.2s							
AKTO	**Aktyubinsk**	**15.65**	**321**	Pn		**Pn**	**21 04 44.4**	**-1.2**
	0.2nm,0.3s,baz=113,slow=10,SNR=10.0							
	1.2nm,0.6s							
ZALV	**Zalesovo Beam**	**16.55**	**24**	Pn		**Pn**	**21 04 55.3**	**-1.8**
	0.2nm,0.3s,baz=212,slow=12,SNR=7.8							
	1.6nm,0.5s							
ARU	**Arti**	**19.82**	**335**	P		**P**	**21 05 34.9**	**-0.8**
	baz=186,slow=3.7,SNR=5.9							
	1.8nm,0.6s							
BELG	**Belogornoye**	**22.19**	**315**	P		**P**	**21 06 00.8**	**-0.4**
	9.9nm,0.9s,baz=144,slow=3.0,SNR=8.9							
	9.9nm,0.9s							
BRTR	**Keskin Array B**	**30.64**	**284**	P		**P**	**21 07 19.5**	**-0.2**
	0.3nm,0.4s,baz=71,slow=6.4,SNR=2.1							
	0.3nm,0.4s							
FINES	**FINESS Array B**	**36.39**	**323**	P		**P**	**21 08 09.1**	**-0.2**
	1.0nm,0.4s,baz=108,slow=9.6,SNR=15							
	1.0nm,0.4s							
ARCES	**ARCESS Array B**	**39.41**	**336**	P		**P**	**21 08 33.8**	**-0.8**
	2.4nm,0.8s,baz=106,slow=9.1,SNR=12							
	2.4nm,0.8s							
GERES	**GERESS Array B**	**43.05**	**303**	P		**P**	**21 09 05.2**	**+0.1**
	0.3nm,0.5s,baz=60,slow=8.1,SNR=4.4							
	0.3nm,0.5s							
NB2	**NORSAR Subarra**	**43.44**	**321**	P		**P**	**21 09 07.1**	**-0.8**
	comp=Z,0.6nm,0.5s,baz=91,slow=7.9							
NOA	**NORSAR Array B**	**43.44**	**321**	P		**P**	**21 09 07.2**	**-0.7**
	comp=Z,1.2nm,0.8s,baz=91,slow=7.8,SNR=4.8							
	comp=Z,1.2nm,0.8s							
ANGG	**Ammassalik, Gr**	**62.80**	**334**	*i*P		P	21 11 40.0	+10
TORD	**Torodi Ar. Bea**	**67.81**	**269**	P		**P**	**21 12 03.1**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=53,slow=5.3,SNR=6.6							
	comp=Z,0.2nm,0.5s							
WRA	**Warramunga Arr**	**81.79**	**124**	P		**P**	**21 13 23.9**	**-0.5**
	comp=Z,0.2nm,0.6s,baz=322,slow=4.8,SNR=2.1							
	comp=Z,0.2nm,0.6s							
ASAR	**Alice Springs**	**84.23**	**127**	P		**P**	**21 13 36.3**	**-0.7**
	comp=Z,0.2nm,0.8s,baz=320,slow=4.2,SNR=1.5							
	comp=Z,0.2nm,0.8s							

*IDC **26** 21:01:39.1±1.2,39˚.29N×73˚.68E,h0km,mb3.7/7, mbtmp3.7/10,ML3.3/3,Error ellipse: s-maj=23.6km s-min=19.4km az=120.0*
*KRNET **26** 21:01:39.5±0.1,39˚.41N×73˚.63E,mb4.4*
ISC 26 21:01:40.9±0.9,39˚.41N±0˚.06×73˚.62E±0˚.05,h10km,n22, σ1§68/33,mb3.7/7,12C-10D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.28**	**330**	⇓*i*P		**Pn**	**21 02 03.9**	**-1.1**
	baz=30							
OHH				⇓*i*S		**Sg**	**21 02 21.9**	**-0.4**
	baz=30							
DRK	**Karamyk**	**1.41**	**274**	⇑*i*P		**Pb**	**21 02 06.4**	**-1.0**
	baz=74							
DRK				⇑*i*S		**Sg**	**21 02 26.0**	**-0.2**
	baz=74							
BTK	**Batken**	**2.25**	**288**	⇓*e*P		**Pb**	**

0.2nm,0.4s
WRA Warramunga Arr 81.83 124 P **P** **21 13 59.6 -0.8**
0.2nm,0.5s,baz=325,slow=5.4,SNR=1.7
0.2nm,0.5s

*IDC **26** 21:05:40.3±1.3,39°.24N×73°.68E, h0km, mb3.7/8, mbtmp3.7/13, ML3.4/4, MS3.7/2, Error ellipse: s-maj=24.3km s-min=16.3km az=133.0*
*KRNET **26** 21:05:41.6±0.1,39°.44N×73°.78E, mb4.1*
*SOME **26** 21:05:41.4,39°.50N×73°.68E, h10km*
*NNC **26** 21:05:46.0±4.5,39°.60N×73°.72E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=39.1km s-min=20.3km az=157.0*
ISC 26 21:05:39.5±1.7,39°.34N±0°.06×73°.99E±0°.04, h1km±10km, n54, σ1°88/77, mb3.7/8, 13C-10D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.50**	**322**	⇓*iP*			**Pn**	**21 06 06.6**	**-1.1**
	baz=25								
OHH				⇓*iS*			**Sn**	**21 06 25.2**	**-2.8**
	baz=25								
DRK	**Karamyk**	**1.70**	**275**	⇑*iP*			**Pn**	**21 06 10.5**	**-0.2**
	baz=72								
DRK				⇑*iS*			**Sn**	**21 06 31.4**	**-1.9**
	baz=72								
ARLS	**Aral**	**2.53**	**6**	⇑*eP*			**Pb**	**21 06 25.0**	**-0.8**
	baz=10.0								
ARLS				⇑*iS*			**Sb**	**21 06 56.3**	**-1.2**
	baz=10.0								
BTK	**Batken**	**2.55**	**287**	⇑*eP*			**Pn**	**21 06 23.7**	**+1.6**
	baz=86								
BTK				⇑*iS*			**Sn**	**21 06 54.4**	**+0.5**
	baz=86								
AML	**Almayashu**	**2.79**	**355**	P			**Pb**	**21 06 29.9**	**-0.6**
	SNR=22								
GAR	**Garm**	**2.88**	**264**	⇑*iP*			**Pn**	**21 06 28.7**	**+2.1**
	baz=62								
GAR				⇑*iS*			**Sn**	**21 07 03.1**	**+1.1**
	baz=62								
UCH	**Uchtor**	**2.91**	**8**	P			**Pb**	**21 06 33.2**	**+0.7**
	SNR=58								
UCH	**Uchtor**	**2.91**	**8**	⇓*eP*			**Pb**	**21 06 30.6**	**-1.9**
	baz=11								
UCH				⇓*iS*			**Sb**	**21 07 06.3**	**-2.5**
	baz=11								
TRKS	**Terek-Say**	**3.08**	**316**	⇓*eP*			**Pn**	**21 06 30.4**	**+0.9**
	baz=16								
TRKS				⇓*iS*			**Sn**	**21 07 05.9**	**-1.2**
	baz=16								
AAK	**Ala-Archa**	**3.31**	**6**	P			**Pb**	**21 06 38.7**	**-0.6**
	SNR=19								
AAK	**Ala-Archa**	**3.31**	**6**	Pn			**Pb**	**21 06 39.4**	**+0.2**
	12nm,0.3s,baz=190,slow=9.6,SNR=14								
AAK						Sn	**Sb**	**21 07 21.7**	**+1.6**
	5.6nm,0.3s,baz=128,slow=23,SNR=1.8								
	33nm,0.4s								
EKS2	**Erkin-Say**	**3.32**	**357**	P			**Pb**	**21 06 37.6**	**-1.7**
	SNR=30								
ULHL	**Ulahol**	**3.37**	**30**	P			**Pb**	**21 06 40.8**	**+0.7**
	SNR=13								
KBK	**Karagaybulak**	**3.39**	**12**	P			**Pb**	**21 06 40.7**	**+0.2**
	SNR=28								
BOOM	**Boomskoye usch**	**3.47**	**25**	⇑*iP*			**Pb**	**21 06 38.9**	**-3.1**
	baz=28								
BOOM				⇑*eS*			**Sb**	**21 07 20.6**	**-4.1**
	baz=28								
CHMS	**Chumysh**	**3.70**	**9**	P			**Pb**	**21 06 43.6**	**-2.0**
	SNR=12								
TKM2	**Tokmak 2**	**3.77**	**18**	P			**Pb**	**21 06 46.3**	**-0.8**
	SNR=9.0								
TKM2	**Tokmak 2**	**3.77**	**18**	⇑Pg			**Pg**	**21 06 51.9**	**+0.1**
	20nm,0.8s								
TKM2					⇑Lg		Lg	21 07 40.5	
	25nm,0.6s								
USP	**Ospenovka**	**3.94**	**5**	P			**Pb**	**21 06 47.0**	**-2.8**
	SNR=9.8								
KST	**Kastek**	**3.98**	**21**	*e*P			**Pg**	**21 06 55.4**	**-0.5**
	22nm,0.5s								
KST				*e*S			**Sg**	**21 07 48.8**	**+1.2**
	78nm,0.8s								
DZA	**Taraz**	**4.08**	**331**	*e*P			**Pn**	**21 06 47.4**	**+4.3**
	30nm,0.1s								
DZA				*e*S			**Sn**	**21 07 34.8**	**+3.4**
	201nm,0.3s								
IUG	**Iuzhnay**	**4.11**	**314**	*e*P			**Pb**	**21 06 54.1**	**+1.3**
	308nm,0.6s								
IUG				*e*S			**Sb**	**21 07 46.4**	**+3.5**
	68nm,0.7s								
DGS	**Degeres**	**4.12**	**18**	*e*P			**Pg**	**21 06 57.4**	**-1.0**
	38nm,0.7s								
DGS				*e*S			**Sg**	**21 07 52.9**	**+1.0**
	64nm,0.4s								
MTBS	**Maitube**	**4.21**	**25**	*e*P			**Pg**	**21 07 00.0**	**-0.1**
	22nm,0.2s								
MTBS				*e*S			**Sg**	**21 07 56.8**	**+2.2**
	59nm,0.7s								
AAA	**Alma-Ata**	**4.45**	**29**	*e*P			**Pg**	**21 07 04.3**	**-0.4**
	29nm,0.3s								
AAA				*e*S			**Sg**	**21 08 04.2**	**+1.8**
	73nm,0.5s								
CHM	**Chimkent**	**4.46**	**313**	*e*P			**Pb**	**21 06 59.9**	**+1.2**
	4.9nm,0.6s								
CHM				*e*S			**Sb**	**21 07 56.7**	**+3.7**
	92nm,0.4s								
KK31	**Karatay Array**	**4.58**	**326**	Pn			**Pn**	**21 06 53.1**	**+3.2**
	1.8nm,0.2s,baz=128,slow=11,SNR=33								
KK31				⇓Pg			**Pg**	**21 07 05.1**	**-2.2**
	3.9nm,0.3s,baz=153,slow=16,SNR=4.9								
KK31				⇓Sn			**Sn**	**21 07 44.6**	**+0.8**
	4.0nm,0.2s,baz=143,slow=26,SNR=4.1								
KK31				⇓Lg			Lg	21 07 59.0	
	12nm,0.5s,baz=158,slow=29,SNR=4.0								
BRLS	**Boroldaу**	**4.84**	**321**	*e*P			**Pb**	**21 07 04.0**	**-1.0**
	4.1nm,0.3s								
BRLS				*e*S			**Sb**	**21 08 03.8**	**0.0**
	37nm,0.5s								
KUU	**Kurty**	**4.88**	**20**	*e*P			**Pg**	**21 07 11.2**	**-1.7**
	18nm,0.7s								
KUU				*e*S			**Sg**	**21 08 16.0**	**-0.1**
	39nm,0.6s								
SATY	**Saty**	**4.99**	**40**	*e*P			**Pg**	**21 07 16.3**	**+1.2**
	9.6nm,0.6s								
SATY				*e*S			**Sg**	**21 08 24.9**	**+5.2**
	37nm,1.1s								
CHKK	**Chushkaly**	**5.04**	**26**	*e*P			**Pg**	**21 07 14.8**	**-1.2**
	10nm,0.7s								
CHKK				*e*S			**Sg**	**21 08 21.8**	**+0.5**
	33nm,0.6s								
KURS	**Kuram**	**5.20**	**36**	*e*P			**Pg**	**21 07 19.2**	**+0.1**
	9.2nm,0.7s								
KURS				*e*S			**Sg**	**21 08 29.4**	**+2.9**
	13nm,0.8s								
KPKS	**Kokpek**	**5.42**	**39**	*e*P			**Pg**	**21 07 23.2**	**-0.2**
	8.0nm,0.6s								
KPKS				*e*S			**Sg**	**21 08 35.8**	**+2.1**
	25nm,0.5s								
ARXS	**Arharly**	**5.65**	**29**	*e*P			**Pg**	**21 07 25.5**	**-2.2**
	18nm,0.7s								
ARXS				*e*S			**Sg**	**21 08 40.5**	**-0.4**
	36nm,0.6s								
BTLS	**Baital**	**5.69**	**0**	*e*P			**Pb**	**21 07 20.2**	**+0.5**
	3.2nm,0.6s								
BTLS				*e*S			**Sb**	**21 08 31.5**	**+3.1**
	8.4nm,0.8s								
BLB	**Baldybastay**	**5.82**	**34**	*e*P			**Pg**	**21 07 29.7**	**-1.3**
	29nm,0.5s								
BLB				*e*S			**Sg**	**21 08 47.1**	**+0.8**
	17nm,0.4s								
MKAR	**Makanchi Array**	**9.61**	**36**	Pn			Pn	21 08 04.7	+5.7
	0.6nm,0.7s,baz=222,slow=15,SNR=1.6								
MKAR						Lg	Lg	21 10 45.5	
	0.1nm,0.3s,baz=220,slow=26,SNR=2.2								
KURBB	**Kurchatov Arra**	**11.72**	**14**	Lg			Lg	21 11 50.2	
	baz=191,slow=28,SNR=4.2								
GEYT	**Alibeck**	**12.49**	**269**	Pn			**Pn**	**21 08 35.5**	**-3.0**
	0.4nm,0.3s,baz=94,slow=16,SNR=2.3								
	1.8nm,0.5s								
AB31	**Akbulak array**	**14.10**	**319**	⇓P			**Pn**	**21 08 58.8**	**-1.5**
	2.3nm,0.9s,baz=130,slow=14,SNR=8.8								
AKTO	**Aktyubinsk**	**15.81**	**320**	Pn			**Pn**	**21 09 20.0**	**-3.3**
	0.1nm,0.3s,baz=122,slow=14,SNR=3.9								
	1.3nm,0.6s								
AKTO	**Aktyubinsk**	**15.81**	**320**	⇑P			**Pn**	**21 09 23.1**	**-0.1**
	3.8nm,1.1s								
ZALV	**Zalesovo Beam**	**16.36**	**23**	Pn			**P**	**21 09 33.6**	**+0.2**
	0.2nm,0.3s,baz=213,slow=11,SNR=4.1								
	0.7nm,0.5s								
BELG	**Belogornoye**	**22.37**	**314**	P			**P**	**21 10 38.3**	**-0.6**
	5.8nm,0.7s,baz=84,slow=7.5,SNR=6.2								
	5.8nm,0.7s								
BRTR	**Keskin Array B**	**30.94**	**284**	P			**P**	**21 11 58.7**	**+0.5**
	0.9nm,0.6s,baz=82,slow=8.2,SNR=6.3								
	0.9nm,0.6s								
FINES	**FINESS Array B**	**36.54**	**323**	P			**P**	**21 12 46.5**	**+0.1**
	0.7nm,0.4s,baz=109,slow=9.2,SNR=12								
	0.7nm,0.4s								
ATD	**Arta Tunnel**	**39.12**	**233**	LR			LR	21 30 16.6	
	comp=Z,82nm,18.9s,baz=348,slow=38								
ARCES	**ARCESS Array B**	**39.48**	**336**	P			**P**	**21 13 11.8**	**+0.6**
	0.6nm,0.5s,baz=106,slow=8.9,SNR=7.9								
	0.6nm,0.5s								
GERES	**GERESS Array B**	**43.29**	**303**	P			**P**	**21 13 43.3**	**+0.5**
	0.4nm,0.8s,baz=74,slow=5.7,SNR=4.6								
	0.4nm,0.8s								
NB2	**NORSAR Subarra**	**43.59**	**321**	P			**P**	**21 13 45.2**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=92,slow=8.6								
NOA	**NORSAR Array B**	**43.59**	**321**	P			**P**	**21 13 45.0**	**0.0**
	comp=Z,0.5nm,0.5s,baz=92,slow=7.9,SNR=4.4								
	comp=Z,0.5nm,0.5s								
TORD	**Torodi Ar. Bea**	**68.13**	**269**	P			**P**	**21 16 40.0**	**-1.5**
	comp=Z,0.4nm,0.6s,baz=48,slow=4.9,SNR=7.9								
	comp=Z,0.4nm,0.6s								
WRA	**Warramunga Arr**	**81.56**	**124**	P			**P**	**21 18 00.5**	**+1.4**
	comp=Z,0.4nm,0.8s,baz=328,slow=5.2,SNR=2.5								
	comp=Z,0.4nm,0.8s								
SUR	**Sutherland**	**86.75**	**223**	LR			LR	21 59 33.4	
	comp=Z,48nm,19.7s,baz=332,slow=37								

*IDC **26** 21:16:39.8±0.9,39°.28N×73°.65E, h0km, mb3.7/17, mbtmp3.8/24, ML3.2/7, Error ellipse: s-maj=16.3km s-min=12.4km az=142.0*
*SOME **26** 21:16:40.0,39°.43N×73°.78E, h15km, MS3.8*
*KRNET **26** 21:16:40.3±0.1,39°.42N×73°.71E, mb4.6*
*MOS **26** 21:16:43.9±1.1,39°.57N×73°.42E, h16km, mb4.2/9, Error ellipse: s-maj=6.4km s-min=4.3km az=74.5*
*BJI **26** 21:16:43.0±0.0,39°.60N×73°.50E, h10km, mb3.9/9, mB4.4/2, ML3.8/6, Ms3.7/4, Ms7 3.2/5*
*NNC **26** 21:16:44.6±1.8,39°.71N×73°.41E, h0km, mb4.7, mpv4.6, Error ellipse: s-maj=15.8km s-min=8.3km az=174.0*
*NEIC **26** 21:16:44.6±2.1,39°.64N±0°.06×73°.39E±0°.07, h10km±1km, mb4.3/17, Error ellipse: s-maj=10.8km s-min=7.6km az=150.0*
ISC 26 21:16:43.2±1.0,39°.53N±0°.03×73°.41E±0°.02, h5km±6km, n231, σ2°28/283, mb4.0/27, 54C-18D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.10**	**335**	⇑*iP*			**Pb**	**21 17 05.2**	**+0.4**
	baz=27								
OHH				⇑*iS*			**Sn**	**21 17 23.2**	**+2.1**
	baz=27								
DRK	**Karamyk**	**1.24**	**268**	⇑*iP*			**Pb**	**21 17 08.0**	**+0.6**
	baz=73								
DRK				⇑*iS*			**Sn**	**21 17 28.5**	**+3.7**
	baz=73								
DRK	**Karamyk**	**1.24**	**268**				**Pn**	**21 17 08.3**	**+0.7**
DRK						Sn	**Sn**	**21 17 26.3**	**+1.5**
KSH	**Kashi**	**1.98**	**90**	Pn		Pn	Pn	21 17 10.0	-7.6
KSH				Sn		Sn	Sn	21 17 30.3	-13
KSH				smax		smax	smax		
	comp=N,2μm,0.8s								
KSH				smax		smax	smax		
	comp=E,2μm,0.8s								
BTK	**Batken**	**2.06**	**286**	⇑*iP*			**Pb**	**21 17 21.4**	**+0.2**
	baz=87								
BTK				⇑*iS*			**Sg**	**21 17 51.7**	**+2.2**
	baz=87								
BTK	**Batken**	**2.06**	**286**	Pn			**Pn**	**21 17 20.0**	**+1.4**
BTK				Sn			**Sn**	**21 17 44.0**	**-0.8**
BTK	**Batken**	**2.06**	**286**	PN			**Pn**	**21 17 20.0**	**+1.4**
BTK								21 17 44.0	
ARLS	**Aral**	**2.43**	**16**	⇑*iP*			**Pn**	**21 17 23.9**	**+0.1**
	baz=11								
ARLS				⇑*iS*			**Sn**	**21 17 55.7**	**+1.7**
	baz=11								
GAR	**Garm**	**2.46**	**259**	⇓*iP*			**Pn**	**21 17 26.4**	**+2.4**
	baz=62								
GAR				⇓*iS*			**Sb**	**21 18 00.0**	**+1.5**
	baz=62								
GAR	**Garm**	**2.46**	**259**				**Pb**	**21 17 27.4**	**-0.5**
AML	**Almayashu**	**2.61**	**5**	P			**Pb**	**21 17 29.4**	**-1.3**
	SNR=43								
TRKS	**Terek-Say**	**2.64**	**320**	⇑*iP*			**Pn**	**21 17 28.5**	**+1.9**
	baz=17								
TRKS				⇑*iS*			**Sb**	**21 18 03.6**	**-0.3**
	baz=17								
UCH	**Uchtor**	**2.83**	**17**	P			**Pn**	**21 17 31.1**	**+1.7**
	SNR=350								
UCH	**Uchtor**	**2.83**	**17**	⇑*iP*			**Pn**	**21 17 29.5**	**+0.1**
	baz=12								
UCH				⇑*iS*			**Sn**	**21 18 05.5**	**+1.5**
	baz=12								
EKS2	**Erkin-Say**	**3.14**	**5**	P			**Pn**	**21 17 36.5**	**+3.0**
	SNR=45								
EKS2	**Erkin-Say**	**3.14**	**5**	⇑*eP*			**Pn**	**21 17 34.3**	**+0.8**
	baz=1.0								
EKS2				⇑*eS*			**Sn**	**21 18 13.7**	**+2.3**
	baz=1.0								
AAK	**Ala-Archa**	**3.21**	**14**	P			**Pn**	**21 17 36.9**	**+2.4**
	SNR=57								
AAK	**Ala-Archa**	**3.21**	**14**	Pn			**Pn**	**21 17 36.9**	**+2.4**
	20nm,0.3s,baz=182,slow=8.8,SNR=54								
AAK						Sn	**Sb**	**21 18 20.0**	**-0.3**
	11nm,0.3s,baz=127,slow=20,SNR=2.2								
	66nm,0.3s								
AAK	**Ala-Archa**	**3.21**	**14**	⇑*iP*			**Pn**	**21 17 34.8**	**+0.3**
	baz=10.0								
AAK				⇑*iS*			**Sn**	**21 18 14.7**	**+1.5**
	baz=10.0								
AAK	**Ala-Archa**	**3.21**	**14**	Pn			**Pn**	**21 17 35.8**	**+1.3**
KBK	**Karagaybulak**	**3.34**	**20**	P			**Pn**	**21 17 38.8**	**+2.6**
	SNR=45								
KBK	**Karagaybulak**	**3.34**	**20**	⇑*eP*			**Pn**	**21 17 36.3**	**+0.1**
	baz=16								
KBK				⇑*iS*			**Sn**	**21 18 17.0**	**+0.7**
	baz=16								
CHGR	**Chuyangaron**	**3.42**	**257**	⇑*iP*			**Pn**	**21 17 39.5**	**+2.3**
	baz=59								
CHGR				⇑*iS*			**Sb**	**21 18 22.9**	**-3.3**
	baz=59								
CHGR	**Chuyangaron**	**3.42**	**257**	Pn			**Pn**	**21 17 38.8**	**+1.6**
CHGR	**Chuyangaron**	**3.42**	**257**	PN			**Pn**	**21 17 38.8**	**+1.6**
ULHL	**Ulahol**	**3.46**	**37**	P			**Pn**	**21 17 39.1**	**+1.2**
	SNR=14								
ULHL	**Ulahol**	**3.46**	**37**	⇑*iP*			**Pn**	**21 17 36.9**	**-1.1**
	baz=33								
ULHL				⇑*iS*			**Sn**	**21 18 18.1**	**-1.3**
	baz=33								
BOOM	**Boomskoye usch**	**3.53**	**32**	⇓*eP*			**Pn**	**21 17 38.1**	**-0.7**
	baz=28								
BOOM				⇓*iS*			**Sn**	**21 18 20.2**	**-0.7**
	baz=28								
BOOM	**Boomskoye usch**	**3.53**	**32**	Pn			**Pn**	**21 17 38.3**	**-0.5**
BOOM	**Boomskoye usch**	**3.53**	**32**	PN			**Pn**	**21 17 38.3**	**-0.5**
CHMS	**Chumysh**	**3.61**	**16**	P			**Pn**	**21 17 41.9**	**+2.0**
	SNR=40								
CHMS	**Chumysh**	**3.61**	**16**	⇑*eP*			**Pn**	**21 17 40.1**	**+0.2**
	baz=12								
CHMS				⇑*eS*			**Sn**	**21 18 23.9**	**+1.0**
	baz=12								
CHMS	**Chumysh**	**3.61**	**16**	PN			**Pn**	**21 17 41.9**	**+2.0**
CHMS						PG	**Pb**	**21 17 47.9**	**+0.3**
CHMS						LG	Lg	21 18 36.1	
CHMS	**Chumysh**	**3.61**	**16**	⇓Pn			**Pn**	**21 17 41.9**	**+2.0**
	31nm,0.5s								
CHMS					⇑Pg		**Pb**	**21 17 47.9**	**+0.3**
	100nm,0.7s								
CHMS					⇑Lg		Lg	21 18 36.1	
	247nm,0.8s								
TAS	**Tashkent**	**3.62**	**301**	⇑*iP*			**Pn**	**21 17 43.1**	**+3.2**
	baz=1.0								
TAS				⇑*iS*			**Sb**	**21 18 29.1**	**-2.7**
	baz=1.0								
TAS	**Tashkent**	**3.62**	**301**	Pn			**Pn**	**21 17 40.8**	**+0.9**
TAS	**Tashkent**	**3.62**	**301**	PN			**Pn**	**21 17 40.8**	**+0.9**
IUG	**luzhnay**	**3.66**	**317**	*e*PN			**Pn**	**21 17 44.8**	**+4.2**
IUG	**luzhnay**	**3.66**	**317**	*e*P			**Pg**	**21 17 55.7**	**+2.3**
	4μm,0.8s								
IUG				*e*S			Sg	21 18 49.9	+9.1
	557nm,0.7s								
IUG	**luzhnay**	**3.66**	**317**	Pg			**Pn**	**21 17 44.7**	**+4.1**
	626nm,0.3s								
IUG				Lg			Lg	21 18 30.4	
	304nm,0.4s								
DZA	**Taraz**	**3.71**	**336**	*e*PN			**Pg**	**21 17 53.4**	**-0.8**
DZA	**Taraz**	**3.71**	**336**	*e*P			**Pg**	**21 17 53.5**	**-0.8**
	172nm,0.4s								
DZA				*e*S			**Sg**	**21 18 46.1**	**+3.8**
	454nm,0.4s								
DZA	**Taraz**	**3.71**	**336**	*e*Pg			**Pg**	**21 17 53.4**	**-0.8**
	baz=333								
DZA				*e*Lg			Lg	21 18 42.9	
	baz=333								
DZA	**Taraz**	**3.71**	**336**	Pg			**Pb**	**21 17 45.5**	**-3.7**
	67nm,0.2s								
DZA				Lg			Lg	21 18 32.1	
	404nm,0.5s								
TKM2	**Tokmak 2**	**3.77**	**25**	P			**Pn**	**21 17 43.5**	**+1.3**
	SNR=64								
TKM2	**Tokmak 2**	**3.77**	**25**	⇑*iP*			**Pn**	**21 17 41.9**	**-0.3**
	baz=22								
TKM2				⇑*iS*			**Sn**	**21 18 26.9**	**-0.1**
	baz=22								
TKM2	**Tokmak 2**	**3.77**	**25**	PN			**Pn**	**21 17 43.6**	**+1.4**
TKM2						PG	**Pb**	**21 17 50.3**	**-0.1**
TKM2						LG	Lg	21 18 39.1	
TKM2	**Tokmak 2**	**3.77**	**25**	⇓Pn			**Pn**	**21 17 43.6**	**+1.4**
	34nm,0.7s								
TKM2				⇓Pg			**Pb**	**21 17 50.0**	**-0.3**
	111nm,1.0s								
TKM2				⇑Lg			Lg	21 18 39.1	
	196nm,0.7s								
USP	**Ospenovka**	**3.83**	**12**	P			**Pn**	**21 17 45.2**	**+2.4**
	SNR=12								
USP	**Ospenovka**	**3.83**	**12**	⇑*eP*			**Pn**	**21 17 43.4**	**+0.6**
	baz=9.0								
USP				⇑*iS*			**Sn**	**21 18 29.5**	**+1.4**
	baz=9.0								
KDJ	**Kajisay**	**3.87**	**47**	⇑*eP*			**Pn**	**21 17 42.0**	**-1.5**
	baz=43								
KDJ				⇑*eS*			**Sn**	**21 18 27.0**	**-2.4**
	baz=43								
KDJ	**Kajisay**	**3.87**	**47**	Pn			**Pn**	**21 17 44.5**	**+1.0**
KDJ	**Kajisay**	**3.87**	**47**	PN			**Pn**	**21 17 44.5**	**+1.0**
TARG	**Taragay, Kyrgy**	**4.00**	**55**	⇑*iP*			**Pn**	**21 17 43.3**	**-2.3**
	baz=52								
TARG				⇑*iS*			**Sn**	**21 18 29.4**	**-3.7**
	baz=52								
TARG	**Taragay, Kyrgy**	**4.00**	**55**	Pn			**Pn**	**21 17 45.3**	**-0.3**
TARG	**Taragay, Kyrgy**	**4.00**	**55**	PN			**Pn**	**21 17 45.3**	**-0.3**
KST	**Kastek**	**4.00**	**28**	*e*P			**Pb**	**21 17 53.7**	**-0.7**
	56nm,0.6s								
KST				*e*S			**Sb**	**21 18 47.0**	**+3.9**
	467nm,0.7s								
KST	**Kastek**	**4.00**	**28**	Pg			**Pb**	**21 17 54.9**	**+0.6**
	49nm,0.4s								
KST				Lg			Lg	21 18 48.2	
	461nm,0.7s								
CHM	**Chimkent**	**4.01**	**315**	*e*P			**Pg**	**21 17 59.1**	**-0.9**
	8.4nm,0.5s								
CHM				*e*S			**Sg**	**21 18 56.7**	**+4.7**
	649nm,0.4s								
CHM	**Chimkent**	**4.01**	**315**	*e*Pg			**Pg**	**21 17 59.5**	**-0.5**
	baz=313								
CHM				*e*Lg			Lg	21 18 55.7	
	baz=313								
SGDS	**Sogindy**	**4.03**	**13**	*e*PN			**Pn**	**21 17 46.6**	**+1.0**
SGDS				*e*				21 17 58.5	
SGDS	**Sogindy**	**4.03**	**13**	*e*P			**Pb**	**21 17 56.0**	**+1.3**
	86nm,0.6s								
SGDS				*e*S			**Sg**	**21 18 51.2**	**-1.3**
	94nm,0.7s								
SGDS	**Sogindy**	**4.03**	**13**	*e*Pn			**Pn**	**21 17 46.7**	**+1.1**
	baz=10								
SGDS				*e*Pb			**Pb**	**21 17 55.1**	**+0.4**
	baz=10								
SGDS				*e*Pg			**Pg**	**21 17 58.5**	**-1.9**
	baz=10								
SGDS				*e*Lg			Lg	21 18 51.5	
	baz=10								
SGDS	**Sogindy**	**4.03**	**13**	Pg			**Pb**	**21 17 56.5**	**+1.9**
	86nm,0.5s								
SGDS				Lg			Lg	21 18 50.6	
	94nm,0.7s								
DGS	**Degeres**	**4.12**	**25**	*e*P			**Pb**	**21 17 57.0**	**+0.8**
	154nm,0.6s								
DGS				*e*S			**Sg**	**21 18 52.2**	**-3.1**
	185nm,0.7s								
KK31	**Karatay Array**	**4.18**	**330**	Pn			**Pn**	**21 17 47.9**	**+0.2**
KK31	**Karatay Array**	**4.18**	**330**	PN			**Pn**	**21 17 47.9**	**+0.2**
KK31	**Karatay Array**	**4.18**	**330**	Pn			**Pn**	**21 17 50.8**	**+3.1**
	14nm,0.6s,baz=133,slow=13,SNR=96								
KK31				⇑Pg			**Pg**	**21 18 01.5**	**-1.9**
	20nm,0.5s,baz=150,slow=16,SNR=9.5								
KK31				⇓Lg			Lg	21 18 54.8	
	87nm,0.6s,baz=142,slow=30,SNR=4.6								
KKAR	**Karatay Array**	**4.18**	**330**	Pn			**Pn**	**21 17 46.9**	**-0.7**
KKAR	**Karatay Array**	**4.18**	**330**				**Pn**	**21 17 47.0**	**-0.7**
KKAR	**Karatay Array**	**4.18**	**330**	PN			**Pn**	**21 17 47.0**	**-0.7**
MTBS	**Maitube**	**4.26**	**31**	*e*P			**Pb**	**21 17 58.4**	**-0.2**
	82nm,0.5s								
MTBS				*e*S			**Sb**	**21 18 55.6**	**+5.3**
	140nm,0.7s								
MTBS	**Maitube**	**4.26**	**31**	Pg			**Pb**	**21 17 59.6**	**+1.0**
	83nm,0.6s								
MTBS				Lg			Lg	21 18 55.9	
	140nm,0.7s				

62nm,0.7s
KTBS eS Sb 21 19 13.3 +6.0
233nm,0.7s
KUU Kurty 4.88 26 ePN **Pn 21 17 58.1 +0.8**
KUU e 21 18 10.6
KUU e 21 19 15.3
KUU Kurty 4.88 26 eP **Pb 21 18 09.7 +0.5**
57nm,0.7s
KUU eS **Sg 21 19 14.7 -5.3**
236nm,0.9s
KUU Kurty 4.88 26 ePn **Pn 21 17 58.1 +0.8**
baz=24
KUU ePg **Pb 21 18 10.7 +1.5**
baz=24
KUU eLg Lg 21 19 15.4
baz=24
KUU Kurty 4.88 26 Pg **Pb 21 18 10.9 +1.7**
57nm,0.7s
KUU Lg Lg 21 19 15.3
237nm,1.0s
CHKK Chushkaly 5.09 31 eP **Pb 21 18 13.2 +0.5**
27nm,0.6s
CHKK eS **Sb 21 19 20.4 +6.3**
129nm,0.7s
CHKK Chushkaly 5.09 31 ePg **Pb 21 18 14.7 +2.0**
baz=29
CHKK eLg Lg 21 19 20.8
baz=29
CHKK Chushkaly 5.09 31 Pg **Pb 21 18 14.2 +1.5**
27nm,0.7s
CHKK Lg Lg 21 19 20.5
113nm,0.7s
SATY Saty 5.16 45 ePN **Pn 21 18 02.2 +1.0**
SATY e 21 18 16.0
SATY e 21 19 22.5
SATY Saty 5.16 45 eP **Pb 21 18 14.0 0.0**
38nm,0.8s
SATY eS **Sb 21 19 21.9 +5.6**
136nm,1.1s
SATY Saty 5.16 45 ePn **Pn 21 18 02.3 +1.0**
baz=44
SATY ePg **Pb 21 18 16.1 +2.1**
baz=44
SATY eLg Lg 21 19 22.6
baz=44
SATY Saty 5.16 45 Pg **Pb 21 18 15.1 +1.1**
42nm,0.8s
SATY Lg Lg 21 19 22.5
144nm,0.8s
ZHN Zhinishke 5.25 45 ePN **Pb 21 18 14.4 -1.1**
ZHN e 21 19 24.3
ZHN Zhinishke 5.25 45 eP **Pb 21 18 15.7 +0.2**
12nm,0.2s
ZHN eS **Sb 21 19 24.4 +5.6**
121nm,0.8s
ZHN Zhinishke 5.25 45 ePg **Pb 21 18 14.5 -1.1**
baz=44
ZHN eLg Lg 21 19 24.4
baz=44
ZHN Zhinishke 5.25 45 Pg **Pb 21 18 16.3 +0.8**
13nm,0.2s
ZHN Lg Lg 21 19 24.5
122nm,0.7s
KURS Kuram 5.33 41 eP **Pb 21 18 17.2 +0.3**
56nm,0.7s
KURS eS **Sb 21 19 27.8 +6.6**
71nm,0.9s
KURS Kuram 5.33 41 Pg **Pb 21 18 18.3 +1.4**
55nm,0.7s
KURS Lg Lg 21 19 28.0
72nm,0.9s
BTLS Baital 5.53 5 ePN **Pn 21 18 07.3 +1.2**
BTLS e 21 18 25.5
BTLS Baital 5.53 5 eP **Pb 21 18 22.8 +2.5**
21nm,0.7s
BTLS eS **Sg 21 19 36.5 -4.3**
54nm,1.0s
BTLS Baital 5.53 5 ePn **Pn 21 18 07.3 +1.2**
baz=3.0
BTLS ePg **Pg 21 18 25.5 -3.6**
baz=3.0
BTLS eLg Lg 21 19 40.9
baz=3.0
BTLS Baital 5.53 5 Pg **Pb 21 18 23.6 +3.3**
20nm,0.7s
BTLS Lg Lg 21 19 36.5
33nm,0.9s
KPKS Kokpek 5.58 43 ePN **Pn 21 18 07.0 0.0**
KPKS e 21 18 24.3
KPKS e 21 19 36.4
KPKS Kokpek 5.58 43 eP **Pb 21 18 20.9 -0.3**
50nm,0.5s
KPKS eS **Sb 21 19 34.1 +5.7**
171nm,0.6s
KPKS Kokpek 5.58 43 ePn **Pn 21 18 07.0 0.0**
baz=43
KPKS ePg **Pb 21 18 24.3 +3.1**
baz=43
KPKS eLg Lg 21 19 36.5
baz=43
KPKS Kokpek 5.58 43 Pg **Pb 21 18 21.8 +0.6**
50nm,0.5s
KPKS Lg Lg 21 19 34.0
170nm,0.7s
ARXS Arharly 5.73 34 ePN **Pn 21 18 09.8 +0.9**
ARXS Arharly 5.73 34 eP **Pb 21 18 24.1 +0.4**
53nm,0.9s
ARXS eS **Sb 21 19 39.2 +6.7**
200nm,0.8s
CEP Cherat 5.82 192 P **Pn 21 18 13.8 +3.5**
SHLS Shalkode 5.82 50 ePN Pn 21 18 15.5 +5.2
SHLS e 21 18 35.0
SHLS Shalkode 5.82 50 eP Pb 21 18 30.6 +5.3
35nm,0.8s
SHLS eS **Sg 21 19 50.5 +0.4**
64nm,1.4s
SHLS Shalkode 5.82 50 ePn Pn 21 18 15.6 +5.2
baz=51
SHLS ePg **Pg 21 18 35.1 +0.3**
baz=51
SHLS eLg Lg 21 19 51.6
baz=51
SHLS Shalkode 5.82 50 Pg **Pg 21 18 32.0 -2.7**
35nm,0.7s
BLB Baldybastay 5.93 38 eP **Pb 21 18 28.2 +1.0**
107nm,0.7s
BLB eS **Sb 21 19 46.1 +7.6**
136nm,0.8s
PDGK Podgornoye 5.94 48 PN **Pn 21 18 12.3 +0.4**
PDGK PG **Pb 21 18 28.6 +1.3**
PDGK LG Lg 21 19 44.8
PDGK Podgornoye 5.94 48 Pg **Pb 21 18 27.6 +0.3**
9.1nm,0.5s
PDGK Podgornoye 5.94 48 ⇑Pn **Pn 21 18 12.3 +0.4**
8.8nm,0.6s
PDGK ⇑Pg **Pb 21 18 28.1 +0.7**
38nm,0.8s
PDGK ⇓Lg Lg 21 19 44.8
188nm,1.0s
KBL Kabul 6.08 216 Pn **Pn 21 18 16.2 +2.3**
KBL Kabul 6.08 216 PN **Pn 21 18 16.2 +2.3**
TDK Taldyqorghan 6.61 32 eP **Pb 21 18 41.7 +3.2**
74nm,0.6s
TDK eS **Sg 21 20 09.6 -5.7**
129nm,0.9s
TDK Taldyqorghan 6.61 32 ePg Pb 21 18 44.8 +6.2
baz=32
TDK eLg Lg 21 20 11.9
baz=32
TDK Taldyqorghan 6.61 32 Pg **Pb 21 18 41.8 +3.2**
74nm,0.6s
DJR Jarkent 6.76 43 eP **Pb 21 18 42.6 +1.4**
6.4nm,0.8s
DJR eS Sb 21 20 11.1 +8.9
49nm,1.4s
DJR Jarkent 6.76 43 Pg **Pb 21 18 43.6 +2.4**
8.7nm,0.6s
THW Thamme Wali 6.85 192 P **Pn 21 18 27.7 +3.3**
THN Thein Dam 7.32 164 eP **Pn 21 18 35.2 +4.5**
THN eS **Sn 21 19 57.1 +2.9**
BHK Bhakra 8.46 162 eS Sn 21 20 14.0 -8.2
OTUK Ortayu 8.75 355 P **Pn 21 18 50.6 +0.3**
OTUK Ortayu 8.75 355 ⇑Pn **Pn 21 18 50.6 +0.3**
5.2nm,0.8s
OTUK ⇓Lg Lg 21 21 19.3
50nm,1.2s
MAKZ Makanchi 9.59 38 Pn **Pn 21 19 02.5 +0.6**
MAKZ Makanchi 9.59 38 P **Pn 21 19 02.5 +0.6**
MK31 Makanchi Array 9.73 39 Pn **Pn 21 19 03.0 -0.8**
MK31 Makanchi Array 9.73 39 eP **Pn 21 19 06.1 +2.2**
MK31 Makanchi Array 9.73 39 ⇑Pg Pn 21 19 18.5 +15
2.5nm,0.6s,baz=218,slow=15,SNR=13
MK31 ⇓Lg Lg 21 21 43.4
19nm,1.4s,baz=230,slow=28,SNR=3.8
MKAR Makanchi Array 9.73 39 Pn **Pn 21 19 05.2 +1.3**
0.1nm,0.3s,baz=221,slow=13,SNR=7.2
MKAR Lg Lg 21 21 46.0
0.2nm,0.3s,baz=228,slow=19,SNR=2.9
0.9nm,0.8s
MKAR Makanchi Array 9.73 39 **Pn 21 19 04.8 +0.9**
MKAR Makanchi Array 9.73 39 *i* P **Pn 21 19 05.5 +1.6**
MKAR pmax pmax
comp=Z,1.0nm,0.8s
BRZS Berezniki 10.47 357 eP **Pn 21 19 13.3 -0.5**
BRZS Berezniki 10.47 357 ePn **Pn 21 19 13.3 -0.5**
baz=356
BRZS eLg Lg 21 22 14.7
baz=356
WMQ Urumqi 11.51 64 eP **Pn 21 19 28.5 +0.3**
LGTI Lohaghat 11.52 149 eP Pn 21 19 23.7 -4.6
LGTI eS Sn 21 21 24.9 -12
KUDL Kundal 11.64 166 eP Pn 21 19 26.2 -3.7
KUDL eS Sn 21 21 26.5 -14
KURBB Kurchatov Arra 11.67 16 Pn **Pn 21 19 29.6 -0.7**
baz=207,slow=12,SNR=6.4
KURBB Lg Lg 21 22 47.5
comp=Z,0.1nm,0.3s,baz=205,slow=29,SNR=7.8
comp=Z,0.7nm,0.8s
KURBB Kurchatov Arra 11.67 16 ⇑Pn **Pn 21 19 29.4 -0.8**
comp=Z,3.2nm,0.8s
KURBB ⇑Lg Lg 21 22 49.2
comp=Z,68nm,1.0s
KURK Kurchatov 11.77 16 **Pn 21 19 29.1 -2.6**
KURK Kurchatov 11.77 16 *i* eP **Pn 21 19 35.1 +3.4**
GEYT Alibeck 12.05 267 Pn **Pn 21 19 34.9 -0.7**
comp=Z,0.7nm,0.3s,baz=96,slow=13,SNR=3.0
GEYT Sn **Sn 21 21 50.5 +0.2**
comp=Z,0.9nm,0.3s,baz=96,slow=25,SNR=3.0
comp=Z,2.2nm,0.4s
AB31 Akbulak array 13.66 320 P **Pn 21 19 57.7 +0.2**
AB31 Akbulak array 13.66 320 P **Pn 21 19 57.1 -0.4**
comp=Z,3.6nm,0.7s,baz=132,slow=12,SNR=28
ABKAR Akbulak array 13.66 320 Pn **Pn 21 19 57.1 -0.4**
ABKAR Akbulak array 13.66 320 Pn **Pn 21 19 56.9 -0.6**
AKTO Aktyubinsk 15.38 320 Pn **Pn 21 20 20.8 +0.1**
comp=Z,0.3nm,0.3s,baz=125,slow=15,SNR=13
AKTO Sn **Sn 21 23 01.6 -10**
comp=Z,0.1nm,0.3s,baz=162,slow=20,SNR=1.0
comp=Z,3.7nm,0.8s
AKTO Aktyubinsk 15.38 320 ⇑P **Pn 21 20 19.0 -1.7**
ZAA0 Zalesovo Array 16.38 25 Pn **Pn 21 20 32.7 -0.9**
ZALV Zalesovo Beam 16.38 25 Pn **Pn 21 20 31.6 -2.0**
comp=Z,0.3nm,0.3s,baz=211,slow=10,SNR=17
ZALV Lg Lg 21 25 16.2
comp=Z,0.1nm,0.3s,baz=217,slow=24,SNR=2.5
comp=Z,4.8nm,0.7s
ZALV Zalesovo Beam 16.38 25 Pn **Pn 21 20 33.1 -0.5**
ZALV **PcP 21 25 24.5 -1.8**
ZALV Zalesovo Beam 16.38 25 *i* P **Pn 21 20 33.9 +0.3**
ZALV pmax pmax
comp=Z,5.0nm,0.7s
GOMU GeErMu 17.22 94 P **Pn 21 20 42.5 -2.4**
GOMU pP P 21 20 49.3 +2.8
GOMU pmax pmax
comp=Z,3.0nm,0.8s
LKRN Lenkeran, Azer 19.12 275 P **Pn 21 21 09.0 +1.3**
ARU Arti 19.54 335 P **P 21 21 11.4 0.0**
baz=146,slow=12,SNR=9.6
comp=Z,4.9nm,0.7s
ARU Arti 19.54 335 P **P 21 21 10.6 -0.8**
ARU Arti 19.54 335 *c* iP **Pn 21 21 12.3 -0.3**
ARU S **S 21 24 54.0 +1.7**
ARU pmax pmax
comp=Z,5.0nm,0.7s
SEKA Sheki 20.02 283 P **P 21 21 18.1 +1.3**
MNGR Mingechevir, A 20.14 282 P Pn 21 21 20.4 +0.5
KNGR Kungurtug, Tuv 20.22 49 ⇑eP Pn 21 21 21.7 +0.8
GTA Gaotai 20.37 82 eP **P 21 21 19.0 -1.7**
GTA pP Pn 21 21 23.3 +0.6
GTA sP pP 21 21 26.3 +2.9
GTA pmax pmax
comp=Z,2.0nm,1.1s
ZKTA Zakatala 20.43 285 P Pn 21 21 23.6 +0.3
GANJ Ganja 20.73 282 P Pn 21 21 26.7 -0.1
NAX Nakhchivan 21.56 278 P **P 21 21 35.5 +2.0**
BELG Belogornoye 21.92 314 P **P 21 21 37.5 +0.4**
comp=Z,4.7nm,0.7s,baz=29,slow=3.3,SNR=3.0
comp=Z,4.7nm,0.7s
BELG Belogornoye 21.92 314 ⇓eP **P 21 21 41.6 +4.5**
BELG pmax pmax
comp=Z,4.0nm,1.0s
GNI Garni 21.98 281 P **P 21 21 38.1 -0.1**
comp=Z,2.6nm,0.5s,baz=59,slow=4.4,SNR=2.7
comp=Z,2.6nm,0.5s
GNI Garni 21.98 281 P **P 21 21 37.4 -0.8**
GNI lAmb lAmb 21 22 03.6
comp=Z,22nm,1.4s
GNI Garni 21.98 281 ⇓eP **P 21 21 43.1 +4.9**
GNI pmax pmax
comp=Z,10.0nm,1.0s
NCK Nalchik 22.61 290 ⇓eP **P 21 21 50.1 +5.4**
NCK pmax pmax
comp=Z,10.0nm,0.7s
ONI Oni 22.74 287 P **P 21 21 47.5 +1.4**
ONI lAmb lAmb 21 21 50.8
comp=Z,11nm,0.7s
ONI Oni 22.74 287 P **P 21 21 47.5 +1.4**
ONI pmax pmax
comp=Z,11nm,0.7s
KBZ Khabaz 23.12 290 P **P 21 21 50.1 +0.2**
comp=Z,0.5nm,0.4s,baz=41,slow=18,SNR=1.5
comp=Z,0.5nm,0.4s
KVAR Kislovodsk Arr 23.27 291 P **P 21 21 51.8 +0.2**
comp=Z,1.6nm,0.7s,baz=77,slow=18,SNR=1.8
comp=Z,1.6nm,0.7s
KIV Kislovodsk 23.27 291 eP **P 21 21 55.0 +3.3**
KIV e 21 22 21.3
KIV ePPP PPP 21 22 31.3
KIV e 21 25 43.4
KIV pmax pmax
comp=Z,5.0nm,0.8s
KIV MLR MLR
comp=Z,44nm,13.0s
LZH Lanzhou 24.23 88 eP **P 21 22 05.0 +3.9**
LZH pP sP 21 22 10.0 +4.8
LZH sP pP 21 22 12.0 +8.0
LZH pmax pmax
comp=Z,13nm,1.4s
KIRV Kirov 24.48 329 ⇓eP **P 21 22 06.9 +4.0**
ULN Ulaanbaatar 25.55 60 ⇑eP **P 21 22 16.5 +3.5**
ULN pmax pmax
comp=Z,5.0nm,1.9s
BR131 Keskin Array S 30.46 283 ⇑eP **P 21 22 58.3 +1.4**
BRTR Keskin Array B 30.46 283 P **P 21 22 57.9 +0.9**
comp=Z,2.0nm,0.7s,baz=90,slow=8.5,SNR=13
comp=Z,2.0nm,0.7s
BRTR Keskin Array B 30.46 283 P **P 21 22 57.3 +0.4**
BRTR Keskin Array B 30.46 283 *i* P **P 21 22 58.4 +1.5**
BRTR pmax pmax
comp=Z,2.0nm,0.7s
AKASG Malin Array Be 32.66 305 P **P 21 23 15.2 -0.7**
comp=Z,0.1nm,0.3s,baz=77,slow=7.2,SNR=3.8
comp=Z,0.1nm,0.3s
AKBB Malin Array Si 32.66 305 ⇓eP **P 21 23 17.6 +1.7**
AKBB pmax pmax
comp=Z,2.0nm,0.8s
MLR Muntele Rosu 35.08 296 P **P 21 23 36.4 -0.8**
MLR lAmb lAmb 21 23 44.1
comp=Z,5.2nm,1.1s
MLR Muntele Rosu 35.08 296 P **P 21 23 36.4 -0.8**
MLR pmax pmax
comp=Z,5.0nm,1.1s
FINES FINESS Array B 36.12 323 P **P 21 23 45.9 +0.1**
comp=Z,0.4nm,0.4s,baz=112,slow=9.7,SNR=7.8
comp=Z,0.4nm,0.4s
FINES FINESS Array B 36.12 323 P **P 21 23 46.2 +0.4**
FINES FINESS Array B 36.12 323 *i* P **P 21 23 48.0 +2.2**
HFS Hagfors 41.92 320 P **P 21 24 34.5 +0.1**
comp=Z,1.8nm,0.5s,baz=85,slow=9.1,SNR=9.4
comp=Z,1.8nm,0.5s
GERES GERESS Array B 42.81 303 P **P 21 24 41.0 -0.9**
comp=Z,0.3nm,0.6s,baz=64,slow=8.9,SNR=3.2
comp=Z,0.3nm,0.6s
GERES GERESS Array B 42.81 303 P **P 21 24 41.0 -0.9**
NC303 NORSAR Array S 43.09 321 P **P 21 24 44.1 +0.2**
NC303 lAmb lAmb 21 24 55.1
comp=Z,17nm,1.3s
NB2 NORSAR Subarra 43.17 321 P **P 21 24 44.4 -0.1**
comp=Z,0.7nm,0.6s,baz=90,slow=8.6
NOA NORSAR Array B 43.17 321 P **P 21 24 43.9 -0.7**
comp=Z,0.9nm,0.7s,baz=90,slow=8.0,SNR=5.5
comp=Z,0.9nm,0.7s
NC204 NORSAR Array S 43.39 321 P **P 21 24 45.9 -0.5**
CUC Castrocucco 43.59 290 P **P 21 24 49.4 +1.1**
NRCA Norcia 44.65 295 P **P 21 24 56.2 -0.6**
NRCA lAmb lAmb 21 25 35.3
comp=Z,3.9nm,1.1s
DAVOX Davos/Dischmat 45.78 301 P **P 21 25 05.1 -0.7**
comp=Z,1.4nm,0.5s,baz=114,slow=18,SNR=2.5
comp=Z,1.4nm,0.5s
ESDC Sonseca Array 57.75 297 P **P 21 26 34.2 -0.9**
comp=Z,0.3nm,0.6s,baz=56,slow=7.2,SNR=1.4
comp=Z,0.3nm,0.6s
TOA0 Torodi Ar. Sit 67.69 269 P **P 21 27 40.2 -1.5**
TOA0 lAmb lAmb 21 28 11.9
comp=Z,5.3nm,1.3s
TORD Torodi Ar. Bea 67.69 269 P **P 21 27 39.9 -1.7**
comp=Z,0.8nm,0.7s,baz=47,slow=5.3,SNR=16
comp=Z,0.8nm,0.7s
TORD Torodi Ar. Bea 67.69 269 P **P 21 27 40.2 -1.5**
TORD lAmb lAmb 21 27 40.7
comp=Z,1.4nm,0.9s
IMAR Indian Mountai 68.71 19 P **P 21 27 45.3 -2.0**
ILAR Eielson Array 71.34 17 P **P 21 28 00.1 -3.5**
comp=Z,0.7nm,0.9s,baz=311,slow=4.5,SNR=4.2
comp=Z,0.7nm,0.9s
BARN Barnard Glacie 75.76 17 P **P 21 28 26.3 -3.5**
YKA Yellowknife Ar 78.12 4 P **P 21 28 41.6 -1.2**
comp=Z,0.4nm,0.6s,baz=350,slow=5.4,SNR=4.4
comp=Z,0.4nm,0.6s
YKA Yellowknife Ar 78.12 4 P **P 21 28 42.1 -0.7**
YKA Yellowknife Ar 78.12 4 *i* P **P 21 28 45.0 +2.2**
YKA pmax pmax
comp=Z,1.0nm,0.9s
WRA Warramunga Arr 82.03 124 P P 21 29 00.5 -4.0
comp=Z,0.4nm,0.6s,baz=322,slow=5.1,SNR=9.8
comp=Z,0.4nm,0.6s
WRA Warramunga Arr 82.03 124 P **P 21 29 01.0 -3.5**
WRA Warramunga Arr 82.03 124 P **P 21 29 01.0 -3.5**
WB2 Warramunga Arr 82.04 124 P **P 21 29 01.0 -3.6**
WR0 Warramunga Arr 82.18 124 P **P 21 29 02.3 -3.0**
ASAR Alice Springs 84.48 127 P P 21 29 13.2 -4.0
comp=Z,0.2nm,0.6s,baz=316,slow=5.3,SNR=5.0
comp=Z,0.2nm,0.6s
ASAR Alice Springs 84.48 127 P **P 21 29 15.6 -1.5**
ASAR Alice Springs 84.48 127 P **P 21 29 15.6 -1.5**

*IDC **26** 21:22:04.9±0.9, 72.°90N×5.°09E, h0km, mb3.4/8, mbtmp3.6/14, ML3.4/6, MS3.4/27, Error ellipse: s-maj=20.7km s-min=15.2km az=71.0*
*NAO **26** 21:22:04.2±312.0, 72.°91N×4.°66E, h10km±564km, ML3.8*
*BER **26** 21:22:07.6±1.8, 73.°03N×4.°88E, h18km±26km, ML2.2, ML3.8(NAO), Confirmed Earthquake*
*DNK **26** 21:22:08.9±4.4, 73.°08N×3.°85E, h0km±133km, ML2.0*
ISC 26 21:22:05.6±0.6, **72.°94N**±0.°05×**5.°41E**±0.°06, **h10km, n88,**
s26, 16/77, mb3.4/8, MS3.3/21, Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BJO1	**Bjornoya**	**4.13**	**61**	Pn	**Pn**	**21 23 09.1**	**+0.5**
BJO1	**Bjornoya**	**4.13**	**61**	eP	**Pn**	**21 23 09.0**	**+0.5**
BJO1				eS	**Sn**	**21 23 55.4**	**-1.5**
BJO1				IAML		21 24 03.1	
	comp=Z,4.9nm,0.7s						
JMIC	**Jan Mayen**	**4.74**	**252**	LR	LR	21 24 42.4	
	comp=Z,197nm,18.9s,baz=188,slow=34						
HSPB	**Hornsund (broa**	**4.85**	**28**	Pn	**Pn**	**21 23 18.5**	**+0.1**
HSPB	**Hornsund (broa**	**4.85**	**28**	eP	**Pn**	**21 23 18.0**	**-0.5**
HSPB				eS	**Sn**	**21 24 09.0**	**-5.5**
HSPB				IAML		21 24 19.2	
	comp=Z,2.2nm,0.7s						
TRO	**Tromso**	**5.47**	**121**	eP	**Pn**	**21 23 27.6**	**+0.7**
TRO				eS	**Sn**	**21 24 25.6**	**-4.2**
TRO				IAML		21 24 30.9	
	comp=Z,11nm,0.4s						
LOF	**Lofoten**	**5.54**	**147**	eP	**Pn**	**21 23 29.3**	**+1.4**
LOF				eS	**Sn**	**21 24 30.1**	**-1.4**
LOF				IAML		21 24 32.0	
	comp=Z,9.5nm,0.4s						
BRBA	**Barentsburg A**	**5.59**	**19**	Pn	**Pn**	**21 23 29.7**	**+1.1**
BRBA	**Barentsburg A**	**5.59**	**19**	eP	**Pn**	**21 23 28.7**	**+0.1**
JETT	**Jettan, Norway**	**5.90**	**118**	Pn	**Pn**	**21 23 34.6**	**+1.6**
JETT				Sn	**Sn**	**21 24 38.4**	**-2.2**
JETT				IAML		21 24 44.7	
	comp=Z,8.4nm,0.5s						
SPA0	**Spitsbergen Ar**	**5.92**	**22**	Pn	**Pn**	**21 23 33.6**	**+0.4**
	baz=218,slow=16						
SPA0	**Spitsbergen Ar**	**5.92**	**22**	Pn	**Pn**	**21 23 33.6**	**+0.4**
	baz=218,slow=16						
SPA0				IAML		21 24 36.4	
	comp=Z,1.9nm,0.8s						
SPITS	**Spitsbergen Ar**	**5.92**	**22**	Pn	**Pn**	**21 23 33.1**	**-0.1**
	baz=202,slow=15						
	comp=Z,6.5nm,0.4s						
STEI	**Steigen**	**6.01**	**142**	eP	**Pn**	**21 23 35.2**	**+0.8**
STEI				IAML		21 24 44.0	
	comp=Z,6.6nm,0.6s						
HAMF	**Hammerfest**	**6.16**	**103**	Pn	**Pn**	**21 23 36.6**	**+0.2**
HAMF				Sn	**Sn**	**21 24 43.8**	**-3.0**
HAMF	**Hammerfest**	**6.16**	**103**	eP	**Pn**	**21 23 36.6**	**+0.2**
HAMF				eS	**Sn**	**21 24 43.7**	**-3.2**
HAMF				IAML		21 24 45.4	
	comp=Z,6.0nm,0.4s						
KBS	**Kingsbay**	**6.22**	**12**	Pn	**Pn**	**21 23 36.6**	**-0.6**
KBS	**Kingsbay**	**6.22**	**12**	*i* P	**Pn**	**21 23 38.5**	**+1.2**
KBS	**Kingsbay**	**6.22**	**12**	eP	**Pn**	**21 23 36.2**	**-1.0**
KBS				*e*		21 24 22.6	
KBS				eS	Sn	21 24 39.1	-9.2
KBS				IAML		21 24 50.3	
	comp=Z,3.2nm,0.6s						
HOPEN	**Hopen**	**6.27**	**46**	*e*	Pn	21 23 45.2	+7.3
HOPEN				eS	**Sn**	**21 24 44.6**	**-4.8**
HOPEN				IAML		21 25 00.9	
	comp=Z,6.9nm,0.5s						
KIF	**Kilpisjarvi**	**6.38**	**121**	Pn	**Pn**	**21 23 40.8**	**+1.3**
KIF	**Kilpisjarvi**	**6.38**	**121**	eP	**Pn**	**21 23 40.6**	**+1.1**
FAUS	**Fauske**	**6.51**	**144**	eP	**Pn**	**21 23 41.8**	**+0.6**
FAUS				eS	**Sn**	**21 24 51.7**	**-3.7**
FAUS				IAML		21 24 54.4	
	comp=Z,4.6nm,0.3s						
KONS	**Konsvik**	**7.00**	**154**	eP	**Pn**	**21 23 48.1**	**+0.2**
KONS				eS	**Sn**	**21 25 02.1**	**-5.2**
KONS				IAML		21 25 08.7	
	comp=Z,9.2nm,0.4s						
KTK1	**Kautokeino**	**7.01**	**115**	eP	**Pn**	**21 23 50.0**	**+1.8**
KTK1				IAML		21 25 15.1	
	comp=Z,2.1nm,0.3s						
SALU	**Saltoluokta**	**7.13**	**135**	eP	**Pn**	**21 23 50.8**	**+1.1**
SALU				eS	**Sn**	**21 25 05.6**	**-5.0**
STOK	**Stokkvaagen**	**7.14**	**155**	eP	**Pn**	**21 23 50.5**	**+0.6**
ARA0	**ARCESS Array S**	**7.30**	**108**	Pn	**Pn**	**21 23 53.1**	**+1.0**
	baz=319,slow=12						
ARA0	**ARCESS Array S**	**7.30**	**108**	Pn	**Pn**	**21 23 53.1**	**+1.0**
	baz=319,slow=12						
ARA0				IAML		21 25 24.0	
	comp=Z,1.8nm,0.5s						
ARCES	**ARCESS Array B**	**7.30**	**108**	Pn	**Pn**	**21 23 53.1**	**+1.0**
	comp=Z,0.7nm,0.3s,baz=319,slow=12,SNR=93						
ARCES				Sn	**Sn**	**21 25 10.8**	**-4.0**
	comp=Z,0.3nm,0.3s,baz=309,slow=21,SNR=1.7						
	comp=Z,1.2nm,0.3s						
DAG	**Danmarks Havn**	**7.33**	**313**	eP	Pn	21 23 48.3	-4.1
DAG				*i* S	Sn	21 25 02.3	-13
DAG				IAML		21 25 06.2	
	comp=Z,7.0nm,0.6s						
DAG	**Danmarks Havn**	**7.33**	**313**	eP	Pn	21 23 47.5	-4.9
DAG				eS	Sn	21 25 02.5	-13
DBG	**Daneborg**	**7.34**	**293**	Pn	Pn	21 23 47.5	-5.0
DBG	**Daneborg**	**7.34**	**293**	eP	Pn	21 23 48.5	-4.1
DBG	**Daneborg**	**7.34**	**293**	eP	Pn	21 23 47.7	-4.8
DBG				eS	Sn	21 25 03.1	-13
MOR8	**Moi Rana**	**7.49**	**151**	eP	**Pn**	**21 23 55.1**	**+0.4**
MOR8				eS	**Sn**	**21 25 12.7**	**-6.9**
MOR8				IAML		21 25 17.6	
	comp=Z,9.0nm,0.7s						
HEF	**Hetta**	**7.54**	**118**	eP	**Pn**	**21 23 56.7**	**+1.3**

KEV	**Kevo**	**7.60**	**104**	*eP*	**Pn**	**21 23 56.2**	**+0.1**
NSS	**Namsos**	**8.77**	**161**	*eP*	**Pn**	**21 24 13.2**	**+1.0**
NSS				*eS*	**Sn**	**21 25 44.7**	**-6.3**
NSS				IAML		21 25 50.5	
	comp=Z,9.5nm,0.6s						
SCO	**Scoresbysund**	**8.89**	**267**	*eP*	**Pn**	**21 24 11.9**	**-1.9**
NOR	**Nord**	**9.84**	**341**	Pn	**Pn**	**21 24 24.3**	**-2.6**
NOR	**Nord**	**9.84**	**341**	*eP*	**Pn**	**21 24 25.5**	**-1.3**
NOR				*eS*	Sn	21 26 07.6	-10
NOR				IAML		21 26 35.4	
	comp=Z,2.6nm,0.5s						
NOR	**Nord**	**9.84**	**341**	*eP*	**Pn**	**21 24 23.6**	**-3.3**
TBLU	**Trondheim**	**9.90**	**167**	*eP*	**Pn**	**21 24 26.1**	**-1.6**
NOD	**Norderasen**	**10.15**	**155**	*eP*	**Pn**	**21 24 31.6**	**+0.5**
APA0	**Apatity Array**	**10.65**	**106**	Pn	**Pn**	**21 24 37.7**	**-0.3**
	baz=309,slow=12						
APA0	**Apatity Array**	**10.65**	**106**	Pn	**Pn**	**21 24 37.7**	**-0.3**
	baz=309,slow=12						
NB2	**NORSAR Subarra**	**12.16**	**166**	Pn	**Pn**	**21 24 59.3**	**+0.6**
	baz=346,slow=16						
NB2	**NORSAR Subarra**	**12.16**	**166**	Pn	**Pn**	**21 24 59.3**	**+0.6**
	baz=346,slow=16						
NOA	**NORSAR Array B**	**12.16**	**166**	Pn	**Pn**	**21 24 59.2**	**+0.6**
	baz=349,slow=13,SNR=5.0						
NOA				LR	LR	21 29 34.6	
	comp=Z,85nm,18.2s,baz=350,slow=37						
	comp=Z,0.3nm,0.4s						
NRA0	**NORESS Array S**	**12.48**	**166**	Pn	**Pn**	**21 25 02.6**	**-0.4**
	baz=348,slow=14						
NRA0	**NORESS Array S**	**12.48**	**166**	Pn	**Pn**	**21 25 02.6**	**-0.4**
	baz=348,slow=14						
BORG	**Borgarnes**	**12.54**	**243**	LR	LR	21 28 31.9	
	comp=Z,88nm,21.2s,baz=326,slow=31						
HFS	**Hagfors**	**13.26**	**162**	Pn	**Pn**	**21 25 13.3**	**-0.3**
	comp=Z,0.8nm,0.3s,baz=358,slow=12,SNR=15						
HFS				Sn	Sn	21 27 29.1	-12
	comp=Z,0.2nm,0.3s,baz=15,slow=22,SNR=1.4						
HFS				LR	LR	21 29 59.7	
	comp=Z,133nm,19.4s,baz=11,slow=36						
	comp=Z,3.1nm,0.5s						
HFS	**Hagfors**	**13.26**	**162**	Pn	**Pn**	**21 25 13.7**	**+0.2**
	baz=353,slow=14						
HFS	**Hagfors**	**13.26**	**162**	Pn	**Pn**	**21 25 13.7**	**+0.2**
	baz=353,slow=14						
FIA0	**FINESS Array S**	**13.92**	**135**	P	**Pn**	**21 25 22.8**	**+0.1**
	baz=342,slow=14						
FIA0	**FINESS Array S**	**13.92**	**135**	P	**Pn**	**21 25 22.8**	**+0.1**
	baz=342,slow=14						
FINES	**FINESS Array B**	**13.92**	**135**	Pn	**Pn**	**21 25 22.9**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=341,slow=12,SNR=26						
FINES				LR	LR	21 30 26.0	
	comp=Z,132nm,19.1s,baz=12,slow=36						
	comp=Z,3.5nm,0.6s						
KLMR	**Klimovskoe**	**17.68**	**115**	*e*	**P**	**21 26 13.6**	**+1.2**
KLMR				AMP		21 26 15.6	
	comp=Z,11nm,0.9s						
EKA	**Eskdalemuir Ar**	**18.03**	**196**	P	**Pn**	**21 26 16.5**	**+0.6**
	baz=12,slow=11						
	comp=Z,0.7nm,0.6s						
SFJD	**Kangerlussuaq**	**19.37**	**281**	LR	LR	21 33 02.3	
	comp=Z,124nm,19.1s,baz=34,slow=34						
OBN	**Obninsk**	**22.01**	**128**	LR	LR	21 35 08.2	
	comp=Z,39nm,20.1s,baz=356,slow=36						
KIRV	**Kirov**	**22.32**	**107**	LR	LR	21 36 09.9	
	comp=Z,58nm,19.6s,baz=321,slow=38						
VRAC	**Vranov**	**24.23**	**162**	LR	LR	21 36 59.7	
	comp=Z,87nm,20.1s,baz=352,slow=37						
GERES	**GERESS Array B**	**24.46**	**167**	P	**P**	**21 27 26.6**	**+2.2**
	comp=Z,0.6nm,0.8s,baz=8.7,slow=9.7,SNR=5.2						
	comp=Z,0.6nm,0.8s						
AKASG	**Malin Array Be**	**24.62**	**142**	P	**P**	**21 27 26.8**	**+1.1**
AKASG				LR	LR	21 36 50.5	
	comp=Z,165nm,20.2s,baz=4.0,slow=36						
	comp=Z,0.9nm,0.7s						
RES	**Resolute Bay**	**24.90**	**322**	LR	LR	21 37 20.3	
	comp=Z,112nm,18.3s,baz=54,slow=37						
DAVOX	**Davos/Dischmat**	**26.32**	**173**	LR	LR	21 37 34.3	
	comp=Z,84nm,21.8s,baz=280,slow=35						
ARU	**Arti**	**26.78**	**99**	LR	LR	21 39 32.7	
	comp=Z,44nm,18.1s,baz=285,slow=39						
FRB	**Frobisher Bay**	**26.87**	**289**	LR	LR	21 38 26.2	
	comp=Z,25nm,21.0s,baz=18,slow=37						
BELG	**Belogornoye**	**27.25**	**116**	LR	LR	21 38 27.8	
	comp=Z,73nm,20.1s,baz=260,slow=36						
AKTO	**Aktyubinsk**	**31.88**	**106**	LR	LR	21 42 02.5	
	comp=Z,55nm,20.3s,baz=354,slow=38						
KBZ	**Khabaz**	**34.12**	**128**	LR	LR	21 43 10.7	
	comp=Z,90nm,19.1s,baz=30,slow=37						
BRTR	**Keskin Array B**	**36.02**	**142**	P	**P**	**21 29 09.0**	**+2.3**
	comp=Z,0.7nm,0.7s,baz=342,slow=9.3,SNR=2.9						
BRTR				LR	LR	21 45 52.1	
	comp=Z,50nm,18.5s,baz=360,slow=40						
	comp=Z,0.7nm,0.7s						
INK	**Inuvik**	**36.47**	**336**	LR	LR	21 44 29.0	
	comp=Z,45nm,21.7s,baz=288,slow=37						
ZALV	**Zalesovo Beam**	**36.61**	**77**	P	**P**	**21 29 13.3**	**+1.9**
	comp=Z,0.3nm,0.4s,baz=310,slow=9.2,SNR=1.5						
ZALV				PcP	**PcP**	**21 31 34.6**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=318,slow=4.1,SNR=1.5						
ZALV				LR	LR	21 47 57.2	
	comp=Z,29nm,19.0s,baz=12,slow=42						
	comp=Z,0.3nm,0.4s						
GNI	**Garni**	**37.94**	**128**	LR	LR	21 45 10.5	
	comp=Z,60nm,19.1s,baz=0.5,slow=36						
YKA	**Yellowknife Ar**	**38.95**	**320**	LR	LR	21 44 45.2	
	comp=Z,47nm,20.9s,baz=350,slow=35						
ILAR	**Eielson Array**	**41.30**	**342**	P	**P**	**21 29 51.7**	**+1.2**
	comp=Z,0.6nm,1.0s,baz=10,slow=5.6,SNR=3.1						
	comp=Z,0.6nm,1.0s						
MKAR	**Makanchi Array**	**42.25**	**84**	P	**P**	**21 30 00.4**	**+1.9**
	comp=Z,0.4nm,0.9s,baz=333,slow=4.5,SNR=2.3						
	comp=Z,0.4nm,0.9s						
DLBC	**Dease Lake**	**45.41**	**329**	LR	LR	21 48 54.0	
	comp=Z,124nm,21.0s,baz=118,slow=35						
ULM	**Lac du Bonnet**	**45.93**	**299**	LR	LR	21 49 03.9	
	comp=Z,60nm,19.8s,baz=347,slow=35						
ELK	**Elko**	**59.54**	**311**	LR	LR	21 58 45.3	
	comp=Z,50nm,18.4s,baz=322,slow=37						
TORD	**Torodi Ar. Bea**	**59.81**	**184**	P	**P**	**21 32 11.5**	**+0.7**
	comp=Z,0.8nm,0.6s,baz=1.7,slow=6.8,SNR=6.7						
	comp=Z,0.8nm,0.6s						
YBH	**Yreka Blue Hor**	**60.18**	**317**	LR	LR	21 56 40.1	
	comp=Z,61nm,18.7s,baz=336,slow=34						
TXAR	**Lajitas Array**	**67.58**	**297**	P	**P**	**21 33 02.0**	**0.0**
	comp=Z,0.2nm,0.7s,baz=35,slow=3.3,SNR=2.4						
TXAR				LR	LR	22 03 56.9	
	comp=Z,32nm,18.8s,baz=312,slow=37						
	comp=Z,0.2nm,0.7s						
ASAR	**Alice Springs**	**123.36**	**59**	PKP	**PKPdf**	**21 41 01.9**	**-0.3**
	comp=Z,0.3nm,0.8s,baz=8.6,slow=1.6,SNR=4.2						

*IDC **26** 21:23:21.9±1.0, 12°.12N×143°.84E, h0km, mb3.8/8, mbtmp3.8/8, Error ellipse: s-maj=40.9km s-min=21.0km az=118.0*

ISC 26 21:23:26.0±0.8, 12°.1N±0°.2×143°.9E±0°.2, h26km, n9, σ1§29/10, mb4.0/8, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.77**	**33**	Pn		**Pn**	**Pn**	**21 23 54.9**	**0.0**
	47nm,0.3s,baz=167,slow=8.5,SNR=11								
GUMO				Sn		**Sn**	**Sn**	**21 24 16.3**	**-0.3**
	55nm,0.3s,baz=189,slow=21,SNR=7.4								
WRA	**Warramunga Arr**	**33.20**	**197**	P		**P**	**P**	**21 30 01.6**	**+0.7**
	0.2nm,0.7s,baz=11,slow=10,SNR=1.2								
	0.2nm,0.7s								
MKAR	**Makanchi Array**	**61.89**	**317**	P		**P**	**P**	**21 33 44.2**	**+0.9**
	0.2nm,0.5s,baz=100,slow=7.5,SNR=4.3								
	0.2nm,0.5s								
ILAR	**Eielson Array**	**70.32**	**25**	P		**P**	**P**	**21 34 35.9**	**-1.2**
	0.6nm,0.6s,baz=248,slow=5.7,SNR=11								
	0.6nm,0.6s								
YKA	**Yellowknife Ar**	**84.61**	**27**	P		**P**	**P**	**21 35 58.0**	**+1.0**
	0.5nm,0.5s,baz=287,slow=5.0,SNR=10								
	0.5nm,0.5s								
ARCES	**ARCESS Array B**	**88.19**	**342**	P		**P**	**P**	**21 36 13.7**	**-0.7**
	1.3nm,0.9s,baz=70,slow=5.3,SNR=3.8								
	1.3nm,0.9s								
NVAR	**Mina Array Bea**	**88.60**	**51**	P		**P**	**P**	**21 36 19.1**	**+1.8**
	0.6nm,0.7s,baz=273,slow=5.6,SNR=6.1								
	0.6nm,0.7s								
VNDA	**Vanda**	**90.05**	**176**	P		**P**	**P**	**21 36 21.3**	**-1.6**
	0.3nm,0.7s,baz=323,slow=5.1,SNR=1.5								
	0.3nm,0.7s								
FINES	**FINESS Array B**	**92.09**	**335**	P		**P**	**P**	**21 36 31.5**	**-1.3**
	0.6nm,0.4s,baz=64,slow=4.9,SNR=10								
	0.6nm,0.4s								

*KRNET **26** 21:34:01.0±0.1, 39°.48N×73°.82E, mb3.4*
*SOME **26** 21:34:02.8, 39°.47N×73°.53E, h5km*
*NNC **26** 21:34:05.2±1.9, 39°.56N×73°.46E, h0km, mb3.8, mpv3.3, Error ellipse: s-maj=14.7km s-min=7.0km az=174.0*

ISC 26 21:34:06.1±1.7, 39°.64N±0°.06×73°.43E±0°.03, h9km±12km, n35, σ2§56/52, 14C-6D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.01**	**331**	⇑*iP*			**Pg**	**21 34 25.0**	**-0.5**
	baz=23								
OHH				⇑*iS*			**Sn**	**21 34 42.6**	**+1.6**
	baz=23								
DRK	**Karamyk**	**1.27**	**263**	⇓*iP*			**Pb**	**21 34 29.2**	**-1.1**
	baz=71								
DRK				⇓*iS*			**Sn**	**21 34 49.7**	**+2.1**
	baz=71								
BTK	**Batken**	**2.05**	**283**	⇑*eP*			**Pn**	**21 34 40.6**	**-0.3**
	baz=85								
BTK				⇑*iS*			**Sb**	**21 35 09.6**	**+0.4**
	baz=85								
ARLS	**Aral**	**2.32**	**17**	⇑*iP*			Pn	21 34 41.2	-3.5
	baz=9.0								
ARLS				⇑*iS*			**Sn**	**21 35 10.6**	**-2.8**
	baz=9.0								
GAR	**Garm**	**2.50**	**256**	⇑*iP*			**Pn**	**21 34 45.8**	**-1.2**
	baz=61								
GAR				⇑*iS*			**Sn**	**21 35 18.5**	**+0.9**
	baz=61								
TRKS	**Terek-Say**	**2.57**	**318**	⇓*eP*			**Pn**	**21 34 47.1**	**-0.9**
	baz=15								
TRKS				⇓*iS*			**Sn**	**21 35 20.8**	**+1.3**
	baz=15								
UCH	**Uchtor**	**2.71**	**17**	⇑*iP*			Pn	21 34 46.9	-3.4
	baz=11								
UCH				⇑*iS*			**Sn**	**21 35 20.5**	**-3.0**
	baz=11								
BOOM	**Boomskoye usch**	**3.42**	**33**	⇑*eP*			Pn	21 34 55.3	-4.5
	baz=27								
BOOM				⇑*eS*			**Sn**	**21 35 35.3**	**-5.3**
	baz=27								
IUG	**Iuzhnay**	**3.59**	**315**	*eP*			**Pb**	**21 35 11.7**	**+1.9**
	144nm,0.5s								
IUG				*eS*			**Sg**	**21 36 01.8**	**+0.4**
	23nm,0.5s								
IUG	**Iuzhnay**	**3.59**	**315**	Pg			**Pb**	**21 35 11.7**	**+1.9**
	144nm,0.5s								
IUG				Lg			Lg	21 36 01.8	
	23nm,0.5s								
TKM2	**Tokmak 2**	**3.66**	**26**	⇑Pg			**Pg**	**21 35 17.3**	**+1.1**
	2.9nm,0.5s								
TKM2				⇓Lg			Lg	21 36 04.5	
	3.0nm,0.5s								
KST	**Kastek**	**3.90**	**29**	*eP*			**Pb**	**21 35 16.5**	**+1.4**
	1.8nm,0.4s								
KST				*eS*			**Sg**	**21 36 09.6**	**-1.7**
	9.8nm,0.7s								
KST	**Kastek**	**3.90**	**29**	Pg			**Pb**	**21 35 16.5**	**+1.4**
	1.8nm,0.4s								
KST				Lg			Lg	21 36 10.7	
	9.8nm,0.7s								
SGDS	**Sogindy**	**3.91**	**13**	*eP*			**Pb**	**21 35 17.0**	**+1.7**
	2.1nm,0.3s								
SGDS				*eS*			**Sg**	**21 36 10.7**	**-1.1**
	2.3nm,0.3s								
SGDS	**Sogindy**	**3.91**	**13**	Pg			**Pb**	**21 35 17.0**	**+1.7**
SGDS				Lg			Lg	21 36 11.3	
DGS	**Degeres**	**4.01**	**25**	*eP*			**Pb**	**21 35 20.1**	**+3.1**
	1.1nm,0.4s								
DGS				*eS*			**Sg**	**21 36 15.5**	**+0.7**
	16nm,0.8s								
DGS	**Degeres**	**4.01**	**25**	Pg			**Pb**	**21 35 20.1**	**+3.1**
DGS				Lg			Lg	21 36 15.5	
KK31	**Karatay Array**	**4.10**	**329**	⇓Pg			**Pb**	**21 35 21.5**	**+3.1**
	1.4nm,0.4s,baz=140,slow=15,SNR=5.7								
KK31				⇑Lg			Lg	21 36 17.1	
	2.3nm,0.4s								
TNSS	**Tian-Shan**	**4.31**	**37**	*eP*			**Pb**	**21 35 25.0**	**+2.8**
	0.6nm,0.2s								
TNSS				*eS*			**Sg**	**21 36 24.3**	**-0.1**
	2.8nm,0.5s								
TNSS	**Tian-Shan**	**4.31**	**37**	Pg			**Pb**	**21 35 25.0**	**+2.8**
	0.6nm,0.2s								
TNSS				Lg			Lg	21 36 24.3	
	2.8nm,0.5s								
BRLS	**Borolday**	**4.33**	**323**	*eP*			**Pb**	**21 35 23.8**	**+1.3**
	1.1nm,0.2s								
BRLS				*eS*			**Sg**	**21 36 21.9**	**-3.3**
	4.2nm,0.4s								
BRLS	**Borolday**	**4.33**	**323**	Pg			**Pb**	**21 35 23.8**	**+1.3**
	1.1nm,0.2s								
BRLS				Lg			Lg	21 36 21.9	
	4.2nm,0.4s								
KTBS	**Karatobe**	**4.74**	**30**	*eP*			**Pb**	**21 35 32.2**	**+2.8**
	1.0nm,0.3s								
KTBS				*eS*			**Sg**	**21 36 36.3**	**-2.0**
	9.1nm,0.7s								
KTBS	**Karatobe**	**4.74**	**30**	Pg			**Pb**	**21 35 32.2**	**+2.8**
	1.0nm,0.3s								
KTBS				Lg			Lg	21 36 37.1	
	9.1nm,0.7s								
KUU	**Kurty**	**4.78**	**26**	*eP*			**Pb**	**21 35 33.2**	**+3.2**
	1.3nm,0.3s								
KUU				*eS*			**Sg**	**21 36 38.4**	**-0.9**
	9.8nm,0.2s								
KUU	**Kurty**	**4.78**	**26**	Pg			**Pb**	**21 35 33.2**	**+3.2**
	1.3nm,0.3s								
KUU				Lg			Lg	21 36 38.4	
	9.8nm,0.2s								
CHKK	**Chushkaly**	**4.98**	**31**	*eP*			**Pb**	**21 35 37.5**	**+4.0**
	1.0nm,0.1s								
CHKK				*eS*			**Sg**	**21 36 45.4**	**-0.6**
	8.9nm,0.4s								
CHKK	**Chushkaly**	**4.98**	**31**	Pg			**Pb**	**21 35 37.5**	**+4.0**
CHKK				Lg			Lg	21 36 45.4	
KURS	**Kuram**	**5.24**	**41**	*eP*			**Pb**	**21 35 40.4**	**+2.5**
	1.4nm,0.5s								
KURS				*eS*			**Sg**	**21 36 50.7**	**-3.5**
	3.6nm,1.0s								
KURS	**Kuram**	**5.24**	**41**	Pg			**Pb**	**21 35 40.3**	**+2.5**
KURS				Lg			Lg	21 36 50.7	
KPKS	**Kokpek**	**5.49**	**44**	*eP*			**Pb**	**21 35 45.5**	**+3.3**
	1.2nm,0.4s								
KPKS				*eS*			**Sg**	**21 36 59.9**	**-2.5**
	3.9nm,0.7s								
KPKS	**Kokpek**	**5.49**	**44**	Pg			**Pb**	**21 35 45.5**	**+3.3**
	1.2nm,0.4s								
KPKS				Lg			Lg	21 36 59.9	
	3.9nm,0.7s								
BLB	**Baldybastay**	**5.83**	**39**	*eP*			**Pb**	**21 35 51.7**	**+3.6**
	1.1nm,0.1s								
BLB				*eS*			**Sg**	**21 37 09.8**	**-3.5**
	7.1nm,1.0s								
BLB	**Baldybastay**	**5.83**	**39**	Pg			**Pb**	**21 35 51.7**	**+3.6**
PDGK	**Podgornoye**	**5.86**	**49**	Pg			**Pb**	**21 35 51.1**	**+2.6**

*KRNET **26** 21:37:12.8±0.1, 39°.48N×73°.81E, mb3.3*
*SOME **26** 21:37:15.8, 39°.55N×73°.70E, h0km*

ISC 26 21:37:13.8±1.5, 39°.57N±0°.06×73°.69E±0°.03, h8km±13km, n22, σ1§58/44, 10C-4D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.18**	**324**	⇓*iP*			**Pg**	**21 37 37.5**	**+1.0**
	baz=23								
OHH				⇓*iS*			**Sn**	**21 37 55.6**	**+2.6**
	baz=23								
DRK	**Karamyk**	**1.46**	**267**	⇑*iP*			**Pg**	**21 37 42.1**	**+0.2**
	baz=71								
DRK				⇑*iS*			**Sg**	**21 38 03.6**	**+2.7**
	baz=71								
BTK	**Batken**	**2.26**	**283**	⇑*eP*			**Pb**	**21 37 55.0**	**0.0**
	baz=85								
BTK				⇑*iS*			**Sg**	**21 38 25.9**	**-0.6**
	baz=85								
ARLS	**Aral**	**2.34**	**12**	⇑*iP*			**Pb**	**21 37 55.3**	**-1.0**
	baz=9.0								
ARLS				⇑*iS*			**Sb**	**21 38 26.5**	**+1.0**
	baz=9.0								
GAR	**Garm**	**2.68**	**259**	⇓*iP*			**Pb**	**21 38 00.3**	**-1.7**
	baz=61								
GAR				⇓*iS*			**Sb**	**21 38 35.0**	**-0.1**
	baz=61								
UCH	**Uchtor**	**2.73**	**13**	⇑*eP*			**Pb**	**21 38 01.0**	**-2.1**
	baz=11								
UCH				⇑*iS*			**Sb**	**21 38 36.1**	**-0.8**
	baz=11								
TRKS	**Terek-Say**	**2.76**	**316**	⇑*iP*			**Pb**	**21 38 01.2**	**-2.2**
	baz=15								
TRKS				⇑*iS*			**Sb**	**21 38 36.6**	**-0.9**
	baz=15								
IUG	**Iuzhnay**	**3.79**	**314**	*eP*			**Pg**	**21 38 26.5**	**+0.2**
	73nm,0.3s								
IUG				*eS*			**Sg**	**21 39 17.2**	**+1.9**
	17nm,0.8s								
KST	**Kastek**	**3.87**	**26**	*eP*			**Pg**	**21 38 27.0**	**-1.0**
	2.9nm,0.6s								
KST				*eS*			**Sg**	**21 39 18.6**	**+0.4**
	14nm,0.5s								
SGDS	**Sogindy**	**3.94**	**10**	*eP*			**Pg**	**21 38 28.6**	**-0.8**
	2.6nm,0.6s								
SGDS				*eS*			**Sg**	**21 39 21.4**	**+0.9**
	2.9nm,0.6s								
DGS	**Degeres**	**3.99**	**22**	*eP*			**Pg**	**21 38 30.2**	**-0.1**
	4.1nm,0.6s								
DGS				*eS*			**Sg**	**21 39 23.7**	**+1.7**
	9.3nm,0.5s								
MTBS	**Maitube**	**4.11**	**29**	*eP*			**Pg**	**21 38 32.9**	**+0.3**
	2.9nm,0.1s								
MTBS				*eS*			**Sg**	**21 39 28.2**	**+2.3**
	9.3nm,0.2s								
TNSS	**Tian-Shan**	**4.25**	**34**	*eP*			**Pg**	**21 38 34.5**	**-0.7**
	4.0nm,0.4s								
TNSS				*eS*			**Sg**	**21 39 31.3**	**+1.1**
	4.8nm,0.9s								
BRLS	**Borolday**	**4.51**	**321**	*eP*			**Pg**	**21 38 37.9**	**-2.4**
	2.5nm,0.2s								
BRLS				*eS*			**Sg**	**21 39 37.0**	**-1.7**
	9.8nm,0.6s								
KTBS	**Karatobe**	**4.71**	**27**	*eP*			**Pg**	**21 38 42.5**	**-1.5**
	1.3nm,0.6s								
KTBS				*eS*			**Sg**	**21 39 45.2**	**+0.2**
	12nm,0.6s								
KUU	**Kurty**	**4.75**	**24**	*eP*			**Pg**	**21 38 44.2**	**-0.6**
	1.1nm,0.4s								
KUU				*eS*			**Sg**	**21 39 47.7**	**+1.3**
	4.8nm,0.6s								
CHKK	**Chushkaly**	**4.94**	**29**	*eP*			**Pg**	**21 38 47.1**	**-1.3**
	1.1nm,0.1s								
CHKK				*eS*			**Sg**	**21 39 52.8**	**+0.3**
	4.7nm,0.3s								
SATY	**Saty**	**4.98**	**44**	*eP*			**Pg**	**21 38 48.7**	**-0.4**
	1.2nm,0.1s								
SATY				*eS*			**Sg**	**21 39 55.3**	**+1.7**
	5.4nm,0.3s								
KURS	**Kuram**	**5.16**	**39**	*eP*			**Pg**	**21 38 53.2**	**+0.5**
	2.2nm,1.0s								
KURS				*eS*			**Sg**	**21 40 03.4**	**+3.9**
	3.1nm,0.9s								
KPKS	**Kokpek**	**5.41**	**42**	*eP*			**Pg**	**21 38 56.3**	**-1.0**
	2.3nm,0.4s								
KPKS				*eS*			**Sg**	**21 40 08.8**	**+1.4**
	6.2nm,0.8s								
BTLS	**Baital**	**5.48**	**3**	*eP*			**Pg**	**21 38 58.7**	**+0.1**
	1.0nm,0.2s								
BTLS				*eS*			**Sg**	**21 40 13.0**	**+3.5**
	1.9nm,0.4s								
ARXS	**Arharly**	**5.58**	**32**	*eP*			**Pg**	**21 38 58.5**	**-2.0**
	1.6nm,0.6s								
ARXS				*eS*			**Sg**	**21 40 13.0**	**+0.2**
	5.7nm,0.6s								

*SOME **26** 21:43:13.2, 39°.52N×73°.65E, h10km*
*KRNET **26** 21:43:15.2±0.1, 39°.50N×73°.62E, mb2.8*

ISC 26 21:43:08.9±2.1, 39°.36N±0°.09×74°.00E±0°.08, h9km±14km, n11, σ1§23/22, 8C-4D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.49**	**322**	⇑*iP*			**Pg**	**21 43 38.3**	**+0.8**
	baz=28								
OHH				⇑*iS*			**Sn**	**21 43 55.2**	**-0.4**
	baz=28								
DRK	**Karamyk**	**1.71**	**275**	⇑*iP*			**Pg**	**21 43 42.0**	**+0.3**
	baz=70								
DRK				⇑*iS*			**Sn**	**21 44 01.8**	**+0.5**
	baz=70								
BTK	**Batken**	**2.55**	**287**	⇓*eP*			**Pb**	**21 43 55.5**	**+0.6**
	baz=85								
BTK				⇓*iS*			**Sb**	**21 44 25.0**	**-1.5**
	baz=85								
GAR	**Garm**	**2.89**	**264**	⇑*eP*			**Pb**	**21 44 00.9**	**+0.2**
	baz=60								
GAR				⇑*iS*			**Sb**	**21 44 34.3**	**-1.8**
	baz=60								
UCH	**Uchtor**	**2.89**	**8**	⇑*eP*			**Pb**	**21 44 03.8**	**-0.5**
	baz=14								
UCH				⇑*iS*			**Sg**	**21 44 39.2**	**-2.6**
	baz=14								
TRKS	**Terek-Say**	**3.08**	**316**	⇓*eP*			**Pb**	**21 44 02.2**	**-1.7**
	baz=17								
TRKS				⇓*iS*			**Sn**	**21 44 36.6**	**+1.8**
	baz=17								
KST	**Kastek**	**3.96**	**21**	*eP*			**Pg**	**21 44 24.6**	**-0.3**
	0.9nm,0.2s								
KST				*eS*			**Sg**	**21 45 16.1**	**-0.1**
	2.9nm,0.6s								
DGS	**Degeres**	**4.10**	**18**	*eP*			**Pg**	**21 44 28.4**	**+0.9**
	1.6nm,0.4s								
DGS				*eS*			**Sg**	**21 45 22.8**	**+2.2**
	1.9nm,0.5s								
IUG	**Iuzhnay**	**4.10**	**314**	*eP*			**Pb

TNSS	**Tian-Shan**	**4.42**	**34**	*e*P		**Pg**	**21 58 07.6**	**+0.4**
	1.4nm,0.3s								
TNSS				*e*S		**Sg**	**21 59 05.7**	**+1.2**
	3.8nm,0.6s								
KRBS	**Karabastau**	**4.55**	**20**	*e*P		**Pg**	**21 58 09.5**	**-0.1**
	0.6nm,0.9s								
KRBS				*e*S		**Sg**	**21 59 08.8**	**+0.3**
	3.9nm,0.8s								
BRLS	**Borolday**	**4.55**	**323**	*e*P		**Pg**	**21 58 08.8**	**-0.9**
	2.9nm,0.2s								
BRLS				*e*S		**Sg**	**21 59 07.2**	**-1.4**
	4.9nm,0.4s								
KTBS	**Karatobe**	**4.88**	**28**	*e*P		**Pg**	**21 58 16.5**	**+0.5**
	1.0nm,0.6s								
KTBS				*e*S		**Sg**	**21 59 20.6**	**+1.4**
	5.4nm,0.7s								
CHKK	**Chushkaly**	**5.12**	**29**	*e*P		**Pg**	**21 58 19.1**	**-1.4**
	1.2nm,0.0s								
CHKK				*e*S		**Sg**	**21 59 25.3**	**-1.4**
	4.4nm,0.3s								
ARXS	**Arharly**	**5.75**	**32**	*e*P		**Pg**	**21 58 31.6**	**-0.9**
	2.3nm,0.7s								
ARXS				*e*S		**Sg**	**21 59 47.1**	**+0.1**
	2.1nm,0.7s								
BLB	**Baldybastay**	**5.94**	**37**	*e*P		**Pg**	**21 58 35.9**	**-0.4**
	2.0nm,0.2s								
BLB				*e*S		**Sg**	**21 59 54.6**	**+1.3**
	1.6nm,0.7s								

*KRNET **26** 22:06:56.7±0.1,39°.43N×73°.64E,mb3.8*
*SOME **26** 22:06:56.6,39°.40N×73°.70E,h10km*
*NNC **26** 22:07:01.7±1.6,39°.62N×73°.71E,h0km,mb4.1,mpv3.8,*
Error ellipse: s-maj=12.4km s-min=5.9km az=172.0

ISC 26 22:06:54.8±1.4,39°.47N±0°.05×73°.68E±0°.03,h9km±13km,
n54,σ1§47/83,16C-8D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.26**	**327**	⇑*e*P	**Pg**	**22 07 21.1**	**+2.1**
	baz=29						
OHH				⇑*e*S	**Sn**	**22 07 38.7**	**+2.9**
	baz=29						
DRK	**Karamyk**	**1.46**	**271**	⇑*i*P	**Pg**	**22 07 23.7**	**+1.0**
	baz=73						
DRK				⇑*e*S	**Sg**	**22 07 43.3**	**+1.7**
	baz=73						
BTK	**Batken**	**2.28**	**286**	⇑*e*P	**Pg**	**22 07 37.3**	**-1.3**
	baz=87						
BTK				⇑*e*S	**Sg**	**22 08 07.0**	**-1.2**
	baz=87						
ARLS	**Aral**	**2.44**	**11**	⇑*e*P	**Pg**	**22 07 40.3**	**-1.3**
	baz=12						
ARLS				⇑*e*S	**Sg**	**22 08 12.2**	**-1.1**
	baz=12						
GAR	**Garm**	**2.65**	**261**	⇓*e*P	**Pb**	**22 07 42.1**	**-0.4**
	baz=62						
GAR				⇓*e*S	**Sb**	**22 08 15.6**	**+0.3**
	baz=62						
TRKS	**Terek-Say**	**2.83**	**318**	⇓*i*P	**Pb**	**22 07 44.2**	**-1.4**
	baz=18						
TRKS				⇓*i*S	**Sb**	**22 08 19.1**	**-1.3**
	baz=18						
UCH	**Uchtor**	**2.83**	**13**	⇑*e*P	**Pb**	**22 07 46.2**	**+0.4**
	baz=13						
UCH				⇑*e*S	**Sb**	**22 08 22.2**	**+1.5**
	baz=13						
AAK	**Ala-Archa**	**3.23**	**11**	⇓*e*P	**Pb**	**22 07 51.2**	**-1.2**
	baz=11						
AAK				⇓*e*S	**Sb**	**22 08 31.1**	**-0.8**
	baz=11						
KBK	**Karagaybulak**	**3.33**	**16**	⇑*e*P	**Pb**	**22 07 52.7**	**-1.4**
	baz=17						
KBK				⇑*e*S	**Sb**	**22 08 33.8**	**-1.0**
	baz=17						
BOOM	**Boomskoye usch**	**3.47**	**29**	⇑*i*P	**Pb**	**22 07 54.9**	**-1.6**
	baz=29						
BOOM				⇑*i*S	**Sb**	**22 08 37.4**	**-1.5**
	baz=29						
TKM2	**Tokmak 2**	**3.74**	**22**	⇑Pg	**Pg**	**22 08 05.3**	**-1.2**
	12nm,0.7s						
TKM2				⇓Lg	Lg	22 08 56.4	
	29nm,0.7s						
IUG	**Iuzhnay**	**3.85**	**315**	*e*P	**Pg**	**22 08 08.9**	**+0.3**
	311nm,0.7s						
IUG				*e*S	**Sg**	**22 09 01.8**	**+3.3**
	27nm,0.5s						
IUG	**Iuzhnay**	**3.85**	**315**	Pg	**Pg**	**22 08 08.9**	**+0.3**
	311nm,0.7s						
IUG				Lg	Lg	22 08 59.9	
	27nm,0.5s						
DZA	**Taraz**	**3.85**	**333**	*e*P	**Pg**	**22 08 08.8**	**+0.2**
	11nm,0.1s						
DZA				*e*S	**Sg**	**22 09 01.4**	**+2.9**
	94nm,0.5s						
DZA	**Taraz**	**3.85**	**333**	Pg	**Pg**	**22 08 10.0**	**+1.3**
DZA				Lg	Lg	22 09 01.9	
KST	**Kastek**	**3.97**	**25**	*e*P	**Pg**	**22 08 10.4**	**-0.4**
	6.6nm,0.5s						
KST				*e*S	**Sg**	**22 09 04.7**	**+2.5**
	37nm,0.8s						
KST	**Kastek**	**3.97**	**25**	Pg	**Pg**	**22 08 12.0**	**+1.2**
	6.6nm,0.5s						
KST				Lg	Lg	22 09 04.7	
	37nm,0.8s						
SGDS	**Sogindy**	**4.05**	**10**	*e*P	**Pg**	**22 08 11.3**	**-1.0**
	11nm,0.5s						
SGDS				*e*S	**Sg**	**22 09 05.9**	**+1.1**
	22nm,0.6s						
SGDS	**Sogindy**	**4.05**	**10**	Pg	**Pg**	**22 08 12.7**	**+0.4**
	11nm,0.5s						
SGDS				Lg	Lg	22 09 05.9	
	22nm,0.6s						
DGS	**Degeres**	**4.09**	**22**	*e*P	**Pg**	**22 08 12.6**	**-0.5**
	16nm,0.8s						
DGS				*e*S	**Sg**	**22 09 08.1**	**+2.1**
	44nm,0.6s						
DGS	**Degeres**	**4.09**	**22**	Pg	**Pg**	**22 08 13.6**	**+0.5**
	16nm,0.8s						
DGS				Lg	Lg	22 09 08.1	
	44nm,0.6s						
CHM	**Chimkent**	**4.20**	**314**	*e*P	**Pg**	**22 08 12.6**	**-2.7**
	4.3nm,0.4s						
CHM				*e*S	**Sg**	**22 09 08.1**	**-1.7**
	86nm,0.5s						
MTBS	**Maitube**	**4.21**	**29**	*e*P	**Pg**	**22 08 15.2**	**-0.2**
	14nm,0.6s						
MTBS				*e*S	**Sg**	**22 09 11.8**	**+2.0**
	26nm,0.7s						
MTBS	**Maitube**	**4.21**	**29**	Pg	**Pg**	**22 08 16.2**	**+0.8**
	14nm,0.6s						
MTBS				Lg	Lg	22 09 11.8	
	26nm,0.7s						
KK31	**Karatay Array**	**4.35**	**328**	⇓Pg	**Pg**	**22 08 19.3**	**+1.3**
	2.6nm,0.3s,baz=150,slow=17,SNR=4.1						
KK31				⇑Lg	Lg	22 09 14.4	
	7.6nm,0.5s,baz=140,slow=30,SNR=3.6						
AAA	**Alma-Ata**	**4.46**	**32**	*e*P	**Pg**	**22 08 20.1**	**-0.1**
	15nm,0.3s						
AAA				*e*S	**Sg**	**22 09 20.8**	**+2.7**
	46nm,0.7s						
BRLS	**Borolday**	**4.59**	**322**	*e*P	**Pg**	**22 08 19.8**	**-2.9**
	3.0nm,0.4s						
BRLS				*e*S	**Sg**	**22 09 20.4**	**-1.8**
	14nm,0.7s						
BRLS	**Borolday**	**4.59**	**322**	Pg	**Pg**	**22 08 21.0**	**-1.7**
	3.0nm,0.4s						
BRLS				Lg	Lg	22 09 20.9	
	14nm,0.7s						
KTBS	**Karatobe**	**4.80**	**27**	*e*P	**Pg**	**22 08 25.5**	**-1.2**
	3.4nm,0.4s						
KTBS				*e*S	**Sg**	**22 09 29.6**	**+0.7**
	30nm,0.6s						
KTBS	**Karatobe**	**4.80**	**27**	Pg	**Pg**	**22 08 26.5**	**-0.3**
	3.4nm,0.4s						
KTBS				Lg	Lg	22 09 29.6	
	30nm,0.6s						
KUU	**Kurty**	**4.85**	**23**	*e*P	**Pg**	**22 08 25.9**	**-1.8**
	8.4nm,0.6s						
KUU				*e*S	**Sg**	**22 09 30.6**	**+0.1**
	13nm,0.6s						
KUU	**Kurty**	**4.85**	**23**	Pg	**Pg**	**22 08 26.6**	**-1.1**
	8.4nm,0.6s						
KUU				Lg	Lg	22 09 30.6	
	13nm,0.6s						
CHKK	**Chushkaly**	**5.04**	**28**	*e*P	**Pg**	**22 08 29.5**	**-1.7**
	3.4nm,0.4s						
CHKK				*e*S	**Sg**	**22 09 36.6**	**+0.2**
	19nm,0.8s						
CHKK	**Chushkaly**	**5.04**	**28**	Pg	**Pg**	**22 08 30.5**	**-0.7**
CHKK				Lg	Lg	22 09 36.7	
SATY	**Saty**	**5.06**	**43**	*e*P	**Pg**	**22 08 30.7**	**-1.0**
	7.8nm,0.7s						
SATY				*e*S	**Sg**	**22 09 37.9**	**+0.8**
	18nm,0.8s						
SATY	**Saty**	**5.06**	**43**	Pg	**Pg**	**22 08 31.0**	**-0.6**
	7.8nm,0.7s						
SATY				Lg	Lg	22 09 38.3	
	18nm,0.8s						
ZHN	**Zhinishke**	**5.15**	**43**	*e*P	**Pg**	**22 08 33.1**	**-0.3**
	10nm,0.2s						
ZHN				*e*S	**Sg**	**22 09 41.6**	**+1.6**
	29nm,1.0s						
ZHN	**Zhinishke**	**5.15**	**43**	Pg	**Pg**	**22 08 33.6**	**+0.2**
	10nm,0.2s						
ZHN				Lg	Lg	22 09 41.7	
	29nm,1.0s						
KURS	**Kuram**	**5.25**	**39**	*e*P	**Pg**	**22 08 35.5**	**+0.2**
	6.8nm,0.7s						
KURS				*e*S	**Sg**	**22 09 46.1**	**+2.9**
	10nm,1.0s						
KURS	**Kuram**	**5.25**	**39**	Pg	**Pg**	**22 08 36.1**	**+0.9**
	6.8nm,0.7s						
KURS				Lg	Lg	22 09 46.1	
	10nm,1.0s						
KPKS	**Kokpek**	**5.49**	**42**	*e*P	**Pg**	**22 08 39.4**	**-0.4**
	8.3nm,0.6s						
KPKS				*e*S	**Sg**	**22 09 53.1**	**+2.2**
	20nm,0.8s						
KPKS	**Kokpek**	**5.49**	**42**	Pg	**Pg**	**22 08 39.9**	**+0.1**
	8.3nm,0.6s						
KPKS				Lg	Lg	22 09 53.1	
	20nm,0.8s						
BTLS	**Baital**	**5.58**	**3**	*e*P	**Pg**	**22 08 40.7**	**-0.9**
	5.0nm,0.7s						
BTLS				*e*S	**Sg**	**22 09 54.7**	**+0.9**
	4.4nm,0.8s						
BTLS	**Baital**	**5.58**	**3**	Pg	**Pg**	**22 08 41.2**	**-0.4**
	5.0nm,0.7s						
BTLS				Lg	Lg	22 09 55.3	
	4.4nm,0.8s						
ARXS	**Arharly**	**5.67**	**32**	*e*P	**Pg**	**22 08 41.1**	**-2.1**
	11nm,0.6s						
ARXS				*e*S	**Sg**	**22 09 56.3**	**-0.3**
	16nm,1.0s						
ARXS	**Arharly**	**5.67**	**32**	Pg	**Pg**	**22 08 41.7**	**-1.6**
	12nm,1.3s						
ARXS				Lg	Lg	22 09 56.3	
	16nm,1.0s						
SHLS	**Shalkode**	**5.71**	**48**	*e*P	Pg	22 08 49.3	+5.2
	3.7nm,0.3s						
SHLS				*e*S	Sg	22 10 09.4	+11
	13nm,0.7s						
SHLS	**Shalkode**	**5.71**	**48**	Pg	Pg	22 08 49.7	+5.7
	3.7nm,0.3s						
SHLS				Lg	Lg	22 10 09.4	
	13nm,0.7s						
PDGK	**Podgornoye**	**5.83**	**47**	Pg	**Pg**	**22 08 44.9**	**-1.5**
	2.2nm,0.8s						
PDGK				Lg	Lg	22 10 02.3	
	5.7nm,0.8s						
BLB	**Baldybastay**	**5.85**	**36**	*e*P	**Pg**	**22 08 45.0**	**-1.9**
	4.1nm,0.5s						
BLB				*e*S	**Sg**	**22 10 02.8**	**+0.1**
	17nm,0.9s						
BLB	**Baldybastay**	**5.85**	**36**	Pg	**Pg**	**22 08 45.4**	**-1.5**
BLB				Lg	Lg	22 10 02.9	
TDK	**Taldyqorghan**	**6.55**	**31**	*e*P	**Pg**	**22 08 58.3**	**-1.9**
	18nm,0.1s						
TDK				*e*S	**Sg**	**22 10 25.6**	**+0.6**
	38nm,0.9s						
DJR	**Jarkent**	**6.66**	**41**	*e*P	**Pg**	**22 09 01.7**	**-0.7**
	1.7nm,0.5s						
DJR				*e*S	**Sg**	**22 10 30.9**	**+2.2**
	8.5nm,0.7s						
DJR	**Jarkent**	**6.66**	**41**	Pg	**Pg**	**22 09 02.2**	**-0.2**

*IDC **26** 22:07:20.7±2.3,6°.21S×129°.85E,h0km,mb3.8/1,*
mbtmp3.3/3,ML3.3/2,Error ellipse: s-maj=148.8km
s-min=31.6km az=69.0
*NEIC **26** 22:07:36.4±1.4,6°.70S±0°.07×130°.1E±0°.1,h155km±9km,*
mb4.4/4,Error ellipse: s-maj=18.1km s-min=9.4km
az=91.0

ISC 26 22:07:35.1±0.8,6°.72S±0°.06×130°.2E±0°.1,h146km,n13,
σ1§97/16,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**4.28**	**28**	Pn	**Pn**	**22 08 41.1**	**+2.1**
FAKI				Sn	**Sn**	**22 09 26.9**	**-1.8**
MTN	**Manton Dam**	**6.15**	**172**	Pn	**Pn**	**22 09 05.4**	**+1.7**
MTN				Sn	**Sn**	**22 10 13.3**	**+0.2**
KNRA	**Kununurra**	**9.01**	**189**	Pn	**Pn**	**22 09 43.2**	**+1.1**
WB0	**Warramunga Arr**	**13.58**	**163**	Pn	**Pn**	**22 10 43.0**	**+1.0**
WRA	**Warramunga Arr**	**13.73**	**163**	Pn	**Pn**	**22 10 45.7**	**+1.8**
	0.1nm,0.3s,baz=346,slow=12,SNR=6.4						
WRA				Sn	**Sn**	**22 13 11.3**	**-4.7**
	0.2nm,0.3s,baz=330,slow=23,SNR=2.1						
WB2	**Warramunga Arr**	**13.74**	**163**	Pn	**Pn**	**22 10 45.6**	**+1.6**
WR0	**Warramunga Arr**	**13.81**	**163**		**P**	**22 10 48.1**	**-0.3**
ASAR	**Alice Springs**	**17.21**	**169**	P	**Pn**	**22 11 29.6**	**+2.7**
	0.1nm,0.3s,baz=339,slow=8.2,SNR=2.7						
	0.1nm,0.3s						
PSA00	**Pilbara Seismi**	**17.85**	**213**		**P**	**22 11 32.5**	**-0.6**
PSA00				IAmb	IAmb	22 12 13.3	
	comp=Z,37nm,1.4s						
JNU	**Nakatsue**	**39.63**	**1**	P	**P**	**22 14 52.5**	**-0.1**
MKAR	**Makanchi Array**	**68.12**	**327**	P	**P**	**22 18 18.6**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=115,slow=7.8,SNR=9.5						
	comp=Z,0.5nm,0.5s						
KDJ	**Kajisay**	**68.50**	**320**	P	**P**	**22 18 20.7**	**-1.3**
KBL	**Kabul**	**70.76**	**310**	P	**P**	**22 18 35.4**	**-0.6**
KBL				IAmb	IAmb	22 18 40.7	
	comp=Z,3.7nm,0.6s						

*ISK **26** 22:09:41.5,38°.92N×25°.94E,h5km,ML3.2/26*
*DDA **26** 22:09:42.4±0.0,38°.93N×26°.04E,h8km±3km,ML3.2*
*ATH **26** 22:09:43.3,38°.94N×26°.02E,h13km±2km,ML3.2/5,Error*
ellipse: s-maj=3.0km s-min=1.0km az=76.0

ISC 26 22:09:42.8±1.0,38°.93N±0°.02×26°.04E±0°.02,h11km±9km,
n64,σ0§94/91,5C-1D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.31**	**333**	P	**Pg**	**22 09 49.3**	**+0.1**
SIGR				S	**Sg**	**22 09 53.8**	**+0.4**
SIGR				AML	AML	22 09 54.4	
	comp=E,16786μm,0.6s						
SIGR				AML	AML	22 09 54.5	
	comp=N,15560μm,0.3s						
PRK	**Paraskevi**	**0.36**	**30**	P	**Pb**	**22 09 50.7**	**-0.6**
PRK				S	**Sg**	**22 09 55.8**	**+1.0**
PRK				AML	AML	22 09 58.8	
	comp=N,9121μm,0.4s						
PRK				AML	AML	22 09 59.5	
	comp=E,6890μm,0.4s						
GPNR	**Gulpinar-Canak**	**0.53**	**8**	PG	**Pg**	**22 09 52.5**	**-0.6**
GPNR				SG	**Sb**	**22 10 01.1**	**-0.6**
PSRA	**Psara**	**0.54**	**224**	P	**Pb**	**22 09 54.9**	**+0.6**
CHOS	**Chios island**	**0.55**	**179**	P	**Pg**	**22 09 53.4**	**-0.1**
CHOS				S	**Sb**	**22 10 02.0**	**-0.4**
CHOS				AML	AML	22 10 05.2	
	comp=N,4017μm,0.4s						
CHOS				AML	AML	22 10 06.7	
	comp=E,7382μm,0.3s						
KOCA	**Canakkale, Ayv**	**0.57**	**8**	P	**Pg**	**22 09 53.6**	**-0.4**
KOCA				S	**Sb**	**22 10 03.0**	**-0.1**
KOCA				*i* AML	AML	22 10 08.0	
	comp=E,1μm,0.4s						
FOCM	**Foa**	**0.58**	**112**	PG	**Pb**	**22 09 54.7**	**-0.3**
FOCM				SG	**Sb**	**22 10 03.3**	**0.0**
CAND	**Candarli**	**0.59**	**88**	PG	**Pb**	**22 09 55.1**	**-0.1**
CAND				SG	**Sb**	**22 10 04.5**	**+0.8**
AYVA	**Ayvalik**	**0.63**	**53**	P	**Pg**	**22 09 54.7**	**-0.3**
AYVA				S	**Sg**	**22 10 02.8**	**-0.6**
AYVA				*i* AML	AML	22 10 06.0	
	comp=E,1μm,0.3s						
AYVA				*i* AML	AML	22 10 07.0	
	comp=E,1μm,0.3s						
DKL	**Dikili**	**0.69**	**78**	PG	**Pb**	**22 09 56.9**	**+0.1**
DKL				SG	**Sb**	**22 10 08.2**	**+1.9**
URLA	**Izmir**	**0.72**	**143**	PG	**Pg**	**22 09 56.5**	**-0.3**
URLA				SG	**Sb**	**22 10 07.7**	**+0.4**
URLA	**Izmir**	**0.72**	**143**	P	**Pg**	**22 09 56.1**	**-0.7**
URLA				S	**Sb**	**22 10 07.3**	**0.0**
URLA				*i* AML	AML	22 10 10.0	
	comp=E,710nm,0.3s						
ZEYE	**Izmir, Urla-Ze**	**0.78**	**152**	P	**Pg**	**22 09 57.3**	**-0.7**
ZEYE				S	**Sg**	**22 10 07.6**	**-0.6**
ZEYE				*i* AML	AML	22 10 12.0	
	comp=E,804nm,0.4s						
ZEDA	**zmir-Bergama**	**0.81**	**87**	P	**Pg**	**22 09 58.2**	**-0.2**
ZEDA				S	**Sb**	**22 10 10.2**	**+0.4**
ZEDA				*i* AML	AML	22 10 11.0	
	comp=E,826nm,0.3s						
BAYC	**CANAKKALE_Bayr**	**0.90**	**26**	P	**Pg**	**22 09 59.3**	**-0.9**
BAYC				S	**Sb**	**22 10 12.8**	**+0.4**
BAYC				*i* AML	AML	22 10 14.0	
	comp=E,713nm,0.3s						
BOZC	**Bozcaada**	**0.91**	**1**	PG	**Pg**	**22 09 59.7**	**-0.6**
BOZC				SG	**Sb**	**22 10 12.4**	**-0.3**
BOZC	**Bozcaada**	**0.91**	**1**	P	**Pg**	**22 09 59.7**	**-0.6**
BOZC				S	**Sg**	**22 10 12.1**	**-0.1**
BOZC				*i* AML	AML	22 10 13.0	
	comp=E,814nm,0.4s						
BOZC				*i* AML	AML	22 10 14.0	
	comp=E,835nm,0.8s						
EZN	**Ezine**	**0.92**	**14**	PG	**Pg**	**22 09 59.8**	**-0.7**
EZN				SG	**Sb**	**22 10 14.0**	**+1.1**
BUHA	**Balikesir, Bur**	**0.98**	**55**	P	**Pg**	**22 10 01.3**	**-0.5**
BUHA				S	**Sg**	**22 10 14.1**	**-0.6**
BUHA				*i* AML	AML	22 10 16.0	
	comp=E,819nm,0.4s						
BUHA				*i* AML	AML	22 10 17.0	
	comp=E,1μm,0.3s						
EFSA	**Agios Efstrati**	**1.02**	**307**	P	**Pn**	**22 10 02.8**	**-0.2**
DGB	**zmir**	**1.10**	**143**	P	**Pg**	**22 10 03.0**	**-1.0**
DGB				S	**Sn**	**22 10 19.0**	**-0.3**
ECEA	**Canakkale, Ece**	**1.11**	**5**	P	**Pg**	**22 10 03.5**	**-0.7**
ECEA				S	**Sn**	**22 10 19.5**	**-0.1**
ECEA				*i* AML	AML	22 10 21.0	
	comp=E,829nm,0.4s						
ECEA				*i* AML	AML	22 10 23.0	
	comp=E,776nm,0.5s						
SKY	**Skiros Island**	**1.16**	**268**	P	**Pn**	**22 10 05.3**	**+0.2**
LIA	**Limnos Island**	**1.17**	**326**	P	**Pn**	**22 10 04.9**	**-0.2**
LIA				S	**Sg**	**22 10 19.9**	**-0.7**
LIA				AML	AML	22 10 20.7	
	comp=E,1391μm,0.5s						
LIA				AML	AML	22 10 22.6	
	comp=N,2048μm,0.5s						
GADA	**Gvkgeada**	**1.26**	**355**	PN	**Pn**	**22 10 05.9**	**-0.5**
SMG	**Samos**	**1.38**	**153**	P	**Pn**	**22 10 08.1**	**+0.1**
SMG				S	**Sg**	**22 10 27.2**	**+0.1**
SMG				AML	AML	22 10 30.8	
	comp=E,1402μm,0.3s						
SMG				AML	AML	22 10 32.0	
	comp=N,2010μm,0.3s						
STEP	**BALIKESIR_Sava**	**1.38**	**71**	P	**Pn**	**22 10 08.0**	**0.0**
STEP				S	**Sb**	**22 10 23.7**	**-2.5**
STEP				*i* AML	AML	22 10 28.0	
	comp=N,443nm,0.8s						
STEP				*i* AML	AML	22 10 32.0	
	comp=N,461nm,0.5s						
AKS	**Akhisar**	**1.38**	**92**	PN	**Pg**	**22 10 09.1**	**-0.3**
BALY	**Balya**	**1.47**	**56**	P	**Pn**	**22 10 08.4**	**-0.8**
BALY				S	**Sn**	**22 10 26.4**	**-2.0**
GELI	**Tayfur-Gelibol**	**1.50**	**13**	PN	**Pb**	**22 10 10.2**	**-0.5**
KYMI	**Kymi, Euboea I**	**1.55**	**259**	P	**Pn**	**22 10 09.9**	**-0.5**
SMTH	**Samothraki Isl**	**1.58**	**346**	P	**Pn**	**22 10 10.5**	**-0.3**
GONE	**Gonen-Balikesi**	**1.69**	**48**	PN	**Pn**	**22 10 12.5**	**+0.2**
KRBG	**Karabiga-Canak**	**1.75**	**33**	PN	**Pn**	**22 10 12.9**	**-0.2**
DDIM	**Aydin, Didim**	**1.75**	**147**	P	**Pg**	**22 10 16.4**	**-0.1**
DDIM				S	**Sg**	**22 10 39.7**	**+0.5**
AYDB	**Zeytinkoy-Aydi**	**1.76**	**124**	PN	**Pn**	**22 10 13.6**	**+0.3**
ERIK	**Erikli-Kesan**	**1.77**	**12**	PN	**Pn**	**22 10 13.8**	**+0.4**
ENEZ	**Enez**	**1.80**	**3**	PN	**Pn**	**22 10 14.1**	**+0.3**
APE	**Apeiranthos**	**1.91**	**192**	PN	**Pn**	**22 10 14.7**	**-0.6**
AYDN	**Tasoluk**	**1.93**	**131**	P	**Pn**	**22 10 14.4**	**-1.2**
AYDN				S	**Sg**	**22 10 44.9**	**+0.2**
RKY	**Sarkoy-Tekirda**	**1.96**	**26**	PN	**Pn**	**22 10 16.7**	**+0.7**
ALN	**Alexandroupoli**	**1.96**	**0**	PN	**Pn**	**22 10 16.3**	**+0.3**
EDC	**Edincik**	**1.99**	**44**	PN	**Pn**	**22 10 17.1**	**+0.6**
MAR6	**Marsite Statio**	**2.00**	**28**	PN	**Pn**	**22 10 17.5**	**+0.9**
MAR3	**Marsite Statio**	**2.05**	**28**	PN	**Pn**	**22 10 18.1**	**+0.9**
MRMT	**Marmara Adasi**	**2.05**	**35**	PN	**Pn**	**22 10 17.0**	**-0.3**
GZKV	**Gazikoy-Tekird**	**2.06**	**28**	PN	**Pn**	**22 10 18.5**	**+1.1**
KULA	**Kula-Manisa**	**2.09**	**101**	PN	**Pn**	**22 10 19.3**	**+1.4**
OUR	**Ouranopolis**	**2.12**	**312**	PN	**Pn**	**22 10 17.7**	**-0.4**
BODT	**Bodrum**	**2.12**	**151**	PN	**Pn**	**22 10 17.1**	**-0.3**
BDRM	**Kayabasi**	**2.17**	**149**	P	**Pn**	**22 10 18.0**	**-0.9**
KCTX	**Karacasey (Bur**	**2.23**	**53**	PN	**Pn**	**22 10 20.6**	**+0.9**
UKOP	**Uzunkopru-Edir**	**2.24**	**12**	PN	**Pn**	**22 10 21.1**	**+1.3**
RDO	**Rodhopi**	**2.24**	**350**	PN	**Pn**	**22 10 20.3**	**+0.4**
SIMA	**Simav-Kutahya**	**2.30**	**85**	PN	**Pn**	**22 10 21.9**	**+1.2**
MULA	**Mugla, Merkez-**	**2.46**	**132**	P	**Pg**	**22 10 28.9**	**-1.0**
MULA				S	**Sb**	**22 10 58.6**	**+1.3**
MDNY	**Mudanya-Bursa**	**2.62**	**56**	PN	**Pn**	**22 10 26.9**	**+1.8**
ARMT	**Armutlu**	**2.72**	**52**	PN	**Pn**	**22 10 28.2**	**+1.8**
HORT	**Hortiatis**	**2.81**	**307**	PN	**Pn**	**22 10 27.6**	**-0.2**
MLR	**Muntele Rosu**	**6.55**	**359**	⇑P	**Pn**	**22 11 21.7**	**+2.5**
MDVR	**Moldovita**	**6.67**	**332**	⇑P	**Pn**	**22 11 24.1**	**+3.3**
PLOR	**Plostina**	**6.93**	**4**	⇑P	**Pn**	**22 11 26.3**	**+2.0**
PLOR				⇓S		22 11 35.8	
VRI	**Vrincioaia**	**6.95**	**4**	⇑P	**Pn**	**22 11 26.0**	**+1.5**
BZS	**Buzias**	**7.44**	**335**	⇑P	**Pn**	**22 11 33.0**	**+1.7**

*IDC **26** 22:11:29.6±0.8,37°.09S×95°.89W,h0km,mb4.0/7,*
mbtmp4.0/7,MS3.6/6,Error ellipse: s-maj=34.8km
s-min=20.1km az=83.0
*NEIC **26** 22:11:31.5±0.8,37°.07S±0°.07×95°.7W±0°.3,h10km±1km,*
mb4.4/21,Error ellipse: s-maj=37.3km s-min=12.5km
az=274.0

ISC 26 22:11:31.1±0.7,37°.1S±0°.1×95°.8W±0°.2,h10km,n44,
σ0§62/35,mb4.4/15,MS3.5/5,Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**14.09**	**82**	T	T	22 29 39.3	
	baz=256						
**

	comp=Z,2.0nm,0.9s							
TXAR	**Lajitas Array**	**66.47**	**352**	P	**P**	**22 22 21.0**	**+0.3**
TX31	**Lajitas Ar. Si**	**66.47**	**352**	P	**P**	**22 22 20.1**	**-0.6**
TX32	**Lajitas Array**	**66.47**	**352**	P	**P**	**22 22 20.6**	**-0.1**
TX32				IAmb	IAmb	22 22 22.5	
	comp=Z,3.9nm,1.1s						
TUC	**Tucson**	**70.44**	**347**	P	**P**	**22 22 45.3**	**-0.1**
TUC				IAmb	IAmb	22 22 47.0	
	comp=Z,4.7nm,1.1s						
MSTX	**Muleshoe**	**70.98**	**354**	P	**P**	**22 22 48.0**	**-0.8**
AMTX	**Amarillo**	**71.80**	**355**	P	**P**	**22 22 53.6**	**-0.1**
ANMO	**Albuquerque**	**72.34**	**351**	P	**P**	**22 22 57.3**	**+0.2**
X16A	**Lo Mia Camp, P**	**72.61**	**346**	P	**P**	**22 22 59.2**	**+0.5**
X16A				IAmb	IAmb	22 23 14.0	
	comp=Z,4.9nm,1.3s						
MGMO	**Mountain Grove**	**73.92**	**3**	P	**P**	**22 23 06.4**	**+0.2**
MGMO				IAmb	IAmb	22 23 16.2	
	comp=Z,4.8nm,1.1s						
MAW	**Mawson**	**74.40**	**172**	P	**P**	**22 23 08.8**	**+0.2**
	comp=Z,2.6nm,0.8s,baz=266,slow=9.4,SNR=4.8						
	comp=Z,2.6nm,0.8s						
MAW	**Mawson**	**74.40**	**172**	P	**P**	**22 23 09.1**	**+0.5**
CCM	**Cathedral Cave**	**74.87**	**4**	P	**P**	**22 23 11.8**	**+0.2**
CCUT	**Cedar City**	**76.01**	**346**	P	**P**	**22 23 19.0**	**+0.5**
CCUT				IAmb	IAmb	22 23 28.2	
	comp=Z,3.6nm,1.0s						
PRN	**Pahroc Range**	**76.22**	**344**	P	**P**	**22 23 20.1**	**+0.5**
PRN				IAmb	IAmb	22 23 21.8	
	comp=Z,7.2nm,1.3s						
PSUT	**Pine Spring**	**77.06**	**346**	P	**P**	**22 23 25.1**	**+0.7**
PSUT				IAmb	IAmb	22 23 39.6	
	comp=Z,3.5nm,1.0s						
R11A	**Troy Canyon, C**	**77.25**	**344**	P	**P**	**22 23 26.4**	**+1.0**
R11A				IAmb	IAmb	22 23 34.8	
	comp=Z,3.6nm,1.2s						
NV11	**Mina Array Sit**	**77.92**	**342**	P	**P**	**22 23 29.1**	**0.0**
NV11				IAmb	IAmb	22 23 30.9	
	comp=Z,5.3nm,1.1s						
NVAR	**Mina Array Bea**	**77.96**	**342**	P	**P**	**22 23 30.1**	**+0.7**
	comp=Z,2.6nm,0.9s,baz=176,slow=7.5,SNR=15						
	comp=Z,2.6nm,0.9s						
KVN	**Kaiserville**	**78.50**	**342**	P	**P**	**22 23 33.2**	**+0.9**
ELK	**Elko**	**79.47**	**345**	P	**P**	**22 23 38.4**	**+0.6**
PDAR	**Pinedale Array**	**80.45**	**350**	P	**P**	**22 23 43.0**	**0.0**
	comp=Z,1.7nm,0.7s,baz=159,slow=6.5,SNR=17						
	comp=Z,1.7nm,0.7s						
PDAR	**Pinedale Array**	**80.45**	**350**	P	**P**	**22 23 43.3**	**+0.3**
CMAR	**Chiang Mai Arr**	**157.41**	**219**	PKPab	**PKPab**	**22 31 58.6**	**-0.6**
	comp=Z,0.9nm,0.8s,baz=160,slow=3.5,SNR=5.2						
ZALV	**Zalesovo Beam**	**163.11**	**359**	PKPab	**PKPab**	**22 32 22.1**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=338,slow=3.1,SNR=3.9						
ZALV	**Zalesovo Beam**	**163.11**	**359**		**PKPab**	**22 32 21.6**	**-1.4**
KURK	**Kurchatov**	**165.77**	**15**		**PKPab**	**22 32 34.1**	**-0.7**
KURBB	**Kurchatov Arra**	**165.84**	**15**	PKPab	**PKPab**	**22 32 34.4**	**-0.7**
	comp=Z,1.1nm,0.2s,baz=334,slow=5.0,SNR=4.8						

HEL 26 22:29:13.3±0.3, 67.76N×33.69E, h0km, ML1.3, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVZ	**Lovozero**	**0.39**	**68**	PG	Pg	22 29 20.2	-0.5
LVZ				SG	Sg	22 29 26.4	+0.6
VRF	**Varrio**	**1.55**	**272**	PG	Pn	22 29 41.4	-0.8
VRF				MSG		22 30 00.4	
	comp=Z,2.5nm,0.2s						
VRF				SG	Sn	22 30 01.5	-1.5
VRF	**Varrio**	**1.55**	**272**	*e*P	Pn	22 29 41.0	-1.2
VRF				*e*S	Sn	22 30 00.7	-2.3
VRF				MSG		22 30 05.2	
	comp=Z,3.5nm,0.2s						
OLKF	**Oulanka, Finla**	**2.22**	**231**	PN	Pn	22 29 52.2	+0.9
OLKF				SN	Sb	22 30 21.5	-0.7
OLKF	**Oulanka, Finla**	**2.22**	**231**	*e*P	Pn	22 29 51.5	+0.2
OLKF				*e*S	Sn	22 30 18.6	-0.7
OLKF				MSG		22 30 21.6	
	comp=Z,0.8nm,0.2s						
KU6	**Riekki**	**2.30**	**223**	*e*P	Pn	22 29 52.1	-0.2
KU6				*e*S	Sn	22 30 21.2	-0.1
MSF	**Maaselka**	**2.61**	**227**	PN	Pn	22 29 57.8	+1.1
MSF				SN	Sb	22 30 32.4	-1.0
MSF	**Maaselka**	**2.61**	**227**	*e*P	Pn	22 29 56.6	-0.1
MSF				*e*S	Sn	22 30 28.6	-0.5
SGF	**Sodankyl**	**2.76**	**267**	PB	Pb	22 30 01.6	-1.9
SGF				SB	Sb	22 30 36.8	-1.0
SGF	**Sodankyl**	**2.76**	**267**	*e*P	Pn	22 29 58.3	-0.4
SGF				*e*S	Sn	22 30 32.5	-0.2
KEV	**Kevo**	**3.15**	**313**	PG	Pn	22 30 05.1	+1.0
KEV				MSG		22 30 38.5	
	comp=Z,1.3nm,0.2s						
KEV				SG	Sn	22 30 43.4	+1.1
RNF	**Rovaniemi**	**3.21**	**252**	PN	Pn	22 30 04.0	-0.8
RNF				SN	Sn	22 30 43.3	-0.4
ARA0	**ARCESS Array S**	**3.48**	**305**	PB	Pn	22 30 08.8	+0.1
ARA0				SB	Sn	22 30 50.3	-0.3
ARA0	**ARCESS Array S**	**3.48**	**305**	*e*P	Pn	22 30 08.8	+0.1
ARA0				*e*S	Sn	22 30 49.7	-0.8
KLF	**Kolari**	**3.78**	**267**	PG	Pb	22 30 21.6	+0.9
KLF				SG	Sb	22 31 10.6	+3.6
TOF	**Tornio**	**4.05**	**250**	PG	Pb	22 30 26.3	+0.9
TOF				SG	Sg	22 31 20.6	-2.7
OUL	**Oulu**	**4.12**	**233**	PB	Pb	22 30 27.5	+0.9
OUL				SB	Sg	22 31 23.2	-2.4
PAJU	**Pajala**	**4.15**	**265**	PG	Pb	22 30 27.2	+0.1
PAJU				SN	Sn	22 31 06.5	-0.5
ERTU	**Ertsjaerv**	**4.64**	**260**	SN	Sn	22 31 16.6	-2.5

IDC 26 22:37:23.3±1.2, 49.54N×28.67W, h0km, mb3.3/4, mbtmp3.4/4, MS3.0/5, Error ellipse: s-maj=55.9km s-min=27.1km az=30.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESDC	**Sonseca Array**	**20.09**	**110**	P	Pn	22 41 59.6	-0.4
	0.4nm,0.9s,baz=309,slow=12,SNR=1.3						
ESDC				LR	LR	22 48 01.4	
	comp=Z,40nm,20.1s,baz=331,slow=32						
	0.4nm,0.9s						
NOA	**NORSAR Array B**	**25.03**	**48**	LR	LR	22 51 29.0	
	comp=Z,24nm,19.1s,baz=270,slow=34						
DAVOX	**Davos/Dischmat**	**25.67**	**81**	LR	LR	22 52 37.1	
	comp=Z,36nm,19.1s,baz=259,slow=36						
HFS	**Hagfors**	**26.14**	**50**	LR	LR	22 51 27.2	
	comp=Z,25nm,19.6s,baz=234,slow=32						
VRAC	**Vranov**	**29.11**	**73**	LR	LR	22 53 42.6	
	comp=Z,38nm,21.0s,baz=298,slow=34						
TORD	**Torodi Ar. Bea**	**44.03**	**135**	P	P	22 45 32.1	-0.5
	1.0nm,1.2s,baz=340,slow=7.8,SNR=5.2						
	1.0nm,1.2s						
PDAR	**Pinedale Array**	**53.89**	**296**	P	P	22 46 48.6	+0.2
	0.7nm,0.6s,baz=63,slow=8.3,SNR=8.3						
	0.7nm,0.6s						
MKAR	**Makanchi Array**	**66.97**	**44**	P	P	22 48 17.4	-0.1
	0.3nm,0.7s,baz=333,slow=5.4,SNR=2.5						
	0.3nm,0.7s						
WRA	**Warramunga Arr**	**147.49**	**31**	PKPbc	PKPbc	22 57 08.7	-0.6
	0.2nm,0.6s,baz=345,slow=2.9,SNR=1.4						
ASAR	**Alice Springs**	**150.78**	**34**	PKPbc	PKPbc	22 57 16.7	-0.9
	0.5nm,0.7s,baz=352,slow=2.1,SNR=6.5						

SOME 26 22:43:45.9, 39.33N×73.63E, h0km
KRNET 26 22:43:49.1±0.1, 39.53N×73.78E, mb3.2
ISC 26 22:43:54.8±1.9, 39.72N±0.07×73.49E±0.05, h3km±13km, n14, σ1°19/28, 8C-4D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**0.97**	**326**	⇓*i*P	**Pg**	**22 44 12.9**	**-0.5**
	baz=23						
OHH				⇓*i*S	**Sn**	**22 44 30.3**	**+0.6**
	baz=23						
DRK	**Karamyk**	**1.33**	**260**	⇑*i*P	**Pn**	**22 44 17.9**	**-2.7**
	baz=69						
DRK				⇑*i*S	**Sg**	**22 44 38.9**	**+1.3**
	baz=69						
BTK	**Batken**	**2.09**	**280**	⇓*i*P	**Pn**	**22 44 30.6**	**-0.2**
	baz=84						
BTK				⇓*i*S	**Sb**	**22 45 01.1**	**+1.4**
	baz=84						
ARLS	**Aral**	**2.23**	**16**	⇑*i*P	**Pn**	**22 44 31.2**	**-1.6**
	baz=10.0						
ARLS				⇑*i*S	**Sn**	**22 45 01.9**	**+1.0**
	baz=10.0						
TRKS	**Terek-Say**	**2.55**	**316**	⇑*i*P	**Pn**	**22 44 36.6**	**-0.5**
	baz=15						
TRKS				⇑*i*S	**Sb**	**22 45 11.6**	**-1.4**
	baz=15						
GAR	**Garm**	**2.57**	**255**	⇑*i*P	**Pn**	**22 44 36.1**	**-1.3**
	baz=60						
GAR				⇑*i*S	**Sn**	**22 45 10.5**	**+1.3**
	baz=60						
KST	**Kastek**	**3.80**	**28**	*e*P	**Pb**	**22 45 02.1**	**-0.5**
	2.2nm,0.2s						
KST				*e*S	**Sg**	**22 45 57.1**	**+0.2**
	14nm,0.6s						
SGDS	**Sogindy**	**3.83**	**12**	*e*P	**Pb**	**22 45 03.0**	**0.0**
	1.4nm,0.5s						
SGDS				*e*S	**Sg**	**22 45 58.6**	**+0.9**
	3.8nm,0.4s						
DGS	**Degeres**	**3.91**	**25**	*e*P	**Pb**	**22 45 04.9**	**+0.4**
	4.4nm,0.5s						
DGS				*e*S	**Sg**	**22 46 01.7**	**+1.3**
	9.4nm,0.8s						
TNSS	**Tian-Shan**	**4.21**	**37**	*e*P	**Pb**	**22 45 10.8**	**+1.0**
	2.4nm,0.4s						
TNSS				*e*S	**Sg**	**22 46 11.8**	**+1.8**
	3.0nm,0.8s						
BRLS	**Borolday**	**4.30**	**321**	*e*P	**Pb**	**22 45 11.3**	**+0.3**
	4.5nm,0.5s						
BRLS				*e*S	**Sg**	**22 46 12.8**	**-0.2**
	6.9nm,0.5s						
KTBS	**Karatobe**	**4.65**	**30**	*e*P	**Pb**	**22 45 17.4**	**+0.5**
	1.8nm,0.7s						
KTBS				*e*S	**Sg**	**22 46 23.2**	**-0.8**
	4.0nm,0.7s						
KUU	**Kurty**	**4.68**	**26**	*e*P	**Pb**	**22 45 19.0**	**+1.5**
	0.9nm,0.1s						
KUU				*e*S	**Sg**	**22 46 26.3**	**+1.2**
	7.8nm,0.5s						
CHKK	**Chushkaly**	**4.89**	**31**	*e*P	**Pb**	**22 45 21.7**	**+0.7**
	0.6nm,0.0s						
CHKK				*e*S	**Sg**	**22 46 30.5**	**-1.2**
	3.2nm,0.4s						

GUC 26 22:52:15.8±0.8, 30.66S×71.76W, h31km±2km, ML4.2
NEIC 26 22:52:16.6±1.8, 30.586S±0.009×71.68W±0.05, h25km±9km, mb4.2/2, ML4.2(GUC), Error ellipse: s-maj=6.1km s-min=1.3km az=90.0
ISC 26 22:52:16.4±1.1, 30.62S±0.03×71.69W±0.06, h26km±6km, n38, σ1°92/50, 2C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.07**	**141**		**Pb**	**22 52 20.8**	**-0.3**
CO06				Sg	**Sb**	**22 52 24.2**	**-0.1**
CO06	**Fray Jorge**	**0.07**	**141**	⇑*i*P	**Pb**	**22 52 20.8**	**-0.3**
CO06				*i* S	**Sb**	**22 52 24.3**	**-0.1**
CO05	**La Serena**	**0.80**	**29**		**Pb**	**22 52 31.4**	**-0.3**
CO05	**La Serena**	**0.80**	**29**	*e*P	**Pb**	**22 52 31.6**	**-0.1**
CO05				*i* S	**Sn**	**22 52 43.2**	**+0.3**
CO02	**Combarbal**	**0.83**	**135**		**Pb**	**22 52 30.9**	**-1.5**
CO02				Sg	**Sb**	**22 52 42.9**	**-0.3**
CO02	**Combarbal**	**0.83**	**135**	⇓*i*P	**Pb**	**22 52 31.0**	**-1.4**
CO02				*i* S	**Sb**	**22 52 43.1**	**-0.2**
CO02				IAML		22 52 45.1	
	comp=N,19μm,0.1s						
GO04	**Tololo Observa**	**0.89**	**60**		**Pb**	**22 52 32.8**	**-0.5**
GO04				Sn	**Sn**	**22 52 46.3**	**+0.8**
GO04	**Tololo Observa**	**0.89**	**60**	⇓*i*P	**Pb**	**22 52 32.8**	**-0.5**
GO04				*i* S	**Sn**	**22 52 46.6**	**+1.1**
CO03	**El Pedregal**	**0.89**	**105**		**Pb**	**22 52 31.8**	**-1.5**
CO03				Sg	**Sb**	**22 52 43.9**	**-0.9**
CO03	**El Pedregal**	**0.89**	**105**	⇓*i*P	**Pb**	**22 52 32.1**	**-1.2**
CO03				*i* S	**Sn**	**22 52 45.7**	**+0.3**
CO01	**Juntas del Tor**	**1.52**	**66**	Pn	**Pn**	**22 52 42.5**	**+0.3**
CO01	**Juntas del Tor**	**1.52**	**66**	*e*P	**Pb**	**22 52 43.1**	**-1.0**
CO01				*e*S	**Sb**	**22 53 04.5**	**+1.5**
LCO	**Las Campanas**	**1.81**	**28**	Pn	**Pn**	**22 52 46.4**	**+0.2**
VA06	**Catapilco**	**1.97**	**170**	Pn	**Pn**	**22 52 48.5**	**+0.5**
VA06	**Catapilco**	**1.97**	**170**	*e*P	**Pn**	**22 52 48.5**	**+0.5**
VA06				*i* S	**Sn**	**22 53 12.9**	**+1.0**
VA06				IAML		22 53 23.7	
	comp=N,3μm,0.5s						
VA03	**San Esteban**	**2.35**	**156**	Pn	**Pn**	**22 52 54.5**	**+1.1**
VA03	**San Esteban**	**2.35**	**156**	*e*P	**Pn**	**22 52 54.5**	**+1.1**
VA03				*i* S	**Sn**	**22 53 23.2**	**+1.7**
VA03				IAML		22 53 32.5	
	comp=N,2μm,0.5s						
VA01	**Torpederas**	**2.40**	**179**		**Pn**	**22 52 55.0**	**+1.1**
ROCH	**El Roble**	**2.42**	**166**	*e*P	**Pn**	**22 52 55.1**	**+0.7**
ROCH				IAML		22 53 32.5	
	comp=N,2μm,0.4s						
ROC1	**El Roble**	**2.42**	**166**	Pn	**Pb**	**22 52 57.5**	**-1.9**
AC04	**Llanos de Chal**	**2.46**	**13**	Pn	**Pn**	**22 52 54.5**	**-0.4**
PEL	**Peldehue**	**2.66**	**162**	Pn	**Pn**	**22 52 58.9**	**+1.3**
PEL	**Peldehue**	**2.66**	**162**	⇑*i*P	**Pn**	**22 52 58.7**	**+1.1**
PEL				*e*S	**Sn**	**22 53 31.4**	**+2.3**
PEL				IAML		22 53 46.3	
	comp=N,861nm,0.6s						
MT02	**Curacav**	**2.68**	**170**		**Pn**	**22 52 59.2**	**+1.4**
ZON	**Zonda**	**2.75**	**111**	Pn	**Pn**	**22 53 00.3**	**+1.5**
MT05	**Renca**	**2.88**	**164**		**Pn**	**22 53 01.8**	**+1.1**
VA05	**Santo Domingo**	**3.03**	**179**	Pn	**Pn**	**22 53 02.9**	**+0.2**
MT03	**Universidad Ad**	**3.04**	**161**		**Pn**	**22 53 04.0**	**+1.2**
MT09	**Talagante**	**3.21**	**170**		**Pn**	**22 53 05.8**	**+0.5**
MT09	**Talagante**	**3.21**	**170**	IAML		22 54 06.5	
	comp=N,521nm,0.4s						
MT01	**Popeta**	**3.26**	**174**		**Pn**	**22 53 06.7**	**+0.9**
GO03	**Copiap**	**3.27**	**23**		**Pn**	**22 53 05.7**	**-0.4**
LMEL	**Las Melosas**	**3.46**	**159**		**Pn**	**22 53 09.0**	**+0.3**
BO04	**La Punta**	**3.49**	**165**		**Pn**	**22 53 09.7**	**+0.7**
BO01	**Tunca**	**3.80**	**172**	Pn	**Pn**	**22 53 14.8**	**+1.5**
AC02	**Maricunga**	**4.39**	**31**	Pn	**Pn**	**22 53 22.1**	**+0.3**
GO05	**Huala**	**4.39**	**183**		**Pn**	**22 53 20.4**	**-0.9**
PLTB	**Pedras Altas**	**15.52**	**99**	Pn	**Pn**	**22 55 52.5**	**-1.1**
PLTB				IAmb	IAmb	22 56 15.9	
	comp=Z,14nm,1.3s						

IDC 26 22:57:04.5±0.4, 37.04N×142.21E, h0km, mb5.4/32, mbtmp5.4/38, ML4.1/5, MS5.3/82, Error ellipse: s-maj=12.2km s-min=10.0km az=118.0
NIED 26 22:57:04.3, 36.99N×142.40E, h19km, MW5.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^17 Nm; Mrr2.23; Mθθ0.11; Mφφ-2.34; Mrθ0.67; Mθφ-1.01; Mφr2.12; Fault plane solution: M0 3.32000×10^17 NP1: φs202.00000°, δ24.00000°, λ94.00000°. NP2: φs18.00000°, δ66.00000°, λ88.00000°.
JMA 26 22:57:04.3±0.3, 37.0N±0.6×14.2E±, h19km±4km, MD5.9/40, MW5.7/40, E OFF FUKUSHIMA PREF
JMA Felt III J1 at E OFF FUKUSHIMA PREF .
BJI 26 22:57:05.7±0.0, 37.06N×141.87E, h11km, mb5.8/73, mB5.9/58, Ms5.9/87, Ms7 5.8/78
NEIC 26 22:57:06.2±1.7, 37.00N±0.05×142.22E±0.08, h13km±2km, mb5.6/580, Ms_20 5.3/340, Mwb5.6/90, Mwr5.5/24, Muww5.7, Error ellipse: s-maj=9.1km s-min=6.6km az=98.0
MOS 26 22:57:06.1±1.1, 37.17N×142.23E, h21km, mb6.0/76, MS5.7/66, Error ellipse: s-maj=5.3km s-min=3.2km az=107.8
NEIC 26 22:57:08.7, 37.06N×142.14E, h23km, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr0.04; Mθθ0.21; Mφφ-0.25; Mrθ1.10; Mθφ0.09; Mφr1.83; Fault plane solution: M0 2.15000×10^17 NP1: φs31.01000°, δ89.43000°, λ96.47000°. NP2: φs126.00000°, δ6.50000°, λ5.02000°. Principal axes: T 2.1427, Plg45.0000°, Azm308.0000°; N 0.0119, Plg6.0000°, Azm211.0000°; P -2.1546, Plg44.0000°, Azm115.0000°;
NEIC 26 22:57:08.5, 37.09N×142.12E, h15km, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr1.44; Mθθ-0.17; Mφφ-1.27; Mrθ1.08; Mθφ-0.47; Mφr2.33; Fault plane solution: M0 2.94000×10^17 NP1: φs196.31000°, δ14.76000°, λ82.31000°. NP2: φs24.25000°, δ75.38000°, λ92.02000°. Principal axes: T 2.9413, Plg60.0000°, Azm297.0000°; N -0.0049, Plg2.0000°, Azm204.0000°; P -2.9364, Plg30.0000°, Azm113.0000°;
GCMT 26 22:57:11.2±0.1, 37.08N±0.01×142.24E±0.01, h22km, MW5.7/154, Moment Tensor Solution. s125, c226; s154, c332; Duration: 1s6 Moment tensor: Scale 10^17 Nm; Mrr2.58±.04; Mθθ-0.22±.03; Mφφ-2.35±.03;
Mrθ1.03±.06; Mθφ-0.92±.02; Mφr2.59±.07; Best double couple: M0 3.83600×10^17 NP1: φs199.00000°, δ22.00000°, λ88.00000°. NP2: φs21.00000°, δ68.00000°, λ91.00000°. Principal axes: T 3.7810, Plg67.0000°, Azm293.0000°; N 0.1180, Plg1.0000°, Azm201.0000°; P -3.8910, Plg23.0000°, Azm111.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
NEIC 26 22:57:13, 37.05N×142.15E, h22km, Moment Tensor Solution. Duration: 10s0 Moment tensor: Scale 10^17 Nm; Mrr1.93; Mθθ0.03; Mφφ-1.96; Mrθ1.53; Mθφ-0.80; Mφr3.13; Fault plane solution: M0 4.07000×10^17 NP1: φs192.00000°, δ16.00000°, λ77.00000°. NP2: φs25.00000°, δ75.00000°, λ94.00000°. Principal axes: T 3.9199, Plg60.0000°, Azm301.0000°; N 0.2851, Plg4.0000°, Azm204.0000°; P -4.2050, Plg30.0000°, Azm112.0000°;
ISC 26 22:57:07.5±0.3, 37.06N±0.03×142.21E±0.02, h19km±1km, h21km: pP-P, n1986, σ1°92/1878, mb5.6/515, MS5.4/323, 544C-240D, Fault plane solution: NP1: φs43.51810°, δ68.01514°, λ123.30503°. NP2: φs163.19267°, δ39.19632°, λ36.32491°. Principal axes: T Plg54.3616°, Azm355.3053°; N Plg30.6084°, Azm209.7001°; P Plg16.4563°, Azm109.6361°; Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.11**	**286**	⇓*i*P	**Pn**	**22 57 27.0**	**-1.0**
JFK	**Kawauchi**	**1.11**	**286**	A	A	22 57 27.0	
	comp=E,254nm,3.2s,comp=E,143nm,1.8s						
ONAJ	**Iwakimizuishiy**	**1.13**	**272**	⇓*i*P	**Pn**	**22 57 27.1**	**-1.2**
ONAJ				⇓S	**Sg**	**22 57 44.3**	**+0.1**
ONAJ	**Iwakimizuishiy**	**1.13**	**272**	A	A	22 57 27.1	
	comp=E,289nm,3.8s,comp=E,261nm,5.4s						
JMST	**Minamisoumatoc**	**1.24**	**303**	⇓*i*P	**Pn**	**22 57 29.1**	**-0.7**
JMST				⇓S	**Sg**	**22 57 48.0**	**+0.2**
JMST	**Minamisoumatoc**	**1.24**	**303**	A	A	22 57 29.1	
	comp=E,236nm,3.9s,comp=E,209nm,1.4s						
JFFD	**Fukushimafurud**	**1.32**	**272**	⇓*i*P	**Pn**	**22 57 29.8**	**-1.1**
JFFD				⇓S	**Sb**	**22 57 48.7**	**+0.6**
JFFD	**Fukushimafurud**	**1.32**	**272**	A	A	22 57 29.8	
	comp=E,171nm,6.4s,comp=E,150nm,3.4s						
JIKH	**Ishinomakikobu**	**1.38**	**335**	⇓*i*P	**Pn**	**22 57 30.8**	**-0.9**
JIKH	**Ishinomakikobu**	**1.38**	**335**	A	A	22 57 30.8	
	comp=E,253nm,2.7s,comp=E,182nm,3.4s						
JMM	**Marumori**	**1.38**	**306**		**Pn**	**22 57 31.2**	**-0.5**
JMM				Sn	**Sb**	**22 57 50.9**	**+1.0**
JMM	**Marumori**	**1.38**	**306**	⇓*i*P	**Pn**	**22 57 31.2**	**-0.5**
JMM				⇓S	**Sb**	**22 57 51.0**	**+1.0**
JMM	**Marumori**	**1.38**	**306**	A	A	22 57 31.2	
	comp=E,331nm,3.5s,comp=E,208nm,3.9s						
JHO	**Hitachi**	**1.39**	**252**	A	A	22 57 30.9	
	comp=E,202nm,2.2s,comp=E,273nm,3.0s						
JHYU	**Hitachinakayam**	**1.49**	**242**	A	A	22 57 32.0	
	comp=E,258nm,3.8s,comp=E,233nm,2.4s						
JIO	**Ouri**	**1.55**	**334**	⇓*i*P	**Pn**	**22 57 33.4**	**-0.6**
JIO				⇓*e*S	**Sb**	**22 57 54.2**	**-0.5**
JIO	**Ouri**	**1.55**	**334**	A	A	22 57 33.4	
	comp=E,206nm,2.0s,comp=E,116nm,4.9s						
JFT	**Otama**	**1.56**	**288**	*i* P	**Pn**	**22 57 34.6**	**+0.4**
JFT				S	**Sb**	**22 57 56.2**	**+1.1**
JFT	**Otama**	**1.56**	**288**	A	A	22 57 34.6	
	comp=E,410nm,1.3s,comp=E,278nm,1.5s						
CHOJ	**Chosi**	**1.74**	**219**	A	A	22 57 34.9	
	comp=E,188nm,1.8s,comp=E,175nm,2.7s						
JIHU	**Itakohorinouch**	**1.74**	**232**	A	A	22 57 35.4	
	comp=E,917nm,1.5s,comp=E,754nm,2.9s						
JOU	**Okura**	**1.79**	**317**	⇓P	**Pn**	**22 57 37.6**	**+0.3**
JOU				⇓*e*S	**Sb**	**22 58 01.5**	**-0.1**
JOU	**Okura**	**1.79**	**317**	A	A	22 57 37.6	
	comp=E,377nm,1.5s,comp=E,519nm,2.1s						
JYT	**Yasato**	**1.82**	**243**		**Pn**	**22 57 37.0**	**-0.8**
JYT				Sn	**Sn**	**22 57 59.2**	**-1.1**
JYT	**Yasato**	**1.82**	**243**	A	A	22 57 37.0	
	comp=E,140nm,1.7s,comp=E,227nm,3.6s						
JSB	**Shiboa**	**1.83**	**268**	A	A	22 57 37.8	
	comp=E,564nm,5.3s,comp=E,492nm,3.8s						
JKMT	**Kesennumamotoy**	**1.84**	**342**	A	A	22 57 37.4	
	comp=E,95nm,4.0s,comp=E,95nm,2.4s						
JOFO	**Osakifurukawao**	**1.85**	**327**	A	A	22 57 37.9	
	comp=E,1μm,1.7s,comp=E,975nm,1.7s						
JYAR	**Yonezawaarcadi**	**1.85**	**298**	A	A	22 57 38.2	
	comp=E,623nm,1.2s,comp=E,578nm,1.2s						
JSMT	**Sammumatsuo**	**2.01**	**226**	A	A	22 57 39.0	
	comp=E,498nm,4.5s,comp=E,447nm,3.0s						
JFY	**Yanaizu**	**2.03**	**281**	*i* P	**Pn**	**22 57 41.5**	**+0.8**
JFY				S	**Sb**	**22 58 09.5**	**+0.9**
JFY	**Yanaizu**	**2.03**	**281**	A	A	22 57 41.5	
	comp=E,149nm,2.9s,comp=E,177nm,4.5s						
JMK	**Ichinoseki**	**2.04**	**338**	⇓P	**Pn**	**22 57 40.9**	**+0.1**
JMK	**Ichinoseki**	**2.04**	**338**	A	A	22 57 40.9	
	comp=E,134nm,4.4s,comp=E,114nm,3.0s						
JYS	**Shirataka**	**2.06**	**305**	P	**Pn**	**22 57 41.8**	**+0.7**
JYS				S	**Sb**	**22 58 10.9**	**+1.5**
JYS	**Shirataka**	**2.06**	**305**	A	A	22 57 41.8	
	comp=E,299nm,1.7s,comp=E,336nm,1.5s						
OFUJ	**Ofunato**	**2.06**	**348**	A	A	22 57 40.4	
	comp=E,118nm,3.8s,comp=E,75nm,2.5s						
JAG	**Ashikaga**	**2.30**	**255**	⇓P	**Pn**	**22 57 44.0**	**-0.3**
JAG				⇓S	**Sn**	**22 58 13.6**	**+1.4**
JAG	**Ashikaga**	**2.30**	**255**	A	A	22 57 44.0	
	comp=E,76

MJAR **Matsushiro Arr** **3.25 262** Pn **Pn** **22 57 58.0 +0.5**
46nm,0.3s,baz=359,slow=16,SNR=724
MJAR Sn **Sn** **22 58 32.7 -3.0**
31nm,0.3s,baz=84,slow=16,SNR=6.3
MJAR LR LR 22 59 30.9
comp=Z,113μm,19.3s,baz=132,slow=45
2μm,0.8s
MJAR Matsushiro Arr 3.25 262 Pn 22 57 57.2 -0.2
MJAR Matsushiro Arr 3.25 262 P Pn 22 57 58.0 +0.5
MAJO Matsushiro 3.25 262 Pn 22 57 58.5 +1.0
MAJO Matsushiro 3.25 262 *d iP* **Pn 22 57 58.9 +1.4**
MAJO Matsushiro 3.25 262 P Pn 22 58 00.1 +2.6
MJB9 Matsu-Tunnel 3.26 262 Pn 22 57 58.7 +1.2
JSD Sado 3.29 288 Pn 22 57 58.1 +0.2
JSD Sado 3.29 288 A A 22 57 58.8
comp=E,64nm,3.5s,comp=E,39nm,4.0s
JHTM Izuhatsuma 3.34 232 A A 22 57 58.2
comp=E,189nm,2.3s,comp=E,172nm,1.1s
JYN Shimob 3.35 243 A A 22 57 58.8
comp=E,194nm,2.5s,comp=E,193nm,1.8s
JANG Nango 3.35 351 A A 22 57 58.7
comp=E,62nm,5.9s,comp=E,47nm,5.9s
JAH Hinai 3.36 339 A A 22 57 59.2
comp=E,202nm,2.6s,comp=E,128nm,2.1s
JNG Nsakai 3.37 260 A A 22 57 59.5
comp=E,66nm,6.3s,comp=E,93nm,3.4s
JFNN Fujinakano 3.41 238 A A 22 57 59.4
comp=E,224nm,2.6s,comp=E,187nm,2.7s
JTHY Toshimahigashi 3.47 224 A A 22 57 59.8
comp=E,134nm,5.0s,comp=E,153nm,6.9s
JNT Takato 3.49 251 A A 22 58 01.1
comp=E,78nm,2.6s,comp=E,82nm,2.6s
JIZS Izushimoda 3.58 230 A A 22 58 01.5
comp=E,54nm,2.9s,comp=E,57nm,4.3s
JNTW Noshirotokiwa 3.58 334 A A 22 58 02.5
comp=E,393nm,3.5s,comp=E,478nm,2.5s
JNIO Niijimaoohara 3.60 222 A A 22 58 01.7
comp=E,120nm,2.1s,comp=E,92nm,1.9s
JSKK Shikinejimakit 3.66 223 A A 22 58 02.4
comp=E,80nm,2.1s,comp=E,63nm,7.6s
JOG3 Oga3 3.76 320 A A 22 58 00.3
comp=E,96nm,3.4s,comp=E,156nm,5.1s
SHZ3 Shizuoka 3 3.80 240 A A 22 58 05.1
comp=E,98nm,3.2s,comp=E,84nm,2.0s
JKO Kozu shima 3.81 222 A A 22 58 04.5
comp=E,155nm,3.3s,comp=E,98nm,3.3s
JMKN Mikurajimanish 3.82 215 A A 22 58 04.3
comp=E,41nm,8.7s,comp=E,38nm,4.4s
JTM Tenmabayashi 3.82 347 Pn 22 58 06.1 +0.8
JTM Tenmabayashi 3.82 347 A A 22 58 05.6
comp=E,72nm,3.9s,comp=E,44nm,3.3s
JHHS Hirosakihyakuz 3.86 339 A A 22 58 06.3
comp=E,179nm,3.9s,comp=E,229nm,3.0s
JSZ Suzu 3.88 277 A A 22 58 07.2
comp=E,74nm,4.5s,comp=E,43nm,3.7s
JNY Yasuok 3.91 245 A A 22 58 06.7
comp=E,161nm,2.2s,comp=E,245nm,1.4s
JIW Iwasaki 3.92 335 A A 22 58 07.3
comp=E,70nm,3.9s,comp=E,81nm,4.2s
JTT Ttatey 3.94 265 A A 22 58 07.7
comp=E,182nm,3.2s,comp=E,109nm,2.4s
JARK Aomorirokkasho 3.99 351 A A 22 58 07.8
comp=E,68nm,2.4s,comp=E,61nm,3.7s
JGN Niukaw 4.02 259 A A 22 58 08.8
comp=E,29nm,3.3s,comp=E,31nm,6.1s
JSG Sagara 4.04 235 A A 22 58 08.3
comp=E,129nm,3.3s,comp=E,98nm,4.3s
JKKS Kakegawashinom 4.13 237 A A 22 58 09.6
comp=E,134nm,2.0s,comp=E,83nm,2.8s
JGF Kuroka 4.18 251 Pn 22 58 12.5 +2.2
JGF Kuroka 4.18 251 A A 22 58 10.8
comp=E,104nm,2.3s,comp=E,60nm,2.0s
JSI2 Shiura 2 4.23 341 A A 22 58 11.4
comp=E,88nm,7.3s,comp=E,93nm,3.3s
JAHD Aomorihigashid 4.25 351 A A 22 58 11.4
comp=E,122nm,1.4s,comp=E,105nm,1.4s
HMMJ Hamamatsu 2 4.25 240 A A 22 58 11.5
comp=E,36nm,4.0s,comp=E,49nm,2.5s
JHG Hegura jima 4.28 282 A A 22 58 12.8
comp=E,50nm,4.8s,comp=E,32nm,3.1s
JJH Hakui 4.35 270 A A 22 58 13.6
comp=E,46nm,2.7s,comp=E,62nm,3.5s
JSSY Shinshiroyabe 4.37 242 A A 22 58 13.2
comp=E,36nm,3.7s,comp=E,38nm,3.2s
JAO Obara 4.39 247 A A 22 58 13.6
comp=E,139nm,2.5s,comp=E,83nm,3.4s
JHJ2 Mitsune 4.40 207 Pn 22 58 11.8 -1.5
JHJ2 Mitsune 4.40 207 P Pn 22 58 13.7 +0.4
JHJ2 Mitsune 4.40 207 A A 22 58 12.3
comp=E,42nm,3.4s,comp=E,32nm,3.9s
JOT Ohata 4.41 349 A A 22 58 13.7
comp=E,46nm,3.5s,comp=E,45nm,6.0s
JHJ Hachijo jima 2 4.41 208 Pn **Pn** **22 58 12.1 -1.2**
216nm,0.3s,baz=312,slow=21,SNR=48
JHJ Sn **Sn** **22 58 58.8 -5.3**
372nm,0.3s,baz=55,slow=23,SNR=4.3
852nm,0.3s
JHCJ Hachijojimakas 4.45 207 A A 22 58 12.9
comp=E,27nm,4.8s,comp=E,23nm,5.8s
INU Inuyama 4.53 249 Pn 22 58 15.0 -0.1
INU Inuyama 4.53 249 P Pn 22 58 18.1 +3.0
JYTA Yamagatataniai 4.66 253 A A 22 58 17.5
comp=E,49nm,2.5s,comp=E,45nm,2.7s
JSR Shiriuchi 4.67 343 A A 22 58 17.6
comp=E,67nm,4.8s,comp=E,70nm,5.2s
JICN Ichinomiyachia 4.68 250 A A 22 58 17.8
comp=E,103nm,3.0s,comp=E,133nm,2.3s
JOMM Oshimamatsumae 4.77 340 A A 22 58 19.1
comp=E,43nm,4.0s,comp=E,61nm,4.5s
JAA Atsumi 4.78 241 A A 22 58 18.8
comp=E,31nm,2.8s,comp=E,38nm,2.4s
JKG Kaga 4.79 262 A A 22 58 19.6
comp=E,24nm,6.2s,comp=E,27nm,7.4s
JKB Kayabe 4.90 350 A A 22 58 20.6
comp=E,38nm,1.6s,comp=E,39nm,3.0s
ERM Erimo 5.00 8 Pn 22 58 19.4 -2.1
ERM Erimo 5.00 8 *d e*P **Pn 22 58 20.3 -1.1**
ERM pmax pmax
comp=Z,433nm,1.0s
ERM Erimo 5.00 8 P Pn 22 58 21.5 +0.1
JEM Erimo 5.00 8 A A 22 58 21.3
comp=Z,31nm,5.0s,comp=Z,26nm,4.6s
JAOM Aogashimamukai 5.01 204 A A 22 58 20.7
comp=Z,40nm,3.4s,comp=Z,31nm,2.2s
TTO3 TONAKAI O.B.S 5.06 232 A A 22 58 22.5
comp=Z,135nm,2.6s,comp=Z,118nm,6.3s
JEG Eigenji 5.09 250 A A 22 58 23.5
comp=Z,24nm,3.8s,comp=Z,38nm,4.2s
JIE Ise 5.21 241 A A 22 58 24.9
comp=Z,44nm,2.2s,comp=Z,45nm,4.5s
JNBK Urakawa-nobuka 5.23 4 A A 22 58 24.6
comp=Z,73nm,4.4s,comp=Z,58nm,5.5s
JYM2 Yakumo 2 5.24 345 A A 22 58 25.6
comp=Z,31nm,3.4s,comp=Z,38nm,3.9s
TSUJ Tsu 2 5.25 245 A A 22 58 25.7
comp=Z,40nm,3.2s,comp=Z,37nm,2.4s
JFM Mihama 5.26 255 A A 22 58 26.0
comp=Z,29nm,2.6s,comp=Z,45nm,2.8s
JTHR Tokachihiroo 5.29 9 A A 22 58 25.3
comp=Z,31nm,6.3s,comp=Z,25nm,5.3s
JSHD Hidakashinhida 5.34 2 A A 22 58 26.3
comp=Z,107nm,2.3s,comp=Z,75nm,5.6s
TTO2 TONANKAI O.B.S 5.38 233 A A 22 58 27.0
comp=Z,127nm,4.4s,comp=Z,170nm,3.8s
JOSM Okushiri--Mats 5.44 338 A A 22 58 28.5
comp=Z,33nm,3.2s,comp=Z,24nm,4.0s
JNB Noboribetsu 5.47 351 A A 22 58 28.6
comp=Z,19nm,4.8s,comp=Z,16nm,5.9s
JIAM Iburiatsuma 5.56 358 A A 22 58 29.5
comp=Z,62nm,5.1s,comp=Z,83nm,1.6s
JKN2 Miekihoku 5.59 242 A A 22 58 30.3
comp=Z,27nm,3.2s,comp=Z,47nm,3.5s
JCH Churui 5.62 9 A A 22 58 29.9
comp=Z,31nm,2.4s,comp=Z,26nm,6.5s
JHST Hiyamasetana 5.65 342 A A 22 58 31.2
comp=Z,42nm,4.8s,comp=Z,27nm,4.3s
JBT2 Biratori 2 5.71 1 A A 22 58 31.5
comp=Z,31nm,2.2s,comp=Z,30nm,4.7s
JWT Wachi 5.79 254 A A 22 58 33.4
comp=Z,18nm,6.5s,comp=Z,21nm,3.1s
JEW Eniwo 5.80 354 Pn 22 58 32.9 +0.4
JEW Eniwo 5.80 354 A A 22 58 33.0
comp=Z,53nm,4.1s,comp=Z,50nm,5.4s
JSH Shimam 5.82 344 A A 22 58 33.6
comp=Z,33nm,5.9s,comp=Z,21nm,4.9s
JHE Heguri 5.82 248 A A 22 58 33.6
comp=Z,26nm,4.7s,comp=Z,49nm,5.7s
JNTK Naratenkawa 5.85 243 A A 22 58 34.0
comp=Z,19nm,6.8s,comp=Z,28nm,5.4s
JKY Yasaka 5.91 258 A A 22 58 35.2
comp=Z,24nm,2.6s,comp=Z,31nm,2.0s
JOB Onbets 5.97 12 A A 22 58 34.7
comp=Z,37nm,3.7s,comp=Z,39nm,1.5s
JMMH Miemihama 6.00 239 A A 22 58 35.8
comp=Z,14nm,7.5s,comp=Z,12nm,6.4s
JFR Furan 6.10 3 A A 22 58 36.9
comp=Z,23nm,4.6s,comp=Z,21nm,2.3s
JAK Akkeshi 6.23 17 A A 22 58 38.1
comp=Z,33nm,2.4s,comp=Z,42nm,2.6s
JMIK Miki 6.23 251 A A 22 58 39.4
comp=Z,24nm,4.1s,comp=Z,33nm,2.5s
JISS Ishikarishitsu 6.24 355 A A 22 58 39.1
comp=Z,48nm,3.8s,comp=Z,69nm,5.3s
NMR Nemuro--Hokkai 6.85 22 *e*P **Pn 22 58 43.3 -3.5**
NMR *e*S **Sn 22 59 57.4 -6.8**
JKA Kamikawa-asahi 7.05 2 Pn **Pn 22 58 48.5 -1.1**
ASAJ Asahikawa 7.05 2 P **Pn 22 58 48.5 -1.1**
RUSJ Misakicho 7.40 17 *e*P **Pn 22 58 52.2 -2.2**
RUSJ *e*S **Sn 23 00 15.3 -2.6**
YUK Yuzh-Kuril'sk 7.50 21 *d iP* **Pn 22 58 52.9 -2.8**
YUK *i* S **Sn 23 00 13.3 -6.9**
YUK pmax pmax
comp=E,327nm,0.6s
YUK pmax pmax
comp=Z,641nm,0.6s
JMN Monobe 7.57 246 Pn **Pn 22 58 55.4 -1.4**
JHS Saijyo 7.65 257 Pn **Pn 22 58 58.7 +0.8**
SHO Shikotan 7.66 26 ⇓ *iP* **Pn 22 58 55.6 -2.3**
SHO *i* S **Sn 23 00 15.9 -8.2**
SHO pmax pmax
comp=E,93nm,0.3s
SHO pmax pmax
comp=Z,103nm,0.3s
TEY Ternei 9.02 334 ⇓ *iP* **Pn 22 59 19.4 +2.8**
TEY *e*S **Sn 23 01 03.3 +5.8**
TEY pmax pmax
comp=N,60nm,0.8s
TEY pmax pmax
comp=E,50nm,0.8s
TEY pmax pmax
comp=Z,70nm,0.8s
TEY MLR MLR
comp=E,10μm,18.0s
TEY MLR MLR
comp=N,18μm,17.0s
TEY MLR MLR
comp=Z,25μm,16.0s
KUR Kuril'sk 9.21 26 *e*P **Pn 22 59 17.8 -1.4**
KUR *e*S **Sn 23 00 54.2 -8.0**
KUR pmax pmax
comp=Z,298nm,0.7s
KUR pmax pmax
comp=E,69nm,0.5s
KUR smax smax
comp=N,712nm,0.9s
KUR smax smax
comp=E,631nm,0.7s
KUR smax smax
comp=E,9μm,5.0s
KUR smax smax
comp=N,4μm,2.4s
KUR MLR MLR
comp=Z,17μm,14.0s
YSS Yuzh-Sakhalins 9.89 2 Pn **Pn 22 59 27.8 -0.7**
YSS Yuzh-Sakhalins 9.89 2 *c e*P **Pn 22 59 28.0 -0.5**
YSS *e*S **Sn 23 01 15.0 -4.0**
YSS pmax pmax
comp=Z,1μm,5.0s
YSS pmax pmax
comp=N,900nm,5.2s
YSS pmax pmax
comp=Z,360nm,0.8s
YSS smax smax
comp=E,1μm,5.3s
YSS MLR MLR
comp=Z,10μm,18.0s
YSS Yuzh-Sakhalins 9.89 2 P **Pn 22 59 28.0 -0.5**
comp=Z,478nm,0.9s
JCJ Chichijima 9.94 180 Pn **Pn 22 59 26.3 -3.0**
comp=Z,70nm,0.3s,baz=49,slow=18,SNR=25
JCJ Sn Sn 23 01 10.1 -10
comp=Z,105nm,0.3s,baz=72,slow=23,SNR=6.9
JCJ Chichijima 9.94 180 Pn **Pn 22 59 24.7 -4.5**
JCJ Chichijima 9.94 180 P **Pn 22 59 28.5 -0.8**
VLA Vladivostok 9.95 311 *c e*P **Pn 22 59 32.0 +2.6**
JNU Nakatsue 10.08 250 Pn **Pn 22 59 33.5 +2.2**
comp=Z,28nm,0.3s,baz=62,slow=5.5,SNR=234
JNU LR LR 23 03 35.4
comp=Z,13μm,18.7s,baz=72,slow=39
JNU Nakatsue 10.08 250 Pn 22 59 30.9 -0.3
JNU Nakatsue 10.08 250 P **Pn 22 59 34.4 +3.2**
MSHR Mys Shultsa 10.13 306 *c iP* **Pn 22 59 33.6 +1.8**
USA0B Ussuriysk Arra 10.54 316 Pn **Pn 22 59 37.8 +0.5**
USA0B Ussuriysk Arra 10.54 316 *c e*P **Pn 22 59 39.1 +1.7**
USRK Ussuriysk Ar. 10.54 316 Pn **Pn 22 59 39.5 +2.1**
comp=Z,3.9nm,0.3s,baz=116,slow=7.2,SNR=56
USRK LR LR 23 03 26.7
comp=Z,36μm,19.4s,baz=120,slow=36
USRK Ussuriysk Ar. 10.54 316 Pn **Pn 22 59 37.7 +0.3**
USRK Ussuriysk Ar. 10.54 316 P **Pn 22 59 37.7 +0.3**
JTU Tsushima 10.71 260 Pn **Pn 22 59 39.8 0.0**
SEHB SEOHWA 11.13 280 Pn **Pn 22 59 45.3 -0.3**
JSU Suzuyama 11.19 244 Pn **Pn 22 59 46.0 -0.4**
KSCHJ Chungju 11.39 273 Pn 22 59 49.6 +0.5
KSRS Korea Array 11.39 276 Pn **Pn 22 59 53.5 +4.3**
comp=Z,3.8nm,0.3s,baz=89,slow=13,SNR=502
KSRS LR LR 23 04 05.4
comp=Z,43μm,18.9s,baz=85,slow=37
KSAR Wonju Array Be 11.43 276 Pn **Pn 22 59 51.0 +1.4**
KSAR Wonju Array Be 11.43 276 P **Pn 22 59 51.0 +1.4**
KS19 Wonju Array Si 11.44 277 Pn 22 59 48.4 -1.3
TJN Taejon 11.94 271 Pn **Pn 22 59 56.3 -0.2**
TJN Taejon 11.94 271 *c iP* **Pn 22 59 59.0 +2.4**
TJN Taejon 11.94 271 P **Pn 22 59 59.9 +3.3**
UGL Uglegorsk 12.01 360 *eP* **Pn 22 59 57.3 -0.2**
UGL *e*S **Sn 23 02 11.7 +0.9**
UGL pmax pmax
comp=Z,650nm,2.0s
UGL pmax pmax
comp=Z,270nm,1.2s
UGL smax smax
comp=E,2μm,7.5s
UGL smax smax
comp=N,1μm,4.0s
UGL MLR MLR
comp=N,19μm,16.0s
UGL MLR MLR
comp=E,20μm,16.0s
NAWB Namwon 12.07 267 Pn **Pn 22 59 59.1 +0.6**
MDJ Mudanjiang 12.17 312 Pn 22 59 59.4 -0.3
MDJ Mudanjiang 12.17 312 P Pn 23 00 04.8 +5.1
MDJ S Sn 23 02 32.8 +18
MDJ pmax pmax
comp=Z,170nm,1.9s
MDJ pmax pmax
comp=Z,3μm,8.2s
MDJ LR LR
comp=N,18μm,17.6s
MDJ LR LR
comp=E,21μm,19.1s
MDJ LR LR
comp=Z,39μm,17.7s
INCN Inchon 12.42 277 Pn **Pn 23 00 02.2 -1.0**
INCN Inchon 12.42 277 P **Pn 23 00 02.2 -1.0**
INCN Inchon 12.42 277 P **Pn 23 00 04.9 +1.7**
TYV Tymovskoe 13.80 1 *eP* **Pn 23 00 23.4 +1.5**
TYV *e*S **Sn 23 02 59.3 +4.7**
TYV pmax pmax
comp=Z,900nm,2.4s
TYV pmax pmax
comp=Z,162nm,1.0s
TYV smax smax
comp=N,41nm,1.3s
TYV smax smax
comp=E,20nm,1.3s
TYV smax smax
comp=N,600nm,5.2s
TYV smax smax
comp=E,600nm,5.2s
TYV MLR MLR
comp=N,20μm,16.0s
TYV MLR MLR
comp=Z,17μm,16.0s
BNX BinXian 14.08 313 ⇓ P **Pn 23 00 25.0 -0.7**
BNX S **Sn 23 02 59.5 -1.8**
BNX pmax pmax
comp=Z,29nm,1.2s
BNX LR LR
comp=Z,12μm,16.5s
BNX LR LR
comp=Z,20μm,15.8s
GRNR Gornyy 14.32 345 ⇑ *iP* **Pn 23 00 28.2 -0.8**
GRNR *e*S **Sn 23 03 08.7 +1.5**
GRNR pmax pmax
comp=Z,30nm,1.0s
GRNR smax smax
comp=N,10.0nm,0.9s
GRNR MLR MLR
comp=E,4μm,14.0s
GRNR MLR MLR
comp=N,8μm,17.0s
GRNR MLR MLR
comp=Z,13μm,16.0s
KLR Kul'dur 14.34 331 Pn **Pn 23 00 27.9 -1.5**
comp=Z,1.1nm,0.3s,baz=128,slow=13,SNR=43
KLR LR LR 23 05 58.6
comp=Z,27μm,18.9s,baz=144,slow=37
comp=Z,15nm,0.8s
KLR Kul'dur 14.34 331 P **Pn 23 00 27.9 -1.5**
CN2 Changchun 14.42 303 *eP* **Pn 23 00 30.3 -0.2**
CN2 *e*S **Sn 23 03 15.0 +5.2**
CN2 pmax pmax
comp=Z,2μm,12.0s
CN2 LR LR
comp=Z,12μm,15.0s
CN2 LR LR
comp=Z,24μm,15.0s
CN2 LR LR
comp=Z,13μm,17.9s
SNY Shenyang 15.15 294 ⇑ P **Pn 23 00 39.5 -0.9**
SNY S **Sn 23 03 26.5 -1.2**
SNY pmax pmax
comp=Z,260nm,1.0s
SNY pmax pmax
comp=Z,4μm,11.2s
SNY LR LR
comp=Z,14μm,12.9s
SNY LR LR
comp=Z,49μm,16.3s
SNY LR LR
comp=Z,68μm,15.8s
JOW Kunigami 15.60 233 Pn **Pn 23 00 45.3 -1.0**
comp=Z,0.9nm,0.3s,baz=50,slow=9.3,SNR=6.7
JOW LR LR 23 06 35.1
comp=Z,10μm,21.9s,baz=55,slow=37
comp=Z,62nm,0.9s
JOW Kunigami 15.60 233 Pn 23 00 42.0 -4.3
JOW IAmb IAmb 23 01 05.0
comp=Z,354nm,1.1s
JOW Kunigami 15.60 233 P **Pn 23 00 47.7 +1.4**
NKL Nikolayevsk 16.12 357 *eP* **Pn 23 00 49.8 -3.0**
NKL pmax pmax
comp=N,360nm,1.1s
NKL pmax pmax
comp=E,2.0nm,1.1s
NKL pmax pmax
comp=Z,620nm,1.1s
NKL MLR MLR
comp=E,25nm,12.0s
NKL MLR MLR
comp=N,5μm,17.0s
NKL MLR MLR
comp=Z,9μm,15.0s
DL2 Dalian 16.33 283 P **Pn 23 00 55.3 -0.3**
DL2 S **Sn 23 03 56.3 0.0**
DL2 pmax pmax
comp=Z,510nm,1.0s
DL2 pmax pmax
comp=Z,4μm,9.2s
DL2 LR LR
comp=Z,10μm,15.7s
DL2 LR LR
comp=Z,20μm,18.5s
DL2 LR LR
comp=Z,24μm,13.6s
SKR Severo-Kuril's 16.87 32 *eP* **Pn 23 00 59.2 -3.1**
SKR *e*S **Sn 23 04 01.3 -7.8**
SKR pmax pmax
comp=Z,53nm,1.1s
SKR pmax pmax
comp=Z,500nm,6.6s
SKR MLR MLR
comp=Z,5μm,15.0s
SSE Sheshan 18.39 257 P **Pn 23 01 21.5 +0.2**
SSE pmax pmax
comp=Z,92nm,2.0s
SSE pmax pmax
comp=Z,580nm,3.5s
SSE LR LR
comp=Z,9μm,17.3s
SSE LR LR
comp=Z,6μm,13.4s
JMJ Miyako jima 2 18.93 235 P **Pn 23 01 27.9 0.0**
PEA0B Petropavlovsk- 19.35 29 P **P 23 01 28.5 -3.1**
PEA0B Petropavlovsk- 19.35 29 ⇑ *eP* **P 23 01 31.8 +0.2**
PETK Petropavlovsk- 19.35 29 P **P 23 01 31.4 -0.2**
comp=Z,0.6nm,0.3s,baz=203,slow=11,SNR=21
PETK S **Sn 23 05 04.2 -4.9**
comp=Z,3.9nm,1.0s,baz=239,slow=30,SNR=1.4
PETK PcP **PcP 23 05 53.7 +0.5**
comp=Z,7.0nm,0.8s,baz=194,slow=5.2,SNR=4.6
PETK LR LR 23 09 47.9
comp=Z,6μm,18.4s,baz=213,slow=39
comp=Z,35nm,1.0s
PETK Petropavlovsk- 19.35 29 P **P 23 01 31.8 +0.2**
PETK **PcP 23 05 53.4 +0.2**
PETK Petropavlovsk- 19.35 29 P **P 23 01 31.8 +0.2**
ZEA Zeya 19.64 333 *eP* **P 23 01 33.3 -1.5**
ZEA pmax pmax
comp=N,140nm,0.8s
ZEA pmax pmax
comp=E,80nm,0.8s
ZEA pmax pmax
comp=Z,250nm,0.8s
ZEA pmax pmax
comp=E,600nm,9.7s
ZEA pmax pmax
comp=N,400nm,5.6s
ZEA pmax pmax
comp=Z,1μm,9.6s
ZEA MLR MLR
comp=E,6μm,17.0s
ZEA MLR MLR
comp=N,11μm,15.0s
ZEA MLR MLR
comp=Z,12μm,16.0s
PET Petropavlovsk 19.66 31 P **Pn 23 01 35.9 -0.6**
PET Petropavlovsk 19.66 31 *eP* **Pn 23 01 36.1 -0.4**
PET *e*S **S 23 05 11.3 -4.6**
PET pmax pmax
comp=Z,2μm,18.0s
PET pmax pmax
comp=Z,178nm,1.0s
PET MLR MLR
comp=Z,10μm,17.0s
PET MLR MLR
comp=Z,10μm,15.0s
PET Petropavlovsk 19.66 31 P **Pn 23 01 38.2 +1.7**
comp=Z,529nm,1.1s
NJ2 Nanjing 19.86 262 ⇑ P **P 23 01 36.0 -1.3**
NJ2 pP **Pn 23 01 39.0 0.0**
NJ2 sP **sP 23 01 44.5 +0.1**
NJ2 pmax pmax
comp=Z,84nm,0.9s
NJ2 pmax pmax
comp=Z,1μm,4.3s
NJ2 LR LR
comp=Z,9μm,17.1s
NJ2 LR LR
comp=Z,25μm,15.6s
NJ2 LR LR
comp=Z,25μm,17.1s
TIA Tai'an 20.14 275 ⇑ P **P 23 01 38.3 -2.1**
TIA pmax pmax
comp=Z,200nm,1.2s
TIA pmax pmax
comp=Z,2μm,10.8s
TIA LR LR
comp=Z,15μm,13.9s
TIA LR LR
comp=Z,21μm,15.9s

TIA LR LR
comp=Z,31μm,16.5s
HIA Hailar 20.34 314 P **P** **23 01 41.0 -1.5**
HIA Hailar 20.34 314 P **P** **23 01 41.0 -1.5**
HIA pmax pmax
comp=Z,137nm,1.0s
HIA MLR MLR
comp=Z,26μm,18.0s
BJI Beijing 20.55 286 P **P** **23 01 41.5 -3.4**
BJI S **S** **23 05 34.5 +0.6**
BJI pmax pmax
comp=Z,150nm,0.9s
BJI pmax pmax
comp=Z,840nm,3.5s
BJI LR LR
comp=Z,1μm,15.5s
BJI LR LR
comp=Z,7μm,14.4s
BJT Baijiatuau 20.56 286 P **P** **23 01 42.6 -2.3**
BJT IAmb IAmb 23 01 52.4
comp=Z,211nm,1.0s
BJT Baijiatuau 20.56 286 P **P** **23 01 42.6 -2.3**
BJT pmax pmax
comp=Z,211nm,1.0s
BJT MLR MLR
comp=Z,8μm,21.0s
YOJ Yonaguni jima 20.69 238 P **P** **23 01 42.9 -3.5**
YOJ Yonaguni jima 20.69 238 P **P** **23 01 42.9 -3.5**
YOJ pmax pmax
comp=Z,203nm,1.1s
YOJ Yonaguni jima 20.69 238 P **P** **23 01 47.1 +0.7**
XLT XiLinHaoTe 20.96 297 *e*P **P** **23 01 46.5 -2.9**
XLT pP Pn 23 01 51.3 -0.7
XLT sP pP 23 01 54.8 +0.3
XLT PP **PnPn** **23 02 09.3 +1.2**
XLT S **S** **23 05 36.3 -5.9**
XLT sS Sn 23 05 46.0 -2.3
XLT PcP **PcP** **23 05 57.0 +0.6**
XLT pmax pmax
comp=Z,530nm,0.9s
XLT pmax pmax
comp=Z,3μm,4.0s
XLT LR LR
comp=Z,22μm,16.8s
XLT LR LR
comp=Z,25μm,17.7s
TATO Taipei 21.41 242 P **P** **23 01 52.4 -1.8**
YHNB Yeheng 21.68 241 P **P** **23 01 54.4 -2.8**
YHNB Yeheng 21.68 241 P **P** **23 01 58.2 +1.0**
NACB Ninganchiao 21.85 240 P **P** **23 01 56.1 -2.8**
HNS HongShan 21.88 279 ⇑P **P** **23 01 55.8 -3.3**
HNS S **S** **23 05 51.0 -9.0**
HNS PcP **PcP** **23 06 03.8 +5.7**
HNS SS **SnSn** **23 06 25.5 +0.1**
HNS ScP **ScP** **23 09 34.8 +0.5**
HNS pmax pmax
comp=Z,690nm,0.9s
HNS LR LR
comp=Z,6μm,15.9s
HNS LR LR
comp=Z,24μm,17.5s
HNS LR LR
comp=Z,26μm,14.1s
SSLB Suanglung 22.54 240 P **P** **23 02 03.0 -3.3**
SSLB IAmb IAmb 23 02 21.4
comp=Z,146nm,1.0s
SSLB Suanglung 22.54 240 P **P** **23 02 06.3 -0.1**
YULB Yu-li 22.57 239 P **P** **23 02 04.0 -2.6**
YULB IAmb IAmb 23 02 20.7
comp=Z,138nm,0.9s
TPUB Ta-pu 23.08 240 P **P** **23 02 08.8 -3.3**
TPUB IAMs_20 IAMs_20 23 11 55.5
comp=Z,11μm,19.0s
TPUB Ta-pu 23.08 240 P **P** **23 02 11.6 -0.5**
TWG Pinlang 23.10 238 P **P** **23 02 09.0 -3.2**
TWG IAmb IAmb 23 02 15.4
comp=Z,182nm,0.8s
MA2 Magadan 23.20 11 P **P** **23 02 13.3 +0.4**
comp=Z,272nm,1.0s,baz=189,slow=8.7,SNR=60
MA2 S **S** **23 06 20.4 -3.1**
comp=Z,3.0nm,0.3s,baz=188,slow=15,SNR=1.1
MA2 LR LR 23 10 55.5
comp=Z,3μm,21.1s,baz=196,slow=36
comp=Z,272nm,1.0s
MA2 Magadan 23.20 11 *c*P **P** **23 02 12.0 -0.9**
MA2 Magadan 23.20 11 *c*P **P** **23 02 13.0 +0.1**
MA2 pmax pmax
comp=Z,366nm,1.0s
MA2 MLR MLR
comp=Z,6μm,16.0s
MA2 Magadan 23.20 11 P **P** **23 02 13.4 +0.5**
GUMO Guam 23.50 174 LR LR 23 10 25.4
comp=Z,3μm,21.8s,baz=8.5,slow=34
QZH Quanzhou 23.50 246 ⇑*i*P **P** **23 02 12.3 -3.9**
QZH S **S** **23 06 20.8 -8.3**
QZH pmax pmax
comp=Z,250nm,0.8s
QZH LR LR
comp=Z,9μm,14.5s
QZH LR LR
comp=Z,2μm,13.3s
QZH LR LR
comp=Z,9μm,14.7s
TIY Taiyuan 23.63 281 ⇓P **P** **23 02 15.0 -2.4**
TIY S **S** **23 06 31.5 +0.4**
TIY SS **SnSn** **23 07 13.0 +4.6**
TIY pmax pmax
comp=Z,100nm,1.1s
TIY LR LR
comp=Z,10μm,12.4s
TIY LR LR
comp=Z,24μm,13.7s
TIY LR LR
comp=Z,26μm,11.7s
KNMB Chin-men Tao 23.94 245 P **P** **23 02 17.7 -2.7**
KNMB IAmb IAmb 23 02 19.7
comp=Z,275nm,1.0s
KNMB IAMs_20 IAMs_20 23 11 42.2
comp=Z,7μm,21.0s
WHN Wuhan 24.00 262 ⇓P **P** **23 02 19.5 -1.4**
WHN sP **pwP** **23 02 29.0 +0.4**
WHN PP **PnPn** **23 02 54.0 +4.4**
WHN S **S** **23 06 33.5 -3.4**
WHN pmax pmax
comp=Z,1μm,0.9s
WHN LR LR
comp=Z,29μm,13.6s
WHN LR LR
comp=Z,22μm,13.1s
WHN LR LR
comp=Z,40μm,19.7s
HHC Hu-ho-hao-te 24.07 289 *e*P **P** **23 02 18.5 -3.1**
HHC PP **PnPn** **23 02 51.8 +1.2**
HHC S **S** **23 06 32.0 -6.1**
HHC pmax pmax
comp=Z,150nm,1.1s
HHC pmax pmax
comp=Z,2μm,5.3s
HHC LR LR
comp=Z,21μm,11.1s
HHC LR LR
comp=Z,14μm,12.1s
HHC LR LR
comp=Z,24μm,12.7s
LYN LuoYang 24.21 273 ⇑P **P** **23 02 18.5 -4.4**
LYN PP **PnPn** **23 02 54.0 +1.5**
LYN S S 23 06 28.8 -11
LYN pmax pmax
comp=Z,230nm,0.8s
LYN pmax pmax
comp=Z,2μm,6.1s
LYN LR LR
comp=Z,14μm,15.5s
LYN LR LR
comp=Z,11μm,19.8s
LYN LR LR
comp=Z,16μm,17.5s
CIT Chita 25.10 316 *e*P **P** **23 02 31.1 +0.2**
CIT *e* 23 02 40.4
CIT *e* 23 03 01.8
CIT *e* 23 03 25.8
CIT *e* 23 06 53.2
CIT pmax pmax
comp=Z,2μm,1.9s
BTO Baotou 25.25 288 *e*P **P** **23 02 30.5 -1.9**

BTO S **S** **23 06 56.8 -0.3**
BTO LR LR
comp=Z,46μm,15.7s
BTO LR LR
comp=Z,22μm,16.5s
YAK Yakutsk 26.18 347 P **P** **23 02 40.1 -0.4**
comp=Z,225nm,0.7s,baz=38,slow=0.2,SNR=104
YAK S **S** **23 07 05.7 -5.6**
comp=Z,10.0nm,0.4s,baz=250,slow=0.6,SNR=2.3
YAK LR LR 23 12 50.8
comp=Z,1μm,20.0s,baz=150,slow=36
comp=Z,225nm,0.7s
YAK Yakutsk 26.18 347 P **P** **23 02 39.9 -0.6**
YAK IAMs_20 IAMs_20 23 13 12.1
comp=Z,10μm,18.0s
YAK Yakutsk 26.18 347 *c i*P **P** **23 02 39.9 -0.6**
YAK *e**PP **pwP** **23 02 51.6 +3.4**
YAK *e* 23 03 17.0
YAK *e* 23 06 06.4
YAK eSS **S** **23 07 09.3 -1.9**
YAK *e*SS **SnSn** **23 08 11.3 +0.9**
YAK pmax pmax
comp=Z,529nm,0.9s
YAK pmax pmax
comp=N,115nm,0.9s
YAK pmax pmax
comp=E,52nm,1.0s
YAK pmax pmax
comp=Z,486nm,1.4s
YAK pmax pmax
comp=N,362nm,1.3s
YAK pmax pmax
comp=E,128nm,1.2s
YAK smax smax
comp=E,1μm,4.3s
YAK smax smax
comp=N,1μm,3.0s
YAK MLR MLR
comp=Z,12μm,14.0s
YAK MLR MLR
comp=N,5μm,14.0s
YAK MLR MLR
comp=E,5μm,14.0s
SEY Seymchan 26.64 10 P **P** **23 02 45.7 +1.1**
comp=E,157nm,0.9s,baz=193,slow=6.7,SNR=168
SEY S **S** **23 07 27.4 +8.9**
comp=E,2.2nm,0.7s,baz=6.4,slow=22,SNR=0.8
SEY LR LR 23 14 31.9
comp=E,4μm,18.2s,baz=207,slow=39
comp=E,157nm,0.9s
SEY Seymchan 26.64 10 *ce*P **P** **23 02 45.6 +1.0**
SEY pmax pmax
comp=Z,287nm,1.3s
SEY MLR MLR
comp=Z,7μm,16.0s
XAN Xi'an 27.17 274 ⇑P **P** **23 02 49.0 -0.8**
XAN pP pP 23 02 54.5 -0.5
XAN sP pwP 23 02 57.5 0.0
XAN PP **PnPn** **23 03 31.5 -1.6**
XAN S **S** **23 07 24.0 -3.6**
XAN pmax pmax
comp=Z,34nm,1.0s
XAN pmax pmax
comp=Z,3μm,7.0s
XAN LR LR
comp=Z,15μm,15.5s
XAN LR LR
comp=Z,13μm,14.9s
XAN LR LR
comp=Z,17μm,14.9s
SHEM Shemya Is, Ala 27.20 45 LR LR 23 11 48.8
comp=Z,3μm,20.8s,baz=244,slow=32
SMY Shemya 27.20 45 P **P** **23 02 50.4 +0.7**
SMY IAmb IAmb 23 03 05.3
comp=Z,163nm,1.3s
SMY Shemya 27.20 45 P **P** **23 02 50.4 +0.7**
SMY pmax pmax
comp=Z,163nm,1.3s
H11N2 WAKE ISLAND Hy 27.62 122 T T 23 31 57.6
baz=314,slow=75,SNR=2048
H11N1 WAKE ISLAND Hy 27.63 122 T T 23 31 52.5
baz=314,slow=75,SNR=284
H11N3 WAKE ISLAND Hy 27.64 122 T T 23 31 59.6
baz=314,slow=75,SNR=291
WAKE Wake Island 27.77 123 IAMs_20 IAMs_20 23 11 44.6
comp=Z,8μm,21.0s
BOD Bodaibo 27.85 327 *e*P **P** **23 02 55.1 -0.4**
BOD pmax pmax
comp=Z,434nm,1.3s
ULN Ulaanbaatar 27.87 304 P **P** **23 02 55.7 -0.3**
ULN IAmb IAmb 23 03 10.2
comp=Z,177nm,1.0s
ULN Ulaanbaatar 27.87 304 IAMs_20 IAMs_20 23 14 12.7
comp=Z,9μm,19.0s
ULN Ulaanbaatar 27.87 304 P **P** **23 02 55.7 -0.3**
ULN pmax pmax
comp=Z,177nm,1.0s
ULN MLR MLR
comp=Z,9μm,19.0s
ENH Enshi 27.97 266 P **P** **23 02 55.9 -1.0**
SONM Songino Array 28.30 304 P **P** **23 03 00.2 +0.4**
comp=Z,195nm,1.0s,baz=101,slow=8.6,SNR=183
SONM PcP **PcP** **23 06 12.9 +0.4**
comp=Z,11nm,0.9s,baz=243,slow=1.0,SNR=4.3
SONM LR LR 23 14 38.3
comp=Z,9μm,18.9s,baz=92,slow=37
comp=Z,195nm,1.0s
SONM Songino Array 28.30 304 P **P** **23 02 59.2 -0.6**
SONM Songino Array 28.30 304 P **P** **23 02 59.2 -0.6**
SONM pmax pmax
comp=Z,232nm,1.0s
H11S1 WAKE ISLAND Hy 28.34 124 T T 23 32 56.4
baz=316,slow=76,SNR=302
H11S3 WAKE ISLAND Hy 28.34 124 T T 23 32 51.2
baz=316,slow=76,SNR=383
H11S2 WAKE ISLAND Hy 28.36 124 T T 23 32 53.8
baz=316,slow=76,SNR=314
HKPS Hong Kong Po S 28.36 247 IAMs_20 IAMs_20 23 13 57.3
comp=Z,11μm,20.0s
GULI GuiLin 29.53 256 P P 23 03 02.8 -8.0
GULI S S 23 07 55.5 -9.1
GULI pmax pmax
comp=Z,390nm,1.4s
GULI LR LR
comp=N,7μm,13.8s
GULI LR LR
comp=E,9μm,14.2s
GULI LR LR
comp=Z,16μm,13.7s
TGY Tagaytay City 29.71 225 P **P** **23 03 13.0 +0.5**
comp=Z,583nm,0.7s,baz=51,slow=0.9,SNR=28
TGY Tagaytay City 29.71 225 P **P** **23 03 13.0 +0.5**
IRK Irkutsk 30.55 312 *e*P **P** **23 03 18.5 -1.1**
IRK pmax pmax
comp=Z,337nm,2.5s
LZH Lanzhou 30.69 280 ⇑P **P** **23 03 20.8 -0.4**
LZH pP pP 23 03 26.5 +0.1
LZH sP pwP 23 03 29.8 +0.8
LZH PP **PnPn** **23 04 20.3 -0.6**
LZH PcP **PcP** **23 06 20.8 +1.9**
LZH S **S** **23 08 22.5 -0.5**
LZH pmax pmax
comp=Z,310nm,1.6s
LZH pmax pmax
comp=Z,1μm,4.5s
LZH LR LR
comp=Z,12μm,16.5s
LZH LR LR
comp=Z,23μm,16.8s
LZH LR LR
comp=Z,33μm,16.1s
ZAK Zakamensk 30.75 308 *e*P **P** **23 03 21.1 -0.4**
ZAK pmax pmax
comp=Z,256nm,1.2s
GYA Guiyang 31.85 261 ⇓P **P** **23 03 31.8 +0.3**
GYA sP pwP 23 03 40.8 +1.6
GYA S **S** **23 08 39.5 -1.8**
GYA pmax pmax
comp=Z,310nm,1.0s
GYA pmax pmax
comp=Z,1μm,3.5s
GYA LR LR
comp=Z,10μm,21.5s
GYA LR LR
comp=Z,8μm,19.8s
GYA LR LR
comp=Z,12μm,22.3s

CD2 Chengdu 32.31 271 P **P** **23 03 34.5 -0.8**
CD2 S **S** **23 08 44.0 -4.2**
CD2 SS **SnSn** **23 10 40.5 +0.1**
CD2 pmax pmax
comp=Z,420nm,0.9s
CD2 pmax pmax
comp=Z,920nm,5.3s
CD2 LR LR
comp=Z,19μm,15.2s
CD2 LR LR
comp=Z,25μm,15.2s
ADK Adak 32.38 50 P **P** **23 03 36.3 +0.7**
ADK Adak 32.38 50 P **P** **23 03 36.3 +0.7**
ADK pmax pmax
comp=Z,31nm,1.0s
ADK MLR MLR
comp=Z,3μm,20.0s
MOY Mondy 32.41 310 *e*P **P** **23 03 36.0 -0.1**
MOY pmax pmax
comp=Z,201nm,1.6s
GTA Gaotai 33.16 287 ⇑P **P** **23 03 43.0 +0.2**
GTA pP sP 23 03 50.5 +0.5
GTA sP pP 23 03 55.0 +6.8
GTA PcP **PcP** **23 06 26.0 +0.5**
GTA S **S** **23 08 56.0 -5.5**
GTA sS pS 23 09 04.3 -3.4
GTA PcS **PcS** **23 10 12.0 +0.9**
GTA ScS **ScS** **23 14 08.3 -1.0**
GTA pmax pmax
comp=Z,88nm,1.5s
GTA pmax pmax
comp=Z,1μm,5.8s
GTA LR LR
comp=Z,8μm,17.4s
GTA LR LR
comp=Z,7μm,18.5s
GTA LR LR
comp=Z,9μm,17.8s
PATS Pohnpei 33.48 150 IAMs_20 IAMs_20 23 15 14.8
comp=Z,6μm,21.0s
DAV Davao City (W) 33.48 211 LR LR 23 17 25.6
comp=Z,5μm,19.9s,baz=53,slow=36
DAV Davao City (W) 33.48 211 IAMs_20 IAMs_20 23 17 25.2
comp=Z,5μm,19.0s
QIZ Qiongzhong 33.52 246 P **P** **23 03 45.2 -0.8**
QIZ Qiongzhong 33.52 246 IAMs_20 IAMs_20 23 17 46.1
comp=Z,5μm,20.0s
QIZ Qiongzhong 33.52 246 P **P** **23 03 47.8 +1.8**
QIZ sP **sP** **23 03 53.0 -0.4**
QIZ S **S** **23 09 09.5 +2.4**
QIZ pmax pmax
comp=Z,160nm,1.0s
QIZ pmax pmax
comp=Z,1μm,4.2s
QIZ LR LR
comp=Z,5μm,17.1s
QIZ LR LR
comp=Z,5μm,13.5s
QIZ LR LR
comp=Z,6μm,15.0s
BILL Bilibino 33.82 16 P **P** **23 03 47.2 -0.8**
BILL IAmb IAmb 23 03 49.8
comp=Z,92nm,1.0s
BILL Bilibino 33.82 16 *d i*P **P** **23 03 47.2 -0.8**
BILL *i* *PP **pwP** **23 03 57.5 +1.8**
BILL *i* 23 04 55.3
BILL *i* S **S** **23 09 06.1 -4.7**
BILL pmax pmax
comp=Z,100nm,1.0s
BILL MLR MLR
comp=Z,3μm,16.0s
ATKA Atka Island 33.95 49 P **P** **23 03 48.4 -0.9**
KNGR Kungurtug, Tuv 34.43 308 *c i*P **P** **23 03 53.9 +0.2**
KNGR pmax pmax
comp=Z,254nm,1.2s
KNGR MLR MLR
comp=Z,6μm,16.0s
MIDW Midway 34.95 93 IAMs_20 IAMs_20 23 15 35.3
comp=Z,5μm,20.0s
TIXI Tiksi 35.34 353 P **P** **23 04 00.8 -0.3**
comp=Z,32nm,0.8s,baz=273,slow=24,SNR=46
TIXI LR LR 23 20 10.7
comp=Z,7μm,18.7s,baz=181,slow=39
comp=Z,32nm,0.8s
TIXI Tiksi 35.34 353 P **P** **23 04 00.8 -0.3**
TIXI IAMs_20 IAMs_20 23 19 58.8
comp=Z,7μm,20.0s
TIXI Tiksi 35.34 353 *c i*P **P** **23 04 00.2 -0.9**
TIXI pmax pmax
comp=Z,45nm,0.9s
TIXI MLR MLR
comp=Z,8μm,17.0s
PZH PanZhiHua 35.74 265 P **P** **23 04 04.8 -0.4**
PZH pP **sP** **23 04 11.8 -0.6**
PZH sP **pwP** **23 04 14.3 +1.3**
PZH S **S** **23 09 40.0 -1.5**
PZH sS **sS** **23 09 52.8 +3.8**
PZH pmax pmax
comp=Z,160nm,0.9s
PZH pmax pmax
comp=Z,1μm,6.5s
PZH LR LR
comp=Z,8μm,16.7s
PZH LR LR
comp=Z,10μm,15.9s
PZH LR LR
comp=Z,17μm,16.6s
KWAJ Kwajalein Atol 36.35 134 IAMs_20 IAMs_20 23 16 32.1
comp=Z,5μm,20.0s
SGSI Sangihe 36.58 209 P **P** **23 04 13.1 +0.8**
comp=Z,10μmcomp=Z,164nm,1.1s
NIKH Nikolski High 37.28 49 P **P** **23 04 18.2 +0.3**
NIKH Nikolski High 37.28 49 P **P** **23 04 18.5 +0.6**
baz=265
GOMU GeErMu 37.73 283 ⇑*e*P **P** **23 04 22.8 +0.4**
GOMU sP pP 23 04 27.5 -0.2
GOMU PP **PP** **23 05 48.0 -0.6**
GOMU PcP **PcP** **23 06 41.0 +1.7**
GOMU S **S** **23 10 13.8 +1.6**
GOMU pmax pmax
comp=Z,240nm,1.1s
GOMU pmax pmax
comp=Z,2μm,4.9s
GOMU LR LR
comp=Z,4μm,14.3s
GOMU LR LR
comp=Z,7μm,14.5s
GOMU LR LR
comp=Z,7μm,15.1s
GAMB Gambell 38.36 31 S **S** **23 10 22.4 +2.2**
baz=248
MYLDM Lahad Datu 38.44 220 P **P** **23 04 28.5 +0.4**
MYLDM IAMs_20 IAMs_20 23 19 17.7
comp=Z,5μm,19.0s
BAKI Biak 38.48 190 P **P** **23 04 30.1 +1.7**
comp=Z,1μmcomp=Z,115nm,1.0s
TNTI Ternate 38.63 204 P **P** **23 04 29.8 +0.2**
TNTI IAmb IAmb 23 04 46.1
comp=Z,270nm,1.4s
TNTI Ternate 38.63 204 P **P** **23 04 30.0 +0.3**
comp=Z,2μmcomp=Z,135nm,1.6s
TNTI Ternate 38.63 204 P **P** **23 04 33.0 +3.3**
UNV Unalaska Valle 38.75 48 S **S** **23 10 30.0 +3.6**
baz=266
SMPI Sarmi 38.99 186 P **P** **23 04 34.4 +1.8**
comp=Z,5μmcomp=Z,60nm,1.4s
SWI Sorong 39.08 198 P **P** **23 04 33.6 +0.2**
comp=Z,1μmcomp=Z,87nm,0.9s
SRPI Serui, Papua 39.13 189 P **P** **23 04 34.9 +1.1**
comp=Z,97nm,1.0s
MANU Manus Island 39.20 172 P **P** **23 04 33.3 -1.1**
GENI Genyem 39.50 183 P **P** **23 04 38.3 +1.4**
comp=Z,3μmcomp=Z,210nm,1.1s
GENI Genyem 39.50 183 P **P** **23 04 39.2 +2.3**
comp=Z,183nm,1.0s
LBMI Labuha 39.91 203 P **P** **23 04 38.0 -2.4**
comp=Z,2μmcomp=Z,29nm,0.4s
KMSI Cibinong 40.03 209 P **P** **23 04 41.7 +0.4**
comp=Z,6μmcomp=Z,406nm,0.8s
TNA Tin City 40.52 29 S **S** **23 10 55.5 +2.9**
baz=250
FAKI Fak Fak 40.84 195 P **P** **23 04 48.2 +0.1**
FAKI Fak Fak 40.84 195 P **P** **23 04 48.0 -0.1**
comp=Z,1μmcomp=Z,107nm,0.8s
FAKI Fak Fak 40.84 195 P **P** **23 04 50.5 +2.4**
TOLI2 Tolitoli 40.88 214 P **P** **23 04 47.7 -0.7**

TOLI2 Tolitoli 40.88 214 P **P** **23 04 48.7 +0.3**
MRSI Marisa 40.95 212 P **P** **23 04 49.4 +0.5**
comp=Z,3µmcomp=Z,3µmcomp=Z,257nm,1.2s
ANM Nome 41.24 31 P **P** **23 04 50.9 +0.1**
ANM Nome 41.24 31 P **P** **23 04 50.9 +0.1**
ANM pmax pmax
comp=Z,73nm,1.4s
ANM MLR MLR
comp=Z,1µm,19.0s
ANM Nome 41.24 31 P **P** **23 04 53.0 +2.1**
baz=254
ANM S **S** **23 11 06.1 +2.6**
baz=254
WMQ Urumqi 41.40 297 ⇓P **P** **23 04 54.5 +2.0**
WMQ sP sP 23 05 04.5 +4.7
WMQ S **S** **23 11 09.3 +2.9**
WMQ pmax pmax
comp=Z,240nm,1.3s
WMQ pmax pmax
comp=Z,2µm,3.7s
WMQ LR LR
comp=Z,9µm,13.3s
WMQ LR LR
comp=Z,6µm,12.3s
WMQ LR LR
comp=Z,7µm,16.3s
SANI Sanana 41.73 205 P **P** **23 04 54.4 -1.0**
comp=Z,2µmcomp=Z,148nm,0.8s
SANI Sanana 41.73 205 P **P** **23 04 56.5 +1.1**
CHTO Chiang Mai 41.92 256 P **P** **23 04 56.6 -0.4**
CHTO IAmb IAmb 23 05 11.1
comp=Z,94nm,0.9s
CHTO Chiang Mai 41.92 256 P **P** **23 04 56.6 -0.4**
CHTO pmax pmax
comp=Z,94nm,1.0s
CHTO MLR MLR
comp=Z,9µm,19.0s
CHTO Chiang Mai 41.92 256 P **P** **23 04 57.9 +0.9**
MPSI Mapaga 41.97 215 P **P** **23 04 57.7 +0.4**
comp=Z,2µmcomp=Z,2µmcomp=Z,52nm,0.9s
LUWI Luwuk 41.98 210 P **P** **23 04 57.0 -0.3**
LUWI IAmb IAmb 23 05 12.9
comp=Z,176nm,1.1s
LUWI Luwuk 41.98 210 P **P** **23 04 57.1 -0.3**
comp=Z,10µmcomp=Z,185nm,1.5s
LUWI Luwuk 41.98 210 P **P** **23 04 58.6 +1.2**
MSAI Masohi 42.06 200 P **P** **23 05 01.3 +3.2**
comp=Z,2µmcomp=Z,26nm,1.0s
CM31 Chiang Mai Arr 42.12 256 P **P** **23 04 58.3 -0.3**
CM31 IAmb IAmb 23 05 13.3
comp=Z,73nm,0.8s
CM31 Chiang Mai Arr 42.12 256 P **P** **23 04 59.1 +0.5**
SNR=21
CMAR Chiang Mai Arr 42.12 256 P **P** **23 04 59.2 +0.6**
comp=Z,24nm,0.8s,baz=46,slow=6.1,SNR=97
CMAR ScP **ScP** **23 10 43.7 +1.2**
comp=Z,1.1nm,0.3s,baz=15,slow=3.7,SNR=4.8
CMAR LR LR 23 24 35.7
comp=Z,9µm,19.1s,baz=60,slow=39
comp=Z,24nm,0.8s
CMAR Chiang Mai Arr 42.12 256 P **P** **23 04 58.4 -0.2**
CMAR **ScP** **23 10 43.4 +0.8**
CMAR Chiang Mai Arr 42.12 256 *i* P **P** **23 04 59.2 +0.6**
CMAR pmax pmax
comp=Z,26nm,0.8s
KRVT Keravat (AS076 42.16 165 LR LR 23 19 23.3
comp=Z,1µm,21.5s,baz=128,slow=32
APSI Ampana 42.32 211 P **P** **23 05 00.7 +0.5**
comp=Z,2µmcomp=Z,219nm,1.2s
SDPT Sand Point 42.33 46 P **P** **23 05 01.6 +1.8**
baz=269
ZAA0 Zalesovo Array 42.37 312 P **P** **23 05 00.2 +0.1**
ZALV Zalesovo Beam 42.37 312 P **P** **23 05 00.3 +0.1**
comp=Z,251nm,1.0s,baz=95,slow=6.2,SNR=267
ZALV PcP **PcP** **23 06 53.0 -0.3**
comp=Z,42nm,0.8s,baz=92,slow=4.5,SNR=3.7
ZALV ScP **ScP** **23 10 42.5 -0.4**
comp=Z,6.5nm,1.1s,baz=73,slow=11,SNR=4.3
ZALV LR LR 23 23 17.2
comp=Z,10µm,19.0s,baz=82,slow=37
comp=Z,251nm,1.0s
ZALV Zalesovo Beam 42.37 312 P **P** **23 04 59.8 -0.4**
ZALV **ScP** **23 10 42.7 -0.2**
ZALV Zalesovo Beam 42.37 312 *i* P **P** **23 05 00.0 -0.2**
ZALV pmax pmax
comp=Z,252nm,1.0s
NLAI Namlea 42.49 203 P **P** **23 05 01.9 +0.3**
comp=Z,79nm,1.1s
AAI Ambon 42.59 201 P **P** **23 05 03.6 +1.2**
comp=Z,2µmcomp=Z,180nm,0.9s
ZSN Zaisan 42.80 303 *ce*P **P** **23 05 04.4 +0.5**
ZSN *e*S **S** **23 11 26.8 -0.2**
ZSN pmax pmax
comp=Z,245nm,1.6s
ZSN Zaisan 42.80 303⇑ *e*P **P** **23 05 04.4 +0.5**
comp=Z,245nm,1.6s,baz=303
ZSN *e*S **S** **23 11 26.9 -0.2**
baz=303
CHNA Chernabura Isl 42.83 46 P **P** **23 05 05.0 +1.0**
baz=270
CHNA S **S** **23 11 24.0 -3.1**
baz=270
CNBA Chernabura Isl 42.83 46 P **P** **23 05 04.8 +0.8**
CNBA IAMs_20 IAMs_20 23 20 48.3
comp=Z,3µm,21.0s
LSA Lhasa 42.84 276 P **P** **23 05 04.6 -0.3**
LSA Lhasa 42.84 276 P **P** **23 05 04.6 -0.3**
LSA pmax pmax
comp=Z,286nm,1.1s
LSA MLR MLR
comp=Z,6µm,19.0s
BNDI Bandanaira 42.93 198 P **P** **23 05 06.9 +1.8**
RDOG Red Dog Mine 43.19 27 IAMs_20 IAMs_20 23 25 14.0
comp=Z,4µm,18.0s
RDOG Red Dog Mine 43.19 27 P **P** **23 05 02.2 -4.5**
baz=253
RDOG S **S** **23 11 27.6 -4.6**
baz=253
N16K Nishlik Lake 43.51 38 P **P** **23 05 10.9 +1.5**
baz=265,SNR=32
N16K S **S** **23 11 38.6 +1.5**
baz=265
O16K Kokwok River B 43.78 39 P **P** **23 05 12.7 +1.1**
baz=266,SNR=18
O16K S **S** **23 11 42.3 +1.4**
baz=266
P16K Nushagak River 43.80 40 P **P** **23 05 13.6 +1.9**
baz=267,SNR=17
P16K S **S** **23 11 43.7 +2.5**
baz=267
SMKI Samarinda 43.92 218 P **P** **23 05 16.0 +2.8**
comp=Z,7µmcomp=Z,263nm,1.3s
SHL Shillong 44.04 270 P **P** **23 05 13.5 -0.8**
SHL Shillong 44.04 270 P **P** **23 05 13.5 -0.8**
SHL pmax pmax
comp=Z,244nm,1.2s
SHL Shillong 44.04 270 P **P** **23 05 13.7 -0.7**
SNR=38
SHL Shillong 44.04 270 *eP* **P** **23 05 13.7 -0.7**
SHL *eP* **pP** **23 05 13.8 -5.9**
SHL IAmb IAmb 23 05 26.5
comp=Z,191nm,1.2s
SHL IAmb IAmb 23 05 26.6
comp=Z,156nm,1.1s
O17K Koliganek Bris 44.30 39 P **P** **23 05 17.4 +1.7**
baz=267,SNR=17
O17K S **S** **23 11 50.4 +2.0**
baz=267
Q16K King Salmon 44.48 41 P **P** **23 05 19.4 +2.2**
baz=269,SNR=6.3
P17K Kvichak River 44.61 40 P **P** **23 05 20.1 +2.0**
baz=268,SNR=5.6
P17K S **S** **23 11 55.3 +2.3**
baz=268
R17K Ugashik Creek 44.62 42 P **P** **23 05 19.6 +1.3**
baz=270
MK31 Makanchi Array 44.64 302 P **P** **23 05 18.8 +0.1**
MK31 IAmb IAmb 23 05 30.8
comp=Z,112nm,0.9s
MK31 Makanchi Array 44.64 302 P **P** **23 05 18.8 +0.1**
MK31 pmax pmax
comp=Z,112nm,0.9s
MKAR Makanchi Array 44.64 302 P **P** **23 05 18.6 -0.1**
comp=Z,86nm,0.7s,baz=87,slow=9.4,SNR=602
MKAR LR LR 23 24 06.5
comp=Z,4µm,21.3s,baz=76,slow=36
comp=Z,86nm,0.7s

MKAR Makanchi Array 44.64 302 P **P** **23 05 18.8 +0.1**
MKAR Makanchi Array 44.64 302 *i* P **P** **23 05 18.6 -0.1**
MKAR pmax pmax
comp=Z,87nm,0.7s
BKB Balikpapan 44.78 217 P **P** **23 05 18.8 -1.2**
BKB Balikpapan 44.78 217 P **P** **23 05 21.2 +1.2**
comp=Z,3µmcomp=Z,4µmcomp=Z,251nm,1.0s
BKB Balikpapan 44.78 217 P **P** **23 05 21.3 +1.2**
MAKZ Makanchi 44.85 302 P **P** **23 05 20.6 +0.2**
MAKZ IAMs_20 IAMs_20 23 24 02.1
comp=Z,5µm,21.0s
MAKZ Makanchi 44.85 302 P **P** **23 05 20.6 +0.2**
MAKZ pmax pmax
comp=Z,316nm,1.4s
MAKZ MLR MLR
comp=Z,4µm,21.0s
N18K Kilae Creek 44.94 38 P **P** **23 05 22.4 +1.6**
N18K IAmb IAmb 23 05 34.1
comp=Z,129nm,1.5s
N18K Kilae Creek 44.94 38 P **P** **23 05 22.7 +1.8**
baz=267,SNR=20
N18K S **S** **23 12 01.0 +3.2**
baz=267
TTSI Tana Toraja 45.02 213 P **P** **23 05 19.4 -2.5**
comp=Z,2µmcomp=Z,43nm,1.0s
TTA Tatalina 45.03 35 P **P** **23 05 22.5 +0.8**
baz=265
SVW2 Sparrevohn 45.11 37 P **P** **23 05 23.6 +1.3**
SVW2 IAmb IAmb 23 05 35.4
comp=Z,85nm,1.2s
P18K Big Mountain, 45.23 40 P **P** **23 05 23.9 +0.6**
P18K IAmb IAmb 23 05 35.9
comp=Z,106nm,1.4s
P18K Big Mountain, 45.23 40 P **P** **23 05 24.8 +1.5**
baz=269
P18K S **S** **23 12 04.2 +2.0**
baz=269
O18K Koktuh Hills 45.25 39 P **P** **23 05 24.7 +1.3**
O18K IAmb IAmb 23 05 39.5
comp=Z,77nm,1.1s
O18K Koktuh Hills 45.25 39 P **P** **23 05 24.9 +1.5**
baz=269,SNR=14
O18K S **S** **23 12 05.2 +2.8**
baz=269
Q18K Katmai Hardscr 45.34 41 P **P** **23 05 26.5 +2.3**
baz=270
Q18K S **S** **23 12 02.7 -1.2**
baz=270
SEM Semipalatinsk 45.43 308 *c i*P **P** **23 05 23.8 -1.3**
SEM pmax pmax
comp=Z,145nm,1.5s
SEM MLR MLR
comp=Z,4µm,17.0s
SEM Semipalatinsk 45.43 308⇑ *i*P **P** **23 05 23.8 -1.3**
comp=Z,145nm,1.5s,baz=308
SEM *e*LR LR 23 24 35.2
comp=Z,4µm,16.5s,baz=308
TARA Tarawa 45.44 134 IAMs_20 IAMs_20 23 21 45.0
comp=Z,5µm,20.0s
TARA Tarawa 45.44 134 P **P** **23 05 27.7 +2.4**
comp=Z,184nm,1.2s
MTKI Muara Teweh, K 45.51 220 P **P** **23 05 26.7 +0.9**
comp=Z,97nm,1.1s
L19K White Mountain 45.52 36 P **P** **23 05 26.7 +1.3**
L19K White Mountain 45.52 36 P **P** **23 05 26.8 +1.3**
baz=267,SNR=17
L19K S **S** **23 12 08.1 +2.0**
baz=267
N19K Bonanza Creek 45.64 38 P **P** **23 05 27.6 +1.1**
N19K Bonanza Creek 45.64 38 P **P** **23 05 27.8 +1.4**
baz=268,SNR=11
N19K S **S** **23 12 09.1 +1.0**
baz=268
O19K Port Alsworth 45.70 39 P **P** **23 05 27.8 +0.9**
O19K Port Alsworth 45.70 39 P **P** **23 05 29.0 +2.1**
baz=269
O19K S **S** **23 12 11.9 +3.1**
baz=269
M19K Big River Lodg 45.72 36 P **P** **23 05 28.2 +1.1**
M19K Big River Lodg 45.72 36 P **P** **23 05 28.5 +1.5**
baz=268
M19K S **S** **23 12 11.1 +2.1**
baz=268
SII Sitkinak Islan 45.84 44 IAMs_20 IAMs_20 23 24 40.8
comp=Z,3µm,20.0s
SPSI Sidrap Palu 45.86 212 P **P** **23 05 28.2 -0.4**
comp=Z,1µmcomp=Z,96nm,1.0s
K20K Telida 45.95 34 P **P** **23 05 29.7 +0.9**
K20K Telida 45.95 34 P **P** **23 05 30.0 +1.2**
baz=266,SNR=29
K20K S **S** **23 12 14.4 +2.2**
baz=266
J20K Nowinta River 45.97 33 P **P** **23 05 30.1 +1.2**
J20K Nowinta River 45.97 33 P **P** **23 05 30.2 +1.2**
baz=266,SNR=42
J20K S **S** **23 12 13.3 +0.7**
baz=266
L20K Farewell, AK 45.98 35 P **P** **23 05 30.6 +1.4**
baz=267,SNR=15
L20K S **S** **23 12 15.3 +2.4**
baz=267
KSM Kuching 46.04 227 P **P** **23 05 29.4 -0.6**
KSM IAmb IAmb 23 05 46.6
comp=Z,82nm,0.9s
KSM Kuching 46.04 227 P **P** **23 05 31.2 +1.2**
Q19K Cape Douglas, 46.05 40 P **P** **23 05 29.6 -0.1**
Q19K Cape Douglas, 46.05 40 P **P** **23 05 32.4 +2.7**
baz=271
BNSI Bone 46.11 211 P **P** **23 05 32.4 +1.8**
comp=Z,3µmcomp=Z,236nm,1.0s
BBSI Bau Bau 46.13 208 P **P** **23 05 32.2 +1.5**
comp=Z,230nmcomp=Z,21nm,1.1s
A21K Barrow 46.18 23 P **P** **23 05 31.6 +1.1**
A21K IAMs_20 IAMs_20 23 26 57.6
comp=Z,2µm,18.0s
A21K Barrow 46.18 23 P **P** **23 05 31.7 +1.3**
baz=256,SNR=8.3
A21K S **S** **23 12 15.2 -0.1**
baz=256
OHAK Old Harbor 46.30 43 P **P** **23 05 35.1 +3.5**
baz=273
IMAR Indian Mountai 46.30 31 P **P** **23 05 32.2 +0.6**
M20K Styx River 46.31 36 P **P** **23 05 32.6 +0.8**
M20K Styx River 46.31 36 P **P** **23 05 33.5 +1.7**
baz=269,SNR=10
M20K S **S** **23 12 20.6 +2.8**
baz=269
KURK Kurchatov 46.41 308 P **P** **23 05 32.5 -0.1**
KURK Kurchatov 46.41 308 P **P** **23 05 32.5 -0.1**
KURK pmax pmax
comp=Z,587nm,1.0s
KURK MLR MLR
comp=Z,10µm,19.0s
PMG Port Moresby 46.45 173 LR LR 23 22 40.3
comp=Z,685nm,21.8s,baz=356,slow=33
KURBB Kurchatov Arra 46.49 308 P **P** **23 05 32.9 -0.3**
comp=Z,149nm,0.7s,baz=83,slow=8.3,SNR=640
KURBB LR LR 23 25 48.6
comp=Z,11µm,18.9s,baz=59,slow=37
comp=Z,149nm,0.7s
RSO Redoubt South 46.49 38 P **P** **23 05 34.0 +0.7**
STKI Sintang 46.51 225 P **P** **23 05 34.2 +0.5**
comp=Z,3µmcomp=Z,81nm,0.9s
O20K Slope Mountain 46.55 39 P **P** **23 05 36.2 +2.5**
baz=271
KDAK Kodiak Island 46.65 42 P **P** **23 05 34.5 +0.2**
comp=Z,35nm,0.8s,baz=285,slow=7.6,SNR=14
KDAK LR LR 23 24 31.2
comp=Z,3µm,21.7s,baz=265,slow=35
comp=Z,35nm,0.8s
KDAK Kodiak Island 46.65 42 P **P** **23 05 34.0 -0.3**
KDAK IAmb IAmb 23 05 48.5
comp=Z,71nm,0.9s
KDAK Kodiak Island 46.65 42 IAMs_20 IAMs_20 23 24 20.1
comp=Z,3µm,20.0s
KDAK Kodiak Island 46.65 42 P **P** **23 05 34.0 -0.3**
KDAK pmax pmax
comp=Z,71nm,1.0s
KDAK MLR MLR
comp=Z,4µm,20.0s
KDAK Kodiak Island 46.65 42 P **P** **23 05 37.0 +2.6**
baz=273
H21K Melozitna Rive 46.66 31 P **P** **23 05 33.6 -0.8**
H21K Melozitna Rive 46.66 31 P **P** **23 05 35.5 +1.1**
baz=265,SNR=23
H21K S **S** **23 12 23.6 +1.2**
baz=265

Q20K Shuyak Island 46.71 41 P **P** **23 05 37.7 +2.9**
baz=272
CHUM Lake Minchumin 46.76 34 P **P** **23 05 37.0 +1.9**
baz=268,SNR=5.1
PPLA Purkeypile 46.78 35 P **P** **23 05 35.8 +0.3**
PPLA IAmb IAmb 23 05 51.2
comp=Z,94nm,1.2s
PPLA Purkeypile 46.78 35 P **P** **23 05 37.0 +1.6**
baz=269,SNR=12
PPLA S **S** **23 12 26.1 +1.6**
baz=269
KAPI Kappang 46.81 211 P **P** **23 05 35.2 -0.8**
KAPI Kappang 46.81 211 *i* P **P** **23 05 36.2 +0.1**
KAPI pmax pmax
comp=Z,405nm,1.3s
KAPI MLR MLR
comp=Z,1µm,22.0s
KAPI Kappang 46.81 211 P **P** **23 05 37.7 +1.6**
SPU Mount Spurr 46.83 37 P **P** **23 05 35.2 -0.6**
CAST Castle Rocks 46.84 34 P **P** **23 05 35.7 -0.1**
CAST Castle Rocks 46.84 34 P **P** **23 05 37.2 +1.4**
baz=268,SNR=16
BKSI Bulukumba 46.94 211 P **P** **23 05 36.8 -0.2**
comp=Z,1µmcomp=Z,1µmcomp=Z,93nm,1.1s
I21K Tanana 46.97 32 P **P** **23 05 36.8 +0.1**
I21K IAmb IAmb 23 05 47.7
comp=Z,45nm,1.2s
I21K Tanana 46.97 32 P **P** **23 05 38.8 +2.0**
baz=267
I21K S **S** **23 12 29.0 +2.1**
baz=267
SKT Skwentna 47.07 36 P **P** **23 05 38.6 +0.9**
baz=270,SNR=10.0
SKT S **S** **23 12 28.4 0.0**
baz=270
H22K Ishtalitna Cre 47.26 31 P **P** **23 05 40.4 +1.3**
baz=266,SNR=33
H22K S **S** **23 12 33.7 +2.6**
baz=266
CNPM China Poot 47.27 40 P **P** **23 05 40.5 +1.2**
CNPM IAmb IAmb 23 05 53.4
comp=Z,101nm,1.5s
PDGK Podgornoye 47.32 298 *i* P **P** **23 05 39.6 -0.4**
PDGK pmax pmax
comp=Z,204nm,0.9s
BPAW Bear Paw Mtn. 47.35 33 P **P** **23 05 39.7 -0.1**
BPAW IAMs_20 IAMs_20 23 25 57.0
comp=Z,2µm,19.0s
BPAW Bear Paw Mtn. 47.35 33 P **P** **23 05 40.9 +1.1**
baz=268,SNR=9.6
BPAW S **S** **23 12 33.8 +1.5**
baz=268
KTH Kantishna Hill 47.37 34 P **P** **23 05 40.1 +0.1**
KTH IAmb IAmb 23 05 55.3
comp=Z,78nm,1.0s
SHLS Shalkode 47.39 298 *c i*P **P** **23 05 37.2 -3.3**
SHLS pmax pmax
comp=Z,60nm,1.2s
SHLS Shalkode 47.39 298⇑ *i*P **P** **23 05 37.3 -3.3**
comp=Z,60nm,1.2s,baz=298
BRLK Bradley Lake 47.44 39 P **P** **23 05 38.4 -2.1**
BRLK IAmb IAmb 23 06 07.7
comp=Z,53nm,1.1s
BRLK IAMs_20 IAMs_20 23 25 02.6
comp=Z,2µm,18.0s
SUA Susitna One 47.45 37 P **P** **23 05 41.3 +0.6**
baz=271,SNR=6.0
MLY Manley 47.49 32 P **P** **23 05 41.3 +0.4**
MLY IAmb IAmb 23 06 04.0
comp=Z,64nm,1.1s
MLY Manley 47.49 32 P **P** **23 05 42.2 +1.3**
baz=268,SNR=53
MLY S **S** **23 12 36.6 +2.2**
baz=268
BRSE Bradley Lake S 47.51 39 P **P** **23 05 42.7 +1.6**
baz=273
BSSI Bau Bau, Buton 47.53 210 P **P** **23 05 42.2 +0.5**
comp=Z,1µmcomp=Z,109nm,1.6s
TRF Thorofare Moun 47.65 34 P **P** **23 05 42.4 +0.1**
TRF Thorofare Moun 47.65 34 P **P** **23 05 43.4 +1.1**
baz=270,SNR=14
CUT Chulitna 47.66 36 P **P** **23 05 43.7 +1.5**
baz=271
CUT S **S** **23 12 36.3 -0.5**
baz=271
TDK Taldyqorghan 47.67 301 *e*P **P** **23 05 41.4 -1.1**
TDK *e*S **S** **23 12 37.0 -0.3**
TDK pmax pmax
comp=Z,140nm,1.2s
TDK MLR MLR
comp=Z,6µm,15.0s
TDK Taldyqorghan 47.67 301 *e*P **P** **23 05 41.4 -1.1**
comp=Z,140nm,1.2s,baz=300
TDK *e*S **S** **23 12 37.1 -0.3**
baz=300
TDK *e*LR LR 23 26 00.5
comp=Z,6µm,15.0s,baz=300
BBKI Banjar Baru 47.69 218 P **P** **23 05 42.8 -0.1**
comp=Z,194nm,1.0s
M22K Willow 47.74 36 P **P** **23 05 42.6 -0.2**
M22K IAmb IAmb 23 05 47.9
comp=Z,56nm,0.9s
M22K Willow 47.74 36 P **P** **23 05 44.2 +1.4**
baz=271
M22K S **S** **23 12 37.1 -0.8**
baz=271
D23K Nanushuk River 47.78 27 P **P** **23 05 44.2 +1.2**
baz=264,SNR=18
D23K S **S** **23 12 39.4 +1.0**
baz=264
GUN Gumba 47.79 276 *e*P **P** **23 05 44.5 +0.4**
comp=Z,502nm,1.0s
COLD Coldfoot 47.82 29 P **P** **23 05 42.1 -1.3**
COLD Coldfoot 47.82 29 P **P** **23 05 44.0 +0.7**
baz=266
COLD S **S** **23 12 39.7 +0.8**
baz=266
SRIT Nakonsritamara 47.83 245 P **P** **23 05 43.1 -0.9**
KPKS Kokpek 47.85 298 *ce*P **P** **23 05 41.9 -2.2**
KPKS *e*S **S** **23 12 38.7 -1.5**
KPKS pmax pmax
comp=Z,160nm,2.5s
KPKS MLR MLR
comp=Z,4µm,18.0s
KPKS Kokpek 47.85 298⇑ *e*P **P** **23 05 42.0 -2.2**
comp=Z,160nm,2.5s,baz=298
KPKS *e*S **S** **23 12 38.8 -1.5**
baz=298
KPKS *e*LR LR 23 26 00.4
comp=Z,4µm,17.6s,baz=298
C23K Itkillik River 47.90 26 P **P** **23 05 45.2 +1.3**
baz=264,SNR=19
C23K S **S** **23 12 41.0 +1.1**
baz=264
RC01 Rabbit Creek A 47.95 37 P **P** **23 05 44.2 -0.2**
RC01 IAmb IAmb 23 05 56.1
comp=Z,47nm,1.0s
RC01 IAMs_20 IAMs_20 23 25 57.0
comp=Z,2µm,20.0s
RC01 Rabbit Creek A 47.95 37 P **P** **23 05 45.1 +0.6**
baz=272
O22K Cooper Landing 47.98 38 P **P** **23 05 45.0 +0.4**
O22K IAMs_20 IAMs_20 23 26 50.3
comp=Z,2µm,20.0s
H23K Yukon River 48.02 31 P **P** **23 05 44.5 -0.4**
H23K IAmb IAmb 23 06 08.4
comp=Z,94nm,1.4s
H23K Yukon River 48.02 31 P **P** **23 05 46.7 +1.8**
baz=268,SNR=18
H23K S **S** **23 12 45.5 +3.7**
baz=268
BWN Browne 48.02 33 P **P** **23 05 46.2 +1.2**
BWN IAMs_20 IAMs_20 23 26 28.6
comp=Z,2µm,20.0s
I23K Minto, Yukon-K 48.08 32 P **P** **23 05 46.4 +1.1**
I23K Minto, Yukon-K 48.08 32 P **P** **23 05 46.6 +1.2**
baz=269,SNR=10
I23K S **S** **23 12 44.4 +1.9**
baz=269
ZHN Zhinishke 48.11 298 *eP* **P** **23 05 45.3 -0.8**
ZHN Zhinishke 48.11 298 *eP* **P** **23 05 45.3 -0.8**
baz=298
SEW Seward 48.14 39 P **P** **23 05 46.9 +1.0**
SEW IAmb IAmb 23 05 58.1
comp=Z,65nm,1.0s
SEW Seward 48.14 39 P **P** **23 05 47.4 +1.5**
baz=274

TOLK	**Toolik Lake Re**	**48.15**	**27**	P		**P**		**23 05 45.7**	**-0.3**
TOLK				IAmb		IAmb		23 05 48.9	
	comp=Z,47nm,1.0s								
TOLK				IAMs_20		IAMs_20		23 28 17.9	
	comp=Z,3µm,18.0s								
TOLK	**Toolik Lake Re**	**48.15**	**27**	P		**P**		**23 05 47.3**	**+1.3**
	baz=266,SNR=25								
TOLK				S		**S**		**23 12 45.0**	**+1.3**
	baz=266								
TOLK				S		S		23 12 47.4	+3.7
	baz=266								
SATY	**Saty**	**48.16**	**298**	*ce*P		**P**		**23 05 43.6**	**-2.9**
SATY				*e*S		**S**		**23 12 45.4**	**+0.8**
SATY				pmax		pmax			
	comp=Z,113nm,2.2s								
SATY	**Saty**	**48.16**	**298**⇑	*e*P		**P**		**23 05 43.7**	**-2.8**
	comp=Z,113nm,2.2s,baz=298								
SATY				*e*S		**S**		**23 12 45.4**	**+0.8**
	baz=298								
NEA2	**Nenana**	**48.19**	**33**	P		**P**		**23 05 46.6**	**+0.3**
NEA2				IAmb		IAmb		23 06 09.2	
	comp=Z,85nm,1.2s								
NEA2	**Nenana**	**48.19**	**33**	P		**P**		**23 05 47.3**	**+1.0**
	baz=270,SNR=37								
NEA2				S		**S**		**23 12 45.5**	**+1.2**
	baz=270								
PMR	**Palmer**	**48.22**	**37**	P		**P**		**23 05 46.4**	**-0.1**
PMR				IAmb		IAmb		23 05 58.0	
	comp=Z,69nm,1.0s								
PMR	**Palmer**	**48.22**	**37**	P		**P**		**23 05 46.4**	**-0.1**
PMR				pmax		pmax			
	comp=Z,69nm,1.0s								
PMR	**Palmer**	**48.22**	**37**	P		**P**		**23 05 46.9**	**+0.4**
	baz=272,SNR=11								
PMR				S		**S**		**23 12 43.0**	**-1.7**
	baz=272								
MCK	**McKinley**	**48.26**	**34**	P		**P**		**23 05 46.4**	**-0.4**
MCK				IAmb		IAmb		23 05 56.6	
	comp=Z,41nm,1.0s								
MCK				IAMs_20		IAMs_20		23 25 42.9	
	comp=Z,2µm,20.0s								
MCK	**McKinley**	**48.26**	**34**	P		**P**		**23 05 46.4**	**-0.4**
MCK				pmax		pmax			
	comp=Z,41nm,1.0s								
MCK				MLR		MLR			
	comp=Z,2µm,20.0s								
MCK	**McKinley**	**48.26**	**34**	P		**P**		**23 05 47.2**	**+0.4**
	baz=271,SNR=18								
MCK				S		**S**		**23 12 43.0**	**-2.2**
	baz=271								
RND	**Reindeer**	**48.30**	**34**	P		**P**		**23 05 46.8**	**-0.4**
RND				IAmb		IAmb		23 06 09.3	
	comp=Z,88nm,1.3s								
RND	**Reindeer**	**48.30**	**34**	P		**P**		**23 05 46.8**	**-0.4**
RND				pmax		pmax			
	comp=Z,87nm,1.3s								
RND				MLR		MLR			
	comp=Z,1µm,20.0s								
GHO	**Glory Hole Cre**	**48.31**	**36**	P		**P**		**23 05 47.5**	**+0.2**
PKIN	**Phulchoki**	**48.32**	**276**	*e*P		**P**		**23 05 47.8**	**-0.3**
	comp=Z,191nm,1.0s								
PRZ	**Przheval'sk**	**48.32**	**297**	P		**P**		**23 05 48.0**	**+0.2**
PRZ	**Przheval'sk**	**48.32**	**297**	P		**P**		**23 05 48.0**	**+0.2**
PRZ				pmax		pmax			
	comp=Z,237nm,1.1s								
WAT1	**Susitna Watana**	**48.45**	**35**	P		**P**		**23 05 48.4**	**+0.1**
	baz=272								
WAT1				S		**S**		**23 12 45.2**	**-2.8**
	baz=272								
D24K	**Happy Valley**	**48.46**	**27**	P		**P**		**23 05 49.6**	**+1.3**
	baz=266,SNR=30								
D24K				S		**S**		**23 12 49.1**	**+1.2**
	baz=266								
DMN	**Daman**	**48.53**	**276**	*e*P		**P**		**23 05 49.8**	**+0.1**
C24K	**Franklin Bluff**	**48.55**	**26**	P		**P**		**23 05 50.1**	**+1.2**
	baz=266								
C24K				S		**S**		**23 12 50.1**	**+1.0**
	baz=266								
KNK	**Knik Glacier**	**48.55**	**37**	P		**P**		**23 05 49.2**	**+0.1**
KNK				IAmb		IAmb		23 06 14.8	
	comp=Z,59nm,1.0s								
KNK				IAMs_20		IAMs_20		23 25 43.9	
	comp=Z,2µm,20.0s								
KNK	**Knik Glacier**	**48.55**	**37**	P		**P**		**23 05 49.4**	**+0.3**
	baz=273								
KNK				S		**S**		**23 12 48.3**	**-1.2**
	baz=273								
MDM	**Murphy Dome**	**48.55**	**32**	P		**P**		**23 05 49.7**	**+0.6**
MDM				IAmb		IAmb		23 06 00.2	
	comp=Z,82nm,1.0s								
SML	**Sawmill**	**48.59**	**36**	P		**P**		**23 05 49.1**	**-0.3**
SML				IAmb		IAmb		23 06 04.0	
	comp=Z,87nm,0.9s								
SML	**Sawmill**	**48.59**	**36**	P		**P**		**23 05 50.1**	**+0.6**
	baz=273,SNR=12								
SML				S		**S**		**23 12 50.3**	**+0.2**
	baz=273								
WRH	**Wood River Hil**	**48.62**	**33**	P		**P**		**23 05 48.7**	**-0.8**
WRH				IAMs_20		IAMs_20		23 26 55.5	
	comp=Z,2µm,20.0s								
PBKI	**Pangkalan Bun**	**48.70**	**223**	P		**P**		**23 05 49.5**	**-1.2**
	comp=Z,142nm,0.6s								
H24K	**Noodor Dome**	**48.70**	**31**	P		**P**		**23 05 49.2**	**-1.0**
H24K				IAMs_20		IAMs_20		23 24 36.6	
	comp=Z,2µm,21.0s								
H24K	**Noodor Dome**	**48.70**	**31**	P		**P**		**23 05 51.6**	**+1.4**
	baz=270,SNR=57								
H24K				S		**S**		**23 12 54.4**	**+2.9**
	baz=270								
TCOL	**CIGO, UAF Yank**	**48.71**	**32**	P		**P**		**23 05 50.4**	**+0.2**
TCOL				IAmb		IAmb		23 06 04.8	
	comp=Z,41nm,0.8s								
TCOL	**CIGO, UAF Yank**	**48.71**	**32**	P		**P**		**23 05 51.3**	**+1.1**
	baz=271								
TCOL				S		**S**		**23 12 52.9**	**+1.4**
	baz=271								
COLA	**College**	**48.72**	**32**	P		**P**		**23 05 50.7**	**+0.4**
COLA				IAmb		IAmb		23 05 60.0	
	comp=Z,45nm,0.8s								
COLA	**College**	**48.72**	**32**	P		**P**		**23 05 50.7**	**+0.4**
COLA				pmax		pmax			
	comp=Z,45nm,0.9s								
COLA				MLR		MLR			
	comp=Z,2µm,20.0s								
CCB	**Clear Creek Bu**	**48.74**	**33**	P		**P**		**23 05 50.2**	**-0.2**
WAT6	**Susitna Watana**	**48.83**	**35**	P		**P**		**23 05 51.7**	**+0.3**
	baz=273,SNR=15								
WAT6				S		**S**		**23 12 53.0**	**-0.6**
	baz=273								
M23K	**Glacier View**	**48.88**	**36**	P		**P**		**23 05 52.4**	**+0.7**
	baz=274,SNR=11								
M23K				S		**S**		**23 12 54.6**	**+0.5**
	baz=274								
POKR	**Poker Plat Res**	**48.89**	**32**	P		**P**		**23 05 52.0**	**+0.4**
POKR	**Poker Plat Res**	**48.89**	**32**	P		**P**		**23 05 53.1**	**+1.4**
	baz=271,SNR=33								
POKR				S		**S**		**23 12 55.1**	**+1.1**
	baz=271								
CHKK	**Chushkaly**	**48.94**	**299**	*e*P		**P**		**23 05 52.0**	**-0.3**
CHKK	**Chushkaly**	**48.94**	**299**	*e*P		**P**		**23 05 52.0**	**-0.3**
	baz=299								
TARG	**Taragay, Kyrgy**	**48.96**	**296**	P		**P**		**23 05 52.3**	**-0.7**
TARG	**Taragay, Kyrgy**	**48.96**	**296**	P		**P**		**23 05 52.3**	**-0.7**
TARG				pmax		pmax			
	comp=Z,131nm,0.8s								
DHY	**Denali Highway**	**48.98**	**35**	P		**P**		**23 05 51.6**	**-0.9**
DHY	**Denali Highway**	**48.98**	**35**	P		**P**		**23 05 53.2**	**+0.7**
	baz=273								
SCM	**Sheep Creek Mo**	**49.07**	**36**	P		**P**		**23 05 53.2**	**0.0**
SCM				IAmb		IAmb		23 06 04.8	
	comp=Z,88nm,1.0s								
SCM	**Sheep Creek Mo**	**49.07**	**36**	P		**P**		**23 05 53.2**	**0.0**
SCM				pmax		pmax			
	comp=Z,88nm,1.0s								
SCM				MLR		MLR			
	comp=Z,2µm,20.0s								
SCM	**Sheep Creek Mo**	**49.07**	**36**	P		**P**		**23 05 53.8**	**+0.7**
	baz=274,SNR=9.3								
SCM				S		**S**		**23 12 59.1**	**+2.3**
	baz=274								
HDA	**Harding Lake**	**49.11**	**33**	P		**P**		**23 05 52.2**	**-1.2**
HDA				IAmb		IAmb		23 06 07.5	
	comp=Z,36nm,0.8s								
HDA	**Harding Lake**	**49.11**	**33**	P		**P**		**23 05 53.6**	**+0.2**
	baz=272,SNR=13								
IL31		**49.13**	**32**	P		**P**		**23 05 52.8**	**-0.6**
IL31				IAmb		IAmb		23 06 15.5	
	comp=Z,50nm,0.9s								
ILAR	**Eielson Array**	**49.13**	**32**	P		**P**		**23 05 53.2**	**-0.2**
	comp=Z,22nm,0.8s,baz=266,slow=5.9,SNR=154								
ILAR					LR	LR		23 27 17.4	
	comp=Z,773nm,21.4s,baz=262,slow=37								
	comp=Z,22nm,0.8s								
ILAR	**Eielson Array**	**49.13**	**32**	P		**P**		**23 05 53.3**	**-0.2**
HNR	**Honiara**	**49.15**	**157**	LR		LR		23 25 45.4	
	comp=Z,4µm,20.1s,baz=328,slow=35								
HNR	**Honiara**	**49.15**	**157**	IAMs_20		IAMs_20		23 25 15.5	
	comp=Z,4µm,20.0s								
MMRI	**Maumere**	**49.16**	**207**	P		**P**		**23 05 53.5**	**-0.8**
MMRI	**Maumere**	**49.16**	**207**	P		**P**		**23 05 53.2**	**-1.1**
	comp=Z,3µmcomp=Z,134nm,0.8s								
MMRI	**Maumere**	**49.16**	**207**	P		**P**		**23 05 57.2**	**+3.0**
AAA	**Alma-Ata**	**49.17**	**299**	*e*P		**P**		**23 05 53.0**	**-1.2**
AAA					pmax	pmax			
	comp=Z,124nm,1.0s								
AAA					MLR	MLR			
	comp=Z,19µm,19.0s								
AAA	**Alma-Ata**	**49.17**	**299**	*e*P		**P**		**23 05 53.0**	**-1.2**
	comp=Z,124nm,1.0s,baz=298								
AAA				*e*LR		LR		23 26 51.5	
	comp=Z,19µm,19.5s,baz=298								
TNSS	**Tian-Shan**	**49.19**	**298**	*e*P		**P**		**23 05 55.1**	**+0.4**
TNSS	**Tian-Shan**	**49.19**	**298**	*e*P		**P**		**23 05 55.2**	**+0.4**
	baz=298								
GLI	**Glacier Island**	**49.25**	**38**	IAMs_20		IAMs_20		23 28 49.3	
	comp=Z,2µm,20.0s								
GLI	**Glacier Island**	**49.25**	**38**	P		**P**		**23 05 54.5**	**0.0**
	baz=275								
DANN	**Dangsing**	**49.28**	**278**	*e*P		**P**		**23 05 56.0**	**+0.5**
	comp=Z,969nm,0.8s								
KDJ	**Kajisay**	**49.29**	**297**	IAmb		IAmb		23 06 08.7	
	comp=Z,56nm,0.8s								
KUU	**Kurty**	**49.38**	**300**	*e*P		**P**		**23 05 54.4**	**-1.3**
KUU				*e*S		**S**		**23 13 01.2**	**-0.3**
KUU				pmax		pmax			
	comp=Z,276nm,1.9s								
KUU	**Kurty**	**49.38**	**300**	*e*P		**P**		**23 05 54.5**	**-1.3**
	comp=Z,276nm,1.9s,baz=300								
KUU				*e*S		**S**		**23 13 01.3**	**-0.3**
	baz=300								
KULM	**Kulim**	**49.38**	**240**	IAMs_20		IAMs_20		23 29 21.1	
	comp=Z,2µm,18.0s								
EDFI	**Ende, Flores**	**49.47**	**207**	P		**P**		**23 05 56.1**	**-0.6**
	comp=Z,964nmcomp=Z,83nm,1.5s								
FID	**Port Fidalgo**	**49.56**	**38**	IAMs_20		IAMs_20		23 26 56.1	
	comp=Z,2µm,20.0s								
HIN	**Hinchinbrook I**	**49.59**	**38**	IAMs_20		IAMs_20		23 24 51.2	
	comp=Z,2µm,21.0s								
M24K	**Tolsona, Glenn**	**49.59**	**36**	IAmb		IAmb		23 06 24.2	
	comp=Z,56nm,0.8s								
M24K	**Tolsona, Glenn**	**49.59**	**36**	P		**P**		**23 05 58.8**	**+1.7**
	baz=274,SNR=7.1								
M24K				S		**S**		**23 13 07.4**	**+3.3**
	baz=274								
K24K	**Donnelly Dome**	**49.65**	**34**	P		**P**		**23 05 56.0**	**-1.5**
	baz=273								
KOLN	**Koldanda**	**49.66**	**277**	*e*P		**P**		**23 05 59.1**	**+0.8**
	comp=Z,446nm,1.6s								
KOLN	**Koldanda**	**49.66**	**277**	*e*P		**P**		**23 05 59.2**	**+0.9**
KOLN	**Koldanda**	**49.66**	**277**	*e*P		**P**		**23 05 59.4**	**+1.1**
BOK	**Bokaro**	**49.68**	**271**	*e*P		**P**		**23 05 58.9**	**+0.6**
BOK				*e*P		**pP**		**23 05 59.0**	**-4.7**
BOK				IAmb		IAmb		23 06 13.3	
	comp=Z,177nm,1.0s								
BOK				IAmb		IAmb		23 06 13.4	
	comp=Z,175nm,1.0s								
KLU	**Klutina**	**49.76**	**37**	IAmb		IAmb		23 06 13.4	
	comp=Z,50nm,1.0s								
KLU	**Klutina**	**49.76**	**37**	P		**P**		**23 05 59.3**	**+0.9**
	baz=275,SNR=14								
KLU				S		**S**		**23 13 07.5**	**+0.9**
	baz=275								
J25K	**Salcha River,**	**49.79**	**33**	P		**P**		**23 05 58.2**	**-0.4**
	baz=273,SNR=6.2								
J25K				S		**S**		**23 13 05.1**	**-1.7**
	baz=273								
PAX	**Paxson**	**49.85**	**35**	P		**P**		**23 06 00.4**	**+1.3**
	baz=274,SNR=11								
PAX				S		**S**		**23 13 09.0**	**+1.2**
	baz=274								
DIV	**Divide**	**49.87**	**37**	IAmb		IAmb		23 06 14.4	
	comp=Z,96nm,1.1s								
DGPR	**DIGLIPUR**	**49.89**	**255**	*e*P		**P**		**23 05 58.9**	**-1.0**
DGPR				*e*P		**pP**		**23 06 01.3**	**-4.0**
DGPR				IAmb		IAmb		23 06 06.3	
	comp=Z,213nm,0.8s								
DGPR				IAmb		IAmb		23 06 10.5	
	comp=Z,313nm,0.4s								
ULHL	**Ulahol**	**49.92**	**298**	P		**P**		**23 06 00.8**	**+0.7**
	SNR=18								
EYAK	**Cordova Ski Ar**	**49.94**	**38**	IAmb		IAmb		23 06 26.0	
	comp=Z,73nm,1.1s								
EYAK	**Cordova Ski Ar**	**49.94**	**38**	P		**P**		**23 06 01.3**	**+1.6**
	baz=276								
EYAK				S		**S**		**23 13 10.7**	**+1.9**
	baz=276								
PYUN	**Piuthan**	**50.00**	**278**	*e*P		**P**		**23 06 01.0**	**+0.1**
	comp=Z,1µm,1.1s								
TPRI	**Tanjung Pinang**	**50.02**	**233**	P		**P**		**23 06 01.6**	**+0.8**
HARP	**HAARP**	**50.04**	**35**	P		**P**		**23 06 01.5**	**+1.0**
	baz=275								
RIDG	**Independent Ri**	**50.07**	**34**	P		**P**		**23 05 59.6**	**-1.2**
RIDG				IAMs_20		IAMs_20		23 27 32.0	
	comp=Z,2µm,21.0s								
RIDG	**Independent Ri**	**50.07**	**34**	P		**P**		**23 06 00.8**	**0.0**
	baz=274,SNR=7.7								
RIDG				S		**S**		**23 13 09.7**	**-1.1**
	baz=274								
BATI	**Baumata**	**50.14**	**204**	P		**P**		**23 06 01.7**	**0.0**
	comp=Z,1µmcomp=Z,162nm,1.1s								
TKM2	**Tokmak 2**	**50.18**	**299**	P		**P**		**23 06 02.7**	**+0.7**
	SNR=122								
TKM2	**Tokmak 2**	**50.18**	**299**	*i* P		**P**		**23 06 02.5**	**+0.5**
TKM2				pmax		pmax			
	comp=Z,166nm,0.9s								
BRZS	**Berezniki**	**50.29**	**308**	*ce*P		**P**		**23 06 01.2**	**-1.3**
BRZS				*e*S		**S**		**23 13 13.5**	**-0.6**
BRZS				pmax		pmax			
	comp=Z,159nm,1.7s								
BRZS	**Berezniki**	**50.29**	**308**⇑	*e*P		**P**		**23 06 01.3**	**-1.3**
	comp=Z,159nm,1.7s,baz=308								
BRZS				*e*S		**S**		**23 13 13.5**	**-0.6**
	baz=308								
KDU	**Kakadu**	**50.32**	**192**	P		**P**		**23 06 05.1**	**+2.1**
N25K	**Chitina, Valde**	**50.38**	**36**	P		**P**		**23 06 04.5**	**+1.4**
	baz=276								
N25K				S		**S**		**23 13 16.5**	**+1.3**
	baz=276								
SCRK	**Sand Creek**	**50.43**	**33**	IAmb		IAmb		23 06 25.7	
	comp=Z,48nm,1.0s								
SCRK	**Sand Creek**	**50.43**	**33**	P		**P**		**23 06 03.9**	**+0.4**
	baz=275,SNR=34								
SCRK				S		**S**		**23 13 14.9**	**-1.0**
	baz=275								
BMRM	**Bremner River**	**50.45**	**37**	IAmb		IAmb		23 06 38.9	
	comp=Z,41nm,0.8s								
BMRM				IAMs_20		IAMs_20		23 27 43.1	
	comp=Z,3µm,20.0s								
BMRM	**Bremner River**	**50.45**	**37**	P		**P**		**23 06 05.1**	**+1.4**
	baz=277,SNR=10								
BMRM				S		**S**		**23 13 18.0**	**+1.9**
	baz=277								
J26L	**Joseph Creek**	**50.57**	**33**	P		**P**		**23 06 05.1**	**+0.6**
	baz=275,SNR=10								
J26L				S		**S**		**23 13 17.0**	**-0.8**
	baz=275								
BTLS	**Baital**	**50.64**	**302**	*ce*P		**P**		**23 06 04.3**	**-0.9**
BTLS				*e*S		**S**		**23 13 17.7**	**-1.3**
BTLS				pmax		pmax			
	comp=Z,84nm,1.6s								
BTLS	**Baital**	**50.64**	**302**⇑	*e*P		**P**		**23 06 04.3**	**-0.9**
	comp=Z,84nm,1.6s,baz=302								
BTLS				*e*S		**S**		**23 13 17.8**	**-1.3**
	baz=302								
I26K	**Coal Creek Min**	**50.68**	**32**	IAMs_20		IAMs_20		23 30 45.0	
	comp=Z,2µm,19.0s								
I26K	**Coal Creek Min**	**50.68**	**32**	P		**P**		**23 06 06.2**	**+1.0**
	baz=274								
I26K				S		**S**		**23 13 19.9**	**+0.8**
	baz=274								
SGDS	**Sogindy**	**50.70**	**300**	*ce*P		**P**		**23 06 05.3**	**-0.5**
SGDS				*e*S		**S**		**23 13 18.0**	**-2.0**
SGDS				pmax		pmax			
	comp=Z,67nm,1.6s								
SGDS	**Sogindy**	**50.70**	**300**⇑	*e*P		**P**		**23 06 05.3**	**-0.5**
	comp=Z,67nm,1.6s,baz=300								
SGDS				*e*S		**S**		**23 13 18.1**	**-2.0**
	baz=300								
HMT	**Hamilton**	**50.70**	**38**	IAMs_20		IAMs_20		23 27 21.6	
	comp=Z,2µm,20.0s								
KBK	**Karagaybulak**	**50.71**	**298**	P		**P**		**23 06 06.6**	**+0.6**
	SNR=55								
MTN	**Manton Dam**	**50.72**	**194**	P		**P**		**23 06 05.1**	**-0.9**
MTN				IAmb		IAmb		23 06 25.7	
	comp=Z,118nm,1.1s								
MTN	**Manton Dam**	**50.72**	**194**	P		**P**		**23 06 07.5**	**+1.5**
CHMS	**Chumysh**	**50.74**	**299**	P		**P**		**23 06 06.2**	**+0.1**
	SNR=26								
CHMS	**Chumysh**	**50.74**	**299**	*i* P		**P**		**23 06 06.0**	**-0.1**
CHMS				pmax		pmax			
	comp=Z,67nm,1.0s								
COEN	**Coen**	**50.75**	**179**	P		**P**		**23 06 05.6**	**-0.6**
COEN				IAmb		IAmb		23 06 09.0	
	comp=Z,69nm,1.0s								
COEN	**Coen**	**50.75**	**179**	P		**P**		**23 06 07.9**	**+1.6**
GLB	**Gilahina Butte**	**50.78**	**37**	IAMs_20		IAMs_20		23 26 31.6	
	comp=Z,2µm,22.0s								
L26K	**Log Cabin Wild**	**50.81**	**35**	IAMs_20		IAMs_20		23 27 25.5	
	comp=Z,2µm,22.0s								
L26K	**Log Cabin Wild**	**50.81**	**35**	P		**P**		**23 06 07.9**	**+1.6**
	baz=276,SNR=9.8								
L26K				S		**S**		**23 13 23.6**	**+2.7**
	baz=276								
BWJI	**Bawean**	**50.84**	**219**	P		**P**		**23 06 03.4**	**-3.6**
USP	**Ospenovka**	**50.84**	**299**	P		**P**		**23 06 07.0**	**+0.1**
	SNR=45								
OTUK	**Ortayu**	**50.92**	**306**	*i* P		**P**		**23 06 06.8**	**-0.6**
VRDI	**Verde Repeater**	**50.97**	**37**	IAMs_20		IAMs_20		23 27 17.9	
	comp=Z,2µm,21.0s								
KSH	**Kashi**	**50.98**	**294**	P		**P**		**23 06 12.8**	**+4.8**
KSH				pP		sP		23 06 16.0	+0.6
KSH				sP		pP		23 06 20.5	+6.9
KSH				S		S		23 13 35.8	+12
KSH				pmax		pmax			
	comp=Z,67nm,1.1s								
KSH				pmax		pmax			
	comp=Z,790nm,4.1s								
KSH				LR		LR			
	comp=Z,13µm,15.8s								
KSH				LR		LR			
	comp=Z,12µm,17.9s								
KSH				LR		LR			
	comp=Z,24µm,15.8s								
TPI	**Tanjungpandan**	**51.00**	**227**	P		**P**		**23 06 09.1**	**+0.9**
	comp=Z,1µmcomp=Z,90nm,0.9s								
BVAR	**Borovoye Array**	**51.02**	**312**	LR		LR		23 28 46.3	
	comp=Z,7µm,18.7s,baz=320,slow=37								
AAK	**Ala-Archa**	**51.03**	**299**	P		**P**		**23 06 08.7**	**+0.2**
	SNR=12								
AAK	**Ala-Archa**	**51.03**	**299**	P		**P**		**23 06 08.6**	**+0.2**
	comp=Z,25nm,0.8s,baz=108,slow=5.7,SNR=45								
AAK				LR		LR		23 29 09.7	
	comp=Z,17µm,19.1s,baz=80,slow=38								
	comp=Z,25nm,0.8s								
AAK	**Ala-Archa**	**51.03**	**299**	P		**P**		**23 06 07.5**	**-0.9**
AAK				IAmb		IAmb		23 06 21.9	
	comp=Z,53nm,0.8s								
AAK	**Ala-Archa**	**51.03**	**299**	*c i* P		**P**		**23 06 08.3**	**-0.2**
AAK				pmax		pmax			
	comp=Z,48nm,1.0s								
AAK				MLR		MLR			
	comp=Z,16µm,19.0s								
AAK	**Ala-Archa**	**51.03**	**299**	*i* P		**P**		**23 06 08.0**	**-0.5**
	SNR=20								
M26K	**Nabesna, AK**	**51.04**	**35**	IAmb		IAmb		23 06 26.2	
	comp=Z,104nm,1.5s								
M26K				IAMs_20		IAMs_20		23 27 51.6	
	comp=Z,2µm,21.0s								
M26K	**Nabesna, AK**	**51.04**	**35**	P		**P**		**23 06 09.9**	**+1.8**
	baz=277,SNR=8.6								
M26K				S		**S**		**23 13 27.3**	**+3.0**
	baz=277								
DSRI	**Dabo**	**51.06**	**232**	P		**P**		**23 06 10.1**	**+1.4**
	comp=Z,2µmcomp=Z,1µmcomp=Z,43nm,1.3s								
PLAI	**Plampang**	**51.08**	**212**	P		**P**		**23 06 06.6**	**-2.2**
	comp=Z,2µmcomp=Z,1µmcomp=Z,104nm,1.2s								
PLAI	**Plampang**	**51.08**	**212**	P		**P**		**23 06 12.8**	**+4.0**
UCH	**Uchtor**	**51.15**	**298**	P		**P**		**23 06 11.5**	**+1.8**
	SNR=14								
WBSI	**Waikabubak, Su**	**51.16**	**209**	P		**P**		**23 06 10.8**	**+1.4**
	comp=Z,51nm,0.8s								
MCARA	**McCarthy VSAT**	**51.16**	**37**	IAMs_20		IAMs_20		23 27 14.8	
	comp=Z,2µm,22.0s								
MCARA	**McCarthy VSAT**	**51.16**	**37**	P		**P**		**23 06 10.1**	**+1.2**
	baz=278,SNR=6.9								
MCARA				S		**S**		**23 13 28.7**	**+2.9**
	baz=278								
CRQM	**Cirque**	**51.19**	**37**	IAmb		IAmb		23 06 42.6	
	comp=Z,56nm,1.0s								
CRQM				IAMs_20		IAMs_20		23 26 03.2	
	comp=Z,3µm,21.0s								
CRQE	**Cirque**	**51.21**	**37**	P		**P**		**23 06 10.7**	**+1.2**
	baz=278,SNR=8.7								
KMMI	**Kalianget**	**51.23**	**217**	P		**P**		**23 06 09.8**	**-0.1**
	comp=Z,3µmcomp=Z,172nm,1.5s								
K27K	**Chicken**	**51.27**	**33**	IAmb		IAmb		23 06 43.4	
	comp=Z,65nm,1.1s								
K27K	**Chicken**	**51.27**	**33**	P		**P**		**23 06 10.8**	**+1.2**
	baz=276								
K27K				S		**S**		**23 13 29.0**	**+1.8**
	baz=276								
TGL	**Tana Glacier**	**51.34**	**37**	IAMs_20		IAMs_20		23 26 05.6	
	comp=Z,3µm,22.0s								
TWSI	**Taliwang, Sumb**	**51.38**	**213**	P		**P**		**23 06 10.0**	**-1.0**
	comp=Z,832nmcomp=Z,80nm,1.0s								
PPBI	**Pangkal Pinang**	**51.42**	**229**	P		**P**		**23 06 12.0**

DAWY S **S** **23 13 44.2 +0.8**
baz=279
RPSI **Rantau Prapat** **52.43 240** IAmb IAmb 23 06 32.8
comp=Z,106nm,0.9s
RPSI IAMs_20 IAMs_20 23 31 16.0
comp=Z,2µm,18.0s
GMJI **Gumukmas** **52.54 217** P **P** **23 06 19.2 -0.5**
comp=Z,90nm,1.1s
JMBI **JAMBI** **52.54 232** P **P** **23 06 22.3 +2.6**
comp=Z,152nm,1.0s
KCSI **Kotacane, Aceh** **52.65 242** P **P** **23 06 19.5 -1.1**
comp=Z,944nmcomp=Z,84nm,0.8s
I29M **Ogilvie Camp,** **52.70 31** P **P** **23 06 20.0 -0.3**
I29M IAmb IAmb 23 06 31.4
comp=Z,73nm,1.1s
I29M IAMs_20 IAMs_20 23 31 41.3
comp=Z,2µm,18.0s
I29M **Ogilvie Camp,** **52.70 31** P **P** **23 06 21.4 +1.1**
baz=279,SNR=51
BKNI **Bangkinang** **52.73 236** P **P** **23 06 20.9 -0.3**
BKNI **Bangkinang** **52.73 236** P **P** **23 06 22.0 +0.8**
comp=Z,3µmcomp=Z,4µmcomp=Z,512nm,1.0s
BKNI **Bangkinang** **52.73 236** P **P** **23 06 23.6 +2.4**
PMBI **Palembang** **52.85 230** P **P** **23 06 22.7 +0.7**
comp=Z,4µmcomp=Z,388nm,0.4s
J29M **Klondike Camp** **52.88 32** IAMs_20 IAMs_20 23 29 57.1
comp=Z,2µm,21.0s
DDI **Dehra Dun** **52.91 283** *e*P **P** **23 06 23.4 +0.9**
DDI IAmb IAmb 23 06 33.4
comp=Z,372nm,1.2s
SMRI **Semarang** **53.00 221** P **P** **23 06 24.1 +1.0**
comp=Z,198nm,1.0s
SMRI **Semarang** **53.00 221** P **P** **23 06 24.5 +1.4**
comp=Z,200nm,1.0s
BCPM **Bancas Point** **53.04 38** IAMs_20 IAMs_20 23 26 41.6
comp=Z,2µm,20.0s
PWJI **Pagerwojo** **53.13 219** P **P** **23 06 22.9 -1.1**
comp=Z,3µmcomp=Z,299nm,0.8s
DZA **Taraz** **53.16 300** *e*P **P** **23 06 22.1 -2.0**
DZA pmax pmax
comp=Z,128nm,2.3s
DZA **Taraz** **53.16 300** *e*P **P** **23 06 22.2 -2.0**
comp=Z,128nm,2.3s,baz=300
EPYK **Eagle Plains** **53.19 30** IAMs_20 IAMs_20 23 32 03.1
comp=Z,2µm,19.0s
EPYK **Eagle Plains** **53.19 30** P **P** **23 06 25.5 +1.6**
baz=279,SNR=27
EPYK S **S** **23 13 56.6 +3.0**
baz=279
SMLA **Simla** **53.26 284** *e*P **P** **23 06 24.0 -1.0**
SMLA *e*P **pP** **23 06 24.8 -5.6**
SMLA IAmb IAmb 23 06 35.5
comp=Z,540nm,1.1s
SMLA IAmb IAmb 23 06 35.6
comp=Z,358nm,0.7s
MNSI **Mandailing Nat** **53.36 238** P **P** **23 06 26.0 +0.2**
comp=Z,2µmcomp=Z,101nm,0.7s
WOJI **Wonogiri, Jawa** **53.41 220** P **P** **23 06 26.2 +0.1**
comp=Z,129nm,1.9s
YUK6 **Outpost Mounta** **53.46 37** P **P** **23 06 28.0 +1.8**
baz=282
BLSP **Bilaspur** **53.51 272** *e*P **P** **23 06 27.1 +0.2**
PCJI **Pacitan** **53.59 219** P **P** **23 06 26.8 -0.6**
comp=Z,136nm,1.5s
UGM **Wanagama** **53.69 220** IAMs_20 IAMs_20 23 27 05.2
comp=Z,3µm,22.0s
UGM **Wanagama** **53.69 220** P **P** **23 06 27.5 -0.7**
comp=Z,8µmcomp=Z,605nm,1.7s
UGM **Wanagama** **53.69 220** P **P** **23 06 29.5 +1.3**
BHK **Bhakra** **53.72 285** *e*P **P** **23 06 29.0 +0.6**
YOGI **Yogyakarta** **53.72 221** P **P** **23 06 28.3 -0.1**
comp=Z,419nm,1.0s
M30M **Minto, Yukon** **53.85 34** IAMs_20 IAMs_20 23 28 39.9
comp=Z,2µm,22.0s
M30M **Minto, Yukon** **53.85 34** P **P** **23 06 30.4 +1.5**
baz=282,SNR=16
M30M S **S** **23 14 08.5 +5.9**
baz=282
HYT **Haines Junctio** **53.90 37** IAmb IAmb 23 06 48.1
comp=Z,97nm,1.2s
HYT **Haines Junctio** **53.90 37** P **P** **23 06 31.1 +1.8**
baz=283,SNR=20
HYT S **S** **23 14 07.7 +4.2**
baz=283
N30M **Aishikik Lake** **53.95 36** P **P** **23 06 32.7 +3.1**
baz=283
N30M S **S** **23 14 07.9 +3.8**
baz=283
KNRA **Kununurra** **53.97 196** IAmb IAmb 23 06 55.5
comp=Z,84nm,0.8s
KNRA **Kununurra** **53.97 196** P **P** **23 06 32.0 +1.9**
INK **Inuvik** **54.07 27** P **P** **23 06 31.0 +0.7**
comp=Z,36nm,0.9s,baz=278,slow=7.1,SNR=39
INK LR LR 23 32 38.2
comp=Z,2µm,18.7s,baz=268,slow=40
comp=Z,36nm,0.9s
INK **Inuvik** **54.07 27** IAmb IAmb 23 06 32.9
comp=Z,43nm,0.9s
INK **Inuvik** **54.07 27** P **P** **23 06 31.0 +0.7**
INK **Inuvik** **54.07 27** P **P** **23 06 31.0 +0.7**
baz=281,SNR=35
INK S **S** **23 14 06.3 +1.0**
baz=281
BRLS **Borolday** **54.15 300** *e*P **P** **23 06 31.7 +0.3**
BRLS **Borolday** **54.15 300** *e*P **P** **23 06 31.7 +0.3**
baz=300
KRJI **Kerinci** **54.28 233** P **P** **23 06 33.3 +0.7**
comp=Z,396nm,1.2s
NDI **New Delhi** **54.29 281** *e*P **P** **23 06 35.0 +2.5**
P30M **Million Dollar** **54.32 37** P **P** **23 06 34.0 +1.7**
baz=284
P30M S **S** **23 14 14.2 +5.1**
baz=284
IUG **luzhnay** **54.32 299** *c*e**P** **P** **23 06 32.1 -0.6**
IUG **luzhnay** **54.32 299**‖ *e***P** **P** **23 06 32.1 -0.6**
baz=299
KLI **Kotabumi** **54.33 228** P **P** **23 06 33.2 +0.3**
comp=Z,10µmcomp=Z,703nm,1.1s
LEM **Lembang** **54.34 224** P **P** **23 06 33.3 +0.2**
comp=Z,3µmcomp=Z,282nm,1.1s
GSI **Gunungsitoli** **54.36 240** IAMs_20 IAMs_20 23 32 21.2
comp=Z,3µm,19.0s
GSI **Gunungsitoli** **54.36 240** P **P** **23 06 33.6 +0.4**
comp=Z,6µmcomp=Z,508nm,0.9s
GSI **Gunungsitoli** **54.36 240** P **P** **23 06 34.6 +1.4**
AYAN **Aya Nagar** **54.45 281** *e*P **P** **23 06 32.5 -1.2**
BLSI **Bandar Lampung** **54.51 227** P **P** **23 06 34.0 -0.2**
comp=Z,3µmcomp=Z,260nm,0.9s
N31M **Braeburn, Yuko** **54.56 36** IAmb IAmb 23 06 52.6
comp=Z,64nm,0.9s
N31M IAMs_20 IAMs_20 23 31 26.7
comp=Z,2µm,19.0s
N31M **Braeburn, Yuko** **54.56 36** P **P** **23 06 36.1 +2.0**
baz=284,SNR=10.0
O30N **Mendenhall** **54.58 37** P **P** **23 06 35.7 +1.5**
baz=284
O30N S **S** **23 14 17.0 +4.4**
baz=284
SONA **Sohna** **54.59 281** *e*P **P** **23 06 35.2 +0.5**
DBJI **Dramaga** **54.60 225** P **P** **23 06 34.8 0.0**
comp=Z,57nm,1.0s
JHNI **Jhansi** **54.74 277** *e*P **P** **23 06 34.3 -1.5**
PLBC **Pleasant Camp** **54.77 38** P **P** **23 06 37.1 +1.6**
baz=284
PLBC S **S** **23 14 20.2 +5.2**
baz=284
VIS **Vishakhapatnam** **54.86 266** *e*P **P** **23 06 37.3 +0.6**
VIS *e*P **pP** **23 06 38.2 -4.0**
VIS IAmb IAmb 23 06 49.4
comp=Z,88nm,0.7s
LWLI **Liwa** **54.93 229** P **P** **23 06 36.3 -1.1**
comp=Z,214nm,0.9s
MTSU **Mount Surprise** **54.93 178** P **P** **23 06 39.0 +1.9**
M31M **Drury Creek, Y** **55.03 35** IAMs_20 IAMs_20 23 32 03.0
comp=Z,2µm,19.0s
M31M **Drury Creek, Y** **55.03 35** P **P** **23 06 38.8 +1.4**
baz=284,SNR=9.4
M31M S **S** **23 14 22.2 +3.7**
baz=284
KASI **Kota Agung** **55.07 228** P **P** **23 06 37.1 -1.2**
comp=Z,144nm,0.9s
SKJI **Sukabumi** **55.08 225** P **P** **23 06 38.4 +0.1**
comp=Z,66nm,0.5s
KUDL **Kundal** **55.11 281** *e*P **P** **23 06 38.6 +0.2**
WHY **Whitehorse** **55.19 37** P **P** **23 06 40.1 +1.4**
baz=285,SNR=9.6
WHY S **S** **23 14 25.8 +5.0**
baz=285
SISI **Saibi** **55.26 236** P **P** **23 06 39.3 -0.3**
comp=Z,107nm,1.1s
SKAG **Skagway** **55.28 38** P **P** **23 06 41.5 +2.3**
baz=285
SVE **Sverdlovsk** **55.55 319** *de***P** **P** **23 06 41.5 +0.3**
SVE *e*S **S** **23 14 25.5 0.0**
SVE pmax pmax
comp=Z,314nm,1.0s
SVE MLR MLR
comp=Z,15µm,16.0s
SVE MLR MLR
comp=E,12µm,15.0s
PPSI **Pulau Pagai** **55.73 234** P **P** **23 06 43.7 +0.7**
comp=E,339nm,0.9s
A36M **Sachs Harbour** **55.99 22** IAMs_20 IAMs_20 23 35 22.8
comp=Z,2µm,20.0s
A36M **Sachs Harbour** **55.99 22** P **P** **23 06 45.4 +1.3**
baz=286,SNR=8.6
A36M S **S** **23 14 33.4 +2.4**
baz=286
P32M **Atlin** **56.04 38** P **P** **23 06 46.8 +2.1**
baz=286
P32M S **S** **23 14 36.4 +4.3**
baz=286
JIS **Juneau Island** **56.08 39** IAmb IAmb 23 07 17.7
comp=Z,53nm,1.1s
P33M **Teslin, Yukon** **56.29 37** P **P** **23 06 45.9 -0.7**
P33M IAmb IAmb 23 07 03.2
comp=Z,58nm,1.1s
P33M **Teslin, Yukon** **56.29 37** P **P** **23 06 48.2 +1.5**
baz=287,SNR=21
P33M S **S** **23 14 39.8 +4.2**
baz=287
NGP **Nagpur** **56.47 272** *e*P **P** **23 06 48.3 0.0**
BHPL **Bhopal** **56.71 275** *e*P **P** **23 06 49.3 -0.7**
BHPL *e*P **P** **23 06 49.4 -0.7**
BHPL IAmb IAmb 23 07 00.3
comp=Z,138nm,1.1s
BHPL IAmb IAmb 23 07 01.4
comp=Z,129nm,1.0s
ARU **Arti** **56.76 319** LR LR 23 33 24.6
comp=Z,10µm,18.3s,baz=68,slow=38
ARU **Arti** **56.76 319** P **P** **23 06 49.8 -0.1**
ARU **Arti** **56.76 319** *c* *i*P **P** **23 06 49.7 -0.1**
ARU 23 07 39.6
ARU 23 08 53.2
ARU PPP PPP 23 10 10.5
ARU S **S** **23 14 41.7 +0.1**
ARU 23 16 33.3
ARU SS **SS** **23 18 34.5 +5.5**
ARU SSS SSS 23 20 44.6
ARU pmax pmax
comp=Z,294nm,1.0s
ARU MLR MLR
comp=Z,12µm,16.0s
CTA **Charters Tower** **56.97 175** LR LR 23 29 29.5
comp=Z,724nm,21.8s,baz=347,slow=34
CTA **Charters Tower** **56.97 175** P **P** **23 06 52.7 +1.0**
CTAO **Charters Tower** **56.97 175** P **P** **23 06 51.4 -0.3**
CTAO **Charters Tower** **56.97 175** P **P** **23 06 51.4 -0.3**
CTAO pmax pmax
comp=Z,22nm,0.9s
CTAO **Charters Tower** **56.97 175** P **P** **23 06 52.3 +0.6**
WB0 **Warramunga Arr** **57.00 189** IAmb IAmb 23 06 53.4
comp=Z,93nm,1.0s
C36M **Paulatuk** **57.13 25** IAmb IAmb 23 07 05.9
comp=Z,76nm,0.9s
C36M IAMs_20 IAMs_20 23 34 24.1
comp=Z,2µm,19.0s
C36M **Paulatuk** **57.13 25** P **P** **23 06 52.9 +0.6**
baz=288,SNR=38
C36M S **S** **23 14 46.7 +0.5**
baz=288
WRAB **Tennant Creek** **57.17 189** P **P** **23 06 52.2 -0.9**
WRAB IAmb IAmb 23 06 54.7
comp=Z,74nm,0.9s
WRAB **Tennant Creek** **57.17 189** *d* *i*P **P** **23 06 53.6 +0.5**
WRAB pmax pmax
comp=Z,146nm,1.7s
WRAB MLR MLR
comp=Z,356nm,16.0s
WRAB **Tennant Creek** **57.17 189** P **P** **23 06 53.7 +0.6**
WR0 **Warramunga Arr** **57.17 189** IAmb IAmb 23 07 04.1
comp=Z,76nm,0.8s
WB2 **Warramunga Arr** **57.18 189** IAmb IAmb 23 07 03.7
comp=Z,88nm,0.9s
WRA **Warramunga Arr** **57.18 189** P **P** **23 06 52.6 -0.5**
comp=Z,48nm,0.8s,baz=7.7,slow=7.3,SNR=127
WRA ScP **ScP** **23 11 45.9 -0.4**
comp=Z,4.2nm,1.1s,baz=3.4,slow=4.8,SNR=3.5
WRA LR LR 23 30 24.3
comp=Z,2µm,21.6s,baz=30,slow=35
WRA PKPPKP **P'P'df** **23 36 42.4 +7.3**
comp=Z,1.7nm,1.1s,baz=175,slow=1.9,SNR=5.2
WRA PKP2bc 23 36 55.2
comp=Z,1.6nm,0.9s,baz=195,slow=2.2,SNR=4.7
comp=Z,48nm,0.8s
WRA **Warramunga Arr** **57.18 189** *i* P **P** **23 06 52.7 -0.5**
WRA pmax pmax
comp=Z,48nm,0.8s
AJM **Ajmer** **57.34 280**‖ *e***P** **P** **23 06 53.8 -0.6**
QIS **Mount Isa** **57.36 183** P **P** **23 06 55.4 +0.9**
CRAG **Craig** **57.61 42** P **P** **23 06 57.2 +1.3**
baz=290
KBL **Kabul** **58.00 291** P **P** **23 06 58.5 -0.7**
KBL **Kabul** **58.00 291** P **P** **23 06 58.5 -0.7**
KBL pmax pmax
comp=Z,200nm,1.2s
KBL **Kabul** **58.00 291** P **P** **23 06 58.9 -0.3**
SNR=97
TGTN **Hyland Airport** **58.00 34** P **P** **23 07 00.8 +2.2**
baz=290
TGTN S **S** **23 15 01.6 +3.7**
baz=290
DLBC **Dease Lake** **58.21 38** LR LR 23 31 42.2
comp=Z,391nm,21.8s,baz=296,slow=36
DLBC **Dease Lake** **58.21 38** IAmb IAmb 23 07 16.4
comp=Z,45nm,1.1s
DLBC **Dease Lake** **58.21 38** P **P** **23 07 02.1 +1.9**
baz=290,SNR=11
DLBC S **S** **23 15 06.0 +5.2**
baz=290
KNTN **Kanton** **58.30 122** IAMs_20 IAMs_20 23 27 23.9
comp=Z,2µm,20.0s
AKL **Akola** **58.33 273** *e*P **P** **23 07 02.1 +0.7**
AB31 **Akbulak array** **58.41 310** *i* P **P** **23 07 00.7 -0.9**
AB31 pmax pmax
comp=Z,175nm,1.0s
T35M **Bob Quinn** **58.60 40** P **P** **23 07 05.2 +2.3**
baz=291,SNR=5.3
HYB **Hyderabad** **58.84 269** *e*P **P** **23 07 04.9 -0.2**
HYB *e*P **pP** **23 07 05.0 -5.6**
HYB IAmb IAmb 23 07 07.5
comp=Z,204nm,0.8s
HYB IAmb IAmb 23 07 07.5
comp=Z,220nm,0.9s
HYBB **Hyderabad (bro** **58.84 269** *e*P **P** **23 07 04.5 -0.6**
HYBB IVmB_BB 23 07 06.1
comp=Z,1µm,1.0s
HYBB *e*pP **pP** **23 07 08.4 -2.2**
HYBB *e*PcP **PcP** **23 07 53.9 -0.6**
HYBB *e*PP **PP** **23 09 15.2 0.0**
HYBB *e*ScP **ScP** **23 11 53.9 -0.1**
HYBB *e*S **S** **23 15 10.1 +0.1**
HYBB IVMs_BB IVMs_BB 23 34 45.7
comp=Z,912nm,15.3s
AKTO **Aktyubinsk** **59.13 312** LR LR 23 33 43.8
comp=Z,6µm,18.7s,baz=63,slow=37
AKTO **Aktyubinsk** **59.13 312** *i* P P 23 07 16.7 +10
MDRS **Chennai** **59.92 264** *e*P **P** **23 07 14.1 +1.6**
MDRS IAmb IAmb 23 07 25.9
comp=Z,100nm,1.1s
EUNU **Eureka** **60.06 9** P **P** **23 07 12.5 -0.2**
EUNU IAmb IAmb 23 07 13.9
comp=Z,52nm,0.8s
HOPEN **Hopen** **60.16 346** *e*P **P** **23 07 14.3 +1.0**
KIRV **Kirov** **60.61 323** LR LR 23 35 40.5
comp=Z,3µm,18.2s,baz=66,slow=38
KIRV **Kirov** **60.61 323** *c* *i*P **P** **23 07 16.7 +0.1**
SPA0 **Spitsbergen Ar** **60.62 349** *e*P **P** **23 07 17.1 +0.7**
SPB2 **Spitsbergen Ar** **60.62 349** IAmb IAmb 23 07 31.1
comp=Z,88nm,1.1s
SPITS **Spitsbergen Ar** **60.62 349** LR LR 23 36 34.5
comp=Z,3µm,19.4s,baz=9.0,slow=39
RK1H **Rockhampton Ha** **60.63 171** P **P** **23 07 18.5 +1.5**
comp=Z,50nm,1.1s
KBS **Kingsbay** **60.74 350** P **P** **23 07 17.0 -0.2**
KBS **Kingsbay** **60.74 350** IAMs_20 IAMs_20 23 35 11.7
comp=Z,2µm,19.0s
KBS **Kingsbay** **60.74 350** *d* *i*P **P** **23 07 18.1 +0.9**
KBS pmax pmax
comp=Z,168nm,0.9s
KBS MLR MLR
comp=Z,2µm,16.0s
KBS **Kingsbay** **60.74 350** *e*P **P** **23 07 18.5 +1.3**
AS31 **Alice Springs** **60.91 189** P **P** **23 07 18.4 -0.6**
ASAR **Alice Springs** **60.91 189** P **P** **23 07 19.1 +0.1**
comp=Z,22nm,0.8s,baz=9.6,slow=6.5,SNR=148
ASAR LR LR 23 32 28.6
comp=Z,2µm,22.0s,baz=2.5,slow=35
ASAR PKP2bc 23 36 44.0
comp=Z,1.2nm,0.8s,baz=147,slow=3.8,SNR=4.2
comp=Z,22nm,0.8s
ASAR **Alice Springs** **60.91 189** P **P** **23 07 19.0 0.0**
ASAR **Alice Springs** **60.91 189** P **P** **23 07 19.1 +0.1**
KOUNC **Koumac, New Ca** **60.97 156** P **P** **23 07 20.7 +1.3**
NOR **Nord** **61.06 357** *i* P **P** **23 07 18.1 -1.2**
NOR IAmb IAmb 23 07 21.7
comp=Z,12nm,0.9s
PRGR **Permogore** **61.09 327**‖ *i*P **P** **23 07 20.3 +0.5**
PRGR *e**SP **sP** **23 07 29.6 +2.3**
PRGR *e* 23 09 37.1
HSPB **Hornsund (broa** **61.55 348** *e*P **P** **23 07 23.2 +0.5**
HSPB *e*S **S** **23 15 42.1 -0.9**
HSPB *e*L L 23 36 12.0
comp=Z,3µm,21.0s
HSPB **Hornsund (broa** **61.55 348** *e*P **P** **23 07 23.8 +1.0**
BBB **Bella Bella** **61.60 44** LR LR 23 30 15.7
comp=Z,797nm,21.2s,baz=297,slow=32
MBWA **Marble Bar** **61.67 204** P **P** **23 07 23.6 -0.6**
MBWA IAmb IAmb 23 07 47.2
comp=Z,44nm,0.9s
MBWA **Marble Bar** **61.67 204** P **P** **23 07 25.4 +1.3**
POO **Poona** **62.00 273** *e*P **P** **23 07 26.3 -0.4**
POO *e*P **pP** **23 07 26.4 -5.8**
POO IAmb IAmb 23 07 37.7
comp=Z,348nm,1.1s
POO IAmb IAmb 23 07 37.7
comp=Z,235nm,0.8s
PSA00 **Pilbara Seismi** **62.02 204** IAmb IAmb 23 07 49.6
comp=Z,60nm,1.0s
PSA00 **Pilbara Seismi** **62.02 204** IAmb IAmb 23 07 53.1
comp=Z,64nm,1.5s
PSA00 **Pilbara Seismi** **62.02 204** P **P** **23 07 28.4 +1.9**
comp=Z,73nm,1.4s
LVZ **Lovozero** **62.34 336** P **P** **23 07 28.1 -0.2**
LVZ **Lovozero** **62.34 336** *c* *i*P **P** **23 07 28.3 0.0**
LVZ pmax pmax
comp=Z,136nm,1.0s
LVZ MLR MLR
comp=Z,9µm,17.0s
KAD **Karad** **62.40 271** *e*P **P** **23 07 29.1 -0.2**
RES **Resolute Bay** **62.41 15** LR LR 23 38 20.9
comp=Z,512nm,18.2s,baz=312,slow=40
RES **Resolute Bay** **62.41 15** P **P** **23 07 27.5 -1.0**
RES **Resolute Bay** **62.41 15** P **P** **23 07 27.5 -1.0**
RES pmax pmax
comp=Z,81nm,1.0s
BJO1 **Bjornoya** **62.60 345** *e*P **P** **23 07 30.2 +0.5**
EIDS **Eidsvold** **62.66 171** P **P** **23 07 29.8 -0.9**
EIDS **Eidsvold** **62.66 171** P **P** **23 07 32.6 +1.9**
APA **Apatity** **62.92 336**‖ *i*P **P** **23 07 31.5 -0.5**
APA *i* 23 07 45.0
APA *i* 23 09 46.0
APA *i* PPP PPP 23 11 29.0
APA *i* S **S** **23 15 58.0 -2.6**
APA *i* 23 17 25.0
APA *i* SS **SS** **23 20 05.0 -0.1**
APA *i* SSS SSS 23 22 54.0
APA pmax pmax
comp=Z,130nm,0.8s
APA MLR MLR
comp=Z,10µm,16.0s
PALK **Pallekele** **63.00 258** LR LR 23 37 48.9
comp=Z,4µm,19.3s,baz=149,slow=39
PALK **Pallekele** **63.00 258** P **P** **23 07 31.7 -1.6**
PALK **Pallekele** **63.00 258** *c* *i*P **P** **23 07 33.9 +0.5**
PALK pmax pmax
comp=Z,138nm,1.1s
PALK MLR MLR
comp=Z,4µm,18.0s
NOUC **Port Laguerre** **63.08 155** P **P** **23 07 34.8 +1.2**
HRA **Herat** **63.09 294** P **P** **23 07 32.7 -1.2**
HRA IAmb IAmb 23 07 48.7
comp=Z,68nm,1.1s
DZM **Mont Dzumac** **63.10 155** LR LR 23 32 28.3
comp=Z,5µm,20.9s,baz=332,slow=34
DZM **Mont Dzumac** **63.10 155** *e*P **P** **23 07 36.8 +3.0**
comp=Z,161nm,24.7s
DZM *e*S **S** **23 16 05.3 +1.4**
comp=Z,1µm,25.6s
DZM **Mont Dzumac** **63.10 155** *e*LR LR 23 26 22.1
comp=Z,7µm,21.6s
DZM **Mont Dzumac** **63.10 155** P **P** **23 07 32.7 -1.2**
DZM **Mont Dzumac** **63.10 155** P **P** **23 07 36.1 +2.3**
WRKA **Warakurna** **63.14 194** P **P** **23 07 35.1 +1.1**
YATNC **Mamie plateau,** **63.24 154** P **P** **23 07 36.4 +1.7**
ONTNC **Ouen Toro** **63.32 155** P **P** **23 07 33.9 -1.3**
ONTNC **Ouen Toro** **63.32 155** P **P** **23 07 38.2 +3.0**
QLP **Quilpie** **63.34 178** P **P** **23 07 36.3 +1.1**
YKA **Yellowknife Ar** **63.46 30** P **P** **23 07 35.9 +0.2**
comp=Z,14nm,0.8s,baz=299,slow=6.6,SNR=61
YKA PKPPKP **P'P'df** **23 36 32.9 -6.1**
comp=Z,0.5nm,0.8s,baz=128,slow=2.5,SNR=4.5
comp=Z,14nm,0.8s
YKA **Yellowknife Ar** **63.46 30** *i* P **P** **23 07 35.9 +0.2**
YKA pmax pmax
comp=Z,15nm,0.9s
RMQ **Roma** **63.51 173** P **P** **23 07 39.4 +3.0**
OUENC **Ouen Island, N** **63.56 154** P **P** **23 07 35.0 -1.7**
OUENC **Ouen Island, N** **63.56 154** P **P** **23 07 39.0 +2.3**
KEV **Kevo** **63.64 339** P **P** **23 07 36.3 -0.5**
KEV **Kevo** **63.64 339** P **P** **23 07 36.3 -0.5**
KEV pmax pmax
comp=Z,88nm,0.9s
KEV MLR MLR
comp=Z,8µm,18.0s
GOA **Goa** **63.68 270** *e*P **P** **23 07 37.9 +0.1**
GOA *e*P **pP** **23 07 38.2 -5.2**
GOA IAmb IAmb 23 07 40.6
comp=Z,633nm,1.2s
GOA IAmb IAmb 23 07 49.9
comp=Z,248nm,0.7s
KOD **Kodaikanal** **63.78 263** *e*P **P** **23 07 39.0 +0.1**
HAMF **Hammerfest** **64.00 341** *e*P **P** **23 07 39.5 +0.4**
KLMR **Klimovskoe** **64.07 328** *e*P **P** **23 07 37.8 -1.9**
KLMR *e* 23 09 59.3
KLMR *e*S **S** **23 16 13.9 -1.2**
KLMR *e*SS **SS** **23 20 30.4 +7.2**
KLMR pmax pmax
comp=Z,237nm,1.2s
KLMR MLR MLR
comp=Z,6µm,17.0s
KLMR **Klimovskoe** **64.07 328** *e*P **P** **23 07 37.9 -1.8**
KLMR AMP 23 07 54.0
comp=Z,237nm,1.2s
KLMR *e*PP **PP** **23 09 59.4 -0.8**
KLMR *e*S **S** **23 16 13.9 -1.2**
KLMR *e*S **S** **23 16 13.9 -1.2**
KLMR *e*SS **SS** **23 20 30.5 +7.2**
KLMR *e*SS **SS** **23 20 30.5 +7.2**
KLMR LQ LQ 23 29 55.1
KLMR LQ LQ 23 29 55.1
KLMR LR LR 23 30 43.9
KLMR AMP 23 37 48.6
comp=Z,6µm,16.7s
MSVF **Nonsavu** **64.13 142** LR LR 23 31 53.4
comp=Z,3µm,19.8s,baz=338,slow=33
MSVF **Nonsavu** **64.13 142** P **P** **23 07 42.5 +1.8**
ARA0 **ARCESS Array S** **64.19 340** *e*P **P** **23 07 41.0 +0.5**
ARCES **ARCESS Array B** **64.19 340** P **P** **23 07 41.0 +0.5**
comp=Z,51nm,0.9s,baz=52,slow=7.9,SNR=72
ARCES LR LR 23 38 10.9
comp=Z,3µm,21.5s,baz=36,slow=38
comp=Z,51nm,0.9s
ARCES **ARCESS Array B** **64.19 340** P **P** **23 07 41.0 +0.5**
BELG **Belogornoye** **64.21 317** LR LR 23 39 51.3
comp=Z,2µm,18.8s,baz=58,slow=40
BELG **Belogornoye** **64.21 317** *c* *i*P **P** **23 07 40.3 -0.5**

BELG pmax pmax
comp=Z,62nm,1.0s
BELG MLR MLR
comp=Z,1µm,16.0s
GEYT Alibeck 64.38 299 P **P 23 07 42.6 +0.4**
comp=Z,54nm,0.9s,baz=255,slow=12,SNR=48
GEYT LR LR 23 38 49.6
comp=Z,2µm,19.2s,baz=69,slow=39
comp=Z,54nm,0.9s
GEYT Alibeck 64.38 299 IAmb IAmb 23 07 53.4
comp=Z,51nm,0.9s
PCHI Peechi 64.49 264 *e*P **P 23 07 43.7 +0.5**
PCHI *e*S S 23 16 06.7 -15
OOD Oodnadatta 64.80 186 P **P 23 07 46.0 +1.2**
KTK1 Kautokeino 65.15 340 *e*P **P 23 07 47.0 +0.3**
JETT Jettan, Norway 65.56 341 *e*P **P 23 07 50.1 +0.7**
DAG Danmarks Havn 65.80 355 *i* P **P 23 07 49.0 -1.7**
DAG IAmb IAmb 23 07 50.9
comp=Z,15nm,0.8s
TRO Tromso 65.89 341 *e*P **P 23 07 51.6 +0.2**
NLWA Neilton Lookou 66.22 48 P **P 23 07 54.0 -0.1**
AFI Afiamalu 66.67 130 LR LR 23 31 42.8
comp=Z,1µm,21.0s,baz=344,slow=31
AFI Afiamalu 66.67 130 IAMs_20 IAMs_20 23 29 19.5
comp=Z,2µm,22.0s
LCRK Leigh Creek 67.26 184 P **P 23 08 01.7 +1.2**
VALR Valaam 67.31 331*c i*P **P 23 08 00.7 +0.1**
VALR pmax pmax
comp=Z,249nm,1.0s
VALR MLR MLR
comp=Z,2µm,15.0s
MULG Mulgathing 67.43 188 P **P 23 08 02.6 +1.0**
MOS Moscow 67.61 324 *e*P **P 23 08 00.7 -1.9**
MOS *e* 23 08 12.6
MOS *e* 23 10 28.1
MOS *e*S **S 23 16 56.6 -1.7**
MOS pmax pmax
comp=Z,262nm,1.3s
MOS pmax pmax
comp=N,300nm,2.0s
MOS pmax pmax
comp=E,200nm,2.0s
MOS pmax pmax
comp=Z,700nm,2.0s
MOS smax smax
comp=N,1µm,4.0s
MOS smax smax
comp=E,700nm,4.0s
MOS MLR MLR
comp=N,2µm,16.0s
MOS MLR MLR
comp=Z,5µm,16.0s
ARMA Armidale 67.71 171 IAmb IAmb 23 08 21.9
comp=Z,59nm,1.2s
ARMA Armidale 67.71 171 P **P 23 08 05.7 +2.2**
F04A Amboy 67.82 49 IAmb IAmb 23 08 17.2
comp=Z,66nm,1.2s
VRH Novokhopyorsk 67.98 318 *e*P **P 23 08 04.5 -0.5**
VRH *e* 23 10 32.7
VRH *e*S **S 23 16 59.9 -3.1**
VRH pmax pmax
comp=Z,200nm,0.8s
VRH pmax pmax
comp=Z,250nm,0.8s
VRH smax smax
comp=N,120nm,7.5s
VRH MLR MLR
comp=Z,11µm,15.0s
STEI Steigen 68.05 341 *e*P **P 23 08 04.9 -0.2**
DBG Daneborg 68.29 355 *i* P **P 23 08 05.8 -0.8**
DBG IAmb IAmb 23 08 13.8
comp=Z,3.3nm,0.9s
CMSA Cobar Meteorol 68.32 177 P **P 23 08 09.0 +1.8**
LOF Lofoten 68.34 342 *e*P **P 23 08 07.4 +0.5**
H04D Lebanon 68.35 50 P **P 23 08 09.2 +1.7**
baz=301
B08A Colville Reser 68.37 45 IAmb IAmb 23 08 22.5
comp=Z,38nm,1.2s
I03D Drain, OR 68.40 51 P **P 23 08 08.9 +1.2**
baz=301
FAUS Fauske 68.44 341 *e*P **P 23 08 08.0 +0.4**
OBN Obninsk 68.45 324 ⇓P **P 23 08 08.3 +0.4**
OBN Obninsk 68.45 324 LR LR 23 40 35.1
comp=Z,1µm,18.3s,baz=54,slow=38
OBN Obninsk 68.45 324 P **P 23 08 06.4 -1.5**
OBN Obninsk 68.45 324*c i*P **P 23 08 07.6 -0.3**
OBN *i* 23 08 18.3
OBN *i* 23 08 32.1
OBN *i* 23 10 37.8
OBN *i* S **S 23 17 00.3 -8.1**
OBN pmax pmax
comp=Z,236nm,1.3s
OBN MLR MLR
comp=Z,4µm,16.0s
PUL Pulkovo 68.48 330*c i*P **P 23 08 08.8 +0.8**
PUL pmax pmax
comp=Z,179nm,0.9s
PUL MLR MLR
comp=Z,5µm,16.0s
STKA Stephens Creek 68.58 181 P **P 23 08 09.8 +0.9**
comp=Z,19nm,1.1s,baz=319,slow=20,SNR=2.8
STKA LR LR 23 37 18.5
comp=Z,260nm,22.0s,baz=357,slow=35
comp=Z,19nm,1.1s
STKA Stephens Creek 68.58 181 P **P 23 08 09.8 +0.9**
STKA Stephens Creek 68.58 181 P **P 23 08 10.1 +1.2**
LPSR Galich'ya Gora 68.69 320 *e*P **P 23 08 08.6 -0.8**
LPSR *e* 23 10 37.4
LPSR pmax pmax
comp=Z,260nm,0.9s
LPSR MLR MLR
comp=Z,14µm,16.0s
K02D Willamette Mer 68.71 52 P **P 23 08 10.7 +0.8**
baz=301
FORT Forrest 68.78 193 P **P 23 08 11.7 +1.6**
G05D Wamic, OR 68.84 49 P **P 23 08 11.9 +1.3**
baz=302
EDM Edmonton 68.93 39 IAmb IAmb 23 08 25.6
comp=Z,68nm,1.2s
I04A Tendick Farm, 68.93 51 P **P 23 08 11.9 +0.7**
baz=302
I04A S **S 23 17 16.0 +1.4**
baz=302
MAK Makhachkala 68.94 308 *e*P P 23 08 03.8 -7.4
MAK *e*PPP PPP 23 12 18.5
MAK *e*S S 23 17 05.1 -10
MAK *e*SS **SS 23 21 34.2 -5.3**
MAK pmax pmax
comp=Z,146nm,1.5s
MAK MLR MLR
comp=Z,4µm,15.0s
E07A Sunnyside 69.02 47 P **P 23 08 10.6 -1.0**
E07A IAmb IAmb 23 08 25.5
comp=Z,70nm,1.5s
VORR Voronezh 69.06 319 *e*P **P 23 08 11.7 0.0**
VORR *i* 23 10 41.6
VORR *e*S SKiKP 23 17 41.9 -20
VORR pmax pmax
comp=Z,128nm,1.3s
L02F Cave Junction 69.07 53 P **P 23 08 13.2 +1.1**
baz=301
FINES FINESS Array B 69.08 332 P **P 23 08 11.9 +0.2**
comp=Z,181nm,0.8s,baz=57,slow=7.0,SNR=332
FINES LR LR 23 40 44.6
comp=Z,5µm,18.1s,baz=36,slow=38
comp=Z,181nm,0.8s
FINES FINESS Array B 69.08 332 *i* P **P 23 08 11.8 +0.1**
FINES pmax pmax
comp=Z,181nm,0.8s
HUMO Hull Mountain 69.21 52 P **P 23 08 12.1 -0.8**
C09A Chrisman Ranch 69.27 45 IAmb IAmb 23 08 28.1
comp=Z,39nm,1.2s
I05D Terrebonne, OR 69.30 50 P **P 23 08 14.5 +1.1**
baz=302,SNR=6.4
I05D S **S 23 17 22.2 +3.2**
baz=302
F07A Phinny Hill Vi 69.32 48 IAmb IAmb 23 08 28.9
comp=Z,30nm,0.9s
VSR Storozhevoye 69.33 319 *e*P **P 23 08 13.0 -0.4**
VSR *e* 23 08 14.9
VSR *e*S **S 23 17 14.1 -4.9**
VSR pmax pmax
comp=Z,310nm,1.0s
VSR smax smax
comp=N,390nm,8.1s
VSR MLR MLR
comp=Z,19µm,15.0s
J04D Umpqua Nationa 69.40 51 P **P 23 08 15.7 +1.4**
baz=302
MOR8 Moi Rana 69.56 340 *e*P **P 23 08 13.6 -1.0**
NEW Newport 69.66 44 LR LR 23 33 46.6
comp=Z,610nm,21.8s,baz=311,slow=32
NEW Newport 69.66 44 P **P 23 08 16.1 +0.5**
baz=303,SNR=5.9
NEW S **S 23 17 24.1 +1.0**
baz=303
UPNV Upernavik 69.71 6 *i* P **P 23 08 15.1 -0.4**
UPNV IAmb IAmb 23 08 18.4
comp=Z,28nm,0.9s
BBOO Buckleboo 69.75 186 IAmb IAmb 23 08 18.5
comp=Z,53nm,1.0s
BBOO Buckleboo 69.75 186 P **P 23 08 17.7 +1.6**
L04D Klamath Falls 69.82 52 P **P 23 08 18.0 +1.2**
baz=302,SNR=10
YBH Yreka Blue Hor 69.82 53 LR LR 23 33 43.9
comp=Z,615nm,21.0s,baz=302,slow=32
YBH Yreka Blue Hor 69.82 53 IAmb IAmb 23 08 30.3
comp=Z,35nm,1.1s
WHYH Whyalla 69.87 184 P **P 23 08 19.3 +2.5**
comp=Z,39nm,1.0s
GROC Groznyy 69.88 309 *e*P **P 23 08 16.4 -0.6**
GROC *e* 23 08 37.2
GROC *e* 23 10 52.5
GROC *e*S **S 23 17 27.8 +2.1**
GROC pmax pmax
comp=Z,96nm,0.9s
J05D Fort Rock, OR 69.92 51 P **P 23 08 18.6 +1.2**
baz=302,SNR=12
J05D S **S 23 17 30.1 +3.5**
baz=302
K04D Chiloquin, OR 69.95 51 S **S 23 17 28.2 +1.3**
baz=302
E09A Wood Farm, Sta 70.03 46 IAmb IAmb 23 08 33.1
comp=Z,48nm,1.2s
SEKA Sheki 70.05 307 P **P 23 08 17.9 -0.3**
ZKTA Zakatala 70.19 308 P **P 23 08 18.9 -0.1**
HTT Hallett 70.20 183 P **P 23 08 21.2 +2.3**
MORW Morawa 70.22 204 P **P 23 08 17.0 -2.1**
MORW IAmb IAmb 23 08 41.7
comp=Z,39nm,0.9s
MORW Morawa 70.22 204 P **P 23 08 19.3 +0.2**
JMIC Jan Mayen 70.23 350 LR LR 23 39 11.6
comp=Z,548nm,21.3s,baz=57,slow=36
LKRN Lenkeran, Azer 70.35 304 P **P 23 08 19.9 0.0**
MNGR Mingechevir, A 70.36 307 P **P 23 08 20.3 +0.3**
GOF Gofitskoye 70.55 312⇑*e*P **P 23 08 21.0 -0.1**
GOF *e*S **S 23 17 33.3 -0.2**
GOF pmax pmax
comp=Z,253nm,0.9s
SUMG Summit 70.66 0 IAMs_20 IAMs_20 23 41 30.3
comp=Z,2µm,20.0s
SUMG Summit 70.66 0 *i* P **P 23 08 21.3 -0.5**
SUMG IAmb IAmb 23 08 23.8
comp=Z,62nm,0.9s
VSU Vasula 70.75 330*d i*P **P 23 08 21.5 -0.5**
VSU pmax pmax
comp=Z,549nm,1.0s
VSU MLR MLR
comp=Z,13µm,17.0s
VSU Vasula 70.75 330 *e*P **P 23 08 22.6 +0.6**
GANJ Ganja 70.92 307 P **P 23 08 23.6 +0.2**
RAF Rauma 70.93 334 *e*P **P 23 08 23.4 +0.4**
WALA Waterton Lakes 70.99 42 IAmb IAmb 23 08 38.2
comp=Z,33nm,1.0s
HOPS Hopland Field 71.05 55 IAMs_20 IAMs_20 23 30 43.6
comp=Z,2µm,19.0s
NCK Nalchik 71.07 310*c i*P **P 23 08 24.2 -0.1**
NCK pmax pmax
comp=Z,100nm,1.2s
NCK MLR MLR
comp=Z,5µm,16.0s
MOD Modoc Plateau 71.25 51 IAmb IAmb 23 08 40.9
comp=Z,38nm,1.1s
ZEI Tsey 71.27 310 *e*P **P 23 08 24.6 -1.2**
ZEI pmax pmax
comp=Z,43nm,0.9s
KVAR Kislovodsk Arr 71.36 311 LR LR 23 42 09.2
comp=Z,3µm,18.7s,baz=268,slow=38
KBZ Khabaz 71.37 311 P **P 23 08 26.6 +0.6**
comp=Z,102nm,0.9s,baz=47,slow=2.8,SNR=148
KBZ LR LR 23 44 33.6
comp=Z,6µm,18.6s,baz=38,slow=40
comp=Z,102nm,0.9s
KBZ Khabaz 71.37 311*c i*P **P 23 08 25.9 -0.1**
KBZ pmax pmax
comp=Z,164nm,0.9s
KBZ MLR MLR
comp=Z,6µm,17.0s
KIV Kislovodsk 71.37 311 ⇓P **P 23 08 27.1 +0.9**
KIV Kislovodsk 71.37 311 P **P 23 08 26.1 -0.1**
KIV Kislovodsk 71.37 311*c i*P **P 23 08 26.3 +0.1**
KIV *e**PP **pP 23 08 32.6 +0.6**
KIV *e**SP **sP 23 08 36.2 +2.5**
KIV *e* 23 08 45.3
KIV *e* 23 11 01.3
KIV *e*PPP PPP 23 12 51.7
KIV *i* S **S 23 17 41.9 -1.4**
KIV *e*SS **SS 23 22 11.3 -5.7**
KIV pmax pmax
comp=Z,652nm,1.8s
KIV MLR MLR
comp=Z,3µm,17.0s
KIV Kislovodsk 71.37 311 P **P 23 08 27.5 +1.3**
KIV Kislovodsk 71.37 311 *i* P **P 23 08 25.9 -0.3**
SNR=70
BLDU Ballidu 71.44 203 P **P 23 08 27.3 +0.9**
WSAR Wadi Sarin 71.47 285 LR LR 23 45 30.9
comp=Z,2µm,18.2s,baz=83,slow=41
WSAR Wadi Sarin 71.47 285 P **P 23 08 28.2 +1.2**
SNR=9.6
NSS Namsos 71.48 340 *e*P **P 23 08 26.4 +0.1**
WBK Wadi Bani Khal 71.55 285 P **P 23 08 28.8 +1.3**
SNR=11
J08A Circle Bar Ran 71.57 49 IAmb IAmb 23 08 40.7
comp=Z,68nm,1.3s
BIDO Bidbid 71.71 286 P **P 23 08 29.8 +1.3**
SNR=22
MTSE Matsula 71.74 331 *e*P **P 23 08 28.7 +0.8**
ORV Oroville 71.77 54 IAmb IAmb 23 08 40.9
comp=Z,38nm,1.1s
BANOM Banah 71.80 289 P **P 23 08 30.1 +1.1**
SNR=14
BANOM Banah 71.80 289 *i* P **P 23 08 29.1 +0.1**
SNR=16
SHME Shamm 71.85 289 P **P 23 08 30.1 +0.9**
SNR=35
SHME Shamm 71.85 289 *i* P **P 23 08 29.3 0.0**
SNR=53
WVOR Wild Horse Val 71.99 50 IAmb IAmb 23 08 43.8
comp=Z,61nm,1.4s
SMDO Samad 72.02 286 P **P 23 08 31.4 +0.9**
SNR=15
KLBR Kellerberrin 72.03 202 P **P 23 08 30.1 +0.1**
PLID Pearl Lake 72.08 47 IAmb IAmb 23 08 45.3
comp=Z,65nm,1.4s
SCO Scoresbysund 72.15 354 IAMs_20 IAMs_20 23 37 28.6
comp=Z,1µm,21.0s
SCO Scoresbysund 72.15 354 *i* P **P 23 08 30.2 -0.1**
SCO IAmb IAmb 23 08 31.8
comp=Z,16nm,0.8s
GNI Garni 72.20 307 LR LR 23 43 01.2
comp=Z,3µm,18.5s,baz=68,slow=38
GNI Garni 72.20 307 P **P 23 08 30.8 -0.6**
GNI Garni 72.20 307*c i*P **P 23 08 31.7 +0.4**
GNI pmax pmax
comp=Z,119nm,1.7s
GNI MLR MLR
comp=Z,3µm,17.0s
GNI Garni 72.20 307 P **P 23 08 31.7 +0.4**
MASF Masafi 72.21 289 P **P 23 08 32.3 +0.9**
SNR=13
MSFE Esma-Masafi 72.21 289 *i* P **P 23 08 31.2 -0.3**
SNR=12
NAX Nakhchivan 72.25 306 P **P 23 08 31.9 +0.3**
MSO Missoula 72.25 44 P **P 23 08 32.0 +0.5**
baz=306,SNR=7.3
MSO S **S 23 17 53.6 +0.2**
baz=306
AKH Akhalkalaki 72.29 309 ⇑P **P 23 08 31.7 -0.2**
AKH Akhalkalaki 72.29 309 P **P 23 08 31.7 -0.2**
CAN Canberra 72.29 174 IAmb IAmb 23 08 34.6
comp=Z,66nm,1.3s
CAN Canberra 72.29 174 P **P 23 08 34.5 +2.9**
CAN Canberra 72.29 174 P **P 23 08 34.4 +2.9**
comp=Z,61nm,1.4s
HOQ Hoqain 72.30 286 P **P 23 08 33.0 +1.0**
SNR=20
BEKR Beckworth 72.33 53 IAmb IAmb 23 08 47.2
comp=Z,42nm,0.9s
JMDO Jabal Madar 72.36 285 P **P 23 08 33.0 +0.7**
SNR=12
UOSS Minazif 72.41 288 P **P 23 08 31.2 -1.4**
UOSS Minazif 72.41 288 IAMs_20 IAMs_20 23 43 33.3
comp=Z,2µm,21.0s
UOSS Minazif 72.41 288 *i* P **P 23 08 31.8 -0.8**
SNR=16
CHVG Ch'k'valeri 72.42 310 ⇓P **P 23 08 33.5 +1.0**
UMQ Umm Al-Quwin 72.50 289 *i* P **P 23 08 34.1 +1.0**
SNR=9.3
HATD Hatta, Dubai 72.53 288 P **P 23 08 35.0 +1.6**
SNR=16
HATD Hatta, Dubai 72.53 288 *i* P **P 23 08 33.3 0.0**
SNR=28
ASHO Ashiyiah 72.66 288 P **P 23 08 36.0 +1.8**
SNR=19
ASHO Ashiyiah 72.66 288 *i* P **P 23 08 33.8 -0.3**
SNR=20
NAZ Nazwa, Dubai 72.79 289 P **P 23 08 36.0 +1.1**
SNR=18
NAZ Nazwa, Dubai 72.79 289 *i* P **P 23 08 35.1 +0.2**
SNR=11
IDID Didziasalis 72.80 327 *e*P **P 23 08 35.3 +0.9**
MNK Minsk 72.83 326 *i* P **P 23 08 34.4 -0.1**
MNK *i* 23 11 17.1
MNK *i* PPP PPP 23 12 59.8
MNK *i* S **S 23 17 59.2 -0.2**
MNK *i* SS **SS 23 22 39.7 +1.2**
MNK pmax pmax
comp=Z,337nm,1.0s
MNK pmax pmax
comp=N,126nm,1.0s
MNK pmax pmax
comp=E,20nm,1.0s
MNK MLR MLR
comp=N,4µm,20.0s
MNK MLR MLR
comp=Z,8µm,15.0s
MNK MLR MLR
comp=E,536nm,15.0s
MNK Minsk 72.83 326 *i* P **P 23 08 34.5 -0.1**
comp=E,20nm,1.0s
MNK *i* P **P 23 08 34.5 -0.1**
comp=N,126nm,1.0s
MNK *i* P **P 23 08 34.5 -0.1**
comp=Z,337nm,1.0s,baz=50
MNK *i* PP **PP 23 11 17.1 +1.0**
MNK *i* PPP PPP 23 12 59.9
MNK *i* S **S 23 17 59.2 -0.2**
MNK *i* SS **SS 23 22 39.8 +1.2**
MNK *i* SSS SSS 23 26 03.0
MNK *i* LQ LQ 23 35 40.3
MNK *i* LR LR 23 41 12.8
MNK *i* LRM MLR 23 43 11.9
comp=N,4µm,20.0s
MNK *i* LRM MLR 23 43 19.0
comp=Z,8µm,15.5s
MNK *i* LRM MLR 23 43 49.3
comp=E,536nm,14.8s
ISAL Salakas 72.89 328 *e*P **P 23 08 35.8 +0.8**
TBLU Trondheim 72.95 339 *e*P **P 23 08 34.5 -0.6**
FAQ Al Faqa, Dubai 72.98 288 P **P 23 08 37.1 +1.0**
SNR=10
FAQ Al Faqa, Dubai 72.98 288 *i* P **P 23 08 35.2 -0.8**
SNR=24
IIGN Ignalina 73.00 328 *e*P **P 23 08 36.4 +0.9**
PAHR Pah Rah Range 73.04 53 IAmb IAmb 23 08 51.5
comp=Z,43nm,1.0s
NACGM Naroch 73.05 327 *i* P **P 23 08 36.8 +0.9**
SLIT Slitere, Latvi 73.07 331 *e*P **P 23 08 35.8 -0.1**
KAAM Kaadhehdhoo 73.20 258 P **P 23 08 37.5 0.0**
MHTO MHTO 73.22 284 P **P 23 08 38.2 +0.7**
SNR=25
VSLR Vesyoloye 73.23 312*ce*P **P 23 08 37.3 +0.1**
ALNE Al Ain 73.24 288 P **P 23 08 37.7 +0.1**
SNR=25
ALNE Al Ain 73.24 288 *i* P **P 23 08 37.5 -0.1**
SNR=14
ASUD Al Ashush, Dub 73.24 288 P **P 23 08 38.1 +0.5**
SNR=10
ASUD Al Ashush, Dub 73.24 288 *i* P **P 23 08 37.5 -0.1**
SNR=29
PNTR Pine Nut 73.25 54 IAmb IAmb 23 08 51.7
comp=Z,52nm,1.2s
BATM Batumi 73.29 310 ⇑P **P 23 08 38.4 +0.8**
CMB Columbia Colle 73.33 55 IAmb IAmb 23 08 53.2
comp=Z,56nm,1.1s
CMB IAMs_20 IAMs_20 23 34 01.1
comp=Z,1µm,20.0s
SOC Sochi 73.35 312 *i* P **P 23 08 37.4 -0.5**
SOC *e**PP **pP 23 08 42.8 -0.9**
SOC *e**SP **sP 23 08 45.4 0.0**
SOC *e*PPP PPP 23 13 06.2
SOC *e*S **S 23 18 06.3 +0.5**
SOC pmax pmax
comp=Z,100nm,0.9s
SOC MLR MLR
comp=Z,3µm,19.0s
NWAO Narrogin (SRO) 73.43 202 P **P 23 08 37.6 -0.7**
NWAO IAmb IAmb 23 08 53.1
comp=Z,58nm,0.9s
NWAO Narrogin (SRO) 73.43 202 P **P 23 08 37.6 -0.7**
NWAO pmax pmax
comp=Z,58nm,0.9s
NWAO Narrogin (SRO) 73.43 202 P **P 23 08 38.9 +0.6**
ARPS Mount Arapiles 73.46 180 P **P 23 08 40.7 +2.4**
comp=Z,51nm,0.8s
AJN Ajban 73.54 288 P **P 23 08 39.4 +0.1**
SNR=13
AJN Ajban 73.54 288 *i* P **P 23 08 39.0 -0.3**
SNR=13
VSVD Vaisvydziai 73.54 329 *e*P **P 23 08 39.3 +0.5**
YERR Yerington 73.54 53 IAmb IAmb 23 08 54.2
comp=Z,54nm,0.9s
ILULI Ilulissat 73.58 5 IAmb IAmb 23 08 40.8
comp=Z,78nm,1.0s
ILULI IAMs_20 IAMs_20 23 41 16.8
comp=Z,2µm,21.0s
ILULI Ilulissat 73.58 5 *i* P **P 23 08 37.8 -1.0**
ILULI IAmb IAmb 23 08 40.2
comp=Z,33nm,0.8s
FCC Fort Churchill 73.69 27 IAmb IAmb 23 08 54.0
comp=Z,67nm,1.1s
EGMT Eagleton 73.83 42 P **P 23 08 41.3 +0.6**
baz=308,SNR=8.0
EGMT S **S 23 18 10.2 -1.0**
baz=308
PABE Paberze 73.85 329 *e*P **P 23 08 41.4 +0.8**
DLMT Dillon 73.87 45 IAmb IAmb 23 08 58.8
comp=Z,88nm,1.1s
HLID Hailey 73.89 47 P **P 23 08 42.4 +1.1**
baz=306,SNR=19
HLID S **S 23 18 12.3 +0.1**
baz=306
ANN Anapa 73.97 314 *e*P **P 23 08 38.2 -3.3**
ANN *e**PP **pP 23 08 45.1 -2.2**
ANN *e* 23 08 51.9
ANN *e* 23 11 22.9
ANN *e*S **SKiKP 23 18 08.8 -0.1**
ANN pmax pmax
comp=Z,220nm,1.4s
ANN MLR MLR
comp=N,5µm,17.0s
ANN MLR MLR
comp=Z,4µm,16.0s
ANN MLR MLR
comp=E,2µm,17.0s
BMN Battle Mountai 74.00 51 IAmb IAmb 23 08 55.2
comp=Z,71nm,1.3s
DQM DQM 74.14 283 P **P 23 08 43.3 +0.4**
SNR=7.3
ICESG Greenland Ices 74.15 1 *i* P **P 23 08 42.0 -0.5**
ICESG IAmb IAmb 23 08 44.9
comp=Z,95nm,0.9s
RYN Ryan 74.21 53 IAmb IAmb 23 08 58.6
comp=Z,41nm,1.0s
KVN Kaiserville 74.23 53 IAmb IAmb 23 08 58.9
comp=Z,72nm,1.0s
MOL Molde 74.25 340 *e*P **P 23 08 43.9 +1.1**

BRAT Ballarat 74.26 179 P P 23 08 46.8 +3.8
comp=Z,16nm,1.0s
BOZ Bozeman (W) 74.28 44 IAmb IAmb 23 08 58.6
comp=Z,53nm,1.1s
BOZ Bozeman (W) 74.28 44 P P 23 08 43.9 +0.4
baz=307,SNR=45
BOZ S S 23 18 15.2 -1.3
baz=307
GEVA Gevas 74.31 306 IAmb IAmb 23 08 59.8
comp=Z,97nm,1.5s
HFS Hagfors 74.32 336 LR LR 23 44 13.6
comp=Z,11μm,19.0s,baz=30,slow=38
TOO Toolangi 74.33 177 P P 23 08 45.6 +2.2
PBUR Paburge 74.33 340 eP P 23 08 44.0 +0.7
NB2 NORSAR Subarra 74.40 338 P P 23 08 43.8 0.0
baz=39,slow=5.9
NB2 NORSAR Subarra 74.40 338 P P 23 08 43.8 0.0
comp=Z,168nm,1.1s,baz=39,slow=5.9
NOA NORSAR Array B 74.40 338 P P 23 08 43.6 -0.2
comp=Z,57nm,1.0s,baz=35,slow=5.8,SNR=125
NOA LR LR 23 45 06.0
comp=Z,5μm,18.6s,baz=35,slow=39
comp=Z,57nm,1.0s
NOA NORSAR Array B 74.40 338 P P 23 08 43.6 -0.2
LHV Little Huntoon 74.43 54 IAmb IAmb 23 09 00.4
comp=Z,108nm,1.1s
NVAR Mina Array Bea 74.46 54 P P 23 08 45.6 +0.8
comp=Z,11nm,0.8s,baz=283,slow=6.0,SNR=68
comp=Z,11nm,0.8s
OMMB Old Mammoth Mi 74.48 55 P P 23 08 43.8 -1.2
NV11 Mina Array Sit 74.55 53 IAmb IAmb 23 08 58.3
comp=Z,60nm,1.4s
NAO01 NORSAR Array S 74.66 338 eP P 23 08 45.3 +0.1
AKASG Malin Array Be 74.66 323 P P 23 08 45.0 -0.4
comp=Z,73nm,0.8s,baz=46,slow=6.4,SNR=293
AKASG LR LR 23 46 17.4
comp=Z,3μm,18.4s,baz=49,slow=40
comp=Z,73nm,0.8s
AKASG Malin Array Be 74.66 323 P P 23 08 45.0 -0.4
AKBB Malin Array Si 74.66 323 ceP P 23 08 44.7 -0.7
AKBB pmax pmax
comp=Z,182nm,1.0s
AKBB MLR MLR
comp=Z,10μm,16.0s
PAGB Antelope Grade 74.72 57 IAmb IAmb 23 09 01.6
comp=Z,62nm,0.9s
GURO Guroymak-BITLI 74.83 307 IAmb IAmb 23 08 49.5
comp=Z,69nm,1.1s
KTUT Trabzon 74.83 310 ⇓P P 23 08 46.5 -0.1
JRN Qarnain Island 74.94 290 P P 23 08 46.9 -0.6
SNR=16
Q09A Carvers 74.94 53 IAmb IAmb 23 09 00.5
comp=Z,58nm,1.1s
ELK Elko 75.04 50 LR LR 23 38 26.5
comp=Z,461nm,19.7s,baz=312,slow=33
SUW Suwalki 75.20 328 eP P 23 08 47.8 -0.7
SUW ePcP PcP 23 08 59.5 -2.4
SUW ePP PP 23 11 36.7 +0.4
SUW eS S 23 18 22.4 -3.8
SUW eL L 23 44 36.3
SUW Suwalki 75.20 328 eP P 23 08 48.6 +0.1
TIN Tinemaha, Big 75.30 55 P P 23 08 51.1 +1.6
baz=306
TIN S S 23 18 29.2 +1.1
baz=306
YNR Norris Junctio 75.35 45 IAmb IAmb 23 09 06.6
comp=Z,68nm,1.3s
OSL Oslo 75.42 337 eP P 23 08 50.8 +1.2
VES Vestal, Richgr 75.44 56 P P 23 08 50.3 +0.2
baz=305,SNR=6.4
PKM Mcpherson Peak 75.50 57 P P 23 08 52.6 +1.8
baz=305,SNR=5.4
MZR Muzera 75.55 288 P P 23 08 51.2 +0.2
SNR=15
MZR Muzera 75.55 288 i P P 23 08 48.8 -2.3
SNR=9.4
SKAR Skarslia 75.56 339 eP P 23 08 51.6 +1.1
KHOR Al-Khor Airpor 75.56 291 P P 23 08 50.5 -0.5
H17A Grant Village 75.60 45 P P 23 08 53.7 +2.4
baz=308
FLWY Flagg Ranch 75.72 45 IAmb IAmb 23 09 27.3
comp=Z,111nm,1.4s
SIM Simferopol' 75.75 316 eP P 23 08 49.5 -2.3
SIM 23 11 44.4
SIM eS S 23 18 24.7 -7.9
SIM pmax pmax
comp=Z,156nm,1.1s
CWC Cottonwood Cre 75.75 55 P P 23 08 53.1 +0.9
baz=306
SFJD Kangerlussuaq 75.80 5 P P 23 08 51.1 -0.6
SFJD IAmb IAmb 23 08 53.7
comp=Z,69nm,1.0s
SFJD Kangerlussuaq 75.80 5 IAMs_20 IAMs_20 23 43 59.5
comp=Z,2μm,18.0s
SFJD Kangerlussuaq 75.80 5 P P 23 08 51.1 -0.6
SFJD pmax pmax
comp=Z,69nm,1.0s
SFJD MLR MLR
comp=Z,2μm,18.0s
SFJD Kangerlussuaq 75.80 5 i P P 23 08 51.3 -0.4
SFJD IAmb IAmb 23 08 52.8
comp=Z,26nm,0.8s
SBC Santa Barbara 75.82 58 P P 23 08 55.7 +3.3
baz=305
RAO Raoul Island 75.83 145 LR LR 23 38 06.6
comp=Z,1μm,20.1s,baz=3.0,slow=32
SHMA Al-Shehemyia 75.84 292 P P 23 08 52.3 -0.3
RLMT Red Lodge 75.88 44 P P 23 08 53.6 +0.8
baz=309,SNR=10
GRAC Grapevine Rang 75.89 54 P P 23 08 54.3 +1.5
baz=306
MOOW Moose Ponds 75.90 46 IAmb IAmb 23 09 08.8
comp=Z,50nm,1.2s
HVU Hansel Valley 75.92 48 IAmb IAmb 23 09 08.5
comp=Z,48nm,1.1s
TPAW Teton Pass 75.94 46 IAmb IAmb 23 09 32.1
comp=Z,74nm,1.4s
ISA Isabella, Lake 75.94 56 P P 23 08 53.4 +0.2
baz=306
KONO Kongsberg 76.00 337 P P 23 08 52.4 -0.6
KONO IAmb IAmb 23 09 07.0
comp=Z,52nm,0.9s
KONO Kongsberg 76.00 337 c i P P 23 08 53.2 +0.3
KONO pmax pmax
comp=Z,51nm,1.3s
KONO MLR MLR
comp=Z,6μm,17.0s
KONO Kongsberg 76.00 337 eP P 23 08 53.5 +0.6
ARVC Arvin 76.02 57 P P 23 08 54.5 +1.0
baz=306
KLNR Kaliningrad 76.03 329 i P P 23 08 53.1 -0.1
KLNR pmax pmax
comp=Z,212nm,1.1s
KLNR MLR MLR
comp=Z,18μm,22.0s
SNOW Snow King Moun 76.07 46 IAmb IAmb 23 09 09.8
comp=Z,53nm,1.1s
REDW Red Top Meadow 76.08 46 IAmb IAmb 23 09 09.7
comp=Z,64nm,1.2s
REDW IAMs_20 IAMs_20 23 48 33.6
comp=Z,817nm,18.0s
SAKB Bahrain 76.09 292 P P 23 08 53.8 -0.3
R11A Troy Canyon, C 76.24 52 IAmb IAmb 23 09 10.3
comp=Z,43nm,1.0s
R11A Troy Canyon, C 76.24 52 P P 23 08 55.6 +0.6
baz=306,SNR=27
R11A S S 23 18 37.1 -1.5
baz=306
AHID Auburn Hatcher 76.30 47 IAMs_20 IAMs_20 23 36 44.6
comp=Z,913nm,20.0s
MPMC Manual Prospec 76.36 55 P P 23 08 56.4 +0.7
baz=306,SNR=12
FURC Furnace Creek, 76.53 54 P P 23 08 57.5 +1.1
baz=306,SNR=17
LAO LASA Array 76.53 41 IAmb IAmb 23 09 11.5
comp=Z,97nm,1.2s
LAO IAMs_20 IAMs_20 23 39 47.4
comp=Z,928nm,20.0s
LAO LASA Array 76.53 41 P P 23 08 57.3 +1.0
baz=310,SNR=5.1
LAO S S 23 18 40.5 -0.9
baz=310
CCAC Calif City Air 76.55 56 IAmb IAmb 23 09 11.7
comp=Z,57nm,0.9s
S11A Rachel 76.56 53 IAmb IAmb 23 09 12.1
comp=Z,90nm,1.0s
SMRA Abu-Samra 76.57 291 P P 23 08 56.8 0.0

LRMC Laurel Mtn Rad 76.58 56 P P 23 08 57.7 +0.8
baz=306
DY2G Dye2 76.58 3 i P P 23 08 55.6 -0.9
DY2G IAmb IAmb 23 08 57.8
comp=Z,28nm,1.0s
FRB Frobisher Bay 76.60 14 LR LR 23 47 11.4
comp=Z,2μm,18.7s,baz=344,slow=39
TPNV Topopah Spring 76.65 54 IAmb IAmb 23 09 13.0
comp=Z,40nm,0.9s
TPNV IAMs_20 IAMs_20 23 34 55.7
comp=Z,1μm,22.0s
TPNV Topopah Spring 76.65 54 P P 23 08 58.0 +0.8
baz=306,SNR=38
TPNV S S 23 18 44.2 +1.1
baz=306
EDW2 Edwards Air Fo 76.72 56 P P 23 08 58.4 +0.9
baz=306,SNR=14
EDW2 S S 23 18 42.3 -1.4
baz=306
HWUT Hardware Ranch 76.74 48 IAmb IAmb 23 09 13.3
comp=Z,63nm,1.1s
SORM Soroca 76.77 321 ⇓P P 23 08 57.3 -0.2
GWY Greenwater Val 76.83 55 IAmb IAmb 23 09 12.4
comp=Z,78nm,1.2s
DUG Dugway, Tooele 76.85 49 IAmb IAmb 23 09 13.8
comp=Z,51nm,0.9s
DUG Dugway, Tooele 76.85 49 P P 23 08 59.3 +1.0
baz=308,SNR=48
DUG S S 23 18 47.6 +2.4
baz=308
DECC Green Verdugo 76.86 57 P P 23 08 59.6 +1.3
baz=306
PURM Purcari 77.04 319 ⇓P P 23 08 59.2 +0.2
DEL Delary 77.06 333 eP P 23 08 59.2 +0.2
PRN Pahroc Range 77.14 53 IAmb IAmb 23 09 18.2
comp=Z,52nm,0.9s
DIKM Dikmen 77.14 313 ⇑P P 23 09 01.1 +1.3
BW06 Boulder Array 77.19 46 P P 23 09 00.7 +0.3
baz=309,SNR=16
BW06 S S 23 18 47.8 -1.2
baz=309
PDAR Pinedale Array 77.19 46 P P 23 09 00.5 +0.2
comp=Z,8.5nm,0.8s,baz=278,slow=2.5,SNR=62
comp=Z,8.5nm,0.8s
CTU Camp Tracy 77.19 49 IAmb IAmb 23 09 15.4
comp=Z,42nm,1.1s
PSUT Pine Spring 77.22 51 IAmb IAmb 23 09 15.8
comp=Z,43nm,1.0s
TOKA Tokat 77.23 311 IAmb IAmb 23 09 03.0
comp=Z,106nm,1.3s
SHOC Shoshone, Teco 77.25 55 P P 23 09 01.4 +0.9
baz=307
GSC Goldstone, Bar 77.26 55 P P 23 09 01.6 +0.9
baz=306,SNR=6.8
KIS Kishinev 77.28 320 eP P 23 08 59.0 -1.4
comp=Z,610nm,6.5s
KIS eS S 23 18 46.0 -3.3
KIS eL L 23 43 00.0
KIS LRM MLR 23 46 04.0
comp=Z,4μm,16.0s
CIS Catalina Islan 77.30 58 P P 23 09 02.6 +1.7
baz=306
MILM Milestii Mici 77.34 320 ⇑ i P P 23 08 59.0 -1.7
comp=Z,680nm,6.3s
MILM Milestii Mici 77.34 320 ePP PP 23 12 06.0 +12
MILM Milestii Mici 77.34 320 ⇓P P 23 09 00.7 -0.1
MILM Milestii Mici 77.34 320 c i P P 23 08 59.0 -1.7
MILM i 23 09 10.0
MILM ePPP PPP 23 13 42.0
MILM eS S 23 18 44.0 -5.9
MILM e 23 19 05.0
MILM ePS PnS 23 19 26.0 -3.8
MILM pmax pmax
comp=Z,680nm,6.3s
MILM MLR MLR
comp=N,6μm,15.5s
MILM MLR MLR
comp=E,6μm,15.5s
MILM MLR MLR
comp=Z,11μm,15.5s
JLU Jordanelle 77.43 48 IAmb IAmb 23 09 17.1
comp=Z,45nm,1.1s
NLU North Lily Min 77.45 49 IAmb IAmb 23 09 17.1
comp=Z,40nm,1.0s
ANGG Ammassalik, Gr 77.65 360 IAmb IAmb 23 09 03.6
comp=Z,83nm,1.0s
MPU Maple Canyon 77.68 49 IAmb IAmb 23 09 18.4
comp=Z,58nm,1.0s
BZK Bozkurt 77.68 314 ⇑P P 23 08 59.3 -3.4
BORG Borgarnes 77.70 353 P P 23 09 02.1 -0.3
BORG IAmb IAmb 23 09 06.3
comp=Z,86nm,0.9s
BORG Borgarnes 77.70 353 P P 23 09 02.1 -0.3
BORG pmax pmax
comp=Z,86nm,1.0s
ISOG Isortoq, Green 77.72 1 i P P 23 09 01.3 -1.2
ISOG IAmb IAmb 23 09 03.7
comp=Z,36nm,0.9s
BSD Bornholm Skovb 77.72 332 eP P 23 09 02.9 +0.2
BSD Bornholm Skovb 77.72 332 i P P 23 09 02.0 -0.7
BSD IAmb IAmb 23 09 03.4
comp=Z,44nm,0.9s
LVV L'vov 77.73 324 eP P 23 09 03.3 +0.4
LVV e 23 09 13.8
LVV e 23 11 54.0
LVV eS S 23 18 48.4 -5.6
LVV eSS SS 23 23 54.9 +1.9
LVV MLR MLR
comp=Z,9μm,16.0s
TUQ Turquoise Moun 77.76 55 P P 23 09 04.3 +0.8
baz=307,SNR=12
BEL Belsk 77.77 327 eP P 23 09 03.5 +0.5
BEL ePcP PcP 23 09 12.8 -0.2
BEL ePP PP 23 11 58.0 0.0
BEL eS S 23 18 49.9 -4.4
BEL eL L 23 46 18.9
comp=Z,6μm,17.3s
IAS Iasi 77.80 321 ⇓P P 23 09 03.9 +0.6
HEC Hector,Ludlow 77.85 56 P P 23 09 05.0 +1.1
baz=307,SNR=12
LEOM Leova 77.92 320 ⇑P P 23 09 04.2 +0.2
MURC Murrieta 78.01 57 P P 23 09 05.8 +1.0
baz=307
TCRU Three Creeks R 78.05 51 IAmb IAmb 23 09 23.7
comp=Z,38nm,0.8s
VASR Vaslui 78.05 320 ⇓P P 23 09 05.2 +0.5
CCUT Cedar City 78.12 52 IAmb IAmb 23 09 24.3
comp=Z,51nm,1.1s
COP Copenhagen 78.19 334 i P P 23 09 05.5 +0.2
COP IAmb IAmb 23 09 06.5
comp=Z,135nm,0.8s
GKP Gorka Klasztor 78.20 330 eP P 23 09 05.5 0.0
GKP eS S 23 18 57.4 -1.6
GKP eL L 23 46 07.2
comp=Z,7μm,18.9s
GKP Gorka Klasztor 78.20 330 eP P 23 09 05.7 +0.3
GOET G??ttrup 78.21 336 i P P 23 09 04.2 -1.2
GMRC Granite Mounta 78.32 55 P P 23 09 07.4 +0.7
baz=307,SNR=9.8
GMRC S S 23 19 00.5 -0.7
baz=307
TMUT Trail Mountain 78.38 49 IAmb IAmb 23 09 22.5
comp=Z,58nm,1.3s
VLDR Vladesti 78.43 319 ⇓P P 23 09 07.8 +1.0
TLCR 78.48 319 ⇑P P 23 09 07.7 +0.5
109C Camp Elliot, M 78.49 58 IAmb IAmb 23 09 22.4
comp=Z,36nm,0.9s
109C IAMs_20 IAMs_20 23 36 15.8
comp=Z,1μm,20.0s
109C Camp Elliot, M 78.49 58 P P 23 09 08.3 +0.9
baz=307
109C S S 23 19 02.2 -0.6
baz=307
PFO Pinyon Flats O 78.49 57 LR LR 23 36 36.1
comp=Z,2μm,22.0s,baz=296,slow=30
PFO Pinyon Flats O 78.49 57 P P 23 09 06.7 -0.9
PFO IAmb IAmb 23 09 22.5
comp=Z,48nm,1.1s
PFO Pinyon Flats O 78.49 57 P P 23 09 06.7 -0.9
PFO pmax pmax
comp=Z,49nm,1.2s
PFO MLR MLR
comp=Z,2μm,20.0s
PFO Pinyon Flats O 78.49 57 P P 23 09 08.3 +0.7
baz=307
VARL Varlezi 78.51 320 ⇑P P 23 09 08.4 +1.1

LCMT Little Creek M 78.53 52 IAmb IAmb 23 09 21.1
comp=Z,76nm,1.2s
P17A Butcher Ranch, 78.56 49 IAmb IAmb 23 09 23.3
comp=Z,80nm,1.0s
MTPU Mount Pierson 78.56 51 IAmb IAmb 23 09 21.8
comp=Z,46nm,1.1s
BELC Belle Mtn. Jos 78.57 56 P P 23 09 08.8 +0.8
baz=307,SNR=5.5
SCTR Scanteiesti 78.59 319 ⇓P P 23 09 08.9 +1.1
GIUM Giurgiulesti 78.60 319 ⇓P P 23 09 08.4 +0.6
Q16A Castle Valley 78.64 50 IAmb IAmb 23 09 24.1
comp=Z,70nm,1.2s
BUR08 Bucovina Ar. S 78.67 322 IAmb IAmb 23 09 23.1
comp=Z,68nm,1.0s
BURAR Bucovina Array 78.68 322 ⇓P P 23 09 09.1 +0.7
BURAR Bucovina Array 78.68 322 IAmb IAmb 23 09 23.5
comp=Z,78nm,0.9s
MUD Monsted U'grnd 78.69 336 i P P 23 09 07.0 -1.1
MUD IAmb IAmb 23 09 09.8
comp=Z,20nm,0.9s
BIZ Bicaz 78.70 321 ⇑P P 23 09 09.0 +0.7
JURR Jurilovca 78.73 318 ⇑P P 23 09 10.1 +1.6
P18A Preston Nutter 78.76 49 IAmb IAmb 23 09 24.7
comp=Z,74nm,1.3s
SLCR Slobozia Conac 78.76 319 ⇓P P 23 09 09.6 +1.0
IZVR Izvoarele 78.80 319 ⇑P P 23 09 10.1 +1.2
CFR Carcaliu 78.85 319 ⇑P P 23 09 09.0 -0.1
PKCU Pink Cliffs 78.85 51 IAmb IAmb 23 09 32.0
comp=Z,57nm,1.3s
PANC Panciu 78.89 320 ⇑P P 23 09 11.1 +1.7
TPGR Topolog 78.91 318 ⇓P P 23 09 10.2 +0.6
SRU San Rafael Swe 78.91 49 IAmb IAmb 23 09 25.0
comp=Z,76nm,0.9s
MONP2 Monument Peak 78.95 57 P P 23 09 11.1 +0.8
baz=307
K22A Casper 78.99 44 IAmb IAmb 23 09 25.1
comp=Z,80nm,1.5s
K22A Casper 78.99 44 P P 23 09 10.3 0.0
baz=311
K22A Casper 78.99 44 P P 23 09 10.8 +0.6
baz=311
K22A S S 23 19 06.3 -1.9
baz=311
NEE2 Needles Airpor 79.01 55 S S 23 19 09.0 +0.7
baz=308
IRM Iron Mountain 79.04 56 P P 23 09 11.5 +1.0
baz=308,SNR=5.7
VRI Vrincioaia 79.11 320 ⇑P P 23 09 12.0 +1.4
VRI Vrincioaia 79.11 320 P P 23 09 12.0 +1.4
ULM Lac du Bonnet 79.13 34 P P 23 09 10.2 -0.3
comp=Z,12nm,0.9s,baz=318,slow=6.6,SNR=9.8
ULM LR LR 23 46 16.4
comp=Z,467nm,20.2s,baz=326,slow=37
comp=Z,12nm,0.9s
ULM Lac du Bonnet 79.13 34 P P 23 09 10.3 -0.3
BC3 Big Chuckawall 79.14 56 P P 23 09 12.1 +0.9
baz=307
PLOR Plostina 79.17 320 ⇑P P 23 09 12.1 +1.2
PLOR Plostina 79.17 320 P P 23 09 12.1 +1.2
KOLS Kolonicke sedl 79.17 324 eP P 23 09 11.8 +0.9
KOLS e 23 09 21.9
KOLS pmax pmax
comp=Z,52nm,1.0s
KOLS Kolonicke sedl 79.17 324 e P 23 09 21.9 +11
KOLS Kolonicke sedl 79.17 324 eP P 23 09 11.8 +0.9
TIRR Tirgusor 79.18 318 ⇓P P 23 09 12.0 +1.1
TIRR Tirgusor 79.18 318 ⇓P P 23 09 12.0 +1.1
RWWY Rawlins 79.22 46 IAmb IAmb 23 09 26.3
comp=Z,57nm,1.1s
RWWY IAMs_20 IAMs_20 23 38 33.8
comp=Z,832nm,20.0s
HARR Harsova 79.28 319 ⇓P P 23 09 11.9 +0.4
IKP In-Ko-Pah, Jac 79.30 57 P P 23 09 13.0 +1.0
baz=307,SNR=6.0
BR131 Keskin Array S 79.31 312 IAmb IAmb 23 09 14.2
comp=Z,108nm,1.2s
BR131 Keskin Array S 79.31 312 i P P 23 09 11.8 -0.2
BR131 Keskin Array S 79.31 312 P P 23 09 13.2 +1.2
SNR=31
BRTR Keskin Array B 79.31 312 P P 23 09 12.2 +0.2
comp=Z,21nm,0.9s,baz=82,slow=3.2,SNR=86
BRTR PP PP 23 12 18.1 +6.7
comp=Z,11nm,1.1s,baz=80,slow=7.8,SNR=4.7
BRTR LR LR 23 48 45.0
comp=Z,2μm,18.1s,baz=60,slow=39
comp=Z,21nm,0.9s
BRTR Keskin Array B 79.31 312 P P 23 09 11.2 -0.8
BRTR PP 23 12 12.7 +1.4
BRTR Keskin Array B 79.31 312 i P P 23 09 12.0 0.0
BRTR pmax pmax
comp=Z,23nm,0.9s
GRER 79.32 320 ⇓P P 23 09 13.8 +2.1
TLBR Topalu 79.32 318 ⇑P P 23 09 12.6 +0.9
SWSC Sam W. Stewart 79.33 57 P P 23 09 12.7 +0.6
baz=307
OJC Ojcow 79.37 327 eP P 23 09 11.9 0.0
OJC ePcP PcP 23 09 20.6 +0.5
OJC ePP PP 23 12 10.4 -0.9
OJC eS S 23 19 10.5 -1.1
OJC eL L 23 47 22.9
UZH Uzhgorod 79.38 324 eP P 23 09 10.1 -1.9
UZH i 23 09 13.3
UZH i 23 09 20.3
UZH i 23 12 13.0
UZH ePPP PPP 23 13 59.0
UZH i S S 23 19 05.7 -6.0
UZH i 23 19 16.0
UZH MLR MLR
comp=N,1μm,16.0s
UZH MLR MLR
comp=E,2μm,16.0s
UZH MLR MLR
comp=Z,1μm,16.0s
RSSD Black Hills 79.38 42 P P 23 09 11.0 -1.4
RSSD Black Hills 79.38 42 P P 23 09 11.0 -1.4
RSSD pmax pmax
comp=Z,29nm,1.1s
RSSD MLR MLR
comp=Z,900nm,21.0s
RSSD Black Hills 79.38 42 P P 23 09 12.7 +0.3
baz=312
RSSD S S 23 19 09.3 -3.1
baz=312
COVR Voineasa-Covas 79.40 320 ⇓P P 23 09 13.3 +1.0
YUH Yuha Desert 79.43 57 IAmb IAmb 23 09 25.3
comp=Z,74nm,1.4s
OZUR 79.44 321 ⇑P P 23 09 13.4 +1.0
ARCR ARCALIA 79.47 322 ⇓P P 23 09 13.8 +1.2
BMR Baia Mare 79.48 323 ⇑P P 23 09 14.1 +1.6
U15A North Rim 79.49 52 IAmb IAmb 23 09 27.5
comp=Z,75nm,1.3s
CRVS Cervenica-Dubn 79.57 325 eP P 23 09 14.2 +1.1
CRVS pmax pmax
comp=Z,228nm,1.7s
CRVS Cervenica-Dubn 79.57 325 eP P 23 09 14.2 +1.1
CRVS eS S 23 19 13.0 -0.8
CRVS eL L 23 47 48.7
PDMCI Parker Dam,Lak 79.61 55 P P 23 09 14.6 +1.0
baz=308,SNR=6.3
PDMCI S S 23 19 15.3 +0.7
baz=308
O20A White River Ci 79.62 47 IAmb IAmb 23 09 28.7
comp=Z,50nm,1.1s
O20A White River Ci 79.62 47 P P 23 09 14.1 +0.3
baz=310,SNR=12
PGOR Pogoanele 79.63 319 ⇓P P 23 09 14.6 +1.1
AMRR Amara 79.65 319 ⇓P P 23 09 11.3 -2.2
RAR Rarotonga 79.66 126 LR LR 23 39 20.7
comp=Z,2μm,19.3s,baz=316,slow=32
BLYC Blythe 79.69 56 IAmb IAmb 23 09 27.7
comp=Z,64nm,1.2s
ANTO Ankara 79.72 312 ⇓P P 23 09 15.1 +1.0
ANTO Ankara 79.72 312 P P 23 09 14.2 +0.1
ANTO IAmb IAmb 23 09 29.1
comp=Z,121nm,1.1s
ANTO Ankara 79.72 312 IAMs_20 IAMs_20 23 48 58.3
comp=Z,1μm,18.0s
ANTO Ankara 79.72 312 P P 23 09 14.2 +0.1
ANTO pmax pmax
comp=Z,121nm,1.2s
ANTO MLR MLR
comp=Z,1μm,18.0s
ANTO Ankara 79.72 312 P P 23 09 15.1 +1.0
ISR Istrita 79.72 320 ⇓P P 23 09 15.2 +1.2
NIE Niedzica 79.73 326 eP P 23 09 14.6 +0.6

NIE					*e*PcP	**pwP**	**23 09 23.4**	**+1.5**
NIE					*e*PP	**PP**	**23 12 14.1**	**-0.2**
NIE					*e*S	**S**	**23 19 15.1**	**-0.4**
NIE					*e*L	L	23 48 38.6	
DOPR	**Dopca**	**79.73**	**321**	⇓	P	**P**	**23 09 15.7**	**+1.6**
ICOR	**Ion Corvin**	**79.73**	**318**	⇑	P	**P**	**23 09 15.4**	**+1.4**
BR231	**Keskin MP Arra**	**79.75**	**312**		IAmb	IAmb	23 09 29.3	
	comp=Z,70nm,1.0s							
MLR	**Muntele Rosu**	**79.77**	**320**	⇓	P	**P**	**23 09 15.8**	**+1.4**
MLR	**Muntele Rosu**	**79.77**	**320**		LR	LR	23 47 06.5	
	comp=Z,6µm,20.3s,baz=46,slow=38							
MLR	**Muntele Rosu**	**79.77**	**320**		IAmb	IAmb	23 09 33.1	
	comp=Z,116nm,1.4s							
GLA	**Glamis**	**79.92**	**56**		IAmb	IAmb	23 09 28.3	
	comp=Z,99nm,1.4s							
GLA	**Glamis**	**79.92**	**56**		P	**P**	**23 09 17.0**	**+1.7**
	baz=308							
CJR	**Cluj-Napoca**	**80.10**	**322**	⇑	P	**P**	**23 09 17.5**	**+1.4**
MESR	**Meseseni**	**80.11**	**323**	⇓	P	**P**	**23 09 17.6**	**+1.6**
PV23	**Carpenter Ridg**	**80.24**	**49**		IAmb	IAmb	23 09 32.0	
	comp=Z,80nm,0.9s							
VOIR		**80.27**	**321**	⇑	P	**P**	**23 09 17.9**	**+0.9**
LANS	**Liptovska Anna**	**80.30**	**326**		*e*P	**P**	**23 09 18.7**	**+1.7**
LANS					*e*		23 09 28.8	
LANS					pmax	pmax		
	comp=Z,37nm,1.2s							
LANS	**Liptovska Anna**	**80.30**	**326**		*e*P	**P**	**23 09 18.7**	**+1.7**
LANS					*e*		23 09 28.8	
KECS	**Kecovo**	**80.32**	**325**		*e*P	**P**	**23 09 18.7**	**+1.6**
KECS	**Kecovo**	**80.32**	**325**		*e*P	**P**	**23 09 18.7**	**+1.6**
OKC	**Ostrava-Krasne**	**80.37**	**327**		*e*P	**P**	**23 09 17.7**	**+0.3**
OKC					*e*		23 09 27.9	
OKC					MLR	MLR		
	comp=Z,6µm,16.4s							
OKC	**Ostrava-Krasne**	**80.37**	**327**		*e*P	**P**	**23 09 17.7**	**+0.3**
OKC					*ex*	x	23 09 27.9	
OKC					AMS	AMS	23 48 00.0	
	comp=Z,6µm,16.4s							
KSP	**Ksiaz**	**80.41**	**329**		*e*P	**P**	**23 09 18.0**	**+0.4**
KSP					*e*PcP	**pwP**	**23 09 26.7**	**+1.2**
KSP					*e*PP	**PP**	**23 12 18.6**	**-1.3**
KSP					*e*S	**S**	**23 19 21.1**	**-1.5**
KSP					*e*L	L	23 47 55.0	
	comp=Z,6µm,17.2s							
PV11	**David Mesa, Pa**	**80.42**	**49**		IAmb	IAmb	23 09 32.0	
	comp=Z,107nm,1.1s							
LTVH	**Ltavrtes, Hu**	**80.45**	**323**		P	**P**	**23 09 18.5**	**+0.7**
N23A	**Red Feather La**	**80.46**	**46**		IAmb	IAmb	23 09 33.9	
	comp=Z,104nm,1.2s							
N23A	**Red Feather La**	**80.46**	**46**		P	**P**	**23 09 19.5**	**+1.1**
	baz=311,SNR=16							
N23A					S	**S**	**23 19 23.5**	**-0.5**
	baz=311							
PHWY	**Pilot Hill**	**80.47**	**45**		IAMs_20	IAMs_20	23 48 55.8	
	comp=Z,759nm,18.0s							
DRGR		**80.48**	**323**	⇑	P	**P**	**23 09 19.2**	**+1.1**
DRGR		**80.48**	**323**		P	**P**	**23 09 19.2**	**+1.1**
ARR	**Arges**	**80.53**	**321**	⇑	P	**P**	**23 09 19.3**	**+0.9**
AGMN	**Agassiz Nation**	**80.55**	**35**		IAMs_20	IAMs_20	23 42 36.9	
	comp=Z,1µm,20.0s							
AGMN	**Agassiz Nation**	**80.55**	**35**		P	**P**	**23 09 18.1**	**-0.2**
	baz=317,SNR=7.5							
AGMN					S	**S**	**23 19 20.0**	**-4.1**
	baz=317							
PRD	**Provadia**	**80.57**	**318**		*i* P	**P**	**23 09 19.3**	**+0.8**
WUAZ	**Wupatki**	**80.64**	**52**		IAmb	IAmb	23 09 33.2	
	comp=Z,88nm,1.2s							
WUAZ	**Wupatki**	**80.64**	**52**		P	**P**	**23 09 20.7**	**+1.4**
	baz=309,SNR=24							
WUAZ					S	**S**	**23 19 27.9**	**+2.1**
	baz=309							
OSTC	**Ostas**	**80.66**	**328**		*e*P	**P**	**23 09 19.5**	**+0.6**
OSTC					AMS	AMS	23 48 00.0	
	comp=Z,6µm,16.8s							
MORC	**Moravsky Berou**	**80.68**	**327**	⇑	P	**P**	**23 09 19.5**	**+0.4**
MORC	**Moravsky Berou**	**80.68**	**327**		P	**P**	**23 09 19.5**	**+0.4**
MORC	**Moravsky Berou**	**80.68**	**327**	⇑	*i*P	**P**	**23 09 19.3**	**+0.2**
MORC	**Moravsky Berou**	**80.68**	**327**		*e*S	**S**	**23 19 23.6**	**-1.9**
CHVC	**Chvalec**	**80.70**	**329**		*e*P	**P**	**23 09 20.1**	**+0.9**
CHVC					AMS	AMS	23 48 00.0	
	comp=Z,6µm,16.4s							
BORR	**Bors**	**80.71**	**323**	⇑	P	**P**	**23 09 19.7**	**+0.4**
DPC	**Dobruska-Polom**	**80.77**	**328**		*e*P	**P**	**23 09 20.4**	**+0.8**
DPC					MLR	MLR		
	comp=Z,6µm,14.7s							
DPC	**Dobruska-Polom**	**80.77**	**328**		*e*P	**P**	**23 09 20.4**	**+0.8**
DPC					AMS	AMS	23 50 10.0	
	comp=Z,6µm,14.7s							
UPC	**Upice**	**80.78**	**329**		*e*P	**P**	**23 09 20.1**	**+0.5**
UPC					*e*S	**S**	**23 19 25.6**	**-0.9**
UPC					MLR	MLR		
	comp=Z,6µm,16.4s							
UPC	**Upice**	**80.78**	**329**		*e*P	**P**	**23 09 20.1**	**+0.5**
UPC					*e*S	**S**	**23 19 25.6**	**-0.9**
UPC					AMS	AMS	23 48 00.0	
	comp=Z,6µm,16.4s							
KRLC	**Kraliky**	**80.78**	**328**		*e*P	**P**	**23 09 20.2**	**+0.6**
KRLC					MLR	MLR		
	comp=Z,4µm,17.2s							
KRLC	**Kraliky**	**80.78**	**328**		*e*P	**P**	**23 09 20.2**	**+0.6**
KRLC					AMS	AMS	23 50 00.0	
	comp=Z,4µm,17.2s							
RAZG	**Razgrad**	**80.80**	**318**	⇑	P	**P**	**23 09 20.6**	**+0.9**
MAUC	**Maruska**	**80.86**	**327**		*e*P	**P**	**23 09 20.8**	**+0.7**
MAUC					AMS	AMS	23 48 20.0	
	comp=Z,12µm,16.3s							
LOT	**Lotru**	**80.91**	**321**	⇑	P	**P**	**23 09 20.5**	**+0.1**
SMCO	**Snowmass**	**80.99**	**47**		IAMs_20	IAMs_20	23 44 37.7	
	comp=Z,797nm,19.0s							
PSZ	**Piszkesteto**	**81.00**	**325**	⇑	P	**P**	**23 09 22.4**	**+1.5**
PSZ	**Piszkesteto**	**81.00**	**325**		P	**P**	**23 09 21.6**	**+0.7**
DEV	**Deva**	**81.03**	**322**	⇓	P	**P**	**23 09 22.1**	**+1.1**
VYHS	**Vyhne**	**81.06**	**326**		*e*P	**P**	**23 09 22.2**	**+1.1**
VYHS					*e*		23 09 32.3	
VYHS					pmax	pmax		
	comp=Z,30nm,1.1s							
VYHS	**Vyhne**	**81.06**	**326**		*e*P	**P**	**23 09 22.2**	**+1.1**
VYHS					*e*		23 09 32.3	
COPA	**Copaceanca**	**81.08**	**319**	⇑	P	**P**	**23 09 21.7**	**+0.5**
KOLL	**Kolacno**	**81.19**	**326**		*e*P	**P**	**23 09 23.0**	**+1.2**
KOLL					*e*PP	**PP**	**23 12 28.2**	**+1.7**
RAYN	**Ar Rayn**	**81.23**	**293**		P	**P**	**23 09 21.1**	**-1.4**
RAYN					IAmb	IAmb	23 09 24.2	
	comp=Z,65nm,0.9s							
RAYN	**Ar Rayn**	**81.23**	**293**		P	**P**	**23 09 21.1**	**-1.4**
RAYN					pmax	pmax		
	comp=Z,65nm,1.0s							
RAYN					MLR	MLR		
	comp=Z,6µm,20.0s							
RAYN	**Ar Rayn**	**81.23**	**293**		P	**P**	**23 09 23.2**	**+0.7**
RAYN	**Ar Rayn**	**81.23**	**293**	*i*	P	**P**	**23 09 21.8**	**-0.7**
	SNR=11							
BSZH	**Besenyszg**	**81.28**	**324**	⇓	P	**P**	**23 09 23.0**	**+0.8**
BSZH	**Besenyszg**	**81.28**	**324**		P	**P**	**23 09 23.2**	**+0.9**
BSZH					PP	**pwP**	**23 09 34.8**	**+4.5**
X16A	**Lo Mia Camp, P**	**81.29**	**53**		IAmb	IAmb	23 09 36.1	
	comp=Z,44nm,1.0s							
SZH	**Strazhica**	**81.31**	**319**	*i*	P	**P**	**23 09 21.8**	**-0.7**
JAVC	**Velka Javorina**	**81.31**	**327**	⇑	*i*P	**P**	**23 09 23.7**	**+1.2**
JAVC	**Velka Javorina**	**81.31**	**327**		*e*S	**S**	**23 19 33.7**	**+1.6**
BRG	**Berggiesshubel**	**81.35**	**330**		*e*P	**P**	**23 09 22.6**	**0.0**
BRG					Amp		23 09 24.7	
	comp=Z,48nm,1.1s							
BRG					PP	**PP**	**23 12 31.5**	**+3.8**
BRG					Amp		23 12 38.3	
	comp=Z,28nm,1.2s							
BRG	**Berggiesshubel**	**81.35**	**330**		S	**S**	**23 19 31.0**	**-1.3**
BRG	**Berggiesshubel**	**81.35**	**330**		SS	SS	23 24 41.0	-6.1
BRG					Amp		23 48 30.0	
	comp=E,4.1nm,16.7s							
BRG					Amp		23 48 34.0	
	comp=Z,7.5nm,17.4s							
BRG					Amp		23 48 40.0	
	comp=N,3.6nm,21.4s							
BRG	**Berggiesshubel**	**81.35**	**330**		*e*P	**P**	**23 09 22.6**	**0.0**
BRG							23 12 31.4	
BRG					S	**S**	**23 19 31.0**	**-1.3**
BRG					pmax	pmax		
	comp=Z,49nm,1.1s							
BRG					pmax	pmax		
	comp=Z,28nm,1.2s							
BRG					MLR	MLR		
	comp=Z,7µm,17.4s							
BRG					MLR	MLR		
	comp=N,4µm,21.4s							
MVCO	**Mesa Verde**	**81.35**	**50**		IAmb	IAmb	23 09 38.4	
	comp=Z,64nm,1.1s							
MVCO	**Mesa Verde**	**81.35**	**50**		P	**P**	**23 09 23.9**	**+0.8**
	baz=310,SNR=14							
MVCO					S	**S**	**23 19 34.6**	**+1.2**
	baz=310							
PVCC	**Panska Ves**	**81.36**	**329**		*e*P	**P**	**23 09 23.4**	**+0.8**
PVCC					*e*S	**S**	**23 19 31.7**	**-0.8**
PVCC					MLR	MLR		
	comp=Z,6µm,16.8s							
PVCC	**Panska Ves**	**81.36**	**329**		*e*P	**P**	**23 09 23.4**	**+0.8**
PVCC					*e*S	**S**	**23 19 31.7**	**-0.8**
PVCC					AMS	AMS	23 48 10.0	
	comp=Z,6µm,16.8s							
SIRR	**Siria**	**81.36**	**323**	⇓	P	**P**	**23 09 23.5**	**+0.7**
SOCY	**Socotra**	**81.36**	**279**		P	**P**	**23 09 19.6**	**-3.7**
ISCO	**Idaho Springs**	**81.37**	**46**		P	**P**	**23 09 24.6**	**+1.2**
	baz=312,SNR=8.6							
ISCO					S	**S**	**23 19 34.1**	**+0.4**
	baz=312							
CLL	**Collm**	**81.39**	**331**	*i*	P	**P**	**23 09 21.9**	**-0.8**
CLL					*e*S	**S**	**23 19 31.0**	**-1.7**
CLL					pmax	pmax		
	comp=Z,154nm,1.1s							
CLL					MLR	MLR		
	comp=Z,6µm,17.0s							
CLL	**Collm**	**81.39**	**331**	*i*	P	**P**	**23 09 21.9**	**-0.8**
	comp=Z,91nm,1.1s							
CLL				*i*	x	x	23 09 32.3	
	comp=Z,74nm,1.0s							
CLL				*i*	Pmax		23 09 35.4	
	comp=Z,154nm,1.1s							
CLL				*e*	Pmax		23 09 36.0	
CLL				*e*	Plp		23 09 37.0	
CLL				*e*	PP	**PP**	**23 12 28.0**	**0.0**
CLL				*e*	PPP	PPP	23 14 18.0	
CLL				*e*	S	**S**	**23 19 31.0**	**-1.7**
CLL				*e*	SKSac	**SKSac**	**23 19 39.0**	**-2.1**
CLL				*e*	SS	**SS**	**23 24 48.0**	**+0.4**
CLL				*e*	SSS	SSS	23 28 12.0	
CLL					LmH		23 44 00.0	
	comp=N,2µm,20.3s							
CLL					LmH		23 44 00.0	
	comp=E,5µm,21.9s							
CLL					Lmax		23 50 00.0	
VRAC	**Vranov**	**81.44**	**327**	⇓	P	**P**	**23 09 24.2**	**+1.1**
VRAC	**Vranov**	**81.44**	**327**		LR	LR	23 49 29.9	
	comp=E,4µm,18.3s,baz=35,slow=39							
VRAC	**Vranov**	**81.44**	**327**	⇑	*i*P	**P**	**23 09 23.6**	**+0.5**
VRAC	**Vranov**	**81.44**	**327**		*e*S	**S**	**23 19 29.3**	**-4.1**
B35A	**Bob, Littlefor**	**81.47**	**34**		P	**P**	**23 09 22.8**	**-0.5**
	baz=318							
JMB	**Yambol**	**81.51**	**318**	*i*	P	**P**	**23 09 24.1**	**+0.5**
URZ	**Urewera**	**81.58**	**153**		IAMs_20	IAMs_20	23 40 30.3	
	comp=Z,2µm,21.0s							
VLAD	**Vladila**	**81.60**	**320**	⇓	P	**P**	**23 09 25.2**	**+1.2**
SMOL	**Smolenice**	**81.67**	**326**		*e*P	**P**	**23 09 25.8**	**+1.5**
SMOL					*e*		23 09 36.0	
SMOL					*e*S	**S**	**23 19 37.0**	**+1.2**
SMOL					pmax	pmax		
	comp=Z,35nm,1.2s							
SMOL					MLR	MLR		
	comp=Z,900nm,17.7s							
SMOL	**Smolenice**	**81.67**	**326**		*e*P	**P**	**23 09 25.8**	**+1.5**
SMOL					*e*		23 09 36.0	
SMOL	**Smolenice**	**81.67**	**326**		*e*S	**S**	**23 19 37.0**	**+1.2**
SMOL					*e*L	L	23 49 28.1	
KRUC	**Moravsky**	**81.71**	**327**	⇑	*i*P	**P**	**23 09 24.8**	**+0.3**
KRUC	**Moravsky**	**81.71**	**327**		*e*S	**S**	**23 19 35.8**	**-0.4**
BUD	**Budapest**	**81.72**	**325**		P	**P**	**23 09 25.6**	**+1.0**
BUD					PP	**pwP**	**23 09 38.3**	**+5.7**
PRU	**Pruhonice**	**81.79**	**329**		*e*P	**P**	**23 09 25.4**	**+0.5**
PRU					*e*		23 09 35.5	
PRU					*e*S	**S**	**23 19 36.1**	**-0.8**
PRU					MLR	MLR		
	comp=Z,6µm,16.8s							
PRU	**Pruhonice**	**81.79**	**329**		*e*P	**P**	**23 09 25.4**	**+0.5**
PRU					*ex*	x	23 09 35.5	
PRU					*e*S	**S**	**23 19 36.1**	**-0.8**
PRU					AMS	AMS	23 48 40.0	
	comp=Z,6µm,16.8s							
SRO	**Srobarova**	**81.80**	**326**		*e*P	**P**	**23 09 26.3**	**+1.3**
SRO					*e*		23 09 37.1	
SRO	**Srobarova**	**81.80**	**326**		*e*P	**P**	**23 09 26.3**	**+1.3**
SRO					*e*		23 09 37.1	
SRO2	**Moca**	**81.80**	**326**		*e*P	**P**	**23 09 25.3**	**+0.3**
SRO2					pmax	pmax		
	comp=Z,33nm,0.9s							
SRO2	**Moca**	**81.80**	**326**		*e*P	**P**	**23 09 25.3**	**+0.3**
SUSD	**Miller**	**81.81**	**39**		IAmb	IAmb	23 09 37.7	
	comp=Z,68nm,0.9s							
SUSD	**Miller**	**81.81**	**39**		P	**P**	**23 09 26.0**	**+0.8**
	baz=315							
SUSD					S	**S**	**23 19 33.9**	**-3.5**
	baz=315							
MODS	**Modra-Piesok**	**81.85**	**326**		*e*P	**P**	**23 09 26.6**	**+1.3**
MODS					*e*		23 09 35.5	
MODS					*e*		23 12 30.3	
MODS					*e*S	**S**	**23 19 38.0**	**+0.4**
MODS					pmax	pmax		
	comp=Z,149nm,1.3s							
MODS					MLR	MLR		
	comp=Z,12µm,17.9s							
MODS	**Modra-Piesok**	**81.85**	**326**		*e*P	**P**	**23 09 26.6**	**+1.3**
MODS					*e*		23 09 35.5	
MODS					*e*PP	**PP**	**23 12 30.3**	**-1.6**
MODS					*e*S	**S**	**23 19 38.0**	**+0.4**
MODS					*e*L	L	23 49 28.7	
BZS	**Buzias**	**81.85**	**322**	⇑	P	**P**	**23 09 25.1**	**-0.2**
TREC	**Trest**	**81.92**	**328**		*e*S	**S**	**23 19 37.0**	**-1.4**
TREC					AMS	AMS	23 50 50.0	
	comp=Z,5µm,15.6s							
W18A	**Petrified Fore**	**81.93**	**52**		P	**P**	**23 09 27.3**	**+1.1**
	baz=310							
W18A					S	**S**	**23 19 41.9**	**+2.6**
	baz=310							
214A	**Organ Pipe Nat**	**81.93**	**56**		IAmb	IAmb	23 09 39.0	
	comp=Z,50nm,1.3s							
214A	**Organ Pipe Nat**	**81.93**	**56**		P	**P**	**23 09 27.2**	**+1.2**
	baz=309,SNR=6.9							
214A					S	**S**	**23 19 40.1**	**+1.0**
	baz=309							
HERR	**Herculane**	**81.98**	**321**	⇑	P	**P**	**23 09 26.6**	**+0.6**
S22A	**4UR Ranch, Cre**	**82.01**	**48**		IAmb	IAmb	23 09 42.5	
	comp=Z,42nm,1.1s							
S22A	**4UR Ranch, Cre**	**82.01**	**48**		P	**P**	**23 09 27.7**	**+1.0**
	baz=311,SNR=27							
S22A					S	**S**	**23 19 41.8**	**+1.5**
	baz=311							
ASF	**Jabal al Asfar**	**82.02**	**304**		LR	LR	23 49 32.2	
	comp=Z,3µm,20.2s,baz=99,slow=38							
ZST	**Bratislava**	**82.06**	**326**		*e*P	**P**	**23 09 28.0**	**+1.7**
ZST					*e*		23 09 38.4	
ZST					*e*S	**S**	**23 19 41.1**	**+1.4**
ZST					pmax	pmax		
	comp=Z,429nm,2.0s							
ZST	**Bratislava**	**82.06**	**326**		*e*P	**P**	**23 09 28.0**	**+1.7**
ZST					*e*		23 09 38.4	
F33A	**5 Mile Ranch,**	**82.13**	**37**		P	**P**	**23 09 26.3**	**-0.5**
	baz=317							
CSKK	**Cskako**	**82.16**	**325**		P	**P**	**23 09 27.4**	**+0.5**
CSKK					PP	**pwP**	**23 09 40.3**	**+5.4**
Q24A	**Divide**	**82.20**	**47**		P	**P**	**23 09 28.1**	**+0.4**
	baz=312							
ISP	**Isparta**	**82.39**	**312**		IAmb	IAmb	23 09 45.0	
	comp=Z,69nm,1.2s							
MDVR	**Moldovita**	**82.40**	**322**	⇓	P	**P**	**23 09 28.5**	**+0.2**
NKC	**Novy Kostel**	**82.45**	**330**		*e*P	**P**	**23 09 28.7**	**+0.3**
NKC					*e*S	**S**	**23 19 42.6**	**-1.1**
NKC					MLR	MLR		
	comp=Z,6µm,14.9s							
NKC	**Novy Kostel**	**82.45**	**330**		*e*P	**P**	**23 09 28.7**	**+0.3**
NKC					*e*S	**S**	**23 19 42.6**	**-1.1**
NKC					AMS	AMS	23 49 30.0	
	comp=Z,6µm,14.9s							
MMAI	**Mount Meron Ar**	**82.47**	**306**		LR	LR	23 49 04.8	
	comp=Z,3µm,21.7s,baz=208,slow=38							
EGYH	**Egyhazaskeszo**	**82.54**	**326**		P	**P**	**23 09 29.8**	**+0.9**
EGYH					PP	**pwP**	**23 09 42.7**	**+5.8**
CSS	**Mathiatis**	**82.55**	**308**		IAmb	IAmb	23 09 41.0	
	comp=Z,57nm,0.8s							
CSS					IAMs_20	IAMs_20	23 50 04.4	
	comp=Z,2µm,20.0s							
OGNE	**Ogallala**	**82.62**	**43**		IAmb	IAmb	23 09 42.7	
	comp=Z,35nm,1.0s							
OGNE	**Ogallala**	**82.62**	**43**		P	**P**	**23 09 30.4**	**+0.9**
	baz=314							
OGNE					S	**S**	**23 19 44.4**	**-1.6**
	baz=314							
MPLH	**Magyarpolny**	**82.63**	**326**		P	**P**	**23 09 30.3**	**+0.9**
TIH	**Tihany**	**82.67**	**325**		P	**P**	**23 09 30.7**	**+1.2**
SOP	**Sopron**	**82.68**	**326**		P	**P**	**23 09 30.3**	**+0.7**
SOP					PP	**pwP**	**23 09 42.4**	**+4.7**
KDZ	**Kurdzhali**	**82.70**	**318**	*i*	P	**P**	**23 09 30.7**	**+0.8**
PGB	**Panagyurishte**	**82.74**	**319**	*i*	P	**P**	**23 09 30.7**	**+0.6**
EYMN	**Ely**	**82.77**	**33**		IAmb	IAmb	23 09 48.2	
	comp=Z,41nm,1.2s							
EYMN	**Ely**	**82.77**	**33**		IAMs_20	IAMs_20	23 51 30.5	
	comp=Z,1µm,18.0s							
EYMN	**Ely**	**82.77**	**33**		P	**P**	**23 09 30.1**	**0.0**
	baz=320							
CKRC	**Cesky Krumlov**	**82.79**	**328**		*e*P	**P**	**23 09 30.5**	**+0.3**
CKRC					*e*S	**S**	**23 19 46.7**	**-0.5**
CKRC					AMS	AMS	23 50 50.0	
	comp=Z,6µm,15.3s							
RONA	**Rosalia, Austr**	**82.79**	**327**	*i*	P	**P**	**23 09 31.0**	**+0.8**
	comp=Z,86nm,1.3s,SNR=45							
SDCO	**Great Sand Dun**	**82.80**	**48**		IAmb	IAmb	23 09 46.2	
	comp=Z,44nm,1.2s							
SDCO					IAMs_20	IAMs_20	23 48 41.7	
	comp=Z,779nm,20.0s							
SDCO	**Great Sand Dun**	**82.80**	**48**		P	**P**	**23 09 31.7**	**+0.9**
	baz=312,SNR=22							
CONA	**Conrad Observa**	**82.80**	**327**	*i*	P	**P**	**23 09 31.1**	**+0.7**
	comp=Z,64nm,1.3s,SNR=41							
CONA					*e*S	**S**	**23 19 49.1**	**+1.5**
	comp=Z,254nm,5.4s							
MORH	**Mrgy, Hungar**	**82.83**	**324**	⇑	P	**P**	**23 09 30.2**	**-0.2**
MORH	**Mrgy, Hungar**	**82.83**	**324**	⇑	*i*P	**P**	**23 09 29.9**	**-0.5**
MORH	**Mrgy, Hungar**	**82.83**	**324**		P	**P**	**23 09 30.4**	**-0.1**
MORH					PP	**pwP**	**23 09 42.9**	**+4.5**
KHC	**Kasperske Hory**	**82.85**	**329**		*e*P	**P**	**23 09 31.0**	**+0.5**
KHC					*e*		23 09 41.5	
KHC					*e*S	**S**	**23 19 47.2**	**-0.7**
KHC					MLR	MLR		
	comp=Z,6µm,16.0s							
KHC	**Kasperske Hory**	**82.85**	**329**		*e*P	**P**	**23 09 31.0**	**+0.5**
KHC					*ex*	x	23 09 41.5	
KHC					*e*S	**S**	**23 19 47.2**	**-0.7**
KHC					AMS	AMS	23 49 10.0	
	comp=Z,6µm,16.0s							
ALN	**Alexandroupoli**	**82.88**	**317**		IAmb	IAmb	23 09 32.9	
	comp=Z,74nm,1.3s							
GEC2	**GERESS Array S**	**83.02**	**329**		IAmb	IAmb	23 09 45.9	
	comp=Z,46nm,1.0s							
GERES	**GERESS Array B**	**83.02**	**329**		P	**P**	**23 09 31.4**	**-0.1**
	comp=Z,12nm,0.8s,baz=42,slow=4.2,SNR=91							
GERES					PP	**PP**	**23 12 42.4**	**+0.8**
	comp=Z,5.1nm,0.9s,baz=39,slow=8.6,SNR=4.1							
GERES					LR	LR	23 51 43.6	
	comp=Z,4µm,18.1s,baz=16,slow=40							
	comp=Z,12nm,0.8s							
GERES	**GERESS Array B**	**83.02**	**329**		P	**P**	**23 09 31.4**	**-0.1**
KULA	**Kula-Manisa**	**83.03**	**314**		P	**P**	**23 09 29.8**	**-1.9**
TUC	**Tucson**	**83.04**	**55**		P	**P**	**23 09 30.9**	**-1.0**
TUC	**Tucson**	**83.04**	**55**		IAMs_20	IAMs_20	23 39 35.2	
	comp=Z,2µm,21.0s							
TUC	**Tucson**	**83.04**	**55**		P	**P**	**23 09 30.9**	**-1.0**
TUC					pmax	pmax		
	comp=Z,14nm,1.0s							
TUC					MLR	MLR		
	comp=Z,2µm,21.0s							
TUC	**Tucson**	**83.04**	**55**		P	**P**	**23 09 32.6**	**+0.7**
	baz=310							
RZN	**Rozhen**	**83.05**	**318**	*i*	P	**P**	**23 09 32.2**	**+0.3**
FRGS	**Fruska Gora**	**83.06**	**323**	⇓	P	**P**	**23 09 32.3**	**+0.6**
FRGS	**Fruska Gora**	**83.06**	**323**	⇑	*i*P	**P**	**23 09 31.4**	**-0.3**
VTS	**Vitosha**	**83.18**	**319**	*i*	P	**P**	**23 09 33.0**	**+0.5**
KOVH	**Kovagototos**	**83.18**	**325**		P	**P**	**23 09 31.9**	**-0.3**
KOVH					PP	**pwP**	**23 09 45.0**	**+4.8**
K31A	**O'Neill**	**83.20**	**41**		P	**P**	**23 09 32.4**	**-0.1**
	baz=315							
BOVS	**Bovan**	**83.23**	**321**	⇓	P	**P**	**23 09 32.2**	**-0.4**
EKA	**Eskdalemuir Ar**	**83.31**	**341**		LR	LR	23 50 50.9	
	comp=Z,3µm,18.3s,baz=34,slow=39							
GRFO	**Grafenberg**	**83.36**	**330**		P	**P**	**23 09 33.2**	**+0.1**
GRFO	**Grafenberg**	**83.36**	**330**		P	**P**	**23 09 33.2**	**+0.1**
GRFO					pmax	pmax		
	comp=Z,121nm,1.0s							
GRFO					MLR	MLR		
	comp=Z,4µm,18.0s							
SMTH	**Samothraki Isl**	**83.45**	**317**		P	**P**	**23 09 31.9**	**-1.9**
ECSD	**EROS Data Cent**	**83.50**	**39**		IAmb	IAmb	23 10 08.9	
	comp=Z,32nm,1.1s							
ECSD	**EROS Data Cent**	**83.50**	**39**		IAMs_20	IAMs_20	23 42 44.5	
	comp=Z,1µm,22.0s							
ECSD	**EROS Data Cent**	**83.50**	**39**		P	**P**	**23 09 33.8**	**-0.2**
	baz=317,SNR=18							
BEHE	**Becsehely**	**83.50**	**325**	⇑	*i*P	**P**	**23 09 33.6**	**-0.3**
BEHE	**Becsehely**	**83.50**	**325**		P	**P**	**23 09 34.8**	**

IVA Berane 84.70 321 eP P 23 09 40.1 -0.1
VNDS Vrh nad Dolski 84.71 326 iP P 23 09 39.5 -0.6
VNDS eS S 23 20 00.2 -6.5
BSTI Sart Tilman 84.75 334 dP P 23 09 40.5 +0.4
MYKA Terra Mystica 84.77 327 iP P 23 09 40.2 -0.2
comp=Z,23nm,1.1s,SNR=9.9
BHOU Houvegnez 84.78 334 dP P 23 09 41.0 +0.6
comp=Z,17nm,1.1s
121A Cookes Peak, D 84.83 53 IAmb IAmb 23 09 55.1
comp=Z,35nm,1.1s
121A Cookes Peak, D 84.83 53 P P 23 09 42.2 +1.0
baz=311
121A Cookes Peak, D 84.83 53 P P 23 09 42.7 +1.5
baz=311,SNR=21
121A S S 23 20 10.6 +1.8
baz=311
LJU Ljubljana 84.84 326⇑iP P 23 09 39.6 -1.1
PAIG Paliouri 84.84 317 P P 23 09 38.3 -2.5
I37B Waseca 84.86 37 P P 23 09 41.1 +0.3
baz=319
PVY Plav 84.87 321 eP P 23 09 40.9 -0.2
ARG Arkhangelos 84.89 312 P P 23 09 41.5 +0.4
KOME Kolasin 84.90 322⇑iP P 23 09 41.0 -0.2
L34A Svendsen Farm, 84.90 40 IAmb IAmb 23 10 16.1
comp=Z,74nm,1.2s
MGRS Mrkonjic Grad 84.91 324⇑iP P 23 09 42.3 +1.2
BOJS Bojanci 84.93 326⇑iP P 23 09 40.6 -0.6
UPM Unac-Piva 84.94 322⇑iP P 23 09 41.4 -0.1
UPM Unac-Piva 84.94 322 eP P 23 09 40.8 -0.7
BCLA Clavier 84.97 334 dP P 23 09 41.1 -0.2
comp=Z,27nm,1.1s
HSIG 85.03 57 IAmb IAmb 23 09 57.0
comp=Z,48nm,1.1s
WATA Walderalm 85.09 329 iP P 23 09 42.3 +0.2
comp=Z,25nm,1.3s,SNR=9.5
CEY Cerknica 85.12 326⇑iP P 23 09 41.1 -1.0
WTTA Wattenberg 85.12 329 iP P 23 09 42.5 +0.2
comp=Z,30nm,1.7s,SNR=9.8
ROBS Robic 85.13 327 iP P 23 09 41.3 -0.8
ROBS eS S 23 20 02.8 -8.0
SCHQ Schefferville 85.13 16 P P 23 09 41.9 -0.1
SCHQ LR LR 23 49 13.4
comp=Z,13nm,0.9s,baz=335,slow=5.0,SNR=14
comp=Z,1µm,20.8s,baz=342,slow=37
comp=Z,13nm,0.9s
SCHQ Schefferville 85.13 16 IAmb IAmb 23 09 56.9
comp=Z,85nm,1.5s
SRKY Kupres RS 85.13 324⇑iP P 23 09 42.5 +0.1
ABTA Abfaltersbach 85.16 328 iP P 23 09 41.7 -0.8
comp=Z,17nm,0.9s,SNR=11
NKY Niksic 85.19 322 eP P 23 09 42.8 +0.1
COWI Conover 85.22 33 IAMs_20 IAMs_20 23 45 19.3
comp=Z,1µm,22.0s
RCHB Rochefort 85.22 334 dP P 23 09 42.0 -0.5
comp=Z,29nm,1.1s
NKME Niksic 85.24 322 eP P 23 09 42.2 -0.7
SNF Seneffe 85.25 335 dP P 23 09 42.8 +0.2
comp=Z,52nm,1.0s
BMRD Maredsous 85.26 334 dP P 23 09 42.7 0.0
comp=Z,47nm,1.1s
MOTA Moosalm 85.28 329 iP P 23 09 42.6 -0.4
comp=Z,38nm,1.2s,SNR=19
WLF Walferdange 85.30 333 IAmb IAmb 23 09 58.3
comp=Z,54nm,1.2s
WLF Walferdange 85.30 333 dP P 23 09 43.9 +1.0
comp=Z,18nm,1.7s
RETA Reutte 85.30 329 iP P 23 09 43.4 +0.3
comp=Z,50nm,1.0s,SNR=31
SQTA Sankt Quirin 85.33 329 iP P 23 09 43.7 +0.4
comp=Z,32nm,1.5s,SNR=11
PDG Podgorica 85.34 321⇑iP P 23 09 43.2 -0.1
PDG Podgorica 85.34 321⇑iP P 23 09 42.8 -0.5
TTG Podgorica 85.34 321⇑iP P 23 09 43.0 -0.3
BRY Bratogost 85.34 322⇑iP P 23 09 43.1 -0.4
BRY Bratogost 85.34 322 eP P 23 09 42.5 -1.0
CBKS Cedar Bluff 85.37 44 IAMs_20 IAMs_20 23 53 55.4
comp=Z,926nm,18.0s
CEME Cevo 85.42 322⇑iP P 23 09 43.0 -0.8
TRI Trieste 85.43 327 IAmb IAmb 23 09 57.2
comp=Z,57nm,1.2s
SKDS Skadanscina 85.45 326⇑iP P 23 09 42.5 -1.3
SKDS Skadanscina 85.45 326 iP P 23 09 42.7 -1.1
FNA Florina 85.46 319 P P 23 09 43.6 -0.4
STAL STALIGIAL 85.46 328 IAmb IAmb 23 09 57.0
comp=Z,65nm,1.0s
DOU Dourbes 85.50 334 dP P 23 09 44.1 +0.2
comp=Z,18nm,1.0s
XOR Xorichti 85.51 317 P P 23 09 42.5 -1.7
OHR Ohrid 85.52 320 iP P 23 09 44.5 +0.2
OHR eS S 23 20 05.9 -9.1
KYMI Kymi, Euboea I 85.53 316 P P 23 09 43.6 -0.7
DRME Dracevica, Mon 85.56 321⇑iP P 23 09 44.2 -0.2
DRME Dracevica, Mon 85.56 321⇑iP P 23 09 44.4 0.0
TAOE Nuku Hiva Isla 85.56 104 eS S 23 20 15.5 -0.6
comp=Z,605nm,25.9s
TAOE Nuku Hiva Isla 85.56 104 eLR LR 23 36 47.6
comp=Z,5µm,23.1s
BFO Black Forest 85.59 331 P P 23 09 43.5 -0.9
BFO Black Forest 85.59 331 P P 23 09 43.6 -0.9
BFO pmax pmax
comp=Z,86nm,0.9s
BFO MLR MLR
comp=Z,4µm,18.0s
KZN Kozani 85.60 319 P P 23 09 41.5 -3.2
BUM Brajici-Budva 85.61 322⇑iP P 23 09 44.5 -0.3
FETA Feichten 85.69 329 iP P 23 09 45.5 +0.3
comp=Z,29nm,1.0s,SNR=11
ULC Ulcinj 85.69 321 eP P 23 09 45.2 +0.1
HCY Herceg Novi 85.70 322⇑iP P 23 09 44.9 -0.2
HCY Herceg Novi 85.70 322⇑iP P 23 09 44.9 -0.2
STON Ston 85.78 323⇑iP P 23 09 44.0 -1.4
DAVA Damuels 85.82 330 iP P 23 09 46.0 +0.2
comp=Z,55nm,0.9s,SNR=21
TIR Tirane 85.83 320⇑P P 23 09 46.6 +0.9
E43A Lone Tree Farm 85.92 32 IAmb IAmb 23 10 04.2
comp=Z,35nm,1.2s
THL Klokotos Trika 86.00 318 P P 23 09 40.4 -6.2
PTL Penteli 86.07 316 P P 23 09 42.5 -4.6
CTI Castel Tesino 86.08 328 IAmb IAmb 23 10 06.3
comp=Z,39nm,1.2s
N35A Tabor 86.09 40 IAmb IAmb 23 10 20.3
comp=Z,51nm,0.8s
N35A Tabor 86.09 40 P P 23 09 47.6 +0.6
baz=317
LKR Lokris 86.12 317 P P 23 09 45.7 -1.5
ECH Echery 86.13 332 IAmb IAmb 23 10 01.6
comp=Z,48nm,0.9s
EPT El Paso 86.15 53 IAMs_20 IAMs_20 23 49 22.3
comp=Z,709nm,18.0s
ATHU Athens Univers 86.18 316 P P 23 09 44.1 -3.4
FUORN Ofenpass-Fuorn 86.20 329 IAmb IAmb 23 10 08.6
comp=Z,73nm,1.1s
AGG Agios Georgios 86.22 317 P P 23 09 43.6 -4.2
DAVOX Davos/Dischmat 86.23 329 LR LR 23 51 48.5
comp=Z,6µm,18.5s,baz=24,slow=38
VLY Voula,Athens 86.25 316 P P 23 09 44.6 -3.3
I40A Norwalk 86.26 35 IAmb IAmb 23 10 06.1
comp=Z,52nm,1.4s
I40A Norwalk 86.26 35 P P 23 09 48.1 +0.2
baz=320
LSK Leskovik 86.33 319 P P 23 09 46.8 -1.5
SCIA State Center 86.53 38 IAmb IAmb 23 10 08.1
comp=Z,47nm,1.1s
SCIA IAMs_20 IAMs_20 23 53 45.7
comp=Z,964nm,19.0s
SCIA State Center 86.53 38 P P 23 09 50.3 +1.1
baz=319
SCIA S S 23 20 21.8 -3.0
baz=319
JAN Janina 86.56 319 P P 23 09 46.8 -2.6
TEOL Teolo 86.62 328 IAmb IAmb 23 10 03.7
comp=Z,48nm,1.0s
TUE Stuetta 86.70 330 IAmb IAmb 23 10 07.4
comp=Z,64nm,1.1s
KSU1 Kansas State U 86.86 42 IAmb IAmb 23 10 02.7
comp=Z,30nm,0.9s
KSU1 Kansas State U 86.86 42 IAMs_20 IAMs_20 23 55 14.8
comp=Z,1µm,19.0s
KSU1 Kansas State U 86.86 42 P P 23 09 50.8 0.0
baz=317,SNR=5.4
KSU1 S S 23 20 22.8 -5.3
baz=317
MNTX Cornudas Mount 86.91 52 IAMs_20 IAMs_20 23 56 33.9
comp=Z,807nm,19.0s
MNTX Cornudas Mount 86.91 52 P P 23 09 52.2 +0.9
baz=312,SNR=12
MNTX S S 23 20 29.4 +0.6
baz=312
IGT Igoumenitsa 86.92 319 P P 23 09 48.9 -2.3
PVO Paravola 86.95 318 P P 23 09 49.9 -1.4
MSTX Muleshoe 86.98 49 S S 23 20 29.1 -0.6
baz=314
MSTX Muleshoe 86.98 49 S S 23 20 30.1 +0.5
baz=314
AMTX Amarillo 87.00 48 IAmb IAmb 23 10 04.7
comp=Z,61nm,1.1s
AMTX Amarillo 87.00 48 P P 23 09 52.8 +1.1
baz=314
AMTX S S 23 20 29.7 0.0
baz=314
KLV Kalavryta, Ach 87.02 317 P P 23 09 48.9 -2.9
E46A Sault Ste Mari 87.03 30 S S 23 20 27.6 -1.8
baz=325
I42A Draeger Farm, 87.04 34 IAmb IAmb 23 10 10.1
comp=Z,44nm,1.2s
I42A Draeger Farm, 87.04 34 S S 23 20 29.4 -0.2
baz=322
KEK Kerkira 87.07 319 P P 23 09 49.9 -2.0
H43A Windswept, Lux 87.10 33 S S 23 20 26.8 -3.3
baz=322
JFWS Jewell Farm 87.19 36 IAMs_20 IAMs_20 23 46 49.6
comp=Z,2µm,21.0s
JFWS Jewell Farm 87.19 36 P P 23 09 52.6 +0.3
baz=321
JFWS S S 23 20 26.8 -4.2
baz=321
LKD2 Lefkada island 87.29 318 P P 23 09 48.9 -4.1
N38A Joes South For 87.36 39 P P 23 09 51.9 -1.3
N38A IAmb IAmb 23 10 09.6
comp=Z,41nm,0.9s
N38A Joes South For 87.36 39 P P 23 09 53.6 +0.3
baz=319
N38A S S 23 20 30.0 -2.7
baz=319
L40A Anamosa 87.38 37 P P 23 09 52.6 -0.8
L40A IAmb IAmb 23 10 07.3
comp=Z,43nm,1.1s
L40A Anamosa 87.38 37 P P 23 09 53.1 -0.2
baz=320
IDI Anoyia 87.43 313 ⇑P P 23 09 53.7 -0.1
IDI Anoyia 87.43 313 LR LR 23 54 06.0
comp=Z,1µm,18.2s,baz=44,slow=39
IDI Anoyia 87.43 313 IAMs_20 IAMs_20 23 54 33.5
comp=Z,2µm,20.0s
VLI Veliai 87.54 315 P P 23 09 49.9 -4.3
G45A Suttons Bay 87.55 32 S S 23 20 30.7 -3.7
baz=324
G45A S S 23 20 30.7 -3.7
baz=324
SGRT San Giovanni R 87.57 323 P P 23 09 52.9 -1.4
SENIN Lac Senin/Sane 87.60 331 P P 23 09 52.8 -1.8
SENIN IAmb IAmb 23 10 22.8
comp=Z,39nm,1.4s
ZCCA Zocca 87.72 327 P P 23 09 53.7 -1.3
ZCCA IAmb IAmb 23 10 32.4
comp=Z,52nm,1.1s
ITM Ithomi 87.77 316 P P 23 09 53.1 -2.2
ITM Ithomi 87.77 316 P P 23 09 53.5 -1.8
MURB Monte Urbino 87.90 326 P P 23 09 54.4 -1.5
MATE Matera 87.94 322 ⇓P P 23 09 56.0 0.0
NRCA Norcia 87.97 325 P P 23 09 54.6 -1.7
TBI Tubuai 88.00 121 eS S 23 20 39.4 +0.4
comp=Z,512nm,25.2s
TBI Tubuai 88.00 121 eLR LR 23 37 54.8
comp=Z,3µm,23.2s
TBI Tubuai 88.00 121 eT T 00 47 01.9
comp=Z,27nm,0.3s
CLF Chambon-Foret 88.06 334 P P 23 09 55.9 -0.6
CLF IAmb IAmb 23 10 11.6
comp=Z,38nm,0.9s
PYL PYLOS 88.08 316 P P 23 09 53.1 -3.7
P38A Dawn 88.08 40 IAmb IAmb 23 10 09.1
comp=Z,28nm,1.1s
P38A Dawn 88.08 40 P P 23 09 57.1 +0.3
baz=319
P38A S S 23 20 36.8 -2.9
baz=319
VLDQ Val d'Or 88.12 25 P P 23 09 54.6 -2.1
VLDQ IAmb IAmb 23 09 57.4
comp=Z,45nm,1.0s
GLMI Grayling 88.16 31 IAMs_20 IAMs_20 23 54 42.4
comp=Z,1µm,19.0s
L42A Oliver, Polo 88.17 36 IAmb IAmb 23 10 10.3
comp=Z,29nm,1.1s
L42A Oliver, Polo 88.17 36 P P 23 09 57.0 -0.1
baz=321
L42A S S 23 20 36.3 -4.1
baz=321
KNDR Palaiochora Ch 88.17 314 P P 23 09 55.2 -2.0
SSF Saint Saulge 88.45 333 eP P 23 09 59.2 +0.9
SSF pmax pmax
comp=Z,22nm,1.0s
T35A Sooner Cattle 88.51 43 IAmb IAmb 23 10 15.3
comp=Z,41nm,1.3s
T35B Sooner Cattle 88.51 43 S S 23 20 41.9 -2.1
baz=317
LPL La Plagne 88.53 330 eP P 23 09 58.4 -0.6
LPL pmax pmax
comp=Z,94nm,2.0s
N41A Harden Midland 88.60 37 S S 23 20 41.8 -2.8
baz=320
LPIG La Paz 88.62 61 LR LR 23 49 01.7
comp=Z,439nm,18.1s,baz=310,slow=35
WMOK Wichita Mounta 88.80 46 P P 23 09 59.3 -1.0
WMOK IAmb IAmb 23 10 13.6
comp=Z,35nm,1.2s
WMOK Wichita Mounta 88.80 46 IAMs_20 IAMs_20 23 55 57.4
comp=Z,735nm,18.0s
WMOK Wichita Mounta 88.80 46 P P 23 09 59.3 -1.0
WMOK pmax pmax
comp=Z,35nm,1.3s
WMOK MLR MLR
comp=Z,700nm,18.0s
WMOK Wichita Mounta 88.80 46 P P 23 10 01.1 +0.8
baz=316,SNR=5.7
L44A Lake County Fo 88.84 35 IAMs_20 IAMs_20 23 48 57.3
comp=Z,1µm,20.0s
L44A Lake County Fo 88.84 35 S S 23 20 43.0 -3.8
baz=322
CUC Castrocucco 88.88 322 P P 23 09 58.8 -1.8
CUC IAmb IAmb 23 10 37.4
comp=Z,28nm,1.2s
P40A Paris 88.91 39 IAmb IAmb 23 10 17.7
comp=Z,31nm,0.9s
P40A Paris 88.91 39 P P 23 10 00.5 -0.2
baz=320
P40A S S 23 20 45.4 -2.2
baz=320
BNI Bardonecchia 88.93 330 P P 23 09 59.4 -1.4
BNI Bardonecchia 88.93 330 P P 23 09 59.4 -1.4
BNI pmax pmax
comp=Z,19nm,1.0s
BNI MLR MLR
comp=Z,5µm,18.0s
TIP Timpagrande 89.03 321 ⇑P P 23 10 00.9 -0.4
TIP Timpagrande 89.03 321 P P 23 09 59.2 -2.1
TIP IAmb IAmb 23 10 15.9
comp=Z,54nm,1.1s
SLBS Sierra La Lagu 89.14 61 IAMs_20 IAMs_20 23 53 19.2
comp=Z,1µm,20.0s
MQOL MQOL 89.16 295 iP P 23 09 43.3 -19
MQOL i 23 09 44.7
baz=267,slow=3.0
MQOL iS SKSac 23 20 13.2 -18
J47A Sunmer 89.36 32 P P 23 10 02.2 -0.5
J47A Sunmer 89.36 32 S S 23 20 50.1 -1.5
baz=324
J47A S S 23 20 50.1 -1.5
baz=324
M44A Midewin, Midew 89.40 35 IAmb IAmb 23 10 15.7
comp=Z,42nm,1.1s
M44A Midewin, Midew 89.40 35 P P 23 10 03.3 +0.4
baz=322
M44A S S 23 20 47.6 -4.5
baz=322
X34A Smith Ranch, M 89.44 46 IAmb IAmb 23 10 16.3
comp=Z,53nm,1.4s
HDIL Hopedale 89.47 37 IAmb IAmb 23 10 22.2
comp=Z,44nm,1.1s
HDIL IAMs_20 IAMs_20 23 55 41.3
comp=Z,1µm,20.0s
HDIL Hopedale 89.47 37 P P 23 10 03.4 +0.2
baz=321
HDIL S S 23 20 49.0 -3.7
baz=321
TX31 Lajitas Ar. Si 89.60 53 P P 23 10 03.7 -0.5
TX32 Lajitas Array 89.60 53 P P 23 10 03.1 -1.1
TX32 IAmb IAmb 23 10 19.1
comp=Z,42nm,1.1s
TXAR Lajitas Array 89.60 53 P P 23 10 04.5 +0.3
comp=Z,10nm,0.8s,baz=285,slow=3.5,SNR=32
TXAR LR LR 23 44 04.5
comp=Z,991nm,21.7s,baz=316,slow=32
comp=Z,10nm,0.8s
TXAR Lajitas Array 89.60 53 P P 23 10 04.5 +0.3
I49A Point Hope 89.62 31 S S 23 20 51.2 -2.8
baz=326
I49A S S 23 20 51.2 -2.8
baz=326
TUL1 Leonard 89.64 44 IAmb IAmb 23 10 17.4
comp=Z,30nm,1.2s
TUL1 IAMs_20 IAMs_20 23 46 59.4
comp=Z,815nm,21.0s
TUL1 Leonard 89.64 44 P P 23 10 04.0 -0.1
baz=317
TUL1 S S 23 20 50.2 -4.3
baz=317
TUL1 Leonard 89.64 44 P P 23 10 04.2 +0.1
baz=317
TUL1 S S 23 20 50.2 -4.3
baz=317
S39A Bolivar 89.64 41 P P 23 10 03.4 -0.7
S39A Bolivar 89.64 41 P P 23 10 03.2 -1.0
baz=319
R40A Maddies Statio 89.74 40 P P 23 10 03.6 -1.0
R40A IAmb IAmb 23 10 18.8
comp=Z,27nm,1.0s
R40A Maddies Statio 89.74 40 S S 23 20 51.4 -3.9
baz=320
ABTX Abilene, Hawle 89.80 48 P P 23 10 03.7 -1.3
ABTX IAmb IAmb 23 10 17.7
comp=Z,45nm,1.2s
ABTX Abilene, Hawle 89.80 48 P P 23 10 05.4 +0.4
baz=315,SNR=6.7
ABTX S S 23 20 53.2 -3.0
baz=315
HPIG 89.92 56 P P 23 10 05.0 -0.9
HPIG IAmb IAmb 23 10 20.8
comp=Z,26nm,1.0s
U38A Gravette 90.01 42 P P 23 10 05.1 -0.8
U38A Gravette 90.01 42 P P 23 10 05.6 -0.3
baz=318
P43A Skaggs, Pawnee 90.07 37 P P 23 10 04.6 -1.5
P43A IAmb IAmb 23 10 24.5
comp=Z,47nm,1.4s
MFF Saint Martin d 90.12 335 eP P 23 10 06.3 +0.1
MFF pmax pmax
comp=Z,38nm,1.2s
CEL Celeste 90.17 321 P P 23 10 04.9 -1.7
LATQ La Tuque 90.29 23 P P 23 10 06.7 -0.3
HHAR Hobbs 90.37 42 P P 23 10 06.7 -0.9
SADO Sadowa 90.37 28 LR LR 23 52 23.0
comp=Z,117nm,21.4s,baz=1.5,slow=37
CCM Cathedral Cave 90.44 39 P P 23 10 06.7 -1.1
CCM IAmb IAmb 23 10 22.2
comp=Z,34nm,1.1s
CCM Cathedral Cave 90.44 39 IAMs_20 IAMs_20 23 56 21.2
comp=Z,1µm,19.0s
CCM Cathedral Cave 90.44 39 P P 23 10 06.7 -1.1
CCM pmax pmax
comp=Z,34nm,1.1s
CCM MLR MLR
comp=Z,1µm,19.0s
CCM Cathedral Cave 90.44 39 P P 23 10 08.1 +0.3
baz=320
CCM S S 23 20 58.3 -3.5
baz=320
ATD Arta Tunnel 90.48 285 LR LR 23 55 08.5
comp=Z,1µm,19.8s,baz=40,slow=38
ATD Arta Tunnel 90.48 285 P P 23 10 07.8 -0.6
L48A N Adams 90.58 33 IAmb IAmb 23 10 30.0
comp=Z,48nm,1.3s
MGMO Mountain Grove 90.60 41 P P 23 10 07.3 -1.3
AAM Ann Arbor 90.62 32 IAMs_20 IAMs_20 23 56 14.2
comp=Z,1µm,19.0s
AAM Ann Arbor 90.62 32 S S 23 21 00.2 -3.1
baz=325
SFIN Lafayette 90.64 35 P P 23 10 07.9 -0.8
SFIN IAmb IAmb 23 10 27.2
comp=Z,50nm,1.4s
SFIN Lafayette 90.64 35 P P 23 10 08.6 -0.1
baz=323
SFIN Lafayette 90.64 35 P P 23 10 09.0 +0.3
baz=323
Z35A Perchaven, San 90.69 46 P P 23 10 08.5 -0.6
Z35A Perchaven, San 90.69 46 P P 23 10 09.1 +0.1
baz=317,SNR=7.2
TRQ Mont Tremblant 90.75 25 P P 23 10 08.7 -0.5
TRQ IAmb IAmb 23 10 28.1
comp=Z,24nm,1.0s
CAF Calviac 90.80 333 eP P 23 10 11.7 +2.3
CAF pmax pmax
comp=Z,33nm,1.1s
N47A Urbana 90.88 34 P P 23 10 09.2 -0.6
N47A IAmb IAmb 23 10 28.7
comp=Z,31nm,1.1s
N47A Urbana 90.88 34 P P 23 10 09.8 0.0
baz=324
N47A P P 23 10 09.8 0.0
baz=324
LMQ La Malbaie 90.88 21 P P 23 10 09.3 -0.4
LMQ IAmb IAmb 23 10 11.4
comp=Z,34nm,1.0s
Q44A Meyer Farm, Va 90.89 37 P P 23 10 09.4 -0.5
Q44A IAmb IAmb 23 10 24.4
comp=Z,35nm,1.1s
Q44A Meyer Farm, Va 90.89 37 P P 23 10 10.4 +0.6
baz=322
FVM French Village 90.91 39 P P 23 10 08.7 -1.3
FVM French Village 90.91 39 P P 23 10 08.7 -1.3
FVM pmax pmax
comp=Z,21nm,1.2s
DELO Deloro Mine 91.16 27 P P 23 10 10.2 -0.8
DELO IAmb IAmb 23 10 29.9
comp=Z,40nm,1.4s
JCT Junction City 91.22 50 P P 23 10 09.6 -2.1
JCT IAmb IAmb 23 10 23.8
comp=Z,22nm,0.9s
JCT IAMs_20 IAMs_20 23 44 56.7
comp=Z,919nm,21.0s
JCT Junction City 91.22 50 P P 23 10 09.6 -2.1
JCT pmax pmax
comp=Z,22nm,1.0s
JCT MLR MLR
comp=Z,900nm,21.0s
JCT Junction City 91.22 50 P P 23 10 12.0 +0.3
baz=315,SNR=6.5
LFF La Frestale 91.26 334 eP P 23 10 11.7 +0.2
LFF pmax pmax
comp=Z,21nm,1.0s
W39A Magazine 91.27 43 IAMs_20 IAMs_20 23 53 48.4
comp=Z,805nm,20.0s
W39A Magazine 91.27 43 P P 23 10 11.8 +0.2
baz=319
W39A Magazine 91.27 43 P P 23 10 11.9 +0.2
baz=319
W39A S S 23 21 04.6 -4.9
baz=319
VAE Valguarnera 91.51 321 LR LR 23 55 37.2
comp=Z,4µm,18.3s,baz=44,slow=38
N49A Columbus Grove 91.52 33 IAmb IAmb 23 10 31.1
comp=Z,47nm,1.5s
WHTX Lake Whitney, 91.54 47 P P 23 10 13.0 -0.1
WHTX Lake Whitney, 91.54 47 P P 23 10 13.6 +0.6
baz=316
O48B Farmland 91.62 34 P P 23 10 13.2 -0.1
baz=324
O48B S S 23 21 06.6 -6.0
baz=324
MNTQ Montreal, Queb 91.69 24 P P 23 10 12.4 -1.1
MNTQ IAmb IAmb 23 10 15.2
comp=Z,22nm,1.1s
S44A Carbondale 91.72 38 P P 23 10 12.7 -1.1
S44A IAmb IAmb 23 10 32.2
comp=Z,27nm,1.1s
S44A Carbondale 91.72 38 P P 23 10 14.1 +0.3
baz=321
SIUC Southern Illin 91.72 38 P P 23 10 12.7 -1.1
SIUC IAmb IAmb 23 10 36.1
comp=Z,19nm,0.8s

PBMO Poplar Bluff 91.83 40 IAmb IAmb 23 10 49.9
comp=Z,26nm,1.0s
MIAR Mount Ida 91.86 43 P **P** **23 10 13.9 -0.6**
MIAR IAmb IAmb 23 10 24.4
comp=Z,37nm,0.9s
MIAR IAMs_20 IAMs_20 23 53 27.3
comp=Z,931nm,20.0s
MIAR Mount Ida 91.86 43 P **P** **23 10 13.9 -0.6**
MIAR pmax pmax
comp=Z,37nm,1.0s
MIAR MLR MLR
comp=Z,900nm,20.0s
MIAR Mount Ida 91.86 43 P **P** **23 10 14.7 +0.2**
baz=319,SNR=21
MIAR S **S** **23 21 10.7 -4.2**
baz=319
E62A Clayton Lake 91.96 21 P **P** **23 10 13.8 -1.0**
E62A Clayton Lake 91.96 21 P **P** **23 10 14.6 -0.1**
baz=335,SNR=5.5
E62A P **P** **23 10 14.6 -0.1**
baz=335,SNR=5.5
WHAR Wooly Hollow 92.00 42 P **P** **23 10 13.1 -2.1**
WHAR IAmb IAmb 23 10 24.5
comp=Z,31nm,0.9s
W41B Gary Mavity, V 92.11 42 P **P** **23 10 14.9 -0.7**
W41B Gary Mavity, V 92.11 42 P **P** **23 10 15.6 0.0**
baz=320,SNR=8.0
W41B Gary Mavity, V 92.11 42 P **P** **23 10 15.7 +0.1**
baz=320,SNR=8.0
W41B S **S** **23 21 18.0 +0.9**
baz=320
LONY Lake Ozonia 92.14 25 IAMs_20 IAMs_20 23 55 12.9
comp=Z,1µm,21.0s
LONY Lake Ozonia 92.14 25 P **P** **23 10 15.3 -0.3**
baz=332
LONY S **S** **23 21 14.5 -2.7**
baz=332
ERPA Erie 92.29 30 IAMs_20 IAMs_20 00 00 00.2
comp=Z,1µm,18.0s
BATG Bathurst New B 92.31 19 IAmb IAmb 23 10 18.0
comp=Z,19nm,0.9s
435B Jarrell 92.33 48 IAMs_20 IAMs_20 23 58 53.2
comp=Z,770nm,20.0s
P49A Miami Univ. Ec 92.41 34 IAmb IAmb 23 10 49.6
P49A comp=Z,23nm,1.2s IAMs_20 IAMs_20 23 51 15.7
comp=Z,1µm,20.0s
P49A Miami Univ. Ec 92.41 34 S **S** **23 21 18.5 -1.2**
baz=324
E63A Oxbow 92.45 21 P **P** **23 10 16.4 -0.6**
baz=336,SNR=5.4
E63A P **P** **23 10 16.4 -0.6**
baz=336,SNR=5.4
F62A Pittston Farm, 92.48 22 IAmb IAmb 23 10 18.8
comp=Z,23nm,0.9s
F62A Pittston Farm, 92.48 22 P **P** **23 10 17.4 +0.3**
baz=335,SNR=10
F62A P **P** **23 10 17.4 +0.3**
baz=335,SNR=10
M53A WI Miller and 92.58 31 IAMs_20 IAMs_20 23 57 06.0
comp=Z,853nm,18.0s
M53A WI Miller and 92.58 31 P **P** **23 10 18.2 +0.5**
baz=327
M53A S **S** **23 21 19.4 -1.7**
baz=327
ACSO Alum Creek Sta 92.61 33 P **P** **23 10 16.5 -1.3**
ACSO IAmb IAmb 23 10 27.2
comp=Z,14nm,0.8s
ACSO IAMs_20 IAMs_20 23 57 17.8
comp=Z,1µm,20.0s
ACSO Alum Creek Sta 92.61 33 P **P** **23 10 18.0 +0.1**
baz=326
WLAR White Oak Lake 92.76 43 P **P** **23 10 18.1 -0.6**
NCB Newcomb 92.84 25 IAmb IAmb 23 10 38.0
comp=Z,23nm,1.2s
G62A West of Eustis 92.92 23 IAmb IAmb 23 10 21.6
comp=Z,20nm,1.1s
G62A West of Eustis 92.92 23 P **P** **23 10 19.5 +0.2**
baz=334,SNR=5.9
G62A P **P** **23 10 19.5 +0.2**
baz=334,SNR=5.9
833A Chaparral WMA, 92.99 51 P **P** **23 10 21.0 +1.2**
baz=315
J58A Remsen 93.00 26 P **P** **23 10 19.1 -0.5**
VT1 Waterbury 93.01 24 IAMs_20 IAMs_20 23 56 42.1
comp=Z,1µm,19.0s
L56A Greenwood 93.22 28 P **P** **23 10 19.9 -0.8**
PKME Peaks-Kenny Pk 93.26 22 IAmb IAmb 23 10 22.9
comp=Z,18nm,0.9s
PKME Peaks-Kenny Pk 93.26 22 P **P** **23 10 21.6 +0.9**
baz=335,SNR=5.7
H62A Milan 93.31 23 P **P** **23 10 20.5 -0.5**
H62A IAmb IAmb 23 10 23.3
comp=Z,24nm,0.9s
H62A Milan 93.31 23 P **P** **23 10 21.8 +0.8**
baz=334,SNR=8.8
H62A P **P** **23 10 21.8 +0.8**
baz=334,SNR=8.8
T47A Sharon Grove 93.33 37 IAmb IAmb 23 10 30.7
comp=Z,16nm,0.8s
T47A Sharon Grove 93.33 37 P **P** **23 10 21.4 +0.1**
baz=323,SNR=5.7
NATX Nacogdoches 93.33 46 IAMs_20 IAMs_20 00 00 46.3
comp=Z,1µm,18.0s
O53A New Philadelph 93.35 32 P **P** **23 10 19.9 -1.3**
O53A IAmb IAmb 23 10 34.0
comp=Z,18nm,0.9s
O53A IAMs_20 IAMs_20 00 00 57.4
comp=Z,904nm,19.0s
O53A New Philadelph 93.35 32 P **P** **23 10 21.7 +0.4**
baz=327
O53A S **S** **23 21 28.0 0.0**
baz=327
LBNH Lisbon 93.36 24 IAMs_20 IAMs_20 00 00 35.1
comp=Z,1µm,18.0s
LBNH Lisbon 93.36 24 S **S** **23 21 27.9 -0.1**
baz=333
Q51A Peebles 93.44 34 IAmb IAmb 23 10 23.2
comp=Z,14nm,0.8s
Q51A Peebles 93.44 34 P **P** **23 10 20.1 -1.6**
baz=325,SNR=5.3
Q51A P **P** **23 10 20.1 -1.6**
baz=325,SNR=5.3
P52A Corning 93.47 33 P **P** **23 10 21.8 0.0**
baz=326
P52A S **S** **23 21 29.9 +0.9**
baz=326
WVT Waverly 93.65 38 P **P** **23 10 22.1 -0.6**
WVT Waverly 93.65 38 IAMs_20 IAMs_20 23 58 09.1
comp=Z,1µm,20.0s
WVT Waverly 93.65 38 P **P** **23 10 22.1 -0.6**
WVT pmax pmax
comp=Z,15nm,1.2s
WVT MLR MLR
comp=Z,1µm,20.0s
WVT Waverly 93.65 38 P **P** **23 10 23.0 +0.3**
baz=322
WVT S **S** **23 21 32.1 +1.3**
baz=322
HNH Hanover 93.72 24 IAMs_20 IAMs_20 00 01 05.6
comp=Z,1µm,18.0s
BINY Binghamton 93.76 27 IAMs_20 IAMs_20 00 00 09.8
comp=Z,1µm,18.0s
WVL Waterville 93.78 22 IAMs_20 IAMs_20 23 58 37.0
comp=Z,1µm,20.0s
LMN Caledonia Moun 93.95 19 IAmb IAmb 23 10 25.8
comp=Z,18nm,0.9s
I63A Otisfield 93.96 23 IAmb IAmb 23 11 00.0
comp=Z,27nm,1.1s
I63A Otisfield 93.96 23 P **P** **23 10 22.3 -1.6**
baz=334,SNR=6.4
I63A P **P** **23 10 22.3 -1.6**
baz=334,SNR=6.4
HKT Hockley 93.98 48 P **P** **23 10 22.0 -2.2**
HKT Hockley 93.98 48 IAMs_20 IAMs_20 00 00 39.3
comp=Z,875nm,18.0s
HKT Hockley 93.98 48 P **P** **23 10 22.0 -2.2**
HKT pmax pmax
comp=Z,12nm,1.3s
M57A Sunshine Farm, 94.07 29 P **P** **23 10 23.5 -1.0**
M57A IAmb IAmb 23 11 03.2
comp=Z,30nm,1.4s
OXF Oxford 94.11 40 IAmb IAmb 23 10 38.9
OXF comp=Z,35nm,1.1s IAMs_20 IAMs_20 23 59 05.5
comp=Z,678nm,20.0s
OXF Oxford 94.11 40 P **P** **23 10 25.3 +0.5**
baz=321

TRY Troy 94.12 26 IAMs_20 IAMs_20 23 59 53.3
comp=Z,1µm,19.0s
FFD Franklin Falls 94.14 24 IAMs_20 IAMs_20 23 56 22.6
comp=Z,1µm,20.0s
SSPA Standing Stone 94.38 29 IAMs_20 IAMs_20 23 59 09.5
comp=Z,1µm,18.0s
T50A Nancy 94.39 36 P **P** **23 10 25.0 -1.1**
T50A Nancy 94.39 36 P **P** **23 10 25.9 -0.2**
baz=324
T50A P **P** **23 10 25.9 -0.2**
baz=324
CLTN Cedars of Leba 94.42 38 P **P** **23 10 25.9 -0.3**
MCWV Mont Chateau 94.42 31 IAMs_20 IAMs_20 23 51 20.6
comp=Z,1µm,22.0s
MCWV Mont Chateau 94.42 31 P **P** **23 10 27.3 +1.1**
baz=328
PLAL Pickwick Lake 94.43 39 IAMs_20 IAMs_20 23 58 41.8
comp=Z,1µm,20.0s
S51A Beattyville 94.46 35 P **P** **23 10 25.2 -1.2**
Q54A Coxs Mills 94.57 32 P **P** **23 10 24.9 -2.0**
Q54A IAmb IAmb 23 10 45.4
comp=Z,23nm,1.2s
L61B Northampton 94.71 25 IAMs_20 IAMs_20 23 57 38.8
comp=Z,1µm,19.0s
ZAIG Zacatecas 94.80 57 P **P** **23 10 29.5 +0.9**
ZAIG IAmb IAmb 23 10 44.1
comp=Z,22nm,1.0s
QUA2 Belchertown 94.97 25 IAMs_20 IAMs_20 23 57 45.7
comp=Z,1µm,20.0s
HRV Adam Dziewonsk 95.03 24 IAMs_20 IAMs_20 23 57 30.3
comp=Z,1µm,20.0s
VBMS Vicksburg 95.29 43 IAMs_20 IAMs_20 23 59 41.0
comp=Z,845nm,18.0s
SWET Sewanee 95.31 38 IAmb IAmb 23 10 56.8
comp=Z,25nm,1.5s
FURI Furi 95.32 285 P **P** **23 10 30.3 -0.9**
FURI Furi 95.32 285 IAMs_20 IAMs_20 23 59 17.7
comp=Z,1µm,19.0s
TZTN Tazewell 95.37 35 IAMs_20 IAMs_20 23 51 42.2
comp=Z,1µm,20.0s
KEST Kesra 95.38 323 P **P** **23 10 30.6 -0.1**
comp=Z,11nm,1.1s,baz=327,slow=2.9,SNR=8.3
KEST PP **PP** **23 14 19.9 -0.5**
comp=Z,10.0nm,1.0s,baz=360,slow=12,SNR=4.2
KEST LR LR 23 58 45.5
comp=Z,3µm,18.4s,baz=338,slow=39
comp=Z,11nm,1.1s
KEST Kesra 95.38 323 IAmb IAmb 23 10 47.8
comp=Z,19nm,1.1s
PAL Palisades 95.56 27 IAMs_20 IAMs_20 23 57 33.3
comp=Z,1µm,20.0s
WSPT Westport, CT 95.62 26 IAMs_20 IAMs_20 23 58 23.9
comp=Z,1µm,19.0s
YLE Yale 95.63 26 IAMs_20 IAMs_20 23 58 23.1
comp=Z,1µm,19.0s
TKL Tuckaleechee C 95.99 36 LR LR 00 00 32.9
comp=Z,344nm,18.3s,baz=332,slow=40
BLA Blacksburg 96.23 33 IAMs_20 IAMs_20 00 02 52.7
comp=Z,1µm,18.0s
LRAL Lakeview Retre 96.51 40 IAMs_20 IAMs_20 23 59 06.9
comp=Z,956nm,20.0s
LRAL Lakeview Retre 96.51 40 S **S** **23 21 50.6 -5.2**
baz=323
PBRG Braganca 96.54 337 *e*Pdif **P** **23 10 36.6 +0.7**
PBRG Braganca 96.54 337 *e*PP **PP** **23 14 34.3 +5.3**
CBN Robin Frederi 96.67 30 IAMs_20 IAMs_20 23 52 52.1
comp=Z,1µm,22.0s
PGAV Gavieira, Arco 96.85 338 *e*Pdif **P** **23 10 39.3 +1.9**
PGAV Gavieira, Arco 96.85 338 *e*PP **PP** **23 14 34.0 +2.5**
PGAV *e*S **S** **23 22 02.1 +3.5**
PGAV *e*SS SS 23 28 46.6 +14
PGAV Gavieira, Arco 96.85 338 *e*LR LR 23 49 18.2
comp=Z,2µm,20.0s
MVO Moncorvo 97.21 337 *e*Pdif Pdif 23 10 40.4 +1.4
MVO Moncorvo 97.21 337 *e*PP **PP** **23 14 38.7 +4.5**
MVO *e*S **S** **23 22 03.7 +2.1**
MVO *e*SS **SS** **23 28 47.8 +11**
MVO Moncorvo 97.21 337 *e*LR LR 23 50 21.3
comp=Z,4µm,18.0s
POLO Lamas de Olo 97.25 338 *e*Pdif Pdif 23 10 41.7 +2.4
POLO Lamas de Olo 97.25 338 *e*PP **PP** **23 14 36.9 +2.3**
POLO *e*S **S** **23 22 04.1 +2.1**
POLO *e*SS **SS** **23 28 44.8 +6.9**
ESDC Sonseca Array 97.54 334 P **P** **23 10 39.8 -0.7**
comp=Z,2.4nm,0.9s,baz=13,slow=4.6,SNR=13
ESDC PP PP 23 14 17.8 -19
comp=Z,3.0nm,0.9s,baz=21,slow=4.7,SNR=6.0
ESDC LR LR 23 59 34.4
comp=Z,5µm,19.9s,baz=12,slow=38
comp=Z,2.4nm,0.9s
BRAL Brewton 97.96 41 IAMs_20 IAMs_20 00 01 02.4
comp=Z,868nm,20.0s
GOGA Godfrey 97.97 37 IAMs_20 IAMs_20 00 01 30.4
comp=Z,854nm,18.0s
MTE Manteigas 98.06 337 *e*Pdif Pdif 23 10 43.1 +0.3
MTE Manteigas 98.06 337 *e*PP **PP** **23 14 44.4 +3.6**
MTE *e*S **S** **23 22 14.1 +5.1**
MTE *e*SS **SS** **23 28 59.0 +10**
MTE Manteigas 98.06 337 *e*LR LR 23 50 15.9
comp=Z,4µm,18.0s
COI Coimbra 98.51 338 *e*Pdif Pdif 23 10 47.0 +2.3
COI Coimbra 98.51 338 *e*PP **PP** **23 14 48.4 +4.3**
COI *e*S **S** **23 22 14.0 +1.5**
COI *e*SS **SS** **23 29 03.1 +7.8**
PCAS Casmilo, Conde 98.68 338 *e*Pdif Pdif 23 10 46.8 +1.3
PCAS Casmilo, Conde 98.68 338 *e*PP **PP** **23 14 48.2 +2.8**
PCAS *e*S **S** **23 22 17.3 +3.3**
PCAS *e*SS **SS** **23 29 05.1 +7.4**
PMRV Marv??o 98.90 337 *e*Pdif Pdif 23 10 47.9 +1.4
PMRV Marv??o 98.90 337 *e*PP **PP** **23 14 50.3 +3.1**
PMRV *e*S **S** **23 22 19.8 +3.8**
PMRV Marv??o 98.90 337 *e*LR LR 23 51 24.1
comp=Z,3µm,18.0s
CNNC Cliffs of the 98.98 32 IAMs_20 IAMs_20 23 55 16.6
comp=Z,868nm,20.0s
PSBE So Bento 99.26 338 *e*Pdif **Pdif** **23 10 50.1 +2.0**
PSBE So Bento 99.26 338 *e*PP **PP** **23 14 52.5 +2.6**
PSBE So Bento 99.26 338 *e*SS SS 23 29 11.6 +5.6
PESTR Estremoz 99.48 337 *e*Pdif **Pdif** **23 10 50.3 +1.2**
PESTR Estremoz 99.48 337 *e*PP **PP** **23 14 54.7 +3.1**
PESTR *e*S **S** **23 22 23.7 +2.9**
NHSC New Hope 99.77 35 IAMs_20 IAMs_20 00 03 38.6
comp=Z,1µm,19.0s
PMAFR Mafra 99.92 338 *e*Pdif **Pdif** **23 10 53.0 +1.9**
PMAFR Mafra 99.92 338 *e*PP **PP** **23 14 58.4 +3.5**
PMAFR *e*S **S** **23 22 28.3 +3.7**
PMAFR *e*SS **SS** **23 29 23.4 +8.2**
LIS Lisbon 100.10 338 *e*PP **PP** **23 14 57.9 +1.7**
LIS IAMs_20 IAMs_20 00 01 59.8
comp=N,4µm,16.4s
PNCL Nicolau / Gran 100.47 337 *e*Pdif **Pdif** **23 10 55.9 +2.4**
PNCL Nicolau / Gran 100.47 337 *e*PP **PP** **23 15 02.3 +3.3**
PNCL *e*S **Sdif** **23 22 35.0 +6.0**
PNCL *e*SS **SS** **23 29 32.8 +10**
MESJ Messejana 100.62 337 *e*Pdif **Pdif** **23 10 54.8 +0.7**
MESJ *e*PP **PP** **23 15 02.0 +1.8**
MESJ *e*SS SS 23 29 29.1 +4.2
MESJ IAMs_20 IAMs_20 00 01 37.5
comp=Z,4µm,15.2s
MESJ Messejana 100.62 337 *e*P **Pdif** **23 10 54.8 +0.7**
MESJ *e* 23 15 02.0
MESJ *e*SS SS 23 29 29.0 +4.2
PCVE Castro Verde 100.75 336 *e*Pdif **Pdif** **23 10 56.0 +1.3**
PCVE Castro Verde 100.75 336 *e*PP **PP** **23 15 05.1 +3.9**
PCVE *e*S SKSac 23 21 46.6 +14
PCVE *e*SS SS 23 29 38.1 +11
PVAQ Vaqueiros 100.85 336 *e*Pdif **Pdif** **23 10 58.0 +2.8**
PVAQ Vaqueiros 100.85 336 *e*PP **PP** **23 15 05.3 +3.3**
PVAQ Vaqueiros 100.85 336 *e*LR LR 23 51 23.7
comp=Z,4µm,22.0s
PBDV Barranco-do-Ve 101.07 336 *e*PP **PP** **23 15 07.3 +3.6**
PBDV Barranco-do-Ve 101.07 336 *e*SS SS 23 29 41.0 +10
MORF Marmelete 101.24 337 *e*PP **PP** **23 15 06.7 +1.7**
MORF IAMs_20 IAMs_20 00 02 23.7
comp=Z,4µm,19.7s
MORF Marmelete 101.24 337 *e*PP **PP** **23 15 10.2 +5.2**
PFVI Vila Bisbo 101.46 337 *e*Pdif **Pdif** **23 11 00.1 +2.2**
PFVI Vila Bisbo 101.46 337 *e*PP **PP** **23 15 09.5 +3.0**
PFVI *e*S **Sdif** **23 22 42.0 +4.7**
PFVI *e*SS **SS** **23 29 43.0 +6.5**
KMBO Kilima Mbogo 102.60 278 P **Pdif** **23 11 03.0 -0.6**
comp=Z,2.1nm,1.1s,baz=357,slow=9.7,SNR=3.9
KMBO PP **PP** **23 15 15.4 -1.5**
comp=Z,3.7nm,0.9s,baz=15,slow=10,SNR=3.9

KMBO Kilima Mbogo 102.60 278 IAMs_20 IAMs_20 00 02 34.1
comp=Z,1µm,20.0s
KMBO Kilima Mbogo 102.60 278 *i* P **Pdif** **23 11 04.6 +0.9**
KMBO pmax pmax
comp=Z,2.0nm,1.0s
KIBK Kibwezi 102.70 277 IAMs_20 IAMs_20 00 05 28.3
comp=Z,891nm,18.0s
DWPF Disney Wildern 103.30 39 IAMs_20 IAMs_20 00 01 50.8
comp=Z,966nm,21.0s
ABPO Ambohimpanom 105.08 257 IAMs_20 IAMs_20 23 58 25.7
comp=Z,1µm,21.0s
PMOZ Porto Moniz, M 107.86 342 *e*PP **PP** **23 15 59.0 +4.8**
PMOZ Porto Moniz, M 107.86 342 *e*LR LR 23 57 57.3
comp=Z,2µm,22.0s
TGUH Tegucigalpa,Un 111.07 52 IAMs_20 IAMs_20 00 08 27.8
comp=Z,757nm,20.0s
GRTK Grand Turk 113.80 34 IAMs_20 IAMs_20 00 08 57.0
comp=Z,979nm,20.0s
VNDA Vanda 114.95 175 PKP PKPdf 23 15 44.3 -1.4
comp=Z,0.7nm,0.7s,baz=312,slow=5.0,SNR=7.7
VNDA Vanda 114.95 175 PKIKP PKPdf 23 15 44.3 -1.4
TORD Torodi Ar. Bea 117.76 316 PKP **PKPdf** **23 15 52.2 -0.8**
comp=Z,7.8nm,1.0s,baz=342,slow=2.0,SNR=24
TORD PP PP 23 16 57.4 -8.0
comp=Z,9.0nm,1.0s,baz=23,slow=5.8,SNR=8.2
TORD PKKPbc **PKKPbc** **23 26 13.6 +0.8**
comp=Z,0.7nm,0.8s,baz=246,slow=4.9,SNR=4.0
SJG San Juan 118.95 31 IAMs_20 IAMs_20 00 09 53.4
comp=Z,697nm,20.0s
BCIP Isla Barro Col 119.44 49 IAMs_20 IAMs_20 00 13 35.1
comp=Z,472nm,18.0s
MAW Mawson 119.84 206 PKP **PKPdf** **23 15 55.1 -0.2**
comp=Z,4.4nm,0.8s,baz=302,slow=5.2,SNR=5.6
MAW Mawson 119.84 206 PKIKP **PKPdf** **23 15 55.1 -0.2**
SMRT St. Maarten 120.22 28 IAMs_20 IAMs_20 00 07 37.7
comp=Z,698nm,20.0s
ANWB Willy Bob 121.05 27 IAMs_20 IAMs_20 00 06 57.4
comp=Z,687nm,22.0s
GDHS Morne Mazeau, 122.34 28 IAMs_20 IAMs_20 00 07 23.6
comp=Z,1µm,22.0s
GDSD La Dsirade Is 122.55 27 IAMs_20 IAMs_20 00 16 11.3
comp=Z,754nm,20.0s
CBE Ff, Capester 122.58 27 IAMs_20 IAMs_20 00 08 17.1
comp=Z,1µm,22.0s
TDBA Terre de Bas, 122.77 28 IAMs_20 IAMs_20 00 08 22.1
comp=Z,1µm,21.0s
SVN Savane Anatole 123.87 28 IAMs_20 IAMs_20 00 09 03.7
comp=Z,788nm,22.0s
FDF Fort de France 123.98 28 IAMs_20 IAMs_20 00 08 45.1
comp=Z,643nm,21.0s
SDV Santo Domingo 124.89 41 IAMs_20 IAMs_20 00 17 30.0
comp=Z,729nm,20.0s
SDV Santo Domingo 124.89 41 *e*P **PKiKP** **23 16 07.7 +0.4**
BAUV El Baul 126.16 38 PKPdf **PKPdf** **23 16 08.3 -0.8**
GRGR Grenville 126.16 29 IAMs_20 IAMs_20 00 11 43.3
comp=Z,689nm,21.0s
ROSC El Rosal 126.17 47 PKP **PKiKP** **23 16 10.2 0.0**
comp=Z,20nm,1.0s,baz=101,slow=1.9,SNR=8.5
ROSC El Rosal 126.17 47 PKPdf **PKiKP** **23 16 11.1 +1.0**
ROSC El Rosal 126.17 47 PKIKP **PKiKP** **23 16 11.1 +1.0**
DBIC Dimbokro 126.70 318 PKP **PKPdf** **23 16 09.8 -0.4**
comp=Z,27nm,1.1s,baz=71,slow=1.9,SNR=18
DBIC PP **PP** **23 18 06.8 +0.7**
comp=Z,11nm,1.0s,baz=29,slow=9.8,SNR=4.4
DBIC Dimbokro 126.70 318 PKPdf **PKPdf** **23 16 10.2 0.0**
DBIC Dimbokro 126.70 318 PKIKP **PKPdf** **23 16 10.2 0.0**
QSPA South Pole Qui 126.81 180 PKPdf **PKPdf** **23 16 08.5 -0.4**
TIC Toumodi 126.81 318 *i* PKIKP **PKPdf** **23 16 10.1 -0.4**
comp=Z,1.9nm,0.2s
KIC Kosan Boka 126.90 317 *i* PKIKP **PKPdf** **23 16 10.3 -0.3**
comp=Z,34nm,0.9s
LIC Lamto 127.17 318 *e*PKIKP **PKPdf** **23 16 10.4 -0.7**
comp=Z,0.7nm,0.3s
OTAV Otavalo 127.18 55 *e*P **PKiKP** **23 16 12.5 +0.3**
BOSA Boshof 127.21 260 PKP **PKiKP** **23 16 11.3 -0.1**
comp=Z,6.1nm,1.1s,baz=65,slow=0.8,SNR=4.2
BOSA Boshof 127.21 260 PKIKP **PKiKP** **23 16 11.3 -0.1**
BOAV Boa Vista 135.42 33 *e*P **PKiKP** **23 16 27.8 -0.4**
CZSB Cruzeiro do Su 136.91 56 *e*P **PKPdf** **23 16 28.1 -1.3**
TROLL Troll, Antarti 139.46 198 PKPdf **PKPdf** **23 16 25.2 -7.4**
MACA Manacapuru-AM 140.24 37 *e*P **PKPdf** **23 16 35.7 +0.1**
SNAA Sanae 140.96 197 PKPdf **PKPdf** **23 16 28.1 -7.1**
SNAA Sanae 140.96 197 PKPpre 23 16 27.7
SNAA Sanae 140.96 197 PKHKP PKPpre 23 16 27.7
SNAA MLR MLR
comp=Z,800nm,18.0s
MCPB Macapa, AP 141.17 23 *e*P **PKPdf** **23 16 38.4 +1.1**
MALB Monte Alegre 141.81 27 *e*P **PKiKP** **23 16 39.9 -1.4**
VNA2 Neumayer--Watz 142.52 196 PKPdf **PKPdf** **23 16 33.5 -4.4**
baz=109,slow=3.0
VNA3 Neumayer Olymp 142.76 195 PKPdf **PKPdf** **23 16 34.1 -4.3**
VNA1 Neumayer--Stat 142.92 196 PKPdf **PKPdf** **23 16 35.0 -3.5**
ITTB Itaituba 143.53 31 *e*P PKPbc 23 16 39.0 +0.2
SAML Samuel 143.78 46 PKPdf PKPab 23 16 38.6 -0.1
SAML Samuel 143.78 46 PKIKP PKPab 23 16 38.6 -0.1
TMAB Tom-Au,PA,Br 144.19 18 *e*P **PKPdf** **23 16 42.3 -0.3**
ROSB Rosrio 145.50 11 *e*P **PKPab** **23 16 45.3 +0.2**
NPGB Novo Progresso 146.10 32 *e*P **PKPab** **23 16 47.1 -0.3**
LPAZ La Paz 146.13 61 PKPbc **PKPbc** **23 16 47.4 -0.1**
comp=Z,36nm,0.8s,baz=342,slow=4.4,SNR=96
LPAZ La Paz 146.13 61 PKP2 **PKPbc** **23 16 47.4 -0.1**
LPAZ La Paz 146.13 61 *e*P **PKPbc** **23 16 47.7 +0.2**
NBMO Morrinhos-CE 146.35 4 *e*P **PKPdf** **23 16 46.5 +0.2**
H03N2 Juan Fernandez 146.39 96 T T 02 01 00.6
baz=291,slow=76,SNR=54
H03N3 Juan Fernandez 146.41 96 T T 02 01 01.7
baz=291,slow=76,SNR=60
H03N1 Juan Fernandez 146.41 96 T T 02 01 01.7
baz=291,slow=76,SNR=64
PRPB Parauapebas 147.35 23 *e*P **PKPdf** **23 16 48.9 +0.9**
NBPB Pedra_Branca-C 148.59 3 *e*P **PKPdf** **23 16 51.0 +0.9**
VILB Vilhena 148.72 46 *e*P **PKPdf** **23 16 51.6 +1.4**
RCBR Riachuelo 148.86 356 PKPab **PKPbc** **23 16 54.9 +0.5**
RCBR Riachuelo 148.86 356 PKP2 **PKPbc** **23 16 54.9 +0.5**
RCBR Riachuelo 148.86 356 *e*P **PKPdf** **23 16 51.9 +1.4**
CLDB Colider 149.29 36 *e*P **PKPdf** **23 16 51.9 +0.8**
PDRB Porto dos Gac 149.47 39 *e*P **PKPdf** **23 16 51.6 +0.2**
LVC Limon Verde 149.56 71 *e*P **PKPdf** **23 16 53.4 +1.6**
NBMA Muriti-CE 150.43 2 *e*P **PKPdf** **23 16 54.0 +1.0**
SMTB Santa Maria do 150.55 20 *e*P **PKPdf** **23 16 54.3 +1.1**
SIV Sao Ignacio 150.58 51 PKP **PKPdf** **23 16 54.1 +0.9**
baz=31,slow=0.3
SIV PKPbc **PKPbc** **23 16 58.3 -0.2**
baz=276,slow=2.0
PTLB Pontes e Lacer 151.32 47 *e*P **PKPdf** **23 16 55.2 +1.0**
MG05 Puerto Natales 151.52 132 **PKPbc** **23 16 57.6 -2.0**
NBRF Rio Formoso - 151.64 354 *e*P **PKPdf** **23 16 56.7 +1.9**
SNDB Serra Nova Dou 152.23 29 *e*P **PKPdf** **23 16 57.0 +1.3**
NBAN Anadia - AL 152.69 357 *e*P **PKPdf** **23 16 58.8 +2.4**
PEXB Peixe 153.42 23 *e*P **PKPdf** **23 16 59.1 +1.7**
SALV Santo Antonio 153.62 42 *e*P **PKPdf** **23 16 59.4 +1.8**
NBLA Lagarto - SE 154.04 360 *e*P **PKPdf** **23 17 00.0 +1.7**
PLCA Paso Flores 154.32 108 PKP **PKPdf** **23 16 59.1 +1.1**
comp=Z,3.0nm,1.2s,baz=281,slow=10,SNR=2.1
PLCA PKPbc **PKiKP** **23 17 06.7 +0.4**
comp=Z,2.9nm,1.0s,baz=330,slow=20,SNR=6.8
PLCA Paso Flores 154.32 108 PKIKP **PKPdf** **23 16 59.1 +1.1**
SDBA SAO DESIDERIO 154.63 16 *e*P **PKPdf** **23 17 00.0 +0.8**
BDFB Brasilia 156.81 26 PKP **PKPdf** **23 17 03.1 +1.1**
comp=Z,9.7nm,1.2s,baz=356,slow=3.6,SNR=3.3
BDFB Brasilia 156.81 26 PKIKP **PKPdf** **23 17 03.2 +1.1**
BDFB Brasilia 156.81 26 *e*P **PKPdf** **23 17 02.4 +0.3**
JANB Januaria 157.33 17 *e*P **PKPdf** **23 17 03.9 +1.2**
CMC01 Camacan, BA 158.33 5 *e*P **PKPdf** **23 17 04.8 +1.0**
IPMB Ipameri, GO 158.90 29 *e*P **PKPdf** **23 17 05.7 +1.2**
ITRB Iturama 159.51 36 *e*P **PKPdf** **23 17 05.4 +0.2**
GUA01 Guaratinga, BA 159.52 6 *e*P **PKPdf** **23 17 06.9 +1.7**
CPUP Villa Florida 160.27 63 PKP **PKPdf** **23 17 07.2 +1.4**
comp=Z,2.7nm,0.9s,baz=292,slow=11,SNR=3.6
CPUP PKPab **PKPab** **23 17 44.6 -1.7**
comp=Z,2.4nm,0.8s,baz=312,slow=4.3,SNR=5.2
CPUP Villa Florida 160.27 63 PKIKP **PKPdf** **23 17 07.2 +1.4**
CPUP 23 17 44.6
CPUP Villa Florida 160.27 63 *e*P **PKPdf** **23 17 07.8 +2.0**
NAN01 Guarapari, ES 160.75 7 *e*P **PKPdf** **23 17 07.2 +0.7**
TRCB Terra Rica 160.86 46 *e*P **PKPdf** **23 17 09.1 +2.4**
BSFB Barra de Sao F 161.64 9 *e*P **PKPdf** **23 17 09.1 +1.5**
RIB01 Linhares ES 162.17 8 *e*P **PKPdf** **23 17 08.7 +0.7**
FRTB Fartura 162.98 40 *e*P **PKPdf** **23 17 10.8 +2.0**
ITAB Concordia 164.41 55 *e*P **PKPdf** **23 17 11.8 +1.8**
CAM01 Campos-RJ 164.45 14 *e*P **PKPdf** **23 17 12.7 +2.5**
CPSB Cacapava Do Su 165.39 68 *e*P **PKPdf** **23 17 10.8 +0.1**
PLTB Pedras Altas 165.92 73 *e*P **PKPdf** **23 17 11.8 +0.6**
TER01 Tubaro-SC 167.23 51 *e*P **PKPdf** **23 17 13.0 +0.7**

MAN 26 23:05:24.6, 10.73N×125.02E, h7km, mb4.0, ML2.8, MS2.4, 4C-1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.51**	**309**	⇑*e*P	Pn	23 05 35.4	+1.0
OCLP				*e*S		23 05 43.2	
MSLP	**Maasin**	**0.61**	**195**	⇓*e*P	Pn	23 05 36.9	+0.6
MSLP				*e*S		23 05 46.5	
LLP	**Lapu-Lapu**	**1.11**	**249**	⇓*i*P	Pb	23 05 44.7	+3.0
LLP				*i* S		23 05 59.1	
GLSP	**General Luna,**	**1.44**	**131**	⇑*e*P	Pn	23 05 50.9	+0.9
GLSP				*e*S		23 06 11.4	
BIPH	**Bislig**	**2.85**	**152**	⇑*i*P	Pb	23 06 15.9	+0.5
BIPH				*i* S		23 06 52.5	

LJU 26 23:07:10.5, 46.40N×13.68E, h6km, ML0.1, 1D, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CADS	**Cadrg**	**0.17**	**166**	*i* Pg	Pg	23 07 14.1	+0.2
CADS				*i* Sg	Sg	23 07 17.4	+1.1
CADS				IAML		23 07 17.6	
	comp=Z,2.5nm,0.2s						
ROBS	**Robic**	**0.19**	**218**	⇓*i*Pg	Pg	23 07 14.4	+0.1
ROBS				*i* Sg	Sg	23 07 17.3	+0.5
ROBS				IAML		23 07 17.6	
	comp=Z,1.2nm,0.1s						

*SOME **26** 23:11:59.8, 39.42N×73.35E, h0km*
*IDC **26** 23:12:00.9±1.3, 39.33N×73.16E, h0km, mb3.8/12, mbtmp3.8/19, ML3.3/6, Error ellipse: s-maj=23.5km s-min=12.8km az=140.0*
*KRNET **26** 23:12:01.1±0.1, 39.42N×73.45E, mb4.4*
*ISU **26** 23:12:02.2, 39.70N×73.50E, h6km*
*NNC **26** 23:12:03.6±1.5, 39.50N×73.33E, h0km, mb4.7, mpv4.3, Error ellipse: s-maj=12.0km s-min=5.9km az=171.0*
*NEIC **26** 23:12:05.5±2.7, 39.48N±0.05×73.13E±0.06, h10km±1km, mb4.1/15, Error ellipse: s-maj=9.5km s-min=7.3km az=155.0*

ISC 26 23:12:05.1±1.2, 39.48N±0.04×73.19E±0.02, h17km±7km, n150, σ2.55/200, mb3.9/18, 21C-24D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**1.08**	**270**	⇓*e*P	**Pg**	**23 12 24.8**	**-1.1**
DRK				⇓*e*S	**Sn**	**23 12 41.8**	**+1.5**
	baz=74						
DRK	**Karamyk**	**1.08**	**270**		**Pg**	**23 12 24.4**	**-1.5**
OHH	**Osh**	**1.08**	**343**	⇓*e*P	**Pg**	**23 12 23.6**	**-2.5**
	baz=35						
OHH				⇓*e*S	**Sg**	**23 12 39.9**	**-0.4**
	baz=35						
TSTA	**Tashata**	**1.22**	**334**	P	**Pb**	**23 12 26.9**	**-0.8**
TSTA				S	**Sn**	**23 12 44.6**	**+1.1**
TSTA	**Tashata**	**1.22**	**334**	P	**Pb**	**23 12 26.9**	**-0.8**
TSTA				S	**Sn**	**23 12 44.6**	**+1.1**
FRG	**Fergana**	**1.40**	**310**	P	**Pn**	**23 12 30.5**	**+0.7**
FRG				S	**Sg**	**23 12 51.0**	**+0.7**
FRG	**Fergana**	**1.40**	**310**	P	**Pn**	**23 12 30.5**	**+0.7**
FRG				S	**Sg**	**23 12 51.0**	**+0.7**
CHMI	**Chimion**	**1.50**	**302**	P	**Pb**	**23 12 33.0**	**+0.5**
CHMI				S	**Sg**	**23 12 55.0**	**+1.4**
CHMI	**Chimion**	**1.50**	**302**	P	**Pb**	**23 12 33.0**	**+0.5**
CHMI				S	**Sg**	**23 12 55.0**	**+1.4**
BTK	**Batken**	**1.92**	**288**	⇑*e*P	**Pn**	**23 12 38.0**	**+1.0**
	baz=88						
BTK				⇑*e*S	**Sg**	**23 13 04.8**	**-2.0**
	baz=88						
BTK	**Batken**	**1.92**	**288**	Pn	**Pn**	**23 12 38.4**	**+1.4**
BTK	**Batken**	**1.92**	**288**	P	**Pb**	**23 12 39.4**	**-0.2**
BTK				S	**Sg**	**23 13 08.9**	**+2.1**
BTK	**Batken**	**1.92**	**288**	P	**Pb**	**23 12 39.4**	**-0.2**
BTK				S	**Sg**	**23 13 08.9**	**+2.1**
MINT	**Mingtut**	**1.96**	**301**	P	**Pb**	**23 12 40.9**	**+0.6**
MINT				S	**Sg**	**23 13 09.9**	**+1.6**
MINT	**Mingtut**	**1.96**	**301**	P	**Pb**	**23 12 40.9**	**+0.6**
MINT				S	**Sg**	**23 13 09.9**	**+1.6**
KSH	**Kashi**	**2.15**	**88**	Pg	Pn	23 12 33.8	-6.5
KSH				Sg	Sn	23 12 57.5	-9.1
KSH				pmax	pmax		
	comp=Z,75nm,0.6s						
KSH				smax	smax		
	comp=N,750nm,0.8s						
KSH				smax	smax		
	comp=E,530nm,0.8s						
GAR	**Garm**	**2.28**	**259**	⇑*e*P	**Pn**	**23 12 42.5**	**+0.5**
	baz=61						
GAR				⇑*e*S	**Sb**	**23 13 12.9**	**-0.9**
	baz=61						
GAR	**Garm**	**2.28**	**259**		**Pb**	**23 12 44.3**	**-1.5**
CHDK	**Chadak**	**2.39**	**309**	P	**Pn**	**23 12 45.7**	**+2.3**
CHDK				S	**Sg**	**23 13 21.0**	**-0.8**
CHDK	**Chadak**	**2.39**	**309**	P	**Pn**	**23 12 45.7**	**+2.3**
CHDK				S	**Sg**	**23 13 21.0**	**-0.8**
ARK	**Arkit**	**2.49**	**338**	P	**Pn**	**23 12 45.8**	**+0.9**
ARK				S	**Sb**	**23 13 19.8**	**-0.1**
ARK	**Arkit**	**2.49**	**338**	P	**Pn**	**23 12 45.8**	**+0.9**
ARK				S	**Sb**	**23 13 19.8**	**-0.1**
ARLS	**Aral**	**2.53**	**20**	⇓*e*P	**Pn**	**23 12 43.2**	**-2.2**
	baz=15						
ARLS				⇓*i*S	**Sn**	**23 13 14.5**	**-1.4**
	baz=15						
TRKS	**Terek-Say**	**2.57**	**323**	⇓*e*P	**Pn**	**23 12 45.6**	**-0.5**
	baz=20						
TRKS				⇓*e*S	**Sn**	**23 13 18.2**	**+1.2**
	baz=20						
AML	**Almayashu**	**2.67**	**8**	P	**Pn**	**23 12 49.7**	**+2.0**
	SNR=14						
UCH	**Uchtor**	**2.92**	**20**	P	**Pn**	**23 12 54.1**	**+3.0**
	SNR=13						
UCH	**Uchtor**	**2.92**	**20**	⇑*e*P	**Pn**	**23 12 49.1**	**-2.0**
	baz=16						
UCH				⇑*e*S	**Sn**	**23 13 24.0**	**-2.0**
	baz=16						
EKS2	**Erkin-Say**	**3.21**	**8**	P	**Pn**	**23 12 57.3**	**+2.6**
	SNR=32						
EKS2	**Erkin-Say**	**3.21**	**8**	⇑*e*P	**Pn**	**23 12 53.4**	**-1.3**
	baz=4.0						
EKS2				⇑*e*S	**Sn**	**23 13 31.7**	**-0.9**
	baz=4.0						
CHGR	**Chuyangaron**	**3.25**	**257**	⇓*e*P	**Pn**	**23 12 56.0**	**+0.8**
	baz=59						
CHGR				⇓*e*S	**Sn**	**23 13 35.9**	**+2.4**
	baz=59						
CHGR	**Chuyangaron**	**3.25**	**257**		**Pn**	**23 12 56.5**	**+1.2**
AAK	**Ala-Archa**	**3.30**	**17**	P	**Pn**	**23 12 58.5**	**+2.4**
	SNR=25						
AAK	**Ala-Archa**	**3.30**	**17**	Pn	**Pn**	**23 12 58.2**	**+2.2**
	comp=E,13nm,0.3s,baz=192,slow=7.1,SNR=21						
AAK				Sn	**Sb**	**23 13 41.2**	**-2.0**
	comp=E,11nm,0.3s,baz=143,slow=20,SNR=10.0 comp=E,75nm,0.5s						
AAK	**Ala-Archa**	**3.30**	**17**	⇑*e*P	**Pn**	**23 12 54.1**	**-2.0**
	baz=13						
AAK				⇑*e*S	**Sn**	**23 13 33.2**	**-1.8**
	baz=13						
KBK	**Karagaybulak**	**3.44**	**22**	P	**Pn**	**23 13 00.9**	**+3.0**
	SNR=10						
KBK	**Karagaybulak**	**3.44**	**22**	⇑*e*P	**Pn**	**23 12 56.0**	**-1.9**
	baz=19						
KBK				⇑*e*S	**Sn**	**23 13 35.9**	**-2.4**
	baz=19						
FRU1	**Bishkek**	**3.50**	**18**	Pn	**Pn**	**23 13 01.1**	**+2.4**
TAS	**Tashkent**	**3.50**	**303**	⇑*e*P	**Pn**	**23 12 59.6**	**+1.0**
	baz=2.0						
TAS				⇑*e*S	**Sn**	**23 13 42.6**	**+3.0**
	baz=2.0						
TAS	**Tashkent**	**3.50**	**303**		**Pb**	**23 13 08.3**	**+1.8**
IUG	**Iuzhnay**	**3.58**	**319**	*e*P	**Pb**	**23 13 08.7**	**+0.7**
	comp=E,895nm,0.3s						
IUG				*e*S	**Sg**	**23 13 59.0**	**-1.0**
	comp=E,428nm,0.6s						
IUG	**Iuzhnay**	**3.58**	**319**	Pg	**Pb**	**23 13 08.7**	**+0.7**
	comp=E,895nm,0.3s						
IUG				Lg	Lg	23 13 59.0	
	comp=E,428nm,0.6s						
ULHL	**Ulahol**	**3.60**	**39**	P	**Pb**	**23 13 06.9**	**-1.4**
	SNR=23						
ULHL	**Ulahol**	**3.60**	**39**	⇓*e*P	**Pn**	**23 12 57.5**	**-2.7**
	baz=36						
ULHL				⇓*e*S	**Sn**	**23 13 38.4**	**-4.0**
	baz=36						
BOOM	**Boomskoye usch**	**3.65**	**34**	⇓*e*P	**Pn**	**23 12 58.4**	**-2.5**
	baz=31						
BOOM				⇓*i*S	**Sn**	**23 13 40.2**	**-3.5**
	baz=31						
BOOM	**Boomskoye usch**	**3.65**	**34**	Pn	**Pn**	**23 13 03.0**	**+2.1**
DZA	**Taraz**	**3.68**	**338**	*e*P	**Pb**	**23 13 09.6**	**0.0**
	comp=E,90nm,0.4s						
DZA				*e*S	**Sg**	**23 14 00.2**	**-3.1**
	comp=E,418nm,0.4s						
DZA	**Taraz**	**3.68**	**338**	Pg	**Pb**	**23 13 09.6**	**0.0**
	comp=E,90nm,0.4s						
DZA				Lg	Lg	23 14 00.2	
	comp=E,418nm,0.4s						
CHMS	**Chumysh**	**3.70**	**18**	P	**Pn**	**23 13 03.6**	**+2.1**
	SNR=15						
CHMS	**Chumysh**	**3.70**	**18**	⇓*e*P	**Pn**	**23 12 59.7**	**-1.8**
	baz=15						
CHMS				⇓*e*S	**Sn**	**23 13 42.8**	**-1.9**
	baz=15						
CHMS	**Chumysh**	**3.70**	**18**	⇑Pn	**Pn**	**23 13 03.4**	**+1.9**
	comp=E,18nm,0.4s						
CHMS				⇑Lg	Lg	23 13 60.0	
	comp=E,57nm,0.6s						
TKM2	**Tokmak 2**	**3.88**	**27**	P	**Pn**	**23 13 05.9**	**+1.7**
	SNR=7.8						
TKM2	**Tokmak 2**	**3.88**	**27**	⇑Pg	**Pb**	**23 13 13.7**	**+0.5**
	comp=E,24nm,0.4s						
TKM2				⇓Lg	Lg	23 14 04.8	
	comp=E,60nm,0.5s						
USP	**Ospenovka**	**3.91**	**14**	P	**Pn**	**23 13 04.4**	**+0.1**
	SNR=10.0						
CHM	**Chimkent**	**3.92**	**317**	*e*P	**Pb**	**23 13 15.5**	**+1.8**
	comp=E,4.1nm,0.5s						
CHM				*e*S	**Sg**	**23 14 10.3**	**-0.8**
	comp=E,856nm,0.4s						
KDJ	**Kajisay**	**4.02**	**48**	⇓*e*P	Pn	23 13 02.9	-3.1
	baz=45						
KDJ				⇓*i*S	**Sn**	**23 13 47.7**	**-5.0**
	baz=45						
KDJ	**Kajisay**	**4.02**	**48**	Pn	**Pn**	**23 13 07.7**	**+1.8**
SGDS	**Sogindy**	**4.11**	**15**	*e*P	**Pb**	**23 13 16.3**	**-0.6**
	comp=E,12nm,0.4s						
SGDS				*e*S	**Sb**	**23 14 11.4**	**+5.1**
	comp=E,82nm,0.8s						
SGDS	**Sogindy**	**4.11**	**15**	Pg	**Pb**	**23 13 16.3**	**-0.6**
	comp=E,12nm,0.4s						
SGDS				Lg	Lg	23 14 12.2	
	comp=E,82nm,0.8s						
KST	**Kastek**	**4.12**	**30**	*e*P	**Pb**	**23 13 17.2**	**0.0**
	comp=E,19nm,0.8s						
KST				*e*S	**Sb**	**23 14 13.3**	**+6.6**
	comp=E,106nm,0.6s						
KST	**Kastek**	**4.12**	**30**	Pg	**Pb**	**23 13 17.2**	**0.0**
	comp=E,19nm,0.8s						
KST				Lg	Lg	23 14 14.0	
	comp=E,106nm,0.6s						
KK31	**Karatay Array**	**4.14**	**332**	Pn	**Pn**	**23 13 09.1**	**+1.6**
KK31	**Karatay Array**	**4.14**	**332**	Pn	**Pn**	**23 13 09.5**	**+2.1**
	comp=E,9.8nm,0.4s,baz=140,slow=13,SNR=50						
KK31				Sn	**Sb**	**23 14 03.1**	**-4.0**
	comp=E,38nm,0.3s,baz=145,slow=24,SNR=4.0						
KK31				⇓Lg	Lg	23 14 14.3	
	comp=E,44nm,0.4s,baz=341,slow=42,SNR=4.5						
KKAR	**Karatay Array**	**4.14**	**332**	⇓*e*P	**Pn**	**23 13 08.0**	**+0.5**
	baz=30						
KKAR				⇓*e*S	**Sn**	**23 13 56.6**	**+1.1**
	baz=30						
KKAR	**Karatay Array**	**4.14**	**332**	Pn	**Pn**	**23 13 09.5**	**+2.0**
KKAR	**Karatay Array**	**4.14**	**332**		**Pn**	**23 13 09.2**	**+1.8**
TARG	**Taragay, Kyrgy**	**4.17**	**56**	Pn	**Pn**	**23 13 10.1**	**+1.9**
DGS	**Degeres**	**4.23**	**27**	*e*P	**Pb**	**23 13 19.5**	**+0.5**
	comp=E,36nm,0.5s						
DGS				*e*S	**Sg**	**23 14 17.0**	**-3.7**
	comp=E,76nm,0.5s						
DGS	**Degeres**	**4.23**	**27**	Pg	**Pb**	**23 13 19.5**	**+0.5**
	comp=E,36nm,0.5s						
DGS				Lg	Lg	23 14 17.0	
	comp=E,76nm,0.5s						
BRLS	**Borolday**	**4.35**	**326**	*e*P	**Pb**	**23 13 20.8**	**-0.2**
	comp=E,5.4nm,0.4s						
BRLS				*e*S	**Sg**	**23 14 19.1**	**-5.6**
	comp=E,74nm,0.4s						
BRLS	**Borolday**	**4.35**	**326**	Pg	**Pb**	**23 13 20.8**	**-0.2**
	comp=E,5.4nm,0.4s						
BRLS				Lg	Lg	23 14 19.1	
	comp=E,74nm,0.4s						
MTBS	**Maitube**	**4.38**	**33**	*e*P	**Pb**	**23 13 22.1**	**+0.5**
	comp=E,16nm,0.2s						
MTBS				*e*S	**Sb**	**23 14 21.8**	**+7.5**
	comp=E,76nm,0.6s						
MTBS	**Maitube**	**4.38**	**33**	Pg	**Pb**	**23 13 22.1**	**+0.5**
	comp=E,16nm,0.2s						
MTBS				Lg	Lg	23 14 21.8	
	comp=E,76nm,0.6s						
TNSS	**Tian-Shan**	**4.54**	**37**	*e*P	**Pb**	**23 13 24.9**	**+0.4**
	comp=E,15nm,0.4s						
TNSS				*e*S	**Sb**	**23 14 26.0**	**+7.0**
	comp=E,36nm,0.5s						
AAA	**Alma-Ata**	**4.66**	**36**	*e*P	**Pb**	**23 13 27.2**	**+0.9**
	comp=E,29nm,0.5s						
AAA				*e*S	**Sb**	**23 14 30.0**	**+7.9**
	comp=E,134nm,0.6s						
KNDC	**Almaty**	**4.69**	**36**	⇑Pg	**Pb**	**23 13 30.9**	**+4.1**
	comp=E,130nm,0.8s						
KNDC				⇑Lg	Lg	23 14 31.0	
	comp=E,141nm,0.5s						
ANVS	**Anan'yevo**	**4.72**	**44**	⇓*e*P	**Pn**	**23 13 12.7**	**-2.9**
	baz=42						
ANVS				⇓*i*S	**Sn**	**23 14 04.9**	**-5.1**
	baz=42						
PRZ	**Przheval'sk**	**4.95**	**51**	Pn	**Pn**	**23 13 20.3**	**+1.5**
KTBS	**Karatobe**	**4.97**	**31**	*e*P	**Pb**	**23 13 32.1**	**+0.5**
	comp=E,13nm,0.3s						
KTBS				*e*S	**Sb**	**23 14 38.9**	**+7.9**
	comp=E,90nm,0.7s						
KTBS	**Karatobe**	**4.97**	**31**	Pg	**Pb**	**23 13 32.1**	**+0.5**
	comp=E,13nm,0.3s						
KTBS				Lg	Lg	23 14 38.9	
	comp=E,90nm,0.7s						
KUU	**Kurty**	**5.00**	**27**	*e*P	**Pb**	**23 13 32.4**	**+0.4**
	comp=E,21nm,0.5s						
KUU				*e*S	**Sb**	**23 14 39.6**	**+7.8**
	comp=E,77nm,0.5s						
KUU	**Kurty**	**5.00**	**27**	Pg	**Pb**	**23 13 32.4**	**+0.4**
	comp=E,21nm,0.5s						
KUU				Lg	Lg	23 14 40.1	
	comp=E,77nm,0.5s						
CHKK	**Chushkaly**	**5.21**	**32**	*e*P	**Pb**	**23 13 36.6**	**+0.9**
	comp=E,11nm,0.4s						
CHKK				*e*S	**Sb**	**23 14 46.2**	**+8.3**
	comp=E,35nm,0.5s						
CHKK	**Chushkaly**	**5.21**	**32**	Pg	**Pb**	**23 13 36.6**	**+0.9**
	comp=E,11nm,0.4s						
CHKK				Lg	Lg	23 14 46.2	
	comp=E,35nm,0.5s						
SATY	**Saty**	**5.31**	**46**	*e*P	**Pb**	**23 13 37.3**	**-0.2**
	comp=E,30nm,1.0s						
SATY				*e*S	**Sb**	**23 14 47.6**	**+6.7**
	comp=E,69nm,1.0s						
SATY	**Saty**	**5.31**	**46**	Pg	**Pb**	**23 13 37.3**	**-0.2**
	comp=E,30nm,1.0s						
SATY				Lg	Lg	23 14 48.4	
	comp=E,69nm,1.0s						
ZHN	**Zhinishke**	**5.40**	**45**	*e*P	**Pb**	**23 13 40.1**	**+1.1**
	comp=E,25nm,0.6s						
ZHN				*e*S	**Sb**	**23 14 52.0**	**+8.6**
	comp=E,38nm,0.9s						
KURS	**Kuram**	**5.47**	**41**	*e*P	**Pb**	**23 13 41.9**	**+1.7**
	comp=E,7.9nm,0.4s						
KURS				*e*S	**Sg**	**23 14 55.1**	**-5.6**
	comp=E,40nm,1.1s						
BTLS	**Baital**	**5.59**	**6**	*e*P	**Pb**	**23 13 43.8**	**+1.7**
	comp=E,5.9nm,0.6s						
BTLS				*e*S	**Sg**	**23 14 58.5**	**-5.8**
	comp=E,48nm,0.6s						
BTLS	**Baital**	**5.59**	**6**	Pg	**Pb**	**23 13 43.8**	**+1.7**
	comp=E,5.9nm,0.6s						
BTLS				Lg	Lg	23 14 58.5	
	comp=E,48nm,0.6s						
KPKS	**Kokpek**	**5.73**	**44**	*e*P	**Pb**	**23 13 45.7**	**+1.1**
	comp=E,16nm,0.5s						
KPKS				*e*S	Sb	23 15 02.6	+10
	comp=E,44nm,0.6s						
KPKS	**Kokpek**	**5.73**	**44**	Pg	**Pb**	**23 13 45.7**	**+1.1**
	comp=E,16nm,0.5s						
KPKS				Lg	Lg	23 15 02.7	
	comp=E,44nm,0.6s						
KBL	**Kabul**	**5.95**	**215**	Pn	**Pn**	**23 13 34.3**	**+1.8**
SHLS	**Shalkode**	**5.98**	**50**	*e*P	Pb	23 13 55.0	+6.2
	comp=E,11nm,0.4s						
SHLS				*e*S	**Sg**	**23 15 17.7**	**+0.8**
	comp=E,30nm,1.2s						
BLB	**Baldybastay**	**6.07**	**39**	*e*P	**Pb**	**23 13 52.8**	**+2.4**
	comp=E,16nm,0.5s						
BLB				*e*S	**Sg**	**23 15 14.0**	**-5.8**
	comp=E,51nm,0.7s						
BLB	**Baldybastay**	**6.07**	**39**	Pg	**Pb**	**23 13 52.8**	**+2.4**
	comp=E,16nm,0.5s						
BLB				Lg	Lg	23 15 14.0	
	comp=E,51nm,0.7s						
KNOS	**Konyrlen**	**6.61**	**41**	*e*P	**Pb**	**23 14 01.0**	**+1.5**
	comp=E,2.7nm,0.5s						
KNOS				*e*S	Sb	23 15 28.0	+10
	comp=E,48nm,0.5s						
DJR	**Jarkent**	**6.91**	**43**	*e*P	**Pb**	**23 14 08.4**	**+3.9**
	comp=E,8.2nm,0.5s						
DJR				*e*S	**Sg**	**23 15 41.1**	**-5.4**
	comp=E,29nm,1.2s						
DJR	**Jarkent**	**6.91**	**43**	Pg	**Pb**	**23 14 08.4**	**+3.9**
MAKZ	**Makanchi**	**9.73**	**38**	Pn	**Pn**	**23 14 25.7**	**+1.5**
MK31	**Makanchi Array**	**9.87**	**39**	Pn	**Pn**	**23 14 28.6**	**+2.5**
MKAR	**Makanchi Array**	**9.87**	**39**	Pn	**Pn**	**23 14 28.7**	**+2.6**
	comp=E,0.1nm,0.3s,baz=218,slow=13,SNR=4.2						
MKAR				Lg	Lg	23 17 13.3	
	comp=E,0.3nm,0.3s,baz=227,slow=21,SNR=2.8 comp=E,1.2nm,0.9s						
MKAR	**Makanchi Array**	**9.87**	**39**	Pn	**Pn**	**23 14 29.1**	**+3.0**
WMQ	**Urumqi**	**11.68**	**64**	*e*P	**Pn**	**23 14 51.5**	**+0.6**
WMQ				PP	**PnPn**	**23 15 00.5**	**+1.9**
WMQ				pmax	pmax		
	comp=Z,16nm,0.8s						
WMQ				smax	smax		
	comp=N,20nm,0.7s						
WMQ				smax	smax		
	comp=E,9.0nm,0.7s						
KURBB	**Kurchatov Arra**	**11.76**	**17**	Pn	**Pn**	**23 14 52.1**	**+0.3**
	comp=E,0.6nm,0.2s,baz=207,slow=12,SNR=1.4						
KURBB				Lg	Lg	23 18 14.9	
	comp=E,0.1nm,0.3s,baz=201,slow=28,SNR=4.7						
GEYT	**Alibeck**		**11.88**	**267**	Pn	**Pn**	**23 14 51.5**	**-2.2**
	comp=E,0.5nm,0.3s,baz=102,slow=12,SNR=2.2						
GEYT				Sn	**Sn**	**23 17 02.5**	**-3.3**
	comp=E,0.6nm,0.3s,baz=97,slow=12,SNR=2.6 comp=E,2.1nm,0.5s						
GEYT	**Alibeck**		**11.88**	**267**	Pn	**Pn**	**23 14 52.0**	**-1.7**
GYA0B	**ALIBECK ARRAY**		**11.88**	**267**	Pn	**Pn**	**23 14 51.9**	**-1.8**
AB31	**Akbulak array**		**13.59**	**320**	⇑P	**Pn**	**23 15 14.8**	**-2.0**
	comp=E,1.7nm,0.5s						
ABKAR	**Akbulak array**		**13.59**	**320**		**Pn**	**23 15 14.8**	**-2.0**
ABKAR	**Akbulak array**		**13.59**	**320**	Pn	**Pn**	**23 15 14.8**	**-2.0**
AKTO	**Aktyubinsk**		**15.30**	**321**	Pn	**Pn**	**23 15 37.7**	**-2.4**
	comp=E,0.4nm,0.3s,baz=125,slow=14,SNR=3.5 comp=E,1.1nm,0.4s						
AKTO	**Aktyubinsk**		**15.30**	**321**	⇑P	**P**	**23 15 43.6**	**-1.2**
	comp=E,7.8nm,0.9s						
ZALV	**Zalesovo Beam**		**16.48**	**25**	Pn	**Pn**	**23 15 55.4**	**+0.1**
	comp=E,0.2nm,0.3s,baz=220,slow=11,SNR=2.9 comp=E,0.5nm,0.3s						
ZALV	**Zalesovo Beam**		**16.48**	**25**	Pn	**Pn**	**23 15 56.6**	**+1.3**
ARU	**Arti**		**19.51**	**335**	P	**P**	**23 16 31.9**	**+0.7**
	baz=159,slow=9.2,SNR=4.4 comp=E,3.9nm,0.6s						
ARU	**Arti**		**19.51**	**335**	P	**P**	**23 16 32.8**	**+1.6**
ARU					IAmb	IAmb	23 16 41.6	
	comp=Z,9.7nm,1.1s						
GNI	**Garni**		**21.83**	**281**	P	**P**	**23 16 56.6**	**0.0**
	comp=E,5.3nm,0.9s,baz=63,slow=6.8,SNR=4.0 comp=E,5.3nm,0.9s						
GNI	**Garni**		**21.83**	**281**	P	**P**	**23 16 58.0**	**+1.3**
GNI					IAmb	IAmb	23 17 09.4	
	comp=Z,7.3nm,0.9s						
BELG	**Belogornoye**		**21.83**	**315**	P	**P**	**23 16 55.4**	**-0.9**
	comp=E,17nm,0.8s,baz=156,slow=19,SNR=4.3 comp=Z,17nm,0.8s						
ONI	**Oni**		**22.59**	**288**	P	**P**	**23 17 05.9**	**+1.2**
ONI					IAmb	IAmb	23 17 08.2	
	comp=Z,6.7nm,0.7s						
KBZ	**Khabaz**		**22.98**	**290**	P	**P**	**23 17 07.0**	**-1.6**
	comp=Z,1.8nm,1.1s,baz=98,slow=9.6,SNR=2.0 comp=Z,1.8nm,1.1s						
KIV	**Kislovodsk**		**23.13**	**291**	P	**P**	**23 17 11.7**	**+1.4**
GEVA	**Gevas**		**23.43**	**277**	P	**P**	**23 17 14.2**	**+0.7**
GEVA					IAmb	IAmb	23 17 23.5	
	comp=Z,5.3nm,1.4s						
HHC	**Hu-ho-hao-te**		**29.20**	**75**	*e*P	**P**	**23 18 08.0**	**+2.3**
BR131	**Keskin Array S**		**30.30**	**283**	P	**P**	**23 18 15.9**	**+0.3**
BR131					IAmb	IAmb	23 18 20.1	
	comp=Z,4.7nm,1.1s						
BRTR	**Keskin Array B**		**30.30**	**283**	P	**P**	**23 18 15.4**	**-0.2**
	comp=Z,0.9nm,0.7s,baz=96,slow=6.4,SNR=4.5 comp=Z,0.9nm,0.7s						
BRTR	**Keskin Array B**		**30.30**	**283**	P	**P**	**23 18 15.9**	**+0.3**
AKASG	**Malin Array Be**		**32.54**	**305**	P	**P**	**23 18 34.0**	**-0.9**
	comp=Z,0.6nm,0.4s,baz=76,slow=7.6,SNR=8.1 comp=Z,0.6nm,0.4s						
MLR	**Muntele Rosu**		**34.95**	**296**	P	**P**	**23 18 57.3**	**+1.3**
BURAR	**Bucovina Array**		**35.23**	**299**	P	**P**	**23 18 58.0**	**-0.4**
BUR08	**Bucovina Ar. S**		**35.23**	**299**	P	**P**	**23 18 58.3**	**-0.2**
BUR08					IAmb	IAmb	23 18 59.6	
	comp=Z,4.1nm,1.1s						
FIA1	**FINESS Array S**		**36.05**	**323**	P	**P**	**23 19 04.0**	**-1.2**
FINES	**FINESS Array B**		**36.05**	**323**	P	**P**	**23 19 04.6**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=117,slow=8.9,SNR=10 comp=Z,0.6nm,0.3s						
FINES	**FINESS Array B**		**36.05**	**323**	P	**P**	**23 19 04.7**	**-0.5**
PSZ	**Piszkesteto**		**38.76**	**301**	P	**P**	**23 19 28.7**	**+0.3**
PSZ					IAmb	IAmb	23 19 44.0	
	comp=Z,3.4nm,1.0s						
ARCES	**ARCESS Array B**		**39.10**	**336**	P	**P**	**23 19 30.7**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=103,slow=5.5,SNR=9.8 comp=Z,0.5nm,0.4s						
ARCES	**ARCESS Array B**		**39.10**	**336**	P	**P**	**23 19

*IDC **26** 23:35:01.2±3.4, 36°.99N×142°.46E, h0km, mb3.5/2, mbtmp3.6/4, ML3.1/2, Error ellipse: s-maj=57.5km s-min=35.1km az=24.0*
*JMA **26** 23:35:03.6±0.2, 37°.0N±0°.5×142°.3E±0°.7, h35km±4km, MV3.7/33, E OFF FUKUSHIMA PREF*
ISC 26 23:35:02.7±3.8, 37°.01N±0°.05×142°.27E±0°.08, h12km±24km, n22, σ0°996/26, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.17**	**288**	P		**Pn**	**23 35 24.7**	**-0.1**
JFK				S		**Sn**	**23 35 40.7**	**0.0**
ONAJ	**Iwakimizuishiy**	**1.18**	**275**	P		**Pn**	**23 35 24.8**	**-0.2**
ONAJ				S		**Sb**	**23 35 40.9**	**+0.7**
JMST	**Minamisoumatoc**	**1.31**	**304**	P		**Pn**	**23 35 27.1**	**+0.3**
JMST				S		**Sn**	**23 35 43.6**	**-0.6**
JFFD	**Fukushimafurud**	**1.37**	**274**	P		**Pn**	**23 35 27.7**	**+0.1**
JFFD				*eS*		**Sn**	**23 35 44.9**	**-0.7**
JHO	**Hitachi**	**1.42**	**254**	P		**Pn**	**23 35 28.4**	**+0.2**
JHO				S		**Sn**	**23 35 46.7**	**-0.1**
JMM	**Marumori**	**1.45**	**307**	P		**Pn**	**23 35 29.1**	**+0.4**
JMM				*eS*		**Sn**	**23 35 47.1**	**-0.6**
JIO	**Ouri**	**1.62**	**334**	P		**Pn**	**23 35 30.9**	**-0.2**
JIO				*eS*		**Sn**	**23 35 50.1**	**-1.7**
JFT	**Otama**	**1.62**	**289**	*eP*		**Pb**	**23 35 32.3**	**-0.2**
JFT				*eS*		**Sb**	**23 35 52.8**	**-0.1**
JOU	**Okura**	**1.86**	**317**	S		**Sn**	**23 35 58.1**	**+0.3**
JFY	**Yanaizu**	**2.08**	**282**	*eS*		**Sb**	**23 36 06.0**	**-0.3**
JYS	**Shirataka**	**2.13**	**305**	*eS*		**Sn**	**23 36 05.8**	**+1.4**
JAG	**Ashikaga**	**2.33**	**256**	*eS*		**Sn**	**23 36 09.8**	**+0.4**
MJAR	**Matsushiro Arr**	**3.29**	**263**	Pn		**Pn**	**23 35 55.9**	**+1.8**
	0.4nm,0.3s,baz=86,slow=16,SNR=8.5							
MJAR						Sn	**Sb**	**23 36 38.5**	**-2.5**
	0.4nm,0.3s,baz=79,slow=31,SNR=5.9							
	1.6nm,0.4s							
JHJ	**Hachijo jima 2**	**4.38**	**208**	Pn		**Pn**	**23 36 09.3**	**+0.3**
	9.7nm,0.3s,baz=79,slow=22,SNR=5.2							
JHJ						Sn	**Sn**	**23 36 58.3**	**-1.6**
	19nm,0.3s,baz=60,slow=16,SNR=2.4							
	25nm,0.2s							
H11N2	**WAKE ISLAND Hy**	**27.55**	**122**	T		T	00 09 51.2	
	baz=315,slow=75,SNR=15							
H11N1	**WAKE ISLAND Hy**	**27.56**	**122**	T		T	00 09 50.4	
	baz=315,slow=75,SNR=13							
H11N3	**WAKE ISLAND Hy**	**27.57**	**122**	T		T	00 09 54.3	
	baz=315,slow=75,SNR=12							
H11S1	**WAKE ISLAND Hy**	**28.27**	**124**	T		T	00 10 44.5	
	baz=316,slow=76,SNR=13							
H11S3	**WAKE ISLAND Hy**	**28.27**	**124**	T		T	00 10 45.1	
	baz=316,slow=76,SNR=11							
H11S2	**WAKE ISLAND Hy**	**28.29**	**124**	T		T	00 10 45.4	
	baz=316,slow=76,SNR=14							
WRA	**Warramunga Arr**	**57.13**	**189**	P		**P**	**23 44 49.5**	**+0.3**
	0.4nm,0.5s,baz=5.9,slow=7.0,SNR=6.3							
	0.4nm,0.5s							
ASAR	**Alice Springs**	**60.86**	**189**	P		**P**	**23 45 15.8**	**+0.8**
	0.3nm,0.7s,baz=14,slow=8.6,SNR=4.4							
	0.3nm,0.7s							

*IDC **26** 23:36:40.2±1.6, 39°.28N×73°.61E, h0km, mb3.5/3, mbtmp3.5/4, ML2.9/1, Error ellipse: s-maj=40.7km s-min=22.0km az=102.0*
*KRNET **26** 23:36:42.3±0.1, 39°.46N×73°.63E, mb3.6*
ISC 26 23:36:41.5±2.8, 39°.37N±0°.07×73°.64E±0°.06, h3km±17km, n12, σ1°47/21, mb3.6/3, 10C-6D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.33**	**331**	⇓*i*P		**Pn**	**23 37 06.1**	**-0.9**
	baz=29							
OHH				⇓*e*S		**Sb**	**23 37 23.4**	**-1.1**
	baz=29							
DRK	**Karamyk**	**1.43**	**275**	⇑*e*P		**Pb**	**23 37 09.1**	**+0.1**
	baz=72							
DRK				⇑*e*S		**Sg**	**23 37 28.8**	**+1.4**
	baz=72							
BTK	**Batken**	**2.28**	**288**	⇓*e*P		**Pb**	**23 37 22.8**	**-0.6**
	baz=86							
BTK				⇓*e*S		**Sb**	**23 37 52.1**	**+0.1**
	baz=86							
ARLS	**Aral**	**2.54**	**12**	⇑*e*P		**Pn**	**23 37 25.5**	**+1.7**
	baz=12							
ARLS				⇑*e*S		**Sn**	**23 37 57.2**	**+1.8**
	baz=12							
GAR	**Garm**	**2.61**	**263**	⇑*e*P		**Pb**	**23 37 27.9**	**-1.1**
	baz=61							
GAR				⇑*e*S		**Sb**	**23 38 01.1**	**-0.4**
	baz=61							
TRKS	**Terek-Say**	**2.88**	**319**	⇑*e*P		**Pn**	**23 37 29.7**	**+1.3**
	baz=18							
TRKS				⇑*e*S		**Sn**	**23 38 04.2**	**+0.5**
	baz=18							
UCH	**Uchtor**	**2.93**	**13**	⇑*e*P		**Pn**	**23 37 31.1**	**+1.7**
	baz=13							
UCH				⇑*e*S		**Sn**	**23 38 06.9**	**+1.5**
	baz=13							
AAK	**Ala-Archa**	**3.33**	**11**	Pn		**Pb**	**23 37 38.5**	**-2.7**
	1.1nm,0.3s,baz=154,slow=10.0,SNR=2.5							
AAK						Sn	**Sb**	**23 38 21.8**	**-0.4**
	2.8nm,0.3s,baz=109,slow=17,SNR=1.6							
	6.8nm,0.4s							
BOOM	**Boomskoye usch**	**3.57**	**28**	⇓*e*P		**Pn**	**23 37 40.1**	**+2.2**
	baz=29							
BOOM				⇓*i*S		**Sn**	**23 38 22.4**	**+1.7**
	baz=29							
FINES	**FINESS Array B**	**36.35**	**323**	P		**P**	**23 43 46.6**	**+0.2**
	0.8nm,0.7s,baz=108,slow=8.9,SNR=1.9							
	0.8nm,0.7s							
TORD	**Torodi Ar. Bea**	**67.86**	**269**	P		**P**	**23 47 40.1**	**-1.4**
	0.2nm,0.5s,baz=41,slow=5.0,SNR=2.0							
	0.2nm,0.5s							
WRA	**Warramunga Arr**	**81.80**	**124**	P		**P**	**23 49 01.2**	**-0.7**
	0.3nm,0.6s,baz=321,slow=5.5,SNR=1.1							
	0.3nm,0.6s							

*SOME **26** 23:37:44.8, 39°.48N×73°.43E, h15km*
*IDC **26** 23:37:44.6±1.1, 39°.29N×73°.78E, h0km, mb3.9/15, mbtmp3.9/21, ML3.3/7, Error ellipse: s-maj=19.9km s-min=13.3km az=140.0*
*KRNET **26** 23:37:45.8±0.1, 39°.39N×73°.55E, mb4.5*
*NNC **26** 23:37:47.3±2.6, 39°.58N×73°.44E, h0km, mb4.5, mpv4.2, Error ellipse: s-maj=21.2km s-min=9.1km az=171.0*
*NEIC **26** 23:37:48.0±2.8, 39°.48N±0°.05×73°.58E±0°.06, h10km±1km, mb4.3/34, Error ellipse: s-maj=8.7km s-min=7.8km az=143.0*
ISC 26 23:37:46.1±1.4, 39°.57N±0°.04×73°.70E±0°.03, h4km±9km, n125, σ1°90/157, mb4.2/27, 25C-16D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.19**	**324**	⇑*e*P		**Pn**	**23 38 09.8**	**+0.2**
	baz=33							
OHH				⇑*e*S		**Sn**	**23 38 27.6**	**+1.3**
	baz=33							
DRK	**Karamyk**	**1.47**	**267**	⇑*i*P		**Pn**	**23 38 11.4**	**-2.4**
	baz=74							
DRK				⇑*e*S		**Sn**	**23 38 30.0**	**-3.7**
	baz=74							
DRK	**Karamyk**	**1.47**	**267**	Pn		**Pn**	**23 38 13.7**	**-0.1**
BTK	**Batken**	**2.27**	**283**	⇓*i*P		**Pn**	**23 38 25.5**	**+0.9**
	baz=88							
BTK				⇓*i*S		**Sn**	**23 38 54.5**	**+1.4**
	baz=88							
BTK	**Batken**	**2.27**	**283**	Pn		**Pn**	**23 38 26.0**	**+1.4**
BTK				Sn		**Sb**	**23 38 58.2**	**+1.9**
ARLS	**Aral**	**2.34**	**11**	⇑*e*P		**Pg**	**23 38 30.0**	**-1.0**
	baz=13							
ARLS				⇑*e*S		**Sg**	**23 39 02.6**	**+1.3**
	baz=13							
ARK	**Arkit**	**2.59**	**330**	⇑*e*P		**Pb**	**23 38 32.3**	**-1.0**
	baz=34							
ARK				⇑*e*S		**Sb**	**23 39 06.2**	**+0.7**
	baz=34							
GAR	**Garm**	**2.69**	**259**	⇓*e*P		**Pn**	**23 38 30.1**	**-0.2**
	baz=62							
GAR				⇓*e*S		**Sn**	**23 39 02.4**	**-1.0**
	baz=62							
GAR	**Garm**	**2.69**	**259**			**Pb**	**23 38 35.0**	**+0.1**
UCH	**Uchtor**	**2.73**	**13**	⇑*e*P		**Pg**	**23 38 35.9**	**-2.5**
	baz=14							
UCH				⇑*i*S		**Sg**	**23 39 12.3**	**-1.5**
	baz=14							
TRKS	**Terek-Say**	**2.77**	**316**	⇓*e*P		**Pn**	**23 38 33.1**	**+1.7**
	baz=19							
TRKS				⇓*e*S		**Sb**	**23 39 07.7**	**-2.9**
	baz=19							
EKS2	**Erkin-Say**	**3.09**	**1**	⇑*e*P		**Pb**	**23 38 40.3**	**-1.5**
	baz=3.0							
EKS2				⇑*i*S		**Sb**	**23 39 20.2**	**+0.3**
	baz=3.0							
AAK	**Ala-Archa**	**3.13**	**11**	Pn		**Pb**	**23 38 42.7**	**+0.4**
	16nm,0.3s,baz=180,slow=13,SNR=9.0							
AAK						Sn	**Sg**	**23 39 23.9**	**-2.6**
	9.4nm,0.3s,baz=204,slow=20,SNR=1.7							
	41nm,0.5s							
AAK	**Ala-Archa**	**3.13**	**11**	⇑*i*P		**Pb**	**23 38 41.2**	**-1.2**
	baz=12							
AAK				⇑*e*S		**Sb**	**23 39 21.4**	**+0.5**
	baz=12							
AAK	**Ala-Archa**	**3.13**	**11**			**Pb**	**23 38 38.9**	**-3.5**
KBK	**Karagaybulak**	**3.23**	**17**	⇓*e*P		**Pb**	**23 38 42.8**	**-1.3**
	baz=18							
KBK				⇓*e*S		**Sb**	**23 39 24.3**	**+0.4**
	baz=18							
ULHL	**Ulahol**	**3.30**	**35**	⇑*e*P		**Pb**	**23 38 43.7**	**-1.6**
	baz=35							
ULHL				⇑*e*S		**Sb**	**23 39 26.1**	**+0.2**
	baz=35							
BOOM	**Boomskoye usch**	**3.38**	**29**	⇑*i*P		**Pb**	**23 38 44.9**	**-1.7**
	baz=30							
BOOM				⇑*i*S		**Sb**	**23 39 28.1**	**0.0**
	baz=30							
BOOM	**Boomskoye usch**	**3.38**	**29**	Pn		**Pb**	**23 38 44.2**	**-2.4**
TKM2	**Tokmak 2**	**3.64**	**22**	⇓Pg		**Pg**	**23 38 53.7**	**-2.2**
	22nm,0.5s							
TKM2				⇓Lg		Lg	23 39 45.9	
	45nm,0.7s							
CHGR	**Chuyangaron**	**3.65**	**257**	⇓*e*P		**Pn**	**23 38 43.3**	**-0.2**
	baz=59							
CHGR				⇓*e*S		**Sn**	**23 39 25.4**	**-1.7**
	baz=59							
CHGR	**Chuyangaron**	**3.65**	**257**	Pn		**Pn**	**23 38 44.4**	**+0.9**
KDJ	**Kajisay**	**3.68**	**45**	⇓*i*P		**Pb**	**23 38 49.0**	**-2.8**
	baz=44							
KDJ				⇓*i*S		**Sb**	**23 39 35.0**	**-1.8**
	baz=44							
KDJ	**Kajisay**	**3.68**	**45**			**Pb**	**23 38 47.9**	**-3.9**
DZA	**Taraz**	**3.77**	**332**	*eP*		**Pb**	**23 38 50.8**	**-2.6**
	79nm,0.3s							
DZA				*eS*		**Sb**	**23 39 38.2**	**-1.2**
	216nm,0.4s							
DZA	**Taraz**	**3.77**	**332**	Pg		**Pb**	**23 38 50.8**	**-2.6**
	79nm,0.3s							
DZA				Lg		Lg	23 39 38.2	
	216nm,0.4s							
IUG	**Iuzhnay**	**3.79**	**314**	*eP*		**Pb**	**23 38 51.2**	**-2.5**
	874nm,0.3s							
IUG				*eS*		**Sb**	**23 39 39.4**	**-0.7**
	284nm,0.6s							
IUG	**Iuzhnay**	**3.79**	**314**	Pg		**Pb**	**23 38 51.3**	**-2.5**
	874nm,0.3s							
IUG				Lg		Lg	23 39 40.1	
	284nm,0.6s							
TAS	**Tashkent**	**3.79**	**299**	⇑*e*P		**Pn**	**23 38 47.2**	**+1.8**
	baz=2.0							
TAS				⇑*i*S		**Sn**	**23 39 32.3**	**+1.8**
	baz=2.0							
TAS	**Tashkent**	**3.79**	**299**	Pn		**Pn**	**23 38 47.7**	**+2.3**
TARG	**Taragay, Kyrgy**	**3.80**	**54**	Pn		**Pb**	**23 38 51.6**	**-2.4**
KST	**Kastek**	**3.87**	**25**	*eP*		**Pg**	**23 38 59.4**	**-0.8**
	25nm,0.6s							
KST				*eS*		**Sg**	**23 39 53.5**	**+3.1**
	90nm,0.5s							
KST	**Kastek**	**3.87**	**25**	Pg		**Pg**	**23 38 59.4**	**-0.8**
	25nm,0.6s							
KST				Lg		Lg	23 39 53.9	
	90nm,0.5s							
SGDS	**Sogindy**	**3.94**	**10**	*eP*		**Pg**	**23 39 00.1**	**-1.6**
	21nm,0.7s							
SGDS				*eS*		**Sg**	**23 39 54.6**	**+1.8**
	38nm,1.0s							
SGDS	**Sogindy**	**3.94**	**10**	Pg		**Pg**	**23 39 00.1**	**-1.6**
	21nm,0.7s							
SGDS				Lg		Lg	23 39 55.3	
	38nm,1.0s							
MTBS	**Maitube**	**4.11**	**29**	*eP*		**Pg**	**23 39 04.2**	**-0.6**
	20nm,0.3s							
MTBS				*eS*		**Sg**	**23 40 01.4**	**+3.3**
	32nm,0.6s							
MTBS	**Maitube**	**4.11**	**29**	Pg		**Pg**	**23 39 04.2**	**-0.6**
	20nm,0.3s							
MTBS				Lg		Lg	23 40 01.3	
	32nm,0.6s							
TNSS	**Tian-Shan**	**4.24**	**34**	*eP*		**Pg**	**23 39 06.5**	**-0.9**
	27nm,0.6s							
TNSS				*eS*		**Sg**	**23 40 05.8**	**+3.4**
	24nm,0.6s							
TNSS	**Tian-Shan**	**4.24**	**34**	Pg		**Pg**	**23 39 06.5**	**-0.9**
	27nm,0.6s							
TNSS				Lg		Lg	23 40 05.8	
	24nm,0.6s							
KK31	**Karatay Array**	**4.27**	**327**	Pn		**Pn**	**23 38 55.0**	**+3.0**
KK31	**Karatay Array**	**4.27**	**327**	⇑Pn		**Pn**	**23 38 56.1**	**+4.1**
	9.4nm,0.4s,baz=141,slow=12,SNR=15							
KK31						Pg	**Pg**	**23 39 07.2**	**-0.7**
	10nm,0.3s,baz=151,slow=16,SNR=6.9							
KK31						⇑Sn	**Sb**	**23 39 49.2**	**-4.5**
	21nm,0.4s,baz=139,slow=25,SNR=4.0							
KKAR	**Karatay Array**	**4.27**	**327**	Pn		**Pn**	**23 38 55.3**	**+3.3**
KKAR	**Karatay Array**	**4.27**	**327**	Pn		**Pn**	**23 38 55.7**	**+3.7**
AAA	**Alma-Ata**	**4.37**	**33**	*eP*		**Pg**	**23 39 09.1**	**-0.7**
	31nm,0.4s							
AAA				*eS*		**Sg**	**23 40 09.5**	**+3.1**
	109nm,0.6s							
ANVS	**Anan'yevo**	**4.39**	**42**	⇓*e*P		Pb	23 38 58.7	-5.2
	baz=41							
ANVS				⇓*i*S		**Sb**	**23 39 52.3**	**-5.0**
	baz=41							
KNDC	**Almaty**	**4.40**	**33**	⇑Pg		**Pg**	**23 39 09.9**	**-0.4**
	86nm,0.7s							
KNDC				⇑Lg		Lg	23 40 10.9	
	249nm,0.8s							
BRLS	**Borolday**	**4.52**	**321**	*eP*		**Pb**	**23 39 05.5**	**-0.6**
	2.0nm,0.3s							
BRLS				*eS*		**Sb**	**23 40 03.4**	**+2.4**
	84nm,0.7s							
PRZ	**Przheval'sk**	**4.59**	**49**			**Pb**	**23 39 02.8**	**-4.7**
KUU	**Kurty**	**4.75**	**24**	*eP*		**Pg**	**23 39 15.6**	**-1.6**
	19nm,0.6s							
KUU				*eS*		**Sg**	**23 40 20.7**	**+2.0**
	83nm,0.8s							
KUU	**Kurty**	**4.75**	**24**	Pg		**Pg**	**23 39 15.6**	**-1.6**
	19nm,0.6s							
KUU				Lg		Lg	23 40 20.7	
	83nm,0.8s							
CHKK	**Chushkaly**	**4.94**	**29**	*eP*		**Pg**	**23 39 19.2**	**-1.5**
	13nm,0.7s							
CHKK				*eS*		**Sg**	**23 40 27.4**	**+2.7**
	40nm,0.6s							
CHKK	**Chushkaly**	**4.94**	**29**	Pg		**Pg**	**23 39 19.2**	**-1.5**
	13nm,0.7s							
CHKK				Lg		Lg	23 40 27.8	
	40nm,0.6s							
SATY	**Saty**	**4.97**	**44**	*eP*		**Pg**	**23 39 19.4**	**-1.9**
	14nm,0.8s							
SATY				*eS*		**Sg**	**23 40 27.6**	**+1.9**
	37nm,1.0s							
SATY	**Saty**	**4.97**	**44**	Pg		**Pg**	**23 39 19.4**	**-1.9**
	14nm,0.8s							
SATY				Lg		Lg	23 40 27.6	
	37nm,1.0s							
KURS	**Kuram**	**5.16**	**39**	*eP*		**Pg**	**23 39 23.4**	**-1.5**
	10nm,0.6s							
KURS				*eS*		**Sg**	**23 40 34.1**	**+2.4**
	13nm,1.0s							
KURS	**Kuram**	**5.16**	**39**	Pg		**Pg**	**23 39 23.4**	**-1.5**
	10nm,0.6s							
KURS				Lg		Lg	23 40 34.1	
	13nm,1.0s							
BTLS	**Baital**	**5.48**	**3**	*eP*		**Pg**	**23 39 28.2**	**-2.8**
	9.3nm,0.6s							
BTLS				*eS*		**Sg**	**23 40 42.1**	**+0.1**
	30nm,0.6s							
PDGK	**Podgornoye**	**5.75**	**47**	Pg		**Pg**	**23 39 33.8**	**-2.4**
	2.4nm,0.5s							
PDGK				Lg		Lg	23 40 52.2	
	8.7nm,0.8s							
CEP	**Cherat**	**5.91**	**195**	P		**Pn**	**23 39 18.4**	**+3.8**
KBL	**Kabul**	**6.25**	**218**			**Pn**	**23 39 21.6**	**+2.4**
THW	**Thamme Wali**	**6.94**	**194**	P		**Pn**	**23 39 31.6**	**+2.9**
MK31	**Makanchi Array**	**9.56**	**38**	Pn		Pn	23 40 09.0	+4.4
MKAR	**Makanchi Array**	**9.56**	**38**	Pn		**Pn**	**23 40 07.3**	**+2.7**
	0.1nm,0.3s,baz=241,slow=15,SNR=2.9							
MKAR						Lg	Lg	23 42 49.5	
	0.1nm,0.3s,baz=228,slow=28,SNR=2.2							
KURBB	**Kurchatov Arra**	**11.57**	**16**	Pn		**Pn**	**23 40 35.1**	**+3.1**
	0.1nm,0.3s,baz=209,slow=11,SNR=1.5							
KURBB						Lg	Lg	23 43 55.7	
	0.1nm,0.3s,baz=204,slow=30,SNR=8.8							
	0.5nm,0.3s							
KURK	**Kurchatov**	**11.67**	**16**			**Pn**	**23 40 35.1**	**+1.7**
GEYT	**Alibeck**	**12.28**	**267**	Pn		**Pn**	**23 40 41.1**	**-0.7**
	0.9nm,0.3s,baz=96,slow=12,SNR=6.3							
GEYT						Sn	**Sn**	**23 42 57.2**	**-2.0**
	0.5nm,0.3s,baz=65,slow=24,SNR=3.0							
	1.5nm,0.3s							
GYA0B	**ALIBECK ARRAY**	**12.28**	**267**	Pn		**Pn**	**23 40 40.6**	**-1.3**
AB31	**Akbulak array**	**13.78**	**319**	P		**Pn**	**23 41 02.1**	**-0.1**
	1.1nm,0.5s,baz=126,slow=12,SNR=17							
ABKAR	**Akbulak array**	**13.78**	**319**	Pn		**Pn**	**23 41 02.3**	**+0.1**
ABKAR	**Akbulak array**	**13.78**	**319**	Pn		**Pn**	**23 41 02.0**	**-0.2**
AKTO	**Aktyubinsk**	**15.49**	**320**	Pn		**Pn**	**23 41 25.5**	**+0.2**
	0.4nm,0.3s,baz=130,slow=14,SNR=7.5							
AKTO						Sn	**Sn**	**23 44 11.2**	**-6.2**
	0.2nm,0.3s,baz=178,slow=18,SNR=2.4							
	3.0nm,0.6s							
AKTO	**Aktyubinsk**	**15.49**	**320**	⇑P		**Pn**	**23 41 25.6**	**+0.2**
	4.8nm,0.9s							
ZAA0	**Zalesovo Array**	**16.25**	**24**	Pn		**P**	**23 41 38.1**	**-0.1**
ZALV	**Zalesovo Beam**	**16.25**	**24**	Pn		**P**	**23 41 37.0**	**-1.2**
	0.3nm,0.3s,baz=204,slow=10,SNR=5.5							
	1.3nm,0.7s							
ZALV	**Zalesovo Beam**	**16.25**	**24**	P		**P**	**23 41 38.7**	**+0.5**
ARU	**Arti**	**19.60**	**334**	P		**Pn**	**23 42 18.0**	**+1.5**
	baz=141,slow=13,SNR=3.5							
	4.1nm,0.8s							
ARU	**Arti**	**19.60**	**334**	P		**Pn**	**23 42 17.1**	**+0.6**
BELG	**Belogornoye**	**22.06**	**314**	P		**P**	**23 42 44.0**	**+2.3**
	24nm,1.0s,baz=150,slow=16,SNR=5.1							
	24nm,1.0s							
GNI	**Garni**	**22.20**	**281**	P		**P**	**23 42 44.7**	**+1.0**
	6.8nm,0.8s,baz=63,slow=4.5,SNR=4.0							
	6.8nm,0.8s							
GNI	**Garni**	**22.20**	**281**	P		**P**	**23 42 43.8**	**+0.1**
GNI					IAmb	IAmb	23 42 56.1	
	comp=Z,10nm,1.0s							
ONI	**Oni**	**22.94**	**287**	P		**P**	**23 42 52.8**	**+1.4**
ONI					IAmb	IAmb	23 42 55.2	
	comp=Z,12nm,0.7s							
KBZ	**Khabaz**	**23.32**	**290**	P		**P**	**23 42 57.6**	**+2.5**
	comp=Z,1.0nm,0.7s,baz=79,slow=5.2,SNR=1.8							
	comp=Z,1.0nm,0.7s							
KARS	**Kars**	**23.40**	**282**	P		**P**	**23 42 55.1**	**-1.0**
KARS					IAmb	IAmb	23 43 00.3	
	comp=Z,19nm,0.9s							
KVAR	**Kislovodsk Arr**	**23.47**	**291**	P		**P**	**23 42 59.1**	**+2.4**
	comp=Z,2.2nm,0.8s,baz=88,slow=13,SNR=1.7							
	comp=Z,2.2nm,0.8s							
KIV	**Kislovodsk**	**23.47**	**291**	P		**P**	**23 42 56.0**	**-0.8**
KIV					IAmb	IAmb	23 43 13.6	
	comp=Z,6.4nm,0.6s							
GEVA	**Gevas**	**23.82**	**277**	P		**P**	**23 43 00.3**	**0.0**
SONM	**Songino Array**	**24.89**	**60**	P		**P**	**23 43 12.7**	**+2.6**
ILGA	**Ilgaz**	**30.35**	**286**	P		**P**	**23 44 00.0**	**+0.9**
BR131	**Keskin Array S**	**30.67**	**283**	P		**P**	**23 44 01.2**	**-0.7**
BR131					IAmb	IAmb	23 44 03.8	
	comp=Z,2.8nm,0.7s							
BRTR	**Keskin Array B**	**30.67**	**283**	P		**P**	**23 44 02.8**	**+0.8**
	comp=Z,1.7nm,0.7s,baz=89,slow=7.6,SNR=12							
	comp=Z,1.7nm,0.7s							
BRTR	**Keskin Array B**	**30.67**	**283**	P		**P**	**23 44 01.3**	**-0.6**
PBA	**Port Blair**	**32.52**	**144**	P		**P**	**23 44 19.0**	**+0.8**
AKASG	**Malin Array Be**	**32.82**	**305**	P		**P**	**23 44 20.8**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=79,slow=7.3,SNR=6.0							
	comp=Z,0.4nm,0.4s							
MLR	**Muntele Rosu**	**35.27**	**296**	P		**P**	**23 44 42.4**	**+0.5**
MLR					IAmb	IAmb	23 44 51.8	
	comp=Z,4.2nm,1.0s							
BUR08	**Bucovina Ar. S**	**35.54**	**299**	P		**P**	**23 44 45.2**	**+1.0**
BUR08					IAmb	IAmb	23 45 12.7	
	comp=Z,5.0nm,1.4s							
FINES	**FINESS Array B**	**36.22**	**323**	P		**P**	**23 44 50.9**	**+1.1**
	comp=Z,1.7nm,0.4s,baz=113,slow=10,SNR=37							
	comp=Z,1.7nm,0.4s							
FINES	**FINESS Array B**	**36.22**	**323**	P		**P**	**23 44 50.6**	**+0.8**
OJC	**Ojcow**	**38.85**	**304**	P		**P**	**23 45 12.8**	**+0.6**
OJC					IAmb	IAmb	23 45 17.2	
	comp=Z,6.1nm,1.4s							
ARCES	**ARCESS Array B**	**39.19**	**335**	P		**P**	**23 45 15.3**	**+0.6**
	comp=Z,0.6nm,0.4s,baz=115,slow=8.1,SNR=4.3							
	comp=Z,0.6nm,0.4s							
ARCES	**ARCESS Array B**	**39.19**	**335**		IAmb	IAmb	23 45 28.5	
	comp=Z,9.2nm,1.5s							
DIVS	**Divibare**	**39.68**	**295**	P		**P**	**23 45 18.0**	**-1.4**
KBN	**Korca**	**39.98**	**289**	P		**P**	**23 45 20.8**	**-1.1**
PDG	**Podgorica**	**40.60**	**292**	P		**P**	**23 45 26.2**	**-0.7**
GERES	**GERESS Array B**	**42.98**	**303**	P		**P**	**23 45 47.7**	**+1.3**
	comp=Z,0.4nm,0.5s,baz=64,slow=9.1,SNR=7.4							
	comp=Z,0.4nm,0.5s							
GERES	**GERESS Array B**	**42.98**	**303**	P		**P**	**23 45 46.1**	**-0.3**
NC303	**NORSAR

mb4.6/41, Error ellipse: s-maj=7.6km s-min=1.6km az=219.0

ISC 26 23:41:40.7±0.7, 36°97'N±0'04×142°23'E±0'05, h24km±4km, n164, σ1°30/161, mb4.3/56, 7C-16D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JFK	**Kawauchi**	**1.15**	**290**	⇓	*iP*	**Pn**	**23 41 59.8**	**-1.6**
JFK				⇓	S	**Sn**	**23 42 15.5**	**-0.8**
ONAJ	**Iwakimizuishiy**	**1.15**	**277**	⇓	*iP*	**Pn**	**23 41 59.9**	**-1.5**
ONAJ	**Iwakimizuishiy**	**1.15**	**277**	A		A	23 41 59.9	
	comp=E,15nm,0.3s,comp=E,7.0nm,0.3s							
JMST	**Minamisoumatoc**	**1.31**	**306**	⇓	*iP*	**Pn**	**23 42 01.9**	**-1.6**
JMST				⇓	S	**Sn**	**23 42 19.1**	**-1.0**
JMST	**Minamisoumatoc**	**1.31**	**306**	A		A	23 42 01.9	
	comp=E,4.0nm,2.8s,comp=E,6.0nm,0.3s							
JFFD	**Fukushimafurud**	**1.34**	**276**	P		**Pn**	**23 42 02.6**	**-1.3**
JFFD					*eS*	**Sn**	**23 42 20.0**	**-1.0**
JHO	**Hitachi**	**1.38**	**255**	⇓	P	**Pn**	**23 42 03.4**	**-1.0**
JHO				⇓	*eS*	**Sn**	**23 42 20.7**	**-1.2**
JMM	**Marumori**	**1.45**	**308**			**Pn**	**23 42 04.1**	**-1.4**
JMM						**Sb**	**23 42 25.2**	**+0.1**
JMM	**Marumori**	**1.45**	**308**	⇓	P	**Pn**	**23 42 04.0**	**-1.4**
JHYU	**Hitachinakayam**	**1.46**	**245**	A		A	23 42 04.6	
	comp=E,5.0nm,7.3s,comp=E,6.0nm,0.6s							
JFT	**Otama**	**1.61**	**290**	⇓	P	**Pn**	**23 42 07.0**	**-0.5**
JFT				⇓	*eS*	**Sn**	**23 42 27.8**	**+0.2**
JFT	**Otama**	**1.61**	**290**	A		A	23 42 07.0	
	comp=E,8.0nm,0.9s,comp=E,9.0nm,5.4s							
JIO	**Ouri**	**1.64**	**335**	⇓	P	**Pn**	**23 42 06.4**	**-1.6**
JIO				⇓	*eS*	**Sn**	**23 42 26.2**	**-2.1**
JIHU	**Itakohorinouch**	**1.70**	**234**	A		A	23 42 08.0	
	comp=E,13nm,2.7s,comp=E,14nm,2.2s							
JYT	**Yasato**	**1.80**	**246**	Pn		**Pn**	**23 42 10.2**	**+0.1**
JYT				Sn		**Sn**	**23 42 32.2**	**0.0**
JYT	**Yasato**	**1.80**	**246**	A		A	23 42 09.5	
	comp=E,7.0nm,0.4s,comp=E,7.0nm,0.4s							
JSB	**Shiboa**	**1.85**	**271**	A		A	23 42 10.2	
	comp=E,9.0nm,0.8s,comp=E,11nm,0.9s							
JOU	**Okura**	**1.87**	**319**	A		A	23 42 09.9	
	comp=E,10.0nm,0.6s,comp=E,8.0nm,0.7s							
JYAR	**Yonezawaarcadi**	**1.91**	**300**	A		A	23 42 10.7	
	comp=E,15nm,0.7s,comp=E,12nm,0.7s							
JOFO	**Osakifurukawao**	**1.94**	**328**	A		A	23 42 10.6	
	comp=E,16nm,1.9s,comp=E,14nm,1.6s							
JFY	**Yanaizu**	**2.06**	**283**	P		**Pn**	**23 42 14.0**	**+0.1**
JMK	**Ichinoseki**	**2.13**	**338**	P		**Pn**	**23 42 14.1**	**-0.7**
MJAR	**Matsushiro Arr**	**3.26**	**264**	Pn		**Pn**	**23 42 31.0**	**+0.7**
	5.0nm,0.3s,baz=89,slow=16,SNR=67							
MJAR				Sn		**Sn**	**23 43 05.3**	**-2.9**
	2.6nm,0.3s,baz=89,slow=18,SNR=6.6							
MJAR				LR		LR	23 44 02.7	
	comp=Z,1μm,18.4s,baz=164,slow=44 44nm,0.5s							
MJAR	**Matsushiro Arr**	**3.26**	**264**	Pn		**Pn**	**23 42 31.3**	**+1.0**
MJAR	**Matsushiro Arr**	**3.26**	**264**	P		**Pn**	**23 42 31.3**	**+1.0**
MAJO	**Matsushiro**	**3.26**	**264**	Pn		**Pn**	**23 42 32.2**	**+1.9**
MAJO	**Matsushiro**	**3.26**	**264**	P		**Pn**	**23 42 32.2**	**+1.9**
MJB9	**Matsu-Tunnel**	**3.26**	**264**			**Pn**	**23 42 32.3**	**+1.9**
JSD	**Sado**	**3.33**	**290**	Pn		**Pn**	**23 42 32.0**	**+0.8**
JTM	**Tenmabayashi**	**3.92**	**347**	Pn		**Pn**	**23 42 40.6**	**+1.3**
JGF	**Kuroka**	**4.17**	**252**	Pn		**Pn**	**23 42 45.6**	**+2.8**
JHJ2	**Mitsune**	**4.33**	**208**	Pn		**Pn**	**23 42 45.7**	**+0.7**
JHJ	**Hachijo jima 2**	**4.33**	**208**	Pn		**Pn**	**23 42 45.6**	**+0.6**
	36nm,0.3s,baz=49,slow=19,SNR=9.3							
JHJ				Sn		**Sn**	**23 43 33.9**	**-1.0**
	76nm,0.3s,baz=31,slow=19,SNR=8.6 75nm,0.3s							
INU	**Inuyama**	**4.52**	**251**	Pn		**Pn**	**23 42 50.4**	**+2.8**
ERM	**Erimo**	**5.09**	**8**	Pn		**Pn**	**23 42 54.0**	**-1.4**
ERM	**Erimo**	**5.09**	**8**	⇑	*eP*	**Pn**	**23 42 53.9**	**-1.5**
ASAJ	**Asahikawa**	**7.14**	**2**	P		**Pn**	**23 43 21.5**	**-2.2**
JKA	**Kamikawa-asahi**	**7.14**	**2**	Pn		**Pn**	**23 43 21.5**	**-2.2**
JHS	**Saijyo**	**7.64**	**258**	Pn		**Pn**	**23 43 33.5**	**+2.9**
SHO	**Shikotan**	**7.73**	**26**	P		**Pn**	**23 43 32.0**	**+0.3**
JCJ	**Chichijima**	**9.85**	**180**	Sn		**Sn**	**23 45 42.5**	**-8.0**
	4.2nm,0.3s,baz=294,slow=15,SNR=1.9							
JCJ	**Chichijima**	**9.85**	**180**	Pn		**Pn**	**23 44 01.6**	**+0.8**
JNU	**Nakatsue**	**10.06**	**251**	Pn		**Pn**	**23 44 04.4**	**+0.6**
	1.2nm,0.3s,baz=58,slow=7.4,SNR=6.5 19nm,0.7s							
JNU	**Nakatsue**	**10.06**	**251**			**Pn**	**23 44 06.1**	**+2.3**
USA0B	**Ussuriysk Arra**	**10.61**	**316**	Pn		**Pn**	**23 44 12.7**	**+1.5**
USA0B	**Ussuriysk Arra**	**10.61**	**316**	P		**Pn**	**23 44 12.7**	**+1.5**
USRK	**Ussuriysk Ar.**	**10.61**	**316**	Pn		**Pn**	**23 44 12.0**	**+0.8**
	0.8nm,0.3s,baz=123,slow=15,SNR=1.9							
JTU	**Tsushima**	**10.71**	**261**	Pn		**Pn**	**23 44 12.1**	**-0.5**
SEHB	**SEOHWA**	**11.16**	**281**	Pn		**Pn**	**23 44 19.8**	**+1.0**
KSRS	**Korea Array**	**11.42**	**277**	Pn		**Pn**	**23 44 26.0**	**+3.7**
	0.3nm,0.3s,baz=89,slow=14,SNR=19							
KSRS				LR		LR	23 48 37.6	
	comp=Z,336nm,18.3s,baz=115,slow=37							
KSRS	**Korea Array**	**11.42**	**277**	*eP*		**Pn**	**23 44 26.3**	**+4.0**
KSRS				pmax		pmax		
	comp=Z,6.0nm,0.9s							
KLR	**Kul'dur**	**14.43**	**331**	Pn		**Pn**	**23 45 03.3**	**0.0**
	comp=Z,0.2nm,0.3s,baz=135,slow=13,SNR=2.3 comp=Z,0.9nm,0.5s							
KLR	**Kul'dur**	**14.43**	**331**	⇓	*eP*	**Pn**	**23 45 03.9**	**+0.6**
KLR				pmax		pmax		
	comp=Z,18nm,3.3s							
ZEA	**Zeya**	**19.73**	**333**	*i*	P	**P**	**23 46 08.1**	**-0.3**
BJT	**Baijiatuan**	**20.60**	**286**	P		Pn	23 46 19.5	-0.9
BJT	**Baijiatuan**	**20.60**	**286**	P		Pn	23 46 19.5	-0.9
BJT				pmax		pmax		
	comp=Z,7.0nm,0.5s							
HNS	**HongShan**	**21.91**	**279**	⇓	P	**P**	**23 46 29.3**	**-2.8**
HNS				pmax		pmax		
	comp=Z,19nm,0.8s							
KNMB	**Chin-men Tao**	**23.91**	**245**	P		**P**	**23 46 52.6**	**-0.1**
LYN	**LuoYang**	**24.23**	**273**	⇓	P	**P**	**23 46 55.0**	**-0.6**
LYN				pmax		pmax		
	comp=Z,10.0nm,0.6s							
YAK	**Yakutsk**	**26.28**	**347**	⇑	*eP*	**P**	**23 47 12.9**	**-1.0**
YAK				pmax		pmax		
	comp=Z,17nm,0.5s							
SEY	**Seymchan**	**26.73**	**10**	P		**P**	**23 47 19.2**	**+1.2**
	comp=Z,2.0nm,0.3s,baz=194,slow=9.8,SNR=5.9 comp=Z,2.0nm,0.3s							
SEY	**Seymchan**	**26.73**	**10**	⇓	*eP*	**P**	**23 47 18.3**	**+0.3**
SEY				pmax		pmax		
	comp=Z,12nm,1.5s							
SMY	**Shemya**	**27.25**	**45**	P		**P**	**23 47 23.0**	**+0.2**
SMY	**Shemya**	**27.25**	**45**	P		**P**	**23 47 23.0**	**+0.2**
SMY				pmax		pmax		
	comp=Z,41nm,1.1s							
H11N2	**WAKE ISLAND Hy**	**27.56**	**122**	T		T	00 16 26.5	
	baz=314,slow=75,SNR=70							
H11N1	**WAKE ISLAND Hy**	**27.57**	**122**	T		T	00 16 33.0	
	baz=314,slow=75,SNR=72							
H11N3	**WAKE ISLAND Hy**	**27.57**	**122**	T		T	00 16 31.2	
	baz=314,slow=75,SNR=64							
WAKE	**Wake Island**	**27.70**	**123**	P		**P**	**23 47 27.3**	**+0.2**
ULN	**Ulaanbaatar**	**27.93**	**304**	P		**P**	**23 47 28.0**	**-1.1**
ULN				IAmb		IAmb	23 47 30.3	
	comp=Z,9.7nm,1.4s							
ULN	**Ulaanbaatar**	**27.93**	**304**	P		**P**	**23 47 28.0**	**-1.1**
ULN				pmax		pmax		
	comp=Z,10.0nm,1.5s							
BOD	**Bodaibo**	**27.93**	**327**	*eP*		**P**	**23 47 28.1**	**-0.7**
BOD				pmax		pmax		
	comp=Z,7.0nm,1.4s							
ENH	**Enshi**	**27.98**	**266**	P		**P**	**23 47 29.3**	**-0.2**
ENH				IAmb		IAmb	23 47 30.8	
	comp=Z,23nm,1.0s							
H11S1	**WAKE ISLAND Hy**	**28.28**	**124**	T		T	00 17 23.8	
	baz=316,slow=76,SNR=50							
H11S3	**WAKE ISLAND Hy**	**28.28**	**124**	T		T	00 17 26.3	
	baz=316,slow=76,SNR=46							
H11S2	**WAKE ISLAND Hy**	**28.30**	**124**	T		T	00 17 25.5	
	baz=316,slow=76,SNR=38							
SONM	**Songino Array**	**28.36**	**304**	P		**P**	**23 47 32.6**	**-0.3**
	comp=Z,4.4nm,0.8s,baz=94,slow=9.4,SNR=11 comp=Z,4.4nm,0.8s							
SONM	**Songino Array**	**28.36**	**304**	P		**P**	**23 47 32.5**	**-0.5**
SONM	**Songino Array**	**28.36**	**304**	*eP*		**P**	**23 47 33.5**	**+0.6**
SONM				pmax		pmax		
	comp=Z,5.0nm,0.9s							
ZAK	**Zakamensk**	**30.82**	**308**	*eP*		**P**	**23 47 53.9**	**-0.8**
ZAK				pmax		pmax		
	comp=Z,4.0nm,1.1s							
PATS	**Pohnpei**	**33.39**	**150**	P		**P**	**23 48 19.2**	**+1.8**
BILL	**Bilibino**	**33.91**	**16**	*i*	P	**P**	**23 48 18.8**	**-2.5**
BILL				pmax		pmax		
	comp=Z,2.0nm,0.9s							
KNGR	**Kungurtug, Tuv**	**34.49**	**308**	⇑	*eP*	**P**	**23 48 27.0**	**+0.2**
KNGR				pmax		pmax		
	comp=Z,7.0nm,1.1s							
ANM	**Nome**	**41.31**	**31**	P		**P**	**23 49 23.2**	**-0.8**
ANM				IAmb		IAmb	23 49 29.8	
	comp=Z,34nm,1.5s							
ANM	**Nome**	**41.31**	**31**	P		**P**	**23 49 23.2**	**-0.8**
ANM				pmax		pmax		
	comp=Z,34nm,1.5s							
CMAR	**Chiang Mai Arr**	**42.11**	**256**	P		**P**	**23 49 31.3**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=21,slow=7.7,SNR=1.1 comp=Z,0.6nm,0.3s							
ZAA0	**Zalesovo Array**	**42.44**	**312**	P		**P**	**23 49 33.7**	**+0.3**
ZAA0				IAmb		IAmb	23 49 44.1	
	comp=Z,9.1nm,1.1s							
ZALV	**Zalesovo Beam**	**42.44**	**312**	P		**P**	**23 49 33.5**	**+0.2**
	comp=Z,6.4nm,1.0s,baz=91,slow=7.6,SNR=14							
ZALV				PcP		**PcP**	**23 51 25.7**	**-0.2**
	comp=Z,1.0nm,0.6s,baz=111,slow=3.2,SNR=2.7 comp=Z,6.4nm,1.0s							
MK31	**Makanchi Array**	**44.70**	**302**	P		**P**	**23 49 51.6**	**-0.1**
MK31	**Makanchi Array**	**44.70**	**302**	P		**P**	**23 49 51.6**	**-0.1**
MK31				pmax		pmax		
	comp=Z,3.0nm,0.8s							
MKAR	**Makanchi Array**	**44.70**	**302**	P		**P**	**23 49 51.7**	**0.0**
	comp=Z,3.0nm,0.8s,baz=86,slow=10,SNR=17 comp=Z,3.0nm,0.8s							
MKAR	**Makanchi Array**	**44.70**	**302**	P		**P**	**23 49 51.6**	**-0.1**
MAKZ	**Makanchi**	**44.91**	**302**	P		**P**	**23 49 53.3**	**-0.1**
MAKZ				IAmb		IAmb	23 50 04.1	
	comp=Z,3.4nm,0.8s							
MAKZ	**Makanchi**	**44.91**	**302**	P		**P**	**23 49 53.3**	**-0.1**
MAKZ				pmax		pmax		
	comp=Z,3.0nm,0.8s							
SVW2	**Sparrevohn**	**45.18**	**37**	P		**P**	**23 49 52.1**	**-3.1**
SVW2				IAmb		IAmb	23 50 01.4	
	comp=Z,9.8nm,1.2s							
KURK	**Kurchatov**	**46.48**	**308**	P		**P**	**23 50 05.5**	**-0.2**
KURK	**Kurchatov**	**46.48**	**308**	*ce*	P	**P**	**23 50 05.8**	**+0.1**
KURK				pmax		pmax		
	comp=Z,11nm,1.0s							
KURBB	**Kurchatov Arra**	**46.55**	**308**	P		**P**	**23 50 06.1**	**-0.2**
	comp=Z,4.2nm,0.4s,baz=82,slow=8.2,SNR=22 comp=Z,4.2nm,0.4s							
TARG	**Taragay, Kyrgy**	**49.01**	**297**	P		**P**	**23 50 26.2**	**+0.3**
TARG				IAmb		IAmb	23 50 39.0	
	comp=Z,4.8nm,0.7s							
TARG	**Taragay, Kyrgy**	**49.01**	**297**	P		**P**	**23 50 26.2**	**+0.3**
TARG				pmax		pmax		
	comp=Z,5.0nm,0.7s							
IL31		**49.20**	**32**	P		**P**	**23 50 26.5**	**0.0**
ILAR	**Eielson Array**	**49.20**	**32**	P		**P**	**23 50 26.8**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=267,slow=7.0,SNR=5.5 comp=Z,0.5nm,0.7s							
ILAR	**Eielson Array**	**49.20**	**32**	P		**P**	**23 50 26.4**	**-0.2**
BOOM	**Boomskoye usch**	**50.12**	**298**	P		**P**	**23 50 34.6**	**+0.5**
BOOM				IAmb		IAmb	23 50 44.9	
	comp=Z,2.6nm,0.8s							
BOOM	**Boomskoye usch**	**50.12**	**298**	P		**P**	**23 50 34.6**	**+0.5**
BOOM				pmax		pmax		
	comp=Z,3.0nm,0.8s							
MENT	**Mentasta**	**50.72**	**35**	P		**P**	**23 50 38.3**	**+0.2**
L26K	**Log Cabin Wild**	**50.88**	**34**	P		**P**	**23 50 39.2**	**-0.1**
L26K				IAmb		IAmb	23 50 41.4	
	comp=Z,13nm,1.5s							
VRDI	**Verde Repeater**	**51.04**	**37**	P		**P**	**23 50 40.7**	**0.0**
VRDI				IAmb		IAmb	23 50 51.2	
	comp=Z,15nm,1.4s							
AAK	**Ala-Archa**	**51.09**	**299**	*ce*	P	**P**	**23 50 42.9**	**+1.5**
AAK				pmax		pmax		
	comp=Z,8.0nm,2.5s							
KK31	**Karatay Array**	**53.72**	**300**	P		**P**	**23 51 01.8**	**+1.1**
KK31				IAmb		IAmb	23 51 13.5	
	comp=Z,7.2nm,1.2s							
KK31	**Karatay Array**	**53.72**	**300**	P		**P**	**23 51 01.8**	**+1.1**
KK31				pmax		pmax		
	comp=Z,7.0nm,1.2s							
KKAR	**Karatay Array**	**53.72**	**300**	P		**P**	**23 51 02.6**	**+1.9**
KKAR	**Karatay Array**	**53.72**	**300**			**P**	**23 51 01.0**	**+0.3**
KKAR				IAmb		IAmb	23 51 13.5	
	comp=Z,7.2nm,1.2s							
KKAR	**Karatay Array**	**53.72**	**300**	P		**P**	**23 51 01.0**	**+0.3**
KKAR				pmax		pmax		
	comp=Z,7.0nm,1.2s							
SKAG	**Skagway**	**55.34**	**38**	P		**P**	**23 51 11.5**	**-0.7**
SKAG				IAmb		IAmb	23 51 22.2	
	comp=Z,8.7nm,0.8s							
CHGR	**Chuyangaron**	**56.28**	**296**	P		**P**	**23 51 19.6**	**+0.2**
CHGR	**Chuyangaron**	**56.28**	**296**	P		**P**	**23 51 19.6**	**+0.2**
CHGR				pmax		pmax		
	comp=Z,20nm,0.8s							
ARU	**Arti**	**56.84**	**319**	P		**P**	**23 51 22.6**	**-0.4**
	comp=Z,4.1nm,0.5s,baz=84,slow=4.2,SNR=6.9 comp=Z,4.1nm,0.5s							
ARU	**Arti**	**56.84**	**319**	P		**P**	**23 51 22.5**	**-0.5**
ARU				IAmb		IAmb	23 51 23.4	
	comp=Z,5.1nm,0.6s							
ARU	**Arti**	**56.84**	**319**	*c*	*iP*	**P**	**23 51 22.8**	**-0.1**
ARU					*PP	**pwP**	**23 51 31.3**	**-0.9**
ARU				S		**S**	**23 59 16.6**	**+1.9**
ARU				pmax		pmax		
	comp=Z,5.0nm,0.6s							
WRA	**Warramunga Arr**	**57.09**	**189**	P		**P**	**23 51 25.6**	**+0.6**
	comp=Z,1.5nm,0.7s,baz=5.6,slow=6.9,SNR=13 comp=Z,1.5nm,0.7s							
WRA	**Warramunga Arr**	**57.09**	**189**	*i*	P	**P**	**23 51 26.2**	**+1.1**
WRA				pmax		pmax		
	comp=Z,1.0nm,0.5s							
ABKAR	**Akbulak array**	**58.48**	**310**	P		**P**	**23 51 34.4**	**-0.2**
ABKAR				IAmb		IAmb	23 51 36.1	
	comp=Z,2.2nm,0.8s							
AKTO	**Aktyubinsk**	**59.20**	**312**	P		**P**	**23 51 39.6**	**0.0**
	comp=Z,2.0nm,0.8s,baz=69,slow=11,SNR=2.7 comp=Z,2.3nm,0.8s							
KIRV	**Kirov**	**60.69**	**323**	*eP*		**P**	**23 51 49.6**	**0.0**
	comp=Z,7.8nm,0.8s,baz=124,slow=1.0,SNR=3.6 comp=Z,7.8nm,0.8s							
KIRV	**Kirov**	**60.69**	**323**	*ce*	P	**P**	**23 51 50.2**	**+0.6**
ASAR	**Alice Springs**	**60.82**	**189**	P		**P**	**23 51 51.8**	**+0.9**
	comp=Z,1.0nm,0.6s,baz=16,slow=8.2,SNR=11 comp=Z,1.0nm,0.6s							
ARCES	**ARCESS Array B**	**64.28**	**340**	P		**P**	**23 52 13.7**	**+0.2**
	comp=Z,3.3nm,1.1s,baz=50,slow=8.1,SNR=6.4 comp=Z,3.3nm,1.1s							
ARCES	**ARCESS Array B**	**64.28**	**340**	P		**P**	**23 52 13.7**	**+0.2**
ARCES				pmax		pmax		
	comp=Z,18nm,1.5s							
GEYT	**Alibeck**	**64.44**	**299**	P		**P**	**23 52 14.9**	**-0.2**
	comp=Z,1.0nm,0.6s,baz=60,slow=9.0,SNR=2.1 comp=Z,1.0nm,0.6s							
VORR	**Voronezh**	**69.14**	**320**	*eP*		**P**	**23 52 45.4**	**+0.7**
FIA1	**FINESS Array S**	**69.17**	**333**	P		**P**	**23 52 45.1**	**+0.3**
FIA1				IAmb		IAmb	23 52 45.8	
	comp=Z,7.4nm,0.8s							
FINES	**FINESS Array B**	**69.17**	**333**	P		**P**	**23 52 44.8**	**0.0**
	comp=Z,4.3nm,0.8s,baz=59,slow=6.7,SNR=9.4 comp=Z,4.3nm,0.8s							
FINES	**FINESS Array B**	**69.17**	**333**	*i*	P	**P**	**23 52 45.0**	**+0.2**
FINES				pmax		pmax		
	comp=Z,4.0nm,0.8s							
KBZ	**Khabaz**	**71.44**	**311**	P		**P**	**23 52 60.0**	**+1.0**
	comp=Z,1.6nm,0.7s,baz=41,slow=17,SNR=3.6 comp=Z,1.6nm,0.7s							
KBZ	**Khabaz**	**71.44**	**311**	*eP*		**P**	**23 52 59.7**	**+0.8**
KBZ				pmax		pmax		
	comp=Z,2.0nm,0.7s							
KIV	**Kislovodsk**	**71.44**	**311**	P		**P**	**23 52 58.9**	**-0.2**
KIV				IAmb		IAmb	23 53 14.1	
	comp=Z,5.6nm,1.0s							
KIV	**Kislovodsk**	**71.44**	**311**	*eP*		**P**	**23 53 00.3**	**+1.2**
KIV				*e*	*PP	**pP**	**23 53 06.0**	**-0.4**
KIV				*e*	*SP	**sP**	**23 53 10.1**	**+0.9**
KIV				*e*			23 53 18.6	
KIV				*e*			23 55 38.0	
KIV				*e*	PPP	PPP	23 57 19.7	
KIV				pmax		pmax		
	comp=Z,5.0nm,1.0s							
PABE	**Paberze**	**73.94**	**329**	P		**P**	**23 53 14.2**	**+0.7**
PABE				IAmb		IAmb	23 53 14.9	
	comp=Z,6.5nm,0.7s							
NB2	**NORSAR Subarra**	**74.50**	**338**	P		**P**	**23 53 16.7**	**-0.1**
	comp=Z,4.6nm,1.4s,baz=41,slow=5.9							
NOA	**NORSAR Array B**	**74.50**	**338**	P		**P**	**23 53 16.8**	**0.0**
	comp=Z,1.1nm,0.9s,baz=39,slow=5.9,SNR=3.8 comp=Z,1.1nm,0.9s							
NVAR	**Mina Array Bea**	**74.50**	**54**	P		**P**	**23 53 18.2**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=291,slow=7.6,SNR=2.3 comp=Z,0.3nm,0.6s							
NVAR	**Mina Array Bea**	**74.50**	**54**	P		**P**	**23 53 17.8**	**+0.3**
AKASG	**Malin Array Be**	**74.75**	**323**	P		**P**	**23 53 18.3**	**-0.1**
	comp=Z,1.5nm,0.6s,baz=44,slow=7.5,SNR=7.5 comp=Z,1.5nm,0.6s							
AKASG	**Malin Array Be**	**74.75**	**323**	*eP*		**P**	**23 53 18.0**	**-0.4**
AKASG				pmax		pmax		
	comp=Z,1.0nm,0.6s							
PDAR	**Pinedale Array**	**77.24**	**46**	P		**P**	**23 53 33.2**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=266,slow=2.6,SNR=2.9 comp=Z,0.1nm,0.3s							
BNN	**Bunyan**	**78.60**	**310**	P		**P**	**23 53 41.5**	**+1.0**
BNN				IAmb		IAmb	23 53 44.2	
	comp=Z,12nm,1.1s							
BURAR	**Bucovina Array**	**78.76**	**322**	P		**P**	**23 53 41.4**	**+0.1**
BRTR	**Keskin Array B**	**79.38**	**312**	P		**P**	**23 53 45.5**	**+0.6**
	comp=Z,0.3nm,0.4s,baz=64,slow=11,SNR=1.6 comp=Z,0.3nm,0.4s							
PHWY	**Pilot Hill**	**80.52**	**45**	P		**P**	**23 53 51.2**	**0.0**
MORC	**Moravsky Berou**	**80.77**	**327**	P		**P**	**23 53 52.3**	**+0.2**
MORC				IAmb		IAmb	23 53 53.7	
	comp=Z,4.3nm,1.3s							
PSZ	**Piszkesteto**	**81.09**	**325**	P		**P**	**23 53 54.4**	**+0.6**
PSZ				IAmb		IAmb	23 54 22.9	
	comp=Z,4.6nm,1.1s							
PSZ	**Piszkesteto**	**81.09**	**325**	P		**P**	**23 53 54.4**	**+0.6**
PSZ				pmax		pmax		
	comp=Z,5.0nm,1.1s							
CLL	**Collm**	**81.47**	**331**	*eP*		**P**	**23 53 56.0**	**+0.3**
CLL	**Collm**	**81.47**	**331**	*eP*		**P**	**23 53 56.0**	**+0.3**
MMAI	**Mount Meron Ar**	**82.53**	**306**	P		**P**	**23 54 01.9**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=19,slow=7.9,SNR=2.1 comp=Z,0.5nm,0.5s							
KHC	**Kasperske Hory**	**82.94**	**329**	P		**P**	**23 54 03.0**	**-0.5**
KHC	**Kasperske Hory**	**82.94**	**329**	P		**P**	**23 54 03.0**	**-0.5**
KHC				pmax		pmax		
	comp=Z,2.0nm,1.1s							
GEC2	**GERESS Array S**	**83.11**	**329**	P		**P**	**23 54 03.3**	**-1.1**
GERES	**GERESS Array B**	**83.11**	**329**	P		**P**	**23 54 04.4**	**0.0**
	comp=Z,0.2nm,0.3s,baz=54,slow=6.8,SNR=2.6 comp=Z,0.2nm,0.3s							
GERES	**GERESS Array B**	**83.11**	**329**	P		**P**	**23 54 03.6**	**-0.8**
CMWZ	**Cape Campbell**	**83.62**	**156**	P		**P**	**23 54 08.5**	**+1.8**
MSWZ	**Moikau Station**	**83.66**	**156**	P		**P**	**23 54 07.0**	**+0.1**
BCX	**Boston College**	**95.39**	**24**	P		**P**	**23 55 03.6**	**+0.6**
LPAZ	**La Paz**	**146.16**	**61**	PKPbc		**PKPbc**	**00 01 19.9**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=50,slow=7.9,SNR=3.6							

*IDC **26** 23:42:18.1±1.7, 2°.01N×127°.45E, h0km, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=138.3km s-min=22.0km az=66.0*

*NEIC **26** 23:42:27.7±0.9, 2°.14N±0°.09×128°.0E±0°.2, h81km±6km, mb4.1/11, Error ellipse: s-maj=23.9km s-min=13.2km az=94.0*

ISC 26 23:42:29.8±0.8, 2°.01N±0°.09×127°.7E±0°.2, h112km, n18, σ0°96/19, mb4.0/9, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**1.27**	**195**			**Pn**	**23 42 53.2**	**-0.9**
TNTI				Sn		**Sn**	**23 43 11.6**	**-0.9**
KNRA	**Kununurra**	**17.60**	**177**	P		**P**	**23 46 27.8**	**+0.3**
KNRA				IAmb		IAmb	23 46 51.5	
	comp=Z,18nm,1.2s							
WB0	**Warramunga Arr**	**22.62**	**163**	P		**P**	**23 47 21.9**	**+0.6**
WB0				IAmb		IAmb	23 47 44.8	
	comp=Z,12nm,1.3s							
WRA	**Warramunga Arr**	**22.77**	**164**	P		**P**	**23 47 23.4**	**+0.5**
	comp=Z,3.3nm,0.4s,baz=343,slow=11,SNR=31 comp=Z,3.3nm,0.4s							
WRA	**Warramunga Arr**	**22.77**	**164**	P		**P**	**23 47 22.1**	**-0.8**
WB2	**Warramunga Arr**	**22.77**	**164**	P		**P**	**23 47 23.5**	**+0.6**
WB2				IAmb		IAmb	23 47 23.9	
	comp=Z,4.0nm,0.6s							
WR0	**

UCH ⇑*i*S **Sb** **00 03 29.9 +0.3**
baz=13
EKS2 Erkin-Say 3.19 1 P **Pb** **00 03 00.8 +0.1**
SNR=9.8
AAK Ala-Archa 3.23 11 P **Pb** **00 03 01.9 +0.6**
SNR=7.8
AAK Ala-Archa 3.23 11 Pn **Pb** **00 03 01.3 0.0**
4.8nm,0.3s,baz=172,slow=7.5,SNR=7.5
AAK Lg Lg 00 03 45.3
2.2nm,0.3s,baz=180,slow=20,SNR=2.6
15nm,0.4s
KBK Karagaybulak 3.33 16 P **Pb** **00 03 03.1 0.0**
SNR=13
ULHL Ulahol 3.39 34 P **Pb** **00 03 03.8 -0.4**
SNR=10
BOOM Boomskoye usch 3.48 29⇓*e*P **Pb** **00 03 02.5 -3.0**
baz=28
BOOM ⇓*i*S **Sb** **00 03 45.5 -2.3**
baz=28
CHMS Chumysh 3.62 13 P **Pb** **00 03 06.1 -1.9**
SNR=5.7
TKM2 Tokmak 2 3.75 22 P **Pb** **00 03 08.1 -2.1**
SNR=7.0
KDJ Kajisay 3.76 44⇓*i*P **Pb** **00 03 06.1 -4.3**
baz=43
KDJ ⇓*i*S **Sb** **00 03 51.8 -4.4**
baz=43
IUG Iuzhnay 3.85 315 *e*P **Pb** **00 03 13.4 +1.5**
338nm,0.7s
IUG *e*S **Sg** **00 04 04.6 -2.9**
65nm,0.7s
DZA Taraz 3.85 333 *e*P **Pg** **00 03 14.8 -2.9**
185nm,0.1s
DZA *e*S **Sg** **00 04 06.8 -0.7**
131nm,0.4s
KST Kastek 3.97 25 *e*P **Pb** **00 03 15.9 +2.0**
7.7nm,0.8s
KST *e*S **Sg** **00 04 08.9 -2.4**
20nm,0.7s
SGDS Sogindy 4.05 10 *e*P **Pg** **00 03 18.4 -2.9**
2.2nm,0.2s
SGDS *e*S **Sg** **00 04 13.2 -0.6**
16nm,0.5s
DGS Degeres 4.09 22 *e*P **Pg** **00 03 20.2 -2.0**
9.2nm,0.8s
DGS *e*S **Sg** **00 04 16.5 +1.4**
26nm,0.6s
CHM Chimkent 4.20 314 *e*P **Pg** **00 03 22.9 -1.4**
6.0nm,0.5s
CHM *e*S **Sg** **00 04 21.3 +2.6**
121nm,0.2s
MTBS Maitube 4.21 29 *e*P **Pg** **00 03 22.9 -1.5**
15nm,0.6s
MTBS *e*S **Sg** **00 04 21.1 +2.2**
14nm,0.4s
TNSS Tian-Shan 4.34 34 *e*P **Pg** **00 03 25.0 -1.9**
8.7nm,0.5s
TNSS *e*S **Sg** **00 04 25.3 +2.2**
5.5nm,0.4s
KRBS Karabastau 4.49 19 *e*P **Pg** **00 03 26.7 -3.0**
2.6nm,1.0s
KRBS *e*S **Sg** **00 04 27.2 -0.6**
29nm,0.7s
BRLS Borolday 4.59 322 *e*P **Pb** **00 03 25.5 +1.1**
3.8nm,0.6s
BRLS *e*S **Sg** **00 04 25.8 -5.3**
24nm,0.5s
KTBS Karatobe 4.80 27 *e*P **Pg** **00 03 33.7 -2.1**
11nm,0.7s
KTBS *e*S **Sg** **00 04 39.4 +1.3**
25nm,0.6s
KUU Kurty 4.85 23 *e*P **Pg** **00 03 32.8 -3.9**
5.6nm,0.7s
KUU *e*S **Sg** **00 04 38.9 -0.7**
13nm,0.9s
CHKK Chushkaly 5.04 28 *e*P **Pg** **00 03 37.9 -2.4**
5.6nm,0.5s
CHKK *e*S **Sg** **00 04 46.5 +1.0**
14nm,0.6s
SATY Saty 5.06 43 *e*P **Pg** **00 03 38.9 -1.8**
8.3nm,0.5s
SATY *e*S **Sg** **00 04 48.9 +2.7**
18nm,0.7s
KURS Kuram 5.25 39 *e*P **Pg** **00 03 40.8 -3.5**
4.9nm,0.6s
KURS *e*S **Sg** **00 04 51.9 -0.4**
4.3nm,1.1s
KPKS Kokpek 5.49 42 *e*P **Pg** **00 03 46.4 -2.5**
8.6nm,0.4s
KPKS *e*S **Sg** **00 05 00.7 +0.7**
10nm,0.6s
BTLS Baital 5.58 3 *e*P **Pg** **00 03 46.4 -4.2**
2.4nm,0.4s
BTLS *e*S **Sg** **00 05 01.8 -1.1**
9.6nm,0.8s
ARXS Arharly 5.67 32 *e*P **Pg** **00 03 48.2 -4.1**
13nm,0.9s
ARXS *e*S **Sg** **00 05 04.3 -1.4**
11nm,0.7s
DJR Jarkent 6.67 41 *e*P **Pg** **00 04 08.6 -2.8**
1.9nm,0.6s
DJR *e*S **Sg** **00 05 38.6 +0.8**
3.0nm,0.9s
MKAR Makanchi Array 9.65 38 Pn Pn 00 04 28.8 +6.0
baz=226,slow=12,SNR=2.9
MKAR Lg Lg 00 07 16.4
baz=228,slow=25,SNR=4.0
0.3nm,0.7s
KURBB Kurchatov Arra 11.67 15 Pn **Pn** **00 04 54.0 +3.7**
baz=200,slow=11,SNR=3.1
KURBB Lg Lg 00 08 13.0
baz=206,slow=29,SNR=4.7
0.2nm,0.5s
ZALV Zalesovo Beam 16.35 24 Pn **P** **00 05 56.9 +0.8**
0.1nm,0.3s,baz=223,slow=9.7,SNR=8.2
1.3nm,0.6s
FINES FINESS Array B 36.29 323 P **P** **00 09 07.6 +0.5**
0.3nm,0.4s,baz=106,slow=11,SNR=5.9
0.3nm,0.4s
ARCESS ARCESS Array B 39.27 336 P **P** **00 09 33.7 +1.5**
0.6nm,0.7s,baz=116,slow=10,SNR=1.4
0.6nm,0.7s
NOA NORSAR Array B 43.35 321 P **P** **00 10 07.4 +1.6**
0.6nm,0.7s,baz=90,slow=8.0,SNR=3.4
0.6nm,0.7s
MJAR Matsushiro Arr 49.96 72 P P 00 11 06.9 +8.9
1.0nm,0.3s,baz=290,slow=7.7,SNR=1.7
1.0nm,0.3s
TORD Torodi Ar. Bea 67.89 269 P **P** **00 13 03.9 +1.1**
0.1nm,0.4s,baz=54,slow=5.0,SNR=4.7
0.1nm,0.4s

IDC 27 00:18:27.0±6.0, 4°.84S×133°.76E, h0km, mb3.6/1, mbtmp3.5/3, ML3.4/2, Error ellipse: s-maj=342.5km s-min=31.4km az=77.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.02**	**178**	Pn	Pn	00 21 59.5	-1.3
	0.1nm,0.3s,baz=357,slow=13,SNR=5.5						
WRA				Sn	Sn	00 24 41.8	-6.3
	0.1nm,0.3s,baz=354,slow=24,SNR=4.9						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**18.72**	**180**	P	Pn	00 22 47.9	+0.2
	0.2nm,0.3s,baz=2.7,slow=12,SNR=15						
ASAR				Sn	Sn	00 26 09.2	-8.6
	0.1nm,0.3s,baz=358,slow=27,SNR=2.4						
	1.1nm,0.6s						
MKAR	**Makanchi Array**	**68.56**	**325**	P	P	00 29 31.6	0.0
	0.4nm,0.5s,baz=109,slow=8.1,SNR=6.2						
	0.4nm,0.5s						

NDI ***27*** *00:27:41.0±3.8, 22°.71N×92°.25E, h10km, mb5.4, ML4.7, mb4.7(NEIC)*
BJI ***27*** *00:27:42.1±0.0, 22°.86N×92°.17E, h8km, mb4.6/49, mB4.7/22, Ms4.2/30, Ms7 3.9/26*
NEIC ***27*** *00:27:43.8±1.7, 22°.71N±0°.02×92°.07E±0°.07, h10km±1km, mb4.7/95, Error ellipse: s-maj=10.9km s-min=3.0km az=264.0*
IDC ***27*** *00:27:47.6±3.0, 22°.69N×92°.17E, h47km±30km, mb3.9/26, mbtmp4.1/27, ML4.4/2, MS3.9/17, Error ellipse: s-maj=16.4km s-min=11.5km az=52.0*
ISC 27 00:27:46.0±0.3, 22°.77N±0°.04×92°.00E±0°.03, h35km, n227, σ2s 24/250, mb4.6/87, MS4.0/20, 7C-8D, Bangladesh

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHL	**Shillong**	**2.79**	**358**	Pn	**Pn**	**00 28 29.0**	**+0.7**
SHL	**Shillong**	**2.79**	**358**	*e*P	**Pn**	**00 28 28.2**	**-0.1**
SHL				*e*P	**Pn**	**00 28 28.7**	**+0.4**
SHL				*e*S	**Sn**	**00 29 01.0**	**+0.1**
BOK	**Bokaro**	**5.71**	**282**	*e*P	**Pn**	**00 29 10.8**	**+2.4**
BOK				*e*P	**Pn**	**00 29 11.2**	**+2.8**
BOK				IAmb	IAmb	00 29 13.6	
	comp=Z,706nm,0.7s						
BOK				*e*S	**Sn**	**00 30 15.0**	**+2.3**
BOK				*e*S	**Sn**	**00 30 15.1**	**+2.3**
BOK				IAML		00 30 19.6	
	comp=N,1μm,0.3s						
LSA	**Lhasa**	**6.95**	**354**	Pn	**Pn**	**00 29 28.0**	**+2.3**
GUN	**Gumba**	**7.54**	**314**	*e*Pn	**Pn**	**00 29 36.6**	**+2.8**
GUN				*e*Sn	**Sn**	**00 30 59.4**	**+1.2**
	comp=N,950nm,0.6s						
CHTO	**Chiang Mai**	**7.59**	**120**	Pn	**Pn**	**00 29 31.5**	**-2.8**
PKIN	**Phulchoki**	**7.66**	**310**	*e*Pn	**Pn**	**00 29 37.5**	**+2.1**
PKIN				*e*Sn	**Sn**	**00 31 01.0**	**-0.1**
	comp=N,458nm,0.3s						
CM31	**Chiang Mai Arr**	**7.79**	**122**		**Pn**	**00 29 35.1**	**-1.9**
CMAR	**Chiang Mai Arr**	**7.79**	**122**	P	**Pn**	**00 29 34.9**	**-2.0**
	comp=N,5.2nm,0.3s,baz=303,slow=14,SNR=94						
CMAR				S	**Sn**	**00 31 07.7**	**+3.7**
	comp=N,4.2nm,0.4s,baz=138,slow=46,SNR=1.8						
CMAR				LR	LR	00 33 15.3	
	comp=N,619nm,18.5s,baz=295,slow=43						
CMAR	**Chiang Mai Arr**	**7.79**	**122**	Pn	**Pn**	**00 29 34.8**	**-2.1**
KKN	**Kakani**	**7.87**	**311**	*e*Pn	**Pn**	**00 29 41.0**	**+2.8**
DMN	**Daman**	**7.89**	**309**	*e*Pn	**Pn**	**00 29 40.5**	**+2.0**
DMN				*e*Sn	**Sn**	**00 31 06.6**	**0.0**
	comp=N,712nm,0.6s						
GKN	**Gorkha**	**8.45**	**310**	*e*Pn	**Pn**	**00 29 47.9**	**+1.7**
GKN				*e*Sn	**Sn**	**00 31 19.4**	**-1.1**
	comp=N,609nm,0.3s						
KOLN	**Koldanda**	**9.09**	**305**	*e*Pn	**Pn**	**00 29 56.5**	**+1.6**
KOLN				*e*Sn	**Sn**	**00 31 33.3**	**-2.8**
KOLN				*e*Sn	Sn	00 31 33.4	-2.7
	comp=N,256nm,0.5s						
DANN	**Dangsing**	**9.28**	**308**	*e*Pn	**Pn**	**00 29 59.1**	**+1.4**
DANN				*e*Sn	**Sn**	**00 31 38.9**	**-2.2**
	comp=N,840nm,0.6s						
VIS	**Vishakhapatnam**	**9.56**	**240**	*e*P	**Pn**	**00 30 01.4**	**+0.2**
VIS				*e*P	**Pn**	**00 30 01.5**	**+0.3**
VIS				*e*S	**Sn**	**00 31 40.4**	**-7.0**
DGPR	**DIGLIPUR**	**9.58**	**175**	*e*P	**Pn**	**00 29 58.2**	**-3.2**
DGPR				*e*P	**Pn**	**00 29 58.6**	**-2.9**
DGPR				IAmb	IAmb	00 30 09.5	
	comp=Z,156nm,0.6s						
DGPR				IAmb	IAmb	00 30 12.0	
	comp=Z,202nm,0.5s						
ALBI	**Allahabad**	**9.65**	**287**	*e*P	**Pn**	**00 30 02.9**	**+0.5**
ALBI				*e*S	**Sn**	**00 31 45.7**	**-3.9**
PYUN	**Piuthan**	**9.72**	**305**	*e*Pn	**Pn**	**00 30 04.5**	**+0.9**
PYUN				*e*Sn	**Sn**	**00 31 48.6**	**-3.0**
	comp=Z,643nm,0.6s						
KMI	**Kunming**	**10.10**	**74**	⇑P	**Pn**	**00 30 07.3**	**-1.5**
KMI				S	**Sn**	**00 32 01.5**	**+0.5**
KMI				LR	LR		
	comp=Z,640nm,9.2s						
KMI				LR	LR		
	comp=Z,730nm,12.2s						
KMI				LR	LR		
	comp=Z,630nm,14.6s						
BRCI	**Bahraich**	**10.57**	**299**	*e*P	**Pn**	**00 30 11.3**	**-3.7**
BRCI				*e*S	**Sn**	**00 32 08.3**	**-4.0**
PBA	**Port Blair**	**11.07**	**176**	Pn	**Pn**	**00 30 21.5**	**-0.5**
JBP	**Jabalpur**	**11.08**	**274**	*e*P	**Pn**	**00 30 23.6**	**+1.7**
LGTI	**Lohaghat**	**12.48**	**305**	*e*P	**Pn**	**00 30 41.9**	**+0.8**
LGTI				*e*S	**Sn**	**00 32 54.1**	**-4.7**
PTH	**Pithoragarh**	**12.55**	**305**	*e*P	**Pn**	**00 30 41.6**	**-0.6**
PTH				*e*S	**Sn**	**00 32 54.6**	**-6.3**
JHNI	**Jhansi**	**12.58**	**285**	*e*P	**Pn**	**00 30 40.2**	**-2.3**
JHNI				*e*S	Sn	00 32 52.5	-9.0
CD2	**Chengdu**	**13.26**	**50**	P	**Pn**	**00 30 50.5**	**-1.3**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CD2				LR	LR		
	comp=Z,530nm,11.2s						
CD2				LR	LR		
	comp=Z,510nm,16.1s						
BHPL	**Bhopal**	**13.43**	**275**	*e*P	**Pn**	**00 30 53.5**	**-0.7**
BHPL				*e*P	P	00 30 53.5	-10
BHPL				IAmb	IAmb	00 31 06.2	
	comp=Z,222nm,0.8s						
BHPL				*e*S	**Sn**	**00 33 16.3**	**-6.0**
BHPL				*e*S	S	00 33 17.4	-28
GOMU	**GeErMu**	**13.61**	**10**	P	**Pn**	**00 30 55.8**	**-1.0**
GOMU				pmax	pmax		
	comp=Z,33nm,0.8s						
HYB	**Hyderabad**	**13.70**	**250**	*e*P	**Pn**	**00 30 55.6**	**-2.4**
HYB				*e*P	P	00 30 57.4	-8.8
HYB				IAmb	IAmb	00 31 09.9	
	comp=Z,38nm,0.3s						
HYB				IAmb	IAmb	00 31 09.9	
	comp=Z,26nm,0.6s						
HYBB	**Hyderabad (bro**	**13.70**	**250**	*e*Pn	**Pn**	**00 30 58.3**	**+0.4**
HYBB				*e*Sn	**Sn**	**00 33 32.5**	**+3.5**
AKL	**Akola**	**14.07**	**264**	*e*P	**Pn**	**00 31 02.6**	**-0.4**
AKL				*e*S	**Sn**	**00 33 30.5**	**-7.6**
SONA	**Sohna**	**14.53**	**295**	*e*P	**Pn**	**00 31 06.8**	**-2.3**
SONA				*e*S	Sn	00 33 38.6	-10
NDI	**New Delhi**	**14.56**	**297**	*e*P	**Pn**	**00 31 08.2**	**-1.4**
NDI				*e*P	P	00 31 11.0	-4.6
NDI				*e*S	Sn	00 33 39.8	-10
NDI				*e*S	S	00 33 44.0	-24
AYAN	**Aya Nagar**	**14.57**	**296**	*e*P	**Pn**	**00 31 05.9**	**-3.7**
MDRS	**Chennai**	**14.76**	**231**⇑	*e*S	Sn	00 33 42.9	-12
KUDL	**Kundal**	**14.99**	**294**	*e*P	**Pn**	**00 31 11.6**	**-3.7**
KUDL				*e*S	Sn	00 33 48.1	-12
SMLA	**Simla**	**15.62**	**305**	*e*P	**Pn**	**00 31 21.4**	**-2.0**
SMLA				*e*P	**P**	**00 31 22.1**	**-5.2**
SMLA				IAmb	IAmb	00 31 24.1	
	comp=Z,47nm,0.8s						
SMLA				⇓*e*S	**Sn**	**00 34 07.6**	**-7.8**
SRIT	**Nakonsritamara**	**15.87**	**151**		**Pn**	**00 31 25.9**	**-0.9**
AJM	**Ajmer**	**16.21**	**287**	*e*P	**Pn**	**00 31 28.4**	**-2.7**
AJM				*e*S	Sn	00 34 17.7	-12
BHK	**Bhakra**	**16.32**	**305**	*e*P	**Pn**	**00 31 34.1**	**+1.6**
BHK				*e*S	Sn	00 34 22.2	-10
LZH	**Lanzhou**	**16.79**	**35**	*e*P	**Pn**	**00 31 38.8**	**+0.2**
LZH				sP	P	00 31 45.0	+4.5
LZH				*e*S	**Sn**	**00 34 40.5**	**-3.6**
LZH				sS	S	00 34 50.3	-3.8
LZH				SS	**SnSn**	**00 35 05.0**	**+7.3**
LZH				pmax	pmax		
	comp=Z,35nm,1.0s						
LZH				pmax	pmax		
	comp=Z,150nm,4.6s						
LZH				LR	LR		
	comp=Z,720nm,10.0s						
LZH				LR	LR		
	comp=Z,610nm,10.3s						
LZH				LR	LR		
	comp=Z,1μm,12.6s						
QIZ	**Qiongzhong**	**17.08**	**99**	Pn	**Pn**	**00 31 41.6**	**-0.6**
THN	**Thein Dam**	**17.33**	**307**	*e*P	**P**	**00 31 48.1**	**+1.8**
THN				*e*S	**Sn**	**00 34 48.8**	**-8.1**
ENH	**Enshi**	**17.33**	**61**	Pn	**Pn**	**00 31 44.0**	**-1.3**
ENH				IAmb	IAmb	00 31 58.0	
	comp=Z,93nm,1.0s						
GTA	**Gaotai**	**17.88**	**20**	*e*P	**Pn**	**00 31 50.3**	**-1.7**
GTA				pP	pP	00 31 58.3	-3.3
GTA				sP	sP	00 32 02.0	-4.1
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
LHMI	**Lhok Sumawe**	**18.08**	**164**		**Pn**	**00 31 53.1**	**-1.4**
XAN	**Xi'an**	**18.62**	**49**	⇓P	**P**	**00 32 00.0**	**-0.6**
XAN				pP	Pn	00 32 04.5	+3.4
XAN				sP	pP	00 32 07.3	-2.5
XAN				S	**Sn**	**00 35 22.5**	**-5.8**
XAN				pmax	pmax		
	comp=Z,11nm,0.8s						
PALK	**Pallekele**	**18.86**	**217**	P	**Pn**	**00 32 05.2**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=338,slow=16,SNR=1.2						
PALK				LR	LR	00 42 04.0	
	comp=Z,192nm,18.3s,baz=132,slow=45						
	comp=Z,5.9nm,0.9s						
PALK	**Pallekele**	**18.86**	**217**	P	**P**	**00 32 03.1**	**-0.2**
PALK				IAmb	IAmb	00 32 17.9	
	comp=Z,60nm,1.5s						

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**19.28**	**153**	P	**P**	**00 32 07.3**	**-0.5**
PCHI	**Peechi**	**19.29**	**233**	*e*S	S	00 35 29.6	-15
KCSI	**Kotacane, Aceh**	**19.93**	**163**	P	**P**	**00 32 12.5**	**-2.5**
	comp=Z,52nm,1.3s						
TSI	**Tuntungan**	**20.18**	**161**	P	**P**	**00 32 17.8**	**+0.1**
	comp=Z,10μmcomp=Z,138nm,0.4s						
RPSI	**Rantau Prapat**	**21.05**	**160**	P	**P**	**00 32 27.8**	**+0.7**
RPSI				IAmb	IAmb	00 32 30.7	
	comp=Z,34nm,0.9s						
WMQ	**Urumqi**	**21.30**	**351**	*e*P	**P**	**00 32 31.3**	**+1.7**
WMQ				pP	pP	00 32 33.8	-5.2
WMQ				sP	sP	00 32 40.0	-3.4
WMQ				S	Sn	00 36 31.5	-1.1
WMQ				pmax	pmax		
	comp=Z,45nm,0.9s						
WHN	**Wuhan**	**21.40**	**64**	⇓P	**P**	**00 32 29.3**	**-1.5**
WHN				pP	**pP**	**00 32 34.0**	**-6.1**
WHN				LR	LR		
	comp=Z,820nm,11.2s						
WHN				LR	LR		
	comp=Z,340nm,8.5s						
WHN				LR	LR		
	comp=Z,870nm,18.0s						
LYN	**LuoYang**	**21.41**	**52**	*e*P	**P**	**00 32 30.8**	**-0.1**
LYN				pP	pP	00 32 39.8	-0.4
LYN				S	**S**	**00 36 20.3**	**-6.4**
LYN				LR	LR		
	comp=Z,280nm,13.3s						
LYN				LR	LR		
	comp=Z,330nm,17.1s						
LYN				LR	LR		
	comp=Z,360nm,16.5s						
KSH	**Kashi**	**21.55**	**324**	P	**P**	**00 32 34.0**	**+1.5**
KSH				pP	pP	00 32 38.5	-3.3
KSH				sP	sP	00 32 46.8	+0.6
KSH				S	**S**	**00 36 29.8**	**+0.2**
KSH				pmax	pmax		
	comp=Z,11nm,0.8s						
GSI	**Gunungsitoli**	**22.01**	**165**	P	**P**	**00 32 35.0**	**-2.5**
GSI				IAmb	IAmb	00 32 45.6	
	comp=Z,36nm,0.8s						
GSI	**Gunungsitoli**	**22.01**	**165**	P	**P**	**00 32 34.8**	**-2.6**
	comp=Z,52nm,0.8s						
TARG	**Taragay, Kyrgy**	**22.34**	**331**	P	**P**	**00 32 44.4**	**+3.2**
TARG				IAmb	IAmb	00 32 58.8	
	comp=Z,32nm,1.0s						
PRZ	**Przheval'sk**	**22.70**	**333**	P	**P**	**00 32 47.9**	**+3.1**
PRZ				IAmb	IAmb	00 33 06.5	
	comp=Z,36nm,0.8s						
KDJ	**Kajisay**	**22.94**	**331**	P	**P**	**00 32 49.8**	**+2.5**
KDJ				IAmb	IAmb	00 33 07.0	
	comp=Z,17nm,0.8s						
MNSI	**Mandailing Nat**	**23.05**	**160**	P	**P**	**00 32 47.3**	**-1.1**
KBL	**Kabul**	**23.25**	**305**	P	**P**	**00 32 51.6**	**+1.0**
KBL				IAmb	IAmb	00 33 09.8	
	comp=Z,27nm,0.9s						
BOOM	**Boomskoye usch**	**23.79**	**330**	P	**P**	**00 32 58.0**	**+2.3**
BOOM				IAmb	IAmb	00 33 18.4	
	comp=Z,16nm,1.1s						
DRK	**Karamyk**	**23.92**	**319**	P	**P**	**00 32 57.9**	**+0.8**
DRK				IAmb	IAmb	00 33 16.0	
	comp=Z,23nm,0.7s						
HNS	**HongShan**	**24.38**	**48**	⇑P	**P**	**00 33 01.0**	**0.0**
HNS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC	**Hu-ho-hao-te**	**24.43**	**38**	*e*P	**P**	**00 33 01.5**	**0.0**
HHC				PP	**PnPn**	**00 33 32.5**	**-0.4**
HHC				S	**S**	**00 37 18.5**	**-0.7**
HHC				pmax	pmax		
	comp=Z,21nm,1.0s						
HHC				pmax	pmax		
	comp=Z,270nm,6.2s						
HHC				LR	LR		
	comp=Z,960nm,18.0s						
HHC				LR	LR		
	comp=Z,730nm,17.7s						
HHC				LR	LR		
	comp=Z,1μm,20.0s						
GAR	**Garm**	**24.56**	**316**	P	**P**	**00 33 04.4**	**+1.7**
AAK	**Ala-Archa**	**24.60**	**328**	P	**P**	**00 33 06.0**	**+3.0**
	comp=Z,1.5nm,0.3s,baz=160,slow=3.4,SNR=1.9						
AAK				LR	LR	00 45 11.3	
	comp=Z,198nm,18.8s,baz=141,slow=42						
	comp=Z,1.5nm,0.3s						
AAK	**Ala-Archa**	**24.60**	**328**	P	**P**	**00 33 05.8**	**+2.7**
AAK				IAmb	IAmb	00 33 25.4	
	comp=Z,12nm,0.9s						
BTK	**Batken**	**24.88**	**319**	P	**P**	**00 33 08.5**	**+3.0**
SISI	**Saibi**	**24.93**	**163**	P	**P**	**00 33 04.8**	**-1.2**
	comp=Z,24nm,0.8s						
CHGR	**Chuyangaron**	**25.13**	**314**	P	**P**	**00 33 09.0**	**+1.1**
MK31	**Makanchi Array**	**25.22**	**344**	P	**P**	**00 33 10.2**	**+1.6**
MK31				IAmb	IAmb	00 33 28.5	
	comp=Z,15nm,0.8s						
MKAR	**Makanchi Array**	**25.22**	**344**	P	**P**	**00 33 10.2**	**+1.7**
	comp=Z,14nm,0.6s,baz=159,slow=9.6,SNR=129						
MKAR				LR	LR	00 45 27.8	
	comp=Z,202nm,21.9s,baz=198,slow=42						
	comp=Z,14nm,0.6s						
MKAR	**Makanchi Array**	**25.22**	**344**	P	**P**	**00 33 10.1**	**+1.6**
MAKZ	**Makanchi**	**25.32**	**344**	P	**P**	**00 33 10.9**	**+1.5**
MAKZ				IAmb	IAmb	00 33 29.3	
	comp=Z,19nm,0.8s						
NJ2	**Nanjing**	**25.52**	**63**	*e*P	**P**	**00 33 08.3**	**-3.0**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
TIA	**Tai'an**	**25.56**	**53**	⇑P	**P**	**00 33 12.3**	**+0.7**
TIA				pmax	pmax		
	comp=Z,11nm,0.6s						
TIA				pmax	pmax		
	comp=Z,160nm,6.1s						
TIA				LR	LR		
	comp=Z,290nm,10.4s						
TIA				LR	LR		
	comp=Z,250nm,11.8s						
TIA				LR	LR		
	comp=Z,320nm,12.4s						
PPSI	**Pulau Pagai**	**26.55**	**162**	P	**P**	**00 33 20.0**	**-0.8**
	comp=Z,140nm,1.1s						
JMBI	**JAMBI**	**26.78**	**153**	P	**P**	**00 33 22.6**	**-0.2**
	comp=Z,94nm,0.4s						
YULB	**Yu-li**	**26.94**	**83**	P	**P**	**00 33 24.3**	**-0.1**
YULB				IAmb	IAmb	00 33 25.4	
	comp=Z,18nm,0.9s						
KKAR	**Karatay Array**	**27.00**	**324**	P	**P**	**00 33 27.5**	**+2.9**
SONM	**Songino Array**	**27.54**	**21**	P	**P**	**00 33 30.5**	**+1.0**
	comp=Z,4.6nm,0.8s,baz=199,slow=10,SNR=10						
	comp=Z,4.6nm,0.8s						
SONM	**Songino Array**	**27.54**	**21**	P	**P**	**00 33 30.2**	**+0.6**
	comp=Z,5.5nm,0.8s,baz=170,slow=8.2,SNR=24						
	comp=Z,5.5nm,0.8s						
ZALV	**Zalesovo Beam**	**31.61**	**352**	P	**P**	**00 34 06.3**	**+1.0**
GEYT	**Alibeck**	**32.70**	**305**	P	**P**	**00 34 17.4**	**+2.1**
	comp=Z,2.4nm,0.5s,baz=134,slow=7.5,SNR=3.8						
	comp=Z,2.4nm,0.5s						
GEYT	**Alibeck**	**32.70**	**305**	P	**P**	**00 34 17.4**	**+2.1**
GEYT				IAmb	IAmb	00 34 20.1	
	comp=Z,13nm,1.4s						
GYA0B	**ALIBECK ARRAY**	**32.70**	**305**	P	**P**	**00 34 17.2**	**+2.0**
GYA0B				IAmb	IAmb	00 34 20.0	
	comp=Z,19nm,1.4s						
JOW	**Kunigami**	**33.11**	**75**	LR	LR	00 48 59.1	
	comp=Z,208nm,19.2s,baz=278,slow=39						
KSRS	**Korea Array**	**34.12**	**56**	P	**P**	**00 34 28.5**	**+0.9**
	comp=Z,0.5nm,0.4s,baz=252,slow=8.5,SNR=2.1						
	comp=Z,0.5nm,0.4s						
JNU	**Nakatsue**	**35.69**	**65**	P	**P**	**00 34 42.7**	**+1.5**
JNU				IAmb	IAmb	00 34 56.6	
	comp=Z,20nm,1.0s						
ABKAR	**Akbulak array**	**36.56**	**324**	P	**P**	**00 34 50.6**	**+2.2**

ABKAR	**Akbulak array**	**36.56**	**324**	P		**P**		**00 34 50.3**	**+2.0**
MRSI	**Marisa**	**36.59**	**123**	P		**P**		**00 34 48.7**	**-0.2**
	comp=Z,18nm,0.9s								
BNX	**BinXian**	**36.72**	**43**	⇓P		P		00 34 55.0	+5.2
BNX				pmax		pmax			
	comp=Z,5.0nm,0.7s								
BNX				pmax		pmax			
	comp=Z,310nm,10.3s								
AKTO	**Aktyubinsk**	**38.26**	**325**	P		**P**		**00 35 04.2**	**+1.4**
	comp=Z,1.8nm,0.7s,baz=117,slow=10,SNR=4.6								
	comp=Z,1.8nm,0.7s								
USRK	**Ussuriysk Ar.**	**39.11**	**47**	P		**P**		**00 35 11.2**	**+1.2**
KLR	**Kul'dur**	**40.91**	**40**	P		**P**		**00 35 24.2**	**-0.6**
	comp=Z,1.2nm,0.7s,baz=232,slow=11,SNR=4.8								
	comp=Z,1.2nm,0.7s								
INU	**Inuyama**	**40.98**	**62**	P		**P**		**00 35 26.5**	**+1.0**
INU				IAmb		IAmb		00 35 37.8	
	comp=Z,18nm,1.0s								
JGF	**Kuroka**	**41.28**	**62**	P		**P**		**00 35 30.0**	**+1.9**
JGF				IAmb		IAmb		00 35 40.0	
	comp=Z,18nm,1.3s								
ARU	**Arti**	**41.60**	**333**	P		**P**		**00 35 32.2**	**+1.8**
	comp=Z,1.8nm,0.4s,baz=125,slow=8.2,SNR=5.7								
ARU				LR		LR		00 56 24.6	
	comp=Z,147nm,19.8s,baz=130,slow=41								
	comp=Z,1.8nm,0.4s								
ARU	**Arti**	**41.60**	**333**	P		**P**		**00 35 31.5**	**+1.1**
MJB9	**Matsu-Tunnel**	**42.05**	**60**	P		**P**		**00 35 35.9**	**+1.4**
MJB9				IAmb		IAmb		00 35 46.5	
	comp=Z,13nm,1.0s								
MAJO	**Matsushiro**	**42.05**	**60**	P		**P**		**00 35 35.3**	**+0.9**
MAJO				IAmb		IAmb		00 35 46.5	
	comp=Z,13nm,1.0s								
MJAR	**Matsushiro Arr**	**42.05**	**60**	P		**P**		**00 35 34.4**	**0.0**
	comp=Z,2.3nm,0.8s,baz=267,slow=8.2,SNR=2.7								
MJAR				LR		LR		00 54 57.5	
	comp=Z,266nm,19.3s,baz=246,slow=39								
	comp=Z,2.3nm,0.8s								
MJAR	**Matsushiro Arr**	**42.05**	**60**	P		**P**		**00 35 35.9**	**+1.4**
JSD	**Sado**	**42.27**	**58**	P		**P**		**00 35 36.8**	**+0.7**
RAYN	**Ar Rayn**	**42.61**	**280**	P		**P**		**00 35 39.7**	**+0.5**
JHJ	**Hachijo jima 2**	**43.14**	**65**	LR		LR		00 55 04.8	
	comp=Z,79nm,18.6s,baz=88,slow=38								
JHJ2	**Mitsune**	**43.17**	**65**	P		**P**		**00 35 44.6**	**+1.1**
GNI	**Garni**	**43.34**	**305**	P		**P**		**00 35 47.1**	**+2.1**
MSAI	**Masohi**	**44.42**	**121**	P		**P**		**00 35 53.2**	**-0.5**
KARS	**Kars**	**44.67**	**305**	P		**P**		**00 35 57.0**	**+1.4**
ONI	**Oni**	**44.71**	**308**	P		**P**		**00 35 57.9**	**+2.1**
ONI				IAmb		IAmb		00 36 17.8	
	comp=Z,5.9nm,0.7s								
SWI	**Sorong**	**44.86**	**116**	P		**P**		**00 35 54.8**	**-2.5**
	comp=Z,2μmcomp=Z,16nm,0.7s								
BELG	**Belogornoye**	**44.90**	**323**	LR		LR		00 57 30.9	
	comp=Z,138nm,18.6s,baz=346,slow=40								
SOEI	**Soe**	**45.21**	**132**	P		**P**		**00 36 00.2**	**+0.1**
	comp=Z,39nm,0.8s								
GURO	**Guroymak-BITLI**	**45.22**	**302**	P		**P**		**00 36 02.1**	**+2.0**
GURO				IAmb		IAmb		00 36 17.2	
	comp=Z,14nm,1.2s								
KIV	**Kislovodsk**	**45.52**	**310**	P		**P**		**00 36 03.1**	**+0.9**
FAKI	**Fak Fak**	**46.84**	**118**	P		**P**		**00 36 12.5**	**-0.3**
KIRV	**Kirov**	**46.86**	**331**	LR		LR		01 00 34.6	
	comp=Z,116nm,18.1s,baz=145,slow=42								
ROCAM	**Rodrigues Isla**	**50.67**	**216**	P		**P**		**00 36 42.4**	**+0.3**
BR131	**Keskin Array S**	**51.80**	**303**	P		**P**		**00 36 51.6**	**+0.9**
BRTR	**Keskin Array B**	**51.80**	**303**	P		**P**		**00 36 51.9**	**+1.2**
	comp=Z,0.6nm,0.5s,baz=93,slow=4.9,SNR=9.1								
	comp=Z,0.6nm,0.5s								
BRTR	**Keskin Array B**	**51.80**	**303**	P		**P**		**00 36 51.1**	**+0.4**
KLMR	**Klimovskoe**	**52.36**	**331**	*e*P		**P**		**00 36 54.2**	**-0.1**
KLMR				AMP				00 37 10.5	
	comp=Z,15nm,1.3s								
TIXI	**Tiksi**	**53.21**	**14**	P		**P**		**00 37 00.5**	**+0.1**
	comp=Z,1.0nm,0.4s,baz=288,slow=13,SNR=1.8								
	comp=Z,1.0nm,0.4s								
GENI	**Genyem**	**53.30**	**112**	P		**P**		**00 37 00.1**	**-1.8**
	comp=Z,31nm,0.7s								
MA2	**Magadan**	**54.92**	**32**	LR		LR		01 03 17.8	
	comp=Z,323nm,18.1s,baz=290,slow=39								
AKASG	**Malin Array Be**	**55.56**	**317**	P		**P**		**00 37 18.1**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=81,slow=6.8,SNR=9.8								
	comp=Z,0.5nm,0.4s								
SEY	**Seymchan**	**56.58**	**28**	LR		LR		01 04 48.5	
	comp=Z,307nm,19.4s,baz=243,slow=39								
MNK	**Minsk**	**56.80**	**321**	*i* P		P		00 37 20.4	-6.2
	comp=E,1.0nm,0.9s								
MNK				*i* P		P		00 37 20.4	-6.2
	comp=N,28nm,0.9s								
MNK				*i* P		P		00 37 20.4	-6.2
	comp=Z,21nm,0.9s,baz=98								
MNK				*i* PcP		**PcP**		**00 38 15.3**	**-6.8**
MNK				*i* PP		**PP**		**00 39 27.1**	**-5.8**
MNK				*i* PPP		PPP		00 40 43.0	
MNK				*i* S		**S**		**00 45 15.7**	**-1.5**
MNK				*i* SS		**SS**		**00 49 05.7**	**+0.4**
MNK				*i* SSS		SSS		00 51 41.0	
MNK				*i* LQ		LQ		00 57 58.8	
MNK				*i* LR		LR		01 02 43.9	
MNK				*i* LRM		MLR		01 04 22.6	
	comp=N,229nm,17.4s								
MNK				*i* LRM		MLR		01 04 27.4	
	comp=E,10.0nm,18.1s								
MNK				*i* LRM		MLR		01 04 52.7	
	comp=Z,7μm,26.1s								
VRI	**Vrincioaia**	**56.97**	**311**	⇑P		**P**		**00 37 30.1**	**+2.0**
PLOR	**Plostina**	**57.03**	**311**	⇓P		**P**		**00 37 31.0**	**+2.6**
KARP	**Karpathos**	**57.13**	**299**	P		**P**		**00 37 30.8**	**+1.5**
BIZ	**Bicaz**	**57.41**	**312**	⇑P		**P**		**00 37 32.1**	**+0.9**
NACGM	**Naroch**	**57.48**	**322**	⇑*e*P		P		00 37 23.4	-8.0
	baz=96								
MLR	**Muntele Rosu**	**57.52**	**310**	⇓P		**P**		**00 37 34.4**	**+2.4**
MLR	**Muntele Rosu**	**57.52**	**310**	P		**P**		**00 37 33.6**	**+1.6**
MLR				IAmb		IAmb		00 37 35.0	
	comp=Z,9.6nm,0.9s								
ALN	**Alexandroupoli**	**57.58**	**305**	P		**P**		**00 37 33.7**	**+1.3**
ALN				IAmb		IAmb		00 37 34.5	
	comp=Z,4.7nm,0.7s								
PETK	**Petropavlovsk-**	**57.59**	**41**	P		**P**		**00 37 32.9**	**+0.6**
IIGN	**Ignalina**	**57.85**	**322**	*e*P		**P**		**00 37 36.5**	**+2.5**
BURAR	**Bucovina Array**	**58.03**	**313**	⇓P		**P**		**00 37 37.3**	**+1.8**
BURAR	**Bucovina Array**	**58.03**	**313**	P		**P**		**00 37 36.4**	**+0.8**
FINES	**FINESS Array B**	**58.77**	**329**	P		**P**		**00 37 41.5**	**+1.1**
	comp=Z,1.6nm,0.8s,baz=98,slow=12,SNR=5.4								
	comp=Z,1.6nm,0.8s								
PABE	**Paberze**	**59.14**	**322**	P		**P**		**00 37 44.6**	**+1.6**
PABE	**Paberze**	**59.14**	**322**	*e*P		**P**		**00 37 44.2**	**+1.2**
WB0	**Warramunga Arr**	**59.16**	**132**	P		**P**		**00 37 44.2**	**+0.6**
WRA	**Warramunga Arr**	**59.24**	**132**	P		**P**		**00 37 43.1**	**-1.1**
	comp=Z,32nm,0.9s,baz=322,slow=7.4,SNR=147								
WR0	**Warramunga Arr**	**59.39**	**132**	P		**P**		**00 37 45.9**	**+0.7**
SUW	**Suwalki**	**59.51**	**320**	*e*P		**P**		**00 37 47.0**	**+1.5**
LIT	**Litokhoron**	**60.35**	**304**	P		**P**		**00 37 52.0**	**+0.3**
LIT				IAmb		IAmb		00 37 52.9	
	comp=Z,7.3nm,0.8s								
ARCES	**ARCESS Array B**	**60.68**	**338**	P		**P**		**00 37 54.9**	**+1.5**
	comp=Z,1.5nm,0.8s,baz=96,slow=7.4,SNR=5.3								
	comp=Z,1.5nm,0.8s								
ITM	**Ithomi**	**61.13**	**301**	P		**P**		**00 37 57.1**	**+0.1**
AS31	**Alice Springs**	**61.56**	**136**	P		**P**		**00 38 00.8**	**+0.8**
AS31				IAmb		IAmb		00 38 10.7	
	comp=Z,6.5nm,0.7s								
ASAR	**Alice Springs**	**61.56**	**136**	P		**P**		**00 37 59.0**	**-0.9**
	comp=Z,3.3nm,0.7s,baz=316,slow=6.8,SNR=29								
	comp=Z,3.3nm,0.7s								
ASAR	**Alice Springs**	**61.56**	**136**	P		**P**		**00 38 00.5**	**+0.5**
KBN	**Korca**	**61.59**	**305**	P		**P**		**00 37 59.7**	**-0.4**
KBN				IAmb		IAmb		00 38 00.9	
	comp=Z,8.0nm,1.1s								
DIVS	**Divibare**	**61.82**	**309**	P		**P**		**00 38 02.7**	**+1.0**
PDG	**Podgorica**	**62.52**	**307**	P		**P**		**00 38 06.5**	**+0.2**
PDG				IAmb		IAmb		00 38 07.5	
	comp=Z,4.3nm,0.7s								
VOI	**Vohitsoka**	**62.54**	**228**	P		**P**		**00 38 08.8**	**+2.1**
MORH	**Mrgy, Hungar**	**62.58**	**311**	⇓P		**P**		**00 38 07.9**	**+1.4**
OKC	**Ostrava-Krasne**	**62.65**	**316**	*e*P		**P**		**00 38 09.1**	**+2.1**
MORC	**Moravsky Berou**	**63.04**	**316**	P		**P**		**00 38 10.9**	**+1.2**
KRLC	**Kraliky**	**63.51**	**316**	*e*P		**P**		**00 38 14.1**	**+1.3**
OSTC	**Ostas**	**63.84**	**316**	*e*P		P		00 38 24.6	+10
SOKA	**Soboth**	**65.02**	**312**	*e*P		**P**		**00 38 24.1**	**+1.4**
	comp=Z,2.3nm,0.7s								
BRG	**Berggiesshubel**	**65.25**	**317**	*e*P		**P**		**00 38 25.7**	**+1.7**
BRG				Amp				00 38 26.3	
	comp=Z,3.6nm,0.9s								
BRG				*ex*		x		00 38 39.8	
BRG				Amp				00 38 41.6	
	comp=Z,5.2nm,0.9s								
MOA	**Molln**	**65.39**	**314**	*e*P		**P**		**00 38 26.1**	**+1.0**
	comp=Z,1.3nm,0.5s								
GEC2	**GERESS Array S**	**65.64**	**315**	P		**P**		**00 38 27.6**	**+0.8**
GEC2				IAmb		IAmb		00 38 43.3	
	comp=Z,5.7nm,1.0s								
GERES	**GERESS Array B**	**65.64**	**315**	P		**P**		**00 38 28.1**	**+1.4**
	comp=Z,1.9nm,0.7s,baz=79,slow=6.9,SNR=23								
	comp=Z,1.9nm,0.7s								
GERES	**GERESS Array B**	**65.64**	**315**	P		**P**		**00 38 27.3**	**+0.6**
KHC	**Kasperske Hory**	**65.68**	**315**	*e*P		**P**		**00 38 28.1**	**+1.2**
KHC				x		x		00 38 41.5	
NB2	**NORSAR Subarra**	**65.92**	**328**	P		**P**		**00 38 28.8**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=85,slow=6.5								
NOA	**NORSAR Array B**	**65.92**	**328**	P		**P**		**00 38 28.9**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=86,slow=6.3,SNR=5.6								
NOA				LR		LR		01 09 12.9	
	comp=Z,59nm,19.6s,baz=210,slow=38								
KHC	comp=Z,0.8nm,0.6s								
STAL	**STALIGIAL**	**66.66**	**312**	P		**P**		**00 38 33.2**	**0.0**
NRCA	**Norcia**	**66.95**	**308**	P		**P**		**00 38 36.1**	**+0.9**
NRCA				IAmb		IAmb		00 38 53.4	
	comp=Z,2.7nm,0.7s								
SMY	**Shemya**	**67.51**	**41**	P		**P**		**00 38 40.6**	**+2.2**
MOTA	**Moosalm**	**67.58**	**313**	*e*P		**P**		**00 38 39.7**	**+0.5**
	comp=Z,1.4nm,0.4s								
RETA	**Reutte**	**67.78**	**314**	*e*P		**P**		**00 38 40.9**	**+0.5**
	comp=Z,1.4nm,0.5s								
PRMA	**PARMA**	**68.58**	**311**	P		**P**		**00 38 47.6**	**+2.3**
WLF	**Walferdange**	**70.37**	**317**	P		**P**		**00 38 58.4**	**+2.1**
WLF				IAmb		IAmb		00 39 11.7	
	comp=Z,9.7nm,1.0s								
KEST	**Kesra**	**71.35**	**302**	P		**P**		**00 39 04.3**	**+1.6**
	comp=Z,5.1nm,1.1s,baz=286,slow=5.0,SNR=3.7								
	comp=Z,5.1nm,1.1s								
STKA	**Stephens Creek**	**72.14**	**137**	P		**P**		**00 39 06.2**	**-0.9**
	comp=Z,0.8nm,0.5s,baz=347,slow=5.6,SNR=2.8								
	comp=Z,0.8nm,0.5s								
LSZ	**Lusaka**	**73.00**	**245**	P		**P**		**00 39 13.4**	**+0.6**
LSZ				IAmb		IAmb		00 39 14.6	
	comp=Z,8.0nm,0.9s								
TOLK	**Toolik Lake Re**	**78.64**	**19**	P		**P**		**00 39 44.9**	**+0.9**
TOLK				IAmb		IAmb		00 40 03.3	
	comp=Z,6.8nm,0.8s								
IMAR	**Indian Mountai**	**78.70**	**22**	P		**P**		**00 39 46.8**	**+2.4**
CART	**Cartagena**	**78.73**	**306**	P		**P**		**00 39 47.7**	**+2.6**
BORG	**Borgarnes**	**79.00**	**336**	LR		LR		01 16 45.7	
	comp=Z,90nm,21.2s,baz=163,slow=37								
H21K	**Melozitna Rive**	**79.20**	**22**	IAmb		IAmb		00 40 00.8	
	comp=Z,9.2nm,1.4s								
COLD	**Coldfoot**	**79.23**	**21**	P		**P**		**00 39 48.8**	**+1.5**
LBTB	**Lobatse**	**80.01**	**238**	P		**P**		**00 39 53.0**	**+0.7**
LBTB				IAmb		IAmb		00 39 54.1	
	comp=Z,10nm,0.7s								
ESDC	**Sonseca Array**	**80.17**	**309**	P		**P**		**00 39 53.9**	**+0.9**
	comp=Z,0.7nm,0.7s,baz=55,slow=5.1,SNR=7.8								
	comp=Z,0.7nm,0.7s								
ESDC	**Sonseca Array**	**80.17**	**309**	P		**P**		**00 39 53.8**	**+0.9**
MLY	**Manley**	**80.27**	**23**	P		**P**		**00 39 54.6**	**+1.6**
BPAW	**Bear Paw Mtn.**	**80.70**	**23**	P		**P**		**00 39 57.0**	**+1.7**
BMAR	**Burnt Mountain**	**80.87**	**19**	P		**P**		**00 39 58.0**	**+1.8**
SKT	**Skwentna**	**81.67**	**25**	P		**P**		**00 40 01.2**	**+0.7**
SKT				IAmb		IAmb		00 40 15.1	
	comp=Z,6.1nm,1.1s								
ILAR	**Eielson Array**	**81.77**	**22**	P		**P**		**00 40 00.2**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=310,slow=3.5,SNR=6.2								
	comp=Z,0.4nm,0.4s								
ILAR	**Eielson Array**	**81.77**	**22**	P		**P**		**00 40 00.7**	**-0.2**
RND	**Reindeer**	**81.88**	**23**	P		**P**		**00 40 02.9**	**+1.3**
BOSA	**Boshof**	**82.12**	**235**	P		**P**		**00 40 04.3**	**+0.8**
	comp=Z,5.0nm,0.8s,baz=47,slow=3.0,SNR=9.7								
	comp=Z,5.0nm,0.8s								
BOSA	**Boshof**	**82.12**	**235**	P		**P**		**00 40 03.8**	**+0.3**
BOSA				IAmb		IAmb		00 40 19.3	
	comp=Z,8.7nm,1.4s								
PMR	**Palmer**	**82.83**	**25**	P		**P**		**00 40 08.0**	**+1.5**
PMR				IAmb		IAmb		00 40 18.0	
	comp=Z,6.6nm,1.0s								
J26L	**Joseph Creek**	**83.05**	**21**	P		**P**		**00 40 09.4**	**+1.6**
J26L				IAmb		IAmb		00 40 26.3	
	comp=Z,4.0nm,0.7s								
SCRK	**Sand Creek**	**83.25**	**22**	P		**P**		**00 40 09.3**	**+0.5**
SCRK				IAmb		IAmb		00 40 27.3	
	comp=Z,5.5nm,0.8s								
INK	**Inuvik**	**83.29**	**15**	P		**P**		**00 40 10.5**	**+1.8**
INK				IAmb		IAmb		00 40 21.7	
	comp=Z,4.4nm,0.9s								
KDAK	**Kodiak Island**	**83.53**	**29**	LR		LR		01 19 13.8	
	comp=Z,138nm,19.9s,baz=117,slow=37								
K27K	**Chicken**	**83.86**	**21**	P		**P**		**00 40 13.2**	**+1.5**
K27K				IAmb		IAmb		00 40 30.7	
	comp=Z,4.5nm,0.9s								
DAWY	**Dawson**	**84.70**	**20**	P		**P**		**00 40 18.3**	**+2.1**
DAWY				IAmb		IAmb		00 40 27.5	
	comp=Z,4.5nm,1.4s								
TORD	**Torodi Ar. Bea**	**85.28**	**282**	P		**P**		**00 40 21.0**	**+1.0**
	comp=Z,2.3nm,0.9s,baz=60,slow=4.5,SNR=15								
	comp=Z,2.3nm,0.9s								
TORD	**Torodi Ar. Bea**	**85.28**	**282**	P		**P**		**00 40 20.9**	**+1.0**
SFJD	**Kangerlussuaq**	**86.24**	**346**	LR		LR		01 23 45.9	
	comp=Z,85nm,19.6s,baz=126,slow=39								
YKA	**Yellowknife Ar**	**92.43**	**12**	P		**P**		**00 40 53.8**	**+0.9**
	comp=Z,0.2nm,0.7s,baz=327,slow=4.5,SNR=1.6								
	comp=Z,0.2nm,0.7s								
TXAR	**Lajitas Array**	**126.05**	**17**	PKP		**PKiKP**		**00 46 45.8**	**+0.1**
	comp=Z,0.3nm,0.8s,baz=129,slow=2.4,SNR=2.2								
CPUP	**Villa Florida**	**151.91**	**256**	PKPbc		**PKPbc**		**00 47 37.8**	**0.0**
	comp=Z,1.4nm,0.5s,baz=94,slow=1.5,SNR=5.4								
CPUP				PKPab		**pPKPbc**		**00 47 48.7**	**-0.6**
	comp=Z,2.5nm,0.7s,baz=80,slow=3.5,SNR=6.8								

ISU ***27*** *00:37:47.4,39˚.57N×73˚.58E,h1km*
IDC ***27*** *00:37:47.6±0.8,39˚.26N×73˚.42E, h0km,mb3.8/17, mbtmp3.9/24,ML3.2/7,MS3.7/3,Error ellipse: s-maj=16.2km s-min=12.5km az=168.0*
SOME ***27*** *00:37:48.0,39˚.43N×73˚.47E,h15km, MS3.8*
KRNET ***27*** *00:37:48.3±0.1,39˚.43N×73˚.45E,mb4.5*
BJI ***27*** *00:37:48.5±0.0,39˚.40N×73˚.31E,h10km,mb4.3/18, mB4.4/10,ML3.9/5,Ms3.9/5,Ms7 3.6/6*
MOS ***27*** *00:37:50.4±1.1,39˚.42N×73˚.31E,h15km,mb4.4/18,Error ellipse: s-maj=6.0km s-min=3.7km az=78.8*
MOS Felt (III-IV) at Bordobo; (II-III) at Kara-Kindik, Sary-Tash.
NNC ***27*** *00:37:52.2±1.6,39˚.56N×73˚.52E,h0km,mb4.5,mpv4.1, Error ellipse: s-maj=13.1km s-min=7.3km az=176.0*
NEIC ***27*** *00:37:52.2±2.8,39˚.47N±0˚.05×73˚.25E±0˚.05,h10km±1km, mb4.3/35,Error ellipse: s-maj=8.6km s-min=5.9km az=152.0*

ISC 27 00:37:50.4±1.2,39˚41N±0˚03×73˚33E±0˚02,h6km±7km, n273,σ2s09/356,mb4.2/42,MS3.9/4,47C-32D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h	m	s	ISC
OHH	**Osh**	**1.19**	**339**	⇑*i*P		**Pb**	**00**	**38**	**11.1**	**-2.3**
	baz=35									
OHH				⇑*i*S		**Sg**	**00**	**38**	**27.9**	**-0.7**
	baz=35									
OHH	**Osh**	**1.19**	**339**	*i* PG		**Pb**	**00**	**38**	**11.1**	**-2.3**
OHH				*i* S		**Sg**	**00**	**38**	**27.9**	**-0.7**
OHH	**Osh**	**1.19**	**339**	P		**Pb**	**00**	**38**	**11.3**	**-2.1**
OHH				S		**Sb**	**00**	**38**	**28.4**	**-0.6**
OHH	**Osh**	**1.19**	**339**	P		**Pb**	**00**	**38**	**11.3**	**-2.1**
OHH				S		**Sb**	**00**	**38**	**28.4**	**-0.6**
DRK	**Karamyk**	**1.19**	**274**	⇑*i*P		**Pg**	**00**	**38**	**12.8**	**-0.4**
	baz=73									
DRK				⇑*i*S		**Sn**	**00**	**38**	**30.5**	**+0.1**
	baz=73									
DRK	**Karamyk**	**1.19**	**274**			**Pg**	**00**	**38**	**12.2**	**-1.1**
DRK					Sg	**Sb**	**00**	**38**	**29.1**	**-0.1**
TSTA	**Tashata**	**1.33**	**331**	P		**Pn**	**00**	**38**	**13.9**	**-1.7**
TSTA				S		**Sg**	**00**	**38**	**32.6**	**-0.8**
TSTA	**Tashata**	**1.33**	**331**	P		**Pn**	**00**	**38**	**13.9**	**-1.7**
TSTA				S		**Sg**	**00**	**38**	**32.6**	**-0.8**
FRG	**Fergana**	**1.53**	**309**	P		**Pn**	**00**	**38**	**18.4**	**+0.1**
FRG				S		**Sg**	**00**	**38**	**40.8**	**+1.2**
FRG	**Fergana**	**1.53**	**309**	P		**Pn**	**00**	**38**	**18.4**	**+0.1**
FRG				S		**Sg**	**00**	**38**	**40.8**	**+1.2**
CHMI	**Chimion**	**1.63**	**302**	P		**Pb**	**00**	**38**	**20.5**	**-0.5**
CHMI				S		**Sg**	**00**	**38**	**43.8**	**+0.9**
CHMI	**Chimion**	**1.63**	**302**	P		**Pb**	**00**	**38**	**20.5**	**-0.5**
CHMI				S		**Sg**	**00**	**38**	**43.8**	**+0.9**
BTK	**Batken**	**2.04**	**289**	⇓*i*P		**Pn**	**00**	**38**	**26.7**	**+1.4**
	baz=88									
BTK				⇓*i*S		**Sg**	**00**	**38**	**55.1**	**-0.9**
	baz=88									
BTK	**Batken**	**2.04**	**289**	Pn		**Pb**	**00**	**38**	**26.9**	**-1.1**
BTK				Sg		**Sg**	**00**	**38**	**57.4**	**+1.4**
BTK	**Batken**	**2.04**	**289**	*i* PN		**Pn**	**00**	**38**	**26.7**	**+1.4**
BTK				*i* S		**Sg**	**00**	**38**	**55.1**	**-0.9**
BTK	**Batken**	**2.04**	**289**	P		**Pn**	**00**	**38**	**26.8**	**+1.4**
BTK				S		**Sg**	**00**	**38**	**57.2**	**+1.2**
BTK	**Batken**	**2.04**	**289**	P		**Pn**	**00**	**38**	**26.8**	**+1.4**
BTK				S		**Sg**	**00**	**38**	**57.2**	**+1.2**
KSH	**Kashi**	**2.05**	**86**	Pg		Pn	00	38	20.5	-5.0
KSH				Sg		Sn	00	38	42.8	-8.7
KSH				*s*max		*s*max				
	comp=N,2μm,0.5s									
KSH				*s*max		*s*max				
	comp=E,2μm,0.6s									
MINT	**Mingtut**	**2.09**	**301**	P		**Pb**	**00**	**38**	**29.4**	**+0.6**
MINT				S		**Sg**	**00**	**38**	**59.4**	**+1.7**
MINT	**Mingtut**	**2.09**	**301**	P		**Pb**	**00**	**38**	**29.4**	**+0.6**
MINT				S		**Sg**	**00**	**38**	**59.4**	**+1.7**
GAR	**Garm**	**2.38**	**261**	⇑*i*P		**Pn**	**00**	**38**	**31.6**	**+1.6**
	baz=61									
GAR				⇑*i*P		**Sb**	**00**	**39**	**03.0**	**-0.3**
	baz=61									
GAR	**Garm**	**2.38**	**261**	Pg		**Pg**	**00**	**38**	**35.8**	**-0.2**
GAR	**Garm**	**2.38**	**261**	*i* PN		**Pn**	**00**	**38**	**31.6**	**+1.6**
GAR				*i* S		**Sb**	**00**	**39**	**03.0**	**-0.3**
ARLS	**Aral**	**2.56**	**17**	⇑*i*P		**Pn**	**00**	**38**	**32.3**	**-0.3**
	baz=15									
ARLS				⇑*i*S		**Sn**	**00**	**39**	**04.3**	**+0.2**
	baz=15									
ARLS	**Aral**	**2.56**	**17**	*i* PN		**Pn**	**00**	**38**	**32.3**	**-0.3**
ARLS				*i* S		**Sn**	**00**	**39**	**04.3**	**+0.2**
ARK	**Arkit**	**2.60**	**337**	P		**Pn**	**00**	**38**	**35.0**	**+1.9**
ARK				S		**Sb**	**00**	**39**	**09.9**	**+0.2**
ARK	**Arkit**	**2.60**	**337**	P		**Pn**	**00**	**38**	**35.0**	**+1.9**
ARK				S		**Sb**	**00**	**39**	**09.9**	**+0.2**
TRKS	**Terek-Say**	**2.69**	**322**	⇑*i*P		**Pn**	**00**	**38**	**34.6**	**+0.2**
	baz=20									
TRKS				⇑*i*S		**Sn**	**00**	**39**	**08.3**	**+0.8**
	baz=20									
AML	**Almayashu**	**2.73**	**6**	P		**Pn**	**00**	**38**	**36.6**	**+1.5**
	SNR=21									
AML	**Almayashu**	**2.73**	**6**	*i* PN		**Pn**	**00**	**38**	**35.1**	**0.0**
AML				*i* S		**Sn**	**00**	**39**	**09.4**	**+0.8**
UCH	**Uchtor**	**2.95**	**17**	P		**Pn**	**00**	**38**	**40.1**	**+1.8**
	SNR=46									
UCH	**Uchtor**	**2.95**	**17**	⇓*i*P		**Pn**	**00**	**38**	**37.9**	**-0.3**
	baz=16									
UCH				⇓*i*S		**Sn**	**00**	**39**	**14.3**	**+0.1**
	baz=16									
UCH	**Uchtor**	**2.95**	**17**	*i* PN		**Pn**	**00**	**38**	**37.9**	**-0.3**
UCH				*i* S		**Sn**	**00**	**39**	**14.3**	**+0.1**
EKS2	**Erkin-Say**	**3.26**	**6**	P		**Pn**	**00**	**38**	**44.4**	**+2.2**
	SNR=37									

222nm,0.8s
USP Ospenovka 3.95 13 P Pn 00 38 53.3 +1.7
SNR=58
KDJ Kajisay 3.99 46⇑*i*P Pn 00 38 51.8 -0.5
baz=45
KDJ ⇑*i*S **Sn 00 39 38.0 -1.4**
baz=45
KDJ Kajisay 3.99 46 Pn 00 38 55.6 +3.3
KDJ Kajisay 3.99 46 *i* PN Pn 00 38 51.8 -0.5
KDJ *i* S **Sn 00 39 38.0 -1.4**
CHM Chimkent 4.05 317 *e*P Pb 00 39 04.0 +1.9
6.6nm,0.6s
CHM *e*S **Sg 00 39 58.8 -1.7**
1µm,0.6s
CHM Chimkent 4.05 317 *e*Pg Pg 00 39 07.2 -0.8
baz=313
CHM *e*Lg Lg 00 39 59.2
baz=313
TARG Taragay, Kyrgy 4.12 54⇑*i*P Pn 00 38 53.6 -0.6
baz=54
TARG ⇑*i*S **Sn 00 39 41.2 -1.7**
baz=54
TARG Taragay, Kyrgy 4.12 54 Pn 00 38 56.1 +1.9
TARG Taragay, Kyrgy 4.12 54 *i* PN Pn 00 38 53.6 -0.6
TARG *i* S **Sn 00 39 41.2 -1.7**
KST Kastek 4.13 28 *e*P Pb 00 39 03.6 -0.1
31nm,0.6s
KST *e*S **Sb 00 39 58.0 +4.1**
454nm,0.8s
KST Kastek 4.13 28 Pg Pb 00 39 01.9 -1.8
31nm,0.6s
KST Lg Lg 00 39 59.0
454nm,0.8s
SGDS Sogindy 4.15 13 *e*PN Pn 00 38 55.5 +1.1
SGDS *e* 00 39 07.4
SGDS *e* 00 39 58.0
SGDS Sogindy 4.15 13 *e*P Pb 00 39 03.4 -0.6
21nm,0.7s
SGDS *e*S **Sb 00 39 56.7 +2.4**
155nm,0.1s
SGDS Sogindy 4.15 13 *e*Pn Pn 00 38 55.6 +1.1
baz=14
SGDS *e*Pg **Pb 00 39 07.5 +3.6**
baz=14
SGDS *e*Lg Lg 00 39 58.0
baz=14
DGS Degeres 4.24 25 *e*P Pb 00 39 06.6 +1.1
26nm,0.6s
DGS *e*S **Sb 00 40 02.6 +5.5**
378nm,0.8s
DGS Degeres 4.24 25 Pg Pb 00 39 04.1 -1.4
39nm,0.5s
DGS Lg Lg 00 40 02.6
378nm,0.8s
KK31 Karatay Array 4.25 331 Pn Pn 00 38 57.6 +1.9
KK31 Karatay Array 4.25 331 PN Pn 00 38 57.7 +2.0
KK31 PG **Pb 00 39 08.8 +3.2**
KK31 SN **Sn 00 39 49.9 +4.2**
KK31 Karatay Array 4.25 331 ⇑Pn Pn 00 38 57.7 +2.0
5.1nm,0.6s,baz=138,slow=12,SNR=98
KK31 ⇓Pg **Pb 00 39 08.8 +3.2**
27nm,0.5s,baz=131,slow=13,SNR=13
KK31 ⇓Sn **Sn 00 39 50.0 +4.2**
56nm,0.6s,baz=150,slow=21,SNR=4.2
KK31 ⇓Lg Lg 00 40 05.1
223nm,0.7s,baz=144,slow=26,SNR=5.5
KKAR Karatay Array 4.25 331 ⇓*i*P Pn 00 38 56.7 +0.9
baz=30
KKAR ⇓*i*S **Sn 00 39 46.8 +1.1**
baz=30
KKAR Karatay Array 4.25 331 Pn Pn 00 38 57.1 +1.3
KKAR Karatay Array 4.25 331 Pn 00 38 57.2 +1.5
KKAR Karatay Array 4.25 331 *i* PN Pn 00 38 56.7 +0.9
KKAR *i* S **Sn 00 39 46.8 +1.1**
MTBS Maitube 4.39 31 *e*P Pb 00 39 08.2 +0.3
55nm,0.7s
MTBS *e*S **Sb 00 40 06.4 +5.3**
190nm,0.5s
MTBS Maitube 4.39 31 Pg Pb 00 39 07.3 -0.6
55nm,0.7s
MTBS Lg Lg 00 40 07.4
190nm,0.5s
BRLS Borolday 4.47 325 *e*PN Pn 00 38 58.1 -0.6
BRLS *e* 00 39 10.5
BRLS *e* 00 40 08.8
BRLS Borolday 4.47 325 *e*P Pb 00 39 08.4 -1.0
8.9nm,0.4s
BRLS *e*S **Sb 00 40 06.4 +2.9**
216nm,0.5s
BRLS Borolday 4.47 325 *e*Pn Pn 00 38 58.2 -0.6
baz=319
BRLS *e*Pg **Pb 00 39 10.6 +1.2**
baz=319
BRLS *e*Lg Lg 00 40 08.9
baz=319
BRLS Borolday 4.47 325 Pg Pb 00 39 05.8 -3.6
6.2nm,0.4s
BRLS Lg Lg 00 40 05.2
216nm,0.5s
TNSS Tian-Shan 4.53 36 *e*PN Pn 00 39 01.7 +1.8
TNSS *e* 00 39 15.9
TNSS *e* 00 40 12.8
TNSS Tian-Shan 4.53 36 *e*P Pb 00 39 10.2 -0.4
44nm,0.6s
TNSS *e*S **Sb 00 40 10.2 +4.6**
109nm,0.6s
TNSS Tian-Shan 4.53 36 *e*Pn Pn 00 39 01.7 +1.8
baz=38
TNSS *e*Pg **Pg 00 39 16.0 -1.3**
baz=38
TNSS *e*Lg Lg 00 40 12.8
baz=38
TNSS Tian-Shan 4.53 36 Pg Pb 00 39 09.4 -1.2
44nm,0.6s
TNSS Lg Lg 00 40 10.8
109nm,0.6s
KRBS Karabastau 4.63 22 *e*P Pb 00 39 13.1 +1.1
1.2nm,1.0s
KRBS *e*S **Sg 00 40 14.2 -4.8**
201nm,0.6s
KRBS Karabastau 4.63 22 Pg Pb 00 39 11.3 -0.7
1.2nm,1.0s
KRBS Lg Lg 00 40 14.2
201nm,0.6s
AAA Alma-Ata 4.65 34 *e*P Pb 00 39 12.9 +0.4
32nm,0.5s
AAA *e*S **Sb 00 40 15.1 +6.3**
693nm,0.6s
AAA Alma-Ata 4.65 34 *e*Pg Pb 00 39 15.8 +3.3
baz=36
AAA *e*Lg Lg 00 40 17.4
baz=36
AAA Alma-Ata 4.65 34 Pg Pb 00 39 11.5 -1.0
35nm,0.4s
AAA Lg Lg 00 40 15.1
693nm,0.6s
KNDC Almaty 4.68 35 PN Pn 00 39 02.8 +1.1
KNDC 00 39 14.5
KNDC Almaty 4.68 35 ⇓Pn Pn 00 39 02.8 +1.1
16nm,0.5s
KNDC ⇓Pg **Pb 00 39 14.6 +1.6**
144nm,0.6s
KNDC ⇑Lg Lg 00 40 15.3
1µm,0.8s
PRZ Przheval'sk 4.91 50⇓*i*P Pn 00 39 04.6 -0.4
baz=49
PRZ ⇓*i*S **Sn 00 40 00.2 -2.0**
baz=49
PRZ Przheval'sk 4.91 50 Pn 00 39 08.6 +3.7
PRZ Przheval'sk 4.91 50 *i* PN Pn 00 39 04.6 -0.4
PRZ *i* S **Sn 00 40 00.2 -2.0**
KUU Kurty 5.01 26 *e*PN Pn 00 39 09.5 +3.4
KUU *e* 00 39 22.6
KUU *e* 00 40 26.0
KUU Kurty 5.01 26 *e*P Pb 00 39 19.4 +0.9
23nm,0.4s
KUU *e*S **Sb 00 40 25.1 +6.2**
256nm,0.5s
KUU Kurty 5.01 26 *e*Pn Pn 00 39 09.6 +3.4
baz=27
KUU *e*Pg **Pb 00 39 22.6 +4.1**
baz=27
KUU *e*Lg Lg 00 40 26.1
baz=27
KUU Kurty 5.01 26 Pg Pb 00 39 17.8 -0.8
23nm,0.4s
KUU Lg Lg 00 40 25.1
256nm,0.5s
CHKK Chushkaly 5.21 31 *e*P Pb 00 39 22.3 +0.3
21nm,0.5s
CHKK *e*S **Sb 00 40 30.5 +5.7**
112nm,0.7s
CHKK Chushkaly 5.21 31 *e*Pg Pb 00 39 27.0 +5.0
baz=32
CHKK *e*Lg Lg 00 40 31.6
baz=32
CHKK Chushkaly 5.21 31 Pg Pb 00 39 21.3 -0.7
21nm,0.5s
CHKK Lg Lg 00 40 31.9
112nm,0.7s
SATY Saty 5.28 45 *e*PN Pn 00 39 14.5 +4.5
SATY *e* 00 39 27.0
SATY *e* 00 40 32.6
SATY Saty 5.28 45 *e*P Pb 00 39 23.0 -0.2
27nm,0.8s
SATY *e*S **Sb 00 40 32.5 +5.6**
398nm,11.7s
SATY Saty 5.28 45 *e*Pn Pn 00 39 14.5 +4.5
baz=47
SATY *e*Pg **Pb 00 39 27.0 +3.8**
baz=47
SATY *e*Lg Lg 00 40 32.7
baz=47
SATY Saty 5.28 45 Pg Pb 00 39 22.5 -0.7
27nm,0.8s
SATY Lg Lg 00 40 33.1
154nm,0.9s
ZHN Zhinishke 5.37 44 *e*PN Pn 00 39 15.0 +3.8
ZHN *e* 00 39 29.9
ZHN *e* 00 40 35.9
ZHN Zhinishke 5.37 44 *e*P Pb 00 39 24.9 +0.2
22nm,0.4s
ZHN *e*S **Sb 00 40 35.3 +5.8**
120nm,0.9s
ZHN Zhinishke 5.37 44 *e*Pn Pn 00 39 15.0 +3.8
baz=46
ZHN *e*Pg Pb 00 39 30.0 +5.3
baz=46
ZHN *e*Lg Lg 00 40 35.9
baz=46
ZHN Zhinishke 5.37 44 Pg Pb 00 39 23.8 -1.0
22nm,0.4s
ZHN Lg Lg 00 40 35.3
120nm,0.9s
KURS Kuram 5.46 40 *e*P Pb 00 39 26.4 +0.2
42nm,0.6s
KURS *e*S **Sb 00 40 37.7 +5.8**
106nm,1.6s
KURS Kuram 5.46 40 Pg Pb 00 39 27.6 +1.5
42nm,0.6s
KURS Lg Lg 00 40 42.1
106nm,1.6s
BTLS Baital 5.65 5 *e*PN Pn 00 39 15.8 +0.9
BTLS *e* 00 39 32.9
BTLS *e* 00 40 45.2
BTLS Baital 5.65 5 *e*P Pb 00 39 29.5 +0.1
10nm,0.6s
BTLS *e*S **Sb 00 40 43.4 +6.1**
55nm,0.6s
BTLS Baital 5.65 5 *e*Pn Pn 00 39 15.8 +0.9
baz=5.0
BTLS *e*Pg **Pb 00 39 33.0 +3.6**
baz=5.0
BTLS *e*Lg Lg 00 40 45.3
baz=5.0
BTLS Baital 5.65 5 Pg Pb 00 39 30.9 +1.6
10nm,0.6s
BTLS Lg Lg 00 40 46.5
55nm,0.6s
KPKS Kokpek 5.71 43 *e*PN Pn 00 39 18.2 +2.5
KPKS *e* 00 39 36.2
KPKS Kokpek 5.71 43 *e*P Pb 00 39 30.4 0.0
33nm,0.6s
KPKS *e*S **Sb 00 40 44.2 +5.1**
122nm,0.7s
KPKS Kokpek 5.71 43 *e*Pn Pn 00 39 18.3 +2.5
baz=45
KPKS *e*Pg Pb 00 39 36.2 +5.8
baz=45
KPKS *e*Lg Lg 00 40 50.4
baz=45
KPKS Kokpek 5.71 43 Pg Pb 00 39 29.4 -1.0
33nm,0.6s
KPKS Lg Lg 00 40 46.2
122nm,0.7s
ARXS Arharly 5.85 34 *e*P Pb 00 39 34.0 +1.1
22nm,0.7s
ARXS *e*S **Sb 00 40 50.6 +7.3**
172nm,0.7s
ARXS Arharly 5.85 34 Pg Pb 00 39 35.1 +2.2
22nm,0.7s
ARXS Lg Lg 00 40 55.4
172nm,0.7s
SHLS Shalkode 5.94 49 *e*Pg Pg 00 39 44.4 +0.2
baz=53
SHLS *e*Lg Lg 00 41 06.8
baz=53
KBL Kabul 5.95 217 Pn Pn 00 39 22.1 +2.9
KBL Kabul 5.95 217 PN Pn 00 39 22.1 +2.9
BLB Baldybastay 6.06 38 *e*P Pb 00 39 37.6 +1.1
19nm,0.1s
BLB *e*S **Sb 00 40 56.3 +7.1**
126nm,0.2s
PDGK Podgornoye 6.06 48 PN Pn 00 39 21.4 +0.7
PDGK Podgornoye 6.06 48 Pg Pb 00 39 36.2 -0.3
6.8nm,0.6s
PDGK Lg Lg 00 40 56.8
29nm,0.6s
PDGK Podgornoye 6.06 48 ⇑Pn Pn 00 39 21.4 +0.7
13nm,0.7s
PDGK ⇓Pg **Pb 00 39 40.1 +3.6**
31nm,0.7s
PDGK ⇓Lg Lg 00 40 58.9
97nm,0.8s
TDK Taldyqorghan 6.74 32 *e*P* Pg 00 39 55.6 -3.8
TDK Taldyqorghan 6.74 32 *e*Pg Pg 00 39 55.6 -3.8
baz=34
TDK *e*Lg Lg 00 41 19.2
baz=34
DJR Jarkent 6.88 42 *e*P Pb 00 39 53.5 +3.1
3.9nm,0.1s
DJR *e*S **Sg 00 41 24.4 -6.9**
67nm,1.0s
DJR Jarkent 6.88 42 Pg Pb 00 39 50.4 0.0
5.4nm,0.5s
DJR Lg Lg 00 41 22.0
67nm,1.0s
OTUK Ortayu 8.86 356 P Pn 00 40 00.5 +1.6
OTUK Ortayu 8.86 356 ⇑Pn Pn 00 40 00.6 +1.6
4.9nm,0.6s
OTUK ⇑Lg Lg 00 42 28.1
72nm,0.9s
MAKZ Makanchi 9.72 38 Pn Pn 00 40 11.7 +1.0
MAKZ Makanchi 9.72 38 P Pn 00 40 11.7 +1.0
MAKZ Makanchi 9.72 38 ⇓Pn Pn 00 40 12.8 +2.1
1.3nm,0.6s
MAKZ ⇓Pg 00 40 47.4
4.9nm,1.1s
MAKZ ⇑Lg Lg 00 42 54.4
19nm,1.1s
MK31 Makanchi Array 9.86 39 Pn 00 40 14.5 +1.8
MK31 Makanchi Array 9.86 39 P Pn 00 40 14.5 +1.8
MK31 Makanchi Array 9.86 39 ⇓Pn Pn 00 40 14.3 +1.6
1.4nm,0.8s,baz=217,slow=14,SNR=7.2
MK31 ⇓Lg Lg 00 42 59.1
5.8nm,0.7s,baz=226,slow=29,SNR=4.4
MKAR Makanchi Array 9.86 39 Pn Pn 00 40 14.3 +1.7
0.1nm,0.3s,baz=223,slow=14,SNR=4.9
MKAR Lg Lg 00 42 57.8
0.5nm,0.3s,baz=234,slow=28,SNR=5.6
1.2nm,0.8s
MKAR Makanchi Array 9.86 39 Pn Pn 00 40 13.7 +1.0
HRA Herat 10.19 244 Pn Pn 00 40 18.7 +1.3
BRZS Berezniki 10.58 358 *e*P Pn 00 40 23.2 +0.8
BRZS Berezniki 10.58 358 *e*Pn Pn 00 40 23.3 +0.8
baz=357
WMQ Urumqi 11.62 63 *e*P Pn 00 40 41.8 +5.0
KURBB Kurchatov Arra 11.79 16 Pn Pn 00 40 39.4 +0.4
0.1nm,0.3s,baz=209,slow=9.4,SNR=2.8
KURBB Lg Lg 00 44 00.6
0.2nm,0.3s,baz=211,slow=29,SNR=3.5
KURBB Kurchatov Arra 11.79 16 ⇑Lg Lg 00 44 00.6
57nm,0.8s
KURK Kurchatov 11.90 17 Pn Pn 00 40 41.3 +0.8
KURK Kurchatov 11.90 17 P Pn 00 40 41.3 +0.8
KURK Kurchatov 11.90 17 ⇑Lg Lg 00 44 04.3
50nm,1.1s
GEYT Alibeck 11.99 268 Pn Pn 00 40 39.6 -2.2
0.4nm,0.3s,baz=78,slow=13,SNR=3.5
GEYT Sn **Sn 00 42 49.0 -6.8**
0.2nm,0.3s,baz=79,slow=31,SNR=2.0
2.6nm,0.5s
GEYT Alibeck 11.99 268 Pn 00 40 41.1 -0.7
GYA0 ALIBECK ARRAY 11.99 268 P Pn 00 40 41.2 -0.6
GYA0B ALIBECK ARRAY 11.99 268 Pn Pn 00 40 41.2 -0.6
AB31 Akbulak array 13.71 320 *e*P Pn 00 41 02.9 -2.4
AB31 Akbulak array 13.71 320 Pn Pn 00 41 08.2 +2.9
1.5nm,0.5s,baz=131,slow=13,SNR=27
ABKAR Akbulak array 13.71 320 Pn 00 41 03.2 -2.1
ABKAR Akbulak array 13.71 320 Pn 00 41 02.8 -2.5
AKTO Aktyubinsk 15.43 321 Pn Pn 00 41 27.0 -1.5
0.3nm,0.3s,baz=119,slow=12,SNR=3.8
AKTO Sn **Sn 00 44 15.3 -4.3**
0.4nm,0.3s,baz=90,slow=20,SNR=3.7
AKTO Lg Lg 00 45 53.4
0.1nm,0.3s,baz=127,slow=20,SNR=1.6
1.2nm,0.4s
AKTO Aktyubinsk 15.43 321 ⇓Pn Pn 00 41 28.9 +0.4
12nm,0.7s
ZAA0 Zalesovo Array 16.50 24 Pn 00 41 42.9 +0.6
ZALV Zalesovo Beam 16.50 24 Pn Pn 00 41 40.7 -1.6
0.1nm,0.3s,baz=211,slow=9.9,SNR=6.1
ZALV Lg Lg 00 46 26.2
0.1nm,0.3s,baz=216,slow=20,SNR=3.5
ZALV LR LR 00 48 22.5
comp=Z,77nm,18.7s,baz=152,slow=38
1.2nm,0.5s
ZALV Zalesovo Beam 16.50 24 P Pn 00 41 43.0 +0.7
ZALV Zalesovo Beam 16.50 24 P Pn 00 41 43.1 +0.7
GOMU GeErMu 17.27 94 P Pn 00 41 52.0 -0.6
GOMU pP P 00 41 56.3 +2.2
GOMU pmax pmax
comp=Z,5.0nm,0.8s
ARU Arti 19.62 335 P P 00 42 19.5 +0.2
baz=162,slow=6.7,SNR=12
ARU Lg Lg 00 48 07.5
baz=180,slow=20,SNR=2.1
6.7nm,0.7s
ARU Arti 19.62 335 P P 00 42 18.9 -0.4
ARU IAmb IAmb 00 42 24.8
comp=Z,8.2nm,0.8s
ARU Arti 19.62 335*d* *i*P Pn 00 42 22.2 +1.6
ARU pmax pmax
comp=Z,9.0nm,0.8s
GTA Gaotai 20.44 82 ⇑P P 00 42 28.8 +0.2
GTA pP Pn 00 42 33.5 +2.8
GTA sP sP 00 42 36.0 +3.0
GTA pmax pmax
comp=Z,10.0nm,0.8s
GTA pmax pmax
comp=Z,37nm,4.5s
GTA LR LR
comp=Z,170nm,14.2s
GTA LR LR
comp=Z,170nm,15.6s
GTA LR LR
comp=Z,200nm,14.9s
GROC Groznyy 20.99 289 *e*P P 00 42 33.5 -0.8
GROC *e* 00 42 53.1
GROC pmax pmax
comp=Z,13nm,0.6s
GNI Garni 21.95 281 P P 00 42 45.3 +0.4
comp=Z,6.4nm,0.8s,baz=160,slow=9.8,SNR=7.2
comp=Z,6.4nm,0.8s
GNI Garni 21.95 281 P P 00 42 44.8 -0.1
GNI IAmb IAmb 00 42 59.6
comp=Z,14nm,1.1s
GNI Garni 21.95 281⇓*e*P P 00 42 46.2 +1.3
GNI pmax pmax
comp=Z,12nm,1.3s
BELG Belogornoye 21.96 315 P P 00 42 42.6 -2.0
comp=Z,27nm,1.0s,baz=130,slow=5.6,SNR=8.1
comp=Z,27nm,1.0s
BELG Belogornoye 21.96 315*c* *i*P P 00 42 42.9 -1.7
BELG pmax pmax
comp=Z,7.0nm,1.0s
NCK Nalchik 22.59 290⇓*e*P P 00 42 50.9 -0.7
NCK pmax pmax
comp=Z,4.0nm,0.4s
ONI Oni 22.71 288 P P 00 42 52.8 -0.2
ONI IAmb IAmb 00 42 56.7
comp=Z,12nm,0.6s
ONI Oni 22.71 288 P P 00 42 52.8 -0.2
ONI pmax pmax
comp=Z,12nm,0.6s
GOF Gofitskoye 23.04 294⇑*e*P P 00 43 00.9 +4.6
KBZ Khabaz 23.10 291 P P 00 42 55.7 -1.1
comp=Z,1.1nm,0.6s,baz=177,slow=7.2,SNR=2.5
comp=Z,1.1nm,0.6s
KARS Kars 23.15 283 P P 00 42 57.2 -0.4
KARS Kars 23.15 283 P P 00 42 57.2 -0.4
KARS pmax pmax
comp=Z,24nm,0.8s
KIV Kislovodsk 23.26 291 P P 00 42 58.7 +0.2
KIV IAmb IAmb 00 43 21.6
comp=Z,7.7nm,0.6s
KIV Kislovodsk 23.26 291⇑*e*P P 00 42 59.1 +0.5
KIV *e* 00 43 23.3
KIV *e*S S 00 46 50.8 -20
KIV pmax pmax
comp=Z,5.0nm,0.8s
KIV MLR MLR
comp=Z,54nm,18.0s
GEVA Gevas 23.55 277 P P 00 43 02.2 +0.6
GEVA IAmb IAmb 00 43 29.7
comp=Z,8.4nm,1.4s
LZH Lanzhou 24.30 88 *e*P P 00 43 08.5 -0.3
LZH pP sP 00 43 16.0 +2.7
LZH pmax pmax
comp=Z,16nm,1.0s
VRH Novokhopyorsk 24.96 309 *e*P P 00 43 22.3 +7.9
VRH pmax pmax
comp=Z,9.0nm,0.6s
KOPT Kop Dagi 25.19 282 P P 00 43 16.7 -0.2
KOPT IAmb IAmb 00 43 19.5
comp=Z,3.6nm,0.7s
SONM Songino Array 25.22 60 P P 00 43 14.5 -2.5
comp=Z,1.5nm,0.9s,baz=241,slow=11,SNR=1.9
comp=Z,1.5nm,0.9s
SONM Songino Array 25.22 60 P P 00 43 16.7 -0.3
SONM Songino Array 25.22 60 P P 00 43 16.7 -0.3
SONM pmax pmax
comp=Z,2.0nm,0.9s
ULN Ulaanbaatar 25.66 60 P P 00 43 21.3 +0.3
ULN Ulaanbaatar 25.66 60⇑*e*P P 00 43 21.8 +0.8
ULN pmax pmax
comp=Z,3.0nm,0.8s
VSR Storozhevoye 26.52 308 *e*P P 00 43 27.5 -1.0
VSR pmax pmax
comp=Z,10.0nm,1.5s
VORR Voronezh 26.60 309 *e*P P 00 43 26.4 -2.9
VORR pmax pmax
comp=Z,20nm,0.4s
HHC Hu-ho-hao-te 29.12 75 *e*P P 00 43 55.3 +3.3
HHC pmax pmax
comp=Z,21nm,0.8s
ILGA Ilgaz 30.11 286 P P 00 44 00.9 -0.1
BR131 Keskin Array S 30.43 283 P P 00 44 04.1 +0.4
BR131 IAmb IAmb 00 44 13.4
comp=Z,5.3nm,0.9s
BR131 Keskin Array S 30.43 283 P P 00 44 04.1 +0.4
BR131 pmax pmax
comp=Z,5.0nm,0.9s
BRTR Keskin Array B 30.43 283 P P 00 44 04.3 +0.7
comp=Z,1.5nm,0.8s,baz=97,slow=6.9,SNR=9.3
comp=Z,1.5nm,0.8s
BRTR Keskin Array B 30.43 283*ce*P P 00 44 07.6 +3.9
BRTR pmax pmax
comp=Z,2.0nm,0.8s
AKASG Malin Array Be 32.67 305 P P 00 44 22.1 -1.1
comp=Z,0.5nm,0.4s,baz=78,slow=7.4,SNR=8.5
comp=Z,0.5nm,0.4s
AKASG Malin Array Be 32.67 305 *i* P P 00 44 22.3 -0.8
AKASG pmax pmax
comp=Z,2.0nm,0.5s
PLOR Plostina 34.54 296 ⇓P P 00 44 40.9 +1.3
BIZ Bicaz 34.81 298 ⇓P P 00 44 42.2 +0.4
MLR Muntele Rosu 35.07 296 ⇓P P 00 44 45.8 +1.5
MLR Muntele Rosu 35.07 296 P P 00 44 45.5 +1.2

MLR					IAmb	IAmb	00 44 52.0	
	comp=Z,6.3nm,0.9s							
MLR	**Muntele Rosu**	**35.07**	**296**		P	**P**	**00 44 45.5**	**+1.2**
MLR					pmax	pmax		
	comp=Z,6.0nm,0.9s							
BURAR	**Bucovina Array**	**35.35**	**299**		P	**P**	**00 44 46.4**	**-0.2**
BURAR	**Bucovina Array**	**35.35**	**299**		P	**P**	**00 44 46.9**	**+0.3**
BURAR					pmax	pmax		
	comp=Z,1.0nm,0.8s							
BUR08	**Bucovina Ar. S**	**35.36**	**300**		P	**P**	**00 44 45.5**	**-1.2**
BUR08					IAmb	IAmb	00 44 53.2	
	comp=Z,2.9nm,1.0s							
ARR	**Arges**	**36.01**	**296**	⇓	P	**P**	**00 44 53.0**	**+0.8**
FINES	**FINESS Array B**	**36.17**	**323**		P	**P**	**00 44 52.6**	**-0.7**
	comp=Z,0.9nm,0.5s,baz=114,slow=9.8,SNR=15							
	comp=Z,0.9nm,0.5s							
FINES	**FINESS Array B**	**36.17**	**323**	*i*	P	**P**	**00 44 52.9**	**-0.4**
FINES					pmax	pmax		
	comp=Z,1.0nm,0.5s							
KARP	**Karpathos**	**36.53**	**279**		P	**P**	**00 44 58.3**	**+1.6**
LOT	**Lotru**	**36.60**	**296**	⇑	P	**P**	**00 44 58.8**	**+1.5**
QIZ	**Qiongzhong**	**37.44**	**112**		P	**P**	**00 45 06.2**	**+1.6**
ARCES	**ARCESS Array B**	**39.20**	**336**		P	**P**	**00 45 18.6**	**-0.3**
	comp=Z,2.4nm,0.9s,baz=109,slow=8.0,SNR=11							
	comp=Z,2.4nm,0.9s							
DIVS	**Divibare**	**39.48**	**295**		P	**P**	**00 45 21.4**	**-0.3**
KEK	**Kerkira**	**40.75**	**288**		P	**P**	**00 45 31.8**	**-0.3**
KEK					IAmb	IAmb	00 45 32.3	
	comp=Z,8.6nm,1.2s							
MDJ	**Mudanjiang**	**41.42**	**64**		P	**P**	**00 45 38.4**	**+0.9**
MDJ					IAmb	IAmb	00 45 39.2	
	comp=Z,11nm,1.1s							
KLR	**Kul'dur**	**41.97**	**57**		P	**P**	**00 45 40.7**	**-1.3**
	comp=Z,0.7nm,0.6s,baz=260,slow=6.1,SNR=2.1							
	comp=Z,0.7nm,0.6s							
TIXI	**Tiksi**	**42.38**	**23**		P	**P**	**00 45 45.9**	**+0.9**
TIXI					IAmb	IAmb	00 45 48.3	
	comp=Z,4.5nm,0.7s							
TIXI	**Tiksi**	**42.38**	**23**		P	**P**	**00 45 45.9**	**+0.9**
TIXI					pmax	pmax		
	comp=Z,4.0nm,0.7s							
TATO	**Taipei**	**42.73**	**95**		P	**P**	**00 45 49.8**	**+1.3**
GERES	**GERESS Array B**	**42.82**	**303**		P	**P**	**00 45 49.2**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=72,slow=8.6,SNR=5.5							
	comp=Z,0.4nm,0.5s							
GERES	**GERESS Array B**	**42.82**	**303**		P	**P**	**00 45 49.0**	**0.0**
KHC	**Kasperske Hory**	**42.85**	**303**		P	**P**	**00 45 50.5**	**+1.3**
KHC	**Kasperske Hory**	**42.85**	**303**		P	**P**	**00 45 50.5**	**+1.3**
KHC					pmax	pmax		
	comp=Z,5.0nm,1.5s							
NB2	**NORSAR Subarra**	**43.22**	**321**		P	**P**	**00 45 50.1**	**-1.9**
	comp=Z,0.8nm,0.5s,baz=92,slow=8.6							
NOA	**NORSAR Array B**	**43.22**	**321**		P	**P**	**00 45 50.2**	**-1.9**
	comp=Z,0.6nm,0.6s,baz=110,slow=7.1,SNR=2.8							
	comp=Z,0.6nm,0.6s							
CUC	**Castrocucco**	**43.58**	**290**		P	**P**	**00 45 56.1**	**+0.9**
CUC					IAmb	IAmb	00 46 01.9	
	comp=Z,3.6nm,0.8s							
ESDC	**Sonseca Array**	**57.75**	**297**		P	**P**	**00 47 40.9**	**-1.3**
	comp=Z,0.6nm,0.6s,baz=52,slow=6.9,SNR=5.9							
	comp=Z,0.6nm,0.6s							
TORD	**Torodi Ar. Bea**	**67.62**	**269**		P	**P**	**00 48 46.6**	**-1.7**
	comp=Z,0.8nm,0.5s,baz=49,slow=5.3,SNR=18							
	comp=Z,0.8nm,0.5s							
TORD	**Torodi Ar. Bea**	**67.62**	**269**		IAmb	IAmb	00 48 52.8	
	comp=Z,1.6nm,0.9s							
INK	**Inuvik**	**70.73**	**10**		LR	LR	01 24 08.5	
	comp=Z,98nm,18.2s,baz=125,slow=39							
ILAR	**Eielson Array**	**71.47**	**17**		P	**P**	**00 49 09.6**	**-1.8**
	comp=Z,0.3nm,0.8s,baz=316,slow=2.5,SNR=2.2							
	comp=Z,0.3nm,0.8s							
N19K	**Bonanza Creek**	**72.77**	**22**		P	**P**	**00 49 22.2**	**+2.9**
N19K					IAmb	IAmb	00 49 52.2	
	comp=Z,4.2nm,1.2s							
YKA	**Yellowknife Ar**	**78.24**	**4**		P	**P**	**00 49 48.8**	**-1.7**
	comp=Z,0.5nm,0.7s,baz=351,slow=6.1,SNR=6.0							
	comp=Z,0.5nm,0.7s							
YKA	**Yellowknife Ar**	**78.24**	**4**		P	**P**	**00 49 52.1**	**+1.6**
YKA	**Yellowknife Ar**	**78.24**	**4**		P	**P**	**00 49 52.1**	**+1.6**
WB0	**Warramunga Arr**	**81.93**	**124**		P	**P**	**00 50 10.8**	**-0.3**
WB0					IAmb	IAmb	00 50 49.1	
	comp=Z,9.5nm,1.5s							
WRA	**Warramunga Arr**	**82.02**	**124**		P	**P**	**00 50 09.0**	**-2.5**
	comp=Z,1.2nm,0.8s,baz=324,slow=5.2,SNR=7.0							
	comp=Z,1.2nm,0.8s							
WRA	**Warramunga Arr**	**82.02**	**124**		P	**P**	**00 50 11.7**	**+0.2**
WRA	**Warramunga Arr**	**82.02**	**124**		P	**P**	**00 50 11.7**	**+0.2**
WB2	**Warramunga Arr**	**82.03**	**124**		P	**P**	**00 50 10.1**	**-1.5**
WB2					IAmb	IAmb	00 50 10.2	
	comp=Z,6.8nm,1.1s							
WR0	**Warramunga Arr**	**82.16**	**124**		P	**P**	**00 50 10.6**	**-1.7**
WR0					IAmb	IAmb	00 50 44.3	
	comp=Z,4.8nm,1.2s							
COEN	**Coen**	**83.82**	**114**		P	**P**	**00 50 21.7**	**+0.8**
AS31	**Alice Springs**	**84.46**	**127**		P	**P**	**00 50 21.8**	**-2.3**
AS31					IAmb	IAmb	00 50 22.9	
	comp=Z,1.4nm,1.1s							
ASAR	**Alice Springs**	**84.46**	**127**		P	**P**	**00 50 22.1**	**-2.0**
	comp=Z,1.0nm,1.0s,baz=316,slow=4.9,SNR=5.1							
	comp=Z,1.0nm,1.0s							
ELK	**Elko**	**99.84**	**7**		LR	LR	01 43 28.1	
	comp=Z,58nm,18.1s,baz=107,slow=39							

MAN 27 00:46:10.3, 17°.14N×120°.37E, h21km, mb4.2, ML3.0, MS2.7, Luzon

MAN 27 00:58:02.6, 6°.84N×125°.63E, h186km, mb4.4, ML3.2, MS2.9, Mindanao

*KRNET **27** 01:01:25.9±0.1, 39°.54N×73°.90E, mb3.5*
*SOME **27** 01:01:25.4, 39°.48N×73°.50E, h0km*
*NNC **27** 01:01:30.3±1.8, 39°.55N×73°.57E, h0km, mb3.9, mpv3.4, Error ellipse: s-maj=14.3km s-min=7.4km az=176.0*
ISC 27 01:01:27.1±1.4, 39°.60N±0°.05×73°.57E±0°.03, h1km±11km, n44, σ2s33/69, 19C-7D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.10**	**327**	⇑	*i* P	**Pn**	**01 01 49.9**	**+0.2**
	baz=19							
OHH				⇑	*i* S	**Sn**	**01 02 07.6**	**+2.0**
	baz=19							
DRK	**Karamyk**	**1.38**	**265**	⇑	*i* P	**Pb**	**01 01 56.0**	**+2.2**
DRK				⇑	*i* S	**Sn**	**01 02 17.8**	**+5.1**
	baz=69							
BTK	**Batken**	**2.17**	**283**	⇑	*i* P	**Pg**	**01 02 07.8**	**-0.9**
BTK				⇑	*i* S	**Sg**	**01 02 38.4**	**+1.6**
	baz=83							
ARLS	**Aral**	**2.33**	**14**	⇑	*i* P	**Pn**	**01 02 06.7**	**+0.1**
	baz=8.0							
ARLS				⇑	*i* S	**Sn**	**01 02 36.4**	**+0.5**
	baz=8.0							
GAR	**Garm**	**2.60**	**258**	⇓	*i* P	**Pb**	**01 02 13.5**	**-1.0**
	baz=60							
GAR				⇓	*i* S	**Sg**	**01 02 48.3**	**-2.2**
	baz=60							
TRKS	**Terek-Say**	**2.67**	**317**	⇑	*e* P	**Pb**	**01 02 13.5**	**-2.3**
	baz=14							
TRKS				⇑	*i* S	**Sb**	**01 02 48.3**	**-0.8**
	baz=14							
BOOM	**Boomskoye usch**	**3.39**	**31**	⇑	*i* P	**Pn**	**01 02 20.8**	**-0.5**
	baz=27							
BOOM				⇑	*e* S	**Sn**	**01 03 00.4**	**-1.9**
	baz=27							
CHMS	**Chumysh**	**3.51**	**14**	⇓	Pn	**Pb**	**01 02 28.1**	**-1.8**
	3.7nm,0.6s							
CHMS				⇓	Lg	Lg	01 03 21.2	
	19nm,0.9s							
TKM2	**Tokmak 2**	**3.65**	**24**	⇓	Pn	**Pb**	**01 02 31.6**	**-0.9**
	3.1nm,0.5s							
TKM2				⇓	Lg	Lg	01 03 29.2	
	13nm,0.8s							
IUG	**luzhnay**	**3.70**	**315**		*e* P	**Pb**	**01 02 35.1**	**+1.9**
	168nm,0.3s							
IUG					*e* S	**Sg**	**01 03 24.6**	**-1.2**
	42nm,0.7s							
IUG	**luzhnay**	**3.70**	**315**		Pg	**Pb**	**01 02 35.1**	**+1.9**
	168nm,0.3s							
IUG					Lg	Lg	01 03 25.2	
	42nm,0.7s							
KDJ	**Kajisay**	**3.72**	**46**	⇑	*e* P	**Pn**	**01 02 23.9**	**-1.9**
	baz=43							
KDJ				⇑	*e* S	**Sn**	**01 03 06.6**	**-3.8**
	baz=43							
KST	**Kastek**	**3.88**	**27**		*e* P	**Pg**	**01 02 40.7**	**-0.7**
	4.9nm,0.2s							
KST					*e* S	**Sg**	**01 03 34.5**	**+2.8**
	25nm,0.8s							
KST	**Kastek**	**3.88**	**27**		Pg	**Pg**	**01 02 40.7**	**-0.7**
	4.9nm,0.5s							
KST					Lg	Lg	01 03 34.5	
	25nm,0.8s							
SGDS	**Sogindy**	**3.93**	**11**		*e* P	**Pg**	**01 02 41.5**	**-0.8**
	4.5nm,0.1s							
SGDS					*e* S	**Sg**	**01 03 35.8**	**+2.6**
	6.4nm,0.4s							
DGS	**Degeres**	**3.99**	**24**		*e* P	**Pg**	**01 02 44.0**	**+0.4**
	9.5nm,0.1s							
DGS					*e* S	**Sg**	**01 03 40.3**	**+4.9**
	20nm,0.7s							
DGS	**Degeres**	**3.99**	**24**		Pg	**Pg**	**01 02 44.0**	**+0.4**
	9.3nm,0.4s							
DGS					Lg	Lg	01 03 40.3	
	20nm,0.7s							
MTBS	**Maitube**	**4.13**	**30**		*e* P	**Pg**	**01 02 45.9**	**-0.3**
	8.2nm,0.1s							
MTBS					*e* S	**Sg**	**01 03 43.2**	**+3.6**
	8.9nm,0.3s							
MTBS	**Maitube**	**4.13**	**30**		Pg	**Pg**	**01 02 45.9**	**-0.3**
	8.2nm,0.4s							
MTBS					Lg	Lg	01 03 43.2	
	8.9nm,0.3s							
KK31	**Karatay Array**	**4.19**	**328**		Pn	**Pb**	**01 02 36.9**	**-4.7**
	0.7nm,0.3s,baz=140,slow=13,SNR=12							
KK31				⇑	Sn	**Sb**	**01 03 29.2**	**-3.4**
	5.8nm,0.5s,baz=138,slow=24,SNR=4.7							
KK31				⇓	Lg	Lg	01 03 44.5	
	9.2nm,0.6s							
TNSS	**Tian-Shan**	**4.27**	**35**		*e* P	**Pg**	**01 02 48.5**	**-0.4**
	7.5nm,0.1s							
TNSS					*e* S	**Sg**	**01 03 47.9**	**+3.7**
	7.3nm,0.3s							
TNSS	**Tian-Shan**	**4.27**	**35**		Pg	**Pg**	**01 02 48.5**	**-0.4**
	7.5nm,0.4s							
TNSS					Lg	Lg	01 03 47.9	
	7.3nm,0.7s							
KRBS	**Karabastau**	**4.38**	**20**		*e* P	**Pg**	**01 02 49.8**	**-1.3**
	0.2nm,0.1s							
KRBS					*e* S	**Sg**	**01 03 50.0**	**+2.2**
	9.7nm,0.6s							
KRBS	**Karabastau**	**4.38**	**20**		Pg	**Pg**	**01 02 49.8**	**-1.3**
	0.2nm,0.5s							
KRBS					Lg	Lg	01 03 50.0	
	9.7nm,0.6s							
BRLS	**Borolday**	**4.43**	**322**		*e* P	**Pb**	**01 02 47.5**	**+1.8**
	2.7nm,0.1s							
BRLS					*e* S	**Sg**	**01 03 46.2**	**-3.2**
	9.5nm,0.1s							
BRLS	**Borolday**	**4.43**	**322**		Pg	**Pb**	**01 02 47.5**	**+1.8**
	2.7nm,0.4s							
BRLS					Lg	Lg	01 03 46.6	
	7.5nm,0.7s							
KTBS	**Karatobe**	**4.72**	**29**		*e* P	**Pg**	**01 02 57.8**	**+0.3**
	2.8nm,0.4s							
KTBS					*e* S	**Sg**	**01 04 03.8**	**+5.1**
	18nm,0.5s							
KTBS	**Karatobe**	**4.72**	**29**		Pg	**Pg**	**01 02 57.8**	**+0.3**
	2.8nm,0.4s							
KTBS					Lg	Lg	01 04 03.8	
	18nm,0.5s							
KUU	**Kurty**	**4.76**	**25**		*e* P	**Pg**	**01 02 57.4**	**-0.9**
	2.6nm,0.1s							
KUU					*e* S	**Sg**	**01 04 03.2**	**+3.3**
	19nm,0.3s							
KUU	**Kurty**	**4.76**	**25**		Pg	**Pg**	**01 02 57.3**	**-0.9**
	2.5nm,0.4s							
KUU					Lg	Lg	01 04 03.3	
	19nm,0.7s							
CHKK	**Chushkaly**	**4.96**	**30**		*e* P	**Pg**	**01 03 00.2**	**-1.8**
	1.1nm,0.1s							
CHKK					*e* S	**Sg**	**01 04 08.1**	**+1.9**
	6.8nm,0.6s							
CHKK	**Chushkaly**	**4.96**	**30**		Pg	**Pg**	**01 03 00.2**	**-1.8**
	1.6nm,0.3s							
CHKK					Lg	Lg	01 04 08.4	
	6.8nm,0.6s							
SATY	**Saty**	**5.01**	**45**		*e* P	**Pg**	**01 03 01.6**	**-1.6**
	1.3nm,0.2s							
SATY					*e* S	**Sg**	**01 04 10.1**	**+1.9**
	7.3nm,0.3s							
SATY	**Saty**	**5.01**	**45**		Pg	**Pg**	**01 03 01.6**	**-1.6**
	1.3nm,0.2s							
SATY					Lg	Lg	01 04 10.1	
	7.3nm,0.7s							
KURS	**Kuram**	**5.19**	**40**		*e* P	**Pg**	**01 03 06.4**	**-0.1**
	2.8nm,0.3s							
KURS					*e* S	**Sg**	**01 04 18.6**	**+4.8**
	4.6nm,0.6s							
KURS	**Kuram**	**5.19**	**40**		Pg	**Pg**	**01 03 06.4**	**-0.1**
	2.8nm,0.6s							
KURS					Lg	Lg	01 04 18.6	
	4.5nm,1.2s							
KPKS	**Kokpek**	**5.44**	**43**		*e* P	**Pg**	**01 03 08.4**	**-3.0**
	2.1nm,0.2s							
KPKS					*e* S	**Sg**	**01 04 22.0**	**+0.2**
	7.1nm,0.2s							
KPKS	**Kokpek**	**5.44**	**43**		Pg	**Pg**	**01 03 08.4**	**-3.0**
	2.1nm,0.5s							
KPKS					Lg	Lg	01 04 22.0	
	6.9nm,0.6s							
BTLS	**Baital**	**5.45**	**4**		*e* P	**Pg**	**01 03 09.4**	**-2.0**
	2.8nm,0.4s							
BTLS					*e* S	**Sg**	**01 04 23.1**	**+1.2**
	2.7nm,0.1s							
ARXS	**Arharly**	**5.59**	**33**		*e* P	**Pg**	**01 03 12.1**	**-2.2**
	4.2nm,0.6s							
ARXS					*e* S	**Sg**	**01 04 27.9**	**+1.3**
	5.9nm,0.6s							
ARXS	**Arharly**	**5.59**	**33**		Pg	**Pg**	**01 03 11.4**	**-2.8**
	4.2nm,0.6s							
ARXS					Lg	Lg	01 04 27.9	
	5.9nm,0.6s							
PDGK	**Podgornoye**	**5.80**	**48**		Pg	**Pg**	**01 03 15.2**	**-2.9**
	0.5nm,0.4s							
PDGK					Lg	Lg	01 04 33.5	
	1.6nm,0.9s							
PDGK	**Podgornoye**	**5.80**	**48**	⇑	Pn	**Pn**	**01 02 56.6**	**+2.3**
	2.0nm,0.8s							
PDGK				⇑	Lg	Lg	01 04 33.3	
	4.5nm,0.7s							
OTUK	**Ortayu**	**8.68**	**355**	⇑	Pn	**Pn**	**01 03 37.1**	**+3.3**
	1.4nm,0.8s							
OTUK				⇑	Lg	Lg	01 06 07.4	
	5.3nm,1.1s							

*SSNC **27** 01:02:50.2±3.1, 19°.99N×70°.22W, h120km±28km, MD3.5, ML2.9*
*OSPL **27** 01:02:56.0±1.4, 20°.01N×70°.42W, h31km±999km, ML2.9*
ISC 27 01:02:49.6±1.7, 20°.11N±0°.04×70°.3W±0°.1, h19km, n10, σ0s96/17, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SC01	**Santiago de lo**	**0.79**	**211**		*e* S	**Sg**	**01 03 16.2**	**+0.5**
SC01					IAML		01 03 21.4	
	comp=Z,427nm,0.9s							
LODA1	**ITESIL, Dajabo**	**1.44**	**247**		*i* P	**Pg**	**01 03 17.0**	**-0.3**
LODA1					*e* S	**Sn**	**01 03 31.6**	**-1.4**
LODA1					IAML		01 03 40.1	
	comp=Z,1μm,1.5s							
SDDR	**Presa de Saban**	**1.46**	**220**		*e* P	**Pb**	**01 03 16.7**	**+0.5**
SDDR					*e* S	**Sb**	**01 03 34.9**	**+0.5**
SDDR					*e* Sg	**Sg**	**01 03 38.2**	**+1.3**
SDDR	**Presa de Saban**	**1.46**	**220**		*i* P	**Pb**	**01 03 16.8**	**+0.5**
SDDR					IAML		01 03 39.9	
	comp=Z,115nm,0.3s							
GRTK	**Grand Turk**	**1.59**	**331**		*e* P	**Pg**	**01 03 20.5**	**+0.2**
GRTK					*e* S	**Sg**	**01 03 41.6**	**+0.5**
GRTK	**Grand Turk**	**1.59**	**331**		*i* P	**Pg**	**01 03 20.8**	**+0.4**
GRTK					*e* S	**Sg**	**01 03 40.6**	**-0.5**
GRTK					IAML		01 03 46.7	
	comp=Z,261nm,0.7s							
BANI	**BANI**	**1.71**	**182**		*i* P	**Pg**	**01 03 22.2**	**-0.4**
BANI					IAML		01 03 50.0	
	comp=Z,128nm,1.1s							
MASC	**Masc**	**3.69**	**272**		*e* P	**Pn**	**01 03 46.4**	**+0.8**
MASC					*e* S	**Sn**	**01 04 28.5**	**-0.2**
MASC					IAML		01 04 32.2	
	comp=N,11nm,0.2s							
MASC					IAML		01 04 36.5	
	comp=E,8.3nm,0.3s							
GTBY	**Guantanamo Bay**	**4.53**	**268**		*e* P	**Pn**	**01 03 57.4**	**+0.2**
RCC	**Rio Carpintero**	**5.07**	**270**		*e* P	**Pn**	**01 04 02.1**	**-2.5**
RCC					*e* S	**Sn**	**01 05 02.6**	**-0.1**

*KRNET **27** 01:03:59.1±0.1, 39°.47N×73°.80E, mb3.2*
*SOME **27** 01:04:01.0, 39°.63N×73°.22E, h15km*
ISC 27 01:04:02.4±1.4, 39°.70N±0°.06×73°.51E±0°.04, h10km, n18, σ2s20/36, 8C-4D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**0.99**	**326**	⇑	*i* P	**Pn**	**01 04 23.9**	**+1.5**
	baz=24							
OHH				⇑	*i* S	**Sn**	**01 04 42.3**	**+5.7**
	baz=24							
DRK	**Karamyk**	**1.34**	**261**	⇓	*i* P	**Pg**	**01 04 28.4**	**+0.3**
	baz=71							
DRK				⇓	*i* S	**Sn**	**01 04 49.6**	**+4.2**
	baz=71							
BTK	**Batken**	**2.10**	**281**	⇓	*e* P	**Pg**	**01 04 41.3**	**-1.3**
	baz=85							
BTK				⇓	*i* S	**Sg**	**01 05 12.0**	**+2.1**
	baz=85							
ARLS	**Aral**	**2.25**	**16**	⇑	*i* P	**Pb**	**01 04 41.8**	**-1.3**
	baz=9.0							
ARLS				⇑	*i* S	**Sg**	**01 05 13.1**	**-1.4**
	baz=9.0							
TRKS	**Terek-Say**	**2.57**	**316**	⇑	*e* P	**Pb**	**01 04 47.5**	**-1.1**
	baz=16							
TRKS				⇑	*i* S	**Sg**	**01 05 23.0**	**-1.8**
	baz=16							
GAR	**Garm**	**2.57**	**255**	⇑	*i* P	**Pb**	**01 04 46.6**	**-2.0**
	baz=61							
GAR				⇑	*i* S	**Sg**	**01 05 21.2**	**-3.8**
	baz=61							
IUG	**luzhnay**	**3.59**	**314**		*e* P	**Pb**	**01 05 04.2**	**-1.9**
	68nm,1.6s							
IUG					*e* S	**Sb**	**01 05 49.7**	**-0.1**
	19nm,0.1s							
KST	**Kastek**	**3.82**	**28**		*e* P	**Pg**	**01 05 13.5**	**-1.9**
	3.4nm,0.4s							
KST					*e* S	**Sg**	**01 06 05.9**	**+1.0**
	10nm,0.7s							
SGDS	**Sogindy**	**3.84**	**12**		*e* P	**Pg**	**01 05 13.3**	**-2.7**
	2.7nm,0.0s							
SGDS					*e* S	**Sg**	**01 06 05.5**	**-0.2**
	1.8nm,0.0s							
DGS	**Degeres**	**3.93**	**25**		*e* P	**Pg**	**01 05 15.7**	**-1.9**
	6.2nm,0.5s							
DGS					*e* S	**Sg**	**01 06 09.5**	**+1.1**
	5.5nm,0.1s							
MTBS	**Maitube**	**4.07**	**32**		*e* P	**Pg**	**01 05 18.5**	**-1.8**
	5.9nm,0.4s							
MTBS					*e* S	**Sg**	**01 06 14.3**	**+1.3**
	6.2nm,0.2s							
TNSS	**Tian-Shan**	**4.22**	**37**		*e* P	**Pg**	**01 05 20.9**	**-2.3**
	3.0nm,0.2s							
TNSS					*e* S	**Sg**	**01 06 18.3**	**+0.4**
	2.1nm,0.5s							
KRBS	**Karabastau**	**4.31**	**21**		*e* P	**Pg**	**01 05 23.1**	**-1.8**
	1.9nm,0.4s							
KRBS					*e* S	**Sg**	**01 06 22.1**	**+1.4**
	4.0nm,0.3s							
BRLS	**Borolday**	**4.32**	**321**		*e* P	**Pb**	**01 05 16.0**	**-2.4**
	1.0nm,0.1s							
BRLS					*e* S	**Sb**	**01 06 10.5**	**-0.2**
	2.4nm,0.5s							
KTBS	**Karatobe**	**4.66**	**30**		*e* P	**Pg**	**01 05 28.7**	**-2.9**
	1.8nm,0.6s							
KTBS					*e* S	**Sg**	**01 06 31.8**	**-0.1**
	6.5nm,0.6s							
KUU	**Kurty**	**4.69**	**26**		*e* P	**Pg**	**01 05 29.8**	**-2.4**
	2.4nm,0.6s							
KUU					*e* S	**Sg**	**01 06 33.4**	**+0.4**
	4.7nm,0.1s							
CHKK	**Chushkaly**	**4.90**	**31**		*e* P	**Pg**	**01 05 33.8**	**-2.4**
	0.9nm,0.0s							
CHKK					*e* S	**Sg**	**01 06 40.6**	**+1.0**
	5.2nm,0.2s							
KPKS	**Kokpek**	**5.40**	**44**		*e* P	**Pg**	**01 05 44.9**	**-1.0**
	2.0nm,0.3s							
KPKS					*e* S	**Sg**	**01 06 59.0**	**+3.2**
	3.2nm,0.2s							

*SOME **27** 01:17:28.9, 39°.53N×73°.73E, h0km*
*KRNET **27** 01:17:28.6±0.1, 39°.57N×74°.00E, mb3.5*
ISC 27 01:17:30.1±1.6, 39°.61N±0°.06×73°.83E±0°.03, h2km±11km, n25, σ1s91/50, 12C-4D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.22**	**319**	⇓	*i* P	**Pg**	**01 17 53.4**	**-0.1**
	baz=16							
OHH				⇓	*i* S	**Sn**	**01 18 11.4**	**+0.1**
	baz=16							
DRK	**Karamyk**	**1.58**	**266**	⇑	*i* P	**Pg**	**01 18 00.3**	**0.0**
	baz=68							
DRK				⇑	*i* S	**Sb**	**01 18 23.0**	**+2.4**
	baz=68							
ARLS	**Aral**	**2.28**	**9**	⇑	*i* P	**Pn**	**01 18 09.1**	**+0.2**
	baz=6.0							
ARLS				⇑	*i* S	**Sn**	**01 18 38.3**	**+0.6**
	baz=6.0							
BTK	**Batken**	**2.36**	**282**	⇑	*e* P	**Pb**	**01 18 11.8**	**-1.6**
	baz=82							
BTK				⇑	*i* S	**Sb**	**01 18 43.1**	**0.0**
	baz=82							
GAR	**Garm**	**2.79**	**259**	⇓	*e* P	**Pn**	**01 18 17.5**	**+1.6**
	baz=60							
GAR				⇓	*i* S	**Sb**	**01 18 53.3**	**-2.2**
	baz=60							
TRKS	**Terek-Say**	**2.81**	**314**	⇑	*e* P	**Pn**	**01 18 16.8**	**+0.6**
	baz=12							
TRKS				⇑	*i* S	**Sn**	**01 18 51.9**	**+1.2**
	baz=12							
BOOM	**Boomskoye usch**	**3.29**	**28**	⇑	*i* P	**Pn**	**01 18 21.9**	**-0.9**
	baz=26							
BOOM				⇑	*i* S	**Sn**	**01 19 01.4**	**-1.2**
	baz=26							
KDJ	**Kajisay**	**3.58**	**44**	⇑	*e* P	**Pn**	**01 18 25.8**	**-0.9**
	baz=42							
KDJ				⇑	*e* S	**Sn**	**01 19 07.9**	**-1.8**
	baz=42							

KUU					*e*S		**Sg**	**01 20 01.1**	**+0.9**
	23nm,0.6s								
CHKK	**Chushkaly**	**4.86**	**28**	*e*P			**Pg**	**01 19 01.3**	**-1.8**
	2.7nm,0.3s								
CHKK					*e*S		**Sg**	**01 20 08.0**	**+2.0**
	16nm,0.7s								
SATY	**Saty**	**4.87**	**43**	*e*P			**Pg**	**01 19 02.6**	**-0.9**
	4.3nm,0.3s								
SATY					*e*S		**Sg**	**01 20 11.0**	**+4.4**
	13nm,0.1s								
KURS	**Kuram**	**5.06**	**39**	*e*P			**Pg**	**01 19 04.5**	**-2.5**
	4.1nm,0.3s								
KURS					*e*S		**Sg**	**01 20 13.5**	**+0.9**
	4.6nm,0.8s								
KPKS	**Kokpek**	**5.30**	**42**	*e*P			**Pg**	**01 19 08.7**	**-3.0**
	2.6nm,0.1s								
KPKS					*e*S		**Sg**	**01 20 20.8**	**+0.4**
	12nm,0.3s								
BTLS	**Baital**	**5.43**	**2**	*e*P			**Pg**	**01 19 11.7**	**-2.5**
	1.6nm,0.3s								
BTLS					*e*S		**Sg**	**01 20 25.4**	**+0.9**
	3.3nm,0.2s								
ARXS	**Arharly**	**5.48**	**32**	*e*P			**Pg**	**01 19 13.1**	**-2.1**
	7.4nm,0.1s								
ARXS					*e*S		**Sg**	**01 20 27.5**	**+1.3**
	11nm,1.0s								
BLB	**Baldybastay**	**5.67**	**36**	*e*P			**Pg**	**01 19 16.0**	**-2.7**
	2.7nm,0.1s								
BLB					*e*S		**Sg**	**01 20 33.2**	**+1.0**
	11nm,0.1s								

MOS ***27*** *02:25:15.7±1.2,42.°46N×144.°10E,h45km,mb4.4/1,Error ellipse: s-maj=22.8km s-min=10.4km az=62.1*
SKHL ***27*** *02:25:17.1±0.4,42.°40N×144.°40E,h59km±4km,mb4.5/3*
JMA ***27*** *02:25:17.1±0.1,42.°5N±0.°3×144.°3E±0.°4,h58km±1km, MV3.7/36,SE OFF TOKACHI*
JMA Felt I J1 at SE OFF TOKACHI .
NIED ***27*** *02:25:17.1,42.°49N×144.°25E,h58km,MW3.7,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr-4.18; Mθθ4.36; Mφφ-0.18; Mrθ-0.11; Mθφ0.03; Mφr1.15; Fault plane solution: M₀4.42000×10¹⁴ NP1: φs255.00000°,δ46.00000°,λ-111.00000°. NP2: φs104.00000°,δ48.00000°,λ-70.00000°.*
IDC ***27*** *02:25:18.1±4.4,42.°53N×144.°12E,h46km±46km,mb3.5/11, mbtmp3.7/12,ML2.8/1 Error ellipse: s-maj=29.2km s-min=22.0km az=9.0*

ISC 27 02:25:17.5±1.1,42.°45N±0.°06×144.°28E±0.°04,h44km±10km, n43,σ0s94/55,mb3.6/11,1D,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOB	**Onbets**	**0.56**	**324**	*i* P	**Pn**	**02 25 29.3**	**+0.1**
JOB				*e*S	**Sn**	**02 25 37.8**	**+0.2**
JAK	**Akkeshi**	**0.63**	**29**	*i* P	**Pn**	**02 25 30.0**	**-0.1**
JAK				*e*S	**Sn**	**02 25 39.2**	**+0.1**
JCH	**Churui**	**0.70**	**284**	*e*S	**Sn**	**02 25 40.2**	**-0.6**
AKK	**Akkeshi**	**0.70**	**36**	*e*P	**Pn**	**02 25 31.0**	**-0.1**
AKK				*e*S	**Sn**	**02 25 41.1**	**+0.2**
JTHR	**Tokachihiroo**	**0.74**	**258**	P	**Pn**	**02 25 31.8**	**+0.2**
JTHR				*e*S	**Sn**	**02 25 42.3**	**+0.5**
JKHN	**Kushirohamanak**	**0.91**	**45**	P	**Pn**	**02 25 34.0**	**+0.1**
JAR	**Ashorobuto**	**0.93**	**336**	*i* P	**Pn**	**02 25 33.7**	**-0.4**
JAR				*e*S	**Sn**	**02 25 45.5**	**-0.8**
JEM	**Erimo**	**0.94**	**243**	*e*P	**Pn**	**02 25 34.5**	**+0.3**
JNBK	**Urakawa-nobuka**	**1.14**	**262**	*e*P	**Pn**	**02 25 36.5**	**-0.5**
JNK	**Nakash**	**1.18**	**16**	P	**Pn**	**02 25 37.0**	**-0.7**
JNK				*e*S	**Sn**	**02 25 51.4**	**-1.1**
NMR	**Nemuro--Hokkai**	**1.41**	**49**	*i* PN	**Pn**	**02 25 39.9**	**-0.8**
NMR				*e*S	**Sn**	**02 25 57.3**	**-0.7**
NMR	**Nemuro--Hokkai**	**1.41**	**49**	*i* P	**Pn**	**02 25 39.9**	**-0.8**
NMR				*e*S	**Sn**	**02 25 57.4**	**-0.6**
NEM2	**Nemuro 2**	**1.41**	**49**	P	**Pn**	**02 25 39.9**	**-0.8**
NEM2				*e*S	**Sn**	**02 25 57.2**	**-1.0**
JFR	**Furan**	**1.43**	**301**	*e*P	**Pn**	**02 25 40.8**	**-0.3**
JTKR	**Abashiri--Toko**	**1.55**	**350**	P	**Pn**	**02 25 43.0**	**+0.4**
JTKR				*e*S	**Sn**	**02 26 01.6**	**+0.2**
JRA	**Rausu**	**1.61**	**22**	*e*P	**Pn**	**02 25 43.3**	**-0.2**
JMP	**Maruseppu**	**1.70**	**337**	P	**Pn**	**02 25 44.8**	**+0.1**
JMP				*e*S	**Sn**	**02 26 05.6**	**+0.4**
RUSJ	**Misakicho**	**1.80**	**23**	*e*PN	**Pn**	**02 25 45.8**	**-0.3**
RUSJ				*e*S	**Sn**	**02 26 09.2**	**+1.5**
YUK	**Yuzh-Kuril'sk**	**1.96**	**36**	*e*PN	**Pn**	**02 25 48.4**	**+0.1**
YUK				*i* S	**Sn**	**02 26 11.8**	**+0.1**
YUK				pmax	pmax		
	comp=Z,633nm,0.3s						
YUK				pmax	pmax		
	comp=E,219nm,0.1s						
YUK				pmax	pmax		
	comp=N,200nm,0.2s						
YUK				smax	smax		
	comp=N,621nm,0.2s						
YUK				smax	smax		
	comp=E,2μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.96**	**36**	*e*P	**Pn**	**02 25 48.4**	**+0.1**
YUK				AMB	AMB	02 25 50.1	
	comp=E,90nm,0.2s						
YUK				*i* S	**Sn**	**02 26 11.5**	**-0.2**
YUK				A	A	02 26 13.6	
	comp=E,620nm,0.4s						
YUK				A	A	02 26 13.6	
	comp=E,230nm,0.4s						
SHO	**Shikotan**	**2.35**	**52**	*d i* PN	**Pn**	**02 25 53.0**	**-0.6**
SHO				*i* S	**Sn**	**02 26 19.8**	**-1.3**
SHO				pmax	pmax		
	comp=E,35nm,0.2s						
SHO				pmax	pmax		
	comp=Z,138nm,0.2s						
SHO				pmax	pmax		
	comp=N,16nm,0.1s						
SHO				smax	smax		
	comp=E,310nm,0.2s						
SHO				smax	smax		
	comp=N,751nm,0.4s						
SHO	**Shikotan**	**2.35**	**52**	*i* P	**Pn**	**02 25 53.0**	**-0.6**
SHO				AMB	AMB	02 25 55.2	
	comp=N,80nm,0.3s						
SHO				*i* S	**Sn**	**02 26 19.8**	**-1.3**
SHO				A	A	02 26 24.3	
	comp=N,240nm,0.3s						
SHO				A	A	02 26 24.3	
	comp=N,150nm,0.3s						
KUR	**Kuril'sk**	**3.81**	**42**	*e*PN	**Pn**	**02 26 16.8**	**+3.2**
KUR				*e*S	**Sn**	**02 27 00.7**	**+3.6**
KUR				pmax	pmax		
	comp=Z,73nm,0.3s						
KUR				pmax	pmax		
	comp=N,34nm,0.2s						
KUR				smax	smax		
	comp=E,127nm,0.4s						
KUR				smax	smax		
	comp=N,82nm,0.2s						
KUR	**Kuril'sk**	**3.81**	**42**	*e*P	**Pn**	**02 26 14.7**	**+1.1**
KUR				AMB	AMB	02 26 18.1	
	comp=N,70nm,0.4s						
KUR				*e*S	**Sn**	**02 26 57.0**	**-0.1**
KUR				A	A	02 27 10.5	
	comp=N,80nm,0.4s						
KUR				A	A	02 27 10.5	
	comp=N,130nm,0.4s						
MJAR	**Matsushiro Arr**	**7.54**	**220**	P	**Pn**	**02 27 04.8**	**-0.1**
	comp=N,0.1nm,0.3s,baz=33,slow=13,SNR=10.0						
	comp=N,3.9nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**29.62**	**133**	T	T	03 02 40.8	
	baz=326,slow=75,SNR=250						
H11N1	**WAKE ISLAND Hy**	**29.64**	**133**	T	T	03 02 42.0	
	baz=326,slow=75,SNR=222						
H11N3	**WAKE ISLAND Hy**	**29.64**	**133**	T	T	03 02 46.5	
	baz=326,slow=75,SNR=189						
H11S1	**WAKE ISLAND Hy**	**30.52**	**135**	T	T	03 03 55.5	
	baz=327,slow=76,SNR=197						
H11S3	**WAKE ISLAND Hy**	**30.53**	**135**	T	T	03 03 59.6	
	baz=327,slow=76,SNR=210						
H11S2	**WAKE ISLAND Hy**	**30.54**	**135**	T	T	03 03 52.6	
	baz=327,slow=76,SNR=137						
ZALV	**Zalesovo Beam**	**40.12**	**308**	P	**P**	**02 32 48.3**	**-0.4**
	comp=N,0.5nm,0.3s,baz=88,slow=5.5,SNR=2.7						
	comp=N,0.5nm,0.3s						
MKAR	**Makanchi Array**	**43.33**	**298**	P	**P**	**02 33 14.3**	**-0.8**
	comp=N,0.4nm,0.5s,baz=80,slow=9.9,SNR=5.1						
	comp=N,0.4nm,0.5s						
ILAR	**Eielson Array**	**43.77**	**35**	P	**P**	**02 33 18.6**	**+0.2**
	comp=N,0.9nm,0.7s,baz=266,slow=6.8,SNR=12						
	comp=N,0.9nm,0.7s						
KURK	**Kurchatov**	**44.52**	**304**	P	**P**	**02 33 24.9**	**+0.4**
KURBB	**Kurchatov Arra**	**44.60**	**304**	P	**P**	**02 33 24.9**	**-0.3**
	comp=N,1.7nm,0.2s,baz=111,slow=5.3,SNR=4.7						
	comp=N,1.7nm,0.2s						
WRA	**Warramunga Arr**	**62.75**	**191**	P	**P**	**02 35 38.7**	**+0.5**
	comp=N,0.2nm,0.4s,baz=13,slow=4.3,SNR=1.4						
	comp=N,0.2nm,0.4s						
FINES	**FINESS Array B**	**65.06**	**332**	P	**P**	**02 35 51.9**	**-1.0**
	comp=N,1.0nm,0.5s,baz=56,slow=7.4,SNR=10						
	comp=N,1.0nm,0.5s						
NOA	**NORSAR Array B**	**70.03**	**338**	P	**P**	**02 36 23.4**	**-1.0**
	comp=N,0.4nm,0.7s,baz=34,slow=6.4,SNR=2.1						
	comp=N,0.4nm,0.7s						
NVAR	**Mina Array Bea**	**70.05**	**56**	P	**P**	**02 36 26.3**	**+1.2**
	comp=N,0.3nm,0.4s,baz=299,slow=6.9,SNR=4.1						
	comp=N,0.3nm,0.4s						
AKASG	**Malin Array Be**	**71.36**	**323**	P	**P**	**02 36 31.8**	**-0.7**
	comp=N,0.2nm,0.3s,baz=43,slow=7.0,SNR=4.2						
	comp=N,0.2nm,0.3s						
PDAR	**Pinedale Array**	**72.35**	**48**	P	**P**	**02 36 39.1**	**+0.1**
	comp=N,0.2nm,0.3s,baz=358,slow=1.3,SNR=4.6						
	comp=N,0.2nm,0.3s						
TXAR	**Lajitas Array**	**85.12**	**54**	P	**P**	**02 37 49.9**	**+0.7**
	comp=N,0.4nm,0.7s,baz=292,slow=3.3,SNR=6.4						
	comp=N,0.4nm,0.7s						

SOME ***27*** *02:32:02.8,39.°37N×73.°68E,h15km*
KRNET ***27*** *02:32:03.8±0.1,39.°39N×73.°69E,mb4.4*
IDC ***27*** *02:32:04.9±1.0,39.°30N×73.°54E,h0km,mb3.7/11, mbtmp3.8/17,ML3.1/6,MS3.0/7,Error ellipse: s-maj=19.9km s-min=13.7km az=148.0*
NEIC ***27*** *02:32:07.9±2.7,39.°39N±0.°06×73.°59E±0.°08,h10km±1km, mb4.4/18,Error ellipse: s-maj=12.3km s-min=8.8km az=140.0*
NNC ***27*** *02:32:09.1±1.5,39.°59N×73.°59E,h0km,mb4.5,mpv4.1, Error ellipse: s-maj=12.4km s-min=6.7km az=171.0*

ISC 27 02:32:06.6±0.5,39.°44N±0.°04×73.°66E±0.°02,h10km,n139, σ2s08/172,mb4.1/19,MS3.0/3,33C-22D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.27**	**328**	⇑*i* P	**Pn**	**02 32 28.9**	**-1.7**
OHH				⇑*i* S	**Sn**	**02 32 47.5**	**-0.3**
	baz=29						
DRK	**Karamyk**	**1.44**	**272**	⇑*i* P	**Pn**	**02 32 31.6**	**-1.4**
DRK				⇑*i* S	**Sg**	**02 32 51.8**	**-1.1**
	baz=74						
DRK	**Karamyk**	**1.44**	**272**		**Pn**	**02 32 31.4**	**-1.6**
KSH	**Kashi**	**1.79**	**87**	Pg	**Pn**	**02 32 35.0**	**-2.7**
KSH				Sg	**Sn**	**02 32 56.3**	**-4.3**
KSH				pmax	pmax		
	comp=Z,140nm,0.7s						
KSH				smax	smax		
	comp=N,1μm,0.6s						
KSH				smax	smax		
	comp=E,710nm,0.6s						
BTK	**Batken**	**2.27**	**287**	⇓*i* P	**Pn**	**02 32 45.2**	**+0.9**
BTK				⇓*i* S	**Sb**	**02 33 15.5**	**-0.5**
	baz=88						
BTK	**Batken**	**2.27**	**287**	Pn	**Pn**	**02 32 44.3**	**0.0**
ARLS	**Aral**	**2.47**	**12**	⇓*i* P	**Pn**	**02 32 47.7**	**+0.6**
ARLS				⇓*i* S	**Sb**	**02 33 19.9**	**-1.9**
	baz=11						
GAR	**Garm**	**2.63**	**261**	⇓*e* P	**Pn**	**02 32 49.6**	**+0.3**
GAR				⇓*i* S	**Sb**	**02 33 23.5**	**-2.9**
	baz=63						
GAR	**Garm**	**2.63**	**261**		**Pn**	**02 32 50.4**	**+1.2**
AML	**Almayashu**	**2.69**	**1**	P	**Pb**	**02 32 53.2**	**-1.9**
	SNR=18						
TRKS	**Terek-Say**	**2.84**	**318**	⇑*e* P	**Pn**	**02 32 52.3**	**+0.2**
TRKS				⇑*i* S	**Sn**	**02 33 28.0**	**+1.6**
	baz=18						
UCH	**Uchtor**	**2.86**	**13**	P	**Pb**	**02 32 56.1**	**-1.9**
	SNR=60						
UCH	**Uchtor**	**2.86**	**13**	⇓*e* P	**Pn**	**02 32 53.5**	**+0.8**
UCH				⇓*i* S	**Sn**	**02 33 29.9**	**+2.5**
	baz=12						
EKS2	**Erkin-Say**	**3.22**	**2**	P	**Pb**	**02 33 00.7**	**-3.2**
	SNR=57						
EKS2	**Erkin-Say**	**3.22**	**2**	⇑*e* P	**Pn**	**02 32 58.3**	**+1.0**
	baz=1.0						
EKS2				⇑*i* S	**Sn**	**02 33 38.3**	**+2.5**
	baz=1.0						
AAK	**Ala-Archa**	**3.26**	**11**	P	**Pb**	**02 33 01.7**	**-2.9**
	SNR=31						
AAK	**Ala-Archa**	**3.26**	**11**	Pn	**Pb**	**02 33 01.9**	**-2.7**
	comp=E,11nm,0.3s,baz=179,slow=7.5,SNR=37						
AAK				Lg	Lg	02 33 45.8	
	comp=E,8.0nm,0.3s,baz=319,slow=20,SNR=1.6						
AAK				LR	LR	02 34 31.7	
	comp=E,177nm,19.6s,baz=211,slow=43						
	comp=E,24nm,0.3s						
AAK	**Ala-Archa**	**3.26**	**11**	⇓*e* P	**Pn**	**02 32 58.7**	**+0.8**
	baz=10.0						
AAK				⇓*i* S	**Sn**	**02 33 39.0**	**+2.2**
	baz=10.0						
AAK	**Ala-Archa**	**3.26**	**11**	Pn	**Pn**	**02 33 00.9**	**+3.0**
KBK	**Karagaybulak**	**3.36**	**16**	P	**Pb**	**02 33 03.6**	**-2.7**
	SNR=25						
KBK	**Karagaybulak**	**3.36**	**16**	⇑*e* P	**Pn**	**02 33 00.3**	**+1.0**
KBK				⇑*i* S	**Sn**	**02 33 41.4**	**+2.1**
	baz=16						
ULHL	**Ulahol**	**3.42**	**34**	P	**Pb**	**02 33 09.3**	**+1.9**
	SNR=42						
ULHL	**Ulahol**	**3.42**	**34**	⇓*i* P	**Pn**	**02 33 00.9**	**+0.7**
	baz=33						
ULHL				⇓*i* S	**Sn**	**02 33 42.7**	**+1.8**
	baz=33						
FRU1	**Bishkek**	**3.45**	**12**	Pn	**Pn**	**02 33 02.2**	**+1.8**
BOOM	**Boomskoye usch**	**3.50**	**29**	⇑*e* P	**Pn**	**02 33 02.3**	**+1.0**
	baz=28						
BOOM				⇑*i* S	**Sn**	**02 33 45.0**	**+2.1**
	baz=28						
BOOM	**Boomskoye usch**	**3.50**	**29**	Pn	**Pn**	**02 33 04.8**	**+3.5**
CHGR	**Chuyangaron**	**3.59**	**259**	⇑*e* P	**Pn**	**02 33 03.2**	**+0.8**
	baz=60						
CHGR				⇑*e* S	**Sn**	**02 33 46.5**	**+1.6**
	baz=60						
CHGR	**Chuyangaron**	**3.59**	**259**	Pn	**Pn**	**02 33 03.5**	**+1.1**
CHMS	**Chumysh**	**3.65**	**13**	P	**Pn**	**02 33 06.8**	**+3.6**
	SNR=13						
CHMS	**Chumysh**	**3.65**	**13**	⇓Pn	**Pn**	**02 33 06.4**	**+3.3**
CHMS				⇑Pg	**Pb**	**02 33 13.5**	**+2.3**
	comp=E,21nm,0.6s						
CHMS				⇑Lg	Lg	02 34 02.4	
	comp=E,46nm,0.8s						
	comp=E,164nm,0.9s						
TKM2	**Tokmak 2**	**3.77**	**22**	P	**Pn**	**02 33 08.7**	**+3.7**
	SNR=20						
TKM2	**Tokmak 2**	**3.77**	**22**	⇑*e* P	**Pn**	**02 33 05.9**	**+0.9**
	baz=22						
TKM2				⇑*i* S	**Sn**	**02 33 51.3**	**+1.7**
	baz=22						
TKM2	**Tokmak 2**	**3.77**	**22**	⇑Pn	**Pn**	**02 33 08.3**	**+3.3**
	comp=E,14nm,0.8s						
TKM2				⇓Pg	**Pg**	**02 33 17.3**	**-1.6**
	comp=E,61nm,0.9s						
TKM2				⇓Lg	Lg	02 34 07.8	
	comp=E,117nm,0.7s						
KDJ	**Kajisay**	**3.79**	**44**	⇓*i* P	**Pn**	**02 33 06.4**	**+1.2**
	baz=43						
KDJ				⇓*i* S	**Sn**	**02 33 51.5**	**+1.5**
	baz=43						
KDJ	**Kajisay**	**3.79**	**44**	Pn	**Pb**	**02 33 09.7**	**-4.0**
TAS	**Tashkent**	**3.83**	**301**	⇑*i* P	**Pn**	**02 33 06.9**	**+1.3**
	baz=1.0						
TAS				⇑*i* S	**Sn**	**02 33 52.4**	**+1.7**
	baz=1.0						
IUG	**Iuzhnay**	**3.86**	**316**	*e*P	**Pb**	**02 33 15.5**	**+0.7**
IUG				*e*S	**Sg**	**02 34 09.2**	**-1.3**
	comp=E,911nm,0.1s						
	comp=E,303nm,0.6s						
IUG	**Iuzhnay**	**3.86**	**316**	Pg	**Pb**	**02 33 15.5**	**+0.7**
IUG				Lg	Lg	02 34 09.2	
	comp=E,2μm,0.6s						
	comp=E,303nm,0.6s						
DZA	**Taraz**	**3.87**	**334**	*e*P	**Pb**	**02 33 15.1**	**+0.1**
	comp=E,80nm,0.3s						
DZA				*e*S	**Sg**	**02 34 07.6**	**-3.3**
	comp=E,228nm,0.2s						
DZA	**Taraz**	**3.87**	**334**	Pg	**Pb**	**02 33 15.1**	**+0.1**
	comp=E,80nm,0.3s						
DZA				Lg	Lg	02 34 07.6	
	comp=E,228nm,0.2s						
USP	**Ospenovka**	**3.88**	**9**	P	**Pb**	**02 33 10.6**	**-4.4**
	SNR=14						
TARG	**Taragay, Kyrgy**	**3.90**	**53**	Pn	**Pn**	**02 33 08.6**	**+1.6**
KST	**Kastek**	**4.00**	**25**	*e*P	**Pb**	**02 33 18.0**	**+0.8**
	comp=E,35nm,0.8s						
KST				*e*S	**Sg**	**02 34 12.6**	**-2.4**
	comp=E,162nm,0.9s						
KST	**Kastek**	**4.00**	**25**	Pg	**Pb**	**02 33 18.0**	**+0.8**
	comp=E,35nm,0.8s						
KST				Lg	Lg	02 34 13.2	
	comp=E,162nm,0.9s						
SGDS	**Sogindy**	**4.08**	**10**	*e*P	**Pb**	**02 33 20.0**	**+1.5**
	comp=E,24nm,0.4s						
SGDS				*e*S	**Sg**	**02 34 15.9**	**-1.5**
	comp=E,60nm,0.2s						
DGS	**Degeres**	**4.12**	**22**	*e*P	**Pb**	**02 33 20.8**	**+1.6**
	comp=E,43nm,0.2s						
DGS				*e*S	**Sg**	**02 34 17.6**	**-1.2**
	comp=E,131nm,0.8s						
DGS	**Degeres**	**4.12**	**22**	Pg	**Pb**	**02 33 20.8**	**+1.6**
	comp=E,43nm,0.5s						
DGS				Lg	Lg	02 34 18.1	
	comp=E,131nm,0.8s						
CHM	**Chimkent**	**4.21**	**314**	*e*P	**Pb**	**02 33 22.0**	**+1.3**
	comp=E,5.8nm,0.5s						
CHM				*e*S	**Sg**	**02 34 19.8**	**-2.0**
	comp=E,357nm,0.5s						
MTBS	**Maitube**	**4.24**	**29**	*e*P	**Pb**	**02 33 23.1**	**+1.9**
	comp=E,45nm,0.2s						
MTBS				*e*S	**Sg**	**02 34 21.1**	**-1.5**
	comp=E,69nm,0.2s						
MTBS	**Maitube**	**4.24**	**29**	Pg	**Pb**	**02 33 23.1**	**+1.9**
	comp=E,45nm,0.6s						
MTBS				Lg	Lg	02 34 21.1	
	comp=E,69nm,0.6s						
KK31	**Karatay Array**	**4.36**	**328**	Pn	**Pn**	**02 33 14.9**	**+2.0**
KK31	**Karatay Array**	**4.36**	**328**	⇑Pn	**Pn**	**02 33 15.2**	**+2.3**
	comp=E,7.5nm,0.5s,baz=136,slow=12,SNR=258						
KK31				⇓Pg	**Pb**	**02 33 25.0**	**+1.7**
	comp=E,54nm,0.8s,baz=138,slow=17,SNR=23						
KK31				⇑Lg	Lg	02 34 21.3	
	comp=E,36nm,0.5s,baz=149,slow=29,SNR=4.5						
KKAR	**Karatay Array**	**4.36**	**328**	Pn	**Pn**	**02 33 14.8**	**+1.8**
KKAR	**Karatay Array**	**4.36**	**328**	Pn	**Pn**	**02 33 14.9**	**+2.0**
TNSS	**Tian-Shan**	**4.37**	**34**	*e*P	**Pb**	**02 33 25.4**	**+1.8**
	comp=E,28nm,0.2s						
TNSS				*e*S	**Sg**	**02 34 25.5**	**-1.3**
	comp=E,31nm,0.6s						
TNSS	**Tian-Shan**	**4.37**	**34**	Pg	**Pb**	**02 33 26.1**	**+2.5**
	comp=E,28nm,0.4s						
TNSS				Lg	Lg	02 34 26.0	
	comp=E,31nm,0.6s						
AAA	**Alma-Ata**	**4.49**	**32**	*e*P	**Pb**	**02 33 27.9**	**+2.3**
	comp=E,41nm,0.1s						
AAA				*e*S	**Sg**	**02 34 29.5**	**-1.3**
	comp=E,117nm,0.1s						
AAA	**Alma-Ata**	**4.49**	**32**	Pg	**Pb**	**02 33 28.1**	**+2.5**
AAA				Lg	Lg	02 34 29.5	
ANVS	**Anan'yevo**	**4.51**	**41**	⇑*e* P	**Pn**	**02 33 16.0**	**+0.9**
	baz=40						
ANVS				⇑*i* S	**Sn**	**02 34 08.5**	**+0.8**
	baz=40						
KRBS	**Karabastau**	**4.51**	**19**	*e*P	**Pb**	**02 33 28.2**	**+2.2**
	comp=E,1.6nm,0.4s						
KRBS				*e*S	**Sg**	**02 34 29.8**	**-1.7**
	comp=E,78nm,0.4s						
KRBS	**Karabastau**	**4.51**	**19**	Pg	**Pb**	**02 33 28.2**	**+2.2**
	comp=E,1.6nm,0.8s						
KRBS				Lg	Lg	02 34 29.8	
	comp=E,79nm,0.9s						
KNDC	**Almaty**	**4.52**	**32**	⇓Pn	**Pb**	**02 33 22.4**	**-3.7**
	comp=E,97nm,0.7s						
KNDC				⇑Lg	Lg	02 34 31.2	
	comp=E,418nm,0.7s						
BRLS	**Boroldaу**	**4.60**	**322**	*e*P	**Pb**	**02 33 27.1**	**-0.3**
	comp=E,9.2nm,0.5s						
BRLS				*e*S	**Sg**	**02 34 28.3**	**-6.0**
	comp=E,79nm,0.3s						
BRLS	**Boroldaу**	**4.60**	**322**	Pg	**Pb**	**02 33 27.1**	**-0.3**
	comp=E,9.2nm,0.5s						
BRLS				Lg	Lg	02 34 28.3	
	comp=E,79nm,0.7s						
PRZ	**Przheval'sk**	**4.70**	**48**	Pn	**Pn**	**02 33 21.6**	**+3.8**
KTBS	**Karatobe**	**4.83**	**27**	*e*P	**Pb**	**02 33 33.7**	**+2.3**
	comp=E,21nm,0.2s						
KTBS				*e*S	**Sg**	**02 34 39.3**	**-2.4**
	comp=E,69nm,0.7s						
KTBS	**Karatobe**	**4.83**	**27**	Pg	**Pb**	**02 33 33.7**	**+2.3**
	comp=E,21nm,0.5s						
KTBS				Lg	Lg	02 34 39.3	
	comp=E,69nm,0.7s						
KUU	**Kurty**	**4.88**	**23**	*e*P	**Pb**	**02 33 34.0**	**+1.8**
	comp=E,18nm,0.6s						
KUU				*e*S	**Sg**	**02 34 39.7**	**-3.6**
	comp=E,59nm,0.6s						
KUU	**Kurty**	**4.88**	**23**	Pg	**Pb**	**02 33 34.0**	**+1.8**
	comp=E,18nm,0.6s						
KUU				Lg	Lg	02 34 39.7	
	comp=E,59nm,0.6s						
CHKK	**Chushkaly**	**5.07**	**28**	*e*P	**Pb**	**02 33 37.5**	**+2.2**
	comp=E,17nm,0.6s						
CHKK				*e*S	**Sg**	**02 34 46.1**	**-3.1**
	comp=E,39nm,0.4s						
CHKK	**Chushkaly**	**5.07**	**28**	Pg	**Pb**	**02 33 37.6**	**+2.2**
	comp=E,17nm,0.6s						
CHKK				Lg	Lg	02 34 46.1	
	comp=E,39nm,0.4s						
SATY	**Saty**	**5.09**	**43**	*e*P	**Pb**	**02 33 39.3**	**+3.6**
	comp=E,17nm,0.2s						
SATY				*e*S	**Sg**	**02 34 48.9**	**-1.0**
	comp=E,82nm,1.0s						
SATY	**Saty**	**5.09**	**43**	Pg	**Pg**	**02 33 40.2**	**-3.8**
	comp=E,18nm,0.7s						
SATY				Lg	Lg	02 34 50.3	
	comp=E,82nm,1.0s						
KURS	**Kuram**	**5.28**	**39**	*e*P	**Pb**	**02 33 41.9**	**+2.9**
	comp=E,11nm,0.3s						
KURS				*e*S	**Sg**	**02 34 53.4**	**-2.6**
	comp=E,36nm,0.6s						
KURS	**Kuram**	**5.28**	**39**	Pg	**Pb**	**02 33 41.9**	**+2.9**
	comp=E,11nm,0.9s						
KURS				Lg	Lg	02 34 53.4	
	comp=E,36nm,1.4s						
KPKS

	comp=E,19nm,1.2s								
DJR	**Jarkent**	**6.69**	**41**	Pg		Pb	02 34 08.6	+5.5	
	comp=E,3.9nm,0.7s								
OTUK	**Ortayu**	**8.85**	**354**	⇑Pn		**Pn**	**02 34 15.7**	**+1.1**	
	comp=E,5.2nm,0.6s								
OTUK				⇑Lg		Lg	02 36 45.6		
	comp=E,51nm,1.1s								
MAKZ	**Makanchi**	**9.55**	**37**	⇓Pn		**Pn**	**02 34 24.9**	**+0.8**	
	comp=E,4.5nm,1.3s								
MAKZ				⇑Lg		Lg	02 37 08.6		
	comp=E,12nm,1.2s								
MK31	**Makanchi Array**	**9.68**	**38**	Pn		**Pn**	**02 34 28.5**	**+2.6**	
MK31	**Makanchi Array**	**9.68**	**38**	Pn		Pn	02 34 30.8	+4.9	
	comp=E,1.4nm,0.8s,baz=223,slow=16,SNR=8.8								
MK31				⇑Lg		Lg	02 37 15.8		
	comp=E,18nm,1.4s,baz=220,slow=14,SNR=4.7								
MKAR	**Makanchi Array**	**9.68**	**38**	Pn		Pn	02 34 31.0	+5.0	
	comp=E,0.1nm,0.3s,baz=222,slow=14,SNR=7.7								
MKAR				Lg		Lg	02 37 16.3		
	comp=E,0.2nm,0.3s,baz=231,slow=28,SNR=4.0								
	comp=E,1.5nm,0.8s								
MKAR	**Makanchi Array**	**9.68**	**38**	Pn		**Pn**	**02 34 28.1**	**+2.1**	
WMQ	**Urumqi**	**11.38**	**63**	*eP*		**Pn**	**02 34 52.3**	**+3.1**	
KURBB	**Kurchatov Arra**	**11.70**	**15**	Pn		**Pn**	**02 34 53.4**	**-0.1**	
	baz=208,slow=12,SNR=2.4								
KURBB				LR		LR	02 39 34.8		
	comp=E,100nm,20.2s,baz=85,slow=38								
	comp=E,0.6nm,0.3s								
KURBB	**Kurchatov Arra**	**11.70**	**15**	⇓Lg		Lg	02 38 16.8		
	comp=E,40nm,1.2s								
KURK	**Kurchatov**	**11.80**	**16**	Pn		**Pn**	**02 34 55.1**	**+0.2**	
KURK	**Kurchatov**	**11.80**	**16**	⇑Lg		Lg	02 38 15.8		
	comp=E,26nm,1.1s								
ABKAR	**Akbulak array**	**13.86**	**320**	Pn		**Pn**	**02 35 20.1**	**-2.9**	
AKTO	**Aktyubinsk**	**15.57**	**320**	Pn		**Pn**	**02 35 44.5**	**-1.6**	
	comp=E,0.2nm,0.3s,baz=120,slow=13,SNR=9.0								
AKTO				LR		LR	02 40 57.3		
	comp=E,26nm,21.3s,baz=108,slow=34								
	comp=E,3.1nm,0.7s								
ZAA0	**Zalesovo Array**	**16.38**	**24**	Pn		**P**	**02 35 58.4**	**-0.8**	
ZALV	**Zalesovo Beam**	**16.38**	**24**	Pn		**Pn**	**02 35 57.3**	**+0.9**	
	comp=E,0.3nm,0.3s,baz=216,slow=10,SNR=18								
	comp=E,4.1nm,0.6s								
ZALV	**Zalesovo Beam**	**16.38**	**24**	Pn		**P**	**02 35 58.3**	**-1.0**	
ARU	**Arti**	**19.70**	**335**	P		**Pn**	**02 36 36.4**	**-0.9**	
	baz=131,slow=5.5,SNR=12								
ARU				LR		LR	02 44 34.8		
	comp=E,38nm,19.1s,baz=8.5,slow=38								
	comp=E,5.7nm,0.6s								
ARU	**Arti**	**19.70**	**335**			**P**	**02 36 36.0**	**+0.1**	
ARU				IAmb		IAmb	02 36 39.3		
	comp=Z,7.4nm,0.7s								
BELG	**Belogornoye**	**22.12**	**314**	P		**P**	**02 37 04.9**	**+2.9**	
	comp=E,18nm,0.8s,baz=171,slow=2.0,SNR=5.4								
ONI	**Oni**	**22.95**	**288**			**P**	**02 37 10.5**	**-0.5**	
ONI				IAmb		IAmb	02 37 19.1		
	comp=E,10nm,0.8s								
KARS	**Kars**	**23.39**	**283**			**P**	**02 37 16.9**	**+1.2**	
SONM	**Songino Array**	**24.98**	**60**	P		**P**	**02 37 32.5**	**+2.0**	
	comp=E,1.0nm,0.6s,baz=281,slow=8.5,SNR=2.5								
	comp=E,1.0nm,0.6s								
SONM	**Songino Array**	**24.98**	**60**	P		**P**	**02 37 32.9**	**+2.4**	
CMAR	**Chiang Mai Arr**	**30.26**	**126**	LR		LR	02 52 33.8		
	comp=Z,22nm,18.8s,baz=300,slow=41								
BRTR	**Keskin Array B**	**30.67**	**284**	P		**P**	**02 38 22.1**	**+0.6**	
	comp=Z,1.2nm,0.7s,baz=87,slow=7.6,SNR=8.5								
	comp=Z,1.2nm,0.7s								
BRTR	**Keskin Array B**	**30.67**	**284**	P		**P**	**02 38 22.6**	**+1.2**	
AKASG	**Malin Array Be**	**32.87**	**305**	P		**P**	**02 38 40.1**	**-0.3**	
	comp=Z,0.2nm,0.3s,baz=76,slow=7.6,SNR=2.7								
	comp=Z,0.2nm,0.3s								
MLR	**Muntele Rosu**	**35.29**	**296**	P		**P**	**02 39 02.0**	**+0.3**	
MLR				IAmb		IAmb	02 39 08.9		
	comp=Z,2.8nm,0.8s								
FIA1	**FINESS Array S**	**36.30**	**323**	P		**P**	**02 39 10.7**	**+0.7**	
FIA1				IAmb		IAmb	02 39 37.1		
	comp=Z,8.3nm,1.1s								
FINES	**FINESS Array B**	**36.30**	**323**	P		**P**	**02 39 10.5**	**+0.5**	
	comp=Z,1.0nm,0.6s,baz=118,slow=9.9,SNR=10								
	comp=Z,1.0nm,0.6s								
FINES	**FINESS Array B**	**36.30**	**323**	P		**P**	**02 39 10.8**	**+0.7**	
ARCES	**ARCESS Array B**	**39.29**	**336**	P		**P**	**02 39 35.8**	**+0.6**	
	comp=Z,1.0nm,0.5s,baz=107,slow=8.0,SNR=18								
	comp=Z,1.0nm,0.5s								
ARCES	**ARCESS Array B**	**39.29**	**336**	P		**P**	**02 39 36.0**	**+0.9**	
ARCES				IAmb		IAmb	02 40 01.0		
	comp=Z,13nm,1.4s								
GERES	**GERESS Array B**	**43.02**	**303**	P		**P**	**02 40 07.2**	**+1.0**	
	comp=Z,0.3nm,0.5s,baz=65,slow=10,SNR=2.0								
	comp=Z,0.3nm,0.5s								
NC303	**NORSAR Array S**	**43.28**	**321**	P		**P**	**02 40 08.4**	**+0.4**	
NC303				IAmb		IAmb	02 40 22.1		
	comp=Z,15nm,1.4s								
NB2	**NORSAR Subarra**	**43.36**	**321**	P		**P**	**02 40 08.3**	**-0.4**	
	comp=Z,0.4nm,0.5s,baz=90,slow=7.9								
NOA	**NORSAR Array B**	**43.36**	**321**	P		**P**	**02 40 08.6**	**-0.2**	
	comp=Z,0.7nm,0.7s,baz=91,slow=7.9,SNR=5.0								
NOA				LR		LR	02 57 59.2		
	comp=Z,17nm,18.8s,baz=35,slow=36								
	comp=Z,0.7nm,0.7s								
PETK	**Petropavlovsk-**	**56.41**	**46**	LR		LR	03 08 14.7		
	comp=Z,40nm,18.0s,baz=79,slow=38								
ESDC	**Sonseca Array**	**57.96**	**297**	P		**P**	**02 41 58.8**	**-0.5**	
	comp=Z,0.4nm,0.7s,baz=58,slow=7.0,SNR=6.4								
	comp=Z,0.4nm,0.7s								
ESDC	**Sonseca Array**	**57.96**	**297**	P		**P**	**02 41 59.2**	**-0.1**	
TOA0	**Torodi Ar. Sit**	**67.88**	**269**	P		**P**	**02 43 04.2**	**-1.3**	
TOA0				IAmb		IAmb	02 43 08.2		
	comp=Z,2.8nm,1.0s								
TORD	**Torodi Ar. Bea**	**67.88**	**269**	P		**P**	**02 43 04.1**	**-1.4**	
	comp=Z,0.8nm,0.6s,baz=46,slow=4.9,SNR=20								
	comp=Z,0.8nm,0.6s								
TORD	**Torodi Ar. Bea**	**67.88**	**269**	P		**P**	**02 43 04.2**	**-1.4**	
TORD				IAmb		IAmb	02 43 08.2		
	comp=Z,1.3nm,0.9s								
IMAR	**Indian Mountai**	**68.73**	**19**	P		**P**	**02 43 10.1**	**0.0**	
INK	**Inuvik**	**70.66**	**10**	P		**P**	**02 43 23.9**	**+2.1**	
INK				IAmb		IAmb	02 43 40.3		
	comp=Z,7.0nm,1.5s								
C36M	**Paulatuk**	**70.74**	**7**	P		**P**	**02 43 22.3**	**-0.1**	
BCAR	**Beaver Creek A**	**73.98**	**16**	P		**P**	**02 43 44.6**	**+2.7**	
YKA	**Yellowknife Ar**	**78.19**	**4**	P		**P**	**02 44 06.0**	**+0.2**	
	comp=Z,0.2nm,0.5s,baz=349,slow=5.7,SNR=7.9								
	comp=Z,0.2nm,0.5s								
WB0	**Warramunga Arr**	**81.73**	**124**	P		**P**	**02 44 25.1**	**-0.5**	
WB0				IAmb		IAmb	02 44 25.2		
	comp=Z,3.9nm,1.2s								
WRA	**Warramunga Arr**	**81.82**	**124**	P		**P**	**02 44 25.6**	**-0.5**	
	comp=Z,1.0nm,0.7s,baz=326,slow=4.7,SNR=10								
	comp=Z,1.0nm,0.7s								
WRA	**Warramunga Arr**	**81.82**	**124**	P		**P**	**02 44 25.6**	**-0.5**	
WB2	**Warramunga Arr**	**81.83**	**124**	P		**P**	**02 44 25.6**	**-0.4**	
WR0	**Warramunga Arr**	**81.97**	**124**	P		**P**	**02 44 26.3**	**-0.5**	

KRSC 27 02:39:50.5±1.7, 50.03N×159.36E, h64km±40km, ML4.4, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KDTR	**Khodutka, Kamc**	**1.96**	**336**	*eP*			Pn	02 40 23.8	+2.4
KDTR				*eS*			Sn	02 40 47.2	+2.2
PAU	**Pauzhetka**	**2.17**	**313**	*eP*			Pn	02 40 26.2	+1.9
PAU				S			Sn	02 40 52.2	+2.2
SKR	**Severo-Kuril's**	**2.18**	**289**	P			Pn	02 40 24.8	+0.4
SKR				S			Sn	02 40 49.4	-0.9
RUS	**Russkaya**	**2.47**	**348**	*eP*			Pn	02 40 30.9	+2.6
RUS				*eS*			Sn	02 40 59.5	+2.2
ASAK	**Asacha**	**2.53**	**339**	*eP*			Pn	02 40 32.2	+2.9
ASAK				*eS*			Sn	02 41 01.9	+2.9
MTVR	**Mutnovka**	**2.57**	**344**	*eP*			Pn	02 40 32.5	+2.7
MTVR				*eS*			Sn	02 41 02.4	+2.4
GRL	**Gorelyy**	**2.65**	**343**	*eP*			Pn	02 40 34.2	+3.2
GRL				*eS*			Sn	02 41 05.4	+3.3
KRMR	**Karymshinskiy**	**2.91**	**345**	*eP*			Pn	02 40 37.7	+3.4
KRMR				*eS*			Sn	02 41 11.5	+3.4
DALK	**Dalny**	**3.03**	**353**	*eP*			Pn	02 40 38.7	+2.7
DALK				S			Sn	02 41 13.6	+2.5
PET	**Petropavlovsk**	**3.03**	**352**	*eP*			Pn	02 40 38.9	+2.9
PET				*eS*			Sn	02 41 13.7	+2.6
SPN	**Mys Shipunski**	**3.10**	**7**	*eP*			Pn	02 40 39.8	+2.8
SPN				*eS*			Sn	02 41 15.9	+3.1
NLC	**Nalytchevo**	**3.15**	**360**	*eP*			Pn	02 40 40.4	+2.8
UGLR	**Uglovaya**	**3.20**	**354**	P			Pn	02 40 41.4	+2.9
APC	**Apacha**	**3.21**	**335**	S			Sn	02 41 20.8	+5.3
SMAR	**Somma**	**3.26**	**354**	P			Pn	02 40 42.5	+3.2
AVH	**Avacha**	**3.27**	**353**	*eP*			Pn	02 40 42.7	+3.4
SDLR	**Sedlovina**	**3.27**	**355**	P			Pn	02 40 42.0	+2.6
KOK	**Koryaka**	**3.30**	**352**	P			Pn	02 40 43.3	+3.5
KRER	**Koryakskii**	**3.30**	**354**	P			Pn	02 40 43.1	+3.2
KRX	**Arik**	**3.37**	**353**	P			Pn	02 40 43.9	+3.2
GNL	**Ganaly**	**3.78**	**347**	P			Pn	02 40 49.9	+3.6
MKZ	**Mys Kozlova**	**4.76**	**17**	P			Pn	02 41 02.2	+2.6
MKZ				S			Sn	02 41 54.7	+1.3
TUMR	**Tumrok**	**5.29**	**5**	*eP*			Pn	02 41 11.9	+5.0
KMNR	**Kamenistaya**	**5.76**	**5**	P			Pn	02 41 19.2	+5.8
KBTR	**Krutoberegovo**	**6.53**	**17**	*eP*			Pn	02 41 27.7	+3.9
BKI	**Bering**	**6.56**	**35**	P			Pn	02 41 27.2	+3.0

KRNET 27 02:44:58.9±0.1, 39.44N×73.84E, mb3.8
SOME 27 02:44:59.2, 39.48N×73.50E, h5km
NNC 27 02:45:09.2±3.0, 39.76N×73.29E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=29.4km s-min=21.1km az=162.0
ISC 27 02:44:59.5±1.5, 39.52N±0.05×73.50E±0.03, h4km±11km, n30, σ2s10/57, 19C-4D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.14**	**331**	⇑*iP*			**Pn**	**02 45 23.7**	**+1.4**
	baz=24								
OHH				⇑*iS*			**Sn**	**02 45 41.9**	**+3.4**
	baz=24								
DRK	**Karamyk**	**1.32**	**269**	⇑*iP*			**Pn**	**02 45 27.7**	**+2.8**
	baz=72								
DRK				⇑*iS*			**Sn**	**02 45 49.0**	**+5.9**
	baz=72								
BTK	**Batken**	**2.13**	**285**	⇑*iP*			**Pg**	**02 45 40.0**	**-0.4**
	baz=86								
BTK				⇑*iS*			**Sg**	**02 46 10.2**	**+2.2**
	baz=86								
ARLS	**Aral**	**2.42**	**15**	⇑*eP*			**Pn**	**02 45 40.6**	**+0.6**
	baz=9.0								
ARLS				⇑*iS*			**Sn**	**02 46 11.1**	**+1.0**
	baz=9.0								
GAR	**Garm**	**2.53**	**259**	⇑*iP*			**Pb**	**02 45 45.1**	**-0.4**
	baz=62								
GAR				⇑*iS*			**Sg**	**02 46 18.9**	**-1.7**
	baz=62								
TRKS	**Terek-Say**	**2.69**	**319**	⇑*eP*			**Pb**	**02 45 46.4**	**-1.9**
	baz=16								
TRKS				⇑*iS*			**Sb**	**02 46 21.3**	**-0.5**
	baz=16								
BOOM	**Boomskoye usch**	**3.49**	**31**	⇑*eP*			**Pn**	**02 45 54.5**	**-0.2**
	baz=27								
BOOM				⇑*iS*			**Sn**	**02 46 34.6**	**-2.0**
	baz=27								
CHMS	**Chumysh**	**3.60**	**15**	⇓Pn			**Pb**	**02 46 04.0**	**+0.4**
	6.4nm,0.7s								
CHMS				⇑Lg			Lg	02 46 59.4	
	14nm,0.6s								
TAS	**Tashkent**	**3.68**	**301**	⇑*iP*			**Pb**	**02 46 01.4**	**-3.7**
	baz=0.0								
TAS				⇑*iS*			**Sb**	**02 46 46.8**	**-3.2**
	baz=0.0								
IUG	**Iuzhnay**	**3.71**	**316**	*eP*			**Pg**	**02 46 10.1**	**-0.5**
	157nm,0.3s								
IUG				*eS*			**Sg**	**02 47 00.4**	**+1.7**
	112nm,0.7s								
TKM2	**Tokmak 2**	**3.74**	**24**	⇑Pn			**Pb**	**02 46 06.4**	**+0.1**
	2.6nm,0.5s								
TKM2				⇓Lg			Lg	02 47 01.5	
	10nm,0.5s								
KDJ	**Kajisay**	**3.82**	**46**	⇓*iP*			**Pn**	**02 45 58.2**	**-1.0**
	baz=42								
KDJ				⇓*iS*			**Sn**	**02 46 41.3**	**-3.4**
	baz=42								
KST	**Kastek**	**3.98**	**27**	*eP*			**Pg**	**02 46 15.4**	**-0.2**
	4.1nm,0.5s								
KST				*eS*			**Sg**	**02 47 09.1**	**+2.0**
	29nm,0.1s								
SGDS	**Sogindy**	**4.01**	**12**	*eP*			**Pg**	**02 46 16.2**	**-0.2**
	2.8nm,0.1s								
SGDS				*eS*			**Sg**	**02 47 10.3**	**+1.8**
	6.7nm,0.1s								
CHM	**Chimkent**	**4.06**	**315**	*eP*			**Pg**	**02 46 17.2**	**-0.1**
	5.0nm,0.4s								
CHM				*eS*			**Sg**	**02 47 12.6**	**+2.7**
	194nm,0.3s								
DGS	**Degeres**	**4.09**	**24**	*eP*			**Pg**	**02 46 17.9**	**+0.1**
	7.5nm,0.1s								
DGS				*eS*			**Sg**	**02 47 13.5**	**+2.7**
	27nm,0.9s								
MTBS	**Maitube**	**4.22**	**31**	*eP*			**Pg**	**02 46 20.2**	**-0.2**
	7.7nm,0.3s								
MTBS				*eS*			**Sg**	**02 47 17.4**	**+2.3**
	12nm,0.2s								
KK31	**Karatay Array**	**4.22**	**329**	Pn			**Pb**	**02 46 10.7**	**-3.6**
	1.1nm,0.3s,baz=135,slow=12,SNR=11								
KK31				⇑Lg			Lg	02 47 14.3	
	14nm,0.6s,baz=155,slow=25,SNR=3.7								
TNSS	**Tian-Shan**	**4.37**	**35**	*eP*			**Pg**	**02 46 23.1**	**-0.1**
	3.7nm,0.4s								
TNSS				*eS*			**Sg**	**02 47 22.1**	**+2.4**
	6.1nm,0.6s								
BRLS	**Borolday**	**4.46**	**323**	*eP*			**Pg**	**02 46 22.2**	**-2.7**
	3.5nm,0.1s								
BRLS				*eS*			**Sg**	**02 47 21.3**	**-1.4**
	23nm,0.5s								
KRBS	**Karabastau**	**4.48**	**21**	*eP*			**Pg**	**02 46 25.6**	**+0.4**
	1.7nm,0.2s								
KRBS				*eS*			**Sg**	**02 47 27.0**	**+3.8**
	9.6nm,0.5s								
KTBS	**Karatobe**	**4.82**	**29**	*eP*			**Pg**	**02 46 31.4**	**-0.3**
	1.8nm,0.1s								
KTBS				*eS*			**Sg**	**02 47 36.7**	**+2.6**
	21nm,0.1s								
KUU	**Kurty**	**4.86**	**25**	*eP*			**Pg**	**02 46 32.0**	**-0.5**
	2.2nm,0.5s								
KUU				*eS*			**Sg**	**02 47 37.6**	**+2.2**
	16nm,0.3s								
CHKK	**Chushkaly**	**5.05**	**30**	*eP*			**Pg**	**02 46 35.8**	**-0.5**
	2.2nm,0.1s								
CHKK				*eS*			**Sg**	**02 47 44.5**	**+2.7**
	17nm,0.5s								
SATY	**Saty**	**5.11**	**45**	*eP*			**Pg**	**02 46 36.5**	**-0.8**
	3.1nm,0.3s								
SATY				*eS*			**Sg**	**02 47 45.3**	**+1.7**
	7.0nm,0.1s								
KURS	**Kuram**	**5.29**	**40**	*eP*			**Pg**	**02 46 39.9**	**-0.8**
	2.7nm,0.3s								
KURS				*eS*			**Sg**	**02 47 51.3**	**+2.0**
	6.4nm,0.1s								
BTLS	**Baital**	**5.53**	**4**	*eP*			**Pg**	**02 46 44.0**	**-1.3**
	3.2nm,0.6s								
BTLS				*eS*			**Sg**	**02 47 58.6**	**+1.7**
	4.1nm,0.6s								
KPKS	**Kokpek**	**5.54**	**43**	*eP*			**Pg**	**02 46 43.9**	**-1.7**
	2.4nm,0.4s								
KPKS				*eS*			**Sg**	**02 47 58.2**	**+0.9**
	16nm,0.5s								
ARXS	**Arharly**	**5.69**	**33**	*eP*			**Pg**	**02 46 47.5**	**-1.0**
	2.9nm,0.2s								
ARXS				*eS*			**Sg**	**02 48 04.9**	**+2.7**
	16nm,0.1s								
BLB	**Baldybastay**	**5.89**	**38**	*eP*			**Pg**	**02 46 50.8**	**-1.5**
	4.1nm,0.1s								
BLB				*eS*			**Sg**	**02 48 10.7**	**+2.1**
	13nm,0.4s								

SOME 27 02:54:55.3, 39.33N×73.48E, h5km
KRNET 27 02:54:55.8±0.1, 39.41N×73.86E, mb4.4
IDC 27 02:54:56.5±1.1, 39.21N×73.51E, h0km, mb3.9/12, mbtmp3.8/17, ML3.4/5, MS2.8/5, Error ellipse: s-maj=22.4km s-min=14.9km az=146.0
NNC 27 02:55:00.6±1.8, 39.52N×73.48E, h0km, mb4.5, mpv4.2, Error ellipse: s-maj=14.8km s-min=7.4km az=172.0
NEIC 27 02:55:02.4±2.9, 39.52N±0.06×73.31E±0.08, h10km±1km, mb4.3/12, Error ellipse: s-maj=11.4km s-min=9.0km az=133.0
ISC 27 02:54:58.4±1.4, 39.47N±0.04×73.76E±0.03, h7km±9km, n131, σ2s05/165, mb4.0/15, 25C-18D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.29**	**325**	⇑*iP*			**Pn**	**02 55 21.2**	**-1.7**
	baz=24								
OHH				⇑*iS*			**Sb**	**02 55 39.7**	**-0.1**
	baz=24								
DRK	**Karamyk**	**1.51**	**271**	⇑*iP*			**Pn**	**02 55 25.2**	**-1.0**
	baz=73								
DRK				⇑*iS*			**Sn**	**02 55 46.7**	**+0.4**
	baz=73								
DRK	**Karamyk**	**1.51**	**271**	Pn			**Pn**	**02 55 24.3**	**-1.9**
KSH	**Kashi**	**1.72**	**88**	Pg			**Pb**	**02 55 29.5**	**-0.8**
KSH				Sg			**Sg**	**02 55 54.0**	**+0.4**
KSH				pmax			pmax		
	comp=Z,220nm,0.6s								
KSH				smax			smax		
	comp=N,1μm,0.6s								
KSH				smax			smax		
	comp=E,1μm,0.6s								
BTK	**Batken**	**2.34**	**285**	⇑*eP*			**Pn**	**02 55 37.6**	**+0.3**
	baz=86								
BTK				⇑*iS*			**Sn**	**02 56 08.1**	**+1.7**
	baz=86								
BTK	**Batken**	**2.34**	**285**	Pn			**Pn**	**02 55 37.1**	**-0.3**
ARLS	**Aral**	**2.43**	**10**	⇑*eP*			**Pn**	**02 55 38.2**	**-0.4**
	baz=8.0								
ARLS				⇑*iS*			**Sn**	**02 56 08.9**	**+0.3**
	baz=8.0								
AML	**Almayashu**	**2.66**	**359**	P			**Pb**	**02 55 46.2**	**-0.3**
	SNR=10								
GAR	**Garm**	**2.71**	**261**	⇑*iP*			**Pn**	**02 55 42.4**	**-0.1**
	baz=63								
GAR				⇑*iS*			**Sn**	**02 56 16.5**	**+0.9**
	baz=63								
GAR	**Garm**	**2.71**	**261**	Pn			**Pn**	**02 55 42.5**	**-0.1**
UCH	**Uchtor**	**2.81**	**12**	P			**Pb**	**02 55 49.3**	**+0.1**
	SNR=44								
UCH	**Uchtor**	**2.81**	**12**	⇑*eP*			**Pn**	**02 55 43.6**	**-0.6**
	baz=10.0								
UCH				⇑*iS*			**Sn**	**02 56 18.7**	**+0.1**
	baz=10.0								
TRKS	**Terek-Say**	**2.87**	**317**	⇓*iP*			**Pn**	**02 55 43.9**	**-0.7**
	baz=16								
TRKS				⇓*iS*			**Sn**	**02 56 19.2**	**-0.3**
	baz=16								
EKS2	**Erkin-Say**	**3.19**	**0**	P			**Pb**	**02 55 53.8**	**-1.6**
	SNR=23								
AAK	**Ala-Archa**	**3.21**	**10**	P			**Pb**	**02 55 55.0**	**-0.9**
	SNR=45								
AAK	**Ala-Archa**	**3.21**	**10**	Pn			**Pb**	**02 55 55.0**	**-0.9**
	comp=E,31nm,0.3s,baz=152,slow=10,SNR=80								
AAK				Lg			Lg	02 56 37.6	
	comp=E,13nm,0.3s,baz=101,slow=21,SNR=7.2								
AAK				LR			LR	02 57 28.8	
	comp=E,180nm,20.5s,baz=214,slow=43								
	comp=E,92nm,0.5s								
AAK	**Ala-Archa**	**3.21**	**10**	⇑*eP*			**Pn**	**02 55 49.0**	**-0.4**
	baz=8.0								
AAK				⇑*eS*			**Sn**	**02 56 28.1**	**+0.1**
	baz=8.0								
AAK	**Ala-Archa**	**3.21**	**10**				**Pb**	**02 55 54.6**	**-1.3**
KBK	**Karagaybulak**	**3.31**	**15**	P			**Pb**	**02 55 56.9**	**-0.6**
	SNR=18								
ULHL	**Ulahol**	**3.35**	**33**	P			**Pg**	**02 56 03.2**	**+0.5**
	SNR=16								
BOOM	**Boomskoye usch**	**3.44**	**28**	⇓*iP*			**Pn**	**02 55 52.0**	**-0.6**
	baz=26								
BOOM				⇓*iS*			**Sn**	**02 56 32.7**	**-0.9**
	baz=26								
BOOM	**Boomskoye usch**	**3.44**	**28**	Pn			**Pb**	**02 55 58.8**	**-1.0**
CHMS	**Chumysh**	**3.60**	**12**	P			**Pb**	**02 56 00.2**	**-2.3**
	SNR=26								
CHMS	**Chumysh**	**3.60**	**12**	⇓Pn			**Pb**	**02 55 59.8**	**-2.6**
	comp=E,45nm,0.6s								
CHMS				⇓Pg			**Pg**	**02 56 10.2**	**+2.7**
	comp=E,64nm,1.0s								
CHMS				⇓Lg			Lg	02 56 56.8	
	comp=E,127nm,0.7s								
CHGR	**Chuyangaron**	**3.67**	**259**	Pn			**Pn**	**02 55 54.7**	**-0.9**
TKM2	**Tokmak 2**	**3.71**	**21**	P			**Pn**	**02 55 59.5**	**+3.1**
	SNR=12								
TKM2	**Tokmak 2**	**3.71**	**21**	⇓Pn			**Pb**	**02 56 02.2**	**-2.3**
	comp=E,15nm,0.7s								
TKM2				⇑Pg			**Pg**	**02 56 11.1**	**+1.5**
	comp=E,28nm,0.4s								
TKM2				⇑Lg			Lg	02 57 00.5	
	comp=E,91nm,0.6s								
KDJ	**Kajisay**	**3.72**	**43**	⇓*iP*			**Pn**	**02 55 55.0**	**-1.4**
	baz=42								
KDJ				⇓*iS*			**Sn**	**02 56 38.7**	**-1.8**
	baz=42								
KDJ	**Kajisay**	**3.72**	**43**	Pn			**Pb**	**02 56 03.5**	**-1.0**
TARG	**Taragay, Kyrgy**	**3.82**	**53**	Pn			**Pb**	**02 56 04.3**	**-2.0**
USP	**Ospenovka**	**3.83**	**8**	P			**Pb**	**02 56 02.7**	**-

ANVS				⇑eS		Sn	02 56 55.9	-2.3	
	baz=39								
KNDC	**Almaty**	**4.45**	**32**	⇑Pg		**Pg**	**02 56 23.1**	**-0.7**	
	comp=E,62nm,0.5s								
KNDC				⇓Lg		Lg	02 57 23.5		
	comp=E,548nm,1.1s								
KRBS	**Karabastau**	**4.46**	**18**	*e*P		**Pg**	**02 56 21.4**	**-2.4**	
	comp=E,14nm,0.0s								
KRBS				eS		**Sg**	**02 57 23.7**	**+2.1**	
	comp=E,71nm,0.1s								
BRLS	**Boroldaу**	**4.62**	**322**	*e*P		**Pb**	**02 56 17.7**	**-2.1**	
	comp=E,5.3nm,0.1s								
BRLS				eS		**Sb**	**02 57 17.2**	**+1.5**	
	comp=E,46nm,0.6s								
BRLS	**Boroldaу**	**4.62**	**322**	Pg		**Pb**	**02 56 17.2**	**-2.6**	
	comp=E,8.0nm,1.1s								
BRLS				Lg		Lg	02 57 17.2		
	comp=E,46nm,0.6s								
KTBS	**Karatobe**	**4.77**	**26**	*e*P		**Pg**	**02 56 27.1**	**-2.7**	
	comp=E,14nm,0.3s								
KTBS				eS		**Sg**	**02 57 33.6**	**+2.0**	
	comp=E,114nm,0.2s								
KUU	**Kurty**	**4.82**	**23**	*e*P		**Pg**	**02 56 27.6**	**-3.2**	
	comp=E,19nm,0.6s								
KUU				eS		**Sg**	**02 57 34.3**	**+1.1**	
	comp=E,85nm,0.6s								
KUU	**Kurty**	**4.82**	**23**	Pg		**Pg**	**02 56 27.5**	**-3.2**	
	comp=E,19nm,0.6s								
KUU				Lg		Lg	02 57 34.3		
	comp=E,85nm,0.6s								
CHKK	**Chushkaly**	**5.00**	**28**	*e*P		**Pg**	**02 56 31.6**	**-2.6**	
	comp=E,12nm,0.2s								
CHKK				eS		**Sg**	**02 57 41.4**	**+2.4**	
	comp=E,61nm,0.7s								
CHKK	**Chushkaly**	**5.00**	**28**	Pg		**Pg**	**02 56 31.6**	**-2.6**	
	comp=E,12nm,0.7s								
CHKK				Lg		Lg	02 57 41.4		
	comp=E,61nm,0.7s								
SATY	**Saty**	**5.01**	**43**	*e*P		**Pg**	**02 56 32.9**	**-1.5**	
	comp=E,26nm,0.6s								
SATY				eS		**Sg**	**02 57 43.3**	**+3.9**	
	comp=E,49nm,0.1s								
SATY	**Saty**	**5.01**	**43**	Pg		**Pg**	**02 56 32.9**	**-1.5**	
	comp=E,26nm,0.6s								
SATY				Lg		Lg	02 57 43.3		
	comp=E,49nm,1.2s								
ZHN	**Zhinishke**	**5.10**	**42**	*e*P		**Pg**	**02 56 34.2**	**-2.0**	
	comp=E,15nm,0.0s								
ZHN				eS		**Sg**	**02 57 45.1**	**+2.9**	
	comp=E,42nm,0.2s								
KURS	**Kuram**	**5.21**	**38**	*e*P		**Pg**	**02 56 36.0**	**-2.1**	
	comp=E,10nm,0.7s								
KURS				eS		**Sg**	**02 57 48.9**	**+3.4**	
	comp=E,34nm,1.0s								
KURS	**Kuram**	**5.21**	**38**	Pg		**Pg**	**02 56 36.0**	**-2.1**	
	comp=E,10nm,0.7s								
KURS				Lg		Lg	02 57 48.9		
	comp=E,34nm,1.0s								
KPKS	**Kokpek**	**5.44**	**41**	*e*P		**Pg**	**02 56 39.6**	**-3.0**	
	comp=E,22nm,0.1s								
KPKS				eS		**Sg**	**02 57 55.2**	**+2.0**	
	comp=E,36nm,0.6s								
KPKS	**Kokpek**	**5.44**	**41**	Pg		**Pg**	**02 56 39.7**	**-3.0**	
	comp=E,22nm,0.5s								
KPKS				Lg		Lg	02 57 55.2		
	comp=E,36nm,0.6s								
BTLS	**Baital**	**5.57**	**2**	*e*P		**Pg**	**02 56 42.2**	**-2.9**	
	comp=E,11nm,0.5s								
BTLS				eS		**Sg**	**02 57 59.7**	**+2.5**	
	comp=E,36nm,0.1s								
BTLS	**Baital**	**5.57**	**2**	Pg		**Pb**	**02 56 39.4**	**+3.4**	
	comp=E,11nm,0.5s								
BTLS				Lg		Lg	02 57 55.2		
	comp=E,27nm,0.6s								
ARXS	**Arharly**	**5.63**	**31**	*e*P		**Pg**	**02 56 42.5**	**-3.7**	
	comp=E,28nm,0.8s								
ARXS				eS		**Sg**	**02 57 59.8**	**+0.7**	
	comp=E,52nm,0.8s								
ARXS	**Arharly**	**5.63**	**31**	Pg		**Pg**	**02 56 42.1**	**-4.1**	
	comp=E,28nm,0.8s								
ARXS				Lg		Lg	02 57 59.8		
	comp=E,52nm,0.8s								
PDGK	**Podgornoye**	**5.78**	**46**	Pg		**Pg**	**02 56 47.1**	**-2.1**	
	comp=E,4.8nm,0.7s								
PDGK				Lg		Lg	02 58 07.7		
	comp=E,15nm,0.8s								
PDGK	**Podgornoye**	**5.78**	**46**	⇓Pn		Pn	02 56 30.2	+5.5	
PDGK				⇓Pg		**Pg**	**02 56 50.3**	**+1.2**	
	comp=E,16nm,0.7s								
PDGK				⇑Lg		Lg	02 58 06.8		
	comp=E,71nm,1.0s								
BLB	**Baldybastay**	**5.81**	**36**	*e*P		**Pg**	**02 56 46.6**	**-3.2**	
	comp=E,33nm,0.2s								
BLB				eS		**Sg**	**02 58 07.3**	**+2.2**	
	comp=E,55nm,0.9s								
BLB	**Baldybastay**	**5.81**	**36**	Pg		**Pg**	**02 56 46.6**	**-3.2**	
	comp=E,33nm,0.6s								
BLB				Lg		Lg	02 58 07.3		
	comp=E,55nm,0.9s								
KBL	**Kabul**	**6.20**	**219**	Pn		**Pn**	**02 56 31.4**	**+0.9**	
DJR	**Jarkent**	**6.62**	**41**	*e*P		**Pg**	**02 57 02.0**	**-3.1**	
	comp=E,3.9nm,0.2s								
DJR				eS		**Sg**	**02 58 33.3**	**+2.4**	
	comp=E,16nm,0.3s								
DJR	**Jarkent**	**6.62**	**41**	Pg		**Pg**	**02 57 01.3**	**-3.9**	
	comp=E,4.0nm,0.7s								
THN	**Thein Dam**	**7.20**	**167**	*e*P		Pn	02 56 49.0	+5.0	
THN				eS		**Sn**	**02 58 10.7**	**+4.6**	
BHK	**Bhakra**	**8.32**	**164**	*e*P		**Pn**	**02 57 02.6**	**+3.1**	
BHK				eS		**Sn**	**02 58 38.5**	**+4.7**	
SMLA	**Simla**	**8.78**	**160**	*e*P		**Pn**	**02 57 08.4**	**+2.7**	
SMLA				eS		**Sn**	**02 58 44.5**	**-0.4**	
SMLA				IAML			02 58 49.0		
	comp=E,50nm,0.6s								
SMLA				IAML			02 58 50.0		
	comp=N,50nm,0.6s								
OTUK	**Ortayu**	**8.83**	**354**	⇑Pn		**Pn**	**02 57 08.5**	**+2.1**	
	comp=N,7.0nm,0.7s								
OTUK				⇓Lg		Lg	02 59 35.9		
	comp=N,28nm,0.9s								
MKAR	**Makanchi Array**	**9.61**	**38**	Pn		Pn	02 57 23.6	+6.5	
	comp=N,0.1nm,0.3s,baz=215,slow=15,SNR=4.6								
MKAR				Lg		Lg	03 00 22.9		
	comp=N,0.2nm,0.3s,baz=210,slow=24,SNR=4.0								
	comp=N,0.6nm,0.7s								
MKAR	**Makanchi Array**	**9.61**	**38**			**Pn**	**02 57 19.8**	**+2.7**	
WMQ	**Urumqi**	**11.30**	**63**	*e*P		Pn	02 57 46.5	+6.3	
KUDL	**Kundal**	**11.52**	**168**	*e*P		**Pn**	**02 57 44.9**	**+1.6**	
KUDL				eS		**Sn**	**02 59 49.0**	**-3.2**	
KURBB	**Kurchatov Arra**	**11.65**	**15**	Pn		**Pn**	**02 57 47.8**	**+2.9**	
	comp=N,0.1nm,0.3s,baz=210,slow=12,SNR=5.8								
	comp=N,0.4nm,0.5s								
KURBB	**Kurchatov Arra**	**11.65**	**15**	⇓Lg		Lg	03 01 09.1		
	comp=N,30nm,0.8s								
KURK	**Kurchatov**	**11.75**	**15**			**Pn**	**02 57 48.3**	**+1.9**	
KURK	**Kurchatov**	**11.75**	**15**	⇑Lg		Lg	03 01 11.0		
	comp=N,28nm,1.2s								
AB31	**Akbulak array**	**13.88**	**319**	⇑Pn		**Pn**	**02 58 12.7**	**-2.8**	
	comp=N,1.8nm,0.7s,baz=132,slow=13,SNR=16								
ABKAR	**Akbulak array**	**13.88**	**319**	Pn		**Pn**	**02 58 12.7**	**-2.7**	
AKTO	**Aktyubinsk**	**15.59**	**320**	Pn		**Pn**	**02 58 36.8**	**-1.8**	
	comp=N,0.4nm,0.3s,baz=122,slow=14,SNR=6.1								
	comp=N,1.9nm,0.8s								
AKTO	**Aktyubinsk**	**15.59**	**320**	⇑Pn		**Pn**	**02 58 35.7**	**-2.8**	
	comp=N,3.1nm,0.7s								
ZAA0	**Zalesovo Array**	**16.32**	**24**	Pn		**P**	**02 58 52.8**	**+2.0**	
ZALV	**Zalesovo Beam**	**16.32**	**24**	Pn		**P**	**02 58 51.4**	**+0.5**	
	comp=N,0.4nm,0.3s,baz=207,slow=13,SNR=9.4								
ZALV				LR		LR	03 04 23.0		
	comp=N,18nm,20.5s,baz=113,slow=34								
	comp=N,2.2nm,0.5s								
ZALV	**Zalesovo Beam**	**16.32**	**24**	Pn		**P**	**02 58 51.1**	**+0.3**	
ARU	**Arti**	**19.71**	**334**	LR		LR	03 07 39.8		
	comp=N,44nm,20.2s,baz=90,slow=38								
GTA	**Gaotai**	**20.11**	**82**	*e*P		Pn	02 59 37.8	+3.2	
GTA				pP		sP	02 59 41.5	+3.9	
GTA				sP		pP	02 59 44.8	+8.7	
GTA				pmax		pmax			
	comp=Z,5.0nm,1.0s								
BELG	**Belogornoye**	**22.15**	**314**	P		**P**	**02 59 55.3**	**+0.8**	
	comp=Z,15nm,0.8s,baz=45,slow=4.3,SNR=3.0								
	comp=Z,15nm,0.8s								
ONI	**Oni**	**23.01**	**288**	P		**P**	**03 00 00.9**	**-3.0**	
SONM	**Songino Array**	**24.90**	**60**	LR		LR	03 11 08.6		
	comp=Z,45nm,18.8s,baz=252,slow=39								
BR131	**Keskin Array S**	**30.73**	**284**	P		**P**	**03 01 14.4**	**+0.2**	
BR131				IAmb		IAmb	03 01 15.1		
	comp=Z,2.9nm,0.8s								
BRTR	**Keskin Array B**	**30.73**	**284**	P		**P**	**03 01 13.4**	**-0.8**	
	comp=Z,1.6nm,0.7s,baz=90,slow=7.6,SNR=13								
	comp=Z,1.6nm,0.7s								
BRTR	**Keskin Array B**	**30.73**	**284**	P		**P**	**03 01 14.2**	**0.0**	
AKASG	**Malin Array Be**	**32.91**	**305**	P		**P**	**03 01 32.0**	**-1.0**	
	comp=Z,0.3nm,0.3s,baz=78,slow=7.6,SNR=7.8								
	comp=Z,0.3nm,0.3s								
MLR	**Muntele Rosu**	**35.35**	**296**	P		**P**	**03 01 55.9**	**+1.5**	
MLR				IAmb		IAmb	03 02 04.0		
	comp=Z,7.3nm,1.2s								
BURAR	**Bucovina Array**	**35.61**	**299**	P		**P**	**03 01 57.5**	**+0.8**	
FIA1	**FINESS Array S**	**36.32**	**323**	P		**P**	**03 02 02.8**	**+0.3**	
FINES	**FINESS Array B**	**36.32**	**323**	P		**P**	**03 02 02.4**	**0.0**	
	comp=Z,0.6nm,0.4s,baz=120,slow=8.6,SNR=18								
	comp=Z,0.6nm,0.4s								
FINES	**FINESS Array B**	**36.32**	**323**	P		**P**	**03 02 02.6**	**+0.2**	
ARCES	**ARCESS Array B**	**39.29**	**336**	P		**P**	**03 02 27.9**	**+0.5**	
	comp=Z,0.8nm,0.5s,baz=103,slow=8.8,SNR=14								
	comp=Z,0.8nm,0.5s								
ARCES	**ARCESS Array B**	**39.29**	**336**	P		**P**	**03 02 27.8**	**+0.4**	
ARCES				IAmb		IAmb	03 02 32.6		
	comp=Z,14nm,1.4s								
GERES	**GERESS Array B**	**43.07**	**303**	P		**P**	**03 02 58.4**	**-0.5**	
	comp=Z,0.3nm,0.5s,baz=74,slow=3.6,SNR=2.0								
	comp=Z,0.3nm,0.5s								
NB2	**NORSAR Subarra**	**43.38**	**321**	P		**P**	**03 03 00.2**	**-1.0**	
	comp=Z,36nm,3.3s,baz=90,slow=7.9								
NOA	**NORSAR Array B**	**43.38**	**321**	P		**P**	**03 03 00.5**	**-0.7**	
	comp=Z,1.2nm,0.6s,baz=91,slow=7.9,SNR=7.6								
NOA				LR		LR	03 21 41.5		
	comp=Z,7.8nm,21.7s,baz=285,slow=37								
	comp=Z,1.2nm,0.6s								
CUC	**Castrocucco**	**43.87**	**290**	P		**P**	**03 03 05.8**	**+0.4**	
CUC				IAmb		IAmb	03 03 20.6		
	comp=Z,5.0nm,1.3s								
ESDC	**Sonseca Array**	**58.02**	**297**	P		**P**	**03 04 50.6**	**-1.3**	
	comp=Z,1.0nm,0.6s,baz=54,slow=7.5,SNR=12								
	comp=Z,1.0nm,0.6s								
TOA0	**Torodi Ar. Sit**	**67.95**	**269**	P		**P**	**03 05 55.6**	**-2.7**	
TOA0				IAmb		IAmb	03 05 56.1		
	comp=Z,2.4nm,1.1s								
TORD	**Torodi Ar. Bea**	**67.95**	**269**	P		**P**	**03 05 55.9**	**-2.4**	
	comp=Z,0.6nm,0.5s,baz=50,slow=5.2,SNR=13								
	comp=Z,0.6nm,0.5s								
TORD	**Torodi Ar. Bea**	**67.95**	**269**	P		**P**	**03 05 56.0**	**-2.3**	
TORD				IAmb		IAmb	03 05 56.1		
	comp=Z,1.2nm,0.9s								
IMAR	**Indian Mountai**	**68.67**	**19**	P		**P**	**03 06 02.6**	**+0.6**	
C36M	**Paulatuk**	**70.70**	**7**	P		**P**	**03 06 14.3**	**0.0**	
ILAR	**Eielson Array**	**71.32**	**17**	P		**P**	**03 06 18.1**	**-0.2**	
	comp=Z,0.6nm,0.8s,baz=326,slow=4.9,SNR=10								
	comp=Z,0.6nm,0.8s								
ILAR	**Eielson Array**	**71.32**	**17**	P		**P**	**03 06 18.2**	**0.0**	
BCAR	**Beaver Creek A**	**73.93**	**16**	P		**P**	**03 06 35.2**	**+1.3**	
YKA	**Yellowknife Ar**	**78.16**	**4**	P		**P**	**03 06 58.0**	**+0.1**	
	comp=Z,0.6nm,0.7s,baz=351,slow=5.7,SNR=8.7								
	comp=Z,0.6nm,0.7s								
YKA	**Yellowknife Ar**	**78.16**	**4**	P		**P**	**03 06 59.6**	**+1.7**	
WRA	**Warramunga Arr**	**81.78**	**124**	P		**P**	**03 07 18.1**	**0.0**	
	comp=Z,0.7nm,0.7s,baz=321,slow=5.0,SNR=5.0								
	comp=Z,0.7nm,0.7s								

*IDC **27** 03:00:37.2±2.4, 13°.30S×167°.10E, h0km, mb4.0/3, mbtmp4.0/4, ML3.9/1, MS4.4/1, Error ellipse: s-maj=55.9km s-min=42.2km az=121.0*

*NOU **27** 03:00:57.9, 14°.37S×167°.76E, h188km, mb4.1/8, Vanuatu Islands*

*NEIC **27** 03:00:58.5±2.3, 14°.5S±0°.2×167°.4E±0°.2, h175km±7km, mb4.0/11, Error ellipse: s-maj=30.3km s-min=11.7km az=136.0*

ISC 27 03:00:57.4±1.0, 14°.37S±0°.10×167°.4E±0°.1, h170km, n28, σ0892/28, mb4.0/7, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
DVP	**Devils Point**	**3.42**	**167**	P		**Pn**	**03 01 51.8**	**+0.9**	
LIFNC	**LIFOU**	**6.37**	**181**	Pn		**Pn**	**03 02 28.5**	**-0.6**	
LIFNC	**LIFOU**	**6.37**	**181**	P		**Pn**	**03 02 28.6**	**-0.6**	
MARNC	**Mare, Loyalty**	**7.10**	**175**	Pn		**Pn**	**03 02 38.1**	**-0.7**	
YATNC	**Mamie plateau,**	**7.66**	**183**	P		**Pn**	**03 02 47.2**	**+0.9**	
DZM	**Mont Dzumac**	**7.71**	**186**	Pn		**Pn**	**03 02 47.0**	**+0.1**	
	1.2nm,0.3s,baz=282,slow=19,SNR=2.7								
DZM				Sn		**Sn**	**03 04 13.1**	**-0.3**	
	0.5nm,0.3s,baz=135,slow=20,SNR=3.1								
	7.2nm,0.6s								
DZM	**Mont Dzumac**	**7.71**	**186**			**Pn**	**03 02 47.1**	**+0.2**	
DZM	**Mont Dzumac**	**7.71**	**186**	P		**Pn**	**03 02 49.0**	**+2.0**	
OUENC	**Ouen Island, N**	**8.02**	**184**	Pn		**Pn**	**03 02 51.5**	**+0.5**	
PINNC	**Pines Island,**	**8.20**	**180**	Pn		**Pn**	**03 02 53.5**	**+0.1**	
EIDS	**Eidsvold**	**18.80**	**232**	P		**P**	**03 05 04.9**	**+0.8**	
EIDS				IAmb		IAmb	03 05 06.6		
	comp=Z,8.1nm,1.1s								
CTAO	**Charters Tower**	**20.95**	**251**	P		**P**	**03 05 28.2**	**+1.0**	
CTAO				IAmb		IAmb	03 05 29.4		
	comp=Z,7.5nm,1.1s								
STKA	**Stephens Creek**	**29.30**	**229**	P		**P**	**03 06 44.5**	**+0.4**	
	comp=Z,0.9nm,0.4s,baz=84,slow=10,SNR=3.4								
	comp=Z,0.9nm,0.4s								
STKA	**Stephens Creek**	**29.30**	**229**	P		**P**	**03 06 44.7**	**+0.7**	
STKA				IAmb		IAmb	03 07 02.5		
	comp=Z,0.9nm,1.1s								
WR0	**Warramunga Arr**	**31.82**	**255**	P		**P**	**03 07 05.5**	**-0.9**	
WR0				IAmb		IAmb	03 07 09.3		
	comp=Z,3.7nm,1.1s								
WB0	**Warramunga Arr**	**31.95**	**256**	P		**P**	**03 07 06.4**	**-1.1**	
WB0				IAmb		IAmb	03 07 07.9		
	comp=Z,3.5nm,0.8s								
WB2	**Warramunga Arr**	**32.00**	**255**	P		**P**	**03 07 06.4**	**-1.5**	
WB2				IAmb		IAmb	03 07 21.1		
	comp=Z,3.4nm,1.1s								
WRA	**Warramunga Arr**	**32.01**	**255**	P		**P**	**03 07 06.9**	**-1.1**	
	comp=Z,0.9nm,0.6s,baz=86,slow=9.4,SNR=17								
	comp=Z,0.9nm,0.6s								
WRA	**Warramunga Arr**	**32.01**	**255**	P		**P**	**03 07 06.6**	**-1.4**	
ASAR	**Alice Springs**	**32.89**	**249**	P		**P**	**03 07 14.5**	**-1.2**	
	comp=Z,1.2nm,0.7s,baz=77,slow=9.4,SNR=17								
	comp=Z,1.2nm,0.7s								
ASAR	**Alice Springs**	**32.89**	**249**	P		**P**	**03 07 14.8**	**-0.9**	
KNRA	**Kununurra**	**37.28**	**263**	P		**P**	**03 07 52.5**	**-0.7**	
KNRA				IAmb		IAmb	03 07 52.7		
	comp=Z,8.4nm,0.9s								
FORT	**Forrest**	**39.56**	**239**	P		**P**	**03 08 12.5**	**+0.3**	
KEKH	**Kekaha**	**48.45**	**42**	P		**P**	**03 09 23.3**	**+0.5**	
JNU	**Nakatsue**	**58.69**	**324**	LR		LR	03 33 36.5		
	comp=Z,300nm,19.5s,baz=282,slow=34								
QSPA	**South Pole Qui**	**75.65**	**180**	P		**P**	**03 12 23.0**	**-0.7**	
ARCES	**ARCESS Array B**	**119.94**	**345**	PKP		**PKPdf**	**03 19 26.7**	**-0.3**	
	comp=Z,0.8nm,0.7s,baz=61,slow=2.1,SNR=9.3								
ARCES	**ARCESS Array B**	**119.94**	**345**			**PKiKP**	**03 19 27.1**	**0.0**	

CNRM 27 03:13:41.6, 34°.07N×5°.23W, h16km, ml2.0, Morocco

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
SICH	**Sidi Chahed**	**0.08**	**294**	P		Pg	03 13 44.5	-0.4	
SICH				S		Sg	03 13 48.4	+1.3	
LCRM	**LCR**	**0.49**	**141**	P		Pn	03 13 54.0	-0.1	
LCRM	**LCR**	**0.49**	**141**	P		Pg	03 13 51.3	-0.3	
LCRM				S		Sn	03 14 01.8	-0.6	
CHEFC	**Chefchaouen**	**1.04**	**355**	P		Pb	03 14 00.4	-0.8	
CHEFC				S		Sn	03 14 16.5	+0.7	
CZD	**Col de Zad**	**1.05**	**171**	P		Pg	03 14 03.0	+1.0	
CZD	**Col de Zad**	**1.05**	**171**	P		Pg	03 14 02.6	+0.6	
CZD				S		Sn	03 14 17.1	+0.7	
AKLM	**AKL**	**1.21**	**69**	P		Pn	03 14 02.7	-1.3	
AKLM	**AKL**	**1.21**	**69**	P		Pn	03 14 02.5	-1.5	
AKLM				S		Sb	03 14 17.9	-1.8	
MD31	**MD31**	**1.27**	**162**	P		Pb	03 14 05.2	+0.1	
MD31				S		Sg	03 14 23.9	+1.3	
ZHG	**ZHG**	**1.33**	**242**	P		Pg	03 14 07.0	-0.3	
ZHG	**ZHG**	**1.33**	**242**	P		Pb	03 14 06.1	-0.1	
ZHG				S		Sg	03 14 25.6	+1.0	
MDT	**Midelt**	**1.36**	**157**	P		Pb	03 14 07.2	+0.5	
MDT	**Midelt**	**1.36**	**157**	P		Pn	03 14 06.0	0.0	
MDT				S		Sn	03 14 22.7	-1.0	
PALE	**Palemas**	**1.56**	**43**	P		Pb	03 14 10.0	-0.1	
PALE	**Palemas**	**1.56**	**43**	P		Pn	03 14 08.0	-0.7	
PALE				S		Sb	03 14 30.6	+0.9	
AVE	**Averroes**	**1.98**	**248**	P		Pn	03 14 14.8	+0.4	
AVE				S		Sb	03 14 40.7	-0.8	
GOG	**Mont Gurugu**	**2.17**	**57**	P		Pn	03 14 18.2	+1.1	
GOG				S		Sn	03 14 45.2	+1.5	
JBK	**JBK**	**2.22**	**82**	P		Pn	03 14 15.6	-2.3	
JBK				S		Sn	03 14 43.5	-1.6	
SRHM	**Skhour des Reh**	**2.75**	**235**	P		Pb	03 14 28.6	-1.7	
SRHM				S		Sb	03 15 03.1	-0.7	

*NEIC **27** 03:21:10.6±1.9, 17°.2S±0°.1×177°.3W±0°.1, h413km±7km, mb4.1/24, Error ellipse: s-maj=19.8km s-min=16.0km az=208.0*

*IDC **27** 03:21:11.9±1.8, 17°.23S×177°.31W, h427km±17km, mb3.4/9, mbtmp4.1/10, Error ellipse: s-maj=42.3km s-min=16.4km az=150.0*

ISC 27 03:21:08.9±0.6, 17°.2S±0°.1×177°.1W±0°.1, h400km, n61, σ1817/60, mb4.0/22, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
MSVF	**Nonsavu**	**4.63**	**263**	P		**Pn**	**03 22 28.8**	**+1.5**	
	30nm,0.7s,baz=110,slow=11,SNR=18								
MSVF				S		**S**	**03 23 34.9**	**+4.0**	
	23nm,1.1s,baz=117,slow=23,SNR=13								
MSVF	**Nonsavu**	**4.63**	**263**	P		**Pn**	**03 22 28.3**	**+1.0**	
BFZ	**Birch Farm**	**24.08**	**192**	P		**P**	**03 25 51.0**	**+0.8**	
ODZ	**Otahua Downs**	**29.59**	**198**	P		**P**	**03 26 38.4**	**-0.4**	
STKA	**Stephens Creek**	**40.04**	**241**	P		**P**	**03 28 07.1**	**-0.2**	
	1.2nm,0.5s,baz=90,slow=10,SNR=3.5								
	1.2nm,0.5s								
STKA	**Stephens Creek**	**40.04**	**241**	P		**P**	**03 28 05.7**	**-1.6**	
BBOO	**Buckleboo**	**44.81**	**241**	P		**P**	**03 28 43.9**	**-1.4**	
BBOO				IAmb		IAmb	03 28 45.5		
	comp=Z,8.2nm,0.9s								
WB0	**Warramunga Arr**	**45.93**	**259**	P		**P**	**03 28 51.7**	**-2.4**	
WRA	**Warramunga Arr**	**45.97**	**259**	P		**P**	**03 28 53.0**	**-1.4**	
	comp=Z,1.2nm,0.9s,baz=92,slow=7.4,SNR=7.2								
	comp=Z,1.2nm,0.9s								
WRA	**Warramunga Arr**	**45.97**	**259**	P		**P**	**03 28 52.8**	**-1.6**	
AS31	**Alice Springs**	**46.16**	**254**	P		**P**	**03 28 55.7**	**-0.2**	
ASAR	**Alice Springs**	**46.16**	**254**	P		**P**	**03 28 55.0**	**-0.8**	
	comp=Z,4.3nm,0.6s,baz=88,slow=8.4,SNR=55								
	comp=Z,4.3nm,0.6s								
ASAR	**Alice Springs**	**46.16**	**254**	P		**P**	**03 28 54.4**	**-1.4**	
FORT	**Forrest**	**51.41**	**244**	P		**P**	**03 29 33.7**	**-1.4**	
QSPA	**South Pole Qui**	**72.84**	**180**	P		**P**	**03 31 54.7**	**-0.5**	
PNTR	**Pine Nut**	**77.60**	**42**	P		**P**	**03 32 23.4**	**+0.9**	
PNTR				IAmb		IAmb	03 32 37.9		
	comp=Z,4.1nm,1.0s								
LCH	**Last Change Ra**	**77.86**	**45**	P		**P**	**03 32 24.7**	**+0.8**	
NVAR	**Mina Array Bea**	**78.08**	**43**	P		**P**	**03 32 26.2**	**+1.1**	
	comp=Z,1.7nm,0.7s,baz=227,slow=9.1,SNR=15								
	comp=Z,1.7nm,0.7s								
NVAR	**Mina Array Bea**	**78.08**	**43**	P		**P**	**03 32 25.9**	**+0.8**	
KVN	**Kaiserville**	**78.55**	**43**	P		**P**	**03 32 28.5**	**+0.9**	
KVN				IAmb		IAmb	03 32 28.8		
	comp=Z,1.9nm,0.7s								
MTPU	**Mount Pierson**	**82.00**	**46**	P		**P**	**03 32 46.1**	**+0.1**	
MTPU				IAmb		IAmb	03 32 48.4		
	comp=Z,2.7nm,1.0s								
MSU	**Marysvale**	**82.23**	**46**	P		**P**	**03 32 48.4**	**+1.3**	
121A	**Cookes Peak, D**	**82.68**	**53**	P		**P**	**03 32 50.5**	**+1.1**	
121A				IAmb		IAmb	03 32 52.0		
	comp=Z,2.3nm,1.0s								
F10A	**Beach Ranch, E**	**82.90**	**37**	P		**P**	**03 32 48.7**	**-1.4**	
F10A				IAmb		IAmb	03 32 51.9		
	comp=Z,4.6nm,0.9s								
HLID	**Hailey**	**83.30**	**41**	P		**P**	**03 32 52.6**	**+0.3**	
HLID				IAmb		IAmb	03 32 54.4		
	comp=Z,2.9nm,0.8s								
HVU	**Hansel Valley**	**83.44**	**43**	P		**P**	**03 32 53.1**	**0.0**	
HVU				IAmb		IAmb	03 32 54.7		
	comp=Z,2.1nm,

	SNR=6.7								
UCH	**Uchtor**	**6.96**	**26**	P		**Pn**	**03 36 42.6**	**0.0**
	SNR=14								
KK31	**Karatay Array**	**7.04**	**1**	Pn		**Pn**	**03 36 43.0**	**-0.3**
KKAR	**Karatay Array**	**7.04**	**1**			**Pn**	**03 36 43.1**	**-0.3**
KKAR	**Karatay Array**	**7.04**	**1**	Pn		**Pn**	**03 36 42.8**	**-0.5**
EKS2	**Erkin-Say**	**7.11**	**21**	P		**Pn**	**03 36 44.4**	**0.0**
	SNR=9.4								
AAK	**Ala-Archa**	**7.31**	**25**	P		**Pn**	**03 36 47.2**	**0.0**
	SNR=12								
AAK	**Ala-Archa**	**7.31**	**25**	P		**Pn**	**03 36 47.1**	**0.0**
	20nm,0.4s,baz=209,slow=7.9,SNR=19								
AAK	**Ala-Archa**	**7.31**	**25**	Pn		**Pn**	**03 36 47.0**	**-0.2**
AAK	**Ala-Archa**	**7.31**	**25**	⇑*iP*		**Pn**	**03 36 48.7**	**+1.5**
	baz=10.0								
KBK	**Karagaybulak**	**7.49**	**27**	P		**Pn**	**03 36 50.3**	**+0.7**
	SNR=7.3								
KBK	**Karagaybulak**	**7.49**	**27**	⇑*iP*		**Pn**	**03 36 50.0**	**+0.4**
	baz=16								
ULHL	**Ulahol**	**7.69**	**35**	P		Pn	03 36 57.2	+4.9
	SNR=13								
CHMS	**Chumysh**	**7.72**	**25**	P		**Pn**	**03 36 52.5**	**-0.1**
	SNR=17								
BOOM	**Boomskoye usch**	**7.75**	**32**	Pn		**Pn**	**03 36 53.3**	**+0.2**
USP	**Ospenovka**	**7.88**	**23**	P		**Pn**	**03 36 54.2**	**-0.6**
	SNR=25								
TKM2	**Tokmak 2**	**7.96**	**29**	P		**Pn**	**03 36 56.0**	**-0.1**
	SNR=13								
KDJ	**Kajisay**	**8.06**	**39**	Pn		**Pn**	**03 36 56.9**	**-0.4**
KDJ	**Kajisay**	**8.06**	**39**	⇑*iP*		**Pn**	**03 36 56.0**	**-1.3**
	baz=43								
TARG	**Taragay, Kyrgy**	**8.11**	**43**	Pn		**Pn**	**03 36 57.4**	**-0.9**
PRZ	**Przheval'sk**	**8.95**	**42**	Pn		**Pn**	**03 37 09.1**	**-0.3**
GEYT	**Alibeck**	**9.96**	**284**	Pn		**Pn**	**03 37 24.1**	**+1.0**
GYA0B	**ALIBECK ARRAY**	**9.96**	**284**	Pn		**Pn**	**03 37 24.7**	**+1.6**
MAKZ	**Makanchi**	**13.82**	**35**	P		**P**	**03 38 17.0**	**-1.8**
MK31	**Makanchi Array**	**13.96**	**36**	Pn		**Pn**	**03 38 15.9**	**+0.1**
MKAR	**Makanchi Array**	**13.96**	**36**	P		**Pn**	**03 38 14.8**	**-1.0**
	0.6nm,0.6s,baz=221,slow=13,SNR=5.9								
MKAR	**Makanchi Array**	**13.96**	**36**			**Pn**	**03 38 14.9**	**-0.9**
ABKAR	**Akbulak array**	**15.23**	**333**	Pn		**Pn**	**03 38 31.6**	**-0.3**
WMQ	**Urumqi**	**15.38**	**54**	*eP*		**P**	**03 38 40.8**	**+4.7**
KURBB	**Kurchatov Arra**	**15.71**	**20**	P		**P**	**03 38 39.8**	**+0.2**
	1.2nm,0.3s,baz=210,slow=11,SNR=11								
KURK	**Kurchatov**	**15.82**	**20**	P		**P**	**03 38 40.9**	**0.0**
AKTO	**Aktyubinsk**	**16.91**	**332**	P		**P**	**03 38 53.5**	**+0.6**
	3.8nm,0.4s,baz=146,slow=11,SNR=15								
ZAA0	**Zalesovo Array**	**20.53**	**25**	P		**P**	**03 39 31.5**	**-0.8**
ZALV	**Zalesovo Beam**	**20.53**	**25**	P		**P**	**03 39 32.5**	**+0.2**
	16nm,0.5s,baz=214,slow=10.0,SNR=35								
	16nm,0.5s								
ZALV	**Zalesovo Beam**	**20.53**	**25**	P		**P**	**03 39 32.4**	**0.0**
ARU	**Arti**	**21.89**	**342**	P		**P**	**03 39 49.2**	**+2.4**
	2.2nm,0.3s,baz=165,slow=9.9,SNR=5.4								
	2.2nm,0.3s								
HHC	**Hu-ho-hao-te**	**32.41**	**69**	*eP*		**P**	**03 41 23.8**	**+1.4**
HHC					pmax	pmax			
	comp=Z,12nm,0.9s								
HHC					pmax	pmax			
	comp=Z,110nm,4.7s								
AKASG	**Malin Array Be**	**32.82**	**309**	P		**P**	**03 41 26.4**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=103,slow=9.2,SNR=3.6								
AKASG					LR	LR	03 56 59.3		
	comp=Z,21nm,18.3s,baz=336,slow=40								
	comp=Z,0.4nm,0.5s								
FINES	**FINESS Array B**	**37.56**	**327**	P		**P**	**03 42 06.9**	**+0.7**
	comp=Z,2.2nm,0.8s,baz=112,slow=8.9,SNR=7.6								
	comp=Z,2.2nm,0.8s								
FINES	**FINESS Array B**	**37.56**	**327**	P		**P**	**03 42 07.0**	**+0.8**
KEV	**Kevo**	**41.02**	**339**	P		**P**	**03 42 35.5**	**+0.6**
ARCES	**ARCESS Array B**	**41.35**	**338**	P		**P**	**03 42 38.6**	**+1.0**
	comp=Z,2.2nm,0.8s,baz=110,slow=7.0,SNR=8.0								
	comp=Z,2.2nm,0.8s								
ARCES	**ARCESS Array B**	**41.35**	**338**	P		**P**	**03 42 38.2**	**+0.6**
NC405	**NORSAR Array S**	**44.19**	**323**	P		**P**	**03 43 00.9**	**+0.3**
NB2	**NORSAR Subarra**	**44.42**	**323**	P		**P**	**03 43 02.4**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=99,slow=7.9								
NOA	**NORSAR Array B**	**44.42**	**323**	P		**P**	**03 43 02.6**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=90,slow=8.0,SNR=4.7								
	comp=Z,0.4nm,0.5s								
ESDC	**Sonseca Array**	**57.20**	**298**	P		**P**	**03 44 37.5**	**-1.2**
	comp=Z,0.4nm,0.6s,baz=56,slow=7.0,SNR=5.6								
	comp=Z,0.4nm,0.6s								
TOA0	**Torodi Ar. Sit**	**65.18**	**268**	P		**P**	**03 45 30.5**	**-2.2**
TOA0					IAmb	IAmb	03 45 35.3		
	comp=Z,4.5nm,1.4s								
TORD	**Torodi Ar. Bea**	**65.18**	**268**	P		**P**	**03 45 31.4**	**-1.3**
	comp=Z,0.4nm,0.4s,baz=50,slow=6.2,SNR=14								
	comp=Z,0.4nm,0.4s								
TORD	**Torodi Ar. Bea**	**65.18**	**268**	P		**P**	**03 45 31.6**	**-1.1**
TOLK	**Toolik Lake Re**	**71.48**	**14**	P		**P**	**03 46 11.2**	**0.0**
TOLK					IAmb	IAmb	03 46 18.8		
	comp=Z,4.4nm,1.2s								
IMAR	**Indian Mountai**	**72.75**	**17**	P		**P**	**03 46 18.2**	**-0.5**
BMAR	**Burnt Mountain**	**73.49**	**13**	P		**P**	**03 46 24.1**	**+0.9**
H24K	**Noodor Dome**	**74.21**	**15**	P		**P**	**03 46 27.6**	**+0.2**
H24K					IAmb	IAmb	03 46 40.1		
	comp=Z,3.0nm,1.4s								
MLY	**Manley**	**74.25**	**17**	P		**P**	**03 46 27.0**	**-0.6**
MLY					IAmb	IAmb	03 46 45.8		
	comp=Z,2.0nm,1.3s								
C36M	**Paulatuk**	**74.37**	**5**	P		**P**	**03 46 27.3**	**-0.8**
C36M					IAmb	IAmb	03 46 28.5		
	comp=Z,2.8nm,0.5s								
K20K	**Telida**	**74.80**	**19**	P		**P**	**03 46 30.5**	**-0.3**
K20K					IAmb	IAmb	03 46 49.3		
	comp=Z,5.4nm,1.4s								
ILAR	**Eielson Array**	**75.34**	**16**	P		**P**	**03 46 31.6**	**-2.3**
	comp=Z,0.3nm,0.7s,baz=300,slow=4.9,SNR=5.8								
	comp=Z,0.3nm,0.7s								
J25K	**Salcha River,**	**75.81**	**15**	P		**P**	**03 46 35.6**	**-1.0**
J25K					IAmb	IAmb	03 46 44.7		
	comp=Z,2.7nm,1.3s								
J26L	**Joseph Creek**	**76.28**	**14**	P		**P**	**03 46 39.0**	**-0.3**
SCRK	**Sand Creek**	**76.66**	**15**	P		**P**	**03 46 41.0**	**-0.5**
RIDG	**Independent Ri**	**76.69**	**15**	P		**P**	**03 46 40.4**	**-1.1**
RIDG					IAmb	IAmb	03 46 50.4		
	comp=Z,5.3nm,1.4s								
PAX	**Paxson**	**77.23**	**16**	P		**P**	**03 46 43.4**	**-1.3**
PAX					IAmb	IAmb	03 46 55.1		
	comp=Z,6.1nm,1.5s								
YKA	**Yellowknife Ar**	**81.71**	**2**	P		**P**	**03 47 07.7**	**-1.1**
	comp=Z,0.2nm,0.6s,baz=349,slow=5.6,SNR=4.4								
	comp=Z,0.2nm,0.6s								
WRA	**Warramunga Arr**	**82.20**	**121**	P		**P**	**03 47 09.6**	**-2.5**
	comp=Z,0.2nm,0.4s,baz=325,slow=4.9,SNR=6.2								
	comp=Z,0.2nm,0.4s								
WB2	**Warramunga Arr**	**82.21**	**121**	P		**P**	**03 47 10.1**	**-2.0**
WB2					IAmb	IAmb	03 47 31.0		
	comp=Z,2.2nm,0.9s								
WR0	**Warramunga Arr**	**82.36**	**121**	P		**P**	**03 47 10.7**	**-2.1**
WR0					IAmb	IAmb	03 47 38.4		
	comp=Z,6.1nm,1.2s								

SOME ***27*** *03:35:53.8,39˚.48N×73˚.72E,h15km*
KRNET ***27*** *03:35:54.6±0.1,39˚.46N×73˚.74E,mb4.2*
ISC 27 03:35:58.5±1.2,39˚60N±0˚.06×73˚63E±0˚.03,h10km,n30,
σ2$29/57,19C-4D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
OHH	**Osh**	**1.13**	**325**	⇑*iP*		**Pb**	**03 36 19.1**	**-1.1**
	baz=26							
OHH				⇑*iS*		**Sn**	**03 36 37.3**	**+1.2**
	baz=26							
DRK	**Karamyk**	**1.42**	**266**	⇑*iP*		**Pn**	**03 36 23.0**	**-1.7**
	baz=72							
DRK				⇑*iS*		**Sg**	**03 36 43.8**	**-0.4**
	baz=72							
BTK	**Batken**	**2.21**	**283**	⇑*iP*		**Pn**	**03 36 36.1**	**+0.7**
	baz=86							
BTK				⇑*iS*		**Sb**	**03 37 06.7**	**+0.5**
	baz=86							
ARLS	**Aral**	**2.32**	**13**	⇑*iP*		**Pn**	**03 36 37.7**	**+0.8**
	baz=10.0							
ARLS				⇑*iS*		**Sb**	**03 37 09.2**	**-0.1**
	baz=10.0							
GAR	**Garm**	**2.64**	**258**	⇑*iP*		**Pn**	**03 36 41.3**	**0.0**
	baz=61							
GAR				⇑*iS*		**Sb**	**03 37 15.4**	**-3.1**
	baz=61							
TRKS	**Terek-Say**	**2.71**	**316**	⇑*iP*		**Pn**	**03 36 42.7**	**+0.5**
	baz=16							
TRKS				⇑*iS*		**Sn**	**03 37 18.1**	**+3.0**
	baz=16							
UCH	**Uchtor**	**2.71**	**14**	⇓*eP*		**Pn**	**03 36 43.2**	**+0.7**
	baz=12							
UCH				⇓*iS*		**Sb**	**03 37 18.9**	**-1.9**
	baz=12							
EKS2	**Erkin-Say**	**3.06**	**2**	⇑*iP*		**Pn**	**03 36 48.2**	**+1.1**
	baz=1.0							
EKS2				⇑*iS*		**Sb**	**03 37 27.4**	**-3.2**
	baz=1.0							
AAK	**Ala-Archa**	**3.10**	**12**	⇑*iS*		**Sn**	**03 37 28.2**	**+3.3**
	baz=10.0							
KBK	**Karagaybulak**	**3.21**	**18**	⇑*iS*		**Sn**	**03 37 30.5**	**+2.9**
	baz=16							
BOOM	**Boomskoye usch**	**3.37**	**30**	⇓*iP*		**Pn**	**03 36 52.0**	**+0.6**
	baz=28							
BOOM				⇓*iS*		**Sn**	**03 37 33.9**	**+2.3**
	baz=28							
KDJ	**Kajisay**	**3.69**	**46**	⇑*iS*		**Sn**	**03 37 40.8**	**+1.4**
	baz=43							
TAS	**Tashkent**	**3.73**	**299**	⇑*iP*		**Pn**	**03 36 57.6**	**+1.5**
	baz=0.0							
TAS				⇑*iS*		**Sn**	**03 37 43.3**	**+3.2**
	baz=0.0							
IUG	**Iuzhnay**	**3.73**	**314**	*eP*		**Pb**	**03 37 05.1**	**+0.5**
	15nm,0.1s							
IUG				*eS*		**Sg**	**03 37 56.5**	**-1.8**
	108nm,0.0s							
KST	**Kastek**	**3.86**	**26**	*eP*		**Pb**	**03 37 07.5**	**+0.7**
	19nm,0.6s							
KST				*eS*		**Sg**	**03 38 00.3**	**-2.2**
	166nm,0.2s							
SGDS	**Sogindy**	**3.92**	**11**	*eP*		**Pb**	**03 37 08.6**	**+0.9**
	36nm,0.7s							
SGDS				*eS*		**Sg**	**03 38 02.8**	**-1.6**
	30nm,0.3s							
DGS	**Degeres**	**3.98**	**23**	*eP*		**Pb**	**03 37 10.3**	**+1.6**
	34nm,0.8s							
DGS				*eS*		**Sg**	**03 38 05.0**	**-1.2**
	109nm,0.3s							
MTBS	**Maitube**	**4.11**	**30**	*eP*		**Pb**	**03 37 11.5**	**+0.5**
	12nm,0.7s							
MTBS				*eS*		**Sg**	**03 38 08.3**	**-2.0**
	95nm,0.2s							
TNSS	**Tian-Shan**	**4.25**	**35**	*eP*		**Pb**	**03 37 14.6**	**+1.2**
	21nm,0.5s							
TNSS				*eS*		**Sg**	**03 38 12.6**	**-2.3**
	47nm,0.8s							
AAA	**Alma-Ata**	**4.37**	**33**	*eP*		**Pb**	**03 37 16.7**	**+1.3**
	35nm,0.1s							
AAA				*eS*		**Sg**	**03 38 17.3**	**-1.5**
	115nm,0.0s							
KRBS	**Karabastau**	**4.37**	**20**	*eP*		**Pb**	**03 37 16.9**	**+1.5**
	0.8nm,0.6s							
KRBS				*eS*		**Sg**	**03 38 17.2**	**-1.5**
	69nm,0.7s							
BRLS	**Borolday**	**4.46**	**321**	*eP*		**Pb**	**03 37 17.2**	**+0.3**
	5.8nm,0.5s							
BRLS				*eS*		**Sg**	**03 38 17.5**	**-4.2**
	28nm,0.0s							
KTBS	**Karatobe**	**4.70**	**28**	*eP*		**Pb**	**03 37 22.7**	**+1.7**
	11nm,0.6s							
KTBS				*eS*		**Sg**	**03 38 26.5**	**-2.9**
	134nm,0.1s							
KUU	**Kurty**	**4.74**	**24**	*eP*		**Pb**	**03 37 22.6**	**+0.9**
	14nm,0.4s							
KUU				*eS*		**Sg**	**03 38 26.2**	**-4.5**
	100nm,0.2s							
CHKK	**Chushkaly**	**4.94**	**29**	*eP*		**Pb**	**03 37 27.1**	**+2.0**
	3.3nm,0.2s							
CHKK				*eS*		**Sg**	**03 38 34.3**	**-2.6**
	62nm,0.2s							
SATY	**Saty**	**4.99**	**45**	*eP*		**Pb**	**03 37 27.5**	**+1.6**
	18nm,0.9s							
SATY				*eS*		**Sg**	**03 38 34.8**	**-3.8**
	33nm,0.2s							
KURS	**Kuram**	**5.17**	**40**	*eP*		**Pb**	**03 37 31.4**	**+2.5**
	16nm,0.7s							
KURS				*eS*		**Sg**	**03 38 41.2**	**-3.1**
	23nm,1.6s							
KPKS	**Kokpek**	**5.41**	**43**	*eP*		**Pb**	**03 37 34.5**	**+1.4**
	17nm,0.9s							
KPKS				*eS*		**Sg**	**03 38 46.4**	**-5.8**
	32nm,0.8s							
BTLS	**Baital**	**5.45**	**3**	*eP*		**Pb**	**03 37 36.9**	**+3.3**
	6.7nm,0.7s							
BTLS				*eS*		**Sg**	**03 38 51.4**	**-1.9**
	12nm,0.7s							
ARXS	**Arharly**	**5.57**	**33**	*eP*		**Pb**	**03 37 37.7**	**+1.9**
	16nm,0.8s							
ARXS				*eS*		**Sg**	**03 38 52.8**	**-4.5**
	38nm,0.7s							

NOU 27 03:49:42.5,15˚.95S×167˚.65E,h11km,MLv4.6/10,
Vanuatu Islands,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
DVP	**Devils Point**	**1.84**	**164**	P		Pn	03 50 13.3	-0.7
KOUNC	**Koumac, New Ca**	**5.58**	**214**	P		Pn	03 51 05.4	-0.1
	16nm,1.5s							
YATNC	**Mamie plateau,**	**6.12**	**187**	P		Pn	03 51 13.3	+0.4
DZM	**Mont Dzumac**	**6.20**	**190**	P		Pn	03 51 13.9	-0.1
OUENC	**Ouen Island, N**	**6.48**	**187**	P		Pn	03 51 18.5	+0.6

IDC ***27*** *03:50:40.2±1.4,4˚.14N×95˚.82E,h0km,mb3.8/8,*
mbtmp3.8/8,MS2.9/1,Error ellipse: s-maj=84.8km
s-min=19.2km az=52.0
NEIC ***27*** *03:50:47.0±1.1,4˚.09N±0˚.07×95˚.7E±0˚.1,h45km±9km,*
mb4.2/10,Error ellipse: s-maj=16.3km s-min=10.6km
az=85.0
DJA ***27*** *03:50:51.5±1.0,4˚N±4˚×9˚6E±1˚0,h66km±29km,M3.7/6,*
MLv3.7/6
ISC 27 03:50:47.1±0.7,4˚02N±0˚.05×95˚77E±0˚.09,h50km,n36,
σ1$10/36,mb4.0/12,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
LHMI	**Lhok Sumawe**	**1.68**	**44**	Pn		**Pn**	**03 51 14.8**	**+0.8**
LHMI	**Lhok Sumawe**	**1.68**	**44**	P		**Pn**	**03 51 15.8**	**+1.7**
LHMI				S		**Sn**	**03 51 37.0**	**+2.5**
KCSI	**Kotacane, Aceh**	**2.06**	**104**	P		**Pn**	**03 51 20.5**	**+1.3**
KCSI				S		**Sn**	**03 51 42.1**	**-1.7**
TSI	**Tuntungan**	**2.84**	**100**	P		**Pn**	**03 51 29.7**	**-0.2**
GSI	**Gunungsitoli**	**3.24**	**146**	Pn		**Pn**	**03 51 36.3**	**+0.8**
GSI	**Gunungsitoli**	**3.24**	**146**	P		**Pn**	**03 51 38.1**	**+2.6**
GSI				S		**Sn**	**03 52 12.4**	**-0.5**
RPSI	**Rantau Prapat**	**3.41**	**113**	Pn		**Pn**	**03 51 39.7**	**+1.8**
KULM	**Kulim**	**5.03**	**75**	Pn		**Pn**	**03 51 59.9**	**-0.1**
IPM	**Ipoh**	**5.26**	**85**	Pn		**Pn**	**03 52 02.6**	**-0.6**
SRIT	**Nakonsritamara**	**5.93**	**40**	Pn		**Pn**	**03 52 12.6**	**+0.2**
CMAR	**Chiang Mai Arr**	**14.68**	**12**	Pn		**Pn**	**03 54 13.5**	**+1.6**
	1.2nm,0.3s,baz=194,slow=15,SNR=4.5							
CMAR						LR	03 59 10.7	
	comp=Z,44nm,18.2s,baz=195,slow=35							
H08S2	**Diego Garcia H**	**25.95**	**244**	T		T	04 22 39.3	
	baz=66,slow=74,SNR=36							
H08S3	**Diego Garcia H**	**25.95**	**244**	T		T	04 22 40.4	
	baz=66,slow=74,SNR=42							
H08S1	**Diego Carcia H**	**25.97**	**244**	T		T	04 22 33.6	
	baz=66,SNR=33							
MK31	**Makanchi Array**	**44.19**	**347**	P		**P**	**03 58 49.9**	**-1.2**
MKAR	**Makanchi Array**	**44.19**	**347**	P		**P**	**03 58 50.1**	**-1.0**
	0.7nm,0.7s,baz=176,slow=7.3,SNR=4.0							
	0.7nm,0.7s							
MKAR	**Makanchi Array**	**44.19**	**347**	P		**P**	**03 58 49.3**	**-1.8**
SONM	**Songino Array**	**44.60**	**10**	P		**P**	**03 58 53.2**	**-1.3**
SONM					IAmb	IAmb	03 59 18.0	
	comp=Z,1.6nm,1.0s							
WB0	**Warramunga Arr**	**44.72**	**123**	P		**P**	**03 58 55.6**	**-0.1**
WRA	**Warramunga Arr**	**44.75**	**124**	P		**P**	**03 58 55.7**	**-0.3**
	comp=Z,1.0nm,0.8s,baz=304,slow=9.3,SNR=7.6							
	comp=Z,1.0nm,0.8s							
WRA	**Warramunga Arr**	**44.75**	**124**	P		**P**	**03 58 56.0**	**0.0**
WB2	**Warramunga Arr**	**44.76**	**124**	P		**P**	**03 58 55.7**	**-0.4**
WB2					IAmb	IAmb	03 59 22.5	
	comp=Z,5.7nm,1.2s							
WR0	**Warramunga Arr**	**44.93**	**123**	P		**P**	**03 58 56.8**	**-0.6**
WR0					IAmb	IAmb	03 59 01.5	
	comp=Z,8.2nm,1.4s							
ASAR	**Alice Springs**	**46.24**	**128**	P		**P**	**03 59 08.1**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=306,slow=7.9,SNR=2.1							
	comp=Z,0.2nm,0.3s							
ASAR	**Alice Springs**	**46.24**	**128**	P		**P**	**03 59 07.4**	**-0.4**
ZAA0	**Zalesovo Array**	**50.58**	**352**	P		**P**	**03 59 40.0**	**-0.5**
ZAA0					IAmb	IAmb	03 59 40.1	
	comp=Z,1.6nm,0.7s							
ZALV	**Zalesovo Beam**	**50.58**	**352**	P		**P**	**03 59 39.7**	**-0.8**
	comp=Z,2.0nm,0.6s,baz=183,slow=7.2,SNR=8.9							
	comp=Z,2.0nm,0.6s							
BBOO	**Buckleboo**	**52.90**	**137**	P		**P**	**03 59 58.7**	**+0.4**
ABKAR	**Akbulak array**	**54.37**	**332**	P		**P**	**04 00 08.8**	**0.0**
STKA	**Stephens Creek**	**56.30**	**133**	P		**P**	**04 00 23.2**	**+0.2**
	comp=Z,0.7nm,0.4s,baz=314,slow=11,SNR=1.8							
	comp=Z,0.7nm,0.4s							
STKA	**Stephens Creek**	**56.30**	**133**	P		**P**	**04 00 23.8**	**+0.8**
STKA					IAmb	IAmb	04 00 28.1	
	comp=Z,1.4nm,1.3s							
BRTR	**Keskin Array B**	**66.17**	**312**	P		**P**	**04 01 30.2**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=127,slow=7.5,SNR=4.0							
	comp=Z,0.4nm,0.6s							
FINES	**FINESS Array B**	**76.86**	**332**	P		**P**	**04 02 32.7**	**-0.9**
	comp=Z,1.0nm,0.6s,baz=95,slow=2.1,SNR=4.6							
	comp=Z,1.0nm,0.6s							
FINES	**FINESS Array B**	**76.86**	**332**	P		**P**	**04 02 32.9**	**-0.6**
ARCES	**ARCESS Array B**	**79.42**	**340**	P		**P**	**04 02 47.4**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=96,slow=6.2,SNR=6.6							
	comp=Z,0.5nm,0.6s							
ARCES	**ARCESS Array B**	**79.42**	**340**	P		**P**	**04 02 47.3**	**-0.3**
ARCES					IAmb	IAmb	04 02 51.4	
	comp=Z,7.7nm,1.4s							

SNET ***27*** *03:56:15.4±1.2,13˚.00N×90˚.54W,h18km±8km,ML3.5*
GCG ***27*** *03:56:24.8±4.2,13˚.73N×90˚.04W,h25km,MD3.7*
ISC 27 03:56:14.2±2.5,12˚9N±0˚.1×90˚55W±0˚.06,h17km±12km,
n13,σ0$63/22,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
NUBE	**Las Nubes**	**1.21**	**38**	*eP*		**Pn**	**03 56 36.8**	**+0.2**
NUBE				*eS*		**Sb**	**03 56 51.2**	**-1.1**
CEVE	**Cerro Verde**	**1.26**	**45**	*eP*		**Pn**	**03 56 37.7**	**+0.4**
CEVE				*eS*		**Sg**	**03 56 54.7**	**-0.4**
JAYA	**Jayaque - finc**	**1.28**	**56**	*eP*		**Pn**	**03 56 37.5**	**0.0**
JAYA				*eS*		**Sn**	**03 56 54.5**	**+0.1**
SLOZ	**Alcaldia de Sa**	**1.31**	**34**	*eP*		**Pn**	**03 56 37.5**	**-0.3**
SLOZ				*eS*		**Sn**	**03 56 55.2**	**+0.3**
CEDA	**San Andres**	**1.41**	**53**	*eP*		**Pn**	**03 56 39.5**	**+0.3**
CEDA				*eS*		**Sb**	**03 56 58.6**	**+0.7**
CEDA				IAML			03 57 09.6	
	comp=Z,785nm,0.4s							
UEES	**Universidad Ev**	**1.49**	**59**	*eP*		**Pn**	**03 56 41.1**	**+0.9**
FUG	**Fuego 3**	**1.52**	**349**	*eP*		**Pg**	**03 56 43.9**	**+0.3**
FUG				*eS*		**Sb**	**03 57 01.1**	**-0.1**
SJTE	**Alcalda de S**	**1.64**	**66**	*eP*		**Pn**	**03 56 42.7**	**+0.3**
NBG	**Las Nubes**	**1.65**	**7**	*eP*		**Pg**	**03 56 45.8**	**-0.2**
NBG				*eS*		**Sb**	**03 57 05.7**	**+0.8**
PAVA	**Las Pavas**	**1.75**	**64**	*eP*		**Pn**	**03 56 44.9**	**+1.1**
COEG	**Centro de Oper**	**1.76**	**67**	*eP*		**Pn**	**03 56 44.1**	**+0.1**
STG3	**Santiaguito 3,**	**2.02**	**331**	*eP*		**Pb**	**03 56 50.7**	**+0.1**
STG3				*eS*		**Sn**	**03 57 11.7**	**-1.0**
COEB	**Comit de Eme**	**2.04**	**74**	*eP*		**Pn**	**03 56 47.7**	**-0.2**
COEB				*eS*		**Sb**	**03 57 15.0**	**-1.0**

ARE ***27*** *04:15:42±5.5,3˚.32S±0˚.05×79˚.97W±0˚.08,h82km±6km,*
Error ellipse: s-maj=0.0km s-min=0.0km az=178.0
IGQ ***27*** *04:15:43±0.7,3˚S±4˚×8˚0W±˚,h27km*
NEIC ***27*** *04:15:45.9±2.6,3˚.25S±0˚.04×79˚.75W±0˚.06,h64km±7km,*
mb4.3/32,ML4.3(ARE),Error ellipse: s-maj=9.5km
s-min=5.7km az=66.0
IDC ***27*** *04:15:45.6±2.3,3˚.24S×79˚.73W,h70km±24km,mb3.6/9,*
mbtmp4.1/14,MS3.0/4,Error ellipse: s-maj=27.6km
s-min=14.8km az=66.0
VAO ***27*** *04:15:50.3±2.5,3˚.29S×79˚.21W,h54km±15km,mb4.3*
ISC 27 04:15:43.7±0.9,3˚35S±0˚.05×79˚89W±0˚.06,h53km±9km,
n144,σ1$51/146,mb4.2/19,1C,Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ACH1	**Ecuador-Univer**	**0.07**	**341**	P		**Pn**	**04 15 51.0**	**-0.9**
ACH2	**Ecuador-Machal**	**0.12**	**41**	P		Pn	04 15 50.0	-2.0
ACUE	**Ecuador-Cuenca**	**1.03**	**65**	P		**Pn**	**04 16 02.0**	**-0.2**
COHC	**Cochancay**	**1.09**	**36**	Pn		**Pn**	**04 16 01.8

PRAC	**Prado**	**8.62**	**35**	*eP*		**Pn**	**04 17 47.5**	**+1.6**
PLMC	**San Jos del P**	**8.96**	**24**	*eP*		**Pn**	**04 17 48.2**	**-2.4**
NNA	**Nana**	**9.09**	**161**	P		**Pn**	**04 17 53.2**	**+0.8**
	20nm,0.3s,baz=324,slow=13,SNR=21							
NNA				S		**Sn**	**04 19 32.1**	**-1.3**
	21nm,0.6s,baz=244,slow=15,SNR=2.1							
NNA	**Nana**	**9.09**	**161**	Pn		**Pn**	**04 17 53.0**	**+0.7**
VILC	**Villavicencio,**	**9.66**	**40**	*eP*		**Pn**	**04 18 02.6**	**+2.4**
ROSC	**El Rosal**	**9.86**	**34**	P		**Pn**	**04 18 02.7**	**-0.5**
	2.8nm,0.3s,baz=323,slow=20,SNR=5.4							
ROSC				LR		LR	04 21 41.3	
	comp=Z,39nm,19.9s,baz=146,slow=37							
ROSC	**El Rosal**	**9.86**	**34**			**Pn**	**04 18 01.7**	**-1.5**
CBOC	**Ciudad Bolivar**	**9.94**	**23**	*eP*		**Pn**	**04 18 02.9**	**-1.2**
CHIC	**Chingaza**	**10.04**	**38**	*eP*		**Pn**	**04 18 08.7**	**+3.1**
PTBC	**PUERTO BERRIO,**	**11.22**	**29**	*eP*		**Pn**	**04 18 25.2**	**+3.7**
SRBA	**San Rafael, Bu**	**12.97**	**345**	Pn		**Pn**	**04 18 47.7**	**+2.2**
SJCC	**San Jacinto, C**	**13.97**	**20**	Pn		**Pn**	**04 18 58.8**	**-0.3**
JTS	**Las Juntas de**	**14.46**	**340**	P		**Pn**	**04 19 06.9**	**+1.4**
	10nm,0.9s,baz=194,slow=7.3,SNR=5.7							
JTS				LR		LR	04 23 43.2	
	comp=Z,70nm,18.1s,baz=192,slow=33							
JTS	**Las Juntas de**	**14.46**	**340**			**Pn**	**04 19 06.3**	**+0.7**
DUNO	**Dulce Nombre,**	**14.47**	**337**	Pn		**Pn**	**04 19 03.9**	**-1.7**
ORTG	**Ortega, Santa**	**14.71**	**338**	Pn		**Pn**	**04 19 09.3**	**+0.4**
URIC	**Uribia, Colomb**	**16.89**	**28**	Pn		**Pn**	**04 19 34.7**	**-1.9**
URIC				IAmb		IAmb	04 19 42.5	
	comp=Z,26nm,1.1s							
BAUV	**El Baul**	**16.99**	**44**			**P**	**04 19 39.1**	**+0.1**
LPAZ	**La Paz**	**17.29**	**139**	P		**Pn**	**04 19 42.6**	**+0.5**
	comp=Z,3.8nm,0.8s,baz=258,slow=9.4,SNR=15							
LPAZ	**La Paz**	**17.29**	**139**			**Pn**	**04 19 42.4**	**+0.3**
LPAZ	**La Paz**	**17.29**	**139**	*eP*		**Pn**	**04 19 43.4**	**+1.3**
LPAZ				*eS*		**Sn**	**04 22 50.8**	**-3.1**
SAML	**Samuel**	**17.51**	**109**	Pn		**Pn**	**04 19 42.0**	**-2.3**
PB16	**IPOC Station P**	**18.03**	**146**	P		**P**	**04 19 52.5**	**+1.5**
MACA	**Manacapuru-AM**	**19.17**	**90**	*eP*		**P**	**04 20 01.9**	**-1.2**
GO01	**Chusmiza**	**19.29**	**148**	P		**P**	**04 20 07.1**	**+2.3**
GO01				IAmb		IAmb	04 20 12.8	
	comp=Z,18nm,1.1s							
BIRV	**Birongo**	**19.30**	**44**	P		**Pn**	**04 20 05.1**	**-0.8**
BIRV				IAmb		IAmb	04 20 29.3	
	comp=Z,14nm,1.0s							
MTO3	**Montecristo**	**19.98**	**332**	P		**P**	**04 20 13.7**	**+1.6**
MTO3				IAmb		IAmb	04 20 14.7	
	comp=Z,8.9nm,0.8s							
VILB	**Vilhena**	**21.68**	**117**	*eP*		**P**	**04 20 31.6**	**+1.5**
SIV	**San Ignacio**	**22.37**	**125**	P		**P**	**04 20 39.1**	**+1.5**
	comp=Z,1.2nm,0.5s,baz=317,slow=11,SNR=12							
	comp=Z,1.2nm,0.5s							
PTLB	**Pontes e Lacer**	**23.70**	**122**	*eP*		**P**	**04 20 52.0**	**+1.1**
PDRB	**Porto dos Gac**	**24.36**	**111**	*eP*		**P**	**04 20 58.2**	**+1.2**
NPGB	**Novo Progresso**	**24.70**	**100**	*eP*		**P**	**04 21 01.1**	**+1.0**
CLDB	**Colider**	**25.03**	**109**	*eP*		**P**	**04 21 02.2**	**-0.9**
PDPR	**Patillas Dam,**	**25.26**	**32**	P		**P**	**04 21 04.0**	**-1.0**
PDPR				IAmb		IAmb	04 21 05.2	
	comp=Z,15nm,0.9s							
SJG	**San Juan**	**25.27**	**32**	P		**P**	**04 21 03.6**	**-1.5**
	comp=Z,15nm,0.9s,baz=221,slow=4.5,SNR=6.3							
	comp=Z,15nm,0.9s							
SJG	**San Juan**	**25.27**	**32**	P		**P**	**04 21 04.0**	**-1.1**
MALB	**Monte Alegre**	**25.64**	**87**	*eP*		**P**	**04 21 09.3**	**+0.7**
PLCA	**Paso Flores**	**38.15**	**168**	P		**P**	**04 22 58.6**	**+0.7**
	comp=Z,0.7nm,0.5s,baz=353,slow=10,SNR=6.0							
	comp=Z,0.7nm,0.5s							
PLCA	**Paso Flores**	**38.15**	**168**	P		**P**	**04 22 59.1**	**+1.1**
TRQA	**Tornquist**	**38.23**	**157**	P		**P**	**04 22 59.0**	**+0.5**
CPCT	**Cooper Cave**	**38.84**	**354**	P		**P**	**04 23 03.4**	**-0.3**
CPCT				IAmb		IAmb	04 23 30.1	
	comp=Z,2.6nm,0.8s							
TXAR	**Lajitas Array**	**39.70**	**327**	P		**P**	**04 23 11.5**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=147,slow=8.9,SNR=6.9							
	comp=Z,0.4nm,0.7s							
TXAR	**Lajitas Array**	**39.70**	**327**	P		**P**	**04 23 12.4**	**+1.3**
WHAR	**Wooly Hollow**	**40.16**	**344**	P		**P**	**04 23 14.2**	**-0.5**
WHAR				IAmb		IAmb	04 23 38.4	
	comp=Z,6.5nm,1.3s							
X37A	**Clayton**	**40.46**	**340**	P		**P**	**04 23 17.7**	**+0.6**
X37A				IAmb		IAmb	04 23 23.9	
	comp=Z,4.2nm,1.1s							
W39A	**Magazine**	**40.51**	**342**	P		**P**	**04 23 18.2**	**+0.7**
W39A				IAmb		IAmb	04 23 18.5	
	comp=Z,4.8nm,0.7s							
U38A	**Gravette**	**41.84**	**342**	P		**P**	**04 23 28.4**	**-0.1**
U38A				IAmb		IAmb	04 23 28.9	
	comp=Z,3.2nm,0.8s							
MNTX	**Cornudas Mount**	**42.46**	**327**	P		**P**	**04 23 34.8**	**+1.1**
MSTX	**Muleshoe**	**42.94**	**332**	P		**P**	**04 23 36.4**	**-1.2**
MSTX				IAmb		IAmb	04 23 39.0	
	comp=Z,5.8nm,0.9s							
T35A	**Sooner Cattle**	**42.95**	**340**	P		**P**	**04 23 37.5**	**-0.1**
T35A				IAmb		IAmb	04 23 38.7	
	comp=Z,4.8nm,0.8s							
KSU1	**Kansas State U**	**44.97**	**342**	P		**P**	**04 23 53.7**	**0.0**
ANMO	**Albuquerque**	**45.55**	**329**	P		**P**	**04 24 00.0**	**+1.5**
ANMO				IAmb		IAmb	04 24 00.5	
	comp=Z,3.0nm,0.8s							
X16A	**Lo Mia Camp, P**	**47.89**	**324**	P		**P**	**04 24 18.2**	**+1.3**
ECSD	**EROS Data Cent**	**49.23**	**344**	P		**P**	**04 24 25.9**	**-1.0**
ECSD				IAmb		IAmb	04 24 26.1	
	comp=Z,2.3nm,0.6s							
PV13	**Radium Mtn., P**	**49.23**	**330**	P		**P**	**04 24 27.3**	**+0.1**
NVAR	**Mina Array Bea**	**54.66**	**323**	P		**P**	**04 25 09.0**	**+1.4**
	comp=Z,0.5nm,0.6s,baz=144,slow=7.2,SNR=5.8							
	comp=Z,0.5nm,0.6s							
NVAR	**Mina Array Bea**	**54.66**	**323**	P		**P**	**04 25 08.4**	**+0.7**
ULM	**Lac du Bonnet**	**55.14**	**348**	P		**P**	**04 25 09.2**	**-1.4**
	comp=Z,3.7nm,0.7s,baz=155,slow=6.2,SNR=3.2							
	comp=Z,3.7nm,0.7s							
YKA	**Yellowknife Ar**	**70.76**	**344**	P		**P**	**04 26 53.1**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=127,slow=7.7,SNR=5.3							
	comp=Z,0.3nm,0.6s							
YKA	**Yellowknife Ar**	**70.76**	**344**	P		**P**	**04 26 52.5**	**-1.6**
DBIC	**Dimbokro**	**75.56**	**82**	P		**P**	**04 27 22.8**	**-0.6**
	comp=Z,3.7nm,0.9s,baz=229,slow=3.7,SNR=3.6							
	comp=Z,3.7nm,0.9s							
DBIC	**Dimbokro**	**75.56**	**82**	P		**P**	**04 27 23.9**	**+0.5**
TORD	**Torodi Ar. Bea**	**82.58**	**76**	P		**P**	**04 28 00.5**	**-1.3**
	comp=Z,0.2nm,0.4s,baz=282,slow=6.3,SNR=4.9							
TORD				LR		LR	05 02 05.6	
	comp=Z,31nm,21.9s,baz=212,slow=34							
	comp=Z,0.2nm,0.4s							
TORD	**Torodi Ar. Bea**	**82.58**	**76**	P		**P**	**04 28 00.5**	**-1.3**

DJA 27 04:20:41.1±0.3,6°S±2°×13°1E±°,h125km±12km,M4.4/7,
mb4.5/7,mB5.1/5,MLv4.3/6,Mw(mB)4.4/5,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**3.36**	**329**	P	Pn	04 21 35.1	+2.8
FAKI	**Fak Fak**	**3.67**	**26**	P	Pn	04 21 38.6	+2.2
FAKI				S	Sn	04 22 19.6	+0.3
SWI	**Sorong**	**5.39**	**7**	P	Pn	04 22 00.7	+1.4
	0.5nm2μm27nm,0.5s						
SWI				S	Sn	04 22 57.5	-2.8
	0.5nm2μm27nm,0.5s						
GENI	**Genyem**	**10.16**	**69**	P	Pn	04 23 03.6	-0.1
	61nm,0.6s						
TWSI	**Taliwang, Sumb**	**13.87**	**259**	P	Pn	04 23 41.4	-11

*SOME **27** 04:23:22.3,39°.35N×73°.77E,h15km*
*KRNET **27** 04:23:22.2±0.1,39°.23N×73°.50E,mb4.1*
*IDC **27** 04:23:23.3±1.1,39°.22N×73°.62E,h0km,mb3.7/9,*
mbtmp3.7/15,ML3.2/5,MS3.0/3,Error ellipse:
s-maj=20.8km s-min=15.8km az=140.0
*NNC **27** 04:23:30.1±1.3,39°.76N×73°.46E,h0km,mb4.4,mpv3.9,*
Error ellipse: s-maj=11.6km s-min=6.2km az=165.0

ISC 27 04:23:24.7±0.8,39°.19N±0°.05×73°.38E±0°.03,h10km,n82,
σ1s79/107,mb3.7/9,MS2.4/3,30C-10D,
Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**1.26**	**284**	⇑*iP*	**Pg**	**04 23 47.9**	**-1.0**
	baz=81						
DRK				⇑*iS*	**Sn**	**04 24 06.2**	**+0.5**
	baz=81						
OHH	**Osh**	**1.41**	**341**	⇑*iP*	**Pn**	**04 23 48.5**	**-2.0**
	baz=37						
OHH				⇑*iS*	**Sn**	**04 24 07.9**	**-1.3**
	baz=37						
BTK	**Batken**	**2.16**	**295**	⇑*iP*	**Pb**	**04 24 02.6**	**-1.3**
	baz=93						
BTK				⇑*iS*	**Sg**	**04 24 32.0**	**-2.1**
	baz=93						
GAR	**Garm**	**2.39**	**266**	⇑*iP*	**Pb**	**04 24 05.9**	**-2.0**
	baz=66						
GAR				⇑*iS*	**Sb**	**04 24 37.8**	**+0.4**
	baz=66						
ARLS	**Aral**	**2.77**	**15**	⇑*iP*	**Pn**	**04 24 08.8**	**-0.4**
	baz=13						
ARLS				⇑*iS*	**Sn**	**04 24 42.7**	**-0.1**
	baz=13						
TRKS	**Terek-Say**	**2.90**	**325**	⇑*eP*	**Pn**	**04 24 11.0**	**0.0**
	baz=22						
TRKS				⇑*iS*	**Sn**	**04 24 46.7**	**+0.7**
	baz=22						
AML	**Almayashu**	**2.95**	**5**	P	**Pn**	**04 24 13.3**	**+1.4**
	SNR=12						
UCH	**Uchtor**	**3.16**	**16**	P	**Pn**	**04 24 16.3**	**+1.4**
	SNR=61						
UCH	**Uchtor**	**3.16**	**16**	⇑*eP*	**Pn**	**04 24 14.5**	**-0.4**
	baz=14						
UCH				⇑*iS*	**Sn**	**04 24 52.9**	**+0.1**
	baz=14						
CHGR	**Chuyangaron**	**3.33**	**262**	⇑*iP*	**Pn**	**04 24 18.9**	**+2.0**
	baz=62						
CHGR				⇑*eS*	**Sb**	**04 25 00.4**	**-4.2**
	baz=62						
EKS2	**Erkin-Say**	**3.48**	**5**	P	**Pn**	**04 24 20.1**	**+1.0**
	SNR=11						
EKS2	**Erkin-Say**	**3.48**	**5**	⇓*eP*	**Pn**	**04 24 19.0**	**-0.1**
	baz=3.0						
EKS2				⇓*iS*	**Sn**	**04 25 00.6**	**+0.2**
	baz=3.0						
AAK	**Ala-Archa**	**3.55**	**13**	P	**Pn**	**04 24 21.4**	**+1.4**
	SNR=20						
AAK	**Ala-Archa**	**3.55**	**13**	Pn	**Pn**	**04 24 21.4**	**+1.4**
	10.0nm,0.3s,baz=209,slow=14,SNR=34						
AAK				Lg	Lg	04 25 05.7	
	8.7nm,0.3s,baz=319,slow=20,SNR=2.2						
	30nm,0.4s						
KBK	**Karagaybulak**	**3.66**	**18**	P	**Pn**	**04 24 23.2**	**+1.7**
	SNR=13						
KBK	**Karagaybulak**	**3.66**	**18**	⇓*iP*	**Pn**	**04 24 21.4**	**-0.2**
	baz=17						
KBK				⇓*iS*	**Sn**	**04 25 04.7**	**-0.2**
	baz=17						
ULHL	**Ulahol**	**3.75**	**35**	P	**Pb**	**04 24 28.2**	**-2.9**
	SNR=22						
TAS	**Tashkent**	**3.78**	**306**	⇑*iP*	**Pn**	**04 24 24.7**	**+1.6**
	baz=4.0						
TAS				⇑*iS*	**Sn**	**04 25 10.0**	**+2.4**
	baz=4.0						
BOOM	**Boomskoye usch**	**3.83**	**30**	⇑*iP*	**Pn**	**04 24 23.4**	**-0.4**
	baz=29						
BOOM				⇑*iS*	**Sn**	**04 25 08.3**	**-0.7**
	baz=29						
IUG	**Iuzhnay**	**3.90**	**320**	*eP*	**Pg**	**04 24 37.6**	**-1.8**
	986nm,0.7s						
IUG				*eS*	**Sg**	**04 25 32.7**	**+2.8**
	212nm,1.0s						
IUG	**Iuzhnay**	**3.90**	**320**	Pg	**Pb**	**04 24 32.4**	**-1.2**
	1μm,0.7s						
IUG				Lg	Lg	04 25 19.6	
	102nm,0.5s						
CHMS	**Chumysh**	**3.95**	**15**	P	**Pn**	**04 24 25.8**	**+0.5**
	SNR=7.5						
CHMS	**Chumysh**	**3.95**	**15**	⇓Pn	**Pn**	**04 24 25.6**	**+0.2**
	15nm,0.6s						
CHMS				⇓Lg	Lg	04 25 20.5	
	90nm,1.1s						
TKM2	**Tokmak 2**	**4.09**	**24**	P	**Pn**	**04 24 27.9**	**+0.4**
	SNR=16						
TKM2	**Tokmak 2**	**4.09**	**24**	⇑Pn	**Pn**	**04 24 27.5**	**0.0**
	13nm,0.5s						
TKM2				⇑Lg	Lg	04 25 24.4	
	42nm,0.5s						
KDJ	**Kajisay**	**4.12**	**43**	⇑*eP*	**Pn**	**04 24 27.4**	**-0.5**
	baz=43						
KDJ				⇑*iS*	**Sn**	**04 25 15.1**	**-1.2**
	baz=43						
USP	**Ospenovka**	**4.16**	**11**	P	**Pn**	**04 24 29.9**	**+1.6**
	SNR=6.8						
KST	**Kastek**	**4.32**	**26**	*eP*	**Pb**	**04 24 36.7**	**-4.0**
	23nm,0.6s						
KST				*eS*	**Sb**	**04 25 31.0**	**-1.9**
	78nm,0.6s						
KST	**Kastek**	**4.32**	**26**	Pg	**Pb**	**04 24 39.2**	**-1.6**
	46nm,0.6s						
KST				Lg	Lg	04 25 31.0	
	78nm,0.6s						
SGDS	**Sogindy**	**4.36**	**12**	*eP*	**Pb**	**04 24 38.2**	**-3.3**
	13nm,0.0s						
SGDS				*eS*	**Sb**	**04 25 33.5**	**-0.7**
	20nm,0.3s						
DGS	**Degeres**	**4.43**	**23**	*eP*	**Pb**	**04 24 40.0**	**-2.7**
	26nm,0.6s						
DGS				*eS*	**Sb**	**04 25 36.5**	**+0.2**
	48nm,0.9s						
DGS	**Degeres**	**4.43**	**23**	Pg	**Pb**	**04 24 40.4**	**-2.3**
	26nm,0.6s						
DGS				Lg	Lg	04 25 33.4	
	48nm,0.9s						
KK31	**Karatay Array**	**4.47**	**332**	Pn	**Pn**	**04 24 34.2**	**+1.7**
	2.6nm,0.3s,baz=134,slow=13,SNR=33						
KK31				⇓Pg	**Pb**	**04 24 44.6**	**+1.3**
	22nm,0.8s,baz=142,slow=16,SNR=6.8						
KK31				⇑Lg	Lg	04 25 38.9	
	20nm,0.6s,baz=176,slow=29,SNR=4.7						
MTBS	**Maitube**	**4.56**	**29**	*eP*	**Pb**	**04 24 41.7**	**-3.2**
	36nm,0.7s						
MTBS				*eS*	**Sb**	**04 25 38.8**	**-1.1**
	33nm,0.4s						
MTBS	**Maitube**	**4.56**	**29**	Pg	**Pb**	**04 24 42.8**	**-2.1**
	36nm,0.7s						
MTBS				Lg	Lg	04 25 38.2	
	33nm,0.4s						
TNSS	**Tian-Shan**	**4.70**	**34**	*eP*	**Pb**	**04 24 44.1**	**-3.2**
	19nm,0.0s						
TNSS				*eS*	**Sb**	**04 25 42.9**	**-1.2**
	22nm,0.7s						
TNSS	**Tian-Shan**	**4.70**	**34**	Pg	**Pb**	**04 24 45.5**	**-1.9**
	19nm,0.5s						
TNSS				Lg	Lg	04 25 42.9	
	22nm,0.7s						
KRBS	**Karabastau**	**4.82**	**20**	*eP*	**Pb**	**04 24 46.1**	**-3.2**
	19nm,0.1s						
KRBS				*eS*	**Sb**	**04 25 46.9**	**-0.5**
	36nm,0.8s						
KRBS	**Karabastau**	**4.82**	**20**	Pg	**Pb**	**04 24 47.9**	**-1.4**
	0.3nm,0.5s						
KRBS				Lg	Lg	04 25 46.4	
	36nm,0.8s						
KTBS	**Karatobe**	**5.16**	**28**	*eP*	**Pb**	**04 24 52.5**	**-2.5**
	21nm,0.1s						
KTBS				*eS*	**Sb**	**04 25 57.3**	**+0.3**
	56nm,0.8s						
KTBS	**Karatobe**	**5.16**	**28**	Pg	**Pb**	**04 24 53.8**	**-1.2**
	22nm,0.8s						
KTBS				Lg	Lg	04 25 57.3	
	56nm,0.8s						
KUU	**Kurty**	**5.20**	**24**	*eP*	**Pb**	**04 24 52.5**	**-3.2**
	18nm,0.6s						
KUU				*eS*	**Sb**	**04 25 58.1**	**-0.1**
	66nm,0.2s						
KUU	**Kurty**	**5.20**	**24**	Pg	**Pb**	**04 24 54.4**	**-1.3**
	18nm,0.6s						
KUU				Lg	Lg	04 25 57.3	
	66nm,0.7s						
CHKK	**Chushkaly**	**5.39**	**29**	*eP*	**Pb**	**04 24 56.1**	**-2.9**
	30nm,0.2s						
CHKK				*eS*	**Sb**	**04 26 04.1**	**+0.3**
	36nm,0.1s						
CHKK	**Chushkaly**	**5.39**	**29**	Pg	**Pb**	**04 24 57.4**	**-1.6**
	30nm,0.5s						
CHKK				Lg	Lg	04 26 02.7	
	37nm,0.5s						
SATY	**Saty**	**5.42**	**43**	*eP*	**Pb**	**04 24 57.4**	**-2.1**
	13nm,3.9s						
SATY				*eS*	**Sb**	**04 26 06.3**	**+1.7**
	39nm,0.1s						
SATY	**Saty**	**5.42**	**43**	Pg	**Pb**	**04 24 59.6**	**+0.1**
	13nm,0.6s						
SATY				Lg	Lg	04 26 06.3	
	49nm,1.1s						
KURS	**Kuram**	**5.61**	**38**	*eP*	**Pb**	**04 25 00.8**	**-1.9**
	9.6nm,0.1s						
KURS				*eS*	**Sb**	**04 26 10.8**	**+0.8**
	15nm,0.3s						
KURS	**Kuram**	**5.61**	**38**	Pg	**Pb**	**04 25 03.4**	**+0.7**
KURS				Lg	Lg	04 26 12.6	
BTLS	**Baital**	**5.87**	**5**	*eP*	**Pb**	**04 25 06.5**	**-0.6**
	5.9nm,0.7s						
BTLS				*eS*	**Sb**	**04 26 20.8**	**+3.3**
	16nm,0.9s						
BTLS	**Baital**	**5.87**	**5**	Pg	**Pb**	**04 25 04.8**	**-2.3**
	2.9nm,0.4s						
BTLS				Lg	Lg	04 26 16.0	
	3.5nm,0.6s						
ARXS	**Arharly**	**6.03**	**32**	*eP*	**Pb**	**04 25 07.5**	**-2.3**
	28nm,0.7s						
ARXS				*eS*	**Sb**	**04 26 23.5**	**+1.5**
	40nm,0.6s						
ARXS	**Arharly**	**6.03**	**32**	Pg	**Pb**	**04 25 09.2**	**-0.5**
	28nm,0.7s						
ARXS				Lg	Lg	04 26 23.5	
	40nm,0.6s						
PDGK	**Podgornoye**	**6.19**	**46**	Pg	**Pb**	**04 25 11.8**	**-0.8**
	3.3nm,0.5s						
PDGK				Lg	Lg	04 26 27.1	
	9.1nm,0.9s						
PDGK	**Podgornoye**	**6.19**	**46**	⇑Pn	**Pn**	**04 24 57.9**	**+1.6**
	3.4nm,0.6s						
PDGK				⇑Lg	Lg	04 26 34.3	
	34nm,0.8s						
BLB	**Baldybastay**	**6.22**	**36**	*eP*	**Pb**	**04 25 11.6**	**-1.5**
	20nm,0.0s						
BLB				*eS*	**Sb**	**04 26 29.6**	**+2.1**
	21nm,0.8s						
BLB	**Baldybastay**	**6.22**	**36**	Pg	**Pb**	**04 25 12.7**	**-0.4**
	24nm,0.8s						
BLB				Lg	Lg	04 26 29.6	
	21nm,0.8s						
DJR	**Jarkent**	**7.03**	**41**	*eP*	**Pb**	**04 25 27.4**	**+0.6**
	1.9nm,0.1s						
DJR				*eS*	**Sb**	**04 26 57.0**	**+6.2**
	14nm,0.7s						
DJR	**Jarkent**	**7.03**	**41**	Pg	**Pb**	**04 25 29.2**	**+2.3**
	2.3nm,0.1s						
OTUK	**Ortayu**	**9.09**	**356**	⇑Pn	**Pn**	**04 25 35.1**	**-0.7**
	4.0nm,0.7s						
OTUK				⇓Lg	Lg	04 28 03.0	
	23nm,0.8s						
MKAR	**Makanchi Array**	**10.02**	**38**	Pn	**Pn**	**04 25 48.9**	**+0.3**
	baz=214,slow=17,SNR=2.7						
	0.5nm,0.8s						
KURBB	**Kurchatov Arra**	**12.00**	**16**	Pn	**Pn**	**04 26 13.6**	**-2.0**
	0.2nm,0.4s,baz=204,slow=12,SNR=2.9						
KURBB	**Kurchatov Arra**	**12.00**	**16**	⇑Lg	Lg	04 29 35.0	
	14nm,0.8s						
KURK	**Kurchatov**	**12.11**	**16**	⇓Lg	Lg	04 29 37.3	
	17nm,1.2s						
AB31	**Akbulak array**	**13.91**	**321**	⇓Pn	**Pn**	**04 26 40.1**	**-1.6**
	1.5nm,0.6s,baz=131,slow=13,SNR=14						
AKTO	**Aktyubinsk**	**15.63**	**321**	Pn	**Pn**	**04 27 04.8**	**-0.1**
	0.2nm,0.3s,baz=120,slow=14,SNR=9.1						
	3.2nm,0.7s						
AKTO	**Aktyubinsk**	**15.63**	**321**	⇑Pn	**Pn**	**04 27 02.1**	**-2.8**
	4.6nm,0.9s						
ZALV	**Zalesovo Beam**	**16.70**	**24**	Pn	**Pn**	**04 27 17.1**	**-1.4**
	0.3nm,0.3s,baz=216,slow=7.1,SNR=9.9						
	2.8nm,0.7s						
ARU	**Arti**	**19.84**	**335**	P	**Pn**	**04 27 57.0**	**0.0**
	baz=173,slow=3.5,SNR=5.7						
	4.7nm,0.7s						
WSAR	**Wadi Sarin**	**20.25**	**223**	LR	LR	04 37 35.8	
	comp=Z,18nm,19.0s,baz=114,slow=42						
BELG	**Belogornoye**	**22.14**	**315**	LR	LR	04 38 31.1	
	comp=Z,11nm,21.4s,baz=132,slow=41						
BRTR	**Keskin Array B**	**30.52**	**284**	P	**P**	**04 29 41.0**	**+2.9**
	1.1nm,0.7s,baz=86,slow=7.9,SNR=6.6						
	1.1nm,0.7s						
FINES	**FINESS Array B**	**36.38**	**323**	P	**P**	**04 30 29.4**	**+0.7**
	2.7nm,0.8s,baz=114,slow=8.7,SNR=9.9						
	2.7nm,0.8s						
ARCES	**ARCESS Array B**	**39.43**	**336**	P	**P**	**04 30 54.7**	**+0.3**
	0.8nm,0.6s,baz=107,slow=8.3,SNR=11						
	0.8nm,0.6s						
GERES	**GERESS Array B**	**42.98**	**303**	P	**P**	**04 31 26.2**	**+2.2**
	0.3nm,0.5s,baz=43,slow=7.3,SNR=3.6						
	0.3nm,0.5s						
NB2	**NORSAR Subarra**	**43.42**	**321**	P	**P**	**04 31 27.1**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=92,slow=7.9						
NOA	**NORSAR Array B**	**43.42**	**321**	P	**P**	**04 31 27.4**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=91,slow=7.8,SNR=8.4						
	comp=Z,0.7nm,0.5s						
TORD	**Torodi Ar. Bea**	**67.66**	**269**	P	**P**	**04 34 22.9**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=48,slow=5.6,SNR=11						
	comp=Z,0.5nm,0.5s						
ILAR	**Eielson Array**	**71.67**	**17**	P	**P**	**04 34 46.2**	**0.0**
	comp=Z,0.4nm,0.9s,baz=312,slow=5.6,SNR=4.2						
	comp=Z,0.4nm,0.9s						
YKA	**Yellowknife Ar**	**78.46**	**4**	P	**P**	**04 35 24.4**	**-1.0**
	comp=Z,0.3nm,0.7s,baz=352,slow=5.6,SNR=6.2						
	comp=Z,0.3nm,0.7s						
WRA	**Warramunga Arr**	**81.86**	**124**	P	**P**	**04 35 44.2**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=322,slow=5.2,SNR=12						
	comp=Z,0.8nm,0.7s						
HNR	**Honiara**	**93.24**	**99**	LR	LR	05 17 43.0	
	comp=Z,54nm,20.9s,baz=140,slow=35						

*NEIC **27** 04:24:04.8±1.7,58°.71N±0°.02×134°.60W±0°.06,h1km±2km,*
Error ellipse: s-maj=5.3km s-min=2.3km az=55.0
*AEIC **27** 04:24:04±3.4,58°.74N±0

comp=N,31nm,2.7s
BCPM IAML 04 25 52.2
comp=E,33nm,2.4s
YUK6 Outpost Mounta 2.91 321 Pg **Pb 04 24 58.0 +0.4**
YUK6 Outpost Mounta 2.91 321 Pg **Pb 04 24 58.0 +0.4**
PCA Pinnacle 3.20 297 Pn **Pn 04 24 53.6 -2.7**
YUK4 Talbot Arm 3.31 324 Pg **Pb 04 25 05.6 +1.3**
YUK4 Talbot Arm 3.31 324 Pg **Pb 04 25 05.6 +1.3**
CRAG Craig 3.38 166 Pn **Pn 04 24 58.4 -0.3**
CRAG IAML 04 26 14.3
comp=E,20nm,2.7s
CRAG IAML 04 26 50.1
comp=N,16nm,2.7s
M31M Drury Creek, Y 3.46 1 Pn **Pn 04 25 00.7 +0.8**
M31M IAML 04 25 57.4
comp=N,18nm,0.3s
M31M Drury Creek, Y 3.46 1 Pg **Pb 04 25 08.7 +1.8**
M30M Minto, Yukon 3.99 345 Pn **Pn 04 25 07.0 -0.1**
M30M Minto, Yukon 3.99 345 IAML 04 26 17.7
comp=E,8.0nm,0.6s
M30M IAML 04 26 18.8
comp=N,7.8nm,0.9s
M30M Minto, Yukon 3.99 345 Pn **Pn 04 25 07.5 +0.4**
M30M Sn **Sn 04 25 54.5 0.0**
M30M Sg **Sg 04 26 10.5 -2.4**
TGTN Hyland Airport 4.21 46 Pn **Pn 04 25 10.5 +0.4**
MMPY Sheldon Lake, 4.21 21 Pn **Pn 04 25 10.5 +0.3**
MMPY Pg **Pb 04 25 21.8 +2.2**
MMPY Sg **Sg 04 26 17.5 -2.3**
YUK3 Moose Creek 4.22 319 Sg **Sg 04 26 19.1 -1.0**
YUK3 Moose Creek 4.22 319 Sg **Sg 04 26 19.1 -1.0**
WAX Waxell Ridge 4.54 296 Pn **Pn 04 25 15.6 +0.9**
BVCY Beaver Creek 4.81 323 Pg **Pb 04 25 32.5 +2.8**
BVCY Beaver Creek 4.81 323 Pg **Pb 04 25 32.5 +2.8**
RUBB Prince Rupert 5.04 150 Pn **Pn 04 25 19.7 -1.7**
DIB Dawson Inlet, 5.69 167 Pn **Pn 04 25 29.2 -1.1**
DAWY Dawson 5.81 339 Pn **Pn 04 25 33.0 +0.9**
MENT Mentasta 6.13 317 Pn **Pn 04 25 36.0 -0.5**
HIN Hinchinbrook I 6.28 290 Pn **Pn 04 25 38.7 +0.2**
K27K Chicken 6.40 329 Pn **Pn 04 25 41.5 +1.3**
SCRK Sand Creek 6.92 323 Pn **Pn 04 25 49.9 +2.6**
I26K Coal Creek Min 7.71 332 Pn **Pn 04 26 00.3 +2.3**
EPYK Eagle Plains 7.71 354 Pn **Pn 04 25 58.9 +0.8**

*SOME **27** 04:25:40.7, 39˚40N×73˚52E, h10km*
*IDC **27** 04:25:41.7±1.4, 39˚48N×73˚84E, h0km, mb3.7/7, mbtmp3.7/8, ML3.5/1, Error ellipse: s-maj=32.3km s-min=26.6km az=109.0*
*KRNET **27** 04:25:41.2±0.1, 39˚31N×73˚45E, mb4.1*
ISC 27 04:25:44.0±0.8, **39˚43N**±0˚05×**73˚41E**±0˚04, **h10**km, **n31**, σ2§**89**/54, **mb3.6**/7, **8C-10D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.19**	**336**	⇑*i*P	**Pn**	**04 26 06.0**	**-0.9**
	baz=38						
OHH				⇑*i*S	**Sn**	**04 26 24.3**	**+1.1**
	baz=38						
DRK	**Karamyk**	**1.25**	**273**	⇓*i*P	**Pn**	**04 26 05.8**	**-2.0**
	baz=78						
DRK				⇓*i*S	**Sb**	**04 26 23.6**	**-0.5**
	baz=78						
BTK	**Batken**	**2.09**	**288**	⇑*e*P	**Pb**	**04 26 20.3**	**-1.9**
	baz=91						
BTK				⇑*e*S	**Sb**	**04 26 48.8**	**+0.5**
	baz=91						
GAR	**Garm**	**2.44**	**261**	⇓*i*P	**Pn**	**04 26 24.4**	**+0.3**
	baz=64						
GAR				⇓*i*S	**Sb**	**04 26 56.0**	**-2.3**
	baz=64						
ARLS	**Aral**	**2.52**	**16**	⇑*e*P	**Pb**	**04 26 27.0**	**-2.5**
	baz=14						
ARLS				⇑*i*S	**Sb**	**04 27 00.6**	**-0.1**
	baz=14						
TRKS	**Terek-Say**	**2.72**	**321**	⇑*e*P	**Pn**	**04 26 28.7**	**+0.8**
	baz=22						
TRKS				⇑*i*S	**Sn**	**04 27 03.5**	**+2.6**
	baz=22						
AAK	**Ala-Archa**	**3.31**	**14**	Pn	**Pn**	**04 26 35.5**	**-0.5**
	5.2nm,0.3s,baz=295,slow=17,SNR=2.0						
AAK				Sn	**Sb**	**04 27 22.3**	**-0.9**
	baz=330,slow=20 16nm,0.4s						
BOOM	**Boomskoye usch**	**3.60**	**31**	⇓*i*P	**Pn**	**04 26 41.7**	**+1.6**
	baz=30						
BOOM				⇓*i*S	**Sn**	**04 27 25.8**	**+3.0**
	baz=30						
TAS	**Tashkent**	**3.67**	**302**	⇓*i*P	**Pn**	**04 26 42.4**	**+1.6**
	baz=4.0						
TAS				⇓*i*S	**Sn**	**04 27 27.1**	**+3.0**
	baz=4.0						
IUG	**Iuzhnay**	**3.73**	**318**	*e*P	**Pb**	**04 26 50.1**	**0.0**
	370nm,0.1s						
IUG				*e*S	**Sb**	**04 27 40.1**	**+4.7**
	111nm,0.9s						
KDJ	**Kajisay**	**3.93**	**46**	⇓*e*P	**Pn**	**04 26 45.9**	**+1.3**
	baz=44						
KDJ				⇓*i*S	**Sn**	**04 27 33.2**	**+2.3**
	baz=44						
KST	**Kastek**	**4.09**	**27**	*e*P	**Pb**	**04 26 56.9**	**+0.7**
	23nm,0.3s						
KST				*e*S	**Sg**	**04 27 52.1**	**-3.2**
	41nm,0.3s						
SGDS	**Sogindy**	**4.12**	**12**	*e*P	**Pb**	**04 26 56.7**	**0.0**
	7.7nm,0.2s						
SGDS				*e*S	**Sg**	**04 27 52.0**	**-4.3**
	20nm,0.2s						
DGS	**Degeres**	**4.20**	**24**	*e*P	**Pb**	**04 26 58.2**	**+0.1**
	24nm,0.7s						
DGS				*e*S	**Sg**	**04 27 54.4**	**-4.5**
	62nm,0.3s						
MTBS	**Maitube**	**4.34**	**31**	*e*P	**Pb**	**04 27 00.7**	**+0.3**
	19nm,0.6s						
MTBS				*e*S	**Sg**	**04 27 58.4**	**-4.9**
	18nm,0.4s						
TNSS	**Tian-Shan**	**4.48**	**35**	*e*P	**Pb**	**04 27 03.4**	**+0.4**
	8.3nm,0.1s						
TNSS				*e*S	**Sg**	**04 28 03.2**	**-4.8**
	17nm,0.2s						
BRLS	**Borolday**	**4.49**	**324**	*e*P	**Pb**	**04 27 02.3**	**-0.7**
	11nm,0.2s						
BRLS				*e*S	**Sb**	**04 28 01.2**	**+4.1**
	21nm,0.2s						
KRBS	**Karabastau**	**4.59**	**21**	*e*P	**Pb**	**04 27 05.3**	**+0.7**
	11nm,0.2s						
KRBS				*e*S	**Sg**	**04 28 05.7**	**-5.6**
	27nm,0.3s						
KTBS	**Karatobe**	**4.93**	**29**	*e*P	**Pb**	**04 27 11.3**	**+0.9**
	11nm,0.2s						
KTBS				*e*S	**Sg**	**04 28 16.8**	**-5.5**
	52nm,0.1s						
KUU	**Kurty**	**4.97**	**25**	*e*P	**Pb**	**04 27 11.8**	**+0.7**
	6.8nm,0.7s						
KUU				*e*S	**Sg**	**04 28 17.3**	**-6.1**
	34nm,0.2s						
SATY	**Saty**	**5.22**	**44**	*e*P	Pg	04 27 18.5	-5.6
	5.4nm,0.2s						
SATY				*e*S	**Sg**	**04 28 28.2**	**-3.6**
	23nm,0.2s						
KURS	**Kuram**	**5.40**	**40**	*e*P	**Pb**	**04 27 20.9**	**+2.4**
	9.7nm,0.2s						
KURS				*e*S	**Sg**	**04 28 32.1**	**-5.4**
	11nm,0.8s						
BTLS	**Baital**	**5.62**	**5**	*e*P	**Pb**	**04 27 24.0**	**+1.8**
	8.5nm,0.1s						
BTLS				*e*S	**Sg**	**04 28 38.6**	**-6.0**
	9.0nm,0.1s						
ARXS	**Arharly**	**5.80**	**33**	*e*P	**Pb**	**04 27 27.6**	**+2.2**
	16nm,0.4s						
ARXS				*e*S	**Sg**	**04 28 45.1**	**-5.3**
	25nm,0.2s						
BRTR	**Keskin Array B**	**30.48**	**283**	P	**P**	**04 31 59.4**	**+2.1**
	0.7nm,0.6s,baz=96,slow=8.8,SNR=4.4 0.7nm,0.6s						
FINES	**FINESS Array B**	**36.20**	**323**	P	**P**	**04 32 47.8**	**+1.3**
	1.8nm,0.8s,baz=98,slow=14,SNR=3.6 1.8nm,0.8s						
ARCES	**ARCESS Array B**	**39.21**	**336**	P	**P**	**04 33 13.4**	**+1.5**
	1.3nm,0.9s,baz=110,slow=7.0,SNR=4.2 1.3nm,0.9s						
NOA	**NORSAR Array B**	**43.24**	**321**	P	**P**	**04 33 45.8**	**+0.6**
	0.5nm,0.6s,baz=90,slow=7.9,SNR=2.9 0.5nm,0.6s						
TORD	**Torodi Ar. Bea**	**67.69**	**269**	P	**P**	**04 36 41.5**	**-0.2**
	0.5nm,0.6s,baz=32,slow=4.5,SNR=4.3 0.5nm,0.6s						
YKA	**Yellowknife Ar**	**78.22**	**4**	P	**P**	**04 37 43.6**	**+0.3**
	0.3nm,0.7s,baz=350,slow=5.9,SNR=2.7 0.3nm,0.7s						
WRA	**Warramunga Arr**	**81.98**	**124**	P	**P**	**04 38 02.4**	**-1.9**
	0.3nm,0.6s,baz=320,slow=5.2,SNR=2.3 0.3nm,0.6s						

*KRSC **27** 04:30:38.5±1.3, 55˚97N×164˚57E, h42km±18km, ML4.1*
*IDC **27** 04:30:38.3±1.6, 55˚99N×164˚74E, h0km, mb3.3/3, mbtmp3.3/4, ML2.3/1, MS2.8/1, Error ellipse: s-maj=126.7km s-min=24.9km az=145.0*
ISC 27 04:30:38.2±0.8, **56˚02N**±0˚05×**164˚54E**±0˚04, **h10**km, **n29**, σ1§**94**/35, **mb3.2**/3, **Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.98**	**282**	*e*P	**Pg**	**04 30 56.6**	**-0.6**
KBTR				*e*S	**Sg**	**04 31 09.0**	**-0.9**
KBG	**Krutoberegovo**	**1.06**	**284**	*e*P	**Pg**	**04 30 57.9**	**-0.6**
KBG				*e*S	**Sg**	**04 31 11.4**	**-0.8**
BKI	**Bering**	**1.15**	**135**	*e*P	**Pg**	**04 30 59.2**	**-1.1**
BKI				*e*S	**Sb**	**04 31 13.6**	**-1.5**
SMKR	**Semkarok**	**1.81**	**289**	*e*P	**Pn**	**04 31 09.8**	**+0.4**
SMKR				*e*S	**Sn**	**04 31 31.8**	**-0.6**
SRKR	**Sorokina**	**1.98**	**290**	*e*P	**Pn**	**04 31 12.7**	**+0.8**
MKZ	**Mys Kozlova**	**2.18**	**229**	*e*P	**Pn**	**04 31 14.0**	**-0.4**
MKZ				*e*S	**Sn**	**04 31 39.0**	**-2.4**
KRSR	**Krestovskiy**	**2.24**	**277**	*e*P	**Pb**	**04 31 17.3**	**-1.5**
KPT	**Kopyto**	**2.43**	**271**	*e*P	**Pb**	**04 31 20.1**	**-1.9**
KMNR	**Kamenistaya**	**2.44**	**266**	*e*P	**Pb**	**04 31 20.2**	**-2.0**
TUMR	**Tumrok**	**2.60**	**255**	*e*P	**Pb**	**04 31 22.4**	**-2.5**
OSSR	**Ossora**	**3.34**	**347**	*e*P	**Pn**	**04 31 30.7**	**+0.3**
KII	**Karymskiy**	**3.54**	**238**	*e*P	**Pn**	**04 31 34.2**	**+0.9**
SPN	**Mys Shipunski**	**3.94**	**224**	*e*P	**Pn**	**04 31 38.1**	**-0.5**
SDLR	**Sedlovina**	**4.28**	**232**	*e*P	**Pn**	**04 31 44.8**	**+1.3**
KRER	**Koryakskii**	**4.33**	**233**	*e*P	**Pn**	**04 31 45.6**	**+1.4**
SMAR	**Somma**	**4.33**	**233**	*e*P	**Pn**	**04 31 45.5**	**+1.2**
KRX	**Arik**	**4.34**	**235**	*e*P	**Pn**	**04 31 48.5**	**+4.2**
AVH	**Avacha**	**4.36**	**233**	*e*P	**Pn**	**04 31 46.1**	**+1.6**
UGLR	**Uglovaya**	**4.36**	**232**	*e*P	**Pn**	**04 31 45.9**	**+1.4**
KOK	**Koryaka**	**4.39**	**234**	*e*P	**Pn**	**04 31 46.3**	**+1.4**
GNL	**Ganaly**	**4.47**	**241**	*e*P	**Pn**	**04 31 48.2**	**+2.1**
KRMR	**Karymshinskiy**	**4.92**	**232**	*e*P	**Pn**	**04 31 55.2**	**+3.0**
PETK	**Petropavlovsk-**	**4.94**	**237**	Pn	**Pn**	**04 31 54.2**	**+1.8**
	0.6nm,0.3s,baz=77,slow=17,SNR=8.1						
PETK				Sn	**Sn**	**04 32 55.1**	**+5.6**
	0.2nm,0.3s,baz=61,slow=15,SNR=1.9						
PETK				LR	LR	04 34 09.8	
	comp=Z,97nm,18.1s,baz=31,slow=42 2.6nm,0.6s						
MTVR	**Mutnovka**	**5.14**	**229**	*e*P	**Pn**	**04 31 57.3**	**+1.9**
ASAK	**Asacha**	**5.34**	**230**	*e*P	**Pn**	**04 32 00.1**	**+2.2**
KDTR	**Khodutka, Kamc**	**5.69**	**225**	*e*P	**Pn**	**04 32 02.5**	**-0.2**
ILAR	**Eielson Array**	**24.92**	**50**	P	**P**	**04 36 01.8**	**+0.7**
	0.5nm,0.8s,baz=259,slow=8.9,SNR=6.4 0.5nm,0.8s						
YKA	**Yellowknife Ar**	**39.26**	**46**	P	**P**	**04 38 07.4**	**+1.0**
	0.3nm,0.5s,baz=300,slow=8.2,SNR=7.7 0.3nm,0.5s						
TXAR	**Lajitas Array**	**67.17**	**71**	P	**P**	**04 41 33.7**	**+1.4**
	0.2nm,0.6s,baz=290,slow=4.3,SNR=4.4 0.2nm,0.6s						

*IDC **27** 04:35:17.7±0.5, 37˚53N×138˚01E, h0km, mb4.2/23, mbtmp4.2/23, Error ellipse: s-maj=16.6km s-min=8.4km az=83.0*
*NEIC **27** 04:35:20.2±1.8, 37˚52N±0˚02×138˚08E±0˚07, h9km±4km, mb4.6/124, Error ellipse: s-maj=7.8km s-min=2.7km az=96.0*
*JMA **27** 04:35:20.7±0.1, 37˚6N±0˚1×138˚1E±0˚2, h27km, MD4.5/39, MV4.5/39, OFF S NIIGATA PREF*
JMA Felt II J1 at OFF S NIIGATA PREF .
ISC 27 04:35:20.3±1.0, **37˚52N**±0˚02×**138˚12E**±0˚02, **h15**km±6km, **n424**, σ1§**00**/426, **mb4.5**/87, **10D, Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJN	**Nakama**	**0.42**	**175**	⇓*i*P	**Pb**	**04 35 30.4**	**+0.9**
JJN				⇓*e*S	**Sb**	**04 35 37.5**	**+1.9**
JJN	**Nakama**	**0.42**	**175**	A	A	04 35 30.4	
	comp=E,124nm,0.6s,comp=E,66nm,0.6s						
JIZZ	**Izumozaki**	**0.47**	**88**	⇓*i*P	**Pb**	**04 35 30.7**	**+0.3**
JIZZ				⇓*e*S	**Sb**	**04 35 37.5**	**+0.3**
JIZZ	**Izumozaki**	**0.47**	**88**	A	A	04 35 30.7	
	comp=E,69nm,0.3s,comp=E,128nm,0.3s						
JSD	**Sado**	**0.53**	**12**		**Pg**	**04 35 30.5**	**-0.3**
JSD				Sg	**Sg**	**04 35 37.4**	**-0.5**
JSD	**Sado**	**0.53**	**12**	*i* P	**Pg**	**04 35 30.6**	**-0.1**
JSD				S	**Sg**	**04 35 37.6**	**-0.2**
JSD	**Sado**	**0.53**	**12**	A	A	04 35 30.6	
	comp=E,52nm,0.5s,comp=E,24nm,0.3s						
JSZ	**Suzu**	**0.60**	**263**	*i* P	**Pb**	**04 35 32.4**	**-0.2**
JSZ				S	**Sb**	**04 35 40.8**	**-0.1**
JSZ	**Suzu**	**0.60**	**263**	A	A	04 35 32.4	
	comp=E,41nm,0.4s,comp=E,57nm,0.8s						
JUON	**Uonuma**	**0.81**	**112**	*i* P	**Pg**	**04 35 35.7**	**-0.3**
JUON				*e*S	**Sg**	**04 35 46.8**	**+0.1**
JUON	**Uonuma**	**0.81**	**112**	A	A	04 35 35.7	
	comp=E,12nm,0.2s,comp=E,8.0nm,0.2s						
MJB9	**Matsu-Tunnel**	**0.97**	**176**		**Pg**	**04 35 38.8**	**-0.4**
MJB9				Sg	**Sg**	**04 35 51.7**	**-0.2**
MAJO	**Matsushiro**	**0.98**	**176**	Pg	**Pg**	**04 35 38.8**	**-0.4**
MAJO				Sg	**Sg**	**04 35 51.9**	**-0.1**
MAJO	**Matsushiro**	**0.98**	**176**	P	**Pg**	**04 35 38.8**	**-0.4**
MAJO						04 35 51.9	
MAT	**Matsushiro**	**0.98**	**176**	*i* P	**Pg**	**04 35 38.8**	**-0.4**
MAT				S	**Sb**	**04 35 52.4**	**+0.7**
MJAR	**Matsushiro Arr**	**0.98**	**176**	Pg	**Pg**	**04 35 37.9**	**-1.4**
	50nm,0.3s,baz=10,slow=18,SNR=278						
MJAR				Lg	Lg	04 35 51.6	
	75nm,0.3s,baz=9.4,slow=13,SNR=11						
MJAR	**Matsushiro Arr**	**0.98**	**176**	Pg	**Pg**	**04 35 37.5**	**-1.7**
MJAR	**Matsushiro Arr**	**0.98**	**176**	P	**Pg**	**04 35 37.9**	**-1.4**
JNS	**Sasagawa**	**1.00**	**72**	*i* P	**Pg**	**04 35 38.8**	**-0.9**
JNS				S	**Sg**	**04 35 52.2**	**-0.6**
JNS	**Sasagawa**	**1.00**	**72**	A	A	04 35 38.8	
	comp=E,25nm,0.3s,comp=E,66nm,0.4s						
JHG	**Hegura jima**	**1.00**	**289**	⇓*i*P	**Pg**	**04 35 38.5**	**-1.2**
JHG				⇓S	**Sb**	**04 35 52.1**	**-0.4**
JHG	**Hegura jima**	**1.00**	**289**	A	A	04 35 38.5	
	comp=E,22nm,1.6s,comp=E,15nm,1.0s						
JTT	**Ttatey**	**1.11**	**215**	*i* P	**Pg**	**04 35 40.8**	**-0.9**
JNG	**Nsakai**	**1.11**	**181**	A	A	04 35 41.2	
	comp=E,6.0nm,1.2s,comp=E,4.0nm,1.8s						
JKT	**Katashina**	**1.18**	**129**	⇓*i*P	**Pb**	**04 35 42.2**	**-0.2**
JKT				⇓*e*S	**Sb**	**04 35 57.8**	**+0.2**
JKT	**Katashina**	**1.18**	**129**	A	A	04 35 42.2	
	comp=E,31nm,0.4s,comp=E,33nm,0.6s						
JJH	**Hakui**	**1.22**	**241**	A	A	04 35 42.4	
	comp=E,10.0nm,2.7s,comp=E,7.0nm,0.4s						
JFY	**Yanaizu**	**1.27**	**95**	S	**Sb**	**04 36 00.1**	**-0.1**
JFY	**Yanaizu**	**1.27**	**95**	A	A	04 36 00.1	
	comp=E,7.0nm,0.9s,comp=E,10.0nm,0.5s						
JAW	**Awa shima**	**1.29**	**43**	S	**Sb**	**04 36 00.7**	**-0.1**
JAW	**Awa shima**	**1.29**	**43**	A	A	04 36 00.7	
	comp=E,5.0nm,2.8s						
JAG	**Ashikaga**	**1.53**	**135**	A	A	04 35 47.5	
	comp=E,7.0nm,0.7s,comp=E,6.0nm,0.9s						
JSB	**Shiboa**	**1.54**	**110**	A	A	04 35 47.4	
	comp=E,39nm,0.9s,comp=E,26nm,1.5s						
JRY	**Ryogami san**	**1.63**	**157**	A	A	04 35 49.0	
	comp=E,8.0nm,1.6s,comp=E,9.0nm,1.1s						
JYA	**Atsumi**	**1.66**	**49**	A	A	04 35 48.4	
	comp=E,18nm,0.8s,comp=E,11nm,0.3s						
JYAR	**Yonezawaarcadi**	**1.66**	**76**	A	A	04 35 48.8	
	comp=E,30nm,0.6s,comp=E,77nm,1.3s						
JYS	**Shirataka**	**1.69**	**65**	A	A	04 35 49.2	
	comp=E,9.0nm,2.4s,comp=E,9.0nm,3.8s						
JFT	**Otama**	**1.77**	**89**	A	A	04 35 50.5	
	comp=E,17nm,1.3s,comp=E,19nm,0.6s						
JGF	**Kuroka**	**2.01**	**198**		**Pn**	**04 35 54.5**	**+0.7**
JYT	**Yasato**	**2.11**	**127**		**Pn**	**04 35 55.6**	**+0.5**
JMM	**Marumori**	**2.15**	**80**		**Pn**	**04 35 55.7**	**0.0**
INU	**Inuyama**	**2.34**	**203**	Pn	**Pb**	**04 36 01.3**	**-0.9**
JTM	**Tenmabayashi**	**3.99**	**34**	Pn	**Pn**	**04 36 21.9**	**+1.0**
JHJ	**Hachijo jima 2**	**4.60**	**162**	Pn	**Pn**	**04 36 32.9**	**+3.5**
	53nm,0.3s,baz=37,slow=3.0,SNR=14						
JHJ2	**Mitsune**	**4.61**	**162**	Pn	**Pn**	**04 36 32.1**	**+2.6**
JHS	**Saijyo**	**4.76**	**240**	Pn	**Pn**	**04 36 33.5**	**+1.9**
JEW	**Eniwo**	**5.90**	**25**	Pn	**Pn**	**04 36 51.0**	**+3.9**
ERM	**Erimo**	**5.94**	**39**	Pn	**Pn**	**04 36 50.0**	**+2.3**
ERM	**Erimo**	**5.94**	**39**	P	**Pn**	**04 36 50.0**	**+2.3**
SEHB	**SEOHWA**	**7.83**	**278**	Pn	**Pn**	**04 37 14.8**	**+1.0**
KSRS	**Korea Array**	**8.10**	**273**	Pn	**Pn**	**04 37 19.6**	**+2.2**
	2.3nm,0.3s,baz=87,slow=14,SNR=12						
KSCHJ	**Chungju**	**8.12**	**269**	Pn	**Pn**	**04 37 18.7**	**+1.0**
USRK	**Ussuriysk Ar.**	**8.13**	**327**	Pn	**Pn**	**04 37 20.9**	**+3.1**
	0.4nm,0.3s,baz=141,slow=42,SNR=3.8						
KSAR	**Wonju Array Be**	**8.13**	**273**	Pn	**Pn**	**04 37 18.8**	**+0.9**
KSAR	**Wonju Array Be**	**8.13**	**273**	P	**Pn**	**04 37 18.8**	**+0.9**
KS19	**Wonju Array Si**	**8.15**	**273**	Pn	**Pn**	**04 37 19.6**	**+1.5**
YSS	**Yuzh-Sakhalins**	**10.03**	**19**	Pn	**Pn**	**04 37 45.8**	**+1.9**
YSS	**Yuzh-Sakhalins**	**10.03**	**19**	*e*P	**Pn**	**04 37 46.3**	**+2.4**
YSS				pmax	pmax		
	comp=Z,50nm,0.9s						
BJI	**Beijing**	**17.29**	**285**	P	**P**	**04 39 24.3**	**+1.8**
BJI				S	**Sn**	**04 42 37.5**	**+4.3**
BJI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BJT	**Baijiatuan**	**17.29**	**285**		**P**	**04 39 23.4**	**+0.8**
BJT	**Baijiatuan**	**17.29**	**285**	P	**P**	**04 39 23.4**	**+0.8**
BJT				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HIA	**Hailar**	**17.73**	**317**		**P**	**04 39 29.6**	**+2.2**
HIA	**Hailar**	**17.73**	**317**	P	**P**	**04 39 29.6**	**+2.2**
HIA				pmax	pmax		
	comp=Z,12nm,1.1s						
ZEA	**Zeya**	**17.88**	**339**	*e*P	P	04 39 37.3	+8.4
HNS	**HongShan**	**18.58**	**277**	⇓P	**Pn**	**04 39 39.3**	**+2.2**
HNS				S	**S**	**04 43 12.3**	**+4.1**
HNS				pmax	pmax		
	comp=Z,11nm,0.7s						
HNS				LR	LR		
	comp=N,230nm,10.8s						
HNS				LR	LR		
	comp=E,1μm,13.1s						
HNS				LR	LR		
	comp=Z,1μm,13.1s						
PETK	**Petropavlovsk-**	**20.69**	**35**	P	**P**	**04 40 00.7**	**+0.9**
	comp=Z,6.4nm,0.9s,baz=222,slow=2.0,SNR=7.6 comp=Z,6.4nm,0.9s						
PETK	**Petropavlovsk-**	**20.69**	**35**	P	**P**	**04 40 00.3**	**+0.5**
PETK	**Petropavlovsk-**	**20.69**	**35**	P	**P**	**04 40 00.7**	**+0.9**
MA2	**Magadan**	**23.53**	**16**	P	**P**	**04 40 30.7**	**+1.0**
	comp=Z,8.7nm,0.6s,baz=143,slow=20,SNR=4.1 comp=Z,8.7nm,0.6s						
MA2	**Magadan**	**23.53**	**16**	P	**P**	**04 40 30.7**	**+1.0**
XAN	**Xi'an**	**23.89**	**270**	*e*P	**P**	**04 40 29.3**	**-4.3**
XAN				pP	sP	04 40 40.5	+1.2
XAN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ENH	**Enshi**	**24.77**	**262**	P	**P**	**04 40 40.3**	**-1.3**
ENH				IAmb	IAmb	04 40 49.3	
	comp=Z,6.6nm,0.6s						
ULN	**Ulaanbaatar**	**24.91**	**304**	P	**P**	**04 40 41.3**	**-1.6**
ULN	**Ulaanbaatar**	**24.91**	**304**	P	**P**	**04 40 41.3**	**-1.6**
ULN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
SONM	**Songino Array**	**25.33**	**304**	P	**P**	**04 40 46.0**	**-0.7**
	comp=Z,2.8nm,0.9s,baz=97,slow=10,SNR=6.3 comp=Z,2.8nm,0.9s						
SONM	**Songino Array**	**25.33**	**304**	P	**P**	**04 40 46.0**	**-0.7**
SONM	**Songino Array**	**25.33**	**304**	P	**P**	**04 40 46.0**	**-0.7**
SEY	**Seymchan**	**26.90**	**14**	P	**P**	**04 41 00.1**	**-0.4**
	comp=Z,5.7nm,0.8s,baz=197,slow=6.6,SNR=11 comp=Z,5.7nm,0.8s						
SEY	**Seymchan**	**26.90**	**14**	P	**P**	**04 41 00.1**	**-0.4**
TIXI	**Tiksi**	**34.53**	**355**	P	**P**	**04 42 06.5**	**-1.2**
	comp=Z,5.6nm,0.9s,baz=88,slow=21,SNR=7.1 comp=Z,5.6nm,0.9s						
TIXI	**Tiksi**	**34.53**	**355**	P	**P**	**04 42 06.1**	**-1.6**
TIXI				IAmb	IAmb	04 42 07.5	
	comp=Z,10nm,1.2s						
TIXI	**Tiksi**	**34.53**	**355**	P	**P**	**04 42 06.5**	**-1.2**
WMQ	**Urumqi**	**38.27**	**296**	*e*P	**P**	**04 42 42.5**	**+2.4**
WMQ				LR	LR		
	comp=N,330nm,13.7s						
WMQ				LR	LR		
	comp=Z,250nm,12.3s						
ZALV	**Zalesovo Beam**	**39.64**	**312**	PcP	**PcP**	**04 44 57.2**	**-0.8**
	comp=Z,1.5nm,0.6s,baz=64,slow=3.4,SNR=4.4						
ZALV	**Zalesovo Beam**	**39.64**	**312**		**PcP**	**04 44 56.2**	**-1.8**
UNV	**Unalaska Valle**	**40.87**	**48**	P	**P**	**04 43 02.5**	**+1.0**
	baz=270						
MK31	**Makanchi Array**	**41.62**	**301**	P	**P**	**04 43 06.8**	**-1.0**
MK31	**Makanchi Array**	**41.62**	**301**	P	**P**	**04 43 06.8**	**-1.0**
MK31				pmax	pmax		
	comp=Z,1.0nm,1.0s						
MKAR	**Makanchi Array**	**41.62**	**301**	P	**P**	**04 43 06.8**	**-1.0**
	comp=Z,0.7nm,0.7s,baz=98,slow=8.7,SNR=6.0						
MKAR				PcP	**PcP**	**04 45 04.5**	**-0.2**
	comp=Z,1.3nm,0.9s,baz=54,slow=2.5,SNR=2.7 comp=Z,0.7nm,0.7s						
MKAR	**Makanchi Array**	**41.62**	**301**	P	**P**	**04 43 05.1**	**-2.8**
MKAR					**PcP**	**04 45 03.5**	**-1.2**
MKAR	**Makanchi Array**	**41.62**	**301**	P	**P**	**04 43 06.9**	**-1.0**
MKAR						04 45 04.5	
ANM	**Nome**	**42.57**	**32**	P	**P**	**04 43 15.8**	**+0.6**
	baz=259						
KURK	**Kurchatov**	**43.55**	**307**	P	**P**	**04 43 22.7**	**-0.7**
KURK	**Kurchatov**	**43.55**	**307**	P	**P**

Q19K **Cape Douglas,** 47.83 41 P P 04 43 56.8 -0.3
Q19K **Cape Douglas,** 47.83 41 P P 04 43 57.2 +0.1
baz=275
H21K **Melozitna Rive** 47.97 31 P P 04 43 58.7 +0.6
H21K **Melozitna Rive** 47.97 31 P P 04 43 58.4 +0.3
baz=270,SNR=5.6
PPLA **Purkeypile** 48.28 35 P P 04 44 02.1 +1.4
PPLA IAmb IAmb 04 44 05.9
comp=Z,6.6nm,1.0s
PPLA **Purkeypile** 48.28 35 P P 04 44 01.7 +0.9
baz=272
I21K **Tanana** 48.31 32 P P 04 44 01.7 +1.0
baz=271
KDAK **Kodiak Island** 48.50 42 P P 04 44 01.0 -1.2
comp=Z,4.0nm,0.6s,baz=269,slow=9.2,SNR=6.1
comp=Z,4.0nm,0.6s
KDAK **Kodiak Island** 48.50 42 P P 04 44 02.0 -0.3
KDAK **Kodiak Island** 48.50 42 P P 04 44 02.0 -0.3
KDAK pmax pmax
comp=Z,21nm,1.3s
H22K **Ishtalitna Cre** 48.55 31 P P 04 44 03.8 +1.1
baz=271,SNR=5.6
SKT **Skwentna** 48.64 36 P P 04 44 04.3 +1.0
baz=274
BPAW **Bear Paw Mtn.** 48.77 33 P P 04 44 05.4 +1.1
baz=272
MLY **Manley** 48.84 32 P P 04 44 05.7 +0.8
MLY IAmb IAmb 04 44 06.7
comp=Z,5.1nm,0.8s
MLY PcP PcP 04 45 29.6 +0.3
MLY **Manley** 48.84 32 P P 04 44 05.9 +1.0
baz=272,SNR=6.5
D23K **Nanushuk River** 48.85 27 P P 04 44 05.7 +0.8
baz=268
C23K **Itkillik River** 48.90 26 P P 04 44 06.2 +1.0
baz=268
TRF **Thorofare Moun** 49.11 34 P P 04 44 07.8 +0.6
baz=274
BRSE **Bradley Lake S** 49.23 39 P P 04 44 09.3 +1.4
baz=276
H23K **Yukon River** 49.31 31 P P 04 44 09.7 +1.2
H23K **Yukon River** 49.31 31 P P 04 44 09.7 +1.2
baz=272,SNR=14
I23K **Minto, Yukon-K** 49.42 32 P P 04 44 09.6 +0.4
I23K PcP PcP 04 45 31.8 +0.5
I23K **Minto, Yukon-K** 49.42 32 P P 04 44 09.6 +0.4
baz=273
D24K **Happy Valley** 49.52 27 P P 04 44 10.8 +0.8
baz=270
C24K **Franklin Bluff** 49.56 26 P P 04 44 10.6 +0.3
baz=270
RC01 **Rabbit Creek A** 49.57 37 P P 04 44 11.1 +0.6
baz=276
NEA2 **Nenana** 49.57 33 P P 04 44 10.6 +0.1
NEA2 IAmb IAmb 04 44 12.0
comp=Z,13nm,1.4s
NEA2 **Nenana** 49.57 33 P P 04 44 10.9 +0.5
baz=274,SNR=5.7
MCK **McKinley** 49.70 34 P P 04 44 11.7 +0.2
baz=275
RND **Reindeer** 49.76 34 P P 04 44 11.9 -0.1
RND IAmb IAmb 04 44 12.6
comp=Z,4.2nm,0.8s
RND **Reindeer** 49.76 34 P P 04 44 11.9 -0.1
RND pmax pmax
comp=Z,4.0nm,0.8s
PMR **Palmer** 49.81 37 P P 04 44 11.6 -0.7
baz=276
SEW **Seward** 49.83 39 P P 04 44 12.6 +0.2
baz=277
GHO **Glory Hole Cre** 49.89 36 P P 04 44 13.0 +0.1
MDM **Murphy Dome** 49.91 32 P P 04 44 13.5 +0.5
MDM IAmb IAmb 04 44 14.6
comp=Z,7.1nm,1.0s
WAT1 **Susitna Watana** 49.95 35 P P 04 44 12.4 -1.0
baz=276
H24K **Noodor Dome** 49.99 31 P P 04 44 14.0 +0.3
H24K IAmb IAmb 04 44 15.8
comp=Z,6.4nm,1.1s
H24K **Noodor Dome** 49.99 31 P P 04 44 14.9 +1.2
baz=274
CCB **Clear Creek Bu** 50.11 33 P P 04 44 16.3 +1.8
SML **Sawmill** 50.16 36 P P 04 44 14.7 -0.3
SML **Sawmill** 50.16 36 P P 04 44 15.4 +0.4
baz=277
POKR **Poker Plat Res** 50.23 32 P P 04 44 16.5 +1.1
POKR **Poker Plat Res** 50.23 32 P P 04 44 16.2 +0.8
baz=275
WAT6 **Susitna Watana** 50.35 35 P P 04 44 16.5 0.0
baz=277
M23K **Glacier View** 50.45 36 P P 04 44 17.0 -0.2
baz=277
DHY **Denali Highway** 50.46 35 P P 04 44 17.5 +0.2
DHY IAmb IAmb 04 44 18.2
comp=Z,3.3nm,0.7s
DHY **Denali Highway** 50.46 35 P P 04 44 17.3 0.0
baz=276
IL31 50.49 32 P P 04 44 17.4 0.0
ILAR **Eielson Array** 50.49 32 P P 04 44 17.1 -0.4
comp=Z,2.0nm,0.7s,baz=278,slow=6.4,SNR=31
comp=Z,2.0nm,0.7s
ILAR **Eielson Array** 50.49 32 P P 04 44 16.9 -0.6
ILAR **Eielson Array** 50.49 32 P P 04 44 17.1 -0.4
HDA **Harding Lake** 50.51 33 P P 04 44 17.1 -0.4
HDA IAmb IAmb 04 44 18.0
comp=Z,4.9nm,0.7s
HDA **Harding Lake** 50.51 33 P P 04 44 17.6 +0.1
baz=276
SCM **Sheep Creek Mo** 50.63 36 P P 04 44 18.3 -0.3
SCM IAmb IAmb 04 44 19.0
comp=Z,12nm,1.1s
SCM **Sheep Creek Mo** 50.63 36 P P 04 44 18.3 -0.3
SCM pmax pmax
comp=Z,12nm,1.1s
SCM **Sheep Creek Mo** 50.63 36 P P 04 44 18.9 +0.3
baz=278
M24K **Tolsona, Glenn** 51.13 36 P P 04 44 23.2 +0.8
M24K **Tolsona, Glenn** 51.13 36 P P 04 44 23.1 +0.8
baz=278
J25K **Salcha River,** 51.16 33 P P 04 44 22.3 -0.2
J25K **Salcha River,** 51.16 33 P P 04 44 22.8 +0.2
baz=277
BMAR **Burnt Mountain** 51.18 29 P P 04 44 23.7 +1.1
KLU **Klutina** 51.34 37 P P 04 44 23.6 -0.3
KLU IAmb IAmb 04 44 24.9
comp=Z,6.5nm,0.6s
KLU **Klutina** 51.34 37 P P 04 44 24.6 +0.6
baz=279
Q23K **Middleton Isla** 51.48 39 P P 04 44 25.3 +0.4
baz=280
HARP **HAARP** 51.56 35 P P 04 44 26.4 +0.9
baz=279
SCRK **Sand Creek** 51.84 33 P P 04 44 27.3 -0.5
SCRK IAmb IAmb 04 44 28.4
comp=Z,6.1nm,1.0s
SCRK **Sand Creek** 51.84 33 P P 04 44 27.8 0.0
baz=279,SNR=5.3
DOT **Dot Lake** 51.86 34 P P 04 44 27.2 -0.5
J26L **Joseph Creek** 51.95 33 P P 04 44 28.4 0.0
baz=279
N25K **Chitina, Valde** 51.95 36 P P 04 44 29.0 +0.5
N25K IAmb IAmb 04 44 30.9
comp=Z,6.1nm,0.8s
N25K **Chitina, Valde** 51.95 36 P P 04 44 29.0 +0.5
baz=280
I26K **Coal Creek Min** 52.00 32 P P 04 44 28.8 +0.1
baz=278
BMRM **Bremner River** 52.06 37 P P 04 44 29.6 +0.2
BMRM **Bremner River** 52.06 37 P P 04 44 30.0 +0.7
baz=280
L26K **Log Cabin Wild** 52.28 34 P P 04 44 31.5 +0.6
baz=280
GLB **Gilahina Butte** 52.35 36 P P 04 44 31.2 -0.3
GLB IAmb IAmb 04 44 33.6
comp=Z,13nm,1.3s
M26K **Nabesna, AK** 52.55 35 P P 04 44 33.8 +0.8
M26K IAmb IAmb 04 44 34.8
comp=Z,8.3nm,1.2s
M26K **Nabesna, AK** 52.55 35 P P 04 44 33.9 +1.0
baz=281
VRDI **Verde Repeater** 52.56 37 P P 04 44 33.3 +0.1
K27K **Chicken** 52.67 33 P P 04 44 33.2 -0.4
K27K IAmb IAmb 04 44 35.2
comp=Z,5.9nm,1.2s
K27K **Chicken** 52.67 33 P P 04 44 34.3 +0.6
baz=280

MCARA **McCarthy VSAT** 52.73 36 P P 04 44 34.8 +0.6
MCARA **McCarthy VSAT** 52.73 36 P P 04 44 35.0 +0.8
baz=281
L27K **Beaver Creek,** 52.96 34 P P 04 44 36.6 +0.7
L27K IAmb IAmb 04 44 37.8
comp=Z,4.9nm,0.8s
L27K **Beaver Creek,** 52.96 34 P P 04 44 36.8 +0.9
baz=281,SNR=5.9
BCAR **Beaver Creek A** 52.97 34 P P 04 44 36.9 +0.8
M27K **Edge Creek, AK** 53.07 35 P P 04 44 37.6 +0.8
M27K IAmb IAmb 04 44 38.5
comp=Z,7.8nm,0.9s
M27K **Edge Creek, AK** 53.07 35 P P 04 44 37.7 +0.8
baz=282
CTG **Chitna Glacier** 53.62 37 P P 04 44 41.2 +0.3
baz=283
DAWY **Dawson** 53.82 33 P P 04 44 42.6 +0.4
baz=282
YUK3 **Moose Creek** 53.85 36 P P 04 44 43.1 +0.4
baz=283
I29M **Ogilvie Camp,** 53.99 31 P P 04 44 44.3 +0.9
baz=282,SNR=5.3
EPYK **Eagle Plains** 54.41 30 P 04 44 47.4 +0.9
EPYK **Eagle Plains** 54.41 30 P P 04 44 47.4 +0.9
baz=283,SNR=9.2
YUK4 **Talbot Arm** 54.80 36 P P 04 44 50.6 +1.0
baz=285
YUK6 **Outpost Mounta** 55.03 36 P P 04 44 51.9 +0.6
baz=286
INK **Inuvik** 55.15 27 P P 04 44 51.8 +0.1
comp=Z,2.9nm,0.7s,baz=296,slow=8.5,SNR=5.7
comp=Z,2.9nm,0.7s
INK **Inuvik** 55.15 27 P P 04 44 52.1 +0.4
INK IAmb IAmb 04 44 52.4
comp=Z,3.2nm,0.7s
INK **Inuvik** 55.15 27 P P 04 44 52.1 +0.4
INK pmax pmax
comp=Z,3.0nm,0.7s
INK **Inuvik** 55.15 27 P P 04 44 51.9 +0.2
baz=284
M30M **Minto, Yukon** 55.32 34 P P 04 44 53.9 +0.7
M30M **Minto, Yukon** 55.32 34 P P 04 44 54.0 +0.9
baz=286
HYT **Haines Junctio** 55.47 36 P P 04 44 55.4 +1.0
HYT IAmb IAmb 04 44 57.2
comp=Z,5.3nm,0.9s
HYT **Haines Junctio** 55.47 36 P P 04 44 53.9 -0.5
baz=286
N30M **Aishikik Lake** 55.49 35 P P 04 44 54.2 -0.2
baz=286
ABKAR **Akbulak array** 55.60 309 P P 04 44 54.1 -1.2
P30M **Million Dollar** 55.93 37 P P 04 44 57.2 -0.4
baz=287
PLBC **Pleasant Camp** 56.42 38 P P 04 45 01.6 +0.7
baz=288
WHY **Whitehorse** 56.75 36 P P 04 45 03.8 +0.3
baz=288
A36M **Sachs Harbour** 56.79 22 P P 04 45 03.5 +0.2
baz=289
WB0 **Warramunga Arr** 57.09 184 P P 04 45 05.3 -0.8
WB0 IAmb IAmb 04 45 14.1
comp=Z,5.3nm,0.8s
WB2 **Warramunga Arr** 57.26 184 P P 04 45 06.0 -1.3
WB2 IAmb IAmb 04 45 15.1
comp=Z,5.9nm,0.8s
WRA **Warramunga Arr** 57.26 184 P P 04 45 06.6 -0.7
comp=Z,2.6nm,0.8s,baz=357,slow=7.4,SNR=26
comp=Z,2.6nm,0.8s
WRA **Warramunga Arr** 57.26 184 P P 04 45 05.7 -1.6
WRA **Warramunga Arr** 57.26 184 P P 04 45 05.7 -1.6
WR0 **Warramunga Arr** 57.27 184 P P 04 45 06.0 -1.3
WR0 IAmb IAmb 04 45 14.7
comp=Z,6.2nm,0.8s
C36M **Paulatuk** 58.09 24 P P 04 45 12.5 -0.1
C36M **Paulatuk** 58.09 24 P P 04 45 12.9 +0.3
baz=292
EUNU **Eureka** 60.09 8 P P 04 45 25.0 -1.5
EUNU IAmb IAmb 04 45 26.4
comp=Z,4.7nm,0.8s
ASAR **Alice Springs** 60.99 184 P P 04 45 32.0 -1.1
comp=Z,0.7nm,0.7s,baz=13,slow=9.9,SNR=7.9
comp=Z,0.7nm,0.7s
ASAR **Alice Springs** 60.99 184 P P 04 45 32.0 -1.1
ARCES **ARCESS Array B** 62.60 339 P P 04 45 43.7 +0.2
comp=Z,1.0nm,0.8s,baz=57,slow=7.5,SNR=4.2
comp=Z,1.0nm,0.8s
ARCES **ARCESS Array B** 62.60 339 P P 04 45 43.7 +0.2
RES **Resolute Bay** 62.77 14 P P 04 45 43.8 -0.7
RES **Resolute Bay** 62.77 14 P P 04 45 43.8 -0.7
RES pmax pmax
comp=Z,8.0nm,1.2s
YKA **Yellowknife Ar** 64.69 29 P P 04 45 56.5 -0.8
comp=Z,0.8nm,0.7s,baz=306,slow=6.7,SNR=13
comp=Z,0.8nm,0.7s
YKA **Yellowknife Ar** 64.69 29 P P 04 45 57.4 0.0
YKA **Yellowknife Ar** 64.69 29 P P 04 45 57.4 0.0
FINES **FINESS Array B** 67.14 331 P P 04 46 12.0 -1.1
comp=Z,1.6nm,0.7s,baz=210,slow=8.0,SNR=2.3
comp=Z,1.6nm,0.7s
FINES **FINESS Array B** 67.14 331 P P 04 46 12.4 -0.7
FINES **FINESS Array B** 67.14 331 P P 04 46 12.4 -0.7
PGC **Sidney** 67.88 45 P P 04 46 18.5 +0.5
SUMG **Summit** 70.17 359 P P 04 46 31.8 -0.6
SUMG **Summit** 70.17 359 P P 04 46 31.8 -0.6
SUMG pmax pmax
comp=Z,5.0nm,0.6s
SUMG **Summit** 70.17 359 *i* P P 04 46 31.0 -1.4
LTY **Liberty** 70.20 45 P P 04 46 32.2 -0.4
LTY IAmb IAmb 04 46 54.8
comp=Z,6.4nm,1.4s
KEBM **Edson Butte** 70.47 51 P P 04 46 35.5 +1.2
J01E **Myrtle Point** 70.56 50 P P 04 46 35.5 +0.8
baz=304
K02D **Willamette Mer** 70.98 51 P P 04 46 38.3 +0.9
baz=304
I04A **Tendick Farm,** 71.13 49 P P 04 46 39.3 +1.0
baz=304
L02F **Cave Junction** 71.36 51 P P 04 46 41.1 +1.4
baz=304
I05D **Terrebonne, OR** 71.46 48 P P 04 46 41.6 +1.3
baz=305
HUMO **Hull Mountain** 71.46 50 P P 04 46 41.5 +1.2
HUMO IAmb IAmb 04 46 57.5
comp=Z,6.1nm,1.3s
NEW **Newport** 71.59 43 P P 04 46 41.8 +0.9
baz=306
J04D **Umpqua Nationa** 71.62 49 P P 04 46 42.9 +1.4
J04D **Umpqua Nationa** 71.62 49 P P 04 46 42.7 +1.3
baz=304
PINE **Pine Mountain** 72.01 48 P P 04 46 44.4 +0.6
L04D **Klamath Falls** 72.08 50 P P 04 46 44.6 +0.4
L04D **Klamath Falls** 72.08 50 P P 04 46 45.2 +1.0
baz=305
YBH **Yreka Blue Hor** 72.10 51 P P 04 46 45.4 +1.1
YBH **Yreka Blue Hor** 72.10 51 P P 04 46 45.4 +1.1
YBH pmax pmax
comp=Z,3.0nm,1.0s
J05D **Fort Rock, OR** 72.12 49 P P 04 46 45.7 +1.3
baz=305
AKASG **Malin Array Be** 72.28 321 P P 04 46 44.0 -1.0
comp=Z,1.2nm,0.5s,baz=45,slow=5.8,SNR=12
comp=Z,1.2nm,0.5s
AKASG **Malin Array Be** 72.28 321 P P 04 46 44.0 -1.0
K05A **Summer Lake** 72.65 49 P P 04 46 48.8 +1.2
NB2 **NORSAR Subarra** 72.70 336 P P 04 46 46.4 -1.0
comp=Z,3.0nm,0.9s,baz=38,slow=6.2
NOA **NORSAR Array B** 72.70 336 P P 04 46 47.0 -0.3
comp=Z,1.9nm,0.9s,baz=41,slow=6.0,SNR=6.5
comp=Z,1.9nm,0.9s
NOA **NORSAR Array B** 72.70 336 P P 04 46 47.1 -0.3
WALA **Waterton Lakes** 72.82 41 P P 04 46 50.4 +2.0
JTMT **Jette** 73.43 42 P P 04 46 52.5 +0.4
JTMT IAmb IAmb 04 46 53.6
comp=Z,4.2nm,0.9s
BMO **Blue Mountains** 73.51 46 P P 04 46 52.5 0.0
BMO **Blue Mountains** 73.51 46 P P 04 46 52.5 0.0
BMO pmax pmax
comp=Z,3.0nm,1.1s
J08A **Circle Bar Ran** 73.72 48 P P 04 46 53.5 -0.3
J08A IAmb IAmb 04 46 55.7
comp=Z,3.0nm,0.6s
WVOR **Wild Horse Val** 74.17 49 P P 04 46 56.8 +0.3
WVOR IAmb IAmb 04 46 58.3
comp=Z,7.4nm,1.5s
WVOR **Wild Horse Val** 74.17 49 P P 04 46 56.8 +0.3
WVOR pmax pmax

comp=Z,7.0nm,1.5s
MSO **Missoula** 74.17 43 P P 04 46 56.8 +0.4
baz=308
BEKR **Beckworth** 74.64 51 P P 04 46 59.8 +0.5
BEKR IAmb IAmb 04 47 00.7
comp=Z,5.3nm,0.8s
PAHR **Pah Rah Range** 75.34 51 P P 04 47 04.0 +0.6
PAHR IAmb IAmb 04 47 04.8
comp=Z,4.8nm,0.9s
HRY **Holter Researc** 75.38 42 P P 04 47 03.3 -0.1
LRM **Limekiln Ridge** 75.61 43 P P 04 47 05.4 +0.5
EGMT **Eagleton** 75.62 40 P P 04 47 05.0 +0.2
baz=311
HLID **Hailey** 75.94 46 P P 04 47 07.3 +0.5
baz=309
BOZ **Bozeman (W)** 76.20 43 P P 04 47 09.0 +0.8
BOZ **Bozeman (W)** 76.20 43 P P 04 47 09.0 +0.8
BOZ pmax pmax
comp=Z,3.0nm,0.8s
BOZ **Bozeman (W)** 76.20 43 P P 04 47 09.0 +0.8
baz=310,SNR=6.4
KVN **Kaiserville** 76.53 51 P P 04 47 11.3 +1.1
KVN IAmb IAmb 04 47 12.0
comp=Z,6.7nm,0.9s
KVN **Kaiserville** 76.53 51 P P 04 47 11.3 +1.1
KVN pmax pmax
comp=Z,7.0nm,0.9s
BRTR **Keskin Array B** 76.54 310 P P 04 47 10.6 +0.4
comp=Z,0.7nm,0.7s,baz=358,slow=11,SNR=1.4
comp=Z,0.7nm,0.7s
BRTR **Keskin Array B** 76.54 310 P P 04 47 10.6 +0.4
NVAR **Mina Array Bea** 76.78 52 P P 04 47 12.7 +1.1
comp=Z,3.1nm,0.8s,baz=284,slow=5.6,SNR=22
comp=Z,3.1nm,0.8s
NVAR **Mina Array Bea** 76.78 52 P P 04 47 12.8 +1.2
NV11 **Mina Array Sit** 76.87 52 P P 04 47 13.1 +1.0
NV11 IAmb IAmb 04 47 30.8
comp=Z,5.3nm,1.4s
YHL **Hebgen Lake** 76.92 43 P P 04 47 14.0 +1.5
YHL IAmb IAmb 04 47 14.2
comp=Z,3.3nm,0.9s
MLAC **Mammoth, Mammo** 76.93 53 P P 04 47 13.1 +0.5
baz=308
H17A **Grant Village** 77.54 43 P P 04 47 17.9 +1.9
baz=311
RLMT **Red Lodge** 77.77 42 P P 04 47 18.2 +1.1
RLMT IAmb IAmb 04 47 19.1
comp=Z,2.4nm,0.7s
RLMT **Red Lodge** 77.77 42 P P 04 47 18.0 +0.9
baz=311
HVU **Hansel Valley** 78.00 46 P P 04 47 19.7 +1.3
HVU IAmb IAmb 04 47 20.2
comp=Z,3.5nm,0.8s
HVU **Hansel Valley** 78.00 46 P P 04 47 19.7 +1.3
HVU pmax pmax
comp=Z,4.0nm,0.8s
CWC **Cottonwood Cre** 78.13 53 P P 04 47 19.0 -0.2
baz=308
GRAC **Grapevine Rang** 78.24 52 P P 04 47 21.0 +1.4
baz=308
MORC **Moravsky Berou** 78.49 325 *eP* P 04 47 21.2 +0.4
R11A **Troy Canyon, C** 78.51 50 P P 04 47 21.7 +0.5
R11A **Troy Canyon, C** 78.51 50 P P 04 47 22.2 +0.9
baz=309,SNR=7.3
MPMC **Manual Prospec** 78.74 53 P P 04 47 23.4 +0.7
baz=308
FURC **Furnace Creek,** 78.89 53 P P 04 47 24.3 +1.2
baz=309
TPNV **Topopah Spring** 78.97 52 P P 04 47 24.1 +0.3
TPNV **Topopah Spring** 78.97 52 P P 04 47 24.1 +0.3
TPNV pmax pmax
comp=Z,2.0nm,1.0s
TPNV **Topopah Spring** 78.97 52 P P 04 47 24.6 +0.7
baz=309,SNR=5.7
DUG **Dugway, Tooele** 79.00 48 P P 04 47 25.1 +1.2
DUG IAmb IAmb 04 47 25.8
comp=Z,3.6nm,0.9s
DUG **Dugway, Tooele** 79.00 48 P P 04 47 25.1 +1.2
DUG pmax pmax
comp=Z,4.0nm,0.9s
DUG **Dugway, Tooele** 79.00 48 P P 04 47 25.0 +1.1
baz=310,SNR=5.3
JAVC **Velka Javorina** 79.09 325 *eP* P 04 47 25.6 +1.5
EDW2 **Edwards Air Fo** 79.15 54 P P 04 47 25.5 +0.8
baz=308
SNCC **San Nicolas Is** 79.15 56 P P 04 47 24.3 -0.3
baz=308
BW06 **Boulder Array** 79.17 44 P P 04 47 25.5 +0.6
BW06 **Boulder Array** 79.17 44 P P 04 47 25.6 +0.6
baz=312,SNR=6.2
PD31 **Pinedale Array** 79.17 44 P P 04 47 25.9 +0.9
PDAR **Pinedale Array** 79.17 44 P P 04 47 25.2 +0.3
comp=Z,2.5nm,0.6s,baz=274,slow=1.9,SNR=42
comp=Z,2.5nm,0.6s
GWY **Greenwater Val** 79.18 53 P P 04 47 26.2 +1.2
QSM **Queen of Sheba** 79.19 53 P P 04 47 26.0 +1.1
QSM IAmb IAmb 04 47 26.5
comp=Z,7.2nm,1.1s
VRAC **Vranov** 79.25 325 *eP* P 04 47 24.9 -0.1
CLL **Collm** 79.34 329 *i* P P 04 47 24.9 -0.4
CLL pmax pmax
comp=Z,4.0nm,0.9s
CLL **Collm** 79.34 329 *i* P P 04 47 24.9 -0.4
comp=Z,4.0nm,0.9s
NLU **North Lily Min** 79.58 47 P P 04 47 27.8 +0.6
GSC **Goldstone, Bar** 79.65 53 P P 04 47 28.0 +0.5
baz=309
MPU **Maple Canyon** 79.80 47 P P 04 47 29.1 +0.7
MPU IAmb IAmb 04 47 30.0
comp=Z,4.5nm,0.9s
SHPR **Sheep Range** 79.93 52 P P 04 47 30.1 +1.0
TUQ **Turquoise Moun** 80.12 53 P P 04 47 30.8 +0.7
baz=309
CCUT **Cedar City** 80.37 50 P P 04 47 32.4 +0.9
MSU **Marysvale** 80.46 48 P P 04 47 32.5 +0.5
MSU **Marysvale** 80.46 48 P P 04 47 32.5 +0.5
ULM **Lac du Bonnet** 80.51 32 P P 04 47 30.6 -1.2
comp=Z,3.8nm,0.8s,baz=285,slow=7.4,SNR=3.6
comp=Z,3.8nm,0.8s
ULM **Lac du Bonnet** 80.51 32 P 04 47 31.5 -0.2
ULM IAmb IAmb 04 47 31.9
comp=Z,5.2nm,0.8s
ULM **Lac du Bonnet** 80.51 32 P P 04 47 31.5 -0.2
ULM pmax pmax
comp=Z,5.0nm,0.9s
MDND **Maddock** 80.67 35 P P 04 47 32.7 +0.1
baz=317
P17A **Butcher Ranch,** 80.68 47 P P 04 47 34.0 +0.9
P17A IAmb IAmb 04 47 34.9
comp=Z,6.6nm,0.9s
GMRC **Granite Mounta** 80.70 53 P P 04 47 33.8 +0.6
baz=310
KHC **Kasperske Hory** 80.72 327 P P 04 47 32.5 -0.4
KHC **Kasperske Hory** 80.72 327 *eP* P 04 47 32.5 -0.4
KHC **Kasperske Hory** 80.72 327 *eP* P 04 47 32.5 -0.4
LCMT **Little Creek M** 80.79 50 P P 04 47 34.4 +0.8
P18A **Preston Nutter** 80.86 47 P P 04 47 34.3 0.0
P18A IAmb IAmb 04 47 36.6
comp=Z,3.9nm,0.8s
GERES **GERESS Array B** 80.88 326 P P 04 47 33.1 -0.8
comp=Z,0.6nm,0.5s,baz=16,slow=1.9,SNR=9.2
comp=Z,0.6nm,0.5s
GERES **GERESS Array B** 80.88 326 P P 04 47 33.1 -0.8
K22A **Casper** 80.90 42 P P 04 47 34.4 +0.3
baz=313
PFO **Pinyon Flats O** 80.93 55 P P 04 47 34.3 -0.1
baz=309
TPFO **Pinon Flats** 80.94 55 P P 04 47 34.4 -0.1
baz=309
BELC **Belle Mtn. Jos** 80.98 54 P P 04 47 34.9 +0.1
baz=309
SRU **San Rafael Swe** 81.04 47 P P 04 47 34.1 -0.9
SRU IAmb IAmb 04 47 36.9
comp=Z,4.3nm,0.7s
SRU **San Rafael Swe** 81.04 47 P P 04 47 34.1 -0.9
SRU pmax pmax
comp=Z,4.0nm,0.7s
RSSD **Black Hills** 81.19 40 P P 04 47 35.5 -0.2
RSSD IAmb IAmb 04 47 36.7
comp=Z,8.2nm,1.4s
RSSD **Black Hills** 81.19 40 P P 04 47 35.5 -0.2
RSSD pmax pmax
comp=Z,8.0nm,1.4s
RSSD **Black Hills** 81.19 40 P P 04 47 35.5 -0.2
baz=315
DIVS **Divibare** 81.34 320 P P 04 47 35.4 -1.0

BC3	Big Chuckawall	81.55	54	P		P	04 47 38.1	+0.4
	baz=310							
O20A	White River Ci	81.67	45	P		P	04 47 38.5	+0.2
	baz=313							
U15A	North Rim	81.75	50	P		P	04 47 39.6	+0.7
U15A				IAmb		IAmb	04 47 41.1	
	comp=Z,5.4nm,1.0s							
IKP	In-Ko-Pah, Jac	81.76	55	P		P	04 47 39.8	+1.0
	baz=310							
PDMCI	Parker Dam,Lak	81.97	53	P		P	04 47 40.5	+0.7
	baz=310							
AGMN	Agassiz Nation	82.00	33	P		P	04 47 39.1	-0.6
	baz=320							
PV23	Carpenter Ridg	82.36	47	P		P	04 47 41.9	-0.2
PV23				IAmb		IAmb	04 47 43.8	
	comp=Z,5.2nm,0.8s							
PV10	Paradox Valley	82.40	47	P		P	04 47 43.1	+0.8
PHWY	Pilot Hill	82.41	43	P		P	04 47 42.9	+0.5
PHWY				IAmb		IAmb	04 47 48.6	
	comp=Z,3.1nm,0.8s							
PV11	David Mesa, Pa	82.55	47	P		P	04 47 42.7	-0.2
PV11				IAmb		IAmb	04 47 51.7	
	comp=Z,5.1nm,0.8s							
PV13	Radium Mtn., P	82.67	47	P		P	04 47 44.1	+0.4
PV13				IAmb		IAmb	04 47 45.5	
	comp=Z,4.5nm,0.8s							
WUAZ	Wupatki	82.91	50	P		P	04 47 45.7	+0.8
	baz=312							
BMRD	Maredsous	83.38	332	*d*P		P	04 47 45.6	-1.1
SUSD	Miller	83.48	37	P		P	04 47 46.9	-0.5
SUSD	Miller	83.48	37	P		P	04 47 47.9	+0.4
	baz=318							
MVCO	Mesa Verde	83.50	48	P		P	04 47 48.4	+0.4
MVCO				IAmb		IAmb	04 47 49.2	
	comp=Z,3.6nm,0.8s							
MVCO	Mesa Verde	83.50	48	P		P	04 47 48.8	+0.8
	baz=313							
X16A	Lo Mia Camp, P	83.59	51	P		P	04 47 49.0	+0.5
X16A				IAmb		IAmb	04 47 50.6	
	comp=Z,4.8nm,1.1s							
S22A	4UR Ranch, Cre	84.10	46	P		P	04 47 52.0	+0.8
	baz=314							
Q24A	Divide	84.21	44	P		P	04 47 52.2	+0.5
	baz=315							
214A	Organ Pipe Nat	84.34	54	P		P	04 47 52.6	+0.5
	baz=311							
X18A	Snowflake	84.44	50	P		P	04 47 53.4	+0.7
X18A				IAmb		IAmb	04 47 54.5	
	comp=Z,3.0nm,1.0s							
OGNE	Ogallala	84.48	41	P		P	04 47 53.2	+0.4
	baz=316							
SDCO	Great Sand Dun	84.86	45	P		P	04 47 55.3	+0.4
SDCO	Great Sand Dun	84.86	45	P		P	04 47 55.3	+0.4
	baz=314							
K31A	O'Neill	84.93	38	P		P	04 47 54.1	-0.7
ECSD	EROS Data Cent	85.13	36	P		P	04 47 56.0	+0.1
	baz=320							
TUC	Tucson	85.40	52	P		P	04 47 58.4	+0.9
	baz=312							
T25A	Trinidad	85.90	45	P		P	04 48 00.9	+0.8
	baz=315							
ANMO	Albuquerque	86.25	48	P		P	04 48 02.7	+0.9
	baz=314							
121A	Cookes Peak, D	87.11	51	P		P	04 48 06.5	+0.4
	baz=314							
KSU1	Kansas State U	88.65	39	P		P	04 48 12.4	-0.6
KSU1	Kansas State U	88.65	39	P		P	04 48 13.2	+0.2
	baz=320							
VLDQ	Val d'Or	89.04	23	P		P	04 48 13.1	-1.6
AMTX	Amarillo	89.06	45	P		P	04 48 15.7	+0.5
	baz=317							
MSTX	Muleshoe	89.09	47	P		P	04 48 15.9	+0.5
	baz=316							
P38A	Dawn	89.76	37	P		P	04 48 17.7	-0.6
P40A	Paris	90.54	36	P		P	04 48 21.9	0.0
TUL1	Leonard	91.50	41	P		P	04 48 26.6	+0.2
	baz=320							
ABTX	Abilene, Hawle	91.87	46	P		P	04 48 28.5	+0.3
	baz=318							
TX31	Lajitas Ar. Si	91.87	50	P		P	04 48 28.1	-0.3
TX32	Lajitas Array	91.87	50	P		P	04 48 28.5	+0.2
TX32				IAmb		IAmb	04 48 37.4	
	comp=Z,2.4nm,1.1s							
TXAR	Lajitas Array	91.87	50	P		P	04 48 28.9	+0.6
	comp=Z,1.1nm,0.6s,baz=293,slow=2.7,SNR=27							
	comp=Z,1.1nm,0.6s							
TXAR	Lajitas Array	91.87	50	P		P	04 48 28.3	-0.1
TXAR	Lajitas Array	91.87	50	P		P	04 48 29.0	+0.6
CCM	Cathedral Cave	92.09	37	P		P	04 48 29.1	0.0
	baz=323							
JCT	Junction City	93.35	47	P		P	04 48 35.3	+0.1
	baz=318							
ERPA	Erie	93.46	27	P		P	04 48 34.3	-1.0
	baz=331							
MIAR	Mount Ida	93.70	40	P		P	04 48 36.6	0.0
	baz=321							
BINY	Binghamton	94.78	25	P		P	04 48 41.1	-0.4
	baz=334							
LRAL	Lakeview Retre	98.18	37	P		P	04 48 57.3	+0.3
	baz=326							
KMSC	Kings Mountain	98.96	32	P		P	04 49 00.3	-0.1
	baz=329							
DBIC	Dimbokro	124.09	314	PKP		PKPdf	04 54 16.9	-1.9
	comp=Z,1.9nm,0.7s,baz=210,slow=2.3,SNR=4.5							
DBIC	Dimbokro	124.09	314			PKPdf	04 54 17.6	-1.2
DBIC	Dimbokro	124.09	314	PKIKP		PKPdf	04 54 17.6	-1.2
LPAZ	La Paz	148.64	55	PKPbc		PKPbc	04 55 08.0	-0.1
	comp=Z,1.9nm,0.7s,baz=14,slow=11,SNR=6.9							
LPAZ	La Paz	148.64	55			PKPbc	04 55 07.0	-0.4
LPAZ	La Paz	148.64	55	PKP2		PKPbc	04 55 08.0	-0.1

IDC ***27*** *04:36:17.8±0.5,37.°60N×137.°97E,h0km,mb4.4/25, mbtmp4.4/26,ML4.7/1,MS3.6/7,Error ellipse: s-maj=15.4km s-min=11.1km az=80.0*

NEIC ***27*** *04:36:19.6±1.5,37.°533N±0.°010×138.°03E±0.°07, h10km±1km,mb4.9/179,Error ellipse: s-maj=9.5km s-min=2.8km az=97.0*

MOS ***27*** *04:36:19.6±1.2,37.°53N×138.°02E,h24km,mb4.9/53,Error ellipse: s-maj=7.9km s-min=4.8km az=94.3*

JMA ***27*** *04:36:20.6±0.1,37.°6N±0.°2×138.°1E±0.°3,h26km±1km, MD4.6/34,MW4.7/34,OFF S NIIGATA PREF*

JMA Felt III J1 at OFF S NIIGATA PREF .

NIED ***27*** *04:36:20.6,37.°57N×138.°11E,h26km,MW4.5,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}5.31; $M_{\theta\theta}$0.14; $M_{\phi\phi}$-5.46; $M_{r\theta}$3.20; $M_{\theta\phi}$-3.17; $M_{\phi r}$1.34; Fault plane solution: $M_0$7.13000×10^{15} NP1: ϕ_s181.00000°,δ39.00000°,λ52.00000°. NP2:ϕ_s46.00000°, δ61.00000°,λ116.00000°*

ISC 27 04:36:21.7±0.8,37.°55N±0.°03×138.°16E±0.°03,h28km±5km, n607,σ1ᵍ45/565,mb4.8/156,MS4.5/25,14C-17D,Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
JIZZ	Izumozaki	0.44	92	P	Pb	04 36 30.4	-0.6
JJN	Nakama	0.45	179	*e*P	Pb	04 36 30.4	-0.8
JJN				S	Sb	04 36 37.3	-0.3
JJN	Nakama	0.45	179	A	A	04 36 30.4	
	comp=E,292nm,0.6s,comp=E,207nm,0.5s						
JSD	Sado	0.49	10	Pg	Pb	04 36 30.4	-1.5
JSD				Sg	Sb	04 36 36.9	-1.9
JSD	Sado	0.49	10	*i* P	Pb	04 36 30.4	-1.5
JSD				S	Sb	04 36 37.5	-1.4
JSD	Sado	0.49	10	A	A	04 36 30.4	
	comp=E,34nm,0.9s,comp=E,26nm,0.8s						
JSZ	Suzu	0.64	261	*i* P	Pb	04 36 32.1	-2.2
JSZ				S	Sb	04 36 40.8	-2.2
JSZ	Suzu	0.64	261	A	A	04 36 32.1	
	comp=E,117nm,0.5s,comp=E,107nm,0.8s						
JUON	Uonuma	0.80	115	*i* P	Pb	04 36 35.7	-1.3
JUON				S	Sb	04 36 46.9	-0.4
JUON	Uonuma	0.80	115	A	A	04 36 35.7	
	comp=E,13nm,0.2s,comp=E,12nm,0.2s						
JNS	Sasagawa	0.96	74	*i* P	Pn	04 36 38.7	-0.7
JNS	Sasagawa	0.96	74	A	A	04 36 38.7	
	comp=E,16nm,0.3s,comp=E,75nm,0.8s						
MJB9	Matsu-Tunnel	1.00	178	Pg	Pn	04 36 38.5	-1.6
MJB9				Sg	Sn	04 36 51.6	-1.7
MAJO	Matsushiro	1.01	178	Pg	Pn	04 36 38.6	-1.4
MAJO				Sg	Sn	04 36 51.7	-1.6
MAJO	Matsushiro	1.01	178	P	Pn	04 36 38.6	-1.4
MAJO						04 36 51.7	
MAT	Matsushiro	1.01	178	P	Pn	04 36 38.8	-1.3
MAT				*i* S	Sn	04 36 52.1	-1.2
MJAR	Matsushiro Arr	1.01	178	Pg	Pn	04 36 39.3	-0.8
	43nm,0.3s,baz=78,slow=19,SNR=11						
MJAR				Lg	Lg	04 36 51.7	
	171nm,0.3s,baz=45,slow=20,SNR=7.0						
MJAR	Matsushiro Arr	1.01	178	Pg	Pn	04 36 37.6	-2.5
JHG	Hegura jima	1.02	287	*i* P	Pn	04 36 38.5	-1.7
JHG	Hegura jima	1.02	287	A	A	04 36 38.5	
	comp=E,54nm,1.8s,comp=E,32nm,2.1s						
JGK	Kuni	1.06	158	A	A	04 36 40.1	
	comp=E,25nm,5.1s,comp=E,22nm,1.8s						
JNG	Nsakai	1.14	182	A	A	04 36 41.2	
	comp=E,17nm,5.1s,comp=E,12nm,1.5s						
JTT	Ttatey	1.15	215	A	A	04 36 40.9	
	comp=E,54nm,1.0s,comp=E,33nm,1.2s						
JKT	Katashina	1.17	132	*i* P	Pn	04 36 42.1	-0.2
JKT				S	Sn	04 36 57.9	+0.4
JKT	Katashina	1.17	132	A	A	04 36 42.1	
	comp=E,35nm,0.8s,comp=E,45nm,0.5s						
JFY	Yanaizu	1.24	96	A	A	04 36 43.1	
	comp=E,14nm,3.0s,comp=E,16nm,3.0s						
JAW	Awa shima	1.25	43	A	A	04 36 42.9	
	comp=E,11nm,5.3s,comp=E,14nm,2.5s						
JJH	Hakui	1.26	241	A	A	04 36 42.4	
	comp=E,33nm,2.7s,comp=E,26nm,1.1s						
JSB	Shiboa	1.52	112	A	A	04 36 47.4	
	comp=E,69nm,1.6s,comp=E,50nm,1.3s						
JAG	Ashikaga	1.53	137	A	A	04 36 47.4	
	comp=E,9.0nm,2.1s,comp=E,10.0nm,1.3s						
JYA	Atsumi	1.61	49	A	A	04 36 48.4	
	comp=E,13nm,0.9s,comp=E,15nm,1.3s						
JYAR	Yonezawaarcadi	1.62	77	A	A	04 36 48.6	
	comp=E,50nm,1.4s,comp=E,125nm,1.4s						
JRY	Ryogami san	1.65	158	A	A	04 36 48.9	
	comp=E,29nm,1.6s,comp=E,22nm,1.1s						
JFT	Otama	1.73	90	A	A	04 36 50.4	
	comp=E,22nm,1.2s,comp=E,30nm,2.5s						
JHU	Hano	1.92	152	A	A	04 36 53.0	
	comp=E,2.0nm,3.1s,comp=E,7.0nm,1.1s						
JKG	Kaga	1.94	230	A	A	04 36 52.5	
	comp=E,11nm,1.6s,comp=E,10.0nm,1.9s						
JFFD	Fukushimafurud	1.97	103	A	A	04 36 53.9	
	comp=E,5.0nm,6.5s,comp=E,8.0nm,3.5s						
JTB	Tobi-shima	1.98	33	A	A	04 36 53.5	
	comp=E,8.0nm,1.1s,comp=E,9.0nm,1.9s						
JYYZ	Yamagatayuza	2.02	43	A	A	04 36 54.2	
	comp=E,22nm,2.1s,comp=E,27nm,1.8s						
JYN	Shimoh	2.07	171	A	A	04 36 55.0	
	comp=E,9.0nm,3.4s,comp=E,7.0nm,1.2s						
JYT	Yasato	2.10	128	Pn	Pn	04 36 55.4	+0.4
JMM	Marumori	2.12	81	Pn	Pn	04 36 57.2	+1.9
JOU	Okura	2.14	67	A	A	04 36 56.2	
	comp=E,8.0nm,1.9s,comp=E,9.0nm,3.1s						
ONAJ	Iwakimizuishiy	2.15	101	A	A	04 36 56.5	
	comp=E,6.0nm,5.7s,comp=E,8.0nm,2.8s						
JNY	Yasuok	2.20	186	A	A	04 36 56.7	
	comp=E,6.0nm,2.7s,comp=E,6.0nm,1.3s						
JYK	Haneyama	2.21	51	A	A	04 36 57.0	
	comp=E,6.0nm,2.0s,comp=E,7.0nm,1.8s						
TOK	Tokyo	2.26	145	A	A	04 36 58.0	
	comp=E,21nm,2.6s,comp=E,25nm,2.4s						
JTM	Tenmabayashi	3.94	34	Pn	Pn	04 37 21.0	+0.6
JHJ	Hachijo jima 2	4.62	163	Pn	Pn	04 37 32.3	+2.6
	86nm,0.3s,baz=122,slow=22,SNR=9.9						
JHJ				LR	LR	04 39 22.2	
	comp=Z,712nm,20.8s,baz=314,slow=39						
	181nm,0.3s						
JHJ	Hachijo jima 2	4.62	163		Pn	04 37 32.3	+2.6
JHJ2	Mitsune	4.63	162	Pn	Pn	04 37 31.9	+2.0
JEW	Eniwo	5.85	24	Pn	Pn	04 37 51.7	+5.1
ASAJ	Asahikawa	7.37	26	P	Pn	04 38 11.8	+4.4
JKA	Kamikawa-asahi	7.37	26	Pn	Pn	04 38 11.8	+4.4
SEHB	SEOHWA	7.86	278	Pn	Pn	04 38 14.6	+0.3
USRK	Ussuriysk Ar.	8.12	327	Pn	Pn	04 38 20.1	+2.4
	0.1nm,0.3s,baz=133,slow=16,SNR=1.8						
USRK				Sn	Sn	04 39 48.0	-0.4
	0.6nm,0.3s,baz=132,slow=22,SNR=2.9						
USRK				LR	LR	04 40 50.8	
	comp=Z,482nm,19.8s,baz=142,slow=34						
USRK	Ussuriysk Ar.	8.12	327	Pn	Pn	04 38 16.1	-1.6
USRK	Ussuriysk Ar.	8.12	327	P	Pn	04 38 16.1	-1.6
KSRS	Korea Array	8.13	272	Pn	Pn	04 38 19.3	+1.4
	3.4nm,0.3s,baz=88,slow=15,SNR=8.7						
KSRS				Sn	Sn	04 39 48.1	-0.8
	1.1nm,0.3s,baz=82,slow=24,SNR=7.8						
KSRS				LR	LR	04 41 18.4	
	comp=Z,478nm,19.8s,baz=75,slow=38						
KSRS	Korea Array	8.13	272		Pn	04 38 19.3	+1.4
KSCHJ	Chungju	8.15	268	Pn	Pn	04 38 19.0	+0.8
KSAR	Wonju Array Be	8.17	272	Pn	Pn	04 38 18.0	-0.4
KSAR	Wonju Array Be	8.17	272	P	Pn	04 38 18.0	-0.4
KS19	Wonju Array Si	8.18	273	Pn	Pn	04 38 18.4	-0.1
YUK	Yuzh-Kuril'sk	8.72	40	*de*P	Pn	04 38 26.7	+0.8
YSS	Yuzh-Sakhalins	9.99	18	*ce*P	Pn	04 38 46.3	+2.9
YSS				*e*S	Sn	04 40 37.1	+2.6
YSS				pmax	pmax		
	comp=Z,100nm,1.2s						
YSS				pmax	pmax		
	comp=Z,100nm,3.6s						
YSS				MLR	MLR		
	comp=Z,700nm,14.0s						
YSS				MLR	MLR		
	comp=N,700nm,13.0s						
KUR	Kuril'sk	10.58	40	⇓*e*P	Pn	04 38 52.3	+0.9
JCJ	Chichijima	10.97	161	LR	LR	04 42 44.2	
	comp=N,354nm,21.4s,baz=92,slow=35						
KLR	Kul'dur	12.56	340	Pn	Pn	04 39 22.3	+3.8
	comp=N,0.2nm,0.3s,baz=152,slow=14,SNR=7.4						
KLR	Kul'dur	12.56	340		Pn	04 39 22.3	+3.8
GRNR	Gornyy	13.27	355	⇓*i* P	Pn	04 39 32.6	+4.4
GRNR				*e*S	S	04 42 07.1	-12
GRNR				pmax	pmax		
	comp=N,20nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,20nm,1.0s						
GRNR				smax	smax		
	comp=N,2.0nm,0.9s						
GRNR				MLR	MLR		
	comp=E,250nm,12.0s						
GRNR				MLR	MLR		
	comp=N,480nm,13.0s						
GRNR				MLR	MLR		
	comp=Z,570nm,12.0s						
TYV	Tymovskoe	13.69	12	*e*P	Pn	04 39 35.8	+1.9
TYV				*e*S	Sn	04 42 12.5	+7.6
TYV				pmax	pmax		
	comp=Z,200nm,1.7s						
TYV				pmax	pmax		
	comp=Z,51nm,1.0s						
TYV				smax	smax		
	comp=E,8.0nm,1.3s						
TYV				smax	smax		
	comp=N,400nm,5.3s						
SSE	Sheshan	15.42	250	P	P	04 40 01.0	-0.6
SSE				S	Sn	04 42 54.5	+7.3
SSE				pmax	pmax		
	comp=N,14nm,0.7s						
SSE				pmax	pmax		
	comp=N,55nm,3.7s						
SSE				LR	LR		
	comp=N,250nm,18.2s						
SSE				LR	LR		
	comp=N,340nm,18.1s						
OKH	Okha	16.34	10	*de*P	Pn	04 40 00.0	-9.0
OKH				MLR	MLR		
	comp=E,900nm,17.0s						
OKH				MLR	MLR		
	comp=N,500nm,14.0s						
OKH				MLR	MLR		
	comp=Z,300nm,14.0s						
NJ2	Nanjing	16.77	257	*e*P	P	04 40 17.0	+0.4
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,450nm,11.8s						
NJ2				LR	LR		
	comp=Z,660nm,13.7s						
NJ2				LR	LR		
	comp=Z,910nm,15.2s						
TIA	Tai'an	16.88	272	⇓P	P	04 40 20.5	+2.7
TIA				S	S	04 43 35.0	+2.4
TIA				pmax	pmax		
	comp=Z,15nm,1.4s						
TIA				pmax	pmax		
	comp=Z,82nm,3.9s						
TIA				LR	LR		
	comp=Z,410nm,12.0s						
TIA				LR	LR		
	comp=Z,810nm,12.5s						
TIA				LR	LR		
	comp=Z,900nm,13.3s						
BJI	Beijing	17.31	285	P	P	04 40 23.5	+1.0
BJI				S	Sn	04 43 35.5	+2.5
BJI				pmax	pmax		
	comp=Z,22nm,1.0s						
BJI				LR	LR		
	comp=Z,84nm,12.4s						
BJI				LR	LR		
	comp=Z,400nm,11.3s						
BJI				LR	LR		
	comp=Z,540nm,11.6s						
BJT	Baijiatuau	17.32	285		P	04 40 23.4	+0.8
BJT	Baijiatuau	17.32	285	P	P	04 40 23.4	+0.8
BJT				pmax	pmax		
	comp=Z,19nm,0.9s						
HIA	Hailar	17.73	317		P	04 40 26.9	-0.2
HIA	Hailar	17.73	317	P	P	04 40 26.9	-0.2
HIA				pmax	pmax		
	comp=Z,12nm,0.5s						
ZEA	Zeya	17.86	338	*e*P	Pn	04 40 28.1	+0.1
ZEA				pmax	pmax		
	comp=N,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,100nm,5.8s						
ZEA				MLR	MLR		
	comp=Z,300nm,15.0s						
SKR	Severo-Kuril's	18.34	39	*e*P	P	04 40 29.4	-4.3
SKR				*e*S	Sn	04 43 53.0	-4.7
SKR				pmax	pmax		
	comp=Z,200nm,6.3s						
SKR				MLR	MLR		
	comp=Z,300nm,16.0s						
HNS	HongShan	18.61	277	⇓P	Pn	04 40 39.0	+1.8
HNS				pmax	pmax		
	comp=Z,37nm,1.3s						
PETK	Petropavlovsk-	20.65	35	P	P	04 40 59.4	+0.4
	comp=Z,11nm,1.0s,baz=226,slow=5.6,SNR=7.9						
	comp=Z,11nm,1.0s						
PETK	Petropavlovsk-	20.65	35	P	Pn	04 41 00.3	-1.1
PETK	Petropavlovsk-	20.65	35	P	Pn	04 41 00.3	-1.1
WHN	Wuhan	20.90	258	⇑P	Pn	04 41 04.0	-0.5
WHN				sP	sP	04 41 11.3	-1.1
WHN				S	Sn	04 45 00.5	+0.8
WHN				LR	LR		
	comp=Z,670nm,11.7s						
WHN				LR	LR		
	comp=Z,1μm,13.4s						
WHN				LR	LR		
	comp=Z,1μm,15.0s						
PET	Petropavlovsk	21.04	36	*e*P	P	04 41 04.0	+0.9
PET				*e*S	S	04 44 49.1	-6.7
PET				pmax	pmax		
	comp=Z,100nm,12.0s						
PET				MLR	MLR		
	comp=Z,400nm,15.0s						
PET				MLR	MLR		
	comp=Z,500nm,17.0s						
BTO	Baotou	22.02	287	*e*P	P	04 41 12.0	-1.9
MA2	Magadan	23.49	16	P	P	04 41 28.3	-0.6
	comp=Z,15nm,0.9s,baz=190,slow=7.1,SNR=4.4						
	comp=Z,15nm,0.9s						
MA2	Magadan	23.49	16	⇑*e*P	P	04 41 28.9	0.0
MA2				pmax	pmax		
	comp=Z,38nm,1.7s						
XAN	Xi'an	23.93	270	⇑P	P	04 41 33.0	-0.4
XAN				pP	pP	04 41 38.8	-2.3
XAN				S	S	04 45 55.0	+6.7
XAN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
XAN				LR	LR		
	comp=Z,360nm,14.0s						
XAN				LR	LR		
	comp=Z,300nm,14.0s						
XAN				LR	LR		
	comp=Z,590nm,13.3s						
ENH	Enshi	24.81	262	P	P	04 41 40.3	-1.3
ULN	Ulaanbaatar	24.92	304	P	P	04 41 41.6	-0.8
ULN	Ulaanbaatar	24.92	304	*ce*P	P	04 41 41.9	-0.6
ULN				pmax	pmax		
	comp=Z,14nm,1.3s						
YAK	Yakutsk	25.07	351	P	P	04 41 43.6	+0.2
SONM	Songino Array	25.34	304	P	P	04 41 45.8	-0.5
	comp=Z,6.6nm,0.9s,baz=108,slow=6.8,SNR=8.3						
	comp=Z,6.6nm,0.9s						
SONM	Songino Array	25.34	304	P	P	04 41 45.5	-0.8
SONM	Songino Array	25.34	304	P	P	04 41 45.5	-0.8
SONM				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SEY	Seymchan	26.86	14	P	P	04 42 02.3	+2.6
	comp=Z,10nm,0.8s,baz=202,slow=6.4,SNR=13						
SEY	Seymchan	26.86	14	⇓*i* P	P	04 42 02.0	+2.3
SEY				pmax	pmax		
	comp=Z,15nm,0.9s						
LZH	Lanzhou	27.42	277	*e*P	P	04 42 07.5	+2.3
LZH				pP	pP	04 42 12.5	-0.5
LZH				PP	PnPn	04 42 54.5	+4.5
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
LZH				LR	LR		
	comp=Z,540nm,11.4s						
LZH				LR	LR		
	comp=Z,620nm,12.3s						
LZH				LR	LR		
	comp=Z,700nm,14.6s						
SHEM	Shemya Is, Ala	29.18	47	LR	LR	04 55 22.8	
	comp=Z,67nm,19.7s,baz=260,slow=39						
KNGR	Kungurtug, Tuv	31.57	308	*de*P	P	04 42 39.5	-2.3
KNGR				pmax	pmax		
	comp=Z,9.0nm,1.2s						
DAV	Davao City (W)	32.42	204	LR	LR	04 57 01.6	
	comp=Z,95nm,18.3s,baz=356,slow=38						
BILL	Bilibino	34.31	18	P	P	04 43 05.0	-0.3
BILL	Bilibino	34.31	18	*c* iP	P	04 43 05.1	-0.3
BILL				*e*		04 44 23.5	
BILL				pmax	pmax		
	comp=Z,12nm,1.7s						
BILL				MLR	MLR		
	comp=Z,176nm,15.0s						
TIXI	Tiksi	34.50	355	P	P	04 43 06.2	-0.8
	comp=Z,7.7nm,0.7s,baz=272,slow=22,SNR=9.3						
	comp=Z,7.7nm,0.7s						
TIXI	Tiksi	34.50	355	P	P	04 43 05.5	-1.4
TIXI				IAmb	IAmb	04 43 07.3	
	comp=Z,14nm,1.0s						
TIXI	Tiksi	34.50	355	*ce*P	P	04 43 06.4	-0.6
TIXI				pmax	pmax		
	comp=Z,11nm,0.8s						
SPIA	Saint Paul Isl	38.93	43	P	P	04 43 46.3	+1.4
	baz=262						
NIKH	Nikolski High	39.41	50	P	P	04 43 50.5	+1.6
	baz=269						
ZALV	Zalesovo Beam	39.64	312	P	P	04 43 48.8	-2.1
	comp=Z,0.5nm,0.3s,baz=40,slow=5.6,SNR=1.9						
ZALV				PcP	PcP	04 45 57.3	0.0
	comp=Z,2.2nm,0.6s,baz=107,slow=5.1,SNR=8.1						
	comp=Z,0.5nm,0.3s						
ZALV	Zalesovo Beam	39.64	312	P	P	04 43 48.8	-2.1
ZALV				PcP	PcP	04 45 56.1	-1.2
UNV	Unalaska Valle	40.83	48	P	P	04 44 02.7	+2.1
	baz=270						
SHL	Shillong	40.83	267	P	P	04 43 59.4	-1.8
SHL				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MK31

KURK pmax pmax
comp=Z,4.0nm,0.8s
KURBB Kurchatov Arra 43.63 307 P **P** **04 44 22.4 -1.1**
comp=Z,2.4nm,0.7s,baz=87,slow=8.7,SNR=7.3
KURB PcP **PcP** **04 46 10.5 0.0**
comp=Z,0.2nm,0.3s,baz=87,slow=3.8,SNR=9.3
comp=Z,2.4nm,0.7s
SDPT Sand Point 44.30 46 P **P** **04 44 29.4 +0.6**
baz=273
CHNA Chernabura Isl 44.84 47 P **P** **04 44 33.8 +0.6**
baz=274
CNBA Chernabura Isl 44.84 47 P **P** **04 44 33.5 +0.4**
CNBA IAmb IAmb 04 45 01.6
comp=Z,20nm,1.3s
N16K Nishlik Lake 45.13 39 P **P** **04 44 36.7 +1.2**
baz=269,SNR=7.2
O16K Kokwok River B 45.47 40 P **P** **04 44 39.3 +1.2**
baz=271,SNR=5.6
P16K Nushagak River 45.53 41 P **P** **04 44 39.3 +0.8**
baz=271
O17K Koliganek Bris 45.97 40 P **P** **04 44 43.2 +1.2**
baz=271
Q16K King Salmon 46.23 41 P **P** **04 44 45.2 +1.1**
baz=273
P17K Kvichak River 46.32 40 P **P** **04 44 46.0 +1.2**
baz=272
R17K Ugashik Creek 46.43 42 P **P** **04 44 46.9 +1.2**
baz=274
TTA Tatalina 46.49 35 P **P** **04 44 47.0 +0.8**
baz=269
N18K Kilae Creek 46.55 38 P **P** **04 44 48.2 +1.5**
N18K IAmb IAmb 04 44 49.1
comp=Z,18nm,1.4s
N18K Kilae Creek 46.55 38 P **P** **04 44 48.2 +1.5**
baz=271,SNR=5.3
SVW2 Sparrevohn 46.69 38 P **P** **04 44 48.8 +1.1**
SVW2 IAmb IAmb 04 44 50.6
comp=Z,7.0nm,0.9s
O18K Koktuh Hills 46.92 39 P **P** **04 44 51.0 +1.5**
baz=273
P18K Big Mountain, 46.93 40 P **P** **04 44 50.7 +1.0**
baz=273
CHIR Chirikof Islan 47.01 45 P **P** **04 44 51.7 +1.5**
baz=276
A21K Barrow 47.01 24 P **P** **04 44 50.8 +0.7**
baz=261
L19K White Mountain 47.02 36 P **P** **04 44 51.5 +1.3**
L19K White Mountain 47.02 36 P **P** **04 44 51.6 +1.3**
baz=271,SNR=5.7
Q18K Katmai Hardscr 47.09 41 P **P** **04 44 53.0 +1.9**
baz=274
N19K Bonanza Creek 47.24 38 P **P** **04 44 53.3 +1.2**
baz=272
M19K Big River Lodg 47.25 37 P **P** **04 44 53.5 +1.5**
baz=272
J20K Nowinta River 47.34 33 P **P** **04 44 54.0 +1.3**
J20K IAmb IAmb 04 44 55.4
comp=Z,10nm,0.9s
J20K Nowinta River 47.34 33 P **P** **04 44 54.0 +1.3**
baz=270,SNR=7.2
K20K Telida 47.37 35 P **P** **04 44 54.1 +1.1**
K20K IAmb IAmb 04 44 55.7
comp=Z,12nm,0.8s
K20K Telida 47.37 35 P **P** **04 44 54.4 +1.4**
baz=270,SNR=8.5
L20K Farewell, AK 47.47 36 P **P** **04 44 55.1 +1.3**
baz=272,SNR=6.7
IMAR Indian Mountai 47.54 31 P **P** **04 44 54.9 +0.6**
IMAR PcP **PcP** **04 46 24.7 +0.8**
Q19K Cape Douglas, 47.78 41 P **P** **04 44 56.4 +0.1**
baz=275
M20K Styx River 47.84 37 P **P** **04 44 58.0 +1.2**
baz=273
H21K Melozitna Rive 47.92 31 P **P** **04 44 58.1 +0.9**
H21K IAmb IAmb 04 44 59.7
comp=Z,9.0nm,1.1s
H21K Melozitna Rive 47.92 31 P **P** **04 44 58.3 +1.1**
baz=270,SNR=11
OHAK Old Harbor 48.14 43 P **P** **04 44 59.9 +0.9**
baz=277
CHUM Lake Minchumin 48.15 34 P **P** **04 45 00.4 +1.4**
baz=272
O20K Slope Mountain 48.20 39 P **P** **04 45 00.0 +0.5**
baz=275
PPLA Purkeypile 48.24 35 P **P** **04 45 00.1 +0.3**
PPLA Purkeypile 48.24 35 P **P** **04 45 01.6 +1.7**
baz=273
I21K Tanana 48.27 32 P **P** **04 45 00.5 +0.6**
I21K IAmb IAmb 04 45 02.7
comp=Z,9.8nm,0.9s
I21K Tanana 48.27 32 P **P** **04 45 01.4 +1.5**
baz=271
SPU Mount Spurr 48.40 37 P **P** **04 45 02.2 +1.2**
KDAK Kodiak Island 48.45 42 P **P** **04 45 02.1 +0.7**
comp=Z,8.0nm,0.8s,baz=305,slow=8.0,SNR=4.3
comp=Z,8.0nm,0.8s
KDAK Kodiak Island 48.45 42 P **P** **04 45 01.9 +0.5**
H22K Ishtalitna Cre 48.51 31 P **P** **04 45 03.4 +1.6**
baz=271,SNR=11
BPAW Bear Paw Mtn. 48.72 34 P **P** **04 45 04.7 +1.2**
BPAW Bear Paw Mtn. 48.72 34 P **P** **04 45 04.6 +1.2**
baz=273,SNR=5.4
HOM Homer 48.73 39 P **P** **04 45 05.8 +2.2**
baz=276
KTH Kantishna Hill 48.78 34 P **P** **04 45 04.0 +0.1**
MLY Manley 48.80 32 P **P** **04 45 05.4 +1.4**
MLY IAmb IAmb 04 45 06.7
comp=Z,8.4nm,0.8s
MLY Manley 48.80 32 P **P** **04 45 05.6 +1.6**
baz=272,SNR=12
D23K Nanushuk River 48.81 27 P **P** **04 45 05.2 +1.2**
baz=269
C23K Itkillik River 48.86 26 P **P** **04 45 05.4 +1.0**
baz=268,SNR=6.5
CAPN Captain Cook N 48.87 38 P **P** **04 45 06.3 +1.8**
baz=275
COLD Coldfoot 48.97 29 P **P** **04 45 06.2 +0.9**
COLD IAmb IAmb 04 45 07.7
comp=Z,11nm,1.2s
COLD Coldfoot 48.97 29 P **P** **04 45 06.4 +1.1**
baz=270
SUA Susitna One 49.01 37 P **P** **04 45 07.8 +2.0**
baz=275
TRF Thorofare Moun 49.07 34 P **P** **04 45 08.4 +2.2**
baz=274
CUT Chulitna 49.15 36 P **P** **04 45 08.2 +1.5**
baz=275
BRSE Bradley Lake S 49.18 39 P **P** **04 45 07.8 +0.8**
baz=277
TOLK Toolik Lake Re 49.20 27 P **P** **04 45 08.1 +1.0**
TOLK Toolik Lake Re 49.20 27 P **P** **04 45 08.0 +1.0**
baz=270
H23K Yukon River 49.27 31 P **P** **04 45 08.5 +0.9**
H23K Yukon River 49.27 31 P **P** **04 45 09.4 +1.9**
baz=272,SNR=21
I23K Minto, Yukon-K 49.37 32 P **P** **04 45 08.1 -0.3**
I23K Minto, Yukon-K 49.37 32 P **P** **04 45 09.7 +1.4**
baz=273
BWN Browne 49.39 33 P **P** **04 45 09.9 +1.4**
D24K Happy Valley 49.48 27 P **P** **04 45 10.2 +1.1**
baz=270,SNR=7.4
C24K Franklin Bluff 49.52 26 P **P** **04 45 10.4 +0.9**
baz=270
NEA2 Nenana 49.53 33 P **P** **04 45 10.1 +0.5**
NEA2 IAmb IAmb 04 45 11.9
comp=Z,22nm,1.3s
NEA2 Nenana 49.53 33 P **P** **04 45 10.6 +1.0**
baz=274,SNR=8.2
MCK McKinley 49.65 34 P **P** **04 45 10.8 +0.3**
MCK McKinley 49.65 34 P **P** **04 45 10.8 +0.3**
MCK pmax pmax
comp=Z,7.0nm,0.8s
MCK McKinley 49.65 34 P **P** **04 45 11.0 +0.5**
baz=275
RND Reindeer 49.72 34 P **P** **04 45 11.0 -0.1**
RND IAmb IAmb 04 45 12.6
comp=Z,11nm,1.0s
RND Reindeer 49.72 34 P **P** **04 45 11.0 -0.1**
RND pmax pmax
comp=Z,11nm,1.0s
PMR Palmer 49.76 37 P **P** **04 45 11.9 +0.5**
baz=276
SEW Seward 49.78 39 P **P** **04 45 11.7 +0.2**
baz=277
GHO Glory Hole Cre 49.84 36 P **P** **04 45 12.8 +0.7**
MDM Murphy Dome 49.86 32 P **P** **04 45 13.3 +1.1**
MDM IAmb IAmb 04 45 14.6
comp=Z,18nm,1.0s
WAT1 Susitna Watana 49.91 35 P **P** **04 45 12.7 +0.2**
baz=276
H24K Noodor Dome 49.95 31 P **P** **04 45 14.0 +1.2**
H24K IAmb IAmb 04 45 15.8
comp=Z,16nm,1.1s
H24K PcP **PcP** **04 46 34.1 +1.4**
H24K Noodor Dome 49.95 31 P **P** **04 45 14.3 +1.5**
baz=274,SNR=8.8
TCOL CIGO, UAF Yank 50.03 32 P **P** **04 45 14.2 +0.9**
TCOL IAmb IAmb 04 45 15.1
comp=Z,9.9nm,1.0s
TCOL CIGO, UAF Yank 50.03 32 P **P** **04 45 14.6 +1.2**
baz=275
COLA College 50.03 32 P **P** **04 45 14.5 +1.2**
COLA IAmb IAmb 04 45 15.2
comp=Z,9.4nm,0.9s
COLA College 50.03 32 *c i* P **P** **04 45 14.4 +1.1**
COLA pmax pmax
comp=Z,17nm,1.6s
COLA College 50.03 32 P **P** **04 45 14.6 +1.2**
baz=275
KNK Knik Glacier 50.10 37 P **P** **04 45 14.7 +0.7**
baz=277
SML Sawmill 50.12 36 P **P** **04 45 15.1 +0.9**
baz=277
POKR Poker Plat Res 50.19 32 P **P** **04 45 15.5 +0.9**
POKR Poker Plat Res 50.19 32 P **P** **04 45 15.9 +1.3**
baz=275,SNR=6.3
WAT6 Susitna Watana 50.30 35 P **P** **04 45 16.1 +0.4**
baz=277
M23K Glacier View 50.41 36 P **P** **04 45 16.7 +0.4**
baz=277
DHY Denali Highway 50.41 35 P **P** **04 45 16.6 +0.1**
DHY Denali Highway 50.41 35 P **P** **04 45 16.8 +0.3**
baz=277
IL31 50.45 32 P **P** **04 45 16.6 +0.1**
ILAR Eielson Array 50.45 32 P **P** **04 45 17.2 +0.6**
comp=Z,3.5nm,0.8s,baz=278,slow=6.3,SNR=14
ILAR PcP **PcP** **04 46 34.5 0.0**
comp=Z,0.9nm,0.7s,baz=280,slow=3.4,SNR=4.7
comp=Z,3.5nm,0.8s
ILAR Eielson Array 50.45 32 P **P** **04 45 15.7 -0.8**
ILAR PcP **PcP** **04 46 33.6 -0.8**
HDA Harding Lake 50.46 33 P **P** **04 45 16.2 -0.5**
HDA IAmb IAmb 04 45 17.9
comp=Z,10nm,0.9s
HDA Harding Lake 50.46 33 P **P** **04 45 16.7 +0.1**
baz=276,SNR=6.3
SCM Sheep Creek Mo 50.59 36 P **P** **04 45 18.6 +0.9**
baz=278
KKAR Karatay Array 50.61 299 P **P** **04 45 17.4 -0.7**
KKAR Karatay Array 50.61 299 P **P** **04 45 17.4 -0.7**
K24K Donnelly Dome 51.04 34 P **P** **04 45 21.4 +0.3**
baz=277
M24K Tolsona, Glenn 51.09 36 P **P** **04 45 21.9 +0.5**
baz=278
J25K Salcha River, 51.12 33 P **P** **04 45 22.2 +0.5**
baz=277
BMAR Burnt Mountain 51.13 29 P **P** **04 45 23.4 +1.7**
BMAR PcP **PcP** **04 46 38.6 +1.6**
KLU Klutina 51.30 37 P **P** **04 45 24.0 +0.9**
baz=279
Q23K Middleton Isla 51.44 39 P **P** **04 45 24.5 +0.5**
baz=280
RIDG Independent Ri 51.46 34 P **P** **04 45 24.1 -0.1**
baz=278
HARP HAARP 51.52 35 P **P** **04 45 25.8 +1.2**
baz=279
SCRK Sand Creek 51.80 33 P **P** **04 45 27.2 +0.3**
SCRK IAmb IAmb 04 45 28.4
comp=Z,12nm,1.0s
SCRK Sand Creek 51.80 33 P **P** **04 45 27.1 +0.2**
baz=279,SNR=8.7
J26L Joseph Creek 51.90 33 P **P** **04 45 28.1 +0.5**
baz=279
N25K Chitina, Valde 51.91 36 P **P** **04 45 28.8 +1.1**
baz=280
I26K Coal Creek Min 51.96 32 P **P** **04 45 27.7 -0.1**
baz=278
BMRM Bremner River 52.02 37 P **P** **04 45 29.4 +0.9**
BMRM IAmb IAmb 04 45 42.5
comp=Z,19nm,1.1s
BMRM Bremner River 52.02 37 P **P** **04 45 29.7 +1.2**
baz=280
MENT Mentasta 52.08 35 P **P** **04 45 30.3 +1.4**
MENT IAmb IAmb 04 45 31.5
comp=Z,9.0nm,0.8s
L26K Log Cabin Wild 52.24 34 P **P** **04 45 31.3 +1.3**
L26K Log Cabin Wild 52.24 34 P **P** **04 45 31.3 +1.3**
baz=280
GLB Gilahina Butte 52.31 36 P **P** **04 45 31.8 +1.2**
M26K Nabesna, AK 52.51 35 P **P** **04 45 33.0 +0.9**
M26K IAmb IAmb 04 45 34.7
comp=Z,9.8nm,0.9s
M26K Nabesna, AK 52.51 35 P **P** **04 45 33.4 +1.4**
baz=281,SNR=5.0
K27K Chicken 52.62 33 P **P** **04 45 33.6 +0.8**
K27K Chicken 52.62 33 P **P** **04 45 34.1 +1.3**
baz=280
MCARA McCarthy VSAT 52.69 36 P **P** **04 45 34.6 +1.3**
baz=282
CRQE Cirque 52.78 37 P **P** **04 45 35.4 +1.2**
baz=282
L27K Beaver Creek, 52.91 34 P **P** **04 45 36.0 +1.0**
L27K IAmb IAmb 04 45 37.7
comp=Z,10nm,0.9s
L27K Beaver Creek, 52.91 34 P **P** **04 45 36.5 +1.4**
baz=281,SNR=10
BCAR Beer Creek A 52.93 34 P **P** **04 45 36.1 +0.9**
M27K Edge Creek, AK 53.03 35 P **P** **04 45 36.4 +0.4**
M27K IAmb IAmb 04 45 38.5
comp=Z,12nm,0.9s
M27K Edge Creek, AK 53.03 35 P **P** **04 45 37.3 +1.3**
baz=282,SNR=6.6
CHGR Chuyangaron 53.09 294 P **P** **04 45 34.9 -1.9**
CHGR Chuyangaron 53.09 294 P **P** **04 45 34.9 -1.9**
CHGR pmax pmax
comp=Z,22nm,0.9s
BVCY Beaver Creek 53.48 35 P **P** **04 45 40.4 +1.2**
baz=282
CTG Chitna Glacier 53.58 37 P **P** **04 45 40.9 +0.8**
baz=283
YUK3 Moose Creek 53.80 36 P **P** **04 45 42.7 +0.9**
baz=283
I29M Ogilvie Camp, 53.95 31 P **P** **04 45 43.2 +0.6**
I29M IAmb IAmb 04 45 45.1
comp=Z,13nm,1.1s
I29M Ogilvie Camp, 53.95 31 P **P** **04 45 44.0 +1.4**
baz=282
ARU Arti 54.24 318 P **P** **04 45 44.0 -0.8**
ARU IAmb IAmb 04 45 45.1
comp=Z,20nm,1.3s
ARU Arti 54.24 318 *c i* P **P** **04 45 44.1 -0.7**
ARU 04 47 43.4
ARU S **S** **04 53 23.5 +3.3**
ARU SS **SS** **04 57 01.8 +0.1**
ARU pmax pmax
comp=Z,17nm,1.3s
ARU MLR MLR
comp=Z,227nm,15.0s
EPYK Eagle Plains 54.36 30 P **P** **04 45 46.6 +1.0**
EPYK Eagle Plains 54.36 30 P **P** **04 45 47.0 +1.4**
baz=283,SNR=10
YUK4 Talbot Arm 54.75 36 P **P** **04 45 50.2 +1.5**
baz=285
PNL Peninsula 54.83 38 P **P** **04 45 50.7 +1.6**
baz=286
YUK6 Outpost Mounta 54.99 36 P **P** **04 45 52.1 +1.6**
baz=286
INK Inuvik 55.11 27 P **P** **04 45 51.3 +0.5**
comp=Z,11nm,1.1s,baz=255,slow=5.5,SNR=9.6
INK PcP **PcP** **04 46 52.5 +0.6**
comp=Z,4.6nm,1.0s,baz=237,slow=4.0,SNR=3.0
comp=Z,11nm,1.1s
INK Inuvik 55.11 27 P **P** **04 45 51.2 +0.3**
INK IAmb IAmb 04 45 52.8
comp=Z,11nm,1.0s
INK PcP **PcP** **04 46 52.8 +0.9**
INK Inuvik 55.11 27 P **P** **04 45 51.3 +0.5**
baz=284,SNR=8.6
M30M Minto, Yukon 55.27 34 P **P** **04 45 54.0 +1.7**
baz=286
HYT Haines Junctio 55.43 36 P **P** **04 45 55.2 +1.7**
baz=286
N30M Aishikik Lake 55.44 36 P **P** **04 45 55.1 +1.6**
baz=286
ABKAR Akbulak array 55.61 309 P **P** **04 45 53.4 -1.4**
P30M Million Dollar 55.89 37 P **P** **04 45 58.4 +1.7**
baz=287
N31M Braeburn, Yuko 56.04 35 P **P** **04 45 59.6 +1.8**
baz=287
O30N Mendenhall 56.11 36 P **P** **04 45 59.7 +1.4**
baz=287
PLBC Pleasant Camp 56.37 38 P **P** **04 46 01.6 +1.5**
baz=288
M31M Drury Creek, Y 56.45 34 P **P** **04 46 02.0 +1.3**
baz=288
WHY Whitehorse 56.71 36 P **P** **04 46 04.0 +1.4**
baz=288
A36M Sachs Harbour 56.74 22 P **P** **04 46 02.7 +0.1**
A36M Sachs Harbour 56.74 22 P **P** **04 46 03.4 +0.8**
baz=289,SNR=5.9
WRAB Tennant Creek 57.29 184 P **P** **04 46 06.2 -0.8**
WRAB IAmb IAmb 04 46 14.9
comp=Z,9.9nm,0.8s
WRAB Tennant Creek 57.29 184⇑ *e* P **P** **04 46 06.0 -1.0**
WRAB pmax pmax
comp=Z,16nm,2.1s
WRA Warramunga Arr 57.30 184 P **P** **04 46 06.7 -0.4**
comp=Z,4.9nm,0.8s,baz=348,slow=8.8,SNR=20
comp=Z,4.9nm,0.8s
WRA Warramunga Arr 57.30 184 P **P** **04 46 05.6 -1.4**
WRA Warramunga Arr 57.30 184 P **P** **04 46 05.6 -1.4**
WRA pmax pmax
comp=Z,1.0nm,0.9s
P33M Teslin, Yukon 57.82 36 P **P** **04 46 11.6 +1.1**
baz=290
C36M Paulatuk 58.04 24 P **P** **04 46 12.1 +0.4**
C36M IAmb IAmb 04 46 13.4
comp=Z,13nm,0.8s
C36M Paulatuk 58.04 24 P **P** **04 46 12.2 +0.5**
baz=292,SNR=7.0
KIRV Kirov 58.26 322⇑ *e* P **P** **04 46 11.1 -2.2**
ASAR Alice Springs 61.02 184 P **P** **04 46 32.8 0.0**
comp=Z,1.6nm,0.8s,baz=9.7,slow=7.4,SNR=8.1
comp=Z,1.6nm,0.8s
ASAR Alice Springs 61.02 184 P **P** **04 46 32.8 0.0**
BELG Belogornoye 61.64 316 *i* P **P** **04 46 34.8 -1.9**
BELG pmax pmax
comp=Z,4.0nm,1.0s
KLMR Klimovskoe 61.91 327 *e* P P 04 46 32.8 -5.6
KLMR pmax pmax
comp=Z,11nm,1.5s
KLMR Klimovskoe 61.91 327 *e* P P 04 46 32.9 -5.5
KLMR AMP 04 46 39.5
comp=Z,11nm,1.5s
ARCES ARCESS Array B 62.58 339 P **P** **04 46 42.5 -0.3**
comp=Z,2.0nm,0.8s,baz=79,slow=6.3,SNR=4.0
comp=Z,2.0nm,0.8s
ARCES ARCESS Array B 62.58 339 IAmb IAmb 04 47 06.9
comp=Z,11nm,1.4s
RES Resolute Bay 62.73 14 LR LR 05 17 20.0
comp=Z,61nm,18.8s,baz=50,slow=39
RES Resolute Bay 62.73 14 P **P** **04 46 43.5 -0.2**
RES IAmb IAmb 04 46 44.5
comp=Z,9.5nm,0.9s
RES Resolute Bay 62.73 14 P **P** **04 46 43.5 -0.2**
RES pmax pmax
comp=Z,10.0nm,1.0s
YKA Yellowknife Ar 64.65 29 P **P** **04 46 57.2 +0.7**
comp=Z,1.2nm,0.7s,baz=300,slow=6.3,SNR=12
comp=Z,1.2nm,0.7s
YKA Yellowknife Ar 64.65 29 P **P** **04 46 56.2 -0.3**
YKA PcP **PcP** **04 47 29.6 -0.6**
VALR Valaam 65.28 330⇓ *e* P **P** **04 46 59.6 -1.0**
VALR pmax pmax
comp=Z,19nm,0.9s
OBN Obninsk 66.11 322 *de* P **P** **04 47 05.7 -0.3**
OBN *e* 04 47 36.4
OBN *e* 04 49 35.5
OBN pmax pmax
comp=Z,6.0nm,0.8s
OBN MLR MLR
comp=Z,186nm,14.0s
VORR Voronezh 66.55 318 *e* P **P** **04 47 11.5 +2.5**
FINES FINESS Array B 67.13 331 P **P** **04 47 12.1 -0.3**
comp=Z,3.2nm,0.8s,baz=43,slow=8.3,SNR=6.2
comp=Z,3.2nm,0.8s
LLLB Lillooet 67.66 43 P **P** **04 47 16.8 +0.7**
HEL Helsinki 68.34 330 P **P** **04 47 22.9 +2.8**
HEL pmax pmax
comp=Z,4.0nm,1.0s
KBZ Khabaz 68.58 309 P **P** **04 47 22.7 +0.8**
comp=Z,1.5nm,0.7s,baz=106,slow=12,SNR=3.8
comp=Z,1.5nm,0.7s
KBZ Khabaz 68.58 309 *de* P **P** **04 47 22.1 +0.2**
KBZ pmax pmax
comp=Z,8.0nm,2.2s
KIV Kislovodsk 68.59 309 P **P** **04 47 22.6 +0.5**
KIV IAmb IAmb 04 47 25.3
comp=Z,7.2nm,0.6s
KIV Kislovodsk 68.59 309 *de* P **P** **04 47 22.7 +0.5**
KIV *e* 04 47 47.0
KIV *e* 04 49 57.1
KIV *eS* **SKiKP** **04 57 07.3 -5.8**
KIV pmax pmax
comp=Z,7.0nm,0.7s
KIV MLR MLR
comp=Z,43nm,17.0s
B06A Marblemount 69.00 44 P **P** **04 47 25.2 +0.7**
G03D McMinnville, O 69.79 48 P **P** **04 47 31.1 +1.7**
baz=303
SUMG Summit 70.14 359 P **P** **04 47 31.3 -0.3**
SUMG IAmb IAmb 04 47 33.3
comp=Z,6.3nm,0.6s
SUMG Summit 70.14 359 P **P** **04 47 31.3 -0.3**
SUMG pmax pmax
comp=Z,6.0nm,0.6s
LTY Liberty 70.16 45 P **P** **04 47 32.2 +0.5**
LTY IAmb IAmb 04 47 45.8
comp=Z,10nm,1.5s
B08A Colville Reser 70.28 44 P **P** **04 47 32.8 +0.4**
B08A IAmb IAmb 04 47 34.4
comp=Z,9.0nm,1.2s
I03D Drain, OR 70.57 50 P **P** **04 47 36.1 +1.9**
baz=304
MNK Minsk 70.59 325 *i* P **P** **04 47 29.7 -4.4**
MNK *i* 04 47 50.8
MNK *i* 04 50 15.6
MNK *i* PPP PPP 04 51 47.8
MNK *i* S **S** **04 56 43.5 -2.3**
MNK *i* 04 57 32.7
MNK *i* SS **SS** **05 01 15.6 -1.0**
MNK pmax pmax
comp=N,23nm,0.8s
MNK pmax pmax
comp=E,3.0nm,0.8s
MNK pmax pmax
comp=Z,15nm,0.7s
MNK MLR MLR
comp=E,15nm,18.0s
MNK MLR MLR
comp=N,246nm,14.0s
MNK MLR MLR
comp=Z,5μm,22.0s
MNK Minsk 70.59 325 *i* LRM MLR 05 21 00.6
comp=E,15nm,17.9s
MNK Minsk 70.59 325 *i* LRM MLR 05 21 56.6
comp=Z,5μm,21.7s
MNK Minsk 70.59 325 *i* LRM MLR 05 21 24.6
comp=N,246nm,14.1s
MNK Minsk 70.59 325 *i* P **P** **04 47 29.7 -4.4**
comp=E,3.0nm,0.8s
MNK Minsk 70.59 325 *i* P **P** **04 47 29.7 -4.4**
comp=N,23nm,0.8s
MNK Minsk 70.59 325 *i* P **P** **04 47 29.7 -4.4**
comp=Z,15nm,0.7s,baz=233
MNK Minsk 70.59 325 *i* PcP **PcP** **04 47 50.8 -4.3**
MNK Minsk 70.59 325 *i* PP PP 04 50 15.6 +5.6
MNK Minsk 70.59 325 *i* PPP PPP 04 51 47.9
MNK Minsk 70.59 325 *i* S **S** **04 56 43.6 -2.3**
MNK Minsk 70.59 325 *i* SS SS 05 01 15.6 -1.0
MNK Minsk 70.59 325 *i* SSS SSS 05 04 34.0
MNK Minsk 70.59 325 *i* LQ LQ 05 13 34.1
MNK Minsk 70.59 325 *i* LR LR 05 18 56.1
NACGM Naroch 70.84 325 *eP* **P** **04 47 35.7 +0.1**
baz=53
K02D Willamette Mer 70.93 51 P **P** **04 47 38.4 +1.9**
baz=304
I04A Tendick Farm, 71.08 49 P **P** **04 47 38.7 +1.3**
baz=304
C09A Chrisman Ranch 71.19 44 P **P** **04 47 38.7 +0.8**

C09A IAmb IAmb 04 47 39.9
comp=Z,8.3nm,0.8s
L02F Cave Junction 71.31 51 P **P** **04 47 40.2 +1.4**
baz=304
F07A Phinny Hill Vi 71.35 46 P **P** **04 47 40.0 +1.1**
F07A IAmb IAmb 04 47 40.8
comp=Z,8.5nm,1.1s
I05D Terrebonne, OR 71.41 48 P **P** **04 47 40.5 +1.0**
baz=305
NEW Newport 71.54 43 P **P** **04 47 41.2 +1.1**
NEW Newport 71.54 43 P **P** **04 47 41.2 +1.1**
NEW pmax pmax
comp=Z,5.0nm,0.9s
NEW Newport 71.54 43 P **P** **04 47 41.0 +0.9**
baz=306
J04D Umpqua Nationa 71.57 49 P **P** **04 47 42.2 +1.6**
baz=304
GURO Guroymak-BITLI 71.93 305 P **P** **04 47 42.5 -0.2**
PINE Pine Mountain 71.96 48 P **P** **04 47 44.2 +1.3**
E09A Wood Farm, Sta 72.00 45 P **P** **04 47 43.8 +0.9**
E09A IAmb IAmb 04 47 45.2
comp=Z,7.8nm,1.0s
L04D Klamath Falls 72.03 50 P **P** **04 47 44.7 +1.5**
baz=305,SNR=6.0
J05D Fort Rock, OR 72.08 49 P **P** **04 47 45.3 +1.8**
baz=305,SNR=7.6
K04D Chiloquin, OR 72.14 50 P **P** **04 47 45.3 +1.5**
baz=305
AKASG Malin Array Be 72.28 321 P **P** **04 47 43.9 -0.5**
comp=Z,5.6nm,0.8s,baz=47,slow=6.3,SNR=19
comp=Z,5.6nm,0.8s
AKBB Malin Array Si 72.28 321 *de*P **P** **04 47 43.9 -0.5**
AKBB pmax pmax
comp=Z,12nm,0.9s
K05A Summer Lake 72.60 49 P **P** **04 47 47.5 +0.8**
K05A IAmb IAmb 04 47 49.6
comp=Z,12nm,0.8s
NC204 NORSAR Array S 72.65 336 P **P** **04 47 46.2 -0.3**
NB2 NORSAR Subarra 72.68 336 P **P** **04 47 46.0 -0.6**
comp=Z,14nm,1.1s,baz=43,slow=6.2
NOA NORSAR Array B 72.68 336 P **P** **04 47 46.1 -0.6**
comp=Z,4.6nm,0.9s,baz=41,slow=5.9,SNR=9.2
comp=Z,4.6nm,0.9s
JTMT Jette 73.38 42 P **P** **04 47 52.0 +0.8**
MARD Mardin 73.44 304 P **P** **04 47 51.5 -0.2**
MARD IAmb IAmb 04 47 52.8
comp=Z,8.7nm,0.9s
BMO Blue Mountains 73.46 46 P **P** **04 47 52.4 +0.8**
BMO Blue Mountains 73.46 46 P **P** **04 47 52.4 +0.8**
BMO pmax pmax
comp=Z,6.0nm,1.1s
J08A Circle Bar Ran 73.67 48 P **P** **04 47 54.1 +1.1**
J08A IAmb IAmb 04 47 55.6
comp=Z,8.9nm,1.0s
KLNR Kaliningrad 73.92 328‖ *e*P **P** **04 47 55.2 +1.2**
WVOR Wild Horse Val 74.12 49 P **P** **04 47 56.6 +1.0**
WVOR IAmb IAmb 04 47 58.1
comp=Z,11nm,1.3s
WVOR Wild Horse Val 74.12 49 P **P** **04 47 56.6 +1.0**
WVOR pmax pmax
comp=Z,11nm,1.3s
BEKR Beckworth 74.59 51 P **P** **04 47 59.2 +0.7**
BEKR IAmb IAmb 04 48 00.6
comp=Z,11nm,0.9s
FCC Fort Churchill 74.67 25 P **P** **04 47 58.6 +0.3**
FCC Fort Churchill 74.67 25 P **P** **04 47 58.6 +0.3**
FCC pmax pmax
comp=Z,5.0nm,1.0s
MFID Camas Ranch 75.18 46 P **P** **04 48 02.6 +0.9**
MFID IAmb IAmb 04 48 04.2
comp=Z,13nm,1.5s
PAHR Pah Rah Range 75.29 51 P **P** **04 48 03.9 +1.4**
PAHR IAmb IAmb 04 48 04.8
comp=Z,11nm,0.9s
HRY Holter Researc 75.33 42 P **P** **04 48 03.8 +1.2**
VCNR Virginia City 75.37 52 P **P** **04 48 04.2 +1.2**
LRM Limekiln Ridge 75.56 43 P **P** **04 48 03.7 -0.3**
EGMT Eagleton 75.57 40 P **P** **04 48 03.8 -0.1**
EGMT IAmb IAmb 04 48 05.3
comp=Z,8.0nm,1.0s
EGMT Eagleton 75.57 40 P **P** **04 48 04.7 +0.9**
baz=311
CMB Columbia Colle 75.66 53 P **P** **04 48 04.9 +0.4**
CMB IAmb IAmb 04 48 06.7
comp=Z,7.7nm,0.9s
CMB Columbia Colle 75.66 53 P **P** **04 48 04.9 +0.4**
CMB pmax pmax
comp=Z,8.0nm,0.9s
HLID Hailey 75.89 46 P **P** **04 48 07.3 +1.4**
baz=309,SNR=7.1
BOZ Bozeman (W) 76.15 43 P **P** **04 48 07.3 0.0**
BOZ Bozeman (W) 76.15 43 P **P** **04 48 07.3 0.0**
BOZ pmax pmax
comp=Z,6.0nm,1.0s
BOZ Bozeman (W) 76.15 43 P **P** **04 48 08.3 +1.0**
baz=310,SNR=11
BMN Battle Mountai 76.18 50 P **P** **04 48 07.1 -0.5**
BMN IAmb IAmb 04 48 09.8
comp=Z,7.6nm,1.0s
BMN Battle Mountai 76.18 50 P **P** **04 48 07.1 -0.5**
BMN pmax pmax
comp=Z,8.0nm,1.0s
BURAR Bucovina Array 76.27 320 P **P** **04 48 07.5 -0.3**
RYN Ryan 76.47 52 P **P** **04 48 10.2 +1.0**
RYN IAmb IAmb 04 48 11.3
comp=Z,10nm,1.2s
KVN Kaiserville 76.48 51 P **P** **04 48 10.4 +1.1**
KVN IAmb IAmb 04 48 11.9
comp=Z,12nm,0.9s
KVN Kaiserville 76.48 51 P **P** **04 48 10.4 +1.1**
KVN pmax pmax
comp=Z,12nm,0.9s
BR131 Keskin Array S 76.55 310‖ *e*P **P** **04 48 10.4 +0.8**
BRTR Keskin Array B 76.55 310 P **P** **04 48 09.8 +0.2**
comp=Z,1.6nm,1.0s,baz=101,slow=5.2,SNR=6.5
comp=Z,1.6nm,1.0s
LHV Little Huntoon 76.71 52 P **P** **04 48 12.2 +1.8**
NVAR Mina Array Bea 76.73 52 P **P** **04 48 12.8 +2.0**
comp=Z,6.5nm,0.9s,baz=285,slow=6.0,SNR=20
comp=Z,6.5nm,0.9s
NVAR Mina Array Bea 76.73 52 P **P** **04 48 12.0 +1.2**
QLMT Earthquake Lak 76.75 43 P **P** **04 48 11.0 +0.2**
OMMB Old Mammoth Mi 76.79 53 P **P** **04 48 12.7 +1.5**
OMMB IAmb IAmb 04 48 13.9
comp=Z,9.4nm,1.3s
NV11 Mina Array Sit 76.82 52 P **P** **04 48 12.3 +1.1**
YHL Hebgen Lake 76.87 43 P **P** **04 48 12.5 +0.9**
UZH Uzhgorod 77.05 322 *e*P **P** **04 48 07.9 -4.2**
UZH *i* 04 48 13.0
UZH *i* 04 48 25.5
GCMT Greycliff 77.07 42 P **P** **04 48 13.9 +1.4**
OJC Ojcow 77.14 325 *e*P **P** **04 48 12.3 -0.3**
OJC Ojcow 77.14 325 P **P** **04 48 11.9 -0.7**
OJC Ojcow 77.14 325 P **P** **04 48 11.9 -0.7**
OJC pmax pmax
comp=Z,26nm,1.3s
YPP Pitchstone Pla 77.45 43 P **P** **04 48 16.5 +1.6**
NIE Niedzica 77.46 324 *e*P **P** **04 48 14.7 +0.2**
H17A Grant Village 77.50 43 P **P** **04 48 17.8 +2.8**
H17A IAmb IAmb 04 48 19.3
comp=Z,11nm,1.0s
H17A Grant Village 77.50 43 P **P** **04 48 17.9 +2.9**
baz=311,SNR=7.5
TPH Tonopah 77.62 51 P **P** **04 48 17.1 +1.3**
TPH Tonopah 77.62 51 P **P** **04 48 17.1 +1.3**
TPH pmax pmax
comp=Z,57nm,1.0s
FLWY Flagg Ranch 77.64 43 P **P** **04 48 17.3 +1.6**
FLWY IAmb IAmb 04 48 19.4
comp=Z,13nm,1.4s
RLMT Red Lodge 77.73 42 P **P** **04 48 16.6 +0.4**
RLMT Red Lodge 77.73 42 P **P** **04 48 17.1 +0.9**
baz=312
PKM Mcpherson Peak 77.91 55 P **P** **04 48 18.7 +1.3**
baz=308
HVU Hansel Valley 77.96 46 P **P** **04 48 18.3 +0.8**
HVU IAmb IAmb 04 48 20.1
comp=Z,7.4nm,0.9s
HVU Hansel Valley 77.96 46 P **P** **04 48 18.3 +0.8**
HVU pmax pmax
comp=Z,7.0nm,0.9s
LANS Liptovska Anna 78.04 324 *e*P **P** **04 48 19.2 +1.5**
LANS pmax pmax
comp=Z,5.0nm,1.3s
LANS Liptovska Anna 78.04 324 *e*P **P** **04 48 19.2 +1.5**

CWC Cottonwood Cre 78.09 53 P **P** **04 48 19.5 +1.2**
baz=308
OKC Ostrava-Krasne 78.16 325 AMS AMS 05 26 20.0
comp=Z,300nm,14.1s
GRAC Grapevine Rang 78.20 52 P **P** **04 48 19.8 +1.0**
GRAC IAmb IAmb 04 48 21.5
comp=Z,11nm,1.0s
GRAC Grapevine Rang 78.20 52 P **P** **04 48 20.0 +1.2**
baz=308
LAO LASA Array 78.25 39 P **P** **04 48 20.2 +1.3**
LAO LASA Array 78.25 39 P **P** **04 48 19.8 +0.9**
baz=313
KSP Ksiaz 78.27 327 *e*P **P** **04 48 19.7 +0.8**
R11A Troy Canyon, C 78.46 50 P **P** **04 48 21.1 +0.7**
R11A IAmb IAmb 04 48 23.1
comp=Z,17nm,1.5s
R11A Troy Canyon, C 78.46 50 P **P** **04 48 21.7 +1.3**
baz=309,SNR=10
MORC Moravsky Berou 78.48 325 P **P** **04 48 20.6 +0.5**
MORC IAmb IAmb 04 48 21.6
comp=Z,9.7nm,1.1s
MORC Moravsky Berou 78.48 325 P **P** **04 48 20.6 +0.5**
MORC pmax pmax
comp=Z,10.0nm,1.1s
MORC Moravsky Berou 78.48 325 *e*P **P** **04 48 20.4 +0.3**
OSTC Ostas 78.51 326 *e*P **P** **04 48 21.4 +1.2**
OSTC AMS AMS 05 27 20.0
comp=Z,300nm,12.5s
CHVC Chvalec 78.56 327 AMS AMS 05 27 30.0
comp=Z,300nm,12.9s
KRLC Kralicky 78.61 326 AMS AMS 05 27 00.0
comp=Z,200nm,15.4s
DPC Dobruska-Polom 78.61 326 *e*P **P** **04 48 22.1 +1.3**
DPC MLR MLR
comp=Z,300nm,13.7s
DPC Dobruska-Polom 78.61 326 *e*P **P** **04 48 22.1 +1.3**
DPC AMS AMS 05 27 10.0
comp=Z,300nm,13.7s
UPC Upice 78.64 327 *e*P P 04 48 28.4 +7.5
UPC MLR MLR
comp=Z,300nm,13.2s
UPC Upice 78.64 327 *e*P P 04 48 28.4 +7.5
UPC AMS AMS 05 27 30.0
comp=Z,300nm,13.2s
MAUC Maruska 78.64 325 AMS AMS 05 26 40.0
comp=Z,400nm,11.8s
MPMC Manual Prospec 78.70 53 P **P** **04 48 22.8 +1.0**
baz=308
PSZ Piszkesteto 78.70 323 P **P** **04 48 21.1 -0.3**
PSZ Piszkesteto 78.70 323 P **P** **04 48 21.1 -0.3**
PSZ pmax pmax
comp=Z,25nm,1.3s
HWUT Hardware Ranch 78.76 46 P **P** **04 48 23.3 +1.3**
HWUT IAmb IAmb 04 48 24.7
comp=Z,9.8nm,1.0s
OSI Osito Audit: C 78.79 55 P **P** **04 48 23.3 +1.2**
baz=308
VYHS Vyhne 78.80 324 *e*P **P** **04 48 22.3 +0.5**
VYHS pmax pmax
comp=Z,4.0nm,1.1s
VYHS Vyhne 78.80 324 *e*P **P** **04 48 22.3 +0.5**
FURC Furnace Creek, 78.84 53 P **P** **04 48 23.7 +1.5**
baz=309
TPNV Topopah Spring 78.93 52 P **P** **04 48 23.4 +0.4**
TPNV IAmb IAmb 04 48 25.3
comp=Z,8.0nm,0.9s
TPNV Topopah Spring 78.93 52 P **P** **04 48 23.4 +0.4**
TPNV pmax pmax
comp=Z,8.0nm,0.9s
TPNV Topopah Spring 78.93 52 P **P** **04 48 24.1 +1.1**
baz=309,SNR=7.4
LRMC Laurel Mtn Rad 78.93 54 P **P** **04 48 23.9 +0.9**
baz=308
DUG Dugway, Tooele 78.95 48 P **P** **04 48 23.9 +0.9**
DUG IAmb IAmb 04 48 25.7
comp=Z,8.3nm,0.9s
DUG Dugway, Tooele 78.95 48 P **P** **04 48 23.9 +0.9**
DUG pmax pmax
comp=Z,8.0nm,1.0s
DUG Dugway, Tooele 78.95 48 P **P** **04 48 24.5 +1.5**
baz=310,SNR=7.9
JAVC Velka Javorina 79.08 325 *e*P **P** **04 48 25.1 +1.7**
BW06 Boulder Array 79.13 44 P **P** **04 48 24.7 +0.6**
baz=312,SNR=11
PD31 Pinedale Array 79.13 44 P **P** **04 48 24.3 +0.3**
PDAR Pinedale Array 79.13 44 P **P** **04 48 25.0 +1.0**
comp=Z,4.2nm,0.7s,baz=278,slow=1.9,SNR=25
comp=Z,4.2nm,0.7s
PDAR Pinedale Array 79.13 44 P **P** **04 48 23.8 -0.2**
GWY Greenwater Val 79.14 53 P **P** **04 48 24.3 +0.1**
GWY IAmb IAmb 04 48 26.4
comp=Z,9.2nm,1.0s
PVCC Panska Ves 79.25 327 AMS AMS 05 27 50.0
comp=Z,200nm,16.2s
VRAC Vranov 79.25 325 *e*P **P** **04 48 24.9 +0.6**
BRG Berggiesshubel 79.26 328 *e*P **P** **04 48 24.5 +0.2**
BRG Amp 04 48 27.2
comp=Z,6.1nm,1.0s
BRG Berggiesshubel 79.26 328 *e*P **P** **04 48 24.5 +0.2**
BRG pmax pmax
comp=Z,6.0nm,1.0s
CLL Collm 79.33 329 *i* P **P** **04 48 24.8 +0.2**
CLL *e* 04 48 40.0
CLL pmax pmax
comp=Z,9.0nm,0.9s
CLL Collm 79.33 329 *i* P **P** **04 48 24.8 +0.2**
comp=Z,9.0nm,0.9s
CLL *ex* x 04 48 40.0
SMOL Smolenice 79.44 324 *e*P **P** **04 48 26.0 +0.7**
SMOL pmax pmax
comp=Z,4.0nm,0.9s
SMOL Smolenice 79.44 324 *e*P **P** **04 48 26.0 +0.7**
KRUC Moravsky 79.52 325 *e*P **P** **04 48 26.1 +0.4**
SHOC Shoshone, Teco 79.57 53 P **P** **04 48 27.3 +1.1**
baz=309
GSC Goldstone, Bar 79.60 53 IAmb IAmb 04 48 28.8
comp=Z,15nm,1.5s
GSC Goldstone, Bar 79.60 53 P **P** **04 48 27.7 +1.1**
baz=309
MODS Modra-Piesok 79.61 324 *e*P **P** **04 48 26.6 +0.3**
MODS pmax pmax
comp=Z,24nm,1.2s
MODS Modra-Piesok 79.61 324 *e*P **P** **04 48 26.6 +0.3**
PRU Pruhonice 79.66 327 *e*P **P** **04 48 27.8 +1.3**
PRU MLR MLR
comp=Z,300nm,13.5s
PRU Pruhonice 79.66 327 *e*P **P** **04 48 27.8 +1.3**
PRU AMS AMS 05 27 50.0
comp=Z,300nm,13.5s
TREC Trest 79.75 326 AMS AMS 05 27 40.0
comp=Z,300nm,13.1s
ZST Bratislava 79.82 324 *e*P **P** **04 48 28.7 +1.3**
ZST Bratislava 79.82 324 *e*P **P** **04 48 28.7 +1.3**
TUQ Turquoise Moun 80.08 53 P **P** **04 48 30.4 +1.2**
baz=309,SNR=5.3
HEC Hector,Ludlow 80.20 54 P **P** **04 48 30.7 +0.9**
baz=309
NKC Novy Kostel 80.37 328 AMS AMS 05 29 10.0
comp=Z,100nm,13.8s
RDO Rodhopi 80.39 315 P **P** **04 48 30.7 +0.1**
RDO IAmb IAmb 04 48 31.7
comp=Z,13nm,1.3s
MURC Murrieta 80.41 55 P **P** **04 48 31.5 +0.6**
baz=309
ULM Lac du Bonnet 80.47 32 P **P** **04 48 30.4 -0.4**
comp=Z,2.9nm,0.6s,baz=332,slow=6.5,SNR=4.9
comp=Z,2.9nm,0.6s
ULM Lac du Bonnet 80.47 32 IAmb IAmb 04 48 31.3
comp=Z,14nm,1.3s
RONA Rosalia, Austr 80.55 324 *i* P **P** **04 48 32.2 +0.8**
comp=Z,16nm,1.0s,SNR=6.1
CONA Conrad Observa 80.59 325 *i* P **P** **04 48 32.1 +0.4**
comp=Z,12nm,1.1s,SNR=7.7
MDND Maddock 80.62 35 IAmb IAmb 04 48 33.6
comp=Z,20nm,1.1s
MDND Maddock 80.62 35 P **P** **04 48 32.5 +0.8**
baz=317
CKRC Cesky Krumlov 80.63 326 *e*P **P** **04 48 32.3 +0.5**
CKRC AMS AMS 05 28 10.0
comp=Z,200nm,14.5s
GMRC Granite Mounta 80.66 53 P **P** **04 48 33.5 +1.1**
baz=310
KHC Kasperske Hory 80.72 327 IAmb IAmb 04 48 33.7
comp=Z,12nm,1.1s
KHC Kasperske Hory 80.72 327 *c i*P **P** **04 48 32.5 +0.2**
KHC pmax pmax
comp=Z,27nm,1.1s
KHC Kasperske Hory 80.72 327 *e*P **P** **04 48 33.2 +0.9**
KHC AMS AMS 05 29 00.0
comp=Z,300nm,12.1s
P18A Preston Nutter 80.82 47 IAmb IAmb 04 48 36.0
comp=Z,12nm,1.1s
K22A Casper 80.86 42 IAmb IAmb 04 48 35.2
comp=Z,9.5nm,1.1s
K22A Casper 80.86 42 P **P** **04 48 33.7 +0.4**
baz=314
GERES GERESS Array B 80.88 327 P **P** **04 48 33.4 +0.1**
comp=Z,1.1nm,0.5s,baz=40,slow=2.3,SNR=16
comp=Z,1.1nm,0.5s
PFO Pinyon Flats O 80.88 55‖ *e*P **P** **04 48 34.0 +0.4**
PFO pmax pmax
comp=Z,8.0nm,1.0s
PFO Pinyon Flats O 80.88 55 P **P** **04 48 34.2 +0.6**
baz=309
TPFO Pinon Flats 80.89 55 P **P** **04 48 34.3 +0.7**
baz=309
BELC Belle Mtn. Jos 80.94 54 P **P** **04 48 34.4 +0.5**
baz=309
SRU San Rafael Swe 81.00 47 P **P** **04 48 34.2 0.0**
SRU IAmb IAmb 04 48 36.3
comp=Z,9.9nm,0.9s
SRU San Rafael Swe 81.00 47 P **P** **04 48 34.2 0.0**
SRU pmax pmax
comp=Z,10.0nm,0.9s
RSSD Black Hills 81.14 40 P **P** **04 48 35.4 +0.5**
baz=315
MONP2 Monument Peak 81.36 55 P **P** **04 48 37.0 +0.8**
baz=309
MOA Molln 81.37 326 *e*P **P** **04 48 36.5 +0.8**
comp=Z,6.9nm,1.4s
IRM Iron Mountain 81.38 53 P **P** **04 48 37.3 +1.2**
baz=310
BC3 Big Chuckawall 81.51 54 P **P** **04 48 37.7 +0.9**
baz=310
O20A White River Ci 81.62 45 P **P** **04 48 38.2 +0.7**
baz=313
U15A North Rim 81.70 50 IAmb IAmb 04 48 41.0
comp=Z,12nm,1.0s
IKP In-Ko-Pah, Jac 81.72 55 P **P** **04 48 39.2 +1.2**
baz=310
SWSC Sam W. Stewart 81.73 55 P **P** **04 48 39.7 +1.8**
baz=310
BIOA Bad Ischl, Aus 81.77 326 *e*P **P** **04 48 38.8 +0.9**
comp=Z,8.6nm,0.9s
PERS Pernice 81.88 324 *i* P **P** **04 48 38.6 +0.1**
SOKA Soboth 81.89 324 *i* P **P** **04 48 39.0 +0.4**
comp=Z,16nm,0.9s,SNR=10
PDMCI Parker Dam,Lak 81.93 53 P **P** **04 48 39.7 +0.8**
baz=310
AGMN Agassiz Nation 81.95 33 P **P** **04 48 38.4 -0.4**
baz=320
OBKA Obir 82.24 325 *e*P **P** **04 48 38.5 -1.9**
comp=Z,3.3nm,1.1s
LEGS Legarje 82.30 324 *i* P **P** **04 48 40.3 -0.3**
CRES Cresnjev 82.32 324 *i* P **P** **04 48 40.5 -0.3**
KBA Koelnbreinsper 82.36 326 *e*P **P** **04 48 41.3 +0.1**
comp=Z,8.0nm,0.9s
N23A Red Feather La 82.38 43 P **P** **04 48 42.6 +1.1**
baz=314
MYKA Terra Mystica 82.56 325 *e*P **P** **04 48 42.5 +0.4**
comp=Z,5.7nm,1.0s
PV13 Radium Mtn., P 82.62 47 IAmb IAmb 04 48 45.3
comp=Z,14nm,1.0s
WUAZ Wupatki 82.86 50 P **P** **04 48 45.4 +1.4**
baz=312,SNR=5.7
WATA Walderalm 82.95 327 *e*P **P** **04 48 44.9 +0.7**
comp=Z,3.5nm,0.5s
WTTA Wattenberg 82.98 327 *e*P **P** **04 48 44.6 +0.2**
comp=Z,8.5nm,1.0s
ABTA Abfaltersbach 82.98 326 *i* P **P** **04 48 43.6 -0.7**
comp=Z,9.9nm,1.3s
MOTA Moosalm 83.15 327 *e*P **P** **04 48 45.5 +0.3**
comp=Z,7.1nm,0.8s
RETA Reutte 83.19 327 *i* P **P** **04 48 45.5 +0.1**
comp=Z,13nm,0.9s,SNR=6.9
ISCO Idaho Springs 83.32 44 P **P** **04 48 47.4 +0.9**
baz=314
SUSD Miller 83.43 37 P **P** **04 48 47.1 +0.5**
baz=318
MVCO Mesa Verde 83.45 48 P **P** **04 48 48.3 +1.1**
baz=313,SNR=5.5
X16A Lo Mia Camp, P 83.55 51 IAmb IAmb 04 48 51.0
comp=Z,8.6nm,1.0s
F33A 5 Mile Ranch, 83.63 35 IAmb IAmb 04 48 49.0
comp=Z,9.7nm,1.0s
DAVA Damuels 83.72 327 *i* P **P** **04 48 47.4 -0.8**
comp=Z,22nm,1.0s,SNR=6.0
CTI Castel Tesino 83.90 326 P **P** **04 48 47.1 -2.0**
CTI IAmb IAmb 04 48 48.9
comp=Z,8.0nm,0.9s
CTI Castel Tesino 83.90 326 P **P** **04 48 47.1 -2.0**
CTI pmax pmax
comp=Z,8.0nm,0.9s
S22A 4UR Ranch, Cre 84.06 46 P **P** **04 48 51.6 +1.4**
baz=314
EYMN Ely 84.07 31 P **P** **04 48 49.7 -0.1**
baz=323
FUORN Ofenpass-Fuorn 84.07 327 P **P** **04 48 49.7 -0.4**
Q24A Divide 84.16 44 P **P** **04 48 51.3 +0.5**
baz=315
214A Organ Pipe Nat 84.30 54 P **P** **04 48 52.5 +1.2**
baz=311
X18A Snowflake 84.39 50 IAmb IAmb 04 48 54.4
comp=Z,7.8nm,1.0s
OGNE Ogallala 84.44 41 P **P** **04 48 52.4 +0.5**
baz=316
SDCO Great Sand Dun 84.81 46 P **P** **04 48 55.3 +1.2**
baz=314,SNR=6.1
ECSD EROS Data Cent 85.08 36 P **P** **04 48 55.2 +0.3**
baz=320,SNR=14
ITM Ithomi 85.14 314 P **P** **04 48 54.2 -1.2**
TUC Tucson 85.35 52 P **P** **04 48 57.6 +1.0**
baz=312
SCHQ Schefferville 85.51 14 P **P** **04 48 56.1 -0.8**
comp=Z,3.3nm,0.8s,baz=351,slow=8.5,SNR=4.4
comp=Z,3.3nm,0.8s
SPMN Marine on St. 85.66 33 P **P** **04 48 58.4 +0.6**
baz=322
T25A Trinidad 85.86 45 P **P** **04 49 00.3 +1.1**
baz=315
BGNE Belgrade 86.09 39 P **P** **04 49 00.4 +0.3**
baz=319
ANMO Albuquerque 86.21 48 *d i*P **P** **04 49 03.1 +2.1**
ANMO pmax pmax
comp=Z,9.0nm,1.3s
ANMO Albuquerque 86.21 48 P **P** **04 49 02.4 +1.4**
baz=314
LPL La Plagne 86.45 328 *e*P **P** **04 49 02.4 +0.4**
LPL pmax pmax
comp=Z,7.0nm,1.0s
SSF Saint Saulge 86.50 331 *e*P **P** **04 49 01.9 0.0**
SSF pmax pmax
comp=Z,8.0nm,0.9s
121A Cookes Peak, D 87.07 51 P **P** **04 49 06.4 +1.2**
baz=314
CBKS Cedar Bluff 87.20 41 P **P** **04 49 05.5 -0.1**
baz=318
SCIA State Center 88.08 36 P **P** **04 49 10.0 +0.4**
baz=322
MFF Saint Martin d 88.26 333 *e*P **P** **04 49 10.1 -0.3**
MFF pmax pmax
comp=Z,14nm,1.1s
KSU1 Kansas State U 88.60 39 P **P** **04 49 12.5 +0.3**
baz=320,SNR=6.6
JFWS Jewell Farm 88.62 33 P **P** **04 49 12.2 0.0**
baz=324
CAF Calviac 88.83 330 *e*P **P** **04 49 13.6 +0.4**
CAF pmax pmax
comp=Z,6.0nm,1.0s
L40A Anamosa 88.87 34 IAmb IAmb 04 49 14.6
comp=Z,9.1nm,1.1s
AMTX Amarillo 89.01 45 IAmb IAmb 04 49 16.5
comp=Z,7.4nm,1.0s
AMTX Amarillo 89.01 45 P **P** **04 49 15.3 +1.0**
baz=317
MSTX Muleshoe 89.05 47 P **P** **04 49 15.8 +1.2**
MSTX IAmb IAmb 04 49 16.7
comp=Z,4.3nm,0.9s
MSTX Muleshoe 89.05 47 P **P** **04 49 14.9 +0.4**
baz=316
MNTX Cornudas Mount 89.11 50 P **P** **04 49 15.8 +1.0**
baz=315
WMOK Wichita Mounta 90.73 44 P **P** **04 49 22.9 +0.6**
baz=318

HDIL	**Hopedale**	**90.94**	**34**	P	**P**	**04 49 23.2**	**+0.1**
	baz=324						
FNO	**Franklin**	**91.10**	**42**	P	**P**	**04 49 24.9**	**+1.0**
R40A	**Maddies Statio**	**91.37**	**37**	IAmb	IAmb	04 49 26.6	
	comp=Z,7.8nm,0.9s						
TUL1	**Leonard**	**91.45**	**41**	P	**P**	**04 49 25.6**	**+0.1**
TUL1	**Leonard**	**91.45**	**41**	P	**P**	**04 49 25.9**	**+0.4**
	baz=320						
TRQ	**Mont Tremblant**	**91.58**	**22**	IAmb	IAmb	04 49 26.8	
	comp=Z,10nm,1.3s						
ABTX	**Abilene, Hawle**	**91.82**	**46**	P	**P**	**04 49 28.0**	**+0.7**
	baz=318						
TXAR	**Lajitas Array**	**91.83**	**50**	P	**P**	**04 49 28.8**	**+1.2**
	comp=Z,1.5nm,0.7s,baz=296,slow=3.1,SNR=15						
	comp=Z,1.5nm,0.7s						
CCM	**Cathedral Cave**	**92.05**	**37**	P	**P**	**04 49 28.0**	**-0.2**
CCM	**Cathedral Cave**	**92.05**	**37**	P	**P**	**04 49 28.0**	**-0.2**
CCM				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CCM	**Cathedral Cave**	**92.05**	**37**	P	**P**	**04 49 28.7**	**+0.4**
	baz=323						
HHAR	**Hobbs**	**92.12**	**40**	IAmb	IAmb	04 49 29.9	
	comp=Z,5.0nm,0.9s						
MGMO	**Mountain Grove**	**92.27**	**38**	IAmb	IAmb	04 49 30.5	
	comp=Z,5.7nm,0.9s						
W39A	**Magazine**	**93.04**	**40**	P	**P**	**04 49 32.9**	**+0.1**
	baz=321						
S44A	**Carbondale**	**93.28**	**36**	P	**P**	**04 49 33.7**	**-0.2**
S44A				IAmb	IAmb	04 49 35.6	
	comp=Z,5.6nm,0.8s						
SIUC	**Southern Illin**	**93.28**	**36**	P	**P**	**04 49 33.5**	**-0.4**
JCT	**Junction City**	**93.31**	**47**	IAmb	IAmb	04 49 36.1	
	comp=Z,5.7nm,0.8s						
JCT	**Junction City**	**93.31**	**47**	P	**P**	**04 49 35.1**	**+0.8**
	baz=318						
FCAR	**Ozark Folk Cen**	**93.34**	**39**	IAmb	IAmb	04 49 35.4	
	comp=Z,6.8nm,1.0s						
MIAR	**Mount Ida**	**93.65**	**40**	P	**P**	**04 49 36.8**	**+1.0**
	baz=322,SNR=6.5						
LCAR	**Lake Charles**	**93.67**	**38**	IAmb	IAmb	04 49 37.3	
	comp=Z,6.0nm,1.3s						
WHAR	**Wooly Hollow**	**93.73**	**39**	P	**P**	**04 49 35.7**	**-0.4**
WHAR				IAmb	IAmb	04 49 37.4	
	comp=Z,6.5nm,0.9s						
W41B	**Gary Mavity, V**	**93.84**	**39**	P	**P**	**04 49 37.0**	**+0.5**
	baz=322						
PKME	**Peaks-Kenny Pk**	**93.92**	**19**	P	**P**	**04 49 37.2**	**+0.5**
	baz=339						
J59A	**Piesco**	**94.08**	**23**	IAmb	IAmb	04 49 38.9	
	comp=Z,4.5nm,0.9s						
P52A	**Corning**	**94.74**	**30**	P	**P**	**04 49 40.5**	**-0.1**
	baz=329						
BINY	**Binghamton**	**94.74**	**25**	P	**P**	**04 49 40.8**	**+0.2**
	baz=334						
HRV	**Adam Dziewonsk**	**95.85**	**22**	P	**P**	**04 49 46.0**	**+0.4**
	baz=337						
NHSC	**New Hope**	**101.15**	**32**	P	**Pdif**	**04 50 10.1**	**+0.6**
	baz=330						
TORD	**Torodi Ar. Bea**	**115.09**	**312**	PKP	**PKiKP**	**04 55 00.2**	**-0.6**
	comp=Z,0.7nm,1.0s,baz=40,slow=2.1,SNR=2.7						
LPAZ	**La Paz**	**148.60**	**55**	PKPbc	**PKiKP**	**04 56 08.1**	**-0.7**
	comp=Z,3.2nm,0.8s,baz=25,slow=11,SNR=7.6						

*KRNET **27** 04:40:43.9±0.1, 39°.37N×73°.35E, mb3.5*
*SOME **27** 04:40:45.6, 39°.50N×73°.42E, h0km*
*NNC **27** 04:40:50.4±2.8, 39°.66N×73°.31E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=25.9km s-min=17.3km az=171.0*

ISC 27 04:40:45.2±1.5, **39°.26N**±0°.07×**73°.22E**±0°.04, **h10**km, **n21, σ1§47/40, 21C-2D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk**	**1.12**	**282**	⇑*i*P	**Pn**	**04 41 06.9**	**-0.3**
	baz=76						
DRK				⇑*i*S	**Sn**	**04 41 23.7**	**+0.9**
	baz=76						
OHH	**Osh**	**1.30**	**345**	⇑*i*P	**Pn**	**04 41 07.4**	**-2.2**
	baz=40						
OHH				⇑*i*S	**Sb**	**04 41 24.6**	**-2.1**
	baz=40						
BTK	**Batken**	**2.02**	**294**	⇑*e*P	**Pb**	**04 41 21.9**	**-0.1**
	baz=90						
BTK				⇑*i*S	**Sg**	**04 41 49.6**	**-0.4**
	baz=90						
GAR	**Garm**	**2.27**	**264**	⇑*e*P	**Pb**	**04 41 26.6**	**+0.3**
	baz=62						
GAR				⇑*i*S	**Sg**	**04 41 57.6**	**-0.5**
	baz=62						
ARLS	**Aral**	**2.73**	**18**	⇑*e*P	**Pn**	**04 41 29.3**	**0.0**
	baz=16						
ARLS				⇑*i*S	**Sn**	**04 42 02.4**	**-0.1**
	baz=16						
TRKS	**Terek-Say**	**2.77**	**326**	⇑*e*P	**Pn**	**04 41 30.4**	**+0.6**
	baz=22						
TRKS				⇑*i*S	**Sn**	**04 42 04.4**	**+1.1**
	baz=22						
UCH	**Uchtor**	**3.12**	**18**	⇑*e*P	**Pn**	**04 41 34.9**	**0.0**
	baz=17						
UCH				⇑*i*S	**Sn**	**04 42 12.1**	**-0.4**
	baz=17						
IUG	**luzhnay**	**3.77**	**321**	*e*P	**Pg**	**04 41 55.0**	**-2.4**
	360nm,0.2s						
IUG				*e*S	**Sg**	**04 42 43.9**	**-2.2**
	53nm,0.2s						
BOOM	**Boomskoye usch**	**3.83**	**32**	⇑*i*P	**Pn**	**04 41 44.4**	**0.0**
	baz=31						
BOOM				⇑*i*S	**Sn**	**04 42 28.5**	**-1.1**
	baz=31						
CHMS	**Chumysh**	**3.91**	**17**	⇑Pn	**Pn**	**04 41 44.9**	**-0.5**
	5.4nm,0.7s						
CHMS				⇑Lg	Lg	04 42 41.7	
	17nm,0.8s						
TKM2	**Tokmak 2**	**4.08**	**25**	⇑Pn	**Pn**	**04 41 49.8**	**+2.0**
	3.8nm,0.5s						
TKM2				⇓Lg	Lg	04 42 47.6	
	9.3nm,0.6s						
KST	**Kastek**	**4.31**	**28**	*e*P	**Pb**	**04 42 00.7**	**-0.5**
	4.3nm,0.1s						
KST				*e*S	**Sb**	**04 42 53.6**	**+0.3**
	25nm,0.2s						
SGDS	**Sogindy**	**4.32**	**14**	*e*P	**Pb**	**04 42 01.2**	**-0.1**
	2.8nm,0.1s						
SGDS				*e*S	**Sb**	**04 42 54.6**	**+1.1**
	7.3nm,0.3s						
KK31	**Karatay Array**	**4.35**	**333**	⇑Pn	**Pn**	**04 41 53.8**	**+2.4**
	0.8nm,0.3s,baz=170,slow=17,SNR=24						
KK31				⇑Pg	**Pb**	**04 42 03.3**	**+1.6**
	1.8nm,0.3s,baz=149,slow=17,SNR=8.9						
KK31				⇓Lg	Lg	04 42 59.7	
	6.9nm,0.5s,baz=153,slow=28,SNR=4.7						
DGS	**Degeres**	**4.42**	**25**	*e*P	**Pb**	**04 42 02.5**	**-0.5**
	8.0nm,0.5s						
DGS				*e*S	**Sb**	**04 42 56.7**	**+0.3**
	27nm,0.7s						
BRLS	**Borolday**	**4.55**	**327**	*e*P	**Pb**	**04 42 06.5**	**+1.3**
	2.7nm,0.1s						
BRLS				*e*S	**Sb**	**04 43 03.5**	**+3.5**
	13nm,0.2s						
MTBS	**Maitube**	**4.56**	**31**	*e*P	**Pb**	**04 42 05.7**	**+0.3**
	3.6nm,0.0s						
MTBS				*e*S	**Sb**	**04 43 02.1**	**+1.6**
	18nm,0.4s						
TNSS	**Tian-Shan**	**4.71**	**36**	*e*P	**Pb**	**04 42 08.0**	**-0.1**
	3.4nm,0.2s						
TNSS				*e*S	**Sb**	**04 43 06.0**	**+1.0**
	6.2nm,0.6s						
KRBS	**Karabastau**	**4.80**	**22**	*e*P	**Pb**	**04 42 10.0**	**+0.5**
	0.2nm,0.1s						
KRBS				*e*S	**Sb**	**04 43 09.6**	**+2.3**
	15nm,0.3s						
KTBS	**Karatobe**	**5.15**	**29**	*e*P	**Pb**	**04 42 15.9**	**+0.4**
	2.5nm,0.1s						
KTBS				*e*S	**Sb**	**04 43 19.4**	**+2.0**
	23nm,0.2s						
KUU	**Kurty**	**5.19**	**26**	*e*P	**Pb**	**04 42 17.3**	**+1.3**
	3.4nm,0.4s						
KUU				*e*S	**Sb**	**04 43 21.9**	**+3.5**
	10nm,0.6s						

*IDC **27** 04:41:35.9±1.8, 22°.02S×170°.10E, h0km, mb3.9/3, mbtmp3.8/5, ML4.2/2, MS3.5/6, Error ellipse: s-maj=90.4km s-min=23.9km az=161.0*
*NEIC **27** 04:41:38.3±1.3, 22°.1S±0°.1×170°.14E±0°.08, h13km±3km, mb4.2/6, Error ellipse: s-maj=16.9km s-min=10.8km az=174.0*
*NOU **27** 04:41:42.2, 21°.99S×169°.74E, h0km, mb4.7/10, Southeast of Loyalty Islands*

ISC 27 04:41:39.4±0.8, **22°.1S**±0°.1×**170°.17E**±0°.08, **h25**km, **n38, σ0§97/36, mb4.0/6, MS3.3/3, 1D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**2.08**	**286**	Pn	**Pn**	**04 42 12.0**	**-0.7**
MARNC	**Mare, Loyalty**	**2.08**	**286**	P	**Pn**	**04 42 12.2**	**-0.5**
PINNC	**Pines Island,**	**2.58**	**257**	Pn	**Pn**	**04 42 19.2**	**-0.4**
LIFNC	**LIFOU**	**3.02**	**295**	Pn	**Pn**	**04 42 24.5**	**-1.2**
LIFNC	**LIFOU**	**3.02**	**295**	P	**Pn**	**04 42 24.7**	**-1.0**
YATNC	**Mamie plateau,**	**3.04**	**270**	P	**Pn**	**04 42 25.4**	**-0.6**
OUENC	**Ouen Island, N**	**3.11**	**263**	Pn	**Pn**	**04 42 26.1**	**-0.7**
OUENC	**Ouen Island, N**	**3.11**	**263**	P	**Pn**	**04 42 27.0**	**+0.2**
ONTNC	**Ouen Toro**	**3.46**	**265**	Pn	**Pn**	**04 42 31.3**	**-0.4**
ONTNC	**Ouen Toro**	**3.46**	**265**	P	**Pn**	**04 42 32.1**	**+0.5**
DZM	**Mont Dzumac**	**3.46**	**269**	Pn	**Pn**	**04 42 32.0**	**+0.2**
	8.1nm,0.3s,baz=120,slow=13,SNR=117						
DZM				Sn	**Sn**	**04 43 11.0**	**-1.0**
	4.4nm,0.3s,baz=126,slow=17,SNR=3.7						
	32nm,0.5s						
DZM	**Mont Dzumac**	**3.46**	**269**		**Pn**	**04 42 31.6**	**-0.2**
DZM	**Mont Dzumac**	**3.46**	**269**	P	**Pn**	**04 42 32.0**	**+0.2**
NOUC	**Port Laguerre**	**3.59**	**269**	P	**Pn**	**04 42 33.6**	**+0.1**
KOUNC	**Koumac, New Ca**	**5.69**	**284**	Pn	**Pn**	**04 43 02.4**	**-0.1**
KOUNC	**Koumac, New Ca**	**5.69**	**284**	P	**Pn**	**04 43 03.7**	**+1.3**
	63nm,0.7s						
MSVF	**Nonsavu**	**8.57**	**61**	Pn	**Pn**	**04 43 42.0**	**-0.1**
	0.2nm,0.3s,baz=345,slow=19,SNR=1.9						
MSVF				LR	LR	04 46 49.7	
	comp=Z,189nm,19.1s,baz=242,slow=36						
	3.5nm,0.8s						
MSVF	**Nonsavu**	**8.57**	**61**	Pn	**Pn**	**04 43 42.3**	**+0.2**
RAO	**Raoul Island**	**12.89**	**126**	LR	LR	04 48 20.3	
	comp=Z,280nm,21.8s,baz=199,slow=31						
URZ	**Urewera**	**17.20**	**161**	LR	LR	04 50 30.6	
	comp=Z,182nm,19.7s,baz=31,slow=31						
CTA	**Charters Tower**	**22.40**	**271**	LR	LR	04 53 37.0	
	comp=Z,88nm,18.0s,baz=80,slow=32						
COEN	**Coen**	**26.88**	**283**	P	**P**	**04 47 21.5**	**+2.9**
STKA	**Stephens Creek**	**27.21**	**243**	P	**P**	**04 47 20.6**	**-0.7**
	3.7nm,0.9s,baz=105,slow=16,SNR=1.8						
STKA				LR	LR	04 57 19.8	
	comp=Z,83nm,18.5s,baz=206,slow=35						
	3.7nm,0.9s						
STKA	**Stephens Creek**	**27.21**	**243**	P	**P**	**04 47 23.7**	**+2.4**
STKA				IAmb	IAmb	04 47 26.2	
	comp=Z,0.8nm,0.8s						
ASAR	**Alice Springs**	**33.40**	**260**	P	**P**	**04 48 16.1**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=79,slow=9.2,SNR=4.8						
	comp=Z,0.7nm,0.8s						
ASAR	**Alice Springs**	**33.40**	**260**	P	**P**	**04 48 14.5**	**-1.7**
WB0	**Warramunga Arr**	**33.45**	**267**	P	**P**	**04 48 16.4**	**-0.3**
WB0				IAmb	IAmb	04 48 19.1	
	comp=Z,4.5nm,1.1s						
WB2	**Warramunga Arr**	**33.46**	**267**	P	**P**	**04 48 15.9**	**-0.9**
WB2				IAmb	IAmb	04 48 24.3	
	comp=Z,6.6nm,1.3s						
WRA	**Warramunga Arr**	**33.47**	**267**	P	**P**	**04 48 15.8**	**-1.0**
	comp=Z,0.7nm,0.7s,baz=98,slow=8.4,SNR=6.0						
WRA				LR	LR	05 01 12.9	
	comp=Z,101nm,21.0s,baz=72,slow=35						
	comp=Z,0.7nm,0.7s						
WRA	**Warramunga Arr**	**33.47**	**267**	P	**P**	**04 48 16.7**	**-0.2**
BELA	**Belgrano 2**	**79.21**	**175**	P	**P**	**04 53 40.7**	**-1.2**
BELA				IAmb	IAmb	04 54 05.9	
	comp=Z,5.0nm,1.5s						
ARCES	**ARCESS Array B**	**128.02**	**345**	PKP	**PKPdf**	**05 00 42.1**	**-0.5**
	comp=Z,1.8nm,0.9s,baz=64,slow=4.1,SNR=4.0						
ARCES	**ARCESS Array B**	**128.02**	**345**		**PKPdf**	**05 00 42.0**	**-0.5**
VRAC	**Vranov**	**145.71**	**329**	*e*PKP	**PKPab**	**05 01 17.7**	**+1.4**
CLL	**Collm**	**145.84**	**334**	⇓*i*PKPbc	**PKPab**	**05 01 16.6**	**-0.1**
	comp=Z,7.0nm,0.8s						
CLL				*i* (pPKPdf)		05 01 18.3	
	comp=Z,7.0nm,0.9s						
KRUC	**Moravsky**	**145.97**	**329**	*e*PKP	**PKPab**	**05 01 17.5**	**+0.2**
GERES	**GERESS Array B**	**147.38**	**331**	PKPbc	**PKPbc**	**05 01 21.5**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=29,slow=2.2,SNR=11						
GERES	**GERESS Array B**	**147.38**	**331**		**PKPbc**	**05 01 21.1**	**0.0**

IDC 27 04:46:04.8±12.0, **65°.37S**×**160°.36E**, **h0**km, **mb3.5**/2, **mbtmp3.5**/2, **MS3.6**/1, **Error ellipse: s-maj=865.9km s-min=122.2km az=42.0, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
QSPA	**South Pole Qui**	**24.71**	**180**	LR	LR	05 00 11.3	
	comp=Z,140nm,21.5s,baz=20,slow=34						
ASAR	**Alice Springs**	**45.05**	**325**	P	P	04 54 23.5	+1.4
	0.2nm,0.4s,baz=162,slow=8.4,SNR=2.0						
	0.2nm,0.4s						
WRA	**Warramunga Arr**	**48.53**	**327**	P	P	04 54 47.7	-1.6
	0.7nm,0.9s,baz=164,slow=5.9,SNR=3.7						
	0.7nm,0.9s						
YKA	**Yellowknife Ar**	**141.93**	**49**	PKP	PKPdf	05 05 36.6	-0.1
	0.8nm,0.9s,baz=208,slow=2.6,SNR=2.9						

MAN 27 04:54:08.5, 6°.28N×126°.76E, h69km, mb4.6, ML3.4, MS3.3, Mindanao

DJA 27 05:03:02.8±0.5, **10°.S**±4°.×**11°.9E**±°., **h19**km±3km, **M3.7**/10, **MLv3.7**/10, **Sumba region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WBSI	**Waikabubak, Su**	**0.27**	**57**	P	Pb	05 03 10.1	+1.1
WBSI				S	Sn	05 03 16.0	-1.5
BASI	**Baing, Sumba**	**1.46**	**107**	P	Pn	05 03 28.3	+0.1
BASI				S	Sb	05 03 48.1	+0.5
PLAI	**Plampang**	**1.67**	**305**	P	Pn	05 03 29.8	-1.2
PLAI				S	Sb	05 03 54.1	+0.5
TWSI	**Taliwang, Sumb**	**2.48**	**295**	P	Pn	05 03 41.6	-0.6
TWSI				S	Sn	05 04 11.8	-0.2
EDFI	**Ende, Flores**	**2.70**	**68**	P	Pn	05 03 44.7	-0.7
BSSI	**Bau Bau, Buton**	**3.86**	**20**	P	Pn	05 04 01.7	+0.5
BSSI				S	Sn	05 04 45.8	-0.2
DNP	**Denpasar**	**4.05**	**286**	P	Pn	05 04 02.5	-1.3
BATI	**Baumata**	**4.46**	**96**	P	Pn	05 04 09.6	+0.2
BKSI	**Bulukumba**	**4.54**	**12**	P	Pn	05 04 11.5	+0.9
BNSI	**Bone**	**5.44**	**10**	P	Pn	05 04 26.4	+3.5

*IDC **27** 05:08:18.3±0.7, 39°.35N×73°.61E, h0km, mb4.1/21, mbtmp4.2/28, ML3.6/7, MS3.5/28, Error ellipse: s-maj=15.3km s-min=10.8km az=158.0*
*KRNET **27** 05:08:19.8±0.1, 39°.49N×73°.52E, mb5.0*
*BJI **27** 05:08:19.6±0.0, 39°.55N×73°.60E, h5km, mb4.3/24, mB4.4/17, ML4.4/6, Ms4.1/21, Ms7 3.7/20*
*MOS **27** 05:08:20.5±1.2, 39°.42N×73°.54E, h15km, mb4.7/34, Error ellipse: s-maj=5.4km s-min=3.9km az=82.2*
*SOME **27** 05:08:20.0, 39°.52N×73°.63E, h10km, MS3.8*
*NEIC **27** 05:08:22.3, 39°.48N×73°.49E, h21km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=1.14; $M_{\theta\theta}$=2.10; $M_{\phi\phi}$3.23; $M_{r\theta}$1.38; $M_{\theta\phi}$-2.50; $M_{r\phi}$0.67; Fault plane solution: M_o4.09000×10^{15} NP1:ϕ_s297.11000°, δ69.09000°, λ,-159.70000°. NP2:ϕ_s199.59000°, δ71.09000°, λ,-22.17000°. Principal axes: T 4.2263, Plg1.0000°, Azm249.0000°; N -0.2950, Plg61.0000°, Azm341.0000°; P -3.9313, Plg29.0000°, Azm158.0000°;*
*NEIC **27** 05:08:23.1±1.9, 39°.44N±0°.06×73°.49E±0°.07, h22km±5km, mb4.5/44, Mwr4.3/15 Error ellipse: s-maj=9.0km s-min=7.2km az=141.0*
*NNC **27** 05:08:23.5±1.0, 39°.64N×73°.62E, h0km, mb5.1, mpv4.8, Error ellipse: s-maj=8.4km s-min=4.5km az=170.0*

ISC 27 05:08:22.5±1.1, **39°.35N**±0°.03×**73°.49E**±0°.02, **h23**km±7km, **n321, σ1§91/361, mb4.5/63, MS3.6/27, 50C-30D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.29**	**335**	⇑*i*P	**Pn**	**05 08 42.3**	**-2.9**
	baz=32						
OHH				⇑*e*S	**Sb**	**05 08 59.0**	**-3.4**
	baz=32						
DRK	**Karamyk**	**1.31**	**276**		**Pn**	**05 08 44.5**	**-1.3**
KSH	**Kashi**	**1.93**	**84**	Pg	Pn	05 08 47.8	-6.3
KSH				Sg	Sn	05 09 07.3	-10
KSH				smax	smax		
	comp=N,6μm,0.9s						
KSH				smax	smax		
	comp=E,5μm,0.8s						
BTK	**Batken**	**2.18**	**290**	⇑*e*P	**Pn**	**05 08 59.0**	**+1.6**
	baz=86						
BTK				⇑*i*S	**Sb**	**05 09 27.7**	**-0.2**
	baz=86						
BTK	**Batken**	**2.18**	**290**	Pn	**Pn**	**05 08 58.8**	**+1.4**
BTK	**Batken**	**2.18**	**290**	PN	**Pn**	**05 08 58.8**	**+1.4**
GAR	**Garm**	**2.49**	**263**	⇓*e*P	**Pn**	**05 09 04.6**	**+2.8**
	baz=60						
GAR				⇓*i*S	**Sb**	**05 09 36.9**	**0.0**
	baz=60						
GAR	**Garm**	**2.49**	**263**		**Pn**	**05 09 03.7**	**+1.9**
ARLS	**Aral**	**2.59**	**14**	⇑*i*P	**Pn**	**05 09 03.0**	**-0.1**
	baz=14						
ARLS				⇑*e*S	**Sn**	**05 09 34.6**	**+0.6**
	baz=14						
AML	**Almayashu**	**2.78**	**3**	P	**Pn**	**05 09 06.1**	**+0.1**
	SNR=48						
TRKS	**Terek-Say**	**2.82**	**321**	⇑*i*P	**Pn**	**05 09 06.0**	**-0.3**
	baz=19						
TRKS				⇑*i*S	**Sn**	**05 09 40.0**	**+0.3**
	baz=19						
UCH	**Uchtor**	**2.98**	**15**	P	**Pn**	**05 09 08.9**	**+0.1**
	SNR=199						
UCH	**Uchtor**	**2.98**	**15**	⇓*e*P	**Pn**	**05 09 08.9**	**+0.1**
	baz=15						
UCH				⇓*e*S	**Sn**	**05 09 44.3**	**+0.3**
	baz=15						
EKS2	**Erkin-Say**	**3.31**	**4**	P	**Pn**	**05 09 13.7**	**+0.6**
	SNR=69						
EKS2	**Erkin-Say**	**3.31**	**4**	⇑*i*P	**Pn**	**05 09 13.3**	**+0.2**
	baz=3.0						
EKS2				⇑*i*S	**Sn**	**05 09 52.2**	**+0.3**
	baz=3.0						
AAK	**Ala-Archa**	**3.37**	**13**	P	**Pn**	**05 09 14.6**	**+0.7**
	SNR=65						
AAK	**Ala-Archa**	**3.37**	**13**	Pn	**Pn**	**05 09 14.4**	**+0.5**
	36nm,0.3s,baz=189,slow=8.2,SNR=85						
AAK				Lg	Lg	05 10 00.3	
	58nm,0.3s,baz=328,slow=11,SNR=7.7						
AAK				LR	LR	05 10 05.2	
	comp=Z,81nm,21.8s,baz=230,slow=32						
	88nm,0.4s						
AAK	**Ala-Archa**	**3.37**	**13**	⇓*e*P	**Pn**	**05 09 14.2**	**+0.3**
	baz=13						
AAK				⇓*i*S	**Sn**	**05 09 53.5**	**+0.2**
	baz=13						
AAK	**Ala-Archa**	**3.37**	**13**		**Pn**	**05 09 14.2**	**+0.3**
AAK	**Ala-Archa**	**3.37**	**13**	*de*PN	**Pn**	**05 09 14.4**	**+0.5**
AAK				pmax	pmax		
	comp=Z,181nm,1.0s						
CHGR	**Chuyangaron**	**3.44**	**260**	⇑*e*P	**Pn**	**05 09 17.4**	**+2.5**
	baz=58						
CHGR				⇑*e*S	**Sn**	**05 09 59.9**	**+4.9**
	baz=58						
CHGR	**Chuyangaron**	**3.44**	**260**		**Pn**	**05 09 17.3**	**+2.4**
CHGR	**Chuyangaron**	**3.44**	**260**	PN	**Pn**	**05 09 17.3**	**+2.4**
KBK	**Karagaybulak**	**3.48**	**18**	P	**Pn**	**05 09 16.6**	**+1.1**
	SNR=64						
KBK	**Karagaybulak**	**3.48**	**18**	⇑*e*P	**Pn**	**05 09 15.5**	**0.0**
	baz=18						
KBK				⇑*i*S	**Sn**	**05 09 56.2**	**+0.2**
	baz=18						
FRU1	**Bishkek**	**3.56**	**14**	PN	**Pn**	**05 09 18.0**	**+1.5**
ULHL	**Ulahol**	**3.57**	**35**	P	**Pn**	**05 09 17.1**	**+0.5**
	SNR=31						
ULHL	**Ulahol**	**3.57**	**35**	⇓*e*P	**Pn**	**05 09 17.0**	**+0.3**
	baz=36						
ULHL				⇓*e*S	**Sn**	**05 09 58.7**	**+0.5**
	baz=36						
BOOM	**Boomskoye usch**	**3.65**	**30**	⇑*e*P	**Pn**	**05 09 17.7**	**+0.1**
	baz=31						
BOOM				⇑*e*S	**Sn**	**05 10 00.6**	**+0.5**
	baz=31						
BOOM	**Boomskoye usch**	**3.65**	**30**	Pn	**Pn**	**05 09 17.8**	**+0.1**
BOOM	**Boomskoye usch**	**3.65**	**30**	PN	**Pn**	**05 09 17.8**	**+0.1**
TAS	**Tashkent**	**3.76**	**303**	⇓*e*P	**Pn**	**05 09 20.4**	**+1.2**
	baz=1.0						
TAS				⇓*e*S	**Sn**	**05 10 05.0**	**+2.3**
	baz=1.0						
TAS	**Tashkent**	**3.76**	**303**	Pn	**Pn**	**05 09 19.3**	**+0.1**
TAS	**Tashkent**	**3.76**	**303**	PN	**Pn**	**05 09 19.3**	**+0.1**
CHMS	**Chumysh**	**3.77**	**14**	P	**Pn**	**05 09 19.8**	**+0.5**
	SNR=19						
CHMS	**Chumysh**	**3.77**	**14**	⇓*e*P	**Pn**	**05 09 19.5**	**+0.3**
	baz=14						
CHMS				⇓*e*S	**Sn**	**05 10 02.9**	**0.0**
	baz=14						
CHMS	**Chumysh**	**3.77**	**14**	PN	**Pn**	**05 09 19.6**	**+0.3**
CHMS				LG	Lg	05 10 14.4	
CHMS	**Chumysh**	**3.77**	**14**	⇑Pn	**Pn**	**05 09 19.6**	**+0.3**
	comp=Z,50nm,0.5s						
CHMS				⇑Lg	Lg	05 10 14.4	
	comp=Z,1μm,0.9s						
IUG	**luzhnay**	**3.83**	**318**	*e*PN	**Pn**	**05 09 21.8**	**+1.6**
IUG				*e*		05 09 34.5	
IUG				*e*		05 10 08.4	
IUG	**luzhnay**	**3.83**	**318**	*e*P	**Pb**	**05 09 30.5**	**+1.0**
	comp=Z,4μm,0.2s						
IUG				*e*S	**Sb**	**05 10 21.3**	**+5.7**
	comp=Z,929nm,0.1s						
IUG	**luzhnay**	**3.83**	**318**	*e*Pn	**Pn**	**05 09 21.9**	**+1.6**
	baz=313						
IUG				*e*Pg	Pb	05 09 34.5	+5.0
	baz=313						
IUG				*e*Sn	**Sn**	**05 10 08.4**	**+3.8**
	baz=313						
IUG	**luzhnay**	**3.83**	**318**	Pg	**Pb**	**05 09 31.3**	**+1.8**
	comp=Z,6μm,0.5s						
IUG				Lg	Lg	05 10 21.9	
	comp=Z,936nm,0.5s						
DZA	**Taraz**	**3.90**	**336**	*e*PN	**Pn**	**05 09 21.2**	**+0.2**
DZA				*e*		05 09 31.2	
DZA	**Taraz**	**3.90**	**336**	*e*P	**Pb**	**05 09 30.8**	**+0.3**
	comp=Z,314nm,0.2s	

CHM Chimkent 4.18 316 *e*P Pb 05 09 37.9 +2.5
comp=Z,116nm,0.1s
CHM *e*S Sb 05 10 34.0 +8.6
CHM Chimkent 4.18 316 *e*Lg Lg 05 10 34.5
baz=312
SGDS Sogindy 4.19 11 *e*PN Pn 05 09 24.3 -0.7
SGDS *e* 05 09 32.9
SGDS *e* 05 10 26.6
SGDS Sogindy 4.19 11 *e*Pn Pn 05 09 24.4 -0.7
baz=10
SGDS *e*Pg Pb 05 09 32.1 -3.4
baz=10
SGDS *e*Lg Lg 05 10 26.7
baz=10
DGS Degeres 4.25 23 *e*P Pb 05 09 34.9 -1.7
comp=Z,92nm,0.1s
DGS *e*S Sb 05 10 28.6 +1.1
comp=Z,656nm,0.3s
DGS Degeres 4.25 23 Pg Pb 05 09 36.4 -0.2
comp=Z,161nm,0.6s
DGS Lg Lg 05 10 31.3
comp=Z,832nm,0.6s
KK31 Karatay Array 4.37 330 Pn Pn 05 09 28.0 +0.5
KK31 Karatay Array 4.37 330 PN Pn 05 09 28.3 +0.8
KK31 05 09 38.3
KK31 Karatay Array 4.37 330 Pn Pn 05 09 28.3 +0.8
comp=Z,50nm,0.7s,baz=139,slow=16,SNR=227
KK31 ⇑Pg Pb 05 09 38.3 -0.3
comp=Z,48nm,0.5s,baz=129,slow=13,SNR=19
KK31 Lg Lg 05 10 32.0
comp=Z,272nm,0.6s,baz=147,slow=31,SNR=3.6
KKAR Karatay Array 4.37 330⇓*e*P Pn 05 09 28.1 +0.6
baz=29
KKAR ⇓*i*S Sn 05 10 18.4 +0.7
baz=29
KKAR Karatay Array 4.37 330 Pn 05 09 27.9 +0.4
KKAR Karatay Array 4.37 330 PN Pn 05 09 27.9 +0.4
MTBS Maitube 4.38 29 *e*P Pb 05 09 36.9 -1.9
comp=Z,171nm,0.5s
MTBS *e*S Sb 05 10 32.3 +1.2
comp=Z,304nm,0.7s
MTBS Maitube 4.38 29 Pg Pb 05 09 36.9 -1.9
comp=Z,171nm,0.5s
MTBS Lg Lg 05 10 33.6
comp=Z,304nm,0.7s
TNSS Tian-Shan 4.51 34 *e*PN Pn 05 09 29.8 0.0
TNSS *e* 05 09 39.6
TNSS *e* 05 10 37.8
TNSS Tian-Shan 4.51 34 *e*P Pb 05 09 39.7 -1.6
comp=Z,124nm,0.2s
TNSS *e*S Sb 05 10 37.1 +1.7
comp=Z,153nm,0.1s
TNSS Tian-Shan 4.51 34 *e*Pn Pn 05 09 29.9 0.0
baz=35
TNSS *e*Pg Pb 05 09 39.7 -1.6
baz=35
TNSS *e*Lg Lg 05 10 37.8
baz=35
TNSS Tian-Shan 4.51 34 Pg Pb 05 09 39.7 -1.6
comp=Z,123nm,0.4s
TNSS Lg Lg 05 10 37.1
BRLS Boroldaу 4.59 324 *e*PN Pn 05 09 29.0 -1.6
BRLS *e* 05 09 41.2
BRLS *e* 05 10 40.2
BRLS Boroldaу 4.59 324 *e*P Pb 05 09 42.1 -0.3
comp=Z,17nm,0.2s
BRLS *e*S Sb 05 10 41.5 +4.1
comp=Z,214nm,0.2s
BRLS Boroldaу 4.59 324 *e*Pn Pn 05 09 29.1 -1.6
baz=317
BRLS *e*Pg Pb 05 09 41.2 -1.2
baz=317
BRLS *e*Lg Lg 05 10 40.2
baz=317
BRLS Boroldaу 4.59 324 Pg Pb 05 09 42.1 -0.3
comp=Z,17nm,0.7s
BRLS Lg Lg 05 10 40.4
comp=Z,6.7nm,0.6s
AAA Alma-Ata 4.64 33 *e*PN Pn 05 09 32.6 +1.4
AAA *e* 05 09 42.8
AAA *e* 05 10 41.0
AAA Alma-Ata 4.64 33 *e*P Pb 05 09 42.7 -0.5
comp=Z,141nm,0.1s
AAA *e*S Sb 05 10 41.9 +3.3
comp=Z,136nm,0.3s
AAA Alma-Ata 4.64 33 *e*Pn Pn 05 09 32.7 +1.5
baz=34
AAA *e*Pg Pb 05 09 42.9 -0.3
baz=34
AAA *e*Lg Lg 05 10 41.1
baz=34
AAA Alma-Ata 4.64 33 Pg Pb 05 09 42.7 -0.5
comp=Z,144nm,0.4s
AAA Lg Lg 05 10 41.9
comp=Z,139nm,1.0s
KRBS Karabastau 4.64 20 *e*P Pb 05 09 42.1 -1.2
comp=Z,108nm,0.5s
KRBS *e*S Sb 05 10 41.1 +2.4
comp=Z,349nm,0.3s
KRBS Karabastau 4.64 20 Pg Pb 05 09 42.1 -1.2
comp=Z,108nm,0.5s
KRBS Lg Lg 05 10 40.8
comp=Z,349nm,0.9s
KNDC Almaty 4.67 33 PN Pn 05 09 33.3 +1.7
KNDC LG Lg 05 10 41.6
KNDC Almaty 4.67 33 ⇑Pn Pn 05 09 33.0 +1.4
comp=Z,379nm,0.7s
KNDC ⇓Lg Lg 05 10 41.6
comp=Z,3μm,1.0s
PRZ Przheval'sk 4.86 48⇑*i*P Pn 05 09 35.2 +0.8
baz=49
PRZ ⇑*e*S Sn 05 10 30.5 +0.4
baz=49
PRZ Przheval'sk 4.86 48 Pn Pn 05 09 35.4 +1.0
PRZ Przheval'sk 4.86 48 PN Pn 05 09 35.4 +1.0
KTBS Karatobe 4.97 28 *e*P Pb 05 09 47.9 -1.0
comp=Z,85nm,0.2s
KTBS *e*S Sb 05 10 51.1 +2.9
comp=Z,434nm,0.6s
KTBS Karatobe 4.97 28 Pg Pb 05 09 47.9 -1.0
comp=Z,91nm,0.7s
KTBS Lg Lg 05 10 51.1
comp=Z,434nm,0.6s
KUU Kurty 5.02 24 *e*PN Pn 05 09 36.0 -0.4
KUU *e* 05 09 47.7
KUU *e* 05 10 53.2
KUU Kurty 5.02 24 *e*P Pb 05 09 48.4 -1.2
comp=Z,102nm,0.4s
KUU *e*S Sb 05 10 52.0 +2.5
comp=Z,654nm,0.3s
KUU Kurty 5.02 24 *e*Pn Pn 05 09 36.0 -0.4
baz=24
KUU *e*Pg Pb 05 09 47.7 -1.9
baz=24
KUU *e*Lg Lg 05 10 53.2
baz=24
KUU Kurty 5.02 24 Pg Pb 05 09 48.4 -1.2
comp=Z,103nm,0.7s
KUU Lg Lg 05 10 52.9
comp=Z,661nm,0.8s
CHKK Chushkaly 5.21 29 *e*PN Pb 05 09 51.1 -1.8
CHKK *e* 05 10 58.6
CHKK Chushkaly 5.21 29 *e*P Pb 05 09 52.0 -0.9
comp=Z,52nm,0.2s
CHKK *e*S Sb 05 10 58.2 +3.3
comp=Z,295nm,0.2s
CHKK Chushkaly 5.21 29 *e*Pg Pb 05 09 51.2 -1.8
baz=30
CHKK *e*Lg Lg 05 10 58.6
baz=30
CHKK Chushkaly 5.21 29 Pg Pb 05 09 52.0 -0.9
comp=Z,56nm,0.5s
CHKK Lg Lg 05 10 58.2
comp=Z,309nm,0.7s
SATY Saty 5.24 43 *e*PN Pn 05 09 39.3 -0.3
SATY *e* 05 09 55.4
SATY *e* 05 11 00.1
SATY Saty 5.24 43 *e*P Pb 05 09 53.5 0.0
comp=Z,78nm,0.1s
SATY *e*S Sb 05 11 00.8 +4.7
comp=Z,570nm,1.1s
SATY Saty 5.24 43 *e*Pn Pn 05 09 39.3 -0.3
baz=45
SATY *e*Pg Pb 05 09 55.5 +2.0
baz=45
SATY *e*Lg Lg 05 11 00.1
baz=45
SATY Saty 5.24 43 Pg Pb 05 09 53.5 0.0
comp=Z,190nm,1.0s
SATY Lg Lg 05 11 00.1
comp=Z,570nm,1.1s
ZHN Zhinishke 5.33 43 *e*PN Pn 05 09 37.7 -3.1
ZHN *e* 05 09 55.2
ZHN *e* 05 11 02.7
ZHN Zhinishke 5.33 43 *e*Pn Pn 05 09 37.7 -3.1
baz=44
ZHN *e*Pg Pb 05 09 55.3 +0.2
baz=44
ZHN *e*Lg Lg 05 11 02.8
baz=44
KURS Kuram 5.43 39 *e*P Pb 05 09 56.9 +0.2
comp=Z,102nm,0.3s
KURS *e*S Sb 05 11 06.7 +5.4
comp=Z,376nm,1.1s
KURS Kuram 5.43 39 Pg Pb 05 09 56.9 +0.2
comp=Z,103nm,0.7s
KURS Lg Lg 05 11 05.8
comp=Z,376nm,1.1s
CEP Cherat 5.66 193 P Pn 05 09 50.4 +5.0
KPKS Kokpek 5.67 42 *e*PN Pn 05 09 45.3 -0.1
KPKS *e* 05 10 02.0
KPKS Kokpek 5.67 42 *e*P Pb 05 10 00.8 0.0
comp=Z,82nm,0.6s
KPKS *e*S Sb 05 11 13.4 +5.1
comp=Z,298nm,0.3s
KPKS Kokpek 5.67 42 *e*Pn Pn 05 09 45.3 -0.1
baz=43
KPKS *e*Pg Pb 05 10 02.0 +1.2
baz=43
KPKS *e*Lg Lg 05 11 15.5
baz=43
KPKS Kokpek 5.67 42 Pg Pb 05 10 00.8 0.0
comp=Z,82nm,0.6s
KPKS Lg Lg 05 11 12.6
comp=Z,301nm,0.8s
CHCP Chirah Chowk 5.68 182 P Pn 05 09 50.6 +5.0
BTLS Baital 5.70 4 *e*PN Pn 05 09 44.8 -1.0
BTLS *e* 05 10 01.5
BTLS Baital 5.70 4 *e*P Pb 05 10 02.2 +1.0
comp=Z,62nm,0.1s
BTLS *e*S Sb 05 11 16.0 +6.9
comp=Z,118nm,0.2s
BTLS Baital 5.70 4 *e*Pn Pn 05 09 44.8 -1.0
baz=2.8
BTLS *e*Pg Pb 05 10 01.6 +0.3
baz=2.8
BTLS *e*Lg Lg 05 11 16.4
baz=2.8
BTLS Baital 5.70 4 Pg Pb 05 10 02.3 +1.0
comp=Z,60nm,0.7s
BTLS Lg Lg 05 11 16.0
comp=Z,120nm,0.6s
ARXS Arharly 5.84 32 *e*P Pb 05 10 03.5 -0.1
comp=Z,143nm,0.5s
ARXS *e*S Sb 05 11 18.3 +5.1
comp=Z,266nm,0.2s
ARXS Arharly 5.84 32 Pg Pb 05 10 03.6 -0.1
comp=Z,144nm,1.0s
ARXS Lg Lg 05 11 18.3
comp=Z,267nm,1.0s
SHLS Shalkode 5.89 48 *e*Pg Pb 05 10 11.5 +6.9
baz=51
SHLS *e*Lg Lg 05 11 32.9
baz=51
KBL Kabul 5.97 218 Pn Pn 05 09 52.9 +3.2
KBL Kabul 5.97 218 PN Pn 05 09 52.9 +3.2
PDGK Podgornoye 6.02 47 PN Pn 05 09 49.4 -0.8
PDGK 05 10 07.4
PDGK Podgornoye 6.02 47 Pg Pb 05 10 07.7 +1.0
comp=Z,33nm,0.7s
PDGK Lg Lg 05 11 24.3
comp=Z,120nm,1.1s
PDGK Podgornoye 6.02 47 ⇑Pn Pn 05 09 49.4 -0.8
comp=Z,19nm,0.8s
PDGK ⇓Pg Pb 05 10 07.5 +0.8
comp=Z,133nm,0.9s
PDGK ⇓Lg Lg 05 11 24.3
comp=Z,511nm,1.1s
BLB Baldybastay 6.03 37 *e*P Pb 05 10 07.5 +0.4
comp=Z,120nm,0.2s
BLB *e*S Sb 05 11 24.7 +5.9
comp=Z,235nm,0.5s
BLB Baldybastay 6.03 37 Pg Pb 05 10 07.5 +0.4
comp=Z,120nm,0.7s
BLB Lg Lg 05 11 24.7
comp=Z,235nm,0.8s
THW Thamme Wali 6.69 193 P Pn 05 10 03.6 +4.2
TDK Taldyqorghan 6.72 31 *e*Pg Pb 05 10 21.9 +3.2
baz=32
TDK *e*Lg Lg 05 11 46.4
baz=32
DJR Jarkent 6.85 41 Pg Pb 05 10 23.0 +2.2
comp=Z,37nm,0.6s
THN Thein Dam 7.13 165 *e*P Pn 05 10 09.5 +4.0
THN *e*S Sn 05 11 29.4 +3.6
BHK Bhakra 8.27 162 *e*P Pn 05 10 22.3 +1.2
BHK *e*S Sn 05 11 53.2 -0.6
SMLA Simla 8.74 159 *e*P Pn 05 10 30.7 +3.3
SMLA *e*S Sn 05 12 02.8 -2.4
SMLA IAML 05 12 16.4
comp=E,158nm,0.5s
SMLA IAML 05 12 20.9
comp=N,170nm,0.5s
OTUK Ortayu 8.93 355 P Pn 05 10 29.2 -0.9
OTUK Ortayu 8.93 355 ⇑Pn Pn 05 10 29.0 -1.1
comp=N,23nm,0.7s
OTUK ⇑Lg Lg 05 12 57.6
comp=N,138nm,1.3s
MAKZ Makanchi 9.70 37 Pn 05 10 39.9 -0.7
MAKZ Makanchi 9.70 37 P Pn 05 10 39.9 -0.7
MAKZ Makanchi 9.70 37 ⇓Pn Pn 05 10 42.1 +1.5
comp=N,8.8nm,1.4s
MAKZ ⇑Lg Lg 05 13 23.0
comp=N,61nm,1.2s
DDI Dehra Dun 9.76 156 *e*P Pn 05 10 42.2 +0.7
DDI *e*S Sn 05 12 25.3 -5.0
MK31 Makanchi Array 9.83 38 Pn Pn 05 10 41.6 -0.8
MK31 Makanchi Array 9.83 38 *d*eP Pn 05 10 43.0 +0.5
MK31 Makanchi Array 9.83 38 Pn Pn 05 10 43.0 +0.5
comp=N,4.5nm,0.8s,baz=220,slow=14,SNR=17
MK31 ⇑Lg Lg 05 13 25.7
comp=N,32nm,0.9s,baz=216,slow=28,SNR=3.8
MKAR Makanchi Array 9.83 38 Pn Pn 05 10 42.7 +0.2
comp=N,0.3nm,0.3s,baz=222,slow=12,SNR=12
MKAR Lg Lg 05 13 27.0
comp=N,1.0nm,0.3s,baz=260,slow=23,SNR=8.1
MKAR LR LR 05 14 31.0
comp=N,249nm,18.1s,baz=226,slow=38
comp=N,3.0nm,0.9s
MKAR Makanchi Array 9.83 38 Pn Pn 05 10 40.6 -1.9
MKAR Makanchi Array 9.83 38 *i*P Pn 05 10 43.2 +0.7
MKAR pmax pmax
comp=Z,3.0nm,0.9s
HRA Herat 10.28 245 Pn 05 10 50.0 +1.3
BRZS Berezniki 10.65 357 *e*P Pn 05 10 51.0 -2.5
BRZS Berezniki 10.65 357 *e*P Pn 05 10 51.0 -2.5
baz=356
LQTI Lohaghat 11.34 149 *e*S Sn 05 12 58.5 -11
KUDL Kundal 11.45 167 *e*P Pn 05 11 04.3 -0.3
KUDL *e*S Sn 05 13 08.3 -3.5
SONA Sohna 11.47 164 *e*P Pn 05 11 03.2 -1.6
WMQ Urumqi 11.54 63 *e*P Pn 05 11 09.5 +3.7
WMQ LR LR
comp=Z,880nm,11.5s
WMQ LR LR
comp=Z,570nm,8.5s
WMQ LR LR
comp=Z,170nm,20.7s
KURBB Kurchatov Arra 11.82 16 Pn Pn 05 11 07.8 -1.8
comp=Z,0.1nm,0.3s,baz=206,slow=12,SNR=9.5
KURBB Lg Lg 05 14 26.3
comp=Z,0.2nm,0.3s,baz=202,slow=29,SNR=16
KURBB LR LR 05 15 42.2
comp=Z,226nm,19.0s,baz=176,slow=38
comp=Z,1.3nm,0.6s
KURBB Kurchatov Arra 11.82 16 ⇑Lg Lg 05 14 24.4
comp=Z,263nm,1.4s
KURK Kurchatov 11.93 16 Pn 05 11 09.1 -1.9
KURK Kurchatov 11.93 16⇑*e*P Pn 05 11 10.0 -1.0
KURK pmax pmax
comp=Z,4.0nm,1.0s
KURK Kurchatov 11.93 16 ⇑Lg Lg 05 14 29.0
comp=Z,222nm,1.3s
GEYT Alibeck 12.11 268 Pn Pn 05 11 12.2 -1.5
comp=Z,1.3nm,0.3s,baz=68,slow=28,SNR=7.4
GEYT LR LR 05 15 58.5
comp=Z,160nm,18.5s,baz=63,slow=38
comp=Z,3.7nm,0.4s
GEYT Alibeck 12.11 268 Pn 05 11 11.9 -1.7
GYA0 ALIBECK ARRAY 12.11 268 P Pn 05 11 11.8 -1.8
GYA0B ALIBECK ARRAY 12.11 268 Pn Pn 05 11 12.2 -1.4
PYUN Piuthan 13.71 142 *e*P Pn 05 11 32.8 -3.0
comp=Z,34nm,0.5s
AB31 Akbulak array 13.84 320 *i*P Pn 05 11 34.2 -2.9
AB31 Akbulak array 13.84 320 Pn Pn 05 11 34.3 -2.9
comp=Z,4.3nm,0.6s,baz=134,slow=12,SNR=68
ABKAR Akbulak array 13.84 320 Pn Pn 05 11 34.2 -2.9
DANN Dangsing 13.89 139 *e*P Pn 05 11 34.0 -4.2
comp=Z,18nm,0.4s
KOLN Koldanda 14.29 141 *e*P Pn 05 11 40.6 -3.0
GUN Gumba 15.37 134 *e*P Pn 05 11 58.6 +0.4
comp=Z,17nm,0.5s
PKI Pulchoki 15.38 136 *e*P Pn 05 11 56.4 -1.9
comp=Z,18nm,0.5s
AKTO Aktyubinsk 15.55 320 Pn Pn 05 11 58.5 -1.7
comp=Z,0.7nm,0.3s,baz=123,slow=15,SNR=18
AKTO LR LR 05 18 49.4
comp=Z,63nm,19.5s,baz=139,slow=40
comp=Z,8.4nm,0.8s
AKTO Aktyubinsk 15.55 320 ⇑Pn Pn 05 11 57.7 -2.5
comp=Z,16nm,0.9s
BHPL Bhopal 16.41 167 *e*P Pn 05 12 10.1 -1.3
BHPL *e*S Sn 05 15 08.8 -3.9
ZAA0 Zalesovo Array 16.51 24 Pn Pn 05 12 10.3 -2.1
ZALV Zalesovo Beam 16.51 24 Pn Pn 05 12 09.8 -2.7
comp=Z,0.7nm,0.3s,baz=206,slow=9.5,SNR=19
ZALV LR LR 05 19 05.7
comp=Z,59nm,20.6s,baz=205,slow=39
comp=Z,6.7nm,0.6s
ZALV Zalesovo Beam 16.51 24 Pn Pn 05 12 10.3 -2.1
ZALV Zalesovo Beam 16.51 24 P Pn 05 12 10.3 -2.1
GOMU GeErMu 17.15 94 P Pn 05 12 18.5 -2.5
GOMU sP pP 05 12 29.5 -0.6
GOMU pmax pmax
comp=Z,3.0nm,0.7s
GOMU pmax pmax
comp=Z,100nm,5.8s
GOMU LR LR
comp=Z,210nm,15.1s
GOMU LR LR
comp=Z,180nm,17.5s
GOMU LR LR
comp=Z,180nm,15.6s
LSA Lhasa 17.42 118 Pn Pn 05 12 22.5 -2.0
LSA Lhasa 17.42 118 P Pn 05 12 22.5 -2.0
LSA pmax pmax
comp=Z,6.0nm,0.7s
LKRN Lenkeran, Azer 19.20 276 P Pn 05 12 48.2 +2.6
SVE Sverdlovsk 19.42 338 *e*P Pn 05 12 47.8 -0.4
SVE pmax pmax
comp=Z,25nm,1.0s
ARU Arti 19.73 335 P P 05 12 49.5 -0.8
baz=131,slow=4.3,SNR=11
ARU LR LR 05 20 41.2
comp=Z,102nm,19.6s,baz=18,slow=38
comp=Z,6.8nm,0.2s
ARU Arti 19.73 335 P 05 12 48.9 -1.4
ARU IAmb IAmb 05 12 55.3
comp=Z,24nm,0.9s
ARU Arti 19.73 335*d*iP P 05 12 50.4 +0.1
ARU S Sn 05 16 33.5 +0.9
ARU pmax pmax
comp=Z,35nm,1.2s
SEKA Sheki 20.12 284 P Pn 05 12 56.6 -0.1
MNGR Mingechevir, A 20.24 282 P Pn 05 12 59.0 +1.0
KNGR Kungurtug, Tuv 20.29 48⇓*e*P Pn 05 12 58.3 -0.4
KNGR pmax pmax
comp=Z,37nm,1.4s
GTA Gaotai 20.33 81 P P 05 12 56.8 -0.4
GTA sP sP 05 13 07.5 -0.9
GTA pmax pmax
comp=Z,7.0nm,1.2s
GTA pmax pmax
comp=Z,96nm,5.1s
GTA LR LR
comp=Z,250nm,14.5s
GTA LR LR
comp=Z,220nm,16.0s
GTA LR LR
comp=Z,180nm,15.3s
WSAR Wadi Sarin 20.43 223 LR LR 05 21 40.6
comp=Z,94nm,18.6s,baz=82,slow=39
UOSS Minazif 20.45 231 P P 05 12 58.8 +0.3
ZKTA Zakatala 20.53 285 P Pn 05 13 02.2 +0.7
SHL Shillong 20.68 126 P P 05 13 01.1 0.0
SHL IAmb IAmb 05 13 12.4
comp=Z,25nm,1.3s
SHL Shillong 20.68 126 P P 05 13 01.1 0.0
SHL pmax pmax
comp=Z,25nm,1.3s
GANJ Ganja 20.83 282 P Pn 05 13 05.0 +0.1
GROC Groznyy 21.12 289 *e*P P 05 13 07.0 +1.4
GROC *e* 05 13 26.7
GROC *e*S S 05 17 03.0 +3.6
GROC pmax pmax
comp=Z,35nm,0.7s
GNI Garni 22.08 281 P P 05 13 17.7 +1.6
comp=Z,25nm,0.9s,baz=151,slow=13,SNR=2.5
comp=Z,25nm,0.9s
GNI Garni 22.08 281 P P 05 13 14.7 -1.3
GNI Garni 22.08 281⇓*e*P P 05 13 18.1 +2.0
GNI pmax pmax
comp=Z,49nm,1.3s
BELG Belogornoye 22.09 315 P P 05 13 16.2 +0.4
comp=Z,49nm,0.9s,baz=104,slow=3.5,SNR=20
comp=Z,49nm,0.9s
BELG Belogornoye 22.09 315*d*eP P 05 13 15.7 -0.1
BELG pmax pmax
comp=Z,14nm,1.1s
ZEI Tsey 22.52 288 *e*P P 05 13 26.5 +5.8
ZEI pmax pmax
comp=Z,7.0nm,0.6s
ONI Oni 22.85 288 P P 05 13 24.0 -0.1
ONI Oni 22.85 288 P P 05 13 24.0 -0.1
ONI pmax pmax
comp=Z,43nm,1.0s
GOF Gofitskoye 23.18 294⇑*e*P P 05 13 32.5 +5.1
GOF pmax pmax
comp=Z,52nm,1.1s
KBZ Khabaz 23.24 291 P P 05 13 27.7 -0.3
comp=Z,4.0nm,0.9s,baz=114,slow=10.0,SNR=4.7
KBZ LR LR 05 24 29.3
comp=Z,81nm,19.4s,baz=95,slow=42
comp=Z,4.0nm,0.9s
KBZ Khabaz 23.24 291⇑*e*P P 05 13 30.6 +2.6
KBZ pmax pmax
comp=Z,8.0nm,0.9s
KIV Kislovodsk 23.40 291 P P 05 13 29.1 -0.5
KIV IAmb IAmb 05 13 44.9
comp=Z,18nm,0.8s
ZAK Zakamensk 23.66 52 *e*P P 05 13 30.7 -1.5
ZAK pmax pmax
comp=Z,6.0nm,1.3s
GEVA Gevas 23.68 277 P P 05 13 33.6 +1.0
GEVA IAmb IAmb 05 13 41.4
comp=Z,13nm,1.1s
LZH Lanzhou 24.18 88 *e*P P 05 13 26.5 -11
LZH pP pP 05 13 28.5 -17
LZH sP sP 05 13 29.5 -20
LZH pmax pmax
comp=Z,15nm,1.3s
LZH Lanzhou 24.18 88 *e*P P 05 13 38.3 +1.0
LZH sP pP 05 13 44.0 -1.6
LZH pmax pmax
comp=Z,17nm,1.0s
LZH LR LR
comp=Z,350nm,13.7s
LZH LR LR
comp=Z,240nm,14.0s
LZH LR LR
comp=Z,260nm,14.1s
KIRV Kirov 24.67 329⇓*e*P P 05 13 44.1 +2.9
VRH Novokhopyorsk 25.09 309 *e*P P 05 13 43.2 -2.0
VRH pmax pmax
comp=Z,10.0nm,0.5s
SONM Songino Array 25.14 59 P P 05 13 44.3 -1.6
comp=Z,1.8nm,0.7s,baz=264,slow=10,SNR=4.2
SONM LR LR 05 23 47.1
comp=Z,167nm,21.2s,baz=352,slow=37

comp=Z,1.8nm,0.7s
SONM Songino Array 25.14 59 P **P** 05 13 46.2 +0.4
SONM Songino Array 25.14 59 P **P** 05 13 46.3 +0.4
SONM pmax pmax
comp=Z,6.0nm,1.1s
SOC Sochi 25.55 291 *e*P **P** 05 13 52.4 +2.9
SOC *e* 05 14 24.6
SOC *e*PPP PPP 05 14 34.9
SOC *e*S **S** **05 18 22.4 +6.6**
SOC *e*SSS SSS 05 19 22.3
SOC pmax pmax
comp=Z,13nm,0.9s
SOC MLR MLR
comp=Z,79nm,16.0s
ULN Ulaanbaatar 25.59 60 P **P** 05 13 48.9 -1.0
ULN Ulaanbaatar 25.59 60⇓ *e*P **P** 05 13 51.9 +2.0
ULN pmax pmax
comp=Z,6.0nm,1.0s
VORR Voronezh 26.74 309 *e*P **P** 05 14 00.6 +0.5
LPSR Galich'ya Gora 27.14 311 *e*P **P** 05 14 03.8 +0.1
LPSR pmax pmax
comp=Z,10.0nm,0.8s
HHC Hu-ho-hao-te 29.02 75 *e*P **P** 05 14 19.3 -1.4
HHC pmax pmax
comp=Z,13nm,0.9s
HHC pmax pmax
comp=Z,200nm,5.3s
HHC LR LR
comp=Z,280nm,12.6s
HHC LR LR
comp=Z,320nm,13.0s
HHC LR LR
comp=Z,330nm,14.6s
KLMR Klimovskoe 30.07 327 *e*P **P** 05 14 32.2 +2.6
KLMR pmax pmax
comp=Z,7.0nm,0.9s
KLMR Klimovskoe 30.07 327 *e*P **P** 05 14 32.2 +2.6
KLMR AMP 05 14 33.9
comp=Z,7.0nm,0.9s
CMAR Chiang Mai Arr 30.32 126 LR LR 05 26 43.8
comp=Z,76nm,21.2s,baz=305,slow=37
BR131 Keskin Array S 30.56 284 P **P** 05 14 34.3 -0.1
BR131 IAmb IAmb 05 14 40.5
comp=Z,9.3nm,0.8s
BR131 Keskin Array S 30.56 284 P **P** 05 14 34.3 -0.1
BR131 pmax pmax
comp=Z,9.0nm,0.9s
BRTR Keskin Array B 30.56 284 P **P** 05 14 35.5 +1.0
comp=Z,4.1nm,0.8s,baz=90,slow=7.7,SNR=11
comp=Z,4.1nm,0.8s
BRTR Keskin Array B 30.56 284 P **P** 05 14 35.2 +0.7
AKASG Malin Array Be 32.81 305 P **P** 05 14 53.3 -0.6
comp=Z,0.4nm,0.4s,baz=78,slow=7.6,SNR=8.0
comp=Z,0.4nm,0.4s
AKASG Malin Array Be 32.81 305 *i* P **P** 05 14 54.0 +0.1
AKASG pmax pmax
comp=Z,3.0nm,0.5s
AKBB Malin Array Si 32.81 305⇑ *e*P **P** 05 14 54.7 +0.8
AKBB pmax pmax
comp=Z,6.0nm,0.8s
MNK Minsk 33.97 312 *i* P **P** 05 14 59.4 -4.6
MNK *i* PPP PPP 05 16 23.4
MNK *i* 05 17 37.6
MNK *i* S **S** **05 20 24.1 -3.3**
MNK *i* SS **SnSn** **05 22 31.1 -3.2**
MNK *i* 05 25 31.6
MNK pmax pmax
comp=Z,19nm,0.8s
MNK pmax pmax
comp=E,3.0nm,1.0s
MNK pmax pmax
comp=N,19nm,0.9s
MNK MLR MLR
comp=N,438nm,19.0s
MNK MLR MLR
comp=Z,5μm,20.0s
MNK MLR MLR
comp=E,9.0nm,16.0s
MNK Minsk 33.97 312 *i* P **P** 05 14 59.4 -4.6
comp=E,3.0nm,1.1s
MNK *i* P **P** 05 14 59.4 -4.6
comp=N,19nm,0.8s
MNK *i* P **P** 05 14 59.4 -4.6
comp=Z,19nm,0.8s,baz=278
MNK *i* PP **PnPn** **05 16 12.2 -4.9**
MNK *i* PPP PPP 05 16 23.4
MNK *i* S **S** **05 20 24.1 -3.3**
MNK *i* SS **SnSn** **05 22 31.1 -3.2**
MNK *i* SSS SSS 05 22 46.9
MNK *i* LR LR 05 28 11.4
MNK *i* LRM MLR 05 30 17.9
comp=N,438nm,19.1s
MNK *i* LRM MLR 05 30 21.7
comp=Z,5μm,20.4s
MNK *i* LRM MLR 05 30 28.1
comp=E,9.0nm,16.0s
VRI Vrincioaia 34.62 296 P P 05 15 14.8 +5.0
VRI pmax pmax
comp=Z,9.0nm,1.1s
NACGM Naroch 34.65 312⇑ *e*P **P** **05 15 14.3 +4.4**
baz=97
MLR Muntele Rosu 35.21 296 P **P** **05 15 16.0 +1.0**
MLR Muntele Rosu 35.21 296 P **P** **05 15 16.0 +1.0**
MLR pmax pmax
comp=Z,12nm,0.8s
BURAR Bucovina Array 35.49 300 P **P** **05 15 17.3 -0.1**
BURAR Bucovina Array 35.49 300 P **P** **05 15 18.3 +0.9**
BURAR pmax pmax
comp=Z,2.0nm,1.0s
FIA1 FINESS Array S 36.30 323 P **P** **05 15 23.7 -0.2**
FIA1 IAmb IAmb 05 15 47.1
comp=Z,7.2nm,0.9s
FINES FINESS Array B 36.30 323 P **P** **05 15 23.8 -0.2**
comp=Z,2.0nm,0.5s,baz=109,slow=10,SNR=13
FINES LR LR 05 29 36.6
comp=Z,89nm,20.5s,baz=168,slow=35
comp=Z,2.0nm,0.5s
FINES FINESS Array B 36.30 323 P **P** **05 15 23.4 -0.5**
NJ2 Nanjing 37.24 87 *e*P **P** **05 15 33.8 +1.5**
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
ZEA Zeya 38.71 50 *e*P **P** **05 15 47.5 +3.0**
ZEA pmax pmax
comp=Z,10.0nm,0.6s
ARCES ARCESS Array B 39.31 336 P **P** **05 15 48.8 -0.5**
comp=Z,1.6nm,0.5s,baz=112,slow=8.5,SNR=19
ARCES LR LR 05 33 00.5
comp=Z,68nm,20.6s,baz=108,slow=38
comp=Z,1.6nm,0.5s
ARCES ARCESS Array B 39.31 336 P **P** **05 15 49.1 -0.2**
ARCES IAmb IAmb 05 16 04.4
comp=Z,11nm,1.2s
ARCES ARCESS Array B 39.31 336 P **P** **05 15 49.1 -0.2**
ARCES pmax pmax
comp=Z,11nm,1.2s
DIVS Divibare 39.62 295 P **P** **05 15 52.1 -0.3**
DIVS IAmb IAmb 05 15 58.0
comp=Z,7.4nm,0.8s
YAK Yakutsk 40.51 37 LR LR 05 32 56.9
comp=Z,87nm,18.1s,baz=265,slow=36
PDG Podgorica 40.53 292 P **P** **05 15 58.1 -1.7**
PDG IAmb IAmb 05 16 05.5
comp=Z,7.5nm,1.0s
VRAC Vranov 41.01 303 LR LR 05 34 41.9
comp=Z,85nm,18.6s,baz=76,slow=38
KLR Kul'dur 41.90 57 P **P** **05 16 09.9 -1.1**
comp=Z,1.8nm,0.6s,baz=288,slow=9.8,SNR=6.1
KLR LR LR 05 33 53.2
comp=Z,66nm,18.9s,baz=276,slow=37
comp=Z,1.8nm,0.6s
KLR Kul'dur 41.90 57⇑ *e*P **P** **05 16 09.5 -1.5**
HFS Hagfors 42.10 320 LR LR 05 34 02.0
comp=Z,91nm,20.4s,baz=88,slow=37
KSRS Korea Array 42.16 75 P **P** **05 16 12.6 -0.6**
comp=Z,0.5nm,0.4s,baz=278,slow=8.5,SNR=1.8
KSRS LR LR 05 35 06.6
comp=Z,57nm,19.1s,baz=275,slow=38
comp=Z,0.5nm,0.4s
TIXI Tiksi 42.39 23 P **P** **05 16 13.3 -1.4**
comp=Z,3.8nm,0.6s,baz=90,slow=23,SNR=7.3
comp=Z,3.8nm,0.6s
TIXI Tiksi 42.39 23 P **P** **05 16 13.9 -0.8**
TIXI Tiksi 42.39 23⇑ *e*P **P** **05 16 13.5 -1.1**
TIXI pmax pmax
comp=Z,5.0nm,0.7s
GEC2 GERESS Array S 42.96 303 P **P** **05 16 18.9 -0.8**
GEC2 IAmb IAmb 05 16 26.2
comp=Z,10nm,1.4s
GERES GERESS Array B 42.96 303 P **P** **05 16 20.4 +0.7**
comp=Z,1.8nm,0.9s,baz=54,slow=5.0,SNR=3.2
comp=Z,1.8nm,0.9s
GERES GERESS Array B 42.96 303 P **P** **05 16 20.0 +0.3**
KHC Kasperske Hory 42.99 304⇓ *e*P **P** **05 16 21.4 +1.6**
KHC pmax pmax
comp=Z,15nm,1.6s
NC405 NORSAR Array S 43.10 321 P **P** **05 16 20.1 -0.5**
USRK Ussuriysk Ar. 43.10 64 LR LR 05 34 51.7
comp=Z,102nm,18.8s,baz=275,slow=37
NC303 NORSAR Array S 43.27 321 P **P** **05 16 22.1 +0.1**
NC303 IAmb IAmb 05 16 26.9
comp=Z,12nm,0.9s
NB201 NORSAR Array S 43.31 321 P **P** **05 16 21.4 -0.9**
NB2 NORSAR Subarra 43.34 321 P **P** **05 16 21.6 -1.0**
comp=Z,6.3nm,0.8s,baz=90,slow=7.9
NOA NORSAR Array B 43.34 321 P **P** **05 16 21.9 -0.7**
comp=Z,5.0nm,0.8s,baz=91,slow=8.0,SNR=12
NOA LR LR 05 34 18.8
comp=Z,74nm,18.4s,baz=90,slow=36
comp=Z,5.0nm,0.8s
NC204 NORSAR Array S 43.57 321 P **P** **05 16 24.2 -0.2**
NRCA Norcia 44.79 295 P **P** **05 16 34.3 -0.1**
NRCA IAmb IAmb 05 16 45.0
comp=Z,8.2nm,1.2s
DAVOX Davos/Dischmat 45.92 301 LR LR 05 38 47.5
comp=Z,90nm,18.4s,baz=84,slow=40
MAJO Matsushiro 50.13 72⇑ *e*P **P** **05 17 17.6 +1.6**
MAJO pmax pmax
comp=Z,15nm,2.3s
MJAR Matsushiro Arr 50.13 72 P **P** **05 17 17.8 +1.8**
comp=Z,1.4nm,0.5s,baz=287,slow=9.1,SNR=4.1
MJAR LR LR 05 38 40.8
comp=Z,44nm,19.8s,baz=264,slow=36
ASAJ Asahikawa 50.41 61 LR LR 05 39 04.4
comp=Z,62nm,18.5s,baz=152,slow=37
MA2 Magadan 50.91 40 LR LR 05 39 42.6
comp=Z,44nm,18.7s,baz=262,slow=37
BILL Bilibino 55.18 27⇓ *e*P **P** **05 17 55.5 +2.6**
BILL *e* 05 20 04.1
BILL *e*S **S** **05 25 37.7 +3.3**
BILL pmax pmax
comp=Z,2.0nm,0.8s
BILL MLR MLR
comp=Z,58nm,16.0s
DAV Davao City (W) 56.63 110 LR LR 05 45 17.5
comp=Z,44nm,18.3s,baz=344,slow=39
ESDC Sonseca Array 57.89 297 P **P** **05 18 12.3 -0.3**
comp=Z,0.9nm,0.5s,baz=60,slow=6.9,SNR=5.0
comp=Z,0.9nm,0.5s
TOA0 Torodi Ar. Sit 67.75 269 P **P** **05 19 19.1 +0.5**
TOA0 IAmb IAmb 05 19 24.1
comp=Z,4.0nm,0.8s
TORD Torodi Ar. Bea 67.75 269 P **P** **05 19 17.9 -0.6**
comp=Z,1.1nm,0.5s,baz=45,slow=5.4,SNR=19
comp=Z,1.1nm,0.5s
TORD Torodi Ar. Bea 67.75 269 P **P** **05 19 17.9 -0.6**
TORD IAmb IAmb 05 19 24.0
comp=Z,3.1nm,0.8s
A36M Sachs Harbour 68.18 6 P **P** **05 19 21.0 +0.6**
IMAR Indian Mountai 68.86 19 P **P** **05 19 24.9 +0.2**
BMAR Burnt Mountain 69.70 15 P **P** **05 19 30.7 +0.7**
H23K Yukon River 70.00 17 P **P** **05 19 32.8 +1.0**
H23K IAmb IAmb 05 20 00.0
comp=Z,3.3nm,1.1s
J20K Nowinta River 70.19 20 P **P** **05 19 33.7 +0.8**
INK Inuvik 70.77 10 P **P** **05 19 35.4 -0.9**
comp=Z,1.3nm,0.5s,baz=309,slow=3.8,SNR=3.6
comp=Z,1.3nm,0.5s
INK Inuvik 70.77 10 P **P** **05 19 37.7 +1.3**
INK IAmb IAmb 05 19 45.2
comp=Z,8.2nm,1.4s
INK Inuvik 70.77 10 P **P** **05 19 37.7 +1.3**
INK pmax pmax
comp=Z,8.0nm,1.4s
K20K Telida 70.86 21 P **P** **05 19 37.8 +0.6**
K20K IAmb IAmb 05 19 42.5
comp=Z,7.9nm,1.5s
COLA College 71.19 17⇑ *e*P **P** **05 19 40.4 +1.4**
COLA pmax pmax
comp=Z,3.0nm,0.8s
IL31 71.49 17 P **P** **05 19 42.2 +1.4**
ILAR Eielson Array 71.49 17 P **P** **05 19 39.7 -1.2**
comp=Z,1.2nm,0.8s,baz=318,slow=5.3,SNR=14
comp=Z,1.2nm,0.8s
ILAR Eielson Array 71.49 17 P **P** **05 19 40.8 -0.1**
ILAR Eielson Array 71.49 17 P **P** **05 19 40.8 -0.1**
KTH Kantishna Hill 71.54 19 P **P** **05 19 42.0 +0.7**
J26L Joseph Creek 72.46 16 P **P** **05 19 47.6 +0.8**
J26L IAmb IAmb 05 19 48.6
comp=Z,3.5nm,1.1s
SKT Skwentna 72.67 20 P **P** **05 19 49.0 +1.0**
SCRK Sand Creek 72.82 16 P **P** **05 19 48.8 -0.2**
SCRK IAmb IAmb 05 19 54.3
comp=Z,5.5nm,1.3s
O18K Koktuh Hills 73.33 23 P **P** **05 19 52.8 +0.9**
O18K IAmb IAmb 05 20 03.5
comp=Z,9.4nm,1.4s
DAWY Dawson 73.69 14 P **P** **05 19 54.9 +0.9**
DAWY IAmb IAmb 05 20 08.7
comp=Z,5.4nm,1.4s
SCM Sheep Creek Mo 73.89 19 P **P** **05 19 56.2 +0.9**
SCM Sheep Creek Mo 73.89 19 P **P** **05 19 56.2 +0.9**
SCM pmax pmax
comp=Z,21nm,1.4s
M24K Tolsona, Glenn 73.94 18 P **P** **05 19 56.1 +0.5**
BCAR Beaver Creek A 74.10 16 P **P** **05 19 57.7 +1.2**
N25K Chitina, Valde 74.75 18 P **P** **05 20 02.2 +1.9**
N25K IAmb IAmb 05 20 16.6
comp=Z,11nm,1.4s
DBIC Dimbokro 76.79 268 P **P** **05 20 13.2 +0.6**
comp=Z,2.7nm,0.9s,baz=37,slow=9.4,SNR=3.0
DBIC LR LR 05 57 08.6
comp=Z,40nm,18.6s,baz=48,slow=38
comp=Z,2.7nm,0.9s
KIC Kosan Boka 76.90 267⇑ *e*P **P** **05 20 13.5 +0.3**
comp=Z,0.6nm,0.4s
TIC Toumodi 76.94 268⇑ *i*P **P** **05 20 13.0 -0.4**
comp=Z,1.5nm,0.3s
LIC Lamto 77.20 268⇑ *e*P **P** **05 20 15.9 +1.0**
comp=Z,1.7nm,0.5s
YKA Yellowknife Ar 78.29 4 P **P** **05 20 18.9 -1.3**
comp=Z,0.9nm,0.7s,baz=350,slow=5.4,SNR=22
YKA LR LR 05 59 28.1
comp=Z,51nm,18.5s,baz=38,slow=39
comp=Z,0.9nm,0.7s
WRA Warramunga Arr 81.88 124 P **P** **05 20 39.3 -0.9**
comp=Z,0.9nm,0.8s,baz=326,slow=5.0,SNR=6.9
comp=Z,0.9nm,0.8s
WRA Warramunga Arr 81.88 124 IAmb IAmb 05 20 43.1
comp=Z,0.5nm,1.4s
WRA Warramunga Arr 81.88 124 *i* P **P** **05 20 42.2 +2.0**
WRA pmax pmax
comp=Z,2.0nm,0.8s
PMG Port Moresby 83.54 108 LR LR 06 02 31.3
comp=Z,53nm,18.1s,baz=105,slow=39
ASAR Alice Springs 84.32 127 P **P** **05 20 51.9 -0.8**
comp=Z,0.7nm,0.5s,baz=315,slow=5.2,SNR=6.5
comp=Z,0.7nm,0.5s

*KRNET **27** 05:22:08.8±0.1, 39.°50N×73.°81E, mb3.8*
*NNC **27** 05:22:12.8±2.4, 39.°51N×73.°81E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=21.4km s-min=12.5km az=10.0*
*SOME **27** 05:22:13.5, 39.°73N×73.°68E, h10km*
ISC 27 05:22:10.4±1.4, **39.°64N**±0.°05×**73.°65E**±0.°03, **h8**km±12km, **n38**, σ1s**72**/67, **23C-5D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
OHH	**Osh**	**1.10**	**323**	⇑*i*P		**Pg**	**05 22 33.5**	**+1.9**
	baz=23							
OHH				⇑*i*S		**Sg**	**05 22 51.6**	**+5.7**
	baz=23							
DRK	**Karamyk**	**1.44**	**264**	⇑*e*P		**Pg**	**05 22 38.2**	**+0.2**
	baz=70							
DRK				⇑*i*S		**Sg**	**05 22 59.3**	**+2.6**
	baz=70							
BTK	**Batken**	**2.22**	**282**	⇑*i*P		**Pg**	**05 22 51.4**	**-1.5**
	baz=84							
BTK				⇑*i*S		**Sg**	**05 23 22.3**	**+0.6**
	baz=84							
ARLS	**Aral**	**2.27**	**13**	⇑*i*P		**Pb**	**05 22 51.2**	**-0.7**
	baz=9.0							
ARLS				⇑*i*S		**Sg**	**05 23 23.0**	**-0.5**
	baz=9.0							
AML	**Almayashu**	**2.49**	**1**	P		**Pg**	**05 22 57.3**	**-0.8**
	SNR=14							
GAR	**Garm**	**2.66**	**257⇑**	*e*P		**Pb**	**05 22 56.8**	**-1.6**
	baz=61							
GAR				⇑*i*S		**Sb**	**05 23 31.8**	**+0.5**
	baz=61							
UCH	**Uchtor**	**2.67**	**14**	P		**Pg**	**05 23 01.7**	**+0.2**
	SNR=18							
UCH	**Uchtor**	**2.67**	**14⇑**	*i*P		**Pb**	**05 22 56.8**	**-1.9**
	baz=11							
UCH				⇑*i*S		**Sb**	**05 23 31.8**	**+0.1**
	baz=11							
TRKS	**Terek-Say**	**2.68**	**315⇑**	*i*P		**Pb**	**05 22 57.4**	**-1.4**
	baz=15							
TRKS				⇑*i*S		**Sb**	**05 23 32.8**	**+0.8**
	baz=15							
EKS2	**Erkin-Say**	**3.02**	**2**	P		**Pb**	**05 23 05.2**	**+0.7**
	SNR=8.7							
AAK	**Ala-Archa**	**3.06**	**12**	P		**Pb**	**05 23 06.1**	**+0.8**
	SNR=11							
KBK	**Karagaybulak**	**3.17**	**18**	P		**Pg**	**05 23 13.0**	**+1.9**
	SNR=9.4							
ULHL	**Ulahol**	**3.26**	**36**	P		**Pg**	**05 23 13.5**	**+0.6**
	SNR=14							
BOOM	**Boomskoye usch**	**3.33**	**31⇑**	*e*P		**Pn**	**05 23 05.2**	**+2.2**
	baz=28							
BOOM				⇑*i*S		**Sb**	**05 23 46.4**	**-4.2**
	baz=28							
CHMS	**Chumysh**	**3.46**	**14**	⇑Pn		**Pb**	**05 23 10.1**	**-1.8**
	8.9nm,0.6s							
CHMS				⇑Lg		Lg	05 24 05.8	
	42nm,0.9s							
TKM2	**Tokmak 2**	**3.59**	**24**	P		**Pb**	**05 23 14.2**	**-0.1**
	SNR=5.5							
TKM2	**Tokmak 2**	**3.59**	**24**	⇓Pn		**Pb**	**05 23 12.7**	**-1.6**
	6.8nm,0.4s							
TKM2				⇑Lg		Lg	05 24 09.2	
	15nm,0.7s							
KDJ	**Kajisay**	**3.65**	**46⇓**	*i*P		**Pn**	**05 23 09.3**	**+1.8**
	baz=43							
KDJ				⇓*i*S		**Sn**	**05 23 53.8**	**+2.9**
	baz=43							
IUG	**Iuzhnay**	**3.71**	**314**	*e*P		**Pg**	**05 23 22.0**	**+0.5**
	269nm,0.0s							
IUG				*e*S		**Sg**	**05 24 10.5**	**+0.8**
	51nm,0.1s							
TAS	**Tashkent**	**3.72**	**298⇑**	*i*P		**Pb**	**05 23 12.5**	**-3.9**
	baz=99							
TAS				⇑*i*S		**Sb**	**05 23 58.8**	**-2.9**
	baz=99							
KST	**Kastek**	**3.82**	**26**	*e*P		**Pg**	**05 23 23.1**	**-0.5**
	12nm,0.7s							
KST				*e*S		**Sg**	**05 24 12.4**	**-0.7**
	12nm,0.1s							
SGDS	**Sogindy**	**3.88**	**11**	*e*P		**Pg**	**05 23 24.1**	**-0.6**
	5.1nm,0.2s							
SGDS				*e*S		**Sg**	**05 24 13.7**	**-1.3**
	4.7nm,0.2s							
DGS	**Degeres**	**3.94**	**23**	*e*P		**Pg**	**05 23 24.9**	**-0.9**
	13nm,0.1s							
DGS				*e*S		**Sg**	**05 24 15.4**	**-1.4**
	7.7nm,0.2s							
MTBS	**Maitube**	**4.06**	**30**	*e*P		**Pg**	**05 23 28.1**	**-0.2**
	16nm,0.5s							
MTBS				*e*S		**Sg**	**05 24 20.7**	**-0.3**
	7.9nm,0.1s							
KK31	**Karatay Array**	**4.19**	**327**	Pn		**Pb**	**05 23 20.3**	**-4.0**
	0.8nm,0.2s,baz=121,slow=13,SNR=12							
KK31				⇑Pg		**Pg**	**05 23 32.4**	**+1.8**
	1.7nm,0.3s,baz=144,slow=14,SNR=8.2							
KK31				⇓Sn		**Sb**	**05 24 13.0**	**-2.1**
	4.1nm,0.4s,baz=172,slow=28,SNR=4.1							
KK31				Lg		Lg	05 24 30.4	
	18nm,0.6s,baz=154,slow=24,SNR=4.5							
TNSS	**Tian-Shan**	**4.20**	**35**	*e*P		**Pg**	**05 23 30.6**	**-0.3**
	11nm,0.5s							
TNSS				*e*S		**Sg**	**05 24 25.4**	**0.0**
	6.2nm,0.9s							
KRBS	**Karabastau**	**4.33**	**20**	*e*P		**Pg**	**05 23 33.1**	**-0.1**
	9.8nm,0.2s							
KRBS				*e*S		**Sg**	**05 24 30.0**	**+0.6**
	11nm,0.1s							
BRLS	**Boroldav**	**4.44**	**321**	*e*P		**Pg**	**05 23 33.5**	**-1.9**
	1.9nm,0.1s							
BRLS				*e*S		**Sg**	**05 24 30.5**	**-2.4**
	18nm,0.1s							
KTBS	**Karatobe**	**4.66**	**28**	*e*P		**Pg**	**05 23 39.1**	**-0.6**
	7.0nm,0.1s							
KTBS				*e*S		**Sg**	**05 24 39.7**	**-0.2**
	23nm,0.3s							
KUU	**Kurty**	**4.70**	**24**	*e*P		**Pg**	**05 23 39.6**	**-0.9**
	6.8nm,0.1s							
KUU				*e*S		**Sg**	**05 24 41.0**	**-0.3**
	17nm,0.0s							
SATY	**Saty**	**4.95**	**45**	*e*P		**Pg**	**05 23 44.6**	**-0.6**
	12nm,0.5s							
SATY				*e*S		**Sg**	**05 24 49.5**	**+0.3**
	22nm,1.2s							
KURS	**Kuram**	**5.12**	**40**	*e*P		**Pg**	**05 23 46.8**	**-1.7**
	4.4nm,0.1s							
KURS				*e*S		**Sg**	**05 24 53.5**	**-1.4**
	7.1nm,0.1s							
KPKS	**Kokpek**	**5.37**	**43**	*e*P		**Pg**	**05 23 53.2**	**-0.1**
	9.2nm,0.1s							
KPKS				*e*S		**Sg**	**05 25 03.9**	**+1.0**
	11nm,0.1s							
BTLS	**Baital**	**5.40**	**3**	*e*P		**Pg**	**05 23 54.4**	**+0.5**
	2.9nm,0.1s							
BTLS				*e*S		**Sg**	**05 25 06.2**	**+2.3**
	3.6nm,0.1s							
ARXS	**Arharly**	**5.53**	**33**	*e*P		**Pg**	**05 23 56.0**	**-0.3**
	12nm,0.2s							
ARXS				*e*S		**Sg**	**05 25 08.5**	**+0.6**
	7.7nm,0.1s							
BLB	**Baldybastay**	**5.73**	**37**	*e*P		**Pg**	**05 23 59.6**	**-0.5**
	8.9nm,0.4s							
BLB				*e*S		**Sg**	**05 25 15.3**	**+1.0**
	11nm,0.1s							
PDGK	**Podgornoye**	**5.73**	**48**	⇓Pn		**Pn**	**05 23 37.0**	**+1.1**
	1.4nm,0.5s							
PDGK				⇑Lg		Lg	05 25 15.1	
	9.4nm,0.8s							
DJR	**Jarkent**	**6.55**	**42**	*e*P		**Pg**	**05 24 15.7**	**-0.1**
	1.1nm,0.1s							
DJR				*e*S		**Sg**	**05 25 42.5**	**+1.9**
	2.7nm,0.4s							

*IDC **27** 05:25:08.7±4.3, 13.°25N×143.°23E, h189km±34km, mb3.3/5, mbtmp3.9/5, Error ellipse: s-maj=95.9km s-min=17.9km az=115.0*
ISC 27 05:25:10.1±1.4, **13.°1N**±0.°2×**143.°4E**±0.°3, **h200**km, **n6**, σ0s**88**/7, **mb3.5**/5, **South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
GUMO	**Guam**	**1.49**	**72**	P		**Pn**	**05 25 44.3**	**+0.7**
	43nm,0.3s,baz=172,slow=19,SNR=2.7							
GUMO					S	**Sn**	**05 26 08.8**	**-0.8**
	185nm,0.3s,baz=353,slow=21,SNR=13							
WRA	**Warramunga Arr**	**34.07**	**195**	P		**P**	**05 31 35.7**	**+0.1**
	4.6nm,0.6s,baz=15,slow=9.4,SNR=9.2							
	4.6nm,0.6s							
ASAR	**Alice Springs**	**37.74**	**194**	P		**P**	**05 32 07.0**	**+0.1**
	0.9nm,0.7s,baz=20,slow=12,SNR=18							
	0.9nm,0.7s							
STKA	**Stephens Creek**	**44.79**	**182**	P		**P**	**05 33 03.6**	**-0.4**
	1.5nm,0.6s,baz=354,slow=11,SNR=3.1							
	1.5nm,0.6s							
ILAR	**Eielson Array**	**69.58**	**25**	P		**P**	**05 35 56.2**	**-0.9**
	0.2nm,0.5s,baz=270,slow=5.0,SNR=4.2							
	0.2nm,0.5s							
NVAR	**Mina Array Bea**	**88.31**	**51**	P		**P**	**05 37 40.5**	**+1.0**
	0.2nm,0.5s,baz=252,slow=4.9,SNR=4.0							
	0.2nm,0.5s							

*IDC **27** 05:27:36.3±0.6, 31.°98N×69.°54E, h0km, mb4.3/23, mbtmp4.3/26, ML4.0/4, MS3.6/35, Error ellipse: s-maj=15.4km s-min=12.4km az=22.0*
*BJI **27** 05:27:41.3±0.0, 32.°20N×69.°74E, h27km, mb4.5/28, mB4.6/13, ML4.6/1, Ms4.1/13, Ms7 3.7/14*
*MOS **27** 05:27:41.5±1.3, 32.°21N×69.°67E, h41km, mb4.8/31, Error ellipse: s-maj=6.9km s-min=3.8km az=84.1*
*NEIC **27** 05:27:43.8±1.2, 32.°18N±0.°08×69.°65E±0.°08, h47km±5km,*

mb4.6/74, Error ellipse: s-maj=12.4km s-min=8.7km az=146.0

ISC 27 05:27:42.2±0.3,**32°07N**±0°04×**69°58E**±0°04,**h35**km,**n344,** σ1**f32**/355,**mb4.6**/80,**MS3.6**/33,**12C-1D,Pakistan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
THW	**Thamme Wali**	**1.96**	**68**	P	**Pn**	**05 28 13.7**	**+0.6**
THW				S	**Sn**	**05 28 44.0**	**+7.5**
KBL	**Kabul**	**2.50**	**350**	Pn	**Pn**	**05 28 21.8**	**+1.2**
KBL	**Kabul**	**2.50**	**350**	P	**Pn**	**05 28 21.8**	**+1.2**
CEP	**Cherat**	**2.62**	**48**	P	**Pn**	**05 28 23.6**	**+1.4**
CHCP	**Chirah Chowk**	**3.48**	**62**	P	**Pn**	**05 28 35.0**	**+1.1**
THN	**Thein Dam**	**5.21**	**84**	*e*P	**Pn**	**05 28 56.8**	**-0.8**
THN				*e*S	**Sn**	**05 30 01.9**	**+5.4**
BHK	**Bhakra**	**5.86**	**95**	*e*P	**Pn**	**05 29 08.5**	**+1.9**
BHK				*e*S	**Sn**	**05 30 16.9**	**+4.3**
SMLA	**Simla**	**6.54**	**96**	*e*P	**Pn**	**05 29 15.8**	**-0.1**
SMLA				*e*S	**Sn**	**05 30 32.9**	**+3.6**
SMLA				IAML		05 30 39.3	
	comp=N,173nm,0.4s						
SMLA				IAML		05 30 40.1	
	comp=E,186nm,0.6s						
HRA	**Herat**	**6.56**	**293**	Pn	**Pn**	**05 29 18.9**	**+2.5**
CHGR	**Chuyangaron**	**6.58**	**357**	Pn	**Pn**	**05 29 15.5**	**-1.0**
CHGR	**Chuyangaron**	**6.58**	**357**	P	**Pn**	**05 29 15.5**	**-1.0**
GAR	**Garm**	**6.94**	**5**		**Pn**	**05 29 21.7**	**+0.2**
NDI	**New Delhi**	**7.41**	**115**	*e*P	**Pn**	**05 29 27.4**	**-0.5**
DDI	**Dehra Dun**	**7.47**	**101**	*e*P	**Pn**	**05 29 31.0**	**+2.3**
SONA	**Sohna**	**7.53**	**118**	*e*P	**Pn**	**05 29 30.9**	**+1.4**
SONA				*e*S	**Sn**	**05 30 51.3**	**-2.4**
DRK	**Karamyk**	**7.61**	**13**	Pn	**Pn**	**05 29 30.8**	**0.0**
BTK	**Batken**	**8.03**	**7**	Pn	**Pn**	**05 29 36.5**	**+0.1**
BTK	**Batken**	**8.03**	**7**	P	**Pn**	**05 29 36.5**	**+0.1**
KSH	**Kashi**	**9.06**	**33**	P	**Pn**	**05 29 46.8**	**-3.8**
KSH				S	**Sn**	**05 31 24.0**	**-7.4**
KSH				pmax	pmax		
	comp=E,69nm,0.7s						
KSH				smax	smax		
	comp=E,140nm,0.6s						
KSH				smax	smax		
	comp=E,160nm,0.8s						
KSH				LR	LR		
	comp=E,580nm,6.4s						
KSH				LR	LR		
	comp=E,770nm,6.4s						
KSH				LR	LR		
	comp=E,730nm,8.6s						
IUG	**Iuzhnay**	**10.06**	**2**	*e*P	**Pn**	**05 30 04.1**	**-0.1**
IUG				*e*S	**Sn**	**05 31 55.9**	**0.0**
IUG	**Iuzhnay**	**10.06**	**2**	*e*P	**Pn**	**05 30 04.1**	**-0.1**
	baz=1.1						
IUG				*e*S	**Sn**	**05 31 56.0**	**0.0**
	baz=1.1						
JHNI	**Jhansi**	**10.25**	**128**	*e*S	**Sn**	**05 31 58.3**	**-2.3**
UCH	**Uchtor**	**10.87**	**20**	P	**Pn**	**05 30 16.0**	**+0.3**
	SNR=9.5						
DZA	**Taraz**	**10.89**	**7**	*e*P	**Pn**	**05 30 14.2**	**-1.3**
DZA				*e*S	**Sn**	**05 32 14.1**	**-1.9**
DZA	**Taraz**	**10.89**	**7**	*e*P	**Pn**	**05 30 14.3**	**-1.3**
	baz=6.2						
DZA				*e*S	**Sn**	**05 32 14.2**	**-1.9**
	baz=6.2						
KK31	**Karatay Array**	**11.04**	**4**	Pn	**Pn**	**05 30 16.7**	**-0.8**
KK31	**Karatay Array**	**11.04**	**4**	P	**Pn**	**05 30 16.7**	**-0.8**
KKAR	**Karatay Array**	**11.04**	**4**	Pn	**Pn**	**05 30 15.7**	**-1.8**
KKAR	**Karatay Array**	**11.04**	**4**	P	**Pn**	**05 30 15.7**	**-1.8**
GEYT	**Alibeck**	**11.06**	**305**	Pn	**Pn**	**05 30 17.1**	**-0.8**
	comp=E,0.8nm,0.3s,baz=202,slow=11,SNR=3.9						
GEYT				LR	LR	05 35 19.7	
	comp=E,211nm,21.1s,baz=150,slow=42 comp=E,5.7nm,0.6s						
GEYT	**Alibeck**	**11.06**	**305**	Pn	**Pn**	**05 30 18.6**	**+0.7**
GYA0	**ALIBECK ARRAY**	**11.06**	**305**	P	**Pn**	**05 30 18.0**	**+0.1**
GYA0B	**ALIBECK ARRAY**	**11.06**	**305**		**Pn**	**05 30 18.2**	**+0.2**
BHPL	**Bhopal**	**11.21**	**140**	*e*P	Pn	05 30 16.0	-4.0
BHPL				*e*S	**Sn**	**05 32 19.6**	**-4.5**
BHPL				IAML		05 32 27.0	
	comp=E,115nm,0.3s						
BHPL				IAML		05 32 28.2	
	comp=N,105nm,0.2s						
AAK	**Ala-Archa**	**11.24**	**19**	P	**Pn**	**05 30 20.8**	**+0.3**
	SNR=12						
AAK	**Ala-Archa**	**11.24**	**19**	Pn	**Pn**	**05 30 20.9**	**+0.3**
	comp=N,4.1nm,0.3s,baz=189,slow=4.7,SNR=16						
AAK				Sn	**Sn**	**05 32 20.6**	**-4.3**
	comp=N,0.4nm,0.3s,baz=95,slow=11,SNR=1.3						
AAK				LR	LR	05 35 08.8	
	comp=N,281nm,18.6s,baz=208,slow=40 comp=N,19nm,0.6s						
AAK	**Ala-Archa**	**11.24**	**19**	Pn	**Pn**	**05 30 20.0**	**-0.5**
AAK	**Ala-Archa**	**11.24**	**19**	*ce*P	**Pn**	**05 30 21.4**	**+0.9**
AAK				pmax	pmax		
	comp=Z,21nm,0.6s						
KBK	**Karagaybulak**	**11.39**	**20**	P	**Pn**	**05 30 24.1**	**+1.5**
	SNR=7.0						
BOOM	**Boomskoye usch**	**11.56**	**24**	Pn	**Pn**	**05 30 24.0**	**-0.8**
BOOM	**Boomskoye usch**	**11.56**	**24**	P	**Pn**	**05 30 24.0**	**-0.8**
CHMS	**Chumysh**	**11.65**	**19**	P	**Pn**	**05 30 25.5**	**-0.4**
	SNR=16						
TARG	**Taragay, Kyrgy**	**11.66**	**32**	Pn	**Pn**	**05 30 26.4**	**-0.1**
TARG	**Taragay, Kyrgy**	**11.66**	**32**	P	**Pn**	**05 30 26.4**	**-0.1**
KDJ	**Kajisay**	**11.72**	**29**	Pn	**Pn**	**05 30 27.7**	**+0.6**
KDJ	**Kajisay**	**11.72**	**29**	P	**Pn**	**05 30 27.7**	**+0.6**
TKM2	**Tokmak 2**	**11.83**	**22**	P	**Pn**	**05 30 29.8**	**+1.2**
	SNR=27						
SGDS	**Sogindy**	**12.04**	**18**	*e*P	**Pn**	**05 30 29.3**	**-2.0**
SGDS				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SGDS	**Sogindy**	**12.04**	**18**	*e*P	**Pn**	**05 30 29.3**	**-2.0**
	comp=Z,4.9nm,0.7s,baz=18						
PYUN	**Piuthan**	**12.27**	**105**	*e*P	**Pn**	**05 30 32.7**	**-1.9**
	comp=Z,75nm,0.5s						
TNSS	**Tian-Shan**	**12.40**	**26**	*e*P	**Pn**	**05 30 33.4**	**-3.1**
TNSS	**Tian-Shan**	**12.40**	**26**	*e*P	**Pn**	**05 30 33.4**	**-3.1**
	baz=26						
DANN	**Dangsing**	**12.81**	**103**	*e*P	**Pn**	**05 30 40.7**	**-1.4**
KUU	**Kurty**	**12.94**	**22**	*e*P	**Pn**	**05 30 42.7**	**-0.8**
KUU	**Kurty**	**12.94**	**22**	*e*P	**Pn**	**05 30 42.8**	**-0.8**
	baz=22						
SATY	**Saty**	**13.00**	**30**	*e*P	**Pn**	**05 30 43.2**	**-1.3**
SATY	**Saty**	**13.00**	**30**	*e*P	**Pn**	**05 30 43.2**	**-1.3**
	baz=30						
CHKK	**Chushkaly**	**13.12**	**24**	*e*P	**Pn**	**05 30 45.2**	**-0.8**
CHKK	**Chushkaly**	**13.12**	**24**	*e*P	**Pn**	**05 30 45.3**	**-0.8**
	baz=24						
BTLS	**Baital**	**13.41**	**14**	*e*P	**Pn**	**05 30 49.1**	**-0.8**
BTLS				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BTLS	**Baital**	**13.41**	**14**	*e*P	**Pn**	**05 30 49.1**	**-0.8**
	comp=Z,1.7nm,0.6s,baz=13						
KPKS	**Kokpek**	**13.45**	**30**	*e*P	**Pn**	**05 30 48.3**	**-2.2**
KPKS				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KPKS	**Kokpek**	**13.45**	**30**	*e*P	**Pn**	**05 30 48.4**	**-2.2**
	comp=Z,7.1nm,0.8s,baz=30						
SHLS	**Shalkode**	**13.54**	**32**	*e*P	**Pn**	**05 30 53.2**	**+1.3**
SHLS	**Shalkode**	**13.54**	**32**	*e*P	**Pn**	**05 30 53.2**	**+1.3**
	baz=33						
GKN	**Gorkha**	**13.66**	**103**	*e*P	**Pn**	**05 30 50.9**	**-2.7**
	comp=Z,20nm,0.3s						
PKIN	**Phulchoki**	**14.44**	**104**	*e*P	**Pn**	**05 31 02.3**	**-2.0**
PKI	**Pulchoki**	**14.45**	**104**	*e*P	**Pn**	**05 31 02.5**	**-2.1**
TDK	**Taldyqorghan**	**14.62**	**26**	*e*P	**Pn**	**05 31 05.4**	**-1.1**
TDK	**Taldyqorghan**	**14.62**	**26**	*e*P	**Pn**	**05 31 05.4**	**-1.1**
	baz=25						
GUN	**Gumba**	**14.72**	**102**	*e*P	**Pn**	**05 31 05.9**	**-2.3**
	comp=Z,48nm,0.4s						
HYBB	**Hyderabad (bro**	**16.70**	**149**	*e*Pn	**Pn**	**05 31 35.2**	**+1.6**
HYBB				*e*Sn	**Sn**	**05 34 41.0**	**+2.9**
MAKZ	**Makanchi**	**17.52**	**29**	P	**Pn**	**05 31 43.0**	**-0.6**
MAKZ	**Makanchi**	**17.52**	**29**	P	**Pn**	**05 31 43.0**	**-0.6**
MAKZ				pmax	pmax		
	comp=Z,15nm,1.0s						
MK31	**Makanchi Array**	**17.64**	**30**		**Pn**	**05 31 44.2**	**-0.9**
MK31	**Makanchi Array**	**17.64**	**30**	*i* P	**P**	**05 31 45.4**	**-0.4**
MKAR	**Makanchi Array**	**17.64**	**30**	P	**Pn**	**05 31 43.6**	**-1.6**
	comp=Z,0.4nm,0.3s,baz=209,slow=11,SNR=18 comp=Z,2.3nm,0.6s						
MKAR	**Makanchi Array**	**17.64**	**30**		**Pn**	**05 31 44.7**	**-0.4**
MKAR	**Makanchi Array**	**17.64**	**30**	P	**Pn**	**05 31 44.7**	**-0.4**
BRZS	**Berezniki**	**18.04**	**6**	*e*P	**Pn**	**05 31 49.0**	**-0.9**
BRZS	**Berezniki**	**18.04**	**6**	*e*P	**Pn**	**05 31 49.1**	**-0.9**
	baz=6.1						
WMQ	**Urumqi**	**18.44**	**45**	*e*P	**P**	**05 31 54.5**	**-0.2**
WMQ				pP	pP	05 32 04.5	+0.3
WMQ				PP	**sP**	**05 32 10.0**	**+1.2**
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.3s						
WMQ				LR	LR		
	comp=Z,210nm,25.5s						
WMQ				LR	LR		
	comp=Z,310nm,17.5s						
WMQ				LR	LR		
	comp=Z,160nm,28.5s						
ABKAR	**Akbulak array**	**18.63**	**340**	P	**P**	**05 31 55.8**	**-0.9**
LSA	**Lhasa**	**18.66**	**92**	P	**P**	**05 31 57.1**	**-0.5**
LSA	**Lhasa**	**18.66**	**92**	P	**P**	**05 31 57.2**	**-0.5**
LSA				pmax	pmax		
	comp=Z,16nm,1.3s						
ZSN	**Zaisan**	**19.28**	**33**	*e*P	**Pn**	**05 32 05.5**	**+0.5**
ZSN				*e*S	**Sn**	**05 35 37.4**	**-2.7**
ZSN	**Zaisan**	**19.28**	**33**	*e*P	**Pn**	**05 32 05.5**	**+0.5**
	baz=33						
ZSN				*e*S	**Sn**	**05 35 37.4**	**-2.7**
	baz=33						
KURBB	**Kurchatov Arra**	**19.68**	**17**	P	**P**	**05 32 07.0**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=210,slow=9.9,SNR=19						
KURBB				LR	LR	05 40 19.1	
	comp=Z,135nm,19.9s,baz=179,slow=39						
KURK	**Kurchatov**	**19.79**	**17**	P	**P**	**05 32 07.9**	**-1.4**
KURK	**Kurchatov**	**19.79**	**17**	P	**P**	**05 32 07.9**	**-1.4**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
SEM	**Semipalatinsk**	**19.96**	**20**	*e*P	**P**	**05 32 09.9**	**-1.5**
SEM	**Semipalatinsk**	**19.96**	**20**	*e*P	**P**	**05 32 09.9**	**-1.5**
	baz=20						
AKTO	**Aktyubinsk**	**20.25**	**338**	P	**P**	**05 32 14.1**	**-0.3**
	comp=Z,11nm,0.7s,baz=138,slow=7.4,SNR=14						
AKTO				LR	LR	05 41 15.7	
	comp=Z,174nm,19.4s,baz=143,slow=40 comp=Z,11nm,0.7s						
SHL	**Shillong**	**20.57**	**103**		**P**	**05 32 17.8**	**-0.4**
SHL				IAmb	IAmb	05 32 38.2	
	comp=Z,46nm,1.4s						
SHL	**Shillong**	**20.57**	**103**	P	**P**	**05 32 17.8**	**-0.4**
SHL				pmax	pmax		
	comp=Z,46nm,1.4s						
BVAR	**Borovoye Array**	**20.95**	**1**	LR	LR	05 41 28.0	
	comp=Z,145nm,18.1s,baz=64,slow=40						
GOMU	**GeErMu**	**21.27**	**72**	P	**P**	**05 32 26.8**	**+0.9**
GOMU				pP	pP	05 32 37.0	+1.6
GOMU				sP	sP	05 32 42.3	+2.3
GOMU				pmax	pmax		
	comp=Z,8.0nm,1.1s						
GOMU				pmax	pmax		
	comp=Z,93nm,4.7s						
GNI	**Garni**	**21.58**	**299**	P	**P**	**05 32 28.9**	**0.0**
	comp=Z,9.5nm,0.8s,baz=135,slow=8.6,SNR=1.7						
GNI				LR	LR	05 43 24.0	
	comp=Z,54nm,18.5s,baz=132,slow=44 comp=Z,9.5nm,0.8s						
GNI	**Garni**	**21.58**	**299**	P	**P**	**05 32 28.9**	**0.0**
GNI				IAmb	IAmb	05 32 50.5	
	comp=Z,28nm,1.1s						
GNI	**Garni**	**21.58**	**299**	*ce*P	**P**	**05 32 30.7**	**+1.8**
GNI				pmax	pmax		
	comp=Z,33nm,1.7s						
GROC	**Groznyy**	**21.79**	**307**	*e*P	**P**	**05 32 32.2**	**+1.2**
GROC				*e*		05 32 54.4	
GROC				pmax	pmax		
	comp=Z,24nm,0.6s						
RAYN	**Ar Rayn**	**22.90**	**254**	P	**P**	**05 32 43.8**	**+0.7**
RAYN	**Ar Rayn**	**22.90**	**254**	P	**P**	**05 32 43.8**	**+0.7**
RAYN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ZEI	**Tsey**	**22.94**	**305**	*e*P	**P**	**05 32 44.6**	**+1.1**
ZEI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ONI	**Oni**	**23.19**	**304**	P	**P**	**05 32 45.5**	**-0.4**
ONI	**Oni**	**23.19**	**304**	P	**P**	**05 32 45.5**	**-0.4**
ONI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KBZ	**Khabaz**	**23.95**	**307**	P	**P**	**05 32 53.3**	**+0.3**
	comp=Z,2.4nm,0.8s,baz=161,slow=9.3,SNR=4.6						
KBZ				LR	LR	05 44 40.2	
	comp=Z,91nm,19.4s,baz=106,slow=43 comp=Z,2.4nm,0.8s						
KBZ	**Khabaz**	**23.95**	**307**	*i* P	**P**	**05 32 53.6**	**+0.6**
KBZ				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SHA1	**Shidzhatmaz**	**24.11**	**307**	*i* P	**P**	**05 32 55.0**	**+0.1**
ZAA0	**Zalesovo Array**	**24.43**	**22**	P	**P**	**05 32 55.7**	**-1.7**
ZALV	**Zalesovo Beam**	**24.43**	**22**	P	**P**	**05 32 57.0**	**-0.4**
	comp=Z,3.9nm,0.4s,baz=221,slow=10,SNR=18 comp=Z,3.9nm,0.4s						
ZALV	**Zalesovo Beam**	**24.43**	**22**	P	**P**	**05 32 56.3**	**-1.1**
ZALV	**Zalesovo Beam**	**24.43**	**22**	*i* P	**P**	**05 32 57.0**	**-0.4**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.4s						
GTA	**Gaotai**	**25.53**	**65**	*e*P	**P**	**05 33 09.3**	**+1.7**
GTA				pP	pP	05 33 17.8	-0.1
GTA				sP	sP	05 33 23.0	+0.8
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ARU	**Arti**	**25.53**	**346**	P	**P**	**05 33 08.4**	**+1.1**
	comp=Z,6.1nm,0.2s,baz=176,slow=7.5,SNR=17						
ARU				LR	LR	05 45 20.3	
	comp=Z,49nm,19.3s,baz=146,slow=42 comp=Z,6.1nm,0.2s						
ARU	**Arti**	**25.53**	**346**	P	**P**	**05 33 07.0**	**-0.3**
ARU				IAmb	IAmb	05 33 11.4	
	comp=Z,24nm,1.0s						
ARU	**Arti**	**25.53**	**346**	*c i*P	**P**	**05 33 08.2**	**+0.9**
ARU				*PP	**sP**	**05 33 21.4**	**-0.8**
ARU						05 33 40.5	
ARU				S	**S**	**05 37 32.9**	**+0.5**
ARU				SS	**SnSn**	**05 38 27.4**	**+0.2**
ARU				pmax	pmax		
	comp=Z,28nm,1.0s						
ARU				MLR	MLR		
	comp=Z,221nm,14.0s						
BELG	**Belogornoye**	**25.83**	**328**	P	**P**	**05 33 11.0**	**+1.0**
	comp=Z,95nm,1.1s,baz=97,slow=2.4,SNR=22						
BELG				LR	LR	05 45 43.9	
	comp=Z,146nm,18.7s,baz=146,slow=42						
BELG	**Belogornoye**	**25.83**	**328**	*i* P	**P**	**05 33 11.3**	**+1.3**
BELG				pmax	pmax		
	comp=Z,11nm,0.9s						
PALK	**Pallekele**	**26.77**	**155**	LR	LR	05 43 50.7	
	comp=Z,182nm,19.4s,baz=90,slow=36						
LZH	**Lanzhou**	**28.57**	**72**	*e*P	**P**	**05 33 36.8**	**+1.7**
LZH				pP	sP	05 33 50.0	+0.2
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
CHTO	**Chiang Mai**	**29.51**	**109**	P	**P**	**05 33 42.6**	**-0.8**
CHTO				IAmb	IAmb	05 33 46.4	
	comp=Z,14nm,1.4s						
CHTO	**Chiang Mai**	**29.51**	**109**	P	**P**	**05 33 42.6**	**-0.8**
CHTO				pmax	pmax		
	comp=Z,14nm,1.5s						
CMAR	**Chiang Mai Arr**	**29.70**	**110**	P	**P**	**05 33 45.5**	**+0.4**
	comp=Z,1.2nm,0.3s,baz=309,slow=8.0,SNR=9.0						
CMAR				LR	LR	05 47 27.6	
	comp=Z,44nm,18.8s,baz=205,slow=40 comp=Z,1.2nm,0.3s						
CMAR	**Chiang Mai Arr**	**29.70**	**110**	*i* P	**P**	**05 33 48.2**	**+3.1**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KIRV	**Kirov**	**29.82**	**339**	LR	LR	05 47 31.9	
	comp=Z,56nm,19.1s,baz=142,slow=40						
KIRV	**Kirov**	**29.82**	**339**	*ce*P	**P**	**05 33 47.4**	**+1.8**
BR131	**Keskin Array S**	**29.95**	**295**	P	**P**	**05 33 47.6**	**+0.4**
BR131	**Keskin Array S**	**29.95**	**295**	P	**P**	**05 33 47.6**	**+0.4**
BR131				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRTR	**Keskin Array B**	**29.95**	**295**	P	**P**	**05 33 47.6**	**+0.4**
	comp=Z,1.3nm,0.7s,baz=120,slow=9.5,SNR=7.0 comp=Z,1.3nm,0.7s						
BRTR	**Keskin Array B**	**29.95**	**295**	P	**P**	**05 33 47.7**	**+0.5**
BRTR	**Keskin Array B**	**29.95**	**295**	*i* P	**P**	**05 33 49.0**	**+1.8**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ILGA	**Ilgaz**	**29.99**	**298**	P	**P**	**05 33 48.8**	**+1.1**
SONM	**Songino Array**	**31.96**	**50**	LR	LR	05 49 06.4	
	comp=Z,154nm,20.3s,baz=46,slow=40						
ULN	**Ulaanbaatar**	**32.39**	**50**	*ce*P	**P**	**05 34 09.5**	**+0.8**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
OBN	**Obninsk**	**32.70**	**325**	LR	LR	05 50 49.0	
	comp=Z,63nm,19.1s,baz=92,slow=42						
OBN	**Obninsk**	**32.70**	**325**	⇑*i*P	**P**	**05 34 11.8**	**+0.8**
OBN				*e*		05 35 24.6	
OBN				*e*SS	SS	05 41 48.2	+2.1
OBN				pmax	pmax		
	comp=Z,10.0nm,0.4s						
OBN				MLR	MLR		
	comp=Z,231nm,19.0s						
HHC	**Hu-ho-hao-te**	**34.61**	**63**	*e*P	**P**	**05 34 27.3**	**-0.7**
HHC				pmax	pmax		
	comp=Z,13nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,4.3s						
AKASG	**Malin Array Be**	**34.99**	**314**	P	**P**	**05 34 30.3**	**-0.7**
	comp=Z,2.1nm,0.5s,baz=97,slow=7.3,SNR=23						
AKASG				LR	LR	05 52 03.5	
	comp=Z,142nm,18.6s,baz=122,slow=42 comp=Z,2.1nm,0.5s						
AKASG	**Malin Array Be**	**34.99**	**314**	*i* P	**P**	**05 34 30.7**	**-0.3**
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MLR	**Muntele Rosu**	**36.12**	**305**	P	**P**	**05 34 40.1**	**-0.8**
MLR				IAmb	IAmb	05 34 43.7	
	comp=Z,12nm,1.2s						
MLR	**Muntele Rosu**	**36.12**	**305**	P	**P**	**05 34 40.1**	**-0.8**
MLR				pmax	pmax		
	comp=Z,12nm,1.2s						
BURAR	**Bucovina Array**	**36.89**	**308**	P	**P**	**05 34 46.9**	**-0.6**
MNK	**Minsk**	**36.97**	**320**	*i* P	**P**	**05 34 47.3**	**-0.5**
MNK				*i* *PP	**pP**	**05 35 00.5**	**+2.0**
MNK				*i*		05 36 11.9	
MNK				*i*		05 37 08.3	
MNK				*i* S	**S**	**05 40 28.7**	**-1.9**
MNK				*i* *SS	**sS**	**05 40 51.4**	**+3.4**
MNK				*i* SS	**SnSn**	**05 43 05.2**	**+0.1**
MNK				*i*		05 44 57.9	
MNK				pmax	pmax		
	comp=Z,22nm,0.9s						
MNK				pmax	pmax		
	comp=N,52nm,0.9s						
MNK				pmax	pmax		
	comp=E,3.0nm,0.7s						
MNK				MLR	MLR		
	comp=N,272nm,15.0s						
MNK				MLR	MLR		
	comp=Z,3μm,20.0s						
MNK				MLR	MLR		
	comp=E,14nm,20.0s						
MNK	**Minsk**	**36.97**	**320**	*i* P	**P**	**05 34 47.4**	**-0.5**
	comp=E,3.0nm,0.7s						
MNK				*i* P	**P**	**05 34 47.4**	**-0.5**
	comp=N,52nm,0.9s						
MNK				*i* P	**P**	**05 34 47.4**	**-0.5**
	comp=Z,22nm,0.8s,baz=110						
MNK				*i* pP	**pP**	**05 35 00.5**	**+2.0**
MNK				*i* PP	**PP**	**05 36 11.9**	**-0.4**
MNK				*i* S	**S**	**05 40 28.8**	**-1.9**
MNK				*i* sS	**sS**	**05 40 51.5**	**+3.4**
MNK				*i* SS	**SnSn**	**05 43 05.2**	**+0.1**
MNK				*i* SSS	SSS	05 43 22.2	
MNK				*i* LQ	LQ	05 47 05.2	
MNK				*i* LR	LR	05 50 08.6	
MNK				*i* LRM	MLR	05 51 29.4	
	comp=N,272nm,14.7s						
MNK				*i* LRM	MLR	05 51 29.4	
	comp=Z,3μm,20.4s						
MNK				*i* LRM	MLR	05 52 10.0	
	comp=E,14nm,20.4s						
NACGM	**Naroch**	**37.70**	**320**	⇓*e*P	**P**	**05 34 55.0**	**+0.8**
	baz=110						
VSU	**Vasula**	**39.04**	**325**	*i* P	**P**	**05 35 04.3**	**-0.9**
VSU				pmax	pmax		
	comp=Z,30nm,1.0s						
ITM	**Ithomi**	**39.22**	**291**	P	**P**	**05 35 06.8**	**-0.3**
KBN	**Korca**	**39.78**	**297**	P	**P**	**05 35 11.4**	**-0.4**
KBN				IAmb	IAmb	05 35 13.4	
	comp=Z,9.4nm,0.9s						
KBN	**Korca**	**39.78**	**297**	P	**P**	**05 35 11.5**	**-0.4**
KBN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
PSI	**Prapat**	**40.11**	**131**	P	**P**	**05 35 14.1**	**-0.7**
PSI				pmax	pmax		
	comp=Z,17nm,1.3s						
RPSI	**Rantau Prapat**	**40.19**	**131**	P	**P**	**05 35 14.1**	**-1.3**
RPSI				IAmb	IAmb	05 35 22.9	
	comp=Z,17nm,1.3s						
FINES	**FINESS Array B**	**40.59**	**329**	P	**P**	**05 35 18.3**	**+0.1**
	comp=Z,3.0nm,0.9s,baz=141,slow=12,SNR=6.1						
FINES				PcP	**PcP**	**05 37 20.4**	**+0.7**
	comp=Z,0.8nm,0.6s,baz=108,slow=4.5,SNR=4.1						
FINES				LR	LR	05 54 03.8	
	comp=Z,74nm,18.1s,baz=88,slow=39 comp=Z,3.0nm,0.9s						
FINES	**FINESS Array B**	**40.59**	**329**	P	**P**	**05 35 17.1**	**-1.1**
NJ2	**Nanjing**	**41.46**	**76**	*e*P	**P**	**05 35 23.8**	**-1.9**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
MORC	**Moravsky Berou**	**42.19**	**310**	P	**P**	**05 35 30.5**	**-1.0**
MORC	**Moravsky Berou**	**42.19**	**310**	P	**P**	**05 35 30.5**	**-1.0**
MORC				pmax	pmax		
	comp=Z,10.0nm,1.4s						
VRAC	**Vranov**	**42.77**	**310**	LR	LR	05 56 06.4	
	comp=Z,41nm,19.4s,baz=66,slow=40						
CUC	**Castrocucco**	**43.63**	**296**	P	**P**	**05 35 42.3**	**-1.0**
CUC				IAmb	IAmb	05 35 46.3	
	comp=Z,11nm,0.7s						
GERES	**GERESS Array B**	**44.66**	**309**	P	**P**	**05 35 50.2**	**-1.3**
	comp=Z,0.6nm,0.6s,baz=126,slow=6.9,SNR=7.3						
GERES				PcP	**PcP**	**05 37 34.0**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=111,slow=3.0,SNR=3.6 comp=Z,0.6nm,0.6s						
PRED	**Cave del Predi**	**44.77**	**306**	P	**P**	**05 35 52.8**	**+0.4**
ARCES	**ARCESS Array B**	**

USRK	**Ussuriysk Ar.**	**49.46**	**57**	P		**P**		**05 36 28.5**	**-0.4**
	comp=Z,3.5nm,0.8s,baz=265,slow=7.2,SNR=5.2									
USRK				LR		LR		05 59 31.3		
	comp=Z,46nm,20.4s,baz=328,slow=39									
	comp=Z,3.5nm,0.8s									
TIXI	**Tiksi**	**50.31**	**21**	P		**P**		**05 36 32.9**	**-2.1**
TIXI				IAmb		IAmb		05 36 39.4		
	comp=Z,4.1nm,0.7s									
TIXI	**Tiksi**	**50.31**	**21**	*i* P		**P**		**05 36 36.7**	**+1.8**
TIXI				pmax		pmax				
	comp=Z,5.0nm,1.0s									
SSB	**Saint Sauveur**	**51.16**	**305**	P		**P**		**05 36 40.9**	**-0.9**
SSB				IAmb		IAmb		05 37 07.8		
	comp=Z,14nm,1.5s									
SSB	**Saint Sauveur**	**51.16**	**305**	P		**P**		**05 36 40.9**	**-0.9**
SSB				pmax		pmax				
	comp=Z,14nm,1.5s									
SPITS	**Spitsbergen Ar**	**51.54**	**348**	LR		LR		06 01 29.7		
	comp=Z,47nm,19.2s,baz=74,slow=39									
KBS	**Kingsbay**	**52.67**	**348**	*ce*	P	**P**		**05 36 54.8**	**+2.3**
KBS				pmax		pmax				
	comp=Z,24nm,1.7s									
JMIC	**Jan Mayen**	**56.17**	**337**	LR		LR		06 01 31.9		
	comp=Z,35nm,21.1s,baz=76,slow=36									
NOR	**Nord**	**57.94**	**350**	*i* P		**P**		**05 37 30.5**	**+0.1**
NOR				IAmb		IAmb		05 37 32.1		
	comp=Z,1.9nm,0.8s									
ESDC	**Sonseca Array**	**58.56**	**300**	P		**P**		**05 37 33.5**	**-2.0**
	comp=Z,1.1nm,0.6s,baz=60,slow=8.2,SNR=7.4									
ESDC				PcP		**PcP**		**05 38 25.1**	**-0.5**
	comp=Z,1.2nm,0.8s,baz=50,slow=2.8,SNR=5.7									
	comp=Z,1.1nm,0.6s									
MA2	**Magadan**	**58.59**	**36**	LR		LR		06 04 07.6		
	comp=Z,52nm,19.9s,baz=254,slow=37									
SEY	**Seymchan**	**58.76**	**32**	LR		LR		06 04 01.4		
	comp=Z,62nm,18.2s,baz=206,slow=37									
SEY	**Seymchan**	**58.76**	**32**	*ce*	P	**P**		**05 37 37.9**	**+1.5**
SEY				pmax		pmax				
	comp=Z,8.0nm,1.3s									
BORG	**Borgarnes**	**61.86**	**331**	LR		LR		06 05 40.8		
	comp=Z,57nm,20.2s,baz=75,slow=37									
PETK	**Petropavlovsk-**	**64.00**	**42**	LR		LR		06 07 16.8		
	comp=Z,55nm,19.6s,baz=263,slow=37									
TOA0	**Torodi Ar. Sit**	**64.48**	**270**	P		**P**		**05 38 13.7**	**-2.0**
TOA0				IAmb		IAmb		05 38 38.6		
	comp=Z,11nm,1.2s									
TORD	**Torodi Ar. Bea**	**64.48**	**270**	P		**P**		**05 38 13.8**	**-2.0**
	comp=Z,3.9nm,0.8s,baz=51,slow=5.7,SNR=20									
	comp=Z,3.9nm,0.8s									
TORD	**Torodi Ar. Bea**	**64.48**	**270**	P		**P**		**05 38 13.7**	**-2.0**
TORD				IAmb		IAmb		05 38 16.0		
	comp=Z,8.4nm,1.2s									
SUMG	**Summit**	**64.87**	**342**	P		**P**		**05 38 18.2**	**+0.4**
SUMG	**Summit**	**64.87**	**342**	P		**P**		**05 38 18.2**	**+0.4**
SUMG				pmax		pmax				
	comp=Z,12nm,0.8s									
SUMG	**Summit**	**64.87**	**342**	*i* P		**P**		**05 38 18.0**	**+0.2**
SUMG				IAmb		IAmb		05 38 19.7		
	comp=Z,6.6nm,0.7s									
ICESG	**Greenland Ices**	**66.87**	**338**	*i* P		**P**		**05 38 30.9**	**+0.3**
ICESG				IAmb		IAmb		05 38 33.7		
	comp=Z,5.8nm,0.8s									
EUNU	**Eureka**	**67.32**	**356**	P		**P**		**05 38 34.7**	**+1.6**
EUNU				IAmb		IAmb		05 38 35.2		
	comp=Z,5.3nm,0.9s									
DY2G	**Dye2**	**70.40**	**337**	*i* P		**P**		**05 38 52.4**	**-0.2**
DY2G				IAmb		IAmb		05 38 54.1		
	comp=Z,12nm,0.6s									
LBTB	**Lobatse**	**70.61**	**222**	P		**P**		**05 38 55.1**	**+1.0**
LBTB				IAmb		IAmb		05 38 55.4		
	comp=Z,8.5nm,1.1s									
LBTB	**Lobatse**	**70.61**	**222**	P		**P**		**05 38 55.2**	**+1.0**
LBTB				pmax		pmax				
	comp=Z,9.0nm,1.1s									
SFJD	**Kangerlussuaq**	**71.45**	**339**	LR		LR		06 10 16.7		
	comp=Z,48nm,19.4s,baz=24,slow=36									
DBIC	**Dimbokro**	**73.31**	**267**	P		**P**		**05 39 09.3**	**-1.3**
	comp=Z,5.1nm,0.9s,baz=88,slow=2.6,SNR=4.9									
	comp=Z,5.1nm,0.9s									
DBIC	**Dimbokro**	**73.31**	**267**	P		**P**		**05 39 09.6**	**-0.9**
DBIC				IAmb		IAmb		05 39 29.2		
	comp=Z,16nm,1.5s									
DBIC	**Dimbokro**	**73.31**	**267**	P		**P**		**05 39 09.6**	**-0.9**
DBIC				pmax		pmax				
	comp=Z,16nm,1.5s									
KIC	**Kosan Boka**	**73.37**	**267**	⇑*i*	P	**P**		**05 39 10.4**	**-0.6**
	comp=Z,9.9nm,0.7s									
TIC	**Toumodi**	**73.46**	**267**	⇑*i*	P	**P**		**05 39 10.1**	**-1.4**
	comp=Z,1.5nm,0.2s									
BOSA	**Boshof**	**73.61**	**220**	P		**P**		**05 39 11.4**	**-0.7**
	comp=Z,4.5nm,0.9s,baz=24,slow=3.6,SNR=6.1									
	comp=Z,4.5nm,0.9s									
BOSA	**Boshof**	**73.61**	**220**	P		**P**		**05 39 13.7**	**+1.6**
BOSA				IAmb		IAmb		05 39 26.4		
	comp=Z,15nm,1.4s									
BOSA	**Boshof**	**73.61**	**220**	P		**P**		**05 39 13.7**	**+1.6**
BOSA				pmax		pmax				
	comp=Z,15nm,1.4s									
LIC	**Lamto**	**73.68**	**267**	⇑*i*	P	**P**		**05 39 12.0**	**-0.8**
	comp=Z,6.3nm,0.6s									
C23K	**Itkillik River**	**74.29**	**13**	P		**P**		**05 39 15.0**	**-0.4**
	baz=325									
C24K	**Franklin Bluff**	**74.75**	**13**	P		**P**		**05 39 17.9**	**-0.2**
	baz=327									
D23K	**Nanushuk River**	**74.99**	**14**	P		**P**		**05 39 19.4**	**-0.1**
	baz=325									
D24K	**Happy Valley**	**75.21**	**13**	P		**P**		**05 39 20.8**	**0.0**
	baz=327									
TOLK	**Toolik Lake Re**	**75.49**	**14**	P		**P**		**05 39 22.0**	**-0.5**
TOLK	**Toolik Lake Re**	**75.49**	**14**	P		**P**		**05 39 22.3**	**-0.2**
	baz=326									
A36M	**Sachs Harbour**	**75.71**	**5**	P		**P**		**05 39 23.5**	**0.0**
A36M	**Sachs Harbour**	**75.71**	**5**	P		**P**		**05 39 23.7**	**+0.2**
	baz=347,SNR=10.0									
COLD	**Coldfoot**	**76.54**	**15**	P		**P**		**05 39 28.8**	**+0.4**
COLD	**Coldfoot**	**76.54**	**15**	P		**P**		**05 39 28.3**	**-0.1**
	baz=326									
IMAR	**Indian Mountai**	**76.74**	**17**	P		**P**		**05 39 28.8**	**-0.7**
GCSA	**Galena City Sc**	**76.91**	**19**	P		**P**		**05 39 30.3**	**-0.2**
	baz=321									
H21K	**Melozitna Rive**	**77.23**	**17**	P		**P**		**05 39 31.9**	**-0.5**
H21K				IAmb		IAmb		05 39 34.4		
	comp=Z,8.2nm,1.0s									
H21K	**Melozitna Rive**	**77.23**	**17**	P		**P**		**05 39 32.0**	**-0.3**
	baz=324,SNR=13									
H22K	**Ishtalitna Cre**	**77.38**	**16**	P		**P**		**05 39 33.0**	**-0.2**
	baz=325									
BMAR	**Burnt Mountain**	**77.51**	**13**	P		**P**		**05 39 32.5**	**-1.4**
I21K	**Tanana**	**77.82**	**17**	P		**P**		**05 39 35.6**	**0.0**
	baz=325									
H23K	**Yukon River**	**77.86**	**15**	P		**P**		**05 39 36.5**	**+0.6**
H23K				IAmb		IAmb		05 39 38.5		
	comp=Z,8.4nm,0.8s									
H23K	**Yukon River**	**77.86**	**15**	P		**P**		**05 39 35.8**	**-0.1**
	baz=327,SNR=11									
J20K	**Nowinta River**	**78.09**	**18**	P		**P**		**05 39 37.1**	**0.0**
J20K				IAmb		IAmb		05 39 39.4		
	comp=Z,5.8nm,0.8s									
J20K	**Nowinta River**	**78.09**	**18**	P		**P**		**05 39 37.1**	**0.0**
	baz=323,SNR=7.8									
H24K	**Noodor Dome**	**78.22**	**15**	P		**P**		**05 39 37.9**	**0.0**
H24K				IAmb		IAmb		05 39 40.4		
	comp=Z,5.0nm,0.8s									
H24K	**Noodor Dome**	**78.22**	**15**	P		**P**		**05 39 37.8**	**-0.1**
	baz=328,SNR=7.5									
MLY	**Manley**	**78.24**	**16**	P		**P**		**05 39 37.9**	**-0.1**
MLY				IAmb		IAmb		05 39 40.0		
	comp=Z,3.7nm,0.7s									
MLY	**Manley**	**78.24**	**16**	P		**P**		**05 39 37.6**	**-0.4**
	baz=326,SNR=7.7									
C36M	**Paulatuk**	**78.38**	**5**	P		**P**		**05 39 38.6**	**+0.1**
C36M	**Paulatuk**	**78.38**	**5**	P		**P**		**05 39 38.2**	**-0.4**
	baz=348,SNR=8.1									
INK	**Inuvik**	**78.45**	**9**	P		**P**		**05 39 38.6**	**-0.4**
INK	**Inuvik**	**78.45**	**9**	P		**P**		**05 39 38.6**	**-0.4**
INK				pmax		pmax				
	comp=Z,20nm,1.3s									
INK	**Inuvik**	**78.45**	**9**	P		**P**		**05 39 39.0**	**0.0**
	baz=340,SNR=13									
I23K	**Minto, Yukon-K**	**78.47**	**16**	P		**P**		**05 39 39.0**	**-0.1**
I23K				IAmb		IAmb		05 39 42.0		
	comp=Z,9.2nm,1.3s									
I23K	**Minto, Yukon-K**	**78.47**	**16**	P		**P**		**05 39 39.0**	**-0.1**
	baz=327,SNR=6.0									
K20K	**Telida**	**78.77**	**18**	P		**P**		**05 39 40.7**	**-0.2**
K20K				IAmb		IAmb		05 39 43.2		
	comp=Z,8.6nm,0.8s									
K20K	**Telida**	**78.77**	**18**	P		**P**		**05 39 40.3**	**-0.6**
	baz=323,SNR=10									
MDM	**Murphy Dome**	**78.89**	**15**	P		**P**		**05 39 41.8**	**+0.2**
POKR	**Poker Flat Res**	**78.93**	**15**	P		**P**		**05 39 42.0**	**+0.2**
POKR				IAmb		IAmb		05 39 44.1		
	comp=Z,7.8nm,0.8s									
POKR	**Poker Flat Res**	**78.93**	**15**	P		**P**		**05 39 41.4**	**-0.3**
	baz=329									
BPAW	**Bear Paw Mtn.**	**78.96**	**17**	P		**P**		**05 39 42.1**	**+0.1**
	baz=326									
NEA2	**Nenana**	**79.00**	**16**	P		**P**		**05 39 41.4**	**-0.7**
NEA2	**Nenana**	**79.00**	**16**	P		**P**		**05 39 41.6**	**-0.6**
	baz=327,SNR=19									
TCOL	**CIGO, UAF Yank**	**79.04**	**15**	P		**P**		**05 39 41.8**	**-0.5**
TCOL	**CIGO, UAF Yank**	**79.04**	**15**	P		**P**		**05 39 42.0**	**-0.4**
	baz=328									
COLA	**College**	**79.05**	**15**	P		**P**		**05 39 41.8**	**-0.5**
COLA	**College**	**79.05**	**15**	P		**P**		**05 39 41.8**	**-0.5**
COLA				pmax		pmax				
	comp=Z,11nm,0.9s									
COLA	**College**	**79.05**	**15**	P		**P**		**05 39 41.8**	**-0.5**
	baz=328									
WRH	**Wood River Hil**	**79.33**	**16**	P		**P**		**05 39 43.2**	**-0.7**
IL31		**79.35**	**15**	P		**P**		**05 39 42.1**	**-1.9**
ILAR	**Eielson Array**	**79.35**	**15**	P		**P**		**05 39 43.1**	**-0.9**
	comp=Z,3.3nm,1.0s,baz=326,slow=3.5,SNR=20									
	comp=Z,3.3nm,1.0s									
ILAR	**Eielson Array**	**79.35**	**15**	P		**P**		**05 39 42.8**	**-1.3**
L20K	**Farewell, AK**	**79.53**	**19**	P		**P**		**05 39 44.4**	**-0.7**
	baz=324									
HDA	**Harding Lake**	**79.65**	**15**	P		**P**		**05 39 45.2**	**-0.4**
	baz=329									
N16K	**Nishlik Lake**	**79.65**	**22**	P		**P**		**05 39 45.1**	**-0.7**
	baz=320									
I26K	**Coal Creek Min**	**79.66**	**13**	P		**P**		**05 39 45.3**	**-0.4**
I26K				IAmb		IAmb		05 39 47.9		
	comp=Z,4.2nm,0.8s									
I26K	**Coal Creek Min**	**79.66**	**13**	P		**P**		**05 39 45.2**	**-0.5**
	baz=332									
TRF	**Thorofare Moun**	**79.67**	**17**	P		**P**		**05 39 45.0**	**-1.0**
	baz=326									
MCK	**McKinley**	**79.77**	**16**	P		**P**		**05 39 46.0**	**-0.4**
MCK				IAmb		IAmb		05 39 50.8		
	comp=Z,5.7nm,0.9s									
MCK	**McKinley**	**79.77**	**16**	P		**P**		**05 39 46.0**	**-0.4**
MCK				pmax		pmax				
	comp=Z,6.0nm,0.9s									
MCK	**McKinley**	**79.77**	**16**	P		**P**		**05 39 45.5**	**-0.8**
	baz=328									
J25K	**Salcha River,**	**79.81**	**15**	P		**P**		**05 39 46.5**	**-0.2**
J25K	**Salcha River,**	**79.81**	**15**	P		**P**		**05 39 45.9**	**-0.8**
	baz=330,SNR=6.6									
EPYK	**Eagle Plains**	**79.81**	**10**	P		**P**		**05 39 46.3**	**-0.3**
EPYK				IAmb		IAmb		05 39 48.3		
	comp=Z,9.7nm,1.1s									
EPYK	**Eagle Plains**	**79.81**	**10**	P		**P**		**05 39 45.9**	**-0.7**
	baz=338									
M19K	**Big River Lodg**	**79.85**	**20**	P		**P**		**05 39 46.2**	**-0.6**
	baz=323									
J26L	**Joseph Creek**	**80.29**	**14**	P		**P**		**05 39 48.0**	**-1.2**
J26L				IAmb		IAmb		05 39 51.1		
	comp=Z,5.3nm,0.7s									
J26L	**Joseph Creek**	**80.29**	**14**	P		**P**		**05 39 48.6**	**-0.7**
	baz=332,SNR=9.9									
K24K	**Donnelly Dome**	**80.43**	**15**	P		**P**		**05 39 49.2**	**-0.8**
	baz=330,SNR=5.5									
I29M	**Ogilvie Camp,**	**80.49**	**11**	P		**P**		**05 39 48.7**	**-1.6**
I29M				IAmb		IAmb		05 39 52.5		
	comp=Z,4.8nm,0.9s									
I29M	**Ogilvie Camp,**	**80.49**	**11**	P		**P**		**05 39 50.0**	**-0.2**
	baz=336									
O16K	**Kokwok River B**	**80.55**	**22**	P		**P**		**05 39 50.3**	**-0.3**
	baz=321									
SKT	**Skwentna**	**80.58**	**18**	P		**P**		**05 39 50.2**	**-0.5**
SKT				IAmb		IAmb		05 39 52.3		
	comp=Z,11nm,1.0s									
SKT	**Skwentna**	**80.58**	**18**	P		**P**		**05 39 50.0**	**-0.7**
	baz=326									
WAT1	**Susitna Watana**	**80.62**	**17**	P		**P**		**05 39 50.5**	**-0.5**
	baz=328									
SCRK	**Sand Creek**	**80.66**	**14**	P		**P**		**05 39 51.0**	**-0.3**
SCRK	**Sand Creek**	**80.66**	**14**	P		**P**		**05 39 50.8**	**-0.5**
	baz=332									
RIDG	**Independent Ri**	**80.69**	**15**	P		**P**		**05 39 51.0**	**-0.4**
	baz=331									
DHY	**Denali Highway**	**80.69**	**16**	P		**P**		**05 39 51.0**	**-0.6**
	baz=329									
WRA	**Warramunga Arr**	**80.71**	**120**	P		**P**		**05 39 51.5**	**-0.5**
	comp=Z,2.5nm,0.9s,baz=321,slow=5.1,SNR=17									
	comp=Z,2.5nm,0.9s									
WRAB	**Tennant Creek**	**80.72**	**120**	*ce*	P	**P**		**05 39 51.5**	**-0.6**
WRAB				pmax		pmax				
	comp=Z,9.0nm,1.7s									
DOT	**Dot Lake**	**80.94**	**14**	P		**P**		**05 39 52.8**	**+0.1**
K27K	**Chicken**	**81.01**	**14**	P		**P**		**05 39 52.5**	**-0.5**
	baz=333									
WAT6	**Susitna Watana**	**81.03**	**17**	P		**P**		**05 39 52.8**	**-0.5**
	baz=329									
PAX	**Paxson**	**81.23**	**15**	P		**P**		**05 39 53.6**	**-0.7**
	baz=330									
O18K	**Koktuh Hills**	**81.25**	**21**	P		**P**		**05 39 53.7**	**-0.6**
	baz=323									
DAWY	**Dawson**	**81.49**	**12**	P		**P**		**05 39 55.2**	**-0.4**
DAWY	**Dawson**	**81.49**	**12**	P		**P**		**05 39 54.9**	**-0.7**
	baz=335,SNR=7.6									
PMR	**Palmer**	**81.53**	**18**	P		**P**		**05 39 55.2**	**-0.5**
	baz=328									
SML	**Sawmill**	**81.55**	**17**	P		**P**		**05 39 55.7**	**-0.2**
SML	**Sawmill**	**81.55**	**17**	P		**P**		**05 39 55.3**	**-0.6**
	baz=328									
CAPN	**Captain Cook N**	**81.68**	**19**	P		**P**		**05 39 55.8**	**-0.7**
	baz=326									
M23K	**Glacier View**	**81.71**	**17**	P		**P**		**05 39 56.3**	**-0.5**
	baz=329									
SCM	**Sheep Creek Mo**	**81.78**	**17**	P		**P**		**05 39 56.5**	**-0.7**
	baz=329									
M24K	**Tolsona, Glenn**	**81.81**	**16**	P		**P**		**05 39 56.9**	**-0.5**
	baz=330									
KNK	**Knik Glacier**	**81.85**	**17**	P		**P**		**05 39 57.4**	**-0.1**
	baz=328									
L27K	**Beaver Creek,**	**81.93**	**14**	P		**P**		**05 39 57.8**	**-0.1**
L27K	**Beaver Creek,**	**81.93**	**14**	P		**P**		**05 39 57.9**	**-0.1**
	baz=334									
BCAR	**Beaver Creek A**	**81.93**	**14**	P		**P**		**05 39 57.7**	**-0.3**
KLU	**Klutina**	**82.41**	**16**	P		**P**		**05 40 00.4**	**-0.2**
	baz=330									
M27K	**Edge Creek, AK**	**82.55**	**14**	P		**P**		**05 40 02.5**	**+1.2**
M27K				IAmb		IAmb		05 40 04.1		
	comp=Z,6.4nm,1.0s									
M27K	**Edge Creek, AK**	**82.55**	**14**	P		**P**		**05 40 01.2**	**-0.1**
	baz=334									
BVCY	**Beaver Creek**	**82.70**	**14**	P		**P**		**05 40 02.2**	**+0.2**
	baz=334									
ASAR	**Alice Springs**	**82.74**	**124**	P		**P**		**05 40 01.9**	**-0.8**
	comp=Z,1.2nm,0.8s,baz=320,slow=5.0,SNR=8.7									
	comp=Z,1.2nm,0.8s									
ASAR	**Alice Springs**	**82.74**	**124**	P		**P**		**05 40 02.8**	**0.0**
ASAR	**Alice Springs**	**82.74**	**124**	P		**P**		**05 40 02.8**	**0.0**
M30M	**Minto, Yukon**	**83.33**	**12**	P		**P**		**05 40 05.5**	**+0.3**
	baz=338									
CRQE	**Cirque**	**83.72**	**15**	P		**P**		**05 40 07.2**	**-0.2**
	baz=333									
KDAK	**Kodiak Island**	**83.73**	**21**	LR		LR		06 21 44.8		
	comp=Z,109nm,18.3s,baz=156,slow=39									
M31M	**Drury Creek, Y**	**84.08**	**11**	P		**P**		**05 40 08.6**	**-0.5**
M31M				IAmb		IAmb		05 40 12.3		
	comp=Z,5.0nm,1.1s									
M31M	**Drury Creek, Y**	**84.08**	**11**	P		**P**		**05 40 08.9**	**-0.2**
	baz=340									
BGLC	**Bering Glacier**	**84.24**	**16**	P		**P**		**05 40 10.1**	**+0.3**
	baz=332									
HYT	**Haines Junctio**	**84.82**	**13**	P		**P**		**05 40 13.2**	**+0.2**
	baz=337									
O30N	**Mendenhall**	**85.13**	**12**	P		**P**		**05 40 14.8**	**+0.4**
	baz=338									
PNL	**Peninsula**	**85.50**	**14**	P		**P**		**05 40 16.7**	**+0.4**
	baz=336									
P30M	**Million Dollar**	**85.57**	**13**	P		**P**		**05 40 16.6**	**-0.1**
	baz=338									
SCHQ	**Schefferville**	**85.68**	**336**	LR		LR		06 22 00.4		
	comp=Z,39nm,18.8s,baz=332,slow=38									
YKA	**Yellowknife Ar**	**85.70**	**2**	P		**P**		**05 40 17.2**	**0.0**
	comp=Z,5.4nm,0.8s,baz=352,slow=5.4,SNR=52									
	comp=Z,5.4nm,0.8s									
YKA	**Yellowknife Ar**	**85.70**	**2**	P		**P**		**05 40 16.7**	**-0.5**
YKA	**Yellowknife Ar**	**85.70**	**2**	*i* P		**P**		**05 40 16.8**	**-0.3**
YKA				pmax		pmax				
	comp=Z,6.0nm,0.8s									
P33M	**Teslin, Yukon**	**86.22**	**11**	P		**P**		**05 40 18.9**	**-1.0**
P33M				IAmb		IAmb		05 40 21.5		
	comp=Z,4.5nm,0.8s									
P33M	**Teslin, Yukon**	**86.22**	**11**	P		**P**		**05 40 19.5**	**-0.4**
	baz=341									
FCC	**Fort Churchill**	**88.48**	**352**	P		**P**		**05 40 30.2**	**-0.4**
FCC	**Fort Churchill**	**88.48**	**352**	P		**P**		**05 40 30.3**	**-0.4**
FCC				pmax		pmax				
	comp=Z,8.0nm,1.1s									
CPUP	**Villa Florida**	**133.68**	**263**	PKP		**PKPdf**		**05 46 53.9**	**-1.6**
	comp=Z,1.3nm,0.7s,baz=14,slow=5.1,SNR=3.6									
PLCA	**Paso Flores**	**147.00**	**243**	PKPbc		**PKPdf**		**05 47 20.8**	**+1.6**
	comp=Z,4.0nm,0.9s,baz=126,slow=5.3,SNR=10									

KRNET ***27*** *05:45:18.4±0.1,39˚.49N×73˚.87E,mb4.4*
SOME ***27*** *05:45:18.1,39˚.35N×73˚.68E,h15km*
IDC ***27*** *05:45:19.1±0.8,39˚.28N×73˚.56E,h0km,mb3.9/16, mbtmp3.9/22,ML3.4/7,MS3.0/7, Error ellipse: s-maj=16.4km s-min=13.5km az=153.0*
BJI ***27*** *05:45:22.0±0.0,39˚.50N×73˚.50E,h10km,mb4.2/10, mB4.5/5,ML3.8/5,Ms3.7/5,Ms7 3.4/4*
NEIC ***27*** *05:45:24±1.6,39˚.51N±0˚.07×73˚.48E±0˚.08,h10km±1km, mb4.4/16, Error ellipse: s-maj=12.9km s-min=8.6km az=141.0*
NNC ***27*** *05:45:24.6±1.0,39˚.65N×73˚.60E,h0km,mb4.7,mpv4.4, Error ellipse: s-maj=8.4km s-min=4.6km az=167.0*

ISC 27 05:45:21.2±0.5,39˚.50N±0˚.03×73˚.64E±0˚.02,h10km,n145, σ2ˢ44/169,mb4.0/21,MS3.1/3,31C-19D,
Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.22**	**328**	⇑*i*	P		**Pn**	**05 45 43.5**	**-0.8**
	baz=22								
OHH				⇑*i*	S		**Sn**	**05 46 02.0**	**+1.1**
	baz=22								
DRK	**Karamyk**	**1.43**	**270**	⇑*e*	P		**Pg**	**05 45 48.3**	**-0.2**
	baz=71								
DRK				⇑*i*	S		**Sg**	**05 46 10.5**	**+3.4**
	baz=71								
DRK	**Karamyk**	**1.43**	**270**		Pn		**Pn**	**05 45 46.2**	**-1.2**
KSH	**Kashi**	**1.80**	**89**		Pg		**Pn**	**05 45 48.8**	**-3.6**
KSH					Sg		**Sn**	**05 46 09.5**	**-5.9**
KSH					smax	smax			
	comp=N,2μm,0.8s								
KSH					smax	smax			
	comp=E,2μm,0.6s								
BTK	**Batken**	**2.25**	**285**	⇑*e*	P		**Pb**	**05 46 01.1**	**-0.8**
	baz=85								
BTK				⇑*i*	S		**Sg**	**05 46 32.5**	**-0.8**
	baz=85								
BTK	**Batken**	**2.25**	**285**		Pn		**Pb**	**05 46 00.6**	**-1.3**
ARLS	**Aral**	**2.42**	**12**	⇑*e*	P		**Pn**	**05 46 00.8**	**-0.1**
	baz=8.0								
ARLS				⇑*i*	S		**Sn**	**05 46 31.9**	**+1.3**
	baz=8.0								
GAR	**Garm**	**2.63**	**260**	⇑*e*	P		**Pb**	**05 46 06.5**	**-1.9**
	baz=61								
GAR				⇑*i*	S		**Sg**	**05 46 41.7**	**-3.9**
	baz=61								
GAR	**Garm**	**2.63**	**260**				**Pb**	**05 46 05.9**	**-2.5**
AML	**Almayashu**	**2.63**	**1**	P			**Pb**	**05 46 08.7**	**0.0**
	SNR=21								
TRKS	**Terek-Say**	**2.78**	**318**	⇓	P		**Pn**	**05 46 07.2**	**+1.2**
	baz=15								
TRKS				⇓*i*	S		**Sb**	**05 46 42.9**	**-2.4**
	baz=15								
UCH	**Uchtor**	**2.81**	**13**	P			**Pb**	**05 46 10.2**	**-1.4**
	SNR=218								
UCH	**Uchtor**	**2.81**	**13**	⇓	P		**Pn**	**05 46 06.4**	**-0.1**
	baz=10.0								
UCH				⇓*i*	S		**Sn**	**05 46 41.6**	**+1.0**
	baz=10.0								
EKS2	**Erkin-Say**	**3.16**	**2**	P			**Pb**	**05 46 15.0**	**-2.5**
	SNR=29								
EKS2	**Erkin-Say**	**3.16**	**2**	⇓*e*	P		**Pn**	**05 46 11.6**	**+0.5**
	baz=59								
EKS2				⇓*i*	S		**Sn**	**05 46 50.7**	**+1.8**
	baz=59								
AAK	**Ala-Archa**	**3.20**	**11**

MTBS	**Maitube**	**4.19**	**29**	Pg	**Pb**	**05 46 37.7**	**+2.7**
	105nm,0.7s						
MTBS				Lg	Lg	05 47 33.2	
	84nm,0.8s						
KK31	**Karatay Array**	**4.30**	**328**		**Pn**	**05 46 29.5**	**+2.8**
KK31	**Karatay Array**	**4.30**	**328**	⇑Pn	**Pn**	**05 46 29.7**	**+3.0**
	3.1nm,0.2s,baz=130,slow=13,SNR=60						
KK31				⇑Pg	**Pg**	**05 46 40.4**	**-3.2**
	15nm,0.4s,baz=149,slow=14,SNR=15						
KK31				⇓Lg	Lg	05 47 34.1	
	146nm,0.8s,baz=152,slow=29,SNR=5.1						
KKAR	**Karatay Array**	**4.30**	**328**		**Pn**	**05 46 28.8**	**+2.1**
KKAR	**Karatay Array**	**4.30**	**328**		**Pn**	**05 46 29.1**	**+2.4**
TNSS	**Tian-Shan**	**4.32**	**34**	*eP*	**Pb**	**05 46 39.7**	**+2.2**
	85nm,0.2s						
TNSS				*eS*	**Sg**	**05 47 38.9**	**-1.1**
	48nm,0.2s						
TNSS	**Tian-Shan**	**4.32**	**34**	Pg	**Pg**	**05 46 40.9**	**-3.1**
	85nm,0.6s						
TNSS				Lg	Lg	05 47 38.9	
	46nm,0.8s						
AAA	**Alma-Ata**	**4.45**	**33**	*eP*	**Pb**	**05 46 42.8**	**+3.4**
	165nm,0.1s						
AAA				*eS*	**Sg**	**05 47 44.4**	**+0.4**
	58nm,0.5s						
AAA	**Alma-Ata**	**4.45**	**33**	Pg	**Pg**	**05 46 43.2**	**-3.2**
	161nm,0.3s						
AAA				Lg	Lg	05 47 43.1	
	141nm,0.8s						
KRBS	**Karabastau**	**4.46**	**19**	*eP*	**Pb**	**05 46 41.2**	**+1.6**
	54nm,0.2s						
KRBS				*eS*	**Sg**	**05 47 42.1**	**-2.3**
	60nm,0.2s						
KRBS	**Karabastau**	**4.46**	**19**	Pg	**Pg**	**05 46 43.0**	**-3.6**
	54nm,0.7s						
KRBS				Lg	Lg	05 47 42.8	
	46nm,0.7s						
ANVS	**Anan'yevo**	**4.47**	**42**	⇑*eP*	**Pn**	**05 46 28.6**	**-0.6**
	baz=40						
ANVS				⇑*iS*	**Sn**	**05 47 19.3**	**-2.1**
	baz=40						
KNDC	**Almaty**	**4.48**	**33**	⇓Pn	Pn	05 46 34.2	+5.0
	183nm,0.6s						
KNDC				⇑Lg	Lg	05 47 44.2	
	575nm,0.9s						
BRLS	**Borolday**	**4.55**	**322**	*eP*	**Pb**	**05 46 41.1**	**+0.1**
	7.8nm,0.1s						
BRLS				*eS*	**Sg**	**05 47 42.2**	**-4.9**
	156nm,0.1s						
BRLS	**Borolday**	**4.55**	**322**	Pg	**Pb**	**05 46 42.5**	**+1.4**
	8.4nm,0.6s						
BRLS				Lg	Lg	05 47 42.2	
	158nm,0.5s						
PRZ	**Przheval'sk**	**4.67**	**49**	Pn	**Pn**	**05 46 35.6**	**+3.6**
KTBS	**Karatobe**	**4.79**	**27**	*eP*	**Pb**	**05 46 47.9**	**+2.7**
	58nm,0.2s						
KTBS				*eS*	**Sg**	**05 47 52.8**	**-2.0**
	139nm,0.2s						
KTBS	**Karatobe**	**4.79**	**27**	Pg	**Pb**	**05 46 48.7**	**+3.6**
	63nm,0.9s						
KTBS				Lg	Lg	05 47 52.8	
	140nm,0.8s						
KUU	**Kurty**	**4.83**	**24**	*eP*	**Pb**	**05 46 48.3**	**+2.4**
	44nm,0.3s						
KUU				*eS*	**Sg**	**05 47 53.4**	**-2.9**
	60nm,0.2s						
KUU	**Kurty**	**4.83**	**24**	Pg	**Pb**	**05 46 49.3**	**+3.4**
	44nm,1.2s						
KUU				Lg	Lg	05 47 53.4	
	60nm,0.7s						
CHKK	**Chushkaly**	**5.02**	**29**	*eP*	**Pb**	**05 46 52.1**	**+3.0**
	30nm,0.2s						
CHKK				*eS*	**Sg**	**05 47 59.5**	**-2.8**
	47nm,0.1s						
CHKK	**Chushkaly**	**5.02**	**29**	Pg	**Pb**	**05 46 52.9**	**+3.7**
	29nm,0.4s						
CHKK				Lg	Lg	05 47 59.5	
	52nm,0.7s						
SATY	**Saty**	**5.05**	**44**	*eP*	**Pb**	**05 46 52.9**	**+3.1**
	24nm,0.2s						
SATY				*eS*	**Sg**	**05 48 01.4**	**-2.0**
	70nm,0.4s						
SATY	**Saty**	**5.05**	**44**	Pg	**Pb**	**05 46 53.9**	**+4.2**
	26nm,0.5s						
SATY				Lg	Lg	05 48 01.4	
	71nm,1.6s						
KURS	**Kuram**	**5.24**	**39**	*eP*	**Pb**	**05 46 56.4**	**+3.5**
	31nm,0.2s						
KURS				*eS*	**Sg**	**05 48 07.4**	**-1.9**
	61nm,0.5s						
KURS	**Kuram**	**5.24**	**39**	Pg	**Pg**	**05 46 57.3**	**-4.1**
	28nm,0.5s						
KURS				Lg	Lg	05 48 07.4	
	61nm,1.2s						
KPKS	**Kokpek**	**5.48**	**42**	*eP*	**Pb**	**05 47 01.2**	**+4.2**
	28nm,0.1s						
KPKS				*eS*	**Sg**	**05 48 15.9**	**-1.2**
	59nm,0.2s						
BTLS	**Baital**	**5.55**	**3**	*eP*	Pg	05 47 02.5	-4.8
	11nm,0.2s						
BTLS				*eS*	**Sg**	**05 48 17.7**	**-1.5**
	31nm,0.4s						
BTLS	**Baital**	**5.55**	**3**	Pg	**Pg**	**05 47 03.5**	**-3.8**
	15nm,0.9s						
BTLS				Lg	Lg	05 48 17.7	
	4.7nm,0.4s						
ARXS	**Arharly**	**5.65**	**32**	*eP*	**Pb**	**05 47 04.3**	**+4.4**
	60nm,0.1s						
ARXS				*eS*	**Sg**	**05 48 19.9**	**-2.7**
	62nm,0.1s						
ARXS	**Arharly**	**5.65**	**32**	Pg	**Pb**	**05 47 04.6**	**+4.7**
	51nm,1.0s						
ARXS				Lg	Lg	05 48 19.9	
	62nm,0.7s						
PDGK	**Podgornoye**	**5.83**	**47**	Pg	Pb	05 47 08.1	+5.2
	11nm,0.7s						
PDGK				Lg	Lg	05 48 25.9	
	25nm,1.1s						
PDGK	**Podgornoye**	**5.83**	**47**	⇓Pn	**Pn**	**05 46 50.8**	**+3.1**
	9.9nm,0.6s						
PDGK				⇓Pg	Pb	05 47 08.1	+5.2
	26nm,0.7s						
PDGK				⇑Lg	Lg	05 48 27.2	
	131nm,1.3s						
BLB	**Baldybastay**	**5.84**	**37**	*eP*	**Pb**	**05 47 08.0**	**+4.8**
	96nm,0.1s						
BLB				*eS*	**Sg**	**05 48 26.9**	**-1.8**
	70nm,0.2s						
BLB	**Baldybastay**	**5.84**	**37**	Pg	**Pg**	**05 47 08.7**	**-4.3**
	96nm,0.7s						
BLB				Lg	Lg	05 48 26.9	
	70nm,1.1s						
KBL	**Kabul**	**6.17**	**218**		**Pn**	**05 46 54.2**	**+1.7**
TDK	**Taldyqorghan**	**6.54**	**31**	*eP*	Pg	05 47 21.5	-4.8
	88nm,0.1s						
TDK				*eS*	**Sg**	**05 48 49.7**	**-1.2**
	98nm,0.0s						
TDK	**Taldyqorghan**	**6.54**	**31**	Pg	**Pg**	**05 47 22.2**	**-4.1**
	89nm,0.2s						
TDK				Lg	Lg	05 48 49.7	
	144nm,1.5s						
DJR	**Jarkent**	**6.66**	**42**	*eP*	Pg	05 47 23.4	-5.2
	7.5nm,0.1s						
DJR				*eS*	**Sg**	**05 48 53.6**	**-1.2**
	16nm,0.8s						
OTUK	**Ortayu**	**8.79**	**354**	⇑Pn	**Pn**	**05 47 30.2**	**+1.9**
	7.5nm,0.8s						
OTUK				⇑Lg	Lg	05 49 55.9	
	51nm,0.9s						
MAKZ	**Makanchi**	**9.51**	**37**	Pn	**Pn**	**05 47 41.9**	**+3.9**
MAKZ	**Makanchi**	**9.51**	**37**	⇑Pn	**Pn**	**05 47 42.6**	**+4.5**
	1.9nm,0.7s						
MAKZ				⇓Lg	Lg	05 50 24.6	
	11nm,1.1s						
MK31	**Makanchi Array**	**9.64**	**38**	Pn	**Pn**	**05 47 43.7**	**+3.7**
MK31	**Makanchi Array**	**9.64**	**38**	⇑Pn	**Pn**	**05 47 43.5**	**+3.5**
	3.1nm,0.7s,baz=224,slow=15,SNR=7.8						
MK31				⇓Lg	Lg	05 50 32.5	
	7.1nm,0.8s						
MKAR	**Makanchi Array**	**9.64**	**38**	Pn	Pn	05 47 45.2	+5.3
	0.1nm,0.3s,baz=223,slow=15,SNR=6.9						
	1.7nm,0.9s						
MKAR	**Makanchi Array**	**9.64**	**38**	Pn	**Pn**	**05 47 43.8**	**+3.8**
WMQ	**Urumqi**	**11.36**	**63**	*eP*	**Pn**	**05 48 07.3**	**+3.7**
KURBB	**Kurchatov Arra**	**11.64**	**16**	Pn	**Pn**	**05 48 08.3**	**+1.0**
	baz=202,slow=30,SNR=2.3						
KURBB				Lg	Lg	05 51 27.0	
	0.1nm,0.3s,baz=204,slow=28,SNR=6.1						
	0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**11.64**	**16**	⇑Lg	Lg	05 51 32.0	
	32nm,0.9s						
KURK	**Kurchatov**	**11.75**	**16**		**Pn**	**05 48 08.3**	**-0.4**
KURK	**Kurchatov**	**11.75**	**16**	⇓Lg	Lg	05 51 33.1	
	26nm,1.2s						
GEYT	**Alibeck**	**12.23**	**268**	Pn	**Pn**	**05 48 13.3**	**-2.1**
	1.2nm,0.3s,baz=63,slow=13,SNR=1.9						
GEYT				LR	LR	05 54 21.4	
	comp=Z,29nm,19.9s,baz=212,slow=45						
	3.5nm,0.4s						
AB31	**Akbulak array**	**13.80**	**319**	⇓Pn	**Pn**	**05 48 35.8**	**-1.0**
	1.6nm,0.5s,baz=128,slow=13,SNR=44						
ABKAR	**Akbulak array**	**13.80**	**319**	Pn	**Pn**	**05 48 36.1**	**-0.6**
AKTO	**Aktyubinsk**	**15.52**	**320**	Pn	**Pn**	**05 48 59.6**	**-0.3**
	0.6nm,0.3s,baz=135,slow=13,SNR=9.9						
AKTO				LR	LR	05 55 30.4	
	comp=Z,57nm,20.5s,baz=128,slow=39						
	5.2nm,0.6s						
AKTO	**Aktyubinsk**	**15.52**	**320**	⇑Pn	**Pn**	**05 48 59.2**	**-0.7**
	8.0nm,0.7s						
ZAA0	**Zalesovo Array**	**16.33**	**24**	Pn	**P**	**05 49 13.7**	**+0.4**
ZALV	**Zalesovo Beam**	**16.33**	**24**	Pn	**Pn**	**05 49 11.4**	**+1.0**
	0.4nm,0.3s,baz=210,slow=10,SNR=9.5						
ZALV				LR	LR	05 54 53.1	
	comp=Z,23nm,18.4s,baz=330,slow=35						
	2.4nm,0.6s						
ZALV	**Zalesovo Beam**	**16.33**	**24**	Pn	**P**	**05 49 13.0**	**-0.3**
GOMU	**GeErMu**	**17.04**	**94**	P	P	05 49 34.0	+12
GOMU				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ARU	**Arti**	**19.64**	**335**	P	**Pn**	**05 49 51.0**	**-0.2**
	baz=149,slow=4.5,SNR=12						
ARU	**Arti**	**19.64**	**335**	P	**Pn**	**05 49 52.0**	**+0.8**
BELG	**Belogornoye**	**22.07**	**314**	P	**P**	**05 50 15.9**	**-0.1**
	comp=Z,23nm,0.9s,baz=327,slow=2.1,SNR=4.0						
BELG				LR	LR	05 59 47.3	
	comp=Z,45nm,19.8s,baz=142,slow=39						
	comp=Z,23nm,0.9s						
GNI	**Garni**	**22.17**	**281**	P	**P**	**05 50 18.5**	**+1.1**
	comp=Z,14nm,0.9s,baz=358,slow=3.4,SNR=3.9						
	comp=Z,14nm,0.9s						
GNI	**Garni**	**22.17**	**281**	IAmb	IAmb	05 50 24.2	
	comp=Z,13nm,0.8s						
ONI	**Oni**	**22.92**	**288**	P	**P**	**05 50 26.4**	**+1.1**
KBZ	**Khabaz**	**23.30**	**290**	P	**P**	**05 50 28.7**	**-0.3**
	comp=Z,1.4nm,0.6s,baz=101,slow=5.2,SNR=2.1						
	comp=Z,1.4nm,0.6s						
SONM	**Songino Array**	**24.97**	**60**	P	**P**	**05 50 49.6**	**+4.8**
	comp=Z,1.7nm,0.7s,baz=279,slow=10,SNR=3.5						
SONM	**Songino Array**	**24.97**	**60**	P	**P**	**05 50 49.0**	**+4.2**
HHC	**Hu-ho-hao-te**	**28.86**	**75**	*eP*	P	05 51 26.8	+6.9
HHC				pmax	pmax		
	comp=Z,17nm,0.9s						
HHC				pmax	pmax		
	comp=Z,120nm,6.9s						
BR131	**Keskin Array S**	**30.64**	**283**	P	**P**	**05 51 36.7**	**+0.9**
BR131				IAmb	IAmb	05 51 37.3	
	comp=Z,4.3nm,0.8s						
BRTR	**Keskin Array B**	**30.64**	**283**	P	**P**	**05 51 36.0**	**+0.2**
	comp=Z,2.1nm,0.9s,baz=86,slow=7.8,SNR=6.9						
	comp=Z,2.1nm,0.9s						
BRTR	**Keskin Array B**	**30.64**	**283**	P	**P**	**05 51 36.5**	**+0.7**
AKASG	**Malin Array Be**	**32.82**	**305**	P	**P**	**05 51 54.6**	**0.0**
	comp=Z,0.7nm,0.4s,baz=79,slow=7.4,SNR=7.6						
AKASG				LR	LR	06 06 58.7	
	comp=Z,37nm,18.3s,baz=51,slow=40						
	comp=Z,0.7nm,0.4s						
MLR	**Muntele Rosu**	**35.25**	**296**	P	**P**	**05 52 17.3**	**+1.3**
MLR				IAmb	IAmb	05 52 28.7	
	comp=Z,5.1nm,1.0s						
FINES	**FINESS Array B**	**36.25**	**323**	P	**P**	**05 52 24.6**	**+0.5**
	comp=Z,1.2nm,0.5s,baz=109,slow=9.4,SNR=9.0						
	comp=Z,1.2nm,0.5s						
FINES	**FINESS Array B**	**36.25**	**323**	P	**P**	**05 52 24.5**	**+0.4**
ARCES	**ARCESS Array B**	**39.23**	**336**	P	**P**	**05 52 49.4**	**+0.2**
	comp=Z,0.9nm,0.5s,baz=108,slow=7.8,SNR=12						
	comp=Z,0.9nm,0.5s						
ARCES	**ARCESS Array B**	**39.23**	**336**	P	**P**	**05 52 49.7**	**+0.5**
ARCES				IAmb	IAmb	05 52 56.5	
	comp=Z,10nm,1.4s						
VRAC	**Vranov**	**41.02**	**303**	LR	LR	06 11 37.8	
	comp=Z,29nm,18.7s,baz=63,slow=38						
GERES	**GERESS Array B**	**42.98**	**303**	P	**P**	**05 53 21.3**	**+0.9**
	comp=Z,0.5nm,0.5s,baz=71,slow=10.0,SNR=5.1						
	comp=Z,0.5nm,0.5s						
GERES	**GERESS Array B**	**42.98**	**303**	P	**P**	**05 53 21.9**	**+1.5**
CLL	**Collm**	**43.01**	**307**	*i* P	**P**	**05 53 21.3**	**+0.8**
NC405	**NORSAR Array S**	**43.06**	**321**	P	**P**	**05 53 21.5**	**+0.7**
NC303	**NORSAR Array S**	**43.23**	**321**	P	**P**	**05 53 23.2**	**+1.0**
NC303				IAmb	IAmb	05 53 23.4	
	comp=Z,7.1nm,0.7s						
NB201	**NORSAR Array S**	**43.27**	**321**	P	**P**	**05 53 23.1**	**+0.6**
NB2	**NORSAR Subarra**	**43.30**	**321**	P	**P**	**05 53 22.5**	**-0.3**
	comp=Z,1.7nm,0.5s,baz=91,slow=7.9						
NOA	**NORSAR Array B**	**43.30**	**321**	P	**P**	**05 53 22.8**	**0.0**
	comp=Z,2.1nm,0.5s,baz=91,slow=7.9,SNR=13						
	comp=Z,2.1nm,0.5s						
NC204	**NORSAR Array S**	**43.52**	**321**	P	**P**	**05 53 25.1**	**+0.4**
ESDC	**Sonseca Array**	**57.92**	**297**	P	**P**	**05 55 12.8**	**-0.7**
	comp=Z,0.6nm,0.6s,baz=46,slow=6.2,SNR=5.2						
	comp=Z,0.6nm,0.6s						
TOA0	**Torodi Ar. Sit**	**67.87**	**269**	P	**P**	**05 56 19.0**	**-1.0**
TOA0				IAmb	IAmb	05 56 19.9	
	comp=Z,3.8nm,1.1s						
TORD	**Torodi Ar. Bea**	**67.87**	**269**	P	**P**	**05 56 18.6**	**-1.3**
	comp=Z,0.8nm,0.4s,baz=54,slow=5.9,SNR=14						
	comp=Z,0.8nm,0.4s						
TORD	**Torodi Ar. Bea**	**67.87**	**269**	P	**P**	**05 56 18.9**	**-1.1**
TORD				IAmb	IAmb	05 56 19.9	
	comp=Z,2.4nm,1.1s						
IMAR	**Indian Mountai**	**68.68**	**19**	P	**P**	**05 56 27.6**	**+3.3**
BMAR	**Burnt Mountain**	**69.53**	**15**	P	**P**	**05 56 32.5**	**+2.9**
INK	**Inuvik**	**70.60**	**10**	P	**P**	**05 56 37.3**	**+1.2**
	comp=Z,0.9nm,0.6s,baz=360,slow=5.5,SNR=3.0						
	comp=Z,0.9nm,0.6s						
INK	**Inuvik**	**70.60**	**10**	P	**P**	**05 56 37.7**	**+1.6**
INK				IAmb	IAmb	05 57 00.8	
	comp=Z,4.3nm,1.4s						
ILAR	**Eielson Array**	**71.32**	**17**	P	**P**	**05 56 43.2**	**+2.7**
	comp=Z,0.4nm,1.0s,baz=328,slow=3.4,SNR=2.7						
	comp=Z,0.4nm,1.0s						
YKA	**Yellowknife Ar**	**78.14**	**4**	P	**P**	**05 57 20.2**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=350,slow=5.4,SNR=7.3						
	comp=Z,0.2nm,0.5s						
WRA	**Warramunga Arr**	**81.87**	**124**	P	**P**	**05 57 39.9**	**-1.0**
	comp=Z,0.5nm,0.5s,baz=328,slow=5.2,SNR=9.0						
	comp=Z,0.5nm,0.5s						
ASAR	**Alice Springs**	**84.32**	**127**	P	**P**	**05 57 52.3**	**-1.1**
	comp=Z,0.3nm,0.5s,baz=318,slow=5.0,SNR=4.1						
	comp=Z,0.3nm,0.5s						
VNDA	**Vanda**	**127.81**	**164**	PKP	**PKPdf**	**06 04 24.7**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=116,slow=2.9,SNR=5.6						

MAN 27 05:57:52.7, 8.59N×125.25E, h1km, mb3.8, ML2.5, MS2.0, Mindanao

*NNC **27** 06:03:20.2±2.1,54.09N×87.40E,h0km,mb3.0,mpv2.8, Error ellipse: s-maj=16.2km s-min=9.3km az=30.0, Suspected Mining explosion.*
*IDC **27** 06:03:22.5±2.7,54.20N×87.24E,h0km,mbtmp3.0/2, ML2.9/2, Error ellipse: s-maj=22.5km s-min=16.3km az=59.0*

ISC 27 06:03:21.1±3.8,54.2N×87.3E±0.1,h0km,n9,σ1s81/12, 6C-5D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.48**	**261**	*i*			06 12 25.0	
	baz=81,slow=311,SNR=7.1							
ZAA0	**Zalesovo Array**	**1.48**	**261**	⇓P		**Pn**	**06 03 47.9**	**-1.1**
	0.5nm,0.2s							
ZAA0				⇓S		**Sg**	**06 04 09.1**	**+0.7**
	3.2nm,0.3s							
ZALV	**Zalesovo Beam**	**1.48**	**261**	Pg		**Pn**	**06 03 48.6**	**-0.3**
	6.4nm,0.3s,baz=79,slow=13,SNR=54							
ZALV				Lg		Lg	06 04 08.7	
	5.6nm,0.3s,baz=78,slow=26,SNR=16							
KURK	**Kurchatov**	**6.34**	**240**	⇑Lg		Lg	06 06 43.7	
	7.4nm,1.3s							
KURBB	**Kurchatov Arra**	**6.44**	**240**	Pn		**Pn**	**06 04 58.9**	**+1.7**
	0.1nm,0.3s,baz=54,slow=13,SNR=12							
KURBB				Sn		**Sn**	**06 06 10.1**	**-1.2**
	0.1nm,0.3s,baz=57,slow=22,SNR=2.3							
KURBB				Lg		Lg	06 06 48.8	
	0.1nm,0.3s,baz=58,slow=31,SNR=4.6							
	0.6nm,0.4s							
KURBB	**Kurchatov Arra**	**6.44**	**240**	⇓Pn		**Pn**	**06 04 58.8**	**+1.6**
	1.4nm,0.5s							
KURBB				⇓Sn		**Sn**	**06 06 10.8**	**-0.5**
	3.1nm,0.5s							
KURBB				⇓Lg		Lg	06 06 45.7	
	9.2nm,1.0s							
MK31	**Makanchi Array**	**8.07**	**205**	⇑Pn		**Pn**	**06 05 17.6**	**-1.9**
	0.2nm,0.5s,baz=29,slow=15,SNR=8.4							
MK31				⇑Sn		**Sn**	**06 06 50.8**	**-0.6**
	0.6nm,0.7s,baz=148,slow=32,SNR=4.2							
MK31				⇑Lg		Lg	06 07 36.0	
	3.9nm,1.2s							
MKAR	**Makanchi Array**	**8.07**	**205**	Pn		**Pn**	**06 05 21.8**	**+2.3**
	0.3nm,0.3s,baz=28,slow=14,SNR=7.8							
MKAR				Sn		**Sn**	**06 06 52.9**	**+1.5**
	0.2nm,0.3s,baz=24,slow=25,SNR=3.3							
MKAR				Lg		Lg	06 07 37.1	
	0.1nm,0.3s,baz=23,slow=27,SNR=2.1							
	0.3nm,0.3s							
MAKZ	**Makanchi**	**8.14**	**207**	⇑Sn		**Sn**	**06 06 50.1**	**-3.0**
	1.2nm,0.9s							
MAKZ				⇑Lg		Lg	06 07 36.6	
	2.6nm,1.1s							

*IDC **27** 06:11:59.8±3.3,39.22N×73.74E,h0km,mb3.6/5, mbtmp3.6/7,ML3.1/2,Error ellipse: s-maj=72.7km s-min=29.2km az=129.0*
*KRNET **27** 06:12:00.9±0.1,39.50N×73.82E,mb3.7*
*NNC **27** 06:12:04.8±8.0,39.54N×73.69E,h0km,mb3.7,mpv3.3, Error ellipse: s-maj=79.2km s-min=60.6km az=148.0*
*SOME **27** 06:12:04.6,39.62N×73.63E,h0km*

ISC 27 06:12:02.2±1.8,39.51N±0.06×73.77E±0.03,h1km±10km, n41,σ1s44/65,mb3.6/5,17C-7D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.27**	**324**	⇑*iP*		**Pg**	**06 12 25.6**	**-0.9**
	baz=23							
OHH				⇑*iS*		**Sg**	**06 12 43.9**	**+1.0**
	baz=23							
DRK	**Karamyk**	**1.52**	**270**	⇑*iP*		**Pn**	**06 12 30.4**	**-0.5**
	baz=70							
DRK				⇑*iS*		**Sn**	**06 12 51.8**	**+0.2**
	baz=70							
BTK	**Batken**	**2.34**	**284**	⇓*eP*		**Pn**	**06 12 43.4**	**+1.4**
	baz=85							
BTK				⇓*iS*		**Sb**	**06 13 14.3**	**-0.4**
	baz=85							
ARLS	**Aral**	**2.39**	**10**	⇑*eP*		**Pn**	**06 12 43.5**	**+0.8**
	baz=9.0							
ARLS				⇑*iS*		**Sb**	**06 13 14.6**	**-1.6**
	baz=9.0							
AML	**Almayashu**	**2.62**	**359**	P		**Pb**	**06 12 49.0**	**-1.3**
	SNR=18							
GAR	**Garm**	**2.73**	**260**	⇓*eP*		**Pn**	**06 12 48.5**	**+1.2**
	baz=61							
GAR				⇓*iS*		**Sn**	**06 13 23.4**	**+2.3**
	baz=61							
UCH	**Uchtor**	**2.77**	**11**	P		**Pb**	**06 12 53.6**	**+0.7**
	SNR=19							
TRKS	**Terek-Say**	**2.84**	**316**	⇑*eP*		**Pn**	**06 12 49.4**	**+0.4**
	baz=15							
TRKS				⇑*iS*		**Sn**	**06 13 24.8**	**+0.8**
	baz=15							
EKS2	**Erkin-Say**	**3.15**	**0**	P		**Pb**	**06 12 57.6**	**-1.5**
	SNR=6.3							
AAK	**Ala-Archa**	**3.17**	**10**	P		**Pb**	**06 12 59.6**	**+0.1**
	SNR=8.5							
AAK	**Ala-Archa**	**3.17**	**10**	Pn		**Pb**	**06 12 59.1**	**-0.4**
	4.3nm,0.3s,baz=162,slow=8.6,SNR=8.9							
	11nm,0.4s							
ULHL	**Ulahol**	**3.31**	**34**	P		**Pg**	**06 13 06.0**	**+0.3**
	SNR=5.8							
BOOM	**Boomskoye usch**	**3.40**	**28**	⇑*eP*		**Pn**	**06 12 57.5**	**+0.9**
	baz=28							
BOOM				⇑*iS*		**Sn**	**06 13 38.9**	**+1.2**
	baz=28							
CHMS	**Chumysh**	**3.56**	**12**	⇓Pn		**Pb**	**06 13 02.7**	**-3.4**
	4.6nm,0.7s							
CHMS				⇓Lg		Lg	06 13 58.5	
	31nm,0.6s							
TKM2	**Tokmak 2**	**3.68**	**21**	⇑Pn		**Pn**	**06 13 00.1**	**-0.4**
	6.8nm,0.9s							
TKM2				⇑Lg		Lg	06 14 03.4	
	20nm,0.6s							
KDJ	**Kajisay**	**3.68**	**44**	⇑*eP*		**Pn**	**06 13 01.4**	**+0.9**
	baz=43							
KDJ				⇑*iS*		**Sn**	**06 13 45.3**	**+0.7**
	baz=43							
TAS	**Tashkent**	**3.87**	**299**	⇑*iP*		**Pn**	**06 13 04.6**	**+1.7**
	baz=99							
TAS				⇑*iS*		**Sn**	**06 13 50.6**	**+1.6**
	baz=99							
IUG	**Iuzhnay**	**3.87**	**314**	*eP*		**Pb**	**06 13 13.8**	**+2.4**
	9.3nm,0.1s							
IUG				*eS*		**Sg**	**06 14 03.7**	**-2.9**
	52nm,0.2s							
KST	**Kastek**	**3.90**	**24**	*eP*		**Pg**	**06 13 16.8**	**-0.1**
	3.5nm,0.1s							
KST				*eS*		**Sg**	**06 14 08.8**	**+1.4**
	51nm,0.2s							
SGDS	**Sogindy**	**3.99**	**9**	*eP*		**Pg**	**06 13 18.0**	**-0.7**
	4.9nm,0.1s							
SGDS				*eS*		**Sg**	**06 14 11.1**	**+0.6**
	22nm,0.1s							
DGS	**Degeres**	**4.02**	**21**	*eP*		**Pg**	**06 13 18.9**	**-0.4**
	3.6nm,0.0s							
DGS				*eS*		**Sg**	**06 14 12.3**	**+0.8**
	25nm,0.2s							
MTBS	**Maitube**	**4.13**	**28**	*eP*		**Pg**	**06 13 21.3**	**-0.1**
	3.9nm,0.1s							
MTBS				*eS*		**Sg**	**06 14 17.2**	**+2.2**
	27nm,0.1s							
TNSS	**Tian-Shan**	**4.26**	**33**

	1.7nm,0.8s								
ARCES	**ARCESS Array B**	**39.26**	**335**	P		**P**	**06 19 32.4**	**+0.4**
	1.5nm,0.9s,baz=105,slow=7.9,SNR=5.3								
	1.5nm,0.9s								
NB2	**NORSAR Subarra**	**43.36**	**321**	P		**P**	**06 20 04.9**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=90,slow=8.6								
NOA	**NORSAR Array B**	**43.36**	**321**	P		**P**	**06 20 04.9**	**-0.9**
	comp=Z,0.9nm,0.7s,baz=91,slow=8.1,SNR=3.8								
	comp=Z,0.9nm,0.7s								
TORD	**Torodi Ar. Bea**	**67.97**	**269**	P		**P**	**06 23 00.6**	**-2.6**
	comp=Z,0.3nm,0.8s,baz=21,slow=4.0,SNR=2.2								
	comp=Z,0.3nm,0.8s								
YKA	**Yellowknife Ar**	**78.12**	**4**	P		**P**	**06 24 02.0**	**-0.5**
	comp=Z,0.1nm,0.5s,baz=350,slow=5.4,SNR=5.5								
	comp=Z,0.1nm,0.5s								

SOME ***27*** *06:16:05.1,39.˚47N×73.˚58E,h10km*
KRNET ***27*** *06:16:05.6±0.1,39.˚56N×73.˚95E, mb3.7*
NNC ***27*** *06:16:12.7±2.9,39.˚68N×73.˚66E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=27.1km s-min=18.6km az=165.0*

ISC 27 06:16:07.8±1.4,39.˚65N±0.˚05×73.˚66E±0.˚03,h5km±12km, n32,σ2≥17/55,19C-4D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.11**	**323**	⇑*i*P			**Pn**	**06 16 30.4**	**+0.4**
	baz=17								
OHH				⇑*i*S			**Sn**	**06 16 48.7**	**+3.0**
	baz=17								
DRK	**Karamyk**	**1.45**	**264**	⇓*e*P			**Pg**	**06 16 36.9**	**+1.3**
	baz=68								
DRK				⇓*e*S			**Sg**	**06 16 59.8**	**+5.4**
	baz=68								
BTK	**Batken**	**2.23**	**282**	⇑*i*P			**Pg**	**06 16 49.2**	**-1.3**
	baz=83								
BTK				⇑*i*S			**Sg**	**06 17 20.9**	**+1.5**
	baz=83								
ARLS	**Aral**	**2.27**	**13**	⇑*i*P			**Pb**	**06 16 47.1**	**-2.2**
	baz=7.0								
ARLS				⇑*i*S			**Sb**	**06 17 17.2**	**-0.6**
	baz=7.0								
AML	**Almayashu**	**2.48**	**1**	P			**Pg**	**06 16 54.9**	**-0.5**
	SNR=8.1								
UCH	**Uchtor**	**2.66**	**14**	P			**Pg**	**06 16 58.0**	**-0.8**
	SNR=32								
UCH	**Uchtor**	**2.66**	**14**	⇑*i*P			**Pn**	**06 16 52.6**	**+0.9**
	baz=9.0								
UCH				⇑*i*S			**Sb**	**06 17 27.0**	**-2.3**
	baz=9.0								
GAR	**Garm**	**2.67**	**257**	⇑*i*P			**Pb**	**06 16 54.9**	**-1.3**
	baz=60								
GAR				⇑*i*S			**Sg**	**06 17 30.8**	**-2.9**
	baz=60								
TRKS	**Terek-Say**	**2.69**	**315**	⇑*i*P			**Pb**	**06 16 54.5**	**-2.0**
	baz=13								
TRKS				⇑*i*S			**Sb**	**06 17 30.1**	**+0.2**
	baz=13								
EKS2	**Erkin-Say**	**3.02**	**2**	P			**Pb**	**06 17 02.5**	**+0.5**
	SNR=7.3								
AAK	**Ala-Archa**	**3.06**	**12**	P			**Pb**	**06 17 03.3**	**+0.6**
	SNR=7.3								
ULHL	**Ulahol**	**3.25**	**36**	P			**Pg**	**06 17 09.5**	**-0.6**
	SNR=11								
BOOM	**Boomskoye usch**	**3.32**	**30**	⇑*e*P			**Pn**	**06 17 00.5**	**-0.1**
	baz=27								
BOOM				⇑*e*S			**Sn**	**06 17 40.4**	**-0.1**
	baz=27								
CHMS	**Chumysh**	**3.45**	**13**	P			**Pb**	**06 17 08.4**	**-1.0**
	SNR=5.5								
CHMS	**Chumysh**	**3.45**	**13**	⇑Pn			**Pb**	**06 17 07.8**	**-1.6**
	4.4nm,0.4s								
CHMS				⇑Lg			Lg	06 18 01.8	
	34nm,0.8s								
TKM2	**Tokmak 2**	**3.58**	**23**	⇑Pn			**Pb**	**06 17 08.8**	**-2.9**
	4.3nm,0.8s								
TKM2				⇓Lg			Lg	06 18 04.9	
	17nm,0.6s								
IUG	**luzhnay**	**3.72**	**313**	*e*P			**Pg**	**06 17 16.5**	**-2.5**
	5.4nm,0.1s								
IUG				*e*S			**Sg**	**06 18 07.2**	**0.0**
	40nm,0.1s								
KST	**Kastek**	**3.81**	**26**	*e*P			**Pg**	**06 17 19.7**	**-1.1**
	5.8nm,0.1s								
KST				*e*S			**Sg**	**06 18 13.1**	**+2.9**
	16nm,0.0s								
SGDS	**Sogindy**	**3.87**	**10**	*e*P			**Pg**	**06 17 20.9**	**-1.2**
	4.1nm,0.1s								
SGDS				*e*S			**Sg**	**06 18 14.6**	**+2.4**
	18nm,0.2s								
DGS	**Degeres**	**3.93**	**23**	*e*P			**Pg**	**06 17 22.4**	**-0.7**
	15nm,0.3s								
DGS				*e*S			**Sg**	**06 18 17.4**	**+3.4**
	20nm,0.2s								
MTBS	**Maitube**	**4.06**	**30**	*e*P			**Pg**	**06 17 24.6**	**-1.0**
	7.6nm,0.0s								
MTBS				*e*S			**Sg**	**06 18 21.1**	**+3.1**
	14nm,0.1s								
KK31	**Karatay Array**	**4.19**	**327**	⇑Pn			Pb	06 17 16.8	-5.2
	0.5nm,0.3s,baz=116,slow=13,SNR=12								
KK31				⇑Pg			**Pg**	**06 17 30.2**	**+2.1**
	2.8nm,0.5s,baz=157,slow=14,SNR=7.5								
KK31				⇓Lg			Lg	06 18 22.9	
	4.7nm,0.3s,baz=155,slow=29,SNR=4.1								
TNSS	**Tian-Shan**	**4.19**	**35**	*e*P			**Pg**	**06 17 27.2**	**-1.0**
	4.7nm,0.2s								
TNSS				*e*S			**Sg**	**06 18 25.9**	**+3.3**
	5.1nm,0.4s								
KRBS	**Karabastau**	**4.32**	**20**	*e*P			**Pg**	**06 17 28.6**	**-2.0**
	3.0nm,0.2s								
KRBS				*e*S			**Sg**	**06 18 28.1**	**+1.6**
	16nm,0.1s								
BRLS	**Boroldaу**	**4.44**	**321**	*e*P			**Pb**	**06 17 27.6**	**+1.3**
	1.8nm,0.1s								
BRLS				*e*S			**Sg**	**06 18 26.2**	**-4.3**
	11nm,0.0s								
KTBS	**Karatobe**	**4.65**	**28**	*e*P			**Pg**	**06 17 34.9**	**-2.0**
	3.0nm,0.3s								
KTBS				*e*S			**Sg**	**06 18 39.2**	**+2.1**
	24nm,0.1s								
KUU	**Kurty**	**4.69**	**24**	*e*P			**Pg**	**06 17 34.8**	**-2.9**
	1.4nm,0.1s								
KUU				*e*S			**Sg**	**06 18 39.0**	**+0.5**
	8.2nm,0.3s								
CHKK	**Chushkaly**	**4.89**	**30**	*e*P			**Pg**	**06 17 39.2**	**-2.2**
	1.8nm,0.0s								
CHKK				*e*S			**Sg**	**06 18 46.0**	**+1.3**
	10nm,0.1s								
SATY	**Saty**	**4.94**	**45**	*e*P			**Pg**	**06 17 40.9**	**-1.5**
	2.1nm,0.1s								
SATY				*e*S			**Sg**	**06 18 49.3**	**+3.0**
	9.4nm,0.1s								
KPKS	**Kokpek**	**5.36**	**43**	*e*P			**Pg**	**06 17 48.5**	**-2.0**
	1.7nm,0.0s								
KPKS				*e*S			**Sg**	**06 19 01.9**	**+1.9**
	13nm,0.2s								
BTLS	**Baital**	**5.40**	**3**	*e*P			**Pg**	**06 17 48.9**	**-2.3**
	1.7nm,0.2s								
BTLS				*e*S			**Sg**	**06 19 02.5**	**+1.4**
	5.0nm,0.2s								
ARXS	**Arharly**	**5.52**	**33**	*e*P			**Pg**	**06 17 52.5**	**-1.1**
	4.6nm,0.2s								
ARXS				*e*S			**Sg**	**06 19 09.2**	**+4.1**
	9.7nm,0.0s								

TIR ***27*** *06:23:46.7,39.˚87N×21.˚40E,h7km±26km, Md2.9, Ml1.7*

ATH 27 06:23:46.1,39.˚78N×21.˚40E,h12km±4km,ML1.8/4, Error ellipse: s-maj=5.1km s-min=1.2km az=37.0,Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PENT	**Pentalofos**	**0.46**	**334**	P			Pg	06 23 54.9	-0.4
PENT				S			Sg	06 24 01.8	+0.4
THL	**Klokotos Trika**	**0.52**	**114**	P			Pg	06 23 55.2	-1.1
THL				S			Sg	06 24 03.6	+0.4
THL						AML	AML	06 24 07.5	
	comp=E,185μm,0.2s								
THL						AML	AML	06 24 07.6	
	comp=N,248μm,0.3s								
KZN	**Kozani**	**0.60**	**28**	P			Pg	06 23 56.7	-1.1
KZN				S			Sb	06 24 06.3	-0.6
KZN						AML	AML	06 24 08.9	
	comp=N,208μm,0.5s								
KZN						AML	AML	06 24 10.4	
	comp=E,261μm,0.2s								
NEST	**Nestorio**	**0.69**	**337**	P			Pg	06 23 59.2	-0.3
NEST						AML	AML	06 24 12.7	
	comp=N,113μm,0.2s								
NEST						AML	AML	06 24 15.1	
	comp=E,202μm,0.4s								
LSK	**Leskovik**	**0.72**	**301**	P			Pg	06 23 59.9	-0.2
	baz=295								
LSK				S			Sb	06 24 10.6	+0.2
	baz=295								
LSK						AMP			
	comp=E,0.2nm,0.4s,baz=295								
IGT	**Igoumenitsa**	**0.86**	**254**	P			Pg	06 24 02.7	0.0
IGT	**Igoumenitsa**	**0.86**	**254**	P			Pn	06 24 04.4	+0.4
	baz=248								
IGT				S			Sn	06 24 17.4	+0.9
	baz=248								
LIT	**Litokhoron**	**0.90**	**69**	P			Pg	06 24 02.4	-1.0
LIT				S			Sb	06 24 15.7	+0.3
LIT						AML	AML	06 24 19.5	
	comp=N,250μm,0.3s								
LIT						AML	AML	06 24 20.9	
	comp=E,172μm,0.3s								
EVR	**Evrytania**	**0.92**	**160**	P			Pg	06 24 03.2	-0.6
MAKR	**Makrakomi, Fth**	**0.95**	**143**	P			Pb	06 24 04.6	+0.1
FNA	**Florina**	**1.00**	**359**	P			Pb	06 24 04.4	-1.0
FNA	**Florina**	**1.00**	**359**	P			Pb	06 24 04.5	-0.9
	baz=0.0								
FNA				S			Sg	06 24 18.4	-0.1
	baz=0.0								
SRN	**Sarande**	**1.08**	**276**	P			Pn	06 24 08.9	+1.9
	baz=271								
SRN				S			Sn	06 24 24.0	+2.1
	baz=271								
SRN						AMP			
	comp=N,0.1nm,0.2s,baz=271								
LKD2	**Lefkada island**	**1.15**	**210**	P			Pg	06 24 10.0	+1.9
	baz=209								
LKD2				S			Sn	06 24 29.4	+5.8
	baz=209								

IDC ***27*** *06:25:35.8±0.4,39.˚35N×73.˚42E,h0km,mb4.9/41, mbtmp4.9/48,ML4.1/7,MS3.9/55,Error ellipse: s-maj=10.3km s-min=8.0km az=169.0*
KRNET ***27*** *06:25:36.8±0.1,39.˚41N×73.˚37E,mb5.5*
MOS ***27*** *06:25:36.8±1.0,39.˚34N×73.˚36E,h16km,mb5.3/97,Error ellipse: s-maj=4.0km s-min=3.1km az=93.0*
MOS Felt (V-VI) at Bordobo; (IV-V) at Kara-Kindik; (IV) at Nura.
BJI ***27*** *06:25:37.1±0.0,39.˚45N×73.˚31E,h19km,mb4.7/50, mB4.8/37,ML4.5/7,Ms4.6/45,Ms7 4.3/44*
SOME ***27*** *06:25:37.1,39.˚50N×73.˚43E,h10km,MS4.6*
NEIC ***27*** *06:25:37.7±1.9,39.˚42N±0.˚06×73.˚30E±0.˚07,h10km±3km, mb5.1/233,Mwr4.6/15,Error ellipse: s-maj=8.7km s-min=6.9km az=140.0*
NNC ***27*** *06:25:38.9±1.1,39.˚46N×73.˚41E,h0km,mb5.5,mpv5.3, Error ellipse: s-maj=9.4km s-min=5.2km az=175.0*
NEIC ***27*** *06:25:38.6,39.˚49N×73.˚35E,h15km,Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr=1.60; Mθθ-1.61; Mθφ3.20; Mrθ5.82; Mφφ-6.40; Mrφ0.73; Fault plane solution: Mo9.11000×10¹⁵ NP1:φ283.23000°, δ79.67000°, λ-141.11000°. NP2:φ185.00000°, δ51.86000°, λ-13.18000°. Principal axes: T 8.5192, Plg18.0000°, Azm49.0000°; N 1.0845, Plg50.0000°, Azm296.0000°; P -9.6038, Plg34.0000°, Azm151.0000°;*
GCMT ***27*** *06:25:39.7±0.4,39.˚50N±0.˚03×73.˚29E±0.˚05,h20km±1km, MW4.8/68,Moment Tensor Solution. s11,c12; s68,c99; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr1.78±.20; Mθθ-1.97±.13; Mφφ0.18±.11; Mrθ-0.02±.20; Mθφ-0.62±.07; Mφr-0.16±.27; Best double couple: Mo1.96500×10¹⁶ NP1:φ81.00000°, δ44.00000°, λ98.00000°. NP2: φ249.00000°, δ46.00000°, λ82.00000°. Principal axes: T 1.7960, Plg84.0000°, Azm84.0000°; N 0.3380, Plg6.0000°, Azm255.0000°; P -2.1340, Plg1.0000°, Azm345.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 06:25:36.6±0.5,39.˚48N±0.˚02×73.˚44E±0.˚02,h2km±2km, n1167,σ1≥64/1274,mb5.1/274,MS4.0/84,244C-172D, Fault plane solution: NP1:φ84.06081°, δ62.36385°, λ121.51649°. NP2:φ211.16664°, δ40.95452°, λ45.04639°. Principal axes: T Plg59.5445°, Azm40.8847°; N Plg27.5876°, Azm248.1832°; P Plg11.8900°, Azm151.8670°**; Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.16**	**335**	⇓*e*P			**Pb**	**06 25 59.4**	**+0.1**
	baz=38								
OHH				⇓*e*S			**Sn**	**06 26 16.2**	**-0.1**
	baz=38								
DRK	**Karamyk**	**1.27**	**271**	⇑*e*P			**Pg**	**06 25 59.9**	**-1.0**
	baz=74								
DRK				⇑*e*S			**Sg**	**06 26 17.1**	**-0.2**
	baz=74								
DRK	**Karamyk**	**1.27**	**271**				**Pg**	**06 25 59.7**	**-1.2**
KSH	**Kashi**	**1.96**	**88**	Pg			**Pn**	**06 26 08.0**	**-2.9**
KSH				Sg			**Sn**	**06 26 31.8**	**-4.3**
KSH				smax		smax			
	comp=N,10μm,1.0s								
KSH				smax		smax			
	comp=E,6μm,1.0s								
BTK	**Batken**	**2.10**	**287**	⇑*i*P			**Pb**	**06 26 14.9**	**-0.5**
	baz=89								
BTK				⇑*i*S			**Sb**	**06 26 42.7**	**+0.8**
	baz=89								
BTK	**Batken**	**2.10**	**287**	Pn			**Pn**	**06 26 12.1**	**-0.7**
BTK	**Batken**	**2.10**	**287**	PN			**Pn**	**06 26 12.1**	**-0.7**
GAR	**Garm**	**2.47**	**260**	⇓*e*P			**Pn**	**06 26 19.5**	**+1.6**
	baz=61								
GAR				⇓*e*S			**Sb**	**06 26 50.8**	**-1.8**
	baz=61								
GAR	**Garm**	**2.47**	**260**				**Pn**	**06 26 14.3**	**-3.6**
ARLS	**Aral**	**2.47**	**16**	⇓*e*P			**Pb**	**06 26 21.4**	**-0.4**
	baz=16								
ARLS				⇓*e*S			**Sb**	**06 26 54.3**	**+1.6**
	baz=16								
ARK	**Arkit**	**2.57**	**335**	⇓*i*P			**Pb**	**06 26 22.4**	**-1.1**
	baz=36								
ARK				⇓*e*S			**Sb**	**06 26 55.7**	**+0.1**
	baz=36								
AML	**Almayashu**	**2.66**	**4**	P			**Pb**	**06 26 24.5**	**-0.6**
	SNR=946								
AML	**Almayashu**	**2.66**	**4**	P			**Pb**	**06 26 24.7**	**-0.4**
AML	**Almayashu**	**2.66**	**4**	*e*P			**Pb**	**06 26 24.5**	**-0.6**
	SNR=1146								
TRKS	**Terek-Say**	**2.70**	**320**	⇓*e*P			**Pn**	**06 26 23.2**	**+2.1**
	baz=21								
TRKS				⇓*e*S			**Sn**	**06 26 56.6**	**+2.3**
	baz=21								
UCH	**Uchtor**	**2.87**	**16**	P			**Pb**	**06 26 27.6**	**-1.0**
	SNR=1503								
UCH	**Uchtor**	**2.87**	**16**	⇑*e*P			**Pb**	**06 26 27.3**	**-1.3**
	baz=17								
UCH				⇑*e*S			**Sb**	**06 27 04.1**	**-0.2**
	baz=17								
EKS2	**Erkin-Say**	**3.19**	**5**	P			**Pb**	**06 26 32.2**	**-1.8**
	SNR=192								
EKS2	**Erkin-Say**	**3.19**	**5**	⇑*i*P			**Pb**	**06 26 31.7**	**-2.3**
	baz=5.0								
EKS2				⇑*i*S			**Sb**	**06 27 11.2**	**-2.1**
	baz=5.0								
AAK	**Ala-Archa**	**3.25**	**14**	P			**Pb**	**06 26 33.5**	**-1.6**
	SNR=782								
AAK	**Ala-Archa**	**3.25**	**14**	Pn			**Pb**	**06 26 33.5**	**-1.6**
	168nm,0.3s,baz=181,slow=7.0,SNR=939								
AAK						LR	LR	06 27 13.4	
	comp=Z,508nm,20.8s,baz=224,slow=29								
AAK						Lg	Lg	06 27 16.1	
	91nm,0.3s,baz=153,slow=16,SNR=8.0								
	1μm,0.6s								
AAK	**Ala-Archa**	**3.25**	**14**	⇑*i*P			**Pb**	**06 26 32.6**	**-2.5**
	baz=14								
AAK				⇑*e*S			**Sb**	**06 27 13.0**	**-2.2**
	baz=14								
AAK	**Ala-Archa**	**3.25**	**14**	Pn			**Pn**	**06 26 31.1**	**+2.4**
AAK	**Ala-Archa**	**3.25**	**14**	P			**Pb**	**06 26 33.5**	**-1.6**
AAK	**Ala-Archa**	**3.25**	**14**	*i* P			**Pb**	**06 26 32.7**	**-2.4**
	SNR=250								
KBK	**Karagaybulak**	**3.37**	**19**	P			**Pb**	**06 26 34.6**	**-2.5**
	SNR=168								
KBK	**Karagaybulak**	**3.37**	**19**	⇑*i*P			**Pb**	**06 26 34.0**	**-3.1**
	baz=20								
KBK				⇑*e*S			**Sb**	**06 27 16.2**	**-2.5**
	baz=20								
CHGR	**Chuyangaron**	**3.43**	**258**	⇑*i*P			**Pn**	**06 26 32.9**	**+1.8**
	baz=58								
CHGR				⇑*e*S			**Sn**	**06 27 13.7**	**+1.4**
	baz=58								
CHGR	**Chuyangaron**	**3.43**	**258**	Pn			**Pn**	**06 26 30.0**	**-1.1**
CHGR	**Chuyangaron**	**3.43**	**258**	PN			**Pn**	**06 26 30.0**	**-1.1**
FRU1	**Bishkek**	**3.45**	**15**	PN			**Pb**	**06 26 36.6**	**-1.7**
ULHL	**Ulahol**	**3.49**	**37**	P			**Pn**	**06 26 35.5**	**+3.5**
	SNR=51								
ULHL	**Ulahol**	**3.49**	**37**	⇓*e*P			**Pb**	**06 26 36.0**	**-3.1**
	baz=37								
ULHL				⇓*e*S			**Sb**	**06 27 19.0**	**-3.0**
	baz=37								
BOOM	**Boomskoye usch**	**3.56**	**31**	⇑*e*P			**Pb**	**06 26 36.8**	**-3.4**
	baz=32								
BOOM				⇑*i*S			**Sb**	**06 27 20.3**	**-3.6**
	baz=32								
BOOM	**Boomskoye usch**	**3.56**	**31**				**Pn**	**06 26 34.8**	**+2.0**
BOOM	**Boomskoye usch**	**3.56**	**31**	PN			**Pn**	**06 26 34.8**	**+2.0**
CHMS	**Chumysh**	**3.65**	**15**	P			**Pb**	**06 26 38.5**	**-3.3**
	SNR=127								
CHMS	**Chumysh**	**3.65**	**15**	⇑*e*P			**Pb**	**06 26 38.0**	**-3.8**
	baz=16								
CHMS				⇑*e*S			**Sb**	**06 27 22.6**	**-4.0**
	baz=16								
CHMS	**Chumysh**	**3.65**	**15**	PN			**Pb**	**06 26 38.6**	**-3.3**
CHMS				LG			Lg	06 27 35.2	
CHMS	**Chumysh**	**3.65**	**15**	⇑Pn			**Pb**	**06 26 38.6**	**-3.3**
	300nm,0.6s								
CHMS				⇓Lg			Lg	06 27 35.2	
	1μm,0.9s								
TAS	**Tashkent**	**3.66**	**302**	⇑*e*P			**Pn**	**06 26 36.9**	**+2.7**
	baz=3.0								
TAS				⇑*e*S			**Sn**	**06 27 20.5**	**+2.6**
	baz=3.0								
TAS	**Tashkent**	**3.66**	**302**	Pn			**Pn**	**06 26 33.2**	**-1.0**
TAS	**Tashkent**	**3.66**	**302**	PN			**Pn**	**06 26 33.2**	**-1.0**
IUG	**luzhnay**	**3.71**	**317**	*i* PN			**Pn**	**06 26 38.2**	**+3.3**
IUG				*e*				06 26 45.7	
IUG				*e*				06 27 35.5	
IUG	**luzhnay**	**3.71**	**317**	*e*P			**Pg**	**06 26 46.0**	**-1.8**
	632nm,0.1s								
IUG				*e*S			**Sg**	**06 27 35.4**	**-0.5**
	5μm,0.1s								
IUG	**luzhnay**	**3.71**	**317**	*i* Pn			**Pn**	**06 26 38.3**	**+3.3**
	baz=316								
IUG				*e*Pg			**Pg**	**06 26 45.7**	**-2.0**
	baz=316								
IUG				*e*Lg			Lg	06 27 35.5	
	baz=316								
IUG	**luzhnay**	**3.71**	**317**	Pg			**Pg**	**06 26 45.9**	**-1.8**
	91μm,0.8s								
IUG				Lg			Lg	06 27 35.4	
	10μm,0.8s								
DZA	**Taraz**	**3.76**	**336**	*e*PN			**Pn**	**06 26 38.8**	**+3.2**
DZA				*e*				06 26 46.9	
DZA				*e*				06 27 36.6	
DZA	**Taraz**	**3.76**	**336**	*e*P			**Pg**	**06 26 46.9**	**-1.7**
	1μm,0.1s								
DZA				*e*S			**Sg**	**06 27 36.7**	**-0.7**
	5μm,0.1s								
DZA	**Taraz**	**3.76**	**336**	*e*Pn			**Pn**	**06 26 38.8**	**+3.2**
	baz=335								
DZA				*e*Pg			**Pg**	**06 26 47.0**	**-1.7**
	baz=335								
DZA				*e*Lg			Lg	06 27 36.7	
	baz=335								
DZA	**Taraz**	**3.76**	**336**	Pg			**Pb**	**06 26 45.4**	**+1.8**
	2μm,0.6s								
DZA				Lg			Lg	06 27 34.9	
	5μm,0.5s								
TKM2	**Tokmak 2**	**3.81**	**25**	P			**Pb**	**06 26 40.6**	**-3.9**
	SNR=241								
TKM2	**Tokmak 2**	**3.81**	**25**	⇓*e*P			**Pn**	**06 26 40.3**	**+4.0**
	baz=25								
TKM2				⇓*e*S			**Sb**	**06 27 26.5**	**-4.6**
	baz=25								
TKM2	**Tokmak 2**	**3.81**	**25**	PN			**Pb**	**06 26 40.6**	**-3.9**
TKM2				PG			**Pg**	**06 26 50.3**	**+0.8**
TKM2				LG			Lg	06 27 40.9	
TKM2	**Tokmak 2**	**3.81**	**25**	⇓Pn			**Pb**	**06 26 40.6**	**-3.9**
	98nm,0.6s								
TKM2				⇑Pg			**Pg**	**06 26 50.3**	**+0.8**
	509nm,0.8s								
TKM2				⇓Lg			Lg	06 27 40.9	
	666nm,0.7s								
USP	**Ospenovka**	**3.87**	**12**	P			**Pn**	**06 26 41.2**	**+4.2**
	SNR=384								
USP	**Ospenovka**	**3.87**	**12**	⇓*e*P			**Pn**	**06 26 40.8**	**+3.7**
	baz=12								
USP				⇓*e*S			**Sn**	**06 27 27.5**	**+4.4**
	baz=12								
KDJ	**Kajisay**	**3.88**	**46**	⇓*e*P			**Pn**	**06 26 41.2**	**+3.8**
	baz=46								
KDJ				⇓*i*S			**Sn**	**06 27 28.4**	**+4.8**
	baz=46								
KDJ	**Kajisay**	**3.88**	**46**				**Pn**	**06 26 38.6**	**+1.2**
KDJ	**Kajisay**	**3.88**	**46**	PN			**Pn**	**06 26 38.6**	**+1.2**
TARG	**Taragay, Kyrgy**	**4.01**	**55**	⇑*e*P			**Pn**	**06 26 43.2**	**+3.8**
	baz=54								
TARG				⇑*e*S			**Sn**	**06 27 31.4**	**+4.3**
	baz=54								
TARG	**Taragay, Kyrgy**	**4.01**	**55**				**Pn**	**06 26 41.8**	**+2.4**
TARG	**Taragay, Kyrgy**	**4.01**	**55**	PN			**Pn**	**06 26 41.8**	**+2.4**
KST	**Kastek**	**4.04**	**27**	*e*P			**Pb**	**06 26 51.2**	**+2.8**
	160nm,0.4s								
KST				*e*S			**Sg**	**06 27 44.4**	**-1.9**
	902nm,0.2s								
KST	**Kastek**	**4.04**	**27**	Pg			**Pb**	**06 26 51.2**	**+2.8**
	523nm,1.0s								
KST				Lg			Lg	06 27 44.4	
	1μm,1.3s								
CHM	**Chimkent**	**4.06**	**316**	*e*P			**Pg**	**06 26 54.1**	**-0.3**
	571nm,0.1s								
CHM				*e*S			**Sg**	**06 27 49.7**	**+2.7**
	10μm,0.1s								
CHM	**Chimkent**	**4.06**	**316**	*e*Pg			**Pg**	**06 26 54.0**	**-0.3**
	baz=315								
CHM				*e*Lg			Lg	06 27 48.3	
	baz=315								
SGDS	**Sogindy**	**4.07**	**12**	*i* PN			**Pn**	**06 26 43.6**	**+3.8**
SGDS				*e*				06 26

	658nm,0.6s								
TNSS	**Tian-Shan**	**4.43**	**36**	*e*PN	**Pn**	**06 26 49.0**	**+3.9**		
TNSS				*e*		06 26 59.1			
TNSS				*e*		06 28 00.9			
TNSS	**Tian-Shan**	**4.43**	**36**	*e*P	**Pg**	**06 26 59.2**	**-2.3**		
	168nm,0.1s								
TNSS				*e*S	**Sg**	**06 27 57.9**	**-1.0**		
	308nm,0.4s								
TNSS	**Tian-Shan**	**4.43**	**36**	*e*Pn	**Pn**	**06 26 49.0**	**+3.9**		
	baz=37								
TNSS				*e*Pg	**Pg**	**06 26 59.2**	**-2.3**		
	baz=37								
TNSS				*e*Lg	Lg	06 28 01.0			
	baz=37								
TNSS	**Tian-Shan**	**4.43**	**36**	Pg	**Pg**	**06 27 01.2**	**-0.3**		
	126nm,0.6s								
TNSS				Lg	Lg	06 28 01.7			
	339nm,1.6s								
BRLS	**Boroldaу**	**4.47**	**324**	*e*PN	**Pn**	**06 26 46.7**	**+1.5**		
BRLS				*e*		06 26 56.5			
BRLS				*e*		06 27 55.3			
BRLS	**Boroldaу**	**4.47**	**324**	*e*P	**Pb**	**06 26 57.4**	**+1.8**		
	155nm,0.4s								
BRLS				*e*S	**Sg**	**06 27 55.4**	**-4.6**		
	2μm,0.0s								
BRLS	**Boroldaу**	**4.47**	**324**	*e*Pn	**Pn**	**06 26 46.7**	**+1.5**		
	baz=320								
BRLS				*e*Pg	**Pb**	**06 26 56.6**	**+0.9**		
	baz=320								
BRLS				*e*Sn	**Sn**	**06 27 33.2**	**-4.6**		
	baz=320								
BRLS				*e*Lg	Lg	06 27 55.3			
	baz=320								
BRLS	**Boroldaу**	**4.47**	**324**	Pg	**Pb**	**06 26 57.4**	**+1.8**		
	252nm,0.8s								
BRLS				Lg	Lg	06 27 55.4			
	3μm,1.1s								
KRBS	**Karabastau**	**4.54**	**21**	*e*P	**Pg**	**06 27 01.2**	**-2.2**		
	257nm,0.3s								
KRBS				*e*S	**Sg**	**06 28 02.3**	**+0.1**		
	789nm,0.1s								
KRBS	**Karabastau**	**4.54**	**21**	Pg	**Pg**	**06 27 01.2**	**-2.2**		
	513nm,0.7s								
KRBS				Lg	Lg	06 28 02.3			
	915nm,1.3s								
AAA	**Alma-Ata**	**4.55**	**34**	*e*PN	**Pn**	**06 26 51.2**	**+4.8**		
AAA				*e*		06 27 02.3			
AAA				*e*		06 28 02.9			
AAA	**Alma-Ata**	**4.55**	**34**	*e*P	**Pg**	**06 27 00.9**	**-2.9**		
	352nm,0.1s								
AAA				*e*S	**Sg**	**06 28 01.5**	**-1.3**		
	1μm,0.6s								
AAA	**Alma-Ata**	**4.55**	**34**	*e*Pn	**Pn**	**06 26 51.3**	**+4.8**		
	baz=35								
AAA				*e*Pg	**Pg**	**06 27 02.3**	**-1.5**		
	baz=35								
AAA				*e*Lg	Lg	06 28 02.9			
	baz=35								
AAA	**Alma-Ata**	**4.55**	**34**	Pg	**Pg**	**06 27 03.2**	**-0.6**		
	465nm,1.2s								
AAA				Lg	Lg	06 28 05.9			
	2μm,1.3s								
KNDC	**Almaty**	**4.58**	**34**	PN	**Pn**	**06 26 50.8**	**+4.0**		
KNDC				PG	**Pg**	**06 27 03.5**	**-0.9**		
KNDC	**Almaty**	**4.58**	**34**	⇓Pn	**Pn**	**06 26 50.9**	**+4.0**		
	349nm,0.8s								
KNDC				⇓Pg	**Pg**	**06 27 03.5**	**-0.9**		
	1μm,0.7s								
KNDC				⇓Lg	Lg	06 28 06.9			
	7μm,1.1s								
ANVS	**Anan'yevo**	**4.59**	**43**	⇓*e*P	**Pn**	**06 26 51.2**	**+4.1**		
	baz=43								
ANVS				⇓*i*S	**Sn**	**06 27 45.4**	**+4.3**		
	baz=43								
PRZ	**Przheval'sk**	**4.81**	**50**	⇑*i*P	**Pn**	**06 26 54.0**	**+3.9**		
	baz=49								
PRZ				⇑*e*S	**Sn**	**06 27 50.5**	**+4.1**		
	baz=49								
PRZ	**Przheval'sk**	**4.81**	**50**		**Pn**	**06 26 53.2**	**+3.1**		
PRZ	**Przheval'sk**	**4.81**	**50**	PN	**Pn**	**06 26 53.2**	**+3.1**		
KTBS	**Karatobe**	**4.88**	**29**	*e*P	**Pg**	**06 27 07.4**	**-2.6**		
	110nm,0.3s								
KTBS				*e*S	**Sg**	**06 28 12.4**	**-0.9**		
	1μm,0.8s								
KTBS	**Karatobe**	**4.88**	**29**	Pg	**Pg**	**06 27 07.4**	**-2.6**		
	180nm,1.2s								
KTBS				Lg	Lg	06 28 13.1			
	1μm,0.9s								
KUU	**Kurty**	**4.92**	**25**	*e*PN	**Pn**	**06 26 54.8**	**+3.4**		
KUU				*e*		06 27 08.1			
KUU				*e*		06 28 13.1			
KUU	**Kurty**	**4.92**	**25**	*e*P	**Pg**	**06 27 08.2**	**-2.5**		
	282nm,0.7s								
KUU				*e*S	**Sg**	**06 28 14.5**	**+0.1**		
	956nm,0.2s								
KUU	**Kurty**	**4.92**	**25**	*e*Pn	**Pn**	**06 26 54.9**	**+3.4**		
	baz=26								
KUU				*e*Pg	**Pg**	**06 27 08.1**	**-2.6**		
	baz=26								
KUU				*e*Lg	Lg	06 28 13.1			
	baz=26								
KUU	**Kurty**	**4.92**	**25**	Pg	**Pg**	**06 27 08.2**	**-2.5**		
	282nm,0.7s								
KUU				Lg	Lg	06 28 14.5			
	817nm,0.7s								
CHKK	**Chushkaly**	**5.12**	**30**	*e*PN	**Pn**	**06 26 56.7**	**+2.6**		
CHKK				*e*		06 27 13.4			
CHKK				*e*		06 28 20.3			
CHKK	**Chushkaly**	**5.12**	**30**	*e*P	**Pg**	**06 27 12.3**	**-2.2**		
	228nm,0.5s								
CHKK				*e*S	**Sg**	**06 28 21.3**	**+0.5**		
	401nm,0.1s								
CHKK	**Chushkaly**	**5.12**	**30**	*e*Pn	**Pn**	**06 26 56.8**	**+2.6**		
	baz=31								
CHKK				*e*Pg	**Pg**	**06 27 13.5**	**-1.1**		
	baz=31								
CHKK				*e*Lg	Lg	06 28 20.3			
	baz=31								
CHKK	**Chushkaly**	**5.12**	**30**	Pg	**Pg**	**06 27 12.4**	**-2.2**		
	228nm,0.5s								
CHKK				Lg	Lg	06 28 21.3			
	512nm,1.2s								
SATY	**Saty**	**5.18**	**45**	*e*PN	**Pn**	**06 26 58.4**	**+3.3**		
SATY				*e*		06 27 13.4			
SATY				*e*		06 28 20.9			
SATY	**Saty**	**5.18**	**45**	*e*P	**Pg**	**06 27 12.2**	**-3.6**		
	528nm,0.7s								
SATY				*e*S	**Sg**	**06 28 20.5**	**-2.3**		
	648nm,1.0s								
SATY	**Saty**	**5.18**	**45**	*e*Pn	**Pn**	**06 26 58.5**	**+3.3**		
	baz=46								
SATY				*e*Pg	**Pg**	**06 27 13.4**	**-2.3**		
	baz=46								
SATY				*e*Lg	Lg	06 28 20.9			
	baz=46								
SATY	**Saty**	**5.18**	**45**	Pg	**Pg**	**06 27 12.2**	**-3.6**		
	528nm,0.7s								
SATY				Lg	Lg	06 28 21.1			
	628nm,1.1s								
ZHN	**Zhinishke**	**5.27**	**44**	*e*PN	**Pn**	**06 27 00.0**	**+3.7**		
ZHN				*e*		06 27 15.8			
ZHN				*e*		06 28 24.3			
ZHN	**Zhinishke**	**5.27**	**44**	*e*P	**Pg**	**06 27 13.9**	**-3.5**		
	195nm,0.1s								
ZHN				*e*S	**Sg**	**06 28 23.1**	**-2.5**		
	444nm,0.2s								
ZHN	**Zhinishke**	**5.27**	**44**	*e*Pn	**Pn**	**06 27 00.1**	**+3.7**		
	baz=45								
ZHN				*e*Pg	**Pg**	**06 27 15.9**	**-1.6**		
	baz=45								
ZHN				*e*Lg	Lg	06 28 24.4			
	baz=45								
KURS	**Kuram**	**5.35**	**40**	*e*P	**Pg**	**06 27 16.0**	**-3.1**		
	111nm,0.9s								
KURS				*e*S	**Sg**	**06 28 26.9**	**-1.6**		
	604nm,0.4s								
KURS	**Kuram**	**5.35**	**40**	Pg	**Pg**	**06 27 16.0**	**-3.1**		
	248nm,0.8s								
KURS				Lg	Lg	06 28 27.7			
	604nm,1.3s								
BTLS	**Baital**	**5.58**	**4**	*i* PN	**Pn**	**06 27 03.7**	**+3.3**		
BTLS				*e*		06 27 20.0			
BTLS				*e*		06 28 33.2			
BTLS	**Baital**	**5.58**	**4**	*e*P	**Pg**	**06 27 20.5**	**-2.9**		
	223nm,0.2s								
BTLS				*e*S	**Sg**	**06 28 34.9**	**-0.7**		
	125nm,0.0s								
BTLS	**Baital**	**5.58**	**4**	*i* Pn	**Pn**	**06 27 03.8**	**+3.3**		
	baz=4.9								
BTLS				*e*Pg	**Pg**	**06 27 20.1**	**-3.3**		
	baz=4.9								
BTLS				*e*Lg	Lg	06 28 33.2			
	baz=4.9								
BTLS	**Baital**	**5.58**	**4**	Pg	**Pg**	**06 27 19.8**	**-3.6**		
	223nm,0.9s								
BTLS				Lg	Lg	06 28 34.0			
	125nm,0.8s								
KPKS	**Kokpek**	**5.60**	**43**	*e*PN	**Pn**	**06 27 05.2**	**+4.3**		
KPKS				*e*		06 27 20.1			
KPKS				*e*		06 28 33.9			
KPKS	**Kokpek**	**5.60**	**43**	*e*P	**Pg**	**06 27 20.1**	**-3.7**		
	182nm,0.1s								
KPKS				*e*S	**Sg**	**06 28 34.1**	**-2.4**		
	499nm,0.1s								
KPKS	**Kokpek**	**5.60**	**43**	*e*Pn	**Pn**	**06 27 05.2**	**+4.3**		
	baz=44								
KPKS				*e*Pg	**Pg**	**06 27 20.2**	**-3.7**		
	baz=44								
KPKS				*e*Lg	Lg	06 28 34.0			
	baz=44								
ARXS	**Arharly**	**5.75**	**33**	*i* PN	**Pn**	**06 27 06.3**	**+3.3**		
ARXS	**Arharly**	**5.75**	**33**	*e*P	**Pg**	**06 27 22.5**	**-4.2**		
	229nm,0.2s								
ARXS				*e*S	**Sg**	**06 28 38.9**	**-2.4**		
	654nm,0.4s								
ARXS	**Arharly**	**5.75**	**33**	Pg	**Pg**	**06 27 22.5**	**-4.2**		
	193nm,0.6s								
ARXS				Lg	Lg	06 28 38.9			
	654nm,1.2s								
CEP	**Cherat**	**5.78**	**193**	P	**Pn**	**06 27 07.8**	**+4.4**		
CHCP	**Chirah Chowk**	**5.81**	**181**	P	**Pn**	**06 27 08.2**	**+4.5**		
SHLS	**Shalkode**	**5.84**	**49**	*e*PN	Pn	06 27 10.9	+6.7		
SHLS				*e*		06 27 29.3			
SHLS	**Shalkode**	**5.84**	**49**	*e*Pn	Pn	06 27 11.0	+6.8		
	baz=52								
SHLS				*e*Pg	**Pg**	**06 27 29.3**	**+1.0**		
	baz=52								
SHLS				*e*Lg	Lg	06 28 54.8			
	baz=52								
BLB	**Baldybastay**	**5.96**	**38**	*e*P	**Pg**	**06 27 27.3**	**-3.4**		
	454nm,0.2s								
BLB				*e*S	**Sg**	**06 28 46.5**	**-1.3**		
	435nm,0.2s								
BLB	**Baldybastay**	**5.96**	**38**	Pg	**Pg**	**06 27 27.3**	**-3.4**		
	410nm,0.6s								
BLB				Lg	Lg	06 28 46.5			
	423nm,1.0s								
PDGK	**Podgornoye**	**5.96**	**48**	PN	**Pn**	**06 27 09.4**	**+3.6**		
PDGK	**Podgornoye**	**5.96**	**48**	Pg	**Pg**	**06 27 28.4**	**-2.3**		
	57nm,1.1s								
PDGK	**Podgornoye**	**5.96**	**48**	⇓Pn	**Pn**	**06 27 09.4**	**+3.6**		
	163nm,0.8s								
PDGK				⇑Lg	Lg	06 28 50.0			
	1μm,1.1s								
KBL	**Kabul**	**6.05**	**217**	Pn	**Pn**	**06 27 05.8**	**-1.4**		
KBL	**Kabul**	**6.05**	**217**	PN	**Pn**	**06 27 05.8**	**-1.4**		
TDK	**Taldyqorghan**	**6.64**	**32**	*e*PN	**Pn**	**06 27 15.5**	**+0.5**		
TDK				*e*		06 27 42.5			
TDK	**Taldyqorghan**	**6.64**	**32**	*e*P	Pg	06 27 38.5	-5.2		
	168nm,0.3s								
TDK				*e*S	**Sg**	**06 29 05.8**	**-3.8**		
	683nm,0.5s								
TDK	**Taldyqorghan**	**6.64**	**32**	*e*Pn	**Pn**	**06 27 15.6**	**+0.5**		
	baz=33								
TDK				*e*Pg	**Pg**	**06 27 42.6**	**-1.1**		
	baz=33								
TDK				*e*Lg	Lg	06 29 08.3			
	baz=33								
TDK	**Taldyqorghan**	**6.64**	**32**	Pg	Pg	06 27 38.5	-5.2		
	488nm,0.9s								
DJR	**Jarkent**	**6.78**	**42**	*e*P	Pg	06 27 41.4	-5.0		
	71nm,0.7s								
DJR				*e*S	**Sg**	**06 29 10.8**	**-3.4**		
	196nm,1.0s								
DJR	**Jarkent**	**6.78**	**42**	Pg	Pg	06 27 41.4	-5.0		
	99nm,1.2s								
THW	**Thamme Wali**	**6.81**	**192**	P	**Pn**	**06 27 20.5**	**+3.0**		
JMU	**Jammu**	**6.85**	**170**	*e*P	**Pn**	**06 27 17.5**	**-0.5**		
THN	**Thein Dam**	**7.27**	**165**	*e*P	**Pn**	**06 27 26.7**	**+3.0**		
THN				*e*S	**Sn**	**06 28 48.9**	**+2.1**		
SARP	**Sargodha**	**7.57**	**185**	P	**Pn**	**06 27 29.9**	**+2.1**		
OTUK	**Ortayu**	**8.80**	**355**	P	**Pn**	**06 27 46.9**	**+2.2**		
OTUK	**Ortayu**	**8.80**	**355**	⇑Pn	**Pn**	**06 27 47.0**	**+2.2**		
	86nm,0.7s								
OTUK				⇑Lg	Lg	06 30 18.4			
	149nm,0.8s								
SMLA	**Simla**	**8.87**	**159**	*e*P	**Pn**	**06 27 46.7**	**+1.0**		
SMLA				*e*S	**Sn**	**06 29 25.2**	**-0.9**		
SMLA				IAML		06 29 33.8			
	comp=E,507nm,0.7s								
SMLA				IAML		06 29 36.5			
	comp=N,549nm,0.5s								
MAKZ	**Makanchi**	**9.62**	**38**		**Pn**	**06 27 59.3**	**+3.3**		
MAKZ	**Makanchi**	**9.62**	**38**	P	**Pn**	**06 27 59.3**	**+3.3**		
MAKZ	**Makanchi**	**9.62**	**38**	⇑Pn	**Pn**	**06 27 59.2**	**+3.3**		
	comp=N,15nm,1.0s								
MAKZ				⇑Lg	Lg	06 30 46.0			
	comp=N,112nm,1.1s								
MK31	**Makanchi Array**	**9.76**	**39**		**Pn**	**06 28 00.5**	**+2.7**		
MK31	**Makanchi Array**	**9.76**	**39**	*i* P	**Pn**	**06 28 01.4**	**+3.6**		
MK31				pmax	pmax				
	comp=Z,17nm,0.8s								
MK31	**Makanchi Array**	**9.76**	**39**	Pn	**Pn**	**06 28 01.4**	**+3.6**		
	comp=Z,18nm,0.7s,baz=216,slow=14,SNR=72								
MK31				Lg	Lg	06 30 49.9			
	comp=Z,102nm,1.1s,baz=235,slow=24,SNR=4.4								
MKAR	**Makanchi Array**	**9.76**	**39**	Pn	**Pn**	**06 28 01.5**	**+3.6**		
	comp=Z,0.5nm,0.3s,baz=214,slow=13,SNR=21								
MKAR				Lg	Lg	06 30 44.3			
	comp=Z,0.9nm,0.3s,baz=230,slow=27,SNR=3.8								
MKAR				LR	LR	06 32 12.1			
	comp=Z,762nm,21.3s,baz=224,slow=40								
	comp=Z,4.2nm,0.8s								
MKAR	**Makanchi Array**	**9.76**	**39**		**Pn**	**06 27 59.5**	**+1.6**		
DDI	**Dehra Dun**	**9.89**	**156**	*e*P	**Pn**	**06 28 01.1**	**+1.4**		
DDI				*e*S	**Sn**	**06 29 51.5**	**+0.2**		
DDI				IAML		06 30 01.0			
	comp=E,842nm,1.2s								
DDI				IAML		06 30 01.9			
	comp=N,810nm,1.2s								
HRA	**Herat**	**10.30**	**244**		**Pn**	**06 28 04.4**	**-1.1**		
BRZS	**Berezniki**	**10.52**	**357**	*e*P	**Pn**	**06 28 09.1**	**+0.9**		
BRZS				*e*S	**Sn**	**06 30 07.9**	**+1.4**		
BRZS	**Berezniki**	**10.52**	**357**	*e*P	**Pn**	**06 28 09.1**	**+0.9**		
	baz=358								
BRZS				*e*S	**Sn**	**06 30 08.0**	**+1.4**		
	baz=358								
NDI	**New Delhi**	**11.21**	**163**	*e*P	**Pn**	**06 28 16.0**	**-1.8**		
NDI				*e*P	**Pn**	**06 28 18.6**	**+0.8**		
NDI				*e*S	**Sn**	**06 30 19.2**	**-4.5**		
NDI				*e*S	**Sn**	**06 30 20.0**	**-3.7**		
PTH	**Pithoragarh**	**11.37**	**149**	*e*S	**Sn**	**06 30 22.7**	**-5.1**		
ZSN	**Zaisan**	**11.50**	**42**	*e*P	**Pn**	**06 28 25.0**	**+3.4**		
ZSN	**Zaisan**	**11.50**	**42**	*e*P	**Pn**	**06 28 25.1**	**+3.4**		
	baz=43								
WMQ	**Urumqi**	**11.51**	**63**	*e*P	Pn	06 28 26.8	+4.9		
WMQ				pP		06 28 29.3			
WMQ				S	Sn	06 30 40.5	+9.4		
WMQ				pmax	pmax				
	comp=N,42nm,1.1s								
WMQ				LR	LR				
	comp=N,2μm,6.1s								
WMQ				LR	LR				
	comp=N,2μm,10.5s								
WMQ				LR	LR				
	comp=N,440nm,11.9s								
KUDL	**Kundal**	**11.59**	**166**	*e*P	**Pn**	**06 28 22.5**	**-0.4**		
KUDL				*e*S	**Sn**	**06 30 31.3**	**-1.5**		
SONA	**Sohna**	**11.60**	**164**	*e*P	**Pn**	**06 28 22.4**	**-0.7**		
SONA				*e*S	**Sn**	**06 30 25.9**	**-7.3**		
KURBB	**Kurchatov Arra**	**11.71**	**16**	Pn	**Pn**	**06 28 25.4**	**+0.9**		
	comp=N,0.4nm,0.3s,baz=208,slow=12,SNR=71								
KURBB				LR	LR	06 33 39.6			
	comp=N,249nm,21.4s,baz=180,slow=41								
	comp=N,4.4nm,0.6s								
KURBB	**Kurchatov Arra**	**11.71**	**16**	P	**Pn**	**06 28 27.3**	**+2.8**		
KURBB	**Kurchatov Arra**	**11.71**	**16**	⇑Pn	**Pn**	**06 28 27.2**	**+2.8**		
	comp=N,24nm,0.7s								
KURBB				⇓Lg	Lg	06 31 51.0			
	comp=N,543nm,1.4s								
KURK	**Kurchatov**	**11.81**	**16**		**Pn**	**06 28 26.3**	**+0.4**		
KURK	**Kurchatov**	**11.81**	**16***c*	*i* P	**Pn**	**06 28 27.4**	**+1.5**		
KURK	**Kurchatov**	**11.81**	**16**	⇓Pn	**Pn**	**06 28 29.2**	**+3.3**		
	comp=N,12nm,0.8s								
KURK				⇑Lg	Lg	06 31 54.2			
	comp=N,740nm,1.5s								
SEM	**Semipalatinsk**	**11.94**	**22**	*e*P	**Pn**	**06 28 28.5**	**+0.6**		
SEM	**Semipalatinsk**	**11.94**	**22**	*e*P	**Pn**	**06 28 28.5**	**+0.6**		
	baz=22								
GEYT	**Alibeck**	**12.07**	**267**	Pn	**Pn**	**06 28 27.7**	**-1.9**		
	comp=N,8.7nm,0.3s,baz=115,slow=10.0,SNR=16								
GEYT				Sn	**Sn**	**06 30 41.9**	**-2.9**		
	comp=N,7.9nm,0.3s,baz=149,slow=6.9,SNR=5.8								
	comp=N,21nm,0.4s								
GEYT	**Alibeck**	**12.07**	**267**		**Pn**	**06 28 27.1**	**-2.5**		
GYA0	**ALIBECK ARRAY**	**12.07**	**267**	P	**Pn**	**06 28 27.1**	**-2.5**		
GYA0				LG	Lg	06 30 40.6			
GYA0B	**ALIBECK ARRAY**	**12.07**	**267**		**Pn**	**06 28 28.0**	**-1.6**		
GYA0B	**ALIBECK ARRAY**	**12.07**	**267**	⇑Pn	**Pn**	**06 28 27.1**	**-2.4**		
AJM	**Ajmer**	**13.00**	**175**	*e*P	**Pn**	**06 28 40.4**	**-1.9**		
AJM				*e*S	**Sn**	**06 31 00.0**	**-7.6**		
BVAR	**Borovoye Array**	**13.71**	**352**	LR	LR	06 34 41.2			
	comp=N,269nm,18.5s,baz=56,slow=39								
AB31	**Akbulak array**	**13.72**	**320**	*i* P	**Pn**	**06 28 50.9**	**-1.0**		
AB31	**Akbulak array**	**13.72**	**320**	Pn	**Pn**	**06 28 50.9**	**-1.0**		
	comp=N,22nm,0.6s,baz=129,slow=12,SNR=245								
ABKAR	**Akbulak array**	**13.72**	**320**	Pn	**Pn**	**06 28 50.7**	**-1.2**		
PYUN	**Piuthan**	**13.84**	**142**	*e*P	**Pn**	**06 28 50.3**	**-3.6**		
	comp=N,50nm,0.4s								
DANN	**Dangsing**	**14.01**	**139**	*e*P	**Pn**	**06 28 53.9**	**-2.4**		
	comp=N,77nm,0.5s								
JHNI	**Jhansi**	**14.62**	**161**	*e*P	**Pn**	**06 29 00.9**	**-3.5**		
JHNI				*e*S	**Sn**	**06 31 39.2**	**-7.8**		
GKN	**Gorkha**	**14.74**	**138**	*e*P	**Pn**	**06 29 03.2**	**-3.0**		
	comp=N,25nm,0.3s								
DMN	**Daman**	**15.30**	**137**	*e*P	**Pn**	**06 29 11.8**	**-2.0**		
	comp=N,40nm,0.5s								
AKTO	**Aktyubinsk**	**15.43**	**320**	Pn	**Pn**	**06 29 14.5**	**-0.6**		
	comp=N,1.6nm,0.3s,baz=135,slow=13,SNR=35								
AKTO				Sn	**Sn**	**06 32 04.2**	**-2.3**		
	comp=N,7.1nm,0.3s,baz=307,slow=13,SNR=6.9								
	comp=N,26nm,0.8s								
AKTO	**Aktyubinsk**	**15.43**	**320**	⇑Pn	**Pn**	**06 29 14.4**	**-0.8**		
	comp=N,90nm,0.8s								
GUN	**Gumba**	**15.48**	**134**	*e*P	**Pn**	**06 29 14.8**	**-1.5**		
	comp=N,36nm,0.5s								
PKIN	**Phulchoki**	**15.48**	**136**	*e*P	**Pn**	**06 29 14.4**	**-1.8**		
PKI	**Pulchoki**	**15.49**	**136**	*e*P	**Pn**	**06 29 14.0**	**-2.4**		
	comp=N,39nm,0.5s								
ALBI	**Allahabad**	**15.79**	**151**	*e*P	**Pn**	**06 29 15.9**	**-4.0**		
ZAA0	**Zalesovo Array**	**16.41**	**24**	Pn	**Pn**	**06 29 28.7**	**+0.9**		
ZALV	**Zalesovo Beam**	**16.41**	**24**	Pn	**Pn**	**06 29 28.6**	**+0.8**		
	comp=N,2.6nm,0.3s,baz=218,slow=9.4,SNR=41								
ZALV				LR	LR	06 36 19.6			
	comp=N,369nm,21.5s,baz=214,slow=39								
	comp=N,40nm,0.7s								
ZALV	**Zalesovo Beam**	**16.41**	**24**	Pn	**Pn**	**06 29 28.4**	**+0.7**		
ZALV	**Zalesovo Beam**	**16.41**	**24**	*i* P	**Pn**	**06 29 28.8**	**+1.0**		
ZALV				pmax	pmax				
	comp=Z,41nm,0.7s								
BHUJ	**Bhuj**	**16.49**	**192**	*e*P	**Pn**	**06 29 29.1**	**+0.1**		
BHUJ				IAmb	IAmb	06 29 37.7			
	comp=Z,127nm,0.8s								
BHPL	**Bhopal**	**16.54**	**167**	*e*P	**Pn**	**06 29 27.0**	**-2.6**		
BHPL				IAmb	IAmb	06 29 32.2			
	comp=Z,35nm,0.8s								
BHPL				*e*S	**Sn**	**06 32 23.5**	**-10**		
GOMU	**GeErMu**	**17.20**	**94**	P	**Pn**	**06 29 39.0**	**+0.8**		
GOMU				sP	sP	06 29 45.3	+2.4		
GOMU				pmax	pmax				
	comp=Z,14nm,1.1s								
GOMU				pmax	pmax				
	comp=Z,97nm,4.1s								
GOMU				LR	LR				
	comp=Z,410nm,14.9s								
GOMU				LR	LR				
	comp=Z,470nm,13.2s								
GOMU				LR	LR				
	comp=Z,520nm,13.5s								
JASK	**Jask - Hormozg**	**18.83**	**229**	P	**Pn**	**06 29 59.2**	**+1.2**		
BOK	**Bokaro**	**18.86**	**142**	*e*P	**P**	**06 29 57.0**	**-0.9**		
SVE	**Sverdlovsk**	**19.29**	**338**	*e*P	**Pn**	**06 30 03.3**	**0.0**		
SVE				*e*S	**S**	**06 33 41.1**	**-0.1**		
SVE				pmax	pmax				
	comp=Z,88nm,1.1s								
SVE				MLR	MLR				
	comp=Z,1μm,10.0s								
ARU	**Arti**	**19.59**	**335**	P	**Pn**	**06 30 07.0**	**0.0**		
	baz=152,slow=8.5,SNR=38								
ARU				LR	LR	06 38 26.9			
	comp=Z,332nm,18.2s,baz=158,slow=39								
	comp=Z,28nm,0.6s								
ARU	**Arti**	**19.59**	**335**	P	**Pn**	**06 30 06.4**	**-0.6**		
ARU				IAmb	IAmb	06 30 13.2			
	comp=Z,66nm,0.9s								
ARU	**Arti**	**19.59**	**335***c*	*i* P	**Pn**	**06 30 07.4**	**+0.4**		
ARU				S	**S**	**06 33 49.3**	**+1.9**		
ARU				pmax	pmax				
	comp=Z,64nm,1.0s								
ARU				MLR	MLR				
	comp=Z,390nm,11.0s								
BANOM	**Banah**	**19.72**	**232**	P	**P**	**06 30 06.6**	**-0.8**		
BANOM				P	**P**	**06 30 06.6**	**-0.8**		
BANOM	**Banah**	**19.72**	**232**	P	**P**	**06 30 06.6**	**-0

SMDO	**Samad**	**20.95**	223		P		**P**	**06 30 19.8**	**-1.0**
SMDO					P		**P**	**06 30 19.8**	**-1.0**
JLN	**Jalan Bani Buh**	**21.01**	219		P		**P**	**06 30 21.3**	**-0.1**
	SNR=5.7								
JLN					P		**P**	**06 30 21.3**	**-0.1**
	SNR=5.7								
FAQ	**Al Faqa, Dubai**	**21.02**	231		P		**P**	**06 30 20.5**	**-1.0**
FAQ					P		**P**	**06 30 20.5**	**-1.0**
FAQ	**Al Faqa, Dubai**	**21.02**	231		P		**P**	**06 30 20.7**	**-0.7**
GROC	**Groznyy**	**21.05**	289	*e*	P		**P**	**06 30 22.2**	**+0.6**
GROC				*e*				06 30 40.1	
GROC				*e*	S		**S**	**06 34 18.0**	**+1.5**
GROC				*e*	SS		**SnSn**	**06 34 39.1**	**+2.0**
GROC					pmax		pmax		
	comp=Z,263nm,1.0s								
ASUD	**Al Ashush, Dub**	**21.27**	231		P		**P**	**06 30 25.2**	**+1.1**
ASUD	**Al Ashush, Dub**	**21.27**	231		P		**P**	**06 30 23.4**	**-0.7**
ALNE	**Al Ain**	**21.45**	229		P		**P**	**06 30 25.2**	**-0.9**
	SNR=8.0								
JMDO	**Jabal Madar**	**21.48**	222		P		**P**	**06 30 26.6**	**+0.1**
BELG	**Belogornoye**	**21.97**	315		P		**P**	**06 30 31.2**	**-0.2**
	comp=Z,153nm,0.8s,baz=40,slow=1.0,SNR=55								
BELG					LR		LR	06 40 45.5	
	comp=Z,149nm,19.2s,baz=129,slow=41								
	comp=Z,153nm,0.8s								
BELG	**Belogornoye**	**21.97**	315	*c*	*i* P		**P**	**06 30 30.9**	**-0.5**
BELG					pmax		pmax		
	comp=Z,62nm,1.0s								
GNI	**Garni**	**22.02**	281		P		**P**	**06 30 33.8**	**+1.5**
	comp=Z,97nm,0.9s,baz=75,slow=1.9,SNR=21								
GNI					LR		LR	06 40 40.0	
	comp=Z,158nm,19.0s,baz=100,slow=41								
	comp=Z,97nm,0.9s								
GNI	**Garni**	**22.02**	281		P		**P**	**06 30 31.8**	**-0.5**
GNI					IAmb		IAmb	06 30 37.5	
	comp=Z,87nm,0.8s								
GNI	**Garni**	**22.02**	281		P		**P**	**06 30 31.8**	**-0.5**
GNI					pmax		pmax		
	comp=Z,87nm,0.9s								
GNI	**Garni**	**22.02**	281		P		**P**	**06 30 33.9**	**+1.7**
GNI	**Garni**	**22.02**	281		P		**P**	**06 30 34.0**	**+1.7**
HYBB	**Hyderabad (bro**	**22.43**	167	*e*	P		**P**	**06 30 36.3**	**-0.3**
HYBB				*e*	S		**S**	**06 34 45.3**	**+1.6**
ZEI	**Tsey**	**22.44**	288	*e*	P		**P**	**06 30 36.1**	**-0.7**
ZEI					pmax		pmax		
	comp=Z,42nm,0.9s								
JRN	**Qarnain Island**	**22.59**	236		P		**P**	**06 30 36.9**	**-1.4**
	SNR=5.1								
NCK	**Nalchik**	**22.65**	290	*i*	P		**P**	**06 30 39.4**	**+0.5**
NCK					pmax		pmax		
	comp=Z,96nm,0.8s								
NCK					MLR		MLR		
	comp=Z,423nm,19.0s								
MOY	**Mondy**	**22.66**	48	*e*	P		**P**	**06 30 40.7**	**+1.7**
MOY					pmax		pmax		
	comp=Z,62nm,1.4s								
MHTO	**MHTO**	**22.71**	220		P		**P**	**06 30 40.8**	**+1.3**
MHTO					P		**P**	**06 30 40.8**	**+1.3**
ONI	**Oni**	**22.77**	288		P		**P**	**06 30 40.8**	**+0.6**
ONI	**Oni**	**22.77**	288		P		**P**	**06 30 40.8**	**+0.6**
ONI					pmax		pmax		
	comp=Z,280nm,0.8s								
AKH	**Akhalkalaki**	**22.82**	285	⇑	P		**P**	**06 30 42.1**	**+1.3**
KHOR	**Al-Khor Airpor**	**23.00**	240		P		**P**	**06 30 42.3**	**-0.3**
GOF	**Gofitskoye**	**23.09**	294	⇓	*e* P		**P**	**06 30 43.5**	**+0.1**
GOF					*e*S		**S**	**06 34 58.2**	**+2.9**
GOF					pmax		pmax		
	comp=Z,155nm,1.5s								
GOF					smax		smax		
	comp=N,56nm,1.1s								
GOF					smax		smax		
	comp=E,80nm,1.6s								
KBZ	**Khabaz**	**23.16**	290		P		**P**	**06 30 43.4**	**-0.8**
	comp=E,21nm,0.9s,baz=120,slow=6.3,SNR=36								
KBZ					LR		LR	06 41 52.5	
	comp=E,386nm,18.1s,baz=92,slow=42								
	comp=E,21nm,0.9s								
KBZ	**Khabaz**	**23.16**	290	*ce*	P		**P**	**06 30 43.1**	**-1.0**
KBZ					pmax		pmax		
	comp=Z,35nm,0.9s								
SHMA	**Al-Shehemyia**	**23.21**	241		P		**P**	**06 30 44.8**	**+0.1**
KARS	**Kars**	**23.22**	283		P		**P**	**06 30 46.6**	**+1.7**
KARS					pmax		pmax		
	comp=Z,467nm,1.0s								
KVAR	**Kislovodsk Arr**	**23.31**	291		P		**P**	**06 30 45.8**	**0.0**
	comp=Z,22nm,0.7s,baz=255,slow=20,SNR=6.5								
KVAR					LR		LR	06 41 51.1	
	comp=Z,367nm,21.3s,baz=211,slow=42								
	comp=Z,22nm,0.7s								
KIV	**Kislovodsk**	**23.31**	291	⇑	P		**P**	**06 30 46.8**	**+1.0**
KIV	**Kislovodsk**	**23.31**	291		P		**P**	**06 30 42.6**	**-3.2**
KIV					IAmb		IAmb	06 30 48.1	
	comp=Z,76nm,0.8s								
KIV	**Kislovodsk**	**23.31**	291	*ce*	P		**P**	**06 30 45.8**	**0.0**
KIV				*e*				06 31 11.8	
KIV				*i*	S		**S**	**06 35 02.7**	**+3.5**
KIV					pmax		pmax		
	comp=Z,102nm,1.0s								
KIV					MLR		MLR		
	comp=Z,256nm,17.0s								
KIV	**Kislovodsk**	**23.31**	291		P		**P**	**06 30 47.0**	**+1.1**
KIV					P		**P**	**06 30 47.0**	**+1.1**
KIV					P		**P**	**06 30 47.0**	**+1.1**
KIV	**Kislovodsk**	**23.31**	291	*i*	P		**P**	**06 30 46.8**	**+1.0**
	SNR=11								
SHA1	**Shidzhatmaz**	**23.33**	291	*c*	*i* P		**P**	**06 30 47.0**	**+0.8**
SAKB	**Bahrain**	**23.42**	242		P		**P**	**06 30 47.0**	**+0.1**
MZR	**Muzera**	**23.60**	232		P		**P**	**06 30 48.2**	**-0.6**
MZR	**Muzera**	**23.60**	232	*i*	P		**P**	**06 30 48.4**	**-0.3**
	SNR=7.1								
ZAK	**Zakamensk**	**23.62**	53	*e*	P		**P**	**06 30 50.0**	**+1.2**
ZAK					pmax		pmax		
	comp=Z,27nm,1.7s								
GEVA	**Gevas**	**23.62**	277		P		**P**	**06 30 48.8**	**-0.3**
GEVA					IAmb		IAmb	06 30 53.0	
	comp=Z,68nm,1.1s								
CHVG	**Ch'k'valeri**	**23.78**	288	⇓	P		**P**	**06 30 52.8**	**+2.5**
BATM	**Batumi**	**24.15**	285	⇑	P		**P**	**06 30 55.1**	**+1.2**
LZH	**Lanzhou**	**24.21**	88	*e*	P		**P**	**06 30 56.5**	**+1.8**
LZH					pP		sP	06 31 02.5	+4.7
LZH					S		**S**	**06 35 18.5**	**+4.6**
LZH					SS		**SnSn**	**06 35 58.5**	**+3.4**
LZH					pmax		pmax		
	comp=Z,52nm,1.2s								
LZH					pmax		pmax		
	comp=Z,230nm,4.7s								
LZH					LR		LR		
	comp=Z,820nm,12.0s								
LZH					LR		LR		
	comp=Z,690nm,11.4s								
LZH					LR		LR		
	comp=Z,780nm,13.1s								
GURO	**Guroymak-BITLI**	**24.36**	278		P		**P**	**06 30 55.1**	**-0.9**
KIRV	**Kirov**	**24.54**	329		P		**P**	**06 30 58.0**	**+0.8**
	comp=Z,42nm,0.7s,baz=98,slow=4.3,SNR=13								
	comp=Z,42nm,0.7s								
KIRV	**Kirov**	**24.54**	329	*ce*	P		**P**	**06 30 57.7**	**+0.5**
IRK	**Irkutsk**	**24.77**	49	*e*	P		**P**	**06 30 56.1**	**-3.3**
IRK					pmax		pmax		
	comp=Z,64nm,1.4s								
VRH	**Novokhopyorsk**	**24.98**	308	*e*	P		**P**	**06 31 01.2**	**-0.1**
VRH					pmax		pmax		
	comp=Z,60nm,0.8s								
SONM	**Songino Array**	**25.11**	60		P		**P**	**06 31 03.8**	**+1.1**
	comp=Z,12nm,0.9s,baz=265,slow=9.5,SNR=22								
SONM					LR		LR	06 41 48.3	
	comp=Z,869nm,18.9s,baz=258,slow=39								
	comp=Z,12nm,0.9s								
SONM	**Songino Array**	**25.11**	60		P		**P**	**06 31 04.1**	**+1.4**
SONM	**Songino Array**	**25.11**	60		P		**P**	**06 31 04.1**	**+1.4**
SONM					pmax		pmax		
	comp=Z,24nm,1.2s								
SOC	**Sochi**	**25.47**	290	*e*	P		**P**	**06 31 04.9**	**-0.9**
SOC				*e*	PPP		PPP	06 31 45.8	
SOC				*e*	S		**S**	**06 35 32.3**	**-1.3**
SOC					pmax		pmax		
	comp=Z,29nm,0.9s								
SOC					MLR		MLR		
	comp=Z,216nm,20.0s								
ULN	**Ulaanbaatar**	**25.56**	60		P		**P**	**06 31 07.8**	**+1.0**
ULN	**Ulaanbaatar**	**25.56**	60		P		**P**	**06 31 07.8**	**+1.0**
ULN					pmax		pmax		
	comp=Z,21nm,1.1s								
ULN	**Ulaanbaatar**	**25.56**	60		P		**P**	**06 31 07.8**	**+1.0**
ULN					P		**P**	**06 31 07.8**	**+1.0**

MARD	**Mardin**	**25.61**	276		P		**P**	**06 31 07.8**	**+0.5**
MARD					IAmb		IAmb	06 31 11.4	
	comp=Z,45nm,1.0s								
CD2	**Chengdu**	**26.12**	100		P		**P**	**06 31 13.8**	**+1.9**
CD2					pmax		pmax		
	comp=Z,30nm,0.9s								
CD2					LR		LR		
	comp=Z,490nm,13.3s								
CD2					LR		LR		
	comp=Z,560nm,13.9s								
VSR	**Storozhevoye**	**26.55**	308	*e*	P		**P**	**06 31 15.5**	**0.0**
VSR					pmax		pmax		
	comp=Z,90nm,0.6s								
VORR	**Voronezh**	**26.62**	309	*i*	P		**P**	**06 31 12.2**	**-4.0**
VORR					pmax		pmax		
	comp=Z,104nm,0.5s								
DOK	**Doka**	**26.67**	224		P		**P**	**06 31 16.3**	**-0.5**
LPSR	**Galich'ya Gora**	**27.02**	310	*e*	P		**P**	**06 31 19.8**	**0.0**
LPSR					pmax		pmax		
	comp=Z,80nm,0.8s								
ANN	**Anapa**	**27.07**	293	*e*	P		**P**	**06 31 19.4**	**-0.9**
ANN				*e*				06 32 01.6	
ANN				*e*	S		**S**	**06 35 56.9**	**-1.9**
ANN					pmax		pmax		
	comp=Z,109nm,1.2s								
PRGR	**Permogore**	**27.96**	332	*e*	P		**P**	**06 31 28.0**	**0.0**
PRGR				*e*	*PP		**sP**	**06 31 32.4**	**+1.2**
RAYN	**Ar Rayn**	**28.49**	244		P		**P**	**06 31 33.2**	**0.0**
RAYN					IAmb		IAmb	06 31 39.1	
	comp=Z,20nm,0.8s								
RAYN	**Ar Rayn**	**28.49**	244		P		**P**	**06 31 33.2**	**0.0**
RAYN					pmax		pmax		
	comp=Z,20nm,0.8s								
RAYN	**Ar Rayn**	**28.49**	244	*i*	P		**P**	**06 31 33.5**	**+0.3**
	SNR=17								
MOS	**Moscow**	**28.69**	316	*e*	P		**P**	**06 31 34.1**	**-0.6**
MOS				*e*				06 32 26.8	
MOS				*e*	S		**S**	**06 36 24.7**	**+0.5**
MOS				*e*	SS		**SnSn**	**06 37 49.6**	**+5.8**
MOS					pmax		pmax		
	comp=Z,78nm,1.0s								
MOS					pmax		pmax		
	comp=Z,100nm,1.1s								
MOS					MLR		MLR		
	comp=Z,400nm,16.0s								
XAN	**Xi'an**	**28.82**	90		P		**P**	**06 31 37.0**	**+0.9**
XAN					pP		sP	06 31 48.8	+10
XAN					pmax		pmax		
	comp=Z,8.0nm,0.8s								
BNN	**Bunyan**	**29.02**	281		P		**P**	**06 31 38.1**	**+0.2**
BNN					IAmb		IAmb	06 31 40.3	
	comp=Z,30nm,1.1s								
HHC	**Hu-ho-hao-te**	**29.02**	75	*e*	P		**P**	**06 31 38.3**	**+0.4**
HHC					pmax		pmax		
	comp=Z,20nm,1.0s								
HHC					pmax		pmax		
	comp=Z,130nm,4.9s								
HHC					LR		LR		
	comp=Z,770nm,13.1s								
HHC					LR		LR		
	comp=Z,2μm,13.3s								
HHC					LR		LR		
	comp=Z,2μm,12.2s								
OBN	**Obninsk**	**29.07**	315		P		**P**	**06 31 38.4**	**+0.4**
	comp=Z,5.7nm,0.3s,baz=123,slow=4.0,SNR=9.3								
	comp=Z,5.7nm,0.3s								
OBN	**Obninsk**	**29.07**	315		IAmb		IAmb	06 31 39.7	
	comp=Z,41nm,0.9s								
OBN	**Obninsk**	**29.07**	315	*d*	*i* P		**P**	**06 31 38.5**	**+0.5**
OBN				*e*				06 32 31.0	
OBN				*i*	S		**S**	**06 36 38.5**	**+8.4**
OBN					pmax		pmax		
	comp=Z,31nm,0.7s								
OBN					MLR		MLR		
	comp=Z,233nm,15.0s								
SIM	**Simferopol'**	**29.42**	294	*e*	P		**P**	**06 31 41.3**	**0.0**
SIM				*e*	*PP		**sP**	**06 31 45.9**	**+1.5**
SIM					pmax		pmax		
	comp=Z,89nm,0.9s								
KLMR	**Klimovskoe**	**29.94**	327	*e*	P		**P**	**06 31 45.3**	**-0.3**
KLMR				*e*				06 32 44.2	
KLMR					pmax		pmax		
	comp=Z,32nm,1.2s								
KLMR	**Klimovskoe**	**29.94**	327	*e*	P		**P**	**06 31 45.3**	**-0.3**
KLMR					AMP			06 31 46.9	
	comp=Z,32nm,1.2s								
KLMR				*e*	PP		**PnPn**	**06 32 44.3**	**+2.8**
KLMR				*e*	ScP		**ScP**	**06 38 33.8**	**+2.8**
ILGA	**Ilgaz**	**30.17**	286		P		**P**	**06 31 48.2**	**0.0**
CMAR	**Chiang Mai Arr**	**30.42**	126		P		**P**	**06 31 51.4**	**+1.0**
	comp=Z,1.5nm,0.5s,baz=313,slow=8.3,SNR=5.8								
CMAR					PcP		**PcP**	**06 34 49.5**	**-0.5**
	comp=Z,0.9nm,0.3s,baz=287,slow=5.3,SNR=4.2								
	comp=Z,1.5nm,0.5s								
CMAR	**Chiang Mai Arr**	**30.42**	126	*i*	P		**P**	**06 31 53.0**	**+2.7**
CMAR					pmax		pmax		
	comp=Z,1.0nm,0.4s								
BR131	**Keskin Array S**	**30.49**	283		P		**P**	**06 31 50.5**	**-0.5**
BR131	**Keskin Array S**	**30.49**	283		P		**P**	**06 31 50.5**	**-0.5**
BR131					pmax		pmax		
	comp=Z,60nm,0.8s								
BR131	**Keskin Array S**	**30.49**	283		P		**P**	**06 31 51.9**	**+0.8**
	SNR=20								
BRTR	**Keskin Array B**	**30.49**	283		P		**P**	**06 31 51.8**	**+0.8**
	comp=Z,36nm,0.8s,baz=89,slow=7.9,SNR=136								
BRTR					LR		LR	06 46 10.1	
	comp=Z,144nm,19.3s,baz=89,slow=40								
	comp=Z,36nm,0.8s								
BRTR	**Keskin Array B**	**30.49**	283		P		**P**	**06 31 49.8**	**-1.2**
GYA	**Guiyang**	**30.57**	105	⇑	P		P	06 31 57.0	+5.2
GYA					S		**S**	**06 37 00.5**	**+6.1**
GYA					pmax		pmax		
	comp=Z,33nm,3.7s								
GYA					LR		LR		
	comp=Z,410nm,12.0s								
ENH	**Enshi**	**30.80**	96		P		**P**	**06 31 54.7**	**+1.1**
ANTO	**Ankara**	**31.10**	284		P		**P**	**06 31 55.2**	**-1.0**
ANTO	**Ankara**	**31.10**	284		P		**P**	**06 31 55.2**	**-1.0**
ANTO					pmax		pmax		
	comp=Z,52nm,1.1s								
BR231	**Keskin MP Arra**	**31.12**	284		P		**P**	**06 31 57.3**	**+0.8**
BOD	**Bodaibo**	**31.83**	41	*e*	P		**P**	**06 32 02.9**	**+0.5**
BOD					pmax		pmax		
	comp=Z,33nm,1.0s								
MDUB	**Mudurnu**	**32.16**	286		P		**P**	**06 32 05.1**	**-0.5**
HNS	**HongShan**	**32.19**	80	⇑	P		**P**	**06 32 07.5**	**+1.7**
HNS				*e*	S		**S**	**06 37 25.0**	**+5.6**
HNS					pmax		pmax		
	comp=Z,9.0nm,1.2s								
HNS					LR		LR		
	comp=Z,390nm,12.4s								
HNS					LR		LR		
	comp=Z,390nm,11.5s								
HNS					LR		LR		
	comp=Z,510nm,13.1s								
AKASG	**Malin Array Be**	**32.70**	305		P		**P**	**06 32 09.9**	**-0.1**
	comp=Z,6.1nm,0.4s,baz=78,slow=7.6,SNR=178								
AKASG					LR		LR	06 46 42.8	
	comp=Z,220nm,18.3s,baz=83,slow=39								
	comp=Z,6.1nm,0.4s								
AKASG	**Malin Array Be**	**32.70**	305	*i*	P		**P**	**06 32 10.0**	**-0.1**
AKASG					pmax		pmax		
	comp=Z,40nm,0.6s								
AKBB	**Malin Array Si**	**32.70**	305	*ce*	P		**P**	**06 32 09.9**	**-0.2**
PALK	**Pallekele**	**32.72**	167		LR		LR	06 46 18.2	
	comp=Z,234nm,19.8s,baz=81,slow=38								
BORA	**Eskisehir**	**32.85**	285		P		**P**	**06 32 10.8**	**-0.9**
MILM	**Milestii Mici**	**33.00**	298	⇓	*i* P		**P**	**06 32 12.8**	**0.0**
	comp=Z,130nm,0.8s								
MILM	**Milestii Mici**	**33.00**	298	*e*	PP		PP	06 33 27.0	-0.1
MILM				*e*	L		L	06 48 36.0	
MILM					LRM		MLR	06 48 48.0	
	comp=Z,200nm,9.5s								
MILM	**Milestii Mici**	**33.00**	298	⇑	P		**P**	**06 32 13.1**	**+0.3**
MILM	**Milestii Mici**	**33.00**	298	*c*	*i* P		**P**	**06 32 13.0**	**+0.3**
MILM				*e*				06 33 27.0	
MILM					pmax		pmax		
	comp=Z,130nm,0.8s								
MILM					MLR		MLR		
	comp=Z,200nm,9.5s								
SORM	**Soroca**	**33.26**	300	⇓	P		**P**	**06 32 14.8**	**-0.2**
TPGR	**Topolog**	**33.46**	294	⇑	P		**P**	**06 32 17.7**	**+0.8**
CFR	**Carcaliu**	**33.62**	295	⇓	P		**P**	**06 32 18.9**	**+0.7**
SCTR	**Scanteiesti**	**33.67**	296	⇑	P		**P**	**06 32 20.1**	**+1.5**
HARR	**Harsova**	**33.83**	294	⇑	P		**P**	**06 32 21.2**	**+1.2**

MNK	**Minsk**	**33.85**	312	*i*	P		**P**	**06 32 18.2**	**-1.8**
MNK				*i*				06 33 30.8	
MNK				*i*				06 34 58.6	
MNK				*i*	S		**S**	**06 37 42.6**	**-2.2**
MNK				*i*	SS		**SnSn**	**06 39 49.1**	**-0.2**
MNK				*i*				06 42 42.7	
MNK					pmax		pmax		
	comp=Z,49nm,0.9s								
MNK					pmax		pmax		
	comp=N,28nm,0.9s								
MNK					pmax		pmax		
	comp=E,5.0nm,0.9s								
MNK					MLR		MLR		
	comp=Z,7μm,22.0s								
MNK					MLR		MLR		
	comp=E,33nm,15.0s								
MNK					MLR		MLR		
	comp=N,301nm,18.0s								
MNK	**Minsk**	**33.85**	312	*i*	P		**P**	**06 32 18.3**	**-1.8**
	comp=E,5.0nm,0.9s								
MNK				*i*	P		**P**	**06 32 18.3**	**-1.8**
	comp=N,28nm,0.9s								
MNK				*i*	P		**P**	**06 32 18.3**	**-1.8**
	comp=Z,49nm,0.8s,baz=279								
MNK				*i*	PP		**PnPn**	**06 33 30.9**	**-1.5**
MNK				*i*	PPP		PPP	06 33 42.0	
MNK				*i*	S		**S**	**06 37 42.6**	**-2.2**
MNK				*i*	SS		**SnSn**	**06 39 49.1**	**-0.2**
MNK				*i*	SSS		SSS	06 40 04.9	
MNK				*i*	LR		LR	06 45 58.9	
MNK				*i*	LRM		MLR	06 47 11.8	
	comp=Z,7μm,22.4s								
MNK				*i*	LRM		MLR	06 47 15.6	
	comp=E,33nm,15.3s								
MNK				*i*	LRM		MLR	06 47 23.3	
	comp=N,301nm,17.9s								
TIA	**Tai'an**	**34.40**	81	⇓	P		**P**	**06 32 26.8**	**+1.7**
TIA					pmax		pmax		
	comp=N,14nm,1.1s								
TIA					pmax		pmax		
	comp=N,40nm,3.5s								
TIA					LR		LR		
	comp=N,460nm,14.5s								
TIA					LR		LR		
	comp=N,680nm,14.4s								
TIA					LR		LR		
	comp=N,860nm,13.8s								
WHN	**Wuhan**	**34.43**	92	⇓	P		**P**	**06 32 27.0**	**+1.6**
WHN					pP		**sP**	**06 32 30.5**	**+2.0**
AKAS	**Kas**	**34.51**	279		P		**P**	**06 32 25.6**	**-0.6**
VRI	**Vrincioaia**	**34.53**	296	⇑	P		**P**	**06 32 27.6**	**+1.4**
VRI	**Vrincioaia**	**34.53**	296		P		**P**	**06 32 27.7**	**+1.6**
VRI					pmax		pmax		
	comp=Z,65nm,1.1s								
NACGM	**Naroch**	**34.54**	312	⇓	*e* P		**P**	**06 32 26.8**	**+0.8**
	baz=98								
KULA	**Kula-Manisa**	**34.54**	283		P		**P**	**06 32 27.0**	**+0.6**
BISRR	**Bisoca**	**34.58**	296	⇑	P		**P**	**06 32 28.7**	**+2.1**
PLOR	**Plostina**	**34.59**	296	⇑	P		**P**	**06 32 28.2**	**+1.6**
ISR	**Istrita**	**34.75**	295	⇑	P		**P**	**06 32 30.1**	**+2.0**
BIZ	**Bicaz**	**34.85**	298	⇑	P		**P**	**06 32 29.7**	**+0.8**
NEHR	**Nehoiu**	**34.88**	295	⇓	P		**P**	**06 32 31.3**	**+2.1**
COVR	**Voineasa-Covas**	**34.90**	296	⇑	P		**P**	**06 32 30.8**	**+1.5**
MLR	**Muntele Rosu**	**35.12**	296	⇓	P		**P**	**06 32 33.3**	**+1.9**
MLR	**Muntele Rosu**	**35.12**	296		LR		LR	06 48 49.9	
	comp=Z,187nm,19.6s,baz=76,slow=40								
MLR	**Muntele Rosu**	**35.12**	296		P		**P**	**06 32 32.2**	**+0.8**
MLR	**Muntele Rosu**	**35.12**	296		P		**P**	**06 32 32.2**	**+0.8**
MLR					pmax		pmax		
	comp=Z,83nm,0.9s								
VSU	**Vasula**	**35.15**	318	*i*	P		**P**	**06 32 31.5**	**+0.3**
VSU					pmax		pmax		
	comp=Z,93nm,1.0s								
VSU	**Vasula**	**35.15**	318	*e*	P		**P**	**06 32 31.7**	**+0.5**
OZUR		**35.16**	297	⇑	P		**P**	**06 32 32.7**	**+1.1**
BURAR	**Bucovina Array**	**35.40**	299	⇑	P		**P**	**06 32 34.1**	**+0.4**
BURAR	**Bucovina Array**	**35.40**	299		P		**P**	**06 32 32.9**	**-0.8**
BURAR					IAmb		IAmb	06 32 36.1	
	comp=Z,25nm,0.8s								
BURAR	**Bucovina Array**	**35.40**	299		P		**P**	**06 32 34.1**	**+0.4**
BURAR					pmax		pmax		
	comp=Z,25nm,0.8s								
BUR08	**Bucovina Ar. S**	**35.40**	299		P		**P**	**06 32 33.8**	**0.0**
BUR08					IAmb		IAmb	06 32 35.9	
	comp=Z,20nm,0.8s								
DOPR	**Dopca**	**35.45**	297	⇑	P		**P**	**06 32 35.6**	**+1.5**
LVZ	**Lovozero**	**35.47**	336		P		**P**	**06 32 33.7**	**-0.2**
LVZ	**Lovozero**	**35.47**	336	*ce*	P		**P**	**06 32 35.6**	**+1.6**
LVZ					pmax		pmax		
	comp=Z,34nm,0.8s								
APA	**Apatity**	**35.69**	335	⇓	*i* P		**P**	**06 32 35.1**	**-0.7**
APA					pmax		pmax		
	comp=Z,5.0nm,0.9s								
APA					MLR		MLR		
	comp=Z,900nm,10.0s								
VOIR		**35.75**	296	⇑	P		**P**	**06 32 37.7**	**+0.9**
ALN	**Alexandroupoli**	**35.89**	288		P		**P**	**06 32 38.1**	**+0.3**
ALN	**Alexandroupoli**	**35.89**	288		P		**P**	**06 32 36.6**	**-1.1**
ALN					IAmb		IAmb	06 32 39.7	
	comp=Z,24nm,1.0s								
ALN	**Alexandroupoli**	**35.89**	288		P		**P**	**06 32 36.7**	**-1.1**
ALN					pmax		pmax		
	comp=Z,24nm,1.0s								
STFAR	**Stefanesti-Arg**	**35.90**	295	⇑	P		**P**	**06 32 39.3**	**+1.4**
ARCR	**ARCALIA**	**36.03**	299	⇑	P		**P**	**06 32 41.0**	**+2.0**
LVV	**L'vov**	**36.04**	303

SNY pmax pmax
comp=Z,95nm,3.6s
SNY LR LR
comp=Z,250nm,14.3s
SNY LR LR
comp=Z,570nm,12.8s
SNY LR LR
comp=Z,640nm,12.9s
HERR Herculane 37.68 295 ⇓P P 06 32 53.4 +0.3
CRVS Cervenica-Dubn 37.78 302 *e*P **P 06 32 54.6 +0.7**
CRVS pmax pmax
comp=Z,13nm,1.0s
CRVS Cervenica-Dubn 37.78 302 *e*P **P 06 32 54.6 +0.7**
PLG Polygyros 37.93 288 P **P 06 32 55.9 +0.6**
KYMI Kymi, Euboea I 37.94 285 P **P 06 32 55.3 0.0**
SIRR Síria 37.98 298 ⇑P P 06 32 57.2 +1.7
BZS Buzias 38.11 297 ⇓P P 06 32 57.9 +1.2
KNT Kendrikon 38.13 289 P **P 06 32 57.8 +0.8**
MDVR Moldovita 38.19 295 ⇑P P 06 32 58.6 +1.2
PTL Penteli 38.29 284 P **P 06 32 58.6 +0.3**
XOR Xorichti 38.40 286 P **P 06 32 59.4 +0.2**
VLY Voula,Athens 38.40 284 P **P 06 32 59.5 +0.2**
BOVS Bovan 38.42 293 ⇓P P 06 32 59.9 +0.6
IDI Anoyia 38.43 279 ⇑P P 06 32 60.0 +0.4
IDI Anoyia 38.43 279 LR LR 06 52 57.6
comp=Z,49nm,18.1s,baz=82,slow=43
IDI Anoyia 38.43 279 P **P 06 32 58.6 -1.0**
IDI IAmb IAmb 06 33 01.5
comp=Z,23nm,0.9s
NIE Niedzica 38.49 303 *e*P **P 06 33 01.0 +1.2**
LIT Litokhoron 38.71 288 P **P 06 33 00.9 -1.0**
LIT Litokhoron 38.71 288 P **P 06 33 02.0 +0.2**
LIT Litokhoron 38.71 288 P **P 06 33 02.0 +0.2**
LIT pmax pmax
comp=Z,24nm,1.1s
ATAL Atalanti 38.72 285 P **P 06 33 01.8 -0.1**
OJC Ojcow 38.73 304 *e*P **P 06 33 01.9 +0.1**
OJC Ojcow 38.73 304 P **P 06 33 01.8 -0.1**
OJC IAmb IAmb 06 33 03.5
comp=Z,51nm,1.0s
OJC Ojcow 38.73 304 P **P 06 33 01.8 -0.1**
OJC pmax pmax
comp=Z,51nm,1.0s
ATD Arta Tunnel 38.86 233 P **P 06 33 06.6 +3.3**
comp=Z,20nm,0.9s,baz=297,slow=9.0,SNR=4.5
ATD LR LR 06 52 35.0
comp=Z,86nm,21.1s,baz=331,slow=42
ATD Arta Tunnel 38.86 233 P **P 06 33 01.5 -1.8**
ATD IAmb IAmb 06 33 05.9
comp=Z,74nm,1.4s
KTI Kastanea 38.91 288 P **P 06 33 03.8 +0.2**
PSZ Piszkesteto 38.93 301 P **P 06 33 03.6 0.0**
PSZ Piszkesteto 38.93 301 P **P 06 33 03.6 0.0**
PSZ pmax pmax
comp=Z,19nm,0.9s
PSZ Piszkesteto 38.93 301 P **P 06 33 04.5 +0.9**
LTK Loutraki 38.97 284 P **P 06 33 03.1 -0.9**
LANS Liptovska Anna 39.06 303 *e*P **P 06 33 06.7 +2.0**
LANS pmax pmax
comp=Z,8.0nm,0.8s
LANS Liptovska Anna 39.06 303 *e*P **P 06 33 06.6 +1.9**
IMMV Iera Moni Meta 39.06 280 P **P 06 33 05.2 +0.4**
AGG Agios Georgios 39.14 286 P **P 06 33 04.6 -0.9**
AGG Agios Georgios 39.14 286 P **P 06 33 04.6 -0.9**
ARA0 ARCESS Array S 39.18 336 *e*P **P 06 33 06.2 +0.8**
ARCES ARCESS Array B 39.18 336 P **P 06 33 06.2 +0.8**
comp=Z,13nm,0.6s,baz=109,slow=7.9,SNR=76
ARCES LR LR 06 50 13.7
comp=Z,168nm,21.3s,baz=126,slow=38
comp=Z,13nm,0.6s
ARCES ARCESS Array B 39.18 336 P **P 06 33 06.2 +0.8**
THL Klokotos Trika 39.21 287 P **P 06 33 05.6 -0.4**
MAKR Makrakomi, Fth 39.29 286 P **P 06 33 06.4 -0.3**
FNA Florina 39.34 289 P **P 06 33 07.2 0.0**
FRGS Fruska Gora 39.44 296 ⇑P P 06 33 09.2 +1.2
FRGS Fruska Gora 39.44 296 ⇑*i*P **P 06 33 08.8 +0.9**
GUR Goura 39.47 285 P **P 06 33 07.7 -0.6**
KTHA Kythira Island 39.48 282 P **P 06 33 07.1 -1.2**
KTHR Kythira 39.52 282 P **P 06 33 07.5 -1.2**
DIVS Divibare 39.53 295 P **P 06 33 08.8 0.0**
DIVS IAmb IAmb 06 33 11.4
comp=Z,50nm,0.9s
DIVS Divibare 39.53 295 ⇑*i*P **P 06 33 09.6 +0.8**
VYHS Vyhne 39.55 302 *e*P **P 06 33 09.8 +1.0**
VYHS pmax pmax
comp=Z,12nm,1.0s
VYHS Vyhne 39.55 302 *e*P **P 06 33 09.8 +1.0**
EVR Evrytania 39.56 286 P **P 06 33 08.9 -0.2**
BNX BinXian 39.57 63 ⇓P P 06 33 10.0 +1.1
BNX pmax pmax
comp=Z,10.0nm,1.1s
BNX pmax pmax
comp=Z,140nm,4.7s
ANX Ano Chora 39.57 286 P **P 06 33 08.9 -0.3**
BUD Budapest 39.57 300 P **P 06 33 09.2 +0.2**
KLV Kalavryta, Ach 39.58 285 P **P 06 33 08.7 -0.5**
EFP Efpalio 39.64 285 P **P 06 33 09.1 -0.5**
LAKA Lakka 39.64 285 P **P 06 33 09.0 -0.7**
KTK1 Kautokeino 39.72 334 *e*P **P 06 33 10.3 +0.5**
SJES Sjenica 39.73 293 ⇑*i*P **P 06 33 11.4 +0.9**
KBN Korca 39.82 289 P **P 06 33 10.9 -0.3**
KBN Korca 39.82 289 P **P 06 33 10.9 -0.3**
KBN pmax pmax
comp=Z,20nm,1.1s
KOLL Kolacno 39.83 302 *e*P **P 06 33 12.5 +1.5**
OKC Ostrava-Krasne 39.83 304 AMS AMS 06 52 50.0
comp=Z,300nm,13.7s
PVO Paravola 39.86 286 P **P 06 33 11.8 +0.4**
IVA Berane 39.88 293 *e*P **P 06 33 13.1 +1.4**
PVY Plav 39.90 292 *e*P **P 06 33 14.2 +2.3**
UPP Uppsala 39.99 319 *e*P **P 06 33 13.2 +1.0**
BBLS Lazići ⇓*i*P **P 06 33 13.4 +0.8**
SRO Srobarova 40.00 301 *e*P **P 06 33 14.5 +2.0**
SRO Srobarova 40.00 301 *e*P **P 06 33 14.4 +2.0**
ITM Ithomi 40.02 284 P **P 06 33 11.4 -1.5**
MORH Mrgy, Hungar 40.05 298 ⇓P P 06 33 13.6 +0.7
MORH Mrgy, Hungar 40.05 298 ⇑*i*P **P 06 33 13.4 +0.5**
MORH Mrgy, Hungar 40.05 298 P **P 06 33 13.6 +0.7**
RUDO Rudo 40.08 294 *e*P **P 06 33 13.7 +0.5**
LSK Leskovik 40.09 288 P **P 06 33 13.5 +0.1**
MAUC Maruska 40.10 303 *e*P **P 06 33 14.6 +1.3**
MAUC AMS AMS 06 53 30.0
comp=Z,700nm,13.9s
GKP Gorka Klasztor 40.10 309 *e*P **P 06 33 14.2 +0.9**
CSKK Cskako 40.10 300 P **P 06 33 14.4 +1.0**
PLE Pljevlja 40.13 294 *e*P **P 06 33 15.7 +1.9**
KOME Kolasin 40.16 293 ⇑*i*P **P 06 33 14.9 +0.9**
HAMF Hammerfest 40.20 337 *e*P **P 06 33 14.8 +0.9**
MORC Moravsky Berou 40.23 304 ⇑P P 06 33 15.1 +0.7
MORC Moravsky Berou 40.23 304 P **P 06 33 14.9 +0.5**
MORC Moravsky Berou 40.23 304 P **P 06 33 14.9 +0.5**
MORC pmax pmax
comp=Z,17nm,0.9s
MORC Moravsky Berou 40.23 304 *e*P **P 06 33 14.9 +0.5**
PYL PYLOS 40.26 283 P **P 06 33 13.4 -1.4**
JAVC Velka Javorina 40.27 302 *e*P **P 06 33 16.5 +1.7**
VIKU Vikbolandet 40.38 317 *e*P **P 06 33 15.7 +0.2**
YAK Yakutsk 40.43 37 P **P 06 33 16.7 +0.9**
comp=Z,18nm,0.5s,baz=231,slow=0.6,SNR=5.2
YAK LR LR 06 50 17.1
comp=Z,211nm,21.3s,baz=266,slow=36
comp=Z,18nm,0.5s
YAK Yakutsk 40.43 37 IAmb IAmb 06 33 23.2
comp=Z,57nm,0.8s
YAK Yakutsk 40.43 37 *e*P **P 06 33 16.3 +0.5**
YAK *e* 06 34 52.0
YAK *e* 06 35 18.4
YAK *e*S **S 06 39 21.5 -3.2**
YAK *e*SS **SS 06 42 22.1 -1.1**
YAK *e* 06 43 16.3
YAK pmax pmax
comp=Z,52nm,0.9s
YAK pmax pmax
comp=N,5.0nm,1.0s
YAK pmax pmax
comp=E,20nm,1.4s
YAK pmax pmax
comp=Z,17nm,0.6s
YAK pmax pmax
comp=N,6.0nm,0.5s
YAK pmax pmax
comp=E,5.0nm,0.5s
YAK smax smax
comp=N,8.0nm,1.1s
YAK smax smax
comp=E,5.0nm,1.0s
KOVH Kovagotottos 40.44 298 P **P 06 33 16.6 +0.5**
PDG Podgorica 40.45 292 ⇑P P 06 33 16.7 +0.4
PDG Podgorica 40.45 292 P **P 06 33 14.7 -1.5**
PDG IAmb IAmb 06 33 18.3
comp=Z,46nm,0.7s
PDG Podgorica 40.45 292 ⇑*i*P **P 06 33 16.6 +0.4**
TTG Podgorica 40.45 292 ⇑*i*P **P 06 33 16.6 +0.4**
LKD2 Lefkada island 40.45 286 P **P 06 33 15.4 -1.0**
SMOL Smolenice 40.48 302 *e*P **P 06 33 17.3 +0.8**
SMOL pmax pmax
comp=Z,6.0nm,0.7s
SMOL Smolenice 40.48 302 *e*P **P 06 33 17.2 +0.8**
UPM Unac-Piva 40.51 294 ⇑*i*P **P 06 33 18.5 +1.5**
UPM Unac-Piva 40.51 294 *e*P **P 06 33 17.9 +0.9**
NKY Niksic 40.54 293 *e*P **P 06 33 17.9 +0.7**
DRME Dracevica, Mon 40.56 292 ⇑*i*P **P 06 33 17.3 +0.1**
DRME Dracevica, Mon 40.56 292 ⇑*i*P **P 06 33 17.4 +0.2**
ULC Ulcinj 40.58 292 *e*P **P 06 33 17.1 -0.3**
NKME Niksic 40.58 293 *e*P **P 06 33 17.9 +0.5**
MODS Modra-Piesok 40.60 302 *e*P **P 06 33 18.7 +1.2**
MODS pmax pmax
comp=Z,35nm,1.1s
MODS Modra-Piesok 40.60 302 *e*P **P 06 33 18.7 +1.2**
MPLH Magyarpolny 40.62 300 P **P 06 33 18.3 +0.7**
CEME Cevo 40.66 293 ⇑*i*P **P 06 33 18.4 +0.3**
KRLC Kraliky 40.68 304 *e*P **P 06 33 19.5 +1.4**
KRLC MLR MLR
comp=Z,200nm,12.9s
KRLC Kraliky 40.68 304 *e*P **P 06 33 19.5 +1.4**
KRLC AMS AMS 06 51 40.0
comp=Z,200nm,12.9s
EGYH Egyhazaskeszo 40.72 300 P **P 06 33 19.3 +0.9**
BUM Brajici-Budva 40.74 292 ⇑*i*P **P 06 33 19.0 +0.2**
ZST Bratislava 40.74 301 *e*P **P 06 33 19.6 +1.0**
ZST pmax pmax
comp=Z,29nm,0.9s
ZST Bratislava 40.74 301 *e*P **P 06 33 19.6 +1.0**
KEK Kerkira 40.80 288 P **P 06 33 18.1 -1.2**
KEK Kerkira 40.80 288 P **P 06 33 18.1 -1.2**
VLO Vlora 40.80 289 P **P 06 33 18.3 -0.9**
VLO Vlora 40.80 289 P **P 06 33 18.3 -0.9**
VLO pmax pmax
comp=Z,111nm,1.1s
BLEU Blekinge 40.82 314 *i*P **P 06 33 17.6 -1.5**
BRY Bratogost 40.84 293 *e*P **P 06 33 20.0 +0.3**
JETT Jettan, Norway 40.85 335 *e*P **P 06 33 20.2 +0.9**
KSP Ksiaz 40.90 306 *e*P **P 06 33 20.3 +0.5**
VRAC Vranov 40.90 303 ⇑P P 06 33 21.0 +1.0
VRAC Vranov 40.90 303 LR LR 06 54 04.4
comp=Z,165nm,18.1s,baz=82,slow=42
VRAC Vranov 40.90 303 *e*P **P 06 33 20.9 +0.9**
DPC Dobruska-Polom 40.94 305 *e*P **P 06 33 21.2 +0.9**
DPC MLR MLR
comp=Z,200nm,13.7s
DPC Dobruska-Polom 40.94 305 *e*P **P 06 33 21.2 +0.9**
DPC AMS AMS 06 52 10.0
comp=Z,200nm,13.7s
OSTC Ostas 40.98 305 *e*P **P 06 33 22.0 +1.4**
OSTC AMS AMS 06 53 30.0
comp=Z,300nm,13.2s
HCY Herceg Novi 40.99 293 ⇑*i*P **P 06 33 21.3 +0.6**
HCY Herceg Novi 40.99 293 ⇑*i*P **P 06 33 20.7 0.0**
TREB Trebinje 41.02 293 *e*P **P 06 33 21.2 +0.2**
KRUC Moravsky 41.07 303 *e*P **P 06 33 22.0 +0.7**
CHVC Chvalec 41.08 305 *e*P **P 06 33 22.9 +1.5**
CHVC AMS AMS 06 53 50.0
comp=Z,300nm,15.1s
UPC Upice 41.11 305 *e*P **P 06 33 22.9 +1.2**
UPC MLR MLR
comp=Z,300nm,12.7s
UPC Upice 41.11 305 *e*P **P 06 33 22.9 +1.2**
UPC AMS AMS 06 51 50.0
comp=Z,300nm,12.7s
SOP Sopron 41.19 301 P **P 06 33 23.1 +0.8**
MDJ Mudanjiang 41.31 64 P **P 06 33 23.8 +0.4**
MDJ pmax pmax
comp=Z,7.0nm,0.8s
MDJ pmax pmax
comp=Z,110nm,4.5s
BLY Banja Luka 41.35 296 ⇑*i*P **P 06 33 24.2 +0.5**
RONA Rosalia, Austr 41.36 301 *i*P **P 06 33 24.5 +0.7**
comp=Z,32nm,1.2s,SNR=12
BSD Bornholm Skovb 41.37 312 *e*P **P 06 33 23.4 -0.3**
BSD Bornholm Skovb 41.37 312 *i*P **P 06 33 21.8 -1.9**
BSD IAmb IAmb 06 33 23.6
comp=Z,13nm,0.8s
TRO Tromso 41.37 334 *e*P **P 06 33 24.0 +0.6**
STON Ston 41.45 293 ⇑*i*P **P 06 33 24.4 0.0**
MGRS Mrkonjic Grad 41.50 296 *e*P **P 06 33 26.5 +1.6**
SRKY Kupres RS 41.52 295 *e*P P 06 33 17.0 -8.3
CONA Conrad Observa 41.61 301 *i*P **P 06 33 26.6 +0.8**
comp=Z,45nm,1.1s,SNR=29
TREC Trest 41.62 303 AMS AMS 06 54 10.0
comp=Z,300nm,14.4s
KOGS Kog 41.63 299 *e*P **P 06 33 26.2 +0.3**
KLR Kul'dur 41.87 57 P **PcP 06 33 28.4 +0.6**
comp=Z,5.2nm,0.5s,baz=289,slow=7.7,SNR=14
KLR PcP **PcP 06 35 23.0 -0.6**
comp=Z,4.0nm,0.7s,baz=275,slow=7.3,SNR=4.5
KLR LR LR 06 52 27.7
comp=Z,287nm,20.7s,baz=268,slow=38
comp=Z,5.2nm,0.5s
KLR Kul'dur 41.87 57*ce*P **P 06 33 29.3 +1.5**
KLR pmax pmax
comp=Z,19nm,1.3s
DEL Delary 41.90 314 *e*P **P 06 33 28.3 +0.3**
DEL Delary 41.90 314 *i*P **P 06 33 26.0 -2.0**
HFS Hagfors 41.98 320 LR LR 06 50 35.6
comp=Z,118nm,19.3s,baz=97,slow=36
PVCC Panska Ves 42.02 305 AMS AMS 06 52 30.0
comp=Z,300nm,13.7s
FAUS Fauske 42.10 331 *e*P **P 06 33 30.1 +0.5**
PRU Pruhonice 42.12 305 *e*P **P 06 33 31.3 +1.4**
PRU MLR MLR
comp=Z,300nm,14.4s
PRU Pruhonice 42.12 305 *e*P **P 06 33 31.3 +1.4**
PRU AMS AMS 06 54 20.0
comp=Z,300nm,14.4s
SEHB SEOHWA 42.13 74 P **P 06 33 31.1 +0.9**
SEHB IAmb IAmb 06 33 34.8
comp=Z,37nm,1.4s
KSAR Wonju Array Be 42.14 75 P **P 06 33 30.2 0.0**
KSAR Wonju Array Be 42.14 75 P **P 06 33 30.2 0.0**
KSRS Korea Array 42.16 75 P **P 06 33 30.9 +0.5**
comp=Z,7.9nm,1.0s,baz=280,slow=7.0,SNR=21
KSRS PcP **PcP 06 35 23.7 -1.0**
comp=Z,1.2nm,0.6s,baz=277,slow=4.4,SNR=4.6
KSRS LR LR 06 52 23.8
comp=Z,134nm,18.8s,baz=275,slow=38
comp=Z,7.9nm,1.0s
MOR8 Moi Rana 42.22 329 *e*P **P 06 33 30.2 -0.3**
STEI Steigen 42.23 331 *e*P **P 06 33 31.3 +0.7**
TIXI Tiksi 42.29 23 P **P 06 33 31.2 +0.3**
comp=Z,14nm,0.8s,baz=91,slow=23,SNR=12
comp=Z,14nm,0.8s
TIXI Tiksi 42.29 23 P **P 06 33 31.3 +0.3**
TIXI IAmb IAmb 06 33 37.7
comp=Z,29nm,0.8s
TIXI Tiksi 42.29 23*ce*P **P 06 33 31.7 +0.7**
TIXI pmax pmax
comp=Z,12nm,0.6s
CRES Cresnjev 42.30 298 ⇑*i*P **P 06 33 31.8 +0.3**
RGN Rugen 42.33 311 P **P 06 33 31.0 -0.4**
PERS Pernice 42.35 299 *i*P **P 06 33 32.3 +0.3**
BRG Berggiesshubel 42.37 306 *i*P **P 06 33 32.7 +0.7**
BRG Amp 06 33 34.4
comp=Z,27nm,0.9s
BRG *ex* x 06 33 36.7
BRG Amp 06 33 38.0
comp=Z,12nm,0.8s
BRG *ex* x 06 33 48.3
BRG Amp 06 33 49.0
comp=Z,9.6nm,0.8s
BRG *ex* x 06 35 23.7
BRG Amp 06 35 27.0
comp=Z,8.0nm,1.0s
BRG Amp 06 55 17.0
comp=E,0.2nm,11.3s
BRG Amp 06 55 18.0
comp=N,0.1nm,11.1s
BRG Amp 06 55 26.0
comp=Z,0.3nm,12.4s
BRG Berggiesshubel 42.37 306 *i*P **P 06 33 32.6 +0.7**
BRG *e* 06 33 36.6
BRG *e* 06 35 23.7
BRG pmax pmax
comp=Z,27nm,0.9s
BRG MLR MLR
comp=E,200nm,11.3s
BRG MLR MLR
comp=N,120nm,11.1s
BRG MLR MLR
comp=Z,310nm,12.4s
BJUU Bjuv 42.39 314 *i*P **P 06 33 31.1 -0.9**
KSCHJ Chungju 42.40 76 P **P 06 33 31.5 -0.9**
SOKA Soboth 42.40 300 *i*P **P 06 33 33.0 +0.7**
comp=Z,45nm,1.2s,SNR=27
BORU Boraas 42.46 316 *i*P **P 06 33 31.6 -0.9**
CKRC Cesky Krumlov 42.47 303 *e*P **P 06 33 34.2 +1.4**
CKRC AMS AMS 06 55 00.0
comp=Z,200nm,18.0s
BOJS Bojanci 42.51 298 *e*P **P 06 33 33.6 +0.4**
MOA Molln 42.68 301 *i*P **P 06 33 34.8 +0.3**
comp=Z,20nm,1.0s,SNR=7.6
COP Copenhagen 42.75 313 *i*P **P 06 33 35.6 +0.7**
OBKA Obir 42.77 299 *i*P **P 06 33 36.1 +0.7**
comp=Z,29nm,0.9s,SNR=11
MATE Matera 42.78 291 ⇑P P 06 33 35.8 +0.4
GEC2 GERESS Array S 42.85 303 P **P 06 33 36.2 +0.2**
GEC2 IAmb IAmb 06 33 38.5
comp=Z,34nm,1.1s
GERES GERESS Array B 42.85 303 P **P 06 33 37.1 +1.1**
comp=Z,17nm,1.0s,baz=90,slow=4.5,SNR=73
GERES LR LR 06 55 47.8
comp=Z,142nm,18.2s,baz=85,slow=42
comp=Z,17nm,1.0s
GERES GERESS Array B 42.85 303 P **P 06 33 36.3 +0.2**
GERES GERESS Array B 42.85 303 P **P 06 33 36.3 +0.2**
SSLB Suanglung 42.88 97 P **P 06 33 35.9 -0.6**
SSLB IAmb IAmb 06 33 40.1
comp=Z,22nm,0.7s
KHC Kasperske Hory 42.88 303 P **P 06 33 36.5 +0.4**
KHC IAmb IAmb 06 33 38.8
comp=Z,33nm,1.1s
KHC Kasperske Hory 42.88 303 P **P 06 33 36.6 +0.4**
KHC pmax pmax
comp=Z,33nm,1.1s
KHC Kasperske Hory 42.88 303 *e*P **P 06 33 37.2 +1.0**
KHC x x 06 33 46.0
KHC PP **PP 06 35 16.0 +0.6**
KHC AMS AMS 06 54 50.0
comp=Z,200nm,18.2s
LJU Ljubljana 42.88 299 ⇑*i*P **P 06 33 36.9 +0.7**
LJU Ljubljana 42.88 299 *i*P **P 06 33 37.0 +0.7**
CLL Collm 42.89 307 P **P 06 33 36.0 -0.1**
CLL Collm 42.89 307 *i*P **P 06 33 36.2 +0.1**
CLL *i* 06 33 40.4
CLL *e*S **S 06 40 07.0 +5.6**
CLL pmax pmax
comp=Z,30nm,1.2s
CLL Collm 42.89 307 *i*P **P 06 33 36.2 +0.1**
comp=Z,30nm,1.2s
CLL *i* pP **sP 06 33 40.4 +1.1**
CLL *e*PP **PP 06 35 16.0 +0.6**
CLL *e*sPP 06 35 23.0
CLL *e*PcP **PcP 06 35 25.0 -1.9**
CLL *e*S S 06 40 07.0 +5.6
CLL *e*SS **SS 06 43 13.0 +0.8**
ONAU Onsala 42.93 316 *i*P **P 06 33 36.8 +0.5**
NC405 NORSAR Array S 42.98 321 P **P 06 33 36.9 +0.2**
CEY Cerknica 43.02 298 ⇑*i*P **P 06 33 37.7 +0.4**
BJO1 Bjornoya 43.03 341 *e*P **P 06 33 37.5 +0.5**
NC602 NORSAR Array S 43.06 321 P **P 06 33 37.2 -0.1**
NC602 IAmb IAmb 06 33 38.9
comp=Z,76nm,1.3s
USA0B Ussuriysk Arra 43.08 64 P **P 06 33 36.8 -1.0**
USA0B Ussuriysk Arra 43.08 64 P **P 06 33 36.8 -1.0**
USA0B pmax pmax
comp=Z,5.0nm,0.9s
USRK Ussuriysk Ar. 43.08 64 P **P 06 33 37.1 -0.7**
comp=Z,2.3nm,0.6s,baz=259,slow=8.5,SNR=4.6
USRK LR LR 06 52 36.7
comp=Z,212nm,20.5s,baz=276,slow=38
comp=Z,2.3nm,0.6s
BIOA Bad Ischl, Aus 43.12 301 *e*P **P 06 33 38.5 +0.3**
comp=Z,24nm,1.1s
NC303 NORSAR Array S 43.15 321 P **P 06 33 37.7 -0.5**
NB201 NORSAR Array S 43.18 321 P **P 06 33 37.8 -0.7**
TIP Timpagrande 43.21 288 ⇓P P 06 33 39.3 +0.3
TIP Timpagrande 43.21 288 P **P 06 33 36.6 -2.4**
TIP IAmb IAmb 06 33 40.7
comp=Z,35nm,1.1s
NB2 NORSAR Subarra 43.22 321 P **P 06 33 38.7 -0.1**
baz=91,slow=8.6
NB2 NORSAR Subarra 43.22 321 P **P 06 33 38.7 -0.1**
comp=Z,29nm,0.8s,baz=91,slow=8.6
NOA NORSAR Array B 43.22 321 P **P 06 33 38.6 -0.2**
comp=Z,21nm,0.7s,baz=91,slow=8.0,SNR=90
NOA LR LR 06 51 24.7
comp=Z,97nm,18.5s,baz=100,slow=36
comp=Z,21nm,0.7s
VOJS Vojsko 43.32 299 *i*P **P 06 33 39.9 +0.1**
MYKA Terra Mystica 43.35 300 *i*P **P 06 33 40.6 +0.5**
comp=Z,6.4nm,0.7s
SKDS Skadanscina 43.35 298 ⇑*i*P **P 06 33 40.0 0.0**
NAO01 NORSAR Array S 43.38 321 P **P 06 33 39.5 -0.5**
NAO01 NORSAR Array S 43.38 321 *e*P **P 06 33 40.0 0.0**
NKC Novy Kostel 43.41 305 AMS AMS 06 55 30.0
comp=Z,300nm,14.3s
NBO00 NORSAR Array S 43.43 321 P **P 06 33 39.8 -0.7**
NC204 NORSAR Array S 43.44 321 P **P 06 33 39.9 -0.7**
PRED Cave del Predi 43.44 300 P **P 06 33 39.6 -1.2**
KBA Koelnbreinsper 43.45 301 *i*P **P 06 33 40.4 -0.6**
comp=Z,9.3nm,1.0s,SNR=6.8
TRI Trieste 43.48 298 P **P 06 33 39.3 -1.7**
TRI Trieste 43.48 298 P **P 06 33 39.3 -1.7**
TRI pmax pmax
comp=Z,57nm,0.9s
TWG Pinlang 43.50 98 P **P 06 33 42.2 +0.8**
TWG IAmb IAmb 06 33 45.9
comp=Z,37nm,1.0s
CUC Castrocucco 43.63 290 P **P 06 33 41.9 -0.5**
CUC IAmb IAmb 06 33 45.2
comp=Z,44nm,0.9s
CLUD Cludinico 43.90 300 P **P 06 33 44.0 -0.5**
GSI Gunungsitoli 43.91 144 P P 06 33 55.0 +10
KONO Kongsberg 44.05 319 P **P 06 33 45.3 0.0**
KONO IAmb IAmb 06 33 46.3
comp=Z,31nm,0.8s
KONO Kongsberg 44.05 319 P **P 06 33 45.3 0.0**
KONO pmax pmax
comp=Z,31nm,0.8s
KONO Kongsberg 44.05 319 *e*P **P 06 33 45.4 0.0**
STAL STALIGIAL 44.06 300 P **P 06 33 45.2 -0.6**
ABTA Abfaltersbach 44.08 300 *i*P **P 06 33 45.5 -0.5**
comp=Z,8.7nm,1.0s
CEL Celeste 44.15 288 P **P 06 33 46.3 -0.3**
GRFO Grafenberg 44.29 305 P **P 06 33 48.7 +1.2**
GRFO IAmb IAmb 06 33 49.9
comp=Z,46nm,1.1s
GRFO Grafenberg 44.29 305 P **P 06 33 48.7 +1.2**
GRFO pmax pmax
comp=Z,46nm,1.1s
WTTA Wattenberg 44.54 301 *i*P **P 06 33 49.5 -0.2**
comp=Z,36nm,1.2s,SNR=8.4
WATA Walderalm 44.56 301 *i*P **P 06 33 50.0 +0.2**
comp=Z,24nm,1.2s,SNR=5.9
GRNR Gornyy 44.57 54 ⇑*i*P **P 06 33 50.6 +0.9**
GRNR pmax pmax
comp=Z,8.0nm,1.1s
GRNR MLR MLR
comp=E,280nm,16.0s
GRNR MLR MLR
comp=N,250nm,18.0s
GRNR MLR MLR
comp=Z,300nm,11.0s
SKAR Skarslia 44.65 321 *e*P **P 06 33 50.9 +0.7**
HOMB Homborsund 44.69 317 *e*P **P 06 33 50.5 0.0**
NRCA Norcia 44.70 295 P **P 06 33 51.6 +0.7**
NRCA IAmb IAmb 06 33 53.3
comp=Z,36nm,1.0s
CTI Castel Tesino 44.83 299 P **P 06 33 50.6 -1.3**
CTI IAmb IAmb 06 33 52.6
comp=Z,18nm,1.0s
CTI Castel Tesino 44.83 299 P **P 06 33 50.6 -1.3**
CTI pmax pmax

comp=Z,18nm,1.0s
SQTA Sankt Quirin 44.83 301 *i* P **P** **06 33 51.7 -0.3**
comp=Z,15nm,1.0s
MOTA Moosalm 44.87 301 *i* P **P** **06 33 52.1 -0.2**
comp=Z,20nm,0.9s,SNR=8.1
MOL Molde 44.95 323 *eP* **P** **06 33 53.7 +1.1**
MURB Monte Urbino 44.98 295 P **P** **06 33 54.2 +1.0**
TEOL Teolo 44.99 299 P **P** **06 33 52.9 -0.3**
SPB2 Spitsbergen Ar 45.05 346 P **P** **06 33 53.2 0.0**
SPB2 IAmb IAmb 06 34 00.4
comp=Z,34nm,1.0s
SPITS Spitsbergen Ar 45.06 346 LR LR 06 55 21.2
comp=Z,132nm,19.1s,baz=67,slow=40
SPITS Spitsbergen Ar 45.06 346 P **P** **06 33 54.8 +1.6**
SPITS pmax pmax
comp=Z,34nm,0.9s
RETA Reutte 45.07 302 *i* P **P** **06 33 54.6 +0.8**
comp=Z,19nm,1.4s
FETA Feichten 45.20 301 *i* P **P** **06 33 54.5 -0.5**
comp=Z,14nm,1.0s,SNR=5.8
AKN Aaknes 45.22 323 *eP* **P** **06 33 55.8 +1.0**
MNSI Mandailing Nat 45.30 142 P **P** **06 34 00.4 +4.6**
ODD1 Odda 45.53 320 *eP* **P** **06 33 58.3 +1.1**
FUORN Ofenpass-Fuorn 45.61 301 P **P** **06 33 57.9 -0.4**
HYA Hoyanger 45.66 321 *eP* **P** **06 33 58.9 +0.8**
RAFF Raffo Rosso 45.66 287 P **P** **06 33 56.8 -1.8**
DAVA Damuels 45.70 302 *i* P **P** **06 33 59.0 +0.1**
comp=Z,57nm,1.2s,SNR=12
ZCCA Zocca 45.74 297 P **P** **06 33 58.4 -0.7**
ZCCA IAmb IAmb 06 34 12.0
comp=Z,32nm,1.0s
OSSC Osservatorio P 45.80 296 P **P** **06 33 58.6 -1.0**
DAVOX Davos/Dischmat 45.83 301 LR LR 06 55 51.0
comp=Z,127nm,19.8s,baz=85,slow=40
JNU Nakatsue 46.06 79 P **P** **06 34 01.9 +0.1**
comp=Z,26nm,0.9s,baz=3.4,slow=12,SNR=6.5
comp=Z,26nm,0.9s
JNU Nakatsue 46.06 79 P **P** **06 34 01.6 -0.2**
BER Bergen 46.13 320 *eP* **P** **06 34 02.6 +0.7**
KBS Kingsbay 46.16 346 P **P** **06 34 03.1 +1.2**
KBS Kingsbay 46.16 346 P **P** **06 34 03.1 +1.2**
KBS pmax pmax
comp=Z,44nm,0.8s
KBS Kingsbay 46.16 346 *eP* **P** **06 34 03.1 +1.2**
FOO Floro 46.18 322 *eP* **P** **06 34 02.8 +0.6**
ASK Askoy 46.19 320 *eP* **P** **06 34 02.9 +0.5**
TUE Stuetta 46.26 301 P **P** **06 34 02.5 -0.9**
TUE IAmb IAmb 06 34 07.5
comp=Z,11nm,0.7s
KMY Karmoy 46.30 319 *eP* **P** **06 34 04.6 +1.4**
CLTB Caltabellotta 46.38 288 P **P** **06 34 02.9 -1.4**
CLTB IAmb IAmb 06 34 05.8
comp=Z,18nm,0.9s
BFO Black Forest 46.45 303 P **P** **06 34 04.8 +0.2**
BFO IAmb IAmb 06 34 05.9
comp=Z,20nm,1.2s
BFO Black Forest 46.45 303 P **P** **06 34 04.8 +0.2**
BFO pmax pmax
comp=Z,20nm,1.2s
JOW Kunigami 46.95 88 P **P** **06 34 09.2 +0.3**
comp=Z,13nm,0.4s,baz=39,slow=5.2,SNR=4.7
comp=Z,13nm,0.4s
JHS Saijyo 46.97 76 P **P** **06 34 08.8 -0.2**
JHS IAmb IAmb 06 34 09.6
comp=Z,32nm,1.2s
ECH Echery 47.23 303 P **P** **06 34 10.6 -0.2**
ECH IAmb IAmb 06 34 12.1
comp=Z,26nm,1.5s
ECH Echery 47.23 303 P **P** **06 34 10.6 -0.2**
ECH pmax pmax
comp=Z,26nm,1.5s
BTNL Ternell 47.29 307 *dP* **P** **06 34 11.3 +0.1**
comp=Z,8.5nm,1.0s
MEM Membach 47.37 307 *dP* **P** **06 34 12.8 +1.1**
comp=Z,9.9nm,0.9s
WLF Walferdange 47.50 306 P **P** **06 34 11.7 -1.1**
WLF IAmb IAmb 06 34 14.8
comp=Z,32nm,1.2s
WLF Walferdange 47.50 306 P **P** **06 34 11.7 -1.1**
WLF Walferdange 47.50 306 *dP* **P** **06 34 13.7 +0.9**
SENIN Lac Senin/Sane 47.65 301 P **P** **06 34 13.8 -0.5**
SENIN IAmb IAmb 06 34 15.0
comp=Z,20nm,0.9s
BMRD Maredsous 48.21 307 *dP* **P** **06 34 18.6 +0.3**
comp=Z,9.9nm,1.1s
LPL La Plagne 48.28 300 *eP* **P** **06 34 19.0 -0.2**
LPL pmax pmax
comp=Z,19nm,0.7s
DOU Dourbes 48.37 307 *dP* **P** **06 34 20.1 +0.5**
comp=Z,9.5nm,1.0s
SNF Seneffe 48.45 307 *dP* **P** **06 34 20.9 +0.7**
BNI Bardonecchia 48.46 300 P **P** **06 34 20.0 -0.5**
BNI Bardonecchia 48.46 300 P **P** **06 34 20.0 -0.5**
BNI pmax pmax
comp=Z,40nm,1.1s
YSS Yuzh-Sakhalins 49.56 57 *eP* **P** **06 34 28.9 +0.2**
YSS pmax pmax
comp=Z,20nm,1.0s
YSS MLR MLR
comp=Z,400nm,16.0s
INU Inuyama 49.74 74 P **P** **06 34 30.3 +0.1**
INU IAmb IAmb 06 34 31.7
comp=Z,19nm,1.1s
LODK Lodwar 49.78 234 P **P** **06 34 31.2 +0.4**
LODK IAmb IAmb 06 34 32.8
comp=Z,24nm,1.1s
LODK Lodwar 49.78 234 P **P** **06 34 31.7 +0.9**
SSB Saint Sauveur 49.82 300 P **P** **06 34 29.7 -1.1**
SSB IAmb IAmb 06 34 32.1
comp=Z,35nm,1.2s
SSB Saint Sauveur 49.82 300 P **P** **06 34 29.7 -1.1**
SSB pmax pmax
comp=Z,35nm,1.2s
JGF Kuroka 49.89 73 P **P** **06 34 30.8 -0.6**
JGF IAmb IAmb 06 34 32.2
comp=Z,17nm,0.8s
KEST Kesra 49.96 287 P **P** **06 34 32.5 +0.5**
comp=Z,26nm,1.0s,baz=3.3,slow=1.6,SNR=16
comp=Z,26nm,1.0s
KEST Kesra 49.96 287 P **P** **06 34 30.5 -1.6**
KEST IAmb IAmb 06 34 33.7
comp=Z,35nm,1.1s
KEST Kesra 49.96 287 P **P** **06 34 32.9 +0.8**
SNR=5.1
ELMS Elmsett, Ipswi 50.03 310 *eP* **P** **06 34 32.5 +0.3**
ELMS IAmb IAmb 06 34 33.1
comp=Z,126nm,0.8s
MJB9 Matsu-Tunnel 50.12 72 P **P** **06 34 32.6 -0.6**
MJB9 IAmb IAmb 06 34 37.3
comp=Z,28nm,0.9s
MAJO Matsushiro 50.13 72 P **P** **06 34 32.6 -0.6**
MAJO IAmb IAmb 06 34 37.3
comp=Z,28nm,0.9s
MAJO Matsushiro 50.13 72 P **P** **06 34 32.6 -0.6**
MAJO pmax pmax
comp=Z,28nm,1.0s
MJAR Matsushiro Arr 50.13 72 P **P** **06 34 32.4 -0.8**
comp=Z,15nm,0.9s,baz=291,slow=7.3,SNR=14
MJAR LR LR 06 56 32.8
comp=Z,71nm,21.0s,baz=300,slow=37
comp=Z,15nm,0.9s
MJAR Matsushiro Arr 50.13 72 P **P** **06 34 32.1 -1.0**
MJAR Matsushiro Arr 50.13 72 P **P** **06 34 32.2 -1.0**
MJAR pmax pmax
comp=Z,12nm,0.9s
ASAJ Asahikawa 50.39 61 LR LR 06 56 52.1
comp=Z,152nm,20.0s,baz=264,slow=37
CLF Chambon-Foret 50.43 304 P **P** **06 34 34.3 -1.0**
JTM Tenmabayashi 50.53 65 P **P** **06 34 35.2 -0.9**
JMIC Jan Mayen 50.67 335 LR LR 06 55 35.6
comp=Z,50nm,19.0s,baz=74,slow=35
MA2 Magadan 50.84 40 LR LR 06 57 07.2
comp=Z,206nm,18.1s,baz=258,slow=37
SEY Seymchan 50.88 35 P **P** **06 34 38.0 -0.4**
comp=Z,4.3nm,0.9s,baz=342,slow=20,SNR=3.0
SEY PcP **PcP** **06 35 55.2 +0.3**
comp=Z,6.6nm,0.8s,baz=281,slow=5.8,SNR=4.2
SEY LR LR 06 58 36.1
comp=Z,103nm,21.9s,baz=248,slow=39
comp=Z,4.3nm,0.9s
SEY Seymchan 50.88 35 *i* P **P** **06 34 39.2 +0.8**
SEY pmax pmax
comp=Z,7.0nm,1.0s
MCD Coleburn Disti 50.99 318 *eP* **P** **06 34 39.5 +0.1**
EDMD Edmundbyers 51.00 314 *eP* **P** **06 34 39.1 -0.3**
EDMD IAmb IAmb 06 34 40.0
comp=Z,62nm,1.0s
HPK Haverah Park 51.04 313 *eP* **P** **06 34 39.7 -0.1**
HPK IAmb IAmb 06 34 40.5
comp=Z,50nm,0.8s
BIGH Upper Bighouse 51.10 319 *eP* **P** **06 34 40.5 +0.3**
BIGH IAmb IAmb 06 34 41.1
comp=Z,59nm,0.9s
NOR Nord 51.23 349 *i* P **P** **06 34 39.8 -1.1**
NOR IAmb IAmb 06 34 42.1
comp=Z,3.9nm,0.8s
EBL Broad Law 51.34 315 *eP* **P** **06 34 41.8 -0.3**
EDI Edinburgh 51.38 315 *eP* **P** **06 34 42.1 -0.1**
EDI IAmb IAmb 06 34 42.8
comp=Z,35nm,0.9s
JMM Marumori 51.47 69 P **P** **06 34 43.1 -0.1**
JMM IAmb IAmb 06 34 47.5
comp=Z,43nm,1.2s
EKA Eskdalemuir Ar 51.52 315 LR LR 07 00 53.2
comp=Z,111nm,19.0s,baz=112,slow=41
ESK Eskdalemuir 51.55 315 *eP* **P** **06 34 43.4 -0.2**
ESK IAmb IAmb 06 34 44.6
comp=Z,28nm,0.8s
ESK Eskdalemuir 51.55 315 P **P** **06 34 43.5 -0.1**
ESK IAmb IAmb 06 34 44.8
comp=Z,28nm,0.8s
ESK Eskdalemuir 51.55 315 P **P** **06 34 43.5 -0.1**
ESK pmax pmax
comp=Z,28nm,0.9s
CAF Calviac 51.59 301 *eP* **P** **06 34 44.0 -0.1**
CAF pmax pmax
comp=Z,24nm,1.0s
MDO Dochfour 51.60 318 *eP* **P** **06 34 43.3 -0.7**
KESW Keswick, Cumbr 51.70 314 *eP* **P** **06 34 44.9 +0.2**
KESW IAmb IAmb 06 34 46.1
comp=Z,62nm,1.1s
INVG Invergeldie, C 51.70 316 *eP* **P** **06 34 44.4 -0.4**
INVG IAmb IAmb 06 34 45.8
comp=Z,17nm,0.9s
JYT Yasato 51.72 71 P **P** **06 34 44.7 -0.4**
STRD Stroud 51.99 310 *eP* **P** **06 34 46.4 -0.6**
STRD IAmb IAmb 06 34 47.2
comp=Z,61nm,0.7s
KAC Achnashellach 52.07 318 *eP* **P** **06 34 47.2 -0.3**
PGBU Glenifferbraes 52.11 316 *eP* **P** **06 34 47.6 -0.2**
PGBU IAmb IAmb 06 34 48.5
comp=Z,42nm,0.8s
NEWG New Galloway 52.17 315 *eP* **P** **06 34 48.4 +0.2**
NEWG IAmb IAmb 06 34 49.6
comp=Z,58nm,1.0s
KMBO Kilima Mbogo 52.25 228 P **P** **06 34 49.7 0.0**
comp=Z,10nm,0.9s,baz=32,slow=11,SNR=12
KMBO LR LR 06 58 01.7
comp=Z,42nm,18.4s,baz=256,slow=37
comp=Z,10nm,0.9s
KMBO Kilima Mbogo 52.25 228 P **P** **06 34 47.3 -2.3**
KMBO IAmb IAmb 06 34 50.9
comp=Z,29nm,1.2s
KMBO Kilima Mbogo 52.25 228 *i* P **P** **06 34 50.2 +0.6**
KMBO pmax pmax
comp=Z,13nm,1.0s
KMBO Kilima Mbogo 52.25 228 P **P** **06 34 49.6 0.0**
KMBO Kilima Mbogo 52.25 228 *i* P **P** **06 34 49.5 -0.1**
SNR=7.6
KPL Plockton 52.30 318 *eP* **P** **06 34 49.0 -0.1**
KPL IAmb IAmb 06 34 49.7
comp=Z,25nm,0.7s
MONM Monmouth 52.35 310 *eP* **P** **06 34 49.2 -0.4**
MONM IAmb IAmb 06 34 49.9
comp=Z,55nm,0.9s
MCH1 Michaelchurch 52.41 311 *eP* **P** **06 34 49.6 -0.5**
MCH1 IAmb IAmb 06 34 50.6
comp=Z,71nm,0.8s
DAG Danmarks Havn 52.43 343 *i* P **P** **06 34 49.0 -0.8**
DAG IAmb IAmb 06 34 50.9
comp=Z,29nm,0.8s
MFF Saint Martin d 52.45 303 *eP* **P** **06 34 49.4 -1.0**
MFF pmax pmax
comp=Z,55nm,1.4s
LAWE Loch Awe, Argy 52.48 316 *eP* **P** **06 34 50.5 0.0**
LAWE IAmb IAmb 06 34 51.3
comp=Z,39nm,0.9s
GAL1 Galloway 52.51 315 *eP* **P** **06 34 50.6 -0.1**
GAL1 IAmb IAmb 06 34 51.5
comp=Z,29nm,0.8s
JHJ Hachijo jima 2 52.77 75 LR LR 07 00 39.0
comp=Z,68nm,18.0s,baz=356,slow=40
KIBK Kibwezi 52.79 227 P **P** **06 34 52.1 -1.3**
KIBK IAmb IAmb 06 34 54.5
comp=Z,17nm,0.9s
KIBK Kibwezi 52.79 227 P **P** **06 34 53.6 +0.2**
GMM Mts of Mourne 53.39 314 *eP* **P** **06 34 57.3 +0.1**
DBG Daneborg 53.42 340 *i* P **P** **06 34 57.2 0.0**
DBG IAmb IAmb 06 34 58.7
comp=Z,7.1nm,0.8s
RSBS Rosebush, Pemb 53.45 311 *eP* **P** **06 34 57.4 -0.4**
RSBS IAmb IAmb 06 34 58.2
comp=Z,63nm,1.1s
KUR Kuril'sk 53.49 58 P **P** **06 34 59.0 +0.9**
KUR *e* 06 36 07.1
KUR S **S** **06 42 31.5 0.0**
KUR MLR MLR
comp=Z,400nm,16.0s
BILL Bilibino 55.09 27 P **P** **06 35 09.9 +0.4**
BILL IAmb IAmb 06 35 17.6
comp=Z,18nm,1.2s
BILL Bilibino 55.09 27 *i* P **P** **06 35 10.7 +1.3**
BILL pmax pmax
comp=Z,12nm,1.2s
MBAR Mbarara 55.80 235 LR LR 07 01 56.1
comp=Z,235nm,18.5s,baz=87,slow=39
MBAR Mbarara 55.80 235 *ce* **P** **06 35 16.6 +1.2**
MBAR pmax pmax
comp=Z,15nm,1.3s
PETK Petropavlovsk- 56.50 46 P **P** **06 35 19.8 0.0**
comp=Z,6.2nm,0.9s,baz=304,slow=3.4,SNR=6.0
PETK LR LR 07 00 34.6
comp=Z,145nm,20.7s,baz=290,slow=37
comp=Z,6.2nm,0.9s
PETK Petropavlovsk- 56.50 46 P **P** **06 35 20.7 +0.9**
PETK Petropavlovsk- 56.50 46 P **P** **06 35 20.7 +0.9**
BORG Borgarnes 57.01 329 LR LR 07 01 36.6
comp=Z,71nm,18.1s,baz=69,slow=38
JCJ Chichijima 57.52 80 LR LR 07 01 37.2
comp=Z,34nm,18.7s,baz=112,slow=38
ESBB Sonseca Array 57.79 297 P **P** **06 35 28.4 -0.8**
ESBB IAmb IAmb 06 35 29.9
comp=Z,16nm,0.8s
ESDC Sonseca Array 57.79 297 P **P** **06 35 29.0 -0.3**
comp=Z,14nm,0.7s,baz=55,slow=7.1,SNR=98
ESDC PcP **PcP** **06 36 21.4 -0.5**
comp=Z,3.2nm,0.9s,baz=48,slow=5.8,SNR=4.4
comp=Z,14nm,0.7s
ESDC Sonseca Array 57.79 297 P **P** **06 35 28.1 -1.2**
PAB San Pablo 58.12 297 P **P** **06 35 30.8 -0.8**
PAB San Pablo 58.12 297 P **P** **06 35 30.8 -0.8**
PAB pmax pmax
comp=Z,8.0nm,0.8s
PBRG Braganca 58.72 300 *eP* **P** **06 35 35.8 +0.1**
MRSI Marisa 58.80 119 P **P** **06 35 38.8 +2.4**
comp=Z,2µmcomp=Z,26nm,0.8s
SUMG Summit 58.88 341 P **P** **06 35 37.0 +0.3**
SUMG Summit 58.88 341 P **P** **06 35 37.0 +0.3**
SUMG pmax pmax
comp=Z,29nm,0.8s
SUMG Summit 58.88 341 *i* P **P** **06 35 36.6 -0.2**
SUMG IAmb IAmb 06 35 38.2
comp=Z,23nm,0.8s
TAF Taforalt 58.97 291 P **P** **06 35 38.0 +0.5**
MVO Moncorvo 59.20 300 *eP* **P** **06 35 39.4 +0.3**
comp=Z,35nm,1.1s
JBK JBK 59.31 291 P **P** **06 35 41.0 +0.9**
FIGM Figuig 59.44 288 P **P** **06 35 40.6 -0.3**
TDRA Tendrara 59.55 289 P **P** **06 35 42.2 +0.5**
PCAB Cabril 59.62 301 *eP* **P** **06 35 42.5 +0.6**
comp=Z,53nm,1.3s
POLO Lamas de Olo 59.62 300 *eP* **P** **06 35 42.2 +0.2**
comp=Z,15nm,1.7s
PGAV Gavieira, Arco 59.66 301 *eP* **P** **06 35 42.8 +0.5**
comp=Z,33nm,1.6s
PALE Palemas 59.87 293 P **P** **06 35 43.4 -0.3**
MTE Manteigas 59.90 299 *eP* **P** **06 35 44.5 +0.6**
comp=Z,30nm,1.4s
PVIS Viseu 59.99 300 *eP* **P** **06 35 45.0 +0.5**
comp=Z,37nm,1.5s
EUNU Eureka 60.18 356 P **P** **06 35 46.1 +0.9**
EUNU IAmb IAmb 06 35 47.6
comp=Z,11nm,0.9s
PMRV Marv??o 60.26 298 *eP* **P** **06 35 47.0 +0.7**
comp=Z,32nm,1.4s
COI Coimbra 60.58 300 *eP* **P** **06 35 49.3 +0.9**
COI Coimbra 60.58 300 P **P** **06 35 47.9 -0.5**
COI Coimbra 60.58 300 P **P** **06 35 47.9 -0.5**
COI pmax pmax
comp=Z,51nm,0.8s
PESTR Estremoz 60.66 298 *eP* **P** **06 35 49.2 +0.1**
comp=Z,18nm,2.3s
SMIR Smir Dam 60.67 294 P **P** **06 35 49.0 -0.1**
CHEFC Chefchaouen 60.92 293 P **P** **06 35 50.0 -1.0**
PSBE So Bento 61.17 299 *eP* **P** **06 35 52.7 +0.2**
comp=Z,87nm,1.6s
ICESG Greenland Ices 61.18 338 *i* P **P** **06 35 52.6 +0.1**
ICESG IAmb IAmb 06 35 54.3
comp=Z,39nm,0.8s
PBEJ Beja 61.26 297 *eP* **P** **06 35 53.4 +0.3**
comp=Z,26nm,1.6s
PVAQ Vaqueiros 61.46 296 *eP* **P** **06 35 54.7 +0.3**
comp=Z,46nm,1.1s
PVAQ Vaqueiros 61.46 296 P **P** **06 35 53.9 -0.5**
PVAQ Vaqueiros 61.46 296 P **P** **06 35 54.8 +0.3**
KAPI Kappang 61.47 125 LR LR 07 04 58.3
comp=Z,86nm,19.6s,baz=262,slow=38
MDT Midelt 61.54 290 P **P** **06 35 55.8 +0.5**
MESJ Messejana 61.59 297 *eP* **P** **06 35 55.5 +0.2**
MESJ IAmb IAmb 06 35 56.8
comp=Z,36nm,1.2s
MESJ Messejana 61.59 297 *eP* **P** **06 35 55.6 +0.2**
comp=Z,35nm,1.4s
MESJ Messejana 61.59 297 *eP* **P** **06 35 55.5 +0.2**
PBDV Barranco-do-Ve 61.69 296 *eP* **P** **06 35 56.6 +0.5**
comp=Z,62nm,1.4s
CZD Col de Zad 61.74 291 P **P** **06 35 58.0 +1.2**
GOLM Goulmima 62.36 290 P **P** **06 36 02.0 +1.2**
ANGG Ammassalik, Gr 62.58 334 *i* P **P** **06 36 01.8 +0.3**
ANGG IAmb IAmb 06 36 02.5
comp=Z,16nm,0.9s
TZRR Tazzarine 63.29 289 P **P** **06 36 07.0 0.0**
ZGR Zagora 63.68 288 P **P** **06 36 10.0 +0.4**
A21K Barrow 63.94 16 P **P** **06 36 10.0 -0.4**
baz=319
OUK Oukaimeden 64.74 291 P **P** **06 36 17.1 +0.4**
DY2G Dye2 64.78 337 *i* P **P** **06 36 15.8 -0.6**
DY2G IAmb IAmb 06 36 17.2
comp=Z,19nm,0.5s
GAMB Gambell 64.99 26 P **P** **06 36 17.2 -0.2**
baz=309
TNA Tin City 65.07 24 P **P** **06 36 18.1 +0.2**
baz=312
TTIG Tnine Tigouga, 65.51 290 P **P** **06 36 22.0 +0.4**
RES Resolute Bay 65.86 357 P **P** **06 36 23.5 +0.6**
RES Resolute Bay 65.86 357 P **P** **06 36 23.5 +0.6**
RES pmax pmax
comp=Z,6.0nm,0.8s
C23K Itkillik River 66.36 15 P **P** **06 36 26.4 +0.2**
baz=324,SNR=7.7
ANM Nome 66.54 24 P **P** **06 36 27.8 +0.4**
baz=314
C24K Franklin Bluff 66.83 15 P **P** **06 36 29.5 +0.3**
baz=326
D23K Nanushuk River 67.05 16 P **P** **06 36 30.8 +0.2**
baz=324
D24K Happy Valley 67.28 15 P **P** **06 36 32.1 0.0**
baz=326
TOLK Toolik Lake Re 67.55 16 P **P** **06 36 33.4 -0.5**
TOLK IAmb IAmb 06 36 36.0
comp=Z,15nm,0.8s
TOLK Toolik Lake Re 67.55 16 P **P** **06 36 33.9 0.0**
baz=325,SNR=14
TOA0 Torodi Ar. Sit 67.71 269 P **P** **06 36 34.3 -1.2**
TOA0 Torodi Ar. Sit 67.71 269 P **P** **06 36 34.4 -1.2**
TORD Torodi Ar. Bea 67.71 269 P **P** **06 36 34.2 -1.4**
comp=Z,15nm,0.5s,baz=46,slow=5.3,SNR=252
TORD LR LR 07 09 41.7
comp=Z,37nm,18.1s,baz=216,slow=39
comp=Z,15nm,0.5s
TORD Torodi Ar. Bea 67.71 269 P **P** **06 36 34.0 -1.6**
A36M Sachs Harbour 68.06 6 P **P** **06 36 37.1 +0.3**
A36M Sachs Harbour 68.06 6 P **P** **06 36 36.9 0.0**
baz=345,SNR=17
NRS Narsarsuaq 68.12 333 P **P** **06 36 37.5 +0.1**
NRS Narsarsuaq 68.12 333 P **P** **06 36 37.5 +0.1**
NRS pmax pmax
comp=Z,32nm,0.8s
COLD Coldfoot 68.58 17 P **P** **06 36 40.5 +0.2**
COLD IAmb IAmb 06 36 41.4
comp=Z,15nm,0.8s
COLD Coldfoot 68.58 17 P **P** **06 36 40.3 0.0**
baz=325
IMAR Indian Mountai 68.75 19 P **P** **06 36 41.0 -0.3**
AMKA Amchitka 68.85 40 P **P** **06 36 41.5 -0.7**
LSZ Lusaka 68.90 227 LR LR 07 10 29.9
comp=Z,126nm,18.1s,baz=129,slow=39
LSZ Lusaka 68.90 227 P **P** **06 36 42.1 -1.0**
LSZ IAmb IAmb 06 36 43.3
comp=Z,23nm,1.1s
LSZ Lusaka 68.90 227 P **P** **06 36 42.1 -1.0**
LSZ pmax pmax
comp=Z,23nm,1.2s
GCSA Galena City Sc 68.90 21 P **P** **06 36 42.2 0.0**
baz=320
H21K Melozitna Rive 69.24 19 P **P** **06 36 43.8 -0.6**
H21K Melozitna Rive 69.24 19 P **P** **06 36 44.4 -0.1**
baz=323
H22K Ishtalitna Cre 69.40 18 P **P** **06 36 45.3 -0.1**
baz=324
BMAR Burnt Mountain 69.59 15 P **P** **06 36 46.9 +0.3**
I21K Tanana 69.83 19 P **P** **06 36 48.5 +0.4**
I21K Tanana 69.83 19 P **P** **06 36 47.9 -0.1**
baz=324
SPIA Saint Paul Isl 69.86 31 P **P** **06 36 48.0 -0.3**
baz=312
H23K Yukon River 69.89 17 P **P** **06 36 48.7 +0.3**
baz=326
J20K Nowinta River 70.08 20 P **P** **06 36 50.0 +0.3**
J20K IAmb IAmb 06 36 50.9
comp=Z,12nm,0.9s
J20K Nowinta River 70.08 20 P **P** **06 36 49.6 0.0**
baz=323,SNR=6.8
H24K Noodor Dome 70.25 17 P **P** **06 36 50.8 +0.1**
baz=327
MLY Manley 70.26 18 P **P** **06 36 50.6 -0.2**
MLY Manley 70.26 18 P **P** **06 36 50.5 -0.2**
baz=325
I23K Minto, Yukon-K 70.49 18 P **P** **06 36 52.1 0.0**
baz=326
TTA Tatalina 70.56 22 P **P** **06 36 53.1 +0.4**
TTA Tatalina 70.56 22 P **P** **06 36 53.1 +0.4**
TTA pmax pmax
comp=Z,8.0nm,1.1s
TTA Tatalina 70.56 22 P **P** **06 36 52.8 +0.1**
baz=322
INK Inuvik 70.65 10 P **P** **06 36 53.2 +0.2**
comp=Z,7.1nm,0.5s,baz=349,slow=4.7,SNR=51
comp=Z,7.1nm,0.5s
INK Inuvik 70.65 10 P **P** **06 36 52.9 -0.1**
INK IAmb IAmb 06 36 55.0
comp=Z,15nm,0.8s
INK Inuvik 70.65 10 P **P** **06 36 52.9 -0.1**
INK pmax pmax
comp=Z,15nm,0.9s
INK Inuvik 70.65 10 P **P** **06 36 53.1 +0.1**
baz=338,SNR=19
C36M Paulatuk 70.72 6 P **P** **06 36 53.1 -0.3**
C36M Paulatuk 70.72 6 P **P** **06 36 52.8 -0.6**
baz=346,SNR=21
K20K Telida 70.76 21 P **P** **06 36 54.4 +0.6**
K20K IAmb IAmb 06 36 55.2
comp=Z,12nm,1.0s
K20K Telida 70.76 21 P **P** **06 36 53.8 -0.1**
baz=323
BPAW Bear Paw Mtn. 70.96 19 P **P** **06 36 54.1 -0.9**
BPAW IAmb IAmb 06 36 55.6
comp=Z,9.9nm,1.0s
BPAW Bear Paw Mtn. 70.96 19 P **P** **06 36 54.6 -0.5**
baz=325,SNR=6.5
POKR Poker Plat Res 70.96 17 P **P** **06 36 54.5 -0.5**
POKR IAmb IAmb 06 36 56.4
comp=Z,17nm,0.9s
POKR Poker Plat Res 70.96 17 P **P** **06 36 55.3 +0.2**
baz=328
NEA2 Nenana 71.03 18 P **P** **06 36 55.0 -0.4**
baz=326

TCOL **CIGO, UAF Yank** 71.07 17 P P 06 36 55.7 +0.1
TCOL IAmb IAmb 06 36 57.1
comp=Z,21nm,0.8s
TCOL **CIGO, UAF Yank** 71.07 17 P P 06 36 55.4 -0.3
baz=327,SNR=7.7
COLA **College** 71.08 17 P P 06 36 55.6 0.0
COLA IAmb IAmb 06 36 57.0
comp=Z,20nm,0.8s
COLA **College** 71.08 17 P P 06 36 55.6 0.0
COLA pmax pmax
comp=Z,20nm,0.9s
COLA **College** 71.08 17 P P 06 36 55.4 -0.2
baz=327
CAST **Castle Rocks** 71.24 20 P P 06 36 56.6 -0.2
baz=324
CCB **Clear Creek Bu** 71.28 17 P P 06 36 55.8 -1.1
BWN **Browne** 71.28 18 P P 06 36 56.9 0.0
WRH **Wood River Hil** 71.36 18 P P 06 36 56.2 -1.2
ILAR **Eielson Array** 71.38 17 P P 06 36 56.9 -0.7
comp=Z,7.3nm,0.8s,baz=318,slow=4.9,SNR=32
ILAR LR LR 07 13 05.0
comp=Z,110nm,18.6s,baz=248,slow=40
comp=Z,7.3nm,0.8s
KTH **Kantishna Hill** 71.43 19 P P 06 36 57.6 -0.3
KTH IAmb IAmb 06 36 59.1
comp=Z,19nm,0.8s
L19K **White Mountain** 71.48 22 P P 06 36 58.6 +0.4
L19K **White Mountain** 71.48 22 P P 06 36 58.4 +0.2
baz=323,SNR=5.8
L20K **Farewell, AK** 71.52 21 P P 06 36 58.7 +0.2
baz=323,SNR=6.9
N16K **Nishlik Lake** 71.63 24 P P 06 36 59.2 0.0
baz=320,SNR=8.1
PPLA **Purkeypile** 71.64 20 P P 06 36 58.2 -1.1
PPLA IAmb IAmb 06 37 05.7
comp=Z,9.2nm,0.8s
PPLA **Purkeypile** 71.64 20 P P 06 36 58.7 -0.6
baz=324
HDA **Harding Lake** 71.68 17 P P 06 36 58.4 -0.9
HDA **Harding Lake** 71.68 17 P P 06 36 59.0 -0.4
baz=328
TRF **Thorofare Moun** 71.68 19 P P 06 36 58.4 -1.1
TRF **Thorofare Moun** 71.68 19 P P 06 36 58.7 -0.9
baz=326
I26K **Coal Creek Min** 71.72 15 P P 06 36 59.6 0.0
MCK **McKinley** 71.78 18 P P 06 36 59.7 -0.3
MCK **McKinley** 71.78 18 P P 06 36 59.7 -0.3
MCK pmax pmax
comp=Z,5.0nm,0.8s
M19K **Big River Lodg** 71.83 22 P P 06 37 00.2 -0.2
M19K **Big River Lodg** 71.83 22 P P 06 37 00.1 -0.2
baz=323
J25K **Salcha River,** 71.86 17 P P 06 36 59.2 -1.3
J25K **Salcha River,** 71.86 17 P P 06 36 59.4 -1.1
baz=329,SNR=6.7
EPYK **Eagle Plains** 71.95 12 P P 06 37 00.5 -0.5
EPYK IAmb IAmb 06 37 19.5
comp=Z,21nm,1.1s
EPYK **Eagle Plains** 71.95 12 P P 06 37 00.5 -0.5
baz=336
SVW2 **Sparrevohn** 72.13 23 P P 06 37 01.9 -0.3
M20K **Styx River** 72.20 21 P P 06 37 02.0 -0.7
baz=324
J26L **Joseph Creek** 72.34 16 P P 06 37 03.2 -0.3
baz=331
SMPI **Sarmi** 72.44 108 P P 06 37 07.6 +3.0
comp=Z,2µmcomp=Z,16nm,1.0s
K24K **Donnelly Dome** 72.46 17 P P 06 37 03.3 -0.8
baz=329
O16K **Kokwok River B** 72.52 25 P P 06 37 04.8 +0.3
baz=321,SNR=14
SKT **Skwentna** 72.57 20 P P 06 37 03.8 -0.9
SKT **Skwentna** 72.57 20 P P 06 37 03.8 -0.9
baz=325,SNR=12
I29M **Ogilvie Camp,** 72.60 13 P P 06 37 04.4 -0.5
I29M **Ogilvie Camp,** 72.60 13 P P 06 37 04.3 -0.6
baz=335,SNR=9.9
WAT1 **Susitna Watana** 72.63 19 P P 06 37 03.6 -1.5
baz=327
N19K **Bonanza Creek** 72.68 22 P P 06 37 05.0 -0.5
N19K **Bonanza Creek** 72.68 22 P P 06 37 05.2 -0.3
baz=323
SCRK **Sand Creek** 72.71 16 P P 06 37 05.0 -0.7
baz=331
RIDG **Independent Ri** 72.73 17 P P 06 37 05.1 -0.6
RIDG IAmb IAmb 06 37 10.3
comp=Z,14nm,0.9s
RIDG **Independent Ri** 72.73 17 P P 06 37 04.9 -0.8
baz=330
DOT **Dot Lake** 72.98 17 P P 06 37 06.2 -1.0
P16K **Nushagak River** 72.99 25 P P 06 37 06.4 -0.8
baz=321
WAT6 **Susitna Watana** 73.04 19 P P 06 37 06.6 -1.2
baz=328
K27K **Chicken** 73.07 16 P P 06 37 07.0 -0.7
baz=332
M22K **Willow** 73.13 20 P P 06 37 07.9 -0.2
baz=326
SUA **Susitna One** 73.20 20 P P 06 37 08.5 -0.1
baz=326
O18K **Koktuh Hills** 73.23 23 P P 06 37 08.9 +0.2
O18K IAmb IAmb 06 37 10.9
comp=Z,18nm,0.9s
O18K **Koktuh Hills** 73.23 23 P P 06 37 09.1 +0.4
baz=323
PAX **Paxson** 73.25 17 P P 06 37 08.7 -0.2
PAX IAmb IAmb 06 37 09.3
comp=Z,11nm,0.9s
PAX **Paxson** 73.25 17 P P 06 37 08.7 -0.2
PAX pmax pmax
comp=Z,11nm,0.9s
PAX **Paxson** 73.25 17 P P 06 37 08.5 -0.4
baz=330,SNR=5.6
P17K **Kvichak River** 73.37 24 P P 06 37 09.9 +0.4
baz=322
GHO **Glory Hole Cre** 73.43 20 P P 06 37 09.8 -0.2
GHO IAmb IAmb 06 37 17.4
comp=Z,24nm,0.9s
PMR **Palmer** 73.53 20 P P 06 37 10.4 +0.1
PMR IAmb IAmb 06 37 10.7
comp=Z,13nm,1.0s
PMR **Palmer** 73.53 20 P P 06 37 10.4 +0.1
PMR pmax pmax
comp=Z,13nm,1.0s
PMR **Palmer** 73.53 20 P P 06 37 09.8 -0.5
baz=327
SML **Sawmill** 73.55 19 P P 06 37 10.3 -0.3
SML **Sawmill** 73.55 19 P P 06 37 10.0 -0.6
baz=328,SNR=7.8
P18K **Big Mountain,** 73.59 24 P P 06 37 11.2 +0.4
P18K IAmb IAmb 06 37 12.3
comp=Z,21nm,1.1s
P18K **Big Mountain,** 73.59 24 P P 06 37 10.7 -0.1
baz=323
CAPN **Captain Cook N** 73.67 21 P P 06 37 10.7 -0.5
baz=326
L26K **Log Cabin Wild** 73.69 17 P P 06 37 11.2 -0.2
L26K **Log Cabin Wild** 73.69 17 P P 06 37 11.1 -0.3
baz=331
Q16K **King Salmon** 73.70 25 P P 06 37 11.1 -0.4
baz=322
UNV **Unalaska Valle** 73.72 32 P P 06 37 11.7 +0.1
baz=316
M23K **Glacier View** 73.72 19 P P 06 37 10.9 -0.7
baz=328,SNR=8.2
SCM **Sheep Creek Mo** 73.78 19 P P 06 37 11.5 -0.5
SCM **Sheep Creek Mo** 73.78 19 P P 06 37 11.5 -0.5
SCM pmax pmax
comp=Z,26nm,0.8s
SCM **Sheep Creek Mo** 73.78 19 P P 06 37 11.6 -0.5
baz=328,SNR=7.0
RC01 **Rabbit Creek A** 73.79 20 P P 06 37 11.9 0.0
baz=327
O20K **Slope Mountain** 73.82 22 P P 06 37 11.8 -0.4
baz=325
HARP **HAARP** 73.82 18 P P 06 37 12.2 +0.1
baz=330
M24K **Tolsona, Glenn** 73.83 18 P P 06 37 12.1 -0.2
M24K **Tolsona, Glenn** 73.83 18 P P 06 37 12.0 -0.3
baz=329,SNR=5.2
KNK **Knik Glacier** 73.85 20 P P 06 37 12.1 -0.3
KNK IAmb IAmb 06 37 14.9
comp=Z,17nm,0.9s
KNK **Knik Glacier** 73.85 20 P P 06 37 11.9 -0.5
baz=328
L27K **Beaver Creek,** 73.98 16 P P 06 37 13.0 -0.1
baz=332
BCAR **Beaver Creek A** 73.99 16 P P 06 37 13.6 +0.5
Q18K **Katmai Hardscr** 74.25 24 P P 06 37 14.5 -0.3
baz=323
M26K **Nabesna, AK** 74.31 17 P P 06 37 14.7 -0.3
baz=332
KLU **Klutina** 74.42 18 P P 06 37 16.6 +0.8
KLU IAmb IAmb 06 37 17.3
comp=Z,14nm,0.9s
KLU **Klutina** 74.42 18 P P 06 37 15.5 -0.2
baz=330
M27K **Edge Creek, AK** 74.60 16 P P 06 37 17.6 +0.8
M27K **Edge Creek, AK** 74.60 16 P P 06 37 16.4 -0.4
baz=332
PSA00 **Pilbara Seismi** 74.62 136 P P 06 37 16.9 -0.3
BRSE **Bradley Lake S** 74.64 21 P P 06 37 16.6 -0.4
baz=326
N25K **Chitina, Valde** 74.64 18 P P 06 37 16.6 -0.5
baz=330
GLI **Glacier Island** 74.66 19 P P 06 37 16.5 -0.5
baz=329
SEW **Seward** 74.69 21 P P 06 37 16.7 -0.5
baz=327
BVCY **Beaver Creek** 74.76 16 P P 06 37 17.8 +0.1
baz=333
Q20K **Shuyak Island** 75.09 23 P P 06 37 19.1 -0.4
baz=325
BMRM **Bremner River** 75.20 18 P P 06 37 21.1 +0.9
BMRM IAmb IAmb 06 37 21.9
comp=Z,18nm,1.0s
BMRM **Bremner River** 75.20 18 P P 06 37 19.6 -0.7
baz=331
MCARA **McCarthy VSAT** 75.20 17 P P 06 37 19.6 -0.6
baz=332
YUK3 **Moose Creek** 75.42 16 P P 06 37 21.0 -0.7
baz=334
M30M **Minto, Yukon** 75.42 14 P P 06 37 21.4 0.0
M30M **Minto, Yukon** 75.42 14 P P 06 37 21.3 -0.2
baz=336
CHNA **Chernabura Isl** 75.69 28 P P 06 37 23.0 -0.1
baz=320
KDAK **Kodiak Island** 75.71 23 P P 06 37 22.7 -0.4
comp=Z,11nm,1.0s,baz=43,slow=6.7,SNR=3.9
comp=Z,11nm,1.0s
KDAK **Kodiak Island** 75.71 23 P P 06 37 22.9 -0.2
baz=325
CRQE **Cirque** 75.75 18 P P 06 37 23.0 -0.5
baz=332
OHAK **Old Harbor** 75.95 24 P P 06 37 24.8 +0.3
OHAK IAmb IAmb 06 37 26.1
comp=Z,24nm,0.9s
OHAK **Old Harbor** 75.95 24 P P 06 37 24.6 +0.1
baz=325
CTG **Chitna Glacier** 75.96 17 P P 06 37 24.0 -0.7
baz=333
Q23K **Middleton Isla** 76.10 20 P P 06 37 25.2 0.0
baz=329
YUK4 **Talbot Arm** 76.19 15 P P 06 37 25.7 -0.3
baz=335
M31M **Drury Creek, Y** 76.20 13 P P 06 37 25.6 -0.3
M31M IAmb IAmb 06 37 33.4
comp=Z,13nm,0.9s
M31M **Drury Creek, Y** 76.20 13 P P 06 37 25.7 -0.2
baz=338
BGLC **Bering Glacier** 76.26 18 P P 06 37 25.8 -0.3
baz=332
CHIR **Chirikof Islan** 76.32 26 P P 06 37 26.7 +0.1
baz=323
N30M **Aishikik Lake** 76.39 15 P P 06 37 26.9 -0.1
baz=336
YUK6 **Outpost Mounta** 76.61 15 P P 06 37 28.0 -0.5
baz=335
N31M **Braeburn, Yuko** 76.62 14 P P 06 37 27.8 -0.5
N31M IAmb IAmb 06 37 32.9
comp=Z,18nm,1.2s
N31M **Braeburn, Yuko** 76.62 14 P P 06 37 27.8 -0.5
baz=337
DBIC **Dimbokro** 76.76 268 P P 06 37 29.1 -0.6
comp=Z,18nm,0.8s,baz=40,slow=6.7,SNR=21
DBIC LR LR 07 15 48.0
comp=Z,51nm,20.7s,baz=62,slow=39
comp=Z,18nm,0.8s
DBIC **Dimbokro** 76.76 268 P P 06 37 28.8 -1.0
DBIC IAmb IAmb 06 37 29.9
comp=Z,27nm,1.1s
DBIC **Dimbokro** 76.76 268 P P 06 37 28.8 -1.0
DBIC pmax pmax
comp=Z,27nm,1.1s
KIC **Kosan Boka** 76.86 267⇑ *i* P P 06 37 29.4 -1.0
comp=Z,14nm,0.4s
HYT **Haines Junctio** 76.89 15 P P 06 37 30.8 +0.8
HYT IAmb IAmb 06 37 31.5
comp=Z,16nm,0.8s
HYT **Haines Junctio** 76.89 15 P P 06 37 29.9 0.0
baz=336
TIC **Toumodi** 76.90 268⇑ *i* P P 06 37 29.2 -1.4
comp=Z,4.4nm,0.3s
PINM **Pinnacle** 76.98 17 P P 06 37 30.2 -0.2
baz=334
LIC **Lamto** 77.17 268⇑ *i* P P 06 37 31.6 -0.5
comp=Z,12nm,0.4s
O30N **Mendenhall** 77.22 14 P P 06 37 31.6 -0.1
baz=337
PNL **Peninsula** 77.55 16 P P 06 37 33.4 -0.1
baz=335
WHY **Whitehorse** 77.55 14 P P 06 37 31.8 -1.8
WHY IAmb IAmb 06 37 34.0
comp=Z,14nm,1.1s
WHY **Whitehorse** 77.55 14 P P 06 37 33.1 -0.5
baz=338
YKA **Yellowknife Ar** 78.17 4 P P 06 37 36.7 -0.2
comp=Z,17nm,0.8s,baz=350,slow=5.6,SNR=146
YKA LR LR 07 15 04.2
comp=Z,53nm,19.4s,baz=45,slow=38
comp=Z,17nm,0.8s
YKA **Yellowknife Ar** 78.17 4 *i* P P 06 37 36.7 -0.2
YKA pmax pmax
comp=Z,18nm,0.8s
LBTB **Lobatse** 78.17 223 P P 06 37 37.4 -0.1
LBTB **Lobatse** 78.17 223 P P 06 37 37.4 -0.1
LBTB pmax pmax
comp=Z,58nm,1.2s
TSUM **Tsumeb** 78.26 233 LR LR 07 14 48.3
comp=Z,81nm,18.0s,baz=160,slow=38
TSUM **Tsumeb** 78.26 233 P P 06 37 37.6 -0.5
TSUM IAmb IAmb 06 37 38.8
comp=Z,13nm,1.1s
P33M **Teslin, Yukon** 78.34 13 P P 06 37 37.7 -0.3
baz=340
PLBC **Pleasant Camp** 78.38 15 P P 06 37 38.1 0.0
baz=337
SKAG **Skagway** 78.58 15 P P 06 37 39.5 +0.3
baz=338
P32M **Atlin** 78.76 14 P P 06 37 40.0 -0.3
baz=339
SCHQ **Schefferville** 80.09 338 P P 06 37 46.9 -0.7
comp=Z,7.2nm,0.8s,baz=54,slow=4.2,SNR=10
comp=Z,7.2nm,0.8s
SCHQ **Schefferville** 80.09 338 P P 06 37 47.1 -0.5
SIT **Sitka** 80.81 15 P P 06 37 51.5 +0.2
baz=338
BOSA **Boshof** 81.26 222 P P 06 37 52.9 -1.3
comp=Z,15nm,0.9s,baz=24,slow=7.2,SNR=8.4
BOSA LR LR 07 13 12.4
comp=Z,58nm,21.6s,baz=19,slow=35
comp=Z,15nm,0.9s
BOSA **Boshof** 81.26 222 P P 06 37 53.0 -1.2
BOSA IAmb IAmb 06 37 54.4
comp=Z,19nm,1.0s
BOSA **Boshof** 81.26 222 P P 06 37 53.0 -1.2
BOSA pmax pmax
comp=Z,19nm,1.0s
FCC **Fort Churchill** 81.57 353 P P 06 37 55.5 +0.2
FCC IAmb IAmb 06 37 56.6
comp=Z,14nm,1.1s
FCC **Fort Churchill** 81.57 353 P P 06 37 55.5 +0.2
FCC pmax pmax
comp=Z,14nm,1.1s
WRA **Warramunga Arr** 81.99 124 P P 06 37 57.0 -1.1
comp=Z,6.7nm,0.9s,baz=323,slow=5.1,SNR=13
comp=Z,6.7nm,0.9s
WRA **Warramunga Arr** 81.99 124 *i* P P 06 37 57.0 -1.1
WRA pmax pmax
comp=Z,9.0nm,1.0s
WRAB **Tennant Creek** 81.99 124 *ce* P P 06 37 58.1 0.0
WRAB pmax pmax
comp=Z,20nm,1.7s
WRAK **Wrangell Islan** 82.00 14 P P 06 37 57.6 0.0
baz=340
WR0 **Warramunga Arr** 82.13 124 P P 06 37 57.7 -1.2
WR0 IAmb IAmb 06 37 59.4
comp=Z,14nm,0.9s
CRAG **Craig** 82.74 15 P P 06 38 01.8 +0.2
baz=340
COEN **Coen** 83.77 114 P P 06 38 07.3 -0.2
ASAR **Alice Springs** 84.43 127 P P 06 38 09.8 -0.9
comp=Z,5.4nm,0.9s,baz=328,slow=5.0,SNR=14
comp=Z,5.4nm,0.9s
ASAR **Alice Springs** 84.43 127 PcP P 06 38 10.0 -0.6
BATG **Bathurst New B** 86.39 334 P P 06 38 18.4 -1.8
SUR **Sutherland** 86.56 222 LR LR 07 18 10.1
comp=Z,52nm,19.4s,baz=22,slow=36
EDM **Edmonton** 87.49 4 P P 06 38 24.8 -0.7
LMQ **La Malbaie** 87.54 336 P P 06 38 26.1 +0.3
LMQ IAmb IAmb 06 38 27.3
comp=Z,17nm,1.0s
D62A **Allapoint, All** 87.55 335 P P 06 38 25.9 +0.1
D62A IAmb IAmb 06 38 27.4
comp=Z,7.6nm,0.9s
PQI **Presque Isle** 87.57 335 P P 06 38 26.6 +0.6
PQI IAmb IAmb 06 38 35.2
comp=Z,17nm,1.3s
VLDQ **Val d'Or** 89.03 341 P P 06 38 33.5 +0.6
PKME **Peaks-Kenny Pk** 89.23 335 P P 06 38 33.9 +0.1
baz=28
LLLB **Lillooet** 89.29 10 P P 06 38 33.5 -0.6
CTA **Charters Tower** 90.07 116 P P 06 38 37.1 -0.9
comp=Z,7.2nm,1.1s,baz=197,slow=1.4,SNR=4.6
comp=Z,7.2nm,1.1s
CTAO **Charters Tower** 90.07 116 P P 06 38 37.6 -0.5
CTAO IAmb IAmb 06 38 38.9
comp=Z,13nm,1.2s
CTAO **Charters Tower** 90.07 116 P P 06 38 37.6 -0.5
CTAO pmax pmax
comp=Z,13nm,1.2s
ULM **Lac du Bonnet** 90.16 353 P P 06 38 37.0 -1.1
comp=Z,5.8nm,0.8s,baz=360,slow=2.9,SNR=6.1
comp=Z,5.8nm,0.8s
ULM **Lac du Bonnet** 90.16 353 IAmb IAmb 06 38 38.4
comp=Z,7.2nm,0.8s
LBNH **Lisbon** 91.00 336 P P 06 38 42.1 -0.1
baz=26
LONY **Lake Ozonia** 91.46 338 P P 06 38 44.3 0.0
LONY IAmb IAmb 06 38 46.2
comp=Z,16nm,1.1s
LONY **Lake Ozonia** 91.46 338 P P 06 38 44.0 -0.3
baz=24
WALA **Waterton Lakes** 91.60 5 P P 06 38 44.6 -0.4
WALA IAmb IAmb 06 38 46.3
comp=Z,12nm,0.9s
B35A **Bob, Littlefor** 91.80 351 P P 06 38 45.0 -0.8
B35A IAmb IAmb 06 38 46.3
comp=Z,13nm,1.2s
B08A **Colville Reser** 91.81 8 P P 06 38 45.0 -0.9
B08A IAmb IAmb 06 38 56.4
comp=Z,10nm,1.1s
EYMN **Ely** 91.93 350 P P 06 38 45.8 -0.5
baz=12
J61A **Chester** 92.00 336 P P 06 38 46.8 0.0
J61A IAmb IAmb 06 38 48.9
comp=Z,9.9nm,0.9s
AGMN **Agassiz Nation** 92.09 353 P P 06 38 46.3 -0.8
AGMN IAmb IAmb 06 38 47.6
comp=Z,6.5nm,0.8s
AGMN **Agassiz Nation** 92.09 353 P P 06 38 46.5 -0.6
baz=8.3
NEW **Newport** 92.14 7 LR LR 07 23 27.6
comp=Z,96nm,20.4s,baz=331,slow=38
NEW **Newport** 92.14 7 P P 06 38 47.8 +0.4
NEW IAmb IAmb 06 38 49.1
comp=Z,6.9nm,0.9s
NEW **Newport** 92.14 7 P P 06 38 47.8 +0.4
NEW pmax pmax
comp=Z,7.0nm,0.9s
NEW **Newport** 92.14 7 P P 06 38 47.2 -0.2
baz=352,SNR=9.2
C09A **Chrisman Ranch** 92.48 8 P P 06 38 49.5 +0.6
C09A IAmb IAmb 06 38 59.5
comp=Z,8.9nm,1.0s
SADO **Sadowa** 92.57 341 LR LR 07 23 13.9
comp=Z,88nm,20.4s,baz=28,slow=37
EGMT **Eagleton** 92.83 2 P P 06 38 50.5 -0.2
EGMT IAmb IAmb 06 38 52.2
comp=Z,13nm,1.1s
EGMT **Eagleton** 92.83 2 P P 06 38 50.2 -0.5
baz=358,SNR=8.5
JTMT **Jette** 92.88 5 P P 06 38 51.1 +0.1
JTMT IAmb IAmb 06 38 52.7
comp=Z,8.8nm,1.0s
D08A **Wollman Farm,** 93.14 8 P P 06 38 51.8 -0.2
J56A **Wolcott** 93.35 339 P P 06 38 53.1 +0.2
E09A **Wood Farm, Sta** 93.76 8 P P 06 38 54.6 -0.2
E09A IAmb IAmb 06 39 04.5
comp=Z,10nm,1.1s
MSO **Missoula** 93.82 5 P P 06 38 54.5 -0.8
MSO **Missoula** 93.82 5 P P 06 38 54.8 -0.5
baz=354,SNR=6.0
HRY **Holter Researc** 94.06 4 P P 06 38 56.4 0.0
BINY **Binghamton** 94.09 338 P P 06 38 56.1 -0.4
baz=23
E28A **Huff** 94.17 356 P P 06 38 56.3 -0.5
LAO **LASA Array** 94.21 360 P P 06 38 57.5 +0.4
LAO **LASA Array** 94.21 360 P P 06 38 57.4 +0.4
baz=0.3,SNR=6.0
F36A **Milaca** 94.24 351 P P 06 38 56.3 -0.7
F36A IAmb IAmb 06 38 57.5
comp=Z,6.1nm,1.1s
G40A **Rib Lake** 94.36 348 P P 06 38 56.5 -1.2
G40A IAmb IAmb 06 38 58.2
comp=Z,7.3nm,0.9s
F10A **Beach Ranch, E** 94.39 7 P P 06 38 57.9 0.0
F33A **5 Mile Ranch,** 94.56 353 P P 06 38 57.7 -0.9
F33A IAmb IAmb 06 38 59.3
comp=Z,6.6nm,0.9s
L56A **Greenwood** 94.60 339 P P 06 38 57.6 -1.2
G05D **Wamic, OR** 94.62 10 P P 06 38 58.7 -0.2
baz=349
SPMN **Marine on St.** 94.78 350 P P 06 38 59.4 -0.1
baz=11
LRM **Limekiln Ridge** 94.92 4 P P 06 39 00.1 -0.4
STKA **Stephens Creek** 95.04 128 LR LR 07 28 28.9
comp=Z,66nm,19.6s,baz=224,slow=40
GCMT **Greycliff** 95.06 2 P P 06 39 01.4 +0.4
BOZ **Bozeman (W)** 95.18 4 P P 06 39 02.1 +0.5
BOZ IAmb IAmb 06 39 29.6
comp=Z,7.1nm,1.1s
BOZ **Bozeman (W)** 95.18 4 P P 06 39 02.1 +0.5
BOZ pmax pmax
comp=Z,7.0nm,1.1s
BOZ **Bozeman (W)** 95.18 4 P P 06 39 01.0 -0.6
baz=356,SNR=14
ERPA **Erie** 95.27 340 P P 06 39 01.1 -0.8
baz=20
I02E **Swisshome, OR** 95.34 12 P P 06 39 02.3 +0.2
baz=347
DLMT **Dillon** 95.37 4 P P 06 39 02.6 +0.2
DLMT IAmb IAmb 06 39 27.9
comp=Z,14nm,1.3s
RLMT **Red Lodge** 95.75 2 P P 06 39 02.6 -1.7
RLMT IAmb IAmb 06 39 05.7
comp=Z,8.0nm,1.1s
RLMT **Red Lodge** 95.75 2 P P 06 39 03.8 -0.4
baz=358,SNR=6.2
MCMT **McKenzie Canyo** 95.88 4 P P 06 39 03.6 -1.3
YHL **Hebgen Lake** 95.95 3 P P 06 39 05.0 -0.3
YHL IAmb IAmb 06 39 35.7
comp=Z,4.7nm,0.8s
SSPA **Standing Stone** 96.08 338 P P 06 39 04.9 -0.7
baz=22
SUSD **Miller** 96.18 355 P P 06 39 06.1 +0.2
YPP **Pitchstone Pla** 96.54 3 P P 06 39 06.7 -1.3
JFWS **Jewell Farm** 96.67 348 P P 06 39 07.1 -1.1
JFWS IAmb IAmb 06 39 08.5
comp=Z,8.7nm,0.9s
JFWS **Jewell Farm** 96.67 348 P P 06 39 07.1 -1.1
JFWS pmax pmax
comp=Z,9.0nm,1.0s
JFWS **Jewell Farm** 96.67 348 P P 06 39 07.3 -0.9
baz=13
ECSD **EROS Data Cent** 96.68 353 P P 06 39 07.9 -0.4
ECSD IAmb IAmb 06 39 09.1
comp=Z,7.9nm,0.9s
ECSD **EROS Data Cent** 96.68 353 P P 06 39 08.0 -0.4

baz=7.8
FLWY Flagg Ranch 96.74 3 P **P** **06 39 08.2 -0.6**
FLWY IAmb IAmb 06 39 40.8
comp=Z,8.5nm,1.1s
RSSD Black Hills 96.75 358 P **P** **06 39 08.4 -0.5**
RSSD IAmb IAmb 06 39 10.4
comp=Z,6.9nm,0.9s
RSSD Black Hills 96.75 358 P **P** **06 39 08.4 -0.5**
RSSD pmax pmax
comp=Z,7.0nm,1.0s
RSSD Black Hills 96.75 358 P **P** **06 39 08.1 -0.7**
baz=2.0
J08A Circle Bar Ran 96.84 9 P **P** **06 39 08.4 -0.7**
J08A IAmb IAmb 06 39 14.8
comp=Z,6.1nm,1.0s
J08A Circle Bar Ran 96.84 9 P **P** **06 39 08.8 -0.4**
HLID Hailey 97.03 6 P **P** **06 39 09.2 -0.9**
baz=354
MCWV Mont Chateau 97.54 340 P **P** **06 39 11.7 -0.5**
baz=20
WVOR Wild Horse Val 97.73 9 P **P** **06 39 12.2 -1.0**
WVOR IAmb IAmb 06 39 14.4
comp=Z,5.6nm,1.0s
WVOR Wild Horse Val 97.73 9 P **P** **06 39 12.3 -0.8**
BW06 Boulder Array 98.09 2 P **P** **06 39 14.1 -0.8**
baz=358
PDAR Pinedale Array 98.09 2 P Pdif 06 39 15.1 +0.1
comp=Z,0.9nm,0.9s,baz=26,slow=3.8,SNR=6.6
PDAR LR LR 07 27 51.2
comp=Z,71nm,19.3s,baz=345,slow=38
comp=Z,0.9nm,0.9s
O48B Farmland 98.27 344 P **P** **06 39 14.1 -1.3**
baz=17
HVU Hansel Valley 98.92 5 P **P** **06 39 18.4 -0.2**
HVU IAmb IAmb 06 39 38.0
comp=Z,4.4nm,0.8s
HVU Hansel Valley 98.92 5 P **P** **06 39 18.4 -0.2**
HVU pmax pmax
comp=Z,4.0nm,0.8s
ELK Elko 99.76 7 LR LR 07 29 38.7
comp=Z,83nm,18.1s,baz=334,slow=38
KVN Kaiserville 101.14 9 **Pdif** **06 39 26.2 -2.3**
KVN Kaiserville 101.14 9 P **Pdif** **06 39 26.2 -2.3**
KMSC Kings Mountain 102.18 339 P **Pdif** **06 39 32.4 -0.6**
baz=20
WVT Waverly 102.81 345 P **Pdif** **06 39 35.3 -0.5**
baz=15
TPNV Topopah Spring 103.42 8 Pdif **Pdif** **06 39 38.8 +0.1**
TPNV Topopah Spring 103.42 8 P **Pdif** **06 39 38.8 +0.1**
CWC Cottonwood Cre 103.71 10 P **Pdif** **06 39 39.3 -0.8**
baz=351
PKM Mcpherson Peak 105.00 11 P **Pdif** **06 39 44.6 -1.2**
baz=350
SBC Santa Barbara 105.45 11 P **PKiKP** **06 44 00.7 -0.4**
baz=350
ANMO Albuquerque 105.94 360 P **PKiKP** **06 44 01.9 -0.4**
baz=0.1
SNCC San Nicolas Is 106.65 11 P **PKiKP** **06 44 03.2 -0.2**
baz=350
PFO Pinyon Flats O 106.70 9 P **PKiKP** **06 44 03.4 -0.3**
baz=352
TPFO Pinon Flats 106.71 9 P **PKiKP** **06 44 03.8 +0.2**
baz=352
TROLL Troll, Antarti 121.55 200 PKPdf **PKPdf** **06 44 30.3 -0.3**
SNAA Sanae 122.86 201 PKPdf **PKPdf** **06 44 31.9 -1.1**
VNDA Vanda 127.84 164 PKP **PKPdf** **06 44 41.2 -1.1**
comp=Z,1.2nm,1.0s,baz=250,slow=1.5,SNR=3.6
TRQA Tornquist 145.47 258 **PKPdf** **06 45 15.4 -0.6**
TRQA Tornquist 145.47 258 PKiKP **PKPdf** **06 45 15.4 -0.6**
GO02 Mina Guanaco 145.90 284 PKPbc **PKPdf** **06 45 17.4 -0.1**
AC02 Maricunga 146.46 281 **PKPbc** **06 45 19.9 0.0**
ZON Zonda 148.34 273 **PKPbc** **06 45 24.6 +0.1**
ZON Zonda 148.34 273 PKP2 **PKPbc** **06 45 24.6 +0.1**
CO01 Juntas del Tor 148.74 276 **PKPbc** **06 45 25.9 +0.1**
LCO Las Campanas 148.75 278 PKPbc **PKPbc** **06 45 25.4 -0.5**
LCO Las Campanas 148.75 278 PKP2 **PKPbc** **06 45 25.4 -0.5**
CO03 El Pedregal 149.59 275 **PKPbc** **06 45 27.2 -0.6**
BO01 Tunca 151.31 269 **PKPbc** **06 45 30.7 -0.9**
BO01 PKPab **PKPab** **06 45 38.3 -1.4**
PLCA Paso Flores 152.54 256 PKPbc **PKPbc** **06 45 33.6 -0.7**
comp=Z,14nm,1.2s,baz=39,slow=2.3,SNR=23
PLCA Paso Flores 152.54 256 PKPdf **PKPdf** **06 45 25.4 -1.9**
PLCA **PKPbc** **06 45 33.9 -0.4**
PLCA PKPab **PKPab** **06 45 44.9 +0.1**
PLCA Paso Flores 152.54 256 PKIKP **PKPdf** **06 45 25.4 -1.9**
PLCA PKP **PKPbc** **06 45 33.9 -0.4**

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*BJI **27** 06:27:27.9±0.0,32.°70N×142.°20E,h16km,mb4.4/30, mB4.6/16,Ms4.4/19,Ms7 4.1/18*
*MOS **27** 06:27:29.8±1.3,32.°75N×141.°90E,h13km,mb4.8/28,Error ellipse: s-maj=12.1km s-min=6.4km az=97.3*
*NEIC **27** 06:27:30.9±1.8,32.°79N±0.°06×141.°98E±0.°07,h10km±1km, mb4.7/113,Error ellipse: s-maj=10.9km s-min=10.4km az=195.0*
*IDC **27** 06:27:30.1±0.6,32.°76N×141.°90E,h0km,mb4.3/16, mbtmp4.3/19,ML3.5/2,MS3.8/27,Error ellipse: s-maj=16.0km s-min=13.9km az=82.0*
*NIED **27** 06:27:32.8,32.°94N×141.°80E,h17km,MW4.5,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr5.78; Mθθ-1.08; Mϕϕ-4.70; Mrθ-1.57; Mθϕ1.79; Mϕr-1.95; Fault plane solution: M₀6.09000×10¹⁵ NP1: ϕs322.00000°,δ41.00000°,λ64.00000°. NP2: ϕs175.00000°,δ54.00000°,λ111.00000°.*
*JMA **27** 06:27:32.8±0.4,32.°9N±1.°0×14.°2E±.°,h17km,MV4.2/29,E OFF HACHIJOJIMA ISLAND*
ISC 27 06:27:30.8±0.4,**32.°73N**±0.°04×**141.°93E**±0.°05,**h10**km,**n393,** σ1§**14**/382,**mb4.7**/86,**MS4.0**/28,**4C-2D,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**1.82**	**283**	Pn	**Pn**	**06 28 01.9**	**-0.2**
JHJ2	**Mitsune**	**1.82**	**283**	P	**Pn**	**06 28 02.1**	**0.0**
JHJ2	**Mitsune**	**1.82**	**283**	A	A	06 28 02.1	
	comp=E,17nm,7.5s,comp=E,11nm,5.4s						
JHCJ	**Hachijojimakas**	**1.83**	**281**	P	**Pn**	**06 28 02.1**	**-0.1**
JHCJ	**Hachijojimakas**	**1.83**	**281**	A	A	06 28 02.1	
	comp=E,21nm,5.3s,comp=E,7.0nm,7.8s						
JAOM	**Aogashimamukai**	**1.85**	**262**	*e*P	**Pn**	**06 28 03.7**	**+1.1**
JAOM	**Aogashimamukai**	**1.85**	**262**	A	A	06 28 03.7	
	comp=E,16nm,6.1s,comp=E,12nm,6.2s						
JHJ	**Hachijo jima 2**	**1.85**	**283**	Pn	**Pn**	**06 28 02.4**	**-0.1**
	49nm,0.3s,baz=59,slow=17,SNR=26						
JHJ				Sn	**Sn**	**06 28 26.3**	**+0.4**
	223nm,0.3s,baz=232,slow=19,SNR=5.7						
JHJ				LR	LR	06 29 00.7	
	comp=Z,2μm,18.4s,baz=81,slow=50						
BSO1	**Boso 1**	**2.08**	**338**	P	**Pn**	**06 28 04.8**	**-0.4**
JMKN	**Mikurajimanish**	**2.28**	**301**	*e*P	**Pn**	**06 28 08.0**	**-0.5**
BSO3	**Boso 3**	**2.38**	**331**	P	**Pn**	**06 28 09.1**	**-0.5**
JIM2	**Oshima 3**	**2.88**	**314**	*e*P	**Pn**	**06 28 15.4**	**-1.3**
JIM2	**Oshima 3**	**2.88**	**314**	A	A	06 28 15.4	
	comp=E,4.0nm,3.9s,comp=E,4.0nm,3.5s						
JIZS	**Izushimoda**	**3.23**	**309**	eS	**Sn**	**06 28 57.4**	**-2.5**
JOD2	**Odawara 2**	**3.46**	**318**	*e*P	**Pn**	**06 28 23.7**	**-1.0**
JOD2				*e*S	**Sn**	**06 29 02.3**	**-3.4**
JYT	**Yasato**	**3.77**	**338**		**Pn**	**06 28 29.3**	**+0.3**
JYN	**Shimob**	**3.94**	**315**	*e*S	**Sn**	**06 29 17.2**	**-0.5**
JRY	**Ryogami san**	**4.13**	**323**	P	**Pn**	**06 28 34.2**	**+0.3**
JRY				*e*S	**Sn**	**06 29 21.2**	**-1.0**
JAG	**Ashikaga**	**4.22**	**332**	P	**Pn**	**06 28 35.0**	**-0.1**
JAG				S	**Sn**	**06 29 22.1**	**-2.3**
JGF	**Kuroka**	**4.75**	**308**	Pn	**Pn**	**06 28 44.2**	**+1.7**
INU	**Inuyama**	**4.84**	**304**	Pn	**Pn**	**06 28 43.4**	**-0.3**
MJAR	**Matsushiro Arr**	**4.89**	**322**	Pn	**Pn**	**06 28 43.9**	**-0.5**
	1.1nm,0.3s,baz=149,slow=11,SNR=36						
MJAR				Sn	**Sn**	**06 29 39.7**	**-1.2**
	0.8nm,0.3s,baz=152,slow=16,SNR=4.6						
MJAR				LR	LR	06 30 49.0	
	comp=Z,858nm,18.1s,baz=137,slow=41						
	11nm,0.5s						
MJAR	**Matsushiro Arr**	**4.89**	**322**	Pn	**Pn**	**06 28 42.3**	**-2.0**
MAJO	**Matsushiro**	**4.89**	**322**	Pn	**Pn**	**06 28 43.3**	**-1.1**
MAJO	**Matsushiro**	**4.89**	**322**	*i* P	**Pn**	**06 28 45.2**	**+0.9**
MAT	**Matsushiro**	**4.89**	**322**	P	**Pn**	**06 28 45.0**	**+0.7**
MAT				*e*S	**Sn**	**06 29 39.5**	**-1.5**
MJB9	**Matsu-Tunnel**	**4.89**	**322**		**Pn**	**06 28 43.0**	**-1.4**
JMM	**Marumori**	**5.21**	**350**		**Pn**	**06 28 47.3**	**-1.5**
JCJ	**Chichijima**	**5.62**	**178**	Pn	**Pn**	**06 28 53.6**	**-0.7**
	119nm,0.3s,baz=266,slow=23,SNR=42						
JCJ				Sn	**Sn**	**06 29 56.1**	**-2.9**
	30nm,0.3s,baz=287,slow=19,SNR=2.1						
JCJ				LR	LR	06 31 10.4	
	comp=Z,868nm,18.2s,baz=39,slow=39						
JCJ	**Chichijima**	**5.62**	**178**	Pn	**Pn**	**06 28 54.1**	**-0.2**
JSD	**Sado**	**6.08**	**332**	Pn	**Pn**	**06 29 00.5**	**-0.2**
JHS	**Saijyo**	**7.67**	**290**	Pn	**Pn**	**06 29 23.7**	**+1.1**
JTM	**Tenmabayashi**	**8.07**	**355**	Pn	**Pn**	**06 29 27.3**	**-0.7**
ERM	**Erimo**	**9.32**	**6**	Pn	**Pn**	**06 29 41.8**	**-3.3**
ERM	**Erimo**	**9.32**	**6**	*i* P	**Pn**	**06 29 42.1**	**-3.0**
JKA	**Kamikawa-asahi**	**11.38**	**2**	Pn	**Pn**	**06 30 12.2**	**-1.2**
ASAJ	**Asahikawa**	**11.38**	**2**	P	**Pn**	**06 30 12.2**	**-1.2**
SHO	**Shikotan**	**11.77**	**18**	*e*P	**Pn**	**06 30 16.3**	**-2.3**
KSRS	**Korea Array**	**12.40**	**296**	Pn	Pn	06 30 33.3	+6.0
	0.4nm,0.3s,baz=113,slow=14,SNR=7.7						
KSRS				LR	LR	06 35 16.2	
	comp=Z,255nm,20.0s,baz=110,slow=38						
JOW	**Kunigami**	**13.23**	**247**	LR	LR	06 35 58.7	
	comp=Z,432nm,18.0s,baz=123,slow=38						
USRK	**Ussuriysk Ar.**	**13.84**	**329**	LR	LR	06 36 15.6	
	comp=Z,271nm,20.2s,baz=136,slow=38						
YSS	**Yuzh-Sakhalins**	**14.22**	**2**	*i* P	**Pn**	**06 30 50.7**	**-1.4**
YSS				pmax	pmax		
	comp=Z,13nm,0.9s						
MDJ	**Mudanjiang**	**15.27**	**325**	P	**Pn**	**06 31 04.3**	**-2.0**
MDJ				S	**Sn**	**06 33 58.0**	**+2.6**
MDJ				sS	S	06 34 03.3	-8.8
MDJ				pmax	pmax		
	comp=Z,11nm,0.5s						
MDJ				pmax	pmax		
	comp=Z,100nm,3.8s						
MDJ				LR	LR		
	comp=Z,570nm,16.3s						
MDJ				LR	LR		
	comp=Z,480nm,16.3s						
MDJ				LR	LR		
	comp=Z,940nm,16.3s						
BNX	**BinXian**	**17.15**	**323**	⇓P	**Pn**	**06 31 30.0**	**-0.5**
BNX				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BNX				pmax	pmax		
	comp=Z,88nm,4.1s						
SSE	**Sheshan**	**17.69**	**270**	P	**Pn**	**06 31 37.0**	**-0.2**
SSE				S	**S**	**06 34 59.8**	**-1.9**
SSE				pmax	pmax		
	comp=Z,15nm,0.7s						
SSE				pmax	pmax		
	comp=Z,79nm,7.8s						
SSE				LR	LR		
	comp=Z,250nm,17.2s						
SSE				LR	LR		
	comp=Z,130nm,17.5s						
TYV	**Tymovskoe**	**18.13**	**1**	*e*P	**P**	**06 31 44.3**	**+1.5**
TYV				*e*S	**S**	**06 35 11.7**	**+1.3**
TYV				pmax	pmax		
	comp=Z,23nm,0.8s						
TYV				pmax	pmax		
	comp=Z,300nm,5.1s						
TYV				smax	smax		
	comp=E,9.0nm,1.2s						
TYV				smax	smax		
	comp=N,400nm,5.7s						
TYV				smax	smax		
	comp=E,400nm,5.7s						
KLR	**Kul'dur**	**18.16**	**338**	P	**Pn**	**06 31 41.5**	**-1.4**
	comp=E,0.3nm,0.3s,baz=139,slow=12,SNR=8.9						
KLR				LR	LR	06 39 31.1	
	comp=E,274nm,18.1s,baz=150,slow=40						
	comp=E,2.7nm,0.5s						
KLR	**Kul'dur**	**18.16**	**338**	*i* P	**Pn**	**06 31 42.0**	**-0.9**
KLR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GUMO	**Guam**	**19.24**	**171**	LR	LR	06 37 49.8	
	comp=Z,92nm,20.7s,baz=104,slow=32						
NJ2	**Nanjing**	**19.50**	**274**	*e*P	**P**	**06 31 57.5**	**-0.5**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
YULB	**Yu-li**	**20.42**	**248**	P	**P**	**06 32 08.1**	**-0.1**
HNS	**HongShan**	**22.73**	**289**	*e*P	**P**	**06 32 38.3**	**+5.4**
HNS				S	**S**	**06 36 37.5**	**-3.9**
HNS				LR	LR		
	comp=N,590nm,15.9s						
HNS				LR	LR		
	comp=E,230nm,15.1s						
HNS				LR	LR		
	comp=Z,440nm,16.2s						
XLT	**XiLinHaoTe**	**23.05**	**306**	⇑*i* P	**P**	**06 32 37.5**	**+1.2**
XLT				pP	pwP	06 32 42.5	-4.0
XLT				sP	sP	06 32 45.0	+7.5
XLT				pmax	pmax		
	comp=Z,16nm,1.3s						
XLT				pmax	pmax		
	comp=Z,120nm,3.7s						
XLT				LR	LR		
	comp=Z,88nm,12.0s						
XLT				LR	LR		
	comp=Z,610nm,13.8s						
XLT				LR	LR		
	comp=Z,940nm,12.9s						
PETK	**Petropavlovsk-**	**23.32**	**24**	P	**P**	**06 32 40.8**	**+2.0**
	comp=Z,4.9nm,0.9s,baz=240,slow=8.0,SNR=5.0						
PETK				LR	LR	06 44 21.0	
	comp=Z,136nm,18.8s,baz=199,slow=43						
	comp=Z,4.9nm,0.9s						
PETK	**Petropavlovsk-**	**23.32**	**24**		**P**	**06 32 37.9**	**-0.9**
ZEA	**Zeya**	**23.48**	**338**	*e*P	**P**	**06 32 42.4**	**+2.0**
ZEA				pmax	pmax		
	comp=N,30nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,40nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,100nm,3.5s						
WHN	**Wuhan**	**23.56**	**272**	⇑P	**P**	**06 32 38.5**	**-2.9**
WHN				S	**S**	**06 36 54.0**	**-1.6**
WHN				LR	LR		
	comp=Z,1μm,14.8s						
WHN				LR	LR		
	comp=Z,2μm,21.1s						
WHN				LR	LR		
	comp=Z,1μm,14.7s						
HHC	**Hu-ho-hao-te**	**25.54**	**297**	*e*P	**P**	**06 32 59.8**	**+0.1**
HHC				S	**S**	**06 37 30.5**	**+3.1**
HHC				sS	sS	06 37 39.5	+10
HHC				pmax	pmax		
	comp=Z,23nm,0.9s						
HHC				pmax	pmax		
	comp=Z,130nm,4.9s						
HHC				LR	LR		
	comp=Z,830nm,11.7s						
HHC				LR	LR		
	comp=Z,2μm,11.7s						
HHC				LR	LR		
	comp=Z,2μm,12.1s						
H11N2	**WAKE ISLAND Hy**	**25.79**	**114**	T	T	06 59 53.4	
	baz=306,slow=74,SNR=6.2						
H11N1	**WAKE ISLAND Hy**	**25.80**	**114**	T	T	07 00 02.5	
	baz=306,slow=74,SNR=6.5						
H11N3	**WAKE ISLAND Hy**	**25.81**	**114**	T	T	06 59 59.1	
	baz=306,slow=74,SNR=5.6						
XAN	**Xi'an**	**27.53**	**282**	⇑P	**P**	**06 33 17.3**	**-0.4**
XAN				pP	pwP	06 33 28.5	+0.6
XAN				pmax	pmax		
	comp=Z,11nm,0.8s						
XAN				pmax	pmax		
	comp=Z,110nm,7.3s						
XAN				LR	LR		
	comp=Z,870nm,14.6s						
XAN				LR	LR		
	comp=Z,510nm,15.5s						
XAN				LR	LR		
	comp=Z,790nm,13.3s						
DAV	**Davao City (W)**	**29.71**	**214**	LR	LR	06 44 41.6	
	comp=Z,152nm,19.6s,baz=169,slow=35						
ULN	**Ulaanbaatar**	**30.30**	**310**	*i* P	**P**	**06 33 43.0**	**+0.7**
ULN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
YAK	**Yakutsk**	**30.36**	**349**	*i* P	**P**	**06 33 40.9**	**-1.5**
YAK				pmax	pmax		
	comp=Z,11nm,0.8s						
SHEM	**Shemya Is, Ala**	**30.57**	**40**	LR	LR	06 48 13.2	
	comp=Z,51nm,18.1s,baz=338,slow=41						
SONM	**Songino Array**	**30.71**	**310**	P	**P**	**06 33 47.0**	**+1.1**
	comp=Z,3.0nm,0.8s,baz=118,slow=12,SNR=3.6						
	comp=Z,3.0nm,0.8s						
SONM	**Songino Array**	**30.71**	**310**	P	**P**	**06 33 45.5**	**-0.4**
SONM				lAmb	lAmb	06 34 01.5	
	comp=Z,9.6nm,1.1s						
SONM	**Songino Array**	**30.71**	**310**	P	**P**	**06 33 45.5**	**-0.4**
SONM				pmax	pmax		
	comp=Z,10.0nm,1.1s						
SEY	**Seymchan**	**30.94**	**9**	P	**P**	**06 33 48.5**	**+0.9**
	comp=Z,1.7nm,0.5s,baz=196,slow=6.0,SNR=6.0						
	comp=Z,1.7nm,0.5s						
SEY	**Seymchan**	**30.94**	**9**	*i* P	**P**	**06 33 47.4**	**-0.2**
SEY				pmax	pmax		
	comp=Z,14nm,2.2s						
LZH	**Lanzhou**	**31.47**	**287**	*e*P	**P**	**06 33 56.0**	**+3.2**
LZH				pP	pwP	06 34 03.8	+0.9
LZH				pmax	pmax		
	comp=Z,24nm,1.3s						
GTA	**Gaotai**	**34.45**	**293**	*e*P	**P**	**06 34 18.0**	**-0.7**
GTA				pP	sP	06 34 23.5	+3.4
GTA				sP	pwP	06 34 27.0	-1.9
GTA				pmax	pmax		
	comp=Z,5.0nm,1.7s						
BILL	**Bilibino**	**38.05**	**15**	⇓*e*P	**P**	**06 34 49.3**	**+0.3**
BILL				*e*S	**S**	**06 40 42.3**	**+1.1**
BILL				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,71nm,15.0s						
GOMU	**GeErMu**	**38.71**	**289**	P	**P**	**06 34 52.8**	**-2.6**
TIXI	**Tiksi**	**39.60**	**354**	*i* P	**P**	**06 35 03.9**	**+2.0**
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
NIKH	**Nikolski High**	**40.40**	**45**	P	**P**	**06 35 09.0**	**+0.2**
	baz=260						
CMAR	**Chiang Mai Arr**	**41.01**	**260**	LR	LR	06 54 24.9	
	comp=Z,126nm,18.2s,baz=35,slow=39						
WMQ	**Urumqi**	**43.29**	**301**	*e*P	**P**	**06 35 35.5**	**+2.8**
WMQ				LR	LR		
	comp=Z,370nm,17.5s						
WMQ				LR	LR		
	comp=Z,110nm,9.1s						
WMQ				LR	LR		
	comp=Z,140nm,12.3s						
ZALV	**Zalesovo Beam**	**45.21**	**316**	LR	LR	06 55 60.0	
	comp=Z,82nm,18.7s,baz=14,slow=38						
CHNA	**Chernabura Isl**	**46.07**	**43**	P	**P**	**06 35 55.0**	**+0.5**
	baz=266						
CNBA	**Chernabura Isl**	**46.07**	**43**	P	**P**	**06 35 53.6**	**-1.0**
CNBA				lAmb	lAmb	06 35 58.6	
	comp=Z,17nm,1.3s						
MTN	**Manton Dam**	**46.48**	**195**	P	**P**	**06 35 59.0**	**+0.8**
MK31	**Makanchi Array**	**46.87**	**306**	P	**P**	**06 36 00.9**	**-0.2**
MK31				lAmb	lAmb	06 36 04.0	
	comp=Z,9.0nm,0.9s						
MK31	**Makanchi Array**	**46.87**	**306**	P	**P**	**06 36 00.9**	**-0.2**
MK31				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MKAR	**Makanchi Array**	**46.87**	**306**	P	**P**	**06 36 03.4**	**+2.3**
	comp=Z,5.8nm,0.7s,baz=87,slow=8.0,SNR=7.6						
	comp=Z,5.8nm,0.7s						
MKAR	**Makanchi Array**	**46.87**	**306**	P	**P**	**06 36 00.0**	**-1.0**
MKAR	**Makanchi Array**	**46.87**	**306**	*i* P	**P**	**06 36 05.0**	**+3.9**
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MAKZ	**Makanchi**	**47.08**	**306**	P	**P**	**06 36 02.2**	**-0.4**
MAKZ	**Makanchi**	**47.08**	**306**	P	**P**	**06 36 02.3**	**-0.4**
MAKZ				pmax	pmax		
	comp=Z,14nm,0.9s						
N16K	**Nishlik Lake**	**47.11**	**36**	P	**P**	**06 36 03.6**	**+0.9**
	baz=261						
P16K	**Nushagak River**	**47.31**	**38**	P	**P**	**06 36 05.3**	**+1.0**
	baz=264						
O16K	**Kokwok River B**	**47.33**	**37**	P	**P**	**06 36 06.3**	**+1.9**
	baz=263						
O17K	**Koliganek Bris**	**47.85**	**37**	P	**P**	**06 36 10.0**	**+1.6**
	baz=264						
Q16K	**King Salmon**	**47.97**	**38**	P	**P**	**06 36 10.9**	**+1.6**
	baz=265						
R17K	**Ugashik Creek**	**48.03**	**40**	P	**P**	**06 36 11.1**	**+1.2**
	baz=266						
P17K	**Kvichak River**	**48.13**	**37**	P	**P**	**06 36 11.6**	**+1.0**
	baz=265						
N18K	**Kilae Creek**	**48.55**	**36**	P	**P**	**06 36 14.8**	**+0.9**
N18K	**Kilae Creek**	**48.55**	**36**	P	**P**	**06 36 14.7**	**+0.9**
	baz=264						
SVW2	**Sparrevohn**	**48.74**	**35**	P	**P**	**06 36 15.8**	**+0.4**
P18K	**Big Mountain,**	**48.76**	**37**	P	**P**	**06 36 16.4**	**+0.8**
	baz=266						
O18K	**Koktuh Hills**	**48.81**	**37**	P	**P**	**06 36 14.4**	**-1.5**
O18K				lAmb	lAmb	06 36 18.1	
	comp=Z,17nm,1.4s						
O18K	**Koktuh Hills**	**48.81**	**37**	P	**P**	**06 36 17.7**	**+1.8**
	baz=265						
KURBB	**Kurchatov Arra**	**49.06**	**311**	LR	LR	06 58 11.0	
	comp=Z,224nm,19.0s,baz=357,slow=38						
L19K	**White Mountain**	**49.20**	**34**	P	**P**	**06 36 20.4**	**+1.5**
	baz=264						
N19K	**Bonanza Creek**	**49.25**	**35**	P	**P**	**06 36 17.4**	**-1.9**
N19K	**Bonanza Creek**	**49.25**	**35**	P	**P**	**06 36 20.0**	**+0.7**
	baz=265						
M19K	**Big River Lodg**	**49.39**	**34**	P	**P**	**06 36 21.1**	**+0.8**
	baz=264						
L20K	**Farewell, AK**	**49.69**	**33**	P	**P**	**06 36 23.5**	**+0.9**
	baz=264						
K20K	**Telida**	**49.69**	**32**	P	**P**	**06 36 21.6**	**-1.0**
K20K	**Telida**	**49.69**	**32**	P	**P**	**06 36 23.9**	**+1.3**
	baz=263						
OHAK	**Old Harbor**	**49.70**	**40**	P	**P**	**06 36 22.4**	**-0.2**
	baz=269						
KNRA	**Kununurra**	**49.75**	**197**	P	**P**	**06 36 23.2**	**-0.2**
J20K	**Nowinta River**	**49.76**	**31**	P	**P**	**06 36 21.8**	**-1.2**
J20K	**Nowinta River**	**49.76**	**31**	P	**P**	**06 36 24.4**	**+1.3**
	baz=262						
M20K	**Styx River**	**49.98**	**34**	P	**P**	**06 36 25.7**	**+0.8**
	baz=265						
KDAK	**Kodiak Island**	**50.08**	**39**	P	**P**	**06 36 25.6**	**+0.1**
	comp=Z,9.6nm,0.8s,baz=270,slow=2.4,SNR=5.1						
	comp=Z,9.6nm,0.8s						
KDAK	**Kodiak Island**	**50.08**	**39**	P	**P**	**06 36 25.6**	**+0.1**
KDAK	**Kodiak Island**	**50.08**	**39**	P	**P**	**06 36 26.4**	**+0.8**
	baz=269						
IMAR	**Indian Mountai**	**50.17**	**29**	P	**P**	**06 36 26.5**	**+0.3**
H21K	**Melozitna Rive**	**50.52**	**29**	P	**P**	**06 36 28.6**	**-0.2**
H21K				lAmb	lAmb	06 36 45.4	
	comp=Z,8.2nm,1.0s						
H21K	**Melozitna Rive**	**50.52**	**29**	P	**P**	**06 36 29.3**	**+0.5**
	baz=263,SNR=5.6						
SKT	**Skwentna**	**50.74**	**34**	P	**P**	**06 36 31.0**	**+0.4**
	baz=267						
I21K	**Tanana**	**50.80**	**30**	P	**P**	**06 36 31.9**	**+1.0**
	baz=264						
CAPN	**Captain Cook N**	**50.88**	**36**	P	**P**	**06 36 32.4**	**+0.9**
	baz=268						
BRSE	**Bradley Lake S**	**51.06**	**37**	P	**P**	**06 36 33.4**	**+0.5**
	baz=269						
H22K	**Ishtalitna Cre**	**51.13**	**29**	P	**P**	**06 36 34.4**	**+1.0**
	baz=264						
BPAW	**Bear Paw Mtn.**	**51.13**	**31**	P	**P**	**06 36 33.5**	**0.0**
	baz=266						
MLY	**Manley**	**51.31**	**30**	P	**P**	**06 36 36.0**	**+1.1**
MLY				lAmb	lAmb	06 36 52.2	
	comp=Z,8.8nm,1.0s						
MLY	**Manley**	**51.31**	**30**	P	**P**	**06 36 34.8**	**0.0**
	baz=265,SNR=6.9						
TRF	**Thorofare Moun**	**51.40**	**32**	P	**P**	**06 36 37.0**	**+1.4**
	baz=267						
RC01	**Rabbit Creek A**	**51.57**	**35**	P	**P**	**06 36 36.7**	**-0.1**
	baz=269						
COLD	**Coldfoot**	**51.74**	**27**	P	**P**	**06 36 38.4**	**+0.4**
PMR	**Palmer**	**51.87**	**35**	P	**P**	**06 36 39.9**	**+0.9**
	baz=269						
H23K	**Yukon River**	**51.87**	**29**	P	**P**	**06 36 37.7**	**-1.3**
H23K				lAmb	lAmb	06 36 50.1	
	comp=Z,7.9nm,0.9s		

comp=Z,4.0nm,0.9s
KNK Knik Glacier 52.19 35 P P 06 36 41.4 -0.1
baz=270
SML Sawmill 52.25 34 P P 06 36 41.7 -0.2
baz=270
MDM Murphy Dome 52.37 30 P P
MDM IAmb IAmb 06 36 59.5
comp=Z,20nm,1.2s
WRH Wood River Hil 52.41 31 P P 06 36 42.4 -0.5
D24K Happy Valley 52.46 25 P P 06 36 43.7 +0.4
baz=264
WAT6 Susitna Watana 52.53 33 P P 06 36 43.2 -0.9
baz=270
CCB Clear Creek Bu 52.54 31 P P 06 36 43.4 -0.5
H24K Noodor Dome 52.56 29 P P 06 36 42.6 -1.6
H24K Noodor Dome 52.56 29 P P 06 36 44.5 +0.3
baz=267
WB0 Warramunga Arr 52.69 189 P P 06 36 45.7 +0.2
WB0 IAmb IAmb 06 36 58.1
comp=Z,9.5nm,0.8s
POKR Poker Plat Res 52.71 30 P P 06 36 43.9 -1.4
POKR Poker Plat Res 52.71 30 P P 06 36 46.2 +1.0
baz=268
SCM Sheep Creek Mo 52.73 34 P P 06 36 45.8 +0.3
baz=271
GLI Glacier Island 52.86 35 P P 06 36 46.2 -0.2
baz=272
WRAB Tennant Creek 52.86 189 P P 06 36 47.2 +0.4
WRAB IAmb IAmb 06 36 55.6
comp=Z,13nm,1.0s
WRAB Tennant Creek 52.86 189 *i* P P 06 36 47.2 +0.4
WRAB pmax pmax
comp=Z,9.0nm,1.0s
WR0 Warramunga Arr 52.87 189 P P 06 36 46.8 0.0
WB2 Warramunga Arr 52.87 189 P P 06 36 47.0 +0.2
WB2 IAmb IAmb 06 36 60.0
comp=Z,19nm,1.2s
WRA Warramunga Arr 52.87 189 P P 06 36 47.2 +0.3
comp=Z,3.2nm,0.5s,baz=3.5,slow=7.7,SNR=67
comp=Z,3.2nm,0.5s
WRA Warramunga Ar 52.87 189 P P 06 36 47.1 +0.3
HDA Harding Lake 52.91 31 P P 06 36 45.7 -1.0
IL31 52.94 31 P P 06 36 46.9 0.0
IL31 IAmb IAmb 06 36 57.8
comp=Z,8.1nm,0.8s
ILAR Eielson Array 52.94 31 P P 06 36 47.0 +0.1
comp=Z,5.7nm,0.9s,baz=266,slow=6.0,SNR=30
comp=Z,5.7nm,0.9s
ILAR Eielson Array 52.94 31 P P 06 36 46.9 0.0
KLU Klutina 53.41 35 P P 06 36 50.9 +0.4
baz=272
K24K Donnelly Dome 53.42 32 P P 06 36 50.5 +0.1
baz=270
EYAK Cordova Ski Ar 53.54 36 P P 06 36 51.2 -0.1
baz=273
PAX Paxson 53.57 33 P P 06 36 51.5 -0.1
baz=271
J25K Salcha River, 53.59 31 P P 06 36 51.0 -0.8
J25K IAmb IAmb 06 37 00.7
comp=Z,6.7nm,0.9s
J25K Salcha River, 53.59 31 P P 06 36 51.6 -0.1
baz=270
RIDG Independent Ri 53.83 32 P P 06 36 54.7 +1.2
RIDG Independent Ri 53.83 32 P P 06 36 53.2 -0.3
baz=271
N25K Chitina, Valde 54.04 34 P P 06 36 53.5 -1.6
N25K IAmb IAmb 06 37 02.9
comp=Z,16nm,1.2s
N25K Chitina, Valde 54.04 34 P P 06 36 55.3 +0.2
baz=273
BMRM Bremner River 54.07 35 P P 06 36 53.7 -1.7
BMRM Bremner River 54.07 35 P P 06 36 55.2 -0.2
baz=274
SCRK Sand Creek 54.21 32 P P 06 36 55.6 -0.7
SCRK IAmb IAmb 06 37 06.6
comp=Z,9.5nm,0.9s
SCRK Sand Creek 54.21 32 P P 06 36 55.6 -0.7
baz=272,SNR=7.6
J26L Joseph Creek 54.37 31 P P 06 36 56.7 -0.8
J26L IAmb IAmb 06 37 04.1
comp=Z,7.0nm,0.8s
J26L Joseph Creek 54.37 31 P P 06 36 57.3 -0.2
baz=272
I26K Coal Creek Min 54.52 30 P P 06 36 58.2 -0.2
I26K IAmb IAmb 06 37 00.7
comp=Z,6.2nm,0.9s
I26K Coal Creek Min 54.52 30 P P 06 36 58.5 0.0
baz=331,SNR=6.2
L26K Log Cabin Wild 54.54 33 P P 06 36 58.6 0.0
L26K IAmb IAmb 06 37 16.8
comp=Z,6.6nm,0.9s
L26K Log Cabin Wild 54.54 33 P P 06 36 59.8 +1.2
baz=273
MCARA McCarthy VSAT 54.81 35 P P 06 37 00.7 +0.1
baz=275
CRQE Cirque 54.83 35 P P 06 37 01.0 +0.1
baz=275
K27K Chicken 55.05 31 P P 06 37 02.1 -0.1
baz=274
L27K Beaver Creek, 55.23 33 P P 06 37 02.4 -1.3
L27K IAmb IAmb 06 37 21.1
comp=Z,5.6nm,0.9s
L27K Beaver Creek, 55.23 33 P P 06 37 04.5 +0.8
baz=275
BCAR Beaver Creek A 55.25 33 P P 06 37 01.6 -2.2
M27K Edge Creek, AK 55.26 33 P P 06 37 03.0 -1.0
M27K IAmb IAmb 06 37 18.4
comp=Z,10nm,1.1s
M27K Edge Creek, AK 55.26 33 P P 06 37 03.7 -0.4
baz=275
CTG Chitna Glacier 55.66 35 P P 06 37 06.4 -0.5
baz=276
BVCY Beaver Creek 55.73 33 P P 06 37 06.6 -0.7
baz=276
KK31 Karatay Array 55.73 303 P P 06 37 07.6 0.0
KK31 IAmb IAmb 06 37 20.5
comp=Z,9.4nm,1.0s
KK31 Karatay Array 55.73 303 P P 06 37 07.6 0.0
KK31 pmax pmax
comp=Z,9.0nm,1.0s
KKAR Karatay Array 55.73 303 P P 06 37 07.3 -0.3
KKAR Karatay Array 55.73 303 P P 06 37 07.3 -0.3
YUK3 Moose Creek 55.99 34 P P 06 37 07.9 -1.5
baz=277
DAWY Dawson 56.22 31 P P 06 37 10.6 -0.2
DAWY IAmb IAmb 06 37 11.5
comp=Z,8.7nm,0.9s
DAWY Dawson 56.22 31 P P 06 37 10.2 -0.6
baz=334,SNR=11
DAWY Dawson 56.22 31 P P 06 37 10.1 -0.6
PINM Pinnacle 56.30 36 P P 06 37 10.2 -1.2
baz=278
AS31 Alice Springs 56.60 189 P P 06 37 15.3 +1.4
ASAR Alice Springs 56.60 189 P P 06 37 15.2 +1.3
comp=Z,1.5nm,0.5s,baz=17,slow=13,SNR=38
comp=Z,1.5nm,0.5s
ASAR Alice Springs 56.60 189 P P 06 37 14.2 +0.4
YUK4 Talbot Arm 56.91 34 P P 06 37 15.1 -0.8
baz=278
GAR Garm 57.02 298 P P 06 37 16.4 -0.5
EPYK Eagle Plains 57.08 28 P P 06 37 17.1 +0.3
baz=277
YUK6 Outpost Mounta 57.10 35 P P 06 37 17.5 +0.2
baz=279
M30M Minto, Yukon 57.58 33 P P 06 37 20.2 -0.2
M30M IAmb IAmb 06 37 25.2
comp=Z,5.4nm,0.9s
P30M Million Dollar 57.93 36 P P 06 37 22.6 -0.3
baz=281
PSA00 Pilbara Seismi 57.97 204 P P 06 37 22.2 -1.3
PSA00 IAmb IAmb 06 37 24.1
comp=Z,15nm,0.8s
CHGR Chuyangaron 57.98 298 P P 06 37 23.4 -0.3
CHGR Chuyangaron 57.98 298 P P 06 37 23.4 -0.3
O30N Mendenhall 58.23 35 P P 06 37 24.0 -1.0
baz=281
N31M Braeburn, Yuko 58.24 34 P P 06 37 25.2 +0.1
WHY Whitehorse 58.83 35 P P 06 37 28.1 -1.3
SKAG Skagway 58.87 36 P P 06 37 28.6 -0.8
baz=282
SIT Sitka 59.41 39 P P 06 37 32.8 -0.4
baz=284
OUENC Ouen Island, N 59.78 153 P P 06 37 36.2 +0.1
ARU Arti 59.90 320 *c i* P P 06 37 35.6 -1.0
ARU S S 06 45 48.4 0.0
ARU SS SS 06 49 40.5 -3.6

ARU pmax pmax
comp=Z,56nm,1.2s
ARU MLR MLR
comp=Z,129nm,14.0s
P33M Teslin, Yukon 59.93 35 P P 06 37 35.9 -0.9
CRAG Craig 61.01 40 P P 06 37 43.8 -0.4
baz=286
ABKAR Akbulak array 61.09 312 P P 06 37 45.2 +0.4
DLBC Dease Lake 61.78 37 P P 06 37 49.5 0.0
DLBC IAmb IAmb 06 37 55.4
comp=Z,6.1nm,1.1s
DLBC Dease Lake 61.78 37 P P 06 37 49.5 0.0
baz=342
T35M Bob Quinn 62.11 38 P P 06 37 51.4 -0.2
baz=288
STKA Stephens Creek 64.26 180 P P 06 38 08.0 +2.0
comp=Z,1.8nm,0.6s,baz=331,slow=12,SNR=3.2
comp=Z,1.8nm,0.6s
STKA Stephens Creek 64.26 180 P P 06 38 08.0 +2.0
EUNU Eureka 64.37 8 P P 06 38 07.1 +0.7
EUNU IAmb IAmb 06 38 14.9
comp=Z,6.1nm,1.1s
FORT Forrest 64.51 193 P P 06 38 08.7 +1.0
HRA Herat 64.70 296 P P 06 38 08.1 -1.4
YKA Yellowknife Ar 67.33 29 *i* P P 06 38 26.1 +0.6
YKA pmax pmax
comp=Z,4.0nm,0.9s
ARCES ARCESS Array B 68.17 340 LR LR 07 12 11.7
comp=Z,82nm,19.5s,baz=119,slow=39
PGC Sidney 69.04 45 P P 06 38 34.9 -1.6
I02E Swisshome, OR 70.82 50 P P 06 38 47.3 -0.3
baz=297
I03D Drain, OR 71.33 50 P P 06 38 53.2 +2.6
baz=298
I04A Tendick Farm, 71.89 49 P P 06 38 53.9 -0.2
baz=298
L02F Cave Junction 71.92 51 P P 06 38 55.5 +1.2
baz=298
I05D Terrebonne, OR 72.31 48 P P 06 38 57.5 +0.8
baz=298
J04D Umpqua Nationa 72.34 50 P P 06 38 57.7 +0.7
baz=298
YBH Yreka Blue Hor 72.67 51 LR LR 07 03 52.2
comp=Z,44nm,20.7s,baz=312,slow=30
L04D Klamath Falls 72.70 51 P P 06 38 57.8 -1.4
L04D Klamath Falls 72.70 51 P P 06 38 59.9 +0.7
baz=299
FINES FINESS Array B 72.83 333 P P 06 39 00.1 +0.9
comp=Z,2.2nm,0.7s,baz=51,slow=16,SNR=2.7
comp=Z,2.2nm,0.7s
FINES FINESS Array B 72.83 333 P P 06 38 58.8 -0.5
K04D Chiloquin, OR 72.87 50 P P 06 39 00.4 +0.3
baz=299
J05D Fort Rock, OR 72.88 49 P P 06 38 59.6 -0.6
baz=299
NEW Newport 72.94 43 P P 06 38 58.7 -1.6
baz=300
UOSS Minazif 73.58 289 P P 06 39 04.4 0.0
UOSS IAmb IAmb 06 39 31.6
comp=Z,9.5nm,1.1s
KBZ Khabaz 74.06 312 LR LR 07 15 08.8
comp=Z,80nm,19.0s,baz=68,slow=39
BMO Blue Mountains 74.56 46 P P 06 39 09.8 -0.2
BMO Blue Mountains 74.56 46 P P 06 39 09.8 -0.2
BMO pmax pmax
comp=Z,3.0nm,0.9s
GNI Garni 74.65 308 LR LR 07 14 55.5
comp=Z,54nm,19.2s,baz=84,slow=38
SUMG Summit 74.98 0 P P 06 39 13.1 +0.9
SUMG IAmb IAmb 06 39 14.8
comp=Z,6.9nm,0.8s
SUMG Summit 74.98 0 P P 06 39 13.1 +0.9
SUMG pmax pmax
comp=Z,7.0nm,0.8s
MSO Missoula 75.53 43 P P 06 39 14.6 -0.9
baz=302
CMB Columbia Colle 76.05 54 P P 06 39 17.5 -1.0
CMB IAmb IAmb 06 39 20.9
comp=Z,6.0nm,1.0s
CMB Columbia Colle 76.05 54 P P 06 39 17.5 -1.0
CMB pmax pmax
comp=Z,6.0nm,1.0s
HLID Hailey 77.01 46 P P 06 39 23.8 -0.3
HLID Hailey 77.01 46 P P 06 39 24.6 +0.5
baz=303
EGMT Eagleton 77.23 41 P P 06 39 26.3 +1.2
baz=305
NVAR Mina Array Bea 77.25 53 P P 06 39 26.6 +1.0
comp=Z,2.2nm,0.8s,baz=287,slow=5.6,SNR=19
NVAR LR LR 07 06 23.6
comp=Z,48nm,21.1s,baz=273,slow=30
comp=Z,2.2nm,0.8s
NVAR Mina Array Bea 77.25 53 P P 06 39 24.1 -1.4
BOZ Bozeman (W) 77.55 44 P P 06 39 27.4 +0.4
baz=304
AKASG Malin Array Be 77.97 323 P P 06 39 29.0 -0.1
comp=Z,0.6nm,0.5s,baz=49,slow=4.6,SNR=3.4
AKASG LR LR 07 17 04.0
comp=Z,176nm,19.8s,baz=54,slow=38
comp=Z,0.6nm,0.5s
AKASG Malin Array Be 77.97 323 P P 06 39 29.0 -0.1
VES Vestal, Richgr 78.07 55 P P 06 39 30.9 +1.0
baz=302
HFS Hagfors 78.19 336 LR LR 07 16 15.5
comp=Z,63nm,20.4s,baz=61,slow=37
NB2 NORSAR Subarra 78.32 338 P P 06 39 30.7 -0.2
comp=Z,4.0nm,0.9s,baz=41,slow=5.3
NOA NORSAR Array B 78.32 338 P P 06 39 31.2 +0.4
comp=Z,2.4nm,0.9s,baz=40,slow=5.4,SNR=5.8
NOA LR LR 07 17 05.5
comp=Z,58nm,21.2s,baz=95,slow=38
comp=Z,2.4nm,0.9s
ARVC Arvin 78.62 56 P P 06 39 33.6 +0.6
baz=302
GRAC Grapevine Rang 78.63 53 P P 06 39 34.9 +1.9
baz=302
H17A Grant Village 78.84 44 P P 06 39 37.6 +3.2
baz=305
MPMC Manual Prospec 79.05 54 P P 06 39 36.3 +0.7
baz=302
R11A Troy Canyon, C 79.09 51 P P 06 39 34.7 -1.1
R11A Troy Canyon, C 79.09 51 P P 06 39 35.9 +0.1
baz=303
RLMT Red Lodge 79.18 43 P P 06 39 35.7 -0.4
baz=306
LRMC Laurel Mtn Rad 79.23 55 P P 06 39 36.7 +0.2
baz=302
FURC Furnace Creek, 79.26 54 P P 06 39 36.6 +0.2
baz=303
LOHW Long Hollow 79.28 45 P P 06 39 36.4 -0.3
BGU Big Grassy Mou 79.32 48 P P 06 39 35.9 -1.0
EDW2 Edwards Air Fo 79.33 55 P P 06 39 37.5 +0.6
baz=302
TPNV Topopah Spring 79.41 53 P P 06 39 37.8 +0.2
baz=303
GWY Greenwater Val 79.54 54 P P 06 39 37.0 -1.3
GWY IAmb IAmb 06 39 40.4
comp=Z,6.7nm,1.0s
DUG Dugway, Tooele 79.86 49 P P 06 39 39.9 0.0
DUG IAmb IAmb 06 39 43.9
comp=Z,6.6nm,0.9s
DUG Dugway, Tooele 79.86 49 P P 06 39 39.9 0.0
DUG pmax pmax
comp=Z,7.0nm,1.0s
DUG Dugway, Tooele 79.86 49 P P 06 39 39.6 -0.3
baz=304
GSC Goldstone, Bar 79.93 55 P P 06 39 40.4 +0.2
baz=303
PRN Pahroc Range 79.96 52 P P 06 39 39.7 -0.7
PRN IAmb IAmb 06 39 43.1
comp=Z,7.8nm,1.1s
BW06 Boulder Array 80.39 45 P P 06 39 44.1 +1.3
baz=306
PD31 Pinedale Array 80.39 45 P P 06 39 42.7 -0.1
PDAR Pinedale Array 80.39 45 P P 06 39 43.8 +1.0
comp=Z,1.4nm,0.8s,baz=275,slow=3.4,SNR=9.8
comp=Z,1.4nm,0.8s
PDAR Pinedale Array 80.39 45 P P 06 39 41.9 -0.9
BBRC Big Bear Solar 80.41 55 P P 06 39 43.4 +0.3
baz=303
TUQ Turquoise Moun 80.46 54 P P 06 39 43.7 +0.6
baz=303
NLU North Lily Min 80.47 49 P P 06 39 41.7 -1.5
JLU Jordanelle 80.49 48 P P 06 39 43.0 -0.4
HEC Hector,Ludlow 80.51 55 P P 06 39 43.3 -0.1
baz=303
MURC Murrieta 80.58 56 P P 06 39 44.6 +0.9

baz=303
MPU Maple Canyon 80.71 48 P P 06 39 43.6 -0.9
MPU IAmb IAmb 06 39 47.1
comp=Z,8.0nm,1.1s
GMRC Granite Mounta 81.00 54 P P 06 39 46.8 +0.8
baz=304
CCUT Cedar City 81.00 51 P P 06 39 45.5 -0.6
PFO Pinyon Flats O 81.09 56 LR LR 07 13 50.8
comp=Z,56nm,19.4s,baz=308,slow=34
PFO Pinyon Flats O 81.09 56 P P 06 39 44.8 -1.7
PFO Pinyon Flats O 81.09 56 P P 06 39 44.8 -1.7
PFO pmax pmax
comp=Z,6.0nm,1.0s
PFO Pinyon Flats O 81.09 56 P P 06 39 47.0 +0.5
baz=303
TPFO Pinon Flats 81.09 56 P P 06 39 47.1 +0.5
baz=303
BELC Belle Mtn. Jos 81.20 55 P P 06 39 47.9 +0.8
baz=304
MSU Marysvale 81.22 50 P P 06 39 45.5 -1.8
MSU Marysvale 81.22 50 P P 06 39 45.5 -1.8
LCMT Little Creek M 81.38 52 P P 06 39 46.4 -1.7
LCMT IAmb IAmb 06 39 52.9
comp=Z,7.5nm,0.9s
MONP2 Monument Peak 81.51 56 P P 06 39 49.6 +0.7
baz=304
Q16A Castle Valley 81.63 49 P P 06 39 48.4 -1.1
Q16A IAmb IAmb 06 39 53.1
comp=Z,8.2nm,1.0s
RDMU Red Mountain 81.67 47 P P 06 39 48.3 -1.3
IRM Iron Mountain 81.70 55 P P 06 39 49.7 0.0
baz=304
BC3 Big Chuckawall 81.76 55 P P 06 39 50.3 +0.1
baz=304
IKP In-Ko-Pah, Jac 81.86 56 P P 06 39 51.1 +0.5
baz=304
SWSC Sam W. Stewart 81.92 56 P P 06 39 51.8 +1.0
baz=304
BRTR Keskin Array B 82.04 312 P P 06 39 52.1 +0.7
comp=Z,1.8nm,0.8s,baz=94,slow=6.0,SNR=7.0
comp=Z,1.8nm,0.8s
BRTR Keskin Array B 82.04 312 *i* P P 06 39 53.7 +2.2
BRTR pmax pmax
comp=Z,2.0nm,0.8s
K22A Casper 82.25 44 P P 06 39 53.6 +1.1
baz=308
PDMCI Parker Dam,Lak 82.31 54 P P 06 39 52.6 -0.1
baz=304
GLA Glamis 82.53 56 P P 06 39 55.2 +1.1
baz=304
RAYN Ar Rayn 82.71 293 P P 06 39 55.6 +0.5
RAYN IAmb IAmb 06 40 14.4
comp=Z,6.1nm,1.1s
RAYN Ar Rayn 82.71 293 P P 06 39 55.6 +0.5
RAYN pmax pmax
comp=Z,6.0nm,1.1s
O20A White River Ci 82.75 47 P P 06 39 53.7 -1.6
O20A IAmb IAmb 06 39 57.5
comp=Z,8.0nm,1.0s
O20A White River Ci 82.75 47 P P 06 39 55.6 +0.4
baz=307
MLR Muntele Rosu 82.95 320 LR LR 07 20 25.7
comp=Z,93nm,19.0s,baz=70,slow=38
WUAZ Wupatki 83.47 52 P P 06 39 59.8 +0.7
baz=306
PV13 Radium Mtn., P 83.57 48 P P 06 39 59.4 -0.2
N23A Red Feather La 83.67 45 P P 06 40 00.1 0.0
baz=308
X16A Lo Mia Camp, P 84.07 53 P P 06 40 01.2 -1.0
X16A IAmb IAmb 06 40 04.9
comp=Z,5.0nm,1.2s
SMCO Snowmass 84.10 47 P P 06 40 00.7 -1.9
SMCO IAmb IAmb 06 40 06.9
comp=Z,5.5nm,0.9s
MORC Moravsky Berou 84.20 327 *e* P P 06 40 02.1 -0.2
MVCO Mesa Verde 84.34 49 P P 06 40 03.2 -0.4
MVCO IAmb IAmb 06 40 07.6
comp=Z,4.1nm,1.1s
MVCO Mesa Verde 84.34 49 P P 06 40 04.6 +1.0
baz=307
ISCO Idaho Springs 84.55 46 P P 06 40 05.4 +0.7
ISCO Idaho Springs 84.55 46 P P 06 40 05.4 +0.7
ISCO pmax pmax
comp=Z,2.0nm,0.9s
ISCO Idaho Springs 84.55 46 P P 06 40 04.3 -0.4
baz=309
214A Organ Pipe Nat 84.56 55 P P 06 40 04.6 +0.2
214A IAmb IAmb 06 40 06.9
comp=Z,5.9nm,1.1s
214A Organ Pipe Nat 84.56 55 P P 06 40 04.7 +0.2
baz=305
JAVC Velka Javorina 84.80 327 *e* P P 06 40 06.3 +0.9
VRAC Vranov 84.97 328 LR LR 07 21 29.0
comp=Z,71nm,18.3s,baz=62,slow=38
VRAC Vranov 84.97 328 *e* P P 06 40 05.7 -0.5
CLL Collm 85.04 331 *e* P P 06 40 06.0 -0.5
CLL pmax pmax
comp=Z,5.0nm,1.0s
CLL Collm 85.04 331 *e* P P 06 40 06.0 -0.5
comp=Z,5.0nm,1.0s
S22A 4UR Ranch, Cre 85.07 48 P P 06 40 06.5 -0.8
S22A IAmb IAmb 06 40 10.3
comp=Z,8.2nm,1.3s
S22A 4UR Ranch, Cre 85.07 48 P P 06 40 07.6 +0.3
baz=308
F33A 5 Mile Ranch, 85.73 37 P P 06 40 10.1 0.0
F33A IAmb IAmb 06 40 13.5
comp=Z,3.8nm,0.8s
TUC Tucson 85.75 54 P P 06 40 09.9 -0.6
TUC Tucson 85.75 54 P P 06 40 09.9 -0.6
TUC pmax pmax
comp=Z,2.0nm,1.1s
TUC Tucson 85.75 54 P P 06 40 10.7 +0.2
baz=306
SDCO Great Sand Dun 85.90 47 P P 06 40 10.3 -1.1
baz=309
T25A Trinidad 86.95 47 P P 06 40 15.8 -0.7
baz=309
ECSD EROS Data Cent 87.03 38 P P 06 40 16.8 +0.2
ECSD IAmb IAmb 06 40 18.0
comp=Z,7.2nm,1.1s
ECSD EROS Data Cent 87.03 38 P P 06 40 16.3 -0.2
baz=314
ANMO Albuquerque 87.03 50 P P 06 40 15.7 -1.2
ANMO Albuquerque 87.03 50 P P 06 40 15.7 -1.2
ANMO pmax pmax
comp=Z,3.0nm,1.2s
ANMO Albuquerque 87.03 50 P P 06 40 17.0 +0.1
baz=308
SPMN Marine on St. 87.89 35 P P 06 40 19.9 -0.7
SPMN IAmb IAmb 06 40 22.1
comp=Z,4.8nm,0.8s
SPMN Marine on St. 87.89 35 P P 06 40 20.6 0.0
baz=316
I37A Lemond, Waseca 88.47 36 P P 06 40 22.7 -0.7
MNTX Cornudas Mount 89.76 52 P P 06 40 29.3 -0.4
baz=309
KSU1 Kansas State U 90.25 42 P P 06 40 31.6 -0.2
KSU1 IAmb IAmb 06 40 35.3
comp=Z,5.1nm,0.7s
KSU1 Kansas State U 90.25 42 P P 06 40 32.8 +0.9
baz=314
ITM Ithomi 90.74 316 P P 06 40 33.4 -0.8
LPIG La Paz 90.94 61 LR LR 07 25 08.0
comp=Z,23nm,18.4s,baz=306,slow=38
WMOK Wichita Mounta 91.97 46 P P 06 40 39.1 -0.8
baz=313
TX31 Lajitas Ar. Si 92.40 53 P P 06 40 41.9 -0.2
TX32 Lajitas Array 92.40 53 P P 06 40 40.8 -1.3
TXAR Lajitas Array 92.40 53 P P 06 40 43.6 +1.5
comp=Z,4.8nm,1.1s,baz=300,slow=2.7,SNR=18
comp=Z,4.8nm,1.1s
TXAR Lajitas Array 92.40 53 P P 06 40 40.3 -1.8
TUL1 Leonard 92.94 43 P P 06 40 44.1 -0.2
baz=314
S39A Bolivar 93.07 41 P P 06 40 42.9 -2.0
S39A IAmb IAmb 06 40 45.7
comp=Z,2.9nm,0.8s
R40A Maddies Statio 93.21 40 P P 06 40 44.5 -1.0
R40A IAmb IAmb 06 40 46.6
comp=Z,3.4nm,0.8s
CCM Cathedral Cave 93.93 39 P P 06 40 47.7 -1.1
CCM IAmb IAmb 06 40 52.3
comp=Z,2.9nm,0.8s
CCM Cathedral Cave 93.93 39 P P 06 40 47.7 -1.1
CCM pmax pmax

comp=Z,3.0nm,0.8s
CCM Cathedral Cave 93.93 39 P P 06 40 49.1 +0.2
baz=318
MGMO Mountain Grove 94.03 41 P P 06 40 48.1 -1.2
MGMO IAmb IAmb 06 40 52.1
comp=Z,3.3nm,0.9s
SADO Sadowa 94.30 28 LR LR 07 31 38.0
comp=Z,15nm,18.1s,baz=24,slow=41
MIAR Mount Ida 95.18 43 P P 06 40 54.2 -0.5
MIAR IAmb IAmb 06 40 56.3
comp=Z,4.2nm,0.9s
MIAR Mount Ida 95.18 43 P P 06 40 54.2 -0.5
MIAR pmax pmax
comp=Z,4.0nm,0.9s
MIAR Mount Ida 95.18 43 P P 06 40 54.1 -0.5
baz=316
M53A WI Miller and 96.41 31 P P 06 40 59.0 -1.1
baz=325
TKL Tuckaleechee C 99.62 36 LR LR 07 28 01.6
comp=Z,43nm,18.7s,baz=346,slow=36
TORD Torodi Ar. Bea 120.63 314 PKP PKPdf 06 46 23.1 -0.4
comp=Z,0.6nm,0.7s,baz=70,slow=0.3,SNR=3.1
LPAZ La Paz 148.28 66 PKPbc PKiKP 06 47 19.5 -0.7
comp=Z,4.8nm,0.9s,baz=20,slow=4.4,SNR=12
LPAZ La Paz 148.28 66 PKPab PKiKP 06 47 20.2 0.0
LPAZ La Paz 148.28 66 PKP2 PKiKP 06 47 20.2 0.0

IDC ***27*** *06:35:44.5±1.6, 4.62S×143.82E, h0km, mb4.1/7, mbtmp4.1/8, ML3.9/1, Error ellipse: s-maj=52.0km s-min=26.0km az=104.0*
NEIC ***27*** *06:36:00.2±1.9, 4.76S±0.08×143.5E±0.2, h118km±9km, mb4.2/19, Error ellipse: s-maj=22.0km s-min=12.0km az=87.0*
ISC 27 06:35:58.4±0.8, 4.70S±0.09×143.4E±0.2, h103km, n30, σ0.97/30, mb4.2/14, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
COEN	**Coen**	**9.20**	**182**	Pn	**Pn**	**06 38 10.1**	**+1.8**
MTN	**Manton Dam**	**14.59**	**236**	Pn	**Pn**	**06 39 19.5**	**-0.4**
WB0	**Warramunga Arr**	**17.37**	**210**	P	**Pn**	**06 39 54.9**	**+0.5**
WB0				IAmb	IAmb	06 40 07.5	
comp=Z,17nm,1.2s							
WR0	**Warramunga Arr**	**17.46**	**209**	P	**P**	**06 39 54.6**	**-0.7**
WR0				IAmb	IAmb	06 39 59.3	
comp=Z,11nm,0.8s							
WB2	**Warramunga Arr**	**17.54**	**209**	P	**P**	**06 39 55.5**	**-0.6**
WB2				IAmb	IAmb	06 40 23.9	
comp=Z,13nm,1.4s							
WRA	**Warramunga Arr**	**17.54**	**210**	P	**P**	**06 39 54.7**	**-1.4**
comp=Z,0.4nm,0.3s,baz=26,slow=13,SNR=12							
comp=Z,3.9nm,0.9s							
WRA	**Warramunga Arr**	**17.54**	**210**	P	**P**	**06 39 53.9**	**-2.3**
AS31	**Alice Springs**	**20.97**	**205**	P	**P**	**06 40 32.2**	**-1.2**
ASAR	**Alice Springs**	**20.97**	**205**	P	**P**	**06 40 32.3**	**-1.1**
comp=Z,1.0nm,0.8s,baz=35,slow=9.2,SNR=4.7							
comp=Z,1.0nm,0.8s							
EIDS	**Eidsvold**	**21.82**	**161**	P	**P**	**06 40 41.5**	**-0.9**
EIDS				IAmb	IAmb	06 41 19.2	
comp=Z,26nm,1.4s							
TOLI2	**Tolitoli**	**23.35**	**284**	P	**P**	**06 40 59.0**	**+1.0**
TOLI2				IAmb	IAmb	06 40 59.1	
comp=Z,9.0nm,0.7s							
MBWA	**Marble Bar**	**28.22**	**232**	P	**P**	**06 41 41.4**	**-0.4**
MORW	**Morawa**	**35.50**	**224**	P	**P**	**06 42 45.1**	**-0.3**
KSRS	**Korea Array**	**44.36**	**342**	P	**P**	**06 43 58.8**	**+0.3**
comp=Z,0.9nm,0.6s,baz=159,slow=8.9,SNR=4.3							
comp=Z,0.9nm,0.6s							
CMAR	**Chiang Mai Arr**	**49.51**	**299**	P	**P**	**06 44 39.7**	**+0.8**
comp=Z,4.6nm,0.2s,baz=122,slow=6.2,SNR=5.3							
comp=Z,4.6nm,0.2s							
VNDA	**Vanda**	**73.43**	**176**	P	**P**	**06 47 18.8**	**-0.2**
SBA	**Scott Base**	**74.13**	**175**	P	**P**	**06 47 23.5**	**+0.5**
SBA				IAmb	IAmb	06 48 02.1	
comp=Z,4.1nm,1.5s							
MK31	**Makanchi Array**	**74.25**	**321**	P	**P**	**06 47 24.9**	**+0.5**
MKAR	**Makanchi Array**	**74.25**	**321**	P	**P**	**06 47 24.7**	**+0.4**
comp=Z,1.7nm,0.7s,baz=103,slow=8.4,SNR=13							
comp=Z,1.7nm,0.7s							
MAKZ	**Makanchi**	**74.45**	**321**	P	**P**	**06 47 25.8**	**+0.3**
MAKZ				IAmb	IAmb	06 47 26.4	
comp=Z,2.2nm,0.8s							
ZALV	**Zalesovo Beam**	**76.04**	**329**	P	**P**	**06 47 33.4**	**-1.0**
comp=Z,1.6nm,0.5s,baz=100,slow=4.5,SNR=3.8							
comp=Z,1.6nm,0.5s							
ZALV	**Zalesovo Beam**	**76.04**	**329**	P	**P**	**06 47 34.0**	**-0.4**
KURK	**Kurchatov**	**78.06**	**324**	P	**P**	**06 47 45.1**	**-0.7**
KURK				IAmb	IAmb	06 48 24.9	
comp=Z,5.1nm,1.4s							
KURBB	**Kurchatov Arra**	**78.08**	**324**	P	**P**	**06 47 45.0**	**-0.9**
comp=Z,0.2nm,0.3s,baz=281,slow=13,SNR=6.0							
comp=Z,0.2nm,0.3s							
MLY	**Manley**	**84.30**	**23**	P	**P**	**06 48 18.6**	**0.0**
MLY				IAmb	IAmb	06 48 19.2	
comp=Z,3.4nm,1.1s							
RND	**Reindeer**	**84.42**	**25**	P	**P**	**06 48 18.7**	**-0.5**
IL31		**85.72**	**24**	P	**P**	**06 48 24.4**	**-1.2**
IL31				IAmb	IAmb	06 48 24.6	
comp=Z,2.9nm,0.7s							
ILAR	**Eielson Array**	**85.72**	**24**	P	**P**	**06 48 24.1**	**-1.6**
comp=Z,2.1nm,0.6s,baz=254,slow=4.8,SNR=27							
comp=Z,2.1nm,0.6s							
M27K	**Edge Creek, AK**	**87.10**	**27**	P	**P**	**06 48 32.9**	**+0.3**
K27K	**Chicken**	**87.47**	**25**	P	**P**	**06 48 34.9**	**+0.7**
K27K				IAmb	IAmb	06 48 36.1	
comp=Z,2.4nm,0.8s							

KRNET ***27*** *06:36:29.5±0.1, 39.41N×73.49E, mb3.5*
SOME ***27*** *06:36:34.0, 39.63N×73.53E, h5km*
ISC 27 06:36:29.9±1.7, 39.56N±0.06×73.42E±0.04, h0km±13km, n20, σ1.47/40, 8C-6D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.08**	**333**	⇑*iP*	**Pn**	**06 36 52.8**	**+0.5**
baz=34							
OHH				⇑*iS*	**Sn**	**06 37 09.9**	**+1.9**
baz=34							
DRK	**Karamyk**	**1.26**	**267**	⇓*iP*	**Pn**	**06 36 54.5**	**-0.5**
baz=74							
DRK				⇓*iS*	**Sn**	**06 37 12.5**	**-0.2**
baz=74							
BTK	**Batken**	**2.07**	**285**	⇑*iP*	**Pb**	**06 37 08.5**	**+0.2**
baz=88							
BTK				⇑*iS*	**Sg**	**06 37 37.1**	**+0.8**
baz=88							
ARLS	**Aral**	**2.40**	**16**	⇑*eP*	**Pb**	**06 37 13.9**	**-0.1**
baz=14							
ARLS				⇑*iS*	**Sg**	**06 37 46.2**	**-0.7**
baz=14							
GAR	**Garm**	**2.48**	**258**	⇓*iP*	**Pn**	**06 37 13.2**	**+1.6**
baz=62							
GAR				⇓*iS*	**Sb**	**06 37 45.3**	**-1.1**
baz=62							
TRKS	**Terek-Say**	**2.62**	**319**	⇑*iP*	**Pb**	**06 37 16.3**	**-1.6**
baz=20							
TRKS				⇑*iS*	**Sb**	**06 37 50.3**	**-0.4**
baz=20							
BOOM	**Boomskoye usch**	**3.49**	**32**	⇓*eP*	**Pn**	**06 37 28.3**	**+2.7**
baz=30							
BOOM				⇓*iS*	**Sb**	**06 38 11.0**	**-4.6**
baz=30							
IUG	**luzhnay**	**3.65**	**316**	*eP*	**Pg**	**06 37 41.0**	**+1.3**
280nm,0.7s							
IUG				*eS*	**Sg**	**06 38 29.0**	**+2.0**
90nm,0.8s							
KST	**Kastek**	**3.97**	**28**	*eP*	**Pg**	**06 37 47.0**	**+1.0**
4.1nm,0.2s							
KST				*eS*	**Sg**	**06 38 39.2**	**+1.8**
25nm,0.1s							
SGDS	**Sogindy**	**3.99**	**13**	*eP*	**Pg**	**06 37 45.8**	**-0.6**
2.2nm,0.6s							
SGDS				*eS*	**Sg**	**06 38 37.2**	**-0.9**
9.2nm,0.1s							
DGS	**Degeres**	**4.08**	**25**	*eP*	**Pg**	**06 37 48.5**	**+0.4**
5.3nm,0.2s							
DGS				*eS*	**Sg**	**06 38 41.8**	**+0.8**
26nm,0.4s							
MTBS	**Maitube**	**4.22**	**31**	*eP*	**Pg**	**06 37 51.5**	**+0.7**
2.9nm,0.1s							
MTBS				*eS*	**Sg**	**06 38 47.2**	**+1.7**
11nm,0.1s							
TNSS	**Tian-Shan**	**4.37**	**36**	*eP*	**Pg**	**06 37 53.5**	**-0.2**
4.7nm,0.4s							
TNSS				*eS*	**Sg**	**06 38 51.0**	**+0.7**
5.1nm,0.1s							
BRLS	**Borolday**	**4.39**	**323**	*eP*	**Pg**	**06 37 52.5**	**-1.6**
2.6nm,0.0s							
BRLS				*eS*	**Sg**	**06 38 48.9**	**-2.1**
16nm,0.3s							
KRBS	**Karabastau**	**4.46**	**21**	*eP*	**Pg**	**06 37 55.9**	**+0.4**
1.2nm,0.0s							
KRBS				*eS*	**Sg**	**06 38 54.9**	**+1.6**
8.5nm,0.2s							
KTBS	**Karatobe**	**4.81**	**29**	*eP*	**Pg**	**06 38 02.0**	**-0.1**
4.8nm,1.2s							
KTBS				*eS*	**Sg**	**06 39 05.7**	**+1.2**
14nm,0.6s							
KUU	**Kurty**	**4.85**	**26**	*eP*	**Pg**	**06 38 02.8**	**+0.1**
3.1nm,0.6s							
KUU				*eS*	**Sg**	**06 39 07.2**	**+1.6**
8.2nm,0.0s							
BTLS	**Baital**	**5.50**	**5**	*eP*	**Pg**	**06 38 15.0**	**-0.2**
3.2nm,0.4s							
BTLS				*eS*	**Sg**	**06 39 27.8**	**+1.4**
4.7nm,0.1s							
KPKS	**Kokpek**	**5.55**	**44**	*eP*	**Pg**	**06 38 14.8**	**-1.4**
3.9nm,0.1s							
KPKS				*eS*	**Sg**	**06 39 27.5**	**-0.6**
10.0nm,0.2s							
ARXS	**Arharly**	**5.69**	**34**	*eP*	**Pg**	**06 38 17.4**	**-1.5**
5.4nm,0.4s							
ARXS				*eS*	**Sg**	**06 39 31.9**	**-0.8**
12nm,0.1s							

IDC ***27*** *06:45:59.9±1.1, 39.26N×73.74E, h0km, mb3.9/12, mbtmp3.9/17, ML3.1/5, MS2.5/1, Error ellipse: s-maj=21.5km s-min=18.2km az=144.0*
SOME ***27*** *06:45:59.9, 39.42N×73.77E, h10km*
KRNET ***27*** *06:46:00.2±0.1, 39.45N×73.77E, mb4.3*
NNC ***27*** *06:46:06.1±1.7, 39.60N×73.70E, h0km, mb4.5, mpv4.2, Error ellipse: s-maj=14.1km s-min=7.5km az=174.0*
ISC 27 06:46:02.5±1.1, 39.30N±0.05×73.53E±0.03, h15km±4km, n92, σ2.80/125, mb3.9/13, 33C-14D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.35**	**335**	⇑*iP*	**Pn**	**06 46 25.1**	**-1.8**
baz=25							
OHH				⇑*iS*	**Sn**	**06 46 43.4**	**-1.2**
baz=25							
DRK	**Karamyk**	**1.35**	**278**	⇑*iP*	**Pb**	**06 46 29.1**	**+1.3**
baz=72							
DRK				⇑*iS*	**Sg**	**06 46 50.1**	**+3.8**
baz=72							
BTK	**Batken**	**2.23**	**291**	⇑*iP*	**Pb**	**06 46 42.2**	**-0.3**
baz=86							
BTK				⇑*iS*	**Sg**	**06 47 12.9**	**-1.2**
baz=86							
GAR	**Garm**	**2.52**	**264**	⇑*iP*	**Pb**	**06 46 47.2**	**-0.3**
baz=62							
GAR				⇑*iS*	**Sg**	**06 47 21.6**	**-1.9**
baz=62							
ARLS	**Aral**	**2.62**	**13**	⇑*eP*	**Pn**	**06 46 43.6**	**-1.0**
baz=10.0							
ARLS				⇑*iS*	**Sn**	**06 47 15.2**	**-1.0**
baz=10.0							
AML	**Almayashu**	**2.83**	**2**	P	**Pn**	**06 46 50.0**	**+2.5**
SNR=67							
TRKS	**Terek-Say**	**2.88**	**321**	⇑*eP*	**Pn**	**06 46 48.8**	**+0.8**
baz=16							
TRKS				⇑*iS*	**Sn**	**06 47 24.3**	**+1.8**
baz=16							
UCH	**Uchtor**	**3.01**	**14**	P	**Pn**	**06 46 52.5**	**+2.4**
SNR=123							
UCH	**Uchtor**	**3.01**	**14**	⇓*iP*	**Pn**	**06 46 49.1**	**-1.1**
baz=11							
UCH				⇓*iS*	**Sn**	**06 47 25.0**	**-1.3**
baz=11							
EKS2	**Erkin-Say**	**3.36**	**3**	P	**Pn**	**06 46 57.1**	**+2.4**
SNR=23							
EKS2	**Erkin-Say**	**3.36**	**3**	⇑*iP*	**Pn**	**06 46 54.2**	**-0.4**
baz=0.0							
EKS2				⇑*iS*	**Sn**	**06 47 33.6**	**-0.7**
baz=0.0							
AAK	**Ala-Archa**	**3.41**	**12**	P	**Pn**	**06 46 58.2**	**+2.9**
SNR=29							
AAK	**Ala-Archa**	**3.41**	**12**	Pn	**Pn**	**06 46 58.2**	**+2.9**
7.7nm,0.3s,baz=184,slow=8.7,SNR=32							
AAK				Lg	Lg	06 47 45.6	
53nm,0.3s,baz=297,slow=23,SNR=7.6							
42nm,0.5s							
AAK	**Ala-Archa**	**3.41**	**12**	⇓*iP*	**Pn**	**06 46 54.5**	**-0.8**
baz=10.0							
AAK				⇓*iS*	**Sn**	**06 47 34.2**	**-1.4**
baz=10.0							
KBK	**Karagaybulak**	**3.52**	**17**	P	**Pn**	**06 46 60.0**	**+3.1**
SNR=22							
KBK	**Karagaybulak**	**3.52**	**17**	⇑*eP*	**Pn**	**06 46 56.0**	**-0.8**
baz=15							
KBK				⇑*eS*	**Sn**	**06 47 36.5**	**-1.8**
baz=15							
ULHL	**Ulahol**	**3.59**	**34**	P	**Pn**	**06 47 00.8**	**+3.0**
SNR=21							
BOOM	**Boomskoye usch**	**3.67**	**29**	⇑*iP*	**Pn**	**06 46 57.7**	**-1.2**
baz=28							
BOOM				⇑*iS*	**Sn**	**06 47 39.4**	**-2.6**
baz=28							
CHMS	**Chumysh**	**3.80**	**14**	P	**Pn**	**06 47 03.7**	**+3.0**
SNR=11							
CHMS	**Chumysh**	**3.80**	**14**	⇓Pn	**Pn**	**06 47 03.3**	**+2.7**
18nm,0.6s							
CHMS				⇑Lg	Lg	06 47 57.1	
238nm,0.8s							
TAS	**Tashkent**	**3.82**	**303**	⇓*iP*	**Pn**	**06 47 03.8**	**+3.0**
baz=0.0							
TAS				⇓*iS*	**Sn**	**06 47 50.2**	**+4.8**
baz=0.0							
IUG	**luzhnay**	**3.89**	**318**	*eP*	**Pg**	**06 47 15.6**	**-1.5**
2μm,0.9s							
IUG				*eS*	**Sg**	**06 48 10.3**	**+2.8**
540nm,0.8s							
IUG	**luzhnay**	**3.89**	**318**	Pg	**Pg**	**06 47 15.6**	**-1.5**
5μm,1.2s							
IUG				Lg	Lg	06 48 08.8	
TKM2	**Tokmak 2**	**3.94**	**23**	P	**Pn**	**06 47 05.1**	**+2.5**
SNR=23							
TKM2	**Tokmak 2**	**3.94**	**23**	⇑Pn	**Pn**	**06 47 05.0**	**+2.4**
17nm,0.7s							
TKM2				⇑Lg	Lg	06 48 00.7	
97nm,0.6s							
KDJ	**Kajisay**	**3.96**	**43**	⇑*eP*	**Pn**	**06 47 01.5**	**-1.4**
baz=43							
KDJ				⇑*iS*	**Sn**	**06 47 46.1**	**-3.0**
baz=43							
USP	**Ospenovka**	**4.03**	**10**	P	**Pn**	**06 47 06.1**	**+2.4**
SNR=24							
KST	**Kastek**	**4.16**	**25**	*eP*	**Pb**	**06 47 14.6**	**-0.9**
32nm,0.7s							
KST				*eS*	**Sb**	**06 48 08.5**	**+2.8**
285nm,0.9s							
KST	**Kastek**	**4.16**	**25**	Pg	**Pb**	**06 47 15.6**	**+0.1**
32nm,0.7s							
KST				Lg	Lg	06 48 09.2	
285nm,0.9s							
SGDS	**Sogindy**	**4.23**	**11**	*eP*	**Pb**	**06 47 15.3**	**-1.3**
14nm,0.2s							
SGDS				*eS*	**Sb**	**06 48 10.1**	**+2.6**
175nm,0.1s							
DGS	**Degeres**	**4.28**	**23**	*eP*	**Pb**	**06 47 17.7**	**+0.1**
77nm,0.5s							
DGS				*eS*	**Sb**	**06 48 13.9**	**+4.8**
328nm,1.4s							
DGS	**Degeres**	**4.28**	**23**	Pg	**Pb**	**06 47 18.9**	**+1.3**
77nm,0.5s							
DGS				Lg	Lg	06 48 14.7	
328nm,1.4s							
MTBS	**Maitube**	**4.40**	**29**	*eP*	**Pb**	**06 47 19.0**	**-0.6**
31nm,0.4s							
MTBS				*eS*	**Sb**	**06 48 16.2**	**+3.7**
98nm,0.6s							
MTBS	**Maitube**	**4.40**	**29**	Pg	**Pb**	**06 47 19.6**	**-0.1**
31nm,0.4s							
MTBS				Lg	Lg	06 48 16.2	
98nm,0.6s							
KK31	**Karatay Array**	**4.43**	**330**	Pn	**Pn**	**06 47 11.1**	**+1.9**
3.7nm,0.3s,baz=138,slow=15,SNR=80							
KK31				⇓Pg	**Pb**	**06 47 22.2**	**+2.2**
17nm,0.5s,baz=134,slow=15,SNR=10							
KK31				⇑Sn	**Sn**	**06 48 04.5**	**+4.0**
28nm,0.4s,baz=153,slow=23,SNR=5.5							
KK31				⇓Lg	Lg	06 48 17.5	
35nm,0.5s							
TNSS	**Tian-Shan**	**4.53**	**34**	*eP*	**Pb**	**06 47 21.7**	**-0.4**
54nm,0.6s							
TNSS				*eS*	**Sb**	**06 48 20.6**	**+3.9**
39nm,0.6s							
TNSS	**Tian-Shan**	**4.53**	**34**	Pg	**Pb**	**06 47 22.7**	**+0.6**
54nm,0.6s							
TNSS				Lg	Lg	06 48 21.3	
39nm,0.6s							
BRLS	**Borolday**	**4.65**	**324**	*eP*	**Pb**	**06 47 23.9**	**+0.1**
9.3nm,0.6s							
BRLS				*eS*	**Sb**	**06 48 25.0**	**+5.3**
102nm,0.5s							
BRLS	**Borolday**	**4.65**	**324**	Pg	**Pb**	**06 47 25.0**	**+1.1**
9.3nm,0.6s							
BRLS				Lg	Lg	06 48 25.0	
102nm,0.5s							
AAA	**Alma-Ata**	**4.66**	**32**	*eP*	**Pb**	**06 47 24.6**	**+0.6**
36nm,0.5s							
AAA				*eS*	**Sb**	**06 48 25.8**	**+5.8**
214nm,0.7s							
AAA	**Alma-Ata**	**4.66**	**32**	Pg	**Pb**	**06 47 25.3**	**+1.3**
36nm,0.5s							
AAA				Lg	Lg	06 48 25.8	
214nm,0.7s							
KRBS	**Karabastau**	**4.67**	**19**	*eP*	**Pb**	**06 47 23.8**	**-0.4**
KRBS				*eS*	**Sb**	**06 48 24.5**	**+4.2**
60nm,0.8s							
KRBS	**Karabastau**	**4.67**	**19**	Pg	**Pb**	**06 47 24.8**	**+0.6**
KRBS				Lg	Lg	06 48 24.5	
60nm,0.8s							
KNDC	**Almaty**	**4.69**	**32**	⇓Pn	**Pn**	**06 47 14.7**	**+1.8**
46nm,0.5s							
KNDC				⇑Lg	Lg	06 48 26.1	
577nm,0.7s							
KTBS	**Karatobe**	**5.00**	**27**	*eP*	**Pb**	**06 47 30.1**	**+0.4**
23nm,0.6s							
KTBS				*eS*	**Sb**	**06 48 35.7**	**+6.0**
327nm,0.7s							
KTBS	**Karatobe**	**5.00**	**27**	Pg	**Pb**	**06 47 30.9**	**+1.1**
23nm,0.6s							
KTBS				Lg	Lg	06 48 35.7	
327nm,0.7s							
KUU	**Kurty**	**5.04**	**24**	*eP*	**Pb**	**06 47 30.7**	**+0.1**
8.2nm,0.7s							
KUU				*eS*	**Sb**	**06 48 36.1**	**+5.1**
121nm,0.8s							
KUU	**Kurty**	**5.04**	**24**	Pg	**Pb**	**06 47 31.2**	**+0.7**
8.2nm,0.7s							
KUU				Lg	Lg	06 48 36.1	
121nm,0.8s							
CHKK	**Chushkaly**	**5.23**	**29**	*eP*	**Pb**	**06 47 33.4**	**-0.3**
20nm,1.3s							
CHKK				*eS*	**Sb**	**06 48 41.0**	**+4.6**
134nm,0.6s							
CHKK	**Chushkaly**	**5.23**	**29**	Pg	**Pb**	**06 47 34.7**	**+0.9**
20nm,1.3s							
CHKK				Lg	Lg	06 48 42.0	
134nm,0.6s							
SATY	**Saty**	**5.25**	**43**	*eP*	**Pb**	**06 47 35.0**	**+0.9**
28nm,0.7s							
SATY				*eS*	**Sb**	**06 48 43.5**	**+6.4**
97nm,1.2s							
SATY	**Saty**	**5.25**	**43**	Pg	**Pb**	**06 47 35.7**	**+1.6**
55nm,1.1s							
SATY				Lg	Lg	06 48 43.5	
105nm,1.9s							
ZHN	**Zhinishke**	**5.34**	**42**	*eP*	**Pb**	**06 47 36.9**	**+1.3**
12nm,0.1s							
ZHN				*eS*	**Sb**	**06 48 46.5**	**+6.8**
154nm,0.2s							
KURS	**Kuram**	**5.44**	**38**	*eP*	**Pb**	**06 47 38.3**	**+0.9**
22nm,1.1s							
KURS				*eS*	**Sb**	**06 48 49.4**	**+6.9**
61nm,1.1s							
KURS	**Kuram**	**5.44**	**38**	Pg	**Pb**	**06 47 39.3**	**+2.0**
22nm,1.1s							
KURS				Lg	Lg	06 48 49.4	
61nm,1.1s							
KPKS	**Kokpek**	**5.68**	**41**	*eP*	**Pb**	**06 47 42.3**	**+0.8**
15nm,0.2s							
KPKS				*eS*	**Sb**	**06 48 55.7**	**+6.3**
74nm,0.2s							
BTLS	**Baital**	**5.75**	**4**	*eP*	**Pb**	**06 47 42.7**	**+0.2**
7.4nm,0.7s							
BTLS				*eS*	**Sb**	**06 48 56.1**	**+5.0**
43nm,0.8s							
BTLS	**Baital**	**5.75**	**4**	Pg	**Pb**	**06 47 42.7**	**+0.2**
7.4nm,0.7s							
ARXS	**Arharly**	**5.86**	**32**	*eP*	**Pb**	**06 47 44.9**	**+0.4**
30nm,0.8s							
ARXS				*eS*	**Sb**	**06 49 00.9**	**+6.4**
99nm,0.6s							
ARXS	**Arharly**	**5.86**	**32**	Pg	**Pb**	**06 47 46.0**	**+1.5**
40nm,1.0s							
ARXS				Lg	Lg	06 49 00.9	
99nm,0.6s							
PDGK	**Podgornoye**	**6.02**	**46**	Pg	**Pb**	**06 47 48.0**	**+0.7**
11nm,0.5s							
PDGK				Lg	Lg	06 49 05.0	
20nm,1.0s							
PDGK	**Podgornoye**	**6.02**	**46**	⇓Pn	**Pn**	**06 47 33.4**	**+2.2**
9.2nm,0.8s							
PDGK				⇑Pg	**Pb**	**06 47 51.2**	**+4.0**
28nm,0.7s							
PDGK				⇓Lg	Lg	06 49 09.4	
71nm,0.9s							
BLB	**Baldybastay**	**6.05**	**36**	*eP*	**Pb**	**06 47 49.1**	**+1.4**
22nm,0.6s							
BLB				*eS*	**Sb**	**06 49 07.7**	**+7.6**
55nm,0.9s							
BLB	**Baldybastay**	**6.05**	**36**	Pg	**Pb**	**06 47 49.9**	**+2.1**
22nm,0.6s							
BLB				Lg	Lg	06 49 07.7	
55nm,0.9s							
TDK	**Taldyqorghan**	**6.75**	**31**	Pg	**Pb**	**06 48 03.4**	**+3.9**
87nm,0.5s							
TDK				Lg	Lg	06 49 30.5	
156nm,0.8s							
DJR	**Jarkent**	**6.86**	**41**	Pg	Pb	06 48 05.9	+4.5
8.7nm,0.5s							
OTUK	**Ortayu**	**8.98**	**355**	⇓Pn	**Pn**	**06 48 12.3**	**+0.6**
7.0nm,0.7s							
OTUK				⇑Lg	Lg	06 50 42.6	
26nm,0.9s							
MAKZ	**Makanchi**	**9.71**	**37**	⇑Pn	**Pn**	**06 48 23.8**	**+2.1**
3.5nm,0.9s							
MAKZ				⇑Lg	Lg	06 51 05.8	
15nm,1.4s							
MK31	**Makanchi Array**	**9.85**	**38**	⇑Pn	**Pn**	**06 48 26.5**	**+2.9**
2.3nm,0.8s,baz=204,slow=40,SNR=14							
MK31				Pg		06 48 38.4	
1.7nm,0.6s,baz=218,slow=14,SNR=5.2							
MK31				⇑Lg	Lg	06 51 09.3	
7.8nm,0.8s,baz=222,slow=27,SNR=5.2							
MKAR	**Makanchi Array**	**9.85**	**38**	Pn	**Pn**	**06 48 26.9**	**+3.4**
0.1nm,0.3s,baz=221,slow=13,SNR=13							
MKAR				Lg	Lg	06 51 10.2	
0.4nm,0.3s,baz=236,slow=26,SNR=7.0							
KURBB	**Kurchatov Arra**	**11.85**	**16**	Pn	**Pn**	**06 48 50.1**	**-0.8**
baz=207,slow=12,SNR=5.4							
KURBB				Lg	Lg	06 52 10.3	
0.1nm,0.3s,baz=202,slow=30,SNR=15							
0.5nm,0.7s							
KURBB	**Kurchatov Arra**	**11.85**	**16**	⇑Lg	Lg	06 52 13.2	
68nm,1.2s							
KURK	**Kurchatov**	**11.96**	**16**

	25nm,0.9s,baz=360,slow=2.5,SNR=6.2								
	25nm,0.9s								
SONM	**Songino Array**	**25.14**	**59**	P		**P**	**06 51 28.0**	**+1.0**
	2.6nm,0.8s,baz=260,slow=8.9,SNR=5.8								
BRTR	**Keskin Array B**	**30.61**	**284**	P		**P**	**06 52 17.8**	**+1.7**
	1.4nm,0.8s,baz=92,slow=7.4,SNR=2.0								
	1.4nm,0.8s								
FINES	**FINESS Array B**	**36.35**	**323**	P		**P**	**06 53 06.4**	**+0.8**
	0.6nm,0.4s,baz=120,slow=11,SNR=5.5								
	0.6nm,0.4s								
ARCES	**ARCESS Array B**	**39.37**	**336**	P		**P**	**06 53 31.4**	**+0.3**
	0.5nm,0.5s,baz=106,slow=8.1,SNR=8.1								
	0.5nm,0.5s								
KLR	**Kul'dur**	**41.90**	**57**	P		**P**	**06 53 52.3**	**+0.1**
	1.2nm,0.5s,baz=277,slow=8.5,SNR=4.1								
	1.2nm,0.5s								
HFS	**Hagfors**	**42.16**	**320**	P		**P**	**06 53 54.4**	**+0.3**
	0.8nm,0.3s,baz=100,slow=12,SNR=7.7								
	0.8nm,0.3s								
NB2	**NORSAR Subarra**	**43.40**	**321**	P		**P**	**06 54 04.4**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=91,slow=7.9								
NOA	**NORSAR Array B**	**43.40**	**321**	P		**P**	**06 54 05.5**	**+1.3**
	comp=Z,0.5nm,0.6s,baz=108,slow=7.6,SNR=2.7								
	comp=Z,0.5nm,0.6s								
TORD	**Torodi Ar. Bea**	**67.78**	**269**	P		**P**	**06 57 00.1**	**0.0**
	comp=Z,0.5nm,0.5s,baz=44,slow=5.8,SNR=3.0								
	comp=Z,0.5nm,0.5s								
ILAR	**Eielson Array**	**71.53**	**17**	P		**P**	**06 57 20.3**	**-2.1**
	comp=Z,0.7nm,0.9s,baz=306,slow=4.8,SNR=7.8								
	comp=Z,0.7nm,0.9s								
DBIC	**Dimbokro**	**76.83**	**268**	P		**P**	**06 57 55.5**	**+1.4**
	comp=Z,3.1nm,0.9s,baz=265,slow=16,SNR=3.2								
	comp=Z,3.1nm,0.9s								
YKA	**Yellowknife Ar**	**78.34**	**4**	P		**P**	**06 58 01.5**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=351,slow=5.5,SNR=8.3								
	comp=Z,0.3nm,0.5s								
WRA	**Warramunga Arr**	**81.83**	**124**	P		**P**	**06 58 20.7**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=329,slow=4.8,SNR=2.2								
	comp=Z,0.3nm,0.5s								

IDC ***27*** *06:51:24.5±1.4,5°.17S×146°.24E, h0km, mb3.7/3, mbtmp3.8/6, ML3.8/2, MS3.0/3, Error ellipse: s-maj=57.6km s-min=24.2km az=111.0*

ISC 27 06:51:30.0±1.4, 5°.3S±0°.1×146°.4E±0°.3, h35km, n9, σ1§53/8, mb3.7/3, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.12**	**170**	Pn		**Pn**	**06 52 30.6**	**+0.1**
	30nm,0.4s,baz=111,slow=5.6,SNR=13							
PMG						Sn		
	3.9nm,0.3s,baz=18,slow=20,SNR=1.7							
CTA	**Charters Tower**	**14.67**	**181**	Pn		**Pn**	**06 54 56.7**	**+1.5**
	0.5nm,0.3s,baz=9.6,slow=14,SNR=5.8							
CTA					LR	LR	07 00 16.6	
	comp=Z,60nm,18.0s,baz=272,slow=36							
	1.5nm,0.4s							
WRA	**Warramunga Arr**	**18.68**	**218**	P		**P**	**06 55 44.1**	**-1.2**
	0.2nm,0.3s,baz=40,slow=12,SNR=11							
	0.7nm,0.4s							
ASAR	**Alice Springs**	**21.85**	**212**	P		**P**	**06 56 18.7**	**-1.1**
	1.1nm,0.7s,baz=48,slow=8.6,SNR=19							
	1.1nm,0.7s							
STKA	**Stephens Creek**	**26.79**	**189**	P		**P**	**06 57 08.6**	**+1.7**
	0.7nm,0.4s,baz=19,slow=8.6,SNR=3.0							
	0.7nm,0.4s							
KSRS	**Korea Array**	**45.92**	**339**	LR		LR	07 17 32.8	
	comp=Z,13nm,21.1s,baz=155,slow=34							
PETK	**Petropavlovsk-**	**59.00**	**8**	LR		LR	07 27 32.1	
	comp=Z,11nm,18.0s,baz=140,slow=37							
ILAR	**Eielson Array**	**85.10**	**23**	P		**P**	**07 04 01.6**	**-0.5**
	0.7nm,0.7s,baz=251,slow=5.6,SNR=8.8							
	0.7nm,0.7s							
SIV	**San Ignacio**	**145.53**	**128**	PKPbc		**PKPab**	**07 11 05.7**	**-0.3**
	6.2nm,0.8s,baz=215,slow=3.3,SNR=35							

KRNET ***27*** *06:56:33.1±0.1, 39°.38N×73°.90E, mb3.4*
SOME ***27*** *06:56:40.4, 39°.68N×73°.45E, h10km*
NNC ***27*** *06:56:44.0±2.6, 39°.79N×73°.48E, h0km, mb3.2, mpv2.8, Error ellipse: s-maj=24.8km s-min=16.3km az=167.0*

ISC 27 06:56:38.0±1.3, 39°.59N±0°.06×73°.62E±0°.04, h10km, n23, σ1§72/44, 12C-7D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.13**	**326**	⇓*iP*		**Pn**	**06 56 59.9**	**-0.2**
	baz=24							
OHH				⇓*iS*		**Sn**	**06 57 19.8**	**+4.0**
	baz=24							
DRK	**Karamyk**	**1.41**	**266**	⇑*iP*		**Pb**	**06 57 03.7**	**-0.9**
	baz=74							
DRK				⇑*iS*		**Sg**	**06 57 26.3**	**+2.8**
	baz=74							
BTK	**Batken**	**2.21**	**283**	⇑*iP*		**Pb**	**06 57 16.6**	**-1.5**
	baz=87							
BTK				⇑*iS*		**Sg**	**06 57 48.4**	**-0.6**
	baz=87							
ARLS	**Aral**	**2.33**	**13**	⇑*iP*		**Pn**	**06 57 17.0**	**+0.3**
	baz=7.0							
ARLS				⇑*iS*		**Sb**	**06 57 49.0**	**-0.3**
	baz=7.0							
GAR	**Garm**	**2.63**	**258**	⇓*iP*		**Pn**	**06 57 21.4**	**+0.7**
	baz=63							
GAR				⇓*iS*		**Sb**	**06 57 56.5**	**-1.2**
	baz=63							
TRKS	**Terek-Say**	**2.71**	**317**	⇑*iP*		**Pn**	**06 57 23.3**	**+1.5**
	baz=16							
TRKS				⇑*iS*		**Sb**	**06 57 59.9**	**-0.1**
	baz=16							
CHMS	**Chumysh**	**3.51**	**14**	⇓Pn		**Pb**	**06 57 38.1**	**-2.3**
	1.6nm,0.4s							
CHMS				⇓Lg		Lg	06 58 31.3	
	11nm,0.7s							
TKM2	**Tokmak 2**	**3.65**	**23**	⇑Pn		**Pb**	**06 57 40.1**	**-2.7**
	1.2nm,0.7s							
TKM2				⇑Lg		Lg	06 58 33.7	
	9.3nm,0.6s							
IUG	**luzhnay**	**3.73**	**314**	*eP*		**Pg**	**06 57 46.7**	**-2.8**
	126nm,0.3s							
IUG				*eS*		**Sg**	**06 58 34.6**	**-3.4**
	16nm,0.1s							
KST	**Kastek**	**3.88**	**26**	*eP*		**Pg**	**06 57 51.8**	**-0.5**
	2.6nm,0.2s							
KST				*eS*		**Sg**	**06 58 43.2**	**+0.7**
	17nm,0.1s							
SGDS	**Sogindy**	**3.94**	**11**	*eP*		**Pg**	**06 57 52.5**	**-0.9**
	2.1nm,0.1s							
SGDS				*eS*		**Sg**	**06 58 44.3**	**-0.1**
	5.9nm,0.5s							
DGS	**Degeres**	**4.00**	**23**	*eP*		**Pg**	**06 57 54.0**	**-0.6**
	2.0nm,0.1s							
DGS				*eS*		**Sg**	**06 58 46.9**	**+0.6**
	17nm,0.5s							
MTBS	**Maitube**	**4.12**	**30**	*eP*		**Pg**	**06 57 56.5**	**-0.5**
	3.2nm,0.1s							
MTBS				*eS*		**Sg**	**06 58 51.2**	**+0.8**
	9.1nm,0.1s							
KK31	**Karatay Array**	**4.22**	**327**	⇓Pn		**Pn**	**06 57 46.2**	**+3.8**
	0.5nm,0.3s,baz=136,slow=12,SNR=5.2							
KK31				⇑Pg		**Pg**	**06 57 56.0**	**-2.8**
	1.7nm,0.5s,baz=150,slow=16,SNR=5.0							
KK31				⇑Lg		Lg	06 58 52.5	
	4.0nm,0.6s							
TNSS	**Tian-Shan**	**4.26**	**35**	*eP*		**Pg**	**06 57 59.0**	**-0.8**
	4.3nm,0.2s							
TNSS				*eS*		**Sg**	**06 58 55.7**	**+0.8**
	4.1nm,0.2s							
KRBS	**Karabastau**	**4.38**	**20**	*eP*		**Pg**	**06 58 01.0**	**-1.1**
	0.6nm,0.2s							
KRBS				*eS*		**Sg**	**06 58 58.7**	**-0.2**
	3.4nm,0.1s							
BRLS	**Borolday**	**4.47**	**322**	*eP*		**Pb**	**06 57 57.7**	**+1.1**
	0.9nm,0.0s							
BRLS				*eS*		**Sb**	**06 58 53.4**	**+2.9**
	3.5nm,0.0s							
KTBS	**Karatobe**	**4.72**	**28**	*eP*		**Pg**	**06 58 06.8**	**-1.6**
	1.9nm,0.2s							
KTBS				*eS*		**Sg**	**06 59 09.2**	**-0.3**
	10nm,0.4s							
KUU	**Kurty**	**4.76**	**24**	*eP*		**Pg**	**06 58 08.0**	**-1.2**
	3.1nm,0.1s							
KUU				*eS*		**Sg**	**06 59 10.9**	**0.0**
	14nm,0.1s							
CHKK	**Chushkaly**	**4.95**	**30**	*eP*		**Pg**	**06 58 11.5**	**-1.4**
	1.0nm,0.0s							
CHKK				*eS*		**Sg**	**06 59 16.5**	**-0.5**
	5.1nm,0.1s							
KPKS	**Kokpek**	**5.43**	**43**	*eP*		**Pg**	**06 58 21.5**	**-0.5**
	3.1nm,0.0s							
KPKS				*eS*		**Sg**	**06 59 34.5**	**+2.2**
	4.9nm,0.1s							
BTLS	**Baital**	**5.46**	**3**	*eP*		**Pg**	**06 58 21.4**	**-1.1**
	1.4nm,0.0s							
BTLS				*eS*		**Sg**	**06 59 33.6**	**+0.3**
	4.3nm,0.0s							
ARXS	**Arharly**	**5.59**	**33**	*eP*		**Pg**	**06 58 22.6**	**-2.4**
	2.0nm,0.2s							
ARXS				*eS*		**Sg**	**06 59 35.9**	**-1.5**
	4.9nm,0.1s							

SOME ***27*** *07:09:00.7, 39°.48N×73°.50E, h0km*
KRNET ***27*** *07:09:01.1±0.1, 39°.40N×73°.54E, mb4.0*
NNC ***27*** *07:09:07.6±2.8, 39°.60N×73°.37E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=24.3km s-min=13.8km az=14.0*

ISC 27 07:09:05.2±1.2, 39°.55N±0°.06×73°.41E±0°.03, h10km, n38, σ2§52/67, 22C-7D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.09**	**334**	⇑*iP*		**Pb**	**07 09 25.1**	**-1.0**
	baz=33							
OHH				⇑*iS*		**Sn**	**07 09 42.9**	**+1.2**
	baz=33							
DRK	**Karamyk**	**1.25**	**267**	⇑*eP*		**Pn**	**07 09 26.8**	**-2.1**
	baz=74							
DRK				⇑*iS*		**Sg**	**07 09 45.2**	**-0.2**
	baz=74							
BTK	**Batken**	**2.06**	**285**	⇑*iP*		**Pb**	**07 09 41.0**	**-1.7**
	baz=88							
BTK				⇑*iS*		**Sg**	**07 10 10.3**	**-1.1**
	baz=88							
ARLS	**Aral**	**2.41**	**16**	⇑*iP*		**Pn**	**07 09 45.4**	**+0.5**
	baz=14							
ARLS				⇑*iS*		**Sb**	**07 10 17.8**	**-0.9**
	baz=14							
GAR	**Garm**	**2.46**	**258**	⇑*iP*		**Pn**	**07 09 45.6**	**+0.1**
	baz=62							
GAR				⇑*iS*		**Sb**	**07 10 18.3**	**-1.7**
	baz=62							
AML	**Almayashu**	**2.59**	**5**	P		**Pb**	**07 09 50.7**	**-1.3**
	SNR=5.4							
TRKS	**Terek-Say**	**2.63**	**320**	⇓*iP*		**Pn**	**07 09 48.6**	**+0.8**
	baz=19							
TRKS				⇓*iS*		**Sb**	**07 10 23.2**	**-1.7**
	baz=19							
UCH	**Uchtor**	**2.81**	**17**	P		**Pb**	**07 09 53.4**	**-2.3**
	SNR=22							
UCH	**Uchtor**	**2.81**	**17**	⇑*iP*		**Pn**	**07 09 51.0**	**+0.5**
	baz=14							
UCH				⇑*iS*		**Sn**	**07 10 27.4**	**+2.8**
	baz=14							
EKS2	**Erkin-Say**	**3.12**	**5**	P		**Pb**	**07 09 58.8**	**-2.1**
	SNR=8.1							
AAK	**Ala-Archa**	**3.19**	**15**	P		**Pb**	**07 09 59.3**	**-2.8**
	SNR=7.4							
KBK	**Karagaybulak**	**3.32**	**20**	P		**Pb**	**07 10 05.1**	**+0.9**
	SNR=6.5							
ULHL	**Ulahol**	**3.45**	**38**	P		**Pb**	**07 10 07.5**	**+1.1**
	SNR=8.3							
BOOM	**Boomskoye usch**	**3.51**	**32**	⇓*iP*		**Pn**	**07 10 00.4**	**+0.5**
	baz=30							
BOOM				⇓*iS*		**Sn**	**07 10 43.3**	**+1.7**
	baz=30							
CHMS	**Chumysh**	**3.59**	**16**	⇑Pn		**Pn**	**07 10 02.9**	**+1.9**
	5.5nm,0.5s							
CHMS				⇓Lg		Lg	07 10 59.6	
	71nm,0.8s							
IUG	**luzhnay**	**3.65**	**316**	*eP*		**Pb**	**07 10 10.3**	**+0.5**
	551nm,0.3s							
IUG				*eS*		**Sg**	**07 11 00.6**	**-1.7**
	213nm,0.8s							
TKM2	**Tokmak 2**	**3.75**	**25**	⇓Pn		**Pb**	**07 10 08.2**	**-3.4**
	6.5nm,0.5s							
TKM2				⇑Lg		Lg	07 11 05.4	
	39nm,0.6s							
KDJ	**Kajisay**	**3.85**	**47**	⇑*iP*		**Pn**	**07 10 04.7**	**+0.1**
	baz=44							
KDJ				⇑*iS*		**Sn**	**07 10 51.0**	**+0.9**
	baz=44							
KST	**Kastek**	**3.99**	**28**	*eP*		**Pb**	**07 10 16.9**	**+1.3**
	4.5nm,0.5s							
KST				*eS*		**Sg**	**07 11 11.5**	**-1.7**
	81nm,0.1s							
SGDS	**Sogindy**	**4.01**	**13**	*eP*		**Pb**	**07 10 15.8**	**-0.1**
	4.0nm,0.2s							
SGDS				*eS*		**Sg**	**07 11 09.8**	**-4.1**
	46nm,0.3s							
DGS	**Degeres**	**4.10**	**25**	*eP*		**Pb**	**07 10 18.9**	**+1.5**
	6.3nm,0.1s							
DGS				*eS*		**Sg**	**07 11 15.3**	**-1.4**
	64nm,0.2s							
KK31	**Karatay Array**	**4.17**	**329**	Pn		**Pn**	**07 10 11.6**	**+2.7**
	1.3nm,0.3s,baz=131,slow=11,SNR=16							
KK31				⇑Pg		**Pb**	**07 10 20.3**	**+1.7**
	16nm,0.7s,baz=148,slow=18,SNR=14							
KK31				⇑Sn		**Sn**	**07 11 02.5**	**+4.9**
	6.8nm,0.3s,baz=146,slow=27,SNR=3.5							
KK31				⇑Lg		Lg	07 11 17.7	
	18nm,0.5s,baz=139,slow=29,SNR=4.6							
MTBS	**Maitube**	**4.24**	**31**	*eP*		**Pb**	**07 10 21.4**	**+1.5**
	11nm,0.5s							
MTBS				*eS*		**Sg**	**07 11 18.9**	**-2.4**
	39nm,0.6s							
TNSS	**Tian-Shan**	**4.39**	**36**	*eP*		**Pb**	**07 10 23.0**	**+0.4**
	7.9nm,0.1s							
TNSS				*eS*		**Sg**	**07 11 22.7**	**-3.4**
	16nm,0.3s							
BRLS	**Borolday**	**4.40**	**323**	*eP*		**Pb**	**07 10 21.0**	**-1.5**
	4.1nm,0.2s							
BRLS				*eS*		**Sb**	**07 11 19.1**	**+3.4**
	31nm,0.4s							
KRBS	**Karabastau**	**4.48**	**22**	*eP*		**Pb**	**07 10 25.8**	**+1.8**
	5.9nm,0.1s							
KRBS				*eS*		**Sg**	**07 11 26.8**	**-2.2**
	40nm,0.0s							
KTBS	**Karatobe**	**4.83**	**29**	*eP*		**Pb**	**07 10 31.7**	**+1.8**
	5.0nm,0.3s							
KTBS				*eS*		**Sg**	**07 11 37.5**	**-2.7**
	64nm,0.6s							
KUU	**Kurty**	**4.86**	**26**	*eP*		**Pb**	**07 10 32.4**	**+1.9**
	3.6nm,0.2s							
KUU				*eS*		**Sg**	**07 11 38.8**	**-2.5**
	56nm,0.3s							
CHKK	**Chushkaly**	**5.07**	**31**	*eP*		**Pb**	**07 10 36.2**	**+2.3**
	3.8nm,0.2s							
CHKK				*eS*		**Sg**	**07 11 44.7**	**-3.2**
	33nm,0.3s							
SATY	**Saty**	**5.14**	**45**	*eP*		**Pb**	**07 10 36.9**	**+1.6**
	10nm,0.2s							
SATY				*eS*		**Sg**	**07 11 46.1**	**-4.2**
	22nm,0.9s							
KURS	**Kuram**	**5.32**	**41**	*eP*		**Pb**	**07 10 40.7**	**+2.5**
	6.5nm,0.2s							
KURS				*eS*		**Sg**	**07 11 52.2**	**-3.6**
	14nm,0.4s							
BTLS	**Baital**	**5.51**	**5**	*eP*		**Pb**	**07 10 43.5**	**+2.1**
	3.8nm,0.3s							
BTLS				*eS*		**Sg**	**07 11 57.6**	**-4.4**
	6.5nm,0.2s							
KPKS	**Kokpek**	**5.57**	**44**	*eP*		**Pb**	**07 10 44.2**	**+1.7**
	5.2nm,0.0s							
KPKS				*eS*		**Sg**	**07 11 59.1**	**-4.7**
	13nm,0.1s							
ARXS	**Arharly**	**5.71**	**34**	*eP*		**Pb**	**07 10 47.4**	**+2.5**
	5.3nm,0.1s							
ARXS				*eS*		**Sg**	**07 12 03.8**	**-4.6**
	26nm,0.2s							
BLB	**Baldybastay**	**5.92**	**38**	*eP*		**Pb**	**07 10 51.6**	**+3.2**
	14nm,0.7s							
BLB				*eS*		**Sg**	**07 12 10.7**	**-4.3**
	36nm,0.3s							
PDGK	**Podgornoye**	**5.93**	**48**	⇑Pn		**Pn**	**07 10 35.4**	**+2.3**
	5.2nm,0.7s							
PDGK				⇑Lg		Lg	07 12 14.9	
	24nm,0.9s							
DJR	**Jarkent**	**6.74**	**43**	*eP*		**Pb**	**07 11 05.4**	**+2.9**
	1.7nm,0.5s							
DJR				*eS*		**Sg**	**07 12 35.1**	**-6.4**
	10nm,1.1s							
OTUK	**Ortayu**	**8.73**	**355**	⇓Pn		**Pn**	**07 11 12.0**	**+0.5**
	2.3nm,0.8s							
OTUK				⇑Lg		Lg	07 13 39.0	
	15nm,0.9s							

INET ***27*** *07:12:28.5±0.8, 9°.89N×83°.28W, h15km±6km, MW3.3*
UCR ***27*** *07:12:30.4±1.6, 10°.08N×83°.56W, h5km, MW4.3*

ISC 27 07:12:30.8±1.1, 10°.04N±0°.04×83°.54W±0°.03, h11km±8km, n38, σ1§00/46, 7C-5D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BATAN	**Batan**	**0.17**	**71**	*eP*		**Pg**	**07 12 35.0**	**+0.4**
VTCV	**VTCV, Calle Va**	**0.19**	**253**	*eP*		**Pg**	**07 12 35.2**	**+0.1**
CVTR	**Volcan Turrial**	**0.22**	**265**	*eP*		**Pg**	**07 12 35.2**	**-0.5**
VTRT	**Volcan Turrial**	**0.25**	**261**	*eP*		**Pg**	**07 12 36.0**	**-0.2**
RIMA	**Rio Macho**	**0.42**	**230**	⇓*eP*		**Pg**	**07 12 39.2**	**0.0**
RIMA	**Rio Macho**	**0.42**	**230**	*eP*		**Pg**	**07 12 39.2**	**0.0**
OCM	**Ochomogo**	**0.44**	**251**	*eP*		**Pg**	**07 12 39.4**	**-0.2**
RIFO	**Rio Frio, Sara**	**0.47**	**306**	*eP*		**Pg**	**07 12 38.9**	**-1.1**
SJS	**Escuela Geolog**	**0.52**	**259**	*eP*		**Pg**	**07 12 41.1**	**+0.1**
CDM	**Cerro de Muert**	**0.53**	**205**	⇓*iP*		**Pb**	**07 12 41.5**	**-1.0**
CDM	**Cerro de Muert**	**0.53**	**205**	⇓*iP*		**Pb**	**07 12 41.5**	**-1.0**
LCR2	**La Lucha 2**	**0.55**	**237**	⇓*eP*		**Pg**	**07 12 41.3**	**-0.3**
LCR2					*eS*	**Sg**	**07 12 50.0**	**+1.1**
HDC3	**Heredia 3**	**0.56**	**266**	*eP*		**Pg**	**07 12 41.7**	**-0.2**
HDC	**Heredia**	**0.57**	**266**	⇑*eP*		**Pg**	**07 12 41.7**	**-0.3**
HDC					*eS*	**Sg**	**07 12 50.7**	**+1.2**
PEZE	**Perez Zeledon,**	**0.67**	**192**	*eP*		**Pb**	**07 12 43.8**	**-0.8**
DRK0	**Durika**	**0.83**	**159**	*eP*		**Pn**	**07 12 47.7**	**-0.9**
EDDO	**Dominical**	**0.85**	**202**	*eP*		**Pn**	**07 12 48.2**	**-0.5**
EDBA	**Buenos Aires**	**0.91**	**163**	*eP*		**Pn**	**07 12 48.1**	**-1.6**
EDBA					*eS*	**Sn**	**07 13 02.5**	**-0.3**
JACO	**JACO, Garabito**	**1.17**	**251**	⇑*eP*		**Pn**	**07 12 52.0**	**-1.1**
ARE1	**Arenal 1**	**1.23**	**290**	⇑*eP*		**Pn**	**07 12 52.6**	**-1.5**
EDSV	**San Vito**	**1.34**	**155**	*eP*		**Pg**	**07 12 57.6**	**+1.1**
LAFE	**Finca La Fe, P**	**1.37**	**260**	⇑*iP*		**Pn**	**07 12 55.8**	**-0.2**
JTS	**Las Juntas de**	**1.41**	**280**	⇑*eP*		**Pn**	**07 12 55.4**	**-1.1**
PTEN	**Parque Tenorio**	**1.57**	**295**	*eP*		**Pn**	**07 12 57.5**	**-1.3**
PTEN					*eS*	**Sn**	**07 13 19.9**	**+0.7**
ACAL	**Aguas Claras**	**1.59**	**292**	*eP*		**Pn**	**07 12 57.6**	**-1.4**
ACAL					*eS*	**Sn**	**07 13 21.2**	**+1.6**
CUI	**Cuipilapa**	**1.71**	**291**	⇑*eP*		**Pn**	**07 12 59.8**	**-0.9**
VMAR	**Armenia, Volca**	**1.73**	**296**	*eP*		**Pn**	**07 13 00.1**	**-0.9**
HORNC	**Hornillas**	**1.75**	**293**	*eP*		**Pn**	**07 13 00.4**	**-0.8**
COLC	**Colonia**	**1.75**	**291**	*eP*		**Pn**	**07 13 00.3**	**-0.9**
COLC					*eS*	**Sn**	**07 13 24.9**	**+1.4**
GUAB	**Guayabo de Bag**	**1.79**	**292**	*eP*		**Pn**	**07 13 01.1**	**-0.6**
ORTG	**Ortega, Santa**	**1.92**	**280**	*eP*		**Pn**	**07 13 03.5**	**0.0**
ORTG					*eS*	**Sn**	**07 13 30.4**	**+2.6**
GPS2	**Hotel Rincn d**	**1.92**	**292**	*eP*		**Pn**	**07 13 03.7**	**+0.2**
BUEV	**Buena Vista**	**1.99**	**292**	*eP*		**Pn**	**07 13 04.1**	**-0.4**
GB1A	**Borinquen Arri**	**1.99**	**293**	⇑*eP*		**Pn**	**07 13 05.0**	**+0.5**
HZTE	**Horizontes, Gu**	**2.13**	**288**	⇓*eP*		**Pn**	**07 13 06.1**	**-0.3**
HZTE	**Horizontes, Gu**	**2.13**	**288**	*eP*		**Pn**	**07 13 06.2**	**-0.3**
ESPN	**Las Esperanzas**	**2.27**	**341**	*eP*		**Pn**	**07 13 07.2**	**-1.1**
ESPN					*eS*	**Sn**	**07 13 38.1**	**+1.8**
ACON	**Acoyapa**	**2.50**	**320**	*eP*		**Pn**	**07 13 10.6**	**-0.8**

IDC ***27*** *07:17:55.6±6.0, 16°.25N×98°.27W, h0km, mb3.7/5, mbtmp3.6/6, ML2.9/1, MS3.5/1, Error ellipse: s-maj=129.6km s-min=99.9km az=62.0*
MEX ***27*** *07:17:57.0±1.1, 15°.99N×98°.86W, h21km±26km, MD4.1*
NEIC ***27*** *07:17:59.9±2.1, 16°.6N±0°.1×98°.9W±0°.1, h10km±2km, mb4.1/78, Md4.1(MEX), Error ellipse: s-maj=22.2km s-min=13.9km az=224.0*

ISC 27 07:17:55.0±1.5, 16°.25N±0°.05×98°.86W±0°.03, h6km±9km, n125, σ1§75/155, mb4.1/35, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CRIG	**Cruz Grande**	**0.55**	**332**	*eP*		**Pn**	**07 18 09.1**	**-0.4**
CRIG					*eS*	**Sn**	**07 18 18.4**	**-0.7**
PNIG	**Pinotepa**	**0.71**	**78**	*i P*		**Pb**	**07 18 09.2**	**-0.7**
PNIG					*eS*	**Sg**	**07 18 19.5**	**+1.4**
MGIG	**Malinaltepec**	**1.00**	**12**	*eP*		**Pn**	**07 18 16.6**	**+0.7**
MGIG					*eS*	**Sn**	**07 18 32.0**	**+1.6**
DAIG	**Los Arroyos**	**1.08**	**315**	*eP*		**Pg**	**07 18 16.3**	**+0.5**
DAIG					*i S*	**Sn**	**07 18 31.2**	**-1.0**
TLIG	**Tlapa**	**1.34**	**12**			**Pb**	**07 18 21.0**	**+0.4**
TLIG	**Tlapa**	**1.34**	**12**	*eP*		**Pg**	**07 18 21.5**	**+0.8**
TLIG					*eS*	**Sg**	**07 18 40.0**	**+1.9**
YOIG	**Yosondua**	**1.40**	**64**	*eP*		**Pn**	**07 18 20.3**	**-1.0**
YOIG					*eS*	**Sn**	**07 18 38.5**	**-1.8**
TXIG	**Tlaxiaco**	**1.45**	**46**	*eP*		**Pb**	**07 18 22.3**	**-0.3**
TXIG					*i S*	**Sb**	**07 18 41.4**	**+0.1**
CAIG	**El Cayaco**	**1.57**	**301**	*eP*		**Pn**	**07 18 22.6**	**-0.8**
CAIG					*eS*	**Sb**	**07 18 43.3**	**-1.3**
MEIG	**Mezcala**	**1.82**	**336**	*eP*		**Pb**	**07 18 28.7**	**-0.1**
MEIG					*eS*	**Sg**	**07 18 52.5**	**-1.2**
HLIG	**Huajuapan de L**	**1.87**	**32**	*eP*		**Pb**	**07 18 28.7**	**-1.0**
HLIG					*eS*	**Sb**	**07

ANMO	**Albuquerque**	**19.83**	**341**	P		**P**	**07 22 25.7**	**-1.1**
WHAR	**Wooly Hollow**	**19.85**	**16**	P		**P**	**07 22 26.3**	**-0.6**
WHAR				IAmb		IAmb	07 22 36.0	
	comp=Z,6.7nm,0.8s							
HHAR	**Hobbs**	**20.43**	**11**	P		**P**	**07 22 33.1**	**0.0**
HHAR				IAmb		IAmb	07 22 40.6	
	comp=Z,12nm,1.4s							
FCAR	**Ozark Folk Cen**	**20.46**	**16**	P		**P**	**07 22 33.3**	**-0.2**
T35A	**Sooner Cattle**	**20.69**	**5**	P		**P**	**07 22 36.1**	**+0.1**
T35A				IAmb		IAmb	07 22 44.6	
	comp=Z,8.1nm,0.8s							
W45A	**Hickory Valley**	**20.73**	**23**	P		**P**	**07 22 35.8**	**-0.5**
X18A	**Snowflake**	**20.75**	**333**	P		**P**	**07 22 35.5**	**-1.3**
LCAR	**Lake Charles**	**20.90**	**18**			**P**	**07 22 37.4**	**-0.8**
X48A	**Hartselle**	**21.00**	**28**			**P**	**07 22 39.9**	**+0.6**
X48A				IAmb		IAmb	07 22 45.9	
	comp=Z,8.2nm,1.1s							
PLAL	**Pickwick Lake**	**21.01**	**25**	P		**P**	**07 22 39.1**	**-0.3**
PLAL				IAmb		IAmb	07 22 46.0	
	comp=Z,18nm,1.4s							
X16A	**Lo Mia Camp, P**	**21.34**	**330**	P		**P**	**07 22 42.9**	**-0.2**
MGMO	**Mountain Grove**	**21.63**	**14**	P		**P**	**07 22 44.9**	**-1.1**
FPAL	**Fort Paine**	**21.75**	**31**	P		**P**	**07 22 48.6**	**+1.2**
FPAL				IAmb		IAmb	07 22 52.5	
	comp=Z,6.9nm,1.0s							
PBMO	**Poplar Bluff**	**21.77**	**18**	P		**P**	**07 22 47.9**	**+0.3**
PBMO				IAmb		IAmb	07 22 52.7	
	comp=Z,11nm,0.8s							
S39A	**Bolivar**	**21.91**	**12**	P		**P**	**07 22 52.0**	**+3.0**
S39A				IAmb		IAmb	07 22 54.7	
	comp=Z,7.3nm,1.1s							
GOGA	**Godfrey**	**22.02**	**36**	P		**P**	**07 22 49.4**	**-0.9**
GOGA				IAmb		IAmb	07 22 51.8	
	comp=Z,5.1nm,0.9s							
Y52A	**Lilburn**	**22.03**	**35**	P		**P**	**07 22 50.0**	**-0.4**
Y52A				IAmb		IAmb	07 22 52.5	
	comp=Z,9.7nm,0.9s							
WVT	**Waverly**	**22.10**	**24**	P		**P**	**07 22 51.5**	**+0.4**
WVT				IAmb		IAmb	07 22 55.2	
	comp=Z,11nm,0.9s							
V48A	**Smith Brothers**	**22.18**	**27**	P		**P**	**07 22 52.9**	**+0.8**
V48A				IAmb		IAmb	07 22 56.1	
	comp=Z,5.2nm,0.8s							
SDCO	**Great Sand Dun**	**22.20**	**346**	P		**P**	**07 22 51.6**	**-0.9**
WUAZ	**Wupatki**	**22.21**	**332**	P		**P**	**07 22 51.2**	**-1.3**
WUAZ				IAmb		IAmb	07 22 59.9	
	comp=Z,6.9nm,0.8s							
W50A	**Signal Mountai**	**22.43**	**30**	P		**P**	**07 22 55.3**	**+0.6**
W50A				IAmb		IAmb	07 22 57.3	
	comp=Z,7.6nm,0.8s							
S22A	**4UR Ranch, Cre**	**22.54**	**343**	P		**P**	**07 22 54.9**	**-1.3**
MVCO	**Mesa Verde**	**22.56**	**340**	P		**P**	**07 22 57.5**	**+1.2**
MVCO				IAmb		IAmb	07 23 01.0	
	comp=Z,8.9nm,0.9s							
R40A	**Maddies Statio**	**22.71**	**14**	P		**P**	**07 22 58.9**	**+1.2**
CCM	**Cathedral Cave**	**22.74**	**16**	P		**P**	**07 22 59.4**	**+1.5**
CCM				IAmb		IAmb	07 23 11.0	
	comp=Z,6.5nm,1.1s							
FVM	**French Village**	**22.89**	**17**	P		**P**	**07 23 00.1**	**+0.6**
FVM				IAmb		IAmb	07 23 02.8	
	comp=Z,7.1nm,1.0s							
S44A	**Carbondale**	**22.98**	**20**	P		**P**	**07 23 00.3**	**-0.2**
SIUC	**Southern Illin**	**23.02**	**20**	P		**P**	**07 22 59.4**	**-1.4**
CPCT	**Cooper Cave**	**23.02**	**31**	P		**P**	**07 22 59.9**	**-1.0**
W52A	**Murphy**	**23.04**	**33**	P		**P**	**07 23 00.4**	**-0.7**
T47A	**Sharon Grove**	**23.14**	**25**	P		**P**	**07 23 02.3**	**+0.2**
U49A	**Red Boiling Sp**	**23.29**	**27**	P		**P**	**07 23 02.4**	**-1.3**
U49A				IAmb		IAmb	07 23 06.4	
	comp=Z,8.5nm,1.0s							
HODGE	**Hodges**	**23.31**	**37**	P		**P**	**07 23 03.8**	**-0.1**
HODGE				IAmb		IAmb	07 23 05.6	
	comp=Z,9.9nm,0.9s							
PV13	**Radium Mtn., P**	**23.52**	**340**	P		**P**	**07 23 05.0**	**-1.2**
PV15	**Paradox Valley**	**23.58**	**341**	P		**P**	**07 23 06.3**	**-0.5**
PV15				IAmb		IAmb	07 23 17.8	
	comp=Z,5.8nm,0.9s							
PV11	**David Mesa, Pa**	**23.67**	**340**	P		**P**	**07 23 08.1**	**+0.5**
PV11				IAmb		IAmb	07 23 30.0	
	comp=Z,4.4nm,0.9s							
P40A	**Paris**	**23.95**	**13**	P		**P**	**07 23 11.8**	**+1.7**
T50A	**Nancy**	**24.13**	**28**	P		**P**	**07 23 12.1**	**+0.3**
T50A				IAmb		IAmb	07 23 14.9	
	comp=Z,4.6nm,0.9s							
ISCO	**Idaho Springs**	**24.20**	**347**	P		**P**	**07 23 13.2**	**+0.5**
MTPU	**Mount Pierson**	**24.68**	**334**	P		**P**	**07 23 18.1**	**+0.8**
MTPU				IAmb		IAmb	07 23 23.6	
	comp=Z,3.4nm,0.8s							
CCUT	**Cedar City**	**24.79**	**332**	P		**P**	**07 23 19.0**	**+0.9**
N38A	**Joes South For**	**24.94**	**10**	P		**P**	**07 23 21.1**	**+2.0**
SRU	**San Rafael Swe**	**24.96**	**338**	P		**P**	**07 23 20.6**	**+1.0**
SRU				IAmb		IAmb	07 23 26.3	
	comp=Z,2.8nm,0.9s							
Q16A	**Castle Valley**	**25.03**	**337**	P		**P**	**07 23 20.4**	**+0.2**
Q16A				IAmb		IAmb	07 23 27.3	
	comp=Z,4.3nm,1.1s							
V55A	**Taylorsville**	**25.07**	**36**	P		**P**	**07 23 21.2**	**+0.8**
V55A				IAmb		IAmb	07 23 22.9	
	comp=Z,4.4nm,0.8s							
O20A	**White River Ci**	**25.16**	**343**	P		**P**	**07 23 23.4**	**+2.0**
O20A				IAmb		IAmb	07 23 27.8	
	comp=Z,5.7nm,0.9s							
S51A	**Beattyville**	**25.21**	**29**	P		**P**	**07 23 23.0**	**+1.4**
U54A	**Nelsons Funny**	**25.23**	**34**	P		**P**	**07 23 23.4**	**+1.5**
X58A	**Rowland**	**25.28**	**40**	P		**P**	**07 23 21.3**	**-0.9**
W57A	**Gilead**	**25.28**	**38**	P		**P**	**07 23 22.2**	**-0.1**
N23A	**Red Feather La**	**25.32**	**347**	P		**P**	**07 23 22.2**	**-0.6**
N23A				IAmb		IAmb	07 23 27.7	
	comp=Z,3.1nm,0.9s							
P18A	**Preston Nutter**	**25.33**	**339**	P		**P**	**07 23 24.2**	**+1.2**
P18A				IAmb		IAmb	07 23 51.1	
	comp=Z,6.9nm,1.1s							
GWY	**Greenwater Val**	**25.41**	**325**	P		**P**	**07 23 23.3**	**-0.3**
GWY				IAmb		IAmb	07 23 35.6	
	comp=Z,3.5nm,1.1s							
HDIL	**Hopedale**	**25.61**	**17**	P		**P**	**07 23 24.8**	**-0.4**
RDMU	**Red Mountain**	**25.96**	**341**	P		**P**	**07 23 29.4**	**+0.8**
RDMU				IAmb		IAmb	07 23 32.9	
	comp=Z,3.1nm,0.8s							
NLU	**North Lily Min**	**26.28**	**337**	P		**P**	**07 23 31.4**	**-0.2**
R53A	**Hurricane**	**26.55**	**31**	P		**P**	**07 23 34.8**	**+1.1**
L42A	**Oliver, Polo**	**26.86**	**15**	P		**P**	**07 23 37.7**	**+1.2**
N47A	**Urbana**	**27.06**	**22**	P		**P**	**07 23 39.1**	**+0.8**
NVAR	**Mina Array Bea**	**27.93**	**326**	P		**P**	**07 23 50.8**	**+4.3**
	comp=Z,0.7nm,0.8s,baz=155,slow=8.6,SNR=7.3							
	comp=Z,0.7nm,0.8s							
PD31	**Pinedale Array**	**27.97**	**343**	P		**P**	**07 23 49.1**	**+2.4**
PD31				IAmb		IAmb	07 24 15.8	
	comp=Z,3.5nm,1.3s							
PDAR	**Pinedale Array**	**27.97**	**343**	P		**P**	**07 23 50.1**	**+3.3**
	comp=Z,0.9nm,0.8s,baz=145,slow=9.2,SNR=9.5							
	comp=Z,0.9nm,0.8s							
HVU	**Hansel Valley**	**28.13**	**338**	P		**P**	**07 23 48.0**	**-0.1**
HVU				IAmb		IAmb	07 23 52.8	
	comp=Z,2.4nm,0.9s							
AGMN	**Agassiz Nation**	**32.06**	**4**	P		**P**	**07 24 24.1**	**+1.6**
F10A	**Beach Ranch, E**	**33.38**	**336**	P		**P**	**07 24 35.0**	**+0.7**
F10A				IAmb		IAmb	07 24 41.8	
	comp=Z,4.2nm,0.9s							
EDM	**Edmonton**	**38.61**	**346**	P		**P**	**07 25 20.3**	**+1.3**
EDM				IAmb		IAmb	07 25 22.6	
	comp=Z,4.4nm,0.8s							
SCHQ	**Schefferville**	**45.73**	**25**	LR		LR	07 47 23.6	
	comp=Z,50nm,19.0s,baz=12,slow=39							
YKA	**Yellowknife Ar**	**47.51**	**350**	P		**P**	**07 26 32.3**	**+1.5**
	comp=Z,0.7nm,1.0s,baz=159,slow=7.6,SNR=5.9							
	comp=Z,0.7nm,1.0s							
H03N2	**Juan Fernandez**	**52.94**	**159**	T		T	08 24 06.4	
	baz=338,slow=77,SNR=22							
H03N1	**Juan Fernandez**	**52.95**	**159**	T		T	08 24 07.4	
	baz=338,slow=77,SNR=34							
H03N3	**Juan Fernandez**	**52.96**	**159**	T		T	08 24 06.1	
	baz=338,slow=77,SNR=30							
ILAR	**Eielson Array**	**58.23**	**338**	P		**P**	**07 27 53.0**	**+3.0**
	comp=Z,1.1nm,0.9s,baz=153,slow=5.6,SNR=6.9							
	comp=Z,1.1nm,0.9s							

IDC ***27*** *07:22:00.0±4.4,23°.16N×95°.26E,h0km,mb3.6/3, mbtmp3.6/3,Error ellipse: s-maj=395.6km s-min=27.1km az=60.0*
NDI ***27*** *07:22:10.6±3.5,23°.19N×94°.18E,h5km,ML4.0*
ISC 27 07:22:10.4±1.3,23°.04N±0°.09×94°.28E±0°.09,h105km,n10, σ1ᵎ82/15,mb3.6/3,Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AZL	**Aizawl**	**1.62**	**296**	*eP*	**Pn**	**07 22 40.0**	**+1.5**
AZL				*eS*	**Sn**	**07 23 02.0**	**+2.1**
AZL				IAML		07 23 04.0	
	comp=E,1μm,0.2s						
AZL				IAML		07 23 04.6	
	comp=N,683nm,0.3s						
KOHI	**KOHIMA**	**2.67**	**357**	*eS*	**Sn**	**07 23 24.9**	**+0.8**
KOHI				IAML		07 23 27.1	
	comp=E,104nm,0.5s						
KOHI				IAML		07 23 35.7	
	comp=N,107nm,0.5s						
MOKO	**MOKOCHONG**	**3.27**	**4**	*eS*	**Sn**	**07 23 38.1**	**-0.3**
MOKO				IAML		07 23 42.0	
	comp=E,71nm,0.2s						
TEZP	**TEZPUR**	**3.81**	**340**	*eP*	**Pn**	**07 23 07.8**	**+0.7**
TEZP				*eS*	**Sn**	**07 23 48.8**	**-2.1**
TEZP				IAML		07 23 50.6	
	comp=N,408nm,0.2s						
TEZP				IAML		07 23 51.0	
	comp=E,452nm,0.2s						
GUWA	**GUWAHATI**	**3.92**	**324**	*eP*	**Pn**	**07 23 09.2**	**+0.5**
GUWA				*eS*	**Sn**	**07 23 51.7**	**-2.1**
GUWA				IAML		07 23 55.9	
	comp=E,2μm,0.2s						
GUWA				IAML		07 23 56.2	
	comp=N,3μm,0.3s						
TURI	**Tura**	**4.38**	**306**	*eP*	**Pn**	**07 23 13.7**	**-1.2**
TURI				*eS*	**Sn**	**07 24 02.7**	**-2.2**
TURI				IAML		07 24 06.8	
	comp=E,18μm,0.2s						
ZIRO	**ZIRO**	**4.48**	**355**	*eP*	**Pn**	**07 23 17.3**	**+0.9**
ZIRO				*eS*	**Sn**	**07 24 05.9**	**-1.7**
ZIRO				IAML		07 24 09.6	
	comp=E,5μm,0.4s						
MKAR	**Makanchi Array**	**25.60**	**341**	P	**P**	**07 27 32.7**	**+2.9**
	comp=E,0.7nm,0.7s,baz=143,slow=9.8,SNR=6.7						
	comp=E,0.7nm,0.7s						
WRA	**Warramunga Arr**	**57.90**	**134**	P	**P**	**07 31 50.1**	**-1.7**
	comp=E,0.7nm,0.8s,baz=322,slow=7.4,SNR=9.0						
	comp=E,0.7nm,0.8s						
ASAR	**Alice Springs**	**60.31**	**138**	P	**P**	**07 32 07.4**	**-1.0**
	comp=E,0.4nm,0.6s,baz=320,slow=6.9,SNR=6.6						
	comp=E,0.4nm,0.6s						

KRNET 27 07:33:37.6±0.1,39°.46N×73°.78E,mb2.9,6C-4D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.31**	**325**	⇑*iP*	Pg	07 34 02.6	-0.2
	baz=25						
OHH				⇑*iS*	Sb	07 34 20.9	+0.2
	baz=25						
BTK	**Batken**	**2.36**	**286**	⇑*iP*	Pb	07 34 19.9	-1.2
	baz=86						
ARLS	**Aral**	**2.44**	**10**	⇓*iP*	Pb	07 34 20.8	-1.7
	baz=10.0						
ARLS				⇓*iS*	Sb	07 34 52.3	-0.8
	baz=10.0						
GAR	**Garm**	**2.73**	**262**	⇑*iP*	Pn	07 34 24.8	+2.0
	baz=62						
GAR				⇑*iS*	Sb	07 34 59.3	-2.1
	baz=62						
UCH	**Uchtor**	**2.83**	**11**	⇑*iP*	Pn	07 34 26.3	+1.8
	baz=11						
TRKS	**Terek-Say**	**2.89**	**317**	⇓*eP*	Pn	07 34 26.3	+1.2
	baz=16						
TRKS				⇓*iS*	Sn	07 35 01.8	+1.2
	baz=16						

IDC ***27*** *07:34:10.7±0.6,39°.32N×73°.70E,h0km,mb4.2/21, mbtmp4.3/28,ML3.7/6,MS3.5/35,Error ellipse: s-maj=13.5km s-min=10.8km az=163.0*
SOME ***27*** *07:34:11.6,39°.48N×73°.77E,h10km,MS4.2*
MOS ***27*** *07:34:12.6±1.1,39°.37N×73°.62E,h18km,mb4.8/28,Error ellipse: s-maj=4.7km s-min=3.3km az=83.4*
KRNET ***27*** *07:34:12.7±0.1,39°.49N×73°.53E,mb5.0*
BJI ***27*** *07:34:12.0±0.0,39°.45N×73°.61E,h6km,mb4.5/29, mB4.5/17,ML4.4/7,Ms4.2/24,Ms7 3.9/25*
NEIC ***27*** *07:34:13.3±1.6,39°.46N±0°.04×73°.63E±0°.07,h10km±1km, mb4.5/50,ML4.5(BJI),Error ellipse: s-maj=10.2km s-min=4.9km az=299.0*
NNC ***27*** *07:34:15.9±1.0,39°.64N×73°.68E,h0km,mb5.0,mpv4.7, Error ellipse: s-maj=8.4km s-min=4.6km az=169.0*
ISC 27 07:34:11.4±1.1,39°.51N±0°.03×73.78E±0°.02,h4km±6km, n373,σ2ᵎ28/440,mb4.5/66,MS3.6/40,48C-31D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.27**	**323**	⇓*iP*	**Pg**	**07 34 35.2**	**-0.6**
	baz=31						
OHH				⇓*iS*	**Sg**	**07 34 51.8**	**-0.5**
	baz=31						
OHH	**Osh**	**1.27**	**323**	*i* PG	**Pg**	**07 34 35.2**	**-0.6**
OHH				*i* S	**Sg**	**07 34 51.8**	**-0.5**
DRK	**Karamyk**	**1.53**	**270**	⇑*iP*	**Pn**	**07 34 38.6**	**-1.2**
	baz=70						
DRK				⇑*iS*	**Sn**	**07 34 57.2**	**-3.2**
	baz=70						
DRK	**Karamyk**	**1.53**	**270**	Pn	**Pn**	**07 34 38.5**	**-1.4**
KSH	**Kashi**	**1.70**	**89**	Pg	**Pn**	**07 34 39.5**	**-2.4**
KSH				Sg	**Sn**	**07 35 00.5**	**-3.6**
KSH				smax	smax		
	comp=N,6μm,0.5s						
KSH				smax	smax		
	comp=E,5μm,0.7s						
BTK	**Batken**	**2.35**	**285**	⇑*iP*	**Pn**	**07 34 52.2**	**+1.3**
	baz=86						
BTK				⇑*iS*	**Sn**	**07 35 20.8**	**+0.6**
	baz=86						
BTK	**Batken**	**2.35**	**285**	Pn	**Pn**	**07 34 51.0**	**+0.2**
BTK	**Batken**	**2.35**	**285**	*i* PN	**Pn**	**07 34 52.2**	**+1.3**
BTK				*i* S	**Sn**	**07 35 20.8**	**+0.6**
BTK	**Batken**	**2.35**	**285**	⇑*iS*	**Pn**	**07 34 50.6**	**-0.3**
	baz=86						
ARLS	**Aral**	**2.39**	**10**	⇑*iP*	**Pg**	**07 34 56.4**	**-0.8**
	baz=14						
ARLS				⇑*iS*	**Sg**	**07 35 27.6**	**-0.6**
	baz=14						
AML	**Almayashu**	**2.62**	**359**	P	**Pb**	**07 34 58.8**	**-0.4**
	SNR=60						
AML	**Almayashu**	**2.62**	**359**	*e*PN	**Pb**	**07 34 59.1**	**-0.1**
AML				*i* S	**Sb**	**07 35 32.9**	**+0.9**
GAR	**Garm**	**2.74**	**260**	⇓*eP*	**Pn**	**07 34 57.4**	**+1.2**
	baz=60						
GAR				⇓*eS*	**Sn**	**07 35 29.8**	**0.0**
	baz=60						
GAR	**Garm**	**2.74**	**260**		**Pn**	**07 34 56.5**	**+0.2**
GAR	**Garm**	**2.74**	**260**	*e*PN	**Pn**	**07 34 57.4**	**+1.2**
GAR				*e*S	**Sn**	**07 35 29.8**	**0.0**
UCH	**Uchtor**	**2.78**	**11**	P	**Pb**	**07 35 01.7**	**-0.2**
	SNR=162						
UCH	**Uchtor**	**2.78**	**11**	⇓*iP*	**Pb**	**07 35 01.6**	**-0.2**
	baz=15						
UCH				⇓*eS*	**Sb**	**07 35 37.5**	**+1.1**
	baz=15						
UCH	**Uchtor**	**2.78**	**11**	*i* PN	**Pb**	**07 35 01.6**	**-0.2**
UCH				*i* S	**Sb**	**07 35 37.5**	**+1.1**
UCH	**Uchtor**	**2.78**	**11**	⇑*iS*	**Pb**	**07 35 01.8**	**0.0**
	baz=11						
TRKS	**Terek-Say**	**2.85**	**316**	⇓*iP*	**Pn**	**07 34 59.0**	**+1.1**
	baz=18						
TRKS				⇓*eS*	**Sn**	**07 35 33.1**	**+0.3**
	baz=18						
TRKS	**Terek-Say**	**2.85**	**316**	*i* PN	**Pn**	**07 34 59.0**	**+1.1**
TRKS				*e*S	**Sn**	**07 35 33.1**	**+0.3**
EKS2	**Erkin-Say**	**3.15**	**360**	P	**Pb**	**07 35 06.0**	**-2.1**
	SNR=52						
EKS2	**Erkin-Say**	**3.15**	**360**	⇑*iP*	**Pb**	**07 35 06.3**	**-1.8**
	baz=3.0						
EKS2				⇑*eS*	**Sb**	**07 35 45.3**	**-1.6**
	baz=3.0						
EKS2	**Erkin-Say**	**3.15**	**360**	*i* PN	**Pb**	**07 35 06.3**	**-1.8**
EKS2				*e*S	**Sb**	**07 35 45.3**	**-1.6**
AAK	**Ala-Archa**	**3.18**	**10**	P	**Pb**	**07 35 07.3**	**-1.2**
	SNR=65						
AAK	**Ala-Archa**	**3.18**	**10**	Pn	**Pb**	**07 35 07.6**	**-0.9**
	30nm,0.3s,baz=190,slow=10,SNR=100						
AAK				LR	LR	07 35 46.6	
	comp=Z,136nm,20.2s,baz=226,slow=28						
AAK				Lg	Lg	07 35 52.2	
	64nm,0.3s,baz=114,slow=23,SNR=6.4						
	168nm,0.5s						
AAK	**Ala-Archa**	**3.18**	**10**	⇓*eP*	**Pb**	**07 35 06.9**	**-1.6**
	baz=13						
AAK				⇓*iS*	**Sb**	**07 35 46.6**	**-1.0**
	baz=13						
AAK	**Ala-Archa**	**3.18**	**10**	Pn	**Pb**	**07 35 05.8**	**-2.6**
AAK	**Ala-Archa**	**3.18**	**10**	*e*PN	**Pb**	**07 35 06.9**	**-1.6**
AAK				*i* S	**Sb**	**07 35 46.6**	**-1.0**
KBK	**Karagaybulak**	**3.27**	**15**	P	**Pb**	**07 35 08.8**	**-1.3**
	SNR=46						
KBK	**Karagaybulak**	**3.27**	**15**	⇓*eP*	**Pb**	**07 35 08.7**	**-1.4**
	baz=18						
KBK				⇓*iS*	**Sb**	**07 35 49.3**	**-1.0**
	baz=18						
KBK	**Karagaybulak**	**3.27**	**15**	*e*PN	**Pb**	**07 35 08.7**	**-1.4**
KBK				*i* S	**Sb**	**07 35 49.3**	**-1.0**
ULHL	**Ulahol**	**3.31**	**33**	P	**Pb**	**07 35 09.9**	**-0.9**
	SNR=16						
ULHL	**Ulahol**	**3.31**	**33**	⇑*eP*	**Pb**	**07 35 10.0**	**-0.9**
	baz=36						
ULHL				⇑*eS*	**Sb**	**07 35 51.7**	**+0.1**
	baz=36						
ULHL	**Ulahol**	**3.31**	**33**	*e*PN	**Pb**	**07 35 10.0**	**-0.9**
ULHL				*e*S	**Sb**	**07 35 51.7**	**+0.1**
BOOM	**Boomskoye usch**	**3.40**	**28**	⇑*eP*	**Pb**	**07 35 10.8**	**-1.5**
	baz=31						
BOOM				⇑*eS*	**Sb**	**07 35 53.6**	**-0.5**
	baz=31						
BOOM	**Boomskoye usch**	**3.40**	**28**		**Pb**	**07 35 09.1**	**-3.2**
BOOM	**Boomskoye usch**	**3.40**	**28**	*e*PN	**Pb**	**07 35 10.8**	**-1.5**
BOOM				*e*S	**Sb**	**07 35 53.6**	**-0.5**
CHMS	**Chumysh**	**3.57**	**12**	P	**Pb**	**07 35 12.4**	**-2.7**
	SNR=42						
CHMS	**Chumysh**	**3.57**	**12**	⇓*iP*	**Pb**	**07 35 12.3**	**-2.7**
	baz=14						
CHMS				⇓*iS*	**Sb**	**07 35 55.9**	**-2.8**
	baz=14						
CHMS	**Chumysh**	**3.57**	**12**	*i* PN	**Pb**	**07 35 12.3**	**-2.7**
CHMS				*i* S	**Sb**	**07 35 55.9**	**-2.8**
CHMS	**Chumysh**	**3.57**	**12**	⇓Pn	**Pb**	**07 35 12.4**	**-2.7**
	70nm,0.6s						
CHMS				⇑Lg	Lg	07 36 07.4	
	501nm,1.1s						
TKM2	**Tokmak 2**	**3.68**	**21**	P	**Pb**	**07 35 14.3**	**-2.7**
	SNR=39						
TKM2	**Tokmak 2**	**3.68**	**21**	⇓*iP*	**Pb**	**07 35 14.4**	**-2.7**
	baz=24						
TKM2				⇓*iS*	**Sb**	**07 35 59.5**	**-2.6**
	baz=24						
TKM2	**Tokmak 2**	**3.68**	**21**	*i* PN	**Pb**	**07 35 14.4**	**-2.7**
TKM2				*i* S	**Sb**	**07 35 59.5**	**-2.6**
TKM2	**Tokmak 2**	**3.68**	**21**	⇓Pn	**Pb**	**07 35 14.2**	**-2.9**
	64nm,0.6s						
TKM2				⇑Lg	Lg	07 36 10.0	
	497nm,0.8s						
KDJ	**Kajisay**	**3.68**	**43**	⇓*eP*	**Pb**	**07 35 15.6**	**-1.5**
	baz=45						
KDJ				⇓*eS*	**Sb**	**07 36 01.3**	**-0.8**
	baz=45						
KDJ	**Kajisay**	**3.68**	**43**	Pn	**Pn**	**07 35 11.8**	**+2.6**
KDJ	**Kajisay**	**3.68**	**43**	*e*PN	**Pb**	**07 35 15.6**	**-1.5**
KDJ				*e*S	**Sb**	**07 36 01.3**	**-0.8**
CHGR	**Chuyangaron**	**3.70**	**258**	⇑*iP*	**Pn**	**07 35 10.8**	**+1.4**
	baz=58						
CHGR				⇑*eS*	**Sn**	**07 35 53.0**	**-0.4**
	baz=58						
CHGR	**Chuyangaron**	**3.70**	**258**	Pn	**Pn**	**07 35 09.7**	**+0.3**
CHGR	**Chuyangaron**	**3.70**	**258**	*i* PN	**Pn**	**07 35 10.8**	**+1.4**
CHGR				*e*S	**Sn**	**07 35 53.0**	**-0.4**
TARG	**Taragay, Kyrgy**	**3.78**	**53**	⇑*eP*	**Pb**	**07 35 16.3**	**-2.7**
	baz=54						
TARG				⇑*eS*	**Sb**	**07 36 04.2**	**-1.1**
	baz=54						
TARG	**Taragay, Kyrgy**	**3.78**	**53**	Pn	**Pb**	**07 35 15.2**	**-3.8**
TARG	**Taragay, Kyrgy**	**3.78**	**53**	*e*PN	**Pb**	**07 35 16.3**	**-2.7**
TARG				*e*S	**Sb**	**07 36 03.8**	**-1.5**
USP	**Ospenovka**	**3.80**	**8**	P	**Pb**	**07 35 15.2**	**-3.8**
	SNR=33						
USP	**Ospenovka**	**3.80**	**8**	⇓*iP*	**Pb**	**07 35 15.2**	**-3.8**
	baz=11						
USP				⇓*eS*	**Sb**	**07 36 01.2**	**-4.2**
	baz=11						
USP	**Ospenovka**	**3.80**	**8**	*i* PN	**Pb**	**07 35 15.2**	**-3.8**
USP				*e*S	**Sb**	**07 36 01.2**	**-4.2**
DZA	**Taraz**	**3.86**	**332**	*e*PN	**Pn**	**07 35 12.0**	**+0.5**
DZA				*e*		07 35 27.1	
DZA				*e*		07 36 14.0	
DZA	**Taraz**	**3.86**	**332**	*e*P	**Pg**	**07 35 23.0**	**-2.2**
	164nm,0.1s						
DZA				*e*S	**Sg**	**07 36 14.4**	**-0.9**
	890nm,0.1s						
DZA	**Taraz**	**3.86**	**332**	*e*Pn	**Pn**	**07 35 12.1**	**+0.5**
	baz=331						
DZA				*e*Pg	**Pg**	**07 35 27.1**	**+1.9**
	baz=331						
DZA				*e*Lg	Lg	07 36 14.1	
	baz=331						
DZA	**Taraz**	**3.86**	**332**	Pg	**Pg**	**07 35 23.0**	**-2.2**
	500nm,0.4s						
DZA				Lg	Lg	07 36 14.2	
	893nm,0.4s						
TAS	**Tashkent**	**3.88**	**299**	⇑*eP*	**Pn**	**07 35 13.7**	**+1.9**
	baz=1.0						
TAS				⇑*eS*	**Sn**	**07 35 58.1**	**+0.3**
	baz=1.0						
TAS	**Tashkent**	**3.88**	**299**	Pn	**Pn

TNSS	**Tian-Shan**	**4.26**	**33**	*e*P	**Pg**	**07 35 32.0**	**-1.0**
	99nm,0.1s						
TNSS				*e*S	**Sg**	**07 36 30.4**	**+2.2**
	218nm,0.5s						
TNSS	**Tian-Shan**	**4.26**	**33**	*e*Pn	**Pb**	**07 35 22.7**	**-4.5**
	baz=35						
TNSS				*e*Pg	**Pg**	**07 35 32.4**	**-0.6**
	baz=35						
TNSS				*e*Lg	Lg	07 36 30.1	
	baz=35						
TNSS	**Tian-Shan**	**4.26**	**33**	Pg	**Pg**	**07 35 32.0**	**-1.0**
	136nm,0.9s						
TNSS				Lg	Lg	07 36 30.4	
	224nm,1.5s						
KK31	**Karatay Array**	**4.36**	**327**	Pn	**Pn**	**07 35 20.7**	**+2.4**
KK31	**Karatay Array**	**4.36**	**327**	*e*PN	**Pn**	**07 35 20.8**	**+2.4**
KK31	**Karatay Array**	**4.36**	**327**	Pn	**Pn**	**07 35 20.8**	**+2.4**
	58nm,0.8s,baz=141,slow=11,SNR=104						
KK31				⇓Lg	Lg	07 36 27.9	
	332nm,0.7s,baz=140,slow=29,SNR=4.8						
KKAR	**Karatay Array**	**4.36**	**327**	⇓*e*P	**Pn**	**07 35 20.9**	**+2.5**
	baz=29						
KKAR				⇓*i*S	**Sn**	**07 36 11.2**	**+1.6**
	baz=29						
KKAR	**Karatay Array**	**4.36**	**327**	Pn	**Pn**	**07 35 20.8**	**+2.5**
KKAR	**Karatay Array**	**4.36**	**327**	*e*PN	**Pn**	**07 35 20.9**	**+2.5**
KKAR				*i* S	**Sn**	**07 36 11.2**	**+1.6**
AAA	**Alma-Ata**	**4.39**	**31**	*e*PN	**Pb**	**07 35 24.6**	**-4.5**
AAA				*e*		07 35 35.3	
AAA				*e*		07 36 33.8	
AAA	**Alma-Ata**	**4.39**	**31**	*e*P	**Pg**	**07 35 34.8**	**-0.7**
	212nm,0.2s						
AAA				*e*S	**Sg**	**07 36 34.7**	**+2.4**
	671nm,0.9s						
AAA	**Alma-Ata**	**4.39**	**31**	*e*Pn	**Pb**	**07 35 24.6**	**-4.5**
	baz=34						
AAA				*e*Pg	**Pg**	**07 35 35.3**	**-0.2**
	baz=34						
AAA				*e*Lg	Lg	07 36 33.9	
	baz=34						
AAA	**Alma-Ata**	**4.39**	**31**	Pg	**Pg**	**07 35 34.8**	**-0.7**
	212nm,0.8s						
AAA				Lg	Lg	07 36 34.7	
	671nm,0.9s						
ANVS	**Anan'yevo**	**4.40**	**41**	⇑*e*P	**Pb**	**07 35 25.1**	**-4.2**
	baz=42						
ANVS				⇑*i*S	**Sb**	**07 36 17.1**	**-5.6**
	baz=42						
KNDC	**Almaty**	**4.42**	**32**	PN	**Pb**	**07 35 25.2**	**-4.3**
KNDC						07 35 35.6	
KNDC	**Almaty**	**4.42**	**32**	⇑Pn	**Pb**	**07 35 25.2**	**-4.3**
	88nm,0.6s						
KNDC				⇑Pg	**Pg**	**07 35 35.7**	**-0.3**
	560nm,0.8s						
KNDC				⇑Lg	Lg	07 36 35.3	
	2μm,0.8s						
KRBS	**Karabastau**	**4.42**	**18**	*e*P	**Pg**	**07 35 34.1**	**-2.0**
	99nm,0.1s						
KRBS				*e*S	**Sg**	**07 36 33.9**	**+0.5**
	533nm,0.1s						
KRBS	**Karabastau**	**4.42**	**18**	Pg	**Pg**	**07 35 34.1**	**-2.0**
	99nm,0.8s						
KRBS				Lg	Lg	07 36 33.9	
	540nm,0.8s						
PRZ	**Przheval'sk**	**4.59**	**48**	⇑*e*P	**Pb**	**07 35 28.0**	**-4.6**
	baz=49						
PRZ				⇑*e*S	**Sb**	**07 36 23.4**	**-4.9**
	baz=49						
PRZ	**Przheval'sk**	**4.59**	**48**	Pn	**Pn**	**07 35 25.5**	**+3.7**
PRZ	**Przheval'sk**	**4.59**	**48**	*e*PN	**Pb**	**07 35 28.0**	**-4.6**
PRZ				*e*S	**Sb**	**07 36 23.4**	**-4.9**
BRLS	**Borolday**	**4.61**	**321**	*e*PN	**Pn**	**07 35 22.0**	**+0.2**
BRLS				*e*		07 36 34.5	
BRLS	**Borolday**	**4.61**	**321**	*e*P	**Pb**	**07 35 35.0**	**+2.2**
	33nm,0.5s						
BRLS				*e*S	**Sg**	**07 36 34.9**	**-4.5**
	395nm,0.3s						
BRLS	**Borolday**	**4.61**	**321**	*e*Pn	**Pn**	**07 35 22.1**	**+0.2**
	baz=317						
BRLS				*e*Pg	**Pb**	**07 35 33.7**	**+0.9**
	baz=317						
BRLS				*e*Lg	Lg	07 36 34.6	
	baz=317						
BRLS	**Borolday**	**4.61**	**321**	Pg	**Pb**	**07 35 35.0**	**+2.2**
	65nm,1.2s						
BRLS				Lg	Lg	07 36 34.9	
	500nm,0.6s						
KTBS	**Karatobe**	**4.73**	**26**	*e*P	**Pg**	**07 35 39.8**	**-2.3**
	70nm,0.3s						
KTBS				*e*S	**Sg**	**07 36 43.5**	**+0.1**
	641nm,0.4s						
KTBS	**Karatobe**	**4.73**	**26**	Pg	**Pg**	**07 35 39.8**	**-2.3**
	71nm,1.0s						
KTBS				Lg	Lg	07 36 43.5	
	641nm,0.4s						
KUU	**Kurty**	**4.78**	**23**	*e*PN	**Pn**	**07 35 27.7**	**+3.5**
KUU				*e*		07 35 42.4	
KUU				*e*		07 36 44.9	
KUU	**Kurty**	**4.78**	**23**	*e*P	**Pg**	**07 35 40.4**	**-2.7**
	78nm,1.4s						
KUU				*e*S	**Sg**	**07 36 44.7**	**-0.3**
	370nm,0.8s						
KUU	**Kurty**	**4.78**	**23**	*e*Pn	**Pn**	**07 35 27.8**	**+3.5**
	baz=24						
KUU				*e*Pg	**Pg**	**07 35 42.5**	**-0.6**
	baz=24						
KUU				*e*Lg	Lg	07 36 44.9	
	baz=24						
KUU	**Kurty**	**4.78**	**23**	Pg	**Pg**	**07 35 40.4**	**-2.7**
	78nm,1.4s						
KUU				Lg	Lg	07 36 44.7	
	370nm,0.8s						
CHKK	**Chushkaly**	**4.96**	**28**	*e*PN	**Pn**	**07 35 30.4**	**+3.7**
CHKK				*e*		07 35 46.5	
CHKK				*e*		07 36 50.8	
CHKK	**Chushkaly**	**4.96**	**28**	*e*P	**Pg**	**07 35 44.3**	**-2.2**
	113nm,0.2s						
CHKK				*e*S	**Sg**	**07 36 50.8**	**0.0**
	299nm,0.3s						
CHKK	**Chushkaly**	**4.96**	**28**	*e*Pn	**Pn**	**07 35 30.5**	**+3.7**
	baz=30						
CHKK				*e*Pg	**Pg**	**07 35 46.6**	**+0.1**
	baz=30						
CHKK				*e*Lg	Lg	07 36 50.8	
	baz=30						
CHKK	**Chushkaly**	**4.96**	**28**	Pg	**Pg**	**07 35 44.3**	**-2.2**
	113nm,0.8s						
CHKK				Lg	Lg	07 36 50.8	
	299nm,1.0s						
SATY	**Saty**	**4.97**	**43**	*e*PN	**Pn**	**07 35 30.9**	**+4.0**
SATY				*e*		07 35 48.1	
SATY				*e*		07 36 52.2	
SATY	**Saty**	**4.97**	**43**	*e*P	**Pg**	**07 35 44.8**	**-1.9**
	117nm,0.2s						
SATY				*e*S	**Sg**	**07 36 52.1**	**+1.0**
	308nm,1.2s						
SATY	**Saty**	**4.97**	**43**	*e*Pn	**Pn**	**07 35 30.9**	**+4.0**
	baz=45						
SATY				*e*Pg	**Pg**	**07 35 48.2**	**+1.5**
	baz=45						
SATY				*e*Lg	Lg	07 36 52.3	
	baz=45						
SATY	**Saty**	**4.97**	**43**	Pg	**Pg**	**07 35 44.8**	**-1.9**
	117nm,0.7s						
SATY				Lg	Lg	07 36 52.1	
	308nm,1.2s						
ZHN	**Zhinishke**	**5.07**	**42**	*e*PN	**Pn**	**07 35 32.9**	**+4.7**
ZHN				*e*		07 35 49.5	
ZHN				*e*		07 36 54.9	
ZHN	**Zhinishke**	**5.07**	**42**	*e*P	**Pg**	**07 35 46.5**	**-1.9**
	38nm,0.3s						
ZHN				*e*S	**Sg**	**07 36 54.9**	**+0.9**
	269nm,0.1s						
ZHN	**Zhinishke**	**5.07**	**42**	*e*Pn	**Pn**	**07 35 33.0**	**+4.7**
	baz=44						
ZHN				*e*Pg	**Pg**	**07 35 49.5**	**+1.1**
	baz=44						
ZHN				*e*Lg	Lg	07 36 55.0	
	baz=44						
ZHN	**Zhinishke**	**5.07**	**42**	Pg	**Pg**	**07 35 46.5**	**-1.9**
	40nm,0.9s						
ZHN				Lg	Lg	07 36 54.9	
	266nm,0.7s						
KURS	**Kuram**	**5.17**	**38**	*e*P	**Pg**	**07 35 47.3**	**-3.1**
	46nm,0.2s						
KURS				*e*S	**Sg**	**07 36 56.6**	**-0.6**
	180nm,0.5s						
KURS	**Kuram**	**5.17**	**38**	Pg	**Pg**	**07 35 48.7**	**-1.7**
	98nm,1.2s						
KURS				Lg	Lg	07 36 58.7	
	191nm,2.5s						
KPKS	**Kokpek**	**5.41**	**41**	*e*PN	**Pn**	**07 35 37.4**	**+4.5**
KPKS				*e*		07 35 53.7	
KPKS	**Kokpek**	**5.41**	**41**	*e*P	**Pg**	**07 35 52.3**	**-2.7**
	102nm,0.1s						
KPKS				*e*S	**Sg**	**07 37 05.0**	**0.0**
	227nm,0.6s						
KPKS	**Kokpek**	**5.41**	**41**	*e*Pn	**Pn**	**07 35 37.4**	**+4.5**
	baz=43						
KPKS				*e*Pg	**Pg**	**07 35 53.8**	**-1.1**
	baz=43						
KPKS				*e*Lg	Lg	07 37 06.8	
	baz=43						
KPKS	**Kokpek**	**5.41**	**41**	Pg	**Pg**	**07 35 52.3**	**-2.7**
	99nm,0.9s						
KPKS				Lg	Lg	07 37 05.0	
	227nm,0.6s						
BTLS	**Baital**	**5.54**	**2**	*e*PN	**Pn**	**07 35 37.8**	**+3.3**
BTLS				*e*		07 35 54.7	
BTLS				*e*		07 37 07.7	
BTLS	**Baital**	**5.54**	**2**	*e*P	**Pg**	**07 35 53.6**	**-3.8**
	74nm,0.1s						
BTLS				*e*S	**Sg**	**07 37 07.3**	**-1.8**
	104nm,0.4s						
BTLS	**Baital**	**5.54**	**2**	*e*P	**Pn**	**07 35 37.9**	**+3.3**
	baz=2.7						
BTLS				*e*Pg	**Pg**	**07 35 54.8**	**-2.6**
	baz=2.7						
BTLS				*e*Lg	Lg	07 37 07.8	
	baz=2.7						
BTLS	**Baital**	**5.54**	**2**	Pg	**Pg**	**07 35 53.6**	**-3.8**
	75nm,1.1s						
BTLS				Lg	Lg	07 37 07.3	
	30nm,1.1s						
ARXS	**Arharly**	**5.59**	**31**	*e*P	**Pg**	**07 35 55.4**	**-3.0**
	147nm,0.8s						
ARXS				*e*S	**Sg**	**07 37 10.4**	**-0.4**
	403nm,0.3s						
ARXS	**Arharly**	**5.59**	**31**	Pg	**Pg**	**07 35 55.4**	**-3.0**
	147nm,0.8s						
ARXS				Lg	Lg	07 37 10.4	
	403nm,1.3s						
SHLS	**Shalkode**	**5.62**	**48**	*e*PN	Pb	07 35 43.4	-6.7
SHLS				*e*		07 36 01.6	
SHLS	**Shalkode**	**5.62**	**48**	*e*P	Pb	07 35 43.5	-6.6
	baz=52						
SHLS				*e*Pg	**Pg**	**07 36 01.6**	**+2.6**
	baz=52						
SHLS				*e*Lg	Lg	07 37 22.6	
	baz=52						
PDGK	**Podgornoye**	**5.75**	**46**	PN	Pn	07 35 42.9	+5.3
PDGK				PG	**Pg**	**07 36 00.8**	**-0.6**
PDGK	**Podgornoye**	**5.75**	**46**	Pg	**Pg**	**07 35 58.1**	**-3.4**
	28nm,1.6s						
PDGK				Lg	Lg	07 37 14.9	
	128nm,1.4s						
PDGK	**Podgornoye**	**5.75**	**46**	⇓Pn	**Pn**	**07 35 42.1**	**+4.5**
	23nm,0.6s						
PDGK				⇑Pg	**Pg**	**07 36 00.8**	**-0.6**
	106nm,0.7s						
PDGK				⇓Lg	Lg	07 37 15.6	
	599nm,1.2s						
BLB	**Baldybastay**	**5.78**	**36**	*e*P	**Pg**	**07 35 58.7**	**-3.3**
	140nm,0.1s						
BLB				*e*S	**Sg**	**07 37 16.2**	**-0.7**
	245nm,0.3s						
BLB	**Baldybastay**	**5.78**	**36**	Pg	**Pg**	**07 35 58.7**	**-3.3**
	140nm,0.8s						
BLB				Lg	Lg	07 37 16.2	
CHCP	**Chirak Chowk**	**5.85**	**184**	P	**Pn**	**07 35 43.0**	**+4.1**
CEP	**Cherat**	**5.87**	**195**	P	**Pn**	**07 35 42.8**	**+3.5**
KBL	**Kabul**	**6.24**	**219**	Pn	**Pn**	**07 35 44.0**	**-0.4**
KBL	**Kabul**	**6.24**	**219**	PN	**Pn**	**07 35 44.0**	**-0.4**
TDK	**Taldyqorghan**	**6.47**	**30**	*e*P	**Pg**	**07 36 11.0**	**-4.4**
	101nm,0.1s						
TDK				*e*S	**Sg**	**07 37 36.8**	**-2.5**
	371nm,0.3s						
TDK	**Taldyqorghan**	**6.47**	**30**	*e*Pg	**Pg**	**07 36 13.2**	**-2.2**
	baz=32						
TDK				*e*Lg	Lg	07 37 38.6	
	baz=32						
TDK	**Taldyqorghan**	**6.47**	**30**	Pg	**Pg**	**07 36 11.0**	**-4.4**
	103nm,0.6s						
TDK				Lg	Lg	07 37 36.8	
	511nm,1.6s						
DJR	**Jarkent**	**6.58**	**41**	*e*P	**Pg**	**07 36 13.4**	**-4.1**
	21nm,0.2s						
DJR				*e*S	**Sg**	**07 37 41.2**	**-1.5**
	151nm,1.8s						
DJR	**Jarkent**	**6.58**	**41**	Pg	**Pg**	**07 36 13.4**	**-4.1**
	22nm,0.9s						
THW	**Thamme Wali**	**6.90**	**194**	P	**Pn**	**07 35 55.5**	**+2.2**
THN	**Thein Dam**	**7.23**	**167**	*e*P	**Pn**	**07 36 00.3**	**+2.5**
THN				*e*S	**Sn**	**07 37 21.0**	**+0.6**
BHK	**Bhakra**	**8.35**	**164**	*e*S	**Sn**	**07 37 45.9**	**-2.1**
OTUK	**Ortayu**	**8.80**	**354**	P	**Pn**	**07 36 21.5**	**+2.2**
OTUK	**Ortayu**	**8.80**	**354**	⇑Pn	**Pn**	**07 36 21.5**	**+2.2**
	16nm,0.6s						
OTUK				⇓Lg	Lg	07 38 49.1	
	183nm,1.1s						
SMLA	**Simla**	**8.80**	**161**	*e*P	**Pn**	**07 36 22.5**	**+3.1**
SMLA				*e*S	**Sn**	**07 37 55.4**	**-3.6**
SMLA				IAML		07 38 06.2	
	comp=N,164nm,0.5s						
SMLA				IAML		07 38 06.7	
	comp=E,249nm,0.5s						
MAKZ	**Makanchi**	**9.44**	**37**		**Pn**	**07 36 30.4**	**+2.3**
MAKZ	**Makanchi**	**9.44**	**37**	P	**Pn**	**07 36 30.4**	**+2.3**
MAKZ	**Makanchi**	**9.44**	**37**	⇑Pn	Pn	07 36 33.7	+5.6
	comp=E,5.9nm,0.8s						
MAKZ				⇑Lg	Lg	07 39 14.1	
	comp=E,58nm,1.4s						
MK31	**Makanchi Array**	**9.57**	**38**	Pn	Pn	07 36 35.2	+5.2
MK31	**Makanchi Array**	**9.57**	**38**	*i* P	Pn	07 36 34.9	+4.9
MK31	**Makanchi Array**	**9.57**	**38**	Pn	Pn	07 36 35.0	+5.0
	comp=E,2.9nm,0.7s,baz=213,slow=13,SNR=32						
MK31				⇑Lg	Lg	07 39 18.7	
	comp=E,26nm,0.8s,baz=218,slow=27,SNR=4.7						
MKAR	**Makanchi Array**	**9.57**	**38**	Pn	Pn	07 36 35.1	+5.2
	comp=E,0.3nm,0.3s,baz=220,slow=13,SNR=18						
MKAR				Lg	Lg	07 39 23.1	
	comp=E,1.1nm,0.3s,baz=226,slow=28,SNR=6.2						
	comp=E,2.4nm,0.7s						
MKAR	**Makanchi Array**	**9.57**	**38**	Pn	**Pn**	**07 36 32.7**	**+2.8**
MKAR	**Makanchi Array**	**9.57**	**38**	P	**Pn**	**07 36 32.7**	**+2.8**
BRZS	**Berezniki**	**10.51**	**356**	*e*P	**Pn**	**07 36 43.6**	**+0.9**
BRZS				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRZS	**Berezniki**	**10.51**	**356**	*e*P	**Pn**	**07 36 43.7**	**+0.9**
	comp=Z,2.2nm,0.7s,baz=356						
HRA	**Herat**	**10.55**	**245**	Pn	**Pn**	**07 36 43.8**	**+0.2**
NDI	**New Delhi**	**11.16**	**164**	*e*P	**Pn**	**07 36 52.0**	**+0.2**
NDI				*e*S	**Sn**	**07 38 49.0**	**-8.0**
WMQ	**Urumqi**	**11.26**	**63**	*e*P	**Pn**	**07 36 56.3**	**+3.1**
WMQ				pP		07 37 04.5	
WMQ				pmax	pmax		
	comp=Z,48nm,0.9s						
WMQ				LR	LR		
	comp=Z,550nm,6.7s						
WMQ				LR	LR		
	comp=Z,600nm,7.7s						
WMQ				LR	LR		
	comp=Z,270nm,12.7s						
ZSN	**Zaisan**	**11.30**	**42**	*e*P	**Pn**	**07 36 57.1**	**+3.5**
ZSN	**Zaisan**	**11.30**	**42**	*e*P	**Pn**	**07 36 57.1**	**+3.5**
	baz=43						
SONA	**Sohna**	**11.55**	**165**	*e*P	**Pn**	**07 36 57.3**	**+0.2**
SONA				*e*S	**Sn**	**07 38 57.9**	**-8.7**
KURBB	**Kurchatov Arra**	**11.61**	**15**	Pn	**Pn**	**07 36 59.7**	**+2.0**
	comp=Z,1.5nm,0.7s,baz=207,slow=12,SNR=8.6						
KURBB				Lg	Lg	07 40 20.9	
	comp=Z,0.2nm,0.3s,baz=206,slow=32,SNR=12						
KURBB	**Kurchatov Arra**	**11.61**	**15**	⇑Lg	Lg	07 40 18.5	
	comp=Z,317nm,1.4s						
KURK	**Kurchatov**	**11.72**	**15**		**Pn**	**07 36 59.7**	**+0.5**
KURK	**Kurchatov**	**11.72**	**15**	P	**Pn**	**07 36 59.7**	**+0.5**
KURK	**Kurchatov**	**11.72**	**15**	⇓Lg	Lg	07 40 22.4	
	comp=Z,192nm,1.4s						
SEM	**Semipalatinsk**	**11.82**	**21**	*e*P	**Pn**	**07 37 04.7**	**+3.9**
SEM	**Semipalatinsk**	**11.82**	**21**	*e*P	**Pn**	**07 37 04.8**	**+3.9**
	baz=21						
GEYT	**Alibeck**	**12.34**	**268**	Pn	**Pn**	**07 37 07.8**	**0.0**
	comp=Z,1.5nm,0.3s,baz=188,slow=16,SNR=7.8						
GEYT				LR	LR	07 42 39.1	
	comp=Z,414nm,18.4s,baz=56,slow=41						
	comp=Z,7.4nm,0.5s						
GEYT	**Alibeck**	**12.34**	**268**	Pn	**Pn**	**07 37 06.6**	**-1.3**
GYA0	**ALIBECK ARRAY**	**12.34**	**268**	P	**Pn**	**07 37 09.3**	**+1.4**
GYA0B	**ALIBECK ARRAY**	**12.34**	**268**	Pn	**Pn**	**07 37 06.6**	**-1.3**
AJM	**Ajmer**	**13.01**	**177**	*e*P	**Pn**	**07 37 12.8**	**-4.3**
AJM				*e*S	Sn	07 39 31.5	-11
PYUN	**Piuthan**	**13.70**	**143**	*e*P	**Pn**	**07 37 25.4**	**-1.3**
	comp=Z,89nm,0.7s						
BVAR	**Borovoye Array**	**13.72**	**351**	LR	LR	07 42 49.3	
	comp=Z,115nm,21.9s,baz=40,slow=37						
DANN	**Dangsing**	**13.86**	**140**	*e*P	**Pn**	**07 37 27.1**	**-1.8**
	comp=Z,20nm,0.4s						
AB31	**Akbulak array**	**13.87**	**319**	*i* P	**Pn**	**07 37 26.9**	**-1.7**
AB31	**Akbulak array**	**13.87**	**319**	Pn	**Pn**	**07 37 26.9**	**-1.7**
	comp=Z,14nm,0.8s,baz=134,slow=11,SNR=75						
ABKAR	**Akbulak array**	**13.87**	**319**	Pn	**Pn**	**07 37 27.2**	**-1.4**
JHNI	**Jhansi**	**14.56**	**163**	*e*P	**Pn**	**07 37 36.2**	**-2.0**
JHNI				*e*S	Sn	07 40 10.1	-10
GKN	**Gorkha**	**14.58**	**139**	*e*P	**Pn**	**07 37 37.1**	**-1.6**
	comp=Z,17nm,0.3s						
GUN	**Gumba**	**15.31**	**135**	*e*P	**Pn**	**07 37 46.9**	**-1.8**
PKIN	**Phulchoki**	**15.32**	**137**	*e*P	**Pn**	**07 37 47.5**	**-1.2**
	comp=Z,14nm,0.5s						
PKI	**Pulchoki**	**15.33**	**137**	*e*P	**Pn**	**07 37 46.9**	**-2.0**
AKTO	**Aktyubinsk**	**15.58**	**320**	Pn	**Pn**	**07 37 51.4**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=134,slow=15,SNR=22						
AKTO				Sn	**Sn**	**07 40 41.3**	**-3.4**
	comp=Z,0.2nm,0.3s,baz=318,slow=14,SNR=2.2						
	comp=Z,10nm,0.7s						
AKTO	**Aktyubinsk**	**15.58**	**320**	⇑Pn	**Pn**	**07 37 50.6**	**-1.2**
	comp=Z,36nm,0.8s						
ZAA0	**Zalesovo Array**	**16.28**	**24**	Pn	**P**	**07 38 02.8**	**-1.1**
ZALV	**Zalesovo Beam**	**16.28**	**24**	Pn	**P**	**07 38 02.7**	**-1.1**
	comp=Z,0.7nm,0.3s,baz=207,slow=11,SNR=25						
ZALV				Lg	Lg	07 42 49.3	
	baz=216,slow=21						
ZALV				LR	LR	07 44 33.9	
	comp=Z,95nm,21.0s,baz=214,slow=38						
	comp=Z,16nm,0.7s						
BHPL	**Bhopal**	**16.51**	**168**	*e*P	**Pn**	**07 38 02.4**	**-1.5**
BHPL				*e*S	**Sn**	**07 40 57.6**	**-10**
GOMU	**GeErMu**	**16.93**	**95**	P	**P**	**07 38 11.5**	**-0.1**
GOMU				sP	sP	07 38 21.3	+6.5
GOMU				S	**S**	**07 41 30.3**	**+1.4**
GOMU				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,49nm,4.6s						
GOMU				LR	LR		
	comp=Z,110nm,13.6s						
GOMU				LR	LR		
	comp=Z,200nm,14.2s						
GOMU				LR	LR		
	comp=Z,240nm,13.3s						
JBP	**Jabalpur**	**17.12**	**160**	*e*P	**P**	**07 38 14.8**	**+1.5**
JBP				⇓*e*S	Sn	07 41 11.1	-11
SVE	**Sverdlovsk**	**19.36**	**338**	*e*P	**Pn**	**07 38 38.4**	**-0.4**
SVE				pmax	pmax		
	comp=Z,35nm,1.3s						
LKRN	**Lenkeran, Azer**	**19.41**	**276**	P	**Pn**	**07 38 39.5**	**0.0**
ARU	**Arti**	**19.68**	**334**	P	**Pn**	**07 38 42.3**	**-0.4**
	baz=154,slow=5.1,SNR=24						
ARU				LR	LR	07 47 01.3	
	comp=Z,112nm,18.2s,baz=222,slow=39						
	comp=Z,15nm,0.6s						
ARU	**Arti**	**19.68**	**334**	P	**Pn**	**07 38 42.4**	**-0.3**
ARU				IAmb	IAmb	07 38 45.4	
	comp=Z,31nm,0.9s						
ARU	**Arti**	**19.68**	**334**	*c i* P	**Pn**	**07 38 42.7**	**0.0**
ARU				S	**S**	**07 42 23.6**	**0.0**
ARU				pmax	pmax		
	comp=Z,30nm,0.8s						
GTA	**Gaotai**	**20.08**	**82**	⇑P	Pn	07 38 49.0	+1.3
GTA				pP	sP	07 38 52.3	+3.1
GTA				sP	pP	07 38 56.5	+8.3
GTA				pmax	pmax		
	comp=Z,29nm,0.9s						
GTA				pmax	pmax		
	comp=Z,130nm,4.7s						
GTA				LR	LR		
	comp=Z,210nm,16.0s						
GTA				LR	LR		
	comp=Z,520nm,15.3s						
GTA				LR	LR		
	comp=Z,260nm,14.2s						
SEKA	**Sheki**	**20.31**	**283**	P	**P**	**07 38 48.9**	**+0.6**
MNGR	**Mingechevir, A**	**20.43**	**282**	P	**P**	**07 38 50.4**	**+0.9**
SHL	**Shillong**	**20.59**	**127**	P	Pn	07 38 53.6	-0.2
SHL	**Shillong**	**20.59**	**127**	P	Pn	07 38 53.6	-0.2
SHL				pmax	pmax		
	comp=Z,11nm,0.9s						
WSAR	**Wadi Sarin**	**20.69**	**223**	P	**P**	**07 38 52.4**	**-0.2**
	comp=Z,12nm,0.7s,baz=260,slow=3.0,SNR=6.5						
	comp=Z,12nm,0.7s						
ZKTA	**Zakatala**	**20.71**	**285**	P	**P**	**07 38 53.6**	**+0.9**
UOSS	**Minazif**	**20.73**	**231**	P	**P**	**07 38 53.3**	**+0.4**
GANJ	**Ganja**	**21.02**	**282**	P	**P**	**07 38 56.1**	**+0.1**
GROC	**Groznyy**	**21.29**	**289**	*e*P	**P**	**07 39 00.2**	**+1.4**
GROC				*e*		07 39 19.0	
GROC				*e*S	**S**	**07 42 54.8**	**-0.9**
GROC				*e*SS	**SnSn**	**07 43 18.2**	**+0.6**
GROC				pmax	pmax		
	comp=Z,43nm,0.6s						
NAX	**Nakhchivan**	**21.85**	**278**	P	**P**	**07 39 05.8**	**+0.8**
BELG	**Belogornoye**	**22.14**	**314**	P	**P**	**07 39 07.6**	**-0.3**
	comp=Z,75nm,0.8s,baz=271,slow=4.8,SNR=8.4						
	comp=Z,75nm,0.8s						
BELG	**Belogornoye**	**22.14**	**314**	*i* P	**P**	**07 39 08.0**	**+0.1**
BELG				pmax	pmax		
	comp=Z,16nm,0.9s						
GNI	**Garni**	**22.27**	**281**	P	**P**	**07 39 11.1**	**+1.4**
	comp=Z,16nm,0.7s,baz=173,slow=2.8,SNR=11						
GNI				LR	LR	07 49 17.4	
	comp=Z,48nm,21.2s,baz=100,slow=41						
	comp=Z,16nm,0.7s						
GNI	**Garni**	**22.27**	**281**	P	**P**	**07 39 09.3**	**-0.3**
GNI	**Garni**	**22.27**	**281**	*i* P	**P**	**07 39 10.8**	**+1.2**
GNI				pmax	pmax		
	comp=Z,56nm,1.1s						
MOY	**Mondy**	**22.45**	**48**	*e*P	**P**	**07 39 14.3**	**+2.9**
MOY				pmax	pmax		
	comp=Z,9.0nm,1.4s						
ZEI	**Tsey**	**22.68**	**288**	*e*P	**P**	**07 39 15.9**	**+1.9**
ZEI				pmax	pmax		
	comp=

comp=Z,340nm,16.5s
GURO Guroymak-BITLI 24.62 278 P **P** **07 39 33.6 +0.6**
KIRV Kirov 24.65 329 P **P** **07 39 34.2 +1.4**
comp=Z,11nm,0.5s,baz=344,slow=10,SNR=5.2
comp=Z,11nm,0.5s
KIRV Kirov 24.65 329*ce*P **P** **07 39 31.7 -1.1**
SONM Songino Array 24.87 60 P **P** **07 39 37.5 +2.4**
comp=Z,4.3nm,0.7s,baz=256,slow=9.0,SNR=8.9
SONM LR LR 07 50 24.2
comp=Z,182nm,20.9s,baz=12,slow=39
comp=Z,4.3nm,0.7s
SONM Songino Array 24.87 60 P **P** **07 39 37.1 +2.0**
SONM IAmb IAmb 07 39 40.0
comp=Z,9.0nm,1.3s
SONM Songino Array 24.87 60 *e*P **P** **07 39 38.2 +3.1**
SONM pmax pmax
comp=Z,4.0nm,0.7s
ULN Ulaanbaatar 25.31 60 P **P** **07 39 39.1 0.0**
ULN IAmb IAmb 07 39 43.6
comp=Z,9.5nm,1.1s
ULN Ulaanbaatar 25.31 60*ce*P **P** **07 39 41.2 +2.0**
ULN pmax pmax
comp=Z,9.0nm,1.0s
KOPT Kop Dagi 25.51 282 P **P** **07 39 40.6 -0.5**
KOPT IAmb IAmb 07 39 52.9
comp=Z,6.5nm,0.8s
SOC Sochi 25.71 290 *e*P **P** **07 39 42.7 +0.1**
SOC *e* 07 40 16.7
SOC *e*SS **S** **07 44 10.9 -0.9**
SOC *e*SS **SnSn** **07 45 03.4 -2.4**
SOC pmax pmax
comp=Z,7.0nm,0.5s
SOC MLR MLR
comp=Z,91nm,19.0s
CD2 Chengdu 25.86 100 P **P** **07 39 47.8 +3.7**
CD2 pmax pmax
comp=Z,10.0nm,0.9s
CD2 LR LR
comp=Z,230nm,13.2s
CD2 LR LR
comp=Z,270nm,11.8s
VSR Storozhevoye 26.74 307 *e*P **P** **07 39 49.9 -1.9**
VSR pmax pmax
comp=Z,30nm,1.3s
VORR Voronezh 26.82 308 *e*P **P** **07 39 51.4 -1.1**
LPSR Galich'ya Gora 27.21 310 *e*P **P** **07 39 55.5 -0.5**
LPSR pmax pmax
comp=Z,20nm,1.0s
RAYN Ar Rayn 28.74 245 P **P** **07 40 11.2 +1.2**
RAYN Ar Rayn 28.74 245 P **P** **07 40 11.3 +1.2**
RAYN pmax pmax
comp=Z,4.0nm,0.9s
HHC Hu-ho-hao-te 28.76 75 *e*P **P** **07 40 14.5 +4.4**
HHC pmax pmax
comp=Z,30nm,1.1s
HHC pmax pmax
comp=Z,140nm,4.7s
HHC LR LR
comp=Z,380nm,14.0s
HHC LR LR
comp=Z,420nm,15.7s
MOS Moscow 28.86 316 *e*P **P** **07 40 10.6 -0.1**
MOS *e* 07 41 00.6
OBN Obninsk 29.24 315*ce*P **P** **07 40 13.3 -0.8**
OBN *e* 07 41 09.7
OBN pmax pmax
comp=Z,4.0nm,0.8s
OBN MLR MLR
comp=Z,73nm,15.0s
KLMR Klimovskoe 30.06 327 *e*P **P** **07 40 20.9 -0.4**
KLMR pmax pmax
comp=Z,8.0nm,1.1s
KLMR Klimovskoe 30.06 327 *e*P **P** **07 40 21.0 -0.4**
KLMR AMP 07 40 26.2
comp=Z,8.0nm,1.1s
CMAR Chiang Mai Arr 30.22 127 LR LR 07 53 54.8
comp=Z,53nm,19.7s,baz=300,slow=39
ENH Enshi 30.54 96 P **P** **07 40 28.0 +2.1**
ENH IAmb IAmb 07 40 28.5
comp=Z,6.4nm,0.8s
BR131 Keskin Array S 30.75 283 P **P** **07 40 26.9 -0.9**
BR131 IAmb IAmb 07 40 36.4
comp=Z,7.1nm,0.7s
BR131 Keskin Array S 30.75 283 P **P** **07 40 26.9 -0.9**
BR131 pmax pmax
comp=Z,7.0nm,0.7s
BRTR Keskin Array B 30.75 283 P **P** **07 40 28.4 +0.6**
comp=Z,2.9nm,0.8s,baz=92,slow=8.0,SNR=12
BRTR LR LR 07 54 38.3
comp=Z,50nm,18.1s,baz=77,slow=40
comp=Z,2.9nm,0.8s
BRTR Keskin Array B 30.75 283 *e*P **P** **07 40 28.9 +1.1**
BRTR pmax pmax
comp=Z,3.0nm,0.9s
PALK Pallekele 32.69 167 LR LR 07 52 37.9
comp=Z,76nm,18.7s,baz=109,slow=34
AKASG Malin Array Be 32.91 305 P **P** **07 40 46.3 -0.2**
AKASG LR LR 07 56 43.5
comp=Z,130nm,18.7s,baz=80,slow=41
comp=Z,0.5nm,0.4s
AKASG Malin Array Be 32.91 305 *e*P **P** **07 40 48.0 +1.5**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
MNK Minsk 34.03 312 *i* P **P** **07 40 51.6 -4.7**
MNK *i* PPP PPP 07 42 15.6
MNK *i* 07 43 29.9
MNK *i* S **S** **07 46 16.2 -5.8**
MNK *i* 07 51 15.9
MNK pmax pmax
comp=N,77nm,0.8s
MNK pmax pmax
comp=Z,19nm,0.7s
MNK pmax pmax
comp=E,5.0nm,0.8s
MNK MLR MLR
comp=Z,9μm,19.0s
MNK MLR MLR
comp=N,1μm,24.0s
MNK MLR MLR
comp=E,3μm,22.0s
MNK Minsk 34.03 312 *i* P **P** **07 40 51.6 -4.7**
comp=E,5.0nm,0.8s
MNK *i* P **P** **07 40 51.6 -4.7**
comp=N,77nm,0.8s
MNK *i* P **P** **07 40 51.6 -4.7**
comp=Z,19nm,0.7s,baz=97
MNK *i* PP **PnPn** **07 42 04.4 -4.8**
MNK *i* PPP PPP 07 42 15.6
MNK *i* S **S** **07 46 16.3 -5.8**
MNK *i* SS **SnSn** **07 48 19.4 -8.8**
MNK *i* SSS SSS 07 48 39.0
MNK *i* LR LR 07 54 03.9
MNK *i* LRM MLR 07 56 15.4
comp=Z,9μm,18.7s
MNK *i* LRM MLR 07 56 21.2
comp=N,1μm,23.9s
MNK *i* LRM MLR 07 56 23.8
comp=E,3μm,21.9s
NACGM Naroch 34.72 312⇑ *e*P **P** **07 41 03.5 +1.3**
baz=98
VRI Vrincioaia 34.76 296 P **P** **07 41 04.2 +1.5**
VSU Vasula 35.30 318 *i* P **P** **07 41 08.8 +1.6**
VSU pmax pmax
comp=Z,27nm,1.0s
MLR Muntele Rosu 35.35 296 P **P** **07 41 07.6 -0.3**
MLR Muntele Rosu 35.35 296 P **P** **07 41 07.6 -0.3**
MLR pmax pmax
comp=Z,12nm,0.9s
LVZ Lovozero 35.55 336 P **P** **07 41 10.3 +1.0**
LVZ Lovozero 35.55 336 P **P** **07 41 10.3 +1.0**
LVZ pmax pmax
comp=Z,21nm,1.0s
BURAR Bucovina Array 35.61 299 P **P** **07 41 09.2 -1.0**
BUR08 Bucovina Ar. S 35.62 299 P **P** **07 41 09.4 -0.8**
FIA0 FINESS Array S 36.31 323 P **P** **07 41 16.2 +0.4**
FIA0 FINESS Array S 36.31 323 P **P** **07 41 16.2 +0.4**
FINES FINESS Array B 36.31 323 P **P** **07 41 16.4 +0.6**
comp=Z,3.4nm,0.8s,baz=112,slow=8.9,SNR=13
FINES LR LR 07 57 13.7
comp=Z,106nm,19.5s,baz=50,slow=38
comp=Z,3.4nm,0.8s
NJ2 Nanjing 37.01 87 *e*P **P** **07 41 24.8 +2.7**
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
QIZ Qiongzhong 37.16 113 P **P** **07 41 24.8 +1.3**
QIZ S **S** **07 47 13.5 +2.9**
QIZ LR LR
comp=Z,160nm,11.2s
QIZ LR LR
comp=Z,150nm,14.3s
QIZ LR LR
comp=Z,94nm,12.7s
ARCES ARCESS Array B 39.27 335 P **P** **07 41 41.6 +1.0**
comp=Z,2.2nm,0.7s,baz=109,slow=8.5,SNR=25
comp=Z,2.2nm,0.7s
ARCES ARCESS Array B 39.27 335 P **P** **07 41 41.7 +1.0**
ARCES IAmb IAmb 07 41 46.0
comp=Z,12nm,1.2s
ARCES ARCESS Array B 39.27 335 *e*P **P** **07 41 41.3 +0.6**
ARCES pmax pmax
comp=Z,1.0nm,0.4s
DIVS Divibare 39.77 295 P **P** **07 41 45.9 +0.6**
DIVS IAmb IAmb 07 41 49.9
comp=Z,8.7nm,1.2s
YAK Yakutsk 40.25 37 LR LR 07 58 48.7
comp=Z,95nm,19.6s,baz=268,slow=37
MORC Moravsky Berou 40.43 304 *e*P **P** **07 41 53.9 +3.2**
JAVC Velka Javorina 40.48 302 *e*P **P** **07 41 54.0 +2.9**
PDG Podgorica 40.68 292 P **P** **07 41 52.3 -0.5**
PDG IAmb IAmb 07 42 05.0
comp=Z,6.6nm,1.0s
VRAC Vranov 41.11 303 LR LR 08 01 27.5
comp=Z,70nm,18.1s,baz=80,slow=40
KLR Kul'dur 41.63 57 LR LR 08 01 56.0
comp=Z,48nm,19.3s,baz=258,slow=40
KLR Kul'dur 41.63 57*ce*P **P** **07 42 02.7 +2.2**
KLR pmax pmax
comp=Z,8.0nm,1.7s
KSAR Wonju Array Be 41.87 75 P **P** **07 42 04.3 +1.7**
KSAR Wonju Array Be 41.87 75 P **P** **07 42 04.3 +1.7**
KSRS Korea Array 41.90 75 P **P** **07 42 03.8 +0.9**
comp=Z,0.7nm,0.5s,baz=294,slow=6.0,SNR=4.2
KSRS LR LR 08 00 49.4
comp=Z,72nm,18.8s,baz=235,slow=38
comp=Z,0.7nm,0.5s
TIXI Tiksi 42.16 23 P **P** **07 42 06.1 +1.6**
TIXI IAmb IAmb 07 42 06.6
comp=Z,5.2nm,0.6s
TIXI Tiksi 42.16 23 P **P** **07 42 06.1 +1.6**
TIXI pmax pmax
comp=Z,5.0nm,0.6s
BRG Berggiesshubel 42.57 306 *e*P **P** **07 42 12.6 +4.4**
BRG Amp 07 42 14.2
comp=Z,7.6nm,1.2s
BRG Berggiesshubel 42.57 306 *e*P **P** **07 42 12.5 +4.4**
BRG pmax pmax
comp=Z,8.0nm,1.2s
USRK Ussuriysk Ar. 42.83 64 P **P** **07 42 10.7 +0.3**
USRK Ussuriysk Ar. 42.83 64 P **P** **07 42 10.7 +0.3**
GEC2 GERESS Array S 43.06 303 P **P** **07 42 12.8 +0.4**
GERES GERESS Array B 43.06 303 P **P** **07 42 12.9 +0.6**
comp=Z,1.0nm,0.6s,baz=125,slow=7.0,SNR=7.2
GERES LR LR 08 02 12.7
comp=Z,57nm,18.2s,baz=94,slow=39
comp=Z,1.0nm,0.6s
GERES GERESS Array B 43.06 303 P **P** **07 42 11.6 -0.8**
GERES GERESS Array B 43.06 303 *e*P **P** **07 42 13.5 +1.2**
GERES pmax pmax
comp=Z,1.0nm,0.5s
KHC Kasperske Hory 43.09 303 P **P** **07 42 12.0 -0.5**
KHC Kasperske Hory 43.09 303 P **P** **07 42 12.0 -0.5**
KHC pmax pmax
comp=Z,3.0nm,0.7s
KHC Kasperske Hory 43.09 303 *e*P **P** **07 42 12.5 0.0**
NC405 NORSAR Array S 43.12 321 P **P** **07 42 13.0 +0.4**
NC303 NORSAR Array S 43.29 321 P **P** **07 42 14.2 +0.3**
NC303 IAmb IAmb 07 42 18.8
comp=Z,14nm,0.9s
NB2 NORSAR Subarra 43.37 321 P **P** **07 42 14.2 -0.3**
comp=Z,1.6nm,0.6s,baz=91,slow=7.9
NOA NORSAR Array B 43.37 321 P **P** **07 42 14.5 0.0**
comp=Z,4.8nm,0.8s,baz=91,slow=7.9,SNR=11
NOA LR LR 08 01 13.2
comp=Z,63nm,19.0s,baz=95,slow=37
comp=Z,4.8nm,0.8s
NOA NORSAR Array B 43.37 321 *e*P **P** **07 42 14.5 0.0**
NOA pmax pmax
comp=Z,6.0nm,0.9s
NC204 NORSAR Array S 43.59 321 P **P** **07 42 16.4 +0.1**
CUC Castrocucco 43.87 290 P **P** **07 42 18.8 -0.1**
CUC IAmb IAmb 07 42 23.6
comp=Z,6.2nm,0.8s
VAE Valguarnera 45.77 287 LR LR 08 06 30.5
comp=Z,49nm,18.6s,baz=148,slow=42
DAVOX Davos/Dischmat 46.04 301 LR LR 08 04 05.7
comp=Z,100nm,18.4s,baz=82,slow=39
MJB9 Matsu-Tunnel 49.86 72 P **P** **07 43 06.3 +0.5**
MJB9 IAmb IAmb 07 43 10.7
comp=Z,7.5nm,0.9s
MAJO Matsushiro 49.87 72 P **P** **07 43 06.3 +0.5**
MAJO IAmb IAmb 07 43 10.7
comp=Z,7.5nm,0.9s
MAJO Matsushiro 49.87 72 P **P** **07 43 06.3 +0.5**
MAJO pmax pmax
comp=Z,7.0nm,0.9s
MJAR Matsushiro Arr 49.87 72 P **P** **07 43 06.5 +0.7**
comp=Z,4.0nm,0.7s,baz=291,slow=8.5,SNR=9.1
MJAR LR LR 08 04 56.6
comp=Z,50nm,19.9s,baz=268,slow=37
comp=Z,4.0nm,0.7s
MJAR Matsushiro Arr 49.87 72 IAmb IAmb 07 43 07.3
comp=Z,6.3nm,1.4s
MJA0 Matsu Arr-Jizo 49.90 72 *e*P **P** **07 43 07.3 +1.2**
MJA0 pmax pmax
comp=Z,5.0nm,0.8s
ASAJ Asahikawa 50.14 61 LR LR 08 06 08.4
comp=Z,65nm,18.2s,baz=182,slow=38
MA2 Magadan 50.65 40 LR LR 08 05 34.7
comp=Z,93nm,18.5s,baz=238,slow=37
SEY Seymchan 50.70 35 LR LR 08 06 05.2
comp=Z,67nm,19.2s,baz=258,slow=38
JMIC Jan Mayen 50.76 335 LR LR 08 04 45.7
comp=Z,53nm,18.3s,baz=61,slow=36
KMBO Kilima Mbogo 52.47 229 LR LR 08 08 44.7
comp=Z,37nm,19.7s,baz=78,slow=40
JHJ Hachijo jima 2 52.51 75 LR LR 08 07 57.1
comp=Z,51nm,19.8s,baz=283,slow=38
BILL Bilibino 54.94 27*ce*P **P** **07 43 44.8 +1.8**
BILL *e* 07 44 47.2
BILL *e* 07 45 50.3
BILL pmax pmax
comp=Z,8.0nm,1.7s
BILL MLR MLR
comp=Z,60nm,17.0s
ESDC Sonseca Array 58.02 297 P **P** **07 44 05.2 -0.3**
comp=Z,1.3nm,0.6s,baz=59,slow=7.1,SNR=8.9
ESDC LR LR 08 11 05.8
comp=Z,32nm,19.5s,baz=97,slow=38
comp=Z,1.3nm,0.6s
ESDC Sonseca Array 58.02 297 IAmb IAmb 07 44 05.8
comp=Z,1.4nm,1.0s
MDT Midelt 61.78 291 LR LR 08 14 57.2
comp=Z,30nm,18.5s,baz=160,slow=40
TOLK Toolik Lake Re 67.45 16 P **P** **07 45 08.6 +0.8**
TOA0 Torodi Ar. Sit 67.97 269 P **P** **07 45 11.2 -0.7**
TOA0 IAmb IAmb 07 45 11.9
comp=Z,4.0nm,0.7s
TORD Torodi Ar. Bea 67.97 269 P **P** **07 45 10.9 -0.9**
comp=Z,3.9nm,0.8s,baz=50,slow=5.9,SNR=30
comp=Z,3.9nm,0.8s
TORD Torodi Ar. Bea 67.97 269 P **P** **07 45 11.0 -0.9**
TORD IAmb IAmb 07 45 11.9
comp=Z,2.9nm,0.7s
IMAR Indian Mountai 68.64 19 P **P** **07 45 15.6 +0.3**
H21K Melozitna Rive 69.13 19 P **P** **07 45 19.9 +1.6**
H21K IAmb IAmb 07 45 40.6
comp=Z,4.2nm,1.1s
BMAR Burnt Mountain 69.49 15 P **P** **07 45 23.0 +2.4**
J20K Nowinta River 69.97 20 P **P** **07 45 25.2 +1.7**
J20K IAmb IAmb 07 45 32.3
comp=Z,4.7nm,1.4s
MLY Manley 70.15 18 P **P** **07 45 25.1 +0.4**
MLY IAmb IAmb 07 45 55.1
comp=Z,3.1nm,1.2s
H24K Noodor Dome 70.15 17 P **P** **07 45 26.2 +1.5**
H24K IAmb IAmb 07 45 49.0
comp=Z,3.2nm,1.2s
INK Inuvik 70.57 10 P **P** **07 45 28.7 +1.6**
INK IAmb IAmb 07 45 31.3
comp=Z,3.8nm,0.8s
INK Inuvik 70.57 10 P **P** **07 45 28.7 +1.6**
INK pmax pmax
comp=Z,4.0nm,0.8s
C36M Paulatuk 70.66 7 P **P** **07 45 28.5 +0.8**
IL31 71.28 17 P **P** **07 45 33.4 +2.0**
IL31 IAmb IAmb 07 45 54.2
comp=Z,5.3nm,1.3s
ILAR Eielson Array 71.28 17 P **P** **07 45 31.4 -0.1**
comp=Z,1.3nm,0.9s,baz=311,slow=4.7,SNR=8.4
ILAR LR LR 08 23 35.1
comp=Z,57nm,20.0s,baz=272,slow=42
comp=Z,1.3nm,0.9s
ILAR Eielson Array 71.28 17 P **P** **07 45 32.0 +0.4**
ILAR Eielson Array 71.28 17 *e*P **P** **07 45 31.2 -0.3**
ILAR pmax pmax
comp=Z,2.0nm,0.9s
J26L Joseph Creek 72.25 16 P **P** **07 45 38.4 +1.0**
SCRK Sand Creek 72.61 16 P **P** **07 45 40.6 +0.9**
SCRK IAmb IAmb 07 45 54.5
comp=Z,5.9nm,1.5s
BCAR Beaver Creek A 73.89 16 P **P** **07 45 47.8 +0.6**
DBIC Dimbokro 77.03 268 P **P** **07 46 05.0 -0.8**
comp=Z,2.1nm,0.7s,baz=34,slow=6.9,SNR=3.1
comp=Z,2.1nm,0.7s
KIC Kosan Boka 77.13 268⇑ *i*P **P** **07 46 06.7 +0.2**
comp=Z,8.3nm,0.8s
TIC Toumodi 77.17 268⇑ *e*P **P** **07 46 06.0 -0.7**
comp=Z,1.3nm,0.2s
LIC Lamto 77.44 268⇑ *i*P **P** **07 46 08.9 +0.7**
comp=Z,0.4nm,0.3s
YKA Yellowknife Ar 78.12 4 P **P** **07 46 11.9 +0.8**
comp=Z,1.5nm,0.8s,baz=350,slow=5.4,SNR=15
comp=Z,1.5nm,0.8s
YKA Yellowknife Ar 78.12 4 *e*P **P** **07 46 11.6 +0.4**
YKA pmax pmax
comp=Z,2.0nm,0.8s
BOSA Boshof 81.45 222 LR LR 08 22 52.6
comp=Z,20nm,20.6s,baz=178,slow=36
WRA Warramunga Arr 81.78 124 P **P** **07 46 30.9 -0.7**
comp=Z,2.1nm,0.7s,baz=330,slow=5.1,SNR=29
comp=Z,2.1nm,0.7s
WRA Warramunga Arr 81.78 124 P **P** **07 46 31.8 +0.2**
WRA Warramunga Arr 81.78 124 P **P** **07 46 31.8 +0.2**
ASAR Alice Springs 84.23 127 P **P** **07 46 43.7 -0.6**
comp=Z,1.3nm,0.6s,baz=316,slow=5.0,SNR=21
comp=Z,1.3nm,0.6s
YBH Yreka Blue Hor 97.76 12 LR LR 08 40 56.6
comp=Z,23nm,18.2s,baz=317,slow=41
PDAR Pinedale Array 98.05 2 LR LR 08 36 32.0
comp=Z,41nm,18.1s,baz=300,slow=38
ELK Elko 99.71 7 LR LR 08 37 30.8
comp=Z,35nm,18.2s,baz=287,slow=38
PLCA Paso Flores 152.81 256 PKPbc **PKPbc** **07 54 09.4 0.0**
comp=Z,0.9nm,0.8s,baz=174,slow=11,SNR=3.5
PLCA Paso Flores 152.81 256 PKPab **PKPab** **07 54 19.4 -1.1**
PLCA Paso Flores 152.81 256 PKIKP **PKPbc** **07 54 09.4 0.0**
PLCA PKP **PKPab** **07 54 19.4 -1.1**

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*KRNET **27** 07:43:07.9±0.1,39.°54N×73.°90E,mb3.5*
*SOME **27** 07:43:11.6,39.°67N×73.°65E,h5km*
*NNC **27** 07:43:14.9±2.7,39.°71N×73.°55E,h0km,mb3.5,mpv3.1,*
Error ellipse: s-maj=25.8km s-min=17.4km az=166.0
ISC 27 07:43:11.2±1.2,39.°67N±0.°05×73.°68E±0.°03,h10km,n25,
σ1§59/48,13C-8D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.09**	**321**	⇑*i*P		**Pn**	**07 43 32.8**	**+0.2**
	baz=19							
OHH				⇑*i*S		**Sn**	**07 43 51.0**	**+3.2**
	baz=19							
DRK	**Karamyk**	**1.46**	**263**	⇓*i*P		**Pg**	**07 43 38.3**	**-0.9**
DRK	baz=69			⇓*i*S		**Sg**	**07 44 00.9**	**+2.7**
	baz=69							
BTK	**Batken**	**2.23**	**281**	⇓*e*P		**Pb**	**07 43 51.0**	**-0.6**
BTK	baz=83			⇓*e*S		**Sg**	**07 44 22.4**	**-0.5**
	baz=83							
ARLS	**Aral**	**2.24**	**12**	⇓*e*P		**Pn**	**07 43 49.8**	**+1.3**
	baz=8.0							
ARLS				⇓*i*S		**Sb**	**07 44 20.3**	**+0.6**
	baz=8.0							
TRKS	**Terek-Say**	**2.68**	**315**	⇑*e*P		**Pb**	**07 43 56.7**	**-2.6**
	baz=14							
TRKS				⇑*i*S		**Sb**	**07 44 32.2**	**0.0**
	baz=14							
GAR	**Garm**	**2.69**	**257**	⇑*i*P		**Pb**	**07 43 56.7**	**-2.8**
	baz=60							
GAR				⇑*i*S		**Sb**	**07 44 32.2**	**-0.4**
	baz=60							
BOOM	**Boomskoye usch**	**3.29**	**311**	⇑*e*P		**Pn**	**07 44 03.6**	**+0.6**
	baz=27							
BOOM				⇑*i*S		**Sn**	**07 44 44.1**	**+1.8**
	baz=27							
CHMS	**Chumysh**	**3.42**	**13**	⇓Pn		**Pb**	**07 44 08.2**	**-3.7**
	4.2nm,0.7s							
CHMS				⇑Lg		Lg	07 45 03.6	
	12nm,0.5s							
TKM2	**Tokmak 2**	**3.55**	**23**	⇓Pn		**Pb**	**07 44 12.8**	**-1.5**
	6.3nm,1.2s							
TKM2				⇑Lg		Lg	07 45 08.2	
	13nm,0.6s							
IUG	**Iuzhnay**	**3.70**	**313**	*e*P		**Pg**	**07 44 21.3**	**-0.8**
	132nm,0.1s							
IUG				*e*S		**Sg**	**07 45 11.2**	**+1.0**
	27nm,0.0s							
KST	**Kastek**	**3.78**	**26**	*e*P		**Pg**	**07 44 22.6**	**-1.0**
	2.4nm,0.1s							
KST				*e*S		**Sg**	**07 45 13.0**	**+0.5**
	17nm,0.1s							
SGDS	**Sogindy**	**3.84**	**10**	*e*P		**Pg**	**07 44 23.4**	**-1.4**
	3.1nm,0.1s							
SGDS				*e*S		**Sg**	**07 45 14.4**	**-0.1**
	4.8nm,0.1s							
DGS	**Degeres**	**3.90**	**23**	*e*P		**Pg**	**07 44 25.0**	**-0.8**
	4.1nm,0.1s							
DGS				*e*S		**Sg**	**07 45 17.0**	**+0.7**
	11nm,0.7s							
MTBS	**Maitube**	**4.03**	**30**	*e*P		**Pg**	**07 44 27.4**	**-0.8**
	2.5nm,0.2s							
MTBS				*e*S		**Sg**	**07 45 21.4**	**+1.0**
	8.9nm,0.1s							
TNSS	**Tian-Shan**	**4.17**	**35**	*e*P		**Pg**	**07 44 29.9**	**-1.1**
	2.7nm,0.0s							
TNSS				*e*S		**Sg**	**07 45 25.8**	**+0.9**
	5.0nm,0.8s							
KK31	**Karatay Array**	**4.17**	**326**	⇑Pn		**Pn**	**07 44 18.8**	**+3.9**
	1.0nm,0.3s,baz=130,slow=11,SNR=9.7							
KK31				⇑Pg		**Pg**	**07 44 30.2**	**-0.9**
	3.8nm,0.6s,baz=150,slow=17,SNR=5.3							
KK31				⇑Lg		Lg	07 45 24.7	
	5.5nm,0.5s,baz=147,slow=32,SNR=4.3							
KRBS	**Karabastau**	**4.29**	**20**	*e*P		**Pg**	**07 44 32.2**	**-1.1**
	0.9nm,0.1s							
KRBS				*e*S		**Sg**	**07 45 29.8**	**+1.0**
	7.0nm,0.1s							
BRLS	**Boroldday**	**4.42**	**320**	*e*P		**Pg**	**07 44 33.5**	**-2.4**
	2.0nm,0.0s							
BRLS				*e*S		**Sg**	**07 45 32.0**	**-1.3**
	9.6nm,0.1s							
KTBS	**Karatobe**	**4.62**	**28**	*e*P		**Pg**	**07 44 38.4**	**-1.2**
	2.0nm,0.1s							
KTBS				*e*S		**Sg**	**07 45 40.1**	**+0.7**
	20nm,0.2s							
KUU	**Kurty**	**4.66**	**24**	*e*P		**Pg**	**07 44 39.5**	**-0.9**
	1.9nm,0.3s							
KUU				*e*S		**Sg**	**07 45 42.5**	**+1.7**
	14nm,0.2s							
CHKK	**Chushkaly**	**4.86**	**30**	*e*P		**Pg**	**07 44 43.6**	**-0.6**
	1.2nm,0.2s							
CHKK				*e*S		**Sg**	**07 45 49.2**	**+2.1**
	3.8nm,0.1s							
SATY	**Saty**	**4.91**	**45**	*e*P		**Pg**	**07 44 44.4**	**-0.8**
	1.7nm,0.1s							
SATY				*e*S		**Sg**	**07 45 50.4**	**+1.6**
	9.4nm,1.1s							
KPKS	**Kokpek**	**5.33**	**43**	*e*P		**Pg**	**07 44 51.6**	**-1.7**
	1.9nm,0.4s							
KPKS				*e*S		**Sg**	**07 46 03.2**	**+0.8**
	12nm,0.2s							
BTLS	**Baital**	**5.37**	**3**	*e*P		**Pg**	**07 44 52.4**	**-1.6**
	2.0nm,0.7s							
BTLS				*e*S		**Sg**	**07 46 04.1**	**+0.6**
	2.5nm,0.6s							
ARXS	**Arharly**	**5.49**	**33**	*e*P		**Pg**	**07 44 54.2**	**-2.1**
	5.4nm,0.3s							

ARXS eS Sg 07 46 07.4 0.0
6.1nm,0.1s

MAN 27 08:13:38.1, 6.22N×125.85E, h122km, mb4.4, ML3.2, MS3.0, 4C-5D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.18**	**231**	⇓eP	Pb	08 13 56.0	+0.6
DDMP				eS		08 14 09.2	
MATI	**Mati**	**0.83**	**29**	⇑iP	Pn	08 13 59.0	+0.3
MATI				eS		08 14 14.9	
GSPH	**General Santos**	**0.90**	**262**	⇓iP	Pb	08 13 59.6	+3.4
GSPH				iS		08 14 16.4	
KCP	**Kidapawan**	**1.09**	**316**	⇓iP	Pn	08 14 01.9	+2.1
KCP				iS		08 14 20.1	
SKMP	**Bagumbayan, Su**	**1.33**	**283**	⇑iP	Pn	08 14 03.8	+2.5
SKMP				eS		08 14 22.8	
BUKP	**Musuan**	**1.83**	**335**	⇑iP	Pg	08 14 10.4	+0.5
BUKP				eS		08 14 35.8	
CTBH	**Cotabato--PC H**	**1.88**	**302**	⇓iP	Pn	08 14 10.4	+1.1
BIPH	**Bislig**	**2.02**	**15**	⇓eP	Pn	08 14 12.3	+0.3
BIPH				eS		08 14 38.2	
GLSP	**General Luna,**	**3.56**	**4**	⇑iP	Pn	08 14 32.2	+0.8
GLSP				eS		08 15 12.6	

IDC 27 08:14:10.7±1.9, 0.52N×124.66E, h0km, mb3.4/3, mbtmp3.5/3, Error ellipse: s-maj=172.2km s-min=27.5km az=63.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.44**	**156**	P	P	08 19 11.6	+0.2
	0.4nm,0.3s,baz=334,slow=11,SNR=11						
	0.4nm,0.3s						
ASAR	**Alice Springs**	**25.67**	**160**	P	P	08 19 42.3	-0.2
	0.7nm,0.4s,baz=340,slow=6.9,SNR=18						
	0.7nm,0.4s						
STKA	**Stephens Creek**	**35.99**	**155**	P	P	08 21 08.2	-5.3
	3.1nm,0.7s,baz=342,slow=6.4,SNR=4.6						
MKAR	**Makanchi Array**	**59.06**	**327**	P	P	08 24 12.7	0.0
	0.2nm,0.4s,baz=127,slow=7.4,SNR=1.8						
	0.2nm,0.4s						

KRNET 27 08:28:28.9±0.1, 39.46N×73.70E, mb3.6
SOME 27 08:28:31.0, 39.63N×73.70E, h0km
ISC 27 08:28:27.4±1.5, 39.52N±0.06×73.70E±0.03, h4km±14km, n23, σ1s31/46, 12C-4D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.22**	**325**	⇑eP	Pg	08 28 53.0	+2.1
	baz=27						
OHH				⇑eS	Sn	08 29 11.0	+2.5
	baz=27						
DRK	**Karamyk**	**1.47**	**269**	⇑eP	Pg	08 28 56.7	+1.1
	baz=72						
DRK				⇑eS	Sg	08 29 17.0	+2.3
	baz=72						
BTK	**Batken**	**2.28**	**285**	⇑eP	Pg	08 29 10.1	-1.1
	baz=86						
BTK				⇑eS	Sg	08 29 40.0	-0.8
	baz=86						
ARLS	**Aral**	**2.39**	**11**	⇓eP	Pb	08 29 11.9	+0.8
	baz=11						
ARLS				⇓eS	Sg	08 29 43.4	-0.7
	baz=11						
GAR	**Garm**	**2.68**	**260**	⇓iP	Pb	08 29 14.9	-1.1
	baz=61						
GAR				⇓eS	Sb	08 29 49.0	-0.3
	baz=61						
UCH	**Uchtor**	**2.77**	**13**	⇑eP	Pb	08 29 17.8	-0.1
	baz=12						
UCH				⇑eS	Sb	08 29 53.4	+1.0
	baz=12						
TRKS	**Terek-Say**	**2.80**	**317**	⇑eP	Pb	08 29 16.8	-1.3
	baz=17						
TRKS				⇑eS	Sb	08 29 51.8	-1.0
	baz=17						
BOOM	**Boomskoye usch**	**3.42**	**29**	⇑iP	Pb	08 29 26.6	-2.1
	baz=29						
BOOM				⇑iS	Sb	08 30 08.9	-1.8
	baz=29						
IUG	**luzhnay**	**3.82**	**315**	eP	Pg	08 29 41.4	+0.7
	160nm,0.1s						
IUG				eS	Sg	08 30 32.2	+2.0
	34nm,0.2s						
KST	**Kastek**	**3.91**	**25**	eP	Pg	08 29 43.0	+0.6
	7.7nm,0.2s						
KST				eS	Sg	08 30 35.4	+2.3
	17nm,1.0s						
SGDS	**Sogindy**	**3.99**	**10**	eP	Pg	08 29 44.0	+0.1
	4.3nm,0.1s						
SGDS				eS	Sg	08 30 36.5	+0.9
	5.5nm,0.0s						
DGS	**Degeres**	**4.03**	**22**	eP	Pg	08 29 44.7	0.0
	13nm,0.1s						
DGS				eS	Sg	08 30 37.6	+0.7
	8.6nm,0.2s						
MTBS	**Maitube**	**4.15**	**29**	eP	Pg	08 29 46.9	-0.1
	9.6nm,0.2s						
MTBS				eS	Sg	08 30 41.6	+0.9
	8.9nm,0.0s						
TNSS	**Tian-Shan**	**4.28**	**34**	eP	Pg	08 29 49.3	-0.2
	5.5nm,0.1s						
TNSS				eS	Sg	08 30 45.8	+0.8
	4.9nm,0.6s						
KRBS	**Karabastau**	**4.43**	**19**	eP	Pg	08 29 52.6	+0.4
	0.7nm,0.4s						
KRBS				eS	Sg	08 30 51.5	+1.9
	6.7nm,1.0s						
BRLS	**Borolday**	**4.56**	**322**	eP	Pg	08 29 53.0	-1.8
	1.7nm,0.1s						
BRLS				eS	Sg	08 30 51.8	-2.0
	17nm,0.4s						
KTBS	**Karatobe**	**4.75**	**27**	eP	Pg	08 29 57.6	-0.8
	6.9nm,0.2s						
KTBS				eS	Sg	08 30 59.8	-0.1
	17nm,1.0s						
KUU	**Kurty**	**4.79**	**23**	eP	Pg	08 29 58.4	-0.9
	6.3nm,0.8s						
KUU				eS	Sg	08 31 01.0	-0.4
	6.1nm,0.4s						
CHKK	**Chushkaly**	**4.98**	**29**	eP	Pg	08 30 02.8	0.0
	4.2nm,0.1s						
CHKK				eS	Sg	08 31 09.1	+1.7
	5.8nm,0.0s						
SATY	**Saty**	**5.01**	**44**	eP	Pg	08 30 03.8	+0.4
	3.9nm,0.2s						
SATY				eS	Sg	08 31 10.5	+2.3
	11nm,0.2s						
KPKS	**Kokpek**	**5.44**	**42**	eP	Pg	08 30 10.6	-1.0
	2.0nm,0.0s						
KPKS				eS	Sg	08 31 22.1	+0.1
	11nm,0.1s						
BTLS	**Baital**	**5.52**	**3**	eP	Pg	08 30 11.6	-1.6
	1.6nm,0.1s						
BTLS				eS	Sg	08 31 23.9	-0.9
	3.3nm,0.3s						
ARXS	**Arharly**	**5.61**	**32**	eP	Pg	08 30 13.9	-1.0
	8.0nm,0.1s						
ARXS				eS	Sg	08 31 28.2	+0.7
	5.1nm,0.2s						

IDC 27 08:37:10.8±3.2, 53.53N×87.54E, h0km, mbtmp2.6/2, ML2.3/2, Error ellipse: s-maj=28.5km s-min=16.3km az=57.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.67**	**286**	*i*		08 48 08.6	
	baz=102,slow=314,SNR=2.5						
ZALV	**Zalesovo Beam**	**1.67**	**286**	Pg	Pn	08 37 39.7	-1.5
	0.6nm,0.3s,baz=105,slow=13,SNR=5.0						
ZALV				Lg	Lg	08 38 04.7	
	1.1nm,0.3s,baz=108,slow=24,SNR=5.9						
KURBB	**Kurchatov Arra**	**6.27**	**246**	Pn	Pn	08 38 44.4	0.0
	baz=63,slow=14,SNR=2.0						
KURBB				Lg	Lg	08 40 29.9	
	baz=59,slow=31						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**7.54**	**209**	Pn	Pn	08 39 03.8	+1.9
	0.1nm,0.3s,baz=29,slow=12,SNR=5.0						
MKAR				Lg	Lg	08 41 08.0	
	0.1nm,0.3s,baz=27,slow=36,SNR=3.9						
	0.2nm,0.3s						

IDC 27 08:41:03.5±1.3, 30.68S×71.31W, h0km, mb3.4/2, mbtmp3.3/5, ML3.1/3, MS3.9/1, Error ellipse: s-maj=36.4km s-min=23.3km az=149.0
GUC 27 08:41:09.4±0.8, 30.71S×71.36W, h51km±2km, ML3.8
ISC 27 08:41:09.2±0.8, 30.69S±0.03×71.42W±0.04, h47km±8km, n25, σ1s03/38, 2C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.18**	**276**	⇑iP	Pn	08 41 17.6	+0.4
CO06				eS	Sn	08 41 24.1	+1.4
CO06				IAML		08 41 25.4	
	comp=E,6μm,0.2s						
CO02	**Combarbal**	**0.62**	**144**	⇓iP	Pn	08 41 21.8	-0.2
CO02				eS	Sn	08 41 30.8	-0.4
CO03	**El Pedregal**	**0.65**	**103**	⇓iP	Pn	08 41 22.0	-0.3
CO03				eS	Sn	08 41 31.1	-0.6
CO03				IAML		08 41 31.7	
	comp=E,7μm,0.2s						
GO04	**Tololo Observa**	**0.75**	**46**	eP	Pn	08 41 23.5	-0.2
GO04				eS	Sn	08 41 34.1	-0.1
GO04				IAML		08 41 37.2	
	comp=E,15μm,0.3s						
CO05	**La Serena**	**0.79**	**12**	⇓iP	Pn	08 41 24.5	+0.5
CO05				eS	Sn	08 41 34.7	0.0
CO01	**Juntas del Tor**	**1.35**	**59**	eP	Pn	08 41 32.8	+0.9
CO01				eS	Sn	08 41 50.1	+1.2
LCO	**Las Campanas**	**1.79**	**21**	⇓eP	Pn	08 41 38.7	+0.8
LCO				eS	Sn	08 42 00.0	+0.4
VA06	**Catapilco**	**1.86**	**177**	eP	Pn	08 41 39.5	+0.8
VA06				eS	Sn	08 42 01.9	+0.9
VA06				IAML		08 42 08.8	
	comp=E,1μm,0.3s						
VA03	**San Esteban**	**2.19**	**160**	⇑eP	Pn	08 41 44.5	+1.2
VA03				eS	Sn	08 42 10.8	+1.5
VA03				IAML		08 42 17.0	
	comp=E,1μm,0.1s						
ROCH	**El Roble**	**2.30**	**171**	eP	Pn	08 41 45.8	+1.0
ROCH				eS	Sn	08 42 13.8	+1.7
ROCH				IAML		08 42 21.5	
	comp=N,654nm,0.4s						
PEL	**Peldehue**	**2.52**	**166**	eP	Pn	08 41 49.1	+1.4
PEL				eS	Sn	08 42 18.4	+1.2
PEL				IAML		08 42 26.9	
	comp=E,289nm,0.2s						
MT05	**Renca**	**2.75**	**168**	eP	Pn	08 41 52.1	+1.2
MT05				eS	Sn	08 42 22.8	-0.1
MT05				IAML		08 42 34.9	
	comp=E,556nm,0.2s						
MT09	**Talagante**	**3.10**	**173**	eP	Pn	08 41 56.8	+1.1
MT09				eS	Sn	08 42 32.1	+0.6
MT09				IAML		08 42 46.0	
	comp=N,308nm,0.2s						
H03N1	**Juan Fernandez**	**6.92**	**245**	Pn	Pn	08 42 47.4	-0.4
	baz=110,slow=20						
H03N1				T	T	08 49 37.4	
	baz=73,slow=72,SNR=1482						
H03N2	**Juan Fernandez**	**6.94**	**245**	Pn	Pn	08 42 47.4	-0.5
	baz=110,slow=20						
H03N2				T	T	08 49 37.7	
	baz=73,slow=72,SNR=1949						
H03N3	**Juan Fernandez**	**6.94**	**245**	Pn	Pn	08 42 47.2	-0.8
	baz=110,slow=20						
H03N3				T	T	08 49 36.4	
	baz=73,slow=72,SNR=1260						
H03S3	**Juan Fernandez**	**7.07**	**242**	Pn	Pn	08 42 48.6	-1.2
H03S1	**Juan Fernandez**	**7.07**	**242**	Pn	Pn	08 42 48.4	-1.5
H03S2	**Juan Fernandez**	**7.08**	**242**	Pn	Pn	08 42 48.6	-1.4
PLCA	**Paso Flores**	**10.04**	**176**	Pn	Pn	08 43 30.2	-0.6
	baz=282,slow=9.3,SNR=1.1						
	comp=N,0.4nm,0.8s						
CPUP	**Villa Florida**	**13.13**	**74**	Pn	Pn	08 44 10.9	-2.1
	comp=N,0.1nm,0.3s,baz=266,slow=13,SNR=1.5						
CPUP				Sn	Sn	08 46 37.1	-0.6
	comp=N,0.1nm,0.3s,baz=143,slow=9.1,SNR=2.2						
	comp=N,0.4nm,0.4s						
LPAZ	**La Paz**	**14.65**	**13**	Pn	Pn	08 44 33.6	-0.6
	baz=165,slow=19,SNR=1.5						
	comp=N,0.9nm,0.9s						
PMSA	**Palmer Station**	**34.41**	**174**	LR	LR	09 02 42.4	
	comp=N,181nm,18.6s,baz=196,slow=38						
TXAR	**Lajitas Array**	**67.13**	**330**	P	P	08 51 59.7	+1.5
	comp=N,0.1nm,0.5s,baz=148,slow=8.6,SNR=2.2						
	comp=N,0.1nm,0.5s						
TORD	**Torodi Ar. Bea**	**82.60**	**70**	P	P	08 53 27.9	+0.2
	comp=N,0.4nm,0.5s,baz=223,slow=2.9,SNR=9.5						
	comp=N,0.4nm,0.5s						

NNC 27 08:42:53.9±2.5, 53.42N×87.81E, h0km, mb3.4, mpv3.1, Error ellipse: s-maj=20.2km s-min=9.8km az=66.0, Suspected Mining explosion.
IDC 27 08:42:55.2±2.6, 53.51N×87.62E, h0km, mbtmp3.5/2, ML3.3/2, Error ellipse: s-maj=22.7km s-min=13.7km az=61.0
ISC 27 08:42:54.1±3.5, 53.5N±0.1×87.8E±0.2, h0km, n9, σ1s29/15, 7C-6D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.79**	**285**	*i*		08 54 30.0	
	0.1nm,0.9s,baz=99,slow=313,SNR=3.7						
ZAA0	**Zalesovo Array**	**1.79**	**285**	⇑Pn	Pn	08 43 26.0	-0.3
	0.7nm,0.4s						
ZAA0				⇑Sn	Sg	08 43 52.4	+0.7
	8.3nm,0.8s						
ZALV	**Zalesovo Beam**	**1.79**	**285**	Pg	Pn	08 43 26.0	-0.3
	3.8nm,0.3s,baz=103,slow=17,SNR=20						
ZALV				Lg	Lg	08 43 49.3	
	9.6nm,0.3s,baz=106,slow=25,SNR=18						
KURK	**Kurchatov**	**6.28**	**247**	⇑Pn	Pn	08 44 28.6	+0.7
	1.5nm,0.8s						
KURK				⇑Sn	Sn	08 45 39.7	-0.6
KURK				⇓Lg	Lg	08 46 13.7	
	7.2nm,0.7s						
KURBB	**Kurchatov Arra**	**6.38**	**247**	Pn	Pn	08 44 30.4	+1.2
	0.4nm,0.3s,baz=63,slow=14,SNR=41						
KURBB				Sn	Sn	08 45 41.8	-1.0
	0.1nm,0.3s,baz=62,slow=22,SNR=2.6						
KURBB				Lg	Lg	08 46 13.7	
	0.1nm,0.3s,baz=63,slow=32,SNR=3.9						
	1.5nm,0.3s						
KURBB	**Kurchatov Arra**	**6.38**	**247**	⇑Pn	Pn	08 44 30.2	+1.0
	1.9nm,0.3s						
KURBB				⇑Sn	Sn	08 45 41.7	-1.0
	7.2nm,0.7s						
KURBB				⇓Lg	Lg	08 46 13.8	
	12nm,0.8s						
MK31	**Makanchi Array**	**7.59**	**210**	Pn	Pn	08 44 47.6	+1.8
	0.2nm,0.3s,baz=29,slow=13,SNR=48						
MK31				⇓Sn	Sn	08 46 12.4	-0.1
	7.1nm,1.4s,baz=37,slow=25,SNR=4.2						
MK31				⇓Lg	Lg	08 46 55.3	
	8.2nm,1.2s,baz=44,slow=29,SNR=3.9						
MKAR	**Makanchi Array**	**7.59**	**210**	Pn	Pn	08 44 47.4	+1.6
	0.7nm,0.3s,baz=26,slow=13,SNR=27						
MKAR				Sn	Sn	08 46 11.3	-1.1
	0.1nm,0.3s,baz=28,slow=26,SNR=6.1						
MKAR				Lg	Lg	08 46 54.0	
	0.1nm,0.3s,baz=40,slow=30,SNR=3.5						
	0.8nm,0.2s						
MAKZ	**Makanchi**	**7.67**	**211**	⇓Pn	Pn	08 44 44.3	-2.6
	2.3nm,0.8s						
MAKZ				⇓Sn	Sn	08 46 14.3	-0.2
	2.1nm,0.7s						
MAKZ				⇑Lg	Lg	08 46 58.4	
	4.1nm,0.8s						

IDC 27 08:43:35.6±0.8, 18.38S×173.12W, h0km, mb4.2/14, mbtmp4.2/15, ML4.0/1, MS3.8/34, Error ellipse: s-maj=33.2km s-min=17.5km az=133.0
NEIC 27 08:43:35.1±1.4, 18.44S±0.07×172.76W±0.07, h10km±1km, mb4.5/17, Error ellipse: s-maj=15.1km s-min=3.2km az=42.0
ISC 27 08:43:36.8±0.5, 18.49S±0.09×172.84W±0.09, h19km, n92, σ1s45/58, mb4.4/23, MS3.9/35, 1C, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**2.82**	**102**	Pn	Pn	08 44 18.0	-3.0

AFI	**Afiamalu**	**4.67**	**13**	Pn	Pn	08 44 45.8	-0.6
	6.3nm,0.3s,baz=77,slow=23,SNR=4.2						
AFI				Sn	Sn	08 45 27.8	-12
	12nm,0.3s,baz=277,slow=20,SNR=2.5						
	18nm,0.3s						
AFI	**Afiamalu**	**4.67**	**13**		Pn	08 44 43.9	-2.6
MSVF	**Nonsavu**	**8.69**	**274**	Pn	Pn	08 45 47.6	+5.8
	0.7nm,0.3s,baz=110,slow=11,SNR=10						
MSVF				LR	LR	08 48 34.4	
	comp=Z,1μm,20.9s,baz=131,slow=36						
MSVF	**Nonsavu**	**8.69**	**274**		Pn	08 45 40.7	-1.0
RAR	**Rarotonga**	**12.59**	**105**	Pn	Pn	08 46 28.9	-6.1
	0.6nm,0.3s,baz=31,slow=17,SNR=2.0						
RAR				LR	LR	08 50 10.9	
	comp=Z,332nm,19.2s,baz=265,slow=31						
RAR	**Rarotonga**	**12.59**	**105**	Pn	Pn	08 46 29.6	-5.5
DZM	**Mont Dzumac**	**19.75**	**256**	eLR	LR	08 53 03.8	
	comp=Z,550nm,27.2s						
URZ	**Urewera**	**21.56**	**202**	P	P	08 48 28.3	+3.1
	14nm,0.8s,baz=20,slow=1.2,SNR=6.7						
	14nm,0.8s						
PPT2	**Papeete2**	**22.14**	**91**	eLR	LR	08 53 35.9	
	comp=Z,847nm,26.5s						
PPT	**Papeete**	**22.14**	**91**	LR	LR	08 55 34.1	
	comp=Z,370nm,18.2s,baz=268,slow=32						
TBI	**Tubuai**	**22.36**	**107**	eLR	LR	08 53 50.4	
	comp=Z,532nm,28.8s						
HNR	**Honiara**	**27.86**	**285**	LR	LR	08 59 39.0	
	comp=Z,322nm,18.8s,baz=200,slow=35						
RPZ	**Rata Peaks**	**28.57**	**205**	P	P	08 49 39.7	+8.0
	6.5nm,0.5s,baz=345,slow=22,SNR=2.0						
TAOE	**Nuku Hiva Isla**	**33.13**	**78**	eLR	LR	08 58 34.5	
	comp=Z,331nm,26.5s						
KRVT	**Keravat (AS076**	**37.11**	**288**	LR	LR	09 05 28.6	
	comp=Z,257nm,18.4s,baz=267,slow=36						
CTA	**Charters Tower**	**38.57**	**261**	LR	LR	09 04 41.3	
	comp=Z,37nm,20.0s,baz=96,slow=33						
CTAO	**Charters Tower**	**38.57**	**261**	P	P	08 50 58.1	-0.7
CTAO				IAmb	IAmb	08 50 58.6	
	comp=Z,4.7nm,0.8s						
STKA	**Stephens Creek**	**43.03**	**243**	P	P	08 51 34.0	-1.5
	comp=Z,3.0nm,1.0s,baz=121,slow=12,SNR=2.9						
STKA				LR	LR	09 07 10.1	
	comp=Z,142nm,18.6s,baz=40,slow=33						
	comp=Z,3.0nm,1.0s						
STKA	**Stephens Creek**	**43.03**	**243**	P	P	08 51 34.5	-1.0
WR0	**Warramunga Arr**	**49.54**	**259**	P	P	08 52 24.9	-1.9
WR0				IAmb	IAmb	08 52 27.2	
	comp=Z,12nm,1.4s						
WB0	**Warramunga Arr**	**49.70**	**259**	P	P	08 52 27.1	-1.0
WB2	**Warramunga Arr**	**49.72**	**259**	P	P	08 52 27.1	-1.1
WB2				IAmb	IAmb	08 52 32.6	
	comp=Z,9.2nm,1.1s						
WRA	**Warramunga Arr**	**49.73**	**259**	P	P	08 52 27.1	-1.2
	comp=Z,2.2nm,0.6s,baz=98,slow=5.8,SNR=40						
WRA				LR	LR	09 12 13.4	
	comp=Z,67nm,20.2s,baz=68,slow=35						
	comp=Z,2.2nm,0.6s						
WRA	**Warramunga Arr**	**49.73**	**259**	P	P	08 52 27.1	-1.2
AS31	**Alice Springs**	**49.73**	**254**	P	P	08 52 28.1	-0.2
ASAR	**Alice Springs**	**49.73**	**254**	P	P	08 52 27.5	-0.8
	comp=Z,6.6nm,1.0s,baz=85,slow=8.7,SNR=27						
ASAR				LR	LR	09 13 08.0	
	comp=Z,80nm,18.2s,baz=153,slow=36						
	comp=Z,6.6nm,1.0s						
ASAR	**Alice Springs**	**49.73**	**254**	P	P	08 52 27.2	-1.0
SIJI	**Sorong**	**57.53**	**281**	LR	LR	09 18 12.8	
	comp=Z,70nm,18.4s,baz=70,slow=36						
RPN	**Rapa Nui**	**58.65**	**111**	LR	LR	09 13 58.7	
	comp=Z,102nm,18.1s,baz=226,slow=31						
VNDA	**Vanda**	**60.38**	**186**	LR	LR	09 14 46.6	
	comp=Z,40nm,20.5s,baz=34,slow=31						
VNDA	**Vanda**	**60.38**	**186**	P	P	08 53 44.9	+0.6
VNDA				IAmb	IAmb	08 53 49.9	
	comp=Z,3.3nm,1.1s						
DAV	**Davao City (W)**	**65.81**	**287**	LR	LR	09 20 42.3	
	comp=Z,26nm,19.2s,baz=151,slow=34						
JHJ	**Hachijo jima 2**	**68.41**	**318**	LR	LR	09 26 17.3	
	comp=Z,22nm,18.1s,baz=101,slow=38						
MJAR	**Matsushiro Arr**	**71.64**	**320**	P	P	08 54 57.2	-0.1
	comp=Z,1.6nm,0.9s,baz=144,slow=7.7,SNR=3.0						
	comp=Z,1.6nm,0.9s						
MJAR	**Matsushiro Arr**	**71.64**	**320**	P	P	08 54 56.4	-0.9
LPIG	**La Paz**	**74.22**	**57**	LR	LR	09 23 32.6	
	comp=Z,58nm,19.0s,baz=202,slow=32						
PFO	**Pinon Flats O**	**74.65**	**46**	LR	LR	09 22 53.2	
	comp=Z,76nm,18.4s,baz=278,slow=32						
YBH	**Yreka Blue Hor**	**75.74**	**36**	LR	LR	09 23 17.8	
	comp=Z,78nm,18.9s,baz=246,slow=31						
NVAR	**Mina Array Bea**	**76.27**	**41**	P	P	08 55 26.8	+2.1
	comp=Z,0.2nm,0.6s,baz=226,slow=7.5,SNR=2.7						
NVAR				LR	LR	09 23 35.3	
	comp=Z,64nm,18.5s,baz=257,slow=31						
	comp=Z,0.2nm,0.6s						
KDAK	**Kodiak Island**	**77.83**	**11**	LR	LR	09 23 02.4	
	comp=Z,95nm,20.9s,baz=219,slow=30						
KSRS	**Korea Array**	**78.73**	**316**	P	P	08 55 40.1	+2.0
	comp=Z,2.9nm,1.1s,baz=128,slow=6.7,SNR=9.0						
KSRS				LR	LR	09 28 35.3	
	comp=Z,27nm,18.4s,baz=115,slow=34						
	comp=Z,2.9nm,1.1s						
KSAR	**Wonju Array Be**	**78.75**	**316**	P	P	08 55 37.5	-0.7
ELK	**Elko**	**79.55**	**41**	LR	LR	09 26 16.3	
	comp=Z,66nm,19.2s,baz=238,slow=32						
BBB	**Bella Bella**	**80.40**	**26**	LR	LR	09 24 44.5	
	comp=Z,81nm,19.1s,baz=257,slow=31						
TXAR	**Lajitas Array**	**81.90**	**56**	P	P	08 55 58.4	+2.9
	comp=Z,1.9nm,1.3s,baz=230,slow=7.0,SNR=6.1						
TXAR				LR	LR	09 28 41.9	
	comp=Z,48nm,18.1s,baz=224,slow=33						
	comp=Z,1.9nm,1.3s						
TXAR	**Lajitas Array**	**81.90**	**56**	P	P	08 55 53.9	-1.6
ANMO	**Albuquerque**	**82.38**	**49**	LR	LR	09 29 45.7	
	comp=Z,57nm,18.1s,baz=214,slow=34						
KLR	**Kul'dur**	**83.39**	**327**	LR	LR	09 26 05.6	
	comp=Z,23nm,21.2s,baz=132,slow=31						
PDAR	**Pinedale Array**	**84.21**	**41**	P	P	08 56 08.7	+1.3
	comp=Z,0.6nm,0.8s,baz=197,slow=2.8,SNR=2.7						
	comp=Z,0.6nm,0.8s						
PDAR	**Pinedale Array**	**84.21**	**41**	P	P	08 56 06.1	-1.2
WRH	**Wood River Hil**	**84.87**	**10**	P	P	08 56 09.6	-0.3
MAW	**Mawson**	**85.05**	**199**	P	P	08 56 12.1	+1.2
	comp=Z,4.3nm,1.1s,baz=109,slow=4.3,SNR=3.2						
	comp=Z,4.3nm,1.1s						
MAW	**Mawson**	**85.05**	**199**	IAmb	IAmb	08 56 36.1	
	comp=Z,2.2nm,1.4s						
CCB	**Clear Creek Bu**	**85.08**	**11**	P	P	08 56 10.6	-0.3
COLA	**College**	**85.28**	**10**	P	P	08 56 11.8	-0.1
MDM	**Murphy Dome**	**85.30**	**10**	P	P	08 56 12.8	+0.8
MDM				IAmb	IAmb	08 56 14.2	
	comp=Z,6.1nm,1.3s						
IL31		**85.36**	**11**	P	P	08 56 13.1	+0.9
IL31				IAmb	IAmb	08 56 26.5	
	comp=Z,5.2nm,1.1s						
ILAR	**Eielson Array**	**85.36**	**11**	P	P	08 56 13.5	+1.1
	comp=Z,2.6nm,1.2s,baz=238,slow=4.9,SNR=11						
	comp=

LPAZ	**La Paz**	**98.26**	**110**	LR	LR	09 33 26.9	
	comp=Z,68nm,18.2s,baz=241,slow=30						
TKL	**Tuckaleechee C**	**99.81**	**56**	LR	LR	09 40 12.7	
	comp=Z,35nm,18.0s,baz=274,slow=34						
AKASG	**Malin Array Be**	**143.38**	**336**	PKP	**PKPdf**	**09 03 10.4**	**+0.5**
	comp=Z,0.2nm,0.4s,baz=33,slow=0.7,SNR=5.1						
KMBO	**Kilima Mbogo**	**144.56**	**240**	PKP	**PKiKP**	**09 03 15.5**	**-1.7**
	comp=Z,1.6nm,0.4s,baz=153,slow=4.5,SNR=7.5						
KMBO	**Kilima Mbogo**	**144.56**	**240**		**PKPab**	**09 03 10.1**	**-1.8**
CLL	**Collm**	**146.93**	**353**	⇑*i*PKPbc	**PKiKP**	**09 03 19.9**	**-0.6**
	comp=Z,26nm,1.5s						
CLL				*i* PKiKP	sPKPbc	09 03 24.2	-0.5
VRAC	**Vranov**	**148.33**	**348**	*e*PKP	**PKPab**	**09 03 24.6**	**-0.3**
JAVC	**Velka Javorina**	**148.53**	**347**	*e*PKP	**PKPab**	**09 03 25.9**	**+0.1**
KRUC	**Moravsky**	**148.60**	**348**	*e*PKP	**PKiKP**	**09 03 24.6**	**+0.5**
BRTR	**Keskin Array B**	**148.85**	**318**	PKPbc	**PKPab**	**09 03 26.1**	**-1.5**
	comp=Z,3.1nm,1.1s,baz=119,slow=1.5,SNR=10						
GERES	**GERESS Array B**	**149.26**	**352**	PKPbc	**PKPab**	**09 03 26.9**	**-1.9**
	comp=Z,1.6nm,0.8s,baz=51,slow=0.9,SNR=11						
CONA	**Conrad Observa**	**149.79**	**348**	*i* P	**PKiKP**	**09 03 28.2**	**+1.5**
	comp=Z,15nm,1.2s						
RONA	**Rosalia, Austr**	**149.92**	**348**	*e*P	**PKiKP**	**09 03 28.6**	**+1.7**
	comp=Z,15nm,1.3s						
RETA	**Reutte**	**150.93**	**355**	*e*P	**PKiKP**	**09 03 30.3**	**+1.3**
	comp=Z,5.2nm,0.9s						
WATA	**Walderalm**	**151.00**	**354**	*i* P	**PKiKP**	**09 03 30.7**	**+1.4**
	comp=Z,4.4nm,0.5s						
MOTA	**Moosalm**	**151.04**	**354**	*e*P	**PKiKP**	**09 03 30.6**	**+1.3**
	comp=Z,9.3nm,1.0s						
WTTA	**Wattenberg**	**151.07**	**354**	*e*P	**PKiKP**	**09 03 30.9**	**+1.4**
	comp=Z,12nm,1.3s						
DAVA	**Damuels**	**151.19**	**356**	*e*P	**PKiKP**	**09 03 32.3**	**+2.6**
	comp=Z,13nm,1.5s						
FETA	**Feichten**	**151.39**	**355**	*e*P	**PKiKP**	**09 03 31.7**	**+1.5**
	comp=Z,6.8nm,1.1s						
ABTA	**Abfaltersbach**	**151.48**	**352**	*i* P	**PKiKP**	**09 03 32.1**	**+1.9**
	comp=Z,12nm,0.9s						

NIED ***27*** *08:47:41.8, 40.°15N×142.°42E, h35km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr5.43; Mθθ-0.99; Mφφ-4.44; Mrθ2.87; Mθφ-0.96; Mφr6.78; Fault plane solution: M₀8.93000×10¹⁴ NP1: φs190.00000°, δ17.00000°, λ80.00000°. NP2:φs21.00000°, δ73.00000°, λ93.00000°.*

JMA ***27*** *08:47:41.8±0.1, 40.°2N±0.°3×142.°4E±0.°7, h35km±1km, MD3.9/40, MV4.0/40, NE OFF IWATE PREF*

JMA Felt I J1 at NE OFF IWATE PREF .

NEIC ***27*** *08:47:42.9, 40.°18N×142.°53E, h41km, Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr6.16; Mθθ-0.58; Mφφ-5.58; Mrθ2.09; Mθφ-1.58; Mφr3.70; Fault plane solution: M₀7.43000×10¹⁴ NP1:φs189.16000°, δ28.30000°, λ77.27000°. NP2:φs23.55000°, δ62.46000°, λ96.76000°. Principal axes: T 7.5405, Plg72.0000°, Azm309.0000°; N -0.2275, Plg6.0000°, Azm200.0000°; P -7.3129, Plg17.0000°, Azm109.0000°;*

NEIC ***27*** *08:47:42.9±2.3, 40.°18N±0.°06×142.°5E±0.°1, h50km±2km, mb4.5/5, Mwr3.8/10 Error ellipse: s-maj=12.7km s-min=8.3km az=109.0*

IDC ***27*** *08:47:44.4±2.8, 39.°94N×142.°49E, h74km±26km, mb3.4/10, mbtmp3.8/13, MS3.1/6, Error ellipse: s-maj=26.6km s-min=15.5km az=87.0*

ISC 27 08:47:40.9±1.5, 40.°15N±0.°04×142.°50E±0.°07, h33km±10km, n64, σ1°48/56, mb3.8/13, 16D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.53**	**247**	⇓*i*P	**Pb**	**08 47 52.0**	**+0.1**
JTH				⇓S	**Sb**	**08 47 59.5**	**0.0**
JKEN	**Kujiedanarisaw**	**0.60**	**276**	⇓*i*P	**Pb**	**08 47 52.8**	**-0.4**
JKEN				⇓S	**Sb**	**08 48 00.2**	**-1.3**
JKEN	**Kujiedanarisaw**	**0.60**	**276**	A	A	08 47 52.8	
	comp=E,7.0nm,0.3s,comp=E,5.0nm,0.6s						
MIYJ	**Miyakonagasawa**	**0.77**	**223**	⇓*i*P	**Pn**	**08 47 55.4**	**-0.1**
MIYJ				⇓S	**Sb**	**08 48 05.0**	**-1.2**
JANG	**Nango**	**0.78**	**287**	⇓*i*P	**Pn**	**08 47 55.4**	**-0.2**
JANG				⇓S	**Sn**	**08 48 04.9**	**-1.3**
JKZ	**Kuzumaki**	**0.91**	**260**	⇓*i*P	**Pn**	**08 47 57.7**	**+0.3**
JKZ				⇓S	**Sn**	**08 48 08.7**	**-0.7**
JKZ	**Kuzumaki**	**0.91**	**260**	A	A	08 47 57.7	
	comp=E,4.0nm,5.9s,comp=E,4.0nm,3.3s						
JOM	**Ohasama**	**1.15**	**234**	⇓*i*P	**Pn**	**08 48 01.3**	**+0.7**
JOM				⇓S	**Sn**	**08 48 15.8**	**+0.6**
JOM	**Ohasama**	**1.15**	**234**	A	A	08 48 01.3	
	comp=E,4.0nm,0.5s,comp=E,3.0nm,1.2s						
JARK	**Aomorirokkasho**	**1.21**	**315**	⇓*i*P	**Pn**	**08 48 02.1**	**+0.6**
JARK				⇓S	**Sn**	**08 48 16.5**	**-0.3**
JARK	**Aomorirokkasho**	**1.21**	**315**	A	A	08 48 02.1	
	comp=E,4.0nm,1.1s,comp=E,3.0nm,0.5s						
OFUJ	**Ofunato**	**1.24**	**211**	*i* P	**Pn**	**08 48 02.8**	**+0.8**
OFUJ				S	**Sn**	**08 48 18.6**	**+1.1**
JSZI	**Iwateshizukuis**	**1.25**	**252**	A	A	08 48 02.7	
	comp=E,8.0nm,0.8s,comp=E,7.0nm,1.0s						
JTM	**Tenmabayashi**	**1.26**	**301**	Pn	**Pn**	**08 48 02.7**	**+0.5**
JTM	**Tenmabayashi**	**1.26**	**301**	⇓*i*P	**Pn**	**08 48 02.9**	**+0.6**
JTM				⇓S	**Sn**	**08 48 18.9**	**+0.9**
JAHD	**Aomorihigashid**	**1.42**	**322**	A	A	08 48 05.5	
	comp=E,5.0nm,1.6s,comp=E,6.0nm,2.8s						
JAH	**Hinai**	**1.43**	**272**	*i* P	**Pn**	**08 48 05.4**	**+0.9**
JAH				S	**Sn**	**08 48 23.2**	**+1.1**
JMK	**Ichinoseki**	**1.55**	**220**	*i* P	**Pn**	**08 48 07.3**	**+1.2**
JMK				S	**Sn**	**08 48 26.8**	**+1.7**
JRG	**Rokugo**	**1.62**	**243**	*i* P	**Pn**	**08 48 08.6**	**+1.5**
JRG				S	**Sb**	**08 48 30.2**	**0.0**
JNTW	**Noshirotokiwa**	**1.79**	**275**	A	A	08 48 10.5	
	comp=E,5.0nm,2.6s,comp=E,4.0nm,5.3s						
ERM	**Erimo**	**1.93**	**15**		**Pn**	**08 48 12.7**	**+1.2**
JOU	**Okura**	**2.28**	**219**	A	A	08 48 17.8	
	comp=E,2.0nm,1.0s,comp=E,2.0nm,2.5s						
JMM	**Marumori**	**2.64**	**211**		**Pn**	**08 48 22.5**	**+1.3**
JYA	**Atsumi**	**2.66**	**235**	A	A	08 48 23.1	
	comp=E,2.0nm,0.8s,comp=E,3.0nm,1.6s						
JEW	**Eniwo**	**2.80**	**344**	Pn	**Pn**	**08 48 24.8**	**+1.4**
JSD	**Sado**	**3.91**	**239**		**Pn**	**08 48 40.8**	**+2.2**
JKA	**Kamikawa-asahi**	**3.97**	**1**		**Pn**	**08 48 41.3**	**+2.0**
JYT	**Yasato**	**4.31**	**206**	Pn	**Pn**	**08 48 45.1**	**+1.0**
MJB9	**Matsu-Tunnel**	**4.93**	**225**	Pn	**Pn**	**08 48 56.2**	**+3.5**
MAJO	**Matsushiro**	**4.93**	**224**	Pn	**Pn**	**08 48 55.8**	**+3.1**
MJAR	**Matsushiro Arr**	**4.93**	**224**	P	**Pn**	**08 48 54.5**	**+1.8**
	8.5nm,0.6s,baz=30,slow=13,SNR=27						
MJAR				LR	LR	08 51 15.2	
	comp=Z,64nm,20.2s,baz=93,slow=44						
MJAR	**Matsushiro Arr**	**4.93**	**224**		**Pn**	**08 48 54.7**	**+2.0**
JGF	**Kuroka**	**6.09**	**223**	Pn	**Pn**	**08 49 12.4**	**+3.7**
JHJ	**Hachijo jima 2**	**7.35**	**198**	P	**Pn**	**08 49 25.6**	**-0.2**
	16nm,0.4s,baz=114,slow=22,SNR=12						
JHJ				S	**Sn**	**08 50 45.6**	**-2.5**
	30nm,0.6s,baz=279,slow=23,SNR=1.6						
USRK	**Ussuriysk Ar.**	**8.79**	**301**	P	Pn	08 49 50.4	+4.8
	3.5nm,0.7s,baz=111,slow=14,SNR=4.9						
USRK				LR	LR	08 52 53.7	
	comp=Z,100nm,20.8s,baz=156,slow=35						
USRK	**Ussuriysk Ar.**	**8.79**	**301**		**Pn**	**08 49 47.6**	**+2.0**
KSRS	**Korea Array**	**11.69**	**261**	P	Pn	08 50 31.5	+6.2
	0.5nm,0.4s,baz=72,slow=12,SNR=4.7						
KSRS				LR	LR	08 54 39.8	
	comp=Z,62nm,18.3s,baz=80,slow=36						
KLR	**Kul'dur**	**11.86**	**324**	LR	LR	08 55 05.8	
	comp=Z,66nm,19.1s,baz=137,slow=37						
SEY	**Seymchan**	**23.57**	**11**	P	**P**	**08 52 50.5**	**+2.3**
	1.0nm,0.3s,baz=184,slow=8.9,SNR=3.6 1.0nm,0.3s						
H11N2	**WAKE ISLAND Hy**	**29.18**	**127**	T	T	09 24 31.0	
	baz=320,slow=75,SNR=185						
H11N1	**WAKE ISLAND Hy**	**29.19**	**127**	T	T	09 24 38.6	
	baz=320,slow=75,SNR=161						
H11N3	**WAKE ISLAND Hy**	**29.20**	**127**	T	T	09 24 29.3	
	baz=320,slow=75,SNR=163						
H11S1	**WAKE ISLAND Hy**	**30.00**	**129**	T	T	09 25 38.7	
	baz=321,slow=76,SNR=37						
H11S3	**WAKE ISLAND Hy**	**30.00**	**129**	T	T	09 25 36.9	
	baz=321,slow=76,SNR=33						
H11S2	**WAKE ISLAND Hy**	**30.01**	**129**	T	T	09 25 40.0	
	baz=321,slow=76,SNR=40						
ZALV	**Zalesovo Beam**	**40.51**	**310**	P	**P**	**08 55 16.6**	**+0.2**
	0.7nm,0.5s,baz=86,slow=7.6,SNR=1.3 0.7nm,0.5s						
MKAR	**Makanchi Array**	**43.25**	**300**	P	**P**	**08 55 40.0**	**+1.0**
	1.0nm,0.6s,baz=89,slow=9.9,SNR=4.9 1.0nm,0.6s						
IMAR	**Indian Mountai**	**43.56**	**32**	P	**P**	**08 55 42.0**	**+0.8**
KURK	**Kurchatov**	**44.74**	**306**	P	**P**	**08 55 51.1**	**+0.3**
KURK				IAmb	IAmb	08 56 20.5	
	comp=Z,7.7nm,0.8s						
KURBB	**Kurchatov Arra**	**44.81**	**306**	P	**P**	**08 55 50.5**	**-0.9**
	comp=Z,3.4nm,0.6s,baz=81,slow=8.5,SNR=13 comp=Z,3.4nm,0.6s						
ILAR	**Eielson Array**	**46.43**	**34**	P	**P**	**08 56 03.7**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=262,slow=5.4,SNR=4.3 comp=Z,0.3nm,0.6s						
J26L	**Joseph Creek**	**47.88**	**34**	P	**P**	**08 56 15.2**	**-0.2**
ABKAR	**Akbulak array**	**56.61**	**309**	P	**P**	**08 57 19.1**	**-1.3**
WB0	**Warramunga Arr**	**60.08**	**189**	P	**P**	**08 57 44.1**	**-0.7**
WB0				IAmb	IAmb	08 58 05.1	
	comp=Z,4.3nm,1.1s						
WB2	**Warramunga Arr**	**60.26**	**189**	P	**P**	**08 57 46.0**	**0.0**
WB2				IAmb	IAmb	08 57 48.3	
	comp=Z,5.2nm,1.2s						
WRA	**Warramunga Arr**	**60.26**	**189**	P	**P**	**08 57 45.0**	**-1.0**
	comp=Z,5.5nm,0.6s,baz=5.2,slow=6.8,SNR=7.7 comp=Z,0.5nm,0.6s						
WRA	**Warramunga Arr**	**60.26**	**189**	IAmb	IAmb	08 57 51.9	
	comp=Z,0.2nm,1.4s						
YKA	**Yellowknife Ar**	**60.70**	**31**	P	**P**	**08 57 49.2**	**+0.6**
	comp=Z,0.2nm,0.7s,baz=305,slow=6.8,SNR=2.6 comp=Z,0.2nm,0.7s						
BELG	**Belogornoye**	**62.12**	**316**	LR	LR	09 26 22.1	
	comp=Z,35nm,19.1s,baz=122,slow=37						
ASAR	**Alice Springs**	**63.99**	**189**	P	**P**	**08 58 07.0**	**-4.0**
	comp=Z,0.5nm,0.9s,baz=19,slow=6.0,SNR=3.4 comp=Z,0.5nm,0.9s						
YBH	**Yreka Blue Hor**	**67.79**	**54**	LR	LR	09 32 35.5	
	comp=Z,21nm,18.1s,baz=248,slow=40						
NB2	**NORSAR Subarra**	**71.64**	**337**	P	**P**	**08 58 58.3**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=39,slow=6.2						
NOA	**NORSAR Array B**	**71.64**	**337**	P	**P**	**08 58 58.5**	**-0.3**
	comp=Z,1.0nm,0.8s,baz=38,slow=6.2,SNR=3.5 comp=Z,1.0nm,0.8s						
AKASG	**Malin Array Be**	**72.36**	**322**	P	**P**	**08 59 03.1**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=45,slow=5.9,SNR=2.5 comp=Z,0.6nm,0.6s						

KRNET ***27*** *08:49:59.1±0.1, 39.°43N×73.°77E, mb4.0*

IDC ***27*** *08:49:59.0±1.1, 39.°34N×73.°75E, h0km, mb3.6/6, mbtmp3.6/9, ML3.2/3, MS2.8/2, Error ellipse: s-maj=28.5km s-min=18.1km az=89.0*

ISU ***27*** *08:50:00.4, 39.°52N×73.°64E, h5km*

SOME ***27*** *08:50:01.1, 39.°62N×73.°52E, h5km*

NNC ***27*** *08:50:05.6±2.7, 39.°68N×73.°61E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=25.8km s-min=16.6km az=179.0*

ISC 27 08:49:59.9±1.4, 39.°57N±0.°04×73.°63E±0.°02, h2km±9km, n63, σ1°97/104, mb3.6/6, 25C-14D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.15**	**326**	⇓*e*P	**Pn**	**08 50 23.8**	**+0.7**
	baz=26						
OHH				⇓*e*S	**Sn**	**08 50 41.6**	**+2.1**
	baz=26						
OHH	**Osh**	**1.15**	**326**	P	**Pn**	**08 50 23.5**	**+0.4**
OHH				S	**Sn**	**08 50 41.7**	**+2.2**
OHH	**Osh**	**1.15**	**326**	P	**Pn**	**08 50 23.5**	**+0.4**
OHH				S	**Sn**	**08 50 41.7**	**+2.2**
TSTA	**Tashata**	**1.34**	**319**	P	**Pg**	**08 50 27.2**	**+1.6**
TSTA				S	**Sn**	**08 50 47.0**	**+2.9**
TSTA	**Tashata**	**1.34**	**319**	P	**Pg**	**08 50 27.2**	**+1.6**
TSTA				S	**Sn**	**08 50 47.0**	**+2.9**
DRK	**Karamyk**	**1.42**	**267**	⇑*i*P	**Pg**	**08 50 27.0**	**-0.1**
	baz=73						
DRK				⇑*e*S	**Sg**	**08 50 47.8**	**+2.3**
	baz=73						
FRG	**Fergana**	**1.63**	**300**	P	**Pg**	**08 50 31.9**	**+0.8**
FRG				S	**Sg**	**08 50 55.2**	**+3.0**
FRG	**Fergana**	**1.63**	**300**	P	**Pg**	**08 50 31.9**	**+0.8**
FRG				S	**Sg**	**08 50 55.2**	**+3.0**
BTK	**Batken**	**2.22**	**284**	⇑*e*P	**Pb**	**08 50 39.7**	**-1.1**
	baz=86						
BTK				⇑*e*S	**Sg**	**08 51 09.5**	**-1.7**
	baz=86						
BTK	**Batken**	**2.22**	**284**	P	**Pg**	**08 50 41.2**	**-1.2**
BTK				S	**Sg**	**08 51 13.6**	**+2.4**
BTK	**Batken**	**2.22**	**284**	P	**Pg**	**08 50 41.2**	**-1.2**
BTK				S	**Sg**	**08 51 13.6**	**+2.4**
MINT	**Mingtut**	**2.23**	**294**	P	**Pg**	**08 50 42.9**	**+0.3**
MINT				S	**Sg**	**08 51 14.1**	**+2.7**
MINT	**Mingtut**	**2.23**	**294**	P	**Pg**	**08 50 42.9**	**+0.3**
MINT				S	**Sg**	**08 51 14.1**	**+2.7**
ARLS	**Aral**	**2.35**	**13**	⇑*e*P	**Pn**	**08 50 41.2**	**+1.6**
	baz=10.0						
ARLS				⇑*e*S	**Sb**	**08 51 11.8**	**-0.7**
	baz=10.0						
AML	**Almayashu**	**2.56**	**1**	P	**Pg**	**08 50 50.4**	**+1.5**
	SNR=11						
ARK	**Arkit**	**2.56**	**331**	⇓*e*P	**Pb**	**08 50 44.9**	**-1.7**
	baz=30						
ARK				⇓*e*S	**Sg**	**08 51 18.7**	**-3.4**
	baz=30						
GAR	**Garm**	**2.63**	**259**	⇓*e*P	**Pn**	**08 50 44.7**	**+1.1**
	baz=62						
GAR				⇓*e*S	**Sb**	**08 51 18.3**	**-2.4**
	baz=62						
TRKS	**Terek-Say**	**2.72**	**317**	⇑*e*P	**Pb**	**08 50 46.6**	**-2.8**
	baz=16						
TRKS				⇑*e*S	**Sb**	**08 51 21.1**	**-2.3**
	baz=16						
UCH	**Uchtor**	**2.73**	**14**	P	**Pb**	**08 50 50.5**	**+0.6**
	SNR=23						
UCH	**Uchtor**	**2.73**	**14**	⇑*e*P	**Pn**	**08 50 46.8**	**+1.6**
	baz=11						
UCH				⇑*e*S	**Sb**	**08 51 21.7**	**-2.3**
	baz=11						
EKS2	**Erkin-Say**	**3.09**	**2**	P	**Pb**	**08 50 55.5**	**-0.1**
	SNR=19						
EKS2	**Erkin-Say**	**3.09**	**2**	⇓*e*P	**Pn**	**08 50 51.8**	**+2.0**
	baz=0.0						
EKS2				⇓*e*S	**Sb**	**08 51 30.4**	**-3.4**
	baz=0.0						
AAK	**Ala-Archa**	**3.13**	**12**	P	**Pb**	**08 50 54.9**	**-1.4**
	SNR=15						
AAK	**Ala-Archa**	**3.13**	**12**	Pn	**Pb**	**08 50 56.2**	**-0.1**
	8.4nm,0.3s,baz=175,slow=11,SNR=15						
AAK				Sn	**Sg**	**08 51 38.6**	**-1.9**
	3.2nm,0.3s,baz=184,slow=16,SNR=1.4						
AAK				LR	LR	08 52 20.6	
	comp=Z,46nm,21.3s,baz=162,slow=42 16nm,0.3s						
AAK	**Ala-Archa**	**3.13**	**12**	⇑*e*P	**Pn**	**08 50 52.1**	**+1.7**
	baz=9.0						
AAK				⇑*e*S	**Sn**	**08 51 31.0**	**+2.5**
	baz=9.0						
KBK	**Karagaybulak**	**3.24**	**17**	P	**Pb**	**08 50 57.7**	**-0.5**
	SNR=22						
KBK	**Karagaybulak**	**3.24**	**17**	⇓*e*P	**Pn**	**08 50 53.2**	**+1.3**
	baz=15						
KBK				⇓*e*S	**Sn**	**08 51 33.1**	**+2.0**
	baz=15						
ULHL	**Ulahol**	**3.32**	**36**	P	**Pb**	**08 50 59.5**	**-0.2**
	SNR=9.7						
BOOM	**Boomskoye usch**	**3.40**	**30**	⇓*i*P	**Pn**	**08 50 55.3**	**+1.2**
	baz=28						
BOOM				⇓*i*S	**Sn**	**08 51 36.4**	**+1.3**
	baz=28						
CHMS	**Chumysh**	**3.52**	**13**	⇑Pn	**Pb**	**08 51 01.8**	**-1.2**
	13nm,0.3s						
CHMS				⇑Lg	Lg	08 51 55.4	
	136nm,1.1s						
TKM2	**Tokmak 2**	**3.66**	**23**	⇓Pn	**Pb**	**08 51 03.0**	**-2.4**
	25nm,0.8s						
TKM2				⇑Lg	Lg	08 51 57.2	
	59nm,0.8s						
KDJ	**Kajisay**	**3.71**	**45**	⇑*e*P	**Pn**	**08 50 59.1**	**+0.7**
	baz=43						
KDJ				⇑*e*S	**Sn**	**08 51 42.6**	**-0.2**
	baz=43						
TAS	**Tashkent**	**3.74**	**299**	⇑*i*P	**Pn**	**08 51 01.1**	**+2.4**
	baz=0.0						
TAS				⇑*i*S	**Sb**	**08 51 46.4**	**-6.1**
	baz=0.0						
IUG	**Iuzhnay**	**3.75**	**314**	*e*P	**Pb**	**08 51 08.5**	**+1.6**
	12nm,0.2s						
IUG				*e*S	**Sg**	**08 51 56.7**	**-3.6**
	108nm,0.0s						
KST	**Kastek**	**3.89**	**26**	*e*P	**Pg**	**08 51 14.3**	**-0.1**
	12nm,0.2s						
KST				*e*S	**Sg**	**08 52 07.0**	**+2.3**
	77nm,0.2s						
SGDS	**Sogindy**	**3.95**	**11**	*e*P	**Pg**	**08 51 14.4**	**-1.2**
	17nm,0.1s						
SGDS				*e*S	**Sg**	**08 52 07.1**	**+0.4**
	25nm,0.3s						
DGS	**Degeres**	**4.00**	**23**	*e*P	**Pg**	**08 51 16.6**	**0.0**
	24nm,0.6s						
DGS				*e*S	**Sg**	**08 52 10.5**	**+2.0**
	96nm,0.8s						
MTBS	**Maitube**	**4.13**	**30**	*e*P	**Pg**	**08 51 18.9**	**-0.1**
	13nm,0.8s						
MTBS				*e*S	**Sg**	**08 52 14.8**	**+2.2**
	31nm,0.8s						
KK31	**Karatay Array**	**4.24**	**327**	Pn	Pb	08 51 09.9	-5.3
	1.4nm,0.3s,baz=126,slow=12,SNR=37			⇑Pg	**Pg**	**08 51 21.3**	**+0.3**
KK31	4.7nm,0.3s,baz=139,slow=14,SNR=8.8						
KK31				⇓Lg	Lg	08 52 14.9	
	21nm,0.5s,baz=155,slow=28,SNR=4.2						
TNSS	**Tian-Shan**	**4.27**	**35**	*e*P	**Pg**	**08 51 21.2**	**-0.5**
TNSS				*e*S	**Sg**	**08 52 18.1**	**+1.1**
	21nm,0.6s						
KRBS	**Karabastau**	**4.39**	**20**	*e*P	**Pg**	**08 51 23.5**	**-0.6**
	11nm,0.2s						
KRBS				*e*S	**Sg**	**08 52 22.9**	**+1.8**
	43nm,0.2s						
BRLS	**Borolday**	**4.48**	**322**	*e*P	**Pb**	**08 51 20.8**	**+1.5**
	3.1nm,0.5s						
BRLS				*e*S	**Sg**	**08 52 17.7**	**-6.1**
	38nm,0.6s						
KTBS	**Karatobe**	**4.72**	**28**	*e*P	**Pg**	**08 51 29.2**	**-1.3**
	6.9nm,0.1s						
KTBS				*e*S	**Sg**	**08 52 32.7**	**+1.0**
	57nm,0.2s						
KUU	**Kurty**	**4.77**	**24**	*e*P	**Pg**	**08 51 29.8**	**-1.5**
	7.0nm,0.9s						
KUU				*e*S	**Sg**	**08 52 33.5**	**+0.5**
	72nm,1.0s						
CHKK	**Chushkaly**	**4.96**	**29**	*e*P	**Pg**	**08 51 33.6**	**-1.3**
	3.5nm,0.5s						
CHKK				*e*S	**Sg**	**08 52 39.9**	**+0.7**
	17nm,0.3s						
SATY	**Saty**	**5.01**	**44**	*e*P	**Pg**	**08 51 34.8**	**-1.0**
	14nm,1.1s						
SATY				*e*S	**Sg**	**08 52 41.5**	**+0.8**
	48nm,1.3s						
KURS	**Kuram**	**5.19**	**40**	*e*P	**Pg**	**08 51 39.8**	**+0.6**
	12nm,0.8s						
KURS				*e*S	**Sg**	**08 52 50.7**	**+4.2**
	34nm,1.1s						
KPKS	**Kokpek**	**5.43**	**43**	*e*P	**Pg**	**08 51 42.4**	**-1.6**
	9.6nm,0.2s						
KPKS				*e*S	**Sg**	**08 52 54.4**	**0.0**
	17nm,0.1s						
BTLS	**Baital**	**5.47**	**3**	*e*P	**Pg**	**08 51 43.7**	**-1.0**
	6.4nm,0.7s						
BTLS				*e*S	**Sg**	**08 52 57.2**	**+1.5**
	17nm,0.8s						
ARXS	**Arharly**	**5.59**	**33**	*e*P	**Pg**	**08 51 45.1**	**-2.0**
	9.0nm,0.9s						
ARXS				*e*S	**Sg**	**08 52 59.8**	**+0.3**
	25nm,0.7s						
PDGK	**Podgornoye**	**5.78**	**48**	⇑Pn	**Pn**	**08 51 29.1**	**+2.3**
	1.8nm,0.5s						
PDGK				⇑Pg	**Pg**	**08 51 50.2**	**-0.5**
	8.9nm,0.7s						
PDGK				⇑Lg	Lg	08 53 08.2	
	57nm,1.2s						
DJR	**Jarkent**	**6.61**	**42**	*e*P	**Pg**	**08 52 04.8**	**-1.7**
	2.2nm,0.8s						
DJR				*e*S	**Sg**	**08 53 33.3**	**+1.2**
	8.9nm,0.9s						
OTUK	**Ortayu**	**8.72**	**354**	⇑Pn	**Pn**	**08 52 10.1**	**+3.1**
	2.8nm,0.8s						
OTUK				⇑Lg	Lg	08 54 37.0	
	6.7nm,0.8s						
MKAR	**Makanchi Array**	**9.59**	**38**	Lg	Lg	08 55 03.0	
	0.1nm,0.3s,baz=220,slow=36,SNR=1.9						
AKTO	**Aktyubinsk**	**15.45**	**320**	Pn	**P**	**08 53 40.3**	**-3.2**
	0.1nm,0.3s,baz=114,slow=12,SNR=2.7 0.8nm,0.4s						
ZALV	**Zalesovo Beam**	**16.26**	**24**	Pn	**Pn**	**08 53 50.1**	**+0.8**
	0.1nm,0.3s,baz=225,slow=14,SNR=1.4 0.6nm,0.5s						
FINES	**FINESS Array B**	**36.19**	**323**	P	**P**	**08 57 04.9**	**+1.4**
	1.1nm,0.6s,baz=102,slow=12,SNR=4.6 1.1nm,0.6s						
ARCES	**ARCESS Array B**	**39.16**	**335**	P	**P**	**08 57 30.1**	**+1.5**
	2.0nm,0.9s,baz=102,slow=8.4,SNR=2.2 2.0nm,0.9s						
ASAJ	**Asahikawa**	**50.21**	**61**	LR	LR	09 23 48.1	
	comp=Z,39nm,21.0s,baz=168,slow=40						
TORD	**Torodi Ar. Bea**	**67.86**	**269**	P	**P**	**09 00 59.1**	**-0.9**
	0.2nm,0.4s,baz=46,slow=6.0,SNR=1.6 0.2nm,0.4s						
YKA	**Yellowknife Ar**	**78.06**	**4**	P	**P**	**09 02 00.6**	**+0.9**
	0.2nm,0.7s,baz=349,slow=5.3,SNR=5.1 0.2nm,0.7s						
WRA	**Warramunga Arr**	**81.92**	**124**	P	**P**	**09 02 20

baz=18
TRKS ⇑eS Sn 08 55 23.6 +0.2
baz=18
UCH Uchtor 3.08 14 P Pn 08 54 51.3 +0.9
SNR=72
UCH Uchtor 3.08 14⇑eP Pn 08 54 50.2 -0.2
baz=13
UCH ⇑eS Sn 08 55 26.3 -1.8
baz=13
EKS2 Erkin-Say 3.42 3 P Pn 08 54 56.1 +1.3
SNR=41
EKS2 Erkin-Say 3.42 3⇓eP Pn 08 54 55.0 +0.2
baz=2.0
EKS2 ⇓eS Sn 08 55 34.3 -1.7
baz=2.0
CHGR Chuyangaron 3.43 261⇑eP Pb 08 54 59.3 -2.6
baz=59
CHGR ⇑eS Sb 08 55 42.5 -1.7
baz=59
AAK Ala-Archa 3.47 12 P Pn 08 54 56.8 +1.2
SNR=23
AAK Ala-Archa 3.47 12 Pn Pn 08 54 57.2 +1.6
12nm,0.3s,baz=185,slow=12,SNR=13
AAK Sn Sn 08 55 39.7 +2.3
9.2nm,0.3s,baz=95,slow=10,SNR=4.9
43nm,0.5s
AAK Ala-Archa 3.47 12⇑eP Pn 08 54 55.2 -0.4
baz=11
AAK ⇑eS Sn 08 55 35.5 -1.9
baz=11
KBK Karagaybulak 3.58 17 P Pn 08 54 59.4 +2.3
SNR=20
KBK Karagaybulak 3.58 17⇓eP Pn 08 54 56.9 -0.2
baz=17
KBK ⇓eS Sn 08 55 38.1 -2.0
baz=17
ULHL Ulahol 3.65 34 P Pn 08 54 59.4 +1.3
SNR=16
BOOM Boomskoye usch 3.73 29⇑iP Pn 08 54 59.0 -0.2
baz=29
BOOM ⇑iS Sn 08 55 41.6 -2.2
baz=29
TAS Tashkent 3.83 304⇓eP Pn 08 55 02.9 +2.6
baz=1.0
TAS ⇓eS Sn 08 55 48.6 +2.7
baz=1.0
CHMS Chumysh 3.87 14 P Pn 08 55 02.1 +1.2
SNR=11
CHMS Chumysh 3.87 14 ⇑Pn Pn 08 55 02.2 +1.2
53nm,0.8s
CHMS ⇓Lg Lg 08 55 54.5
74nm,0.7s
IUG luznay 3.92 319 eP Pb 08 55 11.7 +1.5
1μm,0.1s
IUG eS Sb 08 56 03.5 +5.4
249nm,0.6s
IUG luznay 3.92 319 Pg Pb 08 55 11.7 +1.5
2μm,0.6s
IUG Lg Lg 08 56 01.4
264nm,0.8s
TKM2 Tokmak 2 4.00 23 P Pn 08 55 04.2 +1.3
SNR=12
TKM2 Tokmak 2 4.00 23 ⇓Pn Pn 08 55 03.8 +0.9
31nm,0.6s
TKM2 ⇓Lg Lg 08 56 00.1
86nm,0.6s
KDJ Kajisay 4.02 43⇑eP Pn 08 55 03.0 -0.1
baz=44
KDJ ⇑eS Sn 08 55 48.5 -2.4
baz=44
USP Oepenovka 4.09 10 P Pn 08 55 06.0 +2.1
SNR=8.6
KST Kastek 4.22 25 eP Pb 08 55 12.9 -2.5
25nm,0.2s
KST eS Sb 08 55 05.6 -1.4
70nm,0.1s
KST Kastek 4.22 25 Pg Pb 08 55 13.0 -2.5
34nm,1.1s
KST Lg Lg 08 56 03.9
111nm,0.8s
SGDS Sogindy 4.29 11 eP Pb 08 55 14.6 -1.9
31nm,0.2s
SGDS eS Sb 08 56 08.8 0.0
58nm,0.3s
DGS Degeres 4.34 23 eP Pb 08 55 15.7 -1.8
36nm,0.2s
DGS eS Sb 08 56 10.2 -0.2
37nm,0.1s
DGS Degeres 4.34 23 Pg Pb 08 55 15.7 -1.8
56nm,0.5s
DGS Lg Lg 08 56 08.4
106nm,0.7s
KK31 Karatay Array 4.46 331 ⇑Pn Pn 08 55 10.6 +1.6
3.9nm,0.3s,baz=128,slow=12,SNR=65
KK31 ⇑Pg Pb 08 55 19.9 +0.4
9.2nm,0.4s,baz=144,slow=12,SNR=15
KK31 ⇑Lg Lg 08 56 16.9
53nm,0.6s,baz=144,slow=29,SNR=3.6
KKAR Karatay Array 4.46 331⇑eP Pn 08 55 10.6 +1.5
baz=28
KKAR ⇑eS Sn 08 56 01.6 0.0
baz=28
MTBS Maitube 4.47 29 eP Pb 08 55 18.2 -1.3
31nm,0.2s
MTBS eS Sb 08 56 14.3 +0.4
53nm,0.1s
MTBS Maitube 4.47 29 Pg Pb 08 55 19.3 -0.2
30nm,0.8s
MTBS Lg Lg 08 56 15.3
78nm,0.5s
TNSS Tian-Shan 4.60 33 eP Pb 08 55 21.0 -1.0
50nm,0.4s
TNSS eS Sb 08 56 19.2 +1.3
44nm,0.0s
TNSS Tian-Shan 4.60 33 Pg Pb 08 55 22.0 +0.1
50nm,0.4s
TNSS Lg Lg 08 56 19.5
50nm,0.9s
BRLS Borolday 4.68 325 eP Pb 08 55 22.7 -0.5
5.3nm,0.2s
BRLS eS Sb 08 56 21.9 +1.9
29nm,0.1s
BRLS Borolday 4.68 325 Pg Pb 08 55 24.5 +1.3
11nm,0.4s
BRLS Lg Lg 08 56 23.8
53nm,0.6s
AAA Alma-Ata 4.72 32 eP Pb 08 55 23.2 -0.7
64nm,0.0s
AAA eS Sb 08 56 22.4 +1.1
36nm,0.9s
AAA Alma-Ata 4.72 32 Pg Pb 08 55 25.0 +1.1
64nm,0.4s
AAA Lg Lg 08 56 24.6
36nm,0.9s
KRBS Karabastau 4.74 20 eP Pb 08 55 23.6 -0.6
25nm,0.0s
KRBS eS Sb 08 56 23.1 +1.4
92nm,0.1s
KRBS Karabastau 4.74 20 Pg Pb 08 55 24.1 0.0
KRBS Lg Lg 08 56 23.1
92nm,0.9s
KTBS Karatobe 5.06 27 eP Pb 08 55 29.4 -0.3
13nm,0.2s
KTBS eS Sb 08 56 33.4 +2.4
100nm,0.2s
KTBS Karatobe 5.06 27 Pg Pb 08 55 29.4 -0.3
26nm,0.8s
KTBS Lg Lg 08 56 32.4
100nm,0.8s
KUU Kurty 5.11 24 eP Pb 08 55 29.7 -0.7
10nm,0.0s
KUU eS Sb 08 56 33.8 +1.5
116nm,0.2s
KUU Kurty 5.11 24 Pg Pb 08 55 30.1 -0.3
12nm,0.7s
KUU Lg Lg 08 56 33.4
117nm,0.9s
CHKK Chushkaly 5.30 29 eP Pb 08 55 33.7 +0.1
11nm,0.1s
CHKK eS Sb 08 56 40.6 +2.9
63nm,0.1s
CHKK Chushkaly 5.30 29 Pg Pb 08 55 34.3 +0.7
11nm,0.8s
CHKK Lg Lg 08 56 40.6
64nm,0.9s
SATY Saty 5.31 43 eP Pb 08 55 34.5 +0.5
20nm,0.2s
SATY eS Sb 08 56 41.8 +3.5
43nm,0.5s
SATY Saty 5.31 43 Pg Pb 08 55 35.0 +0.9
20nm,1.4s
SATY Lg Lg 08 56 41.8
43nm,1.5s
ZHN Zhinishke 5.41 42 eP Pb 08 55 36.2 +0.7
12nm,0.0s
ZHN eS Sb 08 56 45.2 +4.3
78nm,0.3s
ZHN Zhinishke 5.41 42 Pg Pb 08 55 37.2 +1.6
12nm,0.2s
ZHN Lg Lg 08 56 45.2
78nm,1.8s
KURS Kuram 5.51 38 eP Pb 08 55 37.7 +0.5
28nm,0.3s
KURS eS Sb 08 56 48.1 +4.3
40nm,0.2s
KURS Kuram 5.51 38 Pg Pb 08 55 38.7 +1.4
28nm,1.0s
KURS Lg Lg 08 56 48.1
32nm,1.5s
KPKS Kokpek 5.75 41 eP Pb 08 55 42.0 +0.6
19nm,0.3s
KPKS eS Sb 08 56 54.5 +3.8
60nm,0.1s
KPKS Kokpek 5.75 41 Pg Pb 08 55 42.6 +1.3
23nm,0.9s
KPKS Lg Lg 08 56 54.5
61nm,0.8s
BTLS Baital 5.80 4 eP Pb 08 55 43.5 +1.2
16nm,0.2s
BTLS eS Sb 08 56 57.5 +5.2
20nm,0.0s
BTLS Baital 5.80 4 Pg Pb 08 55 43.2 +0.9
16nm,0.6s
BTLS Lg Lg 08 56 56.1
8.1nm,0.8s
ARXS Arharly 5.93 32 eP Pb 08 55 44.8 +0.4
29nm,0.1s
ARXS eS Sb 08 57 00.4 +4.6
46nm,0.2s
ARXS Arharly 5.93 32 Pg Pb 08 55 45.9 +1.5
26nm,0.7s
ARXS Lg Lg 08 57 00.4
46nm,0.7s
PDGK Podgornoye 6.08 46 Pg Pb 08 55 48.1 +1.0
5.2nm,0.7s
PDGK Lg Lg 08 57 04.6
16nm,0.9s
PDGK Podgornoye 6.08 46 ⇑Pn Pn 08 55 32.2 +0.8
8.9nm,0.6s
PDGK ⇑Pg Pb 08 55 48.6 +1.5
20nm,0.6s
PDGK ⇑Lg Lg 08 57 03.8
52nm,0.8s
BLB Baldybastay 6.12 36 eP Pb 08 55 48.9 +1.2
24nm,0.3s
BLB eS Sb 08 57 06.4 +5.0
48nm,0.3s
BLB Baldybastay 6.12 36 Pg Pb 08 55 49.4 +1.8
24nm,0.6s
BLB Lg Lg 08 57 06.4
47nm,0.8s
TDK Taldyqorghan 6.81 31 eP Pb 08 56 02.3 +2.9
54nm,0.1s
TDK eS Sb 08 57 28.8 +7.6
108nm,0.2s
TDK Taldyqorghan 6.81 31 Pg Pb 08 56 02.7 +3.3
55nm,0.3s
TDK Lg Lg 08 57 28.8
160nm,1.1s
DJR Jarkent 6.92 41 eP Pb 08 56 04.1 +2.8
4.3nm,0.6s
DJR eS Sb 08 57 32.0 +7.5
24nm,0.4s
DJR Jarkent 6.92 41 Pg Pb 08 56 05.2 +3.8
4.3nm,0.6s
DJR Lg Lg 08 57 33.6
24nm,0.9s
OTUK Ortayu 9.03 355 ⇓Pn Pn 08 56 11.6 -0.2
6.7nm,0.9s
OTUK ⇑Lg Lg 08 58 39.6
17nm,1.1s
MKAR Makanchi Array 9.91 38 Pn Pn 08 56 24.3 +0.4
0.1nm,0.3s,baz=217,slow=14,SNR=1.1
0.5nm,0.6s
KURBB Kurchatov Arra 11.92 16 Pn Pn 08 56 49.9 -1.3
0.7nm,0.6s,baz=201,slow=13,SNR=1.7
KURBB Lg Lg 09 00 09.7
0.1nm,0.3s,baz=206,slow=31,SNR=11
AKTO Aktyubinsk 15.64 321 Pn Pn 08 57 41.4 -0.4
0.3nm,0.3s,baz=116,slow=18,SNR=3.1
AKTO Sn Sn 09 00 29.5 -6.0
0.2nm,0.3s,baz=235,slow=12,SNR=1.9
1.5nm,0.5s
ZALV Zalesovo Beam 16.60 24 Pn Pn 08 57 51.3 -2.8
0.4nm,0.3s,baz=205,slow=13,SNR=7.6
2.4nm,0.6s
ARU Ari 19.82 335 P P 08 58 32.3 +0.2
baz=187,slow=3.2,SNR=5.1
6.1nm,0.2s
BELG Belogornoye 22.17 315 P P 08 58 59.6 +2.2
21nm,0.9s,baz=89,slow=2.0,SNR=5.8
21nm,0.9s
KIRV Kirov 24.76 329 P P 08 59 24.9 +1.8
11nm,0.5s,baz=119,slow=6.7,SNR=3.5
11nm,0.5s
AKASG Malin Array Be 32.87 305 P P 09 00 35.8 +0.3
0.2nm,0.4s,baz=76,slow=7.3,SNR=2.1
0.2nm,0.4s
FINES FINESS Array B 36.38 323 P P 09 01 05.0 -0.8
0.7nm,0.4s,baz=107,slow=9.3,SNR=2.1
0.7nm,0.4s
ARCES ARCESS Array B 39.41 336 P P 09 01 31.1 -0.2
0.6nm,0.5s,baz=90,slow=6.6,SNR=6.1
0.6nm,0.5s
BRG Berggiesshubel 42.54 306 ex x 09 02 04.3
BRG Amp 09 02 05.1
comp=Z,2.5nm,0.5s
GERES GERESS Array B 43.02 303 LR LR 09 23 32.9
comp=Z,40nm,19.4s,baz=273,slow=41
NB2 NORSAR Subarra 43.43 321 P P 09 02 04.1 -0.2
comp=Z,0.9nm,0.6s,baz=88,slow=7.9
NOA NORSAR Array B 43.43 321 P P 09 02 04.3 0.0
comp=Z,0.5nm,0.6s,baz=92,slow=7.8,SNR=3.7
comp=Z,0.5nm,0.6s
TORD Torodi Ar. Bea 67.75 269 P P 09 05 00.0 +0.2
comp=Z,0.5nm,0.5s,baz=49,slow=5.7,SNR=8.6
comp=Z,0.5nm,0.5s
YKA Yellowknife Ar 78.40 4 P P 09 06 00.8 -1.3
comp=Z,0.1nm,0.5s,baz=349,slow=5.5,SNR=7.8
comp=Z,0.1nm,0.5s
WRA Warramunga Arr 81.82 124 P P 09 06 20.9 -0.3
comp=Z,0.3nm,0.6s,baz=328,slow=4.8,SNR=2.0
comp=Z,0.3nm,0.6s

SOME ***27*** *08:57:58.8, 44.37N×84.07E, h15km*
NNC ***27*** *08:57:59.5±3.1, 44.63N×84.69E, h0km, mb3.1, mpv2.8, Error ellipse: s-maj=31.6km s-min=18.4km az=95.0*

ISC 27 08:57:58.1±2.6, 44.3N±0.1×84.1E±0.1, h10km, n8, σ2s 47/14, 3C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**2.78**	**334**	Pn			**Pn**	**08 58 44.3**	**+1.7**
	1.2nm,0.6s,baz=144,slow=14,SNR=96								
MK31				⇓Pg			**Pg**	**08 58 50.4**	**-0.9**
	0.7nm,0.2s,baz=146,slow=17,SNR=12								
MK31				⇑Lg			Lg	08 59 27.5	
	4.1nm,0.3s,baz=147,slow=29,SNR=9.8								
MAKZ	**Makanchi**	**2.90**	**330**	⇓Pn			**Pn**	**08 58 45.9**	**+1.7**
	1.5nm,0.6s								
MAKZ				⇑Lg			Lg	08 59 32.4	
	8.5nm,0.8s								
DJR	**Jarkent**	**3.08**	**272**	eP			**Pb**	**08 58 55.5**	**+2.4**
	5.4nm,0.0s								
DJR				eS			**Sg**	**08 59 36.5**	**-0.6**
	17nm,0.4s								
ZSN	**Zaisan**	**3.18**	**10**	eP			**Pb**	**08 58 55.7**	**+1.1**
	8.3nm,0.1s								
ZSN				eS			**Sg**	**08 59 37.1**	**-3.0**
	7.8nm,0.1s								
PDGK	**Podgornoye**	**3.47**	**255**	⇓Pn			**Pg**	**08 59 03.5**	**-1.0**
	7.4nm,0.7s								
PDGK				⇑Lg			Lg	09 00 03.1	
	22nm,0.7s								
SHLS	**Shalkode**	**3.55**	**252**	eP			**Pb**	**08 58 58.4**	**-2.5**
	4.5nm,0.1s								
SHLS				eS			**Sg**	**08 59 41.7**	**-2.5**
	25nm,0.5s								
KPKS	**Kokpek**	**4.00**	**260**	eP			**Pb**	**08 59 12.1**	**+3.5**
	3.7nm,0.1s								
KPKS				eS			**Sg**	**09 00 05.0**	**-1.4**
	20nm,0.2s								
SATY	**Saty**	**4.31**	**255**	eP			**Pb**	**08 59 17.6**	**+3.6**
	2.2nm,0.1s								
SATY				eS			**Sg**	**09 00 14.5**	**-1.9**
	7.6nm,0.0s								

IDC ***27*** *09:08:21.3±2.2, 21.59N×143.37E, h256km±21km, mb3.1/9, mbtmp3.8/10, Error ellipse: s-maj=26.1km s-min=13.2km az=95.0*
NEIC ***27*** *09:08:22.6±1.3, 21.56N±0.10×143.3E±0.2, h263km±5km, mb4.0/6, Error ellipse: s-maj=23.7km s-min=13.0km az=104.0*

ISC 27 09:08:20.5±0.8, 21.55N±0.09×143.4E±0.2, h250km, n17, σ0s 84/18, mb3.6/11, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.64**	**349**	P			**Pn**	**09 09 45.9**	**+1.7**
	60nm,0.4s,baz=295,slow=22,SNR=17								
JCJ				S			**S**	**09 10 50.1**	**-0.9**
	33nm,0.4s,baz=308,slow=23,SNR=5.7								
JSD	**Sado**	**17.03**	**346**	P			**P**	**09 12 02.9**	**+0.4**
JSD				IAmb			IAmb	09 12 16.0	
	comp=Z,16nm,1.0s								
KSRS	**Korea Array**	**20.77**	**323**	P			**P**	**09 12 43.2**	**+0.6**
	comp=Z,1.1nm,0.6s,baz=147,slow=8.6,SNR=7.5								
	comp=Z,1.1nm,0.6s								
KLR	**Kul'dur**	**29.15**	**344**	P			**P**	**09 13 58.2**	**-0.2**
	comp=Z,0.8nm,0.4s,baz=160,slow=3.9,SNR=3.7								
	comp=Z,0.8nm,0.4s								
KNRA	**Kununurra**	**39.69**	**202**	P			**P**	**09 15 28.3**	**-0.7**
WB0	**Warramunga Arr**	**42.00**	**193**	P			**P**	**09 15 47.7**	**0.0**
WB0				IAmb			IAmb	09 16 04.1	
	comp=Z,7.5nm,1.4s								
WR0	**Warramunga Arr**	**42.16**	**193**	P			**P**	**09 15 49.2**	**+0.3**
WR0				IAmb			IAmb	09 16 05.0	
	comp=Z,5.6nm,1.1s								
WB2	**Warramunga Arr**	**42.18**	**193**	P			**P**	**09 15 49.4**	**+0.3**
WB2				IAmb			IAmb	09 15 55.3	
	comp=Z,14nm,1.4s								
WRA	**Warramunga Arr**	**42.18**	**193**	P			**P**	**09 15 49.1**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=15,slow=9.3,SNR=27								
	comp=Z,0.4nm,0.3s								
ASAR	**Alice Springs**	**45.89**	**192**	P			**P**	**09 16 18.1**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=12,slow=6.7,SNR=6.6								
	comp=Z,0.2nm,0.4s								
MKAR	**Makanchi Array**	**54.97**	**313**	P			**P**	**09 17 25.9**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=91,slow=7.8,SNR=4.1								
	comp=Z,0.3nm,0.5s								
ILAR	**Eielson Array**	**62.06**	**27**	P			**P**	**09 18 13.3**	**-1.2**
	comp=Z,0.6nm,0.7s,baz=260,slow=5.1,SNR=4.5								
	comp=Z,0.6nm,0.7s								
YKA	**Yellowknife Ar**	**76.48**	**28**	P			**P**	**09 19 42.1**	**-0.5**
	comp=Z,0.5nm,0.4s,baz=292,slow=5.7,SNR=22								
	comp=Z,0.5nm,0.4s								
NVAR	**Mina Array Bea**	**83.05**	**52**	P			**P**	**09 20 19.5**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=287,slow=5.3,SNR=8.5								
	comp=Z,0.7nm,0.7s								
FINES	**FINESS Array B**	**83.42**	**335**	P			**P**	**09 20 18.2**	**-1.5**
	comp=Z,0.7nm,0.5s,baz=77,slow=6.3,SNR=5.5								
	comp=Z,0.7nm,0.5s								
PLCA	**Paso Flores**	**145.48**	**131**	PKPbc			**PKPdf**	**09 27 30.1**	**+1.1**
	comp=Z,1.6nm,0.5s,baz=242,slow=4.3,SNR=14								
LPAZ	**La Paz**	**149.72**	**86**	PKPbc			**PKPbc**	**09 27 42.7**	**+0.4**
	comp=Z,1.4nm,0.5s,baz=266,slow=1.2,SNR=9.3								

KRNET ***27*** *09:12:19.9±0.1, 39.08N×73.82E, mb3.6*
SOME ***27*** *09:12:33.5, 39.57N×73.42E, h0km*

ISC 27 09:12:26.9±1.7, 39.35N±0.07×73.44E±0.03, h20km±7km, n23, σ1s 34/46, 10C-4D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.28**	**337**	⇓eP			**Pb**	**09 12 50.2**	**-0.1**
	baz=31								
OHH				⇓iS			**Sg**	**09 13 12.7**	**+4.3**
	baz=31								
BTK	**Batken**	**2.14**	**290**	⇑iP			**Pb**	**09 13 03.5**	**-1.6**
	baz=94								
BTK				⇑eS			**Sg**	**09 13 35.0**	**-0.9**
	baz=94								
GAR	**Garm**	**2.45**	**263**	⇑eP			**Pn**	**09 13 06.7**	**+0.8**
	baz=69								
GAR				⇑eS			**Sb**	**09 13 40.5**	**+0.3**
	baz=69								
ARLS	**Aral**	**2.60**	**15**	⇑eP			**Pn**	**09 13 07.4**	**-0.6**
	baz=8.0								
ARLS				⇑eS			**Sn**	**09 13 41.9**	**+2.8**
	baz=8.0								
TRKS	**Terek-Say**	**2.80**	**322**	⇓eP			**Pn**	**09 13 12.0**	**+1.3**
	baz=20								
TRKS				⇓eS			**Sb**	**09 13 49.7**	**-0.5**
	baz=20								
UCH	**Uchtor**	**2.99**	**15**	⇑eP			**Pn**	**09 13 12.8**	**-0.8**
	baz=9.0								
UCH				⇑eS			**Sn**	**09 13 51.7**	**+2.6**
	baz=9.0								
BOOM	**Boomskoye usch**	**3.67**	**30**	⇑eP			**Pn**	**09 13 20.4**	**-2.2**
	baz=25								
BOOM				⇑eS			**Sn**	**09 14 05.1**	**-0.3**
	baz=25								
IUG	**luznay**	**3.81**	**318**	eP			**Pg**	**09 13 40.7**	**+0.9**
	179nm,0.1s								
IUG				eS			**Sg**	**09 14 29.3**	**0.0**
	23nm,0.1s								
KST	**Kastek**	**4.15**	**26**	eP			**Pg**	**09 13 46.8**	**+0.3**
	3.6nm,0.2s								
KST				eS			**Sg**	**09 14 39.8**	**-0.4**
	19nm,0.3s								
SGDS	**Sogindy**	**4.20**	**12**	eP			**Pg**	**09 13 48.0**	**+0.7**
	2.0nm,0.1s								
SGDS				eS			**Sg**	**09 14 41.4**	**-0.2**
	14nm,0.2s								
DGS	**Degeres**	**4.27**	**24**	eP			**Pg**	**09 13 49.2**	**+0.6**
	3.6nm,0.2s								
DGS				eS			**Sg**	**09 14 43.5**	**-0.4**
	24nm,1.0s								
IZV	**Izvestkoviy**	**4.39**	**32**	eP			**Pg**	**09 13 52.0**	**+1.0**
	27nm,0.0s								
IZV				eS			**Sg**	**09 14 48.7**	**+0.8**
	9.6nm,0.2s								
MTBS	**Maitube**	**4.40**	**30**	eP			**Pg**	**09 13 52.1**	**+1.0**
	3.4nm,0.1s								
MTBS				eS			**Sg**	**09 14 48.9**	**+0.8**
	8.8nm,0.3s								
TNSS	**Tian-Shan**	**4.54**	**35**	eP			**Pg**	**09 13 53.5**	**-0.2**
	2.0nm,0.2s								
TNSS				eS			**Sg**	**09 14 51.5**	**-1.1**
	5.1nm,1.0s								
BRLS	**Borolday**	**4.57**	**325**	eP			**Pg**	**09 13 53.0**	**-1.4**
	2.5nm,0.5s								
BRLS				eS			**Sg**	**09 14 50.7**	**-3.0**
	6.6nm,0.1s								
KRBS	**Karabastau**	**4.66**	**20**	eP			**Pg**	**09 13 56.1**	**0.0**
	2.0nm,0.2s								
KRBS				eS			**Sg**	**09 14 55.7**	**-0.7**
	9.7nm,0.2s								
KTBS	**Karatobe**	**4.99**	**28**	eP			**Pg**	**09 14 02.7**	**+0.2**
	2.3nm,0.2s								
KTBS				eS			**Sg**	**09 15 06.6**	**-0.5**
	21nm,0.1s								
KUU	**Kurty**	**5.04**	**25**	eP			**Pg**	**09 14 03.4**	**+0.2**
	1.7nm,0.3s								
KUU				eS			**Sg**	**09 15 08.2**	**-0.2**
	10nm,0.4s								
CHKK	**Chushkaly**	**5.23**	**29**	eP			**Pg**	**09 14 06.8**	**-0.2**
	1.2nm,0.1s								
CHKK				eS			**Sg**	**09 15 13.7**	**-1.0**
	10nm,0.1s								
SATY	**Saty**	**5.27**	**44**	eP			**Pg**	**09 14 09.3**	**+1.5**
	2.3nm,0.1s								
SATY				eS			**Sg**	**09 15 17.9**	**+1.9**
	6.7nm,0.2s								
KPKS	**Kokpek**	**5.70**	**42**	eP			**Pg**	**09 14 15.8**	**-0.1**
	3.6nm,0.1s								
KPKS				eS			**Sg**	**09 15 29.8**	**+0.1**
	8.1nm,0.2s								
BTLS	**Baital**	**5.71**	**4**	eP			**Pg**	**09 14 15.4**	**-0.6**
	2.7nm,0.2s								
BTLS				eS			**Sg**	**09 15 29.0**	**-1.0**
	3.8nm,0.3s								
ARXS	**Arharly**	**5.86**	**33**	eP			**Pg**	**09 14 18.2**	**-0.9**

	2.1nm,0.1s								
ARXS				*e*S		**Sg**	**09 15 33.1**		**-1.9**
	7.8nm,0.2s								

*SOME **27** 09:15:17.4, 39˚.48N×73˚.67E, h10km*
*KRNET **27** 09:15:17.2±0.1, 39˚.45N×73˚.75E, mb3.7*
ISC 27 09:15:14.7±1.3, 39˚.49N±0˚.05×73˚.71E±0˚.04, h10km, n25, σ1°67/50, 10C-12D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.25**	**326**	⇓*e*P	**Pg**	**09 15 41.3**	**+2.5**
	baz=26						
OHH				⇓*e*S	**Sn**	**09 15 58.9**	**+3.6**
	baz=26						
DRK	**Karamyk**	**1.48**	**270**	⇑*i*P	**Pg**	**09 15 45.5**	**+2.4**
	baz=72						
DRK				⇑*i*S	**Sg**	**09 16 05.9**	**+3.6**
	baz=72						
BTK	**Batken**	**2.30**	**285**	⇑*e*P	**Pg**	**09 15 58.1**	**-0.7**
	baz=86						
BTK				⇑*e*S	**Sg**	**09 16 28.4**	**-0.2**
	baz=86						
ARLS	**Aral**	**2.41**	**11**	⇓*e*P	**Pb**	**09 15 58.8**	**+0.5**
	baz=10.0						
ARLS				⇓*e*S	**Sg**	**09 16 30.6**	**-1.6**
	baz=10.0						
GAR	**Garm**	**2.68**	**260**	⇑*e*P	**Pb**	**09 16 02.9**	**+0.1**
	baz=62						
GAR				⇑*e*S	**Sb**	**09 16 36.2**	**+0.4**
	baz=62						
UCH	**Uchtor**	**2.80**	**12**	⇓*e*P	**Pb**	**09 16 05.5**	**+0.4**
	baz=12						
UCH				⇓*e*S	**Sb**	**09 16 40.5**	**+0.9**
	baz=12						
TRKS	**Terek-Say**	**2.82**	**317**	⇓*e*P	**Pb**	**09 16 04.6**	**-0.7**
	baz=16						
TRKS				⇓*e*S	**Sb**	**09 16 39.0**	**-1.0**
	baz=16						
EKS2	**Erkin-Say**	**3.17**	**1**	⇓*e*P	**Pb**	**09 16 10.3**	**-0.8**
	baz=0.0						
EKS2				⇓*e*S	**Sb**	**09 16 48.9**	**-0.9**
	baz=0.0						
AAK	**Ala-Archa**	**3.20**	**10**	⇑*e*P	**Pb**	**09 16 11.0**	**-0.7**
	baz=10.0						
AAK				⇑*e*S	**Sb**	**09 16 49.8**	**-1.0**
	baz=10.0						
BOOM	**Boomskoye usch**	**3.44**	**29**	⇓*e*P	**Pb**	**09 16 13.6**	**-2.2**
	baz=28						
BOOM				⇓*i*S	**Sb**	**09 16 54.4**	**-3.3**
	baz=28						
CHGR	**Chuyangaron**	**3.64**	**258**	⇑*e*P	**Pb**	**09 16 16.4**	**-2.8**
	baz=59						
CHGR				⇑*e*S	**Sb**	**09 17 00.0**	**-3.4**
	baz=59						
IUG	**luzhnay**	**3.85**	**315**	*e*P	**Pg**	**09 16 28.2**	**-0.3**
	172nm,0.2s						
IUG				*e*S	**Sg**	**09 17 19.2**	**+0.9**
	50nm,0.1s						
KST	**Kastek**	**3.93**	**25**	*e*P	**Pg**	**09 16 30.1**	**+0.1**
	6.0nm,0.2s						
KST				*e*S	**Sg**	**09 17 22.6**	**+1.6**
	21nm,0.2s						
SGDS	**Sogindy**	**4.02**	**10**	*e*P	**Pg**	**09 16 31.4**	**-0.2**
	2.0nm,0.1s						
SGDS				*e*S	**Sg**	**09 17 25.0**	**+1.3**
	14nm,0.3s						
DGS	**Degeres**	**4.05**	**22**	*e*P	**Pg**	**09 16 32.0**	**-0.4**
	6.7nm,0.1s						
DGS				*e*S	**Sg**	**09 17 25.9**	**+1.0**
	17nm,0.2s						
MTBS	**Maitube**	**4.17**	**29**	*e*P	**Pg**	**09 16 34.8**	**+0.1**
	3.5nm,0.2s						
MTBS				*e*S	**Sg**	**09 17 30.5**	**+1.8**
	8.0nm,0.1s						
TNSS	**Tian-Shan**	**4.30**	**34**	*e*P	**Pg**	**09 16 37.4**	**+0.3**
	5.5nm,0.1s						
TNSS				*e*S	**Sg**	**09 17 34.8**	**+2.0**
	3.9nm,0.2s						
KRBS	**Karabastau**	**4.45**	**19**	*e*P	**Pg**	**09 16 39.6**	**-0.3**
	3.7nm,0.1s						
KRBS				*e*S	**Sg**	**09 17 39.0**	**+1.4**
	14nm,0.2s						
BRLS	**Borolday**	**4.58**	**322**	*e*P	**Pg**	**09 16 39.7**	**-2.8**
	7.1nm,0.5s						
BRLS				*e*S	**Sg**	**09 17 39.2**	**-2.6**
	23nm,0.5s						
KTBS	**Karatobe**	**4.77**	**27**	*e*P	**Pg**	**09 16 45.7**	**-0.3**
	3.7nm,0.1s						
KTBS				*e*S	**Sg**	**09 17 49.6**	**+1.8**
	18nm,0.1s						
KUU	**Kurty**	**4.82**	**23**	*e*P	**Pg**	**09 16 47.2**	**+0.3**
	2.7nm,0.1s						
KUU				*e*S	**Sg**	**09 17 51.8**	**+2.4**
	9.0nm,0.0s						
CHKK	**Chushkaly**	**5.00**	**28**	*e*P	**Pg**	**09 16 50.0**	**-0.5**
	2.0nm,0.1s						
CHKK				*e*S	**Sg**	**09 17 56.6**	**+1.3**
	7.1nm,0.1s						
KPKS	**Kokpek**	**5.45**	**42**	*e*P	**Pg**	**09 16 58.3**	**-0.8**
	1.1nm,0.1s						
KPKS				*e*S	**Sg**	**09 18 11.2**	**+1.5**
	7.5nm,0.2s						
BTLS	**Baital**	**5.55**	**2**	*e*P	**Pg**	**09 16 60.0**	**-1.0**
	1.7nm,0.0s						
BTLS				*e*S	**Sg**	**09 18 13.7**	**+0.9**
	5.4nm,0.3s						
ARXS	**Arharly**	**5.63**	**32**	*e*P	**Pg**	**09 17 01.7**	**-0.8**
	3.7nm,0.2s						
ARXS				*e*S	**Sg**	**09 18 16.6**	**+1.2**
	9.1nm,0.1s						

IDC 27 09:16:43.2±2.6, 53˚.60N×87˚.06E, h0km, mbtmp2.5/2, ML2.1/2, Error ellipse: s-maj=24.5km s-min=16.0km az=69.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.38**	**286**	*i*		09 25 00.0	
	baz=103,slow=307,SNR=4.6						
ZALV	**Zalesovo Beam**	**1.38**	**286**	Pg	Pg	09 17 08.6	-1.0
	1.0nm,0.3s,baz=103,slow=17,SNR=6.5						
ZALV				Lg	Lg	09 17 27.0	
	1.3nm,0.3s,baz=107,slow=28,SNR=10						
KURBB	**Kurchatov Arra**	**6.04**	**244**	Pn	Pn	09 18 14.3	+0.6
	baz=62,slow=15,SNR=2.8						
KURBB				Lg	Lg	09 19 56.3	
	baz=62,slow=33,SNR=3.1						
	0.4nm,0.7s						
MKAR	**Makanchi Array**	**7.46**	**206**	Pn	Pn	09 18 34.7	+1.3
	0.1nm,0.3s,baz=28,slow=15,SNR=5.5						
	0.3nm,0.7s						

IDC 27 09:22:16.4±2.7, 53˚.65N×86˚.99E, h0km, mbtmp2.8/2, ML2.3/2, Error ellipse: s-maj=22.7km s-min=14.3km az=71.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.33**	**284**	*i*		09 30 29.7	
	baz=103,slow=312,SNR=4.1						
ZALV	**Zalesovo Beam**	**1.33**	**284**	Pg	Pg	09 22 40.4	-1.3
	0.5nm,0.3s,baz=100,slow=17,SNR=7.2						
ZALV				Lg	Lg	09 22 58.9	
	1.6nm,0.3s,baz=111,slow=28,SNR=24						
KURBB	**Kurchatov Arra**	**6.03**	**243**	Pn	Pn	09 23 48.2	+1.5
	baz=59,slow=14,SNR=4.4						
KURBB				Sn	Sn	09 24 55.5	-0.8
	baz=99,slow=29,SNR=2.5						
KURBB				Lg	Lg	09 25 26.8	
	baz=25,slow=25,SNR=2.7						
	1.2nm,0.9s						
MKAR	**Makanchi Array**	**7.49**	**206**	Pn	Pn	09 24 07.9	+1.0
	0.1nm,0.3s,baz=29,slow=12,SNR=4.3						
MKAR				Sn	Sn	09 25 32.4	-0.1
	0.1nm,0.3s,baz=28,slow=26,SNR=2.8						
MKAR				Lg	Lg	09 26 13.2	
	0.1nm,0.3s,baz=37,slow=23,SNR=2.8						
	0.4nm,0.5s						

*IDC **27** 09:32:16.2±6.1, 16˚.35N×98˚.08W, h0km, mb3.6/4, mbtmp3.5/6, ML3.4/1, MS3.1/3, Error ellipse: s-maj=132.8km s-min=100.3km az=61.0*
*MEX **27** 09:32:17.4±1.3, 15˚.96N×98˚.87W, h15km±22km, MD4.1*

ISC 27 09:32:14.0±1.8, 15˚.97N±0˚.07×98˚.83W±0˚.03, h1km±10km, n43, σ2°39/70, mb3.6/4, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.80**	**58**	*i* P	**Pb**	**09 32 29.9**	**-0.8**
PNIG				*i* S	**Sg**	**09 32 40.5**	**+0.9**
CRIG	**Cruz Grande**	**0.81**	**339**	*e*P	**Pg**	**09 32 29.8**	**+0.1**
CRIG				*e*S	**Sg**	**09 32 39.6**	**-0.7**
MGIG	**Malinaltepec**	**1.27**	**8**	*e*P	**Pn**	**09 32 37.3**	**-1.8**
MGIG				*e*S	**Sb**	**09 32 52.0**	**-3.8**
DAIG	**Los Arroyos**	**1.31**	**323**	*e*P	**Pn**	**09 32 36.9**	**-2.6**
DAIG				*e*S	**Sb**	**09 32 53.4**	**-3.4**
YOIG	**Yosondua**	**1.52**	**54**	*e*P	**Pn**	**09 32 41.0**	**-1.5**
YOIG				*e*S	**Sn**	**09 33 00.3**	**-2.8**
TLIG	**Tlapa**	**1.60**	**9**	*e*P	**Pn**	**09 32 42.5**	**-1.2**
TLIG				*e*S	**Sn**	**09 33 01.8**	**-3.3**
TXIG	**Tlaxiaco**	**1.63**	**38**	*e*P	**Pn**	**09 32 42.9**	**-1.3**
TXIG				*e*S	**Sn**	**09 33 02.6**	**-3.4**
CAIG	**El Cayaco**	**1.75**	**308**	*i* P	**Pn**	**09 32 43.4**	**-2.1**
CAIG				*e*S	**Sn**	**09 33 01.5**	**-6.9**
MEIG	**Mezcala**	**2.09**	**339**	*i* P	**Pn**	**09 32 49.5**	**-0.7**
MEIG				*e*S	**Sn**	**09 33 13.1**	**-3.8**
HLIG	**Huajuapan de L**	**2.10**	**28**	*e*P	**Pn**	**09 32 49.9**	**-0.6**
HLIG				*e*S	**Sn**	**09 33 15.4**	**-2.0**
VHO	**Vista Hermosa**	**2.29**	**61**	*i* P	**Pn**	**09 32 52.4**	**-0.8**
VHO				*e*S	**Sn**	**09 33 19.8**	**-2.4**
PLIG	**Platanillo**	**2.49**	**345**	*e*P	**Pn**	**09 32 54.7**	**-1.2**
PLIG				*e*S	**Sn**	**09 33 28.3**	**+1.3**
TOIG	**Toxpalan**	**2.71**	**38**	*e*P	**Pn**	**09 32 58.0**	**-0.8**
TOIG				*e*S	**Sn**	**09 33 30.6**	**-1.7**
ARIG	**Puente Sto Nin**	**2.72**	**328**	*e*P	**Pn**	**09 32 59.2**	**+0.3**
ARIG				*e*S	**Sn**	**09 33 32.2**	**-0.2**
TPIG	**Tehuac#an**	**2.81**	**30**	*e*P	**Pn**	**09 32 59.9**	**-0.4**
TPIG				*e*S	**Sn**	**09 33 30.1**	**-4.9**
YAIG	**Yautepec**	**2.88**	**356**	*e*P	**Pn**	**09 33 01.7**	**+0.4**
YAIG				*e*S	**Sn**	**09 33 36.0**	**-0.8**
ZIIG	**Zihuatanejo**	**3.00**	**303**	*e*P	**Pn**	**09 33 02.0**	**-0.8**
ZIIG				*e*S	**Sn**	**09 33 34.0**	**-5.4**
PPM	**Popocatepetl**	**3.09**	**4**	*e*P	**Pb**	**09 33 10.5**	**+0.4**
PPM				*e*S	**Sn**	**09 33 41.1**	**-1.1**
TLVM	**San Miguel Top**	**3.24**	**355**	*e*P	**Pb**	**09 33 11.8**	**-0.7**
TLVM				*e*S	**Sn**	**09 33 43.1**	**-2.6**
XCVM	**Xochimilco**	**3.28**	**355**	*e*P	**Pn**	**09 33 05.6**	**-1.2**
XCVM				*e*S	**Sn**	**09 33 47.4**	**+0.8**
AOVM	**Tlapan**	**3.31**	**352**	*e*P	**Pn**	**09 33 11.2**	**+3.8**
AOVM				*e*S	**Sn**	**09 33 42.6**	**-5.2**
THVM	**De Xico**	**3.33**	**358**	*e*P	**Pn**	**09 33 08.0**	**+0.5**
THVM				*e*S	**Sn**	**09 33 44.5**	**-3.3**
INVM	**La Marquesa**	**3.34**	**351**	*e*P	**Pn**	**09 33 10.4**	**+2.6**
INVM				*e*S	**Sn**	**09 33 50.7**	**+2.2**
UNM	**Universidad Na**	**3.36**	**354**	*e*P	**Pb**	**09 33 13.6**	**-0.9**
UNM				*e*S	**Sn**	**09 33 47.6**	**-1.0**
NEUV	**Arroyo Zacate**	**3.38**	**59**	*e*P	**Pn**	**09 33 07.5**	**-0.4**
NEUV				*e*S	**Sn**	**09 33 45.9**	**-2.8**
TOVM	**TOLUCA**	**3.39**	**346**	*e*P	**Pb**	**09 33 15.2**	**0.0**
TOVM				*e*S	**Sn**	**09 33 48.0**	**-1.5**
PBVM	**Pinon**	**3.46**	**356**	*e*P	Pn	09 33 02.0	-7.0
PBVM				*e*S	Sn	09 33 39.1	-12
GMVM	**Gustavo A Made**	**3.51**	**356**	*e*P	**Pb**	**09 33 18.4**	**+1.2**
GMVM				*e*S	**Sn**	**09 33 52.0**	**-0.5**
PTVM	**Pico Tres Padr**	**3.61**	**356**	*e*P	Pn	09 33 16.8	+5.4
PTVM				*e*S	**Sn**	**09 33 53.5**	**-1.4**
ZUVM	**ZUMPANGO**	**3.84**	**357**	*e*P	**Pn**	**09 33 16.2**	**+1.6**
ZUVM				*e*S	**Sn**	**09 33 58.9**	**-1.7**
JAUV	**Jalcomulco**	**3.89**	**29**	*e*P	**Pn**	**09 33 13.5**	**-1.6**
JAUV				*e*S	**Sn**	**09 34 01.5**	**0.0**
DEIG	**Demacu**	**4.31**	**357**	*e*P	**Pb**	**09 33 28.4**	**-2.4**
DEIG				*e*S	**Sn**	**09 34 10.1**	**-2.0**
MOIG	**Morelia**	**4.32**	**329**	*e*P	Pn	09 33 27.0	+5.9
MOIG				*e*S	**Sn**	**09 34 13.7**	**+1.4**
CXUV	**Coxquihui**	**4.34**	**16**	*e*P	**Pn**	**09 33 21.6**	**+0.2**
CXUV				*e*S	**Sn**	**09 34 06.4**	**-5.2**
TXAR	**Lajitas Array**	**14.03**	**342**	Pn	**Pn**	**09 35 35.6**	**+1.5**
	0.3nm,0.8s,baz=156,slow=19,SNR=5.0						
TXAR				LR	LR	09 41 55.5	
	comp=Z,72nm,21.1s,baz=198,slow=42						
ANMO	**Albuquerque**	**20.10**	**342**	P	**P**	**09 36 51.2**	**+1.8**
	0.1nm,0.3s,baz=148,slow=12,SNR=9.9						
ANMO				LR	LR	09 45 24.8	
	comp=Z,53nm,20.6s,baz=148,slow=40						
	2.2nm,0.8s						
NVAR	**Mina Array Bea**	**28.18**	**326**	P	**P**	**09 38 11.0**	**+2.6**
	0.7nm,0.9s,baz=148,slow=9.2,SNR=5.4						
	0.7nm,0.9s						
PDAR	**Pinedale Array**	**28.24**	**343**	P	**P**	**09 38 10.3**	**+1.4**
	0.7nm,0.7s,baz=144,slow=11,SNR=6.9						
PDAR				LR	LR	09 49 46.2	
	comp=Z,39nm,19.2s,baz=172,slow=37						
	0.7nm,0.7s						
YKA	**Yellowknife Ar**	**47.78**	**350**	P	**P**	**09 40 53.0**	**+0.3**
	0.5nm,0.9s,baz=159,slow=8.1,SNR=4.7						
	0.5nm,0.9s						
H03N2	**Juan Fernandez**	**52.68**	**159**	T	T	10 38 29.8	
	baz=338,slow=77						
H03N1	**Juan Fernandez**	**52.69**	**159**	T	T	10 38 35.1	
	baz=338,slow=77						
H03N3	**Juan Fernandez**	**52.69**	**159**	T	T	10 38 34.1	
	baz=338,slow=77						
ILAR	**Eielson Array**	**58.49**	**338**	P	**P**	**09 42 13.3**	**+1.7**
	0.8nm,0.9s,baz=146,slow=5.1,SNR=7.3						
	0.8nm,0.9s						

*IDC **27** 09:33:20.8±1.9, 36˚.16N×136˚.73E, h254km±17km, mb2.9/2, mbtmp3.6/4, Error ellipse: s-maj=54.4km s-min=17.0km az=74.0*
*JMA **27** 09:33:22.1±0.2, 36˚.1N±0˚.8×13˚.7E±˚, h267km±1km, MV2.9/29, NORTHERN GIFU PREF*
ISC 27 09:33:22.0±0.9, 36˚.20N±0˚.07×137˚.03E±0˚.08, h263km±7km, n16, σ0°77/22, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JGN	**Niukaw**	**0.23**	**84**	P	**Pn**	**09 33 56.3**	**+0.4**
JGN				*e*S	**S**	**09 34 22.9**	**+0.2**
JKG	**Kaga**	**0.57**	**278**	P	**Pn**	**09 33 57.5**	**+1.0**
JYTA	**Yamagatataniai**	**0.65**	**201**	P	**Pn**	**09 33 57.2**	**+0.3**
JYTA				S	**S**	**09 34 24.4**	**-0.1**
MAT	**Matsushiro**	**1.01**	**70**	P	**Pn**	**09 33 58.4**	**-0.1**
MJAR	**Matsushiro Arr**	**1.01**	**70**	P	**Pn**	**09 33 57.8**	**-0.7**
	6.7nm,0.3s,baz=253,slow=5.4,SNR=25						
MJAR				S	**S**	**09 34 27.1**	**-0.2**
	1.2nm,0.5s,baz=324,slow=31,SNR=1.8						
JSZ	**Suzu**	**1.28**	**12**	P	**Pn**	**09 34 01.4**	**+1.4**
JYN	**Shimob**	**1.42**	**119**	P	**Pn**	**09 34 00.6**	**-0.5**
JRY	**Ryogami san**	**1.53**	**96**	P	**Pn**	**09 34 02.1**	**+0.3**
JWT	**Wachi**	**1.61**	**236**	*i* P	**Pn**	**09 34 02.8**	**+0.4**
JWT				S	**S**	**09 34 34.4**	**+0.1**
JIE	**Ise**	**1.82**	**188**	P	**Pn**	**09 34 04.4**	**+0.3**
JIE				S	**S**	**09 34 37.2**	**-0.3**
JAG	**Ashikaga**	**1.97**	**83**	P	**Pn**	**09 34 05.1**	**-0.2**
JSD	**Sado**	**2.08**	**28**	P	**Pn**	**09 34 07.1**	**+0.8**
JHJ	**Hachijo jima 2**	**3.82**	**143**	P	**Pn**	**09 34 26.0**	**+1.6**
	22nm,0.7s,baz=252,slow=20,SNR=1.3						
JHJ				S	**S**	**09 35 14.9**	**+0.9**
	40nm,0.6s,baz=104,slow=23,SNR=7.1						
KLR	**Kul'dur**	**13.58**	**345**	P	**Pn**	**09 36 23.9**	**-0.6**
	1.1nm,0.6s,baz=170,slow=14,SNR=5.0						
WRA	**Warramunga Arr**	**55.89**	**183**	P	**P**	**09 42 31.5**	**-1.2**
	0.1nm,0.3s,baz=355,slow=7.6,SNR=1.9						
	0.1nm,0.3s						
TXAR	**Lajitas Array**	**93.39**	**50**	P	**P**	**09 46 08.5**	**+0.8**
	0.1nm,0.6s,baz=259,slow=1.8,SNR=2.4						
	0.1nm,0.6s						

*JMA **27** 09:39:27.9±0.2, 33˚.7N±0˚.9×136˚.4E±0˚.7, h390km±1km, MV3.1/36, SE OFF KII PENINSULA*
*IDC **27** 09:39:27.6±0.7, 33˚.74N×136˚.35E, h390km±7km, mb3.1/9, mbtmp3.9/16, Error ellipse: s-maj=15.0km s-min=10.7km az=93.0*
ISC 27 09:39:27.6±0.7, 33˚.76N±0˚.07×136˚.46E±0˚.05, h391km±6km, n37, σ0°98/48, mb3.5/9, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTO1	**TONANKAI O.B.S**	**0.30**	**116**	P	**Pn**	**09 40 16.8**	**+1.0**
JMMH	**Miemihama**	**0.37**	**280**	P	**Pn**	**09 40 16.4**	**+0.1**
JMMH				*e*S	**S**	**09 40 54.4**	**-1.1**
JKN2	**Miekihoku**	**0.51**	**342**	P	**Pn**	**09 40 16.8**	**+0.4**
JKN2				*e*S	**S**	**09 40 55.0**	**-0.9**

JIE	**Ise**	**0.67**	**18**	P		**Pn**	**09 40 17.4**		**+0.7**
JIE				S		**S**	**09 40 56.4**		**-0.1**
JTNC	**Tanabenakahech**	**0.71**	**275**	P		**Pn**	**09 40 17.1**		**+0.2**
JTNC				*e*S		**S**	**09 40 55.8**		**-0.9**
JWY	**Kouya**	**0.85**	**303**	P		**Pn**	**09 40 18.0**		**+0.6**
JWY				*e*S		**S**	**09 40 56.9**		**-0.6**
JAI	**Aioi**	**1.67**	**272**	P		**Pn**	**09 40 21.2**		**+0.4**
JAI				S		**S**	**09 41 02.9**		**-0.9**
JWT	**Wachi**	**1.76**	**330**	P		**Pn**	**09 40 21.8**		**+0.6**
JWT				S		**S**	**09 41 03.4**		**-1.1**
JYTA	**Yamagatataniai**	**1.85**	**7**	P		**Pn**	**09 40 22.6**		**+0.8**
JYTA				S		**S**	**09 41 05.4**		**-0.2**
JMN	**Monobe**	**2.15**	**270**	P		**Pn**	**09 40 24.4**		**+0.5**
JYN	**Shimob**	**2.44**	**44**	P		**Pn**	**09 40 26.1**		**+0.3**
JKG	**Kaga**	**2.52**	**358**	P		**Pn**	**09 40 26.9**		**+0.7**
JOD2	**Odawara 2**	**2.64**	**55**	P		**Pn**	**09 40 27.5**		**+0.2**
JHJ	**Hachijo jima 2**	**2.85**	**102**	P		**Pn**	**09 40 29.7**		**+0.7**
	170nm,0.6s,baz=213,slow=23,SNR=16								
JHJ				S		**S**	**09 41 21.4**		**+2.9**
	17nm,0.4s,baz=73,slow=19,SNR=1.4								
JHJ2	**Mitsune**	**2.88**	**102**	P		**Pn**	**09 40 29.6**		**+0.4**
JRY	**Ryogami san**	**3.02**	**41**	P		**Pn**	**09 40 30.7**		**+0.4**
JRY				*e*S		**S**	**09 41 21.5**		**+0.5**
JHS	**Saijyo**	**3.03**	**295**	P		**Pn**	**09 40 31.0**		**+0.6**
MAT	**Matsushiro**	**3.13**	**27**	P		**Pn**	**09 40 31.4**		**+0.2**
MJAR	**Matsushiro Arr**	**3.13**	**27**	P		**Pn**	**09 40 30.4**		**-0.7**
	15nm,0.5s,baz=181,slow=8.6,SNR=44								
MJAR				S		**S**	**09 41 22.1**		**-0.6**
	3.8nm,0.8s,baz=184,slow=12,SNR=4.3								
JTO	**Tosashimizu**	**3.19**	**255**	P		**Pn**	**09 40 31.9**		**+0.2**
JNA	**Nagahama**	**3.33**	**268**	P		**Pn**	**09 40 33.1**		**+0.2**
BSO1	**Boso 1**	**3.85**	**75**	P		**Pn**	**09 40 35.1**		**-2.0**
BSO1				*e*S		**S**	**09 41 29.9**		**-3.6**
JNU	**Nakatsue**	**4.71**	**264**	P		**Pn**	**09 40 46.3**		**0.0**
	163nm,1.2s,baz=71,slow=2.2,SNR=17								
KSRS	**Korea Array**	**7.87**	**300**	P		**P**	**09 41 21.6**		**+0.2**
	0.9nm,0.5s,baz=118,slow=12,SNR=3.3								
JCJ	**Chichijima**	**8.27**	**142**	S			09 42 51.4		-11
	39nm,0.7s,baz=287,slow=19,SNR=2.3								
JOW	**Kunigami**	**9.88**	**228**	P		**P**	**09 41 43.9**		**-0.3**
	25nm,0.8s,baz=51,slow=6.5,SNR=3.2								
USRK	**Ussuriysk Ar.**	**10.99**	**343**	P		**P**	**09 41 56.7**		**+0.4**
	2.1nm,0.6s,baz=158,slow=9.3,SNR=4.1								
KLR	**Kul'dur**	**15.85**	**349**	P		**P**	**09 42 49.1**		**-0.3**
	0.8nm,0.5s,baz=167,slow=9.4,SNR=2.3								
WRA	**Warramunga Arr**	**53.44**	**182**	P		**P**	**09 48 08.0**		**-1.1**
	1.2nm,0.4s,baz=355,slow=7.8,SNR=23								
	1.2nm,0.4s								
ILAR	**Eielson Array**	**54.40**	**31**	P		**P**	**09 48 16.0**		**+0.6**
	0.7nm,0.8s,baz=266,slow=5.3,SNR=8.0								
	0.7nm,0.8s								
ASAR	**Alice Springs**	**57.16**	**183**	P		**P**	**09 48 35.2**		**0.0**
	0.5nm,0.7s,baz=3.8,slow=7.1,SNR=9.5								
	0.5nm,0.7s								
ARCES	**ARCESS Array B**	**65.61**	**339**	P		**P**	**09 49 30.4**		**-0.2**
	0.8nm,0.5s,baz=58,slow=9.2,SNR=14								
	0.8nm,0.5s								
YKA	**Yellowknife Ar**	**68.63**	**28**	P		**P**	**09 49 50.1**		**+0.7**
	0.9nm,0.8s,baz=301,slow=5.7,SNR=12								
	0.9nm,0.8s								
FINES	**FINESS Array B**	**69.78**	**331**	P		**P**	**09 49 56.3**		**-0.1**
	0.9nm,0.4s,baz=73,slow=6.6,SNR=10								
	0.9nm,0.4s								
NOA	**NORSAR Array B**	**75.57**	**336**	P		**P**	**09 50 29.2**		**-1.0**
	0.3nm,0.5s,baz=44,slow=6.1,SNR=2.2								
	0.3nm,0.5s								
NVAR	**Mina Array Bea**	**80.19**	**50**	P		**P**	**09 50 57.2**		**+1.2**
	0.3nm,0.5s,baz=321,slow=5.4,SNR=4.7								
	0.3nm,0.5s								
PDAR	**Pinedale Array**	**82.83**	**43**	P		**P**	**09 51 10.3**		**+0.7**
	0.6nm,0.7s,baz=286,slow=2.5,SNR=7.6								
	0.6nm,0.7s								

IDC 27 09:46:58.2±1.9, 5˚.21S×133˚.90E, h0km, mb3.7/1, mbtmp3.9/4, ML3.3/2, Error ellipse: s-maj=89.6km s-min=28.8km az=67.0, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.65**	**178**	Pn	Pn	09 50 25.0	-2.0
	0.1nm,0.3s,baz=358,slow=13,SNR=3.9						
WRA				Sn	Sn	09 53 00.8	-10
	0.2nm,0.3s,baz=356,slow=23,SNR=6.8						
	0.6nm,0.7s						
ASAR	**Alice Springs**	**18.35**	**180**	P	P	09 51 15.1	+0.5
	0.3nm,0.3s,baz=4.2,slow=11,SNR=52						
ASAR				S	Sn	09 54 30.9	-9.3
	0.5nm,0.8s,baz=0.4,slow=25,SNR=3.1						
	7.7nm,0.8s						
CTA	**Charters Tower**	**19.06**	**142**	P	P	09 51 22.4	+0.1
	3.0nm,0.8s,baz=320,slow=12						
MKAR	**Makanchi Array**	**68.93**	**325**	P	P	09 58 05.2	0.0
	0.8nm,0.8s,baz=116,slow=8.2,SNR=3.5						
	0.8nm,0.8s						

*KRNET **27** 09:49:55.2±0.1, 39˚.39N×73˚.77E, mb3.8*
*SOME **27** 09:49:

	183nm,0.2s								
IUG					*e*S		**Sg**	09 51 59.8	**-4.7**
	50nm,0.2s								
DGS	**Degeres**	**4.10**	**19**	*e*P			**Pg**	09 51 12.5	**-0.3**
	13nm,0.8s								
DGS					*e*S		**Sg**	09 52 05.9	**-0.1**
	22nm,0.2s								
SGDS	**Sogindy**	**4.10**	**7**	*e*P			**Pg**	09 51 11.3	**-1.6**
	14nm,0.2s								
SGDS					*e*S		**Sg**	09 52 03.9	**-2.1**
	8.4nm,0.3s								
MTBS	**Maitube**	**4.19**	**26**	*e*P			**Pg**	09 51 14.1	**-0.5**
	4.6nm,0.1s								
MTBS					*e*S		**Sg**	09 52 08.6	**-0.3**
	26nm,0.1s								
TNSS	**Tian-Shan**	**4.30**	**31**	*e*P			**Pg**	09 51 16.6	**-0.2**
	8.8nm,0.0s								
TNSS					*e*S		**Sg**	09 52 13.0	**+0.5**
	11nm,0.1s								
KRBS	**Karabastau**	**4.50**	**16**	*e*P			**Pg**	09 51 18.9	**-1.7**
	9.5nm,0.0s								
KRBS					*e*S		**Sg**	09 52 17.1	**-1.8**
	13nm,0.8s								
KK31	**Karatay Array**	**4.53**	**326**	⇑Pn			**Pn**	09 51 03.9	**+0.9**
	0.4nm,0.3s,baz=128,slow=13,SNR=10								
KK31					Pg		**Pb**	09 51 16.6	**+2.7**
	4.0nm,0.4s,baz=144,slow=16,SNR=7.0								
KK31					Sn		**Sn**	09 51 59.7	**+4.1**
	5.7nm,0.5s,baz=146,slow=18,SNR=5.2								
KK31					⇑Lg		Lg	09 52 16.9	
	8.7nm,0.6s,baz=157,slow=29,SNR=4.5								
BRLS	**Borolday**	**4.78**	**321**	*e*P			**Pb**	09 51 20.3	**+2.1**
	3.1nm,0.0s								
BRLS					*e*S		**Sb**	09 52 19.4	**+3.6**
	13nm,0.1s								
KTBS	**Karatobe**	**4.79**	**25**	*e*P			**Pg**	09 51 24.6	**-1.5**
	3.8nm,0.2s								
KTBS					*e*S		**Sg**	09 52 26.8	**-1.4**
	39nm,0.2s								
KUU	**Kurty**	**4.86**	**21**	*e*P			**Pg**	09 51 25.2	**-2.1**
	2.9nm,0.2s								
KUU					*e*S		**Sg**	09 52 27.7	**-2.5**
	28nm,0.2s								
SATY	**Saty**	**4.99**	**41**	*e*P			**Pg**	09 51 29.3	**-0.5**
	7.3nm,0.0s								
SATY					*e*S		**Sg**	09 52 35.0	**+0.6**
	13nm,1.3s								
CHKK	**Chushkaly**	**5.02**	**26**	*e*P			**Pg**	09 51 29.6	**-0.9**
	2.0nm,0.2s								
CHKK					*e*S		**Sg**	09 52 35.1	**-0.4**
	16nm,0.1s								
KURS	**Kuram**	**5.19**	**36**	*e*P			**Pg**	09 51 31.6	**-2.1**
	10.0nm,0.2s								
KURS					*e*S		**Sg**	09 52 38.9	**-2.1**
	9.0nm,0.7s								
KPKS	**Kokpek**	**5.42**	**40**	*e*P			**Pg**	09 51 37.5	**-0.6**
	5.7nm,0.0s								
KPKS					*e*S		**Sg**	09 52 48.7	**+0.4**
	22nm,0.2s								
ARXS	**Arharly**	**5.64**	**30**	*e*P			**Pg**	09 51 41.2	**-1.0**
	5.3nm,0.5s								
ARXS					*e*S		**Sg**	09 52 54.8	**-0.4**
	10nm,0.6s								
BTLS	**Baital**	**5.66**	**1**	*e*P			**Pg**	09 51 41.0	**-1.7**
	1.8nm,0.0s								
BTLS					*e*S		**Sg**	09 52 54.5	**-1.4**
	4.9nm,0.1s								
DJR	**Jarkent**	**6.60**	**40**	*e*P			**Pg**	09 52 00.2	**-0.4**
	3.4nm,0.3s								
DJR					*e*S		**Sg**	09 53 27.4	**+1.3**
	5.0nm,0.3s								
OTUK	**Ortayu**	**8.94**	**353**	⇓Pn			**Pn**	09 52 05.5	**+2.0**
	1.2nm,0.6s								
OTUK					⇓Lg		Lg	09 54 38.5	
	3.7nm,0.8s								

*MEX **27** 09:55:47.9±1.1, 15°.91N×98°.89W, h16km±26km, MD4.1*
*IDC **27** 09:55:57.9±5.4, 16°.67N×98°.65W, h51km±43km, mb3.6/7, mbtmp3.8/10, ML3.3/3, MS3.4/4, Error ellipse: s-maj=52.4km s-min=28.5km az=24.0*
*NEIC **27** 09:55:60.0±1.8, 16°.3N±0°.2×98°.6W±0°.1, h98km±13km, mb4.1/97, Error ellipse: s-maj=29.2km s-min=9.1km az=220.0*

ISC 27 09:55:47.7±1.6,**16°.14N**±0°.06×**98°.78W**±0°.03,**h7**km±9km, **n114,** σ1§67/107,**mb4.2**/38,**MS3.2**/3,**Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.68**	**68**	*e*P	**Pb**	**09 56 00.9**	**-0.9**
PNIG				*i* S	**Sg**	**09 56 11.6**	**+0.1**
CRIG	**Cruz Grande**	**0.68**	**331**	*e*P	**Pg**	**09 56 00.9**	**+0.1**
CRIG				*i* S	**Sg**	**09 56 11.1**	**+1.5**
MGIG	**Malinaltepec**	**1.10**	**7**	*e*P	**Pb**	**09 56 08.4**	**-0.8**
MGIG				*e*S	**Sn**	**09 56 24.6**	**-0.6**
DAIG	**Los Arroyos**	**1.21**	**317**	*e*P	**Pn**	**09 56 08.2**	**-2.9**
DAIG				*e*S	**Sb**	**09 56 23.7**	**-3.1**
YOIG	**Yosondua**	**1.38**	**59**	*e*P	**Pn**	**09 56 12.1**	**-1.6**
YOIG				*e*S	**Sn**	**09 56 31.3**	**-1.1**
TLIG	**Tlapa**	**1.43**	**8**	*e*P	**Pn**	**09 56 13.5**	**-0.8**
TLIG				*e*S	**Sn**	**09 56 33.0**	**-0.4**
TXIG	**Tlaxiaco**	**1.47**	**41**	*e*P	**Pn**	**09 56 14.0**	**-1.0**
TXIG				*e*S	**Sg**	**09 56 35.4**	**+0.2**
CAIG	**El Cayaco**	**1.69**	**303**	*e*P	**Pn**	**09 56 14.2**	**-3.4**
CAIG				*e*S	**Sn**	**09 56 37.1**	**-2.4**
HLIG	**Huajuapan de L**	**1.92**	**29**	*e*P	**Pn**	**09 56 20.4**	**-0.7**
HLIG				*e*S	**Sb**	**09 56 46.6**	**-1.0**
MEIG	**Mezcala**	**1.95**	**336**	*e*P	**Pn**	**09 56 20.8**	**-0.5**
MEIG				*e*S	**Sn**	**09 56 45.9**	**-0.2**
VHO	**Vista Hermosa**	**2.17**	**64**	*e*P	**Pn**	**09 56 23.5**	**-1.0**
VHO				*e*S	**Sn**	**09 56 50.0**	**-1.8**
PLIG	**Platanillo**	**2.34**	**343**	*e*P	**Pn**	**09 56 27.0**	**+0.2**
PLIG				*e*S	**Sn**	**09 56 56.9**	**+1.0**
TOIG	**Toxpalan**	**2.54**	**40**	*e*P	**Pn**	**09 56 28.7**	**-0.9**
TOIG				*e*S	**Sb**	**09 57 03.1**	**-2.3**
ARIG	**Puente Sto Nin**	**2.60**	**325**	*e*P	**Pn**	**09 56 29.7**	**-0.5**
ARIG				*e*S	**Sn**	**09 56 57.5**	**-4.7**
YAIG	**Yautepec**	**2.72**	**354**	*e*P	**Pn**	**09 56 33.0**	**+1.0**
YAIG				*e*S	**Sn**	**09 57 06.8**	**+1.5**
MAVM	**Malinalco, Edo**	**2.88**	**346**	*e*P	**Pb**	**09 56 41.0**	**+1.4**
MAVM				*e*S	**Sn**	**09 57 07.7**	**-1.7**
ZIIG	**Zihuatanejo**	**2.95**	**300**	*e*P	Pn	09 56 29.1	-6.0
ZIIG				*e*S	**Sn**	**09 57 09.8**	**-1.0**
AMVM	**AMECAMECA**	**2.98**	**360**	*e*P	**Pn**	**09 56 31.1**	**-4.5**
AMVM				*e*S	**Sn**	**09 57 07.9**	**-3.9**
TLVM	**San Miguel Top**	**3.07**	**353**	*e*P	**Pg**	**09 56 45.2**	**-1.5**
TLVM				*e*S	**Sn**	**09 57 16.7**	**+2.5**
XCVM	**Xochimilco**	**3.11**	**354**	*e*P	**Pb**	**09 56 43.1**	**-0.5**
XCVM				*e*S	**Sb**	**09 57 18.8**	**-3.1**
AOVM	**Tlapan**	**3.15**	**351**	*e*P	**Pb**	**09 56 44.1**	**-0.3**
AOVM				*e*S	**Sn**	**09 57 14.3**	**-2.1**
THVM	**De Xico**	**3.16**	**357**	*e*P	**Pb**	**09 56 42.4**	**-2.0**
THVM				*e*S	**Sn**	**09 57 17.5**	**+1.2**
INVM	**La Marquesa**	**3.19**	**350**	*e*P	**Pb**	**09 56 46.7**	**+1.8**
INVM				*e*S	**Sn**	**09 57 15.6**	**-1.5**
UNM	**Universidad Na**	**3.19**	**353**	Pn	**Pb**	**09 56 46.2**	**+1.3**
TOVM	**TOLUCA**	**3.24**	**345**	*e*P	**Pb**	**09 56 46.4**	**+0.7**
TOVM				*e*S	**Sb**	**09 57 23.1**	**-2.6**
PBVM	**Pinon**	**3.29**	**355**	*e*P	**Pb**	**09 56 44.5**	**-2.0**
PBVM				*e*S	**Sn**	**09 57 18.7**	**-0.6**
GMVM	**Gustavo A Made**	**3.35**	**355**	*e*P	**Pn**	**09 56 42.2**	**+1.4**
GMVM				*e*S	**Sn**	**09 57 18.9**	**-2.2**
PTVM	**Pico Tres Padr**	**3.45**	**355**	*e*P	**Pb**	**09 56 50.8**	**+1.5**
PTVM				*e*S	**Sn**	**09 57 22.2**	**-1.2**
ZUVM	**ZUMPANGO**	**3.68**	**356**	*e*P	**Pn**	**09 56 42.9**	**-2.4**
ZUVM				*e*S	**Sn**	**09 57 29.9**	**+0.8**
MOIG	**Morelia**	**4.20**	**327**	Pn	**Pb**	**09 57 04.3**	**+2.3**
CCIG	**Comitan**	**6.39**	**88**	Pn	Pn	09 57 28.9	+6.4
TXAR	**Lajitas Array**	**13.88**	**342**	P	**Pn**	**09 59 07.1**	**+2.1**
	baz=161,slow=16,SNR=8.6						
	0.8nm,0.9s						
DUNO	**Dulce Nombre,**	**14.27**	**113**	Pn	**P**	**09 59 15.8**	**-2.0**
JCT	**Junction City**	**14.30**	**356**	P	**P**	**09 59 19.5**	**+1.4**
JTS	**Las Juntas de**	**14.66**	**112**	P	**P**	**09 59 22.6**	**+0.5**
	0.3nm,0.3s,baz=232,slow=3.6,SNR=3.8						
	5.2nm,0.8s						
ABTX	**Abilene, Hawle**	**16.43**	**357**	P	**P**	**09 59 42.0**	**+0.4**
ABTX					IAmb	IAmb	09 59 44.4
	comp=Z,11nm,1.0s						
MNTX	**Cornudas Mount**	**16.61**	**340**		**P**	**09 59 42.4**	**-1.3**
VBMS	**Vicksburg**	**17.68**	**24**	P	**P**	**09 59 56.4**	**+1.0**
319A	**Douglas**	**17.93**	**330**		**P**	**10 00 00.2**	**+1.7**
MSTX	**Muleshoe**	**18.11**	**349**	P	**P**	**10 00 01.0**	**+0.6**
MSTX					IAmb	IAmb	10 00 03.6
	comp=Z,8.3nm,0.8s						
121A	**Cookes Peak, D**	**18.25**	**335**	P	**P**	**10 00 02.1**	**+0.1**
WMOK	**Wichita Mounta**	**18.52**	**0**	P	**Pn**	**10 00 04.5**	**-0.5**
AMTX	**Amarillo**	**18.84**	**353**	P	**Pn**	**10 00 09.5**	**+0.5**
AMTX					IAmb	IAmb	10 00 18.9
	comp=Z,8.7nm,0.9s						
MIAR	**Mount Ida**	**18.91**	**13**	P	**P**	**10 00 08.2**	**-0.9**
BNM	**Barren Site**	**19.27**	**340**	P	**Pn**	**10 00 15.8**	**+1.6**
TUC	**Tucson**	**19.44**	**328**		**Pn**	**10 00 16.1**	**0.0**
W39A	**Magazine**	**19.50**	**12**	P	**Pn**	**10 00 16.8**	**+0.1**
W41B	**Gary Mavity, V**	**19.84**	**16**	P	**Pn**	**10 00 20.6**	**-0.1**
WHAR	**Wooly Hollow**	**19.94**	**16**	P	**Pn**	**10 00 20.8**	**-1.1**
WHAR					IAmb	IAmb	10 00 27.8
	comp=Z,12nm,0.9s						
ANMO	**Albuquerque**	**19.95**	**341**	P	Pn	10 00 22.8	+0.5
	comp=Z,0.1nm,0.3s,baz=153,slow=11,SNR=18						
ANMO					LR	LR	10 08 55.0
	comp=Z,110nm,20.7s,baz=158,slow=40						
	comp=Z,3.0nm,0.9s						
ANMO	**Albuquerque**	**19.95**	**341**	P	Pn	10 00 22.6	+0.3
HHAR	**Hobbs**	**20.52**	**11**	IAmb	IAmb	10 00 32.4	
	comp=Z,6.5nm,1.0s						
U38A	**Gravette**	**20.59**	**10**	P	Pn	10 00 29.1	-0.6
U38A					IAmb	IAmb	10 00 33.0
	comp=Z,7.2nm,0.9s						
T35A	**Sooner Cattle**	**20.79**	**5**	P	**P**	**10 00 29.3**	**-0.2**
T35A					IAmb	IAmb	10 00 36.0
	comp=Z,12nm,0.8s						
Y49A	**Blount Mountai**	**20.87**	**30**	IAmb	IAmb	10 00 37.2	
	comp=Z,5.2nm,0.7s						
X18A	**Snowflake**	**20.88**	**333**	P	Pn	10 00 33.5	+0.3
X18A					IAmb	IAmb	10 00 43.4
	comp=Z,5.7nm,0.8s						
X48A	**Hartselle**	**21.06**	**28**	IAmb	IAmb	10 00 37.1	
	comp=Z,9.4nm,0.8s						
X16A	**Lo Mia Camp, P**	**21.46**	**330**	P	**P**	**10 00 39.2**	**+2.2**
X16A					IAmb	IAmb	10 00 49.4
	comp=Z,7.5nm,0.9s						
T25A	**Trinidad**	**21.50**	**348**		**P**	**10 00 40.7**	**+3.2**
FPAL	**Fort Paine**	**21.81**	**30**	IAmb	IAmb	10 00 43.8	
	comp=Z,7.4nm,0.8s						
PBMO	**Poplar Bluff**	**21.85**	**18**	P	**P**	**10 00 43.0**	**+2.1**
S39A	**Bolivar**	**22.00**	**12**		**P**	**10 00 45.0**	**+2.4**
S39A					IAmb	IAmb	10 00 51.9
	comp=Z,6.5nm,0.9s						
Y52A	**Lilburn**	**22.07**	**34**	IAmb	IAmb	10 00 44.3	
	comp=Z,14nm,0.9s						
WVT	**Waverly**	**22.17**	**24**	P	**P**	**10 00 45.9**	**+1.5**
SWET	**Sewanee**	**22.21**	**29**	IAmb	IAmb	10 00 47.6	
	comp=Z,7.2nm,0.8s						
V48A	**Smith Brothers**	**22.25**	**26**	P	**P**	**10 00 46.1**	**+0.9**
V48A					IAmb	IAmb	10 00 47.8
	comp=Z,8.1nm,0.9s						
WUAZ	**Wupatki**	**22.34**	**332**	IAmb	IAmb	10 00 57.7	
	comp=Z,9.4nm,0.9s						
W50A	**Signal Mountai**	**22.49**	**30**	IAmb	IAmb	10 00 49.1	
	comp=Z,8.7nm,0.8s						
MVCO	**Mesa Verde**	**22.68**	**340**	IAmb	IAmb	10 00 58.8	
	comp=Z,14nm,1.1s						
CLTN	**Cedars of Leba**	**22.76**	**27**	IAmb	IAmb	10 00 55.0	
	comp=Z,7.5nm,1.0s						
CCM	**Cathedral City**	**22.82**	**15**	P	**P**	**10 00 52.2**	**+0.9**
FVM	**French Village**	**22.97**	**17**	IAmb	IAmb	10 00 55.1	
	comp=Z,8.7nm,0.9s						
CPCT	**Cooper Cave**	**23.07**	**31**	P	**P**	**10 00 54.0**	**0.0**
T47A	**Sharon Grove**	**23.20**	**24**	P	**P**	**10 00 55.3**	**0.0**
HODGE	**Hodges**	**23.35**	**36**	IAmb	IAmb	10 00 57.4	
	comp=Z,11nm,0.9s						
U49A	**Red Boiling Sp**	**23.35**	**27**	P	**P**	**10 00 57.0**	**+0.2**
U49A					IAmb	IAmb	10 00 58.2
	comp=Z,9.5nm,0.9s						
V51A	**Loudon**	**23.43**	**31**	P	**P**	**10 00 58.1**	**+0.5**
V51A					IAmb	IAmb	10 00 59.5
	comp=Z,8.8nm,0.8s						
PFO	**Pinyon Flats O**	**23.60**	**321**	P	**P**	**10 00 59.3**	**-0.1**
	comp=Z,0.8nm,0.8s,baz=300,slow=20,SNR=1.6						
	comp=Z,0.8nm,0.8s						
TKL	**Tuckaleechee C**	**23.61**	**32**	P	**P**	**10 00 59.7**	**+0.3**
	comp=Z,3.7nm,0.8s,baz=196,slow=11,SNR=6.2						
	comp=Z,3.7nm,0.8s						
PV07	**Paradox Valley**	**23.85**	**341**	IAmb	IAmb	10 00 58.9	
	comp=Z,7.4nm,1.3s						
P40A	**Paris**	**24.04**	**13**	P	**P**	**10 01 03.2**	**-0.2**
T50A	**Nancy**	**24.19**	**28**	P	**P**	**10 01 04.9**	**0.0**
T50A					IAmb	IAmb	10 01 06.2
	comp=Z,7.2nm,0.9s						
ISCO	**Idaho Springs**	**24.31**	**347**	P	**P**	**10 01 07.1**	**+0.7**
TZTN	**Tazewell**	**24.42**	**31**	IAmb	IAmb	10 01 09.1	
	comp=Z,7.9nm,0.8s						
N33A	**J Bar K, Exete**	**24.54**	**2**	P	**P**	**10 01 08.9**	**+0.8**
MTPU	**Mount Pierson**	**24.81**	**334**	IAmb	IAmb	10 01 23.1	
	comp=Z,6.2nm,1.0s						
SRU	**San Rafael Swe**	**25.09**	**338**	P	**P**	**10 01 15.4**	**+2.2**
SRU					IAmb	IAmb	10 01 24.4
	comp=Z,5.8nm,1.1s						
S51A	**Beattyville**	**25.27**	**29**	P	**P**	**10 01 14.6**	**-0.1**
O20A	**White River Ci**	**25.29**	**343**	IAmb	IAmb	10 01 20.0	
	comp=Z,7.8nm,0.9s						
P18A	**Preston Nutter**	**25.45**	**339**	IAmb	IAmb	10 01 26.3	
	comp=Z,5.6nm,1.1s						
QSM	**Queen of Sheba**	**25.49**	**324**	IAmb	IAmb	10 01 27.4	
	comp=Z,5.0nm,1.0s						
GWY	**Greenwater Val**	**25.54**	**325**	P	**P**	**10 01 19.4**	**+2.1**
TPNV	**Topopah Spring**	**25.87**	**327**	P	**P**	**10 01 23.2**	**+2.9**
TPNV					IAmb	IAmb	10 01 35.2
	comp=Z,5.6nm,1.1s						
RDMU	**Red Mountain**	**26.08**	**341**	IAmb	IAmb	10 01 42.5	
	comp=Z,8.8nm,1.3s						
ECSD	**EROS Data Cent**	**27.57**	**3**	P	**P**	**10 01 35.2**	**-0.1**
ECSD					IAmb	IAmb	10 01 41.2
	comp=Z,6.5nm,1.4s						
NVAR	**Mina Array Bea**	**28.06**	**326**	P	**P**	**10 01 41.8**	**+1.6**
	comp=Z,1.0nm,0.8s,baz=157,slow=9.1,SNR=10						
NVAR					PcP	**PcP**	**10 04 59.2**	**+4.3**
	comp=Z,0.3nm,0.7s,baz=130,slow=3.9,SNR=2.8						
	comp=Z,1.0nm,0.8s						
PD31	**Pinedale Array**	**28.09**	**343**	P	**P**	**10 01 41.3**	**+0.9**
PDAR	**Pinedale Array**	**28.09**	**343**	P	**P**	**10 01 40.8**	**+0.4**
	comp=Z,1.3nm,0.8s,baz=144,slow=10,SNR=10						
PDAR					LR	LR	10 13 08.6
	comp=Z,53nm,18.6s,baz=160,slow=37						
	comp=Z,1.3nm,0.8s						
ELK	**Elko**	**28.37**	**333**	LR	LR	10 14 35.8	
	comp=Z,60nm,20.2s,baz=153,slow=40						
SNOW	**Snow King Moun**	**29.08**	**342**	IAmb	IAmb	10 01 57.9	
	comp=Z,8.6nm,1.4s						
RLMT	**Red Lodge**	**30.21**	**345**	IAmb	IAmb	10 02 03.7	
	comp=Z,3.3nm,1.0s						
DLMT	**Dillon**	**31.36**	**341**	IAmb	IAmb	10 02 18.4	
	comp=Z,3.3nm,1.0s						
J08A	**Circle Bar Ran**	**31.90**	**332**	IAmb	IAmb	10 02 22.4	
	comp=Z,4.3nm,1.1s						
AGMN	**Agassiz Nation**	**32.16**	**4**	IAmb	IAmb	10 02 17.1	
	comp=Z,3.9nm,0.7s						
F10A	**Beach Ranch, E**	**33.51**	**336**	P	**P**	**10 02 28.5**	**+0.6**
NNA	**Nana**	**35.39**	**141**	LR	LR	10 13 50.3	
	comp=Z,68nm,19.1s,baz=162,slow=30						
EDM	**Edmonton**	**38.73**	**346**	P	**P**	**10 03 12.7**	**+0.2**
SCHQ	**Schefferville**	**45.80**	**25**	P	**P**	**10 04 09.9**	**-0.1**
	comp=Z,4.2nm,0.8s,baz=217,slow=8.4,SNR=4.8						
	comp=Z,4.2nm,0.8s						
SCHQ	**Schefferville**	**45.80**	**25**	IAmb	IAmb	10 04 11.0	
	comp=Z,3.8nm,0.8s						
YKA	**Yellowknife Ar**	**47.62**	**350**	P	**P**	**10 04 23.8**	**-0.4**
	comp=Z,0.8nm,1.0s,baz=155,slow=7.7,SNR=8.3						
	comp=Z,0.8nm,1.0s						
H03N2	**Juan Fernandez**	**52.82**	**159**	T	T	11 01 56.4	
	baz=337,slow=77						
H03N1	**Juan Fernandez**	**52.83**	**159**	T	T	11 01 57.5	
	baz=337,slow=77						
H03N3	**Juan Fernandez**	**52.84**	**159**	T	T	11 02 02.9	
	baz=337,slow=77						
ILAR	**Eielson Array**	**58.35**	**338**	P	**P**	**10 05 44.0**	**+0.7**
	comp=Z,1.3nm,0.9s,baz=139,slow=4.7,SNR=8.8						
	comp=Z,1.3nm,0.9s						

*KRNET **27** 09:57:12.3±0.1, 39°.44N×73°.72E, mb3.7*
*SOME **27** 09:57:15.3, 39°.62N×73°.72E, h10km*
*NNC **27** 09:57:20.1±2.4, 39°.74N×73°.47E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=23.8km s-min=17.3km az=159.0*

ISC 27 09:57:13.4±1.2,**39°.57N**±0°.06×**73.70E**±0°.03,**h10**km,**n27,** σ1§46/51,**11C-11D,Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.19**	**324**	⇓*e*P	**Pg**	**09 57 37.1**	**+0.9**
	baz=27						
OHH				⇓*e*S	**Sn**	**09 57 55.0**	**+2.6**
	baz=27						
DRK	**Karamyk**	**1.47**	**267**	⇑*i*P	**Pn**	**09 57 40.2**	**0.0**
	baz=72						
DRK				⇑*i*S	**Sg**	**09 58 00.7**	**0.0**
	baz=72						
BTK	**Batken**	**2.27**	**283**	⇑*e*P	**Pb**	**09 57 53.8**	**-0.7**
	baz=86						
BTK				⇑*e*S	**Sb**	**09 58 23.7**	**+1.0**
	baz=86						
ARLS	**Aral**	**2.34**	**12**	⇓*e*P	**Pb**	**09 57 55.8**	**0.0**
	baz=11						
ARLS				⇓*e*S	**Sg**	**09 58 27.3**	**-1.3**
	baz=11						
GAR	**Garm**	**2.68**	**259**	⇑*e*P	**Pn**	**09 57 58.8**	**+2.1**
	baz=62						
GAR				⇑*e*S	**Sb**	**09 58 32.8**	**-1.8**
	baz=62						
UCH	**Uchtor**	**2.73**	**13**	⇓*e*P	**Pb**	**09 58 01.1**	**-1.5**
	baz=12						
UCH				⇓*e*S	**Sb**	**09 58 36.9**	**+0.6**
	baz=12						
TRKS	**Terek-Say**	**2.77**	**316**	⇓*e*P	**Pb**	**09 58 00.6**	**-2.4**
	baz=17						
TRKS				⇓*e*S	**Sb**	**09 58 35.6**	**-1.4**
	baz=17						
BOOM	**Boomskoye usch**	**3.38**	**29**	⇑*e*P	**Pn**	**09 58 09.5**	**+3.2**
	baz=28						
BOOM				⇑*i*S	**Sb**	**09 58 51.9**	**-2.7**
	baz=28						
CHMS	**Chumysh**	**3.52**	**13**	⇓Pn	**Pb**	**09 58 14.9**	**-0.8**
	7.1nm,0.5s						
CHMS				⇑Lg	Lg	09 59 08.1	
	34nm,0.7s						
TKM2	**Tokmak 2**	**3.65**	**23**	⇓Pn	**Pb**	**09 58 16.6**	**-1.4**
	2.1nm,0.5s						
TKM2				⇓Lg	Lg	09 59 12.0	
	23nm,0.7s						
IUG	**Iuzhnay**	**3.79**	**314**	*e*P	**Pg**	**09 58 25.8**	**-0.2**
	181nm,0.1s						
IUG				*e*S	**Sg**	**09 59 16.2**	**+1.1**
	33nm,0.1s						
KST	**Kastek**	**3.87**	**25**	*e*P	**Pg**	**09 58 26.1**	**-1.4**
	7.3nm,0.8s						
KST				*e*S	**Sg**	**09 59 16.4**	**-1.3**
	22nm,0.5s						
SGDS	**Sogindy**	**3.94**	**10**	*e*P	**Pg**	**09 58 27.8**	**-1.2**
	4.2nm,0.1s						
SGDS				*e*S	**Sg**	**09 59 19.3**	**-0.7**
	16nm,0.8s						
DGS	**Degeres**	**3.99**	**22**	*e*P	**Pg**	**09 58 28.9**	**-0.9**
	14nm,0.1s						
DGS				*e*S	**Sg**	**09 59 21.5**	**0.0**
	19nm,0.0s						
MTBS	**Maitube**	**4.11**	**29**	*e*P	**Pg**	**09 58 31.4**	**-0.7**
	7.5nm,0.4s						
MTBS				*e*S	**Sg**	**09 59 25.3**	**0.0**
	11nm,0.1s						
TNSS	**Tian-Shan**	**4.24**	**34**	*e*P	**Pg**	**09 58 34.1**	**-0.6**
	7.9nm,0.2s						
TNSS				*e*S	**Sg**	**09 59 30.2**	**+0.5**
	5.8nm,0.3s						
KK31	**Karatay Array**	**4.27**	**327**	⇑Pn	**Pn**	**09 58 22.5**	**+4.1**
	0.9nm,0.3s,baz=138,slow=14,SNR=13						
KK31				⇑Lg	Lg	09 59 29.3	
	3.2nm,0.3s						
KRBS	**Karabastau**	**4.38**	**19**	*e*P	**Pg**	**09 58 36.3**	**-1.0**
	3.7nm,0.2s						
KRBS				*e*S	**Sg**	**09 59 34.1**	**0.0**
	12nm,0.0s						
BRLS	**Borolday**	**4.52**	**321**	*e*P	**Pg**	**09 58 37.6**	**-2.3**
	2.7nm,0.5s						
BRLS				*e*S	**Sg**	**09 59 36.1**	**-2.4**
	14nm,0.8s						
KTBS	**Karatobe**	**4.71**	**27**	*e*P	**Pg**	**09 58 42.3**	**-1.2**
	3.9nm,0.1s						
KTBS				*e*S	**Sg**	**09 59 44.3**	**-0.2**
	32nm,0.1s						
KUU	**Kurty**	**4.75**	**24**	*e*P	**Pg**	**09 58 43.0**	**-1.4**
	3.3nm,0.1s						
KUU				*e*S	**Sg**	**09 59 45.1**	**-0.8**
	18nm,0.1s						
CHKK	**Chushkaly**	**4.94**	**29**	*e*P	**Pg**	**09 58 46.9**	**-1.1**
	3.5nm,0.8s						
CHKK				*e*S	**Sg**	**09 59 52.1**	**+0.1**
	6.8nm,0.1s						
SATY	**Saty**	**4.97**	**44**	*e*P	**Pg**	**09 58 47.3**	**-1.4**
	3.7nm,0.1s						
SATY				*e*S	**Sg**	**09 59 53.0**	**-0.1**
	6.7nm,0.0s						
KPKS

TORD				LR	LR	10 12 57.9			
	comp=Z,143nm,18.3s,baz=208,slow=39								
	comp=Z,0.7nm,0.3s								
TORD	**Torodi Ar. Bea**	**22.56**	**102**	IAmb	IAmb	10 03 29.8			
	comp=Z,13nm,1.0s								
TAM	**Tamanrasset**	**24.93**	**77**	P	**P**	**10 03 42.7**	**-0.5**		
TAM				IAmb	IAmb	10 03 49.6			
	comp=Z,3.9nm,0.7s								
ESDC	**Sonseca Array**	**25.04**	**32**	P	**P**	**10 03 43.2**	**-0.6**		
	comp=Z,1.1nm,0.7s,baz=221,slow=10,SNR=6.1								
	comp=Z,1.1nm,0.7s								
RCBR	**Riachuelo**	**28.99**	**212**	LR	LR	10 13 32.6			
	comp=Z,62nm,18.6s,baz=152,slow=32								
VAE	**Valguarnera**	**35.72**	**52**	LR	LR	10 20 50.7			
	comp=Z,148nm,18.4s,baz=272,slow=38								
GERES	**GERESS Array B**	**40.54**	**35**	P	**P**	**10 06 00.0**	**+1.1**		
	comp=Z,0.4nm,0.2s,baz=246,slow=9.8,SNR=6.3								
	comp=Z,0.4nm,0.2s								
GERES	**GERESS Array B**	**40.54**	**35**	P	**P**	**10 05 58.6**	**-0.3**		
CLL	**Collm**	**41.62**	**32**	*e*P	**P**	**10 06 09.0**	**+1.4**		
LMN	**Caledonia Moun**	**44.70**	**316**	P	**P**	**10 06 31.5**	**-1.1**		
LMN				IAmb	IAmb	10 07 09.2			
	comp=Z,21nm,1.4s								
BORG	**Borgarnes**	**45.43**	**360**	LR	LR	10 20 33.1			
	comp=Z,39nm,18.5s,baz=205,slow=29								
EMMW	**East Machias**	**46.08**	**314**	P	**P**	**10 06 43.0**	**-0.5**		
F64A	**Sherman**	**47.03**	**315**	P	**P**	**10 06 50.8**	**-0.3**		
F64A				IAmb	IAmb	10 06 51.5			
	comp=Z,5.1nm,0.7s								
PQI	**Presque Isle**	**47.07**	**316**	P	**P**	**10 06 50.5**	**-0.8**		
NOA	**NORSAR Array B**	**47.46**	**21**	LR	LR	10 25 33.4			
	comp=Z,15nm,19.1s,baz=310,slow=34								
HFS	**Hagfors**	**47.68**	**23**	LR	LR	10 26 17.1			
	comp=Z,24nm,20.2s,baz=187,slow=35								
D62A	**Allapoint, All**	**47.88**	**317**	P	**P**	**10 06 56.9**	**-0.7**		
E62A	**Clayton Lake**	**48.04**	**316**	P	**P**	**10 06 57.4**	**-1.5**		
E62A				IAmb	IAmb	10 06 59.6			
	comp=Z,4.2nm,0.8s								
SCHQ	**Schefferville**	**49.60**	**327**	P	**P**	**10 07 10.4**	**-0.3**		
	comp=Z,3.3nm,0.7s,baz=89,slow=9.4,SNR=4.1								
	comp=Z,3.3nm,0.7s								
SCHQ	**Schefferville**	**49.60**	**327**	P	**P**	**10 07 10.1**	**-0.7**		
SCHQ				IAmb	IAmb	10 07 11.2			
	comp=Z,4.8nm,0.8s								
AKASG	**Malin Array Be**	**50.34**	**39**	P	**P**	**10 07 16.9**	**+0.5**		
	comp=Z,1.1nm,0.6s,baz=249,slow=7.9,SNR=4.1								
	comp=Z,1.1nm,0.6s								
BRTR	**Keskin Array B**	**50.86**	**54**	P	**P**	**10 07 21.6**	**+0.9**		
	comp=Z,1.7nm,0.6s,baz=252,slow=6.5,SNR=10.0								
	comp=Z,1.7nm,0.6s								
BRTR	**Keskin Array B**	**50.86**	**54**	P	**P**	**10 07 21.1**	**+0.4**		
FINES	**FINESS Array B**	**53.31**	**26**	P	**P**	**10 07 37.9**	**-0.5**		
	comp=Z,2.8nm,0.8s,baz=215,slow=4.6,SNR=6.1								
	comp=Z,2.8nm,0.8s								
TKL	**Tuckaleechee C**	**57.20**	**300**	LR	LR	10 28 43.4			
	comp=Z,50nm,19.8s,baz=300,slow=32								
CPUP	**Villa Florida**	**57.49**	**219**	LR	LR	10 29 59.0			
	comp=Z,37nm,20.6s,baz=250,slow=33								
ARCES	**ARCESS Array B**	**57.57**	**18**	P	**P**	**10 08 09.6**	**+0.7**		
	comp=Z,1.5nm,0.8s,baz=218,slow=8.0,SNR=4.8								
	comp=Z,1.5nm,0.8s								
LPAZ	**La Paz**	**58.34**	**236**	P	**P**	**10 08 16.0**	**+0.1**		
	comp=Z,2.3nm,0.9s,baz=17,slow=6.0,SNR=5.3								
	comp=Z,2.3nm,0.9s								
LPAZ	**La Paz**	**58.34**	**236**	P	**P**	**10 08 15.9**	**+0.1**		
LPAZ				IAmb	IAmb	10 08 54.6			
	comp=Z,5.8nm,1.5s								
WMOK	**Wichita Mounta**	**69.51**	**301**	P	**P**	**10 09 28.4**	**-0.2**		
WMOK				IAmb	IAmb	10 09 28.9			
	comp=Z,3.0nm,0.9s								
TXAR	**Lajitas Array**	**74.67**	**296**	P	**P**	**10 09 59.7**	**+0.1**		
	comp=Z,0.5nm,0.8s,baz=102,slow=7.9,SNR=8.6								
	comp=Z,0.5nm,0.8s								
TXAR	**Lajitas Array**	**74.67**	**296**	P	**P**	**10 09 59.1**	**-0.6**		
YKA	**Yellowknife Ar**	**74.76**	**331**	P	**P**	**10 09 59.2**	**-0.2**		
	comp=Z,0.2nm,0.7s,baz=76,slow=6.6,SNR=3.0								
	comp=Z,0.2nm,0.7s								
ANMO	**Albuquerque**	**75.65**	**302**	P	**P**	**10 10 05.9**	**+0.6**		
	comp=Z,1.4nm,0.7s,baz=90,slow=4.2,SNR=8.9								
	comp=Z,1.4nm,0.7s								
ANMO	**Albuquerque**	**75.65**	**302**	P	**P**	**10 10 04.8**	**-0.5**		
R11A	**Troy Canyon, C**	**81.80**	**308**	P	**P**	**10 10 38.7**	**-0.4**		
NVAR	**Mina Array Bea**	**83.79**	**308**	P	**P**	**10 10 48.4**	**-1.2**		
	comp=Z,0.3nm,0.7s,baz=83,slow=7.3,SNR=4.0								
	comp=Z,0.3nm,0.7s								
ILAR	**Eielson Array**	**86.61**	**340**	P	**P**	**10 11 03.6**	**+0.7**		
	comp=Z,0.8nm,0.8s,baz=32,slow=4.0,SNR=8.8								
	comp=Z,0.8nm,0.8s								

MOS ***27*** *10:13:04.2±1.0, 31.76N×104.44E, h16km, mb4.9/34, Error ellipse: s-maj=8.1km s-min=5.7km az=104.2*

NEIC ***27*** *10:13:05.7±2.0, 31.85N±0.08×104.44E±0.09, h10km±1km, mb4.8/98, Error ellipse: s-maj=13.1km s-min=12.6km az=222.0*

BJI ***27*** *10:13:06.0±0.0, 31.89N×104.41E, h10km, mb4.6/39, mB4.6/22, ML4.8/27, Ms4.5/52, Ms7 4.3/47*

IDC ***27*** *10:13:09.6±3.8, 31.97N×104.57E, h44km±37km, mb4.3/21, mbtmp4.5/22, ML4.6/1, MS3.7/32, Error ellipse: s-maj=17.7km s-min=11.6km az=44.0*

ISC 27 10:13:06.3±0.3, 31.76N±0.03×104.42E±0.03, h15km, n289, σ1s88/258, mb4.8/110, MS3.8/36, 12C-3D, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**1.01**	**214**	⇑*i*Pg	**Pb**	**10 13 26.3**	**+0.7**
CD2				Sg	**Sg**	**10 13 42.5**	**+3.2**
CD2				smax	smax		
	comp=E,31μm,0.9s						
LZH	**Lanzhou**	**4.34**	**354**	Pn	**Pn**	**10 14 12.5**	**+0.5**
LZH				Pg	**Pb**	**10 14 25.0**	**+2.5**
LZH				Sn	**Sn**	**10 15 02.0**	**-0.5**
LZH				Sg	**Sb**	**10 15 18.3**	**+3.5**
LZH				smax	smax		
	comp=N,4μm,1.0s						
LZH				smax	smax		
	comp=E,6μm,1.1s						
LZH				LR	LR		
	comp=N,10μm,5.0s						
LZH				LR	LR		
	comp=E,8μm,5.2s						
LZH				LR	LR		
	comp=Z,9μm,6.5s						
XAN	**Xi'an**	**4.42**	**58**	Pn	**Pn**	**10 14 11.0**	**-1.9**
XAN				Pg	**Pb**	**10 14 24.0**	**+0.3**
XAN				Sg	**Sb**	**10 15 16.8**	**-0.1**
XAN				smax	smax		
	comp=N,3μm,1.2s						
XAN				smax	smax		
	comp=E,4μm,0.8s						
XAN				LR	LR		
	comp=N,6μm,7.6s						
XAN				LR	LR		
	comp=E,6μm,7.0s						
XAN				LR	LR		
	comp=Z,5μm,7.9s						
ENH	**Enshi**	**4.60**	**107**		**Pn**	**10 14 16.2**	**+0.9**
GYA	**Guiyang**	**5.63**	**159**	⇓*i*Pn	**Pn**	**10 14 31.5**	**+1.8**
GYA				Sn	**Sn**	**10 15 37.8**	**+3.6**
GYA				smax	smax		
	comp=N,1μm,1.1s						
GYA				smax	smax		
	comp=E,1μm,0.8s						
GYA				LR	LR		
	comp=N,2μm,5.2s						
GYA				LR	LR		
	comp=E,2μm,5.4s						
GYA				LR	LR		
	comp=Z,2μm,5.8s						
PZH	**PanZhiHua**	**5.73**	**205**	Pn	**Pn**	**10 14 33.8**	**+2.7**
PZH				Sn	Sn	10 15 48.0	+11
PZH				Sg	**Sg**	**10 16 12.3**	**+1.9**
PZH				smax	smax		
	comp=N,340nm,1.4s						
PZH				smax	smax		
	comp=E,300nm,1.1s						
PZH				LR	LR		
	comp=N,2μm,9.8s						
PZH				LR	LR		
	comp=E,2μm,10.3s						
PZH				LR	LR		
	comp=Z,2μm,10.1s						
KMI	**Kunming**	**6.77**	**193**	⇑Pn	**Pn**	**10 14 46.5**	**+1.1**
KMI				Sn	**Sn**	**10 16 04.5**	**+2.1**
KMI				smax	smax		
	comp=N,140nm,1.5s						
KMI				smax	smax		
	comp=E,190nm,1.9s						
KMI				LR	LR		
	comp=N,2μm,8.1s						
KMI				LR	LR		
	comp=E,2μm,9.5s						
KMI				LR	LR		
	comp=Z,2μm,9.1s						
LYN	**LuoYang**	**7.30**	**65**	*e*Pn	**Pn**	**10 14 50.0**	**-2.5**
LYN				Sn	**Sn**	**10 16 08.0**	**-7.1**
LYN				LR	LR		
	comp=N,4μm,6.4s						
LYN				LR	LR		
	comp=Z,2μm,8.2s						
CNSH	**ChangSha**	**8.20**	**114**	⇓P	Pn	10 14 58.0	-6.8
CNSH				S	Sn	10 16 26.5	-11
CNSH				smax	smax		
	comp=N,490nm,1.0s						
CNSH				smax	smax		
	comp=E,450nm,1.1s						
CNSH	**ChangSha**	**8.20**	**114**	*e*P	**Pn**	**10 15 04.0**	**-0.8**
CNSH				smax	smax		
	comp=E,490nm,1.0s						
CNSH				smax	smax		
	comp=E,450nm,0.9s						
GULI	**GuiLin**	**8.30**	**139**	⇓P	Pn	10 14 59.3	-6.9
GULI				S	Sn	10 16 25.5	-14
GULI				LR	LR		
	comp=N,2μm,7.0s						
GULI				LR	LR		
	comp=E,1μm,7.6s						
GULI				LR	LR		
	comp=Z,2μm,11.9s						
GTA	**Gaotai**	**8.51**	**335**	P	**Pn**	**10 15 08.5**	**-0.6**
GTA				pP		10 15 12.0	
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,31nm,4.0s						
GTA				LR	LR		
	comp=Z,2μm,13.4s						
GTA				LR	LR		
	comp=Z,2μm,13.8s						
GTA				LR	LR		
	comp=Z,2μm,10.2s						
WHN	**Wuhan**	**8.60**	**96**	⇑P	**Pn**	**10 15 09.8**	**-0.5**
WHN				pP		10 15 13.5	
WHN				sP		10 15 17.3	
WHN				pmax	pmax		
	comp=Z,52nm,0.3s						
WHN				LR	LR		
	comp=Z,10μm,12.3s						
WHN				LR	LR		
	comp=Z,6μm,11.7s						
WHN				LR	LR		
	comp=Z,5μm,6.2s						
GOMU	**GeErMu**	**9.12**	**302**	P	**Pn**	**10 15 20.8**	**+3.1**
GOMU				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GOMU				pmax	pmax		
	comp=Z,74nm,4.7s						
GOMU				LR	LR		
	comp=Z,1μm,8.3s						
GOMU				LR	LR		
	comp=Z,740nm,7.2s						
GOMU				LR	LR		
	comp=Z,990nm,6.8s						
BTO	**Baotou**	**9.92**	**26**	*e*P	**Pn**	**10 15 28.0**	**-0.5**
BTO				smax	smax		
	comp=Z,690nm,0.9s						
BTO				smax	smax		
	comp=Z,1μm,1.0s						
HNS	**HongShan**	**10.18**	**54**	*e*P	**Pn**	**10 15 36.5**	**+4.6**
HNS				S	**Sn**	**10 17 33.5**	**+7.8**
HNS				LR	LR		
	comp=Z,1μm,11.3s						
HNS				LR	LR		
	comp=Z,920nm,8.8s						
HNS				LR	LR		
	comp=Z,1μm,10.7s						
SLVN	**Son La**	**10.39**	**183**		**Pn**	**10 15 35.8**	**+0.8**
HHC	**Hu-ho-hao-te**	**10.75**	**30**	*e*P	**Pn**	**10 15 41.0**	**+1.2**
HHC				PP	**PnPn**	**10 15 50.5**	**+3.0**
HHC				S	**Sn**	**10 17 35.8**	**-4.0**
HHC				SS	**SnSn**	**10 17 56.8**	**+4.9**
HHC				pmax	pmax		
	comp=Z,39nm,0.9s						
HHC				pmax	pmax		
	comp=Z,170nm,4.3s						
HHC				LR	LR		
	comp=Z,2μm,8.7s						
HHC				LR	LR		
	comp=Z,3μm,8.2s						
HHC				LR	LR		
	comp=Z,3μm,10.5s						
TIA	**Tai'an**	**11.44**	**64**	*e*P	**Pn**	**10 15 53.5**	**+4.3**
TIA				pmax	pmax		
	comp=Z,6.0nm,0.5s						
TIA				pmax	pmax		
	comp=Z,120nm,6.5s						
TIA				LR	LR		
	comp=Z,510nm,7.8s						
TIA				LR	LR		
	comp=Z,680nm,7.7s						
TIA				LR	LR		
	comp=Z,450nm,8.3s						
LSA	**Lhasa**	**11.60**	**263**		**Pn**	**10 15 53.1**	**+1.4**
LSA	**Lhasa**	**11.60**	**263**	P	**Pn**	**10 15 53.2**	**+1.4**
GZH	**Guangzhou**	**11.72**	**135**	P	**Pn**	**10 15 50.5**	**-2.5**
GZH				S	**Sn**	**10 18 02.8**	**-0.8**
NJ2	**Nanjing**	**12.27**	**85**	*e*P	Pn	10 15 57.0	-3.6
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
NJ2				LR	LR		
	comp=N,1μm,8.5s						
NJ2				LR	LR		
	comp=E,2μm,8.5s						
NJ2				LR	LR		
	comp=Z,1μm,9.0s						
BJT	**Baijiatuan**	**12.59**	**46**	Pn	**Pn**	**10 16 03.0**	**-1.9**
BJT	**Baijiatuan**	**12.59**	**46**	P	**Pn**	**10 16 03.0**	**-1.9**
SHL	**Shillong**	**12.61**	**244**	Pn	**Pn**	**10 16 04.2**	**-1.2**
SHL	**Shillong**	**12.61**	**244**	P	**Pn**	**10 16 04.2**	**-1.2**
QIZ	**Qiongzhong**	**13.59**	**158**	P	Pn	10 16 24.8	+6.2
QIZ				S	**Sn**	**10 18 55.8**	**+6.5**
QIZ				LR	LR		
	comp=Z,1μm,8.8s						
QIZ				LR	LR		
	comp=Z,1μm,11.2s						
QIZ				LR	LR		
	comp=Z,1μm,12.3s						
CHTO	**Chiang Mai**	**13.80**	**202**	Pn	**Pn**	**10 16 22.8**	**+1.3**
CHTO	**Chiang Mai**	**13.80**	**202**	P	**Pn**	**10 16 22.8**	**+1.3**
CM31	**Chiang Mai Arr**	**14.13**	**202**	P	**Pn**	**10 16 28.6**	**+2.5**
CMAR	**Chiang Mai Arr**	**14.13**	**202**	P	**Pn**	**10 16 29.6**	**+3.5**
	comp=Z,1.0nm,0.3s,baz=10,slow=11,SNR=32						
CMAR				LR	LR	10 22 37.7	
	comp=Z,510nm,18.4s,baz=5.0,slow=40						
	comp=Z,6.2nm,0.6s						
CMAR	**Chiang Mai Arr**	**14.13**	**202**	Pn	**Pn**	**10 16 27.8**	**+1.6**
SSE	**Sheshan**	**14.34**	**88**	P	**Pn**	**10 16 27.3**	**-1.5**
SSE				S	**Sn**	**10 19 05.8**	**-1.7**
SSE				pmax	pmax		
	comp=Z,22nm,0.8s						
SSE				pmax	pmax		
	comp=Z,69nm,5.6s						
SSE				LR	LR		
	comp=Z,1μm,19.6s						
SSE				LR	LR		
	comp=Z,340nm,19.8s						
TAPN	**Taplejung**	**15.19**	**257**	*e*P	**Pn**	**10 16 39.0**	**-1.6**
XLT	**XiLinHaoTe**	**15.21**	**34**	*e*P	**Pn**	**10 16 41.0**	**+0.4**
XLT				pP	P	10 16 44.5	-1.0
XLT				sP	pP	10 16 47.5	-2.6
XLT				S	**Sn**	**10 19 34.0**	**+5.2**
XLT				sS	S	10 19 40.8	-4.8
XLT				SS	**SnSn**	**10 19 46.0**	**+4.4**
XLT				pmax	pmax		
	comp=Z,17nm,1.0s						
XLT				pmax	pmax		
	comp=Z,83nm,3.7s						
XLT				LR	LR		
	comp=Z,95nm,9.4s						
XLT				LR	LR		
	comp=Z,770nm,8.4s						
XLT				LR	LR		
	comp=Z,1μm,10.2s						
SONM	**Songino Array**	**16.13**	**5**	P	**Pn**	**10 16 53.5**	**+0.9**
	comp=Z,6.3nm,0.8s,baz=189,slow=14,SNR=8.8						
SONM				LR	LR	10 23 27.6	
	comp=Z,536nm,21.4s,baz=202,slow=39						
SONM	**Songino Array**	**16.13**	**5**		**Pn**	**10 16 52.2**	**-0.4**
SONM	**Songino Array**	**16.13**	**5**	P	**Pn**	**10 16 52.2**	**-0.4**
SONM				pmax	pmax		
	comp=Z,25nm,1.0s						
ULN	**Ulaanbaatar**	**16.21**	**6**	P	**Pn**	**10 16 52.4**	**-1.3**
ULN	**Ulaanbaatar**	**16.21**	**6**	P	**Pn**	**10 16 52.4**	**-1.3**
ULN				pmax	pmax		
	comp=Z,30nm,1.1s						
RAMN	**Ramite**	**16.25**	**257**	*e*P	**Pn**	**10 16 52.5**	**-1.9**
JIRN	**Jiri**	**16.35**	**260**	*e*P	**Pn**	**10 16 53.9**	**-1.9**
YHNB	**Yeheng**	**16.52**	**111**	P	**Pn**	**10 17 00.5**	**+2.8**
GUN	**Gumba**	**16.53**	**261**	*e*P	**Pn**	**10 16 56.6**	**-1.5**
SSLB	**Suanglung**	**16.64**	**114**	P	**Pn**	**10 17 00.3**	**+1.2**
PKI	**Pulchoki**	**17.04**	**261**	*e*P	**Pn**	**10 17 02.7**	**-1.7**
	comp=Z,119nm,1.0s						
PKIN	**Phulchoki**	**17.05**	**261**	*e*P	**Pn**	**10 17 02.6**	**-1.9**
GKN	**Gorkha**	**17.55**	**263**	*e*P	**Pn**	**10 17 09.9**	**-0.8**
	comp=Z,41nm,0.8s						
WMQ	**Urumqi**	**17.84**	**317**	*e*P	**Pn**	**10 17 15.5**	**+1.5**
WMQ				sP	pP	10 17 21.5	+2.3
WMQ				PP	**PnPn**	**10 17 27.3**	**+2.5**
WMQ				pmax	pmax		
	comp=Z,24nm,0.7s						
WMQ				LR	LR		
	comp=Z,1μm,11.5s						
WMQ				LR	LR		
	comp=Z,1μm,9.3s						
KOLN	**Koldanda**	**18.50**	**263**	*e*P	**P**	**10 17 19.2**	**-3.0**
ZAK	**Zakamensk**	**18.63**	**358**	*e*P	**P**	**10 17 21.9**	**-1.4**
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
PYUN	**Piuthan**	**18.92**	**264**	*e*P	**P**	**10 17 25.4**	**-1.5**
	comp=Z,42nm,0.9s						
MOY	**Mondy**	**20.05**	**354**	*e*P	**Pn**	**10 17 44.9**	**+4.2**
MOY				pmax	pmax		
	comp=Z,30nm,2.3s						
KSCHJ	**Chungju**	**20.10**	**69**	P	**P**	**10 17 38.9**	**-0.5**
KSCHJ				IAmb	IAmb	10 17 50.8	
	comp=Z,27nm,0.7s						
KS19	**Wonju Array Si**	**20.11**	**67**	P	**P**	**10 17 39.5**	**0.0**
KSAR	**Wonju Array Be**	**20.11**	**67**		**P**	**10 17 40.0**	**+0.5**
KSAR	**Wonju Array Be**	**20.11**	**67**	P	**P**	**10 17 40.0**	**+0.5**
KSRS	**Korea Array**	**20.14**	**67**	P	**P**	**10 17 40.2**	**+0.3**
	comp=Z,6.7nm,0.7s,baz=251,slow=10,SNR=29						
CN2	**Changchun**	**20.45**	**48**	*e*P	Pn	10 17 45.5	+0.1
CN2				S	**S**	**10 21 28.8**	**-2.9**
CN2				pmax	pmax		
	comp=Z,20nm,0.6s						
CN2				LR	LR		
	comp=Z,300nm,10.0s						
CN2				LR	LR		
	comp=Z,200nm,10.0s						
CN2				LR	LR		
	comp=Z,200nm,10.0s						
IRK	**Irkutsk**	**20.47**	**360**	*e*P	**P**	**10 17 43.2**	**-0.2**
IRK				pmax	pmax		
	comp=Z,128nm,0.7s						
SEHB	**SEOHWA**	**20.55**	**65**	P	**P**	**10 17 43.5**	**-0.8**
HIA	**Hailar**	**20.95**	**29**	P	**P**	**10 17 50.7**	**+2.2**
HIA	**Hailar**	**20.95**	**29**	P	**P**	**10 17 50.7**	**+2.2**
HIA				pmax	pmax		
	comp=Z,30nm,1.3s						
JOW	**Kunigami**	**21.36**	**97**	P	**P**	**10 17 49.5**	**-3.8**
	comp=Z,7.8nm,0.4s,baz=270,slow=20,SNR=1.8						
JOW				LR	LR	10 26 15.2	
	comp=Z,128nm,20.0s,baz=284,slow=37						
JOW	**Kunigami**	**21.36**	**97**	IAmb	IAmb	10 17 53.0	
	comp=Z,43nm,1.2s						
JNU	**Nakatsue**	**22.36**	**79**	P	**P**	**10 18 02.3**	**-1.6**
	comp=Z,8.2nm,0.3s,baz=227,slow=0.4,SNR=5.4						
	comp=Z,8.2nm,0.3s						
MK31	**Makanchi Array**	**22.67**	**318**	P	**P**	**10 18 06.4**	**-0.6**
MK31	**Makanchi Array**	**22.67**	**318**	P	**P**	**10 18 06.4**	**-0.6**
MK31				pmax	pmax		
	comp=Z,15nm,1.0s						
MKAR	**Makanchi Array**	**22.67**	**318**	P	**P**	**10 18 06.8**	**-0.3**
	comp=Z,14nm,0.9s,baz=114,slow=12,SNR=48						
	comp=Z,14nm,0.9s						
MKAR	**Makanchi Array**	**22.67**	**318**	P	**P**	**10 18 06.6**	**-0.5**
MAKZ	**Makanchi**	**22.86**	**318**	P	**P**	**10 18 08.7**	**-0.3**
MAKZ				IAmb	IAmb	10 18 15.7	
	comp=Z,36nm,1.5s						
MAKZ	**Makanchi**	**22.86**	**318**	P	**P**	**10 18 08.7**	**-0.3**
MAKZ				pmax	pmax		
	comp=Z,36nm,1.5s						
SRIT	**Nakonsritamara**	**23.48**	**192**	P	**P**	**10 18 16.6**	**+1.1**
MDJ	**Mudanjiang**	**23.48**	**50**	P	**P**	**10 18 17.3**	**+2.0**
MDJ				sP	pP	10 18 21.8	+1.7
MDJ				S	**S**	**10 22 33.0**	**+4.6**
MDJ				pmax	pmax		
	comp=Z,15nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,65nm,3.8s						
MDJ				LR	LR		
	comp=Z,340nm,11.9s						
MDJ				LR	LR		
	comp=Z,250nm,15.7s						
MDJ				LR	LR		
	comp=Z,390nm,11.9s						
KSH	**Kashi**	**24.31**	**296**	P	**P**	**10 18 27.0**	**+3.6**
KSH				pP	pP	10 18 30.3	+1.9
KSH				sP	sP	10 18 32.8	+2.4
KSH				pmax	pmax		
	comp=Z,14nm,0.5s						
KSH				pmax	pmax		
	comp=Z,210nm,6.7s						
USRK	**Ussuriysk Ar.**	**24.91**	**52**	P	**P**	**10 18 30.1**	**+1.4**
	comp=Z,4.6nm,0.7s,baz=255,slow=9.7,SNR=13						
USRK	**Ussuriysk Ar.**	**24.91**	**52**	P	**P**	**10 18 28.3**	**-0.3**
USRK	**Ussuriysk Ar.**	**24.91**	**52**	P	**P**	**10 18 28.3**	**-0.3**
AAK	**Ala-Archa**	**26.07**	**303**	P	**P**	**10 18 42.9**	**+3.5**
	comp=Z,1.4nm,0.3s,baz=127,slow=5.1,SNR=2.0						
AAK	**Ala-Archa**	**26.07**	**303**	*ce*P	**P**	**10 18 40.8**	**+1.4**
AAK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
ZAA0	**Zalesovo Array**	**26.25**	**333**	P	**P**	**10 18 40.1**	**-0.7**
ZAA0				IAmb	IAmb	10 18 43.4	
	comp=Z,16nm,0.8s						
ZALV	**Zalesovo Beam**	**26.25**	**333**	P	**P**	**10 18 40.0**	**-0.8**
	comp=Z,14nm,0.6s,baz=129,slow=9.3,SNR=27						
ZALV				LR	LR	10 29 42.1	
	comp=Z,167nm,21.2s,baz=141,slow=38						
	comp=Z,14nm,0.6s						
ZALV	**Zalesovo Beam**	**26.25**	**333**	P	**P**	**10 18 40.2**	**-0.6**
ZALV	**Zalesovo Beam**	**26.25**	**333**	*i* P	**P**	**10 18 40.0**	**-0.8**
ZALV				pmax	pmax		
	comp=Z,15nm,0.6s						
BOD	**Bodaibo**	**26.88**	**11**	*e*P	**P**	**10 18 47.4**	**+1.1**
BOD				pmax	pmax		
	comp=Z,11nm,1.7s						
KURBB	**Kurchatov Arra**	**26.88**	**322**	P	**P**	**10 18 46.2**	**-0.3**
	comp=Z,7.3nm,0.7s,baz=129,slow=9.0,SNR=37						
KURBB				PcP	**PcP**	**10 22 06.8**	**-1.7**
	comp=Z,1.0nm,0.8s,baz=119,slow=2.6,SNR=3.0						
KURBB				LR	LR	10 28 51.2	
	comp=Z,129nm,19.4s,baz=94,slow=35						
	comp=Z,7.3nm,0.7s						
KURK	**Kurchatov**	**26.89**	**322**		**PcP**	**10 22 06.8**	**-1.7**
KURK	**Kurchatov**	**26.89**	**322**	P	**P**	**10 18 45.1**	**-1.4**
KURK	**Kurchatov**	**26.89**	**322**	*ce*P	**P**	**10 18 46.7**	**+0.2**
KURK				pmax	pmax		
	comp=Z,16nm,1.7s						
KLR	**Kul'dur**	**26.92**	**42**	P	**P**	**10 18 45.6**	**-1.2**
	comp=Z,6.5nm,0.9s,baz=244,slow=9.3,SNR=12				

comp=Z,78nm,21.4s,baz=250,slow=34
GAR Garm 28.61 294 P **P** **10 19 01.7 -0.5**
GAR IAmb IAmb 10 19 06.9
comp=Z,22nm,1.3s
KKAR Karatay Array 29.02 303 P **P** **10 19 05.3 -0.4**
KKAR Karatay Array 29.02 303 P **P** **10 19 05.3 -0.4**
PSI Prapat 29.26 191 P **P** **10 19 08.5 +0.4**
PSI pmax pmax
comp=Z,14nm,0.8s
RPSI Rantau Prapat 29.37 191 P **P** **10 19 08.5 -0.4**
RPSI IAmb IAmb 10 19 09.7
comp=Z,14nm,0.8s
CHGR Chuyangaron 29.49 293 P **P** **10 19 08.8 -1.2**
CHGR IAmb IAmb 10 19 11.2
comp=Z,35nm,1.5s
CHGR Chuyangaron 29.49 293 P **P** **10 19 08.8 -1.2**
CHGR pmax pmax
comp=Z,35nm,1.5s
KBL Kabul 29.66 285 P **P** **10 19 11.9 +0.3**
KBL IAmb IAmb 10 19 14.3
comp=Z,15nm,0.9s
KBL Kabul 29.66 285 P **P** **10 19 11.9 +0.3**
KBL pmax pmax
comp=Z,15nm,1.0s
JHJ Hachijo jima 2 29.80 78 LR LR 10 31 05.2
comp=Z,103nm,21.0s,baz=277,slow=36
DAV Davao City (W) 31.52 137 LR LR 10 34 01.7
comp=Z,61nm,18.2s,baz=334,slow=40
ASAJ Asahikawa 32.26 57 LR LR 10 32 11.1
comp=Z,50nm,18.4s,baz=341,slow=36
PALK Pallekele 32.90 227 LR LR 10 33 57.3
comp=Z,64nm,21.9s,baz=158,slow=38
JCJ Chichijima 33.11 88 LR LR 10 32 05.9
comp=Z,66nm,21.6s,baz=245,slow=34
YAK Yakutsk 34.40 21 LR LR 10 34 38.0
comp=Z,154nm,19.0s,baz=268,slow=38
YAK Yakutsk 34.40 21 *i* P **P** **10 19 52.7 +0.1**
YAK pmax pmax
comp=Z,12nm,0.9s
HRA Herat 35.26 286 P **P** **10 19 59.8 -0.9**
HRA IAmb IAmb 10 20 02.3
comp=Z,10.0nm,0.8s
APSI Ampana 36.37 150 P **P** **10 20 12.6 +2.6**
comp=Z,15nm,0.8s
ABKAR Akbulak array 37.44 311 P **P** **10 20 18.6 -0.3**
TTSI Tana Toraja 37.58 154 P **P** **10 20 22.1 +1.7**
comp=Z,24nm,1.1s
GEYT Alibeck 38.19 292 P **P** **10 20 26.4 +0.9**
comp=Z,14nm,0.9s,baz=141,slow=5.7,SNR=9.6
comp=Z,14nm,0.9s
GEYT Alibeck 38.19 292 P **P** **10 20 26.5 +1.1**
GYA0 ALIBECK ARRAY 38.19 292 P **P** **10 20 26.6 +1.2**
GYA0 pmax pmax
comp=Z,21nm,1.1s
GYA0B ALIBECK ARRAY 38.19 292 P **P** **10 20 26.6 +1.2**
GYA0B IAmb IAmb 10 20 27.8
comp=Z,21nm,1.1s
SPSI Sidrap Palu 38.41 155 P **P** **10 20 28.7 +1.3**
comp=Z,26nm,1.1s
SVE Sverdlovsk 39.14 323 *e*P **P** **10 20 33.5 +0.4**
SVE pmax pmax
comp=Z,22nm,1.2s
KAPI Kappang 39.38 155 P **P** **10 20 35.8 +0.3**
KAPI IAmb IAmb 10 20 37.4
comp=Z,39nm,1.3s
KAPI Kappang 39.38 155 P **P** **10 20 35.8 +0.3**
KAPI pmax pmax
comp=Z,39nm,1.3s
ARU Arti 40.08 322 P **P** **10 20 40.4 -0.5**
ARU IAmb IAmb 10 20 44.7
comp=Z,30nm,0.9s
ARU Arti 40.08 322 *c i* P **P** **10 20 40.8 -0.1**
ARU S **S** **10 26 49.3 +2.9**
ARU SS **SS** **10 29 37.6 -6.0**
ARU pmax pmax
comp=Z,32nm,0.9s
GUMO Guam 41.19 107 LR LR 10 38 32.6
comp=Z,32nm,19.7s,baz=202,slow=37
SIJI Sorong 41.23 137 LR LR 10 37 40.6
comp=Z,42nm,18.5s,baz=71,slow=36
MA2 Magadan 41.40 34 LR LR 10 39 35.9
comp=Z,116nm,19.2s,baz=206,slow=38
TIXI Tiksi 42.06 11 LR LR 10 39 37.3
comp=Z,284nm,18.0s,baz=182,slow=38
TIXI Tiksi 42.06 11 *i* P **P** **10 20 57.4 +0.4**
TIXI pmax pmax
comp=Z,12nm,1.8s
SEY Seymchan 43.39 30 LR LR 10 40 28.0
comp=Z,211nm,19.3s,baz=258,slow=38
PETK Petropavlovsk- 43.54 45 P P 10 21 05.0 -4.2
comp=Z,2.4nm,0.7s,baz=216,slow=15,SNR=9.0
PETK LR LR 10 41 08.9
comp=Z,53nm,18.2s,baz=268,slow=39
comp=Z,2.4nm,0.7s
WBSI Waikabubak, Su 43.59 158 P **P** **10 21 09.2 -0.8**
comp=Z,152nm,0.8s
KIRV Kirov 45.41 323 *i* P **P** **10 21 25.2 +1.1**
BELG Belogornoye 45.59 314 LR LR 10 41 46.2
comp=Z,159nm,19.2s,baz=134,slow=38
SMPI Sarmi 46.74 129 P **P** **10 21 38.7 +3.6**
comp=Z,962nmcomp=Z,17nm,1.1s
PRGR Permogore 47.86 327 *e*P **P** **10 21 42.3 -0.9**
KBZ Khabaz 49.06 302 P **P** **10 21 52.1 -0.7**
comp=Z,2.6nm,0.7s,baz=116,slow=8.6,SNR=5.0
comp=Z,2.6nm,0.7s
KBZ Khabaz 49.06 302 *ce*P **P** **10 21 53.4 +0.6**
KIV Kislovodsk 49.18 303 ⇑*e*P **P** **10 21 55.1 +1.2**
KIV *e* 10 23 17.5
KIV *e* 10 23 47.7
KIV pmax pmax
comp=Z,15nm,1.1s
KIV MLR MLR
comp=Z,65nm,16.0s
SHA1 Shidzhatmaz 49.23 303 *i* P **P** **10 21 55.1 +0.7**
BILL Bilibino 50.47 25 ⇑*e*P **P** **10 22 02.0 -1.2**
BILL *e* 10 23 21.3
BILL *e* 10 23 56.8
BILL pmax pmax
comp=Z,18nm,1.7s
BILL MLR MLR
comp=Z,160nm,15.0s
KLMR Klimovskoe 50.68 325 *e*P **P** **10 22 03.1 -1.8**
KLMR *e* 10 23 20.8
KLMR pmax pmax
comp=Z,16nm,0.7s
KLMR Klimovskoe 50.68 325 *e*P **P** **10 22 03.2 -1.7**
KLMR AMP 10 22 07.6
comp=Z,16nm,0.7s
KLMR *e*PcP **PcP** **10 23 20.8 -1.2**
VORR Voronezh 50.78 313 *e*P P 10 22 01.8 -4.0
OBN Obninsk 52.18 318 *ce*P **P** **10 22 16.4 +0.3**
OBN *e* 10 23 27.4
OBN *e* 10 24 10.4
OBN *e*S **S** **10 29 44.6 +4.7**
OBN pmax pmax
comp=Z,33nm,1.7s
OBN MLR MLR
comp=Z,82nm,17.0s
KNRA Kununurra 52.63 150 P **P** **10 22 19.6 -0.2**
BR131 Keskin Array S 56.65 299 P **P** **10 22 48.6 -0.6**
BR131 Keskin Array S 56.65 299 P **P** **10 22 48.6 -0.6**
BR131 pmax pmax
comp=Z,6.0nm,0.9s
BRTR Keskin Array B 56.65 299 P **P** **10 22 47.6 -1.6**
comp=Z,2.4nm,0.8s,baz=92,slow=6.7,SNR=9.6
BRTR LR LR 10 52 23.5
comp=Z,36nm,18.9s,baz=82,slow=42
comp=Z,2.4nm,0.8s
BRTR Keskin Array B 56.65 299 P **P** **10 22 46.8 -2.4**
ARA0 ARCESS Array S 56.77 336 *e*P **P** **10 22 48.5 -0.8**
ARCES ARCESS Array B 56.77 336 P **P** **10 22 46.7 -2.7**
comp=Z,3.6nm,0.5s,baz=75,slow=7.6,SNR=27
comp=Z,3.6nm,0.5s
ARCES ARCESS Array B 56.77 336 P **P** **10 22 47.9 -1.5**
ARCES IAmb IAmb 10 23 09.1
comp=Z,19nm,1.5s
ARCES ARCESS Array B 56.77 336 P **P** **10 22 47.9 -1.5**
ARCES pmax pmax
comp=Z,19nm,1.5s
AKASG Malin Array Be 57.13 313 P **P** **10 22 51.1 -1.1**
comp=Z,1.0nm,0.4s,baz=69,slow=6.7,SNR=7.4
AKASG LR LR 10 48 59.9
comp=Z,123nm,18.9s,baz=71,slow=38
comp=Z,1.0nm,0.4s
AKASG Malin Array Be 57.13 313 *i* P **P** **10 22 51.0 -1.2**
AKASG pmax pmax
comp=Z,2.0nm,0.6s
AKBB Malin Array Si 57.13 313 *ce*P **P** **10 22 52.3 +0.1**
FIA1 FINESS Array S 57.17 326 P **P** **10 22 50.5 -1.8**
FIA1 IAmb IAmb 10 22 55.0
comp=Z,13nm,0.8s
FINES FINESS Array B 57.18 326 P **P** **10 22 51.1 -1.2**
comp=Z,8.0nm,0.7s,baz=86,slow=8.4,SNR=16
comp=Z,8.0nm,0.7s
FINES FINESS Array B 57.18 326 P **P** **10 22 50.7 -1.6**
FINES FINESS Array B 57.18 326 *i* P **P** **10 22 51.5 -0.8**
FINES pmax pmax
comp=Z,8.0nm,0.7s
HAMF Hammerfest 57.35 337 *e*P **P** **10 22 53.2 -0.2**
KTK1 Kautokeino 57.61 335 *e*P **P** **10 22 55.2 -0.1**
JETT Jettan, Norway 58.56 336 *e*P **P** **10 23 01.5 -0.5**
COEN Coen 58.71 135 P **P** **10 23 03.6 0.0**
SPITS Spitsbergen Ar 58.77 346 LR LR 10 50 44.3
comp=Z,108nm,19.2s,baz=64,slow=38
WRAB Tennant Creek 58.87 147 *i* P **P** **10 23 04.8 +0.2**
WRAB pmax pmax
comp=Z,30nm,0.9s
WRA Warramunga Arr 58.87 147 P **P** **10 23 05.0 +0.3**
comp=Z,26nm,0.7s,baz=316,slow=12,SNR=315
comp=Z,26nm,0.7s
WRA Warramunga Arr 58.87 147 *i* P **P** **10 23 05.0 +0.3**
WRA pmax pmax
comp=Z,24nm,0.6s
WB2 Warramunga Arr 58.88 147 P **P** **10 23 04.5 -0.2**
PABE Paberze 59.26 319 P **P** **10 23 06.2 -0.7**
MLR Muntele Rosu 60.52 308 LR LR 10 51 54.1
comp=Z,77nm,19.9s,baz=42,slow=38
LOF Lofoten 61.27 335 *e*P **P** **10 23 21.8 +1.3**
MOR8 Moi Rana 61.40 332 *e*P **P** **10 23 20.7 -0.8**
AS31 Alice Springs 61.91 149 P **P** **10 23 25.6 +0.2**
AS31 IAmb IAmb 10 23 27.1
comp=Z,4.2nm,0.7s
ASAR Alice Springs 61.91 149 P **P** **10 23 25.9 +0.5**
comp=Z,11nm,0.5s,baz=334,slow=6.5,SNR=171
ASAR LR LR 10 50 51.3
comp=Z,61nm,20.8s,baz=346,slow=36
comp=Z,11nm,0.5s
NOR Nord 63.04 352 *i* P **P** **10 23 33.1 +0.8**
NOR IAmb IAmb 10 23 35.7
comp=Z,1.8nm,0.7s
VYHS Vyhne 64.23 313 *e*P **P** **10 23 40.6 0.0**
VYHS Vyhne 64.23 313 *e*P **P** **10 23 40.6 0.0**
NB2 NORSAR Subarra 64.25 327 P **P** **10 23 38.8 -1.8**
baz=73,slow=6.9
NB2 NORSAR Subarra 64.25 327 P **P** **10 23 38.8 -1.8**
comp=Z,4.2nm,0.7s,baz=73,slow=6.9
NOA NORSAR Array B 64.25 327 P **P** **10 23 38.9 -1.8**
comp=Z,3.4nm,0.7s,baz=72,slow=6.7,SNR=9.2
comp=Z,3.4nm,0.7s
NC204 NORSAR Array S 64.38 328 P **P** **10 23 40.0 -1.4**
MORC Moravsky Berou 64.60 314 P **P** **10 23 42.6 -0.5**
MORC IAmb IAmb 10 23 46.5
comp=Z,4.1nm,0.8s
MORC Moravsky Berou 64.60 314 P **P** **10 23 42.6 -0.5**
MORC pmax pmax
comp=Z,4.0nm,0.8s
MORC Moravsky Berou 64.60 314 *e*P **P** **10 23 45.7 +2.6**
IDI Anoyia 64.67 297 LR LR 10 56 30.7
comp=Z,35nm,20.6s,baz=78,slow=40
JAVC Velka Javorina 64.83 313 *e*P **P** **10 23 45.3 +0.7**
SMOL Smolenice 65.10 313 *e*P **P** **10 23 47.1 +0.8**
SMOL Smolenice 65.10 313 *e*P **P** **10 23 47.1 +0.8**
MODS Modra-Piesok 65.25 313 *e*P **P** **10 23 46.9 -0.4**
MODS Modra-Piesok 65.25 313 *e*P **P** **10 23 46.9 -0.4**
VRAC Vranov 65.34 314 *e*P **P** **10 23 47.3 -0.6**
KRUC Moravsky 65.55 314 *e*P **P** **10 23 49.0 -0.2**
SKAR Skarslia 65.71 328 *e*P **P** **10 23 49.7 -0.4**
RONA Rosalia, Austr 66.10 312 *e*P **P** **10 23 52.6 -0.2**
comp=Z,4.6nm,0.7s
FORT Forrest 66.11 158 P **P** **10 23 52.6 -0.3**
CONA Conrad Observa 66.29 313 *e*P **P** **10 23 54.3 +0.1**
comp=Z,4.8nm,1.3s
TOLK Toolik Lake Re 66.34 23 IAmb IAmb 10 23 56.2
comp=Z,11nm,1.1s
TTA Tatalina 66.36 30 P P 10 23 50.2 -4.1
TTA IAmb IAmb 10 23 59.1
comp=Z,4.5nm,0.5s
TTA Tatalina 66.36 30 P P 10 23 50.2 -4.1
TTA pmax pmax
comp=Z,4.0nm,0.5s
BRG Berggiesshubel 66.37 316 *e*P **P** **10 23 53.9 -0.6**
BRG Amp 10 23 54.6
comp=Z,4.8nm,0.9s
BRG Berggiesshubel 66.37 316 *e*P **P** **10 23 53.8 -0.6**
BRG pmax pmax
comp=Z,5.0nm,0.9s
H21K Melozitna Rive 66.51 26 IAmb IAmb 10 23 57.9
comp=Z,7.0nm,1.1s
J20K Nowinta River 66.62 28 IAmb IAmb 10 23 58.8
comp=Z,7.1nm,0.8s
CLL Collm 66.76 317 *i* P **P** **10 23 56.6 -0.3**
CLL Collm 66.76 317 *i* P **P** **10 23 56.6 -0.3**
I21K Tanana 67.03 26 IAmb IAmb 10 24 01.5
comp=Z,9.9nm,1.1s
L19K White Mountain 67.16 30 IAmb IAmb 10 24 02.5
comp=Z,5.9nm,1.0s
KHC Kasperske Hory 67.25 315 *e*P **P** **10 24 00.0 -0.1**
KHC Kasperske Hory 67.25 315 *e*P **P** **10 24 00.0 -0.1**
GERES GERESS Array B 67.28 314 P **P** **10 23 59.1 -1.3**
comp=Z,1.9nm,0.7s,baz=74,slow=5.7,SNR=9.6
comp=Z,1.9nm,0.7s
GERES GERESS Array B 67.28 314 P **P** **10 23 59.9 -0.5**
GERES GERESS Array B 67.28 314 P **P** **10 23 59.9 -0.5**
SOKA Soboth 67.28 312 *i* P **P** **10 23 59.8 -0.6**
comp=Z,5.8nm,1.0s
JMIC Jan Mayen 67.29 341 LR LR 10 55 28.4
comp=Z,48nm,20.9s,baz=70,slow=38
SVW2 Sparrevohn 67.30 31 IAmb IAmb 10 24 03.8
comp=Z,8.4nm,1.3s
MLY Manley 67.57 26 IAmb IAmb 10 24 04.3
comp=Z,6.5nm,1.0s
H23K Yukon River 67.64 25 IAmb IAmb 10 24 05.1
comp=Z,7.8nm,0.9s
OBKA Obir 67.66 312 *e*P **P** **10 24 01.8 -1.1**
comp=Z,2.6nm,0.6s
BIOA Bad Ischl, Aus 67.77 313 *i* P **P** **10 24 03.9 +0.5**
comp=Z,4.5nm,0.9s
BPAW Bear Paw Mtn. 67.90 27 IAmb IAmb 10 24 08.9
comp=Z,7.8nm,0.8s
N19K Bonanza Creek 67.91 31 P **P** **10 24 03.5 -0.6**
N19K IAmb IAmb 10 24 06.9
comp=Z,4.3nm,0.8s
M20K Styx River 68.02 30 IAmb IAmb 10 24 08.1
comp=Z,7.7nm,1.1s
DBG Daneborg 68.15 346 *i* P **P** **10 24 05.9 +0.6**
DBG IAmb IAmb 10 24 07.0
comp=Z,2.1nm,0.7s
H24K Noodor Dome 68.24 25 IAmb IAmb 10 24 09.1
comp=Z,5.5nm,1.0s
NEA2 Nenana 68.40 26 IAmb IAmb 10 24 09.9
comp=Z,9.9nm,1.0s
COLA College 68.72 26 P **P** **10 24 08.4 -0.6**
COLA College 68.72 26 P **P** **10 24 08.4 -0.6**
COLA pmax pmax
comp=Z,17nm,1.2s
ABTA Abfaltersbach 68.85 313 *i* P **P** **10 24 09.4 -0.9**
comp=Z,6.7nm,1.3s
RND Reindeer 69.06 27 IAmb IAmb 10 24 15.0
comp=Z,14nm,1.4s
ILAR Eielson Array 69.13 26 P **P** **10 24 09.1 -2.5**
comp=Z,1.7nm,0.9s,baz=285,slow=5.1,SNR=14
comp=Z,1.7nm,0.9s
ILAR Eielson Array 69.13 26 P **P** **10 24 09.5 -2.1**
ILAR Eielson Array 69.13 26 P **P** **10 24 09.5 -2.1**
WTTA Wattenberg 69.18 313 *e*P **P** **10 24 10.8 -1.7**
comp=Z,7.9nm,0.9s
WATA Walderalm 69.19 313 *e*P **P** **10 24 11.1 -1.4**
comp=Z,3.0nm,0.5s
SQTA Sankt Quirin 69.47 313 *e*P **P** **10 24 13.6 -0.6**
comp=Z,2.7nm,0.5s
MOTA Moosalm 69.48 314 *e*P **P** **10 24 14.0 -0.3**
comp=Z,8.0nm,1.1s
RETA Reutte 69.63 314 *i* P **P** **10 24 13.5 -1.6**
comp=Z,2.1nm,0.7s
PMR Palmer 69.84 29 IAmb IAmb 10 24 19.9
comp=Z,7.0nm,0.6s
FETA Feichten 69.85 313 *e*P **P** **10 24 15.0 -1.6**
comp=Z,8.4nm,1.0s
NRCA Norcia 70.09 309 IAmb IAmb 10 24 26.6
comp=Z,6.4nm,0.8s
I26K Coal Creek Min 70.20 24 IAmb IAmb 10 24 20.2
comp=Z,7.8nm,0.9s
FUORN Ofenpass-Fuorn 70.31 313 P **P** **10 24 18.8 -0.8**
FUORN IAmb IAmb 10 24 29.9
comp=Z,4.2nm,0.8s
DAVOX Davos/Dischmat 70.48 313 LR LR 10 57 39.2
comp=Z,85nm,19.0s,baz=84,slow=38
J26L Joseph Creek 70.49 25 IAmb IAmb 10 24 21.5
comp=Z,6.6nm,0.9s
SCRK Sand Creek 70.63 26 IAmb IAmb 10 24 22.5
comp=Z,5.3nm,0.9s
K27K Chicken 71.30 25 IAmb IAmb 10 24 28.0
comp=Z,11nm,1.0s
INK Inuvik 71.45 19 IAmb IAmb 10 24 28.2
comp=Z,11nm,1.0s
EPYK Eagle Plains 71.73 22 IAmb IAmb 10 24 29.4
comp=Z,9.5nm,0.9s
M26K Nabesna, AK 71.87 27 IAmb IAmb 10 24 31.1
comp=Z,8.1nm,1.1s
L27K Beaver Creek, 71.94 26 IAmb IAmb 10 24 32.2
comp=Z,11nm,1.1s
M27K Edge Creek, AK 72.33 27 IAmb IAmb 10 24 34.7
comp=Z,7.7nm,0.9s
STKA Stephens Creek 72.41 147 P **P** **10 24 31.6 -0.3**
comp=Z,11nm,0.7s,baz=333,slow=5.9,SNR=24
comp=Z,11nm,0.7s
STKA Stephens Creek 72.41 147 P **P** **10 24 30.9 -1.0**
STKA Stephens Creek 72.41 147 P **P** **10 24 30.9 -1.0**
STKA pmax pmax
comp=Z,3.0nm,0.9s
SUMG Summit 72.85 349 *i* P **P** **10 24 35.0 +0.4**
SUMG IAmb IAmb 10 24 37.1
comp=Z,3.9nm,0.8s
M30M Minto, Yukon 74.08 25 IAmb IAmb 10 24 44.0
comp=Z,8.8nm,1.2s
HYT Haines Junctio 74.92 27 IAmb IAmb 10 24 49.8
comp=Z,11nm,1.0s
N31M Braeburn, Yuko 75.15 26 P **P** **10 24 46.1 -1.6**
N31M IAmb IAmb 10 24 50.8
comp=Z,14nm,1.1s
DY2G Dye2 79.54 348 *i* P **P** **10 25 11.2 -1.3**
DY2G IAmb IAmb 10 25 15.0
comp=Z,4.7nm,0.6s
SFJD Kangerlussuaq 79.74 350 LR LR 11 02 06.1
comp=Z,51nm,19.4s,baz=12,slow=37
DZM Mont Dzumac 79.92 124 LR LR 10 58 31.5
comp=Z,47nm,19.1s,baz=7.0,slow=34
YKA Yellowknife Ar 80.99 17 P **P** **10 25 18.8 -1.2**
comp=Z,4.7nm,0.8s,baz=328,slow=4.9,SNR=28
YKA PKKPbc **PKKPbc** **10 43 54.4 -3.4**
comp=Z,0.7nm,0.6s,baz=146,slow=2.2,SNR=20
comp=Z,4.7nm,0.8s
YKA Yellowknife Ar 80.99 17 *i* P **P** **10 25 18.7 -1.3**
YKA pmax pmax
comp=Z,5.0nm,0.8s
ESDC Sonseca Array 82.78 312 P **P** **10 25 30.0 0.0**
comp=Z,0.7nm,0.7s,baz=54,slow=6.5,SNR=2.8
ESDC LR LR 11 04 28.2
comp=Z,52nm,18.5s,baz=7.5,slow=37
comp=Z,0.7nm,0.7s
B08A Colville Reser 91.16 27 P **P** **10 26 10.0 -0.6**
B08A IAmb IAmb 10 26 14.5
comp=Z,6.9nm,1.1s
C09A Chrisman Ranch 92.02 27 IAmb IAmb 10 26 18.7
comp=Z,6.6nm,1.1s
TORD Torodi Ar. Bea 93.69 288 P **P** **10 26 21.4 -1.5**
comp=Z,1.5nm,1.1s,baz=56,slow=3.7,SNR=5.5
comp=Z,1.5nm,1.1s
BMO Blue Mountains 94.82 28 IAmb IAmb 10 26 30.5
comp=Z,4.1nm,1.4s
PDAR Pinedale Array 99.55 25 LR LR 11 17 58.9
comp=Z,44nm,18.4s,baz=332,slow=39
TXAR Lajitas Array 113.64 27 PKKPbc PKKPbc 10 42 26.9 -0.7
comp=Z,0.4nm,0.8s,baz=160,slow=5.5,SNR=5.3
TROLL Troll, Antarti 123.53 201 PKPdf **PKPdf** **10 32 01.9 -0.4**
SNAA Sanae 125.23 202 PKPdf **PKPdf** **10 32 04.1 -1.4**
MALC Bahia Malaga 144.39 3 *e*P **PKPab** **10 32 40.9 +0.2**
YOTC Yotoco, Valle 144.45 1 *e*P **PKPab** **10 32 37.1 -4.0**
ORTC Ortega, Tolima 144.53 359 *e*P **PKPab** **10 32 39.0 -2.3**
PRAC Prado 144.72 359 *e*P **PKPab** **10 32 40.7 -1.3**
MARP Paez Belalcaza 145.59 1 *e*P **PKPdf** **10 32 43.8 -1.3**
POPC Popayan, Colom 145.88 2 *e*P **PKPdf** **10 32 44.8 -0.8**
PCON Cinco Dias 146.09 1 *e*P **PKPbc** **10 32 48.6 +1.5**
MACC Macarena, Meta 146.24 357 *e*P **PKPdf** **10 32 44.8 -1.1**
BBAC Balboa, Cauca 146.37 3 *e*P **PKPdf** **10 32 46.5 +0.1**
CRUC La Cruz 146.83 2 *e*P **PKPab** **10 32 52.1 +1.8**
FLOC Florencia 146.84 0 *e*P **PKPdf** **10 32 47.7 +0.7**
GCUF Volcan Galeras 147.16 3 *e*P **PKPab** **10 32 52.5 +0.8**
TULM Tulcn-Chalpat 147.64 4 *e*P **PKPdf** **10 32 49.6 +0.7**
OTAV Otavalo 148.06 5 *e*P **PKPdf** **10 32 46.7 -2.8**

IDC ***27*** *10:24:47.6₅1.2, 39˚.24N×73˚.59E, h0ᵏᵐ, mb3.5/6, mbtmp3.7/12, ML3.3/6, Error ellipse: s-maj=24.2km s-min=16.9km az=123.0*
SOME ***27*** *10:24:49.4, 39˚.57N×73˚.65E, h15ᵏᵐ*
KRNET ***27*** *10:24:51.1₅0.1, 39˚.59N×73˚.57E, mb4.3*
NNC ***27*** *10:24:53.9₅1.4, 39˚.70N×73˚.59E, h0ᵏᵐ, mb4.4, mpv4.1, Error ellipse: s-maj=12.7km s-min=6.5km az=169.0*

ISC 27 10:24:45.0₅1.3, 39.45N₅0.04×73.67E₅0.02, h4ᵏᵐ₅10ᵏᵐ, n94, σ2s16/127, mb3.6/6, 43C-19D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.27**	**328**	⇑*e*P		**Pg**	**10 25 12.0**	**+2.7**
baz=28								
OHH				⇑*i*S		**Sg**	**10 25 27.0**	**+1.2**
baz=28								
DRK	**Karamyk**	**1.45**	**272**	⇑*e*P		**Pg**	**10 25 16.4**	**+3.6**
baz=66								
DRK				⇑*e*S		**Sg**	**10 25 35.3**	**+3.8**
baz=66								
KSH	**Kashi**	**1.79**	**87**	Pg		**Pg**	**10 25 18.5**	**-0.8**
KSH				Sg		**Sb**	**10 25 39.0**	**-2.2**
KSH				pmax	pmax			
comp=Z,240nm,0.6s								
KSH				smax	smax			
comp=N,970nm,0.7s								
KSH				smax	smax			
comp=E,860nm,0.6s								
BTK	**Batken**	**2.28**	**286**	⇑*e*P		**Pg**	**10 25 29.4**	**+0.7**
baz=83								
BTK				⇑*e*S		**Sg**	**10 25 57.2**	**-1.0**
baz=83								
ARLS	**Aral**	**2.46**	**11**	⇑*e*P		**Pg**	**10 25 31.7**	**-0.4**
baz=14								
ARLS				⇑*e*S		**Sb**	**10 26 01.0**	**+0.4**
baz=14								
GAR	**Garm**	**2.64**	**261**	⇑*i*P		**Pg**	**10 25 35.4**	**-0.3**
baz=58								
GAR				⇑*e*S		**Sg**	**10 26 07.7**	**-2.2**
baz=58								
AML	**Almayashu**	**2.67**	**0**	P		**Pg**	**10 25 36.9**	**+0.6**
SNR=16								
ARK	**Arkit**	**2.68**	**332**	⇓*i*P		**Pb**	**10 25 34.4**	**+0.8**
baz=32								
ARK				⇓*i*S		**Sb**	**10 26 06.1**	**-0.8**
baz=32								
TRKS	**Terek-Say**	**2.83**	**318**	⇑*e*P		**Pb**	**10 25 35.7**	**-0.6**
baz=17								
TRKS				⇑*e*S		**Sb**	**10 26 08.2**	**-3.2**
baz=17								
UCH	**Uchtor**	**2.84**	**13**	P		**Pg**	**10 25 39.8**	**+0.2**
SNR=88								
UCH	**Uchtor**	**2.84**	**13**	⇑*i*P		**Pb**	**10 25 37.5**	**+0.8**
baz=15								
UCH				⇑*e*S		**Sb**	**10 26 11.2**	**-0.8**
baz=15								
EKS2	**Erkin-Say**	**3.21**	**1**	P		**Pb**	**10 25 44.2**	**+1.6**
SNR=23								
EKS2	**Erkin-Say**	**3.21**	**1**	⇓*e*P		**Pb**	**10 25 42.0**	**-0.6**
baz=3.0								
EKS2				⇓*e*S		**Sb**	**10 26 19.1**	**-3.0**
baz=3.0								
AAK	**Ala-Archa**	**3.24**	**11**	P		**Pg**	**10 25 45.9**	**-1.3**
SNR=25								
AAK	**Ala-Archa**	**3.24**	**11**	Pn		**Pg**	**10 25 45.8**	**-1.3**
comp=E,13nm,0.3s,baz=174,slow=6.4,SNR=19								
AAK					Sn	**Sg**	**10 26 29.9**	**+0.7**
comp=E,20nm,0.3s,baz=352,slow=11,SNR=8.3								
comp=E,26nm,0.3s								
AAK	**Ala-Archa**	**3.24**	**11**	⇓*e*P		**Pb**	**10 25 42.9**	**-0.4**
baz=13								
AAK				⇓*e*S		**Sb**	**10 26 20.2**	**-3.0**
baz=13								
KBK	**Karagaybulak**	**3.34**	**16**	P		**Pg**	**10 25 47.3**	**-1.8**
SNR=16								

KBK	**Karagaybulak**	**3.34**	**16**	⇓*e*P		**Pb**	**10 25 44.3**	**-0.7**
	baz=18							
KBK				⇓*i*S		**Sb**	**10 26 23.1**	**-3.0**
	baz=18							
ULHL	**Ulahol**	**3.40**	**34**	P		**Pg**	**10 25 48.1**	**-2.2**
	SNR=15							
ULHL	**Ulahol**	**3.40**	**34**	⇑*e*P		**Pb**	**10 25 45.8**	**-0.3**
	baz=36							
ULHL				⇑*e*S		**Sb**	**10 26 25.5**	**-2.4**
	baz=36							
BOOM	**Boomskoye usch**	**3.49**	**29**	⇑*i*P		**Pb**	**10 25 46.6**	**-0.9**
	baz=31							
BOOM				⇑*e*S		**Sb**	**10 26 27.3**	**-2.9**
	baz=31							
CHGR	**Chuyangaron**	**3.60**	**259**	⇑*e*P		**Pb**	**10 25 47.3**	**-2.0**
	baz=56							
CHGR				⇑*e*S		**Sb**	**10 26 30.7**	**-2.7**
	baz=56							
CHMS	**Chumysh**	**3.63**	**13**	⇑*e*P		**Pb**	**10 25 48.2**	**-1.7**
	baz=14							
CHMS				⇑*e*S		**Sb**	**10 26 29.7**	**-4.7**
	baz=14							
CHMS	**Chumysh**	**3.63**	**13**	⇑Pn		**Pb**	**10 25 52.1**	**+2.2**
	comp=E,20nm,0.5s							
CHMS				⇑Lg		Lg	10 26 43.3	
	comp=E,251nm,1.1s							
TKM2	**Tokmak 2**	**3.76**	**22**	P		**Pb**	**10 25 52.3**	**+0.2**
	SNR=18							
TKM2	**Tokmak 2**	**3.76**	**22**	⇑*e*P		**Pb**	**10 25 50.3**	**-1.8**
	baz=24							
TKM2				⇑*e*S		**Sb**	**10 26 33.5**	**-4.6**
	baz=24							
TKM2	**Tokmak 2**	**3.76**	**22**	⇓Pn		**Pb**	**10 25 51.6**	**-0.5**
	comp=E,9.0nm,0.7s							
TKM2				⇓Pg		**Pg**	**10 26 01.2**	**+4.1**
	comp=E,11nm,0.3s							
TKM2				⇓Lg		Lg	10 26 48.6	
	comp=E,75nm,0.6s							
KDJ	**Kajisay**	**3.77**	**44**	⇓*i*P		**Pb**	**10 25 51.2**	**-1.2**
	baz=46							
KDJ				⇓*e*S		**Sb**	**10 26 35.0**	**-3.5**
	baz=46							
TAS	**Tashkent**	**3.83**	**301**	⇑*e*P		**Pb**	**10 25 50.4**	**-2.8**
	baz=0.0							
TAS				⇑*e*S		**Sb**	**10 26 34.0**	**-5.9**
	baz=0.0							
IUG	**Iuzhnay**	**3.85**	**315**	*e*P		**Pg**	**10 25 59.4**	**+0.5**
	comp=E,2µm,1.1s							
IUG				*e*S		**Sg**	**10 26 50.7**	**+1.9**
	comp=E,208nm,0.1s							
IUG	**Iuzhnay**	**3.85**	**315**	Pg		**Pg**	**10 25 59.4**	**+0.5**
	comp=E,5µm,1.6s							
IUG				Lg		Lg	10 26 50.7	
	comp=E,209nm,0.9s							
USP	**Ospenovka**	**3.86**	**9**	P		**Pb**	**10 25 54.9**	**+1.2**
	SNR=6.9							
USP	**Ospenovka**	**3.86**	**9**	⇓*e*P		**Pb**	**10 25 51.2**	**-2.6**
	baz=10.0							
USP				⇓*e*S		**Sb**	**10 26 35.0**	**-5.9**
	baz=10.0							
TARG	**Taragay, Kyrgy**	**3.88**	**53**	⇑*e*P		**Pb**	**10 25 53.2**	**-1.2**
	baz=55							
TARG				⇑*e*S		**Sb**	**10 26 38.3**	**-3.6**
	baz=55							
SGDS	**Sogindy**	**4.06**	**10**	*e*P		**Pg**	**10 26 02.9**	**0.0**
	comp=E,14nm,0.1s							
SGDS				*e*S		**Sg**	**10 26 56.0**	**+0.5**
	comp=E,60nm,0.1s							
DGS	**Degeres**	**4.10**	**22**	*e*P		**Pg**	**10 26 05.0**	**+1.3**
	comp=E,17nm,0.1s							
DGS				*e*S		**Sg**	**10 26 60.0**	**+3.1**
	comp=E,96nm,0.3s							
DGS	**Degeres**	**4.10**	**22**	Pg		**Pg**	**10 26 05.0**	**+1.3**
	comp=E,30nm,0.7s							
DGS				Lg		Lg	10 26 59.9	
	comp=E,226nm,1.2s							
MTBS	**Maitube**	**4.22**	**29**	*e*P		**Pg**	**10 26 05.8**	**-0.1**
	comp=E,42nm,0.1s							
MTBS				*e*S		**Sg**	**10 27 01.1**	**+0.5**
	comp=E,78nm,0.0s							
MTBS	**Maitube**	**4.22**	**29**	Pg		**Pg**	**10 26 05.8**	**-0.1**
	comp=E,36nm,0.7s							
MTBS				Lg		Lg	10 27 01.1	
	comp=E,103nm,0.8s							
TNSS	**Tian-Shan**	**4.35**	**34**	*e*P		**Pg**	**10 26 09.7**	**+1.3**
	comp=E,33nm,0.5s							
TNSS				*e*S		**Sg**	**10 27 08.0**	**+3.2**
	comp=E,43nm,0.5s							
TNSS	**Tian-Shan**	**4.35**	**34**	Pg		**Pg**	**10 26 09.7**	**+1.3**
	comp=E,33nm,0.5s							
TNSS				Lg		Lg	10 27 08.3	
	comp=E,38nm,0.6s							
KK31	**Karatay Array**	**4.35**	**328**	Pn		**Pb**	**10 25 58.5**	**-3.7**
	comp=E,3.3nm,0.3s,baz=135,slow=12,SNR=57							
KK31				⇑Pg		**Pg**	**10 26 09.2**	**+0.7**
	comp=E,22nm,0.6s,baz=147,slow=16,SNR=12							
KK31				⇑Lg		Lg	10 27 00.9	
	comp=E,57nm,0.6s,baz=138,slow=27,SNR=3.9							
KKAR	**Karatay Array**	**4.35**	**328**	⇑*e*P		**Pb**	**10 25 57.5**	**-4.6**
	baz=28							
KKAR				⇑*e*S		**Sn**	**10 26 46.2**	**+3.0**
	baz=28							
AAA	**Alma-Ata**	**4.48**	**32**	*e*P		**Pg**	**10 26 12.1**	**+1.2**
	comp=E,22nm,0.3s							
AAA				*e*S		**Sg**	**10 27 11.8**	**+2.9**
	comp=E,154nm,0.6s							
AAA	**Alma-Ata**	**4.48**	**32**	Pg		**Pg**	**10 26 12.1**	**+1.2**
	comp=E,22nm,0.3s							
AAA				Lg		Lg	10 27 11.8	
	comp=E,154nm,0.6s							
ANVS	**Anan'yevo**	**4.49**	**41**	⇑*i*P		**Pb**	**10 26 01.2**	**-3.4**
	baz=43							
ANVS				⇑*i*S		**Sb**	**10 26 52.1**	**-7.1**
	baz=43							
KRBS	**Karabastau**	**4.50**	**19**	*e*P		**Pg**	**10 26 11.1**	**-0.1**
	comp=E,9.6nm,0.3s							
KRBS				*e*S		**Sg**	**10 27 10.5**	**+1.0**
	comp=E,40nm,0.7s							
KRBS	**Karabastau**	**4.50**	**19**	Pg		**Pg**	**10 26 11.1**	**-0.1**
	comp=E,12nm,0.8s							
KRBS				Lg		Lg	10 27 10.5	
	comp=E,40nm,0.7s							
BRLS	**Boroldaу**	**4.59**	**322**	*e*P		**Pg**	**10 26 11.1**	**-2.0**
	comp=E,7.4nm,0.2s							
BRLS				*e*S		**Sg**	**10 27 10.4**	**-2.2**
	comp=E,39nm,0.3s							
BRLS	**Boroldaу**	**4.59**	**322**	Pg		**Pg**	**10 26 11.1**	**-2.0**
	comp=E,11nm,0.3s							
BRLS				Lg		Lg	10 27 10.4	
	comp=E,72nm,0.6s							
KTBS	**Karatobe**	**4.82**	**27**	*e*P		**Pg**	**10 26 17.5**	**+0.2**
	comp=E,16nm,0.6s							
KTBS				*e*S		**Sg**	**10 27 21.6**	**+1.9**
	comp=E,114nm,0.0s							
KTBS	**Karatobe**	**4.82**	**27**	Pg		**Pg**	**10 26 17.5**	**+0.2**
	comp=E,16nm,0.6s							
KTBS				Lg		Lg	10 27 21.6	
	comp=E,147nm,0.7s							
KUU	**Kurty**	**4.87**	**23**	*e*P		**Pg**	**10 26 17.9**	**-0.4**
	comp=E,10nm,0.6s							
KUU				*e*S		**Sg**	**10 27 22.2**	**+0.9**
	comp=E,77nm,0.1s							
KUU	**Kurty**	**4.87**	**23**	Pg		**Pg**	**10 26 17.9**	**-0.4**
	comp=E,10nm,0.6s							
KUU				Lg		Lg	10 27 22.2	
	comp=E,77nm,0.6s							
CHKK	**Chushkaly**	**5.05**	**28**	*e*P		**Pg**	**10 26 21.6**	**-0.2**
	comp=E,19nm,0.1s							
CHKK				*e*S		**Sg**	**10 27 28.6**	**+1.4**
	comp=E,73nm,0.1s							
CHKK	**Chushkaly**	**5.05**	**28**	Pg		**Pg**	**10 26 21.6**	**-0.2**
	comp=E,19nm,0.8s							
CHKK				Lg		Lg	10 27 28.6	
	comp=E,73nm,0.6s							
SATY	**Saty**	**5.07**	**43**	*e*P		**Pg**	**10 26 22.8**	**+0.6**
	comp=E,31nm,0.7s							
SATY				*e*S		**Sg**	**10 27 30.6**	**+2.7**
	comp=E,79nm,1.3s							
SATY	**Saty**	**5.07**	**43**	Pg		**Pg**	**10 26 22.8**	**+0.6**
	comp=E,31nm,0.7s							
SATY				Lg		Lg	10 27 30.6	
	comp=E,79nm,1.3s							
ZHN	**Zhinishke**	**5.16**	**43**	*e*P		**Pg**	**10 26 24.6**	**+0.6**
	comp=E,14nm,0.2s							
ZHN				*e*S		**Sg**	**10 27 33.2**	**+2.4**
	comp=E,46nm,0.7s							
ZHN	**Zhinishke**	**5.16**	**43**	Pg		**Pg**	**10 26 24.6**	**+0.6**
	comp=E,14nm,0.2s							
ZHN				Lg		Lg	10 27 33.2	
	comp=E,46nm,0.7s							
KURS	**Kuram**	**5.26**	**39**	*e*P		**Pg**	**10 26 24.9**	**-0.9**
	comp=E,21nm,0.8s							
KURS				*e*S		**Sg**	**10 27 34.0**	**0.0**
	comp=E,38nm,0.8s							
KURS	**Kuram**	**5.26**	**39**	Pg		**Pg**	**10 26 25.0**	**-0.9**
	comp=E,21nm,0.8s							
KURS				Lg		Lg	10 27 34.0	
	comp=E,65nm,1.5s							
KPKS	**Kokpek**	**5.50**	**42**	*e*P		**Pg**	**10 26 30.5**	**+0.1**
	comp=E,21nm,0.3s							
KPKS				*e*S		**Sg**	**10 27 43.3**	**+1.6**
	comp=E,49nm,0.4s							
KPKS	**Kokpek**	**5.50**	**42**	Pg		**Pg**	**10 26 28.8**	**-1.6**
	comp=E,15nm,0.7s							
KPKS				Lg		Lg	10 27 41.2	
	comp=E,50nm,0.9s							
BTLS	**Baital**	**5.59**	**3**	*e*P		**Pg**	**10 26 30.9**	**-1.2**
	comp=E,8.4nm,0.1s							
BTLS				*e*S		**Sg**	**10 27 44.0**	**-0.6**
	comp=E,6.8nm,0.4s							
BTLS	**Baital**	**5.59**	**3**	Pg		**Pg**	**10 26 30.6**	**-1.6**
	comp=E,8.4nm,0.6s							
BTLS				Lg		Lg	10 27 44.0	
	comp=E,6.8nm,0.7s							
ARXS	**Arharly**	**5.68**	**32**	*e*P		**Pg**	**10 26 33.0**	**-0.8**
	comp=E,14nm,0.1s							
ARXS				*e*S		**Sg**	**10 27 47.9**	**+0.5**
	comp=E,36nm,0.1s							
ARXS	**Arharly**	**5.68**	**32**	Pg		**Pg**	**10 26 32.8**	**-1.0**
	comp=E,16nm,0.8s							
ARXS				Lg		Lg	10 27 47.9	
	comp=E,36nm,0.5s							
PDGK	**Podgornoye**	**5.84**	**47**	Pg		**Pg**	**10 26 35.7**	**-1.3**
	comp=E,12nm,0.9s							
PDGK				Lg		Lg	10 27 52.4	
	comp=E,18nm,1.3s							
PDGK	**Podgornoye**	**5.84**	**47**	⇓Pn		Pb	10 26 19.7	-7.9
	comp=E,6.3nm,0.7s							
PDGK				⇓Pg		**Pg**	**10 26 38.8**	**+1.8**
	comp=E,21nm,0.7s							
PDGK				⇑Lg		Lg	10 27 58.4	
	comp=E,84nm,0.9s							
BLB	**Baldybastay**	**5.87**	**36**	*e*P		**Pg**	**10 26 36.6**	**-0.8**
	comp=E,25nm,0.3s							
BLB				*e*S		**Sg**	**10 27 53.6**	**+0.1**
	comp=E,45nm,0.2s							
BLB	**Baldybastay**	**5.87**	**36**	Pg		**Pg**	**10 26 36.1**	**-1.4**
	comp=E,24nm,0.8s							
BLB				Lg		Lg	10 27 53.6	
	comp=E,46nm,1.1s							
TDK	**Taldyqorghan**	**6.56**	**31**	*e*P		**Pg**	**10 26 49.5**	**-1.3**
	comp=E,29nm,0.0s							
TDK				*e*S		**Sg**	**10 28 16.0**	**+0.3**
	comp=E,56nm,0.1s							
TDK	**Taldyqorghan**	**6.56**	**31**	Pg		**Pg**	**10 26 49.4**	**-1.3**
	comp=E,41nm,0.2s							
TDK				Lg		Lg	10 28 16.0	
	comp=E,84nm,0.9s							
DJR	**Jarkent**	**6.68**	**41**	*e*P		**Pg**	**10 26 52.9**	**-0.1**
	comp=E,7.2nm,0.1s							
DJR				*e*S		**Sg**	**10 28 22.0**	**+2.6**
	comp=E,22nm,0.1s							
DJR	**Jarkent**	**6.68**	**41**	Pg		**Pg**	**10 26 52.9**	**-0.1**
	comp=E,7.8nm,0.6s							
DJR				Lg		Lg	10 28 22.0	
	comp=E,22nm,1.4s							
OTUK	**Ortayu**	**8.84**	**354**	⇑Pn		Pn	10 26 59.8	+6.2
	comp=E,2.4nm,0.5s							
OTUK				⇑Lg		Lg	10 29 25.9	
	comp=E,38nm,0.8s							
MK31	**Makanchi Array**	**9.67**	**38**	⇓Pn		Pn	10 27 15.1	+10
	comp=E,3.8nm,1.2s,baz=215,slow=19,SNR=3.8							
MK31				⇑Lg		Lg	10 29 58.8	
	comp=E,13nm,1.1s,baz=222,slow=26,SNR=3.5							
MKAR	**Makanchi Array**	**9.67**	**38**	Pn		Pn	10 27 13.0	+8.1
	comp=E,0.1nm,0.3s,baz=195,slow=15,SNR=3.1							
MKAR				Lg		Lg	10 29 57.8	
	comp=E,0.2nm,0.3s,baz=223,slow=25,SNR=5.5							
	comp=E,1.2nm,0.9s							
WMQ	**Urumqi**	**11.37**	**63**	*e*P		Pn	10 27 37.0	+8.8
KURBB	**Kurchatov Arra**	**11.68**	**15**	Pn		Pn	10 27 37.6	+5.2
	comp=E,0.1nm,0.3s,baz=204,slow=11,SNR=2.5							
KURBB				Lg		Lg	10 30 55.4	
	comp=E,0.1nm,0.3s,baz=202,slow=28,SNR=15							
	comp=E,0.1nm,0.3s							
KURBB	**Kurchatov Arra**	**11.68**	**15**	⇑Lg		Lg	10 30 57.7	
	comp=E,42nm,1.0s							
KURK	**Kurchatov**	**11.79**	**16**	⇑Lg		Lg	10 30 58.4	
	comp=E,54nm,1.3s							
AB31	**Akbulak array**	**13.85**	**320**	⇓Pn		P	10 28 04.7	-5.9
	comp=E,2.9nm,0.8s,baz=125,slow=14,SNR=14							
AKTO	**Aktyubinsk**	**15.56**	**320**	Pn		**P**	**10 28 27.9**	**-1.7**
	comp=E,0.2nm,0.3s,baz=124,slow=15,SNR=8.9							
	comp=E,2.3nm,0.6s							
AKTO	**Aktyubinsk**	**15.56**	**320**	⇑Pn		**P**	**10 28 27.3**	**-2.3**
	comp=E,4.2nm,0.7s							
ZALV	**Zasovo Beam**	**16.36**	**24**	Pn		**P**	**10 28 40.8**	**+2.3**
	comp=E,0.3nm,0.3s,baz=218,slow=11,SNR=7.0							
ZALV				Lg		Lg	10 33 26.4	
	comp=E,0.1nm,0.3s,baz=214,slow=40,SNR=1.2							
	comp=E,1.9nm,0.6s							
ARU	**Arti**	**19.69**	**335**	P		**Pn**	**10 29 19.7**	**+3.2**
	baz=271,slow=8.5,SNR=1.6							
	comp=E,8.4nm,0.2s							
KBZ	**Khabaz**	**23.33**	**291**	P		**P**	**10 29 58.7**	**+4.5**
	comp=E,1.0nm,0.6s,baz=212,slow=19,SNR=1.8							
	comp=E,1.0nm,0.6s							
ARCES	**ARCESS Array B**	**39.28**	**336**	P		P	10 32 19.1	+4.6
	comp=E,0.8nm,0.6s,baz=106,slow=9.5,SNR=5.0							
	comp=E,0.8nm,0.6s							
TORD	**Torodi Ar. Bea**	**67.89**	**269**	P		P	10 35 47.3	+2.3
	comp=E,0.4nm,0.7s,baz=60,slow=5.6,SNR=5.0							
	comp=E,0.4nm,0.7s							
ILAR	**Eielson Array**	**71.35**	**17**	P		P	10 36 11.7	+6.0
	comp=E,0.2nm,0.6s,baz=324,slow=5.6,SNR=3.0							
	comp=E,0.2nm,0.6s							
YKA	**Yellowknife Ar**	**78.18**	**4**	P		P	10 36 48.8	+3.6
	comp=E,0.2nm,0.6s,baz=351,slow=5.7,SNR=7.2							
	comp=E,0.2nm,0.6s							
WRA	**Warramunga Arr**	**81.83**	**124**	P		P	10 37 08.1	+2.6
	comp=E,0.9nm,1.0s,baz=323,slow=4.8,SNR=3.4							
	comp=E,0.9nm,1.0s							

NOU 27 10:29:44.4, 19.67S×170.02E, h0km, mb4.3/10, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**2.59**	**226**	P		Pn	10 30 25.8	-1.8
LIFNC	**LIFOU**	**2.83**	**247**	P		Pn	10 30 28.6	-2.3
YATNC	**Mamie plateau,**	**3.77**	**230**	P		Pn	10 30 43.4	-0.4
PINNC	**Pines Island,**	**3.79**	**219**	P		Pn	10 30 44.3	+0.2
OUENC	**Ouen Island, N**	**4.04**	**227**	P		Pn	10 30 47.8	+0.3
DZM	**Mont Dzumac**	**4.11**	**234**	P		Pn	10 30 49.0	+0.4
NOUC	**Port Laguerre**	**4.23**	**235**	P		Pn	10 30 50.3	+0.1
ONTNC	**Ouen Toro**	**4.24**	**231**	P		Pn	10 30 51.6	+1.3
KOUNC	**Koumac, New Ca**	**5.46**	**260**	P		Pn	10 31 08.2	+1.1
	42nm,1.3s							

SOME **27** *10:48:28.7, 39.50N×73.42E, h10km*
KRNET **27** *10:48:28.8±0.1, 39.38N×73.36E, mb4.1*
NNC **27** *10:48:38.2±3.5, 39.85N×73.19E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=32.7km s-min=20.7km az=0.0*
IDC **27** *10:48:42.9±6.5, 38.99N×73.04E, h131km±56km, mb3.3/6, mbtmp3.6/7, MS3.0/2, Error ellipse: s-maj=40.4km s-min=30.5km az=23.0*
ISC 27 10:48:25.2±1.6, 39.35N±0.06×73.58E±0.03, h3km±11km, n48, σ1s71/69, mb3.7/6, 21C-19D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OHH	**Osh**	**1.32**	**333**	⇓*e*P		**Pb**	**10 48 51.8**	**+1.2**
	baz=39							
OHH				⇓*e*S		**Sb**	**10 49 08.4**	**+0.4**
	baz=39							
DRK	**Karamyk**	**1.38**	**276**	⇑*e*P		**Pn**	**10 48 51.8**	**+0.1**
	baz=76							
DRK				⇑*e*S		**Sn**	**10 49 08.4**	**-2.2**
	baz=76							
BTK	**Batken**	**2.24**	**289**	⇑*e*P		**Pb**	**10 49 06.4**	**0.0**
	baz=90							
BTK				⇑*e*S		**Sb**	**10 49 33.5**	**-1.0**
	baz=90							
GAR	**Garm**	**2.56**	**263**	⇓*e*P		**Pb**	**10 49 10.6**	**-1.2**
	baz=62							
GAR				⇓*e*S		**Sn**	**10 49 41.1**	**+1.7**
	baz=62							
ARLS	**Aral**	**2.57**	**13**	⇑*e*P		**Pb**	**10 49 13.4**	**+1.4**
	baz=16							
ARLS				⇑*e*S		**Sb**	**10 49 45.7**	**+1.7**
	baz=16							
TRKS	**Terek-Say**	**2.86**	**320**	⇑*e*P		Pn	10 49 14.6	+2.7
	baz=22							
TRKS				⇑*e*S		**Sn**	**10 49 47.8**	**+0.9**
	baz=22							
UCH	**Uchtor**	**2.96**	**14**	⇓*e*P		**Pb**	**10 49 18.9**	**+0.1**
	baz=17							
UCH				⇓*e*S		**Sb**	**10 49 55.7**	**+0.2**
	baz=17							
EKS2	**Erkin-Say**	**3.31**	**3**	⇓*e*P		**Pb**	**10 49 23.3**	**-1.3**
	baz=5.0							
EKS2				⇓*e*S		**Sb**	**10 50 02.8**	**-2.5**
	baz=5.0							
AAK	**Ala-Archa**	**3.35**	**12**	⇓*e*P		**Pb**	**10 49 24.3**	**-1.1**
	baz=14							
AAK				⇓*i*S		**Sb**	**10 50 04.9**	**-1.7**
	baz=14							
KBK	**Karagaybulak**	**3.46**	**17**	⇓*e*P		**Pb**	**10 49 25.9**	**-1.3**
	baz=20							
KBK				⇓*e*S		**Sb**	**10 50 07.5**	**-2.1**
	baz=20							
CHGR	**Chuyangaron**	**3.51**	**260**	⇓*e*P		Pn	10 49 24.0	+3.2
	baz=59							
CHGR				⇓*e*S		**Sn**	**10 50 04.2**	**+1.4**
	baz=59							
BOOM	**Boomskoye usch**	**3.61**	**29**	⇑*e*P		**Pb**	**10 49 28.2**	**-1.5**
	baz=31							
BOOM				⇑*i*S		**Sb**	**10 50 12.2**	**-1.7**
	baz=31							
CHMS	**Chumysh**	**3.75**	**13**	⇓Pn		**Pb**	**10 49 31.3**	**-0.8**
	10.0nm,0.5s							
CHMS				⇓Lg		Lg	10 50 26.6	
	62nm,0.7s							
TAS	**Tashkent**	**3.82**	**302**	⇑*e*P		Pn	10 49 28.3	+3.4
	baz=3.0							
TAS				⇑*e*S		**Sn**	**10 50 11.8**	**+1.5**
	baz=3.0							
TKM2	**Tokmak 2**	**3.88**	**23**	⇑*e*P		**Pb**	**10 49 32.0**	**-2.3**
	baz=25							
TKM2				⇑*e*S		**Sb**	**10 50 18.2**	**-3.5**
	baz=25							
TKM2	**Tokmak 2**	**3.88**	**23**	⇑Pn		**Pb**	**10 49 33.8**	**-0.6**
	5.4nm,0.5s							
TKM2				⇑Lg		Lg	10 50 33.0	
	61nm,0.7s							
IUG	**Iuzhnay**	**3.88**	**317**	*e*P		**Pb**	**10 49 37.5**	**+3.2**
	814nm,0.6s							
IUG				*e*S		**Sg**	**10 50 27.2**	**-2.6**
	302nm,1.0s							
KDJ	**Kajisay**	**3.90**	**43**	⇑*e*P		**Pb**	**10 49 32.9**	**-1.7**
	baz=45							
KDJ				⇑*i*S		**Sb**	**10 50 19.8**	**-2.4**
	baz=45							
SGDS	**Sogindy**	**4.17**	**11**	*e*P		**Pg**	**10 49 43.5**	**-1.6**
	6.0nm,0.2s							
SGDS				*e*S		**Sg**	**10 50 37.9**	**-1.3**
	35nm,0.2s							
DGS	**Degeres**	**4.22**	**22**	*e*P		**Pg**	**10 49 46.5**	**+0.4**
	13nm,0.3s							
DGS				*e*S		**Sg**	**10 50 42.8**	**+2.0**
	54nm,0.2s							
CHM	**Chimkent**	**4.23**	**316**	*e*P		**Pb**	**10 49 43.4**	**+3.2**
	5.7nm,0.4s							
CHM				*e*S		**Sg**	**10 50 38.2**	**-2.8**
	603nm,0.4s							
MTBS	**Maitube**	**4.34**	**29**	*e*P		**Pg**	**10 49 49.1**	**+0.7**
	7.3nm,0.5s							
MTBS				*e*S		**Sg**	**10 50 47.3**	**+2.7**
	52nm,0.7s							
KK31	**Karatay Array**	**4.40**	**329**	Pn		Pn	10 49 38.1	+5.2
	1.6nm,0.3s,baz=133,slow=12,SNR=36							
KK31				⇓Pg		Pg	10 49 50.5	+0.9
	8.5nm,0.5s,baz=153,slow=15,SNR=8.1							
KK31				⇑Lg		Lg	10 50 37.6	
	21nm,0.4s,baz=134,slow=24,SNR=4.2							
TNSS	**Tian-Shan**	**4.47**	**34**	*e*P		**Pg**	**10 49 52.1**	**+1.2**
	10nm,0.1s							
TNSS				*e*S		**Sg**	**10 50 52.1**	**+3.3**
	22nm,0.2s							
KRBS	**Karabastau**	**4.62**	**19**	*e*P		**Pg**	**10 49 52.6**	**-1.0**
	12nm,0.2s							
KRBS				*e*S		**Sg**	**10 50 52.8**	**-0.6**
	26nm,1.4s							
BRLS	**Boroldaу**	**4.63**	**324**	*e*P		**Pb**	**10 49 48.2**	**+1.1**
	5.9nm,0.2s							
BRLS				*e*S		**Sb**	**10 50 46.0**	**+2.8**
	38nm,0.5s							
KTBS	**Karatobe**	**4.94**	**27**	*e*P		**Pg**	**10 50 00.1**	**+0.3**
	6.0nm,0.9s							
KTBS				*e*S		**Sg**	**10 51 05.7**	**+1.9**
	106nm,0.2s							
KUU	**Kurty**	**4.98**	**24**	*e*P		**Pg**	**10 50 00.4**	**-0.3**
	9.0nm,1.4s							
KUU				*e*S		**Sg**	**10 51 06.3**	**+1.0**
	48nm,0.9s							
CHKK	**Chushkaly**	**5.17**	**29**	*e*P		**Pg**	**10 50 03.6**	**-0.7**
	3.3nm,0.0s							
CHKK				*e*S		**Sg**	**10 51 12.0**	**+0.8**
	38nm,0.2s							
SATY	**Saty**	**5.19**	**43**	*e*P		**Pg**	**10 50 05.3**	**+0.6**
	18nm,0.8s							
SATY				*e*S		**Sg**	**10 51 14.4**	**+2.5**
	38nm,1.1s							
ZHN	**Zhinishke**	**5.28**	**42**	*e*P		**Pg**	**10 50 07.7**	**+1.2**
	10nm,0.3s							
ZHN				*e*S		**Sg**	**10 51 18.2**	**+3.4**
	23nm,0.7s							
KURS	**Kuram**	**5.38**	**38**	*e*P		**Pg**	**10 50 08.5**	**+0.2**
	8.4nm,0.9s							
KURS				*e*S		**Sg**	**10 51 19.9**	**+1.8**
	22

MAN 27 10:48:39.3, 6.40N×126.32E, h18km, mb4.5, ML3.3, MS3.1, 2C-6D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.55**	**354**	⇓*eP*			Pn	10 48 50.6	+0.3
MATI				*eS*				10 49 32.2	
DDMP	**Don Marcelino,**	**0.67**	**244**	⇑*iP*			Pn	10 48 52.5	+0.3
DDMP				*eS*				10 50 14.8	
KCP	**Kidapawan**	**1.36**	**297**	⇓*eP*			Pn	10 49 01.7	+0.7
KCP				*i* S				10 49 26.4	
GSPH	**General Santos**	**1.39**	**257**	⇑*eP*			Pn	10 49 00.5	+2.1
SKMP	**Bagumbayan, Su**	**1.77**	**274**	⇓*eP*			Pn	10 49 08.2	+0.4
BIPH	**Bislig**	**1.78**	**1**	⇓*iP*			Pn	10 49 07.3	+0.5
BIPH				*i* S				10 49 28.6	
BUKP	**Musuan**	**1.93**	**320**	⇓*eP*			Pb	10 49 12.4	+1.4
GLSP	**General Luna,**	**3.37**	**357**	⇓*eP*			Pn	10 49 31.3	+2.5

WEL 27 10:54:50.5±1.2, 32.°S±24.°×18.°0E±5.°0, h388km±41km, M4.5/5, mB4.6/2, ML4.6/8, MLv4.5/5, Mw(mB)3.8/2, Error ellipse: s-maj=0.1km s-min=0.0km az=113.6, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**5.62**	**189**	P			Pn	10 56 18.0	-0.5
WMGZ				S			S	10 57 31.0	+1.0
PKGZ	**Pakihiroa**	**5.74**	**192**	P			Pn	10 56 21.2	+1.3
PKGZ				S			S	10 57 32.4	-0.2
PUZ	**Puketiti**	**5.89**	**190**	P			Pn	10 56 21.3	-0.1
PUZ				S			S	10 57 35.2	-0.3
MWZ	**Matawai**	**6.28**	**195**	P			Pn	10 56 25.9	+0.2
MWZ				S			S	10 57 43.7	+0.4
URZ	**Urewera**	**6.31**	**198**	P			Pn	10 56 25.2	-0.7
URZ				S			S	10 57 43.7	-0.1
RIGZ	**Rimuhau**	**6.59**	**192**	P			P	10 56 29.8	-0.2
RIGZ				S			S	10 57 49.5	-0.3
MUGZ	**Murupara**	**6.60**	**199**	P			Pn	10 56 29.4	+0.1
KNZ	**Kokohu**	**6.92**	**192**	P			Pn	10 56 33.1	+0.3
KNZ				S			S	10 57 55.9	-0.4
NMHZ	**Naumai**	**7.18**	**197**	P			Pn	10 56 36.0	+0.2
NMHZ				S			S	10 58 02.9	+1.1
ARHZ	**Aropaoanui**	**7.29**	**196**	P			Pn	10 56 36.7	-0.3
ARHZ				S			S	10 58 04.5	+0.5
BKZ	**Black Stump Fm**	**7.32**	**199**	P			Pn	10 56 36.3	-1.1
BKZ				S			S	10 58 05.4	+0.5
KAHZ	**Kahuranaki**	**7.82**	**195**	P			Pn	10 56 42.8	-0.3
KAHZ				S			S	10 58 16.2	+0.8

*SOME **27** 10:57:20.5, 39.°48N×73.°70E, h15km*
*KRNET **27** 10:57:21.1±0.1, 39.°51N×73.°56E, mb4.5*
*NNC **27** 10:57:25.2±1.2, 39.°72N×73.°62E, h0km, mb4.5, mpv4.2, Error ellipse: s-maj=10.1km s-min=5.0km az=175.0*
*IDC **27** 10:57:26.8±2.8, 39.°31N×73.°60E, h72km±23km, mb3.6/15, mbtmp3.9/20, MS3.2/6, Error ellipse: s-maj=20.2km s-min=13.1km az=0.0*

ISC 27 10:57:20.4±0.6, 39.°48N±0.°04×73.°66E±0.°02, h10km, n109, σ2.978/147, mb3.8/16, MS3.3/5, 45C-19D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.24**	**328**	⇓*eP*			**Pb**	**10 57 42.7**	**-1.3**
	baz=30								
OHH				⇓*eS*			**Sb**	**10 57 58.7**	**-1.4**
	baz=30								
DRK	**Karamyk**	**1.44**	**271**	⇑*eP*			**Pn**	**10 57 46.0**	**-0.8**
	baz=70								
DRK				⇑*eS*			**Sb**	**10 58 04.5**	**-1.4**
	baz=70								
KSH	**Kashi**	**1.79**	**88**	Pg			Pn	10 57 48.0	-3.6
KSH				Sg			**Sn**	**10 58 08.0**	**-6.4**
KSH				pmax			pmax		
	comp=Z,390nm,0.6s								
KSH				smax			smax		
	comp=N,2μm,0.5s								
KSH				smax			smax		
	comp=E,1μm,0.5s								
BTK	**Batken**	**2.26**	**286**	⇓*iP*			**Pn**	**10 57 58.8**	**+0.8**
	baz=86								
BTK				⇓*iS*			**Sn**	**10 58 26.4**	**+0.4**
	baz=86								
ARLS	**Aral**	**2.44**	**12**	⇑*eP*			**Pn**	**10 58 02.2**	**+1.8**
	baz=14								
ARLS				⇑*eS*			**Sb**	**10 58 32.2**	**-2.3**
	baz=14								
GAR	**Garm**	**2.64**	**261**	⇓*eP*			**Pn**	**10 58 04.1**	**+0.9**
	baz=60								
GAR				⇓*eS*			**Sn**	**10 58 35.6**	**+0.3**
	baz=60								
AML	**Almayashu**	**2.65**	**1**	P			**Pb**	**10 58 06.6**	**-1.6**
	SNR=58								
TRKS	**Terek-Say**	**2.81**	**318**	⇑*eP*			**Pn**	**10 58 05.8**	**+0.2**
	baz=18								
TRKS				⇑*eS*			**Sn**	**10 58 38.3**	**-1.3**
	baz=18								
UCH	**Uchtor**	**2.82**	**13**	P			**Pb**	**10 58 09.4**	**-1.8**
	SNR=81								
UCH	**Uchtor**	**2.82**	**13**	⇑*eP*			**Pn**	**10 58 08.0**	**+2.0**
	baz=15								
UCH				⇑*eS*			**Sn**	**10 58 41.9**	**+1.6**
	baz=15								
EKS2	**Erkin-Say**	**3.18**	**2**	P			**Pn**	**10 58 13.9**	**+3.3**
	SNR=23								
EKS2	**Erkin-Say**	**3.18**	**2**	⇑*eP*			**Pn**	**10 58 12.4**	**+1.7**
	baz=3.0								
EKS2				⇑*eS*			**Sn**	**10 58 49.7**	**+1.0**
	baz=3.0								
AAK	**Ala-Archa**	**3.22**	**11**	P			**Pb**	**10 58 14.9**	**-2.9**
	SNR=39								
AAK	**Ala-Archa**	**3.22**	**11**	P			**Pb**	**10 58 15.7**	**-2.1**
	comp=E,60nm,0.5s,baz=175,slow=6.5,SNR=35								
AAK				S			**Sb**	**10 58 58.4**	**+1.3**
	comp=E,89nm,0.3s,baz=94,slow=20,SNR=9.4								
AAK	**Ala-Archa**	**3.22**	**11**	⇑*iP*			**Pn**	**10 58 13.0**	**+1.8**
	baz=12								
AAK				⇑*eS*			**Sn**	**10 58 51.3**	**+1.6**
	baz=12								
KBK	**Karagaybulak**	**3.32**	**17**	P			**Pb**	**10 58 16.7**	**-2.9**
	SNR=36								
KBK	**Karagaybulak**	**3.32**	**17**	⇑*eP*			**Pn**	**10 58 14.8**	**+2.2**
	baz=18								
KBK				⇑*iS*			**Sn**	**10 58 53.9**	**+1.6**
	baz=18								
ULHL	**Ulahol**	**3.39**	**34**	P			**Pb**	**10 58 17.9**	**-2.8**
	SNR=20								
ULHL	**Ulahol**	**3.39**	**34**	⇑*iP*			**Pn**	**10 58 16.1**	**+2.5**
	baz=36								
ULHL				⇑*eS*			**Sn**	**10 58 56.1**	**+2.1**
	baz=36								
BOOM	**Boomskoye usch**	**3.47**	**29**	⇑*eP*			**Pn**	**10 58 17.1**	**+2.4**
	baz=30								
BOOM				⇑*eS*			**Sn**	**10 58 57.8**	**+1.9**
	baz=30								
CHGR	**Chuyangaron**	**3.60**	**258**	⇑*eP*			**Pn**	**10 58 17.3**	**+1.0**
	baz=58								
CHGR				⇑*eS*			**Sn**	**10 58 58.7**	**-0.2**
	baz=58								
CHMS	**Chumysh**	**3.61**	**13**	P			**Pb**	**10 58 21.4**	**-3.1**
	SNR=12								
CHMS	**Chumysh**	**3.61**	**13**	⇑*eP*			**Pn**	**10 58 18.6**	**+2.1**
	baz=14								
CHMS				⇑*eS*			**Sn**	**10 59 00.4**	**+1.2**
	baz=14								
CHMS	**Chumysh**	**3.61**	**13**	⇑Pn			**Pn**	**10 58 20.2**	**+3.7**
	comp=E,10nm,0.3s								
CHMS				⇑Lg			Lg	10 59 14.2	
	comp=E,265nm,0.9s								
TKM2	**Tokmak 2**	**3.74**	**22**	P			**Pn**	**10 58 22.8**	**+4.4**
	SNR=9.9								
TKM2	**Tokmak 2**	**3.74**	**22**	⇑*eP*			**Pn**	**10 58 20.6**	**+2.2**
	baz=24								
TKM2				⇑*eS*			**Sn**	**10 59 03.9**	**+1.3**
	baz=24								
TKM2	**Tokmak 2**	**3.74**	**22**	⇑Pn			**Pn**	**10 58 21.6**	**+3.2**
	comp=E,12nm,0.6s								
TKM2				⇑Pg			**Pg**	**10 58 30.7**	**-1.3**
	comp=E,30nm,0.5s								
TKM2				⇓Lg			Lg	10 59 19.4	
	comp=E,144nm,0.8s								
KDJ	**Kajisay**	**3.77**	**44**	⇑*iP*			**Pn**	**10 58 21.4**	**+2.7**
	baz=45								
KDJ				⇑*iS*			**Sn**	**10 59 05.4**	**+2.2**
	baz=45								
TAS	**Tashkent**	**3.81**	**300**	⇓*eP*			**Pn**	**10 58 20.4**	**+1.3**
	baz=1.0								
TAS				⇓*eS*			**Sn**	**10 59 03.5**	**-0.5**
	baz=1.0								
IUG	**Iuzhnay**	**3.83**	**315**	*eP*			**Pg**	**10 58 31.6**	**-2.2**
	comp=E,69nm,0.1s								
IUG				*eS*			**Sg**	**10 59 22.9**	**-0.6**
	comp=E,231nm,0.4s								
IUG	**Iuzhnay**	**3.83**	**315**	Pg			**Pg**	**10 58 31.7**	**-2.1**
	comp=E,2μm,0.5s								
IUG				Lg			Lg	10 59 22.8	
	comp=E,226nm,0.4s								
USP	**Ospenovka**	**3.84**	**9**	P			**Pn**	**10 58 22.8**	**+3.2**
	SNR=18								
USP	**Ospenovka**	**3.84**	**9**	⇑*eP*			**Pn**	**10 58 21.6**	**+2.0**
	baz=10.0								
USP				⇑*eS*			**Sn**	**10 59 05.8**	**+1.0**
	baz=10.0								
TARG	**Taragay, Kyrgy**	**3.88**	**53**	⇑*eP*			**Pn**	**10 58 23.2**	**+2.7**
	baz=54								
TARG				⇑*eS*			**Sn**	**10 59 08.3**	**+2.0**
	baz=54								
SGDS	**Sogindy**	**4.04**	**10**	*eP*			**Pb**	**10 58 33.2**	**+1.5**
	comp=E,14nm,0.2s								
SGDS				*eS*			**Sg**	**10 59 25.1**	**-5.0**
	comp=E,71nm,0.2s								
DGS	**Degeres**	**4.08**	**22**	*eP*			**Pb**	**10 58 35.0**	**+2.6**
	comp=E,48nm,0.1s								
DGS				*eS*			**Sg**	**10 59 29.1**	**-2.5**
	comp=E,159nm,0.1s								
DGS	**Degeres**	**4.08**	**22**	Pg			**Pb**	**10 58 35.1**	**+2.6**
	comp=E,45nm,0.9s								
DGS				Lg			Lg	10 59 29.0	
	comp=E,165nm,1.1s								
CHM	**Chimkent**	**4.18**	**314**	*eP*			**Pg**	**10 58 38.7**	**-1.9**
	comp=E,138nm,0.3s								
CHM				*eS*			**Sg**	**10 59 34.7**	**0.0**
	comp=E,337nm,0.4s								
MTBS	**Maitube**	**4.20**	**29**	*eP*			**Pb**	**10 58 36.2**	**+1.7**
	comp=E,14nm,0.1s								
MTBS				*eS*			**Sg**	**10 59 30.7**	**-4.7**
	comp=E,94nm,0.1s								
MTBS	**Maitube**	**4.20**	**29**	Pg			**Pb**	**10 58 37.8**	**+3.3**
	comp=E,28nm,0.5s								
MTBS				Lg			Lg	10 59 33.2	
	comp=E,96nm,0.6s								
KK31	**Karatay Array**	**4.33**	**328**	Pn			**Pn**	**10 58 28.9**	**+2.5**
	comp=E,6.8nm,0.3s,baz=129,slow=11,SNR=234								
KK31				⇑Pg			**Pb**	**10 58 38.1**	**+1.5**
	comp=E,17nm,0.5s,baz=115,slow=7.7,SNR=13								
KK31				⇑Sn			**Sn**	**10 59 19.0**	**+2.2**
	comp=E,31nm,0.6s								
KK31				⇓Lg			Lg	10 59 35.4	
	comp=E,62nm,0.7s,baz=156,slow=31,SNR=4.0								
KKAR	**Karatay Array**	**4.33**	**328**	⇑*eP*			**Pn**	**10 58 27.8**	**+1.5**
	baz=28								
KKAR				⇑*eS*			**Sn**	**10 59 16.2**	**-0.6**
	baz=28								
TNSS	**Tian-Shan**	**4.34**	**34**	*eP*			**Pb**	**10 58 39.8**	**+2.9**
	comp=E,32nm,0.5s								
TNSS				*eS*			**Sg**	**10 59 36.8**	**-2.8**
	comp=E,65nm,0.5s								
TNSS	**Tian-Shan**	**4.34**	**34**	Pg			**Pb**	**10 58 39.8**	**+2.9**
	comp=E,32nm,0.5s								
TNSS				Lg			Lg	10 59 36.8	
	comp=E,65nm,0.5s								
KRBS	**Karabastau**	**4.48**	**19**	*eP*			**Pb**	**10 58 42.1**	**+2.9**
	comp=E,26nm,0.6s								
KRBS				*eS*			**Sg**	**10 59 41.3**	**-3.0**
	comp=E,155nm,0.0s								
KRBS	**Karabastau**	**4.48**	**19**	Pg			**Pb**	**10 58 42.1**	**+2.9**
	comp=E,26nm,0.6s								
KRBS				Lg			Lg	10 59 41.3	
	comp=E,156nm,0.8s								
ANVS	**Anan'yevo**	**4.48**	**41**	⇑*iP*			**Pn**	**10 58 31.5**	**+2.9**
	baz=42								
ANVS				⇑*iS*			**Sn**	**10 59 22.4**	**+1.6**
	baz=42								
KNDC	**Almaty**	**4.49**	**33**	⇑Pn			Pb	10 58 34.9	-4.5
	comp=E,67nm,0.5s								
KNDC				⇓Lg			Lg	10 59 42.7	
	comp=E,479nm,0.6s								
BRLS	**Borolday**	**4.57**	**322**	*eP*			**Pb**	**10 58 43.9**	**+3.2**
	comp=E,8.9nm,0.1s								
BRLS				*eS*			**Sg**	**10 59 44.2**	**-3.0**
	comp=E,68nm,0.1s								
BRLS	**Borolday**	**4.57**	**322**	Pg			**Pb**	**10 58 43.9**	**+3.2**
	comp=E,8.9nm,0.5s								
BRLS				Lg			Lg	10 59 44.2	
	comp=E,68nm,0.8s								
PRZ	**Przheval'sk**	**4.68**	**49**	⇓*eP*			**Pn**	**10 58 34.0**	**+2.7**
	baz=49								
PRZ				⇓*eS*			**Sn**	**10 59 27.5**	**+1.7**
	baz=49								
KTBS	**Karatobe**	**4.80**	**27**	*eP*			**Pb**	**10 58 47.4**	**+2.8**
	comp=E,9.0nm,0.2s								
KTBS				*eS*			**Sg**	**10 59 49.8**	**-4.8**
	comp=E,186nm,0.2s								
KTBS	**Karatobe**	**4.80**	**27**	Pg			**Pb**	**10 58 48.0**	**+3.4**
	comp=E,14nm,0.6s								
KTBS				Lg			Lg	10 59 51.3	
	comp=E,187nm,0.6s								
KUU	**Kurty**	**4.85**	**24**	*eP*			**Pb**	**10 58 48.8**	**+3.3**
	comp=E,17nm,0.6s								
KUU				*eS*			**Sg**	**10 59 52.5**	**-3.6**
	comp=E,104nm,1.1s								
KUU	**Kurty**	**4.85**	**24**	Pg			**Pb**	**10 58 48.8**	**+3.3**
	comp=E,17nm,0.6s								
KUU				Lg			Lg	10 59 52.5	
	comp=E,104nm,1.1s								
CHKK	**Chushkaly**	**5.03**	**29**	*eP*			**Pb**	**10 58 51.8**	**+3.1**
	comp=E,11nm,0.1s								
CHKK				*eS*			**Sg**	**10 59 57.8**	**-4.2**
	comp=E,71nm,0.1s								
CHKK	**Chushkaly**	**5.03**	**29**	Pg			**Pb**	**10 58 52.3**	**+3.7**
	comp=E,17nm,0.8s								
CHKK				Lg			Lg	10 59 58.3	
	comp=E,73nm,0.7s								
SATY	**Saty**	**5.06**	**43**	*eP*			**Pb**	**10 58 53.1**	**+4.0**
	comp=E,25nm,0.2s								
SATY				*eS*			**Sg**	**10 59 59.9**	**-3.0**
	comp=E,68nm,0.5s								
SATY	**Saty**	**5.06**	**43**	Pg			**Pb**	**10 58 53.3**	**+4.1**
	comp=E,26nm,0.9s								
SATY				Lg			Lg	10 59 59.9	
	comp=E,71nm,1.0s								
ZHN	**Zhinishke**	**5.15**	**43**	*eP*			**Pb**	**10 58 53.8**	**+3.1**
	comp=E,14nm,0.1s								
ZHN				*eS*			**Sg**	**11 00 00.6**	**-5.2**
	comp=E,68nm,0.1s								
ZHN	**Zhinishke**	**5.15**	**43**	Pg			**Pb**	**10 58 54.9**	**+4.3**
	comp=E,14nm,0.2s								
ZHN				Lg			Lg	11 00 02.5	
	comp=E,70nm,0.9s								
KURS	**Kuram**	**5.25**	**39**	*eP*			**Pb**	**10 58 55.7**	**+3.5**
	comp=E,12nm,0.7s								
KURS				*eS*			**Sg**	**11 00 03.9**	**-5.0**
	comp=E,41nm,0.1s								
KURS	**Kuram**	**5.25**	**39**	Pg			**Pb**	**10 58 55.7**	**+3.5**
	comp=E,12nm,0.7s								
KURS				Lg			Lg	11 00 03.9	
	comp=E,41nm,1.0s								
KPKS	**Kokpek**	**5.49**	**42**	*eP*			**Pb**	**10 59 00.7**	**+4.3**
	comp=E,31nm,0.1s								
KPKS				*eS*			**Sg**	**11 00 12.6**	**-4.1**
	comp=E,57nm,0.2s								
KPKS	**Kokpek**	**5.49**	**42**	Pg			**Pb**	**10 59 00.7**	**+4.3**
	comp=E,30nm,0.7s								
KPKS				Lg			Lg	11 00 12.6	
	comp=E,58nm,0.7s								
BTLS	**Baital**	**5.57**	**3**	*eP*			**Pb**	**10 59 02.1**	**+4.5**
	comp=E,15nm,0.1s								
BTLS				*eS*			**Sg**	**11 00 15.3**	**-3.9**
	comp=E,11nm,0.4s								
BTLS	**Baital**	**5.57**	**3**	Pg			**Pb**	**10 59 02.1**	**+4.5**
	comp=E,15nm,1.2s								
BTLS				Lg			Lg	11 00 15.3	
	comp=E,11nm,0.7s								
ARXS	**Arharly**	**5.66**	**32**	*eP*			**Pb**	**10 59 03.6**	**+4.2**
	comp=E,11nm,0.1s								
ARXS				*eS*			**Sg**	**11 00 17.7**	**-4.5**
	comp=E,78nm,0.2s								
ARXS	**Arharly**	**5.66**	**32**	Pg			**Pb**	**10 59 03.6**	**+4.2**
	comp=E,28nm,0.8s								
ARXS				Lg			Lg	11 00 17.7	
	comp=E,104nm,1.0s								
PDGK	**Podgornoye**	**5.83**	**47**	Pg			**Pg**	**10 59 08.2**	**-3.9**
	comp=E,13nm,0.8s								
PDGK				Lg			Lg	11 00 26.0	
	comp=E,32nm,0.9s								
PDGK	**Podgornoye**	**5.83**	**47**	⇓Pn			Pn	10 58 52.9	+5.8
	comp=E,6.4nm,0.6s								
PDGK				⇑Pg			**Pg**	**10 59 11.6**	**-0.5**
	comp=E,27nm,0.7s								
PDGK				⇑Lg			Lg	11 00 30.2	
	comp=E,79nm,0.8s								
BLB	**Baldybastay**	**5.86**	**36**	*eP*			**Pb**	**10 59 07.2**	**+4.5**
	comp=E,38nm,0.1s								
BLB				*eS*			**Sg**	**11 00 24.3**	**-4.0**
	comp=E,61nm,0.0s								
BLB	**Baldybastay**	**5.86**	**36**	Pg			**Pb**	**10 59 07.2**	**+4.5**
	comp=E,46nm,1.0s								
BLB				Lg			Lg	11 00 24.3	
	comp=E,66nm,0.9s								
TDK	**Taldyqorghan**	**6.55**	**31**	*eP*			Pg	10 59 20.9	-4.9
	comp=E,50nm,0.2s								
TDK				*eS*			**Sg**	**11 00 47.0**	**-3.6**
	comp=E,98nm,1.1s								
TDK	**Taldyqorghan**	**6.55**	**31**	Pg			Pg	10 59 20.9	-4.9
	comp=E,50nm,0.2s								
TDK				Lg			Lg	11 00 47.0	
	comp=E,98nm,1.1s								
DJR	**Jarkent**	**6.67**	**41**	*eP*			Pb	10 59 22.6	+6.2
	comp=E,6.0nm,1.0s								
DJR				*eS*			**Sg**	**11 00 51.0**	**-3.4**
	comp=E,32nm,0.8s								
DJR	**Jarkent**	**6.67**	**41**	Pg			Pb	10 59 22.6	+6.2
	comp=E,6.0nm,1.0s								
DJR				Lg			Lg	11 00 51.0	
	comp=E,32nm,0.8s								
OTUK	**Ortayu**	**8.82**	**354**	⇑Pn			**Pn**	**10 59 29.3**	**+1.4**
	comp=E,2.8nm,0.4s								
OTUK				⇓Lg			Lg	11 01 57.7	
	comp=E,13nm,0.6s								
MKAR	**Makanchi Array**	**9.65**	**38**	P			**Pn**	**10 59 43.7**	**+4.3**
	comp=E,1.0nm,0.8s,baz=220,slow=11,SNR=4.5								
MKAR					LR		LR	11 03 15.6	
	comp=E,32nm,19.7s,baz=194,slow=36								
WMQ	**Urumqi**	**11.36**	**63**	eP			**Pn**	**11 00 05.0**	**+2.2**
KURBB	**Kurchatov Arra**	**11.66**	**16**	P			**Pn**	**11 00 11.1**	**+4.3**
	comp=E,0.4nm,0.7s,baz=204,slow=12,SNR=3.4								
KURBB	**Kurchatov Arra**	**11.66**	**16**	⇓Lg			Lg	11 03 30.3	
	comp=E,21nm,0.8s								
KURK	**Kurchatov**	**11.77**	**16**	⇓Lg			Lg	11 03 34.0	
	comp=E,35nm,1.1s								
GEYT	**Alibeck**	**12.24**	**268**	P			**Pn**	**11 00 16.9**	**+2.1**
	comp=E,5.4nm,0.6s,baz=96,slow=8.4,SNR=4.9								
AB31	**Akbulak array**	**13.83**	**319**	⇓Pn			**Pn**	**11 00 38.4**	**+2.1**
	comp=E,1.5nm,0.5s,baz=131,slow=14,SNR=44								
AKTO	**Aktyubinsk**	**15.54**	**320**	P			**Pn**	**11 00 58.6**	**-0.9**
	comp=E,2.1nm,0.6s,baz=122,slow=13,SNR=5.7								
AKTO				S			**Sn**	**11 03 49.5**	**-2.1**
	comp=E,1.1nm,0.6s,baz=14,slow=19,SNR=1.7								
AKTO	**Aktyubinsk**	**15.54**	**320**	⇑Pn			**Pn**	**11 01 01.1**	**+1.6**
	comp=E,6.7nm,0.8s								
ZALV	**Zalesovo Beam**	**16.34**	**24**	P			**Pn**	**11 01 09.9**	**+0.1**
	comp=E,1.2nm,0.4s,baz=193,slow=10,SNR=7.1								
ARU	**Arti**	**19.67**	**335**	P			**P**	**11 01 50.1**	**+0.7**
	comp=E,5.5nm,0.2s,baz=187,slow=7.5,SNR=6.3								
GTA	**Gaotai**	**20.18**	**82**	⇓P			**P**	**11 01 57.3**	**+2.0**
GTA				pP			pP	11 02 00.8	+1.4
GTA				sP			sP	11 02 03.5	+2.2
GTA				pmax			pmax		
	comp=Z,8.0nm,0.9s								
BELG	**Belogornoye**	**22.09**	**314**	P			**P**	**11 02 17.4**	**+1.9**
	comp=Z,27nm,0.8s,baz=142,slow=5.9,SNR=6.8								
	comp=Z,27nm,0.8s								
GNI	**Garni**	**22.18**	**281**	P			**P**	**11 02 22.5**	**+5.6**
	comp=Z,7.6nm,0.6s,baz=160,slow=4.0,SNR=5.4								
KBZ	**Khabaz**	**23.32**	**291**	P			**P**	**11 02 29.1**	**+0.6**
	comp=Z,0.8nm,0.4s,baz=135,slow=8.6,SNR=1.5								
	comp=Z,0.8nm,0.4s								
KVAR	**Kislovodsk Arr**	**23.46**	**291**	LR			LR	11 13 46.6	
	comp=Z,332nm,19.4s,baz=268,slow=42								
SONM	**Songino Array**	**24.97**	**60**	P			**P**	**11 02 45.8**	**+1.6**
	comp=Z,2.9nm,0.8s,baz=230,slow=11,SNR=3.7								
	comp=Z,2.9nm,0.8s								
BRTR	**Keskin Array B**	**30.66**	**283**	P			**P**	**11 03 35.9**	**+0.8**
	comp=Z,0.8nm,0.6s,baz=80,slow=8.1,SNR=3.6								
	comp=Z,0.8nm,0.6s								
AKASG	**Malin Array Be**	**32.84**	**305**	P			**P**	**11 03 53.5**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=79,slow=7.9,SNR=4.2								
	comp=Z,0.4nm,0.4s								
FINES	**FINESS Array B**	**36.27**	**323**	P			**P**	**11 04 22.9**	**-0.7**
	comp=Z,0.8nm,0.3s,baz=106,slow=9.7,SNR=5.9								
	comp=Z,0.8nm,0.3s								
ARCES	**ARCESS Array B**	**39.25**	**336**	P			**P**	**11 04 49.0**	**+0.3**
	comp=Z,0.7nm,0.4s,baz=108,slow=7.9,SNR=17								
ARCES					LR		LR	11 20 14.9	
	comp=Z,50nm,20.8s,baz=106,slow=35								
	comp=Z,0.7nm,0.4s								
KLR	**Kul'dur**	**41.73**	**57**	P			**P**	**11 05 09.4**	**0.0**
	comp=Z,1.3nm,0.5s,baz=264,slow=7.3,SNR=7.8								
KLR					LR		LR	11 25 53.4	
	comp=Z,29nm,19.2s,baz=228,slow=41								
	comp=Z,1.3nm,0.5s								
NB2	**NORSAR Subarra**	**43.33**	**321**	P			**P**	**11 05 21.8**	**-0.5**
	comp=Z,1.4nm,0.7s,baz=92,slow=8.6								
NOA	**NORSAR Array B**	**43.33**	**

TRAV	**Traversella**	**0.61**	**171**	⇑P	Pb	11 13 28.1	+0.8
EUCT	**Pavia**	**1.41**	**130**	S	Sg	11 14 07.0	+7.4
EUCT	**Pavia**	**1.41**	**130**	S	Sg	11 14 07.0	+7.4
STAL	**STALIGIAL**	**3.54**	**86**	S	Sn	11 14 52.0	+0.4
STAL	**STALIGIAL**	**3.54**	**86**	S	Sn	11 14 52.0	+0.4
APEC	**Apecchio**	**4.27**	**125**	⇑P	Pg	11 14 36.6	+0.4
APEC	**Apecchio**	**4.27**	**125**	⇑P	Pg	11 14 36.6	+0.4
NARO	**Abbazia di Nar**	**4.33**	**124**	P	Pb	11 14 29.9	-0.7
NARO	**Abbazia di Nar**	**4.33**	**124**	P	Pb	11 14 29.9	-0.7
FDMO	**Fiordimonte**	**4.98**	**126**	P	Pn	11 14 26.4	-2.9
FDMO	**Fiordimonte**	**4.98**	**126**	P	Pn	11 14 26.4	-2.9
ARRO	**Arrone**	**5.11**	**132**	P	Pn	11 14 30.6	-0.5
ARRO	**Arrone**	**5.11**	**132**	P	Pn	11 14 30.6	-0.5
TRTR	**Tortoreto Alta**	**5.59**	**124**	P	Pg	11 14 59.0	-2.5
TRTR	**Tortoreto Alta**	**5.59**	**124**	P	Pg	11 14 59.0	-2.5
VIVA	**Pratoni del Vi**	**5.74**	**138**	P	Pg	11 15 00.5	-3.8
VIVA	**Pratoni del Vi**	**5.74**	**138**	P	Pg	11 15 00.5	-3.8

*IDC **27** 11:14:56.5±0.9, 77°.29N×24°.14E, h0km, mb3.5/7, mbtmp3.7/11, ML3.5/4, MS2.8/1, Error ellipse: s-maj=18.5km s-min=6.6km az=47.0*
*NAO **27** 11:14:59.2±1.3, 77°.13N×23°.47E, h17km±9km, ML4.1*
*IEPN **27** 11:15:00.0, 77°.15N×23°.38E, h10km*
*BER **27** 11:15:00.3±2.7, 77°.20N×24°.01E, h15km±12km, ML3.2, MW3.8, ML4.1(NAO), Confirmed Earthquake*
*KOLA **27** 11:15:01.4, 77°.04N×24°.84E, h0km, ML3.2*

ISC 27 11:14:57.6±0.5, 77°.20N±0'.03×24°.11E±0'.04, h10km, n68, σ1°76/95, mb3.4/7, 2C-4D, Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPEN	**Hopen**	**0.73**	**163**	Pg	**Pg**	**11 15 13.2**	**+1.6**
HOPEN				Lg	Lg	11 15 22.6	
HOPEN	**Hopen**	**0.73**	**163**	⇑*i* P	**Pg**	**11 15 13.2**	**+1.6**
HOPEN				*e*S	**Sg**	**11 15 22.6**	**+1.5**
HOPEN				IAML		11 15 26.4	
	comp=Z,2μm,0.2s						
HOPEN	**Hopen**	**0.73**	**163**	*i* P	**Pg**	**11 15 13.2**	**+1.6**
HOPEN				*i* S	**Sg**	**11 15 22.9**	**+1.9**
SPA0	**Spitsbergen Ar**	**1.93**	**304**	Pn	**Pn**	**11 15 29.9**	**-0.4**
	baz=121,slow=16						
SPA0				Pg	**Pb**	**11 15 33.8**	**+1.0**
SPA0				Lg	Lg	11 15 56.9	
	baz=123,slow=37						
SPA0	**Spitsbergen Ar**	**1.93**	**304**	Pn	**Pn**	**11 15 29.9**	**-0.4**
	baz=121,slow=16						
SPA0				Pg	**Pb**	**11 15 33.8**	**+1.0**
SPA0				*e*S	**Sn**	**11 15 51.5**	**-3.1**
SPA0				Sg	**Sb**	**11 15 56.9**	**+0.1**
	baz=123,slow=37						
SPA0				IAML		11 15 59.6	
	comp=Z,1μm,0.4s						
SPA0	**Spitsbergen Ar**	**1.93**	**304**	⇓*i* P	**Pn**	**11 15 30.0**	**-0.4**
SPA0				*e*S	**Sn**	**11 15 52.9**	**-1.7**
SPITS	**Spitsbergen Ar**	**1.93**	**304**	Pn	**Pn**	**11 15 30.0**	**-0.4**
	baz=120,slow=18						
SPITS				Lg	Lg	11 15 55.1	
	baz=116,slow=30						
HSPB	**Hornsund (broa**	**1.94**	**268**	Pn	**Pn**	**11 15 29.6**	**-0.8**
HSPB				Pg	**Pb**	**11 15 33.9**	**+1.0**
HSPB				Lg	Lg	11 15 56.5	
HSPB	**Hornsund (broa**	**1.94**	**268**	*e*P	**Pn**	**11 15 29.6**	**-0.8**
HSPB				*e*Pg	**Pb**	**11 15 34.0**	**+1.1**
HSPB				*e*Sg	**Sn**	**11 15 56.7**	**+2.0**
HSPB				IAML		11 16 01.9	
	comp=Z,482nm,0.3s						
BRBA	**Barentsburg A**	**2.30**	**297**	Pn	**Pn**	**11 15 35.2**	**-0.2**
BRBA				Pg	**Pb**	**11 15 40.3**	**+1.3**
BRBA				Lg	Lg	11 16 07.8	
BRBA	**Barentsburg A**	**2.30**	**297**	⇓*i* P	**Pn**	**11 15 35.2**	**-0.2**
BRBA				*e*Pg	**Pb**	**11 15 40.1**	**+1.1**
BRBA				*e*Sg	**Sb**	**11 16 08.3**	**+1.0**
BRBA				IAML		11 16 13.2	
	comp=Z,759nm,0.5s						
BRBB	**Barentsburg B**	**2.31**	**298**	Pn	**Pn**	**11 15 35.3**	**-0.2**
BRBB				Lg	Lg	11 16 09.6	
BRBB	**Barentsburg B**	**2.31**	**298**	⇓*i* P	**Pn**	**11 15 35.4**	**-0.2**
BRBB				*e*Pg	**Pb**	**11 15 40.0**	**+0.8**
BRBB				*e*Sg	**Sb**	**11 16 09.1**	**+1.4**
BJO1	**Bjornoya**	**2.99**	**207**	Pn	**Pn**	**11 15 43.5**	**-1.5**
BJO1				Pg	**Pb**	**11 15 52.4**	**+1.6**
BJO1				Sn	**Sn**	**11 16 17.4**	**-3.4**
BJO1				Lg	Lg	11 16 30.2	
BJO1	**Bjornoya**	**2.99**	**207**	*e*P	**Pn**	**11 15 43.5**	**-1.5**
BJO1				*e*Pg	**Pb**	**11 15 52.6**	**+1.8**
BJO1				*e*S	**Sn**	**11 16 17.0**	**-3.7**
BJO1				*e*Sg	**Sb**	**11 16 30.3**	**+2.9**
BJO1				IAML		11 16 35.1	
	comp=Z,295nm,0.5s						
BJO1	**Bjornoya**	**2.99**	**207**	⇑*i* P	**Pn**	**11 15 43.4**	**-1.5**
BJO1				*i* S	**Sn**	**11 16 17.1**	**-3.7**
KBS	**Kingsbay**	**3.06**	**310**	Pn	**Pn**	**11 15 45.1**	**-0.8**
KBS				Sn	**Sn**	**11 16 19.4**	**-3.1**
KBS				Lg	Lg	11 16 32.0	
KBS	**Kingsbay**	**3.06**	**310**	*e*P	**Pn**	**11 15 45.0**	**-0.8**
KBS				*e*S	**Sn**	**11 16 19.4**	**-3.1**
KBS				*e*Sg	**Sb**	**11 16 31.1**	**+1.8**
KBS				IAML		11 16 35.1	
	comp=Z,694nm,0.2s						
KBS	**Kingsbay**	**3.06**	**310**	⇓*i* P	**Pn**	**11 15 44.8**	**-1.1**
KBS				*i* S	**Sn**	**11 16 19.2**	**-3.3**
ZFI	**Zemlya Franca-**	**5.73**	**40**	*e*P	**Pn**	**11 16 23.8**	**+1.3**
ZFI				*e*S	**Sn**	**11 17 25.9**	**-2.2**
	comp=Z,70nm,0.4s						
ZFI2	**Zemlya Franca-**	**5.73**	**40**	*e*P	**Pn**	**11 16 23.7**	**+1.3**
ZFI2				*e*S	**Sn**	**11 17 25.7**	**-2.4**
	comp=Z,78nm,0.8s						
HAMF	**Hammerfest**	**6.60**	**181**	Pn	**Pn**	**11 16 33.5**	**-0.9**
HAMF				Sn	Sn	11 17 42.9	-6.7
HAMF	**Hammerfest**	**6.60**	**181**	*e*P	**Pn**	**11 16 33.4**	**-1.1**
HAMF				*e*S	Sn	11 17 42.1	-7.5
HAMF				IAML		11 17 48.6	
	comp=Z,38nm,0.4s						
KEV	**Kevo**	**7.53**	**172**	*e*P	**Pn**	**11 16 47.1**	**-0.2**
ARA0	**ARCESS Array S**	**7.72**	**176**	Pn	**Pn**	**11 16 48.8**	**-1.0**
	baz=354,slow=14						
ARA0				Sn	Sn	11 18 10.3	-6.9
	baz=2.7,slow=22						
ARA0	**ARCESS Array S**	**7.72**	**176**	Pn	**Pn**	**11 16 48.8**	**-1.0**
	baz=354,slow=14						
ARA0				Sn	Sn	11 18 10.3	-6.9
	baz=2.7,slow=22						
ARCES	**ARCESS Array B**	**7.72**	**176**	Pn	**Pn**	**11 16 49.2**	**-0.7**
	comp=Z,6.4nm,0.3s,baz=1.1,slow=13,SNR=357						
ARCES				Sn	Sn	11 18 09.7	-7.5
	comp=Z,5.1nm,0.3s,baz=3.6,slow=19,SNR=8.3						
	comp=Z,13nm,0.3s						
ARCES	**ARCESS Array B**	**7.72**	**176**	P	**Pn**	**11 16 50.8**	**+1.0**
ARCES				S	**Sn**	**11 18 12.1**	**-5.1**
TRO	**Tromso**	**7.75**	**194**	*e*P	**Pn**	**11 16 48.9**	**-1.3**
TRO				*e*S	Sn	11 18 09.1	-8.8
TRO				IAML		11 18 20.3	
	comp=Z,11nm,0.7s						
JETT	**Jettan, Norway**	**7.76**	**190**	Pn	**Pn**	**11 16 49.6**	**-0.8**
JETT				Sn	Sn	11 18 09.6	-8.6
KTK1	**Kautokeino**	**8.24**	**182**	*e*P	**Pn**	**11 16 56.5**	**-0.4**
KTK1				*e*S	Sn	11 18 21.8	-8.2
KTK1				IAML		11 19 27.2	
	comp=Z,16nm,0.5s						
KIF	**Kilpisjarvi**	**8.30**	**188**	Pn	**Pn**	**11 16 57.0**	**-0.7**
KIF				Sn	**Sn**	**11 18 25.4**	**-5.9**
KIF	**Kilpisjarvi**	**8.30**	**188**	*e*P	**Pn**	**11 16 57.3**	**-0.4**
NOR	**Nord**	**8.48**	**319**	Pn	**Pn**	**11 17 00.4**	**+0.2**
NOR	**Nord**	**8.48**	**319**	*i* P	**Pn**	**11 17 01.9**	**+1.6**
NOR	**Nord**	**8.48**	**319**	*e*P	**Pn**	**11 17 00.7**	**+0.5**
TERR	**Teriberka**	**8.62**	**153**	P	**Pn**	**11 17 01.1**	**-1.1**
TERR				S	Sn	11 18 32.7	-6.6
HEF	**Hetta**	**8.84**	**181**	*e*P	**Pn**	**11 17 04.3**	**-0.9**
LOF	**Lofoten**	**9.62**	**204**	*e*P	**Pn**	**11 17 15.1**	**-0.7**
LOF				*e*S	Sn	11 18 51.9	-12
LOF				IAML		11 19 00.4	
	comp=Z,5.5nm,1.1s						
STEI	**Steigen**	**9.67**	**200**	*e*P	**Pn**	**11 17 15.3**	**-1.2**
STEI				*e*S	Sn	11 18 53.2	-12
STEI				IAML		11 19 04.4	
	comp=Z,4.5nm,0.5s						
APA0	**Apatity Array**	**9.99**	**160**	Pn	**Pn**	**11 17 19.3**	**-1.7**
	baz=344,slow=12						
APA0				Sn	Sn	11 19 06.0	-6.9
	baz=344,slow=22						
APA0	**Apatity Array**	**9.99**	**160**	Pn	**Pn**	**11 17 19.3**	**-1.7**
	baz=344,slow=12						
APA0				Sn	Sn	11 19 06.0	-6.9
	baz=344,slow=22						
APA0	**Apatity Array**	**9.99**	**160**	P	**Pn**	**11 17 20.3**	**-0.7**
APA0				S	Sn	11 19 04.9	-8.0
SALU	**Saltoluokta**	**10.01**	**193**	*e*P	**Pn**	**11 17 20.5**	**-0.7**
FAUS	**Fauske**	**10.21**	**200**	*e*P	**Pn**	**11 17 24.0**	**+0.1**
FAUS				*e*S	Sn	11 19 08.1	-10
FAUS				IAML		11 19 18.5	
	comp=Z,6.8nm,0.4s						
DBG	**Daneborg**	**11.06**	**277**	Pn	**Pn**	**11 17 36.4**	**+0.9**
DBG	**Daneborg**	**11.06**	**277**	*e*P	**Pn**	**11 17 35.1**	**-0.4**
DBG				*e*S	Sn	11 19 19.6	-19
KONS	**Konsvik**	**11.25**	**203**	*e*P	Pn	11 17 35.3	-2.8
AMDE	**Amderma**	**12.74**	**106**	*e*P	**Pn**	**11 17 58.5**	**+0.1**
	comp=Z,4.2nm,0.5s						
AMDE				*e*S	Sn	11 20 09.0	-11
LSH	**Leshukonskoye**	**14.07**	**140**	*e*P	Pn	11 18 14.4	-2.1
	comp=Z,53nm,2.5s						
LSH				*e*S	Sn	11 20 38.7	-14
FIA0	**FINESS Array S**	**15.85**	**177**	P	**Pn**	**11 18 37.8**	**-2.6**
	baz=5.2,slow=12						
FIA0	**FINESS Array S**	**15.85**	**177**	P	**Pn**	**11 18 37.8**	**-2.6**
	baz=5.2,slow=12						
FINES	**FINESS Array B**	**15.85**	**177**	Pn	**Pn**	**11 18 36.6**	**-3.8**
	comp=Z,0.4nm,0.3s,baz=5.1,slow=11,SNR=13						
FINES				Sn	Sn	11 21 23.1	-13
	comp=Z,0.4nm,0.3s,baz=356,slow=23,SNR=2.5						
FINES				LR	LR	11 24 16.2	
	comp=Z,30nm,18.6s,baz=202,slow=35						
	comp=Z,1.0nm,0.3s						
NOA	**NORSAR Array B**	**16.79**	**202**	Pn	**Pn**	**11 18 52.4**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=14,slow=13,SNR=6.6						
	comp=Z,0.6nm,0.4s						
NRA0	**NORESS Array S**	**17.07**	**201**	P	**Pn**	**11 18 56.0**	**+0.1**
	baz=23,slow=16						
NRA0	**NORESS Array S**	**17.07**	**201**	P	**Pn**	**11 18 56.0**	**+0.1**
	baz=23,slow=16						
PRGR	**Permogore**	**17.15**	**144**	P	**Pn**	**11 18 53.5**	**-3.4**
KLMR	**Klimovskoe**	**17.21**	**154**	*e*P	**Pn**	**11 18 58.9**	**+1.3**
	comp=Z,11nm,0.8s						
KLMR				*e*S	Sn	11 21 53.1	-16
HFS	**Hagfors**	**17.50**	**198**	Pn	**Pn**	**11 19 00.6**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=29,slow=12,SNR=11						
HFS				Sn	Sn	11 22 02.9	-13
	comp=Z,0.2nm,0.3s,baz=28,slow=22,SNR=3.1						
	comp=Z,2.6nm,0.5s						
HFS	**Hagfors**	**17.50**	**198**	P	**Pn**	**11 19 00.4**	**-1.0**
	baz=5.2,slow=11						
HFS	**Hagfors**	**17.50**	**198**	P	**Pn**	**11 19 00.4**	**-1.0**
	baz=5.2,slow=11						
ARU	**Arti**	**24.12**	**130**	P	**P**	**11 20 13.8**	**+0.7**
	comp=Z,2.3nm,0.4s,baz=288,slow=20,SNR=1.3						
	comp=Z,2.3nm,0.4s						
AKASG	**Malin Array Be**	**26.68**	**173**	P	**P**	**11 20 36.6**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=356,slow=11,SNR=2.3						
	comp=Z,0.3nm,0.4s						
MKAR	**Makanchi Array**	**37.90**	**108**	P	**P**	**11 22 15.9**	**+1.5**
	comp=Z,0.4nm,0.7s,baz=348,slow=7.2,SNR=2.2						
	comp=Z,0.4nm,0.7s						
ILAR	**Eielson Array**	**38.15**	**354**	P	**P**	**11 22 16.2**	**-0.1**
	comp=Z,0.2nm,0.7s,baz=357,slow=8.1,SNR=4.4						
	comp=Z,0.2nm,0.7s						
YKA	**Yellowknife Ar**	**38.22**	**330**	P	**P**	**11 22 15.2**	**-1.7**
	comp=Z,0.4nm,0.7s,baz=9.7,slow=7.7,SNR=6.0						
	comp=Z,0.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**65.10**	**204**	P	**P**	**11 25 38.3**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=348,slow=8.1,SNR=7.4						
	comp=Z,0.6nm,0.5s						
TXAR	**Lajitas Array**	**69.15**	**312**	P	**P**	**11 26 04.5**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=31,slow=5.5,SNR=4.7						
	comp=Z,0.4nm,0.7s						

BUC 27 11:18:34.6±0.2, 44°.36N×28°.35E, h2km, ml1.7/3, 18C-4D, Error ellipse: s-maj=2.5km s-min=1.4km az=79.0, Romania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIRR	**Tirgusor**	**0.10**	**25**	⇑P	Pg	11 18 36.1	-0.5
TIRR				⇑S	Sg	11 18 38.7	+0.7
TIRR	**Tirgusor**	**0.10**	**25**	⇑P	Pg	11 18 36.1	-0.5
TIRR				⇑S	Sg	11 18 38.7	+0.7
MFTR	**Murfatlar**	**0.19**	**165**	⇑P	Pg	11 18 38.3	0.0
MFTR				⇓S	Sg	11 18 41.5	+0.7
MFTR	**Murfatlar**	**0.19**	**165**	⇑P	Pg	11 18 38.3	0.0
MFTR				⇓S	Sg	11 18 41.5	+0.7
TLBR	**Topalu**	**0.28**	**310**	⇑P	Pg	11 18 40.3	+0.3
TLBR				⇓S	Sg	11 18 44.3	+0.7
TLBR	**Topalu**	**0.28**	**310**	⇑P	Pg	11 18 40.3	+0.3
TLBR				⇓S	Sg	11 18 44.3	+0.7
HARR	**Harsova**	**0.44**	**317**	⇑P	Pg	11 18 42.5	-0.5
HARR	**Harsova**	**0.44**	**317**	⇑P	Pg	11 18 42.5	-0.5
TPGR	**Topolog**	**0.49**	**6**	⇑P	Pg	11 18 43.9	-0.2
TPGR				⇑S	Sg	11 18 51.0	+0.6
TPGR	**Topolog**	**0.49**	**6**	⇑P	Pg	11 18 43.9	-0.2
TPGR				⇑S	Sg	11 18 51.0	+0.6
CFR	**Carcaliu**	**0.83**	**349**	⇑P	Pg	11 18 50.1	-0.4
CFR				⇑S	Sg	11 19 02.1	+0.9
CFR	**Carcaliu**	**0.83**	**349**	⇑P	Pg	11 18 50.1	-0.4
CFR				⇑S	Sg	11 19 02.1	+0.9

*JMA **27** 11:31:07.6±0.1, 23°.7N±0'.8×121°.7E±0'.8, h39km±1km, MV3.1/15, TAIWAN REGION*
*TAP **27** 11:31:09.3, 23°.89N×121°.65E, h46km, ML3.5, B*

ISC 27 11:31:09.8±1.1, 23°.86N±0'.02×121°.69E±0'.02, h35km, n146, σ1°02/266, 10C-19D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TEYL	**Yanliau Villag**	**0.09**	**274**	*i* P	**Pn**	**11 31 16.5**	**+0.7**
	baz=285						
TEYL				S	**Sn**	**11 31 22.6**	**+2.7**
	baz=285						
HWA	**Hwalien**	**0.14**	**325**	*i* P	**Pn**	**11 31 16.7**	**+0.5**
	baz=340						
HWA				*e*S	**Sn**	**11 31 23.0**	**+2.5**
	baz=340						
TEGC	**Jichi Village**	**0.21**	**223**	*i* P	**Pn**	**11 31 17.3**	**+0.6**
	baz=206						
TEGC				*e*S	**Sn**	**11 31 24.1**	**+2.7**
	baz=206						
ETM	**Tongmen**	**0.21**	**299**	*i* P	**Pn**	**11 31 16.9**	**+0.1**
	baz=297						
ETM				S	**Sn**	**11 31 22.3**	**+0.7**
	baz=297						
TWD	**Chiawan**	**0.23**	**338**	⇑*i* P	**Pn**	**11 31 17.1**	**+0.1**
	baz=348						
TWD				S	**Sn**	**11 31 22.9**	**+0.9**
	baz=348						
ESL	**Shilin**	**0.24**	**259**	⇓*i* P	**Pn**	**11 31 17.1**	**0.0**
	baz=247						
ESL				S	**Sn**	**11 31 22.4**	**+0.3**
	baz=247						
ETL	**Fush Village**	**0.30**	**348**	*i* P	**Pn**	**11 31 17.7**	**-0.2**
	baz=355						
ETL				S	**Sn**	**11 31 24.1**	**+0.8**
	baz=355						
EGFH	**Guangfu**	**0.31**	**232**	⇓*i* P	**Pn**	**11 31 17.7**	**-0.2**
	baz=222						
EGFH				S	**Sn**	**11 31 23.7**	**+0.2**
	baz=222						
NACB	**Ninganchiao**	**0.32**	**344**	⇑*i* P	**Pn**	**11 31 17.8**	**-0.3**
	baz=350						
NACB				S	**Sn**	**11 31 24.2**	**+0.5**
	baz=350						
ETLH	**Xiulin Townshi**	**0.40**	**331**	⇑*i* P	**Pn**	**11 31 18.6**	**-0.5**
	baz=334						
ETLH				*e*S	**Sn**	**11 31 24.8**	**-0.7**
	baz=334						
HGSD	**Ruisui**	**0.44**	**214**	*i* P	**Pn**	**11 31 19.9**	**+0.2**
	baz=207						
HGSD				S	**Sn**	**11 31 28.6**	**+2.1**
	baz=207						
EHP	**Heping Village**	**0.45**	**6**	*e*P	**Pn**	**11 31 19.7**	**-0.1**
	baz=13						
EHP				*e*S	**Sn**	**11 31 27.8**	**+1.1**
	baz=13						
OWD	**Renai**	**0.48**	**281**	⇓*i* P	**Pn**	**11 31 20.0**	**-0.4**
	baz=278						
OWD				*e*S	**Sn**	**11 31 27.4**	**-0.3**
	baz=278						
WHF	**Hehuan Shan**	**0.48**	**306**	⇓*i* P	**Pn**	**11 31 20.0**	**-0.7**
	baz=306						
WHF				*e*S	**Sn**	**11 31 27.6**	**-0.6**
	baz=306						
EHY	**Hungye**	**0.49**	**224**	⇓*i* P	**Pn**	**11 31 19.4**	**-1.0**
	baz=217						
EHY				S	**Sn**	**11 31 26.5**	**-1.2**
	baz=217						
CHGB	**Renai**	**0.52**	**293**	⇓*i* P	**Pn**	**11 31 20.6**	**-0.3**
	baz=291						
CHGB				*e*S	**Sn**	**11 31 28.6**	**0.0**
	baz=291						
VWDT	**VWDT**	**0.52**	**258**	⇓*i* P	**Pn**	**11 31 20.6**	**-0.1**
	baz=253						
VWDT				*e*S	**Sn**	**11 31 28.1**	**-0.2**
	baz=253						
WUSB	**Renai**	**0.54**	**284**	⇓*i* P	**Pn**	**11 31 21.0**	**-0.2**
	baz=282						
WUSB				*e*S	**Sn**	**11 31 28.9**	**-0.2**
	baz=282						
FUSS	**Fushou**	**0.56**	**313**	⇓*i* P	**Pn**	**11 31 21.2**	**-0.4**
	baz=314						
FUSS				*e*S	**Sn**	**11 31 29.4**	**-0.5**
	baz=314						
ENA	**Nanau**	**0.57**	**4**	P	**Pn**	**11 31 20.9**	**-0.6**
	baz=10.0						
ENA				*e*S	**Sn**	**11 31 29.7**	**+0.1**
	baz=10.0						
EWUT	**Wuta**	**0.59**	**8**	*i* P	**Pn**	**11 31 21.1**	**-0.6**
	baz=12						
EWUT				*e*S	**Sn**	**11 31 29.9**	**-0.1**
	baz=12						
YULB	**Yu-li**	**0.59**	**218**	⇓*i* P	**Pn**	**11 31 20.7**	**-1.1**
	baz=213						
YULB				*e*S	**Sn**	**11 31 29.1**	**-1.1**
	baz=213						
TWT	**Tachien**	**0.61**	**310**	P	**Pn**	**11 31 22.2**	**0.0**
	baz=309						
TWT				*e*S	**Sn**	**11 31 30.7**	**-0.3**
	baz=309						
EYUL	**Yuli**	**0.62**	**214**	P	**Pn**	**11 31 21.2**	**-0.9**
	baz=209						
EYUL				*e*S	**Sn**	**11 31 30.7**	**-0.1**
	baz=209						
TWF1	**Yuli**	**0.62**	**216**	⇓P	**Pn**	**11 31 21.2**	**-1.1**
	baz=210						
TWF1				*e*S	**Sn**	**11 31 30.1**	**-0.9**
	baz=210						
TDCB	**Techi**	**0.63**	**309**	P	**Pn**	**11 31 22.2**	**-0.2**
	baz=309						
TDCB				*e*S	**Sn**	**11 31 30.6**	**-0.6**
	baz=309						
NNSB	**Datong**	**0.63**	**333**	*e*P	**Pn**	**11 31 21.9**	**-0.5**
	baz=336						
NNSB				*e*S	**Sn**	**11 31 30.7**	**-0.6**
	baz=336						
NNSH	**Datong**	**0.63**	**333**	⇑P	**Pn**	**11 31 21.9**	**-0.5**
	baz=336						
NNSH				*e*S	**Sn**	**11 31 30.6**	**-0.8**
	baz=336						
NNS	**Nan Shan**	**0.65**	**333**	P	**Pn**	**11 31 22.2**	**-0.4**
	baz=336						
NNS				*e*S	**Sn**	**11 31 30.8**	**-1.0**
	baz=336						
SSLB	**Suanglung**	**0.68**	**264**	⇓P	**Pn**	**11 31 22.6**	**-0.4**
	baz=261						
SSLB				*e*S	**Sn**	**11 31 31.9**	**-0.6**
	baz=261						
LATG	**Datong**	**0.69**	**347**	⇑P	**Pn**	**11 31 22.5**	**-0.7**
	baz=350						
LATG				*e*S	**Sn**	**11 31 32.1**	**-0.7**
	baz=350						
WPL	**Puli Township**	**0.69**	**283**	⇓P	**Pn**	**11 31 22.9**	**-0.3**
	baz=281						
WPL				*e*S	**Sn**	**11 31 32.7**	**+0.1**
	baz=281						
DPDB	**Guoxing**	**0.72**	**284**	*e*P	**Pn**	**11 31 23.4**	**-0.2**
	baz=282						
DPDB				*e*S	**Sn**	**11 31 34.0**	**+0.4**
	baz=282						
SMLT	**Sun Moon Lake**	**0.73**	**272**	⇓P	**Pn**	**11 31 23.4**	**-0.3**
	baz=269						
SMLT				*e*S	**Sn**	**11 31 33.2**	**-0.5**
	baz=269						
WCS	**Beigang Elemen**	**0.74**	**285**	⇓P	**Pn**	**11 31 23.6**	**-0.2**
	baz=284						
FULB	**Fuli**	**0.76**	**209**	*e*P	**Pn**	**11 31 23.6**	**-0.4**
	baz=205						
FULB				*e*S	**Sn**	**11 31 34.5**	**+0.2**
	baz=205						
NDT	**Datong Townshi**	**0.76**	**347**	⇑*e*P	**Pn**	**11 31 23.7**	**-0.3**
	baz=350						
NDT				*e*S	**Sn**	**11 31 33.5**	**-0.8**
	baz=350						
TWC	**Suao**	**0.76**	**11**	*e*P	**Pn**	**11 31 24.0**	**0.0**
	baz=15						
TWC				*e*S	**Sn**	**11 31 35.0**	**+0.7**
	baz=15						
TYC	**Yuchr**	**0.77**	**273**	*e*P	**Pn**	**11 31 23.8**	**-0.3**
	baz=271						
TYC				*e*S	**Sn**	**11 31 35.9**	**+1.4**
	baz=271						
NDS	**Dongshan**	**0.77**	**2**	*e*P	**Pn**	**11 31 23.8**	**-0.5**
	baz=5.0						
NDS				*e*S	**Sn**	**11 31 34.4**	**-0.2**
	baz=5.0						
YUS	**Yu-Shan**	**0.77**	**242**	*e*P	**Pn**	**11 31 24.6**	**-0.1**
	baz=237						
YUS				*e*S	**Sn**	**11 31 35.1**	**-0.3**
	baz=237						
WHYT	**Xinyi Township**	**0.79**	**258**	*e*P	**Pn**	**11 31 24.6**	**+0.1**
	baz=255						
WHYT				*e*S	**Sn**	**11 31 35.1**	**+0.1**
	baz=255						
WHP	**Taichung City**	**0.80**	**301**	*e*P	**Pn**	**11 31 24.9**	**+0.2**
	baz=301						
WHP				*e*S	**Sn**	**11 31 35.5**	**0.0**
	baz=301						
CHKT	**Chengkung**	**0.82**	**202**	*e*P	**Pn**	**11 31 24.3**	**-0.5**
	baz=198						

NFF	**Wufeng Townshi**	**0.93**	**326**	*eP*	**Pn**	**11 31 26.8**	**+0.3**
	baz=327							
NFF				*eS*	**Sn**	**11 31 38.7**	**+0.1**
	baz=327							
EDH	**Donghe**	**0.95**	**202**	*eP*	**Pn**	**11 31 26.0**	**-0.8**
	baz=199							
EDH				*eS*	**Sn**	**11 31 39.1**	**0.0**
	baz=199							
TWQ1	**Liyutan**	**0.97**	**300⇓**	*eP*	**Pn**	**11 31 27.5**	**+0.5**
	baz=300							
TWQ1				*eS*	**Sn**	**11 31 40.2**	**+0.6**
	baz=300							
TCU	**Taichung**	**0.97**	**287**	*eP*	**Pn**	**11 31 27.9**	**+0.9**
	baz=286							
TCU				*eS*	**Sn**	**11 31 41.5**	**+1.9**
	baz=286							
NSTT	**Nanjuang**	**0.99**	**321**	*eP*	**Pn**	**11 31 28.0**	**+0.7**
	baz=322							
NSTT				*eS*	**Sn**	**11 31 40.7**	**+0.6**
	baz=322							
LIOB	**Emei**	**1.00**	**322**	*eP*	**Pn**	**11 31 28.2**	**+0.9**
	baz=323							
LIOB				*eS*	**Sn**	**11 31 41.3**	**+1.1**
	baz=323							
NTC	**Toucheng**	**1.00**	**7**	*eP*	**Pn**	**11 31 26.9**	**-0.4**
	baz=10.0							
NTC				*eS*	**Sn**	**11 31 40.9**	**+0.8**
	baz=10.0							
EGS		**1.00**	**12**	*eP*	**Pn**	**11 31 28.8**	**+1.3**
	baz=16							
NSY	**Sanyi**	**1.01**	**303**	*eP*	**Pn**	**11 31 28.4**	**+0.8**
	baz=303							
NSY				*eS*	**Sn**	**11 31 42.4**	**+1.7**
	baz=303							
WYL	**Yuanlin Townsh**	**1.02**	**276**	*eP*	**Pn**	**11 31 28.2**	**+0.5**
	baz=274							
WYL				*eS*	**Sn**	**11 31 43.1**	**+2.3**
	baz=274							
NJD	**Zhudong**	**1.03**	**328**	*eP*	**Pn**	**11 31 28.9**	**+1.1**
	baz=329							
WGK	**Gukeng**	**1.05**	**261**	*eP*	**Pn**	**11 31 28.7**	**+0.7**
	baz=258							
WGK				*eS*	**Sn**	**11 31 43.6**	**+2.1**
	baz=258							
WCHH	**Zhanghua**	**1.06**	**282**	*eP*	**Pn**	**11 31 29.0**	**+0.8**
	baz=281							
WCHH				*eS*	**Sn**	**11 31 43.7**	**+1.9**
	baz=281							
NMLH	**Miaoli**	**1.06**	**309**	*eP*	**Pn**	**11 31 28.7**	**+0.4**
	baz=309							
WDLH	**Douliu**	**1.07**	**261**	*eP*	**Pn**	**11 31 29.0**	**+0.6**
	baz=259							
WDLH				*eS*	**Sn**	**11 31 43.8**	**+1.8**
	baz=259							
WDJ	**Dajia District**	**1.08**	**297**	*eP*	**Pn**	**11 31 28.9**	**+0.5**
	baz=296							
WDJ				*eS*	**Sn**	**11 31 43.5**	**+1.3**
	baz=296							
LONT	**Longtian**	**1.08**	**209**	*eP*	**Pn**	**11 31 27.3**	**-1.2**
	baz=206							
LONT				*eS*	**Sn**	**11 31 41.2**	**-1.1**
	baz=206							
STYH	**Taoyuan**	**1.09**	**231**	*eP*	**Pn**	**11 31 28.9**	**+0.3**
	baz=228							
STYH				*eS*	**Sn**	**11 31 43.0**	**+0.6**
	baz=228							
STYT	**Tauyuan**	**1.11**	**231**	*eP*	**Pn**	**11 31 29.2**	**+0.4**
	baz=228							
STYT				*eS*	**Sn**	**11 31 43.9**	**+1.0**
	baz=228							
NHDH	**Xindian Distri**	**1.11**	**352**	*eP*	**Pn**	**11 31 29.1**	**+0.2**
	baz=354							
NHDH				*eS*	**Sn**	**11 31 43.2**	**+0.2**
	baz=354							
TIPB	**Shuangxi**	**1.11**	**6**	*eP*	**Pn**	**11 31 29.4**	**+0.4**
	baz=9.0							
TIPB				*eS*	**Sn**	**11 31 44.4**	**+1.3**
	baz=9.0							
TWA	**Mucha**	**1.12**	**355**	*eP*	**Pn**	**11 31 29.5**	**+0.5**
	baz=357							
TWA				*eS*	**Sn**	**11 31 43.6**	**+0.3**
	baz=357							
TATO	**Taipei**	**1.12**	**350**	*eP*	**Pn**	**11 31 29.3**	**+0.2**
	baz=353							
TPUB	**Ta-pu**	**1.12**	**240**	*eP*	**Pn**	**11 31 29.8**	**+0.7**
	baz=238							
TPUB				*eS*	**Sn**	**11 31 44.6**	**+1.2**
	baz=238							
CHN4	**Tsaushan**	**1.13**	**244**	*eP*	**Pn**	**11 31 30.1**	**+1.0**
	baz=241							
CHN4				*eS*	**Sn**	**11 31 45.6**	**+2.1**
	baz=241							
CHN2	**Minshiung**	**1.16**	**254**	*eP*	**Pn**	**11 31 31.0**	**+1.4**
	baz=252							
CHN2				*eS*	**Sn**	**11 31 47.1**	**+2.8**
	baz=252							
WTP	**Ta-pu**	**1.17**	**238**	*eP*	**Pn**	**11 31 30.4**	**+0.7**
	baz=236							
TWB1	**Santiao Chiao**	**1.17**	**13**	*eP*	**Pn**	**11 31 30.3**	**+0.5**
	baz=16							
TWB1				*eS*	**Sn**	**11 31 45.6**	**+1.1**
	baz=16							
TWGBT	**Beinan**	**1.18**	**209**	*eP*	**Pn**	**11 31 28.3**	**-1.6**
	baz=206							
TWGBT				*eS*	**Sn**	**11 31 43.3**	**-1.5**
	baz=206							
TWG	**Pinlang**	**1.18**	**209**	*eP*	**Pn**	**11 31 28.3**	**-1.6**
	baz=206							
TWG				*eS*	**Sn**	**11 31 43.3**	**-1.5**
	baz=206							
NCUH	**Zhongli**	**1.20**	**337**	*eP*	**Pn**	**11 31 30.8**	**+0.8**
	baz=339							
LDUT	**Ludao**	**1.20**	**190**	P	**Pn**	**11 31 29.2**	**-0.9**
	baz=188							
LDUT				*eS*	**Sn**	**11 31 44.2**	**-1.0**
	baz=188							
WRL	**Guolierlin Hig**	**1.21**	**272**	*eP*	**Pn**	**11 31 30.8**	**+0.6**
	baz=271							
WRL				*eS*	**Sn**	**11 31 46.9**	**+1.5**
	baz=271							
NWF	**Wu-fen Shan**	**1.21**	**4**	*eP*	**Pn**	**11 31 30.7**	**+0.4**
	baz=6.0							
NWF				*eS*	**Sn**	**11 31 47.1**	**+1.6**
	baz=6.0							
WFSB	**Wu-fen Shan**	**1.21**	**4**	*eP*	**Pn**	**11 31 30.7**	**+0.4**
	baz=6.0							
WFSB				*eS*	**Sn**	**11 31 46.6**	**+1.2**
	baz=6.0							
WTK	**Tuku**	**1.21**	**262**	*eP*	**Pn**	**11 31 30.9**	**+0.7**
	baz=260							
WTK				*eS*	**Sn**	**11 31 47.3**	**+1.9**
	baz=260							
TTN	**Taitung**	**1.21**	**205**	*eP*	**Pn**	**11 31 30.1**	**-0.2**
	baz=202							
CHY	**Chiayi**	**1.22**	**253**	*eP*	**Pn**	**11 31 31.1**	**+0.7**
	baz=250							
CHY				*eS*	**Sn**	**11 31 47.3**	**+1.7**
	baz=250							
SXI1	**Grass Mountain**	**1.24**	**8**	*eP*	**Pn**	**11 31 31.4**	**+0.7**
	baz=10.0							
SXI1				*eS*	**Sn**	**11 31 47.6**	**+1.3**
	baz=10.0							
TWK	**Hsinying**	**1.25**	**242**	*eP*	**Pn**	**11 31 31.5**	**+0.6**
	baz=239							
TWK				*eS*	**Sn**	**11 31 46.8**	**+0.2**
	baz=239							
TWS1	**Kuangyinshan**	**1.26**	**349**	*eP*	**Pn**	**11 31 31.4**	**+0.5**
	baz=350							
CHN1	**Nanshi**	**1.26**	**238**	*eP*	**Pn**	**11 31 31.7**	**+0.6**
	baz=236							
CHN1				*eS*	**Sn**	**11 31 48.4**	**+1.6**
	baz=236							
SNST	**Tainan City**	**1.27**	**240**	*eP*	**Pn**	**11 31 31.6**	**+0.5**
	baz=238							
SGST	**Jiashian**	**1.28**	**233**	*eP*	**Pn**	**11 31 31.5**	**+0.2**
	baz=230							
SGST				*eS*	**Sn**	**11 31 48.4**	**+1.1**
	baz=230							
NHW	**Xinwu Township**	**1.28**	**333**	*eP*	**Pn**	**11 31 31.9**	**+0.7**
	baz=334							
NHW				*eS*	**Sn**	**11 31 48.7**	**+1.4**
	baz=334							
YM01	**YM01**	**1.28**	**355**	*eP*	**Pn**	**11 31 31.1**	**-0.2**
	baz=357							
JYNG	**Yonagunijimaku**	**1.28**	**63**	P	**Pn**	**11 31 31.4**	**+0.1**
JYNG				S	**Sn**	**11 31 47.4**	**+0.1**
SLGT	**Liugui**	**1.29**	**228**	*eP*	**Pn**	**11 31 33.3**	**+1.8**
	baz=226							
WTCT	**Ta-ch'eng**	**1.29**	**270**	*eP*	**Pn**	**11 31 32.1**	**+0.8**
	baz=269							
WTCT				*eS*	**Sn**	**11 31 49.9**	**+2.4**
	baz=269							
YM08	**YM08**	**1.32**	**356**	*eP*	**Pn**	**11 31 30.8**	**-1.1**
	baz=358							
ANP	**Anpu**	**1.33**	**353**	*eP*	**Pn**	**11 31 31.8**	**-0.2**
	baz=355							
YOJ	**Yonaguni jima**	**1.34**	**63**	P	**Pn**	**11 31 32.2**	**+0.1**
	baz=65							
YOJ				*eS*	**Sn**	**11 31 48.6**	**-0.1**
	baz=65							
YOJ	**Yonaguni jima**	**1.34**	**63**	P	**Pn**	**11 31 32.2**	**+0.1**
YOJ				S	**Sn**	**11 31 48.7**	**-0.1**
WSF	**Szhu**	**1.37**	**261**	*eP*	**Pn**	**11 31 33.1**	**+0.7**
	baz=259							
WSF				*eS*	**Sn**	**11 31 51.7**	**+2.4**
	baz=259							
WSL	**Shuilin Townsh**	**1.39**	**256**	*eP*	**Pn**	**11 31 33.4**	**+0.7**
	baz=254							
WSL				*eS*	**Sn**	**11 31 51.1**	**+1.3**
	baz=254							
ICHU	**Yijhu**	**1.39**	**249**	*eP*	**Pn**	**11 31 33.5**	**+0.8**
	baz=247							
ICHU				*eS*	**Sn**	**11 31 50.3**	**+0.5**
	baz=247							
CHN8	**Yiju**	**1.45**	**250**	*eP*	**Pn**	**11 31 33.7**	**+0.1**
	baz=247							
SCST	**Cishan**	**1.47**	**229**	*eP*	**Pn**	**11 31 35.6**	**+1.7**
	baz=227							
SCST				*eS*	**Sn**	**11 31 55.0**	**+3.1**
	baz=227							
SSD	**Sandimen**	**1.48**	**222**	*eP*	**Pn**	**11 31 34.7**	**+0.8**
	baz=219							
SSD				*eS*	**Sn**	**11 31 54.4**	**+2.3**
	baz=219							
TSMG	**Majia**	**1.50**	**220**	*eP*	**Pn**	**11 31 35.5**	**+1.2**
	baz=218							
TSMG				*eS*	**Sn**	**11 31 54.7**	**+2.0**
	baz=218							
MASBT	**Mashibuluo**	**1.58**	**218**	*eP*	**Pn**	**11 31 36.2**	**+0.8**
	baz=216							
EAST	**Anshuo**	**1.67**	**208**	*eP*	**Pn**	**11 31 36.7**	**+0.1**
	baz=206							
TAWH	**Dawu Township**	**1.69**	**206**	*eP*	**Pn**	**11 31 37.0**	**+0.2**
	baz=204							
SCZT	**Fangliau**	**1.78**	**214**	*eP*	**Pn**	**11 31 39.8**	**+1.7**
	baz=212							
LAY	**Lan-yu**	**1.82**	**184**	*eP*	**Pn**	**11 31 38.2**	**-0.5**
	baz=183							
LAY				*eS*	**Sn**	**11 31 58.3**	**-2.2**
	baz=183							
SLIU	**Shizi**	**1.83**	**207**	*eP*	**Pn**	**11 31 38.4**	**-0.5**
	baz=205							
IRIF	**Iriomote-Funau**	**1.92**	**75**	P	**Pn**	**11 31 40.2**	**+0.2**
IRIF				S	**Sn**	**11 32 03.5**	**+0.6**
HATJ	**Hateruma jima**	**1.94**	**84**	P	**Pn**	**11 31 40.6**	**+0.3**
HATJ				S	**Sn**	**11 32 04.0**	**+0.5**
WDGT	**Dungji**	**1.96**	**253**	*eP*	**Pn**	**11 31 40.4**	**-0.2**
	baz=251							
WDGT				*eS*	**Sn**	**11 32 03.4**	**-0.5**
	baz=251							
PHUB	**P'eng-hu**	**1.98**	**260**	*eP*	**Pn**	**11 31 40.5**	**-0.2**
	baz=259							
PHUB				*eS*	**Sn**	**11 32 03.7**	**-0.6**
	baz=259							
PNG	**Penghu**	**1.98**	**262**	*eP*	**Pn**	**11 31 40.6**	**-0.2**
	baz=260							
PNG				*eS*	**Sn**	**11 32 04.1**	**-0.4**
	baz=260							
JKRS	**Kuro-shima**	**2.15**	**80**	P	**Pn**	**11 31 43.7**	**+0.5**
JKRS				S	**Sn**	**11 32 10.2**	**+1.6**
VCHM	**Qimei**	**2.18**	**253**	*eP*	**Pn**	**11 31 43.3**	**-0.2**
	baz=252							
JIJ	**Ishigaki jima**	**2.29**	**77**	P	**Pn**	**11 31 44.0**	**-1.2**
JIJ				S	**Sn**	**11 32 11.3**	**-0.9**
VWUC	**VWUC**	**2.33**	**299**	*eP*	**Pn**	**11 31 44.7**	**-1.0**
	baz=299							
VWUC				*eS*	**Sn**	**11 32 10.7**	**-2.5**
	baz=299							
JISG	**Ishigakijimahi**	**2.50**	**73**	P	**Pn**	**11 31 47.7**	**-0.2**
JISG				*eS*	**Sn**	**11 32 16.1**	**-1.1**
PTMZ	**Houxiangcun**	**2.62**	**297**	*eP*	**Pn**	**11 31 48.6**	**-1.1**
	baz=296							
PTMZ				*eS*	**Sn**	**11 32 17.5**	**-2.8**
	baz=296							
MSUT	**Lienchiang**	**2.80**	**325**	*eP*	**Pn**	**11 31 51.8**	**-0.4**
	baz=325							
JTJ	**Tarama**	**2.85**	**74**	P	**Pn**	**11 31 53.3**	**+0.4**
JTJ				S	**Sn**	**11 32 26.0**	**0.0**
KNM	**Kinmen**	**3.03**	**281**	*eP*	**Pn**	**11 31 56.2**	**+0.9**
	baz=279							
KNM				*eS*	**Sn**	**11 32 30.3**	**-0.1**
	baz=279							
KNMB	**Chin-men Tao**	**3.08**	**282**	*eP*	**Pn**	**11 31 54.9**	**-1.0**
	baz=281							
LYJJ	**Jianjiangzhen**	**3.20**	**327**	*eP*	**Pn**	**11 31 56.3**	**-1.3**
	baz=327							
MHZQ	**Yeshan**	**3.29**	**313**	*eP*	**Pn**	**11 31 57.6**	**-1.2**
	baz=313							
MHZQ				*eS*	**Sn**	**11 32 34.1**	**-2.6**
	baz=313							
JIRB	**Irabujima**	**3.32**	**72**	*eP*	**Pn**	**11 31 59.3**	**+0.1**
JIRB				S	**Sn**	**11 32 37.4**	**0.0**
JIKM	**Ikemajima**	**3.41**	**71**	P	**Pn**	**11 32 00.7**	**+0.2**
JIKM				S	**Sn**	**11 32 39.9**	**+0.2**
JMJ2	**Miyako jima3**	**3.43**	**74**	P	**Pn**	**11 32 01.7**	**+0.9**
JMJ2				S	**Sn**	**11 32 41.6**	**+1.4**
JOGS	**Gusukube**	**3.50**	**74**	P	**Pn**	**11 32 02.3**	**+0.5**
JOGS				S	**Sn**	**11 32 43.3**	**+1.3**
AXDP	**Jialang**	**3.55**	**288**	*eP*	**Pn**	**11 32 01.5**	**-0.9**
	baz=287							
ZPLA	**Ao Xicun**	**3.61**	**272⇓**	*eP*	**Pn**	**11 32 02.5**	**-0.8**
	baz=271							
ZPLA				*eS*	**Sn**	**11 32 42.2**	**-2.5**
	baz=271							

*IDC **27** 11:54:48.6±2.6, 48°.11N×149°.09E, h342km±30km, mb2.9/5, mbtmp3.6/10, Error ellipse: s-maj=49.3km s-min=14.2km az=139.0*

ISC 27 11:54:50.1±0.9, **48°.2N**±0°.2×**149°.0E**±0°.1, **h367**km, **n11**, σ1**9**/**07**/**11**, **mb3.4**/**6**, **Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
PETK	**Petropavlovsk-**	**7.43**	**45**	P			**Pn**	**11 56 35.6**	**-2.0**
	1.8nm,1.0s,baz=207,slow=4.8,SNR=2.7								
KLR	**Kul'dur**	**11.43**	**282**	P			**Pn**	**11 57 24.9**	**+0.2**
	0.9nm,0.5s,baz=96,slow=10,SNR=4.2								
USRK	**Ussuriysk Ar.**	**12.41**	**258**	P			**P**	**11 57 34.9**	**-0.6**
	1.3nm,0.5s,baz=88,slow=8.9,SNR=2.4								
MJAR	**Matsushiro Arr**	**14.07**	**218**	P			**P**	**11 57 52.7**	**-1.0**
	3.1nm,0.6s,baz=27,slow=12,SNR=11								
KSRS	**Korea Array**	**18.73**	**243**	P			**P**	**11 58 43.9**	**+0.1**
	0.7nm,0.5s,baz=40,slow=10,SNR=2.4								
JOW	**Kunigami**	**26.74**	**225**	P			**P**	**11 59 58.9**	**+1.3**
	19nm,1.0s,baz=39,slow=14,SNR=2.7								
ILAR	**Eielson Array**	**37.22**	**40**	P			**P**	**12 01 28.0**	**+0.6**
	0.3nm,0.7s,baz=257,slow=5.7,SNR=8.8								
	0.3nm,0.7s								
INK	**Inuvik**	**41.97**	**33**	P			**P**	**12 02 06.3**	**+0.3**
	0.6nm,0.3s,baz=303,slow=10.0,SNR=11								
	0.6nm,0.3s								
YKA	**Yellowknife Ar**	**51.45**	**36**	P			**P**	**12 03 19.1**	**+0.5**
	0.4nm,0.7s,baz=302,slow=6.8,SNR=4.3								
	0.4nm,0.7s								
PDAR	**Pinedale Array**	**66.14**	**52**	P			**P**	**12 05 00.1**	**+0.8**
	0.4nm,0.5s,baz=302,slow=1.5,SNR=6.7								
	0.4nm,0.5s								
TXAR	**Lajitas Array**	**79.18**	**58**	P			**P**	**12 06 15.9**	**+0.6**
	0.3nm,0.5s,baz=297,slow=5.2,SNR=5.7								
	0.3nm,0.5s								

*SOME **27** 12:26:04.2, 39°.35N×73°.60E, h5km*
*KRNET **27** 12:26:04.8±0.1, 39°.41N×73°.54E, mb3.8*
*NNC **27** 12:26:13.8±3.8, 39°.75N×73°.42E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=33.4km s-min=17.7km az=12.0*

ISC 27 12:26:01.2±1.6, **39°.33N**±0°.06×**73°.67E**±0°.03, **h5**km±12km, **n35**, σ1**9**/**97**/**67**, **27C-8D**, **Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
OHH	**Osh**	**1.38**	**331⇓**	*eP*			**Pg**	**12 26 28.6**	**+1.0**
	baz=33								
OHH				⇓*eS*			**Sg**	**12 26 45.9**	**+0.4**
	baz=33								
BTK	**Batken**	**2.32**	**289⇑**	*eP*			**Pb**	**12 26 44.3**	**+0.7**
	baz=88								
BTK				⇑*eS*			**Sb**	**12 27 13.4**	**+0.8**
	baz=88								
ARLS	**Aral**	**2.58**	**11⇑**	*eP*			**Pb**	**12 26 48.6**	**+0.5**
	baz=14								
ARLS				⇑*eS*			**Sb**	**12 27 20.4**	**+0.2**
	baz=14								
GAR	**Garm**	**2.63**	**264⇑**	*eP*			**Pb**	**12 26 49.2**	**+0.3**
	baz=62								
GAR				⇑*eS*			**Sb**	**12 27 21.4**	**-0.1**
	baz=62								
ARK	**Arkit**	**2.79**	**333⇑**	*iP*			**Pb**	**12 26 50.9**	**-0.8**
	baz=34								
ARK				⇑*iS*			**Sb**	**12 27 24.5**	**-1.7**
	baz=34								
TRKS	**Terek-Say**	**2.93**	**320⇑**	*eP*			**Pb**	**12 26 52.0**	**-2.0**
	baz=19								
TRKS				⇑*eS*			**Sn**	**12 27 26.5**	**+2.2**
	baz=19								
UCH	**Uchtor**	**2.97**	**12⇓**	*eP*			**Pb**	**12 26 54.0**	**-0.9**
	baz=14								
UCH				⇓*eS*			**Sb**	**12 27 30.3**	**-1.3**
	baz=14								
AAK	**Ala-Archa**	**3.37**	**10⇑**	*eP*			**Pb**	**12 26 59.4**	**-2.1**
	baz=12								
AAK				⇑*eS*			**Sb**	**12 27 39.5**	**-3.3**
	baz=12								
KBK	**Karagaybulak**	**3.46**	**16⇓**	*eP*			**Pb**	**12 27 01.0**	**-2.1**
	baz=18								
KBK				⇓*eS*			**Sb**	**12 27 42.3**	**-3.3**
	baz=18								
ULHL	**Ulahol**	**3.51**	**33⇑**	*eP*			**Pb**	**12 27 02.2**	**-1.7**
	baz=35								
ULHL				⇑*eS*			**Sb**	**12 27 44.3**	**-2.6**
	baz=35								
CHGR	**Chuyangaron**	**3.58**	**261⇑**	*eP*			**Pb**	**12 27 02.2**	**-2.9**
	baz=59								
CHGR				⇑*eS*			**Sb**	**12 27 44.3**	**-4.6**
	baz=59								
BOOM	**Boomskoye usch**	**3.60**	**28⇑**	*iP*			**Pb**	**12 27 03.6**	**-1.8**
	baz=30								
BOOM				⇑*iS*			**Sb**	**12 27 46.3**	**-3.2**
	baz=30								
CHMS	**Chumysh**	**3.76**	**12**	⇑Pn			**Pb**	**12 27 05.3**	**-2.8**
	14nm,1.0s								
CHMS				⇑Lg			Lg	12 28 01.9	
	24nm,0.8s								
KDJ	**Kajisay**	**3.87**	**42⇑**	*iP*			**Pb**	**12 27 08.2**	**-1.8**
	baz=44								
KDJ				⇑*iS*			**Sb**	**12 27 54.1**	**-3.1**
	baz=44								
TKM2	**Tokmak 2**	**3.88**	**21**	⇓Pn			**Pb**	**12 27 11.2**	**+1.1**
	5.6nm,0.5s								
TKM2				⇓Lg			Lg	12 28 06.9	
	39nm,0.8s								
IUG	**Iuzhnay**	**3.95**	**317**	*eP*			**Pg**	**12 27 16.4**	**-0.4**
	9.8nm,0.2s								
IUG				*eS*			**Sg**	**12 28 08.5**	**+0.5**
	67nm,0.3s								
KST	**Kastek**	**4.10**	**24**	*eP*			**Pg**	**12 27 19.9**	**+0.2**
	8.8nm,0.1s								
KST				*eS*			**Sg**	**12 28 14.4**	**+1.7**
	29nm,0.0s								
SGDS	**Sogindy**	**4.19**	**10**	*eP*			**Pg**	**12 27 22.0**	**+0.6**
	8.8nm,0.1s								
SGDS				*eS*			**Sg**	**12 28 18.2**	**+2.6**
	19nm,0.6s								
DGS	**Degeres**	**4.22**	**21**	*eP*			**Pg**	**12 27 22.9**	**+0.9**
	7.5nm,0.1s								
DGS				*eS*			**Sg**	**12 28 19.4**	**+2.7**
	30nm,0.6s								
MTBS	**Maitube**	**4.33**	**28**	*eP*			**Pg**	**12 27 24.6**	**+0.5**
	6.2nm,0.1s								
MTBS				*eS*			**Sg**	**12 28 22.6**	**+2.4**
	18nm,0.6s								
TNSS	**Tian-Shan**	**4.46**	**33**	*eP*			**Pg**	**12 27 27.1**	**+0.6**
	8.0nm,0.1s								
TNSS				*eS*			**Sg**	**12 28 26.6**	**+2.3**
	8.7nm,0.2s								
KK31	**Karatay Array**	**4.46**	**329**	Pn			Pb	12 27 15.6	-4.5
	1.6nm,0.3s,baz=144,slow=14,SNR=18								
KK31				⇑Pg			**Pg**	**12 27 26.0**	**-0.7**
	4.5nm,0.5s,baz=145,slow=14,SNR=13								
KK31				⇑Sn			**Sn**	**12 28 06.1**	**+4.2**
	5.4nm,0.5s,baz=137,slow=22,SNR=4.7								
KK31				⇑Lg			Lg	12 28 20.5	
	11nm,0.5s,baz=143,slow=26,SNR=4.5								
KRBS	**Karabastau**	**4.62**	**18**	*eP*			**Pg**	**12 27 29.0**	**-0.7**
	4.6nm,0.1s								
KRBS				*eS*			**Sg**	**12 28 29.9**	**+0.4**
	18nm,0.2s								
BRLS	**Borolday**	**4.70**	**323**	*eP*			**Pb**	**12 27 27.7**	**+3.7**
	3.7nm,0.1s								
BRLS				*eS*			**Sg**	**12 28 27.8**	**-4.2**
	21nm,0.1s								
KTBS	**Karatobe**	**4.93**	**26**	*eP*			**Pg**	**12 27 35.1**	**-0.5**
	6.0nm,0.1s								
KTBS				*eS*			**Sg**	**12 28 40.6**	**+1.2**
	22nm,0.2s								
KUU	**Kurty**	**4.98**	**23**	*eP*			**Pg**	**12 27 36.2**	**-0.3**
	4.8nm,0.2s								
KUU				*eS*			**Sg**	**12 28 42.5**	**+1.4**
	31nm,0.1s								
CHKK	**Chushkaly**	**5.16**	**28**	*eP*			**Pg**	**12 27 39.8**	**-0.3**
	1.9nm,0.1s								
CHKK				*eS*			**Sg**	**12 28 48.1**	**+1.2**
	21nm,0.1s								
SATY	**Saty**	**5.16**	**42**	*eP*			**Pg**	**12 27 40.5**	**+0.4**
	6.2nm,0.0s								
SATY				*eS*			**Sg**	**12 28 49.8**	**+2.8**
	9.2nm,0.5s								
KURS	**Kuram**	**5.36**	**38**	*eP*			**Pg**	**12 27 43.6**	**-0.2**
	1.7nm,0.2s								
KURS				*eS*			**Sg**	**12 28 55.0**	**+1.8**
	8.0nm,0.2s								
KPKS	**Kokpek**	**5.59**	**41**	*eP*			**Pg**	**12 27 47.7**	**-0.7**
	2.4nm,0.7s								
KPKS				*eS*			**Sg**	**12 29 01.9**	**+1.1**
	9.3nm,0.3s								
BTLS	**Baital**	**5.72**	**3**	*eP*			**Pg**	**12 27 49.2**	**-1.5**
	2.9nm,0.2s								
BTLS				*eS*			**Sg**	**12 29 04.6**	**-0.2**
	8.2nm,0.3s								
ARXS	**Arharly**	**5.79**	**31**	*eP*			**Pg**	**12 27 50.6**	**-1.4**
	5.3nm,0.7s								
ARXS				*eS*			**Sg**	**12 29 07.0**	**0.0**
	14nm,0.3s								
PDGK	**Podgornoye**	**5.93**	**46**	⇑Pn			**Pb**	**12 27 44.9**	**-0.2**
	3.4nm,1.2s						

SANI	**Sanana**	**6.58**	**324**	P		Pn	12 30 53.9	+7.2
	0.1nm20nm,0.7s							
SIJI	**Sorong**	**6.66**	**12**	Pn		**Pn**	**12 30 44.5**	**-3.2**
	1.1nm,0.3s,baz=179,slow=23,SNR=1.4							
SIJI				Sn		**Sn**	**12 32 00.6**	**-1.7**
	4.0nm,0.3s,baz=147,slow=23,SNR=9.0							
	7.6nm,0.6s							
SWI	**Sorong**	**6.66**	**12**	P		**Pn**	**12 30 51.7**	**+3.9**
	0.2nm713nm17nm,0.7s							
BATI	**Baumata**	**6.72**	**245**	P		Pn	12 30 56.6	+8.0
	0.2nm21nm,0.5s							
LBMI	**Labuha**	**7.14**	**341**	P		Pn	12 31 00.6	+6.3
	0.1nm20nm,0.8s							
BBSI	**Bau Bau**	**7.49**	**284**	P		Pn	12 31 08.0	+8.8
	0.0nm5.3nm,0.9s							
MMRI	**Maumere**	**7.64**	**260**	P		Pn	12 31 09.7	+8.4
	0.2nm37nm,1.2s							
EDFI	**Ende, Flores**	**8.20**	**260**	P		Pn	12 31 18.5	+10
	4.8nm,1.1s							
KNRA	**Kununurra**	**8.28**	**187**	Pn		**Pn**	**12 31 12.5**	**+2.6**
KNRA	**Kununurra**	**8.28**	**187**	P		**Pn**	**12 31 12.5**	**+2.6**
SRPI	**Serui, Papua**	**8.41**	**49**	P		**Pn**	**12 31 12.8**	**+1.0**
BSSI	**Bau Bau, Buton**	**9.39**	**277**	P		Pn	12 31 33.8	+8.6
	17nm,1.3s							
MPSI	**Mapaga**	**12.57**	**307**	P		**P**	**12 32 16.7**	**-2.2**
	5.5nm,1.2s							
WB0	**Warramunga Arr**	**13.04**	**161**	Pn		**Pn**	**12 32 14.0**	**-1.0**
WRAB	**Tennant Creek**	**13.18**	**161**			**Pn**	**12 32 16.0**	**-1.0**
WRA	**Warramunga Arr**	**13.19**	**161**	Pn		**Pn**	**12 32 15.9**	**-1.1**
	3.6nm,0.3s,baz=345,slow=13,SNR=61							
WRA				Sn		**Sn**	**12 34 35.4**	**-6.9**
	4.0nm,0.3s,baz=345,slow=21,SNR=9.2							
WRA	**Warramunga Arr**	**13.19**	**161**			**Pn**	**12 32 14.7**	**-2.4**
WB2	**Warramunga Arr**	**13.19**	**161**	Pn		**Pn**	**12 32 15.8**	**-1.3**
WR0	**Warramunga Arr**	**13.27**	**160**	Pn		**Pn**	**12 32 17.8**	**-0.4**
COEN	**Coen**	**14.60**	**118**	Pn		**Pn**	**12 32 37.7**	**+1.4**
COEN	**Coen**	**14.60**	**118**	P		**Pn**	**12 32 37.9**	**+1.7**
BBKI	**Banjar Baru**	**15.46**	**284**	P		**P**	**12 32 57.2**	**+6.2**
QIS	**Mount Isa**	**16.11**	**145**	P		**Pn**	**12 32 56.0**	**+0.3**
AS31	**Alice Springs**	**16.61**	**167**			**Pn**	**12 33 01.1**	**-1.0**
AS31				IAmb		IAmb	12 33 08.0	
	comp=Z,5.5nm,0.5s							
ASAR	**Alice Springs**	**16.61**	**167**	Pn		**Pn**	**12 33 01.6**	**-0.5**
	comp=Z,1.9nm,0.3s,baz=340,slow=9.3,SNR=58							
ASAR				Sn		**Sn**	**12 35 59.8**	**-5.9**
	comp=Z,1.3nm,0.3s,baz=355,slow=28,SNR=7.2							
	comp=Z,5.9nm,0.6s							
ASAR	**Alice Springs**	**16.61**	**167**			**Pn**	**12 33 01.7**	**-0.3**
MBWA	**Marble Bar**	**16.81**	**215**	P		**P**	**12 33 08.3**	**+2.4**
	comp=Z,5.9nm,1.6s							
PSA00	**Pilbara Seismi**	**17.07**	**213**	P		**Pn**	**12 33 07.6**	**-0.2**
PSA00				IAmb		IAmb	12 33 09.5	
	comp=Z,15nm,1.1s							
PSA00	**Pilbara Seismi**	**17.07**	**213**	P		**P**	**12 33 12.1**	**+3.2**
	comp=Z,20nm,1.5s							
CTA	**Charters Tower**	**20.27**	**130**	P		**P**	**12 33 44.9**	**+0.9**
	comp=Z,2.2nm,0.7s,baz=316,slow=10,SNR=3.8							
CTA				S		**S**	**12 37 25.7**	**-3.2**
	comp=Z,1.0nm,0.7s,baz=36,slow=19,SNR=1.6							
	comp=Z,2.2nm,0.7s							
CTAO	**Charters Tower**	**20.27**	**130**	P		**P**	**12 33 45.8**	**+1.8**
OOD	**Oodnadatta**	**21.00**	**165**	P		**P**	**12 33 54.0**	**+2.2**
INKA	**Innaminka**	**22.69**	**154**	P		**P**	**12 34 12.3**	**+2.4**
MULG	**Mulgathing**	**23.08**	**171**	P		**P**	**12 34 15.4**	**+1.5**
FORT	**Forrest**	**23.30**	**184**	P		**P**	**12 34 15.8**	**-0.2**
FORT	**Forrest**	**23.30**	**184**	P		**P**	**12 34 17.9**	**+1.9**
LCRK	**Leigh Creek**	**24.21**	**162**	P		**P**	**12 34 26.0**	**+1.5**
BBOO	**Buckleboo**	**25.91**	**168**	P		**P**	**12 34 38.9**	**-1.1**
STKA	**Stephens Creek**	**26.68**	**157**	P		**P**	**12 34 48.2**	**+1.3**
	comp=Z,0.8nm,0.4s,baz=322,slow=5.6,SNR=3.9							
	comp=Z,0.8nm,0.4s							
STKA	**Stephens Creek**	**26.68**	**157**	P		**P**	**12 34 47.6**	**+0.7**
CMAR	**Chiang Mai Arr**	**39.90**	**311**	P		**P**	**12 36 41.5**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=126,slow=7.2,SNR=4.7							
	comp=Z,0.4nm,0.3s							
PETK	**Petropavlovsk-**	**64.76**	**18**	P		**P**	**12 39 45.7**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=172,slow=4.4,SNR=2.2							
	comp=Z,0.7nm,0.6s							
PETK	**Petropavlovsk-**	**64.76**	**18**	P		**P**	**12 39 45.0**	**-0.6**
MK31	**Makanchi Array**	**68.50**	**327**	P		**P**	**12 40 08.6**	**-1.0**
MK31				IAmb		IAmb	12 40 09.7	
	comp=Z,3.3nm,0.7s							
MKAR	**Makanchi Array**	**68.50**	**327**	P		**P**	**12 40 09.3**	**-0.3**
	comp=Z,3.7nm,0.5s,baz=116,slow=8.4,SNR=28							
	comp=Z,3.7nm,0.5s							
MKAR	**Makanchi Array**	**68.50**	**327**	P		**P**	**12 40 08.8**	**-0.8**
ZALV	**Zalesovo Beam**	**71.90**	**334**	P		**P**	**12 40 28.6**	**-1.5**
	comp=Z,0.9nm,0.6s,baz=107,slow=5.0,SNR=5.1							
	comp=Z,0.9nm,0.6s							
ZALV	**Zalesovo Beam**	**71.90**	**334**	P		**P**	**12 40 28.0**	**-2.2**
VNDA	**Vanda**	**72.05**	**173**	P		**P**	**12 40 31.8**	**+1.0**
KURBB	**Kurchatov Arra**	**72.79**	**329**	P		**P**	**12 40 34.8**	**-0.8**
	comp=Z,1.5nm,0.5s,baz=129,slow=4.6,SNR=18							
	comp=Z,1.5nm,0.5s							
KURK	**Kurchatov**	**72.80**	**329**	P		**P**	**12 40 34.0**	**-1.7**
KURK				IAmb		IAmb	12 40 36.9	
	comp=Z,6.1nm,1.4s							
QSPA	**South Pole Qui**	**82.56**	**180**	P		**P**	**12 41 29.2**	**-0.7**
QSPA				IAmb		IAmb	12 41 52.4	
	comp=Z,4.5nm,1.4s							
ABKAR	**Akbulak array**	**82.75**	**322**			**P**	**12 41 30.1**	**-0.9**
ABKAR				IAmb		IAmb	12 41 34.5	
	comp=Z,6.1nm,0.9s							
ABKAR	**Akbulak array**	**82.75**	**322**			**P**	**12 41 29.8**	**-1.2**
ABKAR	**Akbulak array**	**82.75**	**322**	Pn		**P**	**12 41 30.1**	**-0.9**
ABKAR	**Akbulak array**	**82.75**	**322**	Pn		**P**	**12 41 29.8**	**-1.2**
SNAA	**Sanae**	**95.23**	**194**	P		**P**	**12 42 27.5**	**-2.9**
TXAR	**Lajitas Array**	**125.26**	**59**	PKP		**PKiKP**	**12 48 08.7**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=222,slow=1.2,SNR=3.8							
TXAR	**Lajitas Array**	**125.26**	**59**			**PKPdf**	**12 48 08.1**	**-0.3**

SOME ***27*** *12:31:17.6, 40˚.03N×73˚.73E, h10km*
KRNET ***27*** *12:31:18.6±0.1, 39˚.94N×73˚.65E, mb3.5*
NNC ***27*** *12:31:28.5±4.8, 40˚.30N×73˚.84E, h0km, mb3.7, mpv3.3,*
Error ellipse: s-maj=47.4km s-min=32.5km az=167.0
ISC 27 12:31:15.5±1.2, 39˚.94N±0˚.04×73˚.70E±0˚.03, h17km±11km, n46, σ1§19/79, 21C-13D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
OHH	**Osh**	**0.91**	**310**		⇑*eP*	**Pn**	**12 31 35.1**	**+1.5**
	baz=12							
OHH					⇑*eS*	**Sn**	**12 31 47.5**	**+1.1**
	baz=12							
DRK	**Karamyk**	**1.54**	**253**		⇑*iP*	**Pg**	**12 31 45.9**	**+0.8**
	baz=53							
DRK					⇑*iS*	**Sg**	**12 32 06.0**	**+0.8**
	baz=53							
ARLS	**Aral**	**1.97**	**14**		⇓*eP*	**Pg**	**12 31 53.2**	**-0.2**
	baz=15							
ARLS					⇓*eS*	**Sg**	**12 32 18.5**	**-0.5**
	baz=15							
AML	**Almayashu**	**2.19**	**360**	P		**Pg**	**12 31 57.7**	**+0.2**
	SNR=31							
BTK	**Batken**	**2.22**	**274**		⇑*eP*	**Pb**	**12 31 56.0**	**+0.8**
	baz=74							
BTK					⇑*eS*	**Sb**	**12 32 23.1**	**+0.7**
	baz=74							
ARK	**Arkit**	**2.28**	**325**		⇑*iP*	**Pb**	**12 31 57.1**	**+0.9**
	baz=26							
ARK					⇑*iS*	**Sb**	**12 32 24.9**	**+0.8**
	baz=26							
UCH	**Uchtor**	**2.36**	**15**	P		**Pg**	**12 32 00.8**	**0.0**
	SNR=33							
UCH	**Uchtor**	**2.36**	**15**		⇑*eP*	**Pb**	**12 31 58.8**	**+0.9**
	baz=16							
UCH					⇑*eS*	**Sb**	**12 32 28.4**	**+1.5**
	baz=16							
TRKS	**Terek-Say**	**2.51**	**310**		⇓*eP*	**Pb**	**12 31 59.4**	**-0.8**
	baz=10.0							
TRKS					⇓*eS*	**Sb**	**12 32 29.3**	**-1.6**
	baz=10.0							
EKS2	**Erkin-Say**	**2.72**	**1**	P		**Pg**	**12 32 06.1**	**-1.5**
	SNR=6.6							
EKS2	**Erkin-Say**	**2.72**	**1**		⇓*eP*	**Pb**	**12 32 03.4**	**-0.3**
	baz=2.0							
EKS2					⇓*eS*	**Sb**	**12 32 36.2**	**-0.6**
	baz=2.0							
AAK	**Ala-Archa**	**2.76**	**12**	P		**Pg**	**12 32 06.7**	**-1.7**
	SNR=9.9							
AAK	**Ala-Archa**	**2.76**	**12**		⇓*eP*	**Pb**	**12 32 04.0**	**-0.4**
	baz=13							
AAK					⇓*eS*	**Sb**	**12 32 37.4**	**-0.6**
	baz=13							
GAR	**Garm**	**2.79**	**251**		⇑*eP*	**Pb**	**12 32 03.9**	**-1.0**
	baz=51							
GAR					⇑*eS*	**Sb**	**12 32 37.1**	**-1.6**
	baz=51							
KBK	**Karagaybulak**	**2.87**	**19**	P		**Pg**	**12 32 12.1**	**+1.6**
	SNR=13							
KBK	**Karagaybulak**	**2.87**	**19**		⇓*eP*	**Pb**	**12 32 05.5**	**-0.8**
	baz=19							
KBK					⇓*eS*	**Sb**	**12 32 40.2**	**-1.0**
	baz=19							
ULHL	**Ulahol**	**3.00**	**39**	P		**Sg**	**12 32 54.6**	**+2.9**
	SNR=9.0							
BOOM	**Boomskoye usch**	**3.05**	**33**		⇑*iP*	**Pb**	**12 32 08.6**	**-0.9**
	baz=33							
BOOM					⇑*iS*	**Sb**	**12 32 45.2**	**-1.3**
	baz=33							
CHMS	**Chumysh**	**3.15**	**14**	P		**Pg**	**12 32 15.0**	**-0.9**
	SNR=6.6							
CHMS	**Chumysh**	**3.15**	**14**	⇑Pn		**Pb**	**12 32 12.1**	**+1.1**
	5.6nm,0.3s							
CHMS					⇑Lg	Lg	12 32 59.3	
	46nm,0.5s							
TKM2	**Tokmak 2**	**3.30**	**25**	P		**Pg**	**12 32 18.9**	**+0.2**
	SNR=5.8							
TKM2	**Tokmak 2**	**3.30**	**25**	⇑Pn		**Pb**	**12 32 15.3**	**+1.6**
	5.3nm,0.5s							
TKM2					⇑Lg	Lg	12 33 03.2	
	61nm,0.7s							
USP	**Ospenovka**	**3.38**	**10**	P		**Pg**	**12 32 19.7**	**-0.5**
	SNR=7.9							
KDJ	**Kajisay**	**3.42**	**49**		⇓*iP*	**Pb**	**12 32 13.6**	**-2.1**
	baz=50							
KDJ					⇓*iS*	**Sb**	**12 32 54.2**	**-2.8**
	baz=50							
KST	**Kastek**	**3.53**	**28**		*eP*	**Pg**	**12 32 22.8**	**-0.4**
	5.8nm,0.1s							
KST					*eS*	**Sg**	**12 33 09.4**	**+0.5**
	72nm,0.2s							
IUG	**Iuzhnay**	**3.54**	**310**		*eP*	**Pg**	**12 32 22.7**	**-0.7**
	3.7nm,0.1s							
IUG					*eS*	**Sg**	**12 33 08.9**	**-0.4**
	75nm,0.1s							
SGDS	**Sogindy**	**3.58**	**11**		*eP*	**Pg**	**12 32 23.4**	**-0.6**
	8.1nm,0.0s							
SGDS					*eS*	**Sg**	**12 33 10.6**	**+0.3**
	24nm,0.1s							
DGS	**Degeres**	**3.64**	**25**		*eP*	**Pg**	**12 32 25.6**	**+0.4**
	8.1nm,0.3s							
DGS					*eS*	**Sg**	**12 33 14.4**	**+2.0**
	60nm,0.2s							
MTBS	**Maitube**	**3.79**	**32**		*eP*	**Pg**	**12 32 28.3**	**+0.3**
	5.2nm,0.0s							
MTBS					*eS*	**Sg**	**12 33 18.6**	**+1.6**
	52nm,0.1s							
TNSS	**Tian-Shan**	**3.94**	**37**		*eP*	**Pg**	**12 32 30.8**	**-0.1**
	7.9nm,0.2s							
TNSS					*eS*	**Sg**	**12 33 22.9**	**+1.0**
	27nm,0.4s							
KK31	**Karatay Array**	**3.96**	**324**	⇑Pn		**Pg**	**12 32 29.8**	**-1.6**
	4.6nm,0.5s,baz=147,slow=16,SNR=21							
KK31					⇓Lg	Lg	12 33 25.3	
	10nm,0.3s,baz=137,slow=30,SNR=7.0							
KRBS	**Karabastau**	**4.03**	**21**		*eP*	**Pg**	**12 32 32.3**	**-0.3**
	7.2nm,0.1s							
KRBS					*eS*	**Sg**	**12 33 25.8**	**+0.9**
	34nm,0.9s							
AAA	**Alma-Ata**	**4.06**	**35**		*eP*	**Pg**	**12 32 33.7**	**+0.5**
	10nm,0.0s							
AAA					*eS*	**Sg**	**12 33 28.2**	**+2.5**
	120nm,2.1s							
BRLS	**Borolday**	**4.24**	**318**		*eP*	**Pg**	**12 32 34.6**	**-2.0**
	6.9nm,0.1s							
BRLS					*eS*	**Sg**	**12 33 29.5**	**-2.0**
	25nm,0.3s							
KTBS	**Karatobe**	**4.37**	**30**		*eP*	**Pg**	**12 32 38.5**	**-0.7**
	2.9nm,0.1s							
KTBS					*eS*	**Sg**	**12 33 36.6**	**+0.7**
	58nm,0.2s							
KUU	**Kurty**	**4.41**	**26**		*eP*	**Pg**	**12 32 39.2**	**-0.7**
	3.3nm,0.0s							
KUU					*eS*	**Sg**	**12 33 38.0**	**+1.0**
	61nm,0.1s							
CHKK	**Chushkaly**	**4.61**	**31**		*eP*	**Pg**	**12 32 42.9**	**-0.9**
	1.4nm,0.1s							
CHKK					*eS*	**Sg**	**12 33 43.8**	**+0.3**
	21nm,0.1s							
SATY	**Saty**	**4.71**	**47**		*eP*	**Pg**	**12 32 44.9**	**-0.7**
	3.7nm,0.2s							
SATY					*eS*	**Sg**	**12 33 48.3**	**+1.7**
	18nm,0.2s							
ZHN	**Zhinishke**	**4.79**	**46**		*eP*	**Pg**	**12 32 46.2**	**-1.0**
	8.2nm,0.0s							
ZHN					*eS*	**Sg**	**12 33 50.1**	**+0.7**
	13nm,0.1s							
KURS	**Kuram**	**4.87**	**42**		*eP*	**Pg**	**12 32 47.8**	**-0.9**
	2.7nm,0.0s							
KURS					*eS*	**Sg**	**12 33 52.3**	**+0.5**
	7.8nm,0.1s							
BTLS	**Baital**	**5.10**	**3**		*eP*	**Pg**	**12 32 51.6**	**-1.5**
	3.4nm,0.5s							
BTLS					*eS*	**Sg**	**12 33 58.7**	**-0.4**
	9.8nm,0.1s							
KPKS	**Kokpek**	**5.13**	**45**		*eP*	**Pg**	**12 32 52.0**	**-1.6**
	2.6nm,0.1s							
KPKS					*eS*	**Sg**	**12 33 59.6**	**-0.4**
	33nm,0.1s							
ARXS	**Arharly**	**5.25**	**34**		*eP*	**Pg**	**12 32 54.5**	**-1.5**
	3.9nm,0.6s							
ARXS					*eS*	**Sg**	**12 34 03.7**	**-0.4**
	30nm,0.5s							
BLB	**Baldybastay**	**5.46**	**39**		*eP*	**Pg**	**12 32 58.9**	**-1.2**
	3.5nm,0.6s							
BLB					*eS*	**Sg**	**12 34 11.4**	**+0.6**
	33nm,0.1s							
PDGK	**Podgornoye**	**5.50**	**50**	⇑Pn		**Pb**	**12 32 50.4**	**-0.7**
	3.9nm,0.8s							
PDGK					⇑Lg	Lg	12 34 15.1	
	13nm,0.8s							
DJR	**Jarkent**	**6.30**	**44**		*eP*	**Pg**	**12 33 14.4**	**-1.6**
	0.9nm,0.1s							
DJR					*eS*	**Sg**	**12 34 38.4**	**+0.9**
	9.0nm,0.1s							

IDC ***27*** *12:38:13.9±0.7, 39˚.26N×73˚.57E, h0km, mb3.9/15,*
mbtmp3.9/21, ML3.1/6, MS2.6/3, Error ellipse:
s-maj=15.3km s-min=13.5km az=157.0
SOME ***27*** *12:38:14.1, 39˚.48N×73˚.63E, h15km*
KRNET ***27*** *12:38:14.6±0.1, 39˚.46N×73˚.68E, mb4.4*
NEIC ***27*** *12:38:15.8±2.0, 39˚.40N±0˚.06×73˚.55E±0˚.07, h10km±1km,*
mb4.5/16, Error ellipse: s-maj=10.9km s-min=8.9km
az=142.0
NNC ***27*** *12:38:20.7±1.1, 39˚.74N×73˚.54E, h0km, mb4.5, mpv4.2,*
Error ellipse: s-maj=9.4km s-min=4.9km az=168.0
ISC 27 12:38:15.8±0.5, 39˚.41N±0˚.04×73˚.57E±0˚.02, h10km, n142, σ2§44/184, mb4.0/20, 42C-19D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
OHH	**Osh**	**1.26**	**332**		⇓*eP*	**Pn**	**12 38 38.3**	**-1.3**
	baz=27							
OHH					⇓*eS*	**Sb**	**12 38 55.4**	**-0.7**
	baz=27							
DRK	**Karamyk**	**1.37**	**273**		⇑*iP*	**Pb**	**12 38 41.3**	**-0.4**
	baz=72							
DRK					⇑*iS*	**Sg**	**12 39 01.6**	**+1.7**
	baz=72							
DRK	**Karamyk**	**1.37**	**273**	Pn		**Pn**	**12 38 40.7**	**-0.6**
BTK	**Batken**	**2.22**	**288**		⇑*iP*	**Pb**	**12 38 54.5**	**-1.5**
	baz=86							
BTK					⇑*iS*	**Sb**	**12 39 23.9**	**+0.4**
	baz=86							
BTK	**Batken**	**2.22**	**288**	Pn		**Pn**	**12 38 53.1**	**+0.4**
ARLS	**Aral**	**2.51**	**13**		⇑*eP*	**Pn**	**12 38 56.9**	**0.0**
	baz=11							
ARLS					⇑*eS*	**Sn**	**12 39 27.8**	**+0.2**
	baz=11							
GAR	**Garm**	**2.56**	**262**		⇑*eP*	**Pb**	**12 38 59.8**	**-2.1**
	baz=61							
GAR					⇑*eS*	**Sb**	**12 39 32.8**	**-0.6**
	baz=61							
GAR	**Garm**	**2.56**	**262**			**Pn**	**12 38 56.1**	**-1.4**
ARK	**Arkit**	**2.68**	**333**		⇑*iP*	**Pn**	**12 39 00.0**	**+0.9**
	baz=31							
ARK					⇑*iS*	**Sn**	**12 39 33.7**	**+2.1**
	baz=31							
AML	**Almayashu**	**2.72**	**2**	P		**Pn**	**12 39 02.4**	**+2.5**
	SNR=36							
TRKS	**Terek-Say**	**2.81**	**320**		⇑*eP*	**Pn**	**12 39 01.4**	**+0.4**
	baz=17							
TRKS					⇑*eS*	**Sn**	**12 39 35.6**	**+0.6**
	baz=17							
UCH	**Uchtor**	**2.90**	**14**	P		**Pn**	**12 39 05.4**	**+2.9**
	SNR=58							
UCH	**Uchtor**	**2.90**	**14**		⇑*eP*	**Pn**	**12 39 02.4**	**-0.1**
	baz=13							
UCH					⇑*iS*	**Sn**	**12 39 37.6**	**-0.1**
	baz=13							
EKS2	**Erkin-Say**	**3.25**	**3**	P		**Pn**	**12 39 10.0**	**+3.0**
	SNR=35							
EKS2	**Erkin-Say**	**3.25**	**3**		⇑*eP*	**Pn**	**12 39 07.4**	**+0.4**
	baz=1.0							
EKS2					⇑*eS*	**Sn**	**12 39 45.8**	**0.0**
	baz=1.0							
AAK	**Ala-Archa**	**3.30**	**12**	P		**Pn**	**12 39 10.8**	**+3.1**
	SNR=28							
AAK	**Ala-Archa**	**3.30**	**12**	Pn		**Pb**	**12 39 11.6**	**-2.9**
	9.7nm,0.3s,baz=190,slow=9.8,SNR=40							
AAK				Sn		**Sb**	**12 39 54.2**	**-0.5**
	10nm,0.3s,baz=177,slow=19,SNR=7.8							
AAK				Lg		Lg	12 39 59.9	
	12nm,0.3s,baz=162,slow=20,SNR=6.9							
AAK				LR		LR	12 40 17.5	
	comp=Z,51nm,21.4s,baz=237,slow=36							
	81nm,0.5s							
AAK	**Ala-Archa**	**3.30**	**12**		⇑*eP*	**Pn**	**12 39 07.8**	**+0.2**
	baz=11							
AAK					⇑*eS*	**Sn**	**12 39 46.8**	**-0.2**
	baz=11							
AAK	**Ala-Archa**	**3.30**	**12**			**Pn**	**12 39 08.1**	**+0.4**
KBK	**Karagaybulak**	**3.41**	**17**	P		**Pb**	**12 39 13.3**	**-3.0**
	SNR=20							
KBK	**Karagaybulak**	**3.41**	**17**		⇑*eP*	**Pn**	**12 39 09.3**	**+0.2**
	baz=16							
KBK					⇑*eS*	**Sn**	**12 39 49.1**	**-0.6**
	baz=16							
ULHL	**Ulahol**	**3.48**	**35**	P		**Pb**	**12 39 18.5**	**+0.9**
	SNR=32							
ULHL	**Ulahol**	**3.48**	**35**		⇓*eP*	**Pn**	**12 39 10.2**	**0.0**
	baz=34							
ULHL					⇓*eS*	**Sn**	**12 39 50.6**	**-1.0**
	baz=34							
CHGR	**Chuyangaron**	**3.52**	**259**		⇑*eP*	**Pn**	**12 39 12.9**	**+2.3**
	baz=59							
CHGR					⇑*eS*	**Sn**	**12 39 55.6**	**+3.3**
	baz=59							
CHGR	**Chuyangaron**	**3.52**	**259**	Pn		**Pn**	**12 39 09.3**	**-1.3**
BOOM	**Boomskoye usch**	**3.56**	**30**		⇑*eP*	**Pn**	**12 39 11.1**	**-0.2**
	baz=29							
BOOM					⇑*eS*	**Sn**	**12 39 52.7**	**-0.8**
	baz=29							
BOOM	**Boomskoye usch**	**3.56**	**30**	Pn		**Pn**	**12 39 12.4**	**+1.1**
CHMS	**Chumysh**	**3.69**	**14**	P		**Pn**	**12 39 16.2**	**+3.3**
	SNR=14							
CHMS	**Chumysh**	**3.69**	**14**		⇓*eP*	**Pn**	**12 39 13.0**	**0.0**
	baz=13							
CHMS					⇓*eS*	**Sn**	**12 39 56.0**	**-0.6**
	baz=13							
CHMS	**Chumysh**	**3.69**	**14**	⇓Pn		**Pn**	**12 39 15.8**	**+2.8**
	31nm,0.7s							
CHMS					⇑Lg	Lg	12 40 10.9	
	213nm,1.0s							
TAS	**Tashkent**	**3.78**	**302**		⇑*eP*	**Pn**	**12 39 16.1**	**+1.9**
	baz=1.0							
TAS					⇑*eS*	**Sn**	**12 40 00.9**	**+2.2**
	baz=1.0							
TKM2	**Tokmak 2**	**3.83**	**23**	P		**Pn**	**12 39 18.3**	**+3.3**
	SNR=17							
TKM2	**Tokmak 2**	**3.83**	**23**		⇑*eP*	**Pn**	**12 39 15.2**	**+0.3**
	baz=22							
TKM2					⇑*eS*	**Sn**	**12 39 59.3**	**-0.8**
	baz=22							
TKM2	**Tokmak 2**	**3.83**	**23**	⇑Pn		**Pn**	**12 39 17.7**	**+2.7**
	13nm,0.6s							
TKM2					⇑Lg	Lg	12 40 14.8	
	90nm,0.8s							
IUG	**Iuzhnay**	**3.83**	**317**		*eP*	**Pb**	**12 39 23.8**	**+0.3**
	2μm,0.6s							
IUG					*eS*	**Sg**	**12 40 14.8**	**-4.0**
	215nm,0.0s							
IUG	**Iuzhnay**	**3.83**	**317**	Pg		**Pb**	**12 39 25.1**	**+1.6**
	6μm,0.9s							
IUG					Lg	Lg	12 40 14.8	
	290nm,1.6s							
KDJ	**Kajisay**	**3.86**	**44**		⇓*iP*	**Pn**	**12 39 15.3**	**-0.1**
	baz=44							
KDJ					⇓*eS*	**Sn**	**12 39 59.7**	**-1.2**
	baz=44							
USP	**Ospenovka**	**3.92**	**10**	P		**Pn**	**12 39 19.5**	**+3.5**
	SNR=14							
USP	**Ospenovka**	**3.92**	**10**		⇓*eP*	**Pn**	**12 39 16.4**	**+0.4**
	baz=9.0							
USP					⇓*eS*	**Sn**	**12 40 01.5**	**-0.5**
	baz=9.0							
TARG	**Taragay, Kyrgy**	**3.97**	**53**		⇓*eP*	**Pn**	**12 39 16.8**	**-0.3**
	baz=53							
TARG					⇓*eS*	**Sn**	**12 40 02.3**	**-1.7**
	baz=53							
TARG	**Taragay,

ANVS	**Anan'yevo**	**4.58**	**41**	⇑*iP*		**Pn**	**12 39 25.6**	**+0.4**
	baz=41								
ANVS				⇑*iS*		**Sn**	**12 40 16.8**	**-1.7**
	baz=41								
BRLS	**Borolday**	**4.58**	**323**	*eP*		**Pb**	**12 39 36.3**	**0.0**
	14nm,0.1s								
BRLS				*eS*		**Sb**	**12 40 35.0**	**+3.5**
	54nm,0.3s								
BRLS	**Borolday**	**4.58**	**323**	Pg		**Pb**	**12 39 36.9**	**+0.6**
	15nm,0.4s								
BRLS				Lg		Lg	12 40 35.0		
	54nm,0.3s								
KNDC	**Almaty**	**4.58**	**33**	⇑Pn		Pn	12 39 30.5	+5.3	
	111nm,0.7s								
KNDC				⇓Lg		Lg	12 40 39.9		
	408nm,0.9s								
KTBS	**Karatobe**	**4.89**	**28**	*eP*		**Pb**	**12 39 42.9**	**+1.4**
	34nm,2.4s								
KTBS				*eS*		**Sb**	**12 40 47.0**	**+6.5**
	102nm,0.8s								
KTBS	**Karatobe**	**4.89**	**28**	Pg		**Pb**	**12 39 43.8**	**+2.2**
	35nm,0.8s								
KTBS				Lg		Lg	12 40 47.0		
	102nm,0.8s								
KUU	**Kurty**	**4.94**	**24**	*eP*		**Pb**	**12 39 44.2**	**+1.9**
	25nm,0.7s								
KUU				*eS*		**Sg**	**12 40 49.2**	**-5.0**
	101nm,0.1s								
KUU	**Kurty**	**4.94**	**24**	Pg		**Pb**	**12 39 44.2**	**+1.9**
	25nm,0.7s								
KUU				Lg		Lg	12 40 47.8		
	54nm,0.9s								
CHKK	**Chushkaly**	**5.12**	**29**	*eP*		**Pb**	**12 39 47.4**	**+1.9**
	16nm,0.0s								
CHKK				*eS*		**Sg**	**12 40 55.2**	**-5.1**
	61nm,0.2s								
CHKK	**Chushkaly**	**5.12**	**29**	Pg		**Pb**	**12 39 48.5**	**+3.0**
	16nm,0.8s								
CHKK				Lg		Lg	12 40 55.2		
	52nm,0.5s								
SATY	**Saty**	**5.16**	**43**	*eP*		**Pb**	**12 39 48.5**	**+2.4**
	18nm,0.1s								
SATY				*eS*		**Sg**	**12 40 56.5**	**-4.8**
	44nm,0.2s								
SATY	**Saty**	**5.16**	**43**	Pg		**Pb**	**12 39 48.5**	**+2.4**
	18nm,0.9s								
SATY				Lg		Lg	12 40 54.9		
	47nm,1.4s								
ZHN	**Zhinishke**	**5.25**	**43**	*eP*		**Pb**	**12 39 50.2**	**+2.5**
	7.5nm,0.2s								
ZHN				*eS*		**Sg**	**12 40 59.5**	**-4.7**
	24nm,0.2s								
ZHN	**Zhinishke**	**5.25**	**43**	Pg		**Pb**	**12 39 51.2**	**+3.5**
	8.2nm,0.2s								
ZHN				Lg		Lg	12 40 59.5		
	24nm,0.7s								
KURS	**Kuram**	**5.34**	**39**	*eP*		**Pb**	**12 39 52.2**	**+2.9**
	20nm,0.8s								
KURS				*eS*		**Sg**	**12 41 02.6**	**-4.7**
	39nm,0.4s								
KURS	**Kuram**	**5.34**	**39**	Pg		**Pb**	**12 39 53.1**	**+3.9**
	20nm,0.8s								
KURS				Lg		Lg	12 41 02.6		
	40nm,2.4s								
KPKS	**Kokpek**	**5.58**	**42**	*eP*		**Pb**	**12 39 55.9**	**+2.5**
	25nm,0.9s								
KPKS				*eS*		**Sg**	**12 41 09.6**	**-5.4**
	39nm,0.1s								
KPKS	**Kokpek**	**5.58**	**42**	Pg		**Pb**	**12 39 56.7**	**+3.3**
	25nm,0.9s								
KPKS				Lg		Lg	12 41 09.6		
	34nm,0.6s								
BTLS	**Baital**	**5.64**	**3**	*eP*		**Pb**	**12 39 56.5**	**+2.3**
	17nm,0.1s								
BTLS				*eS*		**Sg**	**12 41 11.4**	**-5.3**
	34nm,0.9s								
BTLS	**Baital**	**5.64**	**3**	Pg		**Pb**	**12 39 56.5**	**+2.3**
	17nm,0.7s								
BTLS				Lg		Lg	12 41 08.9		
	34nm,0.9s								
ARXS	**Arharly**	**5.76**	**32**	*eP*		**Pb**	**12 39 59.4**	**+3.1**
	40nm,0.0s								
ARXS				*eS*		**Sg**	**12 41 14.8**	**-5.7**
	49nm,0.2s								
ARXS	**Arharly**	**5.76**	**32**	Pg		**Pb**	**12 39 59.9**	**+3.6**
	41nm,1.0s								
ARXS				Lg		Lg	12 41 14.8		
	45nm,0.7s								
PDGK	**Podgornoye**	**5.93**	**47**	Pg		**Pb**	**12 40 03.1**	**+3.8**
	6.4nm,1.3s								
PDGK				Lg		Lg	12 41 20.3		
	14nm,0.9s								
PDGK	**Podgornoye**	**5.93**	**47**	⇓Pn		Pn	12 39 48.8	+5.0	
	10nm,0.8s								
PDGK				⇑Lg		Lg	12 41 26.3		
	51nm,0.9s								
BLB	**Baldybastay**	**5.95**	**37**	*eP*		**Pb**	**12 40 02.5**	**+2.9**
	58nm,0.3s								
BLB				*eS*		**Sg**	**12 41 20.2**	**-6.5**
	31nm,0.1s								
BLB	**Baldybastay**	**5.95**	**37**	Pg		**Pb**	**12 40 03.1**	**+3.5**
	60nm,1.0s								
BLB				Lg		Lg	12 41 20.3		
	32nm,1.0s								
KBL	**Kabul**	**6.06**	**218**			**Pn**	**12 39 42.1**	**-3.6**
TDK	**Taldyqorghan**	**6.64**	**31**	*eP*		**Pb**	**12 40 15.5**	**+4.2**
	38nm,0.0s								
TDK				*eS*		**Sg**	**12 41 42.1**	**-6.7**
	113nm,0.2s								
TDK	**Taldyqorghan**	**6.64**	**31**	Pg		**Pb**	**12 40 16.1**	**+4.8**
	36nm,0.3s								
TDK				Lg		Lg	12 41 42.1		
	115nm,0.7s								
DJR	**Jarkent**	**6.76**	**41**	*eP*		**Pb**	**12 40 17.0**	**+3.6**
	4.6nm,0.2s								
DJR				*eS*		**Sg**	**12 41 45.8**	**-7.0**
	14nm,0.1s								
DJR	**Jarkent**	**6.76**	**41**	Pg		**Pb**	**12 40 18.0**	**+4.6**
	4.8nm,0.9s								
DJR				Lg		Lg	12 41 45.8		
	16nm,0.8s								
OTUK	**Ortayu**	**8.87**	**355**	⇑Pn		**Pn**	**12 40 24.7**	**+0.6**
	7.3nm,0.7s								
OTUK				⇓Lg		Lg	12 42 51.3		
	25nm,0.7s								
MKAR	**Makanchi Array**	**9.75**	**38**	Pn		**Pn**	**12 40 40.1**	**+4.0**
	0.1nm,0.3s,baz=222,slow=9.7,SNR=5.3								
MKAR				Lg		Lg	12 43 20.6		
	0.1nm,0.3s,baz=227,slow=25,SNR=2.9								
	1.3nm,0.8s								
WMQ	**Urumqi**	**11.45**	**63**	*eP*		**Pn**	**12 41 00.0**	**+0.6**
WMQ				smax		smax			
	comp=N,14nm,0.5s								
WMQ				smax		smax			
	comp=E,14nm,0.5s								
KURBB	**Kurchatov Arra**	**11.74**	**16**	Pn		**Pn**	**12 41 05.2**	**+1.9**	
	baz=213,slow=8.5,SNR=4.1								
KURBB				Lg		Lg	12 44 22.9		
	baz=201,slow=28,SNR=9.1								
	comp=E,0.5nm,0.8s								
KURBB	**Kurchatov Arra**	**11.74**	**16**	⇓Lg		Lg	12 44 23.2		
	comp=E,23nm,1.0s								
KURK	**Kurchatov**	**11.85**	**16**	⇑Lg		Lg	12 44 26.5		
	comp=E,37nm,1.4s								
GEYT	**Alibeck**	**12.17**	**268**	Sn		**Sn**	**12 43 26.4**	**+1.5**	
	comp=E,0.5nm,0.3s,baz=94,slow=19,SNR=1.7								
AB31	**Akbulak array**	**13.83**	**320**	⇑Pn		**Pn**	**12 41 33.5**	**+1.7**	
	comp=E,3.4nm,0.7s,baz=103,slow=4.9,SNR=26								
AKTO	**Aktyubinsk**	**15.55**	**320**	Pn		**Pn**	**12 41 53.7**	**-1.3**	
	comp=E,0.2nm,0.3s,baz=124,slow=14,SNR=11								
AKTO				LR		LR	12 48 27.9		
	comp=E,28nm,20.3s,baz=133,slow=39								
	comp=E,6.8nm,0.9s								
AKTO	**Aktyubinsk**	**15.55**	**320**	⇑Pn		**Pn**	**12 41 56.5**	**+1.5**	
	comp=E,7.1nm,0.8s								
ZAA0	**Zalesovo Array**	**16.43**	**24**			**P**	**12 42 08.5**	**-0.5**	
ZALV	**Zalesovo Beam**	**16.43**	**24**	Pn		**Pn**	**12 42 07.0**	**+0.7**	
	comp=E,0.3nm,0.3s,baz=221,slow=11,SNR=7.2								
ZALV				Sn		**S**	**12 45 18.6**	**-2.2**	
	comp=E,0.1nm,0.3s,baz=231,slow=22,SNR=1.6								
	comp=E,1.3nm,0.5s								
ZALV	**Zalesovo Beam**	**16.43**	**24**			**P**	**12 42 08.8**	**-0.3**	
GOMU	**GeErMu**	**17.09**	**94**	P		**P**	**12 42 19.8**	**+2.9**	
GOMU				pmax		pmax			
	comp=Z,2.0nm,0.8s								
GOMU				pmax		pmax			
	comp=Z,58nm,5.4s								
ARU	**Arti**	**19.70**	**335**	P		**Pn**	**12 42 46.0**	**-0.4**	
	baz=156,slow=6.1,SNR=7.6								
ARU				LR		LR	12 50 45.8		
	comp=Z,24nm,20.8s,baz=218,slow=38								
	comp=Z,5.1nm,0.6s								
ARU	**Arti**	**19.70**	**335**	P		**P**	**12 42 44.8**	**-0.2**	
GTA	**Gaotai**	**20.26**	**82**	⇓P		Pn	12 42 53.3	-0.1	
GTA				pP		sP	12 43 00.3	+2.8	
GTA				pmax		pmax			
	comp=Z,5.0nm,1.0s								
WSAR	**Wadi Sarin**	**20.51**	**223**	P		**P**	**12 42 53.9**	**-0.3**	
	comp=Z,8.9nm,1.1s,baz=76,slow=12,SNR=1.9								
	comp=Z,8.9nm,1.1s								
GNI	**Garni**	**22.13**	**281**	P		**P**	**12 43 12.8**	**+1.2**	
	comp=Z,5.7nm,0.6s,baz=101,slow=16,SNR=3.1								
	comp=Z,5.7nm,0.6s								
ONI	**Oni**	**22.89**	**288**	P		**P**	**12 43 18.4**	**-1.3**	
ONI				IAmb		IAmb	12 43 29.7		
	comp=Z,14nm,0.8s								
KBZ	**Khabaz**	**23.28**	**291**	P		**P**	**12 43 24.8**	**+1.3**	
	comp=Z,0.7nm,0.3s,baz=87,slow=7.8,SNR=1.9								
	comp=Z,0.7nm,0.3s								
BRTR	**Keskin Array B**	**30.61**	**284**	P		**P**	**12 44 30.8**	**+0.7**	
	comp=Z,1.3nm,0.7s,baz=98,slow=7.6,SNR=6.1								
	comp=Z,1.3nm,0.7s								
BRTR	**Keskin Array B**	**30.61**	**284**	P		**P**	**12 44 30.3**	**+0.2**	
FIA1	**FINESS Array S**	**36.28**	**323**	P		**P**	**12 45 19.2**	**+0.1**	
FINES	**FINESS Array B**	**36.28**	**323**	P		**P**	**12 45 19.6**	**+0.6**	
	comp=Z,1.4nm,0.3s,baz=112,slow=9.6,SNR=18								
	comp=Z,1.4nm,0.3s								
FINES	**FINESS Array B**	**36.28**	**323**	P		**P**	**12 45 19.2**	**+0.1**	
ARCES	**ARCESS Array B**	**39.28**	**336**	P		**P**	**12 45 45.0**	**+0.7**	
	comp=Z,0.9nm,0.5s,baz=106,slow=7.6,SNR=12								
	comp=Z,0.9nm,0.5s								
ARCES	**ARCESS Array B**	**39.28**	**336**	P		**P**	**12 45 44.8**	**+0.5**	
ARCES				IAmb		IAmb	12 46 13.7		
	comp=Z,8.3nm,1.4s								
KLR	**Kul'dur**	**41.82**	**57**	P		**P**	**12 46 06.0**	**+0.5**	
	comp=Z,1.3nm,0.5s,baz=278,slow=7.6,SNR=7.3								
	comp=Z,1.3nm,0.5s								
NB2	**NORSAR Subarra**	**43.34**	**321**	P		**P**	**12 46 17.8**	**+0.1**	
	comp=Z,0.8nm,0.5s,baz=92,slow=7.9								
NOA	**NORSAR Array B**	**43.34**	**321**	P		**P**	**12 46 17.9**	**+0.2**	
	comp=Z,1.7nm,0.7s,baz=92,slow=7.8,SNR=7.2								
	comp=Z,1.7nm,0.7s								
MJAR	**Matsushiro Ar**	**50.05**	**72**	P		**P**	**12 47 10.8**	**+0.1**	
	comp=Z,1.6nm,0.7s,baz=297,slow=7.8,SNR=4.2								
	comp=Z,1.6nm,0.7s								
ESDC	**Sonseca Array**	**57.91**	**297**	P		**P**	**12 48 07.6**	**-0.5**	
	comp=Z,0.5nm,0.7s,baz=64,slow=8.7,SNR=2.3								
	comp=Z,0.5nm,0.7s								
EUNU	**Eureka**	**60.25**	**356**	P		**P**	**12 48 24.5**	**+0.8**	
TOLK	**Toolik Lake Re**	**67.59**	**16**	P		**P**	**12 49 11.4**	**-0.7**	
TOLK				IAmb		IAmb	12 49 27.8		
	comp=Z,6.8nm,1.4s								
TORD	**Torodi Ar. Bea**	**67.81**	**269**	P		**P**	**12 49 13.3**	**-0.9**	
	comp=Z,0.6nm,0.5s,baz=55,slow=5.6,SNR=4.3								
	comp=Z,0.6nm,0.5s								
TORD	**Torodi Ar. Bea**	**67.81**	**269**	P		**P**	**12 49 13.3**	**-0.9**	
IMAR	**Indian Mountai**	**68.78**	**19**	P		**P**	**12 49 18.7**	**-0.9**	
J20K	**Nowinta River**	**70.11**	**20**	P		**P**	**12 49 27.8**	**0.0**	
J20K				IAmb		IAmb	12 49 45.5		
	comp=Z,3.6nm,1.2s								
INK	**Inuvik**	**70.69**	**10**	P		**P**	**12 49 31.4**	**+0.2**	
INK				IAmb		IAmb	12 49 39.3		
	comp=Z,5.7nm,1.4s								
ILAR	**Eielson Array**	**71.42**	**17**	P		**P**	**12 49 35.1**	**-0.6**	
	comp=Z,0.5nm,0.8s,baz=335,slow=7.9,SNR=5.4								
	comp=Z,0.5nm,0.8s								
BCAR	**Beaver Creek A**	**74.02**	**16**	P		**P**	**12 49 50.9**	**-0.4**	
KNRA	**Kununurra**	**75.16**	**125**	P		**P**	**12 49 58.6**	**+0.2**	
YKA	**Yellowknife Ar**	**78.23**	**4**	P		**P**	**12 50 15.0**	**-0.2**	
	comp=Z,0.3nm,0.4s,baz=350,slow=5.6,SNR=9.1								
	comp=Z,0.3nm,0.4s								
YKA	**Yellowknife Ar**	**78.23**	**4**	P		**P**	**12 50 14.7**	**-0.5**	
WB0	**Warramunga Arr**	**81.78**	**124**	P		**P**	**12 50 34.5**	**-0.4**	
WRA	**Warramunga Arr**	**81.87**	**124**	P		**P**	**12 50 34.8**	**-0.6**	
	comp=Z,0.9nm,0.6s,baz=329,slow=5.2,SNR=14								
	comp=Z,0.9nm,0.6s								
WB2	**Warramunga Arr**	**81.88**	**124**	P		**P**	**12 50 35.3**	**-0.2**	
WB2				IAmb		IAmb	12 50 36.5		
	comp=Z,6.5nm,1.2s								
WR0	**Warramunga Arr**	**82.01**	**124**	P		**P**	**12 50 36.1**	**-0.1**	
WR0				IAmb		IAmb	12 50 38.2		
	comp=Z,9.1nm,1.4s								
AS31	**Alice Springs**	**84.31**	**127**	P		**P**	**12 50 47.4**	**-0.6**	
ASAR	**Alice Springs**	**84.31**	**127**	P		**P**	**12 50 47.5**	**-0.6**	
	comp=Z,0.5nm,0.6s,baz=317,slow=5.0,SNR=13								
	comp=Z,0.5nm,0.6s								
ASAR	**Alice Springs**	**84.31**	**127**	P		**P**	**12 50 47.9**	**-0.1**	

*SJA **27** 12:51:11.1±0.7,31.76S×71.57W,h70km±5km, ML5.0, MW4.9*
*VAO **27** 12:51:12.8±0.3,31.76S×71.34W,h44km,mb5.0*
*GUC **27** 12:51:12.4±0.7,31.77S×71.38W,h45km±2km, ML5.1*
*IDC **27** 12:51:13.0±0.4,31.74S×71.27W,h46km±3km,mb4.8/13, mbtmp4.9/18,MS4.0/38,Error ellipse: s-maj=17.1km s-min=12.8km az=72.0*
*MOS **27** 12:51:13.0±1.3,31.73S×71.26W,h59km,mb5.3/22,Error ellipse: s-maj=12.8km s-min=6.6km az=99.2*
*NEIC **27** 12:51:13,31.77S×71.46W,h66km,Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr3.67; Mθθ0.28; Mφφ-3.95; Mrθ0.41; Mrφ1.18; Mθφ-2.79; Fault plane solution: M₀4.89000×10¹⁶ NP1:φs169.52000°, δ62.75000°,λ94.15000°. NP2:φs340.51000°,δ27.54000°, λ82.00000°. Principal axes: T 4.5832, Plg72.0000°, Azm89.0000°; N 0.5639, Plg4.0000°, Azm348.0000°; P -5.1470, Plg18.0000°, Azm256.0000°;*
*NEIC **27** 12:51:13.2±1.4,31.78S±0.04×71.42W±0.08,h46km±2km, mb5.2/110,Mwr5.1/58,Mww5.0,Mwr4.9(GUC) Error ellipse: s-maj=9.9km s-min=5.4km az=87.0*
*NEIC **27** 12:51:16,31.88S×71.27W,h60km,Moment Tensor Solution. Duration: 8s0 Moment tensor: Scale 10¹⁶Nm; Mrr2.28; Mθθ0.59; Mφφ-2.88; Mrθ-0.16; Mrφ1.28; Mθφ-2.19; Fault plane solution: M₀3.66000×10¹⁶ NP1: φs319.00000°,δ31.00000°,λ53.00000°. NP2: φs179.00000°,δ66.00000°,λ110.00000°. Principal axes: T 3.2256, Plg64.0000°, Azm122.0000°; N 0.7448, Plg18.0000°, Azm351.0000°; P -3.9705, Plg18.0000°, Azm255.0000°;*
*GCMT **27** 12:51:18.2±0.3,31.58S±0.02×71.46W±0.03,h46km±1km, MW5.1/54,Moment Tensor Solution. s47,c54; s54,c68; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr4.02±.28; Mθθ1.14±.23; Mφφ-5.16±.20; Mrθ0.69±.16; Mrφ0.20±.13; Mθφ-2.16±.21; Best double couple: Mo5.14000×10¹⁶ NP1:φs9.00000°,δ33.00000°,λ107.00000°. NP2: φs169.00000°,δ58.00000°,λ79.00000°. Principal axes: T 4.6180, Plg74.0000°, Azm49.0000°; N 1.0430, Plg9.0000°, Azm175.0000°; P -5.6610, Plg13.0000°, Azm267.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 12:51:12.8±0.3,31.75S±0.02×71.42W±0.04,h47km±2km, h47km:pP-P,n632,σ1§19/711,mb5.2/73,MS4.1/38, 26C-14D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
CO02	**Combarbal**	**0.66**	**34**		**Pn**	**12 51 26.2**	**+0.2**
CO02	**Combarbal**	**0.66**	**34**	*eP*	**Pn**	**12 51 26.3**	**+0.2**
CO02				*eS*	**Sn**	**12 51 34.8**	**-0.7**
CO02	**Combarbal**	**0.66**	**34**	*eP*	**Pn**	**12 51 27.2**	**+1.2**
CO02				IAML		12 51 41.2	
	comp=Z,60μm,3.0s						
VA06	**Catapilco**	**0.81**	**172**		**Pn**	**12 51 27.9**	**0.0**
VA06	**Catapilco**	**0.81**	**172**	⇑*iP*	**Pn**	**12 51 28.0**	**0.0**
VA06				*eS*	**Sn**	**12 51 38.3**	**-0.7**
VA06				IAML		12 51 43.1	
	comp=N,127μm,0.5s						
CO06	**Fray Jorge**	**1.09**	**350**		**Pn**	**12 51 32.6**	**+0.8**
CO06	**Fray Jorge**	**1.09**	**350**	⇑*iP*	**Pn**	**12 51 32.1**	**+0.4**
CO06				*eS*	**Sn**	**12 51 44.3**	**-1.4**
CO03	**El Pedregal**	**1.11**	**35**	Pn	**Pn**	**12 51 32.7**	**+0.7**
CO03	**El Pedregal**	**1.11**	**35**	⇓*iP*	**Pn**	**12 51 32.6**	**+0.5**
CO03				*eS*	**Sn**	**12 51 46.2**	**0.0**
CO03				IAML		12 51 51.3	
	comp=E,40μm,0.2s						
CO03	**El Pedregal**	**1.11**	**35**	*eP*	**Pn**	**12 51 32.6**	**+0.5**
CO03				*eS*	**Sn**	**12 51 47.3**	**+1.1**
CO03				IAML		12 51 51.2	
	comp=Z,17μm,0.6s						
VA03	**San Esteban**	**1.25**	**144**	Pn	**Pn**	**12 51 34.5**	**+0.5**
VA03	**San Esteban**	**1.25**	**144**	⇓*iP*	**Pn**	**12 51 34.4**	**+0.4**
VA03				*eS*	**Sn**	**12 51 50.0**	**+0.2**
VA03	**San Esteban**	**1.25**	**144**	*eP*	**Pn**	**12 51 34.4**	**+0.4**
VA03				*eS*	**Sn**	**12 51 51.4**	**+1.6**
ROCH	**El Roble**	**1.27**	**164**	⇑*iP*	**Pn**	**12 51 34.9**	**+0.5**
ROCH				*eS*	**Sn**	**12 51 51.1**	**+0.8**
ROCH				IAML		12 51 53.7	
	comp=N,72μm,0.2s						
ROC1	**El Roble**	**1.27**	**164**		**Pn**	**12 51 34.8**	**+0.4**
ROC1	**El Roble**	**1.27**	**164**	*eP*	**Pn**	**12 51 35.0**	**+0.6**
ROC1				*eS*	**Sn**	**12 51 52.1**	**+1.7**
VA01	**Torpederas**	**1.28**	**188**	Pn	**Pn**	**12 51 34.5**	**+0.2**
VA01	**Torpederas**	**1.28**	**188**	⇓*iP*	**Pn**	**12 51 34.8**	**+0.5**
VA01				*eS*	**Sn**	**12 51 51.1**	**+0.8**
VA01	**Torpederas**	**1.28**	**188**	*eP*	**Pn**	**12 51 35.0**	**+0.7**
VA01				*eS*	**Sn**	**12 51 52.3**	**+2.0**
VA01				IAML		12 51 54.4	
	comp=Z,11μm,0.3s						
PEL	**Peldehue**	**1.52**	**156**		**Pn**	**12 51 38.0**	**+0.3**
PEL	**Peldehue**	**1.52**	**156**	P	**Pn**	**12 51 38.0**	**+0.3**
PEL	**Peldehue**	**1.52**	**156**	*eP*	**Pn**	**12 51 38.0**	**+0.3**
PEL				*eS*	**Sn**	**12 51 57.5**	**+1.1**
PEL	**Peldehue**	**1.52**	**156**	*eP*	**Pn**	**12 51 38.0**	**+0.3**
PEL				*eS*	**Sn**	**12 51 59.2**	**+2.9**
MT02	**Curacav**	**1.52**	**171**		**Pn**	**12 51 38.1**	**+0.4**
MT02	**Curacav**	**1.52**	**171**	*eP*	**Pn**	**12 51 37.7**	**+0.1**
MT02				*eS*	**Sn**	**12 51 57.3**	**+1.0**
MT02				IAML		12 52 00.8	
	comp=N,21μm,0.4s						
MT02	**Curacav**	**1.52**	**171**	*eP*	**Pn**	**12 51 38.0**	**+0.4**
MT02				*eS*	**Sn**	**12 51 58.5**	**+2.3**
MT02				IAML		12 52 00.1	
	comp=Z,14μm,0.2s						
GO04	**Tololo Observa**	**1.66**	**19**		**Pn**	**12 51 41.4**	**+1.6**
GO04	**Tololo Observa**	**1.66**	**19**	⇓*iP*	**Pn**	**12 51 40.7**	**+0.9**
GO04				*eS*	**Sn**	**12 52 01.8**	**+1.7**
GO04				IAML		12 52 12.3	
	comp=N,73μm,0.5s						
GO04	**Tololo Observa**	**1.66**	**19**	*eP*	**Pn**	**12 51 41.0**	**+1.2**
GO04				*eS*	**Sn**	**12 52 03.5**	**+3.5**
MT05	**Renca**	**1.73**	**161**		**Pn**	**12 51 41.1**	**+0.5**
MT05	**Renca**	**1.73**	**161**	⇓*eP*	**Pn**	**12 51 41.4**	**+0.8**
MT05				*eS*	**Sn**	**12 52 03.0**	**+1.4**
MT05				IAML		12 52 05.3	
	comp=E,81μm,0.3s						
MT05	**Renca**	**1.73**	**161**	*eP*	**Pn**	**12 51 41.0**	**+0.4**
MT05				*eS*	**Sn**	**12 52 05.0**	**+3.4**
MT05				IAML		12 52 11.3	
	comp=Z,11μm,0.6s						
RTLS	**Leoncito**	**1.81**	**92**	*eP*	**Pn**	**12 51 44.0**	**+2.1**
RTLS				IAML		12 52 11.2	
	comp=Z,6μm,0.8s						
CO05	**La Serena**	**1.83**	**5**	Pn	**Pn**	**12 51 43.3**	**+1.4**
CO05	**La Serena**	**1.83**	**5**	⇑*iP*	**Pn**	**12 51 43.1**	**+1.2**
CO05				*eS*	**Sn**	**12 52 05.9**	**+2.0**
CO05				IAML		12 52 19.1	
	comp=E,17μm,0.5s						
FCH	**Farellones**	**1.84**	**149**	⇓*iP*	**Pn**	**12 51 43.0**	**+0.7**
FCH				*eS*	**Sn**	**12 52 06.5**	**+1.9**
FCH				IAML		12 52 09.8	
	comp=E,16μm,0.2s						
MT03	**Universidad Ad**	**1.90**	**156**	⇓*eP*	**Pn**	**12 51 43.7**	**+0.8**
MT03				*eS*	**Sn**	**12 52 06.9**	**+1.2**
MT03				IAML		12 52 11.3	
	comp=E,46μm,0.2s						
MT03	**Universidad Ad**	**1.90**	**156**	*eP*	**Pn**	**12 51 43.9**	**+0.9**
MT03				*eP*	**Pn**	**12 51 44.0**	**+1.1**
MT03				*eS*	**Sn**	**12 52 10.3**	**+4.6**
MT03				IAML		12 52 12.6	
	comp=Z,19μm,0.3s						
VA05	**Santo Domingo**	**1.91**	**185**	Pn	**Pn**	**12 51 43.2**	**+0.3**
VA05	**Santo Domingo**	**1.91**	**185**	⇓*eP*	**Pn**	**12 51 43.2**	**+0.3**
VA05				*eS*	**Sn**	**12 52 06.8**	**+1.1**
VA05				IAML		12 52 14.1	
	comp=E,23μm,0.3s						
MT09	**Talagante**	**2.05**	**170**	*eP*	**Pn**	**12 51 45.9**	**+0.9**
MT09				*eS*	**Sn**	**12 52 10.7**	**+1.2**
MT09				IAML		12 52 17.1	
	comp=E,17μm,0.2s						
CO01	**Juntas del Tor**	**2.11**	**33**	Pn	**Pn**	**12 51 47.6**	**+1.8**
CO01	**Juntas del Tor**	**2.11**	**33**	⇓*iP*	**Pn**	**12 51 47.6**	**+1.8**
CO01				*eS*	**Sn**	**12 52 13.0**	**+2.0**
CO01	**Juntas del Tor**	**2.11**	**33**	*eP*	**Pn**	**12 51 47.0**	**+1.1**
CO01				*eS*	**Sn**	**12 52 13.8**	**+2.9**
CO01				IAML		12 52 15.8	
	comp=Z,8μm,0.2s						
MT01	**Popeta**	**2.11**	**176**	Pn	**Pn**	**12 51 46.9**	**+1.2**
MT01	**Popeta**	**2.11**	**176**	⇓*eP*	**Pn**	**12 51 46.5**	**+0.8**
MT01				*eS*	**Sn**	**12 52 12.4**	**+1.7**
MT01				IAML		12 52 19.7	
	comp=E,16μm,0.3s						
MT01	**Popeta**	**2.11**	**176**	*eP*	**Pn**	**12 51 46.0**	**+0.3**
MT01				*eS*	**Sn**	**12 52 15.3**	**+4.5**
MT01				IAML		12 52 18.6	
	comp=Z,8μm,0.2s					

H03N1 Juan Fernandez 6.54 253 T T 12 59 28.7
baz=79,slow=73,SNR=1789
H03N3 Juan Fernandez 6.55 253 T T 12 59 22.1
baz=79,slow=73,SNR=1520
H03N2 Juan Fernandez 6.56 253 T T 12 59 23.4
baz=79,slow=73,SNR=1716
H03S3 Juan Fernandez 6.63 250 T T 12 59 30.5
baz=77
H03S1 Juan Fernandez 6.64 250 T T 12 59 29.0
baz=77
H03S2 Juan Fernandez 6.65 250 T T 12 59 32.2
baz=77
LR04 Corral 8.27 191 Pn **Pn** **12 53 09.4 -0.8**
PLCA Paso Flores 8.99 176 P **Pn** **12 53 20.5 +0.4**
comp=Z,3.1nm,0.4s,baz=344,slow=12,SNR=19
PLCA S **Sn** **12 55 02.6 +2.6**
comp=Z,42nm,1.1s,baz=346,slow=18,SNR=1.6
PLCA LR LR 12 56 49.1
comp=Z,685nm,19.6s,baz=356,slow=37
PLCA Paso Flores 8.99 176 **Pn** **12 53 19.1 -1.0**
PLCA Paso Flores 8.99 176 *eP* **Pn** **12 53 19.8 -0.3**
LVC Limon Verde 9.38 14 P **Pn** **12 53 23.6 -2.1**
comp=Z,4.3nm,0.2s,baz=182,slow=8.5,SNR=7.8
LVC S **Sn** **12 55 09.5 -0.5**
comp=Z,64nm,0.7s,baz=177,slow=11,SNR=3.1
LVC LR LR 12 57 35.5
comp=Z,868nm,21.1s,baz=211,slow=41
LVC Limon Verde 9.38 14 *eP* **Pn** **12 53 23.4 -2.3**
TRQA Tornquist 9.98 132 Pn **Pn** **12 53 33.4 -0.2**
TRQA Tornquist 9.98 132 P **Pn** **12 53 33.4 -0.2**
ITQB Itaqui 12.90 85 Pn **Pn** **12 54 11.5 -2.0**
ITQB Itaqui 12.90 85 *eP* **Pn** **12 54 12.1 -1.5**
CPUP Villa Florida 13.46 70 P **Pn** **12 54 18.2 -2.9**
comp=Z,21nm,1.0s,baz=240,slow=12,SNR=28
CPUP S **Sn** **12 56 47.4 -1.9**
comp=Z,23nm,0.8s,baz=162,slow=19,SNR=1.4
CPUP LR LR 12 59 47.7
comp=Z,1µm,18.2s,baz=256,slow=39
CPUP Villa Florida 13.46 70 **Pn** **12 54 18.0 -3.1**
CPUP Villa Florida 13.46 70 *eP* **Pn** **12 54 19.1 -2.0**
PB16 IPOC Station P 13.47 8 Pn **Pn** **12 54 23.5 +1.6**
COYC Coyhaique 13.81 182 **Pn** **12 54 24.1 -1.7**
PLTB Pedras Altas 15.16 95 Pn **Pn** **12 54 41.4 -2.5**
PLTB Pedras Altas 15.16 95 *eP* **Pn** **12 54 40.9 -3.0**
CPSB Cacapava Do Su 15.47 90 *eP* **Pn** **12 54 43.8 -4.1**
LPAZ La Paz 15.68 12 P **Pn** **12 54 51.9 +0.6**
comp=Z,44nm,0.8s,baz=193,slow=7.4,SNR=53
LPAZ La Paz 15.68 12 **Pn** **12 54 51.5 +0.3**
LPAZ La Paz 15.68 12 *eP* **Pn** **12 54 50.9 -0.4**
ITAB Concordia 17.38 80 **Pn** **12 55 10.4 -1.7**
ITAB Concordia 17.38 80 *eP* **Pn** **12 55 10.3 -1.7**
CNLB Canela 17.89 88 *eP* **Pn** **12 55 16.9 -1.3**
SIV San Ignacio 18.30 33 P **P** **12 55 22.6 -0.4**
comp=Z,42nm,0.5s,baz=204,slow=9.0,SNR=185
SIV S **S** **12 58 53.4 +3.4**
comp=Z,1.3nm,0.4s,baz=178,slow=20,SNR=1.3
SIV LR LR 13 03 50.2
comp=Z,649nm,21.6s,baz=238,slow=42
PTGB Pitanga 18.43 72 *eP* **P** **12 55 24.2 -0.2**
TRCB Terra Rica 18.91 66 *eP* **P** **12 55 28.9 -0.8**
GO09 Cerro Castillo 19.51 182 P **Pn** **12 55 38.6 +0.9**
TER01 Tubarao-SC 19.54 86 *eP* **P** **12 55 36.3 -0.3**
PTLB Pontes e Lacer 19.72 37 *eP* **P** **12 55 38.0 -0.5**
NNA Nana 20.30 345 LR LR 13 02 12.1
comp=Z,325nm,19.8s,baz=174,slow=32
NNA Nana 20.30 345 *i* P **P** **12 55 43.9 -0.9**
NNA pmax pmax
comp=Z,55nm,1.4s
PCMB Pacaembu 20.62 66 *eP* **P** **12 55 47.3 -1.0**
TIJ01 Guaruva-PR 20.69 78 *eP* **P** **12 55 46.0 -3.2**
SALV Santo Antonio 21.31 46 *eP* **P** **12 55 54.6 -1.2**
VILB Vilhena 21.37 31 *eP* **P** **12 55 55.6 -0.8**
MG03 Isla Dawson 22.09 178 P **P** **12 56 04.8 +1.0**
MG03 IAmb IAmb 12 56 30.8
comp=Z,118nm,1.2s
EFI East Falkland 22.20 158 *ceP* **P** **12 56 03.6 -1.3**
EFI pmax pmax
comp=Z,52nm,0.8s
ETMB Extrema 22.36 14 *eP* **P** **12 56 07.3 +0.4**
ITRB Iturama 22.40 63 *eP* **P** **12 56 05.8 -1.7**
PET01 Itanhaem-SP 22.55 77 *eP* **P** **12 56 07.5 -1.4**
BB19B Bebedouro 23.06 68 *eP* **P** **12 56 12.0 -2.3**
USHA Ushuaia 23.17 176 P **P** **12 56 16.1 +1.1**
comp=Z,100nm,1.0s,baz=359,slow=6.6,SNR=7.8
comp=Z,100nm,1.0s
RCLB Rio Claro- Sao 23.17 72 *eP* **P** **12 56 14.8 -0.7**
VAO Valinhos 23.36 74 *eP* **P** **12 56 15.7 -1.7**
CZSB Cruzeiro do Su 23.93 357 *eP* **P** **12 56 22.5 -0.1**
SAML Samuel 23.95 20 P **P** **12 56 21.6 -1.1**
SAML Samuel 23.95 20 P **P** **12 56 21.6 -1.1**
SAML pmax pmax
comp=Z,34nm,1.1s
PDRB Porto dos Gac 24.20 37 *eP* **P** **12 56 24.1 -1.0**
PARB Paraibuna 24.32 76 *eP* **P** **12 56 25.2 -1.0**
IPMB Ipameri, GO 25.06 62 *eP* **P** **12 56 31.5 -1.4**
CLDB Colider 25.31 38 *eP* **P** **12 56 34.4 -0.8**
ATAH Atahualpa 25.34 344 P **P** **12 56 36.9 +0.9**
comp=Z,2.5nm,0.8s,baz=177,slow=18,SNR=2.1
ATAH LR LR 13 05 35.0
comp=Z,239nm,19.8s,baz=191,slow=34
ESAR Angra dos Reis 25.44 77 *eP* **P** **12 56 35.7 -0.5**
VAS01 Vassouras-RJ 26.59 76 *eP* **P** **12 56 46.7 -0.1**
BDFB Brasilia 26.68 58 P **P** **12 56 46.6 -1.1**
comp=Z,85nm,0.9s,baz=230,slow=6.5,SNR=57
BDFB LR LR 13 08 31.9
comp=Z,1µm,20.8s,baz=221,slow=39
comp=Z,85nm,0.9s
BDFB Brasilia 26.68 58 P **P** **12 56 46.8 -0.9**
BDFB IAmb IAmb 12 56 48.2
comp=Z,101nm,1.0s
BDFB Brasilia 26.68 58 P **P** **12 56 46.8 -0.9**
BDFB pmax pmax
comp=Z,101nm,1.0s
BDFB Brasilia 26.68 58 *eP* **P** **12 56 46.8 -0.9**
SNDB Serra Nova Dou 27.05 48 *eP* **P** **12 56 50.0 -0.8**
DUB01 Friburgo-RJ 27.56 77 *eP* **P** **12 56 54.9 -0.7**
CAM01 Campos-RJ 28.27 77 *eP* **P** **12 57 01.2 -0.6**
NPGB Novo Progresso 28.80 35 *eP* **P** **12 57 04.5 -1.9**
PEXB Peixe 28.91 53 *eP* **P** **12 57 06.7 -0.8**
JANB Januaria 29.80 62 *eP* **P** **12 57 15.0 -0.4**
SJMB Sao Joao De Ma 30.17 72 *eP* **P** **12 57 17.9 -0.8**
MACA Manacapuru-AM 30.18 22 *eP* **P** **12 57 18.3 -0.5**
BSFB Barra de Sao F 30.38 72 *eP* **P** **12 57 19.4 -1.2**
RIB01 Linhares ES 30.50 74 *eP* **P** **12 57 20.6 -1.0**
ITTB Itaituba 30.97 32 *eP* **P** **12 57 24.2 -1.5**
SDBA SAO DESIDERIO 31.07 58 *eP* **P** **12 57 25.8 -0.9**
NAN01 Guarapari, ES 31.48 71 *eP* **P** **12 57 28.9 -1.2**
SMTB Santa Maria do 31.76 49 *eP* **P** **12 57 32.6 -0.2**
GUA01 Guaratinga, BA 32.41 70 *eP* **P** **12 57 37.5 -0.9**
PRPB Parauapebas 32.49 43 *eP* **P** **12 57 38.1 -1.1**
RPN Rapa Nui 33.22 268 LR LR 13 08 26.4
comp=Z,209nm,19.5s,baz=112,slow=31
CMC01 Camacan, BA 33.33 68 *eP* **P** **12 57 45.8 -0.6**
PMSA Palmer Station 33.36 174 LR LR 13 09 29.5
comp=Z,407nm,21.8s,baz=321,slow=33
PMSA Palmer Station 33.36 174 *eP* **P** **12 57 44.6 -1.5**
MALB Monte Alegre 33.86 32 *eP* **P** **12 57 50.1 -0.9**
BBAC Balboa, Cauca 34.04 350 *eP* **P** **12 57 57.3 +4.5**
GDU01 Guandu, BA 34.24 66 *eP* **P** **12 57 53.1 -1.3**
POPC Popayan, Colom 34.47 351 *eP* **P** **12 58 00.2 +3.6**
PRAC Prado 35.42 354 *eP* **P** **12 58 07.8 +3.3**
BOAV Boa Vista 35.50 19 *eP* **P** **12 58 04.6 -0.6**
ORTC Ortega, Tolima 35.65 353 *eP* **P** **12 58 06.9 +0.4**
YOTC Yotoco, Valle 35.84 352 *eP* **P** **12 58 12.5 +4.4**
MCPB Macapa, AP 36.20 34 *eP* **P** **12 58 10.7 -0.5**
CHIC Chingaza 36.25 356 *eP* **P** **12 58 12.6 +0.6**
ROSC El Rosal 36.49 355 P **P** **12 58 15.7 +1.6**
comp=Z,10.0nm,0.3s,baz=126,slow=19,SNR=1.7
comp=Z,10.0nm,0.3s
TMAB Tom-Au,PA,Br 36.57 42 *eP* **P** **12 58 14.2 -0.1**
PLMC San Jos del P 36.75 352 *eP* **P** **12 58 15.5 -0.4**
NORC Norcasia 37.25 354 *eP* **P** **12 58 21.3 +1.1**
NBLA Lagarto - SE 37.28 64 *eP* **P** **12 58 18.9 -1.5**
RUSC La Rusia 37.47 357 *eP* **P** **12 58 24.1 +1.7**
PTBC PUERTO BERRIO, 38.19 355 *eP* **P** **12 58 27.0 -1.0**
ROSB Rosrio 38.52 47 *eP* **P** **12 58 30.1 -0.8**
NBMA Muriti-CE 38.92 58 *eP* **P** **12 58 33.6 -0.6**
ZARC Zaragoza, Cauc 39.16 355 P **P** **12 58 35.9 -0.3**
ZARC Zaragoza, Cauc 39.16 355 *eP* **P** **12 58 36.6 +0.4**
NBAN Anadia - AL 39.27 64 *eP* **P** **12 58 36.0 -1.2**
UREC San Jos de Ur 39.48 354 *eP* **P** **12 58 38.5 -0.3**
NBPB Pedra_Branca-C 39.59 55 *eP* **P** **12 58 39.5 -0.3**
SDV Santo Domingo 40.41 1 LR LR 13 16 34.1
comp=Z,141nm,21.1s,baz=165,slow=38
BAUV El Baul 40.59 5 P **P** **12 58 47.6 -0.4**
BAUV IAmb IAmb 12 58 48.6
comp=Z,81nm,1.1s
NBRF Rio Formoso - 40.77 64 *eP* **P** **12 58 48.5 -1.1**
MDP Montagnes des 40.79 29 LR LR 13 16 49.4
comp=Z,422nm,22.0s,baz=230,slow=38
MPGF Montagnes des 40.79 29 P **P** **12 58 48.8 -1.0**
SJCC San Jacinto, C 41.57 354 P **P** **12 58 57.4 +1.3**
SJCC IAmb IAmb 12 58 60.0
comp=Z,44nm,1.1s
SJCC San Jacinto, C 41.57 354 *eP* **P** **12 58 54.8 -1.3**
FDF Fort de France 47.26 14 P **P** **12 59 39.9 -1.7**
BELA Belgrano 2 49.00 170 P **P** **12 59 55.2 +0.9**
BELA IAmb IAmb 12 59 56.4
comp=Z,32nm,1.2s
MLPR Magueyes Islan 49.62 5 **P** **12 59 59.3 -0.2**
OBIP Obispado Ponce 49.73 6 P **P** **12 59 59.8 -0.6**
OBIP IAmb IAmb 13 00 01.7
comp=Z,34nm,0.8s
PDPR Patillas Dam, 49.76 7 **P** **12 59 59.7 -0.9**
SJG San Juan 49.84 7 P **P** **13 00 00.4 -0.8**
SJG San Juan 49.84 7 P **P** **13 00 00.4 -0.8**
SJG pmax pmax
comp=Z,32nm,0.8s
SJG San Juan 49.84 7 P **P** **13 00 00.4 -0.8**
VNA3 Neumayer Olymp 51.25 159 P **P** **13 00 11.9 +0.5**
PETF Flores 51.52 337 P **P** **13 00 14.5 +0.5**
VNA1 Neumayer--Stat 51.54 158 P **P** **13 00 14.1 +0.6**
VNA2 Neumayer--Watz 51.89 158 P **P** **13 00 16.6 +0.5**
baz=283,slow=8.0
SNAA Sanae 53.47 158 P **P** **13 00 28.3 +0.4**
SNAA Sanae 53.47 158 LR LR 13 22 39.9
comp=Z,115nm,18.2s,baz=270,slow=35
SNAA Sanae 53.47 158 P **P** **13 00 28.1 +0.1**
SNAA Sanae 53.47 158 *ceP* **P** **13 00 28.2 +0.3**
SNAA pmax pmax
comp=Z,47nm,1.1s
TROLL Troll, Antarti 55.18 159 P **P** **13 00 40.9 +0.4**
NVL N'lazarevskaya 58.18 157 *eP* **P** **13 00 59.9 -1.6**
NVL *eS* **S** **13 08 58.2 -1.1**
NVL pmax pmax
comp=Z,23nm,1.1s
QSPA South Pole Qui 58.48 180 LR LR 13 26 14.6
comp=Z,80nm,19.1s,baz=152,slow=36
QSPA South Pole Qui 58.48 180 P **P** **13 01 04.3 +0.4**
QSPA IAmb IAmb 13 01 05.8
comp=Z,23nm,0.9s
QSPA South Pole Qui 58.48 180 ⇑P **P** **13 01 04.8 +0.9**
QSPA pP **pP** **13 01 17.3 +0.1**
QSPA sP **sP** **13 01 24.6 +2.0**
DWPF Disney Wildern 60.29 350 P **P** **13 01 16.5 0.0**
baz=170
TIGA Tifton 63.90 348 P **P** **13 01 40.5 -0.2**
baz=168
352A Blakely 64.18 347 P **P** **13 01 42.9 +0.4**
BRAL Brewton 64.31 345 P **P** **13 01 43.9 +0.6**
baz=165
154A Montrose 64.96 349 P **P** **13 01 47.7 +0.1**
NHSC New Hope 65.04 352 P **P** **13 01 48.6 +0.5**
baz=172
152A Waverly Hall 65.30 348 P **P** **13 01 49.8 0.0**
152A IAmb IAmb 13 01 50.4
comp=Z,25nm,1.0s
152A Waverly Hall 65.30 348 P **P** **13 01 49.4 -0.4**
baz=168,SNR=5.4
SBA Scott Base 65.38 191 P **P** **13 01 51.8 +2.0**
SBA pP **pP** **13 02 05.4 +2.0**
833A Chaparral WMA, 65.41 333 P **P** **13 01 52.1 +1.5**
833A Chaparral WMA, 65.41 333 P **P** **13 01 52.1 +1.5**
baz=154,SNR=17
833A Chaparral WMA, 65.41 333 P **P** **13 01 52.1 +1.5**
baz=154,SNR=17
HKT Hockley 65.60 337 *i* P **P** **13 01 51.3 -0.4**
HKT pmax pmax
comp=Z,20nm,1.7s
GOGA Godfrey 65.80 349 P **P** **13 01 52.6 -0.4**
GOGA IAmb IAmb 13 01 53.9
comp=Z,17nm,1.1s
GOGA Godfrey 65.80 349 P **P** **13 01 52.6 -0.4**
GOGA pmax pmax
comp=Z,17nm,1.1s
GOGA Godfrey 65.80 349 P **P** **13 01 52.9 -0.1**
baz=169,SNR=6.7
Z51A Franklin 66.01 347 P **P** **13 01 54.4 0.0**
LRAL Lakeview Retre 66.10 346 P **P** **13 01 55.2 +0.3**
LRAL IAmb IAmb 13 01 56.1
comp=Z,24nm,1.3s
LRAL Lakeview Retre 66.10 346 P **P** **13 01 54.7 -0.2**
baz=166,SNR=5.9
VBMS Vicksburg 66.14 342 P **P** **13 01 56.2 +1.0**
baz=162
SLBS Sierra La Lagu 66.31 321 P **P** **13 01 58.3 +1.7**
SLBS pP **pP** **13 02 11.0 +0.8**
SLBS sP **sP** **13 02 17.3 +1.8**
JSC Jenkinsville 66.33 351 P **P** **13 01 56.8 +0.4**
JSC IAmb IAmb 13 01 57.5
comp=Z,17nm,1.1s
JSC Jenkinsville 66.33 351 P **P** **13 01 56.8 +0.4**
JSC pmax pmax
comp=Z,17nm,1.1s
Y52A Lilburn 66.34 349 P **P** **13 01 56.0 -0.5**
Y52A IAmb IAmb 13 01 57.6
comp=Z,34nm,1.1s
Y52A Lilburn 66.34 349 P **P** **13 01 56.3 -0.2**
baz=168,SNR=8.1
Y52A P **P** **13 01 56.3 -0.2**
baz=168,SNR=8.1
Y49A Blount Mountai 66.77 346 P **P** **13 01 59.5 +0.2**
Y49A Blount Mountai 66.77 346 P **P** **13 01 59.0 -0.3**
baz=154,SNR=6.6
143A Socs Landing, 66.83 342 P **P** **13 02 00.8 +1.2**
baz=162,SNR=5.9
NATX Nacogdoches 66.89 339 P **P** **13 02 01.4 +1.4**
baz=159
CNNC Cliffs of the 66.92 354 P **P** **13 02 00.5 +0.4**
baz=174
PAULI Pauline 66.94 351 P **P** **13 02 00.3 +0.1**
PAULI IAmb IAmb 13 02 01.6
comp=Z,19nm,1.1s
435B Jarrell 66.96 336 P **P** **13 02 01.4 +0.9**
baz=156
W57A Gilead 67.04 352 P **P** **13 02 01.0 +0.2**
W57A IAmb IAmb 13 02 02.0
comp=Z,27nm,1.1s
W57A Gilead 67.04 352 P **P** **13 02 00.9 0.0**
baz=172,SNR=5.9
W57A P **P** **13 02 00.9 0.0**
baz=172,SNR=5.9
X51A Calhoun 67.17 348 P **P** **13 02 01.8 +0.1**
X51A Calhoun 67.17 348 P **P** **13 02 02.1 +0.4**
baz=168,SNR=13
X51A P **P** **13 02 02.1 +0.4**
baz=168,SNR=13
KMSC Kings Mountain 67.19 351 P **P** **13 02 02.1 +0.3**
KMSC IAmb IAmb 13 02 03.0
comp=Z,19nm,1.0s
KMSC Kings Mountain 67.19 351 P **P** **13 02 02.2 +0.3**
baz=171
BG3 Lake Jocassee 67.27 350 P **P** **13 02 02.7 +0.3**
BG3 IAmb IAmb 13 02 03.8
comp=Z,29nm,1.2s
FPAL Fort Paine 67.28 347 P **P** **13 02 02.8 +0.3**
FPAL IAmb IAmb 13 02 03.5
comp=Z,27nm,1.2s
Y45A Yeager Farm, C 67.47 344 P **P** **13 02 04.9 +1.3**
X48A Hartselle 67.47 346 P **P** **13 02 04.0 +0.3**
X48A Hartselle 67.47 346 P **P** **13 02 04.0 +0.3**
baz=166,SNR=18
JCT Junction City 67.50 334 P **P** **13 02 04.3 +0.3**
JCT IAmb IAmb 13 02 06.1
comp=Z,23nm,0.9s
JCT Junction City 67.50 334 P **P** **13 02 04.3 +0.3**
JCT pmax pmax
comp=Z,23nm,0.9s
JCT Junction City 67.50 334 P **P** **13 02 04.7 +0.8**
baz=154,SNR=8.0
W52A Murphy 67.52 349 P **P** **13 02 04.3 +0.3**
baz=168,SNR=6.6
V58A Windy Hill, Pi 67.58 353 P **P** **13 02 04.3 0.0**
V58A IAmb IAmb 13 02 05.4
comp=Z,21nm,1.1s
V58A Windy Hill, Pi 67.58 353 P **P** **13 02 04.5 +0.3**
baz=173
V58A P **P** **13 02 04.5 +0.3**
baz=173
Z41A Richland Creek 67.74 341 P **P** **13 02 06.2 +0.9**
baz=160
W50A Signal Mountai 67.87 348 P **P** **13 02 06.4 +0.3**
W50A IAmb IAmb 13 02 07.5
comp=Z,43nm,1.1s
W50A Signal Mountai 67.87 348 P **P** **13 02 06.5 +0.3**
baz=167,SNR=13
V55A Taylorsville 67.87 351 P **P** **13 02 06.4 +0.2**
V55A IAmb IAmb 13 02 07.5
comp=Z,31nm,1.1s
V55A Taylorsville 67.87 351 P **P** **13 02 06.5 +0.3**
baz=171,SNR=8.0
V55A P **P** **13 02 06.5 +0.3**
baz=171,SNR=8.0
V53A Saluda 67.92 350 P **P** **13 02 06.5 0.0**
baz=170,SNR=12
V53A P **P** **13 02 06.5 0.0**
baz=170,SNR=12
CPCT Cooper Cave 67.97 348 P **P** **13 02 07.0 +0.2**
CPCT IAmb IAmb 13 02 08.0
comp=Z,32nm,1.0s
SWET Sewanee 68.00 347 P **P** **13 02 07.5 +0.5**
WHTX Lake Whitney, 68.02 336 P **P** **13 02 07.9 +0.7**
baz=156
TXAR Lajitas Array 68.04 330 P **P** **13 02 08.5 +1.0**
comp=Z,4.9nm,0.8s,baz=150,slow=8.1,SNR=56
TXAR pP **pP** **13 02 21.8 +0.8**
comp=Z,1.6nm,0.7s,baz=152,slow=9.1,SNR=7.1
TXAR LR LR 13 26 46.7
comp=Z,82nm,21.2s,baz=158,slow=31
TXAR PKP2bc 13 30 27.7
comp=Z,0.1nm,0.4s,baz=264,slow=1.1,SNR=3.8
comp=Z,4.9nm,0.8s
TX31 Lajitas Ar. Si 68.04 330 P **P** **13 02 08.2 +0.7**
TX31 IAmb IAmb 13 02 09.7
comp=Z,21nm,0.9s
TX32 Lajitas Array 68.04 330 P **P** **13 02 08.2 +0.7**
TKL Tuckaleechee C 68.05 349 P **P** **13 02 07.2 -0.1**
TKL IAmb IAmb 13 02 08.2
comp=Z,27nm,1.0s
TKL Tuckaleechee C 68.05 349 P **P** **13 02 07.2 -0.1**
TKL pmax pmax
comp=Z,27nm,1.0s
OXF Oxford 68.05 344 P **P** **13 02 07.2 -0.1**
OXF Oxford 68.05 344 P **P** **13 02 07.2 -0.1**
OXF pmax pmax
comp=Z,102nm,1.0s
OXF Oxford 68.05 344 P **P** **13 02 07.3 0.0**
baz=164,SNR=13
V52A Sevierville 68.20 349 P **P** **13 02 08.2 -0.1**
V52A IAmb IAmb 13 02 09.1
comp=Z,28nm,1.0s
V52A Sevierville 68.20 349 P **P** **13 02 08.0 -0.3**
baz=169,SNR=8.5
PLAL Pickwick Lake 68.20 345 P **P** **13 02 07.7 -0.5**
PLAL IAmb IAmb 13 02 09.2
comp=Z,27nm,1.1s
V51A Loudon 68.29 349 P **P** **13 02 08.7 -0.1**
baz=168,SNR=7.0
TBI Tubuai 68.37 255 *e*LR LR 13 22 52.7
comp=Z,362nm,26.2s
TBI Tubuai 68.37 255 *e*T T 14 16 31.4
comp=Z,9.8nm,0.2s
T59A Double "B" Far 68.61 355 P **P** **13 02 11.1 +0.4**
baz=174,SNR=7.2
T59A P **P** **13 02 11.1 +0.4**
baz=174,SNR=7.2
U54A Nelsons Funny 68.61 351 P **P** **13 02 10.3 -0.6**
baz=170,SNR=8.4
U54A P **P** **13 02 10.3 -0.6**
baz=170,SNR=8.4
V48A Smith Brothers 68.68 347 P **P** **13 02 11.3 +0.1**
V48A Smith Brothers 68.68 347 P **P** **13 02 11.6 +0.4**
baz=166,SNR=18
T57A Hurt 68.78 353 P **P** **13 02 11.3 -0.5**
TZTN Tazewell 68.88 350 P **P** **13 02 12.3 -0.2**
baz=169
CLTN Cedars of Leba 68.92 347 P **P** **13 02 12.6 -0.1**
CLTN IAmb IAmb 13 02 13.9
comp=Z,29nm,0.9s
BLA Blacksburg 69.12 352 P **P** **13 02 14.3 +0.3**
baz=172
MIAR Mount Ida 69.17 341 P **P** **13 02 14.7 +0.5**
MIAR Mount Ida 69.17 341 P **P** **13 02 14.7 +0.5**
MIAR pmax pmax
comp=Z,21nm,1.2s
MIAR Mount Ida 69.17 341 P **P** **13 02 14.6 +0.4**
baz=160,SNR=13
Z35A Perchaven, San 69.17 337 P **P** **13 02 15.0 +0.7**
Z35A Perchaven, San 69.17 337 P **P** **13 02 15.2 +0.9**
baz=157,SNR=5.5
U49A Red Boiling Sp 69.23 348 P **P** **13 02 14.6 0.0**
baz=167,SNR=7.7
WVT Waverly 69.26 346 P **P** **13 02 15.1 +0.3**
WVT Waverly 69.26 346 P **P** **13 02 15.1 +0.3**
WVT pmax pmax
comp=Z,64nm,0.9s
WVT Waverly 69.26 346 P **P** **13 02 14.9 +0.1**
baz=165
WVT Waverly 69.26 346 ⇑P **P** **13 02 14.9 +0.1**
WVT pP **pP** **13 02 28.1 -0.3**
WVT sP **sP** **13 02 34.4 +0.6**
JSRW J. Sargeant Re 69.35 355 P **P** **13 02 16.1 +0.8**
ABTX Abilene, Hawle 69.36 335 P **P** **13 02 16.5 +0.9**
baz=155,SNR=6.6
ABTX Abilene, Hawle 69.36 335 P **P** **13 02 16.3 +0.7**
baz=155,SNR=6.6
W41B Gary Mavity, V 69.39 342 P **P** **13 02 16.2 +0.6**
baz=161,SNR=7.3
W41B Gary Mavity, V 69.39 342 P **P** **13 02 15.9 +0.3**
baz=161,SNR=7.3
S57A Dark Hollow, R 69.51 354 P **P** **13 02 17.0 +0.7**
baz=173,SNR=7.9
S57A P **P** **13 02 17.0 +0.7**
baz=173,SNR=7.9
WHAR Wooly Hollow 69.51 342 P **P** **13 02 16.5 +0.1**
WHAR IAmb IAmb 13 02 17.9
comp=Z,23nm,1.2s
T50A Nancy 69.56 349 P **P** **13 02 16.5 -0.1**
baz=168
T50A P **P** **13 02 16.5 -0.1**
baz=168
R58B Mineral 69.62 355 P **P** **13 02 17.6 +0.7**
baz=174,SNR=6.9
R58B P **P** **13 02 17.6 +0.7**
baz=174,SNR=6.9
MEH Mehetia 69.68 261 *e*T T 14 18 10.5
comp=Z,30nm,0.2s
GLAT Glass 69.71 345 P **P** **13 02 18.7 +1.2**
W39A Magazine 69.83 341 P **P** **13 02 19.0 +0.7**
W39A Magazine 69.83 341 P **P** **13 02 19.6 +1.3**
baz=160,SNR=23
W39A Magazine 69.83 341 P **P** **13 02 19.3 +1.0**
baz=160,SNR=23
T47A Sharon Grove 69.94 347 P **P** **13 02 19.1 +0.2**
T47A IAmb IAmb 13 02 20.1
comp=Z,57nm,1.4s
T47A Sharon Grove 69.94 347 P **P** **13 02 19.1 +0.2**
baz=166,SNR=10
LCAR Lake Charles 69.96 343 P **P** **13 02 19.4 +0.3**
LCAR IAmb IAmb 13 02 20.3
comp=Z,39nm,1.0s
S51A Beattyville 69.96 350 P **P** **13 02 19.1 0.0**
baz=169,SNR=6.4
S51A P **P** **13 02 19.1 0.0**
baz=169,SNR=6.4
FCAR Ozark Folk Cen 70.03 342 P **P** **13 02 19.3 -0.3**
PBMO Poplar Bluff 70.46 344 P **P** **13 02 22.5 +0.3**
PBMO IAmb IAmb 13 02 23.4
comp=Z,30nm,1.0s
TVO Taravao 70.72 261 *e*T T 14 19 27.4
comp=Z,1.8nm,0.2s
MNTX Cornudas Mount 70.82 330 P **P** **13 02 24.5 0.0**
MNTX Cornudas Mount 70.82 330 P **P** **13 02 24.4 -0.2**
baz=150,SNR=16
HHAR Hobbs 70.89 341 P **P** **13 02 25.2 +0.4**
HHAR IAmb IAmb 13 02 26.2
comp=Z,27nm,0.9s
Q54A Coxs Mills 70.92 352 P **P** **13 02 24.8 -0.1**
baz=172
Q54A P **P** **13 02 24.8 -0.1**
baz=172
WMOK Wichita Mounta 70.97 336 P **P** **13 02 25.3 0.0**
baz=156,SNR=5.2
Q52A Bidwell 71.07 351 P **P** **13 02 25.2 -0.7**
baz=170,SNR=6.3

Q52A P P 13 02 25.2 -0.7
baz=170,SNR=6.3
TUL1 Leonard 71.08 339 P P 13 02 26.5 +0.5
baz=158
TUL1 Leonard 71.08 339 P P 13 02 26.1 +0.1
baz=158
PPT2 Papeete2 71.09 261 *e*LR LR 13 24 08.0
comp=Z,180nm,25.5s
P57A Homestead Farm 71.14 355 P P 13 02 27.3 +1.1
baz=174,SNR=6.3
P57A P P 13 02 27.3 +1.1
baz=174,SNR=6.3
U38A Gravette 71.17 341 P P 13 02 27.0 +0.5
baz=160
Q51A Peebles 71.29 350 P P 13 02 27.4 +0.2
baz=169
Q51A P P 13 02 27.4 +0.2
baz=169
WUPA West Chester U 71.43 357 P P 13 02 29.3 +1.4
MCWV Mont Chateau 71.48 353 P P 13 02 28.6 +0.3
baz=172
P53A Whipple 71.48 352 P P 13 02 28.7 +0.4
baz=171
P53A P P 13 02 28.7 +0.4
baz=171
MVL Millersville 71.54 356 P P 13 02 29.7 +1.1
P51A Williamsport 71.69 351 P P 13 02 29.5 -0.1
baz=170
P51A P P 13 02 29.5 -0.1
baz=170
P52A Corning 71.72 351 P P 13 02 29.5 -0.2
baz=170,SNR=8.8
MSTX Muleshoe 71.74 333 P P 13 02 30.7 +0.6
baz=152,SNR=15
MSTX Muleshoe 71.74 333 P P 13 02 30.5 +0.4
baz=152,SNR=15
PAGS Pennsylvania G 71.79 356 P P 13 02 30.8 +0.7
PAGS IAmb IAmb 13 02 31.8
comp=Z,38nm,1.1s
CCM Cathedral Cave 71.87 344 P P 13 02 30.8 +0.2
CCM Cathedral Cave 71.87 344 P P 13 02 30.8 +0.2
CCM pmax pmax
comp=Z,51nm,1.0s
CCM Cathedral Cave 71.87 344 P P 13 02 31.1 +0.4
baz=162
CCM Cathedral Cave 71.87 344 P P 13 02 31.1 +0.4
CCM pP **pP** 13 02 44.5 +0.1
CCM sP **PcP** 13 02 49.3 +0.1
P49A Miami Univ. Ec 71.99 349 P P 13 02 31.1 -0.3
baz=168
P49A Miami Univ. Ec 71.99 349 P P 13 02 30.9 -0.4
baz=168
P48A Milroy 72.04 349 P P 13 02 31.0 -0.6
baz=168,SNR=8.5
P48A P P 13 02 31.0 -0.6
baz=168,SNR=8.5
S39A Bolivar 72.05 342 P P 13 02 32.2 +0.4
S39A IAmb IAmb 13 02 33.9
comp=Z,35nm,1.1s
S39A Bolivar 72.05 342 P P 13 02 32.2 +0.4
baz=161,SNR=20
AMTX Amarillo 72.13 334 P P 13 02 33.3 +0.9
baz=153
O52A Adamsville 72.16 352 P P 13 02 32.1 -0.2
baz=171,SNR=6.2
O52A P P 13 02 32.1 -0.2
baz=171,SNR=6.2
O53A New Philadelph 72.21 352 P P 13 02 32.6 -0.1
baz=171
T35A Sooner Cattle 72.23 339 P P 13 02 34.0 +1.1
T35A IAmb IAmb 13 02 34.6
comp=Z,26nm,1.0s
T35B Sooner Cattle 72.23 339 P P 13 02 33.9 +1.0
baz=158
SSPA Standing Stone 72.27 355 P P 13 02 33.6 +0.6
baz=174
R40A Maddies Statio 72.34 343 P P 13 02 33.8 +0.3
R40A Maddies Statio 72.34 343 P P 13 02 33.9 +0.4
baz=162,SNR=30
N58A Sunbury 72.39 356 P P 13 02 34.6 +0.8
baz=175,SNR=6.6
N58A P P 13 02 34.6 +0.8
baz=175,SNR=6.6
ACSO Alum Creek Sta 72.42 351 P P 13 02 33.7 -0.2
ACSO Alum Creek Sta 72.42 351 P P 13 02 33.8 -0.1
baz=170,SNR=9.2
P46A Rosedale 72.51 347 P P 13 02 34.1 -0.3
baz=166
O49A Covington 72.57 350 P P 13 02 34.6 -0.2
O49A IAmb IAmb 13 02 35.7
comp=Z,38nm,0.9s
O49A Covington 72.57 350 P P 13 02 34.8 0.0
baz=168,SNR=10
O49A P P 13 02 34.8 0.0
baz=168,SNR=10
121A Cookes Peak, D 72.59 328 P P 13 02 36.9 +1.5
121A Cookes Peak, D 72.59 328 P P 13 02 37.1 +1.7
baz=148,SNR=16
121A Cookes Peak, D 72.59 328 P P 13 02 37.1 +1.7
baz=148,SNR=16
N53A Lisbon 72.72 353 P P 13 02 35.9 +0.2
baz=172
N53A P P 13 02 35.9 +0.2
baz=172
O48B Farmland 72.77 349 P P 13 02 35.5 -0.5
baz=168,SNR=5.1
O48B Farmland 72.77 349 P P 13 02 35.5 -0.5
baz=168,SNR=5.1
M57A Sunshine Farm, 72.92 356 P P 13 02 37.5 +0.7
baz=175
M57A P P 13 02 37.5 +0.7
baz=175
P43A Skaggs, Pawnee 72.99 345 P P 13 02 37.0 -0.3
baz=164,SNR=6.5
M55A Ridgway 73.17 354 P P 13 02 38.8 +0.4
baz=174,SNR=14
M55A P P 13 02 38.8 +0.4
baz=174,SNR=14
SFIN Lafayette 73.22 348 P P 13 02 38.0 -0.7
baz=166
N49A Columbus Grove 73.27 350 P P 13 02 38.8 -0.1
N49A Columbus Grove 73.27 350 P P 13 02 38.6 -0.3
baz=169,SNR=14
N49A P P 13 02 38.6 -0.3
baz=169,SNR=14
M53A WI Miller and 73.33 353 P P 13 02 39.2 0.0
baz=172
P40A Paris 73.46 343 P P 13 02 40.5 +0.4
baz=162,SNR=30
N47A Urbana 73.47 349 P P 13 02 39.4 -0.7
baz=167,SNR=9.1
N47A P P 13 02 39.4 -0.7
baz=167,SNR=9.1
LIC Lamto 73.58 72⇑*i*P P 13 02 41.2 -0.2
comp=Z,16nm,0.5s
M50A Fremont 73.58 351 P P 13 02 41.0 +0.2
baz=170
M50A P P 13 02 41.0 +0.2
baz=170
L59A Walton 73.65 357 P P 13 02 42.0 +0.8
baz=177,SNR=5.9
L59A P P 13 02 42.0 +0.8
baz=177,SNR=5.9
BINY Binghamton 73.71 356 P P 13 02 42.2 +0.7
baz=176
L56A Greenwood 73.74 355 P P 13 02 42.3 +0.6
L56A IAmb IAmb 13 02 43.4
comp=Z,46nm,1.1s
L56A Greenwood 73.74 355 P P 13 02 42.4 +0.6
baz=175,SNR=14
L56A P P 13 02 42.4 +0.6
baz=175,SNR=14
HDIL Hopedale 73.82 346 P P 13 02 42.1 0.0
baz=164
TIC Toumodi 73.83 71⇑*i*P P 13 02 42.2 -0.7
comp=Z,4.7nm,0.2s
L61B Northampton 73.85 359 P P 13 02 43.2 +0.9
baz=179
L61B Northampton 73.85 359 P P 13 02 43.1 +0.8
baz=179
KIC Kosan Boka 73.89 72⇑*i*P P 13 02 42.7 -0.5
comp=Z,31nm,0.5s
HRV Adam Dziewonsk 73.89 360 P P 13 02 43.4 +0.8
baz=180
P38A Dawn 73.92 342 P P 13 02 43.2 +0.4
baz=161
ERPA Erie 73.93 353 P P 13 02 43.0 +0.2
baz=172

DBIC Dimbokro 73.97 71 P P 13 02 43.2 -0.4
comp=Z,30nm,0.8s,baz=236,slow=5.8,SNR=35
DBIC pP **pP** 13 02 57.2 -0.3
comp=Z,11nm,0.8s,baz=262,slow=6.6,SNR=5.7
DBIC LR LR 13 31 44.3
comp=Z,229nm,21.9s,baz=233,slow=33
comp=Z,30nm,0.8s
DBIC Dimbokro 73.97 71 P P 13 02 43.0 -0.7
DBIC IAmb IAmb 13 02 44.3
comp=Z,36nm,0.9s
DBIC Dimbokro 73.97 71 P P 13 02 43.0 -0.7
DBIC pmax pmax
comp=Z,36nm,0.9s
ANMO Albuquerque 74.07 331 LR LR 13 31 24.7
comp=Z,105nm,18.8s,baz=162,slow=32
ANMO Albuquerque 74.07 331*ce*P P 13 02 45.5 +1.5
ANMO pmax pmax
comp=Z,11nm,1.3s
KSU1 Kansas State U 74.28 340 P P 13 02 45.1 +0.1
baz=158
L48A N Adams 74.31 350 P P 13 02 44.6 -0.4
baz=169,SNR=5.3
L48A P P 13 02 44.6 -0.4
baz=169,SNR=5.3
N41A Harden Midland 74.31 345 P P 13 02 44.9 -0.1
baz=163,SNR=6.7
214A Organ Pipe Nat 74.49 324 P P 13 02 48.0 +1.7
baz=144,SNR=9.1
J56A Wolcott 74.83 356 P P 13 02 48.3 +0.4
baz=175
J56A P P 13 02 48.3 +0.4
baz=175
J57A Williamstown 74.92 357 P P 13 02 48.7 +0.3
baz=176,SNR=6.0
J57A P P 13 02 48.7 +0.3
baz=176,SNR=6.0
N38A Joes South For 74.95 343 P P 13 02 49.0 +0.3
baz=161,SNR=6.0
CBKS Cedar Bluff 74.99 337 P P 13 02 50.0 +0.9
baz=155,SNR=8.6
L44A Lake County Fo 75.12 347 P P 13 02 49.6 0.0
baz=166
T25A Trinidad 75.16 333 P P 13 02 51.8 +1.5
baz=151,SNR=17
MAW Mawson 75.18 164 P P 13 02 50.3 +0.5
comp=Z,9.2nm,0.8s,baz=218,slow=7.9,SNR=17
MAW LR LR 13 36 24.0
comp=Z,134nm,19.1s,baz=238,slow=36
comp=Z,9.2nm,0.8s
MAW Mawson 75.18 164 P P 13 02 49.4 -0.5
MAW Mawson 75.18 164 P P 13 02 49.4 -0.5
MAW pmax pmax
comp=Z,7.0nm,1.3s
X18A Snowflake 75.24 328 P P 13 02 52.5 +1.6
L42A Oliver, Polo 75.29 346 P P 13 02 50.5 -0.2
baz=164,SNR=5.1
SUR Sutherland 75.46 119 LR LR 13 31 15.3
comp=Z,144nm,18.9s,baz=196,slow=32
LBNH Lisbon 75.63 360 P P 13 02 53.4 +0.8
baz=180,SNR=5.1
W18A Petrified Fore 75.64 328 P P 13 02 54.5 +1.5
baz=147
N35A Tabor 75.64 341 P P 13 02 53.2 +0.4
baz=159
L40A Anamosa 75.68 345 P P 13 02 53.0 +0.1
L40A Anamosa 75.68 345 P P 13 02 52.9 0.0
baz=163,SNR=23
SCIA State Center 76.00 343 P P 13 02 55.1 +0.4
baz=161
LONY Lake Ozonia 76.06 358 P P 13 02 55.4 +0.3
baz=177,SNR=6.8
SDCO Great Sand Dun 76.11 333 P P 13 02 57.2 +1.4
baz=151,SNR=11
KSCO Kaye Shedlock' 76.15 335 P P 13 02 57.2 +1.3
baz=153
JFWS Jewell Farm 76.29 346 P P 13 02 56.2 -0.2
JFWS IAmb IAmb 13 02 57.6
comp=Z,48nm,1.2s
JFWS Jewell Farm 76.29 346 P P 13 02 56.2 -0.2
JFWS pmax pmax
comp=Z,48nm,1.3s
JFWS Jewell Farm 76.29 346 P P 13 02 56.6 +0.3
baz=164,SNR=6.5
GLA Glamis 76.38 324 P P 13 02 58.9 +1.7
baz=143
SADO Sadowa 76.48 354 LR LR 13 40 46.1
comp=Z,40nm,19.1s,baz=140,slow=39
K38A Parkersburg 76.59 344 P P 13 02 57.5 -0.6
K38A IAmb IAmb 13 02 58.4
comp=Z,15nm,0.7s
K38A Parkersburg 76.59 344 P P 13 02 58.1 0.0
baz=162
G62A West of Eustis 76.61 1 P P 13 02 59.2 +1.1
baz=181,SNR=6.6
G62A P P 13 02 59.2 +1.1
baz=181,SNR=6.6
S22A 4UR Ranch, Cre 76.63 332 P P 13 03 00.5 +1.7
baz=150,SNR=6.3
PKME Peaks-Kenny Pk 76.68 2 P P 13 03 00.4 +1.9
baz=182
WUAZ Wupatki 76.71 327 P P 13 03 00.9 +1.7
baz=146,SNR=8.0
IKP In-Ko-Pah, Jac 76.72 322 P P 13 03 01.2 +2.0
baz=142
SWSC Sam W. Stewart 76.79 323 P P 13 03 01.1 +1.7
baz=142
MVCO Mesa Verde 76.86 330 P P 13 03 01.3 +1.3
baz=148,SNR=10.0
L34A Svendsen Farm, 76.87 341 P P 13 02 59.9 +0.2
baz=158
I42A Draeger Farm, 76.96 347 P P 13 03 00.2 +0.1
baz=165,SNR=5.7
Q24A Dixie 77.03 334 P P 13 03 02.4 +1.3
baz=151,SNR=5.3
PDMCI Parker Dam,Lak 77.04 325 P P 13 03 02.4 +1.6
baz=144
MONP2 Monument Peak 77.07 322 P P 13 03 02.9 +1.6
baz=142
BC3 Big Chuckawall 77.17 324 P P 13 03 03.5 +1.8
baz=143,SNR=11
F62A Pittston Farm, 77.30 1 P P 13 03 03.0 +1.1
baz=181,SNR=8.2
F62A P P 13 03 03.0 +1.1
baz=181,SNR=8.2
IRM Iron Mountain 77.42 324 P P 13 03 04.5 +1.5
baz=143,SNR=7.7
TPFO Pinon Flats 77.64 323 P P 13 03 06.3 +1.9
baz=142,SNR=7.8
PFO Pinyon Flats O 77.65 323 LR LR 13 30 38.8
comp=Z,98nm,18.2s,baz=138,slow=30
PFO Pinyon Flats O 77.65 323 P P 13 03 05.7 +1.3
PFO Pinyon Flats O 77.65 323 P P 13 03 05.7 +1.3
PFO pmax pmax
comp=Z,10.0nm,0.9s
PFO Pinyon Flats O 77.65 323 P P 13 03 06.4 +2.0
baz=142,SNR=8.4
TRQ Mont Tremblant 77.66 358 P P 13 03 03.9 -0.2
TRQ IAmb IAmb 13 03 05.3
comp=Z,26nm,1.0s
OGNE Ogallala 77.67 337 P P 13 03 05.1 +0.8
baz=154
BELC Belle Mtn. Jos 77.72 323 P P 13 03 06.5 +1.7
baz=142
PV13 Radium Mtn., P 77.80 331 P P 13 03 06.2 +0.9
RAR Rarotonga 77.80 253 LR LR 13 26 23.4
comp=Z,13nm,21.7s,baz=24,slow=27
ISCO Idaho Springs 77.94 334 P P 13 03 06.3 +0.2
ISCO Idaho Springs 77.94 334 P P 13 03 06.3 +0.2
ISCO pmax pmax
comp=Z,8.0nm,1.0s
ISCO Idaho Springs 77.94 334 P P 13 03 07.4 +1.3
baz=151,SNR=9.7
MURC Murrieta 78.03 322 P P 13 03 08.1 +1.7
baz=142
I37A Lemond, Waseca 78.03 344 P P 13 03 06.4 +0.3
I37B Waseca 78.03 344 P P 13 03 06.2 +0.1
baz=161,SNR=6.7
K31A O'Neill 78.16 340 P P 13 03 08.1 +1.2
baz=156
GMRC Granite Mounta 78.17 324 P P 13 03 09.0 +1.7
baz=143,SNR=13
SCI2 San Clemente I 78.26 321 P P 13 03 09.1 +1.5
baz=140
BBRC Big Bear Solar 78.40 323 P P 13 03 10.3 +1.7
baz=142
D62A Allapoint, All 78.50 2 P P 13 03 09.3 +0.7
baz=182,SNR=6.6
D62A P P 13 03 09.3 +0.7
baz=182,SNR=6.6
CIS Catalina Islan 78.51 321 P P 13 03 11.0 +1.9
baz=141
G40A Rib Lake 78.53 347 P P 13 03 08.9 0.0
baz=164,SNR=5.8
HEC Hector,Ludlow 78.55 324 P P 13 03 11.2 +1.9
baz=142,SNR=12
ECSD EROS Data Cent 78.58 342 P P 13 03 08.8 -0.4
ECSD IAmb IAmb 13 03 10.6
comp=Z,32nm,0.9s
ECSD EROS Data Cent 78.58 342 P P 13 03 09.4 +0.3
baz=158,SNR=29
F42A Maple Grove Fa 78.62 348 P P 13 03 09.9 +0.6
baz=166
E46A Sault Ste Mari 78.62 351 P P 13 03 09.3 0.0
baz=169,SNR=7.4
TUQ Turquoise Moun 78.82 324 P P 13 03 12.6 +1.7
baz=143
N23A Red Feather La 79.01 334 P P 13 03 13.2 +1.2
baz=151,SNR=9.7
E43A Lone Tree Farm 79.03 349 P P 13 03 11.7 +0.2
baz=167,SNR=6.6
SPMN Marine on St. 79.04 345 P P 13 03 11.6 0.0
baz=162
GSC Goldstone, Bar 79.16 324 P P 13 03 14.3 +1.7
baz=142,SNR=6.2
O20A White River Ci 79.25 332 P P 13 03 14.3 +1.2
baz=149,SNR=7.3
TSUM Tsumeb 79.33 106 LR LR 13 33 15.7
comp=Z,180nm,20.8s,baz=284,slow=32
SHOC Shoshone, Teco 79.36 324 P P 13 03 15.0 +1.3
baz=142
EDW2 Edwards Air Fo 79.44 323 P P 13 03 15.5 +1.4
baz=141,SNR=9.2
LRMC Laurel Mtn Rad 79.74 323 P P 13 03 17.6 +1.7
baz=141
GWY Greenwater Val 79.78 324 P P 13 03 16.8 +0.7
F36A Milaca 79.81 345 P P 13 03 15.7 -0.1
baz=161,SNR=8.2
D41A Chassel 79.96 348 P P 13 03 17.4 +0.8
baz=165
MPMC Manual Prospec 80.09 324 P P 13 03 19.1 +1.3
baz=142,SNR=6.5
FURC Furnace Creek, 80.10 324 P P 13 03 19.3 +1.7
baz=142,SNR=7.6
TPNV Topopah Spring 80.18 325 P P 13 03 20.1 +1.9
baz=143,SNR=11
ISA Isabella, Lake 80.29 323 P P 13 03 20.6 +1.9
baz=141,SNR=12
PKM Mcpherson Peak 80.39 321 P P 13 03 21.6 +2.1
baz=140
F33A 5 Mile Ranch, 80.45 343 P P 13 03 19.3 0.0
baz=159
BOSA Boshof 80.66 118 P P 13 03 21.1 0.0
comp=Z,16nm,0.9s,baz=242,slow=2.9,SNR=11
BOSA LR LR 13 34 15.3
comp=Z,72nm,20.0s,baz=208,slow=32
comp=Z,16nm,0.9s
CWC Cottonwood Cre 80.69 324 P P 13 03 22.4 +1.4
baz=141
VES Vestal, Richgr 80.74 323 P P 13 03 22.6 +1.6
baz=140
K22A Casper 80.75 335 P P 13 03 22.5 +1.3
baz=150,SNR=6.0
K22A Casper 80.75 335 P P 13 03 22.2 +1.1
baz=150,SNR=6.0
R11A Troy Canyon, C 80.97 326 P P 13 03 24.1 +1.7
baz=143,SNR=18
RSSD Black Hills 81.17 337 P P 13 03 24.3 +0.8
RSSD Black Hills 81.17 337 P P 13 03 24.3 +0.8
RSSD pmax pmax
comp=Z,14nm,1.0s
RSSD Black Hills 81.17 337 P P 13 03 24.2 +0.8
baz=152
DUG Dugway, Tooele 81.20 329 P P 13 03 24.8 +1.2
baz=145,SNR=7.9
TIN Tinemaha, Big 81.24 324 P P 13 03 25.2 +1.4
baz=141
EYMN Ely 81.36 347 P P 13 03 23.7 -0.4
baz=163
TPH Tonopah 81.54 325 P P 13 03 26.8 +1.3
TPH Tonopah 81.54 325 P P 13 03 26.8 +1.3
TPH pmax pmax
comp=Z,61nm,1.0s
D32B Dogwood Acres, 81.84 343 P P 13 03 27.1 +0.5
baz=158
MLAC Mammoth, Mammo 81.99 324 P P 13 03 28.0 +0.1
baz=141
BW06 Boulder Array 82.00 333 P P 13 03 28.2 +0.3
baz=148,SNR=8.3
PD31 Pinedale Array 82.00 333 P P 13 03 28.4 +0.5
PDAR Pinedale Array 82.00 333 P P 13 03 28.1 +0.2
comp=Z,2.3nm,0.8s,baz=145,slow=5.4,SNR=21
PDAR pP **pP** 13 03 41.2 -0.6
comp=Z,0.9nm,0.6s,baz=122,slow=7.6,SNR=4.4
PDAR PKKPbc **PKKPbc** 13 21 56.7 -2.5
comp=Z,0.3nm,0.5s,baz=143,slow=0.5,SNR=4.2
PDAR LR LR 13 36 37.0
comp=Z,62nm,20.4s,baz=162,slow=33
comp=Z,2.3nm,0.8s
PDAR Pinedale Array 82.00 333 P P 13 03 27.9 0.0
B35A Bob, Littlefor 82.22 345 P P 13 03 28.6 0.0
baz=161,SNR=8.8
CASY Casey 82.27 181 P P 13 03 29.7 +0.9
CASY IAmb IAmb 13 03 30.8
comp=Z,24nm,1.1s
NV11 Mina Array Sit 82.28 325 P P 13 03 29.7 +0.4
NVAR Mina Array Bea 82.35 325 P P 13 03 31.2 +1.4
comp=Z,5.7nm,0.8s,baz=159,slow=6.3,SNR=52
NVAR pP **pP** 13 03 44.2 +0.6
comp=Z,4.2nm,0.7s,baz=158,slow=5.9,SNR=12
NVAR PKKPbc **PKKPbc** 13 21 57.3 -0.7
comp=Z,0.2nm,0.7s,baz=259,slow=1.5,SNR=3.6
comp=Z,5.7nm,0.8s
NVAR Mina Array Bea 82.35 325 P P 13 03 30.9 +1.1
AGMN Agassiz Nation 82.64 344 P P 13 03 30.8 +0.1
baz=159,SNR=6.5
ELK Elko 82.73 328 LR LR 13 35 22.1
comp=Z,59nm,21.3s,baz=155,slow=32
ELK Elko 82.73 328 P P 13 03 31.8 +0.1
ELK Elko 82.73 328 P P 13 03 31.8 +0.1
ELK pmax pmax
comp=Z,9.0nm,0.9s
LBTB Lobatse 82.78 115 LR LR 13 35 42.2
comp=Z,244nm,21.6s,baz=228,slow=32
LBTB Lobatse 82.78 115 P P 13 03 31.1 -1.3
LBTB IAmb IAmb 13 03 32.7
comp=Z,17nm,0.8s
LBTB Lobatse 82.78 115 P P 13 03 31.1 -1.3
LBTB pmax pmax
comp=Z,17nm,0.9s
TOA0 Torodi Ar. Sit 82.96 70 P P 13 03 32.5 -0.7
TORD Torodi Ar. Bea 82.96 70 P P 13 03 32.8 -0.4
comp=Z,30nm,0.8s,baz=262,slow=4.9,SNR=176
TORD pP **pP** 13 03 46.7 -0.5
comp=Z,11nm,0.8s,baz=252,slow=5.9,SNR=9.2
TORD LR LR 13 36 58.9
comp=Z,156nm,22.0s,baz=204,slow=33
comp=Z,30nm,0.8s
TORD Torodi Ar. Bea 82.96 70 P P 13 03 32.8 -0.4
TORD IAmb IAmb 13 03 33.8
comp=Z,33nm,0.8s
MDND Maddock 83.18 341 P P 13 03 33.8 +0.2
baz=156
RLMT Red Lodge 83.89 334 P P 13 03 38.2 +0.6
baz=148,SNR=7.6
ULM Lac du Bonnet 84.47 345 P P 13 03 39.8 -0.3
comp=Z,14nm,0.8s,baz=170,slow=3.6,SNR=13
comp=Z,14nm,0.8s
HLID Hailey 84.64 330 P P 13 03 42.6 +1.2
baz=144,SNR=13
MCMT McKenzie Canyo 85.03 332 P P 13 03 44.7 +1.3
BOZ Bozeman (W) 85.19 333 P P 13 03 44.5 +0.4
baz=147,SNR=9.0
URZ Urewera 85.55 227 LR LR 13 33 01.6
comp=Z,94nm,20.7s,baz=211,slow=29
RPZ Rata Peaks 85.69 220 LR LR 13 32 46.3
comp=Z,84nm,21.4s,baz=182,slow=29
SCHQ Schefferville 86.32 3 P P 13 03 49.2 0.0
comp=Z,16nm,1.2s,baz=184,slow=3.6,SNR=7.4
SCHQ LR LR 13 46 22.0
comp=Z,30nm,18.1s,baz=42,slow=38
comp=Z,16nm,1.2s
EGMT Eagleton 86.53 335 P P 13 03 50.5 -0.1
baz=148,SNR=10
MSO Missoula 87.11 332 P P 13 03 54.0 +0.6
baz=145
L04D Klamath Falls 87.21 325 P P 13 03 54.4 +0.3

baz=139
J05D Fort Rock, OR 87.50 326 P **P** 13 03 56.3 +0.9
baz=140,SNR=7.7
RAO Raoul Island 87.52 237 LR LR 13 33 47.9
comp=Z,89nm,21.7s,baz=286,slow=29
L02F Cave Junction 87.77 324 P **P** **13 03 57.1 +0.5**
baz=138
J04D Umpqua Nationa 87.88 326 P **P** **13 03 58.0 +0.7**
baz=139
K02D Willamette Mer 88.24 324 P **P** **13 04 00.3 +1.4**
baz=138
I05D Terrebonne, OR 88.35 327 P **P** **13 04 00.6 +1.3**
baz=139
J01E Myrtle Point 88.71 324 P **P** **13 04 01.8 +0.8**
baz=138
I03D Drain, OR 88.82 325 P **P** **13 04 02.6 +1.2**
baz=138
WALA Waterton Lakes 88.92 334 P **P** **13 04 02.5 +0.5**
WALA IAmb IAmb 13 04 03.7
comp=Z,17nm,1.1s
I02E Swisshome, OR 89.37 325 P **P** **13 04 05.4 +1.3**
baz=138
NEW Newport 89.55 331 LR LR 13 40 01.7
comp=Z,83nm,20.0s,baz=151,slow=33
NEW Newport 89.55 331 P **P** **13 04 05.8 +1.0**
baz=142
G03D McMinnville, O 89.91 326 P **P** **13 04 07.4 +0.9**
baz=138
MDT Midelt 90.00 51 LR LR 13 44 16.9
comp=Z,92nm,20.1s,baz=178,slow=35
AFI Afiamalu 91.35 253 LR LR 13 37 60.0
comp=Z,61nm,18.4s,baz=126,slow=31
EDM Edmonton 92.14 336 P **P** **13 04 16.4 -0.4**
EDM IAmb IAmb 13 04 18.3
comp=Z,12nm,1.0s
EDM Edmonton 92.14 336 P **P** **13 04 16.4 -0.4**
EDM pmax pmax
comp=Z,12nm,1.0s
ESDC Sonseca Array 94.64 46 P **P** **13 04 28.6 -0.1**
comp=Z,1.2nm,0.8s,baz=238,slow=4.1,SNR=5.8
ESDC LR LR 13 44 31.5
comp=Z,66nm,21.9s,baz=194,slow=34
comp=Z,1.2nm,0.8s
FRB Frobisher Bay 95.20 1 LR LR 13 50 44.4
comp=Z,41nm,19.8s,baz=205,slow=38
SFJD Kangerlussuaq 99.70 8 LR LR 13 54 04.7
comp=Z,24nm,18.0s,baz=194,slow=38
MBAR Mbarara 100.02 97 LR LR 13 46 28.7
comp=Z,104nm,20.1s,baz=154,slow=33
YKA Yellowknife Ar 100.10 341 P **Pdif** **13 04 52.2 -0.5**
comp=Z,0.7nm,0.6s,baz=142,slow=4.6,SNR=17
YKA pP **pPdif** **13 05 06.1 -0.7**
comp=Z,0.7nm,0.6s,baz=142,slow=4.6,SNR=8.1
DZM Mont Dzumac 102.98 234 eLR LR 13 38 54.2
comp=Z,235nm,27.9s
R17K Ugashik Creek 113.66 324 P **PKiKP** **13 09 46.7 +1.3**
baz=112
H23K Yukon River 113.89 334 P **PKiKP** **13 09 47.0 +1.4**
baz=114
O18K Koktuh Hills 113.92 327 P **PKiKP** **13 09 47.2 +1.4**
baz=112
TOLK Toolik Lake Re 115.04 337 P **PKPdf** **13 09 48.7 +1.0**
baz=113
J20K Nowinta River 115.06 331 P **PKPdf** **13 09 48.5 +0.7**
baz=111
H21K Melozitna Rive 115.07 333 P **PKPdf** **13 09 48.5 +0.7**
baz=112
ASAR Alice Springs 119.80 207 PKP **PKPdf** **13 09 57.4 -1.0**
comp=Z,2.7nm,0.8s,baz=136,slow=1.5,SNR=35
ASAR pPKP **pPKPdf** **13 10 11.1 -1.9**
comp=Z,1.1nm,0.7s,baz=144,slow=1.8,SNR=5.2
ASAR PKKPbc **PKKPbc** **13 20 07.6 -0.1**
comp=Z,0.9nm,0.8s,baz=336,slow=3.6,SNR=9.2
BRTR Keskin Array B 120.27 60*c i*PKIKP **PKiKP** **13 09 59.0 +0.1**
BRTR pmax pmax
comp=Z,1.0nm,0.3s
AKASG Malin Array Be 120.28 46 PKP **PKPdf** **13 09 57.1 -1.1**
comp=Z,1.5nm,0.6s,baz=261,slow=2.7,SNR=6.1
AKBB Malin Array Si 120.28 46*c i*PKIKP **PKPdf** **13 09 57.4 -0.9**
WRA Warramunga Arr 122.97 209 PKP **PKPdf** **13 10 03.9 -0.7**
comp=Z,7.4nm,0.8s,baz=158,slow=1.6,SNR=68
WRA pPKP **pPKPdf** **13 10 17.8 -1.3**
comp=Z,2.1nm,0.6s,baz=160,slow=1.6,SNR=6.0
WRAB Tennant Creek 122.98 209*c i*PKIKP **PKPdf** **13 10 04.6 0.0**
WRAB pmax pmax
comp=Z,12nm,1.7s
OBN Obninsk 125.44 42*ce*PKIKP **PKPdf** **13 10 07.1 -0.9**
OBN *e* 13 11 56.8
OBN pmax pmax
comp=Z,6.0nm,1.2s
H11S2 WAKE ISLAND Hyl 126.30 270 T T 15 29 10.9
baz=117,slow=74,SNR=767
H11S1 WAKE ISLAND Hyl 126.31 270 T T 15 29 03.1
baz=117,slow=74,SNR=891
H11S3 WAKE ISLAND Hyl 126.31 270 T T 15 29 16.2
baz=117,slow=74,SNR=670
H11N3 WAKE ISLAND Hyl 126.65 272 T T 15 29 33.9
baz=116,slow=75,SNR=498
H11N1 WAKE ISLAND Hyl 126.67 272 T T 15 29 35.0
baz=116,slow=75,SNR=133
H11N2 WAKE ISLAND Hyl 126.67 272 T T 15 29 31.7
baz=116,slow=75,SNR=831
KLMR Klimovskoe 127.28 35 *e*PKIKP **PKPdf** **13 10 09.7 -1.6**
KLMR *e* 13 10 24.6
KLMR pmax pmax
comp=Z,11nm,1.1s
KLMR Klimovskoe 127.28 35 *e*PKPdf **PKPdf** **13 10 09.8 -1.6**
KLMR AMP 13 10 12.9
comp=Z,11nm,1.1s
KLMR *ep*PKPdf **pPKPdf** **13 10 24.6 -1.4**
KIV Kislovodsk 127.85 57*ce*PKIKP **PKPdf** **13 10 12.5 -0.7**
KIV *e* 13 12 17.5
KIV *e*PPP PPP 13 14 56.5
KIV pmax pmax
comp=Z,5.0nm,0.8s
KBZ Khabaz 127.96 57*c i*PKIKP **PKPdf** **13 10 10.7 -2.5**
GNI Garni 128.63 62*c i*PKIKP **PKPdf** **13 10 14.6 -0.3**
GNI pmax pmax
comp=Z,4.0nm,0.6s
BILL Bilibino 131.03 335*c i*PKIKP **PKiKP** **13 10 19.3 0.0**
BILL *e* 13 12 33.8
BILL *e*PPP PPP 13 15 24.0
BILL pmax pmax
comp=Z,7.0nm,1.0s
BILL MLR MLR
comp=Z,36nm,17.0s
KIRV Kirov 132.44 38*c i*PKIKP **PKPdf** **13 10 21.5 +0.3**
ARU Arti 137.69 39 *i* PKIKP **PKPdf** **13 10 31.3 +0.2**
ARU 13 13 17.3
ARU SS SS 13 31 20.8 -3.3
SEY Seymchan 138.33 332 PKP **PKPdf** **13 10 32.4 +0.3**
comp=Z,8.6nm,0.8s,baz=84,slow=3.0,SNR=6.3
SEY Seymchan 138.33 332*c i*PKIKP **PKiKP** **13 10 33.5 -0.7**
SEY pmax pmax
comp=Z,12nm,1.0s
TIXI Tiksi 138.57 350 PKP **PKPdf** **13 10 31.9 -0.4**
comp=Z,4.1nm,0.9s,baz=291,slow=8.4,SNR=4.5
TIXI Tiksi 138.57 350 **PKPdf** **13 10 32.4 +0.1**
TIXI Tiksi 138.57 350 *i* PKIKP **PKPdf** **13 10 32.2 -0.1**
TIXI pmax pmax
comp=Z,7.0nm,1.1s
PEA0B Petropavlovsk- 138.93 316*c i*PKIKP **PKPdf** **13 10 34.4 +0.9**
PETK Petropavlovsk- 138.93 316 PKP **PKPdf** **13 10 33.1 -0.5**
comp=Z,9.2nm,1.0s,baz=69,slow=8.2,SNR=12
PETK pPKP **pPKPdf** **13 10 48.7 +0.6**
comp=Z,6.7nm,0.9s,baz=92,slow=3.5,SNR=6.1
PETK Petropavlovsk- 138.93 316 PKPdf **PKPdf** **13 10 33.9 +0.3**
YAK Yakutsk 146.78 342 *e*PKP2 **PKPdf** **13 10 47.9 +0.8**
YAK *e* 13 14 14.6
YAK *e* 13 17 47.1
YAK *e*SS SS 13 33 11.6 +3.4
YAK pmax pmax
comp=Z,70nm,1.4s
YAK pmax pmax
comp=N,12nm,1.4s
YAK pmax pmax
comp=E,10.0nm,1.3s
YAK pmax pmax
comp=Z,35nm,2.2s
YAK pmax pmax
comp=N,17nm,2.0s
YAK pmax pmax
comp=E,9.0nm,1.8s
YSS Yuzh-Sakhalins 149.80 310 *e*PKHKP PKPpre 13 10 52.9
YSS pmax pmax
comp=Z,10.0nm,0.8s
EKS2 Erkin-Say 150.41 58 P **PKiKP** **13 10 59.8 -0.1**
SNR=12
USP Ospenovka 150.82 57 P **PKiKP** **13 11 00.7 +0.1**
SNR=10
KURBB Kurchatov Arra 150.86 41 PKP **PKPdf** **13 10 54.4 +0.3**
comp=Z,0.9nm,0.8s,baz=304,slow=2.1,SNR=5.8
KURBB PKPbc **PKPbc** **13 10 59.7 0.0**
comp=Z,11nm,0.7s,baz=306,slow=2.7,SNR=58
KURBB pPKPbc **sPKPdf** **13 11 13.9 0.0**
comp=Z,11nm,0.8s,baz=299,slow=3.0,SNR=16
KURBB PP **PP** **13 14 42.6 +5.2**
comp=Z,0.7nm,0.6s,baz=282,slow=6.1,SNR=4.1
KURK Kurchatov 150.86 41 PKPdf **PKPdf** **13 10 54.5 +0.5**
KURK PKPbc **PKiKP** **13 11 00.3 0.0**
KURK PKPab **PKPab** **13 11 07.6 +0.5**
KURK Kurchatov 150.86 41 PKIKP **PKPdf** **13 10 54.4 +0.4**
KURK 13 11 13.9
AAK Ala-Archa 150.94 58 P **PKiKP** **13 11 01.3 +0.2**
SNR=9.9
AAK Ala-Archa 150.94 58 PKPbc **PKiKP** **13 11 01.1 +0.2**
comp=Z,22nm,0.8s,baz=190,slow=4.2,SNR=22
AAK Ala-Archa 150.94 58 **PKiKP** **13 11 00.9 -0.1**
AAK Ala-Archa 150.94 58*c i*PKIKP **PKiKP** **13 11 01.2 +0.2**
AAK pmax pmax
comp=Z,45nm,1.3s
UCH Uchtor 151.03 59 P **PKiKP** **13 11 01.9 +0.3**
SNR=13
CHMS Chumysh 151.05 58 P **PKiKP** **13 11 01.2 +0.2**
SNR=7.4
KBK Karagaybulak 151.26 58 P **PKiKP** **13 11 02.1 +0.4**
SNR=6.2
TKM2 Tokmak 2 151.68 57 P **PKPbc** **13 11 02.3 +0.1**
SNR=9.6
ZALV Zalesovo Beam 152.04 31 PKP **PKPdf** **13 10 55.7 0.0**
comp=Z,1.2nm,0.5s,baz=316,slow=4.1,SNR=3.9
ZALV PKPbc **PKPbc** **13 11 02.1 -0.2**
comp=Z,24nm,0.6s,baz=298,slow=3.2,SNR=4.5
ZALV pPKPbc **pPKPbc** **13 11 16.5 -0.4**
comp=Z,23nm,0.6s,baz=301,slow=3.0,SNR=16
ZALV Zalesovo Beam 152.04 31 **PKPdf** **13 10 55.3 -0.5**
ZALV PKPbc **PKiKP** **13 11 02.8 +0.1**
MKAR Makanchi Array 154.86 46 PKP **PKPdf** **13 10 59.7 -0.4**
comp=Z,1.0nm,0.8s,baz=315,slow=0.7,SNR=4.2
MKAR PKPbc **PKPbc** **13 11 08.5 -0.3**
comp=Z,3.3nm,0.8s,baz=301,slow=2.3,SNR=14
MKAR PKPab **pPKPbc** **13 11 22.6 -0.8**
comp=Z,8.3nm,0.7s,baz=305,slow=2.8,SNR=19
MKAR pPKPab **pPKPab** **13 11 37.7 -0.8**
comp=Z,4.2nm,0.8s,baz=296,slow=3.9,SNR=5.8
MKAR PP **PP** **13 15 00.4 +0.1**
comp=Z,1.6nm,0.9s,baz=310,slow=5.1,SNR=4.9
MKAR Makanchi Array 154.86 46 **PKPdf** **13 10 58.9 -1.2**
MKAR PKPbc **PKPbc** **13 11 08.7 0.0**
MKAR PKPab **pPKPbc** **13 11 23.5 +0.1**
MJAR Matsushiro Arr 155.07 289 PKP **PKPdf** **13 11 00.2 -0.5**
comp=Z,1.2nm,0.6s,baz=90,slow=1.2,SNR=5.2
KLR Kul'dur 155.35 322 PKP **PKPdf** **13 11 00.3 -0.3**
comp=Z,1.3nm,0.5s,baz=4.0,slow=6.9,SNR=5.7
WMQ Urumqi 159.63 48 *eP* **PKPdf** **13 11 06.5 +0.2**
KSRS Korea Array 163.10 295 PKP **PKPdf** **13 11 09.9 0.0**
comp=Z,1.6nm,1.0s,baz=61,slow=0.5,SNR=7.3
KSRS pPKP **pPKPdf** **13 11 23.6 -1.0**
comp=Z,1.5nm,0.8s,baz=98,slow=1.0,SNR=4.4
CMAR Chiang Mai Arr 164.16 144 PKP **PKPdf** **13 11 11.9 +0.3**
comp=Z,0.6nm,0.3s,baz=255,slow=3.1,SNR=10
CMAR pPKP **pPKPdf** **13 11 25.9 -0.4**
comp=Z,0.7nm,0.4s,baz=246,slow=3.0,SNR=2.8
CMAR PKPab **PKPab** **13 12 04.5 -0.7**
comp=Z,0.9nm,0.3s,baz=230,slow=5.5,SNR=8.2
CMAR pPKPab **pPKPab** **13 12 17.4 -2.0**
comp=Z,3.0nm,1.1s,baz=246,slow=5.1,SNR=1.9
CMAR Chiang Mai Arr 164.16 144 **PKPdf** **13 11 11.0 -0.6**
CMAR **PKPab** **13 12 03.0 -2.1**
GOMU GeErMu 167.75 65 PKPbc **PKPdf** **13 11 14.5 +0.1**
GOMU pPKP pPKPdf 13 11 29.0 -0.1
GOMU sPKP 13 11 37.3
GOMU AMB AMB
comp=Z,76nm,6.0s
GTA Gaotai 169.55 41 PKP **PKPdf** **13 11 16.0 +0.8**
GTA pPKP pPKPdf 13 11 30.0 +0.1
GTA sPKP 13 11 35.0
GTA PKPab **PKPab** **13 12 28.8 +0.1**
HHC Hu-ho-hao-te 170.61 346 *eP* **PKPdf** **13 11 16.5 +0.8**
NJ2 Nanjing 171.26 275 *eP* **PKPdf** **13 11 13.5 -2.6**
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
LZH Lanzhou 174.16 41 *e*PKP **PKPdf** **13 11 10.5 -7.0**
WHN Wuhan 174.91 258 PKPbc PKPdf 13 11 32.3 +15
XAN Xi'an 177.70 353 PKP **PKPdf** **13 11 18.3 +0.1**
XAN sPKP 13 11 32.5

*IDC **27** 12:59:11.3±0.9,39.28N×73.61E,h0km,mb3.8/9,*
mbtmp3.8/14,ML3.1/4,MS3.0/2,Error ellipse:
s-maj=18.2km s-min=13.9km az=101.0
*SOME **27** 12:59:13.6,39.52N×73.58E,h15km*
*NNC **27** 12:59:15.0±1.5,39.48N×73.67E,h0km,mb4.3,mpv3.9,*
Error ellipse: s-maj=12.5km s-min=6.6km az=175.0
*KRNET **27** 12:59:14.6±0.1,39.53N×73.54E,mb4.1*
*NEIC **27** 12:59:15.6±1.1,39.43N±0.03×73.45E±0.07,h10km±1km,*
mb4.4/8,Error ellipse: s-maj=9.0km s-min=4.4km az=68.0

ISC 27 12:59:15.6±1.9,39.44N±0.04×73.41E±0.03,h15km±12km,
n120,σ2≧47/161,mb3.9/13,36C-21D,Tajikistan-Xinjiang
border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.19**	**336**	⇓	*e*	P	**Pb**	**12 59 35.7**	**-2.2**
	baz=30								
OHH				⇓	*e*	S	**Sb**	**12 59 51.3**	**-1.8**
	baz=30								
DRK	**Karamyk**	**1.25**	**273**	⇑	*i*	P	**Pn**	**12 59 39.4**	**+0.7**
	baz=68								
DRK				⇑	*i*	S	**Sn**	**12 59 57.8**	**+2.4**
	baz=68								
DRK	**Karamyk**	**1.25**	**273**	Pn			**Pn**	**12 59 38.6**	**-0.2**
BTK	**Batken**	**2.09**	**288**	⇓	*e*	P	**Pn**	**12 59 52.1**	**+1.9**
	baz=85								
BTK				⇓	*e*	S	**Sb**	**13 00 19.5**	**+0.4**
	baz=85								
BTK	**Batken**	**2.09**	**288**				**Pn**	**12 59 51.4**	**+1.2**
GAR	**Garm**	**2.44**	**261**	⇑	*e*	P	**Pn**	**12 59 57.5**	**+2.5**
	baz=59								
GAR				⇑	*e*	S	**Sb**	**13 00 29.1**	**-0.1**
	baz=59								
GAR	**Garm**	**2.44**	**261**	Pn			**Pn**	**12 59 55.9**	**+0.8**
ARLS	**Aral**	**2.52**	**16**	⇓	*e*	P	**Pn**	**12 59 55.4**	**-0.8**
	baz=14								
ARLS				⇓	*e*	S	**Sn**	**13 00 25.1**	**-1.6**
	baz=14								
ARK	**Arkit**	**2.60**	**335**	⇑	*i*	P	**Pn**	**12 59 57.8**	**+0.5**
	baz=33								
ARK				⇑	*i*	S	**Sn**	**13 00 29.6**	**+0.9**
	baz=33								
AML	**Almayashu**	**2.70**	**4**	P			**Pn**	**13 00 00.1**	**+1.2**
	SNR=28								
TRKS	**Terek-Say**	**2.72**	**321**	⇑	*e*	P	**Pn**	**12 59 58.7**	**-0.1**
	baz=18								
TRKS				⇑	*e*	S	**Sn**	**13 00 31.1**	**-0.4**
	baz=18								
UCH	**Uchtor**	**2.91**	**16**	P			**Pn**	**13 00 04.1**	**+2.3**
	SNR=30								
UCH	**Uchtor**	**2.91**	**16**	⇑	*i*	P	**Pn**	**13 00 01.2**	**-0.6**
	baz=15								
UCH				⇑	*i*	S	**Sn**	**13 00 35.0**	**-1.8**
	baz=15								
EKS2	**Erkin-Say**	**3.24**	**5**	P			**Pn**	**13 00 07.4**	**+1.5**
	SNR=14								
EKS2	**Erkin-Say**	**3.24**	**5**	⇑	*i*	P	**Pn**	**13 00 05.4**	**-0.5**
	baz=3.0								
EKS2				⇑	*i*	S	**Sn**	**13 00 42.8**	**-1.5**
	baz=3.0								
AAK	**Ala-Archa**	**3.30**	**14**	P			**Pn**	**13 00 09.3**	**+2.4**
	SNR=12								
AAK	**Ala-Archa**	**3.30**	**14**	Pn			**Pn**	**13 00 09.1**	**+2.2**
	6.0nm,0.3s,baz=191,slow=12,SNR=11								
AAK						Sn	**Sb**	**13 00 52.4**	**-1.6**
	3.1nm,0.3s,baz=180,slow=20,SNR=2.2								
AAK						LR	LR	13 00 58.0	
	comp=Z,23nm,18.9s,baz=223,slow=31								
AAK						Lg	Lg	13 00 58.1	
	15nm,0.3s,baz=120,slow=20,SNR=9.0								
	14nm,0.3s								
AAK	**Ala-Archa**	**3.30**	**14**	⇓	*i*	P	**Pn**	**13 00 06.5**	**-0.4**
	baz=13								
AAK				⇓	*e*	S	**Sn**	**13 00 44.0**	**-2.0**
	baz=13								
AAK	**Ala-Archa**	**3.30**	**14**				**Pn**	**13 00 07.0**	**+0.1**
CHGR	**Chuyangaron**	**3.40**	**258**	Pn			**Pn**	**13 00 10.3**	**+2.1**
KBK	**Karagaybulak**	**3.42**	**19**	P			**Pn**	**13 00 11.6**	**+3.0**
	SNR=17								
KBK	**Karagaybulak**	**3.42**	**19**	⇑	*e*	P	**Pn**	**13 00 07.8**	**-0.8**
	baz=18								
KBK				⇑	*e*	S	**Sn**	**13 00 46.8**	**-2.1**
	baz=18								
ULHL	**Ulahol**	**3.54**	**37**	P			**Pb**	**13 00 16.4**	**-1.6**
	SNR=21								
ULHL	**Ulahol**	**3.54**	**37**	⇓	*e*	P	**Pn**	**13 00 09.2**	**-0.9**
	baz=36								
ULHL				⇓	*e*	S	**Sn**	**13 00 49.4**	**-2.4**
	baz=36								
BOOM	**Boomskoye usch**	**3.60**	**31**	⇑	*e*	P	**Pn**	**13 00 10.4**	**-0.6**
	baz=31								
BOOM				⇑	*e*	S	**Sn**	**13 00 51.2**	**-2.2**
	baz=31								
BOOM	**Boomskoye usch**	**3.60**	**31**				**Pn**	**13 00 11.1**	**0.0**
TAS	**Tashkent**	**3.67**	**302**	⇑	*e*	P	**Pn**	**13 00 13.5**	**+1.7**
	baz=0.0								
TAS				⇑	*e*	S	**Sn**	**13 00 56.5**	**+1.8**
	baz=0.0								
CHMS	**Chumysh**	**3.70**	**15**	P			**Pn**	**13 00 14.7**	**+2.4**
	SNR=7.2								
CHMS	**Chumysh**	**3.70**	**15**	⇑	*e*	P	**Pn**	**13 00 11.6**	**-0.7**
	baz=14								
CHMS				⇑	*e*	S	**Sn**	**13 00 53.5**	**-2.1**
	baz=14								
CHMS	**Chumysh**	**3.70**	**15**	⇑	Pn		**Pn**	**13 00 14.2**	**+2.0**
	23nm,0.7s								
CHMS				⇑	Lg		Lg	13 01 09.8	
	72nm,0.6s								
IUG	**luzhnay**	**3.73**	**318**	*e*	P		**Pb**	**13 00 24.6**	**+3.4**
	1μm,0.6s								
IUG				*e*	S		**Sg**	**13 01 14.9**	**-0.5**
	124nm,0.2s								
IUG	**luzhnay**	**3.73**	**318**	Pg			**Pb**	**13 00 22.4**	**+1.2**
	1μm,0.8s								
IUG				Lg			Lg	13 01 14.0	
	167nm,1.0s								
TKM2	**Tokmak 2**	**3.85**	**25**	P			**Pn**	**13 00 15.8**	**+1.3**
	SNR=7.5								
TKM2	**Tokmak 2**	**3.85**	**25**	⇓	*e*	P	**Pn**	**13 00 13.9**	**-0.6**
	baz=24								
TKM2				⇓	*e*	S	**Sn**	**13 00 57.2**	**-2.4**
	baz=24								
TKM2	**Tokmak 2**	**3.85**	**25**	⇓	Pn		**Pn**	**13 00 15.6**	**+1.1**
	6.4nm,0.7s								
TKM2				⇓	Lg		Lg	13 01 14.0	
	46nm,0.6s								
USP	**Ospenovka**	**3.92**	**12**	P			**Pn**	**13 00 16.9**	**+1.7**
	SNR=7.0								
USP	**Ospenovka**	**3.92**	**12**	⇓	*e*	P	**Pn**	**13 00 14.7**	**-0.5**
	baz=11								
USP				⇓	*e*	S	**Sn**	**13 00 58.9**	**-2.0**
	baz=11								
KDJ	**Kajisay**	**3.93**	**46**	⇑	*e*	P	**Pn**	**13 00 15.0**	**-0.5**
	baz=46								
KDJ				⇑	*e*	S	**Sn**	**13 00 58.7**	**-2.8**
	baz=46								
KDJ	**Kajisay**	**3.93**	**46**				**Pn**	**13 00 15.5**	**0.0**
TARG	**Taragay, Kyrgy**	**4.06**	**54**				**Pn**	**13 00 17.9**	**+0.4**
KST	**Kastek**	**4.09**	**27**	*eP*			**Pb**	**13 00 27.4**	**+0.1**
	25nm,0.6s								
KST				*e*	S		**Sb**	**13 01 19.5**	**+3.0**
	86nm,0.4s								
SGDS	**Sogindy**	**4.12**	**12**	*eP*			**Pb**	**13 00 27.1**	**-0.7**
	17nm,0.1s								
SGDS				*e*	S		**Sb**	**13 01 20.1**	**+2.7**
	51nm,0.2s								
DGS	**Degeres**	**4.20**	**24**	*eP*			**Pb**	**13 00 30.3**	**+1.1**
	26nm,0.6s								
DGS				*e*	S		**Sb**	**13 01 25.2**	**+5.4**
	134nm,0.9s								
DGS	**Degeres**	**4.20**	**24**	Pg			**Pb**	**13 00 29.0**	**-0.3**
	20nm,0.7s								
DGS				Lg			Lg	13 01 25.2	
	134nm,0.9s								
KK31	**Karatay Array**	**4.27**	**330**				**Pn**	**13 00 21.5**	**+1.5**
KK31	**Karatay Array**	**4.27**	**330**	⇑	Pn		**Pn**	**13 00 22.6**	**+2.6**
	1.9nm,0.3s,baz=134,slow=12,SNR=13								
KK31				⇓	Pg		**Pb**	**13 00 31.8**	**+1.5**
	8.8nm,0.5s,baz=160,slow=19,SNR=10.0								
KK31				⇑	Sn		**Sb**	**13 01 17.4**	**-4.2**
	16nm,0.5s,baz=164,slow=22,SNR=4.1								
KK31				⇑	Lg		Lg	13 01 29.0	
	54nm,0.8s,baz=138,slow=28,SNR=2.5								
KKAR	**Karatay Array**	**4.27**	**330**	⇑	*eP*		**Pn**	**13 00 20.8**	**+0.8**
	baz=28								
KKAR				⇑	*e*	S	**Sn**	**13 01 09.4**	**-0.1**
	baz=28								
KKAR	**Karatay Array**	**4.27**	**330**				**Pn**	**13 00 21.5**	**+1.5**
KKAR	**Karatay Array**	**4.27**	**330**				**Pn**	**13 00 20.8**	**+0.8**
MTBS	**Maitube**	**4.34**	**31**	*eP*			**Pb**	**13 00 32.3**	**+0.7**
	15nm,0.5s								
MTBS				*e*	S		**Sb**	**13 01 28.7**	**+5.0**
	35nm,0.2s								
MTBS	**Maitube**	**4.34**	**31**	Pg			**Pb**	**13 00 31.2**	**-0.3**
	16nm,0.5s								
MTBS				Lg			Lg	13 01 28.7	
	30nm,0.5s								
TNSS	**Tian-Shan**	**4.48**	**35**	*eP*			**Pb**	**13 00 34.9**	**+0.7**
	14nm,0.5s								
TNSS				*e*	S		**Sb**	**13 01 33.3**	**+5.2**
	39nm,0.8s								
TNSS	**Tian-Shan**	**4.48**	**35**	Pg			**Pb**	**13 00 33.6**	**-0.6**
	18nm,0.4s								
TNSS				Lg			Lg	13 01 33.3	
	39nm,0.8s								
BRLS	**Boroldav**	**4.49**	**324**	*eP*			**Pb**	**13 00 36.0**	**+1.9**
	4.3nm,0.3s								
BRLS				*e*	S		**Sb**	**13 01 34.9**	**+6.9**
	44nm,0.0s								
BRLS	**Boroldav**	**4.49**	**324**	Pg			**Pb**	**13 00 34.8**	**+0.7**
	12nm,0.5s								
BRLS				Lg			Lg	13 01 34.9	
	44nm,0.6s								
KRBS	**Karabastau**	**4.58**	**21**	*eP*			**Pb**	**13 00 36.0**	**+0.3**
	16nm,0.1s								
KRBS				*e*	S		**Sb**	**13 01 35.8**	**+5.0**
	45nm,0.3s								
KRBS	**Karabastau**	**4.58**	**21**	Pg			**Pb**	**13 00 35.5**	**-0.2**
	18nm,0.9s								
KRBS				Lg			Lg	13 01 36.4	
	45nm,0.7s								
KNDC	**Almaty**	**4.63**	**34**	⇓	Pn		**Pn**	**13 00 26.3**	**+1.2**
	31nm,0.4s								
KNDC				⇑	Lg		Lg	13 01 37.8	
	288nm,1.2s								
KTBS	**Karatobe**	**4.93**	**29**	*eP*			**Pb**	**13 00 41.8**	**+0.2**
	10nm,0.8s								
KTBS				*e*	S		**Sb**	**13 01 46.2**	**+5.6**
	91nm,0.4s								
KTBS	**Karatobe**	**4.93**	**29**	Pg			**Pb**	**13 00 41.8**	**+0.2**
	10nm,0.8s								
KTBS				Lg			Lg	13 01 47.3	
	92nm,0.9s								
KUU	**Kurty**	**4.96**	**25**	*eP*			**Pb**	**13 00 42.3**	**+0.1**
	13nm,0.8s								
KUU				*e*	S		**Sb**	**13 01 46.3**	**+4.6**
	47nm,0.7s								
KUU	**Kurty**	**4.96**	**25**	Pg			**Pb**	**13 00 41.9**	**-0.3**
	13nm,0.8s								
KUU				Lg			Lg	13 01 47.2	
	47nm,0.7s								
CHKK	**Chushkaly**	**5.17**	**30**	*eP*			**Pb**	**13 00 46.1**	**+0.5**
	8.7nm,0.1s								
CHKK				*e*	S		**Sb**	**13 01 53.4**	**+5.9**
	33nm,0.3s								
CHKK	**Chushkaly**	**5.17**	**30**	Pg			**Pb**	**13 00 45.7**	**+0.1**
	7.9nm,0.6s								
CHKK				Lg			Lg	13 01 53.4	
	32nm,0.9s								
SATY	**Saty**	**5.22**	**45**	*eP*			**Pb**	**13 00 47.4**	**+0.8**
	14nm,0.7s								
SATY				*e*	S		**Sb**	**13 01 55.0**	**+5.7**
	47nm,1.2s								
SATY	**Saty**	**5.22**	**45**	Pg			**Pb**	**13 00 46.5**	**-0.2**
	14nm,0.7s								
SATY				Lg			Lg	13 01 55.0	
	47nm,1.2s								
ZHN	**Zhinishke**	**5.31**	**44**	*eP*			**Pb**	**13 00 48.8**	**+0.6**
	4.6nm,0.3s								
ZHN				*e*	S		**Sb**	**13 01 58.1**	**+6.3**
	15nm,0.1s								
ZHN	**Zhinishke**	**5.31**	**44**	Pg			**Pb**	**13 00 48.3**	**+0.1**

	7.7nm,0.3s							
ZHN					Lg	Lg	13 01 58.1	
	19nm,0.6s							
KURS	**Kuram**	**5.40**	**40**	*e*P		**Pb**	**13 00 50.9**	**+1.2**
	11nm,0.6s							
KURS				*e*S		**Sb**	**13 02 00.4**	**+6.1**
	20nm,1.1s							
KURS	**Kuram**	**5.40**	**40**	Pg		**Pb**	**13 00 50.0**	**+0.3**
	11nm,0.6s							
KURS				Lg		Lg	13 02 00.9	
	20nm,1.1s							
BTLS	**Baital**	**5.62**	**5**	*e*P		**Pb**	**13 00 54.2**	**+0.8**
	16nm,0.3s							
BTLS				*e*S		**Sb**	**13 02 06.4**	**+5.8**
	21nm,0.1s							
BTLS	**Baital**	**5.62**	**5**	Pg		**Pb**	**13 00 56.7**	**+3.3**
	16nm,0.7s							
BTLS				Lg		Lg	13 02 12.4	
	16nm,0.8s							
KPKS	**Kokpek**	**5.65**	**43**	*e*P		**Pb**	**13 00 54.6**	**+0.7**
	8.4nm,0.0s							
KPKS				*e*S		**Sb**	**13 02 07.7**	**+6.2**
	23nm,0.2s							
KPKS	**Kokpek**	**5.65**	**43**	Pg		**Pb**	**13 00 53.7**	**-0.2**
	12nm,0.8s							
KPKS				Lg		Lg	13 02 07.7	
	22nm,0.7s							
ARXS	**Arharly**	**5.80**	**33**	*e*P		**Pb**	**13 00 57.8**	**+1.3**
	18nm,0.1s							
ARXS				*e*S		**Sb**	**13 02 13.8**	**+7.9**
	43nm,0.2s							
ARXS	**Arharly**	**5.80**	**33**	Pg		**Pb**	**13 00 57.2**	**+0.7**
	16nm,0.9s							
ARXS				Lg		Lg	13 02 13.8	
	25nm,0.7s							
PDGK	**Podgornoye**	**6.00**	**48**	Pg		**Pb**	**13 00 59.5**	**-0.5**
	3.4nm,1.5s							
PDGK				Lg		Lg	13 02 17.9	
	13nm,1.1s							
PDGK	**Podgornoye**	**6.00**	**48**	⇑Pn		**Pn**	**13 00 39.6**	**-4.4**
	3.4nm,0.7s							
PDGK				⇑Pg		**Pb**	**13 01 03.7**	**+3.7**
	13nm,0.9s							
PDGK				⇓Lg		Lg	13 02 21.1	
	30nm,0.8s							
BLB	**Baldybastay**	**6.00**	**37**	*e*P		**Pb**	**13 01 01.1**	**+1.1**
	21nm,0.6s							
BLB				*e*S		**Sb**	**13 02 19.1**	**+7.4**
	21nm,0.8s							
BLB	**Baldybastay**	**6.00**	**37**	Pg		**Pb**	**13 01 01.1**	**+1.1**
	21nm,0.6s							
BLB				Lg		Lg	13 02 20.3	
	21nm,0.8s							
DJR	**Jarkent**	**6.83**	**42**	*e*P		**Pb**	**13 01 17.8**	**+3.8**
	3.0nm,0.1s							
DJR				*e*S		**Sg**	**13 02 47.4**	**-7.2**
	11nm,0.5s							
DJR	**Jarkent**	**6.83**	**42**	Pg		**Pb**	**13 01 17.7**	**+3.8**
	3.3nm,0.4s							
OTUK	**Ortayu**	**8.84**	**355**	⇓Pn		**Pn**	**13 01 23.2**	**+0.4**
	2.6nm,0.6s							
OTUK				⇑Lg		Lg	13 03 55.2	
	28nm,1.0s							
MKAR	**Makanchi Array**	**9.81**	**39**	Pn		**Pn**	**13 01 36.5**	**+0.5**
	baz=197,slow=11,SNR=3.8							
MKAR				Lg		Lg	13 04 18.9	
	0.1nm,0.3s,baz=206,slow=22,SNR=1.7							
	0.9nm,0.9s							
WMQ	**Urumqi**	**11.55**	**63**	*e*P		**Pn**	**13 02 00.0**	**0.0**
KURBB	**Kurchatov Arra**	**11.76**	**16**	Pn		**Pn**	**13 02 01.6**	**-1.1**
	baz=209,slow=12,SNR=2.1							
KURBB				Lg		Lg	13 05 23.4	
	baz=198,slow=25							
	0.8nm,0.2s							
KURBB	**Kurchatov Arra**	**11.76**	**16**	⇓Lg		Lg	13 05 23.8	
	33nm,0.8s							
KURK	**Kurchatov**	**11.86**	**16**	⇑Lg		Lg	13 05 26.1	
	13nm,1.1s							
GEYT	**Alibeck**	**12.05**	**268**	Sn		**Sn**	**13 04 24.5**	**+3.7**
	0.7nm,0.3s,baz=106,slow=20,SNR=2.2							
GEYT	**Alibeck**	**12.05**	**268**	Pn		**Pn**	**13 02 08.4**	**+1.7**
GYA0B	**ALIBECK ARRAY**	**12.05**	**268**	Pn		**Pn**	**13 02 08.0**	**+1.3**
AB31	**Akbulak array**	**13.74**	**320**	⇑Pn		**Pn**	**13 02 30.7**	**+1.1**
	1.5nm,0.6s,baz=127,slow=13,SNR=17							
ABKAR	**Akbulak array**	**13.74**	**320**	Pn		**Pn**	**13 02 30.0**	**+0.4**
ABKAR	**Akbulak array**	**13.74**	**320**	Pn		**Pn**	**13 02 29.2**	**-0.5**
AKTO	**Aktyubinsk**	**15.45**	**320**	Pn		**Pn**	**13 02 53.0**	**+0.2**
	0.5nm,0.3s,baz=119,slow=14,SNR=6.0							
AKTO				Sn		**Sn**	**13 05 39.5**	**-4.1**
	0.1nm,0.3s,baz=9.4,slow=19,SNR=2.0							
AKTO				LR		LR	13 09 31.0	
	comp=Z,33nm,21.9s,baz=134,slow=40							
	1.2nm,0.5s							
AKTO	**Aktyubinsk**	**15.45**	**320**	⇑Pn		**Pn**	**13 02 53.1**	**+0.2**
	2.9nm,0.8s							
ZAA0	**Zalesovo Array**	**16.46**	**24**	Pn		**Pn**	**13 03 06.3**	**+0.5**
ZALV	**Zalesovo Beam**	**16.46**	**24**	Pn		**Pn**	**13 03 05.1**	**-0.7**
	1.0nm,0.5s,baz=210,slow=43,SNR=2.9							
ZALV				Lg		Lg	13 07 54.2	
	0.3nm,0.3s,baz=216,slow=27,SNR=1.4							
ZALV	**Zalesovo Beam**	**16.46**	**24**	Pn		**Pn**	**13 03 05.9**	**+0.1**
ONI	**Oni**	**22.77**	**288**	P		**P**	**13 04 19.4**	**+2.0**
ONI				IAmb		IAmb	13 04 21.3	
	comp=Z,9.5nm,0.7s							
BRTR	**Keskin Array B**	**30.48**	**283**	P		**P**	**13 05 27.9**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=84,slow=8.6,SNR=2.5							
	comp=Z,0.8nm,0.5s							
FINES	**FINESS Array B**	**36.19**	**323**	P		**P**	**13 06 17.2**	**0.0**
	comp=Z,1.5nm,0.7s,baz=107,slow=11,SNR=4.4							
	comp=Z,1.5nm,0.7s							
FINES	**FINESS Array B**	**36.19**	**323**	P		**P**	**13 06 17.4**	**+0.1**
FINES	**FINESS Array B**	**36.19**	**323**	P		**P**	**13 06 17.4**	**+0.1**
ARCES	**ARCESS Array B**	**39.21**	**336**	P		**P**	**13 06 42.9**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=113,slow=6.0,SNR=2.1							
	comp=Z,0.7nm,0.5s							
CLL	**Collm**	**42.90**	**307**	*e*P		**P**	**13 07 12.0**	**-1.3**
NC303	**NORSAR Array S**	**43.17**	**321**	P		**P**	**13 07 15.6**	**+0.3**
NC303				IAmb		IAmb	13 07 36.3	
	comp=Z,9.8nm,1.2s							
NB2	**NORSAR Subarra**	**43.24**	**321**	P		**P**	**13 07 14.9**	**-1.1**
	comp=Z,0.6nm,0.6s,baz=92,slow=7.9							
NOA	**NORSAR Array B**	**43.24**	**321**	P		**P**	**13 07 15.3**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=92,slow=7.9,SNR=4.4							
NOA				LR		LR	13 25 55.4	
	comp=Z,25nm,18.0s,baz=270,slow=37							
	comp=Z,0.7nm,0.5s							
KONO	**Kongsberg**	**44.06**	**319**	P		**P**	**13 07 22.8**	**+0.3**
TOA0	**Torodi Ar. Sit**	**67.69**	**269**	P		**P**	**13 10 12.8**	**+0.4**
TORD	**Torodi Ar. Bea**	**67.69**	**269**	P		**P**	**13 10 10.8**	**-1.6**
	comp=Z,0.8nm,0.8s,baz=54,slow=4.7,SNR=3.9							
	comp=Z,0.8nm,0.8s							
TORD	**Torodi Ar. Bea**	**67.69**	**269**	P		**P**	**13 10 13.2**	**+0.8**
INK	**Inuvik**	**70.69**	**10**	P		**P**	**13 10 31.4**	**+1.2**
INK				IAmb		IAmb	13 10 36.9	
	comp=Z,2.9nm,0.9s							
IL31		**71.43**	**17**	P		**P**	**13 10 35.9**	**+1.1**
IL31				IAmb		IAmb	13 10 40.7	
	comp=Z,3.6nm,1.4s							
ILAR	**Eielson Array**	**71.43**	**17**	P		**P**	**13 10 33.0**	**-1.8**
	comp=Z,0.6nm,0.9s,baz=339,slow=4.8,SNR=4.5							
	comp=Z,0.6nm,0.9s							
YKA	**Yellowknife Ar**	**78.21**	**4**	P		**P**	**13 11 12.5**	**-1.6**
	comp=Z,0.5nm,0.5s,baz=351,slow=5.5,SNR=13							
	comp=Z,0.5nm,0.5s							
YKA	**Yellowknife Ar**	**78.21**	**4**	P		**P**	**13 11 14.6**	**+0.5**
WRA	**Warramunga Arr**	**81.98**	**124**	P		**P**	**13 11 32.5**	**-2.5**
	comp=Z,1.0nm,0.9s,baz=327,slow=5.1,SNR=5.2							
	comp=Z,1.0nm,0.9s							
ASAR	**Alice Springs**	**84.42**	**127**	P		**P**	**13 11 44.8**	**-2.8**
	comp=Z,0.6nm,0.8s,baz=317,slow=5.3,SNR=5.8							
	comp=Z,0.6nm,0.8s							

*IDC **27** 13:04:34.7±1.1,32°.63N×91°.83E,h0km,mb3.6/7, mbtmp3.6/8,ML4.0/1,MS3.6/5,Error ellipse: s-maj=39.1km s-min=21.1km az=63.0*

*NEIC **27** 13:04:41.7±1.2,32°.7N±0°.1×92°.0E±0°.2,h39km±6km, mb4.3/13,Error ellipse: s-maj=21.5km s-min=16.0km az=76.0*

ISC 27 13:04:41.2±0.7,32°.69N±0°.10×92°.0E±0°.1,h41km,n29, σ1♀16/24,mb4.0/13,MS3.9/6,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**3.06**	**194**		**Pn**	**13 05 28.0**	**+0.4**
CMAR	**Chiang Mai Arr**	**15.49**	**154**	Pn	**Pn**	**13 08 16.9**	**-0.1**
	0.2nm,0.3s,baz=327,slow=12,SNR=4.1						
	0.5nm,0.6s						
KURBB	**Kurchatov Arra**	**20.48**	**335**	P	**P**	**13 09 15.0**	**-0.4**
	0.3nm,0.5s,baz=151,slow=11,SNR=1.8						
KURBB				LR	LR	13 18 58.8	
	comp=Z,34nm,20.3s,baz=201,slow=42						
	0.3nm,0.5s						
KURK	**Kurchatov**	**20.53**	**335**	P	**P**	**13 09 15.0**	**-0.9**
KURK	**Kurchatov**	**20.53**	**335**	IAmb	IAmb	13 09 23.2	
	comp=Z,1.4nm,0.8s						
ZALV	**Zalesovo Beam**	**21.86**	**349**	P	**P**	**13 09 29.5**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=160,slow=9.9,SNR=2.1						
	comp=Z,0.6nm,0.3s						
ABKAR	**Akbulak array**	**29.02**	**314**	P	**P**	**13 10 35.8**	**-1.3**
KSRS	**Korea Array**	**29.68**	**71**	P	**P**	**13 10 42.0**	**-1.2**
	comp=Z,0.6nm,0.5s,baz=277,slow=9.8,SNR=5.2						
	comp=Z,0.6nm,0.5s						
KOPT	**Kop Dagi**	**41.62**	**295**	P	**P**	**13 12 26.0**	**+0.3**
KOPT				IAmb	IAmb	13 12 30.2	
	comp=Z,4.1nm,0.5s						
CLL	**Collm**	**58.69**	**314**	*e*P	**P**	**13 14 37.0**	**+2.6**
CLL				Lm	MLR	13 55 00.0	
	comp=Z,100nm,19.2s						
WB0	**Warramunga Arr**	**66.07**	**136**	P	**P**	**13 15 24.4**	**+0.3**
WRA	**Warramunga Arr**	**66.18**	**136**	P	**P**	**13 15 24.7**	**-0.1**
	comp=Z,1.5nm,1.0s,baz=324,slow=7.2,SNR=6.8						
	comp=Z,1.5nm,1.0s						
WB2	**Warramunga Arr**	**66.18**	**136**	P	**P**	**13 15 24.8**	**-0.1**
WR0	**Warramunga Arr**	**66.31**	**136**	P	**P**	**13 15 25.7**	**+0.1**
WR0				IAmb	IAmb	13 16 05.0	
	comp=Z,6.0nm,1.3s						
KEST	**Kesra**	**66.39**	**298**	LR	LR	13 51 29.8	
	comp=Z,109nm,19.2s,baz=236,slow=42						
EKA	**Eskdalemuir Ar**	**66.55**	**322**	LR	LR	13 47 41.3	
	comp=Z,82nm,18.8s,baz=178,slow=39						
EUNU	**Eureka**	**67.49**	**360**	P	**P**	**13 15 32.8**	**+0.4**
EUNU				IAmb	IAmb	13 15 35.8	
	comp=Z,8.3nm,1.4s						
AS31	**Alice Springs**	**68.86**	**139**	P	**P**	**13 15 41.5**	**-0.3**
ASAR	**Alice Springs**	**68.86**	**139**	P	**P**	**13 15 41.8**	**0.0**
	comp=Z,0.8nm,0.7s,baz=321,slow=6.0,SNR=13						
	comp=Z,0.8nm,0.7s						
BORG	**Borgarnes**	**69.97**	**335**	LR	LR	13 46 51.2	
	comp=Z,25nm,20.2s,baz=227,slow=36						
BMAR	**Burnt Mountain**	**71.55**	**20**	P	**P**	**13 15 59.6**	**+2.0**
H24K	**Noodor Dome**	**71.60**	**22**	P	**P**	**13 15 59.3**	**+1.3**
H24K				IAmb	IAmb	13 16 36.4	
	comp=Z,3.9nm,1.4s						
ILAR	**Eielson Array**	**72.61**	**23**	P	**P**	**13 16 04.7**	**+0.7**
	comp=Z,0.6nm,0.9s,baz=306,slow=5.6,SNR=6.8						
	comp=Z,0.6nm,0.9s						
SKT	**Skwentna**	**72.77**	**26**	P	**P**	**13 16 05.6**	**+0.6**
SKT				IAmb	IAmb	13 16 18.5	
	comp=Z,7.3nm,1.4s						
I26K	**Coal Creek Min**	**73.42**	**21**	P	**P**	**13 16 10.2**	**+1.4**
I26K				IAmb	IAmb	13 16 14.2	
	comp=Z,2.7nm,1.1s						
SCRK	**Sand Creek**	**74.08**	**22**	P	**P**	**13 16 12.9**	**+0.1**
SCRK				IAmb	IAmb	13 16 14.2	
	comp=Z,1.3nm,0.8s						
BCAR	**Beaver Creek A**	**75.43**	**22**	P	**P**	**13 16 22.3**	**+1.8**
YKA	**Yellowknife Ar**	**82.76**	**12**	LR	LR	14 00 13.0	
	comp=Z,34nm,18.0s,baz=100,slow=40						
TORD	**Torodi Ar. Bea**	**83.26**	**281**	P	**P**	**13 17 01.7**	**-2.2**
	comp=Z,0.5nm,0.8s,baz=76,slow=5.3,SNR=3.2						
	comp=Z,0.5nm,0.8s						

IDC 27 13:15:55.7±1.6,2°.97S×141°.97E,h0km,mb3.6/3, mbtmp3.6/4,ML3.7/1,Error ellipse: s-maj=78.8km s-min=26.8km az=105.0,Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.44**	**203**	P	Pn	13 20 12.7	-0.2
	0.2nm,0.3s,baz=14,slow=12,SNR=12						
	0.9nm,0.5s						
ASAR	**Alice Springs**	**22.00**	**200**	P	P	13 20 51.8	0.0
	0.5nm,0.6s,baz=32,slow=10,SNR=8.6						
	0.5nm,0.6s						
H11S3	**WAKE ISLAND Hy**	**32.37**	**48**	T	T	13 56 50.6	
	baz=232,slow=75,SNR=106						
H11S2	**WAKE ISLAND Hy**	**32.38**	**48**	T	T	13 56 55.6	
	baz=232,slow=75,SNR=40						
H11S1	**WAKE ISLAND Hy**	**32.38**	**48**	T	T	13 56 52.0	
	baz=232,slow=75,SNR=40						
H11N1	**WAKE ISLAND Hy**	**33.28**	**46**	T	T	13 57 50.3	
	baz=230,slow=76,SNR=48						
H11N2	**WAKE ISLAND Hy**	**33.30**	**46**	T	T	13 57 49.2	
	baz=230,slow=76,SNR=73						
H11N3	**WAKE ISLAND Hy**	**33.30**	**46**	T	T	13 57 51.5	
	baz=230,slow=76,SNR=39						
MKAR	**Makanchi Array**	**72.00**	**321**	P	P	13 27 21.5	+0.1
	0.9nm,0.9s,baz=100,slow=6.0,SNR=3.9						
	0.9nm,0.9s						
ILAR	**Eielson Array**	**84.73**	**24**	P	P	13 28 31.4	0.0
	1.1nm,0.9s,baz=254,slow=5.0,SNR=9.6						
	1.1nm,0.9s						

*IDC **27** 13:18:23.6±0.7,28°.29S×62°.76E,h0km,mb4.2/10, mbtmp4.2/10,Error ellipse: s-maj=26.2km s-min=19.8km az=76.0*

*NEIC **27** 13:18:25.5±1.7,28°.25S±0°.04×62°.7E±0°.2,h12km±4km, mb4.5/20,Error ellipse: s-maj=19.3km s-min=5.2km az=84.0*

ISC 27 13:18:24.9±0.5,28°.3S±0°.1×62°.7E±0°.1,h10km,n34, σ0♀75/30,mb4.3/18,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FOMA	**Nahampoana Res**	**14.45**	**279**	Pn	**Pn**	**13 21 48.7**	**-1.0**
VOI	**Vohitsoka**	**15.75**	**290**	Pn	**Pn**	**13 22 06.8**	**-0.2**
MAW	**Mawson**	**39.36**	**180**	P	**P**	**13 25 54.9**	**+0.7**
	2.8nm,0.8s,baz=358,slow=11,SNR=5.0						
	2.8nm,0.8s						
MAW	**Mawson**	**39.36**	**180**	IAmb	IAmb	13 26 03.5	
	comp=Z,1.0nm,0.9s						
CASY	**Casey**	**47.90**	**156**	P	**P**	**13 27 04.3**	**+1.3**
CASY				IAmb	IAmb	13 27 30.1	
	comp=Z,9.5nm,1.4s						
PSA00	**Pilbara Seismi**	**51.84**	**96**	P	**P**	**13 27 33.2**	**-0.4**
PSA00				IAmb	IAmb	13 27 50.9	
	comp=Z,8.8nm,1.4s						
MBWA	**Marble Bar**	**51.88**	**96**	P	**P**	**13 27 32.6**	**-1.3**
SNAA	**Sanae**	**55.78**	**200**	P	**P**	**13 28 01.1**	**-0.7**
SNAA				IAmb	IAmb	13 28 16.3	
	comp=Z,3.3nm,1.2s						
CMAR	**Chiang Mai Arr**	**58.19**	**41**	P	**P**	**13 28 20.1**	**+0.8**
	comp=Z,1.4nm,0.8s,baz=230,slow=7.0,SNR=8.5						
	comp=Z,1.4nm,0.8s						
QSPA	**South Pole Qui**	**61.88**	**180**	P	**P**	**13 28 44.2**	**-0.2**
	comp=Z,5.2nm,0.9s,baz=276,slow=2.5,SNR=12						
	comp=Z,5.2nm,0.9s						
QSPA	**South Pole Qui**	**61.88**	**180**	P	**P**	**13 28 43.7**	**-0.7**
QSPA				IAmb	IAmb	13 28 53.1	
	comp=Z,7.8nm,1.0s						
ASAR	**Alice Springs**	**63.33**	**104**	P	**P**	**13 28 54.2**	**-0.4**
	comp=Z,2.9nm,0.7s,baz=248,slow=6.3,SNR=45						
	comp=Z,2.9nm,0.7s						
AS31	**Alice Springs**	**63.33**	**104**	P	**P**	**13 28 53.9**	**-0.7**
AS31				IAmb	IAmb	13 28 54.9	
	comp=Z,1.0nm,0.8s						
VNDA	**Vanda**	**64.57**	**166**	P	**P**	**13 29 01.9**	**0.0**
	comp=Z,1.3nm,0.9s,baz=277,slow=8.7,SNR=6.8						
	comp=Z,1.3nm,0.9s						
VNDA	**Vanda**	**64.57**	**166**	IAmb	IAmb	13 29 10.4	
	comp=Z,4.0nm,1.3s						
WRA	**Warramunga Arr**	**65.08**	**100**	P	**P**	**13 29 06.3**	**+0.2**
	comp=Z,4.9nm,1.0s,baz=249,slow=5.9,SNR=18						
	comp=Z,4.9nm,1.0s						
WB2	**Warramunga Arr**	**65.09**	**100**	P	**P**	**13 29 06.0**	**-0.2**
WB2				IAmb	IAmb	13 29 06.9	
	comp=Z,6.6nm,1.1s						
MTN	**Manton Dam**	**65.13**	**92**	P	**P**	**13 29 04.4**	**-2.0**
WB0	**Warramunga Arr**	**65.19**	**100**	P	**P**	**13 29 06.3**	**-0.5**
WR0	**Warramunga Arr**	**65.25**	**100**	P	**P**	**13 29 06.6**	**-0.6**
WR0				IAmb	IAmb	13 29 07.7	
	comp=Z,3.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**71.95**	**296**	P	**P**	**13 29 49.5**	**+0.4**
	comp=Z,0.8nm,0.8s,baz=126,slow=3.6,SNR=4.1						
	comp=Z,0.8nm,0.8s						
TORD	**Torodi Ar. Bea**	**71.95**	**296**	IAmb	IAmb	13 29 51.9	
	comp=Z,1.5nm,1.1s						
ITM	**Ithomi**	**75.53**	**327**	P	**P**	**13 30 09.5**	**0.0**
ABKAR	**Akbulak array**	**77.21**	**358**	P	**P**	**13 30 18.7**	**-0.1**
BURAR	**Bucovina Array**	**82.73**	**335**	P	**P**	**13 30 49.6**	**+0.8**
BURAR				IAmb	IAmb	13 30 52.4	
	comp=Z,3.0nm,1.2s						
AKASG	**Malin Array Be**	**84.02**	**339**	P	**P**	**13 30 55.3**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=154,slow=3.9,SNR=4.8						
	comp=Z,0.6nm,0.5s						
ZAA0	**Zalesovo Array**	**84.08**	**13**	P	**P**	**13 30 55.7**	**+0.2**
ZAA0				IAmb	IAmb	13 31 12.6	
	comp=Z,3.2nm,0.7s						
ZALV	**Zalesovo Beam**	**84.08**	**13**	P	**P**	**13 30 55.4**	**-0.1**
	comp=Z,1.9nm,0.8s,baz=186,slow=4.5,SNR=6.0						
	comp=Z,1.9nm,0.8s						
ZALV	**Zalesovo Beam**	**84.08**	**13**	P	**P**	**13 30 55.2**	**-0.3**
MSSA	**Maissana**	**87.06**	**325**	P	**P**	**13 31 10.0**	**-0.6**
ESDC	**Sonseca Array**	**91.72**	**315**	P	**P**	**13 31 34.0**	**+1.3**
	comp=Z,1.2nm,0.9s,baz=137,slow=3.5,SNR=4.8						
	comp=Z,1.2nm,0.9s						
ESDC	**Sonseca Array**	**91.72**	**315**	IAmb	IAmb	13 31 35.4	
	comp=Z,1.4nm,1.1s						
YKA	**Yellowknife Ar**	**145.72**	**358**	PKPbc	**PKPdf**	**13 38 03.1**	**+0.1**
	comp=Z,3.5nm,0.6s,baz=349,slow=3.4,SNR=65						
YKA	**Yellowknife Ar**	**145.72**	**358**		**PKPdf**	**13 38 02.6**	**-0.4**

*JMA **27** 13:27:19.0±0.2,24°.6N±0°.4×122°.0E±0°.4,h65km±2km, MV2.3/9,TAIWAN REGION*

*TAP **27** 13:27:19.4,24°.67N×122°.00E,h57km,ML3.0,B*

ISC 27 13:27:20.1±1.2,24°.68N±0°.02×122°.00E±0°.02,h56km±5km, n86,σ0♀76/161,4C-7D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWC	**Suao**	**0.15**	**245**	⇑*i*P	**Pn**	**13 27 28.7**	**-0.1**
	baz=244						
TWC				*i* S	**Sn**	**13 27 35.2**	**+0.2**
	baz=244						
EGS		**0.18**	**340**	*i* P	**Pn**	**13 27 29.2**	**+0.3**
	baz=344						
EGS				S	**Sn**	**13 27 35.3**	**0.0**
	baz=344						
NTC	**Toucheng**	**0.24**	**319**	⇓*e*P	**Pn**	**13 27 29.1**	**-0.2**
	baz=320						
NTC				*e*S	**Sn**	**13 27 35.9**	**0.0**
	baz=320						
ILA	**Ilan**	**0.25**	**291**	*i* P	**Pn**	**13 27 28.6**	**-0.7**
	baz=293						
ILA				*i* S	**Sn**	**13 27 37.5**	**+1.5**
	baz=293						
NDS	**Dongshan**	**0.26**	**261**	P	**Pn**	**13 27 29.6**	**+0.2**
	baz=262						
NDS				S	**Sn**	**13 27 36.8**	**+0.6**
	baz=262						
EWUT	**Wuta**	**0.31**	**222**	P	**Pn**	**13 27 29.6**	**-0.2**
	baz=221						
EWUT				S	**Sn**	**13 27 37.2**	**+0.5**
	baz=221						
TWE	**Neicheng**	**0.31**	**279**	⇓*i*P	**Pn**	**13 27 29.9**	**+0.1**
	baz=279						
TWE				*i* S	**Sn**	**13 27 37.4**	**+0.6**
	baz=279						
TWB1	**Santiao Chiao**	**0.33**	**358**	*i* P	**Pn**	**13 27 29.9**	**-0.1**
TWB1				*i* S	**Sn**	**13 27 37.2**	**0.0**
TIPB	**Shuangxi**	**0.34**	**332**	⇓*i*P	**Pn**	**13 27 30.0**	**-0.1**
	baz=332						
TIPB				*i* S	**Sn**	**13 27 37.2**	**-0.1**
	baz=332						
ENA	**Nanau**	**0.34**	**224**	⇑*i*P	**Pn**	**13 27 29.8**	**-0.3**
	baz=222						
ENA				*i* S	**Sn**	**13 27 37.5**	**+0.2**
	baz=222						
FUSB	**Fushanzhiwuyua**	**0.39**	**283**	P	**Pn**	**13 27 30.9**	**+0.3**
	baz=283						
FUSB				S	**Sn**	**13 27 38.5**	**+0.3**
	baz=283						
SXI1	**Grass Mountain**	**0.43**	**345**	⇓P	**Pn**	**13 27 30.8**	**-0.3**
	baz=345						
SXI1				S	**Sn**	**13 27 38.7**	**-0.3**
	baz=345						
LATG	**Datong**	**0.45**	**252**	⇑P	**Pn**	**13 27 31.2**	**-0.2**
	baz=252						
LATG				S	**Sn**	**13 27 40.0**	**+0.5**
	baz=252						
NWLT	**Wulai**	**0.46**	**283**	*i* P	**Pn**	**13 27 31.4**	**+0.1**
	baz=283						
NWLT				*i* S	**Sn**	**13 27 39.8**	**+0.3**
	baz=283						
TWA	**Mucha**	**0.49**	**309**	⇓*i*P	**Pn**	**13 27 31.4**	**-0.2**
	baz=310						
TWA				*i* S	**Sn**	**13 27 40.1**	**+0.2**
	baz=310						
NHDH	**Xindian Distri**	**0.52**	**304**	*i* P	**Pn**	**13 27 31.9**	**0.0**
	baz=304						
NHDH				S	**Sn**	**13 27 40.8**	**+0.3**
	baz=304						
YHNB	**Yeheng**	**0.57**	**270**	P	**Pn**	**13 27 32.4**	**-0.1**
	baz=270						
YHNB				S	**Sn**	**13 27 41.4**	**-0.3**
	baz=270						
TAP	**Taipei**	**0.58**	**309**	S	**Sn**	**13 27 42.2**	**+0.6**
	baz=310						
NSK	**Sanguang**	**0.58**	**270**	⇓*i*P	**Pn**	**13 27 32.5**	**-0.2**
	baz=270						
NSK				*i* S	**Sn**	**13 27 41.6**	**-0.3**
	baz=270						
YM01	**YM01**	**0.61**	**320**	P	**Pn**	**13 27 32.7**	**-0.4**
	baz=320						
YM01				S	**Sn**	**13 27 42.2**	**-0.3**
	baz=320						
NNSB

baz=238
FUSS *i* S **Sn** **13 27 47.2 0.0**
baz=238
WHF **Hehuan Shan** **0.85 232** ⇓*i* P **Pn** **13 27 35.9 -0.5**
baz=231
WHF *i* S **Sn** **13 27 47.8 -0.6**
baz=231
TWT **Tachien** **0.86 241** *i* P **Pn** **13 27 36.6 +0.3**
baz=241
TWT *i* S **Sn** **13 27 48.5 +0.3**
baz=241
TDCB **Techi** **0.88 241** P **Pn** **13 27 36.5 +0.1**
baz=241
TDCB S **Sn** **13 27 48.2 -0.3**
baz=241
JYNG **Yonagunijimaku** **0.89 104** P **Pn** **13 27 36.4 -0.1**
JYNG eS **Sn** **13 27 48.4 -0.1**
LIOB **Emei** **0.90 268** *i* P **Pn** **13 27 36.5 -0.1**
baz=268
LIOB *i* S **Sn** **13 27 49.5 +0.7**
baz=268
NSTT **Nanjuang** **0.91 267** *i* P **Pn** **13 27 36.5 -0.3**
baz=267
NSTT *i* S **Sn** **13 27 48.7 -0.4**
baz=267
SBCB **Hsinchu** **0.93 277** *e*P **Pn** **13 27 37.3 +0.3**
baz=277
SBCB S **Sn** **13 27 49.7 +0.2**
baz=277
YOJ **Yonaguni jima** **0.94 103** P **Pn** **13 27 36.9 -0.3**
baz=102
YOJ S **Sn** **13 27 49.2 -0.6**
baz=102
YOJ **Yonaguni jima** **0.94 103** P **Pn** **13 27 37.2 0.0**
YOJ S **Sn** **13 27 49.7 -0.2**
HSN **Hsinchu** **0.95 278** *e*S **Sn** **13 27 49.3 -0.6**
baz=280
PCYT **Pengchaiyu** **0.95 4** P **Pn** **13 27 38.1 +0.8**
baz=4.0
PCYT S **Sn** **13 27 51.5 +1.4**
baz=4.0
CHGB **Renai** **0.97 231** P **Pn** **13 27 37.5 -0.3**
baz=231
CHGB S **Sn** **13 27 50.0 -0.8**
baz=231
ESL **Shilin** **1.00 211** P **Pn** **13 27 36.2 -1.8**
baz=210
ESL S **Sn** **13 27 50.1 -1.1**
baz=210
OWD **Renai** **1.04 227** *i* P **Pn** **13 27 38.0 -0.6**
baz=226
OWD *i* S **Sn** **13 27 51.6 -0.7**
baz=226
WHP **Taichung City** **1.04 248** *i* P **Pn** **13 27 39.5 +0.9**
baz=247
WHP S **Sn** **13 27 52.8 +0.6**
baz=247
WUSB **Renai** **1.05 230** P **Pn** **13 27 38.8 -0.1**
baz=229
WUSB S **Sn** **13 27 52.0 -0.7**
baz=229
NMLH **Miaoli** **1.11 263** *e*S **Sn** **13 27 53.7 -0.1**
baz=263
EGFH **Guangfu** **1.13 208** P **Pn** **13 27 40.3 +0.6**
baz=207
EGFH *e*S **Sn** **13 27 55.8 +1.5**
baz=207
TWQ1 **Liyutan** **1.17 254** P **Pn** **13 27 41.5 +1.4**
baz=253
TWQ1 S **Sn** **13 27 55.5 +0.4**
baz=253
WCS **Beigang Elemen** **1.17 238** P **Pn** **13 27 41.1 +0.9**
baz=238
WCS S **Sn** **13 27 56.6 +1.4**
baz=238
VWDT **VWDT** **1.21 221** P **Pn** **13 27 40.5 -0.2**
baz=220
VWDT S **Sn** **13 27 55.7 -0.4**
baz=220
SMLT **Sun Moon Lake** **1.28 232** *i* P **Pn** **13 27 42.1 +0.4**
baz=231
SMLT S **Sn** **13 27 59.7 +1.7**
baz=231
HGSD **Ruisui** **1.29 204** *e*P **Pn** **13 27 41.5 -0.3**
baz=204
HGSD *e*S **Sn** **13 27 58.8 +0.7**
baz=204
TYC **Yuchr** **1.30 234** *i* P **Pn** **13 27 42.4 +0.4**
baz=233
TYC S **Sn** **13 27 59.0 +0.8**
baz=233
SSLB **Suanglung** **1.30 227** P **Pn** **13 27 42.5 +0.4**
baz=227
SSLB S **Sn** **13 28 00.3 +1.9**
baz=227
EHY **Hungye** **1.32 208** *e*P **Pn** **13 27 41.9 -0.3**
baz=207
YULB **Yu-li** **1.43 207** *e*P **Pn** **13 27 43.6 -0.1**
baz=206
WHYT **Xinyi Township** **1.43 227** *e*P **Pn** **13 27 45.4 +1.6**
baz=227
WHYT *e*S **Sn** **13 28 03.3 +1.7**
baz=227
WJS **Zhushan** **1.44 234** *e*P **Pn** **13 27 45.1 +1.3**
baz=233
WJS *e*S **Sn** **13 28 02.0 +0.3**
baz=233
WNT **Mingjian** **1.44 237** *e*P **Pn** **13 27 45.5 +1.7**
baz=236
WNT *e*S **Sn** **13 28 02.9 +1.1**
baz=236
ALS **Alishan** **1.59 224** P **Pn** **13 27 47.2 +1.0**
baz=223
FULB **Fuli** **1.61 204** *e*P **Pn** **13 27 45.9 -0.2**
baz=203
FULB *e*S **Sn** **13 28 04.4 -1.4**
baz=203
IRIF **Iriomote-Funau** **1.61 102** P **Pn** **13 27 45.9 -0.3**
IRIF S **Sn** **13 28 05.8 -0.1**
WDLH **Douliu** **1.66 234** *e*P **Pn** **13 27 47.2 +0.4**
baz=233
WDLH *e*S **Sn** **13 28 08.3 +1.3**
baz=233
WRL **Guolierlin Hig** **1.67 243** *e*P **Pn** **13 27 45.9 -1.0**
baz=242
ELDTW **Lidau** **1.73 212** P **Pn** **13 27 47.4 -0.6**
baz=211
ELDTW *e*S **Sn** **13 28 07.1 -1.9**
baz=211
WTK **Tuku** **1.77 237** *e*P **Pn** **13 27 48.0 -0.4**
baz=236
WTK *e*S **Sn** **13 28 09.0 -0.7**
baz=236
TPUB **Ta-pu** **1.86 223** *e*P **Pn** **13 27 48.6 -0.9**
baz=222
TPUB *e*S **Sn** **13 28 12.9 +1.0**
baz=222
STYH **Taoyuan** **1.87 217** *e*P **Pn** **13 27 49.4 -0.3**
baz=216
JKRS **Kuro-shima** **1.88 103** P **Pn** **13 27 50.1 +0.2**
JKRS S **Sn** **13 28 12.9 +0.4**
WTP **Ta-pu** **1.91 222** *e*P **Pn** **13 27 50.7 +0.4**
baz=221
TWK **Hsinying** **1.97 225** P **Pn** **13 27 52.3 +1.2**
baz=224
TWK *e*S **Sn** **13 28 16.1 +1.4**
baz=224
JIJ **Ishigaki jima** **1.98 99** P **Pn** **13 27 51.2 +0.1**
JIJ *e*S **Sn** **13 28 14.2 -0.6**
SNST **Tainan City** **2.00 224** *e*P **Pn** **13 27 52.4 +0.9**
baz=223
SNST *e*S **Sn** **13 28 15.7 +0.4**
baz=223
CHN1 **Nanshi** **2.00 223** P **Pn** **13 27 52.5 +0.9**
baz=222
CHN1 *e*S **Sn** **13 28 16.6 +1.1**
baz=222
JISG **Ishigakijimahi** **2.10 92** *e*P **Pn** **13 27 53.0 +0.2**
JISG *e*S **Sn** **13 28 18.8 +0.9**
VWUC **VWUC** **2.34 278** *e*P **Pn** **13 27 54.8 -1.3**
baz=277
VWUC *e*S **Sn** **13 28 22.1 -1.6**
baz=277
PTMZ **Houxiangcun** **2.64 278** *e*P **Pn** **13 27 58.9 -1.4**
baz=278
LYJJ **Jianjiangzhen** **2.75 313** *e*P **Pn** **13 28 01.2 -0.5**
baz=312
LYJJ *e*S **Sn** **13 28 32.2 -1.6**
baz=312
XPSS **Dashiqiu** **2.78 324** *e*P **Pn** **13 28 01.9 -0.1**
baz=324

IDC ***27*** *13:28:31.7±1.1,39°.25N×73°.59E,h0km,mb3.8/11, mbtmp3.9/15,ML3.3/4,MS3.1/6,Error ellipse: s-maj=23.1km s-min=18.7km az=17.0*
BJI ***27*** *13:28:33.4±0.0,39°.42N×73°.45E,h9km,mb4.0/14, mB4.6/8,ML3.8/5,Ms3.6/6,Ms7 3.4/5*
MOS ***27*** *13:28:34.8±1.4,39°.42N×73°.54E,h15km,mb4.4/10,Error ellipse: s-maj=6.5km s-min=4.1km az=81.7*
MOS Felt (III-IV) at Bordobo.
SOME ***27*** *13:28:35.1,39°.60N×73°.65E,h10km*
NEIC ***27*** *13:28:36.5±1.8,39°.61N±0°.06×73°.40E±0°.07,h10km±1km, mb4.3/18,Error ellipse: s-maj=9.8km s-min=8.8km az=155.0*
KRNET ***27*** *13:28:36.0±0.1,39°.52N×73°.46E,mb4.3*
NNC ***27*** *13:28:37.8±2.4,39°.58N×73°.50E,h0km,mb4.2,mpv3.8, Error ellipse: s-maj=22.6km s-min=15.5km az=178.0*

ISC 27 13:28:35.1±2.4,39°.33N±0°.04×73°.43E±0°.02,h13km±15km, n183,σ1=81/247,mb4.1/25,27C-29D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**1.27**	**277**	⇑*i*	P	**Pb**	**13 29 00.2**	**+1.2**
DRK	baz=69			⇑*i*	S	**Sn**	**13 29 17.8**	**+2.0**
DRK	**Karamyk**	**1.27**	**277**		Pn	**Pb**	**13 28 59.2**	**+0.2**
OHH	**Osh**	**1.29**	**338**	⇓*e*	P	**Pn**	**13 28 57.0**	**-1.9**
OHH	baz=33			⇓*e*	S	**Sb**	**13 29 12.4**	**-3.3**
OHH	**Osh**	**1.29**	**338**	*e*	PG	**Pn**	**13 28 57.0**	**-1.9**
OHH				*e*	S	**Sb**	**13 29 12.4**	**-3.3**
KSH	**Kashi**	**1.98**	**84**	Pg		Pn	13 29 02.8	-5.7
KSH				Sg		Sn	13 29 22.0	-11
KSH	comp=N,1μm,0.9s			smax		smax		
KSH	comp=E,900nm,0.9s			smax		smax		
BTK	**Batken**	**2.14**	**291**	⇑*e*	P	**Pb**	**13 29 13.5**	**-0.2**
BTK	baz=86			⇑*e*	S	**Sb**	**13 29 40.8**	**+0.6**
BTK	**Batken**	**2.14**	**291**			**Pn**	**13 29 11.7**	**+1.1**
BTK	**Batken**	**2.14**	**291**	*e*	PN	**Pb**	**13 29 13.5**	**-0.2**
BTK	baz=86			*e*	S	**Sb**	**13 29 40.8**	**+0.6**
GAR	**Garm**	**2.44**	**263**	⇓*e*	P	**Pb**	**13 29 18.9**	**0.0**
GAR	baz=59			⇓*e*	S	**Sb**	**13 29 50.2**	**+1.3**
GAR	**Garm**	**2.44**	**263**			**Pb**	**13 29 19.0**	**0.0**
GAR	**Garm**	**2.44**	**263**	*e*	PN	**Pb**	**13 29 18.9**	**0.0**
GAR	baz=59			*e*	S	**Sb**	**13 29 50.2**	**+1.3**
ARLS	**Aral**	**2.62**	**15**	⇓*e*	P	**Pn**	**13 29 18.1**	**+0.9**
ARLS	baz=16			⇓*i*	S	**Sn**	**13 29 48.5**	**-0.4**
ARLS	**Aral**	**2.62**	**15**	*e*	PN	**Pn**	**13 29 18.1**	**+0.9**
ARLS				*i*	S	**Sn**	**13 29 48.5**	**-0.4**
ARK	**Arkit**	**2.70**	**336**	⇓*i*	P	**Pn**	**13 29 19.6**	**+1.2**
ARK	baz=34			⇓*i*	S	**Sn**	**13 29 51.6**	**+0.6**
AML	**Almayashu**	**2.80**	**4**		P	**Pn**	**13 29 21.0**	**+1.0**
AML	SNR=38							
AML	**Almayashu**	**2.80**	**4**	*e*	PN	**Pn**	**13 29 20.9**	**+1.0**
AML				*e*	S	**Sn**	**13 29 53.7**	**-0.1**
TRKS	**Terek-Say**	**2.80**	**322**	⇓*e*	P	**Pn**	**13 29 20.6**	**+0.8**
TRKS	baz=19			⇓*e*	S	**Sn**	**13 29 53.0**	**-0.5**
TRKS	**Terek-Say**	**2.80**	**322**	*e*	PN	**Pn**	**13 29 20.6**	**+0.8**
TRKS				*e*	S	**Sn**	**13 29 53.0**	**-0.5**
UCH	**Uchtor**	**3.01**	**16**		P	**Pn**	**13 29 23.9**	**+1.1**
UCH	SNR=82							
UCH	**Uchtor**	**3.01**	**16**	⇑*e*	P	**Pn**	**13 29 23.8**	**+1.0**
UCH	baz=16			⇑*e*	S	**Sn**	**13 29 58.5**	**-0.5**
UCH	**Uchtor**	**3.01**	**16**	*e*	PN	**Pn**	**13 29 23.8**	**+1.0**
UCH				*e*	S	**Sn**	**13 29 58.5**	**-0.5**
EKS2	**Erkin-Say**	**3.33**	**4**		P	**Pn**	**13 29 29.4**	**+2.3**
EKS2	SNR=33							
EKS2	**Erkin-Say**	**3.33**	**4**	⇑*i*	P	**Pn**	**13 29 28.1**	**+1.0**
EKS2	baz=4.0			⇑*e*	S	**Sn**	**13 30 06.1**	**-0.5**
EKS2	**Erkin-Say**	**3.33**	**4**	*i*	PN	**Pn**	**13 29 28.1**	**+1.0**
EKS2				*e*	S	**Sn**	**13 30 06.1**	**-0.5**
CHGR	**Chuyangaron**	**3.39**	**260**	⇓*e*	P	**Pb**	**13 29 31.8**	**-3.3**
CHGR	baz=57			⇓*e*	S	**Sb**	**13 30 13.2**	**-3.1**
CHGR	**Chuyangaron**	**3.39**	**260**			**Pn**	**13 29 30.4**	**+2.6**
CHGR	**Chuyangaron**	**3.39**	**260**	*e*	PN	**Pb**	**13 29 31.8**	**-3.3**
CHGR				*e*	S	**Sb**	**13 30 13.2**	**-3.1**
AAK	**Ala-Archa**	**3.40**	**13**		P	**Pn**	**13 29 30.1**	**+2.1**
AAK	SNR=31 **Ala-Archa**	**3.40**	**13**		Pn	**Pn**	**13 29 30.3**	**+2.4**
AAK	10nm,0.3s,baz=191,slow=9.7,SNR=28 15nm,0.3s,baz=336,slow=17,SNR=8.4 47nm,0.5s				Lg	Lg	13 30 15.9	
AAK	**Ala-Archa**	**3.40**	**13**	⇓*e*	P	**Pn**	**13 29 29.1**	**+1.1**
AAK	baz=14			⇓*i*	S	**Sn**	**13 30 07.5**	**-0.7**
AAK	**Ala-Archa**	**3.40**	**13**			**Pn**	**13 29 26.0**	**-2.0**
AAK	**Ala-Archa**	**3.40**	**13**	*e*	PN	**Pn**	**13 29 29.1**	**+1.1**
AAK				*i*	S	**Sn**	**13 30 07.5**	**-0.7**
KBK	**Karagaybulak**	**3.51**	**19**		P	**Pn**	**13 29 31.7**	**+2.2**
KBK	SNR=28 **Karagaybulak**	**3.51**	**19**	⇓*e*	P	**Pn**	**13 29 30.6**	**+1.0**
KBK	baz=19			⇓*e*	S	**Sn**	**13 30 10.6**	**-0.5**
KBK	**Karagaybulak**	**3.51**	**19**	*e*	PN	**Pn**	**13 29 30.6**	**+1.0**
KBK				*e*	S	**Sn**	**13 30 10.6**	**-0.5**
ULHL	**Ulahol**	**3.61**	**35**		P	**Pn**	**13 29 33.9**	**+3.0**
ULHL	SNR=9.5 **Ulahol**	**3.61**	**35**	⇑*e*	P	**Pn**	**13 29 32.5**	**+1.6**
ULHL	baz=37			⇑*e*	S	**Sn**	**13 30 13.2**	**-0.3**
ULHL	**Ulahol**	**3.61**	**35**	*e*	PN	**Pn**	**13 29 32.5**	**+1.6**
ULHL				*e*	S	**Sn**	**13 30 13.2**	**-0.3**
BOOM	**Boomskoye usch**	**3.68**	**30**	⇑*e*	P	**Pn**	**13 29 33.1**	**+1.2**
BOOM	baz=32			⇑*e*	S	**Sn**	**13 30 15.0**	**-0.3**
BOOM	**Boomskoye usch**	**3.68**	**30**			**Pn**	**13 29 32.5**	**+0.5**
BOOM	**Boomskoye usch**	**3.68**	**30**	*e*	PN	**Pn**	**13 29 33.1**	**+1.2**
BOOM				*e*	S	**Sn**	**13 30 15.0**	**-0.3**
TAS	**Tashkent**	**3.73**	**304**	⇑*e*	P	**Pn**	**13 29 34.8**	**+2.4**
TAS	baz=1.0			⇑*e*	S	**Sn**	**13 30 18.0**	**+1.8**
TAS	**Tashkent**	**3.73**	**304**	*e*	PN	**Pn**	**13 29 34.8**	**+2.4**
TAS				*e*	S	**Sn**	**13 30 18.0**	**+1.8**
CHMS	**Chumysh**	**3.79**	**15**		P	**Pn**	**13 29 35.3**	**+2.0**
CHMS	SNR=14 **Chumysh**	**3.79**	**15**	⇓*e*	P	**Pn**	**13 29 34.5**	**+1.2**
CHMS	baz=15			⇓*e*	S	**Sn**	**13 30 16.9**	**-0.9**
CHMS	**Chumysh**	**3.79**	**15**	*e*	PN	**Pn**	**13 29 34.5**	**+1.2**
CHMS				*e*	S	**Sn**	**13 30 16.9**	**-0.9**
CHMS	**Chumysh**	**3.79**	**15**	⇓*e*	Pn	**Pn**	**13 29 35.2**	**+2.0**
CHMS	14nm,0.5s 128nm,0.7s			⇓*e*	Lg	Lg	13 30 29.2	
IUG	**luzhnay**	**3.81**	**319**	*e*	PN	**Pn**	**13 29 36.3**	**+2.7**
IUG				*e*			13 29 44.1	
IUG	**luzhnay** 2μm,0.1s	**3.81**	**319**	*e*	P	**Pb**	**13 29 43.8**	**+1.5**
IUG	159nm,0.1s			*e*	S	**Sb**	**13 30 33.1**	**+4.7**
IUG	**luzhnay**	**3.81**	**319**	*e*	Pn	**Pn**	**13 29 36.4**	**+2.7**
IUG	baz=311			*e*	Pg	**Pb**	**13 29 44.1**	**+1.8**
DZA	**Taraz**	**3.89**	**337**	*e*	PN	**Pn**	**13 29 34.7**	**+0.1**
DZA	**Taraz**	**3.89**	**337**	*e*	P	**Pb**	**13 29 43.6**	**0.0**
DZA	66nm,0.0s 344nm,0.5s			*e*	S	**Sb**	**13 30 33.0**	**+2.5**
DZA	**Taraz**	**3.89**	**337**	*e*	Pn	**Pn**	**13 29 34.7**	**+0.1**
TKM2	baz=331 **Tokmak 2**	**3.94**	**24**		P	**Pn**	**13 29 37.0**	**+1.5**
TKM2	SNR=23 **Tokmak 2**	**3.94**	**24**	⇓*e*	P	**Pn**	**13 29 36.7**	**+1.3**
TKM2	baz=25			⇓*e*	S	**Sn**	**13 30 20.9**	**-0.8**
TKM2	**Tokmak 2**	**3.94**	**24**	*e*	PN	**Pn**	**13 29 36.7**	**+1.3**
TKM2				*e*	S	**Sn**	**13 30 20.9**	**-0.8**
TKM2	**Tokmak 2**	**3.94**	**24**	*e*	Pn	**Pn**	**13 29 36.8**	**+1.3**
TKM2	16nm,0.7s 105nm,0.6s			⇑*e*	Lg	Lg	13 30 37.0	
KDJ	**Kajisay**	**3.99**	**44**	⇑*e*	P	**Pn**	**13 29 37.9**	**+1.8**
KDJ	baz=46			⇑*e*	S	**Sn**	**13 30 23.0**	**+0.1**
KDJ	**Kajisay**	**3.99**	**44**			**Pn**	**13 29 37.3**	**+1.2**
KDJ	**Kajisay**	**3.99**	**44**	*e*	PN	**Pn**	**13 29 37.9**	**+1.8**
KDJ	baz=46			*e*	S	**Sn**	**13 30 23.0**	**+0.1**
USP	**Ospenovka**	**4.01**	**11**		P	**Pn**	**13 29 38.1**	**+1.9**
USP	SNR=14 **Ospenovka**	**4.01**	**11**	⇓*i*	P	**Pn**	**13 29 37.4**	**+1.1**
USP	baz=12			⇓*e*	S	**Sn**	**13 30 22.0**	**-1.2**
USP	**Ospenovka**	**4.01**	**11**	*i*	PN	**Pn**	**13 29 37.4**	**+1.1**
USP				*e*	S	**Sn**	**13 30 22.0**	**-1.2**
TARG	**Taragay, Kyrgy**	**4.11**	**53**	⇑*e*	P	**Pn**	**13 29 38.5**	**+0.6**
TARG	baz=55			⇑*e*	S	**Sn**	**13 30 26.1**	**+0.1**
TARG	**Taragay, Kyrgy**	**4.11**	**53**			**Pn**	**13 29 38.1**	**+0.2**
TARG	**Taragay, Kyrgy**	**4.11**	**53**	*e*	PN	**Pn**	**13 29 38.5**	**+0.6**
TARG	baz=55			*e*	S	**Sn**	**13 30 26.1**	**+0.1**
KST	**Kastek**	**4.17**	**27**	*e*	P	**Pb**	**13 29 47.6**	**-0.8**
KST	14nm,0.1s 179nm,0.4s			*e*	S	**Sb**	**13 30 40.2**	**+1.4**
SGDS	**Sogindy**	**4.21**	**12**	*e*	PN	**Pn**	**13 29 39.0**	**-0.1**
SGDS	**Sogindy**	**4.21**	**12**	*e*	P	**Pb**	**13 29 47.3**	**-1.7**
SGDS	12nm,0.2s 118nm,0.2s			*e*	S	**Sb**	**13 30 39.8**	**-0.1**
SGDS	**Sogindy**	**4.21**	**12**	*e*	Pn	**Pn**	**13 29 39.0**	**-0.1**
SGDS	baz=11			*e*	Pg	**Pb**	**13 29 46.4**	**-2.7**
DGS	**Degeres**	**4.29**	**24**	*e*	P	**Pb**	**13 29 48.4**	**-1.9**
DGS	26nm,0.1s 120nm,0.1s			*e*	S	**Sb**	**13 30 41.8**	**-0.2**
KK31	**Karatay Array**	**4.36**	**331**			**Pn**	**13 29 41.0**	**-0.1**
KK31	**Karatay Array**	**4.36**	**331**		PN	**Pn**	**13 29 42.9**	**+1.8**
KK31					PG	**Pb**	**13 29 53.3**	**+1.7**
KK31					LG	Lg	13 30 50.2	
KK31	**Karatay Array**	**4.36**	**331**		Pn	**Pn**	**13 29 42.9**	**+1.8**
KK31	4.2nm,0.3s,baz=138,slow=16,SNR=40 16nm,0.5s,baz=140,slow=16,SNR=11			⇑	Pg	**Pb**	**13 29 53.2**	**+1.7**
KK31	37nm,0.5s			⇑	Lg	Lg	13 30 50.2	
KKAR	**Karatay Array**	**4.36**	**331**	⇑*e*	P	**Pn**	**13 29 42.9**	**+1.9**
KKAR	baz=29			⇑*e*	S	**Sn**	**13 30 31.4**	**-0.3**
KKAR	**Karatay Array**	**4.36**	**331**			**Pn**	**13 29 40.6**	**-0.5**
KKAR	**Karatay Array**	**4.36**	**331**			**Pn**	**13 29 40.5**	**-0.5**
KKAR	**Karatay Array**	**4.36**	**331**	*e*	PN	**Pn**	**13 29 42.9**	**+1.9**
KKAR				*e*	S	**Sn**	**13 30 31.4**	**-0.3**
MTBS	**Maitube**	**4.42**	**30**	*e*	P	**Pb**	**13 29 50.5**	**-2.0**
MTBS	17nm,0.3s 59nm,0.4s			*e*	S	**Sb**	**13 30 44.9**	**-0.9**
TNSS	**Tian-Shan**	**4.55**	**35**	*e*	PN	**Pn**	**13 29 44.1**	**+0.1**
TNSS				*e*			13 29 52.9	
TNSS	**Tian-Shan**	**4.55**	**35**	*e*	P	**Pb**	**13 29 54.1**	**-1.0**
TNSS	22nm,0.2s 54nm,0.2s			*e*	S	**Sb**	**13 30 51.4**	**+1.3**
TNSS	**Tian-Shan**	**4.55**	**35**	*e*	Pn	**Pn**	**13 29 44.2**	**+0.1**
TNSS	baz=37			*e*	Pg	**Pb**	**13 29 52.9**	**-2.2**
BRLS	**Borolday**	**4.58**	**325**	*e*	P	**Pb**	**13 29 55.8**	**+0.5**
BRLS	6.2nm,0.2s 40nm,0.1s			*e*	S	**Sb**	**13 30 54.2**	**+3.8**
KRBS	**Karabastau**	**4.67**	**20**	*e*	P	**Pb**	**13 29 55.9**	**-1.0**
KRBS	3.5nm,0.5s 46nm,0.3s			*e*	S	**Sb**	**13 30 54.0**	**+0.8**
AAA	**Alma-Ata**	**4.68**	**33**	*e*	P	**Pb**	**13 29 56.9**	**-0.2**
AAA	39nm,0.0s 102nm,0.4s			*e*	S	**Sb**	**13 30 56.5**	**+3.2**
ANVS	**Anan'yevo**	**4.71**	**42**	⇓*i*	P	**Pn**	**13 29 47.8**	**+1.8**
ANVS	baz=43			⇓*i*	S	**Sn**	**13 30 40.0**	**-0.5**
PRZ	**Przheval'sk**	**4.91**	**49**		Pn	**Pn**	**13 29 49.3**	**+0.6**
PRZ	**Przheval'sk**	**4.91**	**49**	*e*	PN	**Pn**	**13 29 49.3**	**+0.6**
KTBS	**Karatobe**	**5.01**	**28**	*e*	P	**Pb**	**13 30 01.9**	**-0.8**
KTBS	20nm,0.2s 180nm,0.1s			*e*	S	**Sb**	**13 31 04.7**	**+1.9**
KUU	**Kurty**	**5.05**	**25**	*e*	P	**Pb**	**13 30 02.8**	**-0.6**
KUU	12nm,0.4s 141nm,1.4s			*e*	S	**Sb**	**13 31 06.5**	**+2.5**
KUU	**Kurty**	**5.05**	**25**	*e*	Pg	**Pb**	**13 30 02.5**	**-0.8**
KUU	baz=26			*e*	Lg	Lg	13 31 03.2	
CHKK	**Chushkaly**	**5.25**	**29**	*e*	P	**Pb**	**13 30 06.8**	**+0.1**
CHKK	6.8nm,0.1s 67nm,0.1s			*e*	S	**Sb**	**13 31 13.0**	**+3.4**
CHKK	**Chushkaly**	**5.25**	**29**	*e*	Pg	**Pb**	**13 30 06.0**	**-0.7**
SATY	baz=31 **Saty**	**5.29**	**44**	*e*	PN	**Pn**	**13 29 52.1**	**-1.8**
SATY				*e*			13 30 06.6	
SATY				*e*			13 31 12.7	
SATY	**Saty**	**5.29**	**44**	*e*	P	**Pb**	**13 30 07.8**	**+0.4**
SATY	19nm,0.4s 75nm,0.0s			*e*	S	**Sb**	**13 31 14.9**	**+4.0**
SATY	**Saty**	**5.29**	**44**	*e*	Pn	**Pn**	**13 29 52.1**	**-1.8**
SATY	baz=46			*e*	Pg	**Pb**	**13 30 06.6**	**-0.8**
SATY	baz=46			*e*	Lg	Lg	13 31 12.8	
ZHN	**Zhinishke**	**5.38**	**43**	*e*	PN	**Pn**	**13 29 53.1**	**-2.0**
ZHN				*e*			13 30 07.4	
ZHN	**Zhinishke**	**5.38**	**43**	*e*	P	**Pb**	**13 30 08.7**	**-0.3**
ZHN	6.0nm,0.1s 101nm,0.3s			*e*	S	**Sb**	**13 31 16.7**	**+3.3**
ZHN	**Zhinishke**	**5.38**	**43**	*e*	Pn	**Pn**	**13 29 53.1**	**-2.0**
ZHN	baz=46			*e*	Pg	**Pb**	**13 30 07.4**	**-1.5**
KURS	**Kuram**	**5.47**	**39**	*e*	P	**Pb**	**13 30 10.0**	**-0.5**
KURS	11nm,0.1s 30nm,0.3s			*e*	S	**Sb**	**13 31 18.4**	**+2.3**
KPKS	**Kokpek**	**5.71**	**42**	*e*	PN	**Pn**	**13 29 59.4**	**-0.3**
KPKS				*e*			13 30 14.3	
KPKS	**Kokpek**	**5.71**	**42**	*e*	P	**Pb**	**13 30 14.3**	**-0.4**
KPKS	11nm,0.5s 44nm,0.7s			*e*	S	**Sb**	**13 31 26.3**	**+3.2**
KPKS	**Kokpek**	**5.71**	**42**	*e*	Pn	**Pn**	**13 29 59.4**	**-0.3**
KPKS	baz=44			*e*	Pg	**Pb**	**13 30 14.3**	**-0.4**
BTLS	**Baital**	**5.72**	**4**	*e*	PN	**Pn**	**13 29 58.3**	**-1.4**
BTLS				*e*			13 30 15.2	
BTLS				*e*			13 31 23.9	

BTLS Baital 5.72 4 *e*P **Pb 13 30 15.9 +1.2**
6.5nm,0.1s
BTLS *e*S **Sb 13 31 28.2 +5.0**
28nm,0.3s
BTLS Baital 5.72 4 *e*Pn **Pn 13 29 58.4 -1.4**
baz=3.1
BTLS *e*Pg **Pb 13 30 15.2 +0.5**
baz=3.1
BTLS *e*Lg Lg 13 31 23.9
baz=3.1
ARXS Arharly 5.88 33 *e*P **Pb 13 30 18.1 +0.6**
34nm,0.1s
ARXS *e*S **Sb 13 31 32.5 +4.6**
83nm,0.2s
KBL Kabul 5.93 218 Pn 13 30 08.3 +5.4
KBL Kabul 5.93 218 PN **Pn 13 30 08.3 +5.4**
PDGK Podgornoye 6.06 47 PN **Pn 13 30 03.8 -0.7**
PDGK Podgornoye 6.06 47 ⇑Pn **Pn 13 30 03.8 -0.7**
8.0nm,0.7s
PDGK ⇓Lg Lg 13 31 43.0
77nm,1.3s
BLB Baldybastay 6.08 37 *e*P **Pb 13 30 22.1 +1.3**
23nm,0.3s
BLB *e*S **Sb 13 31 38.9 +5.4**
48nm,0.4s
TDK Taldyqorghan 6.76 32 *e*P **Pb 13 30 35.2 +2.7**
42nm,0.1s
TDK *e*S **Sb 13 32 01.8 +8.6**
61nm,0.1s
DJR Jarkent 6.89 42 *e*P **Pb 13 30 36.5 +1.8**
2.0nm,0.1s
DJR *e*S **Sb 13 32 04.1 +7.2**
16nm,0.7s
OTUK Ortayu 8.94 355 ⇑Lg Lg 13 33 10.4
45nm,0.8s
MKAR Makanchi Array 9.88 38 Lg Lg 13 33 42.0
0.2nm,0.3s,baz=242,slow=27,SNR=4.2
MKAR LR LR 13 35 04.9
comp=Z,100nm,21.9s,baz=212,slow=40
WMQ Urumqi 11.59 63 *e*P **Pn 13 31 24.5 +4.3**
KURBB Kurchatov Arra 11.85 16 Lg Lg 13 34 41.1
0.1nm,0.3s,baz=359,slow=15,SNR=15
KURBB LR LR 13 36 04.6
comp=Z,102nm,19.5s,baz=176,slow=38
ABKAR Akbulak array 13.82 320 Pn **Pn 13 31 48.0 -2.6**
AKTO Aktyubinsk 15.54 321 Pn **Pn 13 32 12.1 -1.6**
0.3nm,0.3s,baz=129,slow=14,SNR=11
AKTO LR LR 13 38 43.6
comp=Z,23nm,19.8s,baz=137,slow=39
3.8nm,0.7s
ZAA0 Zalesovo Array 16.55 24 Pn **Pn 13 32 24.1 -2.6**
ZALV Zalesovo Beam 16.55 24 Pn **Pn 13 32 25.2 -1.4**
0.3nm,0.3s,baz=206,slow=9.9,SNR=14
ZALV LR LR 13 38 53.5
comp=Z,58nm,18.9s,baz=158,slow=38
6.6nm,0.8s
ZALV Zalesovo Beam 16.55 24 Pn **Pn 13 32 23.7 -2.9**
GOMU GeErMu 17.20 94 P **Pn 13 32 34.0 -1.4**
GOMU pmax pmax
comp=Z,1.0nm,0.7s
GOMU pmax pmax
comp=Z,72nm,5.3s
ARU Arti 19.72 335 P **Pn 13 33 05.8 +0.1**
baz=160,slow=9.3,SNR=7.8
ARU LR LR 13 41 03.3
comp=Z,62nm,19.3s,baz=142,slow=38
3.0nm,0.6s
ARU Arti 19.72 335 P **P 13 33 03.1 -1.0**
ARU Arti 19.72 335 *d* P **P 13 33 03.4 -0.7**
ARU S **S 13 36 46.3 +0.2**
ARU pmax pmax
comp=Z,3.0nm,0.8s
GTA Gaotai 20.38 81 *e*P **P 13 33 11.3 -0.3**
GTA pP sP 13 33 18.0 -0.9
GTA sP pP 13 33 21.8 +5.1
GTA pmax pmax
comp=Z,6.0nm,1.1s
GNI Garni 22.04 281 *i* P **P 13 33 34.7 +5.2**
GNI pmax pmax
comp=Z,14nm,1.2s
BELG Belogornoye 22.07 315 *i* P **P 13 33 29.1 -0.4**
BELG pmax pmax
comp=Z,5.0nm,1.0s
ONI Oni 22.81 288 P **P 13 33 36.6 -1.0**
ONI IAmb IAmb 13 33 49.5
comp=Z,9.7nm,0.9s
ONI Oni 22.81 288 P **P 13 33 36.6 -1.0**
ONI pmax pmax
comp=Z,10.0nm,0.9s
GOF Gofitskoye 23.14 294⇑ *e*P P 13 33 52.8 +12
KBZ Khabaz 23.20 291 *i* P **P 13 33 42.2 +0.7**
KBZ pmax pmax
comp=Z,2.0nm,0.8s
KIV Kislovodsk 23.36 291 *ce*P **P 13 33 44.7 +1.5**
KIV *e* 13 34 11.1
KIV pmax pmax
comp=Z,15nm,1.5s
KIV MLR MLR
comp=Z,22nm,18.0s
SHA1 Shidzhatmaz 23.38 291 *i* P **P 13 33 43.0 -0.6**
LZH Lanzhou 24.23 88 *e*P **P 13 33 53.5 +1.7**
LZH pP sP 13 33 56.3 -3.1
LZH pmax pmax
comp=Z,16nm,1.3s
SONM Songino Array 25.19 59 P **P 13 34 00.2 -0.1**
comp=Z,2.8nm,0.9s,baz=268,slow=8.7,SNR=5.3
comp=Z,2.8nm,0.9s
SONM Songino Array 25.19 59 IAmb IAmb 13 34 01.7
comp=Z,2.5nm,1.0s
SONM Songino Array 25.19 59 *e*P **P 13 34 00.6 +0.2**
SONM pmax pmax
comp=Z,3.0nm,0.8s
ULN Ulaanbaatar 25.64 60 P **P 13 34 03.0 -1.4**
ULN Ulaanbaatar 25.64 60 *i* P **P 13 34 04.7 +0.3**
ULN pmax pmax
comp=Z,2.0nm,0.9s
HHC Hu-ho-hao-te 29.07 75 *e*P **P 13 34 36.8 +1.6**
HHC pmax pmax
comp=Z,21nm,0.9s
HHC pmax pmax
comp=Z,170nm,5.8s
BR131 Keskin Array S 30.52 284 P **P 13 34 49.3 +1.2**
BR131 Keskin Array S 30.52 284 P **P 13 34 49.3 +1.2**
BR131 pmax pmax
comp=Z,6.0nm,0.9s
BRTR Keskin Array B 30.52 284 P P 13 34 53.5 +5.3
comp=Z,1.9nm,0.9s,baz=74,slow=13,SNR=5.6
AKASG Malin Array Be 32.78 305 P **P 13 35 07.9 +0.2**
comp=Z,0.2nm,0.3s,baz=77,slow=8.0,SNR=4.8
comp=Z,0.2nm,0.3s
AKASG Malin Array Be 32.78 305 *e*P **P 13 35 11.5 +3.8**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
VSU Vasula 35.25 318 *i* P **P 13 35 29.0 0.0**
VSU pmax pmax
comp=Z,16nm,1.0s
FIA1 FINESS Array S 36.28 323 P **P 13 35 38.0 +0.2**
FINES FINESS Array B 36.28 323 P **P 13 35 37.9 +0.1**
comp=Z,0.9nm,0.3s,baz=112,slow=9.3,SNR=8.1
comp=Z,0.9nm,0.3s
FINES FINESS Array B 36.28 323 P **P 13 35 38.0 +0.2**
ARCES ARCESS Array B 39.31 336 P **P 13 36 03.2 -0.1**
comp=Z,1.6nm,0.7s,baz=106,slow=8.9,SNR=5.8
comp=Z,1.6nm,0.7s
ARCES ARCESS Array B 39.31 336 P **P 13 36 03.2 -0.1**
ARCES IAmb IAmb 13 36 04.3
comp=Z,12nm,1.3s
ARCES ARCESS Array B 39.31 336 P **P 13 36 03.2 -0.1**
ARCES pmax pmax
comp=Z,12nm,1.3s
KLR Kul'dur 41.95 57 *i* P **P 13 36 23.1 -2.4**
KLR pmax pmax
comp=Z,8.0nm,3.7s
SSLB Suanglung 42.87 97 P **P 13 36 35.6 +2.4**
GEC2 GERESS Array S 42.93 303 P **P 13 36 32.6 -0.9**
GEC2 IAmb IAmb 13 36 37.4
comp=Z,2.7nm,0.7s
USA0B Ussuriysk Arra 43.15 64 P **P 13 36 36.0 +0.7**
USA0B IAmb IAmb 13 36 47.3
comp=Z,6.3nm,1.1s
USA0B Ussuriysk Arra 43.15 64 P **P 13 36 36.0 +0.7**
USA0B pmax pmax
comp=Z,6.0nm,1.1s
USRK Ussuriysk Ar. 43.15 64 P **P 13 36 35.7 +0.5**
USRK Ussuriysk Ar. 43.15 64 P **P 13 36 35.7 +0.5**
NC303 NORSAR Array S 43.25 321 P **P 13 36 36.0 +0.2**
NC303 IAmb IAmb 13 36 43.9
comp=Z,6.4nm,1.0s
NB201 NORSAR Array S 43.29 321 P **P 13 36 35.8 -0.4**
NB2 NORSAR Subarra 43.33 321 P **P 13 36 35.8 -0.7**
comp=Z,0.4nm,0.4s,baz=107,slow=7.9
NOA NORSAR Array B 43.33 321 P **P 13 36 36.0 -0.5**
comp=Z,0.4nm,0.4s,baz=92,slow=7.9,SNR=4.2
comp=Z,0.4nm,0.4s
NC204 NORSAR Array S 43.55 321 P **P 13 36 38.1 -0.2**
NC204 IAmb IAmb 13 36 52.1
comp=Z,6.9nm,1.0s
MJAR Matsushiro Arr 50.18 72 P **P 13 37 28.7 -1.8**
comp=Z,1.3nm,0.6s,baz=303,slow=8.4,SNR=3.6
comp=Z,1.3nm,0.6s
JCJ Chichijima 57.55 80 LR LR 14 04 47.2
comp=Z,42nm,21.2s,baz=118,slow=38
TORD Torodi Ar. Bea 67.70 269 P **P 13 39 31.4 -1.0**
comp=Z,0.4nm,0.6s,baz=57,slow=6.8,SNR=5.6
comp=Z,0.4nm,0.6s
TORD Torodi Ar. Bea 67.70 269 P **P 13 39 33.2 +0.8**
TORD IAmb IAmb 13 39 38.9
comp=Z,2.2nm,1.1s
IMAR Indian Mountai 68.89 19 P **P 13 39 37.3 -1.8**
INK Inuvik 70.79 10 P **P 13 39 49.5 -1.2**
comp=Z,1.0nm,0.6s,baz=303,slow=2.8,SNR=5.0
comp=Z,1.0nm,0.6s
INK Inuvik 70.79 10 P **P 13 39 49.7 -1.0**
INK IAmb IAmb 13 39 55.5
comp=Z,3.7nm,1.1s
INK Inuvik 70.79 10 P **P 13 39 49.7 -1.0**
INK pmax pmax
comp=Z,4.0nm,1.2s
ILAR Eielson Array 71.52 17 P **P 13 39 53.4 -1.8**
comp=Z,0.7nm,0.8s,baz=325,slow=5.2,SNR=8.7
comp=Z,0.7nm,0.8s
ILAR Eielson Array 71.52 17 *e*P **P 13 39 53.0 -2.2**
ILAR pmax pmax
comp=Z,1.0nm,0.8s
SCRK Sand Creek 72.85 16 P **P 13 40 01.7 -1.6**
SCRK IAmb IAmb 13 40 22.1
comp=Z,3.4nm,1.4s
BCAR Beaver Creek A 74.13 16 P **P 13 40 09.5 -1.3**
YKA Yellowknife Ar 78.31 4 P **P 13 40 33.3 -1.2**
comp=Z,0.3nm,0.6s,baz=351,slow=4.5,SNR=4.0
comp=Z,0.3nm,0.6s
ASAR Alice Springs 84.35 127 P **P 13 41 05.3 -1.8**
comp=Z,0.2nm,0.6s,baz=324,slow=5.4,SNR=5.1
comp=Z,0.2nm,0.6s
ASAR Alice Springs 84.35 127 P **P 13 41 09.4 +2.4**
ASAR Alice Springs 84.35 127 P **P 13 41 09.5 +2.4**

NEIC ***27*** *13:46:21.9±2.7, 14°.24N±0°.09×147°.00E±0°.05, h9km±6km, mb4.3/1, Error ellipse: s-maj=12.9km s-min=6.5km az=183.0*
IDC ***27*** *13:46:21.6±3.1, 14°.43N×146°.94E, h0km, mb3.8/6, mbtmp3.8/7, ML3.8/1, MS2.2/2, Error ellipse: s-maj=76.4km s-min=29.3km az=146.0*

ISC 27 13:46:21.3±0.9, 14°.2N±0°.1×147°.05E±0°.09, h10km, n13, σ1°16/13, mb4.0/7, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.20**	**255**	Pn		**Pn**		**13 46 58.4**	**+0.5**
	31nm,0.3s,baz=78,slow=3.8,SNR=20								
GUMO				Sn		**Sn**		**13 47 24.6**	**-0.6**
	30nm,0.3s,baz=328,slow=23,SNR=7.5								
GUMO				LR		LR		13 47 51.3	
	comp=Z,43nm,20.1s,baz=152,slow=41								
	82nm,0.3s								
GUMO	**Guam**	**2.20**	**255**			**Pn**		**13 46 58.0**	**+0.1**
PATS	**Pohnpei**	**13.24**	**122**	Pn		**Pn**		**13 49 29.0**	**-0.6**
KSRS	**Korea Array**	**28.78**	**327**	P		**P**		**13 52 17.1**	**-2.3**
	0.4nm,0.5s,baz=152,slow=10.0,SNR=2.2								
	0.4nm,0.5s								
ASAJ	**Asahikawa**	**30.10**	**354**	LR		LR		14 06 32.4	
	comp=Z,5.0nm,18.9s,baz=88,slow=41								
CMAR	**Chiang Mai Arr**	**46.27**	**282**	P		**P**		**13 54 48.5**	**+1.0**
	0.5nm,0.6s,baz=83,slow=7.4,SNR=4.3								
	0.5nm,0.6s								
ZAA0	**Zalesovo Array**	**62.41**	**324**	P		**P**		**13 56 44.7**	**+0.3**
ZAA0				IAmb		IAmb		13 56 55.5	
	comp=Z,2.5nm,1.1s								
ZALV	**Zalesovo Beam**	**62.41**	**324**	P		**P**		**13 56 45.0**	**+0.6**
	comp=Z,1.2nm,0.5s,baz=104,slow=6.3,SNR=4.9								
	comp=Z,1.2nm,0.5s								
MKAR	**Makanchi Array**	**62.56**	**316**	P		**P**		**13 56 46.9**	**+1.2**
	comp=Z,0.5nm,0.5s,baz=83,slow=9.9,SNR=4.7								
	comp=Z,0.5nm,0.5s								
ILAR	**Eielson Array**	**67.15**	**25**	P		**P**		**13 57 15.9**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=247,slow=6.1,SNR=4.9								
	comp=Z,0.3nm,0.6s								
BMAR	**Burnt Mountain**	**68.76**	**23**	P		**P**		**13 57 27.0**	**+1.7**
ABKAR	**Akbulak array**	**77.55**	**318**	P		**P**		**13 58 17.2**	**-0.3**
FINES	**FINESS Array B**	**91.53**	**336**	P		**P**		**13 59 27.4**	**-0.7**
	comp=Z,1.3nm,0.7s,baz=141,slow=7.3,SNR=4.7								
	comp=Z,1.3nm,0.7s								

MAN 27 13:46:40.5, 16°.19N×120°.23E, h9km, mb3.9, ML2.6, MS2.2, 2C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.36**	**302**⇓	*e*P		Pn		13 46 48.3	+1.9
BOLP				*e*S				13 46 55.3	
SMPP	**San Manuel, Pa**	**0.44**	**95**⇑	*i*P		Pb		13 46 49.5	0.0
SMPP				*e*S				13 46 56.9	
SAMP	**Sagada Mountai**	**1.09**	**36**⇑	*i*P		Pn		13 47 00.8	+0.6
SAMP				*e*S				13 47 21.4	

NEIC ***27*** *13:47:31.8±1.7, 6°.08S±0°.08×145°.30E±0°.02, h118km±7km, mb4.7/105, Error ellipse: s-maj=12.0km s-min=1.4km az=189.0*
DJA ***27*** *13:47:34.3±0.4, 6°.S±3°×14°.5E±°, h120km±6km, M4.5/22, mB4.6/3, mb4.6/22, MLv4.6/4, Mw(mB)3.8/3*
IDC ***27*** *13:47:34.0±2.1, 6°.15S×145°.54E, h138km±23km, mb4.0/14, mbtmp4.5/18, Error ellipse: s-maj=22.7km s-min=13.1km az=108.0*

ISC 27 13:47:31.1±0.4, 6°.10S±0°.05×145°.46E±0°.06, h109km, n164, σ1°04/163, mb4.7/69, 1C-1D, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.69**	**153**	P		**Pn**		**13 48 28.0**	**+1.6**
	113nm,0.3s,baz=37,slow=5.3,SNR=99								
PMG				S		**Sn**		**13 49 09.6**	**+0.5**
	200nm,0.5s,baz=339,slow=23,SNR=20								
PMG	**Port Moresby**	**3.69**	**153**			**Pn**		**13 48 27.5**	**+1.1**
PMG	**Port Moresby**	**3.69**	**153**	P		**Pn**		**13 48 27.8**	**+1.5**
PMG	**Port Moresby**	**3.69**	**153**	P		**Pn**		**13 48 27.9**	**+1.6**
KRVT	**Keravat (AS076**	**6.78**	**75**	P		**Pn**		**13 49 11.6**	**+3.5**
	59nm,0.9s,baz=176,slow=2.4,SNR=8.4								
RABL	**Rabaul**	**6.94**	**74**			**Pn**		**13 49 11.7**	**+1.4**
SMPI	**Sarmi**	**7.88**	**301**	P		**Pn**		**13 49 24.9**	**+1.9**
	0.1nm6.6nm,0.9s								
COEN	**Coen**	**8.13**	**196**	Pn		**Pn**		**13 49 28.6**	**+2.3**
MTSU	**Mount Surprise**	**12.01**	**185**	P		**Pn**		**13 50 22.2**	**+3.3**
FAKI	**Fak Fak**	**13.55**	**283**	P		**P**		**13 50 44.2**	**0.0**
FAKI	**Fak Fak**	**13.55**	**283**	P		**Pn**		**13 50 39.7**	**+0.7**
	23nm,0.7s								
CTA	**Charters Tower**	**13.93**	**177**	P		**P**		**13 50 46.4**	**-2.0**
	11nm,1.0s,baz=344,slow=14,SNR=14								
CTAO	**Charters Tower**	**13.93**	**177**	Pn		**Pn**		**13 50 45.4**	**+1.5**
KDU	**Kakadu**	**14.38**	**242**	P		**Pn**		**13 50 50.9**	**+1.1**
QIS	**Mount Isa**	**15.46**	**201**	P		**Pn**		**13 51 03.5**	**+0.2**
MTN	**Manton Dam**	**15.64**	**244**			**Pn**		**13 51 04.5**	**-1.1**
MTN				IAmb		IAmb		13 51 09.1	
	comp=Z,29nm,0.7s								
MTN	**Manton Dam**	**15.64**	**244**	P		**P**		**13 51 06.5**	**-0.9**
WB0	**Warramunga Arr**	**17.33**	**217**			**P**		**13 51 24.8**	**-1.4**
AAI	**Ambon**	**17.37**	**277**	P		**Pn**		**13 51 28.1**	**+1.2**
	comp=Z,37nm,1.1s								
WR0	**Warramunga Arr**	**17.39**	**217**			**P**		**13 51 25.6**	**-1.2**
WRAB	**Tennant Creek**	**17.48**	**217**	P		**P**		**13 51 27.6**	**-0.2**
WRAB				IAmb		IAmb		13 51 28.6	
	comp=Z,21nm,0.8s								
WRAB	**Tennant Creek**	**17.48**	**217**	P		**Pn**		**13 51 27.8**	**-0.4**
WB2	**Warramunga Arr**	**17.49**	**217**			**P**		**13 51 27.2**	**-0.7**
WB2				IAmb		IAmb		13 51 28.7	
	comp=Z,20nm,0.7s								
WRA	**Warramunga Arr**	**17.50**	**217**	P		**P**		**13 51 27.4**	**-0.5**
	comp=Z,14nm,0.8s,baz=42,slow=12,SNR=91								
PATS	**Pohnpei**	**18.15**	**45**	P		**Pn**		**13 51 37.0**	**+0.7**

NLAI Namlea 18.52 278 P **Pn 13 51 40.8 +0.1**
comp=Z,34nm,0.5s
KNRA Kununurra 18.94 238 P **P 13 51 43.0 -0.8**
KNRA IAmb IAmb 13 51 48.2
comp=Z,21nm,0.7s
KNRA Kununurra 18.94 238 P **P 13 51 43.7 -0.1**
TNTI Ternate 19.31 290 P **P 13 51 49.1 +1.2**
comp=Z,15nm,0.7s
GUMO Guam 19.57 358 P **P 13 51 51.2 +0.6**
SANI Sanana 19.83 281 P **Pn 13 51 56.4 +0.3**
comp=Z,16nm,0.6s
EIDS Eidsvold 19.90 165 P **Pn 13 51 55.5 -1.3**
QLP Quilpie 20.40 183 P Pn 13 52 00.8 -1.8
AS31 Alice Springs 20.70 211 **P 13 52 02.0 -0.8**
ASAR Alice Springs 20.71 211 P **P 13 52 02.5 -0.4**
comp=Z,6.7nm,0.8s,baz=49,slow=7.9,SNR=88
comp=Z,6.7nm,0.8s
ASAR Alice Springs 20.71 211 **P 13 52 02.2 -0.7**
SOEI Soe 21.30 259 P **P 13 52 11.5 +2.0**
comp=Z,39nm,0.5s
MMRI Maumere 23.17 262 P **P 13 52 26.8 -1.6**
MMRI IAmb IAmb 13 52 29.0
comp=Z,47nm,1.1s
OOD Oodnadatta 23.49 202 P **P 13 52 31.3 +0.1**
ARMA Armidale 24.88 167 P **P 13 52 44.3 +0.4**
KAPI Kappang 25.61 271 P **P 13 52 51.3 +0.7**
comp=Z,7.5nm,0.7s,baz=173,slow=16,SNR=3.9
comp=Z,7.5nm,0.7s
STKA Stephens Creek 25.90 188 P **P 13 52 53.3 +0.3**
comp=Z,3.3nm,0.3s,baz=357,slow=9.6,SNR=28
comp=Z,3.3nm,0.3s
STKA Stephens Creek 25.90 188 P **P 13 52 52.9 -0.1**
BBOO Buckleboo 27.98 197 P **P 13 53 11.3 -0.3**
BBOO IAmb IAmb 13 53 23.4
comp=Z,26nm,1.4s
TPUB Ta-pu 37.98 321 P **P 13 54 36.1 -2.6**
SKJI Sukabumi 38.66 266 P **P 13 54 45.1 +0.6**
comp=Z,191nm,0.5s
JGF Kuroka 42.17 350 P **P 13 55 11.2 -1.9**
JHS Saijyo 42.51 345 P **P 13 55 14.7 -1.1**
JHS IAmb IAmb 13 55 17.8
comp=Z,28nm,1.4s
NJ2 Nanjing 45.63 328 *e*P **P 13 55 40.3 -0.5**
NJ2 pmax pmax
comp=Z,6.0nm,0.7s
KSRS Korea Array 46.32 341 P **P 13 55 45.9 -0.2**
comp=Z,1.9nm,0.7s,baz=160,slow=7.8,SNR=5.8
comp=Z,1.9nm,0.7s
JTM Tenmabayashi 46.83 355 P **P 13 55 49.2 -0.8**
JTM IAmb IAmb 13 55 50.3
comp=Z,10nm,0.6s
SEHB SEOHWA 46.95 341 P **P 13 55 50.9 -0.2**
SEHB IAmb IAmb 13 56 02.1
comp=Z,16nm,1.3s
USA0B Ussuriysk Arra 51.52 348 P **P 13 56 25.5 -0.2**
USA0B IAmb IAmb 13 56 31.9
comp=Z,4.9nm,0.8s
USRK Ussuriysk Ar. 51.52 348 P **P 13 56 25.8 0.0**
comp=Z,3.9nm,0.5s,baz=167,slow=8.1,SNR=14
comp=Z,3.9nm,0.5s
USRK Ussuriysk Ar. 51.52 348 P **P 13 56 25.4 -0.3**
HNS HongShan 51.92 329 ⇓P **P 13 56 28.8 0.0**
HNS pmax pmax
comp=Z,13nm,0.6s
CMAR Chiang Mai Arr 51.96 299 P **P 13 56 30.7 +1.3**
comp=Z,2.1nm,0.5s,baz=119,slow=5.9,SNR=16
comp=Z,2.1nm,0.5s
XAN Xi'an 52.80 322 ⇑P **P 13 56 35.8 +0.4**
XAN pmax pmax
comp=Z,17nm,0.7s
YSS Yuzh-Sakhalins 52.88 358 P **P 13 56 35.5 -0.1**
HHC Hu-ho-hao-te 56.13 329 *e*P **P 13 57 03.0 +3.5**
HHC pmax pmax
comp=Z,19nm,1.0s
HHC pmax pmax
comp=Z,91nm,5.2s
KLR Kul'dur 56.39 349 P **P 13 57 01.1 +0.1**
comp=Z,2.1nm,0.6s,baz=222,slow=2.4,SNR=6.9
comp=Z,2.1nm,0.6s
XLT XiLinHaoTe 56.40 335 *e*P **P 13 57 01.0 -0.3**
XLT pP pP 13 57 25.5 -2.5
XLT sP sP 13 57 40.5 +0.3
XLT pmax pmax
comp=Z,7.0nm,0.9s
LZH Lanzhou 57.30 320 *e*P **P 13 57 09.5 +1.6**
LZH pP pP 13 57 38.0 +3.0
LZH sP sP 13 57 47.8 +0.5
LZH pmax pmax
comp=Z,20nm,1.3s
PEA0B Petropavlovsk- 59.89 8 P **P 13 57 25.2 -0.1**
PETK Petropavlovsk- 59.89 8 P **P 13 57 25.4 0.0**
comp=Z,3.3nm,0.8s,baz=187,slow=9.6,SNR=10
comp=Z,3.3nm,0.8s
ULN Ulaanbaatar 63.47 332 P **P 13 57 50.4 +0.6**
ULN IAmb IAmb 13 57 51.0
comp=Z,4.0nm,0.6s
SONM Songino Array 63.76 332 P **P 13 57 52.5 +0.9**
comp=Z,2.1nm,0.6s,baz=150,slow=6.2,SNR=4.8
comp=Z,2.1nm,0.6s
CASY Casey 64.76 195 P **P 13 57 56.1 -1.6**
MA2 Magadan 65.60 3 P **P 13 58 01.0 -2.1**
WMQ Urumqi 71.88 320 *e*P **P 13 58 43.0 +0.5**
UNV Unalaska Valle 72.00 28 P **P 13 58 41.6 -1.3**
UNV IAmb IAmb 13 58 43.7
comp=Z,6.8nm,0.6s
AKUT Akutan 72.52 28 P **P 13 58 45.3 -0.7**
AKUT IAmb IAmb 13 59 09.2
comp=Z,24nm,1.1s
BILL Bilibino 75.42 8 P **P 13 59 02.1 -0.5**
SDPT Sand Point 75.72 29 P **P 13 59 03.4 -1.1**
CNBA Chernabura Isl 75.85 29 P **P 13 59 04.4 -0.9**
CNBA IAmb IAmb 13 59 26.1
comp=Z,23nm,1.4s
MK31 Makanchi Array 76.61 321 P **P 13 59 07.6 -2.3**
MKAR Makanchi Array 76.61 321 P **P 13 59 10.4 +0.5**
comp=Z,1.4nm,0.4s,baz=99,slow=7.8,SNR=13
comp=Z,1.4nm,0.4s
MKAR Makanchi Array 76.61 321 P **P 13 59 07.9 -2.0**
ZAA0 Zalesovo Array 78.29 328 P **P 13 59 18.0 -1.0**
ZALV Zalesovo Beam 78.29 328 P **P 13 59 18.6 -0.4**
comp=Z,4.1nm,0.5s,baz=114,slow=5.4,SNR=17
comp=Z,4.1nm,0.5s
ZALV Zalesovo Beam 78.29 328 P **P 13 59 17.8 -1.2**
TNA Tin City 79.15 18 P **P 13 59 23.7 +0.2**
BOOM Boomskoye usch 79.27 315 P **P 13 59 23.9 -1.0**
BOOM IAmb IAmb 13 59 26.4
comp=Z,6.6nm,0.7s
ANM Nome 79.31 19 P **P 13 59 24.7 +0.4**
ANM IAmb IAmb 13 59 52.4
comp=Z,18nm,1.1s
OHAK Old Harbor 80.12 29 P **P 13 59 29.0 +0.2**
OHAK IAmb IAmb 13 59 45.1
comp=Z,23nm,1.3s
O18K Koktuh Hills 80.51 26 P **P 13 59 30.6 -0.4**
O18K IAmb IAmb 13 59 54.4
comp=Z,13nm,1.4s
N18K Kilae Creek 80.63 25 P **P 13 59 31.8 +0.2**
KDAK Kodiak Island 80.72 29 P **P 13 59 31.9 -0.1**
KDAK IAmb IAmb 13 59 54.0
comp=Z,16nm,1.1s
Q19K Cape Douglas, 80.76 27 P **P 13 59 32.1 -0.3**
SVW2 Sparrevohn 80.98 25 P **P 13 59 34.1 +0.7**
N19K Bonanza Creek 81.30 25 P **P 13 59 35.4 +0.1**
N19K IAmb IAmb 13 59 36.3
comp=Z,12nm,1.4s
MAW Mawson 81.57 203 P **P 13 59 36.4 0.0**
comp=Z,1.6nm,0.6s,baz=27,slow=5.4,SNR=3.7
comp=Z,1.6nm,0.6s
MAW Mawson 81.57 203 P **P 13 59 36.5 0.0**
L19K White Mountain 81.82 24 P **P 13 59 38.4 +0.5**
RSO Redoubt South 81.88 26 P **P 13 59 37.6 -0.9**
HOM Homer 82.01 27 P **P 13 59 38.9 0.0**
CNPM China Poot 82.13 27 P **P 13 59 39.3 -0.3**
M20K Styx River 82.39 25 P **P 13 59 40.1 -0.8**
K20K Telida 82.72 23 P **P 13 59 42.8 +0.3**
K20K IAmb IAmb 13 59 43.9
comp=Z,5.1nm,0.6s
J20K Nowinta River 83.09 23 P **P 13 59 44.9 +0.5**
J20K IAmb IAmb 13 59 45.9
comp=Z,6.0nm,0.9s
SKT Skwentna 83.10 25 P **P 13 59 43.1 -1.4**
SEW Seward 83.19 27 P **P 13 59 43.6 -1.3**
SUA Susitna One 83.21 26 P **P 13 59 43.9 -1.3**
SUA IAmb IAmb 13 59 44.7
comp=Z,7.0nm,0.8s

O22K	**Cooper Landing**	**83.23**	**27**	P	**P**	**13 59 45.2**	**0.0**
PPLA	**Purkeypile**	**83.25**	**24**	P	**P**	**13 59 45.0**	**-0.4**
PPLA				IAmb	IAmb	14 00 09.1	
	comp=Z,10nm,1.3s						
RC01	**Rabbit Creek A**	**83.48**	**26**	P	**P**	**13 59 46.0**	**-0.5**
PMR	**Palmer**	**83.96**	**26**	P	**P**	**13 59 48.0**	**-0.8**
PMR				IAmb	IAmb	13 59 48.5	
	comp=Z,4.3nm,0.7s						
KTH	**Kantishna Hill**	**84.06**	**24**	P	**P**	**13 59 48.4**	**-1.1**
KTH				IAmb	IAmb	13 59 49.1	
	comp=Z,9.0nm,1.1s						
GHO	**Glory Hole Cre**	**84.13**	**26**	P	**P**	**13 59 49.0**	**-0.8**
GHO				IAmb	IAmb	13 59 54.9	
	comp=Z,16nm,1.5s						
IMAR	**Indian Mountai**	**84.13**	**21**	P	**P**	**13 59 49.2**	**-0.4**
TRF	**Thorofare Moun**	**84.27**	**24**	P	**P**	**13 59 49.4**	**-1.3**
TRF				IAmb	IAmb	13 59 52.0	
	comp=Z,5.5nm,0.6s						
BPAW	**Bear Paw Mtn.**	**84.28**	**23**	P	**P**	**13 59 50.0**	**-0.5**
H21K	**Melozitna Rive**	**84.31**	**22**	P	**P**	**13 59 50.6**	**-0.1**
I21K	**Tanana**	**84.39**	**22**	P	**P**	**13 59 50.8**	**-0.2**
SML	**Sawmill**	**84.40**	**26**	P	**P**	**13 59 50.9**	**-0.3**
SML				IAmb	IAmb	13 59 51.7	
	comp=Z,9.4nm,0.7s						
GLI	**Glacier Island**	**84.58**	**27**	P	**P**	**13 59 51.6**	**-0.4**
MLY	**Manley**	**84.79**	**22**	P	**P**	**13 59 52.9**	**-0.2**
MLY				IAmb	IAmb	13 59 53.8	
	comp=Z,9.9nm,0.7s						
FID	**Port Fidalgo**	**84.81**	**27**	P	**P**	**13 59 52.8**	**-0.4**
FID				IAmb	IAmb	14 00 09.4	
	comp=Z,18nm,1.2s						
RND	**Reindeer**	**84.84**	**24**	P	**P**	**13 59 52.3**	**-1.1**
SCM	**Sheep Creek Mo**	**84.84**	**26**	P	**P**	**13 59 53.4**	**-0.1**
SCM				IAmb	IAmb	14 00 15.1	
	comp=Z,16nm,1.2s						
BWN	**Browne**	**84.91**	**24**	P	**P**	**13 59 52.5**	**-1.1**
MCK	**McKinley**	**84.94**	**24**	P	**P**	**13 59 53.0**	**-0.8**
EYAK	**Cordova Ski Ar**	**85.06**	**28**	P	**P**	**13 59 54.0**	**-0.4**
EYAK				IAmb	IAmb	13 59 55.5	
	comp=Z,14nm,1.0s						
DIV	**Divide**	**85.27**	**27**	P	**P**	**13 59 55.8**	**+0.2**
KLU	**Klutina**	**85.33**	**27**	P	**P**	**13 59 56.0**	**+0.1**
KLU				IAmb	IAmb	13 59 56.8	
	comp=Z,6.8nm,0.8s						
I23K	**Minto, Yukon-K**	**85.37**	**23**	P	**P**	**13 59 55.4**	**-0.4**
I23K				IAmb	IAmb	13 59 56.2	
	comp=Z,3.2nm,0.5s						
M24K	**Tolsona, Glenn**	**85.45**	**26**	P	**P**	**13 59 56.7**	**+0.2**
WRH	**Wood River Hil**	**85.58**	**23**	P	**P**	**13 59 55.9**	**-1.1**
WRH				IAmb	IAmb	13 59 56.6	
	comp=Z,7.3nm,0.7s						
H23K	**Yukon River**	**85.59**	**22**	P	**P**	**13 59 55.9**	**-1.1**
BMRM	**Bremner River**	**85.74**	**27**	P	**P**	**13 59 56.8**	**-1.1**
BMRM				IAmb	IAmb	14 00 13.9	
	comp=Z,12nm,1.1s						
CCB	**Clear Creek Bu**	**85.77**	**23**	P	**P**	**13 59 56.4**	**-1.5**
CCB				IAmb	IAmb	13 59 57.3	
	comp=Z,11nm,0.7s						
TCOL	**CIGO, UAF Yank**	**85.83**	**23**	P	**P**	**13 59 56.9**	**-1.3**
COLA	**College**	**85.84**	**23**	P	**P**	**13 59 56.9**	**-1.3**
N25K	**Chitina, Valde**	**85.97**	**27**	P	**P**	**13 59 58.9**	**-0.1**
N25K				IAmb	IAmb	14 00 15.8	
	comp=Z,15nm,1.5s						
HDA	**Harding Lake**	**86.01**	**24**	P	**P**	**13 59 57.6**	**-1.5**
HDA				IAmb	IAmb	13 59 59.1	
	comp=Z,4.7nm,0.6s						
PAX	**Paxson**	**86.08**	**25**	P	**P**	**13 59 59.1**	**-0.5**
IL31		**86.18**	**23**	P	**P**	**13 59 57.7**	**-2.1**
ILAR	**Eielson Array**	**86.18**	**23**	P	**P**	**13 59 58.6**	**-1.3**
	comp=Z,7.9nm,0.6s,baz=251,slow=4.9,SNR=111						
	comp=Z,7.9nm,0.6s						
ILAR	**Eielson Array**	**86.18**	**23**	P	**P**	**13 59 57.8**	**-2.1**
H24K	**Noodor Dome**	**86.22**	**22**	P	**P**	**13 59 59.7**	**-0.5**
GLB	**Gilahina Butte**	**86.27**	**27**	P	**P**	**14 00 00.1**	**-0.4**
GLB				IAmb	IAmb	14 00 15.2	
	comp=Z,8.1nm,1.0s						
VRDI	**Verde Repeater**	**86.36**	**27**	P	**P**	**14 00 00.8**	**-0.3**
VRDI				IAmb	IAmb	14 00 10.3	
	comp=Z,4.8nm,0.8s						
WAX	**Waxell Ridge**	**86.38**	**28**	P	**P**	**14 00 01.0**	**-0.1**
RIDG	**Independent Ri**	**86.62**	**25**	P	**P**	**14 00 01.6**	**-0.5**
RIDG				IAmb	IAmb	14 00 02.2	
	comp=Z,4.3nm,0.6s						
J25K	**Salcha River,**	**86.72**	**24**	P	**P**	**14 00 02.1**	**-0.6**
J25K				IAmb	IAmb	14 00 02.8	
	comp=Z,8.4nm,0.7s						
TOLK	**Toolik Lake Re**	**86.79**	**19**	P	**P**	**14 00 03.4**	**+0.4**
TOLK				IAmb	IAmb	14 00 04.2	
	comp=Z,12nm,1.4s						
MENT	**Mentasta**	**86.81**	**26**	P	**P**	**14 00 02.9**	**-0.3**
MENT				IAmb	IAmb	14 00 03.9	
	comp=Z,4.9nm,0.7s						
DOT	**Dot Lake**	**86.91**	**25**	P	**P**	**14 00 03.1**	**-0.5**
DOT				IAmb	IAmb	14 00 04.2	
	comp=Z,6.5nm,0.8s						
SCRK	**Sand Creek**	**87.06**	**25**		**P**	**14 00 03.9**	**-0.5**
BARN	**Barnard Glacie**	**87.12**	**28**	P	**P**	**14 00 05.3**	**+0.4**
TABL	**Table Mountain**	**87.18**	**28**	P	**P**	**14 00 04.2**	**-1.0**
J26L	**Joseph Creek**	**87.41**	**24**		**P**	**14 00 05.9**	**-0.2**
J26L				IAmb	IAmb	14 00 06.8	
	comp=Z,4.2nm,0.7s						
M27K	**Edge Creek, AK**	**87.43**	**26**	P	**P**	**14 00 06.4**	**+0.2**
M27K				IAmb	IAmb	14 00 07.5	
	comp=Z,8.2nm,0.8s						
L27K	**Beaver Creek,**	**87.67**	**26**	P	**P**	**14 00 07.2**	**0.0**
BCAR	**Beaver Creek A**	**87.69**	**26**	P	**P**	**14 00 07.2**	**-0.1**
BMAR	**Burnt Mountain**	**88.04**	**21**	P	**P**	**14 00 09.3**	**+0.4**
HYT	**Haines Junctio**	**89.01**	**29**	P	**P**	**14 00 13.4**	**-0.3**
HYT				IAmb	IAmb	14 00 15.0	
	comp=Z,3.7nm,0.7s						
DAWY	**Dawson**	**89.01**	**25**	P	**P**	**14 00 13.8**	**+0.3**
DAWY				IAmb	IAmb	14 00 14.7	
	comp=Z,6.1nm,0.7s						
M30M	**Minto, Yukon**	**89.76**	**27**	P	**P**	**14 00 17.1**	**0.0**
I29M	**Ogilvie Camp,**	**89.81**	**24**	P	**P**	**14 00 16.9**	**-0.3**
I29M				IAmb	IAmb	14 00 18.0	
	comp=Z,4.8nm,1.0s						
EPYK	**Eagle Plains**	**90.69**	**23**	P	**P**	**14 00 21.1**	**-0.2**
EPYK				IAmb	IAmb	14 00 22.0	
	comp=Z,6.1nm,0.8s						
YKA	**Yellowknife Ar**	**99.97**	**28**	P	**Pdif**	**14 01 03.4**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=273,slow=4.9,SNR=7.3						
	comp=Z,0.5nm,0.7s						
GERES	**GERESS Array B**	**121.12**	**325**	PKP	**PKPdf**	**14 06 11.0**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=63,slow=6.1,SNR=4.7						
TORD	**Torodi Ar. Bea**	**143.63**	**284**	PKP	PKPab	14 06 50.7	-0.4
	comp=Z,0.5nm,0.3s,baz=72,slow=3.3,SNR=3.7						

TAP ***27*** *13:47:33.9,24˚.37N×121˚.99E,h20km,ML3.3,C*
JMA ***27*** *13:47:33.2±0.2,24˚N±.1˚×122˚.0E±0˚.8,h44km±4km, MV2.9/6, TAIWAN REGION*
ISC 27 13:47:33.4±0.9,**24˚.35N**±0˚.02×**122˚.04E**±0˚.02,**h16**km±6km, **n103,**σ1§**00**/180,**3C-10D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EWUT	**Wuta**	**0.26**	**292**	⇓*i*	P		**Pg**	**13 47 39.3**	**+0.2**
	baz=297								
EWUT				*i*	S		**Sg**	**13 47 43.2**	**+0.2**
	baz=297								
EHP	**Heping Village**	**0.28**	**262**	P	P		**Pb**	**13 47 39.5**	**-0.5**
	baz=260								
EHP				S			**Sg**	**13 47 44.0**	**+0.4**
	baz=260								
ENA	**Nanau**	**0.29**	**286**	⇓*i*	P		**Pg**	**13 47 39.6**	**0.0**
	baz=290								
ENA				*i*	S		**Sg**	**13 47 43.6**	**-0.2**
	baz=290								
TWC	**Suao**	**0.31**	**326**	⇓*i*	P		**Pg**	**13 47 40.2**	**+0.1**
	baz=338								
TWC				*i*	S		**Sb**	**13 47 44.1**	**-1.4**
	baz=338								
NDS	**Dongshan**	**0.41**	**314**	⇓*i*	P		**Pb**	**13 47 42.0**	**-0.3**
	baz=317								
NDS				S			**Sb**	**13 47 47.3**	**-1.0**
	baz=317								
ETL	**Fush Village**	**0.43**	**244**	P	P		**Pg**	**13 47 42.1**	**+0.1**
	baz=241								
ETL				*e*S			**Sb**	**13 47 49.0**	**+0.2**
	baz=241								
NACB	**Ninganchiao**	**0.45**	**247**	⇓*i*	P		**Pg**	**13 47 42.1**	**-0.2**
	baz=241								
NACB				S			**Sb**	**13 47 48.6**	**-0.6**
	baz=241								
TWD	**Chiawan**	**0.49**	**237**	P			**Pb**	**13 47 43.3**	**-0.3**
	baz=233								
TWD				S			**Sn**	**13 47 52.0**	**-1.8**
	baz=233								
ILA	**Ilan**	**0.49**	**327**	P			**Pg**	**13 47 43.6**	**+0.4**
	baz=330								
ILA				S			**Sb**	**13 47 50.1**	**-0.5**
	baz=330								
EGS		**0.51**	**348**	P			**Pg**	**13 47 44.1**	**+0.7**
	baz=351								
EGS				S			**Sg**	**13 47 50.4**	**+0.1**
	baz=351								
TWE	**Neicheng**	**0.51**	**317**	⇓*i*	P		**Pg**	**13 47 43.6**	**+0.1**
	baz=322								
TWE				S			**Sb**	**13 47 49.9**	**-1.1**
	baz=322								
LATG	**Datong**	**0.51**	**292**	⇓*i*	P		**Pg**	**13 47 43.5**	**-0.1**
	baz=298								
LATG				S			**Sg**	**13 47 49.6**	**-0.7**
	baz=298								
ETLH	**Xiulin Townshi**	**0.53**	**255**	P			**Pb**	**13 47 43.7**	**-0.6**
	baz=256								
ETLH				S			**Sg**	**13 47 51.3**	**+0.2**
	baz=256								
NTC	**Toucheng**	**0.54**	**339**	*e*P			**Pg**	**13 47 44.5**	**+0.4**
	baz=346								
NTC				*e*S			**Sb**	**13 47 50.7**	**-1.3**
	baz=346								
HWA	**Hwalien**	**0.55**	**227**	*e*P			**Pn**	**13 47 46.0**	**-0.4**
	baz=219								
HWA				*e*S			**Sn**	**13 47 55.3**	**+0.1**
	baz=219								
FUSB	**Fushanzhiwuyua**	**0.58**	**315**	⇓*i*	P		**Pg**	**13 47 45.2**	**+0.2**
	baz=318								
FUSB				S			**Sg**	**13 47 52.4**	**-0.4**
	baz=318								
NNSB	**Datong**	**0.61**	**278**	⇓*i*	P		**Pg**	**13 47 45.4**	**0.0**
	baz=282								
NNSB				S			**Sg**	**13 47 53.0**	**-0.6**
	baz=282								
NNSH	**Datong**	**0.61**	**278**	P			**Pg**	**13 47 45.4**	**0.0**
	baz=282								
NNSH				*e*S			**Sg**	**13 47 52.8**	**-0.8**
	baz=282								
NNS	**Nan Shan**	**0.62**	**279**	P			**Pg**	**13 47 45.4**	**-0.2**
	baz=282								
NNS				S			**Sg**	**13 47 53.1**	**-0.7**
	baz=282								
TEYL	**Yanliau Villag**	**0.63**	**220**	*e*P			**Pn**	**13 47 46.8**	**-0.8**
	baz=216								
TEYL				*e*S			**Sn**	**13 47 58.0**	**+0.7**
	baz=216								
ETM	**Tongmen**	**0.63**	**233**	*e*P			**Pb**	**13 47 45.9**	**-0.1**
	baz=228								
TIPB	**Shuangxi**	**0.65**	**342**	P			**Pg**	**13 47 46.5**	**+0.3**
	baz=347								
TIPB				S			**Sg**	**13 47 54.5**	**-0.4**
	baz=347								
NWLT	**Wulai**	**0.65**	**311**	*e*P			**Pg**	**13 47 46.3**	**+0.1**
	baz=308								
NWLT				S			**Sb**	**13 47 53.9**	**-1.4**
	baz=308								
TWB1	**Santiao Chiao**	**0.66**	**356**	*e*P			**Pg**	**13 47 46.8**	**+0.4**
	baz=355								
TWB1				*e*S			**Sb**	**13 47 54.5**	**-0.9**
	baz=355								
YHNB	**Yeheng**	**0.69**	**298**	⇑*i*	P		**Pg**	**13 47 47.0**	**+0.1**
	baz=301								
YHNB				S			**Sg**	**13 47 55.0**	**-1.0**
	baz=301								
NSK	**Sanguang**	**0.70**	**298**	⇑*i*	P		**Pg**	**13 47 47.2**	**0.0**
	baz=301								
NSK				*i*	S		**Sg**	**13 47 55.8**	**-0.8**
	baz=301								
FUSS	**Fushou**	**0.74**	**262**	*e*P			**Pg**	**13 47 47.8**	**0.0**
	baz=266								
FUSS				*e*S			**Sn**	**13 47 58.9**	**-1.5**
	baz=266								
WHF	**Hehuan Shan**	**0.74**	**254**	*e*P			**Pb**	**13 47 47.7**	**-0.4**
	baz=258								
TWA	**Mucha**	**0.76**	**326**	*e*P			**Pn**	**13 47 48.7**	**-0.7**
	baz=337								
TWA				*e*S			**Sg**	**13 47 57.8**	**-0.4**
	baz=337								
NWF	**Wu-fen Shan**	**0.76**	**342**	P			**Pn**	**13 47 48.9**	**-0.5**
	baz=338								
NWF				S			**Sg**	**13 47 58.2**	**-0.1**
	baz=338								
SXI1	**Grass Mountain**	**0.76**	**348**	*e*P			**Pg**	**13 47 48.6**	**+0.4**
	baz=357								
SXI1				*e*S			**Sg**	**13 47 57.9**	**-0.3**
	baz=357								
WFSB	**Wu-fen Shan**	**0.76**	**342**	*e*P			**Pn**	**13 47 48.8**	**-0.6**
	baz=338								
WFSB				*e*S			**Sg**	**13 47 58.1**	**-0.1**
	baz=338								
ESL	**Shilin**	**0.77**	**226**	⇑*i*	P		**Pg**	**13 47 48.6**	**+0.2**
	baz=221								
ESL				*e*S			**Sn**	**13 48 00.8**	**0.0**
	baz=221								
NHDH	**Xindian Distri**	**0.77**	**322**	*e*P			**Pn**	**13 47 49.8**	**+0.2**
	baz=315								
TWT	**Tachien**	**0.80**	**263**	P			**Pn**	**13 47 49.6**	**-0.5**
	baz=265								
TWT				*e*S			**Sn**	**13 48 00.7**	**-1.0**
	baz=265								
TDCB	**Techi**	**0.81**	**263**	*e*P			**Pn**	**13 47 49.5**	**-0.8**
	baz=265								
TDCB				*e*S			**Sg**	**13 47 60.0**	**0.0**
	baz=265								
JYNG	**Yonagunijimaku**	**0.83**	**83**	P			**Pb**	**13 47 50.0**	**+0.6**
JYNG				S			**Sb**	**13 48 01.4**	**+1.1**
CHGB	**Renai**	**0.84**	**250**	P			**Pg**	**13 47 49.9**	**+0.1**
	baz=253								
CHGB				S			**Sn**	**13 48 02.8**	**-0.2**
	baz=253								
TAP	**Taipei**	**0.84**	**325**	*e*S			**Sn**	**13 48 01.7**	**-0.9**
	baz=321								
EGFH	**Guangfu**	**0.88**	**220**	*e*P			**Pb**	**13 47 50.5**	**+0.3**
	baz=232								
EGFH				*e*S			**Sn**	**13 48 06.3**	**+2.8**
	baz=232								
OWD	**Renai**	**0.88**	**244**	*e*P			**Pg**	**13 47 50.6**	**0.0**
	baz=240								
OWD				*e*S			**Sn**	**13 48 04.0**	**+0.1**
	baz=240								
NFF	**Wufeng Townshi**	**0.89**	**289**	P			**Pn**	**13 47 51.1**	**-0.1**
	baz=294								
YOJ	**Yonaguni jima**	**0.89**	**83**	*e*P			**Pb**	**13 47 50.4**	**0.0**
	baz=76								
YOJ	**Yonaguni jima**	**0.89**	**83**	P			**Pb**	**13 47 50.5**	**+0.1**
YOJ				S			**Sb**	**13 48 03.4**	**+1.4**
YM01	**YM01**	**0.90**	**332**	*e*P			**Pn**	**13 47 51.8**	**+0.4**
	baz=336								
YM01				*e*S			**Sg**	**13 48 02.4**	**-0.5**
	baz=336								
WUSB	**Renai**	**0.92**	**247**	*e*P			**Pn**	**13 47 51.4**	**-0.3**
	baz=235								
WUSB				*e*S			**Sn**	**13 48 04.7**	**+0.1**
	baz=235								
TWS1	**Kuangyinshan**	**0.94**	**323**	*e*P			**Pg**	**13 47 52.8**	**+1.1**
	baz=319								
TWS1				S			**Sn**	**13 48 04.8**	**-0.2**
	baz=319								
ANP	**Anpu**	**0.96**	**330**	*e*P			**Pg**	**13 47 52.7**	**+0.7**
	baz=334								
NTST	**Danshui**	**0.98**	**327**	*e*P			**Pg**	**13 47 53.5**	**+1.2**
	baz=330								
NTST				*e*S			**Sn**	**13 48 07.1**	**+1.2**
	baz=330								
LIOB	**Emei**	**0.98**	**288**	*e*P			**Pg**	**13 47 53.0**	**+0.6**
	baz=295								
NSTT	**Nanjuang**	**0.99**	**287**	*e*P			**Pg**	**13 47 53.4**	**+0.8**
	baz=292								
NSTT				*e*S			**Sn**	**13 48 07.0**	**+0.7**
	baz=292								
NCUH	**Zhongli**	**0.99**	**308**	*e*P			**Pg**	**13 47 53.7**	**+1.0**
	baz=317								
NCUH				*e*S			**Sn**	**13 48 08.6**	**+2.2**
	baz=317								
WHP	**Taichung City**	**1.00**	**266**	*e*P			**Pg**	**13 47 53.5**	**+0.6**
	baz=271								
WHP				*e*S			**Sn**	**13 48 07.4**	**+0.7**
	baz=271								
VWDT	**VWDT**	**1.01**	**235**	*e*P			**Pn**	**13 47 52.7**	**-0.2**
	baz=230								
VWDT				*e*S			**Sg**	**13 48 08.4**	**+2.0**
	baz=230								
HGSD	**Ruisui**	**1.02**	**214**	*e*P			**Pb**	**13 47 52.6**	**-0.1**
	baz=195								
SBCB	**Hsinchu**	**1.06**	**295**	*e*P			**Pg**	**13 47 54.9**	**+1.0**
	baz=296								
SBCB				*e*S			**Sg**	**13 48 10.1**	**+2.3**
	baz=296								
EHY	**Hungye**	**1.07**	**218**	*e*P			**Pb**	**13 47 53.0**	**-0.5**
	baz=214								
WCS	**Beigang Elemen**	**1.07**	**255**	P			**Pg**	**13 47 54.2**	**0.0**
	baz=241								
SSLB	**Suanglung**	**1.14**	**241**	*e*P			**Pb**	**13 47 54.4**	**-0.3**
	baz=237								
SSLB				*e*S			**Sg**	**13 48 11.1**	**+0.7**
	baz=237								
SMLT	**Sun Moon Lake**	**1.14**	**246**	P			**Pg**	**13 47 55.1**	**-0.4**
	baz=234								
SMLT				*e*S			**Sg**	**13 48 13.2**	**+2.7**
	baz=234								
NMLH	**Miaoli**	**1.16**	**280**	*e*P			**Pg**	**13 47 56.7**	**+1.0**
	baz=279								
NMLH				*e*S			**Sg**	**13 48 13.0**	**+2.1**
	baz=279								
TWQ1	**Liyutan**	**1.16**	**270**	P			**Pg**	**13 47 56.6**	**+0.9**
	baz=269								
TWQ1				*e*S			**Sg**	**13 48 13.3**	**+2.3**
	baz=269								
NSY	**Sanyi**	**1.17**	**274**	*e*P			**Pg**	**13 47 57.2**	**+1.1**
	baz=272								
NSY				*e*S			**Sg**	**13 48 14.2**	**+2.9**
	baz=272								
TYC	**Yuchr**	**1.17**	**248**	P			**Pg**	**13 47 55.5**	**-0.5**
	baz=235								
YULB	**Yu-li**	**1.17**	**216**	*e*P			**Pn**	**13 47 54.4**	**-0.7**
	baz=212								
EYUL	**Yuli**	**1.20**	**214**	*e*P			**Pn**	**13 47 55.3**	**-0.2**
	baz=226								
TCU	**Taichung**	**1.26**	**261**	*e*P			**Pg**	**13 47 58.1**	**+0.3**
	baz=259								
TCU				*e*S			**Sg**	**13 48 17.6**	**+3.3**
	baz=259								
WJS	**Zhushan**	**1.31**	**247**	*e*P			**Pg**	**13 47 58.8**	**+0.1**
	baz=232								
WJS				*e*S			**Sg**	**13 48 19.1**	**+3.3**
	baz=232								
YUS	**Yu-Shan**	**1.31**	**230**	*e*P			**Pb**	**13 47 58.2**	**+0.2**
	baz=227								
WNT	**Mingjian**	**1.33**	**250**	P			**Pg**	**13 47 59.0**	**0.0**
	baz=247								
WNT				S			**Sg**	**13 48 19.1**	**+2.8**
	baz=247								
FULB	**Fuli**	**1.33**	**211**	*e*P			**Pb**	**13 47 58.2**	**+0.1**
	baz=193								
ALS	**Alishan**	**1.41**	**234**	P			**Pb**	**13 47 59.8**	**+0.3**
	baz=214								
ALS				*e*S			**Sg**	**13 48 21.5**	**+2.6**
	baz=214								
ELDTW	**Lidau**	**1.49**	**219**	*e*P			**Pn**	**13 47 59.6**	**+0.1**
	baz=202								
WDLH	**Douliu**	**1.52**	**245**	*e*P			**Pg**	**13 48 01.9**	**-0.8**
	baz=241								
WDLH				*e*S			**Sg**	**13 48 23.6**	**+1.1**
	baz=241								
EDH	**Donghe**	**1.53**	**206**	*e*P			**Pn**	**13 47 59.0**	**-1.0**
	baz=188								
EDH				*e*S			**Sn**	**13 48 18.1**	**-1.4**
	baz=188								
IRIF	**Iriomote-Funau**	**1.54**	**90**	P			**Pn**	**13 47 60.0**	**-0.2**
IRIF				S			**Sn**	**13 48 19.9**	**+0.1**
WRL	**Guolierlin Hig**	**1.59**	**254**	*e*P			**Pb**	**13 48 02.3**	**0.0**
	baz=252								
WRL				*e*S			**Sg**	**13 48 24.4**	**-0.2**
	baz=252								
CHN2	**Minshiung**	**1.65**	**241**	*e*P			**Pg**	**13 48 04.6**	**-0.5**
	baz=237								
CHN2				*e*S			**Sg**	**13 48 28.7**	**+2.1**
	baz=237								
WTK	**Tuku**	**1.65**	**247**	*e*P			**Pb**	**13 48 03.7**	**+0.3**
	baz=244								
WTK				*e*S			**Sg**	**13 48 27.9**	**+1.3**
	baz=244								
STYH	**Taoyuan**	**1.65**	**225**	*e*P			**Pb**	**13 48 03.3**	**-0.1**
	baz=209								
CHN4	**Tsaushan**	**1.66**	**234**	*e*P			**Pb**	**13 48 04.2**	**+0.7**
	baz=229								
CHN4				*e*S			**Sg**	**13 48 27.7**	**+0.8**
	baz=229								
LONT	**Longtian**	**1.66**	**210**	*e*P			**Pn**	**13 48 01.6**	**-0.3**
	baz=205								
LONT				*e*S			**Sb**	**13 48 23.5**	**-0.8**
	baz=205								
TPUB	**Ta-pu**	**1.66**	**231**	*e*P			**Pb**	**13 48 03.7**	**+0.1**
	baz=213								
TPUB				*e*S			**Sg**	**13 48 27.2**	**+0.2**
	baz=213								
CHY	**Chiayi**	**1.71**	**241**	*e*P			**Pg**	**13 48 05.2**	**-1.0**
	baz=237								
CHY				*e*S			**Sg**	**13 48 27.9**	**-0.5**
	baz=237								
WTP	**Ta-pu**	**1.71**	**230**	⇓*i*	P		**Pb**	**13 48 04.6**	**+0.2**
	baz=226								
WTP				S			**Sg**	**13 48 28.7**	**+0.2**
	baz=226								
LDUT	**Ludao**	**1.75**	**198**	*e*P			**Pn**	**13 48 01.0**	**-2.1**
	baz=191								
LDUT				*e*S			**Sn**	**13 48 21.8**	**-3.1**
	baz=191								
TWGBT	**Beinan**	**1.76**	**210**	*e*P			**Pn**	**13 48 02.5**	**-0.8**
	baz=207								
TWG	**Pinlang**	**1.76**	**211**	*e*P			**Pn**	**13 48 02.6**	**-0.6**
	baz=207								
TWK	**Hsinying**	**1.79**	**233**	P			**Pb**	**13 48 05.7**	**-0.1**
	baz=214								
TWK				S			**Sg**	**13 48 29.7**	**-1.2**
	baz=214								
JKRS	**Kuro-shima**	**1.80**	**93**	P			**Pn**	**13 48 03.1**	**-0.5**
JKRS				S			**Sn**	**13 48 25.0**	**-1.1**
CHN1	**Nanshi**	**1.81**	**230**	P			**Pb**	**13 48 05.9**	**-0.2**
	baz=226								
CHN1				S			**Sg**	**13 48 30.9**	**-0.7**
	baz=226								
SGST	**Jiashian**	**1.84**	**227**	*e*P			**Pb**	**13 48 05.6**	**-1.0**
	baz=208								
SGST				*e*S			**Sb**	**13 48 30.3**	**+0.9**
	baz=208								
WSL

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.04**	**301**	P	**Pn**	**14 06 52.2**	**+0.5**
	6.5nm,0.3s,baz=130,slow=16,SNR=11						
MSVF	**Nonsavu**	**5.04**	**301**		**Pn**	**14 06 51.8**	**+0.1**
NIUE	**Niue**	**7.15**	**81**		**Pn**	**14 07 12.8**	**-1.7**
AFI	**Afiamalu**	**8.37**	**41**	P	**Pn**	**14 07 25.6**	**-2.9**
PINNC	**Pines Island,**	**14.29**	**258**	P	**P**	**14 08 33.8**	**0.0**
DZM	**Mont Dzumac**	**15.16**	**261**	P	**P**	**14 08 44.1**	**+0.6**
EIDS	**Eidsvold**	**29.43**	**254**	P	**P**	**14 10 57.0**	**-0.9**
EIDS				IAmb	IAmb	14 11 16.9	
	comp=Z,14nm,1.3s						
CTAO	**Charters Tower**	**34.07**	**264**	P	**P**	**14 11 37.4**	**-0.6**
CTAO				IAmb	IAmb	14 11 39.1	
	comp=Z,6.0nm,1.1s						
COEN	**Coen**	**38.14**	**273**	P	**P**	**14 12 12.7**	**+0.5**
COEN				IAmb	IAmb	14 12 41.2	
	comp=Z,8.8nm,1.1s						
WR0	**Warramunga Arr**	**44.99**	**262**	P	**P**	**14 13 05.6**	**-1.3**
WR0				IAmb	IAmb	14 13 39.1	
	comp=Z,7.4nm,1.2s						
AS31	**Alice Springs**	**45.10**	**257**	P	**P**	**14 13 07.3**	**-0.5**
ASAR	**Alice Springs**	**45.10**	**257**	P	**P**	**14 13 07.2**	**-0.6**
	comp=Z,2.1nm,0.8s,baz=86,slow=8.4,SNR=23						
	comp=Z,2.1nm,0.8s						
WB0	**Warramunga Arr**	**45.16**	**262**	P	**P**	**14 13 06.9**	**-1.3**
WB0				IAmb	IAmb	14 13 25.8	
	comp=Z,10nm,1.4s						
WB2	**Warramunga Arr**	**45.17**	**262**	P	**P**	**14 13 07.1**	**-1.2**
WB2				IAmb	IAmb	14 13 09.1	
	comp=Z,10nm,1.2s						
WRA	**Warramunga Arr**	**45.18**	**262**	P	**P**	**14 13 07.5**	**-1.0**
	comp=Z,1.0nm,0.3s,baz=94,slow=7.6,SNR=59						
	comp=Z,1.0nm,0.3s						
WRA	**Warramunga Arr**	**45.18**	**262**	IAmb	IAmb	14 13 08.0	
	comp=Z,0.2nm,0.6s						
MTN	**Manton Dam**	**49.73**	**270**	P	**P**	**14 13 41.9**	**-1.1**
KNRA	**Kununurra**	**51.23**	**266**	P	**P**	**14 13 53.7**	**-0.3**
QSPA	**South Pole Qui**	**69.70**	**180**	P	**P**	**14 15 57.2**	**+0.5**
QSPA				IAmb	IAmb	14 16 14.0	
	comp=Z,6.5nm,1.4s						
BELA	**Belgrano 2**	**79.61**	**173**	P	**P**	**14 16 52.1**	**-0.5**
NVAR	**Mina Array Bea**	**80.54**	**43**	P	**P**	**14 17 01.9**	**+3.5**
	comp=Z,0.3nm,0.6s,baz=219,slow=6.9,SNR=4.1						
	comp=Z,0.3nm,0.6s						
TXAR	**Lajitas Array**	**86.51**	**57**	P	P	14 17 32.7	+4.3
	comp=Z,0.4nm,0.7s,baz=214,slow=8.6,SNR=5.3						
	comp=Z,0.4nm,0.7s						
CCB	**Clear Creek Bu**	**87.77**	**12**	P	**P**	**14 17 34.5**	**+1.2**
CCB				IAmb	IAmb	14 17 49.4	
	comp=Z,4.8nm,1.5s						

*IDC **27** 14:25:19.4±2.8,39°.32N×73°.73E,h0km,mb3.6/3,*
mbtmp3.6/7,ML3.1/4,MS3.0/2,Error ellipse: s-maj=52.6km
s-min=25.0km az=131.0
*SOME **27** 14:25:19.7,39°.45N×73°.73E,h10km*
*KRNET **27** 14:25:19.5±0.1,39°.41N×73°.69E,mb4.3*
*NNC **27** 14:25:25.9±1.5,39°.70N×73°.61E,h0km,mb4.4,mpv4.1,*
Error ellipse: s-maj=13.3km s-min=6.6km az=166.0
ISC 27 14:25:20.0±0.8,39°.46N±0°.05×73°.76E±0°.03,h10km,n81,
σ2ş21/111,mb3.7/3,32C-11D,Tajikistan-Xinjiang border
region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.29**	**325**	⇓*e*P	**Pg**	**14 25 44.6**	**-0.2**
OHH	baz=28			⇓*e*S	**Sn**	**14 26 03.0**	**+1.3**
DRK	**Karamyk**	**1.51**	**271**	⇑*i*P	**Pb**	**14 25 47.4**	**-0.9**
DRK	baz=74			⇑*i*S	**Sg**	**14 26 07.6**	**-1.1**
BTK	**Batken**	**2.34**	**286**	⇓*e*P	**Pb**	**14 26 00.7**	**-1.6**
BTK	baz=87			⇓*e*S	**Sb**	**14 26 30.4**	**-0.9**
ARLS	**Aral**	**2.43**	**10**	⇑*e*P	**Pb**	**14 26 03.8**	**-0.1**
ARLS	baz=11			⇑*e*S	**Sg**	**14 26 35.8**	**-2.4**
AML	**Almayashu**	**2.67**	**359**	P	**Pg**	**14 26 08.9**	**-2.2**
	SNR=24						
GAR	**Garm**	**2.71**	**261**	⇑*e*P	**Pb**	**14 26 05.2**	**-3.4**
GAR	baz=62			⇑*e*S	**Sb**	**14 26 38.6**	**-3.4**
UCH	**Uchtor**	**2.82**	**12**	P	**Pg**	**14 26 11.8**	**-2.2**
	SNR=23						
UCH	**Uchtor**	**2.82**	**12**	⇑*e*P	**Pb**	**14 26 09.4**	**-1.3**
UCH	baz=12			⇑*e*S	**Sb**	**14 26 45.9**	**+0.4**
TRKS	**Terek-Say**	**2.87**	**317**	⇑*e*P	**Pb**	**14 26 07.9**	**-3.5**
TRKS	baz=18			⇑*e*S	**Sb**	**14 26 43.2**	**-3.4**
	baz=18						
EKS2	**Erkin-Say**	**3.19**	**0**	P	**Pb**	**14 26 16.8**	**-0.1**
	SNR=15						
EKS2	**Erkin-Say**	**3.19**	**0**	⇓*e*P	**Pb**	**14 26 14.3**	**-2.6**
EKS2	baz=1.0			⇓*e*S	**Sb**	**14 26 54.2**	**-1.7**
AAK	**Ala-Archa**	**3.22**	**10**	P	**Pb**	**14 26 16.3**	**-1.0**
	SNR=11						
AAK	**Ala-Archa**	**3.22**	**10**	Pn	**Pb**	**14 26 16.6**	**-0.7**
	6.6nm,0.3s,baz=195,slow=11,SNR=18						
AAK				Lg	Lg	14 27 02.8	
	11nm,0.3s,baz=52,slow=18,SNR=5.7						
	19nm,0.4s						
AAK	**Ala-Archa**	**3.22**	**10**	⇑*e*P	**Pb**	**14 26 14.8**	**-2.5**
AAK	baz=10.0			⇑*e*S	**Sb**	**14 26 55.1**	**-1.6**
	baz=10.0						
KBK	**Karagaybulak**	**3.31**	**15**	P	**Pb**	**14 26 19.3**	**+0.4**
	SNR=15						
KBK	**Karagaybulak**	**3.31**	**15**	⇓*e*P	**Pb**	**14 26 16.1**	**-2.9**
KBK	baz=16			⇓*e*S	**Sb**	**14 26 57.8**	**-1.6**
	baz=16						
ULHL	**Ulahol**	**3.36**	**33**	P	**Pb**	**14 26 20.0**	**+0.3**
	SNR=9.7						
ULHL	**Ulahol**	**3.36**	**33**	⇑*e*P	**Pb**	**14 26 17.0**	**-2.7**
ULHL	baz=33			⇑*e*S	**Sb**	**14 26 59.1**	**-1.6**
	baz=33						
BOOM	**Boomskoye usch**	**3.45**	**28**	⇑*i*P	**Pb**	**14 26 17.7**	**-3.5**
BOOM	baz=28			⇑*i*S	**Sb**	**14 27 00.5**	**-2.7**
	baz=28						
CHMS	**Chumysh**	**3.61**	**12**	P	**Pb**	**14 26 22.1**	**-1.9**
	SNR=7.2						
CHMS	**Chumysh**	**3.61**	**12**	⇓Pn	**Pb**	**14 26 22.0**	**-1.9**
	11nm,0.5s						
CHMS				⇑Lg	Lg	14 27 17.2	
	42nm,0.7s						
CHGR	**Chuyangaron**	**3.67**	**259**	⇑*e*P	**Pn**	**14 26 18.4**	**+1.6**
CHGR	baz=59			⇑*e*S	**Sn**	**14 27 01.4**	**+1.2**
	baz=59						
KDJ	**Kajisay**	**3.72**	**43**	⇓*i*P	**Pb**	**14 26 21.5**	**-4.4**
KDJ	baz=43			⇓*i*S	**Sb**	**14 27 07.6**	**-3.5**
	baz=43						
TKM2	**Tokmak 2**	**3.72**	**21**	P	**Pb**	**14 26 23.6**	**-2.3**
	SNR=12						
TKM2	**Tokmak 2**	**3.72**	**21**	⇑Pn	**Pb**	**14 26 23.5**	**-2.4**
	15nm,0.7s						
TKM2				⇑Lg	Lg	14 27 19.0	
	32nm,0.5s						
TAS	**Tashkent**	**3.88**	**300**	⇑*e*P	**Pn**	**14 26 22.2**	**+2.5**
TAS	baz=1.0			⇑*e*S	**Sn**	**14 27 08.1**	**+2.8**
	baz=1.0						
IUG	**Iuzhnay**	**3.90**	**315**	*e*P	**Pg**	**14 26 32.6**	**-2.0**
IUG	757nm,0.6s			*e*S	**Sg**	**14 27 26.0**	**+1.0**
	254nm,0.9s						
IUG	**Iuzhnay**	**3.90**	**315**	Pg	**Pg**	**14 26 31.6**	**-3.0**
IUG	1μm,0.8s			Lg	Lg	14 27 22.0	
	254nm,0.9s						
KST	**Kastek**	**3.94**	**24**	*e*P	**Pg**	**14 26 32.9**	**-2.7**
KST	34nm,0.2s			*e*S	**Sg**	**14 27 26.0**	**-0.6**
	114nm,0.1s						
KST	**Kastek**	**3.94**	**24**	Pg	**Pg**	**14 26 33.8**	**-1.8**
KST	34nm,0.7s			Lg	Lg	14 27 26.0	
	115nm,0.9s						
SGDS	**Sogindy**	**4.04**	**9**	*e*P	**Pg**	**14 26 35.1**	**-2.2**
SGDS	19nm,0.3s			*e*S	**Sg**	**14 27 28.4**	**-1.2**
	24nm,0.1s						
DGS	**Degeres**	**4.07**	**21**	*e*P	**Pg**	**14 26 36.3**	**-1.6**
DGS	61nm,0.2s			*e*S	**Sg**	**14 27 32.1**	**+1.5**
	43nm,0.2s						
DGS	**Degeres**	**4.07**	**21**	Pg	**Pg**	**14 26 36.9**	**-1.0**
DGS	61nm,0.7s			Lg	Lg	14 27 31.3	
	69nm,0.6s						
MTBS	**Maitube**	**4.18**	**28**	*e*P	**Pg**	**14 26 37.9**	**-2.1**
MTBS	51nm,0.1s			*e*S	**Sg**	**14 27 34.4**	**+0.2**
	32nm,0.0s						
MTBS	**Maitube**	**4.18**	**28**	Pg	**Pg**	**14 26 38.6**	**-1.5**
MTBS	52nm,0.7s			Lg	Lg	14 27 34.4	
	32nm,0.5s						
CHM	**Chimkent**	**4.25**	**314**	*e*P	**Pg**	**14 26 37.9**	**-3.4**
CHM	5.4nm,0.4s			*e*S	**Sg**	**14 27 35.1**	**-1.2**
	319nm,0.1s						
TNSS	**Tian-Shan**	**4.30**	**33**	*e*P	**Pg**	**14 26 40.4**	**-2.0**
TNSS	37nm,0.2s			*e*S	**Sg**	**14 27 39.0**	**+0.8**
	20nm,0.5s						
TNSS	**Tian-Shan**	**4.30**	**33**	Pg	**Pg**	**14 26 41.3**	**-1.2**
TNSS	37nm,0.5s			Lg	Lg	14 27 39.0	
	20nm,0.5s						
KK31	**Karatay Array**	**4.38**	**327**	⇑Pn	**Pn**	**14 26 29.7**	**+3.1**
	1.9nm,0.3s,baz=136,slow=13,SNR=13						
KK31				Pg	**Pg**	**14 26 42.5**	**-1.4**
	9.3nm,0.4s,baz=145,slow=14,SNR=10.0						
KK31				⇑Lg	Lg	14 27 36.6	
	21nm,0.4s,baz=142,slow=29,SNR=3.8						
AAA	**Alma-Ata**	**4.43**	**31**	*e*P	**Pg**	**14 26 43.3**	**-1.6**
AAA	63nm,0.0s			*e*S	**Sg**	**14 27 43.8**	**+1.5**
	114nm,0.1s						
AAA	**Alma-Ata**	**4.43**	**31**	Pg	**Pg**	**14 26 43.5**	**-1.4**
AAA	64nm,0.5s			Lg	Lg	14 27 42.9	
	121nm,0.6s						
KNDC	**Almaty**	**4.46**	**32**	⇑Pn	**Pb**	**14 26 37.7**	**-0.8**
KNDC	79nm,0.7s			⇑Lg	Lg	14 27 45.0	
	512nm,1.4s						
KRBS	**Karabastau**	**4.47**	**18**	*e*P	**Pg**	**14 26 42.2**	**-3.3**
KRBS	24nm,0.1s			*e*S	**Sg**	**14 27 42.4**	**-1.0**
	20nm,0.3s						
KRBS	**Karabastau**	**4.47**	**18**	Pg	**Pg**	**14 26 43.2**	**-2.3**
KRBS	24nm,0.5s			Lg	Lg	14 27 42.4	
	21nm,0.9s						
BRLS	**Borolday**	**4.63**	**322**	*e*P	**Pb**	**14 26 43.1**	**+1.9**
BRLS	10nm,0.2s			*e*S	**Sg**	**14 27 43.3**	**-5.2**
	64nm,0.2s						
BRLS	**Borolday**	**4.63**	**322**	Pg	**Pg**	**14 26 44.0**	**-4.6**
BRLS	11nm,0.4s			Lg	Lg	14 27 43.3	
	65nm,0.6s						
KTBS	**Karatobe**	**4.78**	**26**	*e*P	**Pg**	**14 26 48.5**	**-3.0**
KTBS	32nm,0.2s			*e*S	**Sg**	**14 27 52.5**	**-0.9**
	57nm,0.1s						
KTBS	**Karatobe**	**4.78**	**26**	Pg	**Pg**	**14 26 49.2**	**-2.2**
KTBS	32nm,0.7s			Lg	Lg	14 27 52.5	
	86nm,1.4s						
KUU	**Kurty**	**4.83**	**23**	*e*P	**Pg**	**14 26 48.8**	**-3.6**
KUU	29nm,0.3s			*e*S	**Sg**	**14 27 53.1**	**-1.9**
	22nm,0.6s						
KUU	**Kurty**	**4.83**	**23**	Pg	**Pg**	**14 26 49.4**	**-3.0**
KUU	29nm,0.8s			Lg	Lg	14 27 53.1	
	22nm,0.6s						
CHKK	**Chushkaly**	**5.01**	**28**	*e*P	**Pg**	**14 26 53.0**	**-2.8**
CHKK	16nm,0.1s			*e*S	**Sg**	**14 28 00.2**	**-0.6**
	34nm,0.1s						
CHKK	**Chushkaly**	**5.01**	**28**	Pg	**Pg**	**14 26 53.6**	**-2.3**
CHKK	14nm,0.5s			Lg	Lg	14 28 00.2	
	32nm,0.6s						
SATY	**Saty**	**5.02**	**43**	*e*P	**Pg**	**14 26 53.8**	**-2.3**
SATY	16nm,0.6s			*e*S	**Sg**	**14 28 01.3**	**+0.2**
	64nm,0.1s						
SATY	**Saty**	**5.02**	**43**	Pg	**Pg**	**14 26 54.5**	**-1.6**
SATY	16nm,0.6s			Lg	Lg	14 28 01.3	
	41nm,0.9s						
ZHN	**Zhinishke**	**5.11**	**42**	*e*P	**Pg**	**14 26 55.7**	**-2.1**
ZHN	9.0nm,0.1s			*e*S	**Sg**	**14 28 04.1**	**+0.1**
	33nm,0.1s						
ZHN	**Zhinishke**	**5.11**	**42**	Pg	**Pg**	**14 26 56.2**	**-1.6**
ZHN	9.0nm,0.1s			Lg	Lg	14 28 04.1	
	22nm,0.2s						
KURS	**Kuram**	**5.21**	**38**	*e*P	**Pg**	**14 26 57.5**	**-2.3**
KURS	11nm,0.1s			*e*S	**Sg**	**14 28 07.5**	**+0.3**
	24nm,0.7s						
KURS	**Kuram**	**5.21**	**38**	Pg	**Pg**	**14 26 58.1**	**-1.6**
KURS	11nm,1.1s			Lg	Lg	14 28 07.5	
	24nm,1.6s						
KPKS	**Kokpek**	**5.45**	**41**	*e*P	**Pg**	**14 27 01.0**	**-3.3**
KPKS	27nm,0.2s			*e*S	**Sg**	**14 28 14.3**	**-0.5**
	34nm,0.1s						
KPKS	**Kokpek**	**5.45**	**41**	Pg	**Pg**	**14 27 01.9**	**-2.4**
KPKS	27nm,0.8s			Lg	Lg	14 28 14.3	
	33nm,0.9s						
ARXS	**Arharly**	**5.63**	**31**	*e*P	**Pg**	**14 27 04.4**	**-3.5**
ARXS	28nm,0.1s			*e*S	**Sg**	**14 28 19.5**	**-1.4**
	28nm,0.1s						
ARXS	**Arharly**	**5.63**	**31**	Pg	**Pg**	**14 27 05.1**	**-2.7**
ARXS	28nm,1.1s			Lg	Lg	14 28 19.5	
	28nm,0.8s						
PDGK	**Podgornoye**	**5.79**	**46**	Pg	**Pg**	**14 27 08.0**	**-2.8**
PDGK	4.1nm,1.1s			Lg	Lg	14 28 24.6	
	13nm,1.1s						
BLB	**Baldybastay**	**5.82**	**36**	*e*P	**Pg**	**14 27 08.2**	**-3.2**
BLB	42nm,0.2s			*e*S	**Sg**	**14 28 26.7**	**-0.1**
	15nm,0.1s						
BLB	**Baldybastay**	**5.82**	**36**	Pg	**Pg**	**14 27 09.1**	**-2.3**
BLB	42nm,0.8s			Lg	Lg	14 28 26.7	
	22nm,0.8s						
DJR	**Jarkent**	**6.63**	**41**	*e*P	**Pg**	**14 27 22.8**	**-4.0**
DJR	2.4nm,0.3s			*e*S	**Sg**	**14 28 51.8**	**-0.8**
	16nm,0.1s						
DJR	**Jarkent**	**6.63**	**41**	Pg	**Pg**	**14 27 23.9**	**-2.9**
	1.7nm,0.6s						
OTUK	**Ortayu**	**8.84**	**354**	⇑Pn	Pn	14 27 31.4	+3.7
OTUK	3.1nm,0.7s			⇑Lg	Lg	14 29 58.2	
	33nm,1.2s						
MKAR	**Makanchi Array**	**9.62**	**38**	Pn	Pn	14 27 47.4	+9.0
	0.1nm,0.3s,baz=209,slow=14,SNR=2.5						
MKAR				Lg	Lg	14 30 25.1	
	0.1nm,0.3s,baz=228,slow=21,SNR=2.6						
KURBB	**Kurchatov Arra**	**11.65**	**15**	Pn	**Pn**	**14 28 09.1**	**+2.8**
	baz=210,slow=11,SNR=3.1						
KURBB				Lg	Lg	14 31 29.1	
	baz=202,slow=28,SNR=5.6						
	0.4nm,0.8s						
KURBB	**Kurchatov Arra**	**11.65**	**15**	⇑Lg	Lg	14 31 33.4	
	24nm,1.3s						
KURK	**Kurchatov**	**11.76**	**15**	⇑Lg	Lg	14 31 37.4	
	26nm,1.4s						
AB31	**Akbulak array**	**13.89**	**319**	Pn	**Pn**	**14 28 36.8**	**0.0**
	0.6nm,0.6s,baz=134,slow=13,SNR=9.7						
AKTO	**Aktyubinsk**	**15.60**	**320**	Pn	**Pn**	**14 28 59.4**	**-0.4**
	0.2nm,0.3s,baz=132,slow=13,SNR=6.3						
	2.0nm,0.8s						
AKTO	**Aktyubinsk**	**15.60**	**320**	⇑Pn	**Pn**	**14 28 59.4**	**-0.4**
	3.0nm,1.1s						
ZALV	**Zalesovo Beam**	**16.32**	**24**	Pn	**P**	**14 29 11.6**	**-0.5**
	0.2nm,0.3s,baz=213,slow=10,SNR=8.9						
	1.9nm,0.6s						
OBN	**Obninsk**	**29.25**	**315**	LR	LR	14 44 57.4	
	comp=Z,5.9nm,21.9s,baz=10.0,slow=40						
ARCES	**ARCESS Array B**	**39.30**	**336**	P	**P**	**14 32 50.6**	**+2.1**
	1.7nm,0.9s,baz=106,slow=8.9,SNR=3.6						
	1.7nm,0.9s						
TORD	**Torodi Ar. Bea**	**67.95**	**269**	P	**P**	**14 36 20.5**	**+1.2**
	0.5nm,0.9s,baz=45,slow=6.3,SNR=2.9						
	0.5nm,0.9s						
YKA	**Yellowknife Ar**	**78.17**	**4**	P	**P**	**14 37 20.3**	**+1.3**
	0.3nm,0.8s,baz=352,slow=5.7,SNR=3.2						
	0.3nm,0.8s						
SADO	**Sadowa**	**92.67**	**341**	LR	LR	15 22 40.7	
	comp=Z,38nm,18.1s,baz=114,slow=37						

*IDC **27** 14:38:02.3±6.0,2°.04N×123°.92E,h0km,mb4.2/3,*
mbtmp4.2/3,Error ellipse: s-maj=289.1km s-min=94.7km
az=66.0
*NEIC **27** 14:39:44.3±0.7,4°.8S±0°.1×126°.0E±0°.2,h429km±19km,*
mb4.1/8,Error ellipse: s-maj=22.9km s-min=17.2km
az=99.0
ISC 27 14:39:42.7±0.8,4°.72S±0°.08×125°.94E±0°.10,h400km,n20,
σ1ş71/21,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**4.83**	**319**	P	**Pn**	**14 41 06.5**	**+3.4**
SOEI	**Soe**	**5.27**	**198**		**Pn**	**14 41 09.8**	**+2.1**
SOEI					**S**	**14 42 18.9**	**+2.2**
MMRI	**Maumere**	**5.35**	**223**	P	**Pn**	**14 41 10.2**	**+1.8**
FAKI	**Fak Fak**	**6.55**	**74**		**P**	**14 41 24.1**	**+2.1**
FAKI					**S**	**14 42 42.8**	**+0.9**
TOLI2	**Tolitoli**	**7.75**	**318**	P	**Pn**	**14 41 32.7**	**-2.2**
MTN	**Manton Dam**	**9.56**	**148**	P	**Pn**	**14 41 56.7**	**+1.0**
KNRA	**Kununurra**	**11.23**	**166**	P	**P**	**14 42 14.7**	**+0.7**
WB0	**Warramunga Arr**	**17.07**	**152**	P	**P**	**14 43 16.8**	**-0.7**
WRA	**Warramunga Arr**	**17.20**	**152**	P	**P**	**14 43 18.6**	**-0.3**
	4.8nm,0.5s,baz=333,slow=9.9,SNR=36						
	4.8nm,0.5s						
WRA	**Warramunga Arr**	**17.20**	**152**	P	**P**	**14 43 17.9**	**-0.9**
WB2	**Warramunga Arr**	**17.20**	**152**	P	**P**	**14 43 17.9**	**-1.0**
WB2				IAmb	IAmb	14 43 20.7	
	comp=Z,6.1nm,0.7s						
WR0	**Warramunga Arr**	**17.31**	**152**	P	**P**	**14 43 19.2**	**-0.8**
WR0				IAmb	IAmb	14 43 21.9	
	comp=Z,3.9nm,1.1s						
COEN	**Coen**	**19.31**	**120**	P	**P**	**14 43 40.1**	**-0.7**
COEN				IAmb	IAmb	14 44 16.2	
	comp=Z,14nm,1.4s						
AS31	**Alice Springs**	**20.34**	**159**	P	**P**	**14 43 48.8**	**-1.6**
AS31				IAmb	IAmb	14 43 52.1	
	comp=Z,1.6nm,0.3s						
ASAR	**Alice Springs**	**20.34**	**159**	P	**P**	**14 43 49.2**	**-1.1**
	comp=Z,1.7nm,0.4s,baz=348,slow=12,SNR=75						
	comp=Z,1.7nm,0.4s						
ASAR	**Alice Springs**	**20.34**	**159**	P	**P**	**14 43 49.0**	**-1.3**
STKA	**Stephens Creek**	**30.75**	**153**	P	**P**	**14 45 21.1**	**-1.9**
	comp=Z,0.9nm,0.5s,baz=338,slow=10,SNR=3.7						
	comp=Z,0.9nm,0.5s						
STKA	**Stephens Creek**	**30.75**	**153**	P	**P**	**14 45 21.1**	**-1.9**
STKA	**Stephens Creek**	**30.75**	**153**	IAmb	IAmb	14 45 22.4	
	comp=Z,2.7nm,1.4s						
INU	**Inuyama**	**41.20**	**14**	P	**P**	**14 46 49.9**	**-0.5**

*KRNET **27** 14:44:03.9±0.1,39°.53N×73°.92E,mb4.1*
*IDC **27** 14:44:03.8±1.2,39°.46N×73°.94E,h0km,mb3.7/4,*
mbtmp3.8/5,ML3.8/1,Error ellipse: s-maj=36.6km
s-min=20.3km az=82.0
*SOME **27** 14:44:03.5,39°.63N×73°.87E,h10km*
*NNC **27** 14:44:07.5±2.7,39°.61N×73°.94E,h0km,mb3.9,mpv3.5,*
Error ellipse: s-maj=24.1km s-min=13.1km az=10.0
*NEIC **27** 14:44:09.0±1.1,39°.63N±0°.07×73°.78E±0°.09,h10km±2km,*
mb4.2/5,Error ellipse: s-maj=15.0km s-min=8.7km
az=137.0
ISC 27 14:44:07.4±2.0,39°.45N±0°.05×73°.78E±0°.03,h17km±13km,
n65,σ2ş07/97,mb4.0/5,22C-17D,Tajikistan-Xinjiang
border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.32**	**325**	⇑*e*P	**Pn**	**14 44 28.7**	**-2.5**
OHH	baz=19			⇑*e*S	**Sb**	**14 44 47.0**	**-1.4**
DRK	**Karamyk**	**1.53**	**272**	⇓*i*P	**Pn**	**14 44 34.7**	**+0.4**
DRK	baz=69			⇓*i*S	**Sg**	**14 44 57.1**	**+0.2**
DRK	**Karamyk**	**1.53**	**272**	Pn	**Pn**	**14 44 34.7**	**+0.4**
BTK	**Batken**	**2.36**	**286**	⇑*e*P	**Pn**	**14 44 47.0**	**+1.5**
BTK	baz=83			⇑*e*S	**Sb**	**14 45 18.3**	**-0.2**
BTK	**Batken**	**2.36**	**286**	Pn	**Pb**	**14 44 48.1**	**-1.4**
ARLS	**Aral**	**2.44**	**10**	⇓*e*P	**Pn**	**14 44 45.4**	**-1.3**
	baz=7.0						
ARLS				⇓*e*S	**Sn**	**14 45 15.9**	**-0.4**
	baz=7.0						
AML	**Almayashu**	**2.68**	**359**	P	**Pn**	**14 44 51.0**	**+0.9**
	SNR=23						
ARK	**Arkit**	**2.72**	**330**	⇓*i*P	**Pn**	**14 44 50.8**	**+0.3**
ARK	baz=27			⇓*e*S	**Sn**	**14 45 24.9**	**+1.8**
	baz=27						
GAR	**Garm**	**2.73**	**262**	⇑*e*P	**Pn**	**14 44 52.4**	**+1.8**
GAR	baz=61			⇑*e*S	**Sb**	**14 45 27.7**	**-1.3**
	baz=61						
GAR	**Garm**	**2.73**	**262**		**Pn**	**14 44 53.4**	**+2.8**
UCH	**Uchtor**	**2.83**	**11**	P	**Pn**	**14 44 53.1**	**+0.8**
	SNR=39						
UCH	**Uchtor**	**2.83**	**11**	⇓*e*P	**Pn**	**14 44 51.2**	**-1.1**
UCH	baz=9.0			⇓*e*S	**Sn**	**14 45 25.5**	**-0.8**
	baz=9.0						
TRKS	**Terek-Say**	**2.89**	**317**	⇑*e*P	**Pn**	**14 44 52.5**	**-0.4**
TRKS	baz=14			⇑*e*S	**Sn**	**14 45 28.1**	**+0.7**
	baz=14						
EKS2	**Erkin-Say**	**3.21**	**360**	P	**Pn**	**14 44 59.4**	**+2.2**
	SNR=18						
EKS2	**Erkin-Say**	**3.21**	**360**	⇑*e*P	**Pn**	**14 44 56.5**	**-0.7**
EKS2	baz=58			⇑*e*S	**Sn**	**14 45 34.8**	**-0.3**
	baz=58						
AAK	**Ala-Archa**	**3.23**	**9**	P	**Pn**	**14 44 58.9**	**+1.4**
	SNR=20						
AAK	**Ala-Archa**	**3.23**	**9**	Pn	**Pn**	**14 44 59.3**	**+1.8**
	12nm,0.3s,baz=182,slow=6.6,SNR=12						
AAK				Lg	Lg	14 45 41.5	
	20nm,0.3s,baz=15,slow=22,SNR=16						
	31nm,0.3s						
AAK	**Ala-Archa**	**3.23**	**9**	⇑*e*P	**Pn**	**14 44 56.5**	**-1.0**
AAK	baz=8.0			⇑*e*S	**Sn**	**14 45 34.8**	**-0.9**
	baz=8.0						
AAK	**Ala-Archa**	**3.23**	**9**		**Pn**	**14 44 56.6**	**-0.9**
KBK	**Karagaybulak**	**3.32**	**15**	P	**Pn**	**14 45 01.5**	**+2.7**
	SNR=20						
KBK	**Karagaybulak**	**3.32**	**15**	⇑*e*P	**Pn**	**14 44 57.6**	**-1.2**
KBK	baz=14			⇑*e*S	**Sn**	**14 45 37.0**	**-1.0**
	baz=14						
ULHL	**Ulahol**	**3.36**	**33**	P	**Pn**	**14 45 00.7**	**+1.4**
	SNR=9.5						
BOOM	**Boomskoye usch**	**3.

79nm,0.6s
CHGR Chuyangaron 3.68 259⇓*e*P Pn 14 45 05.8 +2.1
baz=58
CHGR ⇓*e*S **Sn 14 45 51.1 +4.3**
baz=58
CHGR Chuyangaron 3.68 259 Pn 14 45 06.5 +2.7
KDJ Kajisay 3.72 43 Pn 14 45 05.5 +1.2
TKM2 Tokmak 2 3.73 21 ⇓Pn Pn 14 45 05.1 +0.7
4.7nm,0.3s
TKM2 ⇑Lg Lg 14 45 59.5
41nm,0.7s
TARG Taragay, Kyrgy 3.82 52 Pn 14 45 06.5 +0.7
USP Ospenovka 3.85 8 P Pn 14 45 06.9 +0.9
SNR=14
TAS Tashkent 3.90 300⇓*e*P Pn 14 45 07.8 +1.1
baz=99
TAS ⇓*e*S **Sn 14 45 54.5 +2.4**
baz=99
IUG Iuzhnay 3.92 315 *e*P Pb 14 45 16.3 +0.2
780nm,0.4s
IUG *e*S **Sb 14 46 08.9 +5.6**
117nm,0.3s
KST Kastek 3.95 24 *e*P Pb 14 45 14.5 -2.2
6.2nm,0.4s
KST *e*S **Sb 14 46 05.5 +1.2**
74nm,0.7s
SGDS Sogindy 4.05 9 *e*P Pb 14 45 16.4 -2.0
22nm,0.5s
SGDS *e*S **Sb 14 46 08.9 +1.9**
34nm,0.1s
DGS Degeres 4.07 21 *e*P Pb 14 45 16.4 -2.4
12nm,1.9s
DGS *e*S **Sb 14 46 08.6 +0.8**
21nm,0.2s
MTBS Maitube 4.18 28 *e*P Pb 14 45 19.2 -1.4
6.1nm,0.1s
MTBS *e*S **Sb 14 46 13.8 +2.9**
40nm,0.5s
TNSS Tian-Shan 4.31 33 *e*P Pb 14 45 21.6 -1.3
9.6nm,0.4s
TNSS *e*S **Sb 14 46 17.8 +3.0**
13nm,0.2s
KK31 Karatay Array 4.40 327 Pn 14 45 14.0 +0.5
KK31 Karatay Array 4.40 327 Pn Pn 14 45 14.4 +0.9
2.0nm,0.3s,baz=121,slow=13,SNR=25
KK31 Pg **Pb 14 45 24.1 -0.2**
3.4nm,0.3s,baz=156,slow=15,SNR=18
KK31 ⇑Sn **Sn 14 46 08.3 +3.9**
13nm,0.5s
KK31 ⇓Lg Lg 14 46 22.4
11nm,0.4s,baz=142,slow=26,SNR=5.1
KKAR Karatay Array 4.40 327 Pn 14 45 13.9 +0.4
KRBS Karabastau 4.47 18 *e*P Pb 14 45 23.4 -2.2
3.5nm,0.0s
KRBS *e*S **Sb 14 46 20.9 +1.6**
21nm,0.3s
BRLS Borolday 4.65 322 *e*P Pb 14 45 26.9 -1.6
9.3nm,0.0s
BRLS *e*S **Sb 14 46 27.1 +2.8**
14nm,0.1s
KTBS Karatobe 4.78 26 *e*P Pb 14 45 30.2 -0.6
3.6nm,0.1s
KTBS *e*S **Sb 14 46 32.1 +4.1**
71nm,0.2s
KUU Kurty 4.83 23 *e*P Pb 14 45 30.5 -1.2
4.9nm,0.1s
KUU *e*S **Sb 14 46 33.2 +3.6**
34nm,0.1s
CHKK Chushkaly 5.01 28 *e*P Pb 14 45 33.2 -1.5
4.8nm,0.2s
CHKK *e*S **Sb 14 46 38.1 +3.4**
35nm,0.1s
SATY Saty 5.01 43 *e*P Pb 14 45 34.2 -0.6
7.6nm,0.3s
SATY *e*S **Sb 14 46 39.6 +4.7**
26nm,0.1s
KURS Kuram 5.21 38 *e*P Pb 14 45 37.0 -1.1
6.4nm,0.3s
KURS *e*S **Sb 14 46 44.5 +4.0**
8.8nm,0.3s
KPKS Kokpek 5.45 41 *e*P Pb 14 45 41.5 -0.6
7.5nm,0.2s
KPKS *e*S **Sb 14 46 52.0 +4.7**
20nm,0.2s
BTLS Baital 5.59 2 *e*P Pb 14 45 44.2 -0.3
4.8nm,0.5s
BTLS *e*S **Sb 14 46 56.4 +5.1**
11nm,0.7s
ARXS Arharly 5.64 31 *e*P Pb 14 45 45.3 -0.1
7.3nm,0.2s
ARXS *e*S **Sb 14 46 58.1 +5.4**
27nm,0.7s
PDGK Podgornoye 5.78 46 ⇑Pn Pn 14 45 30.5 -2.1
3.1nm,1.1s
PDGK ⇓Pg **Pb 14 45 48.7 +0.7**
6.9nm,0.6s
PDGK ⇑Lg Lg 14 47 04.2
32nm,1.3s
OTUK Ortayu 8.85 354 ⇑Pn Pn 14 46 13.0 -1.5
4.2nm,1.0s
OTUK ⇑Lg Lg 14 48 39.1
5.5nm,0.6s
ABKAR Akbulak array 13.91 319 Pn 14 47 21.8 -1.9
ZAA0 Zalesovo Array 16.33 24 P 14 47 59.2 +0.6
ZALV Zalesovo Beam 16.33 24 Pn P 14 47 57.7 -0.9
0.1nm,0.3s,baz=217,slow=12,SNR=3.7
ZALV Zalesovo Beam 16.33 24 P 14 47 59.3 +0.7
ARCES ARCESS Array B 39.31 336 P P 14 51 34.5 -0.6
0.7nm,0.6s,baz=107,slow=8.6,SNR=10
0.7nm,0.6s
ARCES ARCESS Array B 39.31 336 P P 14 51 34.6 -0.6
ARCES IAmb IAmb 14 51 41.1
comp=Z,13nm,1.5s
TIXI Tiksi 42.21 23 P P 14 51 57.4 -1.6
TIXI IAmb IAmb 14 51 58.7
comp=Z,4.4nm,1.1s
TOA0 Torodi Ar. Sit 67.97 269 P P 14 55 05.5 -0.3
TORD Torodi Ar. Bea 67.97 269 P P 14 55 05.6 -0.3
comp=Z,0.4nm,0.5s,baz=35,slow=5.4,SNR=3.1
comp=Z,0.4nm,0.5s
TORD Torodi Ar. Bea 67.97 269 IAmb IAmb 14 55 15.6
comp=Z,1.6nm,1.2s
WRA Warramunga Arr 81.75 124 P P 14 56 24.1 -1.3
comp=Z,0.7nm,0.7s,baz=321,slow=5.2,SNR=5.2
comp=Z,0.7nm,0.7s
ASAR Alice Springs 84.20 127 P P 14 56 36.6 -1.4
comp=Z,0.4nm,0.7s,baz=316,slow=4.7,SNR=7.0
comp=Z,0.4nm,0.7s

*KRNET **27** 14:46:53.4±0.1,39.˚40N×73.˚67E,mb3.8*
*SOME **27** 14:46:53.0,39.˚50N×73.˚67E,h0km*
ISC 27 14:46:58.2±2.1,39.˚45N±0.˚06×73.˚48E±0.˚03,h7km±15km, n35,σ2ş33/65,20C-8D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.20**	**334**	⇓*e*P	**Pn**	**14 47 18.5**	**-3.0**
	baz=29						
OHH				⇓*e*S	**Sb**	**14 47 36.8**	**-0.3**
	baz=29						
DRK	**Karamyk**	**1.30**	**272**	⇑*i*P	**Pn**	**14 47 20.8**	**-2.2**
	baz=74						
DRK				⇑*i*S	**Sg**	**14 47 40.9**	**+0.9**
	baz=74						
BTK	**Batken**	**2.14**	**287**	⇑*e*P	**Pn**	**14 47 34.7**	**+0.3**
	baz=88						
BTK				⇑*e*S	**Sb**	**14 48 04.8**	**+0.7**
	baz=88						
GAR	**Garm**	**2.50**	**261**	⇑*e*P	**Pn**	**14 47 39.2**	**-0.1**
	baz=62						
GAR				⇑*e*S	**Sb**	**14 48 12.8**	**-1.6**
	baz=62						
ARLS	**Aral**	**2.50**	**15**	⇑*e*P	**Pn**	**14 47 37.6**	**-1.8**
	baz=11						
ARLS				⇑*e*S	**Sn**	**14 48 09.7**	**-0.5**
	baz=11						
ARK	**Arkit**	**2.62**	**334**	⇓*i*P	**Pn**	**14 47 41.1**	**+0.1**
	baz=32						
ARK				⇓*i*S	**Sb**	**14 48 15.2**	**-2.7**
	baz=32						
AML	**Almayashu**	**2.69**	**3**	P	**Pn**	**14 47 41.6**	**-0.6**
	SNR=64						
TRKS	**Terek-Su**	**2.74**	**320**	⇑*e*P	**Pn**	**14 47 41.7**	**-1.0**
	baz=18						
TRKS				⇑*e*S	**Sn**	**14 48 17.0**	**+0.8**
	baz=18						
UCH	**Uchtor**	**2.89**	**15**	P	**Pn**	**14 47 44.6**	**-0.5**
	SNR=34						
UCH	**Uchtor**	**2.89**	**15**	⇑*e*P	**Pn**	**14 47 43.4**	**-1.6**
	baz=12						
UCH				⇑*e*S	**Sn**	**14 48 19.8**	**-0.5**
	baz=12						
EKS2	**Erkin-Say**	**3.22**	**4**	P	**Pn**	**14 47 48.6**	**-0.7**
	SNR=13						
EKS2	**Erkin-Say**	**3.22**	**4**	⇑*e*P	**Pn**	**14 47 48.2**	**-1.1**
	baz=1.0						
EKS2				⇑*e*S	**Sn**	**14 48 28.1**	**+0.1**
	baz=1.0						
AAK	**Ala-Archa**	**3.28**	**13**	⇓*i*P	**Pn**	**14 47 48.7**	**-1.5**
	baz=11						
AAK				⇓*e*S	**Sn**	**14 48 29.0**	**-0.5**
	baz=11						
KBK	**Karagaybulak**	**3.40**	**19**	P	**Pn**	**14 47 52.9**	**+1.2**
	SNR=5.9						
KBK	**Karagaybulak**	**3.40**	**19**	⇑*e*P	**Pn**	**14 47 49.9**	**-1.8**
	baz=16						
KBK				⇑*e*S	**Sn**	**14 48 31.6**	**-0.8**
	baz=16						
CHGR	**Chuyangaron**	**3.45**	**258**	⇑*e*P	**Pn**	**14 47 52.7**	**+0.2**
	baz=60						
CHGR				⇑*e*S	**Sn**	**14 48 35.7**	**+2.0**
	baz=60						
ULHL	**Ulahol**	**3.50**	**36**	P	**Pn**	**14 47 53.7**	**+0.6**
	SNR=13						
BOOM	**Boomskoye usch**	**3.57**	**31**	⇑*i*P	**Pn**	**14 47 52.2**	**-1.9**
	baz=28						
BOOM				⇑*i*S	**Sn**	**14 48 34.5**	**-2.1**
	baz=28						
IUG	**Iuzhnay**	**3.76**	**317**	*e*P	**Pb**	**14 48 06.0**	**+1.1**
	217nm,0.5s						
IUG				*e*S	**Sg**	**14 48 59.8**	**+0.9**
	67nm,0.7s						
KDJ	**Kajisay**	**3.88**	**45**	⇓*i*P	**Pn**	**14 47 55.9**	**-2.6**
	baz=43						
KDJ				⇓*i*S	**Sn**	**14 48 41.5**	**-3.0**
	baz=43						
KST	**Kastek**	**4.05**	**27**	*e*P	**Pb**	**14 48 06.8**	**-3.1**
	11nm,0.5s						
KST				*e*S	**Sb**	**14 49 00.7**	**+1.5**
	70nm,0.7s						
SGDS	**Sogindy**	**4.10**	**12**	*e*P	**Pb**	**14 48 08.6**	**-2.0**
	9.4nm,0.2s						
SGDS				*e*S	**Sb**	**14 49 03.1**	**+2.8**
	8.6nm,0.1s						
DGS	**Degeres**	**4.17**	**24**	*e*P	**Pb**	**14 48 09.8**	**-2.1**
	16nm,0.7s						
DGS				*e*S	**Sb**	**14 49 05.5**	**+3.0**
	27nm,0.6s						
MTBS	**Maitube**	**4.30**	**30**	*e*P	**Pb**	**14 48 11.5**	**-2.6**
	15nm,0.6s						
MTBS				*e*S	**Sb**	**14 49 08.5**	**+2.3**
	28nm,0.6s						
TNSS	**Tian-Shan**	**4.44**	**35**	*e*P	**Pb**	**14 48 14.1**	**-2.6**
	14nm,0.7s						
TNSS				*e*S	**Sb**	**14 49 12.6**	**+2.0**
	16nm,0.6s						
BRLS	**Boroldey**	**4.51**	**324**	*e*P	**Pb**	**14 48 16.8**	**-0.9**
	2.4nm,0.9s						
BRLS				*e*S	**Sb**	**14 49 17.1**	**+4.8**
	24nm,0.5s						
KRBS	**Karabastau**	**4.56**	**20**	*e*P	**Pb**	**14 48 16.4**	**-2.1**
	13nm,0.5s						
KRBS				*e*S	**Sb**	**14 49 16.2**	**+2.6**
	21nm,0.6s						
KTBS	**Karatobe**	**4.89**	**28**	*e*P	**Pb**	**14 48 21.5**	**-2.7**
	7.4nm,0.6s						
KTBS				*e*S	**Sb**	**14 49 25.5**	**+2.2**
	32nm,0.6s						
KUU	**Kurty**	**4.93**	**25**	*e*P	**Pb**	**14 48 22.5**	**-2.4**
	8.8nm,0.6s						
KUU				*e*S	**Sb**	**14 49 26.7**	**+2.3**
	28nm,0.6s						
CHKK	**Chushkaly**	**5.13**	**30**	*e*P	**Pb**	**14 48 26.0**	**-2.2**
	5.6nm,0.7s						
CHKK				*e*S	**Sb**	**14 49 33.7**	**+3.6**
	22nm,0.8s						
SATY	**Saty**	**5.18**	**44**	*e*P	**Pb**	**14 48 27.8**	**-1.3**
	7.9nm,0.8s						
SATY				*e*S	**Sb**	**14 49 35.9**	**+4.3**
	27nm,0.8s						
KURS	**Kuram**	**5.36**	**40**	*e*P	**Pb**	**14 48 30.5**	**-1.7**
	7.2nm,0.5s						
KURS				*e*S	**Sb**	**14 49 40.0**	**+3.3**
	12nm,1.6s						
KPKS	**Kokpek**	**5.61**	**43**	*e*P	**Pb**	**14 48 34.7**	**-1.7**
	11nm,0.7s						
KPKS				*e*S	**Sb**	**14 49 47.1**	**+3.3**
	20nm,0.7s						
ARXS	**Arharly**	**5.76**	**33**	*e*P	**Pb**	**14 48 38.2**	**-0.9**
	8.8nm,0.9s						
ARXS				*e*S	**Sb**	**14 49 52.9**	**+4.5**
	24nm,0.7s						
DJR	**Jarkent**	**6.78**	**42**	*e*P	**Pb**	**14 48 56.6**	**+0.2**
	1.2nm,0.1s						
DJR				*e*S	**Sb**	**14 50 24.9**	**+7.3**
	6.3nm,0.9s						

*IDC **27** 14:50:53.6±4.4,49.˚53S×109.˚97E,h0km,mb3.9/2, mbtmp3.9/2,MS3.7/10,Error ellipse: s-maj=212.9km s-min=49.2km az=116.0*
*NEIC **27** 14:50:55.2±2.1,49.˚4S±0.˚2×109.˚5E±0.˚7,h11km±6km, mb4.3/7,Error ellipse: s-maj=69.5km s-min=11.8km az=115.0*
ISC 27 14:50:54.2±1.3,49.˚4S±0.˚2×109.˚4E±0.˚5,h10km,n19, σ1ş34/10,mb4.2/6,MS3.7/10,Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MORW	**Morawa**	**20.89**	**17**	P	**P**	**14 55 38.9**	**+2.4**
MORW				IAmb	IAmb	14 55 39.2	
	comp=Z,12nm,0.9s						
PSA00	**Pilbara Seismi**	**28.95**	**20**	P	**P**	**14 56 52.2**	**-1.3**
ASAR	**Alice Springs**	**32.07**	**46**	P	**P**	**14 57 21.0**	**-0.2**
	comp=Z,1.0nm,0.8s,baz=210,slow=8.2,SNR=7.9						
	comp=Z,1.0nm,0.8s						
VNDA	**Vanda**	**34.41**	**162**	LR	LR	15 10 15.5	
	comp=Z,75nm,20.1s,baz=0.0,slow=34						
WRA	**Warramunga Arr**	**35.49**	**43**	P	**P**	**14 57 50.6**	**-0.3**
	comp=Z,1.9nm,0.8s,baz=208,slow=8.4,SNR=9.0						
WRA				LR	LR	15 11 06.2	
	comp=Z,76nm,20.1s,baz=57,slow=34						
	comp=Z,1.9nm,0.8s						
WB2	**Warramunga Arr**	**35.50**	**43**	P	**P**	**14 57 50.1**	**-0.9**
WB2				IAmb	IAmb	14 58 03.7	
	comp=Z,6.2nm,1.1s						
WB0	**Warramunga Arr**	**35.67**	**43**	P	**P**	**14 57 53.9**	**+1.4**
WB0				IAmb	IAmb	14 58 04.6	
	comp=Z,7.4nm,1.4s						
QSPA	**South Pole Qui**	**40.78**	**180**	LR	LR	15 14 31.8	
	comp=Z,154nm,19.9s,baz=332,slow=35						
QSPA	**South Pole Qui**	**40.78**	**180**	P	**P**	**14 58 36.4**	**+1.2**
QSPA				IAmb	IAmb	14 58 59.1	
	comp=Z,7.7nm,1.5s						
CTA	**Charters Tower**	**41.42**	**59**	LR	LR	15 15 08.0	
	comp=Z,116nm,18.3s,baz=260,slow=35						
KAPI	**Kappang**	**45.05**	**15**	LR	LR	15 14 46.3	
	comp=Z,89nm,22.0s,baz=236,slow=32						
SNAA	**Sanae**	**50.25**	**202**	LR	LR	15 19 31.7	
	comp=Z,81nm,19.6s,baz=226,slow=34						
SNAA	**Sanae**	**50.25**	**202**	P	**P**	**14 59 49.5**	**-0.5**
SNAA				IAmb	IAmb	15 00 04.8	
	comp=Z,5.6nm,1.5s						
CMAR	**Chiang Mai Arr**	**68.14**	**349**	LR	LR	15 29 54.9	
	comp=Z,23nm,19.2s,baz=175,slow=34						
MATP	**Matopo**	**68.91**	**263**	LR	LR	15 27 12.8	
	comp=Z,130nm,18.4s,baz=240,slow=32						
MJAR	**Matsushiro Arr**	**89.27**	**23**	LR	LR	15 44 26.5	
	comp=Z,14nm,20.0s,baz=184,slow=36						
PLCA	**Paso Flores**	**90.30**	**180**	LR	LR	15 44 13.6	
	comp=Z,80nm,19.2s,baz=178,slow=36						
NVAR	**Mina Array Bea**	**144.50**	**90**	PKP	**PKPdf**	**15 10 30.1**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=238,slow=6.8,SNR=4.7						
TXAR	**Lajitas Array**	**147.93**	**116**	PKPbc	**PKPbc**	**15 10 38.9**	**-0.7**
	comp=Z,0.5nm,0.8s,baz=211,slow=4.4,SNR=5.2						

*DMN **27** 14:52:58.1±0.4,28.˚79N×87.˚50E,h10km,Ml5.2/7,Error ellipse: s-maj=6.7km s-min=3.6km az=28.0*
*IDC **27** 14:52:58.7±0.7,28.˚59N×87.˚26E,h0km,mb4.2/19, mbtmp4.2/21,ML3.8/1,MS3.2/5,Error ellipse: s-maj=20.6km s-min=14.9km az=46.0*
*BJI **27** 14:52:59.3±0.0,29.˚04N×87.˚16E,h7km,mb4.5/7,mB4.4/4, Ms3.9/5,Ms7.3.6/5*
*NEIC **27** 14:53:00.7±1.2,28.˚76N±0.˚08×87.˚47E±0.˚07,h10km±1km, mb4.7/45,ML4.5(BJI),Error ellipse: s-maj=14.6km s-min=9.3km az=161.0*
*NDI **27** 14:53:01.0±4.0,28.˚79N×87.˚43E,h10km,ML4.4, mb4.7(NEIC)*
ISC 27 14:53:03.3±1.3,28.˚68N±0.˚05×87.˚45E±0.˚04,h32km±10km, n104,σ1ş47/113,mb4.5/39,MS3.3/4,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TAPN	**Taplejung**	**1.34**	**170**	*e*Pg	**Pn**	**14 53 24.9**	**-1.2**
TAPN				*e*Sg	**Sn**	**14 53 43.1**	**+0.1**
JIRN	**Jiri**	**1.50**	**228**	*e*Pg	**Pn**	**14 53 27.9**	**-0.5**
JIRN				*e*Sg	**Sn**	**14 53 47.6**	**+0.5**
GUN	**Gumba**	**1.58**	**241**	*e*Pg	**Pn**	**14 53 29.3**	**-0.1**
GUN				*e*Sg	**Sn**	**14 53 50.4**	**+1.5**
ODAN	**Odare**	**1.81**	**182**	*e*Sg	**Sb**	**14 53 59.5**	**+1.1**
	4μm,0.8s						
RAMN	**Ramite**	**1.88**	**204**	*e*Pg	**Pn**	**14 53 35.0**	**+1.6**
RAMN				*e*Sg	**Sb**	**14 54 01.0**	**+0.7**
	4μm,0.6s						
KKN	**Kakani**	**2.11**	**246**	*e*Pg	**Pb**	**14 53 39.4**	**-1.6**
KKN				*e*Sg	**Sb**	**14 54 07.4**	**+0.6**
PKI	**Pulchoki**	**2.11**	**239**	*e*Pg	**Pb**	**14 53 39.3**	**-1.8**
PKI				*e*Sg	**Sb**	**14 54 08.3**	**+1.2**
	12μm,0.7s						
PKIN	**Phulchoki**	**2.12**	**239**	*e*Pg	**Pb**	**14 53 39.5**	**-1.7**
PKIN				*e*Sg	**Sb**	**14 54 08.5**	**+1.3**
	12μm,0.7s						
DMN	**Daman**	**2.33**	**243**	*e*Pg	**Pb**	**14 53 43.4**	**-1.3**
DMN				*e*Sg	**Sb**	**14 54 14.9**	**+1.7**
	4μm,0.6s						
GKN	**Gorkha**	**2.57**	**255**	*e*Pg	**Pb**	**14 53 47.8**	**-1.0**
GKN				*e*Sg	**Sb**	**14 54 21.4**	**+1.4**
	2μm,0.4s						
LSA	**Lhasa**	**3.39**	**72**		**Pn**	**14 53 52.6**	**-1.8**
KOLN	**Koldanda**	**3.51**	**256**	*e*Sg	**Sb**	**14 54 51.0**	**+3.8**
	1μm,0.5s						
SHL	**Shillong**	**5.02**	**127**		**Pn**	**14 54 16.0**	**-0.6**
SHL	**Shillong**	**5.02**	**127**	*e*P	**Pn**	**14 54 18.0**	**+1.4**
SHL				*e*S	**Sn**	**14 55 11.2**	**-2.4**
BOK	**Bokaro**	**5.06**	**196**	*e*P	**Pn**	**14 54 18.2**	**+1.2**
BOK				*e*S	**Sn**	**14 55 17.1**	**+2.7**
ALBI	**Allahabad**	**6.05**	**238**	*e*P	**Pn**	**14 54 31.7**	**+1.2**
ALBI				*e*S	**Sn**	**14 55 39.1**	**+0.5**
ALBI				*e*S	**Sn**	**14 55 39.9**	**+1.3**
LGTI	**Lohaghat**	**6.35**	**279**	*e*P	**Pn**	**14 54 38.3**	**+3.7**
BLSP	**Bilaspur**	**8.10**	**218**	*e*P	**Pn**	**14 54 59.2**	**+0.5**
JHNI	**Jhansi**	**8.56**	**250**	*e*P	**Pn**	**14 55 01.7**	**-3.3**
JHNI				*e*S	**Sn**	**14 56 34.3**	**-6.2**
SMLA	**Simla**	**9.25**	**288**	*e*P	**Pn**	**14 55 14.3**	**-0.1**
SMLA				IAML		14 57 10.6	
	comp=E,64nm,0.6s						
SMLA				IAML		14 57 19.6	
	comp=N,66nm,0.6s						
KUDL	**Kundal**	**9.66**	**269**	*e*P	**Pn**	**14 55 20.5**	**+0.4**
GOMU	**GeErMu**	**9.74**	**38**	P	**Pn**	**14 55 24.3**	**+2.8**
GOMU				pmax	pmax		
	comp=N,4.0nm,1.0s						
GOMU				pmax	pmax		
	comp=N,69nm,4.7s						
GOMU				LR	LR		
	comp=N,340nm,9.4s						
GOMU				LR	LR		
	comp=N,290nm,8.8s						
GOMU				LR	LR		
	comp=N,410nm,9.5s						
BHPL	**Bhopal**	**10.52**	**241**	*e*P	**Pn**	**14 55 29.1**	**-2.8**
BHPL				*e*S	Sn	14 57 19.8	-8.8
BHPL				IAML		14 57 29.8	
	comp=E,330nm,0.5s						
BHPL				IAML		14 57 29.8	
	comp=N,316nm,0.5s						
NGP	**Nagpur**	**10.69**	**227**	*e*P	**Pn**	**14 55 34.2**	**0.0**
NGP				*e*S	Sn	14 57 23.4	-9.3
HYBB	**Hyderabad (bro**	**13.87**	**218**	*e*Pn	**Pn**	**14 56 15.8**	**-2.0**
HYBB				*e*Sn	**Sn**	**14 58 52.5**	**+1.8**
CHTO	**Chiang Mai**	**14.39**	**131**	P	**P**	**14 56 32.6**	**+1.3**
CM31	**Chiang Mai Arr**	**14.64**	**132**	P	**P**	**14 56 34.5**	**+0.3**
CMAR	**Chiang Mai Arr**	**14.64**	**132**	Pn	**Pn**	**14 56 28.1**	**-0.2**
	comp=N,0.4nm,0.7s,baz=307,slow=12,SNR=2.1						
CMAR				LR	LR	15 03 45.6	
	comp=N,37nm,18.7s,baz=310,slow=44						
WMQ	**Urumqi**	**15.11**	**1**	*e*P	**Pn**	**14 56 28.5**	**-6.0**
WMQ				pmax	pmax		
	comp=N,18nm,0.7s						
WMQ				LR	LR		
	comp=N,260nm,8.1s						
WMQ				LR	LR		
	comp=N,220nm,9.5s						
MKAR	**Makanchi Array**	**18.53**	**349**	P	**Pn**	**14 57 17.8**	**+0.4**
	comp=N,0.3nm,0.3s,baz=147,slow=13,SNR=5.8						
	comp=N,1.5nm,0.6s						
MKAR	**Makanchi Array**	**18.53**	**349**	P	**P**	**14 57 15.0**	**-2.1**
KURBB	**Kurchatov Arra**	**22.93**	**345**	P	**P**	**14 58 04.8**	**+0.3**
	comp=N,5.7nm,0.8s,baz=167,slow=9.4,SNR=13						
	comp=N,5.7nm,0.8s						
KURK	**Kurchatov**	**23.00**	**346**	P	**P**	**14 58 05.3**	**+0.1**
SONM	**Songino Array**	**24.12**	**32**	P	**P**	**14 58 17.7**	**+1.5**
	comp=N,4.4nm,0.8s,baz=223,slow=11,SNR=12						
	comp=N,4.4nm,0.8s						
SONM	**Songino Array**	**24.12**	**32**	P	**P**	**14 58 15.5**	**-0.7**
ULN	**Ulaanbaatar**	**24.45**	**33**	P	**P**	**14 58 20.2**	**+0.9**
ULN				IAmb	IAmb	14 58 24.5	
	comp=Z,7.7nm,0.9s						
ZALV	**Zalesovo Beam**	**25.32**	**356**	P	**P**	**14 58 27.6**	**+0.7**
	comp=Z,2.3nm,0.8s,baz=194,slow=10,SNR=3.5						
	comp=Z,2.3nm,0.8s						
WSAR	**Wadi Sarin**	**26.43**	**265**	LR	LR	15 09 05.7	
	comp=Z,30nm,21.6s,baz=110,slow=37						
GSI	**Gunungsitoli**	**28.89**	**159**	P	**P**	**14 58 58.8**	**-0.5**
GSI				IAmb	IAmb	14 59 02.3	
	comp=Z,11nm,0.8s						
KLR	**Kul'dur**	**39.40**	**46**	P	**P**	**15 00 31.6**	**+1.6**
	comp=Z,3.8nm,0.9s,baz=272,slow=9.8,SNR=7.0						
	comp=Z,3.8nm,0.9s						
JHJ	**Hachijo jima 2**	**44.75**	**71**	LR	LR	15 20 10.5	
	comp=Z,28nm,18.6s,baz=255,slow=36						
AKASG	**Malin Array Be**	**48.49**	**314**	P	**P**	**15 01 42.6**	**-0.3**
	comp=Z,1.2nm,0.5s,baz=79,slow=7.3,SNR=14						
	comp=Z,1.2nm,0.5s						
TIXI	**Tiksi**	**48.58**	**16**	P	**P**	**15 01 43.9**	**+0.7**
	comp=Z,8.0nm,0.6s,baz=89,slow=22,SNR=15						
	comp=Z,8.0nm,0.6s						
TIXI	**Tiksi**	**48.58**	**16**	P	**P**	**15 01 43.2**	**0.0**
MLR	**Muntele Rosu**	**50.64**	**307**	P	**P**	**15 01 59.0**	**-0.5**
MLR				IAmb	IAmb	15 02 06.4	
	comp=Z,12nm,0.8s						
BURAR	**Bucovina Array**	**51.06**	**310**	P	**P**	**15 02 02.3**	**-0.2**
BUR08	**Bucovina Ar. S**	**51.07**	**310**	P	**P**	**15 02 02.7**	**0.0**
FIA1	**FINESS Array S**	**51.61**	**327**	P	**P**	**15 02 06.2**	**-0.1**
FIA1				IAmb	IAmb	15 02 39.0	
	comp=Z,14nm,1.2s						
FINES	**FINESS Array B**	**51.61**	**327**	P	**P**	**15 02 06.5**	**+0.2**
	comp=Z,4.2nm,0.7s,baz=103,slow=7.2,SNR=8.4						
FINES				LR	LR	15 26 59.7	
	comp=Z,42nm,20.7s,baz=76,slow=40						
	comp=Z,4.2nm,0.7s						
PABE	**Paberze**	**51.99**	**320**	P	**P**	**15 02 08.8**	**-0.4**
SEY	**Seymchan**	**53.50**	**31**	P	**P**	**15 02 21.2**	**+0.9**
	comp=Z,1.6nm,0.8s,baz=54,slow=4.2,SNR=4.4						
	comp=Z,1.6nm,0.8s						
SEY	**Seymchan**	**53.50**	**31**	P	**P**	**15 02 21.2**	**+0.9**
ARCES	**ARCESS Array B**	**53.68**	**337**	P	**P**	**15 02 22.0**	**+0.5**
	comp=Z,2.0nm,0.7s,baz=100,slow=6.3,SNR=4.8						
	comp=Z,2.0nm,0.7s						
ARCES	**ARCESS Array B**	**53.68**	**337**	P	**P**	**15 02 21.4**	**-0.2**
ARCES				IAmb	IAmb	15 02 51.5	
	comp=Z,18nm,1.5s						
MORC	**Moravsky Berou**	**56.00**	**313**	P	**P**	**15 02 38.1**	**-0.6**
MORC				IAmb	IAmb	15 02 40.4	
	comp=Z,5.5nm,1.1s						
NC405	**NORSAR Array S**	**58.50**	**326**	P	**P**	**15 02 56.2**	**+0.1**
MBWA	**Marble Bar**	**58.53**	**144**	P	**P**	**15 02 56.3**	**-0.5**
GEC2	**GERESS Array S**	**58.61**	**312**	P	**P**	**15 02

NB2	**NORSAR Subarra**	**58.75**	**326**	P		**P**		**15 02 56.9**	**-1.0**
	comp=Z,1.5nm,0.5s,baz=86,slow=6.9								
NOA	**NORSAR Array B**	**58.75**	**326**	P		**P**		**15 02 57.2**	**-0.7**
	comp=Z,1.7nm,0.7s,baz=87,slow=6.9,SNR=8.3								
	comp=Z,1.7nm,0.7s								
NC204	**NORSAR Array S**	**58.95**	**327**	P		**P**		**15 02 58.8**	**-0.5**
KNRA	**Kununurra**	**59.50**	**132**	P		**P**		**15 03 03.3**	**-0.3**
STAL	**STALIGIAL**	**59.71**	**309**	P		**P**		**15 03 03.9**	**-0.9**
STAL				IAmb		IAmb		15 03 04.8	
	comp=Z,7.1nm,0.9s								
NRCA	**Norcia**	**60.13**	**305**	P		**P**		**15 03 08.2**	**+0.4**
NRCA				IAmb		IAmb		15 03 22.5	
	comp=Z,5.2nm,0.9s								
FUORN	**Ofenpass-Fuorn**	**61.30**	**310**	P		**P**		**15 03 14.1**	**-1.8**
FUORN				IAmb		IAmb		15 03 22.5	
	comp=Z,2.4nm,0.7s								
MSSA	**Maissana**	**62.34**	**308**	P		**P**		**15 03 22.2**	**-0.5**
SENIN	**Lac Senin/Sane**	**63.35**	**310**	P		**P**		**15 03 29.2**	**-0.4**
SENIN				IAmb		IAmb		15 03 32.0	
	comp=Z,5.0nm,0.7s								
KEST	**Kesra**	**64.85**	**298**	P		**P**		**15 03 38.3**	**-1.2**
	comp=Z,4.9nm,0.9s,baz=308,slow=5.1,SNR=4.8								
	comp=Z,4.9nm,0.9s								
KEST	**Kesra**	**64.85**	**298**	P		**P**		**15 03 40.7**	**+1.3**
WB0	**Warramunga Arr**	**66.14**	**131**	P		**P**		**15 03 48.2**	**+0.3**
WB0				IAmb		IAmb		15 03 54.4	
	comp=Z,14nm,1.5s								
CLF	**Chambon-Foret**	**66.21**	**313**	P		**P**		**15 03 48.1**	**+0.2**
WRA	**Warramunga Arr**	**66.23**	**131**	P		**P**		**15 03 49.1**	**+0.7**
	comp=Z,2.1nm,0.7s,baz=322,slow=6.6,SNR=18								
	comp=Z,2.1nm,0.7s								
WRA	**Warramunga Arr**	**66.23**	**131**	IAmb		IAmb		15 03 49.9	
	comp=Z,0.2nm,0.8s								
WB2	**Warramunga Arr**	**66.24**	**131**	P		**P**		**15 03 48.9**	**+0.5**
WB2				IAmb		IAmb		15 03 52.3	
	comp=Z,4.4nm,0.8s								
WR0	**Warramunga Arr**	**66.38**	**131**	P		**P**		**15 03 49.5**	**+0.2**
AS31	**Alice Springs**	**68.63**	**134**	P		**P**		**15 04 03.5**	**-0.1**
ASAR	**Alice Springs**	**68.63**	**134**	P		**P**		**15 04 04.3**	**+0.8**
	comp=Z,2.7nm,0.7s,baz=316,slow=6.0,SNR=26								
	comp=Z,2.7nm,0.7s								
ASAR	**Alice Springs**	**68.63**	**134**	P		**P**		**15 04 04.1**	**+0.6**
TNA	**Tin City**	**70.01**	**25**	P		**P**		**15 04 09.7**	**-1.7**
EUNU	**Eureka**	**71.44**	**359**	P		**P**		**15 04 18.4**	**-1.6**
ESDC	**Sonseca Array**	**73.33**	**306**	P		**P**		**15 04 32.2**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=62,slow=6.6,SNR=6.2								
	comp=Z,1.2nm,0.8s								
ESDC	**Sonseca Array**	**73.33**	**306**	IAmb		IAmb		15 04 35.5	
	comp=Z,1.7nm,1.1s								
K20K	**Telida**	**76.28**	**24**	P		**P**		**15 04 48.0**	**-0.5**
K20K				IAmb		IAmb		15 04 53.4	
	comp=Z,6.2nm,1.0s								
MLY	**Manley**	**76.37**	**22**	P		**P**		**15 04 49.9**	**+0.8**
MLY				IAmb		IAmb		15 04 53.2	
	comp=Z,2.9nm,1.0s								
PVAQ	**Vaqueiros**	**76.95**	**305**	P		**P**		**15 04 51.2**	**-1.6**
PVAQ				IAmb		IAmb		15 04 56.6	
	comp=Z,4.1nm,0.7s								
NEA2	**Nenana**	**77.20**	**22**	P		**P**		**15 04 53.1**	**-0.6**
NEA2				IAmb		IAmb		15 04 57.5	
	comp=Z,6.0nm,0.8s								
CCB	**Clear Creek Bu**	**77.57**	**21**	P		**P**		**15 04 55.7**	**-0.1**
ILAR	**Eielson Array**	**77.77**	**21**	P		**P**		**15 04 59.5**	**+2.5**
	comp=Z,1.3nm,0.7s,baz=300,slow=4.5,SNR=9.2								
	comp=Z,1.3nm,0.7s								
J26L	**Joseph Creek**	**78.98**	**20**	P		**P**		**15 05 04.1**	**+0.4**
J26L				IAmb		IAmb		15 05 07.2	
	comp=Z,4.2nm,0.7s								
RIDG	**Independent Ri**	**79.13**	**21**	P		**P**		**15 05 05.0**	**+0.4**
RIDG				IAmb		IAmb		15 05 07.6	
	comp=Z,3.3nm,0.7s								
SCRK	**Sand Creek**	**79.23**	**21**	P		**P**		**15 05 05.1**	**0.0**
SCRK				IAmb		IAmb		15 05 08.7	
	comp=Z,3.1nm,0.7s								
LBTB	**Lobatse**	**79.90**	**234**	LR		LR		15 36 38.8	
	comp=Z,23nm,20.4s,baz=86,slow=33								
TOA0	**Torodi Ar. Sit**	**80.14**	**280**	P		**P**		**15 05 10.5**	**-0.2**
TORD	**Torodi Ar. Bea**	**80.14**	**280**	P		**P**		**15 05 11.1**	**+0.3**
	comp=Z,1.4nm,0.7s,baz=45,slow=4.2,SNR=5.8								
	comp=Z,1.4nm,0.7s								
TORD	**Torodi Ar. Bea**	**80.14**	**280**	IAmb		IAmb		15 05 11.7	
	comp=Z,1.7nm,0.9s								
BCAR	**Beaver Creek A**	**80.58**	**20**	P		**P**		**15 05 12.6**	**+0.2**
HYT	**Haines Junctio**	**83.60**	**20**	P		**P**		**15 05 29.1**	**+0.8**
HYT				IAmb		IAmb		15 05 35.3	
	comp=Z,4.7nm,1.0s								
YKA	**Yellowknife Ar**	**87.44**	**10**	P		**P**		**15 05 47.7**	**+0.5**
	comp=Z,1.0nm,0.8s,baz=340,slow=4.8,SNR=6.2								
	comp=Z,1.0nm,0.8s								
DLBC	**Dease Lake**	**87.75**	**19**	P		**P**		**15 05 50.1**	**+1.2**
	comp=Z,1.6nm,0.6s,baz=0.0,slow=11,SNR=4.5								
	comp=Z,1.6nm,0.6s								
TXAR	**Lajitas Array**	**121.34**	**11**	PKP		**PKiKP**		**15 11 54.1**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=356,slow=3.8,SNR=5.2								
CPUP	**Villa Florida**	**148.74**	**266**	PKPbc		**PKPbc**		**15 12 47.1**	**-0.7**
	comp=Z,1.6nm,0.7s,baz=76,slow=3.3,SNR=4.7								

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*IDC **27** 14:53:13.8±2.3,39.03°N×73.56°E,h0km,mb3.9/10, mbtmp3.9/15,ML3.6/5,MS3.2/8,Error ellipse: s-maj=43.3km s-min=18.3km az=136.0*
*MOS **27** 14:53:19.4±0.9,39.43°N×73.23°E,h19km,mb4.3/5,Error ellipse: s-maj=7.0km s-min=4.6km az=84.1*
MOS Felt (III-IV) at Bordobo; (II-III) at Sary-Tash.
*SOME **27** 14:53:19.3,39.55°N×73.45°E,h10km,MS3.5*
*NEIC **27** 14:53:20.2±1.4,39.49°N±0.06°×73.06°E±0.02,h10km±1km, mb4.2/13,Error ellipse: s-maj=10.7km s-min=3.0km az=184.0*
*KRNET **27** 14:53:20.1±0.1,39.55°N×73.26°E,h29km,mb4.6*
*NNC **27** 14:53:22.3±1.4,39.65°N×73.39°E,h0km,mb4.5,mpv4.1, Error ellipse: s-maj=12.0km s-min=6.1km az=172.0*

ISC 27 14:53:18.3±1.3,39.40N±0.04×73.16E±0.03,h6km±8km, n194,σ2ᵗ19/256,mb4.0/16,MS3.3/7,37C-23D,
Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**1.06**	**275**	**⇓*i*P**			**Pn**	**14 53 41.1**	**+1.2**
DRK									
	baz=67								
				⇓*i*S			**Sn**	**14 53 56.3**	**+1.2**
	baz=67								
DRK	**Karamyk**	**1.06**	**275**	Pg			**Pg**	**14 53 38.6**	**0.0**
OHH	**Osh**	**1.16**	**346**	**⇑*e*P**			**Pg**	**14 53 39.4**	**-1.2**
	baz=40								
OHH				⇑*e*S			**Sg**	**14 53 53.6**	**-2.1**
	baz=40								
OHH	**Osh**	**1.16**	**346**	*e*PG			**Pg**	**14 53 39.4**	**-1.2**
OHH				*e*S			**Sg**	**14 53 53.6**	**-2.1**
BTK	**Batken**	**1.92**	**291**	**⇑*e*P**			**Pg**	**14 53 54.4**	**-0.7**
	baz=86								
BTK				⇑*e*S			**Sg**	**14 54 19.5**	**-0.6**
	baz=86								
BTK	**Batken**	**1.92**	**291**	Pn			**Pb**	**14 53 54.0**	**+0.2**
BTK	**Batken**	**1.92**	**291**	*e*PN			**Pg**	**14 53 54.4**	**-0.7**
BTK				*e*S			**Sg**	**14 54 19.5**	**-0.6**
KSH	**Kashi**	**2.18**	**86**	Pg			Pn	14 53 50.0	-5.2
KSH				Sg			Sn	14 54 13.5	-9.1
KSH				pmax			pmax		
	comp=Z,290nm,0.8s								
KSH				smax			smax		
	comp=N,1μm,0.9s								
KSH				smax			smax		
	comp=E,2μm,0.9s								
GAR	**Garm**	**2.24**	**261**	**⇑*e*P**			**Pb**	**14 54 00.1**	**+0.8**
	baz=57								
GAR				⇑*e*S			**Sg**	**14 54 29.2**	**-1.2**
	baz=57								
GAR	**Garm**	**2.24**	**261**				**Pb**	**14 53 59.9**	**+0.6**
GAR	**Garm**	**2.24**	**261**	*e*PN			**Pb**	**14 54 00.1**	**+0.8**
GAR				*e*S			**Sg**	**14 54 29.2**	**-1.2**
ARLS	**Aral**	**2.62**	**19**	**⇑*e*P**			**Pn**	**14 54 01.3**	**0.0**
ARLS									
	baz=19								
				⇑*e*S			**Sn**	**14 54 31.4**	**-2.0**
	baz=19								
ARLS	**Aral**	**2.62**	**19**	*e*PN			**Pn**	**14 54 01.3**	**0.0**
ARLS				*e*S			**Sn**	**14 54 31.4**	**-2.0**
TRKS	**Terek-Say**	**2.63**	**325**	**⇑*e*P**			**Pn**	**14 54 02.0**	**+0.6**
	baz=21								
TRKS				⇑*e*S			**Sn**	**14 54 32.4**	**-1.3**
	baz=21								
TRKS	**Terek-Say**	**2.63**	**325**	*e*PN			**Pn**	**14 54 02.0**	**+0.6**
TRKS				*e*S			**Sn**	**14 54 32.4**	**-1.3**
AML	**Almayashu**	**2.76**	**8**	P			**Pn**	**14 54 05.1**	**+1.6**
	SNR=38								
AML	**Almayashu**	**2.76**	**8**	*e*PN			**Pn**	**14 54 03.9**	**+0.4**
AML				*e*S			**Sn**	**14 54 35.8**	**-1.5**
UCH	**Uchtor**	**3.01**	**20**	P			**Pn**	**14 54 08.3**	**+1.4**
	SNR=78								
UCH	**Uchtor**	**3.01**	**20**	**⇑*e*P**			**Pn**	**14 54 07.1**	**+0.2**
	baz=19								
UCH				⇑*e*S			**Sn**	**14 54 41.2**	**-2.3**
	baz=19								
UCH	**Uchtor**	**3.01**	**20**	*e*PN			**Pn**	**14 54 07.1**	**+0.2**
UCH				*e*S			**Sn**	**14 54 41.2**	**-2.3**
CHGR	**Chuyangaron**	**3.20**	**258**	**⇑*e*P**			**Pn**	**14 54 12.9**	**+3.7**
	baz=56								
CHGR				⇑*e*S			**Sb**	**14 54 52.1**	**-2.8**
	baz=56								
CHGR	**Chuyangaron**	**3.20**	**258**	Pn			**Pn**	**14 54 10.8**	**+1.6**
CHGR	**Chuyangaron**	**3.20**	**258**	*e*PN			**Pn**	**14 54 12.9**	**+3.7**
CHGR				*e*S			**Sb**	**14 54 52.1**	**-2.8**
EKS2	**Erkin-Say**	**3.30**	**8**	P			**Pn**	**14 54 12.8**	**+2.3**
	SNR=20								
EKS2	**Erkin-Say**	**3.30**	**8**	**⇑*e*P**			**Pn**	**14 54 11.0**	**+0.4**
	baz=7.0								
EKS2				⇑*i*S			**Sn**	**14 54 47.8**	**-2.3**
	baz=7.0								
EKS2	**Erkin-Say**	**3.30**	**8**	*e*PN			**Pn**	**14 54 11.0**	**+0.4**
EKS2				*e*S			**Sn**	**14 54 47.8**	**-2.3**
AAK	**Ala-Archa**	**3.39**	**17**	P			**Pn**	**14 54 14.2**	**+2.3**
	SNR=32								
AAK	**Ala-Archa**	**3.39**	**17**	Pn			**Pn**	**14 54 14.5**	**+2.6**
	comp=E,9.7nm,0.3s,baz=194,slow=7.6,SNR=26								
AAK					Sn		**Sb**	**14 54 56.7**	**-3.8**
	comp=E,15nm,0.3s,baz=6.3,slow=19,SNR=7.6								
	comp=E,59nm,0.4s								
AAK	**Ala-Archa**	**3.39**	**17**	**⇑*e*P**			**Pn**	**14 54 12.3**	**+0.4**
	baz=16								
AAK				⇑*e*S			**Sn**	**14 54 50.2**	**-2.3**
	baz=16								
AAK	**Ala-Archa**	**3.39**	**17**	Pn			**Pn**	**14 54 12.8**	**+0.9**
AAK	**Ala-Archa**	**3.39**	**17**	*e*PN			**Pn**	**14 54 12.3**	**+0.4**
AAK				*e*S			**Sn**	**14 54 50.2**	**-2.3**
TAS	**Tashkent**	**3.52**	**304**	**⇑*i*P**			**Pn**	**14 54 16.1**	**+2.5**
	baz=2.0								
TAS				⇑*i*S			**Sn**	**14 54 56.9**	**+1.3**
	baz=2.0								
TAS	**Tashkent**	**3.52**	**304**	Pn			**Pn**	**14 54 14.5**	**+0.9**
TAS	**Tashkent**	**3.52**	**304**	*i* PN			**Pn**	**14 54 16.1**	**+2.5**
TAS				*i* S			**Sn**	**14 54 56.9**	**+1.3**
KBK	**Karagaybulak**	**3.53**	**22**	P			**Pn**	**14 54 17.4**	**+3.6**
	SNR=21								
KBK	**Karagaybulak**	**3.53**	**22**	**⇓*e*P**			**Pn**	**14 54 13.9**	**+0.1**
	baz=22								
KBK				⇓*i*S			**Sn**	**14 54 53.5**	**-2.4**
	baz=22								
KBK	**Karagaybulak**	**3.53**	**22**	*e*PN			**Pn**	**14 54 13.9**	**+0.1**
KBK				*i* S			**Sn**	**14 54 53.5**	**-2.4**
IUG	**Iuzhnay**	**3.63**	**320**	*e*P			**Pg**	**14 54 26.3**	**-1.6**
IUG				*e*S			**Sg**	**14 55 14.7**	**-0.3**
IUG	**Iuzhnay**	**3.63**	**320**	*e*Pn			**Pn**	**14 54 18.2**	**+3.0**
	baz=314								
IUG				*e*Pg			**Pg**	**14 54 25.2**	**-2.6**
	baz=314								
IUG				*e*Lg			Lg	14 55 14.8	
	baz=314								
IUG	**Iuzhnay**	**3.63**	**320**	Pg			**Pg**	**14 54 26.3**	**-1.6**
	comp=E,61nm,0.6s								
IUG				Lg			Lg	14 55 14.7	
	comp=E,539nm,0.7s								
ULHL	**Ulahol**	**3.68**	**38**	P			**Pn**	**14 54 18.9**	**+2.9**
	SNR=15								
ULHL	**Ulahol**	**3.68**	**38**	**⇑*e*P**			**Pn**	**14 54 16.2**	**+0.2**
	baz=39								
ULHL				⇑*e*S			**Sn**	**14 54 57.3**	**-2.5**
	baz=39								
ULHL	**Ulahol**	**3.68**	**38**	*e*PN			**Pn**	**14 54 16.2**	**+0.2**
ULHL				*e*S			**Sn**	**14 54 57.3**	**-2.5**
BOOM	**Boomskoye usch**	**3.74**	**33**	**⇓*e*P**			**Pn**	**14 54 17.0**	**+0.3**
	baz=34								
BOOM				⇓*e*S			**Sn**	**14 54 58.6**	**-2.5**
	baz=34								
BOOM	**Boomskoye usch**	**3.74**	**33**	Pn			**Pn**	**14 54 17.2**	**+0.5**
BOOM	**Boomskoye usch**	**3.74**	**33**	*e*PN			**Pn**	**14 54 17.0**	**+0.3**
BOOM				*e*S			**Sn**	**14 54 58.6**	**-2.5**
DZA	**Taraz**	**3.76**	**339**	*e*P			**Pg**	**14 54 28.3**	**-1.9**
	comp=E,230nm,0.0s								
DZA				*e*S			**Sg**	**14 55 17.9**	**-1.0**
	comp=E,508nm,0.0s								
DZA	**Taraz**	**3.76**	**339**	*e*Pn			**Pn**	**14 54 19.3**	**+2.5**
	baz=335								
DZA				*e*Pg			**Pg**	**14 54 28.3**	**-1.9**
	baz=335								
DZA	**Taraz**	**3.76**	**339**	Pg			**Pg**	**14 54 28.8**	**-1.4**
	comp=E,122nm,0.2s								
DZA				Lg			Lg	14 55 19.1	
	comp=E,559nm,0.4s								
CHMS	**Chumysh**	**3.79**	**18**	P			**Pn**	**14 54 19.2**	**+1.9**
	SNR=23								
CHMS	**Chumysh**	**3.79**	**18**	**⇓*e*P**			**Pn**	**14 54 17.6**	**+0.3**
	baz=18								
CHMS				⇓*i*S			**Sn**	**14 54 59.7**	**-2.6**
	baz=18								
CHMS	**Chumysh**	**3.79**	**18**	*e*PN			**Pn**	**14 54 17.6**	**+0.3**
CHMS				*e*S			**Sn**	**14 54 59.7**	**-2.6**
CHMS	**Chumysh**	**3.79**	**18**	**⇑**Pn			**Pn**	**14 54 19.0**	**+1.7**
	comp=E,30nm,0.4s								
CHMS				⇑Lg			Lg	14 55 14.6	
	comp=E,182nm,0.6s								
TKM2	**Tokmak 2**	**3.97**	**27**	P			**Pn**	**14 54 21.6**	**+1.6**
	SNR=16								
TKM2	**Tokmak 2**	**3.97**	**27**	**⇑*e*P**			**Pn**	**14 54 20.3**	**+0.4**
	baz=27								
TKM2				⇑*e*S			**Sn**	**14 55 04.2**	**-2.7**
	baz=27								
TKM2	**Tokmak 2**	**3.97**	**27**	*e*PN			**Pn**	**14 54 20.3**	**+0.4**
TKM2				*e*S			**Sn**	**14 55 04.2**	**-2.7**
TKM2	**Tokmak 2**	**3.97**	**27**	**⇓**Pn			**Pn**	**14 54 21.4**	**+1.5**
	comp=E,5.5nm,0.5s								
TKM2				⇑Lg			Lg	14 55 20.6	
	comp=E,178nm,0.7s								
CHM	**Chimkent**	**3.98**	**318**	*e*P			**Pg**	**14 54 32.5**	**-2.0**
	comp=E,65nm,0.3s								
CHM				*e*S			**Sg**	**14 55 25.4**	**-0.5**
	comp=E,1μm,0.1s								
CHM	**Chimkent**	**3.98**	**318**	*e*Pg			**Pg**	**14 54 35.0**	**+0.6**
	baz=313								
CHM				*e*Lg			Lg	14 55 26.1	
	baz=313								
USP	**Ospenovka**	**4.00**	**14**	P			**Pn**	**14 54 22.1**	**+2.0**
	SNR=11								
USP	**Ospenovka**	**4.00**	**14**	**⇓*i*P**			**Pn**	**14 54 20.7**	**+0.6**
	baz=14								
USP				⇓*e*S			**Sn**	**14 55 04.8**	**-2.5**
	baz=14								
USP	**Ospenovka**	**4.00**	**14**	*i* PN			**Pn**	**14 54 20.7**	**+0.6**
USP				*e*S			**Sn**	**14 55 04.8**	**-2.5**
KDJ	**Kajisay**	**4.10**	**47**	Pn			**Pn**	**14 54 23.4**	**+1.8**
SGDS	**Sogindy**	**4.20**	**15**	*e*P			**Pb**	**14 54 32.5**	**-0.1**
	comp=E,29nm,0.5s								
SGDS				*e*S			**Sb**	**14 55 25.7**	**+2.1**
	comp=E,105nm,0.7s								
SGDS	**Sogindy**	**4.20**	**15**	*e*Pn			**Pn**	**14 54 24.4**	**+1.5**
	baz=15								
SGDS				*e*Pg			**Pb**	**14 54 33.9**	**+1.3**
	baz=15								
SGDS				*e*Lg			Lg	14 55 26.6	
	baz=15								
KK31	**Karatay Array**	**4.21**	**333**	Pn			**Pn**	**14 54 25.1**	**+2.1**
KK31	**Karatay Array**	**4.21**	**333**	PN			**Pn**	**14 54 25.5**	**+2.5**
KK31				PG			**Pg**	**14 54 36.2**	**-2.7**
KK31				LG			Lg	14 55 28.5	
KK31	**Karatay Array**	**4.21**	**333**	Pn			**Pn**	**14 54 25.1**	**+2.1**
	comp=E,3.9nm,0.3s,baz=143,slow=12,SNR=117								
KK31				⇑Pg			**Pg**	**14 54 36.2**	**-2.7**
	comp=E,44nm,0.7s,baz=171,slow=17,SNR=17								
KK31				⇓Lg			Lg	14 55 28.5	
	comp=E,47nm,0.3s,baz=136,slow=28,SNR=4.3								
KKAR	**Karatay Array**	**4.21**	**333**	**⇑*i*P**			**Pn**	**14 54 24.3**	**+1.3**
	baz=31								
KKAR				⇑*e*S			**Sn**	**14 55 11.4**	**-1.0**
	baz=31								
KKAR	**Karatay Array**	**4.21**	**333**				**Pn**	**14 54 24.5**	**+1.5**
KKAR	**Karatay Array**	**4.21**	**333**	*i* PN			**Pn**	**14 54 24.3**	**+1.3**
KKAR				*e*S			**Sn**	**14 55 11.4**	**-1.0**
KST	**Kastek**	**4.21**	**29**	*e*P			**Pb**	**14 54 32.5**	**-0.4**
	comp=E,28nm,0.1s								
KST				*e*S			**Sb**	**14 55 25.0**	**+0.9**
	comp=E,296nm,0.8s								
KST	**Kastek**	**4.21**	**29**	Pg			**Pb**	**14 54 33.1**	**+0.3**
	comp=E,28nm,0.6s								
KST				Lg			Lg	14 55 26.9	
	comp=E,296nm,0.8s								
TARG	**Taragay, Kyrgy**	**4.24**	**55**	Pn			**Pn**	**14 54 25.2**	**+1.5**
DGS	**Degeres**	**4.32**	**26**	*e*P			**Pb**	**14 54 36.1**	**+1.5**
	comp=E,46nm,0.1s								
DGS				*e*S			**Sb**	**14 55 31.6**	**+4.6**
	comp=E,143nm,0.3s								
DGS	**Degeres**	**4.32**	**26**	Pg			**Pb**	**14 54 36.1**	**+1.5**
	comp=E,46nm,0.8s								
DGS				Lg			Lg	14 55 31.6	
	comp=E,150nm,0.7s								
BRLS	**Boroldav**	**4.41**	**326**	*e*P			**Pb**	**14 54 37.6**	**+1.4**
	comp=E,13nm,0.5s								
BRLS				*e*S			**Sg**	**14 55 34.1**	**-5.8**
	comp=E,112nm,0.5s								
BRLS	**Boroldav**	**4.41**	**326**	*e*Pn			**Pn**	**14 54 26.9**	**+1.1**
	baz=319								
BRLS				*e*Pg			**Pb**	**14 54 38.5**	**+2.3**
	baz=319								
BRLS				*e*Lg			Lg	14 55 33.9	
	baz=319								
BRLS	**Boroldav**	**4.41**	**326**	Pg			**Pb**	**14 54 37.6**	**+1.4**
	comp=E,13nm,0.5s								
BRLS				Lg			Lg	14 55 34.8	
	comp=E,112nm,0.5s								
MTBS	**Maitube**	**4.47**	**32**	*e*P			**Pb**	**14 54 38.3**	**+1.1**
	comp=E,28nm,0.7s								
MTBS				*e*S			**Sb**	**14 55 35.1**	**+3.8**
	comp=E,162nm,0.6s								
MTBS	**Maitube**	**4.47**	**32**	Pg			**Pb**	**14 54 38.3**	**+1.1**
	comp=E,28nm,0.7s								
MTBS				Lg			Lg	14 55 35.1	
	comp=E,162nm,0.6s								
TNSS	**Tian-Shan**	**4.62**	**37**	*e*P			**Pb**	**14 54 41.3**	**+1.2**
	comp=E,34nm,0.7s								
TNSS				*e*S			**Sb**	**14 55 40.2**	**+4.1**
	comp=E,89nm,0.6s								
TNSS	**Tian-Shan**	**4.62**	**37**	*e*Pn			**Pn**	**14 54 30.7**	**+1.6**
	baz=39								
TNSS				*e*Pg			**Pb**	**14 54 41.1**	**+1.0**
	baz=39								
TNSS				*e*Lg			Lg	14 55 41.1	
	baz=39								
TNSS	**Tian-Shan**	**4.62**	**37**	Pg			**Pb**	**14 54 41.3**	**+1.2**
	comp=E,32nm,0.8s								
TNSS				Lg			Lg	14 55 40.2	
	comp=E,89nm,0.6s								
KRBS	**Karabastau**	**4.69**	**23**	*e*P			**Pb**	**14 54 41.9**	**+0.9**
	comp=E,25nm,0.5s								
KRBS				*e*S			**Sb**	**14 55 41.5**	**+3.7**
	comp=E,145nm,0.2s								
KRBS	**Karabastau**	**4.69**	**23**	Pg			**Pb**	**14 54 41.9**	**+0.9**
	comp=E,25nm,0.5s								
KRBS				Lg			Lg	14 55 41.5	
	comp=E,128nm,0.5s								
AAA	**Alma-Ata**	**4.74**	**35**	*e*P			**Pb**	**14 54 43.1**	**+1.3**
	comp=E,47nm,0.3s								
AAA				*e*S			**Sb**	**14 55 44.3**	**+5.0**
	comp=E,602nm,0.6s								
AAA	**Alma-Ata**	**4.74**	**35**	*e*Pg			**Pg**	**14 54 46.9**	**-2.2**
	baz=38								
AAA				*e*Lg			Lg	14 55 46.6	
	baz=38								
AAA	**Alma-Ata**	**4.74**	**35**	Pg			**Pb**	**14 54 43.5**	**+1.6**
	comp=E,47nm,0.3s								
AAA				Lg			Lg	14 55 44.7	
	comp=E,602nm,0.6s								
KNDC	**Almaty**	**4.77**	**36**	PN			**Pn**	**14 54 34.8**	**+4.0**
KNDC				LG			Lg	14 55 44.7	
KNDC	**Almaty**	**4.77**	**36**	**⇓**Pn			**Pn**	**14 54 34.8**	**+4.0**
	comp=E,46nm,0.7s								
KNDC				⇓Lg			Lg	14 55 44.7	
	comp=E,1μm,1.3s								
ANVS	**Anan'yevo**	**4.80**	**44**	**⇓*i*P**			**Pn**	**14 54 31.7**	**+0.4**
	baz=44								
ANVS				⇓*i*S			**Sn**	**14 55 23.8**	**-3.5**
	baz=44								
PRZ	**Przheval'sk**	**5.03**	**50**	**⇓*e*P**			**Pn**	**14 54 35.3**	**+0.9**
	baz=51								
PRZ				⇓*e*S			**Sn**	**14 55 29.8**	**-3.1**
	baz=51								
PRZ	**Przheval'sk**	**5.03**	**50**	*e*PN			**Pn**	**14 54 35.3**	**+0.9**
KTBS	**Karatobe**	**5.06**	**30**	*e*P		

	comp=E,22nm,0.1s									
ARXS					*e*S		**Sb**	**14 56 19.9**	**+6.1**	
	comp=E,100nm,0.4s									
ARXS	**Arharly**	**5.94**	**34**		Pg		**Pb**	**14 55 04.0**	**+1.7**	
	comp=E,19nm,0.8s									
ARXS					Lg		Lg	14 56 19.9		
	comp=E,95nm,0.7s									
BLB	**Baldybastay**	**6.15**	**39**		*e*P		**Pb**	**14 55 07.7**	**+1.7**	
	comp=E,32nm,0.0s									
BLB					*e*S		**Sb**	**14 56 25.7**	**+5.8**	
	comp=E,92nm,0.2s									
BLB	**Baldybastay**	**6.15**	**39**		Pg		**Pb**	**14 55 07.7**	**+1.7**	
	comp=E,31nm,0.6s									
BLB					Lg		Lg	14 56 26.8		
	comp=E,141nm,0.8s									
PDGK	**Podgornoye**	**6.17**	**48**		PN		**Pn**	**14 54 51.6**	**+1.5**	
PDGK					LG		Lg	14 56 26.5		
PDGK	**Podgornoye**	**6.17**	**48**		Pg		**Pb**	**14 55 06.5**	**+0.2**	
	comp=E,7.6nm,0.6s									
PDGK					Lg		Lg	14 56 24.2		
	comp=E,25nm,1.0s									
PDGK	**Podgornoye**	**6.17**	**48**		⇓Pn		**Pn**	**14 54 51.6**	**+1.5**	
	comp=E,9.3nm,0.7s									
PDGK					⇑Pg		**Pb**	**14 55 06.7**	**+0.5**	
	comp=E,23nm,0.9s									
PDGK					⇓Lg		Lg	14 56 26.5		
	comp=E,152nm,1.0s									
TDK	**Taldyqorghan**	**6.82**	**33**		*e*P		**Pb**	**14 55 20.1**	**+2.9**	
	comp=E,25nm,0.5s									
TDK					*e*S		**Sb**	**14 56 47.0**	**+8.1**	
	comp=E,143nm,1.1s									
TDK	**Taldyqorghan**	**6.82**	**33**		Pg		**Pb**	**14 55 20.1**	**+2.9**	
	comp=E,25nm,0.5s									
TDK					Lg		Lg	14 56 47.0		
	comp=E,143nm,1.1s									
DJR	**Jarkent**	**6.99**	**43**		*e*P		**Pb**	**14 55 23.5**	**+3.4**	
	comp=E,4.7nm,0.1s									
DJR					*e*S		**Sb**	**14 56 52.5**	**+8.8**	
	comp=E,33nm,0.1s									
DJR	**Jarkent**	**6.99**	**43**		Pg		**Pb**	**14 55 21.2**	**+1.2**	
	comp=E,4.3nm,0.4s									
DJR					Lg		Lg	14 56 49.1		
	comp=E,27nm,1.7s									
OTUK	**Ortayu**	**8.87**	**356**		P		**Pn**	**14 55 26.9**	**0.0**	
OTUK	**Ortayu**	**8.87**	**356**		⇓Pn		**Pn**	**14 55 26.9**	**0.0**	
	comp=E,2.1nm,0.5s									
OTUK					⇓Lg		Lg	14 57 54.6		
	comp=E,46nm,0.7s									
MK31	**Makanchi Array**	**9.96**	**39**		*i* P		**Pn**	**14 55 41.8**	**-0.1**	
MKAR	**Makanchi Array**	**9.96**	**39**		Pn		**Pn**	**14 55 44.4**	**+2.5**	
	comp=E,0.1nm,0.3s,baz=200,slow=10,SNR=4.9									
HRA	**Herat**	**10.07**	**244**		Pn		**Pn**	**14 55 44.8**	**+1.2**	
WMQ	**Urumqi**	**11.74**	**63**		*e*P		**Pn**	**14 56 07.5**	**+1.1**	
KURBB	**Kurchatov Arra**	**11.85**	**17**		Pn		**Pn**	**14 56 08.0**	**+0.3**	
	baz=207,slow=12,SNR=4.5									
KURBB					Lg		Lg	14 59 27.3		
	comp=E,0.1nm,0.3s,baz=206,slow=30,SNR=5.1									
	comp=E,0.4nm,0.8s									
KURBB	**Kurchatov Arra**	**11.85**	**17**		⇑Lg		Lg	14 59 27.5		
	comp=E,35nm,0.8s									
GEYT	**Alibeck**	**11.85**	**268**		Pn		**Pn**	**14 56 07.3**	**-0.6**	
	comp=E,2.0nm,0.3s,baz=91,slow=13,SNR=11									
GEYT					LR		LR	15 01 35.7		
	comp=E,162nm,18.1s,baz=92,slow=41									
	comp=E,3.0nm,0.3s									
GEYT	**Alibeck**	**11.85**	**268**				**Pn**	**14 56 06.6**	**-1.3**	
KURK	**Kurchatov**	**11.95**	**17**		P		**Pn**	**14 56 08.0**	**-1.1**	
KURK	**Kurchatov**	**11.95**	**17**		⇓Lg		Lg	14 59 30.2		
	comp=E,48nm,1.3s									
AB31	**Akbulak array**	**13.64**	**321**		P		**Pn**	**14 56 30.7**	**-1.5**	
AB31	**Akbulak array**	**13.64**	**321**		⇑Pn		**Pn**	**14 56 30.7**	**-1.5**	
	comp=E,0.8nm,0.3s,baz=128,slow=14,SNR=38									
ABKAR	**Akbulak array**	**13.64**	**321**		Pn		**Pn**	**14 56 31.2**	**-0.9**	
AKTO	**Aktyubinsk**	**15.36**	**321**		Pn		**Pn**	**14 56 56.7**	**+1.3**	
	comp=E,0.4nm,0.3s,baz=141,slow=14,SNR=10									
AKTO					LR		LR	15 03 24.8		
	comp=E,70nm,19.1s,baz=138,slow=39									
	comp=E,3.6nm,0.6s									
AKTO	**Aktyubinsk**	**15.36**	**321**		⇑Pn		**Pn**	**14 56 57.4**	**+1.9**	
	comp=E,8.3nm,0.7s									
ZAA0	**Zalesovo Array**	**16.57**	**25**				**Pn**	**14 57 13.1**	**+2.0**	
ZALV	**Zalesovo Beam**	**16.57**	**25**		Pn		**Pn**	**14 57 11.7**	**+0.6**	
	comp=E,0.3nm,0.3s,baz=211,slow=11,SNR=7.1									
	comp=E,1.2nm,0.5s									
ZALV	**Zalesovo Beam**	**16.57**	**25**				**Pn**	**14 57 12.9**	**+1.8**	
ZALV	**Zalesovo Beam**	**16.57**	**25**		P		**Pn**	**14 57 12.9**	**+1.8**	
LKRN	**Lenkeran, Azer**	**18.94**	**276**		P		**Pn**	**14 57 41.9**	**+1.4**	
ARU	**Arti**	**19.58**	**335**		P		**Pn**	**14 57 48.9**	**+0.8**	
	comp=E,2.1nm,0.4s,baz=144,slow=19,SNR=3.7									
	comp=E,2.1nm,0.4s									
ARU	**Arti**	**19.58**	**335**		P		**Pn**	**14 57 47.5**	**-0.6**	
ARU	**Arti**	**19.58**	**335**	*c*	*i*P		**Pn**	**14 57 49.2**	**+1.1**	
ARU					pmax		pmax			
	comp=E,6.0nm,1.1s									
SEKA	**Sheki**	**19.86**	**284**		P		**Pn**	**14 57 51.4**	**-0.3**	
MNGR	**Mingechevir, A**	**19.98**	**282**		P		**Pn**	**14 57 53.2**	**+0.3**	
ZKTA	**Zakatala**	**20.27**	**285**		P		Pn	14 57 56.3	-0.2	
UOSS	**Minazif**	**20.29**	**230**		P		**P**	**14 57 55.1**	**+0.4**	
KNGR	**Kungurtug, Tuv**	**20.45**	**49**	*i*	P		**P**	**14 57 56.1**	**-0.4**	
GANJ	**Ganja**	**20.57**	**282**		P		Pn	14 57 59.5	-0.4	
GTA	**Gaotai**	**20.58**	**81**		⇑P		**P**	**14 57 57.5**	**-0.4**	
GTA					pP		sP	14 58 05.0	+2.7	
GTA					sP		pP	14 58 08.3	+7.3	
GTA					pmax		pmax			
	comp=E,16nm,0.9s									
GTA					pmax		pmax			
	comp=E,55nm,5.1s									
GTA					LR		LR			
	comp=N,180nm,14.5s									
GTA					LR		LR			
	comp=E,230nm,12.7s									
GTA					LR		LR			
	comp=Z,310nm,12.0s									
NAX	**Nakhchivan**	**21.39**	**278**		P		**P**	**14 58 08.4**	**+1.8**	
BELG	**Belogornoye**	**21.88**	**315**	*i*	P		**P**	**14 58 12.8**	**+1.2**	
BELG					pmax		pmax			
	comp=E,5.0nm,0.9s									
KIV	**Kislovodsk**	**23.14**	**291**	⇑	*e*P		**P**	**14 58 25.4**	**+0.1**	
KIV					*e*			14 58 51.6		
KIV					*e*S		**S**	**15 02 33.0**	**-4.2**	
KIV					pmax		pmax			
	comp=E,5.0nm,0.7s									
LZH	**Lanzhou**	**24.43**	**88**		*e*P		**P**	**14 58 35.5**	**-2.4**	
LZH					pP		pP	14 58 43.5	+2.4	
LZH					pmax		pmax			
	comp=E,19nm,1.4s									
KIRV	**Kirov**	**24.50**	**329**		LR		LR	15 09 40.5		
	comp=E,29nm,18.6s,baz=222,slow=40									
KIRV	**Kirov**	**24.50**	**329**	*i*	P		**P**	**14 58 38.9**	**+0.9**	
ULN	**Ulaanbaatar**	**25.78**	**60**	*i*	P		**P**	**14 58 49.5**	**-0.5**	
ULN					pmax		pmax			
	comp=E,4.0nm,1.1s									
BR131	**Keskin Array S**	**30.30**	**283**		P		**P**	**14 59 31.5**	**+1.0**	
BR131					IAmb		IAmb	14 59 32.7		
	comp=E,3.8nm,0.8s									
BR131	**Keskin Array S**	**30.30**	**283**		P		**P**	**14 59 31.5**	**+1.0**	
BR131					pmax		pmax			
	comp=E,4.0nm,0.8s									
BRTR	**Keskin Array B**	**30.30**	**283**		P		**P**	**14 59 31.9**	**+1.4**	
	comp=E,1.4nm,0.6s,baz=100,slow=6.8,SNR=5.8									
	comp=E,1.4nm,0.6s									
BRTR	**Keskin Array B**	**30.30**	**283**		P		**P**	**14 59 31.4**	**+0.9**	
AKASG	**Malin Array Be**	**32.58**	**305**		P		**P**	**14 59 49.8**	**-0.4**	
	comp=E,0.5nm,0.4s,baz=78,slow=7.5,SNR=9.2									
	comp=E,0.5nm,0.4s									
MLR	**Muntele Rosu**	**34.96**	**296**		P		**P**	**15 00 12.3**	**+1.1**	
MLR					IAmb		IAmb	15 00 14.5		
	comp=E,4.8nm,1.0s									
MLR	**Muntele Rosu**	**34.96**	**296**		P		**P**	**15 00 12.3**	**+1.1**	
MLR					pmax		pmax			
	comp=E,5.0nm,1.0s									
BURAR	**Bucovina Array**	**35.25**	**299**		P		**P**	**15 00 13.4**	**-0.1**	
BUR08	**Bucovina Ar. S**	**35.26**	**300**		P		**P**	**15 00 13.3**	**-0.3**	
BUR08					IAmb		IAmb	15 00 17.8		
	comp=E,2.5nm,1.1s									
FIA1	**FINESS Array S**	**36.11**	**323**		P		**P**	**15 00 20.3**	**-0.4**	
FINES	**FINESS Array B**	**36.11**	**323**		P		**P**	**15 00 20.5**	**-0.1**	
	comp=E,1.0nm,0.4s,baz=113,slow=9.1,SNR=11									
	comp=E,1.0nm,0.4s									
ARCES	**ARCESS Array B**	**39.17**	**336**		P		**P**	**15 00 46.7**	**+0.3**	
	comp=E,0.7nm,0.5s,baz=104,slow=7.6,SNR=7.6									
	comp=E,0.7nm,0.5s									
ARCES	**ARCESS Array B**	**39.17**	**336**		P		**P**	**15 00 46.6**	**+0.2**	
ARCES					IAmb		IAmb	15 01 21.8		
	comp=E,6.3nm,1.4s									
ARCES	**ARCESS Array B**	**39.17**	**336**		P		**P**	**15 00 46.6**	**+0.2**	

ARCES						pmax		pmax		
	comp=Z,6.0nm,1.4s									
VRAC	**Vranov**	**40.77**	**303**		LR		LR	15 22 11.6		
	comp=Z,26nm,18.5s,baz=88,slow=42									
GERES	**GERESS Array B**	**42.72**	**303**		P		**P**	**15 01 16.7**	**+0.6**	
	comp=Z,0.2nm,0.3s,baz=171,slow=6.8,SNR=3.6									
	comp=Z,0.2nm,0.3s									
KHC	**Kasperske Hory**	**42.75**	**303**	*e*	PP		**PP**	**15 02 57.5**	**+2.3**	
NC303	**NORSAR Array S**	**43.08**	**321**		P		**P**	**15 01 18.5**	**-0.2**	
NC303					IAmb		IAmb	15 01 45.6		
	comp=Z,7.8nm,1.1s									
NB2	**NORSAR Subarra**	**43.15**	**321**		P		**P**	**15 01 18.4**	**-0.9**	
	comp=Z,1.7nm,0.6s,baz=91,slow=8.6									
NOA	**NORSAR Array B**	**43.15**	**321**		P		**P**	**15 01 18.4**	**-0.9**	
	comp=Z,1.6nm,0.8s,baz=92,slow=8.0,SNR=5.3									
	comp=Z,1.6nm,0.8s									
DAVOX	**Davos/Dischmat**	**45.68**	**301**		LR		LR	15 23 00.4		
	comp=Z,32nm,18.8s,baz=87,slow=39									
ASAJ	**Asahikawa**	**50.62**	**61**		LR		LR	15 24 55.9		
	comp=Z,33nm,18.2s,baz=217,slow=38									
SEY	**Seymchan**	**51.07**	**35**		LR		LR	15 27 02.9		
	comp=Z,27nm,18.6s,baz=222,slow=40									
ESDC	**Sonseca Array**	**57.64**	**297**		P		**P**	**15 03 07.7**	**-1.6**	
	comp=Z,0.8nm,0.3s,baz=56,slow=6.4,SNR=4.4									
	comp=Z,0.8nm,0.3s									
MTE	**Manteigas**	**59.76**	**299**		P		**P**	**15 03 22.7**	**-1.3**	
GUMO	**Guam**	**67.42**	**91**		LR		LR	15 34 18.6		
	comp=Z,26nm,19.3s,baz=224,slow=37									
TOA0	**Torodi Ar. Sit**	**67.49**	**269**		P		**P**	**15 04 13.8**	**-1.6**	
TORD	**Torodi Ar. Bea**	**67.49**	**269**		P		**P**	**15 04 14.0**	**-1.4**	
	comp=Z,1.1nm,0.5s,baz=45,slow=5.4,SNR=8.3									
	comp=Z,1.1nm,0.5s									
TORD	**Torodi Ar. Bea**	**67.49**	**269**		P		**P**	**15 04 13.8**	**-1.6**	
TORD					IAmb		IAmb	15 04 14.8		
	comp=Z,0.9nm,0.7s									
YKA	**Yellowknife Ar**	**78.26**	**4**		P		**P**	**15 05 17.4**	**-1.1**	
	comp=Z,0.9nm,0.6s,baz=349,slow=5.7,SNR=7.5									
	comp=Z,0.9nm,0.6s									

*NEIC **27** 14:55:15.2±2.0,50.87N±0.04×179.32E±0.09,h10km±1km, mb4.0/62,ML3.8/32(AEIC),Error ellipse: s-maj=9.3km s-min=6.4km az=265.0*
*IDC **27** 14:55:15.4±1.3,51.28N×179.55E,h0km,mb3.9/15, mbtmp4.0/16,ML4.4/1,MS2.9/7,Error ellipse: s-maj=38.2km s-min=14.6km az=176.0*
*AEIC **27** 14:55:19±2.4,51.05N±0.05×179.46E±0.07,h18km±4km, Error ellipse: s-maj=7.7km s-min=5.0km az=216.0*

ISC 27 14:55:15.6±0.7,50.90N±0.07×179.46E±0.04,h10km,n136, σ1§26/127,**mb4.0**/36,**MS3.0**/4,**Rat Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.49**	**348**				**Pb**	**14 55 27.1**	**+0.8**
AMKA							**Sg**	**14 55 32.6**	**+0.8**
CESW	**Semis' Southwe**	**1.01**	**4**				**Pg**	**14 55 35.4**	**+0.4**
CERAA	**Semis' Rag'd T**	**1.02**	**8**				**Pg**	**14 55 35.6**	**+0.4**
CEAP	**Semis' Anvil P**	**1.11**	**4**				**Pb**	**14 55 37.1**	**+0.2**
LSPA	**Little Sitkin**	**1.20**	**333**				**Pg**	**14 55 38.4**	**-0.2**
LSSA	**Little Sitkin**	**1.21**	**331**				**Pg**	**14 55 38.4**	**-0.5**
LSNW	**Little Sitkin**	**1.23**	**332**				**Pg**	**14 55 38.5**	**-0.7**
GALAA	**Gareloi Lava P**	**1.41**	**51**				**Pn**	**14 55 42.0**	**+0.7**
GAEA	**Gareloi East**	**1.43**	**51**				**Pn**	**14 55 42.4**	**+0.8**
TASE	**Tanaga Southea**	**1.83**	**58**				**Pn**	**14 55 48.7**	**+1.6**
TAFP	**Tanaga Falls P**	**1.89**	**57**				**Pn**	**14 55 49.4**	**+1.5**
TAFP							**Sn**	**14 56 12.3**	**+0.6**
TAPA	**Tanaga Point A**	**1.94**	**61**				**Pn**	**14 55 50.3**	**+1.7**
KIMD	**Kanaga Island**	**2.25**	**66**				**Pn**	**14 55 54.6**	**+1.8**
KIKV	**Kanaga Island**	**2.33**	**64**				**Pn**	**14 55 56.1**	**+2.2**
KIWB	**Kanaga Island**	**2.33**	**64**				**Pn**	**14 55 56.0**	**+2.1**
KICM	**Kanaga Island**	**2.33**	**63**				**Pn**	**14 55 55.9**	**+2.0**
ADK	**Adak**	**2.61**	**66**				**Pn**	**14 55 59.4**	**+1.6**
GSCK	**Great Sitkin C**	**2.96**	**66**				**Pn**	**14 56 04.6**	**+2.0**
GSTD	**Great Sitkin T**	**2.98**	**65**				**Pn**	**14 56 04.8**	**+1.6**
GSTD							**Sn**	**14 56 39.5**	**+0.7**
GSMY	**Great Sitkin M**	**3.03**	**66**				**Pn**	**14 56 05.6**	**+2.0**
GSTR	**Great Sitkin T**	**3.04**	**65**	Pn			**Pn**	**14 56 06.0**	**+2.2**
SHEM	**Shemya Is, Ala**	**3.80**	**301**	LR			LR	14 56 48.3	
	comp=Z,67nm,21.6s,baz=129,slow=25								
SMY	**Shemya**	**3.80**	**301**				**Pn**	**14 56 16.2**	**+2.1**
SMY	**Shemya**	**3.80**	**301**				**Sn**	**14 57 01.1**	**+2.3**
ATKA	**Atka Island**	**4.17**	**69**				**Pn**	**14 56 21.1**	**+1.9**
ATKA							**Sn**	**14 57 07.9**	**0.0**
KOKL	**Mount Kliuchef**	**4.20**	**68**				**Pn**	**14 56 21.3**	**+1.6**
NIKH	**Nikolski High**	**7.52**	**69**				**Pn**	**14 57 07.3**	**+2.2**
SPIA	**Saint Paul Isl**	**8.73**	**40**				**Pn**	**14 57 24.2**	**+2.5**
MNAT	**Makushin Natee**	**8.98**	**65**				**Pn**	**14 57 26.9**	**+1.7**
UNV	**Unalaska Valle**	**9.08**	**66**	Pn			**Pn**	**14 57 27.3**	**+0.8**
AKUT	**Akutan**	**9.57**	**64**	Pn			**Pn**	**14 57 34.2**	**+0.9**
FALS	**False Pass**	**11.07**	**62**	Pn			**Pn**	**14 57 55.8**	**+2.0**
SDPT	**Sand Point**	**12.83**	**62**	Pn			**Pn**	**14 58 17.6**	**-0.2**
CNBA	**Chernabura Isl**	**13.24**	**65**	Pn			**Pn**	**14 58 22.0**	**-1.4**
PEA0B	**Petropavlovsk-**	**13.58**	**288**	Pn			**Pn**	**14 58 29.0**	**+0.9**
PETK	**Petropavlovsk-**	**13.58**	**288**	Pn			**P**	**14 58 33.4**	**-3.8**
	0.2nm,0.3s,baz=105,slow=11,SNR=3.2								
PETK				LR			LR	15 03 58.7	
	comp=Z,24nm,20.1s,baz=107,slow=39								
ANM	**Nome**	**15.85**	**24**	Pn			**Pn**	**14 58 58.2**	**-0.2**
ANM				IAmb			IAmb	14 58 58.8	
	comp=Z,22nm,1.4s								
SII	**Sitkinak Islan**	**16.53**	**60**	Pn			**Pn**	**14 59 06.8**	**-0.5**
N18K	**Kilae Creek**	**16.87**	**45**	Pn			**Pn**	**14 59 12.0**	**+0.5**
Q19K	**Cape Douglas,**	**17.33**	**52**	Pn			**Pn**	**14 59 17.6**	**+0.3**
N19K	**Bonanza Creek**	**17.55**	**46**	Pn			**Pn**	**14 59 20.1**	**0.0**
KDAK	**Kodiak Island**	**17.60**	**56**	Pn			**Pn**	**14 59 17.2**	**-3.5**
	comp=Z,1.4nm,0.3s,baz=52,slow=1.0,SNR=24								
	comp=Z,3.1nm,0.3s								
KDAK	**Kodiak Island**	**17.60**	**56**	Pn			**Pn**	**14 59 18.0**	**-2.7**
KDAK				IAmb			IAmb	14 59 32.0	
	comp=Z,25nm,1.2s								
L19K	**White Mountain**	**17.97**	**41**	P			**P**	**14 59 26.4**	**+0.6**
RSO	**Redoubt South**	**18.22**	**48**	P			**P**	**14 59 29.8**	**+1.0**
BILL	**Bilibino**	**18.38**	**344**	P			**P**	**14 59 30.7**	**+0.5**
CNPM	**China Poot**	**18.68**	**51**	P			**P**	**14 59 34.1**	**+0.5**
CNPM				IAmb			IAmb	14 59 42.0	
	comp=Z,14nm,1.0s								
K20K	**Telida**	**18.85**	**38**	P			**P**	**14 59 34.6**	**-0.8**
SEY	**Seymchan**	**18.89**	**320**	LR			LR	15 05 28.6	
	comp=Z,42nm,20.1s,baz=146,slow=33								
J20K	**Nowinta River**	**19.23**	**36**	P			**P**	**14 59 40.0**	**+0.5**
SKT	**Skwentna**	**19.31**	**44**	P			**Pn**	**14 59 41.8**	**+0.3**
SKT				IAmb			IAmb	14 59 45.0	
	comp=Z,6.9nm,1.0s								
PPLA	**Purkeypile**	**19.40**	**41**	P			**P**	**14 59 42.4**	**+0.8**
PPLA				IAmb			IAmb	15 00 02.6	
	comp=Z,5.1nm,0.8s								
SUA	**Susitna One**	**19.48**	**46**	P			**P**	**14 59 43.1**	**+0.6**
SUA				IAmb			IAmb	15 00 22.6	
	comp=Z,5.0nm,0.8s								
CAST	**Castle Rocks**	**19.67**	**40**	P			**P**	**14 59 45.0**	**+0.6**
SEW	**Seward**	**19.70**	**50**	P			**P**	**14 59 44.8**	**+0.2**
KTH	**Kantishna Hill**	**20.20**	**40**				Pn	14 59 52.2	+0.1
KTH				IAmb			IAmb	15 00 22.6	
	comp=Z,6.2nm,0.7s								
IMAR	**Indian Mountai**	**20.36**	**32**	P			**P**	**14 59 52.1**	**+0.2**
BPAW	**Bear Paw Mtn.**	**20.41**	**38**	P			**P**	**14 59 52.2**	**-0.3**
BPAW				IAmb			IAmb	15 00 34.7	
	comp=Z,12nm,1.1s								
TRF	**Thorofare Moun**	**20.41**	**40**	P			**P**	**14 59 52.7**	**0.0**
TRF				IAmb			IAmb	14 59 57.2	
	comp=Z,7.4nm,1.2s								
H21K	**Melozitna Rive**	**20.50**	**33**	P			**P**	**14 59 53.9**	**+0.4**
I21K	**Tanana**	**20.55**	**35**	P			**P**	**14 59 54.1**	**+0.2**
I21K				IAmb			IAmb	15 00 23.6	
	comp=Z,9.2nm,1.4s								
SML	**Sawmill**	**20.68**	**46**	P			**P**	**14 59 55.8**	**+0.4**
SML				IAmb			IAmb	15 00 14.7	
	comp=Z,5.9nm,1.0s								
MLY	**Manley**	**20.93**	**36**	P			**P**	**14 59 58.4**	**+0.2**
RND	**Reindeer**	**20.99**	**41**	P			**P**	**14 59 59.5**	**+0.7**
GLI	**Glacier Island**	**21.01**	**49**	P			**P**	**14 59 59.6**	**+0.6**
GLI				IAmb			IAmb	15 00 03.8	
	comp=Z,8.8nm,0.9s								
SCM	**Sheep Creek Mo**	**21.15**	**46**	P			**P**	**14 59 59.5**	**-0.9**
SCM				IAmb			IAmb	15 00 37.8	
	comp=Z,11nm,1.0s								
I23K	**Minto, Yukon-K**	**21.50**	**37**	P			**P**	**15 00 04.3**	**+0.1**
M24K	**Tolsona, Glenn**	**21.75**	**46**	P			**P**	**15 00 06.0**	**-0.9**
H23K	**Yukon River**	**21.75**	**35**	P			**P**	**15 00 07.0**	**+0.1**
MDM	**Murphy Dome**	**21.86**	**38**	P			**P**	**15 00 07.4**	**-0.6**
MDM				IAmb			IAmb	15 00 10.4	
	comp=Z,5.2nm,1.1s								
CCB	**Clear Creek Bu**	**21.89**	**39**	P			**P**	**15 00 08.1**	**-0.3**

POKR	**Poker Plat Res**	**22.23**	**38**		P		**P**	**15 00 11.9**	**-0.1**	
POKR					IAmb		IAmb	15 00 13.8		
	comp=Z,2.6nm,0.6s									
PAX	**Paxson**	**22.30**	**44**		P		**P**	**15 00 12.5**	**-0.4**	
PAX					IAmb		IAmb	15 00 24.4		
	comp=Z,6.5nm,1.4s									
IL31		**22.31**	**39**		P		**P**	**15 00 11.4**	**-1.3**	
IL31					IAmb		IAmb	15 00 36.8		
	comp=Z,6.3nm,1.5s									
ILAR	**Eielson Array**	**22.31**	**39**		P		**P**	**15 00 11.6**	**-1.2**	
	comp=Z,0.4nm,0.4s,baz=253,slow=11,SNR=14									
	comp=Z,0.4nm,0.4s									
N25K	**Chitina, Valde**	**22.35**	**48**		P		**P**	**15 00 13.4**	**0.0**	
N25K					IAmb		IAmb	15 00 32.4		
	comp=Z,6.1nm,0.9s									
H24K	**Noodor Dome**	**22.37**	**36**		P		**P**	**15 00 12.9**	**-0.7**	
GLB	**Gilahina Butte**	**22.69**	**48**		P		**P**	**15 00 15.3**	**-1.7**	
GLB					IAmb		IAmb	15 00 29.3		
	comp=Z,6.0nm,1.0s									
RIDG	**Independent Ri**	**22.79**	**42**		P		**P**	**15 00 16.6**	**-1.5**	
RIDG					IAmb		IAmb	15 00 49.5		
	comp=Z,3.1nm,0.8s									
J25K	**Salcha River,**	**22.86**	**40**		P		**P**	**15 00 16.7**	**-2.1**	
TOLK	**Toolik Lake Re**	**23.21**	**29**		P		**P**	**15 00 21.7**	**-0.7**	
SCRK	**Sand Creek**	**23.23**	**42**		P		**P**	**15 00 20.5**	**-2.1**	
J26L	**Joseph Creek**	**23.56**	**41**		P		**P**	**15 00 24.0**	**-1.9**	
J26L					IAmb		IAmb	15 00 29.4		
	comp=Z,2.2nm,0.7s									
M27K	**Edge Creek, AK**	**23.76**	**46**		P		**P**	**15 00 26.1**	**-1.9**	
M27K					IAmb		IAmb	15 00 30.2		
	comp=Z,3.7nm,0.8s									
L27K	**Beaver Creek,**	**23.93**	**45**		P		**P**	**15 00 27.2**	**-2.2**	
L27K					IAmb		IAmb	15 00 54.4		
	comp=Z,3.8nm,1.1s									
I26K	**Coal Creek Min**	**23.98**	**39**		P		**P**	**15 00 28.2**	**-1.6**	
I26K					IAmb		IAmb	15 01 00.7		
	comp=Z,4.5nm,1.4s									
K27K	**Chicken**	**24.05**	**42**		P		**P**	**15 00 30.0**	**-0.5**	
K27K					IAmb		IAmb	15 00 34.2		
	comp=Z,3.6nm,1.2s									
BMAR	**Burnt Mountain**	**24.24**	**34**		P		**P**	**15 00 31.8**	**-0.5**	
ASAJ	**Asahikawa**	**25.61**	**269**		LR		LR	15 10 16.5		
	comp=Z,24nm,21.3s,baz=144,slow=35									
HYT	**Haines Junctio**	**25.65**	**51**		P		**P**	**15 00 45.9**	**+0.7**	
HYT					IAmb		IAmb	15 00 49.5		
	comp=Z,2.3nm,0.9s									
I29M	**Ogilvie Camp,**	**25.95**	**40**		P		**P**	**15 00 47.2**	**-0.5**	
I29M					IAmb		IAmb

DRK	**Karamyk**	**1.46**	**271**	⇑*i*	*P*	**Pb**	15 31 18.1	-0.1
	baz=71							
DRK				⇑*i*	*S*	Sg	15 31 37.8	-0.8
	baz=71							
BTK	**Batken**	**2.29**	**286**	⇑	*eP*	**Pb**	15 31 31.1	-1.1
	baz=86							
BTK				⇑	*eS*	Sb	15 32 00.1	-0.2
	baz=86							
ARLS	**Aral**	**2.44**	**11**	⇑*i*	*P*	**Pb**	15 31 33.3	-1.6
	baz=11							
ARLS				⇑*i*	*S*	Sb	15 32 03.9	-0.9
	baz=11							
GAR	**Garm**	**2.66**	**261**	⇓	*eP*	**Pb**	15 31 36.2	-2.3
	baz=61							
GAR				⇓	*eS*	Sb	15 32 09.1	-1.8
	baz=61							
UCH	**Uchtor**	**2.83**	**13**	⇑	*eP*	**Pn**	15 31 38.6	+2.4
	baz=13							
UCH				⇑	*eS*	Sb	15 32 13.4	-2.8
	baz=13							
TRKS	**Terek-Say**	**2.83**	**318**	⇓	*eP*	**Pn**	15 31 37.8	+1.8
	baz=17							
TRKS				⇓	*eS*	Sn	15 32 11.7	+1.9
	baz=17							
BOOM	**Boomskoye usch**	**3.47**	**29**	⇑	*eP*	**Pn**	15 31 47.7	+3.0
	baz=29							
BOOM				⇑*i*	*S*	Sn	15 32 28.5	+3.0
	baz=29							
IUG	**luzhnay**	**3.86**	**315**		*eP*	Pg	15 32 07.0	+1.8
	114nm,0.5s							
IUG					*eS*	Sg	15 32 52.0	-3.2
	29nm,0.7s							
KST	**Kastek**	**3.97**	**25**		*eP*	Pg	15 32 10.8	+3.5
	7.0nm,0.8s							
KST					*eS*	Sg	15 32 58.1	-0.6
	8.3nm,0.6s							
SGDS	**Sogindy**	**4.05**	**10**		*eP*	Pg	15 32 09.4	+0.5
	2.2nm,0.1s							
SGDS					*eS*	Sb	15 32 55.8	+5.0
	1.5nm,0.1s							
DGS	**Degeres**	**4.09**	**22**		*eP*	Pg	15 32 11.9	+2.2
	1.2nm,0.1s							
DGS					*eS*	Sg	15 32 59.9	-2.7
	1.6nm,0.0s							
TNSS	**Tian-Shan**	**4.33**	**33**		*eP*	Pg	15 32 19.0	+4.6
	1.6nm,0.2s							
TNSS					*eS*	Sg	15 33 11.9	+1.4
	2.2nm,0.1s							
KRBS	**Karabastau**	**4.48**	**19**		*eP*	Pg	15 32 19.2	+2.0
	1.1nm,0.0s							
KRBS					*eS*	Sg	15 33 12.5	-2.8
	3.0nm,0.5s							
KTBS	**Karatobe**	**4.80**	**27**		*eP*	Pg	15 32 25.8	+2.6
	1.5nm,0.2s							
KTBS					*eS*	Sg	15 33 24.0	-1.5
	4.8nm,0.2s							
BTLS	**Baital**	**5.58**	**3**		*eP*	Pg	15 32 38.0	-0.2
	1.0nm,0.2s							
BTLS					*eS*	Sg	15 33 44.6	-5.7
	2.5nm,0.1s							

KRNET 27 15:31:58.9±0.1, 39°.47N×73°.50E, mb3.2, 14C,
Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op		ISC	Time h m s	Res ISC
OHH	**Osh**	**1.19**	**333**	⇑	*eP*	Pg	15 32 21.6	-0.1
	baz=33							
OHH				⇑	*eS*	Sb	15 32 38.0	-0.4
	baz=33							
DRK	**Karamyk**	**1.31**	**271**	⇑	*iP*	Pg	15 32 24.1	0.0
	baz=71							
DRK				⇑	*iS*	Sb	15 32 42.3	+0.1
	baz=71							
BTK	**Batken**	**2.15**	**287**	⇑	*eP*	Pb	15 32 38.0	-0.7
	baz=87							
BTK				⇑	*eS*	Sb	15 33 06.7	+0.7
	baz=87							
ARLS	**Aral**	**2.47**	**14**	⇑	*iP*	Pn	15 32 42.3	+1.7
	baz=15							
ARLS				⇑	*iS*	Sb	15 33 14.2	-1.2
	baz=15							
GAR	**Garm**	**2.51**	**260**	⇑	*eP*	Pn	15 32 43.0	+1.9
	baz=60							
GAR				⇑	*eS*	Sb	15 33 15.3	-1.2
	baz=60							
TRKS	**Terek-Say**	**2.73**	**320**	⇑	*eP*	Pn	15 32 45.5	+1.3
	baz=19							
TRKS				⇑	*eS*	Sn	15 33 19.5	+1.4
	baz=19							
UCH	**Uchtor**	**2.86**	**15**	⇑	*eP*	Pn	15 32 48.3	+2.0
	baz=15							
UCH				⇑	*eS*	Sn	15 33 24.0	+2.3
	baz=15							

*WEL **27** 15:35:07.5±0.7, 33°.S±9°.×18°.0E±1°.5, h415km±16km, M4.3/35, mB4.9/25, ML5.0/36, MLv4.9/35, Mw(mB)4.1/25, Error ellipse: s-maj=0.0km s-min=0.0km az=107.4*

*NOU **27** 15:35:36.2, 34°.67S×177°.56E, h316km, mb4.2/9, North of New Zealand*

ISC 27 15:35:06.4±3.1, 32°.7S±0°.2×179°.9E±0°.2, h400km, n62, σ1°.9 26/85, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op		ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**5.07**	**194**		*P*	**Pn**	**15 36 30.7**	**+1.8**
MXZ					*S*	**S**	**15 37 36.3**	**+0.1**
GRZ	**Great Barrier**	**5.13**	**224**		*P*	**Pn**	**15 36 29.4**	**-0.2**
WMGZ	**Waiomatatini S**	**5.30**	**193**		*P*	**Pn**	**15 36 31.5**	**+0.1**
WMGZ					*S*	**S**	**15 37 42.3**	**+1.8**
KUZ	**Kuaotunu**	**5.34**	**219**		*P*	**Pn**	**15 36 31.7**	**-0.1**
WIZ	**White Island**	**5.35**	**204**		*P*	**Pn**	**15 36 33.1**	**+1.3**
HAZ	**Te Kaha**	**5.38**	**198**		*P*	**Pn**	**15 36 31.9**	**-0.3**
HAZ					*S*	**S**	**15 37 42.6**	**+0.5**
PKGZ	**Pakihiroa**	**5.43**	**195**		*P*	**Pn**	**15 36 32.6**	**-0.3**
PKGZ					*S*	**S**	**15 37 41.7**	**-1.6**
PUZ	**Puketiti**	**5.57**	**193**		*P*	**Pn**	**15 36 33.2**	**-1.0**
PUZ					*S*	**S**	**15 37 45.4**	**-0.6**
WCZ	**Waipu Caves**	**5.64**	**233**		*P*	**Pn**	**15 36 33.6**	**-1.4**
TWGZ	**Tauwhareparae**	**5.73**	**195**		*P*	**Pn**	**15 36 35.9**	**-0.2**
TWGZ					*S*	**S**	**15 37 50.7**	**+1.6**
OUZ	**Omahuta**	**5.82**	**242**		*P*	**Pn**	**15 36 35.8**	**-1.2**
MARZ	**Manawahe**	**5.94**	**205**		*P*	**Pn**	**15 36 40.1**	**+1.9**
CNGZ	**Carnagh Statio**	**5.98**	**193**		*P*	**Pn**	**15 36 38.5**	**-0.1**
MWZ	**Matawai**	**5.99**	**198**		*P*	**Pn**	**15 36 38.3**	**-0.6**
MWZ					*S*	**S**	**15 37 53.5**	**-0.7**
TKGZ	**Te Karaka**	**6.01**	**195**		*P*	**Pn**	**15 36 38.2**	**-0.8**
TKGZ					*S*	**S**	**15 37 54.1**	**-0.4**
URZ	**Urewera**	**6.04**	**201**		*P*	**Pn**	**15 36 37.5**	**-1.8**
URZ					*S*	**S**	**15 37 54.2**	**-0.8**
URZ	**Urewera**	**6.04**	**201**		*P*	**Pn**	**15 36 39.5**	**+0.2**
KARZ	**Kaharoa**	**6.13**	**208**		*P*	**Pn**	**15 36 42.1**	**+1.8**
OMRZ	**Omania**	**6.16**	**207**		*P*	**Pn**	**15 36 42.8**	**+2.2**
TOZ	**Tahuroa Road**	**6.21**	**214**		*P*	**Pn**	**15 36 43.5**	**+2.3**
NGRZ	**Ngongotaha**	**6.22**	**208**		*P*	**Pn**	**15 36 44.0**	**+2.6**
UTU	**Utuhina**	**6.29**	**208**		*P*	**Pn**	**15 36 44.6**	**+2.6**
RIGZ	**Rimuhau**	**6.29**	**195**		*P*	**Pn**	**15 36 41.3**	**-0.8**
RIGZ					*S*	**S**	**15 38 01.6**	**+1.4**
MUGZ	**Murupara**	**6.35**	**203**		*P*	**Pn**	**15 36 42.5**	**-0.2**
MUGZ					*S*	**S**	**15 38 01.3**	**0.0**
HSRZ	**Hossack Road**	**6.38**	**207**		*P*	**Pn**	**15 36 45.1**	**+2.0**
HRRZ	**Handcock Road**	**6.44**	**206**		*P*	**Pn**	**15 36 45.5**	**+1.8**
GRRZ	**Galatos Road**	**6.47**	**207**		*P*	**Pn**	**15 36 46.0**	**+1.9**
PRGZ	**Paritu Road**	**6.47**	**194**		*P*	**Pn**	**15 36 45.7**	**+1.6**
PRGZ					*S*	**S**	**15 38 03.0**	**-0.7**
PRRZ	**Plateau Road**	**6.50**	**205**		*P*	**Pn**	**15 36 45.3**	**+1.0**
PRRZ					*S*	**S**	**15 38 06.6**	**+2.4**
ALRZ	**Allen Road**	**6.57**	**205**		*P*	**Pn**	**15 36 45.7**	**+0.5**
WPRZ	**Whakapapatarin**	**6.60**	**206**		*P*	**Pn**	**15 36 46.4**	**+1.0**
KNZ	**Kokohu**	**6.61**	**195**		*P*	**Pn**	**15 36 45.4**	**-0.2**
KNZ					*S*	**S**	**15 38 04.4**	**-2.1**
RAHZ	**Arahi**	**6.66**	**199**		*P*	**Pn**	**15 36 46.0**	**0.0**
RAHZ					*S*	**S**	**15 38 08.2**	**+0.7**
MTHZ	**Maungataniwha**	**6.67**	**201**		*P*	**P**	**15 36 46.5**	**-0.3**
MTHZ					*S*	**S**	**15 38 08.1**	**+0.3**
MHGZ	**Mahia Peninsul**	**6.69**	**193**		*P*	**P**	**15 36 47.4**	**+0.4**
MHGZ					*S*	**S**	**15 38 07.9**	**-0.2**
TLZ	**Tolley Road**	**6.69**	**211**		*P*	**P**	**15 36 49.2**	**+2.1**
KUTZ	**Kaahu Road**	**6.70**	**208**		*P*	**P**	**15 36 48.2**	**+0.9**
MRHZ	**Matea Rd**	**6.79**	**204**		*P*	**Pn**	**15 36 46.8**	**-0.8**
MRHZ					*S*	**S**	**15 38 08.5**	**-1.7**
NMHZ	**Naumai**	**6.90**	**200**		*P*	**P**	**15 36 49.0**	**-0.5**
NMHZ					*S*	**S**	**15 38 12.9**	**+0.2**
ARHZ	**Aropaoanui**	**7.00**	**199**		*P*	**Pn**	**15 36 49.6**	**-0.4**
ARHZ					*S*	**S**	**15 38 14.7**	**+0.1**
RATZ	**Rangitukua**	**7.05**	**207**		*P*	**P**	**15 36 50.9**	**-0.1**
BKZ	**Black Stump Fm**	**7.06**	**202**		*P*	**Pn**	**15 36 49.1**	**-1.6**
BKZ					*S*	**S**	**15 38 14.6**	**-1.3**
BKZ	**Black Stump Fm**	**7.06**	**202**		*P*	**Pn**	**15 36 50.0**	**-0.7**
HIZ	**Hauiti**	**7.14**	**214**		*P*	**P**	**15 36 53.8**	**+1.7**
MCHZ	**McNeill Hill**	**7.26**	**200**		*P*	**Pn**	**15 36 52.0**	**-0.8**
MCHZ					*S*	**S**	**15 38 19.0**	**-0.8**
TMVZ	**Te Maari**	**7.29**	**207**		*P*	**P**	**15 36 53.7**	**-0.1**
ETVZ	**East Tongariro**	**7.31**	**206**		*P*	**Pn**	**15 36 53.1**	**-0.3**
KWHZ	**Kaweka Forest**	**7.32**	**202**		*P*	**Pn**	**15 36 52.8**	**-0.8**
KWHZ					*S*	**S**	**15 38 20.7**	**-0.6**
WTVZ	**West Tongariro**	**7.33**	**207**		*P*	**Pn**	**15 36 53.9**	**+0.1**
NNVZ	**North Ngauruho**	**7.34**	**207**		*P*	**Pn**	**15 36 54.1**	**+0.2**
OTVZ	**Oturere**	**7.35**	**207**		*P*	**P**	**15 36 54.2**	**-0.3**
TWVZ	**Taurewa**	**7.36**	**208**		*P*	**P**	**15 36 54.6**	**0.0**
FWVZ	**Far West T-bar**	**7.47**	**207**		*P*	**Pn**	**15 36 54.6**	**-0.9**
TRVZ	**Turoa**	**7.51**	**207**		*P*	**Pn**	**15 36 55.2**	**-0.7**
WNVZ	**Wahianoa**	**7.52**	**206**		*P*	**Pn**	**15 36 54.5**	**-1.4**
KRHZ	**Kereru**	**7.54**	**201**		*P*	**Pn**	**15 36 54.7**	**-1.3**
BFZ	**Birch Farm**	**8.53**	**199**		*P*	**Pn**	**15 37 06.4**	**-0.9**
SNZO	**South Karori**	**9.59**	**204**		*P*	**P**	**15 37 16.6**	**-2.6**
QRZ	**Quartz Range**	**10.07**	**214**		*P*	**P**	**15 37 22.6**	**-2.0**
KHZ	**Kahutara**	**10.97**	**205**		*P*	**P**	**15 37 33.4**	**-1.1**
RPZ	**Rata Peaks**	**13.04**	**210**		*P*	**P**	**15 37 58.2**	**+0.8**
ODZ	**Otahua Downs**	**14.31**	**207**		*P*	**P**	**15 38 14.2**	**+3.1**

*KRNET **27** 15:53:08.3±0.1, 39°.43N×73°.89E, mb4.3*

*SOME **27** 15:53:08.9, 39°.73N×73°.33E, h0km*

*IDC **27** 15:53:09.2±0.9, 39°.26N×73°.56E, h0km, mb3.8/13, mbtmp3.8/18, ML3.1/5, MS3.0/10, Error ellipse: s-maj=16.5km s-min=15.9km az=164.0*

*BJI **27** 15:53:11.4±0.0, 39°.50N×73°.62E, h5km, mb4.0/13, mB4.6/9, ML3.7/6, Ms3.7/6, Ms7 3.3/6*

*MOS **27** 15:53:12.9±2.1, 39°.44N×73°.50E, h12km, mb4.4/14, Error ellipse: s-maj=6.2km s-min=4.6km az=81.7*

*NEIC **27** 15:53:12.2±2.5, 39°.46N±0°.07×73°.64E±0°.06, h10km±1km, mb4.3/13, Error ellipse: s-maj=13.2km s-min=4.9km az=150.0*

*NNC **27** 15:53:16.0±2.0, 39°.79N×73°.37E, h0km, mb4.4, mpv4.2, Error ellipse: s-maj=17.6km s-min=9.2km az=172.0*

ISC 27 15:53:14.4±1.4, 39°.46N±0°.04×73°.53E±0°.03, h17km±8km, n192, σ2°.63/225, mb4.1/26, MS3.1/7, 48C-13D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op		ISC	Time h m s	Res ISC
OHH	**Osh**	**1.21**	**332**	⇑	*eP*	**Pn**	**15 53 34.3**	**-2.3**
	baz=22							
OHH				⇑	*eS*	**Sb**	**15 53 53.2**	**+1.0**
	baz=22							
DRK	**Karamyk**	**1.34**	**271**	⇓	*iP*	**Pn**	**15 53 38.3**	**-0.4**
	baz=73							
DRK				⇓	*iS*	**Sg**	**15 54 00.8**	**+3.0**
	baz=73							
DRK	**Karamyk**	**1.34**	**271**		Pn	**Pn**	**15 53 37.1**	**-1.5**
KSH	**Kashi**	**1.89**	**88**		Pg	Pn	15 53 38.3	-7.8
KSH					Sg	Sn	15 53 59.0	-11
KSH					smax	smax		
	comp=N,830nm,0.7s							
KSH					smax	smax		
	comp=E,750nm,0.9s							
BTK	**Batken**	**2.17**	**287**	⇑	*eP*	**Pn**	**15 53 51.3**	**+1.4**
	baz=86							
BTK				⇑	*eS*	**Sg**	**15 54 23.0**	**-1.4**
	baz=86							
BTK	**Batken**	**2.17**	**287**		Pn	**Pn**	**15 53 50.2**	**+0.3**
BTK	**Batken**	**2.17**	**287**		PN	**Pn**	**15 53 50.2**	**+0.3**
ARLS	**Aral**	**2.47**	**14**	⇑	*iP*	**Pn**	**15 53 51.2**	**-2.9**
	baz=8.0							
ARLS				⇑	*iS*	**Sn**	**15 54 22.8**	**-1.2**
	baz=8.0							
GAR	**Garm**	**2.54**	**261**	⇑	*eP*	**Pn**	**15 53 56.5**	**+1.5**
	baz=62							
GAR				⇑	*eS*	**Sb**	**15 54 31.5**	**+0.9**
	baz=62							
GAR	**Garm**	**2.54**	**261**			**Pn**	**15 53 56.0**	**+1.1**
ARK	**Arkit**	**2.62**	**333**	⇑	*eP*	**Pn**	**15 53 56.2**	**+0.1**
	baz=29							
ARK				⇑	*eS*	**Sn**	**15 54 30.7**	**+3.1**
	baz=29							
AML	**Almayashu**	**2.67**	**3**		*P*	**Pn**	**15 53 59.8**	**+2.8**
	SNR=21							
TRKS	**Terek-Say**	**2.75**	**319**	⇑	*eP*	**Pn**	**15 53 57.8**	**-0.2**
	baz=15							
TRKS				⇑	*eS*	**Sn**	**15 54 33.8**	**+2.8**
	baz=15							
UCH	**Uchtor**	**2.86**	**15**		*P*	**Pn**	**15 54 02.0**	**+2.2**
	SNR=182							
UCH	**Uchtor**	**2.86**	**15**	⇓	*eP*	**Pn**	**15 53 57.0**	**-2.7**
	baz=9.0							
UCH				⇓	*eS*	**Sn**	**15 54 32.1**	**-1.9**
	baz=9.0							
EKS2	**Erkin-Say**	**3.20**	**3**		*P*	**Pn**	**15 54 07.0**	**+2.9**
	SNR=14							
EKS2	**Erkin-Say**	**3.20**	**3**	⇑	*eP*	**Pn**	**15 54 02.1**	**-2.0**
	baz=58							
EKS2				⇑	*eS*	**Sn**	**15 54 41.3**	**-0.7**
	baz=58							
AAK	**Ala-Archa**	**3.25**	**13**		*P*	**Pn**	**15 54 07.5**	**+2.7**
	SNR=8.1							
AAK	**Ala-Archa**	**3.25**	**13**		Pn	**Pn**	**15 54 07.6**	**+2.7**
	12nm,0.3s,baz=170,slow=9.6,SNR=32							
AAK					Sn	**Sb**	**15 54 50.9**	**-0.4**
	11nm,0.3s,baz=86,slow=16,SNR=2.4							
	23nm,0.3s							
AAK	**Ala-Archa**	**3.25**	**13**	⇓	*eP*	**Pn**	**15 54 02.3**	**-2.6**
	baz=8.0							
AAK				⇓	*iS*	**Sn**	**15 54 41.6**	**-1.7**
	baz=8.0							
AAK	**Ala-Archa**	**3.25**	**13**		Pn	**Pn**	**15 54 04.2**	**-0.7**
KBK	**Karagaybulak**	**3.37**	**18**		P	**Pn**	**15 54 08.7**	**+2.3**
	SNR=7.6							
KBK	**Karagaybulak**	**3.37**	**18**	⇑	*eP*	**Pn**	**15 54 03.5**	**-2.9**
	baz=14							
KBK				⇑	*eS*	**Sn**	**15 54 43.6**	**-2.5**
	baz=14							
ULHL	**Ulahol**	**3.46**	**36**		P	**Pn**	**15 54 08.7**	**+0.9**
	SNR=7.1							
ULHL	**Ulahol**	**3.46**	**36**	⇑	*eP*	Pn	15 54 03.6	-4.1
	baz=32							
ULHL				⇑	*eS*	**Sn**	**15 54 43.9**	**-4.5**
	baz=32							
CHGR	**Chuyangaron**	**3.50**	**258**	⇑	*eP*	**Pn**	**15 54 09.0**	**+0.9**
	baz=60							
CHGR				⇑	*eS*	**Sb**	**15 54 54.3**	**-3.9**
	baz=60							
CHGR	**Chuyangaron**	**3.50**	**258**		Pn	**Pn**	**15 54 08.5**	**+0.4**
CHGR	**Chuyangaron**	**3.50**	**258**		PN	**Pn**	**15 54 08.5**	**+0.4**
BOOM	**Boomskoye usch**	**3.53**	**30**	⇑	*eP*	**Pn**	**15 54 05.2**	**-3.5**
	baz=26							
BOOM				⇑	*eS*	**Sn**	**15 54 46.3**	**-3.9**
	baz=26							
CHMS	**Chumysh**	**3.65**	**14**		*P*	**Pn**	**15 54 12.5**	**+2.3**
	SNR=12							
CHMS	**Chumysh**	**3.65**	**14**		PN	**Pn**	**15 54 11.9**	**+1.7**
CHMS					LG	Lg	15 55 07.5	
CHMS	**Chumysh**	**3.65**	**14**	⇓	*Pn*	**Pn**	**15 54 11.9**	**+1.7**
	31nm,0.6s							
CHMS				⇑	*Lg*	Lg	15 55 07.5	
	173nm,0.9s							
TAS	**Tashkent**	**3.73**	**301**	⇑	*eP*	**Pn**	**15 54 12.8**	**+1.5**
	baz=0.0							
TAS				⇑	*eS*	**Sn**	**15 54 59.7**	**+4.8**
	baz=0.0							
TAS	**Tashkent**	**3.73**	**301**		Pn	**Pn**	**15 54 11.5**	**+0.2**
TAS	**Tashkent**	**3.73**	**301**		PN	**Pn**	**15 54 11.5**	**+0.2**
IUG	**luzhnay**	**3.77**	**316**		*ePN*	**Pn**	**15 54 13.6**	**+1.6**
IUG					*e*		15 54 25.8	
IUG	**luzhnay**	**3.77**	**316**		*eP*	**Pn**	**15 54 16.0**	**+4.0**
	25nm,0.1s							
IUG					*eS*	**Sb**	**15 55 02.4**	**-3.7**
	124nm,0.1s							
IUG	**luzhnay**	**3.77**	**316**		*ePn*	**Pn**	**15 54 13.6**	**+1.6**
	baz=313							
IUG					*ePg*	**Pg**	**15 54 25.8**	**-0.9**
	baz=313							
IUG					*eLg*	Lg	15 55 14.4	
	baz=313							
IUG	**luzhnay**	**3.77**	**316**		*Pg*	**Pn**	**15 54 14.1**	**+2.1**
	443nm,0.3s							
IUG					*Lg*	Lg	15 54 59.6	
	132nm,0.6s							
TKM2	**Tokmak 2**	**3.79**	**24**		*P*	**Pn**	**15 54 13.8**	**+1.6**
	SNR=19							
TKM2	**Tokmak 2**	**3.79**	**24**		PN	**Pn**	**15 54 13.9**	**+1.6**
TKM2					LG	Lg	15 55 09.8	
TKM2	**Tokmak 2**	**3.79**	**24**	⇓	*Pn*	**Pn**	**15 54 13.9**	**+1.6**
	39nm,0.9s							
TKM2				⇑	*Lg*	Lg	15 55 09.8	
	62nm,0.8s							
DZA	**Taraz**	**3.81**	**335**		*eP*	**Pn**	**15 54 16.2**	**+3.9**
	25nm,0.1s							
DZA					*eS*	**Sb**	**15 55 03.0**	**-4.0**
	262nm,0.3s							
DZA	**Taraz**	**3.81**	**335**		*Pg*	**Pn**	**15 54 16.2**	**+3.9**
	25nm,0.1s							
DZA					*Lg*	Lg	15 55 03.0	
	262nm,0.3s							
KDJ	**Kajisay**	**3.84**	**45**	⇑	*iP*	Pn	15 54 08.4	-4.6
	baz=42							
KDJ				⇑	*iS*	**Sn**	**15 54 52.2**	**-5.7**
	baz=42							
KDJ	**Kajisay**	**3.84**	**45**			**Pn**	**15 54 13.9**	**+0.9**
KDJ	**Kajisay**	**3.84**	**45**		PN	**Pn**	**15 54 13.9**	**+0.9**
USP	**Ospenovka**	**3.87**	**11**		P	**Pn**	**15 54 16.0**	**+2.7**
	SNR=11							
TARG	**Taragay, Kyrgy**	**3.96**	**54**			**Pn**	**15 54 13.6**	**-1.3**
TARG	**Taragay, Kyrgy**	**3.96**	**54**		PN	**Pn**	**15 54 13.6**	**-1.3**
KST	**Kastek**	**4.02**	**26**		*eP*	**Pb**	**15 54 24.0**	**-0.9**
	18nm,0.2s							
KST					*eS*	**Sb**	**15 55 16.9**	**+3.6**
	87nm,0.4s							
KST	**Kastek**	**4.02**	**26**		*Pg*	**Pb**	**15 54 24.0**	**-0.9**
	22nm,0.8s							
KST					*Lg*	Lg	15 55 16.9	
	87nm,0.4s							
SGDS	**Sogindy**	**4.07**	**11**		*ePN*	**Pn**	**15 54 16.9**	**+0.9**
SGDS					*e*		15 54 29.1	
SGDS					*e*		15 55 22.4	
SGDS	**Sogindy**	**4.07**	**11**		*eP*	**Pb**	**15 54 23.6**	**-2.1**
	3.8nm,0.1s							
SGDS					*eS*	**Sb**	**15 55 15.5**	**+0.8**
	66nm,0.6s							
SGDS	**Sogindy**	**4.07**	**11**		*ePn*	**Pn**	**15 54 16.9**	**+0.9**
	baz=11							
SGDS					*ePg*	**Pb**	**15 54 29.2**	**+3.5**
	baz=11							
SGDS					*eLg*	Lg	15 55 22.5	
	baz=11							
DGS	**Degeres**	**4.14**	**23**		*eP*	**Pb**	**15 54 25.0**	**-1.9**
	23nm,0.2s							
DGS					*eS*	**Sb**	**15 55 17.9**	**+1.4**
	38nm,0.4s							
MTBS	**Maitube**	**4.27**	**30**		*eP*	**Pb**	**15 54 28.6**	**-0.5**
	40nm,0.6s							
MTBS					*eS*	**Sb**	**15 55 24.0**	**+3.7**
	78nm,0.7s							
MTBS	**Maitube**	**4.27**	**30**		*Pg*	**Pb**	**15 54 29.4**	**+0.3**
	40nm,0.6s							
MTBS					*Lg*	Lg	15 55 26.1	
	78nm,0.7s							
KK31	**Karatay Array**	**4.29**	**329**		*Pn*	**Pn**	**15 54 18.7**	**-0.3**
KK31	**Karatay Array**	**4.29**	**329**		*PN*	**Pn**	**15 54 18.7**	**-0.3**
KK31	**Karatay Array**	**4.29**	**329**		*Pn*	**Pn**	**15 54 20.8**	**+1.8**
	2.1nm,0.3s,baz=130,slow=12,SNR=69							
KK31				⇑	*Lg*	Lg	15 55 26.0	
	56nm,0.7s,baz=148,slow=33,SNR=4.4							
KKAR	**Karatay Array**	**4.29**	**329**		*Pn*	**Pn**	**15 54 18.5**	**-0.5**
KKAR	**Karatay Array**	**4.29**	**329**		*PN*	**Pn**	**15 54 18.5**	**-0.5**
TNSS	**Tian-Shan**	**4.40**	**35**		*ePN*	**Pn**	**15 54 21.4**	**+0.6**
TNSS					*e*		15 54 31.4	
TNSS					*e*		15 55 30.3	
TNSS	**Tian-Shan**	**4.40**	**35**		*eP*	**Pb**	**15 54 30.8**	**-0.8**
	35nm,0.3s							
TNSS					*eS*	**Sb**	**15 55 28.1**	**+3.6**
	39nm,0.6s							
TNSS	**Tian-Shan**	**4.40**	**35**		*ePn*	**Pn**	**15 54 21.5**	**+0.6**
	baz=36							
TNSS					*ePg*	**Pb**	**15 54 31.5**	**-0.1**
	baz=36							
TNSS					*eLg*	Lg	15 55 30.3	
	baz=36							
TNSS	**Tian-Shan**	**4.40**	**35**		*Pg*	**Pb**	**15 54 30.8**	**-0.8**
	35nm,0.3s							
TNSS					*Lg*	Lg	15 55 28.1	
	39nm,0.6s							
BRLS	**Boroldav**	**4.52**	**323**		*ePN*	**Pn**	**15 54 22.4**	**+0.2**
BRLS					*e*		15 54 36.2	
BRLS					*e*		15 55 34.2	
BRLS	**Boroldav**	**4.52**	**323**		*ePn*	**Pn**	**15 54 22.4**	**+0.2**
	baz=317							
BRLS					*ePg*	**Pb**	**15 54 36.3**	**+2.9**
	baz=317							
BRLS					*eLg*	Lg	15 55 34.3	
	baz=317							
KRBS	**Karabastau**	**4.53**	**20**		*eP*	**Pb**	**15 54 32.4**	**-1.1**
	8.2nm,0.0s							
KRBS					*eS*	**Sb**	**15 55 30.8**	**+3.0**
	48nm,0.3s							
AAA	**Alma-Ata**	**4.53**	**33**		*ePN*	**Pn

KURS	**Kuram**	**5.32**	**39**	*e*P		**Pb**	**15 54 48.1**	**+1.1**
	28nm,0.9s							
KURS				*e*S		**Sb**	**15 55 58.2**	**+7.6**
	63nm,1.0s							
KURS	**Kuram**	**5.32**	**39**	Pg		**Pb**	**15 54 48.1**	**+1.1**
	28nm,0.9s							
KURS				Lg		Lg	15 55 58.2	
	63nm,1.0s							
KPKS	**Kokpek**	**5.57**	**42**	*e*PN		**Pn**	**15 54 37.9**	**+1.4**
KPKS				*e*			15 54 53.1	
KPKS				*e*			15 56 06.2	
KPKS	**Kokpek**	**5.57**	**42**	*e*P		**Pb**	**15 54 52.6**	**+1.4**
	15nm,0.6s							
KPKS				*e*S		**Sb**	**15 56 05.5**	**+7.9**
	27nm,0.1s							
KPKS	**Kokpek**	**5.57**	**42**	*e*Pn		**Pn**	**15 54 38.0**	**+1.4**
	baz=44							
KPKS				*e*Pg		**Pb**	**15 54 53.2**	**+2.0**
	baz=44							
KPKS				*e*Lg		Lg	15 56 06.2	
	baz=44							
KPKS	**Kokpek**	**5.57**	**42**	Pg		**Pb**	**15 54 52.6**	**+1.4**
	15nm,0.6s							
KPKS				Lg		Lg	15 56 05.5	
	30nm,0.9s							
BTLS	**Baital**	**5.59**	**4**	*e*PN		**Pn**	**15 54 38.7**	**+1.9**
BTLS				*e*			15 54 56.1	
BTLS				*e*			15 56 07.3	
BTLS	**Baital**	**5.59**	**4**	*e*P		**Pb**	**15 54 52.3**	**+0.8**
	8.0nm,0.5s							
BTLS				*e*S		**Sb**	**15 56 05.3**	**+7.1**
	25nm,0.5s							
BTLS	**Baital**	**5.59**	**4**	*e*Pn		**Pn**	**15 54 38.7**	**+1.9**
	baz=3.4							
BTLS				*e*Pg		**Pb**	**15 54 56.2**	**+4.7**
	baz=3.4							
BTLS				*e*Lg		Lg	15 56 07.4	
	baz=3.4							
BTLS	**Baital**	**5.59**	**4**	Pg		**Pb**	**15 54 53.5**	**+2.0**
	8.0nm,0.5s							
BTLS				Lg		Lg	15 56 06.9	
	25nm,0.5s							
ARXS	**Arharly**	**5.73**	**33**	*e*P		**Pb**	**15 54 53.8**	**-0.1**
	27nm,0.6s							
ARXS				*e*S		**Sb**	**15 56 07.7**	**+5.4**
	49nm,0.6s							
ARXS	**Arharly**	**5.73**	**33**	Pg		**Pb**	**15 54 53.8**	**-0.1**
	27nm,0.6s							
ARXS				Lg		Lg	15 56 07.7	
	49nm,0.6s							
CHCP	**Chirah Chowk**	**5.80**	**182**	P		**Pn**	**15 54 41.6**	**+1.9**
PDGK	**Podgornoye**	**5.92**	**47**	PN		**Pn**	**15 54 42.3**	**+0.9**
PDGK				PG		**Pb**	**15 54 59.3**	**+2.1**
PDGK	**Podgornoye**	**5.92**	**47**	⇑Pn		**Pn**	**15 54 42.0**	**+0.6**
	4.8nm,0.7s							
PDGK				⇓Pg		**Pb**	**15 54 59.3**	**+2.1**
	24nm,1.2s							
PDGK				⇑Lg		Lg	15 56 22.5	
	68nm,1.1s							
BLB	**Baldybastay**	**5.93**	**37**	*e*P		**Pb**	**15 54 58.3**	**+1.0**
	16nm,0.5s							
BLB				*e*S		**Sb**	**15 56 15.1**	**+7.0**
	32nm,1.1s							
BLB	**Baldybastay**	**5.93**	**37**	Pg		**Pb**	**15 54 58.3**	**+1.0**
	16nm,0.5s							
BLB				Lg		Lg	15 56 15.1	
	32nm,1.1s							
KBL	**Kabul**	**6.08**	**218**	Pn		**Pn**	**15 54 45.2**	**+1.4**
KBL	**Kabul**	**6.08**	**218**	PN		**Pn**	**15 54 45.2**	**+1.4**
TDK	**Taldyqorghan**	**6.61**	**32**	*e*P		**Pb**	**15 55 12.4**	**+3.4**
	14nm,0.1s							
TDK				*e*S		**Sg**	**15 56 40.2**	**-6.4**
	104nm,1.1s							
TDK	**Taldyqorghan**	**6.61**	**32**	*e*Pg		Pb	15 55 15.1	+6.1
	baz=32							
TDK				*e*Lg		Lg	15 56 41.1	
	baz=32							
TDK	**Taldyqorghan**	**6.61**	**32**	Pg		**Pb**	**15 55 12.4**	**+3.4**
	14nm,0.1s							
TDK				Lg		Lg	15 56 40.2	
	104nm,1.1s							
DJR	**Jarkent**	**6.74**	**42**	*e*P		**Pb**	**15 55 15.0**	**+3.8**
	1.7nm,0.1s							
DJR				*e*S		**Sg**	**15 56 43.5**	**-7.2**
	14nm,0.2s							
OTUK	**Ortayu**	**8.82**	**355**	P		**Pn**	**15 55 21.6**	**+0.4**
OTUK	**Ortayu**	**8.82**	**355**	⇓Pn		**Pn**	**15 55 21.6**	**+0.4**
	3.4nm,0.9s							
OTUK				⇑Lg		Lg	15 57 49.1	
	61nm,1.2s							
MAKZ	**Makanchi**	**9.59**	**37**	P		**Pn**	**15 55 34.8**	**+3.1**
MAKZ	**Makanchi**	**9.59**	**37**	⇑Pn		**Pn**	**15 55 34.8**	**+3.1**
	2.2nm,0.7s							
MAKZ				⇑Lg		Lg	15 58 15.0	
	8.2nm,1.2s							
MK31	**Makanchi Array**	**9.73**	**38**	P		Pn	15 55 38.8	+5.2
MK31	**Makanchi Array**	**9.73**	**38**	Pn		Pn	15 55 38.8	+5.2
	1.0nm,0.8s,baz=202,slow=11,SNR=4.3							
MK31				⇑Lg		Lg	15 58 19.6	
	6.5nm,1.0s,baz=218,slow=29,SNR=3.9							
MKAR	**Makanchi Array**	**9.73**	**38**	Pn		**Pn**	**15 55 35.0**	**+1.4**
	0.1nm,0.3s,baz=197,slow=19,SNR=2.5							
MKAR				LR		LR	15 58 51.0	
	comp=Z,23nm,21.7s,baz=216,slow=35 0.3nm,0.6s							
MKAR	**Makanchi Array**	**9.73**	**38**	P		**Pn**	**15 55 35.0**	**+1.4**
WMQ	**Urumqi**	**11.46**	**63**	*e*P		**Pn**	**15 55 59.0**	**+1.7**
KURBB	**Kurchatov Arra**	**11.70**	**16**	Lg		Lg	15 59 18.6	
	0.4nm,0.3s,baz=206,slow=29,SNR=11							
KURBB				LR		LR	16 00 34.2	
	comp=Z,90nm,19.8s,baz=163,slow=37							
KURBB	**Kurchatov Arra**	**11.70**	**16**	⇑Lg		Lg	15 59 19.2	
	66nm,1.2s							
KURK	**Kurchatov**	**11.81**	**16**	⇑Lg		Lg	15 59 27.1	
	38nm,1.1s							
GEYT	**Alibeck**	**12.14**	**268**	LR		LR	16 01 35.3	
	comp=Z,76nm,19.9s,baz=13,slow=42							
GEYT	**Alibeck**	**12.14**	**268**	Pn		**Pn**	**15 56 04.3**	**-2.3**
AB31	**Akbulak array**	**13.78**	**320**	P		**Pn**	**15 56 26.4**	**-2.5**
AB31	**Akbulak array**	**13.78**	**320**	⇓Pn		**Pn**	**15 56 26.4**	**-2.5**
	1.6nm,0.5s,baz=129,slow=14,SNR=20							
ABKAR	**Akbulak array**	**13.78**	**320**	Pn		**Pn**	**15 56 25.9**	**-2.9**
AKTO	**Aktyubinsk**	**15.49**	**320**	Pn		**Pn**	**15 56 50.2**	**-1.8**
	0.1nm,0.3s,baz=131,slow=12,SNR=7.9							
AKTO				LR		LR	16 03 04.2	
	comp=Z,58nm,19.2s,baz=133,slow=38 2.8nm,0.8s							
AKTO	**Aktyubinsk**	**15.49**	**320**	⇓Pn		**Pn**	**15 56 49.7**	**-2.3**
	10.0nm,0.8s							
ZAA0	**Zalesovo Array**	**16.40**	**24**	P		**Pn**	**15 57 06.0**	**+2.4**
ZALV	**Zalesovo Beam**	**16.40**	**24**	Pn		**Pn**	**15 57 04.0**	**+0.3**
	0.2nm,0.3s,baz=211,slow=10,SNR=9.0							
ZALV				LR		LR	16 03 42.4	
	comp=Z,34nm,19.3s,baz=163,slow=38 2.1nm,0.7s							
ZALV	**Zalesovo Beam**	**16.40**	**24**	P		**Pn**	**15 57 05.8**	**+2.2**
ZALV	**Zalesovo Beam**	**16.40**	**24**	*i* P		**Pn**	**15 57 05.0**	**+1.4**
ZALV				pmax		pmax		
	comp=Z,2.0nm,0.7s							
GOMU	**GeErMu**	**17.12**	**94**	P		**P**	**15 57 16.5**	**+1.6**
GOMU				pmax		pmax		
	comp=Z,2.0nm,0.7s							
GOMU				pmax		pmax		
	comp=Z,70nm,4.3s							
LKRN	**Lenkeran, Azer**	**19.22**	**276**	P		**P**	**15 57 38.6**	**+1.0**
ARU	**Arti**	**19.64**	**335**	P		**P**	**15 57 42.1**	**0.0**
	baz=126,slow=6.9,SNR=7.9							
ARU				LR		LR	16 05 34.5	
	comp=Z,41nm,19.4s,baz=162,slow=38 comp=Z,3.1nm,0.5s							
ARU	**Arti**	**19.64**	**335**	P		**P**	**15 57 41.3**	**-0.8**
ARU	**Arti**	**19.64**	**335**	*d* iP		**P**	**15 57 41.5**	**-0.6**
ARU				S		**S**	**16 01 19.2**	**-3.7**
ARU				pmax		pmax		
	comp=Z,6.0nm,0.8s							
SEKA	**Sheki**	**20.13**	**283**	P		**P**	**15 57 47.1**	**-0.5**
MNGR	**Mingechevir, A**	**20.25**	**282**	P		**P**	**15 57 49.8**	**+1.0**
GTA	**Gaotai**	**20.28**	**82**	*e*P		Pn	15 57 53.8	+2.4
GTA				pP		pP	15 57 58.0	+2.6
GTA				sP		sP	15 58 01.0	+2.7
GTA				pmax		pmax		
	comp=Z,3.0nm,1.2s							
ZKTA	**Zakatala**	**20.54**	**285**	P		**P**	**15 57 52.7**	**+0.7**
GANJ	**Ganja**	**20.84**	**282**	P		**P**	**15 57 56.0**	**+0.8**
NAX	**Nakhchivan**	**21.66**	**278**	P		**P**	**15 58 05.3**	**+1.1**
BELG	**Belogornoye**	**22.04**	**314**	P		**P**	**15 58 05.8**	**-2.1**
	comp=Z,22nm,0.8s,baz=48,slow=3.8,SNR=3.3							
	comp=Z,22nm,0.8s							
BELG	**Belogornoye**	**22.04**	**314**	*i* P		**P**	**15 58 10.9**	**+3.0**
BELG				pmax		pmax		
	comp=Z,5.0nm,1.0s							
GNI	**Garni**	**22.09**	**281**	*ce*P		**P**	**15 58 13.3**	**+4.4**
GNI				pmax		pmax		
	comp=Z,26nm,1.3s							
ONI	**Oni**	**22.85**	**288**	P		**P**	**15 58 16.3**	**-0.5**
ONI	**Oni**	**22.85**	**288**	P		**P**	**15 58 16.3**	**-0.5**
ONI				pmax		pmax		
	comp=Z,14nm,0.8s							
KBZ	**Khabaz**	**23.23**	**291**	P		**P**	**15 58 17.9**	**-2.8**
	comp=Z,1.6nm,0.9s,baz=90,slow=10,SNR=1.4							
	comp=Z,1.6nm,0.9s							
KBZ	**Khabaz**	**23.23**	**291**	*i* P		**P**	**15 58 24.8**	**+4.2**
KBZ				pmax		pmax		
	comp=Z,4.0nm,0.9s							
KIV	**Kislovodsk**	**23.39**	**291**	⇑*e*P		**P**	**15 58 26.3**	**+4.0**
KIV				*e*			15 58 51.9	
KIV				pmax		pmax		
	comp=Z,8.0nm,0.6s							
KIV				MLR		MLR		
	comp=Z,32nm,17.0s							
SHA1	**Shidzhatmaz**	**23.41**	**291**	*i* P		**P**	**15 58 25.0**	**+2.3**
SONM	**Songino Array**	**25.06**	**60**	P		**P**	**15 58 36.3**	**-1.7**
	comp=Z,1.5nm,0.8s,baz=260,slow=7.4,SNR=3.7							
	comp=Z,1.5nm,0.8s							
SONM	**Songino Array**	**25.06**	**60**	IAmb		IAmb	15 58 43.9	
	comp=Z,7.7nm,1.4s							
ULN	**Ulaanbaatar**	**25.50**	**60**	*ce*P		**P**	**15 58 45.3**	**+3.3**
ULN				pmax		pmax		
	comp=Z,3.0nm,1.7s							
HHC	**Hu-ho-hao-te**	**28.95**	**75**	*e*P		**P**	**15 59 10.0**	**-3.0**
HHC				pmax		pmax		
	comp=Z,150nm,5.5s							
OBN	**Obninsk**	**29.13**	**315**	*ce*P		**P**	**15 59 18.5**	**+4.3**
OBN				*e*			16 00 11.9	
OBN				*e*SS		SS	16 05 53.2	-16
OBN				pmax		pmax		
	comp=Z,4.0nm,0.8s							
OBN				MLR		MLR		
	comp=Z,23nm,17.0s							
AKASG	**Malin Array Be**	**32.77**	**305**	P		**P**	**15 59 45.1**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=79,slow=7.8,SNR=6.8							
AKASG				LR		LR	16 13 41.2	
	comp=Z,40nm,18.0s,baz=53,slow=37 comp=Z,0.3nm,0.3s							
NACGM	**Naroch**	**34.60**	**312**	⇑*e*P		**P**	**15 59 59.7**	**-2.6**
	baz=96							
MLR	**Muntele Rosu**	**35.19**	**296**	P		**P**	**16 00 06.5**	**-1.1**
MLR				IAmb		IAmb	16 00 17.6	
	comp=Z,4.4nm,0.9s							
MLR	**Muntele Rosu**	**35.19**	**296**	P		**P**	**16 00 06.6**	**-1.1**
MLR				pmax		pmax		
	comp=Z,4.0nm,0.9s							
FIA1	**FINESS Array S**	**36.23**	**323**	P		**P**	**16 00 15.1**	**-1.1**
FINES	**FINESS Array B**	**36.23**	**323**	P		**P**	**16 00 15.2**	**-1.0**
	comp=Z,1.1nm,0.3s,baz=106,slow=9.6,SNR=9.9							
FINES				LR		LR	16 16 46.0	
	comp=Z,31nm,18.2s,baz=88,slow=39 comp=Z,1.1nm,0.3s							
FINES	**FINESS Array B**	**36.23**	**323**	P		**P**	**16 00 15.0**	**-1.2**
FINES	**FINESS Array B**	**36.23**	**323**	*ce*P		P	16 00 21.2	+5.1
FINES				pmax		pmax		
	comp=Z,1.0nm,0.6s							
ARCES	**ARCESS Array B**	**39.23**	**336**	P		**P**	**16 00 40.8**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=110,slow=8.5,SNR=12							
	comp=Z,0.4nm,0.4s							
ARCES	**ARCESS Array B**	**39.23**	**336**	P		**P**	**16 00 40.4**	**-1.0**
ARCES				IAmb		IAmb	16 01 04.1	
	comp=Z,4.4nm,1.0s							
ARCES	**ARCESS Array B**	**39.23**	**336**	P		**P**	**16 00 40.4**	**-1.0**
ARCES				pmax		pmax		
	comp=Z,4.0nm,1.0s							
KLR	**Kul'dur**	**41.81**	**57**	*i* P		**P**	**16 01 05.0**	**+1.9**
KLR				pmax		pmax		
	comp=Z,4.0nm,1.8s							
KSRS	**Korea Array**	**42.10**	**75**	LR		LR	16 20 04.1	
	comp=Z,21nm,20.1s,baz=235,slow=38							
TIXI	**Tiksi**	**42.28**	**23**	*i* P		**P**	**16 01 10.1**	**+3.6**
TIXI				pmax		pmax		
	comp=Z,3.0nm,0.9s							
GERES	**GERESS Array B**	**42.92**	**303**	P		**P**	**16 01 11.5**	**-0.8**
	comp=Z,0.3nm,0.5s,baz=67,slow=3.5,SNR=4.4							
	comp=Z,0.3nm,0.5s							
NC303	**NORSAR Array S**	**43.21**	**321**	P		**P**	**16 01 12.3**	**-1.9**
NC303				IAmb		IAmb	16 01 17.8	
	comp=Z,6.2nm,0.9s							
NB2	**NORSAR Subarra**	**43.28**	**321**	P		**P**	**16 01 13.6**	**-1.3**
	comp=Z,1.1nm,0.6s,baz=90,slow=7.9							
NOA	**NORSAR Array B**	**43.28**	**321**	P		**P**	**16 01 13.3**	**-1.6**
	comp=Z,1.4nm,0.6s,baz=91,slow=7.9,SNR=7.5							
NOA				LR		LR	16 19 50.5	
	comp=Z,26nm,19.8s,baz=90,slow=37 comp=Z,1.4nm,0.6s							
NC204	**NORSAR Array S**	**43.50**	**321**	P		**P**	**16 01 15.0**	**-1.6**
CUC	**Castrocucco**	**43.71**	**290**	P		**P**	**16 01 18.5**	**-0.1**
CUC				IAmb		IAmb	16 01 41.9	
	comp=Z,4.7nm,1.4s							
GSI	**Gunungsitoli**	**43.85**	**144**	P		**P**	**16 01 19.3**	**-0.6**
GSI				IAmb		IAmb	16 01 20.2	
	comp=Z,5.9nm,0.8s							
SEY	**Seymchan**	**50.85**	**35**	*i* P		**P**	**16 02 18.0**	**+4.2**
SEY				pmax		pmax		
	comp=Z,8.0nm,1.7s							
BILL	**Bilibino**	**55.07**	**27**	*ce*P		**P**	**16 02 47.2**	**+2.3**
BILL				*e*			16 03 51.2	
BILL				*e*			16 04 54.6	
BILL				pmax		pmax		
	comp=Z,4.0nm,1.9s							
BILL				MLR		MLR		
	comp=Z,30nm,17.0s							
MBAR	**Mbarara**	**55.84**	**235**	*ce*P		**P**	**16 02 54.9**	**+3.6**
MBAR				pmax		pmax		
	comp=Z,12nm,2.5s							
TORD	**Torodi Ar. Bea**	**67.78**	**269**	P		**P**	**16 04 09.2**	**-2.4**
	comp=Z,0.5nm,0.5s,baz=69,slow=6.2,SNR=5.0							
	comp=Z,0.5nm,0.5s							
TORD	**Torodi Ar. Bea**	**67.78**	**269**	IAmb		IAmb	16 04 16.9	
	comp=Z,4.7nm,1.4s							
IMAR	**Indian Mountai**	**68.74**	**19**	P		**P**	**16 04 14.5**	**-2.4**
ILAR	**Eielson Array**	**71.38**	**17**	P		**P**	**16 04 30.6**	**-2.4**
	comp=Z,0.4nm,0.8s,baz=326,slow=4.0,SNR=4.6							
	comp=Z,0.4nm,0.8s							
YKA	**Yellowknife Ar**	**78.18**	**4**	P		**P**	**16 05 09.4**	**-3.1**
	comp=Z,0.2nm,0.6s,baz=346,slow=5.5,SNR=2.3							
	comp=Z,0.2nm,0.6s							
YKA	**Yellowknife Ar**	**78.18**	**4**	*ce*P		**P**	**16 05 15.6**	**+3.2**
WRA	**Warramunga Arr**	**81.92**	**124**	P		**P**	**16 05 30.7**	**-2.6**
	comp=Z,0.5nm,0.6s,baz=324,slow=5.0,SNR=5.5							
	comp=Z,0.5nm,0.6s							
ASAR	**Alice Springs**	**84.36**	**127**	P		**P**	**16 05 42.5**	**-3.3**
	comp=Z,0.4nm,0.8s,baz=313,slow=5.0,SNR=7.5							
	comp=Z,0.4nm,0.8s							
MK31				IAmb		IAmb	16 04 49.7	
	comp=Z,2.4nm,1.1s							
MKAR	**Makanchi Array**	**46.19**	**347**	P		**P**	**16 04 47.0**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=169,slow=6.8,SNR=4.2							
	comp=Z,0.6nm,0.7s							
MAKZ	**Makanchi**	**46.27**	**346**	P		**P**	**16 04 47.5**	**0.0**
ZAA0	**Zalesovo Array**	**52.56**	**351**	P		**P**	**16 05 35.2**	**0.0**
ZAA0				IAmb		IAmb	16 05 40.2	
	comp=Z,5.0nm,1.5s							
ZALV	**Zalesovo Beam**	**52.56**	**351**	P		**P**	**16 05 35.8**	**+0.5**
	comp=Z,1.0nm,0.4s,baz=178,slow=7.3,SNR=5.6							
	comp=Z,1.0nm,0.4s							
ZALV	**Zalesovo Beam**	**52.56**	**351**	P		**P**	**16 05 35.2**	**0.0**

*IDC **27** 15:56:16.8±18.0, 1°.58N×96°.37E, h0km, mb3.8/2, mbtmp3.7/3, ML3.4/1, Error ellipse: s-maj=460.6km s-min=129.7km az=125.0*
*NEIC **27** 15:56:22.2±0.8, 2°.06N±0°.07×96°.3E±0°.1, h10km±2km, mb4.0/5, Error ellipse: s-maj=21.6km s-min=6.8km az=239.0*

ISC 27 15:56:24.4±1.7, 2°.1N±0°.1×96°.3E±0°.2, h28km, n16, σ0s57/14, mb4.1/4, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**1.47**	**122**		Pn	**Pn**	**15 56 49.6**	**+0.5**
GSI					Sn	**Sb**	**15 57 08.7**	**-0.6**
IPM	**Ipoh**	**5.26**	**63**		Pn	**Pn**	**15 57 42.0**	**+0.7**
KULM	**Kulim**	**5.37**	**53**			**Pn**	**15 57 43.0**	**+0.4**
CM31	**Chiang Mai Arr**	**16.48**	**9**			**P**	**16 00 15.4**	**-0.9**
CM31					IAmb	IAmb	16 00 41.6	
	comp=Z,8.1nm,1.5s							
CMAR	**Chiang Mai Arr**	**16.48**	**9**	Pn		**P**	**16 00 15.8**	**-0.4**
	baz=196,slow=12,SNR=6.2							
	comp=Z,0.6nm,0.6s							
CMAR	**Chiang Mai Arr**	**16.48**	**9**	P		**P**	**16 00 15.3**	**-0.9**
CHTO	**Chiang Mai**	**16.83**	**9**			**P**	**16 00 19.8**	**-0.3**
H08S2	**Diego Garcia H**	**25.66**	**248**	T		T	16 28 31.3	
	baz=68,slow=75,SNR=33							
H08S3	**Diego Garcia H**	**25.66**	**248**	T		T	16 28 26.5	
	baz=68,slow=75,SNR=29							
H08S1	**Diego Carcia H**	**25.68**	**248**	T		T	16 28 32.4	
	baz=68,slow=75,SNR=34							
MK31	**Makanchi Array**	**46.19**	**347**	P		**P**	**16 04 47.1**	**+0.3**

*KRNET **27** 15:57:26.9±0.1, 39°.48N×73°.57E, mb3.5*
*SOME **27** 15:57:27.6, 39°.57N×73°.67E, h5km*

ISC 27 15:57:23.9±1.5, 39°.49N±0°.06×73°.69E±0°.04, h4km±13km, n24, σ1s02/48, 12C-6D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.24**	**326**	⇓*e*P		**Pn**	**15 57 49.6**	**+1.5**
	baz=30							
OHH				⇓*e*S		**Sn**	**15 58 06.2**	**+0.9**
	baz=30							
DRK	**Karamyk**	**1.46**	**270**	⇑*i*P		**Pg**	**15 57 52.4**	**+0.5**
	baz=71							
DRK				⇑*i*S		**Sg**	**15 58 11.1**	**+0.2**
	baz=71							
BTK	**Batken**	**2.28**	**285**	⇑*e*P		**Pb**	**15 58 06.1**	**+0.4**
	baz=86							
BTK				⇑*e*S		**Sb**	**15 58 34.6**	**+0.3**
	baz=86							
ARLS	**Aral**	**2.41**	**11**	⇑*e*P		**Pg**	**15 58 09.4**	**-0.7**
	baz=13							
ARLS				⇑*i*S		**Sg**	**15 58 40.6**	**-0.8**
	baz=13							
GAR	**Garm**	**2.67**	**260**	⇑*e*P		**Pb**	**15 58 11.3**	**-0.9**
	baz=60							
GAR				⇑*e*S		**Sb**	**15 58 43.5**	**-1.8**
	baz=60							
UCH	**Uchtor**	**2.80**	**13**	⇑*i*P		**Pb**	**15 58 15.3**	**+0.6**
	baz=14							
UCH				⇑*e*S		**Sb**	**15 58 50.6**	**+1.1**
	baz=14							
TRKS	**Terek-Say**	**2.81**	**317**	⇓*e*P		**Pb**	**15 58 13.2**	**-1.6**
	baz=18							
TRKS				⇓*e*S		**Sb**	**15 58 46.9**	**-2.7**
	baz=18							
EKS2	**Erkin-Say**	**3.17**	**1**	⇑*e*P		**Pb**	**15 58 19.6**	**-1.1**
	baz=3.0							
EKS2				⇑*e*S		**Sb**	**15 58 58.4**	**-1.3**
	baz=3.0							
BOOM	**Boomskoye usch**	**3.44**	**29**	⇓*i*P		**Pb**	**15 58 24.4**	**-1.1**
	baz=30							
BOOM				⇓*i*S		**Sb**	**15 59 06.2**	**-1.6**
	baz=30							
IUG	**luzhnay**	**3.84**	**315**	*e*P		**Pg**	**15 58 37.3**	**-0.1**
	15nm,0.2s							
IUG				*e*S		**Sg**	**15 59 27.4**	**+0.3**
	53nm,0.6s							
KST	**Kastek**	**3.94**	**25**	*e*P		**Pg**	**15 58 39.7**	**+0.4**
	4.8nm,0.5s							
KST				*e*S		**Sg**	**15 59 31.9**	**+1.6**
	39nm,0.6s							
SGDS	**Sogindy**	**4.02**	**10**	*e*P		**Pg**	**15 58 41.4**	**+0.5**
SGDS				*e*S		**Sg**	**15 59 34.2**	**+1.4**
DGS	**Degeres**	**4.06**	**22**	*e*P		**Pg**	**15 58 42.0**	**+0.4**
	6.6nm,0.2s							
DGS				*e*S		**Sg**	**15 59 35.3**	**+1.1**
	20nm,0.6s							
MTBS	**Maitube**	**4.18**	**29**	*e*P		**Pg**	**15 58 44.1**	**+0.2**
	4.8nm,0.2s							
MTBS				*e*S		**Sg**	**15 59 39.4**	**+1.4**
	19nm,0.2s							
TNSS	**Tian-Shan**	**4.31**	**34**	*e*P		**Pg**	**15 58 46.5**	**+0.1**
	5.3nm,0.4s							
TNSS				*e*S		**Sg**	**15 59 43.5**	**+1.3**
	8.1nm,0.3s							
KRBS	**Karabastau**	**4.45**	**19**	*e*P		**Pg**	**15 58 48.9**	**-0.3**
	3.7nm,0.1s							
KRBS				*e*S		**Sg**	**15 59 47.3**	**+0.4**
	16nm,0.1s							
KTBS	**Karatobe**	**4.77**	**27**	*e*P		**Pg**	**15 58 54.8**	**-0.6**
	1.8nm,0.1s							
KTBS				*e*S		**Sg**	**15 59 57.6**	**+0.5**
	18nm,0.0s							
KUU	**Kurty**	**4.82**	**23**	*e*P		**Pg**	**15 58 55.5**	**-0.7**
	2.7nm,0.2s							
KUU				*e*S		**Sg**	**15 59 58.9**	**+0.2**
	18nm,0.7s							
CHKK	**Chushkaly**	**5.01**	**28**	*e*P		**Pg**	**15 58 59.3**	**-0.5**
	2.0nm,0.1s							
CHKK				*e*S		**Sg**	**16 00 05.6**	**+0.9**
	12nm,0.1s							
SATY	**Saty**	**5.03**	**43**	*e*P		**Pg**	**15 58 59.8**	**-0.4**
	2.9nm,0.2s							
SATY				*e*S		**Sg**	**16 00 05.9**	**+0.5**
	13nm,0.4s							
KPKS	**Kokpek**	**5.46**	**42**	*e*P		**Pg**	**15 59 08.2**	**-0.3**
	4.0nm,0.2s							
KPKS				*e*S		**Sg**	**16 00 20.5**	**+1.3**
	9.1nm,0.2s							
BTLS	**Baital**	**5.55**	**3**	*e*P		**Pg**	**15 59 09.5**	**-0.6**
	3.4nm,0.5s							
BTLS				*e*S		**Sg**	**16 00 22.8**	**+0.8**
	5.8nm,0.6s							
ARXS	**Arharly**	**5.64**	**32**	*e*P		**Pg**	**15 59 10.3**	**-1.5**
	8.0nm,1.1s							

WR0	**Warramunga Arr**	**48.88**	**260**	P	**P**	**16 17 46.9**	**-0.5**
WR0				IAmb	IAmb	16 17 50.0	
	comp=Z,5.1nm,0.9s						
AS31	**Alice Springs**	**49.02**	**255**	P	**P**	**16 17 48.4**	**0.0**
ASAR	**Alice Springs**	**49.02**	**255**	P	**P**	**16 17 48.3**	**-0.1**
	comp=Z,4.4nm,0.7s,baz=89,slow=7.6,SNR=95						
	comp=Z,4.4nm,0.7s						
ASAR	**Alice Springs**	**49.02**	**255**	P	**P**	**16 17 48.1**	**-0.3**
WB0	**Warramunga Arr**	**49.05**	**260**	P	**P**	**16 17 48.3**	**-0.3**
WB0				IAmb	IAmb	16 17 49.3	
	comp=Z,4.8nm,0.6s						
WB2	**Warramunga Arr**	**49.06**	**260**	P	**P**	**16 17 48.0**	**-0.7**
WB2				IAmb	IAmb	16 18 04.0	
	comp=Z,4.3nm,0.8s						
WRA	**Warramunga Arr**	**49.07**	**260**	P	**P**	**16 17 48.4**	**-0.5**
	comp=Z,2.0nm,0.5s,baz=97,slow=5.7,SNR=49						
	comp=Z,2.0nm,0.5s						
MTN	**Manton Dam**	**53.51**	**268**	P	**P**	**16 18 21.9**	**-0.3**
FORT	**Forrest**	**53.75**	**246**	P	**P**	**16 18 23.9**	**+0.1**
KNRA	**Kununurra**	**55.08**	**264**	P	**P**	**16 18 33.6**	**+0.1**
QSPA	**South Pole Qui**	**70.81**	**180**	P	**P**	**16 20 19.6**	**+1.9**
MJAR	**Matsushiro Arr**	**71.88**	**321**	P	**P**	**16 20 24.7**	**+0.4**
	comp=Z,1.2nm,0.8s,baz=151,slow=7.0,SNR=4.9						
	comp=Z,1.2nm,0.8s						
MAJO	**Matsushiro**	**71.89**	**321**	P	**P**	**16 20 24.7**	**+0.3**
MAJO				IAmb	IAmb	16 20 25.9	
	comp=Z,5.5nm,1.1s						
MJB9	**Matsu-Tunnel**	**71.89**	**321**	P	**P**	**16 20 24.7**	**+0.3**
MJB9				IAmb	IAmb	16 20 25.9	
	comp=Z,5.4nm,1.1s						
KKM	**Kota Kinabalu**	**73.67**	**283**	P	**P**	**16 20 36.0**	**+0.4**
PFO	**Pinyon Flats O**	**75.55**	**46**	LR	LR	16 46 34.5	
	comp=Z,66nm,20.2s,baz=173,slow=30						
NVAR	**Mina Array Bea**	**77.19**	**41**	P	**P**	**16 20 54.9**	**-0.5**
	comp=Z,0.7nm,0.7s,baz=225,slow=8.9,SNR=5.8						
	comp=Z,0.7nm,0.7s						
NVAR	**Mina Array Bea**	**77.19**	**41**	P	**P**	**16 20 54.2**	**-1.2**
KVN	**Kaiserville**	**77.69**	**41**	P	**P**	**16 20 57.7**	**-0.5**
XMIS	**Christmas Isla**	**78.14**	**263**	P	**P**	**16 21 00.5**	**-0.5**
KSRS	**Korea Array**	**78.91**	**316**	P	**P**	**16 21 06.8**	**+2.2**
	comp=Z,1.8nm,0.9s,baz=135,slow=5.5,SNR=6.7						
	comp=Z,1.8nm,0.9s						
P18K	**Big Mountain,**	**79.76**	**9**	P	**P**	**16 21 09.5**	**+0.7**
P18K				IAmb	IAmb	16 21 20.3	
	comp=Z,5.4nm,0.8s						
TXAR	**Lajitas Array**	**82.76**	**56**	P	**P**	**16 21 25.9**	**+0.3**
	comp=Z,0.5nm,0.9s,baz=219,slow=8.1,SNR=4.4						
	comp=Z,0.5nm,0.9s						
PDAR	**Pinedale Array**	**85.13**	**42**	P	**P**	**16 21 37.2**	**-0.3**
	comp=Z,0.2nm,0.5s,baz=245,slow=3.9,SNR=3.6						
	comp=Z,0.2nm,0.5s						
WRH	**Wood River Hil**	**85.72**	**11**	P	**P**	**16 21 40.5**	**+0.8**
BCAR	**Beaver Creek A**	**85.72**	**14**	P	**P**	**16 21 40.7**	**+0.9**
MLY	**Manley**	**85.80**	**9**	P	**P**	**16 21 39.7**	**-0.4**
MLY				IAmb	IAmb	16 21 41.7	
	comp=Z,3.2nm,1.2s						
CCB	**Clear Creek Bu**	**85.93**	**11**	P	**P**	**16 21 41.2**	**+0.5**
CCB				IAmb	IAmb	16 21 52.8	
	comp=Z,4.7nm,1.2s						
ILAR	**Eielson Array**	**86.20**	**11**	P	**P**	**16 21 41.4**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=220,slow=5.3,SNR=5.7						
	comp=Z,0.6nm,0.7s						
IMAR	**Indian Mountai**	**86.27**	**8**	P	**P**	**16 21 42.8**	**+0.5**
BMAR	**Burnt Mountain**	**89.02**	**11**	P	**P**	**16 21 55.8**	**+0.2**
CLL	**Collm**	**147.61**	**352**	*e*PKPbc	**PKPbc**	**16 28 46.0**	**+0.7**
	comp=Z,5.0nm,1.1s						
CLL				*e*PKiKP	**pPKPdf**	**16 28 49.0**	**-0.4**
CLL				*ex*	x	16 28 56.0	
KHC	**Kasperske Hory**	**149.67**	**351**	*e*PKP	**PKPab**	**16 28 56.5**	**+0.6**

*IDC **27** 16:09:13.7±1.7,7°.27S×13°.00W,h0km,mb4.0/7, mbtmp4.0/8,ML3.3/1,MS3.5/10,Error ellipse: s-maj=65.8km s-min=22.0km az=97.0*
*NEIC **27** 16:09:14.3±2.1,7°.2S±0°.1×13°.42W±0°.07,h10km±1km, mb4.6/7,Error ellipse: s-maj=21.5km s-min=9.8km az=337.0*
ISC 27 16:09:13.7±0.6,7°.2S±0°.1×13°.3W±0°.1,h10km,n37, σ1$00/24,mb4.3/9,MS3.5/10,3C,Ascension Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASCN	**Ascension**	**1.23**	**235**	Pn	**Pb**	**16 09 36.6**	**-0.5**
H10N2	**ASCENSION HYDR**	**1.29**	**242**	Pn	**Pg**	**16 09 38.1**	**-0.2**
H10N2				T	T	16 11 07.9	
	baz=73,slow=74						
H10N1	**ASCENSION HYDR**	**1.29**	**241**	Pn	**Pb**	**16 09 38.0**	**+0.2**
H10N1				T	T	16 11 16.1	
	baz=73,slow=74,SNR=9102						
H10N1	**ASCENSION HYDR**	**1.29**	**241**		**Pb**	**16 09 38.0**	**+0.2**
H10N3	**ASCENSION HYDR**	**1.30**	**242**	Pn	**Pg**	**16 09 38.6**	**-0.1**
H10N3				T	T	16 11 10.9	
	baz=73,slow=74,SNR=8136						
H10S2	**ASCENSION HYDR**	**2.16**	**217**	T	T	16 12 02.9	
	baz=176,slow=74,SNR=314						
H10S3	**ASCENSION HYDR**	**2.16**	**217**	T	T	16 12 09.0	
	baz=44,slow=74,SNR=382						
LIC	**Lamto**	**15.72**	**32**	⇑*e*P	**P**	**16 12 59.5**	**+0.1**
	12nm,0.8s						
KIC	**Kosan Boka**	**15.99**	**33**	⇑*e*P	**Pn**	**16 12 57.8**	**-1.1**
	6.6nm,0.7s						
TIC	**Toumodi**	**16.08**	**31**	⇑*e*P	**Pn**	**16 12 59.8**	**-0.3**
	11nm,0.2s						
DBIC	**Dimbokro**	**16.19**	**32**	Pn	**Pn**	**16 12 59.9**	**-1.5**
	0.1nm,0.3s,baz=210,slow=13,SNR=3.3						
	5.8nm,1.0s						
DBIC	**Dimbokro**	**16.19**	**32**	IAmb	IAmb	16 13 05.8	
	comp=Z,6.0nm,0.8s						
RCBR	**Riachuelo**	**22.45**	**272**	P	**P**	**16 14 12.2**	**-1.1**
RCBR				IAmb	IAmb	16 14 25.9	
	comp=Z,61nm,1.5s						
TOA0	**Torodi Ar. Sit**	**25.15**	**36**	P	**P**	**16 14 38.2**	**-1.0**
TOA0				IAmb	IAmb	16 14 41.0	
	comp=Z,11nm,1.1s						
TORD	**Torodi Ar. Bea**	**25.15**	**36**	P	**P**	**16 14 38.6**	**-0.7**
	comp=Z,5.8nm,1.1s,baz=221,slow=9.4,SNR=16						
	comp=Z,5.8nm,1.1s						
TORD	**Torodi Ar. Bea**	**25.15**	**36**	P	**P**	**16 14 37.9**	**-1.4**
TORD				IAmb	IAmb	16 14 41.1	
	comp=Z,8.3nm,1.1s						
TSUM	**Tsumeb**	**32.31**	**115**	LR	LR	16 25 51.3	
	comp=Z,66nm,21.4s,baz=287,slow=31						
SUR	**Sutherland**	**40.42**	**133**	LR	LR	16 30 28.6	
	comp=Z,118nm,19.1s,baz=336,slow=32						
LBTB	**Lobatse**	**41.18**	**120**	LR	LR	16 30 52.8	
	comp=Z,66nm,21.7s,baz=262,slow=32						
LSZ	**Lusaka**	**41.45**	**105**	LR	LR	16 31 10.5	
	comp=Z,46nm,21.5s,baz=290,slow=32						
BOSA	**Boshof**	**42.16**	**125**	P	**P**	**16 17 05.6**	**-1.3**
	comp=Z,3.8nm,0.7s,baz=309,slow=8.2,SNR=6.6						
BOSA				LR	LR	16 31 10.4	
	comp=Z,48nm,20.6s,baz=330,slow=32						
	comp=Z,3.8nm,0.7s						
BOSA	**Boshof**	**42.16**	**125**	P	**P**	**16 17 05.4**	**-1.5**
BOSA				IAmb	IAmb	16 17 13.5	
	comp=Z,34nm,1.5s						
MBAR	**Mbarara**	**44.44**	**83**	LR	LR	16 34 13.2	
	comp=Z,89nm,18.4s,baz=178,slow=34						
SIV	**San Ignacio**	**47.46**	**255**	LR	LR	16 37 44.6	
	comp=Z,34nm,18.7s,baz=109,slow=36						
KMBO	**Kilima Mbogo**	**50.79**	**86**	LR	LR	16 38 00.7	
	comp=Z,42nm,20.3s,baz=94,slow=34						
LVC	**Limon Verde**	**55.52**	**248**	LR	LR	16 42 24.9	
	comp=Z,53nm,18.9s,baz=206,slow=36						
GERES	**GERESS Array B**	**60.66**	**20**	P	**P**	**16 19 25.8**	**+0.8**
	comp=Z,0.5nm,0.8s,baz=204,slow=12,SNR=4.0						
	comp=Z,0.5nm,0.8s						
NNA	**Nana**	**62.68**	**260**	LR	LR	16 47 49.4	
	comp=Z,39nm,18.1s,baz=94,slow=37						
BRTR	**Keskin Array B**	**63.73**	**39**	P	**P**	**16 19 47.6**	**+1.7**
	comp=Z,1.4nm,0.7s,baz=203,slow=9.0,SNR=4.9						
	comp=Z,1.4nm,0.7s						
SNAA	**Sanae**	**64.72**	**176**	P	**P**	**16 19 52.9**	**+1.1**
SNAA	**Sanae**	**64.72**	**176**	P	**P**	**16 19 52.6**	**+0.8**
	comp=Z,1.5nm,0.9s,baz=328,slow=7.8,SNR=5.9						
	comp=Z,1.5nm,0.9s						
SNAA	**Sanae**	**64.72**	**176**	IAmb	IAmb	16 20 11.0	
	comp=Z,2.6nm,1.0s						
TROLL	**Troll, Antarti**	**65.47**	**175**	P	**P**	**16 19 57.5**	**+0.8**
AKASG	**Malin Array Be**	**68.39**	**28**	P	**P**	**16 20 15.7**	**+0.3**
	comp=Z,1.1nm,0.7s,baz=225,slow=7.1,SNR=4.8						
	comp=Z,1.1nm,0.7s						
KBZ	**Khabaz**	**71.72**	**39**	P	**P**	**16 20 37.5**	**+1.5**
	comp=Z,0.7nm,0.4s,baz=225,slow=6.7,SNR=3.8						
	comp=Z,0.7nm,0.4s						
UOSS	**Minazif**	**74.79**	**62**	P	**P**	**16 20 54.5**	**-0.1**
CTA	**Charters Tower**	**146.25**	**144**	PKPbc	**PKPbc**	**16 28 56.2**	**+0.7**
	comp=Z,3.9nm,1.0s,baz=214,slow=3.6,SNR=3.0						

*IDC **27** 16:26:38.8±1.3,5°.58S×153°.57E,h0km,mb3.9/9, mbtmp3.9/10,ML2.4/1,MS3.3/9,Error ellipse: s-maj=37.7km s-min=19.5km az=107.0*
*NEIC **27** 16:26:42.4±1.3,5°.42S±0°.08×153°.4E±0°.1,h8km±4km, mb4.4/18,Error ellipse: s-maj=15.7km s-min=10.9km az=68.0*
ISC 27 16:26:46.5±0.6,5°.51S±0°.06×153°.27E±0°.09,h43km,n46, σ1$05/43,mb4.2/19,MS3.3/8,New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.71**	**320**		**Pn**	**16 27 12.3**	**-1.5**
KRVT	**Keravat (AS076**	**1.72**	**314**	Pn	**Pn**	**16 27 13.1**	**-0.8**
	109nm,0.3s,baz=266,slow=2.0,SNR=164						
KRVT				Sn	**Sn**	**16 27 34.9**	**+0.2**
	59nm,0.3s,baz=0.0,slow=20,SNR=9.4						
MANU	**Manus Island**	**6.82**	**300**	Pn	**Pn**	**16 28 24.0**	**-0.1**
PMG	**Port Moresby**	**7.19**	**237**	Pn	**Pn**	**16 28 27.7**	**-1.4**
	3.2nm,0.3s,baz=44,slow=11,SNR=10						
PMG				Sn	**Sn**	**16 29 48.4**	**-1.2**
	2.1nm,0.3s,baz=86,slow=21,SNR=8.1						
	12nm,0.4s						
PMG	**Port Moresby**	**7.19**	**237**		**Pn**	**16 28 29.6**	**+0.5**
CTA	**Charters Tower**	**16.02**	**205**	Pn	**P**	**16 30 30.8**	**-1.0**
	0.1nm,0.3s,baz=21,slow=17,SNR=5.8						
CTA				LR	LR	16 35 45.9	
	comp=Z,114nm,21.1s,baz=81,slow=34						
CTAO	**Charters Tower**	**16.02**	**205**	P	**P**	**16 30 32.9**	**+1.1**
CTAO				IAmb	IAmb	16 30 54.1	
	comp=Z,22nm,1.5s						
KOUNC	**Koumac, New Ca**	**18.39**	**145**	P	**Pn**	**16 30 57.8**	**-0.6**
EIDS	**Eidsvold**	**19.86**	**186**	P	**Pn**	**16 31 15.4**	**-0.6**
GUMO	**Guam**	**20.72**	**336**	LR	LR	16 38 51.5	
	comp=Z,44nm,18.9s,baz=174,slow=35						
MTN	**Manton Dam**	**23.02**	**250**	P	**P**	**16 31 51.2**	**+3.1**
WR0	**Warramunga Arr**	**23.20**	**230**	P	**P**	**16 31 49.6**	**-0.2**
WR0				IAmb	IAmb	16 31 55.4	
	comp=Z,11nm,1.1s						
WB0	**Warramunga Arr**	**23.20**	**231**	P	**P**	**16 31 48.7**	**-1.1**
WB0				IAmb	IAmb	16 32 14.5	
	comp=Z,14nm,1.3s						
WB2	**Warramunga Arr**	**23.33**	**230**	P	**P**	**16 31 50.1**	**-1.0**
WB2				IAmb	IAmb	16 32 04.4	
	comp=Z,14nm,1.4s						
WRA	**Warramunga Arr**	**23.34**	**230**	P	**P**	**16 31 50.1**	**-1.1**
	comp=Z,1.2nm,0.7s,baz=56,slow=10,SNR=8.0						
	comp=Z,1.2nm,0.7s						
ARMA	**Armidale**	**24.83**	**183**	P	**P**	**16 32 06.0**	**+1.1**
ARMA				IAmb	IAmb	16 32 43.9	
	comp=Z,27nm,1.4s						
AS31	**Alice Springs**	**25.96**	**224**	P	**P**	**16 32 15.4**	**+0.2**
ASAR	**Alice Springs**	**25.96**	**224**	P	**P**	**16 32 14.4**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=56,slow=9.2,SNR=13						
ASAR				LR	LR	16 43 09.5	
	comp=Z,44nm,19.7s,baz=6.0,slow=38						
	comp=Z,0.5nm,0.6s						
ASAR	**Alice Springs**	**25.96**	**224**	P	**P**	**16 32 15.4**	**+0.2**
STKA	**Stephens Creek**	**28.42**	**201**	P	**P**	**16 32 36.3**	**-0.9**
	comp=Z,2.1nm,0.8s,baz=346,slow=14,SNR=3.4						
STKA				LR	LR	16 43 56.3	
	comp=Z,76nm,18.8s,baz=22,slow=36						
	comp=Z,2.1nm,0.8s						
JHJ	**Hachijo jima 2**	**40.49**	**342**	LR	LR	16 50 00.6	
	comp=Z,26nm,19.6s,baz=41,slow=34						
JTM	**Tenmabayashi**	**47.41**	**347**	P	**P**	**16 35 15.9**	**-0.7**
USRK	**Ussuriysk Ar.**	**53.06**	**341**	P	**P**	**16 36 00.0**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=149,slow=8.9,SNR=6.3						
	comp=Z,1.1nm,0.8s						
USRK	**Ussuriysk Ar.**	**53.06**	**341**	P	**P**	**16 35 59.3**	**-0.1**
PETK	**Petropavlovsk-**	**58.51**	**3**	P	**P**	**16 36 39.3**	**+1.0**
	comp=Z,1.8nm,0.4s,baz=187,slow=11,SNR=3.8						
PETK				LR	LR	16 58 16.9	
	comp=Z,32nm,21.1s,baz=117,slow=32						
PETK	**Petropavlovsk-**	**58.51**	**3**	P	**P**	**16 36 38.1**	**-0.2**
CMAR	**Chiang Mai Arr**	**58.60**	**295**	P	**P**	**16 36 39.8**	**+0.2**
	comp=Z,0.6nm,0.8s,baz=117,slow=6.4,SNR=5.4						
	comp=Z,0.6nm,0.8s						
MA2	**Magadan**	**64.91**	**359**	LR	LR	17 04 01.2	
	comp=Z,23nm,19.8s,baz=194,slow=34						
YAK	**Yakutsk**	**69.75**	**348**	P	**P**	**16 37 52.3**	**+0.5**
GAMB	**Gambell**	**73.93**	**15**	P	**P**	**16 38 16.4**	**-0.4**
BILL	**Bilibino**	**73.95**	**5**	P	**P**	**16 38 17.4**	**+0.4**
BILL				IAmb	IAmb	16 38 19.5	
	comp=Z,2.4nm,0.8s						
IMAR	**Indian Mountai**	**80.89**	**19**	P	**P**	**16 38 55.9**	**+0.1**
MKAR	**Makanchi Array**	**81.16**	**319**	P	**P**	**16 38 57.6**	**-0.1**
	comp=Z,1.1nm,0.8s,baz=134,slow=3.5,SNR=5.5						
	comp=Z,1.1nm,0.8s						
ZAA0	**Zalesovo Array**	**82.00**	**326**	P	**P**	**16 39 01.4**	**-0.4**
ZAA0				IAmb	IAmb	16 39 02.6	
	comp=Z,3.0nm,0.8s						
ZALV	**Zalesovo Beam**	**82.00**	**326**	P	**P**	**16 39 01.5**	**-0.4**
	comp=Z,2.6nm,0.6s,baz=112,slow=4.8,SNR=11						
	comp=Z,2.6nm,0.6s						
ZALV	**Zalesovo Beam**	**82.00**	**326**	P	**P**	**16 39 01.4**	**-0.5**
ILAR	**Eielson Array**	**82.63**	**22**	P	**P**	**16 39 01.6**	**-3.4**
	comp=Z,0.6nm,1.0s,baz=252,slow=5.1,SNR=4.1						
	comp=Z,0.6nm,1.0s						
J25K	**Salcha River,**	**83.13**	**22**	P	**P**	**16 39 07.8**	**+0.1**
J25K				IAmb	IAmb	16 39 08.1	
	comp=Z,1.8nm,1.0s						
QSPA	**South Pole Qui**	**84.46**	**180**	P	**P**	**16 39 16.3**	**+1.7**
QSPA				IAmb	IAmb	16 39 37.6	
	comp=Z,5.5nm,1.2s						
KURK	**Kurchatov**	**84.61**	**322**	P	**P**	**16 39 15.6**	**+0.2**
KURK				IAmb	IAmb	16 39 16.8	
	comp=Z,5.8nm,1.1s						
KURBB	**Kurchatov Arra**	**84.64**	**322**	P	**P**	**16 39 16.5**	**+0.9**
	comp=Z,1.9nm,0.9s,baz=108,slow=4.3,SNR=11						
	comp=Z,1.9nm,0.9s						
INK	**Inuvik**	**88.94**	**21**	LR	LR	17 19 52.2	
	comp=Z,29nm,18.4s,baz=190,slow=36						
AKTO	**Aktyubinsk**	**97.56**	**320**	LR	LR	17 25 23.7	
	comp=Z,17nm,19.1s,baz=84,slow=36						
KSCT	**Kent School, K**	**125.01**	**42**		**PKPdf**	**16 45 41.8**	**-0.6**
TORD	**Torodi Ar. Bea**	**150.96**	**287**	PKPbc	**PKiKP**	**16 46 36.0**	**-0.3**
	comp=Z,3.0nm,0.8s,baz=59,slow=1.9,SNR=18						
TORD	**Torodi Ar. Bea**	**150.96**	**287**		**PKiKP**	**16 46 36.0**	**-0.3**

*NEIC **27** 16:31:51.0±2.2,11°.0S±0°.3×166°.1E±0°.3,h63km±10km, mb4.2/9,Error ellipse: s-maj=59.9km s-min=13.3km az=132.0*
*IDC **27** 16:32:19.8±21.0,11°.12S×165°.52E,h336km±194km, mb3.0/3,mbtmp3.8/3,Error ellipse: s-maj=222.2km s-min=56.3km az=131.0*
ISC 27 16:31:50.0±1.3,11°.0S±0°.3×166°.1E±0°.4,h61km,n16, σ1$26/16,mb4.1/7,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EIDS	**Eidsvold**	**20.18**	**223**	P	**P**	**16 36 18.9**	**-0.7**
EIDS				IAmb	IAmb	16 36 26.0	
	comp=Z,8.3nm,1.1s						
WB0	**Warramunga Arr**	**31.76**	**250**	P	**P**	**16 38 09.6**	**+0.9**
WB2	**Warramunga Arr**	**31.84**	**250**	P	**P**	**16 38 10.2**	**+0.9**
WB2				IAmb	IAmb	16 38 45.1	
	comp=Z,12nm,1.5s						
WRA	**Warramunga Arr**	**31.85**	**250**	P	**P**	**16 38 10.3**	**+0.9**
	comp=Z,0.2nm,0.4s,baz=80,slow=8.8,SNR=7.5						
	comp=Z,0.2nm,0.4s						
AS31	**Alice Springs**	**33.14**	**243**	P	**P**	**16 38 20.1**	**-0.7**
ASAR	**Alice Springs**	**33.14**	**243**	P	**P**	**16 38 20.1**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=69,slow=10,SNR=22						
	comp=Z,0.5nm,0.4s						
ASAR	**Alice Springs**	**33.14**	**243**	P	**P**	**16 38 19.7**	**-1.1**
TAU	**Tasmania Unive**	**35.76**	**204**	P	**P**	**16 38 44.2**	**+1.2**
IMAR	**Indian Mountai**	**82.29**	**15**	P	**P**	**16 44 06.0**	**+1.5**
CCB	**Clear Creek Bu**	**82.99**	**18**	P	**P**	**16 44 08.2**	**+0.1**
IL31		**83.36**	**18**	P	**P**	**16 44 10.6**	**+0.5**
IL31				IAmb	IAmb	16 44 19.8	
	comp=Z,4.9nm,1.4s						
ILAR	**Eielson Array**	**83.36**	**18**	P	**P**	**16 44 10.8**	**+0.8**
	comp=Z,1.1nm,0.6s,baz=244,slow=5.2,SNR=13						
	comp=Z,1.1nm,0.6s						
ILAR	**Eielson Array**	**83.36**	**18**	P	**P**	**16 44 10.3**	**+0.3**
J25K	**Salcha River,**	**83.72**	**19**	P	**P**	**16 44 12.8**	**+0.8**
J25K				IAmb	IAmb	16 44 13.9	
	comp=Z,1.4nm,0.5s						
SCRK	**Sand Creek**	**83.75**	**20**	P	**P**	**16 44 13.1**	**+0.8**
SCRK				IAmb	IAmb	16 44 39.3	
	comp=Z,2.5nm,1.3s						
ARCES	**ARCESS Array B**	**116.39**	**346**	PKP	**PKiKP**	**16 50 23.1**	**-3.2**
	comp=Z,3.1nm,1.1s,baz=42,slow=2.7,SNR=7.7						

*IDC **27** 16:33:11.6±3.5,39°.13N×73°.98E,h0km,mb3.8/3, mbtmp3.7/6,ML3.2/3,MS2.5/2,Error ellipse: s-maj=66.8km s-min=23.0km az=119.0*
*SOME **27** 16:33:13.8,39°.53N×73°.48E,h5km*
*KRNET **27** 16:33:14.7±0.1,39°.45N×73°.54E,mb3.7*
*NEIC **27** 16:33:18.8±1.7,39°.52N±0°.04×73°.28E±0°.06,h10km±1km, mb4.0/8,Error ellipse: s-maj=8.9km s-min=5.7km az=231.0*
*NNC **27** 16:33:22.6±1.4,39°.76N×73°.22E,h0km,mb3.9,mpv3.5, Error ellipse: s-maj=13.5km s-min=8.4km az=0.0*
ISC 27 16:33:17.2±0.6,39°.57N±0°.04×73°.37E±0°.02,h10km,n77, σ2$40/112,mb3.9/6,27C-15D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.05**	**335**	⇑*e*P	**Pn**	**16 33 37.8**	**-0.3**
	baz=32						
OHH				⇑*e*S	**Sn**	**16 33 54.9**	**+2.1**
	baz=32						
DRK	**Karamyk**	**1.22**	**266**	⇑*i*P	**Pn**	**16 33 40.0**	**-0.5**
	baz=72						
DRK				⇑*i*S	**Sn**	**16 33 58.9**	**+1.7**
	baz=72						
DRK	**Karamyk**	**1.22**	**266**	Pn	**Pb**	**16 33 39.3**	**-1.2**
KSH	**Kashi**	**2.02**	**91**	Pg	**Pn**	**16 33 47.3**	**-4.1**
KSH				Sg	**Sn**	**16 34 10.5**	**-6.2**
KSH				pmax	pmax		
	comp=Z,61nm,0.8s						
KSH				smax	smax		
	comp=N,410nm,0.6s						
KSH				smax	smax		
	comp=E,360nm,0.7s						
BTK	**Batken**	**2.02**	**285**	⇑*e*P	**Pb**	**16 33 53.8**	**-0.3**
	baz=87						
BTK				⇑*e*S	**Sg**	**16 34 22.7**	**+0.5**
	baz=87						
BTK	**Batken**	**2.02**	**285**	Pn	**Pb**	**16 33 52.4**	**-1.7**
ARLS	**Aral**	**2.40**	**17**	⇑*i*P	**Pb**	**16 33 58.2**	**-2.4**
	baz=14						
ARLS				⇑*i*S	**Sb**	**16 34 30.3**	**0.0**
	baz=14						
GAR	**Garm**	**2.44**	**257**	⇑*e*P	**Pb**	**16 33 58.9**	**-2.2**
	baz=61						
GAR				⇑*e*S	**Sb**	**16 34 31.2**	**-0.1**
	baz=61						
GAR	**Garm**	**2.44**	**257**		**Pn**	**16 33 58.2**	**+1.0**
ARK	**Arkit**	**2.47**	**335**	⇑*i*P	**Pb**	**16 34 00.1**	**-1.6**
	baz=34						
ARK				⇑*i*S	**Sg**	**16 34 34.1**	**-2.3**
	baz=34						
AML	**Almayashu**	**2.57**	**5**	P	**Pb**	**16 34 03.1**	**-0.5**
	SNR=30						
TRKS	**Terek-Say**	**2.59**	**320**	⇑*e*P	**Pb**	**16 34 01.3**	**-2.5**
	baz=19						
TRKS				⇑*e*S	**Sb**	**16 34 35.5**	**-0.2**
	baz=19						
UCH	**Uchtor**	**2.79**	**18**	P	**Pb**	**16 34 06.4**	**-1.0**
	SNR=48						
UCH	**Uchtor**	**2.79**	**18**	⇓*e*P	**Pn**	**16 34 03.8**	**+1.4**
	baz=15						
UCH				⇓*e*S	**Sb**	**16 34 40.3**	**-1.5**
	baz=15						
EKS2	**Erkin-Say**	**3.10**	**6**	P	**Pb**	**16 34 11.1**	**-1.4**
	SNR=12						
EKS2	**Erkin-Say**	**3.10**	**6**	⇑*e*P	**Pn**	**16 34 08.3**	**+2.0**
	baz=3.0						
EKS2				⇑*e*S	**Sb**	**16 34 48.1**	**-2.4**
	baz=3.0						
AAK	**Ala-Archa**	**3.18**	**15**	P	**Pb**	**16 34 12.3**	**-1.5**
	SNR=17						
AAK	**Ala-Archa**	**3.18**	**15**	Pn	**Pb**	**16 34 11.5**	**-2.3**
	comp=E,3.6nm,0.3s,baz=190,slow=5.4,SNR=26						
AAK				Sn	**Sb**	**16 34 54.9**	**+2.2**
	comp=E,3.8nm,0.3s,baz=127,slow=20,SNR=3.8						
AAK				LR	LR	16 35 51.7	
	comp=E,32nm,21.6s,baz=266,slow=45						
	comp=E,19nm,0.4s						
AAK	**Ala-Archa**	**3.18**	**15**	⇑*e*P	**Pn**	**16 34 09.2**	**+1.8**
	baz=12						
AAK				⇑*e*S	**Sb**	**16 34 49.3**	**-3.4**
	baz=12						
AAK	**Ala-Archa**	**3.18**	**15**	Pn	**Pn**	**16 34 09.1**	**+1.7**
KBK	**Karagaybulak**	**3.30**	**21**	P	**Pb**	**16 34 16.9**	**+0.9**
	SNR=9.1						
KBK	**Karagaybulak**	**3.30**	**21**	⇑*e*P	**Pn**	**16 34 10.6

	comp=E,8.0nm,0.2s							
AAA				*e*S		**Sg**	**16 35 41.8**	**-0.2**
	comp=E,90nm,0.6s							
KNDC	**Almaty**	**4.54**	**35**	⇓Pn		**Pb**	**16 34 32.8**	**-4.1**
	comp=E,37nm,0.6s							
KNDC				⇑Lg		Lg	16 35 42.8	
	comp=E,254nm,0.8s							
KTBS	**Karatobe**	**4.82**	**30**	*e*P		**Pb**	**16 34 45.2**	**+3.4**
	comp=E,2.9nm,0.8s							
KTBS				*e*S		**Sg**	**16 35 50.9**	**-1.1**
	comp=E,77nm,0.4s							
KUU	**Kurty**	**4.86**	**26**	*e*P		**Pb**	**16 34 45.4**	**+3.1**
	comp=E,2.0nm,1.2s							
KUU				*e*S		**Sg**	**16 35 51.6**	**-1.4**
	comp=E,31nm,0.3s							
CHKK	**Chushkaly**	**5.06**	**31**	*e*P		**Pb**	**16 34 49.4**	**+3.5**
	comp=E,1.2nm,0.2s							
CHKK				*e*S		**Sg**	**16 35 58.5**	**-1.3**
	comp=E,17nm,0.1s							
SATY	**Saty**	**5.15**	**46**	*e*P		**Pb**	**16 34 49.1**	**+1.7**
	comp=E,7.0nm,1.0s							
SATY				*e*S		**Sg**	**16 35 57.9**	**-4.6**
	comp=E,30nm,0.6s							
ZHN	**Zhinishke**	**5.24**	**45**	*e*P		**Pb**	**16 34 51.8**	**+2.8**
	comp=E,5.0nm,0.3s							
ZHN				*e*S		**Sg**	**16 36 01.8**	**-3.5**
	comp=E,14nm,0.8s							
KURS	**Kuram**	**5.32**	**41**	*e*P		**Pb**	**16 34 53.9**	**+3.6**
	comp=E,7.1nm,0.5s							
KURS				*e*S		**Sg**	**16 36 05.8**	**-2.1**
	comp=E,19nm,0.6s							
BTLS	**Baital**	**5.49**	**5**	*e*P		**Pb**	**16 34 54.8**	**+1.7**
	comp=E,2.2nm,0.2s							
BTLS				*e*S		**Sg**	**16 36 06.9**	**-6.4**
	comp=E,6.0nm,0.1s							
KPKS	**Kokpek**	**5.57**	**44**	*e*P		**Pb**	**16 34 57.8**	**+3.2**
	comp=E,4.6nm,0.3s							
KPKS				*e*S		**Sg**	**16 36 12.0**	**-4.1**
	comp=E,20nm,0.3s							
ARXS	**Arharly**	**5.71**	**34**	*e*P		**Pb**	**16 35 01.1**	**+4.2**
	comp=E,6.8nm,0.6s							
ARXS				*e*S		**Sg**	**16 36 17.8**	**-2.6**
	comp=E,31nm,0.8s							
BLB	**Baldybastay**	**5.92**	**39**	*e*P		**Pb**	**16 35 04.2**	**+3.7**
	comp=E,2.9nm,0.5s							
BLB				*e*S		**Sg**	**16 36 24.1**	**-2.9**
	comp=E,26nm,0.2s							
PDGK	**Podgornoye**	**5.94**	**49**	⇓Pn		Pn	16 34 51.9	+6.6
	comp=E,3.3nm,0.7s							
PDGK				⇓Pg		**Pg**	**16 35 10.1**	**-0.8**
	comp=E,5.7nm,0.6s							
PDGK				⇑Lg		Lg	16 36 29.4	
	comp=E,13nm,0.8s							
OTUK	**Ortayu**	**8.70**	**355**	⇑Pn		**Pn**	**16 35 25.7**	**+2.6**
	comp=E,1.4nm,0.8s							
OTUK				⇓Lg		Lg	16 37 49.6	
	comp=E,9.0nm,0.8s							
WMQ	**Urumqi**	**11.52**	**64**	*e*P		**Pn**	**16 36 05.8**	**+4.0**
WMQ				pP			16 36 09.5	
WMQ				sP			16 36 13.0	
WMQ				pmax	pmax			
	comp=Z,22nm,0.7s							
WMQ				smax	smax			
	comp=N,17nm,0.5s							
WMQ				smax	smax			
	comp=E,13nm,0.7s							
ABKAR	**Akbulak array**	**13.61**	**320**	Pn		**Pn**	**16 36 30.3**	**+0.1**
AKTO	**Aktyubinsk**	**15.32**	**320**	Pn		**P**	**16 36 55.9**	**-2.4**
	comp=E,0.1nm,0.3s,baz=115,slow=17,SNR=2.4							
	comp=E,0.6nm,0.5s							
ZAA0	**Zalesovo Array**	**16.35**	**25**	Pn		**P**	**16 37 09.3**	**-0.3**
ZALV	**Zalesovo Beam**	**16.35**	**25**	Pn		**Pn**	**16 37 06.9**	**+0.3**
	comp=E,0.1nm,0.3s,baz=202,slow=11,SNR=2.4							
	comp=E,0.4nm,0.3s							
ZALV	**Zalesovo Beam**	**16.35**	**25**	Pn		**P**	**16 37 08.9**	**-0.7**
GTA	**Gaotai**	**20.39**	**82**	*e*P		**P**	**16 37 55.3**	**+1.0**
GTA				pP	sP		16 38 00.0	-0.3
GTA				sP	pP		16 38 02.5	+4.1
GTA				pmax	pmax			
	comp=Z,4.0nm,1.2s							
BELG	**Belogornoye**	**21.87**	**314**	LR		LR	16 48 42.3	
	comp=Z,26nm,19.2s,baz=281,slow=41							
HHC	**Hu-ho-hao-te**	**29.05**	**75**	*e*P		**P**	**16 39 19.5**	**+1.9**
HHC				pmax	pmax			
	comp=Z,20nm,1.0s							
HHC				pmax	pmax			
	comp=Z,140nm,4.5s							
FINES	**FINESS Array B**	**36.06**	**323**	P		**P**	**16 40 19.1**	**+0.5**
	comp=Z,1.9nm,0.9s,baz=114,slow=9.4,SNR=4.1							
	comp=Z,1.9nm,0.9s							
ARCES	**ARCESS Array B**	**39.07**	**336**	P		**P**	**16 40 45.3**	**+1.4**
	comp=Z,1.5nm,1.0s,baz=101,slow=9.3,SNR=3.6							
	comp=Z,1.5nm,1.0s							
TIXI	**Tiksi**	**42.23**	**23**	P		**P**	**16 41 10.9**	**+1.0**
TIXI				IAmb	IAmb		16 41 13.1	
	comp=Z,2.9nm,1.1s							
GEC2	**GERESS Array S**	**42.76**	**303**	P		**P**	**16 41 14.1**	**-0.6**
GEC2				IAmb	IAmb		16 41 42.5	
	comp=Z,4.4nm,1.4s							
NC303	**NORSAR Array S**	**43.04**	**321**	P		**P**	**16 41 17.0**	**+0.3**
TOA0	**Torodi Ar. Sit**	**67.66**	**269**	P		**P**	**16 44 14.2**	**-0.5**
TORD	**Torodi Ar. Bea**	**67.66**	**269**	P		**P**	**16 44 13.5**	**-1.2**
	comp=Z,0.5nm,0.7s,baz=42,slow=5.8,SNR=3.4							
	comp=Z,0.5nm,0.7s							
TORD	**Torodi Ar. Bea**	**67.66**	**269**	P		**P**	**16 44 13.6**	**-1.1**
IMAR	**Indian Mountai**	**68.67**	**19**	P		**P**	**16 44 22.5**	**+2.1**

MAN 27 16:36:19.0, 16°.72N×119°.47E, h9km, mb4.5, ML3.4, MS3.2, Luzon

*IDC **27** 16:37:25.8±9.5, 18°.59N×108°.14W, h0km, mb3.4/3, mbtmp3.4/4, ML3.6/1, MS3.2/1, Error ellipse: s-maj=164.2km s-min=25.5km az=148.0*

ISC 27 16:37:29.9±7.7, 18°.6N±0°.8×108°.1W±0°.5, h35km, n10, σ1§63/7, mb3.4/3, Revilla Gigedo Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H06E1	**SOCORRO T-PHAS**	**2.65**	**275**	Pn	**Pn**	**16 38 10.3**	**+0.2**
H06E1				T	T	16 40 47.2	
	SNR=52						
H06S1	**SOCORRO T**	**2.68**	**274**	Pn	**Pn**	**16 38 08.8**	**-1.7**
H06S1				T	T	16 40 44.1	
	SNR=18						
H06N1	**SOCORRO T-PHAS**	**2.71**	**277**	Pn	**Pn**	**16 38 10.1**	**-0.9**
H06N1				T	T	16 40 46.6	
	SNR=34						
TXAR	**Lajitas Array**	**11.47**	**20**	Pn	**Pn**	**16 40 09.9**	**-1.5**
	0.1nm,0.3s,baz=210,slow=12,SNR=10						
	0.9nm,0.8s						
NVAR	**Mina Array Bea**	**21.69**	**338**	P	**P**	**16 42 19.0**	**+1.1**
	1.6nm,1.0s,baz=160,slow=11,SNR=7.8						
NVAR				LR	LR	16 49 33.4	
	comp=Z,63nm,19.7s,baz=62,slow=34						
	1.6nm,1.0s						
PDAR	**Pinedale Array**	**24.16**	**357**	P	**P**	**16 42 43.1**	**+0.1**
	0.3nm,0.7s,baz=156,slow=6.9,SNR=2.5						
	0.3nm,0.7s						
ILAR	**Eielson Array**	**52.92**	**340**	P	**P**	**16 46 44.2**	**+1.9**
	0.7nm,0.7s,baz=152,slow=6.4,SNR=6.9						
	0.7nm,0.7s						
H03N2	**Juan Fernandez**	**58.75**	**151**	T	T	17 51 47.5	
	baz=329,slow=77,SNR=77						
H03N1	**Juan Fernandez**	**58.76**	**151**	T	T	17 51 43.6	
	baz=329,slow=77,SNR=94						
H03N3	**Juan Fernandez**	**58.77**	**151**	T	T	17 51 43.0	
	baz=329,slow=77,SNR=87						

*IDC **27** 16:42:07.9±1.2, 0°.37S×123°.66E, h0km, mb3.7/4, mbtmp3.8/5, ML4.1/1, MS3.2/3, Error ellipse: s-maj=50.9km s-min=20.0km az=59.0*

*DJA **27** 16:42:12.1±0.2, 0°.5S±2°×12°.3E±°, h10km, M4.3/19, mb4.6/6, mB4.8/5, MLv4.3/19, Mw(mB)4.1/5*

*NEIC **27** 16:42:15.0±1.5, 0°.70S±0°.08×123°.13E±0°.04, h43km±11km, mb4.3/11, Error ellipse: s-maj=11.8km s-min=3.3km az=159.0*

ISC 27 16:42:14.9±0.6, 0°.55S±0°.04×123°.35E±0°.05, h54km, n44, σ1§94/48, mb4.0/9, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.76**	**230**		**Pn**	**16 42 26.2**	**-3.3**
LUWI	**Luwuk**	**0.76**	**230**	P	**Pn**	**16 42 26.9**	**-2.7**
LUWI				S	**Sn**	**16 42 37.8**	**-2.5**
KMSI	**Cibinong**	**1.28**	**29**	P	**Pn**	**16 42 34.2**	**-2.3**
KMSI				S	**Sn**	**16 42 50.5**	**-2.2**
APSI	**Ampana**	**1.74**	**258**	P	**Pn**	**16 42 43.6**	**+0.9**
APSI				S	**Sn**	**16 43 06.5**	**+2.7**
MRSI	**Marisa**	**1.74**	**306**	P	**Pn**	**16 42 40.1**	**-2.7**
MRSI				S	**Sn**	**16 43 01.9**	**-2.0**
SANI	**Sanana**	**3.03**	**119**	P	**Pn**	**16 42 57.9**	**-2.4**
TOLI2	**Tolitoli**	**3.06**	**303**		**Pn**	**16 42 59.0**	**-1.7**
MPSI	**Mapaga**	**3.57**	**284**	P	**Pn**	**16 43 07.8**	**+0.1**
LBMI	**Labuha**	**4.15**	**91**	P	**Pn**	**16 43 15.5**	**-0.3**
TNTI	**Ternate**	**4.22**	**72**	Pn	**Pn**	**16 43 20.2**	**+3.4**
TNTI	**Ternate**	**4.22**	**72**	P	**Pn**	**16 43 16.4**	**-0.4**
TTSI	**Tana Toraja**	**4.31**	**235**	P	**Pn**	**16 43 18.5**	**+0.5**
NLAI	**Namlea**	**4.60**	**126**	P	**Pn**	**16 43 22.2**	**+0.3**
SGSI	**Sangihe**	**4.74**	**27**	P	**Pn**	**16 43 22.7**	**-1.1**
SPSI	**Sidrap Palu**	**4.93**	**227**	P	**Pn**	**16 43 27.4**	**+0.9**
BBSI	**Bau Bau**	**4.96**	**189**	P	**Pn**	**16 43 28.1**	**+1.1**
	0.0nm117nm5.5nm,0.5s						
BNSI	**Bone**	**5.01**	**220**	P	**Pn**	**16 43 29.0**	**+1.4**
	0.2nm651nm38nm,0.6s						
KAPI	**Kappang**	**5.71**	**219**	Pn	**Pn**	**16 43 37.1**	**0.0**
	5.0nm,0.3s,baz=188,slow=7.8,SNR=6.0						
KAPI				Sn	**Sn**	**16 44 41.0**	**-0.4**
	5.2nm,0.3s,baz=197,slow=18,SNR=4.5						
	9.8nm,0.3s						
BKSI	**Bulukumba**	**5.73**	**214**	P	**Pn**	**16 43 39.0**	**+1.5**
	0.1nm20nm,0.6s						
AAI	**Ambon**	**5.75**	**123**	P	**Pn**	**16 43 39.0**	**+1.2**
BKB	**Balikpapan**	**6.49**	**264**	Pn	**Pn**	**16 43 43.9**	**-4.0**
MYLDM	**Lahad Datu**	**7.48**	**320**		**Pn**	**16 44 03.0**	**+1.6**
DAV	**Davao City (W)**	**7.89**	**16**	LR	LR	16 47 27.8	
	comp=Z,69nm,20.5s,baz=266,slow=42						
FAKI	**Fak Fak**	**9.20**	**105**	Pn	**Pn**	**16 44 23.2**	**-1.8**
KKM	**Kota Kinabalu**	**9.68**	**313**	Pn	**Pn**	**16 44 30.5**	**-1.1**
SBUM	**Sibu**	**11.52**	**285**	Pn	**Pn**	**16 44 53.9**	**-2.9**
MTN	**Manton Dam**	**14.44**	**148**	Pn	**Pn**	**16 45 37.5**	**+1.0**
KNRA	**Kununurra**	**15.95**	**161**	Pn	**Pn**	**16 45 54.6**	**-1.3**
KNRA				IAmb	IAmb	16 46 23.3	
	comp=Z,10nm,1.1s						
XMIS	**Christmas Isla**	**20.17**	**240**	P	**P**	**16 46 42.5**	**-2.6**
WB0	**Warramunga Arr**	**21.95**	**151**	P	**P**	**16 47 03.9**	**-0.3**
WB0				IAmb	IAmb	16 47 18.3	
	comp=Z,7.9nm,1.1s						
WRA	**Warramunga Arr**	**22.07**	**152**	P	**P**	**16 47 04.6**	**-0.9**
	comp=Z,1.4nm,0.6s,baz=329,slow=11,SNR=15						
	comp=Z,1.4nm,0.6s						
WB2	**Warramunga Arr**	**22.08**	**151**	P	**P**	**16 47 05.4**	**-0.2**
WR0	**Warramunga Arr**	**22.18**	**151**	P	**P**	**16 47 06.6**	**-0.1**
WR0				IAmb	IAmb	16 47 11.8	
	comp=Z,10nm,1.2s						
GIRL	**Giralia**	**23.68**	**201**	P	**P**	**16 47 18.8**	**-3.0**
TPUB	**Ta-pu**	**23.86**	**354**	P	**P**	**16 47 26.8**	**+3.4**
TPUB				IAmb	IAmb	16 47 45.3	
	comp=Z,61nm,1.5s						
AS31	**Alice Springs**	**25.16**	**157**	P	**P**	**16 47 36.2**	**+0.9**
ASAR	**Alice Springs**	**25.16**	**157**	P	**P**	**16 47 36.0**	**+0.8**
	comp=Z,0.9nm,0.5s,baz=346,slow=13,SNR=33						
ASAR				PcP	**PcP**	**16 51 09.2**	**+0.8**
	comp=Z,0.2nm,0.5s,baz=353,slow=2.0,SNR=7.2						
	comp=Z,0.9nm,0.5s						
CMAR	**Chiang Mai Arr**	**30.54**	**309**	P	**P**	**16 48 25.7**	**+2.2**
	comp=Z,1.3nm,0.8s,baz=133,slow=6.9,SNR=12						
CMAR				LR	LR	17 01 07.7	
	comp=Z,42nm,20.4s,baz=175,slow=37						
	comp=Z,1.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**30.54**	**309**	P	**P**	**16 48 24.7**	**+1.3**
PALK	**Pallekele**	**43.24**	**281**	LR	LR	17 07 60.0	
	comp=Z,78nm,19.8s,baz=221,slow=36						
USA0B	**Ussuriysk Arra**	**45.22**	**9**	P	**P**	**16 50 29.4**	**+2.7**
USA0B				IAmb	IAmb	16 50 59.2	
	comp=Z,5.9nm,1.5s						
USRK	**Ussuriysk Ar.**	**45.22**	**9**	P	**P**	**16 50 29.1**	**+2.4**
MK31	**Makanchi Array**	**59.26**	**328**	P	**P**	**16 52 10.9**	**0.0**
MK31				IAmb	IAmb	16 52 44.7	
	comp=Z,2.7nm,1.3s						
MKAR	**Makanchi Array**	**59.26**	**328**	P	**P**	**16 52 10.3**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=131,slow=7.9,SNR=6.9						
	comp=Z,0.3nm,0.4s						

*IDC **27** 16:47:21.2±3.4, 51°.56N×179°.75W, h0km, mb3.4/5, mbtmp3.5/6, ML3.9/1, MS3.1/1, Error ellipse: s-maj=68.5km s-min=36.3km az=19.0*

*NEIC **27** 16:47:40.9±1.9, 51°.7N±0°.2×178°.07W±0°.02, h98km±5km, mb3.7/31, ML3.3/35(AEIC), Error ellipse: s-maj=23.8km s-min=1.7km az=177.0*

*AEIC **27** 16:47:42±1.6, 51°.8N±0°.2×178°.04W±0°.07, h91km±4km, Error ellipse: s-maj=24.4km s-min=5.2km az=172.0*

ISC 27 16:47:40.5±0.9, 51°.8N±0°.1×178°.05W±0°.05, h98km±6km, n73, σ1§08/80, mb3.6/8, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TASE	**Tanaga Southea**	**0.08**	**7**		**Pn**	**16 47 54.5**	**+0.2**
TAFP	**Tanaga Falls P**	**0.15**	**16**		**Pn**	**16 47 54.4**	**0.0**
TAFP					**Sn**	**16 48 04.2**	**-0.5**
TAPA	**Tanaga Point A**	**0.16**	**67**		**Pn**	**16 47 54.6**	**+0.2**
GALA	**Gareloi East**	**0.43**	**274**		**Pn**	**16 47 56.1**	**+0.5**
GALA	**Gareloi Lava P**	**0.45**	**271**		**Pn**	**16 47 56.2**	**+0.5**
KIMD	**Kanaga Island**	**0.51**	**89**		**Pn**	**16 47 56.4**	**+0.2**
KIMD					**Sn**	**16 48 07.4**	**-0.4**
KICM	**Kanaga Island**	**0.56**	**72**		**Pn**	**16 47 57.0**	**+0.5**
KICM					**Sn**	**16 48 08.4**	**-0.1**
KIKV	**Kanaga Island**	**0.56**	**77**		**Pn**	**16 47 56.9**	**+0.3**
KIKV					**Sn**	**16 48 08.2**	**-0.4**
KIWB	**Kanaga Island**	**0.57**	**80**		**Pn**	**16 47 56.9**	**+0.3**
ADK	**Adak**	**0.86**	**81**	Pn	**Pn**	**16 47 59.2**	**0.0**
GSCK	**Great Sitkin C**	**1.20**	**77**		**Pn**	**16 48 03.4**	**+0.4**
GSTD	**Great Sitkin T**	**1.22**	**75**		**Pn**	**16 48 03.3**	**0.0**
GSTD					**Sn**	**16 48 19.8**	**-0.8**
GSMY	**Great Sitkin M**	**1.27**	**76**		**Pn**	**16 48 04.1**	**+0.2**
GSTR	**Great Sitkin T**	**1.28**	**74**		**Pn**	**16 48 04.3**	**+0.3**
CERAA	**Semis' Rag'd T**	**1.41**	**277**		**Pn**	**16 48 06.0**	**+0.4**
CESW	**Semis' Southwe**	**1.49**	**277**		**Pn**	**16 48 06.8**	**+0.3**
CESW					**Sn**	**16 48 25.3**	**-0.8**
CEAP	**Semis' Anvil P**	**1.49**	**281**		**Pn**	**16 48 07.2**	**+0.7**
AMKA	**Amchitka**	**1.69**	**258**		**Pn**	**16 48 09.4**	**+0.4**
AMKA					**Sn**	**16 48 30.1**	**-0.6**
LSPA	**Little Sitkin**	**2.10**	**277**		**Pn**	**16 48 15.1**	**+0.8**
LSNW	**Little Sitkin**	**2.14**	**277**		**Pn**	**16 48 15.3**	**+0.5**
LSSA	**Little Sitkin**	**2.14**	**277**		**Pn**	**16 48 15.3**	**+0.5**
ATKA	**Atka Island**	**2.43**	**78**		**Pn**	**16 48 18.8**	**+0.3**
ATKA					**Sn**	**16 48 47.5**	**-0.2**
KOKL	**Mount Kliuchef**	**2.45**	**75**		**Pn**	**16 48 19.3**	**+0.5**
KOFP	**Korovin Flat P**	**2.50**	**76**		**Pn**	**16 48 20.3**	**+0.8**
NIKH	**Nikolski High**	**5.77**	**74**		**Pn**	**16 49 04.8**	**+1.3**
SPIA	**Saint Paul Isl**	**7.08**	**37**		**Pn**	**16 49 23.0**	**+1.6**
MNAT	**Makushin Natee**	**7.21**	**68**		**Pn**	**16 49 24.6**	**+1.4**
UNV	**Unalaska Valle**	**7.31**	**69**	Pn	**Pn**	**16 49 25.8**	**+1.4**
AKUT	**Akutan**	**7.79**	**67**	Pn	**Pn**	**16 49 32.7**	**+1.7**
FALS	**False Pass**	**9.30**	**65**	Pn	**Pn**	**16 49 50.8**	**-0.7**
SDPT	**Sand Point**	**11.05**	**64**	Pn	**Pn**	**16 50 14.8**	**-0.5**
N18K	**Kilae Creek**	**15.15**	**45**	P	**P**	**16 51 13.2**	**+1.4**
N18K				IAmb	IAmb	16 51 47.6	
	comp=Z,5.1nm,1.1s						
SVW2	**Sparrevohn**	**15.48**	**44**		**Pn**	**16 51 14.4**	**+1.3**
SVW2				IAmb	IAmb	16 51 21.1	
	comp=Z,9.2nm,1.4s						
Q19K	**Cape Douglas,**	**15.57**	**53**	Pn	**Pn**	**16 51 14.5**	**+0.3**
KDAK	**Kodiak Island**	**15.83**	**58**	Pn	**Pn**	**16 51 16.2**	**-1.2**
	comp=Z,0.4nm,0.3s,baz=261,slow=6.3,SNR=8.1						
KDAK				Sn	**Sn**	**16 54 08.1**	**-4.2**
	comp=Z,0.1nm,0.3s,baz=260,slow=17,SNR=1.1						
	comp=Z,6.1nm,0.9s						
KDAK	**Kodiak Island**	**15.83**	**58**	Pn	**Pn**	**16 51 16.0**	**-1.4**
N19K	**Bonanza Creek**	**15.84**	**46**		**P**	**16 51 19.7**	**+0.3**
N19K				IAmb	IAmb	16 51 20.9	
	comp=Z,6.1nm,1.2s						
L19K	**White Mountain**	**16.30**	**41**	P	**P**	**16 51 26.4**	**+1.9**
M19K	**Big River Lodg**	**16.36**	**42**	P	**P**	**16 51 27.5**	**+2.4**
M19K				IAmb	IAmb	16 51 34.7	
	comp=Z,4.4nm,1.2s						
CNPM	**China Poot**	**16.92**	**52**		**Pn**	**16 51 31.9**	**+0.9**
SKT	**Skwentna**	**17.61**	**44**	P	**Pn**	**16 51 40.7**	**+1.4**
SKT				IAmb	IAmb	16 51 41.3	
	comp=Z,7.7nm,1.3s						
J20K	**Nowinta River**	**17.62**	**36**	P	**Pn**	**16 51 40.5**	**+1.2**
TRF	**Thorofare Moun**	**18.75**	**41**	P	**P**	**16 51 52.7**	**+1.1**
TRF				IAmb	IAmb	16 52 16.4	
	comp=Z,9.5nm,1.4s						
BPAW	**Bear Paw Mtn.**	**18.77**	**38**	P	**P**	**16 51 53.2**	**+1.6**
BPAW				IAmb	IAmb	16 51 57.0	
	comp=Z,14nm,1.1s						
IMAR	**Indian Mountai**	**18.81**	**31**	P	**P**	**16 51 53.0**	**+0.9**
H21K	**Melozitna Rive**	**18.93**	**33**	P	**P**	**16 51 55.0**	**+1.6**
H21K				IAmb	IAmb	16 51 58.8	
	comp=Z,4.3nm,1.2s						
RND	**Reindeer**	**19.31**	**42**	P	**P**	**16 51 58.0**	**+0.3**
RND				IAmb	IAmb	16 52 24.2	
	comp=Z,3.1nm,1.1s						
MLY	**Manley**	**19.32**	**36**	P	**P**	**16 51 58.9**	**+1.3**
MLY				IAmb	IAmb	16 52 02.3	
	comp=Z,4.8nm,1.3s						
SCM	**Sheep Creek Mo**	**19.42**	**47**	P	**P**	**16 51 58.5**	**-0.4**
SCM				IAmb	IAmb	16 52 03.3	
	comp=Z,13nm,1.2s						
MDM	**Murphy Dome**	**20.22**	**38**	P	**P**	**16 52 08.0**	**+0.7**
MDM				IAmb	IAmb	16 52 13.0	
	comp=Z,2.4nm,0.7s						
CCB	**Clear Creek Bu**	**20.25**	**39**	P	**P**	**16 52 06.7**	**-0.9**
CCB				IAmb	IAmb	16 52 32.6	
	comp=Z,4.4nm,1.5s						
HMT	**Hamilton**	**20.53**	**52**	P	**P**	**16 52 12.5**	**+1.8**
PAX	**Paxson**	**20.59**	**44**	P	**P**	**16 52 13.0**	**+1.5**
IL31		**20.66**	**39**	P	**P**	**16 52 12.7**	**+0.8**
ILAR	**Eielson Array**	**20.66**	**39**	P	**P**	**16 52 12.0**	**0.0**
	comp=Z,0.2nm,0.4s,baz=246,slow=9.5,SNR=4.7						
	comp=Z,0.2nm,0.4s						
H24K	**Noodor Dome**	**20.76**	**36**	P	**P**	**16 52 13.7**	**+0.6**
VRDI	**Verde Repeater**	**21.08**	**50**	P	**P**	**16 52 17.1**	**+0.3**
J25K	**Salcha River,**	**21.20**	**40**	P	**P**	**16 52 17.0**	**-0.9**
J25K				IAmb	IAmb	16 52 56.1	
	comp=Z,3.7nm,1.4s						
SCRK	**Sand Creek**	**21.54**	**42**	P	**P**	**16 52 20.3**	**-1.4**
J26L	**Joseph Creek**	**21.89**	**41**	P	**P**	**16 52 23.9**	**-1.4**
L27K	**Beaver Creek,**	**22.22**	**45**	P	**P**	**16 52 28.6**	**0.0**
L27K				IAmb	IAmb	16 53 07.9	
	comp=Z,5.9nm,1.4s						
BCAR	**Beaver Creek A**	**22.24**	**45**	P	**P**	**16 52 27.5**	**-1.4**
K27K	**Chicken**	**22.36**	**43**	P	**P**	**16 52 29.4**	**-0.8**
K27K				IAmb	IAmb	16 52 30.3	
	comp=Z,4.1nm,1.4s						
BMAR	**Burnt Mountain**	**22.66**	**34**	P	**P**	**16 52 31.7**	**-1.6**
TIXI	**Tiksi**	**30.54**	**330**	P	P	16 53 32.4	-12
	comp=Z,0.7nm,0.4s,baz=90,slow=20,SNR=1.5						
	comp=Z,0.7nm,0.4s						
USRK	**Ussuriysk Ar.**	**33.71**	**277**	LR	LR	17 08 35.0	
	comp=Z,36nm,20.0s,baz=99,slow=39						
YKA	**Yellowknife Ar**	**34.63**	**47**	P	**P**	**16 54 18.9**	**-1.0**
	comp=Z,0.3nm,0.5s,baz=278,slow=7.2,SNR=5.5						
	comp=Z,0.3nm,0.5s						
R11A	**Troy Canyon, C**	**44.77**	**82**	P	**P**	**16 55 45.6**	**+1.3**
R11A				IAmb	IAmb	16 56 08.7	
	comp=Z,2.8nm,1.5s						
PDAR	**Pinedale Array**	**45.75**	**73**	P	**P**	**16 55 52.3**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=303,slow=3.9,SNR=2.8						
	comp=Z,0.2nm,0.4s						
PV13	**Radium Mtn., P**	**49.03**	**77**	P	**P**	**16 56 18.4**	**+0.8**
TXAR	**Lajitas Array**	**58.14**	**82**	P	**P**	**16 57 24.6**	**+0.6**
	comp=Z,0.2nm,0.4s,baz=305,slow=8.7,SNR=4.4						
	comp=Z,0.2nm,0.4s						
TXAR	**Lajitas Array**	**58.14**	**82**	P	**P**	**16 57 24.4**	**+0.4**
255A	**Hazlehurst**	**68.85**	**65**	P	**P**	**16 58 33.5**	**-0.8**

MAN 27 17:01:37.6, 14°.02N×120°.54E, h200km, mb4.1, ML2.9, MS2.5, 3C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACP	**Maragondon, Ca**	**0.30**	**35**	⇑*i*P	Pn	17 02 05.0	+1.2
MACP				*e*S		17 02 26.4	
LUBP	**Lubang**	**0.40**	**226**	⇑*i*P	Pn	17 02 05.5	+1.4
LUBP				*e*S		17 02 26.2	
SJMP	**San Jose**	**1.64**	**160**	⇑*i*P	Pn	17 02 12.6	+0.9
SJMP				*e*S		17 02 39.3	

*IDC **27** 17:04:36.2±1.3, 20°.88S×66°.68W, h233km±22km, mb3.3/2, mbtmp3.8/5, Error ellipse: s-maj=38.4km s-min=14.7km az=105.0*

*NEIC **27** 17:04:36.7±1.7, 21°.04S±0°.08×67°.1W±0°.1, h261km±16km, mb3.9/1, ML4.2(GUC), Error ellipse: s-maj=15.2km s-min=11.3km az=95.0*

*GUC **27** 17:04:37.2±0.8, 21°.02S×66°.94W, h246km±11km, ML4.2*

*SCB **27** 17:04:38.0±1.1, 20°.91S×66°.84W, h206km±10km, ML4.1/7, MW3.4, Error ellipse: s-maj=5.9km s-min=4.2km az=0.0*

**ISC 27 17:04:36.1±0.9, 20°.98S±0°.05×66°.81W±0°.05, h227km±9km, n46, σ1§25/65, 5C-3D

PB16	**IPOC Station P**	**3.66**	**316**	⇓*i*P		**Pn**	17 05 37.2	**+1.7**
PB12	**IPOC Station P**	**4.07**	**305**	Pn		**Pn**	17 05 39.0	**-0.8**
BBOE	**La Paz, Chanca**	**4.29**	**345**	P		**Pn**	17 05 43.9	**+0.8**
LPAZ	**La Paz**	**4.83**	**345**	P		**Pn**	17 05 49.5	**-0.3**
	comp=N,1.1nm,0.3s,baz=172,slow=7.9,SNR=9.7							
LPAZ				S		**S**	17 06 48.5	**+0.5**
	comp=N,2.4nm,0.7s,baz=336,slow=18,SNR=4.6							
LPAZ	**La Paz**	**4.83**	**345**			**Pn**	17 05 51.3	**+1.4**
LPAZ	**La Paz**	**4.83**	**345**	P		**Pn**	17 05 50.1	**+0.3**
GO02	**Mina Guanaco**	**4.89**	**211**			**Pn**	17 05 50.1	**+0.1**
AC02	**Maricunga**	**6.20**	**200**	Pn		**Pn**	17 06 06.8	**0.0**
AC01	**Pan de Azucar**	**6.21**	**213**	Pn		**Pn**	17 06 05.2	**-1.2**
SIV	**San Ignacio**	**7.37**	**49**	P		**Pn**	17 06 19.9	**-1.4**
	comp=N,16nm,0.6s,baz=232,slow=11,SNR=97							
LCO	**Las Campanas**	**8.74**	**203**	Pn		**Pn**	17 06 35.6	**-3.4**
CPUP	**Villa Florida**	**10.19**	**123**	Pn		**Pn**	17 06 58.9	**+1.5**
PLCA	**Paso Flores**	**19.95**	**188**	P		**P**	17 08 53.1	**+2.1**
	comp=N,1.1nm,0.7s,baz=342,slow=9.6,SNR=4.7							
	comp=N,1.1nm,0.7s							
TORD	**Torodi Ar. Bea**	**75.34**	**70**	P		**P**	17 15 53.3	**-1.7**
	comp=N,1.8nm,0.5s,baz=254,slow=5.9,SNR=21							
	comp=N,1.8nm,0.5s							
TORD	**Torodi Ar. Bea**	**75.34**	**70**	IAmb		IAmb	17 15 53.8	
	comp=Z,1.8nm,0.7s							

IDC 27 17:08:17.7±5.0, 38°33'N×55°16'E, h0km, mb3.6/2, mbtmp3.4/3, ML2.4/1, Error ellipse: s-maj=83.2km s-min=39.6km az=82.0, Iran-Turkmenistan border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GEYT	**Alibeck**	**2.37**	**99**		Pn	Pn	17 08 57.5	-0.3
	0.9nm,0.3s,baz=279,slow=11,SNR=8.3							
	1.4nm,0.3s							
ZALV	**Zalesovo Beam**	**25.56**	**43**	P		P	17 13 46.5	-1.6
	0.5nm,0.5s,baz=225,slow=12,SNR=3.5							
	0.5nm,0.5s							
KSRS	**Korea Array**	**55.98**	**66**	P		P	17 17 58.9	+1.1
	0.7nm,0.8s,baz=294,slow=9.2,SNR=4.6							
	0.7nm,0.8s							

*IDC **27** 17:09:48.1±3.4, 38°.96N×74°.20E, h0km, mb3.8/5, mbtmp3.8/7, ML3.7/2, MS4.0/1, Error ellipse: s-maj=55.9km s-min=32.1km az=138.0*
*SOME **27** 17:09:51.2, 39°.50N×73°.52E, h5km*
*KRNET **27** 17:09:52.2±0.1, 39°.40N×73°.54E, mb3.8*
*NNC **27** 17:09:56.8±1.9, 39°.51N×73°.56E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=18.0km s-min=12.1km az=179.0*
ISC 27 17:09:51.9±0.9, 39°.41N±0°.05×73°.74E±0°.03, h10km, n57, σ2s09/91, mb3.7/5, 33C-13D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.33**	**327**	⇑*e*P		**Pg**	17 10 16.2	**-1.3**
	baz=33							
OHH				⇑*e*S		**Sg**	17 10 34.0	**-0.7**
	baz=33							
DRK	**Karamyk**	**1.50**	**273**	⇓*i*P		**Pn**	17 10 17.8	**-1.4**
	baz=74							
DRK				⇓*i*S		**Sn**	17 10 36.3	**-2.7**
	baz=74							
BTK	**Batken**	**2.34**	**287**	⇑*e*P		**Pb**	17 10 31.8	**-2.5**
	baz=88							
BTK				⇑*e*S		**Sb**	17 11 00.8	**-2.5**
	baz=88							
ARLS	**Aral**	**2.48**	**10**	⇑*i*P		**Pb**	17 10 36.3	**-0.5**
	baz=14							
ARLS				⇑*i*S		**Sg**	17 11 09.1	**-2.7**
	baz=14							
GAR	**Garm**	**2.69**	**262**	⇑*e*P		**Pn**	17 10 36.2	**+0.8**
	baz=62							
GAR				⇑*e*S		**Sn**	17 11 08.7	**+0.6**
	baz=62							
AML	**Almayashu**	**2.71**	**359**	P		**Pb**	17 10 40.6	**-0.2**
	SNR=37							
ARK	**Arkit**	**2.74**	**331**	⇑*i*P		**Pb**	17 10 38.7	**-2.4**
	baz=34							
ARK				⇑*i*S		**Sb**	17 11 12.2	**-2.5**
	baz=34							
UCH	**Uchtor**	**2.87**	**12**	P		**Pb**	17 10 43.7	**+0.1**
	SNR=27							
UCH	**Uchtor**	**2.87**	**12**	⇑*e*P		**Pb**	17 10 42.1	**-1.5**
	baz=14							
UCH				⇑*e*S		**Sb**	17 11 18.6	**-0.3**
	baz=14							
TRKS	**Terek-Say**	**2.90**	**318**	⇑*e*P		**Pn**	17 10 39.2	**+0.9**
	baz=20							
TRKS				⇑*e*S		**Sn**	17 11 14.1	**+0.8**
	baz=20							
EKS2	**Erkin-Say**	**3.25**	**1**	P		**Pb**	17 10 48.5	**-1.2**
	SNR=12							
EKS2	**Erkin-Say**	**3.25**	**1**	⇑*e*P		**Pb**	17 10 46.7	**-3.0**
	baz=3.0							
EKS2				⇑*e*S		**Sb**	17 11 26.5	**-2.8**
	baz=3.0							
AAK	**Ala-Archa**	**3.27**	**10**	P		**Pb**	17 10 49.3	**-0.9**
	SNR=15							
AAK	**Ala-Archa**	**3.27**	**10**	Pn		**Pb**	17 10 50.2	**0.0**
	6.4nm,0.3s,baz=186,slow=7.9,SNR=18							
AAK				Sn		**Sb**	17 11 31.6	**+1.4**
	4.6nm,0.3s,baz=3.6,slow=20,SNR=7.5							
	18nm,0.5s							
AAK	**Ala-Archa**	**3.27**	**10**	⇓*e*P		**Pb**	17 10 47.4	**-2.8**
	baz=12							
AAK				⇓*e*S		**Sb**	17 11 27.7	**-2.4**
	baz=12							
KBK	**Karagaybulak**	**3.37**	**15**	P		**Pg**	17 10 56.1	**-0.3**
	SNR=13							
KBK	**Karagaybulak**	**3.37**	**15**	⇑*e*P		**Pb**	17 10 48.8	**-3.0**
	baz=18							
KBK				⇑*e*S		**Sb**	17 11 30.6	**-2.3**
	baz=18							
ULHL	**Ulahol**	**3.41**	**33**	P		**Pg**	17 10 57.0	**-0.3**
	SNR=17							
ULHL	**Ulahol**	**3.41**	**33**	⇑*e*P		**Pb**	17 10 49.9	**-2.6**
	baz=35							
ULHL				⇑*e*S		**Sb**	17 11 32.6	**-1.5**
	baz=35							
BOOM	**Boomskoye usch**	**3.50**	**28**	⇓*i*P		**Pb**	17 10 50.9	**-3.1**
	baz=30							
BOOM				⇓*i*S		**Sb**	17 11 34.1	**-2.5**
	baz=30							
CHGR	**Chuyangaron**	**3.65**	**259**	⇑*e*P		**Pn**	17 10 49.3	**+0.8**
	baz=59							
CHGR				⇑*e*S		**Sn**	17 11 31.3	**-0.3**
	baz=59							
CHMS	**Chumysh**	**3.66**	**12**	P		**Pb**	17 10 54.9	**-1.9**
	SNR=6.5							
CHMS	**Chumysh**	**3.66**	**12**	⇑Pn		**Pb**	17 10 54.6	**-2.2**
	5.6nm,0.4s							
CHMS				⇑Lg		Lg	17 11 50.6	
	66nm,0.9s							
KDJ	**Kajisay**	**3.77**	**43**	⇑*i*P		**Pb**	17 10 55.6	**-3.1**
	baz=44							
KDJ				⇑*i*S		**Sb**	17 11 41.9	**-2.5**
	baz=44							
TKM2	**Tokmak 2**	**3.77**	**21**	⇓Pn		**Pb**	17 10 56.9	**-1.9**
	6.0nm,0.8s							
TKM2				⇑Lg		Lg	17 11 56.0	
	45nm,0.6s							
TAS	**Tashkent**	**3.89**	**301**	⇓*e*P		**Pn**	17 10 53.6	**+1.8**
	baz=2.0							
TAS				⇓*e*S		**Sn**	17 11 38.2	**+0.6**
	baz=2.0							
IUG	**Iuzhnay**	**3.92**	**315**	*e*P		**Pb**	17 11 02.3	**+1.1**
	191nm,0.2s							
IUG				*e*S		**Sg**	17 11 53.1	**-4.7**
	86nm,0.6s							
KST	**Kastek**	**4.00**	**24**	*e*P		**Pg**	17 11 07.7	**-0.8**
	5.9nm,0.2s							
KST				*e*S		**Sg**	17 12 01.8	**+1.6**
	57nm,0.2s							
SGDS	**Sogindy**	**4.09**	**9**	*e*P		**Pg**	17 11 07.3	**-2.9**
	4.4nm,0.2s							
SGDS				*e*S		**Sg**	17 12 01.6	**-1.7**
	20nm,0.1s							
DGS	**Degeres**	**4.12**	**21**	*e*P		**Pg**	17 11 10.2	**-0.7**
	14nm,0.1s							
DGS				*e*S		**Sg**	17 12 06.7	**+2.5**
	49nm,0.8s							
MTBS	**Maitube**	**4.23**	**28**	*e*P		**Pg**	17 11 12.4	**-0.5**
	4.2nm,0.1s							
MTBS				*e*S		**Sg**	17 12 10.3	**+2.5**
	19nm,0.1s							
TNSS	**Tian-Shan**	**4.35**	**33**	*e*P		**Pg**	17 11 13.9	**-1.5**
	4.7nm,0.2s							
TNSS				*e*S		**Sg**	17 12 12.3	**+0.5**
	10nm,0.2s							
KK31	**Karatay Array**	**4.42**	**328**	⇑Pn		**Pn**	17 11 02.6	**+3.6**
	1.6nm,0.4s,baz=134,slow=14,SNR=24							
KK31				⇑Pg		**Pg**	17 11 13.4	**-3.1**
	4.7nm,0.5s,baz=146,slow=14,SNR=4.4							
KK31				⇑Lg		Lg	17 12 14.1	
	16nm,0.6s,baz=128,slow=19,SNR=5.1							
KRBS	**Karabastau**	**4.52**	**18**	*e*P		**Pg**	17 11 16.5	**-2.0**
	4.3nm,0.0s							
KRBS				*e*S		**Sg**	17 12 16.8	**-0.2**
	31nm,0.0s							
BRLS	**Borolday**	**4.66**	**322**	*e*P		**Pb**	17 11 14.2	**+0.5**
	2.9nm,0.1s							
BRLS				*e*S		**Sb**	17 12 13.3	**+3.4**
	23nm,0.2s							
KTBS	**Karatobe**	**4.83**	**26**	*e*P		**Pg**	17 11 21.9	**-2.5**
	4.0nm,0.1s							
KTBS				*e*S		**Sg**	17 12 26.7	**-0.3**
	51nm,0.0s							
KUU	**Kurty**	**4.88**	**23**	*e*P		**Pg**	17 11 23.0	**-2.4**
	3.3nm,0.7s							
KUU				*e*S		**Sg**	17 12 28.6	**0.0**
	47nm,0.6s							
CHKK	**Chushkaly**	**5.06**	**28**	*e*P		**Pg**	17 11 26.3	**-2.5**
	3.5nm,0.1s							
CHKK				*e*S		**Sg**	17 12 33.5	**-0.9**
	24nm,0.2s							
SATY	**Saty**	**5.06**	**43**	*e*P		**Pg**	17 11 28.0	**-0.9**
	5.3nm,0.1s							
SATY				*e*S		**Sg**	17 12 36.8	**+2.3**
	14nm,0.2s							
ZHN	**Zhinishke**	**5.16**	**42**	*e*P		**Pg**	17 11 28.1	**-2.6**
	4.4nm,0.0s							
ZHN				*e*S		**Sg**	17 12 36.8	**-0.6**
	17nm,0.6s							
KURS	**Kuram**	**5.26**	**38**	*e*P		**Pg**	17 11 30.6	**-2.0**
	4.1nm,0.1s							
KURS				*e*S		**Sg**	17 12 41.9	**+1.2**
	11nm,0.2s							
KPKS	**Kokpek**	**5.50**	**41**	*e*P		**Pg**	17 11 34.8	**-2.4**
	5.0nm,0.1s							
KPKS				*e*S		**Sg**	17 12 48.8	**+0.4**
	21nm,0.8s							
BTLS	**Baital**	**5.63**	**2**	*e*P		**Pg**	17 11 36.6	**-3.1**
	4.0nm,0.5s							
BTLS				*e*S		**Sg**	17 12 51.5	**-1.0**
	13nm,0.3s							
ARXS	**Arharly**	**5.69**	**31**	*e*P		**Pg**	17 11 38.5	**-2.3**
	4.6nm,0.3s							
ARXS				*e*S		**Sg**	17 12 55.2	**+0.8**
	22nm,0.1s							
PDGK	**Podgornoye**	**5.83**	**46**	⇓Pn		Pn	17 11 25.0	+6.4
	4.8nm,1.3s							
PDGK				⇓Pg		**Pg**	17 11 40.8	**-2.8**
	5.9nm,0.8s							
PDGK				⇑Lg		Lg	17 13 02.0	
	14nm,0.8s							
BLB	**Baldybastay**	**5.87**	**36**	*e*P		**Pg**	17 11 40.5	**-3.8**
	3.1nm,0.1s							
BLB				*e*S		**Sg**	17 12 58.4	**-1.9**
	14nm,0.2s							
TDK	**Taldyqorghan**	**6.57**	**30**	*e*P		**Pg**	17 11 54.2	**-3.6**
	23nm,0.1s							
TDK				*e*S		**Sg**	17 13 22.4	**-0.4**
	42nm,0.4s							
OTUK	**Ortayu**	**8.88**	**354**	⇓Pn		**Pn**	17 12 03.4	**+3.0**
	1.2nm,0.6s							
OTUK				⇑Lg		Lg	17 14 34.3	
	16nm,1.0s							
KURBB	**Kurchatov Arra**	**11.71**	**15**	⇑Lg		Lg	17 16 06.0	
	13nm,0.9s							
KURK	**Kurchatov**	**11.81**	**15**	⇓Lg		Lg	17 16 08.5	
	16nm,1.2s							
AKTO	**Aktyubinsk**	**15.63**	**320**	Pn		**P**	17 13 36.6	**+0.3**
	0.2nm,0.3s,baz=120,slow=12,SNR=6.8							
	1.7nm,0.6s							
BELG	**Belogornoye**	**22.18**	**314**	P		**P**	17 14 52.7	**+4.7**
	8.5nm,0.8s,baz=168,slow=9.3,SNR=3.6							
	8.5nm,0.8s							
BRTR	**Keskin Array B**	**30.73**	**284**	P		**P**	17 16 09.1	**+1.8**
	0.7nm,0.7s,baz=86,slow=6.5,SNR=4.5							
	0.7nm,0.7s							
FINES	**FINESS Array B**	**36.36**	**323**	P		**P**	17 16 57.1	**+1.3**
	2.4nm,0.8s,baz=116,slow=13,SNR=6.5							
	2.4nm,0.8s							
NOA	**NORSAR Array B**	**43.42**	**321**	P		**P**	17 17 55.2	**+0.6**
	0.3nm,0.5s,baz=94,slow=7.6,SNR=3.5							
	0.3nm,0.5s							
JNU	**Nakatsue**	**45.84**	**79**	LR		LR	17 40 04.9	
	comp=Z,192nm,21.1s,baz=314,slow=40							
YKA	**Yellowknife Ar**	**78.22**	**4**	P		**P**	17 21 52.7	**+1.4**
	0.2nm,0.5s,baz=356,slow=5.3,SNR=3.9							
	0.2nm,0.5s							

*IDC **27** 17:12:34.0±3.4, 39°.21N×73°.98E, h0km, mb4.0/3, mbtmp3.8/6, ML3.2/3, MS1.9/1, Error ellipse: s-maj=64.9km s-min=22.7km az=118.0*
*KRNET **27** 17:12:35.3±0.1, 39°.44N×73°.73E, mb3.8*
ISC 27 17:12:37.3±1.0, 39°.49N±0°.06×73°.66E±0°.05, h10km, n28, σ1s88/45, mb3.9/3, 18C-14D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.24**	**327**	⇓*e*P		**Pn**	17 12 59.9	**-0.8**
	baz=27							
OHH				⇓*e*S		**Sn**	17 13 18.1	**+0.6**
	baz=27							
DRK	**Karamyk**	**1.44**	**270**	⇑*i*P		**Pb**	17 13 03.3	**-1.1**
	baz=72							
DRK				⇑*i*S		**Sg**	17 13 23.9	**+0.2**
	baz=72							
BTK	**Batken**	**2.27**	**286**	⇓*e*P		**Pb**	17 13 16.4	**-1.9**
	baz=86							
BTK				⇓*e*S		**Sb**	17 13 46.6	**+0.2**
	baz=86							
ARLS	**Aral**	**2.42**	**12**	⇑*i*P		**Pb**	17 13 18.5	**-2.6**
	baz=11							
ARLS				⇑*i*S		**Sb**	17 13 50.6	**-0.5**
	baz=11							
AML	**Almayashu**	**2.64**	**1**	P		**Pb**	17 13 23.6	**-1.4**
	SNR=8.2							
GAR	**Garm**	**2.64**	**260**	⇓*e*P		**Pn**	17 13 21.5	**+1.4**
	baz=62							
GAR				⇓*e*S		**Sb**	17 13 54.8	**-2.5**
	baz=62							
ARK	**Arkit**	**2.65**	**331**	⇑*i*P		**Pn**	17 13 22.0	**+1.9**
	baz=31							
ARK				⇑*i*S		**Sb**	17 13 56.1	**-1.4**
	baz=31							
TRKS	**Terek-Say**	**2.81**	**318**	⇓*e*P		**Pn**	17 13 23.4	**+1.0**
	baz=17							
TRKS				⇓*e*S		**Sn**	17 13 58.5	**+2.2**
	baz=17							
UCH	**Uchtor**	**2.81**	**13**	P		**Pb**	17 13 27.2	**-0.7**
	SNR=12							
UCH	**Uchtor**	**2.81**	**13**	⇓*e*P		**Pn**	17 13 24.1	**+1.3**
	baz=12							
UCH				⇓*e*S		**Sb**	17 14 00.1	**-2.5**
	baz=12							
EKS2	**Erkin-Say**	**3.17**	**2**	P		**Pb**	17 13 33.5	**-0.3**
	SNR=5.7							
EKS2	**Erkin-Say**	**3.17**	**2**	⇑*e*P		**Pn**	17 13 29.1	**+1.7**
	baz=1.0							
EKS2				⇑*e*S		**Sn**	17 14 08.5	**+3.1**
	baz=1.0							
AAK	**Ala-Archa**	**3.21**	**11**	P		**Pb**	17 13 33.1	**-1.4**
	SNR=6.3							
AAK	**Ala-Archa**	**3.21**	**11**	Pn		**Pb**	17 13 32.9	**-1.6**
	5.1nm,0.3s,baz=162,slow=8.6,SNR=4.7							
AAK				Sn		**Sb**	17 14 15.7	**+1.9**
	2.4nm,0.3s,baz=112,slow=19,SNR=1.9							
AAK				LR		LR	17 14 43.9	
	comp=Z,20nm,21.3s,baz=242,slow=38							
	29nm,0.6s							
AAK	**Ala-Archa**	**3.21**	**11**	⇑*e*P		**Pn**	17 13 29.8	**+1.9**
	baz=10.0							
AAK				⇑*e*S		**Sn**	17 14 09.4	**+3.1**
	baz=10.0							
KBK	**Karagaybulak**	**3.31**	**17**	P		**Pb**	17 13 35.1	**-1.1**
	SNR=7.4							
KBK	**Karagaybulak**	**3.31**	**17**	⇓*e*P		**Pn**	17 13 30.9	**+1.5**
	baz=16							
KBK				⇓*e*S		**Sn**	17 14 11.7	**+2.8**
	baz=16							
ULHL	**Ulahol**	**3.38**	**35**	P		**Pg**	17 13 39.2	**-2.9**
	SNR=5.2							
ULHL	**Ulahol**	**3.38**	**35**	⇑*e*P		**Pn**	17 13 31.6	**+1.3**
	baz=33							
ULHL				⇑*e*S		**Sn**	17 14 13.0	**+2.4**
	baz=33							
BOOM	**Boomskoye usch**	**3.46**	**29**	⇑*i*P		**Pn**	17 13 31.9	**+0.5**
	baz=28							
BOOM				⇑*i*S		**Sn**	17 14 15.0	**+2.5**
	baz=28							
CHGR	**Chuyangaron**	**3.60**	**258**	⇑*e*P		**Pn**	17 13 35.1	**+1.8**
	baz=59							
CHGR				⇑*e*S		**Sn**	17 14 19.1	**+3.2**
	baz=59							
CHMS	**Chumysh**	**3.60**	**13**	⇓*e*P		**Pn**	17 13 35.1	**+1.9**
	baz=12							
CHMS				⇓*e*S		**Sn**	17 14 18.7	**+2.8**
	baz=12							
KDJ	**Kajisay**	**3.75**	**44**	⇑*i*P		**Pn**	17 13 36.9	**+1.5**
	baz=43							
KDJ				⇑*i*S		**Sn**	17 14 21.5	**+1.7**
	baz=43							
AKTO	**Aktyubinsk**	**15.54**	**320**	Pn		**Pn**	17 16 16.9	**+0.6**
	0.1nm,0.3s,baz=148,slow=9.5,SNR=5.0							
	1.4nm,0.7s							
ZALV	**Zalesovo Beam**	**16.33**	**24**	Pn		**P**	17 16 27.1	**-2.3**
	0.1nm,0.3s,baz=219,slow=11,SNR=2.8							
	0.7nm,0.5s							
FINES	**FINESS Array B**	**36.27**	**323**	P		**P**	17 19 41.2	**+0.8**
	6.3nm,1.2s,baz=104,slow=8.0,SNR=3.9							
	6.3nm,1.2s							
ARCES	**ARCESS Array B**	**39.24**	**336**	P		**P**	17 20 06.9	**+1.4**
	1.1nm,0.8s,baz=108,slow=8.7,SNR=1.8							
	1.1nm,0.8s							
TORD	**Torodi Ar. Bea**	**67.88**	**269**	P		**P**	17 23 36.0	**-0.2**
	0.6nm,0.7s,baz=53,slow=5.1,SNR=4.5							
	0.6nm,0.7s							

*NNC **27** 17:34:12.9±0.5, 43°.26N×78°.71E, h0km, mb3.9, mpv4.0, Error ellipse: s-maj=5.8km s-min=2.5km az=175.0*
*KRNET **27** 17:34:13.7±0.1, 43°.27N×78°.65E, h15km, mb3.9*
*SOME **27** 17:34:13.7, 43°.28N×78°.67E, h10km*
ISC 27 17:34:13.7±1.0, 43°.28N±0°.02×78°.65E±0°.02, h6km±8km, n76, σ1s29/137, 26C-17D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KPKS	**Kokpek**	**0.19**	**7**	*e*P		**Pg**	17 34 17.7	**+0.2**
	baz=7.0							
KPKS				*e*S		**Sg**	17 34 20.6	**+0.6**
	baz=7.0							
KPKS	**Kokpek**	**0.19**	**7**	*e*P		**Pg**	17 34 17.6	**+0.2**
	3μm,0.2s							
KPKS				*e*S		**Sg**	17 34 20.6	**+0.6**
	9μm,0.2s							
KPKS	**Kokpek**	**0.19**	**7**	P		**Pg**	17 34 17.7	**+0.2**
	3μm,0.2s							
KPKS				S		**Sg**	17 34 20.6	**+0.6**
	9μm,0.2s							
ZHN	**Zhinishke**	**0.19**	**235**	*e*P		**Pg**	17 34 17.6	**0.0**
	baz=37							
ZHN				*e*S		**Sg**	17 34 20.5	**+0.3**
	baz=37							
ZHN	**Zhinishke**	**0.19**	**235**	*e*P		**Pg**	17 34 17.6	**0.0**
	2μm,0.1s							
ZHN				*e*S		**Sg**	17 34 20.5	**+0.3**
	7μm,0.2s							
ZHN	**Zhinishke**	**0.19**	**235**	P		**Pg**	17 34 17.6	**0.0**
	2μm,0.1s							
ZHN				S		**Sg**	17 34 20.5	**+0.3**
	7μm,0.2s							
SATY	**Saty**	**0.28**	**219**	*e*P		**Pg**	17 34 19.1	**-0.3**
	baz=21							
SATY				*e*S		**Sg**	17 34 23.0	**-0.1**
	baz=21							
SATY	**Saty**	**0.28**	**219**	*e*P		**Pg**	17 34 19.1	**-0.3**
	406nm,0.1s							
SATY				*e*S		**Sg**	17 34 23.0	**-0.1**
	11μm,0.1s							
SATY	**Saty**	**0.28**	**219**	P		**Pg**	17 34 19.0	**-0.3**
	406nm,0.1s							
SATY				S		**Sg**	17 34 23.0	**-0.1**
	11μm,0.1s							
KURS	**Kuram**	**0.41**	**301**	*e*P		**Pg**	17 34 22.1	**+0.5**
	baz=2.0							
KURS				*e*S		**Sg**	17 34 28.2	**+1.2**
	baz=2.0							
KURS	**Kuram**	**0.41**	**301**	*e*P		**Pg**	17 34 22.1	**+0.5**
	38nm,0.2s							
KURS				*e*S		**Sg**	17 34 28.2	**+1.2**
	894nm,0.5s							
KURS	**Kuram**	**0.41**	**301**	P		**Pg**	17 34 22.1	**+0.5**
	38nm,0.2s							
KURS				S		**Sg**	17 34 28.2	**+1.2**
	894nm,0.5s							
PDGK	**Podgornoye**	**0.61**	**85**	⇓P		**Pg**	17 34 23.7	**-1.8**
	28nm,0.2s							
PDGK				⇓S		**Sg**	17 34 31.2	**-2.4**
	292nm,0.3s							
PRZ	**Przheval'sk**	**0.82**	**193**	⇓*e*P		**Pg**	17 34 29.3	**-0.1**
	baz=94							
PRZ				⇓*e*S		**Sb**	17 34 40.9	**-0.9**
	baz=94							
BLB	**Baldybastay**	**0.83**	**351**	*e*P		**Pg**	17 34 29.4	**-0.2**
	553nm,0.2s							
BLB				*e*S		**Sg**	17 34 40.7	**+0.3**
	302nm,0.1s							
BLB	**Baldybastay**	**0.83**	**351**	P		**Pg**	17 34 29.4	**-0.2**
	553nm,0.2s							
BLB				S		**Sg**	17 34 40.7	**+0.3**
	352nm,0.2s							
ANVS	**Anan'yevo**	**0.88**	**236**	⇓*i*P		**Pg**	17 34 29.7	**-0.8**
	baz=37							
ANVS				⇓*i*S		**Sg**	17 34 42.0	**+0.1**
	baz=37							
ARXS	**Arharly**	**1.11**	**328**	*e*P		**Pb**	17 34 34.6	**-0.8**
	170nm,0.2s							
ARXS				*e*S		**Sg**	17 34 49.6	**+0.3**
	147nm,0.1s							
ARXS	**Arharly**	**1.11**	**328**	P		**Pb**	17 34 34.6	**-0.8**
	170nm,0.2s							
ARXS				S		**Sg**	17 34 49.6	**+0.3**
	149nm,0.3s							
KNDC	**Almaty**	**1.23**	**268**	⇑P		**Pg**	17 34 37.7	**+0.4**
	75nm,0.2s							
KNDC			

CHKK				*e*S		**Sb**	**17 34 56.5**	**-0.2**
	baz=96							
CHKK	**Chushkaly**	**1.34**	**296**	*e*P		**Pn**	**17 34 38.6**	**-0.4**
	74nm,0.2s							
CHKK				*e*S		**Sb**	**17 34 56.5**	**-0.2**
	494nm,0.2s							
CHKK	**Chushkaly**	**1.34**	**296**	P		**Pn**	**17 34 38.6**	**-0.4**
	74nm,0.2s							
CHKK				S		**Sb**	**17 34 56.5**	**-0.2**
	494nm,0.2s							
KTBS	**Karatobe**	**1.50**	**287**	*e*P		**Pb**	**17 34 41.6**	**-0.4**
	baz=88							
KTBS				*e*S		**Sg**	**17 35 01.8**	**0.0**
	baz=88							
KTBS	**Karatobe**	**1.50**	**287**	*e*P		**Pb**	**17 34 41.6**	**-0.4**
	77nm,0.2s							
KTBS				*e*S		**Sg**	**17 35 01.8**	**0.0**
	559nm,0.2s							
KTBS	**Karatobe**	**1.50**	**287**	P		**Pb**	**17 34 41.6**	**-0.4**
	77nm,0.2s							
KTBS				S		**Sg**	**17 35 01.8**	**0.0**
	559nm,0.2s							
KDJ	**Kajisay**	**1.58**	**224**	⇓*e*P		**Pn**	**17 34 42.5**	**0.0**
	baz=24							
KDJ				⇓*e*S		**Sb**	**17 35 03.5**	**-0.3**
	baz=24							
MTBS	**Maitube**	**1.63**	**265**	*e*P		**Pb**	**17 34 44.3**	**0.0**
	baz=66							
MTBS				*e*S		**Sg**	**17 35 06.4**	**+0.3**
	baz=66							
MTBS	**Maitube**	**1.63**	**265**	*e*P		**Pb**	**17 34 44.3**	**0.0**
	45nm,0.2s							
MTBS				*e*S		**Sg**	**17 35 06.4**	**+0.3**
	207nm,0.2s							
MTBS	**Maitube**	**1.63**	**265**	P		**Pb**	**17 34 44.3**	**0.0**
	45nm,0.2s							
MTBS				S		**Sg**	**17 35 06.4**	**+0.3**
	207nm,0.2s							
TDK	**Taldyqorghan**	**1.73**	**354**	*e*P		**Pb**	**17 34 45.4**	**-0.6**
	304nm,0.1s							
TDK				*e*S		**Sb**	**17 35 08.1**	**+0.1**
	610nm,0.5s							
TDK	**Taldyqorghan**	**1.73**	**354**	P		**Pb**	**17 34 45.4**	**-0.6**
	309nm,0.3s							
TDK				S		**Sb**	**17 35 08.1**	**+0.1**
	610nm,0.5s							
KUU	**Kurty**	**1.79**	**291**	*e*P		**Pb**	**17 34 46.3**	**-0.7**
	baz=91							
KUU				*e*S		**Sb**	**17 35 09.8**	**+0.1**
	baz=91							
KUU	**Kurty**	**1.79**	**291**	*e*P		**Pb**	**17 34 46.2**	**-0.7**
	53nm,0.2s							
KUU				*e*S		**Sb**	**17 35 09.7**	**+0.1**
	331nm,0.2s							
KUU	**Kurty**	**1.79**	**291**	P		**Pb**	**17 34 46.3**	**-0.7**
	53nm,0.2s							
KUU				S		**Sb**	**17 35 09.7**	**+0.1**
	331nm,0.2s							
KST	**Kastek**	**1.98**	**264**	*e*P		**Pb**	**17 34 50.5**	**+0.2**
	27nm,0.4s							
KST				*e*S		**Sg**	**17 35 16.9**	**-0.4**
	116nm,0.3s							
KST	**Kastek**	**1.98**	**264**	Pg		**Pb**	**17 34 50.5**	**+0.2**
	27nm,0.4s							
KST				Lg		Lg	17 35 16.9	
	116nm,0.3s							
ULHL	**Ulahol**	**2.05**	**241**	P		**Pb**	**17 34 51.0**	**-0.6**
	SNR=12							
ULHL	**Ulahol**	**2.05**	**241**	⇓*e*P		**Pb**	**17 34 50.2**	**-1.4**
	baz=41							
ULHL				⇓*e*S		**Sb**	**17 35 16.8**	**-0.7**
	baz=41							
DGS	**Degeres**	**2.10**	**270**	*e*P		**Pb**	**17 34 51.8**	**-0.6**
	46nm,0.3s							
DGS				*e*S		**Sb**	**17 35 19.1**	**+0.3**
	142nm,0.2s							
DGS	**Degeres**	**2.10**	**270**	Pg		**Pb**	**17 34 51.8**	**-0.6**
	46nm,0.3s							
DGS				Lg		Lg	17 35 19.1	
	142nm,0.2s							
BOOM	**Boomskoye usch**	**2.14**	**249**	⇑*e*P		**Pn**	**17 34 50.8**	**+0.6**
	baz=50							
BOOM				⇑*e*S		**Sb**	**17 35 18.4**	**-1.6**
	baz=50							
KRBS	**Karabastau**	**2.21**	**282**	*e*P		**Pb**	**17 34 54.2**	**+0.1**
	6.4nm,0.0s							
KRBS				*e*S		**Sg**	**17 35 23.3**	**-1.3**
	118nm,0.1s							
KRBS	**Karabastau**	**2.21**	**282**	Pg		**Pb**	**17 34 54.2**	**+0.1**
	0.4nm,0.5s							
KRBS				Lg		Lg	17 35 23.3	
	217nm,0.2s							
TKM2	**Tokmak 2**	**2.27**	**262**	P		**Pb**	**17 34 54.9**	**-0.3**
	SNR=14							
TKM2	**Tokmak 2**	**2.27**	**262**	⇑*e*P		**Pb**	**17 34 54.2**	**-1.0**
	baz=62							
TKM2				⇑*e*S		**Sb**	**17 35 23.5**	**-0.1**
	baz=62							
TKM2	**Tokmak 2**	**2.27**	**262**	⇑Pg		**Pb**	**17 34 54.9**	**-0.3**
	14nm,0.3s							
TKM2				⇑Lg		Lg	17 35 25.6	
	40nm,0.2s							
KBK	**Karagaybulak**	**2.79**	**258**	P		**Pb**	**17 35 05.1**	**+1.0**
	SNR=13							
KBK	**Karagaybulak**	**2.79**	**258**	⇑*e*P		**Pn**	**17 35 01.1**	**+2.0**
	baz=59							
KBK				⇑*e*S		**Sb**	**17 35 35.7**	**-2.9**
	baz=59							
CHMS	**Chumysh**	**2.87**	**266**	P		**Pb**	**17 35 05.2**	**-0.1**
	SNR=6.4							
CHMS	**Chumysh**	**2.87**	**266**	⇑*e*P		**Pn**	**17 35 02.4**	**+2.3**
	baz=66							
CHMS				⇑*e*S		**Sb**	**17 35 38.0**	**-2.7**
	baz=66							
CHMS	**Chumysh**	**2.87**	**266**	⇑Pn		**Pb**	**17 35 02.8**	**-2.5**
	2.6nm,0.3s							
CHMS				⇓Lg		Lg	17 35 42.9	
	49nm,0.6s							
SGDS	**Sogindy**	**2.94**	**275**	*e*P		**Pb**	**17 35 07.1**	**+0.5**
	4.5nm,0.0s							
SGDS				*e*S		**Sb**	**17 35 45.4**	**+2.6**
	55nm,0.1s							
USP	**Ospenovka**	**3.03**	**271**	⇑*e*P		**Pn**	**17 35 04.8**	**+2.5**
	baz=71							
USP				⇑*e*S		**Sb**	**17 35 42.3**	**-3.1**
	baz=71							
AAK	**Ala-Archa**	**3.12**	**260**	P		**Pb**	**17 35 09.7**	**0.0**
	SNR=7.6							
AAK	**Ala-Archa**	**3.12**	**260**	⇑*e*P		**Pn**	**17 35 05.8**	**+2.2**
	baz=60							
AAK				⇑*e*S		**Sn**	**17 35 43.7**	**+2.4**
	baz=60							
UCH	**Uchtor**	**3.22**	**252**	P		**Pb**	**17 35 11.8**	**+0.1**
	SNR=8.2							
UCH	**Uchtor**	**3.22**	**252**	⇑*e*P		**Pn**	**17 35 06.9**	**+1.6**
	baz=53							
UCH				⇑*e*S		**Sn**	**17 35 46.0**	**+1.7**
	baz=53							
EKS2	**Erkin-Say**	**3.63**	**262**	P		**Pg**	**17 35 24.3**	**+1.0**
	SNR=8.8							
BTLS	**Baital**	**3.75**	**300**	*e*P		**Pb**	**17 35 22.3**	**+1.9**
	17nm,0.6s							
BTLS				*e*S		**Sg**	**17 36 11.2**	**-3.0**
	16nm,0.0s							
BTLS	**Baital**	**3.75**	**300**	Pg		**Pb**	**17 35 20.7**	**+0.3**
	17nm,0.6s							
BTLS				Lg		Lg	17 36 08.7	
	12nm,0.4s							
MAKZ	**Makanchi**	**4.24**	**33**	⇓Pn		**Pn**	**17 35 20.2**	**+1.3**
	1.7nm,0.3s							
MAKZ				⇓Lg		Lg	17 36 24.8	
	13nm,0.5s							
KSH	**Kashi**	**4.26**	**209**	P		**Pb**	**17 35 28.0**	**-1.2**
KSH				S		Sg	17 36 43.0	+12
KSH				smax		smax		
	comp=N,12nm,0.8s							
KSH				smax		smax		
	comp=E,19nm,0.9s							
MK31	**Makanchi Array**	**4.36**	**35**	⇑Pn		**Pn**	**17 35 22.0**	**+1.4**
	comp=E,0.6nm,0.2s,baz=109,slow=12,SNR=72							
MK31				Sn		**Sn**	**17 36 13.5**	**+1.8**
	comp=E,8.2nm,0.7s,baz=218,slow=25,SNR=10							
MK31				⇑Lg		Lg	17 36 28.0	
	comp=E,4.0nm,0.2s,baz=215,slow=29,SNR=11							
OTUK	**Ortayu**	**6.64**	**321**	⇑Pn		**Pn**	**17 35 51.9**	**0.0**
	comp=E,1.0nm,0.4s							
OTUK				⇑Sn		**Sb**	**17 37 22.7**	**-6.6**
	comp=E,3.9nm,0.4s							
OTUK				⇓Lg		Lg	17 37 42.9	
	comp=E,22nm,1.1s							
KURBB	**Kurchatov Arra**	**7.35**	**359**	⇓Pn		**Pn**	**17 36 00.4**	**-1.1**
	comp=E,1.6nm,1.1s							
KURBB				⇓Sn		**Sn**	**17 37 24.4**	**-0.7**
	comp=E,3.6nm,0.5s							
KURBB				⇑Lg		Lg	17 38 05.1	
	comp=E,35nm,0.7s							
KURK	**Kurchatov**	**7.44**	**360**	⇑Pn		**Pn**	**17 36 02.2**	**-0.6**
	comp=E,1.0nm,0.6s							
KURK				⇑Sn		**Sn**	**17 37 25.8**	**-1.6**
	comp=E,2.3nm,0.7s							
KURK				⇓Lg		Lg	17 38 07.9	
	comp=E,17nm,0.6s							

SOME ***27*** *17:40:27.0,40°.12N×73°.47E,h10km*
KRNET 27 17:39:56.3±0.1,39°.32N×73°.98E,mb3.0,18C,
Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.52**	**323**	⇑*i*P		Pn	17 40 25.0	+0.2
	baz=23							
OHH				⇑*i*S		Sn	17 40 46.2	+0.9
	baz=23							
DRK	**Karamyk**	**1.70**	**276**	⇑*i*P		Pn	17 40 27.8	+0.3
	baz=76							
DRK				⇑*i*S		Sg	17 40 51.5	+0.6
	baz=76							
BTK	**Batken**	**2.55**	**288**	⇑*i*P		Pn	17 40 41.0	+2.0
	baz=88							
BTK				⇑*i*S		Sb	17 41 13.7	-1.2
	baz=88							
ARLS	**Aral**	**2.55**	**6**	⇑*i*P		Pb	17 40 41.1	-2.0
	baz=6.0							
ARLS				⇑*i*S		Sb	17 41 14.2	-0.9
	baz=6.0							
GAR	**Garm**	**2.87**	**265**	⇑*e*P		Pb	17 40 46.0	-2.4
	baz=65							
GAR				⇑*i*S		Sb	17 41 21.9	-2.2
	baz=65							
ARK	**Arkit**	**2.91**	**329**	⇑*i*P		Pn	17 40 46.2	+2.2
	baz=29							
ARK				⇑*i*S		Sn	17 41 22.4	+2.6
	baz=29							
UCH	**Uchtor**	**2.93**	**8**	⇑*e*P		Pn	17 40 46.5	+1.9
	baz=8.0							
UCH				⇑*e*S		Sn	17 41 23.2	+2.4
	baz=8.0							
TRKS	**Terek-Say**	**3.10**	**316**	⇑*i*P		Pn	17 40 48.3	+1.7
	baz=16							
TRKS				⇑*i*S		Sn	17 41 25.9	+1.5
	baz=16							
EKS2	**Erkin-Say**	**3.34**	**357**	⇑*e*P		Pn	17 40 52.2	+2.3
	baz=57							
EKS2				⇑*e*S		Sn	17 41 32.9	+2.5
	baz=57							
KST	**Kastek**	**4.01**	**21**	*e*P		Pg	17 41 29.4	+16
	2.9nm,0.4s							
KST				*e*S		Sg	17 42 14.6	+10
	14nm,0.7s							
IUG	**Iuzhnay**	**4.12**	**315**	*e*P		Pg	17 41 25.3	+10
	180nm,0.1s							
IUG				*e*S		Sg	17 42 07.0	-1.7
	23nm,0.2s							
DGS	**Degeres**	**4.14**	**18**	*e*P		Pg	17 41 32.4	+17
	3.0nm,0.4s							
DGS				*e*S		Sg	17 42 19.2	+10
	13nm,0.3s							
SGDS	**Sogindy**	**4.16**	**7**	*e*P		Pg	17 41 29.5	+14
	1.1nm,0.2s							
SGDS				*e*S		Sg	17 42 14.8	+5.0
	6.4nm,0.3s							
TNSS	**Tian-Shan**	**4.33**	**30**	*e*P		Pg	17 41 37.2	+18
	1.6nm,0.1s							
TNSS				*e*S		Sg	17 42 28.0	+12
	3.0nm,0.8s							
KRBS	**Karabastau**	**4.55**	**16**	*e*P		Pg	17 41 38.1	+15
	1.1nm,0.1s							
KRBS				*e*S		Sg	17 42 29.2	+6.6
	2.4nm,0.4s							
KTBS	**Karatobe**	**4.83**	**24**	*e*P		Pg	17 41 45.2	+16
	1.1nm,0.3s							
KTBS				*e*S		Sg	17 42 41.4	+10
	9.3nm,0.1s							
BRLS	**Boroldday**	**4.85**	**321**	*e*P		Pg	17 41 37.5	+8.3
	1.3nm,0.2s							
BRLS				*e*S		Sg	17 42 28.2	-3.8
	4.5nm,0.1s							
KUU	**Kurty**	**4.90**	**20**	*e*P		Pg	17 41 46.5	+16
	1.2nm,0.2s							
KUU				*e*S		Sg	17 42 43.6	+10
	11nm,0.2s							
ARXS	**Arharly**	**5.67**	**29**	*e*P		Pg	17 42 01.7	+17
	2.3nm,0.7s							
ARXS				*e*S		Sg	17 43 10.1	+12
	4.7nm,0.2s							
BTLS	**Baital**	**5.72**	**0**	*e*P		Pg	17 41 58.7	+13
	1.0nm,0.2s							
BTLS				*e*S		Sg	17 43 04.5	+4.6
	1.7nm,0.1s							

SOME ***27*** *17:52:47.2,39°.43N×73°.57E,h15km*
KRNET ***27*** *17:52:47.4±0.1,39°.37N×73°.65E,mb4.0*
IDC ***27*** *17:52:48.3±1.3,39°.31N×73°.57E,h0km,mb3.7/6,*
mbtmp3.7/11,ML2.9/5,MS2.6/1,Error ellipse:
s-maj=25.2km s-min=17.3km az=114.0
NNC ***27*** *17:52:53.9±3.2,39°.61N×73°.50E,h0km,mb4.0,mpv3.6,*
Error ellipse: s-maj=30.3km s-min=19.6km az=177.0
ISC 27 17:52:50.0±0.7,39°.62N±0°.04×73°.55E±0°.03,h10km,n65,
σ2s 24/102,mb3.8/7,23C-25D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.08**	**327**	⇓*e*P		**Pn**	**17 53 12.4**	**+1.2**
	baz=30							
OHH				⇓*e*S		**Sn**	**17 53 31.0**	**+4.7**
	baz=30							
DRK	**Karamyk**	**1.36**	**265**	⇑*i*P		**Pn**	**17 53 14.5**	**-0.7**
	baz=75							
DRK				⇑*i*S		**Sg**	**17 53 34.3**	**+0.7**
	baz=75							
BTK	**Batken**	**2.15**	**283**	⇑*e*P		**Pb**	**17 53 28.2**	**-0.8**
	baz=88							
BTK				⇑*e*S		**Sg**	**17 53 58.4**	**-0.5**
	baz=88							
ARLS	**Aral**	**2.32**	**15**	⇓*i*P		**Pb**	**17 53 32.0**	**0.0**
	baz=12							
ARLS				⇓*e*S		**Sg**	**17 54 04.0**	**-0.5**
	baz=12							
ARK	**Arkit**	**2.49**	**332**	⇓*i*P		**Pb**	**17 53 35.0**	**+0.2**
	baz=33							
ARK				⇓*i*S		**Sg**	**17 54 09.4**	**-0.5**
	baz=33							
AML	**Almayashu**	**2.52**	**3**	P		**Pg**	**17 53 36.5**	**-1.7**
	SNR=46							
GAR	**Garm**	**2.58**	**257**	⇑*e*P		**Pn**	**17 53 33.1**	**+1.2**
	baz=63							
GAR				⇑*e*S		**Sb**	**17 54 06.3**	**-1.9**
	baz=63							
TRKS	**Terek-Say**	**2.65**	**317**	⇓*e*P		**Pb**	**17 53 35.8**	**-1.8**
	baz=19							
TRKS				⇓*e*S		**Sb**	**17 54 11.0**	**+0.8**
	baz=19							
UCH	**Uchtor**	**2.71**	**15**	P		**Pg**	**17 53 39.6**	**-2.3**
	SNR=39							
UCH	**Uchtor**	**2.71**	**15**	⇓*e*P		**Pb**	**17 53 37.3**	**-1.5**
	baz=13							
UCH				⇓*e*S		**Sg**	**17 54 13.8**	**-3.3**
	baz=13							
EKS2	**Erkin-Say**	**3.05**	**3**	P		**Pb**	**17 53 44.1**	**-0.3**
	SNR=27							
EKS2	**Erkin-Say**	**3.05**	**3**	⇑*e*P		**Pb**	**17 53 42.2**	**-2.2**
	baz=2.0							
EKS2				⇑*e*S		**Sb**	**17 54 22.3**	**+0.6**
	baz=2.0							
AAK	**Ala-Archa**	**3.10**	**13**	P		**Pb**	**17 53 45.8**	**+0.4**
	SNR=13							
AAK	**Ala-Archa**	**3.10**	**13**	Pn		**Pb**	**17 53 45.9**	**+0.6**
	6.9nm,0.3s,baz=161,slow=8.6,SNR=17							
AAK				Sn		**Sg**	**17 54 29.9**	**+0.3**
	7.1nm,0.3s,baz=286,slow=19,SNR=2.1							
AAK				LR		LR	17 55 15.1	
	comp=Z,76nm,18.1s,baz=219,slow=43							
AAK	**Ala-Archa**	**3.10**	**13**	⇑*e*P		**Pb**	**17 53 42.6**	**-2.7**
	baz=11							
AAK				⇑*e*S		**Sb**	**17 54 23.0**	**-0.3**
	baz=11							
KBK	**Karagaybulak**	**3.22**	**19**	P		**Pb**	**17 53 47.6**	**+0.3**
	SNR=15							
KBK	**Karagaybulak**	**3.22**	**19**	⇑*i*P		**Pb**	**17 53 44.1**	**-3.2**
	baz=16							
KBK				⇑*e*S		**Sb**	**17 54 25.8**	**-0.8**
	baz=16							
ULHL	**Ulahol**	**3.33**	**37**	P		**Pb**	**17 53 48.2**	**-1.0**
	SNR=18							
BOOM	**Boomskoye usch**	**3.39**	**31**	⇓*i*P		**Pb**	**17 53 46.5**	**-3.8**
	baz=28							
BOOM				⇓*i*S		**Sb**	**17 54 29.2**	**-2.5**
	baz=28							
CHMS	**Chumysh**	**3.50**	**15**	P		**Pb**	**17 53 51.4**	**-0.6**
	SNR=8.2							
CHMS	**Chumysh**	**3.50**	**15**	⇓Pn		**Pb**	**17 53 49.9**	**-2.1**
	8.3nm,0.6s							
CHMS				⇑Lg		Lg	17 54 44.8	
	44nm,0.5s							
CHGR	**Chuyangaron**	**3.54**	**256**	⇓*e*P		**Pn**	**17 53 46.1**	**+1.0**
	baz=60							
CHGR				⇓*e*S		**Sn**	**17 54 29.0**	**+1.9**
	baz=60							
TKM2	**Tokmak 2**	**3.65**	**24**	P		**Pb**	**17 53 52.6**	**-2.0**
	SNR=7.4							
TKM2	**Tokmak 2**	**3.65**	**24**	⇓*e*P		Pb	17 53 50.0	-4.6
	baz=22							
TKM2				⇓*e*S		**Sb**	**17 54 35.7**	**-3.3**
	baz=22							
TKM2	**Tokmak 2**	**3.65**	**24**	⇑Pn		**Pb**	**17 53 52.4**	**-2.2**
	5.1nm,0.8s							
TKM2				⇓Lg		Lg	17 54 51.2	
	55nm,0.7s							
TAS	**Tashkent**	**3.66**	**299**	⇓*e*P		Pb	17 53 50.1	-4.7
	baz=2.0							
TAS				⇓*e*S		**Sb**	**17 54 36.0**	**-3.3**
	baz=2.0							
IUG	**Iuzhnay**	**3.67**	**315**	*e*P		**Pb**	**17 53 53.6**	**-1.4**
	337nm,0.2s							
IUG				*e*S		**Sb**	**17 54 41.6**	**+2.0**
	70nm,0.1s							
USP	**Ospenovka**	**3.72**	**11**	P		**Pb**	**17 53 53.5**	**-2.3**
	SNR=12							
KDJ	**Kajisay**	**3.73**	**46**	⇑*i*P		**Pn**	**17 53 49.9**	**+2.2**
	baz=43							
KDJ				⇑*i*S		**Sb**	**17 54 35.7**	**-5.6**
	baz=43							
KST	**Kastek**	**3.88**	**27**	*e*P		**Pg**	**17 54 03.0**	**-1.3**
	10nm,0.2s							
KST				*e*S		**Sg**	**17 54 57.8**	**+3.3**
	58nm,0.6s							
SGDS	**Sogindy**	**3.92**	**12**	*e*P		**Pg**	**17 54 01.8**	**-3.2**
	7.1nm,0.2s							
SGDS				*e*S		**Sg**	**17 54 55.2**	**-0.5**
	18nm,0.4s							
DGS	**Degeres**	**3.99**	**24**	*e*P		**Pg**	**17 54 04.1**	**-2.3**
	12nm,0.4s							
DGS				*e*S		**Sg**	**17 54 59.4**	**+1.3**
	41nm,0.1s							
MTBS	**Maitube**	**4.13**	**31**	*e*P		**Pg**	**17 54 07.4**	**-1.6**
	16nm,0.4s							
MTBS				*e*S		**Sg**	**17 55 04.8**	**+2.4**
	21nm,0.1s							
KK31	**Karatay Array**	**4.17**	**328**	⇓Pn		Pb	17 53 58.9	-4.4
	3.1nm,0.3s,baz=126,slow=12,SNR=106							
KK31				⇓Pg		**Pg**	**17 54 08.2**	**-1.5**
	6.0nm,0.3s,baz=145,slow=15,SNR=16							
KK31				⇓Lg		Lg	17 55 07.0	
	18nm,0.5s,baz=158,slow=34,SNR=4.0							
TNSS	**Tian-Shan**	**4.27**	**36**	*e*P		**Pg**	**17 54 09.9**	**-1.8**
	8.5nm,0.1s							
TNSS				*e*S		**Sg**	**17 55 09.5**	**+2.4**
	12nm,0.2s							
KRBS	**Karabastau**	**4.38**	**21**	*e*P		**Pg**	**17 54 12.0**	**-1.8**
	0.1nm,0.2s							
KRBS				*e*S		**Sg**	**17 55 13.0**	**+2.5**
	33nm,0.6s							
AAA	**Alma-Ata**	**4.39**	**34**	*e*P		**Pg**	**17 54 11.8**	**-2.3**
	17nm,0.2s							
AAA				*e*S		**Sg**	**17 55 12.8**	**+1.8**
	58nm,0.7s							
BRLS	**Boroldday**	**4.41**	**322**	*e*P		**Pb**	**17 54 05.7**	**-1.8**
	4.9nm,0.1s							
BRLS				*e*S		**Sb**	**17 55 01.8**	**+1.1**
	10nm,0.3s							
KNDC	**Almaty**	**4.42**	**34**	⇑Pn		**Pb**	**17 54 05.8**	**-2.0**
	8.6nm,0.4s							
KNDC				⇑Lg		Lg	17 55 14.4	
	141nm,0.6s							
ANVS	**Anan'yevo**	**4.44**	**43**	⇑*i*P		**Pn**	**17 54 00.2**	**+2.7**
	baz=40							
ANVS				⇑*i*S		**Sn**	**17 54 53.2**	**+3.9**
	baz=40							
KTBS	**Karatobe**	**4.72**	**29**	*e*P		**Pg**	**17 54 17.6**	**-2.7**
	7.1nm,0.0s							
KTBS				*e*S		**Sg**	**17 55 22.6**	**+1.2**
	52nm,0.2s							
KUU	**Kurty**	**4.76**	**25**	*e*P		**Pg**	**17 54 17.9**	**-3.1**
	5.9nm,0.2s							
KUU				*e*S		**Sg**	**17 55 23.2**	**+0.6**
	34nm,0.6s							
CHKK	**Chushkaly**	**4.96**	**30**	*e*P		**Pg**	**17 54 21.6**	**-3.3**
	4.6nm,0.8s							
CHKK				*e*S		**Sg**	**17 55 29.5**	**+0.4**
	20nm,0.7s							
SATY	**Saty**	**5.02**	**45**	*e*P		**Pg**	**17 54 23.1**	**-3.0**
	8.6nm,0.6s							
SATY				*e*S		**Sg**	**17 55 32.1**	**+1.0**
	36nm,1.0s							
ZHN	**Zhinishke**	**5.11**	**44**	*e*P		**Pg**	**17 54 24.9**	**-2.9**
	3.4nm,0.0s							
ZHN				*e*S		**Sg**	**17 55 35.2**	**+1.2**
	14nm,0.3s							
KURS	**Kuram**	**5.20**	**40**	*e*P		**Pg**	**17 54 26.9**	**-2.6**
	5.3nm,0.5s							
KURS				*e*S		**Sg**	**17 55 38.5**	**+1.8**
	16nm,0.5s							
BTLS	**Baital**	**5.43**	**4**	*e*P		**Pg**	**17 54 30.5**	**-3.5**
	6.2nm,0.6s							
BTLS				*e*S		**Sg**	**17 55 44.8**	**+0.5**
	8.3nm,0.5s							
KPKS	**Kokpek**	**5.45**	**43**	*e*P		**Pg**	**17 54 30.6**	**-3.6**
	8.9nm,0.5s							
KPKS				*e*S		**Sg**	**17 55 45.0**	**+0.2**
	20nm,0.6s							
ARXS	**Arharly**	**5.59**	**33**	*e*P		**Pg**	**17 54 32.9**	**-4.1**
	7.9nm,0.2s							
ARXS				*e*S		**Sg**	**17 55 49.0**	**-0.5**
	14nm,0.4s							
BLB	**Baldybastay**	**5.80**	**38**	*e*P		**Pg**	**17 54 36.8**	**-4.1**
	14nm,0.7s							
BLB				*e*S		**Sg**	**17 55 55.6**	**-0.4**
	24nm,0.5s							
PDGK	**Podgornoye**	**5.80**	**48**	⇑Pn		**Pn**	**17 54 17.8**	**+1.6**
	3.1nm,0.7s							
PDGK				⇓Pg		**Pg**	**17 54 40.6**	**-0.5**
	7.7nm,1.0s							
PDGK				⇑Lg		Lg	17 55 56.4	
	20nm,1.1s							
TDK	**Taldyqorghan**	**6.47**	**32**	*e*P		**Pg**	**17 54 49.7**	**-4.3**
	5.8nm,0.2s							
TDK

0.6nm,0.9s,baz=99,slow=7.6,SNR=3.6
0.6nm,0.9s
FINES FINESS Array B 36.11 323 P **P 17 59 53.9 +2.2**
1.5nm,0.7s,baz=109,slow=10,SNR=4.4
1.5nm,0.7s
ARCES ARCESS Array B 39.09 335 P **P 18 00 19.1 +2.2**
2.2nm,0.9s,baz=92,slow=8.5,SNR=7.8
2.2nm,0.9s
NOA NORSAR Array B 43.16 321 P **P 18 00 52.2 +1.7**
0.2nm,0.4s,baz=97,slow=7.7,SNR=1.5
0.2nm,0.4s
TORD Torodi Ar. Bea 67.79 269 P **P 18 03 48.9 +0.6**
0.3nm,0.5s,baz=44,slow=5.5,SNR=3.4
0.3nm,0.5s
WRA Warramunga Arr 82.00 124 P **P 18 05 09.1 -1.2**
0.5nm,0.9s,baz=320,slow=4.2,SNR=5.8
0.5nm,0.9s

IDC ***27*** *17:56:44.6±11.0, 23.°81S×179.°74E, h520km±133km, mb2.8/4, mbtmp3.6/4, Error ellipse: s-maj=287.0km s-min=43.7km az=163.0*
ISC 27 17:56:45.7±3.5, 24.°S±2.°×179.°7E±0.°6, h537km, n6, σ0.°46/6, mb3.2/4, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**41.78**	**261**	P		**P**		**18 03 48.4**	**-0.2**
	0.3nm,0.7s,baz=96,slow=7.4,SNR=4.9								
	0.3nm,0.7s								
WRA	**Warramunga Arr**	**42.15**	**266**	P		**P**		**18 03 51.9**	**+0.4**
	0.4nm,0.5s,baz=104,slow=8.4,SNR=5.3								
	0.4nm,0.5s								
NVAR	**Mina Array Bea**	**84.89**	**44**	P		**P**		**18 08 24.2**	**-0.1**
	0.3nm,0.5s,baz=230,slow=8.1,SNR=3.3								
	0.3nm,0.5s								
TXAR	**Lajitas Array**	**90.62**	**58**	P		**P**		**18 08 51.7**	**+0.4**
	0.6nm,0.7s,baz=211,slow=6.4,SNR=10.0								
	0.6nm,0.7s								
ARCES	**ARCESS Array B**	**131.77**	**348**	PKP		**PKiKP**		**18 14 57.7**	**-0.5**
	1.5nm,0.9s,baz=30,slow=4.2,SNR=4.5								
AKASG	**Malin Array Be**	**144.77**	**327**	PKP		**PKPdf**		**18 15 21.0**	**-0.2**
	0.6nm,0.3s,baz=42,slow=3.8,SNR=7.2								

SOME ***27*** *17:56:53.9, 39.°45N×73.°67E, h15km*
KRNET ***27*** *17:56:54.7±0.1, 39.°51N×73.°71E, mb3.8*
ISC 27 17:56:52.8±1.1, 39.°47N±0.°05×73.°73E±0.°03, h10km, n38, σ2.°38/71, 28C-8D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.28**	**326**	⇑*i*	P		**Pg**	**17 57 17.7**	**+0.3**
OHH	baz=25			⇑*e*	S		**Sg**	**17 57 34.4**	**+0.4**
DRK	**Karamyk**	**1.50**	**271**	⇑*i*	P		**Pg**	**17 57 22.2**	**+0.7**
DRK	baz=69			⇑*i*	S		**Sg**	**17 57 42.2**	**+1.3**
BTK	**Batken**	**2.32**	**286**	⇑*e*	P		**Pb**	**17 57 34.8**	**0.0**
BTK	baz=85			⇑*i*	S		**Sb**	**17 58 04.3**	**+0.7**
ARLS	**Aral**	**2.43**	**10**	⇑*i*	P		**Pb**	**17 57 36.2**	**-0.5**
ARLS	baz=11			⇑*i*	S		**Sb**	**17 58 06.9**	**+0.1**
AML	**Almayashu**	**2.66**	**359**	P			**Pg**	**17 57 42.6**	**-1.1**
	SNR=36								
ARK	**Arkit**	**2.69**	**331**	⇑*i*	P		**Pb**	**17 57 39.9**	**-1.2**
ARK	baz=30			⇑*i*	S		**Sb**	**17 58 13.2**	**-1.0**
GAR	**Garm**	**2.69**	**261**	⇑*i*	P		**Pb**	**17 57 40.5**	**-0.6**
GAR	baz=60			⇑*e*	S		**Sb**	**17 58 13.7**	**-0.6**
UCH	**Uchtor**	**2.82**	**12**	P			**Pg**	**17 57 45.7**	**-1.1**
	SNR=35								
UCH	**Uchtor**	**2.82**	**12**	⇑*e*	P		**Pb**	**17 57 41.9**	**-1.6**
UCH	baz=12			⇑*e*	S		**Sb**	**17 58 16.6**	**-1.7**
TRKS	**Terek-Say**	**2.85**	**317**	⇑*e*	P		**Pb**	**17 57 41.0**	**-2.9**
TRKS	baz=16			⇑*e*	S		**Sn**	**17 58 15.2**	**+2.2**
EKS2	**Erkin-Say**	**3.19**	**1**	P			**Pb**	**17 57 49.1**	**-0.5**
	SNR=12								
EKS2	**Erkin-Say**	**3.19**	**1**	⇓*e*	P		**Pb**	**17 57 46.8**	**-2.8**
EKS2	baz=1.0			⇓*e*	S		**Sn**	**17 58 24.7**	**+3.4**
AAK	**Ala-Archa**	**3.22**	**10**	⇓*e*	P		**Pb**	**17 57 47.4**	**-2.7**
AAK	baz=11			⇓*e*	S		**Sb**	**17 58 25.8**	**-3.6**
KBK	**Karagaybulak**	**3.32**	**16**	P			**Pb**	**17 57 53.3**	**+1.5**
	SNR=15								
KBK	**Karagaybulak**	**3.32**	**16**	⇓*e*	P		**Pb**	**17 57 48.7**	**-3.1**
KBK	baz=16			⇓*e*	S		**Sb**	**17 58 28.2**	**-4.0**
ULHL	**Ulahol**	**3.37**	**34**	P			**Pg**	**17 57 57.5**	**+0.2**
	SNR=18								
ULHL	**Ulahol**	**3.37**	**34**	⇑*e*	P		**Pb**	**17 57 49.7**	**-2.9**
ULHL	baz=34			⇑*i*	S		**Sb**	**17 58 29.6**	**-4.1**
BOOM	**Boomskoye usch**	**3.45**	**28**	⇑*i*	P		**Pb**	**17 57 51.0**	**-3.1**
BOOM	baz=29			⇑*i*	S		**Sn**	**17 58 31.3**	**+3.5**
CHGR	**Chuyangaron**	**3.65**	**259**	⇑*e*	P		**Pb**	**17 57 53.7**	**-3.7**
CHGR	baz=58			⇑*e*	S		**Sb**	**17 58 36.8**	**-5.0**
TKM2	**Tokmak 2**	**3.73**	**22**	⇑*e*	P		**Pb**	**17 57 54.4**	**-4.4**
TKM2	baz=22			⇑*i*	S		**Sn**	**17 58 38.1**	**+3.5**
KDJ	**Kajisay**	**3.73**	**43**	⇑*i*	P		**Pb**	**17 57 55.1**	**-3.8**
KDJ	baz=44			⇑*i*	S		**Sn**	**17 58 39.1**	**+4.4**
TAS	**Tashkent**	**3.86**	**300**	⇓*e*	P		**Pb**	**17 57 56.3**	**-4.7**
TAS	baz=0.0			⇓*e*	S		**Sn**	**17 58 41.3**	**+3.6**
IUG	**Iuzhnay**	**3.88**	**315**	*e*	P		**Pg**	**17 58 06.2**	**-0.9**
IUG	80nm,0.1s			*e*	S		**Sg**	**17 58 58.3**	**+1.0**
KST	**Kastek**	**3.95**	**24**	*e*	P		**Pg**	**17 58 07.7**	**-0.7**
KST	82nm,0.3s			*e*	S		**Sg**	**17 59 01.1**	**+1.6**
SGDS	**Sogindy**	**4.04**	**9**	*e*	P		**Pg**	**17 58 10.3**	**+0.2**
SGDS	7.4nm,0.1s			*e*	S		**Sg**	**17 59 05.0**	**+2.6**
MTBS	**Maitube**	**4.18**	**28**	*e*	P		**Pg**	**17 58 12.3**	**-0.6**
MTBS	12nm,0.3s			*e*	S		**Sg**	**17 59 09.1**	**+1.9**
TNSS	**Tian-Shan**	**4.31**	**33**	*e*	P		**Pg**	**17 58 14.4**	**-1.0**
TNSS	31nm,0.5s			*e*	S		**Sg**	**17 59 12.6**	**+1.4**
ANVS	**Anan'yevo**	**4.45**	**41**	⇑*i*	P		**Pn**	**17 58 04.3**	**+3.8**
ANVS	7.7nm,0.1s			⇑*i*	S		**Sn**	**17 58 55.7**	**+3.3**
KRBS	**Karabastau**	**4.47**	**18**	*e*	P		**Pg**	**17 58 17.0**	**-1.4**
KRBS	baz=41			*e*	S		**Sg**	**17 59 16.7**	**+0.4**
BRLS	**Borolday**	**4.61**	**322**	*e*	P		**Pg**	**17 58 17.2**	**-3.9**
BRLS	8.0nm,0.2s			*e*	S		**Sg**	**17 59 17.4**	**-3.4**
KTBS	**Karatobe**	**4.78**	**27**	*e*	P		**Pg**	**17 58 23.1**	**-1.2**
KTBS	28nm,0.5s			*e*	S		**Sg**	**17 59 27.2**	**+0.9**
KUU	**Kurty**	**4.83**	**23**	*e*	P		**Pg**	**17 58 24.0**	**-1.3**
KUU	45nm,0.1s 3.1nm,0.2s			*e*	S		**Sg**	**17 59 28.6**	**+0.7**
	40nm,0.2s								
CHKK	**Chushkaly**	**5.01**	**28**	*e*	P		**Pg**	**17 58 26.8**	**-2.0**
	2.3nm,0.1s								
CHKK				*e*	S		**Sg**	**17 59 33.8**	**+0.1**
	23nm,0.2s								
SATY	**Saty**	**5.03**	**43**	*e*	P		**Pg**	**17 58 27.4**	**-1.6**
	10.0nm,0.2s								
SATY				*e*	S		**Sg**	**17 59 35.0**	**+0.8**
	28nm,0.8s								
KURS	**Kuram**	**5.22**	**38**	*e*	P		**Pg**	**17 58 31.5**	**-1.2**
	5.2nm,0.0s								
KURS				*e*	S		**Sg**	**17 59 41.6**	**+1.3**
	9.2nm,0.1s								
KPKS	**Kokpek**	**5.46**	**41**	*e*	P		**Pg**	**17 58 35.2**	**-2.1**
	2.6nm,0.4s								
KPKS				*e*	S		**Sg**	**17 59 48.0**	**0.0**
	33nm,0.3s								
BTLS	**Baital**	**5.57**	**2**	*e*	P		**Pg**	**17 58 38.1**	**-1.4**
	3.3nm,0.6s								
BTLS				*e*	S		**Sg**	**17 59 53.5**	**+1.9**
	11nm,0.1s								
ARXS	**Arharly**	**5.64**	**31**	*e*	P		**Pg**	**17 58 38.5**	**-2.3**
	6.0nm,0.3s								
ARXS				*e*	S		**Sg**	**17 59 53.5**	**-0.4**
	30nm,0.3s								

KRNET ***27*** *18:05:39.4±0.1, 39.°38N×73.°60E, mb3.4*
SOME ***27*** *18:05:40.9, 39.°53N×73.°52E, h10km*
NNC ***27*** *18:05:45.3±2.6, 39.°59N×73.°55E, h0km, mb3.3, mpv2.9, Error ellipse: s-maj=24.0km s-min=16.4km az=177.0*
ISC 27 18:05:38.0±1.5, 39.°43N±0.°05×73.°57E±0.°04, h10km±13km, n26, σ1.°56/46, 18C-10D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.25**	**331**	⇓*e*	P		**Pg**	**18 06 03.9**	**+1.8**
OHH	baz=32			⇓*i*	S		**Sn**	**18 06 22.2**	**+3.5**
DRK	**Karamyk**	**1.37**	**273**	⇑*i*	P		**Pg**	**18 06 06.1**	**+1.7**
DRK	baz=75			⇑*i*	S		**Sg**	**18 06 25.1**	**+2.9**
BTK	**Batken**	**2.21**	**287**	⇑*e*	P		**Pg**	**18 06 20.1**	**-0.4**
BTK	baz=88			⇑*e*	S		**Sg**	**18 06 49.3**	**+0.1**
ARLS	**Aral**	**2.50**	**13**	⇑*i*	P		**Pb**	**18 06 24.0**	**+0.9**
ARLS	baz=12			⇑*i*	S		**Sg**	**18 06 56.4**	**-1.9**
GAR	**Garm**	**2.56**	**261**	*e*	P		**Pb**	**18 06 24.5**	**+0.3**
GAR	baz=63			*e*	S		**Sb**	**18 06 57.4**	**+1.6**
ARK	**Arkit**	**2.67**	**333**	⇑*i*	P		**Pb**	**18 06 26.1**	**+0.2**
ARK	baz=33			⇑*i*	S		**Sg**	**18 07 00.7**	**-3.0**
TRKS	**Terek-Say**	**2.80**	**319**	⇓*e*	P		**Pb**	**18 06 27.4**	**-0.9**
TRKS	baz=19			⇓*e*	S		**Sb**	**18 07 02.4**	**-0.3**
UCH	**Uchtor**	**2.89**	**14**	⇓*e*	P		**Pb**	**18 06 29.2**	**-0.7**
UCH	baz=13			⇓*e*	S		**Sb**	**18 07 05.8**	**+0.3**
EKS2	**Erkin-Say**	**3.23**	**3**	⇓*e*	P		**Pb**	**18 06 34.0**	**-1.6**
EKS2	baz=2.0			⇓*e*	S		**Sb**	**18 07 14.1**	**-1.1**
CHGR	**Chuyangaron**	**3.52**	**259**	⇑*e*	P		**Pb**	**18 06 37.4**	**-3.1**
CHGR	baz=60			⇑*e*	S		**Sb**	**18 07 20.0**	**-3.3**
CHMS	**Chumysh**	**3.68**	**14**	⇑Pn			**Pb**	**18 06 41.7**	**-1.5**
CHMS	4.3nm,0.5s			⇑Lg			Lg	18 07 38.1	
TKM2	**Tokmak 2**	**3.81**	**23**	⇑Pn			**Pb**	**18 06 44.8**	**-0.7**
TKM2	19nm,0.8s 2.0nm,0.6s			⇑Lg			Lg	18 07 42.6	
IUG	**Iuzhnay**	**3.82**	**316**	*e*	P		**Pg**	**18 06 51.2**	**0.0**
IUG	14nm,0.8s 155nm,0.5s			*e*	S		**Sg**	**18 07 41.1**	**+0.3**
KST	**Kastek**	**4.04**	**26**	*e*	P		**Pg**	**18 06 56.3**	**+0.9**
KST	46nm,0.4s 2.4nm,0.1s			*e*	S		**Sg**	**18 07 49.8**	**+2.2**
SGDS	**Sogindy**	**4.10**	**11**	*e*	P		**Pg**	**18 06 56.9**	**+0.4**
SGDS	23nm,0.2s 3.0nm,0.1s			*e*	S		**Sg**	**18 07 50.9**	**+1.2**
DGS	**Degeres**	**4.16**	**23**	*e*	P		**Pg**	**18 06 57.9**	**+0.3**
DGS	6.7nm,0.1s 0.6nm,0.2s			*e*	S		**Sg**	**18 07 52.5**	**+1.1**
MTBS	**Maitube**	**4.28**	**29**	*e*	P		**Pg**	**18 07 00.8**	**+0.8**
MTBS	18nm,0.3s 3.7nm,0.1s			*e*	S		**Sg**	**18 07 57.6**	**+2.2**
KK31	**Karatay Array**	**4.34**	**329**	⇑Pn			**Pb**	**18 06 50.9**	**-3.4**
KK31	11nm,0.3s 0.1nm,0.3s,baz=132,slow=12,SNR=7.8			⇑Pg			**Pg**	**18 07 00.2**	**-0.9**
KK31	1.0nm,0.3s,baz=148,slow=16,SNR=9.0			⇓Lg			Lg	18 07 56.8	
TNSS	**Tian-Shan**	**4.41**	**34**	*e*	P		**Pg**	**18 07 02.3**	**-0.3**
TNSS	4.7nm,0.5s,baz=152,slow=16,SNR=5.1 3.2nm,0.4s			*e*	S		**Sg**	**18 08 00.3**	**+0.5**
KUU	**Kurty**	**4.92**	**24**	*e*	P		**Pg**	**18 07 11.7**	**-0.5**
KUU	5.3nm,0.7s 1.9nm,0.1s			*e*	S		**Sg**	**18 08 16.3**	**+0.4**
CHKK	**Chushkaly**	**5.11**	**29**	*e*	P		**Pg**	**18 07 15.3**	**-0.6**
CHKK	12nm,0.7s 1.0nm,0.1s			*e*	S		**Sg**	**18 08 22.4**	**+0.3**
KPKS	**Kokpek**	**5.57**	**42**	*e*	P		**Pg**	**18 07 23.7**	**-1.0**
KPKS	9.4nm,0.2s 3.0nm,3.5s			*e*	S		**Sg**	**18 08 37.1**	**+0.3**
BTLS	**Baital**	**5.62**	**3**	*e*	P		**Pg**	**18 07 25.2**	**-0.5**
BTLS	8.3nm,0.4s 1.4nm,0.2s			*e*	S		**Sg**	**18 08 39.3**	**+0.9**
ARXS	**Arharly**	**5.74**	**32**	*e*	P		**Pg**	**18 07 27.2**	**-0.7**
ARXS	5.5nm,0.3s 4.3nm,0.6s			*e*	S		**Sg**	**18 08 42.9**	**+0.6**
PDGK	**Podgornoye**	**5.92**	**47**	⇑Pn			Pn	18 07 11.0	+5.1
PDGK	6.7nm,0.3s 3.5nm,1.4s			⇓Lg			Lg	18 08 45.2	
OTUK	**Ortayu**	**8.86**	**355**	⇑Lg			Lg	18 10 21.3	
	7.8nm,0.8s 1.3nm,0.7s								

IDC ***27*** *18:19:10.7±22.0, 19.°21S×177.°57W, h624km±302km, mb2.9/7, mbtmp3.9/7, Error ellipse: s-maj=83.6km s-min=36.4km az=68.0*
ISC 27 18:19:06.4±0.9, 19.°2S±0.°2×177.°5W±0.°2, h570km, n7, σ0.°64/7, mb3.4/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.81**	**243**	P			**P**	**18 25 43.2**	**-0.1**
	0.9nm,0.5s,baz=105,slow=15,SNR=3.9								
	0.9nm,0.5s								
WRA	**Warramunga Arr**	**45.27**	**261**	P			**P**	**18 26 34.2**	**+0.1**
	0.9nm,0.5s,baz=99,slow=5.9,SNR=18								
	0.9nm,0.5s								
ASAR	**Alice Springs**	**45.30**	**255**	P			**P**	**18 26 34.8**	**+0.5**
	3.9nm,0.7s,baz=89,slow=8.7,SNR=57								
	3.9nm,0.7s								
VNDA	**Vanda**	**59.29**	**185**	P			**P**	**18 28 13.0**	**-0.3**
	0.4nm,0.6s,baz=32,slow=7.4,SNR=3.5								
	0.4nm,0.6s								
NVAR	**Mina Array Bea**	**79.73**	**43**	P			**P**	**18 30 16.0**	**0.0**
	0.7nm,0.7s,baz=221,slow=7.4,SNR=5.5								
	0.7nm,0.7s								
TXAR	**Lajitas Array**	**85.94**	**57**	P			**P**	**18 30 48.0**	**+0.8**
	0.6nm,0.8s,baz=212,slow=6.8,SNR=6.6								
	0.6nm,0.8s								
ILAR	**Eielson Array**	**86.90**	**13**	P			**P**	**18 30 50.0**	**-0.8**
	0.5nm,0.8s,baz=239,slow=5.4,SNR=5.3								
	0.5nm,0.8s								

KRNET ***27*** *18:22:13.9±0.1, 39.°41N×73.°73E, mb3.6*
SOME ***27*** *18:22:14.9, 39.°77N×73.°05E, h5km*
NNC ***27*** *18:22:17.7±2.6, 39.°45N×73.°58E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=23.5km s-min=12.6km az=14.0*
ISC 27 18:22:14.7±1.2, 39.°37N±0.°06×73.°69E±0.°04, h10km, n42, σ2.°23/76, 32C-12D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.34**	**329**	⇓*e*	P		**Pn**	**18 22 38.4**	**-1.3**
OHH	baz=27			⇓*e*	S		**Sb**	**18 22 56.3**	**-1.1**
DRK	**Karamyk**	**1.47**	**275**	⇑*i*	P		**Pn**	**18 22 41.4**	**-0.2**
DRK	baz=74			⇑*i*	S		**Sg**	**18 23 01.8**	**-0.3**
BTK	**Batken**	**2.32**	**288**	⇑*e*	P		**Pn**	**18 22 54.5**	**+1.4**
BTK	baz=87			⇑*e*	S		**Sb**	**18 23 24.3**	**-1.2**
ARLS	**Aral**	**2.53**	**11**	⇑*i*	P		**Pn**	**18 22 56.8**	**+0.7**
ARLS	baz=10.0			⇑*i*	S		**Sn**	**18 23 28.2**	**+1.2**
GAR	**Garm**	**2.65**	**263**	⇓*e*	P		**Pn**	**18 22 59.5**	**+1.9**
GAR	baz=62			⇓*e*	S		**Sb**	**18 23 32.6**	**-2.4**
AML	**Almayashu**	**2.75**	**0**	P			**Pb**	**18 23 02.7**	**-1.6**
	SNR=63								
ARK	**Arkit**	**2.76**	**332**	⇑*i*	P		**Pn**	**18 23 00.7**	**+1.6**
ARK	baz=31			⇑*i*	S		**Sn**	**18 23 34.6**	**+2.1**
TRKS	**Terek-Say**	**2.90**	**319**	⇑*e*	P		**Pn**	**18 23 01.7**	**+0.5**
TRKS	baz=17			⇑*e*	S		**Sn**	**18 23 36.2**	**0.0**
UCH	**Uchtor**	**2.92**	**12**	P			**Pb**	**18 23 06.7**	**-0.4**
	SNR=16								
UCH	**Uchtor**	**2.92**	**12**	⇑*e*	P		**Pn**	**18 23 02.3**	**+0.7**
UCH	baz=12			⇑*e*	S		**Sn**	**18 23 37.9**	**+0.9**
EKS2	**Erkin-Say**	**3.29**	**1**	P			**Pb**	**18 23 10.7**	**-2.5**
	SNR=13								
EKS2	**Erkin-Say**	**3.29**	**1**	⇓*i*	P		**Pn**	**18 23 07.4**	**+1.0**
EKS2	baz=1.0			⇓*i*	S		**Sn**	**18 23 46.4**	**+0.8**
AAK	**Ala-Archa**	**3.32**	**10**	P			**Pb**	**18 23 12.8**	**-1.0**
	SNR=7.4								
AAK	**Ala-Archa**	**3.32**	**10**	⇑*e*	P		**Pn**	**18 23 07.9**	**+1.0**
AAK	baz=10.0			⇑*e*	S		**Sn**	**18 23 47.1**	**+0.7**
KBK	**Karagaybulak**	**3.42**	**16**	P			**Pb**	**18 23 14.8**	**-0.7**
	SNR=8.9								
KBK	**Karagaybulak**	**3.42**	**16**	⇓*e*	P		**Pn**	**18 23 09.2**	**+1.0**
KBK	baz=15			⇓*e*	S		**Sn**	**18 23 49.5**	**+0.7**
ULHL	**Ulahol**	**3.46**	**33**	P			**Pg**	**18 23 19.1**	**-2.0**
	SNR=10								
BOOM	**Boomskoye usch**	**3.55**	**28**	⇑*i*	P		**Pn**	**18 23 11.1**	**+1.0**
BOOM	baz=28			⇑*i*	S		**Sn**	**18 23 52.1**	**0.0**
CHGR	**Chuyangaron**	**3.60**	**260**	⇑*e*	P		**Pn**	**18 23 12.8**	**+2.1**
CHGR	baz=60			⇑*e*	S		**Sn**	**18 23 55.5**	**+2.1**
CHMS	**Chumysh**	**3.71**	**12**	⇓*e*	P		**Pn**	**18 23 13.2**	**+1.1**
CHMS	baz=12			⇓*e*	S		**Sn**	**18 23 56.1**	**+0.2**
CHMS	**Chumysh**	**3.71**	**12**	⇓Pn			**Pb**	**18 23 16.2**	**-4.1**
CHMS	5.9nm,0.7s 51nm,0.9s			⇑Lg			Lg	18 24 12.7	
KDJ	**Kajisay**	**3.82**	**43**	⇑*i*	P		**Pn**	**18 23 14.6**	**+0.8**
KDJ	baz=43			⇑*i*	S		**Sn**	**18 23 58.9**	**0.0**
TKM2	**Tokmak 2**	**3.83**	**21**	⇑*e*	P		**Pn**	**18 23 14.8**	**+0.9**
TKM2	baz=21			⇑*e*	S		**Sn**	**18 23 59.4**	**+0.4**
TKM2	**Tokmak 2**	**3.83**	**21**	⇑Pn			**Pb**	**18 23 19.2**	**-3.2**
TKM2	2.2nm,0.7s 23nm,0.5s			⇑Lg			Lg	18 24 18.0	
IUG	**Iuzhnay**	**3.92**	**316**	*e*	P		**Pn**	**18 23 17.4**	**+2.2**
IUG	184nm,0.3s 52nm,0.5s			*e*	S		**Sn**	**18 24 01.4**	**+0.1**
KST	**Kastek**	**4.05**	**24**	*e*	P		**Pg**	**18 23 29.6**	**-2.7**
KST	4.1nm,0.3s 50nm,0.8s			*e*	S		**Sg**	**18 24 22.4**	**-2.3**
SGDS	**Sogindy**	**4.14**	**10**	*e*	P		**Pb**	**18 23 28.6**	**+0.9**
SGDS	2.8nm,0.1s 16nm,0.6s			*e*	S		**Sb**	**18 24 21.0**	**+3.3**
DGS	**Degeres**	**4.17**	**21**	*e*	P		**Pg**	**18 23 31.5**	**-3.1**
DGS	5.1nm,0.1s 32nm,0.2s			*e*	S		**Sg**	**18 24 25.9**	**-2.7**
MTBS	**Maitube**	**4.28**	**28**	*e*	P		**Pg**	**18 23 34.7**	**-2.0**
MTBS	7.3nm,0.3s 14nm,0.7s			*e*	S		**Sg**	**18 24 31.6**	**-0.6**
TNSS	**Tian-Shan**	**4.41**	**33**	*e*	P		**Pg**	**18 23 38.1**	**-1.0**
TNSS	7.4nm,0.1s 13nm,0.6s			*e*	S		**Sg**	**18 24 37.2**	**+0.9**
KK31	**Karatay Array**	**4.43**	**328**	⇑Pn			**Pn**	**18 23 23.7**	**+1.7**
KK31	1.2nm,0.3s,baz=127,slow=12,SNR=18 1.6nm,0.3s,baz=141,slow=15,SNR=10			Pg			**Pb**	**18 23 34.6**	**+2.0**
KK31	6.3nm,0.4s,baz=155,slow=23,SNR=5.5			⇑Sn			**Sn**	**18 24 17.8**	**+4.1**
KK31	9.3nm,0.4s,baz=141,slow=30,SNR=3.6			⇑Lg			Lg	18 24 33.0	
KRBS	**Karabastau**	**4.57**	**18**	*e*	P		**Pb**	**18 23 38.3**	**+3.2**
KRBS	2.3nm,0.1s 14nm,0.6s			*e*	S		**Sg**	**18 24 37.5**	**-3.9**
BRLS	**Borolday**	**4.67**	**323**	*e*	P		**Pn**	**18 23 28.7**	**+3.4**
BRLS	1.7nm,0.1s 9.6nm,0.0s			*e*	S		**Sn**	**18 24 21.2**	**+1.7**
KTBS	**Karatobe**	**4.88**	**26**	*e*	P		**Pg**	**18 23 45.9**	**-2.3**
KTBS	2.8nm,0.4s 41nm,0.5s			*e*	S		**Sg**	**18 24 50.6**	**-0.8**
KUU	**Kurty**	**4.93**	**23**	*e*	P		**Pg**	**18 23 45.3**	**-3.9**
KUU	1.5nm,0.2s 26nm,1.0s			*e*	S		**Sg**	**18 24 49.6**	**-3.4**
CHKK	**Chushkaly**	**5.11**	**28**	*e*	P		**Pg**	**18 23 49.4**	**-3.3**
CHKK	1.9nm,0.0s 12nm,0.1s			*e*	S		**Sg**	**18 24 56.2**	**-2.6**
SATY	**Saty**	**5.12**	**42**	*e*	P		**Pg**	**18 23 53.2**	**+0.5**
SATY	3.5nm,0.4s 15nm,0.4s			*e*	S		**Sg**	**18 25 03.4**	**+4.3**
KPKS	**Kokpek**	**5.55**	**41**	*e*	P		**Pg**	**18 24 00.3**	**-0.7**
KPKS	3.8nm,0.1s 7.7nm,0.1s			*e*	S		**Sg**	**18 25 15.4**	**+2.6**
BTLS	**Baital**	**5.67**	**3**	*e*	P		**Pb**	**18 23 55.7**	**+1.9**
BTLS	1.3nm,0.2s 7.7nm,0.1s			*e*	S		**Sb**	**18 25 07.4**	**+5.7**
ARXS	**Arharly**	**5.74**	**31**	*e*	P		**Pg**	**18 24 01.2**	**-3.4**
ARXS	4.0nm,0.1s 15nm,0.5s			*e*	S		**Sg**	**18 25 16.3**	**-2.6**
PDGK	**Podgornoye**	**5.89**	**46**	⇑Pn			**Pn**	**18 23 44.6**	**+2.5**

2.2nm,0.8s
PDGK ⇑Pg **Pg** **18 24 03.9 -3.5**
3.6nm,0.8s
PDGK ⇓Lg Lg 18 25 25.3
15nm,1.4s
OTUK Ortayu 8.92 354 ⇑Pn **Pn** **18 24 27.2 +3.6**
0.8nm,0.6s
OTUK ⇑Lg Lg 18 26 54.2
9.6nm,1.0s

IDC 27 18:29:39.0±1.5, 35°08'N×25°68'E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=345.1km s-min=26.5km az=141.0, Crete

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
TORD	**Torodi Ar. Bea**	**30.76**	**231**	P		P	18 35 56.2	0.0
	0.5nm,0.7s,baz=32,slow=9.2,SNR=4.1							
	0.5nm,0.7s							
KURBB	**Kurchatov Arra**	**40.84**	**51**	P		P	18 37 22.5	+0.2
	0.9nm,0.8s,baz=277,slow=9.2,SNR=5.9							
	0.9nm,0.8s							
MKAR	**Makanchi Array**	**43.46**	**57**	P		P	18 37 43.5	-0.3
	0.3nm,0.5s,baz=269,slow=8.3,SNR=6.1							
	0.3nm,0.5s							
ZALV	**Zalesovo Beam**	**44.75**	**46**	P		P	18 37 53.7	-0.3
	0.6nm,0.5s,baz=266,slow=10.0,SNR=4.0							
	0.6nm,0.5s							

IDC 27 18:33:34.5±4.4, 22°.49N×94°.37E, h94km±42km, mb3.5/5, mbtmp3.6/6, MS4.0/1, Error ellipse: s-maj=81.9km s-min=18.2km az=57.0

ISC 27 18:33:35.2±1.4, 22°.4N±0°.5×94°.3E±0°.6, h106km, n7, σ0s83/6, mb3.7/5, Myanmar

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**5.83**	**131**	P		**Pn**	**18 34 58.6**	**-0.7**
	0.6nm,0.7s,baz=311,slow=13,SNR=5.4							
MKAR	**Makanchi Array**	**26.22**	**341**	P		**P**	**18 39 00.5**	**+0.4**
	0.8nm,0.5s,baz=148,slow=10.0,SNR=18							
	0.8nm,0.5s							
KURBB	**Kurchatov Arra**	**30.77**	**340**	P		**P**	**18 39 40.7**	**+0.3**
	0.5nm,0.3s,baz=148,slow=8.5,SNR=5.6							
	0.5nm,0.3s							
JHJ	**Hachijo jima 2**	**41.34**	**65**	LR		LR	18 58 11.4	
	comp=Z,204nm,21.9s,baz=78,slow=36							
AKASG	**Malin Array Be**	**57.31**	**317**	P		**P**	**18 43 11.5**	**-0.5**
	0.3nm,0.3s,baz=78,slow=7.3,SNR=3.3							
	0.3nm,0.3s							
ASAR	**Alice Springs**	**59.81**	**137**	P		**P**	**18 43 30.7**	**+1.1**
	0.3nm,0.5s,baz=322,slow=6.9,SNR=12							
	0.3nm,0.5s							
FINES	**FINESS Array B**	**60.20**	**329**	P		**P**	**18 43 31.6**	**-0.2**
	1.6nm,0.8s,baz=69,slow=9.6,SNR=3.7							
	1.6nm,0.8s							

IDC 27 18:50:03.7±1.2, 2°.60S×139°.32E, h0km, mb3.8/5, mbtmp3.8/6, ML4.1/1, MS3.3/4, Error ellipse: s-maj=63.4km s-min=22.1km az=87.0

ISC 27 18:50:07.9±1.2, 2°.7S±0°.1×139°.3E±0°.4, h27km, n8, σ0s65/6, mb3.8/5, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
GUMO	**Guam**	**17.07**	**19**	LR		LR	19 00 10.8	
	comp=Z,39nm,19.0s,baz=188,slow=36							
WRA	**Warramunga Arr**	**17.85**	**195**	P		**Pn**	**18 54 14.1**	**-0.4**
	0.7nm,0.3s,baz=16,slow=12,SNR=10							
WRA				LR		LR	19 01 44.2	
	comp=Z,200nm,18.1s,baz=36,slow=39							
	2.1nm,0.5s							
ASAR	**Alice Springs**	**21.53**	**193**	P		**P**	**18 54 54.9**	**-0.2**
	1.9nm,0.8s,baz=19,slow=9.9,SNR=19							
ASAR				LR		LR	19 03 50.7	
	comp=Z,156nm,21.0s,baz=1.5,slow=38							
	1.9nm,0.8s							
PETK	**Petropavlovsk-**	**57.67**	**13**	LR		LR	19 20 43.4	
	comp=Z,17nm,21.4s,baz=164,slow=32							
SONM	**Songino Array**	**57.90**	**334**	P		**P**	**18 59 58.0**	**+0.3**
	0.3nm,0.5s,baz=160,slow=8.2,SNR=2.5							
	0.3nm,0.5s							
MKAR	**Makanchi Array**	**70.07**	**322**	P		**P**	**19 01 17.6**	**0.0**
	1.2nm,0.4s,baz=109,slow=7.7,SNR=34							
	1.2nm,0.4s							
VNDA	**Vanda**	**75.80**	**175**	P		**P**	**19 01 51.8**	**+0.8**
	0.8nm,0.9s,baz=325,slow=8.2,SNR=5.2							
	0.8nm,0.9s							
ILAR	**Eielson Array**	**85.55**	**24**	P		**P**	**19 02 42.9**	**-0.6**
	0.6nm,0.7s,baz=256,slow=4.5,SNR=6.0							
	0.6nm,0.7s							

SOME 27 19:08:21.3, 40°.05N×73°.63E, h5km

KRNET 27 19:08:06.6±0.1, 39°.47N×73°.72E, mb3.2, 12C-8D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
OHH	**Osh**	**1.27**	**326**	⇑*e*P		Pg	19 08 30.1	-0.9
	baz=26							
OHH				⇑*e*S		Sg	19 08 47.2	-0.2
	baz=26							
DRK	**Karamyk**	**1.48**	**271**	⇑*e*P		Pn	19 08 33.7	-1.1
	baz=71							
DRK				⇑*e*S		Sg	19 08 53.5	-0.7
	baz=71							
BTK	**Batken**	**2.31**	**286**	⇑*e*P		Pn	19 08 45.7	-0.3
	baz=86							
BTK				⇑*e*S		Sn	19 09 14.6	-0.5
	baz=86							
ARLS	**Aral**	**2.43**	**11**	⇓*i*P		Pn	19 08 47.0	-0.7
	baz=11							
ARLS				⇓*i*S		Sn	19 09 17.8	-0.5
	baz=11							
GAR	**Garm**	**2.68**	**261**	⇓*e*P		Pn	19 08 51.1	0.0
	baz=61							
GAR				⇓*e*S		Sn	19 09 23.5	-0.8
	baz=61							
UCH	**Uchtor**	**2.82**	**12**	⇓*e*P		Pn	19 08 53.4	+0.1
	baz=12							
UCH				⇓*e*S		Sn	19 09 27.4	-0.9
	baz=12							
TRKS	**Terek-Say**	**2.84**	**317**	⇑*e*P		Pn	19 08 52.5	-0.9
	baz=17							
TRKS				⇑*e*S		Sn	19 09 26.0	-2.4
	baz=17							
EKS2	**Erkin-Say**	**3.19**	**1**	⇑*e*P		Pn	19 08 58.0	-0.1
	baz=1.0							
EKS2				⇑*e*S		Sn	19 09 35.8	-1.1
	baz=1.0							
AAK	**Ala-Archa**	**3.22**	**10**	⇓*e*P		Pn	19 08 58.6	+0.1
	baz=10.0							
AAK				⇓*e*S		Sn	19 09 36.5	-1.2
	baz=10.0							
KBK	**Karagaybulak**	**3.32**	**16**	⇑*e*P		Pn	19 09 00.0	+0.1
	baz=16							
KBK				⇑*e*S		Sn	19 09 39.0	-1.1
	baz=16							
IUG	**Iuzhnay**	**3.87**	**315**	*e*P		Pg	19 09 23.9	+3.2
	147nm,0.1s							
IUG				*e*S		Sg	19 10 08.8	-2.0
	20nm,0.1s							
KST	**Kastek**	**3.95**	**25**	*e*P		Pg	19 09 25.5	+3.2
	2.0nm,0.1s							
KST				*e*S		Sg	19 10 11.8	-1.7
	14nm,0.2s							
SGDS	**Sogindy**	**4.04**	**10**	*e*P		Pg	19 09 25.4	+1.4
	1.8nm,0.1s							
SGDS				*e*S		Sb	19 10 11.5	+3.6
	3.2nm,0.1s							
DGS	**Degeres**	**4.07**	**22**	*e*P		Pg	19 09 26.8	+2.2
	2.8nm,0.0s							
DGS				*e*S		Sg	19 10 13.8	-3.6
	9.1nm,0.1s							
MTBS	**Maitube**	**4.19**	**28**	*e*P		Pg	19 09 30.7	+3.8
	3.5nm,0.0s							
MTBS				*e*S		Sg	19 10 20.8	-0.3
	6.3nm,0.1s							
TNSS	**Tian-Shan**	**4.32**	**33**	*e*P		Pg	19 09 33.1	+3.8
	2.5nm,0.1s							
TNSS				*e*S		Sg	19 10 25.2	-0.1
	6.9nm,0.1s							
KRBS	**Karabastau**	**4.47**	**19**	*e*P		Pg	19 09 34.8	+2.5
	1.8nm,0.2s							
KRBS				*e*S		Sg	19 10 28.0	-2.1
	7.6nm,0.1s							
BRLS	**Boroldoy**	**4.60**	**322**	*e*P		Pg	19 09 36.0	+1.2
	3.9nm,0.1s							
BRLS				*e*S		Sg	19 10 29.6	-4.9
	13nm,0.2s							
KTBS	**Karatobe**	**4.79**	**27**	*e*P		Pg	19 09 41.0	+2.7
	3.3nm,0.6s							
KTBS				*e*S		Sg	19 10 38.4	-1.9
	13nm,0.1s							
KUU	**Kurty**	**4.83**	**23**	*e*P		Pg	19 09 41.8	+2.6
	0.9nm,0.4s							
KUU				*e*S		Sg	19 10 39.7	-2.2
	9.7nm,0.7s							
CHKK	**Chushkaly**	**5.02**	**28**	*e*P		Pg	19 09 45.2	+2.5
	0.9nm,0.0s							
CHKK				*e*S		Sg	19 10 45.9	-1.9
	4.1nm,0.0s							
SATY	**Saty**	**5.03**	**43**	*e*P		Pg	19 09 47.1	+4.1
	2.5nm,0.0s							
SATY				*e*S		Sg	19 10 48.8	+0.5
	6.8nm,0.2s							
KURS	**Kuram**	**5.22**	**38**	*e*P		Pg	19 09 50.7	+4.0
	3.5nm,0.5s							
KURS				*e*S		Sg	19 10 54.8	+0.4
	4.1nm,0.6s							
KPKS	**Kokpek**	**5.46**	**41**	*e*P		Pg	19 09 54.8	+3.5
	3.4nm,0.1s							
KPKS				*e*S		Sg	19 11 02.1	0.0
	5.8nm,0.2s							
BTLS	**Baital**	**5.57**	**2**	*e*P		Pg	19 09 53.4	+0.1
	0.8nm,0.2s							
BTLS				*e*S		Sg	19 10 59.8	-5.7
	2.4nm,0.2s							
ARXS	**Arharly**	**5.65**	**32**	*e*P		Pg	19 09 56.8	+2.0
	3.6nm,0.3s							
ARXS				*e*S		Sg	19 11 05.7	-2.2
	4.3nm,0.2s							
BLB	**Baldybastay**	**5.83**	**36**	*e*P		Pg	19 10 01.2	+2.9
	1.5nm,0.1s							
BLB				*e*S		Sg	19 11 13.0	-1.0
	4.7nm,0.2s							

NNC 27 19:28:40.0±2.7, 38°.60N×73°.08E, h0km, mb5.5, mpv5.3, Error ellipse: s-maj=21.7km s-min=15.7km az=1.0
IDC 27 19:28:47.5±0.4, 39°.35N×73°.55E, h0km, mb4.9/36, mbtmp5.0/43, ML4.1/7, MS4.0/2, Error ellipse: s-maj=9.7km s-min=8.0km az=165.0
BJI 27 19:28:48.1±0.0, 39°.52N×73°.44E, h13km, mb4.8/58, mB4.9/43, ML4.8/6, Ms4.8/67, Ms7 4.6/60
GCMT 27 19:28:48.5±0.2, 39°.50N±0°.01×73°.42E±0°.03, h18km, MW4.9/96, Moment Tensor Solution. s35,c44; s96,c141; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 2.65±.13; Mθθ -2.83±.09; Mφφ 0.17±.08; Mrθ 0.86±.18; Mrφ -0.18±.06; Mθφ~0.18±.20; Best double couple: Mo 2.88400×10^16 NP1: φ 261.00000°, δ 37.00000°, λ 82.00000°. NP2: φ 91.00000°, δ 54.00000°, λ 96.00000°. Principal axes: T 2.7980, Plg80.0000°, Azm27.0000°; N 0.1670, Plg5.0000°, Azm268.0000°; P -2.9700, Plg9.0000°, Azm177.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
MOS 27 19:28:48.2±1.1, 39°.30N×73°.52E, h15km, mb5.4/49, MS4.7/37 Error ellipse: s-maj=3.7km s-min=2.8km az=105.8
MOS Felt (VI) at Bordobo; (V) at Sary-Tash, Kara-Kindik, Nura, Ikizyak; (IV) at Kashka-Suu, Achyk-Suu; (III-IV) at Karamyk; (III) at Gulcha.
NEIC 27 19:28:49.5±1.2, 39°.46N±0°.07×73°.58E±0°.08, h10km±1km, mb5.3/296, Error ellipse: s-maj=11.3km s-min=10.5km az=190.0
KRNET 27 19:28:52.0±0.1, 39°.55N×73°.37E, mb5.5
SOME 27 19:28:51.3, 39°.57N×73°.57E, h15km, MS5.0

ISC 27 19:28:48.4±0.6, 39°.47N±0°.02×73°.57E±0°.02, h5km±3km, n1262, σ1s56/1390, mb5.2/324, MS4.7/64, 444C-148D, Fault plane solution: NP1: φ 259.70642°, δ 19.40089°, λ 70.28523°. NP2: φ 100.50897°, δ 71.77769°, λ 96.77506°. Principal axes: T Plg62.6319°, Azm20.9638°; N Plg6.4338°, Azm278.3814°; P Plg26.4771°, Azm185.1616°; Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
OHH	**Osh**	**1.22**	**330**	⇓*e*P		**Pb**	**19 29 11.9**	**0.0**
	baz=35							
OHH				⇓*e*S		**Sg**	**19 29 26.3**	**-1.2**
	baz=35							
OHH	**Osh**	**1.22**	**330**	*e*PG		**Pb**	**19 29 11.9**	**0.0**
DRK	**Karamyk**	**1.37**	**271**	⇑*e*P		**Pn**	**19 29 14.3**	**-0.2**
	baz=67							
DRK				⇑*e*S		**Sg**	**19 29 30.9**	**-1.6**
	baz=67							
DRK	**Karamyk**	**1.37**	**271**			**Pn**	**19 29 13.4**	**-1.1**
KSH	**Kashi**	**1.86**	**88**	Pg		**Pn**	**19 29 18.3**	**-2.7**
KSH				Sg		**Sn**	**19 29 40.5**	**-4.5**
KSH				smax		smax		
	comp=N,15μm,0.7s							
KSH				smax		smax		
	comp=E,9μm,0.8s							
BTK	**Batken**	**2.20**	**286**	⇑*e*P		**Pb**	**19 29 27.6**	**-1.2**
	baz=85							
BTK				⇑*e*S		**Sn**	**19 29 53.8**	**+0.4**
	baz=85							
BTK	**Batken**	**2.20**	**286**	Pn		**Pb**	**19 29 27.6**	**-1.2**
BTK	**Batken**	**2.20**	**286**	ePN		**Pb**	**19 29 27.6**	**-1.2**
BTK				*e*S		**Sn**	**19 29 53.8**	**+0.4**
ARLS	**Aral**	**2.46**	**13**	⇓*i*P		**Pb**	**19 29 33.2**	**+0.1**
	baz=17							
ARLS				⇓*i*S		**Sb**	**19 30 03.0**	**-0.8**
	baz=17							
GAR	**Garm**	**2.57**	**261**			**Pb**	**19 29 33.4**	**-1.7**
ARK	**Arkit**	**2.63**	**333**	⇑*i*P		**Pb**	**19 29 34.3**	**-1.8**
	baz=35							
ARK				⇑*i*S		**Sn**	**19 30 04.2**	**+0.2**
	baz=35							
AML	**Almayashu**	**2.66**	**2**	P		**Pb**	**19 29 36.4**	**-0.4**
	SNR=195							
AML	**Almayashu**	**2.66**	**2**	ePN		**Pb**	**19 29 35.6**	**-1.2**
AML				*e*S		**Sn**	**19 30 07.5**	**+2.3**
AML	**Almayashu**	**2.66**	**2**	*e*P		**Pb**	**19 29 36.4**	**-0.4**
	SNR=373							
TRKS	**Terek-Say**	**2.77**	**319**	⇑*e*P		**Pn**	**19 29 34.9**	**+1.3**
	baz=19							
TRKS				⇑*e*S		**Sn**	**19 30 06.1**	**-1.4**
	baz=19							
TRKS	**Terek-Say**	**2.77**	**319**	ePN		**Pn**	**19 29 34.9**	**+1.3**
UCH	**Uchtor**	**2.85**	**14**	P		**Pb**	**19 29 39.2**	**-0.8**
	SNR=1553							
UCH	**Uchtor**	**2.85**	**14**	⇑*e*P		**Pb**	**19 29 38.6**	**-1.4**
	baz=18							
UCH				⇑*e*S		**Sb**	**19 30 12.6**	**-2.7**
	baz=18							
UCH	**Uchtor**	**2.85**	**14**	ePN		**Pb**	**19 29 38.6**	**-1.4**
UCH				*e*S		**Sb**	**19 30 12.6**	**-2.7**
EKS2	**Erkin-Say**	**3.19**	**3**	P		**Pb**	**19 29 44.0**	**-1.7**
	SNR=511							
EKS2	**Erkin-Say**	**3.19**	**3**	⇑*e*P		**Pb**	**19 29 43.0**	**-2.7**
	baz=5.0							
EKS2				⇑*e*S		**Sn**	**19 30 19.9**	**+2.0**
	baz=5.0							
EKS2	**Erkin-Say**	**3.19**	**3**	ePN		**Pb**	**19 29 43.0**	**-2.7**
EKS2				*e*S		**Sn**	**19 30 19.9**	**+2.0**
AAK	**Ala-Archa**	**3.24**	**12**	P		**Pb**	**19 29 44.6**	**-1.9**
	SNR=542							
AAK	**Ala-Archa**	**3.24**	**12**	Pn		**Pb**	**19 29 45.0**	**-1.5**
	112nm,0.3s,baz=184,slow=7.3,SNR=429							
AAK				LR		LR	19 30 25.5	
	comp=Z,1μm,19.7s,baz=211,slow=29							
	628nm,0.5s							
AAK	**Ala-Archa**	**3.24**	**12**	⇓*e*P		**Pb**	**19 29 43.8**	**-2.7**
	baz=15							
AAK				⇓*e*S		**Sn**	**19 30 21.8**	**+2.7**
	baz=15							
AAK	**Ala-Archa**	**3.24**	**12**			**Pb**	**19 29 44.7**	**-1.8**
AAK	**Ala-Archa**	**3.24**	**12**	P		**Pb**	**19 29 45.4**	**-1.1**
AAK	**Ala-Archa**	**3.24**	**12**	*i* P		**Pb**	**19 29 45.1**	**-1.5**
	SNR=561							
KBK	**Karagaybulak**	**3.35**	**18**	P		**Pb**	**19 29 46.5**	**-1.8**
	SNR=235							
KBK	**Karagaybulak**	**3.35**	**18**	⇑*i*P		**Pb**	**19 29 45.5**	**-2.9**
	baz=20							
KBK				⇑*e*S		**Sn**	**19 30 24.7**	**+2.9**
	baz=20							
KBK	**Karagaybulak**	**3.35**	**18**	*i* PN		**Pb**	**19 29 45.5**	**-2.9**
KBK				*e*S		**Sn**	**19 30 24.7**	**+2.9**
ULHL	**Ulahol**	**3.43**	**35**	P		**Pb**	**19 29 48.2**	**-1.7**
	SNR=79							
ULHL	**Ulahol**	**3.43**	**35**	⇑*i*P		**Pb**	**19 29 47.3**	**-2.5**
	baz=38							
ULHL				⇑*e*S		**Sb**	**19 30 28.0**	**-4.0**
	baz=38							
ULHL	**Ulahol**	**3.43**	**35**	*i* PN		**Pb**	**19 29 47.3**	**-2.5**
ULHL				*e*S		**Sb**	**19 30 28.0**	**-4.0**
BOOM	**Boomskoye usch**	**3.51**	**30**	⇓*e*P		**Pb**	**19 29 48.4**	**-2.7**
	baz=33							
BOOM				⇓*e*S		**Sn**	**19 30 29.5**	**+3.7**
	baz=33							
BOOM	**Boomskoye usch**	**3.51**	**30**	Pn		**Pb**	**19 29 48.3**	**-2.7**
BOOM	**Boomskoye usch**	**3.51**	**30**	*e*PN		**Pb**	**19 29 48.4**	**-2.7**
BOOM				*e*S		**Sn**	**19 30 29.5**	**+3.7**
CHGR	**Chuyangaron**	**3.53**	**258**			**Pn**	**19 29 46.2**	**+2.2**
CHGR	**Chuyangaron**	**3.53**	**258**	PN		**Pn**	**19 29 46.2**	**+2.2**
CHMS	**Chumysh**	**3.64**	**14**	P		**Pb**	**19 29 50.0**	**-3.2**
	SNR=89							
CHMS	**Chumysh**	**3.64**	**14**	⇑*i*P		**Pn**	**19 29 49.1**	**+3.7**
	baz=16							
CHMS				⇑*i*S		**Sn**	**19 30 31.2**	**+2.5**
	baz=16							
CHMS	**Chumysh**	**3.64**	**14**	*i* PN		**Pn**	**19 29 49.1**	**+3.7**
CHMS				*i* S		**Sn**	**19 30 31.2**	**+2.5**
CHMS	**Chumysh**	**3.64**	**14**	⇑Pn		**Pb**	**19 29 50.4**	**-2.8**
	235nm,0.5s							
CHMS				⇓Sn		**Sg**	**19 30 44.4**	**-0.8**
	3μm,1.2s							
TAS	**Tashkent**	**3.75**	**301**	⇑*e*P		**Pn**	**19 29 49.0**	**+2.0**
	baz=1.0							
TAS	**Tashkent**	**3.75**	**301**			**Pn**	**19 29 49.1**	**+2.1**
TAS	**Tashkent**	**3.75**	**301**	*e*PN		**Pn**	**19 29 49.0**	**+2.0**
TKM2	**Tokmak 2**	**3.77**	**23**	P		**Pb**	**19 29 52.0**	**-3.5**
	SNR=165							
TKM2	**Tokmak 2**	**3.77**	**23**	⇑*e*P		**Pb**	**19 29 51.7**	**-3.9**
	baz=26							
TKM2				⇑*e*S		**Sn**	**19 30 35.4**	**+3.1**
	baz=26							
TKM2	**Tokmak 2**	**3.77**	**23**	ePN		**Pb**	**19 29 51.7**	**-3.9**
TKM2				*e*S		**Sn**	**19 30 35.4**	**+3.1**
TKM2	**Tokmak 2**	**3.77**	**23**	⇓Pn		**Pb**	**19 29 52.3**	**-3.3**
	157nm,1.0s							
TKM2				⇓Pg		**Pg**	**19 30 03.5**	**+2.9**
	725nm,1.1s							
TKM2				⇑Sn		**Sg**	**19 30 51.3**	**+1.8**
	2μm,0.7s							
IUG	**Iuzhnay**	**3.79**	**316**	ePN		**Pn**	**19 29 50.8**	**+3.2**
IUG				*e*			19 29 59.1	
IUG				*e*			19 30 50.0	
IUG	**Iuzhnay**	**3.79**	**316**	*e*P		**Pg**	**19 29 59.5**	**-1.6**
	22μm,1.2s							
IUG				*e*S		**Sg**	**19 30 48.4**	**-1.8**
IUG	**Iuzhnay**	**3.79**	**316**	*e*Pn		**Pn**	**19 29 50.9**	**+3.2**
	baz=315							
IUG				*e*Pg		**Pg**	**19 29 59.2**	**-1.9**
	baz=315							
IUG				*e*Lg		Lg	19 30 50.1	
	baz=315							
DZA	**Taraz**	**3.81**	**334**	ePN		**Pn**	**19 29 51.5**	**+3.7**
DZA				*e*			19 30 00.3	
DZA				*e*			19 30 50.9	
DZA	**Taraz**	**3.81**	**334**	*e*P		**Pg**	**19 29 59.2**	**-2.2**
	936nm,0.8s							
DZA				*e*S		**Sg**	**19 30 47.6**	**-3.2**
	5μm,0.2s							
DZA	**Taraz**	**3.81**	**334**	*e*Pn		**Pn**	**19 29 51.5**	**+3.7**
	baz=334							
DZA				*e*Pg		**Pg**	**19 30 00.4**	**-1.1**
	baz=334							
DZA				*e*Lg		Lg	19 30 50.9	
	baz=334							
KDJ	**Kajisay**	**3.82**	**45**	⇓*i*P		**Pb**	**19 29 53.1**	**-3.2**
	baz=47							
KDJ				⇓*i*S		**Sn**	**19 30 38.0**	**+4.6**
	baz=47							
KDJ	**Kajisay**	**3.82**	**45**			**Pn**	**19 29 50.4**	**+2.4**
KDJ	**Kajisay**	**3.82**	**45**	*i* PN		**Pb**	**19 29 53.1**	**-3.2**
KDJ				*i* S		**Sn**	**19 30 38.0**	**+4.6**
USP	**Ospenovka**	**3.86**	**10**	P		**Pb**	**19 29 52.8**	**-4.1**
	SNR=97							
USP	**Ospenovka**	**3.86**	**10**	⇓*e*P		**Pn**	**19 29 52.3**	**+3.9**
	baz=13							
USP				⇓*e*S		**Sn**	**19 30 36.2**	**+2.0**
	baz=13							
USP	**Ospenovka**	**3.86**	**10**	*e*PN		**Pn**	**19 29 52.3**	**+3.9**
USP				*e*S		**Sn**	**19 30 36.2**	**+2.0**
TARG	**Taragay, Kyrgy**	**3.93**	**54**	Pn		**Pn**	**19 29 53.6**	**+3.8**
TARG	**Taragay, Kyrgy**	**3.93**	**54**	PN		**Pn**	**19 29 53.6**	**+3.8**
KST	**Kastek**	**4.00**	**26**	*e*P		**Pg**	**19 30 04.6**	**-0.4**
	189nm,0.9s							
KST				*e*S		**Sg**	**19 30 57.1**	**+0.3**
	3μm,0.3s							
SGDS	**Sogindy**	**4.06**	**11**	*e*PN		**Pn**	**19 29 54.9**	**+3.7**
SGDS				*e*			19 30 03.3	
SGDS				*e*			19 30 58.0	
SGDS	**Sogindy**	**4.06**	**11**	*e*Pn		**Pn**	**19 29 54.9**	**+3.7**
	baz=12							
SGDS				*e*Pg		**Pg**	**19 30 03.4**	**-2.7**
	baz=12							
SGDS				*e*Lg		Lg	19 30 58.0	
	baz=12							
DGS	**Degeres**	**4.12**	**23**	*e*P		**Pg**	**19 30 07.0**	**-0.3**
	363nm,0.7s							
DGS				*e*S		**Sg**	**19 31 01.0**	**+0.4**
	2μm,0.4s							
CHM	**Chimkent**	**4.14**	**315**	*e*PN		**Pb**	**19 29 58.1**	**-3.6**
CHM				*e*			19 31 01.6	
CHM	**Chimkent**	**4.14**	**315**	*e*P		**Pg**	**19 30 07.7**	**0.0**
	280nm,0.4s							
CHM				*e*S		**Sg**	**19 31 02.3**	**+0.9**
	8μm,0.1s							
CHM	**Chimkent**	**4.14**	**315**	*e*Pn		**Pb**	**19 29 58.2**	**-3.6**
	baz=314							
CHM				*e*Lg		Lg	19 31 01.6	
	baz=314							
MTBS	**Maitube**	**4.24**	**30**	*e*P		**Pg**	**19 30 08.8**	**-0.9**
	366nm,0.9s							
MTBS				*e*S		**Sg**	**19 31 03.5**	**-1.2**
	1μm,0.2s							
KK31	**Karatay Array**	**4.30**	**329**			**Pn**	**19 29 57.4**	**+2.9**
KK31	**Karatay Array**	**4.30**	**329**	PN		**Pn**	**19 29 57.9**	**+3.4**
KK31				PG		**Pg**	**19 30 09.6**	**-1.2**
KK31				SN		**Sb**	**19 30 52.2**	**-4.5**
KK31				LG		Lg	19 31 14.8	
KK31	**Karatay Array**	**4.30**	**329**	Pn		**Pn**	**19 29 58.0**	**+3.4**
	93nm,0.6s,baz=144,slow=12,SNR=2164							
KK31				⇑Pg		**Pg**	**19 30 09.1**	**-1.7**
	1μm,0.9s,baz=152,slow=16,SNR=18							
KK31				⇑Sn		**Sb**	**19 30 52.2**	**-4.5**
	781nm,0.6s,baz=158,slow=20,SNR=6.7							
KK31

baz=34
AAA eLg Lg 19 31 13.6
baz=34
KRBS Karabastau 4.51 20 *e*P **Pg 19 30 12.9 -1.8**
221nm,0.7s
KRBS eS **Sg 19 31 11.7 -1.4**
827nm,0.1s
ANVS Anan'yevo 4.53 42 ⇓*i*P Pn 19 30 03.0 +5.2
baz=44
ANVS ⇓*i*S **Sn 19 30 54.7 +3.7**
baz=44
KNDC Almaty 4.53 33 PN Pb 19 30 03.5 -5.0
KNDC PG **Pg 19 30 19.5 +4.3**
KNDC SN **Sg 19 31 08.9 -5.0**
KNDC Almaty 4.53 33 ⇑Pn Pb 19 30 03.5 -4.9
245nm,0.6s
KNDC ⇓Pg **Pg 19 30 19.5 +4.3**
3µm,1.4s
KNDC ⇑Sn **Sg 19 31 09.0 -5.0**
10µm,1.1s
KNDC ⇓Lg Lg 19 31 57.8
4µm,0.8s
BRLS Borolday 4.54 323 *e*PN **Pn 19 29 58.6 +0.9**
BRLS *e* 19 30 10.5
BRLS *e* 19 31 09.8
BRLS Borolday 4.54 323 *e*P **Pb 19 30 11.1 +2.6**
116nm,0.9s
BRLS eS **Sg 19 31 09.1 -5.0**
2µm,0.3s
BRLS Borolday 4.54 323 *e*Pn **Pn 19 29 58.6 +0.9**
baz=319
BRLS *e*Pg **Pb 19 30 10.5 +2.0**
baz=319
BRLS eLg Lg 19 31 09.8
baz=319
KTBS Karatobe 4.84 28 *e*P **Pg 19 30 18.1 -2.9**
177nm,0.3s
KTBS eS **Sg 19 31 20.7 -3.0**
1µm,0.2s
KUU Kurty 4.88 24 *e*PN **Pn 19 30 05.8 +3.4**
KUU *e* 19 30 18.6
KUU *e* 19 31 25.3
KUU Kurty 4.88 24 *e*P **Pg 19 30 20.2 -1.7**
347nm,1.1s
KUU eS **Sg 19 31 24.0 -1.1**
1µm,0.3s
KUU Kurty 4.88 24 *e*Pn **Pn 19 30 05.9 +3.4**
baz=26
KUU *e*Pg **Pg 19 30 18.6 -3.2**
baz=26
KUU eLg Lg 19 31 25.4
baz=26
CHKK Chushkaly 5.07 29 *e*PN **Pn 19 30 08.6 +3.5**
CHKK *e* 19 30 21.8
CHKK *e* 19 31 29.2
CHKK Chushkaly 5.07 29 *e*P **Pg 19 30 22.2 -3.3**
86nm,0.7s
CHKK eS **Sg 19 31 28.4 -2.9**
489nm,0.3s
CHKK Chushkaly 5.07 29 *e*Pn **Pn 19 30 08.7 +3.5**
baz=31
CHKK *e*Pg **Pg 19 30 21.9 -3.7**
baz=31
CHKK eLg Lg 19 31 29.2
baz=31
SATY Saty 5.11 44 *e*PN **Pn 19 30 09.1 +3.4**
SATY *e* 19 30 24.0
SATY Saty 5.11 44 *e*P **Pg 19 30 23.7 -2.6**
167nm,0.2s
SATY eS **Sg 19 31 30.7 -1.8**
708nm,0.4s
SATY Saty 5.11 44 *e*Pn **Pn 19 30 09.1 +3.4**
baz=46
SATY *e*Pg **Pg 19 30 24.1 -2.2**
baz=46
SATY eLg Lg 19 31 34.3
baz=46
ZHN Zhinishke 5.20 43 *e*PN **Pn 19 30 10.1 +3.2**
ZHN *e* 19 30 25.6
ZHN Zhinishke 5.20 43 *e*P **Pg 19 30 24.7 -3.3**
56nm,0.6s
ZHN eS **Sg 19 31 32.3 -3.1**
755nm,0.8s
ZHN Zhinishke 5.20 43 *e*Pn **Pn 19 30 10.2 +3.2**
baz=45
ZHN *e*Pg **Pg 19 30 25.7 -2.3**
baz=45
ZHN eLg Lg 19 31 35.9
baz=45
KURS Kuram 5.29 39 *e*P **Pg 19 30 27.1 -2.7**
171nm,0.5s
KURS eS **Sg 19 31 37.0 -1.4**
624nm,0.7s
KPKS Kokpek 5.54 42 *e*PN **Pn 19 30 15.1 +3.6**
KPKS *e* 19 30 32.6
KPKS Kokpek 5.54 42 *e*P **Pg 19 30 30.5 -4.0**
117nm,0.3s
KPKS eS **Sg 19 31 42.4 -3.8**
689nm,1.1s
KPKS Kokpek 5.54 42 *e*Pn **Pn 19 30 15.2 +3.6**
baz=44
KPKS *e*Pg **Pg 19 30 32.6 -1.8**
baz=44
KPKS eLg Lg 19 31 48.1
baz=44
BTLS Baital 5.58 3 *e*PN **Pn 19 30 15.2 +3.2**
BTLS *e* 19 30 32.0
BTLS *e* 19 31 42.6
BTLS Baital 5.58 3 *e*P **Pg 19 30 31.0 -4.3**
180nm,0.3s
BTLS eS **Sg 19 31 42.6 -4.9**
526nm,0.4s
BTLS Baital 5.58 3 *e*Pn **Pn 19 30 15.2 +3.2**
baz=4.1
BTLS *e*Pg **Pg 19 30 32.0 -3.2**
baz=4.1
BTLS eLg Lg 19 31 42.6
baz=4.1
ARXS Arharly 5.71 32 *e*P **Pg 19 30 33.9 -3.7**
202nm,0.2s
ARXS eS **Sg 19 31 48.7 -2.9**
825nm,1.0s
PDGK Podgornoye 5.89 47 PN **Pn 19 30 19.2 +2.8**
PDGK LG Lg 19 31 55.3
PDGK Podgornoye 5.89 47 ⇓Pn **Pn 19 30 19.2 +2.8**
148nm,0.8s
PDGK ⇓Lg Lg 19 31 55.3
589nm,0.9s
BLB Baldybastay 5.90 37 *e*P **Pg 19 30 37.9 -3.5**
385nm,0.8s
BLB eS **Sg 19 31 54.6 -3.2**
611nm,0.4s
KBL Kabul 6.11 218 **Pn 19 30 22.6 +3.0**
KBL Kabul 6.11 218 PN **Pn 19 30 22.6 +3.0**
KBL Kabul 6.11 218 P **Pn 19 30 24.1 +4.6**
SNR=74
TDK Taldyqorghan 6.59 31 *e*PN **Pn 19 30 30.2 +4.3**
TDK *e* 19 30 55.1
TDK Taldyqorghan 6.59 31 *e*P **Pg 19 30 50.1 -4.5**
376nm,1.1s
TDK eS **Sg 19 32 16.4 -3.5**
2µm,1.6s
TDK Taldyqorghan 6.59 31 *e*Pn **Pn 19 30 30.3 +4.3**
baz=32
TDK *e*Pg **Pg 19 30 55.1 +0.6**
baz=32
TDK eLg Lg 19 32 17.6
baz=32
DJR Jarkent 6.72 42 *e*P **Pg 19 30 53.0 -4.0**
46nm,0.9s
DJR eS **Sg 19 32 20.7 -3.3**
379nm,1.1s
THW Thamme Wali 6.82 193 P **Pn 19 30 32.2 +3.0**
SARP Sargodha 7.57 186 P **Pn 19 30 41.4 +2.0**
BHK Bhakra 8.36 163 *e*P **Pn 19 30 53.2 +2.9**
OTUK Ortayu 8.82 355 P **Pn 19 30 59.2 +2.7**
OTUK Ortayu 8.82 355 ⇑Pn **Pn 19 30 59.2 +2.7**
120nm,1.1s
OTUK ⇓Lg Lg 19 33 26.2
814nm,1.0s
SMLA Simla 8.82 159 *e*P **Pn 19 30 58.0 +1.4**
SMLA IAmb IAmb 19 31 00.8
comp=Z,89nm,0.6s
MAKZ Makanchi 9.56 37 **Pn 19 31 07.3 +0.7**
MAKZ Makanchi 9.56 37 P **Pn 19 31 07.4 +0.7**
MAKZ Makanchi 9.56 37 ⇓Pn Pn 19 31 11.8 +5.1
comp=Z,32nm,1.0s

MAKZ ⇑Lg Lg 19 33 50.0
comp=Z,152nm,1.4s
MK31 Makanchi Array 9.70 38 Pn **Pn 19 31 11.9 +3.3**
MK31 Makanchi Array 9.70 38 P **Pn 19 31 11.9 +3.3**
MK31 Makanchi Array 9.70 38 Pn **Pn 19 31 12.3 +3.8**
comp=Z,28nm,0.8s,baz=210,slow=13,SNR=94
MK31 Lg Lg 19 33 55.9
comp=Z,146nm,1.4s,baz=222,slow=24,SNR=3.5
MKAR Makanchi Array 9.70 38 Pn **Pn 19 31 12.2 +3.6**
comp=Z,0.4nm,0.3s,baz=211,slow=10,SNR=59
MKAR Lg Lg 19 33 53.7
comp=Z,1.1nm,0.3s,baz=222,slow=21,SNR=3.5
comp=Z,14nm,0.9s
MKAR Makanchi Array 9.70 38 Pn **Pn 19 31 11.6 +3.0**
MKAR Makanchi Array 9.70 38 P **Pn 19 31 11.6 +3.0**
DDI Dehra Dun 9.84 157 *e*P **Pn 19 31 09.5 -1.1**
DDI IAmb IAmb 19 31 20.1
comp=Z,258nm,0.8s
HRA Herat 10.39 244 Pn **Pn 19 31 16.3 -1.9**
BRZS Berezniki 10.53 357 *e*P **Pn 19 31 21.8 +1.9**
BRZS Berezniki 10.53 357 *e*P **Pn 19 31 21.9 +1.9**
baz=357
NDI New Delhi 11.17 163 *e*P **Pn 19 31 30.2 +1.4**
PTH Pithoragarh 11.31 149 *e*P **Pn 19 31 30.7 -0.1**
LGTI Lohaghat 11.41 149 *e*P **Pn 19 31 30.8 -1.2**
WMQ Urumqi 11.42 63 *e*P **Pn 19 31 34.0 +1.8**
WMQ pP 19 31 37.0
WMQ S Sn 19 33 51.0 +11
WMQ pmax pmax
comp=Z,33nm,1.1s
WMQ pmax pmax
comp=Z,170nm,3.6s
WMQ LR LR
comp=Z,4µm,9.3s
WMQ LR LR
comp=Z,2µm,6.7s
WMQ LR LR
comp=Z,890nm,14.3s
ZSN Zaisan 11.44 42 *e*P Pn 19 31 38.3 +6.0
ZSN pmax pmax
comp=Z,18nm,1.2s
ZSN Zaisan 11.44 42 *e*P Pn 19 31 38.4 +6.0
comp=Z,18nm,1.2s,baz=43
KUDL Kundal 11.55 167 *e*P **Pn 19 31 33.5 -0.5**
SONA Sohna 11.56 164 *e*P **Pn 19 31 33.3 -0.8**
KURBB Kurchatov Arra 11.69 16 Pn **Pn 19 31 37.7 +2.0**
comp=Z,0.5nm,0.3s,baz=208,slow=12,SNR=36
comp=Z,16nm,1.1s
KURBB Kurchatov Arra 11.69 16 P **Pn 19 31 37.4 +1.7**
KURBB Kurchatov Arra 11.69 16 ⇑Pn **Pn 19 31 37.4 +1.7**
comp=Z,24nm,0.8s
KURBB ⇓Lg Lg 19 34 57.1
comp=Z,1µm,1.4s
KURK Kurchatov 11.79 16 Pn **Pn 19 31 37.9 +0.7**
KURK Kurchatov 11.79 16*c**e*P **Pn 19 31 38.2 +1.0**
KURK pmax pmax
comp=Z,45nm,1.7s
KURK Kurchatov 11.79 16 P **Pn 19 31 38.1 +0.9**
KURK Kurchatov 11.79 16 ⇑Pn **Pn 19 31 38.7 +1.5**
comp=Z,17nm,1.1s
KURK ⇑Lg Lg 19 34 58.3
comp=Z,844nm,1.3s
SEM Semipalatinsk 11.91 21 *e*P **Pn 19 31 41.4 +2.4**
SEM pmax pmax
comp=Z,12nm,0.8s
SEM Semipalatinsk 11.91 21 *e*P **Pn 19 31 41.5 +2.4**
comp=Z,12nm,0.8s,baz=22
GEYT Alibeck 12.18 268 Pn **Pn 19 31 41.1 -1.4**
comp=Z,3.9nm,0.3s,baz=84,slow=14,SNR=23
GEYT Sn **Sn 19 33 58.4 -0.3**
comp=Z,9.5nm,0.3s,baz=59,slow=40,SNR=5.9
comp=Z,16nm,0.4s
GEYT Alibeck 12.18 268 **Pn 19 31 39.6 -2.9**
GYA0 ALIBECK ARRAY 12.18 268 P **Pn 19 31 39.6 -2.9**
GYA0B ALIBECK ARRAY 12.18 268 **Pn 19 31 39.6 -2.9**
JASL Jaisalmer 12.71 191 *e*P **Pn 19 31 49.9 +0.1**
AJM Ajmer 12.99 176 *e*P **Pn 19 31 51.2 -2.4**
AB31 Akbulak array 13.79 320 P **Pn 19 32 03.5 -1.0**
AB31 Akbulak array 13.79 320 Pn **Pn 19 32 03.5 -1.0**
comp=Z,12nm,0.6s,baz=128,slow=14,SNR=355
ABKAR Akbulak array 13.79 320 Pn **Pn 19 32 02.9 -1.6**
DANN Dangsing 13.94 140 *e*P **Pn 19 32 04.0 -2.8**
comp=Z,50nm,0.4s
KOLN Koldanda 14.34 141 *e*P **Pn 19 32 08.7 -3.6**
JHNI Jhansi 14.57 162 *e*P **Pn 19 32 12.1 -3.2**
GKN Gorkha 14.66 138 *e*P **Pn 19 32 13.9 -2.8**
PKIN Phulchoki 15.41 137 *e*P **Pn 19 32 24.3 -2.4**
PKI Pulchoki 15.42 137 *e*P **Pn 19 32 24.5 -2.4**
AKTO Aktyubinsk 15.50 320 Pn **Pn 19 32 27.1 -0.5**
comp=Z,2.0nm,0.3s,baz=137,slow=15,SNR=37
AKTO Sn **Sn 19 35 14.6 -5.1**
comp=Z,3.0nm,0.3s,baz=343,slow=19,SNR=2.3
comp=Z,30nm,0.8s
AKTO Aktyubinsk 15.50 320 ⇑Pn **Pn 19 32 28.7 +1.1**
comp=Z,184nm,0.8s
JIRN Jiri 15.77 135 *e*P **Pn 19 32 28.7 -2.9**
comp=Z,59nm,0.4s
ZAA0 Zalesovo Array 16.38 24 Pn **Pn 19 32 39.1 +0.3**
ZALV Zalesovo Beam 16.38 24 Pn **Pn 19 32 39.6 +0.7**
comp=Z,4.0nm,0.3s,baz=210,slow=12,SNR=64
comp=Z,91nm,0.8s
ZALV Zalesovo Beam 16.38 24 **Pn 19 32 39.2 +0.4**
ZALV Zalesovo Beam 16.38 24 *i*P **Pn 19 32 39.5 +0.7**
ZALV pmax pmax
comp=Z,93nm,0.8s
BHPL Bhopal 16.51 167 *e*P **Pn 19 32 37.8 -2.9**
BHPL IAmb IAmb 19 32 40.4
comp=Z,24nm,0.5s
RAMN Ramite 16.55 135 *e*P **Pn 19 32 39.1 -2.4**
comp=Z,72nm,0.8s
TAPN Taplejung 16.87 132 *e*P **Pn 19 32 44.0 -1.6**
GOMU GeErMu 17.09 94 P **Pn 19 32 47.8 -0.6**
GOMU sP sP 19 32 56.0 +1.8
GOMU S **Sn 19 36 00.8 +1.9**
GOMU pmax pmax
comp=Z,8.0nm,1.0s
GOMU pmax pmax
comp=Z,140nm,4.9s
GOMU LR LR
comp=Z,870nm,13.4s
GOMU LR LR
comp=Z,880nm,14.1s
GOMU LR LR
comp=Z,1µm,14.7s
GTK Tadong 17.42 130 *e*P **Pn 19 32 52.0 -0.2**
GTK IAmb IAmb 19 33 04.6
comp=Z,35nm,0.8s
LSA Lhasa 17.42 119 **Pn 19 32 52.2 -0.4**
LSA Lhasa 17.42 119 P **Pn 19 32 52.3 -0.4**
LSA pmax pmax
comp=Z,22nm,0.8s
BLSP Bilaspur 18.77 155 *e*P **P 19 33 05.6 -2.7**
AKL Akola 18.94 170 *e*P **P 19 33 08.5 -1.7**
LKRN Lenkeran, Azer 19.25 276 P **Pn 19 33 14.8 +0.3**
SVE Sverdlovsk 19.34 338 *e*P **Pn 19 33 15.6 +0.2**
SVE *e*S **S 19 36 56.8 +3.4**
SVE pmax pmax
comp=Z,169nm,1.4s
SVE MLR MLR
comp=Z,4µm,10.0s
ARU Arti 19.65 335 P **P 19 33 18.3 +0.5**
baz=158,slow=7.5,SNR=55
comp=Z,85nm,0.7s
ARU Arti 19.65 335 P **P 19 33 18.3 +0.5**
ARU IAmb IAmb 19 33 25.1
comp=Z,115nm,0.8s
ARU Arti 19.65 335*c**i*P **Pn 19 33 18.7 -0.4**
ARU S **Sn 19 37 02.3 +2.4**
ARU pmax pmax
comp=Z,126nm,0.9s
ARU MLR MLR
comp=Z,2µm,11.0s
BANOM Banah 19.80 232 P **Pn 19 33 20.6 -0.6**
BANOM Banah 19.80 232 P **P 19 33 20.1 +0.4**
SHME Shamm 19.80 233 P **Pn 19 33 20.6 -0.6**
MAK Makhachkala 19.89 289 *e*P **P 19 33 17.1 -3.4**
MAK *e*S **S 19 36 58.3 -6.4**
MAK pmax pmax
comp=Z,140nm,1.2s
MAK MLR MLR
comp=Z,1µm,15.0s
GUWA GUWAHATI 20.13 126 *e*P **P 19 33 23.3 +0.1**
GUWA IAmb IAmb 19 33 28.7
comp=Z,46nm,0.9s
SEKA Sheki 20.16 283 P **P 19 33 23.8 +0.2**

KNGR Kungurtug, Tuv 20.16 49*c**i*P Pn 19 33 25.7 +0.3
GTA Gaotai 20.25 82 ⇑P Pn 19 33 27.3 +0.7
GTA pP sP 19 33 32.0 +3.4
GTA sP pP 19 33 35.0 +7.6
GTA S **S 19 37 13.0 +0.7**
GTA sS pS 19 37 22.5 -0.4
GTA pmax pmax
comp=Z,92nm,0.9s
GTA pmax pmax
comp=Z,460nm,5.5s
GTA LR LR
comp=Z,1µm,17.4s
GTA LR LR
comp=Z,830nm,16.4s
GTA LR LR
comp=Z,1µm,17.5s
MNGR Mingechevir, A 20.28 282 P **P 19 33 25.6 +0.8**
MASF Masafi 20.29 231 P Pn 19 33 28.4 +1.4
SNR=8.8
MSFE Esma-Masafi 20.30 231 *i*P **P 19 33 25.6 +0.5**
SNR=9.8
TEZP TEZPUR 20.54 123 *e*P Pn 19 33 28.9 -1.0
TEZP IAmb IAmb 19 33 33.5
comp=Z,32nm,1.1s
WSAR Wadi Sarin 20.56 222 P **P 19 33 28.6 +0.7**
comp=Z,24nm,0.7s,baz=70,slow=8.3,SNR=13
comp=Z,24nm,0.7s
WSAR Wadi Sarin 20.56 222 P Pn 19 33 32.7 +2.5
SNR=7.8
ZKTA Zakatala 20.57 285 P **P 19 33 28.0 +0.1**
UOSS Minazif 20.58 230 P **P 19 33 25.1 -3.1**
UOSS Minazif 20.58 230 P **P 19 33 26.9 -1.3**
UOSS Minazif 20.58 230 P **P 19 33 26.2 -2.0**
ZIRO ZIRO 20.63 119 *e*P **P 19 33 29.4 +0.4**
ZIRO IAmb IAmb 19 33 38.7
comp=Z,49nm,0.7s
SHL Shillong 20.70 127 P **P 19 33 28.8 -0.8**
SHL Shillong 20.70 127 P **P 19 33 28.8 -0.8**
SHL pmax pmax
comp=Z,38nm,0.8s
SHL Shillong 20.70 127 P Pn 19 33 31.1 -0.8
SNR=14
SHL Shillong 20.70 127 *e*P **P 19 33 28.9 -0.7**
HATD Hatta, Dubai 20.71 230 P **P 19 33 28.2 -1.4**
ITAN ITANAGAR 20.79 120 *e*P **P 19 33 30.2 -0.2**
ITAN IAmb IAmb 19 33 40.1
comp=Z,117nm,0.7s
ASHO Ashiyiah 20.86 230 P **P 19 33 31.1 -0.2**
SNR=18
ASHO Ashiyiah 20.86 230 *i*P **P 19 33 30.7 -0.6**
SNR=26
GANJ Ganja 20.86 282 P **P 19 33 31.1 -0.1**
NAZ Nazwa, Dubai 20.87 232 P **P 19 33 32.6 +1.2**
SNR=6.8
NAZ Nazwa, Dubai 20.87 232 P **P 19 33 30.9 -0.4**
WBK Wadi Bani Khal 20.90 221 P Pn 19 33 33.6 -0.6
SNR=6.4
HOQ Hoqain 20.99 226 P **P 19 33 31.0 -1.7**
FAQ Al Faqa, Dubai 21.10 231 P **P 19 33 33.9 +0.2**
GROC Groznyy 21.15 289 *e*P **P 19 33 35.0 +0.8**
GROC *e* 19 33 53.6
GROC *e*S **S 19 37 28.3 -1.4**
GROC pmax pmax
comp=Z,288nm,0.9s
ASUD Al Ashush, Dub 21.34 232 P **P 19 33 34.9 -1.5**
ALNE Al Ain 21.52 230 P **P 19 33 39.5 +1.2**
SNR=8.7
JMDO Jabal Madar 21.55 222 P **P 19 33 39.9 +1.2**
SNR=5.4
NAX Nakhchivan 21.69 278 P **P 19 33 41.6 +1.4**
BWNR Bhubaneshwar 21.81 148 *e*P **P 19 33 43.6 +2.2**
MOKO MOKOCHONG 21.87 121 *e*P **P 19 33 42.6 +0.4**
MOKO IAmb IAmb 19 33 51.5
comp=Z,138nm,1.0s
KOHI KOHIMA 22.01 122 *e*P **P 19 33 44.6 +0.9**
KOHI IAmb IAmb 19 33 54.2
comp=Z,1µm,0.9s
BELG Belogornoye 22.05 314 P **P 19 33 43.6 -0.2**
comp=Z,166nm,1.0s,baz=321,slow=1.8,SNR=48
comp=Z,166nm,1.0s
BELG Belogornoye 22.05 314 *i*P **P 19 33 43.4 -0.4**
BELG pmax pmax
comp=Z,86nm,1.1s
BELG MLR MLR
comp=Z,310nm,10.0s
GNI Garni 22.12 281 P **P 19 33 46.7 +1.9**
comp=Z,201nm,1.1s,baz=70,slow=1.7,SNR=31
comp=Z,201nm,1.1s
GNI Garni 22.12 281 P **P 19 33 45.8 +0.9**
GNI Garni 22.12 281*c**e*P **P 19 33 46.6 +1.7**
GNI pmax pmax
comp=Z,364nm,1.3s
GNI MLR MLR
comp=Z,284nm,15.0s
GNI Garni 22.12 281 P **P 19 33 46.3 +1.4**
LKP Lekhapani 22.12 116 *e*P **P 19 33 45.2 +0.4**
LKP IAmb IAmb 19 33 51.6
comp=Z,882nm,0.6s
HYBB Hyderabad (bro 22.39 167 *e*P **P 19 33 47.7 -0.1**
HYBB *e*S **S 19 37 54.6 +0.2**
HYBB Hyderabad (bro 22.39 167 *e*S **S 19 37 54.9 +0.5**
HYBB Hyderabad (bro 22.39 167 *e*P **P 19 33 48.7 +1.0**
AZL Aizawl 22.53 128 *e*P **P 19 33 50.5 +1.2**
AZL IAmb IAmb 19 33 59.0
comp=Z,59nm,0.7s
ZEI Tsey 22.54 288 *e*P **P 19 33 48.9 -0.5**
ZEI pmax pmax
comp=Z,66nm,0.9s
MOY Mondy 22.59 48 *e*P **P 19 33 51.8 +2.0**
MOY pmax pmax
comp=Z,55nm,1.3s
JRN Qarnain Island 22.67 236 P **P 19 33 49.6 -1.0**
SNR=5.7
ONI Oni 22.88 288 P **P 19 33 54.2 +1.4**
ONI Oni 22.88 288 P **P 19 33 54.2 +1.4**
ONI pmax pmax
comp=Z,362nm,0.8s
AKH Akhalkalaki 22.93 285 ⇑P **P 19 33 54.9 +1.4**
AKH Akhalkalaki 22.93 285 P **P 19 33 54.9 +1.4**
KHOR Al-Khor Airpor 23.08 240 P **P 19 33 55.5 +0.5**
GOF Gofitskoye 23.19 294⇑ *e*P **P 19 33 56.2 +0.3**
GOF *e*S **S 19 38 11.2 +3.0**
GOF pmax pmax
comp=Z,187nm,1.2s
GOF smax smax
comp=E,82nm,0.9s
GOF smax smax
comp=N,107nm,1.3s
KBZ Khabaz 23.26 291 P **P 19 33 56.2 -0.4**
comp=N,31nm,0.9s,baz=91,slow=8.0,SNR=30
comp=N,31nm,0.9s
KBZ Khabaz 23.26 291*c**e*P **P 19 33 55.3 -1.3**
KBZ pmax pmax
comp=Z,84nm,0.9s
KBZ MLR MLR
comp=Z,479nm,10.0s
VIS Vishakhapatnam 23.27 156 *e*P **P 19 33 57.4 +0.6**
VIS IAmb IAmb 19 34 01.6
comp=Z,24nm,0.7s
SHMA Al-Shehemyia 23.30 241 P **P 19 33 57.8 +0.7**
KARS Kars 23.32 283 P **P 19 33 58.3 +0.8**
KARS Kars 23.32 283 P **P 19 33 58.3 +0.8**
KARS pmax pmax
comp=Z,601nm,1.0s
KVAR Kislovodsk Arr 23.41 291 P **P 19 33 57.8 -0.5**
comp=Z,23nm,0.8s,baz=253,slow=20,SNR=12
KVAR LR LR 19 43 47.3
comp=Z,674nm,21.3s,baz=240,slow=38
comp=Z,23nm,0.8s
KIV Kislovodsk 23.41 291 P **P 19 33 57.7 -0.6**
KIV IAmb IAmb 19 34 17.0
comp=Z,70nm,0.7s
KIV Kislovodsk 23.41 291*c**i*P **P 19 33 57.7 -0.6**
KIV *e* 19 34 22.7
KIV *e*SS Sn 19 38 59.1 +28
KIV pmax pmax
comp=Z,63nm,0.8s
KIV MLR MLR
comp=Z,388nm,14.0s
SHA1 Shidzhatmaz 23.43 291*c**i*P **P 19 33 56.7 -2.0**
ZAK Zakamensk 23.54 53 *e*P **P 19 34 00.3 +0.8**
ZAK pmax pmax
comp=Z,38nm,1.4s
MZR Muzera 23.68 232 P **P 19 33 59.3 -1.6**
GEVA Gevas 23.73 277 P **P 19 34 01.8 +0.2**

GEVA					IAmb	IAmb	19 34 05.8		
	comp=Z,95nm,1.1s								
CHVG	**Ch'k'valeri**	**23.88**	**288**	⇑P	**P**	**P**	**19 34 04.4**	**+1.6**	
CHVG	**Ch'k'valeri**	**23.88**	**288**	⇑P	**P**	**P**	**19 34 04.4**	**+1.6**	
LZH	**Lanzhou**	**24.11**	**88**	⇑P	**P**	**P**	**19 34 07.5**	**+2.3**	
LZH					pP	sP	19 34 11.0	+1.7	
LZH					sP	pP	19 34 13.5	+5.4	
LZH					S	**S**	**19 38 24.8**	**+1.4**	
LZH					sS	sS	19 38 35.8	+7.6	
LZH					pmax	pmax			
	comp=Z,78nm,1.0s								
LZH					pmax	pmax			
	comp=Z,400nm,5.0s								
LZH					LR	LR			
	comp=Z,1μm,12.3s								
LZH					LR	LR			
	comp=Z,1μm,12.4s								
LZH					LR	LR			
	comp=Z,2μm,15.2s								
SMRA	**Abu-Samra**	**24.13**	**239**	P	**P**	**P**	**19 34 05.5**	**+0.3**	
BATM	**Batumi**	**24.25**	**285**	⇑P	**P**	**P**	**19 34 08.5**	**+2.2**	
BATM	**Batumi**	**24.25**	**285**	⇑P	**P**	**P**	**19 34 08.5**	**+2.2**	
GURO	**Guroymak-BITLI**	**24.46**	**278**	P	**P**	**P**	**19 34 09.4**	**+1.0**	
KIRV	**Kirov**	**24.60**	**329**	P	**P**	**P**	**19 34 10.0**	**+0.8**	
	comp=Z,67nm,0.8s,baz=133,slow=4.3,SNR=29								
	comp=Z,67nm,0.8s								
IRK	**Irkutsk**	**24.70**	**49**	*e*P	**P**	**P**	**19 34 10.6**	**+0.4**	
IRK					pmax	pmax			
	comp=Z,60nm,1.4s								
SONM	**Songino Array**	**25.03**	**60**	P	**P**	**P**	**19 34 14.7**	**+1.3**	
	comp=Z,32nm,0.9s,baz=264,slow=9.0,SNR=96								
	comp=Z,32nm,0.9s								
SONM	**Songino Array**	**25.03**	**60**	P	**P**	**P**	**19 34 14.5**	**+1.1**	
SONM					IAmb	IAmb	19 34 17.1		
	comp=Z,35nm,0.9s								
SONM	**Songino Array**	**25.03**	**60**	P	**P**	**P**	**19 34 14.5**	**+1.1**	
SONM					pmax	pmax			
	comp=Z,35nm,0.9s								
VRH	**Novokhopyorsk**	**25.07**	**308**	*e*P	**P**	**P**	**19 34 13.2**	**-0.4**	
VRH					pmax	pmax			
	comp=Z,100nm,1.2s								
VRH					MLR	MLR			
	comp=Z,2μm,14.0s								
KOPT	**Kop Dagi**	**25.36**	**282**	P	**P**	**P**	**19 34 18.0**	**+1.3**	
KOPT					IAmb	IAmb	19 34 34.7		
	comp=Z,51nm,1.0s								
ULN	**Ulaanbaatar**	**25.47**	**60**	P	**P**	**P**	**19 34 18.2**	**+0.8**	
ULN	**Ulaanbaatar**	**25.47**	**60**	P	**P**	**P**	**19 34 18.2**	**+0.8**	
ULN					pmax	pmax			
	comp=Z,30nm,0.9s								
ULN	**Ulaanbaatar**	**25.47**	**60**	P	**P**	**P**	**19 34 19.0**	**+1.6**	
SOC	**Sochi**	**25.57**	**290**	*c* *i*P	**P**	**P**	**19 34 18.6**	**+0.4**	
SOC				*e*PPP	PPP	PPP	19 34 58.2		
SOC				*e*S	**S**	**S**	**19 38 48.3**	**+1.9**	
SOC				*e*SS	**SnSn**	**SnSn**	**19 39 39.6**	**+0.3**	
SOC				pmax	pmax				
	comp=Z,35nm,0.5s								
SOC				MLR	MLR				
	comp=Z,487nm,13.0s								
MARD	**Mardin**	**25.72**	**276**	P	**P**	**P**	**19 34 20.5**	**+0.7**	
MARD					IAmb	IAmb	19 34 24.2		
	comp=Z,45nm,0.7s								
KTUT	**Trabzon**	**25.77**	**284**	⇑P	**P**	**P**	**19 34 21.7**	**+1.7**	
CD2	**Chengdu**	**26.01**	**100**	P	**P**	**P**	**19 34 25.0**	**+2.6**	
CD2				S	**S**	**S**	**19 38 57.0**	**+3.3**	
CD2				pmax	pmax				
	comp=Z,30nm,1.1s								
CD2				pmax	pmax				
	comp=Z,180nm,7.8s								
CD2				LR	LR				
	comp=Z,1μm,15.2s								
CD2				LR	LR				
	comp=Z,1μm,12.6s								
VSR	**Storozhevoye**	**26.63**	**308**	*e*P	**P**	**P**	**19 34 27.2**	**-0.5**	
VSR					pmax	pmax			
	comp=Z,110nm,1.1s								
VSR					MLR	MLR			
	comp=Z,2μm,16.0s								
VORR	**Voronezh**	**26.71**	**309**	*i* P	**P**	**P**	**19 34 27.7**	**-0.7**	
VORR					pmax	pmax			
	comp=N,698nm,1.1s								
LPSR	**Galich'ya Gora**	**27.11**	**310**	*e*P	**P**	**P**	**19 34 31.8**	**-0.2**	
LPSR					pmax	pmax			
	comp=Z,90nm,1.1s								
LPSR					MLR	MLR			
	comp=Z,1μm,14.0s								
ANN	**Anapa**	**27.17**	**293**	*e*P	**P**	**P**	**19 34 32.4**	**-0.2**	
ANN				*e*			19 35 15.1		
ANN				*e*S	**S**	**S**	**19 39 12.6**	**+1.0**	
ANN				pmax	pmax				
	comp=Z,144nm,1.2s								
BTO	**Baotou**	**27.81**	**76**	*e*P	**P**	**P**	**19 34 38.3**	**-0.2**	
BTO				S	**S**	**S**	**19 39 20.5**	**-1.5**	
BTO				LR	LR				
	comp=Z,3μm,10.2s								
BTO				LR	LR				
	comp=Z,3μm,13.9s								
PRGR	**Permogore**	**28.02**	**332**	*e*P	**P**	**P**	**19 34 40.2**	**+0.2**	
PRGR				*e*			19 35 27.3		
TOKA	**Tokat**	**28.34**	**284**	P	**P**	**P**	**19 34 43.4**	**+0.2**	
KMI	**Kunming**	**28.36**	**112**	⇓P	P	P	19 34 48.8	+5.1	
KMI				pmax	pmax				
	comp=Z,12nm,1.0s								
RAYN	**Ar Rayn**	**28.58**	**245**	P	**P**	**P**	**19 34 45.5**	**0.0**	
RAYN	**Ar Rayn**	**28.58**	**245**	P	**P**	**P**	**19 34 45.5**	**0.0**	
RAYN				pmax	pmax				
	comp=Z,26nm,1.1s								
RAYN	**Ar Rayn**	**28.58**	**245**	*i* P	**P**	**P**	**19 34 46.0**	**+0.5**	
	SNR=17								
XAN	**Xi'an**	**28.71**	**90**	⇑P	**P**	**P**	**19 34 47.5**	**+0.9**	
XAN				pP	sP		19 34 52.8	+2.1	
XAN				sP	pP		19 34 56.3	+6.8	
XAN				S	**S**		**19 39 43.0**	**+6.7**	
XAN				pmax	pmax				
	comp=Z,15nm,1.0s								
XAN				LR	LR				
	comp=Z,610nm,16.8s								
XAN				LR	LR				
	comp=Z,780nm,14.9s								
XAN				LR	LR				
	comp=Z,660nm,16.5s								
MOS	**Moscow**	**28.77**	**316**	*e*P	**P**	**P**	**19 34 45.1**	**-1.7**	
MOS				*e*			19 35 37.7		
MOS				*e*S	**S**	**S**	**19 39 32.6**	**-4.0**	
MOS				*e*SS	**SnSn**	**SnSn**	**19 41 00.0**	**+2.9**	
MOS				pmax	pmax				
	comp=Z,97nm,1.2s								
MOS				pmax	pmax				
	comp=Z,200nm,1.4s								
MOS				MLR	MLR				
	comp=Z,1μm,15.0s								
HHC	**Hu-ho-hao-te**	**28.92**	**75**	*e*P	**P**	**P**	**19 34 50.5**	**+2.0**	
HHC				S	**S**	**S**	**19 39 41.5**	**+2.0**	
HHC				pmax	pmax				
	comp=Z,38nm,0.9s								
HHC				pmax	pmax				
	comp=Z,180nm,4.6s								
HHC				LR	LR				
	comp=Z,820nm,10.6s								
HHC				LR	LR				
	comp=Z,1μm,13.5s								
HHC				LR	LR				
	comp=Z,2μm,13.4s								
BNN	**Bunyan**	**29.12**	**281**	P	**P**	**P**	**19 34 50.7**	**+0.4**	
BNN					IAmb	IAmb	19 34 53.1		
	comp=Z,36nm,1.2s								
OBN	**Obninsk**	**29.15**	**315**	P	**P**	**P**	**19 34 50.5**	**+0.3**	
	comp=Z,3.7nm,0.4s,baz=120,slow=3.0,SNR=14								
	comp=Z,3.7nm,0.4s								
OBN	**Obninsk**	**29.15**	**315**		IAmb	IAmb	19 34 51.6		
	comp=Z,84nm,1.2s								
OBN	**Obninsk**	**29.15**	**315**	*c* *i*P	**P**	**P**	**19 34 50.4**	**+0.3**	
OBN				*e*			19 35 41.8		
OBN				pmax	pmax				
	comp=Z,82nm,1.3s								
OBN				MLR	MLR				
	comp=Z,1μm,15.0s								
SIM	**Simferopol'**	**29.52**	**294**	*e*P	**P**	**P**	**19 34 53.7**	**+0.1**	
SIM				*e**PP	**sP**	**P**	**19 34 58.4**	**+0.6**	
SIM				*e*S	**S**	**S**	**19 39 46.2**	**-2.5**	
SIM				*e*SSS	SSS	SSS	19 41 40.0		
SIM				pmax	pmax				
	comp=Z,84nm,1.0s								
BZK	**Bozkurt**	**29.91**	**288**	⇑P	**P**	**P**	**19 34 57.5**	**+0.4**	
BZK	**Bozkurt**	**29.91**	**288**	P	**P**	**P**	**19 34 57.5**	**+0.4**	
KLMR	**Klimovskoe**	**30.00**	**327**	*e*P	**P**	**P**	**19 34 55.3**	**-2.4**	
KLMR				*e*			19 35 50.6		
KLMR				*e*S	**S**	**S**	**19 39 53.8**	**-2.0**	
KLMR				pmax	pmax				
	comp=Z,74nm,1.2s								
KLMR				MLR	MLR				
	comp=Z,2μm,11.0s								
KLMR	**Klimovskoe**	**30.00**	**327**	*e*P	**P**	**P**	**19 34 55.3**	**-2.4**	
KLMR				AMP			19 34 59.3		
	comp=Z,74nm,1.2s								
KLMR				*e*PP	**PnPn**	**PnPn**	**19 35 50.6**	**-3.3**	
KLMR				*e*S	**S**	**S**	**19 39 53.8**	**-2.0**	
KLMR				*e*S	**S**	**S**	**19 39 53.8**	**-2.0**	
KLMR				LQ	LQ		19 44 24.7		
KLMR				LQ	LQ		19 44 24.7		
KLMR				LR	LR		19 45 45.3		
KLMR				AMP			19 47 18.4		
	comp=Z,2μm,11.1s								
ILGA	**Ilgaz**	**30.28**	**286**	P	**P**	**P**	**19 35 00.7**	**+0.1**	
CMAR	**Chiang Mai Arr**	**30.33**	**126**	P	**P**	**P**	**19 35 01.2**	**+0.2**	
	comp=Z,1.5nm,0.8s,baz=314,slow=9.6,SNR=11								
	comp=Z,1.5nm,0.8s								
CMAR	**Chiang Mai Arr**	**30.33**	**126**	*ce*P	**P**	**P**	**19 34 59.7**	**-1.3**	
CMAR				pmax	pmax				
	comp=Z,2.0nm,0.8s								
GYA	**Guiyang**	**30.47**	**105**	⇓*i*P	**P**	**P**	**19 35 05.0**	**+2.7**	
GYA				S	**S**	**S**	**19 40 06.5**	**+2.4**	
GYA				pmax	pmax				
	comp=Z,200nm,3.5s								
GYA				LR	LR				
	comp=Z,330nm,16.7s								
GYA				LR	LR				
	comp=Z,250nm,10.6s								
GYA				LR	LR				
	comp=Z,320nm,12.8s								
BR131	**Keskin Array S**	**30.60**	**283**	P	**P**	**P**	**19 35 04.4**	**+1.1**	
BR131	**Keskin Array S**	**30.60**	**283**	P	**P**	**P**	**19 35 04.4**	**+1.1**	
BR131				pmax	pmax				
	comp=Z,67nm,0.7s								
BR131	**Keskin Array S**	**30.60**	**283**	P	**P**	**P**	**19 35 04.7**	**+1.3**	
	SNR=13								
BRTR	**Keskin Array B**	**30.60**	**283**	P	**P**	**P**	**19 35 04.5**	**+1.1**	
	comp=Z,35nm,0.7s,baz=90,slow=7.5,SNR=109								
	comp=Z,35nm,0.7s								
BRTR	**Keskin Array B**	**30.60**	**283**	P	**P**	**P**	**19 35 04.1**	**+0.7**	
BRTR	**Keskin Array B**	**30.60**	**283**	*ce*P	**P**	**P**	**19 35 04.5**	**+1.1**	
BRTR				pmax	pmax				
	comp=Z,36nm,0.7s								
ENH	**Enshi**	**30.70**	**96**	P	**P**	**P**	**19 35 06.1**	**+1.9**	
ANTO	**Ankara**	**31.20**	**284**	⇑P	**P**	**P**	**19 35 10.0**	**+1.4**	
ANTO	**Ankara**	**31.20**	**284**	P	**P**	**P**	**19 35 09.7**	**+1.1**	
ANTO				IAmb	IAmb	IAmb	19 35 11.4		
	comp=Z,42nm,0.8s								
ANTO	**Ankara**	**31.20**	**284**	P	**P**	**P**	**19 35 09.7**	**+1.1**	
ANTO				pmax	pmax				
	comp=Z,42nm,0.8s								
ANTO	**Ankara**	**31.20**	**284**	P	**P**	**P**	**19 35 10.3**	**+1.6**	
BR231	**Keskin MP Arra**	**31.22**	**284**	P	**P**	**P**	**19 35 10.2**	**+1.3**	
BR231				IAmb	IAmb	IAmb	19 35 11.6		
	comp=Z,49nm,1.0s								
LYN	**LuoYang**	**31.27**	**87**	*e*P	**P**	**P**	**19 35 11.0**	**+1.8**	
LYN				S	**S**	**S**	**19 40 13.3**	**-3.0**	
LYN				pmax	pmax				
	comp=Z,120nm,6.7s								
LYN				LR	LR				
	comp=Z,770nm,12.0s								
LYN				LR	LR				
	comp=Z,840nm,12.0s								
LYN				LR	LR				
	comp=Z,1μm,12.8s								
BOD	**Bodaibo**	**31.77**	**41**	*e*P	**P**	**P**	**19 35 13.7**	**+0.4**	
BOD				pmax	pmax				
	comp=Z,40nm,1.1s								
XLT	**XiLinHaoTe**	**31.79**	**68**	*e*P	**P**	**P**	**19 35 16.5**	**+2.7**	
XLT				pP	sP		19 35 21.0	+3.1	
XLT				sP	pP		19 35 22.3	+5.6	
XLT				pmax	pmax				
	comp=Z,7.0nm,0.8s								
XLT				pmax	pmax				
	comp=Z,89nm,3.6s								
XLT				LR	LR				
	comp=Z,1μm,14.6s								
XLT				LR	LR				
	comp=Z,1μm,12.9s								
GHAJ	**Ghor Haditha**	**31.85**	**267**	P	**P**	**P**	**19 35 15.9**	**+1.6**	
GHAJ				IAmb	IAmb	IAmb	19 35 28.5		
	comp=Z,28nm,1.0s								
HNS	**HongShan**	**32.09**	**80**	⇑P	**P**	**P**	**19 35 18.5**	**+2.1**	
HNS				S	**S**	**S**	**19 40 31.3**	**+2.3**	
HNS				pmax	pmax				
	comp=Z,12nm,0.9s								
HNS				LR	LR				
	comp=Z,350nm,11.9s								
HNS				LR	LR				
	comp=Z,810nm,12.0s								
HNS				LR	LR				
	comp=Z,650nm,15.9s								
MDUB	**Mudurnu**	**32.27**	**286**	P	**P**	**P**	**19 35 18.4**	**+0.4**	
PURM	**Purcari**	**32.40**	**297**	⇑P	**P**	**P**	**19 35 19.8**	**+0.9**	
BJI	**Beijing**	**32.53**	**75**	P	**P**	**P**	**19 35 21.8**	**+1.6**	
BJI				pmax	pmax				
	comp=Z,10.0nm,0.8s								
BJI				LR	LR				
	comp=Z,570nm,14.0s								
BJI				LR	LR				
	comp=Z,860nm,13.8s								
AKASG	**Malin Array Be**	**32.80**	**305**	P	**P**	**P**	**19 35 22.3**	**0.0**	
	comp=Z,6.0nm,0.5s,baz=78,slow=7.5,SNR=93								
	comp=Z,6.0nm,0.5s								
AKASG	**Malin Array Be**	**32.80**	**305**	*ce*P	**P**	**P**	**19 35 22.2**	**-0.2**	
AKASG				pmax	pmax				
	comp=Z,12nm,0.5s								
AKBB	**Malin Array Si**	**32.80**	**305**	*ce*P	**P**	**P**	**19 35 22.3**	**-0.1**	
BORA	**Eskisehir**	**32.95**	**285**	P	**P**	**P**	**19 35 24.4**	**+0.4**	
BORA				IAmb	IAmb	IAmb	19 35 26.1		
	comp=Z,54nm,1.0s								
KIS	**Kishinev**	**33.09**	**298**	⇑*i*P	**P**	**P**	**19 35 25.0**	**0.0**	
	comp=Z,90nm,1.2s								
KIS				*e*L	L		19 51 16.0		
KIS				LRM	MLR		19 53 01.0		
	comp=Z,200nm,15.5s								
KIS	**Kishinev**	**33.09**	**298**	*c* *i*P	**P**	**P**	**19 35 25.0**	**0.0**	
KIS				pmax	pmax				
	comp=Z,90nm,1.2s								
KIS				MLR	MLR				
	comp=Z,200nm,15.5s								
MILM	**Milestii Mici**	**33.10**	**298**	⇑*i*P	**P**	**P**	**19 35 25.0**	**-0.1**	
	comp=Z,150nm,1.1s								
MILM	**Milestii Mici**	**33.10**	**298**	*e*PP	PP		19 36 40.0	+0.3	
MILM				*e*L	L		19 49 17.0		
MILM				LRM	MLR		19 51 48.0		
	comp=Z,500nm,10.0s								
MILM	**Milestii Mici**	**33.10**	**298**	⇑P	**P**	**P**	**19 35 25.4**	**+0.3**	
MILM	**Milestii Mici**	**33.10**	**298**	*c* *i*P	**P**	**P**	**19 35 25.0**	**-0.1**	
MILM				*i*			19 35 29.0		
MILM				*e*			19 36 40.0		
MILM				pmax	pmax				
	comp=Z,150nm,1.1s								
MILM				MLR	MLR				
	comp=Z,500nm,10.0s								
TLCR		**33.24**	**295**	⇑P	**P**	**P**	**19 35 27.1**	**+0.8**	
TLCR		**33.24**	**295**	⇑P	**P**	**P**	**19 35 27.1**	**+0.8**	
JURR	**Jurilovca**	**33.25**	**294**	⇑P	**P**	**P**	**19 35 27.4**	**+1.0**	
SORM	**Soroca**	**33.35**	**300**	⇑P	**P**	**P**	**19 35 27.1**	**-0.2**	
SORM	**Soroca**	**33.35**	**300**	⇑P	**P**	**P**	**19 35 27.1**	**-0.2**	
ISP	**Isparta**	**33.43**	**281**	P	**P**	**P**	**19 35 27.2**	**-1.0**	
ISP	**Isparta**	**33.43**	**281**	P	**P**	**P**	**19 35 27.2**	**-1.0**	
ISP				pmax	pmax				
	comp=Z,33nm,0.6s								
TPGR	**Topolog**	**33.56**	**294**	⇑P	**P**	**P**	**19 35 30.2**	**+1.0**	
TIRR	**Tirgusor**	**33.62**	**293**	⇑P	**P**	**P**	**19 35 30.2**	**+0.6**	
TIRR	**Tirgusor**	**33.62**	**293**	P	**P**	**P**	**19 35 29.2**	**-0.3**	
TIRR				IAmb	IAmb	IAmb	19 35 31.1		
	comp=Z,32nm,0.8s								
TIRR	**Tirgusor**	**33.62**	**293**	P	**P**	**P**	**19 35 29.3**	**-0.3**	
TIRR				pmax	pmax				
	comp=Z,32nm,0.8s								
MFTR	**Murfatlar**	**33.65**	**293**	⇑P	**P**	**P**	**19 35 31.3**	**+1.4**	
VLDR	**Vladesti**	**33.69**	**296**	⇑P	**P**	**P**	**19 35 31.5**	**+1.2**	
CFR	**Carcaliu**	**33.72**	**295**	⇓P	**P**	**P**	**19 35 31.3**	**+0.8**	
CFR	**Carcaliu**	**33.72**	**295**	⇓P	**P**	**P**	**19 35 31.3**	**+0.8**	
TATR	**Tatarca**	**33.74**	**296**	⇑P	**P**	**P**	**19 35 32.1**	**+1.4**	
SCTR	**Scanteiesti**	**33.77**	**296**	⇑P	**P**	**P**	**19 35 32.6**	**+1.6**	
VASR	**Vaslui**	**33.82**	**297**	⇑P	**P**	**P**	**19 35 31.2**	**-0.1**	
VARL	**Varlezi**	**33.85**	**296**	⇑P	**P**	**P**	**19 35 33.1**	**+1.5**	
TLBR	**Topalu**	**33.86**	**294**	⇑P	**P**	**P**	**19 35 33.0**	**+1.2**	
HARR	**Harsova**	**33.93**	**294**	⇑P	**P**	**P**	**19 35 33.5**	**+1.2**	
HARR	**Harsova**	**33.93**	**294**	⇑P	**P**	**P**	**19 35 33.5**	**+1.2**	
MNK	**Minsk**	**33.94**	**312**	*i* P	**P**	**P**	**19 35 31.9**	**-0.4**	
MNK				*i*			19 36 45.0		
MNK				*i*			19 38 09.6		
MNK				*i* S	**S**	**S**	**19 40 57.1**	**-0.2**	
MNK				*i* SS	**SnSn**	**SnSn**	**19 43 04.9**	**+2.2**	
MNK				*i*			19 45 55.8		
MNK				pmax	pmax				
	comp=Z,47nm,1.0s								
MNK				pmax	pmax				
	comp=E,7.0nm,1.2s								
MNK				pmax	pmax				
	comp=N,23nm,0.9s								
MNK				MLR	MLR				
	comp=E,116nm,17.0s								
MNK				MLR	MLR				
	comp=Z,7μm,23.0s								
MNK				MLR	MLR				
	comp=N,611nm,20.0s								
MNK	**Minsk**	**33.94**	**312**	*i* P	**P**	**P**	**19 35 31.9**	**-0.4**	
	comp=E,7.0nm,1.2s								
MNK				*i* P	**P**	**P**	**19 35 31.9**	**-0.4**	
	comp=N,23nm,0.9s								
MNK				*i* P	**P**	**P**	**19 35 31.9**	**-0.4**	
	comp=Z,47nm,1.0s,baz=276								
MNK				*i* PP	**PnPn**	**PnPn**	**19 36 45.0**	**+0.1**	
MNK				*i* PPP	PPP	PPP	19 36 56.3		
MNK				*i* PcP	**PcP**	**PcP**	**19 38 09.7**	**-0.8**	
MNK				*i* S	**S**	**S**	**19 40 57.2**	**-0.2**	
MNK				*i* SS	**SnSn**	**SnSn**	**19 43 05.0**	**+2.2**	
MNK				*i* SSS	SSS	SSS	19 43 20.7		
MNK				*i* LQ	LQ	LQ	19 46 35.1		
MNK				*i* LR	LR	LR	19 49 23.3		
MNK				*i* LRM	MLR	MLR	19 50 40.7		
	comp=E,116nm,17.2s								
MNK				*i* LRM	MLR	MLR	19 50 40.7		
	comp=Z,7μm,23.0s								
MNK				*i* LRM	MLR	MLR	19 50 44.9		
	comp=N,611nm,20.4s								
ICOR	**Ion Corvin**	**34.10**	**293**	⇑P	**P**	**P**	**19 35 35.3**	**+1.5**	
WHN	**Wuhan**	**34.33**	**92**	⇓P	**P**	**P**	**19 35 38.0**	**+2.1**	
WHN				pmax	pmax				
	comp=N,36nm,1.0s								
WHN				LR	LR				
	comp=N,1μm,9.7s								
WHN				LR	LR				
	comp=N,1μm,11.3s								
WHN				LR	LR				
	comp=N,2μm,12.0s								
PANC	**Panciu**	**34.34**	**296**	⇑P	**P**	**P**	**19 35 37.8**	**+2.0**	
ODBI	**Odobesti**	**34.41**	**296**	⇓P	**P**	**P**	**19 35 39.3**	**+2.8**	
PRD	**Provadia**	**34.53**	**291**	P	**P**	**P**	**19 35 39.2**	**+1.6**	
AKAS	**Kas**	**34.61**	**279**	P	**P**	**P**	**19 35 37.8**	**-0.7**	
NACGM	**Naroch**	**34.62**	**312**	⇑*e*P	**P**	**P**	**19 35 38.5**	**+0.3**	
	baz=96								
VRI	**Vrincioaia**	**34.63**	**296**	⇑P	**P**	**P**	**19 35 40.1**	**+1.6**	
VRI	**Vrincioaia**	**34.63**	**296**	⇑P	**P**	**P**	**19 35 40.1**	**+1.6**	
KULA	**Kula-Manisa**	**34.65**	**283**	P	**P**	**P**	**19 35 39.5**	**+0.7**	
BISRR	**Bisoca**	**34.68**	**296**	⇓P	**P**	**P**	**19 35 41.0**	**+2.1**	
PLOR	**Plostina**	**34.68**	**296**	⇑P	**P**	**P**	**19 35 40.9**	**+1.9**	
PLOR	**Plostina**	**34.68**	**296**	⇑P	**P**	**P**	**19 35 40.9**	**+1.9**	
IDID	**Didziasalis**	**34.70**	**313**	*e*P	**P**	**P**	**19 35 39.6**	**+0.8**	
ISR	**Istrita**	**34.85**	**295**	⇑P	**P**	**P**	**19 35 43.0**	**+2.7**	
ISR	**Istrita**	**34.85**	**295**	⇑P	**P**	**P**	**19 35 43.1**	**+2.7**	
BIZ	**Bicaz**	**34.95**	**298**	⇓P	**P**	**P**	**19 35 42.2**	**+1.0**	
NEHR	**Nehoiu**	**34.98**	**296**	⇑P	**P**	**P**	**19 35 44.0**	**+2.5**	
IIGN	**Ignalina**	**34.99**	**313**	*e*P	**P**	**P**	**19 35 42.1**	**+0.6**	
COVR	**Voineasa-Covas**	**34.99**	**296**	⇓P	**P**	**P**	**19 35 43.0**	**+1.4**	
ISAL	**Salakas**	**35.08**	**313**	*e*P	**P**	**P**	**19 35 42.8**	**+0.6**	
RAZG	**Razgrad**	**35.11**	**292**	⇑P	**P**	**P**	**19 35 43.9**	**+1.3**	
SECR		**35.19**	**295**	⇑P	**P**	**P**	**19 35 45.7**	**+2.4**	
MLR	**Muntele Rosu**	**35.22**	**296**	⇑P	**P**	**P**	**19 35 45.9**	**+2.2**	
MLR	**Muntele Rosu**	**35.22**	**296**	P	**P**	**P**	**19 35 45.4**	**+1.7**	
MLR	**Muntele Rosu**	**35.22**	**296**	P	**P**	**P**	**19 35 45.4**	**+1.7**	
MLR				pmax	pmax				
	comp=Z,86nm,0.9s								
VSU	**Vasula**	**35.22**	**318**	*i* P	**P**	**P**	**19 35 43.6**	**+0.3**	
VSU				pmax	pmax				
	comp=Z,124nm,1.1s								
VSU				MLR	MLR				
	comp=Z,4μm,14.0s								
VSU	**Vasula**	**35.22**	**318**	*e*P	**P**	**P**	**19 35 44.0**	**+0.7**	
JMB	**Yambol**	**35.26**	**290**	P	**P**	**P**	**19 35 46.2**	**+2.3**	
BURAR	**Bucovina Array**	**35.49**	**299**	⇓P	**P**	**P**	**19 35 46.7**	**+0.8**	
BURAR	**Bucovina Array**	**35.49**	**299**	P	**P**	**P**	**19 35 46.4**	**+0.4**	
BURAR	**Bucovina Array**	**35.49**	**299**	⇓P	**P**	**P**	**19 35 46.7**	**+0.8**	
BUR08	**Bucovina Ar. S**	**35.50**	**299**	P	**P**	**P**	**19 35 46.6**	**+0.6**	
LVZ	**Lovozero**	**35.52**	**336**	P	**P**	**P**	**19 35 46.7**	**+0.8**	
LVZ	**Lovozero**	**35.52**	**336**	*ce*P	**P**	**P**	**19 35 46.5**	**+0.6**	
LVZ				pmax	pmax				
	comp=Z,68nm,1.0s								
LVZ				MLR	MLR				
	comp=Z,2μm,11.0s								
DOPR	**Dopca**	**35.55**	**297**	⇑P	**P**	**P**	**19 35 47.8**	**+1.5**	
SZH	**Strazhica**	**35.57**	**292**	P	**P**	**P**	**19 35 46.9**	**+0.3**	
APA	**Apatity**	**35.74**	**335**	⇓*i*P	**P**	**P**	**19 35 47.2**	**-0.5**	
APA				pmax	pmax				
	comp=Z,9.0nm,1.0s								
APA				MLR	MLR				
	comp=Z,3μm,11.0s						

NJ2					LR	LR			
	comp=Z,660nm,13.1s								
NJ2					LR	LR			
	comp=Z,830nm,13.5s								
DEV	**Deva**	**37.27**	**297**	⇓P	**P**	**19 36 03.6 +2.5**			
DEV	**Deva**	**37.27**	**297**	⇓P	**P**	**19 36 03.6 +2.5**			
DRGR		**37.28**	**298**	⇑P	**P**	**19 36 02.6 +1.4**			
DRGR		**37.28**	**298**	⇑P	**P**	**19 36 02.6 +1.4**			
QIZ	**Qiongzhong**	**37.29**	**113**	LR	LR				
	comp=N,580nm,22.3s								
QIZ	**Qiongzhong**	**37.29**	**113**	P	**P**	**19 36 02.3 +0.8**			
QIZ				S	**S**	**19 41 47.5 -2.0**			
QIZ				LR	LR				
	comp=N,480nm,13.7s								
QIZ				LR	LR				
	comp=N,360nm,13.7s								
QIZ				LR	LR				
	comp=N,440nm,15.9s								
KOLS	**Kolonicke sedl**	**37.34**	**302**	*e*P	**P**	**19 36 02.8 +1.2**			
KOLS				pmax	pmax				
	comp=Z,20nm,1.3s								
KOLS	**Kolonicke sedl**	**37.34**	**302**	*e*P	**P**	**19 36 02.8 +1.2**			
UZH	**Uzhgorod**	**37.35**	**301**	*e*P	**P**	**19 36 00.0 -1.7**			
UZH				*i*		19 36 03.9			
UZH				*i*		19 36 07.6			
APE	**Apeiranthos**	**37.45**	**282**	⇑P	**P**	**19 36 02.8 +0.1**			
APE	**Apeiranthos**	**37.45**	**282**	⇑P	**P**	**19 36 02.8 +0.1**			
PBUR	**Paburge**	**37.48**	**314**	*e*P	**P**	**19 36 03.2 +0.6**			
NVR	**Nevrokopi**	**37.48**	**289**	P	**P**	**19 36 04.0 +1.1**			
KOKK	**Kokkinochori,**	**37.51**	**288**	P	**P**	**19 36 03.8 +0.6**			
MMB	**Musomiste**	**37.52**	**290**	P	**P**	**19 36 04.6 +1.3**			
SNY	**Shenyang**	**37.58**	**70**	⇓P	**P**	**19 36 05.0 +1.3**			
SNY				S	**S**	**19 41 53.8 +0.3**			
SNY				pmax	pmax				
	comp=Z,19nm,0.7s								
SNY				pmax	pmax				
	comp=Z,200nm,6.6s								
SNY				LR	LR				
	comp=Z,610nm,13.1s								
SNY				LR	LR				
	comp=Z,830nm,12.6s								
SNY				LR	LR				
	comp=Z,1µm,13.1s								
VTS	**Vitosha**	**37.65**	**292**	P	**P**	**19 36 05.9 +1.5**			
SANT	**Santorini**	**37.73**	**281**	⇑P	**P**	**19 36 04.8 -0.2**			
SANT	**Santorini**	**37.73**	**281**	P	**P**	**19 36 04.2 -0.9**			
SANT				IAmb	IAmb	19 36 05.3			
	comp=Z,36nm,0.8s								
SRS	**Serrai**	**37.74**	**289**	P	**P**	**19 36 05.9 +0.8**			
LTVH	**Ltavrtes, Hu**	**37.75**	**299**	⇑P	**P**	**19 36 07.1 +2.0**			
LTVH	**Ltavrtes, Hu**	**37.75**	**299**	P	**P**	**19 36 07.9 +2.8**			
CRVS	**Cervenica-Dubn**	**37.87**	**302**	*e*P	**P**	**19 36 06.2 +0.1**			
CRVS				pmax	pmax				
	comp=Z,16nm,1.1s								
CRVS	**Cervenica-Dubn**	**37.87**	**302**	*e*P	**P**	**19 36 06.2 +0.1**			
KKB	**Krupnik**	**37.93**	**290**	P	**P**	**19 36 07.7 +1.0**			
PAIG	**Paliouri**	**37.98**	**287**	P	**P**	**19 36 08.0 +0.9**			
PLG	**Polygyros**	**38.03**	**288**	P	**P**	**19 36 08.5 +0.9**			
SIRR	**Siria**	**38.07**	**298**	⇑P	**P**	**19 36 09.6 +1.8**			
BEL	**Belsk**	**38.09**	**307**	*e*P	**P**	**19 36 08.1 +0.2**			
BEL				*e*PP	**PP**	**19 37 33.8 -0.9**			
BEL				*e*SS	SS	19 44 28.7 -19			
RAF	**Rauma**	**38.18**	**322**	*e*P	**P**	**19 36 08.6 +0.1**			
BZS	**Buzias**	**38.21**	**297**	⇓P	**P**	**19 36 10.3 +1.4**			
BZS	**Buzias**	**38.21**	**297**	⇓P	**P**	**19 36 10.3 +1.4**			
KNT	**Kendrikon**	**38.23**	**289**	P	**P**	**19 36 09.9 +0.6**			
MDVR	**Moldovita**	**38.29**	**295**	⇑P	**P**	**19 36 11.1 +1.4**			
CN2	**Changchun**	**38.49**	**66**	*e*P	**P**	**19 36 15.3 +3.9**			
CN2				S	**S**	**19 42 09.3 +2.0**			
CN2				pmax	pmax				
	comp=Z,10.0nm,0.5s								
CN2				LR	LR				
	comp=Z,500nm,12.0s								
CN2				LR	LR				
	comp=Z,600nm,12.0s								
CN2				LR	LR				
	comp=Z,500nm,13.0s								
NEO	**Neokhori**	**38.49**	**286**	P	**P**	**19 36 12.0 +0.5**			
XOR	**Xorichti**	**38.50**	**286**	P	**P**	**19 36 11.9 +0.3**			
BOVS	**Bovan**	**38.52**	**294**	⇑P	**P**	**19 36 12.3 +0.7**			
IDI	**Anoyia**	**38.54**	**280**	⇓P	**P**	**19 36 12.6 +0.7**			
IDI	**Anoyia**	**38.54**	**280**	P	**P**	**19 36 11.3 -0.6**			
IDI				IAmb	IAmb	19 36 18.8			
	comp=Z,34nm,0.9s								
NIE	**Niedzica**	**38.58**	**303**	*e*P	**P**	**19 36 13.3 +1.2**			
NIE				*e*PP	**PnPn**	**19 37 41.7 -0.4**			
NIE				*e*L	L	19 55 60.0			
	comp=Z,562nm,15.3s								
ZEA	**Zeya**	**38.59**	**50**	*e*P	**P**	**19 36 13.9 +1.9**			
ZEA				pmax	pmax				
	comp=E,10.0nm,0.9s								
ZEA				pmax	pmax				
	comp=N,10.0nm,0.8s								
ZEA				pmax	pmax				
	comp=Z,20nm,0.9s								
ZEA				pmax	pmax				
	comp=Z,100nm,7.2s								
ZEA				MLR	MLR				
	comp=E,400nm,8.0s								
ZEA				MLR	MLR				
	comp=Z,600nm,10.0s								
LIT	**Litokhoron**	**38.81**	**288**	P	**P**	**19 36 14.0 -0.2**			
LIT	**Litokhoron**	**38.81**	**288**	P	**P**	**19 36 14.0 -0.2**			
LIT				pmax	pmax				
	comp=Z,28nm,1.1s								
OJC	**Ojcow**	**38.83**	**304**	*e*P	**P**	**19 36 14.3 +0.2**			
OJC				*e*S	S	19 41 59.2 -13			
OJC				*e*SS	SnSn	19 44 30.3 -31			
OJC	**Ojcow**	**38.83**	**304**	P	**P**	**19 36 14.1 0.0**			
OJC				IAmb	IAmb	19 36 16.3			
	comp=Z,41nm,1.0s								
OJC	**Ojcow**	**38.83**	**304**	P	**P**	**19 36 14.1 0.0**			
OJC				pmax	pmax				
	comp=Z,41nm,1.0s								
KEV	**Kevo**	**38.85**	**336**	P	**P**	**19 36 14.5 +0.4**			
KEV	**Kevo**	**38.85**	**336**	P	**P**	**19 36 14.5 +0.4**			
KEV				pmax	pmax				
	comp=Z,29nm,0.9s								
PSZ	**Piszkesteto**	**39.02**	**301**	⇑P	**P**	**19 36 16.9 +1.0**			
PSZ	**Piszkesteto**	**39.02**	**301**	P	**P**	**19 36 15.8 -0.1**			
PSZ	**Piszkesteto**	**39.02**	**301**	P	**P**	**19 36 15.8 -0.1**			
PSZ				pmax	pmax				
	comp=Z,27nm,1.2s								
PSZ	**Piszkesteto**	**39.02**	**301**	P	**P**	**19 36 17.3 +1.4**			
LANS	**Liptovska Anna**	**39.15**	**303**	*e*P	**P**	**19 36 19.1 +2.2**			
LANS				pmax	pmax				
	comp=Z,13nm,1.4s								
LANS	**Liptovska Anna**	**39.15**	**303**	*e*P	**P**	**19 36 19.1 +2.2**			
IMMV	**Iera Moni Meta**	**39.17**	**280**	P	**P**	**19 36 17.7 +0.5**			
ARCES	**ARCESS Array B**	**39.23**	**336**	P	**P**	**19 36 18.2 +1.0**			
	comp=Z,38nm,0.8s,baz=110,slow=8.5,SNR=90								
	comp=Z,38nm,0.8s								
ARCES	**ARCESS Array B**	**39.23**	**336**	P	**P**	**19 36 17.5 +0.2**			
ARCES				IAmb	IAmb	19 36 19.4			
	comp=Z,63nm,0.9s								
ARCES	**ARCESS Array B**	**39.23**	**336**	P	**P**	**19 36 17.5 +0.2**			
ARCES				pmax	pmax				
	comp=Z,63nm,1.0s								
AGG	**Agios Georgios**	**39.24**	**286**	P	**P**	**19 36 17.2 -0.6**			
AGG	**Agios Georgios**	**39.24**	**286**	P	**P**	**19 36 17.2 -0.6**			
THL	**Klokotos Trika**	**39.32**	**287**	P	**P**	**19 36 18.2 -0.1**			
SSE	**Sheshan**	**39.38**	**87**	P	**P**	**19 36 20.3 +1.4**			
SSE				S	**S**	**19 42 24.0 +3.2**			
SSE				pmax	pmax				
	comp=Z,31nm,0.7s								
SSE				pmax	pmax				
	comp=Z,98nm,5.2s								
SSE				LR	LR				
	comp=Z,180nm,19.0s								
SSE				LR	LR				
	comp=Z,230nm,19.0s								
KNDR	**Palaiochora Ch**	**39.48**	**280**	P	**P**	**19 36 20.0 +0.3**			
FRGS	**Fruska Gora**	**39.54**	**296**	⇑P	**P**	**19 36 21.6 +1.4**			
FRGS	**Fruska Gora**	**39.54**	**296**	⇑*i*P	**P**	**19 36 21.2 +1.0**			
DIVS	**Divibare**	**39.63**	**295**	P	**P**	**19 36 21.7 +0.6**			
DIVS				IAmb	IAmb	19 36 28.4			
	comp=Z,48nm,0.9s								
DIVS	**Divibare**	**39.63**	**295**	⇑*i*P	**P**	**19 36 22.1 +1.1**			
VYHS	**Vyhne**	**39.65**	**302**	*e*P	**P**	**19 36 21.9 +0.9**			
VYHS				pmax	pmax				
	comp=Z,15nm,1.1s								
VYHS	**Vyhne**	**39.65**	**302**	*e*P	**P**	**19 36 21.8 +0.8**			
EVR	**Evrytania**	**39.66**	**286**	P	**P**	**19 36 21.6 +0.2**			
BUD	**Budapest**	**39.67**	**300**	P	**P**	**19 36 22.6 +1.4**			

ANX	**Ano Chora**	**39.68**	**286**	P	**P**	**19 36 21.4 -0.1**			
LAKA	**Lakka**	**39.74**	**285**	P	**P**	**19 36 21.7 -0.3**			
KTK1	**Kautokeino**	**39.77**	**334**	*e*P	**P**	**19 36 22.4 +0.6**			
KTK1				IAmb	IAmb	19 36 23.1			
	comp=Z,30nm,0.9s								
SJES	**Sjenica**	**39.83**	**293**	⇑*i*P	**P**	**19 36 23.6 +0.8**			
TEKS	**Tekeris**	**39.86**	**295**	⇑*i*P	**P**	**19 36 23.2 +0.3**			
KOLL	**Kolacno**	**39.92**	**302**	*e*P	**P**	**19 36 24.5 +1.2**			
OKC	**Ostrava-Krasne**	**39.92**	**304**	*e*P	**P**	**19 36 23.7 +0.4**			
OKC				*e*		19 37 59.2			
OKC				MLR	MLR				
	comp=Z,600nm,12.4s								
OKC	**Ostrava-Krasne**	**39.92**	**304**	*e*P	**P**	**19 36 23.7 +0.4**			
OKC				*e*PP	**PnPn**	**19 37 59.2 +1.1**			
OKC				AMS	AMS	19 56 10.0			
	comp=Z,600nm,12.4s								
PVO	**Paravola**	**39.96**	**286**	P	**P**	**19 36 24.2 +0.5**			
UPP	**Uppsala**	**40.06**	**319**	*e*P	**P**	**19 36 24.8 +0.5**			
SRO	**Srobarova**	**40.09**	**301**	*e*P	**P**	**19 36 26.6 +1.9**			
SRO	**Srobarova**	**40.09**	**301**	*e*P	**P**	**19 36 26.6 +1.9**			
BBLS	**Lazići**	**40.10**	**294**	⇑*i*P	**P**	**19 36 25.7 +0.8**			
ITM	**Ithomi**	**40.13**	**284**	P	**P**	**19 36 23.8 -1.4**			
MORH	**Mrgy, Hungar**	**40.14**	**298**	⇑P	**P**	**19 36 26.1 +1.0**			
MORH	**Mrgy, Hungar**	**40.14**	**298**	⇑*i*P	**P**	**19 36 25.9 +0.8**			
MORH	**Mrgy, Hungar**	**40.14**	**298**	P	**P**	**19 36 25.8 +0.6**			
RUDO	**Rudo**	**40.18**	**294**	*e*P	**P**	**19 36 25.1 -0.4**			
MAUC	**Maruska**	**40.19**	**303**	*e*P	**P**	**19 36 27.5 +2.0**			
MAUC				*e*PP	**PnPn**	**19 38 01.0 -0.3**			
MAUC				AMS	AMS	19 57 00.0			
	comp=Z,1µm,15.6s								
GKP	**Gorka Klasztor**	**40.19**	**309**	*e*P	**P**	**19 36 26.2 +0.8**			
GKP				*e*L	L	19 56 06.4			
	comp=Z,2µm,16.6s								
GKP	**Gorka Klasztor**	**40.19**	**309**	*e*P	**P**	**19 36 25.4 0.0**			
LSK	**Leskovik**	**40.19**	**289**	P	**P**	**19 36 26.0 +0.3**			
CSKK	**Cskako**	**40.20**	**300**	P	**P**	**19 36 27.1 +1.4**			
HAMF	**Hammerfest**	**40.26**	**337**	*e*P	**P**	**19 36 26.9 +1.2**			
HAMF				IAmb	IAmb	19 36 27.9			
	comp=Z,91nm,0.8s								
MORC	**Moravsky Berou**	**40.32**	**304**	⇑P	**P**	**19 36 27.6 +1.0**			
MORC	**Moravsky Berou**	**40.32**	**304**	P	**P**	**19 36 26.8 +0.1**			
MORC	**Moravsky Berou**	**40.32**	**304**	P	**P**	**19 36 26.8 +0.1**			
MORC				pmax	pmax				
	comp=Z,25nm,1.1s								
MORC	**Moravsky Berou**	**40.32**	**304**	*e*P	**P**	**19 36 27.1 +0.5**			
MORC				*e*PP	**PnPn**	**19 38 03.0 +0.2**			
JAVC	**Velka Javorina**	**40.36**	**302**	*e*P	**P**	**19 36 28.8 +1.8**			
YAK	**Yakutsk**	**40.37**	**37**	P	**P**	**19 36 27.1 +0.3**			
	comp=Z,19nm,0.7s,baz=246,slow=2.1,SNR=35								
	comp=Z,19nm,0.7s								
YAK	**Yakutsk**	**40.37**	**37**	P	**P**	**19 36 26.8 +0.1**			
YAK				IAmb	IAmb	19 36 28.7			
	comp=Z,52nm,0.8s								
YAK	**Yakutsk**	**40.37**	**37**	*c i*P	**P**	**19 36 26.9 +0.1**			
YAK				*e**PP	**sP**	**19 36 32.8 +1.9**			
YAK				*e*		19 38 01.3			
YAK				*e*		19 38 29.1			
YAK				*e*S	**S**	**19 42 33.7 -1.3**			
YAK				*e*SSS	SSS	19 46 02.3			
YAK				*e*		19 46 31.0			
YAK				pmax	pmax				
	comp=Z,57nm,0.9s								
YAK				pmax	pmax				
	comp=N,5.0nm,1.0s								
YAK				pmax	pmax				
	comp=E,30nm,1.1s								
YAK				pmax	pmax				
	comp=Z,31nm,1.7s								
YAK				pmax	pmax				
	comp=N,16nm,1.5s								
YAK				pmax	pmax				
	comp=E,10.0nm,1.5s								
YAK				smax	smax				
	comp=N,32nm,2.2s								
YAK				smax	smax				
	comp=E,32nm,2.3s								
YAK				MLR	MLR				
	comp=Z,402nm,19.0s								
YAK				MLR	MLR				
	comp=N,114nm,20.0s								
YAK				MLR	MLR				
	comp=E,250nm,19.0s								
VIKU	**Vikbolandet**	**40.45**	**317**	*e*P	**P**	**19 36 28.1 +0.6**			
KOVH	**Kovagotottos**	**40.54**	**298**	P	**P**	**19 36 28.8 +0.3**			
PDG	**Podgorica**	**40.55**	**292**	⇑P	**P**	**19 36 29.5 +1.0**			
PDG	**Podgorica**	**40.55**	**292**	P	**P**	**19 36 28.4 -0.1**			
PDG				IAmb	IAmb	19 36 35.4			
	comp=Z,38nm,0.8s								
PDG	**Podgorica**	**40.55**	**292**	⇑*i*P	**P**	**19 36 29.0 +0.5**			
LKD2	**Lefkada island**	**40.56**	**286**	P	**P**	**19 36 27.8 -0.9**			
IGT	**Igoumenitsa**	**40.57**	**288**	P	**P**	**19 36 27.8 -1.0**			
SMOL	**Smolenice**	**40.57**	**302**	*e*P	**P**	**19 36 29.7 +1.0**			
SMOL				pmax	pmax				
	comp=Z,21nm,1.6s								
SMOL	**Smolenice**	**40.57**	**302**	*e*P	**P**	**19 36 29.7 +1.0**			
DRME	**Dracevica, Mon**	**40.66**	**292**	⇑*i*P	**P**	**19 36 29.9 +0.4**			
MODS	**Modra-Piesok**	**40.69**	**302**	*e*P	**P**	**19 36 30.2 +0.5**			
MODS				pmax	pmax				
	comp=Z,57nm,1.4s								
MODS	**Modra-Piesok**	**40.69**	**302**	*e*P	**P**	**19 36 30.2 +0.5**			
MPLH	**Magyarpolny**	**40.72**	**300**	P	**P**	**19 36 30.5 +0.6**			
KRLC	**Kraliky**	**40.77**	**304**	*e*P	**P**	**19 36 31.0 +0.7**			
KRLC				*e*		19 38 08.2			
KRLC				MLR	MLR				
	comp=Z,700nm,12.4s								
KRLC	**Kraliky**	**40.77**	**304**	*e*P	**P**	**19 36 31.0 +0.7**			
KRLC				*e*PP	**PnPn**	**19 38 08.2 +0.1**			
KRLC				AMS	AMS	19 54 50.0			
	comp=Z,700nm,12.4s								
EGYH	**Egyhazaskeszo**	**40.81**	**300**	P	**P**	**19 36 31.4 +0.8**			
ZST	**Bratislava**	**40.83**	**301**	*e*P	**P**	**19 36 32.1 +1.3**			
ZST	**Bratislava**	**40.83**	**301**	*e*P	**P**	**19 36 32.1 +1.3**			
BLEU	**Blekinge**	**40.90**	**314**	*i*P	**P**	**19 36 30.0 -1.3**			
JETT	**Jettan, Norway**	**40.90**	**335**	*e*P	**P**	**19 36 32.3 +1.1**			
JETT				IAmb	IAmb	19 36 32.9			
	comp=Z,44nm,0.9s								
VLO	**Vlora**	**40.91**	**289**	P	**P**	**19 36 31.2 -0.3**			
VLO				IAmb	IAmb	19 36 37.7			
	comp=Z,77nm,0.9s								
VLO	**Vlora**	**40.91**	**289**	P	**P**	**19 36 31.2 -0.3**			
VLO				pmax	pmax				
	comp=Z,77nm,0.9s								
KEK	**Kerkira**	**40.91**	**288**	P	**P**	**19 36 30.4 -1.1**			
BRY	**Bratogost**	**40.94**	**293**	⇑*i*P	**P**	**19 36 32.4 +0.4**			
KSP	**Ksiaz**	**40.98**	**306**	*e*P	**P**	**19 36 32.9 +0.8**			
KSP				*e*PP	**PP**	**19 38 04.8 -1.5**			
KSP				*e*S	**S**	**19 42 40.4 -4.1**			
KSP				*e*L	L	19 55 29.2			
	comp=Z,627nm,18.9s								
VRAC	**Vranov**	**41.00**	**303**	⇑P	**P**	**19 36 33.0 +0.8**			
VRAC	**Vranov**	**41.00**	**303**	⇑P	**P**	**19 36 33.0 +0.8**			
VRAC	**Vranov**	**41.00**	**303**	*e*P	**P**	**19 36 33.4 +1.2**			
VRAC				*e*PP	**PP**	**19 38 06.0 -0.5**			
DPC	**Dobruska-Polom**	**41.03**	**305**	*e*P	**P**	**19 36 33.5 +1.0**			
DPC				*e*		19 38 08.0			
DPC				MLR	MLR				
	comp=Z,600nm,11.4s								
DPC	**Dobruska-Polom**	**41.03**	**305**	*e*P	**P**	**19 36 33.5 +1.0**			
DPC				*e*PP	**PP**	**19 38 08.0 +1.2**			
DPC				AMS	AMS	19 55 30.0			
	comp=Z,600nm,11.4s								
OSTC	**Ostas**	**41.07**	**305**	*e*P	**P**	**19 36 33.9 +1.1**			
OSTC				*e*PP	**PP**	**19 38 09.8 +2.6**			
OSTC				AMS	AMS	19 55 10.0			
	comp=Z,700nm,12.1s								
HCY	**Herceg Novi**	**41.09**	**293**	⇑*i*P	**P**	**19 36 33.1 +0.1**			
INCN	**Inchon**	**41.09**	**75**	P	**P**	**19 36 33.4 +0.3**			
INCN	**Inchon**	**41.09**	**75**	P	**P**	**19 36 33.4 +0.3**			
INCN				pmax	pmax				
	comp=Z,15nm,0.8s								
TREB	**Trebinje**	**41.12**	**293**	*e*P	**P**	**19 36 33.6 +0.3**			
KRUC	**Moravsky**	**41.16**	**303**	*e*P	**P**	**19 36 34.4 +0.9**			
CHVC	**Chvalec**	**41.17**	**305**	*e*P	**P**	**19 36 34.7 +1.1**			
CHVC				*e*PP	**PnPn**	**19 38 13.4 +0.7**			
CHVC				AMS	AMS	19 55 20.0			
	comp=Z,700nm,12.2s								
UPC	**Upice**	**41.20**	**305**	*e*P	**P**	**19 36 35.1 +1.2**			
UPC				*e*		19 38 11.4			
UPC				MLR	MLR				
	comp=Z,700nm,11.9s								
UPC	**Upice**	**41.20**	**305**	*e*P	**P**	**19 36 35.1 +1.2**			
UPC				*e*PP	**PP**	**19 38 11.4 +2.7**			
UPC				AMS	AMS	19 55 20.0			

	comp=Z,700nm,11.9s								
MDJ	**Mudanjiang**	**41.23**	**64**	P	**P**	**19 36 34.7 +0.6**			
MDJ	**Mudanjiang**	**41.23**	**64**	P	**P**	**19 36 34.8 +0.7**			
MDJ				S	**S**	**19 42 43.5 -4.7**			
MDJ				pmax	pmax				
	comp=Z,9.0nm,0.7s								
MDJ				pmax	pmax				
	comp=Z,100nm,3.6s								
MDJ				LR	LR				
	comp=Z,690nm,11.6s								
MDJ				LR	LR				
	comp=Z,930nm,14.2s								
MDJ				LR	LR				
	comp=Z,1µm,11.4s								
SOP	**Sopron**	**41.28**	**301**	P	**P**	**19 36 35.9 +1.4**			
TRO	**Tromso**	**41.42**	**334**	*e*P	**P**	**19 36 36.6 +1.3**			
TRO				IAmb	IAmb	19 36 37.7			
	comp=Z,24nm,0.9s								
BLY	**Banja Luka**	**41.45**	**296**	⇑*i*P	**P**	**19 36 36.8 +0.8**			
BSD	**Bornholm Skovb**	**41.45**	**312**	*e*P	**P**	**19 36 34.6 -1.2**			
BSD	**Bornholm Skovb**	**41.45**	**312**	*i*P	**P**	**19 36 34.0 -1.8**			
BSD				IAmb	IAmb	19 36 40.2			
	comp=Z,20nm,0.9s								
RONA	**Rosalia, Austr**	**41.45**	**301**	*i*P	**P**	**19 36 36.8 +0.8**			
	comp=Z,38nm,1.4s,SNR=11								
STON	**Ston**	**41.54**	**293**	⇑*i*P	**P**	**19 36 36.8 +0.1**			
SRKY	**Kupres RS**	**41.62**	**295**	*e*P	**P**	**19 36 33.6 -3.9**			
CONA	**Conrad Observa**	**41.70**	**301**	*i*P	**P**	**19 36 39.0 +0.9**			
	comp=Z,54nm,1.3s,SNR=29								
CONA				*e*P	**PP**	**19 38 14.1 -0.1**			
	comp=Z,13nm,1.5s								
TREC	**Trest**	**41.71**	**303**	AMS	AMS	19 55 30.0			
	comp=Z,600nm,11.3s								
KLR	**Kul'dur**	**41.78**	**57**	P	**P**	**19 36 39.8 +1.1**			
	comp=Z,12nm,0.4s,baz=281,slow=7.8,SNR=52								
	comp=Z,12nm,0.4s								
KLR	**Kul'dur**	**41.78**	**57**	*ce*P	**P**	**19 36 39.4 +0.8**			
KLR				pmax	pmax				
	comp=Z,72nm,2.5s								
KLR				MLR	MLR				
	comp=Z,671nm,12.0s								
KULM	**Kulim**	**41.90**	**137**	P	**P**	**19 36 39.3 -0.6**			
DEL	**Delary**	**41.98**	**314**	*e*P	**P**	**19 36 39.5 -0.6**			
DEL	**Delary**	**41.98**	**314**	*i*P	**P**	**19 36 39.0 -1.1**			
SEHB	**SEOHWA**	**42.03**	**74**	P	**P**	**19 36 40.3 -0.5**			
KSAR	**Wonju Array Be**	**42.04**	**75**	P	**P**	**19 36 40.6 -0.2**			
KSAR	**Wonju Array Be**	**42.04**	**75**	P	**P**	**19 36 40.6 -0.2**			
ARSA	**Arzberg**	**42.05**	**300**	*i*P	**P**	**19 36 41.4 +0.5**			
	comp=Z,15nm,1.2s,SNR=6.5								
ARSA				*e*P	**PP**	**19 38 18.9 +0.9**			
	comp=Z,9.7nm,1.5s								
KSRS	**Korea Array**	**42.06**	**75**	P	**P**	**19 36 41.4 +0.4**			
	comp=Z,3.6nm,0.6s,baz=279,slow=7.2,SNR=12								
KSRS				PcP	**PcP**	**19 38 35.5 -0.4**			
	comp=Z,2.3nm,0.7s,baz=313,slow=2.6,SNR=4.7								
	comp=Z,3.6nm,0.6s								
PVCC	**Panska Ves**	**42.11**	**305**	*e*P	**P**	**19 36 42.5 +1.2**			
PVCC				*e*		19 38 25.6			
PVCC				MLR	MLR				
	comp=Z,900nm,12.0s								
PVCC	**Panska Ves**	**42.11**	**305**	*e*P	**P**	**19 36 42.5 +1.2**			
PVCC				*e*PP	**PP**	**19 38 25.6 +7.1**			
PVCC				AMS	AMS	19 55 40.0			
	comp=Z,900nm,12.0s								
FAUS	**Fauske**	**42.16**	**331**	*e*P	**P**	**19 36 42.1 +0.7**			
PRU	**Pruhonice**	**42.21**	**305**	*e*P	**P**	**19 36 43.2 +1.1**			
PRU				*e*		19 38 26.6			
PRU				MLR	MLR				
	comp=Z,600nm,12.2s								
PRU	**Pruhonice**	**42.21**	**305**	*e*P	**P**	**19 36 43.2 +1.1**			
PRU				*e*PP	**PP**	**19 38 26.6 +7.0**			
PRU				AMS	AMS	19 57 30.0			
	comp=Z,600nm,12.2s								
TIXI	**Tiksi**	**42.26**	**23**	P	**P**	**19 36 42.5 +0.3**			
TIXI				IAmb	IAmb	19 36 43.7			
	comp=Z,30nm,0.7s								
TIXI	**Tiksi**	**42.26**	**23**	*ce*P	**P**	**19 36 42.5 +0.3**			
TIXI				pmax	pmax				
	comp=Z,68nm,1.7s								
TIXI				MLR	MLR				
	comp=Z,1µm,11.0s								
MOR8	**Moi Rana**	**42.28**	**329**	*e*P	**P**	**19 36 42.3 -0.1**			
MOR8				IAmb	IAmb	19 36 43.0			
	comp=Z,54nm,1.0s								
STEI	**Steigen**	**42.29**	**331**	*e*P	**P**	**19 36 43.0 +0.6**			
RUE	**Ruedersdorf**	**42.35**	**308**	*e*P	**P**	**19 36 43.6 +0.4**			
CRES	**Cresnjev**	**42.40**	**298**	⇑

CLL	**Collm**	**42.98**	**307**	P	**P**	**19 36 48.3**	**0.0**
CLL				IAmb	IAmb	19 36 50.0	
	comp=Z,62nm,1.5s						
CLL	**Collm**	**42.98**	**307** ⇑	*i*P	**P**	**19 36 48.6**	**+0.3**
CLL				*e*		19 38 29.0	
CLL				pmax	pmax		
	comp=Z,46nm,1.5s						
CLL	**Collm**	**42.98**	**307** ⇑	*i*P	**P**	**19 36 48.6**	**+0.3**
	comp=Z,46nm,1.5s						
CLL				*e*PP	**PP**	**19 38 29.0**	**+1.2**
CLL				*i* pPP		19 38 32.2	
CLL				*i* sPP		19 38 37.0	
CLL				*i* PPP	PPP	19 39 00.8	
CLL				*i* x	x	19 39 20.5	
CLL				*e*ScP	**ScP**	**19 42 30.0**	**-0.3**
CLL				*e*S	S	19 43 30.0	+16
CLL				*e*SS	**SS**	**19 46 24.0**	**-1.3**
CLL				*e*SSS	SSS	19 47 12.0	
USRK	**Ussuriysk Ar.**	**42.99**	**64**	P	**P**	**19 36 48.9**	**+0.4**
	comp=Z,7.3nm,0.9s,baz=273,slow=9.2,SNR=6.8						
	comp=Z,7.3nm,0.9s						
NC405	**NORSAR Array S**	**43.05**	**321**	P	**P**	**19 36 49.0**	**+0.2**
BJO1	**Bjornoya**	**43.08**	**341**	*e*P	**P**	**19 36 49.8**	**+1.0**
CEY	**Cerknica**	**43.12**	**298**	*e*P	**P**	**19 36 50.3**	**+0.7**
NC602	**NORSAR Array S**	**43.13**	**321**	P	**P**	**19 36 49.0**	**-0.4**
CRNS	**Crni Vrh**	**43.15**	**299**	*i* P	**P**	**19 36 50.5**	**+0.7**
PSI	**Prapat**	**43.16**	**141**	P	**P**	**19 36 48.6**	**-1.7**
PSI				pmax	pmax		
	comp=Z,14nm,0.8s						
VLA	**Vladivostok**	**43.20**	**66**	*i* P	**P**	**19 36 51.1**	**+0.9**
VLA				pmax	pmax		
	comp=Z,32nm,1.0s						
VLA				MLR	MLR		
	comp=Z,595nm,12.0s						
BIOA	**Bad Ischl, Aus**	**43.22**	**301**	*i* P	**P**	**19 36 50.7**	**+0.4**
	comp=Z,23nm,1.2s,SNR=7.4						
NC303	**NORSAR Array S**	**43.22**	**321**	P	**P**	**19 36 50.3**	**+0.2**
SGRT	**San Giovanni R**	**43.25**	**292**	P	**P**	**19 36 50.6**	**-0.1**
NB201	**NORSAR Array S**	**43.25**	**321**	P	**P**	**19 36 50.2**	**-0.3**
RPSI	**Rantau Prapat**	**43.25**	**141**	P	**P**	**19 36 48.6**	**-2.3**
NB2	**NORSAR Subarra**	**43.29**	**321**	P	**P**	**19 36 50.7**	**-0.1**
	baz=91,slow=8.6						
NB2	**NORSAR Subarra**	**43.29**	**321**	P	**P**	**19 36 50.7**	**-0.1**
	comp=Z,43nm,0.7s,baz=91,slow=8.6						
NOA	**NORSAR Array B**	**43.29**	**321**	P	**P**	**19 36 50.7**	**-0.1**
	comp=Z,38nm,0.8s,baz=91,slow=7.9,SNR=120						
	comp=Z,38nm,0.8s						
TIP	**Timpagrande**	**43.31**	**289** ⇓	P	**P**	**19 36 51.3**	**+0.1**
TIP	**Timpagrande**	**43.31**	**289**	P	**P**	**19 36 51.0**	**-0.3**
TIP				IAmb	IAmb	19 36 52.7	
	comp=Z,54nm,1.3s						
MYKA	**Terra Mystica**	**43.44**	**300**	*e*P	**P**	**19 36 52.5**	**+0.3**
	comp=Z,18nm,0.9s						
SKDS	**Skadanscina**	**43.45**	**298**	*e*P	**P**	**19 36 52.4**	**+0.2**
NAO01	**NORSAR Array S**	**43.45**	**321**	P	**P**	**19 36 51.5**	**-0.5**
NKC	**Novy Kostel**	**43.50**	**305**	*e*P	**P**	**19 36 54.9**	**+2.3**
NKC				*e*		19 38 41.9	
NKC				MLR	MLR		
	comp=Z,1μm,11.6s						
NKC	**Novy Kostel**	**43.50**	**305**	*e*P	**P**	**19 36 54.9**	**+2.3**
NKC				*e*PP	**PcP**	**19 38 41.9**	**+1.4**
NKC				AMS	AMS	19 56 40.0	
	comp=Z,1μm,11.6s						
NBO00	**NORSAR Array S**	**43.51**	**321**	P	**P**	**19 36 51.9**	**-0.5**
NC204	**NORSAR Array S**	**43.51**	**321**	P	**P**	**19 36 52.3**	**-0.3**
NC204	**NORSAR Array S**	**43.51**	**321**	*e*P	**P**	**19 36 52.7**	**+0.1**
NC204				IAmb	IAmb	19 36 53.5	
	comp=Z,108nm,1.4s						
PRED	**Cave del Predi**	**43.54**	**300**	P	**P**	**19 36 52.2**	**-0.8**
KBA	**Koelnbreinsper**	**43.54**	**301**	*e*P	**P**	**19 36 53.5**	**+0.3**
	comp=Z,17nm,1.1s						
TRI	**Trieste**	**43.58**	**299**	P	**P**	**19 36 53.3**	**+0.1**
TRI				IAmb	IAmb	19 36 54.8	
	comp=Z,47nm,1.0s						
TRI	**Trieste**	**43.58**	**299**	P	**P**	**19 36 53.3**	**+0.1**
TRI				pmax	pmax		
	comp=Z,47nm,1.0s						
CUC	**Castrocucco**	**43.73**	**290**	P	**P**	**19 36 55.1**	**+0.5**
CUC				IAmb	IAmb	19 36 57.1	
	comp=Z,42nm,0.8s						
TBLU	**Trondheim**	**43.79**	**324**	*e*P	**P**	**19 36 54.9**	**+0.2**
TBLU				IAmb	IAmb	19 36 55.0	
	comp=Z,33nm,0.8s						
GSI	**Gunungsitoli**	**43.84**	**144**	P	**P**	**19 36 55.9**	**+0.2**
GSI				IAmb	IAmb	19 37 00.2	
	comp=Z,54nm,0.8s						
GSI	**Gunungsitoli**	**43.84**	**144**	P	**P**	**19 36 56.0**	**+0.4**
	comp=Z,80nm,0.8s						
CLUD	**Cludinico**	**43.99**	**300**	P	**P**	**19 36 56.4**	**-0.2**
KONO	**Kongsberg**	**44.12**	**319**	P	**P**	**19 36 57.3**	**-0.1**
KONO				IAmb	IAmb	19 36 58.5	
	comp=Z,32nm,0.8s						
KONO	**Kongsberg**	**44.12**	**319**	P	**P**	**19 36 57.3**	**-0.1**
KONO				pmax	pmax		
	comp=Z,33nm,0.8s						
KONO	**Kongsberg**	**44.12**	**319**	*e*P	**P**	**19 36 57.8**	**+0.4**
KONO				IAmb	IAmb	19 36 58.3	
	comp=Z,31nm,0.8s						
STAL	**STALIGIAL**	**44.16**	**300**	P	**P**	**19 36 57.0**	**-0.9**
STAL				IAmb	IAmb	19 36 58.9	
	comp=Z,56nm,1.5s						
ABTA	**Abfaltersbach**	**44.17**	**300**	*e*P	**P**	**19 36 57.5**	**-0.6**
	comp=Z,13nm,1.3s						
ABTA				*e*P	**PcP**	**19 38 42.6**	**-0.3**
	comp=Z,9.9nm,1.0s						
CEL	**Celeste**	**44.26**	**288**	P	**P**	**19 36 58.5**	**-0.4**
CEL				IAmb	IAmb	19 37 00.7	
	comp=Z,61nm,1.0s						
PAOL	**Paolisi**	**44.31**	**292**	P	**P**	**19 36 59.7**	**+0.5**
DOMB	**Dombas**	**44.32**	**322**	*e*P	**P**	**19 36 59.6**	**+0.6**
GRA1	**Grafenberg Arr**	**44.38**	**305**	P	**P**	**19 37 00.5**	**+0.9**
GRF	**Grafenberg Arr**	**44.38**	**305**	P	**P**	**19 37 00.5**	**+0.9**
GRFO	**Grafenberg**	**44.38**	**305**	P	**P**	**19 37 00.4**	**+0.7**
GRFO				IAmb	IAmb	19 37 02.4	
	comp=Z,86nm,1.5s						
GRFO	**Grafenberg**	**44.38**	**305**	P	**P**	**19 37 00.4**	**+0.7**
GRFO				pmax	pmax		
	comp=Z,86nm,1.5s						
GRNR	**Gornyy**	**44.49**	**54** ⇑	*i*P	**P**	**19 37 01.7**	**+1.2**
GRNR				*e*S	**S**	**19 43 40.0**	**+4.0**
GRNR				pmax	pmax		
	comp=E,8.0nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,20nm,1.0s						
GRNR				smax	smax		
	comp=N,1.0nm,0.8s						
GRNR				MLR	MLR		
	comp=E,260nm,11.0s						
GRNR				MLR	MLR		
	comp=N,100nm,18.0s						
GRNR				MLR	MLR		
	comp=Z,440nm,10.0s						
MUD	**Monsted U'grnd**	**44.58**	**314**	*i* P	**P**	**19 37 01.4**	**+0.3**
MUD				IAmb	IAmb	19 37 02.2	
	comp=Z,18nm,0.7s						
WTTA	**Wattenberg**	**44.63**	**301**	*i* P	**P**	**19 37 01.7**	**-0.2**
	comp=Z,24nm,1.2s,SNR=10						
WATA	**Walderalm**	**44.66**	**301**	*i* P	**P**	**19 37 01.8**	**-0.3**
	comp=Z,17nm,1.2s,SNR=7.8						
WATA				*e*P	**PcP**	**19 38 43.8**	**-0.8**
	comp=Z,11nm,1.3s						
SKAR	**Skarslia**	**44.72**	**321**	*e*P	**P**	**19 37 03.2**	**+0.9**
SKAR				IAmb	IAmb	19 37 04.1	
	comp=Z,30nm,1.1s						
HOMB	**Homborsund**	**44.77**	**317**	*e*P	**P**	**19 37 02.9**	**+0.4**
NRCA	**Norcia**	**44.80**	**295**	P	**P**	**19 37 03.4**	**+0.2**
NRCA				IAmb	IAmb	19 37 14.3	
	comp=Z,42nm,0.9s						
HSPB	**Hornsund (broa**	**44.81**	**344**	*e*P	**P**	**19 37 07.4**	**+4.7**
CTI	**Castel Tesino**	**44.92**	**300**	P	**P**	**19 37 03.4**	**-0.7**
CTI	**Castel Tesino**	**44.92**	**300**	P	**P**	**19 37 03.4**	**-0.7**
CTI				pmax	pmax		
	comp=Z,23nm,1.2s						
SQTA	**Sankt Quirin**	**44.93**	**301**	*i* P	**P**	**19 37 03.9**	**-0.3**
	comp=Z,22nm,1.6s,SNR=5.6						
MOTA	**Moosalm**	**44.97**	**301**	*i* P	**P**	**19 37 04.0**	**-0.6**
	comp=Z,13nm,0.9s,SNR=7.0						
MOTA				*e*P	**PcP**	**19 38 45.9**	**+0.2**
	comp=Z,9.2nm,0.9s						
MOL	**Molde**	**45.02**	**323**	*e*P	**P**	**19 37 05.6**	**+1.0**
MOL				IAmb	IAmb	19 37 06.2	
	comp=Z,32nm,0.9s						
MURB	**Monte Urbino**	**45.08**	**295**	P	**P**	**19 37 06.6**	**+1.2**
SPB2	**Spitsbergen Ar**	**45.09**	**346**	P	**P**	**19 37 06.3**	**+1.4**
TEOL	**Teolo**	**45.09**	**299**	P	**P**	**19 37 05.3**	**-0.1**
SPA0	**Spitsbergen Ar**	**45.09**	**346**	*e*P	**P**	**19 37 07.0**	**+2.0**
SPA0				IAmb	IAmb	19 37 07.4	
	comp=Z,78nm,1.1s						
SPITS	**Spitsbergen Ar**	**45.09**	**346**	P	**P**	**19 37 06.3**	**+1.3**
SPITS				pmax	pmax		
	comp=Z,66nm,1.0s						
RETA	**Reutte**	**45.16**	**302**	*i* P	**P**	**19 37 06.0**	**0.0**
	comp=Z,32nm,1.6s,SNR=9.1						
MNSI	**Mandailing Nat**	**45.22**	**142**	P	**P**	**19 37 06.6**	**-0.1**
	comp=Z,86nm,0.8s						
AKN	**Aaknes**	**45.29**	**323**	*e*P	**P**	**19 37 07.6**	**+0.8**
FETA	**Feichten**	**45.30**	**301**	*i* P	**P**	**19 37 06.7**	**-0.5**
	comp=Z,18nm,1.5s,SNR=6.9						
FETA				*e*P	**PcP**	**19 38 46.7**	**-0.2**
	comp=Z,14nm,1.1s						
SNART	**Snartemo**	**45.45**	**317**	*e*P	**P**	**19 37 08.8**	**+0.8**
FUORN	**Ofenpass-Fuorn**	**45.70**	**301**	P	**P**	**19 37 10.2**	**-0.3**
HYA	**Hoyanger**	**45.73**	**321**	*e*P	**P**	**19 37 11.2**	**+1.0**
BLS5	**Blasjo**	**45.73**	**319**	*e*P	**P**	**19 37 11.4**	**+1.1**
RAFF	**Raffo Rosso**	**45.76**	**287**	P	**P**	**19 37 12.0**	**+1.2**
DAVA	**Damuels**	**45.79**	**302**	*i* P	**P**	**19 37 11.0**	**-0.1**
	comp=Z,24nm,0.7s,SNR=17						
SALO	**Salr**	**45.80**	**299**	P	**P**	**19 37 10.6**	**-0.4**
SALO				IAmb	IAmb	19 37 15.7	
	comp=Z,33nm,1.1s						
ZCCA	**Zocca**	**45.84**	**297**	P	**P**	**19 37 12.7**	**+1.3**
ZCCA				IAmb	IAmb	19 37 22.3	
	comp=Z,32nm,1.0s						
STU	**Stuttgart**	**45.88**	**304**	P	**P**	**19 37 12.1**	**+0.6**
STU				IAmb	IAmb	19 37 13.6	
	comp=Z,61nm,1.5s						
STU	**Stuttgart**	**45.88**	**304**	P	**P**	**19 37 12.1**	**+0.6**
STU				pmax	pmax		
	comp=Z,61nm,1.5s						
OSSC	**Osservatorio P**	**45.90**	**296**	P	**P**	**19 37 12.1**	**+0.3**
OSSC				IAmb	IAmb	19 37 13.5	
	comp=Z,38nm,0.9s						
JNU	**Nakatsue**	**45.96**	**79**	P	**P**	**19 37 13.2**	**+0.8**
	comp=Z,27nm,1.0s,baz=346,slow=4.9,SNR=6.1						
	comp=Z,27nm,1.0s						
JNU	**Nakatsue**	**45.96**	**79**	P	**P**	**19 37 13.3**	**+0.9**
JNU				IAmb	IAmb	19 37 14.8	
	comp=Z,47nm,1.1s						
KBS	**Kingsbay**	**46.19**	**346**	P	**P**	**19 37 14.7**	**+1.1**
KBS	**Kingsbay**	**46.19**	**346**	*ce*P	**P**	**19 37 15.2**	**+1.6**
KBS				pmax	pmax		
	comp=Z,102nm,1.3s						
KBS	**Kingsbay**	**46.19**	**346**	*e*P	**P**	**19 37 15.1**	**+1.6**
KBS				IAmb	IAmb	19 37 15.8	
	comp=Z,68nm,0.9s						
BER	**Bergen**	**46.21**	**320**	*e*P	**P**	**19 37 14.8**	**+0.9**
FOO	**Floro**	**46.25**	**322**	*e*P	**P**	**19 37 15.2**	**+1.0**
ASK	**Askoy**	**46.27**	**320**	*e*P	**P**	**19 37 15.2**	**+0.8**
BKNI	**Bangkinang**	**46.34**	**140**	P	**P**	**19 37 14.3**	**-1.2**
BKNI	**Bangkinang**	**46.34**	**140**	P	**P**	**19 37 15.4**	**-0.1**
	comp=Z,118nm,0.8s						
TUE	**Stuetta**	**46.35**	**301**	P	**P**	**19 37 15.1**	**-0.5**
BFO	**Black Forest**	**46.54**	**303**	P	**P**	**19 37 16.4**	**-0.4**
BFO	**Black Forest**	**46.54**	**303**	P	**P**	**19 37 16.4**	**-0.4**
BFO				pmax	pmax		
	comp=Z,13nm,0.9s						
SISI	**Saibi**	**46.86**	**144**	P	**P**	**19 37 20.9**	**+1.4**
	comp=Z,24nm,0.9s						
JHS	**Saijyo**	**46.87**	**76**	P	**P**	**19 37 19.4**	**-0.2**
JHS				IAmb	IAmb	19 37 20.7	
	comp=Z,29nm,1.0s						
ECH	**Echery**	**47.33**	**304**	P	**P**	**19 37 22.5**	**-0.4**
ECH	**Echery**	**47.33**	**304**	P	**P**	**19 37 22.5**	**-0.4**
ECH				pmax	pmax		
	comp=Z,14nm,1.2s						
BTNL	**Ternell**	**47.38**	**307**	*d*P	**P**	**19 37 24.0**	**+0.6**
	comp=Z,13nm,1.0s						
MEM	**Membach**	**47.45**	**307**	*d*P	**P**	**19 37 24.5**	**+0.6**
	comp=Z,16nm,0.9s						
BHOU	**Houvegnez**	**47.52**	**307**	*d*P	**P**	**19 37 25.1**	**+0.7**
WLF	**Walferdange**	**47.59**	**306**	P	**P**	**19 37 25.6**	**+0.6**
WLF				IAmb	IAmb	19 37 26.7	
	comp=Z,26nm,0.9s						
WLF	**Walferdange**	**47.59**	**306**	P	**P**	**19 37 25.6**	**+0.6**
WLF				pmax	pmax		
	comp=Z,26nm,0.9s						
WLF	**Walferdange**	**47.59**	**306**	*d*P	**P**	**19 37 26.0**	**+1.0**
	comp=Z,19nm,0.9s						
BSTI	**Sart Tilman**	**47.73**	**307**	*d*P	**P**	**19 37 26.8**	**+0.8**
SENIN	**Lac Senin/Sane**	**47.74**	**301**	P	**P**	**19 37 26.1**	**-0.4**
SENIN				IAmb	IAmb	19 37 28.4	
	comp=Z,24nm,1.1s						
BCLA	**Clavier**	**47.94**	**307**	*d*P	**P**	**19 37 28.2**	**+0.6**
RCHB	**Rochefort**	**48.05**	**307**	*d*P	**P**	**19 37 29.1**	**+0.6**
	comp=Z,8.3nm,1.0s						
BMRD	**Maredsous**	**48.30**	**307**	*d*P	**P**	**19 37 31.3**	**+0.9**
LPL	**La Plagne**	**48.38**	**300**	*e*P	**P**	**19 37 31.2**	**-0.2**
LPL				pmax	pmax		
	comp=Z,19nm,0.5s						
DOU	**Dourbes**	**48.46**	**307**	*d*P	**P**	**19 37 32.5**	**+0.9**
SNF	**Seneffe**	**48.54**	**307**	*d*P	**P**	**19 37 32.8**	**+0.5**
	comp=Z,18nm,0.7s						
BNI	**Bardonecchia**	**48.55**	**300**	P	**P**	**19 37 32.6**	**-0.1**
BNI				IAmb	IAmb	19 37 47.9	
	comp=Z,39nm,1.1s						
BNI	**Bardonecchia**	**48.55**	**300**	P	**P**	**19 37 32.6**	**-0.1**
BNI				pmax	pmax		
	comp=Z,39nm,1.1s						
DSRI	**Dabo**	**48.84**	**137**	P	**P**	**19 37 39.4**	**+4.5**
LRW	**Lerwick**	**49.46**	**321**	*e*P	**P**	**19 37 39.3**	**+0.2**
LRW				IAmb	IAmb	19 37 40.3	
	comp=Z,38nm,0.8s						
JSD	**Sado**	**49.47**	**70**	P	**P**	**19 37 39.2**	**-0.4**
JSD				IAmb	IAmb	19 37 40.3	
	comp=Z,17nm,0.8s						
YSS	**Yuzh-Sakhalins**	**49.48**	**57**	P	**P**	**19 37 40.4**	**+0.8**
YSS				IAmb	IAmb	19 37 45.7	
	comp=Z,44nm,1.1s						
YSS	**Yuzh-Sakhalins**	**49.48**	**57**	*e*P	**P**	**19 37 40.6**	**+1.1**
YSS				*e*		19 39 35.3	
YSS				*e*S	**S**	**19 44 43.4**	**-4.0**
YSS				pmax	pmax		
	comp=Z,30nm,1.1s						
YSS				MLR	MLR		
	comp=Z,600nm,14.0s						
INU	**Inuyama**	**49.64**	**74**	P	**P**	**19 37 41.1**	**+0.2**
INU				IAmb	IAmb	19 37 42.4	
	comp=Z,22nm,0.8s						
JGF	**Kuroka**	**49.79**	**73**	P	**P**	**19 37 42.3**	**+0.2**
JGF				IAmb	IAmb	19 37 43.4	
	comp=Z,32nm,0.8s						
LODK	**Lodwar**	**49.86**	**234**	P	**P**	**19 37 43.3**	**+0.5**
LODK				IAmb	IAmb	19 37 48.7	
	comp=Z,38nm,1.1s						
LODK	**Lodwar**	**49.86**	**234**	P	**P**	**19 37 44.2**	**+1.3**
	SNR=15						
SSB	**Saint Sauveur**	**49.91**	**300**	P	**P**	**19 37 42.9**	**-0.1**
SSB				IAmb	IAmb	19 37 44.5	
	comp=Z,36nm,1.3s						
SSB	**Saint Sauveur**	**49.91**	**300**	P	**P**	**19 37 42.9**	**-0.1**
SSB				pmax	pmax		
	comp=Z,37nm,1.3s						
MJB9	**Matsu-Tunnel**	**50.03**	**72**	P	**P**	**19 37 43.2**	**-0.7**
MJB9				IAmb	IAmb	19 37 44.9	
	comp=Z,33nm,0.8s						
MAJO	**Matsushiro**	**50.03**	**72**	P	**P**	**19 37 43.7**	**-0.2**
MAJO				IAmb	IAmb	19 37 44.9	
	comp=Z,33nm,0.8s						
MAJO	**Matsushiro**	**50.03**	**72**	P	**P**	**19 37 43.7**	**-0.2**
MAJO				pmax	pmax		
	comp=Z,33nm,0.8s						
MJAR	**Matsushiro Arr**	**50.03**	**72**	P	**P**	**19 37 43.4**	**-0.5**
	comp=Z,22nm,0.8s,baz=292,slow=8.0,SNR=27						
	comp=Z,22nm,0.8s						
MJAR	**Matsushiro Arr**	**50.03**	**72**	P	**P**	**19 37 43.9**	**0.0**
MJAR				IAmb	IAmb	19 37 45.1	
	comp=Z,20nm,0.8s						
MJAR	**Matsushiro Arr**	**50.03**	**72**	P	**P**	**19 37 43.9**	**0.0**
MJAR				pmax	pmax		
	comp=Z,21nm,0.8s						
KEST	**Kesra**	**50.06**	**287**	P	**P**	**19 37 45.0**	**+0.7**
	comp=Z,25nm,1.0s,baz=329,slow=2.6,SNR=20						
	comp=Z,25nm,1.0s						
KEST	**Kesra**	**50.06**	**287**	P	**P**	**19 37 44.9**	**+0.7**
KEST				IAmb	IAmb	19 37 46.2	
	comp=Z,58nm,1.3s						
KEST	**Kesra**	**50.06**	**287**	P	**P**	**19 37 45.0**	**+0.7**
	SNR=5.6						
ELMS	**Elmsett, Ipswi**	**50.12**	**310**	*e*P	**P**	**19 37 44.5**	**+0.2**
ELMS				IAmb	IAmb	19 37 45.4	
	comp=Z,124nm,0.8s						
ASAJ	**Asahikawa**	**50.30**	**61**	P	**P**	**19 37 45.5**	**-0.3**
ASAJ				pmax	pmax		
	comp=Z,48nm,1.4s						
JKA	**Kamikawa-asahi**	**50.30**	**61**	P	**P**	**19 37 45.5**	**-0.3**
JKA				IAmb	IAmb	19 37 47.5	
	comp=Z,48nm,1.4s						
JTM	**Tenmabayashi**	**50.44**	**65**	P	**P**	**19 37 46.6**	**-0.3**
JTM				IAmb	IAmb	19 37 47.8	
	comp=Z,41nm,0.8s						
CLF	**Chambon-Foret**	**50.52**	**305**	P	**P**	**19 37 46.9**	**-0.5**
CLF				IAmb	IAmb	19 37 48.1	
	comp=Z,34nm,0.8s						
MA2	**Magadan**	**50.78**	**40**	P	**P**	**19 37 49.9**	**+0.7**
	comp=Z,12nm,0.8s,baz=301,slow=7.7,SNR=13						
MA2				PcP	**PcP**	**19 39 06.0**	**-0.1**
	comp=Z,16nm,0.9s,baz=5.7,slow=2.0,SNR=6.0						
	comp=Z,12nm,0.8s						
MA2	**Magadan**	**50.78**	**40**	P	**P**	**19 37 49.7**	**+0.5**
SEY	**Seymchan**	**50.82**	**35**	*ce*P	**P**	**19 37 49.5**	**0.0**
SEY				pmax	pmax		
	comp=Z,20nm,1.7s						
SEY				MLR	MLR		
	comp=Z,830nm,13.0s						
DRUM	**Mains of Drumt**	**50.83**	**317**	*e*P	**P**	**19 37 49.6**	**0.0**
DRUM				IAmb	IAmb	19 37 50.5	
	comp=Z,66nm,1.1s						
PMBI	**Palembang**	**51.01**	**138**	P	P	19 37 56.9	+5.4
EDMD	**Edmundbyers**	**51.08**	**314**	*e*P	**P**	**19 37 51.5**	**0.0**
EDMD				IAmb	IAmb	19 37 52.4	
	comp=Z,58nm,1.0s						
PPBI	**Pangkal Pinang**	**51.08**	**136**	P	**P**	**19 37 52.7**	**+0.7**
HPK	**Haverah Park**	**51.13**	**313**	*e*P	**P**	**19 37 51.8**	**-0.1**
HPK				IAmb	IAmb	19 37 52.8	
	comp=Z,76nm,0.8s						
ESY	**Stoneypath**	**51.15**	**315**	*e*P	**P**	**19 37 51.9**	**-0.2**
BIGH	**Upper Bighouse**	**51.18**	**319**	*e*P	**P**	**19 37 52.6**	**+0.4**
BIGH				IAmb	IAmb	19 37 53.4	
	comp=Z,90nm,1.1s						
LBWR	**Ladybower, Pea**	**51.34**	**312**	*e*P	**P**	**19 37 53.1**	**-0.4**
LBWR				IAmb	IAmb	19 37 54.3	
	comp=Z,34nm,0.8s						
JMM	**Marumori**	**51.38**	**69**	P	**P**	**19 37 53.8**	**-0.3**
JMM				IAmb	IAmb	19 37 54.8	
	comp=Z,33nm,0.8s						
EBL	**Broad Law**	**51.42**	**315**	*e*P	**P**	**19 37 54.5**	**+0.4**
EDI	**Edinburgh**	**51.46**	**316**	*e*P	**P**	**19 37 54.3**	**0.0**
EDI				IAmb	IAmb	19 37 55.1	
	comp=Z,33nm,0.8s						
JYT	**Yasato**	**51.62**	**71**	P	**P**	**19 37 55.6**	**-0.3**
ESK	**Eskdalemuir**	**51.63**	**315**	*e*P	**P**	**19 37 55.4**	**-0.3**
ESK				IAmb	IAmb	19 37 56.0	
	comp=Z,30nm,0.9s						
ESK	**Eskdalemuir**	**51.63**	**315**	P	**P**	**19 37 55.6**	**-0.1**
ESK				IAmb	IAmb	19 37 56.7	
	comp=Z,40nm,1.1s						
ESK	**Eskdalemuir**	**51.63**	**315**	P	**P**	**19 37 55.6**	**-0.1**
ESK				pmax	pmax		
	comp=Z,40nm,1.1s						
MDO	**Dochfour**	**51.68**	**318**	*e*P	**P**	**19 37 55.5**	**-0.5**
CAF	**Calviac**	**51.68**	**301**	*e*P	**P**	**19 37 56.1**	**-0.2**
CAF				pmax	pmax		
	comp=Z,26nm,1.0s						
KESW	**Keswick, Cumbr**	**51.78**	**314**	*e*P	**P**	**19 37 56.0**	**-0.8**
KESW				IAmb	IAmb	19 37 58.0	
	comp=Z,83nm,1.0s						
INVG	**Invergeldie, C**	**51.78**	**316**	*e*P	**P**	**19 37 56.6**	**-0.2**
INVG				IAmb	IAmb	19 37 57.5	
	comp=Z,42nm,1.2s						
EAB	**Aberfoyle**	**52.01**	**316**	*e*P	**P**	**19 37 58.8**	**+0.4**
STRD	**Stroud**	**52.08**	**310**	*e*P	**P**	**19 37 58.5**	**-0.5**
STRD				IAmb	IAmb	19 37 59.5	
	comp=Z,66nm,0.7s						
KAC	**Achnashellach**	**52.15**	**318**	*e*P	**P**	**19 37 59.5**	**0.0**
PGBU	**Glenifferbraes**	**52.19**	**316**	*e*P	**P**	**19 37 59.9**	**+0.1**
PGBU				IAmb	IAmb	19 38 00.8	
	comp=Z,47nm,0.7s						
NEWG	**New Galloway**	**52.25**	**315**	*e*P	**P**	**19 38 00.5**	**+0.2**
NEWG				IAmb	IAmb	19 38 01.5	
	comp=Z,58nm,0.9s						
KMBO	**Kilima Mbogo**	**52.33**	**228**	P	**P**	**19 38 02.1**	**+0.5**
	comp=Z,7.9nm,0.9s,baz=35,slow=12,SNR=10						
	comp=Z,7.9nm,0.9s						
KMBO	**Kilima Mbogo**	**52.33**	**228**	P	**P**	**19 38 01.7**	**+0.1**
KMBO	**Kilima Mbogo**	**52.33**	**228**	P	**P**	**19 38 01.7**	**+0.1**
KMBO				pmax	pmax		
	comp=Z,26nm,1.4s						
KMBO	**Kilima Mbogo**	**52.33**	**228**	P	**P**	**19 38 02.0**	**+0.5**
KPL	**Plockton**	**52.38**	**318**	*e*P	**P**	**19 38 00.9**	**-0.2**
MONM	**Monmouth**	**52.44**	**310**	*e*P	**P**	**19 38 01.3**	**-0.4**
MONM				IAmb	IAmb	19 38 02.2	
	comp=Z,69nm,1.1s						
MCH1	**Michaelchurch**	**52.50**	**311**	*e*P	**P**	**19 38 01.9**	**-0.2**
MCH1				IAmb	IAmb	19 38 02.9	
	comp=Z,82nm,0.8s						
MFF	**Saint Martin d**	**52.54**	**304**	*e*P	**P**	**19 38 01.5**	**-1.1**
MFF				pmax	pmax		
	comp=Z,46nm,1.4s						
LAWE	**Loch Awe, Argy**	**52.55**	**316**	*e*P	**P**	**19 38 02.8**	**+0.3**
LAWE				IAmb	IAmb	19

PBRG Braganca 58.81 301 eP P 19 38 48.1 +0.3
comp=Z,24nm,1.3s
SUMG Summit 58.92 341 P P 19 38 49.5 +1.0
SUMG Summit 58.92 341 P P 19 38 49.5 +1.0
SUMG pmax pmax
comp=Z,40nm,0.9s
MVO Moncorvo 59.30 300 eP P 19 38 51.7 +0.5
comp=Z,26nm,1.4s
MVO Moncorvo 59.30 300 eLR LR 20 04 54.4
comp=Z,133nm,16.0s
JBK JBK 59.41 291 P P 19 38 53.0 +0.8
FIGM Figuig 59.54 288 P P 19 38 53.0 0.0
PVRL Vila Real 59.71 300 eP P 19 38 54.4 +0.4
PCAB Cabril 59.71 301 eP P 19 38 54.4 +0.4
comp=Z,74nm,1.6s
POLO Lamas de Olo 59.71 300 eP P 19 38 54.5 +0.4
comp=Z,10nm,1.3s
PGAV Gavieira, Arco 59.76 301 eP P 19 38 55.1 +0.7
comp=Z,54nm,2.0s
PGAV Gavieira, Arco 59.76 301 eLR LR 20 06 43.0
comp=Z,129nm,18.0s
MTE Manteigas 60.00 299 eP P 19 38 56.6 +0.6
comp=Z,52nm,1.6s
MTE Manteigas 60.00 299 eLR LR 20 03 34.0
comp=Z,122nm,18.0s
MTE Manteigas 60.00 299 P P 19 38 55.8 -0.2
MTE IAmb IAmb 19 38 57.9
comp=Z,47nm,1.4s
PVIS Viseu 60.09 300 eP P 19 38 57.1 +0.5
comp=Z,47nm,1.7s
EUNU Eureka 60.20 356 P P 19 38 57.6 +0.8
EUNU IAmb IAmb 19 38 59.0
comp=Z,16nm,0.8s
PMRV Marv??o 60.35 298 eP P 19 38 59.2 +0.8
comp=Z,38nm,1.2s
PMRV Marv??o 60.35 298 eLR LR 20 07 01.5
comp=Z,124nm,18.0s
COI Coimbra 60.67 300 eP P 19 39 01.9 +1.4
comp=Z,89nm,1.1s
COI Coimbra 60.67 300 P P 19 39 01.0 +0.5
COI Coimbra 60.67 300 P P 19 39 01.0 +0.5
COI pmax pmax
comp=Z,54nm,0.9s
PESTR Estremoz 60.76 298 eP P 19 39 01.4 +0.2
comp=Z,19nm,2.1s
SMIR Smir Dam 60.77 294 P P 19 39 02.0 +0.8
PMTG Montargil 61.09 298 eP P 19 39 03.8 +0.4
comp=Z,36nm,1.3s
PBEJ Beja 61.35 297 eP P 19 39 05.7 +0.5
comp=Z,27nm,1.5s
PVAQ Vaqueiros 61.56 296 eP P 19 39 06.9 +0.3
comp=Z,52nm,1.5s
PVAQ Vaqueiros 61.56 296 eLR LR 20 06 21.9
comp=Z,102nm,16.0s
PVAQ Vaqueiros 61.56 296 P P 19 39 06.8 +0.3
PVAQ IAmb IAmb 19 39 08.0
comp=Z,19nm,1.0s
MDT Midelt 61.64 291 P P 19 39 08.2 +0.8
PCVE Castro Verde 61.67 297 eP P 19 39 07.4 +0.1
comp=Z,22nm,1.8s
MESJ Messejana 61.69 297 eP P 19 39 07.8 +0.4
MESJ IAmb IAmb 19 39 08.1
comp=Z,14nm,1.0s
MESJ Messejana 61.69 297 eP P 19 39 08.1 +0.6
comp=Z,35nm,2.3s
MESJ Messejana 61.69 297 eP P 19 39 07.8 +0.4
PBDV Barranco-do-Ve 61.78 296 eP P 19 39 08.9 +0.7
comp=Z,41nm,1.0s
GOLM Goulmima 62.46 290 P P 19 39 14.0 +1.1
ZHG ZHG 62.79 292 P P 19 39 16.0 +1.0
TZRR Tazzarine 63.39 289 P P 19 39 19.2 +0.2
ZGR Zagora 63.78 288 P P 19 39 22.0 +0.3
A21K Barrow 63.92 16 P P 19 39 22.2 +0.5
baz=319
OUZM OUZ 64.19 290 P P 19 39 25.0 +0.6
OUK Oukaimeden 64.84 291 P P 19 39 30.0 +1.1
GAMB Gambell 64.95 26 P P 19 39 29.0 +0.4
baz=309
TNA Tin City 65.04 24 P P 19 39 29.9 +0.8
baz=311
TTIG Tnine Tigouga, 65.61 290 P P 19 39 35.0 +1.3
SFJD Kangerlussuaq 65.72 339 P P 19 39 33.8 +0.3
SFJD IAmb IAmb 19 39 34.3
comp=Z,21nm,0.9s
SFJD Kangerlussuaq 65.72 339 P P 19 39 33.8 +0.3
SFJD pmax pmax
comp=Z,21nm,1.0s
RES Resolute Bay 65.87 357 P P 19 39 34.9 +0.5
RES Resolute Bay 65.87 357 P P 19 39 34.9 +0.5
RES pmax pmax
comp=Z,8.0nm,0.9s
SWI Sorong 66.16 112 P P 19 39 39.7 +2.6
C23K Itkillik River 66.34 15 P P 19 39 38.5 +1.0
baz=324
ANM Nome 66.51 24 P P 19 39 39.8 +1.1
ANM IAmb IAmb 19 39 41.0
comp=Z,20nm,0.8s
ANM Nome 66.51 24 P P 19 39 39.8 +1.1
ANM pmax pmax
comp=Z,20nm,0.8s
ANM Nome 66.51 24 P P 19 39 39.8 +1.1
baz=314,SNR=5.9
D23K Nanushuk River 67.03 16 P P 19 39 42.5 +0.5
baz=324,SNR=9.9
D24K Happy Valley 67.26 15 P P 19 39 43.7 +0.3
baz=326,SNR=5.1
TOLK Toolik Lake Re 67.53 16 P P 19 39 45.3 +0.1
TOLK Toolik Lake Re 67.53 16 P P 19 39 45.6 +0.4
baz=325,SNR=24
TOA0 Torodi Ar. Sit 67.81 269 P P 19 39 46.4 -1.3
TORD Torodi Ar. Bea 67.81 269 P P 19 39 46.6 -1.1
comp=Z,7.3nm,0.5s,baz=49,slow=5.6,SNR=96
comp=Z,7.3nm,0.5s
TORD Torodi Ar. Bea 67.81 269 P P 19 39 46.7 -1.0
TORD IAmb IAmb 19 39 47.8
comp=Z,35nm,1.3s
NRS Narsarsuaq 68.17 333 P P 19 39 49.1 -0.1
NRS Narsarsuaq 68.17 333 P P 19 39 49.1 -0.1
NRS pmax pmax
comp=Z,43nm,0.8s
COLD Coldfoot 68.56 17 P P 19 39 51.7 +0.1
COLD Coldfoot 68.56 17 P P 19 39 52.0 +0.4
baz=325,SNR=11
IMAR Indian Mountai 68.72 19 P P 19 39 52.2 -0.5
AMKA Amchitka 68.79 40 P P 19 39 53.2 -0.1
GCSA Galena City Sc 68.87 21 P P 19 39 54.3 +0.8
baz=320
LSZ Lusaka 68.97 227 P P 19 39 54.5 -0.4
LSZ IAmb IAmb 19 40 00.8
comp=Z,19nm,1.2s
LSZ Lusaka 68.97 227 P P 19 39 54.5 -0.4
LSZ pmax pmax
comp=Z,19nm,1.3s
H21K Melozitna Rive 69.22 19 P P 19 39 55.7 -0.1
H21K IAmb IAmb 19 39 57.1
comp=Z,26nm,1.1s
H21K Melozitna Rive 69.22 19 P P 19 39 55.8 +0.1
baz=323,SNR=25
H22K Ishtalitna Cre 69.38 18 P P 19 39 56.9 +0.2
baz=324,SNR=13
BMAR Burnt Mountain 69.57 15 P P 19 39 58.4 +0.5
I21K Tanana 69.81 19 P P 19 39 59.5 +0.1
I21K IAmb IAmb 19 40 01.0
comp=Z,21nm,1.1s
I21K Tanana 69.81 19 P P 19 39 59.7 +0.4
baz=324,SNR=6.6
SPIA Saint Paul Isl 69.82 31 P P 19 40 00.1 +0.5
baz=312
H23K Yukon River 69.86 17 P P 19 40 00.4 +0.6
H23K IAmb IAmb 19 40 01.8
comp=Z,28nm,1.1s
H23K Yukon River 69.86 17 P P 19 40 00.5 +0.8
baz=326,SNR=14
J20K Nowinta River 70.06 20 P P 19 40 01.0 +0.1
J20K IAmb IAmb 19 40 02.6
comp=Z,23nm,0.8s
J20K Nowinta River 70.06 20 P P 19 40 01.5 +0.6
baz=322,SNR=30
H24K Noodor Dome 70.23 17 P P 19 40 02.4 +0.3
H24K IAmb IAmb 19 40 03.9
comp=Z,16nm,1.1s
H24K Noodor Dome 70.23 17 P P 19 40 02.7 +0.6
baz=327,SNR=17
MLY Manley 70.24 18 P P 19 40 01.8 -0.3
MLY IAmb IAmb 19 40 03.5
comp=Z,21nm,1.2s
baz=325,SNR=20
I23K Minto, Yukon-K 70.47 18 P P 19 40 03.7 +0.3
I23K IAmb IAmb 19 40 05.1
comp=Z,28nm,1.1s
I23K Minto, Yukon-K 70.47 18 P P 19 40 03.9 +0.5
baz=326,SNR=25
TTA Tatalina 70.53 22 P P 19 40 04.3 +0.4
TTA Tatalina 70.53 22 P P 19 40 04.3 +0.4
TTA pmax pmax
comp=Z,9.0nm,0.9s
TTA Tatalina 70.53 22 P P 19 40 04.4 +0.5
baz=321,SNR=11
INK Inuvik 70.64 10 P P 19 40 04.8 +0.4
INK IAmb IAmb 19 40 05.5
comp=Z,22nm,0.8s
INK Inuvik 70.64 10 P P 19 40 04.8 +0.4
INK pmax pmax
comp=Z,22nm,0.8s
INK Inuvik 70.64 10 P P 19 40 04.9 +0.6
baz=338,SNR=13
C36M Paulatuk 70.72 7 P P 19 40 04.5 -0.3
C36M Paulatuk 70.72 7 P P 19 40 04.8 -0.1
baz=346,SNR=16
K20K Telida 70.73 21 P P 19 40 05.5 +0.4
K20K IAmb IAmb 19 40 06.9
comp=Z,22nm,0.9s
K20K Telida 70.73 21 P P 19 40 05.7 +0.6
baz=323,SNR=23
CHUM Lake Minchumin 70.78 20 P P 19 40 05.8 +0.5
baz=324
MDM Murphy Dome 70.89 17 P P 19 40 05.9 -0.2
MDM IAmb IAmb 19 40 07.5
comp=Z,39nm,1.4s
BPAW Bear Paw Mtn. 70.94 19 P P 19 40 06.1 -0.3
BPAW IAmb IAmb 19 40 07.4
comp=Z,28nm,1.0s
BPAW Bear Paw Mtn. 70.94 19 P P 19 40 06.1 -0.3
baz=325,SNR=15
POKR Poker Plat Res 70.94 17 P P 19 40 06.6 +0.3
POKR Poker Plat Res 70.94 17 P P 19 40 07.1 +0.8
baz=328,SNR=11
NEA2 Nenana 71.00 18 P P 19 40 06.3 -0.4
NEA2 IAmb IAmb 19 40 07.8
comp=Z,31nm,1.0s
NEA2 Nenana 71.00 18 P P 19 40 06.6 -0.1
baz=326,SNR=19
TCOL CIGO, UAF Yank 71.05 17 P P 19 40 07.2 +0.2
TCOL CIGO, UAF Yank 71.05 17 P P 19 40 07.1 +0.2
baz=327,SNR=6.0
COLA College 71.05 17 P P 19 40 07.3 +0.4
COLA College 71.05 17 P P 19 40 07.3 +0.4
COLA pmax pmax
comp=Z,50nm,0.9s
COLA College 71.05 17 P P 19 40 07.1 +0.1
baz=327
CAST Castle Rocks 71.21 20 P P 19 40 08.3 +0.3
CAST Castle Rocks 71.21 20 P P 19 40 08.4 +0.3
baz=324,SNR=9.4
CCB Clear Creek Bu 71.25 17 P P 19 40 07.4 -0.8
CCB IAmb IAmb 19 40 09.0
comp=Z,20nm,1.4s
BWN Browne 71.26 18 P P 19 40 08.4 +0.1
WRH Wood River Hil 71.34 18 P P 19 40 07.8 -0.9
IL31 71.36 17 P P 19 40 08.1 -0.7
IL31 IAmb IAmb 19 40 09.5
comp=Z,23nm,0.9s
ILAR Eielson Array 71.36 17 P P 19 40 08.4 -0.5
comp=Z,16nm,0.8s,baz=319,slow=4.8,SNR=112
comp=Z,16nm,0.8s
KTH Kantishna Hill 71.41 19 P P 19 40 08.9 -0.4
L19K White Mountain 71.45 22 P P 19 40 09.8 +0.4
L19K IAmb IAmb 19 40 11.4
comp=Z,22nm,1.1s
L19K White Mountain 71.45 22 P P 19 40 10.2 +0.7
baz=322,SNR=21
L20K Farewell, AK 71.49 21 P P 19 40 10.3 +0.6
baz=323,SNR=21
N16K Nishlik Lake 71.59 24 P P 19 40 11.9 +1.5
baz=320,SNR=25
PPLA Purkeypile 71.61 20 P P 19 40 10.7 +0.1
PPLA Purkeypile 71.61 20 P P 19 40 10.6 0.0
baz=324,SNR=6.7
TRF Thorofare Moun 71.65 19 P P 19 40 10.1 -0.8
TRF Thorofare Moun 71.65 19 P P 19 40 10.1 -0.8
baz=326,SNR=5.9
HDA Harding Lake 71.66 17 P P 19 40 09.4 -1.2
HDA Harding Lake 71.66 17 P P 19 40 09.6 -1.1
baz=328,SNR=8.5
I26K Coal Creek Min 71.70 15 P P 19 40 11.1 +0.2
MCK McKinley 71.75 18 P P 19 40 11.0 -0.3
MCK McKinley 71.75 18 P P 19 40 11.0 -0.3
MCK pmax pmax
comp=Z,9.0nm,0.8s
MCK McKinley 71.75 18 P P 19 40 11.1 -0.2
baz=327
M19K Big River Lodg 71.80 22 P P 19 40 12.3 +0.7
J25K Salcha River, 71.84 17 P P 19 40 11.1 -0.8
J25K IAmb IAmb 19 40 12.4
comp=Z,15nm,0.9s
J25K Salcha River, 71.84 17 P P 19 40 11.3 -0.5
baz=329,SNR=21
EPYK Eagle Plains 71.94 12 P P 19 40 11.8 -0.6
EPYK Eagle Plains 71.94 12 P P 19 40 12.4 0.0
baz=336
SVW2 Sparrevohn 72.09 23 P P 19 40 13.1 -0.3
M20K Styx River 72.18 21 P P 19 40 12.7 -1.2
J26L Joseph Creek 72.32 16 P P 19 40 14.4 -0.4
J26L IAmb IAmb 19 40 15.9
comp=Z,19nm,0.8s
J26L Joseph Creek 72.32 16 P P 19 40 14.8 +0.1
baz=331,SNR=28
N18K Kilae Creek 72.33 23 P P 19 40 14.9 +0.1
N18K Kilae Creek 72.33 23 P P 19 40 15.7 +0.9
baz=322
SMPI Sarmi 72.34 108 P P 19 40 16.1 +0.6
comp=Z,20nm,1.5s
K24K Donnelly Dome 72.44 17 P P 19 40 15.0 -0.4
baz=329,SNR=19
O16K Kokwok River B 72.49 25 P P 19 40 17.2 +1.5
baz=320,SNR=33
CUT Chulitna 72.52 20 P P 19 40 15.3 -0.5
SKT Skwentna 72.54 21 P P 19 40 15.1 -0.9
I29M Ogilvie Camp, 72.59 13 P P 19 40 15.8 -0.4
I29M IAmb IAmb 19 40 17.1
comp=Z,19nm,0.8s
I29M Ogilvie Camp, 72.59 13 P P 19 40 15.9 -0.3
baz=335
WAT1 Susitna Watana 72.61 19 P P 19 40 15.5 -1.0
baz=327
N19K Bonanza Creek 72.65 22 P P 19 40 17.3 +0.6
N19K IAmb IAmb 19 40 20.4
comp=Z,14nm,0.9s
N19K Bonanza Creek 72.65 22 P P 19 40 17.5 +0.7
baz=323
O17K Koliganek Bris 72.67 24 P P 19 40 17.8 +1.1
baz=321,SNR=8.7
SCRK Sand Creek 72.69 16 P P 19 40 17.0 0.0
SCRK IAmb IAmb 19 40 18.2
comp=Z,26nm,1.0s
SCRK Sand Creek 72.69 16 P P 19 40 17.1 +0.1
baz=330,SNR=29
RIDG Independent Ri 72.71 17 P P 19 40 16.3 -0.8
RIDG IAmb IAmb 19 40 17.6
comp=Z,32nm,0.9s
RIDG Independent Ri 72.71 17 P P 19 40 16.5 -0.5
baz=330,SNR=22
P16K Nushagak River 72.96 25 P P 19 40 19.9 +1.4
baz=321,SNR=12
DOT Dot Lake 72.96 17 P P 19 40 17.9 -0.6
WAT6 Susitna Watana 73.02 19 P P 19 40 18.2 -0.8
baz=328,SNR=14
SPU Mount Spurr 73.05 21 P P 19 40 17.9 -1.2
K27K Chicken 73.05 16 P P 19 40 19.2 +0.2
K27K IAmb IAmb 19 40 20.8
comp=Z,21nm,1.0s
M22K Willow 73.11 20 P P 19 40 18.8 -0.5
M22K Willow 73.11 20 P P 19 40 18.6 -0.7
baz=326
SUA Susitna One 73.18 21 P P 19 40 19.3 -0.6
SUA IAmb IAmb 19 40 20.6
comp=Z,25nm,1.0s
O19K Port Alsworth 73.19 23 P P 19 40 19.7 -0.1
O18K Koktuh Hills 73.19 23 P P 19 40 20.6 +0.6
O18K Koktuh Hills 73.19 23 P P 19 40 21.1 +1.1
baz=323
PAX Paxson 73.23 17 P P 19 40 19.5 -0.7
PAX IAmb IAmb 19 40 21.1
comp=Z,37nm,1.1s
PAX Paxson 73.23 17 P P 19 40 19.5 -0.7
PAX pmax pmax
comp=Z,37nm,1.1s
PAX Paxson 73.23 17 P P 19 40 20.0 -0.2
baz=329,SNR=21
P17K Kvichak River 73.33 24 P P 19 40 22.1 +1.4
baz=322,SNR=16
GHO Glory Hole Cre 73.40 20 P P 19 40 20.9 -0.3
GHO IAmb IAmb 19 40 27.4
comp=Z,32nm,1.0s
J29M Klondike Camp 73.43 14 P P 19 40 21.2 -0.1
RSO Redoubt South 73.44 22 P P 19 40 21.9 +0.3
PMR Palmer 73.50 20 P P 19 40 21.1 -0.5
PMR IAmb IAmb 19 40 22.4
comp=Z,24nm,1.0s
PMR Palmer 73.50 20 P P 19 40 21.1 -0.5
PMR pmax pmax
comp=Z,24nm,1.0s
PMR Palmer 73.50 20 P P 19 40 21.5 -0.2
baz=327
SML Sawmill 73.53 19 P P 19 40 21.5 -0.4
SML Sawmill 73.53 19 P P 19 40 21.8 -0.1
baz=327,SNR=17
P18K Big Mountain, 73.56 24 P P 19 40 22.4 +0.3
P18K IAmb IAmb 19 40 24.0
comp=Z,36nm,1.0s
P18K Big Mountain, 73.56 24 P P 19 40 22.8 +0.7
baz=323,SNR=14
DAWY Dawson 73.56 14 P P 19 40 21.9 -0.2
DAWY IAmb IAmb 19 40 23.2
comp=Z,21nm,0.9s
DAWY Dawson 73.56 14 P P 19 40 22.0 0.0
baz=334,SNR=14
MENT Mentasta 73.66 17 P P 19 40 23.3 +0.7
L26K Log Cabin Wild 73.67 17 P P 19 40 22.9 +0.2
L26K Log Cabin Wild 73.67 17 P P 19 40 23.1 +0.5
baz=331
UNV Unalaska Valle 73.67 32 P P 19 40 21.6 -1.2
UNV Unalaska Valle 73.67 32 P P 19 40 22.8 +0.1
baz=316
Q16K King Salmon 73.67 25 P P 19 40 23.9 +1.2
baz=322,SNR=8.7
M23K Glacier View 73.69 19 P P 19 40 22.6 -0.2
baz=328,SNR=18
SCM Sheep Creek Mo 73.76 19 P P 19 40 23.3 0.0
SCM Sheep Creek Mo 73.76 19 P P 19 40 23.3 0.0
SCM pmax pmax
comp=Z,50nm,0.8s
SCM Sheep Creek Mo 73.76 19 P P 19 40 23.1 -0.2
baz=328,SNR=13
RC01 Rabbit Creek A 73.76 20 P P 19 40 22.8 -0.4
RC01 Rabbit Creek A 73.76 20 P P 19 40 22.9 -0.3
baz=326
O20K Slope Mountain 73.78 22 P P 19 40 23.2 -0.3
baz=324
HARP HAARP 73.80 18 P P 19 40 24.4 +1.0
baz=330,SNR=9.4
M24K Tolsona, Glenn 73.81 18 P P 19 40 24.2 +0.6
M24K Tolsona, Glenn 73.81 18 P P 19 40 24.2 +0.6
baz=329,SNR=13
KNK Knik Glacier 73.83 20 P P 19 40 23.4 -0.2
KNK Knik Glacier 73.83 20 P P 19 40 23.8 +0.2
baz=327,SNR=7.1
L27K Beaver Creek, 73.96 16 P P 19 40 24.9 +0.5
L27K Beaver Creek, 73.96 16 P P 19 40 25.0 +0.6
baz=332,SNR=14
BCAR Beaver Creek A 73.97 16 P P 19 40 25.0 +0.5
MBWA Marble Bar 74.14 136 P P 19 40 25.1 -0.8
MBWA IAmb IAmb 19 40 28.1
comp=Z,23nm,1.1s
FALS False Pass 74.17 30 P P 19 40 26.5 +0.8
baz=318
M26K Nabesna, AK 74.29 17 P P 19 40 26.4 +0.1
M26K Nabesna, AK 74.29 17 P P 19 40 26.8 +0.4
baz=331
KLU Klutina 74.40 18 P P 19 40 27.2 +0.2
KLU IAmb IAmb 19 40 29.0
comp=Z,28nm,1.0s
KLU Klutina 74.40 18 P P 19 40 27.3 +0.3
baz=329,SNR=9.5
PSA00 Pilbara Seismi 74.54 136 P P 19 40 27.1 -1.1
PSA00 IAmb IAmb 19 40 32.4
comp=Z,31nm,0.8s
PSA00 Pilbara Seismi 74.54 136 P P 19 40 27.4 -0.8
PSA00 IAmb IAmb 19 40 32.4
comp=Z,16nm,0.9s
BRLK Bradley Lake 74.55 22 P P 19 40 27.0 -0.9
BRLK IAmb IAmb 19 40 28.0
comp=Z,22nm,0.9s
M27K Edge Creek, AK 74.58 16 P P 19 40 27.2 -0.9
M27K IAmb IAmb 19 40 30.1
comp=Z,24nm,0.9s
M27K Edge Creek, AK 74.58 16 P P 19 40 28.7 +0.6
baz=332,SNR=8.7
R17K Ugashik Creek 74.58 25 P P 19 40 28.6 +0.6
baz=322
BRSE Bradley Lake S 74.61 22 P P 19 40 27.2 -1.0
baz=326
N25K Chitina, Valde 74.62 18 P P 19 40 28.6 +0.3
N25K Chitina, Valde 74.62 18 P P 19 40 28.8 +0.4
baz=330
GLI Glacier Island 74.63 19 P P 19 40 28.4 +0.1
GLI IAmb IAmb 19 40 29.7
comp=Z,38nm,1.0s
GLI Glacier Island 74.63 19 P P 19 40 28.2 -0.1
baz=328,SNR=6.4
BVCY Beaver Creek 74.74 16 P P 19 40 29.8 +0.8
baz=333
DIV Divide 74.75 19 P P 19 40 29.5 +0.4
DIV IAmb IAmb 19 40 29.9
comp=Z,16nm,0.7s
SDPT Sand Point 74.92 29 P P 19 40 31.5 +1.5
baz=320
BMRM Bremner River 75.17 18 P P 19 40 31.7 +0.2
BMRM Bremner River 75.17 18 P P 19 40 32.0 +0.5
baz=330
MCARA McCarthy VSAT 75.18 17 P P 19 40 31.9 +0.4
MCARA IAmb IAmb 19 40 32.9
comp=Z,23nm,0.9s
MCARA McCarthy VSAT 75.18 17 P P 19 40 32.0 +0.5
baz=332
VRDI Verde Repeater 75.22 18 P P 19 40 31.9 0.0
VRDI IAmb IAmb 19 40 33.3
comp=Z,21nm,1.1s
EYAK Cordova Ski Ar 75.26 19 P P 19 40 32.4 +0.5
baz=330
YUK3 Moose Creek 75.40 16 P P 19 40 33.2 +0.2
baz=334,SNR=5.1
M30M Minto, Yukon 75.41 14 P P 19 40 32.7 -0.1
M30M Minto, Yukon 75.41 14 P P 19 40 33.0 +0.2
baz=336,SNR=8.1
CHNA Chernabura Isl 75.65 29 P P 19 40 33.8 -0.4
baz=320
CNBA Chernabura Isl 75.66 29 P P 19 40 33.7 -0.5
CNBA IAmb IAmb 19 40 34.8
comp=Z,28nm,0.9s
KDAK Kodiak Island 75.68 24 P P 19 40 34.6 +0.2
KDAK Kodiak Island 75.68 24 P P 19 40 34.6 +0.2
KDAK pmax pmax
comp=Z,49nm,1.2s
KDAK Kodiak Island 75.68 24 P P 19 40 34.5 +0.2
baz=325
BARN Barnard Glacie 75.78 17 P P 19 40 34.2 -1.0
BARN IAmb IAmb 19 40 37.5
comp=Z,17nm,1.0s
OHAK Old Harbor 75.92 24 P P 19 40 36.1 +0.4
OHAK Old Harbor 75.92 24 P P 19 40 36.0 +0.4
baz=324,SNR=5.9
SII Sitkinak Islan 76.17 25 P P 19 40 37.9 +0.6
baz=324
YUK4 Talbot Arm 76.17 15 P P 19 40 37.6 +0.3
baz=335,SNR=5.7
M31M Drury Creek, Y 76.19 13 P P 19 40 37.1 -0.2
M31M IAmb IAmb 19 40 38.8
comp=Z,17nm,0.9s
M31M Drury Creek, Y 76.19 13 P P 19 40 37.7 +0.4
baz=338,SNR=11
CHIR Chirikof Islan 76.28 26 P P 19 40 38.6 +0.7
baz=323
N30M Aishikik Lake 76.38 15 P P 19 40 39.0 +0.6
baz=336
MESA MESA 76.50 17 P P 19 40 39.7 +0.5
baz=332

YUK6	**Outpost Mounta**	**76.59**	**15**	P		**P**		**19 40 40.2**	**+0.4**
	baz=335								
N31M	**Braeburn, Yuko**	**76.60**	**14**	P		**P**		**19 40 40.1**	**+0.5**
N31M				IAmb		IAmb		19 40 41.1	
	comp=Z,26nm,0.9s								
N31M	**Braeburn, Yuko**	**76.60**	**14**	P		**P**		**19 40 39.9**	**+0.3**
	baz=337,SNR=7.9								
DBIC	**Dimbokro**	**76.86**	**268**	P		**P**		**19 40 41.1**	**-0.7**
	comp=Z,11nm,0.8s,baz=41,slow=8.4,SNR=11								
	comp=Z,11nm,0.8s								
DBIC	**Dimbokro**	**76.86**	**268**	P		**P**		**19 40 41.1**	**-0.7**
DBIC				IAmb		IAmb		19 40 47.7	
	comp=Z,38nm,1.2s								
DBIC	**Dimbokro**	**76.86**	**268**	P		**P**		**19 40 41.1**	**-0.7**
DBIC				pmax		pmax			
	comp=Z,38nm,1.3s								
HYT	**Haines Junctio**	**76.88**	**15**	P		**P**		**19 40 42.1**	**+0.8**
HYT	**Haines Junctio**	**76.88**	**15**	P		**P**		**19 40 42.1**	**+0.8**
	baz=336,SNR=14								
PINM	**Pinnacle**	**76.96**	**17**	P		**P**		**19 40 42.2**	**+0.5**
	baz=334								
KIC	**Kosan Boka**	**76.97**	**268**	⇓*e*P		**P**		**19 40 41.1**	**-1.3**
	comp=Z,8.0nm,0.5s								
TIC	**Toumodi**	**77.00**	**268**	⇑*i*P		**P**		**19 40 41.8**	**-0.8**
	comp=Z,5.9nm,0.3s								
O30N	**Mendenhall**	**77.20**	**14**	P		**P**		**19 40 43.4**	**+0.3**
	baz=337,SNR=7.3								
LIC	**Lamto**	**77.27**	**268**	⇓*i*P		**P**		**19 40 43.0**	**-1.1**
	comp=Z,3.7nm,0.4s								
PNL	**Peninsula**	**77.53**	**16**	P		**P**		**19 40 45.5**	**+0.7**
	baz=334								
WHY	**Whitehorse**	**77.53**	**14**	P		**P**		**19 40 44.2**	**-0.7**
WHY	**Whitehorse**	**77.53**	**14**	P		**P**		**19 40 44.6**	**-0.4**
	baz=338								
TGTN	**Hyland Airport**	**77.80**	**11**	P		**P**		**19 40 47.0**	**+0.7**
	baz=343								
YKA	**Yellowknife Ar**	**78.17**	**4**	P		**P**		**19 40 48.5**	**+0.2**
	comp=Z,23nm,0.8s,baz=349,slow=5.4,SNR=89								
	comp=Z,23nm,0.8s								
YKA	**Yellowknife Ar**	**78.17**	**4**	P		**P**		**19 40 48.0**	**-0.3**
YKA	**Yellowknife Ar**	**78.17**	**4**	*ce*P		**P**		**19 40 48.5**	**+0.2**
YKA				pmax		pmax			
	comp=Z,24nm,0.8s								
LBTB	**Lobatse**	**78.23**	**224**	P		**P**		**19 40 48.6**	**-0.6**
LBTB	**Lobatse**	**78.23**	**224**	P		**P**		**19 40 48.6**	**-0.6**
LBTB				pmax		pmax			
	comp=Z,72nm,1.3s								
P33M	**Teslin, Yukon**	**78.33**	**13**	P		**P**		**19 40 48.9**	**-0.4**
P33M				IAmb		IAmb		19 40 49.9	
	comp=Z,14nm,0.8s								
P33M	**Teslin, Yukon**	**78.33**	**13**	P		**P**		**19 40 49.2**	**-0.1**
	baz=340,SNR=12								
TSUM	**Tsumeb**	**78.33**	**233**	P		**P**		**19 40 50.0**	**0.0**
PLBC	**Pleasant Camp**	**78.36**	**15**	P		**P**		**19 40 50.0**	**+0.6**
	baz=337,SNR=9.6								
SKAG	**Skagway**	**78.56**	**15**	P		**P**		**19 40 50.8**	**+0.3**
SKAG				IAmb		IAmb		19 40 52.6	
	comp=Z,18nm,1.0s								
SKAG	**Skagway**	**78.56**	**15**	P		**P**		**19 40 51.4**	**+0.9**
	baz=336								
P32M	**Atlin**	**78.75**	**14**	P		**P**		**19 40 51.8**	**+0.2**
	baz=339								
SCHQ	**Schefferville**	**80.14**	**338**	P		**P**		**19 40 58.9**	**-0.4**
	comp=Z,12nm,1.1s,baz=26,slow=9.0,SNR=5.0								
	comp=Z,12nm,1.1s								
SCHQ	**Schefferville**	**80.14**	**338**	P		**P**		**19 40 59.2**	**0.0**
DLBC	**Dease Lake**	**80.48**	**12**	P		**P**		**19 41 01.1**	**0.0**
DLBC	**Dease Lake**	**80.48**	**12**	P		**P**		**19 41 01.8**	**+0.6**
	baz=342								
SIT	**Sitka**	**80.79**	**16**	P		**P**		**19 41 03.5**	**+0.9**
	baz=338								
BOSA	**Boshof**	**81.32**	**222**	P		**P**		**19 41 05.7**	**-0.2**
	comp=Z,20nm,1.0s,baz=52,slow=6.6,SNR=8.6								
	comp=Z,20nm,1.0s								
BOSA	**Boshof**	**81.32**	**222**	P		**P**		**19 41 05.5**	**-0.4**
BOSA				IAmb		IAmb		19 41 10.1	
	comp=Z,37nm,1.2s								
BOSA	**Boshof**	**81.32**	**222**	P		**P**		**19 41 05.5**	**-0.4**
BOSA				pmax		pmax			
	comp=Z,37nm,1.3s								
FCC	**Fort Churchill**	**81.59**	**354**	P		**P**		**19 41 07.0**	**+0.1**
FCC				IAmb		IAmb		19 41 08.5	
	comp=Z,37nm,1.2s								
FCC	**Fort Churchill**	**81.59**	**354**	P		**P**		**19 41 07.0**	**+0.1**
FCC				pmax		pmax			
	comp=Z,37nm,1.2s								
T35M	**Bob Quinn**	**81.83**	**13**	P		**P**		**19 41 09.0**	**+0.7**
	baz=342								
WRA	**Warramunga Arr**	**81.90**	**124**	P		**P**		**19 41 08.6**	**-0.5**
	comp=Z,10nm,0.9s,baz=324,slow=5.3,SNR=26								
	comp=Z,10nm,0.9s								
WRAB	**Tennant Creek**	**81.90**	**124**	*ce*P		**P**		**19 41 10.9**	**+1.9**
WRAB				pmax		pmax			
	comp=Z,44nm,1.7s								
WRAB				MLR		MLR			
	comp=Z,454nm,9.0s								
WRAK	**Wrangell Islan**	**81.98**	**14**	P		**P**		**19 41 09.5**	**+0.5**
WRAK				IAmb		IAmb		19 41 11.0	
	comp=Z,18nm,0.9s								
WRAK	**Wrangell Islan**	**81.98**	**14**	P		**P**		**19 41 09.8**	**+0.8**
	baz=340								
CRAG	**Craig**	**82.72**	**15**	P		**P**		**19 41 13.6**	**+0.8**
	baz=340								
ASAR	**Alice Springs**	**84.34**	**127**	P		**P**		**19 41 20.8**	**-0.9**
	comp=Z,5.6nm,0.9s,baz=316,slow=5.1,SNR=14								
	comp=Z,5.6nm,0.9s								
FORT	**Forrest**	**86.30**	**135**	P		**P**		**19 41 30.7**	**-0.5**
BATG	**Bathurst New B**	**86.44**	**334**	P		**P**		**19 41 32.7**	**+0.8**
BATG				IAmb		IAmb		19 41 34.1	
	comp=Z,28nm,1.1s								
EDM	**Edmonton**	**87.49**	**4**	P		**P**		**19 41 36.9**	**-0.1**
EDM	**Edmonton**	**87.49**	**4**	P		**P**		**19 41 36.9**	**-0.1**
EDM				pmax		pmax			
	comp=Z,40nm,0.9s								
LMQ	**La Malbaie**	**87.59**	**336**	P		**P**		**19 41 37.6**	**+0.1**
D62A	**Allapoint, All**	**87.60**	**335**	P		**P**		**19 41 37.9**	**+0.4**
D62A				IAmb		IAmb		19 41 38.8	
	comp=Z,15nm,1.0s								
VLDQ	**Val d'Or**	**89.08**	**341**	P		**P**		**19 41 44.5**	**0.0**
LLLB	**Lillooet**	**89.28**	**10**	P		**P**		**19 41 45.8**	**+0.3**
LLLB				IAmb		IAmb		19 41 47.4	
	comp=Z,12nm,1.0s								
PKME	**Peaks-Kenny Pk**	**89.29**	**335**	P		**P**		**19 41 46.5**	**+1.0**
	baz=28								
CBB	**Campbell River**	**89.33**	**12**	P		**P**		**19 41 45.6**	**-0.1**
CBB				IAmb		IAmb		19 41 47.6	
	comp=Z,13nm,0.9s								
TRQ	**Mont Tremblant**	**90.04**	**338**	P		**P**		**19 41 48.3**	**-0.8**
TRQ				IAmb		IAmb		19 41 51.6	
	comp=Z,17nm,1.3s								
ULM	**Lac du Bonnet**	**90.18**	**353**	P		**P**		**19 41 48.9**	**-0.7**
	comp=Z,12nm,0.8s,baz=358,slow=5.6,SNR=14								
	comp=Z,12nm,0.8s								
ULM	**Lac du Bonnet**	**90.18**	**353**	P		**P**		**19 41 48.7**	**-0.9**
ULM				IAmb		IAmb		19 41 50.2	
	comp=Z,14nm,0.8s								
ULM	**Lac du Bonnet**	**90.18**	**353**	P		**P**		**19 41 48.7**	**-0.9**
ULM				pmax		pmax			
	comp=Z,14nm,0.9s								
LBNH	**Lisbon**	**91.05**	**336**	P		**P**		**19 41 54.5**	**+0.7**
	baz=26								
LONY	**Lake Ozonia**	**91.51**	**338**	P		**P**		**19 41 56.1**	**+0.2**
LONY	**Lake Ozonia**	**91.51**	**338**	P		**P**		**19 41 56.3**	**+0.3**
	baz=24								
WALA	**Waterton Lakes**	**91.60**	**5**	P		**P**		**19 41 56.1**	**-0.3**
WALA				IAmb		IAmb		19 41 57.6	
	comp=Z,20nm,1.0s								
B08A	**Colville Reser**	**91.81**	**9**	P		**P**		**19 41 57.2**	**0.0**
B08A				IAmb		IAmb		19 41 58.2	
	comp=Z,11nm,1.1s								
EYMN	**Ely**	**91.96**	**350**	P		**P**		**19 41 58.0**	**+0.1**
	baz=12								
J61A	**Chester**	**92.05**	**336**	P		**P**		**19 41 59.2**	**+0.7**
J61A				IAmb		IAmb		19 42 04.7	
	comp=Z,19nm,1.1s								
AGMN	**Agassiz Nation**	**92.11**	**353**	P		**P**		**19 41 58.2**	**-0.4**
AGMN				IAmb		IAmb		19 41 59.6	
	comp=Z,14nm,0.8s								
AGMN	**Agassiz Nation**	**92.11**	**353**	P		**P**		**19 41 58.6**	**0.0**
	baz=8.2								
NEW	**Newport**	**92.13**	**7**	P		**P**		**19 41 58.9**	**+0.1**
NEW				IAmb		IAmb		19 42 00.4	
	comp=Z,18nm,1.2s								
NEW	**Newport**	**92.13**	**7**	P		**P**		**19 41 58.9**	**+0.1**
NEW	**Newport**	**92.13**	**7**	P		**P**		**19 41 59.2**	**+0.4**
	baz=352								
ACCN	**Adirondack Com**	**92.36**	**337**	P		**P**		**19 41 59.8**	**-0.1**
ACCN				IAmb		IAmb		19 42 01.6	
	comp=Z,14nm,1.1s								
C09A	**Chrisman Ranch**	**92.47**	**8**	P		**P**		**19 42 00.7**	**+0.4**
C09A				IAmb		IAmb		19 42 01.4	
	comp=Z,9.5nm,0.8s								
HRV	**Adam Dziewonsk**	**92.49**	**335**	P		**P**		**19 42 00.3**	**-0.2**
	baz=26								
J59A	**Piesco**	**92.54**	**337**	P		**P**		**19 42 01.0**	**+0.3**
J59A				IAmb		IAmb		19 42 02.5	
	comp=Z,16nm,1.1s								
EGMT	**Eagleton**	**92.84**	**2**	P		**P**		**19 42 02.0**	**-0.1**
EGMT	**Eagleton**	**92.84**	**2**	P		**P**		**19 42 02.1**	**-0.1**
	baz=357								
MDND	**Maddock**	**92.85**	**355**	P		**P**		**19 42 02.2**	**+0.2**
	baz=5.3								
J58A	**Remsen**	**92.87**	**338**	P		**P**		**19 42 02.3**	**0.0**
J58A				IAmb		IAmb		19 42 08.0	
	comp=Z,16nm,1.2s								
JTMT	**Jette**	**92.88**	**5**	P		**P**		**19 42 02.8**	**+0.4**
JTMT				IAmb		IAmb		19 42 04.0	
	comp=Z,21nm,1.2s								
L61B	**Northampton**	**92.90**	**336**	P		**P**		**19 42 02.7**	**+0.3**
	baz=26								
J57A	**Williamstown**	**93.03**	**338**	P		**P**		**19 42 03.1**	**+0.2**
E38A	**The Farm, Brul**	**93.28**	**350**	P		**P**		**19 42 03.6**	**-0.5**
J56A	**Wolcott**	**93.40**	**339**	P		**P**		**19 42 04.4**	**-0.2**
E09A	**Wood Farm, Sta**	**93.76**	**8**	P		**P**		**19 42 06.4**	**+0.1**
E09A				IAmb		IAmb		19 42 07.8	
	comp=Z,10.0nm,1.0s								
MSO	**Missoula**	**93.82**	**5**	P		**P**		**19 42 06.5**	**-0.2**
MSO	**Missoula**	**93.82**	**5**	P		**P**		**19 42 06.6**	**-0.2**
	baz=354								
BINY	**Binghamton**	**94.14**	**338**	P		**P**		**19 42 08.0**	**-0.1**
	baz=23								
E28A	**Huff**	**94.18**	**356**	P		**P**		**19 42 07.2**	**-1.0**
LAO	**LASA Array**	**94.22**	**360**	P		**P**		**19 42 08.4**	**-0.1**
LAO	**LASA Array**	**94.22**	**360**	P		**P**		**19 42 09.8**	**+1.3**
	baz=0.2								
F36A	**Milaca**	**94.27**	**351**	P		**P**		**19 42 08.0**	**-0.6**
F36A				IAmb		IAmb		19 42 09.3	
	comp=Z,11nm,0.8s								
F10A	**Beach Ranch, E**	**94.39**	**8**	P		**P**		**19 42 09.3**	**0.0**
G40A	**Rib Lake**	**94.39**	**349**	P		**P**		**19 42 08.7**	**-0.5**
G40A				IAmb		IAmb		19 42 10.2	
	comp=Z,17nm,0.9s								
F33A	**5 Mile Ranch,**	**94.59**	**353**	P		**P**		**19 42 09.9**	**-0.2**
LRM	**Limekiln Ridge**	**94.92**	**4**	P		**P**		**19 42 11.8**	**-0.1**
STKA	**Stephens Creek**	**94.95**	**128**	P		**P**		**19 42 08.8**	**-2.9**
	comp=Z,2.8nm,0.6s,baz=328,slow=10,SNR=4.6								
GCMT	**Greycliff**	**95.07**	**2**	P		**P**		**19 42 12.8**	**+0.3**
BOZ	**Bozeman (W)**	**95.19**	**4**	P		**P**		**19 42 13.2**	**+0.2**
BOZ				IAmb		IAmb		19 42 14.7	
	comp=Z,10nm,1.1s								
BOZ	**Bozeman (W)**	**95.19**	**4**	P		**P**		**19 42 13.2**	**+0.2**
BOZ				pmax		pmax			
	comp=Z,11nm,1.1s								
BOZ	**Bozeman (W)**	**95.19**	**4**	P		**P**		**19 42 13.4**	**+0.4**
	baz=356								
PLID	**Pearl Lake**	**95.39**	**7**	P		**P**		**19 42 13.6**	**-0.5**
PLID				IAmb		IAmb		19 42 15.0	
	comp=Z,5.5nm,0.8s								
RLMT	**Red Lodge**	**95.75**	**2**	P		**P**		**19 42 15.9**	**+0.2**
RLMT				IAmb		IAmb		19 42 17.6	
	comp=Z,16nm,1.2s								
RLMT	**Red Lodge**	**95.75**	**2**	P		**P**		**19 42 16.4**	**+0.7**
	baz=358								
I40A	**Norwalk**	**95.80**	**349**	P		**P**		**19 42 15.7**	**0.0**
MCMT	**McKenzie Canyo**	**95.89**	**5**	P		**P**		**19 42 16.4**	**0.0**
YHL	**Hebgen Lake**	**95.95**	**3**	P		**P**		**19 42 17.3**	**+0.5**
YHL				IAmb		IAmb		19 42 19.2	
	comp=Z,8.5nm,1.2s								
I07A	**Izee**	**96.00**	**9**	P		**P**		**19 42 16.0**	**-0.7**
SSPA	**Standing Stone**	**96.13**	**339**	P		**P**		**19 42 17.1**	**-0.1**
	baz=22								
J05D	**Fort Rock, OR**	**96.54**	**11**	P		**P**		**19 42 19.9**	**+0.7**
	baz=349								
JFWS	**Jewell Farm**	**96.70**	**348**	P		**P**		**19 42 19.5**	**-0.2**
JFWS	**Jewell Farm**	**96.70**	**348**	P		**P**		**19 42 19.5**	**-0.2**
JFWS				pmax		pmax			
	comp=Z,17nm,0.7s								
JFWS	**Jewell Farm**	**96.70**	**348**	P		**P**		**19 42 19.3**	**-0.4**
	baz=12								
ECSD	**EROS Data Cent**	**96.70**	**353**	P		**P**		**19 42 19.3**	**-0.5**
ECSD	**EROS Data Cent**	**96.70**	**353**	P		**P**		**19 42 19.8**	**0.0**
	baz=7.6								
FLWY	**Flagg Ranch**	**96.74**	**3**	P		**P**		**19 42 20.7**	**+0.5**
RSSD	**Black Hills**	**96.76**	**358**	P		**P**		**19 42 20.2**	**-0.1**
RSSD				IAmb		IAmb		19 42 21.8	
	comp=Z,9.8nm,0.8s								
RSSD	**Black Hills**	**96.76**	**358**	P		**P**		**19 42 20.2**	**-0.1**
RSSD				pmax		pmax			
	comp=Z,10.0nm,0.8s								
RSSD	**Black Hills**	**96.76**	**358**	P		**P**		**19 42 20.6**	**+0.3**
	baz=1.9								
MFID	**Camas Ranch**	**97.06**	**7**	P		Pdif		19 42 21.6	-0.1
REDW	**Red Top Meadow**	**97.45**	**3**	P		**P**		**19 42 23.2**	**-0.3**
REDW				IAmb		IAmb		19 42 26.4	
	comp=Z,8.6nm,1.2s								
L42A	**Oliver, Polo**	**97.49**	**347**	P		Pdif		19 42 23.4	0.0
PDAR	**Pinedale Array**	**98.09**	**2**	P		Pdif		19 42 26.8	+0.3
	comp=Z,0.7nm,0.8s,baz=335,slow=2.5,SNR=5.7								
PDAR				PKiKP		**PKiKP**		**19 46 59.0**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=180,slow=0.9,SNR=3.6								
	comp=Z,0.7nm,0.8s								
HVU	**Hansel Valley**	**98.92**	**5**	P		**P**		**19 42 30.0**	**0.0**
HVU				IAmb		IAmb		19 42 32.0	
	comp=Z,5.8nm,1.1s								
HVU	**Hansel Valley**	**98.92**	**5**	P		**P**		**19 42 30.0**	**0.0**
HVU				pmax		pmax			
	comp=Z,6.0nm,1.1s								
HWUT	**Hardware Ranch**	**99.17**	**4**	P		**Pdif**		**19 42 31.6**	**+0.5**
HWUT				IAmb		IAmb		19 42 33.3	
	comp=Z,10.0nm,1.2s								
CCM	**Cathedral Cave**	**101.60**	**348**	P		**Pdif**		**19 42 41.8**	**0.0**
	baz=12								
NVAR	**Mina Array Bea**	**101.72**	**10**	P		**Pdif**		**19 42 41.9**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=320,slow=3.8,SNR=2.0								
Q24A	**Divide**	**101.94**	**359**	P		**Pdif**		**19 42 43.8**	**+0.2**
	baz=1.0								
WVT	**Waverly**	**102.84**	**345**	P		**Pdif**		**19 42 46.9**	**-0.5**
	baz=15								
PKM	**Mcpherson Peak**	**104.98**	**11**	P		**Pdif**		**19 42 56.8**	**-0.4**
	baz=349								
X43A	**Marvell**	**104.99**	**347**	P		**Pdif**		**19 42 56.5**	**-0.4**
	baz=12								
W18A	**Petrified Fore**	**105.72**	**3**	P		**PKiKP**		**19 47 14.5**	**+1.2**
	baz=357								
WMOK	**Wichita Mounta**	**105.82**	**353**	P		**PKiKP**		**19 47 14.6**	**+1.3**
	baz=6.2								
TXAR	**Lajitas Array**	**111.50**	**357**	PKKPbc		PKKPbc		19 58 22.1	+4.3
	comp=Z,0.4nm,0.7s,baz=239,slow=5.1,SNR=4.0								
TROLL	**Troll, Antarti**	**121.58**	**200**	PKPdf		**PKPdf**		**19 47 42.0**	**0.0**
SNAA	**Sanae**	**122.89**	**201**	PKPdf		**PKPdf**		**19 47 43.2**	**-1.2**
CLDB	**Colider**	**126.94**	**288**	*eP*		**PKPdf**		**19 47 54.0**	**+0.1**
QSPA	**South Pole Qui**	**129.26**	**180**	PKP		**PKPdf**		**19 47 56.2**	**-0.5**
	baz=262,slow=5.1								
SAML	**Samuel**	**130.91**	**296**	PKPdf		**PKPdf**		**19 48 00.8**	**-0.7**
SAML	**Samuel**	**130.91**	**296**	PKIKP		**PKPdf**		**19 48 00.8**	**-0.7**
CPUP	**Villa Florida**	**137.24**	**273**	PKP		**PKPdf**		**19 48 12.4**	**-0.5**
	comp=Z,2.2nm,0.7s,baz=186,slow=1.9,SNR=4.2								
LPAZ	**La Paz**	**139.45**	**294**	PKP		**PKPdf**		**19 48 17.8**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=30,slow=6.8,SNR=5.1								
LPAZ	**La Paz**	**139.45**	**294**	PKPdf		**PKPdf**		**19 48 17.6**	**-0.5**
LPAZ	**La Paz**	**139.45**	**294**	PKIKP		**PKPdf**		**19 48 17.6**	**-0.5**
LPAZ	**La Paz**	**139.45**	**294**	*eP*		**PKPdf**		**19 48 16.9**	**-1.2**
TRQA	**Tornquist**	**145.57**	**258**	PKPdf		**PKPdf**		**19 48 26.7**	**-0.9**
TRQA	**Tornquist**	**145.57**	**258**	PKIKP		**PKPdf**		**19 48 26.7**	**-0.9**
AC02	**Maricunga**	**146.56**	**281**			**PKPdf**		**19 48 29.9**	**-0.3**
GO03	**Copiap**	**147.79**	**280**			**PKPdf**		**19 48 31.8**	**+0.1**
ZON	**Zonda**	**148.45**	**273**			**PKPdf**		**19 48 32.3**	**-0.3**
ZON	**Zonda**	**148.45**	**273**	PKIKP		**PKPdf**		**19 48 32.3**	**-0.3**
CO01	**Juntas del Tor**	**148.85**	**276**	PKPdf		**PKPdf**		**19 48 31.4**	**-2.1**
LCO	**Las Campanas**	**148.86**	**279**			**PKPdf**		**19 48 34.5**	**+0.8**
LCO	**Las Campanas**	**148.86**	**279**	PKIKP		**PKPdf**		**19 48 34.5**	**+0.8**
LMEL	**Las Melosas**	**150.54**	**270**			**PKPdf**		**19 48 38.6**	**+2.6**
BO04	**La Punta**	**150.91**	**270**			**PKPdf**		**19 48 36.5**	**+0.1**
BO01	**Tunca**	**151.42**	**269**			**PKPdf**		**19 48 36.2**	**-1.0**
GO05	**Huala**	**152.28**	**268**			**PKPdf**		**19 48 40.8**	**+2.4**
PLCA	**Paso Flores**	**152.64**	**256**	PKPbc		**PKPbc**		**19 48 46.0**	**0.0**
	comp=Z,4.2nm,0.8s,baz=3.5,slow=2.1,SNR=12								
PLCA	**Paso Flores**	**152.64**	**256**	PKPdf		**PKPdf**		**19 48 38.9**	**0.0**
PLCA	**Paso Flores**	**152.64**	**256**	PKIKP		**PKPdf**		**19 48 38.9**	**0.0**
PTCN	**Pitcairn Islan**	**155.47**	**61**			**PKPab**		**19 49 10.7**	**+1.8**

*IDC **27** 19:29:31.6±0.7,39°.29N×73°.61E,h0km,mb4.8/23, mbtmp4.8/27,ML4.1/4,MS3.9/7 Error ellipse: s-maj=15.9km s-min=11.8km az=5.0*
*KRNET **27** 19:29:31.5±0.1,39°.40N×73°.53E,mb5.6*
*MOS **27** 19:29:31.6±1.0,39°.52N×73°.68E,h10km,mb5.0/15,Error ellipse: s-maj=8.4km s-min=6.4km az=80.2*
*NEIC **27** 19:29:32.9±2.2,39°.40N±0°.07×73°.72E±0°.08,h10km±1km, mb4.9/53,Error ellipse: s-maj=12.5km s-min=9.4km az=144.0*

ISC 27 19:29:33.0±0.4,**39°.43N**±0°.04×**73°.57E**±0°.03,**h10km**,**n191**, σ1°.56/196,**mb4.8**/60,**MS4.1**/9,**23C-11D**,
Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.24**	**331**	⇑*e*P			**Pn**	**19 29 55.7**	**-0.9**
	baz=33								
OHH				⇑*e*S			**Sg**	**19 30 13.4**	**+0.3**
	baz=33								
DRK	**Karamyk**	**1.37**	**272**	⇑*i*P			**Pn**	**19 29 57.0**	**-1.5**
	baz=74								
DRK				⇑*e*S			**Sn**	**19 30 15.9**	**-0.9**
	baz=74								
BTK	**Batken**	**2.21**	**287**	⇑*e*P			**Pb**	**19 30 11.0**	**-2.1**
	baz=88								
BTK				⇑*e*S			**Sb**	**19 30 40.4**	**-0.2**
	baz=88								
ARLS	**Aral**	**2.49**	**13**	⇑*i*P			**Pb**	**19 30 15.9**	**-2.1**
	baz=14								
ARLS				⇑*i*S			**Sb**	**19 30 48.5**	**-0.3**
	baz=14								
GAR	**Garm**	**2.56**	**261**	⇑*e*P			**Pb**	**19 30 16.0**	**-3.2**
	baz=62								
GAR				⇑*e*S			**Sb**	**19 30 48.7**	**-2.1**
	baz=62								
ARK	**Arkit**	**2.66**	**333**	⇑*i*P			**Pb**	**19 30 18.2**	**-2.6**
	baz=34								
ARK				⇑*i*S			**Sb**	**19 30 51.7**	**-1.8**
	baz=34								
TRKS	**Terek-Say**	**2.80**	**319**	⇓*e*P			**Pn**	**19 30 18.9**	**+0.9**
	baz=20								
TRKS				⇓*e*S			**Sn**	**19 30 53.5**	**+1.7**
	baz=20								
UCH	**Uchtor**	**2.88**	**14**	⇓*e*P			**Pb**	**19 30 21.7**	**-3.1**
	baz=14								
UCH				⇓*e*S			**Sb**	**19 30 58.3**	**-2.0**
	baz=14								
EKS2	**Erkin-Say**	**3.23**	**3**	*e*P			**Pn**	**19 30 26.2**	**+2.3**
	baz=3.0								
EKS2				⇑*e*S			**Sb**	**19 31 06.3**	**-3.6**
	baz=3.0								
AAK	**Ala-Archa**	**3.28**	**12**	Sn			**Sb**	**19 31 11.9**	**+0.6**
	baz=131,slow=19								
AAK	**Ala-Archa**	**3.28**	**12**	⇑*e*P			**Pn**	**19 30 26.8**	**+2.2**
	baz=12								
AAK				⇑*e*S			**Sb**	**19 31 07.3**	**-4.0**
	baz=12								
AAK	**Ala-Archa**	**3.28**	**12**	Pn			**Pn**	**19 30 23.3**	**-1.3**
AAK	**Ala-Archa**	**3.28**	**12**	PN			**Pn**	**19 30 23.3**	**-1.3**
AAK	**Ala-Archa**	**3.28**	**12**	Sn			**Pb**	**19 30 26.6**	**-4.7**
	105nm,0.3s,baz=334,slow=23,SNR=9.9								
AAK	**Ala-Archa**	**3.28**	**12**	S			Pb	19 30 26.2	-5.2
CHGR	**Chuyangaron**	**3.52**	**259**	Pn			**Pn**	**19 30 28.7**	**+0.9**
CHGR	**Chuyangaron**	**3.52**	**259**	PN			**Pn**	**19 30 28.7**	**+0.9**
BOOM	**Boomskoye usch**	**3.54**	**30**	⇓*i*P			**Pn**	**19 30 30.6**	**+2.4**
	baz=30								
BOOM				⇓*i*S			**Sn**	**19 31 14.0**	**+3.8**
	baz=30								
BOOM	**Boomskoye usch**	**3.54**	**30**	Pn			**Pn**	**19 30 26.0**	**-2.2**
BOOM	**Boomskoye usch**	**3.54**	**30**	PN			**Pn**	**19 30 26.0**

	comp=E,40nm,0.8s,baz=225,slow=2.5,SNR=2.1									
	comp=E,40nm,0.8s									
KIRV	**Kirov**	24.63	329		P		P	19 34 54.4	+1.1	
KIRV	**Kirov**	24.63	329		P		P	19 34 54.4	+1.1	
SONM	**Songino Array**	25.05	60		P		P	19 34 58.9	+1.4	
	comp=E,27nm,0.9s,baz=253,slow=8.4,SNR=8.6									
	comp=E,27nm,0.9s									
SONM	**Songino Array**	25.05	60		P		P	19 34 54.6	-2.8	
SONM	**Songino Array**	25.05	60		P		P	19 34 54.6	-2.8	
SONM					pmax		pmax			
	comp=E,6.0nm,0.8s									
ULN	**Ulaanbaatar**	25.49	60		P		P	19 35 01.3	-0.2	
ULN					IAmb		IAmb	19 35 05.2		
	comp=E,19nm,0.8s									
ULN	**Ulaanbaatar**	25.49	60		P		P	19 35 01.3	-0.2	
ULN					pmax		pmax			
	comp=E,19nm,0.8s									
XAN	**Xi'an**	28.72	90	⇑	P		P	19 35 31.8	+1.3	
XAN					pP		sP	19 35 39.5	+2.7	
XAN					S		S	19 40 28.5	+8.9	
XAN					pmax		pmax			
	comp=E,17nm,1.3s									
XAN					pmax		pmax			
	comp=E,150nm,6.7s									
XAN					LR		LR			
	comp=N,920nm,14.3s									
XAN					LR		LR			
	comp=E,1μm,13.3s									
XAN					LR		LR			
	comp=E,2μm,14.9s									
ILGA	**Ilgaz**	30.28	286		P		P	19 35 44.3	-0.2	
ILGA					IAmb		IAmb	19 35 51.4		
	comp=E,18nm,0.6s									
CMAR	**Chiang Mai Arr**	30.31	126		P		P	19 35 44.2	-0.5	
	comp=E,1.9nm,0.9s,baz=303,slow=12,SNR=4.3									
	comp=E,1.9nm,0.9s									
CMAR	**Chiang Mai Arr**	30.31	126		P		P	19 35 42.3	-2.4	
CMAR	**Chiang Mai Arr**	30.31	126		P		P	19 35 44.2	-0.5	
BR131	**Keskin Array S**	30.60	284		P		P	19 35 47.0	-0.3	
BR131	**Keskin Array S**	30.60	284		P		P	19 35 47.0	-0.3	
BRTR	**Keskin Array B**	30.60	284		P		P	19 35 48.1	+0.8	
	comp=E,6.8nm,0.7s,baz=88,slow=7.2,SNR=3.8									
	comp=E,6.8nm,0.7s									
BRTR	**Keskin Array B**	30.60	284		P		P	19 35 48.1	+0.8	
BRTR	**Keskin Array B**	30.60	284		P		P	19 35 48.1	+0.8	
AKASG	**Malin Array Be**	32.81	305		P		P	19 36 07.0	+0.6	
	comp=E,4.3nm,0.5s,baz=80,slow=7.2,SNR=7.9									
	comp=E,4.3nm,0.5s									
AKASG	**Malin Array Be**	32.81	305		P		P	19 36 07.0	+0.6	
TIA	**Tai'an**	34.31	81	⇑	P		P	19 36 21.0	+1.4	
TIA					pmax		pmax			
	comp=E,20nm,0.8s									
TIA					LR		LR			
	comp=N,650nm,13.2s									
TIA					LR		LR			
	comp=E,440nm,13.6s									
TIA					LR		LR			
	comp=E,650nm,14.5s									
BURAR	**Bucovina Array**	35.51	299		P		P	19 36 30.2	+0.3	
FIA1	**FINESS Array S**	36.27	323		P		P	19 36 37.0	+1.0	
FIA1					IAmb		IAmb	19 36 42.5		
	comp=E,11nm,0.6s									
FINES	**FINESS Array B**	36.27	323		P		P	19 36 37.6	+1.6	
	comp=E,6.5nm,0.4s,baz=110,slow=12,SNR=2.1									
	comp=E,6.5nm,0.4s									
FINES	**FINESS Array B**	36.27	323		P		P	19 36 37.6	+1.6	
FINES	**FINESS Array B**	36.27	323		P		P	19 36 37.7	+1.6	
IDI	**Anoyia**	38.54	280		LR		LR	19 57 25.9		
	comp=E,97nm,18.4s,baz=72,slow=43									
ZEA	**Zeya**	38.61	50	*eP*			P	19 36 57.9	+1.8	
ZEA					pmax		pmax			
	comp=E,10.0nm,0.8s									
ZEA					pmax		pmax			
	comp=N,10.0nm,1.0s									
ZEA					pmax		pmax			
	comp=E,10.0nm,0.9s									
ARCES	**ARCESS Array B**	39.26	336		P		P	19 37 02.9	+1.5	
	comp=E,12nm,0.7s,baz=109,slow=8.3,SNR=6.6									
ARCES					LR		LR	19 53 27.8		
	comp=E,305nm,21.9s,baz=117,slow=36									
	comp=E,12nm,0.7s									
ARCES	**ARCESS Array B**	39.26	336		P		P	19 37 02.3	+0.9	
ARCES	**ARCESS Array B**	39.26	336		P		P	19 37 02.3	+0.9	
ARCES					pmax		pmax			
	comp=E,9.0nm,0.7s									
YAK	**Yakutsk**	40.40	37		P		P	19 37 11.1	+0.2	
	comp=E,16nm,0.6s,baz=146,slow=1.5,SNR=5.8									
	comp=E,16nm,0.6s									
YAK	**Yakutsk**	40.40	37		P		P	19 37 10.5	-0.4	
YAK	**Yakutsk**	40.40	37		P		P	19 37 11.1	+0.2	
KLR	**Kul'dur**	41.80	57		P		P	19 37 23.7	+1.1	
	comp=E,15nm,0.5s,baz=286,slow=7.7,SNR=22									
	comp=E,15nm,0.5s									
KLR	**Kul'dur**	41.80	57		P		P	19 37 23.7	+1.1	
SEHB	**SEOHWA**	42.05	74		P		P	19 37 23.8	-1.0	
KSAR	**Wonju Array Be**	42.05	75		P		P	19 37 24.8	+0.1	
KSAR	**Wonju Array Be**	42.05	75		P		P	19 37 24.8	+0.1	
KSRS	**Korea Array**	42.08	75		P		P	19 37 25.1	+0.2	
	comp=E,4.2nm,0.8s,baz=284,slow=7.1,SNR=7.1									
	comp=E,4.2nm,0.8s									
KSRS	**Korea Array**	42.08	75		P		P	19 37 25.2	+0.2	
TIXI	**Tiksi**	42.29	23		P		P	19 37 26.7	+0.4	
TIXI					IAmb		IAmb	19 37 30.9		
	comp=E,13nm,0.8s									
TIXI	**Tiksi**	42.29	23		P		P	19 37 26.7	+0.4	
TIXI					pmax		pmax			
	comp=E,13nm,0.8s									
KSCHJ	**Chungju**	42.32	76		P		P	19 37 25.6	-1.4	
KSCHJ					IAmb		IAmb	19 37 28.3		
	comp=E,9.9nm,0.6s									
IPM	**Ipoh**	42.76	137		P		P	19 37 30.0	-0.7	
IPM					IAmb		IAmb	19 37 32.3		
	comp=E,12nm,0.7s									
SSLB	**Suanglung**	42.77	97		P		P	19 37 29.1	-1.7	
SSLB					IAmb		IAmb	19 37 31.3		
	comp=E,18nm,0.8s									
GEC2	**GERESS Array S**	42.97	303		P		P	19 37 33.7	+1.5	
GERES	**GERESS Array B**	42.97	303		P		P	19 37 34.0	+1.9	
	comp=E,6.1nm,0.9s,baz=64,slow=9.1,SNR=2.2									
	comp=E,6.1nm,0.9s									
GERES	**GERESS Array B**	42.97	303		P		P	19 37 31.9	-0.3	
GERES	**GERESS Array B**	42.97	303		P		P	19 37 34.1	+1.9	
KHC	**Kasperske Hory**	42.99	303		P		P	19 37 31.9	-0.5	
KHC	**Kasperske Hory**	42.99	303		P		P	19 37 31.9	-0.5	
KHC					pmax		pmax			
	comp=E,6.0nm,0.8s									
CLL	**Collm**	43.00	307		P		P	19 37 31.5	-0.8	
CLL	**Collm**	43.00	307		P		P	19 37 31.5	-0.8	
CLL					pmax		pmax			
	comp=E,7.0nm,0.5s									
USRK	**Ussuriysk Ar.**	43.01	64		P		P	19 37 32.6	+0.2	
USRK	**Ussuriysk Ar.**	43.01	64		P		P	19 37 32.7	+0.2	
NC405	**NORSAR Array S**	43.08	321		P		P	19 37 31.2	-1.7	
NC405					IAmb		IAmb	19 37 38.7		
	comp=E,19nm,0.8s									
NC303	**NORSAR Array S**	43.25	321		P		P	19 37 34.2	0.0	
NC303					IAmb		IAmb	19 37 38.8		
	comp=E,28nm,0.8s									
NOA	**NORSAR Array B**	43.32	321		P		P	19 37 37.8	+3.0	
	comp=E,15nm,0.8s,baz=108,slow=7.4,SNR=5.5									
	comp=E,15nm,0.8s									
NOA	**NORSAR Array B**	43.32	321		P		P	19 37 37.8	+3.0	
NOA	**NORSAR Array B**	43.32	321		P		P	19 37 37.8	+3.0	
NC204	**NORSAR Array S**	43.54	321				P	19 37 35.8	-0.8	
NC204					IAmb		IAmb	19 37 40.6		
	comp=E,27nm,0.8s									
CEL	**Celeste**	44.27	288		P		P	19 37 40.9	-1.8	
CEL					IAmb		IAmb	19 37 41.2		
	comp=E,14nm,0.7s									
GRA1	**Grafenberg Arr**	44.40	305		P		P	19 37 43.9	+0.3	
GRF	**Grafenberg Arr**	44.40	305		P		P	19 37 43.9	+0.3	
GRF					pmax		pmax			
	comp=E,7.0nm,0.7s									
GRFO	**Grafenberg**	44.40	305		P		P	19 37 44.9	+1.3	
GRFO	**Grafenberg**	44.40	305		P		P	19 37 44.9	+1.3	
GRFO					pmax		pmax			
	comp=E,7.0nm,0.7s									
TEOL	**Teolo**	45.10	299		P		P	19 37 52.6	+3.3	
VAE	**Valguarnera**	45.64	287		LR		LR	19 58 56.7		
	comp=E,54nm,21.0s,baz=38,slow=39									
JNU	**Nakatsue**	45.97	79		P		P	19 37 56.7	+0.4	
	comp=E,25nm,0.9s,baz=289,slow=5.7,SNR=4.5									
	comp=E,25nm,0.9s									
INU	**Inuyama**	49.66	74		P		P	19 38 25.7	+0.9	
INU					IAmb		IAmb	19 38 27.1		
	comp=E,17nm,0.8s									
JGF	**Kuroka**	49.80	73		P		P	19 38 25.9	-0.1	
MJB9	**Matsu-Tunnel**	50.04	72		P		P	19 38 27.2	-0.6	
MAJO	**Matsushiro**	50.04	72		P		P	19 38 27.5	-0.3	
MAJO	**Matsushiro**	50.04	72		P		P	19 38 27.5	-0.3	
MJAR	**Matsushiro Arr**	50.05	72		P		P	19 38 28.7	+0.9	
	comp=E,13nm,0.6s,baz=265,slow=7.4,SNR=12									
	comp=E,13nm,0.6s									
MJAR	**Matsushiro Arr**	50.05	72		P		P	19 38 26.8	-1.0	
MJAR					IAmb		IAmb	19 38 29.0		
	comp=E,14nm,0.7s									
MJAR	**Matsushiro Arr**	50.05	72		P		P	19 38 26.8	-1.0	
MJAR					pmax		pmax			
	comp=E,15nm,0.7s									
JTM	**Tenmabayashi**	50.45	65		P		P	19 38 30.5	-0.3	
MA2	**Magadan**	50.81	40		P		P	19 38 33.7	+0.5	
	comp=E,6.5nm,0.7s,baz=297,slow=11,SNR=2.4									
	comp=E,6.5nm,0.7s									
MA2	**Magadan**	50.81	40		P		P	19 38 33.5	+0.3	
MA2	**Magadan**	50.81	40		P		P	19 38 33.7	+0.5	
JMM	**Marumori**	51.39	69		P		P	19 38 37.5	-0.4	
JYT	**Yasato**	51.63	71		P		P	19 38 38.9	-0.8	
PETK	**Petropavlovsk-**	56.46	46		P		P	19 39 14.9	+0.1	
	comp=E,3.7nm,0.8s,baz=3.7,slow=4.5,SNR=4.3									
	comp=E,3.7nm,0.8s									
PETK	**Petropavlovsk-**	56.46	46		P		P	19 39 14.9	+0.1	
ESDC	**Sonseca Array**	57.91	297		P		P	19 39 24.6	-0.7	
	comp=E,3.8nm,0.6s,baz=56,slow=6.9,SNR=2.2									
	comp=E,3.8nm,0.6s									
SUMG	**Summit**	58.95	341		P		P	19 39 36.8	+4.3	
SUMG	**Summit**	58.95	341		P		P	19 39 36.8	+4.3	
SUMG					pmax		pmax			
	comp=E,14nm,0.8s									
SFJD	**Kangerlussuaq**	65.75	339		LR		LR	20 10 55.9		
	comp=E,109nm,20.3s,baz=13,slow=38									
TORD	**Torodi Ar. Bea**	67.81	269		P		P	19 40 31.1	-0.4	
	comp=E,7.5nm,0.7s,baz=48,slow=5.8,SNR=2.5									
	comp=E,7.5nm,0.7s									
AMKA	**Amchitka**	68.82	40		P		P	19 40 36.2	-1.0	
J20K	**Nowinta River**	70.09	20		P		P	19 40 44.6	-0.3	
J20K					IAmb		IAmb	19 40 46.5		
	comp=E,8.5nm,0.8s									
INK	**Inuvik**	70.67	10		LR		LR	20 16 54.4		
	comp=E,92nm,18.3s,baz=304,slow=40									
POKR	**Poker Plat Res**	70.98	17		P		P	19 40 49.7	-0.7	
POKR					IAmb		IAmb	19 40 51.6		
	comp=E,8.1nm,0.7s									
NEA2	**Nenana**	71.04	18		P		P	19 40 50.4	-0.3	
NEA2					IAmb		IAmb	19 40 55.2		
	comp=E,6.1nm,0.8s									
TCOL	**CIGO, UAF Yank**	71.08	17		P		P	19 40 50.3	-0.6	
COLA	**College**	71.09	17		P		P	19 40 49.8	-1.1	
COLA	**College**	71.09	17		P		P	19 40 49.8	-1.1	
COLA					pmax		pmax			
	comp=E,19nm,0.8s									
ILAR	**Eielson Array**	71.39	17		P		P	19 40 52.9	0.0	
	comp=E,6.7nm,0.9s,baz=312,slow=4.9,SNR=4.6									
	comp=E,6.7nm,0.9s									
ILAR	**Eielson Array**	71.39	17		P		P	19 40 52.9	0.0	
ILAR	**Eielson Array**	71.39	17		P		P	19 40 52.9	0.0	
KTH	**Kantishna Hill**	71.44	19		P		P	19 40 52.9	-0.4	
KTH					IAmb		IAmb	19 40 54.7		
	comp=E,12nm,0.8s									
SCRK	**Sand Creek**	72.73	16		P		P	19 41 01.0	0.0	
SCRK					IAmb		IAmb	19 41 01.7		
	comp=E,5.5nm,0.7s									
RIDG	**Independent Ri**	72.74	17		P		P	19 41 00.3	-0.7	
RIDG					IAmb		IAmb	19 41 01.5		
	comp=E,10nm,0.8s									
O19K	**Port Alsworth**	73.22	23		P		P	19 41 03.6	-0.2	
O19K					IAmb		IAmb	19 41 05.9		
	comp=E,5.7nm,0.8s									
O18K	**Koktuh Hills**	73.23	23		P		P	19 41 04.3	+0.4	
O18K					IAmb		IAmb	19 41 05.5		
	comp=E,10nm,0.8s									
PAX	**Paxson**	73.27	17				P	19 41 03.8	-0.4	
PAX					IAmb		IAmb	19 41 04.5		
	comp=E,6.7nm,0.8s									
PAX	**Paxson**	73.27	17		P		P	19 41 03.8	-0.4	
PAX					pmax		pmax			
	comp=E,7.0nm,0.8s									
SML	**Sawmill**	73.56	19		P		P	19 41 04.2	-1.6	
SML					IAmb		IAmb	19 41 09.4		
	comp=E,16nm,0.8s									
P18K	**Big Mountain,**	73.59	24		P		P	19 41 05.9	-0.2	
P18K					IAmb		IAmb	19 41 09.1		
	comp=E,7.7nm,0.8s									
DAWY	**Dawson**	73.59	14		P		P	19 41 06.1	+0.1	
L27K	**Beaver Creek,**	74.00	16		P		P	19 41 08.8	+0.4	
BCAR	**Beaver Creek A**	74.00	16		P		P	19 41 08.6	+0.1	
FALS	**False Pass**	74.20	30		P		P	19 41 08.6	-1.1	
KLU	**Klutina**	74.43	18		P		P	19 41 10.9	-0.1	
DBIC	**Dimbokro**	76.86	268		P		P	19 41 25.4	-0.2	
	comp=E,14nm,1.0s,baz=60,slow=6.0,SNR=5.0									
	comp=E,14nm,1.0s									
DBIC	**Dimbokro**	76.86	268		P		P	19 41 25.0	-0.5	
DBIC					IAmb		IAmb	19 41 32.0		
	comp=E,7.2nm,0.8s									
DBIC	**Dimbokro**	76.86	268		P		P	19 41 25.0	-0.5	
DBIC					pmax		pmax			
	comp=E,7.0nm,0.8s									
KIC	**Kosan Boka**	76.96	268	⇑	*eP*		P	19 41 26.7	+0.6	
	comp=E,3.4nm,0.5s									
TIC	**Toumodi**	77.00	268	⇑	*eP*		P	19 41 30.5	+4.1	
	comp=E,2.5nm,0.3s									
LIC	**Lamto**	77.27	268	⇓	*eP*		P	19 41 30.2	+2.3	
	comp=E,1.3nm,0.2s									
YKA	**Yellowknife Ar**	78.21	4		P		P	19 41 32.6	+0.3	
	comp=E,7.9nm,0.8s,baz=352,slow=5.7,SNR=5.4									
	comp=E,7.9nm,0.8s									
YKA	**Yellowknife Ar**	78.21	4		P		P	19 41 33.0	+0.7	
YKA	**Yellowknife Ar**	78.21	4		P		P	19 41 33.0	+0.7	
WRA	**Warramunga Arr**	81.88	124		P		P	19 41 52.8	+0.1	
	comp=E,6.3nm,0.8s,baz=325,slow=5.2,SNR=6.4									
	comp=E,6.3nm,0.8s									
WRA	**Warramunga Arr**	81.88	124		P		P	19 41 52.8	+0.1	
ASAR	**Alice Springs**	84.32	127		P		P	19 42 05.0	-0.3	
	comp=E,4.2nm,0.8s,baz=310,slow=5.0,SNR=4.8									
	comp=E,4.2nm,0.8s									
ASAR	**Alice Springs**	84.32	127		P		P	19 42 05.0	-0.3	
ASAR	**Alice Springs**	84.32	127		P		P	19 42 05.0	-0.3	
EDM	**Edmonton**	87.52	4		P		P	19 42 21.1	+0.2	
EDM					IAmb		IAmb	19 42 26.7		
	comp=E,8.3nm,0.8s									
EDM	**Edmonton**	87.52	4		P		P	19 42 21.1	+0.2	
EDM					pmax		pmax			
	comp=E,8.0nm,0.8s									

IDC ***27*** *19:32:03.3±0.7,23°.62N×123°.26E,h0km,mb4.3/12, mbtmp4.3/14,ML3.3/2,MS3.8/11,Error ellipse: s-maj=27.7km s-min=17.0km az=74.0*

NEIC ***27*** *19:32:05.2±1.5,23°.57N±0°.06×123°.28E±0°.03,h10km±1km, mb4.8/29,Error ellipse: s-maj=9.6km s-min=5.0km az=186.0*

NIED ***27*** *19:32:06.3,23°.54N×123°.35E,h51km,MW4.5,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr=0.69; Mθθ4.33; Mφφ-3.63; Mrθ2.22; Mφθ-0.04; Mφr3.57; Fault plane solution: M₀5.77000×10¹⁵ NP1: φs130.00000°,δ45.00000°,λ-9.00000°. NP2:φ226.00000°, δ84.00000°,λ-135.00000°.*

JMA ***27*** *19:32:06.3±0.2,24°.N±1°×123°.4E±0°.5,h51km±2km, MD4.7/15,MV4.4/15,NEAR ISHIGAKIJIMA ISLAND*

ISC 27 19:32:06.1±1.2,23°.58N±0°.05×123°.33E±0°.03,h20km±4km, n89,σ1°.08/80,mb4.6/24,MS3.8/8,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
HATJ	**Hateruma jima**	0.64	42	P		**Pn**	19 32 19.7	-0.4
HATJ				S		**Sn**	19 32 28.9	-0.8
HATJ	**Hateruma jima**	0.64	42	A		A	19 32 19.7	
	comp=E,114nm,2.0s,comp=E,84nm,1.2s							
IRIF	**Iriomote-Funau**	0.83	26	P		**Pn**	19 32 22.7	-0.1
IRIF				S		**Sn**	19 32 34.4	-0.1
IRIF	**Iriomote-Funau**	0.83	26	A		A	19 32 22.7	
	comp=E,43nm,1.1s,comp=E,49nm,1.2s							
JKRS	**Kuro-shima**	0.90	43	P		**Pg**	19 32 23.5	-0.2
JKRS				*eS*		**Sg**	19 32 35.5	-0.1
JKRS	**Kuro-shima**	0.90	43	A		A	19 32 23.5	
	comp=E,52nm,2.2s,comp=E,65nm,5.2s							
YOJ	**Yonaguni jima**	0.92	341			**Pg**	19 32 23.9	-0.2
YOJ	**Yonaguni jima**	0.92	341	P		**Pg**	19 32 24.1	-0.1
YOJ				*eS*		**Sn**	19 32 37.4	+0.6
YOJ	**Yonaguni jima**	0.92	341	A		A	19 32 24.1	
	comp=E,24nm,2.3s,comp=E,22nm,1.4s							
JYNG	**Yonagunijimaku**	0.93	338	P		**Pb**	19 32 23.8	+0.1
JYNG				*eS*		**Sg**	19 32 36.8	+0.1
JYNG	**Yonagunijimaku**	0.93	338	A		A	19 32 23.8	
	comp=E,25nm,3.6s,comp=E,23nm,5.0s							
JIJ	**Ishigaki jima**	1.07	43	P		**Pb**	19 32 25.4	-0.7
JIJ				*eS*		**Sb**	19 32 39.8	+0.1
JIJ	**Ishigaki jima**	1.07	43	A		A	19 32 25.4	
	comp=E,9.0nm,4.4s,comp=E,13nm,1.4s							
JISG	**Ishigakijimahi**	1.34	42	P		**Pn**	19 32 29.2	-0.6
JISG				*eS*		**Sn**	19 32 46.6	-0.4
JISG	**Ishigakijimahi**	1.34	42	A		A	19 32 29.2	
	comp=E,17nm,0.5s,comp=E,21nm,0.6s							
JTJ	**Tarama**	1.64	50	P		**Pn**	19 32 33.7	-0.1
JTJ				S		**Sn**	19 32 54.0	-0.3
JTJ	**Tarama**	1.64	50	A		A	19 32 33.7	
	comp=E,22nm,2.2s,comp=E,16nm,2.0s							
NACB	**Ninganchiao**	1.70	291			**Pn**	19 32 33.8	-0.9
YULB	**Yu-li**	1.88	265	Pn		**Pn**	19 32 35.9	-1.3
JIRB	**Irabujima**	2.09	53	P		**Pn**	19 32 39.8	-0.3
JIRB				*eS*		**Sn**	19 33 04.8	-0.7
JIRB	**Irabujima**	2.09	53	A		A	19 32 39.8	
	comp=E,9.0nm,2.6s,comp=E,14nm,5.7s							
YHNB	**Yeheng**	2.09	302	Pn		**Pn**	19 32 41.0	+0.8
JMJ2	**Miyako jima3**	2.15	57	P		**Pn**	19 32 40.9	0.0
JMJ2				S		**Sn**	19 33 07.0	-0.1
JMJ2	**Miyako jima3**	2.15	57	A		A	19 32 40.9	
	comp=E,15nm,2.1s,comp=E,21nm,4.0s							
TATO	**Taipei**	2.18	310			**Pn**	19 32 42.4	+1.0
SSLB	**Suanglung**	2.19	276	Pn		**Pn**	19 32 41.4	-0.1
JIKM	**Ikemajima**	2.20	52	P		**Pn**	19 32 41.4	-0.2
JIKM				S		**Sn**	19 33 08.2	0.0
JIKM	**Ikemajima**	2.20	52	A		A	19 32 41.4	
	comp=E,19nm,2.2s,comp=E,13nm,5.7s							
TWG	**Pinlang**	2.21	250			**Pn**	19 32 41.1	-0.7
JOGS	**Gusukube**	2.23	58	P		**Pn**	19 32 41.8	-0.2
JOGS	**Gusukube**	2.23	58	A		A	19 32 41.8	
	comp=E,21nm,2.8s,comp=E,28nm,3.4s							
TPUB	**Ta-pu**	2.50	264			**Pn**	19 32 47.1	+1.4
KNMB	**Chin-men Tao**	4.61	282			**Pn**	19 33 12.2	-2.5
JOW	**Kunigami**	5.52	53	Pn		**Pn**	19 33 25.4	-1.9
	2.7nm,0.3s,baz=116,slow=11,SNR=10							
JOW				Sn		**Sn**	19 34 29.6	-0.7
	3.7nm,0.3s,baz=292,slow=19,SNR=2.0							
	11nm,0.4s							
KSRS	**Korea Array**	14.38	15	Pn		**Pn**	19 35 31.2	+2.7
	0.2nm,0.3s,baz=196,slow=12,SNR=9.1							
KSRS				LR		LR	19 41 47.8	
	comp=E,336nm,18.0s,baz=185,slow=41							
DAV	**Davao City (W)**	16.56	172	LR		LR	19 42 02.1	
	comp=E,150nm,19.8s,baz=334,slow=36							
JCJ	**Chichijima**	17.39	74	LR		LR	19 42 58.8	
	comp=E,138nm,18.0s,baz=240,slow=38							
BJT	**Baijiatuan**	17.47	341	Pn		**Pn**	19 36 05.4	-3.2
MJAR	**Matsushiro Arr**	18.21	41	P		**P**	19 36 19.3	+1.4
	baz=231,slow=10,SNR=8.4							
	3.7nm,0.8s							
GUMO	**Guam**	22.67	112	LR		LR	19 45 24.6	
	comp=E,127nm,19.8s,baz=278,slow=35							
TNTI	**Ternate**	23.01	170	P		**P**	19 37 11.0	+1.0
TNTI				IAmb		IAmb	19 37 39.2	
	comp=E,60nm,1.3s							
SONM	**Songino Array**	27.71	335	P		**P**	19 37 51.8	-1.4
	comp=E,4.2nm,0.9s,baz=120,slow=10,SNR=4.5							
	comp=E,4.2nm,0.9s							
KAPI	**Kappang**	28.64	187	LR		LR	19 50 33.4	
	comp=E,131nm,18.8s,baz=246,slow=39							
PETK	**Petropavlovsk-**	39.29	33	P		**P**	19 39 32.8	-0.8
	comp=E,2.9nm,0.7s,baz=205,slow=6.4,SNR=5.4							
	comp=E,2.9nm,0.7s							
ZALV	**Zalesovo Beam**	41.82	326	P		**P**	19 39 53.5	-0.9
	comp=E,2.6nm,0.6s,baz=107,slow=7.8,SNR=4.1							
ZALV				LR		LR	19 58 11.5	
	comp=E,106nm,19.8s,baz=125,slow=38							
	comp=E,2.6nm,0.6s							
AAK	**Ala-Archa**	44.43	307	LR		LR	20 02 15.8	
	comp=E,195nm,18.0s,baz=90,slow=41							
W

comp=Z,1.5nm,0.7s,baz=64,slow=6.1,SNR=10
comp=Z,1.5nm,0.7s

GERES	GERESS Array B	84.55	321	P	P	19 44 38.0	-0.1
ITM	Ithomi	84.58	308	P	P	19 44 38.3	-0.1
ECH	Echery	88.56	323	P	P	19 44 57.1	-0.6
ECH				IAmb	IAmb	19 44 58.9	

comp=Z,7.9nm,1.3s

TUL ***27*** *19:36:13±1.3, 36.46N±0.01×98.77W±0.03, h6km±5km, ML2.5, mb_Lg2.2/19(NEIC), Error ellipse: s-maj=4.0km s-min=1.8km az=104.0*

NEIC 27 19:36:12.9±1.2, 36.43N±0.02×98.70W±0.02, h5km±2km, Error ellipse: s-maj=3.9km s-min=3.0km az=182.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKCFA	Oklahoma City	1.43	135	Pn	Pg	19 36 40.5	+0.2
FNO	Franklin	1.57	138	Pn	Pn	19 36 41.5	-0.1
WMOK	Wichita Mounta	1.69	182		Pn	19 36 43.4	+0.3
T35A	Sooner Cattle	1.82	74		Pn	19 36 44.5	-0.5
T35A				IAmb_Lg		19 37 15.0	
	comp=Z,10nm,0.7s						
X34A	Smith Ranch, M	1.96	159		Pb	19 36 48.9	-0.2
TUL1	Leonard	2.41	102	IAmb_Lg		19 37 30.0	
	comp=Z,8.9nm,0.9s						
X37A	Clayton	3.28	123	IAmb_Lg		19 38 03.5	
	comp=Z,11nm,0.8s						
U38A	Gravette	3.48	89	Pn	Pn	19 37 06.6	-1.1
U38A					Pg	19 37 17.4	-2.2
U38A				IAmb_Lg		19 38 04.4	
	comp=Z,5.7nm,0.9s						
HHAR	Hobbs	3.84	91		Pb	19 37 22.6	+1.4
MSTX	Muleshoe	4.14	235	IAmb_Lg		19 38 29.3	
	comp=Z,6.5nm,0.8s						
W39A	Magazine	4.18	106	IAmb_Lg		19 38 37.5	
	comp=Z,6.1nm,0.7s						
S39A	Bolivar	4.48	72	IAmb_Lg		19 38 46.8	
	comp=Z,5.5nm,1.1s						
T25A	Trinidad	4.64	280	Pn	Pn	19 37 20.5	-3.3
T25A				IAmb_Lg		19 38 37.2	
	comp=Z,5.8nm,0.8s						
WHAR	Wooly Hollow	5.33	100	IAmb_Lg		19 39 06.5	
	comp=Z,6.2nm,1.0s						
FCAR	Ozark Folk Cen	5.35	94	IAmb_Lg		19 39 14.1	
	comp=Z,2.8nm,0.8s						
SDCO	Great Sand Dun	5.59	286	IAmb_Lg		19 39 11.0	
	comp=Z,4.6nm,1.2s						

IDC ***27*** *19:50:05.3±5.5, 5.00S×133.40E, h0km, mb3.5/1, mbtmp3.6/3, ML3.4/2, Error ellipse: s-maj=324.6km s-min=32.0km az=77.0*

ISC 27 19:50:06.7±1.7, 4.7S±0.1×134.0E±0.2, h21km, n10, σ1§59/10, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	2.50	316	P	Pn	19 50 45.6	-0.6
KDU	Kakadu	8.03	191	P	Pn	19 52 03.4	+1.1
SANI	Sanana	8.41	288	P	Pn	19 52 06.4	-1.1
	6.3nm,1.8s						
MTN	Manton Dam	8.53	199	P	Pn	19 52 09.9	+0.8
KNRA	Kununurra	12.02	205	P	Pn	19 52 56.4	-0.5
WRAB	Tennant Creek	15.10	179	P	Pn	19 53 38.6	-0.4
WRA	Warramunga Arr	15.11	179	Pn	Pn	19 53 35.9	-3.3
	0.1nm,0.3s,baz=356,slow=13,SNR=7.8						
	1.0nm,0.7s						
ASAR	Alice Springs	18.81	180	P	P	19 54 24.6	-0.6
	0.2nm,0.3s,baz=2.3,slow=13,SNR=16						
	1.8nm,0.7s						
WRKA	Warakurna	20.90	195	P	P	19 54 49.0	+1.0
MKAR	Makanchi Array	68.60	325	P	P	20 01 09.4	+1.2
	0.2nm,0.4s,baz=138,slow=8.0,SNR=4.7						
	0.2nm,0.4s						

JMA ***27*** *19:52:13.9±0.9, 43°N±4°×14°9E±°, h30km, MV4.3/13, SE OFF ETOROFU*

SKHL ***27*** *19:52:14.3±0.4, 43.10N×149.00E, h54km±5km, mb4.6/3*

ISC 27 19:52:11.7±2.9, 42.93N±0.09×149.1E±0.1, h35km, n15, σ1§47/28, Off southeast coast of Hokkaido

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHO	Shikotan	1.91	300	*i* P	Pn	19 52 42.1	+0.4
SHO				AMB	AMB	19 52 42.9	
	90nm,0.2s						
SHO				*i* S	Sn	19 53 03.3	-1.3
SHO				A	A	19 53 04.4	
	450nm,0.4s						
SHO				A	A	19 53 04.4	
	510nm,0.4s						
KUR	Kuril'sk	2.47	339	*i* P	Pn	19 52 50.1	+0.7
KUR				AMB	AMB	19 52 50.7	
	60nm,0.3s						
KUR				*e*S	Sn	19 53 16.7	-1.7
KUR				A	A	19 53 20.9	
	290nm,0.4s						
KUR				A	A	19 53 20.9	
	180nm,0.4s						
NEM2	Nemuro 2	2.50	281	*e*P	Pn	19 52 50.9	+1.0
NEM2				*e*S	Sn	19 53 18.2	-0.9
NMR	Nemuro--Hokkai	2.52	281	*e*P	Pn	19 52 51.1	+1.1
NMR				*e*S	Sn	19 53 18.5	-1.0
YUK	Yuzh-Kuril'sk	2.61	296	*i* P	Pn	19 52 52.0	+0.6
YUK				AMB	AMB	19 52 54.9	
	100nm,0.3s						
YUK				*i* S	Sn	19 53 20.4	-1.4
YUK				A	A	19 53 33.0	
	500nm,0.5s						
YUK				A	A	19 53 33.0	
	340nm,0.5s						
JRA	Rausu	3.08	290	*e*P	Pn	19 52 59.0	+1.3
JRA				*e*S	Sn	19 53 32.4	-0.9
AKK	Akkeshi	3.14	273	*e*P	Pn	19 53 00.1	+1.5
AKK				*e*S	Sn	19 53 33.7	-1.0
JAK	Akkeshi	3.24	273	*e*P	Pn	19 53 01.7	+1.7
JAK				*e*S	Sn	19 53 36.5	-0.9
JNK	Nakash	3.28	283	*e*S	Sn	19 53 36.6	-1.6
JOB	Onbets	3.88	271	*e*P	Pn	19 53 10.5	+1.8
JOB				*e*S	Sn	19 53 52.1	-0.9
JAR	Ashorobuto	3.93	277	*e*P	Pn	19 53 11.5	+2.0
JAR				*e*S	Sn	19 53 53.8	-0.6
JTKR	Abashiri--Toko	3.93	287	*e*P	Pn	19 53 11.9	+2.4
JTKR				*e*S	Sn	19 53 54.5	+0.1
JCH	Churui	4.25	268	*e*P	Pn	19 53 15.6	+1.8
JCH				*e*S	Sn	19 54 00.8	-1.3
JTH	Tanohata	6.21	244	*e*P	Pn	19 53 41.4	+0.5
JANG	Nango	6.24	248	*e*P	Pn	19 53 41.9	+0.7
JANG				*e*S	Sn	19 54 48.0	-3.3

MAN 27 20:12:60.0, 11.09N×124.48E, h19km, mb3.9, ML2.6, MS2.2, Leyte

KRNET ***27*** *20:16:10.9±0.1, 42.94N×78.42E, h17km, mb3.6*
NNC ***27*** *20:16:11.6±0.8, 43.17N×78.41E, h0km, mb3.2, mpv3.0, Error ellipse: s-maj=25.3km s-min=2.7km az=174.0*
SOME ***27*** *20:16:11.4, 42.95N×78.35E, h10km*

ISC 27 20:16:10.7±0.9, 42.93N±0.02×78.45E±0.03, h12km±6km, n42, σ0§79/75, 17C-14D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SATY	Saty	0.13	346	*e*P	Pg	20 16 14.2	+0.1
SATY	baz=55			*e*S	Sg	20 16 16.3	-0.3
	baz=55						
SATY	Saty	0.13	346	*e*P	Pg	20 16 14.2	+0.1
	361nm,0.0s						
SATY				*e*S	Sg	20 16 16.3	-0.3
	7µm,0.1s						
ZHN	Zhinishke	0.24	358	*e*P	Pg	20 16 15.9	+0.1
	baz=3.0						
ZHN				*e*S	Sg	20 16 19.4	+0.1
	baz=3.0						
ZHN	Zhinishke	0.24	358	*e*P	Pg	20 16 15.8	+0.1
	512nm,0.0s						
ZHN				*e*S	Sg	20 16 19.4	+0.1
	5µm,0.1s						
PRZ	Przheval'sk	0.45	184	⇓*e*P	Pg	20 16 19.6	0.0
	baz=82						
PRZ				⇓*e*S	Sg	20 16 25.7	+0.1
	baz=82						
KPKS	Kokpek	0.56	18	*e*P	Pg	20 16 21.6	-0.1
	baz=20						
KPKS				*e*S	Sg	20 16 29.2	+0.1
	baz=20						
KPKS	Kokpek	0.56	18	*e*P	Pg	20 16 21.6	-0.1
	157nm,0.1s						
KPKS				*e*S	Sg	20 16 29.3	+0.1
	728nm,0.3s						
KURS	Kuram	0.59	340	*e*P	Pg	20 16 22.0	-0.2
	baz=42						
KURS				*e*S	Sg	20 16 30.0	-0.1
	baz=42						
KURS	Kuram	0.59	340	*e*P	Pg	20 16 22.0	-0.2
	116nm,0.1s						
KURS				*e*S	Sg	20 16 30.1	-0.1
	46nm,0.1s						
ANVS	Anan'yevo	0.59	256	⇓*i*P	Pg	20 16 22.1	-0.2
	baz=54						
ANVS				⇓*i*S	Sg	20 16 30.0	-0.2
	baz=54						
PDGK	Podgornoye	0.86	62	⇓P	Pb	20 16 27.0	-0.6
	7.6nm,0.5s						
PDGK				⇑S	Sg	20 16 38.4	-0.2
	23nm,0.3s						
TNSS	Tian-Shan	1.11	276	*e*P	Pb	20 16 31.4	-0.6
	baz=76						
TNSS				*e*S	Sb	20 16 45.7	-0.8
	baz=76						
TNSS	Tian-Shan	1.11	276	*e*P	Pb	20 16 31.4	-0.6
	21nm,0.1s						
TNSS				*e*S	Sb	20 16 45.6	-0.8
	46nm,0.0s						
KNDC	Almaty	1.12	285	⇓P	Pb	20 16 31.6	-0.4
	5.9nm,0.3s						
KNDC				⇑S	Sb	20 16 46.0	-0.6
	65nm,0.4s						
AAA	Alma-Ata	1.16	284	*e*P	Pn	20 16 32.5	-0.2
	baz=84						
AAA				*e*S	Sb	20 16 47.7	+0.1
	baz=84						
AAA	Alma-Ata	1.16	284	*e*P	Pn	20 16 32.5	-0.2
	17nm,0.1s						
AAA				*e*S	Sb	20 16 47.7	+0.1
	148nm,0.2s						
BLB	Baldybastay	1.16	1⇑	*e*P	Pb	20 16 32.5	-0.3
	427nm,0.1s						
BLB				*e*S	Sn	20 16 47.8	-1.0
	217nm,0.2s						
KDJ	Kajisay	1.23	230⇑	*e*P	Pn	20 16 33.7	-0.2
	baz=28						
KDJ				⇑*e*S	Sb	20 16 49.9	0.0
	baz=28						
TARG	Taragay, Kyrgy	1.29	202	⇓*e*P	Pb	20 16 34.9	-0.2
	baz=1.0						
TARG				⇓*e*S	Sg	20 16 52.5	+0.1
	baz=1.0						
ARXS	Arharly	1.36	341	*e*P	Pb	20 16 35.6	-0.4
	40nm,0.1s						
ARXS				*e*S	Sb	20 16 53.4	0.0
	162nm,0.1s						
CHKK	Chushkaly	1.41	311	*e*P	Pb	20 16 36.6	-0.3
	baz=12						
CHKK				*e*S	Sb	20 16 54.8	0.0
	baz=12						
CHKK	Chushkaly	1.41	311	*e*P	Pb	20 16 36.6	-0.3
	74nm,0.1s						
CHKK				*e*S	Sb	20 16 54.7	0.0
	318nm,0.1s						
MTBS	Maitube	1.49	278	*e*P	Pb	20 16 38.3	-0.1
	baz=78						
MTBS				*e*S	Sb	20 16 57.6	+0.3
	baz=78						
MTBS	Maitube	1.49	278	*e*P	Pb	20 16 38.3	-0.1
	8.5nm,0.1s						
MTBS				*e*S	Sb	20 16 57.6	+0.3
	35nm,0.1s						
KTBS	Karatobe	1.51	302	*e*P	Pb	20 16 38.4	-0.2
	baz=2.0						
KTBS				*e*S	Sb	20 16 57.8	+0.2
	baz=2.0						
KTBS	Karatobe	1.51	302	*e*P	Pb	20 16 38.4	-0.2
	59nm,0.1s						
KTBS				*e*S	Sb	20 16 57.8	+0.2
	242nm,0.1s						
DJR	Jarkent	1.71	34	*e*P	Pb	20 16 42.0	+0.1
	13nm,0.1s						
DJR				*e*S	Sg	20 17 04.5	-1.0
	152nm,0.2s						
ULHL	Ulahol	1.77	248⇑	*e*P	Pb	20 16 42.9	-0.2
	baz=47						
ULHL				⇑*e*S	Sb	20 17 06.3	+1.0
	baz=47						
KUU	Kurty	1.81	303	*e*P	Pb	20 16 43.6	-0.2
	83nm,0.1s						
KUU				*e*S	Sb	20 17 06.8	+0.5
	185nm,0.1s						
KST	Kastek	1.83	274	*e*P	Pb	20 16 44.9	+0.8
	7.8nm,0.0s						
KST				*e*S	Sg	20 17 08.9	-0.5
	43nm,0.1s						
BOOM	Boomskoye usch	1.90	257⇑	*e*P	Pb	20 16 44.8	-0.6
	baz=57						
BOOM				⇑*e*S	Sb	20 17 10.1	+1.0
	baz=57						
DGS	Degeres	1.98	280	*e*P	Pb	20 16 46.8	+0.1
	11nm,0.2s						
DGS				*e*S	Sb	20 17 12.4	+1.0
	59nm,0.1s						
TDK	Taldyqorghan	2.07	359	*e*P	Pb	20 16 47.9	-0.2
	57nm,0.1s						
TDK				*e*S	Sb	20 17 14.2	+0.4
	229nm,0.1s						
TKM2	Tokmak 2	2.09	271	⇓*e*P	Pb	20 16 47.5	-1.2
	baz=70						
TKM2				⇓*e*S	Sb	20 17 14.6	-0.1
	baz=70						
TKM2	Tokmak 2	2.09	271	⇓Pn	Pb	20 16 49.9	+1.2
	27nm,0.5s						
TKM2				⇑Lg	Lg	20 17 17.8	
	119nm,0.6s						
KRBS	Karabastau	2.16	292	*e*P	Pb	20 16 49.9	+0.2
	5.1nm,0.1s						
KRBS				*e*S	Sb	20 17 17.6	+1.0
	140nm,0.1s						
CHMS	Chumysh	2.71	273	⇓Pn	Pb	20 16 58.3	-0.8
	4.3nm,0.6s						
CHMS				⇑Lg	Lg	20 17 34.6	
	19nm,0.5s						
MAKZ	Makanchi	4.62	32	⇑Pn	Pn	20 17 22.9	+2.8
	0.4nm,0.3s						
MAKZ				⇓Lg	Lg	20 18 34.2	
	2.8nm,0.7s						
MK31	Makanchi Array	4.73	34	⇑Pn	Pn	20 17 24.5	+2.8
	0.4nm,0.2s,baz=219,slow=13,SNR=61						
MK31				⇑Pg	Pb	20 17 29.8	-3.7
	0.5nm,0.2s,baz=214,slow=14,SNR=11						
MK31				⇑Lg	Lg	20 18 36.8	
	4.4nm,0.6s,baz=214,slow=28,SNR=8.5						
OTUK	Ortayu	6.82	323	⇑Lg	Lg	20 19 44.4	
	5.5nm,0.7s						
KURBB	Kurchatov Arra	7.69	0	⇑Lg	Lg	20 20 10.5	
	18nm,0.8s						
KURK	Kurchatov	7.79	1	⇓Lg	Lg	20 20 13.2	
	13nm,1.0s						

KRSC 27 20:21:00.1±1.1, 48.67N×158.17E, h17km±24km, ML3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAU	Pauzhetka	2.94	343	*e*S	Sn	20 22 23.0	+2.2
KDTR	Khodutka, Kamc	3.15	359	*e*P	Pn	20 21 52.1	+3.3
KDTR				*e*S	Sn	20 22 29.4	+3.5
ASAK	Asacha	3.73	357	*e*P	Pn	20 22 00.5	+3.6
ASAK				*e*S	Sn	20 22 45.1	+4.8
RUS	Russkaya	3.78	3	*e*P	Pn	20 22 00.8	+3.3
RUS				*e*S	Sn	20 22 46.2	+4.7
MTVR	Mutnovka	3.82	0	*e*P	Pn	20 22 02.2	+3.9
MTVR				*e*S	Sn	20 22 47.8	+5.0
GRL	Gorelyy	3.89	359	*e*P	Pn	20 22 03.3	+4.1
APC	Apacha	4.31	352	*e*P	Pn	20 22 08.6	+3.8
DALK	Dalny	4.39	5	*e*P	Pn	20 22 10.1	+4.3
DALK				*e*S	Sn	20 23 02.1	+5.6
SPN	Mys Shipunski	4.59	14	S	Sn	20 23 07.5	+6.0
GNL	Ganaly	5.04	358	*e*P	Pn	20 22 19.9	+5.0
MKZ	Mys Kozlova	6.30	19	*e*P	Pn	20 22 36.7	+4.6

GCG ***27*** *20:34:16.9±0.4, 13.70N×90.86W, h28km±2km, MD3.4*
SNET ***27*** *20:34:16.0±0.9, 13.41N×90.62W, h16km±7km, ML3.4*

ISC 27 20:34:13.1±3.2, 13.5N±0.1×90.78W±0.09, h20km±10km, n9, σ0§99/15, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCG	Pacaya	0.94	10	*e*P	Pb	20 34 31.4	+0.4
FUG	Fuego 3	0.99	356	*e*P	Pb	20 34 31.6	-0.1
NUBE	Las Nubes	1.06	65	*e*P	Pb	20 34 33.1	+0.1
NUBE				*e*S	Sb	20 34 46.4	-0.1
NUBE				IAML		20 34 50.2	
	comp=Z,444nm,0.3s						
SLOZ	Alcaldia de Sa	1.12	60	*e*P	Pb	20 34 34.0	+0.2
SLOZ				*e*S	Sb	20 34 48.6	+0.6
CEVE	Cerro Verde	1.18	72	*e*P	Pb	20 34 35.2	+0.2
CEVE				*e*S	Sg	20 34 50.6	-1.0
CEVE				IAML		20 34 53.0	
	comp=Z,2µm,0.2s						
NBG	Las Nubes	1.20	20	*e*P	Pn	20 34 36.1	+1.0
NBG				*e*S	Sb	20 34 51.2	+0.6
JAYA	Jayaque - finc	1.30	81	*e*P	Pn	20 34 37.0	+0.6
JAYA				*e*S	Sb	20 34 52.8	-0.8
JAYA				IAML		20 34 54.9	
	comp=Z,2µm,0.2s						
STG3	Santiaguito 3,	1.46	328	*e*P	Pn	20 34 38.7	+0.1
STG3				*e*S	Sn	20 34 55.6	-1.8
SJTE	Alcalda de S	1.73	85	*e*P	Pn	20 34 43.7	+1.5
SJTE				*e*S	Sb	20 35 04.6	-1.0
SJTE				IAML		20 35 08.0	
	comp=Z,217nm,0.3s						

KRSC 27 20:48:14.1±1.4, 49.96N×156.88E, h96km±25km, ML3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	0.88	326	*e*P	Pn	20 48 33.9	+1.1
SKR				*e*S	Sn	20 48 47.9	+1.0
PAU	Pauzhetka	1.51	358	*e*P	Pn	20 48 41.5	+1.2
PAU				*e*S	Sn	20 49 01.6	+1.5
KDTR	Khodutka, Kamc	2.00	22	*e*P	Pn	20 48 48.7	+2.2
KDTR				*e*S	Sn	20 49 13.6	+2.4
ASAK	Asacha	2.51	14	*e*P	Pn	20 48 55.6	+2.3
MTVR	Mutnovka	2.66	17	*e*P	Pn	20 48 58.0	+2.7
MTVR				*e*S	Sn	20 49 29.4	+2.5
RUS	Russkaya	2.68	22	*e*P	Pn	20 48 57.1	+1.7
RUS				*e*S	Sn	20 49 28.5	+1.3
GRL	Gorelyy	2.71	16	*e*S	Sn	20 49 31.5	+3.5
UGLR	Uglovaya	3.48	20	*e*P	Pn	20 49 08.8	+2.6
AVH	Avacha	3.51	19	*e*P	Pn	20 49 09.6	+3.0
KOK	Koryaka	3.52	17	*e*P	Pn	20 49 09.7	+3.0
KRX	Arik	3.58	17	*e*P	Pn	20 49 10.0	+2.4
SPN	Mys Shipunski	3.71	31	*e*P	Pn	20 49 12.0	+2.8
SPN				*e*S	Sn	20 49 53.0	+1.2
GNL	Ganaly	3.80	10	*e*P	Pn	20 49 11.8	+1.2
MKZ	Mys Kozlova	5.48	31	*e*P	Pn	20 49 34.6	+1.4

ECX ***27*** *20:50:31.7±2.1, 16.26N×97.75W, h15km±33km, MD5.8, ML6.2, Fault plane solution: NP1:φs18.00000°, δ90.00000°, λ90.00000°.*
MEX ***27*** *20:50:31.6±1.7, 16.21N×98.00W, h4km±13km, MD5.7*
MOS ***27*** *20:50:32.1±0.9, 16.50N×97.80W, h21km, mb5.8/18, MS5.1/61, Error ellipse: s-maj=6.4km s-min=3.6km az=97.1*
NEIC ***27*** *20:50:33.9, 16.58N×97.84W, h14km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr1.45; Mθθ-0.53; Mφφ-0.92; Mrθ1.16; Mθφ0.79; Mφr-0.55; Fault plane solution: M₀1.97000×10¹⁷ NP1:φs125.11000°, δ65.77000°, λ75.36000°. NP2:φs337.59000°, δ28.08000°, λ119.32000°. Principal axes: T 1.9970, Plg66.0000°, Azm9.0000°; N -0.0547, Plg13.0000°, Azm131.0000°; P -1.9423, Plg19.0000°, Azm226.0000°;*
BJI ***27*** *20:50:34.5±0.0, 16.48N×97.91W, h40km, mB5.6/33, Ms5.6/42, Ms7 5.3/42*
NEIC ***27*** *20:50:34.7±1.6, 16.55N±0.08×97.83W±0.07, h19km±1km, mb5.8/805, Ms_20 5.2/307, Mwb5.5/45, Mww5.7, Error ellipse: s-maj=14.8km s-min=8.8km az=216.0*
GCMT ***27*** *20:50:35.7±0.1, 16.54N±0.01×97.91W±0.01, h21km, MW5.6/145, Moment Tensor Solution. s123,c218; s145,c268; Duration: 1§5 Moment tensor: Scale 10¹⁷ Nm; Mrr1.51±.03; Mθθ-1.18±.02; Mφφ-0.33±.02; Mrθ2.09±.07; Mθφ0.55±.02; Mφr-1.24±.06; Best double couple: M₀2.84600×10¹⁷ NP1:φs293.00000°, δ16.00000°, λ83.00000°. NP2:φs120.00000°, δ74.00000°, λ92.00000°. Principal axes: T 2.8770, Plg61.0000°, Azm33.0000°; N -0.0640, Plg2.0000°, Azm299.0000°; P -2.8150, Plg29.0000°, Azm208.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
IDC ***27*** *20:50:35.2±1.9, 16.41N×97.78W, h33km±13km, mb5.0/40, mbtmp5.2/43, ML4.6/3, MS5.0/60 Error ellipse: s-maj=13.3km s-min=8.3km az=53.0*
NEIC ***27*** *20:50:36, 16.41N×97.82W, h26km, Moment Tensor Solution. Duration: 5§6 Moment tensor: Scale 10¹⁷Nm; Mrr1.20; Mθθ-0.88; Mφφ-0.32; Mrθ3.97; Mθφ0.59; Mφr-1.62; Fault plane solution: M₀4.46000×10¹⁷ NP1: φs312.00000°, δ8.00000°, λ109.00000°. NP2: φs113.00000°, δ82.00000°, λ87.00000°. Principal axes: T 4.4561, Plg53.0000°, Azm19.0000°; N 0.0154, Plg3.0000°, Azm113.0000°; P -4.4715, Plg37.0000°, Azm205.0000°;*
GCG ***27*** *20:50:55.0±3.5, 15.72N×96.49W, h2km±999km, MD5.5*

ISC 27 20:50:31.7±0.3, 16.29N±0.03×97.98W±0.02, h13km±1km, h13km:pP-P, n2105, σ1§86/2426, mb5.7/486, MS5.2/262, 738C-99D, Fault plane solution: NP1:φs224.79427°, δ28.98315°, λ39.74595°. NP2:φs98.76109°, δ71.95190°, λ113.06943°. Principal axes: T Plg56.8899°, Azm39.2410°; N Plg21.8740°, Azm271.2442°; P Plg23.5455°, Azm171.1689°; Fault plane solution: NP1:φs344.57547°, δ36.64521°, λ137.01395°. NP2: φs111.36591°, δ65.98662°, λ61.44627°. Principal axes: T Plg58.7710°, Azm340.6808°; N Plg25.8880°, Azm123.8526°; P Plg16.2356°, Azm221.9770°; Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.17	307	*e*P	Pg	20 50 35.6	-0.1
PNIG				*i* S	Sg	20 50 38.6	+0.1
YOIG	Yosondua	0.70	37	*e*P	Pg	20 50 45.4	-0.1
YOIG				*e*S	Sb	20 50 55.7	0.0
TXIG	Tlaxiaco	0.98	12	*e*P	Pg	20 50 49.8	-0.9
TXIG				*i* S	Sb	20 51 03.7	0.0
CRIG	Cruz Grande	1.19	292	*e*P	Pn	20 50 51.1	-2.9
CRIG				*e*S	Sb	20 51 06.5	-2.8
TLIG	Tlapa	1.39	336	Pn	Pn	20 50 55.1	-1.7
TLIG	Tlapa	1.39	336	⇑*i*P	Pn	20 50 55.4	-1.4
TLIG				*e*S	Sn	20 51 13.6	-1.5
VHO	Vista Hermosa	1.43	57	*e*P	Pn	20 50 57.1	-0.4
VHO				*e*S	Sn	20 51 15.4	-0.9
OXBJ	Oaxaca	1.44	57	*e*P	Pn	20 50 57.8	+0.2
OXBJ				*i* S	Sn	20 51 15.5	-0.9
HLIG	Huajuapan de L	1.54	6	⇑*i*P	Pn	20 50 58.7	-0.4
HLIG				*i* S	Sb	20 51 19.7	-0.1
PANG	Puerto Angel	1.58	113	*e*P	Pn	20 50 59.2	-0.1
PANG				*e*S	Sn	20 51 17.8	-1.8
HMTT	Tlapaneco	1.60	340	*e*P	Pn	20 50 59.1	-0.7
HMTT				*i* S	Sn	20 51 18.5	-1.9
DAIG	Los Arroyos	1.76	295	*i* P	Pn	20 50 59.3	-2.6
DAIG				*i* S	Sn	20 51 18.2	-5.9
VNTA	La Mica	1.87	290	*e*P	Pn	20 51 01.4	-1.9
VNTA				*e*S	Sn	20 51 24.1	-2.7
HUIG	Huatulco	1.88	106	*e*P	Pn	20 51 02.5	-0.9
HUIG				*e*S	Sn	20 51 25.2	-1.8
ACP2	Acapulco	1.92	288	*e*P	Pn	20 51 03.2	-0.8
ACP2				*i* S	Sn	20 51 26.8	-1.2
TOIG	Toxpalan	2.00	26⇑	*e*P	Pn	20 51 05.1	-0.2
TOIG				*i* S	Sn	20

THEZ	Tehuacan	2.25	15	eP		Pb	20 51 11.2	-1.2
THEZ				eS		Sb	20 51 41.5	+1.3
MEIG	Mezcala	2.26	316	⇑iP		Pn	20 51 08.1	-0.7
MEIG				iS		Sn	20 51 37.0	+0.5
CAIG	El Cayaco	2.32	289	⇓iP		Pn	20 51 07.2	-2.3
CAIG				iS		Sb	20 51 40.8	-1.0
ATYC	Atoyac	2.52	292	eP		Pn	20 51 11.0	-1.3
ATYC				eS		Sn	20 51 37.3	-5.6
NEUV	Arroyo Zacate	2.52	56	⇑eP		Pn	20 51 12.6	+0.3
PLIG	Platanillo	2.55	325	⇑eP		Pn	20 51 12.8	+0.1
PLIG				eS		Sn	20 51 40.5	-3.2
YAIG	Yautepec	2.76	338	⇑iP		Pn	20 51 15.2	-0.6
YAIG				iS		Sb	20 51 54.5	-0.3
AMVM	AMECAMECA	2.93	345	⇑e		Pn	20 51 18.8	+0.6
AMVM				⇑e			20 51 18.8	
AMVM				e			20 51 59.4	
MAVM	Malinalco, Edo	3.02	332	⇑e		Pn	20 51 19.8	+0.4
MAVM				e			20 51 60.0	
CMIG	Matias Romero	3.08	75	Pn		Pn	20 51 19.5	-0.5
	124nm,0.3s,baz=263,slow=11,SNR=990							
CMIG				Lg		Lg	20 52 06.0	
	2μm,0.3s,baz=270,slow=9.1,SNR=4.6							
	765nm,0.6s							
CMIG	Matias Romero	3.08	75	⇑		Pn	20 51 19.5	-0.5
CMIG	Matias Romero	3.08	75	⇑i		Pn	20 51 19.0	-1.0
CMIG				i			20 51 57.6	
TLVM	San Miguel Top	3.11	339	⇑e		Pn	20 51 21.6	+0.8
TLVM				e			20 52 04.2	
XCVM	Xochimilco	3.14	340	⇑e		Pn	20 51 22.0	+0.9
XCVM				e			20 52 00.9	
THVM	De Xico	3.15	343	⇑e		Pn	20 51 22.5	+1.2
THVM				e			20 52 04.0	
AOVM	Tlapan	3.23	337	⇑e		Pn	20 51 23.3	+0.9
AOVM				⇑e			20 51 23.3	
AOVM				e			20 52 07.8	
UNM	Universidad Na	3.23	340			Pn	20 51 21.0	-1.4
UNM	Universidad Na	3.23	340	P		Pn	20 51 21.0	-1.4
COVM	Coyoacan	3.25	340	e		Pb	20 51 28.3	-1.0
COVM				e			20 52 13.1	
JAUV	Jalcomulco	3.26	20	e		Pn	20 51 22.9	+0.3
INVM	La Marquesa	3.27	336	⇑e		Pn	20 51 24.0	+1.0
INVM				⇑e			20 51 24.0	
INVM				e			20 52 08.2	
BJVM	Benito Juarez	3.27	340	e		Pn	20 51 23.9	+1.0
BJVM				e			20 51 23.9	
BJVM				e			20 52 10.1	
VRVM	Mexico City	3.29	341	e		Pn	20 51 26.5	+3.3
VRVM				e			20 52 10.7	
CJVM	Cuajimalpa	3.30	338	e		Pn	20 51 24.3	+1.0
CJVM				e			20 51 24.3	
CJVM				e			20 52 10.1	
PBVM	Pinon	3.31	342	⇑e		Pn	20 51 15.2	-8.0
PBVM				e			20 52 00.6	
MHVM	Bosque de Chap	3.31	340	⇑e		Pn	20 51 24.4	+0.9
MHVM				e			20 52 11.2	
TEJU	Tejupilco	3.33	322	e		Pn	20 51 26.1	+2.6
GMVM	Gustavo A Made	3.36	342	⇑e		Pn	20 51 25.1	+0.9
GMVM				⇑e			20 51 25.1	
GMVM				e			20 52 11.3	
TOVM	TOLUCA	3.39	332	⇑e		Pn	20 51 25.6	+1.0
TOVM				i			20 52 09.7	
APVM	Azcapotzalco	3.39	340	e		Pn	20 51 25.1	+0.6
APVM				e			20 51 25.1	
PTVM	Pico Tres Padr	3.46	342	⇑e		Pn	20 51 26.3	+0.8
AZVM	Cuida Lopez Ma	3.50	340	⇑e		Pn	20 51 27.2	+1.0
AZVM				⇑e			20 51 27.2	
AZVM				e			20 52 12.6	
ZIIG	Zihuatanejo	3.58	292	⇑i		Pn	20 51 25.7	-1.2
ZIIG				i			20 52 01.2	
ZUVM	ZUMPANGO	3.67	344	e		Pn	20 51 28.7	+0.3
ZUVM				i			20 52 17.3	
MIHL	Minatitlan	3.70	62	e		Pn	20 51 30.6	+2.1
MIHL				e			20 52 18.3	
LVIG	Laguna Verde	3.73	23	e		Pn	20 51 26.9	-2.0
LVIG				e			20 52 13.8	
TUIG	Tuzandepetl	3.82	62	⇑e		Pn	20 51 29.9	-0.3
TUIG				e			20 52 20.1	
CXUV	Coxquihui	3.88	5	⇑e		Pn	20 51 30.7	-0.4
CARR	Arriaga	3.91	90	e		Pn	20 51 28.9	-2.5
CARR				e			20 52 16.3	
UON	La Union	4.03	295	e		Pn	20 51 29.1	-4.0
MOIG	Morelia	4.55	318			Pn	20 51 41.7	+1.2
MOIG	Morelia	4.55	318	⇑i		Pn	20 51 41.4	+1.0
MOIG				⇑e			20 51 41.5	
MOIG				i			20 52 35.2	
MOIG				e			20 52 35.8	
PCIG		4.62	97	e		Pn	20 51 41.2	0.0
PCIG				e			20 52 30.6	
IGIG	Irapuato, Guan	5.46	325	⇑i		Pn	20 51 57.5	+4.6
IGIG				i			20 53 00.8	
CCIG	Comitan	5.62	89	Pn		Pn	20 51 56.2	+1.2
CCIG	Comitan	5.62	89	⇑i		Pn	20 51 54.8	-0.3
CCIG				i			20 53 02.3	
PATR	El Naranjo	5.66	101	⇑e		Pn	20 51 56.0	+0.3
PAVE	Pavencul	5.70	100	e		Pn	20 51 57.3	+1.1
CHUJ	Union Juarez	5.78	101	⇑e		Pn	20 51 58.0	+0.6
RPIG	Rio Verde	5.88	342	⇓i		Pn	20 52 00.9	+2.3
RPIG				i			20 53 10.4	
COIG	Colima	6.15	299	e		Pn	20 52 03.3	+0.9
JUBC	Volcan de Coli	6.21	302	e		Pn	20 52 05.7	+2.3
EZ5V		6.22	302	e		Pn	20 52 05.5	+2.1
MNGA	Volcan de Coli	6.23	301	e		Pn	20 52 05.2	+1.6
INCO	Volcan de Coli	6.25	302	e		Pn	20 52 06.4	+2.5
COMA	Comala	6.28	300	e		Pn	20 51 55.2	-8.9
COMA				e			20 53 19.8	
HUEH	Huehuetenango	6.31	98			Pn	20 52 06.6	+1.9
RTAL	Retalhuleu	6.31	105	Pn		Pn	20 52 06.6	+2.1
CDAR	Ciudad de Arme	6.32	296	e		Pn	20 52 05.3	+0.7
STG3	Santiaguito 3,	6.38	103	eP		Pn	20 52 09.1	+3.5
R15V		6.39	298	e		Pn	20 52 06.7	+1.0
GTIG	Gomez Farias	6.84	351	⇑i		Pn	20 52 10.6	-1.0
GTIG				i			20 53 27.5	
AAIG	Aguscalientes	7.01	324	⇑i		Pn	20 52 10.9	-3.4
AAIG				i			20 53 50.2	
FUG	Fuego 3	7.13	104	eP		Pn	20 52 00.2	+4.4
CJM	Chamela	7.44	296	⇓i		Pn	20 52 20.5	+0.5
CJM				i			20 53 44.9	
NBG	Las Nubes	7.56	102	eP		Pn	20 52 30.0	+8.2
ZAIG	Zacatecas	7.76	327			Pn	20 52 25.3	+0.7
ZAIG	Zacatecas	7.76	327	e		Pn	20 52 24.4	-0.2
ZAIG				i			20 53 51.9	
ANIG	Ahuacatlan	7.80	308	e		Pn	20 52 26.7	+1.7
ANIG				e			20 53 54.8	
PETF	Flores	7.81	84	Pn		Pn	20 52 24.5	-0.5
MRL	Marmol	8.08	97	eP		Pn	20 52 33.5	+4.5
TPICX	Tepic	8.30	310	eP		Pn	20 52 34.6	+2.7
TPICX				⇑e			20 55 08.7	
TPICX					IAML		20 55 08.7	
	comp=E,2μm,1.4s							
TPICX					IAML		20 55 11.3	
	comp=N,2μm,1.6s							
TPICX				⇓e			20 55 11.3	
ESQI	Esquipulas	8.51	100			Pn	20 52 36.0	+1.2
MTO3	Montecristo	8.53	102			Pn	20 52 36.2	+1.0
SNET	Serv Nac Est T	8.84	106	Pn		Pn	20 52 41.1	+1.8
MNIG	Monterrey	9.52	347	e		Pn	20 52 46.9	-1.7
MAIG	Mazatlaan	10.50	312	⇑i		Pn	20 53 02.8	+0.9
MAIG				i			20 55 03.5	
MAIG	Mazatlaan	10.50	312	⇑eP		Pn	20 53 04.5	+2.5
TGUH	Tegucigalpa,Un	10.57	101	Pn		Pn	20 53 05.2	+2.0
TGUH	Tegucigalpa,Un	10.57	101	eP		Pn	20 53 03.9	+0.8
CRIN	San Cristobal	11.17	107			Pn	20 53 12.7	+1.4
KVTX	Kingsville	11.20	0			Pn	20 53 08.7	-2.9
CNGN	Cerro Negro	11.56	108			Pn	20 53 18.6	+2.0
833A	Chaparral WMA,	12.05	354	Pn		Pn	20 53 24.6	+1.4
833A	Chaparral WMA,	12.05	354	P		Pn	20 53 24.8	+1.7
	baz=173,SNR=95							
833A	Chaparral WMA,	12.05	354	P		Pn	20 53 24.5	+1.4
	baz=173,SNR=95							
MATN	Matagalpa	12.14	104			Pn	20 53 25.7	+1.2
735A	Kenedy	12.51	1			Pn	20 53 30.6	+1.2
735A	Kenedy	12.51	1	P		Pn	20 53 30.4	+1.0
	baz=180,SNR=6.3							
BOAB	BOACO BROADBAND	12.53	106			Pn	20 53 30.3	+0.5
HPIG		12.77	327			Pn	20 53 35.6	+2.4
HPIG		12.77	327	⇑i		Pn	20 53 33.6	+0.4
ACON	Acoyapa	13.14	107			Pn	20 53 40.0	+1.8
HZTE	Horizontes, Gu	13.26	113			Pn	20 53 44.1	+4.4
SLBS	Sierra La Lagu	13.43	305	Pn		Pn	20 53 44.4	+2.3
SLBS	Sierra La Lagu	13.43	305	⇑iP		Pn	20 53 44.5	+2.3
ORTG	Ortega, Santa	13.53	114	Pn		Pn	20 53 48.2	+4.6
DUNO	Dulce Nombre,	13.63	115	Pn		P	20 53 50.0	-3.7
HKT	Hockley	13.74	8	Pn		Pn	20 53 44.6	-1.6
HKT	Hockley	13.74	8	ceP		Pn	20 53 45.5	-0.7
HKT				pmax		pmax		
	comp=Z,48nm,1.7s							
TSIG	Topolobambo	13.87	314	⇑eP		Pn	20 53 50.1	+2.2
ESPN	Las Esperanzas	13.87	105			Pn	20 53 47.9	-0.2
LPIG	La Paz	13.93	306	Pn		Pn	20 53 52.6	+3.8
	comp=Z,8.3nm,0.3s,baz=76,slow=3.2,SNR=6.9							
LPIG				LR		LR	20 58 09.4	
	comp=Z,4μm,18.8s,baz=123,slow=32							
	comp=Z,26nm,0.3s							
LPIG	La Paz	13.93	306			Pn	20 53 52.6	+3.8
TX31	Lajitas Ar. Si	14.00	339			Pn	20 53 51.2	+1.4
TX32	Lajitas Array	14.00	339			Pn	20 53 51.3	+1.4
TXAR	Lajitas Array	14.00	339	Pn		Pn	20 53 51.9	+2.0
	comp=Z,0.3nm,0.3s,baz=158,slow=13,SNR=95							
TXAR				Lg		Lg	20 57 51.8	
	comp=Z,0.2nm,0.3s,baz=160,slow=25,SNR=3.0							
	comp=Z,42nm,1.1s							
TXAR	Lajitas Array	14.00	339			Pn	20 53 51.0	+1.2
TXAR	Lajitas Array	14.00	339	P		Pn	20 53 51.0	+1.2
JTS	Las Juntas de	14.01	114	Pn		Pn	20 53 52.5	+2.5
	comp=Z,2.9nm,0.3s,baz=2.1,slow=7.1,SNR=13							
JTS	Las Juntas de	14.01	114	Pn		Pn	20 53 52.7	+2.7
JTS	Las Juntas de	14.01	114	P		Pn	20 53 52.7	+2.7
JTS	Las Juntas de	14.01	114	eP		Pn	20 53 52.6	+2.6
JCT	Junction City	14.22	354	Pn		Pn	20 53 52.3	-0.6
JCT	Junction City	14.22	354	P		Pn	20 53 52.3	-0.6
JCT	Junction City	14.22	354	P		Pn	20 53 52.2	-0.7
	baz=172,SNR=24							
435B	Jarrell	14.43	1			Pn	20 53 55.0	-0.7
435B	Jarrell	14.43	1	P		Pn	20 53 54.5	-1.2
	baz=181,SNR=9.5							
435B	Jarrell	14.43	1	P		Pn	20 53 54.6	-1.2
	baz=181							
JACO	JACO, Garabito	14.55	115			P	20 54 01.4	-2.6
HDC	Heredia	14.88	113	P		P	20 54 06.0	-1.8
441A	DeRidder	15.05	16			Pn	20 54 01.8	-2.2
441A	DeRidder	15.05	16	P		Pn	20 54 01.9	-2.2
	baz=198,SNR=8.4							
CVTR	Volcan Turrial	15.18	112	Pn		Pn	20 54 06.1	-0.2
RIMA	Rio Macho	15.20	114			Pn	20 54 08.6	+2.2
BATAN	Batan	15.49	112			P	20 54 12.7	-1.7
PEZE	Perez Zeledon,	15.54	114			Pn	20 54 12.2	+1.5
WHTX	Lake Whitney,	15.64	2			Pn	20 54 10.6	-1.2
WHTX	Lake Whitney,	15.64	2	P		Pn	20 54 10.3	-1.6
	baz=181,SNR=105							
WHTX	Lake Whitney,	15.64	2	P		Pn	20 54 10.7	-1.2
	baz=181,SNR=105							
NATX	Nacogdoches	15.70	11	Pn		Pn	20 54 10.5	-2.1
NATX	Nacogdoches	15.70	11	P		Pn	20 54 09.6	-3.0
	baz=192,SNR=16							
237A	Washetta, Mont	15.77	7			Pn	20 54 11.8	-1.7
237A	Washetta, Mont	15.77	7	P		Pn	20 54 11.2	-2.3
	baz=187,SNR=30							
237A				S		S	20 57 21.4	-1.4
	baz=187							
342A	Flagon Creek P	15.88	18	P		Pn	20 54 10.6	-4.3
342A				IAmb		IAmb	20 54 19.4	
	comp=Z,639nm,0.9s							
342B	Flagon Creek P	15.88	18	P		Pn	20 54 11.7	-3.2
	baz=200,SNR=10							
SRBA	San Rafael, Bu	15.89	114	P		P	20 54 17.8	-1.1
DRK0	Durika	15.97	114	P		P	20 54 19.6	-0.4
ABTX	Abilene, Hawle	16.33	355	P		Pn	20 54 19.4	-1.4
ABTX	Abilene, Hawle	16.33	355	P		Pn	20 54 19.9	-0.9
	baz=174,SNR=361							
ABTX				S		S	20 57 32.1	-2.4
	baz=174							
ABTX	Abilene, Hawle	16.33	355	P		Pn	20 54 19.7	-1.1
	baz=174,SNR=361							
ABTX				S		Sn	20 57 21.1	-0.9
	baz=174							
344A	Westbrook Farm	16.48	22			Pn	20 54 19.6	-3.0
344A				IAmb		IAmb	20 54 27.2	
	comp=Z,690nm,1.1s							
344A	Westbrook Farm	16.48	22	P		Pn	20 54 20.1	-2.5
	baz=205,SNR=7.2							
GUYB	Guaymas	16.60	316	⇑iP		P	20 54 25.4	-1.2
GUYB				⇓eS		S	20 57 47.2	+7.3
GUYB				⇓e			20 59 58.1	
GUYB					IAML		20 59 58.1	
	comp=E,138nm,2.8s							
GUYB				e			21 00 11.9	
GUYB					IAML		21 00 11.9	
	comp=N,160nm,2.8s							
BRU2	Volcan	16.67	115	P		P	20 54 29.0	+1.3
BRU2	Volcan	16.67	115	eP		P	20 54 28.9	+1.1
MNTX	Cornudas Mount	16.75	338	P		Pn	20 54 26.1	0.0
MNTX	Cornudas Mount	16.75	338	P		Pn	20 54 26.5	+0.4
	baz=154,SNR=180							
346A	Big Creek Wild	16.92	26			Pn	20 54 25.3	-2.9
346A	Big Creek Wild	16.92	26	P		Pn	20 54 24.9	-3.2
	baz=209							
346A				S		Sn	20 57 31.8	-4.3
	baz=209							
Z35A	Perchaven, San	16.98	2	P		Pn	20 54 27.1	-1.8
Z35A				IAmb		IAmb	20 54 31.8	
	comp=Z,707nm,1.0s							
Z35A	Perchaven, San	16.98	2	P		Pn	20 54 27.5	-1.4
	baz=182,SNR=38							
Z38A	Mt. Pleasant	17.11	9	P		Pn	20 54 29.8	-0.8
Z38A				IAmb		IAmb	20 54 33.5	
	comp=Z,580nm,0.9s							
Z38A	Mt. Pleasant	17.11	9	P		Pn	20 54 28.3	-2.3
	baz=189,SNR=18							
SRIG	Santa Rosalia	17.18	312	⇑eP		P	20 54 32.5	-0.6
SRIG				eS		S	20 57 53.3	+1.6
VBMS	Vicksburg	17.25	22	P		Pn	20 54 29.2	-3.1
VBMS				IAmb		IAmb	20 54 34.8	
	comp=Z,1μm,0.9s							
VBMS	Vicksburg	17.25	22	P		Pn	20 54 29.5	-2.8
	baz=205,SNR=17							
LCCY	Blossom Villag	17.36	76	P		Pn	20 54 32.3	-1.5
143A	Socs Landing,	17.40	19	P		Pn	20 54 30.7	-3.5
143A				IAmb		IAmb	20 54 36.7	
	comp=Z,1μm,1.1s							
143A	Socs Landing,	17.40	19	P		Pn	20 54 30.8	-3.3
	baz=201,SNR=7.9							
HSIG		17.41	319	P		P	20 54 36.1	+0.5
HSIG		17.41	319	⇑iP		P	20 54 36.2	+0.6
HSIG				eS		S	20 58 02.2	+5.8
HSIG				⇑e			21 00 27.6	
HSIG					IAML		21 00 27.6	
	comp=N,174nm,2.6s							
HSIG					IAML		21 00 59.0	
	comp=E,147nm,3.4s							
HSIG				⇓e			21 00 59.0	
Z41A	Richland Creek	17.53	15	P		Pn	20 54 34.6	-1.3
Z41A				IAmb		IAmb	20 54 38.0	
	comp=Z,599nm,1.2s							
Z41A	Richland Creek	17.53	15	P		Pn	20 54 33.0	-2.8
	baz=196,SNR=12							
Z41A				P		Pn	20 54 33.0	-2.8
	baz=196,SNR=12							
Z41A	Richland Creek	17.53	15	P		Pn	20 54 32.2	-3.7
	baz=196,SNR=12							
NZIG	Nacozari, Sono	17.57	325	⇑eP		P	20 54 37.9	+0.3
NZIG				⇓eS		S	20 58 04.3	+4.3
BRAL	Brewton	17.86	32			Pn	20 54 36.3	-3.6
BRAL	Brewton	17.86	32	P		Pn	20 54 36.7	-3.2
	baz=216,SNR=5.9							
WLAR	White Oak Lake	17.87	13	P		Pn	20 54 37.4	-2.6
MSTX	Muleshoe	18.13	347	P		Pn	20 54 42.2	-1.1
MSTX				IAmb		IAmb	20 54 48.8	
	comp=Z,526nm,1.1s							
MSTX	Muleshoe	18.13	347	P		Pn	20 54 42.7	-0.6
	baz=164,SNR=118							
MSTX				S		Sn	20 58 03.4	-2.2
	baz=164							
MSTX	Muleshoe	18.13	347	P		Pn	20 54 42.2	-1.1
	baz=164,SNR=118							
MSTX				S		Sn	20 58 07.6	+2.0
	baz=164							
451A	Vernon	18.13	36	P		Pn	20 54 39.6	-3.6
146A	Union	18.18	25	P		Pn	20 54 41.4	-2.4
146A				IAmb		IAmb	20 54 45.2	
	comp=Z,1μm,1.2s							
146A	Union	18.18	25	P		Pn	20 54 41.4	-2.4
	baz=208,SNR=11							
319A	Douglas	18.21	328	P		P	20 54 45.6	+1.1
X34A	Smith Ranch, M	18.24	0			Pn	20 54 43.7	-0.9
X34A				IAmb		IAmb	20 54 53.9	
	comp=Z,1μm,1.3s							
X37A	Clayton	18.38	7	P		Pn	20 54 44.3	-1.9
X37A				IAmb		IAmb	20 54 48.9	
	comp=Z,463nm,0.9s							
WMOK	Wichita Mounta	18.39	358	P		Pn	20 54 44.2	-2.2
WMOK	Wichita Mounta	18.39	358	P		Pn	20 54 44.2	-2.2
WMOK				pmax		pmax		
	comp=Z,268nm,1.1s							
WMOK	Wichita Mounta	18.39	358	P		Pn	20 54 44.8	-1.6
	baz=177,SNR=165							
WMOK				S		Sn	20 58 10.5	-1.2
	baz=177							
CCAR	Cane Creek	18.43	17	P		P	20 54 44.8	-1.9
121A	Cookes Peak, D	18.45	333	P		Pn	20 54 48.6	+1.2
121A	Cookes Peak, D	18.45	333	P		Pn	20 54 48.8	+1.4
	baz=148,SNR=107							
121A	Cookes Peak, D	18.45	333	P		Pn	20 54 48.8	+1.4
	baz=148,SNR=107							
121A				S		S	20 58 17.9	0.0
	baz=148							
061Z	Ochoppi	18.55	56	P		P	20 54 45.6	-2.6
061Z	Ochoppi	18.55	56	P		P	20 54 47.4	-0.8
	baz=243							
061Z				S		Sn	20 58 09.5	-6.2
	baz=243							
553A	Crawfordville	18.59	40	P		P	20 54 48.1	-0.4
553A	Crawfordville	18.59	40	P		P	20 54 48.4	-0.2
	baz=225,SNR=7.8							
553A				S		Sn	20 58 12.2	-4.4
	baz=225							
MIAR	Mount Ida	18.61	11	P		P	20 54 46.3	-2.5
MIAR				IAmb		IAmb	20 54 58.0	
	comp=Z,757nm,1.3s							
MIAR	Mount Ida	18.61	11	P		P	20 54 46.3	-2.5
MIAR				pmax		pmax		
	comp=Z,757nm,1.3s							
MIAR	Mount Ida	18.61	11	P		P	20 54 46.6	-2.2
	baz=193,SNR=115							
AMTX	Amarillo	18.81	351	P		P	20 54 50.6	-0.6
AMTX				IAmb		IAmb	20 54 56.6	
	comp=Z,385nm,0.9s							
AMTX	Amarillo	18.81	351	P		P	20 54 50.9	-0.3
	baz=168							
AMTX				S		Sn	20 58 22.5	+0.4
	baz=168							
PNME	Penonome	18.90	112	eP		P	20 54 51.4	-0.7
FNO	Franklin	18.90	1			P	20 54 51.1	-0.9
FNO				IAmb		IAmb	20 55 01.0	
	comp=Z,658nm,0.9s							
250A	Grady	18.90	32	P		P	20 54 50.0	-2.1
250A	Grady	18.90	32	P		P	20 54 50.0	-2.1
	baz=217,SNR=21							
CACAO	El Cacao, Vera	18.96	116	eP		P	20 54 51.0	-1.7
OKCSW	OKLAHOMA CITY	19.05	1	P		P	20 54 53.1	-0.5
BCIP	Isla Barro Col	19.05	110	P		Pn	20 54 56.2	+1.6
BCIP	Isla Barro Col	19.05	110	P		Pn	20 54 56.2	+1.6
BCIP				pmax		pmax		
	comp=Z,132nm,1.2s							
BCIP	Isla Barro Col	19.05	110	eP		Pn	20 54 54.6	0.0
OKCFA	Oklahoma City	19.05	1			P	20 54 53.1	-0.6
Z47A	Carrollton	19.07	26	P		P	20 54 51.9	-2.0
Z47A				IAmb		IAmb	20 55 04.2	
	comp=Z,444nm,1.1s							
Z47A	Carrollton	19.07	26	P		P	20 54 52.5	-1.4
	baz=210,SNR=13							
Y45A	Yeager Farm, C	19.08	22	P		P	20 54 52.5	-1.5
Y45A	Yeager Farm, C	19.08	22	P		P	20 54 53.2	-0.7
	baz=205,SNR=31							
BAHB	Baha de los	19.09	314	⇑iP		Pn	20 54 56.5	+1.6
UALR	University of	19.09	14	P		P	20 54 53.0	-1.1
UALR				IAmb		IAmb	20 55 04.5	
	comp=Z,526nm,1.3s							
W39A	Magazine	19.20	11	P		P	20 54 54.5	-0.8
W39A	Magazine	19.20	11	P		P	20 54 54.8	-0.5
	baz=192,SNR=108							
W39A	Magazine	19.20	11	P		P	20 54 54.7	-0.6
	baz=192,SNR=108							
W39A				S		Sn	20 58 30.9	-0.4
	baz=192							
352A	Blakely	19.24	36	P		P	20 54 55.1	-0.6
352A				IAmb		IAmb	20 55 04.3	
	comp=Z,954nm,1.9s							
352A	Blakely	19.24	36	P		P	20 54 53.7	-2.0
	baz=221,SNR=11							
AZU	Azuero	19.25	114	eP		P	20 54 55.4	-0.6
656A	Willston	19.27	45	P		P	20 54 55.4	-0.6
656A	Willston	19.27	45	P		P	20 54 53.2	-2.8
	baz=231							
CRNM	Carthage	19.27	337	P		Pn	20 54 57.7	+0.4
LAPR	La Primavera	19.29	320	⇑iP		Pn	20 54 57.8	+0.4
LAPR				e			21 01 47.4	
LAPR					IAML		21 01 47.4	
	comp=N,203nm,3.0s							
LAPR					IAML		21 01 50.2	
	comp=E,163nm,2.9s							
LAPR				⇑e			21 01 50.2	
DWPF	Disney Wildern	19.29	50	P		P	20 54 55.1	-1.2
DWPF	Disney Wildern	19.29	50	P		P	20 54 54.4	-2.0
	baz=236							
UPA	Univ. de Panam	19.40	110	eP		P	20 54 58.1	+0.4
LRAL	Lakeview Retre	19.41	29	P		P	20 54 56.5	-1.1
LRAL				IAmb		IAmb	20 55 08.6	
	comp=Z,699nm,1

ANMO LR LR 21 03 30.4
comp=Z,21µm,19.0s,baz=157,slow=39
comp=Z,174nm,1.0s
ANMO Albuquerque 20.07 339 P Pn 20 55 05.8 -1.0
ANMO Albuquerque 20.07 339 P Pn 20 55 06.2 -0.6
ANMO Albuquerque 20.07 339 P Pn 20 55 06.4 -0.5
baz=155
ANMO S **S** **20 58 49.1 -1.4**
baz=155
MET Memphis--Engin 20.09 20 P **P** **20 55 04.0 -1.0**
MET IAmb IAmb 20 55 14.3
comp=Z,390nm,0.8s
MAPC Malpelo 20.20 125 *e*P Pn 20 55 07.6 -0.6
FCAR Ozark Folk Cen 20.21 14 P **P** **20 55 05.2 -1.1**
HHAR Hobbs 20.24 9 P **P** **20 55 05.0 -1.6**
HHAR IAmb IAmb 20 55 12.7
comp=Z,770nm,1.3s
152A Waverly Hall 20.26 34 P **P** **20 55 05.6 -1.2**
152A Waverly Hall 20.26 34 P **P** **20 55 05.5 -1.3**
baz=220,SNR=80
HBAR Harrisburg 20.27 17 P **P** **20 55 05.9 -1.0**
U38A Gravette 20.32 8 P **P** **20 55 05.8 -1.8**
U38A IAmb IAmb 20 55 12.6
comp=Z,316nm,1.1s
U38A Gravette 20.32 8 P **P** **20 55 06.2 -1.4**
baz=190,SNR=53
Y49A Blount Mountai 20.36 29 P **P** **20 55 06.9 -1.2**
Y49A IAmb IAmb 20 55 17.4
comp=Z,533nm,1.3s
Y49A Blount Mountai 20.36 29 P **P** **20 55 07.0 -1.0**
baz=214,SNR=95
Y49A S **S** **20 58 53.3 -2.7**
baz=214
W45A Hickory Valley 20.37 21 P **P** **20 55 06.5 -1.6**
W45A Hickory Valley 20.37 21 P **P** **20 55 06.9 -1.2**
baz=205,SNR=29
456A Hilliard 20.48 43 P **P** **20 55 07.9 -1.3**
456A IAmb IAmb 20 55 15.1
comp=Z,397nm,1.1s
456A Hilliard 20.48 43 P **P** **20 55 08.0 -1.3**
baz=229
Z51A Franklin 20.52 32 P **P** **20 55 08.5 -1.2**
Z51A Franklin 20.52 32 P **P** **20 55 08.8 -1.0**
baz=217,SNR=25
X48A Hartselle 20.58 26 P **P** **20 55 08.7 -1.7**
X48A IAmb IAmb 20 55 19.4
comp=Z,1µm,1.6s
X48A Hartselle 20.58 26 P **P** **20 55 09.1 -1.3**
baz=211,SNR=81
T35A Sooner Cattle 20.59 3 **P** **20 55 08.4 -2.0**
T35B Sooner Cattle 20.59 3 P **P** **20 55 08.7 -1.7**
baz=184,SNR=175
214A Organ Pipe Nat 20.61 322 P Pn 20 55 12.4 -0.7
214A IAmb IAmb 20 55 14.3
comp=Z,512nm,1.6s
214A Organ Pipe Nat 20.61 322 P Pn 20 55 12.7 -0.3
baz=135,SNR=74
214A S **S** **20 59 02.3 +1.3**
baz=135
214A Organ Pipe Nat 20.61 322⇑*i*P Pn 20 55 12.6 -0.5
214A *e*S Sn 20 59 04.7 -0.8
LCAR Lake Charles 20.62 16 P **P** **20 55 09.3 -1.4**
PLAL Pickwick Lake 20.62 24 P **P** **20 55 09.4 -1.4**
PLAL IAmb IAmb 20 55 19.2
comp=Z,554nm,1.0s
GNAR Gosnell 20.84 18 P **P** **20 55 12.1 -1.0**
255A Hazlehurst 21.00 39 P **P** **20 55 13.2 -1.7**
255A IAmb IAmb 20 55 28.4
comp=Z,752nm,1.2s
255A Hazlehurst 21.00 39 P **P** **20 55 12.7 -2.2**
baz=226,SNR=20
HALT Halls 21.01 20 P **P** **20 55 13.3 -1.6**
X18A Snowflake 21.10 332 P **P** **20 55 18.1 +1.9**
X18A IAmb IAmb 20 55 19.9
comp=Z,707nm,1.1s
154A Montrose 21.11 37 P **P** **20 55 14.4 -1.7**
154A IAmb IAmb 20 55 29.3
comp=Z,461nm,1.0s
154A Montrose 21.11 37 P **P** **20 55 14.2 -1.9**
baz=223,SNR=17
LNXT Lenox 21.13 19 P **P** **20 55 15.4 -0.9**
SFX San Felipe 21.27 317 P **P** **20 55 19.4 +1.6**
SFX IAmb IAmb 20 55 28.7
comp=Z,281nm,1.2s
SFX San Felipe 21.27 317⇑*i*P **P** **20 55 19.7 +1.9**
FPAL Fort Paine 21.30 29 P **P** **20 55 15.8 -2.4**
FPAL IAmb IAmb 20 55 26.6
comp=Z,250nm,1.0s
GLAT Glass 21.35 20 P **P** **20 55 16.9 -1.7**
PVMO Portageville 21.36 19 P **P** **20 55 17.1 -1.6**
PVMO IAmb IAmb 20 55 27.6
comp=Z,545nm,0.9s
MGMO Mountain Grove 21.39 13 P **P** **20 55 17.1 -2.0**
PBMO Poplar Bluff 21.48 17 P **P** **20 55 18.2 -1.8**
W18A Petrified Fore 21.50 333 P **P** **20 55 21.9 +1.5**
W18A IAmb IAmb 20 55 23.7
comp=Z,376nm,1.2s
W18A Petrified Fore 21.50 333 P **P** **20 55 22.3 +1.8**
baz=147,SNR=55
W18A S **S** **20 59 22.2 +3.4**
baz=147
GOGA Godfrey 21.50 35 P **P** **20 55 18.1 -2.2**
GOGA IAmb IAmb 20 55 20.1
comp=Z,324nm,0.8s
GOGA Godfrey 21.50 35 P **P** **20 55 18.1 -2.2**
GOGA pmax pmax
comp=Z,325nm,0.9s
GOGA Godfrey 21.50 35 P **P** **20 55 18.5 -1.8**
baz=221,SNR=142
Y52A Lilburn 21.53 33 P **P** **20 55 18.5 -2.0**
Y52A IAmb IAmb 20 55 20.5
comp=Z,499nm,0.8s
Y52A Lilburn 21.53 33 P **P** **20 55 19.0 -1.6**
baz=219,SNR=142
Y52A P **P** **20 55 19.0 -1.6**
baz=219,SNR=142
T25A Trinidad 21.54 346 P **P** **20 55 21.7 +0.8**
T25A Trinidad 21.54 346 P **P** **20 55 22.2 +1.3**
baz=162,SNR=740
T25A S **S** **20 59 23.0 +3.5**
baz=162
UTMT University of 21.56 20 P **P** **20 55 19.8 -1.1**
PARMO Parma 21.57 18 P **P** **20 55 19.9 -1.1**
HICK Hickman 21.62 19 P **P** **20 55 20.1 -1.4**
X51A Calhoun 21.68 30 P **P** **20 55 20.3 -1.9**
X51A IAmb IAmb 20 55 33.3
comp=Z,545nm,1.4s
X51A Calhoun 21.68 30 P **P** **20 55 20.6 -1.6**
baz=216,SNR=41
X51A P **P** **20 55 20.6 -1.6**
baz=216,SNR=41
S39A Bolivar 21.71 10 P **P** **20 55 20.7 -1.9**
S39A IAmb IAmb 20 55 25.9
comp=Z,644nm,1.2s
S39A Bolivar 21.71 10 P **P** **20 55 21.2 -1.4**
baz=192,SNR=237
S39A S **S** **20 59 19.6 -3.0**
baz=192
SWET Sewanee 21.71 28 P **P** **20 55 20.9 -1.7**
PTAC Punta Ardita, 21.72 112 *e*P **P** **20 55 22.2 -0.6**
X16A Lo Mia Camp, P 21.73 329 P **P** **20 55 24.5 +1.6**
X16A IAmb IAmb 20 55 28.8
comp=Z,441nm,1.0s
WVT Waverly 21.73 23 P **P** **20 55 20.8 -1.9**
WVT IAmb IAmb 20 55 30.7
comp=Z,437nm,1.0s
WVT Waverly 21.73 23 P **P** **20 55 20.8 -1.9**
WVT pmax pmax
comp=Z,437nm,1.0s
WVT Waverly 21.73 23 P **P** **20 55 21.2 -1.5**
baz=207
WVT S **S** **20 59 20.8 -2.1**
baz=207
113A Mohawk Valley, 21.76 322 P **P** **20 55 24.3 +1.3**
113A IAmb IAmb 20 55 36.8
comp=Z,545nm,1.9s
V48A Smith Brothers 21.78 25 P **P** **20 55 21.5 -1.8**
V48A Smith Brothers 21.78 25 P **P** **20 55 21.9 -1.4**
baz=210,SNR=174
V48A S **S** **20 59 22.2 -1.8**
baz=210
257A Skidaway Islan 21.94 42 P **P** **20 55 23.1 -1.9**
257A IAmb IAmb 20 55 25.1
comp=Z,561nm,1.2s
257A Skidaway Islan 21.94 42 P **P** **20 55 22.9 -2.1**
baz=229,SNR=7.4

W50A Signal Mountai 21.98 29 P **P** **20 55 23.8 -1.7**
W50A IAmb IAmb 20 55 34.2
comp=Z,458nm,0.9s
W50A Signal Mountai 21.98 29 P **P** **20 55 23.7 -1.7**
baz=214,SNR=191
W50A S **S** **20 59 26.8 -1.1**
baz=214
GTBY Guantanamo Bay 22.04 77 P **P** **20 55 25.0 -1.1**
GTBY IAmb IAmb 20 55 31.2
comp=Z,373nm,1.1s
GTBY Guantanamo Bay 22.04 77 *e*P **P** **20 55 24.7 -1.4**
R32A Long Quarter, 22.06 358 P **P** **20 55 24.8 -1.5**
R32A IAmb IAmb 20 55 29.1
comp=Z,314nm,0.8s
R32A Long Quarter, 22.06 358 P **P** **20 55 25.1 -1.2**
baz=178,SNR=38
R32A S **S** **20 59 31.8 +2.5**
baz=178
Y14A Wickenburg 22.18 325 P **P** **20 55 28.7 +1.1**
GUVIX Guadalupe Vict 22.24 319 P **P** **20 55 28.8 +0.5**
T45B Paducah 22.24 20 P **P** **20 55 26.9 -1.3**
baz=204,SNR=17
T45A Paducah 22.25 20 P **P** **20 55 26.5 -1.7**
CLTN Cedars of Leba 22.29 26 P **P** **20 55 27.0 -1.7**
CLTN IAmb IAmb 20 55 37.0
comp=Z,555nm,1.2s
SDCO Great Sand Dun 22.38 344 P **P** **20 55 30.2 +0.2**
SDCO IAmb IAmb 20 55 34.6
comp=Z,437nm,1.3s
SDCO IAMs_20 IAMs_20 21 04 55.0
comp=Z,13µm,18.0s
SDCO Great Sand Dun 22.38 344 P **P** **20 55 30.4 +0.4**
baz=160,SNR=400
SDCO S **S** **20 59 35.6 -0.3**
baz=160
ALAMX Rancho Alamar 22.45 317⇑*i*P **P** **20 55 32.1 +1.5**
CCM Cathedral Cave 22.48 14 P **P** **20 55 28.1 -2.7**
CCM Cathedral Cave 22.48 14 P **P** **20 55 28.1 -2.7**
CCM pmax pmax
comp=Z,702nm,1.1s
CCM Cathedral Cave 22.48 14 P **P** **20 55 28.8 -1.9**
baz=197
CCM S **S** **20 59 35.0 -2.2**
baz=197
R40A Maddies Statio 22.49 12 P **P** **20 55 28.6 -2.3**
R40A IAmb IAmb 20 55 32.9
comp=Z,584nm,1.1s
R40A Maddies Statio 22.49 12 P **P** **20 55 29.3 -1.5**
baz=194,SNR=327
R40A S **S** **20 59 36.3 -1.0**
baz=194
CBKS Cedar Bluff 22.49 356 P **P** **20 55 29.1 -1.8**
CBKS Cedar Bluff 22.49 356 P **P** **20 55 29.1 -1.8**
CBKS pmax pmax
comp=Z,1µm,1.4s
CBKS Cedar Bluff 22.49 356 P **P** **20 55 29.7 -1.3**
baz=175,SNR=33
CBKS S **S** **20 59 36.1 -1.4**
baz=175
CPCT Cooper Cave 22.56 30 P **P** **20 55 29.4 -2.2**
CPCT IAmb IAmb 20 55 31.2
comp=Z,247nm,0.9s
W52A Murphy 22.56 31 P **P** **20 55 30.1 -1.6**
W52A Murphy 22.56 31 P **P** **20 55 30.3 -1.4**
baz=217,SNR=90
WUAZ Wupatki 22.58 331 P **P** **20 55 33.4 +1.4**
WUAZ IAmb IAmb 20 55 37.6
comp=Z,401nm,0.9s
WUAZ Wupatki 22.58 331 P **P** **20 55 33.7 +1.7**
baz=144,SNR=205
GLA Glamis 22.59 321 P **P** **20 55 33.1 +1.1**
GLA IAmb IAmb 20 55 36.5
comp=Z,444nm,1.2s
GLA Glamis 22.59 321 P **P** **20 55 33.1 +1.1**
GLA pmax pmax
comp=Z,444nm,1.3s
GLA Glamis 22.59 321 P **P** **20 55 33.5 +1.4**
baz=133,SNR=45
GLA S **S** **20 59 43.1 +3.7**
baz=133
GLA Glamis 22.59 321⇑*i*P **P** **20 55 33.5 +1.4**
FVM French Village 22.62 16 P **P** **20 55 29.3 -2.9**
FVM IAmb IAmb 20 55 33.7
comp=Z,454nm,1.2s
FVM French Village 22.62 16 P **P** **20 55 29.3 -2.9**
FVM pmax pmax
comp=Z,454nm,1.2s
S44A Carbondale 22.67 18 P **P** **20 55 30.1 -2.7**
S44A Carbondale 22.67 18 P **P** **20 55 30.8 -2.0**
baz=202,SNR=153
S44A S **S** **20 59 40.8 +0.1**
baz=202
SIUC Southern Illin 22.70 18 P **P** **20 55 30.6 -2.5**
S22A 4UR Ranch, Cre 22.76 342 P **P** **20 55 34.3 +0.3**
S22A IAmb IAmb 20 55 37.8
comp=Z,258nm,1.0s
S22A 4UR Ranch, Cre 22.76 342 P **P** **20 55 35.0 +1.0**
baz=157,SNR=367
S22A S **S** **20 59 41.4 -1.4**
baz=157
KSU1 Kansas State U 22.76 3 P **P** **20 55 31.8 -2.0**
KSU1 IAmb IAmb 20 55 35.2
comp=Z,497nm,1.1s
KSU1 Kansas State U 22.76 3 P **P** **20 55 31.5 -2.2**
baz=183,SNR=85
KSU1 S **S** **20 59 40.9 -1.4**
baz=183
T47A Sharon Grove 22.76 23 P **P** **20 55 31.8 -2.0**
T47A IAmb IAmb 20 55 40.9
comp=Z,495nm,1.1s
T47A Sharon Grove 22.76 23 P **P** **20 55 32.1 -1.7**
baz=208,SNR=133
T47A S **S** **20 59 42.3 0.0**
baz=208
HODGE Hodges 22.78 35 P **P** **20 55 31.8 -2.1**
HODGE IAmb IAmb 20 55 33.3
comp=Z,336nm,0.8s
MVCO Mesa Verde 22.82 338 P **P** **20 55 35.1 +0.4**
MVCO IAMs_20 IAMs_20 21 05 26.1
comp=Z,12µm,21.0s
MVCO Mesa Verde 22.82 338 P **P** **20 55 35.4 +0.8**
baz=153,SNR=224
MVCO S **S** **20 59 43.9 0.0**
baz=153
U49A Red Boiling Sp 22.88 26 P **P** **20 55 33.4 -1.5**
U49A Red Boiling Sp 22.88 26 P **P** **20 55 33.2 -1.7**
baz=211,SNR=60
BLYC Blythe 22.90 322 P **P** **20 55 36.2 +1.0**
BLYC IAmb IAmb 20 55 38.7
comp=Z,237nm,1.1s
V51A Loudon 22.93 29 P **P** **20 55 33.4 -2.1**
V51A IAmb IAmb 20 55 37.1
comp=Z,408nm,1.2s
V51A Loudon 22.93 29 P **P** **20 55 33.2 -2.2**
baz=215,SNR=144
V51A S **S** **20 59 45.7 +0.5**
baz=215
BG3 Lake Jocassee 22.99 33 P **P** **20 55 34.3 -1.9**
BG3 IAmb IAmb 20 55 45.2
comp=Z,391nm,1.2s
CCX Cicese 23.00 316 P **P** **20 55 35.6 -0.6**
CCX Cicese 23.00 316⇑*i*P **P** **20 55 37.6 +1.4**
KSCO Kaye Shedlock' 23.00 351 P **P** **20 55 35.3 -1.1**
KSCO Kaye Shedlock' 23.00 351 P **P** **20 55 36.2 -0.2**
baz=168,SNR=13
KSCO Kaye Shedlock' 23.00 351 P **P** **20 55 36.2 -0.2**
baz=168,SNR=13
KSCO S **S** **20 59 47.0 +0.2**
baz=168
YUH2 Yuha Desert 23.00 318⇑*i*P **P** **20 55 37.8 +1.4**
YUH Yuha Desert 23.00 318 P **P** **20 55 37.6 +1.3**
YUH IAmb IAmb 20 55 48.9
comp=Z,357nm,1.6s
RMX La Rumorosa 23.07 318 P **P** **20 55 36.6 -0.7**
PDMCI Parker Dam,Lak 23.08 324 P **P** **20 55 38.2 +1.2**
baz=136,SNR=41
PDMCI S **S** **20 59 50.4 +2.5**
baz=136
TKL Tuckaleechee C 23.09 31 P **P** **20 55 36.1 -1.1**
comp=Z,198nm,1.0s,baz=210,slow=9.7,SNR=73
TKL S **S** **20 59 43.3 -4.7**
comp=Z,24nm,0.8s,baz=189,slow=19,SNR=2.6
TKL LR LR 21 08 09.2
comp=Z,2µm,19.2s,baz=211,slow=46
comp=Z,198nm,1.0s
TKL Tuckaleechee C 23.09 31 P **P** **20 55 35.1 -2.0**

TKL IAmb IAmb 20 55 38.3
comp=Z,392nm,1.1s
TKL Tuckaleechee C 23.09 31 **S** **20 59 43.3 -4.7**
TKL Tuckaleechee C 23.09 31 P **P** **20 55 35.1 -2.0**
TKL S **S** **20 59 43.3 -4.7**
TKL pmax pmax
comp=Z,393nm,1.2s
SJCC San Jacinto, C 23.09 103 P **P** **20 55 38.6 +1.1**
SJCC IAmb IAmb 20 55 55.0
comp=Z,298nm,1.3s
SJCC San Jacinto, C 23.09 103 *e*P **P** **20 55 36.3 -1.1**
SWSC Sam W. Stewart 23.12 319 P **P** **20 55 39.1 +1.5**
baz=131,SNR=54
SWSC S **S** **20 59 52.9 +4.2**
baz=131
IKP In-Ko-Pah, Jac 23.13 318 P **P** **20 55 39.3 +1.6**
baz=130,SNR=39
IKP S **S** **20 59 53.5 +4.6**
baz=130
DBBC Dabeiba 23.21 111 *e*P **P** **20 55 40.3 +1.6**
CSU Charleston Sou 23.21 41 P **P** **20 55 36.9 -1.5**
NHSC New Hope 23.22 41 P **P** **20 55 36.5 -2.1**
NHSC New Hope 23.22 41 P **P** **20 55 36.8 -1.7**
baz=228,SNR=24
CBX Cerro Bola 23.27 317 P **P** **20 55 40.1 +0.8**
CBX Cerro Bola 23.27 317⇑*i*P **P** **20 55 40.6 +1.4**
SLM Saint Louis 23.28 15 P **P** **20 55 36.8 -2.3**
SLM Saint Louis 23.28 15 P **P** **20 55 36.8 -2.3**
SLM pmax pmax
comp=Z,597nm,1.1s
V52A Sevierville 23.32 31 P **P** **20 55 37.5 -2.1**
V52A IAmb IAmb 20 55 47.6
comp=Z,466nm,1.5s
V52A Sevierville 23.32 31 P **P** **20 55 37.6 -1.9**
baz=217,SNR=70
V52A S **S** **20 59 52.1 +0.2**
baz=217
TJIG Tijuana 23.36 317 *e* **P** **20 55 41.2 +1.2**
JSC Jenkinsville 23.38 37 P **P** **20 55 37.7 -2.5**
JSC IAmb IAmb 20 55 50.7
comp=Z,250nm,1.0s
JSC Jenkinsville 23.38 37 P **P** **20 55 37.7 -2.5**
JSC pmax pmax
comp=Z,250nm,1.0s
BC3 Big Chuckawall 23.39 321 P **P** **20 55 41.4 +1.1**
baz=133,SNR=128
BC3 S **S** **20 59 56.6 +3.3**
baz=133
TKX Tecate 23.40 317 P **P** **20 55 41.4 +1.0**
Q24A Divide 23.45 346 P **P** **20 55 41.2 +0.1**
Q24A IAmb IAmb 20 55 43.8
comp=Z,467nm,1.2s
Q24A Divide 23.45 346 P **P** **20 55 41.5 +0.3**
baz=162,SNR=37
Q24A S **S** **20 59 56.5 +2.0**
baz=162
MONP2 Monument Peak 23.48 318 P **P** **20 55 42.5 +1.1**
baz=130,SNR=55
MONP2 S **S** **20 59 58.7 +3.7**
baz=130
BAR Barrett 23.51 317 P **P** **20 55 42.5 +1.1**
UREC San Jos de Ur 23.52 108 *e*P **P** **20 55 42.5 +0.8**
W13A Hualapai Mount 23.52 326 P **P** **20 55 43.1 +1.3**
IRM Iron Mountain 23.55 322 P **P** **20 55 43.2 +1.3**
baz=134,SNR=93
IRM S **S** **20 59 58.6 +2.9**
baz=134
P38A Dawn 23.57 9 P **P** **20 55 39.4 -2.6**
P38A Dawn 23.57 9 P **P** **20 55 41.3 -0.7**
baz=190,SNR=59
V53A Saluda 23.58 32 P **P** **20 55 40.6 -1.5**
V53A IAmb IAmb 20 55 54.2
comp=Z,407nm,1.3s
V53A Saluda 23.58 32 P **P** **20 55 41.0 -1.1**
baz=219,SNR=52
V53A P **P** **20 55 41.0 -1.1**
baz=219,SNR=52
V53A S **S** **20 59 55.3 -0.8**
baz=219
V53A S **S** **20 59 55.3 -0.8**
baz=219
SMRC Santa Marta, M 23.63 99 *e*P **P** **20 55 42.5 -0.3**
NEE2 Needles Airpor 23.68 324 P **P** **20 55 44.4 +1.3**
baz=136
NEE2 S **S** **21 00 02.0 +4.2**
baz=136
T50A Nancy 23.71 27 P **P** **20 55 41.0 -2.4**
T50A IAmb IAmb 20 55 52.2
comp=Z,162nm,0.8s
T50A Nancy 23.71 27 P **P** **20 55 41.3 -2.0**
baz=213
T50A P **P** **20 55 41.3 -2.0**
baz=213
T50A S **S** **20 59 56.9 -1.2**
baz=213
T50A S **S** **20 59 56.9 -1.2**
baz=213
Y57A Sumter 23.71 39 P **P** **20 55 41.7 -1.7**
Y57A IAmb IAmb 20 55 44.4
comp=Z,542nm,1.1s
Y57A Sumter 23.71 39 P **P** **20 55 43.2 -0.2**
baz=226,SNR=16
Y57A P **P** **20 55 43.2 -0.2**
baz=226,SNR=16
P40A Paris 23.73 11 P **P** **20 55 40.8 -2.7**
P40A Paris 23.73 11 P **P** **20 55 41.4 -2.1**
baz=194,SNR=282
P40A S **S** **20 59 58.3 -0.1**
baz=194
U15A North Rim 23.75 330 P **P** **20 55 45.6 +1.5**
U15A IAmb IAmb 20 55 48.7
comp=Z,541nm,1.3s
PV13 Radium Mtn., P 23.79 338 P **P** **20 55 45.0 +0.7**
PV13 IAmb IAmb 20 55 47.8
comp=Z,251nm,0.9s
TUMC Tumaco 23.80 125 *e*P **P** **20 55 47.3 +3.0**
PV15 Paradox Valley 23.83 339 P **P** **20 55 45.7 +0.9**
PV15 IAmb IAmb 20 55 47.0
comp=Z,364nm,1.1s
Q44A Meyer Farm, Va 23.86 17 P **P** **20 55 43.4 -1.4**
Q44A Meyer Farm, Va 23.86 17 P **P** **20 55 43.4 -1.4**
baz=202,SNR=138
Q44A S **S** **21 00 01.1 +0.6**
baz=202
CBOC Ciudad Bolivar 23.89 113 *e*P **P** **20 55 46.5 +1.0**
TZTN Tazewell 23.90 30 P **P** **20 55 44.0 -1.3**
TZTN Tazewell 23.90 30 P **P** **20 55 44.0 -1.3**
baz=216,SNR=80
TZTN S **S** **21 00 02.3 +1.0**
baz=216
109C Camp Elliot, M 23.92 317 P **P** **20 55 46.3 +0.8**
109C Camp Elliot, M 23.92 317 P **P** **20 55 46.7 +1.3**
baz=128
109C S **S** **21 00 05.7 +4.1**
baz=128
PV11 David Mesa, Pa 23.93 339 P **P** **20 55 46.3 +0.6**
BELC Belle Mtn. Jos 23.95 321 P **P** **20 55 47.4 +1.5**
baz=132,SNR=66
BELC S **S** **21 00 06.4 +4.0**
baz=132
KMSC Kings Mountain 23.97 35 P **P** **20 55 44.5 -1.4**
KMSC IAmb IAmb 20 55 56.3
comp=Z,422nm,1.1s
KMSC Kings Mountain 23.97 35 P **P** **20 55 44.7 -1.1**
baz=223,SNR=51
KMSC S **S** **21 00 04.2 +1.9**
baz=223
KMSC Kings Mountain 23.97 35 P **P** **20 55 44.6 -1.2**
baz=223,SNR=51
KMSC S **S** **21 00 03.2 +1.0**
baz=223
TPFO Pinon Flats 23.97 319 P **P** **20 55 47.7 +1.7**
baz=131,SNR=51
TPFO S **S** **21 00 08.9 +6.3**
baz=131
PV07 Paradox Valley 23.97 339 P **P** **20 55 41.0 -5.1**
PV07 IAmb IAmb 20 55 42.9
comp=Z,544nm,1.2s
ARGC Ariguani, Magd 23.98 103 *e*P **P** **20 55 42.5 -3.6**
PFO Pinyon Flats O 23.98 319 P **P** **20 55 47.5 +1.4**
comp=Z,41nm,1.1s,baz=128,slow=8.3,SNR=67
PFO Lg Lg 21 03 13.9
comp=Z,0.1nm,0.3s,baz=131,slow=20,SNR=1.6
PFO LR LR 21 04 40.0
comp=Z,3µm,19.8s,baz=138,slow=35
comp=Z,41nm,1.1s

PFO	**Pinyon Flats O**	**23.98**	**319**	P	**P**	**20 55 46.9**	**+0.8**
PFO				IAmb	IAmb	20 55 49.4	
	comp=Z,434nm,1.9s						
PFO	**Pinyon Flats O**	**23.98**	**319**	*eP*	**P**	**20 55 46.9**	**+0.8**
PFO	**Pinyon Flats O**	**23.98**	**319**	P	**P**	**20 55 47.9**	**+1.8**
	baz=131,SNR=48						
PFO				S	**S**	**21 00 07.8**	**+5.1**
	baz=131						
OLIL	**Olney**	**23.98**	**19**	P	**P**	**20 55 44.4**	**-1.6**
PV20	**West Nyswonger**	**24.00**	**338**	P	**P**	**20 55 46.7**	**+0.3**
PV20				IAmb	IAmb	20 55 47.9	
	comp=Z,186nm,1.0s						
PV10	**Paradox Valley**	**24.06**	**338**	P	**P**	**20 55 46.6**	**-0.3**
PV10				IAmb	IAmb	20 55 47.7	
	comp=Z,264nm,1.0s						
Y58A	**Scranton**	**24.07**	**40**	P	**P**	**20 55 46.1**	**-0.7**
Y58A	**Scranton**	**24.07**	**40**	P	**P**	**20 55 46.5**	**-0.3**
	baz=228,SNR=10						
Y58A				P	**P**	**20 55 46.5**	**-0.3**
	baz=228,SNR=10						
BIRD	**Birdtown, Kers**	**24.11**	**37**	P	**P**	**20 55 44.9**	**-2.2**
BIRD				IAmb	IAmb	20 55 49.0	
	comp=Z,539nm,1.3s						
PLMC	**San Jos del P**	**24.11**	**116**	*eP*	**P**	**20 55 48.4**	**+1.0**
PV23	**Carpenter Ridg**	**24.11**	**338**	P	**P**	**20 55 48.3**	**+0.8**
PV23				IAmb	IAmb	20 55 49.8	
	comp=Z,406nm,1.0s						
SMCO	**Snowmass**	**24.12**	**343**	P	**P**	**20 55 48.4**	**+0.7**
SMCO				IAMs_20	IAMs_20	21 05 45.2	
	comp=Z,8µm,18.0s						
HELC	**Santa Helena**	**24.17**	**112**	*eP*	**P**	**20 55 50.1**	**+1.8**
PV21	**Cone Mtn., Par**	**24.20**	**339**	P	**P**	**20 55 48.9**	**+0.7**
PV21				IAmb	IAmb	20 55 50.6	
	comp=Z,235nm,0.9s						
ZARC	**Zaragoza, Cauc**	**24.24**	**108**	P	**P**	**20 55 49.4**	**+0.9**
ZARC	**Zaragoza, Cauc**	**24.24**	**108**	*eP*	**P**	**20 55 48.9**	**+0.4**
GMRC	**Granite Mounta**	**24.29**	**323**	P	**P**	**20 55 50.6**	**+1.6**
	baz=134,SNR=54						
GMRC				S	**S**	**21 00 12.3**	**+4.5**
	baz=134						
ISCO	**Idaho Springs**	**24.35**	**346**	P	**P**	**20 55 50.8**	**+1.1**
ISCO				IAMs_20	IAMs_20	21 05 59.0	
	comp=Z,11µm,18.0s						
ISCO	**Idaho Springs**	**24.35**	**346**	P	**P**	**20 55 50.8**	**+1.1**
ISCO				pmax	pmax		
	comp=Z,520nm,0.9s						
ISCO				MLR	MLR		
	comp=Z,11µm,18.0s						
ISCO	**Idaho Springs**	**24.35**	**346**	P	**P**	**20 55 50.8**	**+1.1**
	baz=162,SNR=543						
ISCO				S	**S**	**21 00 09.4**	**+0.4**
	baz=162						
N33B	**J Bar K, Exete**	**24.37**	**1**	P	**P**	**20 55 49.0**	**-0.5**
	baz=181,SNR=38						
N33A	**J Bar K, Exete**	**24.37**	**1**	P	**P**	**20 55 48.7**	**-0.8**
JAKH	**Jacmel**	**24.39**	**82**	P	**P**	**20 55 50.5**	**+0.6**
JAKH				IAmb	IAmb	20 56 00.8	
	comp=Z,393nm,1.2s						
P43A	**Skaggs, Pawnee**	**24.41**	**16**	P	**P**	**20 55 48.7**	**-1.2**
P43A				IAmb	IAmb	20 55 50.7	
	comp=Z,533nm,1.2s						
P43A	**Skaggs, Pawnee**	**24.41**	**16**	P	**P**	**20 55 49.0**	**-0.8**
	baz=200,SNR=42						
P43A				S	**S**	**21 00 12.4**	**+3.2**
	baz=200						
MURC	**Murrieta**	**24.43**	**318**	P	**P**	**20 55 51.5**	**+1.3**
	baz=130,SNR=13						
MURC				S	**S**	**21 00 16.1**	**+6.2**
	baz=130						
YOTC	**Yotoco, Valle**	**24.52**	**118**	*eP*	**P**	**20 55 52.1**	**+0.8**
V55A	**Taylorsville**	**24.56**	**34**	P	**P**	**20 55 50.1**	**-1.1**
V55A	**Taylorsville**	**24.56**	**34**	P	**P**	**20 55 50.7**	**-0.5**
	baz=222,SNR=59						
V55A				P	**P**	**20 55 50.7**	**-0.5**
	baz=222,SNR=59						
V55A				S	**S**	**21 00 14.5**	**+2.7**
	baz=222						
V55A				S	**S**	**21 00 14.5**	**+2.7**
	baz=222						
N35A	**Tabor**	**24.57**	**4**	P	**P**	**20 55 50.1**	**-1.2**
N35A	**Tabor**	**24.57**	**4**	P	**P**	**20 55 50.5**	**-0.8**
	baz=185,SNR=50						
PKCU	**Pink Cliffs**	**24.59**	**332**	P	**P**	**20 55 53.4**	**+1.6**
ELS	**Elsinore Mount**	**24.61**	**318**	P	**P**	**20 55 51.8**	**0.0**
Y59A	**Loris**	**24.62**	**41**	P	**P**	**20 55 51.0**	**-0.9**
Y59A	**Loris**	**24.62**	**41**	P	**P**	**20 55 51.5**	**-0.3**
	baz=229,SNR=14						
Y59A				P	**P**	**20 55 51.5**	**-0.3**
	baz=229,SNR=14						
R49A	**Shelbyville**	**24.65**	**25**	P	**P**	**20 55 50.6**	**-1.5**
R49A	**Shelbyville**	**24.65**	**25**	P	**P**	**20 55 51.0**	**-1.1**
	baz=211,SNR=41						
R49A				P	**P**	**20 55 51.0**	**-1.1**
	baz=211,SNR=41						
R49A				S	**S**	**21 00 18.8**	**+5.6**
	baz=211						
R49A				S	**S**	**21 00 18.8**	**+5.6**
	baz=211						
LCMT	**Little Creek M**	**24.68**	**330**	P	**P**	**20 55 53.3**	**+0.9**
BBRC	**Big Bear Solar**	**24.69**	**320**	P	**P**	**20 55 54.5**	**+1.8**
	baz=131						
X58A	**Rowland**	**24.71**	**39**	P	**P**	**20 55 51.3**	**-1.3**
X58A	**Rowland**	**24.71**	**39**	P	**P**	**20 55 51.6**	**-1.0**
	baz=227,SNR=34						
X58A				P	**P**	**20 55 51.6**	**-1.0**
	baz=227,SNR=34						
HEC	**Hector,Ludlow**	**24.72**	**322**	P	**P**	**20 55 54.6**	**+1.7**
	baz=133,SNR=52						
HEC				S	**S**	**21 00 23.1**	**+8.5**
	baz=133						
PAC1	**Pacto, Paraso**	**24.73**	**128**	*eP*	**P**	**20 55 53.6**	**+0.5**
W57A	**Gilead**	**24.74**	**37**	P	**P**	**20 55 51.5**	**-1.3**
W57A	**Gilead**	**24.74**	**37**	P	**P**	**20 55 51.9**	**-0.9**
	baz=225,SNR=150						
W57A				P	**P**	**20 55 51.9**	**-0.9**
	baz=225,SNR=150						
U54A	**Nelsons Funny**	**24.74**	**32**	P	**P**	**20 55 52.5**	**-0.5**
U54A	**Nelsons Funny**	**24.74**	**32**	P	**P**	**20 55 52.0**	**-1.0**
	baz=220,SNR=42						
U54A				P	**P**	**20 55 52.0**	**-1.0**
	baz=220,SNR=42						
U54A				S	**S**	**21 00 18.1**	**+3.3**
	baz=220						
U54A				S	**S**	**21 00 18.1**	**+3.3**
	baz=220						
GUY2C	**Guyana, Caldas**	**24.76**	**114**	*eP*	**P**	**20 55 55.8**	**+2.0**
N38A	**Joes South For**	**24.76**	**9**	P	**P**	**20 55 51.7**	**-1.3**
N38A	**Joes South For**	**24.76**	**9**	P	**P**	**20 55 52.6**	**-0.4**
	baz=191,SNR=78						
S51A	**Beattyville**	**24.77**	**28**	P	**P**	**20 55 51.9**	**-1.3**
S51A				IAmb	IAmb	20 56 02.6	
	comp=Z,396nm,1.1s						
S51A	**Beattyville**	**24.77**	**28**	P	**P**	**20 55 52.4**	**-0.8**
	baz=215,SNR=38						
S51A				P	**P**	**20 55 52.4**	**-0.8**
	baz=215,SNR=38						
S51A				S	**S**	**21 00 22.5**	**+7.3**
	baz=215						
S51A				S	**S**	**21 00 22.5**	**+7.3**
	baz=215						
OGNE	**Ogallala**	**24.82**	**353**	P	**P**	**20 55 53.6**	**0.0**
OGNE	**Ogallala**	**24.82**	**353**	P	**P**	**20 55 54.2**	**+0.6**
	baz=170,SNR=28						
BBAC	**Balboa, Cauca**	**24.86**	**123**	*eP*	**P**	**20 55 56.0**	**+1.6**
TUQ	**Turquoise Moun**	**24.91**	**323**	P	**P**	**20 55 56.1**	**+1.5**
	baz=135,SNR=80						
TUQ				S	**S**	**21 00 23.6**	**+5.9**
	baz=135						
BLO	**Bloomington**	**24.91**	**22**	P	**P**	**20 55 53.4**	**-1.0**
BLO	**Bloomington**	**24.91**	**22**	P	**P**	**20 55 53.4**	**-1.0**
BLO				pmax	pmax		
	comp=Z,2µm,2.0s						
LL6C	**La Loma 6 Bece**	**24.93**	**102**	*eP*	**P**	**20 55 55.1**	**+0.3**
SCI2	**San Clemente I**	**24.93**	**316**	P	**P**	**20 55 55.8**	**+1.1**
	baz=126,SNR=11						
SCI2				S	**S**	**21 00 27.1**	**+9.2**
	baz=126						
CRJC	**Cerrejon, Guaj**	**24.94**	**99**	*eP*	**P**	**20 55 53.5**	**-1.4**
PTBC	**PUERTO BERRIO,**	**24.99**	**110**	*eP*	**P**	**20 55 54.4**	**-1.0**
R50A	**Paris**	**24.99**	**26**	P	**P**	**20 55 53.7**	**-1.4**
R50A	**Paris**	**24.99**	**26**	P	**P**	**20 55 54.0**	**-1.1**
	baz=212,SNR=57						
R50A				P	**P**	**20 55 54.0**	**-1.1**
	baz=212,SNR=57						
R50A				S	**S**	**21 00 19.4**	**+0.8**
	baz=212						
R50A				S	**S**	**21 00 19.4**	**+0.8**
	baz=212						
OTAV	**Otavalo**	**25.01**	**128**	P	**P**	**20 55 58.4**	**+2.4**
OTAV	**Otavalo**	**25.01**	**128**	P	**P**	**20 55 58.4**	**+2.4**
OTAV				pmax	pmax		
	comp=Z,103nm,1.6s						
OTAV				MLR	MLR		
	comp=Z,2µm,21.0s						
OTAV	**Otavalo**	**25.01**	**128**	*eP*	**P**	**20 55 58.5**	**+2.4**
OTAV	**Otavalo**	**25.01**	**128**	*eP*	**P**	**20 55 58.1**	**+2.1**
OTAV				*epP*	**sP**	**20 56 03.6**	**+1.8**
MTPU	**Mount Pierson**	**25.02**	**333**	P	**P**	**20 55 57.1**	**+1.3**
POPC	**Popayan, Colom**	**25.02**	**121**	*eP*	**P**	**20 55 57.1**	**+1.2**
BGNE	**Belgrade**	**25.03**	**360**	P	**P**	**20 55 55.4**	**-0.1**
BGNE				IAmb	IAmb	20 55 57.0	
	comp=Z,429nm,1.1s						
BGNE	**Belgrade**	**25.03**	**360**	P	**P**	**20 55 55.5**	**-0.1**
	baz=179,SNR=12						
BGNE	**Belgrade**	**25.03**	**360**	P	**P**	**20 55 55.4**	**-0.1**
	baz=179,SNR=12						
NORC	**Norcasia**	**25.04**	**113**	*eP*	**P**	**20 55 58.1**	**+2.3**
Y60A	**Bolivia**	**25.05**	**42**	P	**P**	**20 55 54.0**	**-1.7**
Y60A				IAmb	IAmb	20 56 06.0	
	comp=Z,179nm,1.2s						
Y60A	**Bolivia**	**25.05**	**42**	P	**P**	**20 55 54.3**	**-1.3**
	baz=230						
Y60A				P	**P**	**20 55 54.3**	**-1.3**
	baz=230						
SZCU	**Shurtz Canyon**	**25.07**	**331**	P	**P**	**20 55 57.2**	**+1.1**
SZCU				IAmb	IAmb	20 56 00.1	
	comp=Z,262nm,1.3s						
P46A	**Rosedale**	**25.08**	**20**	P	**P**	**20 55 55.1**	**-0.7**
P46A	**Rosedale**	**25.08**	**20**	P	**P**	**20 55 55.5**	**-0.4**
	baz=205,SNR=75						
P46A				S	**S**	**21 00 24.3**	**+4.3**
	baz=205						
ANIL	**Santa Ana**	**25.08**	**115**	*eP*	**P**	**20 55 57.6**	**+1.2**
CIS	**Catalina Islan**	**25.10**	**316**	P	**P**	**20 55 57.5**	**+1.2**
	baz=127,SNR=17						
CIS				S	**S**	**21 00 30.9**	**+10**
	baz=127						
N41A	**Harden Midland**	**25.11**	**13**	P	**P**	**20 55 54.6**	**-1.6**
N41A				IAmb	IAmb	20 55 57.7	
	comp=Z,326nm,0.9s						
N41A	**Harden Midland**	**25.11**	**13**	P	**P**	**20 55 55.4**	**-0.8**
	baz=196,SNR=28						
N41A				S	**S**	**21 00 21.4**	**+1.0**
	baz=196						
RRX	**Edison Barstow**	**25.15**	**321**	P	**P**	**20 55 58.6**	**+1.9**
	baz=132						
CCUT	**Cedar City**	**25.16**	**330**	P	**P**	**20 55 58.5**	**+1.5**
O44A	**Mansfield**	**25.18**	**17**	P	**P**	**20 55 55.8**	**-1.0**
O44A	**Mansfield**	**25.18**	**17**	P	**P**	**20 55 56.2**	**-0.6**
	baz=202,SNR=28						
FMP	**Fort Macarthur**	**25.21**	**317**	P	**P**	**20 55 58.7**	**+1.5**
	baz=128						
TULM	**Tulcn-Chalpat**	**25.22**	**126**	P	**P**	**20 55 59.5**	**+1.6**
TULM	**Tulcn-Chalpat**	**25.22**	**126**	*eP*	**P**	**20 55 59.2**	**+1.3**
GCUF	**Volcan Galeras**	**25.25**	**124**	*eP*	**P**	**20 56 03.4**	**+5.1**
SRU	**San Rafael Swe**	**25.25**	**337**	P	**P**	**20 55 58.1**	**+0.4**
SRU				IAmb	IAmb	20 56 01.7	
	comp=Z,368nm,1.0s						
SRU	**San Rafael Swe**	**25.25**	**337**	P	**P**	**20 55 58.1**	**+0.4**
SRU				pmax	pmax		
	comp=Z,369nm,1.0s						
SHPR	**Sheep Range**	**25.26**	**326**	P	**P**	**20 55 58.9**	**+1.1**
GSC	**Goldstone, Bar**	**25.33**	**322**	P	**P**	**20 55 58.9**	**+0.6**
GSC	**Goldstone, Bar**	**25.33**	**322**	P	**P**	**20 55 58.9**	**+0.6**
GSC				pmax	pmax		
	comp=Z,117nm,1.2s						
GSC	**Goldstone, Bar**	**25.33**	**322**	P	**P**	**20 55 59.8**	**+1.5**
	baz=133,SNR=52						
GSC				S	**S**	**21 00 34.4**	**+10**
	baz=133						
HDIL	**Hopedale**	**25.33**	**16**	P	**P**	**20 55 57.5**	**-0.7**
	baz=200,SNR=45						
PCON	**Cinco Dias**	**25.37**	**121**	*eP*	P	20 55 48.6	-11
U56A	**King**	**25.38**	**35**	P	**P**	**20 55 57.7**	**-0.9**
U56A	**King**	**25.38**	**35**	P	**P**	**20 55 58.2**	**-0.5**
	baz=223,SNR=37						
U56A				P	**P**	**20 55 58.2**	**-0.5**
	baz=223,SNR=37						
O20A	**White River Ci**	**25.38**	**341**	P	**P**	**20 55 59.9**	**+1.0**
O20A	**White River Ci**	**25.38**	**341**	P	**P**	**20 56 00.4**	**+1.5**
	baz=156,SNR=127						
O20A				S	**S**	**21 00 34.0**	**+8.7**
	baz=156						
MSU	**Marysvale**	**25.41**	**333**	P	**P**	**20 56 00.2**	**+1.0**
MSU	**Marysvale**	**25.41**	**333**	P	**P**	**20 56 00.2**	**+1.0**
BRRC	**Barranca, Sant**	**25.43**	**108**	*eP*	**P**	**20 55 60.0**	**+0.6**
PASC	**Pasadena Art C**	**25.43**	**318**	P	**P**	**20 55 57.6**	**-1.6**
SHOC	**Shoshone, Teco**	**25.44**	**324**	P	**P**	**20 56 00.4**	**+1.2**
	baz=135,SNR=10.0						
MARP	**Paez Belalcaza**	**25.46**	**119**	*eP*	**P**	**20 56 02.3**	**+2.4**
N23A	**Red Feather La**	**25.47**	**346**	P	**P**	**20 56 00.4**	**+0.6**
N23A	**Red Feather La**	**25.47**	**346**	P	**P**	**20 56 00.7**	**+0.9**
	baz=162,SNR=460						
ORTC	**Ortega, Tolima**	**25.50**	**116**	*eP*	**P**	**20 56 02.0**	**+2.0**
P48A	**Milroy**	**25.56**	**23**	P	**P**	**20 55 58.5**	**-1.8**
P48A				IAmb	IAmb	20 56 01.0	
	comp=Z,223nm,1.0s						
P48A	**Milroy**	**25.56**	**23**	P	**P**	**20 55 58.8**	**-1.5**
	baz=209,SNR=56						
P48A				P	**P**	**20 55 58.8**	**-1.5**
	baz=209,SNR=56						
P48A				S	**S**	**21 00 33.3**	**+5.6**
	baz=209						
P48A				S	**S**	**21 00 33.3**	**+5.6**
	baz=209						
SDDR	**Presa de Saban**	**25.57**	**80**	P	**P**	**20 56 01.3**	**+0.6**
SDDR	**Presa de Saban**	**25.57**	**80**	*eP*	**P**	**20 56 01.6**	**+0.9**
DECC	**Green Verdugo**	**25.58**	**318**	P	**P**	**20 56 02.1**	**+1.6**
	baz=129						
DECC				S	**S**	**21 00 38.6**	**+10**
	baz=129						
P18A	**Preston Nutter**	**25.60**	**338**	P	**P**	**20 56 01.7**	**+0.7**
TCRU	**Three Creeks R**	**25.61**	**333**	P	**P**	**20 56 02.1**	**+1.1**
SLOR	**San Lorenzo -**	**25.61**	**129**	P	**P**	**20 56 02.7**	**+1.2**
URIC	**Uribia, Colomb**	**25.62**	**97**	P	**P**	**20 56 00.9**	**-0.2**
URIC				IAmb	IAmb	20 56 17.4	
	comp=Z,142nm,1.1s						
L34A	**Svendsen Farm,**	**25.63**	**3**	P	**P**	**20 55 59.6**	**-1.2**
L34A	**Svendsen Farm,**	**25.63**	**3**	P	**P**	**20 56 00.6**	**-0.3**
	baz=183,SNR=64						
P17A	**Butcher Ranch,**	**25.65**	**337**	P	**P**	**20 56 01.9**	**+0.6**
P17A				IAmb	IAmb	20 56 05.8	
	comp=Z,212nm,1.1s						
TMUT	**Trail Mountain**	**25.68**	**336**	P	**P**	**20 56 02.7**	**+1.0**
TMUT				IAmb	IAmb	20 56 06.0	
	comp=Z,115nm,0.8s						
V58A	**Windy Hill, Pi**	**25.70**	**37**	P	**P**	**20 56 00.5**	**-1.0**
V58A				IAmb	IAmb	20 56 02.6	
	comp=Z,313nm,1.0s						
V58A	**Windy Hill, Pi**	**25.70**	**37**	P	**P**	**20 56 00.7**	**-0.8**
	baz=226,SNR=104						
V58A				P	**P**	**20 56 00.7**	**-0.8**
	baz=226,SNR=104						
SPBC	**San Pablo de B**	**25.71**	**112**	*eP*	**P**	**20 56 03.5**	**+1.5**
PHWY	**Pilot Hill**	**25.75**	**347**	P	**P**	**20 56 02.5**	**+0.2**
PHWY				IAMs_20	IAMs_20	21 07 00.9	
	comp=Z,5µm,18.0s						
SNCC	**San Nicolas Is**	**25.75**	**315**	P	**P**	**20 56 02.0**	**-0.1**
SNCC				IAmb	IAmb	20 56 15.5	
	comp=Z,172nm,1.2s						
SNCC	**San Nicolas Is**	**25.75**	**315**	P	**P**	**20 56 03.2**	**+1.0**
	baz=125						
EDW2	**Edwards Air Fo**	**25.77**	**320**	P	**P**	**20 56 03.6**	**+1.3**
	baz=130,SNR=57						
EDW2				S	**S**	**21 00 40.8**	**+10**
	baz=130						
SFIN	**Lafayette**	**25.80**	**19**	P	**P**	**20 56 01.4**	**-1.1**
SFIN	**Lafayette**	**25.80**	**19**	P	**P**	**20 56 01.7**	**-0.7**
	baz=204,SNR=124						
SFIN				S	**S**	**21 00 33.8**	**+2.3**
	baz=204						
SFIN	**Lafayette**	**25.80**	**19**	P	**P**	**20 56 01.7**	**-0.7**
	baz=204,SNR=124						
SFIN				S	**S**	**21 00 36.6**	**+5.1**
	baz=204						
QSM	**Queen of Sheba**	**25.82**	**323**	P	**P**	**20 56 03.7**	**+1.0**
ROSC	**El Rosal**	**25.86**	**114**	P	**P**	**20 56 07.3**	**+3.7**
	comp=Z,46nm,1.0s,baz=320,slow=8.6,SNR=14						
ROSC				LR	LR	21 06 18.0	
	comp=Z,2µm,21.3s,baz=360,slow=37						
ROSC	**El Rosal**	**25.86**	**114**	P	**P**	**20 56 06.8**	**+3.1**
ROSC				IAmb	IAmb	20 56 19.9	
	comp=Z,176nm,1.2s						
ROSC	**El Rosal**	**25.86**	**114**	P	**P**	**20 56 06.8**	**+3.1**
ROSC				pmax	pmax		
	comp=Z,176nm,1.2s						
ROSC	**El Rosal**	**25.86**	**114**	*eP*	**P**	**20 56 02.0**	**-1.7**
SCIA	**State Center**	**25.86**	**8**	P	**P**	**20 56 02.5**	**-0.5**
	baz=190,SNR=103						
GWY	**Greenwater Val**	**25.86**	**324**	P	**P**	**20 56 04.2**	**+0.9**
GWY				IAmb	IAmb	20 56 15.5	
	comp=Z,300nm,1.8s						
PRN	**Pahroc Range**	**25.89**	**328**	P	**P**	**20 56 04.4**	**+1.0**
PRN				IAmb	IAmb	20 56 22.8	
	comp=Z,166nm,1.1s						
P49A	**Miami Univ. Ec**	**25.90**	**24**	P	**P**	**20 56 02.0**	**-1.4**
P49A	**Miami Univ. Ec**	**25.90**	**24**	P	**P**	**20 56 02.1**	**-1.2**
	baz=210,SNR=143						
P49A				S	**S**	**21 00 39.3**	**+6.2**
	baz=210						
P49A	**Miami Univ. Ec**	**25.90**	**24**	P	**P**	**20 56 02.2**	**-1.2**
	baz=210,SNR=143						
P49A				S	**S**	**21 00 39.6**	**+6.6**
	baz=210						
PORT	**Chimborazo Vol**	**25.90**	**131**	P	**P**	**20 56 07.6**	**+3.3**
PORT				IAmb	IAmb	20 56 18.7	
	comp=Z,211nm,1.2s						
PRAC	**Prado**	**25.91**	**116**	*eP*	**P**	**20 56 03.3**	**-0.5**
GRTK	**Grand Turk**	**25.91**	**74**	P	**P**	**20 56 03.8**	**+0.2**
GRTK				IAMs_20	IAMs_20	21 06 50.0	
	comp=Z,6µm,19.0s						
CCAC	**Calif City Air**	**25.96**	**320**	P	**P**	**20 56 05.2**	**+1.2**
LRMC	**Laurel Mtn Rad**	**25.97**	**321**	P	**P**	**20 56 05.8**	**+1.6**
	baz=132,SNR=24						
LRMC				S	**S**	**21 00 41.4**	**+6.8**
	baz=132						
S54A	**Dingess, Beckl**	**25.99**	**31**	P	**P**	**20 56 02.7**	**-1.6**
S54A	**Dingess, Beckl**	**25.99**	**31**	P	**P**	**20 56 03.3**	**-0.9**
	baz=219,SNR=15						
S54A				P	**P**	**20 56 03.3**	**-0.9**
	baz=219,SNR=15						
S54A				S	**S**	**21 00 40.2**	**+5.6**
	baz=219						
S54A				S	**S**	**21 00 40.2**	**+5.6**
	baz=219						
BLA	**Blacksburg**	**26.00**	**33**	P	**P**	**20 56 03.3**	**-1.0**
BLA	**Blacksburg**	**26.00**	**33**	P	**P**	**20 56 03.3**	**-1.0**
BLA				pmax	pmax		
	comp=Z,725nm,1.3s						
BLA	**Blacksburg**	**26.00**	**33**	P	**P**	**20 56 03.6**	**-0.8**
	baz=221,SNR=41						
Q51A	**Peebles**	**26.03**	**27**	P	**P**	**20 56 03.2**	**-1.4**
Q51A	**Peebles**	**26.03**	**27**	P	**P**	**20 56 03.7**	**-0.9**
	baz=214,SNR=34						
Q51A				P	**P**	**20 56 03.7**	**-0.9**
	baz=214,SNR=34						
Q51A				S	**S**	**21 00 40.8**	**+5.6**
	baz=214						
Q51A				S	**S**	**21 00 40.8**	**+5.6**
	baz=214						
CNNC	**Cliffs of the**	**26.05**	**40**	P	**P**	**20 56 03.7**	**-1.1**
	baz=229						
OSI	**Osito Audit: C**	**26.06**	**318**	P	**P**	**20 56 06.3**	**+1.3**
	baz=129						
R53A	**Hurricane**	**26.09**	**30**	P	**P**	**20 56 04.5**	**-0.6**
R53A	**Hurricane**	**26.09**	**30**	P	**P**	**20 56 04.5**	**-0.6**
	baz=217,SNR=28						
R53A				P	**P**	**20 56 04.5**	**-0.6**
	baz=217,SNR=28						
R53A				S	S	21 00 46.9	+11
	baz=217						
R53A				S	S	21 00 46.9	+11
	baz=217						
SC01	**Santiago de lo**	**26.12**	**79**	P	**P**	**20 56 06.9**	**+1.3**
FURC	**Furnace Creek,**	**26.18**	**324**	P	**P**	**20 56 07.4**	**+1.6**
	baz=135,SNR=21						
TPNV	**Topopah Spring**	**26.18**	**325**	P	**P**	**20 56 07.4**	**+1.3**
TPNV				IAmb	IAmb	20 56 22.8	
	comp=Z,158nm,1.2s						
TPNV	**Topopah Spring**	**26.18**	**325**	P	**P**	**20 56 07.4**	**+1.3**
TPNV				pmax	pmax		
	comp=Z,158nm,1.2s						
TPNV				MLR	MLR		
	comp=Z,4µm,20.0s						
TPNV	**Topopah Spring**	**26.18**	**325**	P	**P**	**20 56 08.1**	**+1.9**
	baz=136,SNR=93						
TPNV				S	S	21 00 49.4	+12
	baz=136						
PSUT	**Pine Spring**	**26.18**	**331**	P	**P**	**20 56 07.6**	**+1.4**
PSUT				IAmb	IAmb	20 56 09.2	
	comp=Z,148nm,1.0s						
GARC	**Garzon, Huila**	**26.20**	**120**	*eP*	P	20 56 14.7	+8.1
RDMU	**Red Mountain**	**26.20**	**340**	P	**P**	**20 56 07.1**	**+0.7**
RDMU				IAmb	IAmb	20 56 10.7	
	comp=Z,397nm,1.2s						
MPMC	**Manual Prospec**	**26.25**	**322**	P	**P**	**20 56 08.3**	**+1.4**
	baz=133,SNR=64						
MPMC				S	**S**	**21 00 47.9**	**+8.8**
	baz=133						
K31A	**O'Neill**	**26.25**	**359**	P	**P**	**20 56 06.7**	**+0.2**
K31A	**O'Neill**	**26.25**	**359**	P	**P**	**20 56 06.8**	**+0.2**
	baz=178,SNR=8.2						
SCZ2	**Santa Cruz Isl**	**26.27**	**316**	P	**P**	**20 56 07.5**	**+0.7**
	baz=126						
PAMC	**Pamplona, Colo**	**26.27**	**107**	*eP*	**P**	**20 56 08.9**	**+1.4**
L40A	**Anamosa**	**26.34**	**11**	P	**P**	**20 56 05.9**	**-1.4**
L40A	**Anamosa**	**26.34**	**11**	P	**P**	**20 56 06.4**	**-0.9**
	baz=194,SNR=164						
L40A				S	S	21 00 50.8	+11
	baz=194						
O48B	**Farmland**	**26.36**	**23**	P	**P**	**20 56 06.2**	**-1.3**
	baz=209,SNR=86						
O48B				S	**S**	**21 00 45.4**	**+5.1**
	baz=209						
O48B	**Farmland**	**26.36**	**23**	P	**P**	**20 56 06.2**	**-1.3**
	baz=209,SNR=86						
O48B				S	**S**	**21 00 45.6**	**+5.3**
	baz=209						
FLOC	**Florencia**	**26.41**	**121**	*eP*	**P**	**20 56 09.4**	**+1.2**
S11A	**Rachel**	**26.43**	**327**	P	**P**	**20 56 10.1**	**+1.8**
S11A				IAmb	IAmb	20 56 16.3	
	comp=Z,311nm,1.5s						
BANI	**BANI**	**26.44**	**81**	P	**P**	**20 56 09.9**	**+1.3**
M44A	**Midewin, Midew**

SBC Santa Barbara 26.59 317 P P 20 56 11.0 +1.3
baz=127
L42A Oliver, Polo 26.61 14 P P 20 56 08.2 -1.5
L42A Oliver, Polo 26.61 14 P P 20 56 09.0 -0.7
baz=198,SNR=133
O49A Covington 26.61 24 P P 20 56 08.1 -1.6
O49A Covington 26.61 24 P P 20 56 08.6 -1.2
baz=210,SNR=77
O49A P P 20 56 08.6 -1.2
baz=210,SNR=77
O49A S S 21 00 50.6 +6.3
baz=210
O49A S S 21 00 50.6 +6.3
baz=210
K38A Parkersburg 26.65 9 P P 20 56 09.1 -1.1
K38A Parkersburg 26.65 9 P P 20 56 09.0 -1.1
baz=191,SNR=18
BCW Bitter Crk WRg 26.70 318 P P 20 56 12.3 +1.5
N47A Urbana 26.72 21 P P 20 56 09.0 -1.8
N47A Urbana 26.72 21 P P 20 56 09.3 -1.4
baz=207,SNR=140
N47A P P 20 56 09.3 -1.4
baz=207,SNR=140
VILC Villavicencio, 26.75 114 eP P 20 56 15.9 +4.4
GRAC Grapevine Rang 26.83 324 P P 20 56 13.8 +1.9
GRAC Grapevine Rang 26.83 324 P P 20 56 13.8 +1.9
baz=135,SNR=16
U59A Littleton 26.86 38 P P 20 56 11.0 -1.1
U59A IAmb IAmb 20 56 12.8
comp=Z,173nm,1.1s
U59A Littleton 26.86 38 P P 20 56 11.2 -0.8
baz=227,SNR=35
U59A P P 20 56 11.2 -0.8
baz=227,SNR=35
CWC Cottonwood Cre 26.86 322 P P 20 56 13.9 +1.6
baz=133
SDD Santo Domingo 26.87 81 P P 20 56 13.9 +1.6
R11A Troy Canyon, C 26.88 328 P P 20 56 13.4 +1.0
R11A Troy Canyon, C 26.88 328 P P 20 56 14.0 +1.5
baz=140,SNR=74
R11A S S 21 00 49.8 +0.9
baz=140
JLU Jordanelle 26.90 337 P P 20 56 13.0 +0.3
PKM Mcpherson Peak 26.93 318 P P 20 56 14.4 +1.4
baz=127,SNR=12
P52A Corning 27.06 28 P P 20 56 12.1 -1.8
P52A IAmb IAmb 20 56 25.9
comp=Z,218nm,1.0s
P52A Corning 27.06 28 P P 20 56 12.6 -1.3
baz=215,SNR=30
P52A S S 21 00 51.7 +0.3
baz=215
VES Vestal, Richgr 27.07 320 P P 20 56 16.0 +2.0
baz=130,SNR=25
DUG Dugway, Tooele 27.09 334 P P 20 56 15.5 +1.2
DUG IAmb IAmb 20 56 17.3
comp=Z,184nm,1.0s
DUG IAMs_20 IAMs_20 21 08 29.7
comp=Z,9µm,22.0s
DUG Dugway, Tooele 27.09 334 P P 20 56 15.5 +1.2
DUG pmax pmax
comp=Z,184nm,1.0s
DUG MLR MLR
comp=Z,9µm,22.0s
DUG Dugway, Tooele 27.09 334 P P 20 56 15.8 +1.6
baz=147,SNR=150
DUG S S 21 00 54.3 +2.2
baz=147
CTU Camp Tracy 27.09 337 P P 20 56 15.3 +0.9
DABV Dabajuro 27.09 98 eP P 20 56 13.0 -1.4
Q54A Coxs Mills 27.14 30 P P 20 56 13.0 -1.6
Q54A Coxs Mills 27.14 30 P P 20 56 14.0 -0.6
baz=218,SNR=41
Q54A P P 20 56 14.0 -0.6
baz=218,SNR=41
Q54A S S 21 01 05.3 +13
baz=218
Q54A S S 21 01 05.3 +13
baz=218
LCH Last Change Ra 27.16 324 P P 20 56 16.2 +1.2
S57A Dark Hollow, R 27.19 34 P P 20 56 13.8 -1.2
S57A IAmb IAmb 20 56 25.2
comp=Z,263nm,1.1s
S57A Dark Hollow, R 27.19 34 P P 20 56 14.2 -0.9
baz=223,SNR=45
S57A P P 20 56 14.2 -0.9
baz=223,SNR=45
ACSO Alum Creek Sta 27.19 26 P P 20 56 13.5 -1.5
ACSO IAmb IAmb 20 56 24.8
comp=Z,286nm,0.9s
ACSO Alum Creek Sta 27.19 26 P P 20 56 13.6 -1.5
baz=213,SNR=29
L44A Lake County Fo 27.21 17 P P 20 56 14.8 -0.4
L44A Lake County Fo 27.21 17 P P 20 56 15.0 -0.2
baz=201,SNR=21
L44A Lake County Fo 27.21 17 P P 20 56 15.0 -0.2
baz=201,SNR=21
V61A Roper 27.23 40 P P 20 56 14.9 -0.4
V61A Roper 27.23 40 P P 20 56 15.2 -0.2
baz=230,SNR=16
V61A P P 20 56 15.2 -0.2
baz=230,SNR=16
K22A Casper 27.27 346 P P 20 56 16.3 +0.3
K22A Casper 27.27 346 P P 20 56 16.6 +0.7
baz=162,SNR=105
K22A Casper 27.27 346 P P 20 56 16.6 +0.7
baz=162,SNR=105
BOSC San Juan Bosco 27.28 133 P P 20 56 19.6 +3.3
P53A Whipple 27.28 29 P P 20 56 14.6 -1.2
P53A IAmb IAmb 20 56 26.7
comp=Z,185nm,0.8s
P53A Whipple 27.28 29 P P 20 56 15.0 -0.8
baz=217,SNR=33
P53A P P 20 56 15.0 -0.8
baz=217,SNR=33
N49A Columbus Grove 27.30 23 P P 20 56 14.1 -1.9
N49A Columbus Grove 27.30 23 P P 20 56 14.5 -1.5
baz=210,SNR=21
N49A P P 20 56 14.5 -1.5
baz=210,SNR=21
SMMC Simmler 27.31 318 P P 20 56 18.0 +1.8
baz=128,SNR=5.4
JFWS Jewell Farm 27.35 12 P P 20 56 15.1 -1.3
JFWS IAmb IAmb 20 56 16.9
comp=Z,333nm,1.0s
JFWS Jewell Farm 27.35 12 IAMs_20 IAMs_20 21 08 37.0
comp=Z,6µm,18.0s
JFWS Jewell Farm 27.35 12 P P 20 56 15.1 -1.3
JFWS pmax pmax
comp=Z,333nm,1.0s
JFWS MLR MLR
comp=Z,6µm,18.0s
JFWS Jewell Farm 27.35 12 P P 20 56 15.6 -0.9
baz=196,SNR=58
JFWS S S 21 00 57.8 +1.9
baz=196
TIN Tinemaha, Big 27.37 323 P P 20 56 18.5 +1.7
baz=133,SNR=10
ECSD EROS Data Cent 27.38 2 P P 20 56 15.8 -0.9
ECSD IAmb IAmb 20 56 17.2
comp=Z,129nm,0.8s
ECSD EROS Data Cent 27.38 2 IAMs_20 IAMs_20 21 07 59.7
comp=Z,6µm,21.0s
ECSD EROS Data Cent 27.38 2 P P 20 56 16.1 -0.6
baz=183,SNR=129
ECSD S S 21 00 55.7 -0.8
baz=183
T59A Double "B" Far 27.42 37 P P 20 56 16.2 -0.9
T59A IAmb IAmb 20 56 18.2
comp=Z,294nm,1.1s
T59A Double "B" Far 27.42 37 P P 20 56 16.4 -0.6
baz=227,SNR=80
T59A P P 20 56 16.4 -0.6
baz=227,SNR=80
TAMC Tame, Arauca 27.45 108 eP P 20 56 19.1 +1.4
TPH Tonopah 27.53 326 P P 20 56 19.4 +1.1
TPH IAmb IAmb 20 56 21.0
comp=Z,313nm,1.1s
TPH Tonopah 27.53 326 P P 20 56 19.4 +1.1
TPH pmax pmax
comp=Z,313nm,1.1s
L46A Eue Claire 27.54 19 P P 20 56 16.5 -1.6
L46A IAmb IAmb 20 56 20.7
comp=Z,275nm,0.9s
L46A Eue Claire 27.54 19 P P 20 56 17.0 -1.1
baz=205,SNR=5.7
L46A P P 20 56 17.0 -1.1
baz=205,SNR=5.7
VOG Valley Oaks Go 27.56 320 P P 20 56 19.5 +1.1
baz=130
O52A Adamsville 27.59 27 P P 20 56 16.9 -1.6
O52A IAmb IAmb 20 56 28.8
comp=Z,220nm,0.8s
O52A Adamsville 27.59 27 P P 20 56 17.4 -1.2
baz=215,SNR=18
O52A P P 20 56 17.4 -1.2
baz=215,SNR=18
K43A Burlington 27.59 15 P P 20 56 17.6 -1.0
K43A Burlington 27.59 15 P P 20 56 18.0 -0.6
baz=200,SNR=51
MACC Macarena, Meta 27.60 118 eP P 20 56 17.9 -1.2
SOCV Socops 27.65 103 eP P 20 56 19.8 +0.3
SDV Santo Domingo 27.66 102 P P 20 56 21.0 +1.3
comp=Z,114nm,0.8s,baz=300,slow=5.2,SNR=38
SDV LR LR 21 08 58.2
comp=Z,2µm,20.3s,baz=317,slow=40
comp=Z,114nm,0.8s
SDV Santo Domingo 27.66 102 P P 20 56 20.5 +0.8
SDV IAmb IAmb 20 56 22.8
comp=Z,115nm,0.9s
SDV Santo Domingo 27.66 102 P P 20 56 21.0 +1.3
SDV Santo Domingo 27.66 102 eP P 20 56 20.1 +0.3
SDV Santo Domingo 27.66 102 eP P 20 56 21.3 +1.6
PAGB Antelope Grade 27.73 319 P P 20 56 21.3 +1.3
JSRW J. Sargeant Re 27.73 36 P P 20 56 18.9 -1.0
BGU Big Grassy Mou 27.79 335 P P 20 56 21.5 +0.9
BGU IAmb IAmb 20 56 23.4
comp=Z,218nm,1.4s
HWUT Hardware Ranch 27.82 338 P P 20 56 21.4 +0.6
HWUT IAmb IAmb 20 56 27.2
comp=Z,106nm,0.9s
I37A Lemond, Waseca 27.91 7 P P 20 56 19.8 -1.7
I37B Waseca 27.91 7 P P 20 56 20.2 -1.3
baz=189,SNR=24
PTLC Puerto Leguiza 27.92 123 eP P 20 56 24.5 +2.7
R58B Mineral 27.92 35 P P 20 56 20.6 -1.0
R58B Mineral 27.92 35 P P 20 56 21.0 -0.6
baz=225,SNR=38
R58B P P 20 56 21.0 -0.6
baz=225,SNR=38
O53A New Philadelph 27.97 28 P P 20 56 20.4 -1.6
O53A New Philadelph 27.97 28 P P 20 56 20.8 -1.3
baz=216,SNR=22
O53A S S 21 01 08.0 +2.2
baz=216
Q56A Snyder Ridge, 28.01 32 P P 20 56 22.2 -0.2
Q56A IAmb IAmb 20 56 33.6
comp=Z,222nm,0.9s
Q56A Snyder Ridge, 28.01 32 P P 20 56 22.2 -0.2
baz=221,SNR=23
Q56A P P 20 56 22.2 -0.2
baz=221,SNR=23
T60A Surry 28.01 38 P P 20 56 21.4 -1.0
T60A Surry 28.01 38 P P 20 56 21.6 -0.8
baz=228,SNR=14
T60A P P 20 56 21.6 -0.8
baz=228,SNR=14
N51A Ashland 28.02 26 P P 20 56 20.5 -1.9
N51A IAmb IAmb 20 56 31.6
comp=Z,153nm,1.1s
N51A Ashland 28.02 26 P P 20 56 20.7 -1.7
baz=213,SNR=13
N51A P P 20 56 20.7 -1.7
baz=213,SNR=13
Q09A Carvers 28.06 327 P P 20 56 24.4 +1.3
SUSD Miller 28.08 359 P P 20 56 22.3 -0.6
SUSD IAmb IAmb 20 57 05.1
comp=Z,109nm,0.7s
SUSD Miller 28.08 359 P P 20 56 22.4 -0.6
baz=178
SUSD Miller 28.08 359 P P 20 56 22.1 -0.8
baz=178
PTGC Puerto Gaitan, 28.08 113 eP P 20 56 20.4 -2.9
L48A N Adams 28.10 22 P P 20 56 21.6 -1.6
L48A N Adams 28.10 22 P P 20 56 21.8 -1.4
baz=208,SNR=26
L48A P P 20 56 21.8 -1.4
baz=208,SNR=26
MLAC Mammoth, Mammo 28.11 323 P P 20 56 25.4 +1.8
baz=133
MCWV Mont Chateau 28.15 31 P P 20 56 22.9 -0.7
MCWV Mont Chateau 28.15 31 P P 20 56 22.9 -0.7
baz=219,SNR=8.3
MCWV S S 21 01 14.7 +6.0
baz=219
M50A Fremont 28.16 24 P P 20 56 22.1 -1.6
M50A IAmb IAmb 20 56 33.0
comp=Z,159nm,0.9s
M50A Fremont 28.16 24 P P 20 56 22.2 -1.4
baz=212,SNR=7.1
M50A P P 20 56 22.2 -1.4
baz=212,SNR=7.1
BW06 Boulder Array 28.19 342 P P 20 56 24.6 +0.4
BW06 IAmb IAmb 20 56 30.8
comp=Z,136nm,1.1s
BW06 IAMs_20 IAMs_20 21 08 39.8
comp=Z,9µm,19.0s
BW06 Boulder Array 28.19 342 P P 20 56 24.7 +0.4
baz=156,SNR=85
BW06 S S 21 01 09.6 0.0
baz=156
PD31 Pinedale Array 28.19 342 P P 20 56 24.6 +0.5
PD31 IAmb IAmb 20 56 30.8
comp=Z,122nm,1.1s
PDAR Pinedale Array 28.19 342 P P 20 56 24.7 +0.5
comp=Z,20nm,0.9s,baz=138,slow=9.1,SNR=151
PDAR PcP PcP 20 59 37.2 -0.7
comp=Z,3.7nm,0.9s,baz=126,slow=6.1,SNR=2.1
PDAR LR LR 21 08 52.5
comp=Z,7µm,20.3s,baz=167,slow=39
comp=Z,20nm,0.9s
PDAR Pinedale Array 28.19 342 P P 20 56 24.5 +0.3
PDAR Pinedale Array 28.19 342 PcP 20 59 37.2 -0.7
OMMB Old Mammoth Mi 28.20 323 P P 20 56 25.8 +1.3
RSSD Black Hills 28.21 351 P P 20 56 24.7 +0.3
RSSD IAmb IAmb 20 56 26.5
comp=Z,167nm,1.6s
RSSD Black Hills 28.21 351 P P 20 56 24.7 +0.3
RSSD pmax pmax
comp=Z,167nm,1.7s
RSSD MLR MLR
comp=Z,2µm,20.0s
RSSD Black Hills 28.21 351 P P 20 56 25.0 +0.5
baz=167
RSSD S S 21 01 08.8 -1.1
baz=167
I40A Norwalk 28.22 11 P P 20 56 22.9 -1.3
I40A IAmb IAmb 20 56 24.8
comp=Z,320nm,1.2s
I40A Norwalk 28.22 11 P P 20 56 23.4 -0.7
baz=195,SNR=28
MDPB Devils Postpil 28.26 323 P P 20 56 26.1 +1.1
NV11 Mina Array Sit 28.29 325 P P 20 56 26.8 +1.7
NV11 IAmb IAmb 20 56 28.5
comp=Z,171nm,1.1s
O54A Avella 28.30 29 P P 20 56 23.9 -1.0
O54A IAmb IAmb 20 56 39.9
comp=Z,124nm,0.9s
O54A Avella 28.30 29 P P 20 56 24.0 -1.0
baz=218,SNR=22
O54A P P 20 56 24.0 -1.0
baz=218,SNR=22
LHV Little Huntoon 28.36 324 P P 20 56 27.6 +2.1
LHV IAmb IAmb 20 56 37.4
comp=Z,142nm,1.2s
NVAR Mina Array Bea 28.37 325 P P 20 56 27.9 +2.0
comp=Z,104nm,1.0s,baz=147,slow=9.2,SNR=226
NVAR PcP PcP 20 59 38.6 +0.1
comp=Z,4.7nm,1.0s,baz=139,slow=4.3,SNR=1.6
NVAR ScP ScP 21 03 16.3 -3.1
comp=Z,2.2nm,1.0s,baz=145,slow=3.3,SNR=2.2
NVAR LR LR 21 08 07.4
comp=Z,4µm,19.1s,baz=136,slow=37
comp=Z,104nm,1.0s
NVAR Mina Array Bea 28.37 325 P P 20 56 27.7 +1.8
NVAR Mina Array Bea 28.37 325 ScP 21 03 16.3 -3.1
CBN Corbin Frederi 28.38 36 P P 20 56 24.6 -1.0
CBN IAmb IAmb 20 56 27.0
comp=Z,157nm,0.8s
CBN Corbin Frederi 28.38 36 P P 20 56 24.8 -0.8
baz=225
PMPB Monarch Peak 28.38 319 P P 20 56 26.9 +1.1
PMPB IAmb IAmb 20 56 28.8
comp=Z,184nm,1.4s
HVU Hansel Valley 28.42 336 P P 20 56 27.2 +1.0
HVU IAmb IAmb 20 56 28.8
comp=Z,110nm,0.9s
HVU Hansel Valley 28.42 336 P P 20 56 27.2 +1.0
HVU pmax pmax
comp=Z,110nm,0.9s
I42A Draeger Farm, 28.57 14 P P 20 56 26.3 -1.1
I42A IAmb IAmb 20 56 28.1
comp=Z,238nm,1.2s
I42A Draeger Farm, 28.57 14 P P 20 56 26.7 -0.6
baz=198,SNR=27
ELK Elko 28.59 332 P P 20 56 29.5 +1.6
comp=Z,60nm,1.1s,baz=151,slow=6.2,SNR=98
ELK Lg Lg 21 05 42.9
comp=Z,0.1nm,0.3s,baz=180,slow=20,SNR=1.4
ELK LR LR 21 07 42.4
comp=Z,8µm,18.5s,baz=158,slow=36
comp=Z,60nm,1.1s
ELK Elko 28.59 332 P P 20 56 28.9 +1.1
ELK IAmb IAmb 20 56 30.9
comp=Z,145nm,1.3s
ELK Elko 28.59 332 P P 20 56 28.9 +1.1
ELK pmax pmax
comp=Z,145nm,1.3s
ELK MLR MLR
comp=Z,9µm,19.0s
N53A Lisbon 28.59 28 P P 20 56 25.9 -1.6
N53A IAmb IAmb 20 56 37.1
comp=Z,163nm,1.1s
N53A Lisbon 28.59 28 P P 20 56 26.2 -1.4
baz=216,SNR=21
N53A P P 20 56 26.2 -1.4
baz=216,SNR=21
RYN Ryan 28.64 325 P P 20 56 29.6 +1.4
AHID Auburn Hatcher 28.68 340 P P 20 56 28.8 +0.3
AAM Ann Arbor 28.69 22 P P 20 56 27.0 -1.4
AAM IAmb IAmb 20 56 37.8
comp=Z,175nm,0.8s
AAM Ann Arbor 28.69 22 P P 20 56 27.0 -1.4
AAM pmax pmax
comp=Z,175nm,0.9s
AAM MLR MLR
comp=Z,2µm,22.0s
AAM Ann Arbor 28.69 22 P P 20 56 26.9 -1.5
baz=210
KVN Kaiserville 28.71 326 P P 20 56 30.1 +1.2
KVN Kaiserville 28.71 326 P P 20 56 30.1 +1.2
KVN pmax pmax
comp=Z,70nm,1.0s
P57A Homestead Farm 28.95 33 P P 20 56 30.3 -0.5
P57A IAmb IAmb 20 56 40.8
comp=Z,237nm,1.4s
P57A Homestead Farm 28.95 33 P P 20 56 30.6 -0.1
baz=223,SNR=28
P57A P P 20 56 30.6 -0.1
baz=223,SNR=28
M52A Chesterland 28.96 26 P P 20 56 29.2 -1.6
M52A IAmb IAmb 20 57 26.2
comp=Z,120nm,0.9s
M52A Chesterland 28.96 26 P P 20 56 29.6 -1.3
baz=214,SNR=9.1
M52A P P 20 56 29.6 -1.3
baz=214,SNR=9.1
S61A Accomac 29.00 38 P P 20 56 31.1 -0.1
baz=229
S61A P P 20 56 31.1 -0.1
baz=229
ECR Eagle Creek 29.02 340 P P 20 56 32.2 +0.5
J47A Sunmer 29.11 20 P P 20 56 31.0 -1.1
J47A IAmb IAmb 20 56 41.9
comp=Z,251nm,1.2s
J47A Sunmer 29.11 20 P P 20 56 31.0 -1.1
baz=207,SNR=6.0
J47A P P 20 56 31.0 -1.1
baz=207,SNR=6.0
REDW Red Top Meadow 29.13 341 P P 20 56 33.3 +0.8
REDW IAmb IAmb 20 56 35.0
comp=Z,202nm,1.3s
REDW IAMs_20 IAMs_20 21 09 00.9
comp=Z,6µm,19.0s
M53A WI Miller and 29.18 27 P P 20 56 31.0 -1.7
M53A WI Miller and 29.18 27 P P 20 56 31.1 -1.6
baz=216,SNR=11
SPMN Marine on St. 29.18 8 P P 20 56 31.6 -1.1
SPMN IAmb IAmb 20 56 33.1
comp=Z,224nm,1.0s
SPMN Marine on St. 29.18 8 P P 20 56 31.9 -0.8
baz=190,SNR=25
SPMN Marine on St. 29.18 8 P P 20 56 31.8 -0.8
baz=190,SNR=25
SNOW Snow King Moun 29.19 341 P P 20 56 33.9 +0.7
SNOW IAmb IAmb 20 56 35.6
comp=Z,176nm,1.1s
SNOW IAMs_20 IAMs_20 21 09 57.4
comp=Z,8µm,18.0s
TPAW Teton Pass 29.27 340 P P 20 56 34.5 +0.6
TPAW IAmb IAmb 20 56 39.0
comp=Z,331nm,1.6s
TPAW IAMs_20 IAMs_20 21 08 55.7
comp=Z,5µm,19.0s
LOHW Long Hollow 29.28 341 P P 20 56 34.3 +0.5
LOHW IAmb IAmb 20 56 35.6
comp=Z,90nm,0.9s
LOHW IAMs_20 IAMs_20 21 09 17.7
comp=Z,9µm,20.0s
BMN Battle Mountai 29.28 329 P P 20 56 34.9 +1.0
BMN IAmb IAmb 20 56 36.9
comp=Z,132nm,1.2s
BMN Battle Mountai 29.28 329 P P 20 56 34.9 +1.0
BMN pmax pmax
comp=Z,132nm,1.2s
YERR Yerington 29.28 325 P P 20 56 35.4 +1.4
CMB Columbia Colle 29.29 322 P P 20 56 34.6 +0.7
CMB Columbia Colle 29.29 322 P P 20 56 34.6 +0.7
CMB pmax pmax
comp=Z,48nm,1.3s
CMB MLR MLR
comp=Z,2µm,19.0s
ELOV Elorza 29.36 105 eP P 20 56 35.0 +0.3
H43A Windswept, Lux 29.39 15 P P 20 56 33.5 -1.1
H43A IAmb IAmb 20 56 35.2
comp=Z,174nm,1.1s
H43A Windswept, Lux 29.39 15 P P 20 56 33.8 -0.8
baz=200,SNR=12
I45A Fountain 29.40 17 P P 20 56 33.9 -0.7
I45A Fountain 29.40 17 P P 20 56 33.9 -0.7
baz=203
I45A P P 20 56 33.9 -0.7
baz=203
FXWY Fox Creek 29.43 341 P P 20 56 35.9 +0.6
MOOW Moose Ponds 29.44 341 P P 20 56 35.8 +0.5
K50A Casco 29.49 23 P P 20 56 33.5 -1.9
K50A IAmb IAmb 20 57 24.5
comp=Z,129nm,0.9s
K50A Casco 29.49 23 P P 20 56 33.5 -1.9
baz=211,SNR=5.4
K50A P P 20 56 33.5 -1.9
baz=211,SNR=5.4
F33A 5 Mile Ranch, 29.50 2 P P 20 56 33.6 -2.0
F33A 5 Mile Ranch, 29.50 2 P P 20 56 34.0 -1.5
baz=183,SNR=30
AGPR Aguadilla, PR 29.53 81 P P 20 56 36.6 +0.5
PNTR Pine Nut 29.56 324 P P 20 56 37.6 +1.2
ALLY Alegheny Colle 29.58 28 P P 20 56 35.1 -1.2
G40A Rib Lake 29.62 11 P P 20 56 35.8 -0.9
G40A Rib Lake 29.62 11 P P 20 56 35.9 -0.8
baz=195,SNR=109
F36A Milaca 29.72 6 P P 20 56 36.3 -1.2
F36A IAmb IAmb 20 56 37.7
comp=Z,111nm,0.9s
F36A Milaca 29.72 6 P P 20 56 36.4 -1.1
baz=188,SNR=87
VCNR Virginia City 29.73 325 P P 20 56 39.6 +1.7
FLWY Flagg Ranch 29.73 341 P P 20 56 38.5 +0.6
FLWY IAmb IAmb 20 56 41.9
comp=Z,8µm,20.0s
EMB Emerald Bay 29.76 324 P P 20 56 40.4 +2.2
EMB IAmb IAmb 20 56 41.9
comp=Z,236nm,1.2s
SSPA Standing Stone 29.87 32 P P 20 56 37.8 -1.1
SSPA IAmb IAmb 20 56 49.7
comp=Z,117nm,0.9s
SSPA Standing Stone 29.87 32 P P 20 56 38.1 -0.8
baz=221

PAHR Pah Rah Range 29.87 326 P **P** **20 56 40.3 +1.2**
YPP Pitchstone Pla 29.93 341 P **P** **20 56 40.1 +0.4**
MPK Martis Peak 29.94 324 P **P** **20 56 42.3 +2.4**
MPK IAmb IAmb 20 56 43.5
comp=Z,219nm,1.2s
OBIP Obispado Ponce 30.01 82 P **P** **20 56 40.4 0.0**
OBIP IAmb IAmb 20 56 51.3
comp=Z,141nm,1.4s
ERPA Erie 30.02 27 P **P** **20 56 38.7 -1.6**
baz=216
ERPA S **S** **21 01 38.3 +0.3**
baz=216
CELP Cerrillos 30.04 82 P **P** **20 56 40.0 -0.6**
M55A Ridgway 30.07 30 P **P** **20 56 39.5 -1.2**
M55A IAmb IAmb 20 56 50.8
comp=Z,222nm,1.0s
M55A Ridgway 30.07 30 P **P** **20 56 39.8 -0.9**
baz=219,SNR=48
M55A P **P** **20 56 39.8 -0.9**
baz=219,SNR=48
LKWY Lake 30.08 342 P **P** **20 56 41.5 +0.6**
LKWY IAmb IAmb 20 57 03.8
comp=Z,315nm,1.9s
LKWY Lake 30.08 342 P **P** **20 56 41.6 +0.6**
LKWY pmax pmax
comp=Z,315nm,1.9s
LKWY MLR MLR
comp=Z,13µm,21.0s
BAUV El Baul 30.09 100 P **P** **20 56 41.0 -0.2**
BAUV IAmb IAmb 20 56 42.5
comp=Z,181nm,1.1s
YFT Old Faithful 30.11 341 P **P** **20 56 42.6 +1.4**
PAGS Pennsylvania G 30.17 34 P **P** **20 56 40.5 -1.0**
PAGS IAmb IAmb 20 56 50.8
comp=Z,128nm,1.2s
MVL Millersville 30.21 34 P **P** **20 56 41.2 -0.6**
RLMT Red Lodge 30.27 344 P **P** **20 56 42.6 0.0**
RLMT Red Lodge 30.27 344 P **P** **20 56 43.4 +0.7**
baz=158,SNR=121
E28A Huff 30.28 356 P **P** **20 56 42.5 0.0**
E28A Huff 30.28 356 P **P** **20 56 42.6 +0.1**
baz=174,SNR=20
ATAH Atahualpa 30.29 139 P **P** **20 56 46.3 +3.0**
comp=Z,13nm,0.8s,baz=327,slow=4.2,SNR=9.2
ATAH LR LR 21 06 54.2
comp=Z,4µm,18.1s,baz=325,slow=32
ATAH Atahualpa 30.29 139 P **P** **20 56 46.3 +3.0**
YNR Norris Junctio 30.30 342 P **P** **20 56 42.5 -0.4**
YMR Madison River 30.34 342 P **P** **20 56 44.7 +1.5**
I49A Point Hope 30.42 22 P **P** **20 56 41.9 -1.8**
baz=210
I49A P **P** **20 56 41.9 -1.8**
baz=210
SJG San Juan 30.45 82 LR LR 21 10 15.9
comp=Z,2µm,20.9s,baz=278,slow=39
SJG San Juan 30.45 82 P **P** **20 56 43.1 -1.1**
SJG IAmb IAmb 20 56 45.2
comp=Z,128nm,1.1s
SJG San Juan 30.45 82 P **P** **20 56 43.1 -1.1**
SJG pmax pmax
comp=Z,129nm,1.1s
SJG MLR MLR
comp=Z,2µm,21.0s
SJG San Juan 30.45 82 *e*P **P** **20 56 41.7 -2.5**
G45A Suttons Bay 30.49 17 P **P** **20 56 43.3 -1.0**
G45A IAmb IAmb 20 57 39.8
comp=Z,129nm,0.8s
G45A Suttons Bay 30.49 17 P **P** **20 56 43.3 -1.0**
baz=204,SNR=7.9
G45A P **P** **20 56 43.3 -1.0**
baz=204,SNR=7.9
GCPR Guaynabo City 30.50 81 P **P** **20 56 43.7 -1.0**
GCPR IAmb IAmb 20 56 46.2
comp=Z,95nm,1.0s
F42A Maple Grove Fa 30.52 14 P **P** **20 56 43.2 -1.3**
F42A IAmb IAmb 20 56 44.9
comp=Z,247nm,1.2s
F42A Maple Grove Fa 30.52 14 P **P** **20 56 43.7 -0.9**
baz=199,SNR=20
BEKR Beckworth 30.52 325 P **P** **20 56 46.6 +1.7**
BEKR IAmb IAmb 20 56 48.1
comp=Z,96nm,1.1s
WUPA West Chester U 30.57 35 P **P** **20 56 43.9 -1.2**
HLID Hailey 30.57 336 P **P** **20 56 46.2 +0.9**
HLID IAMs_20 IAMs_20 21 10 55.6
comp=Z,6µm,20.0s
HLID Hailey 30.57 336 P **P** **20 56 46.5 +1.2**
baz=147,SNR=91
HLID S **S** **21 01 51.1 +4.2**
baz=147
PDPR Patillas Dam, 30.57 82 P **P** **20 56 44.4 -1.0**
PDPR IAmb IAmb 20 56 46.5
comp=Z,94nm,0.9s
YHL Hebgen Lake 30.57 341 P **P** **20 56 46.5 +1.1**
YHL IAmb IAmb 20 56 49.5
comp=Z,125nm,1.4s
N58A Sunbury 30.62 33 P **P** **20 56 43.9 -1.6**
N58A Sunbury 30.62 33 P **P** **20 56 44.3 -1.1**
baz=223,SNR=8.3
N58A P **P** **20 56 44.3 -1.1**
baz=223,SNR=8.3
COWI Conover 30.63 12 P **P** **20 56 44.1 -1.5**
COWI IAmb IAmb 20 56 46.2
comp=Z,110nm,1.1s
QLMT Earthquake Lak 30.63 341 P **P** **20 56 47.0 +1.1**
E38A The Farm, Brul 30.70 9 P **P** **20 56 45.2 -1.0**
E38A IAmb IAmb 20 56 46.8
comp=Z,311nm,1.4s
E38A The Farm, Brul 30.70 9 P **P** **20 56 45.4 -0.7**
baz=192,SNR=23
CBYP Canovanas 30.72 82 P **P** **20 56 45.7 -1.1**
CBYP IAmb IAmb 20 56 47.1
comp=Z,112nm,0.9s
HUMP Col San Antoni 30.73 82 P **P** **20 56 45.6 -1.1**
HUMP IAmb IAmb 20 56 55.6
comp=Z,162nm,1.2s
D32A Dogwood Acres, 30.77 1 P **P** **20 56 45.4 -1.4**
D32A IAmb IAmb 20 56 46.7
comp=Z,126nm,0.8s
D32B Dogwood Acres, 30.77 1 P **P** **20 56 45.5 -1.2**
baz=182,SNR=7.1
M57A Sunshine Farm, 30.77 32 P **P** **20 56 45.6 -1.3**
M57A Sunshine Farm, 30.77 32 P **P** **20 56 46.1 -0.7**
baz=222,SNR=9.5
M57A P **P** **20 56 46.1 -0.7**
baz=222,SNR=9.5
P61A Hammonton 30.85 36 P **P** **20 56 46.7 -0.8**
WVNY West Valley, N 30.88 29 P **P** **20 56 46.3 -1.6**
WVNY IAmb IAmb 20 56 57.9
comp=Z,249nm,1.2s
ORV Oroville 30.95 323 P **P** **20 56 50.0 +1.5**
ORV Oroville 30.95 323 P **P** **20 56 50.0 +1.5**
ORV pmax pmax
comp=Z,85nm,1.4s
ORV MLR MLR
comp=Z,3µm,18.0s
GCMT Greycliff 31.00 344 P **P** **20 56 49.2 +0.2**
MFID Camas Ranch 31.02 334 P **P** **20 56 49.6 +0.5**
MFID IAmb IAmb 20 56 58.0
comp=Z,110nm,1.2s
LAO LASA Array 31.08 349 P **P** **20 56 49.2 -0.4**
LAO IAmb IAmb 20 56 51.1
comp=Z,316nm,1.4s
LAO LASA Array 31.08 349 P **P** **20 56 49.6 0.0**
baz=164,SNR=34
MCMT McKenzie Canyo 31.09 339 P **P** **20 56 51.5 +1.6**
LUPA Lehigh Univers 31.16 34 P **P** **20 56 49.6 -0.7**
LUPA IAmb IAmb 20 57 00.9
comp=Z,141nm,1.1s
L56A Greenwood 31.16 30 P **P** **20 56 49.2 -1.2**
L56A IAmb IAmb 20 57 07.3
comp=Z,127nm,1.2s
L56A Greenwood 31.16 30 P **P** **20 56 49.4 -1.0**
baz=220,SNR=28
L56A P **P** **20 56 49.4 -1.0**
baz=220,SNR=28
GDXM Geysers 31.23 321 P **P** **20 56 52.5 +1.5**
CUPR Culebra, Puert 31.27 81 P **P** **20 56 50.6 -0.8**
BIRV Birongo 31.36 97 P **P** **20 56 52.4 0.0**
E43A Lone Tree Farm 31.37 15 P **P** **20 56 50.8 -1.2**
E43A IAmb IAmb 20 56 52.3
comp=Z,229nm,1.1s
E43A Lone Tree Farm 31.37 15 P **P** **20 56 51.0 -1.1**
baz=200
BOZ Bozeman (W) 31.38 341 P **P** **20 56 53.3 +0.9**
BOZ IAMs_20 IAMs_20 21 10 36.4
comp=Z,8µm,21.0s
BOZ Bozeman (W) 31.38 341 P **P** **20 56 53.3 +0.9**
BOZ pmax pmax
comp=Z,80nm,1.1s
BOZ MLR MLR
comp=Z,8µm,21.0s
BOZ Bozeman (W) 31.38 341 P **P** **20 56 53.5 +1.1**
baz=154,SNR=75
MMNY Mt. Morris Dam 31.45 29 P **P** **20 56 51.8 -1.1**
MMNY IAmb IAmb 20 57 04.4
comp=Z,112nm,1.0s
DLMT Dillon 31.48 340 IAMs_20 IAMs_20 21 10 31.2
comp=Z,8µm,21.0s
WVOR Wild Horse Val 31.50 330 P **P** **20 56 54.4 +1.0**
WVOR IAMs_20 IAMs_20 21 10 16.9
comp=Z,5µm,19.0s
WVOR Wild Horse Val 31.50 330 P **P** **20 56 54.4 +1.0**
WVOR pmax pmax
comp=Z,356nm,1.2s
WVOR MLR MLR
comp=Z,5µm,19.0s
MDND Maddock 31.50 358 P **P** **20 56 52.9 -0.4**
MDND Maddock 31.50 358 P **P** **20 56 53.4 +0.1**
baz=177,SNR=44
MDND Maddock 31.50 358 P **P** **20 56 53.2 0.0**
baz=177,SNR=44
HOPS Hopland Field 31.52 321 IAMs_20 IAMs_20 21 08 56.7
comp=Z,4µm,20.0s
MEDO Medina 31.54 28 P **P** **20 56 51.8 -1.8**
J54A Appleton 31.55 28 P **P** **20 56 51.6 -2.0**
J54A Appleton 31.55 28 P **P** **20 56 52.0 -1.6**
baz=217
J54A P **P** **20 56 52.0 -1.6**
baz=217
STVI Saint Thomas 31.58 81 P **P** **20 56 53.1 -1.1**
STVI IAmb IAmb 20 57 03.2
comp=Z,95nm,0.9s
KSPA Keystone Colle 31.63 33 P **P** **20 56 53.2 -1.2**
BRNJ Basking Ridge 31.66 35 P **P** **20 56 54.0 -0.6**
BRNJ IAmb IAmb 20 56 56.4
comp=Z,176nm,0.9s
D41A Chassel 31.66 12 P **P** **20 56 54.0 -0.6**
D41A Chassel 31.66 12 P **P** **20 56 54.2 -0.4**
baz=197,SNR=26
CDVI St. Croix 31.77 82 P **P** **20 56 54.5 -1.4**
CDVI IAmb IAmb 20 57 19.6
comp=Z,98nm,0.8s
LRM Limekiln Ridge 31.84 341 P **P** **20 56 57.2 +0.7**
J55A Hilton 31.91 28 P **P** **20 56 55.1 -1.7**
J55A IAmb IAmb 20 57 06.3
comp=Z,80nm,0.9s
J55A Hilton 31.91 28 P **P** **20 56 55.6 -1.2**
baz=219,SNR=7.2
J55A P **P** **20 56 55.6 -1.2**
baz=219,SNR=7.2
ODNJ Ogdensburg 31.91 35 P **P** **20 56 55.8 -1.1**
ODNJ IAmb IAmb 20 57 06.5
comp=Z,187nm,1.4s
MOD Modoc Plateau 31.93 328 P **P** **20 56 58.1 +0.8**
MOD IAmb IAmb 20 56 59.9
comp=Z,240nm,1.2s
AGMN Agassiz Nation 31.97 3 P **P** **20 56 56.5 -0.9**
AGMN IAMs_20 IAMs_20 21 10 41.0
comp=Z,4µm,21.0s
AGMN Agassiz Nation 31.97 3 P **P** **20 56 56.7 -0.6**
baz=184,SNR=164
BINY Binghamton 31.98 32 P **P** **20 56 56.6 -1.0**
BINY IAmb IAmb 20 57 08.4
comp=Z,113nm,1.1s
BINY Binghamton 31.98 32 P **P** **20 56 56.7 -0.9**
baz=223,SNR=16
EYMN Ely 32.02 8 P **P** **20 56 56.1 -1.7**
EYMN IAmb IAmb 20 56 58.2
comp=Z,164nm,1.1s
EYMN Ely 32.02 8 IAMs_20 IAMs_20 21 11 17.9
comp=Z,6µm,20.0s
EYMN Ely 32.02 8 P **P** **20 56 56.5 -1.2**
baz=192,SNR=31
EYMN S **S** **21 02 12.2 +3.1**
baz=192
CPNY Central Park 32.07 36 P **P** **20 56 56.6 -1.6**
CPNY IAmb IAmb 20 56 59.4
comp=Z,93nm,1.1s
E46A Sault Ste Mari 32.09 18 P **P** **20 56 57.2 -1.1**
E46A IAmb IAmb 20 57 08.0
comp=Z,88nm,0.9s
E46A Sault Ste Mari 32.09 18 P **P** **20 56 57.4 -1.0**
baz=205,SNR=8.2
K57A Scipio Center 32.12 30 P **P** **20 56 57.2 -1.5**
K57A IAmb IAmb 20 57 10.0
comp=Z,156nm,1.1s
K57A Scipio Center 32.12 30 P **P** **20 56 57.5 -1.2**
baz=221,SNR=8.5
J08A Circle Bar Ran 32.13 331 P **P** **20 57 00.2 +1.3**
TRNY Table Rock, Ra 32.16 35 P **P** **20 56 58.2 -0.9**
TRNY IAmb IAmb 20 57 00.7
comp=Z,178nm,0.9s
B35A Bob, Littlefor 32.17 5 P **P** **20 56 57.9 -1.2**
B35A IAmb IAmb 20 56 59.3
comp=Z,193nm,1.0s
B35A Bob, Littlefor 32.17 5 P **P** **20 56 58.1 -1.0**
baz=188,SNR=74
PAL Palisades 32.24 35 P **P** **20 56 59.0 -0.8**
PAL IAmb IAmb 20 57 01.6
comp=Z,182nm,1.0s
PAL Palisades 32.24 35 P **P** **20 56 59.0 -0.8**
PAL pmax pmax
comp=Z,182nm,1.0s
PAL MLR MLR
comp=Z,2µm,20.0s
PAL Palisades 32.24 35 P **P** **20 56 59.0 -0.8**
baz=227,SNR=16
PAL S **S** **21 02 15.5 +2.7**
baz=227
J56A Wolcott 32.36 29 P **P** **20 56 59.4 -1.5**
J56A IAmb IAmb 20 57 11.3
comp=Z,162nm,1.0s
J56A Wolcott 32.36 29 P **P** **20 56 59.9 -0.9**
baz=220,SNR=23
J56A P **P** **20 56 59.9 -0.9**
baz=220,SNR=23
N62A Caumsett State 32.44 36 P **P** **20 56 59.8 -1.7**
N62A IAmb IAmb 20 57 04.2
comp=Z,117nm,0.9s
N62A Caumsett State 32.44 36 P **P** **20 57 00.4 -1.1**
baz=228
N62A P **P** **20 57 00.4 -1.1**
baz=228
HRY Holter Researc 32.45 342 P **P** **20 57 02.3 +0.6**
L59A Walton 32.46 33 P **P** **20 57 00.2 -1.6**
L59A IAmb IAmb 20 57 11.6
comp=Z,85nm,0.9s
L59A Walton 32.46 33 P **P** **20 57 01.3 -0.5**
baz=224,SNR=18
L59A P **P** **20 57 01.3 -0.5**
baz=224,SNR=18
PLID Pearl Lake 32.47 336 P **P** **20 57 02.7 +0.7**
SADO Sadowa 32.54 25 P **P** **20 57 00.5 -1.8**
comp=Z,25nm,0.8s,baz=241,slow=8.8,SNR=16
SADO LR LR 21 13 08.0
comp=Z,1µm,19.0s,baz=195,slow=42
comp=Z,25nm,0.8s
SADO Sadowa 32.54 25 P **P** **20 57 00.3 -2.0**
SADO IAmb IAmb 20 57 11.3
comp=Z,84nm,1.1s
KMRM Mail Ridge 32.68 322 P **P** **20 57 05.5 +1.7**
KMRM IAmb IAmb 20 57 06.9
comp=Z,139nm,1.3s
WSPT Westport, CT 32.68 36 P **P** **20 57 02.6 -1.0**
WSPT IAmb IAmb 20 57 05.3
comp=Z,179nm,1.0s
BMO Blue Mountains 32.80 334 P **P** **20 57 04.7 -0.1**
BMO IAmb IAmb 20 57 06.6
comp=Z,152nm,1.5s
BMO IAMs_20 IAMs_20 21 11 53.9
comp=Z,4µm,18.0s
BMO Blue Mountains 32.80 334 P **P** **20 57 04.7 -0.1**
BMO pmax pmax
comp=Z,152nm,1.5s
BMO MLR MLR
comp=Z,4µm,18.0s
PECO Prince Edward 32.81 29 P **P** **20 57 03.5 -1.2**
PECO IAmb IAmb 20 57 14.1
comp=Z,59nm,0.9s
K05A Summer Lake 32.83 328 P **P** **20 57 06.2 +1.0**
K05A IAmb IAmb 20 57 07.8
comp=Z,86nm,1.1s
J57A Williamstown 32.88 30 P **P** **20 57 03.9 -1.5**
J57A IAmb IAmb 20 57 15.1
comp=Z,128nm,0.9s
J57A Williamstown 32.88 30 P **P** **20 57 04.1 -1.2**
baz=221,SNR=42
J57A P **P** **20 57 04.1 -1.2**
baz=221,SNR=42
KSCT Kent School, K 32.97 35 P **P** **20 57 05.5 -0.6**
DELO Deloro Mine 32.98 27 P **P** **20 57 04.6 -1.6**
DELO IAmb IAmb 20 57 15.6
comp=Z,203nm,1.4s
YLE Yale 32.99 36 P **P** **20 57 06.4 +0.1**
YLE IAmb IAmb 20 57 08.2
comp=Z,157nm,0.9s
KMPM Mount Pierce 33.04 322 P **P** **20 57 08.5 +1.6**
YBH Yreka Blue Hor 33.10 325 P **P** **20 57 06.2 -1.2**
YBH Yreka Blue Hor 33.10 325 P **P** **20 57 06.2 -1.2**
YBH pmax pmax
comp=Z,11nm,0.8s
YBH MLR MLR
comp=Z,3µm,19.0s
EGMT Eagleton 33.10 345 P **P** **20 57 07.8 +0.5**
EGMT IAMs_20 IAMs_20 21 12 08.5
comp=Z,3µm,19.0s
EGMT Eagleton 33.10 345 P **P** **20 57 07.9 +0.5**
baz=159,SNR=55
KHMM Horse Mountain 33.11 323 P **P** **20 57 08.6 +1.0**
KHMM IAmb IAmb 20 57 10.4
comp=Z,94nm,1.2s
I07A Izee 33.16 331 P **P** **20 57 08.3 +0.3**
I07A IAmb IAmb 20 57 09.9
comp=Z,71nm,0.9s
J58A Remsen 33.19 31 P **P** **20 57 06.7 -1.4**
J58A IAmb IAmb 20 57 19.3
comp=Z,108nm,1.2s
J58A Remsen 33.19 31 P **P** **20 57 07.0 -1.0**
baz=223,SNR=18
J58A P **P** **20 57 07.0 -1.0**
baz=223,SNR=18
K04D Chiloquin, OR 33.20 327 P **P** **20 57 09.3 +1.0**
baz=135,SNR=9.1
L04D Klamath Falls 33.21 326 P **P** **20 57 08.9 +0.5**
L04D IAmb IAmb 20 57 10.5
comp=Z,132nm,1.2s
L04D IAMs_20 IAMs_20 21 11 09.7
comp=Z,4µm,20.0s
L04D Klamath Falls 33.21 326 P **P** **20 57 09.0 +0.5**
baz=133,SNR=24
L04D S S 21 02 38.9 +11
baz=133
MSO Missoula 33.21 340 P **P** **20 57 08.8 +0.4**
MSO IAmb IAmb 20 57 09.7
comp=Z,60nm,0.8s
MSO Missoula 33.21 340 P **P** **20 57 09.1 +0.7**
baz=151,SNR=50
MSO S **S** **21 02 28.5 +0.5**
baz=151
JCC Jacoby Creek, 33.24 323 P **P** **20 57 09.8 +1.3**
JCC IAmb IAmb 20 57 11.8
comp=Z,204nm,1.4s
JCC IAMs_20 IAMs_20 21 10 28.1
comp=Z,4µm,20.0s
SMRT St. Maarten 33.37 82 P **P** **20 57 08.5 -1.5**
SMRT IAmb IAmb 20 57 18.6
comp=Z,64nm,0.9s
J05D Fort Rock, OR 33.41 328 P **P** **20 57 10.7 +0.6**
baz=136,SNR=16
KRPM Rodgers 33.46 323 P **P** **20 57 12.1 +1.5**
KRPM IAmb IAmb 20 57 13.8
comp=Z,228nm,1.3s
SEUS St. Eustatius 33.49 83 P **P** **20 57 09.7 -1.3**
M63A Gales Ferry 33.56 37 P **P** **20 57 10.7 -0.6**
M63A Gales Ferry 33.56 37 P **P** **20 57 10.8 -0.4**
baz=229,SNR=17
M63A P **P** **20 57 10.8 -0.4**
baz=229,SNR=17
TRY Troy 33.56 33 P **P** **20 57 10.6 -0.7**
TRY IAmb IAmb 20 57 14.2
comp=Z,76nm,1.1s
PINE Pine Mountain 33.63 329 P **P** **20 57 12.6 +0.4**
PINE IAmb IAmb 20 57 14.7
comp=Z,76nm,0.9s
J59A Piesco 33.65 32 P **P** **20 57 10.9 -1.2**
J59A IAmb IAmb 20 57 23.6
comp=Z,126nm,1.3s
J59A Piesco 33.65 32 P **P** **20 57 11.1 -1.0**
baz=224,SNR=22
J59A P **P** **20 57 11.1 -1.0**
baz=224,SNR=22
F10A Beach Ranch, E 33.69 336 P **P** **20 57 13.1 +0.6**
UCCT U. Connecticut 33.71 36 P **P** **20 57 11.8 -0.9**
KSXB Camp Six Broad 33.81 324 P **P** **20 57 14.3 +0.6**
KSXB IAmb IAmb 20 57 24.2
comp=Z,158nm,1.7s
J04D Umpqua Nationa 33.82 328 P **P** **20 57 14.6 +0.8**
J04D Umpqua Nationa 33.82 328 P **P** **20 57 14.8 +1.0**
baz=135,SNR=26
HUMO Hull Mountain 33.83 326 P **P** **20 57 13.1 -0.6**
HUMO IAMs_20 IAMs_20 21 12 07.1
comp=Z,5µm,22.0s
L02F Cave Junction 33.83 325 P **P** **20 57 14.0 +0.3**
baz=132
G08A Pilot Rock 33.86 333 P **P** **20 57 14.1 +0.1**
G08A IAmb IAmb 20 57 16.0
comp=Z,134nm,1.1s
L61B Northampton 33.90 35 P **P** **20 57 13.2 -1.0**
L61B IAmb IAmb 20 57 23.8
comp=Z,68nm,0.9s
L61B Northampton 33.90 35 P **P** **20 57 13.2 -1.0**
baz=227,SNR=15
L61B Northampton 33.90 35 P **P** **20 57 13.3 -1.0**
baz=227,SNR=15
L61B S **S** **21 02 46.0 +7.6**
baz=227
ULM Lac du Bonnet 33.92 2 P **P** **20 57 13.0 -1.3**
comp=Z,177nm,1.1s,baz=186,slow=8.9,SNR=88
ULM LR LR 21 11 48.9
comp=Z,2µm,21.6s,baz=184,slow=38
comp=Z,177nm,1.1s
ULM Lac du Bonnet 33.92 2 P **P** **20 57 12.8 -1.5**
ULM IAmb IAmb 20 57 14.5
comp=Z,197nm,1.1s
ULM Lac du Bonnet 33.92 2 P **P** **20 57 12.8 -1.5**
ULM pmax pmax
comp=Z,197nm,1.1s
QUA2 Belchertown 33.96 35 P **P** **20 57 13.4 -1.4**
QUA2 IAmb IAmb 20 57 24.2
comp=Z,130nm,0.9s
ACCN Adirondack Com 34.02 32 P **P** **20 57 14.1 -1.2**
BBSR BB Station 34.12 56 P **P** **20 57 15.8 -0.5**
BBSR IAmb IAmb 20 57 27.0
comp=Z,121nm,1.1s
BBSR BB Station 34.12 56 IAMs_20 IAMs_20 21 10 57.5
comp=Z,3µm,20.0s
JTMT Jette 34.13 340 P **P** **20 57 16.3 0.0**
JTMT IAmb IAmb 20 57 18.2
comp=Z,80nm,1.0s
JTMT **PcP** **20 59 53.4 -0.1**
NCB Newcomb 34.16 31 P **P** **20 57 15.2 -1.3**
NCB IAmb IAmb 20 57 27.9
comp=Z,95nm,1.2s
BRYW Bryant College 34.18 36 P **P** **20 57 16.1 -0.6**
I05D Terrebonne, OR 34.23 330 P **P** **20 57 18.2 +1.1**
baz=137,SNR=14
I05D S **S** **21 02 44.7 +1.0**
baz=137
KBO Bosley Butte 34.26 324 P **P** **20 57 18.9 +1.3**
K02D Willamette Mer 34.27 325 P **P** **20 57 18.2 +0.6**
baz=132,SNR=8.4
K62A Royalston 34.29 35 P **P** **20 57 16.7 -0.9**
K62A IAmb IAmb 20 57 28.1
comp=Z,78nm,1.1s
K62A Royalston 34.29 35 P **P** **20 57 16.7 -0.9**
baz=228,SNR=13
K62A P **P** **20 57 16.7 -0.9**
baz=228,SNR=13
DBO Dodson Butte 34.33 326 P **P** **20 57 18.3 +0.1**
I04A Tendick Farm, 34.37 328 P **P** **20 57 18.8 +0.4**
baz=135,SNR=27
LONY Lake Ozonia 34.46 30 P **P** **20 57 17.5 -1.6**
LONY IAmb IAmb 20 57 29.6
comp=Z,87nm,1.1s
LONY Lake Ozonia 34.46 30 P **P** **20 57 17.9 -1.2**
baz=222,SNR=26

LONY S **S** **21 02 49.3 +2.2**
baz=222
E09A Wood Farm, Sta 34.49 335 P **P** **20 57 19.1 -0.2**
E09A IAmb IAmb 20 57 20.4
comp=Z,79nm,1.1s
HRV Adam Dziewonsk 34.55 35 P **P** **20 57 19.1 -0.9**
HRV IAmb IAmb 20 57 21.4
comp=Z,99nm,1.1s
HRV Adam Dziewonsk 34.55 35 P **P** **20 57 19.1 -0.9**
HRV pmax pmax
comp=Z,99nm,1.1s
HRV MLR MLR
comp=Z,2µm,21.0s
HRV Adam Dziewonsk 34.55 35 P **P** **20 57 18.6 -1.3**
baz=229
CZSB Cruzeiro do Su 34.58 132 *eP* **P** **20 57 23.0 +2.6**
J61A Chester 34.58 34 P **P** **20 57 20.0 -0.2**
J61A IAmb IAmb 20 57 30.5
comp=Z,245nm,1.6s
J61A Chester 34.58 34 P **P** **20 57 19.7 -0.4**
baz=227,SNR=20
J61A P **P** **20 57 19.7 -0.4**
baz=227,SNR=20
L64A Middleborough 34.59 37 P **P** **20 57 19.1 -1.1**
L64A IAmb IAmb 20 57 22.5
comp=Z,230nm,1.1s
L64A Middleborough 34.59 37 P **P** **20 57 19.6 -0.6**
baz=230,SNR=24
L64A P **P** **20 57 19.6 -0.6**
baz=230,SNR=24
WES Weston 34.61 36 P **P** **20 57 20.4 0.0**
WES IAmb IAmb 20 57 22.5
comp=Z,103nm,1.3s
WES Weston 34.61 36 P **P** **20 57 20.4 0.0**
WES pmax pmax
comp=Z,103nm,1.3s
WES MLR MLR
comp=Z,3µm,22.0s
BCX Boston College 34.66 36 P **P** **20 57 19.7 -1.1**
BCX IAmb IAmb 20 57 31.1
comp=Z,102nm,1.3s
J01E Myrtle Point 34.73 326 P **P** **20 57 22.9 +1.4**
J01E IAmb IAmb 20 57 25.9
comp=Z,158nm,0.9s
J01E Myrtle Point 34.73 326 P **P** **20 57 23.2 +1.7**
baz=132,SNR=20
GDHS Morne Mazeau, 34.74 85 IAMs_20 IAMs_20 21 13 16.2
comp=Z,3µm,20.0s
F07A Phinny Hill Vi 34.75 333 P **P** **20 57 22.1 +0.4**
KEBM Edson Butte 34.75 325 P **P** **20 57 23.1 +1.3**
I03D Drain, OR 34.78 327 P **P** **20 57 22.8 +0.9**
baz=134,SNR=26
E08A Dider Farm, El 34.85 334 P **P** **20 57 21.7 -0.7**
G05D Wamic, OR 34.89 331 P **P** **20 57 24.0 +1.1**
baz=138,SNR=11
G05D S **S** **21 02 54.9 +1.1**
baz=138
H04A Detroit Lake 34.90 329 P **P** **20 57 23.4 +0.5**
CBE Ff, Capester 34.91 85 IAMs_20 IAMs_20 21 13 12.6
comp=Z,4µm,20.0s
BUCK Buck Mountain 34.95 328 P **P** **20 57 23.7 +0.2**
BUCK IAmb IAmb 20 57 25.4
comp=Z,220nm,1.1s
HNH Hanover 34.97 33 P **P** **20 57 22.3 -1.1**
HNH IAMs_20 IAMs_20 21 13 57.5
comp=Z,3µm,20.0s
HAWA Hanford 34.97 334 P **P** **20 57 23.2 -0.3**
HAWA IAMs_20 IAMs_20 21 12 36.4
comp=Z,4µm,21.0s
NNA Nana 35.02 142 LR LR 21 09 00.1
comp=Z,3µm,19.4s,baz=332,slow=32
H04D Lebanon 35.05 329 P **P** **20 57 24.3 0.0**
H04D IAmb IAmb 20 57 25.8
comp=Z,182nm,1.1s
H04D Lebanon 35.05 329 P **P** **20 57 24.6 +0.4**
baz=135,SNR=30
FRNY Flat Rock 35.10 31 P **P** **20 57 23.2 -1.4**
FRNY IAmb IAmb 20 57 36.3
comp=Z,83nm,1.1s
HOOD Mount Hood Mea 35.11 330 P **P** **20 57 25.3 +0.5**
VT1 Waterbury 35.16 32 P **P** **20 57 23.7 -1.5**
WALA Waterton Lakes 35.17 342 P **P** **20 57 25.6 +0.2**
WALA IAmb IAmb 20 57 27.4
comp=Z,95nm,0.9s
MAGL Barre de l'ile 35.23 85 IAMs_20 IAMs_20 21 13 32.3
comp=Z,3µm,21.0s
E07A Sunnyside 35.24 334 P **P** **20 57 25.9 +0.1**
D08A Wollman Farm, 35.25 335 P **P** **20 57 25.5 -0.4**
I02E Swisshome, OR 35.33 327 P **P** **20 57 28.1 +1.5**
I02E IAmb IAmb 20 57 30.5
comp=Z,140nm,0.8s
I02E IAMs_20 IAMs_20 21 12 20.7
comp=Z,4µm,21.0s
I02E Swisshome, OR 35.33 327 P **P** **20 57 28.4 +1.8**
baz=133,SNR=13
I02E S **S** **21 03 01.2 +0.7**
baz=133
COR Corvallis 35.38 328 P **P** **20 57 28.0 +0.9**
COR Corvallis 35.38 328 IAMs_20 IAMs_20 21 12 53.0
comp=Z,4µm,18.0s
COR Corvallis 35.38 328 P **P** **20 57 28.0 +0.9**
COR pmax pmax
comp=Z,235nm,1.1s
COR MLR MLR
comp=Z,4µm,18.0s
GDSD La Dsirade Is 35.40 85 P **P** **20 57 25.1 -2.5**
GDSD IAmb IAmb 20 57 27.6
comp=Z,87nm,1.0s
FDF Fort de France 35.50 87 P **P** **20 57 26.8 -1.7**
FDF IAmb IAmb 20 57 45.4
comp=Z,101nm,1.0s
FDF Fort de France 35.50 87 P **P** **20 57 26.8 -1.7**
FDF pmax pmax
comp=Z,101nm,1.0s
FDF MLR MLR
comp=Z,2µm,19.0s
LBNH Lisbon 35.52 33 P **P** **20 57 27.6 -0.7**
LBNH IAmb IAmb 20 57 36.8
comp=Z,247nm,1.7s
LBNH Lisbon 35.52 33 P **P** **20 57 27.6 -0.7**
LBNH pmax pmax
comp=Z,247nm,1.7s
LBNH MLR MLR
comp=Z,3µm,20.0s
LBNH Lisbon 35.52 33 P **P** **20 57 27.7 -0.6**
baz=226,SNR=12
NEW Newport 35.55 338 P **P** **20 57 29.1 +0.6**
comp=Z,54nm,0.9s,baz=146,slow=8.9,SNR=53
NEW PcP **PcP** **20 59 56.3 -1.1**
comp=Z,15nm,0.9s,baz=126,slow=3.8,SNR=3.7
NEW LR LR 21 13 22.7
comp=Z,12µm,18.9s,baz=156,slow=38
comp=Z,54nm,0.9s
NEW Newport 35.55 338 P **P** **20 57 28.0 -0.5**
NEW Newport 35.55 338 P **P** **20 57 28.0 -0.5**
NEW pmax pmax
comp=Z,63nm,1.0s
NEW MLR MLR
comp=Z,15µm,18.0s
NEW Newport 35.55 338 P **P** **20 57 28.3 -0.2**
baz=147,SNR=30
MNTQ Montreal, Queb 35.57 30 P **P** **20 57 27.5 -1.1**
MNTQ IAmb IAmb 20 57 38.7
comp=Z,249nm,1.6s
I62A Tamworth 35.58 34 P **P** **20 57 28.2 -0.6**
I62A IAmb IAmb 20 57 31.8
comp=Z,210nm,1.1s
I62A Tamworth 35.58 34 P **P** **20 57 28.6 -0.2**
baz=228,SNR=43
I62A P **P** **20 57 28.6 -0.2**
baz=228,SNR=43
C09A Chrisman Ranch 35.59 336 P **P** **20 57 28.9 0.0**
C09A IAmb IAmb 20 57 31.1
comp=Z,124nm,1.1s
BIM Bigot 35.60 88 P **P** **20 57 29.1 -0.2**
BIM IAmb IAmb 20 57 31.9
comp=Z,202nm,1.1s
SVB Belmont 35.61 90 P **P** **20 57 28.8 -0.6**
SVB IAmb IAmb 20 57 30.5
comp=Z,157nm,1.0s
TRQ Mont Tremblant 35.67 28 P **P** **20 57 28.4 -1.2**
TRQ IAmb IAmb 20 57 39.7
comp=Z,311nm,1.7s
ILAM Ilet Lapin Mar 35.76 87 P **P** **20 57 29.1 -1.5**
G03D McMinnville, O 35.81 329 P **P** **20 57 31.2 +0.5**
G03D McMinnville, O 35.81 329 P **P** **20 57 32.2 +1.5**
baz=135,SNR=17
MPOM Morne Pois Mar 35.81 88 P **P** **20 57 29.8 -1.3**
F04A Amboy 35.92 331 P **P** **20 57 32.3 +0.7**
F04A IAmb IAmb 20 57 33.9
comp=Z,142nm,1.2s
VLDQ Val d'Or 35.94 24 P **P** **20 57 30.0 -1.8**
HEBO Mount Hebo 36.05 329 P **P** **20 57 34.7 +1.8**
HEBO IAmb IAmb 20 57 35.9
comp=Z,190nm,0.9s
I63A Otisfield 36.11 34 P **P** **20 57 32.3 -1.0**
I63A IAmb IAmb 20 57 36.0
comp=Z,168nm,1.1s
I63A Otisfield 36.11 34 P **P** **20 57 32.9 -0.4**
baz=229,SNR=22
I63A P **P** **20 57 32.9 -0.4**
baz=229,SNR=22
LTY Liberty 36.14 334 P **P** **20 57 34.3 +0.7**
H62A Milan 36.15 33 P **P** **20 57 33.0 -0.7**
H62A Milan 36.15 33 P **P** **20 57 33.4 -0.3**
baz=227,SNR=19
H62A P **P** **20 57 33.4 -0.3**
baz=227,SNR=19
F04D Rainier, OR 36.31 330 P **P** **20 57 36.3 +1.3**
baz=136,SNR=6.7
B08A Colville Reser 36.46 336 P **P** **20 57 36.3 0.0**
B08A IAmb IAmb 20 57 38.3
comp=Z,187nm,1.4s
D05A Enumclaw 36.66 332 P **P** **20 57 39.0 +1.0**
E03A Lebam 36.91 330 P **P** **20 57 41.1 +1.0**
G62A West of Eustis 36.91 33 P **P** **20 57 39.5 -0.7**
G62A IAmb IAmb 20 57 51.8
comp=Z,195nm,1.1s
G62A West of Eustis 36.91 33 P **P** **20 57 39.9 -0.3**
baz=227,SNR=33
G62A P **P** **20 57 39.9 -0.3**
baz=227,SNR=33
WVL Waterville 36.95 34 P **P** **20 57 40.0 -0.4**
BBGH Gun Hill 37.26 90 IAMs_20 IAMs_20 21 14 24.6
comp=Z,4µm,20.0s
LATQ La Tuque 37.35 28 P **P** **20 57 42.5 -1.3**
LATQ IAmb IAmb 20 57 46.9
comp=Z,177nm,1.5s
WISH Wishkah 37.42 331 P **P** **20 57 45.2 +0.7**
WISH IAmb IAmb 20 57 47.6
comp=Z,352nm,1.4s
B06A Marblemount 37.46 334 P **P** **20 57 44.6 -0.1**
B06A IAmb IAmb 20 57 46.1
comp=Z,85nm,0.9s
PKME Peaks-Kenny Pk 37.60 34 P **P** **20 57 45.1 -0.9**
PKME Peaks-Kenny Pk 37.60 34 P **P** **20 57 45.1 -0.9**
baz=229,SNR=6.2
F62A Pittston Farm, 37.67 32 P **P** **20 57 45.5 -1.1**
F62A Pittston Farm, 37.67 32 P **P** **20 57 46.0 -0.6**
baz=228,SNR=7.8
F62A P **P** **20 57 46.0 -0.6**
baz=228,SNR=7.8
NLWA Neilton Lookou 37.67 331 P **P** **20 57 47.8 +1.2**
NLWA IAmb IAmb 20 57 49.5
comp=Z,328nm,1.2s
F63A Nahmakanta, Br 37.99 33 P **P** **20 57 48.3 -0.9**
F63A Nahmakanta, Br 37.99 33 P **P** **20 57 48.6 -0.7**
baz=229
F63A P **P** **20 57 48.6 -0.7**
baz=229
F63A S **S** **21 03 48.5 +7.4**
baz=229
F63A S **S** **21 03 48.5 +7.4**
baz=229
B04A Port Angeles 37.99 332 P **P** **20 57 50.5 +1.2**
B04A IAmb IAmb 20 57 51.8
comp=Z,252nm,1.2s
EMMW East Machias 38.25 36 P **P** **20 57 50.4 -1.0**
EMMW IAmb IAmb 20 57 54.0
comp=Z,92nm,1.0s
E62A Clayton Lake 38.38 32 P **P** **20 57 51.8 -0.8**
E62A IAmb IAmb 20 57 56.6
comp=Z,161nm,1.5s
E62A Clayton Lake 38.38 32 P **P** **20 57 52.1 -0.5**
baz=227,SNR=16
E62A P **P** **20 57 52.1 -0.5**
baz=227,SNR=16
E62A S **S** **21 03 52.7 +5.7**
baz=227
E62A S **S** **21 03 52.7 +5.7**
baz=227
C03A Quillayute Air 38.40 331 P **P** **20 57 53.5 +0.9**
C03A IAmb IAmb 20 57 55.8
comp=Z,265nm,1.2s
PGC Sidney 38.41 333 P **P** **20 57 53.3 +0.5**
PGC IAmb IAmb 20 57 54.8
comp=Z,103nm,1.1s
F64A Sherman 38.49 34 P **P** **20 57 52.7 -0.8**
F64A Sherman 38.49 34 P **P** **20 57 52.9 -0.6**
baz=230,SNR=10
F64A P **P** **20 57 52.9 -0.6**
baz=230,SNR=10
G65A Princeton 38.50 35 P **P** **20 57 52.5 -1.0**
G65A IAmb IAmb 20 57 56.3
comp=Z,144nm,1.1s
G65A Princeton 38.50 35 P **P** **20 57 52.7 -0.9**
baz=231,SNR=12
G65A P **P** **20 57 52.7 -0.9**
baz=231,SNR=12
LMQ La Malbaie 38.62 30 P **P** **20 57 53.6 -1.0**
LMQ IAmb IAmb 20 58 04.6
comp=Z,108nm,1.1s
EDM Edmonton 38.78 345 P **P** **20 57 55.9 0.0**
EDM Edmonton 38.78 345 P **P** **20 57 55.9 0.0**
EDM pmax pmax
comp=Z,426nm,1.3s
E63A Oxbow 38.82 33 P **P** **20 57 55.6 -0.6**
baz=229,SNR=13
E63A P **P** **20 57 55.6 -0.6**
baz=229,SNR=13
E63A S **S** **21 03 55.8 +2.2**
baz=229
E63A S **S** **21 03 55.8 +2.2**
baz=229
CLRS Cowichan Lake 38.84 332 P **P** **20 57 57.0 +0.7**
GGN Saint George 38.85 36 P **P** **20 57 56.0 -0.4**
D62A Allapoint, Ail 38.93 32 P **P** **20 57 56.4 -0.7**
D62A IAmb IAmb 20 58 10.4
comp=Z,205nm,1.2s
D62A Allapoint, Ail 38.93 32 P **P** **20 57 56.9 -0.3**
baz=228,SNR=34
D62A P **P** **20 57 56.9 -0.3**
baz=228,SNR=34
PQI Presque Isle 39.19 33 P **P** **20 57 58.5 -0.8**
LLLB Lillooet 39.26 336 P **P** **20 58 00.5 +0.5**
LLLB IAmb IAmb 20 58 02.0
comp=Z,222nm,1.2s
BOAV Boa Vista 39.36 107 *eP* **P** **20 58 01.6 +0.4**
BOAV *epP* **sP** **20 58 07.1 +0.1**
OZB Mount Ozzard 39.55 331 P **P** **20 58 03.2 +0.8**
OZB IAmb IAmb 20 58 04.9
comp=Z,130nm,1.1s
CBB Campbell River 40.27 333 P **P** **20 58 09.2 +0.9**
LMN Caledonia Moun 40.44 36 P **P** **20 58 08.2 -1.6**
HAL Halifax 40.45 38 P **P** **20 58 08.2 -1.7**
HAL Halifax 40.45 38 P **P** **20 58 08.2 -1.7**
HAL pmax pmax
comp=Z,36nm,1.0s
BATG Bathurst New B 40.61 34 P **P** **20 58 10.4 -0.7**
ETMB Extrema 40.76 127 *eP* **P** **20 58 12.8 0.0**
ETMB *epP* **sP** **20 58 19.6 +1.0**
TLCB Telegraph Cove 41.30 332 P **P** **20 58 17.6 +0.9**
TLCB IAmb IAmb 20 58 19.2
comp=Z,149nm,1.3s
MACA Manacapuru-AM 41.62 114 *eP* **P** **20 58 20.1 +0.2**
HOLB Holberg 41.95 331 P **P** **20 58 22.5 +0.3**
GBN Guysborough 42.11 39 P **P** **20 58 23.0 -0.5**
FCC Fort Churchill 42.50 3 P **P** **20 58 26.0 -0.5**
FCC IAmb IAmb 20 58 27.9
comp=Z,495nm,1.7s
FCC Fort Churchill 42.50 3 P **P** **20 58 26.0 -0.5**
FCC pmax pmax
comp=Z,495nm,1.7s
SAML Samuel 42.60 124 P **P** **20 58 26.2 -1.7**
SAML Samuel 42.60 124 P **P** **20 58 26.2 -1.7**
SAML pmax pmax
comp=Z,26nm,1.0s
BBB Bella Bella 43.03 333 P **P** **20 58 31.9 +1.0**
comp=Z,31nm,0.9s,baz=122,slow=9.5,SNR=5.8
BBB LR LR 21 16 56.1
comp=Z,2µm,21.7s,baz=146,slow=37
comp=Z,31nm,0.9s
BBB Bella Bella 43.03 333 P **P** **20 58 31.6 +0.8**
LPAZ La Paz 43.76 136 P **P** **20 58 38.6 +0.8**
comp=Z,4.4nm,0.8s,baz=344,slow=11,SNR=15
LPAZ LR LR 21 15 31.4
comp=Z,2µm,18.6s,baz=312,slow=34
comp=Z,4.4nm,0.8s
LPAZ La Paz 43.76 136 P **P** **20 58 38.1 +0.2**
LPAZ La Paz 43.76 136 P **P** **20 58 38.1 +0.2**
LPAZ pmax pmax
comp=Z,20nm,0.9s
LPAZ La Paz 43.76 136 *eP* **P** **20 58 38.5 +0.6**
LPAZ *epP* **sP** **20 58 44.7 +0.9**
PB16 IPOC Station P 44.38 140 P **P** **20 58 44.5 +1.7**
PB16 IAmb IAmb 20 58 51.6
comp=Z,244nm,2.0s
HG4B Hotspring 44.48 331 P **P** **20 58 43.2 +0.7**
RPN Rapa Nui 44.54 194 LR LR 21 12 48.4
comp=Z,2µm,21.3s,baz=4.0,slow=30
GRNB Grenville Isla 44.99 334 P **P** **20 58 47.6 +1.0**
SCHQ Schefferville 45.34 25 P **P** **20 58 48.4 -1.0**
comp=Z,32nm,0.9s,baz=230,slow=5.7,SNR=22
SCHQ LR LR 21 21 59.6
comp=Z,2µm,18.4s,baz=220,slow=42
comp=Z,32nm,0.9s
SCHQ Schefferville 45.34 25 P **P** **20 58 48.3 -1.1**
SCHQ IAmb IAmb 20 58 59.3
comp=Z,84nm,1.0s
PB11 IPOC Station P 45.37 141 P **P** **20 58 51.2 +1.0**
PB11 IAmb IAmb 20 58 58.9
comp=Z,246nm,1.8s
RUBB Prince Rupert 45.45 334 P **P** **20 58 51.2 +1.1**
DIB Dawson Inlet, 45.67 332 P **P** **20 58 53.1 +1.1**
DIB IAmb IAmb 20 58 54.6
comp=Z,124nm,1.1s
MDP Montagnes des 45.81 99 P **P** **20 58 53.3 -0.4**
comp=Z,28nm,1.1s,baz=332,slow=6.1,SNR=4.7
MDP LR LR 21 20 30.9
comp=Z,1µm,19.5s,baz=290,slow=39
comp=Z,28nm,1.1s
MDP Montagnes des 45.81 99 P **P** **20 58 53.3 -0.4**
PB08 IPOC Station P 45.97 141 P **P** **20 58 56.5 +1.4**
PB02 IPOC Station P 46.43 143 P **P** **20 58 59.7 +1.2**
PB02 IAmb IAmb 20 59 06.9
comp=Z,42nm,0.7s
DRLN Deer Lake 46.43 36 P **P** **20 58 56.8 -1.2**
DRLN IAmb IAmb 20 59 21.6
comp=Z,65nm,1.1s
ITTB Itaituba 46.55 113 *eP* **P** **20 58 58.6 -0.8**
MALB Monte Alegre 46.78 109 *eP* **P** **20 59 01.5 +0.2**
VILB Vilhena 47.32 126 *eP* **P** **20 59 05.5 0.0**
VILB *epP* **sP** **20 59 12.0 +0.6**
T35M Bob Quinn 47.33 337 P **P** **20 59 06.8 +1.8**
baz=136,SNR=30
T35M S **S** **21 06 02.4 +4.3**
baz=136
CRAG Craig 47.44 334 P **P** **20 59 06.8 +1.0**
CRAG Craig 47.44 334 P **P** **20 59 07.4 +1.5**
baz=131,SNR=20
YKA Yellowknife Ar 47.61 350 P **P** **20 59 06.9 -0.1**
comp=Z,58nm,0.9s,baz=156,slow=7.7,SNR=160
YKA PcP **PcP** **21 00 36.2 -0.4**
comp=Z,16nm,1.0s,baz=153,slow=6.3,SNR=5.0
YKA LR LR 21 22 55.7
comp=Z,2µm,21.1s,baz=164,slow=41
comp=Z,58nm,0.9s
YKA Yellowknife Ar 47.61 350 P **P** **20 59 06.2 -0.9**
YKA Yellowknife Ar 47.61 350 P **P** **20 59 06.9 -0.1**
YKA 21 00 36.2
PB06 IPOC Station P 47.70 144 P **P** **20 59 10.2 +1.8**
PB06 IAmb IAmb 20 59 17.5
comp=Z,208nm,1.8s
WRAK Wrangell Islan 47.76 335 P **P** **20 59 09.6 +1.4**
WRAK IAMs_20 IAMs_20 21 19 28.4
comp=Z,3µm,20.0s
WRAK Wrangell Islan 47.76 335 S **S** **21 06 05.9 +1.6**
baz=133
LVC Limon Verde 48.01 143 P **P** **20 59 11.9 +0.8**
comp=Z,5.8nm,0.9s,baz=307,slow=1.7,SNR=4.3
LVC LR LR 21 15 23.5
comp=Z,1µm,20.5s,baz=322,slow=31
comp=Z,5.8nm,0.9s
LVC Limon Verde 48.01 143 P **P** **20 59 12.3 +1.2**
LVC IAmb IAmb 20 59 20.9
comp=Z,125nm,1.9s
LVC Limon Verde 48.01 143 P **P** **20 59 12.3 +1.2**
LVC pmax pmax
comp=Z,125nm,1.9s
LVC Limon Verde 48.01 143 *eP* **P** **20 59 12.7 +1.6**
LVC *epP* **sP** **20 59 17.7 +0.8**
MCPB Macapa, AP 48.22 106 *eP* **P** **20 59 12.3 -0.2**
DLBC Dease Lake 48.30 338 P **P** **20 59 14.1 +1.6**
comp=Z,100nm,1.0s,baz=147,slow=6.1,SNR=103
DLBC LR LR 21 21 22.0
comp=Z,9µm,18.8s,baz=133,slow=38
comp=Z,100nm,1.0s
DLBC Dease Lake 48.30 338 P **P** **20 59 13.8 +1.3**
DLBC Dease Lake 48.30 338 P **P** **20 59 14.6 +2.0**
baz=137,SNR=100
DLBC S **S** **21 06 16.2 +4.2**
baz=137
VBST Vila Bela da S 48.42 127 *eP* **P** **20 59 13.1 -0.9**
VBST *epP* **sP** **20 59 20.2 +0.4**
SIV San Ignacio 48.53 130 P **P** **20 59 14.4 -0.5**
comp=Z,4.3nm,0.6s,baz=304,slow=7.8,SNR=16
SIV LR LR 21 18 58.6
comp=Z,2µm,18.0s,baz=332,slow=35
comp=Z,4.3nm,0.6s
SIV San Ignacio 48.53 130 P **P** **20 59 14.4 -0.5**
TAOE Nuku Hiva Isla 48.64 242 *eS* **S** **21 06 21.6 +3.7**
comp=Z,1µm,24.7s
TAOE *eLR* LR 21 13 13.4
comp=Z,2µm,21.1s
TAOE Nuku Hiva Isla 48.64 242 *eT* T 21 50 43.9
comp=Z,114nm,0.2s
SIT Sitka 49.41 334 P **P** **20 59 21.6 +0.6**
SIT Sitka 49.41 334 P **P** **20 59 21.6 +0.6**
SIT pmax pmax
comp=Z,59nm,1.4s
SIT Sitka 49.41 334 P **P** **20 59 22.3 +1.3**
baz=130
GO02 Mina Guanaco 49.63 146 P **P** **20 59 25.1 +1.7**
GO02 IAmb IAmb 20 59 32.0
comp=Z,236nm,2.0s
PTLB Pontes e Lacer 49.65 127 *eP* **P** **20 59 22.6 -0.7**
PTLB *epP* **sP** **20 59 29.6 +0.4**
CLDB Colider 49.70 120 *epP* pP 20 59 29.2 +1.1
JIS Juneau Island 49.83 336 P **P** **20 59 26.1 +2.0**
TGTN Hyland Airport 50.05 342 P **P** **20 59 27.6 +1.7**
baz=141,SNR=23
TGTN S **S** **21 06 38.7 +2.1**
baz=141
BESE Bessie Mountai 50.22 336 P **P** **20 59 28.5 +1.3**
BESE IAmb IAmb 20 59 30.3
comp=Z,129nm,1.7s
P32M Atlin 50.46 337 P **P** **20 59 30.8 +1.7**
baz=133,SNR=64
P32M S **S** **21 06 46.0 +3.7**
baz=133
P33M Teslin, Yukon 50.57 338 P **P** **20 59 30.9 +1.0**
P33M IAmb IAmb 20 59 33.0
comp=Z,137nm,1.4s
P33M Teslin, Yukon 50.57 338 P **P** **20 59 31.3 +1.4**
baz=134,SNR=40
P33M S **S** **21 06 45.1 +1.2**
baz=134
SKAG Skagway 50.98 337 P **P** **20 59 33.6 +0.7**
SKAG IAmb IAmb 20 59 44.2
comp=Z,124nm,1.5s
SKAG Skagway 50.98 337 P **P** **20 59 34.4 +1.5**
baz=131,SNR=6.8
PTET Porto Estrela 51.13 126 *eP* **P** **20 59 33.5 -1.1**
PTET *epP* **sP** **20 59 40.7 +0.2**
AC02 Maricunga 51.21 146 P **P** **20 59 37.8 +2.2**
N32M Quiet Lake 51.33 339 P **P** **20 59 37.1 +1.5**
baz=135
PLBC Pleasant Camp 51.38 336 P **P** **20 59 37.8 +1.9**
baz=130,SNR=16
FRB Frobisher Bay 51.57 16 P **P** **20 59 37.0 -0.2**
comp=Z,90nm,0.9s,baz=221,slow=8.6,SNR=31
FRB LR LR 21 23 15.9
comp=Z,2µm,20.7s,baz=206,slow=38
comp=Z,90nm,0.9s
FRB Frobisher Bay 51.57 16 P **P** **20 59 37.0 -0.2**
NBRS Nobres 51.61 124 *eP* **P** **20 59 37.3 -1.0**
NBRS *epP* **sP** **20 59 44.5 +0.4**
WHY Whitehorse 51.62 338 P **P** **20 59 38.5 +0.6**

WHY Whitehorse 51.62 338 P P 20 59 39.0 +1.1
baz=132,SNR=23
WHY S S 21 07 02.7 +4.3
baz=132
P30M Million Dollar 52.04 336 P P 20 59 42.9 +2.0
baz=130,SNR=28
P30M S S 21 07 10.5 +6.4
baz=130
O30N Mendenhall 52.14 337 P P 20 59 43.4 +1.8
baz=131,SNR=36
O30N S S 21 07 11.2 +5.8
baz=131
N31M Braeburn, Yuko 52.51 338 P P 20 59 45.6 +1.3
N31M IAmb IAmb 20 59 47.2
comp=Z,182nm,1.1s
N31M Braeburn, Yuko 52.51 338 P P 20 59 45.9 +1.7
baz=132,SNR=45
N31M S S 21 07 15.6 +5.2
baz=132
M31M Drury Creek, Y 52.52 339 P P 20 59 44.9 +0.6
M31M IAMs_20 IAMs_20 21 21 41.6
comp=Z,3µm,22.0s
M31M Drury Creek, Y 52.52 339 P P 20 59 45.9 +1.5
baz=134,SNR=31
SALV Santo Antonio 52.58 125 eP P 20 59 45.0 -0.4
PRPB Parauapebas 52.62 111 eP P 20 59 46.0 +0.2
TMAB Tom-Au,PA,Br 52.64 106 eP P 20 59 46.6 +0.6
H03N2 Juan Fernandez 52.69 160 T T 21 56 19.3
baz=338,slow=77
H03N1 Juan Fernandez 52.70 160 T T 21 56 19.7
baz=338,slow=77
HYT Haines Junctio 52.70 337 P P 20 59 47.8 +1.9
HYT IAmb IAmb 20 59 49.5
comp=Z,205nm,1.3s
HYT Haines Junctio 52.70 337 P P 20 59 47.7 +1.8
baz=130,SNR=42
HYT S S 21 07 15.4 +2.1
baz=130
H03N3 Juan Fernandez 52.70 160 T T 21 56 18.0
baz=338,slow=77
PNL Peninsula 52.72 335 P P 20 59 47.2 +1.3
baz=127,SNR=12
N30M Aishikik Lake 52.96 338 P P 20 59 49.6 +2.0
baz=130,SNR=28
BCPM Bancas Point 52.99 335 IAMs_20 IAMs_20 21 23 15.7
comp=Z,2µm,21.0s
YUK6 Outpost Mounta 53.10 337 P P 20 59 51.2 +2.2
baz=129,SNR=28
PINM Pinnacle 53.32 335 P P 20 59 52.3 +1.9
baz=126,SNR=14
PCA Pinnacle 53.33 335 P P 20 59 52.2 +1.8
PCA IAmb IAmb 20 59 53.6
comp=Z,127nm,1.0s
YUK4 Talbot Arm 53.46 337 P P 20 59 53.7 +2.2
baz=129,SNR=22
M30M Minto, Yukon 53.59 339 P P 20 59 53.3 +1.0
M30M Minto, Yukon 53.59 339 P P 20 59 53.7 +1.4
baz=131,SNR=45
M30M S S 21 07 29.9 +4.7
baz=131
CO03 El Pedregal 53.71 151 P P 20 59 54.5 +0.9
PANT Pantanal (Braz 53.71 129 eP P 20 59 54.2 +0.5
TABL Table Mountain 53.88 335 P P 20 59 55.3 +0.6
TABL IAmb IAmb 20 59 57.9
comp=Z,122nm,1.2s
SNDB Serra Nova Dou 54.04 118 eP P 20 59 56.2 -0.1
SNDB epP sP 21 00 03.2 +1.1
LOGN Logan Glacier 54.05 336 IAMs_20 IAMs_20 21 23 51.8
comp=Z,3µm,19.0s
MESA MESA 54.06 335 P P 20 59 58.2 +2.2
MESA IAmb IAmb 20 59 59.4
comp=Z,158nm,1.2s
MESA MESA 54.06 335 P P 20 59 57.2 +1.3
baz=124
PP1B Ponte de Pedra 54.20 127 eP P 20 59 56.7 -0.6
PP1B epP sP 21 00 03.8 +0.6
CTGM Chitina Glacie 54.27 336 IAMs_20 IAMs_20 21 23 59.5
comp=Z,2µm,19.0s
CTG Chitna Glacier 54.27 336 P P 20 59 59.4 +2.0
baz=125
YUK3 Moose Creek 54.41 337 P P 20 59 59.8 +1.3
baz=127,SNR=36
YUK3 S S 21 07 42.3 +5.6
baz=127
SNH Sunshine Point 54.43 334 P P 20 59 59.2 +0.7
BARN Barnard Glacie 54.45 336 P P 21 00 00.1 +1.4
BARN IAMs_20 IAMs_20 21 23 41.3
comp=Z,3µm,22.0s
ISLE Juniper Island 54.46 335 P P 21 00 00.2 +1.4
ISLE IAmb IAmb 21 00 01.8
comp=Z,141nm,1.2s
WAX Waxell Ridge 54.59 335 P P 21 00 01.3 +1.7
WAX IAmb IAmb 21 00 03.0
comp=Z,172nm,1.2s
WAX IAMs_20 IAMs_20 21 25 33.0
comp=Z,3µm,20.0s
CRQE Cirque 54.85 335 P P 21 00 03.4 +1.7
baz=123
BVCY Beaver Creek 54.95 337 P P 21 00 03.8 +1.6
baz=127,SNR=17
HMT Hamilton 55.11 334 P P 21 00 04.8 +1.5
HMT IAmb IAmb 21 00 06.5
comp=Z,150nm,1.0s
MCARA McCarthy VSAT 55.18 335 P P 21 00 05.7 +1.9
MCARA IAMs_20 IAMs_20 21 25 41.6
comp=Z,3µm,20.0s
MCARA McCarthy VSAT 55.18 335 P P 21 00 05.9 +2.1
baz=124,SNR=27
ZON Zonda 55.26 149 P P 21 00 06.8 +2.0
ZON Zonda 55.26 149 P P 21 00 06.8 +2.0
ZON pmax pmax
comp=Z,54nm,1.5s
VRDI Verde Repeater 55.27 335 P P 21 00 05.9 +1.2
VRDI IAmb IAmb 21 00 07.6
comp=Z,113nm,1.3s
VRDI IAMs_20 IAMs_20 21 25 07.9
comp=Z,3µm,20.0s
M27K Edge Creek, AK 55.30 337 P P 21 00 06.1 +1.3
M27K IAmb IAmb 21 00 07.7
comp=Z,67nm,1.1s
M27K Edge Creek, AK 55.30 337 P P 21 00 06.3 +1.5
baz=126,SNR=30
M27K S S 21 07 51.0 +2.6
baz=126
AQDB Aquidauana 55.30 130 eP P 21 00 05.8 +0.6
AQDB epP sP 21 00 11.3 +0.1
J29M Klondike Camp 55.31 340 P P 21 00 05.8 +1.0
J29M IAmb IAmb 21 01 28.0
comp=Z,60nm,0.8s
J29M IAMs_20 IAMs_20 21 24 39.4
comp=Z,2µm,19.0s
J29M Klondike Camp 55.31 340 P P 21 00 05.6 +0.8
baz=131
VA03 San Esteban 55.39 152 P P 21 00 06.7 +0.9
VA03 IAmb IAmb 21 00 14.6
comp=Z,109nm,1.7s
DAWY Dawson 55.45 339 P P 21 00 05.6 -0.2
DAWY Dawson 55.45 339 P P 21 00 06.1 +0.3
baz=129,SNR=30
DAWY S S 21 07 49.7 -0.5
baz=129
C36M Paulatuk 55.49 349 P P 21 00 05.1 -0.7
C36M IAmb IAmb 21 00 15.3
comp=Z,117nm,1.9s
C36M IAMs_20 IAMs_20 21 26 13.9
comp=Z,2µm,20.0s
C36M Paulatuk 55.49 349 P P 21 00 05.2 -0.7
baz=149,SNR=5.3
GLB Gilahina Butte 55.53 335 P P 21 00 07.5 +1.1
GLB IAmb IAmb 21 00 09.3
comp=Z,124nm,1.0s
ARAG Araguaiana, MT 55.56 123 eP P 21 00 06.8 -0.4
BMRM Bremner River 55.59 335 P P 21 00 08.3 +1.4
BMRM IAMs_20 IAMs_20 21 26 02.6
comp=Z,3µm,18.0s
BMRM Bremner River 55.59 335 P P 21 00 08.5 +1.7
baz=122,SNR=29
PEL Peldehue 55.65 152 P P 21 00 09.8 +2.3
PEL Peldehue 55.65 152 P P 21 00 09.8 +2.3
PEL pmax pmax
comp=Z,34nm,1.2s
PEL MLR MLR
comp=Z,3µm,20.0s
BCAR Beaver Creek A 55.68 338 P P 21 00 08.3 +0.8
L27K Beaver Creek, 55.69 338 P P 21 00 08.4 +0.8
L27K IAmb IAmb 21 00 10.2
comp=Z,126nm,1.1s
L27K Beaver Creek, 55.69 338 P P 21 00 08.9 +1.4
baz=126,SNR=131
L27K S S 21 07 55.0 +1.5
baz=126
M26K Nabesna, AK 55.75 337 P P 21 00 09.1 +1.1
M26K IAmb IAmb 21 00 10.7
comp=Z,134nm,1.1s
M26K IAMs_20 IAMs_20 21 26 25.4
comp=Z,3µm,18.0s
M26K Nabesna, AK 55.75 337 P P 21 00 09.3 +1.4
baz=124,SNR=82
M26K S S 21 07 55.9 +1.7
baz=124
SMTB Santa Maria do 55.78 113 eP P 21 00 09.1 +0.2
DVLD Doverlandia 55.78 124 eP P 21 00 08.8 0.0
EYAK Cordova Ski Ar 55.85 334 P P 21 00 09.9 +1.3
EYAK IAmb IAmb 21 00 11.8
comp=Z,93nm,1.0s
EYAK Cordova Ski Ar 55.85 334 P P 21 00 10.6 +1.9
baz=120,SNR=12
N25K Chitina, Valde 55.93 335 P P 21 00 10.7 +1.4
N25K IAmb IAmb 21 00 12.6
comp=Z,125nm,1.1s
N25K Chitina, Valde 55.93 335 P P 21 00 11.2 +1.8
baz=122,SNR=26
N25K S S 21 08 00.8 +4.0
baz=122
I29M Ogilvie Camp, 55.94 341 P P 21 00 09.1 -0.2
I29M IAmb IAmb 21 00 10.6
comp=Z,69nm,1.1s
I29M Ogilvie Camp, 55.94 341 P P 21 00 09.2 -0.1
baz=131,SNR=65
ANTJ Antonio Joao (56.03 132 eP P 21 00 09.8 -0.7
ANTJ epP sP 21 00 16.4 -0.1
HIN Hinchinbrook I 56.10 333 P P 21 00 12.0 +1.5
EPYK Eagle Plains 56.15 342 P P 21 00 10.8 0.0
EPYK IAmb IAmb 21 01 00.8
comp=Z,101nm,1.4s
EPYK Eagle Plains 56.15 342 P P 21 00 11.0 +0.2
baz=133,SNR=19
DIV Divide 56.16 334 P P 21 00 12.2 +1.3
DIV IAmb IAmb 21 00 13.8
comp=Z,138nm,1.1s
L26K Log Cabin Wild 56.24 337 P P 21 00 12.3 +0.9
L26K IAmb IAmb 21 00 14.0
comp=Z,87nm,1.1s
L26K Log Cabin Wild 56.24 337 P P 21 00 12.7 +1.3
baz=124,SNR=49
FID Port Fidalgo 56.27 334 P P 21 00 12.6 +1.0
MENT Mentasta 56.33 337 P P 21 00 12.9 +0.9
MENT IAmb IAmb 21 00 14.6
comp=Z,94nm,1.2s
K27K Chicken 56.36 338 P P 21 00 13.9 +1.7
baz=126
KLU Klutina 56.41 335 P P 21 00 14.0 +1.3
KLU IAmb IAmb 21 00 15.6
comp=Z,160nm,1.1s
KLU IAMs_20 IAMs_20 21 26 30.3
comp=Z,2µm,19.0s
KLU Klutina 56.41 335 P P 21 00 14.4 +1.6
baz=121,SNR=46
ROSB Rosrio 56.52 105 eP P 21 00 14.1 -0.1
BO01 Tunca 56.53 153 P P 21 00 14.6 +0.8
HARP HAARP 56.58 336 P P 21 00 15.6 +1.7
baz=122,SNR=27
GLI Glacier Island 56.59 334 P P 21 00 14.5 +0.6
GLI IAmb IAmb 21 00 16.1
comp=Z,96nm,1.0s
GLI IAMs_20 IAMs_20 21 27 03.1
comp=Z,2µm,18.0s
GLI Glacier Island 56.59 334 P P 21 00 14.9 +1.0
baz=119,SNR=13
PEXB Peixe 56.66 117 eP P 21 00 15.2 +0.1
PEXB epP sP 21 00 21.9 +0.8
INK Inuvik 56.68 345 P P 21 00 14.6 +0.2
comp=Z,153nm,0.9s,baz=125,slow=8.1,SNR=123
INK LR LR 21 27 16.3
comp=Z,3µm,18.4s,baz=139,slow=39
comp=Z,153nm,0.9s
INK Inuvik 56.68 345 P P 21 00 13.8 -0.6
INK Inuvik 56.68 345 P P 21 00 13.8 -0.6
INK pmax pmax
comp=Z,172nm,1.0s
INK Inuvik 56.68 345 P P 21 00 14.6 +0.2
baz=138,SNR=94
INK S S 21 08 05.2 -1.1
baz=138
M24K Tolsona, Glenn 56.83 335 P P 21 00 16.9 +1.1
M24K IAmb IAmb 21 00 20.2
comp=Z,171nm,1.1s
M24K Tolsona, Glenn 56.83 335 P P 21 00 17.3 +1.6
baz=121,SNR=24
M24K S S 21 08 10.6 +2.0
baz=121
DOT Dot Lake 56.86 337 P P 21 00 16.7 +0.9
PAX Paxson 57.01 336 P P 21 00 17.3 +0.3
PAX IAmb IAmb 21 00 19.2
comp=Z,123nm,1.0s
PAX Paxson 57.01 336 P P 21 00 17.3 +0.3
PAX pmax pmax
comp=Z,123nm,1.0s
PAX Paxson 57.01 336 P P 21 00 17.8 +0.8
baz=122,SNR=80
PAX S S 21 08 13.6 +2.5
baz=122
SCRK Sand Creek 57.02 338 P P 21 00 17.7 +0.6
SCRK IAmb IAmb 21 00 19.6
comp=Z,113nm,1.0s
SCRK Sand Creek 57.02 338 P P 21 00 18.2 +1.1
baz=124,SNR=125
SCRK S S 21 08 14.1 +3.0
baz=124
IVI Ivigtut 57.05 26 P P 21 00 16.6 -0.5
IVI IAmb IAmb 21 00 17.6
comp=Z,73nm,1.0s
IVI Ivigtut 57.05 26 *i* P P **21 00 16.3 -0.8**
IVI IAmb IAmb 21 00 17.2
comp=Z,26nm,0.8s
SCM Sheep Creek Mo 57.16 335 P P 21 00 18.7 +0.6
SCM IAmb IAmb 21 00 28.8
comp=Z,112nm,1.4s
SCM IAMs_20 IAMs_20 21 23 55.1
comp=Z,3µm,22.0s
SCM Sheep Creek Mo 57.16 335 P P 21 00 18.7 +0.6
SCM pmax pmax
comp=Z,112nm,1.4s
SCM MLR MLR
comp=Z,2µm,22.0s
SCM Sheep Creek Mo 57.16 335 P P 21 00 19.0 +0.9
baz=120,SNR=9.9
J26L Joseph Creek 57.16 338 P P 21 00 19.4 +1.4
J26L Joseph Creek 57.16 338 P P 21 00 19.5 +1.4
baz=125,SNR=174
J26L S S 21 08 16.3 +3.3
baz=125
RIDG Independent Ri 57.20 337 P P 21 00 19.4 +1.1
RIDG IAMs_20 IAMs_20 21 23 23.7
comp=Z,2µm,18.0s
RIDG Independent Ri 57.20 337 P P 21 00 19.5 +1.2
baz=123,SNR=142
RIDG S S 21 08 16.6 +3.2
baz=123
NUUK Nuuk 57.22 22 *i* P P **21 00 18.4 +0.1**
NUUK IAmb IAmb 21 00 20.3
comp=Z,19nm,1.0s
SEW Seward 57.25 332 P P 21 00 19.3 +0.7
SEW IAmb IAmb 21 00 20.6
comp=Z,141nm,1.1s
SEW Seward 57.25 332 P P 21 00 19.1 +0.5
baz=116,SNR=16
M23K Glacier View 57.31 334 P P 21 00 19.6 +0.6
baz=119,SNR=9.1
AMBA Amambai (Brazi 57.34 132 eP P 21 00 19.3 -0.5
AMBA epP sP 21 00 26.1 +0.3
KNK Knik Glacier 57.43 334 P P 21 00 20.4 +0.5
KNK IAmb IAmb 21 00 22.2
comp=Z,132nm,1.2s
KNK IAMs_20 IAMs_20 21 23 46.3
comp=Z,2µm,21.0s
KNK Knik Glacier 57.43 334 P P 21 00 20.8 +0.9
baz=118,SNR=19
KNK S S 21 08 19.5 +3.1
baz=118
I26K Coal Creek Min 57.49 339 IAMs_20 IAMs_20 21 27 00.3
comp=Z,3µm,20.0s
O22K Cooper Landing 57.54 333 P P 21 00 21.3 +0.6
O22K IAmb IAmb 21 00 36.8
comp=Z,90nm,0.8s
O22K Cooper Landing 57.54 333 P P 21 00 21.2 +0.6
baz=116
SML Sawmill 57.57 334 P P 21 00 21.4 +0.5
SML IAmb IAmb 21 00 23.0
comp=Z,159nm,1.1s
SML IAMs_20 IAMs_20 21 25 54.8
comp=Z,2µm,18.0s
SML Sawmill 57.57 334 P P 21 00 21.6 +0.7
baz=119,SNR=33
SML S S 21 08 20.4 +2.1
baz=119
K24K Donnelly Dome 57.58 337 P P 21 00 22.0 +1.0
baz=122,SNR=41
K24K S S 21 08 20.4 +2.0
baz=122
BRSE Bradley Lake S 57.68 332 P P 21 00 22.5 +0.9
baz=115,SNR=19
WAT6 Susitna Watana 57.70 335 P P 21 00 22.9 +0.9
baz=120,SNR=79
BRLK Bradley Lake 57.75 331 P P 21 00 22.8 +0.6
BRLK IAMs_20 IAMs_20 21 24 25.3
comp=Z,2µm,20.0s
KDAK Kodiak Island 57.77 329 P P 21 00 22.6 +0.4
comp=Z,33nm,1.0s,baz=108,slow=6.5,SNR=9.4
KDAK LR LR 21 25 22.6
comp=Z,3µm,18.5s,baz=129,slow=36
comp=Z,33nm,1.0s
KDAK Kodiak Island 57.77 329 *i* P P **21 00 23.1 +0.8**
KDAK pmax pmax
comp=Z,114nm,1.4s
KDAK Kodiak Island 57.77 329 P P 21 00 23.3 +1.0
baz=112
GHO Glory Hole Cre 57.80 334 P P 21 00 23.0 +0.5
GHO IAMs_20 IAMs_20 21 23 58.9
comp=Z,2µm,20.0s
PMR Palmer 57.80 334 P P 21 00 23.0 +0.6
PMR IAmb IAmb 21 00 24.4
comp=Z,99nm,0.9s
PMR Palmer 57.80 334 P P 21 00 23.0 +0.6
PMR pmax pmax
comp=Z,99nm,0.9s
PMR Palmer 57.80 334 P P 21 00 23.2 +0.8
baz=118,SNR=24
DHY Denali Highway 57.81 336 P P 21 00 22.8 +0.1
DHY Denali Highway 57.81 336 P P 21 00 23.2 +0.5
baz=120
CNPM China Poot 57.81 331 P P 21 00 23.3 +0.6
CNPM IAmb IAmb 21 00 24.8
comp=Z,119nm,1.2s
CNPM IAMs_20 IAMs_20 21 25 44.8
comp=Z,2µm,18.0s
RC01 Rabbit Creek A 57.83 333 P P 21 00 22.8 +0.2
RC01 IAmb IAmb 21 00 24.7
comp=Z,101nm,1.0s
RC01 Rabbit Creek A 57.83 333 P P 21 00 23.5 +0.8
baz=117,SNR=13
RC01 S S 21 08 22.9 +1.3
baz=117
J25K Salcha River, 57.87 338 P P 21 00 23.6 +0.5
J25K IAmb IAmb 21 00 25.3
comp=Z,98nm,1.2s
J25K Salcha River, 57.87 338 P P 21 00 23.8 +0.7
baz=123,SNR=67
J25K S S 21 08 24.8 +2.5
baz=123
OHAK Old Harbor 57.91 328 P P 21 00 24.0 +0.8
OHAK IAmb IAmb 21 00 25.5
comp=Z,163nm,1.1s
OHAK Old Harbor 57.91 328 P P 21 00 24.4 +1.1
baz=111,SNR=18
CPUP Villa Florida 57.93 136 P P 21 00 23.0 -0.9
comp=Z,2.0nm,0.6s,baz=308,slow=8.0,SNR=6.3
CPUP LR LR 21 24 34.2
comp=Z,1µm,21.5s,baz=324,slow=35
comp=Z,2.0nm,0.6s
CPUP Villa Florida 57.93 136 P P 21 00 24.6 +0.7
CPUP Villa Florida 57.93 136 P P 21 00 24.6 +0.7
CPUP pmax pmax
comp=Z,16nm,1.1s
CPUP Villa Florida 57.93 136 *eP* P **21 00 22.9 -0.9**
CPUP epP sP 21 00 30.0 +0.2
A36M Sachs Harbour 57.96 350 P P 21 00 23.0 -0.4
A36M IAMs_20 IAMs_20 21 25 57.2
comp=Z,2µm,21.0s
A36M Sachs Harbour 57.96 350 P P 21 00 23.1 -0.3
baz=148,SNR=5.5
Q20K Shuyak Island 57.99 330 P P 21 00 24.7 +0.8
baz=113,SNR=6.7
HOM Homer 58.06 331 IAMs_20 IAMs_20 21 24 45.4
comp=Z,1µm,20.0s
HOM Homer 58.06 331 P P 21 00 25.2 +0.9
baz=114
FIS Fire Island 58.06 333 IAMs_20 IAMs_20 21 24 16.0
comp=Z,1µm,19.0s
SII Sitkinak Islan 58.14 327 IAMs_20 IAMs_20 21 25 45.0
comp=Z,2µm,18.0s
SII Sitkinak Islan 58.14 327 P P 21 00 25.8 +0.8
baz=110
WAT1 Susitna Watana 58.15 335 P P 21 00 25.5 +0.5
baz=119
NRS Narsarsuaq 58.21 27 P P 21 00 24.9 -0.4
NRS IAmb IAmb 21 00 26.1
comp=Z,114nm,1.0s
NRS IAMs_20 IAMs_20 21 29 13.1
comp=Z,2µm,20.0s
NRS Narsarsuaq 58.21 27 P P 21 00 24.9 -0.4
NRS pmax pmax
comp=Z,114nm,1.0s
NRS Narsarsuaq 58.21 27 *i* P P **21 00 24.1 -1.2**
NRS IAmb IAmb 21 00 25.6
comp=Z,54nm,0.8s
PMOR Pomariorio Ree 58.27 240 *eT* T 22 02 51.6
comp=Z,5.0nm,0.2s
M22K Willow 58.29 334 P P 21 00 26.1 +0.2
M22K IAMs_20 IAMs_20 21 24 13.1
comp=Z,1µm,21.0s
M22K Willow 58.29 334 P P 21 00 26.6 +0.8
baz=117,SNR=19
CAPN Captain Cook N 58.30 332 P P 21 00 26.4 +0.4
CAPN IAMs_20 IAMs_20 21 26 02.6
comp=Z,1µm,18.0s
CAPN Captain Cook N 58.30 332 P P 21 00 28.0 +2.0
baz=115,SNR=6.5
HDA Harding Lake 58.34 337 P P 21 00 26.3 +0.1
HDA IAmb IAmb 21 00 27.8
comp=Z,101nm,1.1s
HDA IAMs_20 IAMs_20 21 26 01.8
comp=Z,3µm,20.0s
HDA Harding Lake 58.34 337 P P 21 00 26.6 +0.4
baz=121,SNR=36
HDA S S 21 08 28.0 -0.2
baz=121
HDA S S 21 08 28.0 -0.2
baz=121
RES Resolute Bay 58.43 1 P P 21 00 25.9 -0.7
comp=Z,35nm,1.1s,baz=184,slow=8.8,SNR=21
RES LR LR 21 28 31.6
comp=Z,1µm,18.9s,baz=190,slow=39
comp=Z,35nm,1.1s
RES Resolute Bay 58.43 1 P P 21 00 25.6 -1.0
RES IAmb IAmb 21 00 27.4
comp=Z,78nm,1.4s
RES Resolute Bay 58.43 1 P P 21 00 25.6 -1.0
RES pmax pmax
comp=Z,78nm,1.4s
SUA Susitna One 58.43 333 P P 21 00 28.1 +1.0
baz=116
IL31 58.51 338 P P 21 00 27.2 -0.1
ILAR Eielson Array 58.51 338 P P 21 00 27.6 +0.3
comp=Z,59nm,1.0s,baz=136,slow=4.9,SNR=261
ILAR LR LR 21 29 11.3
comp=Z,1µm,20.8s,baz=116,slow=40
comp=Z,59nm,1.0s
ILAR Eielson Array 58.51 338 P P 21 00 27.5 +0.1
ILAR Eielson Array 58.51 338 P P 21 00 27.7 +0.3
RND Reindeer 58.55 336 P P 21 00 28.7 +0.9
RND IAMs_20 IAMs_20 21 27 32.8
comp=Z,2µm,19.0s
RND Reindeer 58.55 336 P P 21 00 28.7 +0.9
RND pmax pmax
comp=Z,264nm,1.0s
RND MLR MLR
comp=Z,2µm,19.0s
BDFB Brasilia 58.64 120 P P 21 00 29.4 +0.3

comp=Z,26nm,1.0s,baz=285,slow=9.8,SNR=19
comp=Z,26nm,1.0s
BDFB Brasilia 58.64 120 P **P** **21 00 29.4 +0.3**
BDFB Brasilia 58.64 120 P **P** **21 00 29.4 +0.3**
BDFB Brasilia 58.64 120 *eP* **P** **21 00 29.7 +0.5**
CUT Chulitna 58.65 334 P **P** **21 00 29.1 +0.7**
CUT Chulitna 58.65 334 P **P** **21 00 29.1 +0.7**
baz=117,SNR=29
CHIR Chirikof Islan 58.65 326 P **P** **21 00 28.6 +0.1**
CHIR IAMs_20 IAMs_20 21 25 31.8
comp=Z,2µm,18.0s
CHIR Chirikof Islan 58.65 326 P **P** **21 00 29.3 +0.8**
baz=108
O20K Slope Mountain 58.68 331 P **P** **21 00 29.7 +0.9**
baz=113,SNR=20
O20K S **S** **21 08 34.7 +1.7**
baz=113
Q19K Cape Douglas, 58.72 330 P **P** **21 00 28.6 -0.3**
Q19K IAmb IAmb 21 00 34.7
comp=Z,91nm,1.0s
Q19K Cape Douglas, 58.72 330 P **P** **21 00 29.3 +0.3**
baz=112,SNR=11
Q19K S **S** **21 08 34.4 +1.1**
baz=112
MCK McKinley 58.75 336 P **P** **21 00 29.8 +0.7**
MCK IAmb IAmb 21 00 31.0
comp=Z,142nm,1.0s
MCK IAMs_20 IAMs_20 21 26 50.8
comp=Z,2µm,20.0s
MCK McKinley 58.75 336 P **P** **21 00 29.8 +0.7**
MCK pmax pmax
comp=Z,142nm,1.0s
MCK MLR MLR
comp=Z,2µm,20.0s
MCK McKinley 58.75 336 P **P** **21 00 29.7 +0.7**
baz=119,SNR=57
MCK S **S** **21 08 35.0 +1.3**
baz=119
CCB Clear Creek Bu 58.78 337 P **P** **21 00 28.7 -0.6**
CCB IAMs_20 IAMs_20 21 26 15.4
comp=Z,2µm,20.0s
WRH Wood River Hil 58.80 337 P **P** **21 00 29.1 -0.3**
WRH IAmb IAmb 21 00 32.9
comp=Z,63nm,1.0s
WRH IAMs_20 IAMs_20 21 26 25.9
comp=Z,3µm,20.0s
SPU Mount Spurr 58.88 333 P **P** **21 00 30.5 +0.4**
POKR Poker Plat Res 58.89 338 P **P** **21 00 30.4 +0.4**
POKR IAmb IAmb 21 00 31.8
comp=Z,120nm,1.1s
POKR IAMs_20 IAMs_20 21 24 24.3
comp=Z,2µm,20.0s
POKR Poker Plat Res 58.89 338 P **P** **21 00 30.5 +0.4**
baz=121,SNR=20
POKR S **S** **21 08 34.7 -0.7**
baz=121
RSO Redoubt South 58.90 332 P **P** **21 00 30.7 +0.3**
ITRB Iturama 58.91 126 *eP* **P** **21 00 30.9 +0.1**
ITRB *epP* **sP** **21 00 37.5 +0.7**
COLA College 58.91 338 P **P** **21 00 29.9 -0.2**
COLA IAmb IAmb 21 00 31.6
comp=Z,77nm,0.8s
COLA College 58.91 338 IAMs_20 IAMs_20 21 26 54.1
comp=Z,2µm,20.0s
COLA College 58.91 338 P **P** **21 00 29.9 -0.2**
COLA pmax pmax
comp=Z,77nm,0.9s
COLA MLR MLR
comp=Z,2µm,20.0s
COLA College 58.91 338 P **P** **21 00 30.2 +0.1**
baz=121
COLA S **S** **21 08 36.1 +0.5**
baz=121
TCOL CIGO, UAF Yank 58.92 338 P **P** **21 00 30.1 -0.1**
TCOL IAmb IAmb 21 00 31.6
comp=Z,74nm,0.8s
TCOL IAMs_20 IAMs_20 21 26 20.1
comp=Z,2µm,20.0s
TCOL CIGO, UAF Yank 58.92 338 P **P** **21 00 30.5 +0.3**
baz=121,SNR=6.4
TCOL S **S** **21 08 36.6 +1.0**
baz=121
TRCB Terra Rica 58.97 130 *eP* **P** **21 00 31.8 +0.6**
SKT Skwentna 58.99 334 IAMs_20 IAMs_20 21 28 13.6
comp=Z,2µm,19.0s
MDM Murphy Dome 59.09 338 P **P** **21 00 31.3 -0.2**
MDM IAMs_20 IAMs_20 21 26 59.8
comp=Z,2µm,22.0s
TRF Thorofare Moun 59.14 336 P **P** **21 00 32.4 +0.4**
TRF IAMs_20 IAMs_20 21 28 03.4
comp=Z,3µm,20.0s
TRF Thorofare Moun 59.14 336 P **P** **21 00 32.7 +0.7**
baz=118,SNR=210
TRF S **S** **21 08 40.6 +1.5**
baz=118
BWN Browne 59.17 336 P **P** **21 00 32.2 +0.3**
BWN IAMs_20 IAMs_20 21 25 58.1
comp=Z,2µm,22.0s
SFJD Kangerlussuaq 59.20 20 P **P** **21 00 31.8 -0.3**
comp=Z,100nm,0.9s,baz=223,slow=6.4,SNR=28
SFJD LR LR 21 28 02.1
comp=Z,3µm,21.1s,baz=234,slow=38
comp=Z,100nm,0.9s
SFJD Kangerlussuaq 59.20 20 P **P** **21 00 31.5 -0.6**
SFJD Kangerlussuaq 59.20 20 IAMs_20 IAMs_20 21 27 50.1
comp=Z,3µm,20.0s
SFJD Kangerlussuaq 59.20 20 P **P** **21 00 31.5 -0.6**
SFJD pmax pmax
comp=Z,176nm,1.1s
SFJD MLR MLR
comp=Z,3µm,20.0s
SFJD Kangerlussuaq 59.20 20 *i* P **P** **21 00 31.3 -0.8**
SFJD IAmb IAmb 21 00 32.7
comp=Z,50nm,0.9s
BMAR Burnt Mountain 59.21 341 P **P** **21 00 32.6 +0.3**
NEA2 Nenana 59.22 337 P **P** **21 00 32.5 +0.1**
NEA2 IAmb IAmb 21 00 34.1
comp=Z,159nm,1.5s
NEA2 Nenana 59.22 337 P **P** **21 00 32.5 +0.1**
baz=119,SNR=35
NEA2 S **S** **21 08 41.1 +1.4**
baz=119
PCMB Pacaembu 59.30 128 *eP* **P** **21 00 34.1 +0.6**
PCMB *epP* **sP** **21 00 39.5 0.0**
H24K Noodor Dome 59.42 339 P **P** **21 00 33.5 -0.2**
H24K Noodor Dome 59.42 339 P **P** **21 00 34.5 +0.7**
baz=121,SNR=146
H24K S **S** **21 08 42.4 0.0**
baz=121
KTH Kantishna Hill 59.44 335 P **P** **21 00 33.8 -0.2**
O19K Port Alsworth 59.51 331 P **P** **21 00 34.4 +0.1**
baz=112
I23K Minto, Yukon-K 59.60 337 P **P** **21 00 35.1 +0.2**
I23K IAMs_20 IAMs_20 21 27 25.3
comp=Z,2µm,18.0s
I23K Minto, Yukon-K 59.60 337 P **P** **21 00 35.7 +0.7**
baz=119,SNR=130
I23K S **S** **21 08 43.7 -0.9**
baz=119
R17K Ugashik Creek 59.63 328 P **P** **21 00 35.6 +0.3**
baz=108,SNR=19
M20K Styx River 59.64 333 P **P** **21 00 35.3 0.0**
M20K IAMs_20 IAMs_20 21 27 52.7
comp=Z,2µm,21.0s
M20K Styx River 59.64 333 P **P** **21 00 36.0 +0.6**
baz=114
P18K Big Mountain, 59.65 330 P **P** **21 00 34.9 -0.5**
P18K Big Mountain, 59.65 330 P **P** **21 00 35.5 +0.1**
baz=110
PPLA Purkeypile 59.66 335 P **P** **21 00 35.8 +0.2**
PPLA Purkeypile 59.66 335 P **P** **21 00 35.9 +0.2**
baz=115,SNR=44
PPLA S **S** **21 08 46.5 +0.8**
baz=115
IPMB Ipameri, GO 59.68 123 *eP* **P** **21 00 36.0 -0.3**
IPMB *epP* **sP** **21 00 42.5 +0.2**
BPAW Bear Paw Mtn. 59.72 336 P **P** **21 00 35.7 -0.2**
BPAW IAmb IAmb 21 00 37.3
comp=Z,102nm,1.1s
BPAW IAMs_20 IAMs_20 21 28 48.5
comp=Z,2µm,19.0s
BPAW Bear Paw Mtn. 59.72 336 P **P** **21 00 35.9 +0.1**
baz=117,SNR=39
BPAW S **S** **21 08 45.7 -0.5**
baz=117
SDBA SAO DESIDERIO 59.73 115 *eP* **P** **21 00 36.6 -0.1**
SDBA *epP* **sP** **21 00 43.7 +1.1**
O18K Koktuh Hills 59.80 331 P **P** **21 00 36.4 0.0**
O18K Koktuh Hills 59.80 331 P **P** **21 00 36.6 +0.1**
baz=111,SNR=51
O18K S **S** **21 08 48.2 +0.9**
baz=111
N19K Bonanza Creek 59.82 332 P **P** **21 00 36.5 -0.2**
N19K IAMs_20 IAMs_20 21 29 18.7
comp=Z,2µm,18.0s
N19K Bonanza Creek 59.82 332 P **P** **21 00 36.8 +0.1**
baz=112
CAST Castle Rocks 59.85 335 P **P** **21 00 36.3 -0.4**
CAST Castle Rocks 59.85 335 P **P** **21 00 36.6 -0.1**
baz=116,SNR=143
H23K Yukon River 60.01 338 P **P** **21 00 37.9 +0.1**
H23K IAmb IAmb 21 00 38.8
comp=Z,51nm,1.1s
H23K Yukon River 60.01 338 P **P** **21 00 38.3 +0.5**
baz=120,SNR=54
MLY Manley 60.06 337 P **P** **21 00 38.7 +0.5**
MLY Manley 60.06 337 P **P** **21 00 38.6 +0.5**
baz=118,SNR=178
MLY S **S** **21 08 50.3 -0.3**
baz=118
Q16K King Salmon 60.10 329 P **P** **21 00 39.0 +0.6**
baz=109,SNR=31
Q16K S **S** **21 08 53.2 +2.1**
baz=109
CHUM Lake Minchumin 60.15 336 P **P** **21 00 38.4 -0.3**
baz=116,SNR=9.2
CHUM S **S** **21 08 52.1 +0.5**
baz=116
P17K Kvichak River 60.16 330 P **P** **21 00 39.3 +0.5**
baz=109,SNR=33
P17K S **S** **21 08 51.3 -0.6**
baz=109
M19K Big River Lodg 60.19 333 P **P** **21 00 39.5 +0.3**
M19K IAMs_20 IAMs_20 21 28 55.5
comp=Z,2µm,19.0s
M19K Big River Lodg 60.19 333 P **P** **21 00 39.8 +0.7**
baz=112,SNR=120
M19K S **S** **21 08 53.1 +0.8**
baz=112
L20K Farewell, AK 60.20 334 P **P** **21 00 39.3 +0.2**
baz=113,SNR=129
L20K S **S** **21 08 52.5 +0.1**
baz=113
ILULI Ilulissat 60.35 17 P **P** **21 00 39.4 -0.6**
ILULI IAmb IAmb 21 00 40.9
comp=Z,72nm,1.1s
ILULI IAMs_20 IAMs_20 21 29 34.5
comp=Z,2µm,20.0s
ILULI Ilulissat 60.35 17 P **P** **21 00 39.4 -0.6**
ILULI pmax pmax
comp=Z,72nm,1.1s
ILULI MLR MLR
comp=Z,2µm,20.0s
ILULI Ilulissat 60.35 17 *i* P **P** **21 00 38.8 -1.2**
ILULI IAmb IAmb 21 00 39.9
comp=Z,18nm,0.9s
DY2G Dye2 60.39 21 *i* P **P** **21 00 38.6 -2.0**
DY2G IAmb IAmb 21 00 40.6
comp=Z,60nm,0.8s
N18K Kilae Creek 60.41 331 P **P** **21 00 40.3 -0.3**
N18K IAMs_20 IAMs_20 21 29 50.5
comp=Z,2µm,18.0s
N18K Kilae Creek 60.41 331 P **P** **21 00 41.0 +0.4**
baz=110,SNR=94
SVW2 Sparrevohn 60.42 332 P **P** **21 00 40.2 -0.4**
SVW2 IAmb IAmb 21 00 41.8
comp=Z,114nm,1.0s
NBMO Morrinhos-CE 60.47 103 *eP* **P** **21 00 43.3 +1.6**
NBMO *epP* **sP** **21 00 47.8 +0.1**
L19K White Mountain 60.50 333 P **P** **21 00 41.3 +0.1**
L19K IAmb IAmb 21 00 42.8
comp=Z,122nm,1.1s
L19K IAMs_20 IAMs_20 21 28 19.6
comp=Z,2µm,18.0s
L19K White Mountain 60.50 333 P **P** **21 00 41.4 +0.2**
baz=112,SNR=92
L19K S **S** **21 08 56.9 +0.6**
baz=112
PTGB Pitanga 60.55 131 *eP* **P** **21 00 44.5 +2.4**
CNBA Chernabura Isl 60.55 324 P **P** **21 00 41.3 -0.3**
CNBA IAmb IAmb 21 00 42.8
comp=Z,77nm,1.1s
CNBA IAMs_20 IAMs_20 21 27 21.4
comp=Z,2µm,18.0s
CHNA Chernabura Isl 60.56 324 P **P** **21 00 41.5 -0.2**
baz=104,SNR=10.0
I21K Tanana 60.60 337 P **P** **21 00 41.8 0.0**
I21K Tanana 60.60 337 P **P** **21 00 42.1 +0.4**
baz=117,SNR=15
I21K S **S** **21 08 58.6 +1.2**
baz=117
K20K Telida 60.63 335 P **P** **21 00 42.0 -0.1**
K20K IAMs_20 IAMs_20 21 29 03.9
comp=Z,3µm,19.0s
K20K Telida 60.63 335 P **P** **21 00 42.3 +0.2**
baz=114,SNR=166
K20K S **S** **21 08 57.8 -0.2**
baz=114
ITQB Itaqui 60.66 139 P **P** **21 00 45.1 +2.4**
ITQB IAmb IAmb 21 00 49.7
comp=Z,193nm,2.0s
ITQB Itaqui 60.66 139 *eP* **P** **21 00 42.3 -0.4**
ITQB *epP* **sP** **21 00 49.5 +0.9**
O17K Koliganek Bris 60.67 330 P **P** **21 00 42.9 +0.6**
baz=109,SNR=110
O17K S **S** **21 08 59.9 +1.5**
baz=109
H22K Ishtalitna Cre 60.70 338 P **P** **21 00 42.3 -0.3**
baz=118,SNR=124
P16K Nushagak River 60.87 329 P **P** **21 00 43.6 -0.1**
baz=108
S14K Fog Glacier 60.90 326 P **P** **21 00 44.0 -0.1**
baz=105,SNR=16
CRSM Crissiumal (Br 60.90 135 *eP* **P** **21 00 43.4 -1.0**
CRSM *epP* **sP** **21 00 50.6 +0.2**
COLD Coldfoot 60.94 339 P **P** **21 00 44.7 +0.7**
COLD IAmb IAmb 21 00 46.5
comp=Z,111nm,1.3s
COLD Coldfoot 60.94 339 P **P** **21 00 45.1 +1.1**
baz=120,SNR=35
COLD S **S** **21 09 03.1 +1.5**
baz=120
PPT Papeete 60.95 239 LR LR 21 20 27.8
comp=Z,1µm,18.0s,baz=54,slow=29
PPT2 Papeete2 60.96 239 *eLR* LR 21 18 55.9
comp=Z,1µm,20.5s
J20K Nowinta River 61.00 335 P **P** **21 00 44.3 -0.2**
J20K Nowinta River 61.00 335 P **P** **21 00 44.6 +0.1**
baz=114,SNR=175
J20K S **S** **21 09 03.1 +0.6**
baz=114
BB19B Bebedouro 61.09 126 *eP* **P** **21 00 45.4 -0.5**
BB19B *epP* **sP** **21 00 52.5 +0.7**
O16K Kokwok River B 61.09 330 P **P** **21 00 45.4 +0.2**
baz=108,SNR=71
O16K S **S** **21 09 03.4 -0.4**
baz=108
H21K Melozitna Rive 61.12 337 P **P** **21 00 44.9 -0.4**
H21K IAmb IAmb 21 00 46.5
comp=Z,90nm,1.1s
H21K Melozitna Rive 61.12 337 P **P** **21 00 45.2 -0.1**
baz=116,SNR=78
H21K S **S** **21 09 04.4 +0.4**
baz=116
SDPT Sand Point 61.17 325 P **P** **21 00 45.5 -0.3**
SDPT Sand Point 61.17 325 P **P** **21 00 45.5 -0.3**
baz=103,SNR=24
TTA Tatalina 61.28 334 P **P** **21 00 45.9 -0.7**
TTA IAmb IAmb 21 00 47.6
comp=Z,129nm,1.1s
TTA Tatalina 61.28 334 P **P** **21 00 45.9 -0.7**
TTA pmax pmax
comp=Z,129nm,1.1s
TTA Tatalina 61.28 334 P **P** **21 00 46.3 -0.2**
baz=112,SNR=113
UPNV Upernavik 61.37 13 *i* P **P** **21 00 45.8 -1.1**
UPNV IAmb IAmb 21 00 47.2
comp=Z,26nm,0.9s
PMNB Patos De Minas 61.41 122 *eP* **P** **21 00 48.4 +0.3**
PMNB *epP* **sP** **21 00 55.1 +1.0**
TOLK Toolik Lake Re 61.45 341 P **P** **21 00 47.5 -0.1**
TOLK IAmb IAmb 21 00 49.3
comp=Z,103nm,1.1s
TOLK Toolik Lake Re 61.45 341 P **P** **21 00 48.2 +0.6**
baz=121,SNR=61
TOLK S **S** **21 09 08.2 0.0**
baz=121
JANB Januaria 61.47 118 *eP* **P** **21 00 49.0 +0.5**
JANB *epP* **sP** **21 00 54.8 +0.3**
D24K Happy Valley 61.49 342 P **P** **21 00 48.1 +0.3**
baz=122,SNR=21
IMAR Indian Mountai 61.61 337 P **P** **21 00 47.9 -0.8**
LL04 Puerto Octay 61.66 158 P **P** **21 00 49.4 +0.2**
N16K Nishlik Lake 61.69 331 P **P** **21 00 49.5 +0.2**
baz=108,SNR=104
NBPB Pedra_Branca-C 61.70 106 *eP* **P** **21 00 50.9 +0.9**
C24K Franklin Bluff 61.76 342 P **P** **21 00 50.1 +0.6**
baz=122
D23K Nanushuk River 61.96 341 P **P** **21 00 52.0 +1.0**
baz=120,SNR=88
D23K S **S** **21 09 15.7 +1.1**
baz=120
H07S1 FLORES T-PHASE 61.99 54 *eP* **P** **21 00 51.2 -0.5**
RODS Rosario do Sul 62.02 138 *eP* **P** **21 00 51.6 -0.3**
RODS *epP* **sP** **21 00 58.6 +0.7**
ITAB Concordia 62.05 134 *eP* **P** **21 00 52.5 +0.3**
ITAB *epP* **sP** **21 00 58.6 +0.5**
H07N1 FLORES T-PHASE 62.07 53 *eP* **P** **21 00 52.5 +0.3**
TULEG Thule 62.13 7 P **P** **21 00 51.6 -0.3**
TULEG IAmb IAmb 21 00 53.3
comp=Z,134nm,1.5s
TULEG IAMs_20 IAMs_20 21 29 32.0
comp=Z,2µm,18.0s
PLCA Paso Flores 62.19 157 P **P** **21 00 53.6 +0.7**
comp=Z,10nm,0.8s,baz=325,slow=7.8,SNR=27
PLCA LR LR 21 22 37.8
comp=Z,2µm,18.0s,baz=332,slow=31
comp=Z,10nm,0.8s
PLCA Paso Flores 62.19 157 P **P** **21 00 53.9 +1.0**
PLCA Paso Flores 62.19 157 P **P** **21 00 53.9 +1.0**
PLCA pmax pmax
comp=Z,28nm,1.1s
PLCA Paso Flores 62.19 157 *eP* **P** **21 00 54.2 +1.3**
GCSA Galena City Sc 62.31 335 P **P** **21 00 53.2 -0.2**
baz=112
GCSA S **S** **21 09 19.4 +0.3**
baz=112
C23K Itkillik River 62.38 342 P **P** **21 00 54.4 +0.7**
baz=120,SNR=82
C23K S **S** **21 09 19.0 -0.8**
baz=120
ALGR Alto Alegre (B 62.43 136 *eP* **P** **21 00 53.7 -1.0**
RCLB Rio Claro- Sao 62.60 127 *eP* **P** **21 00 58.0 +1.9**
ISOG Isortoq, Green 62.66 24 *i* P **P** **21 00 53.9 -1.8**
ISOG IAmb IAmb 21 00 55.3
comp=Z,37nm,0.8s
FALS False Pass 62.72 324 P **P** **21 00 55.8 -0.4**
FALS False Pass 62.72 324 P **P** **21 00 55.8 -0.4**
baz=100,SNR=30
NBMA Muriti-CE 63.13 107 *eP* **P** **21 01 00.7 +1.0**
CPSB Cacapava Do Su 63.19 137 *eP* **P** **21 01 01.5 +1.7**
ANGG Ammassalik, Gr 63.20 24 P **P** **21 00 58.4 -0.9**
ANGG Ammassalik, Gr 63.20 24 *i* P **P** **21 00 58.1 -1.1**
ANGG IAmb IAmb 21 00 59.2
comp=Z,30nm,0.9s
VAO Valinhos 63.36 127 *eP* **P** **21 00 60.0 -1.1**
VAO *epP* **sP** **21 01 08.0 +0.9**
DIAM Diamantina, MG 63.56 120 *eP* **P** **21 01 03.3 +0.7**
TRQA Tornquist 63.76 149 P **P** **21 01 03.6 +0.3**
TRQA IAmb IAmb 21 01 11.6
comp=Z,72nm,1.6s
TRQA Tornquist 63.76 149 P **P** **21 01 03.6 +0.3**
TRQA pmax pmax
comp=Z,72nm,1.6s
TRQA Tornquist 63.76 149 *eP* **P** **21 01 05.4 +2.0**
ICESG Greenland Ices 63.82 20 *i* P **P** **21 01 02.4 -1.4**
ICESG IAmb IAmb 21 01 03.7
comp=Z,58nm,0.9s
PET01 Itanhaem-SP 63.84 128 *eP* **P** **21 01 05.6 +1.5**
LL02 Futaleuf 63.87 159 P **P** **21 01 04.8 +0.9**
TBI Tubuai 63.90 233 *eLR* LR 21 20 18.0
comp=Z,3µm,24.2s
TBI Tubuai 63.90 233 *eT* T 22 09 48.8
comp=Z,42nm,0.2s
CALA Caldeira 63.94 55 *eP* **P** **21 01 02.7 -2.0**
comp=Z,176nm,1.1s
PCED Cedros 63.94 55 *eP* **P** **21 01 04.0 -0.6**
comp=Z,158nm,1.3s
AKUT Akutan 63.96 323 P **P** **21 01 03.6 -0.9**
AKUT IAmb IAmb 21 01 05.1
comp=Z,98nm,1.1s
PLTB Pedras Altas 63.98 138 *eP* **P** **21 01 04.6 -0.4**
PLTB *epP* **sP** **21 01 11.6 +0.6**
BSCB Bom Sucesso 64.02 124 *eP* **P** **21 01 05.9 +0.5**
EUNU Eureka 64.02 2 P **P** **21 01 04.3 -0.3**
PCAN Candelaria 64.11 55 *eP* **P** **21 01 05.9 +0.1**
comp=Z,144nm,0.8s
PICO Pico 64.15 55 *eP* **P** **21 01 07.7 +1.5**
comp=Z,238nm,0.8s
CNLB Canela 64.22 135 *eP* **P** **21 01 08.1 +1.5**
PPNO Prainha do Nor 64.28 55 *eP* **P** **21 01 08.5 +1.5**
comp=Z,268nm,1.3s
ROSA Rosais 64.29 55 *eP* **P** **21 01 05.1 -1.9**
comp=Z,117nm,1.2s
UNV Unalaska Valle 64.35 322 P **P** **21 01 06.7 -0.2**
UNV Unalaska Valle 64.35 322 P **P** **21 01 06.8 -0.2**
baz=97,SNR=46
UNV S **S** **21 09 43.8 -1.1**
baz=97
PID Ribeirinha 64.39 55 *eP* **P** **21 01 07.7 0.0**
comp=Z,167nm,1.0s
PMAN Manadas 64.41 55 *eP* **P** **21 01 08.3 +0.5**
comp=Z,123nm,1.1s
PARB Paraibuna 64.58 126 *eP* **P** **21 01 09.9 +0.8**
A21K Barrow 64.85 342 P **P** **21 01 09.7 -0.3**
A21K IAMs_20 IAMs_20 21 33 27.2
comp=Z,2µm,22.0s
A21K Barrow 64.85 342 P **P** **21 01 10.2 +0.2**
baz=115,SNR=7.2
TER01 Tubaro-SC 64.94 133 *eP* **P** **21 01 14.3 +3.1**
GDU01 Guandu, BA 64.96 114 *eP* **P** **21 01 12.2 +0.5**
GDU01 *epP* **sP** **21 01 18.5 +0.9**
PAGU Agualva, Azore 65.12 54 *eP* **P** **21 01 12.0 -0.4**
comp=Z,174nm,1.1s
RCBR Riachuelo 65.21 104 LR LR 21 31 06.4
comp=Z,649nm,18.7s,baz=87,slow=37
RCBR Riachuelo 65.21 104 P **P** **21 01 13.1 -0.3**
RCBR IAmb IAmb 21 01 15.8
comp=Z,79nm,1.2s
RCBR Riachuelo 65.21 104 P **P** **21 01 13.1 -0.3**
RCBR pmax pmax
comp=Z,79nm,1.2s
RCBR MLR MLR
comp=Z,700nm,21.0s
RCBR Riachuelo 65.21 104 *eP* **P** **21 01 14.7 +1.3**
ESAR Angra dos Reis 65.33 125 *eP* **P** **21 01 14.7 +0.9**
SUMG Summit 65.64 17 P **P** **21 01 15.4 -0.2**
SUMG IAmb IAmb 21 01 17.0
comp=Z,94nm,1.0s
SUMG Summit 65.64 17 P **P** **21 01 15.4 -0.2**
SUMG pmax pmax
comp=Z,94nm,1.0s
SUMG Summit 65.64 17 *i* P **P** **21 01 14.4 -1.2**
SUMG IAmb IAmb 21 01 16.5
comp=Z,35nm,0.9s
NIKH Nikolski High 65.65 321 P **P** **21 01 14.6 -1.0**
NIKH Nikolski High 65.65 321 P **P** **21 01 14.8 -0.7**
baz=95,SNR=17
NIKH S **S** **21 10 00.3 -0.6**
baz=95
RDOG Red Dog Mine 65.71 338 IAMs_20 IAMs_20 21 29 27.7
comp=Z,2µm,20.0s
RDOG Red Dog Mine 65.71 338 P P 21 01 09.9 -5.8
baz=107,SNR=35
CMC01 Camacan, BA 65.72 116 *eP* **P** **21 01 17.3 +0.7**
VAS01 Vassouras-RJ 65.73 124 *eP* **P** **21 01 17.9 +1.3**
ANM Nome 65.74 334 P **P** **21 01 16.2 +0.3**
ANM Nome 65.74 334 P **P** **21 01 16.2 +0.3**
ANM pmax pmax
comp=Z,162nm,1.3s
ANM MLR MLR
comp=Z,3µm,19.0s
ANM Nome 65.74 334 P **P** **21 01 16.7 +0.8**
baz=103,SNR=14
ANM S **S** **21 10 02.7 +1.0**
baz=103
SJMB Sao Joao De Ma 65.82 120 *eP* **P** **21 01 17.0 -0.2**

COYC	Coyhaique	65.89	160	P		P		21 01 18.0	+0.9	
GUA01	Guaratinga, BA	66.01	117	*e*P		P		21 01 19.2	+0.8	
GUA01				*ep*P		sP		21 01 25.5	+1.0	
BSFB	Barra de Sao F	66.16	120	*e*P		P		21 01 19.8	+0.5	
NBAN	Anadia - AL	66.28	108	*e*P		P		21 01 20.6	+0.4	
PSET	Sete Cidades	66.30	55	*e*P		P		21 01 16.8	-3.3	
	comp=Z,178nm,1.2s									
NAN01	Guarapari, ES	66.31	118	*e*P		P		21 01 20.8	+0.5	
GRON	Grota Negra	66.45	56	*e*P		P		21 01 23.3	+2.2	
	comp=Z,420nm,1.0s									
DUB01	Friburgo-RJ	66.49	123	*e*P		P		21 01 21.2	-0.3	
BART	Pico Bartolome	66.74	55	*e*P		P		21 01 22.6	-0.4	
	comp=Z,560nm,1.1s									
RIB01	Linhares ES	66.77	120	*e*P		P		21 01 23.3	+0.1	
SPIA	Saint Paul Isl	66.85	326	P		P		21 01 23.4	+0.2	
	baz=96									
PSMN	Pico do Norte,	66.87	56	*e*P		P		21 01 04.4	-19	
	comp=Z,147nm,1.2s									
CAM01	Campos-RJ	66.94	123	*e*P		P		21 01 24.3	+0.1	
NBRF	Rio Formoso -	66.96	107	*e*P		P		21 01 25.5	+0.9	
TNA	Tin City	67.01	335	P		P		21 01 24.7	+0.7	
TNA	Tin City	67.01	335	P		P		21 01 24.7	+0.7	
	baz=101,SNR=17									
TNA				S		S		21 10 19.4	+2.4	
	baz=101									
ALF01	Guarapari-ES	67.11	121	*e*P		P		21 01 25.3	-0.1	
GAMB	Gambell	68.33	333	P		P		21 01 32.9	+0.6	
GAMB				IAmb		IAmb		21 01 33.9		
	comp=Z,43nm,1.1s									
GAMB	Gambell	68.33	333	P		P		21 01 33.0	+0.7	
	baz=97,SNR=6.0									
BORG	Borgarnes	69.70	26	LR		LR		21 34 20.0		
	comp=Z,984nm,18.3s,baz=280,slow=38									
SCO	Scoresbysund	70.10	20	P		P		21 01 43.0	-0.2	
SCO				IAmb		IAmb		21 01 56.0		
	comp=Z,67nm,1.5s									
SCO				IAMs_20		IAMs_20		21 34 03.9		
	comp=Z,2µm,21.0s									
SCO	Scoresbysund	70.10	20	P		P		21 01 43.0	-0.2	
SCO				pmax		pmax				
	comp=Z,67nm,1.5s									
SCO				MLR		MLR				
	comp=Z,2µm,21.0s									
SCO	Scoresbysund	70.10	20	*i* P		P		21 01 43.1	-0.1	
SCO				IAmb		IAmb		21 01 44.5		
	comp=Z,4.8nm,0.7s									
KIWB	Kanaga Island	70.69	320	P		P		21 01 46.2	-1.1	
DBG	Daneborg	71.12	16	*i* P		P		21 01 47.8	-1.6	
DBG				IAmb		IAmb		21 01 49.4		
	comp=Z,6.5nm,0.9s									
SACV	Santiago Islan	71.24	79	P		P		21 01 50.8	-0.4	
SACV				IAmb		IAmb		21 01 55.1		
	comp=Z,57nm,1.1s									
DAG	Danmarks Havn	71.81	14	*i* P		P		21 01 52.0	-1.5	
DAG				IAmb		IAmb		21 01 53.1		
	comp=Z,18nm,0.7s									
NOR	Nord	72.72	9	*i* P		P		21 01 57.1	-1.8	
NOR				IAmb		IAmb		21 01 59.2		
	comp=Z,20nm,1.0s									
AMKA	Amchitka	72.93	319	P		P		21 02 00.3	-0.3	
PMOZ	Porto Moniz, M	73.75	60	*e*P		P		21 02 06.9	+0.9	
PMOZ				*e*S		S		21 11 40.6	+3.4	
PMOZ	Porto Moniz, M	73.75	60	*e*LR		LR		21 25 23.8		
	comp=Z,1µm,22.0s									
PMAR	Madeira	74.00	60	*e*P		P		21 02 08.0	+0.4	
	comp=Z,162nm,1.2s									
JMIC	Jan Mayen	74.56	20	LR		LR		21 37 41.0		
	comp=Z,751nm,18.9s,baz=263,slow=38									
JMIC	Jan Mayen	74.56	20	*e*P		P		21 02 10.9	+1.0	
JMIC				IVmB_BB				21 48 32.5		
	comp=Z,2µm,3.2s									
VAL	Valentia	75.97	40	P		P		21 02 17.8	-0.5	
VAL				pmax		pmax				
	comp=Z,132nm,1.0s									
BILL	Bilibino	77.17	337	IAMs_20		IAMs_20		21 39 49.5		
	comp=Z,1µm,20.0s									
BILL	Bilibino	77.17	337	*d* iP		P		21 02 24.9	+0.1	
BILL				*e*				21 05 21.5		
BILL				*e*PPP		PPP		21 07 10.0		
BILL				*i* S		S		21 12 03.7	-10	
BILL				*i* SSS		SSS		21 20 33.1		
BILL				pmax		pmax				
	comp=Z,111nm,1.2s									
BILL				MLR		MLR				
	comp=Z,2µm,16.0s									
MBO	M'Bour	77.65	78	IAMs_20		IAMs_20		21 34 04.8		
	comp=Z,1µm,20.0s									
KBS	Kingsbay	77.87	11	P		P		21 02 29.6	+1.0	
KBS				IAmb		IAmb		21 02 31.3		
	comp=Z,203nm,1.6s									
KBS	Kingsbay	77.87	11	IAMs_20		IAMs_20		21 40 56.9		
	comp=Z,1µm,18.0s									
KBS	Kingsbay	77.87	11	P		P		21 02 29.6	+1.0	
KBS				pmax		pmax				
	comp=Z,203nm,1.6s									
KBS				MLR		MLR				
	comp=Z,2µm,18.0s									
KBS	Kingsbay	77.87	11	*e*P		P		21 02 31.1	+2.5	
DSB	Dublin	78.08	38	P		P		21 02 29.4	-0.8	
AFI	Afiamalu	78.83	252	LR		LR		21 30 46.5		
	comp=Z,718nm,18.5s,baz=77,slow=30									
PMAFR	Mafra	78.96	53	*e*S		S		21 12 39.4	+5.4	
SPITS	Spitsbergen Ar	78.98	11	LR		LR		21 39 27.5		
	comp=Z,2µm,21.3s,baz=270,slow=37									
SPITS	Spitsbergen Ar	78.98	11	P		P		21 02 35.2	+0.4	
SPITS				pmax		pmax				
	comp=Z,62nm,1.2s									
SPB2	Spitsbergen Ar	78.99	11	P		P		21 02 34.2	-0.6	
PTO	Porto	79.02	50	*e*P		P		21 02 35.8	+0.2	
PMST	Lisbon--Monsan	79.08	53	*e*P		P		21 02 36.6	+0.6	
	comp=Z,202nm,1.4s									
PGAV	Gavieira, Arco	79.09	49	*e*P		P		21 02 35.9	-0.2	
	comp=Z,109nm,1.4s									
PGAV	Gavieira, Arco	79.09	49	*e*S		S		21 12 41.3	+5.9	
PGAV	Gavieira, Arco	79.09	49	*e*LR		LR		21 27 38.8		
	comp=Z,648nm,18.0s									
LIS	Lisbon	79.11	53	*e*P		P		21 02 36.4	+0.3	
LIS				IAmb		IAmb		21 02 37.8		
	comp=Z,159nm,1.0s									
LIS	Lisbon	79.11	53	*e*P		P		21 02 36.4	+0.3	
PSBE	So Bento	79.21	52	*e*P		P		21 02 36.8	0.0	
	comp=Z,116nm,1.7s									
PSBE	So Bento	79.21	52	*e*S		S		21 12 42.1	+5.4	
PCAB	Cabril	79.32	50	*e*P		P		21 02 37.0	-0.3	
	comp=Z,109nm,1.5s									
PCAS	Casmilo, Conde	79.32	51	*e*P		P		21 02 37.6	+0.3	
	comp=Z,295nm,1.3s									
PCAS	Casmilo, Conde	79.32	51	*e*S		S		21 12 39.8	+2.0	
HSPB	Hornsund (broa	79.35	12	*e*P		P		21 02 37.5	+0.8	
HSPB				*e*PP		PP		21 05 35.7	-0.6	
HSPB				*e*S		S		21 12 42.1	+5.3	
HSPB				*e*L		L		21 36 39.8		
	comp=Z,1µm,26.5s									
COI	Coimbra	79.35	51	*e*P		P		21 02 38.0	+0.5	
	comp=Z,159nm,1.3s									
COI				*e*S		S		21 12 38.0	-0.1	
COI	Coimbra	79.35	51	P		P		21 02 37.3	-0.2	
COI				IAmb		IAmb		21 02 38.9		
	comp=Z,123nm,1.1s									
COI				IAMs_20		IAMs_20		21 36 05.7		
	comp=Z,912nm,22.0s									
COI	Coimbra	79.35	51	P		P		21 02 37.3	-0.2	
COI				pmax		pmax				
	comp=Z,123nm,1.1s									
COI				MLR		MLR				
	comp=Z,900nm,22.0s									
EKA	Eskdalemuir Ar	79.48	35	LR		LR		21 35 51.9		
	comp=Z,945nm,22.0s,baz=291,slow=34									
POLO	Lamas de Olo	79.56	50	*e*P		P		21 02 38.5	-0.2	
	comp=Z,50nm,1.3s									
POLO	Lamas de Olo	79.56	50	*e*S		S		21 12 39.7	-0.8	
PVIS	Viseu	79.63	51	*e*P		P		21 02 38.9	-0.2	
	comp=Z,99nm,1.3s									
PVRL	Vila Real	79.64	50	*e*P		P		21 02 38.8	-0.3	
	comp=Z,80nm,1.5s									
PTEO	Sao Teotonio	79.69	54	*e*P		P		21 02 39.6	+0.3	
	comp=Z,180nm,1.6s									
PFVI	Vila Bisbo	79.70	54	*e*P		P		21 02 39.6	+0.2	
	comp=Z,227nm,1.3s									
PFVI	Vila Bisbo	79.70	54	P		P		21 02 39.1	-0.3	
PFVI	Vila Bisbo	79.70	54	P		P		21 02 40.2	+0.7	
PNCL	Nicolau / Gran	79.72	53	*e*P		P		21 02 39.1	-0.4	
	comp=Z,89nm,1.1s									
PNCL	Nicolau / Gran	79.72	53	*e*S		S		21 12 43.6	+1.6	
PMTG	Montargil	79.74	52	*e*P		P		21 02 39.5	-0.1	
	comp=Z,158nm,1.1s									
PMTG	Montargil	79.74	52	*e*S		S		21 12 43.2	+1.0	
MORF	Marmelete	79.80	54	*e*P		P		21 02 40.2	+0.2	
MORF				IAmb		IAmb		21 02 41.1		
	comp=Z,73nm,1.1s									
MORF	Marmelete	79.80	54	*e*P		P		21 02 40.3	+0.2	
	comp=Z,104nm,1.1s									
MORF	Marmelete	79.80	54	*e*P		P		21 02 40.2	+0.2	
MTE	Manteigas	79.96	51	*e*P		P		21 02 40.6	-0.3	
	comp=Z,147nm,1.2s									
MTE	Manteigas	79.96	51	*e*S		S		21 12 49.9	+5.2	
MTE	Manteigas	79.96	51	*e*LR		LR		21 28 02.9		
	comp=Z,581nm,16.0s									
MTE	Manteigas	79.96	51	P		P		21 02 40.5	-0.4	
MTE				IAmb		IAmb		21 02 41.8		
	comp=Z,106nm,1.0s									
MTE				IAMs_20		IAMs_20		21 43 39.7		
	comp=Z,764nm,18.0s									
MESJ	Messejana	80.01	54	*e*P		P		21 02 41.2	+0.1	
MESJ				IAmb		IAmb		21 02 42.7		
	comp=Z,48nm,1.0s									
MESJ				*e*PP		PP		21 05 41.9	-1.0	
MESJ	Messejana	80.01	54	*e*P		P		21 02 41.2	+0.1	
	comp=Z,63nm,1.2s									
MESJ	Messejana	80.01	54	*e*P		P		21 02 41.2	+0.1	
MESJ				*e*				21 05 41.8		
EVO	Evora	80.02	53	*e*P		P		21 02 41.1	0.0	
	comp=Z,122nm,1.2s									
PCBR	Castelo Branco	80.14	51	*e*P		P		21 02 41.5	-0.2	
	comp=Z,163nm,1.3s									
MVO	Moncorvo	80.17	50	*e*P		P		21 02 42.1	+0.1	
	comp=Z,117nm,1.3s									
MVO	Moncorvo	80.17	50	*e*S		S		21 12 49.0	+2.1	
MVO	Moncorvo	80.17	50	*e*LR		LR		21 28 29.3		
	comp=Z,432nm,22.0s									
PCVE	Castro Verde	80.20	54	*e*P		P		21 02 42.2	+0.1	
	comp=Z,102nm,1.2s									
PCVE	Castro Verde	80.20	54	*e*S		S		21 12 50.0	+2.9	
PBRG	Braganca	80.24	49	*e*P		P		21 02 42.0	-0.3	
	comp=Z,106nm,1.6s									
PBRG	Braganca	80.24	49	*e*S		S		21 12 52.3	+4.8	
PBEJ	Beja	80.25	53	*e*P		P		21 02 42.4	0.0	
	comp=Z,95nm,1.1s									
PESTR	Estremoz	80.27	52	*e*P		P		21 02 42.1	-0.4	
	comp=Z,93nm,1.3s									
PESTR	Estremoz	80.27	52	*e*S		S		21 12 48.7	+0.9	
PESTR	Estremoz	80.27	52	P		P		21 02 42.0	-0.4	
PESTR	Estremoz	80.27	52	P		P		21 02 43.1	+0.6	
PMRV	Marv??o	80.29	52	*e*P		P		21 02 42.2	-0.4	
	comp=Z,154nm,1.6s									
PMRV	Marv??o	80.29	52	*e*S		S		21 12 52.6	+4.5	
PMRV	Marv??o	80.29	52	*e*LR		LR		21 29 11.0		
	comp=Z,903nm,22.0s									
PBDV	Barranco-do-Ve	80.37	54	*e*P		P		21 02 43.7	+0.6	
	comp=Z,134nm,1.6s									
PBDV	Barranco-do-Ve	80.37	54	*e*S		S		21 12 53.7	+4.7	
PVAQ	Vaqueiros	80.50	54	*e*P		P		21 02 43.9	+0.1	
	comp=Z,129nm,1.2s									
PVAQ	Vaqueiros	80.50	54	*e*LR		LR		21 28 21.8		
	comp=Z,1µm,20.0s									
PVAQ	Vaqueiros	80.50	54	P		P		21 02 43.7	0.0	
PVAQ				IAmb		IAmb		21 02 45.3		
	comp=Z,84nm,1.1s									
PVAQ	Vaqueiros	80.50	54	P		P		21 02 44.5	+0.7	
BJO1	Bjornoya	81.30	14	*e*P		P		21 02 50.3	+3.0	
BJO1				IVmB_BB				21 45 46.3		
	comp=Z,2µm,3.6s									
TTIG	Tnine Tigouga,	81.51	61	P		P		21 02 49.0	-0.5	
AVE	Averroes	81.70	58	P		P		21 02 48.8	-1.4	
AVE				IAmb		IAmb		21 02 51.6		
	comp=Z,141nm,1.1s									
AVE				IAMs_20		IAMs_20		21 34 28.8		
	comp=Z,1µm,20.0s									
AVE	Averroes	81.70	58	P		P		21 02 50.5	+0.3	
OUK	Oukaimeden	81.83	60	P		P		21 02 52.0	+0.6	
SUE	Sulen	81.92	29	*e*P		P		21 02 52.2	+1.4	
ZHG	ZHG	82.29	58	P		P		21 02 54.0	+0.5	
BER	Bergen	82.41	29	*e*P		P		21 02 52.2	-1.1	
BER				IVmB_BB				21 46 18.4		
	comp=Z,854nm,2.2s									
AKN	Aaknes	82.55	27	*e*P		P		21 02 54.1	0.0	
AKN				IVmB_BB				21 41 15.9		
	comp=Z,935nm,2.7s									
PAB	San Pablo	82.55	51	P		P		21 02 54.1	-0.6	
PAB				IAmb		IAmb		21 02 56.2		
	comp=Z,95nm,1.1s									
PAB	San Pablo	82.55	51	P		P		21 02 54.1	-0.6	
PAB				pmax		pmax				
	comp=Z,95nm,1.2s									
PAB				MLR		MLR				
	comp=Z,800nm,22.0s									
PAB	San Pablo	82.55	51	P		P		21 02 54.8	+0.1	
LOF	Lofoten	82.74	21	*e*P		P		21 02 55.9	+0.9	
LOF				IAmb		IAmb		21 02 56.5		
	comp=Z,154nm,1.1s									
SMIR	Smir Dam	82.74	55	P		P		21 02 57.0	+1.3	
ESBB	Sonseca Array	82.80	51	P		P		21 02 55.8	-0.2	
ESDC	Sonseca Array	82.80	51	P		P		21 02 55.8	-0.1	
	comp=Z,25nm,1.0s,baz=297,slow=5.2,SNR=76									
ESDC				LR		LR		21 35 05.8		
	comp=Z,672nm,22.0s,baz=278,slow=32									
	comp=Z,25nm,1.0s									
ESDC	Sonseca Array	82.80	51	P		P		21 02 55.6	-0.4	
OUZM	OUZ	82.83	60	P		P		21 02 57.0	+0.6	
CHEFC	Chefchaouen	82.92	56	P		P		21 02 58.0	+1.3	
BLS5	Blasjo	83.27	30	*e*P		P		21 02 59.9	+2.0	
BLS5				IVmB_BB				21 31 34.9		
	comp=Z,1µm,2.2s									
STEI	Steigen	83.40	20	*e*P		P		21 02 59.4	+1.1	
STEI				IAmb		IAmb		21 03 00.0		
	comp=Z,90nm,1.0s									
DOMB	Dombas	83.50	27	*e*P		P		21 03 00.2	+1.1	
DOMB				IVmB_BB				21 40 34.4		
	comp=Z,405nm,2.5s									
TBLU	Trondheim	83.54	26	*e*P		P		21 03 00.4	+1.2	
TBLU				IAmb		IAmb		21 03 00.5		
	comp=Z,64nm,1.0s									
MFF	Saint Martin d	83.59	43	P		P		21 02 59.5	-0.3	
FAUS	Fauske	83.67	21	*e*P		P		21 03 00.5	+0.8	
FAUS				IVmB_BB				21 40 54.0		
	comp=Z,372nm,2.5s									
LCRM	LCR	83.67	57	P		P		21 03 01.0	+0.3	
SKAR	Skarslia	83.68	28	*e*P		P		21 03 00.5	+0.4	
CZD	Col de Zad	83.70	58	P		P		21 03 02.0	+1.0	
NSS	Namsos	83.71	24	*e*P		P		21 03 00.5	+0.5	
TRO	Tromso	83.75	18	*e*P		P		21 03 00.8	+0.7	
TRO				IAmb		IAmb		21 03 10.3		
	comp=Z,185nm,1.7s									
TRO	Tromso	83.75	18	SG		P		21 03 00.6	+0.5	
TZRR	Tazzarine	83.85	60	P		P		21 03 02.0	+0.4	
MOR8	Moi Rana	83.92	22	*e*P		P		21 03 03.3	+2.2	
MOR8				IAmb		IAmb		21 03 11.4		
	comp=Z,326nm,2.3s									
ZGR	Zagora	83.98	61	P		P		21 03 03.0	+0.7	
PALE	Palemas	84.00	55	P		P		21 03 02.2	0.0	
MDT	Midelt	84.11	58	LR		LR		21 36 06.5		
	comp=Z,1µm,20.8s,baz=315,slow=33									
MDT	Midelt	84.11	58	P		P		21 03 03.3	+0.4	
SEY	Seymchan	84.25	334	P		P		21 03 03.4	+0.6	
	comp=Z,19nm,0.9s,baz=86,slow=4.3,SNR=38									
SEY				LR		LR		21 43 26.9		
	comp=Z,1µm,19.3s,baz=58,slow=38									
	comp=Z,19nm,0.9s									
SEY	Seymchan	84.25	334	P		P		21 03 03.4	+0.6	
SEY	Seymchan	84.25	334	*c* iP		P		21 03 02.4	-0.4	
SEY				pmax		pmax				
	comp=Z,30nm,1.1s									
NC204	NORSAR Array S	84.55	27	P		P		21 03 04.3	-0.2	
HAMF	Hammerfest	84.57	17	*e*P		P		21 03 06.6	+2.4	
HAMF				IVmB_BB				21 41 08.1		
	comp=Z,1µm,3.3s									
NBO00	NORSAR Array S	84.66	28	P		P		21 03 05.4	+0.5	
KONO	Kongsberg	84.67	29	P		P		21 03 05.7	+0.6	
KONO				IAmb		IAmb		21 03 07.2		
	comp=Z,124nm,1.2s									
KONO	Kongsberg	84.67	29	IAMs_20		IAMs_20		21 39 10.0		
	comp=Z,965nm,22.0s									
KONO	Kongsberg	84.67	29	P		P		21 03 05.7	+0.6	
KONO				pmax		pmax				
	comp=Z,124nm,1.3s									
KONO				MLR		MLR				
	comp=Z,1µm,22.0s									
KONO	Kongsberg	84.67	29	*e*P		P		21 03 04.7	-0.3	
HOMB	Homborsund	84.69	31	*e*P		P		21 03 06.6	+1.6	
HOMB				IVmB_BB				21 38 18.3		
	comp=Z,1µm,2.8s									
CLF	Chambon-Foret	84.72	42	P		P		21 03 05.2	-0.3	
CLF				IAMs_20		IAMs_20		21 40 26.5		
	comp=Z,1µm,20.0s									
NAO01	NORSAR Array S	84.78	28	P		P		21 03 06.2	+0.6	
NC303	NORSAR Array S	84.84	27	P		P		21 03 06.1	+0.2	
NB2	NORSAR Subarra	84.85	27	P		P		21 03 06.4	+0.4	
	baz=292,slow=5.3									
NB2	NORSAR Subarra	84.85	27	P		P		21 03 06.4	+0.4	
	comp=Z,485nm,3.3s,baz=292,slow=5.3									
NOA	NORSAR Array B	84.85	27	P		P		21 03 06.2	+0.3	
	comp=Z,18nm,1.1s,baz=293,slow=5.0,SNR=19									
NOA				LR		LR		21 39 57.1		
	comp=Z,399nm,22.0s,baz=290,slow=35									
	comp=Z,18nm,1.1s									
NOA	NORSAR Array B	84.85	27	P		P		21 03 06.2	+0.3	
NOA	NORSAR Array B	84.85	27	P		P		21 03 06.2	+0.3	
PMSA	Palmer Station	84.86	166	LR		LR		21 33 10.6		
	comp=Z,838nm,18.1s,baz=318,slow=30									
NB201	NORSAR Array S	84.88	27	P		P		21 03 06.3	+0.2	
PET	Petropavlovsk	84.95	324	*e*P		P		21 03 05.3	-1.2	
PET				*e*				21 06 27.7		
PET				*e*S		S		21 13 29.9	-5.1	
PET				*e*SS		SS		21 19 10.9	+3.8	
PET				pmax		pmax				
	comp=Z,60nm,1.2s									
PET				pmax		pmax				
	comp=Z,400nm,15.8s									
PET				pmax		pmax				
	comp=Z,100nm,13.1s									
NC405	NORSAR Array S	85.04	27	P		P		21 03 07.1	+0.2	
NC405				IAmb		IAmb		21 03 16.4		
	comp=Z,117nm,1.4s									
NC602	NORSAR Array S	85.12	28	P		P		21 03 07.5	+0.2	
SNF	Seneffe	85.17	39	*d*P		P		21 03 07.9	+0.2	
	comp=Z,19nm,1.5s									
JBK	JBK	85.33	56	P		P		21 03 10.0	+0.9	
KTK1	Kautokeino	85.37	18	*e*P		P		21 03 09.5	+1.1	
PEA0B	Petropavlovsk-	85.46	324	P		P		21 03 09.3	+0.2	
PEA0B				IAmb		IAmb		21 03 10.8		
	comp=Z,106nm,1.3s									
PEA0B	Petropavlovsk-	85.46	324	*c* iP		P		21 03 09.3	+0.2	
PETK	Petropavlovsk-	85.46	324	P		P		21 03 09.3	+0.2	
	comp=Z,31nm,1.0s,baz=81,slow=9.2,SNR=33									
	comp=Z,31nm,1.0s									
PETK	Petropavlovsk-	85.46	324	P		P		21 03 08.7	-0.4	
PETK	Petropavlovsk-	85.46	324	P		P		21 03 09.3	+0.2	
DOU	Dourbes	85.50	39	*d*P		P		21 03 09.2	-0.2	
	comp=Z,21nm,1.3s									
BMRD	Maredsous	85.53	39	*d*P		P		21 03 09.4	-0.1	
	comp=Z,33nm,1.3s									
CART	Cartagena	85.61	52	IAMs_20		IAMs_20		21 39 37.4		
	comp=Z,790nm,20.0s									
ARCES	ARCESS Array B	85.72	17	P		P		21 03 09.2	-1.0	
	comp=Z,30nm,1.0s,baz=300,slow=4.9,SNR=34									
ARCES				LR		LR		21 43 33.5		
	comp=Z,584nm,20.6s,baz=305,slow=37									
	comp=Z,30nm,1.0s									
ARCES	ARCESS Array B	85.72	17	P		P		21 03 09.1	-1.0	
ARCES				IAmb		IAmb		21 03 11.5		
	comp=Z,38nm,1.1s									
ARCES	ARCESS Array B	85.72	17	P		P		21 03 09.1	-1.0	
ARCES				pmax		pmax				
	comp=Z,38nm,1.1s									
BCLA	Clavier	85.81	39	*d*P		P		21 03 11.0	+0.1	
	comp=Z,21nm,1.3s									
RCHB	Rochefort	85.86	39	*d*P		P		21 03 10.9	-0.2	
	comp=Z,27nm,1.3s									
BEBN	Eben Emael	85.90	38	*d*P		P		21 03 11.2	-0.1	
BEBN				*d*PcP		PcP		21 03 13.8	-0.3	
BSTI	Sart Tilman	85.91	38	*d*P		P		21 03 11.9	+0.5	
KEV	Kevo	86.01	17	P		P		21 03 10.1	-1.4	
KEV				IAmb		IAmb		21 03 12.2		
	comp=Z,41nm,1.1s									
KEV				IAMs_20		IAMs_20		21 45 15.8		
	comp=Z,684nm,20.0s									
KEV	Kevo	86.01	17	P		P		21 03 10.1	-1.4	
KEV				pmax		pmax				
	comp=Z,41nm,1.1s									
KEV				MLR		MLR				
	comp=Z,700nm,20.0s									
MEM	Membach	86.16	38	*d*P		P		21 03 12.7	0.0	
	comp=Z,20nm,1.0s									
BTNL	Ternell	86.25	38	*d*P		P		21 03 13.5	+0.3	
	comp=Z,12nm,1.4s									
BHOU	Houvegnez	86.25	39	*d*P		P		21 03 13.7	+0.6	

comp=Z,753nm,20.0s
LVZ Lovozero 89.32 16 *i* P **P** 21 03 25.4 -2.1
LVZ pmax pmax
comp=Z,34nm,1.1s
MSVF Nonsavu 89.32 251 LR LR 21 34 11.9
comp=Z,706nm,19.9s,baz=42,slow=29
MSVF Nonsavu 89.32 251 *ce*P **P** **21 03 32.6 +4.1**
MSVF pmax pmax
comp=Z,35nm,1.7s
RAO Raoul Island 89.36 239 LR LR 21 33 33.6
comp=Z,528nm,21.6s,baz=52,slow=29
MOX Moxa 89.44 37 P **P** **21 03 27.0 -1.4**
MOX pmax pmax
comp=Z,8.0nm,1.6s
GRFO Grafenberg 89.61 38 P **P** **21 03 28.9 -0.3**
GRFO IAms_20 IAms_20 21 40 46.3
comp=Z,809nm,21.0s
GRFO Grafenberg 89.61 38 P **P** **21 03 28.9 -0.3**
GRA1 Grafenberg Arr 89.61 38 P **P** **21 03 29.0 -0.2**
GRA1 IAms_20 IAms_20 21 40 57.3
comp=Z,876nm,22.0s
GRF Grafenberg Arr 89.61 38 P **P** **21 03 29.0 -0.2**
GRF pmax pmax
comp=Z,37nm,1.4s
GRF MLR MLR
comp=Z,900nm,22.0s
TUE Stuetta 89.79 41 P **P** **21 03 28.9 -1.5**
TUE IAms_20 IAms_20 21 43 23.4
comp=Z,1μm,21.0s
DAVA Damuels 89.79 40 *e*P **P** **21 03 30.1 -0.2**
comp=Z,32nm,1.1s,SNR=13
CLL Collm 89.94 36 P **P** **21 03 28.9 -1.8**
CLL IAms_20 IAms_20 21 47 25.8
comp=Z,658nm,20.0s
CLL Collm 89.94 36⇑ *i*P **P** **21 03 29.8 -0.9**
CLL *e* 21 13 58.0
CLL pmax pmax
comp=Z,20nm,1.5s
CLL MLR MLR
comp=Z,600nm,19.4s
CLL Collm 89.94 36⇑ *i*P **P** **21 03 29.8 -0.9**
comp=Z,20nm,1.5s
CLL *i* pP **sP** **21 03 38.2 +1.4**
CLL *ex* x 21 03 47.0
CLL *e*PP **PP** **21 07 01.0 -2.0**
CLL *es*PP 21 07 13.0
CLL *e*PPP PPP 21 08 58.0
CLL *e*SKSac **SKSac** **21 13 58.0 -3.3**
CLL *eS* **SKKSac** **21 14 18.0 +3.6**
CLL *ex* x 21 14 47.0
CLL *e*PS **PS** **21 15 30.0 -0.1**
CLL *e*PPS PPS 21 16 00.0
CLL *e*SS **SS** **21 20 24.0 +4.0**
CLL LmH 21 48 00.0
comp=N,400nm,21.7s
CLL LmH 21 48 00.0
comp=E,500nm,21.5s
CLL LmV 21 49 00.0
comp=Z,600nm,19.4s
DAVOX Davos/Dischmat 90.00 41 LR LR 21 46 18.9
comp=Z,819nm,18.7s,baz=301,slow=37
NKC Novy Kostel 90.09 37 *e*P P 21 03 40.4 +8.9
NKC *e* 21 07 04.0
NKC MLR MLR
comp=Z,1μm,16.7s
NKC Novy Kostel 90.09 37 *e*P P 21 03 40.4 +8.9
NKC *e*PP **PP** **21 07 04.0 -0.3**
NKC *ex* x 21 14 08.9
NKC AMS AMS 21 47 10.0
comp=Z,1μm,16.7s
RETA Reutte 90.26 40 *e*P **P** **21 03 32.1 -0.3**
comp=Z,23nm,1.2s,SNR=11
RETA *e*P **PP** **21 07 05.5 -0.3**
comp=Z,13nm,1.7s
FUORN Ofenpass-Fuorn 90.31 41 P **P** **21 03 32.6 -0.3**
FUORN IAms_20 IAms_20 21 43 54.1
comp=Z,777nm,22.0s
FETA Feichten 90.43 40 *i* P **P** **21 03 33.1 -0.2**
comp=Z,14nm,1.2s,SNR=6.0
FETA *e*P **PP** **21 07 06.4 -0.9**
comp=Z,8.1nm,1.1s
MOTA Moosalm 90.53 40 *e*P **P** **21 03 33.1 -0.7**
comp=Z,23nm,1.2s,SNR=6.8
MOTA *e*P **PP** **21 07 07.4 -0.6**
comp=Z,9.6nm,1.7s
SQTA Sankt Quirin 90.64 40 *e*P **P** **21 03 33.9 -0.3**
comp=Z,27nm,1.4s,SNR=7.0
BRG Berggiesshubel 90.66 36 *e*P **P** **21 03 33.7 -0.4**
BRG Amp 21 03 36.0
comp=Z,27nm,1.6s
BRG *ex* x 21 03 42.6
BRG Amp 21 03 45.5
comp=Z,30nm,1.8s
BRG *ex* x 21 04 07.8
BRG Amp 21 04 08.6
comp=Z,15nm,1.2s
BRG PP **PP** **21 07 08.2 -0.6**
BRG Amp 21 07 10.5
comp=Z,9.4nm,1.4s
BRG Berggiesshubel 90.66 36 *e*P **P** **21 03 33.6 -0.4**
BRG *e* 21 03 42.6
BRG 21 07 08.1
BRG 21 14 00.0
BRG *e* 21 15 41.0
BRG SS SS 21 20 41.0 +10
BRG pmax pmax
comp=Z,27nm,1.6s
BRG pmax pmax
comp=Z,9.0nm,1.4s
FINES FINESS Array B 90.80 23 P **P** **21 03 33.5 -1.0**
comp=Z,14nm,1.0s,baz=320,slow=5.7,SNR=20
FINES LR LR 21 47 49.8
comp=Z,933nm,19.2s,baz=310,slow=38
comp=Z,14nm,1.0s
FINES FINESS Array B 90.80 23 P **P** **21 03 33.0 -1.4**
FINES FINESS Array B 90.80 23 P **P** **21 03 33.5 -1.0**
FIA1 FINESS Array S 90.80 23 P **P** **21 03 33.3 -1.2**
WATA Walderalm 90.82 40 *e*P **P** **21 03 34.7 -0.4**
comp=Z,21nm,1.4s,SNR=6.2
WATA *e*P **PP** **21 07 08.6 -1.8**
comp=Z,18nm,1.6s
WTTA Wattenberg 90.89 40 *e*P **P** **21 03 35.2 -0.2**
comp=Z,19nm,1.6s,SNR=5.1
WTTA *i* P **PP** **21 07 11.2 +0.2**
comp=Z,13nm,1.6s
TIC Toumodi 90.99 83⇑ *i*PKP1 **P** **21 03 35.6 -0.7**
comp=Z,0.9nm,0.2s
LIC Lamto 91.10 83⇑ *i*PKP1 **P** **21 03 36.7 -0.1**
comp=Z,60nm,1.2s
DBIC Dimbokro 91.14 83 P **P** **21 03 36.4 -0.6**
comp=Z,20nm,1.0s,baz=281,slow=5.7,SNR=13
DBIC LR LR 21 42 50.6
comp=Z,376nm,19.8s,baz=308,slow=34
comp=Z,20nm,1.0s
DBIC Dimbokro 91.14 83 P **P** **21 03 35.5 -1.4**
DBIC IAmb IAmb 21 03 37.7
comp=Z,27nm,1.0s
DBIC Dimbokro 91.14 83 P **P** **21 03 35.6 -1.4**
DBIC pmax pmax
comp=Z,27nm,1.0s
PVCC Panska Ves 91.17 36 *e*P **P** **21 03 36.7 +0.2**
PVCC *e* 21 07 11.2
PVCC *eS* S 21 14 23.3 -11
PVCC MLR MLR
comp=Z,1μm,17.5s
PVCC Panska Ves 91.17 36 *e*P **P** **21 03 36.7 +0.2**
PVCC *e*PP **PP** **21 07 11.2 -1.6**
PVCC *ex* x 21 14 23.3
PVCC AMS AMS 21 50 40.0
comp=Z,1μm,17.5s
KHC Kasperske Hory 91.24 38 P **P** **21 03 35.8 -1.1**
KHC Kasperske Hory 91.24 38 *e*P **P** **21 03 36.9 0.0**
KHC *e* 21 03 46.0
KHC *e* 21 07 11.5
KHC MLR MLR
comp=Z,1μm,17.5s
KHC Kasperske Hory 91.24 38 *e*P **P** **21 03 36.9 0.0**
KHC pP **sP** **21 03 46.0 +3.0**
KHC *e*PP **PP** **21 07 11.5 -2.0**
KHC *ex* x 21 14 16.4
KHC AMS AMS 21 48 00.0
comp=Z,1μm,17.5s
GKP Gorka Klasztor 91.31 33 *e*P **P** **21 03 34.2 -2.8**
GKP *eS* **SKSac** **21 14 10.0 +0.9**
GKP *eL* L 21 43 57.0

comp=Z,1μm,22.4s
KIC Kosan Boka 91.34 83⇑ *i*PKP1 **P** **21 03 37.0 -0.9**
comp=Z,40nm,1.0s
PRU Pruhonice 91.41 37 *e*P **P** **21 03 37.4 -0.2**
PRU *e* 21 07 11.1
PRU MLR MLR
comp=Z,800nm,16.9s
PRU Pruhonice 91.41 37 *e*P **P** **21 03 37.4 -0.2**
PRU *e*PP **PP** **21 07 11.1 -3.6**
PRU *eS*KS **SKSac** **21 14 15.2 +5.4**
PRU AMS AMS 21 46 00.0
comp=Z,800nm,16.9s
CTI Castel Tesino 91.42 41 P **P** **21 03 36.9 -0.9**
CTI Castel Tesino 91.42 41 P **P** **21 03 36.9 -0.9**
CTI pmax pmax
comp=Z,21nm,1.2s
GEC2 GERESS Array S 91.44 38 P **P** **21 03 37.0 -0.9**
GERES GERESS Array B 91.44 38 P **P** **21 03 37.2 -0.7**
comp=Z,1.8nm,0.9s,baz=284,slow=5.4,SNR=15
GERES LR LR 21 44 57.8
comp=Z,904nm,19.8s,baz=300,slow=36
comp=Z,1.8nm,0.9s
GERES GERESS Array B 91.44 38 P **P** **21 03 36.6 -1.3**
GERES GERESS Array B 91.44 38 P **P** **21 03 37.2 -0.7**
ABTA Abfaltersbach 91.65 40 *i* P **P** **21 03 38.2 -0.6**
comp=Z,27nm,1.2s,SNR=10
ABTA *e*P **PP** **21 07 15.3 -1.6**
comp=Z,12nm,1.5s
TEOL Teolo 91.72 42 P **P** **21 03 37.4 -1.8**
TEOL IAmb IAmb 21 03 40.0
comp=Z,28nm,1.0s
CKRC Cesky Krumlov 91.81 38 *e*P **P** **21 03 41.5 +2.0**
CKRC *e*PP **PP** **21 07 15.2 -2.8**
CKRC *eS*KS **SKSac** **21 14 14.6 +2.4**
CKRC AMS AMS 21 44 30.0
comp=Z,1μm,20.7s
BIOA Bad Ischl, Aus 91.92 39 *e*P **P** **21 03 39.4 -0.7**
comp=Z,13nm,1.1s
CHVC Chvalec 91.98 36 *e*P **P** **21 03 40.1 -0.2**
CHVC *e*PP **PP** **21 07 17.4 -1.9**
CHVC *eS*KS SKSac 21 14 26.9 +14
CHVC AMS AMS 21 48 30.0
comp=Z,900nm,18.3s
STAL STALIGIAL 91.99 40 P **P** **21 03 39.4 -1.0**
STAL IAmb IAmb 21 03 41.0
comp=Z,38nm,1.3s
KSP Ksiaz 91.99 35 *e*P **P** **21 03 39.0 -1.3**
KSP *e*PP **PP** **21 07 13.0 -6.3**
KSP *eS* **SKSac** **21 14 14.8 +1.6**
KSP *eL* L 21 42 29.3
comp=Z,914nm,24.1s
UPC Upice 92.00 36 *e*P **P** **21 03 39.7 -0.6**
UPC *e* 21 07 17.4
UPC *eS* **SKSac** **21 14 15.6 +2.4**
UPC MLR MLR
comp=Z,1μm,16.5s
UPC Upice 92.00 36 *e*P **P** **21 03 39.7 -0.6**
UPC *e*PP **PP** **21 07 17.4 -2.0**
UPC *eS*KS **SKSac** **21 14 15.6 +2.4**
UPC AMS AMS 21 48 10.0
comp=Z,1μm,16.5s
CLUD Cludinico 92.01 40 P **P** **21 03 39.6 -0.8**
KBA Koelnbreinsper 92.02 40 *e*P **P** **21 03 40.2 -0.5**
comp=Z,15nm,1.2s,SNR=6.3
KBA *e*P **PP** **21 07 18.4 -1.5**
comp=Z,9.0nm,1.2s
OSTC Ostas 92.09 36 *e*P **P** **21 03 40.3 -0.4**
OSTC *e*PP **PP** **21 07 18.4 -1.7**
OSTC AMS AMS 21 48 20.0
comp=Z,1μm,19.0s
KLNR Kaliningrad 92.14 31 *i* P **P** **21 03 41.7 +0.9**
KLNR pmax pmax
comp=Z,16nm,1.0s
MOA Molln 92.23 39 *e*P **P** **21 03 40.9 -0.6**
comp=Z,16nm,1.5s,SNR=6.7
DPC Dobruska-Polom 92.25 36 *e*P **P** **21 03 41.6 +0.1**
DPC *e* 21 07 19.3
DPC *eS* **SKSac** **21 14 17.8 +3.1**
DPC MLR MLR
comp=Z,1μm,16.1s
DPC Dobruska-Polom 92.25 36 *e*P **P** **21 03 41.6 +0.1**
DPC *e*PP **PP** **21 07 19.3 -2.1**
DPC *eS*KS **SKSac** **21 14 17.8 +3.1**
DPC AMS AMS 21 48 10.0
comp=Z,1μm,16.1s
TREC Trest 92.28 37 *e*PP **PP** **21 07 21.2 -0.4**
TREC AMS AMS 21 51 00.0
comp=Z,700nm,15.4s
MYKA Terra Mystica 92.40 40 *i* P **P** **21 03 41.6 -0.7**
comp=Z,7.6nm,0.9s
PRED Cave del Predi 92.44 40 P **P** **21 03 41.4 -1.2**
KRLC Kraliky 92.64 36 *e*P **P** **21 03 43.2 -0.1**
KRLC *e* 21 07 24.0
KRLC *eS* S 21 14 32.2 -16
KRLC MLR MLR
comp=Z,900nm,16.5s
KRLC Kraliky 92.64 36 *e*P **P** **21 03 43.2 -0.1**
KRLC *e*PP **PP** **21 07 24.0 -0.5**
KRLC *ex* x 21 14 32.2
KRLC AMS AMS 21 48 30.0
comp=Z,900nm,16.5s
VRAC Vranov 92.91 37 LR LR 21 49 01.6
comp=Z,638nm,18.5s,baz=305,slow=38
VRAC Vranov 92.91 37 *e*P **P** **21 03 44.1 -0.4**
VRAC *e* 21 03 52.2
VRAC *e*PP **PP** **21 07 24.6 -1.9**
KRUC Moravsky 92.91 37 *e*P **P** **21 03 43.5 -1.0**
OBKA Obir 93.02 40 *e*P **P** **21 03 44.5 -0.7**
comp=Z,19nm,1.4s
CONA Conrad Observa 93.14 38 *i* P **P** **21 03 45.5 -0.2**
comp=Z,12nm,1.3s,SNR=7.8
MORC Moravsky Berou 93.21 36 P **P** **21 03 45.1 -0.9**
MORC Moravsky Berou 93.21 36 P **P** **21 03 45.1 -0.9**
MORC pmax pmax
comp=Z,20nm,1.4s
MORC Moravsky Berou 93.21 36 *e*P **P** **21 03 45.3 -0.7**
MORC *e* 21 03 53.7
SOKA Soboth 93.23 39 *e*P **P** **21 03 45.3 -0.9**
comp=Z,23nm,1.2s,SNR=6.7
SOKA *e*P **PP** **21 07 27.8 -1.5**
comp=Z,8.4nm,1.1s
ARSA Arzberg 93.26 39 *e*P **P** **21 03 45.5 -0.7**
comp=Z,7.7nm,1.2s
YAK Yakutsk 93.39 340 P **P** **21 03 46.6 +0.2**
comp=Z,43nm,0.9s,baz=53,slow=1.4,SNR=32
YAK LR LR 21 50 38.9
comp=Z,1μm,18.6s,baz=77,slow=39
comp=Z,43nm,0.9s
YAK Yakutsk 93.39 340 P **P** **21 03 45.5 -0.9**
YAK Yakutsk 93.39 340 *c* *i*P **P** **21 03 46.4 0.0**
YAK *e* 21 03 49.9
YAK *e* 21 07 26.8
YAK *eS* **SKSac** **21 14 15.6 -4.8**
YAK *e* 21 14 50.3
YAK pmax pmax
comp=Z,96nm,1.1s
YAK pmax pmax
comp=N,9.0nm,1.1s
YAK pmax pmax
comp=E,12nm,1.1s
YAK pmax pmax
comp=Z,209nm,3.3s
YAK pmax pmax
comp=N,65nm,3.2s
YAK pmax pmax
comp=E,41nm,2.7s
YAK smax smax
comp=N,77nm,3.5s
YAK smax smax
comp=E,38nm,3.7s
PABE Paberze 93.44 29 *e*P **P** **21 03 46.3 -0.5**
RONA Rosalia, Austr 93.51 38 *i* P **P** **21 03 47.0 -0.4**
comp=E,16nm,1.3s,SNR=6.7
RONA *e*P **PP** **21 07 28.5 -2.9**
comp=E,13nm,1.4s
OKC Ostrava-Krasne 93.52 36 *e*PP **PP** **21 07 31.5 +0.2**
OKC *e*SKS **SKSac** **21 14 23.2 +1.6**
OKC AMS AMS 21 48 10.0
comp=E,1μm,16.6s
MAUC Maruska 93.58 36 *e*PP **PP** **21 07 32.2 +0.4**
MAUC AMS AMS 21 53 20.0
comp=E,1μm,16.1s
ZST Bratislava 93.74 37 *e*P **P** **21 03 48.8 +0.4**
ZST Bratislava 93.74 37 *e*P **P** **21 03 48.8 +0.4**
JAVC Velka Javorina 93.74 37 *e*P P 21 03 42.2 -6.3

JAVC *e* 21 03 49.4
MODS Modra-Piesok 93.76 37 *e*P **P** **21 03 48.3 -0.2**
MODS Modra-Piesok 93.76 37 *e*P **P** **21 03 48.3 -0.2**
BEL Belsk 93.91 33 *e*P **P** **21 03 48.2 -0.9**
BEL *e*PP **PP** **21 07 32.8 -1.5**
BEL *eL* L 21 45 19.5
comp=E,1μm,22.1s
SUW Suwalki 93.92 30 *e*P **P** **21 03 47.5 -1.6**
SUW *e*PP **PP** **21 07 32.4 -1.9**
SUW *eS* SKSac 21 14 37.3 +14
SUW *eL* L 21 41 45.6
comp=E,965nm,24.8s
SUW Suwalki 93.92 30 IAms_20 IAms_20 21 47 41.5
comp=Z,978nm,18.0s
SUW Suwalki 93.92 30 *e*P **P** **21 03 47.7 -1.3**
KEST Kesra 94.05 51 P **P** **21 03 49.9 -0.3**
comp=Z,10nm,1.0s,baz=269,slow=4.3,SNR=8.5
KEST LR LR 21 44 18.6
comp=Z,717nm,20.0s,baz=271,slow=34
comp=Z,10nm,1.0s
KEST Kesra 94.05 51 P **P** **21 03 49.5 -0.7**
OJC Ojcow 94.24 35 *e*P **P** **21 03 47.2 -3.4**
OJC *e*PP **PP** **21 07 33.8 -3.1**
OJC *eS* **SKSac** **21 14 35.0 +9.5**
OJC *eL* L 21 44 01.0
comp=Z,925nm,22.4s
MPLH Magyarpolny 94.50 38 P **P** **21 03 51.9 0.0**
IIGN Ignalina 94.56 28 *e*P **P** **21 03 51.8 -0.2**
IDID Didziasalis 94.82 28 *e*P **P** **21 03 52.7 -0.4**
NIE Niedzica 94.94 35 *e*P **P** **21 03 52.5 -1.4**
NIE *e*PP **PP** **21 07 37.5 -4.9**
NIE *eS* **SKSac** **21 14 32.6 +3.2**
NACGM Naroch 95.09 28⇓ *e*P **P** **21 03 53.0 -1.4**
baz=308
KOVH Kovagotottos 95.38 39 P **P** **21 03 54.4 -1.5**
TOA0 Torodi Ar. Sit 95.41 75 P **P** **21 03 55.6 -1.0**
TORD Torodi Ar. Bea 95.41 75 P **P** **21 03 55.1 -1.6**
comp=Z,5.9nm,0.9s,baz=288,slow=4.7,SNR=25
TORD PKKPbc **PKKPdf** **21 20 55.0 +6.1**
comp=Z,1.0nm,0.8s,baz=86,slow=3.8,SNR=5.7
TORD LR LR 21 45 07.2
comp=Z,960nm,19.6s,baz=314,slow=34
comp=Z,5.9nm,0.9s
TORD Torodi Ar. Bea 95.41 75 P **P** **21 03 55.1 -1.6**
TORD Torodi Ar. Bea 95.41 75 PKKPdf 21 20 55.0 +6.1
PSZ Piszkesteto 95.50 37 P **P** **21 03 56.2 -0.3**
PSZ IAms_20 IAms_20 21 51 20.9
comp=Z,934nm,18.0s
PSZ Piszkesteto 95.50 37 P **P** **21 03 56.3 -0.3**
PSZ pmax pmax
comp=Z,22nm,1.4s
PSZ MLR MLR
comp=Z,900nm,18.0s
PSZ Piszkesteto 95.50 37 P **P** **21 03 56.5 -0.1**
PAOL Paolisi 95.53 45 P **P** **21 03 55.0 -1.8**
MORH Mrgy, Hungar 95.64 39 P **P** **21 03 56.5 -0.6**
TAM Tamanrasset 95.72 64 IAms_20 IAms_20 21 42 35.2
comp=Z,1μm,22.0s
MNK Minsk 95.84 28 *i* P P 21 03 47.9 -10
MNK *i* S **SKSac** **21 14 23.3 -11**
MNK pmax pmax
comp=E,1.0nm,0.8s
MNK pmax pmax
comp=Z,17nm,0.7s
MNK pmax pmax
comp=N,41nm,0.9s
MNK MLR MLR
comp=E,112nm,24.0s
MNK MLR MLR
comp=N,938nm,22.0s
MNK Minsk 95.84 28 *i* P P 21 03 47.9 -10
comp=E,1.0nm,0.8s
MNK *i* P P 21 03 47.9 -10
comp=N,41nm,0.9s
MNK *i* P P 21 03 47.9 -10
comp=Z,17nm,0.7s,baz=309
MNK *i* PP PP 21 07 36.7 -12
MNK *i* PPP PPP 21 09 38.4
MNK *i* S **SKSac** **21 14 23.3 -11**
MNK *i* PS **PS** **21 16 20.5 -15**
MNK *i* SS SS 21 21 28.4 -16
MNK *i* SSS SSS 21 25 10.9
MNK *i* LQ LQ 21 41 02.9
MNK *i* LR LR 21 43 39.2
MNK *i* LRM MLR 21 47 23.3
comp=E,112nm,23.9s
MNK *i* LRM MLR 21 47 23.3
comp=Z,5μm,28.9s
MNK *i* LRM MLR 21 47 48.9
comp=N,938nm,21.7s
KLMR Klimovskoe 95.95 19 *e*P **P** **21 03 55.7 -2.5**
KLMR *eS* **SKSac** **21 14 32.0 -2.1**
KLMR *ePS* **PS** **21 16 35.2 -0.7**
KLMR pmax pmax
comp=Z,43nm,1.2s
KLMR Klimovskoe 95.95 19 *e*P **P** **21 03 55.7 -2.5**
KLMR AMP 21 03 58.0
comp=Z,43nm,1.2s
KLMR *eS* **SKSac** **21 14 32.1 -2.1**
KLMR *eS* **SKSac** **21 14 32.1 -2.1**
KLMR *ePS* **PS** **21 16 35.3 -0.7**
KLMR *ePS* **PS** **21 16 35.3 -0.7**
KLMR LQ LQ 21 41 20.6
KLMR LQ LQ 21 41 20.6
KLMR LR LR 21 44 07.5
URZ Urewera 96.01 232 LR LR 21 37 15.6
comp=Z,736nm,21.9s,baz=31,slow=29
CLTB Caltabellotta 96.12 48 IAms_20 IAms_20 21 43 42.5
comp=Z,998nm,20.0s
UZH Uzhgorod 96.47 35 *e*P **P** **21 04 02.0 +1.2**
UZH *i* 21 04 07.8
UZH *i* 21 04 09.9
UZH *e* 21 07 56.9
UZH *eS* **S** **21 15 14.0 -7.1**
UZH *i* PS **PS** **21 16 45.2 +3.0**
UZH *i* SS **SS** **21 21 59.5 +6.0**
LVV L'vov 96.74 34 *e*P **P** **21 04 01.3 -0.7**
LVV *eS* S 21 15 12.1 -11
LVV MLR MLR
comp=Z,600nm,22.0s
YSS Yuzh-Sakhalins 96.81 323 IAms_20 IAms_20 21 50 58.2
comp=Z,655nm,19.0s
YSS Yuzh-Sakhalins 96.81 323 *e*P **P** **21 04 02.4 0.0**
YSS *e* 21 07 58.0
YSS *eS* **S** **21 15 20.5 -3.6**
YSS *ePS* **PS** **21 16 55.6 +10**
YSS *eSS* **SS** **21 22 03.6 +5.3**
YSS pmax pmax
comp=Z,40nm,1.1s
CUC Castrocucco 96.85 45 P **P** **21 04 01.2 -1.6**
VAE Valguarnera 97.02 48 LR LR 21 45 21.1
comp=Z,438nm,19.6s,baz=266,slow=34
PRGR Permogore 97.14 17⇑ *i*P **P** **21 04 02.5 -1.0**
DIVS Divibare 97.54 40 P **P** **21 04 05.3 -0.6**
DIVS IAms_20 IAms_20 21 50 27.5
comp=Z,683nm,19.0s
CEL Celeste 97.71 47 IAms_20 IAms_20 21 42 23.8
comp=Z,649nm,20.0s
TIP Timpagrande 97.88 45 IAms_20 IAms_20 21 49 50.6
comp=Z,685nm,20.0s
PDG Podgorica 97.94 42 P **P** **21 04 06.9 -0.6**
PDG IAms_20 IAms_20 21 49 30.5
comp=Z,559nm,19.0s
GRNR Gornyy 98.03 329⇑ *i*P **P** **21 04 07.7 -0.1**
GRNR pmax pmax
comp=Z,8.0nm,1.1s
SNZO South Karori 98.59 230 IAms_20 IAms_20 21 37 40.5
comp=Z,977nm,20.0s
AKASG Malin Array Be 98.87 31 P **P** **21 04 09.7 -1.9**
comp=Z,0.4nm,0.4s,baz=299,slow=3.7,SNR=11
AKASG PP **PP** **21 08 09.0 -3.5**
comp=Z,2.0nm,0.8s,baz=306,slow=6.4,SNR=5.6
AKASG LR LR 21 51 14.5
comp=Z,758nm,19.3s,baz=292,slow=37
comp=Z,0.4nm,0.4s
AKASG Malin Array Be 98.87 31 P **P** **21 04 09.7 -1.9**
AKASG Malin Array Be 98.87 31 *i* P **P** **21 04 09.6 -1.9**
TIR Tirane 98.88 42 IAms_20 IAms_20 21 41 08.5
comp=Z,1μm,19.0s
MOS Moscow 99.11 24 *e*P **Pdif** **21 04 08.2 -4.3**
OBN Obninsk 99.15 24 LR LR 21 52 08.2
comp=Z,179nm,19.4s,baz=338,slow=37
OBN Obninsk 99.15 24 IAms_20 IAms_20 21 48 38.1
comp=Z,965nm,21.0s

OBN	**Obninsk**	**99.15**	**24**	*ce*P		**Pdif**	**21 04 11.3**	**-1.4**
OBN				*e*			21 08 11.3	
OBN				*i* S		**SKSac**	**21 14 52.3**	**+1.6**
OBN				*i* SS		**SS**	**21 22 41.1**	**+11**
OBN				*i* SSS		SSS	21 26 14.6	
OBN				pmax		pmax		
	comp=Z,51nm,2.1s							
OBN				MLR		MLR		
	comp=Z,808nm,19.0s							
ZEA	**Zeya**	**100.23**	**335**	*e*P		**Pdif**	**21 04 17.4**	**-0.2**
ZEA				*e*			21 08 31.2	
ZEA				*e*			21 14 55.1	
MLR	**Muntele Rosu**	**100.31**	**36**	IAMs_20		IAMs_20	21 42 17.2	
	comp=Z,752nm,20.0s							
MILM	**Milestii Mici**	**101.03**	**34**	*e*P		**Pdif**	**21 04 18.0**	**-3.3**
MILM	**Milestii Mici**	**101.03**	**34**	*e*PP		**PP**	**21 08 28.0**	**-1.0**
MILM	**Milestii Mici**	**101.03**	**34**	*i* PS		PS	21 17 28.0	-3.5
MILM				LRM		MLR	21 53 22.0	
	comp=Z,600nm,20.0s							
MILM	**Milestii Mici**	**101.03**	**34**	*e*P		**Pdif**	**21 04 18.0**	**-3.3**
MILM				*e*			21 08 28.0	
MILM				*e*PPP		PPP	21 10 40.0	
MILM				*i* PS		**PS**	**21 17 28.0**	**-3.5**
KLR	**Kul'dur**	**101.33**	**329**	*i* P		**Pdif**	**21 04 21.9**	**-0.7**
KLR				pmax		pmax		
	comp=Z,5.0nm,1.3s							
BOD	**Bodaibo**	**101.56**	**343**	*e*P		**Pdif**	**21 04 21.6**	**-1.8**
BOD				pmax		pmax		
	comp=Z,8.0nm,1.5s							
LPSR	**Galich'ya Gora**	**101.94**	**25**	*e*P		**Pdif**	**21 04 21.9**	**-3.3**
LPSR				pmax		pmax		
	comp=Z,10.0nm,1.0s							
VORR	**Voronezh**	**102.75**	**26**	*e*P		**Pdif**	**21 04 28.6**	**-0.2**
VORR				pmax		pmax		
	comp=Z,30nm,0.5s							
VSR	**Storozhevoye**	**103.07**	**26**	*e*P		**Pdif**	**21 04 28.4**	**-1.9**
VSR				pmax		pmax		
	comp=Z,20nm,1.0s							
HNR	**Honiara**	**104.09**	**264**	IAMs_20		IAMs_20	21 56 43.0	
	comp=Z,624nm,18.0s							
VRH	**Novokhopyorsk**	**104.13**	**25**	*e*P		**Pdif**	**21 04 31.6**	**-3.4**
VRH				pmax		pmax		
	comp=Z,10.0nm,1.0s							
USRK	**Ussuriysk Ar.**	**104.51**	**325**	Pdiff		**Pdif**	**21 04 38.0**	**+1.1**
	comp=Z,1.3nm,0.7s,baz=79,slow=7.5,SNR=2.4							
USRK	**Ussuriysk Ar.**	**104.51**	**325**			**Pdif**	**21 04 38.0**	**+1.1**
USRK	**Ussuriysk Ar.**	**104.51**	**325**	P		**Pdif**	**21 04 38.0**	**+1.1**
ARU	**Arti**	**104.93**	**13**	IAMs_20		IAMs_20	21 58 38.7	
	comp=Z,1μm,20.0s							
ARU	**Arti**	**104.93**	**13**	P		**Pdif**	**21 04 37.1**	**-1.3**
ARU				S		**SKSac**	**21 15 16.6**	**-1.7**
ARU				SP		**SP**	**21 18 05.0**	**-4.8**
MJAR	**Matsushiro Arr**	**105.37**	**316**	PP		**PP**	**21 09 00.5**	**-1.4**
	comp=Z,1.7nm,1.0s,baz=44,slow=5.6,SNR=4.0							
MDJ	**Mudanjiang**	**105.52**	**327**	IAMs_20		IAMs_20	21 56 35.1	
	comp=Z,542nm,20.0s							
QSPA	**South Pole Qui**	**106.22**	**180**	IAMs_20		IAMs_20	21 44 13.3	
	comp=Z,861nm,21.0s							
ANTO	**Ankara**	**107.74**	**38**	IAMs_20		IAMs_20	21 40 21.5	
	comp=Z,749nm,22.0s							
CN2	**Changchun**	**108.22**	**328**	Pdif		**Pdif**	**21 04 58.0**	**+4.6**
CN2				PP		**PP**	**21 09 29.5**	**+7.1**
CN2				SS		SS	21 24 37.5	+1.7
CN2				LR		LR		
	comp=Z,400nm,20.0s							
CN2				LR		LR		
	comp=Z,400nm,20.0s							
CN2				LR		LR		
	comp=Z,300nm,20.0s							
BRTR	**Keskin Array B**	**108.33**	**37**	PP		**PP**	**21 09 17.1**	**-6.4**
	comp=Z,1.2nm,0.8s,baz=294,slow=1.4,SNR=4.7							
ZALV	**Zalesovo Beam**	**110.01**	**358**	Pdiff		**Pdif**	**21 05 01.2**	**+0.2**
	comp=Z,1.0nm,0.7s,baz=321,slow=1.9,SNR=4.3							
ZALV				PP		**PP**	**21 09 32.0**	**-2.7**
	comp=Z,6.2nm,0.9s,baz=359,slow=9.2,SNR=7.1							
KIV	**Kislovodsk**	**110.10**	**29**	IAMs_20		IAMs_20	21 55 49.4	
	comp=Z,480nm,21.0s							
AKTO	**Aktyubinsk**	**110.29**	**16**	PP		**PP**	**21 09 34.6**	**-2.4**
	comp=Z,3.7nm,0.9s,baz=317,slow=6.4,SNR=5.5							
SNY	**Shenyang**	**110.60**	**328**	⇓Pdif		**Pdif**	**21 05 10.5**	**+6.5**
SNY				PP		**PP**	**21 09 41.8**	**+2.2**
SNY	**Shenyang**	**110.60**	**328**	SS		SS	21 25 15.8	+8.0
SNY				AMB		AMB		
	comp=Z,130nm,8.4s							
SNY				LR		LR		
	comp=N,380nm,13.7s							
SNY				LR		LR		
	comp=E,190nm,12.4s							
SNY				LR		LR		
	comp=Z,560nm,21.2s							
KSRS	**Korea Array**	**111.28**	**322**	PP		**PP**	**21 09 44.0**	**-0.8**
	comp=Z,1.1nm,0.8s,baz=58,slow=39,SNR=5.7							
KSRS	**Korea Array**	**111.28**	**322**			**PP**	**21 09 44.0**	**-0.8**
NVL	**N'lazarevskaya**	**111.77**	**160**	*i* PKIKP		PKiKP	21 09 22.6	+17
NVL				*e*SS		SS	21 25 40.3	+17
INCN	**Inchon**	**112.02**	**323**	IAMs_20		IAMs_20	22 04 14.2	
	comp=Z,427nm,19.0s							
SONM	**Songino Array**	**112.54**	**342**	PP		**PP**	**21 09 53.1**	**-0.2**
	comp=Z,1.8nm,1.0s,baz=15,slow=6.3,SNR=4.6							
MAK	**Makhachkala**	**113.06**	**27**	*i* P		**Pdif**	**21 05 09.7**	**-5.2**
MAK				*i*			21 09 06.0	
MAK				*e*PS		**PS**	**21 19 33.6**	**+0.8**
MAK				pmax		pmax		
	comp=Z,126nm,1.4s							
MAK				MLR		MLR		
	comp=Z,684nm,20.0s							
KURBB	**Kurchatov Arra**	**113.31**	**2**	PKKPbc		PKKPbc	21 19 54.2	-1.6
	comp=Z,0.6nm,0.7s,baz=184,slow=2.4,SNR=4.9							
BRZS	**Berezniki**	**113.51**	**7**	*i* PKIKP		**PKiKP**	**21 09 09.2**	**-0.4**
BRZS				*e*			21 09 58.0	
BRZS	**Berezniki**	**113.51**	**7**	*e*PKiKP		**PKiKP**	**21 09 09.2**	**-0.4**
	baz=6.7							
BRZS				*e*PP		**PP**	**21 09 58.0**	**-1.9**
	baz=6.7							
GNI	**Garni**	**114.00**	**31**	IAMs_20		IAMs_20	21 58 13.2	
	comp=Z,627nm,21.0s							
BJT	**Baijiatuan**	**115.58**	**331**	IAMs_20		IAMs_20	22 03 22.4	
	comp=Z,581nm,21.0s							
HHC	**Hu-ho-hao-te**	**116.88**	**335**	*e*PKP		**PKPdf**	**21 09 12.8**	**-3.8**
HHC				PP		**PP**	**21 10 26.5**	**+2.3**
HHC				SS		SS	21 26 30.3	-0.4
HHC				AMB		AMB		
	comp=Z,500nm,10.5s							
HHC				LR		LR		
	comp=Z,870nm,19.0s							
HHC				LR		LR		
	comp=Z,820nm,19.8s							
HHC				LR		LR		
	comp=Z,2μm,20.7s							
MK31	**Makanchi Array**	**117.21**	**360**	PKPdf		**PKPdf**	**21 09 15.0**	**-1.9**
MK31	**Makanchi Array**	**117.21**	**360**	PKIKP		**PKPdf**	**21 09 15.0**	**-1.9**
MKAR	**Makanchi Array**	**117.21**	**360**	Pdiff		**Pdif**	**21 05 33.5**	**+0.1**
	comp=Z,0.6nm,0.8s,baz=5.7,slow=1.4,SNR=4.2							
MKAR				PKP		**PKPdf**	**21 09 15.6**	**-1.3**
	comp=Z,1.4nm,0.8s,baz=333,slow=1.4,SNR=9.6							
MKAR	**Makanchi Array**	**117.21**	**360**			**Pdif**	**21 05 33.5**	**+0.1**
MKAR	**Makanchi Array**	**117.21**	**360**	PKIKP		**PKPdf**	**21 09 15.6**	**-1.3**
HNS	**HongShan**	**118.37**	**331**	⇑PKP		**PKPdf**	**21 09 18.8**	**-0.5**
HNS				PP		**PP**	**21 10 34.5**	**+0.1**
HNS				AMB		AMB		
	comp=Z,170nm,5.1s							
HNS				LR		LR		
	comp=Z,300nm,19.9s							
HNS				LR		LR		
	comp=Z,680nm,17.1s							
HNS				LR		LR		
	comp=Z,950nm,18.8s							
BTLS	**Baital**	**118.54**	**6**	*i* PKIKP		**PKPdf**	**21 09 18.3**	**-1.1**
BTLS				*e*			21 10 32.0	
BTLS	**Baital**	**118.54**	**6**	*e*PKiKP		**PKPdf**	**21 09 18.4**	**-1.1**
	baz=6.6							
BTLS				*e*PP		**PP**	**21 10 32.0**	**-3.1**
	baz=6.6							
TDK	**Taldyqorghan**	**118.92**	**3**	*i* PKIKP		**PKPdf**	**21 09 18.2**	**-2.0**
TDK				*e*			21 10 36.1	
TDK	**Taldyqorghan**	**118.92**	**3**	*e*PKiKP		**PKPdf**	**21 09 18.2**	**-2.0**
	baz=3.1							
TDK				*e*PP		**PP**	**21 10 36.2**	**-1.6**
	baz=3.1							
SSE	**Sheshan**	**119.70**	**321**	PKP		**PKPdf**	**21 09 20.8**	**-1.3**
SSE				PP		**PP**	**21 10 46.0**	**+2.0**
SSE				SS		SS	21 27 01.8	-6.0
SSE				AMB		AMB		
	comp=Z,55nm,8.0s							
SSE				LR		LR		
	comp=Z,150nm,20.4s							
SSE				LR		LR		
	comp=Z,150nm,20.1s							
KUU	**Kurty**	**119.89**	**5**	*i* PKIKP		**PKPdf**	**21 09 20.2**	**-1.9**
KUU				*e*			21 10 41.7	
KUU	**Kurty**	**119.89**	**5**	*e*PKiKP		**PKPdf**	**21 09 20.2**	**-1.9**
	baz=4.9							
KUU				*e*PP		**PP**	**21 10 41.7**	**-2.8**
	baz=4.9							
WMQ	**Urumqi**	**119.96**	**355**	*e*PKP		**PKiKP**	**21 09 24.0**	**+1.6**
WMQ				LR		LR		
	comp=Z,600nm,18.7s							
WMQ				LR		LR		
	comp=Z,540nm,22.5s							
WMQ				LR		LR		
	comp=Z,540nm,22.5s							
SGDS	**Sogindy**	**120.17**	**6**	*i* PKIKP		**PKPdf**	**21 09 21.8**	**-0.9**
SGDS				*e*			21 10 42.4	
SGDS	**Sogindy**	**120.17**	**6**	*e*PKiKP		**PKPdf**	**21 09 21.9**	**-0.9**
	baz=6.4							
SGDS				*e*PP		**PP**	**21 10 42.5**	**-4.0**
	baz=6.4							
NJ2	**Nanjing**	**120.36**	**324**	*e*PKP		**PKiKP**	**21 09 26.3**	**+2.9**
KPKS	**Kokpek**	**120.46**	**3**	*i* PKIKP		**PKPdf**	**21 09 22.1**	**-1.2**
KPKS				*e*			21 10 47.0	
KPKS	**Kokpek**	**120.46**	**3**	*e*PKiKP		**PKPdf**	**21 09 22.1**	**-1.2**
	baz=3.0							
KPKS				*e*PP		**PP**	**21 10 47.1**	**-1.4**
	baz=3.0							
AAA	**Alma-Ata**	**120.61**	**4**	*i* PKIKP		**PKPdf**	**21 09 22.8**	**-0.8**
AAA				*e*			21 10 47.8	
AAA	**Alma-Ata**	**120.61**	**4**	*e*PKiKP		**PKPdf**	**21 09 22.9**	**-0.8**
	baz=4.5							
AAA				*e*PP		**PP**	**21 10 47.8**	**-1.7**
	baz=4.5							
TNSS	**Tian-Shan**	**120.79**	**4**	*i* PKIKP		**PKPdf**	**21 09 22.2**	**-2.1**
TNSS	**Tian-Shan**	**120.79**	**4**	*e*PKiKP		**PKPdf**	**21 09 22.3**	**-2.1**
	baz=4.5							
IUG	**Iuzhnay**	**120.81**	**10**	*i* PKIKP		**PKPdf**	**21 09 23.2**	**-0.9**
IUG				*e*			21 10 49.9	
IUG	**Iuzhnay**	**120.81**	**10**	*e*PKiKP		**PKPdf**	**21 09 23.2**	**-0.9**
	baz=10							
IUG				*e*PP		**PP**	**21 10 49.9**	**-1.1**
	baz=10							
SATY	**Saty**	**120.86**	**3**	*i* PKIKP		**PKPdf**	**21 09 23.1**	**-1.1**
SATY	**Saty**	**120.86**	**3**	*e*PKiKP		**PKPdf**	**21 09 23.1**	**-1.1**
	baz=3.2							
AAK	**Ala-Archa**	**120.96**	**6**	PKP		**PKPdf**	**21 09 24.0**	**-0.4**
	comp=Z,1.2nm,0.2s,baz=5.8,slow=17,SNR=5.5							
AAK				PP		**PP**	**21 10 47.0**	**-5.0**
	comp=Z,2.6nm,0.4s,baz=16,slow=3.9,SNR=7.1							
AAK	**Ala-Archa**	**120.96**	**6**	PKPdf		**PKPdf**	**21 09 24.0**	**-0.4**
AAK	**Ala-Archa**	**120.96**	**6**	IAMs_20		IAMs_20	22 04 32.9	
	comp=Z,603nm,20.0s							
AAK	**Ala-Archa**	**120.96**	**6**	PKIKP		**PKPdf**	**21 09 24.0**	**-0.4**
GEYT	**Alibeck**	**121.58**	**22**	PKP		**PKPdf**	**21 09 24.6**	**-0.9**
	comp=Z,7.1nm,0.8s,baz=42,slow=2.3,SNR=8.2							
GEYT				PP		**PP**	**21 10 54.6**	**-1.8**
	comp=Z,5.1nm,1.0s,baz=288,slow=5.9,SNR=3.8							
GEYT	**Alibeck**	**121.58**	**22**	PKPdf		**PKPdf**	**21 09 24.9**	**-0.7**
GYA0	**ALIBECK ARRAY**	**121.58**	**22**	PKIKP		**PKPdf**	**21 09 24.4**	**-1.2**
GYA0B	**ALIBECK ARRAY**	**121.58**	**22**			**PKPdf**	**21 09 24.4**	**-1.2**
LYN	**LuoYang**	**121.73**	**331**	*e*PKP		**PKPdf**	**21 09 25.3**	**-0.6**
LYN				PP		**PP**	**21 10 58.5**	**+0.9**
LYN				AMB		AMB		
	comp=Z,190nm,5.7s							
LYN				LR		LR		
	comp=Z,540nm,17.3s							
LYN				LR		LR		
	comp=Z,250nm,16.9s							
LYN				LR		LR		
	comp=Z,580nm,18.4s							
TARG	**Taragay, Kyrgy**	**122.15**	**4**	PKPdf		**PKPdf**	**21 09 26.3**	**-0.7**
TARG	**Taragay, Kyrgy**	**122.15**	**4**	PKIKP		**PKPdf**	**21 09 26.3**	**-0.7**
GTA	**Gaotai**	**122.15**	**344**	⇓PKP		**PKPdf**	**21 09 26.3**	**-0.5**
GTA				PP		**PP**	**21 11 01.0**	**+0.7**
GTA				AMB		AMB		
	comp=Z,110nm,6.2s							
GTA				LR		LR		
	comp=Z,590nm,19.3s							
GTA				LR		LR		
	comp=Z,660nm,20.0s							
GTA				LR		LR		
	comp=Z,800nm,21.1s							
XAN	**Xi'an**	**123.77**	**333**	⇑PKP		**PKPdf**	**21 09 29.0**	**-0.9**
XAN				PP		**PP**	**21 11 10.3**	**-1.1**
XAN				SS		SS	21 27 57.8	-1.4
XAN				AMB		AMB		
	comp=Z,250nm,10.8s							
XAN				LR		LR		
	comp=Z,730nm,19.0s							
XAN				LR		LR		
	comp=Z,610nm,20.3s							
XAN				LR		LR		
	comp=Z,1μm,18.4s							
GAR	**Garm**	**123.92**	**11**			**PKPdf**	**21 09 29.6**	**-0.6**
LZH	**Lanzhou**	**123.96**	**339**	*e*PKP		**PKiKP**	**21 09 31.0**	**+0.4**
LZH				PP		**PP**	**21 11 12.3**	**-0.4**
LZH				AMB		AMB		
	comp=Z,310nm,9.0s							
LZH				LR		LR		
	comp=Z,910nm,17.5s							
LZH				LR		LR		
	comp=Z,650nm,17.6s							
LZH				LR		LR		
	comp=Z,1μm,20.3s							
CHGR	**Chuyangaron**	**124.03**	**12**	PKPdf		**PKPdf**	**21 09 29.8**	**-0.6**
CHGR	**Chuyangaron**	**124.03**	**12**	PKIKP		**PKPdf**	**21 09 29.8**	**-0.6**
YHNB	**Yeheng**	**124.05**	**316**	IAMs_20		IAMs_20	22 13 22.1	
	comp=Z,500nm,19.0s							
STKA	**Stephens Creek**	**124.07**	**242**	PKP		**PKPdf**	**21 09 29.8**	**-0.6**
	comp=Z,2.9nm,0.8s,baz=64,slow=2.8,SNR=4.7							
STKA	**Stephens Creek**	**124.07**	**242**			**PKPdf**	**21 09 29.8**	**-0.6**
STKA	**Stephens Creek**	**124.07**	**242**	PKIKP		**PKPdf**	**21 09 29.8**	**-0.6**
KSH	**Kashi**	**124.20**	**6**	PKP		**PKiKP**	**21 09 31.5**	**+0.5**
KSH				sPKP			21 09 43.5	
KSH				PP		**PP**	**21 11 14.5**	**+0.6**
KSH				AMB		AMB		
	comp=Z,220nm,5.7s							
KSH				LR		LR		
	comp=Z,740nm,22.3s							
KSH				LR		LR		
	comp=Z,560nm,18.2s							
KSH				LR		LR		
	comp=Z,1μm,21.0s							
SSLB	**Suanglung**	**124.92**	**315**	IAMs_20		IAMs_20	22 07 22.5	
	comp=Z,469nm,19.0s							
HRA	**Herat**	**126.21**	**20**	PKPdf		**PKPdf**	**21 09 33.9**	**-0.9**
BOSA	**Boshof**	**126.56**	**114**	PKP		**PKPdf**	**21 09 35.0**	**-0.4**
	comp=Z,16nm,1.0s,baz=219,slow=0.6,SNR=11							
BOSA	**Boshof**	**126.56**	**114**	PKPdf		**PKPdf**	**21 09 34.6**	**-0.8**
BOSA	**Boshof**	**126.56**	**114**	PKIKP		**PKPdf**	**21 09 35.0**	**-0.4**
ENH	**Enshi**	**126.68**	**330**	IAMs_20		IAMs_20	22 11 46.3	
	comp=Z,544nm,19.0s							
RAYN	**Ar Rayn**	**126.72**	**43**	PKPdf		**PKPdf**	**21 09 35.0**	**-0.8**
RAYN	**Ar Rayn**	**126.72**	**43**	PKIKP		**PKPdf**	**21 09 35.0**	**-0.8**
MBAR	**Mbarara**	**127.13**	**78**			**PKPdf**	**21 09 37.0**	**0.0**
MBAR	**Mbarara**	**127.13**	**78**	PKIKP		**PKPdf**	**21 09 37.0**	**0.0**
MBAR				MLR		MLR		
	comp=Z,1μm,18.0s							
MAW	**Mawson**	**127.24**	**171**	PKP		**PKiKP**	**21 09 35.9**	**+0.1**
	comp=Z,6.3nm,0.7s,baz=259,slow=2.4,SNR=7.4							
MAW	**Mawson**	**127.24**	**171**	PKPdf		**PKPdf**	**21 09 35.5**	**+0.2**
MAW	**Mawson**	**127.24**	**171**	PKIKP		**PKiKP**	**21 09 35.9**	**+0.1**
CD2	**Chengdu**	**128.63**	**336**	PKP		**PKPdf**	**21 09 39.0**	**-0.3**
CD2				PP		**PP**	**21 11 44.0**	**+0.4**
CD2				SS		SS	21 28 58.0	-1.8
CD2				AMB		AMB		
	comp=Z,180nm,8.3s							
CD2				LR		LR		
	comp=Z,530nm,16.2s							
CD2				LR		LR		
	comp=Z,680nm,14.7s							
FAKI	**Fak Fak**	**128.88**	**280**	IAMs_20		IAMs_20	21 54 48.5	
	comp=Z,434nm,20.0s							
LODK	**Lodwar**	**129.90**	**71**	PKPdf		**PKPdf**	**21 09 42.2**	**+0.1**
WRA	**Warramunga Arr**	**130.29**	**257**	PKP		**PKPdf**	**21 09 42.2**	**-0.3**
	comp=Z,2.3nm,0.8s,baz=87,slow=2.8,SNR=16							
WRA				SKPbc		**SKPab**	**21 13 04.0**	**-1.5**
	comp=Z,4.6nm,1.2s,baz=78,slow=5.2,SNR=7.5							
WRA	**Warramunga Arr**	**130.29**	**257**			**PKPdf**	**21 09 42.2**	**-0.3**
WRA						**SKPab**	**21 13 04.0**	**-1.5**
WRA	**Warramunga Arr**	**130.29**	**257**	PKIKP		**PKPdf**	**21 09 42.3**	**-0.3**
FURI	**Furi**	**130.34**	**63**	IAMs_20		IAMs_20	22 05 25.7	
	comp=Z,600nm,20.0s							
ASAR	**Alice Springs**	**130.90**	**253**	PKP		**PKPdf**	**21 09 43.5**	**-0.1**
	comp=Z,1.7nm,0.8s,baz=95,slow=2.5,SNR=9.3							
ASAR	**Alice Springs**	**130.90**	**253**	PKPdf		**PKPdf**	**21 09 42.6**	**-1.1**
ASAR	**Alice Springs**	**130.90**	**253**	PKIKP		**PKPdf**	**21 09 43.6**	**-0.1**
GYA	**Guiyang**	**131.22**	**330**	⇓PKP		**PKPdf**	**21 09 44.3**	**-0.1**
GYA				PP		**PP**	**21 12 02.5**	**+1.7**
GYA				AMB		AMB		
	comp=Z,320nm,10.9s							
GYA				LR		LR		
	comp=Z,450nm,21.3s							
GYA				LR		LR		
	comp=Z,430nm,21.3s							
GYA				LR		LR		
	comp=Z,560nm,22.2s							
ATD	**Arta Tunnel**	**132.41**	**57**	IAMs_20		IAMs_20	22 04 08.1	
	comp=Z,625nm,20.0s							
KMBO	**Kilima Mbogo**	**133.41**	**76**	PKP		**PKPdf**	**21 09 49.5**	**+0.5**
	comp=Z,1.9nm,0.9s,baz=237,slow=1.2,SNR=4.4							
KMBO	**Kilima Mbogo**	**133.41**	**76**	PKIKP		**PKPdf**	**21 09 49.5**	**+0.5**
LSA	**Lhasa**	**133.44**	**349**	IAMs_20		IAMs_20	22 20 24.9	
	comp=Z,437nm,21.0s							
KMI	**Kunming**	**134.15**	**333**	⇓PKP		**PKiKP**	**21 09 51.0**	**-0.4**
KMI				PP		**PP**	**21 12 20.5**	**+0.9**
KMI				PKS		**PKSdf**	**21 13 22.0**	**-4.9**
KMI				SS		SS	21 30 05.0	-2.9
KMI				AMB		AMB		
	comp=Z,230nm,11.7s							
KMI				LR		LR		
	comp=Z,290nm,23.1s							
KMI				LR		LR		
	comp=Z,380nm,20.1s							
KMI				LR		LR		
	comp=Z,590nm,18.6s							
QIZ	**Qiongzhong**	**135.49**	**321**	IAMs_20		IAMs_20	22 17 02.0	
	comp=Z,409nm,20.0s							
QIZ	**Qiongzhong**	**135.49**	**321**	PKP		**PKPdf**	**21 09 52.8**	**+0.4**
QIZ				PP		**PP**	**21 12 29.0**	**+0.8**
QIZ				SS		SS	21 30 23.8	-0.6
QIZ				AMB		AMB		
	comp=Z,170nm,14.3s							
QIZ				LR		LR		
	comp=Z,340nm,25.5s							
QIZ				LR		LR		
	comp=Z,440nm,14.3s							
QIZ				LR		LR		
	comp=Z,390nm,27.1s							
SHL	**Shillong**	**137.30**	**347**	PKPdf		**PKPdf**	**21 09 54.5**	**-1.4**
SHL	**Shillong**	**137.30**	**347**	PKIKP		**PKPdf**	**21 09 54.5**	**-1.4**
KKM	**Kota Kinabalu**	**139.53**	**301**	IAMs_20		IAMs_20	22 05 22.5	
	comp=Z,367nm,21.0s							
CHTO	**Chiang Mai**	**141.35**	**334**			PKPpre	21 09 55.2	
CHTO	**Chiang Mai**	**141.35**	**334**	PKHKP		PKPpre	21 09 55.2	
CM31	**Chiang Mai Arr**	**141.66**	**334**			PKPpre	21 09 56.2	
CMAR	**Chiang Mai Arr**	**141.66**	**334**	PKhKP		PKPpre	21 09 57.2	
	comp=Z,7.0nm,1.0s,baz=349,slow=3.4,SNR=19							
CMAR				PP		**PP**	**21 13 06.3**	**+0.3**
	comp=Z,3.0nm,1.0s,baz=26,slow=5.9,SNR=5.8							
CMAR	**Chiang Mai Arr**	**141.66**	**334**			PKPpre	21 09 56.4	
CMAR	**Chiang Mai Arr**	**141.66**	**334**	PKHKP		PKPpre	21 09 56.4	
PSA00	**Pilbara Seismi**	**143.89**	**256**			**PKPdf**	**21 10 08.9**	**+1.3**
VOI	**Vohitsoka**	**146.30**	**105**	PKP		**PKPab**	**21 10 14.0**	**+0.2**
ABPO	**Ambohimpanom**	**146.77**	**100**	PKPdf		**PKPdf**	**21 10 13.3**	**+0.5**
ABPO	**Ambohimpanom**	**146.77**	**100**	PKP2		**PKPdf**	**21 10 13.3**	**+0.5**
KSM	**Kuching**	**146.96**	**300**			**PKPdf**	**21 10 13.9**	**+0.8**
SRIT	**Nakonsritamara**	**149.76**	**324**			**PKPbc**	**21 10 21.6**	**-0.8**
KULM	**Kulim**	**151.72**	**318**			**PKPbc**	**21 10 26.4**	**-0.7**
IPM	**Ipoh**	**152.08**	**316**			**PKPbc**	**21 10 26.9**	**-1.0**
PSI	**Prapat**	**154.72**	**317**	PKIKP		**PKPdf**	**21 10 25.0**	**-0.2**
RPSI	**Rantau Prapat**	**154.80**	**317**	PKPdf		**PKPdf**	**21 10 25.0**	**-0.2**
GSI	**Gunungsitoli**	**156.73**	**317**			**PKPdf**	**21 10 27.3**	**-0.5**

*IDC **27**.20:51:33.2±2.7,3°.84S×139°.10E,h0km,mb4.3/2, mbtmp4.5/3,ML4.7/1,MS4.8/2 Error ellipse: s-maj=110.3km s-min=30.0km az=80.0*
*NEIC **27**.20:51:50.6±1.3,4°.3S±0°.1×138°.4E±0°.1, h111km±13km, mb4.4/12,Error ellipse: s-maj=16.7km s-min=14.7km az=147.0*

ISC 27 20:51:49.3±0.7,4°.42S±0°.07×138°.34E±0°.07,h100km,n32, σ2s04/31,mb4.1/4,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GENI	**Genyem**	**2.58**	**45**	P	**Pn**	**20 52 32.2**	**+2.7**
FAKI	**Fak Fak**	**6.26**	**284**	Pn	**Pn**	**20 53 21.4**	**+2.2**
FAKI	**Fak Fak**	**6.26**	**284**	P	**Pn**	**20 53 21.3**	**+2.1**
	37nm,1.5s						
MANU	**Manus Island**	**9.32**	**76**	Pn	**Pn**	**20 54 00.5**	**-0.4**
KDU	**Kakadu**	**10.05**	**215**	P	**Pn**	**20 54 12.7**	**+1.9**
	20nm,1.2s						
COEN	**Coen**	**10.61**	**154**	Pn	**Pn**	**20 54 20.0**	**+1.6**
MTN	**Manton Dam**	**10

baz=84
BTK ⇑*iS* **Sg** **20 57 21.1 -0.7**
baz=84
ARLS Aral **2.30 15**⇑*iP* **Pn** **20 56 50.2 -1.5**
baz=9.0
ARLS ⇑*iS* **Sn** **20 57 21.0 +0.7**
baz=9.0
ARK Arkit **2.47 332**⇑*iP* **Pn** **20 56 55.0 +1.1**
baz=29
ARK ⇑*iS* **Sb** **20 57 28.5 0.0**
baz=29
GAR Garm **2.58 257**⇑*iP* **Pn** **20 56 55.7 +0.3**
baz=60
GAR ⇑*iS* **Sb** **20 57 30.5 -1.2**
baz=60
TRKS Terek-Say **2.63 317**⇑*iP* **Pn** **20 56 56.2 +0.1**
baz=15
TRKS ⇑*iS* **Sb** **20 57 31.6 -1.6**
baz=15
IUG luzhnay **3.65 314** *eP* **Pg** **20 57 24.1 +0.9**
48nm,0.1s
IUG *eS* **Sg** **20 58 12.7 +2.2**
9.0nm,0.1s
KST Kastek **3.86 27** *eP* **Pg** **20 57 26.8 -0.4**
0.9nm,0.2s
KST *eS* **Sg** **20 58 17.4 +0.1**
3.9nm,0.4s
DGS Degeres **3.97 24** *eP* **Pg** **20 57 29.4 +0.1**
1.5nm,0.1s
DGS *eS* **Sg** **20 58 21.9 +1.1**
4.9nm,0.2s
TNSS Tian-Shan **4.26 36** *eP* **Pg** **20 57 34.5 -0.3**
0.9nm,0.0s
TNSS *eS* **Sg** **20 58 30.4 +0.4**
1.1nm,0.1s
KRBS Karabastau **4.36 21** *eP* **Pg** **20 57 36.9 +0.2**
0.4nm,0.0s
KRBS *eS* **Sg** **20 58 34.8 +1.6**
2.0nm,0.2s
BRLS Boroldav **4.38 322** *eP* **Pg** **20 57 35.7 -1.5**
2.1nm,0.1s
BRLS *eS* **Sg** **20 58 32.5 -1.5**
4.0nm,0.1s
KTBS Karatobe **4.70 29** *eP* **Pg** **20 57 42.9 -0.4**
0.5nm,0.3s
KTBS *eS* **Sg** **20 58 44.8 +0.5**
3.2nm,0.1s

*ISK **27** 21:01:52.7, 39.2°26N×29.2°16E, h13km, ML2.0/10*
DDA 27 21:01:52.6±0.0, 39.2°29N×29.2°07E, h7km±3km, ML1.3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMAA	**Simav-Kutahya**	**0.20**	**200**	PG	Pg	21 01 57.8	+1.2
SMAA				SG	Sg	21 02 01.2	+1.9
SIMA	**Simav-Kutahya**	**0.21**	**198**	PG	Pg	21 01 57.9	+1.0
SIMA				SG	Sg	21 02 01.4	+1.6
TVSB	**Tavsanli**	**0.35**	**62**	PG	Pg	21 01 59.6	+0.2
TVSB				SG	Sg	21 02 04.1	+0.1
GEDZ	**Gediz**	**0.36**	**132**	PG	Pg	21 01 59.2	-0.5
DEMI	**Demirci**	**0.37**	**228**	P	Pb	21 02 00.6	-0.8
DEMI				S	Sg	21 02 06.0	+1.4
DEMI				*i* AML	AML	21 02 06.0	
	comp=E,56nm,0.4s						
DEMI				*i* AML	AML	21 02 07.0	
	comp=N,48nm,0.2s						
GDZ	**Gediz**	**0.38**	**122**	P	Pg	21 02 00.3	+0.3
GDZ				S	Sg	21 02 05.6	+0.6
GDZ				*i* AML	AML	21 02 06.0	
	comp=N,32nm,0.2s						
GDZ				*i* AML	AML	21 02 06.0	
	comp=E,29nm,0.2s						
DURS	**Dursunbey**	**0.56**	**304**	P	Pb	21 02 04.1	-0.6
DURS				S	Sg	21 02 11.6	+1.0
DURS				*i* AML	AML	21 02 12.0	
	comp=N,26nm,0.1s						
DURS				*i* AML	AML	21 02 12.0	
	comp=E,20nm,0.4s						
USAK	**Uak-Merkez**	**0.57**	**184**	P	Pb	21 02 04.4	-0.6
USAK				S	Sg	21 02 11.7	+0.6
USAK				*i* AML	AML	21 02 12.0	
	comp=N,26nm,0.2s						
USAK				*i* AML	AML	21 02 12.0	
	comp=E,19nm,0.2s						
KULA	**Kula-Manisa**	**0.83**	**202**	PG	Pb	21 02 09.3	-0.2
IGD	**Bursa**	**0.98**	**6**	P	Pn	21 02 13.6	+0.8
PASA	**Karahalli, USA**	**0.99**	**161**	P	Pb	21 02 12.3	+0.1
PASA				S	Sb	21 02 25.2	-0.3
PASA				*i* AML	AML	21 02 31.0	
	comp=N,5.4nm,0.5s						
PASA				*i* AML	AML	21 02 32.0	
	comp=E,8.4nm,0.7s						
STEP	**BALIKESIR_Sava**	**1.05**	**275**	P	Pn	21 02 14.3	+0.6
STEP				S	Sn	21 02 28.5	-0.2
MDNY	**Mudanya-Bursa**	**1.09**	**353**	PN	Pn	21 02 14.6	+0.3
BORA	**Eskisehir**	**1.22**	**61**	PN	Pg	21 02 15.1	-1.0
BORA	**Eskisehir**	**1.22**	**61**	P	Pn	21 02 16.4	+0.2
BORA				S	Sg	21 02 31.7	-0.3
BORA				*i* AML	AML	21 02 36.0	
	comp=N,7.6nm,0.3s						
ADVT	**Abdulvahap**	**1.25**	**24**	PN	Pn	21 02 16.4	-0.2
ARMT	**Armutlu**	**1.29**	**353**	PN	Pg	21 02 17.4	+0.1
GONE	**Gonen-Balikesi**	**1.31**	**306**	PN	Pg	21 02 18.2	+0.5
TRML	**Termal-Yalova**	**1.32**	**4**	PN	Pb	21 02 17.7	0.0
TSVK	**Tesvikiye-Yalo**	**1.34**	**1**	PN	Pb	21 02 18.0	0.0
EDC	**Edincik**	**1.41**	**319**	PN	Pg	21 02 19.5	-0.1
SRCK	**Saricakaya, Es**	**1.42**	**57**	PN	Pn	21 02 17.9	-0.9

HEL 27 21:02:02.3±0.2, 67.8°80N×20.2°23E, h0km, ML1.8, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LANU	**Lannavaara**	**0.71**	**69**	PG	Pg	21 02 15.1	-0.7
LANU				SG	Sg	21 02 24.4	-0.6
KIF	**Kilpisjarvi**	**1.23**	**10**	PB	Pg	21 02 25.4	-0.4
KIF				MSG		21 02 40.7	
	comp=Z,16nm,0.2s						
KIF				SG	Sg	21 02 41.4	-0.3
PAJU	**Pajala**	**1.36**	**124**	PG	Pg	21 02 26.3	-1.9
PAJU				SB	Sg	21 02 45.9	+0.1
HEF	**Hetta**	**1.42**	**63**	PG	Pn	21 02 27.7	-1.7
HEF				MSG		21 02 45.1	
	comp=Z,7.5nm,0.2s						
HEF				SB	Sg	21 02 47.3	-0.7
ERTU	**Ertsjaerv**	**1.47**	**148**	PG	Pn	21 02 28.9	-1.1
ERTU				SN	Sn	21 02 49.9	+0.1
KLF	**Kolari**	**1.54**	**110**	PG	Pn	21 02 29.8	-1.2
	baz=292						
KLF				SN	Sn	21 02 51.7	0.0
KTK1	**Kautokeino**	**1.65**	**41**	PN	Pn	21 02 32.9	+0.4
KTK1				SN	Sn	21 02 54.5	+0.1
TRO	**Tromso**	**1.90**	**346**	PG	Pn	21 02 36.2	+0.3
KALU	**Kalix**	**2.31**	**146**	PG	Pn	21 02 42.9	+1.5
	baz=325						
KALU				SG	Sb	21 03 14.6	+0.9
TOF	**Tornio**	**2.36**	**135**	PB	Pn	21 02 43.0	+0.7
TOF				MSG		21 03 12.3	
	comp=Z,5.3nm,0.2s						
TOF				SG	Sb	21 03 16.3	+1.0
SGF	**Sodankyl**	**2.44**	**96**	PG	Pb	21 02 45.2	-1.7
SGF				SG	Sb	21 03 16.0	-1.4
RNF	**Rovaniemi**	**2.55**	**115**	PB	Pn	21 02 46.0	+1.2
RNF				SG	Sb	21 03 20.4	-0.2
KEV	**Kevo**	**3.15**	**48**	SN	Sn	21 03 32.0	+0.7
KEV				MSG		21 03 34.8	
	comp=Z,1.9nm,0.2s						
OUL	**Oulu**	**3.55**	**138**	PG	Pb	21 03 04.6	-1.3
OUL				SG	Sg	21 03 53.3	-2.9
VRF	**Varrio**	**3.56**	**86**	SG	Sb	21 03 52.8	+2.9
OBF8	**Ulkokalla**	**3.72**	**158**	PB	Pb	21 03 07.1	-1.7
UMAU	**Umeaa**	**3.94**	**177**	PB	Pn	21 03 07.5	+3.6
	baz=1.0						
KU6	**Riekki**	**4.20**	**111**	PG	Pb	21 03 18.6	+1.6
KU6				SG	Sg	21 04 13.5	-3.5

*IDC **27** 21:31:04.8±1.5, 38.9°90N×73.8°86E, h0km, mb3.8/8, mbtmp3.8/12, ML3.1/6, MS2.8/1, Error ellipse: s-maj=24.8km s-min=20.0km az=151.0*
*SOME **27** 21:31:08.0, 39.4°42N×73.5°57E, h10km*

*KRNET **27** 21:31:08.3±0.1, 39.6°36N×73.5°51E, mb4.0*
*NNC **27** 21:31:15.9±1.3, 39.6°66N×73.5°50E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=10.3km s-min=5.3km az=175.0*
ISC 27 21:31:10.5±1.7, 39.2°28N±0.0°06×73.5°35E±0.0°03, h4km±11km, n82, σ2.2°03/106, mb3.6/7, 26C-15D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**1.21**	**280**	⇑*iP*	**Pn**	**21 31 33.6**	**-0.9**
DRK				⇑*iS*	**Sg**	**21 31 52.2**	**+2.6**
baz=76							
OHH	**Osh**	**1.31**	**341**	⇑*iP*	**Pn**	**21 31 32.7**	**-3.0**
OHH				⇑*iS*	**Sb**	**21 31 50.7**	**-2.3**
baz=35							
BTK	**Batken**	**2.10**	**292**	⇑*eP*	**Pb**	**21 31 48.0**	**-1.2**
BTK				⇑*iS*	**Sb**	**21 32 17.0**	**+1.4**
baz=89							
GAR	**Garm**	**2.37**	**264**	⇓*iP*	**Pn**	**21 31 52.4**	**+2.1**
GAR				⇓*iS*	**Sb**	**21 32 24.6**	**+1.1**
baz=63							
ARLS	**Aral**	**2.68**	**16**	⇑*eP*	**Pn**	**21 31 53.2**	**-1.4**
ARLS				⇑*iS*	**Sn**	**21 32 26.1**	**-1.5**
baz=14							
TRKS	**Terek-Say**	**2.81**	**324**	⇓*eP*	**Pn**	**21 31 55.9**	**-0.4**
TRKS				⇓*iS*	**Sn**	**21 32 30.6**	**-0.1**
baz=20							
AML	**Almayashu**	**2.86**	**5**	P	**Pn**	**21 31 57.4**	**+0.2**
SNR=30							
UCH	**Uchtor**	**3.07**	**16**	P	**Pn**	**21 32 00.7**	**+0.5**
SNR=22							
UCH	**Uchtor**	**3.07**	**16**	⇓*iP*	**Pn**	**21 31 59.0**	**-1.2**
baz=15							
UCH				⇓*iS*	**Sn**	**21 32 35.9**	**-1.8**
baz=15							
EKS2	**Erkin-Say**	**3.39**	**5**	P	**Pn**	**21 32 05.2**	**+0.8**
SNR=16							
AAK	**Ala-Archa**	**3.46**	**14**	P	**Pn**	**21 32 06.2**	**+0.9**
SNR=16							
AAK	**Ala-Archa**	**3.46**	**14**	Pn	**Pn**	**21 32 06.6**	**+1.3**
4.8nm,0.3s,baz=192,slow=8.9,SNR=22							
AAK				Lg	Lg	21 32 50.7	
2.7nm,0.3s,baz=345,slow=20,SNR=3.5							
AAK				LR	LR	21 33 36.8	
comp=Z,130nm,20.6s,baz=154,slow=40							
21nm,0.5s							
AAK	**Ala-Archa**	**3.46**	**14**	⇑*iP*	**Pn**	**21 32 04.3**	**-1.0**
baz=12							
AAK				⇑*iS*	**Sn**	**21 32 45.1**	**-1.8**
baz=12							
KBK	**Karagaybulak**	**3.58**	**19**	P	**Pn**	**21 32 08.7**	**+1.7**
SNR=15							
ULHL	**Ulahol**	**3.69**	**36**	P	**Pb**	**21 32 14.3**	**-2.0**
SNR=29							
TAS	**Tashkent**	**3.71**	**305**	⇓*eP*	**Pn**	**21 32 10.0**	**+1.4**
baz=3.0							
TAS				⇓*iS*	**Sn**	**21 32 54.7**	**+2.0**
baz=3.0							
BOOM	**Boomskoye usch**	**3.76**	**31**	⇑*eP*	**Pn**	**21 32 07.9**	**-1.5**
baz=30							
BOOM				⇑*eS*	**Sn**	**21 32 51.5**	**-2.7**
baz=30							
IUG	**luzhnay**	**3.81**	**320**	*eP*	**Pb**	**21 32 19.3**	**+0.9**
1μm,0.6s							
IUG				*eS*	**Sg**	**21 33 10.0**	**-3.0**
146nm,1.2s							
IUG	**luzhnay**	**3.81**	**320**	Pg	**Pb**	**21 32 21.7**	**+3.3**
1μm,0.6s							
IUG				Lg	Lg	21 33 10.0	
146nm,1.2s							
CHMS	**Chumysh**	**3.86**	**15**	P	**Pn**	**21 32 11.5**	**+0.8**
SNR=8.7							
CHMS	**Chumysh**	**3.86**	**15**	⇓Pn	**Pn**	**21 32 11.3**	**+0.6**
5.1nm,0.3s							
CHMS				⇑Lg	Lg	21 33 06.8	
59nm,0.7s							
TKM2	**Tokmak 2**	**4.01**	**24**	P	**Pb**	**21 32 22.9**	**+1.0**
SNR=6.2							
TKM2	**Tokmak 2**	**4.01**	**24**	⇑Pn	**Pn**	**21 32 13.7**	**+0.7**
7.3nm,0.4s							
TKM2				⇑Lg	Lg	21 33 13.4	
46nm,0.7s							
KDJ	**Kajisay**	**4.07**	**44**	⇑*iP*	**Pn**	**21 32 12.3**	**-1.4**
baz=44							
KDJ				⇑*eS*	**Sn**	**21 32 58.7**	**-3.2**
baz=44							
CHM	**Chimkent**	**4.16**	**318**	*eP*	**Pb**	**21 32 25.6**	**+1.4**
3.2nm,0.3s							
CHM				*eS*	**Sg**	**21 33 21.6**	**-2.4**
251nm,0.5s							
KST	**Kastek**	**4.25**	**27**	*eP*	**Pb**	**21 32 24.1**	**-1.6**
11nm,0.2s							
KST				*eS*	**Sb**	**21 33 18.6**	**+1.2**
67nm,0.1s							
KST	**Kastek**	**4.25**	**27**	Pg	**Pb**	**21 32 27.4**	**+1.7**
9.4nm,0.4s							
KST				Lg	Lg	21 33 19.9	
68nm,1.1s							
DGS	**Degeres**	**4.36**	**24**	*eP*	**Pb**	**21 32 26.8**	**-0.9**
17nm,0.7s							
DGS				*eS*	**Sb**	**21 33 22.8**	**+2.1**
53nm,0.9s							
DGS	**Degeres**	**4.36**	**24**	Pg	**Pb**	**21 32 28.6**	**+0.9**
17nm,0.7s							
DGS				Lg	Lg	21 33 21.7	
53nm,0.9s							
KK31	**Karatay Array**	**4.38**	**332**	Pn	**Pn**	**21 32 19.2**	**+1.5**
2.8nm,0.5s,baz=142,slow=12,SNR=48							
KK31				Pg	**Pb**	**21 32 29.0**	**+1.1**
5.5nm,0.4s,baz=154,slow=16,SNR=12							
KK31				⇑Sn	**Sn**	**21 33 11.4**	**+2.2**
13nm,0.5s,baz=151,slow=24,SNR=3.2							
KK31				Lg	Lg	21 33 29.9	
17nm,0.5s,baz=162,slow=29,SNR=4.0							
MTBS	**Maitube**	**4.49**	**30**	*eP*	**Pb**	**21 32 28.5**	**-1.4**
12nm,0.8s							
MTBS				*eS*	**Sb**	**21 33 25.8**	**+1.3**
26nm,0.2s							
MTBS	**Maitube**	**4.49**	**30**	Pg	**Pb**	**21 32 30.8**	**+0.8**
12nm,0.8s							
MTBS				Lg	Lg	21 33 25.8	
10.0nm,0.4s							
BRLS	**Boroldav**	**4.59**	**326**	*eP*	**Pb**	**21 32 31.2**	**-0.3**
6.4nm,0.1s							
BRLS				*eS*	**Sb**	**21 33 31.1**	**+3.9**
24nm,0.0s							
BRLS	**Boroldav**	**4.59**	**326**	Pg	**Pb**	**21 32 34.0**	**+2.4**
6.9nm,0.8s							
BRLS				Lg	Lg	21 33 31.1	
30nm,0.6s							
TNSS	**Tian-Shan**	**4.63**	**35**	*eP*	**Pb**	**21 32 31.6**	**-0.9**
13nm,0.1s							
TNSS				*eS*	**Sb**	**21 33 31.4**	**+2.5**
18nm,0.3s							
TNSS	**Tian-Shan**	**4.63**	**35**	Pg	**Pb**	**21 32 33.3**	**+0.8**
13nm,0.8s							
TNSS				Lg	Lg	21 33 29.7	
13nm,0.5s							
KRBS	**Karabastau**	**4.75**	**21**	*eP*	**Pb**	**21 32 32.1**	**-2.1**
11nm,1.1s							
KRBS				*eS*	**Sb**	**21 33 33.5**	**+1.8**
30nm,0.8s							
KRBS	**Karabastau**	**4.75**	**21**	Pg	**Pb**	**21 32 35.4**	**+1.2**
11nm,1.1s							
KRBS				Lg	Lg	21 33 33.5	
30nm,0.8s							
AAA	**Alma-Ata**	**4.76**	**33**	*eP*	**Pb**	**21 32 33.0**	**-1.5**
17nm,0.1s							
AAA				*eS*	**Sb**	**21 33 34.2**	**+2.1**
50nm,0.2s							
AAA	**Alma-Ata**	**4.76**	**33**	Pg	**Pb**	**21 32 36.1**	**+1.6**
17nm,0.7s							
AAA				Lg	Lg	21 33 34.2	
50nm,0.9s							
KNDC	**Almaty**	**4.79**	**34**	⇑Pn	**Pn**	**21 32 26.2**	**+2.8**
13nm,0.6s							
KNDC				⇑Lg	Lg	21 33 36.9	
230nm,1.1s							
KTBS	**Karatobe**	**5.09**	**28**	*eP*	**Pb**	**21 32 37.9**	**-2.2**
5.5nm,0.2s							
KTBS				*eS*	**Sb**	**21 33 43.6**	**+2.1**
33nm,0.6s							
KTBS	**Karatobe**	**5.09**	**28**	Pg	**Pb**	**21 32 41.3**	**+1.2**
5.7nm,0.7s							
KTBS				Lg	Lg	21 33 43.6	
33nm,0.6s							
KUU Kurty		**5.12**	**25**	*eP*	**Pb**	**21 32 38.9**	**-1.8**
7.4nm,0.3s							
KUU				*eS*	**Sb**	**21 33 44.5**	**+1.9**
36nm,0.2s							
KUU Kurty		**5.12**	**25**	Pg	**Pb**	**21 32 41.7**	**+1.1**
7.3nm,1.1s							
KUU				Lg	Lg	21 33 44.5	
36nm,0.7s							
CHKK Chushkaly		**5.32**	**30**	*eP*	**Pb**	**21 32 42.6**	**-1.4**
3.8nm,0.6s							
CHKK				*eS*	**Sb**	**21 33 51.1**	**+2.8**
30nm,0.7s							
CHKK Chushkaly		**5.32**	**30**	Pg	**Pb**	**21 32 45.7**	**+1.6**
3.8nm,0.6s							
CHKK				Lg	Lg	21 33 51.1	
30nm,0.7s							
SATY Saty		**5.37**	**44**	*eP*	**Pb**	**21 32 44.4**	**-0.5**
13nm,0.1s							
SATY				*eS*	**Sb**	**21 33 54.9**	**+5.2**
25nm,0.2s							
SATY Saty		**5.37**	**44**	Pg	**Pb**	**21 32 47.3**	**+2.4**
13nm,1.2s							
SATY				Lg	Lg	21 33 53.9	
26nm,1.3s							
KURS Kuram		**5.55**	**39**	*eP*	**Pb**	**21 32 47.4**	**-0.6**
7.1nm,0.1s							
KURS				*eS*	**Sb**	**21 33 59.4**	**+4.5**
16nm,0.0s							
KURS Kuram		**5.55**	**39**	Pg	**Pb**	**21 32 50.5**	**+2.5**
7.1nm,0.7s							
KURS				Lg	Lg	21 33 59.4	
14nm,1.1s							
BTLS Baital		**5.78**	**5**	*eP*	**Pb**	**21 32 51.5**	**-0.3**
4.0nm,0.7s							
BTLS				*eS*	**Sb**	**21 34 06.7**	**+5.3**
9.9nm,0.3s							
BTLS Baital		**5.78**	**5**	Pg	**Pb**	**21 32 52.1**	**+0.3**
4.0nm,0.7s							
BTLS				Lg	Lg	21 34 02.4	
10nm,1.3s							
KPKS Kokpek		**5.80**	**42**	*eP*	**Pb**	**21 32 51.4**	**-0.8**
7.8nm,0.8s							
KPKS				*eS*	**Sb**	**21 34 06.0**	**+4.0**
12nm,0.6s							
KPKS Kokpek		**5.80**	**42**	Pg	**Pb**	**21 32 54.3**	**+2.1**
7.8nm,0.8s							
KPKS				Lg	Lg	21 34 06.0	
12nm,0.6s							
ARXS Arharly		**5.96**	**33**	*eP*	**Pb**	**21 32 54.1**	**-0.9**
16nm,0.2s							
ARXS				*eS*	**Sb**	**21 34 10.1**	**+3.5**
17nm,0.3s							
ARXS Arharly		**5.96**	**33**	Pg	**Pb**	**21 32 56.7**	**+1.8**
16nm,0.8s							
ARXS				Lg	Lg	21 34 10.1	
14nm,0.2s							
PDGK Podgornoye		**6.14**	**47**	Pg	Pb	21 33 02.9	+4.8
2.7nm,0.7s							
PDGK				Lg	Lg	21 34 20.8	
9.8nm,1.2s							
PDGK Podgornoye		**6.14**	**47**	⇑Pn	**Pn**	**21 32 43.5**	**+1.4**
4.1nm,0.7s							
PDGK				⇑Pg	Pb	21 33 04.0	+5.9
6.2nm,0.7s							
PDGK				⇓Lg	Lg	21 34 23.8	
29nm,1.0s							
BLB Baldybastay		**6.16**	**37**	*eP*	**Pb**	**21 32 58.4**	**+0.1**
11nm,0.1s							
BLB				*eS*	**Sb**	**21 34 16.9**	**+4.5**
15nm,0.3s							
BLB Baldybastay		**6.16**	**37**	Pg	**Pb**	**21 32 59.3**	**+1.0**
12nm,0.7s							
BLB				Lg	Lg	21 34 14.9	
15nm,1.2s							
DJR Jarkent		**6.97**	**42**	*eP*	**Pb**	**21 33 13.8**	**+1.6**
1.1nm,0.2s							
DJR				*eS*	Sb	21 34 43.7	+7.9
7.9nm,1.4s							
DJR Jarkent		**6.97**	**42**	Pg	Pb	21 33 16.5	+4.3
1.1nm,0.2s							
DJR				Lg	Lg	21 34 43.7	
7.9nm,1.4s							
OTUK Ortayu		**8.99**	**356**	⇓Pn	**Pn**	**21 33 22.7**	**+1.7**
3.2nm,0.8s							
OTUK				⇓Lg	Lg	21 35 52.7	
20nm,1.1s							
MAKZ Makanchi		**9.82**	**37**	⇑Pn	Pn	21 34 02.0	+30
1.4nm,0.9s							
MAKZ				⇓Lg	Lg	21 36 19.5	
5.0nm,1.4s							
MK31 Makanchi Array		**9.96**	**38**	⇑Pn	Pn	21 33 54.2	+20
0.1nm,0.4s,baz=221,slow=13,SNR=5.5							
MK31				⇓Lg	Lg	21 36 24.0	
7.9nm,1.4s							
MKAR Makanchi Array		**9.96**	**38**	Pn	**Pn**	**21 33 32.5**	**-1.8**
baz=190,slow=6.2,SNR=3.4							
MKAR				Lg	Lg	21 36 11.8	
0.1nm,0.3s,baz=221,slow=28,SNR=1.7							
KURBB Kurchatov Arra		**11.92**	**16**	Pn	**Pn**	**21 33 59.2**	**-1.9**
baz=211,slow=12,SNR=2.0							
KURBB				Lg	Lg	21 37 19.7	
baz=174,slow=29,SNR=3.2							
KURBB Kurchatov Arra		**11.92**	**16**	⇓Lg	Lg	21 37 24.9	
12nm,0.9s							
GEYT Alibeck		**11.99**	**268**	Pn	**Pn**	**21 34 01.9**	**-0.3**
0.3nm,0.3s,baz=66,slow=8.1,SNR=1.9							
1.5nm,0.5s							
KURK Kurchatov		**12.02**	**16**	⇑Lg	Lg	21 37 29.1	
AB31 Akbulak array		**13.82**	**321**	⇑Pn	**Pn**	**21 34 23.3**	**-3.7**
0.4nm,0.5s,baz=128,slow=14,SNR=18							
AKTO Aktyubinsk		**15.54**	**321**	Pn	**Pn**	**21 34 51.6**	**+1.4**
0.3nm,0.3s,baz=108,slow=11,SNR=5.6							
3.1nm,0.8s							
ZALV Zelesovo Beam		**16.62**	**24**	Pn	**Pn**	**21 35 00.7**	**-3.4**
0.1nm,0.3s,baz=339,slow=19,SNR=2.4							
0.4nm,0.3s							
ARU Arti		**19.74**	**335**	P	**P**	**21 35 40.7**	**-0.3**
2.1nm,0.7s,baz=67,slow=8.2,SNR=4.1							
2.1nm,0.7s							
AKASG Malin Array Be		**32.76**	**305**	P	**P**	**21 37 43.6**	**-0.6**
0.1nm,0.2s,baz=79,slow=7.7,SNR=3.5							
0.1nm,0.2s							
FINES FINESS Array B		**36.29**	**323**	P	**P**	**21 38 13.8**	**-0.9**
3.9nm,1.1s,baz=126,slow=9.7,SNR=4.7							
3.9nm,1.1s							
ARCES ARCESS Array B		**39.33**	**336**	P	**P**	**21 38 39.9**	**-0.4**
1.3nm,0.9s,baz=69,slow=17,SNR=4.1							
1.3nm,0.9s							
HFS Hagfors		**42.08**	**320**	P	**P**	**21 39 02.5**	**-0.6**
2.1nm,0.7s,baz=84,slow=13,SNR=5.6							
2.1nm,0.7s							
GERES GERESS Array B		**42.90**	**303**	P	**P**	**21 39 09.1**	**-1.0**
2.6nm,0.7s,baz=150,slow=9.2,SNR=3.7							
2.6nm,0.7s							
NOA NORSAR Array B		**43.33**	**321**	P	**P**	**21 39 12.4**	**-0.9**
0.5nm,0.6s,baz=92,slow=8.0,SNR=3.6							
0.5nm,0.6s							
WRA Warramunga Arr		**81.94**	**124**	P	P	21 43 23.5	-8.0
0.1nm,0.3s,baz=134,slow=28,SNR=4.6							
0.1nm,0.3s							

*ATH **27** 21:34:20.9, 34.2°13N×26.2°60E, h7km±4km, ML3.9/7, Error ellipse: s-maj=5.2km s-min=2.8km az=50.0*
*NIC **27** 21:34:21.1±0.0, 34.0°03N×26.2°33E, h32km±25km, Ml4.8/6*
*DDA **27** 21:34:21.7±0.0, 34.2°26N×26.2°50E, h7km±5km, MW4.3*
*MOS **27** 21:34:21.2±1.2, 34.2°23N×26.2°40E, h17km, mb4.8/7, Error ellipse: s-maj=5.4km s-min=3.1km az=94.7*
*IDC **27** 21:34:21.1±0.6, 34.2°34N×26.2°49E, h0km, mb4.4/28, mbtmp4.4/40, ML4.0/12, MS3.9/6, Error ellipse: s-maj=13.8km s-min=9.6km az=180.0*
*NEIC **27** 21:34:22.4±2.5, 34.2°20N±0.0°08×26.2°45E±0.0°06, h10km±1km, mb4.5/67, ML3.9(THE), ML3.9(ATH), Error ellipse: s-maj=13.2km s-min=8.7km az=187.0*
*BJI **27** 21:34:22.0±0.0, 34.2°38N×26.2°11E, h29km, mb4.6/36, mB4.8/14, Ms4.9/6, Ms7 4.8/6*
*ISK **27** 21:34:24.2, 34.2°36N×26.2°53E, h10km, ML4.3/27*
*THE **27** 21:34:26.2, 34.2°44N×26.2°46E, h0km±1km, ML3.8/6, Error ellipse: s-maj=2.6km s-min=0.8km az=129.0*
*MED_RC **27** 21:34:26.0±0.4, 34.2°21N×26.2°47E, h45km±7km, MW4.7/12,

Duration: 1s0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.22±.23; $M_{\theta\theta}$-1.16±.13; $M_{\phi\phi}$1.37±.16; $M_{r\theta}$0.25±.10; $M_{\theta\phi}$-0.16±.14; $M_{r\phi}$-0.01±.15; Best double couple: $M_0$1.31000×10^{16} NP1:φ_s312.00000°,δ81.00000°, λ-169.00000°. NP2:φ_s221.00000°,δ80.00000°, λ-9.00000°. Principal axes: T 1.3800, Plg1.0000°, Azm86.0000°; N -0.1600, Plg76.0000°, Azm352.0000°; P -1.2300, Plg14.0000°, Azm177.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.

*GII **27** 21:34:27.2±0.0,34°.02N×26°.95E,h10km,mb4.5/4, MD4.4/4,Mm4.5/4*

*HLW **27** 21:34:28.4,33°.95N×26°.69E,h31km±22km,Md4.2,Ml4.3*

ISC 27 21:34:22.1±0.7,**34°.18N**±0°.03×**26°.50E**±0°.02,**h12**km±4km, **h12**km:**pP-P,n506,**σ1°**69**/561,**mb4.5**/75,**MS4.1**/7,**29C-13D, Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.96**	**346**	P	**Pg**	**21 34 40.0**	**-0.7**
ZKR				S	**Sn**	**21 34 54.6**	**-0.6**
ZKR				AML	AML	21 35 00.6	
	comp=E,21357μm,0.6s						
ZKR				AML	AML	21 35 03.1	
	comp=N,14224μm,0.7s						
ZKR	**Zakros**	**0.96**	**346**	P	**Pg**	**21 34 39.7**	**-1.0**
ZKR				S	**Sg**	**21 34 51.5**	**-1.8**
	comp=N,10μm,0.6s						
ZKR	**Zakros**	**0.96**	**346**	PG	**Pg**	**21 34 40.0**	**-0.7**
ZKR	**Zakros**	**0.96**	**346**	P	**Pg**	**21 34 39.7**	**-1.0**
ZKR				S	**Sn**	**21 34 54.4**	**-0.7**
FRMA	**Ierapetra Chan**	**1.05**	**323**	P	**Pg**	**21 34 40.8**	**-1.5**
FRMA				S	**Sn**	**21 34 56.4**	**-0.7**
FRMA				AML	AML	21 35 02.9	
	comp=E,20969μm,0.5s						
FRMA				AML	AML	21 35 03.1	
	comp=N,17231μm,0.5s						
FRMA	**Ierapetra Chan**	**1.05**	**323**	P	**Pg**	**21 34 40.6**	**-1.7**
FRMA				S	**Sg**	**21 34 53.6**	**-2.3**
	comp=N,3μm,0.5s						
STIA	**Sitia Lasithi**	**1.08**	**342**	P	**Pg**	**21 34 42.0**	**-0.8**
STIA				S	**Sn**	**21 34 58.1**	**+0.2**
STIA	**Sitia Lasithi**	**1.08**	**342**	P	**Pg**	**21 34 42.0**	**-0.8**
STIA				S	**Sg**	**21 34 55.6**	**-1.3**
HRKL	**Herakleio**	**1.61**	**315**	P	**Pg**	**21 34 52.6**	**-0.5**
HRKL	**Herakleio**	**1.61**	**315**	P	**Pb**	**21 34 52.1**	**+0.3**
HRKL				S	**Sb**	**21 35 11.4**	**-0.8**
	comp=N,11μm,0.9s						
HRKL	**Herakleio**	**1.61**	**315**	PN	**Pb**	**21 34 51.9**	**+0.1**
HRKL				SN	**Sb**	**21 35 12.2**	**0.0**
KSTL	**Kastelli Herak**	**1.63**	**314**	P	**Pn**	**21 34 48.2**	**-2.4**
KSTL				S	**Sn**	**21 35 08.1**	**-3.4**
KSTL				AML	AML	21 35 14.1	
	comp=E,5771μm,0.9s						
KSTL				AML	AML	21 35 19.1	
	comp=N,10867μm,0.6s						
SIVA	**Sivas**	**1.63**	**301**	P	**Pg**	**21 34 53.0**	**-0.3**
IACM	**Heraklion**	**1.63**	**314**	P	**Pg**	**21 34 52.6**	**-0.8**
TMBK	**Timbaki Herakl**	**1.69**	**302**	P	**Pg**	**21 34 54.0**	**-0.5**
TMBK	**Timbaki Herakl**	**1.69**	**302**	P	**Pb**	**21 34 53.4**	**+0.3**
TMBK				S	**Sb**	**21 35 14.0**	**-0.2**
	comp=N,3μm,0.9s						
IDI	**Anoyia**	**1.73**	**310**	⇓P	**Pn**	**21 34 51.8**	**-0.2**
IDI				⇓S	**Sn**	**21 35 10.5**	**-3.6**
IDI	**Anoyia**	**1.73**	**310**	Pn	**Pb**	**21 34 53.0**	**-0.8**
	comp=N,22nm,0.3s,baz=128,slow=10,SNR=81						
IDI				Sn	**Sb**	**21 35 14.5**	**-1.0**
	comp=N,97nm,0.3s,baz=47,slow=24,SNR=6.4						
IDI				LR	LR	21 35 25.8	
	comp=N,254nm,18.3s,baz=128,slow=40						
IDI	**Anoyia**	**1.73**	**310**	P	**Pb**	**21 34 54.1**	**+0.3**
IDI				S	**Sg**	**21 35 18.2**	**+0.5**
IDI				AML	AML	21 35 28.0	
	comp=E,3884μm,0.7s						
IDI				AML	AML	21 35 31.4	
	comp=N,3225μm,0.6s						
IDI	**Anoyia**	**1.73**	**310**	P	**Pb**	**21 34 53.0**	**-0.8**
IDI				S	**Sg**	**21 35 15.9**	**-1.8**
	comp=N,2μm,1.0s						
IDI	**Anoyia**	**1.73**	**310**	PN	**Pb**	**21 34 53.9**	**+0.1**
IDI	**Anoyia**	**1.73**	**310**	Pn	**Pn**	**21 34 52.6**	**+0.5**
GVDS	**Gavdos**	**2.10**	**289**	P	**Pb**	**21 34 59.7**	**-0.4**
GVD	**Gavdhos**	**2.10**	**289**	P	**Pb**	**21 34 59.6**	**-0.6**
GVD	**Gavdhos**	**2.10**	**289**	P	**Pb**	**21 34 58.9**	**-1.2**
GVD				S	**Sb**	**21 35 26.7**	**+0.6**
	comp=N,3μm,0.8s						
GVD	**Gavdhos**	**2.10**	**289**	PN	**Pb**	**21 34 59.7**	**-0.4**
SANT	**Santorini**	**2.35**	**339**	⇑P	**Pn**	**21 35 01.4**	**+0.8**
SANT				⇑S	**Sn**	**21 35 30.5**	**+1.1**
SANT	**Santorini**	**2.35**	**339**	P	**Pb**	**21 35 02.4**	**-1.9**
SANT				S	**Sg**	**21 35 34.4**	**-3.2**
SANT				AML	AML	21 35 49.2	
	comp=N,1342μm,0.6s						
SANT				AML	AML	21 35 52.0	
	comp=E,2918μm,1.0s						
SANT	**Santorini**	**2.35**	**339**	P	**Pn**	**21 35 01.2**	**+0.6**
SANT	**Santorini**	**2.35**	**339**	PN	**Pn**	**21 35 01.7**	**+1.1**
SANT	**Santorini**	**2.35**	**339**	Pn	**Pn**	**21 35 00.5**	**-0.1**
THR6	**Thira Island,**	**2.35**	**338**	P	**Pn**	**21 35 01.2**	**+0.6**
THR8	**Santorini-Mono**	**2.38**	**340**	P	**Pn**	**21 35 01.4**	**+0.5**
THR3	**Thira Island,**	**2.40**	**338**	P	**Pn**	**21 35 02.7**	**+1.5**
CHAN	**Chania**	**2.42**	**304**	P	**Pb**	**21 35 05.3**	**-0.4**
THR5	**Thira Island,**	**2.42**	**337**	P	**Pn**	**21 35 02.7**	**+1.1**
ARG	**Arkhangelos**	**2.43**	**33**	P	**Pb**	**21 35 04.6**	**-1.2**
ARG				AML	AML	21 35 34.3	
	comp=N,1522μm,1.3s						
ARG				AML	AML	21 35 37.1	
	comp=E,2296μm,1.2s						
ARG	**Arkhangelos**	**2.43**	**33**	P	**Pb**	**21 35 04.3**	**-1.5**
ARG				S	**Sn**	**21 35 32.1**	**+0.8**
ARG	**Arkhangelos**	**2.43**	**33**	PN	**Pn**	**21 35 02.8**	**+1.2**
ARG	**Arkhangelos**	**2.43**	**33**	Pn	**Pb**	**21 35 04.5**	**-1.2**
ARG	**Arkhangelos**	**2.43**	**33**	P	**Pb**	**21 35 04.3**	**-1.5**
ARG				S	**Sn**	**21 35 32.1**	**+0.8**
ARG	**Arkhangelos**	**2.43**	**33**	P	**Pb**	**21 35 04.5**	**-1.3**
ARG				S	**Sb**	**21 35 33.2**	**-2.5**
IMMV	**Iera Moni Meta**	**2.44**	**302**	P	**Pb**	**21 35 04.7**	**-1.2**
IMMV	**Iera Moni Meta**	**2.44**	**302**	P	**Pn**	**21 35 03.6**	**+1.9**
IMMV	**Iera Moni Meta**	**2.44**	**302**	PN	**Pb**	**21 35 04.5**	**-1.4**
CMBO	**Columbo, Santo**	**2.46**	**339**	P	**Pn**	**21 35 03.7**	**+1.7**
NIS1	**Nisyros Isl.**	**2.48**	**13**	PN	**Pn**	**21 35 03.2**	**+0.8**
KNDR	**Palaiochora Ch**	**2.55**	**295**	P	**Pb**	**21 35 07.5**	**-0.2**
KNDR				AML	AML	21 35 46.0	
	comp=E,2752μm,0.7s						
KNDR				AML	AML	21 35 46.4	
	comp=N,2058μm,0.6s						
KNDR	**Palaiochora Ch**	**2.55**	**295**	PN	**Pb**	**21 35 06.8**	**-0.9**
KOSK	**Kos Island**	**2.60**	**8**	PN	**Pn**	**21 35 04.9**	**+1.0**
DAT	**Datca**	**2.69**	**19**	P	**Pn**	**21 35 06.8**	**+1.4**
DAT	**Datca**	**2.69**	**19**	PN	**Pn**	**21 35 06.2**	**+0.8**
SLUM	**Salum**	**2.89**	**202**	P	**Pn**	**21 35 10.0**	**+2.0**
	baz=208						
SLUM				S	**Sn**	**21 35 40.4**	**-2.3**
	baz=208						
BODT	**Bodrum**	**2.95**	**13**	PN	**Pn**	**21 35 10.1**	**+1.3**
TURN	**Turunc**	**2.96**	**28**	PN	**Pn**	**21 35 09.9**	**+1.0**
TURN	**Turunc**	**2.96**	**28**	P	**Pn**	**21 35 10.5**	**+1.6**
TURN				S	**Sb**	**21 35 47.8**	**-3.0**
TURN				AML	AML	21 36 24.0	
	comp=N,157nm,0.9s						
TURN				AML	AML	21 36 43.0	
	comp=N,187nm,1.3s						
APE	**Apeiranthos**	**2.99**	**345**	⇑P	**Pn**	**21 35 10.2**	**+0.8**
APE				⇓S	**Sn**	**21 35 47.0**	**+1.8**
APE	**Apeiranthos**	**2.99**	**345**	P	**Pn**	**21 35 10.0**	**+0.6**
APE	**Apeiranthos**	**2.99**	**345**	PN	**Pn**	**21 35 10.1**	**+0.6**
APE	**Apeiranthos**	**2.99**	**345**	P	**Pn**	**21 35 10.2**	**+0.8**
APE				S	**Sn**	**21 35 47.0**	**+1.8**
MHLO	**Agia Marina, M**	**3.04**	**326**	P	**Pn**	**21 35 11.2**	**+1.2**
DALY	**Dalyan (Mula)**	**3.17**	**33**	PN	**Pn**	**21 35 13.4**	**+1.7**
FETY	**Fethiye**	**3.23**	**40**	PN	**Pn**	**21 35 13.9**	**+1.2**
FETY	**Fethiye**	**3.23**	**40**	P	**Pn**	**21 35 15.8**	**+3.1**
AKAS	**Kas**	**3.27**	**50**	PN	**Pn**	**21 35 15.3**	**+2.0**
AKAS	**Kas**	**3.27**	**50**	Pn	**Pn**	**21 35 14.6**	**+1.4**
AKAS	**Kas**	**3.27**	**50**	P	**Pn**	**21 35 15.3**	**+2.0**
AKAS				S	**Sn**	**21 35 54.2**	**+2.1**
AKAS				AML	AML	21 35 58.0	
	comp=N,585nm,0.5s						
AKAS				AML	AML	21 35 59.0	
	comp=N,743nm,0.5s						
YER	**Yerkesik**	**3.29**	**26**	P	**Pn**	**21 35 15.1**	**+1.6**
YER	**Yerkesik**	**3.29**	**26**	PN	**Pn**	**21 35 14.7**	**+1.2**
YER	**Yerkesik**	**3.29**	**26**	P	**Pn**	**21 35 14.7**	**+1.2**
DEMR	**Demre-Antalya**	**3.46**	**53**	PN	**Pn**	**21 35 17.8**	**+2.0**
KTHR	**Kythira**	**3.54**	**307**	P	**Pn**	**21 35 19.6**	**+2.7**
KTHR				S	**Sn**	**21 36 00.5**	**+1.9**
CAME	**Cameli-Denizli**	**3.58**	**39**	PN	**Pn**	**21 35 19.3**	**+1.7**
CAEL	**Denizli, Camel**	**3.73**	**37**	P	**Pn**	**21 35 21.9**	**+2.2**
CAEL				AML	AML	21 36 11.0	
	comp=N,717nm,0.8s						
CAEL				AML	AML	21 37 17.0	
	comp=N,715nm,1.6s						
ELL	**Elmali**	**3.78**	**46**	PN	**Pn**	**21 35 22.2**	**+1.8**
ELL	**Elmali**	**3.78**	**46**		**Pn**	**21 35 22.8**	**+2.5**
ELL	**Elmali**	**3.78**	**46**	P	**Pn**	**21 35 22.8**	**+2.5**
ELL	**Elmali**	**3.78**	**46**	P	**Pn**	**21 35 22.3**	**+2.0**
AKUM	**Antalya-Kumluc**	**3.80**	**55**	P	**Pn**	**21 35 21.7**	**+1.2**
AKUM				S	**Sn**	**21 36 06.0**	**+0.9**
AKUM				AML	AML	21 36 10.0	
	comp=N,156nm,0.5s						
AKUM				AML	AML	21 36 14.0	
	comp=N,208nm,0.5s						
TAVA	**DENIZLI_Tavas**	**3.82**	**30**	P	**Pn**	**21 35 22.7**	**+1.8**
TAVA				S	**Sn**	**21 36 06.7**	**+0.9**
TAVA				AML	AML	21 36 21.0	
	comp=N,106nm,0.7s						
TAVA				AML	AML	21 36 44.0	
	comp=N,126nm,1.7s						
VLI	**Velíai**	**3.86**	**312**	P	**Pn**	**21 35 21.3**	**0.0**
GOLH	**Golhisar**	**3.94**	**38**	P	**Pn**	**21 35 25.2**	**+2.7**
GOLH				AML	AML	21 36 14.0	
	comp=N,273nm,0.9s						
GOLH				S	**Sb**	**21 36 14.1**	**-5.1**
GOLH				AML	AML	21 36 47.0	
	comp=N,275nm,1.3s						
APMY	**Acipayam-Deniz**	**4.00**	**34**	PN	**Pn**	**21 35 25.1**	**+1.8**
OSC1	**CSNet OBS 1**	**4.03**	**98**	P	**Pn**	**21 35 23.8**	**+0.2**
KRND	**KRANIDI**	**4.20**	**321**	P	**Pn**	**21 35 26.8**	**+0.8**
KORT	**Korkueli**	**4.22**	**47**	PN	**Pn**	**21 35 28.2**	**+1.9**
KORT	**Korkueli**	**4.22**	**47**	P	**Pn**	**21 35 29.3**	**+3.0**
KORT				S	**Sn**	**21 36 20.3**	**+4.7**
KORT				AML	AML	21 36 35.0	
	comp=N,160nm,1.2s						
KORT				AML	AML	21 36 37.0	
	comp=N,237nm,0.8s						
ANTB	**Antalya**	**4.34**	**50**	PN	**Pn**	**21 35 30.5**	**+2.6**
EPID	**Epidavros**	**4.39**	**322**	P	**Pn**	**21 35 29.2**	**+0.6**
DION	**Dionisos Attik**	**4.41**	**333**	P	**Pn**	**21 35 30.6**	**+1.7**
PTL	**Penteli**	**4.41**	**332**	P	**Pn**	**21 35 30.8**	**+1.9**
BRDR	**BURDUR-Merkez**	**4.55**	**38**	P	**Pn**	**21 35 33.4**	**+2.6**
BRDR				AML	AML	21 36 29.0	
	comp=N,94nm,0.5s						
BRDR				S	**Sn**	**21 36 29.2**	**+5.6**
BRDR				AML	AML	21 36 31.0	
	comp=N,104nm,0.6s						
BUCA	**Burdur, Bucak-**	**4.56**	**45**	P	**Pn**	**21 35 34.6**	**+3.6**
BUCA				S	**Sn**	**21 36 27.6**	**+3.7**
BUCA				AML	AML	21 36 42.0	
	comp=N,91nm,0.7s						
BUCA				AML	AML	21 36 57.0	
	comp=N,127nm,0.8s						
BASM	**Basmaki-Afyon**	**4.71**	**37**	PN	**Pn**	**21 35 35.3**	**+2.2**
ITM	**Ithomi**	**4.78**	**310**	PN	**Pn**	**21 35 36.6**	**+2.7**
ITM	**Ithomi**	**4.78**	**310**	Pn	**Pn**	**21 35 35.0**	**+1.0**
ISP	**Isparta**	**4.88**	**41**	PN	**Pn**	**21 35 37.9**	**+2.4**
ISP	**Isparta**	**4.88**	**41**	Pn	**Pn**	**21 35 36.0**	**+0.5**
ISP	**Isparta**	**4.88**	**41**	P	**Pn**	**21 35 36.0**	**+0.5**
AKMS	**Akamas**	**4.88**	**78**	P	**Pn**	**21 35 35.9**	**+0.5**
AKMS				AML	AML	21 36 30.7	
	comp=N,2.0nm,0.5s						
AKMS				AML	AML	21 36 32.7	
	comp=N,2.1nm,0.6s						
SUTC	**Sutluce-Ispart**	**4.92**	**47**	PN	**Pn**	**21 35 38.2**	**+2.2**
OSC2	**CSNet OBS 4**	**4.94**	**101**	P	**Pn**	**21 35 35.1**	**-1.0**
OSC2				S	**Sn**	**21 36 33.5**	**+0.4**
KEPZ	**Antalya-Kepez**	**4.97**	**55**	P	**Pn**	**21 35 38.3**	**+1.7**
KEPZ				S	**Sn**	**21 36 34.8**	**+0.7**
KEPZ				AML	AML	21 36 37.0	
	comp=N,186nm,0.6s						
KEPZ				AML	AML	21 36 41.0	
	comp=N,143nm,0.6s						
SWA2		**5.00**	**191**	P	**Pn**	**21 35 38.6**	**+1.6**
	baz=193						
NATA	**Nata**	**5.05**	**81**	P	**Pn**	**21 35 37.9**	**+0.2**
NATA				S	**Sn**	**21 36 36.9**	**+1.0**
NATA				AML	AML	21 36 41.2	
	comp=N,4.2nm,0.6s						
NATA				AML	AML	21 36 41.2	
	comp=N,4.2nm,0.6s						
NATA				AML	AML	21 36 43.1	
	comp=N,5.4nm,0.6s						
NATA				AML	AML	21 36 43.1	
	comp=N,5.4nm,0.6s						
ALFC	**Alefka**	**5.12**	**77**	P	**Pn**	**21 35 39.1**	**+0.4**
ALFC				AML	AML	21 36 38.8	
	comp=N,2.3nm,0.4s						
ALFC				AML	AML	21 36 44.3	
	comp=N,1.9nm,0.7s						
GAZI	**Gazipasa**	**5.18**	**65**	PN	**Pn**	**21 35 40.3**	**+0.8**
GAZI	**Gazipasa**	**5.18**	**65**	P	**Pn**	**21 35 39.9**	**+0.4**
GAZI				S	**Sn**	**21 36 37.1**	**-2.1**
GAZI				AML	AML	21 36 40.0	
	comp=N,223nm,0.6s						
GAZI				AML	AML	21 36 41.0	
	comp=N,239nm,0.6s						
SZAC	**Souni**	**5.30**	**82**	P	**Pn**	**21 35 41.4**	**+0.3**
SZAC				AML	AML	21 36 54.5	
	comp=N,2.3nm,0.5s						
SZAC				AML	AML	21 36 57.6	
	comp=N,2.3nm,0.9s						
SEDI	**Konya, Seydise**	**5.38**	**51**	P	**Pn**	**21 35 46.4**	**+4.1**
SEDI				S	**Sn**	**21 36 47.5**	**+3.3**
SEDI				AML	AML	21 36 51.0	
	comp=N,160nm,1.5s						
SEDI				AML	AML	21 37 01.0	
	comp=N,172nm,0.9s						
SEYD	**Seydisehir-KON**	**5.40**	**52**	PN	**Pn**	**21 35 45.9**	**+3.3**
SHUT	**Suhut-Afyon**	**5.45**	**36**	PN	**Pn**	**21 35 46.1**	**+2.8**
ASGA	**Asgata**	**5.61**	**82**	P	**Pn**	**21 35 45.5**	**+0.2**
ASGA				AML	AML	21 36 53.3	
	comp=N,4.4nm,0.6s						
ASGA				AML	AML	21 36 54.5	
	comp=N,1.9nm,0.7s						
HDMB	**Hadim**	**5.61**	**59**	PN	**Pn**	**21 35 48.9**	**+3.3**
CSS	**Mathiatis**	**5.69**	**80**	Pn	**Pn**	**21 35 45.9**	**-0.6**
CSS	**Mathiatis**	**5.69**	**80**	P	**Pn**	**21 35 46.7**	**+0.2**
HNAT	**Natroun**	**5.72**	**141**	P	**Pn**	**21 35 48.6**	**+1.6**
	baz=141						
DOGA	**KONYA_Doganhis**	**5.73**	**45**	P	**Pn**	**21 35 49.4**	**+2.2**
DOGA				S	**Sn**	**21 36 54.6**	**+1.7**
DOGA				AML	AML	21 36 59.0	
	comp=N,88nm,0.9s						
DOGA				AML	AML	21 37 00.0	
	comp=N,98nm,1.2s						
ATHAL	**Athalassa**	**5.76**	**78**	P	**Pn**	**21 35 49.0**	**+1.5**
ATHAL				AML	AML	21 37 00.1	
	comp=N,4.4nm,0.8s						
ATHAL				AML	AML	21 37 00.3	
	comp=N,2.9nm,1.1s						
AGG	**Agios Georgios**	**5.88**	**326**	PN	**Pn**	**21 35 52.2**	**+3.1**
AGG	**Agios Georgios**	**5.88**	**326**	Pn	**Pn**	**21 35 49.5**	**+0.3**
AGG	**Agios Georgios**	**5.88**	**326**	P	**Pn**	**21 35 49.5**	**+0.3**
MVOU	**Mavrovouni**	**5.94**	**80**	P	**Pn**	**21 35 50.4**	**+0.5**
RYAN	**Fayoum**	**6.01**	**147**	P	**Pn**	**21 35 53.0**	**+2.1**
	baz=146						
HSAF	**As Saff**	**6.25**	**135**	P	**Pn**	**21 35 54.5**	**+0.3**
	baz=134						
PARAL	**Palalimni**	**6.27**	**80**	P	**Pn**	**21 35 56.1**	**+1.6**
GLL	**Jalalah**	**6.38**	**135**	P	**Pn**	**21 35 55.5**	**-0.4**
	baz=134						
ALN	**Alexandroupoli**	**6.72**	**357**	Pn	**Pn**	**21 36 01.6**	**+1.1**
ALN	**Alexandroupoli**	**6.72**	**357**	P	**Pn**	**21 36 01.6**	**+1.1**
LIT	**Litokhoron**	**6.72**	**333**	Pn	**Pn**	**21 36 01.7**	**+1.0**
LIT	**Litokhoron**	**6.72**	**333**	P	**Pn**	**21 36 01.7**	**+1.0**
OFRI	**`Ofer**	**7.26**	**100**	Pn	**Pn**	**21 36 07.9**	**-0.2**
OFRI				Sn	**Sn**	**21 37 25.9**	**-4.6**
KZIT	**Kziot**	**7.42**	**114**	Pn	**Pn**	**21 36 10.6**	**+0.3**
KZIT				Sn	**Sn**	**21 37 30.7**	**-3.7**
KDZ	**Kurdzhali**	**7.51**	**354**	P	Pb	21 36 22.2	-10
MMA0B	**Mount Meron ar**	**7.52**	**96**	Pn	**Pn**	**21 36 11.5**	**-0.1**
MMA0B				Sn	**Sn**	**21 37 34.4**	**-2.5**
MMAI	**Mount Meron Ar**	**7.52**	**96**	Pn	**Pn**	**21 36 11.8**	**+0.1**
	comp=N,8.7nm,0.3s,baz=280,slow=10,SNR=37						
MMAI				Sn	**Sn**	**21 37 36.4**	**-0.5**
	comp=N,14nm,0.3s,baz=272,slow=29,SNR=7.7 comp=N,4.5nm,0.3s						
AMAZ	**Amatzia**	**7.55**	**108**	Pn	**Pn**	**21 36 12.1**	**0.0**
AMAZ				Sn	**Sn**	**21 37 33.2**	**-4.5**
QRWL	**Qaraoun**	**7.66**	**92**	*e*P	**Pn**	**21 36 12.9**	**-0.8**
MMLI	**Mount Malkishu**	**7.67**	**101**	Pn	**Pn**	**21 36 13.7**	**+0.1**
GEM	**Giv'at Ha'Em**	**7.70**	**95**	Pn	**Pn**	**21 36 14.5**	**+0.5**
KEK	**Kerkira**	**7.70**	**318**	Pn	**Pn**	**21 36 12.1**	**-1.9**
MMB	**Musomiste**	**7.72**	**344**	P	**Pn**	**21 36 15.2**	**+0.9**
NATI	**Neve Ativ**	**7.75**	**94**	Pn	**Pn**	**21 36 14.8**	**+0.1**
YTIR	**Yattir**	**7.78**	**109**	Pn	**Pn**	**21 36 15.4**	**+0.2**
YTIR				Sn	**Sn**	**21 37 39.2**	**-4.1**
VAY	**Valandovo**	**7.78**	**338**	*i* Pn	Pn	21 36 20.5	+5.4
RCY	**Rachaya**	**7.80**	**92**	*e*P	**Pn**	**21 36 14.8**	**-0.7**
HMDT	**Nahal Hemdat**	**7.80**	**102**	Pn	**Pn**	**21 36 15.2**	**-0.3**
HMDT				Sn	**Sn**	**21 37 40.4**	**-3.4**
HWQ	**Hawqa**	**7.82**	**87**	*e*P	**Pn**	**21 36 17.2**	**+1.4**
KBN	**Korca**	**7.88**	**326**	Pn	**Pn**	**21 36 16.4**	**-0.1**
KBN	**Korca**	**7.88**	**326**	P	**Pn**	**21 36 16.4**	**-0.1**
DSI	**Dead Sea**	**7.91**	**107**	Pn	**Pn**	**21 36 17.2**	**+0.3**
DSI				Sn	**Sn**	**21 37 42.7**	**-3.7**
BR131	**Keskin Array S**	**7.95**	**44**	Pn	**Pn**	**21 36 20.0**	**+2.3**
BR131	**Keskin Array S**	**7.95**	**44**	P	**Pn**	**21 36 20.0**	**+2.3**
BRTR	**Keskin Array B**	**7.95**	**44**	Pn	**Pn**	**21 36 18.2**	**+0.6**
	comp=N,0.5nm,0.3s,baz=222,slow=13,SNR=20						
BRTR				Sn	**Sn**	**21 37 46.7**	**-1.0**
	comp=N,0.6nm,0.3s,baz=215,slow=29,SNR=2.0 comp=N,10nm,0.8s						
BRTR	**Keskin Array B**	**7.95**	**44**		**Pn**	**21 36 19.5**	**+1.8**
MSBI	**Mazada**	**7.99**	**109**	Pn	**Pn**	**21 36 18.6**	**+0.6**
KRMI	**Paran Flat**	**8.06**	**118**	Pn	**Pn**	**21 36 19.1**	**0.0**
KRMI				Sn	**Sn**	**21 37 45.4**	**-4.8**
KKB	**Krupnik**	**8.13**	**342**	P	**Pn**	**21 36 21.9**	**+1.9**
PRNI	**Paran**	**8.15**	**116**	Pn	**Pn**	**21 36 20.9**	**+0.7**
PRNI				Sn	**Sn**	**21 37 47.7**	**-4.6**
GHAJ	**Ghor Haditha**	**8.16**	**108**	Pn	**Pn**	**21 36 20.1**	**-0.2**
GHAJ	**Ghor Haditha**	**8.16**	**108**	Pn	**Pn**	**21 36 20.9**	**+0.6**
HRFI	**Mount Harif**	**8.33**	**117**	Pn	**Pn**	**21 36 23.6**	**+0.8**
HRFI				Sn	**Sn**	**21 37 52.9**	**-4.0**
MBRI	**Mt Berech**	**8.38**	**119**	Pn	**Pn**	**21 36 23.9**	**+0.5**
MBRI				Sn	**Sn**	**21 37 54.7**	**-3.3**
EIL	**Elat**	**8.47**	**120**	Pn	**Pn**	**21 36 26.0**	**+1.4**
	comp=N,12nm,0.3s,baz=98,slow=0.0,SNR=23						
EIL				Sn	**Sn**	**21 37 55.0**	**-5.2**
	comp=N,11nm,0.3s,baz=141,slow=1.8,SNR=1.7 comp=N,57nm,0.4s						
HKAT	**Jabal Katrina**	**8.53**	**129**	P	**Pn**	**21 36 25.0**	**-0.7**
	baz=129						
SCTE	**Santa Cesarea**	**8.70**	**315**	Pn	**Pn**	**21 36 26.3**	**-1.4**
BNN	**Bunyan**	**8.85**	**56**	Pn	**Pn**	**21 36 28.6**	**-1.4**
TIR	**Tirane**	**8.88**	**326**	⇑P	**Pn**	**21 36 29.8**	**-0.4**
TIR				⇑S	**Sn**	**21 38 07.9**	**-2.2**
TIR	**Tirane**	**8.88**	**326**	P	**Pn**	**21 36 29.7**	**-0.4**
TIR				S	**Sn**	**21 38 07.9**	**-2.2**
ASF	**Jabal al Asfar**	**8.94**	**100**	Pn	**Pn**	**21 36 31.4**	**+0.3**
	comp=N,1.8nm,0.3s,baz=283,slow=9.0,SNR=18						
ASF				Sn	**Sn**	**21 38 08.2**	**-3.7**
	comp=N,1.0nm,0.3s,baz=6.8,slow=15,SNR=2.1 comp=N,11nm,0.5s						
TIP	**Timpagrande**	**9.28**	**305**	⇑P	**Pn**	**21 36 33.8**	**-2.0**
TIP				⇑S	**Sn**	**21 38 13.7**	**-6.4**
TIP	**Timpagrande**	**9.28**	**305**	Pn	**Pn**	**21 36 35.3**	**-0.5**
AKRG	**Al Kharijah**	**9.31**	**157**	P	**Pn**	**21 36 37.5**	**+1.3**
	baz=157						
GTR	**Jabal at Tayr**	**9.33**	**157**	P	**Pn**	**21 36 37.8**	**+1.3**
	baz=157						
CEL	**Celeste**	**9.49**	**298**	Pn	**Pn**	**21 36 37.8**	**-0.8**
DRME	**Dracevica, Mon**	**9.85**	**326**	*e*Pn	**Pn**	**21 36 43.7**	**+0.2**
PDG	**Podgorica**	**10.01**	**328**	Pn	**Pn**	**21 36 45.0**	**-0.6**
PDG	**Podgorica**	**10.01**	**328**	*e*Pn	**Pn**	**21 36 43.7**	**-2.0**
MATE	**Matera**	**10.12**	**313**	⇑S	**Sn**	**21 38 34.7**	**-5.8**
BOVS	**Bovan**	**10.15**	**340**	⇑P	**Pn**	**21 36 48.3**	**+0.7**
CUC	**Castrocucco**	**10.32**	**307**	Pn	**Pn**	**21 36 49.6**	**-0.3**
RAFF	**Raffo Rosso**	**10.33**	**291**	Pn	**Pn**	**21 36 50.7**

GNI Garni 15.71 62 P Pn 21 38 03.7 +0.3
GNI pmax pmax
comp=Z,16nm,0.8s
MODS Modra-Piesok 15.77 337 eP Pn 21 38 04.1 +0.1
MODS Modra-Piesok 15.77 337 ePN Pn 21 38 04.1 +0.1
MODS Modra-Piesok 15.77 337 eP P 21 38 10.6 +2.7
CONA Conrad Observa 15.89 333 ePn Pn 21 38 04.3 -1.3
comp=Z,7.8nm,1.1s
KBZ Khabaz 15.90 48 Pn Pn 21 38 06.5 +0.9
comp=Z,0.2nm,0.3s,baz=246,slow=12,SNR=14
comp=Z,12nm,1.1s
NIE Niedzica 15.90 345 eP Pn 21 38 07.2 +1.5
STAL STALIGIAL 15.99 323 P 21 38 09.5 -0.8
CLUD Cludinico 16.04 324 Pn Pn 21 38 06.8 -0.7
CLUD IAmb IAmb 21 38 18.9
comp=Z,21nm,0.8s
JAVC Velka Javorina 16.07 339 ePN Pn 21 38 06.7 -1.2
ZEI Tsey 16.09 53 eP P 21 38 11.1 -0.6
ZEI pmax pmax
comp=Z,17nm,0.9s
KBA Koelnbreinsper 16.27 326 ePn Pn 21 38 10.1 -0.5
comp=Z,7.0nm,0.7s
CTI Castel Tesino 16.39 321 Pn Pn 21 38 12.6 +0.6
CTI Castel Tesino 16.39 321 P Pn 21 38 12.6 +0.6
CTI pmax pmax
comp=Z,19nm,1.1s
ABTA Abfaltersbach 16.43 324 ePn P 21 38 14.0 -1.3
comp=Z,13nm,0.7s,SNR=7.0
MOA Molln 16.46 330 ePn Pn 21 38 10.1 -2.6
comp=Z,4.6nm,0.6s,SNR=9.3
MAUC Maruska 16.48 340 eP Pn 21 38 12.3 -0.8
BIOA Bad Ischl, Aus 16.60 328 *i* Pn Pn 21 38 15.4 +0.8
comp=Z,10nm,1.0s
AKASG Malin Array Be 16.63 6 Pn Pn 21 38 13.8 -1.1
comp=Z,4.0nm,0.3s,baz=188,slow=11,SNR=22
AKASG Sn Sn 21 41 16.0 -3.4
baz=189,slow=22
comp=Z,2.0nm,0.4s
KRUC Moravsky 16.66 336 ePN Pn 21 38 12.8 -2.5
GOF Gofitskoye 16.71 45⇑ eP P 21 38 18.7 +0.3
GOF pmax pmax
comp=Z,31nm,0.8s
SALO Salr 16.72 318 Pn 21 38 17.2 +1.0
SALO IAmb IAmb 21 38 29.9
comp=Z,54nm,0.8s
OJC Ojcow 16.77 345 eP Pn 21 38 15.1 -1.6
OJC Ojcow 16.77 345 Pn Pn 21 38 15.1 -1.6
OJC Ojcow 16.77 345 P Pn 21 38 15.1 -1.6
OJC pmax pmax
comp=Z,9.0nm,1.0s
VRAC Vranov 16.80 337 ⇑P Pn 21 38 15.2 -2.0
VRAC Vranov 16.80 337 Pn Pn 21 38 15.9 -1.3
comp=Z,0.3nm,0.3s,baz=167,slow=15,SNR=5.3
comp=Z,4.2nm,0.7s
VRAC Vranov 16.80 337 ePN Pn 21 38 15.5 -1.7
OKC Ostrava-Krasne 16.82 341 eP Pn 21 38 16.5 -0.8
OKC Ostrava-Krasne 16.82 341 eP Pn 21 38 16.5 -0.8
MORC Moravsky Berou 16.93 340 ⇓P Pn 21 38 16.8 -2.0
MORC Moravsky Berou 16.93 340 Pn 21 38 17.3 -1.5
MORC Moravsky Berou 16.93 340 P Pn 21 38 17.3 -1.5
MORC pmax pmax
comp=Z,14nm,0.9s
MORC Moravsky Berou 16.93 340 ePN Pn 21 38 17.0 -1.8
TREC Trest 17.17 335 eP P 21 38 22.9 -0.4
TREC Trest 17.17 335 eP P 21 38 22.9 -0.4
CKRC Cesky Krumlov 17.21 332 eP Pn 21 38 20.9 -1.4
WTTA Wattenberg 17.22 324 ePn P 21 38 23.9 -0.2
comp=Z,10nm,1.0s
WATA Walderalm 17.30 324 *i* Pn P 21 38 24.6 -0.4
comp=Z,11nm,0.9s
SQTA Sankt Quirin 17.40 323 *i* Pn Pn 21 38 25.2 +0.4
comp=Z,9.6nm,0.7s
KRLC Kraliky 17.42 339 eP Pn 21 38 23.9 -1.0
KRLC Kraliky 17.42 339 eP Pn 21 38 23.9 -1.0
GEC2 GERESS Array S 17.47 331 Pn Pn 21 38 23.6 -2.0
GERES GERESS Array B 17.47 331 P Pn 21 38 24.2 -1.4
comp=Z,0.5nm,0.3s,baz=139,slow=12,SNR=26
comp=Z,4.5nm,0.7s
GERES GERESS Array B 17.47 331 Pn Pn 21 38 23.8 -1.9
FUORN Ofenpass-Fuorn 17.49 320 P 21 38 27.7 +0.5
FUORN IAmb IAmb 21 38 37.0
comp=Z,37nm,1.1s
FETA Feichten 17.51 322 ePn P 21 38 28.1 +0.8
comp=Z,20nm,0.8s,SNR=10
GROC Groznyy 17.52 53 eP P 21 38 28.9 +1.6
GROC pmax pmax
comp=Z,8.0nm,0.5s
MOTA Moosalm 17.54 323 ePn Pn 21 38 26.7 +0.2
comp=Z,10nm,1.0s
KHC Kasperske Hory 17.75 331 Pn Pn 21 38 27.2 -1.8
KHC Kasperske Hory 17.75 331 eP Pn 21 38 28.5 -0.5
KHC Kasperske Hory 17.75 331 eP Pn 21 38 28.5 -0.5
KHC x x 21 38 38.5
DAVOX Davos/Dischmat 17.80 320 P Pn 21 38 29.5 -0.3
comp=Z,0.4nm,0.3s,baz=145,slow=16,SNR=10
comp=Z,4.9nm,0.7s
DPC Dobruska-Polom 17.80 338 eP Pn 21 38 29.0 -0.6
DPC Dobruska-Polom 17.80 338 eP Pn 21 38 29.0 -0.6
RETA Reutte 17.80 323 ePn Pn 21 38 29.3 -0.4
comp=Z,6.8nm,1.0s
TUE Stuetta 17.89 318 P 21 38 31.4 -0.2
TUE IAmb IAmb 21 38 59.0
comp=Z,24nm,1.1s
OSTC Ostas 18.02 338 eP Pn 21 38 31.0 -1.3
UPC Upice 18.04 338 eP Pn 21 38 31.7 -0.8
UPC Upice 18.04 338 eP Pn 21 38 31.7 -0.8
PRU Pruhonice 18.08 334 eP Pn 21 38 30.8 -2.3
PRU Pruhonice 18.08 334 eP Pn 21 38 30.8 -2.3
CHVC Chvalec 18.09 338 eP Pn 21 38 32.1 -1.1
DAVA Damuels 18.12 321 *i* Pn Pn 21 38 33.6 -0.1
comp=Z,8.1nm,0.5s
KSP Ksiaz 18.24 339 eP Pn 21 38 33.6 -1.4
PVCC Panska Ves 18.53 335 eP P 21 38 34.8 -3.5
PVCC Panska Ves 18.53 335 eP P 21 38 34.8 -3.5
MAK Makhachkala 18.58 56 eP Pn 21 38 39.7 +0.5
MAK eS Sn 21 42 08.5 +1.7
MAK pmax pmax
comp=Z,60nm,0.7s
MAK MLR MLR
comp=Z,325nm,17.0s
LPL La Plagne 18.88 313 eP P 21 38 42.8 +0.3
SENIN Lac Senin/Sane 18.99 316 P 21 38 43.5 -0.1
BRG Berggiesshubel 19.03 335 eP Pn 21 38 44.8 +0.1
BRG Amp 21 38 46.1
comp=Z,8.7nm,1.3s
BRG ex x 21 38 52.5
BRG Amp 21 38 58.4
comp=Z,13nm,1.1s
BRG Amp 21 51 32.0
comp=Z,0.9nm,15.8s
BRG Amp 21 51 34.0
comp=N,0.3nm,14.8s
BRG Amp 21 51 36.0
comp=E,0.7nm,17.8s
BRG Berggiesshubel 19.03 335 eP Pn 21 38 44.7 +0.1
BRG pmax pmax
comp=Z,9.0nm,1.3s
BRG MLR MLR
comp=Z,870nm,15.8s
BRG MLR MLR
comp=N,260nm,14.8s
BRG MLR MLR
comp=E,680nm,17.8s
NKC Novy Kostel 19.07 331 eP P 21 38 43.4 -0.9
NKC Novy Kostel 19.07 331 eP P 21 38 43.4 -0.9
GRA1 Grafenberg Arr 19.16 329 P P 21 38 43.9 -1.4
GRF Grafenberg Arr 19.16 329 P P 21 38 43.9 -1.4
GRF pmax pmax
comp=Z,11nm,0.7s
GRFO Grafenberg 19.16 329 P P 21 38 44.2 -1.1
GRFO Grafenberg 19.16 329 P P 21 38 44.2 -1.1
GRFO pmax pmax
comp=Z,11nm,0.8s
VSR Storozhevoye 19.36 25 eP Pn 21 38 48.6 +0.1
VSR pmax pmax
comp=Z,20nm,0.6s
BFO Black Forest 19.59 322 P P 21 38 48.8 -1.3
BFO IAmb IAmb 21 38 59.8
comp=Z,15nm,0.8s
BFO Black Forest 19.59 322 P P 21 38 48.8 -1.3
BFO pmax pmax
comp=Z,15nm,0.8s
RAYN Ar Rayn 19.71 118 P Pn 21 38 54.1 +1.1
RAYN IAmb IAmb 21 38 57.2
comp=Z,21nm,0.9s
MOX Moxa 19.73 331 P P 21 38 51.6 +0.1
MOX pmax pmax
comp=Z,10.0nm,0.8s
CLL Collm 19.73 334 P P 21 38 50.3 -1.2
CLL Collm 19.73 334 eP P 21 38 51.0 -0.4
CLL pmax pmax
comp=Z,10.0nm,0.7s
CLL Collm 19.73 334 eP P 21 38 51.0 -0.4
comp=Z,10.0nm,0.7s
CLL epP sP 21 38 55.0 -0.2
CLL e(PP) 21 39 04.0
CLL ePPP PPP 21 39 16.0
VORR Voronezh 19.75 24 eP P 21 38 50.7 -1.0
VORR pmax pmax
comp=Z,40nm,0.4s
SUW Suwalki 19.97 354 eP P 21 38 51.1 -3.0
SUW Suwalki 19.97 354 P P 21 38 52.9 -1.1
SUW Suwalki 19.97 354 P P 21 38 52.9 -1.1
SUW pmax pmax
comp=Z,45nm,0.9s
SUW Suwalki 19.97 354 eP P 21 38 53.9 -0.1
ECH Echery 20.13 320 P P 21 38 55.4 -0.6
ECH IAmb IAmb 21 39 04.1
comp=Z,14nm,0.9s
ECH Echery 20.13 320 P P 21 38 55.4 -0.6
ECH pmax pmax
comp=Z,14nm,0.9s
GKP Gorka Klasztor 20.19 344 eP P 21 38 55.7 -0.8
GKP Gorka Klasztor 20.19 344 eP P 21 38 56.3 -0.1
VRH Novokhopyorsk 20.29 28 eP P 21 38 57.6 0.0
VRH pmax pmax
comp=Z,40nm,0.8s
LPSR Galich'ya Gora 20.46 22 eP P 21 39 00.3 +0.9
LPSR pmax pmax
comp=Z,40nm,0.9s
NACGM Naroch 20.72 0⇑ eP P 21 39 01.2 -1.0
baz=180
IDID Didziasalis 21.14 0 eP P 21 39 05.9 -0.8
IIGN Ignalina 21.17 360 eP P 21 39 06.3 -0.7
PABE Paberze 21.40 356 P P 21 39 07.4 -2.1
PABE IAmb IAmb 21 39 21.8
comp=Z,26nm,0.9s
PABE Paberze 21.40 356 eP P 21 39 09.7 +0.2
WLF Walferdange 21.55 322 P P 21 39 09.8 -1.3
WLF IAmb IAmb 21 39 34.5
comp=Z,27nm,0.9s
WLF Walferdange 21.55 322 P P 21 39 09.8 -1.3
WLF pmax pmax
comp=Z,27nm,0.9s
WLF Walferdange 21.55 322 dP P 21 39 11.2 +0.1
comp=Z,20nm,0.9s
TAM Tamanrasset 21.60 244 P P 21 39 05.6 -6.6
TAM IAmb IAmb 21 39 11.5
comp=Z,28nm,1.2s
TAM Tamanrasset 21.60 244 P P 21 39 05.6 -6.6
TAM pmax pmax
comp=Z,28nm,1.2s
CAF Calviac 21.61 307 eP P 21 39 12.1 +0.2
CAF pmax pmax
comp=Z,6.0nm,1.0s
VSVD Vaisvydziai 21.88 356 eP P 21 39 15.1 +0.5
PBUR Paburge 22.07 353 eP P 21 39 15.9 -0.8
OBN Obninsk 22.08 15 P P 21 39 15.5 -1.3
comp=Z,5.4nm,0.7s,baz=204,slow=15,SNR=6.2
comp=Z,5.4nm,0.7s
OBN Obninsk 22.08 15 P P 21 39 16.2 -0.6
BTNL Ternell 22.14 324 dP P 21 39 17.4 -0.2
comp=Z,19nm,1.2s
MEM Membach 22.21 324 dP P 21 39 18.5 +0.2
comp=Z,32nm,1.0s
RCHB Rochefort 22.32 322 dP P 21 39 17.9 -1.5
comp=Z,7.6nm,0.9s
BSD Bornholm Skovb 22.44 342 eP P 21 39 19.7 -1.0
BCLA Clavier 22.44 323 dP P 21 39 20.0 -0.8
comp=Z,11nm,1.0s
LFF La Frestale 22.49 306 eP P 21 39 20.1 -1.2
LFF pmax pmax
comp=Z,3.0nm,0.5s
DOU Dourbes 22.61 321 dP P 21 39 22.8 +0.3
BMRD Maredsous 22.64 322 dP P 21 39 23.0 +0.1
CLF Chambon-Foret 22.79 315 P P 21 39 25.1 +0.6
MOS Moscow 22.89 16 eP P 21 39 22.3 -3.2
MOS eS S 21 43 28.0 -6.9
MFF Saint Martin d 23.66 310 eP P 21 39 33.5 +0.2
MFF pmax pmax
comp=Z,7.0nm,0.6s
BELG Belogornoye 23.68 33 P P 21 39 32.5 -0.9
comp=Z,7.7nm,0.6s,baz=233,slow=18,SNR=5.2
comp=Z,7.7nm,0.6s
DEL Delary 23.92 343 eP P 21 39 31.9 -3.7
VSU Vasula 24.29 0 eP P 21 39 38.6 -0.5
MTSE Matsula 24.61 357 eP P 21 39 41.2 -0.7
ESBB Sonseca Array 24.89 292 P P 21 39 45.1 +0.3
ESBB IAmb IAmb 21 39 53.7
comp=Z,15nm,0.9s
ESDC Sonseca Array 24.89 292 P P 21 39 45.7 +0.8
comp=Z,4.7nm,0.6s,baz=81,slow=9.2,SNR=40
comp=Z,4.7nm,0.6s
ESDC Sonseca Array 24.89 292 P P 21 39 45.0 +0.1
PAB San Pablo 25.18 291 P P 21 39 48.8 +1.3
PAB IAmb IAmb 21 39 56.5
comp=Z,13nm,1.0s
PAB San Pablo 25.18 291 P P 21 39 48.8 +1.3
PAB pmax pmax
comp=Z,13nm,1.0s
VIKU Vikbolandet 25.20 348 eP P 21 39 46.6 -0.7
GEYT Alibeck 25.77 72 P P 21 39 53.0 +0.2
comp=Z,7.1nm,0.4s,baz=265,slow=9.4,SNR=11
comp=Z,7.1nm,0.4s
GEYT Alibeck 25.77 72 P P 21 39 53.4 +0.6
GEYT IAmb IAmb 21 40 06.9
comp=Z,14nm,0.9s
GYA0 ALIBECK ARRAY 25.77 72 P P 21 39 53.8 +1.0
GYA0 pmax pmax
comp=Z,19nm,0.9s
GYA0B ALIBECK ARRAY 25.77 72 P P 21 39 53.8 +1.0
MDT Midelt 25.93 276 P P 21 39 55.3 +0.9
comp=Z,2.4nm,0.7s,baz=97,slow=17,SNR=2.0
comp=Z,2.4nm,0.7s
MEF Metsahovi 26.09 358 eP P 21 39 54.6 -0.7
RAF Rauma 27.04 355 eP P 21 40 01.9 -2.0
PBRG Braganca 27.16 296 eP P 21 40 05.7 +0.4
PBRG epP pwP 21 40 11.6 -0.3
FINES FINESS Array B 27.28 360 P P 21 40 04.5 -1.6
comp=Z,3.9nm,0.5s,baz=162,slow=11,SNR=16
comp=Z,3.9nm,0.5s
FINES FINESS Array B 27.28 360 P P 21 40 04.1 -2.0
HFS Hagfors 27.29 346 P P 21 40 04.9 -1.3
comp=Z,5.4nm,0.6s,baz=126,slow=7.5,SNR=14
comp=Z,5.4nm,0.6s
MVO Moncorvo 27.32 295 eP P 21 40 08.5 +1.7
comp=Z,26nm,1.5s
MVO epP pwP 21 40 13.6 +0.2
PMRV Marv??o 27.54 291 eP P 21 40 10.1 +1.4
comp=Z,19nm,1.4s
PMRV epP pwP 21 40 15.7 +0.4
PESTR Estremoz 27.69 290 eP P 21 40 11.2 +1.1
comp=Z,21nm,1.1s
PESTR epP pwP 21 40 17.3 +0.6
KLMR Klimovskoe 27.99 14 eP P 21 40 11.0 -1.4
KLMR pmax pmax
comp=Z,26nm,1.0s
KLMR Klimovskoe 27.99 14 e P 21 40 11.1 -1.4
KLMR AMP 21 40 24.9
comp=Z,26nm,1.0s
PBDV Barranco-do-Ve 28.04 286 eP P 21 40 15.3 +2.1
comp=Z,42nm,1.8s
AKTO Aktyubinsk 28.13 45 P P 21 40 12.7 -1.2
comp=Z,3.5nm,0.8s,baz=357,slow=22,SNR=6.1
comp=Z,3.5nm,0.8s
NAO01 NORSAR Array S 28.53 344 P P 21 40 15.8 -1.5
NB2 NORSAR Subarra 28.63 344 P P 21 40 15.4 -2.9
comp=Z,4.5nm,1.0s,baz=156,slow=9.3
NOA NORSAR Array B 28.63 344 P P 21 40 15.7 -2.6
comp=Z,1.3nm,0.9s,baz=166,slow=9.1,SNR=6.8
NOA LR LR 21 52 60.0
comp=Z,88nm,20.4s,baz=325,slow=39
comp=Z,1.3nm,0.9s
ABKAR Akbulak array 28.87 48 P P 21 40 21.2 +0.8
ABKAR Akbulak array 28.87 48 P P 21 40 20.3 -0.2
ABKAR IAmb IAmb 21 40 41.5
comp=Z,3.3nm,0.8s
EKA Eskdalemuir Ar 29.48 325 P P 21 40 24.1 -1.7
comp=Z,4.1nm,0.8s,baz=127,slow=11,SNR=11
comp=Z,4.1nm,0.8s
TOA0 Torodi Ar. Sit 30.74 233 P P 21 40 38.2 +0.9
TORD Torodi Ar. Bea 30.74 233 P P 21 40 38.5 +1.2
comp=Z,9.2nm,0.7s,baz=32,slow=9.8,SNR=72
comp=Z,9.2nm,0.7s
TORD Torodi Ar. Bea 30.74 233 P P 21 40 38.1 +0.7
TORD IAmb IAmb 21 40 47.1
comp=Z,8.8nm,0.9s
ARU Arti 31.21 35 P P 21 40 41.5 +0.4
comp=Z,1.2nm,0.4s,baz=205,slow=17,SNR=2.8
comp=Z,1.2nm,0.4s
CHGR Chuyangaron 34.39 70 P P 21 41 07.8 -1.4
CHGR Chuyangaron 34.39 70 P P 21 41 07.9 -1.4
CHGR pmax pmax
comp=Z,13nm,0.8s
KBL Kabul 34.93 77 P P 21 41 14.4 +0.3
KBL IAmb IAmb 21 41 21.2
comp=Z,6.8nm,0.9s
KBL Kabul 34.93 77 P P 21 41 14.4 +0.3
KBL pmax pmax
comp=Z,7.0nm,0.9s
KK31 Karatay Array 35.17 62 P P 21 41 16.0 +0.1
KK31 IAmb IAmb 21 41 18.2
comp=Z,9.6nm,0.9s
KK31 Karatay Array 35.17 62 P P 21 41 16.0 +0.1
KK31 pmax pmax
comp=Z,10.0nm,1.0s
KKAR Karatay Array 35.17 62 P P 21 41 15.7 -0.1
KKAR Karatay Array 35.17 62 P P 21 41 15.9 0.0
KKAR IAmb IAmb 21 41 18.2
comp=Z,9.6nm,0.9s
KKAR Karatay Array 35.17 62 P P 21 41 15.9 0.0
KKAR pmax pmax
comp=Z,10.0nm,1.0s
ARCES ARCESS Array B 35.41 359 P P 21 41 16.4 -1.2
comp=Z,4.6nm,0.7s,baz=186,slow=8.5,SNR=19
comp=Z,4.6nm,0.7s
ARCES ARCESS Array B 35.41 359 P P 21 41 15.6 -2.0
ARCES IAmb IAmb 21 41 33.3
comp=Z,9.6nm,1.1s
ARCES ARCESS Array B 35.41 359 P P 21 41 15.6 -2.0
ARCES pmax pmax
comp=Z,10.0nm,1.1s
AAK Ala-Archa 38.11 63 P P 21 41 42.2 +1.1
comp=Z,5.5nm,0.7s,baz=252,slow=7.9,SNR=9.1
comp=Z,5.5nm,0.7s
AAK Ala-Archa 38.11 63 P P 21 41 41.5 +0.4
AAK IAmb IAmb 21 41 44.9
comp=Z,8.2nm,1.0s
AAK Ala-Archa 38.11 63 P P 21 41 41.5 +0.4
AAK pmax pmax
comp=Z,8.0nm,1.0s
KSH Kashi 39.55 67 P P 21 41 53.0 -0.1
KSH pmax pmax
comp=Z,5.0nm,0.7s
DBIC Dimbokro 39.85 234 P P 21 41 56.7 +1.1
comp=Z,4.6nm,0.7s,baz=46,slow=8.7,SNR=5.8
DBIC LR LR 22 00 26.5
comp=Z,490nm,19.3s,baz=34,slow=39
comp=Z,4.6nm,0.7s
TIC Toumodi 39.98 234⇑ eP P 21 41 56.9 +0.1
comp=Z,1.4nm,0.2s
KIC Kosan Boka 40.00 233⇑ eP P 21 41 57.7 +0.8
comp=Z,1.2nm,0.2s
LIC Lamto 40.29 234⇑ eP P 21 42 00.4 +1.1
comp=Z,1.3nm,0.1s
TARG Taragay, Kyrgy 40.65 64 P P 21 42 02.0 -0.5
TARG Taragay, Kyrgy 40.65 64 P P 21 42 02.0 -0.5
TARG pmax pmax
comp=Z,3.0nm,0.8s
KURBB Kurchatov Arra 40.89 50 P P 21 42 04.7 +0.8
comp=Z,7.7nm,0.7s,baz=276,slow=8.8,SNR=42
comp=Z,7.7nm,0.7s
KURK Kurchatov 40.95 50 P P 21 42 04.8 +0.4
KURK IAmb IAmb 21 42 07.2
comp=Z,12nm,0.8s
KURK Kurchatov 40.95 50 P P 21 42 04.8 +0.4
KURK pmax pmax
comp=Z,12nm,0.9s
MAKZ Makanchi 43.19 56 P P 21 42 23.1 +0.3
MAKZ IAmb IAmb 21 42 25.1
comp=Z,5.6nm,1.1s
MAKZ Makanchi 43.19 56 P P 21 42 23.1 +0.3
MAKZ pmax pmax
comp=Z,6.0nm,1.1s
MK31 Makanchi Array 43.40 56 P P 21 42 24.9 +0.4
MK31 IAmb IAmb 21 42 26.7
comp=Z,6.5nm,0.8s
MK31 Makanchi Array 43.40 56 P P 21 42 24.9 +0.4
MK31 pmax pmax
comp=Z,7.0nm,0.8s
MKAR Makanchi Array 43.40 56 P P 21 42 25.9 +1.3
comp=Z,7.3nm,0.7s,baz=275,slow=6.4,SNR=69
comp=Z,7.3nm,0.7s
MKAR Makanchi Array 43.40 56 P P 21 42 25.2 +0.7
ZAA0 Zalesovo Array 44.89 45 P P 21 42 36.6 +0.2
ZALV Zalesovo Beam 44.89 45 P P 21 42 37.0 +0.7
comp=Z,6.7nm,0.5s,baz=266,slow=9.3,SNR=39
comp=Z,6.7nm,0.5s
ZALV Zalesovo Beam 44.89 45 P P 21 42 36.7 +0.4
KBS Kingsbay 45.27 356 P P 21 42 39.3 +0.3
KBS IAmb IAmb 21 42 56.0
comp=Z,10nm,1.0s
KBS Kingsbay 45.27 356 P P 21 42 39.3 +0.3
KBS pmax pmax
comp=Z,10.0nm,1.0s
WMQ Urumqi 47.55 59 eP P 21 43 01.0 +3.5
WMQ LR LR
comp=Z,600nm,19.3s
WMQ LR LR
comp=Z,540nm,20.9s
WMQ LR LR
comp=Z,550nm,26.7s
DANN Dangsing 48.75 80 eP P 21 43 09.1 +1.9
GKN Gorkha 49.60 80 eP P 21 43 14.6 +1.0
comp=Z,38nm,0.7s
DMN Daman 50.13 81 eP P 21 43 19.0 +1.2
SUMG Summit 50.29 339 *i* P P 21 43 27.0 +8.5
PKIN Phulchoki 50.38 81 eP P 21 43 20.7 +1.0
PKI Pulchoki 50.39 81 eP P 21 43 20.4 +0.6
GUN Gumba 50.65 80 eP P 21 43 23.1 +1.3
JIRN Jiri 51.00 80 eP P 21 43 25.6 +1.2
SFJD Kangerlussuaq 54.07 332 LR LR 22 08 20.1
comp=Z,118nm,18.6s,baz=73,slow=38
ZAK Zakamensk 56.57 48 eP P 21 44 05.9 +1.3
ZAK pmax pmax
comp=Z,6.0nm,1.1s
GTA Gaotai 57.45 62 ⇑P P 21 44 12.3 +1.2
GTA pP pwP 21 44 17.0 -0.9
GTA pmax pmax
comp=Z,7.0nm,0.9s
GTA pmax pmax
comp=Z,32nm,4.7s
GTA LR LR
comp=Z,530nm,18.2s
GTA LR LR
comp=Z,380nm,17.5s
GTA LR LR
comp=Z,690nm,18.2s
SONM Songino Array 59.26 51 P P 21 44 24.5 +1.0
comp=Z,2.5nm,0.7s,baz=277,slow=9.2,SNR=10
comp=Z,2.5nm,0.7s
SONM Songino Array 59.26 51 P P 21 44 24.5 +1.0
SONM IAmb IAmb 21 44 39.7
comp=Z,3.4nm,0.9s
ULN Ulaanbaatar 59.66 50 P P 21 44 27.5 +1.1
ULN IAmb IAmb 21 44 42.6
comp=Z,5.9nm,1.1s
ULN Ulaanbaatar 59.66 50 P P 21 44 27.5 +1.1
ULN pmax pmax
comp=Z,6.0nm,1.1s
BOD Bodaibo 60.55 38 eP P 21 44 32.2 +0.2
BOD pmax pmax
comp=Z,9.0nm,1.2s
LZH Lanzhou 61.64 64 eP P 21 44 41.5 +1.5
LZH pP pwP 21 44 49.0 +2.2
LZH pmax pmax
comp=Z,16nm,1.3s
SCHQ Schefferville 64.65 320 P P 21 45 00.1 +0.6
comp=Z,4.9nm,0.5s,baz=58,slow=3.7,SNR=12
comp=Z,4.9nm,0.5s
SCHQ Schefferville 64.65 320 P P 21 44 59.7 +0.2
HHC Hu-ho-hao-te 65.26 56 eP P 21 45 05.5 +1.6
HHC pmax pmax

	comp=Z,33nm,0.9s								
HHC					pmax	pmax			
	comp=Z,84nm,5.1s								
CHTO	**Chiang Mai**	**65.41**	**83**		P	**P**	**21 45 04.9**	**-0.1**	
CHTO					IAmb	IAmb	21 45 07.1		
	comp=Z,6.2nm,1.2s								
CHTO	**Chiang Mai**	**65.41**	**83**		P	**P**	**21 45 04.9**	**-0.1**	
CHTO					pmax	pmax			
	comp=Z,6.0nm,1.3s								
KMI	**Kunming**	**65.49**	**75**	⇓	P	P	21 45 12.0	+6.3	
KMI					pmax	pmax			
	comp=Z,10.0nm,1.1s								
CM31	**Chiang Mai Arr**	**65.58**	**84**		P	**P**	**21 45 07.2**	**+1.1**	
CMAR	**Chiang Mai Arr**	**65.58**	**84**		P	**P**	**21 45 07.2**	**+1.1**	
	comp=Z,4.1nm,0.8s,baz=294,slow=7.9,SNR=26								
	comp=Z,4.1nm,0.8s								
CMAR	**Chiang Mai Arr**	**65.58**	**84**		P	**P**	**21 45 06.8**	**+0.7**	
XAN	**Xi'an**	**66.27**	**64**	⇑	P	**P**	**21 45 11.5**	**+1.1**	
XAN					pP	pwP	21 45 23.5	+6.2	
XAN					pmax	pmax			
	comp=Z,6.0nm,0.7s								
RCBR	**Riachuelo**	**70.99**	**249**		LR	LR	22 17 14.7		
	comp=Z,108nm,18.3s,baz=197,slow=36								
USA0B	**Ussuriysk Arra**	**76.75**	**45**		P	**P**	**21 46 13.5**	**+0.2**	
USA0B	**Ussuriysk Arra**	**76.75**	**45**		P	**P**	**21 46 13.5**	**+0.2**	
USA0B					pmax	pmax			
	comp=Z,8.0nm,0.8s								
USRK	**Ussuriysk Ar.**	**76.75**	**45**		P	**P**	**21 46 13.2**	**-0.2**	
	comp=Z,4.7nm,0.7s,baz=288,slow=4.6,SNR=6.7								
	comp=Z,4.7nm,0.7s								
KSRS	**Korea Array**	**78.00**	**53**		P	**P**	**21 46 20.8**	**+0.3**	
	comp=Z,1.0nm,0.5s,baz=316,slow=4.7,SNR=5.3								
	comp=Z,1.0nm,0.5s								
BMAR	**Burnt Mountain**	**78.48**	**356**		P	**P**	**21 46 22.6**	**-0.1**	
YKA	**Yellowknife Ar**	**78.72**	**343**		P	**P**	**21 46 24.1**	**+0.1**	
	comp=Z,1.1nm,0.8s,baz=31,slow=6.5,SNR=4.4								
	comp=Z,1.1nm,0.8s								
YKA	**Yellowknife Ar**	**78.72**	**343**		P	**P**	**21 46 23.0**	**-0.9**	
IMAR	**Indian Mountai**	**80.16**	**0**		P	**P**	**21 46 32.0**	**+0.2**	
H23K	**Yukon River**	**80.27**	**358**		P	**P**	**21 46 33.6**	**+1.1**	
H23K					IAmb	IAmb	21 46 54.6		
	comp=Z,4.6nm,0.9s								
H21K	**Melozitna Rive**	**80.49**	**360**		P	**P**	**21 46 34.9**	**+1.3**	
H21K					IAmb	IAmb	21 46 56.2		
	comp=Z,3.0nm,0.8s								
MDM	**Murphy Dome**	**81.10**	**358**		P	**P**	**21 46 37.8**	**+0.8**	
MDM					IAmb	IAmb	21 46 38.6		
	comp=Z,4.5nm,0.9s								
ILAR	**Eielson Array**	**81.24**	**357**		P	**P**	**21 46 38.1**	**+0.5**	
	comp=Z,0.8nm,0.8s,baz=359,slow=5.1,SNR=7.9								
	comp=Z,0.8nm,0.8s								
ILAR	**Eielson Array**	**81.24**	**357**		P	**P**	**21 46 36.0**	**-1.7**	
J26L	**Joseph Creek**	**81.34**	**356**		P	**P**	**21 46 38.9**	**+0.6**	
WRH	**Wood River Hil**	**81.59**	**358**		P	**P**	**21 46 40.2**	**+0.8**	
WRH					IAmb	IAmb	21 46 56.5		
	comp=Z,5.0nm,0.7s								
J20K	**Nowinta River**	**81.97**	**0**		P	**P**	**21 46 42.8**	**+1.3**	
J20K					IAmb	IAmb	21 46 54.7		
	comp=Z,6.0nm,1.1s								
BCAR	**Beaver Creek A**	**82.64**	**355**		P	**P**	**21 46 46.5**	**+1.5**	
T50A	**Nancy**	**84.62**	**312**		P	**P**	**21 46 57.5**	**+1.8**	
L40A	**Anamosa**	**85.06**	**319**		P	**P**	**21 46 58.3**	**+0.5**	
MJAR	**Matsushiro Arr**	**85.15**	**49**		P	**P**	**21 46 59.5**	**+1.1**	
	comp=Z,3.4nm,1.0s,baz=306,slow=4.6,SNR=4.7								
	comp=Z,3.4nm,1.0s								
MJAR	**Matsushiro Arr**	**85.15**	**49**		P	**P**	**21 46 58.5**	**+0.1**	
MJAR					IAmb	IAmb	21 47 01.3		
	comp=Z,5.2nm,1.3s								
MJAR	**Matsushiro Arr**	**85.15**	**49**		P	**P**	**21 46 58.5**	**+0.1**	
MJAR					pmax	pmax			
	comp=Z,5.0nm,1.3s								
BDFB	**Brasilia**	**86.36**	**248**		P	**P**	**21 47 06.3**	**+1.7**	
	comp=Z,1.0nm,0.3s,baz=72,slow=9.6,SNR=1.6								
	comp=Z,1.0nm,0.3s								
PDAR	**Pinedale Array**	**93.51**	**329**		P	**P**	**21 47 38.0**	**-0.1**	
	comp=Z,0.1nm,0.6s,baz=169,slow=17,SNR=1.9								
	comp=Z,0.1nm,0.6s								
SIV	**San Ignacio**	**96.85**	**255**		LR	LR	22 33 08.9		
	comp=Z,53nm,19.6s,baz=100,slow=36								
CPUP	**Villa Florida**	**99.60**	**245**		P	**Pdif**	**21 48 04.3**	**-1.3**	
	comp=Z,0.9nm,0.3s,baz=19,slow=9.3,SNR=4.0								
CPUP	**Villa Florida**	**99.60**	**245**		P	**Pdif**	**21 48 03.6**	**-1.9**	
CPUP	**Villa Florida**	**99.60**	**245**		P	**Pdif**	**21 48 03.6**	**-1.9**	
CPUP					pmax	pmax			
	comp=Z,3.0nm,0.9s								
WRA	**Warramunga Arr**	**115.37**	**98**		PKP	**PKPdf**	**21 53 03.7**	**-0.5**	
	comp=Z,0.5nm,0.8s,baz=327,slow=1.3,SNR=2.3								
ASAR	**Alice Springs**	**116.78**	**101**		PKP	**PKPdf**	**21 53 07.0**	**+0.2**	
	comp=Z,0.2nm,0.7s,baz=351,slow=2.9,SNR=1.7								

RSNC 27 21:34:28.2±1.0, 6.78N×73.13W, h144km±4km, ML3.4, Mw3.7, 2C-3D, Northern Colombia

Code	Station Name	Δ°	AZ°		Phase	ID	ISC	Time h m s	Res ISC
BRRC	**Barranca, Sant**	**0.66**	**299**	⇑	*eP*		Pn	21 34 49.5	-0.3
BRRC					*eS*		Sn	21 35 06.0	-0.2
BRRC					*i*			21 35 10.3	
	comp=Z,378nm,0.1s								
PAMC	**Pamplona, Colo**	**0.70**	**38**	⇑	*iP*		Pn	21 34 50.5	-0.1
PAMC					*eS*		Sn	21 35 07.2	-0.4
PAMC					*i*			21 35 09.6	
	comp=Z,546nm,0.5s								
RUSC	**La Rusia**	**0.88**	**177**	⇓	*eP*		Pn	21 34 51.5	-0.5
RUSC					*eS*		Sn	21 35 09.7	-0.4
RUSC					*i*			21 35 10.6	
	comp=Z,150nm,0.3s								
PTBC	**PUERTO BERRIO,**	**1.34**	**260**		*eP*		Pn	21 34 54.1	-1.5
PTBC					*eS*		Sn	21 35 15.4	-1.2
PTBC					*i*			21 35 17.6	
	comp=Z,230nm,0.2s								
TAMC	**Tame, Arauca**	**1.37**	**104**	⇓	*iP*		Pn	21 34 55.9	-0.1
TAMC					*eS*		Sn	21 35 17.0	-0.2
TAMC					*i*			21 35 24.7	
	comp=Z,92nm,0.8s								
SPBC	**San Pablo de B**	**1.46**	**220**	⇓	*iP*		Pn	21 34 56.5	-0.5
SPBC					*eS*		Sn	21 35 18.6	-0.4
SPBC					*i*			21 35 25.4	
	comp=Z,243nm,0.4s								
ZARC	**Zaragoza, Cauc**	**1.86**	**292**		*eP*		Pn	21 35 00.6	-0.7
ZARC					*eS*		Sn	21 35 26.2	-0.4
ZARC					*i*			21 35 31.5	
	comp=Z,337nm,0.2s								
NORC	**Norcasia**	**2.11**	**235**		*eP*		Pn	21 35 03.6	-0.8
NORC					*eS*		Sn	21 35 31.6	-0.5
NORC					*i*			21 35 38.6	
	comp=Z,80nm,0.2s								
CHIC	**Chingaza**	**2.22**	**196**		*eP*		Pn	21 35 05.9	-0.2
CHIC					*eS*		Sn	21 35 34.5	-0.5
CHIC					*i*			21 35 41.8	
	comp=Z,75nm,0.2s								
ROSC	**El Rosal**	**2.26**	**212**		*eP*		Pn	21 35 07.4	+0.9
ROSC					*eS*		Sn	21 35 37.6	+1.7
ROSC					*i*			21 35 43.5	
	comp=Z,203nm,0.4s								
HELC	**Santa Helena**	**2.46**	**256**		*eP*		Pn	21 35 08.8	0.0
HELC					*eS*		Sn	21 35 40.3	+0.3
HELC					*i*			21 35 46.7	
	comp=Z,114nm,0.4s								
UREC	**San Jos de Ur**	**2.57**	**292**		*eP*		Pn	21 35 11.4	+1.5
UREC					*eS*		Sn	21 35 39.5	-2.7
UREC					*i*			21 35 51.0	
	comp=Z,153nm,0.8s								
SOCV	**Socops**	**2.70**	**56**		*eP*		Pn	21 35 10.6	-1.0
SOCV					*eS*		Sn	21 35 42.2	-2.9
GUY2C	**Guyana, Caldas**	**2.71**	**235**		*eP*		Pn	21 35 12.4	+0.3
GUY2C					*eS*		Sn	21 35 45.7	-0.2
GUY2C					*i*			21 35 55.2	
	comp=Z,73nm,0.6s								
VILC	**Villavicencio,**	**2.71**	**192**		*eP*		Pn	21 35 11.6	-0.3
VILC					*eS*		Sn	21 35 44.5	-0.9
VILC					*i*			21 35 51.1	
	comp=Z,3μm,0.4s								
PTGC	**Puerto Gaitan,**	**2.75**	**159**		*eP*		Pn	21 35 10.6	-1.6
PTGC					*eS*		Sn	21 35 43.2	-3.0
PTGC					*i*			21 35 48.7	
	comp=Z,7μm,1.4s								
CBOC	**Ciudad Bolivar**	**3.01**	**253**		*eP*		Pn	21 35 15.7	+0.1
CBOC					*eS*		Sn	21 35 53.1	+1.0
CBOC					*i*			21 36 07.2	
	comp=Z,24nm,0.2s								
DBBC	**Dabeiba**	**3.07**	**275**		*eP*		Pn	21 35 15.8	-0.5
DBBC					*eS*		Sn	21 35 51.3	-2.1
DBBC					*i*			21 35 58.6	
	comp=Z,325nm,0.4s								

ANIL	**Santa Ana**	**3.21**	**225**		*eP*		Pn	21 35 19.4	+1.1
ANIL					*eS*		Sn	21 35 57.9	+0.9
ANIL					*i*			21 36 01.4	
	comp=Z,167nm,0.2s								
SDV	**Santo Domingo**	**3.24**	**50**		*eP*		Pn	21 35 17.3	-1.3
SDV					*eS*		Sn	21 35 54.2	-3.3
SDV					*i*			21 35 57.5	
	comp=Z,47nm,0.4s								
ARGC	**Ariguani, Magd**	**3.25**	**340**		*eP*		Pn	21 35 17.8	-0.8
ARGC					*eS*		Sn	21 35 57.1	-0.5
ARGC					*i*			21 35 58.9	
	comp=Z,25nm,0.2s								
PRAC	**Prado**	**3.51**	**210**		*eP*		Pn	21 35 21.6	-0.4
PRAC					*eS*		Sn	21 36 02.6	-1.1
PRAC					*i*			21 36 08.0	
	comp=Z,79nm,0.2s								
ORTC	**Ortega, Tolima**	**3.55**	**217**		*eP*		Pn	21 35 22.6	+0.2
ORTC					*eS*		Sn	21 36 03.4	-1.1
ORTC					*i*			21 36 10.3	
	comp=Z,68nm,0.5s								
ELOV	**Elorza**	**3.63**	**86**		*eP*		Pn	21 35 21.9	-1.5
ELOV					*i*			21 36 01.2	
	comp=Z,74nm,0.2s								
ELOV					*eS*		Sn	21 36 02.2	-4.1
PLMC	**San Jos del P**	**3.65**	**239**		*eP*		Pn	21 35 23.3	-0.5
PLMC					*eS*		Sn	21 36 06.7	-0.2
PLMC					*i*			21 36 10.8	
	comp=Z,22nm,0.4s								
CRJC	**Cerrejon, Guaj**	**4.22**	**3**		*eP*		Pn	21 35 28.5	-2.8
CRJC					*eS*		Sn	21 36 14.4	-5.9
CRJC					*i*			21 36 20.9	
	comp=Z,56nm,0.3s								
MACC	**Macarena, Meta**	**4.66**	**189**		*eP*		Pn	21 35 34.6	-2.4
MACC					*eS*		Sn	21 36 25.2	-5.5
MACC					*i*			21 36 32.8	
	comp=Z,17nm,0.5s								
BBAC	**Balboa, Cauca**	**6.26**	**221**		*eP*		Pn	21 35 58.8	+0.2
BBAC					*eS*		Sn	21 37 06.3	-2.9
BBAC					*i*			21 37 11.6	
	comp=Z,6.9nm,0.6s								

IDC 27 21:35:19.6±1.9, 24.12S×69.68E, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=53.6km s-min=35.4km az=101.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**16.60**	**10**			T	T	21 56 00.9	
	baz=190,slow=76,SNR=15								
H08S2	**Diego Garcia H**	**16.61**	**10**			T	T	21 56 04.2	
	baz=190,slow=76,SNR=30								
H08S3	**Diego Garcia H**	**16.62**	**10**			T	T	21 56 05.2	
	baz=190,slow=76,SNR=22								
MAW	**Mawson**	**43.69**	**184**			P	P	21 43 25.6	-0.3
	1.6nm,0.7s,baz=309,slow=6.5,SNR=6.9								
	1.6nm,0.7s								
ASAR	**Alice Springs**	**58.23**	**104**			P	P	21 45 16.7	+0.6
	0.4nm,0.7s,baz=252,slow=6.0,SNR=6.0								
	0.4nm,0.7s								
WRA	**Warramunga Arr**	**59.62**	**100**			P	P	21 45 25.0	-0.8
	0.6nm,0.8s,baz=258,slow=7.9,SNR=2.3								
	0.6nm,0.8s								
MKAR	**Makanchi Array**	**71.50**	**9**			P	P	21 46 42.1	+0.1
	0.3nm,0.6s,baz=201,slow=7.2,SNR=2.8								
	0.3nm,0.6s								

IDC 27 21:54:32.4±0.9, 39.11N×73.94E, h0km, mb3.7/13, mbtmp3.7/18, ML2.9/5, Error ellipse: s-maj=18.3km s-min=15.9km az=149.0
SOME 27 21:54:36.5, 39.43N×73.70E, h20km
KRNET 27 21:54:36.7±0.1, 39.51N×73.55E, mb4.0
NEIC 27 21:54:39.0±2.7, 39.42N±0.06×73.56E±0.05, h10km±1km, mb4.4/12, Error ellipse: s-maj=9.5km s-min=6.5km az=190.0
NNC 27 21:54:39.6±0.9, 39.60N×73.62E, h0km, mb4.2, mpv3.8, Error ellipse: s-maj=7.4km s-min=3.9km az=171.0

ISC 27 21:54:35.3±0.5, 39.37N±0.03×73.78E±0.02, h10km, n128, σ2.51/161, mb3.8/16, 30C-17D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.38**	**327**	⇓	*eP*	Pn	21 54 59.3	-1.4
OHH	baz=30				*eS*	Sb	21 55 15.6	-3.4
	baz=30							
DRK	**Karamyk**	**1.53**	**275**	⇑	*iP*	Pn	21 55 02.5	-0.5
DRK	baz=70				*iS*	Sn	21 55 21.5	-1.7
	baz=70							
DRK	**Karamyk**	**1.53**	**275**			Pn	21 55 01.7	-1.3
KSH	**Kashi**	**1.71**	**84**		Pg	Pn	21 55 04.3	-0.9
KSH					Sg	Sn	21 55 21.5	-5.7
KSH					pmax	pmax		
	comp=Z,96nm,0.7s							
KSH					smax	smax		
	comp=N,810nm,0.7s							
KSH					smax	smax		
	comp=E,440nm,0.6s							
BTK	**Batken**	**2.38**	**288**	⇑	*eP*	Pb	21 55 16.2	-2.1
BTK	baz=86				*eS*	Sb	21 55 45.3	-2.5
	baz=86							
BTK	**Batken**	**2.38**	**288**		Pn	Pn	21 55 15.8	+1.4
ARLS	**Aral**	**2.52**	**9**	⇑	*iP*	Pb	21 55 19.5	-1.2
ARLS	baz=14				*eS*	Sb	21 55 50.9	-1.0
	baz=14							
GAR	**Garm**	**2.71**	**263**	⇓	*eP*	Pb	21 55 21.6	-2.4
GAR	baz=60				*iS*	Sb	21 55 54.4	-3.0
	baz=60							
GAR	**Garm**	**2.71**	**263**		Pn	Pb	21 55 21.3	-2.7
AML	**Almayashu**	**2.76**	**359**		P	Pb	21 55 23.4	-1.5
	SNR=39							
UCH	**Uchtor**	**2.91**	**11**		P	Pb	21 55 27.5	0.0
	SNR=40							
UCH	**Uchtor**	**2.91**	**11**	⇑	*iP*	Pb	21 55 25.4	-2.1
UCH	baz=15				*iS*	Sb	21 56 00.9	-2.4
	baz=15							
TRKS	**Terek-Say**	**2.95**	**318**	⇓	*iP*	Pn	21 55 23.1	+0.8
TRKS	baz=18				*iS*	Sn	21 55 57.1	-0.8
	baz=18							
EKS2	**Erkin-Say**	**3.29**	**0**		P	Pb	21 55 32.1	-1.6
	SNR=20							
EKS2	**Erkin-Say**	**3.29**	**0**	⇑	*eP*	Pb	21 55 29.9	-3.9
EKS2	baz=3.0				*eS*	Sn	21 56 08.6	+2.5
	baz=3.0							
AAK	**Ala-Archa**	**3.31**	**9**		P	Pb	21 55 32.2	-1.9
	SNR=16							
AAK	**Ala-Archa**	**3.31**	**9**		Pn	Pb	21 55 31.6	-2.5
	comp=E,6.5nm,0.3s,baz=170,slow=7.4,SNR=20							
AAK					Sn	Sb	21 56 13.7	-0.8
	comp=E,4.5nm,0.3s,baz=107,slow=22,SNR=1.5							
AAK					Lg	Lg	21 56 19.0	
	comp=E,8.0nm,0.3s,baz=78,slow=21,SNR=5.6							
	comp=E,16nm,0.4s							
AAK	**Ala-Archa**	**3.31**	**9**	⇓	*iP*	Pb	21 55 30.7	-3.4
AAK	baz=12				*eS*	Sb	21 56 10.1	-4.4
	baz=12							
AAK	**Ala-Archa**	**3.31**	**9**		Pn	Pb	21 55 31.9	-2.2
KBK	**Karagaybulak**	**3.40**	**15**		P	Pb	21 55 34.4	-1.3
	SNR=16							
KBK	**Karagaybulak**	**3.40**	**15**	⇓	*iP*	Pb	21 55 32.0	-3.7
KBK	baz=18				*eS*	Sb	21 56 12.7	-4.4
	baz=18							
ULHL	**Ulahol**	**3.43**	**32**		P	Pb	21 55 35.0	-1.2
	SNR=22							
ULHL	**Ulahol**	**3.43**	**32**	⇑	*iP*	Pb	21 55 33.3	-2.9
ULHL	baz=36				*iS*	Sb	21 56 14.8	-3.2
	baz=36							
FRU1	**Bishkek**	**3.50**	**10**		Pn	Pb	21 55 34.1	-3.1
BOOM	**Boomskoye usch**	**3.52**	**27**	⇑	*eP*	Pb	21 55 34.3	-3.5
	baz=30							
BOOM					*eS*	Sb	21 56 16.7	-3.9
	baz=30							
BOOM	**Boomskoye usch**	**3.52**	**27**		Pn	Pb	21 55 34.1	-3.7

CHGR	**Chuyangaron**	**3.67**	**260**		Pn	Pn	**21 55 33.7**	**+1.6**	
KDJ	**Kajisay**	**3.78**	**42**	⇑	*iP*	Pb	**21 55 38.9**	**-3.3**	
KDJ	baz=45				*eS*	Sb	**21 56 24.4**	**-3.7**	
	baz=45								
KDJ	**Kajisay**	**3.78**	**42**		Pn	Pb	**21 55 40.0**	**-2.2**	
TKM2	**Tokmak 2**	**3.80**	**21**		*i* P	Pb	**21 55 38.1**	**-4.5**	
	baz=24								
TKM2					*i* S	Sn	**21 56 22.8**	**+3.8**	
	baz=24								
TKM2	**Tokmak 2**	**3.80**	**21**	⇑	Pn	Pn	**21 55 37.5**	**+3.4**	
	comp=E,5.6nm,0.8s								
TKM2				⇑	Lg	Lg	21 56 37.7		
	comp=E,59nm,1.1s								
TARG	**Taragay, Kyrgy**	**3.87**	**51**	⇑	*eP*	Pb	**21 55 40.7**	**-3.1**	
	baz=54								
TARG				⇑	*iS*	Sb	**21 56 27.4**	**-3.5**	
	baz=54								
TARG	**Taragay, Kyrgy**	**3.87**	**51**		Pn	Pb	**21 55 41.0**	**-2.8**	
TAS	**Tashkent**	**3.94**	**301**	⇑	*eP*	Pn	**21 55 37.7**	**+1.9**	
	baz=1.0								
TAS				⇑	*iS*	Sn	**21 56 22.1**	**0.0**	
	baz=1.0								
IUG	**Iuzhnay**	**3.97**	**315**		*eP*	Pg	**21 55 47.9**	**-3.4**	
	comp=E,803nm,0.3s								
IUG					*eS*	Sg	**21 56 39.0**	**-3.8**	
	comp=E,164nm,0.2s								
IUG	**Iuzhnay**	**3.97**	**315**		Pg	Pg	**21 55 47.9**	**-3.4**	
	comp=E,1μm,0.7s								
IUG					Lg	Lg	21 56 39.0		
	comp=E,92nm,0.6s								
DZA	**Taraz**	**3.97**	**333**		*eP*	Pb	**21 55 46.8**	**+1.4**	
	comp=E,20nm,0.1s								
DZA					*eS*	Sb	**21 56 37.0**	**+3.5**	
	comp=E,238nm,0.7s								
DZA	**Taraz**	**3.97**	**333**		Pg	Pb	**21 55 45.9**	**+0.5**	
	comp=E,19nm,0.1s								
DZA					Lg	Lg	21 56 35.8		
	comp=E,238nm,0.7s								
KST	**Kastek**	**4.02**	**24**		*eP*	Pg	**21 55 50.4**	**-1.9**	
	comp=E,8.0nm,0.2s								
KST					*eS*	Sg	**21 56 43.7**	**-0.7**	
	comp=E,86nm,0.2s								
KST	**Kastek**	**4.02**	**24**		Pg	Pg	**21 55 50.4**	**-1.9**	
	comp=E,8.1nm,0.5s								
KST					Lg	Lg	21 56 43.7		
	comp=E,86nm,0.7s								
DGS	**Degeres**	**4.15**	**21**		*eP*	Pg	**21 55 52.3**	**-2.4**	
	comp=E,14nm,0.2s								
DGS					*eS*	Sg	**21 56 46.9**	**-1.6**	
	comp=E,60nm,0.3s								
DGS	**Degeres**	**4.15**	**21**		Pg	Pg	**21 55 53.9**	**-0.9**	
	comp=E,35nm,0.6s								
DGS					Lg	Lg	21 56 49.2		
	comp=E,60nm,0.7s								
MTBS	**Maitube**	**4.25**	**27**		*eP*	Pg	**21 55 54.6**	**-2.1**	
	comp=E,10nm,0.1s								
MTBS					*eS*	Sg	**21 56 51.0**	**-0.9**	
	comp=E,30nm,0.1s								
MTBS	**Maitube**	**4.25**	**27**		Pg	Pg	**21 55 54.7**	**-2.1**	
	comp=E,10nm,0.5s								
MTBS					Lg	Lg	21 56 51.0		
	comp=E,30nm,1.5s								
CHM	**Chimkent**	**4.32**	**314**		*eP*	Pb	**21 55 53.9**	**+2.5**	
	comp=E,6.6nm,0.2s								
CHM					*eS*	Sg	**21 56 49.4**	**-4.7**	
	comp=E,208nm,0.2s								
TNSS	**Tian-Shan**	**4.37**	**32**		*eP*	Pg	**21 55 56.3**	**-2.8**	
	comp=E,10nm,0.1s								
TNSS					*eS*	Sg	**21 56 53.8**	**-1.9**	
	comp=E,14nm,0.3s								
TNSS	**Tian-Shan**	**4.37**	**32**		Pg	Pg	**21 55 56.3**	**-2.8**	
	comp=E,11nm,0.5s								
TNSS					Lg	Lg	21 56 53.8		
	comp=E,18nm,0.5s								
KK31	**Karatay Array**	**4.47**	**328**		Pn	Pn	**21 55 45.1**	**+2.0**	
KK31	**Karatay Array**	**4.47**	**328**		Pn	Pn	**21 55 45.6**	**+2.6**	
	comp=E,1.0nm,0.2s,baz=134,slow=12,SNR=36								
KK31				⇑	Lg	Lg	21 56 51.1		
	comp=E,28nm,0.6s,baz=158,slow=31,SNR=3.9								
KKAR	**Karatay Array**	**4.47**	**328**	⇓	*eP*	Pn	**21 55 45.3**	**+2.2**	
	baz=28								
KKAR				⇓	*eS*	Sn	**21 56 35.1**	**0.0**	
	baz=28								
KKAR	**Karatay Array**	**4.47**	**328**		Pn	Pn	**21 55 45.1**	**+2.0**	
KKAR	**Karatay Array**	**4.47**	**328**		Pn	Pn	**21 55 45.6**	**+2.5**	
ANVS	**Anan'yevo**	**4.50**	**40**	⇓	*iP*	Pb	21 55 48.8	-5.7	
	baz=42								
ANVS				⇓	*iS*	Sn	**21 56 41.4**	**+5.2**	
	baz=42								
AAA	**Alma-Ata**	**4.50**	**31**		*eP*	Pg	**21 55 59.7**	**-1.8**	
	comp=E,18nm,0.1s								
AAA					*eS*	Sg	**21 56 59.9**	**+0.1**	
	comp=E,74nm,0.2s								
AAA	**Alma-Ata**	**4.50**	**31**		Pg	Pg	**21 55 59.7**	**-1.8**	
	comp=E,19nm,0.5s								
AAA					Lg	Lg	21 56 59.9		
	comp=E,77nm,0.7s								
KNDC	**Almaty**	**4.53**	**31**	⇑	Pn	Pn	**21 55 47.9**	**+3.9**	
	comp=E,11nm,0.5s								
KNDC				⇓	Lg	Lg	21 57 00.4		
	comp=E,114nm,0.7s								
KRBS	**Karabastau**	**4.55**	**18**		*eP*	Pg	**21 55 59.3**	**-3.1**	
	comp=E,7.4nm,0.2s								
KRBS					*eS*	Sg	**21 56 59.1**	**-2.2**	
	comp=E,50nm,0.3s								
KRBS	**Karabastau**	**4.55**	**18**		Pg	Pg	**21 55 59.3**	**-3.1**	
	comp=E,13nm,0.7s								
KRBS					Lg	Lg	21 56 59.1		
	comp=E,25nm,0.8s								
BRLS	**Borolday**	**4.71**	**322**		*eP*	Pb	**21 55 59.6**

KPKS					*e*S		**Sg**	**21 57 31.9**	**-0.2**
	comp=E,24nm,0.2s								
KPKS	**Kokpek**	**5.51**	**40**		Pg		**Pg**	**21 56 18.8**	**-1.9**
	comp=E,7.3nm,0.6s								
KPKS					Lg		Lg	21 57 31.9	
	comp=E,24nm,0.8s								
BTLS	**Baital**	**5.67**	**2**	*e*P			**Pg**	**21 56 20.5**	**-3.3**
	comp=E,8.9nm,0.2s								
BTLS					*e*S		**Sg**	**21 57 34.5**	**-2.7**
	comp=E,12nm,0.1s								
BTLS	**Baital**	**5.67**	**2**	Pg			**Pb**	**21 56 17.9**	**+3.7**
	comp=E,9.0nm,0.9s								
BTLS					Lg		Lg	21 57 30.6	
	comp=E,11nm,0.1s								
ARXS	**Arharly**	**5.71**	**31**	*e*P			**Pg**	**21 56 21.8**	**-2.7**
	comp=E,12nm,0.3s								
ARXS					*e*S		**Sg**	**21 57 37.7**	**-0.7**
	comp=E,28nm,0.3s								
ARXS	**Arharly**	**5.71**	**31**	Pg			**Pg**	**21 56 20.5**	**-4.0**
	comp=E,12nm,1.1s								
ARXS					Lg		Lg	21 57 35.7	
	comp=E,38nm,0.7s								
PDGK	**Podgornoye**	**5.84**	**46**	Pg			**Pg**	**21 56 24.8**	**-2.3**
	comp=E,3.1nm,0.9s								
PDGK					Lg		Lg	21 57 42.7	
	comp=E,12nm,0.9s								
PDGK	**Podgornoye**	**5.84**	**46**	⇑Pn			Pn	21 56 06.9	+4.9
	comp=E,3.9nm,0.8s								
PDGK					⇑Lg		Lg	21 57 43.2	
	comp=E,43nm,1.2s								
BLB	**Baldybastay**	**5.89**	**35**	*e*P			**Pg**	**21 56 25.9**	**-2.1**
	comp=E,13nm,0.1s								
BLB					*e*S		**Sg**	**21 57 44.3**	**+0.1**
	comp=E,17nm,0.1s								
BLB	**Baldybastay**	**5.89**	**35**	Pg			**Pg**	**21 56 24.5**	**-3.5**
	comp=E,11nm,0.7s								
BLB					Lg		Lg	21 57 42.0	
	comp=E,22nm,0.9s								
KBL	**Kabul**	**6.13**	**220**	Pn			**Pn**	**21 56 08.8**	**+2.7**
DJR	**Jarkent**	**6.69**	**40**	*e*P			**Pg**	**21 56 40.9**	**-2.4**
	comp=E,1.9nm,0.1s								
DJR					*e*S		**Sg**	**21 58 10.3**	**+0.5**
	comp=E,14nm,0.5s								
DJR	**Jarkent**	**6.69**	**40**	Pg			**Pg**	**21 56 43.0**	**-0.3**
	comp=E,1.9nm,0.2s								
DJR					Lg		Lg	21 58 13.6	
	comp=E,14nm,1.1s								
SMLA	**Simla**	**8.68**	**160**	*e*P			Pn	21 56 46.3	+5.5
SMLA					*e*S		**Sn**	**21 58 20.7**	**+1.9**
SMLA					IAML			21 58 27.0	
	comp=N,21nm,0.5s								
SMLA					IAML			21 58 30.2	
	comp=E,24nm,0.8s								
OTUK	**Ortayu**	**8.93**	**354**	⇓Pn			**Pn**	**21 56 45.9**	**+1.6**
	comp=E,2.6nm,1.0s								
OTUK					⇑Lg		Lg	21 59 12.1	
	comp=E,10nm,1.0s								
MAKZ	**Makanchi**	**9.55**	**36**	Pn			Pn	21 56 57.7	+4.9
MK31	**Makanchi Array**	**9.68**	**37**	Pn			**Pn**	**21 56 58.8**	**+4.2**
MK31	**Makanchi Array**	**9.68**	**37**	⇓Pn			**Pn**	**21 56 58.1**	**+3.5**
	comp=E,0.7nm,0.7s,baz=214,slow=12,SNR=4.6								
MK31					⇑Lg		Lg	21 59 41.4	
	comp=E,2.1nm,0.8s								
MKAR	**Makanchi Array**	**9.68**	**37**	Pn			**Pn**	**21 56 56.3**	**+1.7**
	baz=215,slow=13,SNR=2.6								
MKAR					Lg		Lg	21 59 38.7	
	comp=E,0.1nm,0.3s,baz=226,slow=22,SNR=1.9								
	comp=E,1.1nm,1.2s								
MKAR	**Makanchi Array**	**9.68**	**37**				Pn	21 57 00.0	+5.4
WMQ	**Urumqi**	**11.33**	**62**	*e*P			Pn	21 57 23.0	+5.8
KURBB	**Kurchatov Arra**	**11.74**	**15**	Pn			**Pn**	**21 57 24.4**	**+1.7**
	baz=206,slow=12,SNR=5.7								
KURBB					Lg		Lg	22 00 44.3	
	baz=206,slow=31,SNR=9.2								
	comp=E,0.4nm,0.8s								
KURBB	**Kurchatov Arra**	**11.74**	**15**	⇑Lg			Lg	22 00 43.9	
	comp=E,23nm,1.1s								
KURK	**Kurchatov**	**11.85**	**15**	⇑Lg			Lg	22 00 47.0	
	comp=E,17nm,1.0s								
ABKAR	**Akbulak array**	**13.97**	**320**	Pn			**Pn**	**21 57 52.0**	**-1.1**
AKTO	**Aktyubinsk**	**15.68**	**320**	Pn			**Pn**	**21 58 16.2**	**0.0**
	comp=E,0.2nm,0.3s,baz=131,slow=13,SNR=1.8								
	comp=E,2.1nm,0.8s								
ZAA0	**Zalesovo Array**	**16.40**	**24**	Pn			**P**	**21 58 29.1**	**+0.8**
ZALV	**Zalesovo Beam**	**16.40**	**24**	Pn			**Pn**	**21 58 24.6**	**-0.8**
	comp=E,0.2nm,0.3s,baz=205,slow=9.4,SNR=11								
	comp=E,0.7nm,0.5s								
ZALV	**Zalesovo Beam**	**16.40**	**24**	Pn			**P**	**21 58 28.3**	**+0.1**
ARU	**Arti**	**19.80**	**335**	P			**P**	**21 59 05.7**	**+0.1**
	comp=E,3.0nm,0.7s,baz=162,slow=5.2,SNR=8.0								
	comp=E,3.0nm,0.7s								
ARU	**Arti**	**19.80**	**335**	P			**Pn**	**21 59 08.1**	**+0.9**
GTA	**Gaotai**	**20.11**	**82**	*e*P			Pn	21 59 15.0	+3.9
GTA				pP			sP	21 59 19.0	+3.9
GTA				sP			pP	21 59 22.3	+9.1
GTA				pmax			pmax		
	comp=Z,3.0nm,1.0s								
ONI	**Oni**	**23.06**	**288**	P			**P**	**21 59 43.3**	**+2.5**
KBZ	**Khabaz**	**23.44**	**291**	P			**P**	**21 59 45.9**	**+1.4**
	comp=Z,0.6nm,0.5s,baz=92,slow=11,SNR=1.5								
	comp=Z,0.6nm,0.5s								
SONM	**Songino Array**	**24.94**	**59**	P			**P**	**21 59 59.1**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=238,slow=9.5,SNR=3.3								
	comp=Z,0.3nm,0.3s								
BRTR	**Keskin Array B**	**30.77**	**284**	P			**P**	**22 00 52.0**	**+1.0**
	comp=Z,0.7nm,0.6s,baz=86,slow=9.4,SNR=2.0								
	comp=Z,0.7nm,0.6s								
FIA1	**FINESS Array S**	**36.41**	**323**	P			**P**	**22 01 40.7**	**+1.1**
FIA1				IAmb			IAmb	22 02 08.2	
	comp=Z,10.0nm,1.2s								
FINES	**FINESS Array B**	**36.41**	**323**	P			**P**	**22 01 40.8**	**+1.2**
	comp=Z,1.6nm,0.4s,baz=113,slow=10,SNR=32								
	comp=Z,1.6nm,0.4s								
ARCES	**ARCESS Array B**	**39.38**	**336**	P			**P**	**22 02 05.5**	**+0.9**
	comp=Z,1.5nm,0.7s,baz=109,slow=8.8,SNR=7.7								
	comp=Z,1.5nm,0.7s								
ARCES	**ARCESS Array B**	**39.38**	**336**	P			**P**	**22 02 06.2**	**+1.6**
GERES	**GERESS Array B**	**43.13**	**303**	P			**P**	**22 02 37.3**	**+1.4**
	comp=Z,0.2nm,0.4s,baz=67,slow=7.7,SNR=2.6								
	comp=Z,0.2nm,0.4s								
NC405	**NORSAR Array S**	**43.23**	**321**	P			**P**	**22 02 36.8**	**+0.5**
NC405				IAmb			IAmb	22 02 56.3	
	comp=Z,13nm,1.4s								
NB2	**NORSAR Subarra**	**43.47**	**321**	P			**P**	**22 02 38.4**	**+0.1**
	comp=Z,0.7nm,0.4s,baz=91,slow=7.9								
NOA	**NORSAR Array B**	**43.47**	**321**	P			**P**	**22 02 38.1**	**-0.2**
	comp=Z,1.4nm,0.7s,baz=91,slow=7.9,SNR=7.0								
	comp=Z,1.4nm,0.7s								
NC204	**NORSAR Array S**	**43.69**	**321**	P			**P**	**22 02 40.4**	**+0.3**
ESDC	**Sonseca Array**	**58.08**	**297**	P			**P**	**22 04 29.2**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=59,slow=7.5,SNR=2.1								
	comp=Z,0.3nm,0.6s								
TOA0	**Torodi Ar. Sit**	**67.97**	**269**	P			**P**	**22 05 36.7**	**+1.9**
TOA0				IAmb			IAmb	22 05 59.3	
	comp=Z,5.8nm,1.5s								
TORD	**Torodi Ar. Bea**	**67.97**	**269**	P			**P**	**22 05 34.3**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=55,slow=5.2,SNR=7.0								
	comp=Z,0.4nm,0.6s								
TORD	**Torodi Ar. Bea**	**67.97**	**269**	P			**P**	**22 05 34.2**	**-0.5**
TORD				IAmb			IAmb	22 05 35.8	
	comp=Z,2.9nm,1.4s								
IMAR	**Indian Mountai**	**68.76**	**19**	P			**P**	**22 05 39.6**	**+0.7**
ILAR	**Eielson Array**	**71.41**	**17**	P			**P**	**22 05 55.2**	**0.0**
	comp=Z,0.6nm,0.9s,baz=332,slow=4.9,SNR=4.4								
	comp=Z,0.6nm,0.9s								
SVW2	**Sparrevohn**	**72.12**	**23**	P			**P**	**22 06 02.6**	**+3.0**
SVW2				IAmb			IAmb	22 06 27.5	
	comp=Z,3.3nm,1.2s								
BCAR	**Beaver Creek A**	**74.02**	**16**	P			**P**	**22 06 13.1**	**+2.3**
WRA	**Warramunga Arr**	**81.71**	**124**	P			**P**	**22 06 50.6**	**-3.5**
	comp=Z,0.5nm,0.6s,baz=324,slow=5.5,SNR=5.7								
	comp=Z,0.5nm,0.6s								
WB2	**Warramunga Arr**	**81.72**	**124**	P			**P**	**22 06 56.0**	**+1.9**
ASAR	**Alice Springs**	**84.16**	**127**	P			**P**	**22 07 04.1**	**-2.6**
	comp=Z,0.4nm,0.5s,baz=314,slow=5.0,SNR=2.5								
	comp=Z,0.4nm,0.5s								

IDC 27 21:54:39.1±14.0, 33°21'S×57°06'E, h0km, mb3.7/2, mbtmp3.7/2, Error ellipse: s-maj=712.8km s-min=66.5km az=40.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**29.17**	**33**	T	T	22 31 54.5	
	baz=205						
H08S2	**Diego Garcia H**	**29.18**	**33**	T	T	22 31 55.9	
	baz=205						
H08S3	**Diego Garcia H**	**29.19**	**33**	T	T	22 31 57.4	
	baz=205						
ASAR	**Alice Springs**	**66.89**	**104**	P	P	22 05 33.2	-0.2
	0.3nm,0.6s,baz=233,slow=5.3,SNR=4.3						
	0.3nm,0.6s						
WRA	**Warramunga Arr**	**69.00**	**101**	P	P	22 05 46.9	+0.2
	0.7nm,0.5s,baz=238,slow=5.5,SNR=10.0						
	0.7nm,0.5s						
ILAR	**Eielson Array**	**145.17**	**18**	PKPbc	PKPbc	22 14 16.6	-0.8
	1.1nm,1.0s,baz=320,slow=4.2,SNR=4.1						

IDC 27 22:01:00.8±7.6, 8°45'S×156°07'E, h0km, mb3.9/3, mbtmp3.9/3, MS3.9/2, Error ellipse: s-maj=128.6km s-min=91.1km az=17.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**8.85**	**263**	LR	LR	22 06 16.6	
	comp=Z,254nm,19.0s,baz=105,slow=36						
WRA	**Warramunga Arr**	**23.93**	**239**	P	P	22 06 17.0	+0.3
	1.3nm,0.7s,baz=64,slow=9.6,SNR=5.2						
	1.3nm,0.7s						
ASAR	**Alice Springs**	**26.06**	**232**	P	P	22 06 36.0	-0.1
	2.2nm,0.8s,baz=64,slow=9.7,SNR=16						
	2.2nm,0.8s						
STKA	**Stephens Creek**	**26.91**	**208**	P	P	22 06 43.7	-0.1
	2.7nm,0.8s,baz=32,slow=15,SNR=4.3						
	2.7nm,0.8s						
AAK	**Ala-Archa**	**89.52**	**313**	LR	LR	22 56 14.2	
	comp=Z,152nm,19.6s,baz=168,slow=37						

IDC 27 22:02:19.9±1.1, 39°22'N×73°40'E, h0km, mb3.6/6, mbtmp3.6/12, ML2.7/4, Error ellipse: s-maj=22.2km s-min=18.4km az=120.0
SOME 27 22:02:21.9, 39°52'N×73°70'E, h5km
KRNET 27 22:02:23.1±0.1, 39°48'N×73°52'E, mb4.2
NNC 27 22:02:30.3±3.1, 39°89'N×73°48'E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=31.3km s-min=18.9km az=177.0
ISC 27 22:02:19.8±1.5, 39°48'N±0'05×73°76'E±0'02, h3km±9km, n100, σ1$75/129, mb3.7/6, 46C-22D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.29**	**325**	⇓*e*P	**Pg**	**22 02 45.6**	**+1.2**
	baz=32						
OHH				⇓*i*S	**Sn**	**22 03 01.7**	**-0.8**
	baz=32						
DRK	**Karamyk**	**1.52**	**271**	⇑*e*P	**Pb**	**22 02 47.8**	**-0.9**
	baz=71						
DRK				⇑*e*S	**Sn**	**22 03 06.3**	**-2.2**
	baz=71						
BTK	**Batken**	**2.34**	**285**	⇓*e*P	**Pb**	**22 03 01.7**	**-0.9**
	baz=86						
BTK				⇓*i*S	**Sb**	**22 03 29.7**	**-2.3**
	baz=86						
ARLS	**Aral**	**2.42**	**10**	⇑*i*P	**Pg**	**22 03 05.5**	**-0.6**
	baz=14						
ARLS				⇑*i*S	**Sg**	**22 03 36.8**	**-0.7**
	baz=14						
AML	**Almayashu**	**2.65**	**359**	P	**Pg**	**22 03 09.8**	**-0.8**
	SNR=47						
GAR	**Garm**	**2.72**	**261**	⇓*e*P	**Pb**	**22 03 06.8**	**-2.3**
	baz=60						
GAR				⇓*i*S	**Sn**	**22 03 38.6**	**+0.8**
	baz=60						
UCH	**Uchtor**	**2.81**	**11**	P	**Pg**	**22 03 12.2**	**-1.4**
	SNR=30						
UCH	**Uchtor**	**2.81**	**11**	⇑*e*P	**Pb**	**22 03 11.2**	**+0.4**
	baz=15						
UCH				⇑*e*S	**Sb**	**22 03 46.7**	**+1.0**
	baz=15						
TRKS	**Terek-Say**	**2.86**	**317**	⇑*i*P	**Pb**	**22 03 08.9**	**-2.7**
	baz=19						
TRKS				⇑*e*S	**Sn**	**22 03 42.4**	**+0.9**
	baz=19						
EKS2	**Erkin-Say**	**3.18**	**0**	P	**Pb**	**22 03 16.9**	**-0.1**
	SNR=16						
EKS2	**Erkin-Say**	**3.18**	**0**	⇓*i*P	**Pb**	**22 03 15.9**	**-1.1**
	baz=3.0						
EKS2				⇓*e*S	**Sb**	**22 03 54.5**	**-1.7**
	baz=3.0						
AAK	**Ala-Archa**	**3.21**	**10**	P	**Pb**	**22 03 17.8**	**+0.4**
	SNR=25						
AAK	**Ala-Archa**	**3.21**	**10**	Pn	**Pb**	**22 03 18.0**	**+0.6**
	25nm,0.5s,baz=165,slow=6.4,SNR=20						
AAK				Sn	**Sb**	**22 03 55.5**	**-1.4**
	baz=317,slow=19						
AAK				Lg	Lg	22 04 02.9	
	14nm,0.3s,baz=136,slow=20,SNR=9.3						
AAK	**Ala-Archa**	**3.21**	**10**	⇑*i*P	**Pb**	**22 03 16.8**	**-0.6**
	baz=13						
AAK				⇑*i*S	**Sb**	**22 03 56.0**	**-0.9**
	baz=13						
KBK	**Karagaybulak**	**3.30**	**15**	P	**Pb**	**22 03 20.4**	**+1.3**
	SNR=38						
KBK	**Karagaybulak**	**3.30**	**15**	⇑*e*P	**Pb**	**22 03 18.2**	**-0.8**
	baz=18						
KBK				⇑*i*S	**Sb**	**22 03 58.5**	**-1.2**
	baz=18						
ULHL	**Ulahol**	**3.34**	**33**	P	**Pb**	**22 03 21.3**	**+1.5**
	SNR=7.8						
ULHL	**Ulahol**	**3.34**	**33**	⇑*e*P	**Pb**	**22 03 19.7**	**-0.1**
	baz=36						
ULHL				⇑*e*S	**Sb**	**22 04 01.0**	**0.0**
	baz=36						
BOOM	**Boomskoye usch**	**3.43**	**28**	⇓*i*P	**Pb**	**22 03 20.8**	**-0.5**
	baz=31						
BOOM				⇓*i*S	**Sb**	**22 04 02.5**	**-0.9**
	baz=31						
CHMS	**Chumysh**	**3.60**	**12**	P	**Pb**	**22 03 24.2**	**+0.2**
	SNR=15						
CHMS	**Chumysh**	**3.60**	**12**	⇓*e*P	**Pb**	**22 03 21.9**	**-2.1**
	baz=14						
CHMS				⇓*i*S	**Sb**	**22 04 05.1**	**-2.9**
	baz=14						
KDJ	**Kajisay**	**3.71**	**43**	⇑*i*P	**Pb**	**22 03 25.0**	**-1.0**
	baz=45						
KDJ				⇑*e*S	**Sb**	**22 04 10.2**	**-1.2**
	baz=45						
TKM2	**Tokmak 2**	**3.71**	**21**	P	**Pb**	**22 03 26.3**	**+0.3**
	SNR=8.2						
TKM2	**Tokmak 2**	**3.71**	**21**	⇓*e*P	**Pb**	**22 03 24.3**	**-1.7**
	baz=24						
TKM2				⇓*e*S	**Sb**	**22 04 08.7**	**-2.7**
	baz=24						
TKM2	**Tokmak 2**	**3.71**	**21**	⇓Pn	**Pb**	**22 03 25.5**	**-0.5**
	5.6nm,0.6s						
TKM2				⇑Lg	Lg	22 04 20.6	
	93nm,0.8s						
TKM2	**Tokmak 2**	**3.71**	**21**	⇓Pn	**Pb**	**22 03 25.5**	**-0.5**
	5.6nm,0.6s						
TKM2				⇑Lg	Lg	22 04 20.6	
	93nm,0.8s						
TARG	**Taragay, Kyrgy**	**3.81**	**53**	⇑*i*P	**Pb**	**22 03 26.8**	**-1.1**
	baz=54						
TARG				⇑*i*S	**Sb**	**22 04 13.4**	**-1.2**
	baz=54						
DZA	**Taraz**	**3.87**	**333**	*e*P	**Pg**	**22 03 33.3**	**-0.7**
	34nm,0.1s						
DZA				*e*S	**Sg**	**22 04 24.6**	**+0.5**
	148nm,0.2s						
DZA	**Taraz**	**3.87**	**333**	Pg	**Pg**	**22 03 33.3**	**-0.7**
	49nm,0.4s						
DZA				Lg	Lg	22 04 24.7	
	150nm,0.5s						
TAS	**Tashkent**	**3.88**	**300**	⇑*e*P	**Pn**	**22 03 23.2**	**+2.9**
	baz=1.0						
TAS				⇑*i*S	**Sn**	**22 04 07.1**	**+0.8**
	baz=1.0						
IUG	**Iuzhnay**	**3.89**	**314**	*e*P	**Pg**	**22 03 33.8**	**-0.4**
	764nm,0.1s						
IUG				*e*S	**Sg**	**22 04 25.6**	**+0.9**
	268nm,0.9s						
IUG	**Iuzhnay**	**3.89**	**314**	Pg	**Pg**	**22 03 33.8**	**-0.4**
	773nm,0.4s						
IUG				Lg	Lg	22 04 25.6	
	268nm,0.9s						
KST	**Kastek**	**3.93**	**24**	*e*P	**Pg**	**22 03 34.8**	**-0.2**
	26nm,0.2s						
KST				*e*S	**Sg**	**22 04 27.2**	**+1.2**
	178nm,0.1s						
KST	**Kastek**	**3.93**	**24**	Pg	**Pg**	**22 03 35.2**	**+0.2**
	26nm,0.7s						
KST				Lg	Lg	22 04 28.5	
	178nm,0.5s						
DGS	**Degeres**	**4.05**	**21**	*e*P	**Pg**	**22 03 36.5**	**-0.9**
	45nm,0.3s						
DGS				*e*S	**Sg**	**22 04 30.4**	**+0.4**
	107nm,0.3s						
DGS	**Degeres**	**4.05**	**21**	Pg	**Pg**	**22 03 37.8**	**+0.4**
	45nm,0.9s						
DGS				Lg	Lg	22 04 32.8	
	108nm,0.9s						
MTBS	**Maitube**	**4.17**	**28**	*e*P	**Pg**	**22 03 38.8**	**-0.8**
	24nm,0.2s						
MTBS				*e*S	**Sg**	**22 04 34.1**	**+0.6**
	68nm,0.2s						
MTBS	**Maitube**	**4.17**	**28**	Pg	**Pg**	**22 03 39.7**	**+0.1**
	24nm,0.7s						
MTBS				Lg	Lg	22 04 36.2	
	74nm,0.5s						
CHM	**Chimkent**	**4.24**	**313**	*e*P	**Pg**	**22 03 40.7**	**-0.4**
	3.7nm,0.3s						
CHM				*e*S	**Sg**	**22 04 37.7**	**+1.7**
	277nm,0.2s						
KK31	**Karatay Array**	**4.37**	**327**	Pn	Pn	22 03 31.5	+4.5
	1.6nm,0.3s,baz=85,slow=4.2,SNR=31						
KK31				⇓Lg	Lg	22 04 30.8	
	3.0nm,0.3s,baz=139,slow=30,SNR=2.9						
KK31	**Karatay Array**	**4.37**	**327**	Pn	Pn	22 03 31.5	+4.5
	1.6nm,0.3s,baz=85,slow=4.2,SNR=31						
KK31				⇓Lg	Lg	22 04 30.8	
	3.0nm,0.3s,baz=139,slow=30,SNR=2.9						
KKAR	**Karatay Array**	**4.37**	**327**	⇑*i*P	**Pn**	**22 03 30.4**	**+3.3**
	baz=29						
KKAR				⇑*e*S	**Sn**	**22 04 20.6**	**+2.1**
	baz=29						
AAA	**Alma-Ata**	**4.42**	**31**	*e*P	**Pg**	**22 03 44.0**	**-0.5**
	30nm,0.1s						
AAA				*e*S	**Sg**	**22 04 43.4**	**+1.7**
	202nm,0.2s						
AAA	**Alma-Ata**	**4.42**	**31**	Pg	**Pg**	**22 03 44.8**	**+0.4**
	33nm,0.4s						
AAA				Lg	Lg	22 04 45.0	
	207nm,1.1s						
ANVS	**Anan'yevo**	**4.43**	**41**	⇑*i*P	**Pb**	**22 03 34.9**	**-3.3**
	baz=42						
ANVS				⇑*i*S	**Sb**	**22 04 27.5**	**-4.6**
	baz=42						
ANVS	**Anan'yevo**	**4.43**	**41**	⇑*i*P	**Pb**	**22 03 34.9**	**-3.3**
	baz=42						
ANVS				⇑*i*S	**Sb**	**22 04 27.5**	**-4.6**
	baz=42						
KNDC	**Almaty**	**4.45**	**32**	⇑Pn	**Pb**	**22 03 38.4**	**-0.1**
	17nm,0.5s						
KNDC				⇑Lg	Lg	22 04 45.8	
	652nm,0.9s						
KNDC	**Almaty**	**4.45**	**32**	⇑Pn	**Pb**	**22 03 38.4**	**-0.1**
	17nm,0.5s						
KNDC				⇑Lg	Lg	22 04 45.8	
	652nm,0.9s						
KRBS	**Karabastau**	**4.45**	**18**	*e*P	**Pg**	**22 03 43.3**	**-1.8**
	20nm,0.2s						
KRBS				*e*S	**Sg**	**22 04 42.2**	**-0.5**
	87nm,0.2s						
KRBS	**Karabastau**	**4.45**	**18**	Pg	**Pg**	**22 03 43.3**	**-1.8**
	20nm,0.8s						
KRBS				Lg	Lg	22 04 42.5	
	37nm,1.0s						
BRLS	**Boroldav**	**4.62**	**321**	*e*P	**Pg**	**22 03 45.0**	**-3.3**
	5.6nm,0.0s						
BRLS				*e*S	**Sg**	**22 04 45.0**	**-3.1**
	93nm,0.2s						
BRLS	**Boroldav**	**4.62**	**321**	Pg	**Pg**	**22 03 45.0**	**-3.3**
	5.6nm,0.6s						
BRLS				Lg	Lg	22 04 45.0	
	93nm,0.7s						
KTBS	**Karatobe**	**4.76**	**26**	*e*P	**Pg**	**22 03 50.1**	**-0.9**
	15nm,0.7s						
KTBS				*e*S	**Sg**	**22 04 53.6**	**+0.8**
	103nm,0.2s						
KTBS	**Karatobe**	**4.76**	**26**	Pg	**Pg**	**22 03 50.1**	**-0.9**
	15nm,0.7s						
KTBS				Lg	Lg	22 04 54.4	
	103nm,0.6s						
KUU	**Kurty**	**4.81**	**23**	*e*P	**Pg**	**22 03 50.9**	**-1.1**
	12nm,0.2s						
KUU				*e*S	**Sg**	**22 04 54.9**	**+0.5**
	76nm,0.2s						
KUU	**Kurty**	**4.81**	**23**	Pg	**Pg**	**22 03 50.9**	**-1.1**
	12nm,1.2s						
KUU				Lg	Lg	22 04 55.7	
	75nm,1.2s						
CHKK	**Chushkaly**	**5.00**	**28**	*e*P	**Pg**	**22 03 54.6**	**-0.9**
	9.6nm,0.1s						
CHKK				*e*S	**Sg**	**22 05 01.3**	**+1.2**
	66nm,0.7s						
CHKK	**Chushkaly**	**5.00**	**28**	Pg	**Pg**	**22 03 54.6**	**-0.9**
	10.0nm,1.0s						
CHKK				Lg	Lg	22 05 01.3	
	66nm,0.7s						
SATY	**Saty**	**5.00**	**43**	*e*P	**Pg**	**22 03 54.6**	**-1.0**
	21nm,0.3s						
SATY				*e*S	**Sg**	**22 05 01.6**	**+1.1**
	81nm,0.3s						
SATY	**Saty**	**5.00**	**43**	Pg	**Pg**	**22 03 55.3**	**-0.3**
	21nm,0.9s						
SATY				Lg	Lg	22 05 02.4	
	81nm,1.0s						
ZHN	**Zhinishke**	**5.10**	**42**	*e*P	**Pg**	**22 03 56.2**	**-1.2**
	7.4nm,0.0s						
ZHN				*e*S	**Sg**	**22 05 04.2**	**+0.7**
	66nm,0.1s						
ZHN	**Zhinishke**	**5.10**	**42**	Pg	**Pg**	**22 03 56.5**	**-0.8**
	9.9nm,0.6s						
ZHN				Lg	Lg	22 05 04.8	
	63nm,0.6s						
KURS	**Kuram**	**5.20**	**38**	*e*P	**Pg**	**22 03 56.7**	**-2.7**
	18nm,0.1s						
KURS				*e*S	**Sg**	**22 05 04.9**	**-1.8**
	26nm,0.2s						
KURS	**Kuram**	**5.20**	**38**	Pg	**Pg**	**22 03 58.9**	**-0.4**
	18nm,0.6s						
KURS				Lg	Lg	22 05 08.8	
	46nm,1.0s						
KPKS	**Kokpek**	**5.43**	**41**	*e*P	**Pg**	**22 04 02.5**

BLB					Lg	Lg	22 05 29.0		
	48nm,0.9s								
TDK	**Taldyqorghan**	**6.51**	**30**	*e*P	**Pg**	**Pg**	**22 04 22.1**	**-2.2**	
	30nm,0.0s								
TDK				*e*S	**Sg**	**Sg**	**22 05 48.8**	**+0.2**	
	54nm,0.2s								
TDK	**Taldyqorghan**	**6.51**	**30**	Pg	**Pg**	**Pg**	**22 04 20.8**	**-3.6**	
	32nm,0.2s								
TDK				Lg	Lg	Lg	22 05 46.4		
	61nm,1.2s								
DJR	**Jarkent**	**6.61**	**41**	*e*P	**Pg**	**Pg**	**22 04 24.7**	**-1.7**	
	3.1nm,0.0s								
DJR				*e*S	**Sg**	**Sg**	**22 05 53.0**	**+1.0**	
	21nm,0.4s								
DJR	**Jarkent**	**6.61**	**41**	Pg	**Pg**	**Pg**	**22 04 23.7**	**-2.8**	
	4.8nm,0.5s								
DJR				Lg	Lg	Lg	22 05 51.3		
	22nm,1.1s								
OTUK	**Ortayu**	**8.82**	**354**	⇑Pn	Pn	Pn	22 04 32.6	+4.4	
	2.2nm,0.7s								
OTUK				⇑Lg	Lg	Lg	22 07 01.1		
	38nm,1.2s								
OTUK	**Ortayu**	**8.82**	**354**	⇑Pn	Pn	Pn	22 04 32.6	+4.4	
	2.2nm,0.7s								
OTUK				⇑Lg	Lg	Lg	22 07 01.1		
	38nm,1.2s								
MAKZ	**Makanchi**	**9.47**	**37**	⇑Pn	Pn	Pn	22 04 44.1	+7.2	
	1.9nm,1.0s								
MAKZ				⇑Lg	Lg	Lg	22 07 21.8		
	11nm,1.2s								
MAKZ	**Makanchi**	**9.47**	**37**	⇑Pn	Pn	Pn	22 04 44.1	+7.2	
	1.9nm,1.0s								
MAKZ				⇑Lg	Lg	Lg	22 07 21.8		
	11nm,1.2s								
MK31	**Makanchi Array**	**9.60**	**38**	Pn	Pn	Pn	22 04 51.0	+12	
	78nm,0.1s,baz=221,slow=14,SNR=5.3								
MK31				Lg	Lg	Lg	22 07 27.9		
	6.2nm,0.9s,baz=216,slow=24,SNR=3.8								
MK31	**Makanchi Array**	**9.60**	**38**	Pn	Pn	**P**	22 04 51.0	+12	
	78nm,0.1s,baz=221,slow=14,SNR=5.3								
MK31				Lg	Lg	Lg	22 07 27.9		
	6.2nm,0.9s,baz=216,slow=24,SNR=3.8								
MKAR	**Makanchi Array**	**9.60**	**38**	Pn	Pn	Pn	22 04 47.0	+8.1	
	baz=219,slow=10,SNR=5.8								
MKAR				Lg	Lg	Lg	22 07 27.3		
	0.1nm,0.3s,baz=270,slow=21,SNR=2.7								
	0.8nm,0.8s								
KURBB	**Kurchatov Arra**	**11.64**	**15**	Pn	**Pn**	**Pn**	**22 05 09.8**	**+3.2**	
	0.2nm,0.6s,baz=206,slow=12,SNR=1.8								
KURBB				Sn	**Sn**	**Sn**	**22 07 09.3**	**-7.8**	
	baz=291,slow=5.1,SNR=1.5								
KURBB				Lg	Lg	Lg	22 08 26.1		
	baz=203,slow=32,SNR=4.7								
KURBB	**Kurchatov Arra**	**11.64**	**15**	⇓Lg	Lg	Lg	22 08 27.1		
	14nm,0.7s								
KURBB	**Kurchatov Arra**	**11.64**	**15**	⇓Lg	Lg	Lg	22 08 27.1		
	14nm,0.7s								
KURK	**Kurchatov**	**11.75**	**15**	⇑Lg	Lg	Lg	22 08 31.4		
	10nm,0.8s								
KURK	**Kurchatov**	**11.75**	**15**	⇑Lg	Lg	Lg	22 08 31.4		
	10nm,0.8s								
AKTO	**Aktyubinsk**	**15.59**	**320**	Pn	**Pn**	**Pn**	**22 05 59.6**	**-0.7**	
	0.1nm,0.3s,baz=127,slow=16,SNR=2.9								
	4.5nm,1.2s								
ZALV	**Zalesovo Beam**	**16.31**	**24**	Pn	**P**	**P**	**22 06 15.3**	**+2.6**	
	0.2nm,0.3s,baz=215,slow=10.0,SNR=5.1								
	0.8nm,0.5s								
ARU	**Arti**	**19.70**	**334**	P	**Pn**	**Pn**	**22 06 53.5**	**+2.1**	
	baz=154,slow=8.5,SNR=6.1								
	3.9nm,0.8s								
FINES	**FINESS Array B**	**36.32**	**323**	P	**P**	**P**	**22 09 24.6**	**+0.2**	
	0.9nm,0.6s,baz=108,slow=12,SNR=5.0								
	0.9nm,0.6s								
NOA	**NORSAR Array B**	**43.38**	**321**	P	**P**	**P**	**22 10 24.1**	**+1.0**	
	0.3nm,0.6s,baz=141,slow=7.0,SNR=1.8								
	0.3nm,0.6s								
TORD	**Torodi Ar. Bea**	**67.96**	**269**	P	**P**	**P**	**22 13 18.8**	**-1.5**	
	0.4nm,0.8s,baz=43,slow=5.0,SNR=5.4								
	0.4nm,0.8s								
ILAR	**Eielson Array**	**71.31**	**17**	P	P	P	22 13 44.0	+3.8	
	0.3nm,0.8s,baz=324,slow=4.5,SNR=2.6								
	0.3nm,0.8s								
WRA	**Warramunga Arr**	**81.78**	**124**	P	**P**	**P**	**22 14 41.0**	**+0.9**	
	0.5nm,0.7s,baz=324,slow=4.9,SNR=2.4								
	0.5nm,0.7s								
ASAR	**Alice Springs**	**84.23**	**127**	P	**P**	**P**	**22 14 53.3**	**+0.6**	
	0.3nm,0.3s,baz=312,slow=6.1,SNR=2.1								
	0.3nm,0.3s								

NEIC ***27*** *22:04:28.4±1.6,42.36N±0.02×124.47W±0.07,h25km±5km, Error ellipse: s-maj=7.7km s-min=2.6km az=95.0*

SEA ***27*** *22:04:28.4±1.5,42.39N±0.03×124.49W±0.07,h21km±6km, ML2.9/33,ML2.7/35(NEIC),Error ellipse: s-maj=7.4km s-min=3.5km az=82.0*

ANF ***27*** *22:04:28.4±0.8,42.44N×124.47W,h21km±5km,ML3.0/9, Error ellipse: s-maj=6.3km s-min=3.0km az=65.0*

NCEDC ***27*** *22:04:29.6,42.37N×124.33W,h23km*

ISC 27 22:04:28.1±1.3, 42.36N±0.03×124.48W±0.07, h27km±10km, n33, σ0.71/40, Near coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBO	**Bosley Butte**	**0.24**	**128**		**Pb**	**22 04 34.4**	**-0.1**
KEBM	**Edson Butte**	**0.52**	**12**		**Pb**	**22 04 39.2**	**+0.4**
KEBM					**Sb**	**22 04 47.1**	**+1.0**
K02D	**Willamette Mer**	**0.69**	**61**		**Pb**	**22 04 41.5**	**-0.1**
K02D					**Sn**	**22 04 51.6**	**-0.4**
K02D	**Willamette Mer**	**0.69**	**61**	P	**Pb**	**22 04 41.5**	**-0.1**
	baz=237,SNR=968						
K02D				S	**Sb**	**22 04 50.0**	**-0.8**
	baz=237						
KSXB	**Camp Six Broad**	**0.69**	**139**		**Pb**	**22 04 41.8**	**+0.2**
KSXB				Sg	**Sn**	**22 04 51.9**	**-0.2**
L02F	**Cave Junction**	**0.72**	**109**	P	**Pn**	**22 04 42.5**	**0.0**
	baz=294						
L02F				S	**Sn**	**22 04 53.2**	**+0.6**
	baz=294						
J01E	**Myrtle Point**	**0.90**	**27**		**Pb**	**22 04 44.3**	**-0.8**
J01E				IAML		22 05 00.6	
	comp=N,513nm,0.5s						
J01E				IAML		22 05 01.6	
	comp=E,394nm,0.5s						
J01E	**Myrtle Point**	**0.90**	**27**	P	**Pb**	**22 04 44.2**	**-0.8**
	baz=200,SNR=55						
J01E				S	**Sb**	**22 04 55.3**	**-1.3**
	baz=200						
KTRM	**Thompson Ridge**	**0.94**	**118**		**Pb**	**22 04 45.2**	**-0.5**
HUMO	**Hull Mountain**	**1.15**	**77**		**Pn**	**22 04 48.4**	**-0.1**
HUMO				IAML		22 05 09.5	
	comp=N,177nm,0.5s						
HUMO				IAML		22 05 11.5	
	comp=E,123nm,0.6s						
DBO	**Dodson Butte**	**1.19**	**50**		**Pn**	**22 04 48.6**	**-0.4**
DBO				IAML		22 05 12.8	
	comp=E,147nm,0.7s						
DBO				IAML		22 05 18.2	
	comp=N,131nm,0.8s						
KRPM	**Rodgers**	**1.25**	**164**	Pn	**Pn**	**22 04 49.3**	**-0.5**
KRPM				IAML		22 05 19.4	
	comp=E,120nm,0.9s						
KRPM				IAML		22 05 20.0	
	comp=N,144nm,1.0s						
YBH	**Yreka Blue Hor**	**1.46**	**115**		**Pb**	**22 04 54.1**	**-0.5**
YBH	**Yreka Blue Hor**	**1.46**	**115**	Pn	**Pn**	**22 04 53.6**	**+0.8**
YBH	**Yreka Blue Hor**	**1.46**	**115**	IAML		22 05 21.7	
	comp=E,71nm,0.7s						
I03D	**Drain, OR**	**1.57**	**31**		**Pn**	**22 04 54.2**	**0.0**
I03D	**Drain, OR**	**1.57**	**31**	P	**Pn**	**22 04 54.1**	**-0.1**
	baz=209,SNR=15						
I03D				Sb	**Sb**	**22 05 15.2**	**-0.8**
	baz=209						
JCC	**Jacoby Creek,**	**1.58**	**167**	Pn	**Pn**	**22 04 54.0**	**-0.3**
KHMM	**Horse Mountain**	**1.59**	**159**	Pn	**Pn**	**22 04 55.1**	**+0.6**
KHMM				IAML		22 05 29.0	
	comp=N,98nm,1.2s						
KHMM				IAML		22 05 31.1	
	comp=E,93nm,1.0s						
L04D	**Klamath Falls**	**1.62**	**94**	Pn	**Pn**	**22 04 55.9**	**+0.9**
L04D				IAML		22 05 22.7	
	comp=E,176nm,0.7s						
L04D				IAML		22 05 29.9	
	comp=N,146nm,1.1s						
L04D	**Klamath Falls**	**1.62**	**94**	P	**Pn**	**22 04 56.1**	**+1.1**
	baz=277,SNR=36						
L04D				Sb	**Sb**	**22 05 18.7**	**+1.2**
	baz=277						
I02E	**Swisshome, OR**	**1.81**	**15**	Pn	**Pn**	**22 04 59.1**	**+1.7**
I02E				IAML		22 05 33.7	
	comp=N,70nm,1.0s						
I02E				IAML		22 05 36.8	
	comp=E,64nm,0.8s						
I02E	**Swisshome, OR**	**1.81**	**15**	S	**Sn**	**22 05 19.0**	**-0.4**
	baz=192						
J04D	**Umpqua Nationa**	**1.96**	**62**	Pn	**Pn**	**22 04 59.7**	**+0.1**
K04D	**Chiloquin, OR**	**2.03**	**82**	P	**Pn**	**22 05 01.2**	**+0.5**
	baz=263						
I04A	**Tendick Farm,**	**2.09**	**46**	P	**Pn**	**22 05 01.8**	**+0.4**
	baz=225,SNR=12						
J05D	**Fort Rock, OR**	**2.56**	**68**	P	**Pn**	**22 05 08.4**	**+0.5**
	baz=249,SNR=5.3						
K05A	**Summer Lake**	**2.68**	**81**	Pn	**Pn**	**22 05 10.4**	**+0.9**
K05A				IAML		22 06 03.7	
	comp=N,31nm,1.2s						
H04A	**Detroit Lake**	**2.86**	**35**	Pn	**Pn**	**22 05 13.0**	**+1.1**
H04A				IAML		22 05 59.5	
	comp=E,38nm,0.5s						
PINE	**Pine Mountain**	**2.96**	**60**	Pn	**Pn**	**22 05 14.0**	**+0.5**
I07A	**Izee**	**4.02**	**63**	Pn	**Pn**	**22 05 28.5**	**+0.4**
WVOR	**Wild Horse Val**	**4.33**	**87**	Pn	**Pn**	**22 05 32.1**	**-0.1**
G08A	**Pilot Rock**	**4.95**	**52**	Pn	**Pn**	**22 05 41.4**	**+0.6**

HEL 27 22:06:33.2±0.3, 67.17N×20.56E, h0km, ML1.0, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ERTU	**Ertsjaerv**	**0.89**	**133**	PG	Pg	22 06 48.7	-1.5
PAJU	**Pajala**	**1.01**	**97**	PG	Pg	22 06 51.5	-1.1
	baz=280						
PAJU				SB	Sg	22 07 04.7	-0.9
LANU	**Lannavaara**	**1.04**	**31**	PG	Pg	22 06 51.8	-1.3
KLF	**Kolari**	**1.33**	**85**	PG	Pg	22 06 57.1	-1.6
KLF				SB	Sg	22 07 14.5	-1.4
HEF	**Hetta**	**1.72**	**42**	MSG		22 07 24.5	
	comp=Z,0.6nm,0.2s						
HEF				SN	Sb	22 07 27.8	+0.1
KALU	**Kalix**	**1.73**	**138**	PG	Pn	22 07 04.3	-0.1
KIF	**Kilpisjarvi**	**1.85**	**3**	PG	Pb	22 07 07.0	-0.8
KIF				MSG		22 07 29.4	
	comp=Z,0.7nm,0.2s						
KIF				SG	Sg	22 07 32.2	-0.3
TOF	**Tornio**	**1.86**	**124**	PG	Pn	22 07 06.7	+0.5
TOF				MSG		22 07 28.7	
	comp=Z,1.2nm,0.2s						
TOF				SG	Sb	22 07 31.4	-0.3
RNF	**Rovaniemi**	**2.23**	**102**	SG	Sb	22 07 41.7	-0.6
SGF	**Sodankyl**	**2.33**	**80**	SG	Sb	22 07 45.3	0.0

HEL 27 22:07:14.7±0.0, 67.17N×20.64E, h0km, ML1.4, ML1.2(UPP), Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DUNU	**Dundret**	**0.06**	**210**	*i* P	Pg	22 07 15.6	-0.2
DUNU				*i* S	Sg	22 07 16.7	+0.1
MASU	**Masugnsbyn**	**0.60**	**61**	*i* P	Pg	22 07 25.5	-0.6
RATU	**Laukkuluspa**	**0.77**	**329**	*i* P	Pg	22 07 28.4	-1.0
SALU	**Saltoluokta**	**0.86**	**285**	*i* P	Pg	22 07 30.2	-0.8
ERTU	**Ertsjaerv**	**0.87**	**135**	*e*P	Pg	22 07 30.4	-1.0
ERTU				*e*S	Sg	22 07 41.7	-1.0
PAJU	**Pajala**	**0.98**	**98**	*e*P	Pg	22 07 32.4	-1.0
PAJU				*e*SB	Sg	22 07 45.5	-0.5
LANU	**Lannavaara**	**1.02**	**30**	*e*P	Pg	22 07 33.2	-1.0
KLF	**Kolari**	**1.29**	**86**	*e*P	Pg	22 07 37.7	-1.8
KLF				*e*SB	Sg	22 07 55.9	-0.3
HEF	**Hetta**	**1.69**	**41**	*e*PN	Pn	22 07 45.5	+0.1
HEF				MSG		22 08 05.5	
	comp=Z,1.9nm,0.2s						
HEF				*e*SN	Sg	22 08 08.6	-0.2
KALU	**Kalix**	**1.71**	**139**	*e*PG	Pn	22 07 45.3	-0.4
KALU				*e*SN	Sb	22 08 08.6	-0.3
TOF	**Tornio**	**1.83**	**125**	*e*PG	Pn	22 07 47.8	+0.4
	baz=304						
TOF				MSG		22 08 09.1	
	comp=Z,2.7nm,0.2s						
TOF				*e*SN	Sn	22 08 11.8	+0.6
KIF	**Kilpisjarvi**	**1.84**	**2**	*e*PG	Pb	22 07 48.6	-0.6
KIF				MSG		22 08 11.2	
	comp=Z,2.2nm,0.2s						
KIF				*e*SG	Sg	22 08 13.6	-0.2
KTK1	**Kautokeino**	**2.09**	**27**	*e*SB	Sn	22 08 18.0	+0.5
RNF	**Rovaniemi**	**2.19**	**102**	*e*PB	Pn	22 07 53.5	+1.1
RNF				*e*S	Sn	22 08 18.8	-1.3
SGF	**Sodankyl**	**2.30**	**81**	*e*S	Sn	22 08 21.0	-1.7
ARA0	**ARCESS Array S**	**2.98**	**35**	SG	Pn	22 08 03.1	-0.1
ARA0	**ARCESS Array S**	**2.98**	**35**	*e*P	Pn	22 08 03.1	-0.1
ARA0				*e*SB	Sb	22 08 43.6	-1.9

IDC ***27*** *22:10:40.2±0.6,44.16N×153.04E,h0km,mb4.1/22, mbtmp4.1/26,ML3.3/4,MS3.6/4,Error ellipse: s-maj=16.3km s-min=14.1km az=136.0*

SKHL ***27*** *22:10:42.6±0.6,43.90N×152.90E,h34km±4km,mb4.9/5, mbv5.3/2,msh4.8/2*

MOS ***27*** *22:10:42.5±1.0,44.19N×152.82E,h19km,mb4.6/13,Error ellipse: s-maj=8.3km s-min=6.5km az=40.3*

NEIC ***27*** *22:10:43.2±1.6,44.22N±0.09×152.9E±0.1,h10km±1km, mb4.4/65,Error ellipse: s-maj=17.9km s-min=12.3km az=136.0*

ISC 27 22:10:46.2±0.5, 44.14N±0.06×152.86E±0.05, h35km, n222, σ1.9 44/226, mb4.4/73, 3C-1D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**3.73**	**289**	*e*PN	**Pn**	**22 11 40.9**	**-0.3**
KUR				*e*S	**Sn**	**22 12 24.2**	**+0.4**
KUR				pmax	pmax		
	comp=Z,89nm,0.4s						
KUR				smax	smax		
	comp=N,279nm,0.5s						
KUR				smax	smax		
	comp=E,113nm,0.4s						
KUR	**Kuril'sk**	**3.73**	**289**	*e*P	**Pn**	**22 11 40.8**	**-0.4**
KUR				AMB	AMB	22 11 46.6	
	comp=E,400nm,3.0s						
KUR				AMB	AMB	22 11 47.0	
	comp=E,90nm,0.4s						
KUR				*e*S	**Sn**	**22 12 24.0**	**+0.2**
KUR				A	A	22 12 29.3	
	comp=E,270nm,0.5s						
KUR				A	A	22 12 29.3	
	comp=E,150nm,0.5s						
KUR				A	A	22 12 30.0	
	comp=E,1μm,3.0s						
KUR				A	A	22 12 30.0	
	comp=E,600nm,3.0s						
SHO	**Shikotan**	**4.36**	**268**	*e*PN	**Pn**	**22 11 48.7**	**-1.2**
SHO				pmax	pmax		
	comp=Z,29nm,0.4s						
SHO	**Shikotan**	**4.36**	**268**	*e*P	**Pn**	**22 11 48.4**	**-1.5**
SHO				AMB	AMB	22 11 49.8	
	comp=Z,300nm,3.0s						
SHO				AMB	AMB	22 11 51.5	
	comp=Z,40nm,0.4s						
SHO				*e*S	**Sn**	**22 12 36.4**	**-3.1**
SHO				A	A	22 12 37.3	
	comp=Z,320nm,0.5s						
SHO				A	A	22 12 37.3	
	comp=Z,150nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**5.05**	**271**	*c i*PN	**Pn**	**22 11 59.4**	**+0.1**
YUK				pmax	pmax		
	comp=Z,124nm,0.2s						
YUK				pmax	pmax		
	comp=N,50nm,0.1s						
YUK	**Yuzh-Kuril'sk**	**5.05**	**271**	*i* P	**Pn**	**22 11 57.6**	**-1.7**
YUK				AMB	AMB	22 11 59.4	
	comp=N,80nm,0.2s						
YUK				*e*S	**Sn**	**22 12 53.2**	**-3.1**
YUK				A	A	22 12 57.6	
	comp=N,300nm,0.6s						
YUK				A	A	22 12 57.6	
	comp=N,310nm,0.6s						
YUK				A	A	22 12 58.9	
	comp=N,800nm,3.0s						
YUK				A	A	22 12 58.9	
	comp=N,600nm,3.0s						
NMR	**Nemuro--Hokkai**	**5.23**	**264**	*e*PN	**Pn**	**22 11 59.4**	**-2.4**
NMR	**Nemuro--Hokkai**	**5.23**	**264**	*e*P	**Pn**	**22 11 59.4**	**-2.4**
NMR				*e*S	**Sn**	**22 12 56.6**	**-4.2**
RUSJ	**Misakicho**	**5.48**	**272**	*e*PN	**Pn**	**22 12 05.0**	**-0.3**
AKK	**Akkeshi**	**5.94**	**262**	*e*P	**Pn**	**22 12 10.1**	**-1.4**
AKK				*e*S	**Sn**	**22 13 14.1**	**-4.1**
SKR	**Severo-Kuril's**	**6.90**	**17**	*e*P	**Pn**	**22 12 26.7**	**+1.9**
SKR				AMB	AMB	22 12 28.8	
	comp=N,40nm,0.6s						
JKA	**Kamikawa-asahi**	**7.39**	**273**	Pn	**Pn**	**22 12 31.5**	**+0.1**
JKA	**Kamikawa-asahi**	**7.39**	**273**	*e*P	**Pn**	**22 12 31.0**	**-0.4**
ASAJ	**Asahikawa**	**7.39**	**273**	PN	**Pn**	**22 12 31.5**	**0.0**
ERM	**Erimo**	**7.42**	**257**	Pn	**Pn**	**22 12 31.9**	**0.0**
ERM	**Erimo**	**7.42**	**257**	PN	**Pn**	**22 12 31.9**	**0.0**
YSS	**Yuzh-Sakhalins**	**7.63**	**295**	*e*PN	**Pn**	**22 12 33.5**	**-1.3**
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
YSS	**Yuzh-Sakhalins**	**7.63**	**295**	*e*P	**Pn**	**22 12 35.3**	**+0.5**
YSS				AMB	AMB	22 12 38.8	
	comp=Z,30nm,0.4s						
UGL	**Uglegorsk**	**8.92**	**307**	*e*P	**Pn**	**22 12 52.4**	**0.0**
PEA0B	**Petropavlovsk-**	**9.52**	**18**	Pn	**Pn**	**22 12 57.1**	**-3.5**
PEA0B	**Petropavlovsk-**	**9.52**	**18**	*c i*PN	**Pn**	**22 12 57.4**	**-3.3**
PETK	**Petropavlovsk-**	**9.52**	**18**	Pn	**Pn**	**22 12 56.8**	**-3.9**
	comp=Z,4.1nm,0.3s,baz=172,slow=12,SNR=43						
PETK				Sn	**Sn**	**22 14 47.0**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=201,slow=33,SNR=1.4						
PETK				LR	LR	22 18 45.3	
	comp=Z,73nm,18.5s,baz=238,slow=51						
	comp=Z,9.8nm,0.4s						
PETK	**Petropavlovsk-**	**9.52**	**18**		**Pn**	**22 12 56.2**	**-4.5**
TYV	**Tymovskoe**	**9.63**	**318**	*e*P	**Pn**	**22 13 03.1**	**+0.9**
PET	**Petropavlovsk**	**9.68**	**21**	Pn	**Pn**	**22 12 58.8**	**-3.9**
JSD	**Sado**	**12.59**	**246**	Pn	**Pn**	**22 13 40.0**	**-2.7**
MJAR	**Matsushiro Arr**	**13.50**	**241**	Pn	**Pn**	**22 13 54.4**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=59,slow=11,SNR=2.1						
	comp=Z,1.9nm,0.7s						
USA0B	**Ussuriysk Arra**	**14.98**	**278**	Pn	**Pn**	**22 14 16.5**	**+1.3**
USA0B	**Ussuriysk Arra**	**14.98**	**278**	P	**Pn**	**22 14 16.5**	**+1.3**
USA0B				pmax	pmax		
	comp=Z,8.0nm,0.9s						
USRK	**Ussuriysk Ar.**	**14.98**	**278**	Pn	**Pn**	**22 14 13.7**	**-1.5**
	comp=Z,0.3nm,0.3s,baz=78,slow=12,SNR=11						
	comp=Z,7.5nm,0.9s						
USRK	**Ussuriysk Ar.**	**14.98**	**278**	Pn	**Pn**	**22 14 13.5**	**-1.7**
MA2	**Magadan**	**15.51**	**356**	Pn	**Pn**	**22 14 20.2**	**-1.8**
	comp=Z,1.5nm,0.3s,baz=167,slow=6.1,SNR=7.9						
MA2	**Magadan**	**15.51**	**356**	Pn	**Pn**	**22 14 20.6**	**-1.4**
MA2				IAmb	IAmb	22 14 21.4	
	comp=Z,8.7nm,0.6s						
MA2	**Magadan**	**15.51**	**356**	P	**Pn**	**22 14 20.6**	**-1.4**
MA2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
MDJ	**Mudanjiang**	**16.64**	**280**	P	**Pn**	**22 14 35.3**	**-1.2**
MDJ				pP	P	22 14 37.5	-1.1
MDJ				PP	**PnPn**	**22 14 44.0**	**-1.9**
MDJ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,160nm,9.9s						
SEY	**Seymchan**	**18.83**	**359**	P	**P**	**22 15 00.6**	**-2.1**
	comp=Z,0.6nm,0.3s,baz=165,slow=9.0,SNR=18						
SEY				LR	LR	22 22 55.9	
	comp=Z,86nm,19.0s,baz=282,slow=39						
	comp=Z,6.6nm,0.6s						
SEY	**Seymchan**	**18.83**	**359**	*i* P	**P**	**22 15 00.4**	**-2.2**
SEY				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SEY				MLR	MLR		
	comp=Z,71nm,13.0s						
ZEA	**Zeya**	**19.27**	**309**	*i* P	**P**	**22 15 06.2**	**-1.4**
CN2	**Changchun**	**19.71**	**279**	*e*P	**Pn**	**22 15 20.8**	**+6.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KSRS	**Korea Array**	**19.99**	**259**	P	**P**	**22 15 16.5**	**+1.0**
	comp=Z,2.5nm,0.9s,baz=61,slow=10,SNR=7.9						
	comp=Z,2.5nm,0.9s						
YAK	**Yakutsk**	**22.47**	**331**	P	**P**	**22 15 41.2**	**-0.8**
	comp=Z,11nm,0.5s,baz=107,slow=2.4,SNR=4.9						
	comp=Z,11nm,0.5s						
YAK	**Yakutsk**	**22.47**	**331**	P	**P**	**22 15 42.0**	**0.0**
YAK				IAmb	IAmb	22 15 45.9	
	comp=Z,23nm,0.8s						
YAK	**Yakutsk**	**22.47**	**331**	*e*P	**P**	**22 15 41.1**	**-0.9**
YAK				*e**PP	**pP**	**22 15 49.6**	**-0.1**
YAK				*e*		22 16 04.1	
YAK				*e*PPP	PPP	22 16 14.8	
YAK				*e*		22 19 35.5	
YAK				*e*S	**S**	**22 19 43.1**	**-3.0**
YAK				*e*SSS	SSS	22 20 36.5	
YAK				*e*		22 26 55.1	
YAK				pmax	pmax		
	comp=Z,21nm,1.0s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,4.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,18nm,0.9s						
YAK				pmax	pmax		
	comp=N,6.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.0s						
YAK				smax	smax		
	comp=N,10.0nm,1.3s						
YAK				smax	smax		
	comp=E,11nm,1.5s						
HIA	**Hailar**	**23.17**	**295**	P	**P**	**22 15 47.3**	**-2.1**
HIA				IAmb	IAmb	22 15 50.9	
	comp=Z,8.1nm,0.9s						
HIA	**Hailar**	**23.17**	**295**	P	**P**	**22 15 47.3**	**-2.1**
HIA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BILL	**Bilibino**	**24.98**	**12**	P	**P**	**22 16 07.0**	**+1.0**
BILL				IAmb	IAmb	22 16 10.8	
	comp=Z,9.2nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**27.02**	**150**	T	T	22 44 29.2	
	baz=338,slow=76,SNR=12						
H11N1	**WAKE ISLAND Hy**	**27.03**	**150**	T	T	22 44 30.4	
	baz=338,slow=76,SNR=12						
H11N3	**WAKE ISLAND Hy**	**27.04**	**150**	T	T	22 44 28.8	
	baz=338,slow=76,SNR=11						
H11S1	**WAKE ISLAND Hy**	**28.08**	**151**	T	T	22 45 50.3	
	baz=339,

KDAK pmax pmax
comp=Z,18nm,1.1s
IMAR Indian Mountai 36.00 34 P **P** **22 17 43.1 -0.3**
PPLA Purkeypile 36.26 39 P **P** **22 17 46.2 +0.4**
PPLA IAmb IAmb 22 17 51.4
comp=Z,10nm,1.2s
H21K Melozitna Rive 36.33 35 P **P** **22 17 46.2 0.0**
H21K IAmb IAmb 22 17 49.7
comp=Z,12nm,1.3s
MLY Manley 37.10 36 P **P** **22 17 53.1 +0.2**
I23K Minto, Yukon-K 37.70 36 P **P** **22 17 56.6 -1.2**
LZH Lanzhou 37.87 275 *eP* **P** **22 17 58.5 -1.3**
LZH pP pP 22 18 03.3 -5.1
LZH pmax pmax
comp=Z,18nm,1.0s
SML Sawmill 38.01 41 P **P** **22 18 00.5 -0.1**
SML IAmb IAmb 22 18 02.6
comp=Z,7.8nm,0.8s
TOLK Toolik Lake Re 38.07 30 P **P** **22 18 01.4 +0.5**
MDM Murphy Dome 38.16 36 P **P** **22 18 01.2 -0.6**
MDM IAmb IAmb 22 18 12.0
comp=Z,4.8nm,0.9s
COLA College 38.32 36 *i* P **P** **22 18 04.6 +1.6**
COLA pmax pmax
comp=Z,4.0nm,1.1s
CCB Clear Creek Bu 38.32 37 P **P** **22 18 02.9 -0.2**
H24K Noodor Dome 38.37 35 P **P** **22 18 03.2 -0.3**
IL31 38.72 36 P **P** **22 18 06.0 -0.4**
ILAR Eielson Array 38.72 36 P **P** **22 18 03.7 -2.8**
comp=Z,0.8nm,0.6s,baz=247,slow=5.5,SNR=10
comp=Z,0.8nm,0.6s
ILAR Eielson Array 38.72 36 P **P** **22 18 05.6 -0.9**
ILAR Eielson Array 38.72 36 P **P** **22 18 05.6 -0.9**
KLU Klutina 39.17 42 P **P** **22 18 09.9 -0.4**
KLU IAmb IAmb 22 18 13.3
comp=Z,8.7nm,1.2s
GTA Gaotai 39.27 282 *eP* **P** **22 18 13.3 +1.8**
GTA pP pP 22 18 18.3 -1.8
GTA sP sP 22 18 21.0 -2.6
GTA pmax pmax
comp=Z,4.0nm,0.9s
RIDG Independent Ri 39.60 38 P **P** **22 18 13.2 -0.7**
BMAR Burnt Mountain 39.80 32 P **P** **22 18 16.4 +0.9**
N25K Chitina, Valde 39.80 42 P **P** **22 18 15.8 +0.3**
SCRK Sand Creek 39.98 38 P **P** **22 18 16.3 -0.8**
J26L Joseph Creek 40.15 37 P **P** **22 18 17.9 -0.6**
VRDI Verde Repeater 40.37 42 P **P** **22 18 20.1 -0.4**
VRDI IAmb IAmb 22 18 40.8
comp=Z,11nm,1.2s
M26K Nabesna, AK 40.50 40 P **P** **22 18 21.6 +0.3**
M26K IAmb IAmb 22 18 25.3
comp=Z,11nm,1.3s
MCARA McCarthy VSAT 40.57 42 P **P** **22 18 20.0 -1.9**
MCARA IAmb IAmb 22 18 42.5
comp=Z,16nm,1.3s
K27K Chicken 40.82 38 P **P** **22 18 24.0 +0.1**
K27K IAmb IAmb 22 18 27.6
comp=Z,7.2nm,0.9s
L27K Beaver Creek, 40.99 39 P **P** **22 18 25.0 -0.4**
BCAR Beaver Creek A 41.01 39 P **P** **22 18 25.9 +0.4**
ZALV Zalesovo Beam 44.03 308 P **P** **22 18 49.7 -0.4**
comp=Z,0.6nm,0.4s,baz=69,slow=7.9,SNR=3.3
comp=Z,0.6nm,0.4s
ZALV Zalesovo Beam 44.03 308 P **P** **22 18 51.0 +0.9**
ZALV Zalesovo Beam 44.03 308 P **P** **22 18 51.0 +0.9**
WMQ Urumqi 45.76 294 *eP* **P** **22 19 07.0 +2.9**
MK31 Makanchi Array 48.02 299 P **P** **22 19 22.9 +1.2**
MK31 IAmb IAmb 22 19 25.7
comp=Z,3.5nm,0.7s
MK31 Makanchi Array 48.02 299 P **P** **22 19 22.9 +1.2**
MK31 pmax pmax
comp=Z,4.0nm,0.7s
MKAR Makanchi Array 48.02 299 P **P** **22 19 22.5 +0.8**
comp=Z,2.8nm,0.6s,baz=73,slow=7.8,SNR=25
comp=Z,2.8nm,0.6s
MKAR Makanchi Array 48.02 299 P **P** **22 19 23.1 +1.4**
MKAR Makanchi Array 48.02 299 *eP* **P** **22 19 22.9 +1.2**
MKAR pmax pmax
comp=Z,3.0nm,0.6s
MKAR Makanchi Array 48.02 299 *eP* **P** **22 19 22.9 +1.2**
MAKZ Makanchi 48.22 299 P **P** **22 19 24.0 +0.8**
MAKZ IAmb IAmb 22 19 25.3
comp=Z,8.3nm,1.4s
MAKZ Makanchi 48.22 299 P **P** **22 19 24.0 +0.8**
MAKZ pmax pmax
comp=Z,8.0nm,1.4s
KURK Kurchatov 48.70 305 P **P** **22 19 27.0 +0.2**
KURK Kurchatov 48.70 305 P **P** **22 19 27.0 +0.2**
KURK pmax pmax
comp=Z,12nm,1.1s
KURK Kurchatov 48.70 305 *eP* **P** **22 19 27.0 +0.2**
CMAR Chiang Mai Arr 51.62 258 P **P** **22 19 50.2 +0.9**
comp=Z,0.7nm,0.8s,baz=25,slow=8.0,SNR=4.4
comp=Z,0.7nm,0.8s
CMAR Chiang Mai Arr 51.62 258 P **P** **22 19 49.5 +0.1**
CMAR Chiang Mai Arr 51.62 258 *eP* **P** **22 19 50.9 +1.6**
CMAR pmax pmax
comp=Z,1.0nm,0.9s
YKA Yellowknife Ar 53.13 35 P **P** **22 19 58.8 -1.2**
comp=Z,1.2nm,0.8s,baz=292,slow=6.5,SNR=4.4
comp=Z,1.2nm,0.8s
YKA Yellowknife Ar 53.13 35 P **P** **22 19 59.5 -0.4**
YKA Yellowknife Ar 53.13 35 *eP* **P** **22 20 01.9 +2.0**
YKA pmax pmax
comp=Z,2.0nm,0.9s
TARG Taragay, Kyrgy 53.19 295 P **P** **22 20 01.0 -0.2**
TARG IAmb IAmb 22 20 13.2
comp=Z,3.9nm,1.0s
TARG Taragay, Kyrgy 53.19 295 P **P** **22 20 01.0 -0.2**
TARG pmax pmax
comp=Z,4.0nm,1.0s
BOOM Boomskoye usch 54.02 297 P **P** **22 20 08.6 +1.6**
BOOM IAmb IAmb 22 20 09.6
comp=Z,12nm,1.4s
BOOM Boomskoye usch 54.02 297 P **P** **22 20 08.6 +1.6**
BOOM pmax pmax
comp=Z,12nm,1.5s
KSH Kashi 55.52 294 P **P** **22 20 22.0 +4.2**
KSH sP sP 22 20 29.3 -0.8
KSH pmax pmax
comp=Z,3.0nm,0.8s
ARU Arti 56.83 319 P **P** **22 20 26.9 +0.1**
ARU IAmb IAmb 22 20 32.5
comp=Z,5.6nm,0.7s
ARU Arti 56.83 319 *c i* P **P** **22 20 27.5 +0.7**
ARU 22 21 22.4
ARU 22 22 32.2
ARU S **S** **22 28 23.0 +5.6**
ARU SS **SS** **22 32 07.1 +2.0**
ARU pmax pmax
comp=Z,9.0nm,1.2s
ARU Arti 56.83 319 *eP* **P** **22 20 27.5 +0.7**
KKAR Karatay Array 57.13 300 P **P** **22 20 30.3 +1.2**
KKAR Karatay Array 57.13 300 P **P** **22 20 30.3 +1.2**
PRGR Permogore 59.48 328 *eP* **P** **22 20 47.6 +2.5**
ABKAR Akbulak array 59.98 311 P **P** **22 20 49.9 +1.1**
AKTO Aktyubinsk 60.35 313 P **P** **22 20 52.0 +0.6**
comp=Z,1.3nm,0.5s,baz=72,slow=4.0,SNR=3.8
comp=Z,1.3nm,0.5s
AKTO Aktyubinsk 60.35 313 P **P** **22 20 52.0 +0.6**
CHGR Chuyangaron 60.42 297 P **P** **22 20 52.6 +0.4**
CHGR Chuyangaron 60.42 297 P **P** **22 20 52.6 +0.4**
CHGR pmax pmax
comp=Z,19nm,1.0s
PLID Pearl Lake 61.33 54 P **P** **22 20 57.9 -0.5**
PLID IAmb IAmb 22 21 00.7
comp=Z,4.4nm,0.8s
KLMR Klimovskoe 62.26 329 *eP* **P** **22 21 03.1 -0.9**
KLMR pmax pmax
comp=Z,9.0nm,1.2s
KLMR Klimovskoe 62.26 329 *eP* **P** **22 21 03.2 -0.8**
KLMR AMP 22 21 16.4
comp=Z,9.0nm,1.2s
KBL Kabul 62.89 293 P **P** **22 21 08.3 -0.7**
KBL Kabul 62.89 293 P **P** **22 21 08.3 -0.7**
KBL pmax pmax
comp=Z,5.0nm,0.8s
BMN Battle Mountai 63.31 59 P **P** **22 21 11.8 +0.2**
BMN IAmb IAmb 22 21 12.5
comp=Z,3.7nm,1.0s
BMN Battle Mountai 63.31 59 P **P** **22 21 11.8 +0.2**
BMN pmax pmax
comp=Z,4.0nm,1.0s
SUMG Summit 63.31 4 P **P** **22 21 11.5 +0.1**
SUMG Summit 63.31 4 P **P** **22 21 11.5 +0.1**
SUMG pmax pmax
comp=Z,10.0nm,1.0s
SUMG Summit 63.31 4 *i* P **P** **22 21 12.0 +0.6**
NVAR Mina Array Bea 63.82 61 P **P** **22 21 14.6 -0.6**
comp=Z,0.8nm,0.6s,baz=300,slow=8.3,SNR=6.6
comp=Z,0.8nm,0.6s
NVAR Mina Array Bea 63.82 61 P **P** **22 21 15.6 +0.4**
BELG Belogornoye 64.37 319 *i* P **P** **22 21 18.3 +0.1**
BELG pmax pmax
comp=Z,2.0nm,0.9s
MOOW Moose Ponds 65.15 53 P **P** **22 21 23.8 +0.1**
MOOW IAmb IAmb 22 21 27.5
comp=Z,2.9nm,1.2s
KOUNC Koumac, New Ca 65.22 168 P **P** **22 21 26.6 +2.6**
R11A Troy Canyon, C 65.57 60 P **P** **22 21 25.8 -0.6**
R11A IAmb IAmb 22 21 29.5
comp=Z,1.9nm,0.9s
WR0 Warramunga Arr 65.96 199 P **P** **22 21 29.3 +0.6**
WRA Warramunga Arr 65.99 199 P **P** **22 21 27.6 -1.3**
comp=Z,1.2nm,0.8s,baz=17,slow=7.0,SNR=5.5
comp=Z,1.2nm,0.8s
FIA1 FINESS Array S 66.33 335 P **P** **22 21 30.6 -0.1**
FINES FINESS Array B 66.33 335 P **P** **22 21 30.0 -0.7**
comp=Z,3.5nm,0.7s,baz=42,slow=8.9,SNR=13
comp=Z,3.5nm,0.7s
FINES FINESS Array B 66.33 335 P **P** **22 21 30.6 0.0**
FINES FINESS Array B 66.33 335 *eP* **P** **22 21 30.7 0.0**
FINES pmax pmax
comp=Z,4.0nm,0.7s
PDAR Pinedale Array 66.44 53 P **P** **22 21 31.4 -0.6**
comp=Z,0.6nm,0.6s,baz=264,slow=1.5,SNR=3.9
comp=Z,0.6nm,0.6s
PDAR Pinedale Array 66.44 53 P **P** **22 21 31.6 -0.5**
PSUT Pine Spring 66.53 59 P **P** **22 21 33.9 +1.2**
PSUT IAmb IAmb 22 21 39.0
comp=Z,3.4nm,1.4s
GEYT Alibeck 67.81 302 LR LR 22 53 58.9
comp=Z,130nm,18.5s,baz=158,slow=38
VORR Voronezh 68.71 322 *eP* **P** **22 21 48.4 +2.5**
ASAR Alice Springs 69.68 199 P **P** **22 21 52.0 -0.2**
comp=Z,1.1nm,0.8s,baz=17,slow=5.9,SNR=12
comp=Z,1.1nm,0.8s
ASAR Alice Springs 69.68 199 P **P** **22 21 51.8 -0.4**
PV13 Radium Mtn., P 69.82 56 P **P** **22 21 53.4 +0.1**
NC405 NORSAR Array S 70.46 341 P **P** **22 21 56.8 +0.2**
NB2 NORSAR Subarra 70.64 341 P **P** **22 21 57.7 +0.1**
comp=Z,2.4nm,0.5s,baz=29,slow=6.5
NOA NORSAR Array B 70.64 341 P **P** **22 21 57.5 -0.2**
comp=Z,2.0nm,0.5s,baz=28,slow=6.5,SNR=14
comp=Z,2.0nm,0.5s
NOA NORSAR Array B 70.64 341 *eP* **P** **22 21 57.8 +0.1**
NOA pmax pmax
comp=Z,2.0nm,0.5s
HFS Hagfors 70.84 340 P **P** **22 21 58.6 -0.2**
comp=Z,4.4nm,0.6s,baz=46,slow=6.4,SNR=19
comp=Z,4.4nm,0.6s
NACGM Naroch 71.23 330 *eP* **P** **22 22 01.6 +0.3**
baz=37
PABE Paberze 71.72 332 P **P** **22 22 03.7 -0.6**
EYMN Ely 72.28 40 P **P** **22 22 06.2 -1.6**
EYMN IAmb IAmb 22 22 19.6
comp=Z,8.2nm,1.1s
KBZ Khabaz 72.55 314 P **P** **22 22 10.2 +0.8**
comp=Z,5.5nm,0.7s,baz=90,slow=3.1,SNR=13
comp=Z,5.5nm,0.7s
KBZ Khabaz 72.55 314 *eP* **P** **22 22 10.4 +1.0**
KBZ pmax pmax
comp=Z,6.0nm,0.8s
KBZ Khabaz 72.55 314 *eP* **P** **22 22 10.4 +1.0**
ANMO Albuquerque 73.37 57 P **P** **22 22 14.5 -0.3**
ANMO IAmb IAmb 22 22 17.4
comp=Z,1.8nm,0.8s
ANMO Albuquerque 73.37 57 *i* P **P** **22 22 14.4 -0.3**
ANMO pmax pmax
comp=Z,2.0nm,0.7s
AKASG Malin Array Be 73.62 327 P **P** **22 22 15.0 -0.6**
comp=Z,2.8nm,0.5s,baz=37,slow=6.2,SNR=13
comp=Z,2.8nm,0.5s
AKASG Malin Array Be 73.62 327 *eP* **P** **22 22 15.4 -0.2**
AKASG pmax pmax
comp=Z,3.0nm,0.5s
GNI Garni 74.09 311 LR LR 22 59 12.6
comp=Z,97nm,19.9s,baz=143,slow=39
BUR08 Bucovina Ar. S 77.65 327 P **P** **22 22 38.9 -0.1**
BUR08 IAmb IAmb 22 22 42.1
comp=Z,2.9nm,0.8s
BURAR Bucovina Array 77.67 327 P **P** **22 22 39.5 +0.5**
BURAR IAmb IAmb 22 22 42.5
comp=Z,3.2nm,0.9s
KOLS Kolonicke sedl 77.71 329 *eP* **P** **22 22 38.7 -0.4**
KOLS Kolonicke sedl 77.71 329 *eP* **P** **22 22 38.7 -0.4**
WMOK Wichita Mounta 78.05 53 P **P** **22 22 40.3 -1.0**
WMOK IAmb IAmb 22 22 43.3
comp=Z,2.1nm,0.9s
WMOK Wichita Mounta 78.05 53 P **P** **22 22 40.3 -1.0**
WMOK pmax pmax
comp=Z,2.0nm,0.9s
MORC Moravsky Berou 78.66 332 *eP* **P** **22 22 45.0 +0.6**
CLL Collm 78.77 336 *i* P **P** **22 22 44.5 -0.3**
CLL pmax pmax
comp=Z,4.0nm,0.6s
CLL Collm 78.77 336 *i* P **P** **22 22 44.5 -0.3**
comp=Z,4.0nm,0.6s
TXAR Lajitas Array 78.94 60 P **P** **22 22 45.1 -1.3**
comp=Z,1.5nm,0.7s,baz=329,slow=4.7,SNR=7.1
comp=Z,1.5nm,0.7s
TXAR Lajitas Array 78.94 60 P **P** **22 22 46.0 -0.3**
TXAR Lajitas Array 78.94 60 P **P** **22 22 46.0 -0.3**
MLR Muntele Rosu 79.10 325 P **P** **22 22 47.9 +0.9**
MLR Muntele Rosu 79.10 325 P **P** **22 22 47.9 +0.9**
MLR pmax pmax
comp=Z,13nm,1.5s
VRAC Vranov 79.38 333 *eP* **P** **22 22 49.0 +0.7**
KRUC Moravsky 79.66 333 *eP* **P** **22 22 50.1 +0.3**
MODS Modra-Piesok 79.96 332 *eP* **P** **22 22 52.1 +0.6**
MODS Modra-Piesok 79.96 332 *eP* **P** **22 22 52.0 +0.6**
BRTR Keskin Array B 80.17 317 P **P** **22 22 52.8 -0.1**
comp=Z,1.4nm,0.8s,baz=202,slow=1.3,SNR=4.9
comp=Z,1.4nm,0.8s
BRTR Keskin Array B 80.17 317 *eP* **P** **22 22 53.9 +1.0**
BRTR pmax pmax
comp=Z,2.0nm,0.9s
KHC Kasperske Hory 80.51 334 P **P** **22 22 55.1 +0.7**
KHC IAmb IAmb 22 22 57.9
comp=Z,4.2nm,0.7s
KHC Kasperske Hory 80.51 334 P **P** **22 22 55.1 +0.7**
KHC pmax pmax
comp=Z,4.0nm,0.7s
KHC Kasperske Hory 80.51 334 *eP* **P** **22 22 54.5 +0.1**
GEC2 GERESS Array S 80.72 334 P **P** **22 22 55.1 -0.5**
GERES GERESS Array B 80.72 334 P **P** **22 22 55.4 -0.3**
comp=Z,0.7nm,0.6s,baz=46,slow=7.6,SNR=6.0
comp=Z,0.7nm,0.6s
GERES GERESS Array B 80.72 334 P **P** **22 22 55.7 0.0**
GERES GERESS Array B 80.72 334 *eP* **P** **22 22 55.9 +0.3**
GERES pmax pmax
comp=Z,1.0nm,0.6s
MIAR Mount Ida 81.13 50 P **P** **22 22 59.1 +1.2**
MIAR IAmb IAmb 22 23 00.3
comp=Z,3.4nm,1.1s
MIAR Mount Ida 81.13 50 P **P** **22 22 59.1 +1.2**
MIAR pmax pmax
comp=Z,3.0nm,1.1s
WATA Walderalm 82.72 335 *i* P **P** **22 23 07.1 +0.8**
comp=Z,4.8nm,1.1s
WTTA Wattenberg 82.77 335 *i* P **P** **22 23 07.5 +0.9**
comp=Z,3.0nm,1.0s
RDO Rodhopi 82.81 323 P **P** **22 23 07.3 +0.7**
RETA Reutte 82.83 335 *i* P **P** **22 23 05.9 -0.8**
comp=Z,3.1nm,1.0s
MOTA Moosalm 82.86 335 *i* P **P** **22 23 08.7 +1.7**
comp=Z,7.6nm,1.2s
SQTA Sankt Quirin 82.94 335 *i* P **P** **22 23 07.7 +0.3**
comp=Z,2.8nm,0.8s
ABTA Abfaltersbach 82.95 334 *eP* **P** **22 23 09.5 +2.1**
comp=Z,6.3nm,1.3s
T50A Nancy 83.79 43 P **P** **22 23 11.0 -0.8**
T50A IAmb IAmb 22 23 13.3
comp=Z,2.2nm,0.7s
MURB Monte Urbino 86.04 332 P **P** **22 23 23.6 +0.6**
NRCA Norcia 86.22 332 P **P** **22 23 24.1 +0.1**
TORD Torodi Ar. Bea 117.23 328 PKP **PKPdf** **22 29 26.7 -1.3**
comp=Z,0.1nm,0.4s,baz=22,slow=3.1,SNR=1.3
VNDA Vanda 121.52 178 PKP **PKPdf** **22 29 33.4 -0.9**
comp=Z,0.3nm,0.5s,baz=296,slow=7.3,SNR=4.3
PLCA Paso Flores 148.05 99 PKPbc **PKPbc** **22 30 27.2 -0.5**
comp=Z,4.1nm,0.7s,baz=295,slow=1.8,SNR=12

ATH **27** *22:11:41.9, 34°.16N×26°.60E, h15km±5km, ML3.9/3, Error ellipse: s-maj=8.5km s-min=1.8km az=51.0*
NIC **27** *22:11:42.9±0.0, 34°.09N×26°.37E, h28km±5km, Ml4.4/4*
IDC **27** *22:11:42.3±0.9, 34°.35N×26°.49E, h0km, mb4.1/16, mbtmp4.1/26, ML3.8/10, MS3.6/2, Error ellipse: s-maj=19.1km s-min=12.3km az=9.0*
NEIC **27** *22:11:44.1±2.6, 34°.24N±0°.08×26°.40E±0°.07, h10km±1km, mb4.1/26, ML3.5(THE), ML3.9(ATH), Error ellipse: s-maj=13.5km s-min=9.0km az=199.0*
THE **27** *22:11:44.2, 34°.33N×26°.68E, h0km±2km, ML3.5/6, Error ellipse: s-maj=5.3km s-min=1.4km az=140.0*
DDA **27** *22:11:45.0±0.0, 34°.43N×26°.57E, h6km±3km, MW4.0*
ISK **27** *22:11:46.3, 34°.42N×26°.53E, h8km, ML3.7/23*
HLW **27** *22:11:47.6, 33°.91N×26°.70E, h4km±6km, Md4.1, Ml4.1*
GII **27** *22:11:49.0±0.0, 33°.98N×26°.97E, h8km, mb4.3/4, MD4.1/4, Mm4.2/3*

ISC 27 22:11:42.6±0.9, 34°.17N±0°.03×26°.55E±0°.03, h8km±5km, n213, σ1°.79/268, mb4.2/21, 2D, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.99**	**344**	P	**Pg**	**22 12 01.0**	**-0.6**
ZKR				S	**Sb**	**22 12 15.2**	**+0.1**
ZKR				AML	AML	22 12 16.2	
	comp=E,11930μm,0.4s						
ZKR				AML	AML	22 12 19.8	
	comp=N,3783μm,0.5s						
ZKR	**Zakros**	**0.99**	**344**	P	**Pg**	**22 12 01.0**	**-0.6**
ZKR				S	**Sb**	**22 12 15.4**	**+0.3**
	comp=N,4μm,0.6s						
ZKR	**Zakros**	**0.99**	**344**	PG	**Pg**	**22 12 00.9**	**-0.6**
ZKR				SG	**Sg**	**22 12 11.5**	**-2.9**
ZKR	**Zakros**	**0.99**	**344**	P	**Pg**	**22 12 01.0**	**-0.6**
ZKR				S	**Sb**	**22 12 15.6**	**+0.5**
FRMA	**Ierapetra Chan**	**1.08**	**322**	P	**Pg**	**22 12 01.6**	**-1.8**
FRMA				S	**Sg**	**22 12 16.5**	**-1.0**
FRMA				AML	AML	22 12 24.8	
	comp=N,8034μm,0.6s						
FRMA				AML	AML	22 12 28.1	
	comp=E,10102μm,0.5s						
FRMA	**Ierapetra Chan**	**1.08**	**322**	P	**Pg**	**22 12 01.6**	**-1.8**
FRMA				S	**Sg**	**22 12 17.6**	**+0.2**
	comp=E,2μm,0.4s						
STIA	**Sitia Lasithi**	**1.10**	**340**	P	**Pg**	**22 12 03.0**	**-0.8**
STIA				S	**Sg**	**22 12 18.0**	**0.0**
STIA				AML	AML	22 12 22.5	
	comp=N,14744μm,0.4s						
STIA				AML	AML	22 12 24.4	
	comp=E,13911μm,0.6s						
STIA	**Sitia Lasithi**	**1.10**	**340**	P	**Pg**	**22 12 03.2**	**-0.5**
STIA				S	**Sb**	**22 12 18.6**	**+0.2**
HRKL	**Herakleio**	**1.65**	**314**	P	**Pb**	**22 12 12.9**	**-0.4**
HRKL	**Herakleio**	**1.65**	**314**	P	**Pb**	**22 12 13.2**	**-0.1**
HRKL				S	**Sg**	**22 12 35.7**	**0.0**
	comp=E,4μm,1.1s						
HRKL	**Herakleio**	**1.65**	**314**	PN	**Pb**	**22 12 13.7**	**+0.4**
HRKL				SN	**Sn**	**22 12 33.7**	**+0.4**
SIVA	**Sivas**	**1.67**	**301**	P	**Pb**	**22 12 13.3**	**-0.3**
TMBK	**Timbaki Herakl**	**1.73**	**302**	P	**Pb**	**22 12 14.4**	**-0.1**
TMBK	**Timbaki Herakl**	**1.73**	**302**	P	**Pb**	**22 12 14.4**	**-0.1**
TMBK				S	**Sg**	**22 12 38.0**	**-0.1**
	comp=E,790nm,0.8s						
IDI	**Anoyia**	**1.77**	**310**	Pn	**Pn**	**22 12 14.2**	**+0.7**
	comp=E,15nm,0.3s,baz=135,slow=8.7,SNR=135						
IDI				Sn	**Sn**	**22 12 31.9**	**-4.3**
	comp=E,36nm,0.3s,baz=158,slow=20,SNR=9.8						
IDI	**Anoyia**	**1.77**	**310**	P	**Pn**	**22 12 13.9**	**+0.4**
IDI	**Anoyia**	**1.77**	**310**	P	**Pn**	**22 12 14.0**	**+0.4**
IDI				S	**Sb**	**22 12 37.7**	**0.0**
	comp=E,740nm,0.7s						
IDI	**Anoyia**	**1.77**	**310**	PN	**Pb**	**22 12 15.6**	**+0.3**
IDI				SN	**Sn**	**22 12 37.0**	**+0.7**
IDI	**Anoyia**	**1.77**	**310**		**Pn**	**22 12 14.3**	**+0.7**
GVDS	**Gavdos**	**2.14**	**289**	P	**Pb**	**22 12 20.4**	**-1.2**
GVD	**Gavdhos**	**2.14**	**289**	P	**Pb**	**22 12 20.4**	**-1.2**
GVD	**Gavdhos**	**2.14**	**289**	P	**Pb**	**22 12 20.4**	**-1.2**
GVD				S	**Sb**	**22 12 49.6**	**+1.2**
	comp=E,950nm,0.5s						
GVD	**Gavdhos**	**2.14**	**289**	PN	**Pb**	**22 12 20.9**	**-0.7**
GVD				SN	**Sb**	**22 12 48.2**	**-0.2**
SANT	**Santorini**	**2.38**	**338**	PN	**Pn**	**22 12 23.2**	**+1.3**
SANT				SN	**Sn**	**22 12 50.1**	**-1.1**
SANT	**Santorini**	**2.38**	**338**	Pn	**Pn**	**22 12 22.2**	**+0.3**
THR6	**Thira Island,**	**2.38**	**337**	P	**Pn**	**22 12 21.8**	**-0.1**
THR8	**Santorini-Mono**	**2.40**	**339**	P	**Pn**	**22 12 22.7**	**+0.5**
ARG	**Arkhangelos**	**2.42**	**32**	P	**Pb**	**22 12 25.6**	**-0.8**
ARG				S	**Sn**	**22 12 48.6**	**-3.7**
ARG	**Arkhangelos**	**2.42**	**32**	PN	**Pb**	**22 12 25.3**	**-1.1**
ARG				SN	**Sn**	**22 12 52.3**	**0.0**
ARG	**Arkhangelos**	**2.42**	**32**	Pn	**Pb**	**22 12 25.4**	**-0.9**
ARG	**Arkhangelos**	**2.42**	**32**	P	**Pb**	**22 12 25.2**	**-1.2**
ARG				S	**Sb**	**22 12 54.2**	**-2.2**
THR5	**Thira Island,**	**2.45**	**337**	P	**Pn**	**22 12 23.5**	**+0.6**
IMMV	**Iera Moni Meta**	**2.48**	**302**	P	**Pn**	**22 12 25.0**	**+1.8**
IMMV	**Iera Moni Meta**	**2.48**	**302**	P	**Pn**	**22 12 25.1**	**+1.8**
IMMV	**Iera Moni Meta**	**2.48**	**302**	PN	**Pb**	**22 12 25.8**	**-1.6**
IMMV				SN	**Sn**	**22 12 55.1**	**+1.4**
NIS1	**Nisyros Isl.**	**2.48**	**12**	PN	**Pn**	**22 12 24.7**	**+1.3**
KNDR	**Palaiochora Ch**	**2.59**	**295**	PN	**Pb**	**22 12 28.7**	**-0.6**
KOSK	**Kos Island**	**2.60**	**8**	PN	**Pn**	**22 12 26.1**	**+1.1**
DAT	**Datca**	**2.69**	**18**	PN	**Pn**	**22 12 27.8**	**+1.5**
DAT				SN	**Sn**	**22 12 58.1**	**-1.1**
DAT	**Datca**	**2.69**	**18**	P	**Pn**	**22 12 28.0**	**+1.7**
DAT				*i* AML	AML	22 13 34.0	
	comp=E,96nm,1.0s						
DAT				*i* AML	AML	22 13 34.0	
	comp=E,102nm,1.1s						
SLUM	**Salum**	**2.89**	**203**	P	**Pn**	**22 12 31.4**	**+2.5**
	baz=208						
SLUM				S	**Sn**	**22 13 03.4**	**-0.5**
	baz=208						
TURN	**Turunc**	**2.95**	**27**	PN	**Pn**	**22 12 31.9**	**+2.2**
TURN	**Turunc**	**2.95**	**27**	P	**Pn**	**22 12 31.6**	**+1.9**
TURN				S	**Sn**	**22 13 06.5**	**+1.2**
TURN				*i* AML	AML	22 13 09.0	
	comp=E,79nm,0.8s						
TURN				*i* AML	AML	22 13 09.0	
	comp=E,127nm,0.7s						
BODT	**Bodrum**	**2.96**	**12**	PN	**Pn**	**22 12 31.4**	**+1.5**
APE	**Apeiranthos**	**3.01**	**344**	P	**Pn**	**22 12 30.9**	**+0.2**
APE	**Apeiranthos**	**3.01**	**344**	PN	**Pn**	**22 12 31.9**	**+1.2**
APE				SN	**Sn**	**22 13 05.8**	**-1.2**
DALY	**Dalyan (Mula)**	**3.15**	**32**	PN	**Pn**	**22 12 34.9**	**+2.4**
DALY				SN	**Sn**	**22 13 10.2**	**-0.2**
FETY	**Fethiye**	**3.22**	**39**	PN	**Pn**	**22 12 36.0**	**+2.5**
FETY				SN	**Sn**	**22 13 12.4**	**+0.4**
FETY	**Fethiye**	**3.22**	**39**	P	**Pb**	**22 12 37.9**	**-2.1**
FETY				S	**Sn**	**22 13 14.8**	**+2.8**
AKAS	**Kas**	**3.24**	**50**	PN	**Pn**	**22 12 36.9**	**+3.0**
AKAS				SN	**Sn**	**22 13 14.0**	**+1.2**
AKAS	**Kas**	**3.24**	**50**	Pn	**Pn**	**22 12 35.6**	**+1.7**
AKAS	**Kas**	**3.24**	**50**	P	**Pn**	**22 12 36.5**	**+2.6**
AKAS				S	**Sn**	**22 13 14.6**	**+1.8**
AKAS				*i* AML	AML	22 13 19.0	
	comp=E,344nm,0.6s						
AKAS				*i* AML	AML	22 13 19.0	
	comp=E,234nm,0.6s						
YER	**Yerkesik**	**3.28**	**25**	PN	**Pn**	**22 12 36.6**	**+2.2**
MULA	**Mugla, Merkez-**	**3.40**	**25**	P	**Pn**	**22 12 38.4**	**+2.3**
MULA				S	**Sn**	**22 13 19.3**	**+2.6**
MULA				*i* AML	AML	22 14 06.0	
	comp=E,56nm,0.9s						
MULA				*i* AML	AML	22 14 33.0	
	comp=E,37nm,1.9s						
CAME	**Cameli-Denizli**	**3.57**	**38**	PN	**Pn**	**22 12 41.0**	**+2.6**
AYDN	**Tasoluk**	**3.65**	**17**	P	**Pn**	**22 12 41.4**	**+1.9**
AYDN				S	**Sn**	**22 13 23.0**	**+0.2**
AYDN				*i* AML	AML	22 13 29.0	
	comp=E,54nm,1.0s						
AYDN				*i* AML	AML	22 13 54.0	
	comp=E,49nm,1.1s						
CAEL	**Denizli, Camel**	**3.71**	**37**	P	**Pn**	**22 12 43.0**	**+2.6**
CAEL				S	**Sn**	**22 13 26.7**	**+2.2**
CAEL				*i* AML	AML	22 13 34.0	
	comp=E,159nm,0.6s						
CAEL				*i* AML	AML	22 13 38.0	
	comp=E,232nm,0.9s						

ELL	**Elmali**	**3.76**	**46**	PN	**Pn**	**22 12 44.3 +3.2**
ELL	**Elmali**	**3.76**	**46**	Pn	**Pn**	**22 12 43.1 +2.0**
ELL	**Elmali**	**3.76**	**46**	S	**Sn**	**22 13 27.3 +1.7**
AKUM	**Antalya-Kumluc**	**3.78**	**54**	P	**Pn**	**22 12 43.7 +2.5**
AKUM				S	**Sn**	**22 13 27.2 +1.5**
AKUM				*i* AML	AML	22 13 31.0
	comp=E,58nm,0.6s					
AKUM				*i* AML	AML	22 13 36.0
	comp=E,55nm,0.8s					
TAVA	**DENIZLI_Tavas**	**3.81**	**30**	P	**Pn**	**22 12 43.6 +1.9**
TAVA				S	**Sn**	**22 13 27.7 +0.9**
TAVA				*i* AML	AML	22 14 19.0
	comp=E,48nm,1.1s					
TAVA				*i* AML	AML	22 14 20.0
	comp=E,48nm,1.9s					
GOLH	**Golhisar**	**3.92**	**38**	P	**Pn**	**22 12 46.5 +3.2**
GOLH				S	**Sn**	**22 13 32.3 +2.7**
GOLH				*i* AML	AML	22 13 39.0
	comp=E,94nm,0.6s					
GOLH				*i* AML	AML	22 13 40.0
	comp=E,81nm,0.8s					
AYDB	**Zeytinkoy-Aydi**	**3.93**	**16**	PN	**Pn**	**22 12 45.2 +1.9**
APMY	**Acipayam-Deniz**	**3.99**	**33**	PN	**Pn**	**22 12 46.5 +2.4**
OSC1	**CSNet OBS 1**	**3.99**	**98**	P	**Pn**	**22 12 45.0 +1.0**
OSC1				S	**Sn**	**22 13 32.8 +1.9**
URLA	**Izmir**	**4.19**	**0**	PN	**Pn**	**22 12 48.8 +2.0**
KORT	**Korkueli**	**4.20**	**47**	P	**Pn**	**22 12 50.8 +3.8**
KORT				S	**Sb**	**22 13 42.0 -5.6**
KORT				*i* AML	AML	22 13 43.0
	comp=E,110nm,0.6s					
KORT				*i* AML	AML	22 13 50.0
	comp=E,95nm,0.6s					
BRDR	**BURDUR-Merkez**	**4.53**	**38**	P	**Pn**	**22 12 54.5 +3.0**
BRDR				S	**Sn**	**22 13 46.5 +2.0**
BRDR				*i* AML	AML	22 13 49.0
	comp=E,47nm,0.7s					
BRDR				*i* AML	AML	22 13 50.0
	comp=E,40nm,0.5s					
PASA	**Karahalli, USA**	**4.80**	**29**	P	**Pn**	**22 12 56.7 +1.4**
PASA				*i* AML	AML	22 13 50.0
	comp=E,21nm,0.8s					
PASA				S	**Sn**	**22 13 50.8 -0.4**
PASA				*i* AML	AML	22 13 52.0
	comp=E,18nm,0.6s					
ITM	**Ithomi**	**4.82**	**310**	Pn	**Pn**	**22 12 56.0 +0.5**
AKMS	**Akamas**	**4.85**	**78**	P	**Pn**	**22 12 56.9 +1.1**
AKMS				AML	AML	22 13 52.3
	comp=E,0.7nm,0.6s					
AKMS				AML	AML	22 13 53.7
	comp=E,0.7nm,0.7s					
OSC2	**CSNet OBS 4**	**4.89**	**101**	P	**Pn**	**22 12 58.3 +1.9**
SWA2		**5.00**	**191**	P	**Pn**	**22 12 59.9 +2.1**
	baz=194					
NATA	**Nata**	**5.01**	**81**	P	**Pn**	**22 12 58.6 +0.5**
NATA				S	**Sn**	**22 13 58.3 +2.1**
NATA				AML	AML	22 14 01.3
	comp=E,2.0nm,0.6s					
NATA				AML	AML	22 14 01.3
	comp=E,2.0nm,0.6s					
NATA				AML	AML	22 14 01.5
	comp=E,1.8nm,0.6s					
NATA				AML	AML	22 14 01.5
	comp=E,1.8nm,0.6s					
ALFC	**Alefka**	**5.08**	**77**	P	**Pn**	**22 13 00.6 +1.5**
ALFC				AML	AML	22 13 59.8
	comp=E,1.0nm,0.4s					
ALFC				AML	AML	22 14 10.8
	comp=E,0.7nm,0.6s					
SZAC	**Souni**	**5.26**	**82**	P	**Pn**	**22 13 02.2 +0.6**
SZAC				AML	AML	22 14 13.7
	comp=E,0.8nm,0.4s					
SZAC				AML	AML	22 14 18.6
	comp=E,0.8nm,0.6s					
ASGA	**Asgata**	**5.57**	**82**	P	**Pn**	**22 13 07.6 +1.9**
CSS	**Mathiatis**	**5.65**	**80**	Pn	**Pn**	**22 13 07.9 +0.9**
CSS	**Mathiatis**	**5.65**	**80**	P	**Pn**	**22 13 08.0 +1.1**
HNAT	**Natroun**	**5.69**	**141**	P	**Pn**	**22 13 09.5 +2.0**
	baz=140					
MVOU	**Mavrovouni**	**5.90**	**80**	P	**Pn**	**22 13 11.7 +1.3**
AGG	**Agios Georgios**	**5.92**	**326**	Pn	**Pn**	**22 13 13.7 +3.1**
RYAN	**Fayoum**	**5.98**	**147**	P	**Pn**	**22 13 13.8 +2.4**
	baz=146					
RYAN				S	**Sn**	**22 14 20.0 -0.1**
	baz=146					
HSAF	**As Saff**	**6.22**	**135**	P	**Pn**	**22 13 15.9 +1.2**
	baz=134					
PARAL	**Paralimni**	**6.23**	**80**	P	**Pn**	**22 13 16.7 +1.9**
GLL	**Jalalah**	**6.34**	**135**	P	**Pn**	**22 13 17.3 +0.9**
	baz=134					
ALN	**Alexandroupoli**	**6.73**	**357**	Pn	**Pn**	**22 13 22.7 +1.0**
LIT	**Litokhoron**	**6.75**	**332**	Pn	**Pn**	**22 13 23.1 +1.1**
SUZ	**Suez**	**6.86**	**127**	P	**Pn**	**22 13 25.8 +2.3**
	baz=126					
RDO	**Rodhopi**	**7.01**	**354**	Pn	**Pn**	**22 13 26.7 +1.1**
OFRI	**`Ofer**	**7.22**	**100**	Pn	**Pn**	**22 13 28.8 +0.3**
HNTI	**Hanita**	**7.28**	**96**	Pn	**Pn**	**22 13 30.7 +1.5**
KZIT	**Kziot**	**7.38**	**114**	Pn	**Pn**	**22 13 32.1 +1.5**
KZIT				Sn	**Sn**	**22 14 51.9 -2.7**
MMAI	**Mount Meron Ar**	**7.48**	**96**	Pn	**Pn**	**22 13 32.3 +0.3**
	comp=E,3.5nm,0.3s,baz=282,slow=10,SNR=22					
MMAI				Sn	**Sn**	**22 14 57.1 0.0**
	comp=E,4.8nm,0.3s,baz=263,slow=25,SNR=5.7					
	comp=E,1.8nm,0.3s					
MMAI	**Mount Meron Ar**	**7.48**	**96**		**Pn**	**22 13 32.3 +0.3**
AMAZ	**Amatzia**	**7.51**	**108**	Pn	**Pn**	**22 13 33.4 +0.9**
AMAZ				Sn	**Sn**	**22 14 55.1 -2.8**
MMLI	**Mount Malkishu**	**7.62**	**101**	Pn	**Pn**	**22 13 35.9 +1.9**
NATI	**Neve Ativ**	**7.71**	**94**	Pn	**Pn**	**22 13 36.5 +1.4**
NATI				Sn	**Sn**	**22 15 00.9 -1.7**
KEK	**Kerkira**	**7.74**	**318**	Pn	**Pn**	**22 13 33.9 -1.6**
YTIR	**Yattir**	**7.74**	**109**	Pn	**Pn**	**22 13 37.0 +1.4**
YTIR				Sn	**Sn**	**22 15 01.1 -2.4**
HMDT	**Nahal Hemdat**	**7.76**	**102**	Pn	**Pn**	**22 13 36.6 +0.7**
HMDT				Sn	**Sn**	**22 15 02.1 -1.8**
DSI	**Dead Sea**	**7.87**	**107**	Pn	**Pn**	**22 13 38.4 +1.1**
DSI				Sn	**Sn**	**22 15 04.4 -2.1**
BRTR	**Keskin Array B**	**7.94**	**44**	Pn	**Pn**	**22 13 37.7 -0.7**
	comp=E,0.2nm,0.3s,baz=229,slow=13,SNR=9.2					
	comp=E,1.5nm,0.7s					
BRTR	**Keskin Array B**	**7.94**	**44**	Pn	**Pn**	**22 13 38.9 +0.5**
MSBI	**Mazada**	**7.95**	**109**	Pn	**Pn**	**22 13 40.0 +1.6**
MSBI				Sn	**Sn**	**22 15 05.8 -2.6**
KRMI	**Paran Flat**	**8.02**	**118**	Pn	**Pn**	**22 13 41.7 +2.2**
KRMI				Sn	**Sn**	**22 15 06.8 -3.6**
PRNI	**Paran**	**8.11**	**116**	Pn	**Pn**	**22 13 42.4 +1.8**
PRNI				Sn	**Sn**	**22 15 09.2 -3.3**
GHAJ	**Ghor Haditha**	**8.11**	**108**		**Pn**	**22 13 42.4 +1.7**
GHAJ	**Ghor Haditha**	**8.11**	**108**	Pn	**Pn**	**22 13 42.3 +1.6**
HRFI	**Mount Harif**	**8.29**	**117**	Pn	**Pn**	**22 13 44.7 +1.5**
HRFI				Sn	**Sn**	**22 15 14.6 -2.5**
MBRI	**Mt Berech**	**8.33**	**119**	Pn	**Pn**	**22 13 45.3 +1.5**
EIL	**Elat**	**8.43**	**120**	Sn	**Sn**	**22 15 16.6 -3.8**
	comp=E,29nm,0.3s,baz=255,slow=0.2,SNR=1.9					
SCTE	**Santa Cesarea**	**8.74**	**315**	Pn	**Pn**	**22 13 46.5 -2.7**
BNN	**Bunyan**	**8.82**	**55**	Pn	**Pn**	**22 13 54.3 +3.7**
ASF	**Jabal al Asfar**	**8.90**	**100**	Pn	**Pn**	**22 13 52.6 +1.0**
	comp=E,1.1nm,0.3s,baz=296,slow=9.2,SNR=5.8					
ASF				Sn	**Sn**	**22 15 29.1 -3.0**
	comp=E,0.5nm,0.3s,baz=23,slow=23,SNR=1.8					
	comp=E,3.9nm,0.4s					
ASF	**Jabal al Asfar**	**8.90**	**100**		**Pn**	**22 13 52.6 +1.0**
TIP	**Timpagrande**	**9.32**	**305**		**Pn**	**22 13 56.3 -1.0**
PDG	**Podgorica**	**10.04**	**327**	Pn	**Pn**	**22 14 04.5 -2.5**
CUC	**Castrocucco**	**10.36**	**307**	Pn	**Pn**	**22 14 09.9 -1.5**
RAFF	**Raffo Rosso**	**10.37**	**291**	Pn	**Pn**	**22 14 11.8 +0.1**
VAE	**Valguarnera**	**10.39**	**292**	Pn	**Pn**	**22 14 13.0 +1.0**
	comp=E,2.4nm,0.3s,baz=3.4,slow=11,SNR=7.9					
VAE				Sn	**Sn**	**22 16 01.7 -7.0**
	comp=E,1.6nm,0.3s,baz=241,slow=2.9,SNR=6.3					
	comp=E,7.5nm,0.5s					
VAE	**Valguarnera**	**10.39**	**292**		**Sn**	**22 16 01.7 -7.0**
MLR	**Muntele Rosu**	**11.32**	**358**	Pn	**Pn**	**22 14 24.8 0.0**
	comp=E,0.1nm,0.3s,baz=223,slow=2.6,SNR=2.0					
	comp=E,0.9nm,0.7s					
MLR	**Muntele Rosu**	**11.32**	**358**	Pn	**Pn**	**22 14 26.1 +1.3**
SGRT	**San Giovanni R**	**11.40**	**315**	Pn	**Pn**	**22 14 21.7 -4.1**
NRCA	**Norcia**	**13.61**	**313**	Pn	**Pn**	**22 14 54.3 -1.7**
SOKA	**Soboth**	**15.25**	**328**	*e*Pn	**Pn**	**22 15 19.3 +1.1**
	comp=E,2.6nm,0.6s					
RONA	**Rosalia, Austr**	**15.56**	**333**	*e*Pn	**Pn**	**22 15 21.1 -1.2**
	comp=E,6.7nm,0.9s					
KBZ	**Khabaz**	**15.88**	**48**	Pn	**P**	**22 15 28.7 -1.4**
	comp=E,0.1nm,0.3s,baz=257,slow=5.1,SNR=4.6					
KBZ				LR	LR	22 21 58.1
	comp=E,102nm,19.0s,baz=11,slow=39					
	comp=E,8.2nm,0.9s					
STAL	**STALIGIAL**	**16.02**	**323**	P	**P**	**22 15 30.9 -0.9**
STAL				IAmb	IAmb	22 15 31.3
	comp=Z,19nm,1.4s					
CLUD	**Cludinico**	**16.08**	**324**	P	**P**	**22 15 32.0 -0.3**
CLUD				IAmb	IAmb	22 15 49.7
	comp=Z,13nm,1.2s					
ABTA	**Abfaltersbach**	**16.46**	**324**	*e*Pn	**P**	**22 15 36.8 +0.1**
	comp=Z,4.5nm,0.9s					
AKASG	**Malin Array Be**	**16.64**	**6**	Pn	**Pn**	**22 15 35.4 -0.7**
	comp=Z,3.0nm,0.3s,baz=193,slow=10,SNR=23					
	comp=Z,1.3nm,0.4s					
AKASG	**Malin Array Be**	**16.64**	**6**		**Pn**	**22 15 35.4 -0.7**
KRUC	**Moravsky**	**16.68**	**336**	*e*PN	**Pn**	**22 15 35.2 -1.4**
VRAC	**Vranov**	**16.83**	**337**	Pn	**Pn**	**22 15 37.2 -1.3**
	comp=Z,0.5nm,0.3s,baz=162,slow=11,SNR=4.7					
	comp=Z,1.8nm,0.5s					
VRAC	**Vranov**	**16.83**	**337**	*e*PN	**Pn**	**22 15 37.5 -1.0**
MORC	**Moravsky Berou**	**16.95**	**340**	Pn	**Pn**	**22 15 38.2 -1.9**
MORC				IAmb	IAmb	22 15 39.7
	comp=Z,6.1nm,0.8s					
MORC	**Moravsky Berou**	**16.95**	**340**	*e*PN	**Pn**	**22 15 38.5 -1.6**
CKRC	**Cesky Krumlov**	**17.24**	**332**	*e*P	**Pn**	**22 15 42.8 -0.9**
WTTA	**Wattenberg**	**17.25**	**324**	*e*Pn	**P**	**22 15 45.3 -0.2**
	comp=Z,4.1nm,0.9s					
WATA	**Walderalm**	**17.33**	**324**	*e*Pn	**Pn**	**22 15 45.7 +0.8**
	comp=Z,5.2nm,1.0s					
SQTA	**Sankt Quirin**	**17.43**	**323**	*e*Pn	**Pn**	**22 15 46.3 +0.1**
	comp=Z,4.9nm,0.7s					
KRLC	**Kraliky**	**17.45**	**339**	*e*P	**Pn**	**22 15 45.1 -1.2**
GEC2	**GERESS Array S**	**17.50**	**331**	P	**Pn**	**22 15 47.5 +0.4**
GERES	**GERESS Array B**	**17.50**	**331**	P	**Pn**	**22 15 44.6 -2.4**
	comp=Z,0.3nm,0.3s,baz=144,slow=12,SNR=16					
	comp=Z,1.8nm,0.6s					
GERES	**GERESS Array B**	**17.50**	**331**	P	**Pn**	**22 15 46.9 -0.1**
FUORN	**Ofenpass-Fuorn**	**17.52**	**320**		**P**	**22 15 48.9 +0.2**
FETA	**Feichten**	**17.54**	**322**	*e*Pn	**P**	**22 15 48.7 -0.1**
	comp=Z,4.9nm,0.8s					
MOTA	**Moosalm**	**17.57**	**323**	*e*Pn	**Pn**	**22 15 47.7 -0.2**
	comp=Z,3.6nm,0.8s					
KHC	**Kasperske Hory**	**17.78**	**331**		**P**	**22 15 51.3 +0.1**
KHC	**Kasperske Hory**	**17.78**	**331**	*e*P	**P**	**22 15 51.1 -0.1**
DPC	**Dobruska-Polom**	**17.83**	**338**	*e*P	**Pn**	**22 15 50.1 -0.9**
DAVOX	**Davos/Dischmat**	**17.83**	**320**	P	**Pn**	**22 15 50.4 -0.8**
	comp=Z,0.1nm,0.3s,baz=137,slow=17,SNR=4.0					
	comp=Z,2.5nm,0.7s					
RETA	**Reutte**	**17.84**	**323**	*e*Pn	**Pn**	**22 15 51.5 +0.4**
	comp=Z,2.2nm,0.5s					
OSTC	**Ostas**	**18.04**	**338**	*e*P	**Pn**	**22 15 52.1 -1.5**
PRU	**Pruhonice**	**18.11**	**334**	*e*P	**Pn**	**22 15 52.0 -2.4**
CHVC	**Chvalec**	**18.12**	**338**	*e*P	**Pn**	**22 15 53.7 -0.8**
DAVA	**Damuels**	**18.15**	**321**	*e*Pn	**Pn**	**22 15 55.0 -0.2**
	comp=Z,4.5nm,1.0s					
PVCC	**Panska Ves**	**18.55**	**335**	*e*P	**Pn**	**22 16 00.0 +0.2**
SENIN	**Lac Senin/Sane**	**19.03**	**316**	P	**P**	**22 16 05.4 +0.3**
RAYN	**Ar Rayn**	**19.67**	**118**		**Pn**	**22 16 15.9 +2.4**
RAYN				IAmb	IAmb	22 16 18.3
	comp=Z,6.5nm,0.8s					
CLL	**Collm**	**19.76**	**334**	P	**P**	**22 16 12.2 -0.6**
CLL				IAmb	IAmb	22 16 13.6
	comp=Z,5.6nm,0.7s					
CLL	**Collm**	**19.76**	**334**	*i* P	**P**	**22 16 12.0 -0.8**
	comp=Z,6.0nm,0.7s					
CLL				*e*pP	**sP**	**22 16 16.0 +1.1**
CLL				*e*PPP	PPP	22 16 37.0
SUW	**Suwalki**	**19.98**	**354**	P	**P**	**22 16 13.4 -1.9**
SUW				IAmb	IAmb	22 16 40.7
	comp=Z,14nm,0.8s					
BTNL	**Ternell**	**22.17**	**324**	*d*P	**P**	**22 16 39.5 +0.6**
MEM	**Membach**	**22.25**	**324**	*d*P	**P**	**22 16 38.8 -0.9**
ESBB	**Sonseca Array**	**24.93**	**292**	P	**P**	**22 17 06.3 0.0**
ESBB				IAmb	IAmb	22 17 15.0
	comp=Z,4.5nm,0.8s					
ESDC	**Sonseca Array**	**24.94**	**292**	P	**P**	**22 17 06.0 -0.3**
	comp=Z,1.7nm,0.5s,baz=80,slow=9.3,SNR=38					
	comp=Z,1.7nm,0.5s					
ESDC	**Sonseca Array**	**24.94**	**292**	P	**P**	**22 17 06.2 -0.1**
GEYT	**Alibeck**	**25.73**	**72**	P	**P**	**22 17 14.8 +1.3**
	comp=Z,2.4nm,0.5s,baz=262,slow=11,SNR=4.8					
	comp=Z,2.4nm,0.5s					
GEYT	**Alibeck**	**25.73**	**72**	P	**P**	**22 17 14.3 +0.7**
GEYT				IAmb	IAmb	22 17 19.2
	comp=Z,3.0nm,0.7s					
FINES	**FINESS Array B**	**27.30**	**360**	P	**P**	**22 17 25.8 -1.5**
	comp=Z,1.5nm,0.4s,baz=162,slow=12,SNR=17					
	comp=Z,1.5nm,0.4s					
FINES	**FINESS Array B**	**27.30**	**360**	P	**P**	**22 17 25.4 -1.9**
FIA1	**FINESS Array S**	**27.30**	**360**	P	**P**	**22 17 25.1 -2.2**
FIA1				IAmb	IAmb	22 17 39.4
	comp=Z,15nm,1.4s					
HFS	**Hagfors**	**27.31**	**346**	P	**P**	**22 17 25.9 -1.6**
	comp=Z,2.4nm,0.6s,baz=148,slow=12,SNR=10					
	comp=Z,2.4nm,0.6s					
HFS	**Hagfors**	**27.31**	**346**	P	**P**	**22 17 25.9 -1.6**
AKTO	**Aktyubinsk**	**28.11**	**45**	P	**P**	**22 17 35.4 +0.5**
	comp=Z,1.0nm,0.5s,baz=233,slow=9.8,SNR=3.5					
	comp=Z,1.0nm,0.5s					
NC602	**NORSAR Array S**	**28.31**	**344**	P	**P**	**22 17 36.5 0.0**
NB2	**NORSAR Subarra**	**28.66**	**344**	P	**P**	**22 17 37.2 -2.4**
	comp=Z,3.0nm,1.2s,baz=156,slow=9.3					
NOA	**NORSAR Array B**	**28.66**	**344**	P	**P**	**22 17 38.0 -1.6**
	comp=Z,0.4nm,0.5s,baz=157,slow=10,SNR=3.6					
	comp=Z,0.4nm,0.5s					
EKA	**Eskdalemuir Ar**	**29.51**	**325**	P	**P**	**22 17 46.0 -1.2**
	comp=Z,0.8nm,0.5s,baz=126,slow=11,SNR=6.1					
	comp=Z,0.8nm,0.5s					
TOA0	**Torodi Ar. Sit**	**30.77**	**233**	P	**P**	**22 17 59.7 +1.1**
TOA0				IAmb	IAmb	22 18 00.6
	comp=Z,3.4nm,0.7s					
TORD	**Torodi Ar. Bea**	**30.77**	**233**	P	**P**	**22 17 59.7 +1.0**
	comp=Z,3.2nm,0.7s,baz=34,slow=9.0,SNR=28					
	comp=Z,3.2nm,0.7s					
TORD	**Torodi Ar. Bea**	**30.77**	**233**	P	**P**	**22 17 59.7 +1.0**
TORD				IAmb	IAmb	22 18 00.5
	comp=Z,1.9nm,0.8s					
ARU	**Arti**	**31.20**	**35**	P	**P**	**22 18 02.7 +0.6**
	comp=Z,0.6nm,0.3s,baz=240,slow=16,SNR=1.8					
	comp=Z,0.6nm,0.3s					
KKAR	**Karatay Array**	**35.14**	**62**	P	**P**	**22 18 38.5 +1.8**
ARCES	**ARCESS Array B**	**35.43**	**359**	P	**P**	**22 18 36.5 -2.3**
	comp=Z,2.3nm,0.7s,baz=182,slow=8.5,SNR=8.8					
	comp=Z,2.3nm,0.7s					
ARCES	**ARCESS Array B**	**35.43**	**359**	P	**P**	**22 18 37.1 -1.7**
MKAR	**Makanchi Array**	**43.38**	**56**	P	**P**	**22 19 46.5 +1.1**
	comp=Z,3.9nm,0.6s,baz=276,slow=4.5,SNR=3.9					
	comp=Z,3.9nm,0.6s					
MKAR	**Makanchi Array**	**43.38**	**56**	P	**P**	**22 19 47.4 +2.0**
SPB2	**Spitsbergen Ar**	**44.33**	**357**	P	**P**	**22 19 53.1 +0.5**
ZAA0	**Zalesovo Array**	**44.87**	**45**	P	**P**	**22 19 58.1 +0.8**
ZAA0				IAmb	IAmb	22 19 59.0
	comp=Z,3.7nm,0.7s					
ZALV	**Zalesovo Beam**	**44.87**	**45**	P	**P**	**22 19 58.1 +0.9**
	comp=Z,3.8nm,0.6s,baz=265,slow=9.0,SNR=17					
	comp=Z,3.8nm,0.6s					
ZALV	**Zalesovo Beam**	**44.87**	**45**	P	**P**	**22 19 58.5 +1.2**
SONM	**Songino Array**	**59.23**	**51**	P	**P**	**22 21 45.4 +0.9**
	comp=Z,1.0nm,0.7s,baz=284,slow=8.0,SNR=4.6					
	comp=Z,1.0nm,0.7s					
SONM	**Songino Array**	**59.23**	**51**	P	**P**	**22 21 45.0 +0.6**
SONM				IAmb	IAmb	22 21 58.0
	comp=Z,1.1nm,1.0s					
SCHQ	**Schefferville**	**64.68**	**320**	P	**P**	**22 22 20.7 -0.2**
	comp=Z,1.4nm,0.4s,baz=54,slow=5.5,SNR=5.4					
	comp=Z,1.4nm,0.4s					
SCHQ	**Schefferville**	**64.68**	**320**	P	**P**	**22 22 20.5 -0.3**
RES	**Resolute Bay**	**64.92**	**346**	LR	LR	22 51 33.7
	comp=Z,68nm,18.5s,baz=50,slow=37					
CMAR	**Chiang Mai Arr**	**65.55**	**84**	P	**P**	**22 22 28.2 +1.2**
	comp=Z,2.0nm,0.7s,baz=294,slow=8.1,SNR=14					
	comp=Z,2.0nm,0.7s					
CMAR	**Chiang Mai Arr**	**65.55**	**84**	P	**P**	**22 22 28.0 +1.0**
USA0B	**Ussuriysk Arra**	**76.73**	**45**	P	**P**	**22 23 35.0 +0.7**
USRK	**Ussuriysk Ar.**	**76.73**	**45**	P	**P**	**22 23 35.1 +0.7**
	comp=Z,1.6nm,0.6s,baz=278,slow=4.6,SNR=11					
	comp=Z,1.6nm,0.6s					
USRK	**Ussuriysk Ar.**	**76.73**	**45**	P	**P**	**22 23 35.3 +1.0**
IMAR	**Indian Mountai**	**80.17**	**0**	P	**P**	**22 23 54.0 +0.9**
H21K	**Melozitna Rive**	**80.50**	**360**	P	**P**	**22 23 55.7 +0.9**
H21K				IAmb	IAmb	22 23 56.4
	comp=Z,1.1nm,0.8s					
TROLL	**Troll, Antarti**	**107.22**	**188**	PP	**PP**	**22 30 28.0 +0.8**
VNA1	**Neumayer--Stat**	**107.47**	**192**	PP	**PP**	**22 30 35.3 +6.5**
SNAA	**Sanae**	**107.56**	**189**	PP	**PP**	**22 30 30.8 +1.2**
VNA2	**Neumayer--Watz**	**107.56**	**191**	PP	**PP**	**22 30 34.3 +4.7**
	baz=84,slow=1.0					
VNA3	**Neumayer Olymp**	**108.21**	**192**	PP	**PP**	**22 30 34.9 +0.6**

MAN 27 22:29:17.1, 10.62N×122.55E, h23km, mb3.7, ML2.4, MS1.8, Panay

IDC 27 22:35:19.4±2.1, 7.37S×155.35E, h0km, mb3.8/4, mbtmp3.8/4, Error ellipse: s-maj=101.4km s-min=26.6km az=130.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.90**	**236**	P		P	P	22 40 35.0	-0.1
	2.5nm,0.9s,baz=62,slow=9.3,SNR=8.6								
	2.5nm,0.9s								
ASAR	**Alice Springs**	**26.19**	**229**	P		P	P	22 40 56.0	-0.1
	0.5nm,0.5s,baz=61,slow=8.9,SNR=6.0								
	0.5nm,0.5s								
ILAR	**Eielson Array**	**83.59**	**21**	P		P	P	22 47 49.8	+0.4
	0.8nm,0.4s,baz=242,slow=5.5,SNR=17								
	0.8nm,0.4s								
MKAR	**Makanchi Array**	**83.91**	**319**	P		P	P	22 47 51.3	-0.1
	0.5nm,0.8s,baz=111,slow=6.9,SNR=4.2								
	0.5nm,0.8s								
TORD	**Torodi Ar. Bea**	**153.46**	**285**	PKPbc		PKPbc	PKPbc	22 55 20.7	-0.3
	0.4nm,0.7s,baz=80,slow=1.9,SNR=6.0								

NEIC ***27*** *22:37:02.6±1.6, 31.08S±0.05×70.12W±0.06, h131km±4km, mb4.1/1, Md3.6(SJA), ML4.1(GUC), Error ellipse: s-maj=7.8km s-min=6.0km az=135.0*
GUC ***27*** *22:37:03.0±0.7, 31.06S×70.18W, h138km±4km, ML4.1*
ISC 27 22:37:01.3±0.8, 31.08S±0.03×70.13W±0.06, h138km±8km, n62, σ1.900/88, 4C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CO03	**El Pedregal**	**0.54**	**296**				**Pn**	**22 37 22.0**	**+0.3**
CO03						Sn	**Sn**	**22 37 35.9**	**-1.1**
CO03	**El Pedregal**	**0.54**	**296**	⇓	*i* P		**Pn**	**22 37 22.0**	**+0.3**
CO03					*i* S		**Sn**	**22 37 36.1**	**-1.0**
CO03					IAML			22 37 36.8	
	comp=E,11μm,0.3s								
CO02	**Combarbal**	**0.76**	**260**				**Pn**	**22 37 24.0**	**+0.8**
CO02						Sn	**Sn**	**22 37 39.6**	**-0.1**
CO02	**Combarbal**	**0.76**	**260**		*i* P		**Pn**	**22 37 24.0**	**+0.8**
CO02					*i* S		**Sn**	**22 37 40.0**	**+0.3**
CO02					IAML			22 37 41.4	
	comp=E,9μm,0.3s								
GO04	**Tololo Observa**	**1.07**	**327**				**Pn**	**22 37 26.6**	**+0.7**
GO04						Sn	**Sn**	**22 37 44.2**	**-0.5**
GO04	**Tololo Observa**	**1.07**	**327**	⇑	*i* P		**Pn**	**22 37 26.6**	**+0.7**
GO04					*i* S		**Sn**	**22 37 44.1**	**-0.5**
GO04					IAML			22 37 47.2	
	comp=E,6μm,0.4s								
CO01	**Juntas del Tor**	**1.10**	**2**				**Pn**	**22 37 27.3**	**+1.1**
CO01						Sn	**Sn**	**22 37 45.6**	**+0.5**
CO01	**Juntas del Tor**	**1.10**	**2**	⇑	*i* P		**Pn**	**22 37 27.4**	**+1.2**
CO01					*i* S		**Sn**	**22 37 45.3**	**+0.2**
ZON	**Zonda**	**1.32**	**111**				**Pn**	**22 37 27.1**	**-1.1**
CO06	**Fray Jorge**	**1.36**	**287**				**Pn**	**22 37 29.3**	**+0.9**
CO06						Sn	**Sn**	**22 37 48.6**	**-0.6**
CO06	**Fray Jorge**	**1.36**	**287**	⇓	*i* P		**Pn**	**22 37 29.3**	**+0.9**
CO06					*i* S		**Sn**	**22 37 48.8**	**-0.4**
CO06					IAML			22 37 54.8	
	comp=E,1μm,0.2s								
CO05	**La Serena**	**1.50**	**320**				**Pn**	**22 37 31.1**	**+1.0**
CO05	**La Serena**	**1.50**	**320**	*i*	P		**Pn**	**22 37 31.0**	**+1.0**
CO05					*i* S		**Sn**	**22 37 51.6**	**-0.3**
CO05					IAML			22 37 52.5	
	comp=N,2μm,0.4s								
VA03	**San Esteban**	**1.72**	**192**				**Pn**	**22 37 34.1**	**+1.6**
VA03	**San Esteban**	**1.72**	**192**	*i*	P		**Pn**	**22 37 34.2**	**+1.6**
VA03					*i* S		**Sn**	**22 37 57.5**	**+1.0**
VA03					IAML			22 37 59.2	

GO01	**Chusmiza**	**11.39**	**4**	Pn	**Pn**	**22 39 39.3**	**-1.2**
ITQB	**Itaqui**	**11.75**	**87**	Pn	**Pn**	**22 39 43.0**	**-1.6**
PLTB	**Pedras Altas**	**14.13**	**97**		**P**	**22 40 19.4**	**+0.7**
LPAZ	**La Paz**	**14.84**	**8**	P	**P**	**22 40 29.1**	**+1.8**
SNAA	**Sanae**	**53.70**	**159**		P	22 46 13.2	+4.7
SNAA				IAmb	IAmb	22 46 34.0	
	comp=Z,3.1nm,1.3s						

IDC 27 22:41:19.5±1.7, 8°13.5S×148°56.6E, h0km, mb3.7/3, mbtmp3.8/4, ML4.0/1, Error ellipse: s-maj=77.7km s-min=27.8km az=123.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.10**	**228**	P	Pn	22 45 31.4	-1.2
	0.6nm,0.3s,baz=50,slow=10,SNR=13						
	1.4nm,0.4s						
ASAR	**Alice Springs**	**20.88**	**221**	P	P	22 46 02.0	-1.5
	1.5nm,0.7s,baz=55,slow=9.7,SNR=14						
	1.5nm,0.7s						
STKA	**Stephens Creek**	**24.50**	**194**	P	P	22 46 39.8	-0.9
	1.4nm,0.4s,baz=358,slow=7.5,SNR=5.5						
	1.4nm,0.4s						
ILAR	**Eielson Array**	**86.82**	**23**	P	P	22 54 07.5	+2.0
	0.5nm,0.7s,baz=239,slow=4.1,SNR=4.8						
	0.5nm,0.7s						

SOME 27 22:41:49.8, 39°.30N×73°.45E, h10km
KRNET 27 22:41:52.0±0.1, 39°.35N×73°.54E, mb3.6
NNC 27 22:41:56.2±5.1, 39°.42N×73°.48E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=47.9km s-min=23.2km az=18.0

ISC 27 22:41:52.6±1.5, 39°.47N±0°.05×73°.50E±0°.03, h2km±12km, n26, σ2s36/49, 18C-6D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.19**	**332**	⇑*iP*	**Pg**	**22 42 16.8**	**+1.5**
	baz=34						
OHH				⇑*iS*	**Sn**	**22 42 34.9**	**+1.9**
	baz=34						
DRK	**Karamyk**	**1.32**	**271**	⇑*iP*	**Pg**	**22 42 17.8**	**0.0**
	baz=76						
DRK				⇑*iS*	**Sg**	**22 42 36.6**	**+1.7**
	baz=76						
BTK	**Batken**	**2.15**	**287**	⇑*iP*	**Pb**	**22 42 32.0**	**-0.3**
	baz=89						
BTK				⇑*iS*	**Sg**	**22 43 01.3**	**-0.3**
	baz=89						
ARLS	**Aral**	**2.46**	**14**	⇑*iP*	**Pb**	**22 42 36.9**	**-0.8**
	baz=13						
ARLS				⇑*iS*	**Sb**	**22 43 09.7**	**+1.2**
	baz=13						
GAR	**Garm**	**2.52**	**260**	⇑*iP*	**Pb**	**22 42 36.4**	**-2.2**
	baz=63						
GAR				⇑*iS*	**Sb**	**22 43 08.8**	**-1.3**
	baz=63						
TRKS	**Terek-Say**	**2.73**	**319**	⇓*eP*	**Pb**	**22 42 40.1**	**-2.1**
	baz=20						
TRKS				⇓*iS*	**Sb**	**22 43 15.1**	**-1.1**
	baz=20						
UCH	**Uchtor**	**2.85**	**15**	⇑*iP*	**Pb**	**22 42 42.6**	**-1.9**
	baz=14						
UCH				⇑*iS*	**Sb**	**22 43 19.5**	**-0.6**
	baz=14						
BOOM	**Boomskoye usch**	**3.53**	**31**	⇓*eP*	**Pb**	**22 42 51.6**	**-4.3**
	baz=29						
BOOM				⇓*iS*	**Sb**	**22 43 35.3**	**-4.0**
	baz=29						
IUG	**Iuzhnay**	**3.75**	**316**	*eP*	**Pg**	**22 43 03.7**	**-0.7**
	396nm,0.2s						
IUG				*eS*	**Sg**	**22 43 56.7**	**+3.6**
	78nm,0.1s						
TKM2	**Tokmak 2**	**3.79**	**24**	Pn	**Pb**	**22 42 59.3**	**-0.9**
	3.2nm,0.5s						
TKM2				Lg	Lg	22 43 56.5	
	10nm,0.6s						
KST	**Kastek**	**4.02**	**27**	*eP*	**Pg**	**22 43 07.8**	**-1.7**
	2.4nm,0.3s						
KST				*eS*	**Sg**	**22 44 03.7**	**+2.0**
	12nm,0.2s						
DGS	**Degeres**	**4.13**	**24**	*eP*	**Pg**	**22 43 10.0**	**-1.8**
	7.3nm,0.0s						
DGS				*eS*	**Sg**	**22 44 07.5**	**+2.2**
	16nm,0.3s						
KK31	**Karatay Array**	**4.27**	**329**	⇑Pn	Pn	22 43 02.8	+4.2
	0.9nm,0.3s,baz=130,slow=12,SNR=19						
KK31				⇑Pg	**Pg**	**22 43 12.9**	**-1.4**
	1.4nm,0.3s,baz=144,slow=16,SNR=8.7						
KK31				⇓Sn	**Sb**	**22 43 55.9**	**-4.4**
	3.2nm,0.4s						
KK31				⇑Lg	Lg	22 44 12.9	
	6.4nm,0.5s						
TNSS	**Tian-Shan**	**4.41**	**35**	*eP*	**Pg**	**22 43 15.3**	**-1.7**
	4.3nm,0.1s						
TNSS				*eS*	**Sg**	**22 44 16.6**	**+2.5**
	6.3nm,0.4s						
BRLS	**Borolday**	**4.50**	**323**	*eP*	**Pb**	**22 43 14.7**	**+2.4**
	4.2nm,0.2s						
BRLS				*eS*	**Sg**	**22 44 15.5**	**-1.6**
	14nm,0.1s						
KRBS	**Karabastau**	**4.52**	**20**	*eP*	**Pg**	**22 43 17.1**	**-2.1**
	0.6nm,0.2s						
KRBS				*eS*	**Sg**	**22 44 19.8**	**+2.0**
	6.4nm,0.2s						
KTBS	**Karatobe**	**4.86**	**28**	*eP*	**Pg**	**22 43 23.5**	**-2.1**
	1.8nm,0.1s						
KTBS				*eS*	**Sg**	**22 44 30.3**	**+1.7**
	22nm,0.2s						
KUU	**Kurty**	**4.90**	**25**	*eP*	**Pg**	**22 43 23.9**	**-2.5**
	1.1nm,0.0s						
KUU				*eS*	**Sg**	**22 44 30.9**	**+1.0**
	6.6nm,0.2s						
CHKK	**Chushkaly**	**5.09**	**30**	*eP*	**Pg**	**22 43 26.8**	**-3.3**
	2.7nm,0.2s						
CHKK				*eS*	**Sg**	**22 44 36.2**	**0.0**
	6.3nm,0.2s						
SATY	**Saty**	**5.14**	**44**	*eP*	**Pg**	**22 43 30.5**	**-0.6**
	4.3nm,0.3s						
SATY				*eS*	**Sg**	**22 44 42.5**	**+4.6**
	7.0nm,0.2s						
KURS	**Kuram**	**5.33**	**40**	*eP*	**Pg**	**22 43 33.1**	**-1.5**
	4.5nm,0.3s						
KURS				*eS*	**Sg**	**22 44 46.7**	**+3.1**
	4.9nm,0.3s						
KPKS	**Kokpek**	**5.57**	**43**	*eP*	**Pg**	**22 43 37.5**	**-1.8**
	2.9nm,0.1s						
KPKS				*eS*	**Sg**	**22 44 54.5**	**+3.1**
	9.8nm,0.3s						
BTLS	**Baital**	**5.58**	**4**	*eP*	**Pg**	**22 43 36.8**	**-2.7**
	1.7nm,0.1s						
BTLS				*eS*	**Sg**	**22 44 53.1**	**+1.4**
	4.5nm,0.2s						
ARXS	**Arharly**	**5.73**	**33**	*eP*	**Pg**	**22 43 41.2**	**-1.1**
	5.3nm,0.2s						
ARXS				*eS*	**Sg**	**22 45 01.0**	**+4.4**
	7.5nm,0.2s						
PDGK	**Podgornoye**	**5.92**	**48**	⇓Pn	**Pn**	**22 43 24.6**	**+3.2**
	1.3nm,0.9s						
PDGK				⇑Lg	Lg	22 45 06.0	
	10nm,0.9s						
OTUK	**Ortayu**	**8.81**	**355**	⇑Pn	**Pn**	**22 44 01.4**	**+0.5**
	0.9nm,0.9s						
OTUK				⇑Lg	Lg	22 46 34.8	
	4.8nm,0.8s						

IDC 27 22:43:50.2±0.6, 9°.54N×126°.21E, h0km, mb4.2/21, mbtmp4.1/21, MS3.7/7, Error ellipse: s-maj=26.7km s-min=14.2km az=75.0
MAN 27 22:43:54.2, 9°.73N×126°.76E, h10km, mb5.3, ML4.3, MS4.4
NEIC 27 22:43:57.6±1.7, 9°.69N±0°.07×126°.4E±0°.1, h35km±1km, mb4.7/48, Error ellipse: s-maj=19.1km s-min=11.9km az=84.0
DJA 27 22:44:10.2±0.5, 10°N±3°×12°7E±°, h172km±5km, M4.8/31, mB5.3/6, mb4.5/31, MLv5.1/3, Mw(mB)4.7/6

ISC 27 22:43:57.9±1.0, 9°.72N±0°.04×126°.72E±0°.06, h47km±10km, n142, σ2s97/130, mb4.5/48, MS3.9/6, 12C-5D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLSP	**General Luna,**	**0.59**	**276**	⇑*iP*	**Pn**	**22 44 06.8**	**-3.3**
GLSP				*eS*	**Sn**	**22 44 16.8**	**-2.1**
BUTP	**Butuan**	**1.31**	**236**	⇑*iP*	**Pn**	**22 44 17.8**	**-2.0**
BUTP				*eS*	**Sn**	**22 44 39.3**	**+3.0**
BIPH	**Bislig**	**1.56**	**193**	⇑*eP*	**Pn**	**22 44 19.1**	**-4.2**
BIPH				*eS*	**Sn**	**22 44 36.5**	**-5.9**
MSLP	**Maasin**	**1.88**	**283**	⇓*eP*	**Pn**	**22 44 27.3**	**-0.2**
MSLP				*eS*	Sn	22 45 01.8	+12
LLP	**Lapu-Lapu**	**2.78**	**283**	⇑*eP*	**Pn**	**22 44 40.4**	**+0.5**
LLP				*eS*	**Sn**	**22 45 13.2**	**+1.0**
MATI	**Mati**	**2.79**	**189**	⇑*iP*	**Pn**	**22 44 43.7**	**+3.6**
MATI				*eS*	**Sn**	**22 45 05.8**	**-6.9**
TBP	**Tagbilaran**	**2.82**	**270**	⇑*iP*	**Pn**	**22 44 39.8**	**-0.7**
TBP				*i* S	Sn	22 45 21.2	+8.0
DAV	**Davao City (W)**	**2.86**	**203**	Pn	**Pn**	**22 44 38.1**	**-3.0**
	33nm,0.3s,baz=46,slow=13,SNR=1.3						
DAV				Sn	**Sn**	**22 45 14.5**	**+0.1**
	80nm,0.3s,baz=239,slow=23,SNR=5.7						
DAV	**Davao City (W)**	**2.86**	**203**		**Pn**	**22 44 39.4**	**-1.7**
KCP	**Kidapawan**	**3.14**	**211**	⇑*eP*	**Pn**	**22 44 47.2**	**+2.3**
KCP				*i* S	**Sn**	**22 45 23.8**	**+2.6**
SNPH	**Sibulan**	**3.46**	**264**	⇓*iP*	**Pn**	**22 44 51.4**	**+2.1**
SNPH				*eS*	**Sn**	**22 45 32.6**	**+3.6**
CTBH	**Cotabato--PC H**	**3.48**	**225**	⇑*iP*	**Pn**	**22 44 51.3**	**+1.6**
DCPH	**Dipolog City**	**3.51**	**252**	⇑*eP*	Pn	22 44 55.7	+5.7
GSPH	**General Santos**	**4.01**	**206**	⇑*eP*	Pn	22 45 05.9	+8.9
RCP	**Roxas**	**4.31**	**295**	⇑*eP*	**Pn**	**22 45 01.1**	**0.0**
JAP	**San Jose, Anti**	**4.81**	**283**	⇑*eP*	Pn	22 45 12.6	+4.8
SGSI	**Sangihe**	**6.11**	**191**	P	Pn	22 45 35.4	+10
TNTI	**Ternate**	**8.91**	**176**	Pn	**Pn**	**22 46 04.0**	**-0.1**
MRSI	**Marisa**	**10.34**	**208**	P	Pn	22 46 34.6	+11
	28nm,1.0s						
LUWI	**Luwuk**	**11.39**	**200**	P	Pn	22 46 50.0	+12
	43nm,0.5s						
SWI	**Sorong**	**11.44**	**156**	P	Pn	22 46 46.7	+7.9
	954nm21nm,0.8s						
MPSI	**Mapaga**	**11.53**	**216**	P	Pn	22 46 52.3	+12
	5.0nm,0.5s						
SANI	**Sanana**	**11.71**	**184**	P	Pn	22 46 49.6	+7.1
	25nm,0.9s						
FAKI	**Fak Fak**	**13.71**	**156**	Pn	**Pn**	**22 47 12.3**	**+2.5**
SMKI	**Samarinda**	**13.84**	**224**	P	**P**	**22 47 21.0**	**+2.3**
	53nm,1.1s						
TTSI	**Tana Toraja**	**14.42**	**209**	P	**P**	**22 47 29.0**	**+3.9**
	2μm27nm,0.7s						
BKB	**Balikpapan**	**14.65**	**222**	P	**P**	**22 47 30.0**	**+2.3**
	69nm,1.3s						
TPUB	**Ta-pu**	**14.71**	**337**	Pn	**Pn**	**22 47 23.1**	**0.0**
SRPI	**Serui, Papua**	**14.91**	**140**	P	**P**	**22 47 31.5**	**+0.9**
SPSI	**Sidrap Palu**	**15.26**	**207**	P	**P**	**22 47 36.5**	**+2.1**
	16nm,1.1s						
BNSI	**Bone**	**15.50**	**205**	P	**P**	**22 47 40.3**	**+3.2**
	39nm,1.3s						
BKSI	**Bulukumba**	**16.32**	**204**	P	**P**	**22 47 49.4**	**+3.2**
	17nm,1.3s						
SMPI	**Sarmi**	**16.67**	**134**	P	**P**	**22 47 50.2**	**+0.1**
	4μm11nm,0.9s						
JOW	**Kunigami**	**17.09**	**5**	P	**P**	**22 47 56.4**	**+1.8**
	9.1nm,0.5s,baz=165,slow=16,SNR=2.2						
BBKI	**Banjar Baru**	**17.65**	**223**	P	**P**	**22 48 06.2**	**+5.2**
	24nm,0.8s						
GUMO	**Guam**	**18.19**	**76**	LR	LR	22 54 11.9	
	comp=Z,163nm,20.1s,baz=238,slow=33						
MMRI	**Maumere**	**18.77**	**194**	P	**Pn**	**22 48 15.6**	**+1.5**
	93nm,0.9s						
EDFI	**Ende, Flores**	**19.02**	**195**	P	**Pn**	**22 48 19.7**	**+2.5**
	13nm,0.7s						
BATI	**Baumata**	**20.03**	**189**	P	**P**	**22 48 27.2**	**+0.2**
	1μm123nm,0.7s						
PLAI	**Plampang**	**20.46**	**206**	P	Pn	22 48 34.6	+0.4
	61nm,1.1s						
MTN	**Manton Dam**	**22.84**	**169**	P	**P**	**22 48 58.1**	**+0.9**
MTN				IAmb	IAmb	22 49 18.3	
	comp=Z,51nm,1.4s						
PPBI	**Pangkal Pinang**	**23.66**	**241**	P	**P**	**22 49 07.1**	**+1.9**
WHN	**Wuhan**	**23.71**	**333**	⇓P	**P**	**22 49 06.3**	**+0.7**
WHN				pmax	pmax		
	comp=Z,42nm,1.1s						
KNRA	**Kununurra**	**25.31**	**175**	P	**P**	**22 49 21.4**	**+1.1**
KNRA				IAmb	IAmb	22 49 40.6	
	comp=Z,24nm,0.7s						
IPM	**Ipoh**	**26.01**	**260**	P	**P**	**22 49 23.1**	**-3.6**
IPM				IAmb	IAmb	22 49 28.5	
	comp=Z,52nm,1.5s						
BKNI	**Bangkinang**	**27.20**	**251**	P	**P**	**22 49 35.8**	**-1.7**
KSRS	**Korea Array**	**27.64**	**2**	P	**P**	**22 49 42.0**	**+0.9**
	comp=Z,0.8nm,0.5s,baz=180,slow=10.0,SNR=5.7						
	comp=Z,0.8nm,0.5s						
CMAR	**Chiang Mai Arr**	**28.27**	**291**	P	P	22 49 40.5	-6.6
	comp=Z,0.5nm,0.3s,baz=94,slow=6.7,SNR=1.3						
CMAR				LR	LR	23 01 25.5	
	comp=Z,57nm,18.7s,baz=315,slow=38						
	comp=Z,0.5nm,0.3s						
CMAR	**Chiang Mai Arr**	**28.27**	**291**	P	**P**	**22 49 44.7**	**-2.4**
MNSI	**Mandailing Nat**	**28.41**	**253**	P	**P**	**22 49 50.5**	**+2.2**
	comp=Z,33nm,0.8s						
MJAR	**Matsushiro Arr**	**28.67**	**20**	P	**P**	**22 49 50.0**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=187,slow=8.6,SNR=2.4						
MJAR				LR	LR	23 01 26.1	
	comp=Z,218nm,19.2s,baz=210,slow=36						
	comp=Z,0.8nm,0.5s						
MJB9	**Matsu-Tunnel**	**28.67**	**20**	P	**P**	**22 49 51.9**	**+1.5**
XAN	**Xi'an**	**29.20**	**329**	⇓P	**P**	**22 49 53.8**	**-1.4**
XAN				pP	pP	22 49 58.0	-7.9
XAN				sP	sP	22 50 00.5	-10
XAN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HNS	**HongShan**	**29.62**	**340**	⇓P	**P**	**22 49 59.5**	**+0.8**
HNS				pmax	pmax		
	comp=Z,14nm,1.0s						
GSI	**Gunungsitoli**	**30.16**	**256**	P	**P**	**22 50 01.9**	**-1.9**
GSI				IAmb	IAmb	22 50 06.6	
	comp=Z,16nm,0.8s						
WRA	**Warramunga Arr**	**30.41**	**166**	P	**P**	**22 50 02.4**	**-3.5**
	comp=Z,0.9nm,0.6s,baz=343,slow=9.4,SNR=4.6						
	comp=Z,0.9nm,0.6s						
WB2	**Warramunga Arr**	**30.42**	**166**	P	**P**	**22 50 04.5**	**-1.5**
WR0	**Warramunga Arr**	**30.48**	**165**	P	**P**	**22 50 05.3**	**-1.2**
WR0				IAmb	IAmb	22 50 27.8	
	comp=Z,8.8nm,0.9s						
MBWA	**Marble Bar**	**31.44**	**193**	P	**P**	**22 50 14.2**	**-0.8**
MBWA				IAmb	IAmb	22 50 26.4	
	comp=Z,8.9nm,0.7s						
PSA00	**Pilbara Seismi**	**31.82**	**192**	P	**P**	**22 50 17.1**	**-1.1**
PSA00				IAmb	IAmb	22 50 38.2	
	comp=Z,16nm,0.8s						
LZH	**Lanzhou**	**33.48**	**325**	*eP*	**P**	**22 50 34.5**	**+1.6**
LZH				sP	pwP	22 50 50.8	-0.6
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
ASAR	**Alice Springs**	**33.92**	**168**	P	**P**	**22 50 34.1**	**-2.5**
	comp=Z,0.6nm,0.6s,baz=350,slow=6.7,SNR=8.0						
	comp=Z,0.6nm,0.6s						
ASAR	**Alice Springs**	**33.92**	**168**	P	**P**	**22 50 37.7**	**+1.1**
USRK	**Ussuriysk Ar.**	**34.66**	**7**	P	**P**	**22 50 43.0**	**+0.2**
	comp=Z,0.8nm,0.5s,baz=202,slow=1.6,SNR=2.5						
	comp=Z,0.8nm,0.5s						
USRK	**Ussuriysk Ar.**	**34.66**	**7**	P	**P**	**22 50 42.7**	**-0.1**
SHL	**Shillong**	**36.60**	**300**	P	**P**	**22 50 57.6**	**-2.3**
GTA	**Gaotai**	**38.08**	**325**	*eP*	**P**	**22 51 14.8**	**+2.5**
GTA				pP	pP	22 51 19.5	-3.6
GTA				sP	sP	22 51 22.5	-5.5
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
H11S3	**WAKE ISLAND Hy**	**39.66**	**73**	T	T	23 34 32.4	
	baz=262,slow=74,SNR=15						
H11S1	**WAKE ISLAND Hy**	**39.67**	**73**	T	T	23 34 27.2	
	baz=262,slow=74,SNR=8.0						
H11S2	**WAKE ISLAND Hy**	**39.67**	**73**	T	T	23 34 27.0	
	baz=262,slow=74,SNR=8.4						
MORW	**Morawa**	**39.91**	**195**	P	**P**	**22 51 25.9**	**-1.6**
MORW				IAmb	IAmb	22 51 39.6	
	comp=Z,13nm,0.7s						
H11N1	**WAKE ISLAND Hy**	**40.01**	**71**	T	T	23 34 51.9	
	baz=265,slow=74,SNR=6.6						
H11N2	**WAKE ISLAND Hy**	**40.02**	**71**	T	T	23 34 53.7	
	baz=265,slow=74,SNR=5.3						
H11N3	**WAKE ISLAND Hy**	**40.03**	**71**	T	T	23 34 53.7	
	baz=265,slow=74,SNR=8.5						
FORT	**Forrest**	**40.28**	**178**	P	**P**	**22 51 29.8**	**-0.7**
ULN	**Ulaanbaatar**	**41.49**	**340**	P	**P**	**22 51 40.9**	**+0.4**
ULN				IAmb	IAmb	22 51 44.9	
	comp=Z,8.7nm,0.8s						
SONM	**Songino Array**	**41.69**	**339**	P	**P**	**22 51 41.1**	**-1.0**
	comp=Z,5.0nm,1.0s,baz=162,slow=8.5,SNR=23						
	comp=Z,5.0nm,1.0s						
SONM	**Songino Array**	**41.69**	**339**	P	**P**	**22 51 42.2**	**+0.1**
SONM				IAmb	IAmb	22 51 43.7	
	comp=Z,14nm,1.4s						
EIDS	**Eidsvold**	**42.19**	**146**	P	**P**	**22 51 50.0**	**+3.8**
EIDS				IAmb	IAmb	22 51 57.3	
	comp=Z,15nm,1.1s						
BBOO	**Buckleboo**	**43.22**	**168**	P	**P**	**22 51 54.3**	**-0.2**
BBOO				IAmb	IAmb	22 52 06.3	
	comp=Z,35nm,1.4s						
NWAO	**Narrogin (SRO)**	**43.36**	**192**	P	**P**	**22 51 54.7**	**-0.9**
STKA	**Stephens Creek**	**43.74**	**162**	P	**P**	**22 51 58.0**	**-0.7**
	comp=Z,3.7nm,0.8s,baz=333,slow=8.3,SNR=3.9						
	comp=Z,3.7nm,0.8s						
STKA	**Stephens Creek**	**43.74**	**162**	P	**P**	**22 52 00.2**	**+1.5**
PEA0B	**Petropavlovsk-**	**49.96**	**24**	P	**P**	**22 52 49.4**	**+2.4**
PETK	**Petropavlovsk-**	**49.96**	**24**	P	**P**	**22 52 49.4**	**+2.3**
	comp=Z,2.6nm,0.6s,baz=200,slow=6.8,SNR=8.9						
PETK				LR	LR	23 14 20.9	
	comp=Z,116nm,19.4s,baz=247,slow=36						
	comp=Z,2.6nm,0.6s						
PETK	**Petropavlovsk-**	**49.96**	**24**	P	**P**	**22 52 49.2**	**+2.2**
MK31	**Makanchi Array**	**52.73**	**323**	P	**P**	**22 53 07.3**	**-0.7**
MKAR	**Makanchi Array**	**52.73**	**323**	P	**P**	**22 53 05.5**	**-2.5**
	comp=Z,1.6nm,0.5s,baz=125,slow=8.2,SNR=17						
	comp=Z,1.6nm,0.5s						
MKAR	**Makanchi Array**	**52.73**	**323**	P	**P**	**22 53 06.9**	**-1.1**
MAKZ	**Makanchi**	**52.92**	**323**	P	**P**	**22 53 08.2**	**-1.2**
ZAA0	**Zalesovo Array**	**55.32**	**331**	P	**P**	**22 53 25.2**	**-1.4**
ZALV	**Zalesovo Beam**	**55.32**	**331**	P	**P**	**22 53 25.1**	**-1.5**
	comp=Z,2.8nm,0.8s,baz=115,slow=7.1,SNR=10						
	comp=Z,2.8nm,0.8s						
ZALV	**Zalesovo Beam**	**55.32**	**331**	P	**P**	**22 53 25.7**	**-1.0**
AAK	**Ala-Archa**	**56.03**	**315**	LR	LR	23 21 02.7	
	comp=Z,80nm,18.4s,baz=91,slow=40						
KURK	**Kurchatov**	**56.77**	**326**	P	**P**	**22 53 36.0**	**-1.0**
KURK				IAmb	IAmb	22 53 59.5	
	comp=Z,6.0nm,0.9s						
KBL	**Kabul**	**58.01**	**305**	P	**P**	**22 53 44.8**	**-1.6**
KBL				IAmb	IAmb	22 53 45.7	
	comp=Z,5.4nm,0.6s						
CHGR	**Chuyangaron**	**58.78**	**309**	P	**P**	**22 53 49.1**	**-2.5**
KK31	**Karatay Array**	**58.95**	**315**	P	**P**	**22 53 51.0**	**-1.6**
KKAR	**Karatay Array**	**58.95**	**315**	P	**P**	**22 53 50.8**	**-1.8**
TIXI	**Tiksi**	**61.89**	**1**	P	**P**	**22 54 11.2**	**-0.9**
TIXI				IAmb	IAmb	22 54 21.8	
	comp=Z,5.0nm,1.1s						
THZ	**Tophouse**	**66.46**	**144**	P	**P**	**22 54 44.3**	**+1.7**
LBZ	**Lake Benmore**	**66.67**	**148**	P	**P**	**22 54 45.7**	**+1.9**
GEYT	**Alibeck**	**67.23**	**307**	P	**P**	**22 54 45.2**	**-2.4**
	comp=Z,2.3nm,0.6s,baz=195,slow=4.3,SNR=4.8						
	comp=Z,2.3nm,0.6s						
GEYT	**Alibeck**	**67.23**	**307**	P	**P**	**22 54 46.1**	**-1.5**
GEYT				IAmb	IAmb	22 54 48.2	
	comp=Z,4.6nm,1.1s						
GYA0B	**ALIBECK ARRAY**	**67.23**	**307**	P	**P**	**22 54 46.8**	**-0.9**
GYA0B				IAmb	IAmb	22 54 48.2	
	comp=Z,4.9nm,0.9s						
ABKAR	**Akbulak array**	**67.58**	**319**	P	**P**	**22 54 48.2**	**-1.3**
AKTO	**Aktyubinsk**	**69.03**	**320**	LR	LR	23 27 56.2	
	comp=Z,77nm,18.9s,baz=103,slow=38						
ARU	**Arti**	**69.93**	**327**	P	**P**	**22 55 02.4**	**-1.7**
O18K	**Koktuh Hills**	**75.66**	**31**	P	**P**	**22 55 40.2**	**+2.2**
O18K				IAmb	IAmb	22 55 55.0	
	comp=Z,6.7nm,0.8s						
IMAR	**Indian Mountai**	**76.92**	**24**	P	**P**	**22 55 46.9**	**+1.8**
MLY	**Manley**	**78.10**	**25**	P	**P**	**22 55 52.8**	**+1.1**
RAYN	**Ar Rayn**	**78.19**	**292**	P	**P**	**22 55 51.3**	**-1.7**
RAYN				IAmb	IAmb	22 56 04.6	
	comp=Z,5.3nm,0.8s						
I23K	**Minto, Yukon-K**	**78.69**	**25**	P	**P**	**22 55 57.6**	**+2.8**
TOLK	**Toolik Lake Re**	**78.72**	**22**	P	**P**	**22 55 56.9**	**+1.9**
KBZ	**Khabaz**	**78.91**	**313**	P	**P**	**22 55 52.8**	**-3.6**
	comp=Z,0.8nm,0.5s,baz=113,slow=7.7,SNR=2.6						
	comp=Z,0.8nm,0.5s						
GEVA	**Gevas**	**79.09**	**307**	P	**P**	**22 55 57.9**	**0.0**
H24K	**Noodor Dome**	**79.32**	**25**	P	**P**	**22 56 01.3**	**+2.9**
POKR	**Poker Plat Res**	**79.50**	**25**	P	**P**	**22 56 01.7**	**+2.4**
POKR				IAmb	IAmb	22 56 03.4	
	comp=Z,4.4nm,0.6s						
ILAR	**Eielson Array**	**79.74**	**26**	P	**P**	**22 56 00.8**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=240,slow=5.8,SNR=6.9						
	comp=Z,0.5nm,0.7s						
ILAR	**Eielson Array**	**79.74**	**26**	P	**P**	**22 56 01.9**	**+1.3**
KLMR	**Klimovskoe**	**80.22**	**330**	*e*	**P**	**22 56 01.7**	**-1.6**
KLMR				AMP		22 56 03.9	
	comp=Z,10.0nm,1.1s						
BMAR	**Burnt Mountain**	**80.60**	**23**	P	**P**	**22 56 07.1**	**+1.8**
K27K	**Chicken**	**81.87**	**26**	P	**P**	**22 56 14.8**	**+2.8**
K27K				IAmb	IAmb	22 56 31.8	
	comp=Z,6.4nm,1.1s						
HYT	**Haines Junctio**	**84.40**	**29**	P	**P**	**22 56 27.4**	**+2.1**
HYT				IAmb	IAmb	22 56 44.8	
	comp=Z,5.9nm,1.1s						
SPB2	**Spitsbergen Ar**	**84.64**	**349**	P	**P**	**22 56 26.5**	**+0.5**
ARCES	**ARCESS Array B**	**84.86**	**340**	P	**P**	**22 56 26.6**	**-0.7**
	comp=Z,5.6nm,0.8s,baz=84,slow=7.4,SNR=19						
	comp=Z,5.6nm,0.8s						
ARCES	**ARCESS Array B**	**84.86**	**340**	P	**P**	**22 56 27.1**	**-0.2**

ARMA	**Armidale**	**21.58**	**220**	P	**P**	**22 59 37.5**	**-0.3**
ARMA				IAmb	IAmb	22 59 52.3	
	comp=Z,30nm,1.2s						
LTZ	**Lake Taylor**	**28.54**	**173**	P	**P**	**23 00 41.0**	**-0.1**
STKA	**Stephens Creek**	**29.33**	**229**	P	**P**	**23 00 48.6**	**+0.4**
	comp=Z,5.0nm,0.4s,baz=48,slow=8.8,SNR=16						
STKA				PcP	**PcP**	**23 03 50.1**	**-0.3**
	comp=Z,2.8nm,0.7s,baz=321,slow=9.7,SNR=4.6						
	comp=Z,5.0nm,0.4s						
STKA	**Stephens Creek**	**29.33**	**229**	P	**P**	**23 00 48.8**	**+0.6**
DCZ	**Deep Cove**	**30.92**	**180**	P	**P**	**23 01 02.5**	**+0.5**
WB0	**Warramunga Arr**	**32.03**	**256**	P	**P**	**23 01 10.7**	**-1.4**
WB0				IAmb	IAmb	23 01 14.5	
	comp=Z,7.4nm,1.1s						
WB2	**Warramunga Arr**	**32.08**	**255**	P	**P**	**23 01 10.5**	**-2.1**
WB2				IAmb	IAmb	23 01 26.9	
	comp=Z,14nm,1.4s						
WRA	**Warramunga Arr**	**32.09**	**255**	P	**P**	**23 01 10.9**	**-1.7**
	comp=Z,0.7nm,0.4s,baz=82,slow=6.4,SNR=12						
WRA				PcP	**PcP**	**23 03 57.9**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=222,slow=34,SNR=1.1						
	comp=Z,0.7nm,0.4s						
AS31	**Alice Springs**	**32.96**	**249**	P	**P**	**23 01 19.1**	**-1.2**
ASAR	**Alice Springs**	**32.96**	**249**	P	**P**	**23 01 18.9**	**-1.3**
	comp=Z,1.7nm,0.4s,baz=68,slow=9.7,SNR=19						
ASAR				PcP	**PcP**	**23 03 59.8**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=60,slow=2.2,SNR=2.5						
	comp=Z,1.7nm,0.4s						
ASAR	**Alice Springs**	**32.96**	**249**	P	**P**	**23 01 18.5**	**-1.7**
BBOO	**Buckleboo**	**33.91**	**232**	P	**P**	**23 01 28.4**	**+0.2**
KNRA	**Kununurra**	**37.37**	**263**	P	**P**	**23 01 58.0**	**0.0**
KNRA				IAmb	IAmb	23 01 58.4	
	comp=Z,19nm,0.9s						
FORT	**Forrest**	**39.62**	**239**	P	**P**	**23 02 15.4**	**-1.1**
MORW	**Morawa**	**49.57**	**244**	P	**P**	**23 03 34.4**	**-1.0**
RSD	**Rainshed**	**49.79**	**48**	P	**P**	**23 03 36.9**	**-0.3**
MJAR	**Matsushiro Arr**	**57.75**	**332**	P	**P**	**23 04 33.2**	**-1.4**
	comp=Z,0.6nm,0.4s,baz=178,slow=8.3,SNR=2.1						
	comp=Z,0.6nm,0.4s						
MAJO	**Matsushiro**	**57.75**	**332**	P	**P**	**23 04 34.4**	**-0.2**
MAJO				IAmb	IAmb	23 04 38.4	
	comp=Z,14nm,1.3s						
MJB9	**Matsu-Tunnel**	**57.75**	**332**	P	**P**	**23 04 34.6**	**0.0**
MJB9				IAmb	IAmb	23 04 38.3	
	comp=Z,14nm,1.3s						
VNDA	**Vanda**	**63.15**	**181**	P	**P**	**23 05 10.2**	**-0.4**
	comp=Z,1.5nm,0.8s,baz=9.6,slow=5.1,SNR=6.9						
	comp=Z,1.5nm,0.8s						
VNDA	**Vanda**	**63.15**	**181**	P	**P**	**23 05 09.8**	**-0.7**
VNDA				IAmb	IAmb	23 05 12.5	
	comp=Z,3.7nm,1.1s						
SBA	**Scott Base**	**63.42**	**180**	P	**P**	**23 05 12.2**	**-0.2**
SBA				IAmb	IAmb	23 05 14.4	
	comp=Z,8.9nm,1.0s						
CASY	**Casey**	**63.87**	**202**	P	**P**	**23 05 15.6**	**+0.1**
CASY				IAmb	IAmb	23 05 15.7	
	comp=Z,3.6nm,0.7s						
USRK	**Ussuriysk Ar.**	**66.72**	**333**	P	**P**	**23 05 34.6**	**+0.5**
	comp=Z,2.1nm,0.7s,baz=209,slow=11,SNR=4.7						
	comp=Z,2.1nm,0.7s						
PETK	**Petropavlovsk-**	**67.80**	**354**	P	**P**	**23 05 41.6**	**+0.9**
	comp=Z,2.4nm,0.7s,baz=171,slow=10,SNR=3.7						
	comp=Z,2.4nm,0.7s						
CMAR	**Chiang Mai Arr**	**75.02**	**294**	P	**P**	**23 06 25.4**	**+0.7**
	comp=Z,0.9nm,0.3s,baz=102,slow=2.1,SNR=8.6						
	comp=Z,0.9nm,0.3s						
CMAR	**Chiang Mai Arr**	**75.02**	**294**	P	**P**	**23 06 24.3**	**-0.4**
QSPA	**South Pole Qui**	**75.58**	**180**	P	**P**	**23 06 26.8**	**-0.4**
	comp=Z,4.6nm,1.0s,baz=290,slow=0.3,SNR=9.3						
	comp=Z,4.6nm,1.0s						
QSPA	**South Pole Qui**	**75.58**	**180**	P	**P**	**23 06 26.4**	**-0.8**
QSPA				IAmb	IAmb	23 06 29.1	
	comp=Z,4.4nm,0.9s						
L19K	**White Mountain**	**81.90**	**17**	P	**P**	**23 07 01.9**	**+0.5**
MAW	**Mawson**	**82.22**	**202**	P	**P**	**23 07 03.4**	**+0.3**
	comp=Z,5.2nm,0.9s,baz=109,slow=5.0,SNR=7.5						
	comp=Z,5.2nm,0.9s						
MAW	**Mawson**	**82.22**	**202**	P	**P**	**23 07 03.4**	**+0.3**
SONM	**Songino Array**	**82.39**	**323**	P	**P**	**23 07 04.8**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=148,slow=4.6,SNR=8.3						
	comp=Z,1.1nm,0.6s						
SONM	**Songino Array**	**82.39**	**323**	P	**P**	**23 07 06.4**	**+1.9**
ILAR	**Eielson Array**	**86.19**	**18**	P	**P**	**23 07 22.6**	**-0.4**
	comp=Z,1.7nm,0.7s,baz=236,slow=5.7,SNR=20						
	comp=Z,1.7nm,0.7s						
NVAR	**Mina Array Bea**	**86.93**	**49**	P	**P**	**23 07 29.2**	**+1.6**
	comp=Z,0.5nm,0.7s,baz=240,slow=8.0,SNR=4.3						
	comp=Z,0.5nm,0.7s						
TROLL	**Troll, Antarti**	**93.16**	**185**	P	**P**	**23 07 55.3**	**-0.7**
SNAA	**Sanae**	**93.84**	**183**	P	**P**	**23 07 57.7**	**-1.3**
VNA3	**Neumayer Olymp**	**94.50**	**181**	P	**P**	**23 08 00.5**	**-1.5**
VNA2	**Neumayer--Watz**	**94.77**	**182**	P	**P**	**23 08 02.4**	**-0.8**
	baz=192,slow=4.0						
VNA1	**Neumayer--Stat**	**95.07**	**181**	P	**P**	**23 08 00.5**	**-4.0**
MKAR	**Makanchi Array**	**97.14**	**316**	P	Pdif	23 08 15.0	+0.6
	comp=Z,1.6nm,0.7s,baz=93,slow=7.2,SNR=16						
	comp=Z,1.6nm,0.7s						
MKAR	**Makanchi Array**	**97.14**	**316**	P	**P**	**23 08 14.2**	**-0.2**
ZALV	**Zalesovo Beam**	**97.28**	**324**	P	**P**	**23 08 14.4**	**-0.4**
	comp=Z,0.9nm,0.5s,baz=120,slow=5.3,SNR=5.2						
	comp=Z,0.9nm,0.5s						
ARCES	**ARCESS Array B**	**120.03**	**346**	PKP	**PKPdf**	**23 13 31.0**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=56,slow=1.7,SNR=24						
ARCES	**ARCESS Array B**	**120.03**	**346**		**PKPdf**	**23 13 31.1**	**-0.1**
FINES	**FINESS Array B**	**125.53**	**338**	PKP	**PKPdf**	**23 13 41.9**	**0.0**
	comp=Z,1.0nm,0.8s,baz=99,slow=4.0,SNR=6.8						
FINES	**FINESS Array B**	**125.53**	**338**	PKPdf	**PKiKP**	**23 13 42.3**	**0.0**
NOA	**NORSAR Array B**	**130.40**	**345**	PKP	**PKPdf**	**23 13 51.6**	**+0.3**
	comp=Z,0.5nm,0.9s,baz=228,slow=9.5,SNR=3.0						
AKASG	**Malin Array Be**	**130.61**	**326**	PKP	**PKPdf**	**23 13 52.1**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=64,slow=2.2,SNR=4.5						
CLL	**Collm**	**137.88**	**336**	*i* PKPdf	**PKiKP**	**23 14 07.7**	**+0.2**
GERES	**GERESS Array B**	**139.48**	**333**	PKP	**PKiKP**	**23 14 10.0**	**-1.0**
	comp=Z,1.0nm,0.9s,baz=149,slow=2.8,SNR=7.0						
KEST	**Kesra**	**151.12**	**321**	PKPbc	**PKiKP**	**23 14 35.7**	**+0.3**
	comp=Z,12nm,0.9s,baz=230,slow=3.4,SNR=9.3						
KEST	**Kesra**	**151.12**	**321**		**PKiKP**	**23 14 35.3**	**0.0**
ESDC	**Sonseca Array**	**153.76**	**345**	PKPbc	**PKPbc**	**23 14 40.2**	**-0.4**
	comp=Z,0.9nm,0.8s,baz=15,slow=2.3,SNR=5.4						
ESDC				PKPab	**PKPab**	**23 14 54.6**	**+0.6**
	comp=Z,0.6nm,0.9s,baz=0.0,slow=5.4,SNR=5.3						
TORD	**Torodi Ar. Bea**	**166.13**	**266**	PKPab	**PKPab**	**23 15 48.1**	**-0.6**
	comp=Z,1.3nm,0.8s,baz=92,slow=4.2,SNR=8.0						

IDC 27 22:58:02.9±25.0, 22.67S×179.00E, h297km±179km, mb2.9/2, mbtmp3.6/3, Error ellipse: s-maj=415.3km s-min=47.6km az=147.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.99**	**349**	P	Pn	22 59 20.3	-0.1
	2.7nm,0.4s,baz=244,slow=23,SNR=4.8						
ASAR	**Alice Springs**	**41.34**	**259**	P	P	23 05 19.4	-1.3
	0.7nm,0.6s,baz=99,slow=7.7,SNR=2.7						
	0.7nm,0.6s						
WRA	**Warramunga Arr**	**41.59**	**265**	P	P	23 05 23.7	+1.0
	0.7nm,0.8s,baz=97,slow=7.4,SNR=2.2						
	0.7nm,0.8s						
AKASG	**Malin Array Be**	**143.44**	**327**	PKP	PKPdf	23 17 01.4	-0.6
	1.0nm,0.7s,baz=46,slow=3.1,SNR=7.2						

*KRNET **27** 23:05:16.1±0.1, 39.45N×73.84E, mb3.7*
*SOME **27** 23:05:19.2, 39.55N×73.65E, h5km*
ISC 27 23:05:17.3±1.2, 39.46N±0.06×73.79E±0.03, h10km, n34, σ1§96/61, 20C-2D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.32**	**324**	⇑*i*P	**Pn**	**23 05 41.4**	**-0.5**
	baz=23						
OHH				⇑*i*S	**Sg**	**23 06 00.2**	**+0.5**
	baz=23						
DRK	**Karamyk**	**1.54**	**272**	⇑*i*P	**Pb**	**23 05 45.7**	**-0.4**
	baz=72						
DRK				⇑*i*S	**Sg**	**23 06 07.5**	**+0.6**
	baz=72						
BTK	**Batken**	**2.37**	**286**	⇑*i*P	**Pb**	**23 05 58.6**	**-1.5**
	baz=86						
BTK				⇑*i*S	**Sb**	**23 06 30.0**	**+0.6**
	baz=86						
ARLS	**Aral**	**2.44**	**9**	⇑*i*P	**Pb**	**23 05 59.1**	**-2.2**
	baz=9.0						
ARLS				⇑*i*S	**Sb**	**23 06 30.7**	**-0.8**
	baz=9.0						
GAR	**Garm**	**2.74**	**262**	⇓*e*P	**Pb**	**23 06 04.0**	**-2.4**
	baz=62						
GAR				⇓*i*S	**Sb**	**23 06 38.9**	**-1.1**
	baz=62						
UCH	**Uchtor**	**2.82**	**11**	P	**Pg**	**23 06 11.0**	**-0.5**
	SNR=70						
UCH	**Uchtor**	**2.82**	**11**	⇑*e*P	**Pn**	**23 06 04.9**	**+2.0**
	baz=10.0						
UCH				⇑*i*S	**Sb**	**23 06 40.2**	**-2.7**
	baz=10.0						
TRKS	**Terek-Say**	**2.89**	**317**	⇑*e*P	**Pn**	**23 06 05.1**	**+1.5**
	baz=16						
TRKS				⇑*e*S	**Sb**	**23 06 41.1**	**-3.5**
	baz=16						
EKS2	**Erkin-Say**	**3.20**	**360**	P	**Pb**	**23 06 15.3**	**+1.0**
	SNR=5.8						
AAK	**Ala-Archa**	**3.22**	**9**	P	**Pg**	**23 06 16.9**	**-2.1**
	SNR=12						
KBK	**Karagaybulak**	**3.31**	**15**	P	**Pg**	**23 06 20.6**	**-0.2**
	SNR=7.7						
KBK	**Karagaybulak**	**3.31**	**15**	⇑*i*P	**Pn**	**23 06 11.4**	**+2.0**
	baz=14						
KBK				⇑*i*S	**Sn**	**23 06 51.6**	**+2.6**
	baz=14						
ULHL	**Ulahol**	**3.35**	**33**	P	**Pg**	**23 06 21.2**	**-0.3**
	SNR=10						
BOOM	**Boomskoye usch**	**3.44**	**28**	⇑*i*P	**Pn**	**23 06 13.1**	**+2.0**
	baz=27						
BOOM				⇑*i*S	**Sn**	**23 06 54.4**	**+2.4**
	baz=27						
CHMS	**Chumysh**	**3.61**	**11**	P	**Pb**	**23 06 19.7**	**-1.6**
	SNR=6.1						
KDJ	**Kajisay**	**3.71**	**43**	⇑*i*P	**Pn**	**23 06 17.0**	**+2.2**
	baz=43						
KDJ				⇑*i*S	**Sn**	**23 07 00.9**	**+2.2**
	baz=43						
USP	**Ospenovka**	**3.84**	**8**	P	**Pg**	**23 06 29.1**	**-1.9**
	SNR=6.8						
TAS	**Tashkent**	**3.91**	**300**	⇑*i*P	**Pn**	**23 06 19.9**	**+2.5**
	baz=0.0						
TAS				⇑*i*S	**Sn**	**23 07 06.6**	**+3.3**
	baz=0.0						
IUG	**Iuzhnay**	**3.92**	**315**	*e*P	**Pb**	**23 06 28.6**	**+2.0**
	252nm,0.2s						
IUG				*e*S	**Sg**	**23 07 18.6**	**-4.6**
	28nm,0.1s						
KST	**Kastek**	**3.94**	**24**	*e*P	**Pg**	**23 06 31.4**	**-1.4**
	8.2nm,0.2s						
KST				*e*S	**Sg**	**23 07 23.5**	**-0.3**
	26nm,0.6s						
DGS	**Degeres**	**4.07**	**21**	*e*P	**Pg**	**23 06 33.2**	**-2.0**
	14nm,0.2s						
DGS				*e*S	**Sg**	**23 07 27.2**	**-0.7**
	17nm,0.3s						
MTBS	**Maitube**	**4.17**	**28**	*e*P	**Pg**	**23 06 36.5**	**-0.8**
	5.7nm,0.2s						
MTBS				*e*S	**Sg**	**23 07 32.4**	**+1.0**
	12nm,0.2s						
TNSS	**Tian-Shan**	**4.30**	**33**	*e*P	**Pg**	**23 06 38.3**	**-1.3**
	11nm,0.1s						
TNSS				*e*S	**Sg**	**23 07 34.7**	**-0.6**
	9.9nm,0.1s						
KRBS	**Karabastau**	**4.47**	**18**	*e*P	**Pg**	**23 06 41.1**	**-1.7**
	6.2nm,0.6s						
KRBS				*e*S	**Sg**	**23 07 40.0**	**-0.7**
	20nm,0.3s						
BRLS	**Borolday**	**4.65**	**321**	*e*P	**Pb**	**23 06 40.6**	**+1.6**
	2.1nm,0.2s						
BRLS				*e*S	**Sb**	**23 07 39.4**	**+4.3**
	12nm,0.1s						
KTBS	**Karatobe**	**4.77**	**26**	*e*P	**Pg**	**23 06 46.6**	**-2.1**
	3.4nm,0.1s						
KTBS				*e*S	**Sg**	**23 07 49.5**	**-1.0**
	36nm,0.1s						
KUU	**Kurty**	**4.83**	**22**	*e*P	**Pg**	**23 06 47.4**	**-2.3**
	6.9nm,0.2s						
KUU				*e*S	**Sg**	**23 07 50.9**	**-1.4**
	17nm,0.3s						
CHKK	**Chushkaly**	**5.00**	**28**	*e*P	**Pg**	**23 06 51.0**	**-2.2**
	2.5nm,0.1s						
CHKK				*e*S	**Sg**	**23 07 57.2**	**-0.8**
	13nm,0.2s						
SATY	**Saty**	**5.01**	**43**	*e*P	**Pg**	**23 06 52.2**	**-0.9**
	5.1nm,0.2s						
SATY				*e*S	**Sg**	**23 07 59.4**	**+1.4**
	14nm,0.1s						
KPKS	**Kokpek**	**5.44**	**41**	*e*P	**Pg**	**23 06 59.3**	**-2.1**
	2.6nm,0.1s						
KPKS				*e*S	**Sg**	**23 08 11.1**	**-0.7**
	12nm,0.2s						
BTLS	**Baital**	**5.58**	**2**	*e*P	**Pg**	**23 07 01.5**	**-2.8**
	2.6nm,0.2s						
BTLS				*e*S	**Sg**	**23 08 14.8**	**-1.7**
	4.5nm,0.3s						
ARXS	**Arharly**	**5.63**	**31**	*e*P	**Pg**	**23 07 02.3**	**-2.7**
	8.9nm,0.2s						
ARXS				*e*S	**Sg**	**23 08 16.7**	**-1.3**
	16nm,0.2s						
BLB	**Baldybastay**	**5.81**	**36**	*e*P	**Pg**	**23 07 05.6**	**-3.0**
	8.4nm,0.2s						
BLB				*e*S	**Sg**	**23 08 22.3**	**-1.5**
	6.9nm,0.3s						
DJR	**Jarkent**	**6.62**	**41**	*e*P	**Pg**	**23 07 21.4**	**-2.5**
	1.5nm,0.0s						
DJR				*e*S	**Sg**	**23 08 49.6**	**0.0**
	2.3nm,0.1s						

*NOU **27** 23:36:26.9, 32.37S×122.43E, h0km, mb4.2/12, Western Australia*
*AUST **27** 23:36:27.3±1.6, 32.33S×122.29E, h0km, Error ellipse: s-maj=28.3km s-min=12.2km az=173.0*
ISC 27 23:36:28.7±1.1, 32.4S±0.1×122.38E±0.07, h19km, n24, σ1§15/27, Western Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLBR	**Kellerberrin**	**4.02**	**281**	P	**Pn**	**23 37 30.1**	**+0.8**
	baz=3.9,SNR=18						
KLBR				S	**Sn**	**23 38 14.9**	**-1.0**
	baz=3.9,SNR=4.6						
KLBR	**Kellerberrin**	**4.02**	**281**	P	**Pn**	**23 37 30.0**	**+0.7**
NWAO	**Narrogin (SRO)**	**4.37**	**262**	P	**Pn**	**23 37 35.7**	**+1.6**
RKGY	**Rocky Gully**	**5.00**	**243**	P	**Pn**	**23 37 44.1**	**+1.3**
	baz=5.0,SNR=11						
RKGY				S	**Sn**	**23 38 39.3**	**-0.9**
	baz=5.0,SNR=4.3						
RKGY	**Rocky Gully**	**5.00**	**243**	P	**Pn**	**23 37 44.1**	**+1.3**
FORT	**Forrest**	**5.12**	**73**	P	**Pn**	**23 37 46.2**	**+1.8**
	baz=5.2,SNR=10						
BLDU	**Ballidu**	**5.18**	**289**	P	**Pn**	**23 37 44.6**	**-0.6**
	baz=5.1						
BLDU	**Ballidu**	**5.18**	**289**	P	**Pn**	**23 37 45.2**	**0.0**
MUN	**Mundaring**	**5.25**	**273**	P	**Pn**	**23 37 46.0**	**-0.3**
	baz=5.2						
MUN				S	**Sn**	**23 38 45.8**	**-0.5**
	baz=5.2						
MUN	**Mundaring**	**5.25**	**273**	P	**Pn**	**23 37 46.3**	**0.0**
MORW	**Morawa**	**6.41**	**300**	P	**Pn**	**23 38 03.0**	**+0.8**
	baz=6.3,SNR=9.7						
MORW	**Morawa**	**6.41**	**300**	P	**Pn**	**23 38 03.1**	**+0.9**
WRKA	**Warakurna**	**9.02**	**37**	P	**Pn**	**23 38 40.9**	**+2.8**
	baz=9.0						
MULG	**Mulgathing**	**10.21**	**81**	P	**Pn**	**23 38 54.1**	**-0.2**
	baz=10,SNR=14						
MULG	**Mulgathing**	**10.21**	**81**	P	**Pn**	**23 38 54.4**	**+0.1**
PSA00	**Pilbara Seismi**	**11.06**	**348**	P	**Pn**	**23 39 05.5**	**-0.5**
MBWA	**Marble Bar**	**11.48**	**347**	P	**Pn**	**23 39 11.2**	**-0.6**
BBOO	**Buckleboo**	**11.54**	**95**	P	**Pn**	**23 39 11.5**	**-1.0**
	baz=12						
BBOO	**Buckleboo**	**11.54**	**95**	P	**Pn**	**23 39 11.7**	**-0.8**
GIRL	**Giralia**	**12.14**	**321**	P	**Pn**	**23 39 21.6**	**+0.9**
	baz=12						
OOD	**Oodnadatta**	**12.41**	**72**	P	**Pn**	**23 39 23.0**	**-1.4**
	baz=12,SNR=5.0						
OOD	**Oodnadatta**	**12.41**	**72**	P	**Pn**	**23 39 23.1**	**-1.4**
LCRK	**Leigh Creek**	**13.66**	**86**	P	**Pn**	**23 39 39.8**	**-1.7**
	baz=14						
LCRK	**Leigh Creek**	**13.66**	**86**	P	**Pn**	**23 39 41.9**	**+0.4**

*IDC **27** 23:36:47.7±4.3, 38.53N×27.42E, h0km, mb3.5/2, mbtmp3.3/4, ML3.4/2, Error ellipse: s-maj=90.0km s-min=23.4km az=10.0*
*DDA **27** 23:36:52.9±0.0, 38.76N×27.82E, h3km±2km, ML2.9*
*ISK **27** 23:36:52.9, 38.77N×27.81E, h6km, ML3.4/45*
*THE **27** 23:36:54.1, 38.78N×27.87E, h9km±3km, ML2.9/7, Error ellipse: s-maj=4.3km s-min=1.0km az=73.0*
ISC 27 23:36:53.0±0.8, 38.77N±0.02×27.81E±0.02, h10km±5km, n84, σ1§01/121, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOMA	**Golmarmara-Man**	**0.10**	**125**	PG	**Pg**	**23 36 55.7**	**+0.2**
GOMA				SG	**Sg**	**23 36 57.7**	**+0.3**
AKS	**Akhisar**	**0.11**	**1**	PG	**Pg**	**23 36 55.6**	**-0.2**
AKS				SG	**Sg**	**23 36 58.1**	**+0.4**
ZEDA	**zmir-Bergama**	**0.61**	**290**	P	**Pb**	**23 37 05.5**	**-0.2**
ZEDA				S	**Sb**	**23 37 14.7**	**+0.4**
ZEDA				*i* AML	AML	23 37 15.0	
	comp=N,682nm,0.2s						
ZEDA				*i* AML	AML	23 37 16.0	
	comp=E,410nm,0.3s						
STEP	**BALIKESIR_Sava**	**0.61**	**353**	P	**Pg**	**23 37 05.1**	**+0.2**
STEP				S	**Sb**	**23 37 14.5**	**-0.1**
STEP				*i* AML	AML	23 37 16.0	
	comp=N,1μm,0.6s						
STEP				*i* AML	AML	23 37 17.0	
	comp=E,1μm,0.3s						
KULA	**Kula-Manisa**	**0.71**	**110**	P	**Pg**	**23 37 07.0**	**+0.3**
KULA	**Kula-Manisa**	**0.71**	**110**	PG	**Pg**	**23 37 06.7**	**0.0**
DKL	**Dikili**	**0.77**	**294**	PG	**Pb**	**23 37 08.3**	**-0.1**
DKL				SG	**Sb**	**23 37 19.4**	**+0.5**
AYDB	**Zeytinkoy-Aydi**	**0.82**	**176**	PG	**Pg**	**23 37 08.7**	**-0.1**
AYDB				SG	**Sb**	**23 37 20.9**	**+0.3**
FOCM	**Foa**	**0.84**	**267**	PG	**Pb**	**23 37 09.7**	**0.0**
FOCM				SG	**Sb**	**23 37 21.9**	**+0.8**
BUHA	**Balikesir, Bur**	**0.93**	**322**	P	**Pb**	**23 37 11.4**	**+0.2**
BUHA				*i* AML	AML	23 37 27.0	
	comp=E,586nm,0.6s						
BUHA				*i* AML	AML	23 37 32.0	
	comp=N,492nm,0.9s						
USAK	**Uak-Merkez**	**0.95**	**93**	P	**Pg**	**23 37 10.8**	**-0.4**
USAK				S	**Sg**	**23 37 22.7**	**-0.8**
USAK				*i* AML	AML	23 37 27.0	
	comp=N,419nm,0.5s						
USAK				*i* AML	AML	23 37 27.0	
	comp=E,248nm,0.4s						
SIMA	**Simav-Kutahya**	**0.97**	**71**	PG	**Pb**	**23 37 11.7**	**-0.2**
SIMA				SG	**Sb**	**23 37 25.8**	**+1.0**
SMAA	**Simav-Kutahya**	**0.97**	**70**	PG	**Pb**	**23 37 11.8**	**-0.2**
SMAA				SG	**Sn**	**23 37 26.2**	**-0.5**
DGB	**zmir**	**1.02**	**226**	P	**Pg**	**23 37 12.5**	**0.0**
DGB				S	**Sb**	**23 37 27.3**	**+1.2**
DGB				*i* AML	AML	23 37 30.0	
	comp=N,349nm,0.6s						
DGB				*i* AML	AML	23 37 30.0	
	comp=E,250nm,0.3s						
URLA	**Izmir**	**1.03**	**247**	PG	**Pb**	**23 37 13.1**	**+0.1**
URLA				SG	**Sn**	**23 37 28.2**	**0.0**
DST	**Dursunbey**	**1.05**	**37**	PG	**Pb**	**23 37 13.4**	**+0.2**
DST				SG	**Sn**	**23 37 28.5**	**0.0**
ZEYE	**Izmir, Urla-Ze**	**1.15**	**243**	P	**Pg**	**23 37 14.9**	**-0.1**
ZEYE				S	**Sn**	**23 37 32.1**	**+1.2**
ZEYE				*i* AML	AML	23 37 33.0	
	comp=N,931nm,0.4s						
ZEYE				*i* AML	AML	23 37 35.0	
	comp=E,418nm,0.4s						
GEDZ	**Gediz**	**1.28**	**77**	PN	**Pg**	**23 37 17.8**	**+0.3**
GEDZ				SN	**Sn**	**23 37 35.9**	**+1.6**
GONE	**Gonen-Balikesi**	**1.28**	**356**	PN	**Pg**	**23 37 17.7**	**+0.1**
PRK	**Paraskevi**	**1.29**	**292**	P	**Pg**	**23 37 18.6**	**+0.9**
PRK				S	**Sg**	**23 37 34.8**	**+0.3**
	780nm,0.6s						
SMG	**Samos**	**1.30**	**216**	P	**Pn**	**23 37 16.6**	**-0.7**
SMG				S	**Sn**	**23 37 36.1**	**+1.3**
	2μm,0.5s						
GDZ	**Gediz**	**1.34**	**76**	P	**Pn**	**23 37 18.2**	**+0.2**
GDZ				S	**Sn**	**23 37 36.8**	**+0.8**
GDZ				*i* AML	AML	23 37 40.0	
	comp=N,249nm,0.6s						
GDZ				*i* AML	AML	23 37 44.0	
	comp=E,160nm,0.5s						
BAYC	**CANAKKALE_Bayr**	**1.38**	**315**	P	**Pn**	**23 37 19.0**	**+0.6**
BAYC				S	**Sn**	**23 37 37.4**	**+0.7**
BAYC				*i* AML	AML	23 37 39.0	
	comp=E,122nm,0.3s						
BAYC				*i* AML	AML	23 37 43.0	
	comp=N,115nm,0.3s						
CHOS	**Chios island**	**1.43**	**255**	P	**Pn**	**23 37 19.2**	**+0.2**
CHOS				S	**Sg**	**23 37 40.1**	**+1.2**
	362nm,0.5s						
TVSB	**Tavsanli**	**1.46**	**62**	PN	**Pn**	**23 37 19.7**	**+0.2**
TVSB				SN	**Sg**	**23 37 40.2**	**+0.4**
KOCA	**Canakkale, Ayv**	**1.49**	**300**	P	**Pn**	**23 37 20.5**	**+0.7**
KOCA				S	**Sn**	**23 37 39.9**	**+0.5**
KOCA				*i* AML	AML	23 37 43.0	
	comp=E,190nm,0.7s						
KOCA				*i* AML	AML	23 37 49.0	
	comp=N,130nm,0.6s						
ORLT	**Orhaneli**	**1.53**	**33**	PN	**Pb**	**23 37 21.6**	**+0.1**
MULA	**Mugla, Merkez-**	**1.56**	**165**	P	**Pn**	**23 37 20.8**	**-0.1**
MULA				S	**Sn**	**23 37 41.7**	**+0.5**
MULA				*i* AML	AML	23 37 45.0	
	comp=E,270nm,1.2s						
MULA				*i* AML	AML	23 37 46.0	
	comp=N,151nm,0.6s						
TAVA	**DENIZLI_Tavas**	**1.56**	**146**	P	**Pn**	**23 37 21.0**	**+0.1**
TAVA				S	**Sg**	**23 37 44.6**

TRML	**Termal-Yalova**	**2.12**	**29**	PN	**Pb**	**23 37 30.7**	**-0.8**
ERIK	**Erikli-Kesan**	**2.15**	**333**	PN	**Pn**	**23 37 30.7**	**+1.8**
SHUT	**Suhut-Afyon**	**2.16**	**95**	PN	**Pb**	**23 37 31.3**	**-0.9**
YLV	**Yalova**	**2.17**	**33**	PN	**Pn**	**23 37 30.6**	**+1.4**
CAME	**Cameli-Denizli**	**2.17**	**147**	PN	**Pn**	**23 37 30.2**	**+0.9**
NIS1	**Nisyros Isl.**	**2.22**	**193**	PN	**Pn**	**23 37 31.2**	**+1.4**
ADVT	**Abdulvahap**	**2.23**	**41**	PN	**Pn**	**23 37 31.6**	**+1.5**
LIA	**Limnos Island**	**2.33**	**300**	P	**Pn**	**23 37 32.1**	**+0.8**
LIA				S	**Sn**	**23 38 02.2**	**+2.2**
	68nm,0.7s						
BORA	**Eskisehir**	**2.33**	**61**	PN	**Pn**	**23 37 32.9**	**+1.4**
ENEZ	**Enez**	**2.35**	**328**	PN	**Pn**	**23 37 32.9**	**+1.3**
FETY	**Fethiye**	**2.35**	**154**	PN	**Pn**	**23 37 33.1**	**+1.4**
SMTH	**Samothraki Isl**	**2.45**	**315**	P	**Pn**	**23 37 33.4**	**+0.4**
SMTH				S	**Sn**	**23 38 03.6**	**+0.6**
APE	**Apeiranthos**	**2.47**	**227**	PN	**Pn**	**23 37 34.8**	**+1.4**
KAVV	**Kandilli-Istan**	**2.49**	**22**	PN	**Pn**	**23 37 35.0**	**+1.5**
ISK	**Istanbul-Kandi**	**2.49**	**22**	PN	**Pn**	**23 37 35.0**	**+1.4**
ALN	**Alexandroupoli**	**2.52**	**328**	P	**Pn**	**23 37 34.5**	**+0.5**
ALN				S	**Sn**	**23 38 06.1**	**+1.2**
	80nm,0.5s						
ALN	**Alexandroupoli**	**2.52**	**328**	PN	**Pn**	**23 37 35.2**	**+1.2**
SRCK	**Saricakaya, Es**	**2.53**	**59**	PN	**Pn**	**23 37 35.8**	**+1.7**
KLYT	**Kilyos**	**2.66**	**20**	PN	**Pn**	**23 37 37.7**	**+1.8**
RDO	**Rodhopi**	**2.95**	**324**	P	**Pn**	**23 37 41.1**	**+1.2**
BRTR	**Keskin Array B**	**4.63**	**76**	Pn	**Pn**	**23 38 04.6**	**+1.5**
	0.4nm,0.3s,baz=254,slow=14,SNR=7.4						
BRTR				Pg	**Pg**	**23 38 21.6**	**+0.1**
	0.3nm,0.3s,baz=268,slow=15,SNR=3.7						
BRTR				Lg	Lg	23 39 26.1	
	0.3nm,0.3s,baz=272,slow=23,SNR=5.9						
	1.2nm,0.4s						
GERES	**GERESS Array B**	**14.30**	**319**	Pn	**Pn**	**23 40 12.0**	**-3.6**
	0.1nm,0.3s,baz=117,slow=7.9,SNR=1.9						
	0.1nm,0.3s						
MKAR	**Makanchi Array**	**40.08**	**60**	P	**P**	**23 44 29.5**	**+1.0**
	0.3nm,0.5s,baz=278,slow=8.3,SNR=3.6						
	0.3nm,0.5s						
SONM	**Songino Array**	**55.59**	**53**	P	**P**	**23 46 26.9**	**-1.9**
	0.2nm,0.3s,baz=327,slow=10,SNR=2.0						
	0.2nm,0.3s						

*IDC **28** 00:08:02.9±2.6, 10°.14S×109°.01E, h0km, mb3.7/5, mbtmp3.7/5, Error ellipse: s-maj=118.2km s-min=22.6km az=52.0*

ISC 28 00:08:07.6±1.5, 10°.1S±0°.1×109°.2E±0°.2, h31km, n9, σ1s38/7, mb3.6/5, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UGM	**Wanagama**	**2.54**	**31**	P	**Pb**	**00 08 52.2**	**-0.4**
JAGI	**Jajag, Banyuwa**	**5.16**	**72**	P	Pb	00 09 31.8	-5.3
PLAI	**Plampang**	**8.56**	**82**	P	Pn	00 10 18.5	+9.0
PSA00	**Pilbara Seismi**	**15.32**	**139**	P	**Pn**	**00 11 40.6**	**-1.2**
WRA	**Warramunga Arr**	**26.15**	**115**	P	**P**	**00 13 40.9**	**+1.5**
	0.9nm,0.8s,baz=288,slow=11,SNR=5.5						
	0.9nm,0.8s						
ASAR	**Alice Springs**	**27.16**	**123**	P	**P**	**00 13 50.1**	**+1.7**
	0.8nm,0.8s,baz=298,slow=9.2,SNR=6.2						
	0.8nm,0.8s						
STKA	**Stephens Creek**	**36.97**	**131**	P	**P**	**00 15 13.7**	**-0.6**
	1.1nm,0.5s,baz=298,slow=8.4,SNR=4.2						
	1.1nm,0.5s						
SONM	**Songino Array**	**57.73**	**358**	P	**P**	**00 17 56.2**	**+0.7**
	0.2nm,0.3s,baz=171,slow=6.6,SNR=1.7						
	0.2nm,0.3s						
MKAR	**Makanchi Array**	**61.53**	**339**	P	**P**	**00 18 21.1**	**-0.5**
	0.5nm,0.5s,baz=146,slow=7.7,SNR=5.9						
	0.5nm,0.5s						

*IDC **28** 00:10:40.2±1.9, 2°.52N×125°.44E, h0km, mb3.8/4, mbtmp3.8/4, MS3.0/2, Error ellipse: s-maj=183.8km s-min=24.6km az=64.0*

*NEIC **28** 00:10:49.6±1.1, 2°.68N±0°.07×125°.9E±0°.1, h77km±12km, mb4.2/8, Error ellipse: s-maj=16.6km s-min=9.6km az=108.0*

ISC 28 00:10:50.7±0.8, 2°.68N±0°.08×125°.9E±0°.1, h100km, n17, σ1s15/14, mb4.0/7, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**4.37**	**356**	Pn	**Pn**	**00 11 52.9**	**-2.0**
TOLI2	**Tolitoli**	**5.32**	**253**	Pn	**Pn**	**00 12 06.7**	**-1.0**
MTN	**Manton Dam**	**16.29**	**161**	Pn	**Pn**	**00 14 31.9**	**-1.8**
MTN				IAmb	IAmb	00 15 06.1	
	comp=Z,43nm,1.4s						
UGM	**Wanagama**	**18.58**	**235**	P	**Pn**	**00 15 00.5**	**-1.0**
KNMB	**Chin-men Tao**	**22.83**	**342**	P	**P**	**00 15 46.5**	**+1.1**
JMZ	**Minamidaito 2**	**23.57**	**12**	P	**P**	**00 15 52.5**	**+0.1**
WB0	**Warramunga Arr**	**23.83**	**160**	P	**P**	**00 15 55.1**	**+0.3**
WB0				IAmb	IAmb	00 15 56.6	
	comp=Z,5.3nm,0.8s						
WRA	**Warramunga Arr**	**23.97**	**160**	P	**P**	**00 15 56.4**	**+0.3**
	comp=Z,2.3nm,0.8s,baz=337,slow=11,SNR=12						
	comp=Z,2.3nm,0.8s						
WB2	**Warramunga Arr**	**23.98**	**160**	P	**P**	**00 15 56.0**	**-0.1**
WB2				IAmb	IAmb	00 16 08.2	
	comp=Z,13nm,1.2s						
WR0	**Warramunga Arr**	**24.06**	**160**	P	**P**	**00 15 57.2**	**+0.4**
WR0				IAmb	IAmb	00 16 33.2	
	comp=Z,8.7nm,1.2s						
ASAR	**Alice Springs**	**27.34**	**164**	P	**P**	**00 16 27.8**	**+1.4**
	comp=Z,0.4nm,0.6s,baz=351,slow=7.3,SNR=5.4						
	comp=Z,0.4nm,0.6s						
MJAR	**Matsushiro Arr**	**35.57**	**17**	LR	LR	00 30 25.4	
	comp=Z,19nm,21.8s,baz=202,slow=33						
STKA	**Stephens Creek**	**37.48**	**158**	P	**P**	**00 17 55.3**	**+0.6**
	comp=Z,2.5nm,0.7s,baz=334,slow=8.5,SNR=3.8						
	comp=Z,2.5nm,0.7s						
STKA	**Stephens Creek**	**37.48**	**158**	IAmb	IAmb	00 17 56.8	
	comp=Z,1.3nm,1.1s						
MKAR	**Makanchi Array**	**57.93**	**326**	P	**P**	**00 20 33.3**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=114,slow=7.4,SNR=5.3						
	comp=Z,0.4nm,0.5s						
ABKAR	**Akbulak array**	**72.42**	**321**	P	**P**	**00 22 07.1**	**+1.0**
NOA	**NORSAR Array B**	**99.33**	**333**	LR	LR	01 11 20.6	
	comp=Z,8.6nm,20.6s,baz=100,slow=37						

MAN 28 00:24:17.4, 13°.75N×121°.53E, h1km, mb3.9, ML2.7, MS2.2, 2C-4D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOAC	**Boac**	**0.42**	**134**	⇓*e*P	Pg	00 24 25.8	+0.3
TGY	**Tagaytay City**	**0.67**	**301**	⇓*e*P	Pb	00 24 31.3	+0.3
GQP	**Guinayangan**	**0.91**	**80**	⇑*e*P	Pg	00 24 34.8	+0.3
GQP				*i* S		00 24 51.7	
LUBP	**Lubang**	**1.25**	**269**	⇓*e*P	Pg	00 24 39.3	+0.9
SJMP	**San Jose**	**1.34**	**197**	⇓*e*P	Pb	00 24 42.8	+0.3
PCPH	**Palayan**	**1.84**	**347**	⇑*e*P	Pn	00 24 50.5	+0.9
PCPH				*e*S		00 25 02.0	

*IDC **28** 00:27:26.3±0.8, 4°.55S×68°.57E, h0km, mb4.2/14, mbtmp4.2/14, MS3.6/22, Error ellipse: s-maj=25.0km s-min=18.3km az=25.0*

*NEIC **28** 00:27:28.9±0.9, 4°.45S±0°.08×68°.68E±0°.09, h10km±1km, mb4.6/41, Error ellipse: s-maj=14.6km s-min=13.7km az=112.0*

ISC 28 00:27:28.2±0.5, 4°.47S±0°.08×68°.65E±0°.08, h10km, n95, σ0s76/72, mb4.5/38, MS3.7/21, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DGAR	**Diego Garcia**	**4.79**	**128**	Pn	**Pn**	**00 28 40.5**	**+0.1**
H08S3	**Diego Garcia H**	**4.94**	**130**	T	T	00 33 50.1	
	baz=302,slow=80,SNR=638						
H08S1	**Diego Garcia H**	**4.95**	**130**	T	T	00 33 48.1	
	baz=302,slow=80,SNR=783						
H08S2	**Diego Garcia H**	**4.96**	**130**	T	T	00 33 52.0	
	baz=302,slow=80,SNR=891						
KAAM	**Kaadhehdhoo**	**6.57**	**42**	Pn	**Pn**	**00 29 05.5**	**+0.6**
MSEY	**Mahe Island**	**13.13**	**269**	Pn	**Pn**	**00 30 35.7**	**+0.7**
MNCI	**Minicoy**	**13.40**	**19**	Pn	**Pn**	**00 30 38.5**	**-0.2**
ROCAM	**Rodrigues Isla**	**16.05**	**198**	Pn	**Pn**	**00 31 15.1**	**+1.0**
PALK	**Pallekele**	**16.75**	**46**	LR	LR	00 36 26.9	
	comp=Z,379nm,19.9s,baz=355,slow=32						
SOCY	**Socotra**	**22.05**	**319**	P	**P**	**00 32 25.2**	**+1.8**
OPO	**Ambohidratompo**	**25.22**	**235**	LR	LR	00 40 27.7	
	comp=Z,135nm,18.4s,baz=179,slow=31						

FOMA	**Nahampoana Res**	**29.15**	**223**	P	**P**	**00 33 30.4**	**+0.7**
ATD	**Arta Tunnel**	**30.19**	**302**	LR	LR	00 44 52.1	
	comp=Z,66nm,18.4s,baz=298,slow=35						
KIBK	**Kibwezi**	**30.62**	**273**	P	**P**	**00 33 43.2**	**+0.2**
KIBK				IAmb	IAmb	00 33 46.0	
	comp=Z,14nm,1.4s						
LODK	**Lodwar**	**34.17**	**283**	P	**P**	**00 34 14.0**	**-0.1**
CMAR	**Chiang Mai Arr**	**37.55**	**52**	P	**P**	**00 34 44.3**	**+1.3**
	comp=Z,2.4nm,0.3s,baz=241,slow=9.2,SNR=5.2						
CMAR				PcP	**PcP**	**00 37 01.9**	**+0.8**
	comp=Z,1.2nm,0.3s,baz=237,slow=3.0,SNR=4.1						
CMAR				LR	LR	00 48 00.8	
	comp=Z,61nm,21.9s,baz=250,slow=33						
	comp=Z,2.4nm,0.3s						
MBAR	**Mbarara**	**38.06**	**275**	P	**P**	**00 34 47.7**	**+0.1**
MBAR				IAmb	IAmb	00 34 50.4	
	comp=Z,9.7nm,1.3s						
LSA	**Lhasa**	**40.25**	**31**	P	**P**	**00 35 06.0**	**0.0**
LSA				IAmb	IAmb	00 35 10.7	
	comp=Z,5.7nm,0.6s						
LSZ	**Lusaka**	**41.20**	**252**	P	**P**	**00 35 12.6**	**-1.2**
	comp=Z,0.6nm,0.2s,baz=95,slow=8.8,SNR=1.4						
	comp=Z,0.6nm,0.2s						
GAR	**Garm**	**43.27**	**2**	P	**P**	**00 35 30.1**	**-0.1**
GAR				IAmb	IAmb	00 35 34.7	
	comp=Z,20nm,1.3s						
GEYT	**Alibeck**	**43.30**	**348**	LR	LR	00 52 17.6	
	comp=Z,60nm,20.9s,baz=148,slow=34						
BTK	**Batken**	**44.35**	**2**	P	**P**	**00 35 38.9**	**+0.1**
LBTB	**Lobatse**	**46.09**	**239**	LR	LR	00 52 30.0	
	comp=Z,149nm,19.4s,baz=72,slow=33						
TARG	**Taragay, Kyrgy**	**46.73**	**9**	P	**P**	**00 35 58.6**	**+0.6**
KDJ	**Kajisay**	**47.02**	**9**	P	**P**	**00 35 59.5**	**-0.5**
KDJ				IAmb	IAmb	00 36 03.4	
	comp=Z,3.6nm,0.8s						
AAK	**Ala-Archa**	**47.18**	**6**	P	**P**	**00 36 01.7**	**+0.4**
AAK				IAmb	IAmb	00 36 07.2	
	comp=Z,4.7nm,1.1s						
BOOM	**Boomskoye usch**	**47.20**	**7**	P	**P**	**00 36 02.2**	**+0.8**
BOOM				IAmb	IAmb	00 36 11.3	
	comp=Z,4.2nm,1.1s						
KKAR	**Karatay Array**	**47.38**	**2**	P	**P**	**00 36 02.5**	**-0.1**
KKAR	**Karatay Array**	**47.38**	**2**	P	**P**	**00 36 02.5**	**-0.1**
KKAR				IAmb	IAmb	00 36 05.7	
	comp=Z,3.9nm,1.4s						
BOSA	**Boshof**	**47.64**	**235**	LR	LR	00 53 43.1	
	comp=Z,95nm,19.1s,baz=28,slow=33						
GEVA	**Gevas**	**48.73**	**333**	P	**P**	**00 36 12.4**	**-1.0**
GEVA				IAmb	IAmb	00 36 16.5	
	comp=Z,7.1nm,1.4s						
MARD	**Mardin**	**49.00**	**330**	P	**P**	**00 36 14.6**	**-0.8**
MARD				IAmb	IAmb	00 36 23.7	
	comp=Z,3.8nm,0.5s						
KAPI	**Kappang**	**50.92**	**93**	LR	LR	00 54 52.1	
	comp=Z,105nm,21.7s,baz=268,slow=32						
H01W3	**Cape Leeuwin H**	**51.78**	**132**	T	T	01 32 20.1	
	baz=296,slow=75						
H01W2	**Cape Leeuwin H**	**51.79**	**132**	T	T	01 32 20.1	
	baz=296,slow=75						
H01W1	**Cape Leeuwin H**	**51.80**	**132**	T	T	01 32 21.3	
	baz=296,slow=75						
HKPS	**Hong Kong Po S**	**51.82**	**57**	P	**P**	**00 36 36.5**	**-0.3**
TSUM	**Tsumeb**	**51.87**	**249**	LR	LR	00 56 13.1	
	comp=Z,60nm,18.6s,baz=106,slow=33						
MAKZ	**Makanchi**	**52.40**	**12**	P	**P**	**00 36 41.0**	**+0.2**
MK31	**Makanchi Array**	**52.45**	**12**	P	**P**	**00 36 41.0**	**-0.1**
MKAR	**Makanchi Array**	**52.45**	**12**	P	**P**	**00 36 40.6**	**-0.5**
	comp=Z,1.1nm,0.8s,baz=201,slow=8.4,SNR=9.9						
	comp=Z,1.1nm,0.8s						
MKAR	**Makanchi Array**	**52.45**	**12**	P	**P**	**00 36 40.8**	**-0.3**
SUR	**Sutherland**	**52.59**	**232**	LR	LR	00 55 07.7	
	comp=Z,70nm,21.5s,baz=84,slow=32						
BNN	**Bunyan**	**52.70**	**328**	P	**P**	**00 36 43.7**	**+0.5**
BNN				IAmb	IAmb	00 36 46.4	
	comp=Z,11nm,1.0s						
KBZ	**Khabaz**	**53.29**	**337**	P	**P**	**00 36 47.1**	**-0.2**
	comp=Z,7.5nm,1.0s,baz=161,slow=6.5,SNR=12						
	comp=Z,7.5nm,1.0s						
ABKAR	**Akbulak array**	**54.03**	**353**	P	**P**	**00 36 53.0**	**+0.3**
BR131	**Keskin Array S**	**54.51**	**327**	P	**P**	**00 36 56.3**	**-0.2**
BRTR	**Keskin Array B**	**54.51**	**327**	P	**P**	**00 36 57.2**	**+0.7**
	comp=Z,1.8nm,1.1s,baz=142,slow=7.3,SNR=5.9						
	comp=Z,1.8nm,1.1s						
BRTR	**Keskin Array B**	**54.51**	**327**	P	**P**	**00 36 56.4**	**-0.1**
KURK	**Kurchatov**	**55.63**	**8**	P	**P**	**00 37 04.2**	**0.0**
DAV	**Davao City (W)**	**57.96**	**79**	LR	LR	01 02 35.2	
	comp=Z,35nm,21.1s,baz=150,slow=36						
ALN	**Alexandroupoli**	**59.61**	**323**	P	**P**	**00 37 31.9**	**-0.6**
ALN				IAmb	IAmb	00 37 34.7	
	comp=Z,5.1nm,1.0s						
ZAA0	**Zalesovo Array**	**59.76**	**11**	P	**P**	**00 37 32.7**	**-0.6**
ZAA0				IAmb	IAmb	00 37 35.1	
	comp=Z,3.5nm,0.9s						
ZALV	**Zalesovo Beam**	**59.76**	**11**	P	**P**	**00 37 32.6**	**-0.6**
	comp=Z,2.9nm,0.7s,baz=208,slow=6.8,SNR=14						
	comp=Z,2.9nm,0.7s						
TIRR	**Tirgusor**	**60.59**	**328**	P	**P**	**00 37 40.1**	**+1.0**
ARU	**Arti**	**61.25**	**354**	P	**P**	**00 37 43.4**	**+0.1**
ARU				IAmb	IAmb	00 37 45.9	
	comp=Z,5.8nm,1.2s						
SONM	**Songino Array**	**61.71**	**28**	P	**P**	**00 37 48.3**	**+1.5**
	comp=Z,5.4nm,1.0s,baz=221,slow=6.9,SNR=20						
SONM				LR	LR	01 04 32.5	
	comp=Z,95nm,20.9s,baz=226,slow=36						
	comp=Z,5.4nm,1.0s						
SONM	**Songino Array**	**61.71**	**28**	P	**P**	**00 37 46.9**	**+0.1**
SONM				IAmb	IAmb	00 37 49.2	
	comp=Z,7.4nm,1.2s						
MLR	**Muntele Rosu**	**62.59**	**327**	P	**P**	**00 37 52.9**	**+0.1**
MLR				IAmb	IAmb	00 38 00.1	
	comp=Z,6.6nm,1.3s						
MAW	**Mawson**	**63.16**	**182**	LR	LR	00 59 20.1	
	comp=Z,51nm,20.7s,baz=11,slow=30						
TIR	**Tirane**	**63.66**	**321**	P	**P**	**00 37 59.8**	**0.0**
AKASG	**Malin Array Be**	**64.53**	**333**	P	**P**	**00 38 03.7**	**-1.6**
	comp=Z,2.1nm,0.7s,baz=124,slow=5.6,SNR=6.1						
	comp=Z,2.1nm,0.7s						
DIVS	**Divibare**	**65.11**	**323**	P	**P**	**00 38 08.1**	**-1.3**
DIVS				IAmb	IAmb	00 38 18.8	
	comp=Z,4.3nm,1.2s						
ASAR	**Alice Springs**	**65.58**	**114**	P	**P**	**00 38 12.4**	**-0.4**
	comp=Z,1.5nm,0.8s,baz=277,slow=5.7,SNR=8.7						
ASAR				LR	LR	01 04 00.4	
	comp=Z,64nm,20.6s,baz=340,slow=33						
	comp=Z,1.5nm,0.8s						
WRA	**Warramunga Arr**	**65.65**	**110**	P	**P**	**00 38 12.8**	**-0.5**
	comp=Z,5.0nm,1.0s,baz=284,slow=6.4,SNR=14						
	comp=Z,5.0nm,1.0s						
WB2	**Warramunga Arr**	**65.66**	**110**	P	**P**	**00 38 12.9**	**-0.5**
WB0	**Warramunga Arr**	**65.69**	**110**	P	**P**	**00 38 11.2**	**-2.3**
WR0	**Warramunga Arr**	**65.84**	**110**	P	**P**	**00 38 13.5**	**-1.0**
TORD	**Torodi Ar. Bea**	**68.73**	**286**	P	**P**	**00 38 32.5**	**-0.4**
	comp=Z,1.2nm,1.1s,baz=100,slow=6.0,SNR=3.5						
	comp=Z,1.2nm,1.1s						
KSRS	**Korea Array**	**68.99**	**47**	LR	LR	01 10 28.1	
	comp=Z,47nm,18.6s,baz=220,slow=37						
CONA	**Conrad Observa**	**69.62**	**325**	*e*P	**P**	**00 38 37.4**	**-0.5**
	comp=Z,2.2nm,0.7s						
WATA	**Walderim**	**71.82**	**323**	*e*P	**P**	**00 38 51.6**	**+0.2**
	comp=Z,4.8nm,1.0s						
SQTA	**Sankt Quirin**	**71.99**	**323**	*e*P	**P**	**00 38 51.7**	**-0.7**
	comp=Z,3.3nm,0.8s						
FUORN	**Ofenpass-Fuorn**	**72.29**	**322**	P	**P**	**00 38 54.0**	**-0.4**
FUORN				IAmb	IAmb	00 38 56.3	
	comp=Z,5.6nm,1.1s						
RETA	**Reutte**	**72.38**	**323**	*e*P	**P**	**00 38 54.3**	**-0.4**
	comp=Z,3.0nm,1.1s						
TUE	**Stuetta**	**72.79**	**322**	P	**P**	**00 38 57.1**	**-0.2**
TUE				IAmb	IAmb	00 39 01.2	
	comp=Z,5.3nm,0.8s						
DAVA	**Damuels**	**72.83**	**322**	*e*P	**P**	**00 38 54.5**	**-2.9**
	comp=Z,7.8nm,1.0s						
CLL	**Collm**	**72.97**	**327**	P	**P**	**00 38 58.3**	**+0.4**
CLL				IAmb	IAmb	00 39 00.1	
	comp=Z,4.3nm,1.1s						
GRA1	**Grafenberg Arr**	**73.16**	**325**	P	**P**	**00 38 59.2**	**+0.1**
GRFO	**Grafenberg**	**73.16**	**325**	P	**P**	**00 38 58.5**	**-0.6**
GRFO				IAmb	IAmb	00 39 00.7	
	comp=Z,9.7nm,1.0s						
FINES	**FINESS Array B**	**73.44**	**340**	P	**P**	**00 39 01.1**	**+0.5**
	comp=Z,3.1nm,1.0s,baz=145,slow=5.1,SNR=4.1						
	comp=Z,3.1nm,1.0s						
KLR	**Kul'dur**	**76.28**	**37**	P	**P**	**00 39 17.2**	**0.0**
	comp=Z,1.1nm,0.6s,baz=263,slow=8.6,SNR=5.1						
KLR				LR	LR	01 14 55.2	
	comp=Z,42nm,19.9s,baz=220,slow=37						
	comp=Z,1.1nm,0.6s						

MJAR	**Matsushiro Arr**	**76.44**	**51**	LR	LR	01 14 49.1	
	comp=Z,26nm,18.0s,baz=226,slow=37						
CTA	**Charters Tower**	**76.85**	**109**	LR	LR	01 12 46.5	
	comp=Z,32nm,18.5s,baz=262,slow=35						
GUMO	**Guam**	**77.71**	**75**	LR	LR	01 08 48.6	
	comp=Z,26nm,21.9s,baz=106,slow=32						
ESDC	**Sonseca Array**	**79.58**	**312**	P	**P**	**00 39 35.7**	**-0.2**
	comp=Z,0.8nm,1.0s,baz=87,slow=4.2,SNR=3.8						
	comp=Z,0.8nm,1.0s						
ESDC	**Sonseca Array**	**79.58**	**312**	IAmb	IAmb	00 39 37.7	
	comp=Z,1.0nm,1.0s						
YAK	**Yakutsk**	**80.83**	**25**	LR	LR	01 16 44.3	
	comp=Z,61nm,18.5s,baz=268,slow=36						
ASAJ	**Asahikawa**	**81.67**	**44**	LR	LR	01 18 56.3	
	comp=Z,25nm,18.1s,baz=136,slow=38						
MA2	**Magadan**	**89.83**	**30**	LR	LR	01 23 48.0	
	comp=Z,36nm,18.6s,baz=247,slow=38						
PDAR	**Pinedale Array**	**141.83**	**358**	PKP	**PKPdf**	**00 47 00.9**	**0.0**
	baz=52,slow=3.5,SNR=4.2						
PDAR	**Pinedale Array**	**141.83**	**358**	PKPdf	**PKPdf**	**00 47 01.2**	**+0.2**
NVAR	**Mina Array Bea**	**145.60**	**10**	PKPbc	**PKPdf**	**00 47 07.6**	**0.0**
	comp=Z,3.8nm,0.9s,baz=42,slow=1.5,SNR=19						
NVAR	**Mina Array Bea**	**145.60**	**10**		**PKPab**	**00 47 08.5**	**+0.5**
TXAR	**Lajitas Array**	**154.22**	**344**	PKPbc	**PKPbc**	**00 47 29.2**	**-0.3**
	comp=Z,0.6nm,0.9s,baz=72,slow=2.9,SNR=4.6						
TXAR				PKPab	**PKPab**	**00 47 43.5**	**+0.4**
	comp=Z,2.2nm,0.9s,baz=46,slow=3.6,SNR=12						

*KRNET **28** 00:30:57.9±0.1, 39°.61N×73°.84E, mb2.8*

*SOME **28** 00:31:01.1, 39°.65N×73°.30E, h0km*

ISC 28 00:31:03.1±1.2, 39°.77N±0°.05×73°.39E±0°.04, h10km, n15, σ2s30/30, 10C-2D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**0.89**	**329**	⇓*i*P	Pn	**00 31 21.2**	**-0.6**
OHH				⇓*i*S	Sn	**00 31 38.3**	**+3.5**
	baz=19						
DRK	**Karamyk**	**1.26**	**257**	⇑*e*P	Pg	**00 31 26.9**	**-0.5**
DRK				⇑*i*S	Sn	**00 31 49.1**	**+4.9**
	baz=66						
BTK	**Batken**	**2.00**	**279**	⇑*i*P	Pb	**00 31 39.9**	**+0.3**
BTK				⇑*i*S	Sg	**00 32 11.0**	**+3.6**
	baz=82						
ARLS	**Aral**	**2.21**	**18**	⇑*i*P	Pn	**00 31 38.6**	**-1.5**
ARLS				⇑*i*S	Sn	**00 32 08.5**	**+1.0**
	baz=9.0						
ARK	**Arkit**	**2.30**	**332**	⇑*i*P	Pb	**00 31 43.5**	**-1.3**
ARK				⇑*i*S	Sg	**00 32 16.9**	**-0.2**
	baz=28						
GAR	**Garm**	**2.50**	**253**	⇑*i*P	Pb	**00 31 47.2**	**-1.0**
GAR				⇑*i*S	Sg	**00 32 21.0**	**-2.5**
	baz=59						
IUG	**Iuzhnay**	**3.48**	**314**	*e*P	Pb	**00 32 05.9**	**+0.9**
IUG	86nm,0.8s			*e*S	Sg	**00 32 52.8**	**-2.2**
	9.4nm,0.7s						
DZA	**Taraz**	**3.49**	**334**	*e*P	Pg	**00 32 07.5**	**-2.5**
DZA	22nm,0.2s			*e*S	Sg	**00 32 55.0**	**-0.1**
	45nm,0.3s						
KST	**Kastek**	**3.80**	**30**	*e*P	Pg	**00 32 14.4**	**-1.6**
KST	0.7nm,0.3s			*e*S	Sg	**00 33 07.5**	**+2.2**
	6.2nm,0.3s						
DGS	**Degeres**	**3.91**	**26**	*e*P	Pg	**00 32 16.9**	**-1.1**
DGS	2.2nm,0.5s			*e*S	Sg	**00 33 11.1**	**+2.5**
	4.1nm,0.6s						
BRLS	**Borolday**	**4.22**	**322**	*e*P	Pb	**00 32 20.0**	**+2.6**
BRLS	1.5nm,0.3s			*e*S	Sg	**00 33 16.6**	**-1.9**
	5.9nm,0.5s						
KRBS	**Karabastau**	**4.28**	**23**	*e*P	Pg	**00 32 23.1**	**-2.1**
KRBS	0.2nm,0.2s			*e*S	Sg	**00 33 22.5**	**+1.8**
	3.8nm,0.8s						
KTBS	**Karatobe**	**4.65**	**31**	*e*P	Pg	**00 32 31.3**	**-0.8**
KTBS	1.5nm,0.6s			*e*S	Sg	**00 33 36.1**	**+3.7**
	6.1nm,0.9s						
BTLS	**Baital**	**5.29**	**5**	*e*P	Pg	**00 32 42.0**	**-2.5**
BTLS	0.9nm,0.5s			*e*S	Sg	**00 33 54.5**	**+1.4**
	1.4nm,0.6s						
BLB	**Baldybastay**	**5.76**	**40**	*e*P	Pg	**00 32 49.7**	**-3.7**
BLB	2.2nm,0.2s			*e*S	S

	6.0nm,0.3s							
MTBS					*e*S		**Sb**	**00 47 20.2 +0.6**
	8.9nm,0.5s							
MTBS	**Maitube**	**4.48**	**28**	Pg			**Pb**	**00 46 23.9 -1.9**
	5.9nm,0.3s							
MTBS				Lg			Lg	00 47 19.0
	8.1nm,0.4s							
KK31	**Karatay Array**	**4.51**	**331**	⇑Pn			**Pn**	**00 46 16.2 +1.0**
	0.5nm,0.3s,baz=119,slow=13,SNR=7.3							
KK31				⇓Pg			**Pb**	**00 46 27.2 +1.0**
	3.2nm,0.7s,baz=148,slow=16,SNR=6.7							
KK31				⇓Sn			**Sn**	**00 47 08.4 +1.0**
	2.8nm,0.5s							
KK31				⇑Lg			Lg	00 47 25.4
	4.2nm,0.5s,baz=141,slow=30							
TNSS	**Tian-Shan**	**4.61**	**33**	*e*P			**Pb**	**00 46 28.0 -0.1**
	5.2nm,0.5s							
TNSS					*e*S		**Sb**	**00 47 24.9 +1.4**
	4.3nm,0.6s							
TNSS	**Tian-Shan**	**4.61**	**33**	Pg			**Pb**	**00 46 27.0 -1.1**
	5.2nm,0.5s							
TNSS				Lg			Lg	00 47 25.3
	4.3nm,0.6s							
BRLS	**Boroldaу**	**4.73**	**325**	*e*P			**Pb**	**00 46 30.9 +0.9**
	1.2nm,0.3s							
BRLS					*e*S		**Sb**	**00 47 29.8 +3.0**
	10nm,0.5s							
BRLS	**Boroldaу**	**4.73**	**325**	Pg			**Pb**	**00 46 29.9 -0.1**
	2.3nm,0.2s							
BRLS				Lg			Lg	00 47 29.6
	9.3nm,0.5s							
KRBS	**Karabastau**	**4.76**	**19**	*e*P			**Pb**	**00 46 29.4 -1.2**
	4.0nm,0.6s							
KRBS					*e*S		**Sb**	**00 47 27.2 -0.4**
	9.2nm,0.8s							
KRBS	**Karabastau**	**4.76**	**19**	Pg			**Pb**	**00 46 28.7 -1.8**
	4.0nm,0.4s							
KRBS				Lg			Lg	00 47 27.4
	9.2nm,0.8s							
KTBS	**Karatobe**	**5.08**	**27**	*e*P			**Pb**	**00 46 35.8 -0.1**
	2.2nm,0.3s							
KTBS					*e*S		**Sb**	**00 47 38.7 +1.9**
	13nm,0.5s							
KTBS	**Karatobe**	**5.08**	**27**	Pg			**Pb**	**00 46 34.8 -1.1**
	3.5nm,0.8s							
KTBS				Lg			Lg	00 47 37.7
	13nm,0.8s							
KUU	**Kurty**	**5.13**	**23**	*e*P			**Pb**	**00 46 35.8 -0.9**
	3.9nm,1.4s							
KUU					*e*S		**Sb**	**00 47 38.9 +0.7**
	7.8nm,0.9s							
KUU	**Kurty**	**5.13**	**23**	Pg			**Pb**	**00 46 35.5 -1.3**
	4.6nm,1.1s							
KUU				Lg			Lg	00 47 38.8
	9.0nm,0.7s							
CHKK	**Chushkaly**	**5.31**	**28**	*e*P			**Pb**	**00 46 40.4 +0.5**
	1.1nm,0.3s							
CHKK					*e*S		**Sb**	**00 47 46.2 +2.7**
	8.6nm,0.5s							
CHKK	**Chushkaly**	**5.31**	**28**	Pg			**Pb**	**00 46 39.5 -0.3**
	3.6nm,0.8s							
CHKK				Lg			Lg	00 47 46.2
	8.6nm,0.5s							
SATY	**Saty**	**5.32**	**42**	*e*P			**Pb**	**00 46 42.3 +2.3**
	1.4nm,0.2s							
SATY					*e*S		**Sb**	**00 47 49.5 +5.8**
	5.8nm,0.5s							
KPKS	**Kokpek**	**5.75**	**41**	*e*P			**Pb**	**00 46 47.3 -0.1**
	1.2nm,0.4s							
KPKS					*e*S		**Sb**	**00 47 58.2 +2.1**
	5.6nm,0.6s							
KPKS	**Kokpek**	**5.75**	**41**	Pg			**Pb**	**00 46 44.3 -3.1**
	1.5nm,0.5s							
BTLS	**Baital**	**5.84**	**4**	*e*P			**Pb**	**00 46 49.2 +0.4**
	1.5nm,0.8s							
BTLS					*e*S		**Sb**	**00 48 01.3 +2.7**
	4.0nm,0.7s							
ARXS	**Arharly**	**5.94**	**31**	*e*P			**Pb**	**00 46 51.5 +0.9**
	3.5nm,0.7s							
ARXS					*e*S		**Sb**	**00 48 05.2 +3.7**
	7.0nm,0.6s							
ARXS	**Arharly**	**5.94**	**31**	Pg			**Pb**	**00 46 50.2 -0.3**
	6.0nm,0.7s							
ARXS				Lg			Lg	00 48 05.2
	7.0nm,0.6s							
PDGK	**Podgornoye**	**6.08**	**46**	Pg			**Pb**	**00 46 54.1 +1.1**
	1.0nm,0.7s							
PDGK				Lg			Lg	00 48 10.9
	1.8nm,0.8s							
BLB	**Baldybastay**	**6.12**	**36**	*e*P			**Pb**	**00 46 55.1 +1.3**
	4.3nm,0.3s							
BLB					*e*S		**Sb**	**00 48 11.5 +4.6**
	6.6nm,0.7s							
BLB	**Baldybastay**	**6.12**	**36**	Pg			**Pb**	**00 46 54.2 +0.4**
	314nm,0.7s							
BLB				Lg			Lg	00 48 11.5
	6.1nm,1.2s							

IDC 28 00:57:02.6±1.3, 11°51N×144°36E, h0km, mb3.6/3, mbtmp3.6/4, ML3.9/1, MS3.3/3, Error ellipse: s-maj=180.2km s-min=19.5km az=106.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.12**	**13**	Pn	Pn	00 57 39.2	-0.2
	40nm,0.3s,baz=188,slow=14,SNR=6.3						
GUMO				Sn	Sn	00 58 05.9	-0.7
	26nm,0.3s,baz=32,slow=22,SNR=5.6						
	154nm,0.5s						
H11N1	**WAKE ISLAND Hy**	**23.16**	**67**	T	T	01 27 07.5	
	baz=255,slow=75,SNR=12						
H11N2	**WAKE ISLAND Hy**	**23.17**	**67**	T	T	01 27 18.6	
	baz=255,slow=75,SNR=11						
H11N3	**WAKE ISLAND Hy**	**23.18**	**67**	T	T	01 27 11.8	
	baz=255,slow=75,SNR=12						
WRA	**Warramunga Arr**	**32.77**	**198**	P	P	01 03 37.2	-0.5
	1.7nm,0.8s,baz=21,slow=9.7,SNR=7.6						
	1.7nm,0.8s						
ASAR	**Alice Springs**	**36.43**	**196**	P	P	01 04 09.3	+0.1
	0.4nm,0.6s,baz=22,slow=12,SNR=5.5						
	0.4nm,0.6s						
SHEM	**Shemya Is, Ala**	**47.55**	**24**	LR	LR	01 25 11.2	
	comp=Z,15nm,18.8s,baz=146,slow=36						
AFI	**Afiamalu**	**50.29**	**119**	LR	LR	01 24 20.4	
	comp=Z,34nm,18.4s,baz=116,slow=33						
ILAR	**Eielson Array**	**70.65**	**25**	P	P	01 08 20.5	+0.6
	0.2nm,0.6s,baz=251,slow=5.4,SNR=2.3						
	0.2nm,0.6s						
DLBC	**Dease Lake**	**77.99**	**32**	LR	LR	01 45 26.4	
	comp=Z,23nm,19.5s,baz=219,slow=37						

*NNC **28** 01:01:20.3±4.8, 39°.27N×73°.76E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=35.9km s-min=17.4km az=171.0*
*SOME **28** 01:01:24.5, 39°.30N×73°.90E, h10km*
*KRNET **28** 01:01:26.1±0.1, 39°.57N×73°.60E, mb3.0*
ISC 28 01:01:21.6±1.7, 39°.30N±0°.07×73°.78E±0°.04, h2km±11km, n28, σ2s20/48, 10C-12D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.44**	**328**	⇑*e*P	**Pn**	**01 01 47.6**	**-1.2**
	baz=27						
OHH				⇑*i*S	**Sn**	**01 02 03.9**	**-4.4**
	baz=27						
DRK	**Karamyk**	**1.54**	**277**	⇑*e*P	**Pg**	**01 01 52.6**	**+1.4**
	baz=67						
DRK				⇑*i*S	**Sg**	**01 02 11.6**	**+0.3**
	baz=67						
BTK	**Batken**	**2.41**	**289**	⇓*i*P	**Pb**	**01 02 05.4**	**-0.3**
	baz=84						
BTK				⇓*i*S	**Sb**	**01 02 34.8**	**-1.0**
	baz=84						
ARLS	**Aral**	**2.59**	**9**	⇑*e*P	**Pb**	**01 02 08.1**	**-0.7**
	baz=13						
ARLS				⇑*i*S	**Sn**	**01 02 38.5**	**+1.7**
	baz=13						
GAR	**Garm**	**2.71**	**265**	⇑*i*P	**Pg**	**01 02 11.6**	**-2.0**
	baz=59						
GAR				⇑*i*S	**Sb**	**01 02 44.4**	**-0.2**
	baz=59						
ARK	**Arkit**	**2.85**	**332**	⇓*i*P	**Pb**	**01 02 10.9**	**-2.4**
	baz=31						
ARK				⇓*i*S	**Sn**	**01 02 43.3**	**+0.1**
	baz=31						
TRKS	**Terek-Say**	**3.00**	**319**	⇓*i*P	**Pn**	**01 02 11.9**	**+1.6**
	baz=16						
TRKS				⇓*i*S	**Sn**	**01 02 45.5**	**-1.4**
	baz=16						
CHMS	**Chumysh**	**3.76**	**11**	⇓Pg	**Pb**	**01 02 29.2**	**+0.4**
	1.0nm,0.5s						
CHMS				⇓Lg	Lg	01 03 19.0	
	7.4nm,0.8s						
TKM2	**Tokmak 2**	**3.87**	**20**	⇑Pg	**Pg**	**01 02 34.1**	**-1.6**
	2.6nm,0.8s						
TKM2				⇓Lg	Lg	01 03 24.0	
	2.4nm,0.5s						
IUG	**Iuzhnay**	**4.02**	**316**	*e*P	**Pg**	**01 02 41.0**	**+2.3**
	235nm,0.4s						
IUG				*e*S	**Sg**	**01 03 36.0**	**+5.2**
	22nm,0.6s						
IUG	**Iuzhnay**	**4.02**	**316**	Pg	**Pb**	**01 02 28.9**	**-4.4**
	55nm,0.4s						
IUG				Lg	Lg	01 03 24.7	
	10nm,0.6s						
DZA	**Taraz**	**4.04**	**333**	*e*P	**Pg**	**01 02 41.1**	**+2.2**
	35nm,0.1s						
DZA				*e*S	**Sg**	**01 03 36.4**	**+5.2**
	105nm,0.2s						
KST	**Kastek**	**4.08**	**23**	*e*P	**Pg**	**01 02 38.9**	**-1.0**
	1.4nm,1.6s						
KST				*e*S	**Sg**	**01 03 32.5**	**-0.3**
	5.1nm,0.7s						
KST	**Kastek**	**4.08**	**23**	Pg	**Pb**	**01 02 33.8**	**-0.5**
	1.8nm,0.5s						
KST				Lg	Lg	01 03 32.8	
	5.3nm,0.5s						
SGDS	**Sogindy**	**4.20**	**8**	*e*P	**Pg**	**01 02 39.5**	**-2.5**
	1.8nm,0.2s						
SGDS				*e*S	**Sg**	**01 03 33.5**	**-2.9**
	3.3nm,0.5s						
DGS	**Degeres**	**4.21**	**20**	*e*P	**Pg**	**01 02 41.8**	**-0.5**
	3.1nm,1.0s						
DGS				*e*S	**Sg**	**01 03 37.6**	**+0.7**
	5.2nm,0.6s						
DGS	**Degeres**	**4.21**	**20**	Pg	**Pb**	**01 02 34.8**	**-1.7**
	1.8nm,0.3s						
DGS				Lg	Lg	01 03 34.5	
	5.2nm,0.8s						
TNSS	**Tian-Shan**	**4.43**	**32**	*e*P	**Pg**	**01 02 45.9**	**-0.6**
	1.8nm,0.5s						
TNSS				*e*S	**Sg**	**01 03 44.7**	**+0.7**
	2.3nm,0.7s						
TNSS	**Tian-Shan**	**4.43**	**32**	Pg	**Pb**	**01 02 41.3**	**+0.9**
	1.6nm,0.5s						
TNSS				Lg	Lg	01 03 46.1	
	2.3nm,0.7s						
KK31	**Karatay Array**	**4.53**	**328**	⇑Pn	**Pn**	**01 02 34.3**	**+3.2**
	0.3nm,0.3s,baz=0.0,slow=0.1,SNR=6.2						
KK31				⇓Pg	**Pb**	**01 02 42.9**	**+1.1**
	0.4nm,0.3s,baz=147,slow=16,SNR=7.5						
KK31				⇓Sn	**Sn**	**01 03 27.9**	**+3.6**
	1.1nm,0.5s						
KK31				⇓Lg	Lg	01 03 39.4	
	1.8nm,0.5s,baz=152,slow=28,SNR=4.0						
KRBS	**Karabastau**	**4.61**	**17**	*e*P	**Pg**	**01 02 48.1**	**-1.9**
	1.2nm,0.2s						
KRBS				*e*S	**Sg**	**01 03 48.5**	**-1.3**
	3.6nm,0.7s						
BRLS	**Boroldaу**	**4.77**	**323**	*e*P	**Pg**	**01 02 50.7**	**-2.3**
	1.1nm,0.1s						
BRLS				*e*S	**Sg**	**01 03 52.9**	**-1.8**
	5.1nm,0.6s						
BRLS	**Boroldaу**	**4.77**	**323**	Pg	**Pb**	**01 02 42.0**	**-3.9**
	1.0nm,0.3s						
BRLS				Lg	Lg	01 03 46.8	
	2.4nm,0.4s						
KTBS	**Karatobe**	**4.91**	**25**	*e*P	**Pg**	**01 02 54.6**	**-1.2**
	1.5nm,0.5s						
KTBS				*e*S	**Sg**	**01 03 59.4**	**0.0**
	5.6nm,0.7s						
KTBS	**Karatobe**	**4.91**	**25**	Pg	**Pb**	**01 02 48.5**	**+0.1**
	1.5nm,0.7s						
KTBS				Lg	Lg	01 03 58.1	
	4.4nm,0.8s						
KUU	**Kurty**	**4.97**	**22**	*e*P	**Pg**	**01 02 55.9**	**-1.0**
	1.8nm,0.3s						
KUU				*e*S	**Sg**	**01 04 01.6**	**+0.3**
	7.0nm,0.5s						
KUU	**Kurty**	**4.97**	**22**	Pg	**Pb**	**01 02 50.8**	**+1.5**
	1.7nm,0.3s						
KUU				Lg	Lg	01 04 01.6	
	7.0nm,0.5s						
KPKS	**Kokpek**	**5.56**	**40**	*e*P	**Pg**	**01 03 08.1**	**-0.1**
	1.5nm,0.5s						
KPKS				*e*S	**Sg**	**01 04 22.8**	**+2.6**
	3.9nm,1.1s						

*KRNET **28** 01:09:32.1±0.1, 39°.46N×73°.61E, mb3.2*
*NNC **28** 01:09:34.8±2.4, 39°.53N×73°.72E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=17.9km s-min=8.6km az=171.0*
*SOME **28** 01:09:40.5, 39°.77N×73°.63E, h0km*
ISC 28 01:09:35.4±1.2, 39°.57N±0°.06×73°.56E±0°.03, h10km, n33, σ2s06/56, 16C-12D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.13**	**328**	⇓*i*P	**Pb**	**01 09 55.6**	**-1.5**
	baz=30						
OHH				⇓*i*S	**Sn**	**01 10 12.7**	**-0.3**
	baz=30						
DRK	**Karamyk**	**1.37**	**267**	⇓*i*P	**Pn**	**01 09 58.5**	**-2.4**
	baz=71						
DRK				⇓*i*S	**Sb**	**01 10 18.2**	**-0.7**
	baz=71						
BTK	**Batken**	**2.17**	**284**	⇑*i*P	**Pn**	**01 10 12.1**	**+0.4**
	baz=86						
BTK				⇑*e*S	**Sb**	**01 10 41.7**	**-0.2**
	baz=86						
ARLS	**Aral**	**2.36**	**14**	⇑*i*P	**Pn**	**01 10 15.3**	**+0.9**
	baz=13						
ARLS				⇑*i*S	**Sb**	**01 10 47.2**	**-0.3**
	baz=13						
ARK	**Arkit**	**2.54**	**332**	⇑*i*P	**Pn**	**01 10 18.0**	**+1.2**
	baz=32						
ARK				⇑*i*S	**Sb**	**01 10 51.5**	**-1.0**
	baz=32						
GAR	**Garm**	**2.58**	**258**	⇓*i*P	**Pn**	**01 10 17.1**	**-0.3**
	baz=61						
GAR				⇓*e*S	**Sn**	**01 10 52.0**	**+1.2**
	baz=61						
TRKS	**Terek-Say**	**2.69**	**317**	⇓*e*P	**Pn**	**01 10 19.0**	**0.0**
	baz=18						
TRKS				⇓*i*S	**Sn**	**01 10 53.4**	**+1.7**
	baz=18						
UCH	**Uchtor**	**2.75**	**15**	⇑*e*P	**Pn**	**01 10 20.8**	**+0.7**
	baz=14						
UCH				⇑*e*S	**Sb**	**01 10 56.3**	**-2.7**
	baz=14						
BOOM	**Boomskoye usch**	**3.43**	**31**	⇑*i*P	**Pn**	**01 10 30.2**	**+1.1**
	baz=30						
BOOM				⇑*i*S	**Sn**	**01 11 11.9**	**+2.0**
	baz=30						
CHMS	**Chumysh**	**3.54**	**14**	⇓Pg	**Pb**	**01 10 35.9**	**-2.3**
	1.5nm,0.4s						
CHMS				⇑Lg	Lg	01 11 27.8	
	8.3nm,0.6s						
TKM2	**Tokmak 2**	**3.68**	**24**	⇑Pg	**Pb**	**01 10 38.8**	**-2.0**
	3.9nm,0.8s						
TKM2				⇓Lg	Lg	01 11 31.2	
	6.1nm,0.7s						
IUG	**Iuzhnay**	**3.72**	**315**	*e*P	**Pg**	**01 10 48.3**	**+1.7**
	173nm,0.6s						
IUG				*e*S	**Sg**	**01 11 37.3**	**+2.5**
	17nm,0.5s						
DZA	**Taraz**	**3.72**	**334**	*e*P	**Pg**	**01 10 45.9**	**-0.9**
	200nm,0.1s						
DZA				*e*S	**Sg**	**01 11 32.7**	**-2.3**
	87nm,0.2s						
KDJ	**Kajisay**	**3.75**	**46**	⇓*i*P	**Pn**	**01 10 34.2**	**+0.7**
	baz=44						
KDJ				⇓*i*S	**Sn**	**01 11 19.8**	**+2.0**
	baz=44						
KST	**Kastek**	**3.91**	**27**	*e*P	**Pg**	**01 10 49.8**	**-0.6**
	8.3nm,0.8s						
KST				*e*S	**Sg**	**01 11 39.5**	**-1.6**
	16nm,0.9s						
KST	**Kastek**	**3.91**	**27**	Pg	**Pb**	**01 10 46.6**	**+2.0**
	8.3nm,0.8s						
KST				Lg	Lg	01 11 39.3	
	16nm,0.8s						
DGS	**Degeres**	**4.03**	**24**	*e*P	**Pg**	**01 10 53.0**	**+0.4**
	5.5nm,0.6s						
DGS				*e*S	**Sg**	**01 11 45.3**	**+0.5**
	8.7nm,0.6s						
DGS	**Degeres**	**4.03**	**24**	Pg	**Pb**	**01 10 48.7**	**+2.2**
	5.5nm,0.4s						
DGS				Lg	Lg	01 11 42.9	
	8.7nm,0.6s						
MTBS	**Maitube**	**4.16**	**30**	*e*P	**Pg**	**01 10 54.4**	**-0.8**
	3.5nm,0.4s						
MTBS				*e*S	**Sg**	**01 11 47.6**	**-1.4**
	5.9nm,0.6s						
MTBS	**Maitube**	**4.16**	**30**	Pg	**Pg**	**01 10 51.7**	**-3.4**
	2.6nm,0.1s						
MTBS				Lg	Lg	01 11 47.3	
	8.6nm,0.3s						
KK31	**Karatay Array**	**4.21**	**328**	⇑Pn	**Pn**	**01 10 41.8**	**+2.1**
	0.4nm,0.2s,baz=137,slow=12,SNR=5.4						
KK31				⇑Pg	**Pg**	**01 10 54.1**	**-2.1**
	1.5nm,0.4s,baz=159,slow=17,SNR=4.4						
KK31				⇑Sn	**Sn**	**01 11 34.2**	**+5.2**
	2.4nm,0.4s,baz=146,slow=24,SNR=3.5						
KK31				⇑Lg	Lg	01 11 52.9	
	1.3nm,0.3s						
TNSS	**Tian-Shan**	**4.30**	**35**	*e*P	**Pg**	**01 10 56.5**	**-1.3**
	3.1nm,0.3s						
TNSS				*e*S	**Sg**	**01 11 51.6**	**-2.0**
	3.4nm,0.5s						
TNSS	**Tian-Shan**	**4.30**	**35**	Pg	**Pb**	**01 10 53.8**	**+2.4**
	3.1nm,0.3s						
TNSS				Lg	Lg	01 11 51.8	
	3.5nm,0.5s						
KRBS	**Karabastau**	**4.42**	**20**	*e*P	**Pg**	**01 10 58.4**	**-1.6**
	0.9nm,0.3s						
KRBS				*e*S	**Sg**	**01 11 54.6**	**-2.6**
	5.7nm,0.1s						
KRBS	**Karabastau**	**4.42**	**20**	Pg	**Pb**	**01 10 55.9**	**+2.7**
	0.4nm,0.6s						
KRBS				Lg	Lg	01 11 54.6	
	5.6nm,0.7s						
BRLS	**Boroldaу**	**4.46**	**322**	*e*P	**Pg**	**01 10 58.9**	**-1.8**
	2.5nm,0.2s						
BRLS				*e*S	**Sg**	**01 11 55.5**	**-2.9**
	4.8nm,0.6s						
BRLS	**Boroldaу**	**4.46**	**322**	Pg	**Pb**	**01 10 55.7**	**+2.0**
	2.6nm,0.4s						
BRLS				Lg	Lg	01 11 54.4	
	4.6nm,0.5s						
KTBS	**Karatobe**	**4.75**	**28**	*e*P	**Pg**	**01 11 05.6**	**-0.9**
	1.7nm,0.4s						
KTBS				*e*S	**Sg**	**01 12 06.8**	**-1.2**
	14nm,0.5s						
KTBS	**Karatobe**	**4.75**	**28**	Pg	**Pg**	**01 11 02.6**	**-3.9**
	1.7nm,0.4s						
KTBS				Lg	Lg	01 12 06.1	
	14nm,0.5s						
KUU	**Kurty**	**4.79**	**25**	*e*P	**Pg**	**01 11 05.6**	**-1.6**
	1.7nm,0.2s						
KUU				*e*S	**Sg**	**01 12 06.7**	**-2.6**
	9.2nm,0.5s						
KUU	**Kurty**	**4.79**	**25**	Pg	**Pb**	**01 11 02.9**	**+3.4**
	1.4nm,0.1s						
KUU				Lg	Lg	01 12 06.7	
	9.2nm,0.5s						
KPKS	**Kokpek**	**5.47**	**43**	*e*P	**Pg**	**01 11 18.3**	**-1.9**
	3.2nm,0.1s						
KPKS				*e*S	**Sg**	**01 12 28.6**	**-2.5**
	4.4nm,0.5s						
KPKS	**Kokpek**	**5.47**	**43**	Pg	**Pb**	**01 11 14.6**	**+3.5**
	1.6nm,0.2s						
KPKS				Lg	Lg	01 12 27.2	
	3.1nm,0.4s						

*IDC **28** 01:20:12.5±1.2, 1°.42N×126°.08E, h0km, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=131.9km s-min=20.5km az=68.0*
*DJA **28** 01:20:13.4±0.7, 1°N±5°×12°7E±°, h106km±12km, M3.8/8, MLv3.8/8*
*NEIC **28** 01:20:18±1.4, 1°.7N±0°.1×126°.8E±0°.1, h35km±2km, mb4.6/12, Error ellipse: s-maj=25.2km s-min=7.5km az=221.0*
ISC 28 01:20:17.3±0.6, 1°.7N±0°.1×126°.8E±0°.1, h35km, n29, σ1s15/26, mb4.3/10, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.08**	**146**		**Pn**	**01 20 37.1**	**+1.1**
TNTI				Sn	**Sn**	**01 20 51.2**	**+1.4**
TNTI	**Ternate**	**1.08**	**146**	P	**Pn**	**01 20 34.2**	**-1.8**
TNTI				S	**Sn**	**01 20 50.4**	**+0.6**
SGSI	**Sangihe**	**2.35**	**328**	P	Pn	01 20 46.0	-7.4
LBMI	**Labuha**	**2.41**	**162**	P	Pn	01 20 47.9	-6.4
KMSI	**Cibinong**	**2.98**	**249**	P	Pn	01 20 54.7	-7.5
SANI	**Sanana**	**3.77**	**192**	P	Pn	01 21 04.3	-8.8
LUWI	**Luwuk**	**4.81**	**236**	P	Pn	01 21 18.7	-8.6
MRSI	**Marisa**	**4.96**	**256**	P	Pn	01 21 22.2	-7.2
TOLI2	**Tolitoli**	**6.00**	**265**	Pn	**Pn**	**01 21 41.6**	**-2.1**
FAKI	**Fak Fak**	**7.14**	**130**	Pn	**Pn**	**01 21 58.8**	**-0.5**
MYLDM	**Lahad Datu**	**8.95**	**293**		**Pn**	**01 22 26.7**	**+2.6**
WB0	**Warramunga Arr**	**22.59**	**161**	P	**P**	**01 25 14.3**	**-0.6**
WB0				IAmb	IAmb	01 25 16.3	
	comp=Z,11nm,1.0s						
WRA	**Warramunga Arr**	**22.73**	**161**	P	**P**	**01 25 15.9**	**-0.6**
	comp=Z,6.5nm,0.6s,baz=339,slow=11,SNR=38						
	comp=Z,6.5nm,0.6s						
WB2	**Warramunga Arr**	**22.73**	**161**	P	**P**	**01 25 15.5**	**-1.1**
WB2				IAmb	IAmb	01 25 17.9	
	comp=Z,14nm,0.8s						
WR0	**Warramunga Arr**	**22.81**	**161**	P	**P**	**01 25 16.7**	**-0.6**
WR0				IAmb	IAmb	01 25 18.7	
	comp=Z,8.1nm,0.7s						
AS31	**Alice Springs**	**26.13**	**165**	P	**P**	**01 25 48.9**	**+0.6**
ASAR	**Alice Springs**	**26.13**	**165**	P	**P**	**01 25 48.2**	**-0.1**
	comp=Z,1.8nm,0.4s,baz=353,slow=15,SNR=38						
ASAR				PcP	**PcP**	**01 29 16.0**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=354,slow=2.1,SNR=1.6						
	comp=Z,1.8nm,0.4s						
KULM	**Kulim**	**26.30**	**279**	P	**P**	**01 25 50.1**	**+0.1**
KULM				IAmb	IAmb	01 25 56.0	
	comp=Z,14nm,1.0s						
CM31	**Chiang Mai Arr**	**31.97**	**303**	P	**P**	**01 26 40.3**	**-0.1**
NWAO	**Narrogin (SRO)**	**35.57**	**194**	P	**P**	**01 27 11.7**	**+0.2**
SEHB	**SEOHWA**	**36.45**	**2**	P	**P**	**01 27 18.1**	**-0.8**
SEHB				IAmb	IAmb	01 27 58.8	
	comp=Z,14nm,1.3s						
ARMA	**Armidale**	**39.75**	**145**	P	**P**	**01 27 47.0**	**0.0**
ARMA				IAmb	IAmb	01 28 07.6	
	comp=Z,46nm,1.4s						
PALK	**Pallekele**	**46.23**	**278**	P	**P**	**01 28 39.1**	**-0.5**
SONM	**Songino Array**	**49.25**	**342**	P	**P**	**01 29 04.4**	**+1.8**
	comp=Z,0.5nm,0.6s,baz=148,slow=8.5,SNR=3.5						
	comp=Z,0.5nm,0.6s						
SONM	**Songino Array**	**49.25**	**342**	P	**P**	**01 29 03.3**	**+0.7**
MK31	**Makanchi Array**	**59.26**	**326**	P	**P**	**01 30 14.4**	**-1.0**
MKAR	**Makanchi Array**	**59.26**	**326**	P	**P**	**01 30 13.9**	**-1.5**
	comp=Z,1.0nm,0.5s,baz=118,slow=7.3,SNR=12						
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	**59.26**	**326**	P	**P**	**01 30 14.2**	**-1.2**
ABKAR	**Akbulak array**	**73.76**	**321**	P	**P**	**01 31 47.7**	**-0.3**

**DJA 28 01:21:45.2±0.2, 0°S±2°×100°0E±°, h10km, M3.8/12, mb3

s-min=27.1km az=79.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**20.04**	**3**	LR	LR	01 34 08.1	
	comp=Z,94nm,18.7s,baz=214,slow=34						
RPZ	**Rata Peaks**	**22.08**	**80**	LR	LR	01 34 16.8	
	comp=Z,159nm,20.9s,baz=252,slow=31						
H01W1	**Cape Leeuwin H**	**25.30**	**302**	T	T	01 54 17.8	
	baz=140,slow=75,SNR=42						
H01W2	**Cape Leeuwin H**	**25.30**	**302**	T	T	01 54 22.5	
	baz=140,slow=75,SNR=51						
H01W3	**Cape Leeuwin H**	**25.32**	**302**	T	T	01 54 10.0	
	baz=140,slow=75,SNR=42						
VNDA	**Vanda**	**26.93**	**170**	P	P	01 28 33.8	-0.2
	1.4nm,1.1s,baz=331,slow=9.0,SNR=4.0						
	1.4nm,1.1s						
ASAR	**Alice Springs**	**28.62**	**348**	P	P	01 28 49.6	-0.1
	0.7nm,0.8s,baz=162,slow=9.4,SNR=4.5						
	0.7nm,0.8s						
CTA	**Charters Tower**	**32.09**	**11**	LR	LR	01 41 27.6	
	comp=Z,108nm,18.1s,baz=244,slow=35						
WRA	**Warramunga Arr**	**32.24**	**349**	P	P	01 29 21.2	-0.4
	1.6nm,1.0s,baz=176,slow=7.9,SNR=5.2						
	1.6nm,1.0s						
DZM	**Mont Dzumac**	**35.98**	**44**	LR	LR	01 41 56.9	
	comp=Z,158nm,20.7s,baz=216,slow=32						
QSPA	**South Pole Qui**	**38.21**	**180**	LR	LR	01 44 11.7	
	comp=Z,83nm,19.2s,baz=7.5,slow=34						
MAW	**Mawson**	**39.04**	**216**	LR	LR	01 44 04.0	
	comp=Z,144nm,20.5s,baz=104,slow=33						
HNR	**Honiara**	**45.29**	**28**	LR	LR	01 49 52.2	
	comp=Z,63nm,18.6s,baz=143,slow=36						
KAPI	**Kappang**	**49.76**	**333**	LR	LR	01 55 04.8	
	comp=Z,70nm,18.1s,baz=251,slow=39						
SNAA	**Sanae**	**54.00**	**194**	LR	LR	01 54 25.7	
	comp=Z,102nm,18.0s,baz=136,slow=35						
RAR	**Rarotonga**	**55.10**	**80**	LR	LR	01 55 32.9	
	comp=Z,22nm,18.1s,baz=141,slow=36						
ARCES	**ARCESS Array B**	**145.72**	**325**	PKPbc	PKPbc	01 42 30.8	0.0
	1.7nm,0.8s,baz=76,slow=3.8,SNR=1.7						

*KRNET **28** 01:24:34.1±0.1, 39.°43N×73.°64E, mb3.1*
*SOME **28** 01:24:35.8, 39.°45N×73.°67E, h0km*
*NNC **28** 01:24:38.0±2.7, 39.°49N×73.°72E, h0km, mb3.7, mpv3.3,*
Error ellipse: s-maj=20.4km s-min=9.9km az=170.0
ISC 28 01:24:35.9±1.4, **39.°51N**±0.°05×**73.°57E**±0.°03, **h16**km±11km, **n32**, σ1s**87**/57, **26C-12D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.18**	**329**	⇓*iP*	**Pb**	**01 24 57.9**	**0.0**
	baz=29						
OHH				⇓*iS*	**Sg**	**01 25 16.1**	**+2.1**
	baz=29						
OHH	**Osh**	**1.18**	**329**	⇓*iP*	**Pg**	**01 24 59.7**	**+1.1**
	baz=36						
OHH				⇓*iS*	**Sn**	**01 25 13.5**	**-0.1**
	baz=36						
DRK	**Karamyk**	**1.37**	**269**	⇑*iP*	**Pb**	**01 25 00.9**	**-0.5**
	baz=73						
DRK				⇑*iS*	**Sg**	**01 25 20.6**	**+0.4**
	baz=73						
DRK	**Karamyk**	**1.37**	**269**	⇑*iP*	**Pg**	**01 25 02.8**	**+0.5**
	baz=65						
DRK				⇑*iS*	**Sg**	**01 25 19.3**	**-0.9**
	baz=65						
BTK	**Batken**	**2.19**	**285**	⇑*iP*	**Pb**	**01 25 14.5**	**-0.7**
	baz=87						
BTK				⇑*iS*	**Sg**	**01 25 44.4**	**-1.9**
	baz=87						
BTK	**Batken**	**2.19**	**285**	⇓*iP*	**Pg**	**01 25 16.8**	**-1.1**
	baz=84						
BTK				⇓*iS*	**Sb**	**01 25 43.7**	**+1.6**
	baz=84						
ARLS	**Aral**	**2.41**	**13**	⇑*iP*	**Pb**	**01 25 17.6**	**-1.5**
	baz=12						
ARLS				⇑*iS*	**Sb**	**01 25 49.4**	**+0.7**
	baz=12						
ARLS	**Aral**	**2.41**	**13**	⇑*iP*	**Pg**	**01 25 21.9**	**-0.3**
	baz=18						
ARLS				⇑*iS*	**Sg**	**01 25 52.8**	**-0.7**
	baz=18						
GAR	**Garm**	**2.58**	**260**	⇓*iP*	**Pb**	**01 25 20.1**	**-1.7**
	baz=62						
GAR				⇓*iS*	**Sb**	**01 25 52.5**	**-0.8**
	baz=62						
GAR	**Garm**	**2.58**	**260**	⇑*iP*	**Pb**	**01 25 22.9**	**+1.1**
	baz=57						
GAR				⇑*iS*	**Sb**	**01 25 53.8**	**+0.5**
	baz=57						
ARK	**Arkit**	**2.59**	**332**	⇑*iP*	**Pb**	**01 25 20.4**	**-1.6**
	baz=32						
ARK				⇑*iS*	**Sb**	**01 25 54.2**	**+0.6**
	baz=32						
ARK	**Arkit**	**2.59**	**332**	⇓*iP*	**Pb**	**01 25 23.0**	**+1.0**
	baz=35						
ARK				⇓*iS*	**Sb**	**01 25 54.5**	**+0.8**
	baz=35						
TRKS	**Terek-Say**	**2.74**	**318**	⇑*iP*	**Pb**	**01 25 22.2**	**-2.4**
	baz=18						
TRKS				⇑*iS*	**Sb**	**01 25 56.7**	**-1.2**
	baz=18						
BOOM	**Boomskoye usch**	**3.47**	**30**	⇑*iP*	**Pn**	**01 25 32.0**	**+2.5**
	baz=29						
BOOM				⇑*iS*	**Sb**	**01 26 14.8**	**-4.3**
	baz=29						
BOOM	**Boomskoye usch**	**3.47**	**30**	⇑*iP*	**Pb**	**01 25 37.9**	**+0.8**
	baz=33						
BOOM				⇑*iS*	**Sb**	**01 26 20.1**	**+1.0**
	baz=33						
CHMS	**Chumysh**	**3.59**	**14**	⇑Pg	**Pg**	**01 25 41.9**	**-2.8**
	2.3nm,0.7s						
CHMS				⇑Lg	Lg	01 26 32.3	
	2.3nm,0.5s						
TKM2	**Tokmak 2**	**3.73**	**24**	⇑Pg	**Pg**	**01 25 45.7**	**-1.7**
	1.7nm,0.6s						
TKM2				⇓Lg	Lg	01 26 32.4	
	3.2nm,0.7s						
IUG	**Iuzhnay**	**3.76**	**316**	*eP*	**Pg**	**01 25 47.2**	**-0.7**
	108nm,0.4s						
IUG				*eS*	**Sg**	**01 26 39.3**	**+2.7**
	14nm,0.8s						
IUG	**Iuzhnay**	**3.76**	**316**	Pg	**Pg**	**01 25 47.1**	**-0.8**
	137nm,0.3s						
IUG				Lg	Lg	01 26 39.4	
	16nm,0.3s						
DZA	**Taraz**	**3.77**	**334**	*eP*	**Pg**	**01 25 48.6**	**+0.4**
	111nm,0.1s						
DZA				*eS*	**Sg**	**01 26 41.5**	**+4.5**
	88nm,0.3s						
KST	**Kastek**	**3.96**	**26**	*eP*	**Pg**	**01 25 50.0**	**-1.8**
	1.9nm,0.4s						
KST				*eS*	**Sg**	**01 26 43.9**	**+0.8**
	8.4nm,0.5s						
KST	**Kastek**	**3.96**	**26**	Pg	**Pg**	**01 25 49.7**	**-2.1**
	3.1nm,0.5s						
KST				Lg	Lg	01 26 43.7	
	7.9nm,0.7s						
SGDS	**Sogindy**	**4.01**	**11**	*eP*	**Pg**	**01 25 51.0**	**-1.8**
	1.4nm,0.5s						
SGDS				*eS*	**Sg**	**01 26 45.5**	**+0.7**
	2.6nm,0.5s						
SGDS	**Sogindy**	**4.01**	**11**	Pg	**Pg**	**01 25 51.1**	**-1.8**
	1.8nm,0.2s						
SGDS				Lg	Lg	01 26 45.6	
	1.8nm,0.2s						
DGS	**Degeres**	**4.08**	**23**	*eP*	**Pg**	**01 25 53.1**	**-0.9**
	2.7nm,0.5s						
DGS				*eS*	**Sg**	**01 26 49.1**	**+2.3**
	5.4nm,0.7s						
DGS	**Degeres**	**4.08**	**23**	Pg	**Pg**	**01 25 53.2**	**-0.9**
	2.7nm,0.5s						
DGS				Lg	Lg	01 26 49.2	
	6.3nm,0.8s						
KK31	**Karatay Array**	**4.26**	**328**	⇓Pn	**Pb**	**01 25 46.1**	**-4.3**
	0.3nm,0.3s,baz=126,slow=12,SNR=7.5						
KK31				⇑Pg	**Pg**	**01 25 54.7**	**-2.9**
	2.3nm,0.6s,baz=145,slow=16,SNR=8.6						
KK31				⇑Sn	**Sb**	**01 26 38.8**	**-2.9**
	1.3nm,0.4s,baz=134,slow=25,SNR=4.5						
KK31				⇑Lg	Lg	01 26 56.0	
	1.2nm,0.3s						
TNSS	**Tian-Shan**	**4.34**	**35**	*eP*	**Pg**	**01 25 57.7**	**-1.4**
	2.6nm,0.4s						
TNSS				*eS*	**Sg**	**01 26 57.3**	**+1.9**
	2.0nm,0.6s						
TNSS	**Tian-Shan**	**4.34**	**35**	Pg	**Pg**	**01 25 57.7**	**-1.4**
	2.6nm,0.4s						
TNSS				Lg	Lg	01 26 57.4	
	2.0nm,0.6s						
BRLS	**Borolday**	**4.50**	**323**	*eP*	**Pg**	**01 25 60.0**	**-2.1**
	1.0nm,0.3s						
BRLS				*eS*	**Sg**	**01 27 01.4**	**+1.0**
	6.5nm,0.5s						
BRLS	**Borolday**	**4.50**	**323**	Pg	**Pg**	**01 25 60.0**	**-2.1**
	2.3nm,0.3s						
BRLS				Lg	Lg	01 27 01.5	
	4.8nm,0.5s						
BTLS	**Baital**	**5.54**	**4**	*eP*	**Pg**	**01 26 20.5**	**-1.4**
	0.8nm,0.3s						
BTLS				*eS*	**Sg**	**01 27 36.2**	**+2.7**
	1.9nm,0.6s						

*NNC **28** 01:26:08.1±0.2, 43.°25N×78.°37E, h0km, mb2.8, mpv2.7,*
Error ellipse: s-maj=2.2km s-min=1.2km az=1.0
*SOME **28** 01:26:08.6, 43.°23N×78.°33E, h5km*
ISC 28 01:26:08.2±1.2, **43.°22N**±0.°03×**78.°34E**±0.°03, **h9**km±9km, **n13**, σ0s**29**/26, **1C-3D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZHN	**Zhinishke**	**0.08**	**128**	*eP*	**Pg**	**01 26 10.6**	**+0.1**
	40nm,0.1s						
ZHN				*eS*	**Sg**	**01 26 12.3**	**0.0**
	198nm,0.2s						
ZHN	**Zhinishke**	**0.08**	**128**	P	**Pg**	**01 26 10.6**	**+0.1**
	40nm,0.1s						
ZHN				S	**Sg**	**01 26 12.3**	**0.0**
	198nm,0.2s						
SATY	**Saty**	**0.17**	**164**	*eP*	**Pg**	**01 26 11.8**	**0.0**
	3.8nm,0.1s						
SATY				*eS*	**Sg**	**01 26 13.9**	**-0.4**
	167nm,0.1s						
SATY	**Saty**	**0.17**	**164**	P	**Pg**	**01 26 11.8**	**0.0**
	3.8nm,0.1s						
SATY				S	**Sg**	**01 26 13.9**	**-0.4**
	167nm,0.1s						
KURS	**Kuram**	**0.30**	**335**	*eP*	**Pg**	**01 26 14.0**	**-0.1**
	2.4nm,0.1s						
KURS				*eS*	**Sg**	**01 26 18.0**	**-0.1**
	6.0nm,0.2s						
KURS	**Kuram**	**0.30**	**335**	P	**Pg**	**01 26 14.0**	**-0.1**
	2.4nm,0.1s						
KURS				S	**Sg**	**01 26 18.0**	**-0.1**
	8.7nm,0.2s						
KPKS	**Kokpek**	**0.35**	**45**	*eP*	**Pg**	**01 26 15.3**	**+0.2**
	7.5nm,0.1s						
KPKS				*eS*	**Sg**	**01 26 20.1**	**+0.3**
	11nm,0.1s						
PDGK	**Podgornoye**	**0.84**	**82**	P	**Pg**	**01 26 24.2**	**-0.2**
	0.5nm,0.1s						
PDGK				S	**Sg**	**01 26 35.4**	**0.0**
	1.9nm,0.2s						
PDGK	**Podgornoye**	**0.84**	**82**	⇓P	**Pg**	**01 26 24.0**	**-0.4**
	0.7nm,0.5s						
PDGK				⇑S	**Sg**	**01 26 35.4**	**0.0**
	1.0nm,0.2s						
BLB	**Baldybastay**	**0.88**	**6**	*eP*	**Pg**	**01 26 24.9**	**-0.3**
	5.0nm,0.1s						
BLB				*eS*	**Sg**	**01 26 36.5**	**-0.1**
	11nm,0.2s						
BLB	**Baldybastay**	**0.88**	**6**	P	**Pg**	**01 26 24.9**	**-0.3**
	5.0nm,0.1s						
BLB				S	**Sg**	**01 26 36.5**	**-0.1**
	11nm,0.2s						
KNDC	**Almaty**	**1.01**	**270**	⇓P	**Pg**	**01 26 27.8**	**+0.2**
	12nm,0.3s						
KNDC				⇓S	**Sb**	**01 26 41.9**	**+0.7**
	5.5nm,0.3s						
TNSS	**Tian-Shan**	**1.04**	**260**	*eP*	**Pg**	**01 26 27.8**	**-0.4**
	0.6nm,0.2s						
TNSS				*eS*	**Sg**	**01 26 41.5**	**-0.2**
	1.4nm,0.1s						

*SOME **28** 01:28:41.6, 39.°55N×73.°68E, h0km*
*KRNET **28** 01:28:42.5±0.1, 39.°52N×73.°55E, mb3.5*
*NNC **28** 01:28:45.3±1.2, 39.°64N×73.°69E, h0km, mb4.0, mpv3.6,*
Error ellipse: s-maj=9.8km s-min=4.8km az=175.0
ISC 28 01:28:39.9±1.4, **39.°55N**±0.°05×**73.°69E**±0.°03, **h7**km±12km, **n39**, σ1s**50**/63, **20C-4D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.20**	**325**	⇑*iP*	**Pn**	**01 29 04.7**	**+1.6**
	baz=30						
OHH				⇑*iS*	**Sn**	**01 29 20.8**	**+1.1**
	baz=30						
DRK	**Karamyk**	**1.46**	**268**	⇑*iP*	**Pg**	**01 29 08.3**	**+0.3**
	baz=69						
DRK				⇑*iS*	**Sg**	**01 29 26.5**	**-0.4**
	baz=69						
BTK	**Batken**	**2.27**	**284**	⇓*iP*	**Pb**	**01 29 21.6**	**+0.4**
	baz=85						
BTK				⇓*iS*	**Sb**	**01 29 50.6**	**+1.0**
	baz=85						
ARLS	**Aral**	**2.36**	**12**	⇑*iP*	**Pg**	**01 29 24.8**	**-0.3**
	baz=14						
ARLS				⇑*iS*	**Sg**	**01 29 56.3**	**+0.7**
	baz=14						
ARK	**Arkit**	**2.60**	**330**	⇑*iP*	**Pb**	**01 29 27.5**	**+0.6**
	baz=33						
ARK				⇑*iS*	**Sb**	**01 30 00.6**	**+1.5**
	baz=33						
GAR	**Garm**	**2.67**	**259**	⇑*iP*	**Pb**	**01 29 27.3**	**-0.9**
	baz=59						
GAR				⇑*iS*	**Sb**	**01 30 00.1**	**-1.2**
	baz=59						
TRKS	**Terek-Say**	**2.77**	**316**	⇑*iP*	**Pb**	**01 29 28.7**	**-1.2**
	baz=18						
TRKS				⇑*iS*	**Sb**	**01 30 02.1**	**-2.0**
	baz=18						
BOOM	**Boomskoye usch**	**3.39**	**29**	⇑*iP*	**Pb**	**01 29 40.1**	**-0.4**
	baz=31						
BOOM				⇑*iS*	**Sb**	**01 30 21.7**	**-0.3**
	baz=31						
CHMS	**Chumysh**	**3.54**	**13**	⇓Pn	**Pb**	**01 29 42.0**	**-0.8**
	4.9nm,0.4s						
CHMS				⇑Lg	Lg	01 30 36.3	
	9.9nm,0.6s						
TKM2	**Tokmak 2**	**3.66**	**23**	⇑Pn	**Pb**	**01 29 43.5**	**-1.5**
	5.0nm,0.6s						
TKM2				Lg	Lg	01 30 40.7	
	9.4nm,0.7s						
KDJ	**Kajisay**	**3.69**	**45**	⇑*iP*	**Pb**	**01 29 44.8**	**-0.8**
	baz=46						
KDJ				⇑*iS*	**Sb**	**01 30 29.6**	**-1.1**
	baz=46						
DZA	**Taraz**	**3.78**	**333**	*eP*	**Pg**	**01 29 53.0**	**+0.7**
	115nm,0.1s						
DZA				*eS*	**Sg**	**01 30 44.4**	**+3.1**
	129nm,0.2s						
IUG	**Iuzhnay**	**3.80**	**314**	*eP*	**Pg**	**01 29 53.1**	**+0.5**
	268nm,0.3s						
IUG				*eS*	**Sg**	**01 30 44.7**	**+2.8**
	67nm,0.6s						
IUG	**Iuzhnay**	**3.80**	**314**	Pg	**Pg**	**01 29 52.4**	**-0.3**
	439nm,0.5s						
IUG				Lg	Lg	01 30 43.1	
	46nm,0.4s						
KST	**Kastek**	**3.89**	**25**	*eP*	**Pg**	**01 29 53.8**	**-0.6**
	5.3nm,0.6s						
KST				*eS*	**Sg**	**01 30 45.9**	**+1.2**
	27nm,0.7s						
KST	**Kastek**	**3.89**	**25**	Pg	**Pg**	**01 29 54.6**	**+0.3**
	5.7nm,0.4s						
KST				Lg	Lg	01 30 47.0	
	27nm,0.7s						
SGDS	**Sogindy**	**3.96**	**10**	*eP*	**Pg**	**01 29 55.4**	**-0.4**
	3.6nm,0.7s						
SGDS				*eS*	**Sg**	**01 30 48.7**	**+1.6**
	7.6nm,1.0s						
SGDS	**Sogindy**	**3.96**	**10**	Pg	**Pg**	**01 29 55.3**	**-0.4**
	5.5nm,0.4s						
SGDS				Lg	Lg	01 30 49.1	
	5.7nm,0.4s						
DGS	**Degeres**	**4.01**	**22**	*eP*	**Pg**	**01 29 56.7**	**+0.1**
	12nm,0.6s						
DGS				*eS*	**Sg**	**01 30 50.7**	**+2.2**
	7.8nm,0.7s						
DGS	**Degeres**	**4.01**	**22**	Pg	**Pg**	**01 29 56.5**	**-0.1**
	8.7nm,0.8s						
DGS				Lg	Lg	01 30 50.3	
	7.7nm,0.5s						
MTBS	**Maitube**	**4.13**	**29**	*eP*	**Pg**	**01 29 58.5**	**-0.4**
	13nm,0.4s						
MTBS				*eS*	**Sg**	**01 30 54.2**	**+1.8**
	13nm,0.5s						
MTBS	**Maitube**	**4.13**	**29**	Pg	**Pg**	**01 29 58.5**	**-0.4**
	13nm,0.6s						
MTBS				Lg	Lg	01 30 54.1	
	14nm,0.5s						
TNSS	**Tian-Shan**	**4.26**	**34**	*eP*	**Pg**	**01 30 01.2**	**-0.2**
	9.3nm,0.5s						
TNSS				*eS*	**Sg**	**01 30 58.7**	**+2.0**
	6.6nm,0.7s						
TNSS	**Tian-Shan**	**4.26**	**34**	Pg	**Pg**	**01 30 01.0**	**-0.5**
	9.3nm,0.5s						
TNSS				Lg	Lg	01 30 58.8	
	7.3nm,0.7s						
KK31	**Karatay Array**	**4.28**	**327**	Pn	Pb	01 29 50.9	-4.6
	0.4nm,0.2s,baz=145,slow=15,SNR=11						
KK31				⇑Pg	**Pg**	**01 30 00.8**	**-1.1**
	2.4nm,0.5s,baz=144,slow=12,SNR=5.7						
KK31				⇓Sn	**Sb**	**01 30 42.9**	**-4.5**
	8.3nm,0.6s						
KK31				⇑Lg	Lg	01 30 56.7	
	7.3nm,0.4s,baz=142,slow=30,SNR=2.7						
BRLS	**Borolday**	**4.53**	**321**	*eP*	**Pg**	**01 30 03.8**	**-2.8**
	2.2nm,0.2s						
BRLS				*eS*	**Sg**	**01 31 03.0**	**-2.2**
	21nm,0.5s						
BRLS	**Borolday**	**4.53**	**321**	Pg	**Pg**	**01 30 03.8**	**-2.8**
	1.8nm,0.2s						
BRLS				Lg	Lg	01 31 02.9	
	21nm,0.5s						
KUU	**Kurty**	**4.77**	**24**	*eP*	**Pg**	**01 30 09.7**	**-1.5**
	6.0nm,0.9s						
KUU				*eS*	**Sg**	**01 31 13.4**	**+0.4**
	16nm,0.6s						
KUU	**Kurty**	**4.77**	**24**	Pg	**Pg**	**01 30 09.7**	**-1.5**
	5.3nm,0.7s						
KUU				Lg	Lg	01 31 13.2	
	16nm,0.6s						
CHKK	**Chushkaly**	**4.96**	**29**	*eP*	**Pg**	**01 30 14.0**	**-0.8**
	1.5nm,0.1s						
CHKK				*eS*	**Sg**	**01 31 20.4**	**+1.3**
	11nm,0.3s						
CHKK	**Chushkaly**	**4.96**	**29**	Pg	**Pg**	**01 30 13.5**	**-1.3**
	5.0nm,0.5s						
CHKK				Lg	Lg	01 31 19.8	
	11nm,0.4s						
SATY	**Saty**	**4.99**	**44**	*eP*	**Pg**	**01 30 14.9**	**-0.6**
	2.0nm,0.1s						
SATY				*eS*	**Sg**	**01 31 22.0**	**+1.9**
	11nm,1.0s						
SATY	**Saty**	**4.99**	**44**	Pg	**Pg**	**01 30 14.1**	**-1.3**
	7.7nm,0.8s						
SATY				Lg	Lg	01 31 21.5	
	13nm,0.9s						
KPKS	**Kokpek**	**5.42**	**42**	*eP*	**Pg**	**01 30 23.1**	**-0.6**
	8.2nm,0.4s						
KPKS				*eS*	**Sg**	**01 31 36.1**	**+2.3**
	14nm,0.7s						
KPKS	**Kokpek**	**5.42**	**42**	Pg	**Pg**	**01 30 22.3**	**-1.4**
	8.3nm,0.5s						
KPKS				Lg	Lg	01 31 34.4	
	14nm,0.7s						
BTLS	**Baital**	**5.49**	**3**	*eP*	**Pg**	**01 30 22.9**	**-2.1**
	0.8nm,0.2s						
BTLS				*eS*	**Sg**	**01 31 35.9**	**-0.3**
	3.3nm,1.0s						
PDGK	**Podgornoye**	**5.76**	**47**	Pg	**Pg**	**01 30 28.8**	**-1.4**
	1.4nm,0.5s						
PDGK				Lg	Lg	01 31 46.1	
	3.1nm,0.8s						
BLB	**Baldybastay**	**5.78**	**37**	*eP*	**Pg**	**01 30 28.8**	**-1.8**
	8.4nm,0.4s						
BLB				*eS*	**Sg**	**01 31 45.8**	**+0.3**
	7.2nm,0.6s						
BLB	**Baldybastay**	**5.78**	**37**	Pg	**Pg**	**01 30 28.8**	**-1.8**
	8.4nm,0.4s						
BLB				Lg	Lg	01 31 45.8	
	7.2nm,0.6s						

*SOME **28** 01:48:13.0, 39.°65N×73.°32E, h5km*
*KRNET **28** 01:48:19.9±0.1, 39.°56N×73.°21E, h35km, mb2.7*
ISC 28 01:48:20.7±1.9, **39.°57N**±0.°07×**73.°12E**±0.°05, **h2**km±12km, **n15**, σ3s**49**/29, **12C, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**0.99**	**345**	⇑*iP*	**Pg**	**01 48 39.0**	**-0.6**
	baz=41						
OHH				⇑*iS*	**Sg**	**01 48 52.6**	**+0.2**
	baz=41						
DRK	**Karamyk**	**1.02**	**265**	⇑*iP*	**Pg**	**01 48 40.1**	**-0.2**
	baz=66						
DRK				⇑*iS*	**Sg**	**01 48 54.8**	**+1.2**
	baz=66						
BTK	**Batken**	**1.84**	**286**	⇑*iP*	**Pn**	**01 48 52.0**	**-1.4**
	baz=86						
BTK				⇑*eS*	**Sn**	**01 49 14.8**	**-2.5**
	baz=86						
ARK	**Arkit**	**2.39**	**339**	⇑*iP*	**Pn**	**01 48 58.9**	**-2.1**
	baz=37						
ARK				⇑*iS*	**Sn**	**01 49 27.5**	**-3.5**
	baz=37						
ARLS	**Aral**	**2.46**	**21**	⇑*iP*	**Pn**	**01 48 59.2**	**-2.9**
	baz=20						
ARLS				⇑*iS*	**Sn**	**01 49 27.9**	**-5.0**
	baz=20						
TRKS	**Terek-Say**	**2.47**	**323**	⇑*iP*	**Pn**	**01 48 59.4**	**-2.7**
	baz=21						
TRKS				⇑*iS*	**Sn**	**01 49 28.6**	**-4.4**
	baz=21						
IUG	**Iuzhnay**	**3.48**	**319**	*eP*	**Pn**	**01 49 16.1**	**+0.2**
	46nm,0.5s						
IUG				*eS*	**Sn**	**01 50 01.5**	**+3.7**
	10nm,0.4s						
DZA	**Taraz**	**3.58**	**338**	*eP*	**Pn**	**01 49 21.0**	**+3.7**
	72nm,0.1s						
DZA				*eS*	**Sb**	**01 50 09.4**	**+0.7**
	121nm,0.2s						
SGDS	**Sogindy**	**4.04**	**16**	*eP*	**Pn**	**01 49 26.6**	**+2.9**
	0.9nm,0.6s						
SGDS				*eS*	**Sb**	**01 50 19.9**	**-2.1**
	5.1nm,0.9s						
KST	**Kastek**	**4.08**	**31**	*eP*	**Pn**	**01 49 25.3**	**+1.1**
	0.7nm,0.2s						
KST				*eS*	**Sn**	**01 50 17.5**	**+4.9**
	7.8nm,0.7s						
DGS	**Degeres**	**4.18**	**28**	*eP*	**Pn**	**01 49 28.3**	**+2.8**
	2.4nm,0.3s						
DGS				*eS*	**Sb**	**01 50 22.6**	**-3.2**
	5.0nm,0.6s						
BRLS	**Borolday**	**4.25**	**325**	*eP*	**Pn**	**01 49 30.0**	**+3.5**
	0.7nm,0.2s						
BRLS				*eS*	**Sn**	**01 50 25.1**	**+8.4**
	8.1nm,0.6s						
TNSS	**Tian-Shan**	**4.51**	**39**	*eP*	**Pn**	**01 49 33.3**	**+3.0**
	3.0nm,0.7s						
TNSS				*eS*	**Sb**	**01 50 31.6**	**-4.1**
	3.0nm,0.8s						
KRBS	**Karabastau**	**4.54**	**24**	*eP*	**Pn**	**01 49 34.6**	**+4.1**
	1.1nm,1.0s						
KRBS				*eS*	**Sb**	**01 50 33.5**	**-2.9**
	4.0nm,0.8s						
BTLS	**Baital**	**5.51**	**7**	*eP*	Pb	01 49 52.9	-4.7
	1.4nm,0.6s						
BTLS				*eS*	**Sb**	**01 51 04.5**	**+0.4**
	1.3nm,0.4s						

KRNET 28 01:53:28.9±0.1, **39.°58N**×**73.°37E, mb2.6, 9C-3D, Tajikistan-Xinjiang border region**

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

ARLS			⇑*i*S	Sn	01 54 41.3	+1.6
	baz=17						
GAR	**Garm**	**2.44 257**	⇓*i*S	Sb	01 54 42.7	-1.8
	baz=57						
ARK	**Arkit**	**2.46 335**	⇑*i*P	Pn	01 54 11.8	+1.3
	baz=35						
ARK			⇑*i*S	Sn	01 54 43.2	+1.8
	baz=35						
TRKS	**Terek-Say**	**2.59 320**	⇓*i*P	Pn	01 54 12.8	+0.6
	baz=19						
TRKS			⇓*i*S	Sn	01 54 44.6	+0.1
	baz=19						

*NEIC **28** 01:54:35.5±0.8, 46.5°S×0.2°×95.9°E×0.3, h10km±2km, mb4.4/10, Error ellipse: s-maj=40.4km s-min=10.4km az=312.0*
*IDC **28** 01:54:35.1±0.9, 46.44S×96.09E, h0km, mb4.2/9, mbtmp4.2/9, MS4.1/23, Error ellipse: s-maj=31.0km s-min=18.2km az=130.0*
ISC 28 01:54:37.2±0.8, 46.6°S±0.1°×96.1°E±0.2°, h16km, n46, σ1§27/26, mb4.3/13, MS4.2/23, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**17.91**	**56**	T	T	02 17 06.5	
	baz=224,slow=74						
H01W3	**Cape Leeuwin H**	**17.92**	**56**	T	T	02 17 19.8	
	baz=224,slow=74,SNR=591						
H01W1	**Cape Leeuwin H**	**17.93**	**56**	T	T	02 17 20.1	
	baz=224,slow=74,SNR=415						
CASY	**Casey**	**21.16**	**164**	P	**P**	**01 59 18.7**	**-2.7**
CASY				IAmb	IAmb	01 59 30.8	
	comp=Z,22nm,1.1s						
MAW	**Mawson**	**27.14**	**207**	P	**P**	**02 00 22.1**	**+2.9**
	comp=Z,7.6nm,1.1s,baz=62,slow=13,SNR=6.7						
MAW				LR	LR	02 08 53.8	
	comp=Z,188nm,19.6s,baz=48,slow=32						
	comp=Z,7.6nm,1.1s						
MAW	**Mawson**	**27.14**	**207**	P	**P**	**02 00 17.4**	**-1.8**
STKA	**Stephens Creek**	**37.61**	**83**	P	**P**	**02 01 51.9**	**+0.7**
	comp=Z,2.7nm,0.9s,baz=282,slow=9.3,SNR=2.4						
	comp=Z,2.7nm,0.9s						
STKA	**Stephens Creek**	**37.61**	**83**	P	**P**	**02 01 50.7**	**-0.4**
ASAR	**Alice Springs**	**37.92**	**66**	P	**P**	**02 01 54.1**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=217,slow=7.2,SNR=2.9						
ASAR				PcP	**PcP**	**02 04 09.8**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=224,slow=2.6,SNR=2.2						
ASAR				LR	LR	02 15 21.7	
	comp=Z,406nm,21.8s,baz=182,slow=33						
	comp=Z,0.3nm,0.3s						
VNDA	**Vanda**	**39.77**	**162**	P	**P**	**02 02 09.8**	**+1.1**
	comp=Z,1.4nm,0.8s,baz=276,slow=9.8,SNR=8.2						
VNDA				LR	LR	02 17 16.5	
	comp=Z,355nm,18.9s,baz=284,slow=34						
	comp=Z,1.4nm,0.8s						
VNDA	**Vanda**	**39.77**	**162**	P	**P**	**02 02 09.7**	**+1.0**
VNDA				IAmb	IAmb	02 02 24.4	
	comp=Z,7.3nm,1.4s						
LEM	**Lembang**	**40.84**	**18**	LR	LR	02 16 44.8	
	comp=Z,126nm,18.5s,baz=204,slow=33						
SBA	**Scott Base**	**40.86**	**162**	P	**P**	**02 02 18.1**	**+0.4**
SBA				IAmb	IAmb	02 02 32.4	
	comp=Z,8.6nm,1.3s						
WRA	**Warramunga Arr**	**40.95**	**63**	P	**P**	**02 02 18.9**	**-0.2**
	comp=Z,2.8nm,1.1s,baz=220,slow=7.9,SNR=6.3						
WRA				LR	LR	02 17 20.2	
	comp=Z,906nm,21.0s,baz=192,slow=33						
	comp=Z,2.8nm,1.1s						
WB2	**Warramunga Arr**	**40.95**	**63**	P	**P**	**02 02 18.9**	**-0.2**
WB2				IAmb	IAmb	02 02 58.7	
	comp=Z,11nm,1.3s						
QSPA	**South Pole Qui**	**43.54**	**180**	P	**P**	**02 02 41.5**	**+1.6**
	comp=Z,2.3nm,1.0s,baz=317,slow=14,SNR=5.5						
QSPA				LR	LR	02 19 46.9	
	comp=Z,392nm,18.7s,baz=310,slow=35						
	comp=Z,2.3nm,1.0s						
QSPA	**South Pole Qui**	**43.54**	**180**	P	**P**	**02 02 39.6**	**-0.3**
QSPA				IAmb	IAmb	02 02 48.5	
	comp=Z,11nm,1.2s						
H08S2	**Diego Garcia H**	**43.80**	**325**	T	T	02 49 33.0	
	baz=156,slow=76,SNR=51						
H08S1	**Diego Garcia H**	**43.81**	**325**	T	T	02 49 33.6	
	baz=156,slow=76,SNR=70						
H08S3	**Diego Garcia H**	**43.82**	**325**	T	T	02 49 34.5	
	baz=156,slow=76,SNR=60						
TROLL	**Troll, Antarti**	**47.55**	**205**	P	**P**	**02 03 12.6**	**+1.0**
CTA	**Charters Tower**	**48.48**	**74**	LR	LR	02 22 19.5	
	comp=Z,308nm,19.9s,baz=254,slow=34						
SNAA	**Sanae**	**49.23**	**204**	P	**P**	**02 03 25.0**	**+0.6**
SNAA	**Sanae**	**49.23**	**204**	P	**P**	**02 03 25.3**	**+1.0**
	comp=Z,4.3nm,0.9s,baz=137,slow=7.9,SNR=10						
SNAA				LR	LR	02 22 29.7	
	comp=Z,95nm,18.1s,baz=113,slow=34						
	comp=Z,4.3nm,0.9s						
SNAA	**Sanae**	**49.23**	**204**	P	**P**	**02 03 23.2**	**-1.1**
VNA2	**Neumayer--Watz**	**50.88**	**204**	P	**P**	**02 03 37.6**	**+0.8**
	baz=108,slow=7.7						
RPZ	**Rata Peaks**	**51.03**	**116**	LR	LR	02 21 16.3	
	comp=Z,284nm,19.0s,baz=241,slow=31						
VNA1	**Neumayer--Stat**	**51.27**	**204**	P	**P**	**02 03 40.3**	**+0.7**
VNA3	**Neumayer Olymp**	**51.35**	**203**	P	**P**	**02 03 37.8**	**-2.6**
BELA	**Belgrano 2**	**52.21**	**192**	P	**P**	**02 03 46.1**	**-0.6**
BELA				IAmb	IAmb	02 03 54.6	
	comp=Z,8.6nm,1.5s						
SIJI	**Sorong**	**54.91**	**45**	LR	LR	02 28 17.3	
	comp=Z,50nm,18.5s,baz=206,slow=37						
PMG	**Port Moresby**	**56.94**	**66**	LR	LR	02 27 09.2	
	comp=Z,298nm,20.1s,baz=251,slow=34						
BOSA	**Boshof**	**57.07**	**262**	P	**P**	**02 04 22.4**	**-0.4**
	comp=Z,5.4nm,1.0s,baz=120,slow=8.1,SNR=3.4						
BOSA				LR	LR	02 23 22.6	
	comp=Z,354nm,21.5s,baz=176,slow=30						
	comp=Z,5.4nm,1.0s						
SUR	**Sutherland**	**57.74**	**255**	LR	LR	02 24 39.3	
	comp=Z,176nm,18.2s,baz=142,slow=31						
URZ	**Urewera**	**57.87**	**113**	LR	LR	02 26 16.5	
	comp=Z,132nm,18.1s,baz=211,slow=33						
LBTB	**Lobatse**	**59.14**	**265**	LR	LR	02 24 53.5	
	comp=Z,212nm,20.6s,baz=135,slow=31						
DZM	**Mont Dzumac**	**60.91**	**92**	LR	LR	02 28 43.0	
	comp=Z,122nm,18.5s,baz=222,slow=34						
KRVT	**Keravat (AS076**	**63.92**	**67**	LR	LR	02 31 59.6	
	comp=Z,122nm,20.2s,baz=349,slow=35						
LSZ	**Lusaka**	**63.93**	**275**	LR	LR	02 28 04.4	
	comp=Z,204nm,19.6s,baz=141,slow=32						
CMAR	**Chiang Mai Arr**	**64.80**	**3**	P	**P**	**02 05 14.8**	**-0.3**
	comp=Z,3.5nm,0.3s,baz=224,slow=6.1,SNR=2.0						
CMAR				LR	LR	02 31 40.0	
	comp=Z,74nm,19.1s,baz=190,slow=34						
	comp=Z,3.5nm,0.3s						
SMAI	**San Martin Ant**	**64.90**	**187**	P	**P**	**02 05 15.2**	**+0.1**
KMBO	**Kilima Mbogo**	**68.26**	**293**	LR	LR	02 29 12.2	
	comp=Z,109nm,20.0s,baz=97,slow=30						
TSUM	**Tsumeb**	**68.53**	**264**	LR	LR	02 30 10.4	
	comp=Z,240nm,21.6s,baz=130,slow=31						
MBAR	**Mbarara**	**72.87**	**288**	LR	LR	02 34 09.1	
	comp=Z,178nm,19.4s,baz=124,slow=33						
JCJ	**Chichijima**	**84.35**	**40**	LR	LR	02 43 01.6	
	comp=Z,28nm,20.9s,baz=115,slow=34						
TXAR	**Lajitas Array**	**156.84**	**131**	PKPab	**PKPab**	**02 15 01.9**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=213,slow=9.3,SNR=6.4						

*UPA **28** 02:00:40.9±1.8, 7.15N×78.50W, h20km±16km, MW3.9*
*RSNC **28** 02:00:42.3±1.0, 7.31N×78.40W, h28km±5km, ML2.5*
ISC 28 02:00:41.2±1.3, 7.26N±0.05°×78.46W±0.03°, h27km±13km, n23, σ1§48/43, Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTAC	**Punta Ardita,**	**0.66**	**99**	*e*P	**Pb**	**02 00 54.1**	**0.0**
PTAC				*e*S	**Sb**	**02 01 02.2**	**-0.8**
PTAC	**Punta Ardita,**	**0.66**	**99**	*e*P	**Pb**	**02 00 54.1**	**0.0**
PTAC				*e*S	**Sb**	**02 01 03.0**	**0.0**
UPD2	**Meteti**	**1.36**	**19**	*e*P	**Pn**	**02 01 04.4**	**-0.1**
SOLC	**Bahia Solano**	**1.46**	**134**	*e*P	**Pn**	**02 01 06.3**	**+0.4**
SOLC				*e*S	**Sn**	**02 01 23.7**	**-0.4**
CAPC	**Capurgana**	**1.76**	**39**	*e*P	**Pn**	**02 01 09.7**	**-0.2**
CAPC				*e*S	**Sn**	**02 01 29.2**	**-2.3**
CAPC				*i*		02 01 31.6	
	comp=Z,42nm,0.2s						
AZU	**Azuero**	**1.87**	**287**	*e*P	**Pn**	**02 01 12.1**	**+0.7**
AZU				*e*S	**Sn**	**02 01 33.6**	**-0.6**
AZU				*i*		02 01 35.2	
	comp=Z,123nm,0.4s						
AZU	**Azuero**	**1.87**	**287**	*e*P	**Pn**	**02 01 12.5**	**+1.0**
AZU				*e*S	**Sn**	**02 01 34.1**	**-0.1**
UPA	**Univ. de Panam**	**2.02**	**328**	*e*P	**Pn**	**02 01 13.0**	**-0.4**
UPA				*e*S	**Sn**	**02 01 37.8**	**0.0**
UPA				*i*		02 01 44.9	
	comp=Z,14nm,0.3s						
UPA	**Univ. de Panam**	**2.02**	**328**	*e*P	**Pn**	**02 01 12.9**	**-0.6**
UPA				*e*S	**Sn**	**02 01 39.6**	**+1.9**
CHIT3	**Chitre**	**2.06**	**290**	*e*P	**Pn**	**02 01 15.3**	**+1.3**
CHIT3				*e*S	**Sn**	**02 01 38.5**	**-0.3**
VTON	**El Valle, Cocl**	**2.12**	**310**	*e*P	**Pn**	**02 01 15.4**	**+0.5**
VTON				*e*S	**Sn**	**02 01 41.5**	**+1.1**
DBBC	**Dabeiba**	**2.25**	**96**	*e*P	**Pn**	**02 01 18.2**	**+1.5**
DBBC				*e*S	**Sn**	**02 01 42.9**	**-0.8**
DBBC				*i*		02 01 46.3	
	comp=Z,112nm,0.6s						
BCIP	**Isla Barro Col**	**2.34**	**324**	*e*P	**Pn**	**02 01 17.9**	**0.0**
BCIP				*e*S	**Sn**	**02 01 46.1**	**+0.4**
BCIP	**Isla Barro Col**	**2.34**	**324**	*e*P	**Pn**	**02 01 18.8**	**+0.9**
BCIP				*e*S	**Sn**	**02 01 46.9**	**+1.2**
CACAO	**El Cacao, Vera**	**2.38**	**272**	*e*P	**Pn**	**02 01 16.7**	**-1.8**
CACAO				*e*S	**Sn**	**02 01 44.5**	**-2.3**
CBOC	**Ciudad Bolivar**	**2.80**	**119**	*e*P	**Pn**	**02 01 25.5**	**+1.1**
CBOC				*e*S	**Sn**	**02 01 56.5**	**-0.9**
UREC	**San Jos de Ur**	**2.95**	**80**	*e*P	**Pn**	**02 01 26.3**	**0.0**
UREC				*e*S	**Sn**	**02 01 59.6**	**-1.2**
UREC				*i*		02 02 03.5	
	comp=Z,6.7nm,0.4s						
UREC	**San Jos de Ur**	**2.95**	**80**	*e*P	**Pn**	**02 01 28.3**	**+2.0**
UREC				*e*S	**Sn**	**02 02 01.5**	**+0.7**
HELC	**Santa Helena**	**3.10**	**110**	*e*P	**Pn**	**02 01 31.0**	**+2.3**
HELC				*e*S	**Sn**	**02 02 04.8**	**-0.3**
ZARC	**Zaragoza, Cauc**	**3.58**	**86**	*e*P	**Pn**	**02 01 37.3**	**+2.3**
ZARC				*e*S	**Sn**	**02 02 14.5**	**-2.1**
ZARC				*i*		02 02 18.5	
	comp=Z,7.7nm,0.3s						
GUY2C	**Guyana, Caldas**	**3.68**	**123**	*e*P	**Pn**	**02 01 39.2**	**+2.4**
YOTC	**Yotoco, Valle**	**3.87**	**147**	*e*P	**Pn**	**02 01 39.8**	**+0.7**
PTBC	**PUERTO BERRIO,**	**4.04**	**100**	*e*P	**Pn**	**02 01 43.7**	**+2.4**
PTBC				*e*S	**Sn**	**02 02 23.2**	**-4.7**

IDC 28 02:15:39.1±3.2, 46.78S×96.10E, h0km, mb3.6/4, mbtmp3.6/4, MS3.8/2, Error ellipse: s-maj=104.2km s-min=28.8km az=128.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**18.03**	**55**	T	T	02 38 08.3	
	baz=224,slow=74						
H01W3	**Cape Leeuwin H**	**18.05**	**55**	T	T	02 38 10.4	
	baz=224						
H01W1	**Cape Leeuwin H**	**18.05**	**55**	T	T	02 38 10.1	
	baz=224,slow=74						
MAW	**Mawson**	**26.97**	**208**	LR	LR	02 29 56.3	
	comp=Z,99nm,18.3s,baz=51,slow=32						
ASAR	**Alice Springs**	**38.02**	**66**	P	P	02 22 59.5	+0.5
	0.2nm,0.3s,baz=224,slow=7.8,SNR=3.1						
	0.2nm,0.3s						
VNDA	**Vanda**	**39.61**	**162**	P	P	02 23 10.9	-0.8
	0.7nm,1.1s,baz=284,slow=6.7,SNR=3.1						
	0.7nm,1.1s						
WRA	**Warramunga Arr**	**41.05**	**62**	P	P	02 23 23.8	-0.5
	0.9nm,0.9s,baz=221,slow=7.7,SNR=2.9						
	0.9nm,0.9s						
H08S2	**Diego Garcia H**	**43.93**	**325**	T	T	03 10 26.6	
	baz=156,slow=76,SNR=38						
H08S1	**Diego Garcia H**	**43.94**	**325**	T	T	03 10 23.5	
	baz=156,slow=76,SNR=40						
H08S3	**Diego Garcia H**	**43.95**	**325**	T	T	03 10 30.5	
	baz=156,slow=76,SNR=49						
SNAA	**Sanae**	**49.06**	**204**	P	P	02 24 32.3	+4.8
SNAA	**Sanae**	**49.06**	**204**	P	P	02 24 27.8	+0.3
	2.2nm,1.1s,baz=124,slow=7.3,SNR=3.7						
	2.2nm,1.1s						
RPZ	**Rata Peaks**	**50.98**	**116**	LR	LR	02 41 27.3	
	comp=Z,155nm,20.6s,baz=237,slow=30						

*IDC **28** 02:18:25.7±1.3, 46.66S×96.31E, h0km, mb4.2/4, mbtmp4.2/4, MS4.0/24, Error ellipse: s-maj=53.3km s-min=29.2km az=127.0*
ISC 28 02:18:27.2±1.3, 46.7°S±0.3°×96.3°E±0.3°, h10km, n34, σ1§36/5, mb4.0/4, MS4.0/24, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**17.86**	**55**	T	T	02 40 51.1	
	baz=224,slow=74,SNR=69						
H01W3	**Cape Leeuwin H**	**17.87**	**55**	T	T	02 40 52.1	
	baz=224,slow=74,SNR=259						
H01W1	**Cape Leeuwin H**	**17.87**	**55**	T	T	02 40 52.2	
	baz=224,slow=74,SNR=79						
STKA	**Stephens Creek**	**37.50**	**83**	LR	LR	02 38 51.0	
	comp=Z,200nm,18.4s,baz=212,slow=33						
ASAR	**Alice Springs**	**37.84**	**66**	P	**P**	**02 25 43.8**	**-0.2**
	1.6nm,1.1s,baz=220,slow=7.3,SNR=4.5						
ASAR				LR	LR	02 39 09.6	
	comp=Z,236nm,19.2s,baz=178,slow=33						
	1.6nm,1.1s						
VNDA	**Vanda**	**39.65**	**162**	LR	LR	02 41 14.4	
	comp=Z,314nm,18.1s,baz=274,slow=34						
WRA	**Warramunga Arr**	**40.87**	**62**	P	**P**	**02 26 08.8**	**-0.6**
	1.5nm,0.9s,baz=219,slow=10.0,SNR=4.1						
WRA				LR	LR	02 41 07.7	
	comp=Z,525nm,19.4s,baz=216,slow=33						
	1.5nm,0.9s						
QSPA	**South Pole Qui**	**43.45**	**180**	LR	LR	02 43 35.8	
	comp=Z,362nm,18.2s,baz=312,slow=35						
H08S2	**Diego Garcia H**	**43.94**	**325**	T	T	03 13 08.9	
	baz=156,slow=76,SNR=45						
H08S1	**Diego Garcia H**	**43.95**	**325**	T	T	03 13 09.5	
	baz=156,slow=76,SNR=46						
H08S3	**Diego Garcia H**	**43.96**	**325**	T	T	03 13 10.5	
	baz=156,slow=76,SNR=47						
KAPI	**Kappa**	**46.19**	**33**	LR	LR	02 46 09.7	
	comp=Z,88nm,18.8s,baz=157,slow=36						
CTA	**Charters Tower**	**48.38**	**74**	LR	LR	02 45 57.1	
	comp=Z,167nm,20.0s,baz=260,slow=34						
SNAA	**Sanae**	**49.20**	**204**	P	**P**	**02 27 14.6**	**-0.5**
	2.9nm,1.1s,baz=130,slow=4.7,SNR=4.6						
	2.9nm,1.1s						
PALK	**Pallekele**	**55.50**	**341**	LR	LR	02 45 45.3	
	comp=Z,319nm,21.1s,baz=249,slow=30						
PMG	**Port Moresby**	**56.85**	**66**	LR	LR	02 50 58.4	
	comp=Z,195nm,18.6s,baz=232,slow=34						
BOSA	**Boshof**	**57.18**	**262**	LR	LR	02 47 11.6	
	comp=Z,170nm,20.7s,baz=176,slow=30						
URZ	**Urewera**	**57.72**	**113**	LR	LR	02 48 57.0	
	comp=Z,102nm,18.2s,baz=211,slow=32						
SUR	**Sutherland**	**57.84**	**255**	LR	LR	02 48 18.8	
	comp=Z,127nm,18.6s,baz=140,slow=31						
LBTB	**Lobatse**	**59.26**	**265**	LR	LR	02 48 52.8	
	comp=Z,122nm,19.5s,baz=139,slow=31						
DAV	**Davao City (W)**	**59.51**	**34**	LR	LR	02 54 31.7	
	comp=Z,67nm,19.1s,baz=166,slow=36						
DZM	**Mont Dzumac**	**60.78**	**92**	LR	LR	02 50 50.0	
	comp=Z,112nm,19.2s,baz=218,slow=32						
LSZ	**Lusaka**	**64.07**	**275**	LR	LR	02 52 12.7	
	comp=Z,134nm,18.1s,baz=137,slow=32						
CMAR	**Chiang Mai Arr**	**64.88**	**3**	P	**P**	**02 29 06.3**	**-0.2**
	4.7nm,0.2s,baz=204,slow=6.5,SNR=6.3						
	4.7nm,0.2s						
TSUM	**Tsumeb**	**68.64**	**264**	LR	LR	02 53 60.0	
	comp=Z,95nm,21.3s,baz=120,slow=31						
MBAR	**Mbarara**	**73.02**	**288**	LR	LR	02 58 08.3	
	comp=Z,90nm,18.9s,baz=124,slow=33						
GUMO	**Guam**	**74.11**	**49**	LR	LR	03 02 46.2	
	comp=Z,26nm,19.2s,baz=101,slow=36						
ATD	**Arta Tunnel**	**75.08**	**305**	LR	LR	02 58 00.5	
	comp=Z,46nm,19.5s,baz=212,slow=32						
AFI	**Afiamalu**	**81.31**	**101**	LR	LR	03 00 58.8	
	comp=Z,37nm,19.8s,baz=80,slow=31						
PLCA	**Paso Flores**	**92.18**	**190**	LR	LR	03 13 39.6	
	comp=Z,60nm,18.5s,baz=169,slow=36						
PPT	**Papeete**	**92.90**	**119**	LR	LR	03 05 08.7	
	comp=Z,45nm,18.8s,baz=230,slow=30						
GNI	**Garni**	**97.93**	**323**	LR	LR	03 12 57.7	
	comp=Z,29nm,19.0s,baz=172,slow=33						
NB2	**NORSAR Subarra**	**127.23**	**322**	PKP	PKiKP	02 37 39.8	+8.6
	comp=Z,1.2nm,0.5s,baz=21,slow=3.8						
NVAR	**Mina Array Bea**	**153.36**	**95**	PKPbc	**PKiKP**	**02 38 27.4**	**+1.8**
	comp=Z,0.3nm,0.8s,baz=225,slow=3.6,SNR=1.6						

*NEIC **28** 02:18:29.2±1.2, 24.9S×0.1°×177.4W±0.1°, h173km±6km, mb4.5/17, Error ellipse: s-maj=18.2km s-min=17.4km az=153.0*
*IDC **28** 02:18:30.8±3.5, 24.92S×177.55W, h190km±29km, mb3.9/16, mbtmp4.4/17, MS3.5/1, Error ellipse: s-maj=18.8km s-min=13.9km az=100.0*
ISC 28 02:18:28.6±0.5, 24.87S±0.08°×177.35W±0.09°, h176km, n70, σ1§12/69, mb4.4/22, 2C-2D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**8.29**	**328**	P	**Pn**	**02 20 28.0**	**+2.1**
	7.3nm,0.6s,baz=166,slow=9.0,SNR=7.2						
MSVF	**Nonsavu**	**8.29**	**328**		**Pn**	**02 20 25.6**	**-0.3**
NIUE	**Niue**	**8.98**	**52**	Pn	**Pn**	**02 20 32.3**	**-2.5**
DZM	**Mont Dzumac**	**15.13**	**277**	P	**P**	**02 21 56.9**	**+2.2**
	20nm,1.0s,baz=65,slow=17,SNR=7.8						
DZM	**Mont Dzumac**	**15.13**	**277**	P	**Pn**	**02 21 51.2**	**-2.4**
DZM				IAmb	IAmb	02 22 01.3	
	comp=Z,20nm,0.9s						
BKZ	**Black Stump Fm**	**15.18**	**199**	P	**P**	**02 21 54.9**	**0.0**
BKZ				IAmb	IAmb	02 22 33.2	
	comp=Z,23nm,1.4s						
WHZ	**Wether Hill Ro**	**24.09**	**206**	P	**P**	**02 23 28.4**	**+0.6**
WHZ				IAmb	IAmb	02 23 32.4	
	comp=Z,32nm,1.4s						
CTA	**Charters Tower**	**33.90**	**271**	P	**P**	**02 24 55.5**	**+0.5**
	comp=Z,52nm,0.4s,baz=97,slow=9.8,SNR=103						
CTAO	**Charters Tower**	**33.90**	**271**	P	**P**	**02 24 55.3**	**+0.3**
STKA	**Stephens Creek**	**36.63**	**249**	P	**P**	**02 25 16.8**	**-1.4**
	comp=Z,1.3nm,0.4s,baz=114,slow=13,SNR=3.9						
STKA				PcP	**PcP**	**02 27 37.1**	**-0.3**
	comp=Z,2.1nm,0.5s,baz=359,slow=4.7,SNR=3.7						
	comp=Z,1.3nm,0.4s						
STKA	**Stephens Creek**	**36.63**	**249**	P	**P**	**02 25 17.0**	**-1.1**
PMG	**Port Moresby**	**37.09**	**288**	P	**P**	**02 25 21.6**	**-0.6**
	comp=Z,13nm,0.5s,baz=40,slow=0.8,SNR=4.4						
	comp=Z,13nm,0.5s						
ASAR	**Alice Springs**	**44.27**	**261**	P	**P**	**02 26 19.1**	**-1.9**
	comp=Z,1.3nm,0.3s,baz=94,slow=7.4,SNR=19						
ASAR				PcP	**PcP**	**02 28 02.6**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=96,slow=3.2,SNR=1.8						
	comp=Z,1.3nm,0.3s						
ASAR	**Alice Springs**	**44.27**	**261**	P	**P**	**02 26 20.7**	**-0.3**
ASAR				pP	**pP**	**02 26 58.9**	**0.0**
ASAR					**PcP**	**02 28 02.4**	**+0.1**
WRA	**Warramunga Arr**	**44.76**	**266**	P	**P**	**02 26 23.2**	**-1.6**
	comp=Z,8.3nm,0.4s,baz=99,slow=7.0,SNR=101						
WRA				PcP	**PcP**	**02 28 03.9**	**-0.1**
	comp=Z,1.2nm,0.8s,baz=98,slow=3.2,SNR=3.3						
	comp=Z,8.3nm,0.4s						
KNRA	**Kununurra**	**51.10**	**270**	P	**P**	**02 27 13.7**	**+0.2**
VNDA	**Vanda**	**53.64**	**186**	P	**P**	**02 27 31.8**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=340,slow=1.2,SNR=2.4						
	comp=Z,0.6nm,0.7s						
VNDA	**Vanda**	**53.64**	**186**	P	**P**	**02 27 32.0**	**+0.7**
SIJI	**Sorong**	**55.03**	**288**	LR	LR	02 49 42.1	
	comp=Z,42nm,20.7s,baz=270,slow=34						
CASY	**Casey**	**60.31**	**206**	P	**P**	**02 28 17.5**	**-0.8**
CASY				IAmb	IAmb	02 28 18.3	
	comp=Z,20nm,1.4s						
QSPA	**South Pole Qui**	**65.22**	**180**	P	**P**	**02 28 51.7**	**+0.7**
	comp=Z,1.9nm,0.8s,baz=19,slow=3.8,SNR=4.1						
	comp=Z,1.9nm,0.8s						
LEM	**Lembang**	**73.60**	**270**	P	**P**	**02 29 43.1**	**-0.1**
	comp=Z,25nm,0.6s,baz=104,slow=5.3,SNR=4.1						
	comp=Z,25nm,0.6s						
MAW	**Mawson**	**77.68**	**200**	P	**P**	**02 30 05.8**	**+0.6**
	comp=Z,3.2nm,0.4s,baz=138,slow=4.6,SNR=23						
	comp=Z,3.2nm,0.4s						
MAW	**Mawson**	**77.68**	**200**	P	**P**	**02 30 06.1**	**+0.9**
PETK	**Petropavlovsk-**	**80.63**	**345**	P	**P**	**02 30 21.5**	**+0.3**
	comp=Z,2.7nm,0.7s,baz=154,slow=7.6,SNR=7.9						
	comp=Z,2.7nm,0.7s						
H03S2	**Juan Fernandez**	**83.05**	**124**	T	T	04 02 24.5	
	baz=244						
H03S1	**Juan Fernandez**	**83.06**	**124**	T	T	04 02 50.6	
	baz=244						
H03S3	**Juan Fernandez**	**83.06**	**124**	T	T	04 03 12.7	
	baz=244						
TROLL	**Troll, Antarti**	**83.39**	**180**	P	**P**	**02 30 36.2**	**+0.4**
SNAA	**Sanae**	**83.65**	**178**	P	**P**	**02 30 36.9**	**-0.1**
SNAA	**Sanae**	**83.65**	**178**	P	**P**	**02 30 36.7**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=212,slow=6.7,SNR=17						
	comp=Z,0.9nm,0.6s						
SNAA	**Sanae**	**83.65**	**178**	P	**P**	**02 30 37.0**	**0.0**
VNA3	**Neumayer Olymp**	**83.77**	**176**	P	**P**	**02 30 37.9**	**+0.4**
NVAR	**Mina Array Bea**	**83.79**	**43**	P	**P**	**02 30 39.3**	**+0.9**
	comp=Z,0.6nm,0.8s,baz=271,slow=9.3,SNR=3.8						
	comp=Z,0.6nm,0.8s						
VNA2	**Neumayer--Watz**	**84.21**	**177**	P	**P**	**02 30 40.5**	**+0.7**
	baz=188,slow=4.4						
GSI	**Gunungsitoli**	**86.07**	**273**	P	**P**	**02 30 49.8**	**-0.3**
O18K	**Koktuh Hills**	**86.35**	**11**

mbtmp3.6/16, ML3.1/6, Error ellipse: s-maj=21.2km s-min=15.7km az=137.0
*SOME **28** 02:25:22.0, 39°.53N × 73°.68E, h10km*
*KRNET **28** 02:25:22.4±0.1, 39°.51N × 73°.71E, mb4.2*
*NNC **28** 02:25:27.6±1.4, 39°.67N × 73°.75E, h0km, mb4.5, mpv4.1, Error ellipse: s-maj=10.8km s-min=5.5km az=172.0*

ISC 28 02:25:22.8±1.5, **39°.41N**±0°.05 × **73°.62E**±0°.03, **h3**km±10km, **n89**, σ2°.72/126, **mb3.6**/10, **32C-21D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
OHH	**Osh**	**1.29**	**330**	⇑*i*	*P*	**Pn**	**02 25 46.1**	**-1.6**
	baz=25							
OHH				⇑*i*	*S*	**Sb**	**02 26 02.9**	**-1.8**
	baz=25							
DRK	**Karamyk**	**1.41**	**274**	⇑*i*	*P*	**Pn**	**02 25 49.9**	**+0.3**
	baz=69							
DRK				⇑*e*	*S*	**Sg**	**02 26 10.6**	**+2.5**
	baz=69							
BTK	**Batken**	**2.25**	**288**	⇑*e*	*P*	**Pn**	**02 26 03.3**	**+2.2**
	baz=85							
BTK				⇑*i*	*S*	**Sb**	**02 26 33.3**	**+0.8**
	baz=85							
ARLS	**Aral**	**2.51**	**12**	⇓*i*	*P*	**Pn**	**02 26 04.6**	**0.0**
	baz=11							
ARLS				⇓*i*	*S*	**Sn**	**02 26 35.4**	**-0.4**
	baz=11							
GAR	**Garm**	**2.60**	**262**	⇑*i*	*P*	**Pn**	**02 26 08.6**	**+2.8**
	baz=60							
GAR				⇑*e*	*S*	**Sb**	**02 26 42.8**	**+0.4**
	baz=60							
ARK	**Arkit**	**2.70**	**333**	⇑*i*	*P*	**Pn**	**02 26 08.5**	**+1.3**
	baz=30							
ARK				⇑*i*	*S*	**Sn**	**02 26 42.0**	**+1.5**
	baz=30							
AML	**Almayashu**	**2.72**	**1**	*P*		**Pn**	**02 26 09.4**	**+1.7**
	SNR=42							
TRKS	**Terek-Say**	**2.84**	**319**	⇑*e*	*P*	**Pn**	**02 26 09.6**	**+0.4**
	baz=16							
TRKS				⇑*i*	*S*	**Sn**	**02 26 44.2**	**+0.2**
	baz=16							
UCH	**Uchtor**	**2.90**	**13**	*P*		**Pn**	**02 26 12.4**	**+2.2**
	SNR=38							
UCH	**Uchtor**	**2.90**	**13**	⇑*i*	*P*	**Pn**	**02 26 10.3**	**0.0**
	baz=12							
UCH				⇑*i*	*S*	**Sn**	**02 26 45.2**	**-0.6**
	baz=12							
EKS2	**Erkin-Say**	**3.25**	**2**	*P*		**Pn**	**02 26 17.4**	**+2.6**
	SNR=5.7							
EKS2	**Erkin-Say**	**3.25**	**2**	⇓*e*	*P*	**Pn**	**02 26 15.1**	**+0.3**
	baz=1.0							
EKS2				⇓*e*	*S*	**Sn**	**02 26 53.6**	**-0.5**
	baz=1.0							
AAK	**Ala-Archa**	**3.29**	**11**	*P*		**Pn**	**02 26 19.3**	**+3.9**
	SNR=23							
AAK	**Ala-Archa**	**3.29**	**11**	*Pn*		**Pn**	**02 26 19.0**	**+3.6**
	11nm,0.3s,baz=178,slow=7.1,SNR=30							
AAK					*Sn*	**Sb**	**02 26 59.8**	**-2.8**
	10nm,0.3s,baz=3.5,slow=20,SNR=8.6							
	27nm,0.4s							
AAK	**Ala-Archa**	**3.29**	**11**	⇑*i*	*P*	**Pn**	**02 26 15.5**	**+0.1**
	baz=11							
AAK				⇑*i*	*S*	**Sn**	**02 26 54.3**	**-0.9**
	baz=11							
KBK	**Karagaybulak**	**3.40**	**17**	*P*		**Pn**	**02 26 19.8**	**+2.9**
	SNR=27							
KBK	**Karagaybulak**	**3.40**	**17**	⇑*i*	*P*	**Pn**	**02 26 16.8**	**-0.1**
	baz=16							
KBK				⇑*i*	*S*	**Sn**	**02 26 56.7**	**-1.1**
	baz=16							
ULHL	**Ulahol**	**3.46**	**34**	*P*		**Pb**	**02 26 24.7**	**-0.2**
	SNR=24							
ULHL	**Ulahol**	**3.46**	**34**	⇑*e*	*P*	**Pn**	**02 26 17.8**	**0.0**
	baz=34							
ULHL				⇑*e*	*S*	**Sn**	**02 26 58.5**	**-1.0**
	baz=34							
BOOM	**Boomskoye usch**	**3.55**	**29**	⇑*e*	*P*	**Pn**	**02 26 18.9**	**0.0**
	baz=29							
BOOM				⇑*i*	*S*	**Sn**	**02 27 00.3**	**-1.1**
	baz=29							
CHGR	**Chuyangaron**	**3.55**	**259**	⇓*i*	*P*	**Pn**	**02 26 21.7**	**+2.8**
	baz=58							
CHGR				⇓*e*	*S*	**Sn**	**02 27 05.6**	**+4.1**
	baz=58							
CHMS	**Chumysh**	**3.69**	**13**	*P*		**Pn**	**02 26 23.0**	**+2.3**
	SNR=9.8							
CHMS	**Chumysh**	**3.69**	**13**	⇓*e*	*P*	**Pn**	**02 26 20.8**	**+0.1**
	baz=12							
CHMS				⇓*i*	*S*	**Sn**	**02 27 03.8**	**-0.9**
	baz=12							
CHMS	**Chumysh**	**3.69**	**13**	⇓*Pn*		**Pn**	**02 26 23.0**	**+2.3**
	31nm,0.7s							
CHMS				⇓*Lg*		Lg	02 27 18.0	
	138nm,1.1s							
TKM2	**Tokmak 2**	**3.81**	**22**	*P*		**Pn**	**02 26 24.7**	**+2.1**
	SNR=10							
TKM2	**Tokmak 2**	**3.81**	**22**	⇓*i*	*P*	**Pn**	**02 26 22.7**	**+0.1**
	baz=22							
TKM2				⇓*e*	*S*	**Sn**	**02 27 06.9**	**-1.2**
	baz=22							
TKM2	**Tokmak 2**	**3.81**	**22**	⇓*Pn*		**Pn**	**02 26 24.8**	**+2.1**
	15nm,0.6s							
TKM2				⇑*Lg*		Lg	02 27 20.8	
	56nm,0.6s							
KDJ	**Kajisay**	**3.84**	**44**	⇑*i*	*P*	**Pn**	**02 26 23.2**	**+0.3**
	baz=44							
KDJ				⇑*i*	*S*	**Sn**	**02 27 07.9**	**-0.7**
	baz=44							
IUG	**Iuzhnay**	**3.86**	**316**	*eP*		**Pb**	**02 26 34.0**	**+2.5**
	686nm,0.6s							
IUG				*eS*		**Sg**	**02 27 25.8**	**-1.0**
	181nm,0.1s							
IUG	**Iuzhnay**	**3.86**	**316**	*Pg*		**Pb**	**02 26 34.6**	**+3.0**
	2μm,0.5s							
IUG				*Lg*		Lg	02 27 25.9	
	166nm,0.5s							
USP	**Ospenovka**	**3.91**	**9**	*P*		**Pn**	**02 26 26.9**	**+3.1**
	SNR=7.4							
USP	**Ospenovka**	**3.91**	**9**	⇑*e*	*P*	**Pn**	**02 26 24.0**	**+0.2**
	baz=9.0							
USP				⇑*e*	*S*	**Sn**	**02 27 08.9**	**-1.4**
	baz=9.0							
KST	**Kastek**	**4.04**	**25**	*eP*		**Pb**	**02 26 35.3**	**+0.6**
	16nm,0.4s							
KST				*eS*		**Sb**	**02 27 28.2**	**+4.2**
	192nm,0.7s							
KST	**Kastek**	**4.04**	**25**	*Pg*		**Pb**	**02 26 35.4**	**+0.7**
	16nm,0.4s							
KST				*Lg*		Lg	02 27 27.7	
	192nm,0.7s							
SGDS	**Sogindy**	**4.11**	**10**	*eP*		**Pb**	**02 26 36.1**	**+0.3**
	30nm,0.5s							
SGDS				*eS*		**Sb**	**02 27 29.6**	**+3.6**
	41nm,0.7s							
SGDS	**Sogindy**	**4.11**	**10**	*Pg*		**Pb**	**02 26 36.2**	**+0.3**
	30nm,0.5s							
SGDS				*Lg*		Lg	02 27 29.4	
	41nm,0.7s							
DGS	**Degeres**	**4.16**	**22**	*eP*		**Pb**	**02 26 38.3**	**+1.6**
	39nm,1.2s							
DGS				*eS*		**Sg**	**02 27 33.0**	**-3.4**
	87nm,0.8s							
DGS	**Degeres**	**4.16**	**22**	*Pg*		**Pb**	**02 26 38.4**	**+1.7**
	43nm,0.6s							
DGS				*Lg*		Lg	02 27 32.1	
	77nm,0.8s							
MTBS	**Maitube**	**4.28**	**29**	*eP*		**Pb**	**02 26 39.9**	**+1.2**
	16nm,0.8s							
MTBS				*eS*		**Sb**	**02 27 35.7**	**+4.9**
	82nm,0.5s							
MTBS	**Maitube**	**4.28**	**29**	*Pg*		**Pb**	**02 26 40.1**	**+1.4**
	15nm,0.4s							
MTBS				*Lg*		Lg	02 27 35.3	
	74nm,0.5s							
KK31	**Karatay Array**	**4.37**	**329**	⇓*Pn*		**Pn**	**02 26 32.0**	**+1.9**
	4.8nm,0.5s,baz=129,slow=13,SNR=76							
KK31				⇑*Pg*		**Pb**	**02 26 42.2**	**+2.0**
	24nm,0.6s,baz=139,slow=15,SNR=18							
KK31				⇑*Sn*		**Sn**	**02 27 25.6**	**+4.1**
	17nm,0.5s,baz=328,slow=42,SNR=4.4							
KK31				⇑*Lg*		Lg	02 27 41.5	
	24nm,0.6s,baz=139,slow=28,SNR=3.5							
KKAR	**Karatay Array**	**4.37**	**329**	⇓*i*	*P*	**Pn**	**02 26 31.2**	**+1.1**
	baz=27							
KKAR				⇓*i*	*S*	**Sn**	**02 27 21.5**	**-0.1**
	baz=27							
TNSS	**Tian-Shan**	**4.41**	**34**	*eP*		**Pb**	**02 26 42.1**	**+0.9**
	24nm,0.5s							
TNSS				*eS*		**Sb**	**02 27 39.2**	**+4.4**
	46nm,0.8s							
TNSS	**Tian-Shan**	**4.41**	**34**	*Pg*		**Pb**	**02 26 42.6**	**+1.5**
	24nm,0.5s							
TNSS				*Lg*		Lg	02 27 40.2	
	46nm,0.9s							
AAA	**Alma-Ata**	**4.54**	**32**	*eP*		**Pb**	**02 26 45.3**	**+2.2**
	28nm,0.3s							
AAA				*eS*		**Sg**	**02 27 44.7**	**-3.9**
	176nm,0.6s							
AAA	**Alma-Ata**	**4.54**	**32**	*Pg*		**Pb**	**02 26 45.7**	**+2.6**
	20nm,0.1s							
AAA				*Lg*		Lg	02 27 44.6	
	158nm,0.4s							
KRBS	**Karabastau**	**4.55**	**19**	*eP*		**Pb**	**02 26 44.3**	**+0.9**
	19nm,0.5s							
KRBS				*eS*		**Sb**	**02 27 43.4**	**+4.7**
	66nm,0.6s							
KRBS	**Karabastau**	**4.55**	**19**	*Pg*		**Pb**	**02 26 44.9**	**+1.6**
	19nm,0.5s							
KRBS				*Lg*		Lg	02 27 43.4	
	64nm,0.8s							
KNDC	**Almaty**	**4.57**	**32**	⇓*Pg*		**Pg**	**02 26 48.6**	**-1.7**
	40nm,0.5s							
KNDC				⇑*Lg*		Lg	02 27 45.3	
	505nm,1.1s							
BRLS	**Borolday**	**4.61**	**323**	*eP*		**Pb**	**02 26 45.6**	**+1.3**
	10nm,0.3s							
BRLS				*eS*		**Sb**	**02 27 45.4**	**+5.3**
	51nm,0.4s							
BRLS	**Borolday**	**4.61**	**323**	*Pg*		**Pb**	**02 26 46.2**	**+1.9**
	22nm,0.6s							
BRLS				*Lg*		Lg	02 27 45.5	
	50nm,0.6s							
KTBS	**Karatobe**	**4.88**	**27**	*eP*		**Pb**	**02 26 50.4**	**+1.6**
	15nm,0.5s							
KTBS				*eS*		**Sb**	**02 27 53.8**	**+5.9**
	151nm,0.5s							
KTBS	**Karatobe**	**4.88**	**27**	*Pg*		**Pb**	**02 26 50.9**	**+2.0**
	15nm,0.5s							
KTBS				*Lg*		Lg	02 27 53.8	
	151nm,0.5s							
KUU	**Kurty**	**4.92**	**24**	*eP*		**Pb**	**02 26 50.3**	**+0.6**
	11nm,0.5s							
KUU				*eS*		**Sb**	**02 27 54.4**	**+5.1**
	116nm,0.6s							
KUU	**Kurty**	**4.92**	**24**	*Pg*		**Pb**	**02 26 51.2**	**+1.6**
	11nm,0.5s							
KUU				*Lg*		Lg	02 27 54.4	
	116nm,0.6s							
CHKK	**Chushkaly**	**5.11**	**29**	*eP*		**Pb**	**02 26 54.6**	**+1.8**
	7.5nm,0.7s							
CHKK				*eS*		**Sb**	**02 28 00.9**	**+6.3**
	88nm,0.7s							
CHKK	**Chushkaly**	**5.11**	**29**	*Pg*		**Pb**	**02 26 55.2**	**+2.4**
	11nm,0.7s							
CHKK				*Lg*		Lg	02 28 00.9	
	88nm,0.7s							
SATY	**Saty**	**5.13**	**43**	*eP*		**Pb**	**02 26 55.2**	**+2.0**
	24nm,0.9s							
SATY				*eS*		**Sb**	**02 28 01.5**	**+6.2**
	62nm,1.4s							
SATY	**Saty**	**5.13**	**43**	*Pg*		**Pb**	**02 26 55.2**	**+2.0**
	24nm,0.9s							
SATY				*Lg*		Lg	02 28 01.5	
	62nm,1.4s							
ZHN	**Zhinishke**	**5.22**	**42**	*eP*		**Pb**	**02 26 56.8**	**+1.9**
	29nm,0.2s							
ZHN				*eS*		**Sb**	**02 28 04.4**	**+6.5**
	50nm,0.9s							
ZHN	**Zhinishke**	**5.22**	**42**	*Pg*		**Pb**	**02 26 57.0**	**+2.2**
	29nm,0.2s							
ZHN				*Lg*		Lg	02 28 04.4	
	50nm,0.9s							
KPKS	**Kokpek**	**5.56**	**42**	*eP*		**Pb**	**02 27 02.3**	**+1.7**
	17nm,0.7s							
KPKS				*eS*		**Sb**	**02 28 14.6**	**+6.9**
	62nm,0.7s							
KPKS	**Kokpek**	**5.56**	**42**	*Pg*		**Pb**	**02 27 03.1**	**+2.6**
	17nm,0.7s							
KPKS				*Lg*		Lg	02 28 14.6	
	62nm,0.7s							
BTLS	**Baital**	**5.64**	**3**	*eP*		**Pb**	**02 27 03.2**	**+1.4**
	7.9nm,0.6s							
BTLS				*eS*		**Sb**	**02 28 16.3**	**+6.5**
	12nm,0.7s							
BTLS	**Baital**	**5.64**	**3**	*Pg*		**Pb**	**02 27 05.0**	**+3.2**
	7.9nm,0.6s							
BTLS				*Lg*		Lg	02 28 17.7	
	12nm,0.7s							
ARXS	**Arharly**	**5.74**	**32**	*eP*		**Pb**	**02 27 06.2**	**+2.6**
	15nm,0.5s							
ARXS				*eS*		**Sb**	**02 28 20.7**	**+7.9**
	57nm,1.1s							
ARXS	**Arharly**	**5.74**	**32**	*Pg*		**Pb**	**02 27 06.8**	**+3.2**
	23nm,0.6s							
ARXS				*Lg*		Lg	02 28 20.7	
	57nm,1.1s							
PDGK	**Podgornoye**	**5.90**	**47**	*Pg*		**Pb**	**02 27 08.9**	**+2.5**
	6.2nm,0.6s							
PDGK				*Lg*		Lg	02 28 25.3	
	18nm,0.8s							
PDGK	**Podgornoye**	**5.90**	**47**	⇓*Pg*		Pb	02 27 12.1	+5.7
	12nm,0.6s							
PDGK				⇑*Lg*		Lg	02 28 26.4	
	35nm,0.8s							
BLB	**Baldybastay**	**5.93**	**36**	*eP*		**Pb**	**02 27 09.2**	**+2.3**
	23nm,0.8s							
BLB				*eS*		**Sb**	**02 28 26.2**	**+7.9**
	55nm,0.8s							
BLB	**Baldybastay**	**5.93**	**36**	*Pg*		**Pb**	**02 27 10.0**	**+3.1**
	23nm,0.8s							
BLB				*Lg*		Lg	02 28 26.2	
	55nm,0.8s							
OTUK	**Ortayu**	**8.88**	**354**	⇓*Pn*		**Pn**	**02 27 32.9**	**+0.8**
	1.9nm,0.5s							
OTUK				⇓*Lg*		Lg	02 30 04.5	
	7.8nm,0.7s							
MK31	**Makanchi Array**	**9.73**	**38**	⇓*Pn*		Pn	02 27 48.7	+5.1
	0.9nm,0.6s							
MK31				*Lg*		Lg	02 30 29.4	
	3.9nm,0.8s,baz=257,slow=29,SNR=5.5							
MKAR	**Makanchi Array**	**9.73**	**38**	*Pn*		**Pn**	**02 27 46.1**	**+2.5**
	0.1nm,0.3s,baz=253,slow=7.2,SNR=2.2							
MKAR				*Lg*		Lg	02 30 25.5	
	0.1nm,0.3s,baz=222,slow=27,SNR=3.6							
	0.2nm,0.5s							
KURBB	**Kurchatov Arra**	**11.74**	**16**	*Lg*		Lg	02 31 28.6	
	0.1nm,0.3s,baz=200,slow=29,SNR=10							
GEYT	**Alibeck**	**12.21**	**268**	*Pn*		**Pn**	**02 28 16.6**	**-1.0**
	0.4nm,0.3s,baz=84,slow=19,SNR=1.7							
	2.0nm,0.6s							
AKTO	**Aktyubinsk**	**15.57**	**320**	*Pn*		**Pn**	**02 28 59.9**	**-3.3**
	0.1nm,0.3s,baz=119,slow=15,SNR=5.9							
	1.4nm,0.8s							
ZALV	**Zalesovo Beam**	**16.42**	**24**	*Pn*		**Pn**	**02 29 14.4**	**+0.4**
	0.2nm,0.3s,baz=211,slow=12,SNR=2.5							
	0.6nm,0.5s							
ARU	**Arti**	**19.72**	**335**	*P*		**P**	**02 29 53.5**	**+0.3**
	baz=108,slow=15,SNR=3.1							
	1.3nm,0.3s							
SONM	**Songina Array**	**25.03**	**60**	*P*		**P**	**02 30 45.2**	**-2.9**
	0.6nm,0.6s,baz=269,slow=9.8,SNR=3.2							
	0.6nm,0.6s							
BRTR	**Keskin Array B**	**30.64**	**284**	*P*		**P**	**02 31 38.5**	**+0.1**
	0.2nm,0.4s,baz=68,slow=10,SNR=1.7							
	0.2nm,0.4s							
FINES	**FINESS Array B**	**36.31**	**323**	*P*		**P**	**02 32 27.7**	**+0.4**
	1.0nm,0.9s,baz=112,slow=9.5,SNR=6.8							
	1.0nm,0.9s							
ARCES	**ARCESS Array B**	**39.30**	**336**	*P*		**P**	**02 32 52.5**	**-0.1**
	1.1nm,0.7s,baz=108,slow=8.6,SNR=5.6							
	1.1nm,0.7s							
HFS	**Hagfors**	**42.12**	**320**	*P*		**P**	**02 33 15.5**	**-0.5**
	1.6nm,0.8s,baz=111,slow=8.2,SNR=2.8							
	1.6nm,0.8s							
NOA	**NORSAR Array B**	**43.36**	**321**	*P*		**P**	**02 33 25.4**	**-0.6**
	0.5nm,0.7s,baz=90,slow=7.7,SNR=2.0							
	0.5nm,0.7s							
TORD	**Torodi Ar. Bea**	**67.85**	**269**	*P*		**P**	**02 36 21.1**	**-1.5**
	0.3nm,0.6s,baz=44,slow=5.6,SNR=7.5							
	0.3nm,0.6s							
ILAR	**Eielson Array**	**71.41**	**17**	*P*		**P**	**02 36 42.8**	**-1.1**
	0.1nm,0.7s,baz=322,slow=3.9,SNR=1.6							
	0.1nm,0.7s							
YKA	**Yellowknife Ar**	**78.23**	**4**	*P*		**P**	**02 37 22.7**	**-0.7**
	0.3nm,0.6s,baz=354,slow=5.7,SNR=2.5							
	0.3nm,0.6s							
WRA	**Warramunga Arr**	**81.83**	**124**	*P*		**P**	**02 37 41.8**	**-1.6**
	0.5nm,0.9s,baz=326,slow=4.7,SNR=1.9							
	0.5nm,0.9s							

*IDC **28** 02:27:11.4±3.6, 38°.54N × 141°.88E, h87km±31km, mb3.4/5, mbtmp3.7/8, Error ellipse: s-maj=34.7km s-min=23.9km az=80.0*
*JMA **28** 02:27:12.3±0.1, 38°.7N±0°.2 × 141°.7E±0°.4, h67km, MV3.7/40, KINKAZAN REGION*
JMA Felt I J1 at KINKAZAN REGION .

ISC 28 02:27:10.6±1.0, **38°.65N**±0°.05 × **141°.81E**±0°.08, **h73**km±6km, **n28**, σ0°.82/36, **mb3.7**/5, **6D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
JKMT	**Kesennumamotoy**	**0.31**	**302**	*i*	*P*	**Pn**	**02 27 22.6**	**+0.5**
JKMT					*S*	**Sn**	**02 27 29.8**	**-0.9**
JIO	**Ouri**	**0.41**	**243**	*i*	*P*	**Pn**	**02 27 23.3**	**+0.4**
JIO					*S*	**Sn**	**02 27 31.0**	**-1.0**
JIKH	**Ishinomakikobu**	**0.43**	**219**	*i*	*P*	**Pn**	**02 27 23.8**	**+0.7**
JIKH					*S*	**Sn**	**02 27 32.0**	**-0.2**
OFUJ	**Ofunato**	**0.45**	**345**	*i*	*P*	**Pn**	**02 27 24.1**	**+0.9**
OFUJ					*S*	**Sn**	**02 27 32.6**	**0.0**
JMK	**Ichinoseki**	**0.56**	**304**	*i*	*P*	**Pn**	**02 27 24.5**	**+0.3**
JMK					*S*	**Sn**	**02 27 33.3**	**-0.9**
JOM	**Ohasama**	**0.92**	**334**	⇓*i*	*P*	**Pn**	**02 27 29.0**	**+0.7**
JOM				⇓*i*	*S*	**Sn**	**02 27 41.4**	**0.0**
JOU	**Okura**	**0.94**	**253**	*i*	*P*	**Pn**	**02 27 28.8**	**+0.2**
JOU					*S*	**Sn**	**02 27 40.8**	**-1.1**
JMM	**Marumori**	**1.12**	**226**	*i*	*P*	**Pn**	**02 27 30.9**	**+0.1**
JMM					*S*	**Sn**	**02 27 45.0**	**-0.8**
JYK	**Kaneyama**	**1.17**	**284**	⇓*i*	*P*	**Pn**	**02 27 31.5**	**+0.1**
JYK				⇓*i*	*S*	**Sn**	**02 27 46.1**	**-0.8**
JRG	**Rokugo**	**1.19**	**310**	⇓*i*	*P*	**Pn**	**02 27 31.9**	**+0.4**
JRG				⇓*i*	*S*	**Sn**	**02 27 46.7**	**-0.6**
JYS	**Shirataka**	**1.44**	**253**	*i*	*P*	**Pn**	**02 27 35.4**	**+0.5**
JYS					*S*	**Sn**	**02 27 53.3**	**+0.2**
JFK	**Kawauchi**	**1.48**	**210**	*i*	*P*	**Pn**	**02 27 36.3**	**+1.0**
JFK					*S*	**Sn**	**02 27 54.2**	**+0.1**
JFT	**Otama**	**1.62**	**226**		*P*	**Pn**	**02 27 38.6**	**+1.3**
JFT					*S*	**Sn**	**02 27 57.9**	**+0.4**
JYA	**Atsumi**	**1.65**	**269**		*P*	**Pn**	**02 27 37.9**	**+0.3**
JYA					*S*	**Sn**	**02 27 57.6**	**-0.4**
MJAR	**Matsushiro Arr**	**3.55**	**235**		*P*	**Pn**	**02 28 05.1**	**+1.7**
	3.8nm,0.6s,baz=49,slow=11,SNR=11							
USRK	**Ussuriysk Ar.**	**9.23**	**310**		*P*	**Pn**	**02 29 21.7**	**+0.9**
	2.9nm,0.6s,baz=114,slow=13,SNR=4.2							
KSRS	**Korea Array**	**11.02**	**268**		*P*	**Pn**	**02 29 46.5**	**+1.3**
	1.4nm,0.6s,baz=82,slow=14,SNR=6.3							
H11N2	**WAKE ISLAND Hy**	**28.74**	**124**		*T*	T	03 03 26.8	
	baz=316,slow=75,SNR=148							
H11N1	**WAKE ISLAND Hy**	**28.75**	**124**		*T*	T	03 03 37.0	
	baz=316,slow=75,SNR=104							
H11N3	**WAKE ISLAND Hy**	**28.76**	**124**		*T*	T	03 03 26.9	
	baz=316,slow=75,SNR=77							
H11S1	**WAKE ISLAND Hy**	**29.51**	**126**		*T*	T	03 04 18.3	
	baz=318,slow=76,SNR=67							
H11S3	**WAKE ISLAND Hy**	**29.51**	**126**		*T*	T	03 04 22.5	
	baz=318,slow=76,SNR=112							
H11S2	**WAKE ISLAND Hy**	**29.52**	**126**		*T*	T	03 04 23.6	
	baz=318,slow=76,SNR=67							
ZALV	**Zalesovo Beam**	**41.08**	**311**		*P*	**P**	**02 34 47.2**	**+0.4**
	0.7nm,0.5s,baz=85,slow=6.4,SNR=1.4							
	0.7nm,0.5s							
MKAR	**Makanchi Array**	**43.55**	**301**		*P*	**P**	**02 35 06.1**	**-0.9**
	0.7nm,0.6s,baz=78,slow=12,SNR=4.9							
	0.7nm,0.6s							
KURBB	**Kurchatov Arra**	**45.28**	**307**		*P*	**P**	**02 35 21.6**	**+1.0**
	2.5nm,0.5s,baz=82,slow=8.2,SNR=14							
	2.5nm,0.5s							
ILAR	**Eielson Array**	**47.97**	**33**		*P*	**P**	**02 35 41.4**	**-0.1**
	0.3nm,0.5s,baz=274,slow=6.7,SNR=4.5							
	0.3nm,0.5s							
WRA	**Warramunga Arr**	**58.70**	**188**		*P*	**P**	**02 36 58.9**	**-1.7**
	0.5nm,0.8s,baz=5.4,slow=7.2,SNR=5.4							
	0.5nm,0.8s							

*UPA **28** 02:30:57.4±0.4, 6°.82N × 78°.06W, h12km±10km, MW4.2*
*RSNC **28** 02:30:58.7±1.4, 6°.93N × 78°.01W, h16km±4km, ML2.7*

ISC 28 02:30:56.1±1.8, **6°.85N**±0°.03 × **78°.05W**±0°.03, **h14**km±14km, **n28**, σ1°.67/49, **South of Panama**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
PTAC	**Punta Ardita,**	**0.38**	**39**	*eP*		**Pb**	**02 31 04.4**	**-0.2**
PTAC				*eS*		**Sb**	**02 31 08.9**	**-1.4**
SOLC	**Bahia Solano**	**0.89**	**134**	*eP*		**Pn**	**02 31 14.9**	**+0.7**
SOLC				*eS*		**Sn**	**02 31 27.8**	**+0.9**
SOLC				*i*			02 31 28.9	
	comp=Z,543nm,0.2s							
UPD2	**Meteti**	**1.69**	**1**	*eP*		**Pb**	**02 31 25.9**	**-1.0**
UPD2				*eS*		**Sb**	**02 31 47.8**	**-0.2**
DBBC	**Dabeiba**	**1.83**	**85**	*eP*		**Pn**	**02 31 28.2**	**+0.9**
CAPC	**Capurgana**	**1.90**	**21**	*eP*		**Pn**	**02 31 29.0**	**+0.8**
CAPC				*eS*		**Sn**	**02 31 51.7**	**-0.2**
CAPC				*i*			02 31 56.4	
	comp=Z,39nm,0.3s							
CBOC	**Ciudad Bolivar**	**2.25**	**116**	*eP*		**Pn**	**02 31 33.7**	**+0.7**
CBOC				*eS*		**Sn**	**02 32 01.5**	**+0.8**
CBOC				*i*			02 32 11.2	
	comp=Z,25nm,0.5s							
AZU	**Azuero**	**2.40**	**293**	*eP*		**Pn**	**02 31 36.3**	**+1.4**
AZU				*eS*		**Sn**	**02 32 03.0**	**-1.2**
AZ

OHH	**Osh**	**1.06**	**333**	⇓	*i*	P	**Pn**	**02 32 09.2**	**+0.4**
	baz=36									
OHH					⇓	*i*	S	**Sn**	**02 32 23.4**	**0.0**
	baz=36									
DRK	**Karamyk**	**1.26**	**266**	⇑	*e*	P	**Pg**	**02 32 12.3**	**-0.3**
	baz=65									
DRK					⇑	*i*	S	**Sn**	**02 32 28.7**	**+0.2**
	baz=65									
FRG	**Fergana**	**1.49**	**303**			P	**Pg**	**02 32 19.5**	**+2.5**
FRG						S	**Sg**	**02 32 37.3**	**+1.0**
CHMI	**Chimion**	**1.61**	**296**			P	**Pg**	**02 32 22.6**	**+3.2**
CHMI						S	**Sg**	**02 32 41.8**	**+1.4**
BTK	**Batken**	**2.06**	**284**	⇑	*i*	P	**Pg**	**02 32 26.6**	**-1.3**
	baz=84									
BTK					⇑	*i*	S	**Sg**	**02 32 53.4**	**-1.3**
	baz=84									
MINT	**Mingtut**	**2.08**	**296**			P	Pg	02 32 31.8	+3.6	
MINT						S	**Sg**	**02 32 56.7**	**+1.5**	
ARLS	**Aral**	**2.38**	**16**	⇑	*i*	P	**Pg**	**02 32 31.9**	**-2.1**
	baz=19									
ARLS					⇑	*i*	S	**Sg**	**02 33 03.4**	**-1.5**
	baz=19									
CHDK	**Chadak**	**2.47**	**305**			S	**Sg**	**02 33 08.3**	**+0.5**	
GAR	**Garm**	**2.48**	**257**	⇑	*i*	P	**Pb**	**02 32 32.5**	**-0.2**
	baz=56									
GAR					⇑	*i*	S	**Sg**	**02 33 04.7**	**-3.3**
	baz=56									
TRKS	**Terek-Say**	**2.61**	**319**	⇑	*i*	P	**Pb**	**02 32 34.0**	**-1.0**
	baz=19									
TRKS					⇑	*i*	S	**Sb**	**02 33 06.3**	**-0.6**
	baz=19									
IUG	**Iuzhnay**	**3.63**	**316**		*e*	P	**Pb**	**02 32 52.9**	**+0.6**	
	85nm,0.4s									
IUG					*e*	S	**Sg**	**02 33 45.0**	**+0.1**	
	20nm,0.4s									
KST	**Kastek**	**3.96**	**28**		*e*	P	**Pb**	**02 32 59.1**	**+1.3**	
	1.0nm,0.2s									
KST					*e*	S	**Sg**	**02 33 55.3**	**0.0**	
	15nm,0.6s									
DGS	**Degeres**	**4.06**	**25**		*e*	P	**Pb**	**02 33 01.9**	**+2.2**	
	1.6nm,0.6s									
DGS					*e*	S	**Sg**	**02 34 00.2**	**+1.4**	
	11nm,0.7s									
TNSS	**Tian-Shan**	**4.36**	**36**		*e*	P	**Pb**	**02 33 05.5**	**+0.7**	
	0.4nm,0.1s									
TNSS					*e*	S	**Sg**	**02 34 06.6**	**-1.7**	
	3.2nm,0.6s									
BRLS	**Boroldaу**	**4.38**	**323**		*e*	P	**Pb**	**02 33 04.5**	**-0.4**	
	1.0nm,0.2s									
BRLS					*e*	S	**Sg**	**02 34 05.0**	**-3.9**	
	6.9nm,0.5s									
KRBS	**Karabastau**	**4.45**	**22**		*e*	P	**Pb**	**02 33 08.7**	**+2.5**	
	0.3nm,0.1s									
KRBS					*e*	S	**Sg**	**02 34 11.7**	**+0.7**	
	6.5nm,0.6s									
KTBS	**Karatobe**	**4.80**	**30**		*e*	P	**Pb**	**02 33 14.0**	**+1.8**	
	2.5nm,0.6s									
KTBS					*e*	S	**Sg**	**02 34 21.1**	**-1.3**	
	7.0nm,0.7s									
KUU	**Kurty**	**4.83**	**26**		*e*	P	**Pb**	**02 33 14.8**	**+2.1**	
	1.4nm,0.4s									
KUU					*e*	S	**Sg**	**02 34 23.0**	**-0.4**	
	8.7nm,0.5s									
CHKK	**Chushkaly**	**5.04**	**31**		*e*	P	**Pb**	**02 33 17.8**	**+1.6**	
	0.8nm,0.2s									
CHKK					*e*	S	**Sg**	**02 34 27.4**	**-2.5**	
	4.4nm,0.2s									
BTLS	**Baital**	**5.48**	**5**		*e*	P	**Pg**	**02 33 28.6**	**-4.6**	
	1.4nm,1.1s									
BTLS					*e*	S	**Sg**	**02 34 46.5**	**+2.4**	
	1.5nm,0.6s									
KPKS	**Kokpek**	**5.54**	**44**		*e*	P	**Pb**	**02 33 28.0**	**+3.2**	
	1.3nm,0.5s									
KPKS					*e*	S	**Sg**	**02 34 45.3**	**-0.8**	
	5.3nm,0.6s									
BLB	**Baldybastay**	**5.88**	**38**		*e*	P	**Pb**	**02 33 34.5**	**+3.8**	
BLB					*e*	S	**Sg**	**02 34 56.6**	**-0.6**	

IDC ***28*** *02:33:42.8±1.1, 41°.39N×14°.12E, h0km, mb3.5/4, mbtmp3.5/10, ML3.4/5, MS3.1/2, Error ellipse: s-maj=17.4km s-min=12.9km az=112.0*

ROM ***28*** *02:33:43.1±0.1, 41°.322N±0°.004×14°.019E±0°.005, h5km, ML3.5/59, Mw3.6, Error ellipse: s-maj=0.4km s-min=0.2km az=244.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=2.37; $M_{\theta\theta}$0.72; $M_{\phi\phi}$1.65; $M_{r\theta}$-0.79; $M_{\theta\phi}$-1.28; $M_{\phi r}$0.73; Fault plane solution: M_o2.68866×10^{14} NP1:ϕs331.00000°, δ34.00000°, λ-81.00000°. NP2:ϕs140.00000°, δ57.00000°, λ-96.00000°.*

PDG ***28*** *02:33:43.9±0.4, 41°.33N×14°.03E, h13km, ML3.5/12 Error ellipse: s-maj=0.5km s-min=0.5km az=0.0*

LDG ***28*** *02:33:44.9±0.2, 41°.34N×14°.15E, h7km, Md2.9/1, Ml2.9/16, Error ellipse: s-maj=7.4km s-min=3.6km az=16.0*

PRU ***28*** *02:33:46.1±0.0, 41°.39N×14°.42E, h0km*

ISC 28 02:33:43.6±0.8, 41°.33N±0°.02×14°.01E±0°.02, h11km±5km, n228, σ1s33/268, mb3.6/4, 15C-6D, Southern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	h m s	ISC
PIGN	**Pignataro Magg**	**0.19**	**135**	⇑P		**Pg**	**02 33 46.5**	**-1.0**
PIGN				S		**Sg**	**02 33 50.3**	**-0.1**
PIGN				AML	AML			
	comp=E,14850μm,1.3s							
PIGN				AML	AML			
	comp=N,14200μm,0.6s							
PIGN				AML	AML			
	comp=E,13500μm,1.3s							
PIGN				AML	AML			
	comp=N,13360μm,0.6s							
VAGA	**Valle Agricola**	**0.19**	**64**	⇑P		**Pg**	**02 33 47.3**	**-0.4**
VAGA				S		**Sg**	**02 33 51.4**	**+0.8**
VAGA				AML	AML			
	comp=N,48000μm,1.6s							
VAGA				AML	AML			
	comp=N,49800μm,1.6s							
VAGA				AML	AML			
	comp=E,29850μm,0.3s							
VAGA				AML	AML			
	comp=E,31500μm,0.3s							
MODR	**Mondragone**	**0.21**	**207**	⇑P		**Pg**	**02 33 47.6**	**-0.4**
MODR				S		**Sg**	**02 33 51.2**	**+0.2**
MODR				AML	AML			
	comp=N,21350μm,0.7s							
MODR				AML	AML			
	comp=E,16450μm,0.4s							
CERA	**Filignano**	**0.27**	**2**	P		**Pg**	**02 33 49.9**	**+0.8**
CERA				S		**Sb**	**02 33 55.1**	**+0.1**
CERA				AML	AML			
	comp=N,28950μm,0.6s							
CERA				AML	AML			
	comp=N,27800μm,0.6s							
CERA				AML	AML			
	comp=E,31900μm,0.5s							
CERA				AML	AML			
	comp=E,33150μm,0.5s							
SGG	**Gregorio Mates**	**0.28**	**79**	⇑P		**Pg**	**02 33 48.9**	**-0.5**
SGG				AML	AML			
	comp=N,62nm,0.9s							
SGG				AML	AML			
	comp=N,19850μm,0.7s							
SGG				AML	AML			
	comp=E,33650μm,0.6s							
SGG				AML	AML			
	comp=E,102nm,0.7s							
MIDA	**Miranda**	**0.36**	**31**	⇑P		**Pg**	**02 33 50.6**	**-0.2**
MIDA				S		**Sb**	**02 33 57.7**	**-0.1**
MIDA				AML	AML			
	comp=E,7785μm,1.3s							
MIDA				AML	AML			
	comp=N,8000μm,1.0s							
MIDA				AML	AML			
	comp=E,7780μm,1.3s							
MIDA				AML	AML			
	comp=N,8025μm,1.0s							
MIDA				AML	AML			
	comp=E,8195μm,1.3s							
MIDA				AML	AML			
	comp=N,8365μm,1.0s							
LIK	**San Giovanni I**	**0.38**	**297**	⇓P		**Pg**	**02 33 51.4**	**+0.3**
LIK				S		**Sb**	**02 33 58.6**	**+0.4**
LIK				AML	AML			
	comp=N,16950μm,0.4s							
LIK				AML	AML			
	comp=E,19400μm,0.4s							
LIK				AML	AML			
	comp=N,17000μm,0.4s							
RNI2	**Rionero Sannit**	**0.39**	**16**	P		**Pg**	**02 33 51.6**	**+0.4**
RNI2				S		**Sb**	**02 33 59.1**	**+0.6**
RNI2				AML	AML			
	comp=E,13850μm,0.8s							
RNI2				AML	AML			
	comp=N,9035μm,0.8s							
RNI2				AML	AML			
	comp=N,9075μm,0.8s							
RNI2				AML	AML			
	comp=N,9185μm,0.9s							
RNI2				AML	AML			
	comp=N,9065μm,0.8s							
RNI2				AML	AML			
	comp=E,13900μm,0.8s							
RNI2				AML	AML			
	comp=E,14350μm,0.8s							
PTRJ	**Pietraroja**	**0.40**	**85**	⇑P		**Pg**	**02 33 51.1**	**-0.3**
PTRJ				AML	AML			
	comp=E,12100μm,0.6s							
PTRJ				AML	AML			
	comp=N,7920μm,0.9s							
PTRJ				AML	AML			
	comp=E,13850μm,0.6s							
PTRJ				AML	AML			
	comp=E,12150μm,0.6s							
PTRJ				AML	AML			
	comp=N,7915μm,0.9s							
PTRJ				AML	AML			
	comp=N,8655μm,0.9s							
POFI	**Posta Fibreno**	**0.44**	**330**	P		**Pg**	**02 33 53.0**	**+0.7**
POFI				S		**Sb**	**02 34 01.2**	**+1.1**
POFI				AML	AML			
	comp=E,5580μm,0.5s							
POFI				AML	AML			
	comp=N,5580μm,0.7s							
POFI				AML	AML			
	comp=N,5575μm,0.7s							
POFI				AML	AML			
	comp=E,6190μm,0.4s							
POFI				AML	AML			
	comp=N,5550μm,0.7s							
BSSO	**Busso**	**0.49**	**64**	⇑P		**Pg**	**02 33 53.1**	**-0.1**
BSSO				AML	AML			
	comp=E,8055μm,0.7s							
BSSO				AML	AML			
	comp=N,5820μm,0.7s							
BSSO				AML	AML			
	comp=E,8075μm,0.7s							
BSSO				AML	AML			
	comp=N,5825μm,0.7s							
BSSO				AML	AML			
	comp=N,2190μm,0.7s							
BSSO				AML	AML			
	comp=E,3615μm,0.8s							
VITU	**Vitulano (BN)**	**0.49**	**107**	P		**Pg**	**02 33 52.3**	**-0.9**
VITU				S		**Sb**	**02 34 02.2**	**+0.6**
VITU				AML	AML			
	comp=E,2695μm,0.7s							
VITU				AML	AML			
	comp=N,10270μm,0.7s							
VITU				AML	AML			
	comp=E,7595μm,0.5s							
VITU				AML	AML			
	comp=N,10255μm,0.7s							
VITU				AML	AML			
	comp=E,2690μm,0.7s							
VITU				AML	AML			
	comp=N,10520μm,0.7s							
CFMN	**Campi Flegrei**	**0.50**	**173**	P		**Pg**	**02 33 53.7**	**+0.3**
CFMN				S		**Sb**	**02 34 02.6**	**+0.9**
CFMN				AML	AML			
	comp=N,9340μm,0.7s							
CFMN				AML	AML			
	comp=E,9090μm,0.6s							
CSFT	**Campi Flegrei**	**0.51**	**169**	P		**Pb**	**02 33 53.9**	**-0.7**
CPIS	**Campi Flegrei**	**0.51**	**168**	P		**Pb**	**02 33 54.6**	**+0.1**
CSOB	**Campi Flegrei**	**0.52**	**168**	P		**Pg**	**02 33 53.9**	**+0.3**
CSOB				S		**Sb**	**02 34 02.6**	**+0.5**
PAOL	**Paolisi**	**0.52**	**125**	P		**Pg**	**02 33 52.8**	**-0.9**
PAOL				S		**Sb**	**02 34 02.2**	**-0.1**
PAOL				AML	AML			
	comp=E,3645μm,1.2s							
PAOL				AML	AML			
	comp=N,4690μm,0.5s							
PAOL				AML	AML			
	comp=E,3790μm,1.2s							
PAOL				AML	AML			
	comp=E,3640μm,1.2s							
PAOL				AML	AML			
	comp=N,4525μm,0.5s							
COLB	**Campi Flegrei**	**0.52**	**168**	P		**Pg**	**02 33 54.1**	**+0.3**
SACR	**S. Croce Del S**	**0.53**	**83**	P		**Pg**	**02 33 53.6**	**-0.3**
SACR				AML	AML			
	comp=E,5395μm,1.0s							
SACR				AML	AML			
	comp=N,6825μm,1.0s							
VVDG	**Vesuvio Valle**	**0.59**	**147**	P		**Pg**	**02 33 55.0**	**0.0**
IOCA	**Ischia Osserva**	**0.59**	**188**	P		**Pb**	**02 33 55.4**	**-0.5**
VBKN	**Vesuvio Bunker**	**0.60**	**147**	P		**Pg**	**02 33 55.3**	**+0.1**
VBKN				AML	AML			
	comp=E,17400μm,1.5s							
VBKN				AML	AML			
	comp=N,17700μm,0.9s							
VARP	**Vesuvio Array**	**0.60**	**149**	P		**Pg**	**02 33 55.4**	**+0.2**
CRTO	**Cratere Ovest,**	**0.60**	**148**	P		**Pg**	**02 33 55.4**	**+0.1**
CRTO				AML	AML			
CRTO				AML	AML			
VCRE	**Vesuvio Crater**	**0.61**	**148**	P		**Pg**	**02 33 55.5**	**+0.2**
GIUL	**Giuliano Di Ro**	**0.61**	**292**	P		**Pg**	**02 33 55.4**	**0.0**
GIUL				AML	AML			
	comp=N,3360μm,0.6s							
GIUL				AML	AML			
	comp=E,3720μm,0.5s							
VVLD	**Villa Vallelon**	**0.61**	**332**	P		**Pg**	**02 33 55.4**	**0.0**
VVLD				AML	AML			
	comp=E,6075μm,0.4s							
VVLD				AML	AML			
	comp=N,6220μm,0.7s							
VTIR	**Vesuvio Tirone**	**0.61**	**149**	P		**Pg**	**02 33 55.5**	**0.0**
VTIR				AML	AML			
	comp=E,9435μm,0.6s							
VTIR				AML	AML			
	comp=N,5095μm,0.4s							
PSB1	**Pescosannita**	**0.62**	**100**	P		**Pg**	**02 33 55.4**	**-0.2**
IFOR	**Ischia Forio P**	**0.63**	**190**	P		**Pg**	**02 33 55.7**	**-0.1**
INTR	**Introdacqua**	**0.68**	**354**	P		**Pg**	**02 33 56.4**	**-0.5**
INTR				AML	AML			
	comp=N,5μm,0.6s							
INTR				AML	AML			
	comp=N,8220μm,0.6s							
INTR				AML	AML			
	comp=E,3μm,0.5s							
INTR				AML	AML			
	comp=E,3000μm,1.0s							
INTR				AML	AML			
	comp=N,5μm,0.6s							
GUAR	**Guarcino**	**0.70**	**312**	P		**Pg**	**02 33 57.5**	**+0.4**
GUAR				AML	AML			
	comp=E,8910μm,0.7s							
GUAR				AML	AML			
	comp=N,8430μm,0.7s							
VENT	**Ventotene**	**0.70**	**220**	P		**Pg**	**02 33 56.9**	**-0.2**
VENT				AML	AML			
	comp=E,10925μm,0.4s							
VENT				AML	AML			
	comp=N,11350μm,0.4s							
VENT				AML	AML			
	comp=E,10895μm,0.4s							
GATE	**Gambatesa**	**0.70**	**75**	P		**Pg**	**02 33 57.4**	**+0.2**
GATE				AML	AML			
	comp=E,3235μm,0.8s							
GATE				AML	AML			
	comp=E,2325μm,1.6s							
GATE				AML	AML			
	comp=N,4030μm,0.7s							
GATE				AML	AML			
	comp=N,4035μm,0.7s							
GATE				AML	AML			
	comp=N,3950μm,0.7s							
GATE				AML	AML			
	comp=E,3230μm,0.8s							
LPEL	**Lama dei Pelig**	**0.73**	**10**	P		**Pg**	**02 33 57.4**	**-0.2**
LPEL				AML	AML			
	comp=E,3285μm,0.4s							
LPEL				AML	AML			
	comp=N,2575μm,0.6s							
CIGN	**Sant'Elia a Pi**	**0.75**	**64**	P		**Pg**	**02 33 58.1**	**+0.1**
CIGN				AML	AML			
	comp=N,1920μm,1.5s							
CIGN				AML	AML			
	comp=E,2910μm,1.5s							
MRB1	**Monte Rocchett**	**0.76**	**105**	P		**Pg**	**02 33 58.2**	**0.0**
MRB1				AML	AML			
	comp=E,5230μm,1.0s							
MRB1				AML	AML			
	comp=N,6495μm,0.8s							
MRB1				AML	AML			
	comp=E,5235μm,1.0s							
MRB1				AML	AML			
	comp=N,6255μm,0.8s							
LATB	**Latina**	**0.80**	**282**	⇑P		**Pg**	**02 33 58.1**	**-1.0**
LATB				AML	AML			
	comp=E,2020μm,0.5s							
LATB				AML	AML			
	comp=N,689μm,1.6s							
LATB				AML	AML			
	comp=E,2025μm,0.5s							
LATB				AML	AML			
	comp=N,688μm,1.6s							
PTQR	**Pietraquaria**	**0.82**	**327**	P		**Pg**	**02 33 59.3**	**-0.2**
PTQR				AML	AML			
	comp=E,2470μm,0.6s							
PTQR				AML	AML			
	comp=N,1610μm,1.3s							
PTQR				AML	AML			
	comp=E,2465μm,0.6s							
BIOG	**Biogem**	**0.86**	**99**	P		**Pn**	**02 34 01.8**	**+0.2**
MOCO	**Biccari - m.te**	**0.87**	**87**	P		**Pb**	**02 34 00.6**	**-0.1**
MOCO				AML	AML			
	comp=E,1725μm,0.8s							
MOCO				AML	AML			
	comp=N,1005μm,0.7s							
MOCO				AML	AML			
	comp=N,992μm,0.7s							
MOCO				AML	AML			
	comp=E,1755μm,0.8s							
T0110	**Collepietro**	**0.91**	**349**	P		**Pg**	**02 34 00.3**	**-0.8**
T0110				AML	AML			
	comp=E,4495μm,0.5s							
T0110				AML	AML			
	comp=N,4020μm,0.5s							
MELA	**Melanico ??? S**	**0.92**	**66**	P		**Pg**	**02 34 00.1**	**-1.2**
MELA				AML	AML			
	comp=E,3205μm,0.6s							
MELA				AML	AML			
	comp=N,2565μm,0.5s							
MELA				AML	AML			
	comp=N,2645μm,0.5s							
MELA				AML	AML			
	comp=E,3340μm,0.6s							
MELA				AML	AML			
	comp=N,2560μm,0.5s							
CAFR	**Castel Frentan**	**0.93**	**16**	P		**Pb**	**02 34 02.0**	**+0.3**
CAFR				AML	AML			
	comp=E,19μm,0.5s							
CAFR				AML	AML			
	comp=N,2425μm,1.2s							
RCAV	**Rocca di Cave**	**0.95**	**303**	P		**Pg**	**02 34 02.0**	**+0.2**
RCAV				AML	AML			
	comp=E,2465μm,1.1s							
RCAV				AML	AML			
	comp=N,2830μm,0.4s							
RSF3	**Rocca San Feli**	**0.96**	**112**	P		**Pb**	**02 34 02.0**	**-0.2**
CAFE	**Carife**	**0.98**	**108**	P		**Pg**	**02 34 02.2**	**-0.2**
CAFE				AML	AML			
	comp=E,1925μm,1.0s							
CAFE				AML	AML			
	comp=N,1375μm,0.7s							
CAFE				AML	AML			
	comp=N,1395μm,0.7s							
CAFE				AML	AML			
	comp=E,2000μm,1.0s							
CERT	**Cerreto**	**0.98**	**309**	P		**Pg**	**02 34 01.6**	**-0.9**
CERT				AML	AML			
	comp=E,3215μm,1.5s							
CERT				AML	AML			
	comp=N,1985μm,0.7s							
FAGN	**Fagnano**	**0.98**	**341**	P		**Pg**	**02 34 02.1**	**-0.4**
FAGN				AML	AML			
	comp=N,4535μm,0.4s							
FAGN				AML	AML			
	comp=E,6220μm,0.5s							
LIO3	**Lioni**	**0.99**	**116**	P		**Pg**	**02 34 02.2**	**-0.4**
SNAL	**S. Angelo Dei**	**1.00**	**114**	P		**Pg**	**02 34 02.0**	**-0.7**
SNAL				AML	AML			
	comp=E,2510μm,1.1s							
SNAL				AML	AML			
	comp=E,2475μm,1.1s							
SNAL				AML	AML			
	comp=N,2425μm,1.4s							
SNAL				AML	AML			
	comp=N,2635μm,1.4s							
VIVA	**Pratoni del Vi**	**1.02**	**295**	P		**Pb**	**02 34 03.3**	**+0.1**
VIVA				AML	AML			
	comp=E,7385μm,1.2s							
VIVA				AML	AML			
	comp=N,8275μm,1.0s							
MCRV	**Calabrutti - M**	**1.04**	**122**	P		**Pg**	**02 34 03.1**	**-0.4**
LAV9	**Lanuvio**	**1.04**	**290**	P		**Pn**	**02 34 04.2**	**+0.1**
RDP	**Rocca di Papa**	**1.06**	**294**	P		**Pb**	**02 34 03.5**	**-0.4**
RDP				AML	AML			
	comp=N,8885μm,0.5s							
RDP				AML	AML			
	comp=E,6575μm,0.6s							
VCEL	**Villa Celiera**	**1.07**	**353**	P		**Pb**	**02 34 03.1**	**-1.1**
VCEL				AML	AML			
	comp=N,2475μm,0.7s							
VCEL				AML	AML			
	comp=E,3815μm,0.5s							
RMP	**Rome, Mte Porz**	**1.09**	**296**	P		**Pg**	**02 34 04.8**	**+0.3**
RMP				AML	AML			
	comp=N,4360μm,0.9s							
RMP				AML	AML			
	comp=E,5170μm,0.8s							
FIAM	**Fiamignano**	**1.15**	**325**	P		**Pg**	**02 34 06.5**	**+0.9**
FIAM				AML	AML			
	comp=N,2315μm,0.5s							
FIAM				AML	AML			
	comp=E,2905μm,0.7s							
GIGS	**Gran Sasso**	**1.16**	**344**	P		**Pb**	**02 34 05.0**	**-0.8**
MTCE	**Montecelio**	**1.17**	**306**	P		**Pb**	**02 34 05.5**	**-0.4**
MTCE				AML	AML			
	comp=N,1590μm,0.6s							
MTCE				AML	AML			
	comp=E,1600μm,1.5s							
APRC	**Apricena**	**1.23**	**69**	P		**Pn**	**02 34 06.1**	**-0.7**
APRC				AML	AML			
	comp=N,4725μm,0.6s							
APRC				AML	AML			
	comp=E,2045μm,0.7s							
RDM3	**Ruvo Del Monte**	**1.24**	**111**	P		**Pg**	**02 34 07.3**	**-0.1**
CAMP	**Campotosto**	**1.28**	**340**	P		**Pb**	**02 34 08.2**	**+0.4**
CDRU	**Civita di Ruta**	**1.29**	**130**	P		**Pn**	**02 34 06.7**	**-1.0**
CDRU				AML	AML			
	comp=E,441μm,0.5s							
CDRU				AML	AML			
	comp=N,384μm,0.9s							
RM33	**Pellescritta (**	**1.32**	**334**	P		**Pg**	**02 34 09.3**	**+0.4**
RM33				AML	AML			
	comp=E,1585μm,0.7s							
RM33				AML	AML			
	comp=E,1595μm,1.0s							
RM33				AML	AML			
	comp=N,1360μm,0.7s							
RM33				AML	AML			
	comp=N,1335μm,0.7s							
TERO	**Teramo**	**1.32**	**347**	P		**Pn**	**02 34 07.4**	**-0.7**
TERO				AML	AML			
	comp=N,986μm,0.7s							
TERO				AML	AML			
	comp=E,963μm,0.8s							
SGRT	**San Giovanni R**	**1.37**	**72**	⇓P		**Pn**	**02 34 08.8**	**+0.1**
SGRT				AML	AML			
	comp=E,1680μm,0.7s							
SGRT				AML	AML			
	comp=N,1710μm,1.6s							
TREM	**Isole Tremiti**	**1.38**	**54**	P		**Pb**	**02 34 09.4**	**+0.1**
TREM				AML	AML			
	comp=E,2775μm,0.9s							
TREM				AML	AML			
	comp=N,5295μm,0.8s							

SMA1	**SAN MARTINO**	**1.39**	**339**	P		**Pg**	02 34 10.3	**0.0**	
CMPR	**Campora**	**1.41**	**135**	P		**Pg**	02 34 10.7	**0.0**	
SRES	**S.Oreste - Sor**	**1.44**	**309**	P		**Pn**	02 34 09.8	**+0.2**	
SRES				AML	AML				
	comp=E,564μm,1.6s								
SRES				AML	AML				
	comp=N,651μm,1.5s								
LNSS	**Leonessa**	**1.46**	**331**	P		**Pg**	02 34 11.6	**0.0**	
LNSS				AML	AML				
	comp=N,1705μm,0.7s								
LNSS				AML	AML				
	comp=E,1585μm,1.1s								
TRTR	**Tortoreto Alta**	**1.48**	**357**	P		**Pn**	02 34 10.3	**+0.2**	
MSAG	**Monte S. Angel**	**1.48**	**75**	P		**Pn**	02 34 10.3	**+0.1**	
MSAG				AML	AML				
	comp=N,3245μm,0.9s								
MSAG				AML	AML				
	comp=N,3295μm,0.9s								
MSAG				AML	AML				
	comp=E,2150μm,0.8s								
MSAG				AML	AML				
	comp=E,2225μm,0.8s								
PALZ	**Palazzo San Ge**	**1.53**	**104**	P		**Pg**	02 34 12.8	**0.0**	
PALZ				AML	AML				
	comp=N,1815μm,1.1s								
PALZ				AML	AML				
	comp=E,1262μm,1.6s								
PZUN	**Potenza**	**1.53**	**116**	P		**Pg**	02 34 13.2	**+0.4**	
AQT1	**Arquata del Tr**	**1.54**	**340**	P		**Pb**	02 34 12.2	**+0.1**	
ACER	**Acerenza**	**1.56**	**110**	P		**Pb**	02 34 12.9	**+0.4**	
OFFI	**Offida**	**1.62**	**352**	P		**Pg**	02 34 15.6	**+1.0**	
BULG	**Bulgheria - Ca**	**1.63**	**140**	P		**Pb**	02 34 14.1	**+0.4**	
NRCA	**Norcia**	**1.64**	**336**	P		**Pb**	02 34 13.7	**-0.1**	
TOLF	**Tolfa**	**1.67**	**297**	P		**Pn**	02 34 12.5	**-0.3**	
TOLF				AML	AML				
	comp=E,447μm,0.8s								
TOLF				AML	AML				
	comp=N,536μm,0.6s								
MRVN	**Minervino Murg**	**1.67**	**99**	P		**Pn**	02 34 12.4	**-0.4**	
MGR	**Morigerati**	**1.68**	**135**	P		**Pb**	02 34 13.7	**-0.7**	
MCEL	**Monticello**	**1.69**	**126**	P		**Pb**	02 34 14.1	**-0.7**	
MTSN	**Montesano sull**	**1.70**	**128**	P		**Pn**	02 34 13.3	**0.0**	
AG11	**Viggiano (PZ)**	**1.78**	**123**	P		**Pn**	02 34 15.0	**+0.6**	
SIRI	**Monte Sirino -**	**1.82**	**129**	P		**Pb**	02 34 17.5	**+0.6**	
FDMO	**Fiordimonte**	**1.83**	**338**	P		**Pb**	02 34 17.2	**+0.1**	
FDMO				AML	AML				
	comp=N,405μm,1.1s								
FDMO				AML	AML				
	comp=E,581μm,1.0s								
CSP1	**Cessapalombo**	**1.86**	**342**	P		**Pb**	02 34 17.0	**-0.6**	
CUC	**Castrocucco**	**1.92**	**134**	P		**Pb**	02 34 17.5	**-1.1**	
SCHR	**S. Chirico Rap**	**1.94**	**125**	P		**Pb**	02 34 18.6	**-0.3**	
AMUR	**Altamura**	**2.01**	**101**	P		**Pn**	02 34 17.1	**-0.3**	
SNTG	**Esanatoglia**	**2.08**	**338**	P		**Pb**	02 34 20.4	**-0.8**	
CRAC	**Craco**	**2.08**	**117**	P		**Pb**	02 34 20.4	**-1.0**	
EL6	**Elcito**	**2.10**	**342**	P		**Pb**	02 34 20.8	**-1.0**	
ATCC	**AVT- Casa Cast**	**2.11**	**332**	P		**Pb**	02 34 20.9	**-0.9**	
MGAB	**Montegabbione**	**2.12**	**319**	P		**Pn**	02 34 20.0	**+1.1**	
MGAB				AML	AML				
	comp=E,470μm,1.1s								
MGAB				AML	AML				
	comp=N,426μm,0.9s								
MGAB				AML	AML				
	comp=N,456μm,1.3s								
MGAB				AML	AML				
	comp=E,488μm,1.5s								
CING	**Cingoli**	**2.13**	**344**	P		**Pb**	02 34 21.6	**-0.6**	
MATE	**Matera**	**2.15**	**108**	P		**Pn**	02 34 19.4	**+0.1**	
MATE				AML	AML				
	comp=E,234μm,1.1s								
MATE				AML	AML				
	comp=N,314μm,0.7s								
FOSV	**Fossato di Vic**	**2.17**	**335**	P		**Pb**	02 34 23.0	**+0.2**	
SACS	**San Casciano d**	**2.17**	**315**	P		**Pb**	02 34 21.2	**+1.4**	
MURB	**Monte Urbino**	**2.22**	**331**	P		**Pb**	02 34 22.6	**-1.1**	
AOI	**Ancona**	**2.24**	**352**	P		**Pn**	02 34 20.8	**+0.2**	
MCIV	**Monte Civitell**	**2.26**	**311**	P		**Pn**	02 34 22.2	**+1.3**	
SSFR	**Montelago di S**	**2.29**	**337**	P		**Pb**	02 34 24.4	**-0.5**	
ARVD	**Arcevia**	**2.30**	**340**	P		**Pb**	02 34 24.2	**-0.9**	
ATLO	**AVT- Montelove**	**2.31**	**330**	P		**Pn**	02 34 23.2	**+1.6**	
ATVA	**AVT- Monte Val**	**2.33**	**327**	P		**Pn**	02 34 23.3	**+1.5**	
SF01	**Poggio Pratacc**	**2.34**	**310**	P		**Pn**	02 34 23.2	**+1.2**	
TB01	**Gubbio**	**2.35**	**331**	P		**Pn**	02 34 23.5	**+1.3**	
TB02	**Pietralunga**	**2.35**	**330**	P		**Pn**	02 34 24.2	**+2.0**	
ATVO	**AVT- Monte Val**	**2.37**	**330**	P		**Pb**	02 34 24.6	**-1.6**	
NOCI	**Noci**	**2.38**	**102**	P		**Pb**	02 34 24.5	**-1.9**	
ATMI	**Monte Miggiano**	**2.38**	**328**	P		**Pn**	02 34 24.2	**+1.7**	
FRON	**Frontone**	**2.38**	**337**	P		**Pb**	02 34 25.1	**-1.3**	
TB03	**Pietralunga**	**2.38**	**331**	P		**Pb**	02 34 24.9	**-1.6**	
ATBU	**Serra di Buran**	**2.40**	**334**	P		**Pb**	02 34 25.8	**-1.0**	
COR1	**Corinaldo**	**2.42**	**342**	P		**Pb**	02 34 26.3	**-0.7**	
ARCI	**Arcidosso**	**2.42**	**310**	P		**Pn**	02 34 24.3	**+1.2**	
ARCI				AML	AML				
	comp=E,99μm,1.6s								
ARCI				AML	AML				
	comp=N,98μm,1.2s								
ATPI	**Pietralunga -**	**2.43**	**331**	P		**Pn**	02 34 23.6	**+0.4**	
ATPC	**Poggio Castell**	**2.43**	**332**	P		**Pb**	02 34 25.5	**-1.9**	
PIEI	**Pieia**	**2.46**	**334**	P		**Pb**	02 34 25.8	**+2.1**	
MPAG	**Monte Paganucc**	**2.47**	**339**	P		**Pb**	02 34 27.2	**-0.9**	
ATMC	**Monte Cedrone**	**2.50**	**328**	P		**Pn**	02 34 25.5	**+1.2**	
CAFI	**Castiglion Fio**	**2.50**	**324**	P		**Pn**	02 34 25.4	**+1.2**	
FSSB	**Fossombrone**	**2.53**	**339**	P		**Pb**	02 34 27.2	**-1.7**	
PARC	**Parchiule**	**2.66**	**331**	P		**Pn**	02 34 27.5	**+1.1**	
CAR1	**CAROLEI**	**2.67**	**140**	P		**Pn**	02 34 27.5	**+0.8**	
CELI	**Celico**	**2.71**	**134**	P		**Pn**	02 34 29.4	**+2.1**	
CASP	**Castiglione de**	**2.75**	**303**	P		**Pn**	02 34 28.1	**+0.4**	
CSNT	**Castellina Chi**	**2.94**	**318**	P		**Pn**	02 34 31.1	**+0.9**	
STON	**Ston**	**3.15**	**60**	*e*Pn		**Pn**	02 34 33.2	**+0.1**	
STON	**Ston**	**3.15**	**60**	AML	AML				
	comp=N,224μm,1.0s								
STON				AML	AML				
	comp=E,153μm,0.9s								
TREB	**Trebinje**	**3.52**	**65**	*e*Pn		**Pn**	02 34 38.9	**+0.7**	
HCY	**Herceg Novi**	**3.53**	**70**	*e*Pn		**Pn**	02 34 38.9	**+0.6**	
HCY	**Herceg Novi**	**3.53**	**70**⇑	*i*Pn		**Pn**	02 34 39.2	**+0.9**	
HCY				*i* Sn		**Sn**	02 35 22.2	**+2.1**	
SRKY	**Kupres RS**	**3.59**	**39**	*e*Pn		**Pn**	02 34 39.7	**+0.5**	
BRY	**Bratogost**	**3.72**	**64**	*e*Pn		**Pn**	02 34 41.8	**+0.8**	
BRY	**Bratogost**	**3.72**	**64**⇑	*i*Pn		**Pn**	02 34 41.9	**+0.9**	
BRY				*i* Sn		**Sn**	02 35 26.5	**+1.6**	
BUM	**Brajici-Budva**	**3.78**	**74**⇑	*i*Pn		**Pn**	02 34 42.8	**+1.0**	
BUM				*e*Sn		**Sn**	02 35 27.8	**+1.5**	
MGRS	**Mrkonjic Grad**	**3.82**	**35**	*e*Pn		**Pn**	02 34 44.8	**+2.4**	
CEME	**Cevo**	**3.86**	**70**⇓	*i*Pn		**Pn**	02 34 43.8	**+0.9**	
CEME				*i* Sn		**Sn**	02 35 29.9	**+1.6**	
VAE	**Valguarnera**	**3.86**	**175**	Pn		**Pn**	02 34 45.3	**+2.4**	
	comp=E,14nm,0.9s,baz=230,slow=16,SNR=3.2								
PGF	**Pioggiola**	**3.93**	**290**	*e*Pn		**Pn**	02 34 44.4	**+0.5**	
PGF	**Pioggiola**	**3.93**	**290**	*e*P		**Pn**	02 34 47.4	**+3.5**	
PGF				*e*Sn		**Sn**	02 35 29.2	**-0.8**	
NKME	**Niksic**	**3.95**	**67**⇑	*i*Pn		**Pn**	02 34 45.4	**+1.2**	
NKME				*i* Sn		**Sn**	02 35 32.1	**+1.6**	
DRME	**Dracevica, Mon**	**3.97**	**76**	*e*Pn		**Pn**	02 34 44.6	**+0.3**	
DRME	**Dracevica, Mon**	**3.97**	**76**⇓	*i*Pn		**Pn**	02 34 45.3	**+1.0**	
DRME				*i* Sn		**Sn**	02 35 32.3	**+1.5**	
ULC	**Ulcinj**	**3.98**	**79**⇓	*i*Pn		**Pn**	02 34 45.7	**+1.2**	
ULC				*i* Sn		**Sn**	02 35 32.6	**+1.5**	
PDG	**Podgorica**	**4.07**	**73**	*e*Pn		**Pn**	02 34 46.3	**+0.6**	
PDG	**Podgorica**	**4.07**	**73**	AML	AML				
	comp=E,143μm,1.3s								
PDG				AML	AML				
	comp=E,94μm,0.9s								
PDG				AML	AML				
	comp=N,176μm,1.1s								
PDG				AML	AML				
	comp=N,110μm,1.0s								
TTG	**Podgorica**	**4.07**	**73**⇑	*i*Pn		**Pn**	02 34 47.0	**+1.3**	
TTG				*e*Sn		**Sn**	02 35 34.9	**+1.6**	
UPM	**Unac-Piva**	**4.09**	**61**	*e*Pn		**Pn**	02 34 47.7	**+1.5**	
UPM	**Unac-Piva**	**4.09**	**61**	*e*Pn		**Pn**	02 34 46.9	**+0.7**	
UPM				*i* Sn		**Sn**	02 35 35.5	**+1.4**	
BLY	**Banja Luka**	**4.13**	**33**	*e*Pn		**Pn**	02 34 49.1	**+2.5**	
PRIJ	**Prijedor**	**4.15**	**28**	*e*Pn		**Pn**	02 34 49.6	**+2.8**	
SKDS	**Skadanscina**	**4.21**	**0**	*e*Pn		**Pn**	02 34 48.4	**+0.7**	
BOJS	**Bojanci**	**4.27**	**12**	*e*Pn		**Pn**	02 34 49.4	**+1.0**	
KOME	**Kolasin**	**4.37**	**68**	*e*Pn		**Pn**	02 34 51.0	**+1.0**	
KOME				*i* Sn		**Sn**	02 35 42.2	**+1.3**	
CEY	**Cerknica**	**4.42**	**4**	*e*Pn		**Pn**	02 34 51.9	**+1.4**	
PLE	**Pljevlja**	**4.46**	**62**⇑	*i*Pn		**Pn**	02 34 52.5	**+1.3**	
PLE				*i* Sn		**Sn**	02 35 44.4	**+1.2**	
RUDO	**Rudo**	**4.58**	**58**	*e*Pn		**Pn**	02 34 53.8	**+1.1**	
CRES	**Cresnjev**	**4.61**	**13**	*e*Pn		**Pn**	02 34 54.2	**+1.0**	
PVY	**Plav**	**4.61**	**72**	*e*Pn		**Pn**	02 34 54.4	**+1.1**	
PVY				*i* Sn		**Sn**	02 35 48.0	**+1.0**	
IVA	**Berane**	**4.64**	**69**⇓	*i*Pn		**Pn**	02 34 55.1	**+1.4**	
IVA				*i* Sn		**Sn**	02 35 48.7	**+1.1**	
BBLS	**Lazići**	**4.72**	**56**	*e*Pn		**Pn**	02 34 56.0	**+1.2**	
LJU	**Ljubljana**	**4.72**	**4**	*e*Pn		**Pn**	02 34 53.3	**-1.4**	
SJES	**Sjenica**	**4.83**	**64**	*e*Pn		**Pn**	02 34 58.0	**+1.8**	
OHR	**Ohrid**	**5.13**	**90**	*i*Pn		**Pn**	02 35 02.6	**+2.3**	
OHR				*i* Sn		**Sn**	02 36 03.2	**+3.7**	
TEKS	**Tekeris**	**5.17**	**50**	*e*Pn		**Pn**	02 34 59.0	**-1.9**	
OBKA	**Obir**	**5.19**	**4**	*i*Pn		**Pn**	02 35 03.1	**+1.9**	
	comp=N,1.6nm,0.2s								
DIVS	**Divibare**	**5.20**	**56**	*e*Pn		**Pn**	02 35 02.0	**+0.6**	
MYKA	**Terra Mystica**	**5.30**	**357**	*e*Sn		**Sn**	02 36 01.2	**-2.6**	
	comp=N,14nm,0.9s								
SOKA	**Soboth**	**5.39**	**8**	*i*Pn		**Pn**	02 35 04.5	**+0.5**	
	comp=N,1.6nm,0.4s								
SOKA				*i* Sn		**Sn**	02 36 03.0	**-3.1**	
	comp=N,4.6nm,0.6s								
SBF	**Sospel**	**5.47**	**300**	*e*Pn		**Pn**	02 35 06.1	**+1.1**	
SBF	**Sospel**	**5.47**	**300**	*e*P		**Pn**	02 35 09.3	**+4.3**	
SBF				*e*Sn		**Sn**	02 36 06.8	**-1.2**	
	comp=N,3.3nm,0.2s								
BEHE	**Becsehely**	**5.51**	**20**	*e*Pn		**Pn**	02 35 07.9	**+2.4**	
ABTA	**Abfaltersbach**	**5.52**	**349**	*e*Pn		**Pn**	02 35 06.6	**+0.8**	
	comp=N,6.2nm,0.6s								
ABTA				*e*Sn		**Sn**	02 36 07.6	**-1.6**	
	comp=N,11nm,0.7s								
KOVH	**Kovagotottos**	**5.60**	**31**	P		**Pn**	02 35 07.5	**+0.7**	
FRGS	**Fruska Gora**	**5.71**	**46**	*e*Pn		**Pn**	02 35 07.9	**-0.3**	
LMR	**La Mourre**	**5.91**	**292**	*e*Pn		**Pn**	02 35 11.1	**+0.2**	
LMR				*e*Sn		**Sn**	02 36 16.7	**-1.9**	
MORH	**Mrgy, Hungar**	**5.92**	**33**	*e*Pn		**Pn**	02 35 10.7	**-0.5**	
MORH	**Mrgy, Hungar**	**5.92**	**33**	P		**Pn**	02 35 11.9	**+0.8**	
ARSA	**Arzberg**	**6.02**	**10**	*i*Pn		**Pn**	02 35 14.4	**+1.9**	
	comp=N,2.7nm,0.4s								
DAVOX	**Davos/Dischmat**	**6.20**	**333**	Pn		**Pn**	02 35 16.6	**+1.4**	
	comp=N,0.3nm,0.3s,baz=156,slow=20,SNR=3.6								
DAVOX				Sn		**Sn**	02 36 24.8	**-1.4**	
	comp=N,0.2nm,0.3s,baz=114,slow=21,SNR=1.0								
	comp=N,1.0nm,0.3s								
WATA	**Walderalm**	**6.25**	**345**	*i* Pn		**Pn**	02 35 18.9	**+3.1**	
	comp=N,1.7nm,0.4s								
WATA				*e*Sn		**Sn**	02 36 29.7	**+2.4**	
	comp=N,8.6nm,0.7s								
MBDF	**Montbardon**	**6.29**	**305**	*e*Pn		**Pn**	02 35 18.3	**+1.9**	
MBDF	**Montbardon**	**6.29**	**305**	*e*P		Pn	02 35 22.6	**+6.2**	
MBDF				*e*Sn		**Sn**	02 36 27.5	**-0.9**	
	comp=N,2.8nm,0.5s								
BIOA	**Bad Ischl, Aus**	**6.36**	**358**	*i* Pn		**Pn**	02 35 19.2	**+1.9**	
	comp=N,4.8nm,0.3s								
BIOA				*i* Sn		**Sn**	02 36 31.9	**+2.0**	
	comp=N,5.7nm,0.4s								
MPLH	**Magyarpolny**	**6.36**	**22**	P		**Pn**	02 35 20.4	**+3.2**	
MOA	**Molin**	**6.52**	**2**	*i* Pn		**Pn**	02 35 21.2	**+1.8**	
	comp=N,2.4nm,0.3s								
MOA				*e*Sn		**Sn**	02 36 34.0	**+0.3**	
	comp=N,4.8nm,0.5s								
RONA	**Rosalia, Austr**	**6.57**	**14**	*i* Pn		**Pn**	02 35 22.4	**+2.3**	
	comp=N,2.7nm,0.4s								
KEST	**Kesra**	**6.68**	**215**	Pn		**Pn**	02 35 23.4	**+1.8**	
	comp=N,0.3nm,0.3s,baz=298,slow=7.6,SNR=4.3								
	comp=N,3.4nm,0.7s								
CONA	**Conrad Observa**	**6.73**	**11**	*e*Pn		**Pn**	02 35 24.4	**+2.1**	
	comp=N,3.8nm,0.7s								
SMRF	**Simiane la Rot**	**6.75**	**296**	*e*Pn		**Pn**	02 35 24.0	**+1.4**	
SMRF				*e*Sn		**Sn**	02 36 38.9	**-0.6**	
	comp=N,4.5nm,0.8s								
ORIF	**Oris-en-Rattie**	**6.94**	**304**	*e*P		Pn	02 35 30.9	**+5.6**	
ORIF				*e*Sn		**Sn**	02 36 43.2	**-1.0**	
	comp=N,0.7nm,0.3s								
SRO	**Srobarova**	**7.17**	**24**	*e*PN		**Pn**	02 35 25.1	**-3.2**	
MODS	**Modra-Piesok**	**7.41**	**17**	*e*PN		**Pn**	02 35 35.0	**+3.3**	
MODS				*e*PG		**Pg**	02 36 06.6	**+1.2**	
MODS				*e*SN		Sn	02 36 38.6	**-17**	
GERES	**GERESS Array B**	**7.51**	**358**	Pn		**Pn**	02 35 34.3	**+1.2**	
	comp=N,0.6nm,0.3s,baz=174,slow=14,SNR=11								
GERES				Sn		**Sn**	02 36 56.9	**-1.5**	
	comp=N,0.4nm,0.3s,baz=167,slow=22,SNR=3.1								
	comp=N,1.1nm,0.4s								
VIVF	**Saint-Julien-l**	**7.68**	**300**	*e*Pn		**Pn**	02 35 36.6	**+1.2**	
VIVF				*e*Sn		**Sn**	02 37 00.8	**-1.6**	
	comp=N,1.1nm,0.4s								
CABF	**La Chapelle**	**7.77**	**315**	*e*Pn		**Pn**	02 35 38.6	**+1.9**	
CABF	**La Chapelle**	**7.77**	**315**	*e*P		Pn	02 35 43.3	**+6.6**	
CABF				*e*Sn		**Sn**	02 37 02.8	**-1.9**	
	comp=N,1.7nm,0.4s								
KHC	**Kasperske Hory**	**7.80**	**358**	*e*PN		**Pn**	02 35 38.4	**+1.4**	
KHC				*ex*		Pb	02 35 51.0	**-7.8**	
KHC				*e*SN		**Sn**	02 37 04.5	**-0.9**	
LASF	**Ste Croix**	**7.96**	**294**	*e*Pn		**Pn**	02 35 39.8	**+0.6**	
LASF				*e*Sn		**Sn**	02 37 07.4	**-1.8**	
	comp=N,0.7nm,0.3s								
HINF	**Hinteralfeld**	**8.25**	**324**	*e*Pn		**Pn**	02 35 45.1	**+2.0**	
HINF				*e*Sn		**Sn**	02 37 12.3	**-4.0**	
	comp=N,1.7nm,0.4s								
CDF	**Champ du Feu**	**8.54**	**328**	*e*Pn		**Pn**	02 35 47.6	**+0.5**	
CDF				*e*Sn		**Sn**	02 37 20.1	**-3.4**	
	comp=N,2.1nm,0.6s								
HAU	**Haudompre**	**8.62**	**323**	*e*Pn		**Pn**	02 35 49.6	**+1.4**	
MTLF	**Montolieu**	**8.96**	**287**	*e*Pn		**Pn**	02 35 53.8	**+0.9**	
MTLF				*e*Sn		**Sn**	02 37 31.9	**-1.9**	
	comp=N,1.5nm,0.7s								
SMF	**Signal de Mont**	**9.05**	**309**	*e*Pn		**Pn**	02 35 55.4	**+1.4**	
SMF				*e*Sn		**Sn**	02 37 33.1	**-2.8**	
	comp=N,0.7nm,0.3s								
PAGF	**Fort de Pagny**	**9.30**	**324**	*e*P		Pn	02 36 05.0	**+7.5**	
	baz=144								
CAF	**Calviac**	**9.44**	**296**	*e*Pn		**Pn**	02 36 00.9	**+1.4**	
SSF	**Saint Saulge**	**9.46**	**311**	*e*Pn		**Pn**	02 36 00.6	**+0.8**	
MEZF	**Maizieres J'vi**	**9.57**	**321**	*e*Pn		**Pn**	02 36 00.7	**-0.5**	
	baz=142								
MEZF				*e*Sn		**Sn**	02 37 44.4	**-4.3**	
	comp=N,0.6nm,0.2s								
BGF	**Bois d'Agland**	**9.59**	**307**	*e*P		Pn	02 36 07.7	**+6.2**	
SAVF	**Savonnieres en**	**9.62**	**322**	*e*Pn		**Pn**	02 36 03.1	**+1.2**	
MLR	**Muntele Rosu**	**9.63**	**60**	Pn		**Pn**	02 36 03.4	**+1.3**	
	comp=N,0.1nm,0.3s,baz=156,slow=17,SNR=4.0								
MLR				Sn		**Sn**	02 37 47.9	**-2.4**	
	baz=72,slow=23								
	comp=N,1.5nm,0.6s								
RJF	**Les Rejaudoux**	**9.93**	**298**	*e*Pn		**Pn**	02 36 07.6	**+1.5**	
RJF				*e*Sn		**Sn**	02 37 54.5	**-3.0**	
	comp=N,0.4nm,0.3s								
BAIF	**Baives**	**11.09**	**325**	*e*P		Pn	02 36 28.1	**+6.2**	
ESDC	**Sonseca Array**	**13.78**	**269**	Pn		**Pn**	02 36 59.1	**+0.3**	
	comp=N,0.1nm,0.3s,baz=75,slow=13,SNR=8.4								
ESDC				LR		LR	02 41 44.6		
	comp=N,22nm,19.5s,baz=112,slow=35								
	comp=N,0.8nm,0.8s								
NACGM	**Naroch**	**16.00**	**28**⇑	*e*P		P	02 37 45.5	**+14**	
	baz=215								
VSVD	**Vaisvydziai**	**16.03**	**21**	*e*P		P	02 37 45.8	**+14**	
IIGN	**Ignalina**	**16.17**	**26**	*e*P		P	02 37 44.6	**+11**	
VIKU	**Vikbolandet**	**17.27**	**5**	*e*P		**Pn**	02 37 44.4	**-0.1**	
FINES	**FINESS Array B**	**21.43**	**16**	P		**P**	02 38 30.3	**-1.0**	
	comp=N,2.1nm,1.0s,baz=183,slow=10,SNR=1.7								
	comp=N,2.1nm,1.0s								
TORD	**Torodi Ar. Bea**	**30.07**	**204**	P		**P**	02 39 54.6	**+1.7**	
	comp=N,0.9nm,0.8s,baz=16,slow=7.9,SNR=6.0								
TORD				LR		LR	02 52 42.1		
	comp=N,144nm,19.0s,baz=180,slow=38								
	comp=N,0.9nm,0.8s								
MKAR	**Makanchi Array**	**47.97**	**59**	P		**P**	02 42 20.9	**-1.3**	
	comp=N,0.2nm,0.5s,baz=286,slow=5.2,SNR=2.0								
	comp=N,0.2nm,0.5s								
SONM	**Songino Array**	**62.29**	**49**	P		**P**	02 44 05.2	**-0.5**	
	comp=N,0.4nm,0.4s,baz=292,slow=7.8,SNR=4.8								
	comp=N,0.4nm,0.4s								

MAN 28 02:42:41.6, 9°21N × 126°26E, h24 km, mb4.2, ML3.0, MS2.7, 1C-6D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	**General Luna,**	**0.58**	**347**⇓	*e*P	Pg	02 42 54.0	**0.0**
BUTP	**Butuan**	**0.67**	**249**⇓	*e*P	Pb	02 42 54.3	**+0.3**
SCPH	**Surigao**	**0.95**	**307**	*e*P	Pg	02 42 59.1	**+1.4**
SCPH				*i* S		02 43 12.5	
BIPH	**Bislig**	**1.02**	**174**⇑	*i*P	Pg	02 42 56.7	**+0.2**
BIPH				*i* S		02 43 08.7	
MSLP	**Maasin**	**1.66**	**304**⇓	*e*P	Pn	02 43 10.9	**+0.9**
BUKP	**Musuan**	**1.77**	**222**⇓	*e*P	Pn	02 43 10.9	**0.0**
TBP	**Tagbilaran**	**2.41**	**282**	*e*P	Pn	02 43 19.8	**+1.8**
TBP				*i* S		02 43 49.5	
DDMP	**Don Marcelino,**	**3.13**	**190**⇓	*e*P	Pn	02 43 29.3	**+0.5**
RCP	**Roxas**	**4.17**	**304**⇓	*e*P	Pn	02 43 45.4	**+1.0**

*SOME **28** 02:47:57.1, 40°.57N × 73°.38E, h5 km*

KRNET 28 02:47:27.2±0.1, 39°.40N × 73°.59E, mb3.1, 12C-4D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.28**	**331**⇑	*e*P	Pg	02 47 51.2	**-0.6**
	baz=31						
OHH				⇑*e*S	Sb	02 48 09.0	**-0.4**
	baz=31						
DRK	**Karamyk**	**1.39**	**274**⇓	*e*P	Pg	02 47 53.1	**-0.7**
	baz=74						
DRK				⇓*e*S	Sb	02 48 12.3	**-0.3**
	baz=74						
BTK	**Batken**	**2.24**	**288**⇑	*i*P	Pb	02 48 07.2	**-1.3**
	baz=88						
BTK				⇑*i*S	Sb	02 48 36.4	**-0.4**
	baz=88						
ARLS	**Aral**	**2.52**	**13**⇑	*i*P	Pn	02 48 11.1	**+1.5**
	baz=13						
ARLS				⇑*i*S	Sb	02 48 43.1	**-2.0**
	baz=13						
GAR	**Garm**	**2.58**	**262**⇑	*i*P	Pn	02 48 11.9	**+1.6**
	baz=62						
GAR				⇑*i*S	Sn	02 48 44.2	**+1.8**
	baz=62						
ARK	**Arkit**	**2.70**	**333**⇑	*i*P	Pn	02 48 13.6	**+1.6**
	baz=33						
ARK				⇑*i*S	Sn	02 48 47.5	**+2.1**
	baz=33						
TRKS	**Terek-Say**	**2.83**	**319**⇓	*i*P	Pn	02 48 14.5	**+0.6**
	baz=19						
TRKS				⇓*i*S	Sn	02 48 48.9	**+0.1**
	baz=19						
BOOM	**Boomskoye usch**	**3.56**	**29**⇑	*i*P	Pn	02 48 25.7	**+1.8**
	baz=29						
BOOM				⇑*i*S	Sn	02 49 08.1	**+1.3**
	baz=29						
IUG	**luzhnay**	**3.85**	**317**	*e*P	Pg	02 48 53.5	**+13**
	123nm,0.5s						
IUG				*e*S	Sg	02 49 34.3	**+3.3**
	12nm,0.5s						
DZA	**Taraz**	**3.88**	**335**	*e*P	Pg	02 48 47.3	**+5.6**
	62nm,0.1s						
DZA				*e*S	Sb	02 49 23.5	**-0.7**
	253nm,0.1s						
KST	**Kastek**	**4.06**	**25**	*e*P	Pg	02

SCIA	**State Center** comp=Z,17nm,0.7s	**7.03**	**38**	IAmb_Lg		02 54 07.8
MNTX	**Cornudas Mount**	**7.12**	**229**	Pn	Pn	02 51 55.9 -1.0
MNTX	comp=Z,8.5nm,0.7s			IAmb_Lg		02 54 00.3
ECSD	**EROS Data Cent** comp=Z,8.3nm,1.1s	**7.45**	**14**	IAmb_Lg		02 54 17.7
S44A	**Carbondale** comp=Z,9.2nm,0.7s	**7.90**	**78**	IAmb_Lg		02 54 24.6
SIUC	**Southern Illin** comp=Z,13nm,0.9s	**7.93**	**78**	IAmb_Lg		02 54 24.9
833A	**Chaparral WMA,** comp=Z,9.1nm,0.7s	**8.17**	**182**	IAmb_Lg		02 54 41.0
RWWY	**Rawlins** comp=Z,6.4nm,0.7s	**8.20**	**312**	IAmb_Lg		02 54 43.0
K22A	**Casper** comp=Z,8.8nm,0.8s	**8.43**	**319**	IAmb_Lg		02 55 01.0
RSSD	**Black Hills** comp=Z,7.1nm,0.9s	**8.51**	**335**	IAmb_Lg		02 54 52.4
JFWS	**Jewell Farm** comp=Z,10nm,0.7s	**9.31**	**44**	IAmb_Lg		02 55 06.3

*JMA **28** 02:52:57.0±0.2,25°N×3°×122°9E±0°.7, h121km±2km, MV2.9/13, NW OFF ISHIGAKIJIMA IS*
*TAP **28** 02:52:56.5, 24°.75N×122°.90E, h120km, ML3.3, D*
ISC 28 02:52:57.9±1.5**, 24°.68N**±0°.06×**122°.90E**±0°.03**, h112**km±8km**, n67, σ0°.84/112, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.23**	**169**	P	**Pn**	**02 53 14.0**	**+0.3**
JYNG				*e*S	**Sn**	**02 53 26.9**	**+1.3**
YOJ	**Yonaguni jima** baz=161	**0.24**	**154**	P	**Pn**	**02 53 13.8**	**+0.1**
YOJ	baz=161			S	**Sn**	**02 53 26.5**	**+1.0**
YOJ	**Yonaguni jima**	**0.24**	**154**	P	**Pn**	**02 53 13.9**	**+0.2**
YOJ				*e*S	**Sn**	**02 53 26.4**	**+0.8**
IRIF	**Iriomote-Funau**	**0.83**	**114**	P	**Pn**	**02 53 17.7**	**+0.1**
IRIF				S	**Sn**	**02 53 33.0**	**+0.5**
TWC	**Suao** baz=257	**0.95**	**266**	P	**Pn**	**02 53 18.1**	**-0.7**
TWC	baz=257			S	**Sn**	**02 53 33.4**	**-1.2**
TIPB	**Shuangxi** baz=277	**1.02**	**287**	P	**Pn**	**02 53 19.4**	**-0.1**
TIPB	baz=277			S	**Sn**	**02 53 35.2**	**-0.6**
HATJ	**Hateruma jima**	**1.03**	**126**	P	**Pn**	**02 53 19.9**	**+0.3**
HATJ				S	**Sn**	**02 53 36.6**	**+0.6**
EWUT	**Wuta** baz=249	**1.04**	**258**	*e*S	**Sn**	**02 53 35.7**	**-0.5**
NDS	**Dongshan** baz=260	**1.07**	**268**	*e*P	**Pn**	**02 53 20.3**	**+0.2**
NDS	baz=260			*e*S	**Sn**	**02 53 36.5**	**-0.3**
ENA	**Nanau** baz=249	**1.08**	**257**	P	**Pn**	**02 53 20.0**	**-0.1**
ENA	baz=249			S	**Sn**	**02 53 36.2**	**-0.7**
JKRS	**Kuro-shima**	**1.10**	**113**	P	**Pn**	**02 53 20.4**	**0.0**
JKRS				S	**Sn**	**02 53 37.9**	**+0.6**
JIJ	**Ishigaki jima**	**1.18**	**105**	P	**Pn**	**02 53 21.1**	**0.0**
JIJ				S	**Sn**	**02 53 38.1**	**-0.7**
FUSB	**Fushanzhiwuyua** baz=270	**1.19**	**274**	*e*P	**Pn**	**02 53 21.1**	**-0.3**
FUSB	baz=270			*e*S	**Sn**	**02 53 38.3**	**-0.9**
LATG	**Datong** baz=256	**1.25**	**264**	*e*P	**Pn**	**02 53 22.5**	**+0.3**
LATG	baz=256			*e*S	**Sn**	**02 53 40.2**	**-0.3**
ETL	**Fush Village** baz=237	**1.27**	**246**	*e*S	**Sn**	**02 53 40.3**	**-0.4**
NWLT	**Wulai** baz=271	**1.27**	**275**	*e*P	**Pn**	**02 53 22.8**	**+0.5**
NWLT	baz=271			*e*S	**Sn**	**02 53 40.4**	**-0.2**
NACB	**Ninganchiao** baz=239	**1.29**	**247**	P	**Pn**	**02 53 21.6**	**-0.8**
NACB	baz=239			S	**Sn**	**02 53 39.7**	**-1.2**
JISG	**Ishigakijimahi**	**1.29**	**94**	P	**Pn**	**02 53 22.2**	**-0.2**
JISG				S	**Sn**	**02 53 40.3**	**-0.7**
TWD	**Chiawan** baz=235	**1.33**	**244**	*e*S	**Sn**	**02 53 40.3**	**-1.4**
HWA	**Hwalien** baz=237	**1.37**	**240**	*e*S	**Sn**	**02 53 42.1**	**-0.4**
ETLH	**Xiulin Townshi** baz=247	**1.37**	**250**	*e*P	**Pn**	**02 53 22.8**	**-0.7**
ETLH	baz=247			*e*S	**Sn**	**02 53 42.9**	**+0.1**
YHNB	**Yeheng** baz=272	**1.38**	**270**	*e*P	**Pn**	**02 53 23.5**	**-0.1**
YHNB	baz=272			*e*S	**Sn**	**02 53 42.3**	**-0.7**
NNSB	**Datong** baz=251	**1.40**	**260**	*e*S	**Sn**	**02 53 43.2**	**-0.2**
NSK	**Sanguang** baz=272	**1.40**	**270**	*e*P	**Pn**	**02 53 24.1**	**+0.4**
NSK	baz=272			*e*S	**Sn**	**02 53 42.8**	**-0.5**
NNS	**Nan Shan** baz=252	**1.41**	**261**	*e*P	**Pn**	**02 53 24.4**	**+0.5**
NNS	baz=252			*e*S	**Sn**	**02 53 42.8**	**-0.8**
FUSS	**Fushou** baz=247	**1.56**	**255**	*e*P	**Pn**	**02 53 26.4**	**+0.5**
FUSS	baz=247			*e*S	**Sn**	**02 53 46.4**	**-0.8**
WHF	**Hehuan Shan** baz=248	**1.58**	**251**	*e*P	**Pn**	**02 53 25.8**	**-0.5**
WHF	baz=248			*e*S	**Sn**	**02 53 46.7**	**-1.0**
ESL	**Shilin** baz=235	**1.59**	**238**	*e*S	**Sn**	**02 53 47.3**	**+0.1**
NFF	**Wufeng Townshi** baz=266	**1.62**	**269**	*e*P	**Pn**	**02 53 27.2**	**+0.9**
NFF	baz=266			*e*S	**Sn**	**02 53 47.0**	**-0.9**
TWT	**Tachien** baz=249	**1.62**	**255**	*e*S	**Sn**	**02 53 48.5**	**+0.2**
TDCB	**Techi** baz=248	**1.64**	**255**	*e*P	**Pn**	**02 53 26.3**	**-0.4**
TDCB	baz=248			*e*S	**Sn**	**02 53 47.8**	**-0.7**
JTJ	**Tarama**	**1.64**	**91**	S	**Sn**	**02 53 47.5**	**-0.8**
EGFH	**Guangfu** baz=235	**1.68**	**234**	*e*S	**Sn**	**02 53 48.9**	**-0.2**
CHGB	**Renai** baz=241	**1.69**	**249**	*e*P	**Pn**	**02 53 27.3**	**0.0**
CHGB	baz=241			*e*S	**Sn**	**02 53 49.4**	**-0.3**
LIOB	**Emei** baz=267	**1.71**	**269**	*e*S	**Sn**	**02 53 49.8**	**-0.1**
NSTT	**Nanjuang** baz=266	**1.73**	**269**	*e*S	**Sn**	**02 53 49.7**	**-0.5**
OWD	**Renai** baz=239	**1.73**	**246**	*e*P	**Pn**	**02 53 28.4**	**+0.7**
OWD	baz=239			*e*S	**Sn**	**02 53 49.2**	**-1.2**
WUSB	**Renai** baz=241	**1.76**	**248**	*e*P	**Pn**	**02 53 28.1**	**0.0**
WUSB	baz=241			*e*S	**Sn**	**02 53 50.8**	**-0.4**
HGSD	**Ruisui** baz=226	**1.79**	**229**	*e*P	**Pn**	**02 53 27.9**	**-0.4**
HGSD	baz=226			*e*S	**Sn**	**02 53 50.9**	**-0.7**
WHP	**Taichung City** baz=253	**1.82**	**258**	*e*P	**Pn**	**02 53 29.2**	**+0.3**
WHP	baz=253			*e*S	**Sn**	**02 53 52.5**	**+0.1**
VWDT	**VWDT** baz=234	**1.85**	**241**	*e*P	**Pn**	**02 53 29.0**	**0.0**
VWDT	baz=234			*e*S	**Sn**	**02 53 52.0**	**-0.8**
EHY	**Hungye** baz=229	**1.85**	**231**	*e*P	**Pn**	**02 53 29.9**	**+0.7**
EHY	baz=229			*e*S	**Sn**	**02 53 53.3**	**+0.3**
WCS	**Beigang Elemen** baz=249	**1.91**	**252**	*e*S	**Sn**	**02 53 56.0**	**+1.6**
YULB	**Yu-li** baz=234	**1.94**	**229**	*e*P	**Pn**	**02 53 29.6**	**-0.6**
YULB				*e*S	**Sn**	**02 53 54.1**	**-0.9**
EYUL	**Yuli** baz=233	**1.96**	**228**	*e*P	**Pn**	**02 53 30.5**	**0.0**
EYUL	baz=233			*e*S	**Sn**	**02 53 55.5**	**+0.1**
SSLB	**Suanglung** baz=239	**1.98**	**244**	*e*P	**Pn**	**02 53 30.8**	**-0.1**
SSLB	baz=239			*e*S	**Sn**	**02 53 55.0**	**-0.9**
SMLT	**Sun Moon Lake** baz=240	**1.99**	**247**	*e*P	**Pn**	**02 53 31.8**	**+0.8**
SMLT	baz=240			*e*S	**Sn**	**02 53 58.0**	**+1.8**
TYC	**Yuchr** baz=241	**2.01**	**248**	*e*P	**Pn**	**02 53 32.1**	**+0.9**
TYC	baz=241			*e*S	**Sn**	**02 53 58.3**	**+1.7**
JIRB	**Irabujima**	**2.08**	**85**	*e*S	**Sn**	**02 53 57.5**	**-0.5**
FULB	**Fuli** baz=218	**2.08**	**225**	*e*P	**Pn**	**02 53 32.5**	**+0.4**
FULB	baz=218			*e*S	**Sn**	**02 53 58.0**	**-0.1**
YUS	**Yu-Shan** baz=230	**2.13**	**237**	*e*P	**Pn**	**02 53 33.5**	**+0.3**
YUS	baz=230			*e*S	**Sn**	**02 53 59.3**	**-0.8**
JIKM	**Ikemajima**	**2.15**	**83**	*e*P	**Pn**	**02 53 32.7**	**-0.2**
JIKM				S	**Sn**	**02 53 59.4**	**-0.3**
JMJ2	**Miyako jima3**	**2.21**	**88**	*e*P	**Pn**	**02 53 33.9**	**+0.2**
JMJ2				S	**Sn**	**02 54 01.2**	**+0.1**
ALS	**Alishan** baz=237	**2.24**	**239**	*e*P	**Pn**	**02 53 34.6**	**+0.3**
ALS	baz=237			*e*S	**Sn**	**02 54 03.0**	**+0.9**
EDH	**Donghe** baz=214	**2.24**	**221**	*e*P	**Pn**	**02 53 32.9**	**-1.2**
EDH	baz=214			*e*S	**Sn**	**02 54 00.2**	**-1.5**
CHN5	**Tsauling** baz=234	**2.29**	**243**	*e*S	**Sn**	**02 54 04.4**	**+1.2**
LDUT	**Ludao** baz=210	**2.38**	**214**	*e*S	**Sn**	**02 54 03.8**	**-1.3**
LONT	**Longtian** baz=221	**2.39**	**223**	*e*S	**Sn**	**02 54 03.8**	**-1.5**
STYH	**Taoyuan** baz=228	**2.45**	**233**	*e*S	**Sn**	**02 54 07.9**	**+1.3**
CHN4	**Tsaushan** baz=237	**2.48**	**238**	*e*P	**Pn**	**02 53 38.3**	**+1.1**
CHN4	baz=237			*e*S	**Sn**	**02 54 09.2**	**+1.8**
TPUB	**Ta-pu** baz=235	**2.48**	**237**	*e*P	**Pn**	**02 53 37.2**	**0.0**
TPUB	baz=235			*e*S	**Sn**	**02 54 08.2**	**+0.7**
TWGBT	**Beinan** baz=226	**2.49**	**222**	*e*S	**Sn**	**02 54 07.8**	**+0.3**
TWG	**Pinlang** baz=226	**2.49**	**223**	*e*S	**Sn**	**02 54 06.5**	**-1.1**
WTP	**Ta-pu** baz=229	**2.53**	**236**	*e*P	**Pn**	**02 53 39.3**	**+1.5**
WTP	baz=229			*e*S	**Sn**	**02 54 10.4**	**+1.9**
TWK	**Hsinying** baz=236	**2.61**	**238**	*e*S	**Sn**	**02 54 12.0**	**+1.6**
CHN1	**Nanshi** baz=234	**2.63**	**236**	*e*S	**Sn**	**02 54 12.2**	**+1.4**
ECL	**Taimali** baz=219	**2.73**	**221**	*e*S	**Sn**	**02 54 10.5**	**-2.6**

IDC 28 02:53:39.2±7.4**, 31°.64S**×**179°.70E, h469**km±93km**, mb3.2/2, mbtmp4.2/3, Error ellipse: s-maj=101.8km s-min=36.3km az=9.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.94**	**197**	P	P	02 55 24.9	+1.3
	13nm,0.3s,baz=240,slow=2.5,SNR=30						
URZ				S	S	02 56 47.9	-1.4
	37nm,0.6s,baz=9.5,slow=12,SNR=13						
ASAR	**Alice Springs**	**41.09**	**269**	P	P	03 00 41.0	-0.2
	0.7nm,0.4s,baz=105,slow=7.3,SNR=9.6						
	0.7nm,0.4s						
WRA	**Warramunga Arr**	**42.20**	**275**	P	P	03 00 50.0	0.0
	1.6nm,0.3s,baz=112,slow=7.9,SNR=49						
	1.6nm,0.3s						
FINES	**FINESS Array B**	**145.58**	**338**	PKPbc	PKPdf	03 12 22.8	+0.3
	1.0nm,0.4s,baz=46,slow=3.9,SNR=21						

*IDC **28** 03:04:54.8±5.0, 44°.38N×149°.58E, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=170.6km s-min=42.9km az=8.0*
*SKHL **28** 03:04:57.1±0.5, 45°.30N×148°.90E, h99km±4km, mb4.0/3, msha4.5/3*
ISC 28 03:05:00.0±1.7**, 45°.1N**±0°.1×**149°.0E**±0°.1**, h35**km**, n14, σ0°.94/11, mb3.5/3, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**0.81**	**283**	*e*P	**Pn**	**03 05 14.2**	**-0.8**
KUR				AMB	AMB	03 05 15.2	
	20nm,0.2s						
KUR				*e*S	**Sn**	**03 05 27.1**	**+1.3**
KUR				A	A	03 05 30.8	
	30nm,0.2s						
KUR				A	A	03 05 30.8	
	50nm,0.2s						
SHO	**Shikotan**	**1.95**	**233**	*e*P	**Pn**	**03 05 30.5**	**-0.1**
SHO				AMB	AMB	03 05 31.2	
	30nm,0.5s						
SHO				*e*S	**Sn**	**03 05 55.3**	**+1.5**
SHO				A	A	03 05 56.7	
	40nm,0.5s						
SHO				A	A	03 05 56.7	
	70nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**2.46**	**247**	*e*P	**Pn**	**03 05 36.5**	**-1.1**
YUK				AMB	AMB	03 05 39.1	
	40nm,0.4s						
YUK				*e*S	**Sn**	**03 06 06.3**	**-0.1**
YUK				A	A	03 06 16.4	
	30nm,0.5s						
YUK				A	A	03 06 16.4	
	80nm,0.5s						
NMR	**Nemuro--Hokkai**	**2.89**	**235**	*e*P	**Pn**	**03 05 42.6**	**-0.9**
NMR				*e*S	**Sn**	**03 06 16.9**	**0.0**
AKK	**Akkeshi**	**3.62**	**237**	*e*P	**Pn**	**03 05 53.0**	**-0.5**
AKK				*e*S	**Sn**	**03 06 35.3**	**+0.3**
H11N2	**WAKE ISLAND Hy 29.30** baz=334,slow=76,SNR=3.3	**144**		T	T	03 41 55.6	
H11N1	**WAKE ISLAND Hy 29.31** baz=334,slow=76,SNR=4.4	**144**		T	T	03 42 02.2	
H11N3	**WAKE ISLAND Hy 29.31** baz=334,slow=76,SNR=4.1	**144**		T	T	03 41 59.4	
H11S1	**WAKE ISLAND Hy 30.31** baz=335,slow=76,SNR=5.6	**145**		T	T	03 43 13.8	
H11S3	**WAKE ISLAND Hy 30.32** baz=335,slow=76,SNR=3.5	**145**		T	T	03 43 14.6	
H11S2	**WAKE ISLAND Hy 30.33** baz=335,slow=76,SNR=3.4	**145**		T	T	03 43 10.6	
MKAR	**Makanchi Array** 0.5nm,0.7s,baz=77,slow=9.1,SNR=4.6	**45.16**	**297**	P	P	03 13 18.3	+5.2
	0.5nm,0.7s						
FINES	**FINESS Array B** 1.4nm,0.7s,baz=35,slow=7.5,SNR=5.6	**64.31**	**333**	P	P	03 15 36.7	+5.3
	1.4nm,0.7s						
TXAR	**Lajitas Array** 0.2nm,0.5s,baz=328,slow=4.3,SNR=4.0	**80.83**	**58**	P	**P**	**03 17 10.7**	**+0.3**
	0.2nm,0.5s						

*BJI **28** 03:17:13.9±0.0, 53°.64N×159°.71E, h103km, mb4.6/41, mB4.8/20*
*KRSC **28** 03:17:13.9±0.8, 53°.26N×159°.95E, h86km±8km, ML5.4*
*MOS **28** 03:17:15.0±1.0, 53°.36N×159°.53E, h101km, mb4.7/46, Error ellipse: s-maj=7.0km s-min=3.5km az=79.4*
MOS Felt (II-III) at Petropavlovsk-Kamchatskiy.
*NEIC **28** 03:17:16.2±1.6, 53°.48N±0°.09×159°.55E±0°.09, h89km±5km, mb4.9/394, Error ellipse: s-maj=13.5km s-min=7.6km az=166.0*
*IDC **28** 03:17:17.7±0.6, 53°.52N×159°.33E, h105km±5km, mb4.4/42, mbtmp4.7/43, MS3.3/24, Error ellipse: s-maj=10.9km s-min=7.0km az=163.0*
ISC 28 03:17:15.3±0.4**, 53°.34N**±0°.03×**159°.67E**±0°.03**, h90**km±3km**,**
h89km:pP-P, n834, σ1s42/753, mb4.9/274, 15C-22D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NLC	**Nalytchevo**	**0.26**	**229**	PN	**Pn**	**03 17 28.4**	**0.0**
NLC				S	**Sn**	**03 17 38.2**	**0.0**
NLC	**Nalytchevo**	**0.26**	**229**	*e*P	**Pn**	**03 17 28.4**	**0.0**
NLC				*e*S	**Sn**	**03 17 38.2**	**0.0**
SPN	**Mys Shipunski**	**0.32**	**138**	PN	**Pn**	**03 17 28.0**	**-0.8**
SPN				S	**Sn**	**03 17 37.3**	**-1.5**
SPN	**Mys Shipunski**	**0.32**	**138**	*e*P	**Pn**	**03 17 28.0**	**-0.8**
SPN				*e*S	**Sn**	**03 17 37.3**	**-1.5**
SDLR	**Sedlovina**	**0.47**	**263**	PN	**Pn**	**03 17 30.4**	**+0.5**
SDLR	**Sedlovina**	**0.47**	**263**	*e*P	**Pn**	**03 17 30.4**	**+0.5**
UGLR	**Uglovaya**	**0.52**	**256**	PN	**Pn**	**03 17 31.1**	**+0.8**
UGLR	**Uglovaya**	**0.52**	**256**	*e*P	**Pn**	**03 17 31.1**	**+0.8**
SMAR	**Somma**	**0.52**	**262**	PN	**Pn**	**03 17 30.9**	**+0.5**
SMAR	**Somma**	**0.52**	**262**	*e*P	**Pn**	**03 17 30.9**	**+0.5**
KRER	**Koryakskii**	**0.55**	**267**	PN	**Pn**	**03 17 31.5**	**+0.9**
KRER	**Koryakskii**	**0.55**	**267**	*e*P	**Pn**	**03 17 31.5**	**+0.9**
AVH	**Avacha**	**0.56**	**263**	PN	**Pn**	**03 17 31.6**	**+1.0**
AVH	**Avacha**	**0.56**	**263**	*e*P	**Pn**	**03 17 31.6**	**+1.0**
KRX	**Arik**	**0.61**	**272**	PN	**Pn**	**03 17 31.9**	**+0.8**
KRX	**Arik**	**0.61**	**272**	*e*P	**Pn**	**03 17 31.9**	**+0.8**
KOK	**Koryaka**	**0.62**	**266**	PN	**Pn**	**03 17 32.0**	**+0.9**
KOK	**Koryaka**	**0.62**	**266**	*e*P	**Pn**	**03 17 32.0**	**+0.9**
DALK	**Dalny**	**0.63**	**241**	PN	**Pn**	**03 17 31.6**	**+0.5**
DALK				S	**Sn**	**03 17 43.7**	**+0.9**
DALK	**Dalny**	**0.63**	**241**	*e*P	**Pn**	**03 17 31.6**	**+0.5**
DALK				*e*S	**Sn**	**03 17 43.7**	**+0.9**
PET	**Petropavlovsk**	**0.69**	**243**	Pn	**Pn**	**03 17 31.8**	**+0.2**
PET				Sn	**Sn**	**03 17 44.6**	**+0.8**
PET	**Petropavlovsk**	**0.69**	**243**	*i*PN	**Pn**	**03 17 31.8**	**+0.2**
PET				*e*S	**Sn**	**03 17 44.7**	**+0.9**
PET	comp=Z,20μm,0.3s			pmax	pmax		
PET	comp=N,19μm,0.5s			smax	smax		
PET	comp=E,26μm,0.5s			smax	smax		
PET	**Petropavlovsk**	**0.69**	**243**	*e*P	**Pn**	**03 17 32.3**	**+0.7**
KII	**Karymskiy**	**0.71**	**350**	PN	**Pn**	**03 17 32.0**	**+0.1**
KII	**Karymskiy**	**0.71**	**350**	*e*P	**Pn**	**03 17 32.0**	**+0.1**
KRMR	**Karymshinskiy**	**1.06**	**242**	PN	**Pn**	**03 17 36.6**	**+1.0**
KRMR				S	**Sn**	**03 17 52.9**	**+2.1**
KRMR	**Karymshinskiy**	**1.06**	**242**	*e*P	**Pn**	**03 17 36.6**	**+1.0**
KRMR				*e*S	**Sn**	**03 17 52.9**	**+2.1**
GNL	**Ganaly**	**1.09**	**290**	PN	**Pn**	**03 17 36.9**	**+0.8**
GNL	**Ganaly**	**1.09**	**290**	*e*P	**Pn**	**03 17 36.9**	**+0.8**
RUS	**Russkaya**	**1.15**	**218**	PN	**Pn**	**03 17 37.1**	**+0.5**
RUS	**Russkaya**	**1.15**	**218**	*e*P	**Pn**	**03 17 37.1**	**+0.5**
I44RU	**PETROPAVLOVSK-** baz=79,slow=19,SNR=4.7	**1.20**	**259**	P	**Pn**	**03 17 37.9**	**+0.7**
PEA0B	**Petropavlovsk-**	**1.21**	**260**		**Pn**	**03 17 38.5**	**+1.1**
PEA0B				Sn	**Sn**	**03 17 55.0**	**+1.0**
PEA0B	**Petropavlovsk-**	**1.21**	**260**	PN	**Pn**	**03 17 38.5**	**+1.1**
PEA0B						03 17 55.0	
PETK	**Petropavlovsk-** comp=E,4μm,0.4s,baz=76,slow=19,SNR=3494	**1.21**	**260**	P	**Pn**	**03 17 37.5**	**+0.2**
PETK				S	**Sn**	**03 17 56.0**	**+2.0**
	comp=E,1μm,0.4s,baz=103,slow=28,SNR=10.0						
PETK				LR	LR	03 18 12.1	
	comp=E,2μm,18.2s,baz=38,slow=51						
MTVR	**Mutnovka**	**1.24**	**227**	PN	**Pn**	**03 17 39.2**	**+1.2**
MTVR	**Mutnovka**	**1.24**	**227**	*e*P	**Pn**	**03 17 39.2**	**+1.2**
GRL	**Gorelyy**	**1.25**	**231**	PN	**Pn**	**03 17 39.6**	**+1.6**
GRL	**Gorelyy**	**1.25**	**231**	*e*P	**Pn**	**03 17 39.6**	**+1.6**
ASAK	**Asacha**	**1.44**	**229**	PN	**Pn**	**03 17 42.0**	**+1.7**
ASAK	**Asacha**	**1.44**	**229**	*e*P	**Pn**	**03 17 42.0**	**+1.7**
APC	**Apacha**	**1.57**	**256**	PN	**Pn**	**03 17 43.8**	**+2.0**
APC				S	**Sn**	**03 18 04.4**	**+2.5**
APC	**Apacha**	**1.57**	**256**	*e*P	**Pn**	**03 17 43.8**	**+2.0**
APC				*e*S	**Sn**	**03 18 04.4**	**+2.5**
MKZ	**Mys Kozlova**	**1.72**	**44**	PN	**Pn**	**03 17 43.5**	**-0.3**
MKZ				S	**Sn**	**03 18 03.6**	**-1.9**
MKZ	**Mys Kozlova**	**1.72**	**44**	*e*P	**Pn**	**03 17 43.5**	**-0.3**
MKZ				*e*S	**Sn**	**03 18 03.6**	**-1.9**
KDTR	**Khodutka, Kamc**	**1.81**	**213**	PN	**Pn**	**03 17 45.9**	**+0.9**
KDTR				S	**Sn**	**03 18 07.9**	**+0.3**
KDTR	**Khodutka, Kamc**	**1.81**	**213**	*e*P	**Pn**	**03 17 45.9**	**+0.9**
KDTR				*e*S	**Sn**	**03 18 07.9**	**+0.3**
TUMR	**Tumrok**	**1.97**	**8**	PN	**Pn**	**03 17 48.6**	**+1.5**
TUMR	**Tumrok**	**1.97**	**8**	*e*P	**Pn**	**03 17 48.6**	**+1.5**
KMNR	**Kamenistaya**	**2.44**	**8**	PN	**Pn**	**03 17 55.4**	**+2.0**
KMNR	**Kamenistaya**	**2.44**	**8**	*e*P	**Pn**	**03 17 55.4**	**+2.0**
PAU	**Pauzhetka**	**2.56**	**224**	PN	**Pn**	**03 17 56.9**	**+2.0**
PAU	**Pauzhetka**	**2.56**	**224**	*e*P	**Pn**	**03 17 56.9**	**+2.0**
KIRR	**Kirishev**	**2.65**	**8**	PN	**Pn**	**03 17 58.1**	**+1.9**
KIRR	**Kirishev**	**2.65**	**8**	*e*P	**Pn**	**03 17 58.1**	**+1.9**
ESO	**Esso**	**2.65**	**348**	PN	**Pn**	**03 17 59.5**	**+3.4**
ESO				S	**Sn**	**03 18 31.0**	**+3.6**
ESO	**Esso**	**2.65**	**348**	*e*P	**Pn**	**03 17 59.5**	**+3.4**
ESO				*e*S	**Sn**	**03 18 31.0**	**+3.6**
KPT	**Kopyto**	**2.65**	**7**	PN	**Pn**	**03 17 58.0**	**+1.8**
KPT	**Kopyto**	**2.65**	**7**	*e*P	**Pn**	**03 17 58.0**	**+1.8**
BZGR	**Bezymyannyi-Gr**	**2.67**	**13**	PN	**Pn**	**03 17 58.8**	**+2.3**
BZGR	**Bezymyannyi-Gr**	**2.67**	**13**	*e*P	**Pn**	**03 17 58.8**	**+2.3**
BZWR	**Bezymyannyi-We**	**2.67**	**10**	PN	**Pn**	**03 17 58.6**	**+2.1**
BZWR	**Bezymyannyi-We**	**2.67**	**10**	*e*P	**Pn**	**03 17 58.6**	**+2.1**
ZLN	**Zelenaya**	**2.76**	**13**	PN	**Pn**	**03 18 00.5**	**+2.8**
ZLN	**Zelenaya**	**2.76**	**13**	*e*P	**Pn**	**03 18 00.5**	**+2.8**
LGNR	**Loginova**	**2.81**	**12**	PN	**Pn**	**03 18 01.9**	**+3.4**
LGNR	**Loginova**	**2.81**	**12**	*e*P	**Pn**	**03 18 01.9**	**+3.4**
CIRR	**Tsirk**	**2.85**	**12**	PN	**Pn**	**03 18 01.5**	**+2.6**
CIRR	**Tsirk**	**2.85**	**12**	*e*P	**Pn**	**03 18 01.5**	**+2.6**
KRSR	**Krestovskiy**	**2.93**	**10**	PN	**Pn**	**03 18 01.6**	**+1.7**
KRSR	**Krestovskiy**	**2.93**	**10**	*e*P	**Pn**	**03 18 01.6**	**+1.7**
KLY	**Klyuchi**	**3.03**	**10**	PN	**Pn**	**03 18 03.5**	**+2.3**
KLY	**Klyuchi**	**3.03**	**10**	*e*P	**Pn**	**03 18 03.5**	**+2.3**
BDR	**Baidarnaya**	**3.35**	**15**	PN	**Pn**	**03 18 07.5**	**+1.9**
BDR	**Baidarnaya**	**3.35**	**15**	*e*P	**Pn**	**03 18 07.5**	**+1.9**
KBTR	**Krutoberegovo**	**3.41**	**31**	PN	**Pn**	**03 18 06.2**	**0.0**
KBTR	**Krutoberegovo**	**3.41**	**31**	*e*P	**Pn**	**03 18 06.2**	**0.0**
KBG	**Krutoberegovo**	**3.41**	**30**	PN	**Pn**	**03 18 06.8**	**+0.6**
KBG	**Krutoberegovo**	**3.41**	**30**	*e*P	**Pn**	**03 18 06.8**	**+0.6**
SMKR	**Semkarok**	**3.41**	**17**	PN	**Pn**	**03 18 07.7**	**+1.4**
SMKR	**Semkarok**	**3.41**	**17**	*e*P	**Pn**	**03 18 07.7**	**+1.4**
SRKR	**Sorokina**	**3.43**	**14**	PN	**Pn**	**03 18 08.3**	**+1.7**
SRKR	**Sorokina**	**3.43**	**14**	*e*P	**Pn**	**03 18 08.3**	**+1.7**
SKR	**Severo-Kuril's**	**3.45**	**221**	*e*PN	**Pn**	**03 18 08.6**	**+1.8**
SKR				*e*S	**Sn**	**03 18 46.0**	**-0.6**
SKR	comp=Z,297nm,0.6s			pmax	pmax		
SKR	comp=E,1μm,0.6s			smax	smax		
SKR	comp=N,1μm,0.7s			smax	smax		
SKR	comp=Z,300nm,12.0s			MLR	MLR		
SKR	**Severo-Kuril's**	**3.45**	**221**	*e*P	**Pn**	**03 18 08.5**	**+1.8**
BKI	**Bering**	**4.14**	**61**	PN	**Pn**	**03 18 15.4**	**-0.7**
BKI	**Bering**	**4.14**	**61**	*e*P	**Pn**	**03 18 15.4**	**-0.7**
BKI				*e*S	**Sn**	**03 18 57.8**	**-5.5**
MA2	**Magadan** comp=Z,54nm,0.7s,baz=147,slow=10.0,SNR=34	**7.95**	**325**	P	**Pn**	**03 19 09.2**	**+1.2**
MA2	**Magadan**	**7.95**	**325**		**Pn**	**03 19 06.9**	**-1.0**
MA2	**Magadan**	**7.95**	**325**	PN	**Pn**	**03 19 06.9**	**-1.0**
SMY	**Shemya**	**8.72**	**88**	Pn	**

GRNR MLR MLR
comp=N,100nm,16.0s
JKA Kamikawa-asahi 14.53 237 Pn **Pn** **03 20 34.8 -1.4**
ASAJ Asahikawa 14.53 237 LR LR 03 25 48.7
comp=N,52nm,18.9s,baz=130,slow=35
ASAJ Asahikawa 14.53 237 P **Pn** **03 20 34.8 -1.5**
GSTR Great Sitkin T 14.75 85 P **Pn** **03 20 41.3 +2.3**
BILL Bilibino 15.08 10 P **Pn** **03 20 43.5 +0.3**
BILL Bilibino 15.08 10 *e*P **Pn** **03 20 41.9 -1.3**
BILL pmax pmax
comp=Z,11nm,0.7s
ERM Erimo 15.83 231 P **Pn** **03 20 52.2 -0.5**
ERM IAmb IAmb 03 20 59.9
comp=Z,25nm,0.5s
ERM Erimo 15.83 231 P **Pn** **03 20 52.2 -0.5**
ERM pmax pmax
comp=Z,25nm,0.5s
ERM Erimo 15.83 231 P **Pn** **03 20 50.6 -2.1**
ATKA Atka Island 15.83 84 P **Pn** **03 20 55.4 +2.7**
SPIA Saint Paul Isl 17.49 65 P **Pn** **03 21 15.8 +2.7**
SPIA IAmb IAmb 03 21 16.7
comp=Z,136nm,1.4s
SPIA Saint Paul Isl 17.49 65 P **Pn** **03 21 14.3 +1.2**
baz=271
JTM Tenmabayashi 17.77 233 **P** **03 21 13.6 -2.5**
KLR Kul'dur 17.88 268 P **Pn** **03 21 19.2 +1.3**
comp=Z,16nm,0.7s,baz=67,slow=10,SNR=26
KLR LR LR 03 27 40.7
comp=Z,83nm,21.8s,baz=58,slow=35
GAMB Gambell 18.05 43 P **P** **03 21 19.1 +0.1**
GAMB Gambell 18.05 43 P **Pn** **03 21 20.1 +0.3**
baz=249,SNR=6.9
YAK Yakutsk 18.08 311 P **P** **03 21 17.6 -1.8**
comp=Z,29nm,0.4s,baz=93,slow=2.0,SNR=13
YAK LR LR 03 29 31.6
comp=Z,89nm,18.7s,baz=88,slow=41
YAK Yakutsk 18.08 311 P **P** **03 21 16.9 -2.5**
YAK Yakutsk 18.08 311 *e*P **Pn** **03 21 19.8 -0.4**
YAK *e*S **S** **03 24 42.4 +1.2**
YAK pmax pmax
comp=Z,78nm,0.9s
YAK pmax pmax
comp=E,25nm,1.0s
YAK pmax pmax
comp=N,10.0nm,1.0s
YAK smax smax
comp=E,22nm,0.9s
YAK smax smax
comp=N,11nm,0.8s
NIKH Nikolski High 18.81 78 P **P** **03 21 28.3 +0.8**
NIKH Nikolski High 18.81 78 P **P** **03 21 28.2 +0.8**
baz=284,SNR=11
ZEA Zeya 19.18 284 *e*P **P** **03 21 31.9 +0.3**
ZEA pmax pmax
comp=E,10.0nm,0.8s
ZEA pmax pmax
comp=Z,20nm,1.0s
UNV Unalaska Valle 19.98 75 **P** **03 21 41.0 +0.8**
UNV IAmb IAmb 03 21 43.1
comp=Z,91nm,1.0s
UNV Unalaska Valle 19.98 75 P **P** **03 21 41.2 +1.0**
baz=283,SNR=20
TNA Tin City 20.23 40 **P** **03 21 44.0 +1.3**
TNA Tin City 20.23 40 P **P** **03 21 43.6 +0.9**
baz=249
JMM Marumori 20.24 228 P **P** **03 21 41.9 -1.2**
JMM IAmb IAmb 03 21 47.8
comp=Z,65nm,1.2s
USA0B Ussuriysk Arra 20.29 254 P **P** **03 21 44.0 +0.4**
USA0B Ussuriysk Arra 20.29 254 P **P** **03 21 44.1 +0.4**
USA0B pmax pmax
comp=Z,19nm,1.0s
USRK Ussuriysk Ar. 20.29 254 P **P** **03 21 43.2 -0.4**
comp=Z,6.2nm,0.7s,baz=61,slow=8.4,SNR=10.0
comp=Z,6.2nm,0.7s
USRK Ussuriysk Ar. 20.29 254 **P** **03 21 43.4 -0.3**
USRK Ussuriysk Ar. 20.29 254 P **P** **03 21 43.4 -0.3**
AKUT Akutan 20.34 74 **P** **03 21 43.7 -0.4**
ANM Nome 20.93 44 **P** **03 21 50.3 0.0**
ANM IAmb IAmb 03 21 56.9
comp=Z,33nm,0.7s
ANM Nome 20.93 44 P **P** **03 21 50.3 0.0**
ANM pmax pmax
comp=Z,33nm,0.7s
ANM Nome 20.93 44 P **P** **03 21 51.1 +0.8**
baz=255,SNR=12
JSD Sado 21.27 233 P **P** **03 21 53.9 -0.3**
JSD IAmb IAmb 03 21 59.7
comp=Z,67nm,0.9s
MDJ Mudanjiang 21.45 258 P **P** **03 21 57.3 +1.3**
MDJ pmax pmax
comp=Z,7.0nm,0.6s
MDJ pmax pmax
comp=Z,51nm,3.8s
FALS False Pass 21.55 71 P **P** **03 21 57.0 0.0**
FALS False Pass 21.55 71 P **P** **03 21 57.6 +0.6**
baz=282,SNR=10.0
JYT Yasato 21.87 226 P **P** **03 21 59.9 -0.7**
JYT IAmb IAmb 03 22 05.1
comp=Z,45nm,0.6s
BNX BinXian 22.12 263 ⇓P **P** **03 22 02.5 -0.7**
BNX pP **pP** **03 22 23.0 +1.8**
BNX sP **sP** **03 22 35.0 +2.6**
BNX pmax pmax
comp=Z,24nm,0.9s
BNX pmax pmax
comp=Z,150nm,4.0s
MJA0 Matsu Arr-Jizo 22.48 230 *e*P **P** **03 22 07.5 +0.3**
MJA0 pmax pmax
comp=Z,17nm,0.6s
MJB9 Matsu-Tunnel 22.50 230 P **P** **03 22 06.7 -0.6**
MJB9 IAmb IAmb 03 22 09.7
comp=Z,37nm,0.7s
MJAR Matsushiro Arr 22.50 230 P **P** **03 22 07.5 +0.1**
comp=Z,16nm,0.7s,baz=26,slow=11,SNR=38
MJAR LR LR 03 32 06.1
comp=Z,30nm,18.4s,baz=28,slow=40
comp=Z,16nm,0.7s
MJAR Matsushiro Arr 22.50 230 P **P** **03 22 06.1 -1.2**
MJAR Matsushiro Arr 22.50 230 P **P** **03 22 06.1 -1.2**
MJAR pmax pmax
comp=Z,19nm,0.9s
MAJO Matsushiro 22.50 230 P **P** **03 22 06.6 -0.7**
MAJO IAmb IAmb 03 22 09.8
comp=Z,39nm,0.8s
MAJO Matsushiro 22.50 230 P **P** **03 22 06.6 -0.7**
MAJO pmax pmax
comp=Z,39nm,0.8s
MAJO Matsushiro 22.50 230 P **P** **03 22 08.4 +1.1**
TIXI Tiksi 22.75 335 P **P** **03 22 07.8 -1.7**
comp=Z,3.1nm,0.4s,baz=86,slow=22,SNR=10
TIXI LR LR 03 31 20.8
comp=Z,85nm,21.2s,baz=180,slow=38
comp=Z,3.1nm,0.4s
TIXI Tiksi 22.75 335 P **P** **03 22 08.4 -1.1**
TIXI Tiksi 22.75 335 P **P** **03 22 08.4 -1.1**
TIXI pmax pmax
comp=Z,14nm,0.8s
RDOG Red Dog Mine 22.99 36 P **P** **03 22 06.9 -5.1**
RDOG IAmb IAmb 03 22 08.0
comp=Z,46nm,0.9s
RDOG Red Dog Mine 22.99 36 P **P** **03 22 06.1 -5.9**
baz=249,SNR=27
S14K Fog Glacier 23.44 66 P **P** **03 22 15.8 -0.6**
baz=281,SNR=6.2
N16K Nishlik Lake 23.45 56 P **P** **03 22 17.3 +1.0**
baz=272,SNR=36
JGF Kuroka 23.67 230 P **P** **03 22 19.5 +0.9**
CHNA Chernabura Isl 23.71 70 P **P** **03 22 18.4 -0.3**
baz=284,SNR=23
O16K Kokwok River B 23.82 58 P **P** **03 22 20.0 +0.4**
baz=274,SNR=14
P16K Nushagak River 23.91 59 P **P** **03 22 20.8 +0.4**
baz=275
INU Inuyama 24.03 231 P **P** **03 22 23.9 +2.2**
INU Inuyama 24.03 231 P **P** **03 22 24.5 +2.8**
O17K Koliganek Bris 24.32 57 P **P** **03 22 25.3 +1.3**
baz=274,SNR=13
CN2 Changchun 24.36 261 *e*P **P** **03 22 24.3 -0.3**
CN2 S **S** **03 26 30.5 -6.9**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=Z,100nm,12.0s
CN2 LR LR
comp=Z,100nm,12.0s
CN2 LR LR
comp=Z,100nm,16.5s
GCSA Galena City Sc 24.55 45 P **P** **03 22 26.1 0.0**
baz=264,SNR=9.8
P17K Kvichak River 24.70 59 P **P** **03 22 28.9 +1.4**
baz=276,SNR=16
TTA Tatalina 24.79 50 P **P** **03 22 29.2 +0.8**
TTA IAmb IAmb 03 22 31.7
comp=Z,35nm,1.0s
TTA Tatalina 24.79 50 P **P** **03 22 29.2 +0.8**
TTA pmax pmax
comp=Z,35nm,1.0s
TTA Tatalina 24.79 50 P **P** **03 22 29.1 +0.6**
baz=268,SNR=28
N18K Kilae Creek 24.86 55 P **P** **03 22 30.1 +1.1**
N18K IAmb IAmb 03 22 32.1
comp=Z,45nm,0.8s
N18K Kilae Creek 24.86 55 P **P** **03 22 30.0 +0.9**
baz=273,SNR=36
R17K Ugashik Creek 24.92 62 P **P** **03 22 30.1 +0.4**
baz=280,SNR=13
SVW2 Sparrevohn 24.99 54 P **P** **03 22 31.1 +0.9**
O18K Koktuh Hills 25.26 57 IAmb IAmb 03 22 36.6
comp=Z,58nm,0.9s
O18K Koktuh Hills 25.26 57 P **P** **03 22 34.0 +1.3**
baz=276
P18K Big Mountain, 25.29 58 IAmb IAmb 03 22 35.7
comp=Z,32nm,0.8s
P18K Big Mountain, 25.29 58 P **P** **03 22 33.8 +0.7**
baz=277
L19K White Mountain 25.31 51 P **P** **03 22 33.8 +0.6**
baz=271,SNR=19
Q18K Katmai Hardscr 25.50 60 P **P** **03 22 35.4 +0.4**
baz=278
M19K Big River Lodg 25.54 52 P **P** **03 22 36.1 +0.9**
baz=272
N19K Bonanza Creek 25.54 55 IAmb IAmb 03 22 38.3
comp=Z,24nm,0.8s
N19K Bonanza Creek 25.54 55 P **P** **03 22 36.4 +1.1**
baz=274,SNR=17
O19K Port Alsworth 25.67 56 IAmb IAmb 03 22 40.5
comp=Z,33nm,0.8s
O19K Port Alsworth 25.67 56 P **P** **03 22 38.8 +2.4**
baz=276
J20K Nowinta River 25.68 47 P **P** **03 22 36.8 +0.4**
baz=268,SNR=23
K20K Telida 25.68 49 P **P** **03 22 37.1 +0.6**
baz=269,SNR=19
CHIR Chirikof Islan 25.69 66 P **P** **03 22 37.0 +0.4**
baz=284
L20K Farewell, AK 25.77 51 P **P** **03 22 37.6 +0.3**
baz=271,SNR=18
BOD Bodaibo 25.80 298 *e*P **P** **03 22 36.1 -1.5**
BOD pmax pmax
comp=Z,12nm,1.2s
IMAR Indian Mountai 25.99 43 P **P** **03 22 39.5 +0.2**
M20K Styx River 26.13 52 P **P** **03 22 41.7 +1.0**
baz=273
Q19K Cape Douglas, 26.16 59 IAmb IAmb 03 22 43.0
comp=Z,64nm,1.2s
Q19K Cape Douglas, 26.16 59 P **P** **03 22 40.8 0.0**
baz=279
JHS Saijyo 26.19 236 P **P** **03 22 41.6 +0.2**
A21K Barrow 26.20 30 P **P** **03 22 41.0 -0.1**
A21K IAmb IAmb 03 22 45.0
comp=Z,38nm,0.7s
A21K Barrow 26.20 30 P **P** **03 22 40.7 -0.3**
baz=250,SNR=8.7
SII Sitkinak Islan 26.31 64 P **P** **03 22 42.5 +0.3**
SII Sitkinak Islan 26.31 64 P **P** **03 22 42.6 +0.4**
baz=283
SEHB SEOHWA 26.31 248 P **P** **03 22 43.5 +1.1**
H21K Melozitna Rive 26.35 44 P **P** **03 22 42.7 +0.2**
baz=266,SNR=16
RSO Redoubt South 26.42 55 P **P** **03 22 43.8 +0.4**
CHUM Lake Minchumin 26.47 48 P **P** **03 22 43.8 +0.2**
baz=270
O20K Slope Mountain 26.53 56 P **P** **03 22 44.3 0.0**
baz=277
PPLA Purkeypile 26.54 50 P **P** **03 22 44.3 -0.1**
baz=272
CAST Castle Rocks 26.58 49 P **P** **03 22 43.6 -0.9**
CAST Castle Rocks 26.58 49 P **P** **03 22 45.1 +0.5**
baz=271
N20K Mount Spurr 26.62 54 P **P** **03 22 45.9 +0.8**
baz=275
OHAK Old Harbor 26.65 63 IAmb IAmb 03 22 46.0
comp=Z,35nm,0.8s
OHAK Old Harbor 26.65 63 P **P** **03 22 44.8 -0.4**
baz=282,SNR=6.4
I21K Tanana 26.66 45 P **P** **03 22 44.1 -1.1**
baz=268
SPU Mount Spurr 26.70 54 P **P** **03 22 46.8 +1.1**
Q20K Shuyak Island 26.86 59 P **P** **03 22 47.2 +0.1**
baz=280
SKT Skwentna 26.88 52 P **P** **03 22 47.6 +0.2**
baz=274
KDAK Kodiak Island 26.91 61 P **P** **03 22 47.5 0.0**
comp=Z,8.6nm,0.4s,baz=306,slow=8.2,SNR=20
comp=Z,8.6nm,0.4s
KDAK Kodiak Island 26.91 61 P **P** **03 22 47.7 +0.2**
KDAK IAmb IAmb 03 22 48.7
comp=Z,53nm,1.4s
KDAK Kodiak Island 26.91 61 P **P** **03 22 47.7 +0.2**
KDAK pmax pmax
comp=Z,53nm,1.4s
KDAK Kodiak Island 26.91 61 P **P** **03 22 47.7 +0.2**
baz=282
H22K Ishtalitna Cre 26.95 43 P **P** **03 22 48.3 +0.4**
baz=267,SNR=17
BPAW Bear Paw Mtn. 27.06 47 P **P** **03 22 49.0 +0.1**
baz=270,SNR=8.5
KSRS Korea Array 27.07 247 P **P** **03 22 48.8 -0.4**
comp=Z,3.2nm,0.6s,baz=42,slow=9.5,SNR=15
KSRS LR LR 03 34 04.1
comp=Z,28nm,18.4s,baz=55,slow=37
comp=Z,3.2nm,0.6s
KSRS Korea Array 27.07 247 *e*P **P** **03 22 51.3 +2.1**
KSRS pmax pmax
comp=Z,3.0nm,0.6s
KSAR Wonju Array Be 27.10 247 P **P** **03 22 49.5 +0.1**
KSAR Wonju Array Be 27.10 247 P **P** **03 22 49.6 +0.1**
MLY Manley 27.18 45 P **P** **03 22 50.7 +0.7**
MLY **PcP** **03 26 08.8 +1.0**
MLY Manley 27.18 45 P **P** **03 22 50.5 +0.5**
baz=269,SNR=11
CNPM China Poot 27.30 57 P **P** **03 22 51.6 +0.6**
CNPM IAmb IAmb 03 22 53.2
comp=Z,33nm,1.2s
SUA Susitna One 27.30 53 P **P** **03 22 51.2 0.0**
baz=276
TRF Thorofare Moun 27.38 49 P **P** **03 22 52.2 +0.3**
baz=272,SNR=6.9
BRLK Bradley Lake 27.44 57 P **P** **03 22 53.4 +1.0**
BRLK IAmb IAmb 03 23 21.6
comp=Z,31nm,1.3s
CUT Chulitna 27.45 51 P **P** **03 22 52.9 +0.6**
CUT IAmb IAmb 03 22 54.3
comp=Z,24nm,0.6s
CUT Chulitna 27.45 51 P **P** **03 22 52.4 +0.1**
baz=274
BRSE Bradley Lake S 27.51 57 P **P** **03 22 53.7 +0.8**
baz=279
COLD Coldfoot 27.53 40 P **P** **03 22 53.1 +0.1**
COLD Coldfoot 27.53 40 P **P** **03 22 53.1 +0.1**
baz=265,SNR=5.7
D23K Nanushuk River 27.57 36 P **P** **03 22 53.6 +0.3**
baz=261
H23K Yukon River 27.70 43 P **P** **03 22 55.4 +0.7**
H23K Yukon River 27.70 43 P **P** **03 22 55.3 +0.6**
baz=268,SNR=9.0
BWN Browne 27.73 47 P **P** **03 22 56.7 +1.9**
BWN IAmb IAmb 03 22 58.5
comp=Z,43nm,1.3s
C23K Itkillik River 27.74 35 P **P** **03 22 55.1 +0.2**
baz=260,SNR=17
I23K Minto, Yukon-K 27.77 45 P **P** **03 22 55.9 +0.8**
baz=270,SNR=6.2
RC01 Rabbit Creek A 27.82 54 P **P** **03 22 56.8 +1.1**
RC01 Rabbit Creek A 27.82 54 P **P** **03 22 56.2 +0.5**
baz=277
NEA2 Nenana 27.89 46 P **P** **03 22 56.6 +0.3**
baz=271,SNR=8.7
O22K Cooper Landing 27.91 55 P **P** **03 22 56.5 +0.1**
baz=278
TOLK Toolik Lake Re 27.92 37 P **P** **03 22 56.7 +0.2**
TOLK IAmb IAmb 03 23 04.8
comp=Z,14nm,0.5s
TOLK Toolik Lake Re 27.92 37 P **P** **03 22 56.7 +0.2**
baz=263,SNR=17
MCK McKinley 27.98 48 P **P** **03 22 57.7 +0.6**
MCK McKinley 27.98 48 P **P** **03 22 57.7 +0.6**
MCK pmax pmax
comp=Z,14nm,1.3s
MCK McKinley 27.98 48 P **P** **03 22 56.7 -0.4**
baz=273
PMR Palmer 28.05 52 P **P** **03 22 57.7 0.0**
baz=277
SEW Seward 28.10 56 P **P** **03 22 57.5 -0.6**
baz=279
WAT1 Susitna Watana 28.21 50 P **P** **03 22 58.6 -0.5**
baz=275
D24K Happy Valley 28.26 36 P **P** **03 22 59.6 +0.1**
baz=263
C24K Franklin Bluff 28.38 35 P **P** **03 23 00.2 -0.4**
baz=262
H24K Noodor Dome 28.39 43 P **P** **03 23 01.1 +0.3**
baz=270,SNR=6.7
KNK Knik Glacier 28.40 53 IAmb IAmb 03 23 02.9
comp=Z,23nm,0.8s
KNK Knik Glacier 28.40 53 P **P** **03 23 01.2 +0.4**
baz=278,SNR=8.0
TCOL CIGO, UAF Yank 28.40 45 P **P** **03 23 01.4 +0.6**
COLA College 28.41 45 P **P** **03 23 01.5 +0.7**
COLA College 28.41 45 *i* P **P** **03 23 01.5 +0.7**
COLA pmax pmax
comp=Z,7.0nm,0.7s
COLA College 28.41 45 P **P** **03 23 00.8 0.0**
SML Sawmill 28.41 52 IAmb IAmb 03 23 03.3
comp=Z,22nm,0.8s
SML Sawmill 28.41 52 P **P** **03 23 01.1 +0.1**
baz=277,SNR=6.7
POKR Poker Plat Res 28.58 45 P **P** **03 23 01.8 -0.6**
baz=272
WAT6 Susitna Watana 28.60 50 P **P** **03 23 02.6 -0.1**
baz=276
M23K Glacier View 28.70 52 P **P** **03 23 03.7 +0.2**
baz=278,SNR=6.2
DHY Denali Highway 28.72 49 P **P** **03 23 03.4 -0.5**
baz=276,SNR=7.8
JNU Nakatsue 28.81 237 P **P** **03 23 03.9 -0.9**
comp=Z,8.9nm,0.8s,baz=28,slow=8.1,SNR=4.2
comp=Z,8.9nm,0.8s
HDA Harding Lake 28.82 46 P **P** **03 23 03.9 -0.6**
baz=274,SNR=16
ILAR Eielson Array 28.82 46 P **P** **03 23 04.5 -0.1**
comp=Z,4.3nm,0.7s,baz=269,slow=9.0,SNR=75
ILAR ScP **ScP** **03 29 43.6 -1.1**
comp=Z,1.1nm,1.0s,baz=254,slow=4.1,SNR=6.1
ILAR LR LR 03 34 23.7
comp=Z,40nm,19.8s,baz=110,slow=36
comp=Z,4.3nm,0.7s
SCM Sheep Creek Mo 28.88 52 IAmb IAmb 03 23 07.1
comp=Z,20nm,0.8s
SCM Sheep Creek Mo 28.88 52 P **P** **03 23 05.4 +0.2**
baz=278,SNR=8.4
GLI Glacier Island 29.13 54 P **P** **03 23 07.3 0.0**
baz=280
K24K Donnelly Dome 29.37 47 P **P** **03 23 09.2 -0.3**
baz=276
M24K Tolsona, Glenn 29.38 51 IAmb IAmb 03 23 12.0
comp=Z,21nm,0.5s
M24K Tolsona, Glenn 29.38 51 P **P** **03 23 10.3 +0.7**
baz=278
J25K Salcha River, 29.48 46 P **P** **03 23 09.2 -1.3**
baz=274,SNR=10
KLU Klutina 29.59 52 P **P** **03 23 11.8 +0.3**
baz=280
PAX Paxson 29.60 49 P **P** **03 23 11.4 -0.1**
baz=277
BMAR Burnt Mountain 29.71 40 P **P** **03 23 13.0 +0.5**
RIDG Independent Ri 29.79 48 P **P** **03 23 12.6 -0.6**
baz=276
HARP HAARP 29.81 50 P **P** **03 23 13.7 +0.4**
baz=278
EYAK Cordova Ski Ar 29.84 54 P **P** **03 23 14.0 +0.5**
baz=281
SCRK Sand Creek 30.14 47 P **P** **03 23 15.6 -0.8**
baz=277,SNR=15
N25K Chitina, Valde 30.20 52 P **P** **03 23 17.3 +0.5**
baz=280,SNR=6.1
J26L Joseph Creek 30.27 46 P **P** **03 23 17.2 -0.3**
baz=276
BMRM Bremner River 30.31 53 P **P** **03 23 17.1 -0.7**
baz=281
M26K Nabesna, AK 30.81 50 P **P** **03 23 23.2 +1.0**
baz=280,SNR=7.9
K27K Chicken 30.97 47 P **P** **03 23 23.9 +0.4**
baz=278
MCARA McCarthy VSAT 30.98 52 P **P** **03 23 24.7 +1.1**
baz=282
CRQM Cirque 31.05 53 IAmb IAmb 03 23 26.5
comp=Z,18nm,0.6s
CRQE Cirque 31.08 53 P **P** **03 23 25.6 +0.9**
baz=283
L27K Beaver Creek, 31.23 49 IAmb IAmb 03 23 28.1
comp=Z,18nm,0.8s
L27K Beaver Creek, 31.23 49 P **P** **03 23 26.9 +1.0**
baz=280,SNR=34
M27K Edge Creek, AK 31.33 50 IAmb IAmb 03 23 29.3
comp=Z,17nm,0.8s
M27K Edge Creek, AK 31.33 50 P **P** **03 23 28.4 +1.5**
baz=281,SNR=12
BARN Barnard Glacie 31.70 52 IAmb IAmb 03 23 32.3
comp=Z,17nm,0.6s
GRNC Granite Creek 31.72 53 IAmb IAmb 03 23 32.0
comp=Z,12nm,0.6s
MESA MESA 31.76 54 P **P** **03 23 32.1 +1.4**
baz=284
BVCY Beaver Creek 31.78 50 P **P** **03 23 32.0 +1.3**
baz=282,SNR=9.5
CTG Chitna Glacier 31.87 52 P **P** **03 23 32.6 +1.0**
baz=284,SNR=6.1
CTGM Chitina Glacie 31.87 52 IAmb IAmb 03 23 33.7
comp=Z,14nm,0.6s
LOGN Logan Glacier 32.06 53 IAmb IAmb 03 23 35.2
comp=Z,16nm,0.8s
TABL Table Mountain 32.09 53 IAmb IAmb 03 23 35.5
comp=Z,19nm,0.7s
YUK3 Moose Creek 32.10 51 P **P** **03 23 34.5 +0.8**
baz=283,SNR=6.9
DAWY Dawson 32.13 46 P **P** **03 23 34.0 +0.3**
baz=280,SNR=11
BJI Beijing 32.14 263 P **P** **03 23 36.0 +2.1**
BJI pmax pmax
comp=Z,8.0nm,0.8s
I29M Ogilvie Camp, 32.39 44 P **P** **03 23 36.4 +0.5**
baz=279
J29M Klondike Camp 32.57 45 **PcP** **03 26 22.7 +0.9**
PINM Pinnacle 32.60 54 P **P** **03 23 38.9 +0.9**
baz=286,SNR=7.3
EPYK Eagle Plains 32.88 42 P **P** **03 23 41.0 +0.7**
baz=279,SNR=12
YUK4 Talbot Arm 33.05 51 P **P** **03 23 42.8 +0.8**
baz=285
PNL Peninsula 33.14 54 P **P** **03 23 43.3 +0.8**
baz=287
YUK6 Outpost Mounta 33.28 52 P **P** **03 23 45.1 +1.1**
baz=286,SNR=6.2
M30M Minto, Yukon 33.59 49 P **P** **03 23 47.7 +1.2**
baz=284,SNR=9.1
SONM Songino Array 33.59 283 P **P** **03 23 45.7 -1.1**
comp=Z,2.9nm,0.7s,baz=66,slow=7.9,SNR=15
SONM PcP **PcP** **03 26 25.5 +0.5**
comp=Z,1.4nm,0.5s,baz=96,slow=1.0,SNR=5.7
SONM ScP **ScP** **03 30 02.2 +1.0**
comp=Z,1.3nm,0.7s,baz=65,slow=2.7,SNR=7.4
SONM LR LR 03 37 56.6
comp=Z,50nm,20.5s,baz=58,slow=37
comp=Z,2.9nm,0.7s
SONM Songino Array 33.59 283 *e*P **P** **03 23 46.6 -0.2**
SONM pmax pmax
comp=Z,3.0nm,0.8s
HYT Haines Junctio 33.72 52 IAmb IAmb 03 23 50.2
comp=Z,17nm,0.7s
HYT Haines Junctio 33.72 52 P **P** **03 23 48.8 +1.1**
baz=286,SNR=15
N30M Aishikik Lake 33.74 51 P **P** **03 23 48.8 +1.0**
baz=286
INK Inuvik 33.83 38 P **P** **03 23 49.2 +0.8**
comp=Z,18nm,0.3s,baz=300,slow=11,SNR=86
comp=Z,18nm,0.3s
INK Inuvik 33.83 38 P **P** **03 23 49.2 +0.8**

INK IAmb IAmb 03 23 50.2
comp=Z,22nm,0.8s
INK Inuvik 33.83 38 P **P** **03 23 49.4 +1.0**
baz=278,SNR=21
ZAK Zakamensk 34.18 288 *e*P **P** **03 23 51.2 -0.6**
ZAK pmax pmax
comp=Z,3.0nm,1.2s
P30M Million Dollar 34.18 53 P **P** **03 23 53.1 +1.5**
baz=288
N31M Braeburn, Yuko 34.34 50 IAmb IAmb 03 23 56.3
comp=Z,17nm,0.8s
N31M Braeburn, Yuko 34.34 50 P **P** **03 23 54.6 +1.6**
baz=287,SNR=10
HHC Hu-ho-hao-te 34.39 269 *e*P **P** **03 23 53.0 -0.7**
HHC pmax pmax
comp=Z,26nm,1.0s
HHC pmax pmax
comp=Z,130nm,6.0s
O30N Mendenhall 34.40 51 P **P** **03 23 54.8 +1.3**
baz=288,SNR=17
PLBC Pleasant Camp 34.67 54 P **P** **03 23 57.4 +1.7**
baz=289,SNR=6.0
HNS HongShan 34.72 261 ⇑P **P** **03 23 56.0 -0.4**
HNS pmax pmax
comp=Z,11nm,0.5s
M31M Drury Creek, Y 34.77 49 IAmb IAmb 03 23 59.4
comp=Z,22nm,0.8s
M31M Drury Creek, Y 34.77 49 P **P** **03 23 58.3 +1.7**
baz=287,SNR=24
WHY Whitehorse 35.00 51 P **P** **03 24 00.6 +1.9**
baz=288,SNR=22
SKAG Skagway 35.17 53 P **P** **03 24 02.3 +2.2**
baz=290,SNR=10
H11S1 WAKE ISLAND Hy 35.19 168 T T 04 01 10.5
baz=352,slow=76,SNR=122
H11S3 WAKE ISLAND Hy 35.20 168 T T 04 01 19.9
baz=352,slow=76,SNR=378
H11S2 WAKE ISLAND Hy 35.21 168 T T 04 01 13.1
baz=352,slow=76,SNR=146
JOW Kunigami 35.25 234 P **P** **03 24 03.2 +2.1**
N32M Quiet Lake 35.68 50 P **P** **03 24 05.7 +1.2**
baz=289
BESE Bessie Mountai 35.70 55 IAmb IAmb 03 24 07.6
comp=Z,22nm,0.8s
P32M Atlin 35.90 53 P **P** **03 24 07.8 +1.4**
baz=291
SIT Sitka 36.03 57 P **P** **03 24 09.3 +1.8**
SIT Sitka 36.03 57 P **P** **03 24 09.3 +1.8**
SIT pmax pmax
comp=Z,37nm,1.1s
SIT Sitka 36.03 57 P **P** **03 24 09.8 +2.3**
baz=293
A36M Sachs Harbour 36.04 31 P **P** **03 24 08.1 +0.8**
baz=280
JIS Juneau Island 36.05 55 P **P** **03 24 08.9 +1.4**
NJ2 Nanjing 36.10 250 *e*P P 03 24 19.5 +11
NJ2 pmax pmax
comp=Z,13nm,0.5s
P33M Teslin, Yukon 36.11 52 P **P** **03 24 09.2 +1.0**
P33M IAmb IAmb 03 24 11.4
comp=Z,13nm,0.8s
P33M Teslin, Yukon 36.11 52 P **P** **03 24 09.8 +1.6**
baz=290,SNR=19
C36M Paulatuk 36.99 35 P **P** **03 24 15.8 +0.4**
C36M Paulatuk 36.99 35 P **P** **03 24 16.1 +0.6**
baz=285,SNR=7.1
KNGR Kungurtug, Tuv 37.32 292 *i*P **P** **03 24 18.8 +0.2**
TGTN Hyland Airport 37.73 48 P **P** **03 24 23.2 +1.3**
baz=292
WRAK Wrangell Islan 37.79 57 P **P** **03 24 24.7 +2.4**
baz=295
DLBC Dease Lake 38.10 53 P **P** **03 24 27.1 +2.0**
DLBC IAmb IAmb 03 24 28.7
comp=Z,21nm,0.9s
DLBC Dease Lake 38.10 53 P **P** **03 24 27.6 +2.5**
baz=294,SNR=16
T35M Bob Quinn 38.60 56 P **P** **03 24 32.5 +3.3**
baz=296,SNR=15
DIB Dawson Inlet, 39.17 62 P **P** **03 24 35.8 +1.8**
DIB IAmb IAmb 03 25 00.6
comp=Z,22nm,1.4s
YOJ Yonaguni jima 39.83 238 P **P** **03 24 38.8 -0.9**
GRNB Grenville Isla 40.18 60 P **P** **03 24 44.5 +2.1**
EUNU Eureka 41.77 14 P **P** **03 24 55.5 +0.4**
EUNU IAmb IAmb 03 24 58.8
comp=Z,22nm,0.7s
BBB Bella Bella 41.98 61 LR LR 03 40 23.3
comp=Z,43nm,21.0s,baz=286,slow=33
LZH Lanzhou 42.08 269 ⇓P **P** **03 25 00.3 +2.0**
LZH pP pP 03 25 20.8 +0.9
LZH sP sP 03 25 33.5 +3.2
LZH pmax pmax
comp=Z,19nm,1.3s
LZH LR LR
comp=Z,150nm,18.5s
GTA Gaotai 42.32 276 ⇓P **P** **03 24 59.8 -0.4**
GTA pP pP 03 25 21.0 -0.7
GTA sP sP 03 25 30.8 -1.2
GTA pmax pmax
comp=Z,9.0nm,0.9s
GTA pmax pmax
comp=Z,36nm,5.6s
GTA LR LR
comp=Z,69nm,17.1s
GTA LR LR
comp=Z,50nm,18.5s
GTA LR LR
comp=Z,77nm,18.9s
ZALV Zalesovo Beam 42.43 302 P **P** **03 24 58.8 -1.8**
comp=Z,3.3nm,0.5s,baz=63,slow=7.2,SNR=10
ZALV PP **PP** **03 26 39.5 -0.8**
comp=Z,0.6nm,0.3s,baz=60,slow=8.8,SNR=1.7
ZALV PcP **PcP** **03 26 52.0 0.0**
comp=Z,3.4nm,0.9s,baz=35,slow=5.3,SNR=4.7
ZALV ScP **ScP** **03 30 32.5 -1.8**
comp=Z,0.6nm,0.3s,baz=52,slow=2.4,SNR=1.9
ZALV LR LR 03 44 18.9
comp=Z,48nm,18.3s,baz=70,slow=38
comp=Z,3.3nm,0.5s
ZALV Zalesovo Beam 42.43 302 P **P** **03 24 58.6 -2.0**
ZALV Zalesovo Beam 42.43 302 *e*P **P** **03 24 59.0 -1.7**
ZALV pmax pmax
comp=Z,3.0nm,0.5s
HOLB Holberg 42.80 63 P **P** **03 25 05.0 +1.3**
YKA Yellowknife Ar 43.15 43 P **P** **03 25 07.3 +0.9**
comp=Z,12nm,0.7s,baz=300,slow=7.3,SNR=91
YKA PcP **PcP** **03 26 55.2 +0.9**
comp=Z,1.0nm,0.8s,baz=288,slow=3.2,SNR=4.2
YKA ScP **ScP** **03 30 36.6 -0.5**
comp=Z,0.3nm,0.6s,baz=299,slow=3.3,SNR=4.0
comp=Z,12nm,0.7s
YKA Yellowknife Ar 43.15 43 *e*P **P** **03 25 07.3 +0.9**
YKA pmax pmax
comp=Z,7.0nm,0.5s
RES Resolute Bay 43.19 22 P **P** **03 25 07.1 +0.5**
comp=Z,5.9nm,0.4s,baz=338,slow=4.2,SNR=25
comp=Z,5.9nm,0.4s
RES Resolute Bay 43.19 22 P **P** **03 25 07.2 +0.6**
RES IAmb IAmb 03 25 10.5
comp=Z,7.1nm,0.5s
RES Resolute Bay 43.19 22 P **P** **03 25 07.2 +0.6**
RES pmax pmax
comp=Z,7.0nm,0.5s
CBB Campbell River 44.61 62 P **P** **03 25 19.5 +1.2**
CBB IAmb IAmb 03 25 35.5
comp=Z,22nm,1.4s
CLRS Cowichan Lake 45.97 63 P **P** **03 25 30.4 +1.4**
CLRS IAmb IAmb 03 25 31.7
comp=Z,18nm,0.8s
LLLB Lillooet 46.11 60 P **P** **03 25 31.6 +1.4**
LLLB IAmb IAmb 03 25 33.1
comp=Z,21nm,1.0s
PGC Sidney 46.43 63 P **P** **03 25 33.7 +1.2**
PGC IAmb IAmb 03 25 34.7
comp=Z,15nm,0.7s
WMQ Urumqi 46.65 289 *e*P **P** **03 25 36.0 +1.5**
SPITS Spitsbergen Ar 46.85 350 P **P** **03 25 35.0 -0.5**
comp=Z,3.7nm,0.5s,baz=57,slow=9.1,SNR=26
comp=Z,3.7nm,0.5s
SPITS Spitsbergen Ar 46.85 350 P **P** **03 25 35.1 -0.5**
SPITS pmax pmax
comp=Z,22nm,1.5s
SPB2 Spitsbergen Ar 46.85 350 P **P** **03 25 35.2 -0.4**
NLWA Neilton Lookou 46.96 65 P **P** **03 25 38.3 +1.5**
NLWA IAmb IAmb 03 25 39.8
comp=Z,30nm,0.8s
WISH Wishkah 47.18 65 P **P** **03 25 40.5 +2.0**

KURK Kurchatov 47.38 301 P **P** **03 25 38.6 -1.4**
KURK PcP **PcP** **03 27 09.6 +0.5**
KURK Kurchatov 47.38 301 P **P** **03 25 39.5 -0.5**
KURK 03 27 09.5
KURK Kurchatov 47.38 301 P **P** **03 25 38.6 -1.4**
KURK pP **pP** **03 26 00.7 -1.2**
KURK sP **sP** **03 26 10.0 -2.1**
GOMU GeErMu 47.41 276 P **P** **03 25 38.3 -2.6**
GOMU pmax pmax
comp=Z,6.0nm,0.8s
GOMU pmax pmax
comp=Z,81nm,4.8s
KURBB Kurchatov Arra 47.48 301 P **P** **03 25 39.5 -1.3**
comp=Z,10nm,0.4s,baz=60,slow=7.5,SNR=76
KURBB PcP **PcP** **03 27 09.5 0.0**
comp=Z,3.2nm,0.6s,baz=53,slow=3.9,SNR=8.1
comp=Z,10nm,0.4s
B06A Marblemount 47.56 62 P **P** **03 25 42.5 +1.1**
E03A Lebam 47.64 65 P **P** **03 25 43.6 +1.6**
MK31 Makanchi Array 47.81 295 P **P** **03 25 41.7 -1.7**
MK31 Makanchi Array 47.81 295 P **P** **03 25 41.7 -1.7**
MK31 pmax pmax
comp=Z,4.0nm,0.5s
MKAR Makanchi Array 47.81 295 P **P** **03 25 42.1 -1.4**
comp=Z,5.0nm,0.5s,baz=57,slow=7.5,SNR=42
comp=Z,5.0nm,0.5s
MAKZ Makanchi 47.98 295 P **P** **03 25 43.0 -1.7**
MAKZ IAmb IAmb 03 25 43.8
comp=Z,6.9nm,0.4s
MAKZ Makanchi 47.98 295 P **P** **03 25 43.0 -1.7**
MAKZ pmax pmax
comp=Z,7.0nm,0.4s
MAKZ Makanchi 47.98 295 P **P** **03 25 43.4 -1.3**
MAKZ pP **pP** **03 26 05.3 -1.2**
MAKZ sP **sP** **03 26 15.3 -1.4**
D05A Enumclaw 48.10 64 P **P** **03 25 47.0 +1.4**
G03D McMinnville, O 48.63 67 P **P** **03 25 51.2 +1.5**
baz=309
F04A Amboy 48.64 65 P **P** **03 25 50.9 +1.1**
LTY Liberty 48.76 63 P **P** **03 25 51.8 +1.0**
LTY IAmb IAmb 03 25 52.8
comp=Z,37nm,1.4s
EDM Edmonton 48.82 53 P **P** **03 25 52.0 +0.9**
EDM Edmonton 48.82 53 P **P** **03 25 52.0 +0.9**
EDM pmax pmax
comp=Z,40nm,0.7s
COR Corvallis 49.00 67 P **P** **03 25 54.1 +1.6**
COR Corvallis 49.00 67 P **P** **03 25 54.2 +1.6**
COR pmax pmax
comp=Z,34nm,0.8s
COR Corvallis 49.00 67 P **P** **03 25 54.9 +2.3**
I02E Swisshome, OR 49.01 68 P **P** **03 25 54.7 +2.1**
baz=310
H04D Lebanon 49.36 67 P **P** **03 25 56.9 +1.7**
H04D Lebanon 49.36 67 P **P** **03 25 57.2 +1.9**
baz=310,SNR=6.7
BUCK Buck Mountain 49.43 68 P **P** **03 25 58.3 +2.4**
I03D Drain, OR 49.54 68 P **P** **03 25 58.9 +2.2**
baz=310,SNR=5.9
H04A Detroit Lake 49.56 67 P **P** **03 25 58.6 +1.7**
H04A IAmb IAmb 03 25 59.4
comp=Z,27nm,1.1s
J01E Myrtle Point 49.56 69 P **P** **03 25 58.0 +1.2**
J01E Myrtle Point 49.56 69 P **P** **03 25 59.2 +2.4**
baz=310
E07A Sunnyside 49.64 63 P **P** **03 25 58.9 +1.5**
E07A IAmb IAmb 03 25 59.7
comp=Z,23nm,1.0s
G05D Wamic, OR 49.68 65 P **P** **03 25 59.3 +1.6**
baz=310,SNR=9.1
C09A Chrisman Ranch 49.69 61 P **P** **03 25 58.7 +0.9**
C09A IAmb IAmb 03 25 59.8
comp=Z,14nm,0.8s
D08A Wollman Farm, 49.82 62 P **P** **03 25 59.4 +0.7**
D08A IAmb IAmb 03 26 00.2
comp=Z,8.0nm,0.6s
HAWA Hanford 49.91 63 P **P** **03 26 00.6 +1.1**
HAWA IAmb IAmb 03 26 01.7
comp=Z,23nm,1.1s
DBO Dodson Butte 49.98 69 P **P** **03 26 02.2 +2.1**
DBO IAmb IAmb 03 26 03.5
comp=Z,18nm,0.9s
I04A Tendick Farm, 50.00 68 P **P** **03 26 01.9 +1.7**
baz=310,SNR=8.8
NEW Newport 50.00 60 P **P** **03 26 01.0 +0.8**
comp=Z,8.4nm,0.8s,baz=314,slow=6.4,SNR=16
NEW LR LR 03 45 16.1
comp=Z,49nm,20.1s,baz=5.5,slow=34
comp=Z,8.4nm,0.8s
NEW Newport 50.00 60 IAmb IAmb 03 26 02.1
comp=Z,14nm,1.1s
NEW Newport 50.00 60 P **P** **03 26 01.0 +0.8**
NEW Newport 50.00 60 P **P** **03 26 01.1 +0.8**
baz=309,SNR=11
K02D Willamette Mer 50.01 69 P **P** **03 26 02.4 +2.1**
baz=311
F07A Phinney Hill Vi 50.02 64 P **P** **03 26 01.8 +1.6**
BVAR Borovoye Array 50.03 308 LR LR 03 49 16.7
comp=Z,46nm,19.3s,baz=284,slow=39
BRVK Borovoye 50.06 308 P **P** **03 25 58.6 -1.9**
BRVK pP **pP** **03 26 21.3 -1.3**
BRVK x x 03 26 25.6
E08A Dider Farm, El 50.10 63 IAmb IAmb 03 26 03.0
comp=Z,15nm,1.0s
DAG Danmarks Havn 50.15 359 *i*P **P** **03 25 59.5 -1.4**
DAG IAmb IAmb 03 26 01.7
comp=Z,2.9nm,0.5s
I05D Terrebonne, OR 50.24 66 P **P** **03 26 03.6 +1.5**
baz=310,SNR=6.5
L02F Cave Junction 50.44 70 P **P** **03 26 05.6 +2.1**
baz=311,SNR=5.2
HUMO Hull Mountain 50.47 69 P **P** **03 26 05.8 +2.1**
HUMO IAmb IAmb 03 26 07.1
comp=Z,13nm,0.9s
J04D Umpqua Nationa 50.53 68 P **P** **03 26 06.3 +2.0**
J04D Umpqua Nationa 50.53 68 P **P** **03 26 06.4 +2.0**
baz=311,SNR=12
PINE Pine Mountain 50.82 67 P **P** **03 26 08.5 +1.9**
G08A Pilot Rock 50.93 64 IAmb IAmb 03 26 08.9
comp=Z,7.3nm,0.6s
J05D Fort Rock, OR 50.98 67 P **P** **03 26 10.2 +2.5**
baz=311,SNR=35
L04D Klamath Falls 51.09 69 P **P** **03 26 10.4 +1.9**
L04D Klamath Falls 51.09 69 P **P** **03 26 10.7 +2.2**
baz=311,SNR=24
K04D Chiloquin, OR 51.13 68 P **P** **03 26 10.9 +2.1**
baz=311
KHMM Horse Mountain 51.17 71 P **P** **03 26 11.1 +1.9**
KHMM IAmb IAmb 03 26 12.5
comp=Z,19nm,0.8s
YBH Yreka Blue Hor 51.18 70 P **P** **03 26 11.6 +2.4**
comp=Z,17nm,0.7s,baz=348,slow=5.2,SNR=51
YBH LR LR 03 45 28.5
comp=Z,66nm,21.1s,baz=338,slow=33
comp=Z,17nm,0.7s
YBH Yreka Blue Hor 51.18 70 P **P** **03 26 11.4 +2.3**
YBH Yreka Blue Hor 51.18 70 P **P** **03 26 11.4 +2.3**
YBH pmax pmax
comp=Z,18nm,0.8s
F10A Beach Ranch, E 51.41 62 IAmb IAmb 03 26 13.0
comp=Z,11nm,0.9s
I07A Izee 51.42 66 P **P** **03 26 12.2 +1.3**
K05A Summer Lake 51.54 68 P **P** **03 26 14.2 +2.2**
KCPM Cahto Peak 52.05 72 P **P** **03 26 17.2 +1.6**
BMO Blue Mountains 52.10 63 IAmb IAmb 03 26 18.0
comp=Z,11nm,0.6s
J08A Circle Bar Ran 52.45 66 IAmb IAmb 03 26 21.4
comp=Z,18nm,1.3s
MSO Missoula 52.58 60 IAmb IAmb 03 26 22.4
comp=Z,8.3nm,0.8s
MSO Missoula 52.58 60 P **P** **03 26 20.6 +1.1**
baz=311,SNR=9.3
DBG Daneborg 52.64 360 *i*P **P** **03 26 18.3 -1.1**
DBG IAmb IAmb 03 26 19.6
comp=Z,2.0nm,0.5s
ARCES ARCESS Array B 52.97 342 P **P** **03 26 19.8 -2.1**
comp=Z,3.0nm,1.0s,baz=43,slow=7.6,SNR=13
comp=Z,3.0nm,1.0s
WVOR Wild Horse Val 52.98 67 IAmb IAmb 03 26 25.5
comp=Z,24nm,1.3s
ARU Arti 53.04 317 P **P** **03 26 21.1 -1.5**
comp=Z,12nm,0.4s,baz=33,slow=4.8,SNR=24
ARU LR LR 03 51 56.9
comp=Z,56nm,18.5s,baz=356,slow=39
comp=Z,12nm,0.4s
ARU Arti 53.04 317 P **P** **03 26 21.1 -1.5**

ARU Arti 53.04 317 *d*/*i*P **P** **03 26 21.3 -1.3**
ARU *PP **pP** **03 26 43.8 -0.8**
ARU 03 27 27.2
ARU S **S** **03 33 43.6 -1.7**
ARU SS **SS** **03 37 21.8 -3.0**
ARU pmax pmax
comp=Z,11nm,0.5s
ARU Arti 53.04 317 P **P** **03 26 21.4 -1.3**
ARU pP **pP** **03 26 44.2 -0.4**
ARU x x 03 27 29.7
GDXM Geysers 53.09 73 IAmb IAmb 03 26 27.1
comp=Z,23nm,1.0s
FCC Fort Churchill 53.45 39 P **P** **03 26 25.5 0.0**
FCC IAmb IAmb 03 26 26.7
comp=Z,12nm,0.6s
FCC Fort Churchill 53.45 39 P **P** **03 26 25.5 0.0**
FCC pmax pmax
comp=Z,12nm,0.6s
KDJ Kajisay 53.62 294 IAmb IAmb 03 26 27.9
comp=Z,11nm,0.6s
SUMG Summit 53.74 7 P **P** **03 26 28.2 +0.3**
SUMG IAmb IAmb 03 26 33.1
comp=Z,16nm,1.0s
SUMG Summit 53.74 7 P **P** **03 26 28.3 +0.3**
SUMG pmax pmax
comp=Z,16nm,1.0s
SUMG Summit 53.74 7 *i*P **P** **03 26 28.0 0.0**
SUMG IAmb IAmb 03 26 28.9
comp=Z,11nm,0.5s
MFID Camas Ranch 53.85 64 IAmb IAmb 03 26 31.4
comp=Z,17nm,1.4s
EGMT Eagleton 53.91 56 IAmb IAmb 03 26 31.1
comp=Z,16nm,1.1s
EGMT Eagleton 53.91 56 P **P** **03 26 30.1 +0.9**
baz=312,SNR=8.4
BOOM Boomskoye usch 54.05 295 IAmb IAmb 03 26 32.5
comp=Z,8.0nm,0.9s
PRGR Permogore 54.09 327 *e*P **P** **03 26 29.2 -1.0**
PRGR *e*PP **pP** **03 26 50.6 -1.7**
DLMT Dillon 54.25 60 IAmb IAmb 03 26 34.8
comp=Z,9.1nm,0.9s
HLID Hailey 54.51 63 P **P** **03 26 35.4 +1.6**
baz=313,SNR=12
BOZ Bozeman (W) 54.59 59 IAmb IAmb 03 26 36.7
comp=Z,15nm,0.7s
BOZ Bozeman (W) 54.59 59 P **P** **03 26 35.9 +1.6**
baz=313,SNR=42
AAK Ala-Archa 54.74 296 P **P** **03 26 32.6 -2.8**
comp=Z,5.6nm,0.4s,baz=116,slow=4.3,SNR=8.1
comp=Z,5.6nm,0.4s
AAK Ala-Archa 54.74 296 P **P** **03 26 34.2 -1.2**
AAK IAmb IAmb 03 26 35.3
comp=Z,6.9nm,0.7s
AAK Ala-Archa 54.74 296 P **P** **03 26 34.2 -1.2**
AAK pmax pmax
comp=Z,7.0nm,0.7s
AAK Ala-Archa 54.74 296 P **P** **03 26 34.6 -0.7**
AAK pP **pP** **03 26 56.6 -1.1**
CMB Columbia Colle 54.99 72 IAmb IAmb 03 26 41.0
comp=Z,10nm,0.8s
KIRV Kirov 55.04 323 LR LR 03 52 28.4
comp=Z,53nm,18.1s,baz=60,slow=38
KIRV Kirov 55.04 323 *d*/*i*P **P** **03 26 35.3 -1.8**
YHL Hebgen Lake 55.33 60 IAmb IAmb 03 26 42.5
comp=Z,12nm,0.9s
RYN Ryan 55.64 70 IAmb IAmb 03 26 45.1
comp=Z,19nm,0.9s
YNR Norris Junctio 55.69 60 IAmb IAmb 03 26 45.6
comp=Z,10nm,0.8s
NVAR Mina Array Bea 55.90 70 P **P** **03 26 46.0 +2.2**
comp=Z,14nm,0.7s,baz=302,slow=7.2,SNR=101
comp=Z,14nm,0.7s
LKWY Lake 55.94 60 IAmb IAmb 03 26 48.1
comp=Z,18nm,0.8s
NV11 Mina Array Sit 55.98 70 IAmb IAmb 03 26 47.6
comp=Z,14nm,1.0s
ELK Elko 55.99 66 P **P** **03 26 46.9 +2.3**
comp=Z,10nm,0.6s,baz=316,slow=7.4,SNR=51
ELK LR LR 03 47 29.7
comp=Z,65nm,21.6s,baz=39,slow=32
comp=Z,10nm,0.6s
ELK Elko 55.99 66 IAmb IAmb 03 26 47.8
comp=Z,11nm,0.7s
MDPB Devils Postpil 56.02 71 IAmb IAmb 03 26 48.2
comp=Z,16nm,1.0s
OMMB Old Mammoth Mi 56.08 71 IAmb IAmb 03 26 48.7
comp=Z,7.5nm,0.9s
FLWY Flagg Ranch 56.11 60 IAmb IAmb 03 26 48.8
comp=Z,17nm,0.8s
RLMT Red Lodge 56.13 58 P **P** **03 26 47.5 +2.1**
baz=314,SNR=41
TPAW Teton Pass 56.39 61 IAmb IAmb 03 26 51.5
comp=Z,9.4nm,0.7s
LOHW Long Hollow 56.49 61 IAmb IAmb 03 26 51.3
comp=Z,15nm,1.1s
SNOW Snow King Moun 56.51 61 IAmb IAmb 03 26 51.7
comp=Z,11nm,0.9s
REDW Red Top Meadow 56.53 61 IAmb IAmb 03 26 51.7
comp=Z,10nm,0.8s
KK31 Karatay Array 56.54 299 IAmb IAmb 03 26 47.4
comp=Z,5.8nm,0.6s
KKAR Karatay Array 56.54 299 P **P** **03 26 46.8 -1.3**
KKAR Karatay Array 56.54 299 IAmb IAmb 03 26 47.4
comp=Z,5.8nm,0.6s
KKAR Karatay Array 56.54 299 P **P** **03 26 46.8 -1.3**
KLMR Klimovskoe 56.61 330 *e*P **P** **03 26 46.6 -1.6**
KLMR pmax pmax
comp=Z,5.0nm,0.6s
KLMR Klimovskoe 56.61 330 *e*P **P** **03 26 46.6 -1.6**
KLMR AMP 03 26 47.8
comp=Z,5.0nm,0.6s
HVU Hansel Valley 56.61 64 IAmb IAmb 03 26 52.0
comp=Z,16nm,1.0s
PAGB Antelope Grade 56.68 74 P **P** **03 26 49.7 +0.5**
PAGB IAmb IAmb 03 26 52.5
comp=Z,12nm,0.8s
TIN Tinemaha, Big 56.90 71 P **P** **03 26 52.8 +1.9**
baz=315
ICESG Greenland Ices 57.06 8 *i*P **P** **03 26 51.6 -0.1**
ICESG IAmb IAmb 03 26 54.3
comp=Z,5.0nm,0.8s
BGU Big Grassy Mou 57.07 64 IAmb IAmb 03 26 55.0
comp=Z,6.1nm,0.6s
LCH Last Change Ra 57.11 71 IAmb IAmb 03 26 55.1
comp=Z,9.2nm,0.7s
SMMC Simmler 57.12 74 P **P** **03 26 54.9 +2.6**
baz=316
VES Vestal, Richgr 57.27 73 P **P** **03 26 54.7 +1.4**
baz=316,SNR=5.3
CWC Cottonwood Cre 57.42 71 P **P** **03 26 56.5 +1.9**
baz=316
GRAC Grapevine Rang 57.43 71 P **P** **03 26 57.0 +2.4**
baz=315,SNR=7.1
AKTO Aktyubinsk 57.47 312 P **P** **03 26 52.9 -1.5**
comp=Z,4.6nm,0.5s,baz=73,slow=9.8,SNR=23
AKTO PcP **PcP** **03 27 47.2 +0.1**
comp=Z,6.2nm,0.6s,baz=78,slow=4.5,SNR=9.6
AKTO LR LR 03 53 36.4
comp=Z,41nm,18.6s,baz=103,slow=38
comp=Z,4.6nm,0.5s
R11A Troy Canyon, C 57.48 68 IAmb IAmb 03 26 57.8
comp=Z,7.6nm,0.8s
R11A Troy Canyon, C 57.48 68 P **P** **03 26 56.7 +1.7**
baz=315,SNR=23
PKM Mcpherson Peak 57.53 74 P **P** **03 26 57.8 +2.4**
baz=316
BW06 Boulder Array 57.63 61 P **P** **03 26 57.8 +1.8**
baz=315,SNR=56
PDAR Pinedale Array 57.63 61 P **P** **03 26 57.9 +1.8**
comp=Z,23nm,0.7s,baz=320,slow=2.8,SNR=216
comp=Z,23nm,0.7s
CHTO Chiang Mai 57.70 258 P **P** **03 26 56.0 -0.5**
CHTO IAmb IAmb 03 26 59.2
comp=Z,7.5nm,0.8s
CHTO Chiang Mai 57.70 258 P **P** **03 26 56.0 -0.5**
CHTO pmax pmax
comp=Z,7.0nm,0.9s
CHTO Chiang Mai 57.70 258 P **P** **03 26 57.8 +1.2**
DUG Dugway, Tooele 57.70 65 IAmb IAmb 03 26 59.7
comp=Z,15nm,0.9s
DUG Dugway, Tooele 57.70 65 P **P** **03 26 58.5 +2.0**
baz=315,SNR=21
BCW Bitter Crk WRg 57.72 74 P **P** **03 26 59.0 +2.4**
ISA Isabella, Lake 57.75 72 P **P** **03 26 57.1 +0.3**
ISA IAmb IAmb 03 26 59.4
comp=Z,7.0nm,0.8s
ISA Isabella, Lake 57.75 72 P **P** **03 26 57.1 +0.3**

ISA pmax pmax
comp=Z,7.0nm,0.9s
ISA Isabella, Lake 57.75 72 P P 03 26 57.9 +1.2
baz=316,SNR=5.3
S11A Rachel 57.89 69 P P 03 26 59.4 +1.6
ARVC Arvin 57.93 73 P P 03 27 00.0 +2.1
baz=316
CTU Camp Tracy 57.93 64 IAmb IAmb 03 27 00.9
comp=Z,11nm,0.7s
CMAR Chiang Mai Arr 57.98 258 P P 03 26 58.3 -0.2
comp=Z,5.8nm,0.2s,baz=23,slow=6.9,SNR=16
comp=Z,5.8nm,0.2s
CMAR Chiang Mai Arr 57.98 258 *e*P **P 03 26 59.9 +1.4**
CMAR pmax pmax
comp=Z,6.0nm,0.8s
MPMC Manual Prospec 58.03 71 P P 03 27 00.8 +1.9
baz=316,SNR=12
FURC Furnace Creek, 58.09 71 P P 03 27 01.3 +2.3
baz=316,SNR=42
TPNV Topopah Spring 58.10 70 P P 03 27 01.2 +1.9
baz=316,SNR=28
JLU Jordanelle 58.15 64 IAmb IAmb 03 27 02.8
comp=Z,7.4nm,0.9s
NLU North Lily Min 58.27 65 IAmb IAmb 03 27 03.6
comp=Z,15nm,0.7s
PSUT Pine Spring 58.31 67 IAmb IAmb 03 27 03.7
comp=Z,17nm,1.2s
LRMC Laurel Mtn Rad 58.33 72 P P 03 27 02.7 +1.8
baz=316
DRK Karamyk 58.39 295 IAmb IAmb 03 27 01.9
comp=Z,10nm,0.7s
BTK Batken 58.52 296 IAmb IAmb 03 27 03.9
comp=Z,10nm,0.7s
EDW2 Edwards Air Fo 58.58 73 P P 03 27 04.5 +2.0
baz=316,SNR=15
SHOC Shoshone, Teco 58.83 71 P P 03 27 06.1 +1.8
baz=316
DECC Green Verdugo 58.84 73 P P 03 27 06.1 +1.8
baz=316
ULM Lac du Bonnet 58.84 47 P P 03 27 04.8 +0.8
comp=Z,8.5nm,0.6s,baz=316,slow=7.6,SNR=12
comp=Z,8.5nm,0.6s
ULM Lac du Bonnet 58.84 47 IAmb IAmb 03 27 05.3
comp=Z,7.8nm,0.6s
DY2G Dye2 58.90 12 *i* P **P 03 27 05.4 +0.9**
MDND Maddock 58.92 51 P P 03 27 06.4 +1.8
baz=317
GSC Goldstone, Bar 58.96 72 P P 03 27 07.0 +1.8
baz=316,SNR=15
TCRU Three Creeks R 59.03 66 IAmb IAmb 03 27 13.7
comp=Z,6.4nm,0.7s
CCUT Cedar City 59.28 67 IAmb IAmb 03 27 10.6
comp=Z,9.7nm,0.7s
K22A Casper 59.28 59 IAmb IAmb 03 27 09.9
comp=Z,11nm,0.8s
K22A Casper 59.28 59 P P 03 27 08.8 +1.4
baz=316,SNR=8.6
P17A Butcher Ranch, 59.34 64 IAmb IAmb 03 27 12.1
comp=Z,9.7nm,0.6s
TUQ Turquoise Moun 59.36 71 P P 03 27 10.0 +1.9
baz=316,SNR=6.1
SZCU Shurtz Canyon 59.40 67 IAmb IAmb 03 27 11.2
comp=Z,9.7nm,1.1s
CIS Catalina Islan 59.40 74 P P 03 27 09.6 +1.4
baz=317
RSSD Black Hills 59.48 56 P P 03 27 10.3 +1.5
RSSD Black Hills 59.48 56 P P 03 27 10.3 +1.5
RSSD pmax pmax
comp=Z,67nm,0.7s
RSSD Black Hills 59.48 56 P P 03 27 10.4 +1.5
baz=317
RSSD Black Hills 59.48 56 P P 03 27 10.5 +1.6
P18A Preston Nutter 59.49 64 IAmb IAmb 03 27 13.6
comp=Z,12nm,0.7s
HEC Hector,Ludlow 59.56 72 P P 03 27 11.3 +1.9
baz=317,SNR=9.1
MTPU Mount Pierson 59.58 66 IAmb IAmb 03 27 13.2
comp=Z,8.2nm,0.8s
RWWY Rawlins 59.62 60 IAmb IAmb 03 27 12.2
comp=Z,12nm,0.8s
BBRC Big Bear Solar 59.64 72 P P 03 27 12.1 +2.0
baz=317
LCMT Little Creek M 59.73 68 IAmb IAmb 03 27 13.8
comp=Z,14nm,1.1s
FINES FINESS Array B 59.79 336 P P 03 27 09.5 -0.9
comp=Z,3.0nm,0.4s,baz=36,slow=8.0,SNR=56
FINES LR LR 03 55 34.2
comp=Z,26nm,21.5s,baz=28,slow=39
comp=Z,3.0nm,0.4s
FINES FINESS Array B 59.79 336 *e*P **P 03 27 09.6 -0.8**
FINES pmax pmax
comp=Z,3.0nm,0.4s
ELS Elsinore Mount 59.79 73 IAmb IAmb 03 27 13.5
comp=Z,13nm,0.8s
MURC Murrieta 59.96 73 P P 03 27 13.6 +1.5
baz=317,SNR=6.9
GMRC Granite Mounta 59.98 71 P P 03 27 14.1 +1.8
baz=317,SNR=18
O20A White River Ci 60.20 62 P P 03 27 15.4 +1.6
baz=317,SNR=20
AGMN Agassiz Nation 60.29 48 IAmb IAmb 03 27 15.5
comp=Z,5.6nm,0.8s
AGMN Agassiz Nation 60.29 48 P P 03 27 14.6 +0.6
baz=318
BELC Belle Mtn. Jos 60.36 72 P P 03 27 16.3 +1.4
baz=317,SNR=11
BELG Belogornoye 60.36 319 P P 03 27 13.0 -1.4
comp=Z,24nm,0.6s,baz=237,slow=1.3,SNR=14
BELG LR LR 03 56 34.3
comp=Z,27nm,19.9s,baz=128,slow=39
comp=Z,24nm,0.6s
BELG Belogornoye 60.36 319 *i* P **P 03 27 10.5 -3.9**
BELG pmax pmax
comp=Z,5.0nm,0.8s
PFO Pinyon Flats O 60.38 73 P P 03 27 16.4 +1.4
comp=Z,5.4nm,0.6s,baz=322,slow=5.6,SNR=13
PFO LR LR 03 53 11.0
comp=Z,46nm,18.4s,baz=79,slow=36
comp=Z,5.4nm,0.6s
PFO Pinyon Flats O 60.38 73 P P 03 27 15.8 +0.9
PFO IAmb IAmb 03 27 16.9
comp=Z,5.7nm,0.6s
PFO Pinyon Flats O 60.38 73 P P 03 27 15.9 +0.9
PFO pmax pmax
comp=Z,6.0nm,0.6s
PFO Pinyon Flats O 60.38 73 P P 03 27 16.5 +1.5
baz=317,SNR=6.4
PFO Pinyon Flats O 60.38 73 P P 03 27 16.5 +1.5
TPFO Pinon Flats 60.38 73 P P 03 27 16.5 +1.5
baz=317
CHGR Chuyangaron 60.42 296 P P 03 27 13.4 -1.8
CHGR Chuyangaron 60.42 296 P P 03 27 13.4 -1.8
CHGR pmax pmax
comp=Z,22nm,0.5s
109C Camp Elliot, M 60.53 74 P P 03 27 17.6 +1.7
baz=317
NEE2 Needles Airpor 60.58 70 P P 03 27 17.8 +1.5
baz=317
IRM Iron Mountain 60.73 71 P P 03 27 19.2 +2.0
baz=317,SNR=6.7
W13A Hualapai Mount 60.76 70 IAmb IAmb 03 27 20.4
comp=Z,7.5nm,0.8s
BC3 Big Chuckawall 60.92 72 P P 03 27 20.1 +1.4
baz=317,SNR=12
MONP2 Monument Peak 60.92 73 P P 03 27 20.2 +1.4
baz=317,SNR=5.4
BAR Barrett 60.93 74 IAmb IAmb 03 27 21.2
comp=Z,7.4nm,0.9s
B35A Bob, Littlefor 61.19 47 IAmb IAmb 03 27 20.9
comp=Z,6.1nm,0.6s
PDMCI Parker Dam,Lak 61.19 71 P P 03 27 22.1 +1.7
baz=317
SWSC Sam W. Stewart 61.24 73 P P 03 27 22.1 +1.4
baz=317
IKP In-Ko-Pah, Jac 61.28 73 P P 03 27 22.6 +1.6
baz=318
BLYC Blythe 61.38 71 IAmb IAmb 03 27 24.5
comp=Z,13nm,0.8s
YUH Yuha Desert 61.38 73 IAmb IAmb 03 27 23.7
comp=Z,8.0nm,0.7s
GLA Glamis 61.72 72 P P 03 27 25.9 +2.0
baz=318
ISCO Idaho Springs 61.82 61 P P 03 27 26.8 +1.9
baz=318
WUAZ Wupatki 61.85 68 P P 03 27 26.1 +1.1
WUAZ IAmb IAmb 03 27 28.3
comp=Z,23nm,1.3s
WUAZ Wupatki 61.85 68 P P 03 27 27.1 +2.1
baz=318,SNR=6.0
OBN Obninsk 62.17 327 *e*P **P 03 27 25.1 -1.4**
OBN pmax pmax
comp=Z,3.0nm,0.8s
MVCO Mesa Verde 62.19 64 P P 03 27 28.6 +1.3
MVCO IAmb IAmb 03 27 29.9
comp=Z,14nm,0.7s
MVCO Mesa Verde 62.19 64 P P 03 27 29.0 +1.7
baz=318,SNR=15
EYMN Ely 62.47 46 P P 03 27 28.6 -0.1
EYMN IAmb IAmb 03 27 29.6
comp=Z,8.3nm,0.7s
EYMN Ely 62.47 46 P P 03 27 29.1 +0.3
baz=320,SNR=5.7
X16A Lo Mia Camp, P 62.62 69 IAmb IAmb 03 27 33.5
comp=Z,9.9nm,0.8s
W18A Petrified Fore 63.05 67 IAmb IAmb 03 27 36.1
comp=Z,12nm,0.8s
W18A Petrified Fore 63.05 67 P P 03 27 35.2 +2.1
baz=318,SNR=7.1
NB201 NORSAR Array S 63.21 343 IAmb IAmb 03 27 53.0
comp=Z,31nm,1.4s
NB2 NORSAR Subarra 63.23 343 P P 03 27 32.7 -0.9
comp=Z,1.7nm,0.5s,baz=21,slow=6.9
NOA NORSAR Array B 63.23 343 P P 03 27 32.8 -0.9
comp=Z,2.2nm,0.5s,baz=21,slow=6.7,SNR=21
comp=Z,2.2nm,0.5s
X18A Snowflake 63.37 67 IAmb IAmb 03 27 38.3
comp=Z,20nm,0.8s
E38A The Farm, Brul 63.48 47 IAmb IAmb 03 27 36.4
comp=Z,13nm,0.6s
KBL Kabul 63.49 293 P P 03 27 33.7 -2.3
KBL IAmb IAmb 03 27 34.9
comp=Z,6.7nm,0.6s
KBL Kabul 63.49 293 P P 03 27 33.7 -2.3
KBL pmax pmax
comp=Z,7.0nm,0.6s
HFS Hagfors 63.63 342 LR LR 03 58 20.1
comp=Z,36nm,18.6s,baz=43,slow=39
214A Organ Pipe Nat 63.67 71 P P 03 27 38.8 +1.8
baz=318,SNR=7.0
VORR Voronezh 64.09 323 *e*P **P 03 27 42.3 +2.9**
VORR pmax pmax
comp=Z,40nm,0.4s
TUC Tucson 64.55 70 P P 03 27 43.1 +0.3
TUC Tucson 64.55 70 P P 03 27 43.1 +0.3
TUC pmax pmax
comp=Z,5.0nm,0.9s
TUC Tucson 64.55 70 P P 03 27 44.4 +1.6
baz=319
TUC Tucson 64.55 70 P P 03 27 44.6 +1.9
COWI Conover 64.92 46 IAmb IAmb 03 27 45.7
comp=Z,9.4nm,0.7s
ANMO Albuquerque 64.97 65 P P 03 27 46.9 +1.2
comp=Z,7.9nm,0.6s,baz=306,slow=4.7,SNR=4.3
comp=Z,7.9nm,0.6s
ANMO Albuquerque 64.97 65 P P 03 27 46.4 +0.8
ANMO IAmb IAmb 03 27 48.4
comp=Z,8.7nm,0.8s
ANMO Albuquerque 64.97 65 P P 03 27 46.4 +0.8
ANMO pmax pmax
comp=Z,9.0nm,0.8s
NACGM Naroch 65.31 332 ⇓ *e*P **P 03 27 45.9 -1.3**
baz=29
SCHQ Schefferville 65.55 27 P P 03 27 48.6 -0.1
comp=Z,7.3nm,0.6s,baz=339,slow=6.4,SNR=14
comp=Z,7.3nm,0.6s
SCHQ Schefferville 65.55 27 P P 03 27 48.9 +0.1
SCHQ IAmb IAmb 03 27 49.5
comp=Z,7.8nm,0.7s
121A Cookes Peak, D 66.06 67 P P 03 27 54.2 +1.6
baz=319
319A Douglas 66.10 69 IAmb IAmb 03 27 55.8
comp=Z,23nm,0.9s
E46A Sault Ste Mari 66.72 43 IAmb IAmb 03 27 56.3
comp=Z,11nm,0.6s
VLDQ Val d'Or 67.93 37 P P 03 28 02.2 -1.7
VLDQ IAmb IAmb 03 28 03.3
comp=Z,14nm,0.8s
MNTX Cornudas Mount 68.02 66 P P 03 28 06.3 +1.5
baz=320
GOF Gofitskoye 68.03 317 ⇑ *e*P **P 03 28 04.5 -0.2**
GOF pmax pmax
comp=Z,38nm,0.8s
AKASG Malin Array Be 68.27 329 P P 03 28 04.9 -1.2
comp=Z,1.8nm,0.3s,baz=28,slow=6.7,SNR=16
comp=Z,1.8nm,0.3s
J47A Sunmer 69.05 45 IAmb IAmb 03 28 12.3
comp=Z,21nm,0.7s
KIV Kislovodsk 69.08 316 *e*P **P 03 28 10.6 -0.8**
KIV pmax pmax
comp=Z,6.0nm,0.6s
KIV Kislovodsk 69.08 316 P P 03 28 14.0 +2.6
KBZ Khabaz 69.18 316 P P 03 28 11.7 -0.1
comp=Z,8.6nm,0.9s,baz=245,slow=1.9,SNR=15
comp=Z,8.6nm,0.9s
KBZ Khabaz 69.18 316 *e*P **P 03 28 11.8 0.0**
KBZ pmax pmax
comp=Z,9.0nm,0.9s
WMOK Wichita Mounta 69.20 60 P P 03 28 12.9 +0.7
baz=321
CCM Cathedral Cave 70.34 52 P P 03 28 18.6 -0.5
SLM Saint Louis 70.35 51 P P 03 28 19.6 +0.5
SLM Saint Louis 70.35 51 P P 03 28 19.6 +0.5
SLM pmax pmax
comp=Z,66nm,0.7s
TRQ Mont Tremblant 70.58 37 P P 03 28 20.4 0.0
TRQ IAmb IAmb 03 28 20.9
comp=Z,12nm,0.8s
TXAR Lajitas Array 70.78 67 P P 03 28 23.6 +1.6
comp=Z,29nm,0.8s,baz=307,slow=4.7,SNR=31
SORM Soroca 70.79 328 ⇑ **P P 03 28 20.3 -1.3**
SORM Soroca 70.79 328 ⇑ **P P 03 28 20.3 -1.3**
P46A Rosedale 70.95 49 IAmb IAmb 03 28 23.6
comp=Z,19nm,0.7s
O48B Farmland 71.34 47 P P 03 28 25.0 -0.1
baz=325
HPIG 71.52 70 IAmb IAmb 03 28 29.0
comp=Z,7.9nm,0.6s
D62A Allapoint, All 71.71 33 IAmb IAmb 03 28 28.3
comp=Z,13nm,0.7s
LONY Lake Ozonia 71.94 38 P P 03 28 27.8 -0.8
baz=330
E62A Clayton Lake 71.96 33 IAmb IAmb 03 28 29.8
comp=Z,14nm,0.8s
ERPA Erie 71.98 42 P P 03 28 28.8 -0.2
baz=327
OSTC Ostas 72.00 336 *e*P P 03 28 28.8 -0.1
CLL Collm 72.03 339 *i* P **P 03 28 29.3 +0.3**
CLL pmax pmax
comp=Z,7.0nm,1.0s
CLL Collm 72.03 339 *i* P **P 03 28 29.3 +0.3**
comp=Z,7.0nm,1.0s
P49A Miami Univ. Ec 72.13 47 IAmb IAmb 03 28 30.5
comp=Z,13nm,1.0s
P49A Miami Univ. Ec 72.13 47 P P 03 28 29.6 -0.2
baz=326
DPC Dobruska-Polom 72.16 336 *e*P P 03 28 30.4 +0.5
DPC Dobruska-Polom 72.16 336 *e*P P 03 28 30.4 +0.5
BRG Berggiesshubel 72.23 338 *e*P P 03 28 31.8 +1.6
BRG Amp 03 28 32.9
comp=Z,4.6nm,0.9s
BRG Berggiesshubel 72.23 338 *e*P P 03 28 31.8 +1.6
BRG pmax pmax
comp=Z,5.0nm,0.9s
BURAR Bucovina Array 72.23 330 ⇓ **P P 03 28 30.0 -0.4**
BURAR Bucovina Array 72.23 330 ⇓ **P P 03 28 30.0 -0.4**
M53A WI Miller and 72.27 43 IAmb IAmb 03 28 31.7
comp=Z,18nm,0.8s
M53A WI Miller and 72.27 43 P P 03 28 30.6 0.0
baz=327
MMNY Mt. Morris Dam 72.29 41 IAmb IAmb 03 28 31.1
comp=Z,15nm,0.7s
ACSO Alum Creek Sta 72.31 46 P P 03 28 30.5 -0.3
baz=326
KRLC Kraliky 72.31 336 *e*P P 03 28 30.6 -0.2
KRLC Kraliky 72.31 336 *e*P P 03 28 30.6 -0.2
MORC Moravsky Berou 72.39 335 ⇓ **P P 03 28 30.7 -0.6**
MORC Moravsky Berou 72.39 335 P P 03 28 31.5 +0.2
MORC Moravsky Berou 72.39 335 P P 03 28 31.5 +0.2
MORC pmax pmax
comp=Z,5.0nm,1.0s
MORC Moravsky Berou 72.39 335 *e*P P 03 28 31.3 0.0
BIZ Bicaz 72.56 329 ⇑ **P P 03 28 31.5 -0.8**
O52A Adamsville 72.89 45 IAmb IAmb 03 28 35.2
comp=Z,20nm,0.7s
PRU Pruhonice 72.92 337 *e*P P 03 28 35.2 +0.9
PRU Pruhonice 72.92 337 *e*P P 03 28 35.2 +0.9
L56A Greenwood 72.93 41 IAmb IAmb 03 28 35.2
comp=Z,15nm,0.7s
M55A Ridgway 73.02 42 IAmb IAmb 03 28 36.0
comp=Z,13nm,0.8s
O53A New Philadelph 73.04 44 P P 03 28 35.1 -0.1
baz=327
VRAC Vranov 73.06 336 *e*P P 03 28 36.4 +1.2
P52A Corning 73.17 45 P P 03 28 35.5 -0.5
baz=327
JAVC Velka Javorina 73.21 335 *e*P P 03 28 37.5 +1.4
LBNH Lisbon 73.22 36 P P 03 28 36.6 +0.3
baz=331
KOPT Kop Dagi 73.25 316 IAmb IAmb 03 28 39.6
comp=Z,12nm,0.9s
VRI Vrincioaia 73.32 328 ⇓ **P P 03 28 36.6 -0.2**
VRI Vrincioaia 73.32 328 ⇓ **P P 03 28 36.6 -0.2**
R50A Paris 73.33 48 IAmb IAmb 03 28 38.2
comp=Z,8.6nm,0.7s
KRUC Moravsky 73.34 336 *e*P P 03 28 37.0 +0.2
CFR Carcaliu 73.47 326 ⇓ **P P 03 28 37.2 -0.4**
CFR Carcaliu 73.47 326 ⇓ **P P 03 28 37.2 -0.4**
WVT Waverly 73.50 51 P P 03 28 38.6 +0.6
baz=325
TPGR Topolog 73.66 326 ⇓ **P P 03 28 38.7 -0.1**
DRGR 73.72 331 ⇑ **P P 03 28 38.8 -0.4**
DRGR 73.72 331 ⇑ **P P 03 28 38.8 -0.4**
M57A Sunshine Farm, 73.78 41 IAmb IAmb 03 28 40.2
comp=Z,13nm,0.6s
MLR Muntele Rosu 73.90 328 ⇓ **P P 03 28 39.6 -0.8**
MLR Muntele Rosu 73.90 328 ⇓ **P P 03 28 39.6 -0.8**
KHC Kasperske Hory 73.94 338 *e*P P 03 28 40.9 +0.5
KHC Kasperske Hory 73.94 338 *e*P P 03 28 40.9 +0.5
MEM Membach 74.07 343 *d*P P 03 28 41.0 0.0
comp=Z,9.7nm,0.9s
BTNL Ternell 74.07 343 *d*P P 03 28 41.5 +0.4
SSPA Standing Stone 74.08 42 P P 03 28 41.3 0.0
baz=329
MCWV Mont Chateau 74.11 44 IAmb IAmb 03 28 42.8
comp=Z,13nm,0.7s
MCWV Mont Chateau 74.11 44 P P 03 28 42.0 +0.5
baz=328
GERES GERESS Array B 74.19 337 P P 03 28 41.7 -0.2
comp=Z,0.9nm,0.4s,baz=36,slow=5.9,SNR=13
comp=Z,0.9nm,0.4s
GERES GERESS Array B 74.19 337 *e*P **P 03 28 41.9 0.0**
GERES pmax pmax
comp=Z,1.0nm,0.4s
CLTN Cedars of Leba 74.23 50 IAmb IAmb 03 28 43.7
comp=Z,12nm,0.8s
VOIR 74.23 329 ⇑ **P P 03 28 43.0 +0.8**
VOIR 74.23 329 ⇑ **P P 03 28 43.0 +0.8**
Q54A Coxs Mills 74.26 45 IAmb IAmb 03 28 43.1
comp=Z,8.3nm,0.6s
V48A Smith Brothers 74.29 51 IAmb IAmb 03 28 43.9
comp=Z,12nm,0.9s
PLAL Pickwick Lake 74.32 52 IAmb IAmb 03 28 43.9
comp=Z,12nm,0.8s
R53A Hurricane 74.33 46 IAmb IAmb 03 28 44.0
comp=Z,15nm,0.8s
BCLA Clavier 74.38 343 *d*P P 03 28 43.1 +0.2
ARR Arges 74.42 329 ⇑ **P P 03 28 44.3 +1.0**
SIRR Siria 74.50 331 ⇑ **P P 03 28 43.2 -0.5**
CONA Conrad Observa 74.53 336 *i* P P 03 28 44.8 +0.9
comp=Z,2.8nm,0.6s
BMRD Maredsous 74.58 344 *d*P P 03 28 44.0 0.0
RONA Rosalia, Austr 74.63 335 *i* P P 03 28 45.3 +0.9
comp=Z,3.0nm,0.6s
PAGS Pennsylvania G 74.89 41 IAmb IAmb 03 28 46.6
comp=Z,12nm,0.8s
MOA Molln 74.99 337 *i* P **P 03 28 48.0 +1.5**
comp=Z,1.1nm,0.5s
ILGA Ilgaz 75.09 321 IAmb IAmb 03 28 49.3
comp=Z,24nm,0.9s
BZS Buzias 75.11 331 ⇓ **P P 03 28 47.2 +0.1**
BZS Buzias 75.11 331 ⇓ **P P 03 28 47.2 +0.1**
TZTN Tazewell 75.12 48 P P 03 28 47.7 +0.3
baz=327
SWET Sewanee 75.13 50 IAmb IAmb 03 28 48.4
comp=Z,20nm,0.7s
ARSA Arzberg 75.24 336 *i* P **P 03 28 48.7 +0.8**
comp=Z,2.1nm,0.5s
PAL Palisades 75.31 39 P P 03 28 48.5 +0.1
baz=330
MARD Mardin 75.40 314 IAmb IAmb 03 28 50.0
comp=Z,7.2nm,0.5s
W50A Signal Mountai 75.43 50 IAmb IAmb 03 28 50.4
comp=Z,11nm,0.8s
HAL Halifax 75.61 30 P P 03 28 50.2 +0.2
HAL IAmb IAmb 03 29 07.2
comp=Z,39nm,1.3s
HAL Halifax 75.61 30 P P 03 28 50.2 +0.2
HAL pmax pmax
comp=Z,39nm,1.3s
L64A Middleborough 75.62 36 P P 03 28 49.9 -0.2
L64A IAmb IAmb 03 29 04.4
comp=Z,19nm,1.1s
TKL Tuckaleechee C 75.75 49 P P 03 28 51.3 +0.3
comp=Z,3.0nm,0.6s,baz=161,slow=4.6,SNR=4.6
comp=Z,3.0nm,0.6s
146A Union 75.76 54 IAmb IAmb 03 28 53.2
comp=Z,23nm,0.7s
Z47A Carrollton 75.78 53 IAmb IAmb 03 28 52.4
comp=Z,12nm,0.8s
FPAL Fort Paine 75.84 51 IAmb IAmb 03 28 52.6
comp=Z,14nm,0.8s
SOKA Soboth 75.90 336 *i* P **P 03 28 52.4 +0.7**
comp=Z,2.9nm,0.5s
BLA Blacksburg 75.93 46 P P 03 28 51.9 -0.2
baz=328
KBA Koelnbreinsper 75.93 337 *i* P **P 03 28 53.3 +1.3**
comp=Z,10nm,0.8s
WB0 Warramunga Arr 76.02 204 P P 03 28 53.3 +0.8
WB0 IAmb IAmb 03 28 54.5
comp=Z,18nm,1.4s
WATA Walderalm 76.09 338 *i* P **P 03 28 54.7 +1.7**
comp=Z,1.6nm,0.4s
WTTA Wattenberg 76.14 338 *i* P **P 03 28 54.2 +1.0**
comp=Z,5.2nm,0.8s
WR0 Warramunga Arr 76.17 204 P P 03 28 54.5 +1.1
OBKA Obir 76.17 336 *e*P **P 03 28 55.1 +1.8**
comp=Z,3.8nm,0.6s
MOTA Moosalm 76.18 339 *i* P **P 03 28 55.0 +1.6**
comp=Z,2.8nm,0.8s
WB2 Warramunga Arr 76.19 204 P P 03 28 54.2 +0.7
WB2 IAmb IAmb 03 29 02.2
comp=Z,19nm,1.4s
WRA Warramunga Arr 76.20 204 P P 03 28 54.5 +0.9
comp=Z,0.9nm,0.4s,baz=18,slow=6.0,SNR=18
comp=Z,0.9nm,0.4s
WRA Warramunga Arr 76.20 204 P P 03 28 54.8 +1.3
WRA Warramunga Arr 76.20 204 *e*P P 03 28 55.5 +2.0
WRA pmax pmax
comp=Z,1.0nm,0.4s
BRTR Keskin Array B 76.27 320 P P 03 28 53.9 -0.2
comp=Z,1.8nm,0.6s,baz=54,slow=3.5,SNR=12
comp=Z,1.8nm,0.6s
SQTA Sankt Quirin 76.28 338 *e*P P 03 28 54.8 +0.8
comp=Z,2.3nm,0.6s
LRAL Lakeview Retre 76.43 53 P P 03 28 54.7 -0.1
baz=326
DAVA Damuels 76.50 339 *i* P **P 03 28 56.8 +1.6**
comp=Z,2.1nm,0.6s
FETA Feichten 76.57 339 *i* P **P 03 28 57.6 +1.9**
comp=Z,3.5nm,1.0s
JSRW J. Sargeant Re 76.59 43 P P 03 28 56.2 +0.6
CLUD Cludinico 76.62 337 P P 03 28 55.8 0.0
BG3 Lake Jocassee 76.69 49 IAmb IAmb 03 28 57.7
comp=Z,9.1nm,0.7s
V55A Taylorsville 76.73 47 P P 03 28 56.7 +0.2
STAL STALIGIAL 76.84 337 P P 03 28 56.8 -0.2
DIVS Divibare 76.96 331 P P 03 28 57.1 -0.7
DAVOX Davos/Dischmat 76.98 339 LR LR 04 06 11.8
comp=Z,22nm,20.2s,baz=85,slow=38
FUORN Ofenpass-Fuorn 77.05 339 P P 03 28 59.2 +0.7
KMSC Kings Mountain 77.27 47 IAmb IAmb 03 29 00.5
comp=Z,7.9nm,0.7s
KMSC Kings Mountain 77.27 47 P P 03 28 59.8 +0.2
baz=328
TUE Stuetta 77.39 339 P P 03 29 00.9 +0.6
GOGA Godfrey 77.77 50 P P 03 29 02.6 +0.3
baz=327
W57A Gilead 77.85 46 IAmb IAmb 03 29 03.8
comp=Z,8.4nm,0.7s
TEOL Teolo 77.94 338 P P 03 29 03.5 +0.4
TEOL IAmb IAmb 03 29 06.2

	comp=Z,8.7nm,0.6s							
SALO	**Salr**	**77.95**	**338**	P	**P**	**03 29 03.7**	**+0.5**	
SALO				IAmb	IAmb	03 29 29.9		
	comp=Z,11nm,0.8s							
ALN	**Alexandroupoli**	**77.97**	**326**	P	**P**	**03 29 03.2**	**-0.2**	
ALN	**Alexandroupoli**	**77.97**	**326**	P	**P**	**03 29 03.2**	**-0.2**	
ALN				pmax	pmax			
	comp=Z,8.0nm,1.4s							
JSC	**Jenkinsville**	**78.03**	**48**	P	**P**	**03 29 04.0**	**+0.2**	
JSC	**Jenkinsville**	**78.03**	**48**	P	**P**	**03 29 04.0**	**+0.2**	
JSC				pmax	pmax			
	comp=Z,5.0nm,0.6s							
CNNC	**Cliffs of the**	**78.68**	**45**	P	**P**	**03 29 07.8**	**+0.5**	
	baz=329							
PDG	**Podgorica**	**78.71**	**331**	⇑P	**P**	**03 29 06.5**	**-0.8**	
PDG	**Podgorica**	**78.71**	**331**	P	**P**	**03 29 06.7**	**-0.6**	
PDG				IAmb	IAmb	03 29 07.7		
	comp=Z,5.9nm,0.5s							
LPL	**La Plagne**	**78.83**	**341**	*e*P	**P**	**03 29 09.0**	**+0.7**	
LPL				pmax	pmax			
	comp=Z,8.0nm,0.7s							
MFF	**Saint Martin d**	**78.95**	**346**	*e*P	**P**	**03 29 08.7**	**0.0**	
MFF				pmax	pmax			
	comp=Z,3.0nm,0.5s							
BNI	**Bardonecchia**	**79.29**	**341**	P	**P**	**03 29 10.9**	**+0.2**	
BNI	**Bardonecchia**	**79.29**	**341**	P	**P**	**03 29 10.9**	**+0.2**	
BNI				pmax	pmax			
	comp=Z,4.0nm,0.6s							
TIGA	**Tifton**	**79.36**	**51**	P	**P**	**03 29 11.9**	**+0.8**	
	baz=327							
MSSA	**Maissana**	**79.41**	**339**	P	**P**	**03 29 11.1**	**-0.2**	
MSSA				IAmb	IAmb	03 29 25.6		
	comp=Z,34nm,1.3s							
SSB	**Saint Sauveur**	**79.48**	**342**	P	**P**	**03 29 12.5**	**+0.9**	
SSB	**Saint Sauveur**	**79.48**	**342**	P	**P**	**03 29 12.5**	**+0.9**	
SSB				pmax	pmax			
	comp=Z,5.0nm,0.5s							
NHSC	**New Hope**	**79.50**	**48**	P	**P**	**03 29 12.6**	**+0.8**	
	baz=328							
Y60A	**Bolivia**	**79.59**	**46**	P	**P**	**03 29 12.5**	**+0.2**	
Y60A				IAmb	IAmb	03 29 13.5		
	comp=Z,24nm,0.9s							
MURB	**Monte Urbino**	**79.72**	**336**	P	**P**	**03 29 14.0**	**+1.0**	
MURB				IAmb	IAmb	03 29 15.3		
	comp=Z,14nm,0.6s							
OSSC	**Osservatorio P**	**79.77**	**337**	P	**P**	**03 29 13.9**	**+0.7**	
ASAR	**Alice Springs**	**79.88**	**204**	P	**P**	**03 29 14.8**	**+0.9**	
	comp=Z,2.1nm,0.8s,baz=16,slow=5.3,SNR=14							
	comp=Z,2.1nm,0.8s							
NRCA	**Norcia**	**79.97**	**336**	IAmb	IAmb	03 29 18.1		
	comp=Z,9.5nm,0.5s							
553A	**Crawfordville**	**80.00**	**52**	P	**P**	**03 29 14.9**	**+0.3**	
553A				IAmb	IAmb	03 29 42.1		
	comp=Z,25nm,1.2s							
ELL	**Elmali**	**80.29**	**321**	P	**P**	**03 29 16.2**	**0.0**	
ELL				IAmb	IAmb	03 29 29.4		
	comp=Z,28nm,1.2s							
ELL	**Elmali**	**80.29**	**321**	P	**P**	**03 29 16.2**	**0.0**	
ELL				pmax	pmax			
	comp=Z,28nm,1.2s							
SGRT	**San Giovanni R**	**80.31**	**333**	P	**P**	**03 29 16.2**	**0.0**	
SGRT				IAmb	IAmb	03 29 41.8		
	comp=Z,35nm,1.2s							
LFF	**La Frestale**	**80.45**	**345**	*e*P	**P**	**03 29 15.0**	**-1.8**	
LFF				pmax	pmax			
	comp=Z,3.0nm,0.5s							
KEK	**Kerkira**	**81.05**	**330**	P	**P**	**03 29 19.9**	**-0.2**	
KEK				IAmb	IAmb	03 29 23.4		
	comp=Z,18nm,1.3s							
SCTE	**Santa Cesarea**	**81.11**	**331**	P	**P**	**03 29 20.5**	**+0.1**	
ITM	**Ithomi**	**82.70**	**327**	P	**P**	**03 29 28.3**	**-0.5**	
ITM				IAmb	IAmb	03 29 36.3		
	comp=Z,30nm,1.5s							
IDI	**Anoyia**	**83.41**	**324**	P	**P**	**03 29 30.5**	**-2.1**	
IDI				IAmb	IAmb	03 29 54.8		
	comp=Z,24nm,1.4s							
RAYN	**Ar Rayn**	**84.70**	**303**	P	**P**	**03 29 38.6**	**-0.7**	
RAYN				IAmb	IAmb	03 29 39.6		
	comp=Z,10nm,0.7s							
RAYN	**Ar Rayn**	**84.70**	**303**	P	**P**	**03 29 38.6**	**-0.7**	
RAYN				pmax	pmax			
	comp=Z,10.0nm,0.7s							
CMIG	**Matias Romero**	**85.36**	**68**	P	**P**	**03 29 43.9**	**+1.3**	
	comp=Z,5.9nm,0.7s,baz=274,slow=3.9,SNR=7.6							
	comp=Z,5.9nm,0.7s							
ESDC	**Sonseca Array**	**86.28**	**347**	P	**P**	**03 29 47.1**	**+0.2**	
	comp=Z,4.9nm,0.7s,baz=360,slow=4.9,SNR=45							
	comp=Z,4.9nm,0.7s							
KEST	**Kesra**	**87.63**	**336**	P	**P**	**03 29 52.9**	**-0.7**	
	comp=Z,2.0nm,0.5s,baz=358,slow=2.4,SNR=7.5							
	comp=Z,2.0nm,0.5s							
BAUV	**El Baul**	**105.97**	**49**	*e*	**Pdif**	**03 31 25.7**	**+8.8**	
TORD	**Torodi Ar. Bea**	**111.14**	**337**	PKiKP	**PKiKP**	**03 35 38.2**	**-0.3**	
	comp=Z,0.2nm,0.5s,baz=26,slow=3.5,SNR=4.6							
VNDA	**Vanda**	**130.60**	**179**	PKP	**PKPdf**	**03 36 14.5**	**+0.7**	
	comp=Z,0.5nm,0.7s,baz=324,slow=5.2,SNR=2.5							
VNDA	**Vanda**	**130.60**	**179**		**PKPdf**	**03 36 15.3**	**+1.5**	
VNDA	**Vanda**	**130.60**	**179**	PKiKP	**PKPdf**	**03 36 15.3**	**+1.5**	
SIV	**San Ignacio**	**131.00**	**56**	SKPab	**SKPbc**	**03 39 32.6**	**0.0**	
	comp=Z,3.4nm,0.6s,baz=19,slow=2.9,SNR=16							
BDFB	**Brasilia**	**136.55**	**41**	PKP	**PKPdf**	**03 36 26.8**	**-0.2**	
	comp=Z,0.8nm,0.4s,baz=31,slow=22,SNR=3.1							
BDFB	**Brasilia**	**136.55**	**41**		**PKPdf**	**03 36 26.0**	**-1.0**	
CPUP	**Villa Florida**	**141.52**	**60**	PKP	**PKPdf**	**03 36 35.9**	**+0.3**	
	comp=Z,1.1nm,0.7s,baz=332,slow=8.5,SNR=4.1							
CPUP	**Villa Florida**	**141.52**	**60**		**PKPdf**	**03 36 36.5**	**+0.9**	
CPUP	**Villa Florida**	**141.52**	**60**	PKiKP	**PKPdf**	**03 36 36.5**	**+0.9**	
QSPA	**South Pole Qui**	**143.09**	**180**	PKhKP	PKPpre	03 36 34.0		
	comp=Z,2.2nm,0.8s,baz=240,slow=0.6,SNR=16							
QSPA				SKPbc	**SKPbc**	**03 40 05.9**	**-1.1**	
	comp=Z,2.2nm,1.1s,baz=32,slow=1.3,SNR=3.4							
SUR	**Sutherland**	**143.96**	**289**	PKP	**PKPdf**	**03 36 39.9**	**-0.1**	
	comp=Z,8.7nm,0.9s,baz=202,slow=4.7,SNR=6.1							
PLCA	**Paso Flores**	**144.27**	**90**	PKP	PKPbc	03 36 39.7	+1.1	
	comp=Z,6.0nm,0.7s,baz=299,slow=3.9,SNR=32							
PLCA				SKPbc	**SKPbc**	**03 40 10.2**	**-0.6**	
	comp=Z,1.6nm,0.9s,baz=358,slow=4.1,SNR=3.2							
PLCA	**Paso Flores**	**144.27**	**90**	PKPdf	PKPbc	03 36 39.8	+1.2	
TROLL	**Troll, Antarti**	**158.80**	**200**	PKPab	**PKPab**	**03 37 38.4**	**+1.0**	
SNAA	**Sanae**	**160.07**	**196**	PKPab	**PKPab**	**03 37 42.7**	**-0.1**	
	comp=Z,0.8nm,0.7s,baz=48,slow=8.1,SNR=2.2							

*NOU **28** 03:17:33.1,40˚.49S×174˚.51E,h91km,MLv3.8/8,Cook Strait, New Zealand*
*WEL **28** 03:17:34.8±0.5,40˚S±3˚×17˚5E±˚,h64km±7km,M3.5/36, ML3.7/36,MLv3.5/36,Error ellipse: s-maj=0.0km s-min=0.0km az=78.4*

ISC 28 03:17:32.5±1.4, 40.48S±0.03×174.56E±0.04, h99km±9km, n104,σ0s99/110, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIW	**Kapiti Island**	**0.47**	**145**	P	**Pn**	**03 17 48.2**	**+0.4**
KIW				S	**Sn**	03 17 58.7	-0.7
OGWZ	**Otaki Gorge**	**0.57**	**126**	P	**Pn**	**03 17 49.2**	**+0.5**
DUWZ	**D'Urville Isla**	**0.58**	**236**	P	**Pn**	**03 17 48.7**	**-0.1**
DUWZ				S	**Sn**	**03 18 00.0**	**-0.9**
OHWZ	**Ohakea**	**0.64**	**65**	P	**Pn**	**03 17 49.7**	**+0.6**
OHWZ				S	**Sn**	**03 18 01.6**	**-0.1**
CAW	**Cannon Point**	**0.74**	**148**	P	**Pn**	**03 17 51.0**	**+0.9**
CAW				S	**Sn**	**03 18 03.6**	**+0.3**
WAZ	**Wanganui**	**0.80**	**24**	P	**Pn**	**03 17 51.3**	**+0.6**
MRZ	**Mangatainoka R**	**0.80**	**103**	P	**Pn**	**03 17 51.2**	**+0.5**
MRZ				S	**Sn**	**03 18 03.4**	**-0.9**
WEL	**Wellington**	**0.82**	**169**	P	**Pn**	**03 17 51.7**	**+0.8**
SNZO	**South Karori**	**0.84**	**172**	P	**Pn**	**03 17 51.7**	**+0.7**
HOWZ	**Holdsworth Sta**	**0.84**	**120**	P	**Pn**	**03 17 51.7**	**+0.6**
HOWZ				S	**Sn**	**03 18 04.4**	**-0.7**
POWZ	**Post Office Ro**	**0.93**	**85**	P	**Pn**	**03 17 52.3**	**+0.3**
POWZ				S	**Sn**	**03 18 05.3**	**-1.4**
BHW	**Baring Head**	**0.96**	**166**	P	**Pn**	**03 17 53.1**	**+0.8**
BHW				S	**Sn**	**03 18 06.9**	**-0.3**
MTW	**Mount Morrison**	**0.98**	**134**	P	**Pn**	**03 17 53.4**	**+0.7**
MTW				S	**Sn**	**03 18 07.3**	**-0.4**
LREZ	**Lake Rotokare**	**1.03**	**353**	P	**Pn**	**03 17 53.4**	**+0.4**
LREZ				S	**Sn**	**03 18 08.6**	**+0.1**
TIWZ	**Tintock**	**1.05**	**107**	P	**Pn**	**03 17 54.0**	**+0.6**
TUWZ	**Tuamarina**	**1.06**	**206**	P	**Pn**	**03 17 54.0**	**+0.7**
MSWZ	**Moikau Station**	**1.07**	**151**	P	**Pn**	**03 17 54.5**	**+0.9**
PRWZ	**Pori Road**	**1.08**	**94**	P	**Pn**	**03 17 54.4**	**+0.8**
PAWZ	**Paruwai Farm**	**1.11**	**144**	P	**Pn**	**03 17 55.0**	**+0.9**
TSZ	**Takapari Road**	**1.15**	**69**	P	**Pn**	**03 17 54.7**	**+0.1**
NNZ	**Nelson**	**1.16**	**230**	P	**Pn**	**03 17 55.0**	**+0.4**
PREZ	**Palmer Road**	**1.18**	**345**	P	**Pn**	**03 17 55.3**	**+0.4**
NMEZ	**Namu Road**	**1.19**	**334**	P	**Pn**	**03 17 55.0**	**+0.2**
TMWZ	**Te Maipa**	**1.19**	**122**	P	**Pn**	**03 17 55.7**	**+0.8**
PLWZ	**Palliser**	**1.21**	**154**	P	**Pn**	**03 17 56.0**	**+0.8**
DVHZ	**Dannevirke**	**1.24**	**82**	P	**Pn**	**03 17 55.6**	**+0.1**
TRWZ	**Traveller**	**1.25**	**137**	P	**Pn**	**03 17 56.4**	**+0.7**
KHEZ	**Kahui Hut**	**1.26**	**340**	P	**Pn**	**03 17 56.0**	**+0.2**
NEZ	**North Egmont**	**1.26**	**343**	P	**Pn**	**03 17 56.0**	**+0.1**
CMWZ	**Cape Campbell**	**1.29**	**191**	P	**Pn**	**03 17 57.7**	**+1.6**
MTVZ	**Mangateitei**	**1.30**	**33**	P	**Pn**	**03 17 57.1**	**+0.8**
BFZ	**Birch Farm**	**1.30**	**99**	P	**Pn**	**03 17 56.6**	**+0.4**
BFZ	**Birch Farm**	**1.30**	**99**	P	**Pn**	**03 17 56.8**	**+0.6**
DREZ	**Durham Road**	**1.32**	**348**	P	**Pn**	**03 17 57.0**	**+0.5**
CPWZ	**Castlepoint**	**1.32**	**109**	P	**Pn**	**03 17 57.7**	**+1.2**
NBEZ	**Newall Road No**	**1.32**	**336**	P	**Pn**	**03 17 56.8**	**+0.3**
PKVZ	**Pokaka**	**1.34**	**27**	P	**Pn**	**03 17 56.9**	**+0.1**
BSWZ	**Blackbirch Sta**	**1.34**	**202**	P	**Pn**	**03 17 57.6**	**+1.0**
PKE	**Pukeiti**	**1.36**	**341**	P	**Pn**	**03 17 57.1**	**+0.1**
VRZ	**Vera Road**	**1.36**	**7**	P	**Pn**	**03 17 57.5**	**+0.5**
PNHZ	**Pukenui**	**1.38**	**66**	P	**Pn**	**03 17 57.3**	**+0.1**
WNVZ	**Wahianoa**	**1.40**	**35**	P	**Pn**	**03 17 58.0**	**+0.4**
TRVZ	**Turoa**	**1.41**	**33**	P	**Pn**	**03 17 58.1**	**+0.3**
MOVZ	**Moawhango**	**1.41**	**41**	P	**Pn**	**03 17 57.7**	**0.0**
DRZ	**Dome Shelter**	**1.43**	**33**	P	**Pn**	**03 17 59.9**	**+1.8**
WHVZ	**Whangaehu Hut**	**1.44**	**34**	P	**Pn**	**03 17 58.5**	**+0.4**
FWVZ	**Far West T-bar**	**1.44**	**32**	P	**Pn**	**03 17 58.5**	**+0.3**
ANWZ	**Angora Road**	**1.46**	**90**	P	**Pn**	**03 17 58.6**	**+0.5**
TUVZ	**Tukino**	**1.48**	**35**	P	**Pn**	**03 17 58.2**	**-0.3**
WPHZ	**Waipukurau**	**1.50**	**75**	P	**Pn**	**03 17 58.9**	**+0.3**
BHHZ	**Black Hill Sta**	**1.52**	**50**	P	**Pn**	**03 17 59.0**	**0.0**
NGZ	**Ngauruhoe**	**1.53**	**32**	P	**Pn**	**03 18 00.9**	**+1.7**
SNVZ	**South Ngauruho**	**1.54**	**33**	P	**Pn**	**03 18 00.3**	**+1.0**
TWVZ	**Taurewa**	**1.56**	**26**	P	**Pn**	**03 17 59.6**	**+0.1**
OTVZ	**Oturere**	**1.57**	**33**	P	**Pn**	**03 18 00.4**	**+0.8**
NNVZ	**North Ngauruho**	**1.57**	**32**	P	**Pn**	**03 18 00.7**	**+0.9**
WTVZ	**West Tongariro**	**1.58**	**31**	P	**Pn**	**03 18 00.4**	**+0.6**
QRZ	**Quartz Range**	**1.58**	**257**	P	**Pn**	**03 17 59.2**	**-0.4**
QRZ	**Quartz Range**	**1.58**	**257**	P	**Pn**	**03 17 59.3**	**-0.3**
PRHZ	**Porangahau**	**1.60**	**83**	P	**Pn**	**03 18 00.2**	**+0.3**
ETVZ	**East Tongariro**	**1.61**	**34**	P	**Pn**	**03 18 00.7**	**+0.5**
KRVZ	**Karewarewa**	**1.62**	**31**	P	**Pn**	**03 18 01.6**	**+1.3**
TMVZ	**Te Maari**	**1.62**	**33**	P	**Pn**	**03 18 00.9**	**+0.6**
NTVZ	**North Tongarir**	**1.63**	**32**	P	**Pn**	**03 18 04.2**	**+3.8**
MRNZ	**Matariki Terra**	**1.64**	**235**	P	**Pn**	**03 18 01.1**	**+0.7**
KATZ	**Kakaramea**	**1.74**	**31**	P	**Pn**	**03 18 04.2**	**+2.4**
KWHZ	**Kaweka Forest**	**1.78**	**54**	P	**Pn**	**03 18 02.0**	**-0.2**
THZ	**Tophouse**	**1.79**	**224**	P	**Pn**	**03 18 03.3**	**+1.0**
RATZ	**Rangitukua**	**1.86**	**31**	P	**Pn**	**03 18 07.1**	**+3.8**
KAHZ	**Kahuranaki**	**1.91**	**70**	P	**Pn**	**03 18 03.9**	**+0.1**
MCHZ	**McNeill Hill**	**1.94**	**58**	P	**Pn**	**03 18 04.2**	**0.0**
HIZ	**Hauiti**	**1.98**	**7**	P	**Pn**	**03 18 05.2**	**+0.5**
HIZ	**Hauiti**	**1.98**	**7**	P	**Pn**	**03 18 05.4**	**+0.7**
BKZ	**Black Stump Fm**	**1.99**	**49**	P	**Pn**	**03 18 04.6**	**-0.3**
BKZ	**Black Stump Fm**	**1.99**	**49**	P	**Pn**	**03 18 04.6**	**-0.3**
KHZ	**Kahutara**	**2.08**	**201**	P	**Pn**	**03 18 06.9**	**+0.9**
KHZ	**Kahutara**	**2.08**	**201**	P	**Pn**	**03 18 06.9**	**+0.9**
MRHZ	**Matea Rd**	**2.18**	**42**	P	**Pn**	**03 18 08.7**	**+1.3**
NMHZ	**Naumai**	**2.22**	**52**	P	Pn	03 18 14.5	+6.6
TLZ	**Tolley Road**	**2.28**	**20**	P	**Pn**	**03 18 09.4**	**+0.7**
MTHZ	**Maungataniwha**	**2.40**	**48**	P	**Pn**	**03 18 09.3**	**-0.9**
DSZ	**Denniston Nort**	**2.43**	**238**	P	**Pn**	**03 18 10.6**	**-0.1**
GVZ	**Greta Valley S**	**2.73**	**204**	P	**Pn**	**03 18 14.8**	**+0.2**
LTZ	**Lake Taylor**	**2.87**	**216**	P	**Pn**	**03 18 16.3**	**-0.1**
MHGZ	**Mahia Peninsul**	**2.90**	**64**	P	**Pn**	**03 18 15.9**	**-0.9**
URZ	**Urewera**	**2.97**	**43**	P	Pn	03 18 23.3	+5.5
URZ	**Urewera**	**2.97**	**43**	P	**Pn**	**03 18 19.7**	**+1.9**
MWZ	**Matawai**	**3.15**	**49**	P	**Pn**	**03 18 19.3**	**-0.8**
INZ	**Inobonnie**	**3.24**	**225**	P	**Pn**	**03 18 21.5**	**+0.2**
AWAZ	**Awhitu Peninsu**	**3.41**	**1**	P	**Pn**	**03 18 24.4**	**+0.7**
OKCZ	**Okains Bay**	**3.43**	**198**	P	**Pn**	**03 18 23.5**	**-0.4**
RUGZ	**Raukumara Rang**	**3.49**	**45**	P	**Pn**	**03 18 24.6**	**-0.3**
TWGZ	**Tauwhareparae**	**3.51**	**50**	P	Pn	03 18 32.1	+7.0
MQZ	**McQueen's Vall**	**3.52**	**203**	P	**Pn**	**03 18 23.7**	**-1.4**
AKCZ	**Akaroa Harbour**	**3.60**	**199**	P	**Pn**	**03 18 25.6**	**-0.7**
WIAZ	**Waiheke Island**	**3.71**	**7**	P	**Pn**	**03 18 28.5**	**+0.8**
RPZ	**Rata Peaks**	**4.15**	**218**	P	**Pn**	**03 18 37.4**	**+3.8**
GCSZ	**Gaunt Creek Bo**	**4.24**	**227**	P	Pn	03 18 40.7	+5.8
FOZ	**Fox Glacier**	**4.67**	**228**	P	**Pn**	**03 18 41.5**	**+1.0**
TMZ	**Timaru**	**4.70**	**213**	P	**Pn**	**03 18 40.7**	**-0.4**
ODZ	**Otahua Downs**	**5.39**	**211**	P	**Pn**	**03 18 49.9**	**-0.5**
ODZ	**Otahua Downs**	**5.39**	**211**	P	**Pn**	**03 18 49.9**	**-0.5**
JCZ	**Jackson Bay**	**5.59**	**228**	P	**Pn**	**03 18 54.1**	**+0.9**
CTZ	**Chatham Island**	**7.32**	**119**	P	**Pn**	**03 19 18.0**	**+1.3**

IDC 28 03:21:56.2±2.0, 4˚.66S×146˚.13E, h0km, mb3.5/3, mbtmp3.5/4, ML3.5/1, Error ellipse: s-maj=102.4km s-min=28.3km az=114.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.04**	**216**	P	P	03 26 20.1	-0.1
	0.2nm,0.3s,baz=39,slow=10,SNR=4.9						
	0.2nm,0.3s						
ASAR	**Alice Springs**	**22.27**	**211**	P	P	03 26 54.8	-0.4
	0.3nm,0.6s,baz=37,slow=7.4,SNR=4.7						
	0.3nm,0.6s						
ZALV	**Zalesovo Beam**	**77.42**	**328**	P	P	03 33 53.3	+0.1
	0.7nm,0.4s,baz=133,slow=8.1,SNR=3.3						
	0.7nm,0.4s						
ILAR	**Eielson Array**	**84.60**	**23**	P	P	03 34 31.5	+0.2
	0.5nm,0.7s,baz=253,slow=4.7,SNR=5.2						
	0.5nm,0.7s						

*IDC **28** 03:25:07.8±0.8,36˚.78N×98˚.64W,h0km,mb3.7/3, mbtmp3.7/8,ML3.9/3,Error ellipse: s-maj=14.0km s-min=10.7km az=116.0*
*NEIC **28** 03:25:08,36˚.70N×98˚.66W,h4km,Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=0.48; $M_{\theta\theta}$=1.06; $M_{\phi\phi}$=0.58; $M_{r\theta}$=-0.83; $M_{r\phi}$=0.46; $M_{\theta\phi}$=0.55; Fault plane solution: M_0=1.43000×10^{14} NP1:ϕ_s217.27000°, δ42.10000°, λ=-160.59000°. NP2:ϕ_s112.61000°, δ77.12000°, λ=-49.56000°. Principal axes: T 1.4473, Plg22.0000°, Azm173.0000°; N -0.0310, Plg39.0000°, Azm282.0000°; P -1.4162, Plg43.0000°, Azm61.0000°;*
*TUL **28** 03:25:08±1.5,36˚.70N±0˚.02×98˚.66W±0˚.03,h5km±6km, ML3.7,mb_Lg3.6/110(NEIC),Mwr3.4/34(NEIC) Error ellipse: s-maj=4.0km s-min=1.9km az=107.0*
*ANF **28** 03:25:08.4±0.3,36˚.72N×98˚.69W,h5km,ML4.6/16,Error ellipse: s-maj=3.7km s-min=2.6km az=77.0*
*NEIC **28** 03:25:09±0.9,36˚.70N±0˚.02×98˚.65W±0˚.04,h1km±7km, Error ellipse: s-maj=5.5km s-min=1.7km az=22.0*

ISC 28 03:25:09.7±3.1, 36.71N±0.03×98.56W±0.03, h12km±22km, n187,σ1s11/192, mb3.9/3, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKCFA	**Oklahoma City**	**1.58**	**145**	Pg	**Pn**	**03 25 37.3**	**-0.2**
OKCSW	**OKLAHOMA CITY**	**1.59**	**145**		**Pn**	**03 25 37.6**	**-0.1**
T35A	**Sooner Cattle**	**1.66**	**82**		**Pn**	**03 25 39.7**	**+1.1**
T35B	**Sooner Cattle**	**1.66**	**82**	P	**Pn**	**03 25 39.6**	**+1.0**
	baz=264,SNR=300						
T35B				S	**Sb**	**03 26 02.8**	**+1.8**
	baz=264						
R32A	**Long Quarter,**	**1.71**	**356**	Pn	**Pn**	**03 25 39.6**	**+0.2**
R32A				IAmb_Lg		03 26 03.7	
	comp=Z,313nm,1.0s						
R32A	**Long Quarter,**	**1.71**	**356**	P	**Pn**	**03 25 39.6**	**+0.2**
	baz=179,SNR=345						
R32A				S	**Sb**	**03 26 02.5**	**0.0**
	baz=179						
FNO	**Franklin**	**1.73**	**147**		**Pn**	**03 25 39.9**	**+0.3**
WMOK	**Wichita Mounta**	**1.98**	**185**		**Pn**	**03 25 42.4**	**-0.7**
WMOK	**Wichita Mounta**	**1.98**	**185**	P	**Pn**	**03 25 42.3**	**-0.8**
	baz=2.8,SNR=102						
WMOK				S	**Sn**	**03 26 08.1**	**+0.2**
	baz=2.8						
X34A	**Smith Ranch, M**	**2.19**	**164**	Pn	**Pn**	**03 25 46.4**	**+0.4**
X34A				IAmb_Lg		03 26 18.8	
	comp=Z,220nm,0.9s						
CBKS	**Cedar Bluff**	**2.29**	**336**		**Pn**	**03 25 47.2**	**-0.3**
CBKS				IAmb_Lg		03 26 23.2	
	comp=Z,279nm,0.8s						
CBKS	**Cedar Bluff**	**2.29**	**336**	P	**Pn**	**03 25 47.2**	**-0.3**
	baz=158,SNR=106						
CBKS				S	**Sn**	**03 26 16.2**	**+0.6**
	baz=158						
TUL1	**Leonard**	**2.38**	**109**	Pn	**Pn**	**03 25 49.2**	**+0.8**
TUL1				IAmb_Lg		03 26 29.5	
	comp=Z,298nm,1.0s						
TUL1	**Leonard**	**2.38**	**109**	P	**Pn**	**03 25 49.4**	**+0.9**
	baz=290,SNR=116						
TUL1				S	**Sb**	**03 26 23.0**	**+1.3**
	baz=290						
TUL1	**Leonard**	**2.38**	**109**	P	**Pn**	**03 25 49.1**	**+0.6**
	baz=290,SNR=51						
TUL1				Sb	**Sb**	**03 26 23.2**	**+1.5**
	baz=290						
KSU1	**Kansas State U**	**2.84**	**32**	Pn	**Pn**	**03 25 55.6**	**+0.8**
KSU1	**Kansas State U**	**2.84**	**32**	IAmb_Lg		03 26 47.1	
	comp=Z,182nm,0.8s						
KSU1	**Kansas State U**	**2.84**	**32**	P	**Pn**	**03 25 55.7**	**+0.8**
	baz=215,SNR=17						
KSU1				S	**Sn**	**03 26 31.7**	**+2.8**
	baz=215						
AMTX	**Amarillo**	**3.13**	**235**		**Pn**	**03 25 58.4**	**-0.5**
AMTX	**Amarillo**	**3.13**	**235**	P	**Pn**	**03 25 58.3**	**-0.6**
	baz=53						
AMTX				Sb	**Sb**	**03 26 43.3**	**-0.1**
	baz=53						
X37A	**Clayton**	**3.35**	**128**	Pn	**Pn**	**03 26 01.5**	**-0.4**
X37A				IAmb_Lg		03 27 01.5	
	comp=Z,213nm,0.7s						
U38A	**Gravette**	**3.37**	**93**	Pn	**Pn**	**03 26 03.6**	**+1.4**
U38A	**Gravette**	**3.37**	**93**	P	**Pn**	**03 26 03.6**	**+1.4**
	baz=276,SNR=27						
Z35A	**Perchaven, San**	**3.54**	**162**	Pn	**Pn**	**03 26 04.3**	**-0.2**
Z35A	**Perchaven, San**	**3.54**	**162**	P	**Pn**	**03 26 04.9**	**+0.3**
	baz=342						
HHAR	**Hobbs**	**3.75**	**95**	Pn	**Pn**	**03 26 08.2**	**+0.8**
KSCO	**Kaye Shedlock'**	**3.95**	**307**	Pn	**Pn**	**03 26 10.3**	**0.0**
KSCO				IAmb_Lg		03 27 16.0	
	comp=Z,192nm,0.7s						
KSCO	**Kaye Shedlock'**	**3.95**	**307**	P	**Pn**	**03 26 09.2**	**-1.1**
	baz=125,SNR=55						
KSCO				S	**Sn**	**03 26 56.1**	**-0.5**
	baz=125						
N33B	**J Bar K, Exete**	**4.11**	**12**	P	**Pn**	**03 26 11.5**	**-0.9**
	baz=194,SNR=20						
N33A	**J Bar K, Exete**	**4.11**	**12**		**Pn**	**03 26 11.5**	**-0.8**
N33A				IAmb_Lg		03 27 29.7	
	comp=Z,206nm,0.9s						
W39A	**Magazine**	**4.16**	**110**	Pn	**Pn**	**03 26 13.7**	**+0.7**
W39A				IAmb_Lg		03 27 26.8	
	comp=Z,135nm,0.8s						
W39A	**Magazine**	**4.16**	**110**	P	**Pn**	**03 26 14.0**	**+0.9**
	baz=292,SNR=7.5						
W39A	**Magazine**	**4.16**	**110**	P	**Pn**	**03 26 13.4**	**+0.3**
	baz=292,SNR=7.4						
W39A				S	**Sn**	**03 27 03.5**	**+1.9**
	baz=292						
ABTX	**Abilene, Hawle**	**4.18**	**193**	Pn	**Pn**	**03 26 13.2**	**-0.1**
ABTX	**Abilene, Hawle**	**4.18**	**193**	P	**Pn**	**03 26 12.6**	**-0.7**
	baz=11						
ABTX				Sb	**Sb**	**03 27 15.6**	**+2.0**
	baz=11						
S39A	**Bolivar**	**4.29**	**75**		**Pn**	**03 26 15.6**	**+0.8**
S39A				IAmb_Lg		03 27 32.6	
	comp=Z,111nm,1.0s						
S39A	**Bolivar**	**4.29**

P40A	**Paris**	**5.85**	**59**	Pn	**Pn**	**03 26 36.6**	**+0.3**		
P40A				IAmb_Lg		03 28 19.5			
	comp=Z,119nm,0.8s								
K31A	**O'Neill**	**5.90**	**359**	Pn	**Pn**	**03 26 37.0**	**+0.1**		
K31A	**O'Neill**	**5.90**	**359**	P	**Pn**	**03 26 36.8**	**-0.2**		
	baz=179,SNR=6.5								
435B	**Jarrell**	**5.97**	**172**	Pn	**Pn**	**03 26 37.6**	**-0.3**		
435B				IAmb_Lg		03 28 34.5			
	comp=Z,84nm,0.9s								
435B	**Jarrell**	**5.97**	**172**	P	**Pn**	**03 26 37.4**	**-0.5**		
	baz=352								
CCM	**Cathedral Cave**	**5.98**	**75**	Pn	**Pn**	**03 26 39.0**	**+1.0**		
CCM				IAmb_Lg		03 28 21.4			
	comp=Z,56nm,0.8s								
CCM	**Cathedral Cave**	**5.98**	**75**	P	**Pn**	**03 26 38.4**	**+0.4**		
	baz=259								
LCAR	**Lake Charles**	**6.01**	**94**	Pn	**Pn**	**03 26 38.9**	**+0.5**		
LCAR				IAmb_Lg		03 28 22.9			
	comp=Z,95nm,1.0s								
CCAR	**Cane Creek**	**6.21**	**115**	IAmb_Lg		03 28 37.5			
	comp=Z,106nm,1.0s								
JCT	**Junction City**	**6.30**	**190**	Pn	**Pn**	**03 26 41.9**	**-0.7**		
JCT	**Junction City**	**6.30**	**190**	P	**Pn**	**03 26 42.0**	**-0.5**		
	baz=8.4								
ISCO	**Idaho Springs**	**6.35**	**301**	Pn	**Pn**	**03 26 42.1**	**-1.2**		
ISCO				IAmb_Lg		03 28 31.7			
	comp=Z,116nm,0.9s								
ISCO	**Idaho Springs**	**6.35**	**301**	P	**Pn**	**03 26 42.2**	**-1.2**		
	baz=117								
ISCO				Sb	**Sb**	**03 28 20.4**	**+4.1**		
	baz=117								
HBAR	**Harrisburg**	**6.50**	**98**	IAmb_Lg		03 28 40.2			
	comp=Z,181nm,0.8s								
PBMO	**Poplar Bluff**	**6.53**	**87**	Pn	**Pn**	**03 26 45.9**	**+0.3**		
PBMO				IAmb_Lg		03 28 37.6			
	comp=Z,106nm,0.9s								
FVM	**French Village**	**6.60**	**76**	Pn	**Pn**	**03 26 47.9**	**+1.3**		
FVM				IAmb_Lg		03 28 42.0			
	comp=Z,93nm,0.8s								
SCIA	**State Center**	**6.64**	**37**	IAmb_Lg		03 28 56.4			
	comp=Z,114nm,0.7s								
ANMO	**Albuquerque**	**6.65**	**257**	Pn	**Pn**	**03 26 46.6**	**-0.8**		
	comp=Z,0.4nm,0.3s,baz=94,slow=11,SNR=6.7								
ANMO				Pg	**Pb**	**03 27 07.2**	**+1.7**		
	comp=Z,1.6nm,0.3s,baz=91,slow=17,SNR=8.7								
ANMO				Lg	Lg	03 28 32.8			
	comp=Z,5.4nm,0.3s,baz=358,slow=12,SNR=6.9								
	comp=Z,0.8nm,0.3s								
ANMO	**Albuquerque**	**6.65**	**257**	Pn	**Pn**	**03 26 46.4**	**-1.1**		
ANMO	**Albuquerque**	**6.65**	**257**	P	**Pn**	**03 26 46.0**	**-1.4**		
	baz=72								
SLM	**Saint Louis**	**6.88**	**71**	Pn	**Pn**	**03 26 52.4**	**+2.1**		
SLM				IAmb_Lg		03 28 57.5			
	comp=Z,89nm,0.9s								
PHWY	**Pilot Hill**	**7.06**	**313**		**Pn**	**03 26 52.0**	**-1.1**		
PHWY				IAmb_Lg		03 29 03.8			
	comp=Z,80nm,0.8s								
BNM	**Barren Site**	**7.07**	**251**		**Pn**	**03 26 52.3**	**-0.8**		
PARMO	**Parma**	**7.08**	**88**	IAmb_Lg		03 29 08.0			
	comp=Z,113nm,0.8s								
N23A	**Red Feather La**	**7.12**	**308**			**03 26 53.5**	**-0.4**		
N23A	**Red Feather La**	**7.12**	**308**	P	**Pn**	**03 26 53.4**	**-0.4**		
	baz=124								
143A	**Socs Landing,**	**7.12**	**122**	IAmb_Lg		03 29 03.9			
	comp=Z,56nm,0.8s								
ECSD	**EROS Data Cent**	**7.17**	**11**		**Pn**	**03 26 52.9**	**-1.4**		
ECSD				IAmb_Lg		03 28 56.8			
	comp=Z,68nm,0.9s								
ECSD	**EROS Data Cent**	**7.17**	**11**	P	**Pn**	**03 26 52.8**	**-1.6**		
	baz=193,SNR=7.0								
N41A	**Harden Midland**	**7.22**	**54**		**Pn**	**03 26 55.5**	**+0.4**		
N41A	**Harden Midland**	**7.22**	**54**	P	**Pn**	**03 26 55.4**	**+0.3**		
	baz=239,SNR=9.4								
CRNM	**Carthage**	**7.22**	**250**		**Pn**	**03 26 54.2**	**-1.1**		
Y22D	**IRIS PASSCAL I**	**7.32**	**251**	IAmb_Lg		03 29 14.9			
	comp=Z,68nm,1.0s								
LENM	**Lemitar**	**7.32**	**252**	Pn	**Pn**	**03 26 55.0**	**-1.7**		
K38A	**Parkersburg**	**7.42**	**35**	Pn	**Pn**	**03 26 56.4**	**-1.3**		
K38A				IAmb_Lg		03 29 16.7			
	comp=Z,102nm,0.8s								
HALT	**Halls**	**7.49**	**93**	IAmb_Lg		03 29 18.2			
	comp=Z,91nm,0.8s								
S44A	**Carbondale**	**7.49**	**80**	Pn	**Pn**	**03 26 59.8**	**+1.1**		
S44A				IAmb_Lg		03 29 16.2			
	comp=Z,103nm,0.7s								
HICK	**Hickman**	**7.51**	**89**	Pn	**Pn**	**03 27 01.0**	**+2.0**		
SIUC	**Southern Illin**	**7.52**	**80**	Pn	**Pn**	**03 26 59.2**	**0.0**		
SIUC				IAmb_Lg		03 29 21.7			
	comp=Z,93nm,0.9s								
MNTX	**Cornudas Mount**	**7.55**	**230**		**Pn**	**03 26 57.1**	**-2.5**		
MNTX	**Cornudas Mount**	**7.55**	**230**	P	**Pn**	**03 26 57.6**	**-1.9**		
	baz=46,SNR=7.3								
P43A	**Skaggs, Pawnee**	**7.70**	**65**	Pn	**Pn**	**03 27 01.5**	**-0.1**		
P43A	**Skaggs, Pawnee**	**7.70**	**65**	P	**Pn**	**03 27 02.6**	**+1.1**		
	baz=251,SNR=9.9								
SUSD	**Miller**	**7.73**	**358**	IAmb_Lg		03 29 27.1			
	comp=Z,61nm,0.8s								
SUSD	**Miller**	**7.73**	**358**	P	**Pn**	**03 27 00.9**	**-1.1**		
	baz=178								
W45A	**Hickory Valley**	**7.76**	**99**	Pn	**Pn**	**03 27 04.3**	**+1.8**		
OXF	**Oxford**	**7.77**	**104**	Pn	**Pn**	**03 27 01.2**	**-1.3**		
OXF				IAmb_Lg		03 29 18.4			
	comp=Z,56nm,0.7s								
OXF	**Oxford**	**7.77**	**104**	P	**Pn**	**03 27 02.2**	**-0.4**		
	baz=289,SNR=6.9								
L40A	**Anamosa**	**7.80**	**45**		**Pn**	**03 27 02.0**	**-0.9**		
735A	**Kenedy**	**7.86**	**175**	IAmb_Lg		03 29 36.5			
	comp=Z,44nm,0.8s								
Q44A	**Meyer Farm, Va**	**7.86**	**71**		**Pn**	**03 27 04.9**	**+1.1**		
Q44A				IAmb_Lg		03 29 37.2			
	comp=Z,85nm,0.8s								
Y45A	**Yeager Farm, C**	**7.90**	**108**	IAmb_Lg		03 29 38.9			
	comp=Z,52nm,0.8s								
HDIL	**Hopedale**	**8.20**	**59**	P	**Pn**	**03 27 08.8**	**+0.3**		
	baz=245,SNR=20								
I37A	**Lemond, Waseca**	**8.29**	**27**	Pn	**Pn**	**03 27 08.5**	**-1.2**		
I37A				IAmb_Lg		03 29 52.2			
	comp=Z,63nm,0.8s								
RWWY	**Rawlins**	**8.35**	**309**	IAmb_Lg		03 29 40.3			
	comp=Z,78nm,1.2s								
833A	**Chaparral WMA,**	**8.40**	**185**	Pn	**Pn**	**03 27 10.8**	**-0.4**		
833A	**Chaparral WMA,**	**8.40**	**185**	P	**Pn**	**03 27 10.4**	**-0.8**		
	baz=4.0								
TX31	**Lajitas Ar. Si**	**8.52**	**212**		**Pn**	**03 27 11.5**	**-1.5**		
TX32	**Lajitas Array**	**8.52**	**212**		**Pn**	**03 27 11.1**	**-1.9**		
TXAR	**Lajitas Array**	**8.52**	**212**	Pn	**Pn**	**03 27 11.3**	**-1.7**		
	comp=Z,1.4nm,0.3s,baz=35,slow=10,SNR=59								
TXAR				Lg	Lg	03 29 31.4			
	comp=Z,2.3nm,0.3s,baz=14,slow=33,SNR=4.0								
	comp=Z,2.1nm,0.3s								
TXAR	**Lajitas Array**	**8.52**	**212**		**Pn**	**03 27 11.2**	**-1.8**		
K22A	**Casper**	**8.53**	**316**	IAmb_Lg		03 29 55.4			
	comp=Z,59nm,1.0s								
WVT	**Waverly**	**8.67**	**91**	Pn	**Pn**	**03 27 14.3**	**-0.6**		
WVT	**Waverly**	**8.67**	**91**	P	**Pn**	**03 27 14.7**	**-0.3**		
	baz=277								
L42A	**Oliver, Polo**	**8.68**	**50**		**Pn**	**03 27 15.0**	**0.0**		
JFWS	**Jewell Farm**	**8.90**	**43**	Pn	**Pn**	**03 27 17.8**	**-0.2**		
JFWS				IAmb_Lg		03 29 57.9			
	comp=Z,76nm,0.8s								
JFWS	**Jewell Farm**	**8.90**	**43**	P	**Pn**	**03 27 17.2**	**-0.8**		
	baz=229,SNR=5.2								
T47A	**Sharon Grove**	**9.19**	**85**	Pn	**Pn**	**03 27 22.5**	**+0.5**		
F33A	**5 Mile Ranch,**	**9.28**	**10**	Pn	**Pn**	**03 27 21.4**	**-1.9**		
F33A				IAmb_Lg		03 30 15.5			
	comp=Z,59nm,1.2s								
I40A	**Norwalk**	**9.39**	**38**	Pn	**Pn**	**03 27 23.6**	**-1.1**		
I40A				IAmb_Lg		03 30 16.0			
	comp=Z,38nm,0.9s								
P46A	**Rosedale**	**9.40**	**69**	Pn	**Pn**	**03 27 25.4**	**+0.5**		
M44A	**Midewin, Midew**	**9.42**	**57**	Pn	**Pn**	**03 27 26.1**	**+1.0**		
SPMN	**Marine on St.**	**9.55**	**25**	IAmb_Lg		03 30 20.2			
	comp=Z,50nm,1.1s								
SFIN	**Lafayette**	**9.70**	**64**	Pn	**Pn**	**03 27 29.8**	**+0.8**		
SFIN	**Lafayette**	**9.70**	**64**	P	**Pn**	**03 27 29.6**	**+0.6**		
	baz=252								
BLO	**Bloomington**	**9.82**	**72**	Pn	**Pn**	**03 27 30.5**	**-0.2**		
E28A	**Huff**	**9.98**	**351**	IAmb_Lg		03 30 26.6			
	comp=Z,32nm,0.8s								
LRAL	**Lakeview Retre**	**10.18**	**108**	P	**Pn**	**03 27 36.0**	**+0.3**		
	baz=294								
I42A	**Draeger Farm,**	**10.27**	**43**	Pn	**Pn**	**03 27 35.8**	**-1.1**		
PDAR	**Pinedale Array**	**10.40**	**309**	Pn	**Pn**	**03 27 38.6**	**-0.3**		
	comp=Z,0.9nm,0.5s,baz=120,slow=13,SNR=1.8								
PDAR				Pg		03 28 20.0			
	comp=Z,0.8nm,0.3s,baz=109,slow=14,SNR=4.0								
PDAR				Lg	Lg	03 30 29.6			
	comp=Z,0.7nm,0.3s,baz=112,slow=32,SNR=6.1								
G40A	**Rib Lake**	**10.62**	**34**		**Pn**	**03 27 40.6**	**-1.1**		
P48A	**Milroy**	**10.71**	**71**	Pn	**Pn**	**03 27 41.9**	**-1.0**		
T50A	**Nancy**	**11.00**	**84**	Pn	**Pn**	**03 27 48.0**	**+1.2**		
O48B	**Farmland**	**11.09**	**67**	P	**Pn**	**03 27 46.6**	**-1.4**		
	baz=256								
P49A	**Miami Univ. Ec**	**11.26**	**71**	Pn	**Pn**	**03 27 49.7**	**-0.7**		
P49A	**Miami Univ. Ec**	**11.26**	**71**	P	**Pn**	**03 27 49.6**	**-0.9**		
	baz=260								
H43A	**Windswept, Lux**	**11.28**	**43**	Pn	**Pn**	**03 27 50.2**	**-0.4**		
R50A	**Paris**	**11.42**	**78**	Pn	**Pn**	**03 27 52.0**	**-0.6**		
CPCT	**Cooper Cave**	**11.43**	**92**		**Pn**	**03 27 53.9**	**+1.1**		
HPIG		**11.46**	**214**	Pn	**Pn**	**03 27 51.6**	**-1.8**		
V51A	**Loudon**	**11.51**	**90**		**Pn**	**03 27 54.6**	**+0.7**		
O49A	**Covington**	**11.68**	**68**	Pn	**Pn**	**03 27 55.5**	**-0.6**		
F42A	**Maple Grove Fa**	**11.96**	**38**	Pn	**Pn**	**03 27 58.1**	**-1.8**		
N49A	**Columbus Grove**	**11.97**	**65**	Pn	**Pn**	**03 27 59.1**	**-1.0**		
S51A	**Beattyville**	**11.98**	**81**	Pn	**Pn**	**03 27 59.8**	**-0.5**		
TKL	**Tuckaleechee C**	**12.00**	**91**	Pn	**Pn**	**03 28 00.0**	**-0.5**		
	comp=Z,0.5nm,0.3s,baz=232,slow=8.3,SNR=13								
TKL				Lg	Lg	03 31 15.9			
	comp=Z,0.7nm,0.3s,baz=186,slow=22,SNR=3.8								
	comp=Z,2.3nm,0.5s								
TKL	**Tuckaleechee C**	**12.00**	**91**	Pn	**Pn**	**03 28 00.7**	**+0.2**		
152A	**Waverly Hall**	**12.09**	**105**	Pn	**Pn**	**03 28 01.6**	**-0.2**		
V52A	**Sevierville**	**12.11**	**90**	Pn	**Pn**	**03 28 01.6**	**-0.5**		
L48A	**N Adams**	**12.12**	**60**	Pn	**Pn**	**03 28 01.2**	**-0.9**		
Q51A	**Peebles**	**12.24**	**75**	Pn	**Pn**	**03 28 02.6**	**-1.3**		
GOGA	**Godfrey**	**12.80**	**100**	Pn	**Pn**	**03 28 12.2**	**+0.7**		
Q52A	**Bidwell**	**13.08**	**75**	Pn	**Pn**	**03 28 14.5**	**-0.7**		
ULM	**Lac du Bonnet**	**13.67**	**7**	Pn	Pn	03 28 17.8	-5.5		
	comp=Z,1.0nm,0.4s,baz=184,slow=14,SNR=1.1								
ULM				Sn	Sn	03 30 41.1	-14		
	comp=Z,0.4nm,0.3s,baz=287,slow=21,SNR=1.8								
ULM				Lg	Lg	03 32 12.3			
	comp=Z,0.5nm,0.3s,baz=315,slow=6.4,SNR=2.5								
YKA	**Yellowknife Ar**	**27.66**	**344**	P	**P**	**03 30 55.1**	**-2.0**		
	comp=Z,0.2nm,0.7s,baz=150,slow=9.0,SNR=2.0								
	comp=Z,0.2nm,0.7s								
ARCES	**ARCESS Array B**	**66.49**	**19**	P	**P**	**03 35 58.0**	**-0.7**		
	comp=Z,1.4nm,0.8s,baz=317,slow=6.2,SNR=4.0								
	comp=Z,1.4nm,0.8s								
FINES	**FINESS Array B**	**72.39**	**25**	P	**P**	**03 36 35.4**	**+0.1**		
	comp=Z,1.0nm,0.8s,baz=310,slow=11,SNR=1.8								
	comp=Z,1.0nm,0.8s								
SNAA	**Sanae**	**126.16**	**157**	Pdiff	**Pdif**	**03 40 51.1**	**+0.9**		

*IDC **28** 03:29:09.8±1.2,6˚.77N×72˚.89W,h161km±11km,mb3.9/23, mbtmp4.4/29,MS2.9/1,Error ellipse: s-maj=12.2km s-min=9.1km az=57.0*

*NEIC **28** 03:29:09.8±1.4,6˚.85N±0˚.04×73˚.02W±0˚.05,h147km±6km, mb4.5/241,Mwr4.4(RSNC),Error ellipse: s-maj=7.9km s-min=6.3km az=72.0*

*VAO **28** 03:29:10.3±0.5,6˚.82N×73˚.04W,h151km±2km,mb4.3*

*RSNC **28** 03:29:10.6±1.0,6˚.82N×73˚.12W,h149km±4km,ML4.4, Mw4.4,Fault plane solution: NP1:ϕs110.00000°, δ71.00000°,λ,98.00000°.*

ISC 28 03:29:09.7±0.5,6˚.84N±0˚.03×73˚.07W±0˚.03,h154km±4km, n560,σ1ş12/565,mb4.5/130,83C-45D,Fault plane solution: NP1:ϕs347.98218°,δ51.32108°,λ161.74095°. NP2:ϕs89.63266°,δ75.84229°,λ40.13062°. Principal axes: T Plg37.9419°, Azm316.3548°; N Plg47.8469°, Azm105.8126°; P Plg15.6023°, Azm213.7799°; **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BARC	**Barichara**	**0.27**	**204**	*i*	P	**Pn**	**03 29 30.9**	**-0.1**
BARC				*i*			03 29 47.2	
	comp=Z,4μm,0.4s							
PAMC	**Pamplona, Colo**	**0.62**	**37**	*e*	P	**Pn**	**03 29 33.6**	**+0.9**
PAMC				*e*	S	**Sn**	**03 29 50.5**	**+0.2**
PAMC				*i*			03 29 52.8	
	comp=Z,12μm,0.5s							
BRRC	**Barranca, Sant**	**0.69**	**293**	↑ *i*	P	**Pn**	**03 29 32.7**	**+0.1**
BRRC				*e*	S	**Sn**	**03 29 49.6**	**-0.4**
BRRC				*i*			03 29 52.7	
	comp=Z,6μm,0.4s							
RUSC	**La Rusia**	**0.94**	**181**	↑ *i*	P	**Pn**	**03 29 34.8**	**-0.2**
RUSC				*i*			03 29 57.0	
	comp=Z,2μm,0.4s							
TAMC	**Tame, Arauca**	**1.33**	**107**	↑ *i*	P	**Pn**	**03 29 39.3**	**+1.3**
TAMC				*i*			03 30 00.2	
	comp=Z,1μm,0.3s							
TAMC				*e*	S	**Sn**	**03 30 00.4**	**+0.8**
PTBC	**PUERTO BERRIO,**	**1.41**	**258**	↑ *i*	P	**Pn**	**03 29 37.4**	**-1.3**
PTBC				*e*	S	**Sn**	**03 29 59.2**	**-1.7**
PTBC				*i*			03 30 04.5	
	comp=Z,2μm,0.3s							
SPBC	**San Pablo de B**	**1.54**	**220**	↑ *i*	P	**Pn**	**03 29 39.8**	**-0.4**
SPBC				*e*	S	**Sn**	**03 30 01.8**	**-1.7**
SPBC				*i*			03 30 08.1	
	comp=Z,3μm,0.2s							
ZARC	**Zaragoza, Cauc**	**1.89**	**290**			**Pn**	**03 29 43.3**	**-0.5**
ZARC					Sn	**Sn**	**03 30 10.0**	**-0.1**
ZARC	**Zaragoza, Cauc**	**1.89**	**290**	*i*	P	**Pn**	**03 29 44.0**	**+0.2**
ZARC				*i*			03 30 15.5	
	comp=Z,7μm,0.4s							
NORC	**Norcasia**	**2.19**	**235**	↑ *i*	P	**Pn**	**03 29 46.6**	**-0.8**
NORC				*e*	S	**Sn**	**03 30 14.6**	**-1.9**
NORC				*i*			03 30 23.6	
	comp=Z,2μm,0.2s							
CHIC	**Chingaza**	**2.29**	**197**	*e*	P	**Pn**	**03 29 48.9**	**-0.1**
CHIC				*e*	S	**Sn**	**03 30 18.5**	**-0.7**
CHIC				*i*			03 30 25.8	
	comp=Z,1μm,0.4s							
ROSC	**El Rosal**	**2.34**	**212**	P		**Pn**	**03 29 50.8**	**+1.2**
	comp=Z,596nm,0.4s,baz=308,slow=16,SNR=253							
ROSC				S		**Sn**	**03 30 19.8**	**-0.4**
	comp=Z,2μm,0.5s,baz=209,slow=22,SNR=22							
ROSC				LR		LR	03 30 29.3	
	comp=Z,263nm,19.2s,baz=208,slow=33							
ROSC	**El Rosal**	**2.34**	**212**			**Pn**	**03 29 50.0**	**+0.4**
ROSC					Sn	**Sn**	**03 30 19.8**	**-0.4**
ROSC	**El Rosal**	**2.34**	**212**	↑ *i*	P	**Pn**	**03 29 50.7**	**+1.2**
ROSC				*e*	S	**Sn**	**03 30 19.3**	**-0.9**
ROSC				*i*			03 30 25.3	
	comp=Z,2μm,0.5s							
HELC	**Santa Helena**	**2.53**	**255**	*e*	P	**Pn**	**03 29 51.4**	**-0.4**
HELC				*e*	S	**Sn**	**03 30 23.4**	**-0.7**
HELC				*i*			03 30 29.4	
	comp=Z,2μm,0.4s							
UREC	**San Jos de Ur**	**2.60**	**291**	*e*	P	**Pn**	**03 29 51.2**	**-1.2**
UREC				*e*	S	**Sn**	**03 30 22.9**	**-2.4**
UREC				*i*			03 30 33.9	
	comp=Z,2μm,0.3s							
SOCV	**Socops**	**2.62**	**57**	↓ *i*	P	**Pn**	**03 29 53.7**	**+1.1**
SOCV				*e*	S	**Sn**	**03 30 25.9**	**+0.2**
LL1C	**La Loma 1 Cana**	**2.73**	**350**	↓ *i*	P	**Pn**	**03 29 55.0**	**+1.2**
LL1C				*e*	S	**Sn**	**03 30 30.3**	**+2.3**
VILC	**Villavicencio,**	**2.78**	**193**	*e*	P	**Pn**	**03 29 54.7**	**0.0**
VILC				*e*	S	**Sn**	**03 30 28.0**	**-1.4**
PTGC	**Puerto Gaitan,**	**2.78**	**160**	↑ *i*	P	**Pn**	**03 29 54.1**	**-0.5**
PTGC				*e*	S	**Sn**	**03 30 28.2**	**-1.1**
PTGC				*i*			03 30 30.3	
	comp=Z,860nm,0.5s							
GUY2C	**Guyana, Caldas**	**2.79**	**235**	*e*	P	**Pn**	**03 29 55.4**	**+0.2**
GUY2C				*e*	S	**Sn**	**03 30 26.7**	**-3.4**
GUY2C				*i*			03 30 39.0	
	comp=Z,2μm,0.7s							
CBOC	**Ciudad Bolivar**	**3.08**	**252**	*e*	P	**Pn**	**03 29 59.0**	**+0.5**
CBOC				*e*	S	**Sn**	**03 30 35.0**	**-1.2**
CBOC				*i*			03 30 46.4	
	comp=Z,655nm,0.5s							
DBBC	**Dabeiba**	**3.12**	**273**	*i*	P	**Pn**	**03 29 58.7**	**-0.2**
DBBC				*e*	S	**Sn**	**03 30 35.3**	**-1.6**
SDV	**Santo Domingo**	**3.16**	**50**	P		**Pn**	**03 30 00.1**	**+0.7**
	comp=Z,611nm,0.3s,baz=231,slow=11,SNR=151							
SDV				S		**Sn**	**03 30 34.2**	**-3.7**
	comp=Z,566nm,0.7s,baz=349,slow=22,SNR=2.5							
SDV	**Santo Domingo**	**3.16**	**50**			**Pn**	**03 30 00.1**	**+0.7**
SDV					Sn	**Sn**	**03 30 36.9**	**-1.0**
SDV	**Santo Domingo**	**3.16**	**50**	↓ *i*	P	**Pn**	**03 30 00.3**	**+0.9**
SDV				*e*	S	**Sn**	**03 30 37.1**	**-0.9**
SDV				*i*			03 30 42.0	
	comp=Z,661nm,0.6s							
SDV	**Santo Domingo**	**3.16**	**50**	*e*	P	**Pn**	**03 30 00.2**	**+0.7**
ARGC	**Ariguani, Magd**	**3.22**	**339**	*e*	P	**Pn**	**03 30 00.7**	**+0.6**
ARGC				*e*	S	**Sn**	**03 30 39.2**	**+0.2**
ARGC				*i*			03 30 42.4	
	comp=Z,564nm,0.2s							
ANIL	**Santa Ana**	**3.29**	**225**	*e*	P	**Pn**	**03 30 01.8**	**+0.5**
ANIL				*i*	P		03 30 01.9	
ANIL				*e*	S	**Sn**	**03 30 40.2**	**-1.0**
ANIL				*i*			03 30 46.6	
	comp=Z,2μm,0.6s							
PRAC	**Prado**	**3.59**	**210**	*e*	P	**Pn**	**03 30 04.3**	**-0.6**
PRAC				*e*	S	**Sn**	**03 30 46.6**	**-1.2**
PRAC				*i*			03 30 54.6	
	comp=Z,1μm,0.6s							
ORTC	**Ortega, Tolima**	**3.63**	**217**	*e*	P	**Pn**	**03 30 05.1**	**-0.3**
ORTC				*e*	S	**Sn**	**03 30 48.4**	**-0.1**
ORTC				*i*			03 30 56.2	
	comp=Z,774nm,0.7s							
SJCC	**San Jacinto, C**	**3.69**	**326**			**Pn**	**03 30 04.8**	**-1.3**
SJCC	**San Jacinto, C**	**3.69**	**326**	*i*	P	**Pn**	**03 30 04.8**	**-1.3**
SJCC				*e*	S	**Sn**	**03 30 46.6**	**-3.3**
SJCC				*i*			03 30 50.5	
	comp=Z,875nm,0.4s							
PLMC	**San Jos del P**	**3.73**	**239**	*i*	P	**Pn**	**03 30 06.6**	**-0.1**
PLMC				*e*	S	**Sn**	**03 30 49.8**	**-1.1**
PLMC				*i*			03 31 04.4	
	comp=Z,278nm,0.6s							
CRJC	**Cerrejon, Guaj**	**4.16**	**3**	↓ *i*	P	**Pn**	**03 30 11.1**	**-1.2**
CRJC				*e*	S	**Sn**	**03 31 00.7**	**-0.3**
CRJC				*i*			03 31 03.4	
	comp=Z,505nm,0.2s							
GUVC	**San Jose del G**	**4.29**	**174**	*e*	P	**Pn**	**03 30 13.3**	**-0.6**
GUVC				*e*	S	**Sn**	**03 31 02.4**	**-1.5**
GUVC				*i*			03 31 07.2	
	comp=Z,536nm,0.3s							
YOTC	**Yotoco, Valle**	**4.32**	**229**	↓ *i*	P	**Pn**	**03 30 13.5**	**-1.0**
YOTC				*e*	S	**Sn**	**03 31 07.8**	**+3.0**
SMRC	**Santa Marta, M**	**4.45**	**345**	↑ *i*	P	**Pn**	**03 30 15.1**	**-0.8**
SMRC				*e*	S	**Sn**	**03 31 04.2**	**-3.3**
SMRC				*i*			03 31 10.6	
	comp=Z,228nm,0.4s							
CAPC	**Capurgana**	**4.60**	**293**	*e*	P	**Pn**	**03 30 16.4**	**-1.6**
CAPC				*e*	S	**Sn**	**03 31 07.0**	**-4.2**
CAPC				*i*			03 31 16.5	
	comp=Z,303nm,0.3s							
PTAC	**Punta Ardita,**	**4.71**	**274**	*e*	P	**Pn**	**03 30 19.0**	**-0.5**
PTAC				*e*	S	**Sn**	**03 31 13.3**	**-0.5**
PTAC				*i*			03 31 19.2	
	comp=Z,242nm,0.1s							
DABV	**Dabajuro**	**4.72**	**30**	↓ *i*	P	**Pn**	**03 30 19.8**	**+0.2**
DABV				*e*	S	**Sn**	**03 31 12.8**	**-1.1**
DABV				*i*			03 31 16.8	
	comp=Z,1μm,0.6s							
MACC	**Macarena, Meta**	**4.73**	**189**	↓ *i*	P	**Pn**	**03 30 18.1**	**-1.6**
MACC				*e*	S	**Sn**	**03 31 11.1**	**-3.2**
MACC				*i*			03 31 16.6	
	comp=Z,196nm,0.3s							
BETC	**Betania**	**4.76**	**210**	*e*	P	**Pn**	**03 30 19.6**	**-0.6**
BETC				*e*	S	**Sn**	**03 31 13.4**	**-1.6**
BETC				*i*			03 31 15.6	
	comp=Z,288nm,0.6s							
MARP	**Paez Belalcaza**	**4.90**	**216**	*e*	P	**Pn**	**03 30 21.7**	**-0.5**
MARP				*e*	S	**Sn**	**03 31 14.0**	**-0.8**
URIC	**Uribia, Colomb**	**4.95**	**12**			**Pn**	**03 30 21.0**	**-1.5**
URIC					Sn	**Sn**	**03 31 16.4**	**-3.1**
MALC	**Bahia Malaga**	**5.09**	**237**	↑ *i*	P	**Pn**	**03 30 25.5**	**+1.0**
MALC				*e*	S	**Sn**	**03 31 24.7**	**+2.0**
MALC				*i*			03 31 37.3	
	comp=Z,122nm,0.7s							
GARC	**Garzon, Huila**	**5.21**	**208**	*e*	P

comp=Z,9.5nm,0.8s,baz=17,slow=8.4,SNR=3.7
MDP Montagnes des 20.39 94 P **P 03 33 31.8 -3.0**
comp=Z,5.5nm,0.8s,baz=66,slow=18,SNR=1.5
comp=Z,5.5nm,0.8s
ITTB Itaituba 20.58 122 *eP* **P 03 33 37.9 +1.1**
MALB Monte Alegre 20.66 114 *eP* **P 03 33 38.7 +1.1**
MALB *epP* **pP 03 34 05.0 +0.2**
CCIG Comitan 20.88 298 P **P 03 33 40.6 +0.3**
CCIG IAmb IAmb 03 33 44.1
comp=Z,8.6nm,0.7s
MCPB Macapa, AP 22.15 108 *eP* **P 03 33 54.0 +0.5**
MCPB *epP* **pP 03 34 20.7 -0.4**
NPGB Novo Progresso 22.42 128 *eP* **P 03 33 55.4 -0.6**
NPGB *epP* **pP 03 34 23.8 -0.2**
VILB Vilhena 23.46 147 *eP* **P 03 34 06.6 +1.0**
LPAZ La Paz 23.49 168 P **P 03 34 04.9 -1.6**
comp=Z,3.3nm,0.7s,baz=351,slow=9.7,SNR=10
comp=Z,3.3nm,0.7s
LPAZ La Paz 23.49 168 P **P 03 34 05.4 -1.1**
LPAZ La Paz 23.49 168 *eP* **P 03 34 05.7 -0.8**
656A Willston 24.12 339 P **P 03 34 13.4 +2.0**
656A IAmb IAmb 03 34 14.1
comp=Z,12nm,0.7s
PDRB Porto dos Gac 24.50 138 *eP* **P 03 34 14.7 -0.4**
CLDB Colider 24.60 136 *eP* **P 03 34 15.4 -0.6**
SIV San Ignacio 25.61 152 P **P 03 34 23.4 -1.6**
comp=Z,0.5nm,0.2s,baz=318,slow=7.7,SNR=4.0
comp=Z,0.5nm,0.2s
PTLB Pontes e Lacer 26.10 148 *eP* **P 03 34 30.4 +1.0**
152A Waverly Hall 27.89 339 P **P 03 34 46.0 +0.7**
152A IAmb IAmb 03 34 48.0
comp=Z,8.5nm,0.7s
GOGA Godfrey 28.14 341 P **P 03 34 49.3 +1.8**
baz=158
LRAL Lakeview Retre 29.10 335 P **P 03 34 57.5 +1.5**
baz=151
KMSC Kings Mountain 29.18 346 P **P 03 34 58.2 +1.6**
baz=163
LVC Limon Verde 29.55 172 *eP* **P 03 35 00.4 -0.1**
SMTB Santa Maria do 29.81 121 *eP* **P 03 35 02.7 +0.2**
VBMS Vicksburg 30.03 329 P **P 03 35 06.0 +1.7**
baz=144
X48A Hartselle 30.36 337 IAmb IAmb 03 35 09.6
comp=Z,9.3nm,0.7s
ROSB Rosrio 30.47 108 *eP* **P 03 35 09.0 +0.6**
ROSB *epP* **pP 03 35 39.6 -2.2**
ARAG Araguaiana, MT 30.74 137 *eP* **P 03 35 09.9 -0.8**
BLA Blacksburg 30.96 349 P **P 03 35 14.2 +1.7**
baz=166
PEXB Peixe 31.00 127 *eP* **P 03 35 12.8 -0.2**
TZTN Tazewell 31.08 344 P **P 03 35 15.1 +1.7**
baz=160
PLAL Pickwick Lake 31.23 336 IAmb IAmb 03 35 17.2
comp=Z,9.9nm,0.8s
CBN Corbin Frederi 31.47 353 P **P 03 35 18.4 +1.6**
baz=172
NATX Nacogdoches 31.95 324 P **P 03 35 22.5 +1.3**
baz=136
WVT Waverly 32.13 337 P **P 03 35 23.7 +1.0**
WVT IAmb IAmb 03 35 24.5
comp=Z,16nm,1.1s
WVT Waverly 32.13 337 P **P 03 35 23.9 +1.2**
baz=152
833A Chaparral WMA, 32.81 314 P **P 03 35 29.2 +0.5**
baz=126
R50A Paris 32.92 344 IAmb IAmb 03 35 32.4
comp=Z,11nm,0.7s
W41B Gary Mavity, V 33.26 331 P **P 03 35 33.2 +0.7**
baz=144
BDFB Brasilia 33.39 132 P **P 03 35 30.8 -3.2**
comp=Z,1.4nm,0.5s,baz=284,slow=7.5,SNR=4.3
comp=Z,1.4nm,0.5s
BDFB Brasilia 33.39 132 *eP* **P 03 35 34.5 +0.5**
MIAR Mount Ida 33.44 328 P **P 03 35 34.2 +0.2**
baz=141
LCAR Lake Charles 33.48 333 IAmb IAmb 03 35 36.1
comp=Z,8.1nm,0.7s
P52A Corning 33.65 347 P **P 03 35 37.4 +1.6**
baz=164
SDBA SAO DESIDERIO 33.91 124 *eP* **P 03 35 37.8 -0.7**
SSPA Standing Stone 33.93 353 P **P 03 35 39.9 +1.7**
baz=171
W39A Magazine 34.05 329 IAmb IAmb 03 35 41.0
comp=Z,12nm,0.8s
W39A Magazine 34.05 329 P **P 03 35 40.2 +0.9**
baz=141,SNR=5.5
O53A New Philadelph 34.06 349 P **P 03 35 40.8 +1.5**
baz=165
SIUC Southern Illin 34.06 337 P **P 03 35 40.2 +0.8**
BLO Bloomington 34.40 341 P **P 03 35 43.8 +1.5**
ACSO Alum Creek Sta 34.41 347 P **P 03 35 44.0 +1.6**
baz=162
NBMO Morrinhos-CE 34.48 106 *eP* **P 03 35 43.8 +0.5**
O48B Farmland 34.99 344 P **P 03 35 48.3 +0.9**
baz=159
CCM Cathedral Cave 35.17 335 P **P 03 35 49.8 +0.8**
CCM Cathedral Cave 35.17 335 P **P 03 35 49.8 +0.8**
baz=148
BINY Binghamton 35.31 356 P **P 03 35 51.9 +1.8**
baz=175
PCMB Pacaembu 35.45 143 *eP* **P 03 35 53.8 +2.2**
ABTX Abilene, Hawle 35.62 320 P **P 03 35 53.3 +0.4**
ABTX IAmb IAmb 03 35 54.3
comp=Z,8.3nm,0.8s
ABTX Abilene, Hawle 35.62 320 P **P 03 35 53.3 +0.4**
baz=130,SNR=6.4
TUL1 Leonard 35.65 327 P **P 03 35 53.0 0.0**
baz=139
SFIN Lafayette 35.68 341 P **P 03 35 54.2 +0.9**
SFIN Lafayette 35.68 341 P **P 03 35 54.1 +0.9**
baz=156,SNR=7.0
TRY Troy 35.75 359 P **P 03 35 54.1 +0.3**
S39A Bolivar 35.80 332 IAmb IAmb 03 35 56.0
comp=Z,7.0nm,0.7s
R40A Maddies Statio 35.81 334 IAmb IAmb 03 35 55.2
comp=Z,10nm,0.6s
TX31 Lajitas Ar. Si 36.49 312 P **P 03 36 01.0 +0.5**
TX31 IAmb IAmb 03 36 01.8
comp=Z,10nm,0.8s
TX31 **PcP PcP 03 38 21.1 +0.1**
TX32 Lajitas Array 36.49 312 P **P 03 36 01.1 +0.7**
TX32 **PcP 03 38 21.4 +0.3**
TXAR Lajitas Array 36.49 312 P **P 03 36 01.0 +0.5**
comp=Z,2.2nm,0.4s,baz=126,slow=9.2,SNR=25
TXAR PcP **PcP 03 38 22.3 +1.3**
comp=Z,2.2nm,0.7s,baz=135,slow=5.7,SNR=12
comp=Z,2.2nm,0.4s
TXAR Lajitas Array 36.49 312 P **P 03 36 00.9 +0.5**
WMOK Wichita Mounta 36.49 323 P **P 03 36 00.1 -0.2**
baz=134
AAM Ann Arbor 36.54 347 P **P 03 36 02.6 +2.1**
baz=162
HDIL Hopedale 36.58 339 P **P 03 36 00.6 -0.3**
baz=152,SNR=5.3
NBMA Muriti-CE 37.01 112 *eP* **P 03 36 05.3 +0.4**
FRTB Fartura 37.79 143 *eP* **P 03 36 11.9 +0.6**
SADO Sadowa 38.15 353 P **P 03 36 14.7 +0.7**
comp=Z,6.6nm,0.6s,baz=174,slow=6.1,SNR=4.3
comp=Z,6.6nm,0.6s
SADO Sadowa 38.15 353 IAmb IAmb 03 36 16.0
comp=Z,13nm,0.9s
AMTX Amarillo 38.37 321 P **P 03 36 16.9 +0.7**
AMTX IAmb IAmb 03 36 17.7
comp=Z,16nm,1.0s
AMTX Amarillo 38.37 321 P **P 03 36 16.5 +0.4**
baz=130
KSU1 Kansas State U 38.49 330 P **P 03 36 16.7 -0.3**
KSU1 Kansas State U 38.49 330 P **P 03 36 16.6 -0.5**
baz=140
MSTX Muleshoe 38.50 319 IAmb IAmb 03 36 18.9
comp=Z,5.4nm,0.7s
MSTX Muleshoe 38.50 319 P **P 03 36 17.3 +0.1**
baz=128,SNR=6.0
L40A Anamosa 38.59 338 IAmb IAmb 03 36 18.3
comp=Z,11nm,0.8s
JFWS Jewell Farm 38.99 340 P **P 03 36 21.1 0.0**
baz=152,SNR=7.2
MNTX Cornudas Mount 38.99 314 P **P 03 36 22.1 +0.8**
MNTX IAmb IAmb 03 36 23.6
comp=Z,8.0nm,0.8s
MNTX Cornudas Mount 38.99 314 P **P 03 36 21.9 +0.6**
baz=123,SNR=13
GDU01 Guandu, BA 39.03 122 *eP* **P 03 36 21.2 -0.6**
VAO Valinhos 39.14 140 *eP* **P 03 36 22.0 -0.6**
RCBR Riachuelo 39.17 108 *eP* **P 03 36 23.2 +0.2**
BSCB Bom Sucesso 39.21 136 *eP* **P 03 36 23.7 +0.4**

SCIA State Center 39.23 336 P **P 03 36 23.2 +0.1**
baz=147
NBLA Lagarto - SE 39.33 117 *eP* **P 03 36 24.0 -0.3**
PET01 Itanhaem-SP 39.88 142 *eP* **P 03 36 28.7 0.0**
CBKS Cedar Bluff 39.91 327 P **P 03 36 28.7 -0.1**
baz=136
I40A Norwalk 39.98 340 IAmb IAmb 03 36 30.2
comp=Z,12nm,0.9s
D62A Allapoint, All 40.24 4 IAmb IAmb 03 36 33.6
comp=Z,12nm,1.1s
GUA01 Guaratinga, BA 40.31 126 *eP* **P 03 36 32.0 -0.4**
NAN01 Guarapari, ES 40.74 127 *eP* **P 03 36 36.9 +1.0**
ESAR Angra dos Reis 40.80 138 *eP* **P 03 36 36.5 +0.3**
VAS01 Vassouras-RJ 40.98 136 *eP* **P 03 36 40.6 +2.7**
BGNE Belgrade 41.02 331 P **P 03 36 38.1 +0.2**
baz=140
121A Cookes Peak, D 41.17 313 P **P 03 36 40.0 +0.6**
121A Cookes Peak, D 41.17 313 P **P 03 36 41.1 +1.7**
baz=121
Y22D IRIS PASSCAL I 41.37 316 P **P 03 36 42.2 +1.2**
baz=123
COWI Conover 41.50 343 P **P 03 36 42.6 +0.9**
COWI IAmb IAmb 03 36 43.8
comp=Z,11nm,1.0s
T25A Trinidad 41.51 321 P **P 03 36 43.6 +1.4**
baz=129
ANMO Albuquerque 41.53 317 P **P 03 36 43.0 +0.6**
ANMO Albuquerque 41.53 317 P **P 03 36 43.6 +1.2**
baz=125
CPSB Cacapava Do Su 41.55 154 *eP* **P 03 36 43.2 +1.0**
DUB01 Friburgo-RJ 41.60 135 *eP* **P 03 36 43.1 +0.2**
KSCO Kaw Shedlock' 41.66 325 P **P 03 36 44.1 +0.8**
baz=133
319A Douglas 41.71 311 IAmb IAmb 03 36 46.2
comp=Z,6.4nm,0.8s
SPMN Marine on St. 41.91 339 P **P 03 36 45.3 +0.3**
baz=150
ECSD EROS Data Cent 42.15 334 P **P 03 36 46.8 -0.2**
ECSD IAmb IAmb 03 36 48.0
comp=Z,5.0nm,0.5s
ECSD EROS Data Cent 42.15 334 P **P 03 36 46.5 -0.6**
baz=144,SNR=8.9
SDCO Great Sand Dun 42.56 321 IAmb IAmb 03 36 53.1
comp=Z,4.6nm,0.7s
SDCO Great Sand Dun 42.56 321 P **P 03 36 52.2 +1.4**
baz=128,SNR=10.0
PLTB Pedras Altas 42.65 155 P **P 03 36 50.5 -0.7**
PLTB IAmb IAmb 03 36 51.2
comp=Z,9.7nm,0.7s
PLTB Pedras Altas 42.65 155 *eP* **P 03 36 50.8 -0.4**
OGNE Ogallala 42.66 327 P **P 03 36 51.7 +0.4**
baz=135
E38A The Farm, Brul 42.69 341 IAmb IAmb 03 36 52.3
comp=Z,4.8nm,0.7s
TUC Tucson 43.27 311 P **P 03 36 57.3 +1.0**
TUC Tucson 43.27 311 P **P 03 36 57.4 +1.0**
baz=118
S22A 4UR Ranch, Cre 43.40 320 P **P 03 36 58.5 +0.9**
S22A 4UR Ranch, Cre 43.40 320 P **P 03 36 58.9 +1.3**
baz=127,SNR=11
F33A 5 Mile Ranch, 43.74 337 IAmb IAmb 03 37 00.6
comp=Z,4.6nm,0.6s
SUSD Miller 43.74 333 P **P 03 36 59.7 -0.2**
baz=141,SNR=5.2
EYMN Ely 43.87 342 P **P 03 37 00.9 +0.1**
baz=153,SNR=16
ISCO Idaho Springs 43.92 323 IAmb IAmb 03 37 04.4
comp=Z,6.6nm,0.9s
ISCO Idaho Springs 43.92 323 P **P 03 37 02.8 +1.1**
baz=130,SNR=7.9
MVCO Mesa Verde 44.17 318 IAmb IAmb 03 37 05.2
comp=Z,4.3nm,0.6s
MVCO Mesa Verde 44.17 318 P **P 03 37 04.6 +0.9**
baz=124
214A Organ Pipe Nat 44.65 309 P **P 03 37 08.6 +1.2**
baz=116
X16A Lo Mia Camp, P 44.75 313 P **P 03 37 09.0 +0.7**
PV15 Paradox Valley 44.81 320 P **P 03 37 10.1 +1.4**
PV15 IAmb IAmb 03 37 11.2
comp=Z,17nm,0.9s
N23A Red Feather La 44.82 324 IAmb IAmb 03 37 11.7
comp=Z,6.1nm,0.8s
N23A Red Feather La 44.82 324 P **P 03 37 09.9 +1.1**
baz=130,SNR=5.5
PV13 Radium Mtn., P 44.92 319 IAmb IAmb 03 37 11.7
comp=Z,10nm,0.7s
B35A Bob, Littlefor 44.94 341 IAmb IAmb 03 37 10.1
comp=Z,10nm,0.6s
PV23 Carpenter Ridg 45.21 320 IAmb IAmb 03 37 15.0
comp=Z,4.6nm,0.6s
WUAZ Wupatki 45.24 315 IAmb IAmb 03 37 14.9
comp=Z,14nm,0.9s
WUAZ Wupatki 45.24 315 P **P 03 37 13.5 +1.4**
baz=120,SNR=15
AGMN Agassiz Nation 45.62 339 IAmb IAmb 03 37 15.5
comp=Z,10nm,0.6s
AGMN Agassiz Nation 45.62 339 P **P 03 37 14.8 +0.1**
baz=148,SNR=9.1
O20A White River Ci 45.71 322 P **P 03 37 16.7 +1.0**
baz=127,SNR=5.3
TRQA Tornquist 45.85 168 *eP* **P 03 37 18.2 +1.6**
RSSD Black Hills 45.95 329 P **P 03 37 17.9 +0.3**
baz=135
E28A Huff 46.17 334 P **P 03 37 19.7 +0.7**
K22A Casper 46.28 326 P **P 03 37 20.8 +0.6**
K22A Casper 46.28 326 P **P 03 37 20.8 +0.6**
baz=131
U15A North Rim 46.34 315 IAmb IAmb 03 37 23.3
comp=Z,8.8nm,1.0s
SRU San Rafael Swe 46.56 319 P **P 03 37 22.9 +0.5**
SRU IAmb IAmb 03 37 24.3
comp=Z,5.5nm,0.8s
GLA Glamis 46.66 310 P **P 03 37 24.0 +1.0**
baz=115
PDMCI Parker Dam,Lak 46.68 312 P **P 03 37 24.1 +1.0**
baz=116
MDND Maddock 46.70 336 P **P 03 37 22.5 -0.6**
PKCU Pink Cliffs 46.86 316 IAmb IAmb 03 37 27.2
comp=Z,7.2nm,1.1s
P17A Butcher Ranch, 46.90 320 IAmb IAmb 03 37 26.9
comp=Z,9.4nm,0.9s
MTPU Mount Pierson 47.08 317 P **P 03 37 27.1 +0.4**
ULM Lac du Bonnet 47.28 340 P **P 03 37 27.2 -0.3**
comp=Z,12nm,0.4s,baz=148,slow=7.2,SNR=22
comp=Z,12nm,0.4s
ULM Lac du Bonnet 47.28 340 P **P 03 37 27.2 -0.3**
ULM IAmb IAmb 03 37 28.5
comp=Z,13nm,0.7s
LCMT Little Creek M 47.29 315 IAmb IAmb 03 37 30.9
comp=Z,8.8nm,0.9s
YUH Yuha Desert 47.34 309 P **P 03 37 29.0 +0.7**
SWSC Sam W. Stewart 47.36 309 P **P 03 37 29.4 +0.9**
baz=114
BC3 Big Chuckawall 47.39 310 P **P 03 37 29.4 +0.6**
baz=115
SZCU Shurtz Canyon 47.47 316 P **P 03 37 29.6 +0.1**
SZCU IAmb IAmb 03 37 30.8
comp=Z,5.3nm,0.6s
CCUT Cedar City 47.64 316 P **P 03 37 30.7 -0.1**
MONP2 Monument Peak 47.82 309 P **P 03 37 32.6 +0.3**
baz=113
BELC Belle Mtn. Jos 47.94 310 P **P 03 37 33.8 +0.7**
baz=114
GMRC Granite Mounta 48.02 311 P **P 03 37 34.2 +0.6**
baz=115
NLU North Lily Min 48.02 319 P **P 03 37 33.4 -0.3**
NLU IAmb IAmb 03 37 35.7
comp=Z,5.0nm,1.0s
BW06 Boulder Array 48.09 324 P **P 03 37 34.4 +0.2**
baz=128,SNR=8.0
PDAR Pinedale Array 48.09 324 P **P 03 37 34.8 +0.5**
comp=Z,2.1nm,0.5s,baz=127,slow=9.0,SNR=22
PDAR PcP **PcP 03 38 59.5 0.0**
comp=Z,0.8nm,0.6s,baz=131,slow=5.5,SNR=4.8
comp=Z,2.1nm,0.5s
SCHQ Schefferville 48.12 5 P **P 03 37 34.5 +0.5**
comp=Z,11nm,0.7s,baz=207,slow=6.6,SNR=16
comp=Z,11nm,0.7s
SCHQ Schefferville 48.12 5 P **P 03 37 34.6 +0.7**
SCHQ IAmb IAmb 03 37 35.4
comp=Z,12nm,0.7s
SHPR Sheep Range 48.41 314 P **P 03 37 37.3 +0.6**
PSUT Pine Spring 48.47 317 IAmb IAmb 03 37 42.7
comp=Z,4.3nm,0.7s
TUQ Turquoise Moun 48.49 312 P **P 03 37 37.9 +0.6**
baz=116
HEC Hector,Ludlow 48.54 311 P **P 03 37 38.6 +1.0**

baz=115
DUG Dugway, Tooele 48.63 319 P **P 03 37 39.2 +0.9**
baz=122,SNR=7.1
MURC Murrieta 48.69 309 P **P 03 37 40.0 +1.3**
baz=113
BBRC Big Bear Solar 48.75 310 P **P 03 37 40.5 +1.2**
baz=114
SHOC Shoshone, Teco 48.95 313 P **P 03 37 41.2 +0.6**
baz=116
AHID Auburn Hatcher 49.00 323 IAmb IAmb 03 37 42.3
comp=Z,6.7nm,0.9s
GSC Goldstone, Bar 49.09 312 P **P 03 37 42.2 +0.4**
GSC IAmb IAmb 03 37 43.6
comp=Z,6.4nm,0.8s
GSC Goldstone, Bar 49.09 312 P **P 03 37 42.8 +1.0**
baz=115,SNR=6.3
BGU Big Grassy Mou 49.16 320 P **P 03 37 43.1 +0.8**
BGU IAmb IAmb 03 37 43.8
comp=Z,11nm,0.7s
REDW Red Top Meadow 49.21 324 IAmb IAmb 03 37 44.3
comp=Z,10nm,0.6s
SNOW Snow King Moun 49.21 324 IAmb IAmb 03 37 45.5
comp=Z,7.7nm,0.7s
LOHW Long Hollow 49.21 324 P **P 03 37 43.7 +0.9**
LOHW IAmb IAmb 03 37 44.3
comp=Z,6.6nm,0.6s
TPAW Teton Pass 49.34 324 IAmb IAmb 03 37 45.7
comp=Z,5.4nm,0.7s
TPNV Topopah Spring 49.39 314 P **P 03 37 44.8 +0.7**
TPNV IAmb IAmb 03 37 47.0
comp=Z,6.6nm,1.0s
TPNV Topopah Spring 49.39 314 P **P 03 37 45.4 +1.3**
baz=116,SNR=8.2
RLMT Red Lodge 49.39 327 P **P 03 37 44.6 +0.5**
RLMT Red Lodge 49.39 327 P **P 03 37 44.5 +0.5**
baz=130,SNR=5.6
HVU Hansel Valley 49.47 321 P **P 03 37 45.2 +0.6**
HVU IAmb IAmb 03 37 47.8
comp=Z,3.6nm,0.6s
R11A Troy Canyon, C 49.56 316 P **P 03 37 46.5 +1.0**
baz=118,SNR=9.3
FURC Furnace Creek, 49.62 313 P **P 03 37 47.2 +1.6**
baz=116
EDW2 Edwards Air Fo 49.81 311 P **P 03 37 47.9 +0.7**
baz=113
LRMC Laurel Mtn Rad 49.81 311 P **P 03 37 48.3 +0.9**
baz=114
MPMC Manual Prospec 49.91 312 P **P 03 37 48.7 +0.6**
baz=115
GRAC Grapevine Rang 50.22 313 P **P 03 37 51.4 +1.2**
baz=116
YHL Hebgen Lake 50.29 325 IAmb IAmb 03 37 53.1
comp=Z,5.0nm,0.7s
ISA Isabella, Lake 50.48 311 P **P 03 37 53.0 +0.7**
baz=114
ELK Elko 50.50 319 P **P 03 37 53.0 +0.4**
comp=Z,1.5nm,0.5s,baz=113,slow=5.4,SNR=10
comp=Z,1.5nm,0.5s
ELK Elko 50.50 319 P **P 03 37 52.7 +0.2**
CWC Cottonwood Cre 50.50 312 P **P 03 37 53.3 +0.8**
baz=114
LCH Last Change Ra 50.52 313 P **P 03 37 53.0 +0.4**
BOZ Bozeman (W) 50.99 326 IAmb IAmb 03 37 57.6
comp=Z,4.8nm,0.7s
BOZ Bozeman (W) 50.99 326 P **P 03 37 56.8 +0.7**
baz=127,SNR=7.6
HLID Hailey 51.45 322 P **P 03 38 00.0 +0.5**
HLID IAmb IAmb 03 38 01.7
comp=Z,4.1nm,0.8s
HLID Hailey 51.45 322 P **P 03 38 00.2 +0.7**
baz=123,SNR=13
NVAR Mina Array Bea 51.51 315 P **P 03 38 01.0 +0.9**
comp=Z,1.6nm,0.6s,baz=124,slow=7.3,SNR=20
NVAR PcP **PcP 03 39 13.0 +0.9**
comp=Z,0.9nm,0.4s,baz=133,slow=4.9,SNR=10.0
comp=Z,1.6nm,0.6s
NVAR Mina Array Bea 51.51 315 P **P 03 38 00.6 +0.5**
EGMT Eagleton 51.52 329 IAmb IAmb 03 38 01.9
comp=Z,5.3nm,0.5s
EGMT Eagleton 51.52 329 P **P 03 38 00.5 +0.6**
baz=131
KVN Kaiserville 51.63 315 P **P 03 38 01.6 +0.6**
BMN Battle Mountai 51.66 317 P **P 03 38 01.6 +0.5**
MFID Camas Ranch 52.24 321 IAmb IAmb 03 38 07.7
comp=Z,7.3nm,0.6s
YERR Yerington 52.41 315 IAmb IAmb 03 38 08.6
comp=Z,6.2nm,0.8s
PNTR Pine Nut 52.70 315 IAmb IAmb 03 38 10.9
comp=Z,6.5nm,0.8s
VCNR Virginia City 52.83 315 IAmb IAmb 03 38 11.8
comp=Z,7.4nm,1.1s
PLID Pearl Lake 53.23 323 P **P 03 38 12.9 +0.2**
PLID IAmb IAmb 03 38 13.6
comp=Z,5.0nm,0.8s
WVOR Wild Horse Val 53.55 319 P **P 03 38 15.2 +0.3**
WVOR IAmb IAmb 03 38 16.3
comp=Z,5.7nm,0.7s
JTMT Jette 53.74 327 IAmb IAmb 03 38 18.0
comp=Z,8.0nm,0.8s
J08A Circle Bar Ran 53.88 320 IAmb IAmb 03 38 18.4
comp=Z,5.7nm,1.2s
BMO Blue Mountains 53.90 322 P **P 03 38 17.9 +0.6**
FCC Fort Churchill 54.27 347 P **P 03 38 19.3 -0.3**
FCC IAmb IAmb 03 38 20.2
comp=Z,12nm,1.1s
WALA Waterton Lakes 54.32 328 P **P 03 38 20.0 -0.4**
F10A Beach Ranch, E 54.44 323 P **P 03 38 21.6 +0.3**
F10A IAmb IAmb 03 38 22.0
comp=Z,6.8nm,0.5s
I07A Izee 54.88 320 P **P 03 38 25.1 +0.6**
I07A IAmb IAmb 03 38 26.1
comp=Z,4.8nm,0.8s
NEW Newport 55.61 326 P **P 03 38 27.9 -1.6**
comp=Z,2.3nm,0.6s,baz=136,slow=2.8,SNR=5.2
comp=Z,2.3nm,0.6s
NEW Newport 55.61 326 P **P 03 38 29.7 +0.2**
NEW IAmb IAmb 03 38 29.9
comp=Z,2.7nm,0.7s
NEW Newport 55.61 326 P **P 03 38 30.3 +0.8**
baz=123
J05D Fort Rock, OR 55.63 319 P **P 03 38 30.7 +0.7**
baz=116,SNR=7.8
L04D Klamath Falls 55.88 317 P **P 03 38 31.6 -0.2**
L04D IAmb IAmb 03 38 34.3
comp=Z,6.8nm,1.1s
L04D Klamath Falls 55.88 317 P **P 03 38 32.1 +0.4**
baz=115
YBH Yreka Blue Hor 55.96 317 P **P 03 38 31.3 -1.0**
comp=Z,2.9nm,0.5s,baz=128,slow=3.5,SNR=15
comp=Z,2.9nm,0.5s
YBH Yreka Blue Hor 55.96 317 IAmb IAmb 03 38 32.0
comp=Z,3.7nm,0.6s
KMRM Mail Ridge 56.06 314 P **P 03 38 33.1 +0.2**
J04D Umpqua Nationa 56.19 318 P **P 03 38 34.5 +0.6**
baz=116
KHMM Horse Mountain 56.33 315 P **P 03 38 35.5 +0.6**
KMPM Mount Pierce 56.43 315 P **P 03 38 36.2 +0.7**
HUMO Hull Mountain 56.49 317 P **P 03 38 34.4 -1.5**
G05D Wamic, OR 56.57 321 P **P 03 38 37.8 +1.4**
baz=118
I04A Tendick Farm, 56.63 319 P **P 03 38 37.2 +0.3**
baz=116
KRPM Rodgers 56.64 315 P **P 03 38 37.8 +0.7**
KSXB Camp Six Broad 56.80 316 P **P 03 38 38.7 +0.5**
HOOD Mount Hood Mea 56.82 321 P **P 03 38 38.8 +0.4**
H04A Detroit Lake 56.87 320 IAmb IAmb 03 38 40.0
comp=Z,11nm,1.0s
B08A Colville Reser 56.91 325 IAmb IAmb 03 38 39.7
comp=Z,5.2nm,0.8s
K02D Willamette Mer 57.00 317 P **P 03 38 40.0 +0.4**
baz=114
LTY Liberty 57.13 323 P **P 03 38 41.1 +0.7**
LTY IAmb IAmb 03 38 41.9
comp=Z,6.4nm,0.7s
BUCK Buck Mountain 57.17 319 P **P 03 38 40.4 -0.3**
KBO Bosley Butte 57.19 316 P **P 03 38 41.7 +0.8**
I03D Drain, OR 57.20 318 P **P 03 38 41.3 +0.5**
baz=115
IVI Ivigtut 57.34 14 P **P 03 38 41.9 +0.4**
J01E Myrtle Point 57.37 318 P **P 03 38 43.0 +1.0**
J01E Myrtle Point 57.37 318 P **P 03 38 42.7 +0.7**
baz=114
KEBM Edson Butte 57.52 317 P **P 03 38 43.7 +0.5**
COR Corvallis 57.55 319 P **P 03 38 43.6 +0.4**
I02E Swisshome, OR 57.70 319 P **P 03 38 45.6 +1.3**
I02E Swisshome, OR 57.70 319 P **P 03 38 45.0 +0.7**
baz=114

G03D	McMinnville, O	57.79	320	P		P	03 38 45.8	+0.9
	baz=116							
WISH	Wishkah	58.94	322	P		P	03 38 53.9	+1.0
NLWA	Neilton Lookou	59.12	322	P		P	03 38 54.7	+0.6
NLWA				IAmb	IAmb		03 38 56.3	
	comp=Z,9.8nm,1.1s							
B04A	Port Angeles	59.20	323	P		P	03 38 55.4	+0.8
LLLB	Lillooet	59.48	326	IAmb	IAmb		03 38 57.9	
	comp=Z,14nm,1.1s							
C03A	Quillayute Air	59.79	322	P		P	03 38 59.5	+0.9
CBB	Campbell River	61.18	324	P		P	03 39 08.9	+0.8
CBB				IAmb	IAmb		03 39 10.1	
	comp=Z,11nm,0.9s							
DY2G	Dye2	62.35	12 *i*	P		P	03 39 15.1	-0.8
DY2G				IAmb	IAmb		03 39 16.1	
	comp=Z,11nm,0.6s							
YKA	Yellowknife Ar	63.26	340	P		P	03 39 21.7	0.0
	comp=Z,9.7nm,0.6s,baz=132,slow=6.8,SNR=144							
	comp=Z,9.7nm,0.6s							
HG4B	Hotspring	65.45	325	P		P	03 39 36.7	+0.5
ICESG	Greenland Ices	65.92	13 *i*	P		P	03 39 38.7	-0.6
ICESG				IAmb	IAmb		03 39 40.1	
	comp=Z,11nm,0.7s							
T35M	Bob Quinn	66.82	330	P		P	03 39 46.0	+1.2
	baz=115							
DLBC	Dease Lake	67.33	331	P		P	03 39 49.0	+1.0
	comp=Z,3.1nm,0.4s,baz=98,slow=3.3,SNR=14							
	comp=Z,3.1nm,0.4s							
DLBC	Dease Lake	67.33	331	P		P	03 39 48.7	+0.6
DLBC				IAmb	IAmb		03 39 49.6	
	comp=Z,4.6nm,0.6s							
DLBC	Dease Lake	67.33	331	P		P	03 39 49.2	+1.2
	baz=116,SNR=6.1							
TIC	Toumodi	67.52	86⇑ *i*	P		P	03 39 48.4	-1.6
	comp=Z,1.7nm,0.2s							
LIC	Lamto	67.55	86⇑ *i*	P		P	03 39 49.3	-0.9
	comp=Z,12nm,0.6s							
DBIC	Dimbokro	67.68	86	P		P	03 39 48.7	-2.3
	comp=Z,6.8nm,0.7s,baz=266,slow=4.6,SNR=11							
	comp=Z,6.8nm,0.7s							
DBIC	Dimbokro	67.68	86	P		P	03 39 49.8	-1.2
DBIC				IAmb	IAmb		03 39 50.3	
	comp=Z,6.1nm,0.7s							
KIC	Kosan Boka	67.82	86⇑ *e*	P		P	03 39 50.6	-1.3
	comp=Z,21nm,0.6s							
TGTN	Hyland Airport	67.95	335	P		P	03 39 52.9	+1.0
	baz=118							
RES	Resolute Bay	68.96	354	P		P	03 39 57.4	-0.4
SUMG	Summit	68.96	11	P		P	03 39 58.8	+0.5
SUMG	Summit	68.96	11 *i*	P		P	03 39 57.5	-0.9
SUMG				IAmb	IAmb		03 39 59.0	
	comp=Z,26nm,0.6s							
JIS	Juneau Island	69.37	330	P		P	03 40 01.3	+0.7
JIS				IAmb	IAmb		03 40 02.5	
	comp=Z,4.6nm,1.0s							
P33M	Teslin, Yukon	69.37	333	IAmb	IAmb		03 40 02.9	
	comp=Z,4.6nm,1.1s							
P33M	Teslin, Yukon	69.37	333	P		P	03 40 01.7	+1.0
	baz=114							
SIT	Sitka	69.41	329	P		P	03 40 02.0	+1.1
	baz=110							
P32M	Atlin	69.54	332	P		P	03 40 02.6	+0.8
	baz=112							
N32M	Quiet Lake	69.87	333	P		P	03 40 04.8	+1.0
	baz=114							
WHY	Whitehorse	70.49	333	P		P	03 40 08.2	+0.7
	baz=112							
C36M	Paulatuk	70.59	343	P		P	03 40 08.7	+0.9
	baz=125							
M31M	Drury Creek, Y	70.86	334	P		P	03 40 10.8	+1.1
M31M				IAmb	IAmb		03 40 11.4	
	comp=Z,4.4nm,0.7s							
M31M	Drury Creek, Y	70.86	334	P		P	03 40 10.7	+1.1
	baz=113,SNR=5.9							
O30N	Mendenhall	71.08	332	P		P	03 40 12.4	+1.3
	baz=111,SNR=8.9							
N31M	Braeburn, Yuko	71.20	333	P		P	03 40 12.8	+1.1
	baz=111,SNR=6.6							
P30M	Million Dollar	71.26	332	P		P	03 40 12.9	+0.7
	baz=110							
PMSA	Palmer Station	71.74	176 *e*	P		P	03 40 17.1	+2.4
HYT	Haines Junctio	71.75	332	P		P	03 40 15.4	+0.2
HYT	Haines Junctio	71.75	332	P		P	03 40 15.8	+0.6
	baz=109							
N30M	Aishikik Lake	71.78	333	P		P	03 40 16.6	+1.4
	baz=110,SNR=5.6							
M30M	Minto, Yukon	72.04	334	P		P	03 40 17.8	+1.0
M30M				IAmb	IAmb		03 40 18.4	
	comp=Z,11nm,0.8s							
M30M	Minto, Yukon	72.04	334	P		P	03 40 17.6	+0.8
	baz=111,SNR=15							
YUK6	Outpost Mounta	72.19	332	P		P	03 40 19.6	+1.7
	baz=109							
PNL	Peninsula	72.28	331	P		P	03 40 19.3	+1.0
	baz=107							
A36M	Sachs Harbour	72.43	345	P		P	03 40 19.2	+0.4
A36M	Sachs Harbour	72.43	345	P		P	03 40 19.2	+0.4
	baz=125							
YUK4	Talbot Arm	72.45	333	P		P	03 40 20.4	+1.0
	baz=109							
INK	Inuvik	73.03	340	P		P	03 40 22.8	+0.4
INK				IAmb	IAmb		03 40 23.2	
	comp=Z,4.9nm,0.6s							
INK	Inuvik	73.03	340	P		P	03 40 22.8	+0.4
	baz=115,SNR=5.3							
EPYK	Eagle Plains	73.39	338	P		P	03 40 25.3	+0.7
EPYK	Eagle Plains	73.39	338	P		P	03 40 25.2	+0.6
	baz=112							
YUK3	Moose Creek	73.41	333	P		P	03 40 25.7	+0.6
	baz=107,SNR=7.8							
CTGM	Chitina Glacie	73.58	332	P		P	03 40 26.7	+0.6
CTGM				IAmb	IAmb		03 40 28.1	
	comp=Z,8.9nm,0.6s							
CTG	Chitna Glacier	73.58	332	P		P	03 40 26.8	+0.7
	baz=106							
DAWY	Dawson	73.64	335	P		P	03 40 26.4	+0.2
DAWY	Dawson	73.64	335	P		P	03 40 27.2	+1.0
	baz=109							
TORD	Torodi Ar. Bea	73.69	78	P		P	03 40 25.5	-1.8
	comp=Z,0.6nm,0.3s,baz=286,slow=6.7,SNR=29							
	comp=Z,0.6nm,0.3s							
BVCY	Beaver Creek	73.77	333	P		P	03 40 28.4	+1.4
	baz=107							
DBG	Daneborg	73.92	13 *i*	P		P	03 40 26.8	-0.7
M27K	Edge Creek, AK	74.21	333	P		P	03 40 30.3	+0.6
M27K				IAmb	IAmb		03 40 32.0	
	comp=Z,7.6nm,0.7s							
M27K	Edge Creek, AK	74.21	333	P		P	03 40 30.6	+0.9
	baz=106,SNR=7.4							
L27K	Beaver Creek,	74.38	334	P		P	03 40 31.6	+1.1
L27K				IAmb	IAmb		03 40 32.7	
	comp=Z,5.1nm,0.8s							
L27K	Beaver Creek,	74.38	334	P		P	03 40 31.7	+1.2
	baz=106,SNR=5.9							
MCARA	McCarthy VSAT	74.48	332	P		P	03 40 32.4	+1.4
	baz=104							
VRDI	Verde Repeater	74.64	332	P		P	03 40 33.0	+0.8
VRDI				IAmb	IAmb		03 40 34.3	
	comp=Z,5.5nm,0.8s							
M26K	Nabesna, AK	74.73	333	P		P	03 40 33.7	+1.2
	baz=105							
K27K	Chicken	74.76	335	P		P	03 40 34.0	+1.4
	baz=106							
GLB	Gilahina Butte	74.86	332	P		P	03 40 34.2	+0.9
GLB				IAmb	IAmb		03 40 36.2	
	comp=Z,8.4nm,1.2s							
L26K	Log Cabin Wild	75.04	334	IAmb	IAmb		03 40 36.5	
	comp=Z,6.5nm,0.7s							
L26K	Log Cabin Wild	75.04	334	P		P	03 40 35.6	+1.3
	baz=105,SNR=7.8							
BMRM	Bremner River	75.13	331	P		P	03 40 34.7	-0.1
BMRM				IAmb	IAmb		03 40 36.5	
	comp=Z,7.5nm,0.5s							
BMRM	Bremner River	75.13	331	P		P	03 40 35.9	+1.0
	baz=103							
N25K	Chitina, Valde	75.27	332	P		P	03 40 36.8	+1.1
	baz=103							
DOT	Dot Lake	75.51	334	IAmb	IAmb		03 40 38.9	
	comp=Z,10nm,0.6s							
J26L	Joseph Creek	75.51	335	P		P	03 40 37.4	+0.4
	baz=105							
I26K	Coal Creek Min	75.55	336	P		P	03 40 37.0	-0.1
I26K	Coal Creek Min	75.55	336	P		P	03 40 37.4	+0.2
	baz=105							
SCRK	Sand Creek	75.56	335	P		P	03 40 38.1	+0.7
SCRK				IAmb	IAmb		03 40 39.3	
	comp=Z,4.6nm,0.9s							
SCRK	Sand Creek	75.56	335	P		P	03 40 38.2	+0.9
	baz=104,SNR=6.5							
DAG	Danmarks Havn	75.63	11 *i*	P		P	03 40 36.0	-1.3
DAG				IAmb	IAmb		03 40 37.2	
	comp=Z,6.3nm,0.6s							
HARP	HAARP	75.70	333	P		P	03 40 37.8	-0.2
	baz=103							
KLU	Klutina	75.86	332	P		P	03 40 39.7	+0.7
	baz=102							
RIDG	Independent Ri	75.87	334	P		P	03 40 40.1	+1.0
	baz=103,SNR=7.1							
PAX	Paxson	75.97	333	P		P	03 40 40.2	+0.6
	baz=103							
FID	Port Fidalgo	75.98	331	P		P	03 40 39.5	-0.1
FID				IAmb	IAmb		03 40 49.6	
	comp=Z,9.9nm,0.9s							
M24K	Tolsona, Glenn	76.11	332	P		P	03 40 41.4	+1.0
M24K				IAmb	IAmb		03 40 42.1	
	comp=Z,12nm,0.7s							
M24K	Tolsona, Glenn	76.11	332	P		P	03 40 41.5	+1.1
	baz=102							
K24K	Donnelly Dome	76.29	334	P		P	03 40 42.3	+0.9
	baz=103							
J25K	Salcha River,	76.30	335	P		P	03 40 42.0	+0.6
	baz=103,SNR=5.6							
SCM	Sheep Creek Mo	76.59	332	IAmb	IAmb		03 40 44.9	
	comp=Z,10nm,0.8s							
SCM	Sheep Creek Mo	76.59	332	P		P	03 40 43.9	+0.8
	baz=101							
BMAR	Burnt Mountain	76.66	338	P		P	03 40 44.2	+0.8
M23K	Glacier View	76.77	332	P		P	03 40 44.9	+0.8
	baz=100							
DHY	Denali Highway	76.84	333	P		P	03 40 45.5	+0.9
DHY	Denali Highway	76.84	333	P		P	03 40 44.9	+0.3
	baz=101							
WAT6	Susitna Watana	76.92	333	P		P	03 40 45.6	+0.5
	baz=100							
HDA	Harding Lake	76.92	335	P		P	03 40 45.2	+0.3
HDA				IAmb	IAmb		03 40 45.9	
	comp=Z,6.3nm,0.6s							
HDA	Harding Lake	76.92	335	P		P	03 40 45.3	+0.5
	baz=102							
IL31		76.97	335	P		P	03 40 44.3	-0.8
ILAR	Eielson Array	76.97	335	P		P	03 40 45.2	+0.1
	comp=Z,1.7nm,0.7s,baz=105,slow=4.6,SNR=22							
	comp=Z,1.7nm,0.7s							
SML	Sawmill	77.05	332	P		P	03 40 46.2	+0.5
SML				IAmb	IAmb		03 40 59.7	
	comp=Z,6.9nm,0.9s							
SML	Sawmill	77.05	332	P		P	03 40 46.3	+0.6
	baz=100							
POKR	Poker Plat Res	77.27	335	P		P	03 40 47.2	+0.4
PMR	Palmer	77.39	332	P		P	03 40 47.7	+0.2
PMR				IAmb	IAmb		03 40 49.5	
	comp=Z,5.4nm,0.6s							
PMR	Palmer	77.39	332	P		P	03 40 48.0	+0.5
	baz=99							
RND	Reindeer	77.56	333	IAmb	IAmb		03 40 50.4	
	comp=Z,13nm,0.7s							
H24K	Noodor Dome	77.59	336	P		P	03 40 49.2	+0.6
	baz=101							
RC01	Rabbit Creek A	77.60	331	P		P	03 40 48.9	+0.2
	baz=98							
NEA2	Nenana	77.86	335	P		P	03 40 50.3	+0.3
	baz=100,SNR=7.0							
CUT	Chulitna	78.04	332	P		P	03 40 51.6	+0.5
	baz=98							
I23K	Minto, Yukon-K	78.07	335	P		P	03 40 51.7	+0.5
I23K	Minto, Yukon-K	78.07	335	P		P	03 40 51.9	+0.7
	baz=100							
CNPM	China Poot	78.14	329	P		P	03 40 51.8	+0.1
CNPM				IAmb	IAmb		03 40 54.6	
	comp=Z,13nm,1.1s							
SUA	Susitna One	78.14	331	P		P	03 40 52.6	+0.8
	baz=98							
TRF	Thorofare Moun	78.20	333	IAmb	IAmb		03 40 53.6	
	comp=Z,4.6nm,0.7s							
TRF	Thorofare Moun	78.20	333	P		P	03 40 52.9	+0.7
	baz=98							
H23K	Yukon River	78.26	336	P		P	03 40 52.9	+0.6
	baz=100,SNR=6.1							
HOM	Homer	78.36	329	P		P	03 40 53.6	+0.7
	baz=96							
KTH	Kantishna Hill	78.50	333	IAmb	IAmb		03 40 54.9	
	comp=Z,7.7nm,1.1s							
SKT	Skwentna	78.58	332	P		P	03 40 54.6	+0.5
	baz=97							
NOR	Nord	78.59	7 *i*	P		P	03 40 52.0	-1.8
NOR				IAmb	IAmb		03 40 53.8	
	comp=Z,1.5nm,0.7s							
BPAW	Bear Paw Mtn.	78.61	334	P		P	03 40 54.5	+0.2
	baz=98,SNR=6.5							
MLY	Manley	78.63	335	P		P	03 40 54.5	+0.2
	baz=98,SNR=5.1							
C24K	Franklin Bluff	78.65	340	P		P	03 40 55.1	+0.9
	baz=101							
COLD	Coldfoot	78.75	337	P		P	03 40 56.1	+1.2
	baz=99							
TOLK	Toolik Lake Re	78.76	339	P		P	03 40 55.8	+0.8
	baz=100							
OHAK	Old Harbor	78.99	327	P		P	03 40 56.0	-0.3
OHAK				IAmb	IAmb		03 41 08.9	
	comp=Z,12nm,1.1s							
PPLA	Purkeypile	78.99	333	P		P	03 40 56.7	+0.2
	baz=96,SNR=7.1							
CAST	Castle Rocks	79.00	333	P		P	03 40 56.6	+0.2
	baz=97							
H22K	Ishtalitna Cre	79.02	336	P		P	03 40 57.1	+0.7
	baz=98							
CHUM	Lake Minchumin	79.16	334	P		P	03 40 57.6	+0.5
	baz=97							
D23K	Nanushuk River	79.21	339	P		P	03 40 58.4	+1.0
	baz=99							
Q19K	Cape Douglas,	79.31	329	P		P	03 40 58.2	+0.1
Q19K	Cape Douglas,	79.31	329	P		P	03 40 58.3	+0.1
	baz=94							
M20K	Styx River	79.32	332	P		P	03 40 58.3	0.0
	baz=96							
C23K	Itkillik River	79.32	340	P		P	03 40 58.8	+0.9
	baz=99							
H21K	Melozitna Rive	79.57	335	P		P	03 40 59.5	0.0
H21K	Melozitna Rive	79.57	335	P		P	03 40 59.5	0.0
	baz=96							
L20K	Farewell, AK	79.72	332	P		P	03 41 00.2	-0.1
	baz=95,SNR=8.2							
N19K	Bonanza Creek	79.88	331	P		P	03 41 01.1	-0.2
N19K	Bonanza Creek	79.88	331	P		P	03 41 01.2	-0.1
	baz=94							
K20K	Telida	79.88	333	IAmb	IAmb		03 41 01.6	
	comp=Z,3.6nm,0.7s							
K20K	Telida	79.88	333	P		P	03 41 01.3	+0.1
	baz=95							
M19K	Big River Lodg	79.91	332	P		P	03 41 01.5	+0.2
	baz=94							
J20K	Nowinta River	79.99	334	P		P	03 41 01.9	+0.2
	baz=95,SNR=13							
IMAR	Indian Mountai	79.99	336	P		P	03 41 01.2	-0.4
Q18K	Katmai Hardscr	80.00	328	P		P	03 41 01.7	-0.3
	baz=93							
L19K	White Mountain	80.15	332	P		P	03 41 02.5	-0.2
L19K	White Mountain	80.15	332	P		P	03 41 02.6	0.0
	baz=94,SNR=5.5							
P18K	Big Mountain,	80.16	329	P		P	03 41 02.5	-0.2
	baz=93							
O18K	Koktuh Hills	80.17	330	P		P	03 41 02.5	-0.3
	baz=93							
N18K	Kilae Creek	80.56	330	P		P	03 41 04.6	-0.2
	baz=93,SNR=6.0							
R17K	Ugashik Creek	80.68	327	P		P	03 41 05.7	+0.2
	baz=92							
TTA	Tatalina	80.73	333	P		P	03 41 05.8	0.0
	baz=93							
P17K	Kvichak River	80.77	329	P		P	03 41 05.8	-0.1
	baz=92							
Q16K	King Salmon	80.86	328	P		P	03 41 06.5	+0.1
	baz=92							
O17K	Koliganek Bris	81.12	329	P		P	03 41 07.8	0.0
	baz=92							
GCSA	Galena City Sc	81.21	334	P		P	03 41 08.8	+0.7
	baz=93							
NB2	NORSAR Subarra	81.29	29	P		P	03 41 08.5	-0.2
	comp=Z,1.0nm,0.6s,baz=267,slow=5.6							
NOA	NORSAR Array B	81.29	29	P		P	03 41 08.0	-0.8
	comp=Z,1.2nm,0.6s,baz=268,slow=5.3,SNR=7.1							
	comp=Z,1.2nm,0.6s							
O16K	Kokwok River B	81.62	329	P		P	03 41 10.3	-0.2
	baz=91							
N16K	Nishlik Lake	81.97	330	P		P	03 41 12.6	+0.3
	baz=90							
S14K	Fog Glacier	82.40	326	P		P	03 41 14.6	-0.1
	baz=89							
GERES	GERESS Array B	82.78	42	P		P	03 41 15.1	-1.7
	comp=Z,0.9nm,0.6s,baz=190,slow=0.8,SNR=8.4							
	comp=Z,0.9nm,0.6s							
GERES	GERESS Array B	82.78	42	P		P	03 41 16.8	0.0
ANM	Nome	84.87	334	P		P	03 41 27.5	+0.6
ANM				IAmb	IAmb		03 41 36.7	
	comp=Z,6.1nm,1.0s							
UNV	Unalaska Valle	86.56	324	P		P	03 41 36.0	+0.5
	baz=83							
ARCES	ARCESS Array B	86.64	20	P		P	03 41 35.0	-0.7
	comp=Z,1.3nm,0.5s,baz=272,slow=3.5,SNR=16							
	comp=Z,1.3nm,0.5s							
GAMB	Gambell	87.72	334	P		P	03 41 41.7	+0.9
	baz=79							
FINES	FINESS Array B	88.40	28	P		P	03 41 43.3	-0.8
	comp=Z,1.5nm,0.9s,baz=316,slow=5.3,SNR=4.2							
	comp=Z,1.5nm,0.9s							
SNAA	Sanae	90.34	163	P		P	03 41 51.5	-1.5
SNAA	Sanae	90.34	163	P		P	03 41 51.6	-1.4
	comp=Z,0.8nm,0.8s,baz=284,slow=8.7,SNR=10							
	comp=Z,0.8nm,0.8s							
TROLL	Troll, Antarti	92.05	162	P		P	03 41 59.9	-1.1
ZALV	Zalesovo Beam	116.64	14	PKP		PKPdf	03 47 34.3	-1.3
	comp=Z,1.7nm,0.4s,baz=219,slow=0.1,SNR=5.7							
MKAR	Makanchi Array	122.29	20	PKP		PKPdf	03 47 46.1	-0.7
	comp=Z,1.4nm,0.4s,baz=296,slow=2.6,SNR=24							
SONM	Songino Array	125.56	0	PKP		PKPdf	03 47 52.0	-1.2
	comp=Z,1.0nm,0.5s,baz=307,slow=1.2,SNR=6.3							
KSRS	Korea Array	131.77	338	PKP		PKPdf	03 48 04.8	-0.2
	comp=Z,0.5nm,0.4s,baz=46,slow=0.9,SNR=2.1							
ASAR	Alice Springs	149.16	234	PKP		PKPdf	03 48 36.1	-0.5
	comp=Z,5.5nm,0.5s,baz=121,slow=3.1,SNR=26							
ASAR				PKPbc		PKPbc	03 48 39.8	-1.2
	comp=Z,5.7nm,0.5s,baz=116,slow=3.7,SNR=27							
ASAR	Alice Springs	149.16	234			PKPdf	03 48 36.3	-0.3
WRA	Warramunga Arr	150.39	241	PKP		PKPdf	03 48 38.3	-0.3
	comp=Z,5.9nm,0.4s,baz=107,slow=2.8,SNR=47							
WRA				PKPbc		PKPbc	03 48 42.6	-1.4
	comp=Z,6.0nm,0.4s,baz=107,slow=2.8,SNR=32							
WRA	Warramunga Arr	150.39	241			PKPdf	03 48 38.7	+0.1
CMAR	Chiang Mai Arr	153.66	17	PKPbc		PKPbc	03 48 51.4	0.0
	comp=Z,3.8nm,0.5s,baz=326,slow=3.6,SNR=9.0							

IDC ***28*** *03:32:43.2±0.4,5.79S×105.40E,h0km,mb4.9/34, mbtmp4.9/36,ML3.7/1,MS3.9/43 Error ellipse: s-maj=14.1km s-min=10.2km az=49.0*

NEIC ***28*** *03:32:44.9±1.9,5.99S±0.07×105.34E±0.06,h10km±1km, mb5.3/116,Error ellipse: s-maj=13.3km s-min=8.0km az=219.0*

MOS ***28*** *03:32:46.1±1.1,5.79S×105.41E,h32km,mb5.5/52,Error ellipse: s-maj=10.4km s-min=4.9km az=121.7*

DJA ***28*** *03:32:50.9±0.2,6°S±2°×10°5E±°,h45km±2km,M5.0/70, mB5.5/34,mb5.0/70,MLv5.2/28,Mw(mB)4.9/34, MwMwp4.6/1,Mwp5.0/1*

ISC 28 03:32:49.9±0.4,6.01S±0.04×105.31E±0.04,h49km±3km, h50km:pP-P,n770,σ1s53/814,mb5.2/154,MS4.1/61, 16C-5D,Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLSI	Bandar Lampung	0.64	354	P	Pn	03 32 59.3	-3.5
BLSI				S	Sn	03 33 09.1	-3.0
SBJI	Serang	0.82	98	P	Pn	03 32 59.1	-6.1
SBJI				S	Sn	03 33 17.1	+0.7
KASI	Kota Agung	0.94	300	P	Pn	03 33 04.5	-2.3
KLI	Kotabumi	1.22	338	P	Pn	03 33 10.2	-0.4
TNG	Tangerang	1.34	97	P	Pn	03 33 11.6	-0.6
DBJI	Dramaga	1.53	111	P	Pn	03 33 11.3	-3.5
CBJI	Citeko	1.58	105	P	Pn	03 33 15.1	-0.4
LWLI	Liwa	1.59	308	P	Pn	03 33 15.6	-0.1
SKJI	Sukabumi	1.59	129	P	Pn	03 33 12.1	-3.5
CNJI	Cibinong	2.22	126	P	Pn	03 33 20.4	-3.9
LEM	Lembang	2.43	110	Pn	Pn	03 33 24.9	-2.4
	18nm,0.3s,baz=238,slow=5.3,SNR=26						
LEM				Lg	Lg	03 34 03.9	
	baz=125,slow=23						
	488nm,1.1s						
MNAI	Manna	2.86	305	Pn	Pn	03 33 31.9	-1.1
MNAI	Manna	2.86	305	P	Pn	03 33 35.2	+2.2
MNAI	Manna	2.86	305	P	Pn	03 33 35.5	+2.5
JCJI	Jatiwangi	2.98	99	P	Pn	03 33 39.0	+4.3
PMBI	Palembang	3.10	350		Pn	03 33 35.6	-0.8
PMBI	Palembang	3.10	350	P	Pn	03 33 40.1	+3.7
PMBI	Palembang	3.10	350	P	Pn	03 33 38.5	+2.1
CMJI	Cimerak	3.58	120	P	Pn	03 33 41.4	-1.5
PPBI	Pangkal Pinang	3.91	12	P	Pn	03 33 47.2	-0.2
TPI	Tanjungpandan	3.98	36	P	Pn	03 33 47.1	-1.4
MASI	Maura Aman, Be	4.18	313	P	Pn	03 33 53.6	+2.4
XMI	Christmas Isla	4.43	175	P	Pn	03 33 49.7	-4.9
XMIS	Christmas Isla	4.46	176	P	Pn	03 33 49.8	-5.2
JMBI	JAMBI	4.65	339	P	Pn	03 34 00.2	+2.6
SMRI	Semarang	5.20	102	Pn	Pn	03 34 01.9	-3.3
SMRI	Semarang	5.20	102	P	Pn	03 34 10.0	+4.8
	7.7nm17μm1μm,0.9s						
SMRI	Semarang	5.20	102	P	Pn	03 34 05.5	+0.3
YOGI	Yogyakarta	5.26	110	P	Pn	03 34 05.0	-1.1
	1.7nm5μm394nm,1.0s						
KRJI	Kerinci	5.46	315	P	Pn	03 34 13.7	+4.8
	9.2nm34μm2μm,1.3s						
UGM	Wanagama	5.51	110	Pn	Pn	03 34 05.8	-3.6
UGM	Wanagama	5.51	110	P	Pn	03 34 08.5	-1.0
	1.8nm597nm,1.2s						
UGM	Wanagama	5.51	110	P	Pn	03 34 10.6	+1.1
DSRI	Dabo	5.54	352	P	Pn	03 34 11.4	+1.6
	1.9nm3μm2μm83nm,0.9s						
WOJI	Wonogiri, Jawa	5.86	108	P	Pn	03 34 16.2	+2.0
	0.7nm4μm144nm,1.1s						
PPSI	Pulau Pagai	6.19	301	P	Pn	03 34 26.8	+8.0
PCJI	Pacitan	6.21	111	P	Pn	03 34 19.2	+0.1
	0.9nm258nm,0.8s						
PWJI	Pagerwojo	6.75	108	P	Pn	03 34 28.2	+1.8
	0.8nm263nm,1.1s						
TPRI	Tanjung Pinang

KAPI	**Kappang**	**14.41**	**87**	P	**P**	**03 36 13.9**	**-2.9**
SPSI	**Sidrap Palu**	**14.54**	**83**	P	**P**	**03 36 22.2**	**+3.9**
BKSI	**Bulukumba**	**14.76**	**88**	P	**Pn**	**03 36 17.4**	**+1.7**
	2µm52nm,1.3s						
TTSI	**Tana Toraja**	**14.76**	**79**	P	**P**	**03 36 21.9**	**+1.2**
	2µm79nm,1.5s						
BNSI	**Bone**	**14.82**	**85**	P	**P**	**03 36 19.3**	**-2.1**
	4µm72nm,1.5s						
BSSI	**Bau Bau, Buton**	**15.10**	**91**	P	P	03 36 35.6	+11
SRIT	**Nakonsritamara**	**15.58**	**339**	Pn	**Pn**	**03 36 25.4**	**-1.0**
MPSI	**Mapaga**	**15.87**	**67**	P	**P**	**03 36 32.8**	**-0.2**
	2µm91nm,1.4s						
KKM	**Kota Kinabalu**	**16.18**	**42**	Pn	**Pn**	**03 36 31.0**	**-3.1**
KKM	**Kota Kinabalu**	**16.18**	**42**	P	**P**	**03 36 39.3**	**+2.7**
	49nm,1.4s						
EDFI	**Ende, Flores**	**16.47**	**101**	P	**Pn**	**03 36 36.9**	**-0.9**
	691nm30nm,1.2s						
TOLI2	**Tolitoli**	**16.99**	**66**		**Pn**	**03 36 42.4**	**-1.8**
TOLI2	**Tolitoli**	**16.99**	**66**	P	**P**	**03 36 47.5**	**+2.0**
MMRI	**Maumere**	**16.99**	**100**		**Pn**	**03 36 42.2**	**-2.0**
MMRI				IAmb	IAmb	03 36 49.1	
	comp=Z,628nm,2.0s						
MMRI	**Maumere**	**16.99**	**100**	P	**P**	**03 36 46.3**	**+0.8**
	comp=Z,109nm,1.0s						
MMRI	**Maumere**	**16.99**	**100**	P	**P**	**03 36 45.8**	**+0.3**
APSI	**Ampana**	**17.07**	**73**	P	**P**	**03 36 48.9**	**+2.5**
	comp=Z,2µmcomp=Z,171nm,1.5s						
MYLDM	**Lahad Datu**	**17.23**	**50**		**Pn**	**03 36 44.9**	**-2.2**
MRSI	**Marisa**	**17.81**	**69**	P	**P**	**03 36 57.4**	**+2.9**
	comp=Z,2µmcomp=Z,89nm,1.1s						
LUWI	**Luwuk**	**18.11**	**75**		**P**	**03 36 54.4**	**-3.4**
LUWI				IAmb	IAmb	03 37 04.8	
	comp=Z,319nm,1.3s						
LUWI	**Luwuk**	**18.11**	**75**	P	**Pn**	**03 37 00.9**	**+2.9**
	comp=Z,98nm,2.7s						
LUWI	**Luwuk**	**18.11**	**75**	P	**Pn**	**03 37 00.7**	**+2.7**
BATI	**Baumata**	**18.64**	**104**	P	**Pn**	**03 37 04.8**	**+0.3**
	comp=Z,2µmcomp=Z,121nm,1.0s						
GIRL	**Giralia**	**18.65**	**153**	P	**P**	**03 37 04.2**	**+0.4**
	baz=18,SNR=4.5						
GIRL	**Giralia**	**18.65**	**153**	P	**P**	**03 37 02.3**	**-1.4**
GIRL				IAmb	IAmb	03 37 07.6	
	comp=Z,182nm,1.1s						
GIRL	**Giralia**	**18.65**	**153**	P	**P**	**03 37 03.5**	**-0.2**
SOEI	**Soe**	**19.14**	**102**	P	**P**	**03 37 07.9**	**-1.4**
SOEI				IAmb	IAmb	03 37 20.5	
	comp=Z,179nm,1.0s						
SOEI	**Soe**	**19.14**	**102**	P	**Pn**	**03 37 12.1**	**+1.5**
KMSI	**Cibinong**	**19.75**	**71**	P	Pn	03 37 29.1	+11
MBWA	**Marble Bar**	**20.55**	**139**	P	**P**	**03 37 23.2**	**-1.2**
MBWA	**Marble Bar**	**20.55**	**139**	P	**P**	**03 37 24.8**	**+0.4**
MBWA	**Marble Bar**	**20.55**	**139**	P	**P**	**03 37 24.5**	**+0.1**
PSA00	**Pilbara Seismi**	**20.91**	**139**	P	**P**	**03 37 25.3**	**-3.1**
PSA00				IAmb	IAmb	03 37 31.3	
	comp=Z,211nm,1.4s						
PSA00	**Pilbara Seismi**	**20.91**	**139**	P	**P**	**03 37 25.7**	**-2.7**
PSA00				IAmb	IAmb	03 37 31.3	
	comp=Z,119nm,1.4s						
PSA00	**Pilbara Seismi**	**20.91**	**139**	P	**P**	**03 37 28.4**	**0.0**
SANI	**Sanana**	**20.99**	**80**	P	Pn	03 37 31.4	-1.0
	comp=Z,1µmcomp=Z,58nm,1.3s						
SANI	**Sanana**	**20.99**	**80**	P	Pn	03 37 31.1	-1.3
	comp=Z,58nm,1.3s						
LBMI	**Labuha**	**22.78**	**77**	P	**P**	**03 37 50.2**	**+1.7**
	comp=Z,2µmcomp=Z,72nm,1.0s						
TNTI	**Ternate**	**23.02**	**74**	P	**P**	**03 37 51.1**	**+0.1**
TNTI	**Ternate**	**23.02**	**74**	P	**P**	**03 37 51.4**	**+0.4**
	comp=Z,3µmcomp=Z,148nm,1.4s						
TNTI	**Ternate**	**23.02**	**74**	P	**P**	**03 37 53.5**	**+2.5**
DAV	**Davao City (W)**	**24.04**	**58**	P	**P**	**03 38 03.5**	**+2.9**
	comp=Z,145nm,0.3s,baz=79,slow=2.4,SNR=11						
DAV	**Davao City (W)**	**24.04**	**58**	P	**P**	**03 37 59.7**	**-0.8**
KNRA	**Kununurra**	**24.93**	**115**	P	**P**	**03 38 08.1**	**-0.5**
	baz=25,SNR=28						
KNRA	**Kununurra**	**24.93**	**115**	P	**P**	**03 38 07.6**	**-1.0**
KNRA	**Kununurra**	**24.93**	**115**	P	**P**	**03 38 08.0**	**-0.7**
MORW	**Morawa**	**25.08**	**157**	P	**P**	**03 38 10.5**	**+0.5**
	baz=25,SNR=3.6						
MORW	**Morawa**	**25.08**	**157**	P	**P**	**03 38 09.1**	**-0.8**
MORW	**Morawa**	**25.08**	**157**	P	**P**	**03 38 10.0**	**0.0**
CM31	**Chiang Mai Arr**	**25.11**	**346**	P	**P**	**03 38 16.8**	**+6.6**
	SNR=6.2						
CMAR	**Chiang Mai Arr**	**25.11**	**346**	P	**P**	**03 38 08.9**	**-1.3**
	comp=Z,4.0nm,0.9s,baz=180,slow=8.3,SNR=19						
CMAR				PcP	**PcP**	**03 41 43.7**	**-0.1**
	comp=Z,2.4nm,0.6s,baz=206,slow=2.9,SNR=7.0						
CMAR				LR	LR	03 48 31.8	
	comp=Z,296nm,19.4s,baz=180,slow=38						
	comp=Z,4.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**25.11**	**346**	P	**P**	**03 38 08.7**	**-1.6**
CMAR				PcP	**PcP**	**03 41 44.5**	**+0.7**
CMAR	**Chiang Mai Arr**	**25.11**	**346**	*ceP*	**P**	**03 38 08.8**	**-1.4**
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
QIZ	**Qiongzhong**	**25.27**	**10**	P	**P**	**03 38 15.5**	**+3.8**
QIZ				S	**S**	**03 42 40.8**	**+6.5**
QIZ				sS	**sS**	**03 42 59.0**	**+3.4**
QIZ				pmax	pmax		
	comp=Z,27nm,1.1s						
QIZ				pmax	pmax		
	comp=Z,390nm,5.4s						
QIZ				LR	LR		
	comp=Z,990nm,14.3s						
QIZ				LR	LR		
	comp=Z,1µm,15.9s						
QIZ				LR	LR		
	comp=Z,920nm,12.0s						
TGY	**Tagaytay City**	**25.29**	**38**	P	**P**	**03 38 10.6**	**-1.4**
	comp=Z,154nm0.3s,baz=186,slow=9.3,SNR=1.8						
CHTO	**Chiang Mai**	**25.45**	**346**	P	**P**	**03 38 11.3**	**-2.0**
CHTO	**Chiang Mai**	**25.45**	**346**	P	**P**	**03 38 11.3**	**-2.0**
CHTO				pmax	pmax		
	comp=Z,30nm,1.2s						
MTN	**Manton Dam**	**26.35**	**107**	P	**P**	**03 38 20.4**	**-1.2**
MTN	**Manton Dam**	**26.35**	**107**	P	**P**	**03 38 23.4**	**+1.8**
SWI	**Sorong**	**26.39**	**80**	P	**P**	**03 38 22.3**	**+0.3**
	comp=Z,21nm,1.0s						
SIJI	**Sorong**	**26.40**	**80**	P	**P**	**03 38 20.4**	**-1.7**
	comp=Z,14nm,0.8s,baz=180,slow=20,SNR=15						
	comp=Z,14nm,0.8s						
KDU	**Kakadu**	**27.59**	**106**	P	**P**	**03 38 31.3**	**-1.4**
	baz=28,SNR=7.2						
KDU	**Kakadu**	**27.59**	**106**	P	**P**	**03 38 31.7**	**-1.1**
PALK	**Pallekele**	**27.87**	**298**	LR	LR	03 49 38.7	
	comp=Z,261nm,19.3s,baz=220,slow=36						
KLBR	**Kellerberrin**	**28.00**	**157**	P	**P**	**03 38 35.6**	**-0.6**
	baz=28,SNR=8.3						
KLBR	**Kellerberrin**	**28.00**	**157**	P	**P**	**03 38 35.5**	**-0.6**
WRKA	**Warakurna**	**29.04**	**133**	P	**P**	**03 38 45.1**	**-0.4**
	baz=29,SNR=7.2						
WRKA	**Warakurna**	**29.04**	**133**	P	**P**	**03 38 45.9**	**+0.3**
KMI	**Kunming**	**31.04**	**355**	⇓P	**P**	**03 39 07.3**	**+3.8**
KMI				sP	sP	03 39 23.5	+1.3
KMI				PP	**PP**	**03 40 09.0**	**-5.3**
KMI				S	**S**	**03 44 12.5**	**+7.1**
KMI				SS	**SnSn**	**03 45 54.5**	**+4.4**
KMI				pmax	pmax		
	comp=Z,14nm,1.0s						
KMI				pmax	pmax		
	comp=Z,78nm,9.5s						
KMI				LR	LR		
	comp=Z,4µm,10.4s						
KMI				LR	LR		
	comp=Z,2µm,13.6s						
KMI				LR	LR		
	comp=Z,3µm,10.2s						
WB0	**Warramunga Arr**	**31.40**	**119**	P	**P**	**03 39 03.8**	**-2.7**
WB0				IAmb	IAmb	03 39 08.9	
	comp=Z,36nm,1.1s						
WRA	**Warramunga Arr**	**31.42**	**119**	P	**P**	**03 39 05.5**	**-1.2**
	comp=Z,22nm,0.8s,baz=296,slow=9.7,SNR=60						
WRA				PcP	**PcP**	**03 41 59.6**	**+0.2**
	comp=Z,4.9nm,1.0s,baz=302,slow=2.0,SNR=6.3						
WRA				LR	LR	03 52 19.1	
	comp=Z,271nm,21.0s,baz=199,slow=37						
	comp=Z,22nm,0.8s						
WRA	**Warramunga Arr**	**31.42**	**119**	P	**P**	**03 39 05.4**	**-1.2**
WRAB	**Tennant Creek**	**31.43**	**119**	P	**P**	**03 39 05.3**	**-1.4**
WRAB				IAmb	IAmb	03 39 09.3	
	comp=Z,41nm,1.0s						
WRAB	**Tennant Creek**	**31.43**	**119**	P	**P**	**03 39 05.3**	**-1.4**
WRAB				pmax	pmax		
	comp=Z,41nm,1.0s						
WRAB	**Tennant Creek**	**31.43**	**119**	P	**P**	**03 39 06.3**	**-0.4**
WB2	**Warramunga Arr**	**31.43**	**119**	P	**P**	**03 39 05.8**	**-1.0**
	baz=31						
WB2	**Warramunga Arr**	**31.43**	**119**	P	**P**	**03 39 05.0**	**-1.8**
WB2				IAmb	IAmb	03 39 07.1	
	comp=Z,48nm,1.1s						
WR0	**Warramunga Arr**	**31.60**	**119**	P	**P**	**03 39 07.2**	**-1.0**
WR0				IAmb	IAmb	03 39 08.8	
	comp=Z,39nm,0.9s						
GYA	**Guiyang**	**32.30**	**2**	⇑*iP*	**P**	**03 39 15.5**	**+1.1**
GYA				pP	pP	03 39 28.3	+1.1
GYA				S	**S**	**03 44 25.5**	**+0.7**
GYA				pmax	pmax		
	comp=Z,14nm,0.9s						
GYA				pmax	pmax		
	comp=Z,200nm,5.7s						
GYA				LR	LR		
	comp=Z,1µm,10.0s						
GYA				LR	LR		
	comp=Z,1µm,12.9s						
GYA				LR	LR		
	comp=Z,2µm,10.8s						
ASAR	**Alice Springs**	**32.63**	**126**	P	**P**	**03 39 16.9**	**-0.4**
	comp=Z,46nm,1.1s,baz=299,slow=8.0,SNR=108						
ASAR				PcP	**PcP**	**03 42 03.2**	**+0.6**
	comp=Z,11nm,1.1s,baz=316,slow=2.6,SNR=10						
ASAR				S	**S**	**03 44 29.3**	**-0.7**
	comp=Z,2.0nm,1.0s,baz=301,slow=16,SNR=5.4						
ASAR				LR	LR	03 53 15.6	
	comp=Z,280nm,21.2s,baz=323,slow=38						
	comp=Z,46nm,1.1s						
ASAR	**Alice Springs**	**32.63**	**126**	P	**P**	**03 39 16.3**	**-1.0**
ASAR				PcP	**PcP**	**03 42 02.9**	**+0.2**
ASAR	**Alice Springs**	**32.63**	**126**	P	**P**	**03 39 16.3**	**-1.0**
ASAR						03 42 02.9	
AS31	**Alice Springs**	**32.63**	**126**	P	**P**	**03 39 16.0**	**-1.3**
AS31					**PcP**	**03 42 02.0**	**-0.7**
SSLB	**Suanglung**	**33.32**	**27**	P	**P**	**03 39 23.7**	**+0.5**
SSLB	**Suanglung**	**33.32**	**27**	P	**P**	**03 39 25.6**	**+2.4**
SHL	**Shillong**	**33.99**	**338**	P	**P**	**03 39 26.5**	**-2.7**
SHL				PcP	**PcP**	**03 42 05.5**	**-1.0**
HYBB	**Hyderabad (bro**	**35.22**	**312**	*eP*	**P**	**03 39 40.2**	**+0.4**
HYBB				*eS*	**S**	**03 45 14.1**	**+3.9**
OOD	**Oodnadatta**	**36.06**	**130**	P	**P**	**03 39 47.2**	**+0.3**
MULG	**Mulgathing**	**36.25**	**135**	P	**P**	**03 39 49.0**	**+0.5**
QIS	**Mount Isa**	**36.27**	**117**	P	**P**	**03 39 48.2**	**-0.6**
	baz=36,SNR=22						
QIS	**Mount Isa**	**36.27**	**117**	P	**P**	**03 39 48.7**	**-0.1**
ENH	**Enshi**	**36.29**	**6**	P	**P**	**03 39 47.6**	**-1.2**
CD2	**Chengdu**	**36.74**	**358**	P	**P**	**03 39 52.5**	**-0.1**
CD2				PP	**PP**	**03 41 21.8**	**+4.7**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CD2				pmax	pmax		
	comp=Z,140nm,5.5s						
CD2				LR	LR		
	comp=Z,1µm,12.2s						
CD2				LR	LR		
	comp=Z,2µm,10.2s						
WHN	**Wuhan**	**37.36**	**13**	P	P	03 40 03.0	+5.2
COEN	**Coen**	**38.07**	**105**	P	**P**	**03 40 03.2**	**-1.0**
	baz=38,SNR=10						
COEN	**Coen**	**38.07**	**105**	P	**P**	**03 40 01.4**	**-2.8**
COEN				IAmb	IAmb	03 40 04.1	
	comp=Z,103nm,1.1s						
COEN	**Coen**	**38.07**	**105**	P	**P**	**03 40 03.7**	**-0.5**
LCRK	**Leigh Creek**	**39.33**	**132**	P	**P**	**03 40 15.5**	**+1.0**
	comp=Z,54nm,1.2s						
SSE	**Sheshan**	**39.89**	**21**	P	**P**	**03 40 20.0**	**+0.9**
SSE				S	S	03 46 29.5	+8.9
SSE				pmax	pmax		
	comp=Z,14nm,0.8s						
SSE				pmax	pmax		
	comp=Z,130nm,4.1s						
SSE				LR	LR		
	comp=Z,160nm,13.6s						
SSE				LR	LR		
	comp=Z,200nm,13.7s						
MTSU	**Mount Surprise**	**39.90**	**111**	P	**P**	**03 40 19.7**	**+0.2**
	baz=40,SNR=7.9						
MTSU	**Mount Surprise**	**39.90**	**111**	P	**P**	**03 40 19.8**	**+0.3**
INKA	**Innaminka**	**39.97**	**127**	P	**P**	**03 40 20.9**	**+1.1**
XAN	**Xi'an**	**39.97**	**5**	⇑P	**P**	**03 40 18.8**	**-1.0**
XAN				S	**S**	**03 46 17.0**	**-4.8**
XAN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,150nm,5.4s						
XAN				LR	LR		
	comp=Z,560nm,15.2s						
XAN				LR	LR		
	comp=Z,2µm,16.2s						
XAN				LR	LR		
	comp=Z,770nm,13.0s						
NJ2	**Nanjing**	**39.99**	**18**	*eP*	**P**	**03 40 22.0**	**+2.2**
NJ2				S	**S**	**03 46 27.8**	**+5.9**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,260nm,7.7s						
NJ2				LR	LR		
	comp=Z,850nm,11.1s						
NJ2				LR	LR		
	comp=Z,620nm,12.8s						
NJ2				LR	LR		
	comp=Z,1µm,11.6s						
WHYH	**Whyalla**	**40.28**	**136**	P	**P**	**03 40 23.7**	**+1.4**
	comp=Z,24nm,1.0s						
NAPP	**Napperby**	**40.76**	**136**	P	**P**	**03 40 27.9**	**+1.6**
	comp=Z,40nm,1.0s						
LYN	**LuoYang**	**40.90**	**9**	*eP*	**P**	**03 40 27.5**	**+0.2**
LYN				PP	**PnPn**	**03 42 07.0**	**-0.1**
LYN				S	**S**	**03 46 35.8**	**+0.3**
LYN				pmax	pmax		
	comp=Z,200nm,6.7s						
LYN				LR	LR		
	comp=Z,270nm,12.6s						
LYN				LR	LR		
	comp=Z,830nm,13.9s						
LYN				LR	LR		
	comp=Z,790nm,13.3s						
HTT	**Hallett**	**41.44**	**136**	P	**P**	**03 40 32.7**	**+0.8**
	baz=41,SNR=5.6						
HTT	**Hallett**	**41.44**	**136**	P	**P**	**03 40 32.8**	**+0.8**
PMG	**Port Moresby**	**41.59**	**97**	LR	LR	03 59 57.2	
	comp=Z,149nm,21.8s,baz=193,slow=39						
PMG	**Port Moresby**	**41.59**	**97**	P	**P**	**03 40 30.4**	**-3.0**
PMG				IAmb	IAmb	03 40 47.4	
	comp=Z,49nm,0.9s						
PMG	**Port Moresby**	**41.59**	**97**	P	**P**	**03 40 30.4**	**-3.0**
PMG				pmax	pmax		
	comp=Z,49nm,1.0s						
PMG	**Port Moresby**	**41.59**	**97**	P	**P**	**03 40 36.3**	**+2.9**
	comp=Z,57nm,1.2s						
LZH	**Lanzhou**	**41.89**	**358**	*eP*	**P**	**03 40 36.3**	**+0.6**
LZH				pP	pP	03 40 50.5	+1.6
LZH				PP	**PnPn**	**03 42 16.5**	**-2.3**
LZH				S	**S**	**03 46 47.8**	**-2.7**
LZH				pmax	pmax		
	comp=Z,31nm,1.3s						
LZH				LR	LR		
	comp=Z,1µm,13.7s						
LZH				LR	LR		
	comp=Z,1µm,13.5s						
LZH				LR	LR		
	comp=Z,980nm,15.8s						
TWOA	**Tennyson Woods**	**42.11**	**138**	P	**P**	**03 40 38.3**	**+0.9**
CTA	**Charters Tower**	**42.13**	**113**	LR	LR	03 59 19.0	
	comp=Z,231nm,19.7s,baz=264,slow=38						
CTA	**Charters Tower**	**42.13**	**113**	P	**P**	**03 40 38.4**	**+0.6**
	comp=Z,58nm,1.2s						
CTAO	**Charters Tower**	**42.13**	**113**	P	**P**	**03 40 37.2**	**-0.5**
CTAO				IAmb	IAmb	03 40 41.2	
	comp=Z,51nm,1.0s						
CTAO	**Charters Tower**	**42.13**	**113**	P	**P**	**03 40 37.2**	**-0.5**
CTAO				pmax	pmax		
	comp=Z,51nm,1.0s						
CTAO	**Charters Tower**	**42.13**	**113**	P	**P**	**03 40 36.6**	**-1.2**
QLP	**Quilpie**	**42.34**	**123**	P	**P**	**03 40 40.5**	**+1.1**
	baz=42,SNR=3.2						
QLP	**Quilpie**	**42.34**	**123**	P	**P**	**03 40 41.4**	**+2.0**
STKA	**Stephens Creek**	**42.55**	**132**	P	**P**	**03 40 41.7**	**+0.7**
	comp=Z,74nm,0.8s,baz=303,slow=8.7,SNR=83						
STKA				LR	LR	04 00 37.1	
	comp=Z,156nm,21.1s,baz=273,slow=39						
	comp=Z,74nm,0.8s						
STKA	**Stephens Creek**	**42.55**	**132**	P	**P**	**03 40 41.4**	**+0.4**
	baz=42,SNR=30						
STKA	**Stephens Creek**	**42.55**	**132**	P	**P**	**03 40 40.6**	**-0.4**
STKA	**Stephens Creek**	**42.55**	**132**	P	**P**	**03 40 40.6**	**-0.4**
STKA				pmax	pmax		
	comp=Z,17nm,0.9s						
STKA	**Stephens Creek**	**42.55**	**132**	P	**P**	**03 40 42.3**	**+1.3**
GOMU	**GeErMu**	**43.12**	**348**	P	**P**	**03 40 44.8**	**-1.1**
GOMU				PP	**PcP**	**03 42 33.0**	**-2.1**
GOMU				PcP	PP	03 42 35.3	+8.4
GOMU				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GOMU				pmax	pmax		
	comp=Z,88nm,5.8s						
GOMU				LR	LR		
	comp=Z,520nm,12.0s						
GOMU				LR	LR		
	comp=Z,520nm,12.3s						
GOMU				LR	LR		
	comp=Z,460nm,11.2s						
HNS	**HongShan**	**44.06**	**11**	*eP*	**P**	**03 40 55.0**	**+2.0**
HNS				S	**S**	**03 47 24.3**	**+2.3**
HNS				LR	LR		
	comp=Z,200nm,17.1s						
HNS				LR	LR		
	comp=Z,510nm,15.1s						
HNS				LR	LR		
	comp=Z,500nm,13.3s						
ARPS	**Mount Arapiles**	**45.28**	**138**	P	**P**	**03 41 04.2**	**+1.4**
	baz=45,SNR=8.5						
ARPS	**Mount Arapiles**	**45.28**	**138**	P	**P**	**03 41 04.1**	**+1.4**
GTA	**Gaotai**	**45.47**	**354**	⇓P	**P**	**03 41 04.3**	**-0.1**
GTA				pP	pP	03 41 17.5	-0.2
GTA				sP	sP	03 41 23.8	+0.3
GTA				PcP	**PcP**	**03 42 43.0**	**+0.3**
GTA				PP	**PP**	**03 42 53.3**	**+1.7**
GTA				pmax	pmax		
	comp=Z,18nm,1.3s						
GTA				pmax	pmax		
	comp=Z,120nm,5.5s						
GTA				LR	LR		
	comp=Z,380nm,20.0s						
GTA				LR	LR		
	comp=Z,700nm,18.5s						
GTA				LR	LR		
	comp=Z,230nm,18.2s						
CMSA	**Cobar Meteorol**	**45.49**	**129**	P	**P**	**03 41 05.2**	**+0.7**
	baz=45,SNR=25						
CMSA	**Cobar Meteorol**	**45.49**	**129**	P	**P**	**03 41 05.1**	**+0.5**
JNU	**Nakatsue**	**45.86**	**30**	P	**P**	**03 41 07.3**	**-0.2**
JNU				IAmb	IAmb	03 41 09.5	
	comp=Z,38nm,1.1s						
JNU	**Nakatsue**	**45.86**	**30**	P	**P**	**03 41 09.4**	**+1.9**
	comp=Z,33nm,1.3s						
RMQ	**Roma**	**46.11**	**121**	P	**P**	**03 41 10.2**	**+0.7**
	baz=46,SNR=8.0						
RMQ	**Roma**	**46.11**	**121**	P	**P**	**03 41 10.8**	**+1.2**
KRVT	**Keravat (AS076**	**46.55**	**90**	LR	LR	04 01 54.5	
	comp=Z,103nm,21.9s,baz=119,slow=38						
BTO	**Baotou**	**46.58**	**5**	*eP*	**P**	**03 41 13.3**	**+0.2**
BJI	**Beijing**	**46.90**	**11**	P	**P**	**03 41 15.8**	**+0.4**
BJI				S	**S**	**03 48 06.8**	**+4.0**
BJI				pmax	pmax		
	comp=Z,8.0nm,1.3s						
BJI				pmax	pmax		
	comp=Z,86nm,3.8s						
BJI				LR	LR		
	comp=Z,210nm,13.8s						
BJI				LR	LR		
	comp=Z,520nm,12.9s						
HHC	**Hu-ho-hao-te**	**46.98**	**6**	*eP*	P	03 41 21.5	+5.3
HHC				pmax	pmax		
	comp=Z,21nm,0.8s						
HHC				pmax	pmax		
	comp=Z,120nm,5.1s						
HHC				LR	LR		
	comp=Z,2µm,12.1s						
HHC				LR	LR		
	comp=Z,810nm,12.7s						
HHC				LR	LR		
	comp=Z,2µm,13.3s						
BRAT	**Ballarat**	**47.10**	**137**	P	**P**	**03 41 19.0**	**+1.9**
KSCHJ	**Chungju**	**47.63**	**25**	P	**P**	**03 41 20.9**	**-0.2**
KSCHJ				IAmb	IAmb	03 41 24.9	
	comp=Z,30nm,1.2s						
GEXS	**Deakin Univers**	**47.69**	**138**	P	**P**	**03 41 24.5**	**+2.8**
EIDS	**Eidsvold**	**47.78**	**119**	P	**P**	**03 41 23.3**	**+0.6**
	baz=48,SNR=5.8						
EIDS	**Eidsvold**	**47.78**	**119**	P	**P**	**03 41 22.2**	**-0.5**
EIDS				IAmb	IAmb	03 41 24.2	
	comp=Z,44nm,1.1s						
EIDS	**Eidsvold**	**47.78**	**119**	P	**P**	**03 41 23.9**	**+1.3**
	comp=Z,36nm,1.4s						
KSAR	**Wonju Array Be**	**48.08**	**24**	P	**P**	**03 41 24.5**	**-0.1**
KSAR	**Wonju Array Be**	**48.08**	**24**	P	**P**	**03 41 24.5**	**-0.1**
KSRS	**Korea Array**	**48.11**	**24**	P	**P**	**03 41 24.3**	**-0.5**
	comp=Z,12nm,1.1s,baz=203,slow=8.4,SNR=31						
	comp=Z,12nm,1.1s						
TOO	**Toolangi**	**48.17**	**137**	P	**P**	**03 41 26.0**	**+0.5**
	baz=48,SNR=5.9						
TOO	**Toolangi**	**48.17**	**137**	P	**P**	**03 41 25.8**	**+0.3**
TOO				IAmb	IAmb	03 41 30.8	
	comp=Z,46nm,1.1s						
TOO	**Toolangi**	**48.17**	**137**	P	**P**	**03 41 25.8**	**+0.3**
TOO				pmax	pmax		
	comp=Z,46nm,1.1s						
TOO	**Toolangi**	**48.17**	**137**	P	**P**	**03 41 28.4**	**+2.9**
JHS	**Saijyo**	**48.48**	**31**	P	**P**	**03 41 26.8**	**-1.0**
JHS				IAmb	IAmb	03 41 29.3	
	comp=Z,24nm,1.0s						
JCJ	**Chichijima**	**48.53**	**46**	LR	LR	04 02 51.8	
	comp=Z,90nm,19.4s,baz=104,slow=37						
CAN	**Canberra**	**49.61**	**132**	P	**P**	**03 41 37.7**	**+1.1**
CAN				IAmb	IAmb	03 41 41.0	
	comp=Z,37nm,1.0s						
CAN	**Canberra**	**49.61**	**132**	P	**P**	**03 41 37.7**	**+1.1**
CAN				pmax	pmax		
	comp=Z,37nm,1.0s						
CAN	**Canberra**	**49.61**	**132**	P	**P**	**03 41 38.2**	**+1.6**
MGCD	**Mangrove Creek**	**50.36**	**129**	P	**P**	**03 41 43.7**	**+1.5**
	baz=50,SNR=5.3						
WMQ	**Urumqi**	**52.09**	**344**	*eP*	**P**	**03 41 54.5**	**-0.5**
WMQ				pmax	pmax		
	comp=Z,29nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,140nm,5.3s						
WMQ				LR	LR		
	comp=Z,430nm,14.5s						
WMQ				LR	LR		
	comp=Z,250nm,17.3s						
WMQ				LR	LR		
	comp=Z,160nm,12.7s						
MJAR	**Matsushiro Arr**	**52.34**	**34**	P	**P**	**03 41 55.2**	**-1.8**
	comp=Z,6.2nm,1.1s,baz=218,slow=8.4,SNR=7.8						
MJAR				LR	LR	04 06 36.4	
	comp=Z,105nm,18.6s,baz=232,slow=39

SONM	**Songino Array**	**53.62**	**1**	P	**P**	**03 42 06.2**	**-0.1**
SONM				pmax	pmax		
	comp=Z,18nm,1.2s						
ULN	**Ulaanbaatar**	**53.66**	**1**	P	**P**	**03 42 05.5**	**-1.1**
ULN	**Ulaanbaatar**	**53.66**	**1**	P	**P**	**03 42 05.6**	**-1.1**
ULN				pmax	pmax		
	comp=Z,13nm,1.2s						
ULN	**Ulaanbaatar**	**53.66**	**1**	P	**P**	**03 42 06.5**	**-0.1**
TARG	**Taragay, Kyrgy**	**53.74**	**335**	P	**P**	**03 42 06.4**	**-1.3**
TARG	**Taragay, Kyrgy**	**53.74**	**335**	P	**P**	**03 42 06.4**	**-1.3**
TARG				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KDJ	**Kajisay**	**54.34**	**334**	P	**P**	**03 42 10.3**	**-1.4**
KDJ				IAmb	IAmb	03 42 12.1	
	comp=Z,30nm,1.3s						
KDJ	**Kajisay**	**54.34**	**334**	P	**P**	**03 42 10.3**	**-1.4**
KDJ				pmax	pmax		
	comp=Z,30nm,1.3s						
PDGK	**Podgornoye**	**54.39**	**337**	P	**P**	**03 42 10.1**	**-1.9**
SMDO	**Samad**	**54.47**	**304**	P	**P**	**03 42 14.1**	**+1.2**
SMDO				P	**P**	**03 42 14.1**	**+1.2**
BIDO	**Bidbid**	**54.60**	**304**	P	**P**	**03 42 16.0**	**+2.2**
	SNR=9.3						
BIDO				P	**P**	**03 42 16.0**	**+2.2**
	SNR=9.3						
MDJ	**Mudanjiang**	**54.92**	**21**	P	**P**	**03 42 15.5**	**-0.1**
MDJ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,79nm,3.5s						
BNX	**BinXian**	**55.17**	**19**	⇓P	**P**	**03 42 17.3**	**-0.1**
BNX				pmax	pmax		
	comp=Z,39nm,1.0s						
BOOM	**Boomskoye usch**	**55.17**	**334**	P	**P**	**03 42 16.1**	**-1.6**
BOOM	**Boomskoye usch**	**55.17**	**334**	P	**P**	**03 42 16.1**	**-1.6**
BOOM				pmax	pmax		
	comp=Z,12nm,1.1s						
GAR	**Garm**	**55.27**	**327**	P	**P**	**03 42 15.7**	**-2.8**
GAR				IAmb	IAmb	03 42 18.6	
	comp=Z,35nm,1.1s						
HOQ	**Hoqain**	**55.30**	**304**	P	**P**	**03 42 22.0**	**+3.2**
	SNR=7.2						
HOQ				P	**P**	**03 42 22.0**	**+3.2**
	SNR=7.2						
USA0B	**Ussuriysk Arra**	**55.46**	**23**	P	**P**	**03 42 18.6**	**-0.9**
USA0B				IAmb	IAmb	03 42 20.8	
	comp=Z,41nm,1.2s						
USA0B	**Ussuriysk Arra**	**55.46**	**23**	P	**P**	**03 42 18.7**	**-0.9**
USA0B				pmax	pmax		
	comp=Z,41nm,1.2s						
USRK	**Ussuriysk Ar.**	**55.46**	**23**	P	**P**	**03 42 18.6**	**-0.9**
	comp=Z,22nm,1.0s,baz=218,slow=5.7,SNR=38						
	comp=Z,22nm,1.0s						
USRK	**Ussuriysk Ar.**	**55.46**	**23**	P	**P**	**03 42 19.0**	**-0.5**
USRK	**Ussuriysk Ar.**	**55.46**	**23**	P	**P**	**03 42 19.0**	**-0.5**
CHGR	**Chuyangaron**	**55.66**	**326**	P	**P**	**03 42 18.2**	**-3.0**
CHGR	**Chuyangaron**	**55.66**	**326**	P	**P**	**03 42 18.3**	**-3.0**
CHGR				pmax	pmax		
	comp=Z,88nm,1.3s						
BTK	**Batken**	**55.77**	**328**	P	**P**	**03 42 17.5**	**-4.5**
BTK	**Batken**	**55.77**	**328**	P	**P**	**03 42 17.5**	**-4.5**
BTK				pmax	pmax		
	comp=Z,20nm,1.3s						
JASK	**Jask - Hormozg**	**55.88**	**307**	P	**P**	**03 42 25.0**	**+2.0**
AAK	**Ala-Archa**	**55.93**	**333**	P	**P**	**03 42 21.9**	**-1.3**
AAK	**Ala-Archa**	**55.93**	**333**	P	**P**	**03 42 21.9**	**-1.3**
AAK				pmax	pmax		
	comp=Z,20nm,1.1s						
SOHO	**SOHO**	**56.18**	**304**	P	**P**	**03 42 25.8**	**+0.7**
SOHO				P	**P**	**03 42 25.8**	**+0.7**
SOHO	**SOHO**	**56.18**	**304**	P	**P**	**03 42 25.6**	**+0.5**
ZAK	**Zakamensk**	**56.19**	**358**	*e*P	**P**	**03 42 23.6**	**-1.2**
ZAK				*e*		03 43 19.4	
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
MK31	**Makanchi Array**	**56.40**	**341**	P	**P**	**03 42 24.4**	**-1.8**
MK31	**Makanchi Array**	**56.40**	**341**	P	**P**	**03 42 24.4**	**-1.8**
MK31				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MKAR	**Makanchi Array**	**56.40**	**341**	P	**P**	**03 42 24.5**	**-1.7**
	comp=Z,8.6nm,0.9s,baz=141,slow=7.8,SNR=40						
	comp=Z,8.6nm,0.9s						
MKAR	**Makanchi Array**	**56.40**	**341**	P	**P**	**03 42 24.1**	**-2.2**
MAKZ	**Makanchi**	**56.51**	**341**	P	**P**	**03 42 25.1**	**-2.0**
MAKZ	**Makanchi**	**56.51**	**341**	P	**P**	**03 42 25.1**	**-2.0**
MAKZ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KNGR	**Kungurtug, Tuv**	**56.78**	**354**	*i* P	**P**	**03 42 28.4**	**-0.6**
ALNE	**Al Ain**	**56.80**	**304**	P	**P**	**03 42 32.4**	**+2.9**
	SNR=6.6						
UOSS	**Minazif**	**56.81**	**305**	P	**P**	**03 42 30.4**	**+0.8**
ASHO	**Ashiyiah**	**56.81**	**305**	P	**P**	**03 42 30.1**	**+0.5**
HATD	**Hatta, Dubai**	**56.81**	**305**	P	**P**	**03 42 30.7**	**+1.1**
MSFE	**Esma-Masafi**	**57.02**	**305**	P	**P**	**03 42 32.4**	**+1.2**
HRA	**Herat**	**57.15**	**318**	P	**P**	**03 42 31.3**	**-0.8**
BANOM	**Banah**	**57.16**	**306**	P	**P**	**03 42 33.4**	**+1.3**
FAQ	**Al Faqa, Dubai**	**57.22**	**304**	P	**P**	**03 42 34.0**	**+1.5**
	SNR=10						
FAQ				P	**P**	**03 42 34.0**	**+1.5**
	SNR=10						
FAQ	**Al Faqa, Dubai**	**57.22**	**304**	*i* P	**P**	**03 42 33.3**	**+0.9**
	SNR=17						
NAZ	**Nazwa, Dubai**	**57.27**	**305**	P	**P**	**03 42 35.0**	**+2.2**
	SNR=7.2						
NAZ	**Nazwa, Dubai**	**57.27**	**305**	*i* P	**P**	**03 42 33.8**	**+1.0**
	SNR=9.8						
ASUD	**Al Ashush, Dub**	**57.38**	**304**	P	**P**	**03 42 37.0**	**+3.3**
	SNR=6.9						
ASUD				P	**P**	**03 42 37.0**	**+3.3**
	SNR=6.9						
ASUD	**Al Ashush, Dub**	**57.38**	**304**	*i* P	**P**	**03 42 34.9**	**+1.3**
	SNR=9.4						
AJN	**Ajban**	**57.64**	**304**	P	**P**	**03 42 37.8**	**+2.4**
	SNR=5.2						
KKAR	**Karatay Array**	**58.17**	**331**	P	**P**	**03 42 36.9**	**-2.0**
KKAR	**Karatay Array**	**58.17**	**331**	P	**P**	**03 42 36.9**	**-2.0**
MZR	**Muzera**	**58.27**	**302**	P	**P**	**03 42 41.8**	**+1.9**
	SNR=6.3						
MZR				P	**P**	**03 42 41.8**	**+1.9**
	SNR=6.3						
MZR	**Muzera**	**58.27**	**302**	*i* P	**P**	**03 42 41.2**	**+1.3**
	SNR=10						
VOI	**Vohitsoka**	**58.61**	**248**	P	P	03 42 47.6	+5.2
KOUNC	**Koumac, New Ca**	**58.89**	**110**	P	**P**	**03 42 43.2**	**-1.1**
KOUNC				IAmb	IAmb	03 42 45.9	
	comp=Z,54nm,1.1s						
JRN	**Qarnain Island**	**59.57**	**303**	P	**P**	**03 42 49.4**	**+0.6**
JRN				P	**P**	**03 42 49.4**	**+0.6**
KLR	**Kul'dur**	**59.65**	**20**	LR	LR	04 08 13.7	
	comp=Z,125nm,20.3s,baz=228,slow=36						
ASAJ	**Asahikawa**	**60.14**	**30**	LR	LR	04 10 34.3	
	comp=Z,56nm,20.0s,baz=144,slow=38						
CASY	**Casey**	**60.28**	**178**	P	**P**	**03 42 53.2**	**+0.2**
CASY				IAmb	IAmb	03 42 57.4	
	comp=Z,22nm,1.4s						
KURBB	**Kurchatov Arra**	**60.96**	**341**	LR	LR	04 13 04.5	
	comp=Z,160nm,18.7s,baz=156,slow=40						
KURBB	**Kurchatov Arra**	**60.96**	**341**	P	**P**	**03 42 55.3**	**-2.5**
KURK	**Kurchatov**	**61.01**	**341**	P	**P**	**03 42 56.8**	**-1.4**
KURK				IAmb	IAmb	03 42 57.4	
	comp=Z,17nm,1.1s						
KURK	**Kurchatov**	**61.01**	**341**	P	**P**	**03 42 56.8**	**-1.4**
KURK				pmax	pmax		
	comp=Z,17nm,1.1s						
DZM	**Mont Dzumac**	**61.04**	**112**	P	**P**	**03 42 57.5**	**-1.7**
OTUK	**Ortayu**	**61.29**	**335**	P	**P**	**03 42 57.4**	**-2.8**
LIFNC	**LIFOU**	**61.67**	**110**	P	**P**	**03 43 02.4**	**-0.8**
SAKB	**Bahrain**	**61.90**	**304**	P	**P**	**03 43 05.9**	**+1.3**
GEYT	**Alibeck**	**61.91**	**319**	P	**P**	**03 43 03.8**	**-0.8**
	comp=Z,21nm,0.8s,baz=187,slow=12,SNR=29						
GEYT				LR	LR	04 12 14.6	
	comp=Z,87nm,19.8s,baz=135,slow=38						
	comp=Z,21nm,0.8s						
GEYT	**Alibeck**	**61.91**	**319**	P	**P**	**03 43 03.9**	**-0.8**
GEYT				IAmb	IAmb	03 43 05.8	
	comp=Z,51nm,1.2s						
GYA0B	**ALIBECK ARRAY**	**61.91**	**319**	P	**P**	**03 43 03.9**	**-0.7**
ZAA0	**Zalesovo Array**	**62.17**	**346**	P	**P**	**03 43 03.6**	**-2.4**
ZAA0				IAmb	IAmb	03 43 05.5	
	comp=Z,21nm,1.0s						
ZALV	**Zalesovo Beam**	**62.17**	**346**	P	**P**	**03 43 04.1**	**-1.9**
	comp=Z,15nm,0.9s,baz=151,slow=4.2,SNR=40						
ZALV				LR	LR	04 11 39.3	
	comp=Z,145nm,18.7s,baz=150,slow=38						
	comp=Z,15nm,0.9s						
ZALV	**Zalesovo Beam**	**62.17**	**346**	P	**P**	**03 43 03.9**	**-2.1**
ZALV	**Zalesovo Beam**	**62.17**	**346**	*i* P	**P**	**03 43 04.0**	**-1.9**
ZALV				pmax	pmax		
	comp=Z,16nm,0.9s						
YSS	**Yuzh-Sakhalins**	**62.27**	**28**	P	**P**	**03 43 06.0**	**-0.8**
YSS	**Yuzh-Sakhalins**	**62.27**	**28**	*e*P	**P**	**03 43 06.3**	**-0.5**
YSS				pmax	pmax		
	comp=Z,40nm,1.4s						
ZEA	**Zeya**	**62.33**	**15**	*e*P	**P**	**03 43 07.0**	**0.0**
ZEA				pmax	pmax		
	comp=Z,20nm,1.1s						
ZEA				MLR	MLR		
	comp=E,100nm,16.0s						
ZEA				MLR	MLR		
	comp=N,100nm,13.0s						
ZEA				MLR	MLR		
	comp=Z,200nm,14.0s						
BOD	**Bodaibo**	**64.00**	**5**	*e*P	**P**	**03 43 16.7**	**-1.3**
BOD				pmax	pmax		
	comp=Z,229nm,1.6s						
RAYN	**Ar Rayn**	**65.30**	**299**	P	**P**	**03 43 27.4**	**+0.1**
RAYN				IAmb	IAmb	03 43 29.6	
	comp=Z,34nm,1.2s						
RAYN	**Ar Rayn**	**65.30**	**299**	P	**P**	**03 43 27.4**	**+0.1**
RAYN				pmax	pmax		
	comp=Z,33nm,1.2s						
RAYN	**Ar Rayn**	**65.30**	**299**	*i* P	**P**	**03 43 27.7**	**+0.4**
	SNR=18						
BVAR	**Borovoye Array**	**65.81**	**338**	LR	LR	04 16 58.9	
	comp=Z,113nm,18.7s,baz=17,slow=40						
DCZ	**Deep Cove**	**66.16**	**137**	P	**P**	**03 43 31.1**	**-1.3**
DCZ				IAmb	IAmb	03 43 40.5	
	comp=Z,31nm,1.1s						
AB31	**Akbulak array**	**67.71**	**330**	*i* P	**P**	**03 43 39.7**	**-2.4**
ABKAR	**Akbulak array**	**67.71**	**330**	P	**P**	**03 43 40.3**	**-1.7**
ABKAR				IAmb	IAmb	03 43 41.8	
	comp=Z,32nm,1.2s						
MAW	**Mawson**	**67.84**	**196**	P	**P**	**03 43 44.7**	**+2.1**
	comp=Z,12nm,0.8s,baz=49,slow=5.1,SNR=20						
MAW				LR	LR	04 07 36.8	
	comp=Z,117nm,20.4s,baz=8.5,slow=31						
	comp=Z,12nm,0.8s						
MAW	**Mawson**	**67.84**	**196**	P	**P**	**03 43 44.5**	**+2.0**
	baz=68,SNR=10						
KMBO	**Kilima Mbogo**	**68.06**	**271**	P	**P**	**03 43 46.4**	**+1.0**
	comp=Z,2.2nm,0.6s,baz=48,slow=7.8,SNR=5.1						
	comp=Z,2.2nm,0.6s						
KMBO	**Kilima Mbogo**	**68.06**	**271**	P	**P**	**03 43 44.0**	**-1.4**
KMBO				IAmb	IAmb	03 44 31.4	
	comp=Z,26nm,1.9s						
KMBO	**Kilima Mbogo**	**68.06**	**271**	P	**P**	**03 43 44.0**	**-1.4**
KMBO				pmax	pmax		
	comp=Z,26nm,1.9s						
RPZ	**Rata Peaks**	**68.42**	**135**	LR	LR	04 13 41.5	
	comp=Z,203nm,18.9s,baz=268,slow=36						
RPZ	**Rata Peaks**	**68.42**	**135**	P	**P**	**03 43 46.9**	**+0.2**
QRZ	**Quartz Range**	**68.90**	**131**	P	**P**	**03 43 49.8**	**0.0**
AKTO	**Aktyubinsk**	**69.42**	**330**	P	**P**	**03 43 51.3**	**-1.4**
	comp=Z,5.6nm,1.1s,baz=117,slow=12,SNR=6.1						
	comp=Z,5.6nm,1.1s						
AKTO	**Aktyubinsk**	**69.42**	**330**	P	**P**	**03 43 50.4**	**-2.3**
YAK	**Yakutsk**	**70.40**	**12**	LR	LR	04 16 10.9	
	comp=Z,99nm,18.3s,baz=269,slow=37						
YAK	**Yakutsk**	**70.40**	**12**	*e*P	**P**	**03 43 56.9**	**-1.5**
YAK				*e**PP	**pP**	**03 44 10.5**	**-2.0**
YAK				*e*		03 44 16.8	
YAK				*e*S	**S**	**03 53 06.3**	**-0.9**
YAK				*e**SS	**sS**	**03 53 31.5**	**+0.7**
YAK				*e*		03 53 58.6	
YAK				*e*SS	**SS**	**03 57 37.0**	**-2.0**
YAK				pmax	pmax		
	comp=Z,32nm,0.9s						
YAK				pmax	pmax		
	comp=N,10.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.3s						
YAK				smax	smax		
	comp=N,55nm,3.4s						
LODK	**Lodwar**	**70.47**	**276**	P	**P**	**03 43 59.2**	**-0.9**
MAK	**Makhachkala**	**71.43**	**319**	*e*P	**P**	**03 44 03.3**	**-1.8**
MAK				*e*		03 46 41.3	
MAK				*e*PPP	PPP	03 48 31.5	
MAK				*e*S	**S**	**03 53 19.8**	**-0.1**
MAK				*e*SS	**SS**	**03 57 57.1**	**+1.4**
MAK				pmax	pmax		
	comp=Z,67nm,1.0s						
BKZ	**Black Stump Fm**	**71.65**	**129**	P	**P**	**03 44 06.6**	**-0.1**
BKZ				IAmb	IAmb	03 44 07.6	
	comp=Z,34nm,0.9s						
BFZ	**Birch Farm**	**71.67**	**131**	P	**P**	**03 44 06.2**	**-0.5**
DDFL	**Dedoflistskaro**	**71.67**	**317**	P	**P**	**03 44 08.5**	**+1.7**
URZ	**Urewera**	**72.02**	**128**	LR	LR	04 19 21.3	
	comp=Z,116nm,18.1s,baz=211,slow=39						
GNI	**Garni**	**72.07**	**315**	P	**P**	**03 44 09.4**	**+0.1**
	comp=Z,16nm,0.8s,baz=172,slow=2.7,SNR=17						
GNI				LR	LR	04 18 26.4	
	comp=Z,36nm,21.6s,baz=105,slow=38						
	comp=Z,16nm,0.8s						
GNI	**Garni**	**72.07**	**315**	P	**P**	**03 44 09.1**	**-0.2**
GNI				IAmb	IAmb	03 44 11.2	
	comp=Z,72nm,1.4s						
GNI	**Garni**	**72.07**	**315**	P	**P**	**03 44 09.1**	**-0.2**
GNI				pmax	pmax		
	comp=Z,72nm,1.4s						
GNI	**Garni**	**72.07**	**315**	P	**P**	**03 44 09.6**	**+0.3**
GNI	**Garni**	**72.07**	**315**	P	**P**	**03 44 09.6**	**+0.3**
SVE	**Sverdlovsk**	**72.42**	**336**	*e*P	**P**	**03 44 10.0**	**-0.8**
SVE				pmax	pmax		
	comp=Z,30nm,1.3s						
GEVA	**Gevas**	**72.54**	**313**	P	**P**	**03 44 11.0**	**-1.1**
GEVA				IAmb	IAmb	03 44 15.1	
	comp=Z,33nm,1.2s						
GROC	**Groznyy**	**72.66**	**319**	*e*P	**P**	**03 44 12.7**	**+0.2**
GROC				*e*		03 44 30.4	
GROC				*e*S	**S**	**03 53 33.0**	**-1.0**
GROC				*e**SS	**sS**	**03 54 02.3**	**+4.4**
GROC				pmax	pmax		
	comp=Z,94nm,1.0s						
ARU	**Arti**	**73.01**	**335**	LR	LR	04 18 40.2	
	comp=Z,120nm,21.1s,baz=154,slow=38						
ARU	**Arti**	**73.01**	**335**	P	**P**	**03 44 13.1**	**-1.1**
ARU	**Arti**	**73.01**	**335***c*	*i*P	**P**	**03 44 12.8**	**-1.5**
ARU						03 44 29.8	
ARU						03 46 51.4	
ARU				S	**S**	**03 53 38.6**	**+1.1**
ARU				SS	**SS**	**03 58 18.5**	**-0.8**
ARU				pmax	pmax		
	comp=Z,22nm,1.2s						
GURO	**Guroymak-BITLI**	**73.37**	**313**	P	**P**	**03 44 16.9**	**-0.1**
GURO				IAmb	IAmb	03 44 19.1	
	comp=Z,38nm,1.1s						
KARS	**Kars**	**73.42**	**315**	P	**P**	**03 44 17.0**	**-0.3**
KARS	**Kars**	**73.42**	**315**	P	**P**	**03 44 17.0**	**-0.3**
KARS				pmax	pmax		
	comp=Z,222nm,1.1s						
AKH	**Akhalkalaki**	**73.45**	**316**	P	**P**	**03 44 16.2**	**-1.3**
PEA0B	**Petropavlovsk-**	**73.56**	**30**	*i* P	**P**	**03 44 16.7**	**-0.9**
PETK	**Petropavlovsk-**	**73.56**	**30**	P	**P**	**03 44 16.6**	**-1.1**
	comp=Z,4.6nm,1.0s,baz=90,slow=3.0,SNR=5.4						
PETK				LR	LR	04 18 24.9	
	comp=Z,73nm,19.3s,baz=254,slow=37						
	comp=Z,4.6nm,1.0s						
ZEI	**Tsey**	**73.74**	**318**	*e*P	**P**	**03 44 18.8**	**-0.4**
ZEI				pmax	pmax		
	comp=Z,26nm,1.0s						
MARD	**Mardin**	**73.84**	**311**	P	**P**	**03 44 19.8**	**0.0**
ONI	**Oni**	**73.96**	**317**	P	**P**	**03 44 19.9**	**-0.4**
ONI				IAmb	IAmb	03 44 31.4	
	comp=Z,18nm,1.0s						
ONI	**Oni**	**73.96**	**317**	P	**P**	**03 44 19.9**	**-0.4**
ONI				pmax	pmax		
	comp=Z,18nm,1.0s						
MBAR	**Mbarara**	**74.59**	**271**	LR	LR	04 14 37.8	
	comp=Z,161nm,18.1s,baz=84,slow=34						
MBAR	**Mbarara**	**74.59**	**271**	P	**P**	**03 44 23.6**	**-1.1**
MBAR	**Mbarara**	**74.59**	**271**	P	**P**	**03 44 23.6**	**-1.1**
MBAR				pmax	pmax		
	comp=Z,15nm,1.1s						
KBZ	**Khabaz**	**74.79**	**318**	P	**P**	**03 44 25.3**	**+0.3**
	comp=Z,33nm,1.0s,baz=110,slow=4.2,SNR=46						
	comp=Z,33nm,1.0s						
KBZ	**Khabaz**	**74.79**	**318***ce*	P	**P**	**03 44 24.8**	**-0.2**
KBZ				pmax	pmax		
	comp=Z,59nm,1.1s						
KVAR	**Kislovodsk Arr**	**75.02**	**318**	P	**P**	**03 44 26.5**	**0.0**
	comp=Z,9.1nm,1.1s,baz=271,slow=24,SNR=14						
	comp=Z,9.1nm,1.1s						
KOPT	**Kop Dagi**	**75.02**	**314**	P	**P**	**03 44 26.7**	**-0.1**
KOPT				IAmb	IAmb	03 44 30.1	
	comp=Z,77nm,1.4s						
KIV	**Kislovodsk**	**75.03**	**318**	P	**P**	**03 44 26.2**	**-0.2**
KIV				IAmb	IAmb	03 44 27.9	
	comp=Z,46nm,1.2s						
KIV	**Kislovodsk**	**75.03**	**318***c*	*i*P	**P**	**03 44 25.7**	**-0.8**
KIV				*e*		03 47 11.0	
KIV				*i* S	**S**	**03 54 03.6**	**+2.7**
KIV				pmax	pmax		
	comp=Z,49nm,1.3s						
JAWL	**J.Aulia**	**75.14**	**287**	*i* P	**P**	**03 44 30.1**	**+2.5**
JAWL				*i*		03 44 37.1	
	baz=250,slow=12						
JAWL				*i* S	**S**	**03 54 11.3**	**+8.3**
ASF	**Jabal al Asfar**	**75.21**	**305**	P	**P**	**03 44 28.2**	**+0.4**
	comp=Z,21nm,1.0s,baz=103,slow=2.1,SNR=15						
	comp=Z,21nm,1.0s						
GOF	**Gofitskoye**	**75.24**	**320**⇑	*e*P	**P**	**03 44 27.7**	**+0.1**
GOF				pmax	pmax		
	comp=Z,55nm,0.9s						
RAO	**Raoul Island**	**75.56**	**119**	LR	LR	04 18 41.8	
	comp=Z,94nm,19.5s,baz=326,slow=36						
BELG	**Belogornoye**	**75.90**	**328**	P	**P**	**03 44 30.3**	**-0.8**
	comp=Z,17nm,1.1s,baz=286,slow=16,SNR=6.0						
BELG				LR	LR	04 22 04.0	
	comp=Z,99nm,19.7s,baz=139,slow=39						
	comp=Z,17nm,1.1s						
BELG	**Belogornoye**	**75.90**	**328**	*i* P	**P**	**03 44 30.1**	**-1.0**
BELG				pmax	pmax		
	comp=Z,5.0nm,1.2s						
LSZ	**Lusaka**	**76.05**	**256**	LR	LR	04 14 57.8	
	comp=Z,154nm,19.3s,baz=114,slow=33						
LSZ	**Lusaka**	**76.05**	**256**	P	**P**	**03 44 32.6**	**-0.3**
LSZ				IAmb	IAmb	03 44 38.5	
	comp=Z,12nm,0.7s						
LSZ	**Lusaka**	**76.05**	**256**	P	**P**	**03 44 32.6**	**-0.3**
LSZ				pmax	pmax		
	comp=Z,12nm,0.7s						
MMAI	**Mount Meron Ar**	**76.66**	**306**	P	**P**	**03 44 37.7**	**+1.7**
	comp=Z,3.7nm,0.5s,baz=94,slow=11,SNR=8.8						
MMAI				LR	LR	04 19 34.2	
	comp=Z,131nm,19.4s,baz=252,slow=37						
	comp=Z,3.7nm,0.5s						
SOC	**Sochi**	**76.87**	**317**	*e*P	**P**	**03 44 33.3**	**-3.5**
SOC				*e*		03 47 27.4	
SOC				*e*PPP	PPP	03 49 12.6	
SOC				*e*S	**S**	**03 54 16.5**	**-4.5**
SOC				*e*SSS	SSS	04 02 40.5	
SOC				pmax	pmax		
	comp=Z,49nm,1.0s						
VNDA	**Vanda**	**77.25**	**169**	P	**P**	**03 44 39.5**	**+1.1**
	comp=Z,12nm,0.8s,baz=312,slow=5.7,SNR=60						
VNDA				LR	LR	04 18 28.5	
	comp=Z,61nm,18.6s,baz=323,slow=35						
	comp=Z,12nm,0.8s						
VNDA	**Vanda**	**77.25**	**169**	P	**P**	**03 44 38.5**	**+0.1**
VNDA				IAmb	IAmb	03 44 44.2	
	comp=Z,17nm,0.8s						
VNDA	**Vanda**	**77.25**	**169**	P	**P**	**03 44 38.5**	**+0.1**
VNDA				pmax	pmax		
	comp=Z,17nm,0.9s						
SEY	**Seymchan**	**77.44**	**20**	LR	LR	04 19 32.2	
	comp=Z,53nm,19.2s,baz=343,slow=36						
SEY	**Seymchan**	**77.44**	**20***ce*	P	**P**	**03 44 40.1**	**+0.5**
SEY				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TOKA	**Tokat**	**78.02**	**313**	P	**P**	**03 44 43.5**	**0.0**
TOKA				IAmb	IAmb	03 44 45.5	
	comp=Z,45nm,1.3s						
BNN	**Bunyan**	**78.03**	**312**	P	**P**	**03 44 43.1**	**-0.5**
LBTB	**Lobatse**	**78.18**	**246**	LR	LR	04 12 42.0	
	comp=Z,82nm,20.5s,baz=94,slow=31						
KIRV	**Kirov**	**78.25**	**334**	P	**P**	**03 44 44.0**	**-0.2**
	comp=Z,17nm,0.9s,baz=60,slow=2.1,SNR=11						
KIRV				LR	LR	04 22 50.0	
	comp=Z,75nm,20.2s,baz=130,slow=38						
	comp=Z,17nm,0.9s						
KIRV	**Kirov**	**78.25**	**334***ce*	P	**P**	**03 44 44.3**	**+0.1**
SBA	**Scott Base**	**78.33**	**169**	P	**P**	**03 44 45.3**	**+0.9**
SBA				IAmb	IAmb	03 44 50.0	
	comp=Z,20nm,0.8s						
SBA	**Scott Base**	**78.33**	**169**	P	**P**	**03 44 45.3**	**+0.9**
SBA				pmax	pmax		
	comp=Z,20nm,0.8s						
BOSA	**Boshof**	**78.43**	**242**	P	**P**	**03 44 47.9**	**+1.8**
	comp=Z,10nm,0.8s,baz=96,slow=3.8,SNR=13						
	comp=Z,10nm,0.8s						
BOSA	**Boshof**	**78.43**	**242**	P	**P**	**03 44 46.5**	**+0.4**
BOSA				IAmb	IAmb	03 46 01.5	
	comp=Z,90nm,2.0s						
BOSA	**Boshof**	**78.43**	**242**	P	**P**	**03 44 46.5**	**+0.4**
BOSA				pmax	pmax		
	comp=Z,90nm,2.0s						
VRH	**Novokhopyorsk**	**78.61**	**325**	*e*P	**P**	**03 44 45.1**	**-1.2**
VRH				pmax	pmax		
	comp=Z,40nm,1.0s						
ANN	**Anapa**	**78.83**	**318**	*e*P	**P**	**03 44 48.1**	**+0.4**
ANN				*e**PP	**pP**	**03 45 02.7**	**+0.8**
ANN				*e*S	**S**	**03 54 41.5**	**-0.6**
ANN				pmax	pmax		
	comp=Z,24nm,0.9s						
CSS	**Mathiatis**	**78.85**	**307**	P	**P**	**03 44 45.7**	**-2.4**
CSS				IAmb	IAmb	03 44 50.5	
	comp=Z,73nm,1.2s						
TIXI	**Tiksi**	**79.03**	**7**	P	**P**	**03 44 45.9**	**-2.4**
TIXI	**Tiksi**	**79.03**	**7**	P	**P**	**03 44 45.9**	**-2.4**
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BR131	**Keskin Array S**	**79.92**	**312**	P	**P**	**03 44 54.0**	**+0.1**
	SNR=14						
BRTR	**Keskin

QSPA **South Pole Qui** 83.98 180 P **P** 03 45 15.9 +1.1
QSPA IAmb IAmb 03 45 22.6
comp=Z,43nm,1.1s
TIRR Tirgusor 84.90 316 P **P** 03 45 19.9 +0.2
TIRR Tirgusor 84.90 316 P **P** 03 45 19.9 +0.2
TIRR pmax pmax
comp=Z,137nm,1.2s
MILM Milestii Mici 85.21 318 ⇑ *i*P **P** 03 45 21.0 -0.1
comp=Z,220nm,3.1s
MILM Milestii Mici 85.21 318 *c i*P **P** 03 45 21.0 -0.1
MILM *e* 03 45 38.0
MILM pmax pmax
comp=Z,220nm,3.1s
NVL N'lazarevskaya 85.52 199 *e*P **P** 03 45 24.5 +2.2
NVL *e*S **S** 03 55 48.5 -1.4
NVL pmax pmax
comp=Z,9.0nm,0.8s
IDI Anoyia 85.66 306 P **P** 03 45 24.6 +0.8
comp=Z,8.0nm,0.4s,baz=317,slow=6.8,SNR=4.9
IDI LR LR 04 26 21.5
comp=Z,28nm,20.8s,baz=89,slow=38
comp=Z,8.0nm,0.4s
IDI Anoyia 85.66 306 P **P** 03 45 23.1 -0.7
IDI IAmb IAmb 03 45 26.6
comp=Z,37nm,1.1s
AKASG Malin Array Be 85.88 322 P **P** 03 45 23.7 -0.7
comp=Z,12nm,0.9s,baz=82,slow=5.2,SNR=61
AKASG LR LR 04 27 46.4
comp=Z,60nm,19.3s,baz=59,slow=38
comp=Z,12nm,0.9s
AKASG Malin Array Be 85.88 322 *ce*P **P** 03 45 23.7 -0.7
AKASG pmax pmax
comp=Z,8.0nm,0.7s
AKBB Malin Array Si 85.88 322 *ce*P **P** 03 45 23.9 -0.5
VRI Vrincioaia 86.38 317 P **P** 03 45 27.9 +0.9
MLR Muntele Rosu 86.83 316 P **P** 03 45 29.8 +0.4
comp=Z,81nm,1.1s,baz=48,slow=2.9,SNR=29
MLR Muntele Rosu 86.83 316 P **P** 03 45 30.2 +0.8
MNK Minsk 87.60 325 *i* P **P** 03 45 32.5 -0.2
MNK *i* *PP **pP** 03 45 46.8 -0.3
MNK *i* 03 48 56.6
MNK *i* PPP PPP 03 50 52.6
MNK *i* S **SKSac** 03 55 54.9 -1.5
MNK *i* SS **SS** 04 01 57.2 -0.1
MNK *i* SSS SSS 04 05 29.6
MNK pmax pmax
comp=Z,61nm,1.1s
MNK pmax pmax
comp=N,12nm,0.9s
MNK pmax pmax
comp=E,8.0nm,1.1s
MNK MLR MLR
comp=Z,10μm,21.0s
MNK MLR MLR
comp=E,31nm,22.0s
MNK MLR MLR
comp=N,312nm,17.0s
MNK Minsk 87.60 325 *i* P **P** 03 45 32.5 -0.2
comp=E,8.0nm,1.1s
MNK *i* P **P** 03 45 32.5 -0.2
comp=N,12nm,0.9s
MNK *i* P **P** 03 45 32.5 -0.2
comp=Z,61nm,1.1s,baz=104
MNK *i* pP **pP** 03 45 46.8 -0.3
MNK *i* sP **sP** 03 45 53.2 +0.6
MNK *i* PP **PP** 03 48 56.7 -1.7
MNK *i* PPP PPP 03 50 52.7
MNK *i* S **SKSac** 03 55 54.9 -1.5
MNK *i* sS **ScS** 03 56 20.5 +3.4
MNK *i* SS **SS** 04 01 57.2 -0.1
MNK *i* SSS SSS 04 05 29.6
MNK *i* LQ LQ 04 18 35.9
MNK *i* LR LR 04 21 54.0
MNK *i* LRM MLR 04 27 54.0
comp=Z,10μm,20.8s
MNK *i* LRM MLR 04 28 19.4
comp=E,31nm,21.7s
MNK *i* LRM MLR 04 28 23.9
comp=N,312nm,17.2s
BURAR Bucovina Array 87.75 318 P **P** 03 45 34.3 +0.6
TROLL Troll, Antarti 88.26 198 P **P** 03 45 38.4 +2.6
NACGM Naroch 88.31 326 ‖ *e*P **P** 03 45 36.2 +0.1
baz=102
IDID Didziasalis 88.43 326 *e*P **P** 03 45 37.1 +0.5
IIGN Ignalina 88.73 326 *e*P **P** 03 45 38.4 +0.3
ISAL Salakas 88.83 326 *e*P **P** 03 45 39.2 +0.7
LVV L'vov 88.94 320 *e*P **P** 03 45 39.1 -0.1
LVV *e* 03 49 02.4
LVV *e*S **S** 03 56 21.2 -2.2
LVV *e* 03 57 53.6
VSU Vasula 89.13 329 *e*P **P** 03 45 39.7 -0.2
UZH Uzhgorod 89.86 319 *e*P **P** 03 45 43.0 -0.5
UZH *e* 03 45 51.6
SNAA Sanae 89.97 197 P **P** 03 45 46.3 +2.6
SNAA Sanae 89.97 197 LR LR 04 19 52.8
comp=N,52nm,20.1s,baz=140,slow=31
SNAA Sanae 89.97 197 P **P** 03 45 44.5 +0.9
SNAA IAmb IAmb 03 45 51.1
comp=Z,42nm,1.1s
SNAA Sanae 89.97 197 P **P** 03 45 44.6 +0.9
SNAA pmax pmax
comp=Z,42nm,1.1s
PABE Paberze 90.02 326 *e*P **P** 03 45 43.6 -0.5
FINES FINESS Array B 90.11 332 P **P** 03 45 44.5 +0.1
comp=Z,9.7nm,0.8s,baz=95,slow=4.6,SNR=21
FINES LR LR 04 32 46.5
comp=Z,79nm,18.7s,baz=100,slow=40
comp=Z,9.7nm,0.8s
SUW Suwalki 90.20 324 *e*P **P** 03 45 44.8 -0.2
SUW Suwalki 90.20 324 *e*P **P** 03 45 45.2 +0.3
CRVS Cervenica-Dubn 90.45 319 *e*P **P** 03 45 47.1 +0.8
CRVS pmax pmax
comp=Z,33nm,1.5s
CRVS Cervenica-Dubn 90.45 319 *e*P **P** 03 45 47.1 +0.8
MEF Metsahovi 90.67 330 *e*P **P** 03 45 47.0 0.0
MTSE Matsula 90.68 329 *e*P **P** 03 45 47.0 -0.1
DIVS Divibare 90.78 314 IAmb IAmb 03 45 50.6
comp=Z,34nm,1.3s
PBUR Paburge 91.24 326 *e*P **P** 03 45 50.1 +0.4
NIE Niedzica 91.27 319 *e*P **P** 03 45 50.9 +0.7
BEL Belsk 91.30 322 *e*P **P** 03 45 50.4 +0.3
PSZ Piszkesteto 91.34 318 IAmb IAmb 03 45 54.9
comp=Z,14nm,1.0s
VNA2 Neumayer--Watz 91.61 198 P **P** 03 45 53.8 +2.6
baz=92,slow=3.1
OJC Ojcow 91.70 320 *e*P **P** 03 45 52.1 +0.1
OJC *e*S **SKSac** 03 56 23.7 +3.0
LANS Liptovska Anna 91.78 319 *e*P **P** 03 45 52.7 +0.2
LANS pmax pmax
comp=Z,4.0nm,1.3s
LANS Liptovska Anna 91.78 319 *e*P **P** 03 45 52.7 +0.2
VNA1 Neumayer--Stat 91.98 198 P **P** 03 45 56.6 +3.7
ARCES ARCESS Array B 92.03 340 LR LR 04 31 19.3
comp=Z,90nm,18.6s,baz=98,slow=38
RAF Rauma 92.08 331 *e*P **P** 03 45 53.7 +0.2
VYHS Vyhne 92.12 318 *e*P **P** 03 45 54.3 +0.3
VYHS pmax pmax
comp=Z,9.0nm,1.6s
VYHS Vyhne 92.12 318 *e*P **P** 03 45 54.3 +0.3
VNA3 Neumayer Olymp 92.15 197 P **P** 03 45 57.0 +3.3
SRO2 Moca 92.33 318 *e*P **P** 03 45 55.6 +0.6
SRO2 pmax pmax
comp=Z,33nm,1.6s
SRO2 Moca 92.33 318 *e*P **P** 03 45 55.6 +0.6
SRO Srobarova 92.39 318 *e*P **P** 03 45 55.3 +0.1
SRO pmax pmax
comp=Z,16nm,0.9s
SRO Srobarova 92.39 318 *e*P **P** 03 45 55.3 +0.1
JAVC Velka Javorina 92.92 319 *e*P **P** 03 45 58.9 +1.1
SMOL Smolenice 93.05 318 *e*P **P** 03 45 58.3 0.0
SMOL Smolenice 93.05 318 *e*P **P** 03 45 58.3 0.0
MORC Moravsky Berou 93.10 320 IAmb IAmb 03 46 00.1
comp=Z,17nm,1.3s
MORC Moravsky Berou 93.10 320 P **P** 03 45 59.4 +0.8
MORC Moravsky Berou 93.10 320 *e*P **P** 03 45 59.1 +0.5
MODS Modra-Piesok 93.14 318 *e*P **P** 03 45 58.7 0.0
MODS pmax pmax
comp=Z,24nm,1.4s
MODS Modra-Piesok 93.14 318 *e*P **P** 03 45 58.7 0.0
BELA Belgrano 2 93.40 188 IAmb IAmb 03 46 04.7
comp=Z,16nm,1.4s
VRAC Vranov 93.67 319 P **P** 03 46 00.2 -1.0
comp=Z,2.1nm,0.5s,baz=331,slow=23,SNR=2.4
VRAC LR LR 04 36 20.4
comp=Z,34nm,18.6s,baz=74,slow=41
comp=Z,2.1nm,0.5s
VRAC Vranov 93.67 319 *e*P **P** 03 46 02.0 +0.8
KRUC Moravsky 93.78 319 *e*P **P** 03 46 02.2 +0.5
UPP Uppsala 93.98 330 *e*P **P** 03 46 02.0 -0.3
KSP Ksiaz 93.99 321 *e*P **P** 03 45 58.5 -4.1
ARSA Arzberg 94.22 317 *e*P **P** 03 46 03.7 -0.1
comp=Z,6.7nm,1.2s
SOKA Soboth 94.51 316 *e*P **P** 03 46 05.0 -0.2
comp=Z,14nm,1.3s
BRG Berggiesshubel 95.48 320 *e*P **P** 03 46 09.9 +0.4
BRG Amp 03 46 11.4
comp=Z,7.3nm,1.3s
BRG Berggiesshubel 95.48 320 *e*P **P** 03 46 09.8 +0.4
BRG pmax pmax
comp=Z,7.0nm,1.3s
PRED Cave del Predi 95.51 316 IAmb IAmb 03 46 12.0
comp=Z,12nm,1.4s
GEC2 GERESS Array S 95.54 318 IAmb IAmb 03 46 11.0
comp=Z,11nm,1.3s
GERES GERESS Array B 95.54 318 P **P** 03 46 08.5 -1.3
comp=Z,1.1nm,0.7s,baz=149,slow=3.1,SNR=16
comp=Z,1.1nm,0.7s
SPITS Spitsbergen Ar 95.62 348 LR LR 04 34 05.1
comp=Z,96nm,20.9s,baz=60,slow=39
HFS Hagfors 95.97 330 P **P** 03 46 11.0 -0.4
comp=Z,5.4nm,0.8s,baz=113,slow=3.4,SNR=8.1
HFS LR LR 04 36 01.2
comp=Z,65nm,18.2s,baz=80,slow=40
comp=Z,5.4nm,0.8s
CLL Collm 96.09 321 *e*P **P** 03 46 11.0 -1.1
CLL pmax pmax
comp=Z,7.0nm,1.5s
CLL Collm 96.09 321 *e*Px Px 03 46 11.0
comp=Z,7.0nm,1.5s
ABTA Abfaltersbach 96.25 316 *e*P **P** 03 46 12.8 -0.3
comp=Z,5.6nm,1.5s
CTI Castel Tesino 96.82 316 IAmb IAmb 03 46 18.6
comp=Z,12nm,1.1s
WTTA Wattenberg 96.86 317 *i* P **P** 03 46 16.3 +0.3
comp=Z,8.4nm,1.2s
WATA Walderalm 96.91 317 *i* P **P** 03 46 15.1 -1.0
comp=Z,8.4nm,1.0s
SQTA Sankt Quirin 97.15 317 *i* P Pdif 03 46 17.4 0.0
comp=Z,6.9nm,1.2s
NOA NORSAR Array B 97.20 331 P **P** 03 46 16.1 -0.9
comp=Z,2.4nm,1.0s,baz=90,slow=4.4,SNR=6.4
NOA LR LR 04 35 45.1
comp=Z,30nm,18.4s,baz=105,slow=39
comp=Z,2.4nm,1.0s
MOTA Moosalm 97.23 317 *i* P Pdif 03 46 17.7 0.0
comp=Z,3.4nm,0.8s
RETA Reutte 97.46 317 *i* P Pdif 03 46 18.9 +0.2
comp=Z,5.8nm,1.3s
DAVA Damuels 98.06 317 *i* P **P** 03 46 20.9 -0.5
comp=Z,8.4nm,1.5s
L19K White Mountain 99.87 28 P **Pdif** 03 46 29.0 0.0
baz=276
ILAR Eielson Array 102.96 25 PP **PP** 03 50 56.0 -1.1
comp=Z,0.4nm,1.0s,baz=284,slow=7.3,SNR=2.5
ILAR PKKPbc **PKKPbc** 04 02 41.5 -1.0
comp=Z,0.5nm,0.8s,baz=73,slow=0.8,SNR=5.5
HDA Harding Lake 103.02 25 P **Pdif** 03 46 43.2 +0.3
baz=284
WAT6 Susitna Watana 103.08 27 P **Pdif** 03 46 43.4 0.0
baz=282
TORD Torodi Ar. Bea 104.57 282 PKiKP **PKiKP** 03 51 07.5 +0.7
comp=Z,0.9nm,1.0s,baz=104,slow=1.8,SNR=3.4
M26K Nabesna, AK 105.26 27 P **PKiKP** 03 51 07.5 +0.6
baz=287
I29M Ogilvie Camp, 106.24 23 P **PKiKP** 03 51 09.2 +0.6
baz=292
DAWY Dawson 106.27 24 P **PKiKP** 03 51 09.3 +0.7
baz=290
INK Inuvik 106.73 19 P **PKiKP** 03 51 09.9 +0.7
baz=297
M30M Minto, Yukon 107.91 25 P **PKiKP** 03 51 11.9 +0.2
baz=293
N30M Aishikik Lake 108.21 27 P **PKiKP** 03 51 12.8 +0.5
baz=292
ESDC Sonseca Array 108.63 310 PP **PP** 03 51 40.1 +0.2
comp=Z,0.7nm,0.8s,baz=82,slow=9.2,SNR=2.7
P30M Milton Dollar 108.76 28 P **PKiKP** 03 51 14.2 +0.8
baz=292
CRAG Craig 112.45 32 P **PKiKP** 03 51 20.4 0.0
baz=294
DLBC Dease Lake 112.70 28 P **PKiKP** 03 51 21.0 +0.1
baz=298
YKA Yellowknife Ar 116.50 19 PKP **PKPdf** 03 51 27.4 -0.6
comp=Z,3.4nm,1.0s,baz=305,slow=2.3,SNR=18
YKA PKKPbc **PKKPbc** 04 01 59.3 +0.8
comp=Z,1.2nm,0.8s,baz=122,slow=3.9,SNR=6.6
F04D Rainier, OR 122.34 38 P **PKiKP** 03 51 40.4 +0.5
baz=299
G03D McMinnville, O 122.59 39 P **PKiKP** 03 51 40.4 0.0
baz=298
J01E Myrtle Point 123.09 41 P **PKPdf** 03 51 41.1 -0.1
baz=296
I03D Drain, OR 123.23 41 P **PKPdf** 03 51 41.5 0.0
baz=297
H04D Lebanon 123.25 40 P **PKiKP** 03 51 41.9 +0.1
baz=298
K02D Willamette Mer 123.47 42 P **PKiKP** 03 51 42.4 0.0
baz=296
L02F Cave Junction 123.78 42 P **PKiKP** 03 51 42.9 0.0
baz=296
G05D Wamic, OR 123.79 38 P **PKiKP** 03 51 43.0 +0.2
baz=300
I04A Tendick Farm, 123.79 40 P **PKiKP** 03 51 43.0 +0.1
baz=298
I05D Terrebonne, OR 124.21 39 P **PKiKP** 03 51 43.8 +0.1
baz=299
J04D Umpqua Nationa 124.24 41 P **PKiKP** 03 51 43.9 -0.2
baz=298
L04D Klamath Falls 124.58 42 **PKPdf** 03 51 42.8 -1.6
L04D Klamath Falls 124.58 42 P **PKiKP** 03 51 44.6 0.0
baz=297
NEW Newport 124.60 33 P **PKiKP** 03 51 44.7 +0.4
baz=306
J05D Fort Rock, OR 124.79 40 P **PKiKP** 03 51 45.3 +0.2
baz=299
FCC Fort Churchill 125.28 12 PKPdf **PKPdf** 03 51 44.7 -0.2
FCC Fort Churchill 125.28 12 PKIKP **PKPdf** 03 51 44.7 -0.2
BEKR Beckworth 126.96 44 **PKPdf** 03 51 49.0 -0.1
MSO Missoula 127.18 33 P **PKiKP** 03 51 49.4 -0.3
baz=308
PAHR Pah Rah Range 127.70 43 PKPdf **PKPdf** 03 51 49.7 -0.7
EGMT Eagleton 128.57 30 P **PKiKP** 03 51 52.1 -0.2
baz=313
HLID Hailey 128.86 37 P **PKiKP** 03 51 53.4 +0.2
baz=305
NVAR Mina Array Bea 129.04 44 PKP **PKiKP** 03 51 54.6 +0.8
comp=Z,2.8nm,1.0s,baz=275,slow=2.0,SNR=14
BOZ Bozeman (W) 129.21 33 P **PKiKP** 03 51 53.6 -0.2
baz=310
PKM Mcpherson Peak 129.50 49 P **PKPdf** 03 51 53.8 -0.3
baz=294
VES Vestal, Richgr 129.64 48 P **PKPdf** 03 51 54.0 0.0
baz=296
CWC Cottonwood Cre 130.11 46 P **PKPdf** 03 51 55.1 0.0
baz=297
GRAC Grapevine Rang 130.37 45 P **PKiKP** 03 51 55.8 -0.4
baz=298
H17A Grant Village 130.55 34 P **PKiKP** 03 51 56.3 -0.4
baz=310
MPMC Manual Prospec 130.71 47 P **PKiKP** 03 51 56.7 -0.5
baz=297,SNR=8.0
RLMT Red Lodge 130.78 32 P **PKiKP** 03 51 57.6 +0.5
baz=312
EDW2 Edwards Air Fo 130.86 48 P **PKiKP** 03 51 58.0 +0.7
baz=296
SCHQ Schefferville 130.90 354 PKP **PKiKP** 03 51 56.5 -0.3
comp=Z,6.1nm,1.0s,baz=341,slow=1.7,SNR=5.1
R11A Troy Canyon, C 130.94 43 P **PKiKP** 03 51 57.5 -0.1
baz=301
FURC Furnace Creek, 130.97 46 P **PKiKP** 03 51 58.6 +1.2
baz=298
FMP Fort Macarthur 131.13 50 P **PKiKP** 03 51 58.2 +0.4
baz=295
TPNV Topopah Spring 131.18 45 P **PKiKP** 03 51 58.3 +0.2
baz=299
LAO LASA Array 131.22 29 P **PKiKP** 03 51 58.5 +0.8
baz=316
GSC Goldstone, Bar 131.55 47 P **PKiKP** 03 51 59.4 +0.7
baz=297
DUG Dugway, Tooele 131.77 39 P **PKiKP** 03 51 59.4 +0.3
baz=305
HEC Hector,Ludlow 132.10 47 P **PKiKP** 03 52 00.1 +0.2
baz=297
BW06 Boulder Array 132.16 35 P **PKiKP** 03 51 59.6 -0.4
baz=310
PDAR Pinedale Array 132.16 35 PKP **PKPdf** 03 51 58.9 -0.1
comp=Z,3.3nm,1.2s,baz=10,slow=1.7,SNR=12
PDAR SKPbc **SKPab** 03 55 26.9 +4.6
comp=Z,0.9nm,1.0s,baz=306,slow=3.1,SNR=4.6
ULM Lac du Bonnet 132.46 18 PKP **PKPdf** 03 51 58.8 -0.1
comp=Z,6.6nm,0.9s,baz=296,slow=4.2,SNR=7.3
ULM Lac du Bonnet 132.46 18 PKPdf **PKPdf** 03 51 59.1 +0.2
ULM Lac du Bonnet 132.46 18 PKIKP **PKPdf** 03 51 59.1 +0.2
PFO Pinyon Flats O 132.55 49 P **PKiKP** 03 52 00.8 -0.1
baz=296
TPFO Pinon Flats 132.56 49 P **PKiKP** 03 52 01.1 +0.2
baz=296
GMRC Granite Mounta 132.62 47 P **PKiKP** 03 52 01.9 +0.9
baz=298,SNR=5.7
BELC Belle Mtn. Jos 132.73 48 P **PKiKP** 03 52 02.4 +1.2
baz=297
MONP2 Monument Peak 132.89 50 P **PKiKP** 03 52 02.8 +1.0
baz=296
IKP In-Ko-Pah, Jac 133.23 50 P **PKiKP** 03 52 03.7 +1.5
baz=296
BC3 Big Chuckawall 133.29 48 P **PKiKP** 03 52 03.5 +1.1
baz=297
IRM Iron Mountain 133.29 48 P **PKiKP** 03 52 03.5 +1.2
baz=298
PLCA Paso Flores 133.34 184 PKP **PKiKP** 03 52 02.9 +0.6
comp=Z,2.2nm,1.1s,baz=154,slow=10,SNR=3.0
SWSC Sam W. Stewart 133.34 49 P **PKiKP** 03 52 03.7 +1.4
baz=296
K22A Casper 133.91 33 P **PKPdf** 03 52 02.3 +0.2
baz=313
K22A Casper 133.91 33 P **PKiKP** 03 52 03.5 +0.1
baz=313
GLA Glamis 134.03 49 P **PKiKP** 03 52 04.6 +0.9
baz=297
RSSD Black Hills 134.15 29 PKPdf **PKPdf** 03 52 02.3 -0.3
RSSD Black Hills 134.15 29 PKIKP **PKPdf** 03 52 02.3 -0.3
RSSD Black Hills 134.15 29 P **PKPdf** 03 52 02.0 -0.6
baz=317
AGMN Agassiz Nation 134.16 20 P **PKPdf** 03 52 02.2 0.0
baz=330
O20A White River Ci 134.60 37 P **PKiKP** 03 52 04.5 -0.5
baz=310
B35A Bob, Littlefor 134.79 18 P **PKPdf** 03 52 03.8 +0.5
baz=333
WUAZ Wupatki 135.30 44 P **PKiKP** 03 52 06.2 -0.3
baz=302
N23A Red Feather La 135.42 34 P **PKiKP** 03 52 06.2 -0.5
baz=313
EYMN Ely 135.81 16 P **PKiKP** 03 52 06.3 -0.6
baz=336
F33A 5 Mile Ranch, 136.12 22 P **PKPdf** 03 52 06.7 +0.8
baz=328
SUSD Miller 136.22 25 P **PKiKP** 03 52 07.7 -0.1
baz=324
MVCO Mesa Verde 136.25 40 P **PKiKP** 03 52 07.8 -0.6
baz=307
ISCO Idaho Springs 136.35 35 P **PKiKP** 03 52 08.0 -0.6
baz=312
W18A Petrified Fore 136.64 43 P **PKiKP** 03 52 08.7 -0.5
baz=304
S22A 4UR Ranch, Cre 136.97 38 P **PKiKP** 03 52 09.1 -0.9
baz=309
E38A The Farm, Brul 137.01 17 P **PKPdf** 03 52 08.2 +0.6
baz=335
F36A Milaca 137.06 19 P **PKPdf** 03 52 07.4 -0.3
baz=332
OGNE Ogallala 137.48 31 P **PKiKP** 03 52 09.9 -0.8
baz=318
ECSD EROS Data Cent 137.76 24 P **PKPdf** 03 52 09.8 +0.7
baz=327
SDCO Great Sand Dun 137.77 37 P **PKPdf** 03 52 10.5 +0.9
baz=311
SPMN Marine on St. 137.87 19 P **PKiKP** 03 52 10.6 -0.5
baz=333
KSCO Kaye Shedlock' 138.56 33 P **PKiKP** 03 52 12.1 -0.9
baz=315
I37B Waseca 138.73 21 P **PKPdf** 03 52 11.5 +0.7
baz=331
LATQ La Tuque 138.74 358 **PKPdf** 03 52 10.8 +0.1
T25A Trinidad 138.82 37 P **PKiKP** 03 52 13.0 -0.6
baz=312
ANMO Albuquerque 138.93 41 *c i*PKIKP **PKiKP** 03 52 12.8 -1.1
ANMO pmax pmax
comp=Z,8.0nm,1.7s
ANMO Albuquerque 138.93 41 P **PKiKP** 03 52 13.4 -0.6
baz=307
BGNE Belgrade 139.00 27 P **PKiKP** 03 52 12.8 -0.8
baz=323
121A Cookes Peak, D 139.42 45 P **PKPdf** 03 52 13.5 +0.8
baz=304
CBKS Cedar Bluff 140.25 31 P **PKPdf** 03 52 15.0 +1.2
baz=319
KSU1 Kansas State U 141.56 28 P **PKPdf** 03 52 17.1 +1.0
baz=324
LBNH Lisbon 141.84 357 P **PKiKP** 03 52 18.0 -1.4
baz=4.4
MSTX Muleshoe 141.91 39 P **PKiKP** 03 52 19.0 -0.9
baz=311
AMTX Amarillo 141.98 37 P **PKiKP** 03 52 19.1 -0.9
baz=313
CO03 El Pedregal 143.17 186 PKPdf **PKPdf** 03 52 19.3 0.0
HDIL Hopedale 143.19 19 P **PKiKP** 03 52 22.2 0.0
baz=335
HRV Adam Dziewonsk 143.54 356 P **PKiKP** 03 52 22.9 0.0
baz=5.2
L61B Northampton 143.66 357 P **PKiKP** 03 52 23.6 +0.5
baz=3.3
CPUP Villa Florida 143.71 207 PKP **PKPdf** 03 52 19.6 -0.7
comp=Z,18nm,1.2s,baz=74,slow=1.5,SNR=12
CPUP Villa Florida 143.71 207 PKPdf **PKPdf** 03 52 19.9 -0.4
CPUP Villa Florida 143.71 207 PKIKP **PKPdf** 03 52 19.9 -0.4
ERPA Erie 143.73 7 P PKPbc 03 52 17.9 +0.5
baz=351
WMOK Wichita Mounta 143.77 35 P PKPbc 03 52 17.9 +0.1
baz=317
SFIN Lafayette 144.01 16 P PKPbc 03 52 18.7 +0.4
baz=339
R40A Maddies Statio 144.12 24 P **PKPab** 03 52 17.7 -0.5
baz=329
TX31 Lajitas Ar. Si 144.13 46 PKPbc 03 52 19.9 +0.7
TXAR Lajitas Array 144.13 46 PKP PKPbc 03 52 19.8 +0.6
comp=Z,13nm,1.1s,baz=259,slow=1.3,SNR=42
S39A Bolivar 144.19 26 P **PKPab** 03 52 17.8 -0.7
baz=327
UCCT U. Connecticut 144.29 357 **PKPdf** 03 52 20.4 -0.4
M53A WI Miller and 144.31 8 P **PKPab** 03 52 18.8 -0.1
baz=350
TUL1 Leonard 144.48 30 P PKPbc 03 52 19.8 -0.1
baz=322
TUL1 Leonard 144.48 30 P PKPbc 03 52 20.0 +0.1
baz=322
M55A Ridgway 144.50 5 P PKPbc 03 52 19.6 -0.2
baz=353,SNR=5.1
M55A P PKPbc 03 52 19.6 -0.2
baz=353,SNR=5.1
O48B Farmland 144.62 14 P PKPbc 03 52 20.2 0.0
baz=342
O48B Farmland 144.62 14 P PKPbc 03 52 20.3 +0.1
baz=342
CCM Cathedral Cave 144.72 23 PKPdf **PKPab** 03 52 19.6 -0.9
CCM Cathedral Cave 144.72 23 PKIKP **PKPab** 03 52 19.6 -0.9
CCM Cathedral Cave 144.72 23 P PKPbc 03 52 20.5 -0.1
baz=331
U38A Gravette 144.74 28 P **PKPab** 03 52 19.7 -0.9
baz=325
M57A Sunshine Farm, 144.75 3 P PKPbc 03 52 20.7 +0.1
baz=356,SNR=11
M57A P PKPbc 03 52 20.7 +0.1
baz=356,SNR=11
ABTX Abilene, Hawle 144.76 38 P PKPbc 03 52 21.3 +0.3
baz=314,SNR=5.4
ABTX Abilene, Hawle 144.76 38 P **PKPab** 03 52 20.1 -0.7
baz=314,SNR=5.4
O49A Covington 144.88 13 P **PKPab** 03 52 20.9 -0.1
baz=343
O49A P **PKPab** 03 52 20.9 -0.1
baz=343
N53A Lisbon 144.91 8 P **PKPab** 03 52 20.3 -0.8
baz=349,SNR=8.5
N53A P **PKPab** 03 52 20.3 -0.8
baz=349,SNR=8.5
ACSO Alum Creek Sta 145.12 11 P **PKPbc** 03 52 21.7 -0.1
baz=346
PAL Palisades 145.14 359 P **PKPbc** 03 52 20.5 -1.4
baz=1.3,SNR=6.3

N58A	**Sunbury**	**145.27**	**3**	P		**PKPbc**	**03 52 21.6**	**-0.6**
	baz=356,SNR=19								
N58A				P		**PKPbc**	**03 52 21.6**	**-0.6**
	baz=356,SNR=19								
P48A	**Milroy**	**145.31**	**15**	P		**PKPbc**	**03 52 21.4**	**-1.1**
	baz=341								
P48A				P		**PKPbc**	**03 52 21.4**	**-1.1**
	baz=341								
SSPA	**Standing Stone**	**145.40**	**4**			**PKPbc**	**03 52 22.2**	**-0.5**
SSPA	**Standing Stone**	**145.40**	**4**	P		**PKPbc**	**03 52 21.8**	**-0.9**
	baz=354								
O53A	**New Philadelph**	**145.41**	**9**	P		**PKPbc**	**03 52 21.7**	**-1.0**
	baz=349								
P49A	**Miami Univ. Ec**	**145.41**	**14**	P		**PKPbc**	**03 52 21.6**	**-1.2**
	baz=342								
O52A	**Adamsville**	**145.44**	**10**	P		**PKPbc**	**03 52 22.0**	**-0.8**
	baz=347,SNR=5.9								
O52A				P		**PKPbc**	**03 52 22.0**	**-0.8**
	baz=347,SNR=5.9								
O54A	**Avella**	**145.59**	**8**	P		**PKPdf**	**03 52 22.5**	**-0.6**
	baz=350,SNR=8.7								
O54A				P		**PKPdf**	**03 52 22.5**	**-0.6**
	baz=350,SNR=8.7								
Z35A	**Perchaven, San**	**145.67**	**35**	P		**PKPdf**	**03 52 22.6**	**-0.8**
	baz=318,SNR=7.9								
S44A	**Carbondale**	**145.78**	**21**	P		**PKPdf**	**03 52 22.4**	**-1.1**
	baz=334								
P52A	**Corning**	**145.85**	**10**	P		**PKPdf**	**03 52 22.9**	**-0.7**
	baz=347								
BDFB	**Brasilia**	**145.93**	**231**	PKPbc		**PKPab**	**03 52 27.1**	**+1.4**
	comp=Z,20nm,0.9s,baz=141,slow=3.7,SNR=22								
W39A	**Magazine**	**146.03**	**29**	P		**PKPdf**	**03 52 24.1**	**+0.1**
	baz=324,SNR=12								
W39A	**Magazine**	**146.03**	**29**	P		**PKPdf**	**03 52 24.0**	**+0.1**
	baz=324								
JCT	**Junction City**	**146.09**	**41**	P		**PKPbc**	**03 52 25.0**	**-0.2**
	baz=311								
P53A	**Whipple**	**146.12**	**9**	P		**PKPbc**	**03 52 24.5**	**-0.5**
	baz=348,SNR=13								
P53A				P		**PKPbc**	**03 52 24.5**	**-0.5**
	baz=348,SNR=13								
MCWV	**Mont Chateau**	**146.18**	**7**	P		**PKPdf**	**03 52 24.6**	**+0.4**
	baz=351								
Q51A	**Peebles**	**146.21**	**12**	P		**PKPbc**	**03 52 24.7**	**-0.5**
	baz=344,SNR=12								
Q51A				P		**PKPbc**	**03 52 24.7**	**-0.5**
	baz=344,SNR=12								
R49A	**Shelbyville**	**146.48**	**15**	P		**PKPdf**	**03 52 25.0**	**+0.3**
	baz=341,SNR=13								
R49A				P		**PKPdf**	**03 52 25.0**	**+0.3**
	baz=341,SNR=13								
Q52A	**Bidwell**	**146.48**	**11**	P		**PKPdf**	**03 52 25.1**	**+0.5**
	baz=346,SNR=17								
Q52A				P		**PKPdf**	**03 52 25.1**	**+0.5**
	baz=346,SNR=17								
WHTX	**Lake Whitney,**	**146.52**	**37**	P		**PKPbc**	**03 52 26.0**	**-0.4**
	baz=316,SNR=10								
WHTX	**Lake Whitney,**	**146.52**	**37**	P		**PKPbc**	**03 52 26.4**	**0.0**
	baz=316,SNR=10								
P57A	**Homestead Farm**	**146.54**	**5**	P		**PKPbc**	**03 52 25.4**	**-0.8**
	baz=354,SNR=14								
P57A				P		**PKPbc**	**03 52 25.4**	**-0.8**
	baz=354,SNR=14								
MIAR	**Mount Ida**	**146.66**	**29**	P		**PKPbc**	**03 52 26.2**	**-0.5**
	baz=324								
R50A	**Paris**	**146.70**	**14**	P		**PKPdf**	**03 52 25.5**	**+0.4**
	baz=342,SNR=11								
R50A				P		**PKPdf**	**03 52 25.5**	**+0.4**
	baz=342,SNR=11								
Q54A	**Coxs Mills**	**146.70**	**9**	P		**PKPbc**	**03 52 26.0**	**-0.7**
	baz=349								
Q54A				P		**PKPbc**	**03 52 26.0**	**-0.7**
	baz=349								
W41B	**Gary Mavity, V**	**146.76**	**27**	P		**PKPdf**	**03 52 25.2**	**-0.1**
	baz=327,SNR=9.7								
W41B	**Gary Mavity, V**	**146.76**	**27**	P		**PKPdf**	**03 52 25.4**	**+0.1**
	baz=327								
Q56A	**Snyder Ridge,**	**146.86**	**6**	P		**PKPbc**	**03 52 26.3**	**-0.9**
	baz=352,SNR=12								
Q56A				P		**PKPbc**	**03 52 26.3**	**-0.9**
	baz=352,SNR=12								
T47A	**Sharon Grove**	**147.14**	**18**	P		**PKPbc**	**03 52 27.0**	**-1.0**
	baz=337,SNR=12								
R53A	**Hurricane**	**147.15**	**11**	P		**PKPbc**	**03 52 27.4**	**-0.6**
	baz=347,SNR=18								
R53A				P		**PKPbc**	**03 52 27.4**	**-0.6**
	baz=347,SNR=18								
435B	**Jarrell**	**147.29**	**38**	P		**PKPbc**	**03 52 28.0**	**-0.6**
	baz=314								
237A	**Washetta, Mont**	**147.47**	**35**	P		**PKPbc**	**03 52 29.4**	**+0.3**
	baz=318,SNR=15								
S51A	**Beattyville**	**147.48**	**13**	P		**PKPbc**	**03 52 27.7**	**-1.3**
	baz=343,SNR=25								
S51A				P		**PKPbc**	**03 52 27.7**	**-1.3**
	baz=343,SNR=25								
WVT	**Waverly**	**147.68**	**20**			**PKPbc**	**03 52 28.9**	**-0.6**
WVT	**Waverly**	**147.68**	**20**	PKP2		**PKPbc**	**03 52 28.9**	**-0.6**
WVT	**Waverly**	**147.68**	**20**	P		**PKPbc**	**03 52 28.5**	**-1.1**
	baz=335								
833A	**Chaparral WMA,**	**147.74**	**44**	P		**PKPbc**	**03 52 28.5**	**-1.4**
	baz=309,SNR=23								
833A	**Chaparral WMA,**	**147.74**	**44**	P		**PKPbc**	**03 52 28.8**	**-1.1**
	baz=309								
T50A	**Nancy**	**147.76**	**15**	P		**PKPdf**	**03 52 27.7**	**+0.9**
	baz=341								
T50A				P		**PKPdf**	**03 52 27.7**	**+0.9**
	baz=341								
S54A	**Dingess, Beckl**	**147.78**	**10**	P		**PKPbc**	**03 52 29.3**	**-0.6**
	baz=348,SNR=6.6								
S54A				P		**PKPbc**	**03 52 29.3**	**-0.6**
	baz=348,SNR=6.6								
CBN	**Corbin Frederi**	**147.85**	**4**	P		**PKPbc**	**03 52 28.8**	**-1.1**
	baz=355								
U49A	**Red Boiling Sp**	**147.98**	**17**	P		**PKPdf**	**03 52 27.6**	**+0.3**
	baz=339,SNR=25								
R58B	**Mineral**	**148.06**	**5**	P		**PKPbc**	**03 52 29.0**	**-1.4**
	baz=354,SNR=12								
R58B				P		**PKPbc**	**03 52 29.0**	**-1.4**
	baz=354,SNR=12								
W45A	**Hickory Valley**	**148.06**	**23**	P		**PKPbc**	**03 52 30.4**	**-0.1**
	baz=332,SNR=5.4								
Z41A	**Richland Creek**	**148.08**	**30**	P		**PKPbc**	**03 52 30.2**	**-0.5**
	baz=324,SNR=9.1								
Z41A				P		**PKPbc**	**03 52 30.2**	**-0.5**
	baz=324,SNR=9.1								
Z41A	**Richland Creek**	**148.08**	**30**	P		**PKPbc**	**03 52 29.9**	**-0.7**
	baz=324								
S57A	**Dark Hollow, R**	**148.15**	**6**	P		**PKPbc**	**03 52 29.3**	**-1.4**
	baz=352,SNR=15								
S57A				P		**PKPbc**	**03 52 29.3**	**-1.4**
	baz=352,SNR=15								
NATX	**Nacogdoches**	**148.29**	**34**	P		**PKPbc**	**03 52 31.5**	**+0.3**
	baz=320,SNR=6.8								
ZAIG	**Zacatecas**	**148.37**	**55**			**PKiKP**	**03 52 33.6**	**-0.1**
V48A	**Smith Brothers**	**148.37**	**19**	P		**PKPdf**	**03 52 28.5**	**+0.6**
	baz=337,SNR=24								
735A	**Kenedy**	**148.46**	**41**	P		**PKiKP**	**03 52 33.4**	**0.0**
	baz=312,SNR=6.9								
BLA	**Blacksburg**	**148.50**	**9**	P		**PKPbc**	**03 52 31.0**	**-0.7**
	baz=349,SNR=8.6								
OXF	**Oxford**	**148.53**	**24**	P		**PKPbc**	**03 52 31.2**	**-0.6**
	baz=331								
TZTN	**Tazewell**	**148.54**	**14**	P		**PKPbc**	**03 52 31.1**	**-0.7**
	baz=343								
T57A	**Hurt**	**148.87**	**7**	P		**PKPbc**	**03 52 32.4**	**-0.2**
	baz=351,SNR=15								
T57A				P		**PKPbc**	**03 52 32.4**	**-0.2**
	baz=351,SNR=15								
U54A	**Nelsons Funny**	**148.93**	**11**	P		**PKPbc**	**03 52 32.4**	**-0.5**
	baz=346,SNR=9.1								
U54A				P		**PKPbc**	**03 52 32.4**	**-0.5**
	baz=346,SNR=9.1								
HKT	**Hockley**	**148.95**	**37**	PKPdf		**PKPdf**	**03 52 28.8**	**-0.1**
HKT	**Hockley**	**148.95**	**37**	PKIKP		**PKPdf**	**03 52 28.8**	**-0.1**
V51A	**Loudon**	**149.04**	**15**	P		**PKPbc**	**03 52 32.8**	**-0.3**
	baz=341,SNR=20								
Y45A	**Yeager Farm, C**	**149.04**	**24**	P		**PKPbc**	**03 52 33.3**	**+0.1**
	baz=330,SNR=27								
T59A	**Double "B" Far**	**149.07**	**4**	P		**PKPbc**	**03 52 33.0**	**0.0**
	baz=354,SNR=32								
T59A				P		**PKPbc**	**03 52 33.0**	**0.0**
	baz=354,SNR=32								
V52A	**Sevierville**	**149.20**	**14**	P		**PKPbc**	**03 52 33.4**	**-0.1**
	baz=343,SNR=34								
143A	**Socs Landing,**	**149.21**	**28**	P		**PKPbc**	**03 52 33.8**	**+0.2**
	baz=326								
W50A	**Signal Mountai**	**149.34**	**17**	P		**PKPbc**	**03 52 33.0**	**-0.9**
	baz=339,SNR=20								
U56A	**King**	**149.35**	**9**	P		**PKPbc**	**03 52 33.7**	**-0.2**
	baz=349,SNR=8.6								
U56A				P		**PKPbc**	**03 52 33.7**	**-0.2**
	baz=349,SNR=8.6								
X48A	**Hartselle**	**149.47**	**20**	P		**PKPbc**	**03 52 33.2**	**-1.0**
	baz=335,SNR=20								
V53A	**Saluda**	**149.55**	**13**	P		**PKPbc**	**03 52 34.2**	**-0.3**
	baz=344,SNR=43								
V53A				P		**PKPbc**	**03 52 34.2**	**-0.3**
	baz=344,SNR=43								
U59A	**Littleton**	**149.66**	**5**	P		**PKPbc**	**03 52 34.6**	**0.0**
	baz=354,SNR=17								
U59A				P		**PKPbc**	**03 52 34.6**	**0.0**
	baz=354,SNR=17								
V55A	**Taylorsville**	**149.70**	**11**	P		**PKPbc**	**03 52 34.1**	**-0.6**
	baz=347,SNR=17								
V55A				P		**PKPbc**	**03 52 34.1**	**-0.6**
	baz=347,SNR=17								
W52A	**Murphy**	**149.82**	**15**	P		**PKPbc**	**03 52 34.9**	**-0.3**
	baz=342,SNR=19								
342B	**Flagon Creek P**	**149.83**	**31**	P		**PKiKP**	**03 52 35.9**	**-0.2**
	baz=323,SNR=6.1								
441A	**DeRidder**	**149.87**	**33**	P		**PKiKP**	**03 52 37.1**	**+0.9**
	baz=321								
VBMS	**Vicksburg**	**150.02**	**28**	P		**PKPbc**	**03 52 35.5**	**0.0**
	baz=327,SNR=6.5								
X51A	**Calhoun**	**150.06**	**17**	P		**PKPbc**	**03 52 35.3**	**-0.3**
	baz=340,SNR=9.0								
X51A				P		**PKPbc**	**03 52 35.3**	**-0.3**
	baz=340,SNR=9.0								
V58A	**Windy Hill, Pi**	**150.07**	**7**	P		**PKPbc**	**03 52 35.5**	**-0.2**
	baz=351,SNR=16								
V58A				P		**PKPbc**	**03 52 35.5**	**-0.2**
	baz=351,SNR=16								
Z47A	**Carrollton**	**150.22**	**23**	P		**PKPbc**	**03 52 35.9**	**-0.2**
	baz=332,SNR=30								
Y49A	**Blount Mountai**	**150.23**	**20**	P		**PKPbc**	**03 52 35.8**	**-0.3**
	baz=336,SNR=40								
V61A	**Roper**	**150.31**	**3**	P		**PKiKP**	**03 52 36.5**	**-0.4**
	baz=356,SNR=5.4								
V61A				P		**PKiKP**	**03 52 36.5**	**-0.4**
	baz=356,SNR=5.4								
146A	**Union**	**150.31**	**25**	P		**PKiKP**	**03 52 36.9**	**-0.2**
	baz=330,SNR=29								
KMSC	**Kings Mountain**	**150.36**	**11**	P		**PKPbc**	**03 52 36.2**	**-0.2**
	baz=347,SNR=25								
KMSC	**Kings Mountain**	**150.36**	**11**	P		**PKPbc**	**03 52 34.9**	**-1.5**
	baz=347,SNR=25								
W57A	**Gilead**	**150.58**	**9**	P		**PKPbc**	**03 52 36.4**	**-0.5**
	baz=349,SNR=23								
W57A				P		**PKPbc**	**03 52 36.4**	**-0.5**
	baz=349,SNR=23								
CNNC	**Cliffs of the**	**150.76**	**5**	P		**PKPbc**	**03 52 36.9**	**-0.4**
	baz=354,SNR=12								
LRAL	**Lakeview Retre**	**150.77**	**22**	P		**PKPbc**	**03 52 36.9**	**-0.5**
	baz=334,SNR=20								
Y52A	**Lilburn**	**150.95**	**16**	P		**PKPbc**	**03 52 38.0**	**+0.2**
	baz=341,SNR=22								
Y52A				P		**PKPbc**	**03 52 38.0**	**+0.2**
	baz=341,SNR=22								
Z51A	**Franklin**	**151.13**	**18**	P		**PKPbc**	**03 52 38.3**	**+0.1**
	baz=338,SNR=12								
346A	**Big Creek Wild**	**151.20**	**27**	P		**PKiKP**	**03 52 38.9**	**-0.1**
	baz=328,SNR=9.0								
X58A	**Rowland**	**151.27**	**8**	P		**PKPbc**	**03 52 38.6**	**+0.1**
	baz=350,SNR=9.7								
X58A				P		**PKPbc**	**03 52 38.6**	**+0.1**
	baz=350,SNR=9.7								
GOGA	**Godfrey**	**151.54**	**16**	P		**PKPbc**	**03 52 39.0**	**-0.1**
	baz=342,SNR=31								
Y57A	**Sumter**	**151.63**	**10**	P		**PKPbc**	**03 52 39.3**	**0.0**
	baz=348,SNR=10.0								
Y57A				P		**PKPbc**	**03 52 39.3**	**0.0**
	baz=348,SNR=10.0								
Y58A	**Scranton**	**151.86**	**9**	P		**PKPbc**	**03 52 39.7**	**-0.1**
	baz=350,SNR=15								
Y58A				P		**PKPbc**	**03 52 39.7**	**-0.1**
	baz=350,SNR=15								
152A	**Waverly Hall**	**151.87**	**18**	P		**PKPbc**	**03 52 38.6**	**-1.3**
	baz=339,SNR=29								
Y59A	**Loris**	**151.88**	**7**	P		**PKPbc**	**03 52 39.2**	**-0.7**
	baz=351,SNR=11								
Y59A				P		**PKPbc**	**03 52 39.2**	**-0.7**
	baz=351,SNR=11								
Y60A	**Bolivia**	**151.95**	**6**	P		**PKiKP**	**03 52 40.2**	**-0.2**
	baz=352,SNR=5.7								
Y60A				P		**PKiKP**	**03 52 40.2**	**-0.2**
	baz=352,SNR=5.7								
250A	**Grady**	**151.98**	**21**	P		**PKPbc**	**03 52 40.3**	**0.0**
	baz=335,SNR=24								
154A	**Montrose**	**152.39**	**15**	P		**PKPbc**	**03 52 41.1**	**0.0**
	baz=342								
BRAL	**Brewton**	**152.41**	**23**	P		**PKiKP**	**03 52 41.3**	**-0.1**
	baz=333,SNR=19								
NHSC	**New Hope**	**152.55**	**10**	P		**PKPbc**	**03 52 41.1**	**-0.4**
	baz=348								
352A	**Blakely**	**152.90**	**19**	P		**PKPbc**	**03 52 41.9**	**-0.4**
	baz=337,SNR=13								
255A	**Hazlehurst**	**153.20**	**15**	P		**PKiKP**	**03 52 43.5**	**+0.5**
	baz=343,SNR=7.0								
TIGA	**Tifton**	**153.36**	**17**	P		**PKiKP**	**03 52 44.0**	**+0.6**
	baz=340,SNR=5.8								
TIGA	**Tifton**	**153.36**	**17**	P		**PKPbc**	**03 52 43.2**	**-0.1**
	baz=340								
PB11	**IPOC Station P**	**153.92**	**191**	PKPdf		**PKPdf**	**03 52 36.1**	**-0.9**
LPAZ	**La Paz**	**156.92**	**196**	PKP		**PKPdf**	**03 52 43.0**	**+1.3**
	comp=Z,4.4nm,1.2s,baz=54,slow=5.2,SNR=6.6								
LPAZ				PKPab		**PKPab**	**03 53 13.6**	**+2.1**
	comp=Z,4.9nm,1.0s,baz=152,slow=3.5,SNR=6.0								
GCPR	**Guaynabo City**	**165.17**	**326**			**PKPab**	**03 53 46.4**	**-0.4**
PDPR	**Patillas Dam,**	**165.37**	**325**	PKPab		**PKPab**	**03 53 46.7**	**-0.9**

IDC ***28*** *03:42:52.2±1.1,39°.30N×25°.87E,h0km,mb3.3/4, mbtmp3.5/8,ML3.4/4,MS2.8/2,Error ellipse: s-maj=22.2km s-min=14.4km az=103.0*
ISK ***28*** *03:42:52.7,39°.44N×25°.89E,h4km,ML3.7/23*
THE ***28*** *03:42:53.8,39°.42N×25°.91E,h8km±1km,ML3.3/21,Error ellipse: s-maj=1.2km s-min=0.5km az=104.0*
DDA ***28*** *03:42:53.6±0.0,39°.43N×25°.93E,h9km±1km,MW3.7*
ATH ***28*** *03:42:54.1,39°.43N×25°.89E,h12km±3km,ML3.6/2,Error ellipse: s-maj=3.7km s-min=1.4km az=178.0*

ISC 28 03:42:53.6±0.9,39°.42N±0".02×25°.88E±0".02,h9km±7km, n113,σ1§05/151,mb3.4/4,16C-6D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GPNR	**Gulpinar-Canak**	**0.20**	**80**	PG	**Pg**	**03 42 57.1**	**-0.6**
SIGR	**SIGRI**	**0.21**	**185**	P	**Pg**	**03 42 58.1**	**+0.3**
SIGR				S	**Sg**	**03 43 01.7**	**+0.9**
SIGR				AML	AML	03 43 02.1	
	comp=N,97218μm,0.4s						
SIGR				AML	AML	03 43 03.1	
	comp=E,42903μm,0.5s						
SIGR	**SIGRI**	**0.21**	**185**	P	**Pg**	**03 42 58.2**	**+0.3**
SIGR				S	**Sg**	**03 43 01.3**	**+0.5**
	comp=E,23μm,0.4s						
KOCA	**Canakkale, Ayv**	**0.21**	**68**	P	**Pg**	**03 42 57.5**	**-0.5**
KOCA				*i* AML	AML	03 43 00.0	
	comp=E,1μm,0.8s						
KOCA				S	**Sg**	**03 43 00.5**	**-0.5**
KOCA				*i* AML	AML	03 43 04.0	
	comp=E,9μm,0.6s						
PRK	**Paraskevi**	**0.35**	**120**	P	**Pg**	**03 43 01.2**	**+0.7**
PRK				S	**Sg**	**03 43 06.2**	**+1.1**
PRK				AML	AML	03 43 08.1	
	comp=E,21191μm,0.9s						
PRK				AML	AML	03 43 12.1	
	comp=N,24225μm,0.7s						
PRK	**Paraskevi**	**0.35**	**120**	P	**Pg**	**03 43 01.2**	**+0.7**
PRK				S	**Sg**	**03 43 05.5**	**+0.3**
	comp=N,18μm,0.7s						
BOZC	**Bozcaada**	**0.44**	**18**	PG	**Pg**	**03 43 01.9**	**-0.3**
BOZC				SG	**Sg**	**03 43 08.2**	**+0.2**
EZN	**Ezine**	**0.53**	**40**	P	**Pg**	**03 43 03.3**	**-0.6**
EZN				S	**Sg**	**03 43 10.6**	**-0.2**
EZN	**Ezine**	**0.53**	**40**	PG	**Pg**	**03 43 03.3**	**-0.6**
EZN				SG	**Sg**	**03 43 11.2**	**+0.3**
BAYC	**CANAKKALE_Bayr**	**0.61**	**58**	P	**Pg**	**03 43 04.4**	**-0.9**
BAYC				S	**Sg**	**03 43 12.5**	**-0.8**
BAYC				*i* AML	AML	03 43 16.0	
	comp=N,2μm,0.3s						
BAYC				*i* AML	AML	03 43 17.0	
	comp=N,991nm,0.6s						
ECEA	**Canakkale, Ece**	**0.66**	**20**	P	**Pg**	**03 43 06.1**	**-0.3**
ECEA				S	**Sb**	**03 43 16.2**	**-0.4**
ECEA				*i* AML	AML	03 43 21.0	
	comp=N,4μm,0.6s						
ECEA				*i* AML	AML	03 43 23.0	
	comp=N,2μm,0.6s						
EFSA	**Agios Efstrati**	**0.70**	**280**	P	**Pb**	**03 43 08.0**	**0.0**
LIA	**Limnos Island**	**0.72**	**312**	P	**Pb**	**03 43 08.0**	**-0.4**
LIA	**Limnos Island**	**0.72**	**312**	P	**Pb**	**03 43 08.1**	**-0.2**
LIA				S	**Sb**	**03 43 19.2**	**+0.9**
	comp=N,3μm,0.5s						
GADA	**Gvkgeada**	**0.77**	**1**	PG	**Pg**	**03 43 07.9**	**-0.5**
GADA				SG	**Sb**	**03 43 18.9**	**-0.8**
GOKA	**anakkale-Gk**	**0.77**	**2**	P	**Pg**	**03 43 08.1**	**-0.4**
GOKA				S	**Sb**	**03 43 19.3**	**-0.5**
CAND	**Candarli**	**0.86**	**123**	PG	**Pg**	**03 43 09.9**	**-0.2**
DKL	**Dikili**	**0.87**	**113**	PG	**Pg**	**03 43 09.8**	**-0.5**
PSRA	**Psara**	**0.91**	**196**	P	**Pb**	**03 43 11.9**	**+0.3**
BUHA	**Balikesir, Bur**	**0.93**	**85**	P	**Pg**	**03 43 11.4**	**0.0**
BUHA				S	**Sn**	**03 43 25.5**	**-0.9**
BUHA				*i* AML	AML	03 43 33.0	
	comp=N,2μm,0.5s						
BUHA				*i* AML	AML	03 43 35.0	
	comp=N,1μm,0.5s						
FOCM	**Foa**	**0.97**	**137**	PG	**Pg**	**03 43 12.1**	**-0.1**
ZEDA	**zmir-Bergama**	**1.03**	**116**	P	**Pg**	**03 43 12.7**	**-0.8**
ZEDA				S	**Sb**	**03 43 27.7**	**+0.3**
ZEDA				*i* AML	AML	03 43 29.0	
	comp=N,887nm,0.5s						
ZEDA				*i* AML	AML	03 43 50.0	
	comp=N,719nm,0.3s						
CHOS	**Chios island**	**1.04**	**172**	P	**Pg**	**03 43 13.3**	**-0.3**
CHOS	**Chios island**	**1.04**	**172**	P	**Pg**	**03 43 13.5**	**-0.1**
CHOS				S	**Sg**	**03 43 26.9**	**-0.3**
	comp=N,6μm,0.5s						
GELI	**Tayfur-Gelibol**	**1.08**	**25**	PG	**Pg**	**03 43 13.6**	**-0.7**
SMTH	**Samothraki Isl**	**1.08**	**346**	P	**Pg**	**03 43 13.9**	**-0.5**
SMTH	**Samothraki Isl**	**1.08**	**346**	P	**Pg**	**03 43 14.2**	**-0.2**
SMTH				S	**Sb**	**03 43 29.0**	**+0.2**
	comp=N,2μm,0.7s						
SKY	**Skiros Island**	**1.17**	**243**	P	**Pb**	**03 43 15.5**	**-0.5**
SKY				S	**Sb**	**03 43 31.9**	**+0.6**
	comp=N,4μm,0.7s						
URLA	**Izmir**	**1.20**	**152**	PN	**Pb**	**03 43 15.5**	**-1.0**
ZEYE	**Izmir, Urla-Ze**	**1.28**	**157**	P	**Pn**	**03 43 16.5**	**-1.1**
ZEYE				S	**Sb**	**03 43 33.5**	**-0.8**
ZEYE				*i* AML	AML	03 43 39.0	
	comp=N,1μm,0.7s						
ZEYE				*i* AML	AML	03 43 58.0	
	comp=N,884nm,0.4s						
CAVK	**Edirne/Enez-Ca**	**1.29**	**10**	P	**Pn**	**03 43 17.6**	**-0.2**
CAVK				S	**Sn**	**03 43 36.3**	**+1.2**
CAVK				*i* AML	AML	03 43 43.0	
	comp=N,851nm,0.6s						
CAVK				*i* AML	AML	03 43 49.0	
	comp=N,1μm,0.9s						
ENEZ	**Enez**	**1.33**	**9**	P	**Pn**	**03 43 18.2**	**-0.2**
ENEZ				S	**Sn**	**03 43 36.7**	**+0.5**
	comp=N,2μm,0.6s						
ENEZ	**Enez**	**1.33**	**9**	PN	**Pn**	**03 43 18.2**	**-0.2**
ERIK	**Erikli-Kesan**	**1.34**	**21**	PN	**Pn**	**03 43 18.5**	**0.0**
STEP	**BALIKESIR_Sava**	**1.43**	**91**	P	**Pn**	**03 43 19.8**	**0.0**
STEP				S	**Sg**	**03 43 39.8**	**+0.4**
STEP				*i* AML	AML	03 43 45.0	
	comp=N,614nm,0.6s						
STEP				*i* AML	AML	03 43 54.0	
	comp=N,911nm,0.8s						
KRBG	**Karabiga-Canak**	**1.46**	**48**	PN	**Pn**	**03 43 20.1**	**-0.1**
ALN	**Alexandroupoli**	**1.48**	**5**	P	**Pn**	**03 43 19.8**	**-0.6**
ALN	**Alexandroupoli**	**1.48**	**5**	P	**Pn**	**03 43 20.3**	**-0.1**
ALN				S	**Sn**	**03 43 38.4**	**-1.5**
	comp=N,630nm,0.5s						
ALN	**Alexandroupoli**	**1.48**	**5**	PN	**Pn**	**03 43 20.4**	**0.0**
THAS	**Thassos island**	**1.48**	**323**	P	**Pn**	**03 43 20.1**	**-0.4**
THAS				S	**Sb**	**03 43 40.5**	**+0.2**
	comp=N,918nm,0.5s						
KNL	**Balıkesir**	**1.52**	**56**	P	**Pn**	**03 43 21.0**	**-0.1**
KNL				S	**Sb**	**03 43 41.3**	**-0.2**
KNL				*i* AML	AML	03 43 49.0	
	comp=N,2μm,0.9s						
KNL				*i* AML	AML	03 43 51.0	
	comp=N,2μm,0.8s						
GONE	**Gonen-Balikesi**	**1.53**	**65**	PN	**Pn**	**03 43 21.1**	**0.0**
DGB	**zmir**	**1.58**	**150**	P	**Pn**	**03 43 20.8**	**-0.9**
DGB				S	**Sg**	**03 43 44.4**	**+0.1**
AKS	**Akhisar**	**1.60**	**109**	PN	**Pn**	**03 43 22.4**	**+0.3**
RKY	**Sarkoy-Tekirda**	**1.61**	**38**	PN	**Pn**	**03 43 22.3**	**0.0**
MAR6	**Marsite Statio**	**1.66**	**39**	PN	**Pn**	**03 43 23.2**	**+0.2**
MAR3	**Marsite Statio**	**1.71**	**39**	PN	**Pn**	**03 43 23.8**	**+0.2**
OUR	**Ouranopolis**	**1.72**	**303**	P	**Pn**	**03 43 23.9**	**+0.1**
OUR				S	**Sb**	**03 43 47.0**	**-0.2**
	comp=N,668nm,0.7s						
OUR	**Ouranopolis**	**1.72**	**303**	PN	**Pn**	**03 43 23.9**	**+0.1**
GZKV	**Gazikoy-Tekird**	**1.73**	**40**	PN	**Pn**	**03 43 24.0**	**+0.2**
RDO	**Rodhopi**	**1.74**	**351**	P	**Pn**	**03 43 24.0**	**-0.1**

TPGR	**Topolog**	**5.75**	**18**	⇑P		**Pn**	**03 44 22.4**	**+3.3**	
BRTR	**Keskin Array B**	**6.00**	**85**	Pn		**Pn**	**03 44 23.1**	**+0.4**	
	comp=N,0.8nm,0.3s,baz=262,slow=13,SNR=26								
	comp=N,2.5nm,0.5s								
NEHR	**Nehoiu**	**6.01**	**3**	⇑P		Pn	03 44 27.5	+4.8	
ARR	**Arges**	**6.01**	**352**	⇑P		**Pn**	**03 44 24.7**	**+1.8**	
HERR	**Herculane**	**6.03**	**336**	⇑P		**Pn**	**03 44 23.5**	**+0.5**	
VOIR		**6.04**	**354**	⇑P		**Pn**	**03 44 24.8**	**+1.5**	
MLR	**Muntele Rosu**	**6.07**	**0**	⇑P		**Pn**	**03 44 25.5**	**+1.9**	
MLR	**Muntele Rosu**	**6.07**	**0**	Pn		**Pn**	**03 44 25.7**	**+2.1**	
	comp=N,1.0nm,0.3s,baz=186,slow=9.2,SNR=13								
MLR				LR		LR	03 47 34.5		
	comp=N,90nm,21.9s,baz=178,slow=46								
	comp=N,5.7nm,0.5s								
MDVR	**Moldovita**	**6.19**	**331**	⇓P		**Pn**	**03 44 25.9**	**+0.7**	
PLOR	**Plostina**	**6.45**	**5**	⇑P		**Pn**	**03 44 30.5**	**+1.7**	
VRI	**Vrincioaia**	**6.47**	**5**	⇑P		**Pn**	**03 44 30.9**	**+1.9**	
DOPR	**Dopca**	**6.55**	**357**	⇓P		**Pn**	**03 44 32.3**	**+2.1**	
BZS	**Buzias**	**6.95**	**334**	⇑P		**Pn**	**03 44 36.2**	**+0.7**	
BIZ	**Bicaz**	**7.51**	**1**	⇑P		**Pn**	**03 44 45.3**	**+1.9**	
DRGR		**7.72**	**344**	⇓P		**Pn**	**03 44 47.3**	**+1.0**	
BURAR	**Bucovina Array**	**8.20**	**357**	⇓P		**Pn**	**03 44 54.9**	**+2.0**	
DAVOX	**Davos/Dischmat**	**13.80**	**307**	Pn		**Pn**	**03 46 10.4**	**+0.9**	
	comp=N,0.3nm,0.3s,baz=158,slow=20,SNR=2.0								
	comp=N,1.0nm,0.4s								
ESDC	**Sonseca Array**	**22.97**	**280**	P		**P**	**03 47 57.4**	**-1.0**	
	comp=N,1.0nm,0.9s,baz=75,slow=10,SNR=4.1								
	comp=N,1.0nm,0.9s								
NOA	**NORSAR Array B**	**23.48**	**342**	LR		LR	03 58 54.6		
	comp=N,19nm,19.6s,baz=350,slow=41								
EKA	**Eskdalemuir Ar**	**25.04**	**319**	P		**P**	**03 48 18.2**	**+0.4**	
	comp=N,1.5nm,0.5s,baz=112,slow=9.3,SNR=2.6								
	comp=N,0.5nm,0.5s								
TORD	**Torodi Ar. Bea**	**33.77**	**226**	P		**P**	**03 49 35.8**	**0.0**	
	comp=N,0.4nm,0.6s,baz=33,slow=8.6,SNR=3.0								
	comp=N,0.4nm,0.6s								
MKAR	**Makanchi Array**	**41.06**	**61**	P		**P**	**03 50 39.0**	**+1.6**	
	comp=N,0.2nm,0.6s,baz=272,slow=10.0,SNR=1.7								
	comp=N,0.2nm,0.6s								

*DDA **28** 03:44:18.9±0.0,39°.42N×25°.93E,h7km±1km,ML3.3*
*ISK **28** 03:44:18.4,39°.46N×25°.94E,h5km,ML3.5/19*
ISC 28 03:44:20.0±1.1,**39°.47N**±0°.03×**25°.99E**±0°.05,**h10**km±7km,
n30,σ0**953**/**42**,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GPNR	**Gulpinar-Canak**	**0.11**	**95**	PG		**Pg**	**03 44 21.8**	**-0.9**
GPNR				SG		**Sg**	**03 44 24.9**	**+0.2**
KOCA	**Canakkale, Ayv**	**0.12**	**73**	P		**Pg**	**03 44 23.0**	**+0.1**
KOCA				S		**Sg**	**03 44 25.8**	**+0.8**
KOCA				*i*	AML	AML	03 44 26.0	
	comp=N,1μm,0.8s							
KOCA				*i*	AML	AML	03 44 28.0	
	comp=E,7μm,0.5s							
BOZC	**Bozcaada**	**0.38**	**8**	PG		**Pg**	**03 44 27.3**	**-0.2**
BOZC				SG		**Sb**	**03 44 34.1**	**-0.7**
BOZC	**Bozcaada**	**0.38**	**8**	P		**Pg**	**03 44 27.3**	**-0.2**
BOZC				S		**Sb**	**03 44 33.9**	**-0.9**
BOZC				*i*	AML	AML	03 44 34.0	
	comp=E,3μm,0.3s							
EZN	**Ezine**	**0.44**	**36**	PG		**Pg**	**03 44 28.7**	**0.0**
EZN				SG		**Sb**	**03 44 36.2**	**-0.4**
BAYC	**CANAKKALE_Bayr**	**0.51**	**57**	P		**Pg**	**03 44 29.9**	**-0.1**
BAYC				S		**Sb**	**03 44 37.8**	**-0.8**
AYVA	**Ayvalik**	**0.57**	**106**	P		**Pg**	**03 44 30.6**	**-0.4**
AYVA				*i*	AML	AML	03 44 39.0	
	comp=E,2μm,0.6s							
AYVA				S		**Sb**	**03 44 39.5**	**-0.6**
AYVA				*i*	AML	AML	03 44 49.0	
	comp=N,2μm,0.6s							
ECEA	**Canakkale, Ece**	**0.59**	**14**	P		**Pg**	**03 44 31.5**	**0.0**
ECEA				S		**Sb**	**03 44 41.4**	**+0.4**
ECEA				*i*	AML	AML	03 44 42.0	
	comp=N,2μm,0.4s							
ECEA				*i*	AML	AML	03 44 42.0	
	comp=E,3μm,0.6s							
GOKA	**anakkale-Gk**	**0.73**	**355**	P		**Pn**	**03 44 36.0**	**-0.3**
GOKA				S		**Sb**	**03 44 44.5**	**-0.2**
GADA	**Gvkgeada**	**0.73**	**355**	PG		**Pg**	**03 44 33.7**	**-0.3**
GADA				SG		**Sg**	**03 44 44.2**	**+0.7**
CAND	**Candarli**	**0.81**	**129**	PG		**Pg**	**03 44 35.9**	**+0.2**
DKL	**Dikili**	**0.81**	**119**	PG		**Pg**	**03 44 35.9**	**+0.2**
FOCM	**Foa**	**0.95**	**142**	PG		**Pg**	**03 44 38.3**	**+0.1**
GELI	**Tayfur-Gelibol**	**1.00**	**22**	PG		**Pg**	**03 44 39.1**	**-0.2**
GELI				SG		**Sn**	**03 44 53.9**	**-0.4**
URLA	**Izmir**	**1.20**	**157**	PN		**Pb**	**03 44 42.5**	**-0.3**
ERIK	**Erikli-Kesan**	**1.27**	**18**	PN		**Pb**	**03 44 43.9**	**-0.1**
ENEZ	**Enez**	**1.27**	**6**	PN		**Pb**	**03 44 44.1**	**0.0**
KRBG	**Karabiga-Canak**	**1.37**	**47**	PN		**Pb**	**03 44 45.5**	**-0.2**
ALN	**Alexandroupoli**	**1.43**	**2**	PN		**Pn**	**03 44 45.9**	**-0.1**
GONE	**Gonen-Balikesi**	**1.43**	**66**	PN		**Pb**	**03 44 46.7**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.52**	**36**	PN		**Pb**	**03 44 47.9**	**-0.5**
RKY				SN		**Sg**	**03 45 09.7**	**+0.7**
AKS	**Akhisar**	**1.54**	**112**	PN		**Pb**	**03 44 48.3**	**-0.2**
MAR6	**Marsite Statio**	**1.58**	**38**	PN		**Pb**	**03 44 48.7**	**-0.6**
MAR3	**Marsite Statio**	**1.62**	**38**	PN		**Pb**	**03 44 49.4**	**-0.6**
EDC	**Edincik**	**1.69**	**58**	PN		**Pb**	**03 44 50.4**	**-0.8**
RDO	**Rodhopi**	**1.71**	**349**	PN		**Pn**	**03 44 50.4**	**+0.5**
UKOP	**Uzunkopru-Edir**	**1.73**	**16**	PN		**Pn**	**03 44 50.8**	**+0.7**
OUR	**Ouranopolis**	**1.77**	**300**	PN		**Pn**	**03 44 51.1**	**+0.5**
TKR	**Tekirdag**	**1.93**	**37**	PN		**Pn**	**03 44 53.8**	**+1.0**
CRLT	**Corlu**	**2.13**	**38**	PN		**Pn**	**03 44 56.7**	**+1.1**

*KRNET **28** 03:55:48.4±0.1,39°.41N×73°.56E,mb3.5*
*SOME **28** 03:55:50.3,39°.50N×73°.45E,h5km*
*NNC **28** 03:55:53.2±1.2,39°.55N×73°.51E,h0km,mb3.7,mpv3.4,*
Error ellipse: s-maj=9.7km s-min=4.5km az=175.0
ISC 28 03:55:55.9±1.4,**39°.42N**±0°.07×**73°.31E**±0°.04,**h29**km,**n33**,
σ2**962**/**53**,**12C-3D**,**Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
OHH	**Osh**	**1.17**	**340**	⇑	*iP*	**Pn**	**03 56 11.8**	**-4.7**
	baz=32							
OHH				⇑	*iS*	**Sn**	**03 56 29.0**	**-2.5**
	baz=32							
BTK	**Batken**	**2.02**	**289**	⇑	*iP*	**Pn**	**03 56 27.5**	**-0.7**
	baz=88							
BTK				⇑	*iS*	**Sb**	**03 56 55.7**	**-1.2**
	baz=88							
GAR	**Garm**	**2.36**	**261**	⇑	*iP*	**Pn**	**03 56 32.2**	**-0.7**
	baz=62							
GAR				⇑	*iS*	**Sn**	**03 57 03.3**	**+2.4**
	baz=62							
TRKS	**Terek-Say**	**2.68**	**323**	⇑	*iP*	**Pn**	**03 56 35.0**	**-2.2**
	baz=19							
TRKS				⇑	*iS*	**Sn**	**03 57 08.1**	**-0.7**
	baz=19							
IUG	**luzhnay**	**3.69**	**319**	*eP*		**Pb**	**03 56 59.9**	**-0.6**
	161nm,0.3s							
IUG				*eS*		**Sb**	**03 57 49.6**	**+4.9**
	31nm,0.4s							
IUG	**luzhnay**	**3.69**	**319**	Pg		**Pb**	**03 57 00.0**	**-0.4**
	161nm,0.4s							
IUG				Lg		Lg	03 57 49.6	
	31nm,0.4s							
CHMS	**Chumysh**	**3.74**	**16**	⇑	Pn	**Pn**	**03 56 50.8**	**-0.9**
	1.9nm,0.4s							
CHMS				⇓	Lg	Lg	03 57 46.6	
	8.9nm,0.6s							
DZA	**Taraz**	**3.78**	**337**	*eP*		**Pb**	**03 57 00.5**	**-1.4**
	77nm,0.1s							
DZA				*eS*		**Sb**	**03 57 50.4**	**+3.2**
	205nm,0.2s							
TKM2	**Tokmak 2**	**3.90**	**26**	⇓	Pg	**Pb**	**03 57 01.3**	**-2.8**
	1.7nm,0.4s							
TKM2				⇑	Lg	Lg	03 57 52.2	
	4.5nm,0.5s							
KST	**Kastek**	**4.13**	**28**	*eP*		**Pb**	**03 57 05.3**	**-2.8**
	2.1nm,0.3s							
KST				*eS*		**Sb**	**03 57 58.9**	**+1.3**
	14nm,0.5s							
KST	**Kastek**	**4.13**	**28**	Pg		**Pb**	**03 57 05.1**	**-3.0**
	2.7nm,0.2s							
KST				Lg		Lg	03 57 58.5	
	14nm,0.5s							
SGDS	**Sogindy**	**4.15**	**13**	*eP*		**Pb**	**03 57 05.0**	**-3.3**
	2.4nm,0.3s							
SGDS				*eS*		**Sb**	**03 57 58.5**	**+0.6**
	5.8nm,0.4s							
KK31	**Karatay Array**	**4.24**	**331**	⇓	Pn	**Pn**	**03 56 59.2**	**+0.6**
	0.2nm,0.2s,baz=136,slow=12,SNR=8.5							
KK31				⇑	Pg	**Pb**	**03 57 07.3**	**-2.4**
	1.8nm,0.5s,baz=146,slow=16,SNR=8.6							
KK31				⇑	Sn	**Sn**	**03 57 50.8**	**+3.7**
	2.0nm,0.5s,baz=145,slow=24,SNR=3.7							
KK31				Lg		Lg	03 58 08.5	
	3.1nm,0.4s,baz=156,slow=30,SNR=4.4							
DGS	**Degeres**	**4.24**	**25**	*eP*		**Pb**	**03 57 07.7**	**-2.2**
	3.0nm,0.4s							
DGS				*eS*		**Sb**	**03 58 03.0**	**+2.3**
	12nm,1.5s							
DGS	**Degeres**	**4.24**	**25**	Pg		**Pb**	**03 57 06.9**	**-3.0**
	2.3nm,0.4s							
DGS				Lg		Lg	03 58 01.4	
	8.9nm,0.6s							
MTBS	**Maitube**	**4.39**	**31**	*eP*		**Pb**	**03 57 10.3**	**-2.0**
	2.7nm,0.2s							
MTBS				*eS*		**Sb**	**03 58 07.5**	**+2.6**
	6.8nm,0.2s							
MTBS	**Maitube**	**4.39**	**31**	Pg		**Pb**	**03 57 10.5**	**-1.9**
	3.7nm,0.2s							
MTBS				Lg		Lg	03 58 07.8	
	5.3nm,0.1s							
BRLS	**Borolday**	**4.46**	**325**	*eP*		**Pb**	**03 57 11.3**	**-2.1**
	1.5nm,0.4s							
BRLS				*eS*		**Sb**	**03 58 09.2**	**+2.5**
	3.9nm,0.5s							
BRLS	**Borolday**	**4.46**	**325**	Pg		**Pb**	**03 57 11.3**	**-2.1**
	2.9nm,0.2s							
BRLS				Lg		Lg	03 58 09.0	
	5.9nm,0.3s							
TNSS	**Tian-Shan**	**4.54**	**36**	*eP*		**Pb**	**03 57 13.1**	**-1.9**
	1.9nm,0.3s							
TNSS				*eS*		**Sb**	**03 58 12.6**	**+3.3**
	4.5nm,0.7s							
TNSS	**Tian-Shan**	**4.54**	**36**	Pg		**Pb**	**03 57 12.6**	**-2.5**
	2.8nm,0.4s							
TNSS				Lg		Lg	03 58 12.3	
	4.5nm,0.7s							
KRBS	**Karabastau**	**4.62**	**22**	*eP*		**Pb**	**03 57 14.2**	**-2.2**
	1.5nm,0.4s							
KRBS				*eS*		**Sb**	**03 58 14.2**	**+2.6**
	8.6nm,0.5s							
KRBS	**Karabastau**	**4.62**	**22**	Pg		**Pb**	**03 57 14.2**	**-2.2**
	2.9nm,0.4s							
KRBS				Lg		Lg	03 58 14.1	
	8.6nm,0.9s							
KTBS	**Karatobe**	**4.98**	**29**	*eP*		**Pb**	**03 57 20.1**	**-2.2**
	1.1nm,0.4s							
KTBS				*eS*		**Sb**	**03 58 24.3**	**+2.6**
	14nm,0.6s							
KTBS	**Karatobe**	**4.98**	**29**	Pg		**Pb**	**03 57 20.1**	**-2.2**
	1.1nm,0.4s							
KTBS				Lg		Lg	03 58 24.3	
	14nm,0.6s							
KUU	**Kurty**	**5.01**	**26**	*eP*		**Pb**	**03 57 20.7**	**-2.2**
	1.8nm,0.2s							
KUU				*eS*		**Sb**	**03 58 25.4**	**+2.7**
	7.7nm,0.8s							
KUU	**Kurty**	**5.01**	**26**	Pg		**Pb**	**03 57 20.7**	**-2.2**
	1.8nm,0.2s							
KUU				Lg		Lg	03 58 25.4	
	7.7nm,0.8s							
SATY	**Saty**	**5.29**	**45**	*eP*		**Pb**	**03 57 26.7**	**-1.0**
	3.0nm,0.6s							
SATY				*eS*		**Sb**	**03 58 36.0**	**+5.3**
	5.4nm,0.3s							
SATY	**Saty**	**5.29**	**45**	Pg		**Pb**	**03 57 26.7**	**-1.0**
	3.0nm,0.6s							
SATY				Lg		Lg	03 58 36.0	
	5.4nm,0.3s							
BTLS	**Baital**	**5.64**	**5**	*eP*		**Pb**	**03 57 33.2**	**-0.4**
	1.6nm,0.5s							
BTLS				*eS*		**Sb**	**03 58 46.6**	**+5.9**
	2.3nm,0.4s							
KPKS	**Kokpek**	**5.71**	**43**	*eP*		**Pb**	**03 57 32.8**	**-2.1**
	1.9nm,0.6s							
KPKS				*eS*		**Sb**	**03 58 46.5**	**+3.6**
	6.2nm,0.6s							
KPKS	**Kokpek**	**5.71**	**43**	Pg		**Pb**	**03 57 32.8**	**-2.1**
	1.9nm,0.6s							
KPKS				Lg		Lg	03 58 46.5	
	6.2nm,0.6s							
PDGK	**Podgornoye**	**6.07**	**48**	Pg		**Pb**	**03 57 39.8**	**-1.2**
	0.7nm,0.3s							
PDGK				Lg		Lg	03 58 58.5	
	1.6nm,0.5s							

*UCR **28** 04:11:50.2±0.9,13°.31N×89°.75W,h49km±7km,ML4.1,*
mb3.5(NEIC)
*SNET **28** 04:11:50.1±0.9,13°.30N×89°.75W,h48km±7km,ML4.1*
*GCG **28** 04:11:50.1±0.5,13°.35N×89°.82W,h98km±19km,MD3.7*
*NEIC **28** 04:11:51.4±1.6,13°.36N±0°.07×89°.71W±0°.08,h57km±11km,*
mb3.5/1,Md4.0(SNET),Error ellipse: s-maj=12.2km
s-min=7.9km az=55.0
*INET **28** 04:11:54.9±3.0,13°.71N×89°.23W,h61km±20km,MW3.6*
ISC 28 04:11:52.2±1.4,**13°.36N**±0°.06×**89°.70W**±0°.04,**h44**km±11km,
n88,σ0**997**/**122**,**36D**,**El Salvador**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JAYA	**Jayaque - finc**	**0.38**	**39**	⇓	*iP*	**Pn**	**04 12 01.0**	**-0.9**
JAYA				*eS*		**Sn**	**04 12 09.3**	**+0.7**
JAYA	**Jayaque - finc**	**0.38**	**39**	⇓	*iP*	**Pn**	**04 12 01.0**	**-0.9**
JAYA				*eS*		**Sn**	**04 12 09.3**	**+0.7**
CEVE	**Cerro Verde**	**0.47**	**9**	⇓	*iP*	**Pn**	**04 12 02.2**	**-0.8**
CEVE				*eS*		**Sn**	**04 12 11.7**	**+1.1**
CEVE					IAML		04 12 15.8	
	comp=Z,16μm,0.3s							
CEVE	**Cerro Verde**	**0.47**	**9**	⇓	*iP*	**Pn**	**04 12 02.2**	**-0.8**
CEVE				*eS*		**Sn**	**04 12 11.7**	**+1.1**
CEVE					IAML		04 12 15.8	
	comp=Z,16μm,0.3s							
SBLS	**San Blas**	**0.49**	**9**	⇓	*iP*	**Pn**	**04 12 02.3**	**-0.9**
SBLS	**San Blas**	**0.49**	**9**	⇓	*iP*	**Pn**	**04 12 02.3**	**-0.9**
PMON	**Piamonte**	**0.51**	**46**	*eP*		**Pn**	**04 12 02.5**	**-0.9**
PMON				*eS*		**Sn**	**04 12 12.7**	**+1.4**
PMON	**Piamonte**	**0.51**	**46**	*eP*		**Pn**	**04 12 02.5**	**-0.9**
PMON				*eS*		**Sn**	**04 12 12.7**	**+1.4**
SNJE	**San Jose**	**0.52**	**10**	⇓	*iP*	**Pn**	**04 12 02.6**	**-0.9**
SNJE	**San Jose**	**0.52**	**10**	⇓	*iP*	**Pn**	**04 12 02.6**	**-0.9**
CEDA	**San Andres**	**0.53**	**34**	⇓	*iP*	**Pn**	**04 12 02.8**	**-0.8**
CEDA				*eS*		**Sn**	**04 12 13.1**	**+1.4**
CEDA					IAML		04 12 17.7	
	comp=Z,6μm,0.2s							
CEDA	**San Andres**	**0.53**	**34**	⇓	*iP*	**Pn**	**04 12 02.8**	**-0.8**
CEDA				*eS*		**Sn**	**04 12 13.1**	**+1.4**
CEDA					IAML		04 12 17.7	
	comp=Z,6μm,0.2s							
CEDA	**San Andres**	**0.53**	**34**	*eP*		**Pn**	**04 12 02.8**	**-0.8**
CEDA				*eS*		**Sn**	**04 12 13.0**	**+1.4**
NUBE	**Las Nubes**	**0.55**	**352**	⇓	*iP*	**Pn**	**04 12 02.7**	**-1.2**
NUBE				*eS*		**Sn**	**04 12 11.9**	**-0.3**
NUBE	**Las Nubes**	**0.55**	**352**	⇓	*iP*	**Pn**	**04 12 02.7**	**-1.2**
NUBE				*eS*		**Sn**	**04 12 11.9**	**-0.3**
BOQS	**Boqueron**	**0.55**	**47**	*eP*		**Pn**	**04 12 03.2**	**-0.8**
BOQS	**Boqueron**	**0.55**	**47**	*eP*		**Pn**	**04 12 03.2**	**-0.8**
SNET	**Serv Nac Est T**	**0.56**	**54**			**Pn**	**04 12 02.9**	**-1.0**
SNET					Sn	**Sn**	**04 12 13.0**	**+0.6**
SNET	**Serv Nac Est T**	**0.56**	**54**	⇓	*iP*	**Pn**	**04 12 02.9**	**-1.0**
SNET				*eS*		**Sn**	**04 12 13.1**	**+0.8**
SNET					IAML		04 12 14.5	
	comp=Z,5μm,0.2s							
SNET	**Serv Nac Est T**	**0.56**	**54**	⇓	*iP*	**Pn**	**04 12 02.9**	**-1.0**
SNET				*eS*		**Sn**	**04 12 13.1**	**+0.8**
SNET					IAML		04 12 14.5	
	comp=Z,5μm,0.2s							
SNET	**Serv Nac Est T**	**0.56**	**54**	*eP*		**Pn**	**04 12 02.9**	**-1.0**
UEES	**Universidad Ev**	**0.57**	**51**	⇓	*iP*	**Pn**	**04 12 03.2**	**-0.9**
UEES				*eS*		**Sn**	**04 12 13.4**	**+0.8**
UEES					IAML		04 12 17.1	
	comp=Z,5μm,0.1s							
UNIC	**Universidad Ca**	**0.64**	**13**	⇓	*iP*	**Pn**	**04 12 04.2**	**-0.8**
UNIC				*eS*		**Sn**	**04 12 15.1**	**+0.9**
UNIC	**Universidad Ca**	**0.64**	**13**	⇓	*iP*	**Pn**	**04 12 04.2**	**-0.8**
UNIC				*eS*		**Sn**	**04 12 15.1**	**+0.9**
LOAL	**Lomas de Alarc**	**0.64**	**353**	⇓	*eP*	**Pn**	**04 12 04.2**	**-0.8**
LOAL	**Lomas de Alarc**	**0.64**	**353**	⇓	*eP*	**Pn**	**04 12 04.2**	**-0.8**
AEIL	**Aeropuerto Ilo**	**0.66**	**59**	*eP*		**Pn**	**04 12 04.6**	**-0.6**
AEIL				*eS*		**Sn**	**04 12 15.9**	**+1.3**
AEIL					IAML		04 12 19.0	
	comp=Z,12μm,0.2s							
AEIL	**Aeropuerto Ilo**	**0.66**	**59**	*eP*		**Pn**	**04 12 04.6**	**-0.6**
AEIL				*eS*		**Sn**	**04 12 15.9**	**+1.3**
AEIL					IAML		04 12 19.0	
	comp=Z,12μm,0.2s							
SLOZ	**Alcaldia de Sa**	**0.67**	**353**	⇓	*iP*	**Pn**	**04 12 04.5**	**-0.9**
SLOZ				*eS*		**Sn**	**04 12 15.8**	**+1.0**
LFRS	**El Faro**	**0.67**	**67**	⇓	*iP*	**Pn**	**04 12 04.5**	**-0.9**
LFRS	**El Faro**	**0.67**	**67**	⇓	*iP*	**Pn**	**04 12 04.5**	**-0.9**
LFU	**La Fuente**	**0.69**	**55**	⇓	*iP*	**Pn**	**04 12 05.0**	**-0.7**
LFU	**La Fuente**	**0.69**	**55**	⇓	*iP*	**Pn**	**04 12 05.0**	**-0.7**
SJTE	**Alcalda de S**	**0.72**	**69**	⇓	*eP*	**Pn**	**04 12 05.1**	**-0.9**
SJTE				*eS*		**Sn**	**04 12 16.5**	**+0.4**
SJTE	**Alcalda de S**	**0.72**	**69**	⇓	*eP*	**Pn**	**04 12 05.1**	**-0.9**
SJTE				*eS*		**Sn**	**04 12 16.5**	**+0.4**
LBRS	**Las Brisas**	**0.74**	**59**	*eP*		**Pn**	**04 12 05.9**	**-0.5**
LBRS	**Las Brisas**	**0.74**	**59**	*eP*		**Pn**	**04 12 05.9**	**-0.5**
PAVA	**Las Pavas**	**0.82**	**64**	⇓	*iP*	**Pn**	**04 12 07.0**	**-0.5**
PAVA				*eS*		**Sn**	**04 12 20.1**	**+1.6**
PAVA	**Las Pavas**	**0.82**	**64**	⇓	*iP*	**Pn**	**04 12 07.0**	**-0.5**
PAVA				*eS*		**Sn**	**04 12 20.1**	**+1.6**
PAVA	**Las Pavas**	**0.82**	**64**	*eP*		**Pn**	**04 12 07.0**	**-0.5**
COEG	**Centro de Oper**	**0.84**	**72**	⇓	*eP*	**Pn**	**04 12 06.7**	**-1.0**
COEG				*eS*		**Sn**	**04 12 19.4**	**+0.5**
COEG					IAML		04 12 22.4	
	comp=Z,6μm,0.2s							
COEG	**Centro de Oper**	**0.84**	**72**	⇓	*eP*	**Pn**	**04 12 06.7**	**-1.0**
COEG				*eS*		**Sn**	**04 12 19.4**	**+0.5**
COEG					IAML		04 12 22.4	
	comp=Z,6μm,0.2s							
COEG	**Centro de Oper**	**0.84**	**72**	*eP*		**Pn**	**04 12 07.1**	**-0.5**
COEG				*eS*		**Sn**	**04 12 19.6**	**+0.7**
SCLA	**Alcaldia de Sa**	**1.00**	**70**	⇓	*eP*	**Pn**	**04 12 09.1**	**-0.8**
SCLA				*eS*		**Sn**	**04 12 24.6**	**+1.7**
SCLA	**Alcaldia de Sa**	**1.00**	**70**	⇓	*eP*	**Pn**	**04 12 09.1**	**-0.8**
SCLA				*eS*		**Sn**	**04 12 24.6**	**+1.7**
LLGN	**La Laguna**	**1.09**	**42**	*eP*		**Pn**	**04 12 10.1**	**-1.0**
LLGN				*eS*		**Sn**	**04 12 25.7**	**+0.7**
LLGN	**La Laguna**	**1.09**	**42**	*eP*		**Pn**	**04 12 10.1**	**-1.0**
LLGN				*eS*		**Sn**	**04 12 25.7**	**+0.7**
MTO3	**Montecristo**	**1.09**	**17**			**Pn**	**04 12 10.2**	**-0.9**
MTO3					Sn	**Sn**	**04 12 24.9**	**-0.3**
MTO3	**Montecristo**	**1.09**	**17**	⇓	*iP*	**Pn**	**04 12 10.3**	**-0.9**
MTO3	**Montecristo**	**1.09**	**17**	⇓	*iP*	**Pn**	**04 12 10.3**	**-0.9**
MTO3	**Montecristo**	**1.09**	**17**	*eP*		**Pn**	**04 12 10.3**	**-0.9**
PQSS	**Presa 15 de Se**	**1.14**	**76**	*eP*		**Pn**	**04 12 10.8**	**-0.9**
PQSS	**Presa 15 de Se**	**1.14**	**76**	*eP*		**Pn**	**04 12 10.8**	**-0.9**
ESQI	**Esquipulas**	**1.25**	**16**			**Pn**	**04 12 12.6**	**-0.7**
ESQI					Sn	**Sn**	**04 12 29.0**	**0.0**
ESQI	**Esquipulas**	**1.25**	**16**	⇓	*iP*	**Pn**	**04 12 12.6**	**-0.7**
PACA	**Pacayal**	**1.34**	**85**	*eP*		**Pn**	**04 12 14.1**	**-0.5**
PACA	**Pacayal**	**1.34**	**85**	*eP*		**Pn**	**04 12 14.1**	**-0.5**
PCG	**Pacaya**	**1.36**	**319**	*eP*		**Pn**	**04 12 14.7**	**-0.2**
LCY	**Lacayo**	**1.37**	**87**	*eP*		**Pn**	**04 12 14.3**	**-0.6**
LCY	**Lacayo**	**1.37**	**87**	*eP*		**Pn**	**04 12 14.3**	**-0.6**
RANC	**El Ranchito**	**1.37**	**87**	*eP*		**Pn**	**04 12 14.1**	**-0.9**
RANC	**El Ranchito**	**1.37**	**87**	*eP*		**Pn**	**04 12 14.1**	**-0.9**
NBG	**Las Nubes**	**1.38**	**333**	*eP*		**Pn**	**04 12 15.3**	**+0.1**
NBG				*eS*		**Sn**	**04 12 35.2**	**+2.8**
FUG	**Fuego 3**	**1.55**	**314**	*eP*		**Pn**	**04 12 16.6**	**-0.9**
MRL	**Marmol**	**1.71**	**0**	*eP*		**Pn**	**04 12 20.0**	**+0.2**
LCND	**La Caada**	**1.76**	**91**	*eP*		**Pn**	**04 12 19.1**	**-1.1**
LCND	**La Caada**	**1.76**	**91**	*eP*		**Pn**	**04 12 19.1**	**-1.1**
CNCH	**Conchagua**	**1.82**	**92**	*eP*		**Pn**	**04 12 19.9**	**-1.2**
CNCH	**Conchagua**	**1.82**	**92**	*eP*		**Pn**	**04

comp=E,226nm,0.2s
SAHE *i* AML AML 04 24 40.0
comp=Z,130nm,0.4s
SAHE *i* AML AML 04 24 43.0
comp=N,132nm,0.3s
KAND Kocaeli-Kandir 1.84 215 P **Pn 04 24 17.1 +0.4**
KAND S **Sn 04 24 37.9 -1.3**
KAND *i* AML AML 04 24 39.0
comp=E,1µm,0.4s
KAND *i* AML AML 04 24 40.0
comp=N,1µm,0.4s
KAND *i* AML AML 04 24 41.0
comp=Z,917nm,0.7s
KAYN Sakarya, Kayna 1.89 210 P **Pn 04 24 17.7 +0.3**
KAYN S **Sn 04 24 38.2 -2.3**
KAYN *i* AML AML 04 24 39.0
comp=Z,204nm,0.3s
KAYN *i* AML AML 04 24 40.0
comp=N,283nm,0.2s
KAYN *i* AML AML 04 24 42.0
comp=E,373nm,0.3s
BZK Bozkurt 1.90 109 ⇓P **Pn 04 24 17.6 +0.1**
BZK ⇑S **Sn 04 24 40.8 +0.2**
BZK Bozkurt 1.90 109 PN **Pn 04 24 18.2 +0.8**
BZK SN **Sn 04 24 40.8 +0.2**
BZK Bozkurt 1.90 109 Pn **Pn 04 24 17.1 -0.3**
SILT Sile 2.06 226 PN **Pn 04 24 19.9 +0.2**
SILT SN **Sn 04 24 42.9 -1.8**
BTAS Taskesti 2.08 193 P **Pn 04 24 21.0 +0.9**
BTAS S **Sn 04 24 44.6 -0.8**
BTAS *i* AML AML 04 24 45.0
comp=N,466nm,0.5s
BTAS *i* AML AML 04 24 46.0
comp=Z,162nm,0.7s
BTAS *i* AML AML 04 24 46.0
comp=E,223nm,0.3s
MDUB Mudurnu 2.15 188 PN **Pn 04 24 21.1 0.0**
MDUB Mudurnu 2.15 188 Pn **Pn 04 24 22.1 +1.0**
KIBS BOLU 2.19 175 P **Pn 04 24 22.6 +1.0**
KIBS *i* AML AML 04 24 55.0
comp=Z,74nm,1.0s
KIBS *i* AML AML 04 24 56.0
comp=N,77nm,0.4s
KIBS *i* AML AML 04 24 58.0
comp=E,92nm,0.6s
CMDR Camlidere-ANKA 2.21 162 P **Pn 04 24 23.0 +1.1**
CMDR *i* AML AML 04 24 54.0
comp=Z,146nm,0.7s
CMDR *i* AML AML 04 24 59.0
comp=E,196nm,0.6s
CMDR *i* AML AML 04 25 01.0
comp=N,265nm,0.5s
YUVA Yuva-Kibriscik 2.21 178 PN **Pn 04 24 22.0 0.0**
ILGA Ilgaz 2.22 134 P **Pn 04 24 23.5 +1.4**
ILGA S **Sn 04 24 51.6 +2.7**
ILGA *i* AML AML 04 24 52.0
comp=E,211nm,0.4s
ILGA *i* AML AML 04 24 53.0
comp=Z,112nm,0.5s
ILGA *i* AML AML 04 24 53.0
comp=N,249nm,0.8s
GEYV SAKARYA_Geyve 2.34 205 P **Pn 04 24 24.7 +1.2**
GEYV S **Sn 04 24 51.0 -0.5**
GEYV *i* AML AML 04 24 56.0
comp=N,136nm,0.4s
GEYV *i* AML AML 04 24 56.0
comp=E,90nm,0.2s
GEYV *i* AML AML 04 24 57.0
comp=Z,92nm,0.9s
KLYT Kilyos 2.34 236 Pn **Pn 04 24 23.7 +0.2**
ISK Istanbul-Kandi 2.45 232 P **Pn 04 24 25.6 +0.6**
SEV Sevastopol' 2.45 37 *i* Pn **Pn 04 24 27.0 +1.9**
SEV Pnm 04 24 27.5
comp=Z,9.0nm,0.2s
SEV *i* Sn **Sn 04 24 52.4 -1.9**
SEV Snm 04 24 56.8
comp=N,152nm,0.3s
SEV Snm 04 24 57.3
comp=E,97nm,0.3s
TSMN Mangalia Port- 2.50 300 ⇑P **Pn 04 24 27.6 +1.8**
TSMN ⇑S **Sn 04 24 55.9 +0.4**
MANR Mangalia 2.51 300 ⇓P **Pn 04 24 27.4 +1.5**
MANR ⇑S **Sn 04 24 56.1 +0.2**
ELDT Eldivan 2.52 146 P **Pb 04 24 30.6 -0.5**
BOYA Sinop/Boyabat- 2.53 114 P **Pn 04 24 27.8 +1.6**
BOYA S **Sn 04 24 57.7 +1.4**
EFOR EFORIE 2.62 305 ⇓P **Pn 04 24 29.1 +1.8**
EFOR ⇑S **Sn 04 24 58.1 -0.4**
YLV Yalova 2.64 220 Pn **Pn 04 24 28.2 +0.5**
YAL Yalta 2.64 44 *eP* **Pn 04 24 29.7 +2.0**
YAL *i* 04 24 58.6
YAL Yalta 2.64 44 *e*(Pn) **Pn 04 24 29.7 +2.0**
YAL Pnm 04 24 31.6
comp=Z,6.0nm,0.3s
YAL *i* Sn **Sn 04 24 58.6 -0.4**
YAL Snm 04 25 00.7
comp=N,173nm,0.2s
YAL Snm 04 25 00.7
comp=E,119nm,0.2s
TSCT Constanta Port 2.65 307 ⇑P **Pn 04 24 29.4 +1.6**
TSCT ⇑S **Sn 04 24 59.3 +0.1**
SRCK Saricakaya, Es 2.67 196 PN **Pn 04 24 28.5 +0.4**
AUMIH MIHALICIK 2.74 182 PN **Pn 04 24 29.5 +0.3**
MFTR Murfatlar 2.80 305 ⇑P **Pn 04 24 31.6 +1.8**
MFTR ⇓S **Sn 04 25 02.9 0.0**
BORA Eskisehir 2.86 198 PN **Pn 04 24 31.3 +0.5**
ANTO Ankara 2.88 161 ⇓P **Pb 04 24 37.1 -0.2**
TSSL Sulina 2.89 333 ⇑P **Pn 04 24 32.6 +1.4**
TSSL ⇑S **Sn 04 24 04.8 -0.4**
ALU Alushta 2.91 43 *i* Sn **Sn 04 25 03.6 -1.9**
ALU Snm 04 25 05.8
comp=N,423nm,0.2s
ALU Snm 04 25 07.0
comp=E,367nm,0.3s
SIM Simferopol' 2.97 37 *eP* **Pn 04 24 32.4 +0.2**
SIM *eS* **Sn 04 25 05.8 -1.2**
SIM pmax pmax
comp=Z,14nm,0.4s
SIM smax smax
comp=E,80nm,0.4s
SIM Simferopol' 2.97 37 *e*Pn **Pn 04 24 33.8 +1.6**
SIM Pnm 04 24 36.8
comp=Z,51nm,0.4s
SIM *i* Sn **Sn 04 25 06.3 -0.7**
SIM Snm 04 25 08.9
comp=E,247nm,0.3s
SIM Snm 04 25 09.5
comp=N,185nm,0.4s
TIRR Tirgusor 2.97 310 ⇓P **Pn 04 24 33.6 +1.5**
TIRR ⇓S **Sn 04 25 06.3 -0.8**
TIRR Tirgusor 2.97 310 P **Pn 04 24 33.6 +1.5**
TIRR S **Sn 04 25 06.2 -0.8**
CVDA Cernavoda 3.12 305 ⇑P **Pn 04 24 35.8 +1.6**
CVDA ⇓S **Sn 04 25 10.2 -0.5**
ICOR Ion Corvin 3.16 300 ⇑P **Pn 04 24 36.5 +1.8**
ICOR ⇑S **Sn 04 25 11.5 -0.2**
SVRH Sivrihisar-ESK 3.16 181 PN **Pn 04 24 35.5 +0.6**
AUSIV SIVRIHISAR 3.17 181 PN **Pn 04 24 35.5 +0.5**
TPGR Topolog 3.22 315 ⇑P **Pn 04 24 36.9 +1.2**
TPGR ⇑S **Sn 04 25 12.6 -0.8**
TLBR Topalu 3.23 308 ⇑P **Pn 04 24 37.5 +1.7**
TLBR ⇑S **Sn 04 25 13.2 -0.3**
BR106 Keskin Array S 3.25 151 Pn **Pn 04 24 36.5 +0.3**
BR105 Keskin Array S 3.26 152 Pn **Pn 04 24 36.7 +0.3**
BR131 Keskin Array S 3.26 151 *eP* **Pn 04 24 35.2 -1.2**
BRTR Keskin Array B 3.26 151 Pn **Pn 04 24 36.9 +0.4**
comp=N,0.4nm,0.3s,baz=337,slow=13,SNR=11
BRTR Pg **Pb 04 24 44.5 +0.7**
comp=N,1.2nm,0.3s,baz=338,slow=11,SNR=17
BRTR Sn **Sn 04 25 12.5 -2.1**
comp=N,2.4nm,0.3s,baz=330,slow=17,SNR=3.5
BRTR Lg Lg 04 25 23.5
comp=N,3.6nm,0.3s,baz=330,slow=22,SNR=15
BRTR Keskin Array B 3.26 151 PN **Pn 04 24 37.4 +1.0**
TLCR 3.27 323 ⇑P **Pn 04 24 37.4 +1.0**
TLCR ⇑S **Sn 04 25 13.1 -1.4**
TLCR 3.27 323 P **Pn 04 24 37.3 +1.0**
TLCR S **Sn 04 25 13.1 -1.4**
BR104 Keskin Array S 3.28 151 Pn **Pn 04 24 37.3 +0.7**
CORM Corum 3.33 136 PN **Pn 04 24 38.1 +0.8**
SUDU Sudak 3.36 46 *eP* **Pn 04 24 40.3 +2.8**
SUDU *i* 04 25 16.8
SUDU Sudak 3.36 46 *e*Pn **Pn 04 24 40.3 +2.8**
SUDU Pnm 04 24 43.8

comp=Z,14nm,0.2s
SUDU *i* Sn **Sn 04 25 16.8 +0.2**
SUDU Snm 04 25 17.3
comp=E,255nm,0.2s
SUDU Snm 04 25 17.9
comp=N,418nm,0.4s
HARR Harsova 3.38 309 ⇓P **Pn 04 24 39.5 +1.6**
CFR Carcaliu 3.59 317 ⇓P **Pn 04 24 42.3 +1.6**
CFR ⇑S **Sn 04 25 21.9 -0.4**
KAMT Kaman 3.61 153 PN **Pn 04 24 42.1 +1.0**
FEO Feodosiya 3.65 47 *i* Sn **Sn 04 25 22.2 -1.7**
FEO Snm 04 25 22.5
comp=E,149nm,0.3s
FEO Snm 04 25 24.7
comp=N,165nm,0.3s
EDRB Edirne 3.69 260 P **Pn 04 24 42.2 +0.1**
AMRR Amara 3.69 304 ⇑P **Pn 04 24 42.1 0.0**
AMRR ⇑S **Sn 04 25 24.1 -0.7**
GIUM Giurgiulesti 3.78 321 ⇓P **Pn 04 24 44.4 +1.1**
GIUM ⇓S **Sn 04 25 25.9 -1.1**
RAZG Razgrad 3.85 286 ⇑P **Pn 04 24 46.2 +1.8**
RAZG ⇑S **Sn 04 25 28.1 -0.8**
TATR Tatarca 3.94 321 ⇑P **Pn 04 24 47.3 +1.8**
TATR ⇓S **Sn 04 25 30.0 -0.8**
SCHL Schela 3.97 318 ⇑S **Sn 04 25 32.0 +0.3**
SCTR Scanteiesti 4.02 321 ⇑S **Sn 04 25 32.4 -0.6**
VLDR Vladesti 4.11 323 ⇑P **Pn 04 24 49.6 +1.8**
VLDR ⇓S **Sn 04 25 33.9 -1.3**
PURM Purcari 4.11 343 ⇑S **Sn 04 25 36.2 +0.9**
TUDR 4.12 318 ⇑P **Pn 04 24 49.0 +1.0**
TUDR ⇑S **Sn 04 25 36.0 +0.7**
VARL Varlezi 4.25 322 ⇑S **Sn 04 25 38.5 -0.3**
SULR 4.40 300 ⇑P **Pn 04 24 54.6 +2.8**
SULR ⇑S **Sn 04 25 43.2 +0.8**
ISR Istrita 4.44 306 ⇑P **Pn 04 24 55.6 +3.1**
ISR ⇑S **Sn 04 25 43.9 +0.5**
ALN Alexandroupoli 4.49 250 P **Pn 04 24 53.1 -0.1**
ALN Alexandroupoli 4.49 250 Pn **Pn 04 24 53.0 -0.1**
BISRR Bisoca 4.59 312 ⇑S **Sn 04 25 48.2 +1.0**
BIR Birlad 4.63 323 ⇑S **Sn 04 25 48.1 0.0**
SECR 4.68 303 ⇑P **Pn 04 24 55.9 +0.2**
ZIMR 4.68 285 ⇑P **Pn 04 24 57.2 +1.4**
MILM Milestii Mici 4.75 336 *i* **Pn 04 24 57.0 +0.4**
MILM Milestii Mici 4.75 336 *eP* **Pn 04 24 58.0 +1.4**
comp=N,34nm,0.5s
MILM *i* S **Sn 04 25 49.0 -1.9**
comp=N,80nm,0.1s
MILM Milestii Mici 4.75 336 ⇓P **Pn 04 24 57.3 +0.7**
MILM ⇓S **Sn 04 25 50.3 -0.6**
MILM Milestii Mici 4.75 336 *eP* **Pn 04 24 56.0 -0.6**
MILM *i* S **Sn 04 25 49.0 -1.9**
MILM pmax pmax
comp=Z,34nm,0.5s
MILM smax smax
comp=N,80nm,0.1s
MILM smax smax
comp=E,100nm,0.2s
RDO Rodhopi 4.76 254 P **Pn 04 24 56.9 +0.1**
ANN Anapa 4.76 61 *eP* **Pn 04 24 56.7 -0.1**
ANN *eS* **Sn 04 25 47.2 -4.1**
ANN pmax pmax
comp=Z,10.0nm,0.6s
VRI Vrincioaia 4.78 315 ⇑P **Pn 04 24 57.3 +0.1**
VRI ⇑S **Sn 04 25 52.4 +0.6**
VRI Vrincioaia 4.78 315 P **Pn 04 24 57.3 +0.1**
VRI S **Sn 04 25 52.4 +0.6**
PLOR Plostina 4.81 314 ⇑P **Pn 04 24 57.5 -0.1**
PLOR Plostina 4.81 314 P **Pn 04 24 57.5 -0.1**
VASR Vaslui 4.87 327 ⇑P **Pn 04 25 00.2 +1.9**
VASR ⇑S **Sn 04 25 52.4 -1.5**
MLR Muntele Rosu 4.99 307 ⇑P **Pn 04 25 00.3 +0.1**
MLR ⇑S **Sn 04 25 57.6 +0.4**
MLR Muntele Rosu 4.99 307 P **Pn 04 25 00.2 +0.1**
MLR S **Sn 04 25 57.6 +0.4**
SMTH Samothraki Isl 5.03 247 P **Pn 04 25 00.8 +0.2**
COVR Voineasa-Covas 5.05 312 ⇑P **Pn 04 25 02.9 +2.0**
COVR ⇑S **Sn 04 25 57.1 -1.4**
VLAD Vladila 5.43 287 ⇑P **Pn 04 25 07.4 +1.3**
VLAD ⇑S **Sn 04 26 06.2 -1.6**
OZUR 5.44 312 ⇓P **Pn 04 25 08.2 +2.0**
VOIR 5.51 303 ⇑P **Pn 04 25 09.2 +2.1**
VOIR ⇓S **Sn 04 26 09.2 -0.6**
VOIR 5.51 303 P **Pn 04 25 09.2 +2.1**
VOIR S **Sn 04 26 09.2 -0.6**
THAS Thassos island 5.53 251 P **Pn 04 25 07.1 -0.3**
LIA Limnos Island 5.54 243 P **Pn 04 25 07.5 -0.1**
DOPR Dopca 5.58 309 ⇑P **Pn 04 25 10.4 +2.2**
DOPR ⇓S **Sn 04 26 10.5 -1.1**
ARR Arges 5.73 301 ⇑P **Pn 04 25 12.2 +1.9**
ARR ⇑S **Sn 04 26 15.3 0.0**
BIZ Bicaz 5.84 320 ⇑P **Pn 04 25 11.6 0.0**
BIZ ⇓S **Sn 04 26 15.0 -2.7**
SORM Soroca 5.98 339 ⇑P **Pn 04 25 14.2 +0.6**
SORM ⇑S **Sn 04 26 17.6 -3.7**
SORM Soroca 5.98 339 P **Pn 04 25 14.1 +0.6**
SOC Sochi 6.02 78 *eP* **Pn 04 25 14.7 +0.6**
SOC *e* 04 26 19.5
SOC pmax pmax
comp=Z,4.0nm,0.3s
SOC smax smax
comp=N,46nm,0.5s
SRS Serrai 6.16 259 P **Pn 04 25 16.0 -0.1**
VSLR Vesyoloye 6.24 79 ⇑*i*P **Pn 04 25 16.9 -0.2**
LOT Lotru 6.32 299 ⇑P **Pn 04 25 20.0 +1.6**
LOT ⇓S **Sn 04 26 28.1 -1.8**
PLG Polygyros 6.52 253 P **Pn 04 25 21.0 0.0**
PAIG Palíouri 6.54 248 P **Pn 04 25 20.9 -0.4**
BURAR Bucovina Array 6.74 320 ⇑P **Pn 04 25 24.6 +0.5**
BURAR ⇑S **Sn 04 26 41.0 +0.8**
BURAR Bucovina Array 6.74 320 P **Pn 04 25 24.6 +0.5**
BURAR S **Sn 04 26 41.0 +0.8**
VAY Valandovo 6.85 262 *i* P **Pn 04 25 26.2 +0.6**
KMPD K-Podol'skiy 6.96 331 Pn **Pn 04 25 26.7 -0.3**
KMPD sP **Pb 04 25 37.1 -10**
HERR Herculane 7.03 292 ⇑P **Pn 04 25 28.1 +0.2**
HERR ⇑S **Sn 04 26 42.3 -4.9**
MDVR Moldovita 7.49 290 ⇑P **Pn 04 25 34.9 +0.5**
DRGR 7.59 306 ⇑P **Pn 04 25 36.9 +1.2**
DRGR 7.59 306 P **Pn 04 25 36.9 +1.2**
CHVG Ch'k'valeri 7.73 86 ⇓S **Sn 04 27 01.7 -2.7**
LUBAR Lubar, Ukraine 7.78 341 Pn **Pn 04 25 38.4 +0.1**
BZS Buzias 7.79 296 ⇑P **Pn 04 25 39.1 +0.7**
AK07 Malin Array Si 8.12 349 Pn **Pn 04 25 42.5 -0.3**
AK07 sP **Pb** 04 25 53.5 -13
AK06 Malin Array Si 8.15 349 Pn **Pn 04 25 42.9 -0.4**
AK06 sP **Pb** 04 25 54.0 -13
AK10 Malin Array Si 8.16 349 Pn **Pn 04 25 43.0 -0.4**
AK09 Malin Array Si 8.17 350 Pn **Pn 04 25 43.1 -0.5**
AK05 Malin Array Si 8.18 349 Pn **Pn 04 25 43.3 -0.5**
AK08 Malin Array Si 8.19 349 Pn **Pn 04 25 43.4 -0.5**
AK08 sP **Pb 04 25 53.9 -14**
AK13 Malin Array Si 8.20 349 Pn **Pn 04 25 43.9 0.0**
KIV Kislovodsk 8.20 77 ⇑*eP* **Pn 04 25 44.5 +0.4**
KIV *eS* **Sn 04 27 16.1 0.0**
KIV pmax pmax
comp=Z,3.0nm,0.3s
AK14 Malin Array Si 8.21 349 Pn **Pn 04 25 44.0 -0.1**
MI29 MI29, Kamyanyy 8.23 343 Pn **Pn 04 25 45.2 +0.8**
AK11 Malin Array Si 8.25 349 Pn **Pn 04 25 44.2 -0.4**
AK16 Malin Array Si 8.25 349 Pn **Pn 04 25 44.6 0.0**
AK01 Malin Array Si 8.25 349 Pn **Pn 04 25 44.2 -0.5**
AKASG Malin Array Be 8.26 349 Pn **Pn 04 25 43.8 -1.1**
comp=Z,1.4nm,0.2s,baz=171,slow=12,SNR=7.9
AKASG Sn **Sn 04 27 13.9 -3.4**
comp=Z,4.4nm,0.3s,baz=177,slow=22,SNR=7.2
AKBB Malin Array Si 8.26 349 *d*P **Pn 04 25 44.3 -0.5**
AKBB Malin Array Si 8.26 349 Pn **Pn 04 25 44.3 -0.5**
comp=Z,4.3nm,0.7s
AK15 Malin Array Si 8.27 349 Pn **Pn 04 25 44.8 -0.1**
AK17 Malin Array Si 8.27 349 Pn **Pn 04 25 44.5 -0.4**
AK03 Malin Array Si 8.29 349 Pn **Pn 04 25 44.4 -0.8**
AK04 Malin Array Si 8.29 349 Pn **Pn 04 25 44.8 -0.4**
AK20 Malin Array Si 8.33 349 Pn **Pn 04 25 45.8 0.0**
KBZ Khabaz 8.33 78 Pn **Pn 04 25 46.2 +0.3**
comp=Z,0.6nm,0.3s,baz=274,slow=8.9,SNR=6.9
KBZ Sn **Sn 04 27 16.1 -3.0**
comp=Z,0.2nm,0.3s,baz=48,slow=22,SNR=1.4
comp=Z,2.1nm,0.4s
AK23 Malin Array Si 8.33 349 Pn **Pn 04 25 45.5 -0.3**
AK22 Malin Array Si 8.34 349 Pn **Pn 04 25 45.7 -0.2**
AK21 Malin Array Si 8.36 349 Pn **Pn 04 25 46.1 -0.1**

MI30 MI30,Zelenitsa 8.47 345 Pn **Pn 04 25 47.9 +0.2**
MI28 MI28,Pidlybu 8.75 343 Pn **Pn 04 25 51.6 0.0**
OBN Obninsk 12.93 13 *eP* **Pn 04 26 49.0 +0.3**
OBN pmax pmax
comp=Z,5.0nm,0.8s
BELG Belogornoye 14.57 42 *i* P **Pn 04 27 11.9 +0.9**
KLMR Klimovskoe 18.89 12 *eP* **Pn 04 28 06.8 +1.0**
KLMR pmax pmax
comp=Z,5.0nm,0.8s
KLMR Klimovskoe 18.89 12 *e*Pn **Pn 04 28 06.8 +1.0**
KLMR AMP 04 28 09.2
comp=Z,5.0nm,0.8s
FINES FINESS Array B 19.16 352 Pn **P 04 28 04.2 -3.8**
comp=Z,0.2nm,0.3s,baz=161,slow=14,SNR=1.6
FINES Sn Sn 04 31 25.0 -18
comp=Z,0.1nm,0.3s,baz=154,slow=26,SNR=1.7
comp=Z,1.8nm,0.9s
FINES FINESS Array B 19.16 352 *i* P **Pn 04 28 09.3 +0.4**
FINES pmax pmax
comp=Z,1.0nm,0.3s
KIRV Kirov 19.48 29 *eP* **P 04 28 11.0 -0.6**
ARU Arti 22.12 42 *c i*P **P 04 28 41.5 +1.4**
ARU 04 28 59.9
ARU S **S 04 32 45.1 +2.6**
ARU SS **SnSn 04 33 11.7 +2.3**
ARU pmax pmax
comp=Z,4.0nm,0.9s
AAK Ala-Archa 31.31 75 *i* P **P 04 30 05.5 +0.4**
AAK pmax pmax
comp=Z,1.0nm,1.0s
KURK Kurchatov 32.79 59 *eP* **P 04 30 19.0 +1.3**
KURK pmax pmax
comp=Z,1.0nm,0.9s
MK31 Makanchi Array 35.76 65 *i* P **P 04 30 42.6 -1.0**

GCG ***28*** *05:08:54.9±0.3, 13°.38N×90°.60W, h24km±2km, MD3.0*
SNET ***28*** *05:08:57.1±0.8, 13°.40N×90°.35W, h29km±6km, ML3.2*
ISC 28 05:08:54.2±3.3, 13°.4N±0°.1×90°.46W±0°.09, h17km±17km,
n12, σ0°81/17, 1C-1D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NUBE	**Las Nubes**	**0.85**	**50**	*eP*	**Pg**	**05 09 11.2**	**+0.3**
NUBE				*eS*	**Sg**	**05 09 21.9**	**-0.2**
SLOZ	**Alcaldia de Sa**	**0.94**	**44**	⇓*eP*	**Pg**	**05 09 12.3**	**0.0**
SLOZ				*eS*	**Sg**	**05 09 24.4**	**-0.2**
CEVE	**Cerro Verde**	**0.94**	**60**	*eP*	**Pg**	**05 09 12.8**	**+0.4**
CEVE				*eS*	**Sg**	**05 09 25.7**	**+0.9**
CEVE				IAML		05 09 27.1	
comp=Z,888nm,0.2s							
JAYA	**Jayaque - finc**	**1.03**	**73**	⇑*eP*	**Pg**	**05 09 14.0**	**-0.1**
JAYA				IAML		05 09 28.6	
comp=Z,2µm,0.2s							
CEDA	**San Andres**	**1.12**	**67**	*eP*	**Pg**	**05 09 15.3**	**-0.6**
CEDA				IAML		05 09 38.6	
comp=Z,355nm,0.5s							
FUG	**Fuego 3**	**1.15**	**341**	*eS*	**Sg**	**05 09 30.5**	**-1.0**
NBG	**Las Nubes**	**1.23**	**5**	*eP*	**Pg**	**05 09 17.3**	**-0.6**
NBG				*eS*	**Sg**	**05 09 34.8**	**+0.7**
UEES	**Universidad Ev**	**1.24**	**73**	*eP*	**Pg**	**05 09 17.1**	**-1.0**
UEES				IAML		05 09 35.1	
comp=Z,381nm,0.5s							
SJTE	**Alcalda de S**	**1.44**	**80**	*eP*	**Pn**	**05 09 19.8**	**+0.3**
PAVA	**Las Pavas**	**1.52**	**76**	*eP*	**Pn**	**05 09 20.7**	**0.0**
COEG	**Centro de Oper**	**1.56**	**80**	*eP*	**Pn**	**05 09 21.9**	**+0.7**
STG3	**Santiaguito 3,**	**1.73**	**321**	*eP*	**Pn**	**05 09 25.1**	**+1.4**
STG3				*eS*	**Sn**	**05 09 44.2**	**-1.2**

KRNET ***28*** *05:34:34.6±0.1, 39°.46N×73°.66E, mb3.8*
SOME ***28*** *05:34:34.8, 39°.58N×73°.78E, h0km*
NNC ***28*** *05:34:35.8±1.7, 39°.51N×73°.75E, h0km, mb4.3, mpv3.9,*
Error ellipse: s-maj=13.2km s-min=6.5km az=172.0
ISC 28 05:34:35.8±1.2, 39°.34N±0°.05×73°.56E±0°.03, h10km, n62,
σ1°63/99, 31C-18D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.33**	**333**	⇑*i*P	**Pn**	**05 34 58.3**	**-2.2**
baz=28							
OHH				⇑*i*S	**Sb**	**05 35 16.4**	**-1.6**
baz=28							
DRK	**Karamyk**	**1.37**	**277**	⇓*i*P	**Pb**	**05 35 01.6**	**-0.2**
baz=72							
DRK				⇓*i*S	**Sg**	**05 35 21.6**	**+1.5**
baz=72							
BTK	**Batken**	**2.24**	**290**	⇑*i*P	**Pb**	**05 35 15.5**	**-0.9**
baz=86							
BTK				⇑*i*S	**Sb**	**05 35 45.0**	**+0.8**
baz=86							
GAR	**Garm**	**2.54**	**263**	⇑*i*P	**Pb**	**05 35 20.6**	**-1.1**
baz=61							
GAR				⇑*i*S	**Sb**	**05 35 53.9**	**+0.8**
baz=61							
ARLS	**Aral**	**2.59**	**13**	⇑*i*P	**Pn**	**05 35 18.0**	**+0.1**
baz=12							
ARLS				⇑*i*S	**Sn**	**05 35 49.4**	**-0.1**
baz=12							
AML	**Almayashu**	**2.79**	**2**	P	**Pn**	**05 35 19.9**	**-1.0**
SNR=8.4							
TRKS	**Terek-Say**	**2.87**	**321**	⇑*i*P	**Pn**	**05 35 21.9**	**+0.1**
baz=17							
TRKS				⇑*i*S	**Sn**	**05 35 57.2**	**+0.8**
baz=17							
UCH	**Uchtor**	**2.98**	**14**	P	**Pn**	**05 35 23.7**	**+0.1**
SNR=31							
UCH	**Uchtor**	**2.98**	**14**	⇑*i*P	**Pn**	**05 35 23.7**	**+0.1**
baz=13							
UCH				⇑*i*S	**Sn**	**05 35 59.2**	**-0.3**
baz=13							
EKS2	**Erkin-Say**	**3.33**	**3**	P	**Pb**	**05 35 30.8**	**-4.2**
SNR=13							
EKS2	**Erkin-Say**	**3.33**	**3**	⇑*i*P	**Pn**	**05 35 28.5**	**+0.5**
baz=2.0							
EKS2				⇑*i*S	**Sn**	**05 36 07.7**	**0.0**
baz=2.0							
AAK	**Ala-Archa**	**3.37**	**12**	P	**Pn**	**05 35 30.4**	**+1.7**
SNR=9.8							
AAK	**Ala-Archa**	**3.37**	**12**	⇑*i*P	**Pn**	**05 35 28.7**	**0.0**
baz=11							
AAK				⇑*i*S	**Sn**	**05 36 08.6**	**-0.3**
baz=11							
KBK	**Karagaybulak**	**3.48**	**17**	P	**Pn**	**05 35 32.4**	**+2.2**
SNR=12							
KBK	**Karagaybulak**	**3.48**	**17**	⇓*eP*	**Pn**	**05 35 30.6**	**+0.4**
baz=17							
KBK				⇓*i*S	**Sn**	**05 36 11.1**	**-0.4**
baz=17							
CHGR	**Chuyangaron**	**3.50**	**260**	⇓*i*P	**Pn**	**05 35 33.8**	**+3.4**
baz=59							
CHGR				⇓*i*S	**Sb**	**05 36 16.8**	**-3.7**
baz=59							
ULHL	**Ulahol**	**3.55**	**34**	P	**Pb**	**05 35 35.9**	**-2.9**
SNR=25							
ULHL	**Ulahol**	**3.55**	**34**	⇑*i*P	**Pn**	**05 35 31.4**	**+0.2**
baz=34							
ULHL				⇑*i*S	**Sn**	**05 36 12.4**	**-0.8**
baz=34							
BOOM	**Boomskoye usch**	**3.63**	**29**	⇓*i*P	**Pn**	**05 35 32.3**	**+0.1**
baz=29							
BOOM				⇓*i*S	**Sn**	**05 36 14.4**	**-0.8**
baz=29							
CHMS	**Chumysh**	**3.77**	**13**	⇓*i*P	**Pn**	**05 35 34.4**	**+0.4**
baz=13							
CHMS				⇓*i*S	**Sn**	**05 36 17.9**	**-0.5**
baz=13							
CHMS	**Chumysh**	**3.77**	**13**	⇓Pg	**Pb**	**05 35 39.0**	**-3.4**
6.6nm,0.4s							
CHMS				⇓Lg	Lg	05 36 29.2	
57nm,0.7s							
IUG	**luzhnay**	**3.88**	**317**	*eP*	**Pb**	**05 35 46.1**	**+1.6**
304nm,0.3s							
IUG				*eS*	**Sg**	**05 36 37.3**	**-3.2**
73nm,0.4s							
IUG	**luzhnay**	**3.88**	**317**	Pg	**Pb**	**05 35 46.1**	**+1.6**
620nm,0.3s							
IUG				Lg	Lg	05 36 37.3	
67nm,0.6s							
TKM2	**Tokmak 2**	**3.90**	**23**	⇑*i*P	**Pn**	**05 35 35.9**	**-0.1**
baz=22							
TKM2				⇑*i*S	**Sn**	**05 36 20.9**	**-1.0**
baz=22							
TKM2	**Tokmak 2**	**3.90**	**23**	⇑Pn	**Pn**	**05 35 35.6**	**-0.4**
9.4nm,0.6s							
TKM2				⇓Lg	Lg	05 36 33.1	

33nm,0.7s
KDJ Kajisay 3.92 43 ⇓iP Pn 05 35 36.6 +0.4
baz=44
KDJ ⇓iS **Sn 05 36 21.7 -0.6**
baz=44
DZA Taraz 3.93 335 eP Pb 05 35 46.8 +1.5
74nm,0.2s
DZA eS **Sg 05 36 37.9 -4.1**
152nm,0.3s
USP Ospenovka 3.99 10 P Pb 05 35 44.5 -1.7
SNR=7.2
USP Ospenovka 3.99 10 ⇑iP Pn 05 35 37.5 +0.4
baz=9.0
USP ⇑iS **Sn 05 36 23.1 -0.8**
baz=9.0
KST Kastek 4.12 25 eP Pb 05 35 47.6 -0.9
6.1nm,0.4s
KST eS **Sb 05 36 39.8 +1.3**
126nm,0.7s
KST Kastek 4.12 25 Pg Pb 05 35 47.6 -0.9
6.4nm,0.2s
KST Lg Lg 05 36 39.8
126nm,0.7s
SGDS Sogindy 4.19 11 eP Pb 05 35 48.4 -1.2
10.0nm,0.2s
SGDS eS **Sb 05 36 41.4 +1.1**
37nm,0.3s
SGDS Sogindy 4.19 11 Pg Pb 05 35 48.4 -1.2
10.0nm,0.4s
SGDS Lg Lg 05 36 41.5
30nm,0.6s
DGS Degeres 4.24 22 eP Pb 05 35 49.5 -1.1
28nm,0.9s
DGS eS **Sb 05 36 42.9 +1.0**
51nm,0.4s
DGS Degeres 4.24 22 Pg Pb 05 35 49.5 -1.1
28nm,0.9s
DGS Lg Lg 05 36 42.9
52nm,1.0s
MTBS Maitube 4.36 29 eP Pb 05 35 51.3 -1.3
15nm,0.6s
MTBS eS **Sb 05 36 46.5 +1.1**
53nm,0.5s
MTBS Maitube 4.36 29 Pg Pb 05 35 51.3 -1.3
15nm,0.6s
MTBS Lg Lg 05 36 46.5
53nm,0.5s
KK31 Karatay Array 4.41 330 Pn Pn 05 35 43.5 +0.7
0.8nm,0.2s,baz=125,slow=12,SNR=19
KK31 ⇓Pg **Pb 05 35 53.6 +0.2**
9.1nm,0.5s,baz=143,slow=16,SNR=13
KK31 ⇑Sn **Sn 05 36 36.7 +2.5**
9.3nm,0.5s
KK31 ⇓Lg Lg 05 36 52.1
22nm,0.6s,baz=150,slow=31
KKAR Karatay Array 4.41 330 ⇑eP Pn 05 35 43.7 +0.9
baz=28
KKAR ⇑iS **Sn 05 36 34.8 +0.5**
baz=28
TNSS Tian-Shan 4.49 34 eP Pb 05 35 54.4 -0.6
15nm,0.3s
TNSS eS **Sb 05 36 51.3 +1.9**
26nm,0.7s
TNSS Tian-Shan 4.49 34 Pg Pb 05 35 53.9 -1.2
15nm,0.4s
TNSS Lg Lg 05 36 51.3
26nm,0.7s
AAA Alma-Ata 4.62 32 eP Pb 05 35 56.6 -0.4
44nm,0.2s
AAA eS **Sb 05 36 55.0 +2.3**
108nm,0.7s
AAA Alma-Ata 4.62 32 Pg Pb 05 35 56.6 -0.4
44nm,0.2s
AAA Lg Lg 05 36 55.0
108nm,0.7s
ANVS Anan'yevo 4.63 41 ⇑iP Pn 05 35 46.5 +0.4
baz=41
ANVS ⇑iS **Sn 05 36 38.8 -1.2**
baz=41
KRBS Karabastau 4.63 19 eP Pb 05 35 56.2 -1.0
8.7nm,0.5s
KRBS eS **Sb 05 36 54.5 +1.4**
39nm,1.0s
KRBS Karabastau 4.63 19 Pg Pb 05 35 56.2 -1.0
8.7nm,0.5s
KRBS Lg Lg 05 36 54.5
39nm,1.0s
BRLS Boroldaу 4.64 324 eP Pb 05 35 58.0 +0.7
10nm,0.5s
BRLS eS **Sb 05 36 57.4 +4.2**
27nm,0.5s
BRLS Boroldaу 4.64 324 Pg Pb 05 35 58.0 +0.7
10nm,0.5s
BRLS Lg Lg 05 36 57.4
27nm,0.5s
KUU Kurty 5.00 24 eP Pb 05 36 02.6 -0.9
7.0nm,0.6s
KUU eS **Sb 05 37 05.8 +2.0**
79nm,0.7s
KUU Kurty 5.00 24 Pg Pb 05 36 02.6 -0.9
7.0nm,0.6s
KUU Lg Lg 05 37 05.8
79nm,0.7s
SATY Saty 5.21 43 eP Pb 05 36 06.5 -0.7
9.8nm,0.5s
SATY eS **Sb 05 37 12.5 +2.7**
28nm,0.8s
SATY Saty 5.21 43 Pg Pb 05 36 06.5 -0.7
9.8nm,0.5s
SATY Lg Lg 05 37 12.5
28nm,0.8s
KURS Kuram 5.40 38 eP Pb 05 36 09.1 -1.2
14nm,1.1s
KURS eS **Sb 05 37 16.9 +1.7**
17nm,0.9s
KURS Kuram 5.40 38 Pg Pb 05 36 09.1 -1.2
14nm,0.8s
KURS Lg Lg 05 37 17.6
17nm,0.9s
KPKS Kokpek 5.64 41 eP Pb 05 36 14.3 -0.1
11nm,0.6s
KPKS eS **Sb 05 37 25.5 +3.3**
24nm,0.6s
KPKS Kokpek 5.64 41 Pg Pb 05 36 14.3 -0.1
11nm,0.6s
KPKS Lg Lg 05 37 25.5
24nm,0.6s
BTLS Baital 5.71 3 eP Pb 05 36 15.9 +0.4
3.6nm,0.5s
BTLS eS **Sb 05 37 28.1 +4.1**
7.8nm,0.4s
PDGK Podgornoye 5.98 46 Pg Pb 05 36 20.5 +0.2
3.4nm,0.7s
PDGK Lg Lg 05 37 36.5
9.6nm,1.0s
PDGK Podgornoye 5.98 46 ⇑Pg Pb 05 36 19.5 -0.7
5.9nm,0.6s
PDGK ⇑Lg Lg 05 37 42.0
34nm,1.0s
BLB Baldybastay 6.01 36 eP Pb 05 36 21.2 +0.5
9.6nm,0.5s
BLB eS **Sb 05 37 37.1 +4.4**
30nm,0.5s
BLB Baldybastay 6.01 36 Pg Pb 05 36 21.2 +0.5
9.6nm,0.5s
BLB Lg Lg 05 37 37.1
30nm,0.5s
OTUK Ortayu 8.95 355 ⇑Pn Pn 05 36 44.5 -0.6
1.2nm,0.7s
OTUK ⇓Lg Lg 05 39 15.0
12nm,0.8s

MAN 28 05:43:50.6,9.68N×127.00E,h5km,mb5.4,ML4.4,MS4.7, Philippine Islands region

IDC 28 05:55:16.9±10.0,18.33S×178.33W,h484km±45km, mb2.7/3,mbtmp3.6/4,Error ellipse: s-maj=316.5km s-min=31.6km az=142.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.50**	**279**	P	P	05 56 30.4	+0.1
	8.0nm,0.4s,baz=139,slow=15,SNR=21						
WRA	**Warramunga Arr**	**44.63**	**260**	P	P	06 02 44.8	-0.9
	0.7nm,1.0s,baz=98,slow=6.5,SNR=4.5						
	0.7nm,1.0s						
ASAR	**Alice Springs**	**44.75**	**255**	P	P	06 02 46.8	+0.2
	1.2nm,0.7s,baz=90,slow=8.3,SNR=12						
	1.2nm,0.7s						
ILAR	**Eielson Array**	**86.28**	**13**	P	P	06 07 05.2	-1.0
	0.2nm,0.8s,baz=220,slow=5.3,SNR=2.0						
	0.2nm,0.8s						
GERES	**GERESS Array B**	**148.03**	**345**	PKPbc	PKPbc	06 14 08.0	+0.5
	0.6nm,0.4s,baz=35,slow=3.9,SNR=2.2						

*IDC **28** 05:56:50.2±6.2,32.79S×68.87W,h33km±44km,mb3.6/5, mbtmp3.7/9,ML3.7/4,MS3.0/3,Error ellipse: s-maj=32.9km s-min=24.9km az=70.0*
*GUC **28** 05:56:51.3±0.6,32.71S×68.85W,h19km±3km,ML3.9*
*NEIC **28** 05:56:53.2±1.4,32.69S±0.05×68.78W±0.07,h55km±7km, mb4.3/16,Md3.7(SJA),Error ellipse: s-maj=9.6km s-min=5.9km az=113.0*
ISC 28 05:56:53.0±0.7,32.68S±0.04×68.75W±0.05,h55km±7km, n87,σ1916/111,mb4.1/12,4C-6D,Mendoza Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZON	**Zonda**	**1.14**	**3**	Pn	**Pn**	**05 57 11.1**	**-1.7**
ZON				Sn	**Sn**	**05 57 26.6**	**-0.8**
RTLL	**Cerro Villicun**	**1.37**	**10**	⇓iP	**Pn**	**05 57 15.1**	**-0.8**
RTLL				eS	**Sn**	**05 57 33.9**	**+0.9**
FCH	**Farellones**	**1.45**	**243**	⇓iP	**Pn**	**05 57 15.8**	**-1.4**
FCH				iS	**Sn**	**05 57 34.4**	**-0.9**
FCH				IAML		05 57 36.0	
	comp=N,1μm,0.2s						
VA03	**San Esteban**	**1.52**	**266**		**Pn**	**05 57 16.6**	**-1.3**
VA03				Sn	**Sn**	**05 57 36.4**	**-0.4**
VA03	**San Esteban**	**1.52**	**266**	⇓iP	**Pn**	**05 57 16.6**	**-1.3**
VA03				eS	**Sn**	**05 57 35.3**	**-1.5**
VA03				IAML		05 57 38.1	
	comp=E,3μm,0.5s						
LMEL	**Las Melosas**	**1.68**	**226**		**Pn**	**05 57 20.1**	**-0.1**
LMEL	**Las Melosas**	**1.68**	**226**	⇓iP	**Pn**	**05 57 20.2**	**-0.1**
LMEL				eS	**Sn**	**05 57 40.1**	**-0.7**
LMEL				IAML		05 57 43.8	
	comp=E,3μm,0.5s						
MT03	**Universidad Ad**	**1.68**	**241**		**Pn**	**05 57 20.0**	**-0.2**
MT03	**Universidad Ad**	**1.68**	**241**	⇓iP	**Pn**	**05 57 20.0**	**-0.2**
MT03				eS	**Sn**	**05 57 41.0**	**+0.2**
MT03				IAML		05 57 44.3	
	comp=E,2μm,0.2s						
PEL	**Peldehue**	**1.69**	**254**	Pn	**Pn**	**05 57 19.3**	**-1.0**
PEL	**Peldehue**	**1.69**	**254**	eP	**Pn**	**05 57 19.1**	**-1.1**
PEL				eS	**Sn**	**05 57 40.6**	**-0.3**
PEL				IAML		05 57 41.8	
	comp=N,1μm,0.2s						
MT05	**Renca**	**1.81**	**246**		**Pn**	**05 57 22.2**	**+0.3**
MT05	**Renca**	**1.81**	**246**	⇓iP	**Pn**	**05 57 22.2**	**+0.3**
MT05				eS	**Sn**	**05 57 43.4**	**-0.4**
MT05				IAML		05 57 53.2	
	comp=E,2μm,0.3s						
ROCH	**El Roble**	**1.93**	**261**	eP	**Pn**	**05 57 23.4**	**-0.2**
ROCH				eS	**Sn**	**05 57 47.5**	**+0.7**
ROCH				IAML		05 57 54.1	
	comp=E,3μm,0.5s						
ROC1	**El Roble**	**1.93**	**261**	Pn	**Pn**	**05 57 23.5**	**-0.2**
BO04	**La Punta**	**2.03**	**230**		**Pn**	**05 57 24.8**	**-0.1**
BO04	**La Punta**	**2.03**	**230**	⇑eP	**Pn**	**05 57 24.8**	**-0.1**
BO04				eS	**Sn**	**05 57 48.8**	**-0.3**
BO04				IAML		05 57 54.2	
	comp=E,1μm,0.3s						
MT02	**Curacav**	**2.09**	**253**	Pn	**Pn**	**05 57 25.6**	**0.0**
MT02	**Curacav**	**2.09**	**253**	eP	**Pn**	**05 57 25.6**	**0.0**
MT02				eS	**Sn**	**05 57 51.1**	**+0.6**
MT02				IAML		05 57 54.6	
	comp=N,758nm,0.5s						
VA06	**Catapilco**	**2.15**	**273**	Pn	**Pn**	**05 57 26.1**	**-0.4**
VA06	**Catapilco**	**2.15**	**273**	⇑eP	**Pn**	**05 57 26.1**	**-0.4**
VA06				eS	**Sn**	**05 57 52.9**	**+0.9**
VA06				IAML		05 57 57.2	
	comp=N,4μm,0.4s						
MT09	**Talagante**	**2.17**	**239**		**Pn**	**05 57 26.7**	**-0.2**
MT09	**Talagante**	**2.17**	**239**	⇑eP	**Pn**	**05 57 26.7**	**-0.2**
MT09				eS	**Sn**	**05 57 53.9**	**+1.2**
MT09				IAML		05 58 03.0	
	comp=N,774nm,0.4s						
MT01	**Popeta**	**2.40**	**240**		**Pn**	**05 57 29.6**	**-0.4**
MT01	**Popeta**	**2.40**	**240**	⇑iP	**Pn**	**05 57 29.5**	**-0.4**
MT01				eS	**Sn**	**05 57 58.8**	**+0.6**
MT01				IAML		05 58 07.2	
	comp=N,349nm,0.3s						
CO02	**Combarbal**	**2.41**	**307**	Pn	**Pn**	**05 57 30.6**	**+0.4**
CO02	**Combarbal**	**2.41**	**307**	eP	**Pn**	**05 57 30.4**	**+0.2**
CO02				eS	**Sn**	**05 58 01.5**	**+2.9**
CO02				IAML		05 58 07.0	
	comp=E,3μm,0.3s						
VA01	**Torpederas**	**2.46**	**261**	Pn	**Pn**	**05 57 30.6**	**-0.1**
VA01	**Torpederas**	**2.46**	**261**	eP	**Pn**	**05 57 30.6**	**-0.1**
VA01				eS	**Sn**	**05 58 01.3**	**+1.7**
VA01				IAML		05 58 06.2	
	comp=E,353nm,0.2s						
CO03	**El Pedregal**	**2.47**	**318**		**Pn**	**05 57 31.9**	**+0.9**
CO03	**El Pedregal**	**2.47**	**318**	eP	**Pn**	**05 57 31.8**	**+0.9**
CO03				eS	**Sn**	**05 58 02.9**	**+2.9**
CO03				IAML		05 58 09.5	
	comp=E,1μm,0.5s						
BO01	**Tunca**	**2.59**	**228**	Pn	**Pn**	**05 57 32.2**	**-0.3**
BO01	**Tunca**	**2.59**	**228**	eP	**Pn**	**05 57 32.1**	**-0.3**
BO01				eS	**Sn**	**05 58 04.5**	**+1.7**
VA05	**Santo Domingo**	**2.59**	**247**	Pn	**Pn**	**05 57 31.7**	**-0.8**
VA05	**Santo Domingo**	**2.59**	**247**	eP	**Pn**	**05 57 31.5**	**-0.9**
VA05				eS	**Sn**	**05 58 02.8**	**0.0**
VA05				IAML		05 58 15.2	
	comp=E,989nm,0.4s						
CO01	**Juntas del Tor**	**2.93**	**337**	Pn	**Pn**	**05 57 39.4**	**+2.0**
GO04	**Tololo Observa**	**3.05**	**324**	Pn	**Pn**	**05 57 39.2**	**+0.1**
GO04	**Tololo Observa**	**3.05**	**324**	eP	**Pn**	**05 57 38.8**	**-0.2**
GO04				eS	**Sn**	**05 58 17.8**	**+3.3**
GO04				IAML		05 58 26.9	
	comp=N,3μm,0.5s						
CO06	**Fray Jorge**	**3.17**	**308**	Pn	**Pn**	**05 57 40.1**	**-0.4**
CO05	**La Serena**	**3.48**	**322**	Pn	**Pn**	**05 57 44.0**	**-0.7**
GO05	**Huala**	**3.52**	**228**	Pn	**Pn**	**05 57 44.0**	**-1.2**
ML02	**Panimavida**	**3.78**	**215**	Pn	**Pn**	**05 57 49.5**	**+0.6**
LCO	**Las Campanas**	**4.03**	**335**	Pn	**Pn**	**05 57 51.7**	**-0.7**
AC04	**Llanos de Chal**	**4.89**	**335**	Pn	**Pn**	**05 58 04.3**	**+0.3**
GO03	**Copiap**	**5.23**	**345**	Pn	**Pn**	**05 58 08.7**	**-0.1**
AC02	**Maricunga**	**5.84**	**357**	Pn	**Pn**	**05 58 18.3**	**+0.8**
AC01	**Pan de Azucar**	**6.71**	**346**	Pn	**Pn**	**05 58 28.6**	**-0.4**
GO02	**Mina Guanaco**	**7.53**	**354**	Pn	**Pn**	**05 58 40.6**	**+0.1**
TRQA	**Tornquist**	**7.70**	**136**	Pn	**Pn**	**05 58 41.1**	**-1.4**
PLCA	**Paso Flores**	**8.16**	**190**	Pn	**Pn**	**05 58 49.5**	**+0.6**
	comp=N,0.1nm,0.3s,baz=358,slow=12,SNR=5.7						
PLCA				Lg	Lg	06 01 03.2	
	comp=N,0.5nm,0.3s,baz=350,slow=15,SNR=2.7						
PLCA				LR	LR	06 02 22.0	
	comp=N,150nm,20.0s,baz=0.5,slow=41						
PLCA	**Paso Flores**	**8.16**	**190**	Pn	**Pn**	**05 58 49.6**	**+0.7**
LVC	**Limon Verde**	**10.04**	**359**	Pn	**Pn**	**05 59 13.1**	**-1.7**
	comp=N,0.3nm,0.3s,baz=170,slow=12,SNR=1.7						
LVC				Lg	Lg	06 02 12.4	
	comp=N,0.6nm,0.3s,baz=272,slow=19,SNR=2.5						
LVC				LR	LR	06 04 00.7	
	comp=N,58nm,19.7s,baz=182,slow=42						
	comp=N,1.7nm,0.6s						
ITQB	**Itaqui**	**10.81**	**77**	Pn	**Pn**	**05 59 22.7**	**-2.3**
CPUP	**Villa Florida**	**11.79**	**60**	Pn	**Pn**	**05 59 39.6**	**+1.2**
	comp=N,0.1nm,0.3s,baz=250,slow=7.4,SNR=1.7						
CPUP				Lg	Lg	06 03 07.7	
	comp=N,0.3nm,0.3s,baz=133,slow=19,SNR=1.9						
CPUP				LR	LR	06 04 51.1	
	comp=N,100nm,21.0s,baz=224,slow=40						
	comp=N,0.6nm,0.4s						
PLTB	**Pedras Altas**	**12.86**	**90**	Pn	**Pn**	**05 59 57.3**	**+4.3**
PB16	**IPOC Station P**	**14.30**	**357**		**P**	**06 00 16.4**	**-2.5**
LPAZ	**La Paz**	**16.33**	**2**	Pn	**Pn**	**06 00 39.7**	**+0.4**
	comp=N,0.1nm,0.3s,baz=146,slow=8.4,SNR=6.4						
	comp=N,0.7nm,0.6s						
LPAZ	**La Paz**	**16.33**	**2**		**Pn**	**06 00 39.7**	**+0.4**
SIV	**San Ignacio**	**18.02**	**25**	P	**Pn**	**06 01 00.2**	**+0.6**
	baz=216,slow=14,SNR=1.8						
	comp=N,0.6nm,0.4s						
BELA	**Belgrano 2**	**47.71**	**171**	P	**P**	**06 05 23.6**	**-0.1**
BELA				IAmb	IAmb	06 05 52.4	
	comp=Z,5.0nm,1.5s						
VNA3	**Neumayer Olymp**	**49.56**	**159**	P	**P**	**06 05 38.7**	**+0.8**
VNA1	**Neumayer--Stat**	**49.82**	**158**	P	**P**	**06 05 39.3**	**-0.6**
VNA2	**Neumayer--Watz**	**50.18**	**158**	P	**P**	**06 05 43.3**	**+0.7**
	baz=287,slow=9.4						
CELP	**Cerrillos**	**50.51**	**3**	P	**P**	**06 05 43.4**	**-2.3**
SNAA	**Sanae**	**51.78**	**158**	P	**P**	**06 05 55.5**	**+0.8**
SNAA	**Sanae**	**51.78**	**158**	P	**P**	**06 05 54.7**	**0.0**
SNAA				IAmb	IAmb	06 05 56.0	
	comp=Z,3.8nm,1.0s						
TROLL	**Troll, Antarti**	**53.49**	**159**	P	**P**	**06 06 08.1**	**+0.6**
QSPA	**South Pole Qui**	**57.55**	**180**	P	**P**	**06 06 37.0**	**+0.3**
VNDA	**Vanda**	**65.91**	**191**	P	**P**	**06 07 32.0**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=150,slow=7.5,SNR=3.9						
	comp=Z,0.5nm,0.7s						
VNDA	**Vanda**	**65.91**	**191**	P	**P**	**06 07 33.9**	**+1.3**
TXAR	**Lajitas Array**	**70.01**	**328**	P	**P**	**06 07 58.9**	**0.0**
	comp=Z,0.4nm,0.6s,baz=156,slow=8.9,SNR=7.3						
	comp=Z,0.4nm,0.6s						
TX31	**Lajitas Ar. Si**	**70.01**	**328**	P	**P**	**06 07 59.0**	**+0.1**
TX31				IAmb	IAmb	06 07 59.6	
	comp=Z,2.1nm,0.8s						
TX32	**Lajitas Array**	**70.01**	**328**	P	**P**	**06 07 58.8**	**-0.2**
JSRW	**J. Sargeant Re**	**70.53**	**352**	P	**P**	**06 08 02.0**	**+0.2**
WVT	**Waverly**	**70.75**	**344**	P	**P**	**06 08 02.5**	**-0.7**
W39A	**Magazine**	**71.49**	**339**	P	**P**	**06 08 07.9**	**+0.2**
W39A				IAmb	IAmb	06 08 08.5	
	comp=Z,4.2nm,0.8s						
MNTX	**Cornudas Mount**	**72.79**	**328**	P	**P**	**06 08 14.6**	**-1.0**
MNTX				IAmb	IAmb	06 08 15.1	
	comp=Z,1.6nm,0.8s						
CCM	**Cathedral Cave**	**73.43**	**342**	P	**P**	**06 08 18.6**	**-0.6**
CCM				IAmb	IAmb	06 08 19.0	
	comp=Z,1.9nm,0.6s						
MAW	**Mawson**	**73.64**	**163**	P	**P**	**06 08 19.8**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=239,slow=12,SNR=1.6						
	comp=Z,0.8nm,0.5s						
S39A	**Bolivar**	**73.67**	**340**	P	**P**	**06 08 20.3**	**-0.3**
S39A				IAmb	IAmb	06 08 21.4	
	comp=Z,2.5nm,0.7s						
R40A	**Maddies Statio**	**73.93**	**341**	P	**P**	**06 08 21.6**	**-0.5**
TORD	**Torodi Ar. Bea**	**81.17**	**68**	P	**P**	**06 09 03.0**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=260,slow=6.2,SNR=12						
TORD				pP	**PcP**	**06 09 14.2**	**+5.0**
	comp=Z,0.9nm,0.6s,baz=264,slow=4.8,SNR=5.0						
	comp=Z,1.3nm,0.7s						
PDAR	**Pinedale Array**	**83.89**	**331**	P	**P**	**06 09 17.0**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=122,slow=8.6,SNR=2.8						
	comp=Z,0.3nm,0.7s						
WRA	**Warramunga Arr**	**123.20**	**206**	PKP	**PKPdf**	**06 15 42.5**	**-1.6**
	comp=Z,0.4nm,0.6s,baz=159,slow=1.8,SNR=9.3						
KURBB	**Kurchatov Arra**	**150.02**	**44**	PKPbc	**PKPbc**	**06 16 37.4**	**+0.5**
	comp=Z,1.7nm,0.7s,baz=300,slow=3.2,SNR=13						
KURBB				pPKPbc	**pPKPdf**	**06 16 48.9**	**+0.3**
	comp=Z,1.0nm,0.8s,baz=297,slow=3.2,SNR=5.0						
ZALV	**Zalesovo Beam**	**151.62**	**34**	PKPbc	**PKiKP**	**06 16 40.9**	**-0.1**
	comp=Z,5.0nm,0.4s,baz=317,slow=2.9,SNR=17						
ZALV				pPKPbc	**pPKPdf**	**06 16 52.1**	**+1.2**
	comp=Z,2.2nm,0.4s,baz=315,slow=2.6,SNR=4.1						
MKAR	**Makanchi Array**	**153.82**	**49**	PKPbc	**PKPbc**	**06 16 45.4**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=299,slow=3.1,SNR=3.2						

*IDC **28** 06:05:31.3±2.9,53.51N×87.57E,h0km,mbtmp3.0/2, ML2.6/2,Error ellipse: s-maj=25.6km s-min=13.9km az=63.0*
*NNC **28** 06:05:34.1±1.1,53.44N×87.38E,h0km,mb3.0,mpv2.7, Error ellipse: s-maj=10.3km s-min=4.3km az=51.0, Suspected Mining explosion.*
ISC 28 06:05:32.5±3.6,53.5N±0.1×87.5E±0.2,h0km,n8,σ0.69/10, 5C-4D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.64**	**286**	*i*		06 16 25.3	
	0.1nm,0.9s,baz=100,slow=315,SNR=1.8						
ZAA0	**Zalesovo Array**	**1.64**	**286**	⇓P	**Pb**	**06 06 03.3**	**-0.1**
	0.3nm,0.6s						
ZAA0				⇑S	**Sg**	**06 06 25.2**	**+0.2**
	3.2nm,1.1s						
ZALV	**Zalesovo Beam**	**1.64**	**286**	Pg	**Pn**	**06 06 02.4**	**-0.1**
	1.2nm,0.3s,baz=102,slow=16,SNR=12						
ZALV				Lg	Lg	06 06 24.6	
	2.3nm,0.3s,baz=105,slow=28,SNR=12						
KURK	**Kurchatov**	**6.14**	**246**	⇑Pn	**Pn**	**06 07 05.5**	**+1.1**
	2.8nm,0.7s						
KURK				⇓Lg	Lg	06 08 45.8	
	7.7nm,1.2s						
KURBB	**Kurchatov Arra**	**6.24**	**246**	Pn	**Pn**	**06 07 06.0**	**+0.3**
	0.1nm,0.3s,baz=62,slow=14,SNR=4.2						
KURBB				Lg	Lg	06 08 48.4	
	baz=60,slow=30,SNR=4.2						
	0.7nm,0.6s						
KURBB	**Kurchatov Arra**	**6.24**	**246**	⇑Pn	**Pn**	**06 07 05.2**	**-0.5**
	1.1nm,0.6s						
KURBB				⇓Lg	Lg	06 08 50.7	
	13nm,0.8s						
MK31	**Makanchi Array**	**7.52**	**208**	⇓Pn	**Pn**	**06 07 23.7**	**+0.4**
	0.3nm,0.5s,baz=29,slow=13,SNR=11						
MK31				⇑Sn	**Sn**	**06 08 49.6**	**+0.3**
	0.4nm,0.6s						
MK31				⇑Lg	Lg	06 09 29.4	
	2.2nm,0.8s,baz=32,slow=31,SNR=6.8						
MKAR	**Makanchi Array**	**7.52**	**208**	Pn	**Pn**	**06 07 23.6**	**+0.2**
	0.2nm,0.3s,baz=29,slow=13,SNR=9.4						
MKAR				Sn	**Sn**	**06 08 48.1**	**-1.2**
	0.1nm,0.3s,baz=28,slow=25,SNR=5.3						
MKAR				Lg	Lg	06 09 28.1	
	0.1nm,0.3s,baz=32,slow=30,SNR=7.9						
	0.4nm,0.3s						

IDC 28 06:07:49.2±1.7,2.73N×128.34E,h0km,mb3.4/4, mbtmp3.4/4,Error ellipse: s-maj=142.8km s-min=23.3km az=68.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.29**	**166**	P	P	06 12 58.6	-0.3
	0.9nm,0.7s,baz=345,slow=10,SNR=9.4						
	0.9nm,0.7s						
ASAR	**Alice Springs**	**26.79**	**169**	P	P	06 13 31.7	+0.5
	0.3nm,0.5s,baz=347,slow=7.6,SNR=2.0						
ASAR				PcP	PcP	06 16 53.1	-1.4
	0.3nm,0.4s,baz=0.3,slow=2.2,SNR=5.4						
	0.3nm,0.5s						
H11S3	**WAKE ISLAND Hy**	**40.68**	**65**	T	T	06 58 53.5	
	baz=252,slow=74						
H11S2	**WAKE ISLAND Hy**	**40.69**	**65**	T	T	06 58 49.6	
	baz=252,slow=74						
H11S1	**WAKE ISLAND Hy**	**40.70**	**65**	T	T	06 58 49.9	
	baz=252						
H11N1	**WAKE ISLAND Hy**	**41.25**	**63**	T	T	06 59 26.4	
	baz=251						
H11N2	**WAKE ISLAND Hy**	**41.26**	**63**	T	T	06 59 27.3	
	baz=251						
H11N3	**WAKE ISLAND Hy**	**41.27**	**63**	T	T	06 59 28.3	
	baz=251						
MKAR	**Makanchi Array**	**59.29**	**325**	P	P	06 17 52.9	0.0
	0.2nm,0.4s,baz=116,slow=7.3,SNR=4.1						
	0.2nm,0.4s						
KURBB	**Kurchatov Arra**	**63.45**	**327**	P	P	06 18 21.7	+0.8
	0.2nm,0.5s,baz=130,slow=6.0,SNR=3.2						
	0.2nm,0.5s						

IDC 28 06:08:38.2±2.1,54.40N×83.68E,h0km,mbtmp2.4/2, ML2.5/1,Error ellipse: s-maj=16.3km s-min=10.0km az=160.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.81**	**124**	*i*		06 15 10.0	
	baz=308,slow=309,SNR=1.7						
ZALV	**Zalesovo Beam**	**0.81**	**124**	Pg	Pg	06 08 53.7	-0.1
	2.2nm,0.3s,baz=305,slow=18,SNR=19						
ZALV				Lg	Lg	06 09 05.4	
	3.6nm,0.3s,baz=302,slow=31,SNR=19						
ZALV				Rg	Rg	06 09 11.0	
	9.1nm,0.7s,baz=312,slow=37,SNR=4.9						
KURBB	**Kurchatov Arra**	**4.92**	**222**	Pn	Pn	06 09 53.9	+0.5
	0.2nm,0.5s,baz=42,slow=14,SNR=1.0						
KURBB				Lg	Lg	06 11 12.6	
	baz=45,slow=32,SNR=5.2						
MKAR	**Makanchi Array**	**7.67**	**187**	Pn	Pn	06 10 31.7	+0.5
	0.1nm,0.3s,baz=11,slow=13,SNR=1.7						
MKAR				Lg	Lg	06 12 38.4	
	baz=3.5,slow=26,SNR=3.4						
	0.2nm,0.4s						

*KRNET **28** 06:16:03.6±0.1,39.°52N×73.°41E,mb3.7*
*NNC **28** 06:16:10.4±1.7,39.°75N×73.°42E,h0km,mb3.9,mpv3.5,*
Error ellipse: s-maj=13.4km s-min=6.3km az=175.0
*SOME **28** 06:16:11.8,39.°93N×73.°45E,h0km*

ISC 28 06:16:04.9±1.6,39.°62N±0.°06×73.°39E±0.°03,h2km±11km, n42,σ1°85/68,12C-15D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.02**	**333**	⇓*e*P	**Pg**	**06 16 24.5**	**+0.1**
	baz=35						
OHH				⇓*e*S	**Sn**	**06 16 39.8**	**-1.4**
	baz=35						
BTK	**Batken**	**2.03**	**283**	⇑*e*P	**Pn**	**06 16 40.9**	**+0.7**
	baz=86						
BTK				⇑*e*S	**Sb**	**06 17 07.9**	**-0.5**
	baz=86						
ARLS	**Aral**	**2.35**	**17**	⇑*e*P	**Pn**	**06 16 45.7**	**+1.0**
	baz=16						
ARLS				⇑*e*S	**Sb**	**06 16 16.8**	**-0.8**
	baz=16						
GAR	**Garm**	**2.47**	**256**	⇓*e*P	**Pn**	**06 16 46.2**	**0.0**
	baz=59						
GAR				⇓*e*S	**Sn**	**06 17 17.5**	**+0.5**
	baz=59						
TRKS	**Terek-Say**	**2.57**	**319**	⇓*e*P	**Pn**	**06 16 48.0**	**+0.3**
	baz=19						
TRKS				⇓*e*S	**Sb**	**06 17 20.5**	**-3.4**
	baz=19						
UCH	**Uchtor**	**2.74**	**18**	⇓*e*P	**Pn**	**06 16 51.7**	**+1.4**
	baz=17						
UCH				⇓*e*S	**Sb**	**06 17 27.0**	**-2.2**
	baz=17						
EKS2	**Erkin-Say**	**3.05**	**5**	⇑*e*P	**Pn**	**06 16 55.8**	**+1.5**
	baz=5.0						
EKS2				⇑*e*S	**Sb**	**06 17 33.8**	**-4.0**
	baz=5.0						
AAK	**Ala-Archa**	**3.13**	**15**	⇓*e*P	**Pn**	**06 16 57.0**	**+1.6**
	baz=14						
AAK				⇓*e*S	**Sb**	**06 17 35.7**	**-4.3**
	baz=14						
KBK	**Karagaybulak**	**3.25**	**21**	⇓*e*P	**Pn**	**06 16 58.4**	**+1.3**
	baz=20						
KBK				⇓*e*S	**Sn**	**06 17 38.5**	**+2.0**
	baz=20						
CHGR	**Chuyangaron**	**3.43**	**255**	⇑*e*P	**Pn**	**06 16 59.6**	**+0.1**
	baz=57						
CHGR				⇑*e*S	**Sn**	**06 17 40.4**	**-0.4**
	baz=57						
CHMS	**Chumysh**	**3.53**	**16**	⇑Pn	**Pn**	**06 17 03.5**	**+2.7**
	4.0nm,0.5s						
CHMS				⇓Lg	Lg	06 17 59.5	
	15nm,0.6s						
IUG	**luzhnay**	**3.59**	**316**	*e*P	**Pg**	**06 17 15.3**	**+1.6**
	280nm,0.4s						
IUG				*e*S	**Sg**	**06 18 00.4**	**+0.2**
	99nm,0.6s						
IUG	**luzhnay**	**3.59**	**316**	Pg	**Pg**	**06 17 15.4**	**+1.6**
	655nm,0.7s						
IUG				Lg	Lg	06 18 00.4	
	99nm,0.6s						
TKM2	**Tokmak 2**	**3.69**	**26**	⇓Pg	**Pb**	**06 17 14.1**	**+3.1**
	5.2nm,0.6s						
TKM2				⇑Lg	Lg	06 18 07.2	
	9.9nm,0.6s						
KST	**Kastek**	**3.93**	**29**	*e*P	**Pg**	**06 17 21.9**	**+1.7**
	6.2nm,1.1s						
KST				*e*S	**Sg**	**06 18 11.8**	**+0.7**
	23nm,0.6s						
KST	**Kastek**	**3.93**	**29**	Pg	**Pg**	**06 17 21.4**	**+1.2**
	8.4nm,0.7s						
KST				Lg	Lg	06 18 11.1	
	23nm,0.6s						
SGDS	**Sogindy**	**3.94**	**13**	*e*P	**Pg**	**06 17 21.3**	**+0.8**
	3.0nm,0.0s						
SGDS				*e*S	**Sg**	**06 18 10.4**	**-1.1**
	12nm,0.5s						
SGDS	**Sogindy**	**3.94**	**13**	Pg	**Pg**	**06 17 20.1**	**-0.3**
	4.5nm,0.5s						
SGDS				Lg	Lg	06 18 08.9	
	9.8nm,0.6s						
DGS	**Degeres**	**4.04**	**26**	*e*P	**Pg**	**06 17 23.4**	**+1.1**
	7.8nm,0.4s						
DGS				*e*S	**Sg**	**06 18 14.7**	**+0.1**
	27nm,0.8s						
DGS	**Degeres**	**4.04**	**26**	Pg	**Pg**	**06 17 23.4**	**+1.1**
	7.7nm,0.2s						
DGS				Lg	Lg	06 18 14.5	
	27nm,0.8s						
KK31	**Karatay Array**	**4.10**	**329**	Pn	**Pn**	**06 17 11.6**	**+3.0**
	0.7nm,0.3s,baz=128,slow=13,SNR=11						
KK31				⇑Pg	**Pb**	**06 17 20.4**	**+2.6**
	7.9nm,0.6s,baz=141,slow=16,SNR=13						
KK31				⇑Sn	**Sb**	**06 18 02.9**	**-4.9**
	6.8nm,0.6s,baz=153,slow=24,SNR=4.5						
KK31				⇓Lg	Lg	06 18 16.9	
	7.1nm,0.5s,baz=146,slow=30,SNR=3.6						
MTBS	**Maitube**	**4.19**	**32**	*e*P	**Pg**	**06 17 26.5**	**+1.4**
	7.3nm,0.6s						
MTBS				*e*S	**Sg**	**06 18 19.7**	**+0.4**
	12nm,0.5s						
MTBS	**Maitube**	**4.19**	**32**	Pg	**Pg**	**06 17 26.5**	**+1.4**
	6.6nm,0.3s						
MTBS				Lg	Lg	06 18 19.7	
	14nm,0.3s						
BRLS	**Borolday**	**4.33**	**323**	*e*P	**Pg**	**06 17 27.1**	**-0.9**
	5.3nm,0.6s						
BRLS				*e*S	**Sg**	**06 18 20.7**	**-3.5**
	17nm,0.6s						
BRLS	**Borolday**	**4.33**	**323**	Pg	**Pg**	**06 17 27.1**	**-0.9**
	5.3nm,0.6s						
BRLS				Lg	Lg	06 18 20.7	
	17nm,0.6s						
TNSS	**Tian-Shan**	**4.34**	**37**	*e*P	**Pg**	**06 17 29.1**	**+1.0**
	5.0nm,0.4s						
TNSS				*e*S	**Sg**	**06 18 24.3**	**0.0**
	7.3nm,0.6s						
TNSS	**Tian-Shan**	**4.34**	**37**	Pg	**Pg**	**06 17 28.7**	**+0.6**
	5.0nm,0.4s						
TNSS				Lg	Lg	06 18 24.2	
	7.3nm,0.6s						
KRBS	**Karabastau**	**4.42**	**22**	*e*P	**Pg**	**06 17 31.3**	**+1.7**
	2.9nm,0.4s						
KRBS				*e*S	**Sg**	**06 18 28.0**	**+1.2**
	9.8nm,1.1s						
KRBS	**Karabastau**	**4.42**	**22**	Pg	**Pg**	**06 17 28.7**	**-0.9**
KRBS				Lg	Lg	06 18 24.2	
KTBS	**Karatobe**	**4.77**	**30**	*e*P	**Pg**	**06 17 36.7**	**+0.3**
	2.1nm,0.4s						
KTBS				*e*S	**Sg**	**06 18 37.3**	**-1.0**
	23nm,0.6s						
KTBS	**Karatobe**	**4.77**	**30**	Pg	**Pg**	**06 17 36.5**	**+0.1**
	2.1nm,0.5s						
KTBS				Lg	Lg	06 18 37.0	
	15nm,0.4s						
KUU	**Kurty**	**4.81**	**26**	*e*P	**Pg**	**06 17 37.6**	**+0.7**
	1.4nm,0.3s						
KUU				*e*S	**Sg**	**06 18 39.3**	**0.0**
	18nm,0.4s						
KUU	**Kurty**	**4.81**	**26**	Pg	**Pg**	**06 17 36.6**	**-0.3**
	3.0nm,0.3s						
KUU				Lg	Lg	06 18 37.9	
	18nm,0.4s						
SATY	**Saty**	**5.10**	**46**	*e*P	**Pg**	**06 17 41.8**	**-0.9**
	4.9nm,0.6s						
SATY				*e*S	**Sg**	**06 18 46.7**	**-2.2**
	6.9nm,0.6s						
SATY	**Saty**	**5.10**	**46**	Pg	**Pg**	**06 17 41.8**	**-0.9**
	4.9nm,0.6s						
SATY				Lg	Lg	06 18 46.7	
	6.9nm,0.6s						
BTLS	**Baital**	**5.44**	**5**	*e*P	**Pg**	**06 17 48.8**	**-0.3**
	1.3nm,0.3s						
BTLS				*e*S	**Sg**	**06 18 57.9**	**-1.7**
	3.7nm,0.3s						
BTLS	**Baital**	**5.44**	**5**	Pg	**Pg**	**06 17 48.8**	**-0.3**
	1.3nm,0.3s						
BTLS				Lg	Lg	06 18 57.9	
	3.7nm,0.3s						
KPKS	**Kokpek**	**5.53**	**44**	*e*P	**Pg**	**06 17 49.6**	**-1.2**
	3.3nm,0.6s						
KPKS				*e*S	**Sg**	**06 18 59.0**	**-3.3**
	7.6nm,0.5s						
KPKS	**Kokpek**	**5.53**	**44**	Pg	**Pg**	**06 17 49.6**	**-1.2**
	3.3nm,0.6s						
KPKS				Lg	Lg	06 18 59.0	
	7.6nm,0.5s						
BLB	**Baldybastay**	**5.87**	**39**	*e*P	**Pg**	**06 17 55.2**	**-2.1**
	5.4nm,0.7s						
BLB				*e*S	**Sg**	**06 19 08.8**	**-4.5**
	7.5nm,0.9s						
BLB	**Baldybastay**	**5.87**	**39**	Pg	**Pg**	**06 17 55.2**	**-2.1**
	5.4nm,0.7s						
BLB				Lg	Lg	06 19 08.8	
	7.5nm,0.9s						
PDGK	**Podgornoye**	**5.89**	**49**	Pg	**Pg**	**06 17 56.1**	**-1.6**
	0.9nm,0.7s						
PDGK				Lg	Lg	06 19 10.6	
	2.2nm,0.8s						

*IDC **28** 06:34:58.2±4.3,12.°27N×143.°77E,h50km±36km,mb3.2/5,*
mbtmp3.5/5,Error ellipse: s-maj=124.0km s-min=17.9km az=116.0

ISC 28 06:34:55.4±1.4,12.°3N±0.°4×143.°9E±0.°6,h26km,n9, σ0°48/7,mb3.5/5,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.66**	**36**	P	**Pb**	**06 35 25.3**	**-0.1**
	141nm,0.3s,baz=169,slow=14,SNR=25						
GUMO				S	**Sb**	**06 35 46.1**	**+0.2**
	134nm,0.3s,baz=201,slow=21,SNR=15						
H11S3	**WAKE ISLAND Hy**	**22.86**	**71**	T	T	07 03 24.4	
	baz=263						
H11S1	**WAKE ISLAND Hy**	**22.88**	**71**	T	T	07 03 17.9	
	baz=263						
H11S2	**WAKE ISLAND Hy**	**22.88**	**71**	T	T	07 03 29.0	
	baz=263						
WRA	**Warramunga Arr**	**33.33**	**196**	P	**P**	**06 41 31.5**	**0.0**
	0.6nm,0.9s,baz=18,slow=9.6,SNR=2.8						
	0.6nm,0.9s						
ASAR	**Alice Springs**	**36.99**	**195**	P	**P**	**06 42 03.1**	**+0.1**
	0.4nm,0.7s,baz=19,slow=8.9,SNR=5.5						
	0.4nm,0.7s						
ILAR	**Eielson Array**	**70.20**	**25**	P	**P**	**06 46 05.2**	**-0.5**
	0.3nm,0.4s,baz=255,slow=5.4,SNR=6.7						
	0.3nm,0.4s						
YKA	**Yellowknife Ar**	**84.50**	**27**	P	**P**	**06 47 26.6**	**+0.7**
	0.2nm,0.6s,baz=281,slow=4.7,SNR=4.3						
	0.2nm,0.6s						
NVAR	**Mina Array Bea**	**88.53**	**51**	P	**P**	**06 47 46.1**	**-0.3**
	0.1nm,0.4s,baz=254,slow=6.2,SNR=1.9						
	0.1nm,0.4s						

*KRNET **28** 06:36:21.3±0.1,39.°44N×73.°61E,mb3.8*
*SOME **28** 06:36:21.3,39.°45N×73.°45E,h15km*
*NNC **28** 06:36:29.7±1.2,39.°70N×73.°46E,h0km,mb4.1,mpv3.6,*
Error ellipse: s-maj=9.6km s-min=4.5km az=173.0

ISC 28 06:36:25.2±1.1,39.°57N±0.°05×73.°47E±0.°03,h10km,n59, σ2°17/94,37C-9D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.09**	**332**	⇑*i*P	**Pb**	**06 36 45.2**	**-1.0**
	baz=30						
OHH				⇑*i*S	**Sn**	**06 37 02.7**	**+0.9**
	baz=30						
BTK	**Batken**	**2.10**	**284**	⇑*i*P	**Pb**	**06 37 01.8**	**-1.6**
	baz=87						
BTK				⇑*i*S	**Sg**	**06 37 31.1**	**-1.5**
	baz=87						
ARLS	**Aral**	**2.38**	**16**	⇑*i*P	**Pn**	**06 37 05.2**	**+0.7**
	baz=13						
ARLS				⇑*i*S	**Sb**	**06 37 37.1**	**-0.8**
	baz=13						
ARK	**Arkit**	**2.50**	**333**	⇑*i*P	**Pn**	**06 37 07.5**	**+1.4**
	baz=33						
ARK				⇑*i*S	**Sb**	**06 37 41.5**	**+0.2**
	baz=33						
GAR	**Garm**	**2.51**	**258**	⇓*i*P	**Pn**	**06 37 06.8**	**+0.6**
	baz=61						
GAR				⇓*i*S	**Sb**	**06 37 39.9**	**-1.5**
	baz=61						
AML	**Almayashu**	**2.57**	**4**	P	**Pb**	**06 37 11.2**	**-0.4**
	SNR=16						
TRKS	**Terek-Say**	**2.64**	**319**	⇑*i*P	**Pn**	**06 37 08.7**	**+0.6**
	baz=18						
TRKS				⇑*i*S	**Sb**	**06 37 43.5**	**-1.8**
	baz=18						
UCH	**Uchtor**	**2.77**	**16**	P	**Pb**	**06 37 13.9**	**-1.3**
	SNR=35						
UCH	**Uchtor**	**2.77**	**16**	⇓*i*P	**Pn**	**06 37 10.7**	**+0.5**
	baz=14						
UCH				⇓*i*S	**Sb**	**06 37 46.8**	**-2.6**
	baz=14						
EKS2	**Erkin-Say**	**3.10**	**4**	P	**Pb**	**06 37 18.6**	**-1.9**
	SNR=7.7						
EKS2	**Erkin-Say**	**3.10**	**4**	⇑*i*P	**Pn**	**06 37 15.4**	**+1.1**
	baz=2.0						
EKS2				⇑*i*S	**Sb**	**06 37 55.0**	**-3.5**
	baz=2.0						
AAK	**Ala-Archa**	**3.17**	**14**	P	**Pb**	**06 37 19.7**	**-1.9**
	SNR=14						
AAK	**Ala-Archa**	**3.17**	**14**	⇑*i*P	**Pn**	**06 37 16.1**	**+0.8**
	baz=12						
AAK				⇑*i*S	**Sn**	**06 37 55.8**	**+2.6**
	baz=12						
KBK	**Karagaybulak**	**3.28**	**19**	P	**Pb**	**06 37 21.7**	**-2.0**
	SNR=9.0						
KBK	**Karagaybulak**	**3.28**	**19**	⇑*i*P	**Pn**	**06 37 17.7**	**+0.8**
	baz=17						
KBK				⇑*i*S	**Sn**	**06 37 58.7**	**+2.6**
	baz=17						
ULHL	**Ulahol**	**3.40**	**37**	P	**Pb**	**06 37 27.6**	**+1.8**
	SNR=12						
ULHL	**Ulahol**	**3.40**	**37**	⇓*i*P	**Pn**	**06 37 18.8**	**+0.2**
	baz=35						
ULHL				⇓*i*S	**Sn**	**06 38 00.1**	**+1.0**
	baz=35						
BOOM	**Boomskoye usch**	**3.47**	**32**	⇑*i*P	**Pn**	**06 37 19.6**	**+0.2**
	baz=29						
BOOM				⇑*i*S	**Sn**	**06 38 02.0**	**+1.3**
	baz=29						
CHGR	**Chuyangaron**	**3.47**	**256**	⇑*i*P	**Pn**	**06 37 20.2**	**+0.8**
	baz=59						
CHGR				⇑*i*S	**Sn**	**06 38 03.0**	**+2.4**
	baz=59						
CHMS	**Chumysh**	**3.56**	**15**	⇑*i*P	**Pn**	**06 37 21.5**	**+0.9**
	baz=13						
CHMS				⇑*i*S	**Sn**	**06 38 05.2**	**+2.4**
	baz=13						
CHMS	**Chumysh**	**3.56**	**15**	⇑Pn	**Pb**	**06 37 24.2**	**-4.1**
	9.3nm,0.6s						
CHMS				⇑Lg	Lg	06 38 19.0	
	8.8nm,0.5s						
IUG	**luzhnay**	**3.66**	**316**	*e*P	**Pb**	**06 37 32.1**	**+2.0**
	407nm,0.5s						
IUG				*e*S	**Sg**	**06 38 23.1**	**+0.2**
	104nm,0.4s						
IUG	**luzhnay**	**3.66**	**316**	Pg	**Pg**	**06 37 35.7**	**+0.3**
	840nm,0.5s						
IUG				Lg	Lg	06 38 23.1	
	79nm,0.5s						
TKM2	**Tokmak 2**	**3.72**	**25**	⇑*i*P	**Pn**	**06 37 23.4**	**+0.5**
	baz=23						
TKM2				⇑*i*S	**Sn**	**06 38 08.5**	**+1.7**
	baz=23						
TKM2	**Tokmak 2**	**3.72**	**25**	⇑Pg	**Pg**	**06 37 34.0**	**-2.5**
	9.5nm,0.8s						
TKM2				⇑Lg	Lg	06 38 24.7	
	14nm,0.5s						
USP	**Ospenovka**	**3.78**	**12**	⇑*i*P	**Pn**	**06 37 24.5**	**+0.9**
	baz=10.0						
USP				⇑*i*S	**Sn**	**06 38 10.6**	**+2.5**
	baz=10.0						
KDJ	**Kajisay**	**3.81**	**47**	⇑*i*P	**Pn**	**06 37 23.7**	**-0.4**
	baz=44						
KDJ				⇑*i*S	**Sn**	**06 38 09.3**	**+0.3**
	baz=44						
KST	**Kastek**	**3.95**	**28**	*e*P	**Pg**	**06 37 37.5**	**-3.4**
	6.1nm,0.4s						
KST				*e*S	**Sg**	**06 38 32.7**	**+0.7**
	45nm,0.4s						
KST	**Kastek**	**3.95**	**28**	Pg	**Pg**	**06 37 41.2**	**+0.3**
	9.9nm,0.4s						
KST				Lg	Lg	06 38 32.7	
	45nm,0.4s						
SGDS	**Sogindy**	**3.98**	**12**	*e*P	**Pb**	**06 37 36.7**	**+1.2**
	6.3nm,0.6s						
SGDS				*e*S	**Sg**	**06 38 31.6**	**-1.4**
	18nm,1.0s						
SGDS	**Sogindy**	**3.98**	**12**	Pg	**Pg**	**06 37 40.5**	**-1.0**
	9.5nm,0.8s						
SGDS				Lg	Lg	06 38 31.8	
	18nm,1.0s						
DGS	**Degeres**	**4.06**	**25**	*e*P	**Pb**	**06 37 39.3**	**+2.4**
	12nm,0.4s						
DGS				*e*S	**Sg**	**06 38 35.9**	**+0.3**
	49nm,0.7s						
DGS	**Degeres**	**4.06**	**25**	Pg	**Pg**	**06 37 43.6**	**+0.6**
	14nm,0.5s						
DGS				Lg	Lg	06 38 36.7	
	49nm,0.7s						
KK31	**Karatay Array**	**4.17**	**329**	⇑Pn	**Pn**	**06 37 32.4**	**+3.4**
	0.6nm,0.2s,baz=129,slow=12,SNR=18						
KK31				⇑Pg	**Pb**	**06 37 41.5**	**+2.7**
	5.1nm,0.5s,baz=141,slow=16,SNR=14						
KK31				⇑Sn	**Sn**	**06 38 23.3**	**+5.4**
	5.8nm,0.4s,baz=149,slow=15,SNR=5.1						
KK31				⇑Lg	Lg	06 38 37.9	
	19nm,0.6s,baz=146,slow=29,SNR=3.8						
KKAR	**Karatay Array**	**4.17**	**329**	⇓*i*P	**Pn**	**06 37 31.0**	**+2.0**
	baz=28						
KKAR				⇓*i*S	**Sn**	**06 38 21.5**	**+3.6**
	baz=28						
MTBS	**Maitube**	**4.20**	**31**	*e*P	**Pg**	**06 37 42.4**	**-3.3**
	7.7nm,0.6s						
MTBS				*e*S	**Sg**	**06 38 40.9**	**+0.8**
	27nm,0.3s						
MTBS	**Maitube**	**4.20**	**31**	Pg	**Pg**	**06 37 45.7**	**0.0**
	10nm,0.3s						
MTBS				Lg	Lg	06 38 40.8	
	27nm,0.3s						
TNSS	**Tian-Shan**	**4.35**	**36**	*e*P	**Pb**	**06 37 44.0**	**+2.1**
	3.3nm,0.5s						
TNSS				*e*S	**Sg**	**06 38 43.8**	**-1.0**
	15nm,0.6s						
TNSS	**Tian-Shan**	**4.35**	**36**	Pg	**Pg**	**06 37 47.2**	**-1.3**
	9.9nm,0.5s						
TNSS				Lg	Lg	06 38 43.8	
	15nm,0.6s						
BRLS	**Borolday**	**4.41**	**323**	*e*P	**Pb**	**06 37 43.3**	**+0.5**
	3.9nm,0.3s						
BRLS				*e*S	**Sg**	**06 38 42.5**	**-4.3**
	7.3nm,0.8s						
BRLS	**Borolday**	**4.41**	**323**	Pg	**Pg**	**06 37 46.8**	**-2.9**
	5.8nm,0.6s						
BRLS				Lg	Lg	06 38 42.1	
	22nm,0.4s						
KRBS	**Karabastau**	**4.45**	**21**	*e*P	**Pg**	**06 37 46.6**	**-3.8**
	7.7nm,0.6s						
KRBS				*e*S	**Sg**	**06 38 48.3**	**+0.3**
	19nm,0.7s						
KRBS	**Karabastau**	**4.45**	**21**	Pg	**Pg**	**06 37 50.0**	**-0.4**
	0.4nm,0.5s						
KRBS				Lg	Lg	06 38 48.1	
	19nm,0.6s						
KTBS	**Karatobe**	**4.79**	**29**	*e*P	**Pg**	**06 37 52.7**	**-4.3**
	3.7nm,0.4s						
KTBS				*e*S	**Sg**	**06 38 58.4**	**-0.7**
	44nm,0.5s						
KTBS	**Karatobe**	**4.79**	**29**	Pg	**Pg**	**06 37 54.3**	**-2.7**
	3.5nm,0.3s						
KTBS				Lg	Lg	06 38 55.8	
	22nm,0.5s						
KUU	**Kurty**	**4.83**	**26**	*e*P	**Pb**	**06 37 53.2**	**+3.3**
	2.3nm,0.3s						
KUU				*e*S	**Sg**	**06 38 59.3**	**-0.9**
	32nm,0.6s						
KUU	**Kurty**	**4.83**	**26**	Pg	**Pg**	**06 37 56.7**	**-0.9**
	2.6nm,0.3s						
KUU				Lg	Lg	06 38 59.4	
	32nm,0.6s						
CHKK	**Chushkaly**	**5.03**	**30**	*e*P	**Pb**	**06 37 56.8**	**+3.4**
	2.7nm,0.2s						
CHKK				*e*S	**Sg**	**06 39 05.7**	**-1.0**
	25nm,0.4s						
CHKK	**Chushkaly**	**5.03**	**30**	Pg	**Pg**	**06 38 00.5**	**-1.0**
	3.5nm,0.5s						
CHKK				Lg	Lg	06 39 05.7	
	25nm,0.4s						
SATY	**Saty**	**5.10**	**45**	*e*P	**Pb**	**06 37 58.1**	**+3.5**
	2.0nm,0.2s						
SATY				*e*S	**Sg**	**06 39 07.5**	**-1.5**
	17nm,1.0s						
SATY	**Saty**	**5.10**	**45**	Pg	**Pg**	**06 38 00.9**	**-2.0**
	4.6nm,0.5s						
SATY				Lg	Lg	06 39 07.6	
	12nm,0.7s						
KURS	**Kuram**	**5.27**	**41**	*e*P	**Pg**	**06 38 03.4**	**-2.8**
	6.7nm,0.6s						
KURS				*e*S	**Sg**	**06 39 16.6**	**+2.1**
	13nm,0.8s						
KURS	**Kuram**	**5.27**	**41**	Pg	**Pg**	**06 38 04.9**	**-1.3**
	6.7nm,0.6s						
KURS				Lg	Lg	06 39 13.4	
	13nm,0.8s						
BTLS	**Baital**	**5.49**	**4**	*e*P	**Pb**	**06 38 05.4**	**+4.3**
	2.5nm,0.6s						
BTLS				*e*S	**Sg**	**06 39 20.1**	**-1.3**
	6.3nm,1.7s						
BTLS	**Baital**	**5.49**	**4**	Pg	**Pg**	**06 38 06.9**	**-3.4**
	3.2nm,0.6s						
BTLS				Lg	Lg	06 39 17.0	
	4.0nm,0.7s						
KPKS	**Kokpek**	**5.52**	**43**	*e*P	**Pb**	**06 38 04.8**	**+3.0**
	2.1nm,0.3s						
KPKS				*e*S	**Sg**	**06 39 19.6**	**-3.0**
	15nm,0.8s						
KPKS	**Kokpek**	**5.52**	**43**	Pg	**Pg**	**06 38 08.6**	**-2.4**
	5.1nm,0.7s						
KPKS				Lg	Lg	06 39 19.5	
	14nm,0.4s						
PDGK	**Podgornoye**	**5.88**	**48**	Pg	**Pg**	**06 38 14.8**	**-3.1**
	1.9nm,0.6s						
PDGK				Lg	Lg	06 39 30.7	
	7.2nm,1.0s						
PDGK	**Podgornoye**	**5.88**	**48**	⇑Pg	**Pg**	**06 38 14.7**	**-3.2**
	3.2nm,0.6s						
PDGK				⇓Lg	Lg	06 39 30.3	
	28nm,1.1s						

*ISK **28** 06:49:28.9,39.°46N×25.°91E,h5km,ML4.0/47*
*DDA **28** 06:49:29.9±0.0,39.°42N×25.°94E,h12km±1km,MW4.0*
*IDC **28** 06:49:29.1±1.1,39.°37N×25.°99E,h0km,mb3.5/5,*
mbtmp3.5/10,ML3.7/5,MS3.0/15,Error ellipse:
s-maj=16.7km s-min=13.6km az=95.0
*ATH **28** 06:49:30.5,39.°42N×25.°88E,h15km±2km,ML3.7/5,Error ellipse: s-maj=3.2km s-min=1.1km az=191.0*
*THE **28** 06:49:30.1,39.°42N×25.°87E,h6km±1km,ML3.5/22,Error ellipse: s-maj=1.1km s-min=0.5km az=125.0*

ISC 28 06:49:30.2±0.8,39.°41N±0.°01×25.°91E±0.°02,h10km±6km, n172,σ0°93/215,mb3.5/5,MS3.0/7,19C-4D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GPNR	**Gulpinar-Canak**	**0.18**	**76**	PG	**Pg**	**06 49 33.3**	**-0.7**

GPNR					SG	Sg	06 49 36.2	-0.4
KOCA	**Canakkale, Ayv**	**0.20**	**63**		P	Pg	06 49 34.1	-0.3
KOCA					S	Sg	06 49 37.0	-0.2
SIGR	**SIGRI**	**0.20**	**191**		P	Pg	06 49 34.7	+0.3
SIGR					S	Sg	06 49 38.1	+0.9
SIGR					AML	AML	06 49 38.8	
SIGR					AML	AML	06 49 40.2	
	comp=E,78769µm,0.4s							
SIGR	**SIGRI**	**0.20**	**191**		P	Pg	06 49 34.7	+0.3
SIGR					S	Sg	06 49 37.0	-0.2
	comp=E,46µm,0.4s							
PRK	**Paraskevi**	**0.33**	**120**		P	Pb	06 49 37.8	-0.3
PRK					S	Sb	06 49 42.7	-0.9
PRK					AML	AML	06 49 43.0	
PRK					AML	AML	06 49 43.2	
PRK	**Paraskevi**	**0.33**	**120**		P	Pb	06 49 37.8	-0.3
PRK					S	Sb	06 49 42.6	-0.9
	comp=E,69µm,0.3s							
BOZC	**Bozcaada**	**0.44**	**15**	PG		Pg	06 49 38.2	-0.7
BOZC				SG		Sg	06 49 44.7	0.0
BOZC	**Bozcaada**	**0.44**	**15**	P		Pg	06 49 38.3	-0.5
BOZC				S		Sg	06 49 44.8	0.0
EZN	**Ezine**	**0.53**	**38**	P		Pg	06 49 39.8	-0.6
EZN				S		Sg	06 49 47.2	-0.1
	comp=E,8µm,0.2s							
EZN	**Ezine**	**0.53**	**38**	PG		Pg	06 49 39.8	-0.6
BAYC	**CANAKKALE_Bayr**	**0.59**	**56**	P		Pg	06 49 40.8	-0.9
BAYC				S		Sg	06 49 48.8	-0.8
AYVA	**Ayvalik**	**0.62**	**99**	P		Pg	06 49 41.8	-0.3
AYVA				S		Sg	06 49 50.5	+0.3
ECEA	**Canakkale, Ece**	**0.67**	**18**	P		Pg	06 49 42.6	-0.4
ECEA				S		Sb	06 49 52.4	-0.8
EFSA	**Agios Efstrati**	**0.72**	**281**	P		Pb	06 49 44.5	-0.4
EFSA				S		Sg	06 49 53.8	+0.3
EFSA				AML	AML		06 49 57.4	
	comp=E,9228µm,0.3s							
EFSA				AML	AML		06 49 57.5	
	comp=N,4988µm,0.3s							
LIA	**Limnos Island**	**0.74**	**311**	P		Pg	06 49 44.4	0.0
LIA				AML	AML		06 49 57.9	
	comp=E,7888µm,0.3s							
LIA				AML	AML		06 49 59.0	
	comp=N,7622µm,0.3s							
LIA	**Limnos Island**	**0.74**	**311**	P		Pg	06 49 44.5	0.0
LIA				S		Sg	06 49 54.3	+0.2
	comp=N,4µm,0.3s							
GADA	**Gvkgeada**	**0.78**	**360**	PG		Pg	06 49 44.4	-0.8
GADA				SG		Sg	06 49 55.2	-0.1
GOKA	**anakkale-Gk**	**0.78**	**0**	P		Pg	06 49 44.5	-0.7
GOKA				S		Sb	06 49 55.7	-0.8
CAND	**Candarli**	**0.83**	**123**	PG		Pg	06 49 46.4	+0.2
DKL	**Dikili**	**0.85**	**113**	PG		Pg	06 49 46.4	-0.1
BUHA	**Balikesir, Bur**	**0.91**	**84**	P		Pg	06 49 46.7	-1.0
BUHA				S		Sb	06 50 01.2	+0.9
FOCM	**Foa**	**0.95**	**137**	PG		Pb	06 49 48.8	+0.1
ZEDA	**zmir-Bergama**	**1.01**	**116**	P		Pg	06 49 49.3	-0.3
ZEDA				S		Sb	06 50 04.4	+1.2
CHOS	**Chios island**	**1.03**	**173**	P		Pg	06 49 49.8	-0.1
CHOS	**Chios island**	**1.03**	**173**	P		Pg	06 49 49.9	-0.1
CHOS				S		Sb	06 50 04.2	+0.4
	comp=N,10µm,0.7s							
GELI	**Tayfur-Gelibol**	**1.08**	**24**	PG		Pg	06 49 50.1	-0.8
SMTH	**Samothraki Isl**	**1.10**	**345**	P		Pg	06 49 50.3	-0.9
SMTH				AML	AML		06 50 06.7	
	comp=N,4817µm,0.3s							
SMTH				AML	AML		06 50 07.4	
	comp=E,7845µm,0.7s							
SMTH	**Samothraki Isl**	**1.10**	**345**	P		Pg	06 49 50.7	-0.5
SMTH				S		Sg	06 50 05.0	-0.5
	comp=E,3µm,0.5s							
URLA	**Izmir**	**1.18**	**153**	P		Pg	06 49 51.9	-0.9
URLA				S		Sg	06 50 07.9	-0.2
SKY	**Skiros Island**	**1.18**	**244**	P		Pg	06 49 52.0	-0.8
SKY	**Skiros Island**	**1.18**	**244**	P		Pg	06 49 52.1	-0.8
SKY				S		Sg	06 50 07.5	-0.7
	comp=E,5µm,0.6s							
ZEYE	**Izmir, Urla-Ze**	**1.26**	**158**	P		Pn	06 49 53.0	-0.8
ZEYE				S		Sg	06 50 09.1	-1.6
CAVK	**Edirne/Enez-Ca**	**1.29**	**9**	P		Pn	06 49 53.5	-0.8
CAVK				S		Sg	06 50 11.2	-0.6
ENEZ	**Enez**	**1.34**	**8**	P		Pn	06 49 54.6	-0.3
ENEZ				S		Sn	06 50 13.0	+0.2
	comp=E,4µm,0.6s							
ENEZ	**Enez**	**1.34**	**8**	PN		Pn	06 49 54.4	-0.5
ERIK	**Erikli-Kesan**	**1.34**	**20**	PN		Pn	06 49 54.6	-0.4
BALY	**Balya**	**1.36**	**76**	P		Pn	06 49 54.6	-0.8
BALY				S		Sb	06 50 12.7	-0.7
STEP	**BALIKESIR_Sava**	**1.41**	**91**	P		Pn	06 49 55.6	-0.3
STEP				S		Sg	06 50 16.6	+1.3
KRBG	**Karabiga-Canak**	**1.45**	**47**	PN		Pn	06 49 56.4	-0.1
ALN	**Alexandroupoli**	**1.49**	**4**	P		Pn	06 49 56.6	-0.3
ALN	**Alexandroupoli**	**1.49**	**4**	P		Pn	06 49 56.7	-0.3
ALN				S		Sn	06 50 15.7	-0.8
	comp=E,1µm,0.5s							
ALN	**Alexandroupoli**	**1.49**	**4**	PN		Pn	06 49 56.9	-0.1
THAS	**Thassos island**	**1.50**	**323**	P		Pn	06 49 56.4	-0.8
THAS				S		Sn	06 50 16.4	-0.4
	comp=E,1µm,0.3s							
GONE	**Gonen-Balikesi**	**1.51**	**65**	PN		Pn	06 49 57.7	+0.4
KNL	**Balıkesir**	**1.51**	**55**	P		Pn	06 49 56.9	-0.4
KNL				S		Sn	06 50 17.5	+0.3
KESN	**Edirne-Kesan**	**1.53**	**23**	P		Pn	06 49 56.9	-1.1
KESN				S		Sn	06 50 17.5	-0.7
DGB	**zmir**	**1.56**	**150**	P		Pn	06 49 57.0	-1.0
DGB				S		Sn	06 50 17.5	-0.7
AKS	**Akhisar**	**1.58**	**109**	PN		Pb	06 49 59.2	-0.2
RKY	**Sarkoy-Tekirda**	**1.60**	**37**	PN		Pn	06 49 58.9	+0.2
KYMI	**Kymi, Euboea I**	**1.61**	**242**	P		Pn	06 49 57.6	-1.0
KYMI				S		Sn	06 50 18.4	-1.1
	comp=E,1µm,0.8s							
SART	**Tekirdag**	**1.61**	**37**	P		Pn	06 49 58.1	-0.7
SART				S		Sb	06 50 20.6	+0.2
MAR6	**Marsite Statio**	**1.66**	**39**	PN		Pn	06 49 59.6	+0.2
MAR3	**Marsite Statio**	**1.70**	**38**	PN		Pn	06 50 00.3	+0.3
GZKV	**Gazikoy-Tekird**	**1.72**	**39**	PN		Pn	06 50 00.5	+0.3
OUR	**Ouranopolis**	**1.74**	**303**	P		Pn	06 50 00.1	-0.4
OUR				S		Sn	06 50 22.8	0.0
	comp=E,812nm,1.0s							
RDO	**Rodhopi**	**1.75**	**351**	P		Pn	06 50 00.4	-0.3
RDO				S		Sn	06 50 22.6	-0.5
	comp=E,428nm,0.4s							
MRMT	**Marmara Adasi**	**1.76**	**47**	PN		Pn	06 50 01.1	+0.3
EDC	**Edincik**	**1.77**	**58**	PN		Pn	06 50 01.3	+0.4
PAIG	**Paliouri**	**1.79**	**287**	P		Pn	06 50 00.7	-0.5
PAIG				S		Sn	06 50 24.4	+0.4
	comp=E,315nm,0.9s							
UKOP	**Uzunkopru-Edir**	**1.80**	**18**	PN		Pn	06 50 01.6	+0.3
SMG	**Samos**	**1.85**	**156**	P		Pn	06 50 01.2	-0.8
SMG				S		Sb	06 50 27.5	+0.2
	comp=E,2µm,0.6s							
DURS	**Dursunbey**	**2.00**	**84**	P		Pn	06 50 03.7	-0.4
DURS				S		Sn	06 50 28.0	-1.2
KOKK	**Kokkinochori,**	**2.03**	**314**	P		Pn	06 50 04.4	0.0
KOKK	**Kokkinochori,**	**2.03**	**314**	P		Pn	06 50 03.8	-0.6
KOKK				S		Sn	06 50 30.0	+0.2
	comp=E,660nm,0.8s							
DST	**Dursunbey**	**2.11**	**84**	PN		Pn	06 50 06.8	+1.2
AYDB	**Zeytinkoy-Aydi**	**2.13**	**133**	PN		Pn	06 50 07.2	+1.2
DEMI	**Demirci**	**2.21**	**99**	P		Pn	06 50 06.9	-0.2
DEMI				S		Sg	06 50 40.9	-0.4
DDIM	**Aydin, Didim**	**2.22**	**151**	P		Pn	06 50 07.1	+0.1
DDIM				S		Sb	06 50 39.0	+1.2
KULA	**Kula-Manisa**	**2.33**	**112**	P		Pn	06 50 08.8	+0.2
KULA	**Kula-Manisa**	**2.33**	**112**	PN		Pn	06 50 08.9	+0.3
APE	**Apeiranthos**	**2.36**	**187**	⇑P		Pn	06 50 07.7	-1.3
APE				⇓S		Sn	06 50 37.8	-0.3
APE	**Apeiranthos**	**2.36**	**187**	P		Pn	06 50 07.7	-1.3
APE				S		Sn	06 50 38.3	+0.2
	comp=E,365nm,0.5s							
ORLT	**Orhaneli**	**2.39**	**74**	PN		Pn	06 50 10.4	+0.9
SMAA	**Simav-Kutahya**	**2.41**	**96**	PN		Pn	06 50 11.0	+1.3
SIMA	**Simav-Kutahya**	**2.41**	**97**	PN		Pn	06 50 10.7	+0.9
SRS	**Serrai**	**2.46**	**315**	P		Pn	06 50 10.1	-0.2
SRS				S		Sn	06 50 40.6	+0.1
	comp=E,328nm,0.7s							
MDNY	**Mudanya-Bursa**	**2.48**	**66**	PN		Pn	06 50 11.8	+1.1
NVR	**Nevrokopi**	**2.49**	**322**	P		Pn	06 50 10.7	-0.1
NVR				S		Sn	06 50 41.0	-0.2
	comp=E,180nm,0.8s							
EDRB	**Edirne**	**2.52**	**14**	P		Pn	06 50 11.2	+0.1
EDRB				S		Sn	06 50 42.4	+0.5
	comp=E,462nm,0.4s							

EDRB	**Edirne**	**2.52**	**14**	PN		Pn	06 50 11.6	+0.5
USAK	**Uak-Merkez**	**2.52**	**105**	P		Pn	06 50 11.7	+0.4
SLVT	**Silivri**	**2.53**	**43**	PN		Pn	06 50 12.2	+0.9
KIRK	**Kırklareli**	**2.54**	**21**	P		Pn	06 50 13.3	+1.9
PHSR	**Pinarhisar**	**2.54**	**29**	PN		Pn	06 50 12.1	+0.7
ARMT	**Armutlu**	**2.55**	**62**	PN		Pn	06 50 12.5	+0.9
BODT	**Bodrum**	**2.59**	**154**	P		Pn	06 50 11.9	-0.3
ULDT	**Uludag**	**2.59**	**73**	P		Pn	06 50 12.8	+0.4
ULDT				S		Sg	06 50 51.8	-1.7
ESNK	**Esenk¶y**	**2.65**	**62**	P		Pn	06 50 14.8	+1.8
ESNK				S		Sb	06 50 50.6	+0.2
IGD	**Bursa**	**2.68**	**70**	P		Pn	06 50 13.3	-0.1
IGD				S		Sg	06 50 54.2	-1.9
CTKS	**Kestanelik-??a**	**2.70**	**47**	PN		Pn	06 50 14.9	+1.3
GEMT	**Gemlik**	**2.72**	**67**	PN		Pn	06 50 15.2	+1.2
TSVK	**Tesvikiye-Yalo**	**2.73**	**63**	PN		Pn	06 50 15.1	+1.1
GEDZ	**Gediz**	**2.75**	**97**	PN		Pn	06 50 15.4	+1.0
CTYL	**Yalikoy Yolu**	**2.75**	**41**	PN		Pn	06 50 15.2	+0.9
TVSB	**Tavsanli**	**2.75**	**88**	PN		Pn	06 50 16.1	+1.6
TRML	**Termal-Yalova**	**2.78**	**63**	PN		Pn	06 50 15.9	+1.1
GDZ	**Gediz**	**2.79**	**96**	P		Pn	06 50 15.4	+0.3
BGKT	**Bogazkoy**	**2.82**	**50**	PN		Pn	06 50 16.2	+0.9
KNT	**Kendrikon**	**2.89**	**308**	P		Pn	06 50 16.8	+0.5
KNT				S		Sn	06 50 51.6	+0.5
	comp=E,215nm,0.6s							
IZI	**Iznik**	**2.90**	**70**	PN		Pn	06 50 17.5	+1.0
YLV	**Yalova**	**2.90**	**65**	PN		Pn	06 50 17.8	+1.3
KAVV	**Kandilli-Istan**	**2.92**	**55**	PN		Pn	06 50 17.7	+1.0
ISK	**Istanbul-Kandi**	**2.92**	**55**	PN		Pn	06 50 17.8	+1.1
YER	**Yerkesik**	**2.94**	**140**	P		Pn	06 50 17.4	+0.3
KLYT	**Kilyos**	**3.02**	**52**	PN		Pn	06 50 19.2	+1.1
THR3	**Thira Island,**	**3.02**	**188**	P		Pn	06 50 18.0	-0.1
SANT	**Santorini**	**3.06**	**187**	⇓P		Pn	06 50 17.5	-1.1
TAVA	**DENIZLI_Tavas**	**3.06**	**129**	P		Pn	06 50 19.0	+0.3
ANDZ	**Kutahya, Merke**	**3.09**	**87**	P		Pn	06 50 19.5	+0.4
ADVT	**Abdulvahap**	**3.12**	**70**	PN		Pn	06 50 20.7	+1.3
BILE	**Bilecik/Merkez**	**3.15**	**75**	P		Pn	06 50 20.6	+0.6
VAY	**Valandovo**	**3.18**	**308**	*i* Pn		Pn	06 50 21.5	+1.2
ANX	**Ano Chora**	**3.21**	**257**	P		Pn	06 50 21.2	+0.4
ANX				S		Sn	06 50 58.2	-1.0
	comp=E,162nm,0.8s							
AUBOZ	**BOZOYUK**	**3.22**	**80**	PN		Pn	06 50 22.3	+1.4
APMY	**Acipayam-Deniz**	**3.30**	**125**	PN		Pn	06 50 22.7	+0.8
SILT	**Sile**	**3.35**	**57**	PN		Pn	06 50 23.9	+1.4
KZIL	**AFYON_Kizioren**	**3.50**	**108**	P		Pn	06 50 26.1	+1.3
BORA	**Eskisehir**	**3.54**	**81**	PN		Pn	06 50 26.8	+1.5
VLI	**Veliai**	**3.57**	**222**	P		Pn	06 50 25.1	-0.5
GULT	**Gulveren**	**3.69**	**72**	PN		Pn	06 50 28.9	+1.6
SRCK	**Saricakaya, Es**	**3.69**	**79**	PN		Pn	06 50 28.9	+1.6
SHUT	**Suhut-Afyon**	**3.72**	**102**	PN		Pn	06 50 29.6	+1.8
KAYN	**Sakarya, Kayna**	**3.73**	**64**	P		Pn	06 50 28.3	+0.4
RAZG	**Razgrad**	**4.17**	**6**	⇑P		Pn	06 50 34.6	+0.7
IDI	**Anoyia**	**4.20**	**191**	P		Pn	06 50 33.5	-0.8
IDI	**Anoyia**	**4.20**	**191**	Pn		Pn	06 50 33.7	-0.6
	comp=E,1.3nm,0.3s,baz=8.1,slow=7.1,SNR=2.8							
IDI					Sn	Sn	06 51 21.2	-2.2
	comp=E,2.0nm,0.3s,baz=258,slow=22,SNR=1.5							
IDI					LR	LR	06 52 24.7	
	comp=E,134nm,20.3s,baz=77,slow=42							
	comp=E,4.2nm,0.3s							
MDUB	**Mudurnu**	**4.20**	**74**	PN		Pn	06 50 36.2	+1.8
OHR	**Ohrid**	**4.26**	**295**	*i* Pn		Pn	06 50 34.5	-0.6
SVRH	**Sivrihisar-ESK**	**4.35**	**88**	PN		Pn	06 50 38.4	+2.0
AUSIV	**SIVRIHISAR**	**4.36**	**88**	PN		Pn	06 50 38.7	+2.1
SUTC	**Sutluce-Ispart**	**4.44**	**114**	PN		Pn	06 50 39.9	+2.2
YUVA	**Yuva-Kibriscik**	**4.55**	**76**	PN		Pn	06 50 41.4	+2.1
ICOR	**Ion Corvin**	**4.91**	**16**	⇑P		Pn	06 50 44.7	+0.7
BOVS	**Bovan**	**5.27**	**325**	⇑P		Pn	06 50 49.2	+0.3
TIRR	**Tirgusor**	**5.38**	**20**	⇑P		Pn	06 50 51.7	+1.3
BRTR	**Keskin Array B**	**5.98**	**85**	Pn		Pn	06 50 59.9	+0.9
	comp=E,1.7nm,0.3s,baz=264,slow=13,SNR=16							
BRTR					Sn	Sn	06 52 05.5	-2.1
	baz=265,slow=21							
BRTR					Lg	Lg	06 52 37.7	
	baz=268,slow=29							
	comp=E,4.9nm,0.4s							
CFR	**Carcaliu**	**6.00**	**15**	⇑P		Pn	06 50 57.4	-1.5
ARR	**Arges**	**6.03**	**351**	⇑P		Pn	06 51 00.9	+1.5
HERR	**Herculane**	**6.05**	**336**	⇓P		Pn	06 50 59.5	-0.1
VOIR		**6.05**	**354**	⇓P		Pn	06 51 01.7	+1.9
MLR	**Muntele Rosu**	**6.08**	**0**	⇑P		Pn	06 51 01.7	+1.6
MLR	**Muntele Rosu**	**6.08**	**0**	Pn		Pn	06 51 02.2	+2.0
	comp=E,1.2nm,0.3s,baz=166,slow=21,SNR=10							
MLR					Sn	Sn	06 52 10.3	+0.5
	comp=E,0.4nm,0.3s,baz=155,slow=18,SNR=1.5							
MLR					Lg	Lg	06 52 44.3	
	comp=E,0.4nm,0.3s,baz=87,slow=24,SNR=1.9							
MLR					LR	LR	06 53 51.4	
	comp=E,164nm,18.9s,baz=120,slow=43							
	comp=E,6.0nm,0.5s							
MDVR	**Moldovita**	**6.21**	**331**	⇑P		Pn	06 51 02.1	+0.2
LOT	**Lotru**	**6.24**	**346**	⇑P		Pn	06 51 02.4	+0.1
COVR	**Voinasa-Covas**	**6.43**	**2**	⇑P		Pn	06 51 06.1	+1.1
PLOR	**Plostina**	**6.46**	**5**	⇑P		Pn	06 51 06.9	+1.5
VRI	**Vrincioaia**	**6.48**	**5**	⇑P		Pn	06 51 06.9	+1.3
DOPR	**Dopca**	**6.56**	**357**	⇑P		Pn	06 51 08.2	+1.4
OZUR		**6.68**	**359**	⇑P		Pn	06 51 10.1	+1.7
BZS	**Buzias**	**6.96**	**334**	⇑P		Pn	06 51 13.1	+0.9
BIZ	**Bicaz**	**7.53**	**1**	⇑P		Pn	06 51 21.6	+1.6
SIRR	**Siria**	**7.53**	**337**	⇑P		Pn	06 51 20.5	+0.5
BURAR	**Bucovina Array**	**8.21**	**357**	⇑P		Pn	06 51 31.6	+2.1
MMAI	**Mount Meron Ar**	**9.98**	**127**	Pn		Pn	06 51 52.1	-1.6
	comp=E,2.4nm,0.3s,baz=312,slow=12,SNR=3.2							
	comp=E,1.2nm,0.3s							
AKASG	**Malin Array Be**	**11.53**	**11**	Pn		Pn	06 52 13.5	-1.3
	comp=E,0.6nm,0.3s,baz=196,slow=12,SNR=2.9							
AKASG					LR	LR	06 57 03.5	
	comp=E,60nm,18.5s,baz=232,slow=39							
	comp=E,0.1nm,0.3s							
VRAC	**Vranov**	**11.92**	**329**	LR		LR	06 56 49.4	
	comp=E,39nm,20.2s,baz=140,slow=37							
GERES	**GERESS Array B**	**12.86**	**321**	LR		LR	06 58 01.9	
	comp=E,52nm,19.4s,baz=110,slow=40							
DAVOX	**Davos/Dischmat**	**13.82**	**307**	LR		LR	06 59 03.1	
	comp=E,16nm,18.6s,baz=194,slow=41							
GNI	**Garni**	**14.51**	**81**	LR		LR	06 58 35.1	
	comp=E,29nm,21.6s,baz=268,slow=38							
BELG	**Belogornoye**	**19.82**	**42**	LR		LR	07 01 39.3	
	comp=E,19nm,20.6s,baz=114,slow=37							
HFS	**Hagfors**	**22.12**	**344**	LR		LR	07 04 28.1	
	comp=E,37nm,19.8s,baz=150,slow=40							
ESDC	**Sonseca Array**	**22.99**	**280**	P		P	06 54 36.8	+1.7
	comp=E,1.6nm,1.0s,baz=72,slow=9.6,SNR=7.4							
	comp=E,1.6nm,1.0s							
NOA	**NORSAR Array B**	**23.49**	**342**	LR		LR	07 05 01.3	
	comp=E,24nm,18.4s,baz=55,slow=40							
EKA	**Eskdalemuir Ar**	**25.06**	**319**	P		P	06 54 54.8	+0.3
	comp=E,0.4nm,0.3s,baz=107,slow=9.7,SNR=4.5							
	comp=E,0.4nm,0.3s							
ARU	**Arti**	**27.36**	**41**	LR		LR	07 07 17.3	
	comp=E,38nm,18.9s,baz=243,slow=39							
ARCES	**ARCESS Array B**	**30.19**	**360**	LR		LR	07 07 09.7	
	comp=E,35nm,20.0s,baz=270,slow=35							
TORD	**Torodi Ar. Bea**	**33.78**	**226**	P		P	06 56 12.5	+0.2
	comp=E,0.7nm,0.8s,baz=38,slow=9.4,SNR=4.7							
	comp=E,0.7nm,0.8s							
MKAR	**Makanchi Array**	**41.05**	**61**	P		P	06 57 14.4	+0.7
	comp=E,0.3nm,0.7s,baz=266,slow=7.1,SNR=2.9							
	comp=E,0.3nm,0.7s							
ZALV	**Zalesovo Beam**	**41.71**	**50**	P		P	06 57 19.5	+0.5
	comp=E,0.3nm,0.3s,baz=289,slow=9.0,SNR=1.2							
	comp=E,0.3nm,0.3s							
SEY	**Seymchan**	**69.41**	**23**	LR		LR	07 36 52.5	
	comp=E,38nm,18.9s,baz=336,slow=41							
SUR	**Sutherland**	**71.59**	**185**	LR		LR	07 34 04.6	
	comp=E,47nm,18.8s,baz=122,slow=37							
PETK	**Petropavlovsk-**	**78.86**	**27**	LR		LR	07 38 09.4	
	comp=E,30nm,18.9s,baz=105,slow=37							

*KRNET **28** 06:52:21.1±0.1,39˚.30N×73˚.57E,mb3.5*
*NNC **28** 06:52:24.8±5.1,39˚.48N×73˚.48E,h0km,mb3.8,mpv3.4,*
Error ellipse: s-maj=42.1km s-min=20.5km az=165.0
*SOME **28** 06:52:28.8,39˚.63N×73˚.33E,h5km*
ISC 28 06:52:22.2±1.7, 39˚.45N±0˚.07×73˚.31E±0˚.03, h4km±11km, n30, σ1°37/50, 13C-10D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.15**	**340**	⇑*e*P		**Pn**	**06 52 46.0**	**+0.9**
	baz=34							
OHH				⇑*i*S		**Sn**	**06 53 04.1**	**+2.7**
	baz=34							

BTK	**Batken**	**2.01**	**288**	⇑*e*P		**Pb**	**06 52 58.7**	**-0.7**
	baz=91							
BTK				⇑*e*S		**Sg**	**06 53 26.3**	**-0.6**
	baz=91							
GAR	**Garm**	**2.37**	**260**	⇓*e*P		**Pn**	**06 53 02.9**	**+1.0**
	baz=64							
GAR				⇓*e*S		**Sb**	**06 53 33.2**	**-1.9**
	baz=64							
ARLS	**Aral**	**2.53**	**17**	⇑*e*P		**Pn**	**06 53 03.9**	**-0.3**
	baz=13							
ARLS				⇑*e*S		**Sn**	**06 53 34.8**	**-0.8**
	baz=13							
TRKS	**Terek-Say**	**2.66**	**322**	⇓*i*P		**Pn**	**06 53 07.0**	**+1.0**
	baz=21							
TRKS				⇓*e*S		**Sn**	**06 53 40.4**	**+1.7**
	baz=21							
UCH	**Uchtor**	**2.92**	**18**	⇑*e*P		**Pn**	**06 53 09.7**	**-0.2**
	baz=13							
UCH				⇑*e*S		**Sn**	**06 53 44.9**	**-0.8**
	baz=13							
EKS2	**Erkin-Say**	**3.23**	**6**	⇓*e*P		**Pn**	**06 53 14.0**	**+0.2**
	baz=3.0							
EKS2				⇓*e*S		**Sn**	**06 53 52.9**	**+0.1**
	baz=3.0							
AAK	**Ala-Archa**	**3.31**	**15**	⇑*e*P		**Pn**	**06 53 14.8**	**-0.1**
	baz=12							
AAK				⇑*e*S		**Sn**	**06 53 54.0**	**-0.8**
	baz=12							
IUG	**Iuzhnay**	**3.67**	**318**	*e*P		**Pg**	**06 53 34.1**	**+1.6**
	251nm,0.9s							
IUG				*e*S		**Sg**	**06 54 20.9**	**+0.9**
	37nm,0.5s							
IUG	**Iuzhnay**	**3.67**	**318**	Pg		**Pb**	**06 53 28.6**	**+0.9**
	113nm,0.3s							
IUG				Lg		Lg	06 54 24.1	
	37nm,0.5s							
CHMS	**Chumysh**	**3.71**	**17**	⇓Pn		**Pb**	**06 53 26.9**	**-1.4**
	3.8nm,0.5s							
CHMS				⇑Lg		Lg	06 54 23.3	
	14nm,0.8s							
DZA	**Taraz**	**3.75**	**337**	*e*P		**Pg**	**06 53 35.7**	**+1.7**
	246nm,0.1s							
DZA				*e*S		**Sg**	**06 54 23.3**	**+0.6**
	112nm,0.2s							
TKM2	**Tokmak 2**	**3.88**	**26**	⇑Pg		**Pg**	**06 53 37.3**	**+0.9**
	4.6nm,0.7s							
TKM2				⇓Lg		Lg	06 54 27.7	
	8.5nm,0.7s							
KST	**Kastek**	**4.11**	**28**	*e*P		**Pg**	**06 53 40.8**	**-0.1**
	2.8nm,1.1s							
KST				*e*S		**Sg**	**06 54 32.4**	**-1.9**
	13nm,1.3s							
KST	**Kastek**	**4.11**	**28**	Pg		**Pb**	**06 53 33.3**	**-1.9**
	2.6nm,0.5s							
KST				Lg		Lg	06 54 32.6	
	10nm,0.5s							
SGDS	**Sogindy**	**4.12**	**14**	*e*P		**Pg**	**06 53 40.8**	**-0.3**
	2.7nm,1.0s							
SGDS				*e*S		**Sg**	**06 54 32.2**	**-2.4**
	6.9nm,1.1s							
SGDS	**Sogindy**	**4.12**	**14**	Pg		**Pb**	**06 53 35.1**	**-0.3**
	1.6nm,0.5s							
SGDS				Lg		Lg	06 54 35.9	
	5.4nm,0.9s							
KK31	**Karatay Array**	**4.21**	**331**	⇓Pn		**Pb**	**06 53 33.6**	**-3.3**
	0.8nm,0.3s,baz=134,sl

ECEA					*i* AML	AML	06 55 15.0	
	comp=E,399nm,0.4s							
ECEA					*i* AML	AML	06 55 15.0	
	comp=E,336nm,0.3s							
EFSA	**Agios Efstrati**	**0.74**	**279**		P	**Pg**	**06 55 02.3**	**+0.1**
LIA	**Limnos Island**	**0.74**	**309**		P	**Pg**	**06 55 02.1**	**-0.1**
LIA					AML	AML	06 55 16.0	
	comp=E,794μm,0.4s							
LIA					AML	AML	06 55 16.5	
	comp=N,677μm,0.4s							
LIA	**Limnos Island**	**0.74**	**309**		P	**Pg**	**06 55 02.1**	**-0.1**
LIA					S	**Sb**	**06 55 13.0**	**-0.2**
	comp=N,370nm,0.4s							
GADA	**Gvkgeada**	**0.76**	**358**		PG	**Pg**	**06 55 02.2**	**-0.3**
GOKA	**anakkale-Gk**	**0.76**	**358**		P	**Pb**	**06 55 03.6**	**+0.4**
CAND	**Candarli**	**0.83**	**125**		PG	**Pg**	**06 55 03.7**	**-0.1**
CAND					SG	**Sb**	**06 55 16.3**	**+0.8**
DKL	**Dikili**	**0.83**	**115**		PG	**Pg**	**06 55 03.9**	**-0.1**
BUHA	**Balikesir, Bur**	**0.89**	**85**		P	**Pg**	**06 55 05.2**	**+0.3**
BUHA					S	**Sb**	**06 55 18.4**	**+1.1**
PSRA	**Psara**	**0.93**	**198**		P	**Pb**	**06 55 06.3**	**+0.1**
FOCM	**Foa**	**0.95**	**139**		PG	**Pg**	**06 55 06.1**	**0.0**
FOCM					SG	**Sb**	**06 55 19.9**	**+0.9**
ZEDA	**zmir-Bergama**	**1.00**	**117**		P	**Pg**	**06 55 07.0**	**-0.2**
ZEDA					S	**Sb**	**06 55 21.3**	**+0.7**
ZEDA					*i* AML	AML	06 55 23.0	
	comp=N,180nm,0.2s							
ZEDA					*i* AML	AML	06 55 23.0	
	comp=N,154nm,0.3s							
CHOS	**Chios island**	**1.05**	**175**		P	**Pg**	**06 55 07.6**	**-0.4**
CHOS	**Chios island**	**1.05**	**175**		P	**Pg**	**06 55 07.6**	**-0.4**
CHOS					S	**Sb**	**06 55 22.2**	**+0.2**
	comp=N,740nm,0.3s							
GELI	**Tayfur-Gelibol**	**1.05**	**23**		PG	**Pb**	**06 55 07.7**	**-0.5**
SMTH	**Samothraki Isl**	**1.08**	**343**		P	**Pb**	**06 55 08.2**	**-0.6**
SMTH	**Samothraki Isl**	**1.08**	**343**		P	**Pb**	**06 55 08.4**	**-0.4**
SMTH					S	**Sb**	**06 55 23.2**	**+0.2**
	comp=N,282nm,0.3s							
URLA	**Izmir**	**1.19**	**154**		PN	**Pb**	**06 55 09.7**	**-0.8**
URLA					SN	**Sn**	**06 55 27.8**	**+0.9**
CAVK	**Edirne/Enez-Ca**	**1.27**	**8**		P	**Pn**	**06 55 11.6**	**-0.1**
CAVK					S	**Sg**	**06 55 29.2**	**+0.4**
CAVK					*i* AML	AML	06 55 32.0	
	comp=N,116nm,0.5s							
ENEZ	**Enez**	**1.31**	**7**		P	**Pb**	**06 55 12.9**	**+0.2**
ENEZ					S	**Sg**	**06 55 30.8**	**+0.6**
	comp=N,290nm,0.4s							
ENEZ	**Enez**	**1.31**	**7**		PN	**Pb**	**06 55 12.7**	**0.0**
ERIK	**Erikli-Kesan**	**1.32**	**20**		PN	**Pn**	**06 55 12.3**	**0.0**
STEP	**BALIKESIR_Sava**	**1.38**	**92**		P	**Pb**	**06 55 14.3**	**+0.4**
STEP					S	**Sg**	**06 55 33.0**	**+0.6**
STEP					*i* AML	AML	06 55 35.0	
	comp=N,101nm,0.3s							
STEP					*i* AML	AML	06 55 36.0	
	comp=N,108nm,0.4s							
KRBG	**Karabiga-Canak**	**1.42**	**47**		PN	**Pb**	**06 55 14.4**	**-0.1**
ALN	**Alexandroupoli**	**1.47**	**3**		P	**Pn**	**06 55 14.6**	**+0.1**
ALN	**Alexandroupoli**	**1.47**	**3**		P	**Pn**	**06 55 14.6**	**+0.1**
ALN					S	**Sb**	**06 55 34.1**	**+0.1**
	comp=N,118nm,0.4s							
ALN	**Alexandroupoli**	**1.47**	**3**		PN	**Pn**	**06 55 14.9**	**+0.5**
GONE	**Gonen-Balikesi**	**1.48**	**65**		PN	**Pb**	**06 55 15.6**	**0.0**
KNL	**Balıkesir**	**1.48**	**55**		P	**Pn**	**06 55 14.7**	**0.0**
KNL					S	**Sn**	**06 55 34.3**	**+0.1**
KNL					*i* AML	AML	06 55 39.0	
	comp=N,118nm,0.3s							
KNL					*i* AML	AML	06 55 42.0	
	comp=N,132nm,0.6s							
THAS	**Thassos island**	**1.50**	**322**		P	**Pn**	**06 55 14.2**	**-0.7**
THAS					S	**Sn**	**06 55 34.4**	**-0.1**
	comp=N,90nm,0.4s							
KESN	**Edirne-Kesan**	**1.51**	**22**		P	**Pn**	**06 55 15.0**	**-0.4**
KESN					S	**Sb**	**06 55 35.6**	**+0.1**
KESN					*i* AML	AML	06 55 36.0	
	comp=N,142nm,0.3s							
KESN					*i* AML	AML	06 55 36.0	
	comp=N,248nm,0.4s							
RKY	**Sarkoy-Tekirda**	**1.58**	**37**		PN	**Pb**	**06 55 16.8**	**-0.4**
SART	**Tekirdag**	**1.58**	**37**		P	**Pb**	**06 55 16.8**	**-0.5**
SART					S	**Sb**	**06 55 37.6**	**+0.3**
SART					*i* AML	AML	06 55 40.0	
	comp=N,106nm,0.3s							
SART					*i* AML	AML	06 55 40.0	
	comp=N,118nm,0.2s							
MAR6	**Marsite Statio**	**1.63**	**38**		PN	**Pb**	**06 55 17.6**	**-0.5**
MAR3	**Marsite Statio**	**1.68**	**38**		PN	**Pb**	**06 55 18.3**	**-0.5**
GZKV	**Gazikoy-Tekird**	**1.69**	**39**		PN	**Pb**	**06 55 18.8**	**-0.4**
MRMT	**Marmara Adasi**	**1.73**	**47**		PN	**Pn**	**06 55 18.6**	**+0.5**
RDO	**Rodhopi**	**1.74**	**350**		PN	**Pn**	**06 55 18.8**	**+0.6**
EDC	**Edincik**	**1.74**	**58**		PN	**Pb**	**06 55 19.5**	**-0.5**
OUR	**Ouranopolis**	**1.75**	**302**		PN	**Pn**	**06 55 18.9**	**+0.6**
UKOP	**Uzunkopru-Edir**	**1.78**	**17**		PN	**Pb**	**06 55 19.8**	**-0.8**
SMG	**Samos**	**1.86**	**157**		P	**Pn**	**06 55 19.6**	**-0.2**
SMG					S	**Sb**	**06 55 45.0**	**-0.3**
	comp=N,120nm,0.5s							
DURS	**Dursunbey**	**1.97**	**84**		P	**Pn**	**06 55 21.5**	**+0.1**
DURS					S	**Sn**	**06 55 45.7**	**-0.6**
KIRK	**Kırklareli**	**2.51**	**20**		P	**Pn**	**06 55 34.3**	**+1.3**
VIZE	**Kirklareli, Vi**	**2.59**	**34**		P	**Pn**	**06 55 29.8**	**-0.1**
VIZE					S	**Sn**	**06 55 58.7**	**-2.8**
ARMN	**Kirklareli, Me**	**2.68**	**25**		P	**Pn**	**06 55 31.0**	**-0.2**

MAN 28 07:00:10.8, 17°.13N×120°.77E, h33km, mb3.9, ML2.6, MS2.2, Luzon

*ISK **28** 07:03:32.4, 39°.44N×25°.92E, h6km, ML3.0/18*
*DDA **28** 07:03:32.9±0.0, 39°.43N×25°.95E, h7km±2km, ML2.8*
*THE **28** 07:03:33.1, 39°.43N×25°.91E, h6km±1km, ML2.6/9, Error ellipse: s-maj=1.8km s-min=0.7km az=142.0*
*ATH **28** 07:03:33.3, 39°.41N×25°.89E, h14km±3km, ML2.7/2, Error ellipse: s-maj=3.7km s-min=1.2km az=199.0*

ISC 28 07:03:33.0±0.9, 39°.43N±0°.02×25°.92E±0°.02, h9km±7km, n57, σ0s47/89, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GPNR	**Gulpinar-Canak**	**0.17**	**80**	P	**Pg**	**07 03 35.8**	**-0.7**
GPNR				SG	**Sg**	**07 03 38.9**	**0.0**
KOCA	**Canakkale, Ayv**	**0.18**	**66**	P	**Pg**	**07 03 36.8**	**-0.1**
KOCA				*i* AML	AML	07 03 39.0	
	comp=N,953nm,0.4s						
KOCA				S	**Sg**	**07 03 39.5**	**0.0**
KOCA				*i* AML	AML	07 03 43.0	
	comp=E,1μm,0.4s						
SIGR	**SIGRI**	**0.22**	**193**	P	**Pg**	**07 03 37.5**	**0.0**
SIGR				S	**Sg**	**07 03 40.8**	**+0.4**
SIGR				AML	AML	07 03 41.4	
	comp=N,5762μm,0.3s						
SIGR				AML	AML	07 03 42.9	
	comp=E,5358μm,0.5s						
SIGR	**SIGRI**	**0.22**	**193**	P	**Pg**	**07 03 37.5**	**0.0**
SIGR				S	**Sg**	**07 03 40.9**	**+0.4**
	comp=E,3μm,0.5s						
PRK	**Paraskevi**	**0.33**	**123**	P	**Pb**	**07 03 40.5**	**-0.5**
PRK				S	**Sg**	**07 03 45.4**	**+1.6**
PRK				AML	AML	07 03 47.5	
	comp=N,3404μm,0.3s						
PRK				AML	AML	07 03 48.4	
	comp=E,3448μm,0.5s						
PRK	**Paraskevi**	**0.33**	**123**	P	**Pb**	**07 03 40.5**	**-0.5**
PRK				S	**Sb**	**07 03 45.5**	**-0.9**
	comp=E,2μm,0.3s						
BOZC	**Bozcaada**	**0.43**	**14**	PG	**Pg**	**07 03 40.9**	**-0.5**
BOZC				SG	**Sg**	**07 03 47.5**	**+0.5**
BOZC	**Bozcaada**	**0.43**	**14**	P	**Pg**	**07 03 41.1**	**-0.3**
BOZC				S	**Sg**	**07 03 47.5**	**+0.5**
BOZC				*i* AML	AML	07 03 48.0	
	comp=E,467nm,0.2s						
EZN	**Ezine**	**0.51**	**38**	P	**Pg**	**07 03 42.5**	**-0.4**
EZN				S	**Sg**	**07 03 49.4**	**-0.1**
	comp=E,728nm,0.3s						
EZN	**Ezine**	**0.51**	**38**	PG	**Pg**	**07 03 42.4**	**-0.4**
EZN				SG	**Sg**	**07 03 49.9**	**+0.4**
BAYC	**CANAKKALE_Bayr**	**0.58**	**57**	P	**Pg**	**07 03 43.6**	**-0.6**
BAYC				*i* AML	AML	07 03 51.0	
	comp=E,320nm,0.4s						
BAYC				S	**Sg**	**07 03 51.4**	**-0.3**
AYVA	**Ayvalik**	**0.61**	**101**	P	**Pg**	**07 03 44.5**	**-0.2**
ECEA	**Canakkale, Ece**	**0.65**	**18**	P	**Pg**	**07 03 45.5**	**0.0**
ECEA				S	**Sb**	**07 03 55.1**	**-0.5**

ECEA					*i* AML	AML	07 04 00.0	
	comp=E,363nm,0.3s							
ECEA					*i* AML	AML	07 04 01.0	
	comp=E,514nm,0.4s							
EFSA	**Agios Efstrati**	**0.73**	**279**		P	**Pg**	**07 03 47.4**	**+0.4**
LIA	**Limnos Island**	**0.74**	**310**		P	**Pg**	**07 03 47.2**	**-0.1**
LIA					S	**Sg**	**07 03 57.5**	**+0.7**
LIA	**Limnos Island**	**0.74**	**310**		P	**Pg**	**07 03 47.3**	**+0.1**
LIA					S	**Sb**	**07 03 57.7**	**-0.6**
	comp=E,538nm,0.5s							
GADA	**Gvkgeada**	**0.76**	**359**		PG	**Pg**	**07 03 47.3**	**-0.4**
CAND	**Candarli**	**0.83**	**124**		PG	**Pg**	**07 03 48.9**	**-0.1**
DKL	**Dikili**	**0.84**	**115**		PG	**Pg**	**07 03 49.4**	**+0.2**
BUHA	**Balikesir, Bur**	**0.90**	**85**		P	**Pg**	**07 03 50.3**	**0.0**
BUHA					S	**Sb**	**07 04 02.8**	**-0.1**
FOCM	**Foa**	**0.95**	**138**		PG	**Pg**	**07 03 51.3**	**0.0**
ZEDA	**zmir-Bergama**	**1.01**	**117**		P	**Pb**	**07 03 53.1**	**+0.4**
ZEDA					S	**Sb**	**07 04 06.6**	**+0.6**
ZEDA					*i* AML	AML	07 04 08.0	
	comp=E,215nm,0.2s							
ZEDA					*i* AML	AML	07 04 08.0	
	comp=E,254nm,0.4s							
CHOS	**Chios island**	**1.04**	**174**		P	**Pg**	**07 03 52.6**	**-0.4**
CHOS	**Chios island**	**1.04**	**174**		P	**Pg**	**07 03 52.7**	**-0.4**
CHOS					S	**Sg**	**07 04 07.2**	**+0.6**
	comp=E,1μm,0.3s							
GELI	**Tayfur-Gelibol**	**1.06**	**24**		PG	**Pg**	**07 03 52.7**	**-0.7**
GELI					SG	**Sb**	**07 04 07.9**	**+0.4**
SMTH	**Samothraki Isl**	**1.08**	**344**		P	**Pg**	**07 03 53.1**	**-0.7**
SMTH	**Samothraki Isl**	**1.08**	**344**		P	**Pg**	**07 03 53.2**	**-0.7**
SMTH					S	**Sb**	**07 04 08.7**	**+0.4**
	comp=E,328nm,0.4s							
URLA	**Izmir**	**1.19**	**153**		PN	**Pg**	**07 03 55.7**	**-0.1**
URLA	**Izmir**	**1.19**	**153**		P	**Pg**	**07 03 55.1**	**-0.7**
URLA					S	**Sg**	**07 04 11.2**	**0.0**
URLA					*i* AML	AML	07 04 13.0	
	comp=E,224nm,0.3s							
URLA					*i* AML	AML	07 04 16.0	
	comp=E,249nm,0.7s							
ZEYE	**Izmir, Urla-Ze**	**1.27**	**159**		P	**Pn**	**07 03 56.0**	**-0.9**
ZEYE					S	**Sb**	**07 04 12.8**	**-0.8**
ZEYE					*i* AML	AML	07 04 16.0	
	comp=E,159nm,0.5s							
ZEYE					*i* AML	AML	07 04 17.0	
	comp=E,143nm,0.2s							
CAVK	**Edirne/Enez-Ca**	**1.28**	**8**		P	**Pn**	**07 03 56.8**	**-0.3**
CAVK					S	**Sn**	**07 04 14.8**	**+0.5**
CAVK					*i* AML	AML	07 04 21.0	
	comp=E,148nm,0.5s							
ENEZ	**Enez**	**1.32**	**8**		PN	**Pn**	**07 03 57.5**	**-0.1**
ERIK	**Erikli-Kesan**	**1.32**	**20**		PN	**Pn**	**07 03 57.2**	**-0.5**
BALY	**Balya**	**1.35**	**76**		P	**Pn**	**07 03 58.4**	**+0.3**
BALY					S	**Sb**	**07 04 15.5**	**-0.4**
BALY					*i* AML	AML	07 04 17.0	
	comp=E,106nm,0.5s							
STEP	**BALIKESIR_Sava**	**1.39**	**91**		P	**Pb**	**07 03 59.5**	**+0.2**
STEP					S	**Sg**	**07 04 19.1**	**+1.2**
STEP					*i* AML	AML	07 04 21.0	
	comp=E,162nm,0.3s							
STEP					*i* AML	AML	07 04 21.0	
	comp=E,165nm,0.3s							
KRBG	**Karabiga-Canak**	**1.43**	**47**		PN	**Pn**	**07 03 59.3**	**+0.1**
KRBG					SN	**Sg**	**07 04 18.9**	**-0.2**
ALN	**Alexandroupoli**	**1.47**	**4**		P	**Pn**	**07 03 59.5**	**-0.2**
ALN	**Alexandroupoli**	**1.47**	**4**		P	**Pn**	**07 03 59.8**	**0.0**
ALN					S	**Sn**	**07 04 18.9**	**-0.2**
	comp=E,118nm,0.3s							
ALN	**Alexandroupoli**	**1.47**	**4**		PN	**Pn**	**07 03 59.7**	**0.0**
ALN					SN	**Sb**	**07 04 19.6**	**+0.2**
GONE	**Gonen-Balikesi**	**1.50**	**65**		PN	**Pn**	**07 04 00.2**	**+0.2**
KNL	**Balıkesir**	**1.50**	**55**		P	**Pn**	**07 03 60.0**	**-0.1**
KNL					S	**Sb**	**07 04 20.2**	**+0.2**
KNL					*i* AML	AML	07 04 23.0	
	comp=E,218nm,0.7s							
KNL					*i* AML	AML	07 04 24.0	
	comp=E,183nm,0.3s							
THAS	**Thassos island**	**1.50**	**322**		P	**Pn**	**07 03 59.8**	**-0.2**
THAS					S	**Sn**	**07 04 19.2**	**-0.5**
	comp=E,115nm,0.3s							
KESN	**Edirne-Kesan**	**1.51**	**22**		P	**Pn**	**07 04 00.6**	**-0.1**
KESN					S	**Sn**	**07 04 20.6**	**-0.1**
KESN					*i* AML	AML	07 04 22.0	
	comp=E,147nm,0.3s							
KESN					*i* AML	AML	07 04 23.0	
	comp=E,220nm,0.3s							
RKY	**Sarkoy-Tekirda**	**1.59**	**37**		PN	**Pn**	**07 04 01.4**	**0.0**
SART	**Tekirdag**	**1.59**	**37**		P	**Pn**	**07 04 01.6**	**+0.2**
SART					S	**Sb**	**07 04 23.4**	**+0.6**
SART					*i* AML	AML	07 04 25.0	
	comp=E,146nm,0.3s							
SART					*i* AML	AML	07 04 25.0	
	comp=E,161nm,0.5s							
MAR6	**Marsite Statio**	**1.64**	**39**		PN	**Pn**	**07 04 02.1**	**0.0**
MAR3	**Marsite Statio**	**1.69**	**38**		PN	**Pn**	**07 04 02.8**	**+0.1**
GZKV	**Gazikoy-Tekird**	**1.71**	**39**		PN	**Pn**	**07 04 03.2**	**+0.3**
MRMT	**Marmara Adasi**	**1.74**	**47**		PN	**Pn**	**07 04 03.7**	**+0.2**
RDO	**Rodhopi**	**1.74**	**350**		PN	**Pn**	**07 04 03.5**	**+0.1**
EDC	**Edincik**	**1.75**	**58**		PN	**Pn**	**07 04 04.0**	**+0.4**
SMG	**Samos**	**1.86**	**157**		P	**Pn**	**07 04 04.7**	**-0.4**
SMG					S	**Sn**	**07 04 29.0**	**+0.3**
	comp=E,178nm,0.5s							
DURS	**Dursunbey**	**1.98**	**84**		P	**Pn**	**07 04 06.4**	**-0.4**
EDRB	**Edirne**	**2.50**	**14**		PN	**Pn**	**07 04 14.6**	**+0.8**
SLVT	**Silivri**	**2.51**	**43**		PN	**Pn**	**07 04 14.8**	**+0.8**
KIRK	**Kırklareli**	**2.52**	**20**		P	**Pn**	**07 04 14.4**	**+0.3**
ULDT	**Uludag**	**2.58**	**73**		P	**Pn**	**07 04 16.2**	**+1.1**

*NNC **28** 07:04:17.2±4.0, 53°.62N×88°.33E, h0km, mb3.3, mpv2.9, Error ellipse: s-maj=33.1km s-min=24.4km az=60.0, Suspected Mining explosion.*
*IDC **28** 07:04:19.4±2.9, 53°.77N×88°.12E, h0km, mbtmp3.0/2, ML2.7/2, Error ellipse: s-maj=24.3km s-min=17.2km az=56.0*

ISC 28 07:04:17.8±4.0, 53°.7N±0°.1×88°.3E±0°.2, h0km, n8, σ1s51/10, 7C-2D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**2.08**	**278**	*i*		07 16 44.6	
	0.2nm,0.9s,baz=90,slow=320,SNR=2.9						
ZAA0	**Zalesovo Array**	**2.08**	**278**	⇑Pn	**Pn**	**07 04 53.8**	**-0.2**
	2.1nm,0.7s						
ZAA0				⇑Lg	Lg	07 05 22.1	
	6.5nm,0.6s						
ZALV	**Zalesovo Beam**	**2.08**	**278**	Pn	**Pn**	**07 04 53.8**	**-0.1**
	1.9nm,0.3s,baz=97,slow=16,SNR=35						
ZALV				Lg	Lg	07 05 21.8	
	6.7nm,0.3s,baz=95,slow=28,SNR=19						
KURK	**Kurchatov**	**6.68**	**247**	⇓Lg	Lg	07 07 46.5	
	7.1nm,0.9s						
KURBB	**Kurchatov Arra**	**6.77**	**247**	Pn	**Pn**	**07 05 59.2**	**+0.9**
	0.1nm,0.3s,baz=62,slow=14,SNR=11						
KURBB				Sn	**Sn**	**07 07 15.4**	**-0.7**
	baz=61,slow=25,SNR=2.2						
KURBB				Lg	Lg	07 07 49.8	
	baz=63,slow=33,SNR=10						
	1.0nm,0.5s						
KURBB	**Kurchatov Arra**	**6.77**	**247**	⇑Pn	**Pn**	**07 05 58.6**	**+0.3**
	1.8nm,0.7s						
KURBB				⇑Sn	**Sn**	**07 07 16.6**	**+0.5**
	4.5nm,0.7s						
KURBB				⇑Lg	Lg	07 07 52.2	
	8.4nm,1.0s						
MK31	**Makanchi Array**	**7.94**	**211**	⇑Pn	**Pn**	**07 06 12.2**	**-2.2**
	0.5nm,0.6s,baz=34,slow=12,SNR=5.9						
MK31				⇑Sn	**Sn**	**07 07 43.3**	**-1.6**
	1.3nm,0.9s,baz=27,slow=17,SNR=2.7						
MK31				⇓Lg	Lg	07 08 27.6	
	4.3nm,1.2s,baz=32,slow=28,SNR=4.6						
MKAR	**Makanchi Array**	**7.94**	**211**	Pn	**Pn**	**07 06 16.9**	**+2.6**
	0.2nm,0.3s,baz=32,slow=12,SNR=5.9						
MKAR				Sn	**Sn**	**07 07 45.3**	**+0.5**
	0.2nm,0.3s,baz=26,slow=20,SNR=6.0						
MKAR				Lg	Lg	07 08 25.2	
	0.1nm,0.3s,baz=32,slow=30,SNR=2.3						
	0.4nm,0.5s						

*KRNET **28** 07:27:52.5±0.1, 39°.45N×73°.68E, mb3.6*
*SOME **28** 07:27:53.4, 39°.53N×73°.73E, h0km*
*NNC **28** 07:27:59.5±1.9, 39°.72N×73°.76E, h0km, mb3.8, mpv3.3, Error ellipse: s-maj=15.1km s-min=8.3km az=169.0*

ISC 28 07:27:50.6±1.4, 39°.49N±0°.05×73°.65E±0°.03, h12km±13km, n45, σ1s75/73, 22C-11D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.23**	**327**	⇓*e*P	**Pg**	**07 28 16.8**	**+2.5**
	baz=28						
OHH				⇓*e*S	**Sn**	**07 28 34.7**	**+4.4**
	baz=28						
BTK	**Batken**	**2.26**	**286**	⇑*e*P	**Pg**	**07 28 33.6**	**-0.3**
	baz=86						
BTK				⇑*e*S	**Sg**	**07 29 03.5**	**+0.3**
	baz=86						
ARLS	**Aral**	**2.43**	**12**	⇑*e*P	**Pg**	**07 28 36.0**	**-1.1**
	baz=11						
ARLS				⇑*e*S	**Sg**	**07 29 07.8**	**-0.7**
	baz=11						
GAR	**Garm**	**2.64**	**260**	⇑*e*P	**Pb**	**07 28 38.8**	**+1.0**
	baz=61						
GAR				⇑*e*S	**Sb**	**07 29 12.4**	**+2.3**
	baz=61						
TRKS	**Terek-Say**	**2.80**	**318**	⇑*e*P	**Pb**	**07 28 40.3**	**-0.3**
	baz=17						
TRKS				⇑*e*S	**Sb**	**07 29 15.4**	**+0.5**
	baz=17						
UCH	**Uchtor**	**2.81**	**13**	⇓*e*P	**Pb**	**07 28 41.5**	**+0.5**
	baz=13						
UCH				⇓*e*S	**Sb**	**07 29 17.4**	**+1.8**
	baz=13						
EKS2	**Erkin-Say**	**3.17**	**2**	⇑*e*P	**Pb**	**07 28 46.5**	**-0.4**
	baz=1.0						
EKS2				⇑*e*S	**Sb**	**07 29 25.7**	**+0.1**
	baz=1.0						
AAK	**Ala-Archa**	**3.21**	**11**	⇑*e*P	**Pb**	**07 28 47.0**	**-0.6**
	baz=11						
AAK				⇑*e*S	**Sb**	**07 29 26.8**	**+0.1**
	baz=11						
KBK	**Karagaybulak**	**3.31**	**17**	⇓*e*P	**Pb**	**07 28 48.3**	**-1.1**
	baz=16						
KBK				⇓*e*S	**Sb**	**07 29 29.0**	**-0.7**
	baz=16						
CHGR	**Chuyangaron**	**3.60**	**258**	⇑*e*P	**Pb**	**07 28 51.9**	**-2.2**
	baz=59						
CHGR				⇑*e*S	**Sb**	**07 29 35.1**	**-2.6**
	baz=59						
CHMS	**Chumysh**	**3.60**	**13**	⇑*e*P	**Pb**	**07 28 52.1**	**-2.1**
	baz=13						
CHMS				⇑*e*S	**Sb**	**07 29 35.9**	**-2.0**
	baz=13						
CHMS	**Chumysh**	**3.60**	**13**	⇓Pn	**Pb**	**07 28 53.9**	**-0.3**
	5.8nm,0.7s						
CHMS				⇓Lg	Lg	07 29 46.2	
	17nm,0.6s						
TKM2	**Tokmak 2**	**3.73**	**22**	⇓Pn	**Pb**	**07 28 55.9**	**-0.6**
	4.0nm,0.7s						
TKM2				⇑Lg	Lg	07 29 51.5	
	14nm,0.6s						
DZA	**Taraz**	**3.83**	**333**	*e*P	**Pg**	**07 29 05.5**	**+1.6**
	93nm,0.1s						
DZA				*e*S	**Sg**	**07 29 57.0**	**+3.6**
	92nm,0.3s						
KST	**Kastek**	**3.96**	**25**	*e*P	**Pg**	**07 29 06.2**	**-0.2**
	6.0nm,0.2s						
KST				*e*S	**Sg**	**07 29 59.2**	**+1.6**
	41nm,0.8s						
KST	**Kastek**	**3.96**	**25**	Pg	**Pg**	**07 29 06.1**	**-0.3**
	9.4nm,0.7s						
KST				Lg	Lg	07 29 59.2	
	41nm,0.8s						
SGDS	**Sogindy**	**4.03**	**10**	*e*P	**Pg**	**07 29 07.3**	**-0.5**
	1.9nm,0.2s						
SGDS				*e*S	**Sg**	**07 30 00.9**	**+1.0**
	13nm,0.2s						
SGDS	**Sogindy**	**4.03**	**10**	Pg	**Pg**	**07 29 07.5**	**-0.2**
	2.8nm,0.8s						
SGDS				Lg	Lg	07 30 00.9	
	14nm,1.1s						
DGS	**Degeres**	**4.08**	**22**	*e*P	**Pg**	**07 29 09.1**	**+0.5**
	5.9nm,0.6s						
DGS				*e*S	**Sg**	**07 30 04.0**	**+2.6**
	24nm,0.4s						
DGS	**Degeres**	**4.08**	**22**	Pg	**Pg**	**07 29 09.1**	**+0.5**
	7.0nm,0.6s						
DGS				Lg	Lg	07 30 04.0	
	24nm,0.7s						
MTBS	**Maitube**	**4.20**	**29**	*e*P	**Pg**	**07 29 11.1**	**+0.2**
	5.9nm,0.2s						
MTBS				*e*S	**Sg**	**07 30 07.7**	**+2.4**
	20nm,0.7s						
MTBS	**Maitube**	**4.20**	**29**	Pg	**Pg**	**07 29 10.9**	**0.0**
	7.6nm,0.4s						
MTBS				Lg	Lg	07 30 07.6	
	20nm,0.4s						
KK31	**Karatay Array**	**4.32**	**328**	Pn	**Pb**	**07 29 03.2**	**-3.2**
	0.6nm,0.3s,baz=120,slow=13,SNR=8.8						
KK31				Pg	**Pg**	**07 29 15.5**	**+2.2**
	1.5nm,0.4s,baz=138,slow=14,SNR=4.7						
KK31				⇑Sn	**Sb**	**07 29 55.0**	**-3.5**
	1.9nm,0.3s,baz=132,slow=17,SNR=5.0						
KK31				⇑Lg	Lg	07 30 09.9	
	4.2nm,0.4s,baz=137,slow=30						
KKAR	**Karatay Array**	**4.32**	**328**	⇓*e*P	**Pb**	**07 29 02.2**	**-4.2**
	baz=28						
KKAR				⇓*e*S	**Sb**	**07 29 53.5**	**-4.9**
	baz=28						
TNSS	**Tian-Shan**	**4.33**	**34**	*e*P	**Pg**	**07 29 13.5**	**+0.1**
	7.4nm,0.5s						
TNSS				*e*S	**Sg**	**07 30 11.4**	**+1.9**
	9.3nm,0.4s						
TNSS	**Tian-Shan**	**4.33**	**34**	Pg	**Pg**	**07 29 13.5**

9.3nm,0.7s
KPKS Kokpek 5.48 42 Pg **Pg 07 29 33.8 -1.7**
3.6nm,0.5s
KPKS Lg Lg 07 30 46.2
9.3nm,0.7s
BTLS Baital 5.56 3 *e*P **Pg 07 29 34.8 -2.1**
1.9nm,0.8s
BTLS *e*S **Sg 07 30 48.5 -0.4**
7.9nm,0.8s
PDGK Podgornoye 5.83 47 Pg **Pg 07 29 39.2 -2.9**
2.2nm,0.8s
PDGK Lg Lg 07 30 55.9
3.4nm,1.1s
PDGK Podgornoye 5.83 47 ⇑Pg **Pg 07 29 43.7 +1.5**
3.9nm,0.7s
PDGK ⇑Lg Lg 07 30 58.5
9.3nm,0.9s
KURK Kurchatov 11.76 16 ⇑Lg Lg 07 30 46.6
2.5nm,0.8s

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*KRNET **28** 07:30:25.0±0.1,39°.56N×73°.91E,mb3.7*
*NNC **28** 07:30:28.9±1.8,39°.55N×73°.71E,h0km,mb4.0,mpv3.6, Error ellipse: s-maj=13.8km s-min=7.2km az=171.0*
*SOME **28** 07:30:34.3,39°.88N×73°.50E,h15km*
ISC 28 07:30:29.7±1.5,39°.60N±0°.05×73°.83E±0°.03,h9km±11km, n47,σ1§95/79,36C-8D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.22**	**319**	⇑*i*P	**Pn**	**07 30 49.5**	**-3.6**
	baz=19						
OHH				⇑*i*S	**Sn**	**07 31 07.7**	**-2.1**
ARLS	**Aral**	**2.29**	**9**	⇑*i*P	**Pn**	**07 31 06.4**	**-1.5**
	baz=8.0						
ARLS				⇑*i*S	**Sn**	**07 31 36.5**	**+0.2**
	baz=8.0						
BTK	**Batken**	**2.36**	**282**	⇑*i*P	**Pn**	**07 31 08.0**	**-0.8**
	baz=83						
BTK				⇑*i*S	**Sn**	**07 31 39.5**	**+1.6**
	baz=83						
UCH	**Uchtor**	**2.68**	**11**	⇑*e*P	**Pn**	**07 31 11.9**	**-1.6**
	baz=9.0						
UCH				⇑*i*S	**Sn**	**07 31 46.2**	**0.0**
	baz=9.0						
GAR	**Garm**	**2.79**	**259**	⇑*i*P	**Pn**	**07 31 13.7**	**-1.0**
	baz=60						
GAR				⇑*i*S	**Sn**	**07 31 49.2**	**+0.7**
	baz=60						
TRKS	**Terek-Say**	**2.81**	**314**	⇑*i*P	**Pn**	**07 31 13.6**	**-1.4**
	baz=13						
TRKS				⇑*i*S	**Sn**	**07 31 49.0**	**-0.1**
	baz=13						
EKS2	**Erkin-Say**	**3.06**	**359**	⇓*e*P	**Pn**	**07 31 17.3**	**-1.1**
	baz=58						
EKS2				⇓*i*S	**Sn**	**07 31 55.4**	**+0.2**
	baz=58						
AAK	**Ala-Archa**	**3.08**	**9**	⇑*e*P	**Pn**	**07 31 17.4**	**-1.3**
	baz=8.0						
AAK				⇑*i*S	**Sn**	**07 31 55.6**	**-0.1**
	baz=8.0						
KBK	**Karagaybulak**	**3.17**	**15**	⇑*i*P	**Pn**	**07 31 18.5**	**-1.5**
	baz=14						
KBK				⇑*e*S	**Sn**	**07 31 57.6**	**-0.4**
	baz=14						
ULHL	**Ulahol**	**3.21**	**34**	⇑*e*P	**Pn**	**07 31 18.8**	**-1.8**
	baz=33						
ULHL				⇑*i*S	**Sn**	**07 31 58.2**	**-1.0**
	baz=33						
BOOM	**Boomskoye usch**	**3.30**	**28**	⇑*e*P	**Pn**	**07 31 20.1**	**-1.7**
	baz=27						
BOOM				⇑*e*S	**Sn**	**07 32 00.4**	**-0.8**
	baz=27						
CHMS	**Chumysh**	**3.47**	**11**	⇓*e*P	**Pn**	**07 31 22.6**	**-1.3**
	baz=10.0						
CHMS				⇓*i*S	**Sn**	**07 32 04.7**	**-0.4**
	baz=10.0						
CHMS	**Chumysh**	**3.47**	**11**	⇓Pg	**Pb**	**07 31 31.2**	**-0.2**
	8.8nm,0.6s						
CHMS				⇑Lg	Lg	07 32 21.9	
	30nm,0.9s						
TKM2	**Tokmak 2**	**3.58**	**21**	⇓*e*P	**Pn**	**07 31 24.1**	**-1.5**
	baz=20						
TKM2				⇓*i*S	**Sn**	**07 32 07.2**	**-0.9**
	baz=20						
TKM2	**Tokmak 2**	**3.58**	**21**	⇑Pg	**Pg**	**07 31 37.9**	**-0.3**
	13nm,0.8s						
TKM2				⇑Lg	Lg	07 32 26.0	
	12nm,0.5s						
TARG	**Taragay, Kyrgy**	**3.70**	**54**	⇑*e*P	**Pn**	**07 31 25.2**	**-2.3**
	baz=52						
TARG				⇑*i*S	**Sn**	**07 32 09.1**	**-2.3**
	baz=52						
USP	**Ospenovka**	**3.70**	**8**	⇑*e*P	**Pn**	**07 31 26.0**	**-1.1**
	baz=7.0						
USP				⇑*i*S	**Sn**	**07 32 10.4**	**-0.5**
	baz=7.0						
CHGR	**Chuyangaron**	**3.75**	**257**	⇑*e*P	**Pn**	**07 31 27.0**	**-0.9**
	baz=58						
CHGR				⇑*i*S	**Sn**	**07 32 12.3**	**+0.1**
	baz=58						
DZA	**Taraz**	**3.79**	**331**	*e*P	**Pb**	**07 31 35.5**	**-1.4**
	86nm,0.1s						
DZA				*e*S	**Sb**	**07 32 23.1**	**+0.3**
	117nm,0.6s						
KST	**Kastek**	**3.80**	**24**	*e*P	**Pg**	**07 31 41.4**	**-1.1**
	6.9nm,0.4s						
KST				*e*S	**Sg**	**07 32 33.2**	**+1.5**
	31nm,0.8s						
KST	**Kastek**	**3.80**	**24**	Pg	**Pb**	**07 31 38.5**	**+1.5**
	6.9nm,0.4s						
KST				Lg	Lg	07 32 33.2	
	31nm,0.5s						
SGDS	**Sogindy**	**3.90**	**9**	*e*P	**Pg**	**07 31 42.3**	**-2.1**
	5.8nm,0.5s						
SGDS				*e*S	**Sg**	**07 32 34.7**	**-0.1**
	19nm,1.2s						
SGDS	**Sogindy**	**3.90**	**9**	Pg	**Pb**	**07 31 39.6**	**+1.0**
	6.9nm,0.5s						
SGDS				Lg	Lg	07 32 34.7	
	18nm,0.4s						
DGS	**Degeres**	**3.92**	**21**	*e*P	**Pg**	**07 31 44.9**	**0.0**
	8.0nm,0.4s						
DGS				*e*S	**Sg**	**07 32 39.1**	**+3.4**
	29nm,1.0s						
DGS	**Degeres**	**3.92**	**21**	Pg	**Pb**	**07 31 41.5**	**+2.4**
	12nm,0.5s						
DGS				Lg	Lg	07 32 38.0	
	23nm,0.7s						
MTBS	**Maitube**	**4.04**	**28**	*e*P	**Pg**	**07 31 46.1**	**-0.9**
	6.0nm,0.2s						
MTBS				*e*S	**Sg**	**07 32 41.9**	**+2.6**
	16nm,0.3s						
MTBS	**Maitube**	**4.04**	**28**	Pg	**Pg**	**07 31 43.6**	**-3.4**
	8.4nm,0.4s						
MTBS				Lg	Lg	07 32 41.3	
	16nm,0.7s						
TNSS	**Tian-Shan**	**4.16**	**33**	*e*P	**Pg**	**07 31 48.8**	**-0.6**
	8.9nm,0.3s						
TNSS				*e*S	**Sg**	**07 32 46.5**	**+3.1**
	11nm,0.5s						
TNSS	**Tian-Shan**	**4.16**	**33**	Pg	**Pb**	**07 31 45.1**	**+1.7**
	6.8nm,0.4s						
TNSS				Lg	Lg	07 32 44.5	
	11nm,0.5s						
KK31	**Karatay Array**	**4.30**	**326**	⇑Pn	**Pn**	**07 31 36.2**	**+0.9**
	3.0nm,0.5s,baz=135,slow=12,SNR=8.2						
KK31				⇓Pg	**Pb**	**07 31 46.5**	**+1.0**
	4.7nm,0.5s,baz=143,slow=16,SNR=6.5						
KK31				⇑Sn	**Sn**	**07 32 28.0**	**+2.4**
	5.4nm,0.5s,baz=244,slow=44,SNR=4.8						
KK31				⇑Lg	Lg	07 32 42.5	
	6.8nm,0.4s,baz=143,slow=28						
KKAR	**Karatay Array**	**4.30**	**326**	⇑*e*P	**Pn**	**07 31 34.8**	**-0.5**
	baz=25						
KKAR				⇑*i*S	**Sn**	**07 32 25.7**	**+0.1**
	baz=25						
KRBS	**Karabastau**	**4.32**	**18**	*e*P	**Pg**	**07 31 50.2**	**-2.2**
	6.0nm,0.7s						
KRBS				*e*S	**Sg**	**07 32 49.1**	**+0.6**
	24nm,0.8s						
KRBS	**Karabastau**	**4.32**	**18**	Pg	**Pb**	**07 31 47.7**	**+1.8**
	4.3nm,0.4s						
KRBS				Lg	Lg	07 32 48.8	
	24nm,1.1s						
BRLS	**Boroldaу**	**4.56**	**320**	*e*P	**Pb**	**07 31 49.6**	**-0.3**
	2.7nm,0.2s						
BRLS				*e*S	**Sb**	**07 32 48.1**	**+3.2**
	16nm,0.5s						
KUU	**Kurty**	**4.68**	**23**	*e*P	**Pg**	**07 31 56.3**	**-3.1**
	4.2nm,0.9s						
KUU				*e*S	**Sg**	**07 33 00.2**	**+0.1**
	23nm,0.5s						
KUU	**Kurty**	**4.68**	**23**	Pg	**Pb**	**07 31 54.3**	**+2.2**
	4.4nm,0.6s						
KUU				Lg	Lg	07 32 59.5	
	23nm,0.8s						
CHKK	**Chushkaly**	**4.87**	**28**	*e*P	**Pg**	**07 32 00.1**	**-2.8**
	2.4nm,0.6s						
CHKK				*e*S	**Sg**	**07 33 07.0**	**+1.1**
	14nm,0.3s						
CHKK	**Chushkaly**	**4.87**	**28**	Pg	**Pb**	**07 31 57.8**	**+2.6**
	4.9nm,0.4s						
CHKK				Lg	Lg	07 33 05.3	
	14nm,0.3s						
SATY	**Saty**	**4.88**	**43**	*e*P	**Pg**	**07 32 01.8**	**-1.5**
	3.7nm,0.2s						
SATY				*e*S	**Sg**	**07 33 10.1**	**+3.6**
	15nm,0.7s						
SATY	**Saty**	**4.88**	**43**	Pg	**Pg**	**07 31 59.6**	**-3.7**
	6.0nm,0.7s						
SATY				Lg	Lg	07 33 09.1	
	15nm,1.1s						
KURS	**Kuram**	**5.07**	**39**	*e*P	**Pg**	**07 32 05.7**	**-1.1**
	4.6nm,0.6s						
KURS				*e*S	**Sg**	**07 33 17.0**	**+4.5**
	9.1nm,0.9s						
KURS	**Kuram**	**5.07**	**39**	Pg	**Pg**	**07 32 03.7**	**-3.1**
	7.4nm,1.0s						
KURS				Lg	Lg	07 33 15.7	
	14nm,1.2s						
KPKS	**Kokpek**	**5.31**	**42**	*e*P	**Pg**	**07 32 08.5**	**-2.9**
	6.4nm,0.5s						
KPKS				*e*S	**Sg**	**07 33 21.8**	**+1.5**
	14nm,0.4s						
KPKS	**Kokpek**	**5.31**	**42**	Pg	**Pg**	**07 32 07.4**	**-4.0**
	6.4nm,0.5s						
KPKS				Lg	Lg	07 33 21.8	
	14nm,0.4s						
BTLS	**Baital**	**5.44**	**2**	*e*P	**Pb**	**07 32 08.6**	**+3.7**
	1.4nm,0.5s						
BTLS				*e*S	**Sg**	**07 33 22.1**	**-2.2**
	11nm,0.6s						
PDGK	**Podgornoye**	**5.66**	**47**	Pg	Pg	07 32 13.3	-4.7
	1.8nm,0.8s						
PDGK				Lg	Lg	07 33 32.2	
	4.3nm,1.4s						
PDGK	**Podgornoye**	**5.66**	**47**	⇑Pg	**Pg**	**07 32 17.0**	**-1.0**
	6.1nm,1.1s						
PDGK				⇑Lg	Lg	07 33 31.7	
	13nm,1.1s						

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*IDC **28** 07:40:50.1±2.8,53°.73N×91°.33E,h0km,mbtmp3.7/3, ML3.2/2,Error ellipse: s-maj=30.2km s-min=24.3km az=15.0*
*NNC **28** 07:41:03.1±3.5,53°.45N×90°.03E,h0km,mb4.0,mpv3.7, Error ellipse: s-maj=28.0km s-min=20.8km az=88.0, Suspected Mining explosion.*
ISC 28 07:40:56.0±4.0,53°.7N±0°.1×90°.5E±0°.2,h0km,n11, σ0§77/13,9C-4D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**3.37**	**276**	*i*		08 02 20.0	
	0.1nm,1.0s,baz=90,slow=315,SNR=7.9						
ZAA0	**Zalesovo Array**	**3.37**	**276**	⇑Pn	**Pb**	**07 41 55.5**	**-1.0**
	4.8nm,0.7s						
ZAA0				⇑Lg	Lg	07 42 41.3	
	18nm,0.9s						
ZALV	**Zalesovo Beam**	**3.37**	**276**	Pn	**Pn**	**07 41 51.1**	**+1.4**
	6.0nm,0.6s,baz=95,slow=11,SNR=6.3						
ZALV				Lg	Lg	07 42 46.5	
	3.7nm,0.3s,baz=95,slow=26,SNR=13						
KURK	**Kurchatov**	**7.89**	**252**	⇑Pn	**Pn**	**07 42 51.4**	**-0.4**
	10nm,0.9s						
KURK				⇑Sn	**Sn**	**07 44 21.7**	**0.0**
	28nm,1.0s						
KURK				⇓Lg	Lg	07 45 04.2	
	79nm,1.1s						
KURBB	**Kurchatov Arra**	**7.98**	**252**	Pn	**Pn**	**07 42 53.3**	**+0.2**
	0.2nm,0.3s,baz=64,slow=14,SNR=26						
KURBB				Sn	**Sn**	**07 44 24.9**	**+1.0**
	0.1nm,0.3s,baz=68,slow=27,SNR=8.1						
KURBB				Lg	Lg	07 45 13.9	
	0.1nm,0.3s,baz=66,slow=31,SNR=3.9						
	9.4nm,0.9s						
KURBB	**Kurchatov Arra**	**7.98**	**252**	⇑Pn	**Pn**	**07 42 52.7**	**-0.4**
	10nm,0.8s						
KURBB				⇑Sn	**Sn**	**07 44 23.7**	**-0.3**
	87nm,0.8s						
KURBB				⇓Lg	Lg	07 45 04.8	
	139nm,0.8s						
MK31	**Makanchi Array**	**8.70**	**220**	⇓Pn	**Pn**	**07 43 03.3**	**+0.3**
	2.0nm,0.7s,baz=43,slow=14,SNR=13						
MK31				⇑Sn	**Sn**	**07 44 42.5**	**+0.8**
	13nm,1.0s						
MK31				⇓Lg	Lg	07 45 27.7	
	25nm,0.8s,baz=34,slow=31,SNR=5.5						
MKAR	**Makanchi Array**	**8.70**	**220**	Pn	**Pn**	**07 43 02.7**	**-0.3**
	0.3nm,0.3s,baz=42,slow=14,SNR=20						
MKAR				Sn	**Sn**	**07 44 42.6**	**+0.9**
	0.3nm,0.3s,baz=34,slow=21,SNR=2.4						
MKAR				Lg	Lg	07 45 28.1	
	0.1nm,0.3s,baz=36,slow=32,SNR=3.7						
	1.4nm,0.5s						
MAKZ	**Makanchi**	**8.81**	**222**	⇑Sn	**Sn**	**07 44 44.5**	**+0.2**
	8.8nm,0.8s						
MAKZ				⇑Lg	Lg	07 45 30.7	
	36nm,1.0s						
SONM	**Songino Array**	**11.66**	**114**	Pg	Pn	07 44 13.3	+30
	0.2nm,0.3s,baz=307,slow=14,SNR=4.1						
SONM				Lg	Lg	07 46 45.3	
	baz=304,slow=30						
AAK	**Ala-Archa**	**15.35**	**230**	Lg	Lg	07 49 02.0	
	0.2nm,0.3s,baz=331,slow=23,SNR=1.4						

IDC 28 07:52:29.0±3.1,27°.78N×85°.78E,h0km,mb3.2/3, mbtmp3.2/4,ML3.4/1,Error ellipse: s-maj=97.0km s-min=31.3km az=68.0,Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.18**	**353**	P	P	07 56 53.9	-0.3
	0.1nm,0.3s,baz=171,slow=10,SNR=5.8						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**23.47**	**348**	P	P	07 57 40.2	+0.1
	0.3nm,0.5s,baz=167,slow=9.9,SNR=2.1						
	0.3nm,0.5s						
SONM	**Songino Array**	**25.66**	**33**	P	P	07 58 00.8	+0.2
	0.4nm,0.6s,baz=213,slow=10,SNR=2.8						
	0.4nm,0.6s						
WRA	**Warramunga Arr**	**66.77**	**130**	P	P	08 03 22.5	-0.1
	0.3nm,0.9s,baz=324,slow=6.5,SNR=1.4						
	0.3nm,0.9s						

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*TAP **28** 07:54:11.4,25°.59N×122°.33E,h255km,ML3.3,C*
*JMA **28** 07:54:12.4±0.4,25°.4N±4°.1×122°.2E±°,h245km,MV3.0/9, TAIWAN REGION*
ISC 28 07:54:12.7±3.2,25°.4N±0°.1×122°.33E±0°.05,h243km±17km, n46,σ0§54/71,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.48**	**220**	*i* P	**Pn**	**07 54 45.2**	**+0.4**
	baz=201						
TWB1				*e*S	**S**	**07 55 09.9**	**-0.1**
	baz=201						
SXI1	**Grass Mountain**	**0.50**	**235**	P	**Pn**	**07 54 45.1**	**+0.1**
	baz=231						
SXI1				*e*S	**S**	**07 55 10.0**	**-0.2**
	baz=231						
TIPB	**Shuangxi**	**0.61**	**228**	P	**Pn**	**07 54 45.4**	**+0.1**
	baz=216						
TWC	**Suao**	**0.88**	**210**	P	**Pn**	**07 54 46.5**	**0.0**
	baz=199						
TWC				S	**S**	**07 55 12.3**	**-0.5**
	baz=199						
TWE	**Neicheng**	**0.89**	**223**	P	**Pn**	**07 54 47.0**	**+0.5**
	baz=210						
FUSB	**Fushanzhiwuyua**	**0.91**	**228**	P	**Pn**	**07 54 46.9**	**+0.2**
	baz=219						
FUSB				S	**S**	**07 55 12.9**	**-0.4**
	baz=219						
NDS	**Dongshan**	**0.93**	**217**	P	**Pn**	**07 54 47.8**	**+1.1**
	baz=210						
NDS				S	**S**	**07 55 13.6**	**+0.3**
	baz=210						
NWLT	**Wulai**	**0.96**	**231**	*i* P	**Pn**	**07 54 46.9**	**0.0**
	baz=224						
NWLT				S	**S**	**07 55 13.2**	**-0.4**
	baz=224						
EWUT	**Wuta**	**1.06**	**208**	P	**Pn**	**07 54 48.1**	**+0.7**
	baz=199						
EWUT				S	**S**	**07 55 15.5**	**+0.9**
	baz=199						
ENA	**Nanau**	**1.09**	**210**	*i* P	**Pn**	**07 54 48.3**	**+0.7**
	baz=212						
ENA				S	**S**	**07 55 15.6**	**+0.6**
	baz=212						
YOJ	**Yonaguni jima**	**1.10**	**146**	S	**S**	**07 55 15.5**	**+0.4**
	baz=159						
YOJ	**Yonaguni jima**	**1.10**	**146**	*e*P	**Pn**	**07 54 47.9**	**+0.2**
LATG	**Datong**	**1.11**	**221**	P	**Pn**	**07 54 48.2**	**+0.3**
	baz=215						
LATG				S	**S**	**07 55 15.5**	**+0.1**
	baz=215						
YHNB	**Yeheng**	**1.12**	**231**	S	**S**	**07 55 14.2**	**-1.2**
	baz=215						
NSK	**Sanguang**	**1.13**	**232**	P	**Pn**	**07 54 47.8**	**-0.1**
	baz=216						
NSK				S	**S**	**07 55 14.8**	**-0.6**
	baz=216						
NNS	**Nan Shan**	**1.28**	**223**	*e*P	**Pn**	**07 54 48.6**	**-0.4**
	baz=219						
NNS				S	**S**	**07 55 17.3**	**0.0**
	baz=219						
NNSB	**Datong**	**1.28**	**222**	P	**Pn**	**07 54 49.3**	**+0.3**
	baz=219						
NNSB				S	**S**	**07 55 17.2**	**-0.2**
	baz=219						
NFF	**Wufeng Townshi**	**1.33**	**236**	P	**Pn**	**07 54 49.1**	**-0.1**
	baz=235						
NFF				S	**S**	**07 55 17.7**	**-0.1**
	baz=235						
NACB	**Ninganchiao**	**1.37**	**209**	P	**Pn**	**07 54 49.0**	**-0.5**
	baz=213						
NACB				S	**S**	**07 55 17.0**	**-1.4**
	baz=213						
LIOB	**Emei**	**1.40**	**239**	*e*P	**Pn**	**07 54 49.4**	**-0.3**
	baz=232						
ETLH	**Xiulin Townshi**	**1.40**	**214**	P	**Pn**	**07 54 49.6**	**-0.2**
	baz=207						
ETLH				S	**S**	**07 55 18.3**	**-0.6**
	baz=207						
NSTT	**Nanjuang**	**1.42**	**239**	*i* P	**Pn**	**07 54 49.8**	**0.0**
	baz=228						
NSTT				S	**S**	**07 55 18.7**	**-0.1**
	baz=228						
FUSS	**Fushou**	**1.50**	**221**	P	**Pn**	**07 54 51.5**	**+0.8**
	baz=216						
FUSS				S	**S**	**07 55 20.4**	**0.0**
	baz=216						
WHF	**Hehuan Shan**	**1.56**	**218**	*i* P	**Pn**	**07 54 52.2**	**+0.7**
	baz=208						
WHF				*i* S	**S**	**07 55 21.3**	**-0.5**
	baz=208						
WHP	**Taichung City**	**1.67**	**229**	P	**Pn**	**07 54 52.6**	**+0.7**
	baz=224						
CHGB	**Renai**	**1.68**	**219**	P	**Pn**	**07 54 52.8**	**+0.6**
	baz=218						
OWD	**Renai**	**1.77**	**217**	P	**Pn**	**07 54 53.2**	**+0.4**
	baz=208						
OWD				S	**S**	**07 55 24.3**	**+0.1**
	baz=208						
WCS	**Beigang Elemen**	**1.84**	**225**	*e*P	**Pn**	**07 54 53.3**	**0.0**
	baz=225						
HATJ	**Hateruma jima**	**1.88**	**134**	*e*S	**S**	**07 55 26.0**	**+0.3**
JKRS	**Kuro-shima**	**1.90**	**126**	P	**Pn**	**07 54 54.3**	**+0.5**
JKRS				S	**S**	**07 55 25.9**	**-0.1**
JIJ	**Ishigaki jima**	**1.93**	**121**	P	**Pn**	**07 54 53.9**	**-0.1**
JIJ				S	**S**	**07 55 25.2**	**-1.3**
VWDT	**VWDT**	**1.95**	**214**	P	**Pn**	**07 54 55.3**	**+1.1**
	baz=207						
VWDT				*e*S	**S**	**07 55 26.9**	**+0.2**
	baz=207						
JISG	**Ishigakijimahi**	**1.96**	**113**	P	**Pn**	**07 54 54.4**	**+0.1**
JISG				S	**S**	**07 55 26.2**	**-0.7**
SSLB	**Suanglung**	**2.02**	**219**	P	**Pn**	**07 54 55.3**	**+0.4**
	baz=221						
SSLB				S	**S**	**07 55 27.6**	**-0.5**
	baz=221						
EHY	**Hungye**	**2.08**	**206**	P	**Pn**	**07 54 54.4**	**-1.1**
	baz=199						
YULB	**Yu-li**	**2.19**	**206**	P	**Pn**	**07 54 56.3**	**-0.3**
	baz=206						
YUS	**Yu-Shan**	**2.26**	**214**	*i* P	**Pn**	**07 54 58.2**	**+0.5**
	baz=219						
JTJ	**Tarama**	**2.27**	**108**	P	**Pn**	**07 54 57.7**	**+0.4**
JTJ				S	**S**	**07 55 32.2**	**0.0**
ALS	**Alishan**	**2.32**	**217**	*i* P	**Pn**	**07 54 58.7**	**+0.6**
	baz=220						
ELDTW	**Lidau**	**2.49**	**209**	*e*P	**Pn**	**07 55 00.3**	**+0.8**
	baz=205						
EDH	**Donghe**	**2.57**	**202**	*e*P	**Pn**	**07 55 00.2**	**-0.1**
	baz=200						
TPUB	**Ta-pu**	**2.59**	**217**	P	**Pn**	**07 55 00.7**	**+0.3**
	baz=219						
STYH	**Taoyuan**	**2.62**	**213**	*e*P	**Pn**	**07 55 01.3**	**+0.6**
	baz=210						
WTP	**Ta-pu**	**2.64**	**217**	P	**Pn**	**07 55 01.4**	**+0.3**
	baz=219						
TWK	**Hsinying**	**2.69**	**219**	*e*P	**Pn**	**07 55 01.6**	**0.0**
	baz=216						
CHN1	**Nanshi**	**2.73**	**217**	P	**Pn**	**07 55 01.8**	**-0.2**
	baz=219						

IDC 28 08:03:04.1±2.7,53°.42N×87°.17E,h0km,mbtmp2.9/2, ML2.6/2,Error ellipse: s-maj=24.6km s-min=15.4km az=75.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.49**	**292**	*i*		08 12 54.1	
	baz=107,slow=313,SNR=4.3						
ZALV	**Zalesovo Beam**	**1.49**	**292**	Pg	Pn	08 03 30.9	-1.3
	0.8nm,0.3s,baz=107,slow=16,SNR=3.8						
ZALV				Lg	Lg	08 03 51.4	
	1.5nm,0.3s,baz=112,slow=29,SNR=6.3						
KURBB	**Kurchatov Arra**	**6.02**	**246**	Pn	Pn	08 04 35.5	+1.1
	0.1nm,0.3s,baz=62,slow=14,SNR=5.9						
KURBB				Lg	Lg	08 06 13.2	
	baz=61,slow=33,SNR=1.9						
	0.7nm,0.3s						
MKAR	**Makanchi Array**	**7.34**	**207**	Pn	Pn	08 04 53.4	+0.9
	0.1nm,0.3s,baz=25,slow=13,SNR=3.5						
MKAR				Lg	Lg	08 06 56.7	
	0.1nm,0.3s,baz=24,slow=30,SNR=2.6						
	0.4nm,0.6s						

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*IDC **28** 08:09:33.9±0.8,3°.05S×79°.10E,h0km,mb4.1/19, mbtmp4.1/19,MS3.8/57,Error ellipse: s-maj=27.8km s-min=15.7km az=42.0*
*NEIC **28** 08:09:36.9±2.3,2°.82S±0°.09×79°.15E±0°.10,h10km±1km, mb4.7/25,Error ellipse: s-maj=17.1km s-min=13.5km az=120.0*
ISC 28 08:09:35.9±0.4,2°.89S±0°.07×79°.13E±0°.08,h10km,n170, σ1§06/122,mb4.4/32,MS3.9/56,1D,South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAAM	**Kaadhehdhoo**	**6.99**	**299**	Pn	**Pn**	**08 11 17.9**	**-0.6**
DGAR	**Diego Garcia**	**8.03**	**236**	Pn	**Pn**	**08 11 34.1**	**+1.4**
H08S3	**Diego Garcia H**	**8.12**	**234**	Pn	**Pn**	**08 11 32.9**	**-0.9**
	baz=44,slow=16						
H08S3				Sn	Sn	08 12 55.3	-10
H08S2	**Diego Garcia H**	**8.12**	**234**	Pn	**Pn**	**08 11 32.9**	**-0.9**
	baz=44,slow=16						
H08S2				Sn	Sn	08 12 55.3	-10
H08S1	**Diego Garcia H**	**8.14**	**234**	Pn	**Pn**	**08 11 32.9**	**-1.1**
	baz=44,slow=16						
H08S1				Sn	Sn	08 12 55.3	-11
PALK	**Pallekele**	**10.21**	**9**	Pn	**Pn**	**08 12 00.9**	**-1.8**
	14nm,0.3s,baz=123,slow=13,SNR=93						
PALK				Sn	Sn	08 13 45.7	-12
	14nm,0.3s,baz=78,slow=19,SNR=6.3						
PALK				LR	LR	08 15 26.6	
	comp=Z,807nm,21.4s,baz=

PALK	**Pallekele**	**10.21**	**9**	Pn	**Pn**	**08 12 02.2**	**-0.5**
MNCI	**Minicoy**	**12.64**	**331**	Pn	**Pn**	**08 12 33.6**	**-2.2**
PCHI	**Peechi**	**13.62**	**348**	*eP*	**Pn**	**08 12 46.8**	**-2.5**
	baz=171,slow=18						
PCHI				*eS*	Sn	08 15 01.1	-20
KCSI	**Kotacane, Aceh**	**19.69**	**71**	P	Pn	08 14 15.2	+8.3
HYBB	**Hyderabad (bro**	**20.18**	**358**	*eP*	**P**	**08 14 10.1**	**-0.8**
HYBB				*eS*	**S**	**08 17 57.7**	**+0.1**
PSI	**Prapat**	**20.57**	**74**	LR	LR	08 21 51.5	
	comp=Z,665nm,18.8s,baz=246,slow=36						
RGRI	**Rengat**	**23.33**	**84**	P	**P**	**08 14 48.0**	**+3.5**
LEM	**Lembang**	**28.64**	**99**	LR	LR	08 26 07.3	
	comp=Z,210nm,18.6s,baz=250,slow=35						
CMAR	**Chiang Mai Arr**	**28.82**	**42**	P	**P**	**08 15 36.9**	**+2.4**
	1.4nm,0.3s,baz=240,slow=9.1,SNR=4.9						
CMAR				LR	LR	08 27 13.4	
	comp=Z,152nm,18.9s,baz=225,slow=37						
	1.4nm,0.3s						
CMAR	**Chiang Mai Arr**	**28.82**	**42**	P	**P**	**08 15 35.2**	**+0.7**
WSAR	**Wadi Sarin**	**32.77**	**323**	LR	LR	08 26 51.7	
	comp=Z,205nm,19.6s,baz=216,slow=32						
ABPO	**Ambohimpanom**	**35.08**	**240**	P	**P**	**08 16 30.3**	**+0.6**
VOI	**Vohitsoka**	**36.66**	**236**	P	**P**	**08 16 43.0**	**-0.2**
VOI				IAmb	IAmb	08 17 47.9	
	comp=Z,30nm,1.6s						
ATD	**Arta Tunnel**	**38.82**	**292**	LR	LR	08 30 14.0	
	comp=Z,141nm,19.8s,baz=154,slow=32						
KAPI	**Kappang**	**40.57**	**94**	LR	LR	08 33 17.3	
	comp=Z,168nm,18.4s,baz=274,slow=35						
KMBO	**Kilima Mbogo**	**41.89**	**272**	LR	LR	08 31 22.2	
	comp=Z,68nm,20.7s,baz=98,slow=31						
KSH	**Kashi**	**42.30**	**356**	P	**P**	**08 17 28.5**	**-1.5**
KSH				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CHGR	**Chuyangaron**	**42.35**	**348**	P	**P**	**08 17 30.2**	**-0.2**
CHGR				IAmb	IAmb	08 17 32.1	
	comp=Z,14nm,1.0s						
GAR	**Garm**	**42.47**	**350**	P	**P**	**08 17 31.6**	**+0.2**
GAR				IAmb	IAmb	08 17 32.6	
	comp=Z,11nm,0.9s						
LODK	**Lodwar**	**44.19**	**278**	P	**P**	**08 17 47.3**	**+1.6**
LODK				IAmb	IAmb	08 17 49.5	
	comp=Z,12nm,1.1s						
GEYT	**Alibeck**	**45.04**	**336**	LR	LR	08 36 53.6	
	comp=Z,163nm,18.5s,baz=156,slow=36						
H01W3	**Cape Leeuwin H**	**45.49**	**139**	T	T	09 04 59.4	
	baz=303,slow=75						
H01W2	**Cape Leeuwin H**	**45.50**	**139**	T	T	09 04 56.3	
	baz=303,slow=75						
H01W1	**Cape Leeuwin H**	**45.51**	**139**	T	T	09 05 12.3	
	baz=303,slow=75						
AAK	**Ala-Archa**	**45.51**	**355**	P	**P**	**08 17 58.0**	**+2.2**
	comp=Z,1.1nm,0.2s,baz=198,slow=9.6,SNR=4.1						
AAK				LR	LR	08 37 21.6	
	comp=Z,283nm,19.0s,baz=186,slow=36						
	comp=Z,1.1nm,0.2s						
AAK	**Ala-Archa**	**45.51**	**355**	P	**P**	**08 17 57.4**	**+1.6**
DAV	**Davao City (W)**	**47.40**	**78**	LR	LR	08 40 37.4	
	comp=Z,50nm,18.9s,baz=230,slow=39						
MBAR	**Mbarara**	**48.42**	**272**	LR	LR	08 37 00.9	
	comp=Z,55nm,20.0s,baz=128,slow=34						
MAKZ	**Makanchi**	**49.55**	**3**	P	**P**	**08 18 27.5**	**+0.6**
MK31	**Makanchi Array**	**49.55**	**3**	P	**P**	**08 18 26.7**	**-0.3**
MK31				IAmb	IAmb	08 18 44.8	
	comp=Z,8.5nm,0.9s						
MKAR	**Makanchi Array**	**49.55**	**3**	P	**P**	**08 18 27.3**	**+0.4**
	comp=Z,3.4nm,0.8s,baz=177,slow=8.0,SNR=25						
MKAR				LR	LR	08 39 49.6	
	comp=Z,81nm,21.9s,baz=184,slow=36						
	comp=Z,3.4nm,0.8s						
LSZ	**Lusaka**	**51.65**	**253**	LR	LR	08 36 57.8	
	comp=Z,131nm,21.8s,baz=139,slow=32						
SIJI	**Sorong**	**52.14**	**89**	LR	LR	08 41 58.8	
	comp=Z,39nm,20.0s,baz=170,slow=37						
GNI	**Garni**	**53.16**	**327**	LR	LR	08 41 13.7	
	comp=Z,54nm,21.9s,baz=130,slow=36						
KURBB	**Kurchatov Arra**	**53.30**	**360**	P	**P**	**08 18 55.3**	**+0.3**
	comp=Z,1.2nm,0.8s,baz=188,slow=7.6,SNR=11						
KURBB				PcP	**PcP**	**08 20 02.8**	**+0.3**
	comp=Z,1.4nm,0.9s,baz=188,slow=3.5,SNR=4.6						
KURBB				LR	LR	08 42 17.1	
	comp=Z,110nm,18.8s,baz=164,slow=37						
	comp=Z,1.2nm,0.8s						
KURK	**Kurchatov**	**53.40**	**360**	P	**P**	**08 18 56.1**	**+0.4**
ABKAR	**Akbulak array**	**54.53**	**345**	P	**P**	**08 19 04.5**	**+0.5**
MMAI	**Mount Meron Ar**	**54.60**	**315**	LR	LR	08 41 44.6	
	comp=Z,89nm,18.6s,baz=248,slow=35						
SONM	**Songino Array**	**55.86**	**22**	P	**P**	**08 19 13.8**	**0.0**
	comp=Z,0.6nm,0.4s,baz=216,slow=7.1,SNR=5.7						
SONM				LR	LR	08 45 19.4	
	comp=Z,80nm,19.6s,baz=201,slow=38						
	comp=Z,0.6nm,0.4s						
SONM	**Songino Array**	**55.86**	**22**	P	**P**	**08 19 14.5**	**+0.7**
SONM				IAmb	IAmb	08 19 32.1	
	comp=Z,13nm,1.0s						
LBTB	**Lobatse**	**55.97**	**242**	LR	LR	08 40 17.3	
	comp=Z,103nm,20.2s,baz=86,slow=33						
AKTO	**Aktyubinsk**	**56.13**	**344**	LR	LR	08 44 21.5	
	comp=Z,155nm,18.7s,baz=139,slow=37						
WRA	**Warramunga Arr**	**56.42**	**112**	P	**P**	**08 19 18.4**	**+0.2**
	comp=Z,3.8nm,0.8s,baz=286,slow=7.8,SNR=18						
WRA				LR	LR	08 40 57.3	
	comp=Z,96nm,20.4s,baz=154,slow=33						
	comp=Z,3.8nm,0.8s						
WRA	**Warramunga Arr**	**56.42**	**112**	P	**P**	**08 19 17.0**	**-1.2**
WRAB	**Tennant Creek**	**56.43**	**112**	P	P	08 19 10.7	-7.6
WRAB				IAmb	IAmb	08 19 35.3	
	comp=Z,9.5nm,0.8s						
WB2	**Warramunga Arr**	**56.43**	**112**	P	**P**	**08 19 14.7**	**-3.6**
WB2				IAmb	IAmb	08 19 35.3	
	comp=Z,10.0nm,0.8s						
WB0	**Warramunga Arr**	**56.44**	**112**	P	P	08 19 10.1	-8.3
WR0	**Warramunga Arr**	**56.61**	**112**	P	**P**	**08 19 15.8**	**-3.8**
KBZ	**Khabaz**	**56.66**	**329**	P	**P**	**08 19 20.8**	**+1.3**
	comp=Z,2.0nm,0.7s,baz=135,slow=4.3,SNR=4.2						
	comp=Z,2.0nm,0.7s						
ASAR	**Alice Springs**	**56.76**	**116**	P	**P**	**08 19 19.4**	**-1.2**
	comp=Z,1.4nm,0.9s,baz=280,slow=5.5,SNR=6.5						
ASAR				LR	LR	08 40 35.1	
	comp=Z,77nm,21.9s,baz=278,slow=33						
	comp=Z,1.4nm,0.9s						
ZALV	**Zalesovo Beam**	**56.83**	**4**	P	**P**	**08 19 20.6**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=202,slow=6.2,SNR=2.8						
ZALV				LR	LR	08 44 21.9	
	comp=Z,90nm,21.2s,baz=200,slow=37						
	comp=Z,0.6nm,0.3s						
ZALV	**Zalesovo Beam**	**56.83**	**4**	P	**P**	**08 19 20.7**	**+0.3**
BOSA	**Boshof**	**57.21**	**238**	LR	LR	08 41 08.8	
	comp=Z,71nm,18.6s,baz=70,slow=33						
BRTR	**Keskin Array B**	**59.46**	**320**	P	**P**	**08 19 39.5**	**+0.1**
	comp=Z,1.6nm,0.9s,baz=153,slow=4.8,SNR=5.6						
BRTR				LR	LR	08 46 17.3	
	comp=Z,144nm,18.5s,baz=133,slow=37						
	comp=Z,1.6nm,0.9s						
KSRS	**Korea Array**	**60.44**	**43**	LR	LR	08 45 22.0	
	comp=Z,68nm,21.3s,baz=240,slow=36						
BELG	**Belogornoye**	**61.17**	**339**	LR	LR	08 48 47.1	
	comp=Z,63nm,19.1s,baz=165,slow=38						
ARU	**Arti**	**61.45**	**347**	LR	LR	08 47 06.3	
	comp=Z,144nm,20.0s,baz=178,slow=37						
SUR	**Sutherland**	**61.94**	**235**	LR	LR	08 41 47.9	
	comp=Z,71nm,21.2s,baz=104,slow=31						
TSUM	**Tsumeb**	**62.22**	**250**	LR	LR	08 42 48.5	
	comp=Z,39nm,20.3s,baz=14,slow=32						
ALN	**Alexandroupoli**	**65.03**	**318**	P	**P**	**08 20 17.5**	**+1.0**
STKA	**Stephens Creek**	**65.22**	**124**	P	**P**	**08 20 17.3**	**-0.7**
	comp=Z,1.9nm,0.7s,baz=270,slow=6.1,SNR=3.7						
STKA				LR	LR	08 46 51.9	
	comp=Z,132nm,19.9s,baz=213,slow=34						
	comp=Z,1.9nm,0.7s						
STKA	**Stephens Creek**	**65.22**	**124**	P	**P**	**08 20 17.7**	**-0.3**
STKA				IAmb	IAmb	08 21 59.1	
	comp=Z,10nm,2.0s						
MAW	**Mawson**	**65.57**	**187**	LR	LR	08 42 41.7	
	comp=Z,63nm,18.3s,baz=8.0,slow=30						
KIRV	**Kirov**	**65.69**	**343**	LR	LR	08 49 54.4	
	comp=Z,126nm,20.3s,baz=152,slow=37						
GUMO	**Guam**	**67.21**	**74**	LR	LR	08 47 41.2	
	comp=Z,34nm,21.6s,baz=233,slow=34						
MLR	**Muntele Rosu**	**67.33**	**322**	LR	LR	08 52 01.1	
	comp=Z,79nm,18.4s,baz=109,slow=38						
MJAR	**Matsushiro Arr**	**67.44**	**48**	P	**P**	**08 20 32.1**	**0.0**
	comp=Z,1.3nm,0.8s,baz=232,slow=6.0,SNR=1.8						
	comp=Z,1.3nm,0.8s						
CTA	**Charters Tower**	**67.54**	**110**	P	**P**	**08 20 32.4**	**-0.7**
	comp=Z,4.2nm,0.8s,baz=242,slow=8.0,SNR=2.3						
CTA				LR	LR	08 49 12.6	
	comp=Z,142nm,18.6s,baz=260,slow=35						
	comp=Z,4.2nm,0.8s						
OBN	**Obninsk**	**67.56**	**335**	LR	LR	08 53 23.4	
	comp=Z,11nm,18.9s,baz=131,slow=39						
JCJ	**Chichijima**	**67.61**	**59**	LR	LR	08 50 08.5	
	comp=Z,18nm,19.0s,baz=168,slow=36						
AKASG	**Malin Array Be**	**68.26**	**328**	P	**P**	**08 20 36.7**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=120,slow=5.5,SNR=1.1						
	comp=Z,0.2nm,0.4s						
BURAR	**Bucovina Array**	**68.83**	**324**	P	**P**	**08 20 41.1**	**+0.5**
BURAR				IAmb	IAmb	08 20 42.4	
	comp=Z,7.7nm,1.9s						
KLR	**Kul'dur**	**68.92**	**34**	LR	LR	08 54 12.4	
	comp=Z,78nm,18.3s,baz=226,slow=39						
ASAJ	**Asahikawa**	**73.34**	**42**	LR	LR	08 53 42.4	
	comp=Z,27nm,20.2s,baz=272,slow=36						
MORC	**Moravsky Berou**	**74.34**	**324**	P	**P**	**08 21 13.3**	**-0.5**
VRAC	**Vranov**	**74.72**	**323**	LR	LR	08 56 02.9	
	comp=Z,18nm,21.4s,baz=66,slow=37						
YAK	**Yakutsk**	**75.22**	**22**	LR	LR	08 57 31.2	
	comp=Z,65nm,20.8s,baz=268,slow=38						
FINES	**FINESS Array B**	**75.84**	**337**	P	**P**	**08 21 23.4**	**+1.3**
	comp=Z,2.2nm,1.1s,baz=132,slow=9.5,SNR=2.3						
FINES				LR	LR	08 57 03.8	
	comp=Z,78nm,18.9s,baz=89,slow=38						
	comp=Z,2.2nm,1.1s						
TAM	**Tamanrasset**	**76.06**	**294**	P	**P**	**08 21 24.3**	**-0.1**
TAM				IAmb	IAmb	08 21 26.1	
	comp=Z,9.8nm,1.3s						
GERES	**GERESS Array B**	**76.30**	**322**	P	**P**	**08 21 25.1**	**-0.1**
	comp=Z,0.3nm,0.2s,baz=148,slow=5.8,SNR=6.1						
	comp=Z,0.3nm,0.2s						
GERES	**GERESS Array B**	**76.30**	**322**	P	**P**	**08 21 24.4**	**-0.8**
KHC	**Kasperske Hory**	**76.48**	**322**	P	**P**	**08 21 25.2**	**-0.9**
KHC				IAmb	IAmb	08 21 27.0	
	comp=Z,6.7nm,1.0s						
CLL	**Collm**	**77.60**	**324**	↓*iP*	**P**	**08 21 33.3**	**+1.0**
	comp=Z,5.0nm,1.0s						
DAVOX	**Davos/Dischmat**	**78.06**	**319**	LR	LR	08 58 13.2	
	comp=Z,29nm,19.9s,baz=83,slow=37						
TORD	**Torodi Ar. Bea**	**78.44**	**284**	P	**P**	**08 21 38.1**	**+0.3**
	comp=Z,2.2nm,1.1s,baz=83,slow=3.5,SNR=7.1						
TORD				LR	LR	08 55 29.4	
	comp=Z,63nm,18.2s,baz=212,slow=35						
	comp=Z,2.2nm,1.1s						
TORD	**Torodi Ar. Bea**	**78.44**	**284**	P	**P**	**08 21 37.8**	**0.0**
ARCES	**ARCESS Array B**	**80.71**	**343**	P	**P**	**08 21 50.0**	**+1.0**
	comp=Z,1.4nm,0.8s,baz=83,slow=3.7,SNR=2.1						
ARCES				LR	LR	08 59 36.8	
	comp=Z,102nm,19.4s,baz=138,slow=37						
	comp=Z,1.4nm,0.8s						
ARCES	**ARCESS Array B**	**80.71**	**343**	P	**P**	**08 21 49.4**	**+0.5**
TIXI	**Tiksi**	**80.97**	**14**	LR	LR	09 00 28.7	
	comp=Z,55nm,19.4s,baz=181,slow=38						
TIXI	**Tiksi**	**80.97**	**14**	P	**P**	**08 21 50.8**	**+0.5**
NOA	**NORSAR Array B**	**82.01**	**333**	LR	LR	09 01 36.2	
	comp=Z,28nm,16.1s,baz=110,slow=38						
TROLL	**Troll, Antarti**	**83.14**	**198**	P	**P**	**08 22 03.0**	**+1.1**
DBIC	**Dimbokro**	**84.37**	**277**	LR	LR	08 58 22.5	
	comp=Z,26nm,18.0s,baz=140,slow=35						
SNAA	**Sanae**	**84.74**	**198**	P	**P**	**08 22 09.1**	**-0.9**
SNAA	**Sanae**	**84.74**	**198**	P	**P**	**08 22 10.2**	**+0.2**
SNAA				IAmb	IAmb	08 22 12.5	
	comp=Z,4.2nm,1.1s						
SEY	**Seymchan**	**85.00**	**26**	LR	LR	09 06 48.6	
	comp=Z,65nm,18.0s,baz=304,slow=40						
PETK	**Petropavlovsk-**	**85.44**	**36**	LR	LR	09 03 26.8	
	comp=Z,29nm,19.5s,baz=255,slow=38						
VNDA	**Vanda**	**85.62**	**168**	LR	LR	08 53 58.9	
	comp=Z,101nm,20.9s,baz=280,slow=31						
VNA2	**Neumayer--Watz**	**86.15**	**199**	P	**P**	**08 22 18.5**	**+1.5**
	baz=75,slow=3.5						
ESDC	**Sonseca Array**	**86.51**	**310**	P	**P**	**08 22 20.0**	**+0.5**
	comp=Z,1.8nm,1.1s,baz=101,slow=5.9,SNR=4.4						
	comp=Z,1.8nm,1.1s						
QSPA	**South Pole Qui**	**87.10**	**180**	LR	LR	08 56 52.1	
	comp=Z,83nm,21.2s,baz=272,slow=33						
SPITS	**Spitsbergen Ar**	**87.40**	**349**	LR	LR	09 06 55.1	
	comp=Z,55nm,18.8s,baz=88,slow=39						
URZ	**Urewera**	**94.49**	**129**	LR	LR	08 57 22.6	
	comp=Z,64nm,21.8s,baz=211,slow=30						
BORG	**Borgarnes**	**97.06**	**335**	LR	LR	09 07 60.0	
	comp=Z,27nm,20.0s,baz=104,slow=36						
YKA	**Yellowknife Ar**	**119.65**	**7**	PKP	**PKPdf**	**08 28 23.8**	**-2.1**
	comp=Z,8nm,0.9s,baz=344,slow=3.0,SNR=6.5						
YKA	**Yellowknife Ar**	**119.65**	**7**		**PKPdf**	**08 28 24.5**	**-1.4**
PDAR	**Pinedale Array**	**139.54**	**10**	PKP	**PKPdf**	**08 29 04.0**	**-0.5**
	comp=Z,0.7nm,0.8s,baz=46,slow=2.6,SNR=8.1						
PDAR	**Pinedale Array**	**139.54**	**10**		**PKPdf**	**08 29 03.3**	**-1.2**
NVAR	**Mina Array Bea**	**141.20**	**22**	PKP	**PKPdf**	**08 29 07.9**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=253,slow=2.7,SNR=5.0						
NVAR	**Mina Array Bea**	**141.20**	**22**		**PKPdf**	**08 29 07.4**	**-0.2**
LPAZ	**La Paz**	**142.45**	**238**	PKhKP	PKPpre	08 29 05.5	
	comp=Z,0.9nm,0.3s,baz=51,slow=2.4,SNR=5.2						
KMSC	**Kings Mountain**	**143.14**	**333**	P	PKPbc	08 29 08.3	+0.6
	baz=34						
MPMC	**Manual Prospec**	**143.59**	**23**	P	PKPbc	08 29 09.0	-0.1
	baz=331						
CCM	**Cathedral Cave**	**143.91**	**347**	P	PKPab	08 29 08.9	-0.3
	baz=16						
LRMC	**Laurel Mtn Rad**	**144.02**	**24**	P	PKPbc	08 29 11.1	+0.7
	baz=331						
NHSC	**New Hope**	**144.23**	**330**	P	**PKPdf**	**08 29 12.0**	**-0.7**
	baz=37						
EDW2	**Edwards Air Fo**	**144.41**	**25**	P	**PKPdf**	**08 29 12.4**	**-0.8**
	baz=330						
GSC	**Goldstone, Bar**	**144.52**	**23**	P	**PKPdf**	**08 29 12.7**	**-0.7**
	baz=332						
TUQ	**Turquoise Moun**	**144.73**	**22**	P	**PKPdf**	**08 29 13.3**	**-0.6**
	baz=333						
WVT	**Waverly**	**144.79**	**342**	P	**PKPab**	**08 29 12.2**	**-0.3**
	baz=23						
S22A	**4UR Ranch, Cre**	**144.88**	**8**	P	PKPbc	08 29 13.6	+0.4
	baz=350,SNR=17						
SDCO	**Great Sand Dun**	**145.05**	**6**	P	**PKPbc**	**08 29 13.3**	**-0.5**
	baz=352,SNR=13						
HEC	**Hector,Ludlow**	**145.12**	**23**	P	**PKPdf**	**08 29 15.1**	**+0.7**
	baz=332						
MVCO	**Mesa Verde**	**145.13**	**11**	P	**PKPbc**	**08 29 13.8**	**-0.2**
	baz=347,SNR=5.1						
BBRC	**Big Bear Solar**	**145.38**	**24**	P	**PKPab**	**08 29 15.8**	**+0.7**
	baz=331,SNR=7.3						
GMRC	**Granite Mounta**	**145.41**	**22**	P	**PKPab**	**08 29 15.8**	**+0.8**
	baz=333,SNR=9.8						
GOGA	**Godfrey**	**145.54**	**334**	P	**PKPab**	**08 29 15.3**	**-0.1**
	baz=32						
T25A	**Trinidad**	**145.76**	**5**	P	**PKPdf**	**08 29 15.4**	**-0.3**
	baz=354,SNR=12						
SCI2	**San Clemente I**	**145.78**	**27**	P	**PKPab**	**08 29 17.0**	**+0.7**
	baz=328						
MURC	**Murrieta**	**145.84**	**25**	P	**PKPbc**	**08 29 16.2**	**0.0**
	baz=330						
BELC	**Belle Mtn. Jos**	**145.98**	**23**	P	**PKPab**	**08 29 17.2**	**+0.1**
	baz=332						
WUAZ	**Wupatki**	**146.10**	**15**	P	**PKPbc**	**08 29 17.0**	**0.0**
	baz=341,SNR=5.9						
PFO	**Pinyon Flats O**	**146.14**	**24**	P	**PKPab**	**08 29 17.8**	**+0.1**
	baz=331						
TPFO	**Pinon Flats**	**146.14**	**24**	P	**PKPab**	**08 29 18.1**	**+0.3**
	baz=331						
IRM	**Iron Mountain**	**146.16**	**22**	P	**PKPab**	**08 29 17.8**	**+0.1**
	baz=334,SNR=6.8						
PDMCI	**Parker Dam,Lak**	**146.38**	**20**	P	**PKPbc**	**08 29 17.7**	**+0.1**
	baz=336						
BC3	**Big Chuckawall**	**146.49**	**22**	P	**PKPab**	**08 29 18.9**	**-0.2**
	baz=333						
OXF	**Oxford**	**146.78**	**343**	P	**PKPbc**	**08 29 18.3**	**-0.5**
	baz=21,SNR=7.1						
MONP2	**Monument Peak**	**146.78**	**24**	P	**PKPbc**	**08 29 19.4**	**+0.3**
	baz=331,SNR=6.6						
TUL1	**Leonard**	**146.81**	**352**	P	**PKPdf**	**08 29 17.8**	**+0.6**
	baz=9.2						
W18A	**Petrified Fore**	**146.89**	**13**	P	**PKPbc**	**08 29 18.4**	**-1.0**
	baz=344						
W41B	**Gary Mavity, V**	**146.89**	**347**	P	**PKPbc**	**08 29 18.7**	**-0.5**
	baz=16						
SWSC	**Sam W. Stewart**	**146.98**	**23**	P	**PKPbc**	**08 29 19.9**	**+0.5**
	baz=332						
IKP	**In-Ko-Pah, Jac**	**147.12**	**24**	P	**PKPbc**	**08 29 19.9**	**-0.1**
	baz=331						
W39A	**Magazine**	**147.19**	**349**	P	**PKPbc**	**08 29 19.0**	**-0.9**
	baz=13						
TIGA	**Tifton**	**147.26**	**332**	P	**PKPbc**	**08 29 20.6**	**+0.4**
	baz=33						
GLA	**Glamis**	**147.26**	**22**	P	**PKPbc**	**08 29 20.6**	**+0.3**
	baz=334						
ANMO	**Albuquerque**	**147.68**	**9**	P	**PKPdf**	**08 29 19.7**	**+0.8**
	baz=350						
MIAR	**Mount Ida**	**147.78**	**349**	P	**PKPdf**	**08 29 19.9**	**+1.1**
	baz=14						
AMTX	**Amarillo**	**148.16**	**1**	P	**PKPbc**	**08 29 21.5**	**-1.3**
	baz=358						
WMOK	**Wichita Mounta**	**148.25**	**357**	P	**PKPbc**	**08 29 21.7**	**-1.2**
	baz=3.9						
DWPF	**Disney Wildern**	**148.81**	**325**	P	**PKPab**	**08 29 29.1**	**+0.9**
	baz=40						
214A	**Organ Pipe Nat**	**148.98**	**20**	P	**PKPbc**	**08 29 24.6**	**-0.3**
	baz=336						
BRAL	**Brewton**	**148.99**	**337**	P	**PKiKP**	**08 29 26.1**	**-0.1**
	baz=27						
MSTX	**Muleshoe**	**149.03**	**3**	P	**PKPbc**	**08 29 23.9**	**-1.2**
	baz=356						
VBMS	**Vicksburg**	**149.24**	**343**	P	**PKPbc**	**08 29 25.6**	**+0.1**
	baz=20						
TUC	**Tucson**	**149.28**	**17**	P	**PKPbc**	**08 29 26.0**	**+0.3**
	baz=340						
121A	**Cookes Peak, D**	**149.80**	**12**	P	**PKPbc**	**08 29 27.1**	**0.0**
	baz=346,SNR=5.8						
ABTX	**Abilene, Hawle**	**150.40**	**358**	P	**PKPbc**	**08 29 27.8**	**-0.6**
	baz=2.4,SNR=5.4						
NATX	**Nacogdoches**	**150.69**	**349**	P	**PKPbc**	**08 29 29.2**	**+0.2**
	baz=13						
MNTX	**Cornudas Mount**	**151.03**	**8**	P	**PKPbc**	**08 29 29.5**	**-0.3**
	baz=351,SNR=21						
JCT	**Junction City**	**152.54**	**358**	P	**PKPbc**	**08 29 32.6**	**-0.8**
	baz=2.2						
TXAR	**Lajitas Array**	**153.56**	**5**	PKP	**PKPdf**	**08 29 27.5**	**-0.6**
	comp=Z,0.6nm,0.9s,baz=132,slow=1.9,SNR=5.2						
TXAR				PKPbc	**PKPbc**	**08 29 35.0**	**-0.7**
	comp=Z,1.5nm,0.8s,baz=8.1,slow=1.9,SNR=13						
TXAR				PKPab	**PKPab**	**08 29 46.0**	**-2.0**
	comp=Z,0.7nm,0.8s,baz=318,slow=1.7,SNR=5.4						
TXAR	**Lajitas Array**	**153.56**	**5**		**PKPdf**	**08 29 26.7**	**-1.3**
TXAR				PKPbc	**PKPbc**	**08 29 35.5**	**-0.3**
TXAR					**PKPab**	**08 29 46.0**	**-2.0**

UCR ***28*** *08:10:39.8±2.3, 8°.28N×82°.61W, h18km±6km, MW4.2*
UPA ***28*** *08:10:43.0±1.2, 8°.35N×82°.79W, h8km±3km, MW4.4*
ISC 28 08:10:42.9±0.9, 8°.34N±0°.04×82°.81W±0°.03, h18km±6km, n26, σ1°18/46, 3C-4D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PTPM	**Petroterminale**	**0.15**	**207**	↑*iP*	**Pg**	**08 10 46.4**	**-0.8**
PTPM				*eS*	**Sg**	**08 10 50.3**	**+0.3**
CDITO	**Canoas**	**0.24**	**345**	*eP*	**Pg**	**08 10 48.3**	**-0.2**
CDITO				*eS*	**Sg**	**08 10 52.5**	**+0.2**
BAGA3	**Bagala, Chiriq**	**0.31**	**66**	↓*eP*	**Pb**	**08 10 50.0**	**+0.1**
BAGA3				*eS*	**Sb**	**08 10 54.1**	**-0.5**
DVD	**David**	**0.37**	**75**	*eP*	**Pg**	**08 10 50.6**	**0.0**
DVD				*eS*	**Sb**	**08 10 56.0**	**-0.4**
BRU2	**Volcan**	**0.47**	**15**	↓*eP*	**Pg**	**08 10 52.5**	**0.0**
BRU2				*eS*	**Sb**	**08 10 59.8**	**+0.3**
BCO2	**Palmira**	**0.47**	**36**	*eP*	**Pb**	**08 10 52.6**	**-0.2**
BCO2				*eS*	**Sb**	**08 10 59.7**	**+0.2**
CHIR3	**Chiriqui UPA,**	**0.48**	**83**	*eP*	**Pg**	**08 10 52.1**	**-0.5**
CHIR3				*eS*	**Sb**	**08 11 00.1**	**+0.5**
EDSV	**San Vito**	**0.50**	**341**	↓*eP*	**Pg**	**08 10 52.7**	**-0.4**
EDSV				*eS*	**Sb**	**08 11 02.0**	**+1.5**
BC3P	**Paso Ancho**	**0.51**	**23**	↓*eP*	**Pg**	**08 10 53.1**	**-0.2**
BC3P				*eS*	**Sb**	**08 11 01.2**	**+0.4**
CHGR2	**Aguacate**	**0.89**	**48**	*eP*	**Pg**	**08 10 58.6**	**-1.7**
CHGR2				*eS*	**Sg**	**08 11 11.4**	**-0.5**
EDBA	**Buenos Aires**	**0.94**	**331**	*eP*	**Pg**	**08 11 00.1**	**-1.2**
EDBA				*eS*	**Sb**	**08 11 14.5**	**+1.6**
REME3	**Remedios, Chir**	**0.97**	**97**	*eP*	**Pg**	**08 10 59.7**	**-2.2**
REME3				*eS*	**Sb**	**08 11 14.9**	**+1.0**
DRK0	**Durika**	**1.01**	**335**	*eP*	**Pg**	**08 11 01.7**	**-1.0**

*IDC **28** 08:38:14.1±0.9,39˚.36N×73˚.62E,h0km,mb3.8/12, mbtmp3.8/15,ML3.2/3,Error ellipse: s-maj=18.5km s-min=16.1km az=105.0*
*NNC **28** 08:38:18.6±1.3,39˚.53N×73˚.70E,h0km,mb4.3,mpv3.9, Error ellipse: s-maj=10.0km s-min=5.8km az=171.0*
*NEIC **28** 08:38:19.5±1.3,39˚.47N±0˚.04×73˚.29E±0˚.07,h10km±1km, mb4.2/6,Error ellipse: s-maj=9.2km s-min=7.1km az=63.0*

ISC 28 08:38:16.6±0.6,39˚.44N±0˚.04×73˚.50E±0˚.03,h10km,n99,
σ2s61/134,mb3.8/13,35C-11D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.22**	**333**	⇑*i*	P		**Pb**	**08 38 38.8**	**-0.9**
	baz=27								
OHH				⇑*i*	S		**Sn**	**08 38 58.4**	**+2.1**
	baz=27								
DRK	**Karamyk**	**1.32**	**272**	Pn			**Pg**	**08 38 42.5**	**+0.6**
BTK	**Batken**	**2.16**	**288**	⇑*e*P			**Pb**	**08 38 55.0**	**-0.8**
	baz=88								
BTK				⇑*i*	S		**Sg**	**08 39 26.3**	**+0.3**
	baz=88								
BTK	**Batken**	**2.16**	**288**				**Pb**	**08 38 53.7**	**-2.1**
ARLS	**Aral**	**2.50**	**14**	⇑*e*P			**Pn**	**08 38 56.8**	**-0.7**
	baz=9.0								
ARLS				⇑*i*	S		**Sn**	**08 39 29.3**	**+1.2**
	baz=9.0								
GAR	**Garm**	**2.51**	**261**	⇑*i*	P		**Pb**	**08 38 59.7**	**-2.1**
	baz=64								
GAR				⇑*i*	S		**Sg**	**08 39 34.2**	**-3.1**
	baz=64								
GAR	**Garm**	**2.51**	**261**				**Pb**	**08 38 59.0**	**-2.8**
ARK	**Arkit**	**2.63**	**334**	⇑*e*P			**Pn**	**08 39 00.9**	**+1.7**
	baz=31								
ARK				⇑*i*	S		**Sb**	**08 39 36.3**	**0.0**
	baz=31								
AML	**Almayashu**	**2.69**	**3**	P			**Pb**	**08 39 03.4**	**-1.8**
	SNR=34								
TRKS	**Terek-Say**	**2.76**	**320**	⇓*e*P			**Pn**	**08 39 02.2**	**+1.2**
	baz=17								
TRKS				⇓*i*	S		**Sb**	**08 39 38.5**	**-1.5**
	baz=17								
UCH	**Uchtor**	**2.89**	**15**	P			**Pb**	**08 39 05.6**	**-2.9**
	SNR=79								
UCH	**Uchtor**	**2.89**	**15**	⇓*e*P			**Pn**	**08 39 02.5**	**-0.6**
	baz=11								
UCH				⇓*i*	S		**Sn**	**08 39 38.9**	**+0.7**
	baz=11								
EKS2	**Erkin-Say**	**3.23**	**4**	P			**Pb**	**08 39 10.6**	**-3.5**
	SNR=17								
EKS2	**Erkin-Say**	**3.23**	**4**	⇓*e*P			**Pn**	**08 39 07.5**	**+0.1**
	baz=60								
EKS2				⇓*e*S			**Sn**	**08 39 47.7**	**+1.7**
	baz=60								
AAK	**Ala-Archa**	**3.28**	**13**	P			**Pb**	**08 39 11.5**	**-3.5**
	SNR=18								
AAK	**Ala-Archa**	**3.28**	**13**	Pn			**Pn**	**08 39 11.0**	**+2.8**
	6.6nm,0.3s,baz=193,slow=12,SNR=28								
AAK							Sn	**Sb**	**08 39 52.6**	**-2.5**
	6.4nm,0.3s,baz=122,slow=19,SNR=6.6								
	15nm,0.3s								
AAK	**Ala-Archa**	**3.28**	**13**	⇑*e*P			**Pn**	**08 39 07.9**	**-0.3**
	baz=9.0								
AAK				⇑*i*	S		**Sn**	**08 39 48.4**	**+1.0**
	baz=9.0								
AAK	**Ala-Archa**	**3.28**	**13**				**Pb**	**08 39 11.5**	**-3.5**
KBK	**Karagaybulak**	**3.40**	**18**	P			**Pb**	**08 39 13.4**	**-3.6**
	SNR=32								
KBK	**Karagaybulak**	**3.40**	**18**	⇓*e*P			**Pn**	**08 39 09.0**	**-0.8**
	baz=14								
KBK				⇓*i*	S		**Sn**	**08 39 50.5**	**+0.2**
	baz=14								
CHGR	**Chuyangaron**	**3.47**	**258**	⇑*i*	P		**Pn**	**08 39 12.7**	**+2.0**
	baz=61								
CHGR				⇑*i*	S		**Sb**	**08 39 56.9**	**-3.5**
	baz=61								
CHGR	**Chuyangaron**	**3.47**	**258**	Pn			**Pn**	**08 39 11.4**	**+0.7**
ULHL	**Ulahol**	**3.49**	**36**	P			**Pb**	**08 39 19.2**	**+0.6**
	SNR=32								
ULHL	**Ulahol**	**3.49**	**36**	⇑*e*P			**Pn**	**08 39 09.2**	**-1.9**
	baz=32								
ULHL				⇑*i*	S		**Sn**	**08 39 50.8**	**-1.8**
	baz=32								
BOOM	**Boomskoye usch**	**3.56**	**30**	⇑*i*	P		**Pn**	**08 39 10.6**	**-1.5**
	baz=27								
BOOM				⇑*i*	S		**Sn**	**08 39 53.4**	**-1.0**
	baz=27								
BOOM	**Boomskoye usch**	**3.56**	**30**	Pn			**Pn**	**08 39 15.5**	**+3.4**
CHMS	**Chumysh**	**3.68**	**14**	P			**Pn**	**08 39 16.6**	**+3.0**
	SNR=9.7								
CHMS	**Chumysh**	**3.68**	**14**	⇑*i* P			**Pn**	**08 39 13.1**	**-0.5**
	baz=11								
CHMS				⇑*e*S			**Sn**	**08 39 57.4**	**+0.4**
	baz=11								
CHMS	**Chumysh**	**3.68**	**14**	⇑Pn			**Pn**	**08 39 16.3**	**+2.7**
	16nm,0.5s								
CHMS				⇓Lg			Lg	08 40 11.8	
	47nm,0.6s								
TAS	**Tashkent**	**3.72**	**302**	⇑*i* P			**Pn**	**08 39 16.6**	**+2.4**
	baz=1.0								
TAS				⇑*i*	S		**Sb**	**08 40 03.6**	**-4.0**
	baz=1.0								
TKM2	**Tokmak 2**	**3.82**	**24**	P			**Pn**	**08 39 18.6**	**+2.9**
	SNR=12								
TKM2	**Tokmak 2**	**3.82**	**24**	⇑*i* P			**Pn**	**08 39 14.5**	**-1.2**
	baz=20								
TKM2				⇑*i*	S		**Sn**	**08 40 00.0**	**-0.8**
	baz=20								
TKM2	**Tokmak 2**	**3.82**	**24**	⇑Pn			**Pn**	**08 39 18.4**	**+2.8**
	25nm,0.8s								
TKM2				⇑Lg			Lg	08 40 16.9	
	39nm,0.9s								
KDJ	**Kajisay**	**3.88**	**45**	Pn			**Pb**	**08 39 20.9**	**-4.2**
USP	**Ospenovka**	**3.90**	**11**	P			**Pn**	**08 39 19.7**	**+3.1**
	SNR=12								
USP	**Ospenovka**	**3.90**	**11**	⇑*i* P			**Pn**	**08 39 16.4**	**-0.2**
	baz=8.0								
USP				⇑*e*S			**Sn**	**08 40 03.1**	**+0.7**
	baz=8.0								
TARG	**Taragay, Kyrgy**	**4.00**	**54**	⇓*e*P			**Pn**	**08 39 15.6**	**-2.7**
	baz=51								
TARG				⇓*i*	S		**Sn**	**08 40 01.7**	**-3.7**
	baz=51								
TARG	**Taragay, Kyrgy**	**4.00**	**54**	Pn			**Pn**	**08 39 22.3**	**+4.0**
KST	**Kastek**	**4.05**	**26**	*e*P			**Pb**	**08 39 27.3**	**-0.8**
	17nm,0.5s								
KST				*e*S			**Sb**	**08 40 21.4**	**+4.2**
	80nm,0.8s								
KST	**Kastek**	**4.05**	**26**	Pg			**Pb**	**08 39 29.1**	**+1.0**
	17nm,0.5s								
KST				Lg			Lg	08 40 22.3	
	80nm,0.8s								
SGDS	**Sogindy**	**4.10**	**12**	*e*P			**Pb**	**08 39 28.0**	**-0.8**
	15nm,0.7s								
SGDS				*e*S			**Sb**	**08 40 23.0**	**+4.5**
	32nm,0.7s								
SGDS	**Sogindy**	**4.10**	**12**	Pg			**Pb**	**08 39 29.6**	**+0.8**
	15nm,0.7s								
SGDS				Lg			Lg	08 40 23.5	
	32nm,0.7s								
DGS	**Degeres**	**4.17**	**23**	*e*P			**Pb**	**08 39 31.5**	**+1.4**
	36nm,0.4s								
DGS				*e*S			**Sg**	**08 40 28.3**	**-2.1**
	58nm,0.9s								
DGS	**Degeres**	**4.17**	**23**	Pg			**Pb**	**08 39 32.4**	**+2.3**
	36nm,0.5s								
DGS				Lg			Lg	08 40 28.3	
	58nm,0.9s								
MTBS	**Maitube**	**4.30**	**30**	*e*P			**Pb**	**08 39 32.5**	**+0.2**
	24nm,0.4s								
MTBS				*e*S			**Sg**	**08 40 30.4**	**-4.2**
	27nm,0.1s								
MTBS	**Maitube**	**4.30**	**30**	Pg			**Pb**	**08 39 33.6**	**+1.3**
	24nm,0.5s								
MTBS				Lg			Lg	08 40 30.4	
	27nm,0.7s								
KK31	**Karatay Array**	**4.30**	**329**				**Pn**	**08 39 24.0**	**+2.0**
KK31	**Karatay Array**	**4.30**	**329**	⇑Pn			**Pn**	**08 39 24.6**	**+2.6**
	3.3nm,0.3s,baz=131,slow=12,SNR=64								
KK31				⇑Pg			**Pb**	**08 39 34.5**	**+2.2**
	31nm,0.8s,baz=148,slow=16,SNR=14								
KK31				⇑Sn			**Sb**	**08 40 18.3**	**-5.9**
	10.0nm,0.5s,baz=142,slow=25,SNR=2.7								
KK31				⇑Lg			Lg	08 40 35.2	
	11nm,0.3s								
KKAR	**Karatay Array**	**4.30**	**329**	⇑*e*P			**Pn**	**08 39 23.8**	**+1.8**
	baz=28								
KKAR				⇑*i* S			**Sn**	**08 40 16.3**	**+4.0**
	baz=28								
KKAR	**Karatay Array**	**4.30**	**329**				**Pn**	**08 39 23.8**	**+1.8**
KKAR	**Karatay Array**	**4.30**	**329**	Pn			**Pn**	**08 39 23.8**	**+1.8**
TNSS	**Tian-Shan**	**4.44**	**35**	*e*P			**Pb**	**08 39 35.1**	**+0.3**
	22nm,0.5s								
TNSS				*e*S			**Sg**	**08 40 35.3**	**-3.7**
	21nm,0.8s								
TNSS	**Tian-Shan**	**4.44**	**35**	Pg			**Pb**	**08 39 36.4**	**+1.5**
	22nm,0.5s								
TNSS				Lg			Lg	08 40 35.3	
	21nm,0.8s								
BRLS	**Borolday**	**4.53**	**324**	*e*P			**Pb**	**08 39 37.1**	**+0.9**
	9.2nm,0.2s								
BRLS				*e*S			**Sg**	**08 40 38.1**	**-3.8**
	38nm,0.7s								
KRBS	**Karabastau**	**4.56**	**20**	*e*P			**Pb**	**08 39 38.1**	**+1.5**
	15nm,0.6s								
KRBS				*e*S			**Sg**	**08 40 39.9**	**-3.0**
	34nm,1.3s								
KRBS	**Karabastau**	**4.56**	**20**	Pg			**Pb**	**08 39 38.6**	**+1.9**
	15nm,0.6s								
KRBS				Lg			Lg	08 40 38.9	
	34nm,1.3s								
KTBS	**Karatobe**	**4.89**	**28**	*e*P			**Pb**	**08 39 43.4**	**+1.0**
	14nm,0.7s								
KTBS				*e*S			**Sg**	**08 40 49.0**	**-4.6**
	53nm,0.7s								
KTBS	**Karatobe**	**4.89**	**28**	Pg			**Pb**	**08 39 44.5**	**+2.1**
	14nm,0.7s								
KTBS				Lg			Lg	08 40 49.0	
	53nm,0.7s								
KUU	**Kurty**	**4.93**	**25**	*e*P			**Pb**	**08 39 43.5**	**+0.5**
	9.5nm,0.6s								
KUU				*e*S			**Sg**	**08 40 49.7**	**-5.3**
	25nm,1.3s								
KUU	**Kurty**	**4.93**	**25**	Pg			**Pb**	**08 39 45.1**	**+2.0**
	9.5nm,0.6s								
KUU				Lg			Lg	08 40 49.7	
	25nm,1.3s								
CHKK	**Chushkaly**	**5.13**	**30**	*e*P			**Pb**	**08 39 47.5**	**+1.1**
	7.0nm,0.8s								
CHKK				*e*S			**Sg**	**08 40 56.2**	**-4.9**
	26nm,0.7s								
CHKK	**Chushkaly**	**5.13**	**30**	Pg			**Pb**	**08 39 48.6**	**+2.3**
	7.0nm,0.8s								
CHKK				Lg			Lg	08 40 56.2	
	26nm,0.7s								
KURS	**Kuram**	**5.36**	**39**	*e*P			**Pb**	**08 39 51.4**	**+1.2**
	7.4nm,0.5s								
KURS				*e*S			**Sg**	**08 41 02.8**	**-5.7**
	25nm,0.9s								
KPKS	**Kokpek**	**5.60**	**42**	*e*P			**Pb**	**08 39 55.5**	**+1.1**
	8.1nm,0.4s								
KPKS				*e*S			**Sg**	**08 41 10.1**	**-6.2**
	18nm,0.7s								
KPKS	**Kokpek**	**5.60**	**42**	Pg			**Pb**	**08 39 56.9**	**+2.4**
	8.1nm,0.4s								
KPKS				Lg			Lg	08 41 10.1	
	18nm,0.7s								
BTLS	**Baital**	**5.61**	**4**	*e*P			**Pb**	**08 39 56.0**	**+1.3**
	6.2nm,0.7s								
BTLS				*e*S			**Sg**	**08 41 10.0**	**-6.8**
	16nm,0.6s								
ARXS	**Arharly**	**5.76**	**33**	*e*P			**Pb**	**08 39 58.1**	**+0.9**
	16nm,0.6s								
ARXS				*e*S			**Sg**	**08 41 14.7**	**-6.8**
	19nm,0.6s								
ARXS	**Arharly**	**5.76**	**33**	Pg			**Pb**	**08 40 00.3**	**+3.1**
	16nm,0.6s								
ARXS				Lg			Lg	08 41 15.8	
	19nm,0.6s								
PDGK	**Podgornoye**	**5.95**	**47**	Pg			**Pb**	**08 40 03.1**	**+2.6**
	1.8nm,0.6s								
PDGK				Lg			Lg	08 41 21.1	
	6.7nm,0.9s								
BLB	**Baldybastay**	**5.96**	**37**	*e*P			**Pb**	**08 40 03.3**	**+2.7**
	28nm,0.6s								
BLB				*e*S			**Sg**	**08 41 23.1**	**-4.7**
	20nm,1.2s								
BLB	**Baldybastay**	**5.96**	**37**	Pg			**Pb**	**08 40 04.5**	**+3.9**
	28nm,0.6s								
BLB				Lg			Lg	08 41 23.1	
	20nm,1.2s								
MKAR	**Makanchi Array**	**9.76**	**38**	Lg			Lg	08 43 21.3	
	0.1nm,0.3s,baz=225,slow=26,SNR=2.2								
MKAR	**Makanchi Array**	**9.76**	**38**				**Pn**	**08 40 41.5**	**+4.5**
KURBB	**Kurchatov Arra**	**11.73**	**16**	Lg			Lg	08 44 22.1	
	baz=203,slow=28,SNR=3.2								
ABKAR	**Akbulak array**	**13.78**	**320**	Pn			**Pn**	**08 41 32.0**	**+0.1**
AKTO	**Aktyubinsk**	**15.49**	**320**	Pn			**Pn**	**08 41 52.9**	**-2.1**
	0.2nm,0.3s,baz=127,slow=13,SNR=6.1								
	1.8nm,0.7s								
ZALV	**Zalesovo Beam**	**16.43**	**24**	Pn			**Pn**	**08 42 06.7**	**-0.3**
	0.1nm,0.3s,baz=200,slow=13,SNR=4.4								
	0.9nm,0.6s								
ZALV	**Zalesovo Beam**	**16.43**	**24**				**P**	**08 42 08.4**	**-1.4**
BRTR	**Keskin Array B**	**30.55**	**283**	P			**P**	**08 44 31.5**	**+1.1**
	0.8nm,0.5s,baz=108,slow=4.7,SNR=4.0								
	0.8nm,0.5s								
AKASG	**Malin Array Be**	**32.77**	**305**	P			**P**	**08 44 49.2**	**-0.3**
	0.2nm,0.3s,baz=75,slow=7.2,SNR=2.5								
	0.2nm,0.3s								
FIA1	**FINESS Array S**	**36.23**	**323**	P			**P**	**08 45 20.6**	**+1.2**
FIA1					IAmb		IAmb	08 45 37.6	
	comp=Z,9.0nm,1.4s								
FINES	**FINESS Array B**	**36.23**	**323**	P			**P**	**08 45 20.0**	**+0.6**
	comp=Z,1.0nm,0.3s,baz=114,slow=10.0,SNR=18								
	comp=Z,1.0nm,0.3s								
FINES	**FINESS Array B**	**36.23**	**323**	P			**P**	**08 45 20.4**	**+1.0**
ARCES	**ARCESS Array B**	**39.24**	**336**	P			**P**	**08 45 45.2**	**+0.4**
	comp=Z,1.2nm,0.6s,baz=114,slow=9.6,SNR=8.1								
	comp=Z,1.2nm,0.6s								
ARCES	**ARCESS Array B**	**39.24**	**336**	P			**P**	**08 45 47.2**	**+2.4**
ARCES					IAmb		IAmb	08 45 52.5	
	comp=Z,13nm,1.4s								
KLR	**Kul'dur**	**41.85**	**57**	P			**P**	**08 46 06.5**	**0.0**
	comp=Z,0.7nm,0.5s,baz=307,slow=5.1,SNR=2.5								
	comp=Z,0.7nm,0.5s								
HFS	**Hagfors**	**42.04**	**320**	P			**P**	**08 46 08.3**	**+0.3**
	comp=Z,2.0nm,0.4s,baz=96,slow=11,SNR=12								
	comp=Z,2.0nm,0.4s								
NB2	**NORSAR Subarra**	**43.28**	**321**	P			**P**	**08 46 17.8**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=91,slow=7.9								
NOA	**NORSAR Array B**	**43.28**	**321**	P			**P**	**08 46 17.9**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=92,slow=7.9,SNR=5.6								
	comp=Z,0.7nm,0.5s								
ESDC	**Sonseca Array**	**57.86**	**297**	P			**P**	**08 48 08.1**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=55,slow=7.6,SNR=4.2								
	comp=Z,0.5nm,0.5s								
TORD	**Torodi Ar. Bea**	**67.76**	**269**	P			**P**	**08 49 13.4**	**-1.3**
	comp=Z,0.4nm,0.4s,baz=51,slow=5.8,SNR=9.8								
	comp=Z,0.4nm,0.4s								
TORD	**Torodi Ar. Bea**	**67.76**	**269**		IAmb		IAmb	08 49 15.9	
	comp=Z,1.7nm,1.3s								
TORD					P		**P**	**08 49 15.9**	**+1.2**
IMAR	**Indian Mountai**	**68.77**	**19**		P		**P**	**08 49 23.4**	**+3.1**
BMAR	**Burnt Mountain**	**69.61**	**15**		P		**P**	**08 49 29.6**	**+4.0**
YKA	**Yellowknife Ar**	**78.21**	**4**		P		**P**	**08 50 15.2**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=351,slow=5.3,SNR=8.1								
	comp=Z,0.3nm,0.5s								
WRA	**Warramunga Arr**	**81.92**	**124**	P			**P**	**08 50 35.0**	**-1.6**
	comp=Z,0.6nm,0.7s,baz=327,slow=4.9,SNR=6.7								
	comp=Z,0.6nm,0.7s								
WRA	**Warramunga Arr**	**81.92**	**124**	P			**P**	**08 50 40.0**	**+3.5**
WB2	**Warramunga Arr**	**81.93**	**124**	P			**P**	**08 50 39.3**	**+2.7**
ASAR	**Alice Springs**	**84.37**	**127**	P			**P**	**08 50 47.5**	**-1.7**
	comp=Z,0.2nm,0.5s,baz=316,slow=3.9,SNR=1.8								
	comp=Z,0.2nm,0.5s								

*SOME **28** 08:47:26.1,39˚.43N×73˚.75E,h0km*
*KRNET **28** 08:47:27.6±0.1,39˚.44N×73˚.55E,mb3.7*
*ISU **28** 08:47:30.0,39˚.51N×73˚.62E,h7km*
*NNC **28** 08:47:33.0±2.8,39˚.68N×73˚.81E,h0km,mb3.8,mpv3.4, Error ellipse: s-maj=21.7km s-min=11.6km az=166.0*

ISC 28 08:47:20.8±1.4,39˚.20N±0˚.06×73˚.87E±0˚.03,h10km,n44,
σ1s71/73,15C-10D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.57**	**328**	⇓*e*P			**Pg**	**08 47 51.2**	**+0.3**
	baz=32								
OHH				⇓*e*S			**Sn**	**08 48 08.2**	**-1.0**
	baz=32								
ANR	**Andizhan**	**1.94**	**324**	P			**Pg**	**08 47 59.3**	**+1.3**
ANR				S			**Sg**	**08 48 21.8**	**-1.4**
FRG	**Fergana**	**1.99**	**307**	P			**Pg**	**08 48 00.6**	**+1.6**
FRG				S			**Sg**	**08 48 23.3**	**-1.5**
CHMI	**Chimion**	**2.10**	**301**	P			**Pg**	**08 48 02.3**	**+1.2**
CHMI				S			**Sg**	**08 48 26.9**	**-1.5**
BTK	**Batken**	**2.51**	**291**	⇑*e*P			**Pb**	**08 48 07.1**	**+1.1**
	baz=87								
BTK				⇑*e*S			**Sb**	**08 48 36.2**	**-0.8**
	baz=87								
BTK	**Batken**	**2.51**	**291**	P			**Pg**	**08 48 09.6**	**+0.7**
BTK				S			**Sg**	**08 48 41.2**	**-0.3**
MINT	**Mingtut**	**2.56**	**300**	P			**Pg**	**08 48 10.2**	**+0.2**
MINT				S			**Sg**	**08 48 41.1**	**-2.1**
ARLS	**Aral**	**2.68**	**7**	⇓*e*P			**Pg**	**08 48 11.2**	**-1.0**
	baz=13								
ARLS				⇓*i*	S		**Sb**	**08 48 42.8**	**+0.8**
	baz=13								
GAR	**Garm**	**2.77**	**267**	⇑*e*P			**Pb**	**08 48 12.2**	**+1.7**
	baz=61								
GAR				⇑*e*S			**Sb**	**08 48 44.6**	**0.0**
	baz=61								
CHDK	**Chadak**	**2.98**	**307**	P			**Pb**	**08 48 15.5**	**+1.5**
CHDK				S			**Sb**	**08 48 52.9**	**+2.4**
UCH	**Uchtor**	**3.06**	**9**	⇓*e*P			**Pb**	**08 48 16.9**	**+1.2**
	baz=14								
UCH				⇓*e*S			**Sb**	**08 48 53.0**	**-0.3**
	baz=14								
TRKS	**Terek-Say**	**3.13**	**319**	⇑*e*P			**Pb**	**08 48 14.5**	**-2.1**
	baz=19								
TRKS				⇑*e*S			**Sn**	**08 48 48.8**	**+1.0**
	baz=19								
AAK	**Ala-Archa**	**3.47**	**8**	⇓*e*P			**Pb**	**08 48 22.2**	**-0.2**
	baz=12								
AAK				⇓*e*S			**Sb**	**08 49 01.8**	**-2.8**
	baz=12								
CHGR	**Chuyangaron**	**3.72**	**263**	⇑*e*P			**Pb**	**08 48 25.5**	**-1.1**
	baz=59								
CHGR				⇑*e*S			**Sb**	**08 49 07.8**	**-3.9**
	baz=59								
CHMG	**Chimgan**	**3.77**	**310**	S			**Sg**	**08 49 18.1**	**-3.8**
CHMS	**Chumysh**	**3.85**	**10**	⇑Pn			**Pb**	**08 48 28.9**	**0.0**
	3.4nm,0.4s								
CHMS				⇑Lg			Lg	08 49 20.3	
	16nm,0.8s								
TKM2	**Tokmak 2**	**3.94**	**19**	⇑Pg			**Pg**	**08 48 37.9**	**+1.6**
	3.9nm,0.6s								
TKM2				⇑Lg			Lg	08 49 24.5	
	10nm,0.6s								
TGS	**TashGRES**	**4.00**	**305**	S			**Sg**	**08 49 29.6**	**+0.3**
KST	**Kastek**	**4.15**	**22**	*e*P			**Pg**	**08 48 40.4**	**+0.1**
	4.1nm,0.4s								
KST				*e*S			**Sg**	**08 49 34.6**	**+0.5**
	26nm,1.2s								
KST	**Kastek**	**4.15**	**22**	Pg			**Pg**	**08 48 40.4**	**+0.1**
	4.1nm,0.4s								
KST				Lg			Lg	08 49 34.6	
	28nm,1.0s								
DZA	**Taraz**	**4.16**	**333**	*e*P			**Pg**	**08 48 40.2**	**-0.3**
	66nm,0.3s								
DZA				*e*S			**Sg**	**08 49 33.9**	**-0.5**
	231nm,0.4s								
DGS	**Degeres**	**4.29**	**19**	*e*P			**Pg**	**08 48 42.4**	**-0.4**
	6.4nm,0.8s								
DGS				*e*S			**Sg**	**08 49 38.3**	**-0.1**
	31nm,0.8s								
DGS	**Degeres**	**4.29**	**19**	Pg			**Pg**	**08 48 42.4**	**-0.4**
	6.4nm,0.8s								
DGS				Lg			Lg	08 49 38.3	
	31nm,0.8s								
SGDS	**Sogindy**	**4.29**	**7**	*e*P			**Pg**	**08 48 43.4**	**+0.5**
	5.4nm,0.4s								
SGDS				*e*S			**Sg**	**08 49 39.6**	**+1.1**
	7.2nm,0.6s								
SGDS	**Sogindy**	**4.29**	**7**	Pg			**Pg**	**08 48 42.0**	**-0.9**
	5.4nm,0.4s								
SGDS				Lg			Lg	08 49 37.5	
	5.5nm,0.6s								
MTBS	**Maitube**	**4.38**	**25**	*e*P			**Pg**	**08 48 44.8**	**+0.2**
	5.9nm,0.2s								
MTBS				*e*S			**Sg**	**08 49 42.2**	**+1.0**
	12nm,0.4s								
MTBS	**Maitube**	**4.38**	**25**	Pg			**Pg**	**08 48 44.7**	**+0.1**
	5.9nm,0.2s								
MTBS				Lg			Lg	08 49 42.1	
	13nm,0.4s								
TNSS	**Tian-Shan**	**4.48**	**30**	*e*P			**Pg**	**08 48 47.7**	**+1.0**
	3.2nm,0.2s								
TNSS				*e*S			**Sg**	**08 49 46.8**	**+2.1**
	7.3nm,0.6s								
TNSS	**Tian-Shan**	**4.48**	**30**	Pg			**Pg**	**08 48 47.1**	**+0.5**
	4.6nm,0.3s								
TNSS				Lg			Lg	08 49 46.3	
	7.3nm,0.6s								
KK31	**Karatay Array**	**4.65**	**328**	⇑Pn			**Pb**	**08 48 37.8**	**-4.7**
	0.8nm,0.3s,baz=128,slow=12,SNR=15								
KK31				⇓Pg			**Pg**	**08 48 47.7**	**-2.2**
	3.9nm,0.6s,baz=132,slow=16,SNR=7.8								
KK31				⇓Sn			**Sn**	**08 49 29.8**	**+4.6**
	3.2nm,0.4s								
KK31				Lg			Lg	08 49 43.0	
	7.7nm,0.4s,baz=138,slow=30,SNR=3.6								
KRBS	**Karabastau**	**4.69**	**16**

ISK 28 08:59:41.1, 37.17N×27.89E, h0km±2km, ML1.7/5, Suspected Mining explosion., Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.32**	**96**	PG	Pg	08 59 48.2	+1.1
YER				SG	Sb	08 59 53.7	-1.7
BODT	**Bodrum**	**0.48**	**257**	PG	Pg	08 59 51.3	+1.1
BODT				SG	Sb	08 59 58.5	-1.5
TURN	**Turunc**	**0.48**	**144**	PG	Pg	08 59 51.4	+1.0
DAT	**Datca**	**0.51**	**210**	PG	Pg	08 59 51.7	+0.9
AYDB	**Zeytinkoy-Aydi**	**0.78**	**360**	PG	Pb	08 59 56.8	-0.8

IDC 28 08:59:41.1±12.0, 37.03N×71.88E, h139km±76km, mb2.9/2, mbtmp3.5/4, Error ellipse: s-maj=355.4km s-min=44.2km az=139.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**12.45**	**35**	P	Pn	09 02 34.5	+1.0
	0.3nm,0.5s,baz=209,slow=12,SNR=2.6						
ZALV	**Zalesovo Beam**	**19.14**	**24**	P	P	09 03 52.4	-0.9
	1.7nm,0.3s,baz=217,slow=10,SNR=6.4						
TORD	**Torodi Ar. Bea**	**66.43**	**269**	P	P	09 10 15.6	-0.1
	0.2nm,0.5s,baz=52,slow=5.8,SNR=2.0						
	0.2nm,0.5s						
YKA	**Yellowknife Ar**	**80.68**	**3**	P	P	09 11 38.5	+0.4
	0.1nm,0.5s,baz=350,slow=5.3,SNR=4.2						
	0.1nm,0.5s						

KRNET 28 08:59:48.8±0.1, 39.34N×73.59E, mb2.9, 2C-6D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.34**	**333**	⇑*e*P	Pg	09 00 13.7	-0.8
	baz=33						
OHH				⇑*e*S	Sg	09 00 31.8	0.0
	baz=33						
BTK	**Batken**	**2.26**	**289**	⇓*e*P	Pn	09 00 28.3	+0.8
	baz=89						
BTK				⇓*e*S	Sn	09 00 57.4	+1.3
	baz=89						
GAR	**Garm**	**2.57**	**263**	⇓*e*P	Pn	09 00 32.8	+1.0
	baz=63						
GAR				⇓*e*S	Sn	09 01 05.0	+1.2
	baz=63						
ARLS	**Aral**	**2.58**	**12**	⇓*e*P	Pn	09 00 32.9	+0.9
	baz=12						
ARLS				⇓*e*S	Sn	09 01 05.0	+0.8
	baz=12						

*IDC **28** 09:05:38.2±1.9, 19.54S×169.14E, h105km±16km, mb4.0/13, mbtmp4.4/15, Error ellipse: s-maj=17.2km s-min=14.4km az=119.0*
*NEIC **28** 09:05:40.5±1.8, 19.58S±0.10×169.14E±0.09, h119km±5km, mb4.7/59, Error ellipse: s-maj=14.4km s-min=12.2km az=204.0*
*NOU **28** 09:05:40.1, 19.48S×169.10E, h110km, mb4.7/45, Vanuatu Islands*

ISC 28 09:05:38.6±0.3, 19.52S±0.05×169.09E±0.06, h104km, n166, σ1°14/165, mb4.6/46, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**1.98**	**334**	P	**Pn**	**09 06 12.9**	**+1.8**
LIFNC	**LIFOU**	**2.14**	**234**	Pn	**Pn**	**09 06 13.6**	**+0.5**
LIFNC	**LIFOU**	**2.14**	**234**	P	**Pn**	**09 06 14.2**	**+1.0**
MARNC	**Mare, Loyalty**	**2.19**	**207**		**Pn**	**09 06 14.2**	**+0.4**
MARNC	**Mare, Loyalty**	**2.19**	**207**	P	**Pn**	**09 06 15.0**	**+1.2**
YATNC	**Mamie plateau,**	**3.26**	**219**	P	**Pn**	**09 06 28.5**	**+0.6**
PINNC	**Pines Island,**	**3.44**	**206**	Pn	**Pn**	**09 06 31.9**	**+1.5**
PINNC	**Pines Island,**	**3.44**	**206**	P	**Pn**	**09 06 32.8**	**+2.5**
DZM	**Mont Dzumac**	**3.55**	**224**	P	**Pn**	**09 06 32.7**	**+0.8**
	135nm,0.3s,baz=73,slow=8.3,SNR=482						
DZM				S	**Sn**	**09 07 12.5**	**-0.6**
	551nm,0.4s,baz=111,slow=22,SNR=24						
DZM	**Mont Dzumac**	**3.55**	**224**		**Pn**	**09 06 33.4**	**+1.5**
DZM	**Mont Dzumac**	**3.55**	**224**	P	**Pn**	**09 06 33.9**	**+2.0**
OUENC	**Ouen Island, N**	**3.57**	**216**	Pn	**Pn**	**09 06 34.1**	**+2.1**
OUENC	**Ouen Island, N**	**3.57**	**216**	P	**Pn**	**09 06 34.5**	**+2.4**
NOUC	**Port Laguerre**	**3.66**	**225**	P	**Pn**	**09 06 36.1**	**+2.8**
KOUNC	**Koumac, New Ca**	**4.63**	**256**	Pn	**Pn**	**09 06 48.7**	**+2.3**
KOUNC	**Koumac, New Ca**	**4.63**	**256**	P	**Pn**	**09 06 48.9**	**+2.5**
MSVF	**Nonsavu**	**8.68**	**80**	P	**Pn**	**09 07 46.0**	**+4.5**
	10nm,0.9s,baz=285,slow=16,SNR=4.1						
RAO	**Raoul Island**	**15.28**	**132**	P	**P**	**09 09 10.5**	**-0.7**
	581nm,0.6s,baz=17,slow=23,SNR=3.7						
RAO	**Raoul Island**	**15.28**	**132**		**Pn**	**09 09 07.5**	**-1.2**
OUZ	**Omahuta**	**16.14**	**167**	P	**P**	**09 09 21.9**	**+1.3**
EIDS	**Eidsvold**	**17.63**	**247**	P	**Pn**	**09 09 40.1**	**+2.4**
ARMA	**Armidale**	**19.17**	**232**	P	**Pn**	**09 09 57.0**	**+0.9**
URZ	**Urewera**	**19.93**	**161**	P	**P**	**09 10 01.8**	**-0.3**
	21nm,0.7s,baz=3.6,slow=6.0,SNR=15						
URZ	**Urewera**	**19.93**	**161**	P	**P**	**09 10 02.3**	**+0.1**
URZ				IAmb	IAmb	09 10 14.9	
	comp=Z,33nm,1.0s						
URZ	**Urewera**	**19.93**	**161**	P	**Pn**	**09 10 05.1**	**+0.3**
RMQ	**Roma**	**19.95**	**246**	P	**Pn**	**09 10 05.5**	**+0.4**
BKZ	**Black Stump Fm**	**20.60**	**163**	P	Pn	09 10 11.4	-1.2
QRZ	**Quartz Range**	**21.44**	**173**	P	**P**	**09 10 19.7**	**+1.3**
CTA	**Charters Tower**	**21.49**	**265**	P	**P**	**09 10 19.2**	**0.0**
	comp=Z,20nm,0.7s,baz=92,slow=12,SNR=25						
	comp=Z,20nm,0.7s						
CTA	**Charters Tower**	**21.49**	**265**	P	**P**	**09 10 20.6**	**+1.4**
CTAO	**Charters Tower**	**21.49**	**265**	P	**P**	**09 10 20.8**	**+1.6**
CTAO				IAmb	IAmb	09 10 22.5	
	comp=Z,22nm,0.7s						
CTAO	**Charters Tower**	**21.49**	**265**	P	**P**	**09 10 20.5**	**+1.4**
SYDH	**Sydney Hard Ro**	**21.64**	**225**	P	**P**	**09 10 22.0**	**+1.5**
BFZ	**Birch Farm**	**21.96**	**165**	P	**P**	**09 10 23.9**	**0.0**
BFZ				IAmb	IAmb	09 10 30.0	
	comp=Z,21nm,0.7s						
BFZ	**Birch Farm**	**21.96**	**165**	P	**P**	**09 10 24.1**	**+0.2**
SNZO	**South Karori**	**22.24**	**169**	P	**P**	**09 10 28.8**	**+2.0**
KHZ	**Kahutara**	**23.13**	**172**	P	**P**	**09 10 35.6**	**-0.1**
CNB	**Canberra Magne**	**23.47**	**224**	P	**P**	**09 10 40.8**	**+1.8**
MTSU	**Mount Surprise**	**23.48**	**269**	P	**P**	**09 10 40.3**	**+1.0**
CAN	**Canberra**	**23.71**	**224**	P	**P**	**09 10 42.4**	**+1.2**
CAN				IAmb	IAmb	09 10 49.2	
	comp=Z,35nm,1.3s						
RPZ	**Rata Peaks**	**24.18**	**177**	P	**P**	**09 10 44.6**	**-0.6**
	comp=Z,8.7nm,0.8s,baz=345,slow=2.4,SNR=5.8						
	comp=Z,8.7nm,0.8s						
RPZ	**Rata Peaks**	**24.18**	**177**	P	**P**	**09 10 46.5**	**+1.3**
COEN	**Coen**	**25.41**	**279**	P	**P**	**09 10 57.9**	**+1.2**
STKA	**Stephens Creek**	**27.58**	**238**	P	**P**	**09 11 17.0**	**+1.0**
	comp=Z,5.4nm,0.5s,baz=68,slow=8.8,SNR=38						
	comp=Z,5.4nm,0.5s						
STKA	**Stephens Creek**	**27.58**	**238**	P	**P**	**09 11 17.2**	**+1.2**
STKA	**Stephens Creek**	**27.58**	**238**	P	**P**	**09 11 17.0**	**+1.0**
QIS	**Mount Isa**	**27.70**	**263**	P	**P**	**09 11 17.8**	**+0.5**
PATS	**Pohnpei**	**28.26**	**337**	P	**P**	**09 11 22.8**	**+0.6**
RAR	**Rarotonga**	**29.22**	**99**	P	**P**	**09 11 33.9**	**+3.2**
	comp=Z,12nm,0.5s,baz=328,slow=16,SNR=1.9						
RAR	**Rarotonga**	**29.22**	**99**	P	**P**	**09 11 31.3**	**+0.6**
LCRK	**Leigh Creek**	**29.93**	**243**	P	**P**	**09 11 37.4**	**+0.4**
OOD	**Oodnadatta**	**31.61**	**249**	P	**P**	**09 11 52.8**	**+1.1**
BBOO	**Buckleboo**	**32.32**	**239**	P	**P**	**09 11 58.7**	**+0.7**
BBOO				IAmb	IAmb	09 12 02.5	
	comp=Z,22nm,1.2s						
BBOO	**Buckleboo**	**32.32**	**239**	P	**P**	**09 11 58.9**	**+0.9**
WR0	**Warramunga Arr**	**32.49**	**263**	P	**P**	**09 11 58.9**	**-0.7**
WR0				IAmb	IAmb	09 11 59.1	
	comp=Z,8.3nm,0.8s						
WB0	**Warramunga Arr**	**32.65**	**264**	P	**P**	**09 11 60.0**	**-1.0**
WB0				IAmb	IAmb	09 12 01.0	
	comp=Z,12nm,0.8s						
WB2	**Warramunga Arr**	**32.67**	**263**	P	**P**	**09 12 00.6**	**-0.5**
WB2				IAmb	IAmb	09 12 02.4	
	comp=Z,22nm,1.4s						
WRAB	**Tennant Creek**	**32.67**	**263**	P	**P**	**09 11 59.7**	**-1.5**
WRAB				IAmb	IAmb	09 12 01.3	
	comp=Z,17nm,1.3s						
WRAB	**Tennant Creek**	**32.67**	**263**	P	**P**	**09 12 00.4**	**-0.8**
WRA	**Warramunga Arr**	**32.68**	**263**	P	**P**	**09 12 00.3**	**-1.0**
	comp=Z,6.9nm,0.6s,baz=100,slow=8.2,SNR=70						
WRA				PcP	**PcP**	**09 14 43.9**	**-1.0**
	comp=Z,0.7nm,0.7s,baz=98,slow=5.9,SNR=3.4						
	comp=Z,6.9nm,0.6s						
WRA	**Warramunga Arr**	**32.68**	**263**	P	**P**	**09 11 59.7**	**-1.5**
WRA					**PcP**	**09 14 42.0**	**-2.9**
AS31	**Alice Springs**	**32.92**	**256**		**P**	**09 12 03.2**	**-0.2**
ASAR	**Alice Springs**	**32.92**	**256**	P	**P**	**09 12 03.1**	**-0.2**
	comp=Z,39nm,0.6s,baz=84,slow=8.9,SNR=556						
ASAR				PcP	**PcP**	**09 14 44.1**	**-1.4**
	comp=Z,0.4nm,0.7s,baz=99,slow=3.7,SNR=2.1						
ASAR				ScP	**ScP**	**09 18 20.0**	**-0.3**
	comp=Z,0.9nm,1.0s,baz=107,slow=5.0,SNR=4.4						
MULG	**Mulgathing**	**33.41**	**244**	P	**P**	**09 12 07.9**	**+0.4**
KDU	**Kakadu**	**35.78**	**275**	P	**P**	**09 12 28.1**	**+0.1**
WRKA	**Warakurna**	**38.04**	**254**	P	**P**	**09 12 47.1**	**-0.1**
KNRA	**Kununurra**	**38.57**	**269**	P	**P**	**09 12 51.7**	**+0.1**
KNRA	**Kununurra**	**38.57**	**269**	P	**P**	**09 12 51.5**	**-0.1**
FORT	**Forrest**	**38.60**	**245**	P	**P**	**09 12 51.8**	**+0.1**
PSA00	**Pilbara Seismi**	**46.01**	**259**	P	**P**	**09 13 52.3**	**+0.4**
MBWA	**Marble Bar**	**46.16**	**259**	P	**P**	**09 13 53.8**	**+0.7**
MBWA				IAmb	IAmb	09 13 54.4	
	comp=Z,12nm,1.1s						
VNDA	**Vanda**	**58.15**	**182**	P	**P**	**09 15 20.4**	**-0.6**
	comp=Z,0.9nm,0.5s,baz=355,slow=8.5,SNR=10						
	comp=Z,0.9nm,0.5s						
VNDA	**Vanda**	**58.15**	**182**	P	**P**	**09 15 21.1**	**+0.1**
SBA	**Scott Base**	**58.38**	**181**	P	**P**	**09 15 22.4**	**-0.3**
CASY	**Casey**	**59.81**	**204**	P	**P**	**09 15 32.4**	**-0.2**
CASY				IAmb	IAmb	09 15 32.8	
	comp=Z,3.6nm,0.7s						
KSM	**Kuching**	**61.30**	**283**	P	**P**	**09 15 43.4**	**-0.3**
JSD	**Sado**	**64.17**	**333**	P	**P**	**09 16 01.8**	**-0.3**
QSPA	**South Pole Qui**	**70.53**	**180**	P	**P**	**09 16 41.1**	**-1.0**
QSPA				IAmb	IAmb	09 16 43.2	
	comp=Z,11nm,0.8s						
USA0B	**Ussuriysk Arra**	**71.92**	**333**	P	**P**	**09 16 50.9**	**+0.4**
USRK	**Ussuriysk Ar.**	**71.92**	**333**	P	**P**	**09 16 51.0**	**+0.5**
	comp=Z,1.9nm,0.7s,baz=72,slow=8.2,SNR=4.1						
	comp=Z,1.9nm,0.7s						
USRK	**Ussuriysk Ar.**	**71.92**	**333**	P	**P**	**09 16 50.5**	**0.0**
PETK	**Petropavlovsk-**	**72.99**	**353**	P	**P**	**09 16 56.4**	**-0.3**
	comp=Z,2.8nm,0.6s,baz=171,slow=10,SNR=7.3						
	comp=Z,2.8nm,0.6s						
PETK	**Petropavlovsk-**	**72.99**	**353**	P	**P**	**09 16 57.6**	**+0.9**
PETK	**Petropavlovsk-**	**72.99**	**353**	P	**P**	**09 16 57.3**	**+0.6**
PETK	**Petropavlovsk-**	**72.99**	**353**	P	**P**	**09 16 57.3**	**+0.6**
KLR	**Kul'dur**	**76.07**	**336**	P	**P**	**09 17 15.0**	**+0.5**
	comp=Z,1.1nm,0.7s,baz=97,slow=1.8,SNR=2.5						
	comp=Z,1.1nm,0.7s						
MAW	**Mawson**	**78.12**	**202**	P	**P**	**09 17 25.1**	**-0.7**
	comp=Z,2.9nm,0.7s,baz=121,slow=7.0,SNR=9.7						
	comp=Z,2.9nm,0.7s						
HHC	**Hu-ho-hao-te**	**80.34**	**320**	*e*P	**P**	**09 17 39.8**	**+1.3**
HHC				pmax	pmax		
	comp=Z,14nm,0.9s						
HHC				pmax	pmax		
	comp=Z,100nm,5.3s						
BELA	**Belgrano 2**	**81.83**	**175**	P	**P**	**09 17 45.0**	**-0.8**
BELA				IAmb	IAmb	09 17 45.7	
	comp=Z,14nm,0.9s						
LZH	**Lanzhou**	**82.81**	**312**	*e*P	**P**	**09 17 49.3**	**-2.4**
LZH				pP	pP	09 18 20.5	+2.2
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
P18K	**Big Mountain,**	**83.88**	**17**	P	**P**	**09 17 55.9**	**-0.5**
L19K	**White Mountain**	**86.31**	**16**	P	**P**	**09 18 08.5**	**0.0**
SONM	**Songino Array**	**87.36**	**323**	P	**P**	**09 18 14.4**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=145,slow=5.4,SNR=4.4						
	comp=Z,0.6nm,0.5s						
CMB	**Columbia Colle**	**87.45**	**48**		**P**	**09 18 14.7**	**0.0**
CMB				IAmb	IAmb	09 18 15.6	
	comp=Z,6.2nm,0.8s						
ISA	**Isabella, Lake**	**87.76**	**51**		**P**	**09 18 16.3**	**+0.1**
ISA				IAmb	IAmb	09 18 17.5	
	comp=Z,6.9nm,0.8s						
TROLL	**Troll, Antarti**	**88.25**	**184**	P	**P**	**09 18 17.4**	**-0.6**
TROLL	**Troll, Antarti**	**88.25**	**184**	pP	pP	09 18 47.8	+3.0
LHV	**Little Huntoon**	**88.87**	**49**	P	**P**	**09 18 21.4**	**+0.2**
LHV				IAmb	IAmb	09 18 23.0	
	comp=Z,12nm,1.4s						
SNAA	**Sanae**	**88.88**	**183**	P	**P**	**09 18 20.0**	**-0.9**
SNAA	**Sanae**	**88.88**	**183**	P	**P**	**09 18 20.2**	**-0.7**
PAHR	**Pah Rah Range**	**88.90**	**47**		**P**	**09 18 21.0**	**-0.6**
PAHR				IAmb	IAmb	09 18 22.9	
	comp=Z,5.4nm,1.1s						
RYN	**Ryan**	**89.02**	**48**	P	**P**	**09 18 22.2**	**0.0**
QSM	**Queen of Sheba**	**89.07**	**51**	P	**P**	**09 18 22.9**	**+0.6**
NVAR	**Mina Array Bea**	**89.09**	**49**	P	**P**	**09 18 22.4**	**-0.2**
	comp=Z,3.0nm,0.9s,baz=226,slow=8.5,SNR=20						
	comp=Z,3.0nm,0.8s						
NVAR	**Mina Array Bea**	**89.09**	**49**	P	**P**	**09 18 21.6**	**-1.0**
NV11	**Mina Array Sit**	**89.20**	**49**	P	**P**	**09 18 23.4**	**+0.4**
NV11				IAmb	IAmb	09 18 24.2	
	comp=Z,5.0nm,1.0s						
MOD	**Modoc Plateau**	**89.27**	**45**	P	**P**	**09 18 23.0**	**-0.3**
MOD				IAmb	IAmb	09 18 24.4	
	comp=Z,5.3nm,0.8s						
GWY	**Greenwater Val**	**89.31**	**51**		**P**	**09 18 23.5**	**-0.1**
GWY				IAmb	IAmb	09 18 24.6	
	comp=Z,4.8nm,0.9s						
VNA3	**Neumayer Olymp**	**89.47**	**180**	P	**P**	**09 18 22.7**	**-1.0**
VNA3	**Neumayer Olymp**	**89.47**	**180**	pP	pP	09 18 52.0	+1.5
KVN	**Kaiserville**	**89.50**	**48**		**P**	**09 18 24.6**	**+0.1**
KVN				IAmb	IAmb	09 18 25.5	
	comp=Z,4.0nm,0.7s						
PINE	**Pine Mountain**	**89.72**	**43**		**P**	**09 18 25.6**	**+0.2**
VNA2	**Neumayer--Watz**	**89.76**	**181**	P	**P**	**09 18 24.0**	**-0.9**
	baz=181,slow=4.4						
VNA2	**Neumayer--Watz**	**89.76**	**181**	PP	PP	09 21 54.9	-2.9
TPNV	**Topopah Spring**	**89.94**	**51**	P	**P**	**09 18 25.7**	**-0.8**
VNA1	**Neumayer--Stat**	**90.05**	**181**	P	**P**	**09 18 25.5**	**-0.8**
ILAR	**Eielson Array**	**90.54**	**17**	P	**P**	**09 18 26.3**	**-2.2**
	comp=Z,1.2nm,0.8s,baz=232,slow=5.9,SNR=8.7						
SHPR	**Sheep Range**	**90.55**	**51**		**P**	**09 18 28.8**	**-0.7**
WVOR	**Wild Horse Val**	**90.61**	**45**	P	**P**	**09 18 29.8**	**+0.3**
WVOR				IAmb	IAmb	09 18 30.8	
	comp=Z,6.0nm,0.9s						
BMN	**Battle Mountai**	**90.71**	**47**	P	**P**	**09 18 30.4**	**+0.3**
BMN				IAmb	IAmb	09 18 31.2	
	comp=Z,4.2nm,0.9s						
I07A	**Izee**	**90.77**	**43**	P	**P**	**09 18 30.6**	**+0.4**
I07A				IAmb	IAmb	09 18 32.0	
	comp=Z,5.7nm,0.8s						
W13A	**Hualapai Mount**	**90.94**	**53**		**P**	**09 18 31.8**	**+0.4**
PRN	**Pahroc Range**	**91.00**	**51**		**P**	**09 18 31.9**	**+0.4**
J08A	**Circle Bar Ran**	**91.12**	**44**		**P**	**09 18 32.3**	**+0.5**
J08A				IAmb	IAmb	09 18 32.9	
	comp=Z,5.2nm,0.9s						
G08A	**Pilot Rock**	**91.66**	**42**		**P**	**09 18 34.2**	**0.0**
LCMT	**Little Creek M**	**92.17**	**51**	P	**P**	**09 18 36.9**	**0.0**
LCMT				IAmb	IAmb	09 18 38.1	
	comp=Z,4.1nm,1.0s						
TUC	**Tucson**	**92.28**	**57**		**P**	**09 18 36.1**	**-1.2**
TUC				IAmb	IAmb	09 18 39.1	
	comp=Z,3.1nm,1.0s						
CCUT	**Cedar City**	**92.29**	**51**		**P**	**09 18 36.0**	**-1.5**
X16A	**Lo Mia Camp, P**	**92.54**	**54**	P	**P**	**09 18 37.9**	**-0.8**
X16A				IAmb	IAmb	09 18 40.4	
	comp=Z,4.0nm,1.0s						
U15A	**North Rim**	**92.65**	**52**	P	**P**	**09 18 37.5**	**-1.8**
U15A				IAmb	IAmb	09 18 40.9	
	comp=Z,5.6nm,1.2s						
WUAZ	**Wupatki**	**93.00**	**53**	P	**P**	**09 18 39.2**	**-1.6**
WUAZ				IAmb	IAmb	09 18 42.2	
	comp=Z,2.9nm,0.9s						
MTPU	**Mount Pierson**	**93.34**	**51**		**P**	**09 18 40.6**	**-1.9**
HLID	**Hailey**	**93.90**	**45**	P	**P**	**09 18 44.3**	**-0.4**
PDAR	**Pinedale Array**	**96.91**	**47**	P	**P**	**09 18 57.2**	**-1.3**
	comp=Z,0.2nm,0.6s,baz=214,slow=10,SNR=3.1						
	comp=Z,0.2nm,0.6s						
TXAR	**Lajitas Array**	**97.02**	**61**	P	**P**	**09 18 57.9**	**-1.3**
	comp=Z,0.4nm,0.8s,baz=224,slow=5.2,SNR=6.6						
	comp=Z,0.4nm,0.8s						
WMQ	**Urumqi**	**97.30**	**314**	*e*P	Pdif	09 19 01.8	+1.7
WMQ				LR	LR		
	comp=N,1μm,12.7s						
WMQ				LR	LR		
	comp=E,640nm,17.3s						
WMQ				LR	LR		
	comp=Z,630nm,17.3s						
YKA	**Yellowknife Ar**	**100.98**	**27**	P	**Pdif**	**09 19 14.9**	**-1.1**
	comp=Z,0.4nm,0.5s,baz=254,slow=5.1,SNR=8.5						
SPITS	**Spitsbergen Ar**	**119.86**	**354**	PKP	**PKPdf**	**09 24 13.6**	**-2.3**
	comp=Z,1.5nm,0.6s,baz=82,slow=11,SNR=1.8						
ARCES	**ARCESS Array B**	**125.30**	**345**	PKP	**PKPdf**	**09 24 25.4**	**-1.1**
	comp=Z,2.6nm,0.7s,baz=55,slow=1.5,SNR=17						
FINES	**FINESS Array B**	**130.79**	**338**	PKP	**PKPdf**	**09 24 36.8**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=59,slow=8.3,SNR=1.4						
FINES				SKPbc	**SKPbc**	**09 27 49.5**	**-2.3**
	comp=Z,1.1nm,0.8s,baz=100,slow=4.5,SNR=3.8						
NOA	**NORSAR Array B**	**135.68**	**345**	PKP	**PKPdf**	**09 24 46.4**	**0.0**
	comp=Z,0.2nm,0.6s,baz=30,slow=2.0,SNR=2.0						
DPC	**Dobruska-Polom**	**142.40**	**331**	*e*PKP	**PKiKP**	**09 25 03.1**	**+1.0**
EKA	**Eskdalemuir Ar**	**143.77**	**353**	PKP	PKPbc	09 24 59.7	+0.6
	comp=Z,0.8nm,0.4s,baz=3.1,slow=2.6,SNR=9.3						
RONA	**Rosalia, Austr**	**144.25**	**328**	*i* P	PKPbc	09 25 01.8	+1.0
	comp=Z,4.6nm,0.7s						
CONA	**Conrad Observa**	**144.31**	**329**	*i* P	PKPbc	09 25 01.9	+0.7
	comp=Z,8.1nm,1.1s						
CKRC	**Cesky Krumlov**	**144.41**	**331**	*e*PKP	**PKPab**	**09 25 01.3**	**+0.3**
KHC	**Kasperske Hory**	**144.51**	**332**	*e*PKP	**PKPab**	**09 25 01.4**	**0.0**
GERES	**GERESS Array B**	**144.67**	**332**	PKP	**PKPab**	**09 25 01.6**	**-0.5**
	comp=Z,3.1nm,0.7s,baz=29,slow=3.0,SNR=18						
GERES	**GERESS Array B**	**144.67**	**332**		**PKPab**	**09 25 01.2**	**-0.9**
IDI	**Anoyia**	**144.77**	**304**	PKP	**PKPab**	**09 25 02.7**	**-0.2**
	comp=Z,9.2nm,0.7s,baz=146,slow=3.7,SNR=2.9						
ARSA	**Arzberg**	**144.94**	**328**	*i* P	PKPbc	09 25 02.8	-0.2
	comp=Z,6.1nm,0.9s						
MOA	**Molln**	**145.13**	**330**	*i* P	**PKPbc**	**09 25 03.7**	**+0.1**
	comp=Z,11nm,0.8s						
BIOA	**Bad Ischl, Aus**	**145.54**	**330**	*i* P	**PKPdf**	**09 25 04.6**	**0.0**
	comp=Z,2.9nm,0.4s						
SOKA	**Soboth**	**145.58**	**328**	*i* P	**PKPdf**	**09 25 04.0**	**-0.7**
	comp=Z,0.8nm,0.3s						
SOKA				*i* P	**PKPbc**	**09 25 05.5**	**+0.3**
	comp=Z,8.9nm,1.1s						
KBA	**Koelnbreinsper**	**146.12**	**330**	*i* P	**PKPdf**	**09 25 05.9**	**+0.1**
	comp=Z,2.4nm,0.6s						
WATA	**Walderalm**	**146.75**	**332**	*i* P	**PKPbc**	**09 25 08.0**	**-0.6**
	comp=Z,4.6nm,0.6s						
ABTA	**Abfaltersbach**	**146.75**	**330**	*i* P	**PKPdf**	**09 25 05.8**	**-1.0**
	comp=Z,4.6nm,1.1s						
ABTA				*i* P	**PKPbc**	**09 25 07.7**	**-1.0**
	comp=Z,3.7nm,0.5s						
WTTA	**Wattenberg**	**146.77**	**332**	*i* P	**PKPdf**	**09 25 08.1**	**+1.1**
	comp=Z,6.3nm,0.7s						
MOTA	**Moosalm**	**146.95**	**332**	*i* P	**PKPbc**	**09 25 08.8**	**-0.5**
	comp=Z,12nm,0.9s						
SQTA	**Sankt Quirin**	**147.00**	**332**	*i* P	**PKPbc**	**09 25 08.9**	**-0.5**
	comp=Z,8.0nm,0.6s						
BFO	**Black Forest**	**147.32**	**336**		**PKPbc**	**09 25 09.4**	**-0.7**
FETA	**Feichten**	**147.36**	**332**	*i* P	**PKPbc**	**09 25 10.2**	**-0.3**
	comp=Z,7.6nm,0.7s						
DAVA	**Damuels**	**147.52**	**333**	*i* P	**PKPbc**	**09 25 10.4**	**-0.5**
	comp=Z,10nm,1.2s						
DAVOX	**Davos/Dischmat**	**147.92**	**333**	PKPbc	**PKPbc**	**09 25 11.4**	**-0.6**
	comp=Z,14nm,0.7s,baz=53,slow=1.2,SNR=14						
BNI	**Bardonecchia**	**150.65**	**334**		**PKPbc**	**09 25 18.7**	**-0.1**
TORD	**Torodi Ar. Bea**	**166.35**	**244**	PKP	**PKPdf**	**09 25 31.4**	**-1.1**
	comp=Z,0.7nm,0.8s,baz=124,slow=2.6,SNR=3.1						

*IDC **28** 09:07:13.5±0.7, 39.32N×73.50E, h0km, mb4.2/18, mbtmp4.2/23, ML3.6/5, MS3.4/20, Error ellipse: s-maj=13.7km s-min=11.0km az=169.0*
*SOME **28** 09:07:13.8, 39.43N×73.72E, h10km, MS3.8*
*MOS **28** 09:07:14.9±1.2, 39.26N×73.60E, h16km, mb4.6/20, Error ellipse: s-maj=5.4km s-min=3.8km az=84.8*
MOS Felt (IV) at Bordobo, Nura; (III-IV) at Irkeshtam, Kara-Kindik; (III) at Sary-Tash.
*KRNET **28** 09:07:15.4±0.1, 39.46N×73.57E, mb4.9*
*NEIC **28** 09:07:16.1±2.6, 39.38N±0.06×73.59E±0.07, h10km±1km, mb4.5/36, ML4.2(BJI), Error ellipse: s-maj=11.2km s-min=8.3km az=145.0*
*BJI **28** 09:07:18.0±0.0, 39.50N×73.40E, h40km, mb4.3/26, mB4.4/18, ML4.1/7, Ms3.9/15, Ms7 3.6/14*
*NNC **28** 09:07:20.1±1.4, 39.63N×73.64E, h0km, mb4.8, mpv4.6, Error ellipse: s-maj=13.0km s-min=6.7km az=174.0*

**ISC 28 09:07:13.9±1.2, 39.25N±0.03×73.54E±0.02, h2km±8km, n283, σ1°89/334, mb4.4/40, MS3.4/15

SNR=72
ULHL Ulahol 3.63 34⇑ eP Pn 09 08 12.7 +1.5
baz=35
ULHL ⇑ eS Sn **09 08 54.5 -0.2**
baz=35
ULHL Ulahol 3.63 34 ePN Pn 09 08 12.7 +1.5
ULHL eS Sn **09 08 54.5 -0.2**
FRU1 Bishkek 3.65 13 PN Pb 09 08 17.2 -1.9
BOOM Boomskoye usch 3.71 29⇑ eP Pn 09 08 13.5 +1.1
baz=30
BOOM ⇑ eS Sn **09 08 56.4 -0.3**
baz=30
BOOM Boomskoye usch 3.71 29 Pn Pn 09 08 14.1 +1.8
BOOM Boomskoye usch 3.71 29 ePN Pn 09 08 13.5 +1.1
BOOM eS Sn **09 08 56.4 -0.3**
CHMS Chumysh 3.85 13 P Pn 09 08 16.3 +2.1
SNR=20
CHMS Chumysh 3.85 13⇓ eP Pn 09 08 15.2 +1.0
baz=14
CHMS ⇓ eS Sn **09 08 59.0 -1.1**
baz=14
CHMS Chumysh 3.85 13 ePN Pn 09 08 15.2 +1.0
CHMS eS Sn **09 08 59.0 -1.1**
CHMS Chumysh 3.85 13 ⇓Pn Pn 09 08 16.0 +1.8
89nm,0.7s
CHMS ⇓Lg Lg 09 09 11.4
1µm,1.4s
TAS Tashkent 3.85 304⇑ eP Pn 09 08 16.9 +2.7
baz=1.0
TAS ⇑ eS Sn **09 09 01.8 +1.8**
baz=1.0
TAS Tashkent 3.85 304 Pn Pn 09 08 15.8 +1.6
TAS Tashkent 3.85 304 ePN Pn 09 08 16.9 +2.7
TAS eS Sn **09 09 01.8 +1.8**
TKM2 Tokmak 2 3.98 22 P Pn 09 08 18.0 +1.9
SNR=14
TKM2 Tokmak 2 3.98 22⇓ eP Pn 09 08 17.3 +1.2
baz=23
TKM2 ⇓ eS Sn **09 09 02.6 -0.8**
baz=23
TKM2 Tokmak 2 3.98 22 ePN Pn 09 08 17.3 +1.2
TKM2 eS Sn **09 09 02.6 -0.8**
TKM2 Tokmak 2 3.98 22 ⇓Pn Pn 09 08 18.0 +1.9
119nm,1.1s
TKM2 ⇓Lg Lg 09 09 14.2
249nm,0.6s
KDJ Kajisay 3.99 43⇓ iP Pn 09 08 18.1 +1.9
baz=45
KDJ ⇓ eS Sn **09 09 03.7 +0.1**
baz=45
KDJ Kajisay 3.99 43 Pn Pn 09 08 18.6 +2.5
KDJ Kajisay 3.99 43 i PN Pn 09 08 18.1 +1.9
KDJ eS Sn **09 09 03.7 +0.1**
DZA Taraz 4.00 336 eP Pb 09 08 27.4 +2.2
171nm,0.2s
DZA eS Sg **09 09 20.6 -1.9**
1µm,0.5s
DZA Taraz 4.00 336 Pg Pb 09 08 27.4 +2.2
162nm,0.1s
DZA Lg Lg 09 09 20.6
1µm,0.5s
USP Ospenovka 4.08 10 P Pn 09 08 19.0 +1.7
SNR=20
USP Ospenovka 4.08 10⇑ eP Pn 09 08 18.5 +1.2
baz=10.0
USP ⇑ iS Sn **09 09 04.3 -1.3**
baz=10.0
USP Ospenovka 4.08 10 ePN Pn 09 08 18.5 +1.2
USP i S Sn **09 09 04.3 -1.3**
TARG Taragay, Kyrgy 4.08 51 Pn Pn 09 08 20.0 +2.3
TARG Taragay, Kyrgy 4.08 51 PN Pn 09 08 20.0 +2.3
KST Kastek 4.21 25 eP Pb 09 08 27.9 -0.8
57nm,0.5s
KST eS Sb **09 09 21.4 +1.5**
366nm,0.9s
SGDS Sogindy 4.28 11 ePN Pb 09 08 29.4 -0.4
SGDS e 09 09 23.3
SGDS Sogindy 4.28 11 eP Pb 09 08 29.1 -0.7
47nm,0.4s
SGDS eS Sb **09 09 23.4 +1.6**
246nm,0.7s
SGDS Sogindy 4.28 11 ePg Pb 09 08 29.5 -0.4
baz=13
SGDS eLg Lg 09 09 23.4
baz=13
DGS Degeres 4.33 22 eP Pb 09 08 30.8 +0.1
122nm,0.8s
DGS eS Sb **09 09 26.5 +3.1**
308nm,0.8s
DGS Degeres 4.33 22 Pg Pb 09 08 31.0 +0.3
122nm,0.8s
DGS Lg Lg 09 09 27.3
308nm,0.8s
MTBS Maitube 4.44 28 eP Pb 09 08 33.0 +0.3
69nm,0.3s
MTBS eS Sb **09 09 30.6 +3.9**
169nm,1.1s
MTBS Maitube 4.44 28 Pg Pb 09 08 32.9 +0.3
69nm,0.5s
MTBS Lg Lg 09 09 30.6
166nm,0.8s
KK31 Karatay Array 4.48 330 Pn Pn 09 08 24.7 +2.0
KK31 Karatay Array 4.48 330 PN Pn 09 08 24.7 +2.0
KK31 Karatay Array 4.48 330 ⇑Pn Pn 09 08 24.7 +2.0
8.9nm,0.3s,baz=134,slow=12,SNR=302
KK31 ⇑Pg Pb **09 08 36.4 +3.2**
54nm,0.5s,baz=146,slow=12,SNR=22
KK31 ⇓Lg Lg 09 09 29.0
152nm,0.7s,baz=152,slow=29,SNR=4.7
KKAR Karatay Array 4.48 330⇑ eP Pn 09 08 24.7 +1.9
baz=29
KKAR ⇑ eS Sn **09 09 14.9 -0.5**
baz=29
KKAR Karatay Array 4.48 330 Pn Pn 09 08 24.7 +1.9
KKAR Karatay Array 4.48 330 i PN Pn 09 08 24.7 +1.9
KKAR eS Sn **09 09 14.9 -0.5**
TNSS Tian-Shan 4.57 33 ePN Pn 09 08 25.5 +1.1
TNSS e 09 08 36.1
TNSS e 09 09 34.7
TNSS Tian-Shan 4.57 33 eP Pb 09 08 36.0 +1.0
80nm,0.4s
TNSS eS Sg **09 09 35.2 -5.6**
81nm,0.6s
TNSS Tian-Shan 4.57 33 ePn Pn 09 08 25.5 +1.1
baz=37
TNSS ePg Pb **09 08 36.1 +1.1**
baz=37
TNSS eLg Lg 09 09 34.8
baz=37
TNSS Tian-Shan 4.57 33 Pg Pb 09 08 35.3 +0.2
80nm,0.4s
TNSS Lg Lg 09 09 34.5
81nm,0.6s
BRLS Boroldaу 4.70 325 eP Pb 09 08 38.9 +1.9
29nm,0.6s
BRLS eS Sg **09 09 40.6 -4.2**
309nm,0.8s
BRLS Boroldaу 4.70 325 Pg Pb 09 08 38.9 +1.9
29nm,0.6s
BRLS Lg Lg 09 09 40.6
309nm,0.8s
AAA Alma-Ata 4.70 32 eP Pb 09 08 37.1 +0.1
53nm,0.2s
AAA eS Sb **09 09 37.5 +3.4**
453nm,0.8s
AAA Alma-Ata 4.70 32 ePg Pb 09 08 39.1 +2.1
baz=35
AAA eLg Lg 09 09 39.7
baz=35
KRBS Karabastau 4.72 19 eP Pb 09 08 37.6 +0.3
61nm,0.5s
KRBS eS Sb **09 09 38.4 +3.8**
301nm,0.6s
KNDC Almaty 4.73 32 PN Pn 09 08 29.2 +3.0
KNDC PG Pb **09 08 39.7 +2.2**
KNDC Almaty 4.73 32 ⇓Pn Pn 09 08 29.2 +3.0
48nm,0.4s
KNDC ⇑Pg Pb **09 08 39.7 +2.2**
226nm,0.6s
KNDC ⇓Lg Lg 09 09 40.3
1µm,0.8s
PRZ Przheval'sk 4.90 47 Pn Pn 09 08 26.9 -1.8
PRZ Przheval'sk 4.90 47 PN Pn 09 08 26.9 -1.8
KTBS Karatobe 5.04 27 eP Pb 09 08 43.6 +0.8
70nm,1.0s
KTBS eS Sb **09 09 48.2 +4.3**
341nm,0.9s

KUU Kurty 5.09 23 eP Pb 09 08 44.3 +0.7
53nm,0.5s
KUU eS Sb **09 09 49.6 +4.4**
160nm,1.1s
KUU Kurty 5.09 23 ePg Pb 09 08 44.1 +0.5
baz=26
KUU eLg Lg 09 09 49.1
baz=26
CHKK Chushkaly 5.28 28 ePN Pn 09 08 32.1 -1.6
CHKK e 09 08 48.5
CHKK e 09 09 55.1
CHKK Chushkaly 5.28 28 eP Pb 09 08 47.8 +1.1
38nm,0.4s
CHKK eS Sb **09 09 55.5 +4.9**
149nm,0.9s
CHKK Chushkaly 5.28 28 ePn Pn 09 08 32.2 -1.6
baz=31
CHKK ePg Pb **09 08 48.5 +1.7**
baz=31
CHKK eLg Lg 09 09 55.2
baz=31
CHKK Chushkaly 5.28 28 Pg Pb 09 08 47.9 +1.1
38nm,0.4s
CHKK Lg Lg 09 09 55.5
149nm,0.9s
SATY Saty 5.29 42 ePN Pn 09 08 34.6 +0.7
SATY e 09 08 51.3
SATY Saty 5.29 42 eP Pb 09 08 48.7 +1.6
22nm,0.5s
SATY eS Sg **09 09 57.3 -6.4**
216nm,1.9s
SATY Saty 5.29 42 ePn Pn 09 08 34.7 +0.7
baz=46
SATY ePg Pg 09 08 51.4 -3.8
baz=46
SATY eLg Lg 09 09 59.4
baz=46
SATY Saty 5.29 42 Pg Pb 09 08 48.7 +1.6
73nm,1.1s
SATY Lg Lg 09 09 57.3
216nm,1.9s
ZHN Zhinishke 5.38 42 ePg Pb 09 08 51.1 +2.5
baz=46
ZHN eLg Lg 09 10 00.0
baz=46
KURS Kuram 5.48 38 eP Pb 09 08 51.9 +1.6
29nm,0.8s
KURS eS Sg 09 10 02.6 -7.3
94nm,2.0s
KURS Kuram 5.48 38 Pg Pb 09 08 51.8 +1.6
99nm,0.6s
KURS Lg Lg 09 10 02.6
94nm,2.0s
KPKS Kokpek 5.72 41 ePN Pn 09 08 41.4 +1.6
KPKS e 09 08 57.8
KPKS e 09 10 10.8
KPKS Kokpek 5.72 41 eP Pb 09 08 56.5 +2.2
34nm,0.5s
KPKS eS Sg **09 10 10.5 -7.0**
144nm,1.3s
KPKS Kokpek 5.72 41 ePn Pn 09 08 41.5 +1.6
baz=44
KPKS ePg Pb **09 08 57.9 +3.5**
baz=44
KPKS eLg Lg 09 10 10.8
baz=44
KPKS Kokpek 5.72 41 Pg Pb 09 08 56.3 +2.0
34nm,0.5s
KPKS Lg Lg 09 10 10.5
144nm,1.3s
BTLS Baital 5.80 4 ePN Pn 09 08 42.2 +1.3
BTLS e 09 08 57.2
BTLS e 09 10 09.2
BTLS Baital 5.80 4 eP Pb 09 08 58.8 +3.1
30nm,0.8s
BTLS eS Sg **09 10 14.5 -5.5**
158nm,0.8s
BTLS Baital 5.80 4 ePn Pn 09 08 42.2 +1.3
baz=4.3
BTLS ePg Pb **09 08 57.3 +1.6**
baz=4.3
BTLS eLg Lg 09 10 09.3
baz=4.3
ARXS Arharly 5.90 31 eP Pb 09 08 59.1 +1.6
63nm,0.6s
ARXS eS Sb **09 10 14.9 +6.3**
197nm,1.0s
ARXS Arharly 5.90 31 Pg Pb 09 08 58.7 +1.2
63nm,0.6s
ARXS Lg Lg 09 10 14.9
197nm,1.0s
KBL Kabul 5.92 219 PN Pn 09 08 50.0 +7.2
PDGK Podgornoye 6.05 46 PN Pn 09 08 45.7 +1.2
PDGK 09 09 03.0
PDGK Podgornoye 6.05 46 Pg Pb 09 09 02.8 +2.7
12nm,0.7s
PDGK Lg Lg 09 10 21.4
47nm,1.0s
PDGK Podgornoye 6.05 46 ⇑Pn Pn 09 08 45.5 +1.0
14nm,0.6s
PDGK ⇑Pg Pg **09 09 08.9 -0.9**
54nm,0.7s
PDGK ⇓Lg Lg 09 10 25.4
261nm,1.1s
THN Thein Dam 7.03 165 eP Pn 09 09 04.7 +7.0
THN eS Sb 09 10 29.7 -11
SMLA Simla 8.63 159 eP Pn 09 09 21.4 +1.7
SMLA eS Sn **09 10 58.7 +1.1**
SMLA IAML 09 11 08.9
comp=N,101nm,0.5s
SMLA IAML 09 11 13.9
comp=E,101nm,1.0s
MAKZ Makanchi 9.75 37 Pn 09 09 32.1 -3.0
MAKZ Makanchi 9.75 37 P Pn 09 09 32.1 -3.0
MAKZ Makanchi 9.75 37 ⇓Pn Pn 09 09 38.4 +3.3
comp=E,6.2nm,0.8s
MAKZ ⇑Lg Lg 09 12 18.3
comp=E,25nm,1.2s
MK31 Makanchi Array 9.89 37 Pn Pn 09 09 35.1 -1.8
MK31 Makanchi Array 9.89 37 i P Pn 09 09 37.8 +0.8
MK31 pmax pmax
comp=Z,3.0nm,0.7s
MK31 Makanchi Array 9.89 37 ⇑Pn Pn 09 09 41.5 +4.6
comp=Z,3.0nm,0.6s,baz=218,slow=15,SNR=13
MK31 ⇑Lg Lg 09 12 25.3
comp=Z,20nm,1.0s,baz=222,slow=31,SNR=3.5
MKAR Makanchi Array 9.89 37 Pn Pn 09 09 38.4 +1.4
comp=Z,0.2nm,0.3s,baz=212,slow=14,SNR=10
MKAR Lg Lg 09 12 22.4
comp=Z,0.3nm,0.3s,baz=240,slow=26,SNR=3.0
MKAR LR LR 09 13 15.1
comp=Z,79nm,18.8s,baz=223,slow=37
comp=Z,1.1nm,0.7s
MKAR Makanchi Array 9.89 37 Pn Pn 09 09 35.8 -1.2
MKAR Makanchi Array 9.89 37 P Pn 09 09 35.8 -1.2
HRA Herat 10.27 245 Pn Pn 09 09 43.2 +0.7
BRZS Berezniki 10.75 357 eP Pn 09 09 47.0 -1.7
BRZS Berezniki 10.75 357 ePn Pn 09 09 47.0 -1.7
baz=357
BRZS eLg Lg 09 12 47.0
baz=357
KUDL Kundal 11.35 167 eP Pn 09 10 00.1 +3.2
KUDL eS Sn **09 12 06.7 +2.4**
WMQ Urumqi 11.54 62 eP Pn 09 10 01.3 +1.6
WMQ LR LR
comp=Z,540nm,10.1s
WMQ LR LR
comp=Z,260nm,14.1s
ZSN Zaisan 11.61 41 ePg Pn 09 10 46.1 +46
baz=43
ZSN eLg Lg 09 13 16.7
baz=43
KURBB Kurchatov Arra 11.90 16 Lg Lg 09 13 24.3
comp=Z,0.1nm,0.3s,baz=155,slow=7.6,SNR=3.9
KURBB LR LR 09 14 49.4
comp=Z,220nm,21.5s,baz=174,slow=38
KURBB Kurchatov Arra 11.90 16 P Pn 09 10 05.4 +0.9
KURBB Kurchatov Arra 11.90 16 ⇑Pn Pn 09 10 05.4 +0.9
comp=Z,2.4nm,0.5s
KURBB ⇑Lg Lg 09 13 26.7
comp=Z,106nm,1.0s
KURK Kurchatov 12.01 16 Pn Pn 09 10 07.3 +1.4
KURK Kurchatov 12.01 16⇑ eP Pn 09 10 07.5 +1.6
KURK pmax pmax
comp=Z,5.0nm,0.6s
KURK Kurchatov 12.01 16 ⇑Pn Pn 09 10 08.2 +2.2
comp=Z,4.1nm,0.5s

KURK ⇓Lg Lg 09 13 31.4
comp=Z,87nm,1.3s
SEM Semipalatinsk 12.12 21 eP Pn 09 10 07.0 -0.7
SEM Semipalatinsk 12.12 21 ePn Pn 09 10 07.0 -0.7
baz=22
SEM eLg Lg 09 13 31.4
baz=22
GEYT Alibeck 12.15 269 Pn Pn 09 10 06.2 -1.7
comp=Z,0.9nm,0.3s,baz=66,slow=22,SNR=3.1
GEYT Sn **Sn 09 12 25.9 +1.9**
comp=Z,1.2nm,0.3s,baz=124,slow=48,SNR=2.6
GEYT LR LR 09 15 38.0
comp=Z,207nm,20.6s,baz=79,slow=42
comp=Z,3.7nm,0.4s
GEYT Alibeck 12.15 269 Pn Pn 09 10 09.7 +1.7
GYA0 ALIBECK ARRAY 12.15 269 P Pn 09 10 11.6 +3.7
GYA0B ALIBECK ARRAY 12.15 269 Pn 09 10 11.3 +3.4
AJM Ajmer 12.77 176 eS Sn 09 12 40.6 +1.4
PYUN Piuhan 13.61 142 eP Pn 09 10 28.9 +0.8
comp=Z,35nm,0.4s
DANN Dangsing 13.79 139 eP Pn 09 10 31.4 +0.8
comp=Z,25nm,0.5s
AB31 Akbulak array 13.94 320 P Pn 09 10 33.7 +1.3
AB31 SN **Sn 09 13 06.7 -1.0**
AB31 Akbulak array 13.94 320 Pn Pn 09 10 33.7 +1.3
comp=Z,7.2nm,0.7s,baz=131,slow=13,SNR=63
AB31 ⇑Sn **Sn 09 13 06.7 -1.0**
comp=Z,5.5nm,0.6s,baz=129,slow=25,SNR=4.2
ABKAR Akbulak array 13.94 320 Pn Pn 09 10 31.2 -1.2
BVAR Borovoye Array 13.95 352 LR LR 09 15 53.1
comp=Z,90nm,20.0s,baz=44,slow=37
JHNI Jhansi 14.38 162 eP Pn 09 10 38.3 -0.1
JHNI eS **Sn 09 13 15.3 -3.1**
GUN Gumba 15.27 134 eP Pn 09 10 51.0 +0.2
PKI Pulchoki 15.28 136 eP Pn 09 10 51.6 +0.7
JIRN Jiri 15.63 134 eP Pn 09 10 56.6 +1.0
comp=Z,44nm,0.5s
AKTO Aktyubinsk 15.66 321 Pn Pn 09 10 55.3 -0.2
comp=Z,0.7nm,0.3s,baz=111,slow=8.0,SNR=10.0
AKTO Sn **Sn 09 13 43.4 -6.0**
comp=Z,0.3nm,0.3s,baz=166,slow=2.3,SNR=3.3
AKTO Aktyubinsk 15.66 321 P P 09 10 58.9 -0.8
AKTO SN **Sn 09 13 50.2 +0.8**
AKTO Aktyubinsk 15.66 321 ⇓Pn P 09 10 59.0 -0.8
comp=Z,20nm,0.9s
AKTO ⇓Sn **Sn 09 13 50.2 +0.8**
comp=Z,9.7nm,1.2s
BHPL Bhopal 16.30 167 eS Sn 09 13 59.2 -6.1
RAMN Ramite 16.41 134 eP P 09 11 06.3 -2.2
comp=Z,34nm,0.6s
ZAA0 Zalesovo Array 16.58 24 Pn P 09 11 07.5 -2.4
ZALV Zalesovo Beam 16.58 24 Pn Pn 09 11 06.5 -0.8
comp=Z,0.6nm,0.3s,baz=215,slow=12,SNR=13
ZALV Lg Lg 09 15 52.9
baz=124,slow=48
ZALV LR LR 09 17 10.8
comp=Z,60nm,18.5s,baz=152,slow=36
comp=Z,5.7nm,0.6s
ZALV Zalesovo Beam 16.58 24 Pn Pn 09 11 07.0 -0.3
ZALV Zalesovo Beam 16.58 24 i P P 09 11 07.6 -2.4
ZALV pmax pmax
comp=Z,5.0nm,0.5s
GOMU GeErMu 17.10 94 P P 09 11 17.0 +0.8
GOMU pP sP 09 11 22.8 +3.9
GOMU S **S 09 14 28.3 -6.8**
GOMU pmax pmax
comp=Z,6.0nm,0.7s
GOMU pmax pmax
comp=Z,85nm,4.5s
GOMU LR LR
comp=Z,100nm,15.2s
GOMU LR LR
comp=Z,120nm,15.5s
GOMU LR LR
comp=Z,120nm,16.0s
ARU Arti 19.84 335 P Pn 09 11 46.2 -1.0
baz=148,slow=9.5,SNR=1.5
ARU LR LR 09 19 39.6
comp=Z,128nm,19.2s,baz=170,slow=38
comp=Z,9.4nm,0.2s
ARU Arti 19.84 335 IAmb IAmb 09 11 53.3
comp=Z,15nm,0.8s
ARU Arti 19.84 335 *d* **iP Pn 09 11 47.9 +0.7**
ARU S **Sn 09 15 30.2 -0.2**
ARU pmax pmax
comp=Z,23nm,1.1s
SEKA Sheki 20.19 284 P Pn 09 11 51.1 -0.5
GTA Gaotai 20.30 81 ⇑P Pn 09 11 53.8 +0.7
GTA pP sP 09 11 59.5 +5.7
GTA pmax pmax
comp=Z,5.0nm,1.5s
GTA pmax pmax
comp=Z,77nm,4.5s
GTA LR LR
comp=Z,130nm,19.3s
GTA LR LR
comp=Z,150nm,18.5s
GTA LR LR
comp=Z,140nm,19.3s
UOSS Minazif 20.42 231 P Pn 09 11 56.2 +1.8
UOSS IAmb IAmb 09 11 57.5
comp=Z,24nm,1.1s
SHL Shillong 20.59 126 Pn 09 11 55.5 -1.0
SHL IAmb IAmb 09 12 13.2
comp=Z,18nm,0.5s
SHL Shillong 20.59 126 P Pn 09 11 55.5 -1.0
SHL pmax pmax
comp=Z,18nm,0.5s
ZKTA Zakatala 20.60 285 P Pn 09 11 55.2 -1.2
GANJ Ganja 20.89 283 P Pn 09 11 58.3 -1.5
GROC Groznyy 21.20 290 eP P 09 12 01.3 +0.7
GROC eS **S 09 15 54.3 -2.6**
GROC pmax pmax
comp=Z,38nm,0.5s
GNI Garni 22.14 282 P P 09 12 09.4 -1.5
comp=Z,8.9nm,0.6s,baz=160,slow=3.9,SNR=2.4
GNI LR LR 09 22 24.8
comp=Z,52nm,18.2s,baz=102,slow=41
comp=Z,8.9nm,0.6s
GNI Garni 22.14 282 P P 09 12 10.8 -0.2
GNI Garni 22.14 282 *c* **iP P 09 12 13.8 +2.8**
GNI pmax pmax
comp=Z,24nm,1.5s
BELG Belogornoye 22.19 315 P P 09 12 12.1 +0.9
comp=Z,44nm,0.9s,baz=90,slow=20,SNR=2.2
BELG LR LR 09 20 39.2
comp=Z,74nm,18.4s,baz=166,slow=36
comp=Z,44nm,0.9s
BELG Belogornoye 22.19 315 *eP* **P 09 12 13.2 +2.1**
BELG pmax pmax
comp=Z,10.0nm,0.9s
ZEI Tsey 22.59 289 *eP* **P 09 12 19.0 +3.2**
ZEI pmax pmax
comp=Z,7.0nm,0.5s
ONI Oni 22.92 288 P P 09 12 19.5 +0.3
ONI Oni 22.92 288 P P 09 12 19.5 +0.3
ONI pmax pmax
comp=Z,31nm,0.8s
GOF Gofitskoye 23.26 294⇑ eP P 09 12 15.1 -7.4
KBZ Khabaz 23.32 291 P P 09 12 21.8 -1.3
comp=Z,1.1nm,0.5s,baz=105,slow=2.4,SNR=1.9
KBZ LR LR 09 23 36.0
comp=Z,64nm,19.5s,baz=78,slow=42
comp=Z,1.1nm,0.5s
KBZ Khabaz 23.32 291 *eP* **P 09 12 22.7 -0.4**
KBZ pmax pmax
comp=Z,5.0nm,1.5s
KIV Kislovodsk 23.47 292 P P 09 12 25.3 +0.5
KIV IAmb IAmb 09 12 42.6
comp=Z,15nm,0.7s
ZAK Zakamensk 23.69 52 *eP* **P 09 12 28.7 +1.8**
ZAK pmax pmax
comp=Z,4.0nm,1.2s
KIRV Kirov 24.77 329 LR LR 09 22 57.2
comp=Z,119nm,20.6s,baz=142,slow=38
KIRV Kirov 24.77 329 *c iP* **P 09 12 36.0 -0.7**
SONM Songino Array 25.16 59 P P 09 12 41.9 +1.4
comp=Z,4.5nm,0.9s,baz=262,slow=10,SNR=17
SONM LR LR 09 22 43.7
comp=Z,130nm,21.8s,baz=113,slow=37
comp=Z,4.5nm,0.9s
SONM Songino Array 25.16 59 P P 09 12 41.2 +0.7
SONM Songino Array 25.16 59 P P 09 12 41.2 +0.7
SONM pmax pmax
comp=Z,5.0nm,1.1s
KOPT Kop Dagi 25.39 282 P P 09 12 42.2 -0.6

KOPT					IAmb	IAmb	09 12 53.5		
	comp=Z,17nm,1.1s								
ULN	**Ulaanbaatar**	**25.60**	**59**	P	**P**		**09 12 45.5**	**+0.9**	
ULN	**Ulaanbaatar**	**25.60**	**59**	*ce*P	**P**		**09 12 46.9**	**+2.4**	
ULN				pmax	pmax				
	comp=Z,4.0nm,0.7s								
MARD	**Mardin**	**25.72**	**276**	P	**P**		**09 12 46.1**	**+0.5**	
MARD				IAmb	IAmb		09 12 54.4		
	comp=Z,6.5nm,0.7s								
RAYN	**Ar Rayn**	**28.46**	**245**	P	**P**		**09 13 10.3**	**0.0**	
RAYN				IAmb	IAmb		09 13 24.6		
	comp=Z,9.5nm,1.4s								
RAYN	**Ar Rayn**	**28.46**	**245**	P	**P**		**09 13 10.4**	**0.0**	
RAYN				pmax	pmax				
	comp=Z,9.0nm,1.5s								
HHC	**Hu-ho-hao-te**	**29.00**	**75**	*e*P	P		09 13 20.5	+5.4	
HHC				pmax	pmax				
	comp=Z,17nm,0.9s								
HHC				pmax	pmax				
	comp=Z,91nm,5.2s								
KLMR	**Klimovskoe**	**30.17**	**327**	*e*P	**P**		**09 13 24.1**	**-1.0**	
KLMR				*e*			09 14 19.7		
KLMR				pmax	pmax				
	comp=Z,6.0nm,1.0s								
KLMR	**Klimovskoe**	**30.17**	**327**	*e*P	**P**		**09 13 24.1**	**-1.0**	
KLMR				AMP			09 13 29.2		
	comp=Z,6.0nm,1.0s								
KLMR				*e*PP		**PnPn**	**09 14 19.8**	**-2.2**	
CMAR	**Chiang Mai Arr**	**30.22**	**126**	P	**P**		**09 13 26.6**	**+0.6**	
	comp=Z,1.4nm,0.3s,baz=357,slow=14,SNR=2.0								
	comp=Z,1.4nm,0.3s								
BR131	**Keskin Array S**	**30.63**	**284**	P	**P**		**09 13 29.5**	**0.0**	
BR131				IAmb	IAmb		09 13 32.4		
	comp=Z,5.9nm,0.8s								
BR131	**Keskin Array S**	**30.63**	**284**	P	**P**		**09 13 29.5**	**0.0**	
BR131				pmax	pmax				
	comp=Z,6.0nm,0.8s								
BRTR	**Keskin Array B**	**30.63**	**284**	P	**P**		**09 13 30.4**	**+0.9**	
	comp=Z,3.7nm,0.8s,baz=90,slow=8.8,SNR=9.9								
	comp=Z,3.7nm,0.8s								
BRTR	**Keskin Array B**	**30.63**	**284**	P	**P**		**09 13 30.9**	**+1.3**	
BRTR	**Keskin Array B**	**30.63**	**284**	*ce*P	**P**		**09 13 31.8**	**+2.3**	
BRTR				pmax	pmax				
	comp=Z,4.0nm,0.8s								
PALK	**Pallekele**	**32.48**	**167**	LR	LR		09 27 37.7		
	comp=Z,106nm,19.6s,baz=172,slow=38								
AKASG	**Malin Array Be**	**32.90**	**305**	P	**P**		**09 13 48.2**	**-1.0**	
	comp=Z,1.3nm,0.4s,baz=79,slow=7.1,SNR=6.0								
AKASG				LR	LR		09 28 44.4		
	comp=Z,95nm,18.0s,baz=60,slow=39								
	comp=Z,1.3nm,0.4s								
AKASG	**Malin Array Be**	**32.90**	**305**	*ce*P	**P**		**09 13 49.7**	**+0.5**	
AKASG				pmax	pmax				
	comp=Z,3.0nm,0.5s								
AKBB	**Malin Array Si**	**32.90**	**305**	⇑*i*P	**P**		**09 13 49.3**	**+0.1**	
AKBB				pmax	pmax				
	comp=Z,4.0nm,0.6s								
VRI	**Vrincioaia**	**34.70**	**297**	⇑P	**P**		**09 14 05.0**	**0.0**	
VRI	**Vrincioaia**	**34.70**	**297**	⇑P	**P**		**09 14 05.0**	**0.0**	
NACGM	**Naroch**	**34.75**	**312**	⇓*e*P	**P**		**09 14 05.8**	**+0.6**	
	baz=97								
PLOR	**Plostina**	**34.76**	**296**	⇓P	**P**		**09 14 07.0**	**+1.5**	
PLOR	**Plostina**	**34.76**	**296**	⇓P	**P**		**09 14 07.0**	**+1.5**	
COVR	**Voineasa-Covas**	**35.07**	**297**	⇑P	**P**		**09 14 08.7**	**+0.5**	
MLR	**Muntele Rosu**	**35.29**	**296**	⇓P	**P**		**09 14 11.1**	**+0.9**	
MLR	**Muntele Rosu**	**35.29**	**296**	LR	LR		09 30 30.9		
	comp=Z,56nm,18.0s,baz=106,slow=40								
MLR	**Muntele Rosu**	**35.29**	**296**	P	**P**		**09 14 10.1**	**-0.1**	
MLR				IAmb	IAmb		09 14 20.1		
	comp=Z,8.4nm,0.8s								
MLR	**Muntele Rosu**	**35.29**	**296**	P	**P**		**09 14 10.1**	**-0.1**	
MLR				pmax	pmax				
	comp=Z,8.0nm,0.8s								
BURAR	**Bucovina Array**	**35.58**	**300**	⇑P	**P**		**09 14 15.1**	**+2.5**	
BURAR	**Bucovina Array**	**35.58**	**300**	P	**P**		**09 14 12.2**	**-0.5**	
BURAR	**Bucovina Array**	**35.58**	**300**	⇑P	**P**		**09 14 15.1**	**+2.5**	
BUR08	**Bucovina Ar. S**	**35.59**	**300**	P	**P**		**09 14 12.4**	**-0.3**	
DOPR	**Dopca**	**35.62**	**297**	⇓P	**P**		**09 14 13.4**	**+0.5**	
VOIR		**35.92**	**296**	⇑P	**P**		**09 14 14.2**	**-1.4**	
VOIR		**35.92**	**296**	⇑P	**P**		**09 14 14.2**	**-1.4**	
FIA1	**FINESS Array S**	**36.40**	**323**	P	**P**		**09 14 18.9**	**-0.4**	
FIA1				IAmb	IAmb		09 14 20.0		
	comp=Z,4.9nm,0.9s								
FIA0	**FINESS Array S**	**36.40**	**323**	P	**P**		**09 14 19.8**	**+0.4**	
FIA0	**FINESS Array S**	**36.40**	**323**	P	**P**		**09 14 19.8**	**+0.4**	
FINES	**FINESS Array B**	**36.40**	**323**	P	**P**		**09 14 19.0**	**-0.3**	
	comp=Z,3.6nm,0.4s,baz=114,slow=10,SNR=43								
FINES				LR	LR		09 29 48.7		
	comp=Z,64nm,21.9s,baz=140,slow=37								
	comp=Z,3.6nm,0.4s								
FINES	**FINESS Array B**	**36.40**	**323**	P	**P**		**09 14 20.0**	**+0.7**	
FINES	**FINESS Array B**	**36.40**	**323**	*ce*P	**P**		**09 14 19.8**	**+0.4**	
FINES				pmax	pmax				
	comp=Z,4.0nm,0.4s								
PABE	**Paberze**	**36.42**	**313**	P	**P**		**09 14 19.8**	**+0.2**	
LOT	**Lotru**	**36.82**	**296**	⇑P	**P**		**09 14 25.6**	**+2.3**	
NJ2	**Nanjing**	**37.20**	**87**	*e*P	**P**		**09 14 29.5**	**+3.0**	
NJ2				pmax	pmax				
	comp=Z,10.0nm,0.6s								
DRGR		**37.36**	**299**	⇓P	**P**		**09 14 26.8**	**-1.0**	
DRGR		**37.36**	**299**	⇓P	**P**		**09 14 26.8**	**-1.0**	
MDVR	**Moldovita**	**38.36**	**296**	⇑P	**P**		**09 14 37.1**	**+0.9**	
ARCES	**ARCESS Array B**	**39.42**	**336**	P	**P**		**09 14 44.6**	**-0.2**	
	comp=Z,2.6nm,0.7s,baz=110,slow=8.3,SNR=13								
ARCES				LR	LR		09 32 05.0		
	comp=Z,46nm,18.2s,baz=268,slow=38								
	comp=Z,2.6nm,0.7s								
ARCES	**ARCESS Array B**	**39.42**	**336**	P	**P**		**09 14 44.6**	**-0.2**	
ARCES				IAmb	IAmb		09 14 46.0		
	comp=Z,7.7nm,1.1s								
VRAC	**Vranov**	**41.10**	**303**	LR	LR		09 33 39.7		
	comp=Z,60nm,18.1s,baz=78,slow=39								
KLR	**Kul'dur**	**41.92**	**57**	P	**P**		**09 15 05.7**	**0.0**	
	comp=Z,1.1nm,0.5s,baz=289,slow=8.6,SNR=5.0								
	comp=Z,1.1nm,0.5s								
KSRS	**Korea Array**	**42.14**	**75**	P	**P**		**09 15 08.2**	**+0.6**	
	comp=Z,0.6nm,0.5s,baz=272,slow=5.7,SNR=5.1								
	comp=Z,0.6nm,0.5s								
TIXI	**Tiksi**	**42.47**	**23**	P	**P**		**09 15 10.4**	**+0.6**	
TIXI	**Tiksi**	**42.47**	**23**	P	**P**		**09 15 10.4**	**+0.6**	
TIXI				pmax	pmax				
	comp=Z,3.0nm,0.7s								
GEC2	**GERESS Array S**	**43.05**	**303**	P	**P**		**09 15 14.7**	**-0.3**	
GERES	**GERESS Array B**	**43.05**	**303**	P	**P**		**09 15 13.0**	**-2.0**	
	comp=Z,0.8nm,0.4s,baz=59,slow=9.4,SNR=2.7								
GERES				LR	LR		09 34 41.2		
	comp=Z,54nm,21.4s,baz=93,slow=38								
	comp=Z,0.8nm,0.4s								
GERES	**GERESS Array B**	**43.05**	**303**	P	**P**		**09 15 16.8**	**+1.8**	
GERES	**GERESS Array B**	**43.05**	**303**	P	**P**		**09 15 16.8**	**+1.8**	
KHC	**Kasperske Hory**	**43.08**	**304**	P	**P**		**09 15 14.4**	**-0.7**	
KHC				IAmb	IAmb		09 15 22.2		
	comp=Z,8.4nm,1.5s								
KHC	**Kasperske Hory**	**43.08**	**304**	P	**P**		**09 15 14.4**	**-0.7**	
KHC				pmax	pmax				
	comp=Z,8.0nm,1.5s								
NC405	**NORSAR Array S**	**43.21**	**321**	P	**P**		**09 15 15.7**	**-0.3**	
NC303	**NORSAR Array S**	**43.38**	**321**	P	**P**		**09 15 17.8**	**+0.4**	
NB201	**NORSAR Array S**	**43.41**	**321**	P	**P**		**09 15 17.5**	**-0.2**	
NB2	**NORSAR Subarra**	**43.45**	**321**	P	**P**		**09 15 17.7**	**-0.3**	
	comp=Z,3.0nm,0.5s,baz=91,slow=8.6								
NOA	**NORSAR Array B**	**43.45**	**321**	P	**P**		**09 15 17.5**	**-0.5**	
	comp=Z,3.3nm,0.6s,baz=92,slow=7.9,SNR=23								
NOA				LR	LR		09 33 46.5		
	comp=Z,54nm,19.6s,baz=95,slow=37								
	comp=Z,3.3nm,0.6s								
NAO01	**NORSAR Array S**	**43.61**	**321**	P	**P**		**09 15 18.5**	**-0.7**	
NAO01				IAmb	IAmb		09 15 27.3		
	comp=Z,15nm,1.1s								
NC204	**NORSAR Array S**	**43.67**	**322**	P	**P**		**09 15 19.9**	**+0.1**	
DAVOX	**Davos/Dischmat**	**46.01**	**301**	LR	LR		09 36 28.9		
	comp=Z,58nm,18.8s,baz=83,slow=38								
MSSA	**Maissana**	**46.93**	**298**	P	**P**		**09 15 47.1**	**+1.2**	
BMRD	**Maredsous**	**48.41**	**307**	*d*P	**P**		**09 15 58.8**	**+1.6**	
BNI	**Bardonecchia**	**48.64**	**300**	P	**P**		**09 15 59.4**	**+0.1**	
BNI				IAmb	IAmb		09 16 16.4		
	comp=Z,8.6nm,1.3s								
BNI	**Bardonecchia**	**48.64**	**300**	P	**P**		**09 15 59.4**	**+0.1**	
BNI				pmax	pmax				
	comp=Z,9.0nm,1.3s								
MJAR	**Matsushiro Arr**	**50.12**	**72**	P	**P**		**09 16 11.0**	**+0.5**	
	comp=Z,2.0nm,0.8s,baz=294,slow=9.2,SNR=3.1								
	comp=Z,2.0nm,0.8s								
ERM	**Erimo**	**51.55**	**63**	P	**P**		**09 16 21.4**	**+0.2**	
ERM				IAmb	IAmb		09 16 44.6		
	comp=Z,8.3nm,1.1s								
ERM	**Erimo**	**51.55**	**63**	P	**P**		**09 16 21.4**	**+0.2**	
ERM				pmax	pmax				
	comp=Z,8.0nm,1.1s								
ESDC	**Sonseca Array**	**57.97**	**297**	P	**P**		**09 17 07.7**	**-0.1**	
	comp=Z,1.4nm,0.6s,baz=53,slow=6.9,SNR=4.3								
	comp=Z,1.4nm,0.6s								
TOLK	**Toolik Lake Re**	**67.75**	**16**	P	**P**		**09 18 14.4**	**+1.9**	
TOLK				IAmb	IAmb		09 18 29.3		
	comp=Z,6.8nm,1.5s								
TOA0	**Torodi Ar. Sit**	**67.79**	**269**	P	**P**		**09 18 13.3**	**-0.2**	
TORD	**Torodi Ar. Bea**	**67.79**	**269**	P	**P**		**09 18 13.0**	**-0.5**	
	comp=Z,1.7nm,0.8s,baz=56,slow=5.6,SNR=10								
	comp=Z,1.7nm,0.8s								
TORD	**Torodi Ar. Bea**	**67.79**	**269**	P	**P**		**09 18 13.4**	**-0.1**	
TORD				IAmb	IAmb		09 18 20.4		
	comp=Z,2.2nm,0.8s								
IMAR	**Indian Mountai**	**68.94**	**19**	P	**P**		**09 18 18.9**	**-1.0**	
H21K	**Melozitna Rive**	**69.43**	**19**	P	**P**		**09 18 23.4**	**+0.4**	
BMAR	**Burnt Mountain**	**69.79**	**15**	P	**P**		**09 18 24.9**	**-0.3**	
BCAR	**Beaver Creek A**	**74.18**	**16**	P	**P**		**09 18 51.8**	**+0.1**	
WRA	**Warramunga Arr**	**81.79**	**124**	P	**P**		**09 19 34.0**	**-0.5**	
	comp=Z,2.6nm,0.9s,baz=330,slow=5.2,SNR=12								
	comp=Z,2.6nm,0.9s								
WRA	**Warramunga Arr**	**81.79**	**124**	P	**P**		**09 19 34.0**	**-0.5**	
WRAB	**Tennant Creek**	**81.79**	**124**	*ce*P	P		09 19 43.8	+9.4	
WRAB				pmax	pmax				
	comp=Z,5.0nm,1.0s								
ASAR	**Alice Springs**	**84.23**	**127**	P	**P**		**09 19 46.1**	**-0.9**	
	comp=Z,1.7nm,0.8s,baz=323,slow=5.9,SNR=10								
	comp=Z,1.7nm,0.8s								

IDC ***28*** *09:18:18.0±1.3, 53°.28S×9°.12E, h0km, mb3.9/4, mbtmp3.9/4, MS3.5/8, Error ellipse: s-maj=59.7km s-min=25.7km az=83.0*

NEIC ***28*** *09:18:20.3±0.4, 53°.3S±0°.2×9°.0E±0°.2, h10km±1km, mb4.3/7, Error ellipse: s-maj=28.9km s-min=20.9km az=27.0*

ISC 28 09:18:19.8±1.1, 53°.3S±0°.1×9°.0E±0°.3, h10km, n29, σ0s53/20, mb4.3/5, MS3.5/7, Bouvet Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TROLL	**Troll, Antarti**	**19.03**	**186**	Pdiff		**Pn**		**09 22 42.7**	**+0.2**
VNA1	**Neumayer--Stat**	**19.10**	**198**	Pdiff		**Pn**		**09 22 43.4**	**+0.3**
VNA2	**Neumayer--Watz**	**19.18**	**196**	Pdiff		**Pn**		**09 22 44.3**	**+0.1**
SNAA	**Sanae**	**19.20**	**191**	Pdiff		**Pn**		**09 22 44.5**	**+0.1**
SNAA	**Sanae**	**19.20**	**191**	pPdiff		Pn		09 22 54.9	+11
SNAA	**Sanae**	**19.20**	**191**	LR		LR		09 28 14.1	
	comp=Z,134nm,20.9s,baz=331,slow=31								
SNAA	**Sanae**	**19.20**	**191**	P		**P**		**09 22 43.6**	**+0.2**
SNAA				IAmb		IAmb		09 22 46.2	
	comp=Z,21nm,0.9s								
VNA3	**Neumayer Olymp**	**19.86**	**198**	Pdiff		**P**		**09 22 50.6**	**+0.1**
VNA3	**Neumayer Olymp**	**19.86**	**198**	pPdiff		Pn		09 23 02.1	+10
SUR	**Sutherland**	**22.54**	**27**	LR		LR		09 29 55.3	
	comp=Z,122nm,19.8s,baz=192,slow=31								
BOSA	**Boshof**	**27.39**	**32**	LR		LR		09 32 36.1	
	comp=Z,55nm,20.8s,baz=194,slow=31								
BELA	**Belgrano 2**	**29.16**	**197**	P		**P**		**09 24 20.6**	**0.0**
BELA				IAmb		IAmb		09 24 26.7	
	comp=Z,7.8nm,1.5s								
LBTB	**Lobatse**	**30.85**	**30**	LR		LR		09 34 59.2	
	comp=Z,48nm,18.8s,baz=189,slow=32								
TSUM	**Tsumeb**	**34.64**	**14**	LR		LR		09 36 35.4	
	comp=Z,155nm,21.3s,baz=150,slow=32								
QSPA	**South Pole Qui**	**36.98**	**180**	P		**P**		**09 25 27.8**	**-1.2**
	comp=Z,1.0nm,0.6s,baz=236,slow=18,SNR=13								
QSPA				LR		LR		09 40 33.1	
	comp=Z,82nm,18.6s,baz=256,slow=36								
	comp=Z,1.0nm,0.6s								
QSPA	**South Pole Qui**	**36.98**	**180**	P		**P**		**09 25 29.2**	**+0.1**
VNDA	**Vanda**	**48.40**	**172**	P		**P**		**09 27 01.6**	**+0.3**
	comp=Z,2.1nm,0.9s,baz=214,slow=7.3,SNR=6.9								
VNDA				LR		LR		09 45 57.0	
	comp=Z,88nm,20.8s,baz=213,slow=34								
	comp=Z,2.1nm,0.9s								
VNDA	**Vanda**	**48.40**	**172**	P		**P**		**09 27 01.4**	**+0.1**
VNDA				IAmb		IAmb		09 27 03.2	
	comp=Z,3.6nm,1.1s								
PLCA	**Paso Flores**	**52.95**	**249**	P		**P**		**09 27 36.7**	**+0.5**
	comp=Z,1.1nm,0.8s,baz=139,slow=5.5,SNR=4.1								
	comp=Z,1.1nm,0.8s								
PLCA	**Paso Flores**	**52.95**	**249**	P		**P**		**09 27 36.2**	**+0.1**
PLCA				IAmb		IAmb		09 28 04.5	
	comp=Z,4.5nm,1.2s								
MBAR	**Mbarara**	**55.51**	**27**	LR		LR		09 49 26.0	
	comp=Z,69nm,20.8s,baz=150,slow=34								
TORD	**Torodi Ar. Bea**	**66.43**	**352**	P		**P**		**09 29 09.2**	**+0.2**
	comp=Z,1.5nm,0.9s,baz=194,slow=7.0,SNR=6.0								
	comp=Z,1.5nm,0.9s								
TORD	**Torodi Ar. Bea**	**66.43**	**352**	P		**P**		**09 29 09.6**	**+0.6**
TORD				IAmb		IAmb		09 29 11.2	
	comp=Z,3.6nm,1.2s								
LPAZ	**La Paz**	**69.42**	**270**	P		**P**		**09 29 28.3**	**-0.4**
H01W2	**Cape Leeuwin H**	**70.97**	**123**	T		T		10 47 21.2	
	baz=218,slow=75,SNR=38								
H01W3	**Cape Leeuwin H**	**70.98**	**123**	T		T		10 47 22.2	
	baz=218,slow=75,SNR=48								
H01W1	**Cape Leeuwin H**	**70.98**	**123**	T		T		10 47 22.3	
	baz=218,slow=75,SNR=44								
YKA	**Yellowknife Ar**	**149.57**	**310**	PKPbc		**PKPbc**		**09 38 07.0**	**-0.9**
	comp=Z,0.1nm,0.6s,baz=93,slow=2.6,SNR=2.9								
YKA	**Yellowknife Ar**	**149.57**	**310**	PKPdf		**PKPdf**		**09 38 04.3**	**+0.9**
YKA				PKPbc		**PKiKP**		**09 38 08.4**	**-0.6**
YKA				PKPab		**PKPab**		**09 38 13.1**	**-0.1**

IDC 28 09:18:24.5±999.0, 27°.04N×36°.51E, h0km, Error ellipse: s-maj=1407.0km s-min=259.8km az=127.0, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
I48TN	**KESRA INFRASON**	**24.73**	**297**	*i*			11 50 40.0	
	0.2nm,0.6s,baz=98,slow=318,SNR=1.8							
I26DE	**FREYUNG INFRAS**	**28.04**	**327**	*i*			12 08 30.0	
	baz=133,slow=322,SNR=1.6							
I42PT	**GRACIOSA ISLAN**	**54.37**	**300**	*i*			14 51 30.0	
	baz=84,slow=313,SNR=1.7							

IDC ***28*** *09:19:30.6±5.0, 7°.54S×127°.56E, h114km±45km, mb3.7/12, mbtmp4.2/15, Error ellipse: s-maj=33.4km s-min=13.0km az=74.0*

DJA ***28*** *09:19:40.0±1.2, 8°.3S±13°.×12°.8E±°, h158km±17km, M4.4/6, mb4.3/6, mB4.6/1, MLv4.5/4, Mw(mB)3.8/1*

ISC 28 09:19:34.0±0.5, 7°.57S±0°.06×127°.97E±0°.09, h142km, n22, σ1881/25, mb3.8/12, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.00**	**238**	P		**Pn**		**09 20 50.2**	**+2.9**
EDFI	**Ende, Flores**	**6.32**	**259**	P		**Pn**		**09 21 08.2**	**+3.1**
	0.1nm36nm,0.9s								
SIJI	**Sorong**	**7.42**	**26**	P		**Pn**		**09 21 21.6**	**+1.8**
	14nm,0.3s,baz=218,slow=11,SNR=12								
SIJI				S		**Sn**		**09 22 43.9**	**+1.3**
	2.8nm,0.4s,baz=118,slow=23,SNR=1.2								
WRA	**Warramunga Arr**	**13.77**	**154**	P		**Pn**		**09 22 43.7**	**+0.3**
	8.1nm,0.8s,baz=323,slow=14,SNR=90								
WRA				S		Sn		09 25 05.1	-11
	20nm,0.9s,baz=324,slow=24,SNR=14								
ASAR	**Alice Springs**	**16.99**	**161**	P		**Pn**		**09 23 24.5**	**+1.1**
	6.2nm,0.6s,baz=344,slow=12,SNR=55								
ASAR				S		**S**		**09 26 28.6**	**-4.3**
	2.9nm,0.7s,baz=312,slow=20,SNR=6.7								
PMG	**Port Moresby**	**19.07**	**97**	P		**Pn**		**09 23 49.6**	**+1.6**
	55nm,0.8s,baz=274,slow=3.8,SNR=7.9								
CTA	**Charters Tower**	**21.66**	**127**	P		**P**		**09 24 15.3**	**+1.8**
	5.2nm,0.8s,baz=301,slow=5.4,SNR=2.3								
	5.2nm,0.8s								
STKA	**Stephens Creek**	**27.32**	**154**	P		**P**		**09 25 06.2**	**+0.7**
	1.4nm,0.9s,baz=320,slow=15,SNR=1.4								
	1.4nm,0.9s								
KSRS	**Korea Array**	**44.78**	**360**	P		**P**		**09 27 32.4**	**-1.2**
	1.1nm,0.5s,baz=176,slow=9.3,SNR=8.4								
	1.1nm,0.5s								
SONM	**Songino Array**	**58.36**	**343**	P		**P**		**09 29 13.4**	**-1.1**
	0.6nm,0.5s,baz=151,slow=6.3,SNR=2.9								
	0.6nm,0.5s								
MKAR	**Makanchi Array**	**67.61**	**328**	P		**P**		**09 30 13.6**	**-1.9**
	0.9nm,0.6s,baz=123,slow=7.9,SNR=12								
	0.9nm,0.6s								
ZALV	**Zalesovo Beam**	**71.21**	**335**	P		**P**		**09 30 34.7**	**-2.7**
	1.2nm,0.6s,baz=134,slow=6.4,SNR=3.8								
	1.2nm,0.6s								
KURBB	**Kurchatov Arra**	**71.95**	**329**	P		**P**		**09 30 40.6**	**-1.3**
	1.3nm,0.6s,baz=134,slow=5.2,SNR=15								
	1.3nm,0.6s								
VNDA	**Vanda**	**72.14**	**173**	P		**P**		**09 30 41.5**	**-1.1**
	0.4nm,0.6s,baz=318,slow=8.9,SNR=6.3								
	0.4nm,0.6s								
SEY	**Seymchan**	**72.74**	**11**	P		**P**		**09 30 45.5**	**-0.8**
	0.6nm,0.4s,baz=37,slow=15,SNR=4.3								
	0.6nm,0.4s								
MAW	**Mawson**	**73.69**	**201**	P		**P**		**09 30 51.6**	**-0.3**
	1.8nm,0.5s,baz=94,slow=38,SNR=3.1								
	1.8nm,0.5s								
QSPA	**South Pole Qui**	**82.42**	**180**	P		**P**		**09 31 40.2**	**0.0**
	1.9nm,0.6s,baz=284,slow=1.6,SNR=22								
	1.9nm,0.6s								
AKTO	**Aktyubinsk**	**83.29**	**323**	P		**P**		**09 31 44.3**	**-0.5**
	1.6nm,0.6s,baz=104,slow=5.9,SNR=7.7								
	1.6nm,0.6s								
TORD	**Torodi Ar. Bea**	**126.94**	**281**	PKP		**PKPdf**		**09 38 20.7**	**-1.4**
	0.7nm,0.7s,baz=66,slow=1.9,SNR=3.6								
TXAR	**Lajitas Array**	**126.94**	**59**	PKP		**PKiKP**		**09 38 22.2**	**-0.2**
	0.1nm,0.5s,baz=320,slow=3.8,SNR=1.7								
CPUP	**Villa Florida**	**145.92**	**171**	PKPbc		**PKPbc**		**09 38 57.4**	**-0.2**
	0.8nm,0.4s,baz=196,slow=5.7,SNR=4.9								
LPAZ	**La Paz**	**151.44**	**146**	PKPbc		**PKPbc**		**09 39 12.7**	**-0.2**
	1.1nm,0.7s,baz=143,slow=4.7,SNR=3.0								
LPAZ				PKPab		**PKPab**		**09 39 23.3**	**+1.8**
	1.0nm,0.6s,baz=194,slow=4.2,SNR=6.2								

BJI ***28*** *09:32:28.0±0.0, 55°.23N×159°.58E, h5km, mb4.9/66, mB5.1/56, Ms5.2/72, Ms7 5.1/69*

IDC ***28*** *09:32:29.0±0.4, 55°.18N×159°.56E, h0km, mb4.9/45, mbtmp4.9/49, ML4.8/4, MS4.4/75, Error ellipse: s-maj=9.3km s-min=8.0km az=158.0*

KRSC ***28*** *09:32:31.5±0.7, 55°.21N×159°.60E, h44km±20km, ML5.6*

GCMT ***28*** *09:32:33.8±0.2, 55°.24N±0°.01×159°.63E±0°.02, h13km, MW5.1/116, Moment Tensor Solution. s76,c114; s116,c191; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=3.85±.14; Mθθ5.06±.11; Mϕϕ-1.21±.09; Mrθ3.33±.29; Mθϕ-0.39±.07; Mϕr-1.73±.26; Best double couple: M≤5.89300×10¹⁶ NP1:ϕs72.00000°, δ30.00000°, λ-125.00000°. NP2:ϕs291.00000°, δ66.00000°, λ-72.00000°. Principal axes: T 6.2820, Plg19.0000°, Azm8.0000°; N -0.7790, Plg16.0000°, Azm103.0000°; P -5.5030, Plg64.0000°, Azm231.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MOS ***28*** *09:32:33.1±0.9, 55°.19N×159°.64E, h40km, mb5.4/102, MS4.6/50 Error ellipse: s-maj=5.5km s-min=2.7km az=81.1*

NEIC ***28*** *09:32:34.4±1.6, 55°.16N±0°.06×159°.6E±0°.1, h35km±1km, mb5.3/660, Error ellipse: s-maj=11.8km s-min=9.6km az=131.0*

ISC 28 09:32:33.8±0.3, 55°.14N±0°.02×159°.61E±0°.02, h29km±1km, h29km:pP-P, n1515, σ1934/1588, mb5.3/449, MS4.7/139, 36C-49D, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TUMR	**Tumrok**	**0.34**	**65**	PN		**Pb**		**09 32 38.4**	**-3.5**
TUMR	**Tumrok**	**0.34**	**65**	*e*P		**Pb**		**09 32 38.4**	**-3.5**
KMNR	**Kamenistaya**	**0.71**	**30**	PN		**Pb**		**09 32 44.4**	**-3.4**
KMNR	**Kamenistaya**	**0.71**	**30**	*e*P		**Pb**		**09 32 44.4**	**-3.4**
KPT	**Kopyto**	**0.90**	**23**	PN		**Pn**		**09 32 46.9**	**-3.7**
KPT	**Kopyto**	**0.90**	**23**	*e*P		**Pn**		**09 32 46.9**	**-3.7**
KIRR	**Kirishev**	**0.92**	**27**	PN		**Pn**	

KRMR	**Karymshinskiy**	**2.47**	**201**	PN	**Pn**	**09 33 12.1**	**0.0**
KRMR	**Karymshinskiy**	**2.47**	**201**	*e*P	**Pn**	**09 33 12.1**	**0.0**
APC	**Apacha**	**2.65**	**214**	PN	**Pn**	**09 33 15.2**	**+0.8**
APC				S	**Sb**	**09 33 49.3**	**-3.2**
APC	**Apacha**	**2.65**	**214**	*e*P	**Pn**	**09 33 15.2**	**+0.8**
APC				*e*S	**Sb**	**09 33 49.3**	**-3.2**
GRL	**Gorelyy**	**2.75**	**200**	PN	**Pn**	**09 33 16.9**	**+0.9**
GRL	**Gorelyy**	**2.75**	**200**	*e*P	**Pn**	**09 33 16.9**	**+0.9**
RUS	**Russkaya**	**2.79**	**194**	PN	**Pn**	**09 33 16.7**	**+0.3**
RUS	**Russkaya**	**2.79**	**194**	*e*P	**Pn**	**09 33 16.7**	**+0.3**
MTVR	**Mutnovka**	**2.79**	**198**	PN	**Pn**	**09 33 17.4**	**+0.8**
MTVR	**Mutnovka**	**2.79**	**198**	*e*P	**Pn**	**09 33 17.4**	**+0.8**
ASAK	**Asacha**	**2.94**	**201**	PN	**Pn**	**09 33 19.3**	**+0.7**
ASAK	**Asacha**	**2.94**	**201**	*e*P	**Pn**	**09 33 19.3**	**+0.7**
KDTR	**Khodutka, Kamc**	**3.46**	**196**	PN	**Pn**	**09 33 26.4**	**+0.8**
KDTR				S	**Sn**	**09 34 07.7**	**+2.2**
KDTR	**Khodutka, Kamc**	**3.46**	**196**	*e*P	**Pn**	**09 33 26.4**	**+0.8**
BKI	**Bering**	**3.65**	**86**	PN	**Pn**	**09 33 27.7**	**-0.5**
BKI				S	**Sn**	**09 34 10.0**	**-0.3**
BKI	**Bering**	**3.65**	**86**	*e*P	**Pn**	**09 33 27.7**	**-0.5**
BKI				*e*S	**Sn**	**09 34 10.3**	**0.0**
PALN	**Palana**	**3.97**	**3**	PN	**Pn**	**09 33 31.0**	**-1.5**
PALN	**Palana**	**3.97**	**3**	*e*P	**Pn**	**09 33 31.0**	**-1.5**
PAU	**Pauzhetka**	**4.04**	**206**	PN	**Pn**	**09 33 34.4**	**+0.8**
PAU	**Pauzhetka**	**4.04**	**206**	*e*P	**Pn**	**09 33 34.4**	**+0.8**
OSSR	**Ossora**	**4.53**	**23**	PN	**Pn**	**09 33 40.3**	**0.0**
OSSR	**Ossora**	**4.53**	**23**	*e*P	**Pn**	**09 33 40.3**	**0.0**
SKR	**Severo-Kuril's**	**4.94**	**207**	*e*PN	**Pn**	**09 33 49.8**	**+3.9**
SKR				pmax	pmax		
	comp=Z,556nm,0.7s						
SKR				MLR	MLR		
	comp=Z,15µm,16.0s						
SKR	**Severo-Kuril's**	**4.94**	**207**	*e*P	**Pn**	**09 33 49.6**	**+3.7**
TILK	**Tilichiki**	**6.37**	**31**	PN	**Pn**	**09 34 06.1**	**+0.6**
MA2	**Magadan**	**6.53**	**317**	Pn	**Pn**	**09 34 06.7**	**-1.0**
	comp=Z,2.1nm,0.3s,baz=116,slow=10,SNR=24						
MA2				Lg	Lg	09 35 50.5	
	baz=189,slow=21 comp=Z,31nm,0.7s						
MA2	**Magadan**	**6.53**	**317**		**Pn**	**09 34 06.4**	**-1.3**
MA2	**Magadan**	**6.53**	**317**⇑	*e*PN	**Pn**	**09 34 07.3**	**-0.4**
MA2				pmax	pmax		
	comp=Z,31nm,0.7s						
MA2				MLR	MLR		
	comp=Z,1µm,3.0s						
SEY	**Seymchan**	**8.65**	**338**	Pn	**Pn**	**09 34 36.1**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=148,slow=13,SNR=12						
SEY				Lg	Lg	09 37 00.7	
	comp=Z,0.7nm,0.3s,baz=49,slow=19,SNR=2.3						
SEY	**Seymchan**	**8.65**	**338**	*c i* PN	**Pn**	**09 34 37.4**	**+0.6**
SEY				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SEY				MLR	MLR		
	comp=Z,4µm,10.0s						
SHEM	**Shemya Is, Ala**	**8.89**	**100**	Pn	**Pn**	**09 34 39.9**	**-0.1**
	comp=Z,17nm,0.3s,baz=290,slow=14,SNR=19						
SHEM				Sn	**Sn**	**09 36 15.6**	**-3.4**
	comp=Z,2.0nm,0.3s,baz=276,slow=19,SNR=3.5						
SHEM				LR	LR	09 37 48.9	
	comp=Z,2µm,21.4s,baz=296,slow=36 comp=Z,70nm,0.6s						
SMY	**Shemya**	**8.89**	**100**	Pn	**Pn**	**09 34 40.4**	**+0.4**
SMY	**Shemya**	**8.89**	**100**	PN	**Pn**	**09 34 40.4**	**+0.4**
OKH	**Okha**	**9.87**	**268**	*c i* PN	**Pn**	**09 34 57.5**	**+4.0**
OKH				pmax	pmax		
	comp=Z,200nm,9.0s						
OKH				MLR	MLR		
	comp=Z,7µm,12.0s						
OKH				MLR	MLR		
	comp=N,4µm,12.0s						
OKH				MLR	MLR		
	comp=E,8µm,11.0s						
TYV	**Tymovskoe**	**11.07**	**254**	*e*PN	Pn	09 35 15.8	+5.9
TYV				pmax	pmax		
	comp=Z,19nm,1.1s						
TYV				pmax	pmax		
	comp=Z,200nm,4.0s						
TYV				MLR	MLR		
	comp=E,4µm,15.0s						
TYV				MLR	MLR		
	comp=Z,5µm,15.0s						
NKL	**Nikolayevsk**	**11.28**	**268**	*e*PN	**Pn**	**09 35 12.5**	**-0.2**
NKL				pmax	pmax		
	comp=E,3.0nm,1.1s						
NKL				pmax	pmax		
	comp=N,355nm,1.0s						
NKL				pmax	pmax		
	comp=Z,57nm,1.0s						
NKL				MLR	MLR		
	comp=N,12µm,16.0s						
NKL				MLR	MLR		
	comp=Z,3µm,13.0s						
UGL	**Uglegorsk**	**12.36**	**248**	*e*PN	**P**	**09 35 40.8**	**+1.5**
UGL				S	Sn	09 37 57.4	+13
UGL				pmax	pmax		
	comp=Z,1µm,2.5s						
UGL				pmax	pmax		
	comp=Z,168nm,0.9s						
UGL				MLR	MLR		
	comp=Z,5µm,13.0s						
UGL				MLR	MLR		
	comp=E,7µm,11.0s						
UGL				MLR	MLR		
	comp=N,2µm,13.0s						
AMKA	**Amchitka**	**12.37**	**100**	Pn	**Pn**	**09 35 26.4**	**-1.4**
KUR	**Kuril'sk**	**12.43**	**222**	*e*PN	**Pn**	**09 35 29.8**	**+1.3**
KUR				pmax	pmax		
	comp=Z,3µm,3.0s						
KUR				pmax	pmax		
	comp=N,2µm,3.1s						
KUR				pmax	pmax		
	comp=E,2µm,3.1s						
KUR				pmax	pmax		
	comp=N,39nm,1.1s						
KUR				pmax	pmax		
	comp=Z,72nm,1.1s						
KUR				pmax	pmax		
	comp=E,41nm,0.8s						
KUR				MLR	MLR		
	comp=N,4µm,14.0s						
KUR				MLR	MLR		
	comp=E,4µm,14.0s						
KUR				MLR	MLR		
	comp=Z,5µm,14.0s						
BILL	**Bilibino**	**13.31**	**11**		**Pn**	**09 35 40.8**	**+0.3**
BILL	**Bilibino**	**13.31**	**11**	*d i* PN	**Pn**	**09 35 43.6**	**+3.1**
BILL				*e*S	**Sn**	**09 38 12.8**	**+5.5**
BILL				pmax	pmax		
	comp=Z,233nm,2.5s						
BILL				MLR	MLR		
	comp=Z,6µm,12.0s						
YSS	**Yuzh-Sakhalins**	**13.37**	**239**	Pn	**Pn**	**09 35 40.0**	**-1.3**
YSS	**Yuzh-Sakhalins**	**13.37**	**239**	*d i* PN	**Pn**	**09 35 44.4**	**+3.0**
YSS				pmax	pmax		
	comp=Z,40nm,1.2s						
YSS				pmax	pmax		
	comp=Z,700nm,6.7s						
YSS				pmax	pmax		
	comp=N,500nm,6.5s						
YSS				MLR	MLR		
	comp=N,3µm,14.0s						
YSS				MLR	MLR		
	comp=Z,6µm,14.0s						
KIWB	**Kanaga Island**	**14.20**	**94**	Pn	**Pn**	**09 35 51.5**	**-1.2**
YUK	**Yuzh-Kuril'sk**	**14.21**	**224**	*c i* P	**Pn**	**09 35 52.7**	**-0.2**
YUK				*e*S	**Sn**	**09 38 26.1**	**-3.4**
YUK				pmax	pmax		
	comp=Z,624nm,1.3s						
YUK				pmax	pmax		
	comp=Z,993nm,1.7s						
ADK	**Adak**	**14.46**	**93**	Pn	**Pn**	**09 35 55.7**	**-0.5**
ADK	**Adak**	**14.46**	**93**	P	**Pn**	**09 35 55.7**	**-0.5**
GRNR	**Gornyy**	**14.62**	**262**	⇓ *i* P	**P**	**09 36 06.5**	**+2.1**
GRNR				pmax	pmax		
	comp=E,20nm,0.7s						
GRNR				pmax	pmax		
	comp=N,10.0nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,40nm,0.9s						
GRNR				MLR	MLR		
	comp=N,2µm,13.0s						
GRNR				MLR	MLR		
	comp=E,2µm,12.0s						
GRNR				MLR	MLR		
	comp=Z,3µm,12.0s						
GSTR	**Great Sitkin T**	**14.74**	**92**	Pn	**Pn**	**09 35 59.3**	**-0.7**
JKA	**Kamikawa-asahi**	**15.54**	**232**	Pn	**Pn**	**09 36 10.6**	**-0.1**
JKA				IAmb	IAmb	09 36 16.0	
	comp=Z,447nm,1.5s						
ASAJ	**Asahikawa**	**15.54**	**232**	LR	LR	09 42 15.1	
	comp=Z,5µm,18.9s,baz=50,slow=38						
ASAJ	**Asahikawa**	**15.54**	**232**	P	**Pn**	**09 36 10.6**	**-0.1**
ASAJ				pmax	pmax		
	comp=Z,447nm,1.5s						
ATKA	**Atka Island**	**15.77**	**90**	P	**P**	**09 36 15.3**	**-1.8**
GAMB	**Gambell**	**16.81**	**48**	Pn	**Pn**	**09 36 26.2**	**-0.4**
GAMB	**Gambell**	**16.81**	**48**	P	**Pn**	**09 36 27.2**	**+0.6**
	baz=253,SNR=7.9						
SPIA	**Saint Paul Isl**	**16.85**	**71**	Pn	**Pn**	**09 36 27.1**	**-0.1**
SPIA	**Saint Paul Isl**	**16.85**	**71**	P	**Pn**	**09 36 28.0**	**+0.7**
	baz=276						
SPIA	**Saint Paul Isl**	**16.85**	**71**	P	**P**	**09 36 29.2**	**+0.1**
YAK	**Yakutsk**	**16.93**	**306**	Pn	**Pn**	**09 36 28.8**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=89,slow=0.8,SNR=6.3						
YAK				LR	LR	09 44 12.1	
	comp=Z,974nm,18.5s,baz=114,slow=42 comp=Z,12nm,0.5s						
YAK	**Yakutsk**	**16.93**	**306**	*e*P	**P**	**09 36 29.4**	**-0.6**
YAK				*e*S	**Sn**	**09 39 36.0**	**+0.7**
YAK				pmax	pmax		
	comp=Z,31nm,1.2s						
YAK				pmax	pmax		
	comp=E,23nm,1.3s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.0s						
YAK				smax	smax		
	comp=N,486nm,4.4s						
YAK				smax	smax		
	comp=E,314nm,4.5s						
YAK				MLR	MLR		
	comp=Z,2µm,12.0s						
YAK				MLR	MLR		
	comp=E,1µm,12.0s						
YAK				MLR	MLR		
	comp=N,2µm,13.0s						
ERM	**Erimo**	**17.00**	**226**		**Pn**	**09 36 26.7**	**-2.5**
ERM	**Erimo**	**17.00**	**226**	*ce*P	**Pn**	**09 36 28.2**	**-0.9**
ERM				pmax	pmax		
	comp=Z,53nm,1.0s						
ERM				MLR	MLR		
	comp=Z,4µm,14.0s						
ERM	**Erimo**	**17.00**	**226**	P	**Pn**	**09 36 28.8**	**-0.3**
JEW	**Eniwo**	**17.06**	**231**		**Pn**	**09 36 28.2**	**-1.8**
JEW				IAmb	IAmb	09 36 31.9	
	comp=Z,238nm,1.4s						
TEY	**Ternei**	**17.81**	**245**⇑	*i* P	**P**	**09 36 41.8**	**+2.0**
TEY				pmax	pmax		
	comp=Z,90nm,1.2s						
TEY				pmax	pmax		
	comp=E,60nm,1.2s						
TEY				pmax	pmax		
	comp=N,40nm,1.1s						
TEY				pmax	pmax		
	comp=N,800nm,3.2s						
TEY				pmax	pmax		
	comp=E,1µm,3.2s						
TEY				pmax	pmax		
	comp=Z,2µm,3.2s						
TEY				MLR	MLR		
	comp=E,900nm,13.0s						
TEY				MLR	MLR		
	comp=N,1µm,15.0s						
TEY				MLR	MLR		
	comp=Z,2µm,14.0s						
KLR	**Kul'dur**	**18.00**	**262**	P	**P**	**09 36 43.0**	**+1.2**
	comp=Z,14nm,0.7s,baz=67,slow=10,SNR=38						
KLR	**Kul'dur**	**18.00**	**262**	*d i* P	**P**	**09 36 43.6**	**+1.7**
KLR				pmax	pmax		
	comp=Z,90nm,1.7s						
KLR				MLR	MLR		
	comp=Z,4µm,13.0s						
NIKH	**Nikolski High**	**18.56**	**84**	P	**P**	**09 36 46.1**	**-1.9**
NIKH				IAmb	IAmb	09 36 54.8	
	comp=Z,374nm,1.3s						
NIKH	**Nikolski High**	**18.56**	**84**	P	**Pn**	**09 36 49.3**	**+0.9**
	baz=290						
NIKH				S	**S**	**09 40 19.8**	**+2.0**
	baz=290						
ZEA	**Zeya**	**18.78**	**279**	*e*P	**Pn**	**09 36 50.7**	**-0.4**
ZEA				*e*S	**S**	**09 40 23.5**	**+1.3**
ZEA				pmax	pmax		
	comp=E,200nm,4.7s						
ZEA				pmax	pmax		
	comp=Z,300nm,7.0s						
ZEA				smax	smax		
	comp=E,400nm,6.3s						
ZEA				smax	smax		
	comp=N,600nm,9.3s						
ZEA				MLR	MLR		
	comp=E,900nm,11.0s						
ZEA				MLR	MLR		
	comp=N,900nm,12.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,12.0s						
JTM	**Tenmabayashi**	**18.89**	**228**	P	**P**	**09 36 50.6**	**-1.1**
TNA	**Tin City**	**18.91**	**44**		**P**	**09 36 51.1**	**-0.6**
TNA	**Tin City**	**18.91**	**44**	P	**Pn**	**09 36 53.0**	**+0.6**
	baz=252,SNR=6.8						
UNV	**Unalaska Valle**	**19.62**	**80**	P	**P**	**09 36 59.1**	**-0.5**
UNV				IAmb	IAmb	09 37 02.4	
	comp=Z,125nm,1.0s						
UNV	**Unalaska Valle**	**19.62**	**80**	P	**Pn**	**09 37 00.3**	**-0.8**
	baz=288,SNR=22						
UNV				S	**Sn**	**09 40 40.1**	**-0.2**
	baz=288						
ANM	**Nome**	**19.69**	**47**	P	**P**	**09 37 00.6**	**+0.3**
ANM	**Nome**	**19.69**	**47**	P	**P**	**09 37 00.6**	**+0.3**
ANM				pmax	pmax		
	comp=Z,122nm,1.2s						
ANM	**Nome**	**19.69**	**47**	P	**Pn**	**09 37 01.7**	**-0.2**
	baz=258,SNR=23						
ANM				S	**Sn**	**09 40 43.7**	**+1.8**
	baz=258						
AKUT	**Akutan**	**19.95**	**79**	P	**Pn**	**09 37 03.9**	**-1.0**
USA0B	**Ussuriysk Arra**	**20.81**	**250**	P	**P**	**09 37 13.1**	**+0.5**
USA0B	**Ussuriysk Arra**	**20.81**	**250**	P	**P**	**09 37 13.1**	**+0.5**
USA0B				pmax	pmax		
	comp=Z,729nm,1.5s						
USRK	**Ussuriysk Ar.**	**20.81**	**250**	P	**P**	**09 37 13.2**	**+0.6**
	comp=Z,148nm,0.9s,baz=52,slow=12,SNR=174 comp=Z,148nm,0.9s						
USRK	**Ussuriysk Ar.**	**20.81**	**250**	P	**P**	**09 37 13.0**	**+0.4**
FALS	**False Pass**	**21.06**	**75**	P	**P**	**09 37 15.7**	**+0.5**
FALS				IAmb	IAmb	09 37 31.7	
	comp=Z,94nm,0.8s						
FALS	**False Pass**	**21.06**	**75**	P	**P**	**09 37 15.0**	**-0.2**
	baz=286						
FALS	**False Pass**	**21.06**	**75**	P	**P**	**09 37 17.2**	**+2.1**
TIXI	**Tiksi**	**21.11**	**333**	P	**P**	**09 37 16.2**	**+0.6**
TIXI				IAmb	IAmb	09 37 24.3	
	comp=Z,114nm,0.9s						
TIXI	**Tiksi**	**21.11**	**333**	*ce*P	**P**	**09 37 16.7**	**+1.1**
TIXI				pmax	pmax		
	comp=Z,113nm,1.7s						
JMM	**Marumori**	**21.47**	**224**	P	**P**	**09 37 17.5**	**-2.2**
RDOG	**Red Dog Mine**	**21.57**	**38**	P	**P**	**09 37 14.9**	**-5.8**
	baz=252						
MDJ	**Mudanjiang**	**21.85**	**254**	P	**P**	**09 37 23.2**	**-0.5**
MDJ				IAmb	IAmb	09 37 31.7	
	comp=Z,124nm,1.0s						
MDJ	**Mudanjiang**	**21.85**	**254**	P	**P**	**09 37 24.0**	**+0.3**
MDJ				PP	**PnPn**	**09 37 45.0**	**-0.3**
MDJ				S	**S**	**09 41 26.5**	**+3.0**
MDJ				pmax	pmax		
	comp=Z,130nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,2µm,3.5s						
MDJ				LR	LR		
	comp=Z,2µm,17.6s						
MDJ				LR	LR		
	comp=Z,3µm,12.7s						
MDJ				LR	LR		
	comp=Z,5µm,13.3s						
BNX	**BinXian**	**22.38**	**259**	⇓ P	**P**	**09 37 29.5**	**+0.1**
BNX				sP	**pP**	**09 37 35.5**	**-1.8**
BNX				S	**S**	**09 41 33.0**	**-0.4**
BNX				pmax	pmax		
	comp=Z,290nm,1.2s						
BNX				pmax	pmax		
	comp=Z,2µm,6.6s						
BNX				LR	LR		
	comp=Z,1µm,11.3s						
BNX				LR	LR		
	comp=Z,3µm,12.9s						
BNX				LR	LR		
	comp=Z,2µm,12.7s						
JSD	**Sado**	**22.38**	**229**	P	**P**	**09 37 28.8**	**-0.7**
JSD				IAmb	IAmb	09 37 31.4	
	comp=Z,98nm,1.0s						
N16K	**Nishlik Lake**	**22.51**	**59**	P	**P**	**09 37 31.0**	**+0.3**
	baz=275,SNR=122						
N16K				S	**S**	**09 41 38.5**	**+2.9**
	baz=275						
SDPT	**Sand Point**	**22.55**	**73**	P	**P**	**09 37 29.4**	**-1.8**
SDPT				IAmb	IAmb	09 37 46.6	
	comp=Z,228nm,1.8s						
SDPT	**Sand Point**	**22.55**	**73**	P	**P**	**09 37 29.3**	**-1.8**
	baz=286						
S14K	**Fog Glacier**	**22.80**	**70**	P	**P**	**09 37 34.0**	**+0.1**
	baz=285,SNR=15						
O16K	**Kokwok River B**	**22.94**	**61**	P	**P**	**09 37 34.8**	**-0.4**
	baz=278,SNR=37						
O16K				S	**S**	**09 41 43.4**	**+0.3**
	baz=278						
P16K	**Nushagak River**	**23.07**	**63**	P	**P**	**09 37 36.7**	**+0.2**
	baz=279,SNR=26						
P16K				S	**S**	**09 41 47.7**	**+2.3**
	baz=279						
JYT	**Yasato**	**23.13**	**223**	P	**P**	**09 37 36.4**	**-0.9**
JYT				IAmb	IAmb	09 37 39.0	
	comp=Z,119nm,1.3s						
CHNA	**Chernabura Isl**	**23.18**	**74**	P	**P**	**09 37 36.7**	**-1.0**
	baz=288,SNR=41						
CNBA	**Chernabura Isl**	**23.19**	**74**	P	**P**	**09 37 36.8**	**-0.9**
CNBA				IAmb	IAmb	09 37 39.0	
	comp=Z,90nm,0.8s						
GCSA	**Galena City Sc**	**23.34**	**48**	P	**P**	**09 37 38.7**	**-0.4**
	baz=267,SNR=28						
GCSA				S	**S**	**09 41 53.0**	**+3.4**
	baz=267						
O17K	**Koliganek Bris**	**23.42**	**61**	P	**P**	**09 37 40.0**	**0.0**
	baz=278,SNR=58						
O17K				S	**S**	**09 41 53.7**	**+2.7**
	baz=278						
MJB9	**Matsu-Tunnel**	**23.66**	**227**	P	**P**	**09 37 42.4**	**-0.2**
MAJO	**Matsushiro**	**23.67**	**227**	P	**P**	**09 37 42.4**	**-0.2**
MAJO	**Matsushiro**	**23.67**	**227**	*d i* P	**P**	**09 37 41.7**	**-0.9**
MAJO				pmax	pmax		
	comp=Z,281nm,1.4s						
MAJO				MLR	MLR		
	comp=Z,2µm,15.0s						
MAJO	**Matsushiro**	**23.67**	**227**	P	**P**	**09 37 42.6**	**0.0**
MJAR	**Matsushiro Arr**	**23.67**	**227**	P	**P**	**09 37 41.9**	**-0.7**
	comp=Z,52nm,1.0s,baz=22,slow=7.9,SNR=52						
MJAR				LR	LR	09 47 24.6	
	comp=Z,2µm,19.2s,baz=40,slow=38 comp=Z,52nm,1.0s						
MJAR	**Matsushiro Arr**	**23.67**	**227**	P	**P**	**09 37 41.6**	**-1.0**
MJAR	**Matsushiro Arr**	**23.67**	**227**	P	**P**	**09 37 41.6**	**-1.0**
MJAR				pmax	pmax		
	comp=Z,232nm,1.5s						
TTA	**Tatalina**	**23.69**	**53**	P	**P**	**09 37 42.5**	**-0.2**
TTA				IAmb	IAmb	09 37 44.1	
	comp=Z,116nm,0.8s						
TTA	**Tatalina**	**23.69**	**53**	P	**P**	**09 37 42.5**	**-0.2**
TTA				pmax	pmax		
	comp=Z,116nm,0.8s						
TTA	**Tatalina**	**23.69**	**53**	P	**P**	**09 37 42.6**	**-0.1**
	baz=272,SNR=133						
Q16K	**King Salmon**	**23.82**	**63**	P	**P**	**09 37 44.2**	**+0.4**
	baz=281,SNR=26						
P17K	**Kvichak River**	**23.84**	**62**	P	**P**	**09 37 44.5**	**+0.5**
	baz=280						
N18K	**Kilae Creek**	**23.90**	**58**	P	**P**	**09 37 45.1**	**+0.4**
N18K	**Kilae Creek**	**23.90**	**58**	P	**P**	**09 37 45.1**	**+0.4**
	baz=277,SNR=68						
N18K				S	**S**	**09 42 02.9**	**+4.1**
	baz=277						
SVW2	**Sparrevohn**	**24.00**	**57**	P	**P**	**09 37 44.6**	**-1.0**
R17K	**Ugashik Creek**	**24.17**	**66**	P	**P**	**09 37 46.9**	**-0.3**
	baz=283,SNR=50						
R17K				S	**S**	**09 42 07.9**	**+4.8**
	baz=283						
L19K	**White Mountain**	**24.26**	**55**	P	**P**	**09 37 46.8**	**-1.1**
L19K				IAmb	IAmb	09 37 52.3	
	comp=Z,93nm,1.0s						
L19K	**White Mountain**	**24.26**	**55**	P	**P**	**09 37 47.7**	**-0.3**
	baz=274,SNR=102						
O18K	**Koktuh Hills**	**24.35**	**60**	P	**P**	**09 37 49.3**	**+0.5**
O18K	**Koktuh Hills**	**24.35**	**60**	P	**P**	**09 37 49.4**	**+0.5**
	baz=279,SNR=96						
O18K				S	**S**	**09 42 08.4**	**+2.4**
	baz=279						
P18K	**Big Mountain,**	**24.41**	**61**	P	**P**	**09 37 49.1**	**-0.3**
P18K	**Big Mountain,**	**24.41**	**61**	P	**P**	**09 37 49.5**	**+0.1**
	baz=280,SNR=73						
P18K				S	**S**	**09 42 10.4**	**+3.3**
	baz=280						
M19K	**Big River Lodg**	**24.50**	**55**	P	**P**	**09 37 50.4**	**+0.2**
M19K	**Big River Lodg**	**24.50**	**55**	P	**P**	**09 37 50.2**	**+0.1**
	baz=275						
J20K	**Nowinta River**	**24.50**	**50**	P	**P**	**09 37 50.0**	**-0.1**
J20K	**Nowinta River**	**24.50**	**50**	P	**P**	**09 37 50.0**	**-0.1**
	baz=270,SNR=298						
J20K				S	**S**	**09 42 09.6**	**+1.2**
	baz=270						
K20K	**Telida**	**24.55**	**52**	P	**P**	**09 37 50.4**	**-0.2**
K20K				IAmb	IAmb	09 37 52.5	
	comp=Z,114nm,0.8s						
K20K	**Telida**	**24.55**	**52**	P	**P**	**09 37 50.4**	**-0.2**
	baz=272,SNR=149						
N19K	**Bonanza Creek**	**24.57**	**58**	P	**P**	**09 37 51.3**	**+0.4**
N19K				IAmb	IAmb	09 37 53.1	
	comp=Z,63nm,0.8s						
N19K	**Bonanza Creek**	**24.57**	**58**	P	**P**	**09 37 51.3**	**+0.4**
	baz=278,SNR=51						
N19K				S	**S**	**09 42 12.5**	**+2.8**
	baz=278						
Q18K	**Katmai Hardscr**	**24.67**	**63**	P	**P**	**09 37 51.5**	**-0.3**
	baz=282						
Q18K				S	**S**	**09 42 12.0**	**+0.7**
	baz=282						
CN2	**Changchun**	**24.67**	**257**	*e*P	**P**	**09 37 49.8**	**-2.0**
CN2				S	**S**	**09 42 09.0**	**-2.4**
CN2				pmax	pmax		
	comp=Z,40nm,1.6s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,2µm,14.0s						
CN2				LR	LR		
	comp=Z,2µm,14.0s						
CN2				LR	LR		
	comp=Z,2µm,15.1s						
A21K	**Barrow**	**24.68**	**32**	P	**P**	**09 37 50.5**	**-1.1**
A21K				IAmb	IAmb	09 37 54.9	
	comp=Z,102nm,0.9s						
A21K	**Barrow**	**24.68**	**32**	P	**P**	**09 37 51.2**	**-0.4**
	baz=252						
A21K				S	**S**	**09 42 11.3**	**+0.2**
	baz=252						
L20K	**Farewell, AK**	**24.69**	**54**	P	**P**	**09 37 51.4**	**-0.5**
	baz=274,SNR=75						
IMAR	**Indian Mountai**	**24.72**	**45**	P	**P**	**09 37 51.3**	**-0.8**
O19K	**Port Alsworth**	**24.74**	**59**	P	**P**	**09 37 52.5**	**+0.2**
O19K				IAmb	IAmb	09 37 54.5	
	comp=Z,107nm,0.8s						
O19K	**Port Alsworth**	**24.74**	**59**	P	**P**	**09 37 52.4**	**+0.2**
	baz=279,SNR=18						
JGF	**Kuroka**	**24.83**	**227**	P	**P**	**09 37 53.3**	**-0.1**
JGF				IAmb	IAmb	09 37 54.5	
	comp=Z,52nm,0.8s						
HIA	**Hailar**	**24.86**	**273**	P	**P**	**09 37 53.1**	**-0.5**
HIA				IAmb	IAmb	09 37 54.8	
	comp=Z,118nm,1.5s						
HIA	**Hailar**	**24.86**	**273**	P	**P**	**09 37 53.1**	**-0.5**
HIA				pmax	pmax		
	comp=Z,118nm,1.5s						
BOD	**Bodaibo**	**24.96**	**295**	*e*P	**P**	**09 37 53.9**	**-0.4**
BOD				pmax	pmax		
	comp=Z,229nm,1.6s						
CHIR	**Chirikof Islan**	**25.05**	**70**	P	**P**	**09 37 54.9**	**-0.2**
CHIR	**Chirikof Islan**	**25.05**	**70**	P	**P**	**09 37 54.2**	**-1.0**
	baz=288						
M20K	**Styx River**	**25.09**	**55**	P	**P**	**09 37 56.2**	**+0.6**

H21K IAmb IAmb 09 37 57.7
comp=Z,59nm,0.9s
H21K Melozitna Rive 25.10 46 P P 09 37 55.0 -0.5
baz=268,SNR=81
H21K S **S 09 42 20.2 +2.3**
baz=268
INU Inuyama 25.19 228 P P 09 37 54.4 -2.1
INU IAmb IAmb 09 37 58.5
comp=Z,138nm,1.4s
INU Inuyama 25.19 228 P P 09 37 56.4 -0.1
Q19K Cape Douglas, 25.30 62 P P 09 37 57.3 -0.1
Q19K Cape Douglas, 25.30 62 P P 09 37 57.2 -0.3
baz=282,SNR=62
CHUM Lake Minchumin 25.32 50 P P 09 37 57.8 +0.3
baz=273,SNR=50
CHUM S **S 09 42 23.7 +2.3**
baz=273
I21K Tanana 25.43 47 P P 09 37 58.4 -0.1
I21K IAmb IAmb 09 38 02.5
comp=Z,95nm,0.9s
I21K Tanana 25.43 47 P P 09 37 58.6 +0.1
baz=270,SNR=156
PPLA Purkeypile 25.43 53 P P 09 37 58.6 -0.1
PPLA Purkeypile 25.43 53 P P 09 37 59.2 +0.4
baz=275,SNR=44
PPLA S **S 09 42 26.6 +3.0**
baz=275
CAST Castle Rocks 25.44 51 P P 09 37 58.5 -0.2
CAST IAmb IAmb 09 38 01.4
comp=Z,61nm,0.9s
CAST Castle Rocks 25.44 51 P P 09 37 58.6 0.0
baz=274,SNR=59
RSO Redoubt South 25.46 58 P P 09 37 59.5 +0.5
O20K Slope Mountain 25.59 59 P P 09 38 00.3 +0.2
baz=280,SNR=19
SII Sitkinak Islan 25.61 68 P P 09 37 59.2 -1.0
baz=287
SII Sitkinak Islan 25.61 68 P P 09 38 01.3 +1.1
N20K Mount Spurr 25.62 57 P P 09 38 00.9 +0.5
baz=278
H22K Ishtalitna Cre 25.69 46 P P 09 38 00.9 0.0
baz=269,SNR=98
H22K S **S 09 42 29.1 +1.8**
baz=269
SKT Skwentna 25.83 55 IAmb IAmb 09 38 06.6
comp=Z,63nm,0.9s
SKT Skwentna 25.83 55 P P 09 38 02.0 -0.2
baz=277,SNR=40
BPAW Bear Paw Mtn. 25.89 50 P P 09 38 02.6 -0.1
BPAW Bear Paw Mtn. 25.89 50 P P 09 38 02.6 -0.1
baz=273,SNR=33
OHAK Old Harbor 25.90 66 P P 09 38 01.3 -1.4
OHAK IAmb IAmb 09 38 18.9
comp=Z,82nm,1.1s
OHAK Old Harbor 25.90 66 P P 09 38 01.6 -1.2
baz=286,SNR=10
OHAK S **S 09 42 32.7 +2.1**
baz=286
MLY Manley 25.96 48 IAmb IAmb 09 38 06.4
comp=Z,50nm,0.9s
MLY Manley 25.96 48 P P 09 38 03.2 -0.2
baz=272,SNR=94
MLY S **S 09 42 34.0 +2.3**
baz=272
Q20K Shuyak Island 26.01 62 P P 09 38 03.2 -0.6
baz=284,SNR=26
JHJ Hachijo jima 2 26.03 220 LR LR 09 48 51.9
comp=Z,628nm,21.8s,baz=74,slow=38
KDAK Kodiak Island 26.11 64 P P 09 38 03.5 -1.3
comp=Z,41nm,0.8s,baz=310,slow=5.2,SNR=25
comp=Z,41nm,0.8s
KDAK Kodiak Island 26.11 64 P P 09 38 03.4 -1.3
KDAK IAmb IAmb 09 38 04.6
comp=Z,51nm,0.8s
KDAK Kodiak Island 26.11 64 *c i*P **P 09 38 03.2 -1.6**
KDAK pmax pmax
comp=Z,80nm,0.9s
KDAK MLR MLR
comp=Z,2µm,17.0s
KDAK Kodiak Island 26.11 64 P P 09 38 03.6 -1.3
baz=285
KDAK S **S 09 42 38.5 +4.5**
baz=285
HOM Homer 26.16 60 P P 09 38 04.9 -0.3
baz=282,SNR=16
D23K Nanushuk River 26.16 39 P P 09 38 05.0 -0.1
baz=264,SNR=40
D23K S **S 09 42 35.0 +0.3**
baz=264
HHU Hamhung 26.17 248 P P 09 38 04.7 -0.6
HHU pP **sP 09 38 21.9 +4.4**
HHU S **S 09 42 27.2 -7.9**
HHU AmB
comp=Z,478nm,1.9s
HHU AMS AMS
comp=N,35nm,1.9s
HHU AMS AMS
comp=E,167nm,9.1s
HHU AMS AMS
comp=Z,27nm,1.5s
CAPN Captain Cook N 26.19 57 P P 09 38 03.7 -1.7
baz=280
COLD Coldfoot 26.20 43 P P 09 38 05.2 -0.3
COLD Coldfoot 26.20 43 P P 09 38 05.1 -0.4
baz=268,SNR=15
COLD S **S 09 42 36.1 +0.8**
baz=268
TRF Thorofare Moun 26.25 51 IAmb IAmb 09 38 11.2
comp=Z,67nm,0.9s
TRF Thorofare Moun 26.25 51 P P 09 38 05.9 -0.2
baz=275,SNR=50
TRF S **S 09 42 37.7 +1.3**
baz=275
SUA Susitna One 26.27 56 IAmb IAmb 09 38 06.8
comp=Z,47nm,0.8s
SUA Susitna One 26.27 56 P P 09 38 05.5 -0.8
baz=279
SUA S **S 09 42 37.7 +0.9**
baz=279
C23K Itkillik River 26.30 37 P P 09 38 06.3 0.0
baz=262,SNR=62
C23K S **S 09 42 37.6 +0.8**
baz=262
CUT Chulitna 26.37 54 P P 09 38 06.3 -0.7
CUT Chulitna 26.37 54 P P 09 38 06.4 -0.6
baz=277,SNR=13
CNPM China Poot 26.39 60 IAmb IAmb 09 38 07.3
comp=Z,81nm,0.9s
H23K Yukon River 26.44 46 IAmb IAmb 09 38 12.0
comp=Z,81nm,1.1s
H23K Yukon River 26.44 46 P P 09 38 07.9 +0.2
baz=271,SNR=126
H23K S **S 09 42 40.8 +1.6**
baz=271
BRLK Bradley Lake 26.51 60 P P 09 38 07.2 -1.2
BRLK IAmb IAmb 09 38 08.3
comp=Z,68nm,0.9s
M22K Willow 26.53 55 IAmb IAmb 09 38 09.5
comp=Z,57nm,0.9s
M22K Willow 26.53 55 P P 09 38 07.1 -1.3
baz=279,SNR=7.6
TOLK Toolik Lake Re 26.53 39 P P 09 38 08.3 -0.2
TOLK IAmb IAmb 09 38 27.6
comp=Z,124nm,1.1s
TOLK Toolik Lake Re 26.53 39 P P 09 38 08.3 -0.2
baz=265,SNR=45
TOLK S **S 09 42 42.2 +1.6**
baz=265
I23K Minto, Yukon-K 26.54 47 IAmb IAmb 09 38 12.8
comp=Z,56nm,0.9s
I23K Minto, Yukon-K 26.54 47 P P 09 38 08.4 -0.1
baz=273,SNR=86
BWN Browne 26.55 50 P P 09 38 09.1 +0.5
BWN IAmb IAmb 09 38 25.9
comp=Z,82nm,0.9s
BRSE Bradley Lake S 26.59 60 P P 09 38 07.9 -1.2
baz=282,SNR=14
NEA2 Nenana 26.69 49 P P 09 38 09.4 -0.6
baz=274,SNR=46
RC01 Rabbit Creek A 26.82 56 P P 09 38 09.6 -1.5
baz=280
MCK McKinley 26.82 50 P P 09 38 10.9 -0.3
MCK McKinley 26.82 50 P P 09 38 10.9 -0.3
MCK pmax pmax
comp=Z,49nm,1.1s
MCK McKinley 26.82 50 P P 09 38 10.5 -0.6
baz=276,SNR=18

D24K Happy Valley 26.84 38 P P 09 38 10.9 -0.4
baz=265,SNR=26
RND Reindeer 26.89 51 P P 09 38 11.3 -0.6
RND Reindeer 26.89 51 P P 09 38 11.3 -0.6
RND pmax pmax
comp=Z,44nm,1.0s
O22K Cooper Landing 26.94 58 P P 09 38 11.2 -1.0
baz=282
C24K Franklin Bluff 26.94 37 P P 09 38 11.5 -0.6
baz=264
C24K S **S 09 42 48.0 +1.0**
baz=264
SNY Shenyang 27.00 256 ⇓P **P 09 38 12.3 -0.6**
SNY pmax pmax
comp=Z,150nm,1.2s
SNY pmax pmax
comp=Z,690nm,4.7s
SNY LR LR
comp=Z,4µm,14.0s
SNY LR LR
comp=Z,7µm,15.1s
SNY LR LR
comp=Z,10µm,14.6s
SEHB SEOHWA 27.01 244 P P 09 38 12.6 -0.4
PMR Palmer 27.02 55 P P 09 38 11.3 -1.5
PMR Palmer 27.02 55 P P 09 38 11.3 -1.5
PMR pmax pmax
comp=Z,14nm,0.8s
PMR Palmer 27.02 55 P P 09 38 11.8 -1.0
baz=280,SNR=6.8
MDM Murphy Dome 27.03 48 P P 09 38 12.1 -0.9
GHO Glory Hole Cre 27.09 55 P P 09 38 12.3 -1.3
WAT1 Susitna Watana 27.10 52 P P 09 38 12.6 -1.0
baz=278
WAT1 S **S 09 42 49.3 -0.4**
baz=278
WRH Wood River Hil 27.13 49 IAmb IAmb 09 38 14.7
comp=Z,81nm,1.0s
H24K Noodor Dome 27.13 46 P P 09 38 13.8 -0.1
H24K Noodor Dome 27.13 46 P P 09 38 13.9 0.0
baz=273,SNR=34
SEW Seward 27.15 58 P P 09 38 12.9 -1.1
baz=282,SNR=23
SEW S **S 09 42 52.6 +2.3**
baz=282
TCOL CIGO, UAF Yank 27.19 48 P P 09 38 14.2 -0.2
TCOL CIGO, UAF Yank 27.19 48 P P 09 38 14.0 -0.4
baz=274,SNR=9.7
COLA College 27.20 48 P P 09 38 14.2 -0.3
COLA College 27.20 48 *c i*P **P 09 38 14.1 -0.3**
COLA pmax pmax
comp=Z,29nm,0.9s
COLA MLR MLR
comp=Z,2µm,18.0s
COLA College 27.20 48 P P 09 38 13.9 -0.5
baz=274
CCB Clear Creek Bu 27.23 48 P P 09 38 14.3 -0.4
POKR Poker Plat Res 27.36 47 P P 09 38 15.4 -0.4
POKR Poker Plat Res 27.36 47 P P 09 38 15.5 -0.4
baz=274,SNR=8.1
SML Sawmill 27.36 55 P P 09 38 14.6 -1.4
SML IAmb IAmb 09 38 16.6
comp=Z,108nm,1.0s
SML Sawmill 27.36 55 P P 09 38 15.5 -0.5
baz=280,SNR=23
SML S **S 09 42 55.1 +1.4**
baz=280
KNK Knik Glacier 27.37 55 P P 09 38 15.5 -0.6
baz=281,SNR=19
WAT6 Susitna Watana 27.51 53 P P 09 38 16.3 -1.2
baz=279,SNR=21
DHY Denali Highway 27.60 52 P P 09 38 17.2 -1.1
baz=278
IL31 27.62 48 P P 09 38 17.4 -0.7
ILAR Eielson Array 27.62 48 P P 09 38 17.4 -0.9
comp=Z,20nm,0.8s,baz=274,slow=9.3,SNR=216
ILAR PcP **PcP 09 41 34.1 -0.7**
comp=Z,2.1nm,0.9s,baz=296,slow=3.2,SNR=7.3
comp=Z,20nm,0.8s
ILAR Eielson Array 27.62 48 P P 09 38 17.1 -1.1
HDA Harding Lake 27.62 49 P P 09 38 17.1 -1.2
HDA Harding Lake 27.62 49 P P 09 38 17.0 -1.4
baz=276,SNR=29
M23K Glacier View 27.64 55 P P 09 38 17.9 -0.6
baz=280,SNR=17
SUJ Sinuiju 27.68 252 P P 09 38 18.1 -0.8
SUJ pP **sP 09 38 37.7 +6.6**
SUJ S S 09 42 45.4 -14
SUJ AmB
comp=Z,847nm,2.8s
SUJ AMS AMS
comp=N,7µm,14.3s
SUJ AMS AMS
comp=E,7µm,14.0s
SUJ AMS AMS
comp=Z,6µm,11.6s
PYAG Pyongyang 27.75 249 P P 09 38 19.5 -0.1
KS19 Wonju Array Si 27.79 244 P P 09 38 19.0 -1.0
KSRS Korea Array 27.80 244 P P 09 38 20.2 +0.2
comp=Z,17nm,0.8s,baz=38,slow=10.0,SNR=47
KSRS PcP **PcP 09 41 35.5 -0.2**
comp=Z,3.3nm,0.6s,baz=19,slow=2.0,SNR=12
KSRS LR LR 09 49 42.9
comp=Z,962nm,18.0s,baz=50,slow=37
comp=Z,17nm,0.8s
SCM Sheep Creek Mo 27.82 54 P P 09 38 19.2 -1.0
SCM Sheep Creek Mo 27.82 54 P P 09 38 19.2 -1.0
SCM pmax pmax
comp=Z,89nm,0.8s
SCM Sheep Creek Mo 27.82 54 P P 09 38 19.9 -0.3
baz=281,SNR=36
SCM S **S 09 43 03.1 +2.0**
baz=281
KSAR Wonju Array Be 27.82 244 P P 09 38 19.2 -1.1
KSAR Wonju Array Be 27.82 244 P P 09 38 19.2 -1.1
GLI Glacier Island 28.12 56 P P 09 38 21.1 -1.7
GLI IAmb IAmb 09 38 23.0
comp=Z,147nm,1.8s
GLI Glacier Island 28.12 56 P P 09 38 21.7 -1.1
baz=283
K24K Donnelly Dome 28.21 50 P P 09 38 22.2 -1.3
baz=278,SNR=22
J25K Salcha River, 28.28 48 P P 09 38 22.5 -1.8
J25K Salcha River, 28.28 48 P P 09 38 22.5 -1.8
baz=277,SNR=35
M24K Tolsona, Glenn 28.31 54 P P 09 38 24.5 0.0
M24K Tolsona, Glenn 28.31 54 P P 09 38 24.7 +0.2
baz=281,SNR=15
FID Port Fidalgo 28.45 56 P P 09 38 24.6 -1.1
FID IAmb IAmb 09 38 29.4
comp=Z,70nm,1.0s
PAX Paxson 28.47 52 P P 09 38 25.3 -0.7
PAX IAmb IAmb 09 38 30.7
comp=Z,93nm,1.9s
PAX Paxson 28.47 52 P P 09 38 25.3 -0.7
PAX pmax pmax
comp=Z,93nm,1.9s
PAX Paxson 28.47 52 P P 09 38 25.7 -0.3
baz=280,SNR=15
HJU Haeju 28.50 247 P P 09 38 23.9 -2.4
HJU pP **sP 09 38 42.3 +3.9**
HJU S S 09 42 54.5 -17
HJU AmB
comp=Z,448nm,2.6s
HJU AMS AMS
comp=N,236nm,4.2s
HJU AMS AMS
comp=E,563nm,10.0s
HJU AMS AMS
comp=Z,144nm,2.6s
KLU Klutina 28.55 55 P P 09 38 26.5 -0.1
KLU IAmb IAmb 09 38 34.3
comp=Z,42nm,0.9s
KLU Klutina 28.55 55 P P 09 38 26.3 -0.3
baz=282,SNR=18
KLU S **S 09 43 14.9 +2.3**
baz=282
RIDG Independent Ri 28.63 50 P P 09 38 25.8 -1.5
RIDG IAmb IAmb 09 38 27.0
comp=Z,49nm,1.0s
RIDG Independent Ri 28.63 50 P P 09 38 25.9 -1.5
baz=279,SNR=25
DIV Divide 28.70 55 P P 09 38 27.4 -0.6
DIV IAmb IAmb 09 38 28.7
comp=Z,46nm,0.8s
HARP HAARP 28.72 53 P P 09 38 27.7 -0.4
baz=281,SNR=8.1
Q23K Middleton Isla 28.83 59 P P 09 38 27.2 -1.8
baz=286
EYAK Cordova Ski Ar 28.84 57 P P 09 38 29.0 -0.1
EYAK IAmb IAmb 09 38 30.1
comp=Z,63nm,1.3s
EYAK Cordova Ski Ar 28.84 57 P P 09 38 28.8 -0.3
baz=284,SNR=8.2
TJN Taejon 28.91 243 P P 09 38 30.3 +0.4
SCRK Sand Creek 28.97 49 P P 09 38 28.9 -1.5
SCRK IAmb IAmb 09 38 30.1
comp=Z,49nm,0.8s
SCRK Sand Creek 28.97 49 P P 09 38 28.9 -1.5
baz=279,SNR=92
DOT Dot Lake 28.99 50 P P 09 38 28.9 -1.6
J26L Joseph Creek 29.07 48 P P 09 38 29.4 -1.9
J26L Joseph Creek 29.07 48 P P 09 38 29.2 -2.1
baz=279,SNR=15
J26L S **S 09 43 21.8 +1.1**
baz=279
I26K Coal Creek Min 29.13 47 P P 09 38 29.8 -1.9
I26K Coal Creek Min 29.13 47 P P 09 38 30.1 -1.6
baz=278
N25K Chitina, Valde 29.14 54 P P 09 38 30.5 -1.4
N25K IAmb IAmb 09 38 33.0
comp=Z,40nm,0.8s
N25K Chitina, Valde 29.14 54 P P 09 38 31.9 -0.1
baz=283,SNR=21
N25K S **S 09 43 24.0 +2.1**
baz=283
MENT Mentasta 29.27 51 P P 09 38 32.7 -0.2
BMRM Bremner River 29.29 56 P P 09 38 32.2 -0.9
BMRM Bremner River 29.29 56 P P 09 38 33.3 +0.1
baz=284,SNR=37
BMRM S **S 09 43 27.8 +3.6**
baz=284
L26K Log Cabin Wild 29.42 51 P P 09 38 33.7 -0.6
L26K Log Cabin Wild 29.42 51 P P 09 38 33.7 -0.6
baz=281,SNR=12
GLB Gilahina Butte 29.55 54 P P 09 38 35.6 +0.1
HMT Hamilton 29.61 57 P P 09 38 35.0 -1.1
HMT IAmb IAmb 09 38 37.2
comp=Z,39nm,0.9s
M26K Nabesna, AK 29.70 52 P P 09 38 35.5 -1.3
M26K IAmb IAmb 09 38 38.6
comp=Z,65nm,0.9s
M26K Nabesna, AK 29.70 52 P P 09 38 37.4 +0.5
baz=283,SNR=54
M26K S **S 09 43 33.8 +3.2**
baz=283
VRDI Verde Repeater 29.77 55 P P 09 38 37.6 0.0
VRDI IAmb IAmb 09 38 38.6
comp=Z,31nm,0.8s
K27K Chicken 29.79 49 P P 09 38 37.0 -0.5
K27K Chicken 29.79 49 P P 09 38 36.8 -0.8
baz=281
K27K S **S 09 43 32.8 +1.0**
baz=281
JNU Nakatsue 29.80 234 LR LR 09 51 17.7
comp=Z,857nm,18.2s,baz=27,slow=38
XLT XiLinHaoTe 29.93 266 ⇑*i*P **P 09 38 39.3 +0.3**
XLT sP pP 09 38 47.0 -0.6
XLT S **S 09 43 37.3 +2.8**
XLT pmax pmax
comp=Z,61nm,0.5s
XLT pmax pmax
comp=Z,280nm,4.1s
XLT LR LR
comp=Z,280nm,14.4s
XLT LR LR
comp=Z,3µm,13.5s
XLT LR LR
comp=Z,4µm,12.7s
MCARA McCarthy VSAT 29.93 54 P P 09 38 39.3 +0.5
MCARA IAmb IAmb 09 38 42.5
comp=Z,38nm,0.8s
MCARA McCarthy VSAT 29.93 54 P P 09 38 39.2 +0.4
baz=284,SNR=11
MCARA S **S 09 43 37.3 +3.2**
baz=284
CRQM Cirque 30.03 56 P P 09 38 39.7 -0.2
CRQE Cirque 30.06 56 P P 09 38 40.3 +0.2
baz=286,SNR=14
L27K Beaver Creek, 30.09 51 P P 09 38 40.3 +0.1
L27K IAmb IAmb 09 38 41.7
comp=Z,52nm,0.9s
L27K Beaver Creek, 30.09 51 P P 09 38 40.5 +0.3
baz=282,SNR=75
L27K S **S 09 43 38.9 +2.3**
baz=282
DL2 Dalian 30.09 253 *e*P **P 09 38 39.3 -1.1**
DL2 S **S 09 43 38.5 +1.6**
DL2 pmax pmax
comp=Z,86nm,1.0s
DL2 pmax pmax
comp=Z,290nm,9.0s
DL2 LR LR
comp=Z,2µm,16.0s
DL2 LR LR
comp=Z,1µm,15.0s
DL2 LR LR
comp=Z,2µm,12.7s
BCAR Beaver Creek A 30.11 51 P P 09 38 40.1 -0.3
BCAR **PcP 09 41 42.5 +1.3**
BGLC Bering Glacier 30.14 57 P P 09 38 41.7 +1.1
baz=286
M27K Edge Creek, AK 30.22 52 P P 09 38 42.3 +0.8
M27K Edge Creek, AK 30.22 52 P P 09 38 42.3 +0.8
baz=284,SNR=83
M27K S **S 09 43 41.9 +3.0**
baz=284
WAX Waxell Ridge 30.25 56 P P 09 38 42.0 +0.3
WAX IAmb IAmb 09 38 43.3
comp=Z,56nm,0.9s
ISLE Juniper Island 30.45 56 P P 09 38 43.4 -0.2
ISLE IAmb IAmb 09 38 48.2
comp=Z,59nm,1.1s
BARN Barnard Glacie 30.65 55 IAmb IAmb 09 38 47.0
comp=Z,62nm,0.8s
BVCY Beaver Creek 30.67 52 P P 09 38 45.9 +0.6
baz=284,SNR=49
GRNC Granite Creek 30.70 55 P P 09 38 46.3 +0.4
GRNC IAmb IAmb 09 38 47.2
comp=Z,55nm,0.8s
JCJ Chichijima 30.76 211 LR LR 09 52 11.8
comp=Z,300nm,20.1s,baz=26,slow=38
MESA MESA 30.76 56 P P 09 38 46.9 +0.5
baz=287,SNR=12
CTG Chitna Glacier 30.82 55 P P 09 38 47.5 +0.6
baz=286,SNR=34
CTGM Chitina Glacie 30.83 55 P P 09 38 46.9 0.0
DAWY Dawson 30.94 48 P P 09 38 47.1 -0.7
DAWY Dawson 30.94 48 P P 09 38 47.2 -0.6
baz=283,SNR=17
YUK3 Moose Creek 31.01 53 P P 09 38 48.7 +0.1
baz=286,SNR=21
YUK3 S **S 09 43 54.2 +2.7**
baz=286
LOGN Logan Glacier 31.02 55 IAmb IAmb 09 38 49.9
comp=Z,55nm,0.8s
TABL Table Mountain 31.07 56 P P 09 38 49.2 +0.1
I29M Ogilvie Camp, 31.13 46 IAmb IAmb 09 38 50.3
comp=Z,33nm,0.8s
I29M Ogilvie Camp, 31.13 46 P P 09 38 49.1 -0.3
baz=281,SNR=55
EPYK Eagle Plains 31.58 44 P P 09 38 53.4 0.0
EPYK Eagle Plains 31.58 44 P P 09 38 53.2 -0.1
baz=281,SNR=23
PINM Pinnacle 31.59 56 P P 09 38 54.0 +0.4
baz=288,SNR=28
BCPM Bancas Point 31.93 56 P P 09 38 56.6 +0.2
YUK4 Talbot Arm 31.97 53 P P 09 38 57.1 +0.1
baz=287,SNR=23
PNL Peninsula 32.14 57 P P 09 38 58.3 0.0
baz=290,SNR=18
IRK Irkutsk 32.17 288 *e*P **P 09 38 58.7 +0.1**
IRK pmax pmax
comp=Z,42nm,2.4s
YUK6 Outpost Mounta 32.22 54 P P 09 38 59.5 +0.2
baz=288,SNR=19
BJI Beijing 32.35 260 P P 09 39 00.3 0.0
BJI S **S 09 44 15.8 +3.5**
BJI pmax pmax
comp=Z,16nm,0.8s
BJI pmax pmax
comp=Z,230nm,6.9s

BJI					LR	LR				
	comp=Z,390nm,14.1s									
BJI					LR	LR				
	comp=Z,2μm,14.8s									
BJT	**Baijiatuau**	**32.37**	**260**		P	**P**	**09 38 59.3**	**-1.2**		
BJT	**Baijiatuau**	**32.37**	**260**		P	**P**	**09 38 59.3**	**-1.2**		
BJT					pmax	pmax				
	comp=Z,13nm,0.8s									
INK	**Inuvik**	**32.45**	**40**		P	**P**	**09 39 00.9**	**+0.2**		
	comp=Z,15nm,0.7s,baz=292,slow=7.7,SNR=34									
	comp=Z,15nm,0.7s									
INK	**Inuvik**	**32.45**	**40**		P	**P**	**09 39 01.1**	**+0.2**		
INK	**Inuvik**	**32.45**	**40**		P	**P**	**09 39 01.1**	**+0.2**		
INK					pmax	pmax				
	comp=Z,214nm,2.0s									
INK	**Inuvik**	**32.45**	**40**		P	**P**	**09 39 01.0**	**+0.2**		
	baz=280,SNR=21									
INK					S	**S**	**09 44 15.2**	**+2.0**		
	baz=280									
M30M	**Minto, Yukon**	**32.45**	**51**		P	**P**	**09 39 01.6**	**+0.6**		
	baz=287,SNR=34									
M30M					S	**S**	**09 44 17.2**	**+3.7**		
	baz=287									
N30M	**Aishikik Lake**	**32.65**	**53**		P	**P**	**09 39 02.9**	**+0.1**		
	baz=288,SNR=15									
HYT	**Haines Junctio**	**32.66**	**54**		P	**P**	**09 39 03.7**	**+0.7**		
HYT	**Haines Junctio**	**32.66**	**54**		P	**P**	**09 39 03.7**	**+0.7**		
	baz=289,SNR=90									
HYT					S	**S**	**09 44 20.9**	**+3.9**		
	baz=289									
ULN	**Ulaanbaatar**	**32.82**	**279**		P	**P**	**09 39 04.2**	**-0.3**		
ULN	**Ulaanbaatar**	**32.82**	**279**	*d i*	P	**P**	**09 39 03.9**	**-0.6**		
ULN					pmax	pmax				
	comp=Z,6.0nm,1.1s									
ULN					MLR	MLR				
	comp=Z,920nm,12.0s									
ULN	**Ulaanbaatar**	**32.82**	**279**		P	**P**	**09 39 04.2**	**-0.3**		
ULN					x	**pP**	**09 39 10.2**	**-3.0**		
ULN					pP	**sP**	**09 39 14.6**	**-2.1**		
P30M	**Million Dollar**	**33.15**	**55**		P	**P**	**09 39 08.0**	**+0.8**		
	baz=290									
P30M					S	**S**	**09 44 24.8**	**+0.4**		
	baz=290									
SONM	**Songino Array**	**33.21**	**280**		P	**P**	**09 39 07.9**	**0.0**		
	comp=Z,3.2nm,0.6s,baz=64,slow=8.8,SNR=12									
SONM					PcP	**PcP**	**09 41 49.3**	**-0.6**		
	comp=Z,6.3nm,0.7s,baz=70,slow=2.3,SNR=11									
SONM					ScP	**ScP**	**09 45 33.7**	**+1.9**		
	comp=Z,0.5nm,0.6s,baz=33,slow=5.7,SNR=4.3									
	comp=Z,3.2nm,0.6s									
SONM	**Songino Array**	**33.21**	**280**		P	**P**	**09 39 07.5**	**-0.4**		
SONM						**PcP**	**09 41 48.9**	**-1.0**		
N31M	**Braeburn, Yuko**	**33.23**	**52**		P	**P**	**09 39 08.8**	**+1.0**		
N31M					IAmb	IAmb	09 39 13.5			
	comp=Z,34nm,0.8s									
N31M	**Braeburn, Yuko**	**33.23**	**52**		P	**P**	**09 39 08.8**	**+1.0**		
	baz=289,SNR=24									
N31M					S	**S**	**09 44 27.2**	**+1.5**		
	baz=289									
O30N	**Mendenhall**	**33.33**	**54**		P	**P**	**09 39 09.4**	**+0.6**		
	baz=290,SNR=46									
ZAK	**Zakamensk**	**33.62**	**286**	*e*	P	**P**	**09 39 11.3**	**-0.1**		
ZAK					pmax	pmax				
	comp=Z,16nm,1.4s									
M31M	**Drury Creek, Y**	**33.63**	**51**		P	**P**	**09 39 12.2**	**+0.9**		
	baz=289,SNR=70									
M31M					S	**S**	**09 44 32.7**	**+1.0**		
	baz=289									
PLBC	**Pleasant Camp**	**33.66**	**56**		P	**P**	**09 39 12.2**	**+0.7**		
	baz=292,SNR=12									
WHY	**Whitehorse**	**33.93**	**53**		P	**P**	**09 39 15.0**	**+1.0**		
WHY	**Whitehorse**	**33.93**	**53**		P	**P**	**09 39 15.1**	**+1.1**		
	baz=291,SNR=66									
WHY					S	**S**	**09 44 41.7**	**+5.1**		
	baz=291									
FARO	**Faro, Yukon**	**34.08**	**50**		P	**P**	**09 39 15.7**	**+0.5**		
FARO					IAmb	IAmb	09 39 17.0			
	comp=Z,48nm,1.1s									
SKAG	**Skagway**	**34.15**	**56**		P	**P**	**09 39 17.1**	**+1.3**		
	baz=292,SNR=25									
MOY	**Mondy**	**34.23**	**289**	*e*	P	**P**	**09 39 17.6**	**+0.9**		
MOY					pmax	pmax				
	comp=Z,42nm,1.2s									
HHC	**Hu-ho-hao-te**	**34.45**	**266**	*e*	P	**P**	**09 39 18.5**	**-0.2**		
HHC					S	**S**	**09 44 44.3**	**-0.7**		
HHC					pmax	pmax				
	comp=Z,61nm,1.0s									
HHC					pmax	pmax				
	comp=Z,500nm,4.9s									
HHC					LR	LR				
	comp=Z,2μm,14.0s									
HHC					LR	LR				
	comp=Z,3μm,13.6s									
HHC					LR	LR				
	comp=Z,5μm,13.3s									
TIA	**Tai'an**	**34.51**	**255**	⇓	P	**P**	**09 39 18.0**	**-1.2**		
TIA					pmax	pmax				
	comp=Z,10.0nm,0.7s									
TIA					pmax	pmax				
	comp=Z,140nm,3.6s									
TIA					LR	LR				
	comp=Z,1μm,11.8s									
TIA					LR	LR				
	comp=Z,1μm,14.2s									
TIA					LR	LR				
	comp=Z,3μm,12.7s									
A36M	**Sachs Harbour**	**34.52**	**32**		P	**P**	**09 39 19.4**	**+0.6**		
	baz=282,SNR=12									
N32M	**Quiet Lake**	**34.57**	**52**		P	**P**	**09 39 19.8**	**+0.3**		
	baz=291,SNR=22									
BESE	**Bessie Mountai**	**34.72**	**57**		P	**P**	**09 39 21.7**	**+0.9**		
P32M	**Atlin**	**34.87**	**55**		P	**P**	**09 39 22.9**	**+0.8**		
	baz=293,SNR=11									
HNS	**HongShan**	**35.01**	**258**	⇓	P	**P**	**09 39 22.8**	**-0.6**		
HNS					PcP	**PcP**	**09 41 54.0**	**-1.0**		
HNS					S	**S**	**09 44 54.0**	**+0.6**		
HNS					pmax	pmax				
	comp=Z,26nm,1.5s									
HNS					pmax	pmax				
	comp=Z,210nm,3.7s									
HNS					LR	LR				
	comp=Z,2μm,12.7s									
HNS					LR	LR				
	comp=Z,3μm,13.9s									
HNS					LR	LR				
	comp=Z,4μm,13.4s									
P33M	**Teslin, Yukon**	**35.04**	**54**		IAmb	IAmb	09 39 25.5			
	comp=Z,46nm,1.2s									
P33M	**Teslin, Yukon**	**35.04**	**54**		P	**P**	**09 39 24.4**	**+0.8**		
	baz=293,SNR=46									
P33M					S	**S**	**09 44 57.3**	**+3.6**		
	baz=293									
JIS	**Juneau Island**	**35.07**	**57**		P	**P**	**09 39 24.2**	**+0.5**		
SIT	**Sitka**	**35.12**	**59**		P	**P**	**09 39 25.9**	**+1.8**		
	baz=295,SNR=20									
BTO	**Baotou**	**35.49**	**267**	*e*	P	**P**	**09 39 27.3**	**-0.4**		
BTO					S	**S**	**09 45 04.0**	**+3.0**		
BTO					LR	LR				
	comp=Z,10μm,13.4s									
BTO					LR	LR				
	comp=Z,13μm,13.3s									
C36M	**Paulatuk**	**35.55**	**36**		P	**P**	**09 39 27.8**	**+0.1**		
C36M	**Paulatuk**	**35.55**	**36**		P	**P**	**09 39 27.6**	**-0.1**		
	baz=286,SNR=18									
H11N2	**WAKE ISLAND Hy**	**35.78**	**168**		T	T	10 17 01.0			
	baz=355,slow=76,SNR=2028									
H11N3	**WAKE ISLAND Hy**	**35.80**	**168**		T	T	10 17 06.1			
	baz=355,slow=76,SNR=633									
H11N1	**WAKE ISLAND Hy**	**35.80**	**168**		T	T	10 17 02.3			
	baz=355,slow=76,SNR=1061									
TIY	**Taiyuan**	**36.07**	**261**		P	**P**	**09 39 32.3**	**-0.4**		
TIY					PP	**PP**	**09 40 56.3**	**+1.5**		
TIY					S	**S**	**09 45 09.0**	**-0.9**		
TIY					pmax	pmax				
	comp=Z,220nm,3.6s									
TIY					LR	LR				
	comp=Z,2μm,13.1s									
TIY					LR	LR				
	comp=Z,730nm,11.6s									
TIY					LR	LR				
	comp=Z,2μm,12.5s									
SSE	**Sheshan**	**36.23**	**244**		P	**P**	**09 39 32.0**	**-1.9**		
SSE					S	**S**	**09 45 13.0**	**+0.8**		
SSE					pmax	pmax				
	comp=Z,18nm,0.8s									
SSE					pmax	pmax				
	comp=Z,160nm,9.4s									
SSE					LR	LR				
	comp=Z,340nm,18.0s									
SSE					LR	LR				
	comp=Z,410nm,18.7s									
JOW	**Kunigami**	**36.31**	**232**		LR	LR	09 54 09.1			
	comp=Z,870nm,22.0s,baz=68,slow=36									
TGTN	**Hyland Airport**	**36.58**	**50**		P	**P**	**09 39 37.5**	**+0.8**		
	baz=294,SNR=7.9									
KNGR	**Kungurtug, Tuv**	**36.65**	**289**	⇑ *e*	P	**P**	**09 39 38.5**	**+0.9**		
KNGR					pmax	pmax				
	comp=Z,20nm,1.4s									
KNGR					MLR	MLR				
	comp=Z,1μm,12.0s									
NJ2	**Nanjing**	**36.70**	**248**	⇑	P	**P**	**09 39 37.3**	**-0.7**		
NJ2					pP	**pP**	**09 39 40.3**	**-6.3**		
NJ2					PP	**PP**	**09 41 06.5**	**+4.8**		
NJ2					S	**S**	**09 45 27.8**	**+8.3**		
NJ2					sS	**sS**	**09 45 34.0**	**+0.3**		
NJ2					pmax	pmax				
	comp=Z,30nm,1.0s									
NJ2					LR	LR				
	comp=Z,2μm,11.9s									
NJ2					LR	LR				
	comp=Z,2μm,11.1s									
NJ2					LR	LR				
	comp=Z,3μm,12.6s									
WRAK	**Wrangell Islan**	**36.87**	**59**		IAmb	IAmb	09 39 42.7			
	comp=Z,37nm,0.9s									
WRAK	**Wrangell Islan**	**36.87**	**59**		P	**P**	**09 39 40.7**	**+1.5**		
	baz=298,SNR=7.7									
WRAK					S	**S**	**09 45 22.2**	**+0.6**		
	baz=298									
CRAG	**Craig**	**36.93**	**61**		P	**P**	**09 39 40.0**	**+0.3**		
CRAG					IAmb	IAmb	09 39 42.8			
	comp=Z,83nm,1.5s									
CRAG	**Craig**	**36.93**	**61**		P	**P**	**09 39 41.3**	**+1.7**		
	baz=298,SNR=6.8									
CRAG					S	**S**	**09 45 25.5**	**+3.1**		
	baz=298									
H11S1	**WAKE ISLAND Hy**	**36.97**	**169**		T	T	10 18 28.7			
	baz=352,slow=74									
H11S3	**WAKE ISLAND Hy**	**36.98**	**169**		T	T	10 18 21.9			
	baz=352,slow=74									
H11S2	**WAKE ISLAND Hy**	**36.98**	**169**		T	T	10 18 25.8			
	baz=352									
DLBC	**Dease Lake**	**37.08**	**55**		P	**P**	**09 39 39.1**	**-2.0**		
	comp=Z,52nm,0.9s,baz=292,slow=9.5,SNR=122									
	comp=Z,52nm,0.9s									
DLBC	**Dease Lake**	**37.08**	**55**		P	**P**	**09 39 42.8**	**+1.7**		
	baz=296,SNR=66									
DLBC					S	**S**	**09 45 30.5**	**+5.6**		
	baz=296									
T35M	**Bob Quinn**	**37.64**	**57**		P	**P**	**09 39 48.0**	**+2.3**		
	baz=298,SNR=36									
LYN	**LuoYang**	**38.32**	**257**	⇓	P	**P**	**09 39 50.8**	**-0.8**		
LYN					sP	pP	09 39 57.3	-3.0		
LYN					PP	**PnPn**	**09 41 20.3**	**-0.9**		
LYN					S	**S**	**09 45 39.5**	**-4.4**		
LYN					LR	LR				
	comp=Z,2μm,15.7s									
LYN					LR	LR				
	comp=Z,1μm,15.7s									
LYN					LR	LR				
	comp=Z,2μm,13.5s									
DIB	**Dawson Inlet,**	**38.38**	**64**		P	**P**	**09 39 53.0**	**+1.0**		
DIB					IAmb	IAmb	09 39 54.5			
	comp=Z,84nm,1.6s									
GRNB	**Grenville Isla**	**39.34**	**62**		IAmb	IAmb	09 40 05.6			
	comp=Z,80nm,1.4s									
HG4B	**Hotspring**	**39.52**	**64**		P	**P**	**09 40 03.0**	**+1.4**		
HG4B					IAmb	IAmb	09 40 03.7			
	comp=Z,29nm,0.7s									
WHN	**Wuhan**	**40.30**	**251**	⇓	P	**P**	**09 40 06.3**	**-1.9**		
WHN					PP	**PnPn**	**09 41 46.0**	**+1.2**		
WHN					S	**S**	**09 46 12.8**	**-0.9**		
WHN					LR	LR				
	comp=Z,2μm,15.8s									
WHN					LR	LR				
	comp=Z,2μm,12.1s									
WHN					LR	LR				
	comp=Z,4μm,16.1s									
XAN	**Xi'an**	**40.69**	**260**		P	**P**	**09 40 11.8**	**+0.3**		
XAN					PcP	**PcP**	**09 42 11.8**	**-0.8**		
XAN					pmax	pmax				
	comp=Z,9.0nm,1.1s									
XAN					pmax	pmax				
	comp=Z,180nm,5.9s									
XAN					LR	LR				
	comp=Z,3μm,16.2s									
XAN					LR	LR				
	comp=Z,3μm,14.6s									
XAN					LR	LR				
	comp=Z,5μm,14.9s									
BBB	**Bella Bella**	**41.17**	**63**		LR	LR	09 55 57.8			
	comp=Z,671nm,20.9s,baz=304,slow=34									
BBB	**Bella Bella**	**41.17**	**63**		P	**P**	**09 40 16.1**	**+1.0**		
ZALV	**Zalesovo Beam**	**41.46**	**301**		P	**P**	**09 40 16.6**	**-0.8**		
	comp=Z,1.8nm,0.5s,baz=62,slow=7.2,SNR=6.3									
ZALV					PcP	**PcP**	**09 42 13.5**	**-1.2**		
	comp=Z,5.6nm,0.9s,baz=18,slow=5.2,SNR=6.1									
ZALV					LR	LR	09 58 57.2			
	comp=Z,1μm,18.5s,baz=52,slow=38									
	comp=Z,1.8nm,0.5s									
ZALV	**Zalesovo Beam**	**41.46**	**301**		P	**P**	**09 40 16.5**	**-1.0**		
RES	**Resolute Bay**	**41.54**	**23**		P	**P**	**09 40 18.0**	**+0.1**		
	comp=Z,18nm,0.9s,baz=317,slow=9.3,SNR=16									
RES					LR	LR	09 58 58.8			
	comp=Z,773nm,20.5s,baz=301,slow=38									
	comp=Z,18nm,0.9s									
RES	**Resolute Bay**	**41.54**	**23**		P	**P**	**09 40 17.9**	**0.0**		
RES	**Resolute Bay**	**41.54**	**23**		P	**P**	**09 40 17.9**	**0.0**		
RES					pmax	pmax				
	comp=Z,20nm,1.0s									
YKA	**Yellowknife Ar**	**41.87**	**44**		P	**P**	**09 40 20.6**	**-0.1**		
	comp=Z,320nm,0.7s,baz=301,slow=8.0,SNR=195									
YKA					PcP	**PcP**	**09 42 15.8**	**-0.1**		
	comp=Z,3.3nm,0.7s,baz=305,slow=3.5,SNR=6.6									
YKA					ScP	**ScP**	**09 46 06.3**	**+2.5**		
	comp=Z,1.2nm,0.8s,baz=304,slow=4.2,SNR=5.5									
YKA					LR	LR	09 59 30.5			
	comp=Z,532nm,18.9s,baz=296,slow=39									
	comp=Z,32nm,0.7s									
HOLB	**Holberg**	**42.04**	**65**		P	**P**	**09 40 23.0**	**+0.6**		
LZH	**Lanzhou**	**42.12**	**267**	⇓	P	**P**	**09 40 23.5**	**+0.2**		
LZH					sP	pP	09 40 29.8	-2.3		
LZH					PP	**PP**	**09 42 01.8**	**+0.9**		
LZH					S	**S**	**09 46 39.5**	**-1.5**		
LZH					sS	pS	09 46 51.0	-0.1		
LZH					pmax	pmax				
	comp=Z,51nm,1.3s									
LZH					pmax	pmax				
	comp=Z,300nm,5.5s									
LZH					LR	LR				
	comp=Z,3μm,14.0s									
LZH					LR	LR				
	comp=Z,4μm,13.7s									
LZH					LR	LR				
	comp=Z,6μm,16.2s									
GTA	**Gaotai**	**42.14**	**274**	⇓	P	**P**	**09 40 23.3**	**-0.1**		
GTA					pP	pP	09 40 27.5	-4.7		
GTA					sP	sP	09 40 30.0	-5.7		
GTA					PP	**PP**	**09 42 00.0**	**-1.0**		
GTA					S	**S**	**09 46 40.5**	**-0.7**		
GTA					sS	pS	09 46 50.0	-1.3		
GTA					pmax	pmax				
	comp=Z,29nm,1.3s									
GTA					pmax	pmax				
	comp=Z,210nm,3.8s									
GTA					LR	LR				
	comp=Z,3μm,12.7s									
GTA					LR	LR				
	comp=Z,2μm,13.1s									
GTA					LR	LR				
	comp=Z,5μm,13.1s									
GUMO	**Guam**	**43.02**	**201**		LR	LR	09 56 03.8			
	comp=Z,162nm,20.6s,baz=31,slow=33									
ENH	**Enshi**	**43.18**	**256**		P	**P**	**09 40 30.5**	**-1.4**		
NOR	**Nord**	**43.48**	**359**	*i*	P	**P**	**09 40 33.6**	**-0.1**		
NOR					IAmb	IAmb	09 40 35.0			
	comp=Z,2.6nm,0.9s									
CBB	**Campbell River**	**43.83**	**64**		P	**P**	**09 40 37.5**	**+0.6**		
CBB					IAmb	IAmb	09 40 39.1			
	comp=Z,143nm,1.9s									
OZB	**Mount Ozzard**	**44.41**	**65**		P	**P**	**09 40 41.3**	**-0.3**		
OZB					IAmb	IAmb	09 40 43.9			
	comp=Z,53nm,0.8s									
KBS	**Kingsbay**	**44.81**	**352**		P	**P**	**09 40 44.3**	**+0.1**		
KBS	**Kingsbay**	**44.81**	**352**	*e*	P	**P**	**09 40 45.2**	**+0.9**		
KBS					pmax	pmax				
	comp=Z,11nm,0.9s									
KBS					MLR	MLR				
	comp=Z,367nm,15.0s									
KBS	**Kingsbay**	**44.81**	**352**		P	**P**	**09 40 45.0**	**+0.7**		
SPITS	**Spitsbergen Ar**	**45.07**	**350**		P	**P**	**09 40 45.7**	**-0.7**		
	comp=Z,22nm,0.7s,baz=91,slow=8.7,SNR=24									
SPITS					LR	LR	10 00 36.2			
	comp=Z,464nm,18.1s,baz=358,slow=38									
	comp=Z,22nm,0.7s									
SPITS	**Spitsbergen Ar**	**45.07**	**350**		P	**P**	**09 40 45.8**	**-0.6**		
SPITS					pmax	pmax				
	comp=Z,64nm,1.1s									
SPB2	**Spitsbergen Ar**	**45.07**	**350**		P	**P**	**09 40 45.1**	**-1.3**		
SPB2					IAmb	IAmb	09 40 51.9			
	comp=Z,49nm,1.1s									
CLRS	**Cowichan Lake**	**45.21**	**65**		P	**P**	**09 40 49.1**	**+1.3**		
CLRS					IAmb	IAmb	09 40 50.0			
	comp=Z,54nm,0.9s									
LLLB	**Lillooet**	**45.26**	**62**		IAmb	IAmb	09 40 50.5			
	comp=Z,53nm,0.9s									
ZSN	**Zaisan**	**45.26**	**293**	*e*	P	**P**	**09 40 47.4**	**-0.9**		
ZSN	**Zaisan**	**45.26**	**293**	*e*	P	**P**	**09 40 47.5**	**-0.9**		
	baz=293									
PGC	**Sidney**	**45.67**	**65**		P	**P**	**09 40 52.1**	**+0.7**		
PGC					IAmb	IAmb	09 40 53.3			
	comp=Z,26nm,0.8s									
SEM	**Semipalatinsk**	**45.81**	**299**	*e*	P	**P**	**09 40 51.1**	**-1.7**		
SEM					MLR	MLR				
	comp=Z,418nm,13.0s									
SEM	**Semipalatinsk**	**45.81**	**299**	*e*	P	**P**	**09 40 51.2**	**-1.7**		
	baz=299									
SEM					LR	LR	10 00 34.7			
	comp=Z,418nm,13.0s,baz=299									
CD2	**Chengdu**	**45.93**	**262**		P	**P**	**09 40 52.3**	**-1.5**		
CD2					PP	**PP**	**09 42 41.3**	**-0.2**		
CD2					S	**S**	**09 47 35.3**	**-1.1**		
CD2					pmax	pmax				
	comp=Z,10.0nm,0.7s									
CD2					pmax	pmax				
	comp=Z,130nm,8.2s									
CD2					LR	LR				
	comp=Z,2μm,12.9s									
CD2					LR	LR				
	comp=Z,2μm,15.1s									
WMQ	**Urumqi**	**46.06**	**287**	*e*	P	**P**	**09 40 56.3**	**+1.6**		
WMQ					sP	pP	09 41 02.5	-1.0		
WMQ					S	**S**	**09 47 40.8**	**+2.8**		
WMQ					pmax	pmax				
	comp=Z,88nm,0.9s									
WMQ					pmax	pmax				
	comp=Z,380nm,4.3s									
WMQ					LR	LR				
	comp=Z,1μm,12.7s									
WMQ					LR	LR				
	comp=Z,1μm,13.1s									
WMQ					LR	LR				
	comp=Z,750nm,14.5s									
WMQ	**Urumqi**	**46.06**	**287**		P	**P**	**09 40 56.0**	**+1.3**		
KURK	**Kurchatov**	**46.43**	**300**		P	**P**	**09 40 56.4**	**-1.0**		
KURK					IAmb	IAmb	09 40 58.3			
	comp=Z,32nm,0.9s									
KURK	**Kurchatov**	**46.43**	**300**	*ce*	P	**P**	**09 40 56.5**	**-1.0**		
KURK					pmax	pmax				
	comp=Z,30nm,0.8s									
KURK					MLR	MLR				
	comp=Z,2μm,16.0s									
KURK	**Kurchatov**	**46.43**	**300**		P	**P**	**09 40 57.0**	**-0.5**		
KURK					pP	**sP**	**09 41 07.8**	**-2.0**		
KURK					sP	**pP**	**09 41 13.4**	**+7.1**		
KURK					PP	**PP**	**09 42 49.4**	**+2.9**		
WISH	**Wishkah**	**46.47**	**66**		P	**P**	**09 40 57.4**	**-0.3**		
KURBB	**Kurchatov Arra**	**46.54**	**300**		P	**P**	**09 40 57.4**	**-0.9**		
	comp=Z,19nm,0.8s,baz=55,slow=7.9,SNR=99									
KURBB					LR	LR	10 01 41.7			
	comp=Z,840nm,18.2s,baz=34,slow=38									
	comp=Z,19nm,0.8s									
B06A	**Marblemount**	**46.77**	**64**		P	**P**	**09 41 00.8**	**+0.7**		
E03A	**Lebam**	**46.94**	**67**		P	**P**	**09 41 02.1**	**+0.7**		
MK31	**Makanchi Array**	**47.04**	**294**		P	**P**	**09 41 01.4**	**-0.9**		
MK31	**Makanchi Array**	**47.04**	**294**		P	**P**	**09 41 01.4**	**-0.9**		
MK31					pmax	pmax				
	comp=Z,13nm,0.7s									
MKAR	**Makanchi Array**	**47.04**	**294**		P	**P**	**09 41 01.7**	**-0.6**		
	comp=Z,13nm,0.6s,baz=59,slow=7.3,SNR=148									
	comp=Z,13nm,0.6s									
MKAR	**Makanchi Array**	**47.04**	**294**		P	**P**	**09 41 01.4**	**-0.9**		
MAKZ	**Makanchi**	**47.19**	**294**		P	**P**	**09 41 02.6**	**-0.9**		
MAKZ					IAmb	IAmb	09 41 04.3			
	comp=Z,66nm,1.4s									
MAKZ	**Makanchi**	**47.19**	**294**	⇑	P	**P**	**09 41 02.6**	**-0.9**		
MAKZ	**Makanchi**	**47.19**	**294**		P	**P**	**09 41 03.3**	**-0.2**		
MAKZ					x	**pP**	**09 41 09.9**	**-2.4**		
MAKZ					pP	**pwP**	**09 41 12.1**	**-0.3**		
GOMU	**GeErMu**	**47.22**	**274**	⇓	P	**P**	**09 41 03.5**	**-0.7**		
GOMU					sP	pP	09 41 08.3	-4.8		
GOMU					PcP	**PcP**	**09 42 33.0**	**-2.2**		
GOMU					PP	**PP**	**09 42 54.0**	**-1.1**		
GOMU					S	**S**	**09 47 56.5**	**+1.1**		
GOMU					pmax	pmax				
	comp=Z,19nm,1.0s									
GOMU					pmax	pmax				
	comp=Z,140nm,6.4s									
GOMU					LR	LR				
	comp=Z,1μm,12.1s									
GOMU					LR	LR				
	comp=Z,1μm,12.3s									
GOMU					LR	LR				
	comp=Z,2μm,12.5s									
F04D	**Rainier, OR**	**47.53**	**67**		P	**P**	**09 41 07.0**	**+0.8**		
	baz=311									
GYA	**Guiyang**	**47.70**	**255**	⇓	P	**P**	**09 41 05.5**	**-2.3**		
GYA					PP	**PP**	**09 42 53.5**	**-6.0**		
GYA					S	**S**	**09 48 08.5**	**+6.6**		
GYA					pmax	pmax				
	comp=Z,150nm,4.2s									
GYA					LR	LR				
	comp=Z,1μm,15.8s									
GYA					LR	LR				
	comp=Z,860nm,20.2s									
GYA					LR	LR				
	comp=Z,2μm,16.6s									
EDM	**Edmonton**	**47.78**	**54**		P	**P**	**09 41 08.0**	**0.0**		
EDM	**Edmonton**	**47.78**	**54**		P	**P**

baz=312
G05D Wamic, OR 48.98 67 P P 09 41 18.3 +0.9
baz=312,SNR=10
D08A Wollman Farm, 49.03 64 P P 09 41 17.0 -0.7
D08A IAmb IAmb 09 41 22.4
comp=Z,49nm,1.5s
NEW Newport 49.15 61 P P 09 41 18.6 0.0
comp=Z,16nm,0.8s,baz=319,slow=8.1,SNR=38
NEW PcP PcP 09 42 42.2 +0.7
comp=Z,4.5nm,0.6s,baz=295,slow=4.3,SNR=2.5
NEW LR LR 10 00 30.6
comp=Z,635nm,21.9s,baz=312,slow=34
comp=Z,16nm,0.8s
NEW Newport 49.15 61 P P 09 41 18.8 +0.2
NEW IAmb IAmb 09 41 19.8
comp=Z,22nm,0.9s
NEW Newport 49.15 61 P P 09 41 18.8 +0.2
NEW pmax pmax
comp=Z,22nm,0.9s
NEW Newport 49.15 61 P P 09 41 18.8 +0.2
baz=311,SNR=22
HAWA Hanford 49.15 65 P P 09 41 18.7 +0.1
HAWA IAmb IAmb 09 41 23.7
comp=Z,45nm,1.3s
F07A Phinny Hill Vi 49.28 65 P P 09 41 20.2 +0.7
E08A Dider Farm, El 49.33 64 P P 09 41 20.1 +0.2
E08A IAmb IAmb 09 41 21.3
comp=Z,24nm,0.9s
I04A Tendick Farm, 49.37 69 P P 09 41 21.1 +0.7
baz=312,SNR=9.7
DBO Dodson Butte 49.38 70 P P 09 41 21.3 +0.9
DBO IAmb IAmb 09 41 23.0
comp=Z,34nm,1.1s
K02D Willamette Mer 49.43 71 P P 09 41 22.2 +1.3
baz=313
I05D Terrebonne, OR 49.57 68 P P 09 41 22.7 +0.8
baz=312,SNR=20
E09A Wood Farm, Sta 49.79 64 P P 09 41 23.9 +0.4
BRZS Berezniki 49.82 302 *eP* P 09 41 21.3 -2.3
BRZS Berezniki 49.82 302 *eP* P 09 41 21.4 -2.3
baz=302
L02F Cave Junction 49.88 71 P P 09 41 25.5 +1.4
baz=313,SNR=5.9
HUMO Hull Mountain 49.88 70 IAmb IAmb 09 41 26.7
comp=Z,20nm,0.9s
J04D Umpqua Nationa 49.90 69 P P 09 41 25.9 +1.3
baz=313,SNR=16
PINE Pine Mountain 50.16 68 P P 09 41 27.0 +0.5
G08A Pilot Rock 50.19 65 P P 09 41 26.7 +0.1
G08A IAmb IAmb 09 41 27.9
comp=Z,57nm,1.8s
J05D Fort Rock, OR 50.34 69 P P 09 41 29.3 +1.4
baz=313,SNR=40
L04D Klamath Falls 50.49 70 P P 09 41 28.1 -0.9
L04D Klamath Falls 50.49 70 P P 09 41 30.2 +1.2
baz=314,SNR=16
K04D Chiloquin, OR 50.51 70 P P 09 41 30.3 +1.2
baz=313,SNR=5.2
YBH Yreka Blue Hor 50.61 71 LR LR 10 01 14.2
comp=Z,201nm,18.2s,baz=318,slow=34
YBH Yreka Blue Hor 50.61 71 P P 09 41 29.6 -0.2
YBH IAmb IAmb 09 41 32.5
comp=Z,25nm,0.8s
YBH Yreka Blue Hor 50.61 71 P P 09 41 29.6 -0.2
YBH pmax pmax
comp=Z,25nm,0.8s
F10A Beach Ranch, E 50.62 64 P P 09 41 30.2 +0.4
F10A IAmb IAmb 09 41 31.2
comp=Z,27nm,0.8s
KHMM Horse Mountain 50.64 73 P P 09 41 29.9 -0.3
KHMM IAmb IAmb 09 41 33.1
comp=Z,41nm,0.9s
LVZ Lovozero 50.70 336⇑ *i*P P 09 41 30.2 +0.1
LVZ pmax pmax
comp=Z,30nm,1.2s
LVZ MLR MLR
comp=Z,450nm,20.0s
I07A Izee 50.72 67 P P 09 41 31.4 +0.7
PDGK Podgornoye 50.82 292 P P 09 41 30.2 -1.3
DBG Daneborg 50.84 360 *i* P P 09 41 29.3 -1.7
DBG IAmb IAmb 09 41 31.2
comp=Z,3.9nm,0.8s
K05A Summer Lake 50.91 69 P P 09 41 32.1 -0.1
K05A IAmb IAmb 09 41 34.7
comp=Z,40nm,1.0s
JTMT Jette 50.92 60 P P 09 41 32.6 +0.5
KMI Kunming 50.94 258 ⇓P P 09 41 31.3 -1.3
KMI sP pP 09 41 38.5 -3.0
KMI S S 09 48 54.5 +7.0
KMI pmax pmax
comp=Z,12nm,1.2s
KMI pmax pmax
comp=Z,180nm,4.5s
KMI LR LR
comp=Z,1μm,18.1s
KMI LR LR
comp=Z,450nm,15.5s
KMI LR LR
comp=Z,1μm,13.3s
KMRM Mail Ridge 51.11 73 P P 09 41 35.1 +1.5
KPKS Kokpek 51.16 293 *eP* P 09 41 33.3 -0.6
KPKS pmax pmax
comp=Z,11nm,0.7s
KPKS Kokpek 51.16 293 *eP* P 09 41 33.4 -0.6
comp=Z,11nm,0.7s,baz=293
APA Apatity 51.25 337⇓ *i*P P 09 41 32.1 -2.1
APA pmax pmax
comp=Z,5.0nm,0.7s
ARCES ARCESS Array B 51.25 341 P P 09 41 32.0 -2.1
comp=Z,5.9nm,0.8s,baz=35,slow=6.5,SNR=12
ARCES LR LR 10 07 10.1
comp=Z,387nm,19.0s,baz=22,slow=41
comp=Z,5.9nm,0.8s
ARCES ARCESS Array B 51.25 341 P P 09 41 33.2 -1.0
ARCES IAmb IAmb 09 42 13.4
comp=Z,44nm,1.9s
ARCES ARCESS Array B 51.25 341 P P 09 41 33.2 -1.0
ARCES pmax pmax
comp=Z,44nm,1.9s
BMO Blue Mountains 51.34 65 IAmb IAmb 09 41 36.9
comp=Z,26nm,0.8s
ZHN Zhinishke 51.49 292 *eP* P 09 41 35.3 -1.2
ZHN Zhinishke 51.49 292 *eP* P 09 41 35.3 -1.2
baz=292
SATY Saty 51.58 292 *eP* P 09 41 36.3 -0.9
SATY pmax pmax
comp=Z,26nm,1.3s
SATY Saty 51.58 292 *eP* P 09 41 36.3 -0.9
comp=Z,26nm,1.3s,baz=292
ARU Arti 51.71 316 P P 09 41 37.7 -0.1
comp=Z,8.2nm,0.2s,baz=2.2,slow=8.1,SNR=10.0
ARU LR LR 10 07 01.2
comp=Z,556nm,19.1s,baz=42,slow=40
comp=Z,8.2nm,0.2s
ARU Arti 51.71 316 P P 09 41 37.0 -0.7
ARU Arti 51.71 316 *ci* P P 09 41 37.3 -0.4
ARU *PP sP 09 41 48.7 -1.4
ARU 09 43 29.9
ARU S S 09 48 56.4 -0.6
ARU SS SS 09 52 26.3 -6.5
ARU pmax pmax
comp=Z,23nm,1.4s
ARU MLR MLR
comp=Z,591nm,17.0s
MSO Missoula 51.71 61 P P 09 41 37.8 -0.3
MSO IAmb IAmb 09 41 39.4
comp=Z,24nm,0.9s
MSO Missoula 51.71 61 P P 09 41 38.3 +0.3
baz=313,SNR=17
J08A Circle Bar Ran 51.76 67 P P 09 41 38.2 -0.2
J08A IAmb IAmb 09 41 40.5
comp=Z,25nm,1.0s
MOD Modoc Plateau 51.79 69 IAmb IAmb 09 41 40.9
comp=Z,35nm,0.7s
PLID Pearl Lake 51.86 64 P P 09 41 39.5 +0.2
PLID IAmb IAmb 09 41 41.2
comp=Z,35nm,0.7s
SUMG Summit 51.96 7 P P 09 41 39.6 -0.3
SUMG IAmb IAmb 09 41 41.0
comp=Z,50nm,1.0s
SUMG Summit 51.96 7 P P 09 41 39.6 -0.3
SUMG pmax pmax
comp=Z,50nm,1.0s
SUMG Summit 51.96 7 *i* P P 09 41 39.0 -0.9
SUMG IAmb IAmb 09 41 41.0
comp=Z,26nm,0.9s
QIZ Qiongzhong 51.96 246 P P 09 41 38.3 -1.8
QIZ S S 09 49 03.5 +2.2
QIZ sS pS 09 49 11.0 -0.9
QIZ pmax pmax
comp=Z,93nm,9.2s
QIZ LR LR
comp=Z,910nm,12.3s
QIZ LR LR
comp=Z,650nm,11.9s
QIZ LR LR
comp=Z,950nm,10.4s
PRZ Przheval'sk 51.98 292 IAmb IAmb 09 41 42.0
comp=Z,43nm,1.1s
FCC Fort Churchill 52.07 39 P P 09 41 40.1 -0.2
FCC Fort Churchill 52.07 39 P P 09 41 40.1 -0.2
FCC pmax pmax
comp=Z,62nm,0.9s
KUU Kurty 52.10 295 *eP* P 09 41 39.0 -1.8
KUU pmax pmax
comp=Z,21nm,0.6s
KUU Kurty 52.10 295 *eP* P 09 41 39.0 -1.8
comp=Z,21nm,0.6s,baz=294
WVOR Wild Horse Val 52.31 68 IAmb IAmb 09 41 44.6
comp=Z,27nm,0.8s
TNSS Tian-Shan 52.37 293 *eP* P 09 41 42.7 -0.6
TNSS Tian-Shan 52.37 293 *eP* P 09 41 42.8 -0.6
baz=293
BTLS Baital 52.49 297 *eP* P 09 41 42.8 -0.9
BTLS pmax pmax
comp=Z,9.0nm,0.8s
BTLS Baital 52.49 297 *eP* P 09 41 42.9 -0.9
comp=Z,8.5nm,0.8s,baz=297
PRGR Permogore 52.56 327 *eP* P 09 41 43.2 -0.8
GDXM Geysers 52.60 74 P P 09 41 44.9 +0.2
GDXM IAmb IAmb 09 41 48.2
comp=Z,54nm,1.3s
ORV Oroville 52.78 72 P P 09 41 45.2 -0.8
ORV IAmb IAmb 09 41 47.5
comp=Z,23nm,0.9s
ORV Oroville 52.78 72 P P 09 41 45.2 -0.8
ORV pmax pmax
comp=Z,23nm,1.0s
HRY Holter Researc 52.84 60 P P 09 41 47.2 +0.7
KDJ Kajisay 52.88 292 IAmb IAmb 09 41 47.9
comp=Z,40nm,0.9s
EGMT Eagleton 52.95 57 P P 09 41 47.3 +0.1
EGMT IAmb IAmb 09 41 48.2
comp=Z,28nm,0.8s
EGMT Eagleton 52.95 57 P P 09 41 47.0 -0.2
baz=314,SNR=26
MFID Camas Ranch 53.11 65 IAmb IAmb 09 41 51.4
comp=Z,24nm,0.9s
LRM Limekiln Ridge 53.15 61 P P 09 41 49.2 +0.3
TKM2 Tokmak 2 53.16 294 P P 09 41 49.0 0.0
SNR=15
TKM2 Tokmak 2 53.16 294 P P 09 41 48.4 -0.6
BEKR Beckworth 53.19 71 IAmb IAmb 09 41 51.3
comp=Z,44nm,1.1s
BOOM Boomskoye usch 53.28 293 P P 09 41 49.8 -0.1
BOOM IAmb IAmb 09 41 51.2
comp=Z,56nm,1.4s
BOOM Boomskoye usch 53.28 293 P P 09 41 49.8 -0.1
BOOM pmax pmax
comp=Z,56nm,1.4s
SGDS Sogindy 53.29 295 *eP* P 09 41 49.0 -0.8
SGDS pmax pmax
comp=Z,16nm,1.3s
SGDS Sogindy 53.29 295 *eP* P 09 41 49.0 -0.8
comp=Z,16nm,1.3s,baz=295
ULHL Ulahol 53.30 293 P P 09 41 50.3 +0.3
SNR=11
DLMT Dillon 53.40 61 P P 09 41 51.0 +0.4
DLMT IAmb IAmb 09 41 55.9
comp=Z,59nm,1.4s
USP Ospenovka 53.49 295 P P 09 41 51.6 +0.4
SNR=8.0
CHMS Chumysh 53.55 295 P P 09 41 52.0 +0.4
SNR=8.4
KIRV Kirov 53.58 322 P P 09 41 51.9 +0.4
comp=Z,15nm,0.5s,baz=42,slow=4.0,SNR=6.4
KIRV LR LR 10 07 24.3
comp=Z,434nm,20.4s,baz=43,slow=39
comp=Z,15nm,0.5s
KIRV Kirov 53.58 322 *eP* P 09 41 52.2 +0.7
MCMT McKenzie Canyo 53.65 62 P P 09 41 52.8 +0.2
KBK Karagaybulak 53.69 294 P P 09 41 53.2 +0.4
SNR=9.9
BOZ Bozeman (W) 53.72 61 P P 09 41 53.5 +0.5
BOZ IAmb IAmb 09 41 54.6
comp=Z,19nm,0.8s
BOZ Bozeman (W) 53.72 61 P P 09 41 53.5 +0.5
BOZ pmax pmax
comp=Z,19nm,0.8s
BOZ Bozeman (W) 53.72 61 P P 09 41 53.5 +0.5
baz=315,SNR=36
HLID Hailey 53.74 64 P P 09 41 53.8 +0.7
baz=315,SNR=26
PAHR Pah Rah Range 53.83 71 P P 09 41 53.7 -0.2
PAHR IAmb IAmb 09 41 56.0
comp=Z,39nm,1.0s
AAK Ala-Archa 53.94 295 P P 09 41 55.0 +0.4
SNR=15
AAK Ala-Archa 53.94 295 P P 09 41 54.3 -0.3
comp=Z,40nm,1.0s,baz=93,slow=4.4,SNR=49
AAK LR LR 10 03 58.3
comp=Z,362nm,18.7s,baz=34,slow=35
comp=Z,40nm,1.0s
AAK Ala-Archa 53.94 295 P P 09 41 54.5 -0.1
AAK IAmb IAmb 09 41 55.7
comp=Z,47nm,1.0s
AAK Ala-Archa 53.94 295 *ce*P P 09 41 54.3 -0.3
AAK pmax pmax
comp=Z,59nm,1.1s
AAK MLR MLR
comp=Z,766nm,16.0s
AAK Ala-Archa 53.94 295 P P 09 41 54.7 +0.1
AAK pP sP 09 42 05.3 -1.7
VCNR Virginia City 53.98 71 P P 09 41 55.6 +0.6
LSA Lhasa 54.05 272 P P 09 41 55.6 -0.3
LSA Lhasa 54.05 272 P P 09 41 55.7 -0.3
LSA Lhasa 54.05 272 P P 09 41 55.7 -0.3
LSA x pP 09 42 00.4 -4.5
UCH Uchtor 54.22 294 P P 09 41 57.0 0.0
SNR=16
EKS2 Erkin-Say 54.29 295 P P 09 41 57.7 +0.5
SNR=31
QLMT Earthquake Lak 54.36 61 P P 09 41 58.1 +0.4
YERR Yerington 54.42 71 P P 09 41 59.3 +1.0
YHL Hebgen Lake 54.47 61 P P 09 41 59.1 +0.4
YHL IAmb IAmb 09 42 01.8
comp=Z,32nm,0.9s
BMN Battle Mountai 54.48 69 IAmb IAmb 09 42 01.0
comp=Z,30nm,0.8s
CMB Columbia Colle 54.48 73 P P 09 41 59.2 +0.8
CMB IAmb IAmb 09 42 00.9
comp=Z,31nm,1.2s
CMB Columbia Colle 54.48 73 P P 09 41 59.3 +0.8
CMB pmax pmax
comp=Z,31nm,1.2s
GCMT Greycliff 54.56 59 P P 09 41 59.6 +0.5
YMR Madison River 54.71 61 P P 09 42 00.2 0.0
YMR IAmb IAmb 09 42 02.2
comp=Z,34nm,0.9s
YNR Norris Junctio 54.82 61 P P 09 42 01.5 +0.3
YNR IAmb IAmb 09 42 03.5
comp=Z,21nm,0.9s
KVN Kaiserville 54.99 70 P P 09 42 02.5 +0.1
KVN Kaiserville 54.99 70 P P 09 42 02.5 +0.1
KVN pmax pmax
comp=Z,43nm,0.8s
KLMR Klimovskoe 55.04 329 *eP* P 09 42 00.9 -1.2
KLMR *e* 09 44 04.4
KLMR *eS* S 09 49 40.2 -1.8
KLMR pmax pmax
comp=Z,54nm,1.3s
KLMR MLR MLR
comp=Z,589nm,16.0s
KLMR Klimovskoe 55.04 329 *eP* P 09 42 00.9 -1.2
KLMR AMP 09 42 08.2
comp=Z,54nm,1.3s
KLMR *ePP* PP 09 44 04.4 -0.5
KLMR *eS* S 09 49 40.3 -1.8
KLMR *eS* S 09 49 40.3 -1.8
KLMR LQ LQ 10 00 43.2
KLMR LQ LQ 10 00 43.2
KLMR LR LR 10 05 13.7
KLMR AMP 10 09 27.6
comp=Z,589nm,15.8s
LKWY Lake 55.07 61 IAmb IAmb 09 42 11.0
comp=Z,45nm,1.0s
RYN Ryan 55.07 71 P P 09 42 03.3 +0.4
YPP Pitchstone Pla 55.08 61 IAmb IAmb 09 42 22.1
comp=Z,24nm,1.1s
DAV Davao City (W) 55.08 223 LR LR 10 07 18.0
comp=Z,594nm,18.4s,baz=40,slow=38
H17A Grant Village 55.10 61 IAmb IAmb 09 42 06.5
comp=Z,40nm,0.9s
H17A Grant Village 55.10 61 P P 09 42 05.4 +2.2
baz=316,SNR=59
RLMT Red Lodge 55.23 60 P P 09 42 05.1 +1.1
RLMT Red Lodge 55.23 60 P P 09 42 05.2 +1.1
baz=316,SNR=81
FLWY Flagg Ranch 55.26 61 IAmb IAmb 09 42 06.9
comp=Z,31nm,0.8s
ICESG Greenland Ices 55.28 8 *i* P P 09 42 02.9 -1.3
ICESG IAmb IAmb 09 42 08.8
comp=Z,13nm,0.8s
ELK Elko 55.31 67 LR LR 10 05 04.2
comp=Z,231nm,19.0s,baz=330,slow=35
ELK Elko 55.31 67 P P 09 42 05.4 +0.7
ELK IAmb IAmb 09 42 07.1
comp=Z,25nm,0.8s
ELK Elko 55.31 67 P P 09 42 05.4 +0.7
ELK pmax pmax
comp=Z,25nm,0.8s
NVAR Mina Array Bea 55.33 71 P P 09 42 05.8 +1.0
comp=Z,30nm,0.7s,baz=302,slow=7.4,SNR=306
NVAR LR LR 10 04 11.3
comp=Z,278nm,18.9s,baz=312,slow=34
comp=Z,30nm,0.7s
NVAR Mina Array Bea 55.33 71 P P 09 42 05.4 +0.6
KSH Kashi 55.38 291 P P 09 42 08.3 +3.2
KSH pP pP 09 42 14.0 0.0
KSH pmax pmax
comp=Z,46nm,1.1s
KSH LR LR
comp=Z,410nm,13.4s
KSH LR LR
comp=Z,1μm,14.1s
KSH LR LR
comp=Z,1μm,14.4s
NV11 Mina Array Sit 55.41 71 P P 09 42 06.1 +0.8
NV11 IAmb IAmb 09 42 07.9
comp=Z,29nm,0.8s
MDPB Devils Postpil 55.48 72 P P 09 42 07.8 +1.8
MDPB IAmb IAmb 09 42 08.8
comp=Z,29nm,1.0s
TPAW Teton Pass 55.56 62 P P 09 42 07.8 +1.3
TPAW IAmb IAmb 09 42 08.9
comp=Z,26nm,0.8s
LAO LASA Array 55.59 56 P P 09 42 07.3 +0.9
baz=316,SNR=16
MLAC Mammoth, Mammo 55.62 72 P P 09 42 08.7 +1.7
baz=317
LOHW Long Hollow 55.65 62 IAmb IAmb 09 42 09.4
comp=Z,26nm,0.8s
KK31 Karatay Array 55.66 298 P P 09 42 06.6 -0.3
KK31 IAmb IAmb 09 42 07.3
comp=Z,37nm,1.0s
KK31 Karatay Array 55.66 298 P P 09 42 06.6 -0.3
KK31 pmax pmax
comp=Z,37nm,1.0s
KKAR Karatay Array 55.66 298 P P 09 42 06.7 -0.2
KKAR IAmb IAmb 09 42 07.3
comp=Z,37nm,1.0s
KKAR Karatay Array 55.66 298 P P 09 42 06.7 -0.2
KKAR pmax pmax
comp=Z,37nm,1.0s
SNOW Snow King Moun 55.68 62 IAmb IAmb 09 42 15.0
comp=Z,23nm,0.9s
REDW Red Top Meadow 55.70 62 P P 09 42 06.6 -0.9
REDW IAmb IAmb 09 42 09.9
comp=Z,23nm,0.9s
FRB Frobisher Bay 55.74 24 LR LR 10 08 51.6
comp=Z,755nm,21.0s,baz=340,slow=39
HVU Hansel Valley 55.85 65 IAmb IAmb 09 42 10.8
comp=Z,25nm,0.9s
AHID Auburn Hatcher 56.01 63 IAmb IAmb 09 42 11.6
comp=Z,22nm,0.9s
SFJD Kangerlussuaq 56.09 14 LR LR 10 08 53.7
comp=Z,516nm,18.1s,baz=337,slow=39
TPH Tonopah 56.17 71 P P 09 42 12.1 +1.2
TPH Tonopah 56.17 71 P P 09 42 12.1 +1.2
TPH pmax pmax
comp=Z,169nm,0.9s
PAGB Antelope Grade 56.22 75 IAmb IAmb 09 42 17.2
comp=Z,67nm,1.4s
AKTO Aktyubinsk 56.24 311 P P 09 42 10.7 -0.2
comp=Z,5.0nm,0.7s,baz=46,slow=7.4,SNR=15
AKTO LR LR 10 09 10.7
comp=Z,491nm,18.4s,baz=34,slow=39
comp=Z,5.0nm,0.7s
AKTO Aktyubinsk 56.24 311 P P 09 42 10.6 -0.3
AB31 Akbulak array 56.26 309 *i* P P 09 42 10.7 -0.4
ABKAR Akbulak array 56.26 309 P P 09 42 11.4 +0.3
ABKAR IAmb IAmb 09 42 12.1
comp=Z,31nm,1.2s
VOG Valley Oaks Go 56.27 74 P P 09 42 13.3 +2.0
baz=317
TIN Tinemaha, Big 56.37 72 P P 09 42 13.7 +1.6
baz=317
LCH Last Change Ra 56.56 72 IAmb IAmb 09 42 16.2
comp=Z,31nm,1.2s
HWUT Hardware Ranch 56.60 64 P P 09 42 15.1 +1.2
SMMC Simmler 56.67 75 P P 09 42 15.9 +1.7
baz=318,SNR=5.1
VES Vestal, Richgr 56.79 74 P P 09 42 15.7 +0.8
baz=318,SNR=7.7
BW06 Boulder Array 56.79 62 P P 09 42 16.0 +0.8
BW06 IAmb IAmb 09 42 17.0
comp=Z,31nm,0.8s
BW06 Boulder Array 56.79 62 P P 09 42 16.0 +0.8
baz=317,SNR=55
PD31 Pinedale Array 56.79 62 P P 09 42 15.9 +0.7
PD31 IAmb IAmb 09 42 17.1
comp=Z,30nm,0.9s
PDAR Pinedale Array 56.79 62 P P 09 42 15.5 +0.3
comp=Z,22nm,0.7s,baz=327,slow=2.8,SNR=233
comp=Z,22nm,0.7s
PDAR Pinedale Array 56.79 62 P P 09 42 15.9 +0.7
R11A Troy Canyon, C 56.86 69 P P 09 42 16.5 +0.8
R11A Troy Canyon, C 56.86 69 P P 09 42 16.6 +0.9
baz=317,SNR=21
GRAC Grapevine Rang 56.88 72 IAmb IAmb 09 42 22.1
comp=Z,48nm,1.4s
GRAC Grapevine Rang 56.88 72 P P 09 42 17.4 +1.6
baz=317
CWC Cottonwood Cre 56.90 73 P P 09 42 16.9 +0.9
baz=317
DUG Dugway, Tooele 56.98 66 P P 09 42 17.5 +1.0
DUG Dugway, Tooele 56.98 66 P P 09 42 17.5 +1.0
DUG pmax pmax
comp=Z,47nm,0.9s
DUG Dugway, Tooele 56.98 66 P P 09 42 17.9 +1.4
baz=317,SNR=63
VALR Valaam 57.02 333 *d* P P 09 42 16.6 +0.4
VALR pmax pmax
comp=Z,41nm,0.9s
VALR MLR MLR
comp=Z,182nm,13.0s
PKM Mcpherson Peak 57.08 75 P P 09 42 19.1 +1.7
baz=318,SNR=7.9
CTU Camp Tracy 57.17 65 IAmb IAmb 09 42 19.9
comp=Z,34nm,0.8s
ISA Isabella, Lake 57.25 73 P P 09 42 18.9 +0.5
ISA Isabella, Lake 57.25 73 P P 09 42 18.9 +0.5
ISA pmax pmax
comp=Z,23nm,1.2s
ISA Isabella, Lake 57.25 73 P P 09 42 18.9 +0.5
baz=318,SNR=12
S11A Rachel 57.28 70 IAmb IAmb 09 42 21.2
comp=Z,32nm,0.8s
JLU Jordanelle 57.40 65 P P 09 42 20.2 +0.6
JLU IAmb IAmb 09 42 21.8
comp=Z,21nm,0.9s
ARVC Arvin 57.45 74 P P 09 42 20.1 +0.4
baz=318
MPMC Manual Prospec 57.50 72 P P 09 42 21.5 +1.2
baz=318,SNR=22
TPNV Topopah Spring 57.52 71 P P 09 42 21.1 +0.7
TPNV IAmb IAmb 09 42 28.6
comp=Z,28nm,0.9s

TPNV **Topopah Spring** 57.52 71 P P 09 42 21.1 +0.7
TPNV pmax pmax
comp=Z,28nm,1.0s
TPNV **Topopah Spring** 57.52 71 P P 09 42 21.6 +1.2
baz=318,SNR=21
FURC **Furnace Creek,** 57.54 72 P P 09 42 21.8 +1.5
baz=318,SNR=32
NLU **North Lily Min** 57.55 66 P P 09 42 21.1 +0.5
NLU IAmb IAmb 09 42 22.9
comp=Z,37nm,0.8s
ULM **Lac du Bonnet** 57.63 47 P P 09 42 19.6 -1.2
comp=Z,5.9nm,0.4s,baz=310,slow=6.4,SNR=12
comp=Z,5.9nm,0.4s
ULM **Lac du Bonnet** 57.63 47 P P 09 42 20.5 -0.3
ULM IAmb IAmb 09 42 22.9
comp=Z,67nm,1.7s
ULM **Lac du Bonnet** 57.63 47 P P 09 42 20.5 -0.3
ULM pmax pmax
comp=Z,67nm,1.7s
PSUT **Pine Spring** 57.65 68 P P 09 42 22.6 +1.3
PSUT IAmb IAmb 09 42 29.4
comp=Z,19nm,0.8s
MPU **Maple Canyon** 57.73 65 P P 09 42 22.9 +1.0
MDND **Maddock** 57.81 51 P P 09 42 23.1 +1.0
baz=318,SNR=21
MDND **Maddock** 57.81 51 P P 09 42 23.0 +0.9
baz=318,SNR=21
LRMC **Laurel Mtn Rad** 57.82 73 P P 09 42 23.4 +0.9
baz=318,SNR=14
PRN **Pahroc Range** 57.84 70 P P 09 42 24.0 +1.5
PRN IAmb IAmb 09 42 25.0
comp=Z,31nm,0.8s
SCZ2 **Santa Cruz Isl** 57.84 76 P P 09 42 23.3 +0.8
baz=318
GWY **Greenwater Val** 57.86 72 P P 09 42 23.4 +0.7
GWY IAmb IAmb 09 42 25.0
comp=Z,27nm,0.9s
OSI **Osito Audit: C** 57.89 74 P P 09 42 23.8 +0.9
baz=318
QSM **Queen of Sheba** 57.91 72 IAmb IAmb 09 42 28.8
comp=Z,45nm,1.3s
CHTO **Chiang Mai** 58.07 257 P P 09 42 24.2 0.0
CHTO **Chiang Mai** 58.07 257 P P 09 42 24.2 0.0
CHTO pmax pmax
comp=Z,11nm,1.0s
CHTO **Chiang Mai** 58.07 257 P P 09 42 24.2 0.0
comp=Z,8.7nm,1.4s
CHTO **Chiang Mai** 58.07 257 P P 09 42 24.0 -0.2
EDW2 **Edwards Air Fo** 58.09 74 P P 09 42 25.4 +1.1
baz=318,SNR=17
FIA1 **FINESS Array S** 58.13 336 P P 09 42 24.3 +0.3
FIA1 IAmb IAmb 09 42 25.5
comp=Z,28nm,0.9s
FINES **FINESS Array B** 58.13 336 P P 09 42 24.1 +0.1
comp=Z,21nm,0.8s,baz=38,slow=9.6,SNR=54
FINES LR LR 10 13 17.2
comp=Z,221nm,18.3s,baz=36,slow=42
comp=Z,21nm,0.8s
E28A **Huff** 58.27 53 P P 09 42 26.0 +0.7
E28A **Huff** 58.27 53 P P 09 42 26.0 +0.7
baz=318,SNR=16
SHOC **Shoshone, Teco** 58.28 72 P P 09 42 26.7 +1.2
baz=318,SNR=13
CMAR **Chiang Mai Arr** 58.35 256 P P 09 42 25.9 -0.4
comp=Z,2.2nm,0.5s,baz=24,slow=6.7,SNR=15
CMAR PcP PcP 09 43 15.1 -1.8
comp=Z,5.1nm,0.3s,baz=12,slow=6.3,SNR=6.0
CMAR LR LR 10 10 16.0
comp=Z,848nm,18.4s,baz=45,slow=39
comp=Z,2.2nm,0.5s
CMAR **Chiang Mai Arr** 58.35 256 P P 09 42 24.4 -1.8
DECC **Green Verdugo** 58.37 74 P P 09 42 27.2 +1.0
baz=318
RDMU **Red Mountain** 58.39 63 P P 09 42 27.7 +1.2
K22A **Casper** 58.39 60 IAmb IAmb 09 42 29.4
comp=Z,33nm,0.9s
K22A **Casper** 58.39 60 P P 09 42 26.9 +0.5
baz=318,SNR=30
K22A **Casper** 58.39 60 P P 09 42 26.9 +0.5
baz=318,SNR=30
GSC **Goldstone, Bar** 58.44 73 IAmb IAmb 09 42 29.0
comp=Z,28nm,1.0s
GSC **Goldstone, Bar** 58.44 73 P P 09 42 27.9 +1.2
baz=318,SNR=29
SHPR **Sheep Range** 58.44 70 P P 09 42 27.8 +1.0
SHPR IAmb IAmb 09 42 32.8
comp=Z,32nm,1.5s
TMUT **Trail Mountain** 58.48 66 P P 09 42 28.3 +1.0
PASC **Pasadena Art C** 58.52 74 IAmb IAmb 09 42 32.6
comp=Z,21nm,1.1s
RSSD **Black Hills** 58.52 57 P P 09 42 27.9 +0.5
RSSD **Black Hills** 58.52 57 P P 09 42 27.9 +0.5
RSSD pmax pmax
comp=Z,84nm,0.8s
RSSD **Black Hills** 58.52 57 P P 09 42 27.8 +0.5
baz=318
RSSD **Black Hills** 58.52 57 P P 09 42 28.0 +0.5
RSSD x pP 09 42 34.1 -2.3
RSSD sP sP 09 42 44.0 +4.2
P17A **Butcher Ranch,** 58.60 65 P P 09 42 28.6 +0.7
P17A IAmb IAmb 09 42 33.8
comp=Z,24nm,1.0s
RRX **Edison Barstow** 58.65 73 P P 09 42 29.3 +1.2
baz=318
P18A **Preston Nutter** 58.74 65 IAmb IAmb 09 42 36.6
comp=Z,22nm,0.8s
SZCU **Shurtz Canyon** 58.75 68 P P 09 42 30.1 +1.1
SZCU IAmb IAmb 09 42 34.8
comp=Z,41nm,1.5s
GAR **Garm** 58.75 294 P P 09 42 28.6 -0.3
RWWY **Rawlins** 58.76 61 P P 09 42 29.6 +0.4
RWWY IAmb IAmb 09 42 40.3
comp=Z,23nm,0.8s
Q16A **Castle Valley** 58.78 66 IAmb IAmb 09 42 31.6
comp=Z,29nm,0.9s
FMP **Fort Macarthur** 58.80 75 P P 09 42 29.9 +0.8
baz=319
TUQ **Turquoise Moun** 58.82 72 P P 09 42 30.6 +1.1
baz=318,SNR=25
MTPU **Mount Pierson** 58.90 67 P P 09 42 31.1 +0.8
MTPU IAmb IAmb 09 42 33.0
comp=Z,16nm,0.9s
CIS **Catalina Islan** 58.96 75 P P 09 42 31.0 +0.7
baz=319
SRU **San Rafael Swe** 58.98 65 P P 09 42 31.8 +1.2
SRU **San Rafael Swe** 58.98 65 P P 09 42 31.8 +1.2
SRU pmax pmax
comp=Z,50nm,0.8s
BELG **Belogornoye** 58.98 318 P P 09 42 30.4 +0.3
comp=Z,90nm,1.0s,baz=113,slow=1.6,SNR=14
BELG LR LR 10 10 53.6
comp=Z,605nm,19.3s,baz=45,slow=39
comp=Z,90nm,1.0s
BELG **Belogornoye** 58.98 318 *i* P P 09 42 30.4 +0.3
BELG pmax pmax
comp=Z,13nm,0.9s
BELG MLR MLR
comp=Z,99nm,17.0s
HEC **Hector,Ludlow** 59.04 73 P P 09 42 32.0 +1.1
baz=318,SNR=6.8
LCMT **Little Creek M** 59.10 69 P P 09 42 32.6 +1.3
LCMT IAmb IAmb 09 42 33.9
comp=Z,30nm,1.3s
AGMN **Agassiz Nation** 59.12 49 P P 09 42 30.9 -0.3
AGMN **Agassiz Nation** 59.12 49 P P 09 42 30.9 -0.3
baz=320,SNR=14
BBRC **Big Bear Solar** 59.15 73 P P 09 42 32.7 +0.8
baz=319,SNR=6.3
SCI2 **San Clemente I** 59.20 76 P P 09 42 34.0 +2.1
baz=319
PKCU **Pink Cliffs** 59.27 68 IAmb IAmb 09 42 35.6
comp=Z,23nm,0.9s
ELS **Elsinore Mount** 59.32 74 IAmb IAmb 09 42 38.2
comp=Z,26nm,1.3s
O20A **White River Ci** 59.39 63 P P 09 42 34.2 +0.8
O20A **White River Ci** 59.39 63 P P 09 42 34.2 +0.8
baz=318,SNR=62
RABL **Rabaul** 59.44 189 P P 09 42 34.0 +0.3
GMRC **Granite Mounta** 59.45 72 P P 09 42 35.0 +1.2
baz=319,SNR=30
RAF **Rauma** 59.48 338 *e*P P 09 42 33.5 +0.1
SMPI **Sarmi** 59.48 204 P P 09 42 35.9 +2.0
comp=Z,27nm,1.6s
MURC **Murrieta** 59.49 74 P P 09 42 34.7 +0.7
baz=319,SNR=7.5
D32B **Dogwood Acres,** 59.50 50 P P 09 42 33.7 -0.1
baz=320,SNR=12

KRVT **Keravat (AS076** 59.57 189 LR LR 10 06 27.5
comp=Z,306nm,19.6s,baz=149,slow=34
MEF **Metsahovi** 59.60 336 *e*P P 09 42 34.9 +0.6
CHGR **Chuyangaron** 59.61 295 P P 09 42 34.0 -0.8
CHGR **Chuyangaron** 59.61 295 P P 09 42 34.0 -0.8
CHGR pmax pmax
comp=Z,125nm,1.0s
MYLDM **Lahad Datu** 59.71 229 P P 09 42 34.5 -1.1
MOS **Moscow** 59.79 326 *e*P P 09 42 36.0 +0.4
MOS MLR MLR
comp=Z,500nm,17.0s
BELC **Belle Mtn. Jos** 59.85 73 P P 09 42 37.2 +0.6
baz=319,SNR=14
PFO **Pinyon Flats O** 59.88 74 LR LR 10 04 42.7
comp=Z,261nm,20.5s,baz=314,slow=32
PFO **Pinyon Flats O** 59.88 74 P P 09 42 36.4 -0.4
PFO IAmb IAmb 09 42 41.3
comp=Z,37nm,1.6s
PFO **Pinyon Flats O** 59.88 74 *c i* P P 09 42 37.2 +0.4
PFO pmax pmax
comp=Z,39nm,1.6s
PFO MLR MLR
comp=Z,174nm,14.0s
PFO **Pinyon Flats O** 59.88 74 P P 09 42 37.3 +0.5
baz=319,SNR=10
PFO **Pinyon Flats O** 59.88 74 P P 09 42 37.3 +0.5
PFO x x 09 42 40.2
TPFO **Pinon Flats** 59.89 74 P P 09 42 37.5 +0.6
baz=319,SNR=9.9
KKM **Kota Kinabalu** 59.96 232 P P 09 42 37.9 +0.5
KKM **Kota Kinabalu** 59.96 232 P P 09 42 37.7 +0.3
B35A **Bob, Littlefor** 59.99 48 P P 09 42 36.6 -0.5
baz=321,SNR=9.8
N23A **Red Feather La** 59.99 61 P P 09 42 38.5 +0.9
baz=319,SNR=58
NEE2 **Needles Airpor** 60.03 71 P P 09 42 38.1 +0.5
baz=319
U15A **North Rim** 60.04 68 IAmb IAmb 09 42 40.5
comp=Z,22nm,1.1s
109C **Camp Elliot, M** 60.07 75 IAmb IAmb 09 42 43.5
comp=Z,34nm,1.3s
109C **Camp Elliot, M** 60.07 75 P P 09 42 39.0 +1.1
baz=319
IRM **Iron Mountain** 60.20 72 P P 09 42 40.1 +1.2
baz=319,SNR=34
PV23 **Carpenter Ridg** 60.25 65 P P 09 42 40.2 +0.7
BC3 **Big Chuckawall** 60.41 73 P P 09 42 41.0 +0.6
baz=319,SNR=15
BORG **Borgarnes** 60.44 0 LR LR 10 08 37.8
comp=Z,152nm,19.5s,baz=334,slow=36
MONP2 **Monument Peak** 60.45 74 P P 09 42 41.7 +0.9
baz=319,SNR=8.7
SWI **Sorong** 60.46 213 P P 09 42 41.2 +0.5
comp=Z,54nm,1.5s
SIJI **Sorong** 60.46 213 LR LR 10 04 45.2
comp=Z,187nm,21.0s,baz=34,slow=32
VSU **Vasula** 60.58 334 *e*P P 09 42 41.3 +0.3
PDMCI **Parker Dam,Lak** 60.63 71 P P 09 42 42.6 +0.9
baz=319,SNR=8.8
OBN **Obninsk** 60.64 326 *d i* P P 09 42 41.3 -0.2
OBN *e* 09 44 53.4
OBN *e*S S 09 51 00.4 +5.0
OBN *e*SS SS 09 54 55.2 +2.1
OBN pmax pmax
comp=Z,26nm,1.3s
OBN MLR MLR
comp=Z,320nm,18.0s
SUSD **Miller** 60.68 54 P P 09 42 42.0 +0.1
baz=320
SUSD **Miller** 60.68 54 P P 09 42 41.8 -0.1
baz=320
SWSC **Sam W. Stewart** 60.75 74 P P 09 42 43.2 +0.6
baz=319,SNR=8.6
SMCO **Snowmass** 60.76 63 P P 09 42 44.0 +0.9
SMCO IAmb IAmb 09 42 45.0
comp=Z,32nm,0.8s
IKP **In-Ko-Pah, Jac** 60.80 74 P P 09 42 43.9 +0.9
baz=319,SNR=8.4
F33A **5 Mile Ranch,** 60.81 51 P P 09 42 42.8 0.0
baz=321,SNR=17
BLYC **Blythe** 60.84 72 IAmb IAmb 09 42 49.1
comp=Z,33nm,1.1s
YUH **Yuha Desert** 60.91 74 P P 09 42 44.3 +0.7
YUH IAmb IAmb 09 42 49.1
comp=Z,21nm,1.1s
ISCO **Idaho Springs** 60.98 61 P P 09 42 45.6 +1.2
ISCO IAmb IAmb 09 42 46.9
comp=Z,29nm,0.9s
ISCO **Idaho Springs** 60.98 61 P P 09 42 45.6 +1.2
ISCO pmax pmax
comp=Z,29nm,0.9s
ISCO **Idaho Springs** 60.98 61 P P 09 42 45.8 +1.3
baz=319,SNR=58
MTSE **Matsula** 61.08 335 *e*P P 09 42 44.8 +0.4
GLA **Glamis** 61.20 73 P P 09 42 46.4 +0.7
GLA IAmb IAmb 09 42 48.0
comp=Z,26nm,0.9s
GLA **Glamis** 61.20 73 P P 09 42 46.4 +0.7
GLA pmax pmax
comp=Z,26nm,0.9s
GLA **Glamis** 61.20 73 P P 09 42 47.1 +1.4
baz=319
WUAZ **Wupatki** 61.22 69 P P 09 42 46.4 +0.5
WUAZ IAmb IAmb 09 42 48.5
comp=Z,42nm,1.2s
WUAZ **Wupatki** 61.22 69 P P 09 42 47.3 +1.4
baz=319,SNR=29
EYMN **Ely** 61.25 47 P P 09 42 45.2 -0.6
EYMN **Ely** 61.25 47 P P 09 42 45.3 -0.4
baz=322,SNR=19
NC405 **NORSAR Array S** 61.34 343 P P 09 42 45.7 -0.5
NC204 **NORSAR Array S** 61.35 343 IAmb IAmb 09 43 14.9
comp=Z,34nm,1.1s
UPP **Uppsala** 61.41 339 *e*P P 09 42 46.6 +0.1
MVCO **Mesa Verde** 61.45 65 IAmb IAmb 09 42 49.5
comp=Z,19nm,0.9s
MVCO **Mesa Verde** 61.45 65 P P 09 42 48.5 +0.9
baz=319,SNR=14
NB201 **NORSAR Array S** 61.47 343 P P 09 42 46.4 -0.7
NB2 **NORSAR Subarra** 61.49 343 P P 09 42 47.0 -0.3
comp=Z,2.2nm,0.7s,baz=22,slow=6.9
NOA **NORSAR Array B** 61.49 343 P P 09 42 45.8 -1.4
comp=Z,1.9nm,0.6s,baz=21,slow=6.7,SNR=12
NOA LR LR 10 11 54.3
comp=Z,112nm,21.0s,baz=20,slow=38
comp=Z,1.9nm,0.6s
Q24A **Divide** 61.85 62 P P 09 42 51.2 +0.9
Q24A IAmb IAmb 09 42 55.8
comp=Z,20nm,0.9s
Q24A **Divide** 61.85 62 P P 09 42 51.1 +0.7
baz=320,SNR=8.9
OGNE **Ogallala** 61.88 58 P P 09 42 51.0 +0.7
baz=320,SNR=6.9
HFS **Hagfors** 61.91 341 P P 09 42 49.5 -0.5
comp=Z,3.0nm,0.5s,baz=46,slow=4.3,SNR=14
comp=Z,3.0nm,0.5s
S22A **4UR Ranch, Cre** 61.91 64 IAmb IAmb 09 42 53.2
comp=Z,25nm,0.9s
S22A **4UR Ranch, Cre** 61.91 64 P P 09 42 52.0 +1.2
baz=320,SNR=47
LPSR **Galich'ya Gora** 61.96 324 *e*P P 09 42 50.1 -0.3
LPSR pmax pmax
comp=Z,30nm,0.7s
113A **Mohawk Valley,** 62.00 72 P P 09 42 51.9 +0.8
X16A **Lo Mia Camp, P** 62.01 69 P P 09 42 51.4 +0.1
X16A IAmb IAmb 09 42 53.9
comp=Z,17nm,0.9s
F36A **Milaca** 62.02 49 IAmb IAmb 09 42 52.2
comp=Z,43nm,1.9s
F36A **Milaca** 62.02 49 P P 09 42 50.1 -0.9
baz=322,SNR=6.5
FAKI **Fak Fak** 62.10 211 P P 09 42 50.9 -0.9
VRH **Novokhopyorsk** 62.13 321 *e*P P 09 42 50.9 -0.7
VRH pmax pmax
comp=Z,30nm,0.8s
K31A **O'Neill** 62.17 55 IAmb IAmb 09 42 53.2
comp=Z,29nm,0.8s
K31A **O'Neill** 62.17 55 P P 09 42 52.4 +0.4
baz=321
E38A **The Farm, Brul** 62.28 47 IAmb IAmb 09 42 52.5
comp=Z,16nm,0.6s
E38A **The Farm, Brul** 62.28 47 P P 09 42 52.1 -0.6
baz=322,SNR=5.2
ECSD **EROS Data Cent** 62.30 53 P P 09 42 52.7 -0.2

ECSD IAmb IAmb 09 42 53.7
comp=Z,24nm,0.8s
ECSD **EROS Data Cent** 62.30 53 P P 09 42 52.7 -0.2
baz=321,SNR=35
W18A **Petrified Fore** 62.39 68 IAmb IAmb 09 42 56.3
comp=Z,25nm,1.0s
W18A **Petrified Fore** 62.39 68 P P 09 42 55.1 +1.3
baz=320,SNR=22
TOLI2 **Tolitoli** 62.42 225 P P 09 42 53.1 -0.8
TOLI2 **Tolitoli** 62.42 225 P P 09 42 53.6 -0.3
MRSI **Marisa** 62.53 224 P P 09 42 55.2 +0.5
comp=Z,1µmcomp=Z,75nm,1.3s
SDCO **Great Sand Dun** 62.60 63 IAmb IAmb 09 42 57.4
comp=Z,19nm,0.9s
SDCO **Great Sand Dun** 62.60 63 P P 09 42 56.3 +1.0
baz=320,SNR=43
KBL **Kabul** 62.78 292 P P 09 42 54.8 -1.7
KBL IAmb IAmb 09 42 55.5
comp=Z,36nm,0.9s
KBL **Kabul** 62.78 292 P P 09 42 54.8 -1.7
KBL pmax pmax
comp=Z,36nm,1.0s
SPMN **Marine on St.** 62.83 49 P P 09 42 55.9 -0.6
baz=322
SPMN **Marine on St.** 62.83 49 P P 09 42 55.8 -0.6
baz=322
VIKU **Vikbolandet** 62.85 339 *e*P P 09 42 54.8 -1.4
VSR **Storozhevoye** 63.03 323 *e*P P 09 42 57.4 -0.2
VSR pmax pmax
comp=Z,20nm,0.7s
KSCO **Kaye Shedlock'** 63.08 60 P P 09 42 58.8 +0.5
KSCO IAmb IAmb 09 43 03.5
comp=Z,32nm,1.0s
KSCO **Kaye Shedlock'** 63.08 60 P P 09 42 58.7 +0.5
baz=321,SNR=7.8
KSCO **Kaye Shedlock'** 63.08 60 P P 09 42 58.9 +0.5
baz=321,SNR=7.8
214A **Organ Pipe Nat** 63.14 72 IAmb IAmb 09 43 00.9
comp=Z,19nm,0.9s
214A **Organ Pipe Nat** 63.14 72 P P 09 42 59.8 +1.1
baz=320,SNR=10
D41A **Chassel** 63.16 45 P P 09 42 58.7 +0.2
SANI **Sanana** 63.34 218 P P 09 42 59.5 -0.5
comp=Z,655nmcomp=Z,51nm,1.4s
SANI **Sanana** 63.34 218 P P 09 42 59.1 -0.9
BGNE **Belgrade** 63.39 55 P P 09 43 00.3 0.0
BGNE **Belgrade** 63.39 55 P P 09 43 00.2 0.0
baz=321,SNR=7.3
BGNE **Belgrade** 63.39 55 P P 09 43 00.3 0.0
baz=321,SNR=7.3
MPSI **Mapaga** 63.48 226 P P 09 43 01.0 0.0
comp=Z,783nmcomp=Z,34nm,1.4s
I37A **Lemond, Waseca** 63.52 50 P P 09 43 01.3 +0.3
I37B **Waseca** 63.52 50 P P 09 43 01.0 0.0
baz=322,SNR=11
T25A **Trinidad** 63.62 63 P P 09 43 01.9 -0.1
T25A IAmb IAmb 09 43 07.3
comp=Z,31nm,1.2s
T25A **Trinidad** 63.62 63 P P 09 43 02.4 +0.4
baz=321,SNR=20
COWI **Conover** 63.69 46 P P 09 43 01.2 -0.9
COWI IAmb IAmb 09 43 06.0
comp=Z,58nm,1.7s
NACGM **Naroch** 63.71 332 *i e*P P 09 43 02.8 +0.7
baz=29
MNK **Minsk** 63.76 331 *i* P P 09 43 00.6 -1.7
MNK *i* *PP sP 09 43 14.6 -0.3
MNK *i* 09 43 36.0
MNK *i* 09 45 21.2
MNK *i* PPP PPP 09 46 51.3
MNK *i* S S 09 51 32.2 -2.5
MNK *i* *SS sS 09 51 56.3 +6.6
MNK *i* 09 52 49.6
MNK pmax pmax
comp=Z,33nm,0.9s
MNK pmax pmax
comp=N,39nm,0.8s
MNK pmax pmax
comp=E,3.0nm,0.9s
MNK MLR MLR
comp=E,143nm,19.0s
MNK MLR MLR
comp=N,485nm,20.0s
MNK **Minsk** 63.76 331 *i* P P 09 43 00.6 -1.7
comp=E,3.0nm,0.8s
MNK *i* P P 09 43 00.6 -1.7
comp=N,39nm,0.8s
MNK *i* P P 09 43 00.6 -1.7
comp=Z,33nm,0.8s,baz=29
MNK *i* pP sP 09 43 14.6 -0.3
MNK *i* sP pP 09 43 20.6 +9.1
MNK *i* PP PP 09 45 21.2 -0.9
MNK *i* PPP PPP 09 46 51.3
MNK *i* S S 09 51 32.3 -2.5
MNK *i* sS sS 09 51 56.4 +6.6
MNK *i* SS SS 09 54 57.3 -45
MNK *i* SSS SSS 09 59 21.8
MNK *i* LQ LQ 10 06 19.7
MNK *i* LR LR 10 08 51.0
MNK *i* LRM MLR 10 14 05.5
comp=E,143nm,19.5s
MNK *i* LRM MLR 10 14 24.5
comp=N,485nm,19.6s
MNK *i* LRM MLR 10 14 24.5
comp=Z,5µm,19.8s
L34A **Svendsen Farm,** 63.79 54 P P 09 43 02.1 -0.7
L34A **Svendsen Farm,** 63.79 54 P P 09 43 01.9 -0.9
baz=322,SNR=10
PABE **Paberze** 63.91 334 P P 09 43 02.7 -0.6
PABE **Paberze** 63.91 334 *e*P P 09 43 03.7 +0.4
APSI **Ampana** 63.91 223 P P 09 43 03.8 0.0
comp=Z,536nmcomp=Z,31nm,1.6s
G40A **Rib Lake** 63.91 48 P P 09 43 02.8 -0.8
SCHQ **Schefferville** 63.97 28 P P 09 43 02.5 -1.3
comp=Z,12nm,0.7s,baz=5.5,slow=7.1,SNR=12
SCHQ LR LR 10 14 17.2
comp=Z,330nm,19.0s,baz=305,slow=39
comp=Z,12nm,0.7s
SCHQ **Schefferville** 63.97 28 P P 09 43 02.7 -1.1
SCHQ IAmb IAmb 09 43 06.9
comp=Z,14nm,0.7s
TUC **Tucson** 63.97 70 P P 09 43 03.7 -0.5
TUC **Tucson** 63.97 70 P P 09 43 03.7 -0.5
TUC pmax pmax
comp=Z,14nm,1.1s
TUC **Tucson** 63.97 70 P P 09 43 05.1 +0.9
baz=320
TUC **Tucson** 63.97 70 P P 09 43 05.5 +1.2
TUC pP sP 09 43 15.4 -1.6
TUC sP pP 09 43 20.7 +7.3
N33A **J Bar K, Exete** 64.25 55 P P 09 43 05.8 0.0
ANMO **Albuquerque** 64.25 65 LR LR 10 10 54.7
comp=Z,227nm,19.2s,baz=334,slow=36
ANMO **Albuquerque** 64.25 65 P P 09 43 06.9 +0.7
ANMO IAmb IAmb 09 43 08.1
comp=Z,16nm,0.8s
ANMO **Albuquerque** 64.25 65 *c e*P P 09 43 07.0 +0.8
ANMO pmax pmax
comp=Z,19nm,0.9s
ANMO MLR MLR
comp=Z,157nm,16.0s
ANMO **Albuquerque** 64.25 65 P P 09 43 07.1 +0.9
baz=321
ANMO **Albuquerque** 64.25 65 P P 09 43 07.3 +1.2
HNR **Honiara** 64.33 180 LR LR 10 06 25.2
comp=Z,260nm,22.0s,baz=348,slow=32
CBKS **Cedar Bluff** 64.65 58 P P 09 43 08.4 -0.2
CBKS **Cedar Bluff** 64.65 58 P P 09 43 08.4 -0.2
CBKS pmax pmax
comp=Z,35nm,0.8s
CBKS **Cedar Bluff** 64.65 58 P P 09 43 08.0 -0.6
baz=322,SNR=10
BNM **Barren Site** 64.77 66 P P 09 43 10.9 +1.2
I40A **Norwalk** 64.84 49 P P 09 43 08.7 -0.9
I40A **Norwalk** 64.84 49 P P 09 43 08.8 -0.9
baz=324
K38A **Parkersburg** 64.89 51 P P 09 43 09.6 -0.4
K38A IAmb IAmb 09 43 10.2
comp=Z,13nm,0.7s
K38A **Parkersburg** 64.89 51 P P 09 43 09.2 -0.7
baz=323
SBUM **Sibu** 64.97 234 P P 09 43 10.5 -0.2
N35A **Tabor** 65.00 54 P P 09 43 10.9 +0.2
N35A **Tabor** 65.00 54 P P 09 43 11.0 +0.2
baz=322,SNR=18

PMG **Port Moresby** 65.15 194 LR LR 10 08 52.6
comp=Z,367nm,20.9s,baz=12,slow=34
PMG **Port Moresby** 65.15 194 P **P** **09 43 16.2 +4.3**
PMG pP **sP** **09 43 24.4 -0.1**
PMG sP pP 09 43 30.4 +9.4
SCIA **State Center** 65.28 52 P **P** **09 43 12.1 -0.4**
baz=323,SNR=5.8
121A **Cookes Peak, D** 65.41 68 P **P** **09 43 14.4 +0.7**
121A **Cookes Peak, D** 65.41 68 P **P** **09 43 15.2 +1.5**
baz=321,SNR=25
121A **Cookes Peak, D** 65.41 68 P **P** **09 43 15.1 +1.4**
baz=321,SNR=25
SUW **Suwalki** 65.45 333 *e*P **P** **09 43 13.5 +0.1**
SUW *e*L L 10 15 46.1
comp=Z,557nm,16.3s
R32A **Long Quarter,** 65.46 58 IAmb IAmb 09 43 19.4
comp=Z,15nm,0.8s
319A **Douglas** 65.50 70 P **P** **09 43 14.7 +0.4**
319A IAmb IAmb 09 43 16.6
comp=Z,34nm,1.0s
GEYT **Alibeck** 65.75 302 P **P** **09 43 15.3 -0.4**
comp=Z,16nm,1.0s,baz=27,slow=13,SNR=18
GEYT LR LR 10 14 37.2
comp=Z,1µm,18.1s,baz=58,slow=38
comp=Z,16nm,1.0s
GEYT **Alibeck** 65.75 302 P **P** **09 43 15.0 -0.7**
GEYT IAmb IAmb 09 43 16.5
comp=Z,28nm,1.1s
GYA0B **ALIBECK ARRAY** 65.75 302 P **P** **09 43 14.9 -0.8**
GYA0B IAmb IAmb 09 43 16.4
comp=Z,28nm,1.1s
JFWS **Jewell Farm** 65.78 49 P **P** **09 43 16.1 +0.3**
baz=324
KSU1 **Kansas State U** 65.93 56 P **P** **09 43 15.7 -1.1**
KSU1 **Kansas State U** 65.93 56 P **P** **09 43 15.7 -1.1**
baz=323,SNR=11
L40A **Anamosa** 66.04 50 P **P** **09 43 16.2 -1.2**
baz=324,SNR=5.4
N38A **Joes South For** 66.16 52 IAmb IAmb 09 43 19.7
comp=Z,32nm,1.1s
BKB **Balikpapan** 66.18 228 P **P** **09 43 17.3 -1.3**
BKB **Balikpapan** 66.18 228 P **P** **09 43 19.6 +1.0**
comp=Z,2µmcomp=Z,79nm,1.4s
BKB **Balikpapan** 66.18 228 P **P** **09 43 19.4 +0.8**
comp=Z,78nm,1.2s
HRA **Herat** 66.46 297 P **P** **09 43 19.8 -0.7**
HRA IAmb IAmb 09 43 21.2
comp=Z,23nm,1.1s
VLDQ **Val d'Or** 66.52 38 P **P** **09 43 18.1 -2.3**
MAK **Makhachkala** 66.59 312 *e*P **P** **09 43 21.2 +0.3**
MAK *e*S **S** **09 52 09.3 -0.5**
MAK pmax pmax
comp=Z,156nm,1.1s
MAK MLR MLR
comp=Z,590nm,13.0s
GOF **Gofitskoye** 66.70 316⇑ *e*P **P** **09 43 21.5 -0.1**
GOF pmax pmax
comp=Z,115nm,1.2s
AKASG **Malin Array Be** 66.71 328 P **P** **09 43 20.8 -0.8**
comp=Z,5.6nm,0.6s,baz=30,slow=6.6,SNR=27
AKASG LR LR 10 15 37.3
comp=Z,398nm,18.4s,baz=28,slow=39
comp=Z,5.6nm,0.6s
AKBB **Malin Array Si** 66.71 328 *ce*P **P** **09 43 21.3 -0.3**
AKBB pmax pmax
comp=Z,15nm,0.9s
AKBB MLR MLR
comp=Z,389nm,17.0s
KSM **Kuching** 66.72 236 P **P** **09 43 22.2 +0.2**
KSM IAmb IAmb 09 43 23.4
comp=Z,42nm,1.2s
KSM **Kuching** 66.72 236 P **P** **09 43 22.2 +0.2**
AMTX **Amarillo** 66.76 62 P **P** **09 43 22.2 -0.1**
AMTX IAmb IAmb 09 43 23.4
comp=Z,19nm,0.9s
AMTX **Amarillo** 66.76 62 P **P** **09 43 22.4 +0.1**
baz=322
MSTX **Muleshoe** 66.92 64 P **P** **09 43 23.1 -0.2**
MSTX **Muleshoe** 66.92 64 P **P** **09 43 23.5 +0.2**
baz=322,SNR=30
MSTX **Muleshoe** 66.92 64 P **P** **09 43 23.3 0.0**
baz=322,SNR=30
P38A **Dawn** 66.96 53 P **P** **09 43 22.9 -0.4**
P38A IAmb IAmb 09 43 23.9
comp=Z,31nm,0.9s
P38A **Dawn** 66.96 53 P **P** **09 43 22.7 -0.6**
baz=324,SNR=18
GROC **Groznyy** 67.11 313 *e*P **P** **09 43 23.6 -0.6**
GROC *e* 09 43 53.3
GROC pmax pmax
comp=Z,22nm,0.5s
N41A **Harden Midland** 67.30 51 P **P** **09 43 24.5 -0.9**
baz=324,SNR=5.9
MNTX **Cornudas Mount** 67.33 67 P **P** **09 43 26.8 +0.9**
MNTX IAmb IAmb 09 43 28.0
comp=Z,34nm,1.1s
MNTX **Cornudas Mount** 67.33 67 P **P** **09 43 26.8 +0.9**
baz=322,SNR=58
STKI **Sintang** 67.41 234 P **P** **09 43 28.1 +1.7**
comp=Z,9µmcomp=Z,20nm,0.8s
SPSI **Sidrap Palu** 67.44 224 P **P** **09 43 27.0 +0.4**
comp=Z,44nm,1.5s
BNSI **Bone** 67.71 223 P P 09 43 34.3 +6.0
P40A **Paris** 67.71 52 P **P** **09 43 27.6 -0.6**
P40A IAmb IAmb 09 43 28.6
comp=Z,19nm,0.8s
P40A **Paris** 67.71 52 P **P** **09 43 27.6 -0.5**
baz=324,SNR=13
T35A **Sooner Cattle** 67.71 57 **P** **09 43 27.6 -0.5**
T35B **Sooner Cattle** 67.71 57 P **P** **09 43 27.3 -0.8**
baz=323,SNR=7.7
KVAR **Kislovodsk Arr** 67.75 316 LR LR 10 16 07.2
comp=Z,429nm,18.5s,baz=280,slow=39
KBZ **Khabaz** 67.86 316 P **P** **09 43 29.1 +0.2**
comp=Z,18nm,1.0s,baz=76,slow=4.6,SNR=23
comp=Z,18nm,1.0s
KBZ **Khabaz** 67.86 316 *d i*P **P** **09 43 29.1 +0.2**
KBZ pmax pmax
comp=Z,27nm,1.1s
KBZ MLR MLR
comp=Z,491nm,17.0s
HDIL **Hopedale** 68.11 50 P **P** **09 43 29.7 -0.9**
baz=325,SNR=9.5
ZEI **Tsey** 68.23 314 *e*P **P** **09 43 30.4 -1.2**
ZEI pmax pmax
comp=Z,23nm,1.5s
WMOK **Wichita Mounta** 68.33 60 P **P** **09 43 32.2 +0.1**
WMOK **Wichita Mounta** 68.33 60 P **P** **09 43 32.2 +0.1**
WMOK pmax pmax
comp=Z,39nm,0.9s
WMOK **Wichita Mounta** 68.33 60 P **P** **09 43 32.1 0.0**
baz=323,SNR=24
KAPI **Kappang** 68.41 223 LR LR 10 14 10.1
comp=Z,57nm,20.3s,baz=40,slow=37
ONI **Oni** 68.58 315 P **P** **09 43 34.2 +0.6**
ONI **Oni** 68.58 315 P **P** **09 43 34.2 +0.6**
ONI pmax pmax
comp=Z,17nm,1.0s
S39A **Bolivar** 68.61 55 P **P** **09 43 32.5 -1.3**
S39A IAmb IAmb 09 43 33.4
comp=Z,19nm,0.8s
S39A **Bolivar** 68.61 55 P **P** **09 43 32.4 -1.3**
baz=324,SNR=18
R40A **Maddies Statio** 68.61 53 P **P** **09 43 32.8 -1.0**
R40A IAmb IAmb 09 43 34.0
comp=Z,32nm,0.8s
R40A **Maddies Statio** 68.61 53 P **P** **09 43 33.1 -0.6**
baz=324,SNR=25
SADO **Sadowa** 68.75 41 LR LR 10 15 59.2
comp=Z,442nm,20.6s,baz=0.5,slow=38
P43A **Skaggs, Pawnee** 68.76 51 P **P** **09 43 33.9 -0.8**
P43A IAmb IAmb 09 43 34.6
comp=Z,19nm,0.7s
O44A **Mansfield** 68.81 50 IAmb IAmb 09 43 34.6
comp=Z,20nm,0.9s
O44A **Mansfield** 68.81 50 P **P** **09 43 33.6 -1.3**
baz=325
TUL1 **Leonard** 68.86 57 P **P** **09 43 35.0 -0.4**
TUL1 IAmb IAmb 09 43 36.1
comp=Z,29nm,0.8s
TUL1 **Leonard** 68.86 57 P **P** **09 43 35.1 -0.3**
baz=324,SNR=11
TUL1 **Leonard** 68.86 57 P **P** **09 43 35.1 -0.3**
baz=324,SNR=11
X34A **Smith Ranch, M** 68.91 60 P **P** **09 43 36.1 +0.4**
X34A IAmb IAmb 09 43 37.2
comp=Z,33nm,1.1s
EKA **Eskdalemuir Ar** 68.99 350 P **P** **09 43 34.9 -0.9**
comp=Z,7.6nm,0.9s,baz=24,slow=6.3,SNR=12
comp=Z,7.6nm,0.9s
LVV **L'vov** 69.01 331 *e*P **P** **09 43 35.4 -0.7**
BBKI **Banjar Baru** 69.03 229 P **P** **09 43 36.6 0.0**
comp=Z,35nm,0.9s
L48A **N Adams** 69.04 46 IAmb IAmb 09 43 37.5
comp=Z,27nm,0.9s
L48A **N Adams** 69.04 46 P **P** **09 43 35.7 -0.7**
baz=327
L48A P **P** **09 43 35.7 -0.7**
baz=327
AAM **Ann Arbor** 69.06 45 P **P** **09 43 35.4 -1.1**
baz=327
ANN **Anapa** 69.07 320 *e*P **P** **09 43 38.7 +2.3**
ANN *e*PP **sP** **09 43 53.3 +4.2**
ANN *e*S **S** **09 52 40.7 +1.3**
ANN pmax pmax
comp=Z,26nm,0.7s
ANN MLR MLR
comp=E,1µm,15.0s
ANN MLR MLR
comp=Z,547nm,14.0s
U38A **Gravette** 69.11 56 P **P** **09 43 36.2 -0.7**
U38A IAmb IAmb 09 43 37.2
comp=Z,27nm,0.9s
U38A **Gravette** 69.11 56 P **P** **09 43 36.3 -0.7**
baz=324,SNR=22
BSSI **Bau Bau, Buton** 69.15 222 P **P** **09 43 37.7 +0.4**
comp=Z,44nm,1.4s
SFIN **Lafayette** 69.22 49 P **P** **09 43 35.9 -1.6**
baz=326
SOC **Sochi** 69.23 318 *e*P **P** **09 43 35.8 -1.7**
SOC *e*PPP PPP 09 47 53.1
SOC *e*S **S** **09 52 38.6 -2.8**
SOC MLR MLR
comp=Z,389nm,17.0s
SORM **Soroca** 69.25 327 ⇑P **P** **09 43 37.0 -0.5**
SORM **Soroca** 69.25 327 ⇑P **P** **09 43 37.0 -0.5**
CCM **Cathedral Cave** 69.27 53 P **P** **09 43 37.2 -0.7**
CCM **Cathedral Cave** 69.27 53 P **P** **09 43 37.2 -0.7**
CCM pmax pmax
comp=Z,14nm,0.9s
CCM **Cathedral Cave** 69.27 53 P **P** **09 43 37.0 -0.9**
baz=325
CCM **Cathedral Cave** 69.27 53 P **P** **09 43 37.1 -0.7**
N47A **Urbana** 69.40 47 P **P** **09 43 36.9 -1.7**
N47A **Urbana** 69.40 47 P **P** **09 43 37.3 -1.3**
baz=326
N47A P **P** **09 43 37.3 -1.3**
baz=326
HHAR **Hobbs** 69.45 56 P **P** **09 43 38.3 -0.8**
DELO **Deloro Mine** 69.53 40 P **P** **09 43 38.4 -1.0**
DELO IAmb IAmb 09 43 40.5
comp=Z,38nm,1.7s
MGMO **Mountain Grove** 69.53 54 IAmb IAmb 09 43 40.7
comp=Z,32nm,0.9s
KWP **Kalwaria Pacla** 69.55 332 *e*P **P** **09 43 40.3 +0.9**
KWP *e*PcP **PcP** **09 44 03.0 +0.6**
KWP *e*L L 10 15 59.5
comp=Z,522nm,19.6s
ABTX **Abilene, Hawle** 69.58 62 P **P** **09 43 39.9 0.0**
ABTX IAmb IAmb 09 43 40.9
comp=Z,28nm,0.9s
ABTX **Abilene, Hawle** 69.58 62 P **P** **09 43 39.7 -0.2**
baz=323,SNR=18
ABTX **Abilene, Hawle** 69.58 62 P **P** **09 43 39.6 -0.3**
baz=323,SNR=18
FVM **French Village** 69.71 52 IAmb IAmb 09 43 42.0
comp=Z,24nm,0.9s
OJC **Ojcow** 69.77 334 *e*P **P** **09 43 41.2 +0.4**
OJC *e*PcP **PcP** **09 44 04.0 +0.6**
OJC *e*S **S** **09 52 48.2 +0.6**
OJC *e*L L 10 18 20.3
comp=Z,435nm,18.2s
OJC **Ojcow** 69.77 334 P **P** **09 43 40.5 -0.3**
OJC IAmb IAmb 09 43 42.1
comp=Z,27nm,1.2s
OJC **Ojcow** 69.77 334 P **P** **09 43 40.5 -0.3**
OJC pmax pmax
comp=Z,27nm,1.2s
P46A **Rosedale** 69.80 49 P **P** **09 43 40.1 -0.9**
baz=326,SNR=10
N49A **Columbus Grove** 70.00 46 P **P** **09 43 41.0 -1.3**
N49A IAmb IAmb 09 43 43.4
comp=Z,18nm,0.8s
KSP **Ksiaz** 70.05 336 *e*P **P** **09 43 43.2 +0.8**
KSP *e*S **S** **09 52 53.7 +2.9**
KSP *e*L L 10 11 45.1
comp=Z,408nm,28.6s
GNI **Garni** 70.08 312 P **P** **09 43 42.8 -0.2**
comp=Z,7.5nm,0.5s,baz=3.6,slow=6.3,SNR=9.1
comp=Z,7.5nm,0.5s
GNI **Garni** 70.08 312 P **P** **09 43 41.8 -1.2**
GNI IAmb IAmb 09 44 20.6
comp=Z,22nm,0.8s
GNI **Garni** 70.08 312 *ce*P **P** **09 43 43.7 +0.7**
GNI pmax pmax
comp=Z,56nm,1.6s
GNI MLR MLR
comp=Z,527nm,16.0s
GNI **Garni** 70.08 312 P **P** **09 43 44.0 +1.0**
TX31 **Lajitas Ar. Si** 70.10 67 P **P** **09 43 44.1 +0.8**
TX32 **Lajitas Array** 70.10 67 P **P** **09 43 44.1 +0.8**
TX32 IAmb IAmb 09 43 45.1
comp=Z,25nm,0.8s
TXAR **Lajitas Array** 70.10 67 P **P** **09 43 43.5 +0.2**
comp=Z,15nm,0.7s,baz=298,slow=4.6,SNR=213
comp=Z,15nm,0.7s
TXAR **Lajitas Array** 70.10 67 P **P** **09 43 43.8 +0.5**
OLIL **Olney** 70.13 50 P **P** **09 43 42.2 -0.9**
O48B **Farmland** 70.14 47 P **P** **09 43 41.8 -1.4**
baz=327,SNR=8.3
O48B **Farmland** 70.14 47 P **P** **09 43 41.7 -1.5**
baz=327,SNR=8.3
Z35A **Perchaven, San** 70.22 60 P **P** **09 43 42.7 -1.0**
Z35A IAmb IAmb 09 43 47.6
comp=Z,22nm,0.8s
Z35A **Perchaven, San** 70.22 60 P **P** **09 43 43.0 -0.8**
baz=324,SNR=5.4
COEN **Coen** 70.22 197 P **P** **09 43 43.3 -0.5**
COEN IAmb IAmb 09 43 45.1
comp=Z,35nm,1.0s
COEN **Coen** 70.22 197 P **P** **09 43 44.2 +0.4**
KOLS **Kolonicke sedl** 70.30 332 *e*P **P** **09 43 44.3 +0.2**
KOLS pmax pmax
comp=Z,14nm,1.2s
KOLS **Kolonicke sedl** 70.30 332 *e*P **P** **09 43 44.3 +0.2**
OSTC **Ostas** 70.33 336 *e*P **P** **09 43 45.9 +1.7**
OSTC AMS AMS 10 20 30.0
comp=Z,400nm,17.3s
CLL **Collm** 70.34 338 P **P** **09 43 44.0 -0.2**
CLL IAmb IAmb 09 43 45.9
comp=Z,27nm,1.1s
CLL **Collm** 70.34 338 *i* P **P** **09 43 43.7 -0.5**
CLL *e*S **S** **09 53 00.0 +5.8**
CLL pmax pmax
comp=Z,24nm,1.0s
CLL MLR MLR
comp=Z,300nm,19.5s
CLL **Collm** 70.34 338 *i* P **P** **09 43 43.7 -0.5**
comp=Z,24nm,1.0s
CLL *i* x x 09 43 49.9
CLL *e*S **S** **09 53 00.0 +5.8**
CLL *e*SS **SS** **09 57 29.0 +5.3**
CLL *e*SSSS 10 01 54.0
CLL LmV 10 17 00.0
comp=Z,300nm,19.5s
CHVC **Chvalec** 70.34 336 *e*P **P** **09 43 44.9 +0.6**
CHVC AMS AMS 10 21 10.0
comp=Z,400nm,15.3s
NIE **Niedzica** 70.38 333 *e*P **P** **09 43 45.6 +1.0**
W39A **Magazine** 70.41 56 P **P** **09 43 44.6 -0.2**
W39A IAmb IAmb 09 43 45.6
comp=Z,21nm,0.9s
W39A **Magazine** 70.41 56 P **P** **09 43 44.7 -0.2**
baz=324,SNR=9.5
W39A **Magazine** 70.41 56 P **P** **09 43 44.4 -0.5**
baz=324,SNR=9.5
UPC **Upice** 70.42 336 AMS AMS 10 20 20.0
comp=Z,400nm,15.0s
BLO **Bloomington** 70.46 49 IAmb IAmb 09 43 45.7
comp=Z,16nm,0.8s
SIUC **Southern Illin** 70.47 52 P **P** **09 43 44.5 -0.8**
SIUC IAmb IAmb 09 43 45.4
comp=Z,24nm,0.9s
S44A **Carbondale** 70.47 52 P **P** **09 43 44.0 -1.2**
S44A IAmb IAmb 09 43 45.4
comp=Z,20nm,0.8s
S44A **Carbondale** 70.47 52 P **P** **09 43 44.4 -0.8**
baz=326,SNR=12
E62A **Clayton Lake** 70.48 34 IAmb IAmb 09 43 45.3
comp=Z,16nm,0.8s
E62A **Clayton Lake** 70.48 34 P **P** **09 43 44.3 -0.9**
baz=333,SNR=6.7
E62A P **P** **09 43 44.3 -0.9**
baz=333,SNR=6.7
DPC **Dobruska-Polom** 70.50 336 *e*P **P** **09 43 46.2 +0.9**
DPC *e*S **S** **09 52 54.6 -1.6**
DPC MLR MLR
comp=Z,400nm,14.9s
DPC **Dobruska-Polom** 70.50 336 *e*P **P** **09 43 46.2 +0.9**
DPC *e*S **S** **09 52 54.6 -1.6**
DPC AMS AMS 10 20 10.0
comp=Z,400nm,14.9s
J55A **Hilton** 70.53 41 P **P** **09 43 44.4 -1.1**
LONY **Lake Ozonia** 70.54 38 P **P** **09 43 43.8 -1.8**
baz=331
BRG **Berggiesshubel** 70.55 338 *e*P **P** **09 43 45.4 -0.1**
BRG Amp 09 43 47.5
comp=Z,10nm,1.1s
BRG *ex* x 09 43 52.0
BRG Amp 09 43 53.1
comp=Z,5.7nm,0.8s
BRG *ex* x 09 44 00.4
BRG Amp 09 44 00.7
comp=Z,6.4nm,0.9s
BRG Amp 10 20 07.0
comp=E,0.3nm,13.9s
BRG Amp 10 20 12.0
comp=N,0.3nm,12.8s
BRG Amp 10 20 15.0
comp=Z,0.4nm,16.1s
BRG **Berggiesshubel** 70.55 338 *e*P **P** **09 43 45.4 -0.1**
BRG *e* 09 44 00.4
BRG pmax pmax
comp=Z,10.0nm,1.1s
BRG MLR MLR
comp=E,250nm,13.9s
BRG MLR MLR
comp=N,330nm,12.8s
BRG MLR MLR
comp=Z,370nm,16.1s
O49A **Covington** 70.55 47 P **P** **09 43 44.5 -1.2**
O49A IAmb IAmb 09 43 46.7
comp=Z,50nm,1.6s
CRVS **Cervenica-Dubn** 70.55 332 *e*P **P** **09 43 45.4 -0.2**
CRVS **Cervenica-Dubn** 70.55 332 *e*P **P** **09 43 45.4 -0.2**
UZH **Uzhgorod** 70.57 332 *e*P **P** **09 43 45.8 +0.1**
UZH *e* 09 43 55.8
UZH *e* 09 43 59.2
UZH *e* 09 44 07.0
FCAR **Ozark Folk Cen** 70.63 55 P **P** **09 43 45.4 -0.8**
FCAR IAmb IAmb 09 43 46.3
comp=Z,24nm,0.9s
LPIG **La Paz** 70.63 76 LR LR 10 13 30.7
comp=Z,82nm,18.3s,baz=320,slow=35
BUR08 **Bucovina Ar. S** 70.64 329 P **P** **09 43 46.2 0.0**
KRLC **Kraliky** 70.65 336 *e*P **P** **09 43 46.3 +0.1**
KRLC MLR MLR
comp=Z,400nm,11.9s
KRLC **Kraliky** 70.65 336 *e*P **P** **09 43 46.3 +0.1**
KRLC AMS AMS 10 20 30.0
comp=Z,400nm,11.9s
BURAR **Bucovina Array** 70.66 329 ⇓P **P** **09 43 46.5 +0.1**
BURAR **Bucovina Array** 70.66 329 P **P** **09 43 46.5 +0.1**
BURAR **Bucovina Array** 70.66 329 ⇓P **P** **09 43 46.5 +0.1**
ERPA **Erie** 70.68 43 P **P** **09 43 45.1 -1.3**
baz=329
PBMO **Poplar Bluff** 70.69 53 P **P** **09 43 45.9 -0.7**
PBMO IAmb IAmb 09 43 48.2
comp=Z,29nm,0.8s
P48A **Milroy** 70.69 48 P **P** **09 43 45.7 -0.9**
P48A IAmb IAmb 09 43 46.2
comp=Z,22nm,0.8s
P48A **Milroy** 70.69 48 P **P** **09 43 45.2 -1.4**
baz=327,SNR=12
P48A P **P** **09 43 45.2 -1.4**
baz=327,SNR=12
PVCC **Panska Ves** 70.73 337 AMS AMS 10 20 00.0
comp=Z,400nm,15.6s
MORC **Moravsky Berou** 70.74 335 ⇓P **P** **09 43 47.2 +0.4**
MORC **Moravsky Berou** 70.74 335 P **P** **09 43 46.2 -0.6**
MORC **Moravsky Berou** 70.74 335 P **P** **09 43 46.2 -0.6**
MORC pmax pmax
comp=Z,15nm,0.9s
MORC **Moravsky Berou** 70.74 335 *e*P **P** **09 43 47.3 +0.5**
N51A **Ashland** 70.74 45 IAmb IAmb 09 43 47.7
comp=Z,20nm,0.8s
LANS **Liptovska Anna** 70.84 334 *e*P **P** **09 43 49.0 +1.6**
LANS pmax pmax
comp=Z,11nm,0.8s
LANS **Liptovska Anna** 70.84 334 *e*P **P** **09 43 49.0 +1.6**
J56A **Wolcott** 70.88 40 P **P** **09 43 46.2 -1.4**
P49A **Miami Univ. Ec** 70.93 48 P **P** **09 43 47.1 -1.0**
P49A IAmb IAmb 09 43 47.8
comp=Z,21nm,0.9s
P49A **Miami Univ. Ec** 70.93 48 P **P** **09 43 46.7 -1.3**
baz=327,SNR=6.1
P49A **Miami Univ. Ec** 70.93 48 P **P** **09 43 46.7 -1.3**
baz=327,SNR=6.1
HPIG 70.94 70 P **P** **09 43 48.9 +0.4**
HPIG IAmb IAmb 09 43 53.8
comp=Z,31nm,1.5s
LCAR **Lake Charles** 70.94 54 P **P** **09 43 47.5 -0.6**
LCAR IAmb IAmb 09 43 49.5
comp=Z,69nm,2.0s
MMNY **Mt. Morris Dam** 70.95 41 P **P** **09 43 46.9 -1.2**
MMNY IAmb IAmb 09 43 48.5
comp=Z,24nm,1.1s
WVNY **West Valley, N** 70.97 42 P **P** **09 43 47.0 -1.2**
M53A **WI Miller and** 70.99 44 P **P** **09 43 47.5 -0.8**
M53A IAmb IAmb 09 43 49.4
comp=Z,29nm,0.9s
M53A **WI Miller and** 70.99 44 P **P** **09 43 47.4 -1.0**
baz=328
BIZ **Bicaz** 71.00 328 ⇓P **P** **09 43 48.3 -0.1**
MIAR **Mount Ida** 71.03 57 P **P** **09 43 48.5 -0.2**
MIAR IAmb IAmb 09 43 49.6
comp=Z,26nm,0.9s
MIAR **Mount Ida** 71.03 57 P **P** **09 43 48.5 -0.2**
MIAR pmax pmax
comp=Z,26nm,0.9s
MIAR **Mount Ida** 71.03 57 P **P** **09 43 48.5 -0.2**
baz=325,SNR=22
WHAR **Wooly Hollow** 71.04 55 P **P** **09 43 48.2 -0.5**
WHAR IAmb IAmb 09 43 49.2
comp=Z,35nm,0.9s
MAUC **Maruska** 71.06 335 AMS AMS 10 19 20.0
comp=Z,800nm,16.6s
ACSO **Alum Creek Sta** 71.07 46 IAmb IAmb 09 43 50.1
comp=Z,37nm,1.1s
ACSO **Alum Creek Sta** 71.07 46 P **P** **09 43 48.0 -0.9**
baz=328
EDFI **Ende, Flores** 71.09 220 P **P** **09 43 48.8 -0.5**
comp=Z,16nm,1.2s
PARMO **Parma** 71.09 53 P **P** **09 43 49.2 +0.2**
W41B **Gary Mavity, V** 71.15 55 P **P** **09 43 49.0 -0.4**
baz=325,SNR=44
W41B **Gary Mavity, V** 71.15 55 P **P** **09 43 49.0 -0.4**
baz=325,SNR=44
SLBS **Sierra La Lagu** 71.16 76 P **P** **09 43 48.4 -1.4**
SLBS IAmb IAmb 09 43 52.4
comp=Z,40nm,1.5s
WHTX **Lake Whitney,** 71.19 61 P **P** **09 43 49.1 -0.6**
baz=324
JCT **Junction City** 71.21 64 P **P** **09 43 49.2 -0.7**
JCT **Junction City** 71.21 64 P **P** **09 43 49.2 -0.7**
JCT pmax pmax
comp=Z,40nm,0.9s
JCT **Junction City** 71.21 64 P **P** **09 43 49.8 -0.2**
baz=324,SNR=30
PRU **Pruhonice** 71.25 337 *e*P **P** **09 43 49.9 +0.1**
PRU *e*S **S** **09 53 04.1 -0.7**
PRU MLR MLR
comp=Z,400nm,12.9s
PRU **Pruhonice** 71.25 337 *e*P **P** **09 43 49.9 +0.1**
PRU *e*S **S** **09 53 04.1 -0.7**
PRU AMS AMS 10 20 20.0
comp=Z,400nm,12.9s

J58A Remsen 71.38 39 P P 09 43 49.2 -1.5
J58A Remsen 71.38 39 P P 09 43 49.2 -1.5
baz=330,SNR=6.5
J58A P P 09 43 49.2 -1.5
baz=330,SNR=6.5
Z38A Mt. Pleasant 71.39 58 IAmb IAmb 09 43 51.6
comp=Z,28nm,0.8s
Z38A Mt. Pleasant 71.39 58 P P 09 43 50.7 -0.2
baz=324,SNR=6.2
VRAC Vranov 71.41 335 ⇓P P 09 43 51.6 +0.8
VRAC Vranov 71.41 335 LR LR 10 18 47.1
comp=Z,218nm,19.6s,baz=28,slow=39
VRAC Vranov 71.41 335 ⇓P P 09 43 51.6 +0.8
VRAC Vranov 71.41 335 *eP* P 09 43 51.1 +0.3
F63A Nahmakanta, Br 71.42 34 P P 09 43 49.6 -1.3
F63A IAmb IAmb 09 44 02.6
comp=Z,81nm,2.0s
UALR University of 71.43 56 P P 09 43 50.4 -0.7
N53A Lisbon 71.46 44 IAmb IAmb 09 43 54.8
comp=Z,75nm,1.9s
NKC Novy Kostel 71.47 338 AMS AMS 10 20 40.0
comp=Z,500nm,14.1s
JAVC Velka Javorina 71.56 335 *eP* P 09 43 52.9 +1.1
J59A Piesco 71.57 38 P P 09 43 50.6 -1.2
J59A Piesco 71.57 38 P P 09 43 50.4 -1.5
baz=331
J59A P P 09 43 50.4 -1.5
baz=331
HBAR Harrisburg 71.59 54 P P 09 43 50.6 -1.4
L56A Greenwood 71.60 41 P P 09 43 51.0 -1.1
L56A IAmb IAmb 09 43 59.3
comp=Z,16nm,0.7s
L56A Greenwood 71.60 41 P P 09 43 50.6 -1.4
baz=330,SNR=8.3
L56A P P 09 43 50.6 -1.4
baz=330,SNR=8.3
VYHS Vyhne 71.61 334 *eP* P 09 43 53.1 +1.0
VYHS pmax pmax
comp=Z,5.0nm,1.2s
VYHS Vyhne 71.61 334 *eP* P 09 43 53.0 +1.0
GLAT Glass 71.63 53 P P 09 43 51.9 -0.4
P51A Williamsport 71.67 46 P P 09 43 51.5 -1.0
P51A IAmb IAmb 09 43 53.2
comp=Z,17nm,0.8s
LNXT Lenox 71.68 53 P P 09 43 56.1 +3.5
TPI Tanjungpandan 71.68 236 P P 09 43 54.0 +1.2
comp=Z,16nm,1.3s
KRUC Moravsky 71.68 335 *eP* P 09 43 52.7 +0.3
M55A Ridgway 71.71 42 P P 09 43 51.7 -1.0
M55A IAmb IAmb 09 43 53.7
comp=Z,20nm,0.9s
M55A Ridgway 71.71 42 P P 09 43 51.8 -1.0
baz=329,SNR=7.9
M55A P P 09 43 51.8 -1.0
baz=329,SNR=7.9
H62A Milan 71.75 36 P P 09 43 52.3 -0.6
baz=332
H62A P P 09 43 52.3 -0.6
baz=332
PKME Peaks-Kenny Pk 71.75 34 P P 09 43 51.7 -1.1
baz=333
VRI Vrincioaia 71.78 327 ⇑P P 09 43 53.5 +0.5
VRI Vrincioaia 71.78 327 ⇑P P 09 43 53.5 +0.5
R49A Shelbyville 71.78 49 P P 09 43 52.1 -1.1
R49A IAmb IAmb 09 43 54.7
comp=Z,55nm,1.7s
R49A Shelbyville 71.78 49 P P 09 43 52.6 -0.6
baz=327
R49A P P 09 43 52.6 -0.6
baz=327
O53A New Philadelph 71.78 45 P P 09 43 51.6 -1.5
baz=328
LBNH Lisbon 71.79 36 P P 09 43 52.5 -0.6
LBNH Lisbon 71.79 36 P P 09 43 52.5 -0.6
LBNH pmax pmax
comp=Z,13nm,0.9s
LBNH Lisbon 71.79 36 P P 09 43 52.6 -0.6
baz=332
MTN Manton Dam 71.86 209 P P 09 43 53.6 -0.1
PSZ Piszkesteto 71.87 333 ⇓P P 09 43 54.2 +0.6
PSZ Piszkesteto 71.87 333 P P 09 43 54.1 +0.5
PSZ Piszkesteto 71.87 333 P P 09 43 54.1 +0.5
PSZ pmax pmax
comp=Z,9.0nm,1.0s
P52A Corning 71.93 46 P P 09 43 52.3 -1.8
P52A Corning 71.93 46 P P 09 43 52.4 -1.6
baz=328
Q51A Peebles 71.94 47 P P 09 43 53.3 -0.8
Q51A Peebles 71.94 47 P P 09 43 53.4 -0.7
baz=328
Q51A P P 09 43 53.4 -0.7
baz=328
CFR Carcaliu 71.95 326 ⇓P P 09 43 53.5 -0.5
CFR Carcaliu 71.95 326 ⇓P P 09 43 53.5 -0.5
WLAR White Oak Lake 71.95 57 IAmb IAmb 09 43 55.4
comp=Z,28nm,0.9s
COVR Voinease-Covas 71.96 328 ⇑P P 09 43 53.4 -0.8
T47A Sharon Grove 72.02 51 P P 09 43 54.0 -0.6
T47A IAmb IAmb 09 43 56.4
comp=Z,35nm,0.9s
T47A Sharon Grove 72.02 51 P P 09 43 54.1 -0.6
baz=327,SNR=20
435B Jarrell 72.10 62 P P 09 43 54.8 -0.4
baz=324
MODS Modra-Piesok 72.11 335 *eP* P 09 43 55.9 +0.9
MODS pmax pmax
comp=Z,21nm,1.0s
MODS Modra-Piesok 72.11 335 *eP* P 09 43 55.9 +0.9
BINY Binghamton 72.13 40 P P 09 43 54.1 -1.2
baz=330
DRGR 72.13 330 ⇑P P 09 43 55.3 +0.1
DRGR 72.13 330 ⇑P P 09 43 55.3 +0.1
TPGR Topolog 72.14 326 ⇓P P 09 43 55.4 +0.1
R50A Paris 72.15 48 P P 09 43 54.3 -1.1
R50A Paris 72.15 48 P P 09 43 54.8 -0.5
baz=327,SNR=6.0
R50A P P 09 43 54.8 -0.5
baz=327,SNR=6.0
GRFO Grafenberg 72.24 339 P P 09 43 55.2 -0.5
GRFO IAmb IAmb 09 43 57.0
comp=Z,40nm,1.3s
GRFO Grafenberg 72.24 339 P P 09 43 55.2 -0.5
GRFO pmax pmax
comp=Z,40nm,1.3s
KHC Kasperske Hory 72.27 337 P P 09 43 55.5 -0.5
KHC Kasperske Hory 72.27 337 *eP* P 09 43 56.7 +0.7
KHC *eS* S 09 53 18.1 +1.5
KHC MLR MLR
comp=Z,400nm,14.0s
KHC Kasperske Hory 72.27 337 *eP* P 09 43 56.7 +0.7
KHC *ex* x 09 53 18.1
KHC AMS AMS 10 21 00.0
comp=Z,400nm,14.0s
GEVA Gevas 72.33 312 P P 09 43 56.7 0.0
GEVA IAmb IAmb 09 44 11.9
comp=Z,46nm,1.8s
X43A Marvell 72.33 55 P P 09 43 55.9 -0.6
baz=326
MEM Membach 72.34 343 *dP* P 09 43 56.1 -0.2
comp=Z,17nm,0.9s
BTNL Ternell 72.34 343 *dP* P 09 43 56.3 0.0
comp=Z,11nm,1.0s
MLR Muntele Rosu 72.36 328 ⇑P P 09 43 56.8 +0.2
MLR Muntele Rosu 72.36 328 LR LR 10 18 53.4
comp=Z,664nm,19.5s,baz=26,slow=38
MLR Muntele Rosu 72.36 328 P P 09 43 56.3 -0.4
MLR Muntele Rosu 72.36 328 P P 09 43 56.3 -0.4
MLR pmax pmax
comp=Z,24nm,1.3s
J61A Chester 72.36 37 P P 09 43 56.2 -0.4
CKC Cesky Krumlov 72.40 337 *eP* P 09 43 57.1 +0.4
CKRC *eS* S 09 53 19.8 +1.7
CKRC AMS AMS 10 21 40.0
comp=Z,400nm,15.6s
CCAR Cane Creek 72.41 56 P P 09 43 56.4 -0.6
CCAR IAmb IAmb 09 44 02.0
comp=Z,38nm,0.9s
WVT Waverly 72.41 52 P P 09 43 56.0 -1.0
WVT Waverly 72.41 52 P P 09 43 56.0 -1.0
WVT pmax pmax
comp=Z,19nm,0.9s
WVT Waverly 72.41 52 P P 09 43 56.5 -0.4
baz=326
Q52A Bidwell 72.44 46 P P 09 43 55.8 -1.4
M57A Sunshine Farm, 72.45 41 P P 09 43 55.8 -1.3
baz=330,SNR=8.6
M57A P P 09 43 55.8 -1.3
baz=330,SNR=8.6
Z41A Richland Creek 72.45 57 P P 09 43 57.1 -0.2
Z41A Richland Creek 72.45 57 P P 09 43 56.9 -0.4
baz=325
L59A Walton 72.49 39 P P 09 43 55.8 -1.6
L59A IAmb IAmb 09 43 58.0
comp=Z,20nm,0.8s
L59A Walton 72.49 39 P P 09 43 56.1 -1.3
baz=331,SNR=9.6
L59A P P 09 43 56.1 -1.3
baz=331,SNR=9.6
TIRR Tirgusor 72.50 326 ⇓P P 09 43 57.2 -0.2
TIRR Tirgusor 72.50 326 ⇓P P 09 43 57.2 -0.2
GEC2 GERESS Array S 72.51 337 P P 09 43 56.8 -0.7
GERES GERESS Array B 72.51 337 P P 09 43 57.7 +0.2
comp=Z,4.3nm,0.8s,baz=36,slow=2.5,SNR=23
GERES LR LR 10 19 00.7
comp=Z,120nm,21.1s,baz=34,slow=38
comp=Z,4.3nm,0.8s
GERES GERESS Array B 72.51 337 P P 09 43 57.0 -0.5
GERES GERESS Array B 72.51 337 P P 09 43 57.0 -0.5
W45A Hickory Valley 72.59 53 P P 09 43 58.0 0.0
W45A Hickory Valley 72.59 53 P P 09 43 58.1 0.0
baz=326,SNR=6.7
VOIR 72.68 328 ⇓P P 09 43 58.6 +0.1
VOIR 72.68 328 ⇓P P 09 43 58.6 +0.1
SSPA Standing Stone 72.76 42 P P 09 43 57.3 -1.7
SSPA Standing Stone 72.76 42 P P 09 43 57.7 -1.3
baz=330
KSPA Keystone Colle 72.77 40 P P 09 43 58.1 -0.9
NATX Nacogdoches 72.77 59 IAmb IAmb 09 44 00.4
comp=Z,38nm,0.8s
NATX Nacogdoches 72.77 59 P P 09 43 59.3 +0.1
baz=325,SNR=5.1
MCWV Mont Chateau 72.83 44 P P 09 43 59.0 -0.4
MCWV Mont Chateau 72.83 44 P P 09 43 58.6 -0.8
baz=329
BMRD Maredsous 72.84 343 *dP* P 09 43 59.5 +0.2
comp=Z,8.9nm,0.9s
ARR Arges 72.86 329 ⇑P P 09 43 59.7 +0.1
CONA Conrad Observa 72.87 335 *iP* P 09 44 00.5 +0.9
comp=Z,14nm,1.1s,SNR=8.9
AFI Afiamalu 72.91 151 LR LR 10 08 47.0
comp=Z,172nm,21.7s,baz=53,slow=30
RCHB Rochefort 72.91 343 *dP* P 09 43 59.6 -0.1
RONA Rosalia, Austr 72.98 335 *iP* P 09 44 01.3 +1.1
comp=Z,6.8nm,0.7s
T50A Nancy 72.99 49 P P 09 43 59.8 -0.6
T50A Nancy 72.99 49 P P 09 43 59.8 -0.6
baz=327
T50A P P 09 43 59.8 -0.6
baz=327
S51A Beattyville 73.00 48 P P 09 43 59.4 -1.1
S51A Beattyville 73.00 48 P P 09 43 59.8 -0.7
baz=328,SNR=5.4
S51A P P 09 43 59.8 -0.7
baz=328,SNR=5.4
U49A Red Boiling Sp 73.00 50 P P 09 43 59.8 -0.7
U49A Red Boiling Sp 73.00 50 P P 09 43 59.9 -0.5
baz=327,SNR=11
Q54A Coxs Mills 73.01 45 P P 09 43 59.7 -0.8
Q54A Coxs Mills 73.01 45 P P 09 43 59.7 -0.8
baz=329
Q54A P P 09 43 59.7 -0.8
baz=329
OXF Oxford 73.03 54 P P 09 43 59.4 -1.2
OXF Oxford 73.03 54 P P 09 43 59.4 -1.2
OXF pmax pmax
comp=Z,49nm,0.9s
OXF Oxford 73.03 54 P P 09 44 00.1 -0.5
baz=326,SNR=5.8
N58A Sunbury 73.04 41 P P 09 43 59.1 -1.5
DOU Dourbes 73.07 343 *dP* P 09 44 00.2 -0.4
R53A Hurricane 73.11 46 P P 09 44 00.4 -0.7
R53A IAmb IAmb 09 44 02.5
comp=Z,28nm,0.8s
R53A Hurricane 73.11 46 P P 09 44 00.4 -0.7
baz=328,SNR=11
R53A P P 09 44 00.4 -0.7
baz=328,SNR=11
CLTN Cedars of Leba 73.11 51 P P 09 44 00.8 -0.3
CLTN IAmb IAmb 09 44 01.6
comp=Z,20nm,0.9s
833A Chaparral WMA, 73.15 65 P P 09 44 01.2 -0.3
833A Chaparral WMA, 73.15 65 P P 09 44 01.7 +0.2
baz=324
V48A Smith Brothers 73.18 51 P P 09 43 59.5 -2.1
V48A Smith Brothers 73.18 51 P P 09 44 01.1 -0.5
baz=327,SNR=8.3
PLAL Pickwick Lake 73.25 52 P P 09 44 01.4 -0.6
PLAL IAmb IAmb 09 44 02.3
comp=Z,32nm,0.8s
MOA Molln 73.32 336 *iP* P 09 44 02.6 +0.4
comp=Z,5.5nm,0.5s
HRV Adam Dziewonsk 73.45 37 P P 09 44 02.4 -0.6
baz=332
Y45A Yeager Farm, C 73.50 54 P P 09 44 03.6 +0.2
Y45A Yeager Farm, C 73.50 54 P P 09 44 03.5 +0.2
baz=326,SNR=7.0
BZS Buzias 73.51 331 ⇓P P 09 44 03.0 -0.4
BZS Buzias 73.51 331 ⇓P P 09 44 03.0 -0.4
143A Socs Landing, 73.58 56 P P 09 44 04.0 +0.1
143A IAmb IAmb 09 44 05.2
comp=Z,33nm,0.8s
143A Socs Landing, 73.58 56 P P 09 44 04.5 +0.6
baz=326,SNR=8.5
ARSA Arzberg 73.59 335 *iP* P 09 44 04.6 +0.8
comp=Z,8.8nm,0.9s
Q56A Snyder Ridge, 73.62 44 P P 09 44 03.3 -0.8
WES Weston 73.64 37 P P 09 44 03.2 -0.9
WES IAmb IAmb 09 44 05.7
comp=Z,52nm,1.7s
WES Weston 73.64 37 P P 09 44 03.2 -0.9
WES pmax pmax
comp=Z,52nm,1.7s
HKT Hockley 73.66 61 P P 09 44 04.0 -0.3
HKT Hockley 73.66 61 P P 09 44 04.0 -0.3
HKT pmax pmax
comp=Z,12nm,1.1s
MORH Mrgy, Hungar 73.77 333 ⇑P P 09 44 04.6 -0.2
S54A Dingess, Beckl 73.82 46 P P 09 44 04.3 -1.0
PAL Palisades 73.93 39 P P 09 44 04.5 -1.3
baz=332
TZTN Tazewell 73.94 48 P P 09 44 05.5 -0.5
TZTN IAmb IAmb 09 44 07.7
comp=Z,28nm,0.9s
TZTN Tazewell 73.94 48 P P 09 44 05.6 -0.5
baz=328,SNR=13
HERR Herculane 73.96 330 ⇑P P 09 44 05.6 -0.4
SWET Sewanee 74.02 51 P P 09 44 05.6 -0.9
SWET IAmb IAmb 09 44 06.5
comp=Z,30nm,0.9s
BFO Black Forest 74.11 341 P P 09 44 06.7 -0.2
BFO Black Forest 74.11 341 P P 09 44 06.7 -0.2
BFO pmax pmax
comp=Z,7.0nm,0.6s
MARD Mardin 74.13 313 P P 09 44 06.9 -0.3
MARD IAmb IAmb 09 44 15.6
comp=Z,18nm,0.8s
X48A Hartselle 74.16 52 P P 09 44 06.3 -1.0
X48A Hartselle 74.16 52 P P 09 44 06.3 -1.0
baz=327,SNR=10.0
L64A Middleborough 74.20 37 P P 09 44 06.4 -1.0
L64A IAmb IAmb 09 44 09.0
comp=Z,56nm,1.4s
V51A Loudon 74.22 49 P P 09 44 07.0 -0.7
V51A Loudon 74.22 49 P P 09 44 07.0 -0.7
baz=328,SNR=11
SOKA Soboth 74.24 335 *iP* P 09 44 08.2 +0.5
comp=Z,14nm,1.1s,SNR=6.4
MDVR Moldovita 74.25 330 ⇓P P 09 44 07.2 -0.6
KBA Koelnbreinsper 74.25 337 *iP* P 09 44 09.0 +1.1
comp=Z,37nm,1.0s,SNR=20
MSVF Nonsavu 74.26 162 LR LR 10 14 02.0
comp=Z,108nm,20.0s,baz=197,slow=34
W50A Signal Mountai 74.31 50 P P 09 44 07.5 -0.7
W50A Signal Mountai 74.31 50 P P 09 44 07.6 -0.7
baz=328,SNR=16
VBMS Vicksburg 74.40 56 P P 09 44 08.9 +0.2
VBMS IAmb IAmb 09 44 11.4
comp=Z,29nm,0.9s
VBMS Vicksburg 74.40 56 P P 09 44 08.7 0.0
baz=326
WATA Walderalm 74.40 338 *iP* P 09 44 09.3 +0.6
comp=Z,12nm,0.9s
PWJI Pagerwojo 74.43 230 P P 09 44 07.6 -1.4
comp=Z,76nm,1.2s
RETA Reutte 74.43 339 *iP* P 09 44 09.1 +0.3
comp=Z,9.4nm,1.0s
FRGS Fruska Gora 74.44 332 ⇓P P 09 44 09.0 +0.2
ECH Echery 74.44 341 P P 09 44 08.1 -0.7
ECH Echery 74.44 341 P P 09 44 08.1 -0.7
ECH pmax pmax
comp=Z,18nm,1.1s
CPCT Cooper Cave 74.44 50 P P 09 44 08.3 -0.7
WTTA Wattenberg 74.46 338 *iP* P 09 44 09.8 +0.7
comp=Z,14nm,1.0s
MOTA Moosalm 74.49 338 *iP* P 09 44 09.6 +0.4
comp=Z,12nm,0.9s,SNR=7.4
OBKA Obir 74.51 336 *iP* P 09 44 09.8 +0.5
comp=Z,21nm,0.9s,SNR=7.3
V52A Sevierville 74.52 49 P P 09 44 08.9 -0.4
V52A Sevierville 74.52 49 P P 09 44 08.9 -0.4
baz=328,SNR=12
SQTA Sankt Quirin 74.59 338 *iP* P 09 44 10.5 +0.7
comp=Z,20nm,1.1s,SNR=5.9
TKL Tuckaleechee C 74.59 49 LR LR 10 19 00.1
comp=Z,680nm,18.5s,baz=334,slow=37
TKL Tuckaleechee C 74.59 49 P P 09 44 09.4 -0.5
TKL IAmb IAmb 09 44 13.8
comp=Z,42nm,1.6s
TKL Tuckaleechee C 74.59 49 P P 09 44 09.4 -0.5
MYKA Terra Mystica 74.61 336 *iP* P 09 44 10.2 +0.3
comp=Z,11nm,1.0s
BLA Blacksburg 74.69 46 P P 09 44 10.1 -0.3
BLA IAmb IAmb 09 44 11.9
comp=Z,33nm,0.9s
BLA Blacksburg 74.69 46 P P 09 44 10.1 -0.3
BLA pmax pmax
comp=Z,33nm,1.0s
BLA Blacksburg 74.69 46 P P 09 44 09.5 -0.9
baz=329,SNR=9.9
U54A Nelsons Funny 74.70 47 P P 09 44 10.0 -0.6
U54A IAmb IAmb 09 44 12.1
comp=Z,19nm,0.8s
U54A Nelsons Funny 74.70 47 P P 09 44 09.9 -0.6
baz=329,SNR=8.9
U54A P P 09 44 09.9 -0.6
baz=329,SNR=8.9
FPAL Fort Paine 74.73 51 P P 09 44 10.0 -0.7
FPAL IAmb IAmb 09 44 12.1
comp=Z,29nm,0.9s
Z47A Carrollton 74.73 54 P P 09 44 10.2 -0.5
Z47A Carrollton 74.73 54 P P 09 44 10.4 -0.3
baz=327,SNR=14
146A Union 74.74 55 P P 09 44 10.9 +0.2
146A Union 74.74 55 P P 09 44 11.1 +0.4
baz=327,SNR=12
ABTA Abfaltersbach 74.75 337 *iP* P 09 44 11.0 +0.3
comp=Z,18nm,0.9s,SNR=10
BNN Bunyan 74.79 318 P P 09 44 10.8 -0.3
BNN IAmb IAmb 09 44 17.1
comp=Z,22nm,0.7s
DAVA Damuels 74.80 339 *iP* P 09 44 11.0 0.0
comp=Z,13nm,1.4s
PRED Cave del Predi 74.81 336 P P 09 44 10.4 -0.5
S57A Dark Hollow, R 74.82 44 P P 09 44 10.7 -0.4
S57A IAmb IAmb 09 44 12.8
comp=Z,19nm,0.7s
S57A Dark Hollow, R 74.82 44 P P 09 44 10.9 -0.2
baz=330,SNR=6.0
S57A P P 09 44 10.9 -0.2
baz=330,SNR=6.0
BR131 Keskin Array S 74.86 320 P P 09 44 11.5 0.0
BR131 Keskin Array S 74.86 320 P P 09 44 11.5 0.0
BR131 pmax pmax
comp=Z,8.0nm,0.9s
BRTR Keskin Array B 74.86 320 P P 09 44 11.5 0.0
comp=Z,4.7nm,0.8s,baz=62,slow=3.5,SNR=10
comp=Z,4.7nm,0.8s
BRTR Keskin Array B 74.86 320 P P 09 44 10.7 -0.8
BRTR Keskin Array B 74.86 320 P P 09 44 10.7 -0.8
FETA Feichten 74.88 339 *iP* P 09 44 12.2 +0.7
comp=Z,16nm,1.0s,SNR=12
344A Westbrook Farm 74.93 56 P P 09 44 11.5 -0.3
344A IAmb IAmb 09 44 13.6
comp=Z,31nm,0.8s
344A Westbrook Farm 74.93 56 P P 09 44 12.9 +1.1
baz=326,SNR=6.0
Y49A Blount Mountai 74.94 52 P P 09 44 11.0 -0.9
Y49A IAmb IAmb 09 44 12.0
comp=Z,22nm,0.8s
Y49A Blount Mountai 74.94 52 P P 09 44 11.2 -0.7
baz=327,SNR=17
V53A Saluda 75.00 48 P P 09 44 11.6 -0.6
V53A Saluda 75.00 48 P P 09 44 11.8 -0.5
baz=328,SNR=6.9
V53A P P 09 44 11.8 -0.5
baz=328,SNR=6.9
W52A Murphy 75.00 49 P P 09 44 12.0 -0.3
W52A Murphy 75.00 49 P P 09 44 11.9 -0.3
baz=328,SNR=8.3
X51A Calhoun 75.04 50 P P 09 44 12.0 -0.4
X51A IAmb IAmb 09 44 14.0
comp=Z,24nm,0.9s
X51A Calhoun 75.04 50 P P 09 44 12.0 -0.4
baz=328,SNR=6.9
X51A P P 09 44 12.0 -0.4
baz=328,SNR=6.9
CBN Corbin Frederi 75.06 43 P P 09 44 11.5 -1.0
baz=330
R58B Mineral 75.07 44 P P 09 44 11.7 -0.8
R58B Mineral 75.07 44 P P 09 44 11.7 -0.8
baz=330
R58B P P 09 44 11.7 -0.8
baz=330
KNRA Kununurra 75.23 211 P P 09 44 12.9 -0.6
KNRA Kununurra 75.23 211 P P 09 44 13.5 0.0
LEM Lembang 75.26 234 LR LR 10 17 51.6
comp=Z,136nm,20.3s,baz=346,slow=36
DAVOX Davos/Dischmat 75.29 339 LR LR 10 20 34.6
comp=Z,258nm,20.5s,baz=76,slow=38
BOVS Bovan 75.31 330 ⇑P P 09 44 13.0 -0.8
JSRW J. Sargeant Re 75.31 44 P P 09 44 12.9 -0.9
T57A Hurt 75.35 45 P P 09 44 13.2 -1.0
T57A Hurt 75.35 45 P P 09 44 13.4 -0.8
baz=330,SNR=12
T57A P P 09 44 13.4 -0.8
baz=330,SNR=12
FUORN Ofenpass-Fuorn 75.36 339 P P 09 44 13.2 -1.2
LRAL Lakeview Retre 75.36 53 P P 09 44 13.3 -1.0
LRAL IAmb IAmb 09 44 17.7
comp=Z,22nm,0.6s
LRAL Lakeview Retre 75.36 53 P P 09 44 13.2 -1.0
baz=327,SNR=27
DIVS Divibare 75.36 331 P P 09 44 12.8 -1.4
U56A King 75.45 46 P P 09 44 13.9 -0.9
U56A King 75.45 46 P P 09 44 14.4 -0.3
baz=329
U56A P P 09 44 14.4 -0.3
baz=329
KOUNC Koumac, New Ca 75.49 175 P P 09 44 15.3 +0.4
BG3 Lake Jocassee 75.52 49 P P 09 44 14.3 -0.9
V55A Taylorsville 75.52 47 P P 09 44 14.6 -0.6
CTI Castel Tesino 75.61 338 P P 09 44 14.5 -1.1
CTI Castel Tesino 75.61 338 P P 09 44 14.5 -1.1
CTI pmax pmax
comp=Z,15nm,1.0s
TUE Stuetta 75.69 339 P P 09 44 15.8 -0.4
TUE IAmb IAmb 09 44 20.5
comp=Z,26nm,1.0s
CTA Charters Tower 75.79 193 P P 09 44 16.8 +0.1
CTAO Charters Tower 75.79 193 P P 09 44 16.7 0.0
CTAO IAmb IAmb 09 44 17.5
comp=Z,50nm,1.4s
CTAO Charters Tower 75.79 193 P P 09 44 16.7 0.0
CTAO pmax pmax
comp=Z,50nm,1.4s
CTAO Charters Tower 75.79 193 P P 09 44 16.8 +0.1
ZAIG Zacatecas 75.94 70 P P 09 44 17.6 -0.5
Z51A Franklin 75.95 51 P P 09 44 17.1 -0.6
Z51A IAmb IAmb 09 44 17.6
comp=Z,24nm,0.9s
Z51A Franklin 75.95 51 P P 09 44 17.1 -0.6
baz=328,SNR=5.1
Y52A Lilburn 75.98 50 P P 09 44 17.1 -0.7
Y52A Lilburn 75.98 50 P P 09 44 17.7 -0.2
baz=328,SNR=5.7
Y52A P P 09 44 17.7 -0.2
baz=328,SNR=5.7

T59A	Double "B" Far	76.06	44	P		P	09 44 17.6	-0.6
KMSC	Kings Mountain	76.08	48	P		P	09 44 17.4	-1.0
KMSC	Kings Mountain	76.08	48	P		P	09 44 17.9	-0.5
	baz=329,SNR=8.4							
KMSC	Kings Mountain	76.08	48	P		P	09 44 17.5	-0.9
	baz=329,SNR=8.4							
SENIN	Lac Senin/Sane	76.20	341	P		P	09 44 18.3	-0.8
TEOL	Teolo	76.26	337	P		P	09 44 18.5	-0.7
TEOL				IAmb		IAmb	09 44 20.4	
	comp=Z,36nm,0.8s							
RDO	Rodhopi	76.40	326	P		P	09 44 19.6	-0.5
V58A	Windy Hill, Pi	76.44	46	P		P	09 44 19.6	-0.8
V58A				IAmb		IAmb	09 44 22.1	
	comp=Z,23nm,0.9s							
V58A	Windy Hill, Pi	76.44	46	P		P	09 44 20.2	-0.2
	baz=330,SNR=10							
V58A				P		P	09 44 20.2	-0.2
	baz=330,SNR=10							
HODGE	Hodges	76.46	49	P		P	09 44 19.7	-0.8
ALN	Alexandroupoli	76.47	326	P		P	09 44 20.0	-0.5
ALN	Alexandroupoli	76.47	326	P		P	09 44 20.0	-0.5
ALN				pmax		pmax		
	comp=Z,28nm,1.6s							
U59A	Littleton	76.50	44	P		P	09 44 20.2	-0.5
U59A	Littleton	76.50	44	P		P	09 44 20.6	-0.2
	baz=330,SNR=8.0							
U59A				P		P	09 44 20.6	-0.2
	baz=330,SNR=8.0							
250A	Grady	76.58	53	P		P	09 44 20.4	-0.9
250A				IAmb		IAmb	09 44 21.6	
	comp=Z,26nm,0.9s							
250A	Grady	76.58	53	P		P	09 44 20.9	-0.4
	baz=328,SNR=6.0							
GOGA	Godfrey	76.63	50	P		P	09 44 20.4	-1.1
GOGA	Godfrey	76.63	50	P		P	09 44 20.4	-1.1
GOGA				pmax		pmax		
	comp=Z,9.0nm,1.1s							
GOGA	Godfrey	76.63	50	P		P	09 44 20.6	-0.9
	baz=328							
W57A	Gilead	76.63	47	P		P	09 44 20.8	-0.7
W57A	Gilead	76.63	47	P		P	09 44 20.9	-0.5
	baz=330,SNR=7.0							
W57A				P		P	09 44 20.9	-0.5
	baz=330,SNR=7.0							
152A	Waverly Hall	76.70	51	P		P	09 44 21.0	-0.9
152A	Waverly Hall	76.70	51	P		P	09 44 21.1	-0.9
	baz=328,SNR=11							
JSC	Jenkinsville	76.84	48	P		P	09 44 21.7	-1.0
JSC	Jenkinsville	76.84	48	P		P	09 44 21.7	-1.0
JSC				pmax		pmax		
	comp=Z,9.0nm,0.9s							
BIRD	Birdtown, Kers	76.87	47	P		P	09 44 22.0	-0.8
BRAL	Brewton	76.90	54	P		P	09 44 23.4	+0.3
BRAL	Brewton	76.90	54	P		P	09 44 23.0	0.0
	baz=329							
PDG	Podgorica	77.11	331	⇓P		P	09 44 23.4	-0.7
PDG	Podgorica	77.11	331	P		P	09 44 23.0	-1.0
PDG				IAmb		IAmb	09 44 25.0	
	comp=Z,18nm,0.8s							
DZM	Mont Dzumac	77.12	173	LR		LR	10 13 57.9	
	comp=Z,170nm,18.9s,baz=14,slow=32							
DZM	Mont Dzumac	77.12	173	eLR		LR	10 08 16.9	
	comp=Z,362nm,29.9s							
DZM	Mont Dzumac	77.12	173	P		P	09 44 25.8	+1.6
LPL	La Plagne	77.12	341	eP		P	09 44 24.5	+0.1
LPL				pmax		pmax		
	comp=Z,28nm,0.9s							
NOUC	Port Laguerre	77.14	174	P		P	09 44 25.8	+1.6
WSAR	Wadi Sarin	77.25	292	LR		LR	10 19 52.6	
	comp=Z,198nm,20.3s,baz=79,slow=37							
QIS	Mount Isa	77.30	199	P		P	09 44 24.6	-0.6
ZCCA	Zocca	77.37	337	P		P	09 44 24.2	-1.3
CNNC	Cliffs of the	77.42	45	P		P	09 44 25.5	-0.5
	baz=330							
154A	Montrose	77.47	50	P		P	09 44 26.2	0.0
154A				IAmb		IAmb	09 44 26.8	
	comp=Z,37nm,0.9s							
BNI	Bardonecchia	77.58	341	P		P	09 44 26.4	-0.5
BNI	Bardonecchia	77.58	341	P		P	09 44 26.4	-0.5
BNI				pmax		pmax		
	comp=Z,15nm,0.9s							
352A	Blakely	77.61	52	P		P	09 44 26.0	-1.0
352A				IAmb		IAmb	09 44 28.8	
	comp=Z,27nm,0.9s							
352A	Blakely	77.61	52	P		P	09 44 26.7	-0.3
	baz=328,SNR=6.9							
WB0	Warramunga Arr	77.64	204	P		P	09 44 25.8	-1.3
WB0				IAmb		IAmb	09 44 27.9	
	comp=Z,43nm,1.1s							
MSSA	Maissana	77.72	339	P		P	09 44 26.7	-0.8
MSSA				IAmb		IAmb	09 44 33.4	
	comp=Z,28nm,1.0s							
PALK	Pallekele	77.72	265	LR		LR	10 21 31.0	
	comp=Z,211nm,21.8s,baz=147,slow=38							
SSB	Saint Sauveur	77.75	342	P		P	09 44 26.9	-0.8
SSB				IAmb		IAmb	09 47 01.0	
	comp=Z,29nm,1.0s							
SSB	Saint Sauveur	77.75	342	P		P	09 44 26.9	-0.8
SSB				pmax		pmax		
	comp=Z,29nm,1.0s							
WR0	Warramunga Arr	77.80	204	P		P	09 44 27.8	-0.2
WR0				IAmb		IAmb	09 44 28.7	
	comp=Z,33nm,1.2s							
WRAB	Tennant Creek	77.81	204	P		P	09 44 27.9	-0.2
WRAB				IAmb		IAmb	09 44 28.9	
	comp=Z,50nm,1.2s							
WRAB	Tennant Creek	77.81	204	*d iP*		P	09 44 27.3	-0.8
WRAB				pmax		pmax		
	comp=Z,49nm,1.3s							
WRAB				MLR		MLR		
	comp=Z,102nm,13.0s							
WRAB	Tennant Creek	77.81	204	P		P	09 44 27.9	-0.2
WB2	Warramunga Arr	77.82	204	P		P	09 44 27.7	-0.4
WB2				IAmb		IAmb	09 44 28.9	
	comp=Z,41nm,1.1s							
WRA	Warramunga Arr	77.83	204	P		P	09 44 26.9	-1.2
	comp=Z,22nm,1.1s,baz=14,slow=5.4,SNR=32							
WRA				LR		LR	10 15 31.4	
	comp=Z,105nm,21.9s,baz=21,slow=33							
	comp=Z,22nm,1.1s							
WRA	Warramunga Arr	77.83	204	P		P	09 44 27.0	-1.2
WRA	Warramunga Arr	77.83	204	P		P	09 44 27.0	-1.2
WRA				pmax		pmax		
	comp=Z,3.0nm,1.2s							
MURB	Monte Urbino	78.05	336	P		P	09 44 28.6	-0.8
OSSC	Osservatorio P	78.10	337	P		P	09 44 28.6	-1.0
OSSC				IAmb		IAmb	09 44 35.6	
	comp=Z,22nm,1.0s							
Y59A	Loris	78.10	46	P		P	09 44 29.8	+0.1
Y59A				IAmb		IAmb	09 44 31.6	
	comp=Z,29nm,0.8s							
TIGA	Tifton	78.25	51	P		P	09 44 30.3	-0.3
TIGA	Tifton	78.25	51	P		P	09 44 30.6	0.0
	baz=329,SNR=6.1							
TIGA	Tifton	78.25	51	P		P	09 44 30.5	0.0
	baz=329,SNR=6.1							
NHSC	New Hope	78.31	48	P		P	09 44 30.5	-0.4
	baz=330							
NRCA	Norcia	78.32	336	P		P	09 44 31.2	+0.2
255A	Hazlehurst	78.33	50	P		P	09 44 30.7	-0.3
255A				IAmb		IAmb	09 44 31.9	
	comp=Z,36nm,0.8s							
255A	Hazlehurst	78.33	50	P		P	09 44 31.3	+0.3
	baz=329,SNR=5.9							
MMAI	Mount Meron Ar	80.05	315	P		P	09 44 41.2	+0.7
	comp=Z,0.9nm,0.3s,baz=90,slow=5.0,SNR=4.7							
MMAI				LR		LR	10 23 20.8	
	comp=Z,202nm,18.3s,baz=176,slow=38							
	comp=Z,0.9nm,0.3s							
ASF	Jabal al Asfar	80.17	314	P		P	09 44 41.1	-0.1
	comp=Z,3.8nm,0.8s,baz=96,slow=8.5,SNR=4.1							
ASF				LR		LR	10 26 00.6	
	comp=Z,177nm,18.2s,baz=81,slow=40							
	comp=Z,3.8nm,0.8s							
EIDS	Eidsvold	80.51	188	P		P	09 44 42.4	-0.4
EIDS				IAmb		IAmb	09 44 43.7	
	comp=Z,40nm,1.6s							
TIP	Timpagrande	80.83	332	⇑P		P	09 44 45.1	+0.6
TIP	Timpagrande	80.83	332	P		P	09 44 43.7	-0.9
TIP				IAmb		IAmb	09 44 49.3	
	comp=Z,25nm,1.1s							
TAOE	Nuku Hiva Isla	81.00	120	eLR		LR	10 10 04.9	
	comp=Z,118nm,22.8s							
AS31	Alice Springs	81.51	204	P		P	09 44 48.1	0.0
ASAR	Alice Springs	81.51	204	P		P	09 44 48.0	-0.1
	comp=Z,18nm,1.1s,baz=13,slow=4.7,SNR=56							
ASAR				LR		LR	10 18 41.6	
	comp=Z,132nm,21.8s,baz=21,slow=34							
	comp=Z,18nm,1.1s							
ASAR	Alice Springs	81.51	204	P		P	09 44 47.8	-0.3
RMQ	Roma	81.82	190	P		P	09 44 50.6	+0.9
IDI	Anoyia	81.93	324	LR		LR	10 23 39.1	
	comp=Z,102nm,21.2s,baz=68,slow=38							
DWPF	Disney Wildern	82.06	51	P		P	09 44 49.3	-1.8
	baz=330							
QLP	Quilpie	82.45	194	P		P	09 44 53.0	+0.1
PMOR	Pomariorio Ree	82.69	129	*e*T		T	11 14 45.0	
	comp=Z,4.0nm,0.2s							
VAE	Valguarnera	83.05	333	LR		LR	10 25 23.2	
	comp=Z,279nm,19.0s,baz=84,slow=38							
MBWA	Marble Bar	83.25	217	P		P	09 44 57.5	+0.3
RAR	Rarotonga	83.56	142	LR		LR	10 22 01.0	
	comp=Z,106nm,18.4s,baz=316,slow=36							
PSA00	Pilbara Seismi	83.59	217	P		P	09 44 58.0	-1.0
PSA00				IAmb		IAmb	09 44 59.1	
	comp=Z,50nm,1.4s							
PSA00	Pilbara Seismi	83.59	217	P		P	09 44 59.1	+0.1
RAYN	Ar Rayn	83.70	303	P		P	09 44 58.4	-1.5
PPT	Papeete	84.24	132	LR		LR	10 16 31.9	
	comp=Z,96nm,19.6s,baz=336,slow=31							
PPT2	Papeete2	84.26	132	eLR		LR	10 11 36.9	
	comp=Z,137nm,21.8s							
ESDC	Sonseca Array	84.52	347	P		P	09 45 03.5	-0.3
	comp=Z,20nm,1.2s,baz=356,slow=4.6,SNR=15							
ESDC				LR		LR	10 28 32.8	
	comp=Z,132nm,18.3s,baz=25,slow=40							
	comp=Z,20nm,1.2s							
ESDC	Sonseca Array	84.52	347	P		P	09 45 03.0	-0.7
ESDC				IAmb		IAmb	09 45 08.6	
	comp=Z,26nm,1.2s							
KEST	Kesra	85.96	336	P		P	09 45 09.3	-1.8
	comp=Z,2.7nm,0.6s,baz=22,slow=11,SNR=2.5							
KEST				LR		LR	10 28 44.3	
	comp=Z,136nm,18.6s,baz=356,slow=39							
	comp=Z,2.7nm,0.6s							
KEST	Kesra	85.96	336	IAmb		IAmb	09 45 15.7	
	comp=Z,22nm,1.3s							
STKA	Stephens Creek	88.04	195	P		P	09 45 18.8	-1.9
	comp=Z,3.3nm,1.1s,baz=349,slow=7.8,SNR=2.8							
STKA				LR		LR	10 21 24.7	
	comp=Z,138nm,21.6s,baz=20,slow=33							
	comp=Z,3.3nm,1.1s							
TBI	Tubuai	89.43	134	eLR		LR	10 14 01.0	
	comp=Z,198nm,27.8s							
MDT	Midelt	91.36	347	P		P	09 45 35.6	-1.1
	comp=Z,2.7nm,0.8s,baz=97,slow=2.6,SNR=4.0							
MDT				LR		LR	10 30 12.2	
	comp=Z,56nm,20.9s,baz=34,slow=38							
	comp=Z,2.7nm,0.8s							
URZ	Urewera	94.23	166	LR		LR	10 22 00.0	
	comp=Z,97nm,20.4s,baz=31,slow=32							
ATD	Arta Tunnel	95.21	299	LR		LR	10 33 58.4	
	comp=Z,203nm,18.8s,baz=338,slow=39							
SJG	San Juan	97.36	43	LR		LR	10 34 47.5	
	comp=Z,274nm,18.5s,baz=288,slow=38							
RPZ	Rata Peaks	98.96	172	LR		LR	10 26 12.7	
	comp=Z,149nm,20.0s,baz=323,slow=33							
LPAZ	La Paz	126.80	63	PKP		PKPdf	09 51 34.8	-0.4
	comp=Z,1.7nm,0.7s,baz=29,slow=0.2,SNR=3.1							
LPAZ	La Paz	126.80	63	PKPdf		PKiKP	09 51 35.7	0.0
VNDA	Vanda	132.40	179	PKP		PKPdf	09 51 42.3	-0.9
	comp=Z,1.1nm,1.0s,baz=308,slow=2.9,SNR=4.1							
BDFB	Brasilia	135.19	39	PKP		PKPdf	09 51 49.3	-1.2
	comp=Z,1.3nm,0.4s,baz=310,slow=16,SNR=1.6							
BOSA	Boshof	137.98	290	PKP		PKPdf	09 51 54.2	-1.2
	comp=Z,1.8nm,0.5s,baz=40,slow=3.3,SNR=4.4							
MT03	Universidad Ad	139.23	79			PKPdf	09 51 55.7	-1.7
CPUP	Villa Florida	140.63	58	PKhKP		PKPpre	09 51 53.0	
	comp=Z,1.8nm,0.7s,baz=327,slow=2.6,SNR=4.0							
MAW	Mawson	141.45	218	PKhKP		PKPpre	09 51 56.2	
	comp=Z,1.3nm,0.6s,baz=42,slow=9.5,SNR=2.6							
LL04	Puerto Octay	143.32	89			PKPdf	09 52 04.2	-0.2
PLCA	Paso Flores	144.27	88	PKP		PKPbc	09 52 05.2	+0.6
	comp=Z,8.8nm,1.1s,baz=301,slow=4.6,SNR=15							
PLCA	Paso Flores	144.27	88	PKPdf		PKPdf	09 52 05.4	-0.8
LL02	Futaleuf	145.09	92			PKPbc	09 52 06.8	-0.1
AY01	Puyuhuapi	145.38	94			PKPab	09 52 08.2	+0.2
COYC	Coyhaique	146.39	95			PKPab	09 52 11.4	-0.4
PLTB	Pedras Altas	146.94	59		PKP2	PKPbc	09 52 13.5	+0.6
TRQA	Tornquist	147.31	76			PKPbc	09 52 14.0	+0.2
TRQA	Tornquist	147.31	76		PKP2	PKPbc	09 52 14.0	+0.2
TROLL	Troll, Antarti	160.48	201		PKPab	PKPab	09 53 09.6	-0.9
SNAA	Sanae	161.78	198		PKPab	PKPab	09 53 14.0	-2.1
VNA2	Neumayer--Watz	163.17	195		PKPab	PKPab	09 53 26.1	+4.0
VNA2	Neumayer--Watz	163.17	195		PKPdf	PKPdf	09 52 36.2	+4.6
VNA3	Neumayer Olymp	163.18	192		PKPab	PKPab	09 53 21.1	-1.0
VNA3	Neumayer Olymp	163.18	192		PKPdf	PKPdf	09 52 34.9	+3.2

MAN 28 09:42:49.9,9°.59N×126°.35E,h14km,mb4.3,ML3.2,MS2.9, Mindanao

*TEH **28** 10:19:38.8,36°.46N×52°.34E,h8km,ML3.0*
*AZER **28** 10:19:40.6±4.5,36°.58N×52°.19E,h10km,Error ellipse: s-maj=30.3km s-min=26.2km az=97.0*

ISC 28 10:19:39.0±0.8,36°.46N±0°.03×52°.34E±0°.03,h10km,n58, σ1§67/64,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPRN	Peran	0.22	179	*e*Pg	Pg	10 19 43.4	-0.3
DAMV	Damavand	0.88	200	*e*Pg	Pb	10 19 56.5	-0.1
IFIR	Firoozkooh	0.89	157	*e*Pg	Pg	10 19 55.9	-0.3
IDMV	Damavand	0.92	196	*e*Pg	Pb	10 19 56.9	-0.3
IDMV				eSg	Sn	10 20 10.5	-1.2
ISHM	Shahmirzad	1.01	130	*e*Pg	Pg	10 19 58.3	-0.3
ISHM				eSg	Sn	10 20 13.0	-1.0
ISHM				*e*		10 20 15.7	
	comp=Z,6μm,0.2s						
CHTH	Charan	1.12	241	*e*Pg	Pn	10 20 01.5	+0.4
ILAS	Lasjerd	1.19	155	*e*		10 20 05.1	
	comp=Z,3μm,0.2s						
ILAS				*e*Pg	Pn	10 20 01.7	-0.3
IGLO	Ghaloghah	1.21	88	*e*Pg	Pg	10 20 02.2	0.0
IGLO				*e*		10 20 30.6	
	comp=Z,5μm,0.4s						
IHSB	Hasanabad	1.34	220	*e*Pg	Pg	10 20 05.5	+0.8
QALM	Alamut, Qazvin	1.36	269	*e*		10 20 28.5	
	comp=Z,3μm,0.3s						
QALM				*e*Pg	Pb	10 20 04.8	0.0
IVRN	Varamin	1.55	199	*e*		10 20 34.0	
	comp=Z,2μm,0.3s						
IVRN				*e*Pg	Pg	10 20 09.0	+0.3
IMHD	Mahdasht	1.56	241	*e*		10 20 12.8	
	comp=Z,1μm,0.2s						
IMHD				*e*Pg	Pg	10 20 09.2	+0.3
IANJ	Anjilo	1.62	127	*e*		10 20 36.9	
	comp=Z,1μm,0.2s						
IANJ				*e*Pg	Pb	10 20 09.2	0.0
IGZV	Ghazvin	1.71	268	*e*Pg	Pb	10 20 11.1	+0.4
IGZV				*e*		10 20 40.0	
	comp=Z,2μm,0.3s						
IQOM	Qom	1.92	213	*e*Pn	Pb	10 20 14.5	+0.3
IQOM				*e*		10 20 18.3	
	comp=Z,1μm,0.5s						
LHJ2	Lahijan - Gila	1.96	292	*e*Pn	Pb	10 20 13.9	-0.8
GIDE	GILAN DEYLAMAN	2.00	284	*e*Pn	Pb	10 20 15.7	0.0
JIR1	Jirandeh	2.05	278	*e*Pn	Pb	10 20 16.1	-0.4
ISFB	Sefidab	2.11	182	*e*Pn	Pb	10 20 17.3	-0.1
ISFB				*e*		10 20 18.7	
	comp=Z,1μm,0.4s						
GHVR	GHOM	2.15	204	*e*Pn	Pb	10 20 17.8	-0.4
IRAZ	Razeghan	2.22	242	*e*Pn	Pb	10 20 18.7	-0.7
IRAZ				*e*		10 20 51.4	
	comp=Z,1μm,0.6s						
QABG	Abgarm-Qazvin	2.35	252	*e*Pn	Pn	10 20 19.4	+1.4
QABG				*e*		10 20 22.7	
	comp=Z,391nm,0.2s						
KRSH	Karshahi	2.49	184	*e*Pn	Pb	10 20 22.1	-1.9
ASAO	Ashtian	2.68	225	*e*Pn	Pb	10 20 25.1	-2.2
QAMS	Qamsar	2.83	196	*e*	Pg	10 21 14.0	+41
	comp=Z,557nm,0.4s						
ZNJK	Zanjan	2.95	275	*e*Pn	Pn	10 20 28.5	+2.4
SHRO	Shahrood	3.01	98	*e*Pn	Pb	10 20 30.2	-2.6
IKLH	Kolahrood	3.20	191	*e*Pn	Pb	10 20 32.8	-3.3
IKLH				*e*		10 20 42.7	
	comp=Z,231nm,0.3s						
MRVT	Maraveh tapeh	3.23	67	*e*Pn	Pn	10 20 31.9	+2.0
ANAR	Anarak	3.46	160	*e*Pn	Pn	10 20 35.9	+2.8
ASTR	Astara	3.51	308	S	Sn	10 21 13.3	-1.9
LKRN	Lenkeran, Azer	3.61	310	P	Pn	10 20 33.0	-1.9
LRK	Lerik	3.85	306	P	Pn	10 20 38.5	0.0
LRK				S	Sn	10 21 21.3	-2.6
YRD	Yardimli	4.07	308	P	Pn	10 20 41.6	+0.1
YRD				S	Sn	10 21 27.0	-2.3
GLBA	Clilabad	4.17	313	S	Sn	10 21 30.1	-1.5
GRMI	Germi	4.23	305	*e*Pn	Pn	10 20 45.0	+1.3
BJRD	Bojnurd	4.24	72	*e*Pn	Pn	10 20 47.0	+3.2
SBZV	Sabzevar	4.25	89	*e*Pn	Pn	10 20 46.4	+2.3
TNSJ	Nastanj	4.30	124	*e*Pn	Pn	10 20 46.6	+2.0
YZKH	Yazd	4.47	155	*e*Pn	Pn	10 20 49.8	+2.9
TABS	Tabas	4.82	124	*e*Pn	Pn	10 20 55.4	+3.6
TKDS	Koohdasht(Taba	4.85	125	*e*Pn	Pn	10 20 55.1	+2.9
PQL	Pirkuli	5.22	327	P	Pn	10 20 56.8	-0.5
PQL				S	Sn	10 21 57.5	-0.1
SIZA	Siyzn	5.33	331	P	Pn	10 20 58.5	-0.3
SIZA				S	Sn	10 22 00.0	-0.2
AGDM	Agdam	5.49	313	S	Sn	10 22 03.9	-0.2
BRDA	Brd	5.55	315	S	Sn	10 22 04.4	-1.1
ORD	Ordubad	5.60	298	S	Sn	10 22 07.3	+0.4
QBL	Gabala	5.69	323	S	Sn	10 22 09.3	+0.2
QUBA	Quba, Azerbaij	5.73	330	P	Pn	10 21 05.6	+1.4
QUBA				S	Sn	10 22 06.9	-3.1
XNQ	Khinaliq	5.73	326	S	Sn	10 22 08.4	-1.9
MNGR	Mingechevir, A	5.95	318	S	Sn	10 22 15.5	+0.2
QSAR	Qusar	5.96	329	S	Sn	10 22 13.2	-2.5
SEKA	Sheki	6.21	321	S	Sn	10 22 20.5	-1.3
AFRZ	Afriz	6.27	117	*e*Pn	Pn	10 21 14.7	+3.0
GANJ	Ganja	6.30	313	S	Sn	10 22 25.3	+1.4
GDB	GEDABAY	6.68	312	S	Sn	10 22 32.7	-0.9
ZKTA	Zakatala	6.81	321	S	Sn	10 22 35.3	-1.4
SHRT	Shahrakht	7.10	111	*e*Pn	Pn	10 21 25.8	+2.7

*SJA **28** 10:37:34.9±1.2,31°.74S×72°.27W,h15km,ML4.1,MW4.5*
*IDC **28** 10:37:35.3±0.9,31°.75S×71°.90W,h0km,mb3.8/5, mbtmp3.6/9,ML3.6/4,Error ellipse: s-maj=33.9km s-min=22.3km az=94.0*
*NEIC **28** 10:37:36.4±1.4,31°.73S±0°.04×72°.23W±0°.10,h10km±1km, mb4.3/5,Mwr4.1/41,ML4.0(GUC),Error ellipse: s-maj=14.4km s-min=7.1km az=279.0*
*NEIC **28** 10:37:36.3,31°.74S×72°.23W,h8km,Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=0.26; $M_{\theta\theta}$0.23; $M_{\phi\phi}$0.03; $M_{r\theta}$0.08; $M_{\theta\phi}$-0.14; $M_{\phi r}$-1.61; Fault plane solution: $M_0$1.64000×10^{15} NP1:ϕ_s112.91000°, δ6.17000°,λ-152.76000°. NP2:ϕ_s355.80000°,δ87.18000°, λ-84.51000°. Principal axes: T 1.5235, Plg42.0000°, Azm81.0000°; N 0.2114, Plg5.0000°, Azm176.0000°; P -1.7348, Plg48.0000°, Azm272.0000°;*
*GUC **28** 10:37:38.3±0.6,31°.74S×72°.10W,h43km±2km,ML4.0*

ISC 28 10:37:35.7±1.4,31°.73S±0°.02×72°.13W±0°.04,h7km±9km, n105,σ1§25/129,mb4.1/6,2C-1D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VA06	Catapilco	1.09	140		Pn	10 37 57.6	+0.2
VA06	Catapilco	1.09	140	⇓*i*P	Pn	10 37 57.5	+0.1
VA06				eS	Sb	10 38 11.5	+0.1
VA06				IAML		10 38 19.3	
	comp=E,7μm,0.5s						
CO02	Combarbal	1.10	62		Pn	10 37 57.9	+0.2
CO02	Combarbal	1.10	62	⇑*i*P	Pn	10 37 57.7	0.0
CO02				eS	Sb	10 38 12.5	+0.7
CO02				IAML		10 38 13.9	
	comp=N,18μm,0.4s						
CO06	Fray Jorge	1.14	22		Pb	10 37 57.9	+0.1
CO06	Fray Jorge	1.14	22	eP	Pg	10 37 57.7	+0.2
CO06				eS	Sb	10 38 12.7	0.0
VA01	Torpederas	1.35	162		Pn	10 38 00.9	-0.2
VA01	Torpederas	1.35	162	eP	Pn	10 37 59.0	-2.1
CO03	El Pedregal	1.52	55	Pn	Pb	10 38 04.6	+0.2
CO03	El Pedregal	1.52	55	⇑*i*P	Pb	10 38 04.5	+0.2
CO03				eS	Sb	10 38 23.9	0.0
CO03				IAML		10 38 32.0	
	comp=E,2μm,0.4s						
ROCH	El Roble	1.56	143	eP	Pb	10 38 04.7	-0.3
ROCH				eS	Sn	10 38 24.3	-0.4
ROCH				IAML		10 38 34.1	
	comp=N,3μm,0.7s						
ROC1	El Roble	1.56	143		Pb	10 38 05.1	0.0
ROC1	El Roble	1.56	143	eP	Pb	10 38 05.2	+0.1
ROC1				eS	Sg	10 38 26.9	+1.0
VA03	San Esteban	1.69	128		Pb	10 38 06.8	-0.4
VA03	San Esteban	1.69	128	eP	Pb	10 38 07.0	-0.2
VA03				eS	Sn	10 38 27.7	0.0
VA03				IAML		10 38 36.1	
	comp=E,3μm,0.3s						
VA03	San Esteban	1.69	128	eP	Pb	10 38 06.7	-0.5
VA03				eP	Pn	10 38 07.1	+1.3
VA03				eS	Sg	10 38 31.5	+1.4
VA03				IAML		10 38 37.0	
	comp=Z,2μm,1.1s						
MT02	Curacav	1.74	151		Pn	10 38 07.2	+0.9
MT02	Curacav	1.74	151	eP	Pn	10 38 07.2	+0.9
MT02				eS	Sn	10 38 27.8	-1.1
MT02	Curacav	1.74	151	eP	Pn	10 38 06.7	+0.3
MT02				eP	Pn	10 38 07.3	+0.9

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	comp=Z,2µm,0.9s						
CO01	**Juntas del Tor**	**2.48**	**46**	Pn	**Pn**	**10 38 18.7**	**+2.0**
CO01	**Juntas del Tor**	**2.48**	**46**	*e*P	**Pb**	**10 38 19.4**	**-1.3**
CO01				*e*S	**Sb**	**10 38 50.4**	**-1.1**
CO01				IAML		10 38 57.8	
	comp=Z,521nm,0.5s						
BO04	**La Punta**	**2.59**	**151**		**Pn**	**10 38 19.8**	**+1.7**
LMEL	**Las Melosas**	**2.66**	**143**		**Pn**	**10 38 21.0**	**+1.7**
LMEL	**Las Melosas**	**2.66**	**143**	*e*P	**Pn**	**10 38 21.2**	**+2.0**
LMEL				*e*S	**Sn**	**10 38 51.7**	**-0.2**
LMEL				IAML		10 39 11.3	
	comp=N,609nm,0.4s						
AROD	**Rodeo**	**2.77**	**56**	*e*P	**Pb**	**10 38 24.7**	**-1.0**
AROD				*e*S	**Sb**	**10 38 59.2**	**-0.8**
BO01	**Tunca**	**2.79**	**162**	Pn	**Pn**	**10 38 21.6**	**+0.7**
BO01	**Tunca**	**2.79**	**162**	*e*P	**Pn**	**10 38 20.5**	**-0.4**
ACCO	**Cerro Coronel**	**2.87**	**67**	*e*P	**Pb**	**10 38 26.0**	**-1.4**
ACCO				*e*S	**Sb**	**10 39 03.4**	**+0.5**
LCO	**Las Campanas**	**2.98**	**25**	Pn	**Pn**	**10 38 24.8**	**+1.1**
LCO	**Las Campanas**	**2.98**	**25**	*e*P	**Pn**	**10 38 25.0**	**+1.3**
LCO				*e*S	**Sn**	**10 38 56.6**	**-3.3**
LCO	**Las Campanas**	**2.98**	**25**	*e*P	**Pb**	**10 38 28.0**	**-1.3**
ACDV	**Cuesta del Vie**	**3.02**	**60**	*e*P	**Pn**	**10 38 24.7**	**+0.5**
ACDV				*e*P	Pb	10 38 25.2	-4.7
ACDV				*e*S	**Sb**	**10 39 07.2**	**+0.1**
ACDV				IAML		10 39 16.1	
	comp=Z,500nm,1.2s						
GO05	**Huala**	**3.27**	**177**		**Pn**	**10 38 26.7**	**-0.8**
GO05	**Huala**	**3.27**	**177**	*e*P	**Pn**	**10 38 25.4**	**-2.1**
GO05				*e*S	**Sn**	**10 39 03.9**	**-2.9**
AC04	**Llanos de Chal**	**3.63**	**15**	Pn	**Pn**	**10 38 32.0**	**-0.5**
ML02	**Panimavida**	**4.07**	**172**	Pn	**Pn**	**10 38 39.1**	**+0.7**
AVFE	**Valle Fertil**	**4.15**	**76**	*e*P	**Pn**	**10 38 39.2**	**-0.4**
AVFE				*e*S	**Sg**	**10 39 45.6**	**-3.3**
AVFE				IAML		10 39 54.0	
	comp=Z,276nm,0.8s						
GO03	**Copiap**	**4.44**	**22**		**Pn**	**10 38 43.8**	**+0.1**
VCA	**Vinchina**	**4.52**	**50**	*e*S	**Sb**	**10 39 47.2**	**-3.2**
VCA				IAML		10 40 08.0	
	comp=Z,377nm,1.4s						
ACHE	**Chepes**	**4.71**	**84**	*e*P	**Pn**	**10 38 46.2**	**-1.2**
ACHE				*e*S	**Sb**	**10 39 51.2**	**-4.5**
APLL	**PUNTA DE LOS L**	**4.99**	**76**	*e*P	**Pn**	**10 38 51.2**	**0.0**
APLL				IAML		10 40 14.0	
	comp=Z,297nm,1.3s						
BI05	**Punta Hualpn**	**5.08**	**190**	Pn	**Pn**	**10 38 52.4**	**+0.1**
AC02	**Maricunga**	**5.54**	**29**	Pn	**Pn**	**10 39 00.0**	**+1.0**
AC01	**Pan de Azucar**	**5.72**	**14**	Pn	**Pn**	**10 39 01.2**	**0.0**
H03N1	**Juan Fernandez**	**5.97**	**252**	Pn	**Pn**	**10 39 04.7**	**+0.4**
	baz=229,slow=77						
H03N1				T	T	10 45 55.1	
	baz=79,slow=73,SNR=612						
H03N3	**Juan Fernandez**	**5.98**	**252**	Pn	**Pn**	**10 39 04.7**	**+0.2**
	baz=229,slow=77						
H03N3				T	T	10 45 54.5	
	baz=79,slow=73,SNR=902						
H03N2	**Juan Fernandez**	**5.99**	**252**	Pn	**Pn**	**10 39 05.1**	**+0.6**
	baz=229,slow=77						
H03N2				T	T	10 45 55.8	
	baz=79,slow=73,SNR=880						
H03S3	**Juan Fernandez**	**6.08**	**248**	T	T	10 46 01.0	
	baz=79						
H03S1	**Juan Fernandez**	**6.08**	**248**	T	T	10 46 01.8	
	baz=79						
H03S2	**Juan Fernandez**	**6.09**	**248**	T	T	10 46 02.6	
	baz=79						
GO02	**Mina Guanaco**	**6.92**	**19**	Pn	**Pn**	**10 39 17.0**	**-0.9**
LR04	**Corral**	**8.20**	**187**	Pn	**Pn**	**10 39 33.9**	**-1.2**
PLCA	**Paso Flores**	**9.07**	**172**	Pn	**Pn**	**10 39 48.0**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=336,slow=12,SNR=12						
	comp=Z,0.9nm,0.6s						
PLCA	**Paso Flores**	**9.07**	**172**		**Pn**	**10 39 47.4**	**+0.2**
LVC	**Limon Verde**	**9.53**	**18**	Pn	**Pn**	**10 39 52.6**	**-1.1**
TRQA	**Tornquist**	**10.45**	**130**	Pn	**Pn**	**10 40 05.2**	**-0.8**
CPUP	**Villa Florida**	**14.02**	**71**	Pn	**Pn**	**10 40 51.1**	**-3.8**
	comp=Z,0.1nm,0.3s,baz=168,slow=19,SNR=1.7						
	comp=Z,0.9nm,0.8s						
CPUP	**Villa Florida**	**14.02**	**71**		**Pn**	**10 40 57.2**	**+2.4**
LPAZ	**La Paz**	**15.80**	**14**	Pn	**Pn**	**10 41 19.4**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=228,slow=3.9,SNR=2.9						
	comp=Z,1.0nm,0.8s						
LPAZ	**La Paz**	**15.80**	**14**		**Pn**	**10 41 18.1**	**-1.3**
SIV	**San Ignacio**	**18.63**	**35**	P	**P**	**10 41 54.1**	**+0.1**
	baz=213,slow=11,SNR=5.4						
	comp=Z,1.0nm,0.8s						
VNA3	**Neumayer Olymp**	**51.49**	**158**	P	**P**	**10 46 43.3**	**+1.8**
SNAA	**Sanae**	**53.71**	**158**	P	**P**	**10 46 59.6**	**+1.6**
SNAA	**Sanae**	**53.71**	**158**	P	**P**	**10 46 59.5**	**+1.4**
SNAA				IAmb	IAmb	10 47 00.3	
	comp=Z,4.8nm,1.0s						
TROLL	**Troll, Antarti**	**55.42**	**159**	P	**P**	**10 47 12.0**	**+1.4**
QSPA	**South Pole Qui**	**58.50**	**180**	P	**P**	**10 47 32.7**	**+0.3**
VNDA	**Vanda**	**66.31**	**191**	P	**P**	**10 48 25.1**	**+0.7**
	comp=Z,0.9nm,0.4s,baz=128,slow=2.6,SNR=11						
	comp=Z,0.9nm,0.4s						
VNDA	**Vanda**	**66.31**	**191**	P	**P**	**10 48 22.2**	**-2.2**
VNDA				IAmb	IAmb	10 48 25.9	
	comp=Z,4.7nm,1.4s						
TXAR	**Lajitas Array**	**67.72**	**330**	P	**P**	**10 48 35.7**	**+1.7**
	comp=Z,0.4nm,0.7s,baz=163,slow=6.5,SNR=5.1						
	comp=Z,0.4nm,0.7s						
PDAR	**Pinedale Array**	**81.71**	**333**	P	**P**	**10 49 56.5**	**+1.5**
	comp=Z,0.3nm,0.8s,baz=112,slow=6.9,SNR=2.4						
	comp=Z,0.3nm,0.8s						
NVAR	**Mina Array Bea**	**81.98**	**325**	P	**P**	**10 49 58.0**	**+1.4**
	comp=Z,0.9nm,0.8s,baz=149,slow=7.8,SNR=9.2						
	comp=Z,0.9nm,0.8s						
NVAR	**Mina Array Bea**	**81.98**	**325**	P	**P**	**10 49 56.9**	**+0.4**
TORD	**Torodi Ar. Bea**	**83.52**	**70**	P	**P**	**10 50 05.3**	**+0.6**
	comp=Z,1.2nm,0.7s,baz=266,slow=5.4,SNR=7.2						
	comp=Z,1.2nm,0.7s						
H11S2	**WAKE ISLAND Hyl**	**25.69**	**271**	T	T	13 15 39.9	
	baz=116,slow=74,SNR=7.1						
H11S1	**WAKE ISLAND Hyl**	**25.70**	**271**	T	T	13 15 38.2	
	baz=116,slow=74,SNR=6.5						
H11S3	**WAKE ISLAND Hyl**	**25.71**	**271**	T	T	13 15 36.6	
	baz=116,slow=74,SNR=5.7						
H11N3	**WAKE ISLAND Hyl**	**26.05**	**272**	T	T	13 16 04.5	
	baz=116						
H11N1	**WAKE ISLAND Hyl**	**26.06**	**272**	T	T	13 16 06.7	
	baz=116						
H11N2	**WAKE ISLAND Hyl**	**26.07**	**272**	T	T	13 16 05.7	
	baz=116						
ZALV	**Zalesovo Beam**	**152.33**	**30**	PKPbc	**PKPbc**	**10 57 30.4**	**-1.5**
	comp=Z,1.0nm,0.6s,baz=299,slow=3.1,SNR=3.6						
ZALV	**Zalesovo Beam**	**152.33**	**30**	PKPab	**PKPab**	**10 57 41.6**	**-0.3**
ZALV	**Zalesovo Beam**	**152.33**	**30**	PKPdf	**PKPdf**	**10 57 23.2**	**-1.9**

IDC 28 10:41:43.5±2.6, 14°15S×163°23E, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=106.6km s-min=35.1km az=136.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**26.52**	**225**	P	P	10 47 21.0	-1.9
	0.9nm,0.4s,baz=48,slow=12,SNR=3.9						
	0.9nm,0.4s						
WRA	**Warramunga Arr**	**28.19**	**254**	P	P	10 47 39.6	+1.5
	0.6nm,1.1s,baz=80,slow=8.4,SNR=5.1						
	0.6nm,1.1s						
ASAR	**Alice Springs**	**29.26**	**247**	P	P	10 47 47.6	0.0
	0.8nm,0.5s,baz=75,slow=10.0,SNR=28						
	0.8nm,0.5s						
ILAR	**Eielson Array**	**87.22**	**19**	P	P	10 54 31.7	+0.3
	0.3nm,0.9s,baz=226,slow=3.6,SNR=2.0						
	0.3nm,0.9s						

*IDC **28** 11:03:46.4±0.7, 39.80N×21.16E, h0km, mb4.0/17, mbtmp3.9/26, ML3.7/8, MS3.1/13, Error ellipse: s-maj=14.4km s-min=13.0km az=123.0*
*ATH **28** 11:03:47.6, 39.80N×21.13E, h16km±1km, ML3.8/17, Error ellipse: s-maj=2.0km s-min=0.8km az=332.0*
*TIR **28** 11:03:47.8, 39.89N×21.07E, h32km±3km, Ml3.8*
*PDG **28** 11:03:48.5±0.6, 39.81N×21.15E, h7km, ML3.6/11, Error ellipse: s-maj=0.5km s-min=0.8km az=0.0*
*THE **28** 11:03:48.7, 39.82N×21.16E, h0km±1km, ML3.7/52, Error ellipse: s-maj=1.4km s-min=0.5km az=310.0*
*NEIC **28** 11:03:48.5±1.2, 39.82N±0.05×21.15E±0.07, h10km±1km, Error ellipse: s-maj=9.6km s-min=7.6km az=230.0*
*BEO **28** 11:03:49.0±0.7, 39.73N×21.13E, h15km±4km, ML3.6/13*
ISC 28 11:03:48.0±0.9, 39.81N±0.01×21.15E±0.01, h8km±6km,

n289,σ1$57/389,mb4.1/19,MS3.0/6,13C-14D,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.27**	**237**	P	**Pg**	**11 03 52.0**	**-1.4**
JAN				S	**Sg**	**11 03 56.9**	**-0.2**
JAN				AML	AML	11 03 58.2	
	comp=N,59581µm,0.4s						
JAN				AML	AML	11 04 01.3	
	comp=E,65637µm,0.3s						
JAN	**Janina**	**0.27**	**237**	P	**Pg**	**11 03 52.2**	**-1.2**
JAN				S	**Sg**	**11 03 56.5**	**-0.6**
	comp=E,31µm,0.4s						
PENT	**Pentalofos**	**0.39**	**359**	P	**Pg**	**11 03 55.9**	**+0.3**
PENT				S	**Sg**	**11 04 01.5**	**+0.7**
PENT				AML	AML	11 04 05.0	
	comp=N,7224µm,0.5s						
PENT				AML	AML	11 04 06.7	
	comp=E,12044µm,0.5s						
PENT	**Pentalofos**	**0.39**	**359**	P	**Pg**	**11 03 56.0**	**+0.3**
PENT				S	**Sb**	**11 04 02.1**	**-1.3**
	comp=E,5µm,0.5s						
LSK	**Leskovik**	**0.54**	**309**	P	**Pg**	**11 03 58.7**	**+0.2**
LSK				S	**Sg**	**11 04 06.8**	**+1.2**
	comp=E,8µm,0.7s						
LSK	**Leskovik**	**0.54**	**309**	P	**Pg**	**11 03 58.1**	**-0.4**
	baz=306						
LSK				S	**Sg**	**11 04 04.9**	**-0.7**
	baz=306						
LSK				AMP			
	comp=E,0.2nm,0.8s,baz=340						
NEST	**Nestorio**	**0.61**	**353**	P	**Pg**	**11 04 00.3**	**+0.4**
NEST				S	**Sb**	**11 04 08.9**	**-0.9**
NEST				AML	AML	11 04 17.7	
	comp=E,9574µm,0.9s						
NEST				AML	AML	11 04 21.2	
	comp=N,9518µm,0.6s						
NEST	**Nestorio**	**0.61**	**353**	P	**Pb**	**11 04 01.2**	**+0.2**
NEST				S	**Sb**	**11 04 10.9**	**+1.1**
	comp=N,4µm,0.6s						
IGT	**Igoumenitsa**	**0.69**	**247**	P	**Pg**	**11 04 00.6**	**-0.6**
IGT				S	**Sg**	**11 04 10.4**	**+0.2**
IGT				AML	AML	11 04 15.5	
	comp=E,10663µm,0.7s						
IGT				AML	AML	11 04 18.2	
	comp=N,9469µm,0.5s						
IGT	**Igoumenitsa**	**0.69**	**247**	P	**Pg**	**11 04 01.1**	**-0.1**
IGT				S	**Sb**	**11 04 13.0**	**+1.2**
	comp=N,5µm,0.6s						
IGT	**Igoumenitsa**	**0.69**	**247**	P	**Pg**	**11 04 00.8**	**-0.4**
	baz=239						
IGT				S	**Sb**	**11 04 13.1**	**+1.2**
	baz=239						
KZN	**Kozani**	**0.69**	**44**	P	**Pg**	**11 04 00.9**	**-0.4**
KZN				S	**Sb**	**11 04 11.9**	**-0.2**
KZN				AML	AML	11 04 16.1	
	comp=N,10093µm,0.5s						
KZN				AML	AML	11 04 17.0	
	comp=E,14080µm,0.4s						
KZN	**Kozani**	**0.69**	**44**	P	**Pg**	**11 04 01.3**	**0.0**
KZN				S	**Sb**	**11 04 13.4**	**+1.3**
	comp=E,6µm,0.4s						
THL	**Klokotos Trika**	**0.71**	**110**	P	**Pg**	**11 04 00.8**	**-0.9**
THL				S	**Sb**	**11 04 12.6**	**0.0**
THL				AML	AML	11 04 16.0	
	comp=E,11864µm,0.6s						
THL				AML	AML	11 04 18.2	
	comp=N,17108µm,0.4s						
THL	**Klokotos Trika**	**0.71**	**110**	P	**Pg**	**11 04 01.2**	**-0.5**
THL				S	**Sb**	**11 04 13.3**	**+0.7**
	comp=N,7µm,0.5s						
TYRN	**Tyrnavos**	**0.84**	**96**	P	**Pg**	**11 04 03.4**	**-0.8**
TYRN				S	**Sb**	**11 04 16.7**	**+0.4**
TYRN				AML	AML	11 04 22.0	
	comp=E,39529µm,0.5s						
TYRN				AML	AML	11 04 23.0	
	comp=N,16900µm,0.4s						
TYRN	**Tyrnavos**	**0.84**	**96**	P	**Pg**	**11 04 03.8**	**-0.4**
TYRN				S	**Sb**	**11 04 17.3**	**+1.0**
	comp=N,11µm,0.4s						
KBN	**Korca**	**0.86**	**341**	P	**Pg**	**11 04 04.4**	**-0.1**
KBN				S	**Sn**	**11 04 18.6**	**-0.7**
	comp=N,2µm,0.6s						
KBN	**Korca**	**0.86**	**341**		**Pg**	**11 04 04.2**	**-0.3**
KBN	**Korca**	**0.86**	**341**	P	**Pg**	**11 04 04.2**	**-0.3**
	baz=344						
KBN				S	**Sg**	**11 04 14.2**	**-1.5**
	baz=344						
SRN	**Sarande**	**0.89**	**275**	P	**Pg**	**11 04 05.1**	**+0.1**
SRN				S	**Sb**	**11 04 17.5**	**0.0**
	comp=N,4µm,0.8s						
SRN	**Sarande**	**0.89**	**275**	P	**Pg**	**11 04 04.7**	**-0.3**
	baz=270						
SRN				S	**Sg**	**11 04 14.7**	**-1.8**
	baz=270						
SRN				AMP			
	comp=N,13nm,1.1s,baz=270						
KTI	**Kastanea**	**0.95**	**52**	P	**Pg**	**11 04 06.2**	**0.0**
LRSO	**Larissa Observ**	**0.97**	**98**	P	**Pg**	**11 04 06.3**	**-0.3**
LRSO				S	**Sn**	**11 04 22.4**	**+0.6**
	comp=N,19µm,0.7s						
FNA	**Florina**	**0.99**	**10**	*e*Pg	**Pg**	**11 04 06.9**	**-0.1**
FNA				*e*Sg	**Sn**	**11 04 23.4**	**+0.9**
FNA	**Florina**	**0.99**	**10**	P	**Pg**	**11 04 06.2**	**-0.8**
FNA				AML	AML	11 04 25.1	
	comp=N,8588µm,0.7s						
FNA				AML	AML	11 04 25.8	
	comp=E,8624µm,0.5s						
FNA	**Florina**	**0.99**	**10**	P	**Pg**	**11 04 07.2**	**+0.2**
FNA				S	**Sb**	**11 04 20.8**	**+0.1**
	comp=E,4µm,0.6s						
FNA	**Florina**	**0.99**	**10**	P	**Pg**	**11 04 05.6**	**-1.4**
	baz=14						
FNA				S	**Sb**	**11 04 20.5**	**-0.2**
	baz=14						
EVR	**Evrytania**	**1.03**	**150**	P	**Pg**	**11 04 07.5**	**-0.2**
EVR				S	**Sb**	**11 04 21.6**	**-0.1**
EVR				AML	AML	11 04 29.4	
	comp=E,5074µm,0.6s						
EVR				AML	AML	11 04 29.9	
	comp=N,6291µm,0.3s						
EVR	**Evrytania**	**1.03**	**150**	P	**Pb**	**11 04 08.1**	**0.0**
EVR				S	**Sb**	**11 04 22.2**	**+0.5**
	comp=N,3µm,0.4s						
KEK	**Kerkira**	**1.04**	**265**	P	**Pg**	**11 04 07.0**	**-1.0**
KEK				S	**Sg**	**11 04 21.0**	**-0.5**
KEK				AML	AML	11 04 29.1	
	comp=E,7138µm,0.5s						
KEK				AML	AML	11 04 29.6	
	comp=N,8567µm,0.6s						
KEK	**Kerkira**	**1.04**	**265**	P	**Pg**	**11 04 07.2**	**-0.8**
KEK				S	**Sn**	**11 04 24.0**	**+0.3**
	comp=N,4µm,0.5s						
KEK	**Kerkira**	**1.04**	**265**		**Pg**	**11 04 07.0**	**-1.0**
TSLK	**Tsoukalades, L**	**1.05**	**201**	P	**Pg**	**11 04 07.8**	**-0.4**
TSLK				AML	AML	11 04 30.2	
	comp=N,21758µm,0.5s						
TSLK				AML	AML	11 04 30.7	
	comp=E,13794µm,0.8s						
TSLK	**Tsoukalades, L**	**1.05**	**201**	P	**Pg**	**11 04 08.3**	**+0.1**
TSLK				S	**Sn**	**11 04 25.3**	**+1.4**
	comp=E,8µm,0.6s						
LIT	**Litokhoron**	**1.07**	**74**	P	**Pg**	**11 04 07.6**	**-1.0**
LIT				S	**Sb**	**11 04 23.9**	**+0.9**
LIT				AML	AML	11 04 27.8	
	comp=N,11378µm,0.4s						
LIT				AML	AML	11 04 30.7	
	comp=E,9910µm,0.6s						
LIT	**Litokhoron**	**1.07**	**74**	P	**Pg**	**11 04 08.4**	**-0.2**
LIT				S	**Sn**	**11 04 25.3**	**+0.9**
	comp=E,5µm,0.5s						
LIT	**Litokhoron**	**1.07**	**74**		**Pg**	**11 04 08.1**	**-0.5**
LKD2	**Lefkada island**	**1.09**	**201**	P	**Pg**	**11 04 08.4**	**-0.5**
LKD2				S	**Sg**	**11 04 22.6**	**-0.4**
LKD2				AML	AML	11 04 31.3	
	comp=E,9141µm,0.5s						
LKD2				AML	AML	11 04 32.3	
	comp=N,11324µm,0.4s						
LKD2	**Lefkada island**	**1.09**	**201**	P	**Pg**	**11 04 08.7**	**-0.1**
LKD2				S	**Sn**	**11 04 25.5**	**+0.8**
	comp=N,5µm,0.4s						
LKD2	**Lefkada island**	**1.09**	**201**	P	**Pg**	**11 04 08.6**	**-0.2**
	baz=197						
LKD2				S	**Sn**	**11 04 26.4**	**+1.7**
	baz=197						
MAKR	**Makrakomi, Fth**	**1.10**	**136**	P	**Pg**	**11 04 08.4**	**-0.7**
MAKR				S	**Sb**	**11 04 24.1**	**+0.4**
MAKR				AML	AML	11 04 28.6	
	comp=N,24073µm,0.3s						
MAKR				AML	AML	11 04 30.2	
	comp=E,29893µm,0.2s						
MAKR	**Makrakomi, Fth**	**1.10**	**136**	P	**Pg**	**11 04 08.9**	**-0.2**
MAKR				S	**Sn**	**11 04 25.4**	**+0.3**
	comp=E,14µm,0.3s						
NYDR	**Nydri-Lefkada**	**1.15**	**198**	P	**Pg**	**11 04 09.4**	**-0.6**
NYDR	**Nydri-Lefkada**	**1.15**	**198**	P	**Pg**	**11 04 09.7**	**-0.3**
NYDR				S	**Sn**	**11 04 27.9**	**+1.7**
	comp=E,5µm,0.6s						
AGG	**Agios Georgios**	**1.21**	**130**	P	**Pg**	**11 04 10.4**	**-0.7**
AGG				S	**Sn**	**11 04 27.9**	**+0.2**
AGG	**Agios Georgios**	**1.21**	**130**	P	**Pg**	**11 04 10.8**	**-0.3**
AGG				S	**Sn**	**11 04 27.6**	**-0.1**
AGG	**Agios Georgios**	**1.21**	**130**	Pg	**Pg**	**11 04 10.6**	**-0.5**
DRAG	**Dragano-Lefkad**	**1.21**	**202**	P	**Pg**	**11 04 10.1**	**-1.1**
DRAG	**Dragano-Lefkad**	**1.21**	**202**	P	**Pg**	**11 04 10.5**	**-0.6**
DRAG				S	**Sn**	**11 04 29.2**	**+1.5**
	comp=E,28µm,0.5s						
PVO	**Paravola**	**1.23**	**166**	P	**Pg**	**11 04 11.2**	**-0.3**
EVGI	**Lefkada island**	**1.25**	**198**	P	**Pg**	**11 04 11.1**	**-0.8**
EVGI	**Lefkada island**	**1.25**	**198**	P	**Pg**	**11 04 11.4**	**-0.5**
EVGI				S	**Sn**	**11 04 30.6**	**+2.0**
	comp=E,6µm,0.6s						
OHR	**Ohrid**	**1.33**	**349**	*e*Pg	**Pg**	**11 04 14.1**	**+0.6**
OHR				*e*Sg	**Sn**	**11 04 34.2**	**+3.4**
OHR	**Ohrid**	**1.33**	**349**	*i* Pn	**Pg**	**11 04 14.1**	**+0.6**
OHR				*i* Sn	**Sn**	**11 04 34.7**	**+3.9**
ANX	**Ano Chora**	**1.35**	**153**	P	**Pn**	**11 04 13.4**	**+0.2**
ANX				AML	AML	11 04 42.9	
	comp=N,12980µm,0.4s						
ANX				AML	AML	11 04 44.4	
	comp=E,13792µm,0.5s						
ANX	**Ano Chora**	**1.35**	**153**	P	**Pg**	**11 04 14.4**	**+0.4**
ANX				S	**Sn**	**11 04 33.8**	**+2.3**
	comp=E,7µm,0.4s						
FSK	**Fiskardo**	**1.42**	**199**	P	**Pn**	**11 04 14.6**	**+0.6**
FSK	**Fiskardo**	**1.42**	**199**	P	**Pb**	**11 04 15.0**	**+0.3**
FSK				S	**Sg**	**11 04 36.4**	**+2.7**
	comp=E,4µm,0.6s						
VLO	**Vlora**	**1.43**	**298**	P	**Pg**	**11 04 16.6**	**+1.2**
VLO	**Vlora**	**1.43**	**298**	Pn	**Pg**	**11 04 15.7**	**+0.3**
VLO	**Vlora**	**1.43**	**298**	P	**Pg**	**11 04 16.1**	**+0.7**
	baz=297						
VLO				S	**Sg**	**11 04 40.4**	**+6.5**
	baz=297						
GRG	**Griva**	**1.50**	**39**	P	**Pn**	**11 04 15.5**	**+0.3**
GRG	**Griva**	**1.50**	**39**	P	**Pg**	**11 04 16.6**	**-0.1**
GRG				S	**Sg**	**11 04 37.4**	**+1.3**
	comp=E,2µm,0.7s						
EFP	**Efpalio**	**1.50**	**157**	P	**Pg**	**11 04 16.5**	**-0.2**
EFP				AML	AML	11 04 48.9	
	comp=N,9972µm,0.8s						
EFP				AML	AML	11 04 50.1	
	comp=E,9587µm,0.6s						
EFP	**Efpalio**	**1.50**	**157**	P	**Pg**	**11 04 17.0**	**+0.3**
EFP				S	**Sg**	**11 04 37.6**	**+1.4**
	comp=E,5µm,0.7s						
THE	**Thessaloniki**	**1.62**	**59**	P	**Pb**	**11 04 18.0**	**-0.1**
THE				S	**Sg**	**11 04 39.5**	**-0.5**
	comp=E,620nm,0.6s						
THE	**Thessaloniki**	**1.62**	**59**	P	**Pn**	**11 04 17.1**	**+0.4**
	baz=62						
THE				S	**Sg**	**11 04 39.4**	**-0.5**
	baz=62						
XOR	**Xorichti**	**1.64**	**105**	P	**Pn**	**11 04 17.1**	**0.0**
XOR	**Xorichti**	**1.64**	**105**	P	**Pn**	**11 04 17.6**	**+0.5**
XOR				S	**Sg**	**11 04 40.6**	**-0.1**
	comp=E,2µm,0.7s						
KEF4	**Livadi, Kephal**	**1.65**	**200**	P	**Pb**	**11 04 18.6**	**0.0**
KEF4	**Livadi, Kephal**	**1.65**	**200**	P	**Pb**	**11 04 18.8**	**+0.2**
KEF4				S	**Sg**	**11 04 40.9**	**0.0**
	comp=E,15µm,0.5s						
DMLN	**Damoulianata-K**	**1.68**	**201**	P	**Pb**	**11 04 18.9**	**-0.2**
DMLN	**Damoulianata-K**	**1.68**	**201**	P	**Pb**	**11 04 19.4**	**+0.3**
DMLN				S	**Sg**	**11 04 42.3**	**+0.4**
	comp=E,4µm,0.6s						
NEO	**Neokhori**	**1.68**	**107**	P	**Pn**	**11 04 17.9**	**+0.2**
NEO	**Neokhori**	**1.68**	**107**	P	**Pb**	**11 04 18.7**	**-0.5**
NEO				S	**Sg**	**11 04 41.9**	**-0.1**
	comp=E,3µm,0.6s						
VLS	**Valsamata**	**1.69**	**195**	P	**Pb**	**11 04 18.9**	**-0.3**
VLS				AML	AML	11 04 51.3	
	comp=E,2646µm,0.4s						
VLS				AML	AML	11 04 52.0	
	comp=N,3312µm,0.7s						
VLS	**Valsamata**	**1.69**	**195**	P	**Pb**	**11 04 19.4**	**+0.2**
VLS				S	**Sb**	**11 04 40.9**	**+0.3**
	comp=N,2µm,0.4s						
HORT	**Hortiatis**	**1.69**	**62**	P	**Pn**	**11 04 17.9**	**0.0**
HORT	**Hortiatis**	**1.69**	**62**	P	**Pn**	**11 04 17.9**	**0.0**
HORT				S	**Sb**	**11 04 40.7**	**-0.1**
	comp=N,568nm,0.8s						
DLFA	**Delphi**	**1.69**	**141**	P	**Pb**	**11 04 19.6**	**+0.2**
LAKA	**Lakka**	**1.69**	**157**	P	**Pb**	**11 04 19.5**	**+0.1**
LAKA	**Lakka**	**1.69**	**157**	P	**Pg**	**11 04 20.8**	**+0.3**
LAKA				S	**Sg**	**11 04 41.9**	**-0.5**
	comp=N,5µm,0.8s						
ALIK	**Aliki, Aigiali**	**1.72**	**154**	P	**Pg**	**11 04 20.4**	**-0.5**
ALIK				S	**Sg**	**11 04 44.0**	**+0.8**
KEF3	**Kipouria, Keph**	**1.72**	**201**	P	**Pb**	**11 04 19.2**	**-0.5**
KEF3	**Kipouria, Keph**	**1.72**	**201**	P	**Pb**	**11 04 19.4**	**-0.4**
KEF3				S	**Sb**	**11 04 42.2**	**+0.7**
	comp=N,6µm,0.6s						
PSDA	**Pessada-Kefalo**	**1.75**	**195**	P	**Pb**

SKO	Skopje	2.17	6	*e*Pn		Pn	11 04 25.7	+1.2
SKO	Skopje	2.17	6	*i* Pn		Pg	11 04 29.1	-0.5
OUR	Ouranopolis	2.24	76	P		Pn	11 04 25.7	+0.4
OUR				S		Sn	11 04 53.4	+0.3
	comp=N,850nm,0.7s							
SRS	Serrai	2.28	54	P		Pn	11 04 26.6	+0.7
SRS				S		Sn	11 04 55.9	+1.7
	comp=N,515nm,0.8s							
LTK	Loutraki	2.28	141	P		Pn	11 04 27.7	+1.8
LTK				S		Sb	11 04 58.0	+0.3
	comp=N,765nm,0.8s							
VILL	Villia	2.35	134	P		Pn	11 04 28.8	+1.8
VILL				S		Sn	11 04 57.8	+1.7
	comp=N,1μm,0.7s							
KOKK	Kokkinochori,	2.40	64	P		Pn	11 04 28.2	+0.6
KOKK				S		Sb	11 04 59.7	-1.6
	comp=N,818nm,0.6s							
KKB	Krupnik	2.53	35	P		Pn	11 04 31.2	+1.9
KYMI	Kymi, Euboea I	2.58	116	P		Pn	11 04 31.6	+1.6
KYMI				S		Sb	11 05 04.3	-1.9
	comp=N,388nm,0.8s							
NVR	Nevrokopi	2.58	52	P		Pn	11 04 31.5	+1.4
NVR				S		Sn	11 05 02.6	+1.0
	comp=N,580nm,0.8s							
ULC	Ulcinj	2.59	327⇓	*i* Pn		Pn	11 04 32.2	+2.0
MMB	Musomiste	2.65	47	P		Pn	11 04 32.0	+1.0
EPID	Epidavros	2.68	144	P		Pn	11 04 33.1	+1.7
ITM	Ithomi	2.69	167	Pn		Pn	11 04 32.0	+0.3
DION	Dionisos Attik	2.78	128	P		Pn	11 04 34.2	+1.5
PRVS	Prvonek	2.79	14	*e*Pn		Pn	11 04 34.1	+1.2
PRVS				*e*Sn		Sn	11 05 08.0	+1.2
DRME	Dracevica, Mon	2.80	329	*e*Pn		Pn	11 04 35.6	+2.5
DRME	Dracevica, Mon	2.80	329⇓	*i* Pn		Pn	11 04 35.1	+2.0
DRME				*i* Sn		Sb	11 05 11.1	-1.6
VLY	Voula,Athens	2.84	133	P		Pn	11 04 35.2	+1.5
VLY				S		Sb	11 05 12.8	-1.1
	comp=N,568nm,0.8s							
THAS	Thassos island	2.85	73	P		Pn	11 04 33.5	-0.2
PVY	Plav	2.92	343⇓	*i* Pn		Pn	11 04 36.7	+1.8
PVY				*i* Sn		Sb	11 05 14.1	-2.3
PYL	PYLOS	2.94	171	P		Pn	11 04 37.6	+2.5
PDG	Podgorica	2.98	332	⇑P		Pn	11 04 38.4	+2.8
PDG	Podgorica	2.98	332			Pn	11 04 35.7	+0.2
PDG	Podgorica	2.98	332	*e*Pn		Pn	11 04 37.2	+1.6
TTG	Podgorica	2.98	332⇓	*i* Pn		Pn	11 04 37.8	+2.2
TTG				*i* Sn		Sb	11 05 15.6	-2.4
BUM	Brajici-Budva	3.02	326⇓	*i* Pn		Pn	11 04 38.0	+1.9
BUM				*i* Sn		Sb	11 05 16.4	-2.6
BARS	Barje	3.05	9	*e*Pn		Pn	11 04 37.7	+1.2
BARS				*e*Sn		Sn	11 05 13.3	+0.2
IVA	Berane	3.20	343⇓	*i* Pn		Pn	11 04 40.6	+1.9
IVA				*i* Sn		Sn	11 05 20.8	+3.7
CEME	Cevo	3.21	329⇓	*i* Pn		Pn	11 04 40.6	+1.8
CEME				*i* Sn		Sb	11 05 21.1	+3.8
VTS	Vitosha	3.22	29	P		Pn	11 04 39.9	+0.9
NOCI	Noci	3.27	289	P		Pn	11 04 40.4	+0.8
	baz=288							
NOCI				S		Sb	11 05 27.1	+0.9
	baz=288							
KOME	Kolasin	3.28	339	*e*Pn		Pn	11 04 43.0	+3.3
KOME				*e*Sn		Sb	11 05 24.9	-1.6
RZN	Rozhen	3.30	54	P		Pn	11 04 41.1	+1.0
HCY	Herceg Novi	3.31	324	*e*Pn		Pn	11 04 41.5	+1.4
HCY	Herceg Novi	3.31	324	*e*Pn		Pn	11 04 41.5	+1.4
HCY				*e*Sn		Sn	11 05 22.9	+3.3
NKME	Niksic	3.39	332	*e*Pn		Pn	11 04 43.0	+1.8
NKME				*e*Sn		Sb	11 05 26.6	-3.0
VLI	Veliai	3.39	155	P		Pn	11 04 44.2	+3.0
SELS	Selova	3.41	360	*e*Pn		Pn	11 04 42.6	+1.1
NKY	Niksic	3.41	332	*e*Pn		Pn	11 04 43.4	+1.8
NKY				*e*Sn		Sb	11 05 26.9	-3.5
TIP	Timpagrande	3.45	261	⇑P		Pn	11 04 42.8	+0.7
TIP				⇓S		Sn	11 05 23.9	+0.7
TIP	Timpagrande	3.45	261			Pn	11 04 42.1	0.0
MATE	Matera	3.50	285	⇑P		Pn	11 04 44.0	+1.3
PLD	Plovdiv	3.54	48	P		Pg	11 05 07.4	+12
SJES	Sjenica	3.56	346	*e*Pn		Pn	11 04 45.5	+1.9
SJES	Sjenica	3.56	346	*e*Pn		Pn	11 04 47.0	+3.4
RDO	Rodhopi	3.61	67	P		Pn	11 04 44.4	+0.3
RDO	Rodhopi	3.61	67			Pn	11 04 44.0	-0.1
ZAPS	Zavoj	3.64	17	*e*Pn		Pn	11 04 45.8	+1.2
ZAPS				*e*Sn		Sn	11 05 28.3	+0.6
BRY	Bratogost	3.66	328	*e*Pn		Pn	11 04 45.7	+0.7
BRY	Bratogost	3.66	328	*e*Pn		Pn	11 04 46.4	+1.4
KDZ	Kurdzhali	3.73	59	P		Pn	11 04 45.5	-0.4
PLE	Pljevlja	3.76	340	*e*Pn		Pn	11 04 47.6	+1.3
PLE				*e*Sn		Sb	11 05 36.3	-4.1
UPM	Unac-Piva	3.79	334	*e*Pn		Pn	11 04 50.5	+3.7
UPM	Unac-Piva	3.79	334	*e*Pn		Pn	11 04 49.5	+2.7
UPM				*e*Sn		Sb	11 05 36.8	-4.5
BOVS	Bovan	3.85	6	*e*Pn		Pn	11 04 48.0	+0.6
BOVS				*e*Sn		Sn	11 05 33.6	+0.8
BOVS	Bovan	3.85	6	⇓P		Pn	11 04 50.4	+2.9
ALN	Alexandroupoli	3.90	72	Pn		Pn	11 04 48.2	0.0
MRVN	Minervino Murg	3.98	290	P		Pn	11 04 50.3	+1.0
	baz=290							
STON	Ston	4.01	321	*e*Pn		Pn	11 04 50.3	+0.6
RUDO	Rudo	4.03	341	*e*Pn		Pn	11 04 52.1	+2.1
MPEP	Malo Peshtene	4.04	28	P		Pn	11 04 54.9	+4.7
CHOS	Chios island	4.07	109	P		Pn	11 04 51.9	+1.3
ZAGS	Zajecar	4.08	11	*e*Pn		Pn	11 04 52.3	+1.6
GRUS	Gruza	4.09	356	*e*Pn		Pn	11 04 52.0	+1.2
CUC	Castrocucco	4.11	274			Pn	11 04 51.0	-0.1
BBLS	Lazići	4.26	343	*e*Pn		Pn	11 04 53.4	+0.2
BBLS	Lazići	4.26	343	*e*Pn		Pn	11 04 53.6	+0.4
CEL	Celeste	4.37	251			Pn	11 04 55.4	+0.6
DIVS	Divibare	4.37	349	*e*Pn		Pn	11 04 55.9	+1.1
DIVS				*e*Sn		Sn	11 05 45.0	-0.9
DIVS	Divibare	4.37	349			Pn	11 04 55.9	+1.1
DIVS	Divibare	4.37	349	*e*Pn		Pn	11 04 56.1	+1.3
APE	Apeiranthos	4.40	127	⇑P		Pn	11 04 56.8	+1.7
TRUS	Trudelj	4.45	353	*e*Pn		Pn	11 04 57.6	+1.9
SGRT	San Giovanni R	4.54	297	Pn		Pn	11 04 58.3	+1.3
SGRT	San Giovanni R	4.54	297	P		Pn	11 04 58.3	+1.3
	baz=297							
TEKS	Tekeris	4.89	346	*e*Pn		Pn	11 05 02.1	+0.3
MDVR	Moldovita	4.99	5	⇑P		Pn	11 05 06.8	+3.7
HERR	Herculane	5.16	10	⇓P		Pn	11 05 09.1	+3.7
PAOL	Paolisi	5.17	286			Pn	11 05 06.4	+0.8
IDI	Anoyia	5.40	145	Pn		Pn	11 05 10.1	+1.2
	comp=N,1.5nm,0.3s,baz=301,slow=16,SNR=2.1							
	comp=N,3.4nm,0.4s							
FRGS	Fruska Gora	5.44	350	⇓P		Pn	11 05 12.3	+3.0
FRGS	Fruska Gora	5.44	350	*e*Pn		Pn	11 05 09.7	+0.4
MGRS	Mrkonjic Grad	5.51	328	*e*Pn		Pn	11 05 12.7	+2.4
BLY	Banja Luka	5.75	331	*e*Pn		Pn	11 05 15.1	+1.6
BZS	Buzias	5.82	3	⇑P		Pn	11 05 17.2	+2.8
RAFF	Raffo Rosso	5.91	246	Pn		Pn	11 05 15.4	-0.4
VOIR		6.32	26	⇑P		Pn	11 05 24.9	+3.4
MORH	Mrgy, Hungar	6.66	345	⇑P		Pn	11 05 28.4	+2.3
MORH	Mrgy, Hungar	6.66	345	*e*Pn		Pn	11 05 27.1	+1.4
MORH	Mrgy, Hungar	6.66	345	P		Pn	11 05 27.8	+1.7
KOVH	Kovagotottos	6.66	341	P		Pn	11 05 28.0	+1.9
MLR	Muntele Rosu	6.69	30	⇓P		Pn	11 05 30.0	+3.4
MLR	Muntele Rosu	6.69	30	Pn		Pn	11 05 28.1	+1.5
	comp=N,0.5nm,0.3s,baz=290,slow=19,SNR=2.7							
MLR				Sn		Sn	11 06 48.4	+5.4
	baz=287,slow=22							
MLR				LR		LR	11 08 34.0	
	comp=N,197nm,18.1s,baz=204,slow=43							
	comp=N,2.7nm,0.5s							
MLR	Muntele Rosu	6.69	30			Pn	11 05 25.2	-1.4
NRCA	Norcia	6.76	299			Pn	11 05 27.6	+0.1
BOJS	Bojanci	7.16	325	*e*Pn		Pn	11 05 33.7	+0.8
PLOR	Plostina	7.27	32	⇑P		Pn	11 05 37.6	+3.1
VRI	Vrincioaia	7.31	32	⇑P		Pn	11 05 38.0	+3.0
CRES	Cresnjev	7.32	327	*e*Pn		Pn	11 05 32.5	-2.7
MURB	Monte Urbino	7.33	301			Pn	11 05 35.7	+0.3
CFR	Carcaliu	7.45	42	⇑P		Pn	11 05 40.7	+3.9
AKAS	Kas	7.57	115	Pn		Pn	11 05 37.9	-0.8
CEY	Cerknica	7.72	322	*e*Pn		Pn	11 05 41.8	+1.2
MDUB	Mudurnu	7.73	82	Pn		Pn	11 05 41.1	+0.2
SKDS	Skadanscina	7.78	320	*e*Pn		Pn	11 05 41.0	-0.4
MPLH	Magyarpolny	7.81	342	P		Pn	11 05 47.7	+5.8
BIZ	Bicaz	7.99	25	⇓P		Pn	11 05 48.4	+4.1
PSZ	Piszkesteto	8.16	354	⇑P		Pn	11 05 50.2	+3.4
PSZ	Piszkesteto	8.16	354	Pn		Pn	11 05 46.5	-0.2
PSZ	Piszkesteto	8.16	354	P		Pn	11 05 49.6	+2.9
PSZ				S		Sn	11 07 20.8	+1.7
SOKA	Soboth	8.19	329	*i* Pn		Pn	11 05 49.9	+2.8
	comp=N,1.1nm,0.5s							
OBKA	Obir	8.25	326	*e*Pn		Pn	11 05 51.2	+3.2
	comp=N,2.7nm,0.4s							
OBKA				*e*Sn		Sn	11 07 18.3	-3.1
	comp=N,7.3nm,0.7s							
OSSC	Osservatorio P	8.29	300	Pn		Pn	11 05 48.8	+0.3
BURAR	Bucovina Array	8.34	19	⇓P		Pn	11 05 53.1	+3.9
BUR08	Bucovina Ar. S	8.36	19	Pn		Pn	11 05 49.8	+0.3
PRED	Cave del Predi	8.64	323	Pn		Pn	11 05 54.2	+0.9
TEOL	Teolo	8.92	312	Pn		Pn	11 05 58.1	+1.0
STAL	STALUGIAL	8.93	319			Pn	11 05 57.4	+0.2
CLUD	Cludinico	8.98	320	Pn		Pn	11 05 57.0	-0.9
KBA	Knbnbreinsper	9.22	325	*i* Pn		Pn	11 06 03.5	+2.2
	comp=N,0.6nm,0.3s							
KBA				*e*Sn		Sn	11 07 42.9	-2.3
	comp=N,0.8nm,0.3s							
CTI	Castel Tesino	9.35	315	Pn		Pn	11 06 03.2	+0.2
ABTA	Abfaltersbach	9.36	321	*i* Pn		Pn	11 06 05.0	+1.8
	comp=N,4.4nm,0.6s							
ABTA				*e*Sn		Sn	11 07 46.4	-2.3
	comp=N,4.0nm,0.5s							
BRTR	Keskin Array B	9.62	87	Pn		Pn	11 06 07.0	+0.1
	comp=N,0.1nm,0.3s,baz=264,slow=14,SNR=1.3							
BRTR				LR		LR	11 10 16.7	
	comp=N,108nm,21.8s,baz=273,slow=41							
	comp=N,0.6nm,0.4s							
SALO	Salr	9.73	310	Pn		Pn	11 06 08.6	+0.3
MSSA	Maissana	9.75	301	Pn		Pn	11 06 08.4	-0.2
VRAC	Vranov	10.04	343	Pn		Pn	11 06 13.6	+1.2
	comp=N,0.6nm,0.3s,baz=84,slow=20,SNR=1.9							
	comp=N,2.5nm,0.5s							
WTTA	Wenberg	10.15	320	*i* Pn		Pn	11 06 16.0	+1.8
	comp=N,4.7nm,0.6s							
WTTA				*e*Sn		Sn	11 08 06.3	-2.0
	comp=N,14nm,0.7s							
KEST	Kesra	10.19	250	Pn		Pn	11 06 14.2	-0.4
	comp=N,0.9nm,0.3s,baz=60,slow=20,SNR=3.5							
KEST				LR		LR	11 11 11.2	
	comp=N,64nm,18.1s,baz=329,slow=44							
	comp=N,6.4nm,0.7s							
KEST	Kesra	10.19	250			Pn	11 06 14.4	-0.2
WATA	Walderalm	10.23	320	*i* Pn		Pn	11 06 20.0	+4.8
	comp=N,3.5nm,0.3s							
FETA	Feichten	10.45	317	*e*Pn		Pn	11 06 22.1	+3.8
	comp=N,3.4nm,0.6s							
FETA				*i* Sn		Sn	11 08 13.2	-2.3
	comp=N,1.6nm,0.6s							
FUORN	Ofenpass-Fuorn	10.46	314	Pn		Pn	11 06 18.1	-0.3
MOTA	Moosalm	10.47	319	*i* Pn		Pn	11 06 20.1	+1.6
	comp=N,7.8nm,0.6s							
MOTA				*i* Sn		Sn	11 08 15.8	-0.3
	comp=N,8.0nm,0.6s							
GERES	GERESS Array B	10.49	332	Pn		Pn	11 06 18.7	+0.1
	comp=N,0.2nm,0.2s,baz=157,slow=16,SNR=1.4							
GERES	GERESS Array B	10.49	332	Pn		Pn	11 06 17.4	-1.2
DAVOX	Davos/Dischmat	10.76	314	Pn		Pn	11 06 22.7	+0.2
	comp=N,0.4nm,0.3s,baz=173,slow=21,SNR=2.6							
DAVOX				Sn		Sn	11 08 20.3	-2.9
	comp=N,0.2nm,0.3s,baz=40,slow=23,SNR=1.5							
DAVOX				LR		LR	11 11 09.8	
	comp=N,55nm,19.2s,baz=84,slow=41							
	comp=N,1.0nm,0.3s							
KHC	Kasperske Hory	10.77	332	*e*P		Pn	11 06 25.5	+3.1
CSS	Mathiatis	10.83	113	Pn		Pn	11 06 23.2	-0.1
TUE	Stuetta	10.89	312			Pn	11 06 24.3	+0.1
AKASG	Malin Array Be	12.28	25	Pn		Pn	11 06 41.3	-1.7
	comp=N,0.3nm,0.3s,baz=83,slow=15,SNR=1.9							
AKASG				LR		LR	11 11 22.9	
	comp=N,45nm,19.1s,baz=242,slow=37							
	comp=N,0.3nm,0.4s							
CLL	Collm	12.83	336	*e*PP		Pn	11 07 04.0	+14
NACGM	Naroch	15.57	12⇑	*e*P		P	11 07 38.3	+6.3
	baz=197							
GNI	Garni	18.08	81	LR		LR	11 14 58.8	
	comp=N,29nm,21.1s,baz=310,slow=37							
ESDC	Sonseca Array	19.30	278	P		P	11 08 14.0	+0.7
	comp=N,0.1nm,0.3s,baz=72,slow=11,SNR=9.9							
ESDC				LR		LR	11 15 03.5	
	comp=N,43nm,19.3s,baz=128,slow=35							
	comp=N,2.0nm,0.8s							
HFS	Hagfors	20.88	350	P		P	11 08 30.0	-0.3
	comp=N,3.8nm,0.6s,baz=163,slow=11,SNR=9.6							
	comp=N,3.8nm,0.6s							
MDT	Midelt	21.85	259	LR		LR	11 16 46.3	
	comp=N,74nm,20.7s,baz=156,slow=36							
FINES	FINESS Array B	21.88	6	P		P	11 08 41.1	+0.2
	comp=N,2.1nm,0.7s,baz=163,slow=13,SNR=7.6							
	comp=N,2.1nm,0.7s							
BELG	Belogornoye	22.11	47	LR		LR	11 18 24.8	
	comp=N,41nm,20.8s,baz=164,slow=40							
NC405	NORSAR Array S	22.11	348	P		P	11 08 43.6	0.0
NC405				IAmb		IAmb	11 08 55.4	
	comp=Z,19nm,0.8s							
NB201	NORSAR Array S	22.12	347	P		P	11 08 43.4	-0.3
NB2	NORSAR Subarra	22.13	347	P		P	11 08 43.8	0.0
	comp=Z,4.9nm,0.8s,baz=163,slow=11							
NOA	NORSAR Array B	22.13	347	P		P	11 08 43.4	-0.3
	comp=Z,2.0nm,0.6s,baz=245,slow=19,SNR=12							
	comp=Z,2.0nm,0.6s							
NC303	NORSAR Array S	22.28	347	P		P	11 08 44.0	-1.3
NC303				IAmb		IAmb	11 08 46.2	
	comp=Z,18nm,1.2s							
EKA	Eskdalemuir Ar	22.41	322	P		P	11 08 46.1	-0.7
	comp=Z,3.2nm,0.8s,baz=122,slow=11,SNR=7.6							
	comp=Z,3.2nm,0.8s							
NC204	NORSAR Array S	22.43	347	P		P	11 08 46.4	-0.6
ARU	Arti	29.53	43	LR		LR	11 23 15.0	
	comp=Z,40nm,20.7s,baz=324,slow=40							
ARCES	ARCESS Array B	29.88	3	P		P	11 09 54.5	-1.1
	comp=Z,0.6nm,0.5s,baz=193,slow=9.5,SNR=6.7							
ARCES				LR		LR	11 22 49.6	
	comp=Z,33nm,18.5s,baz=148,slow=38							
	comp=Z,0.6nm,0.5s							
ARCES	ARCESS Array B	29.88	3	IAmb		IAmb	11 10 21.3	
	comp=Z,5.4nm,1.2s							
TOA0	Torodi Ar. Sit	31.61	218	P		P	11 10 12.5	+1.2
TOA0				IAmb		IAmb	11 10 12.8	
	comp=Z,3.6nm,0.8s							
TORD	Torodi Ar. Bea	31.61	218	P		P	11 10 11.5	+0.1
	comp=Z,2.7nm,0.6s,baz=35,slow=9.2,SNR=26							
	comp=Z,2.7nm,0.6s							
TORD	Torodi Ar. Bea	31.61	218	IAmb		IAmb	11 10 12.8	
	comp=Z,2.0nm,0.8s							
WSAR	Wadi Sarin	35.67	106	LR		LR	11 27 31.3	
	comp=Z,21nm,19.4s,baz=203,slow=40							
DBIC	Dimbokro	40.42	222	P		P	11 11 25.9	-0.9
	comp=Z,2.9nm,0.6s,baz=40,slow=11,SNR=3.9							
	comp=Z,2.9nm,0.6s							
DBIC	Dimbokro	40.42	222	IAmb		IAmb	11 11 33.8	
	comp=Z,12nm,1.1s							
MK31	Makanchi Array	44.05	60	P		P	11 11 56.8	+0.6
MKAR	Makanchi Array	44.05	60	P		P	11 11 56.5	+0.3
	comp=Z,1.8nm,0.6s,baz=279,slow=6.6,SNR=16							
MKAR				PcP		PcP	11 13 41.3	-0.1
	comp=Z,1.2nm,0.8s,baz=281,slow=3.7,SNR=3.9							
	comp=Z,1.8nm,0.6s							
MKAR	Makanchi Array	44.05	60	P		P	11 11 56.7	+0.5
ZALV	Zalesovo Beam	44.25	49	P		P	11 11 57.5	-0.1
	comp=Z,1.2nm,0.4s,baz=285,slow=8.0,SNR=5.4							
	comp=Z,1.2nm,0.4s							
ZALV	Zalesovo Beam	44.25	49	P		P	11 11 57.0	-0.6
RES	Resolute Bay	58.34	344	P		P	11 13 41.0	-1.9
	comp=Z,2.5nm,0.9s,baz=102,slow=12,SNR=2.2							
	comp=Z,2.5nm,0.9s							
SONM	Songino Array	59.05	52	P		P	11 13 47.7	-0.8
	comp=Z,0.3nm,0.4s,baz=280,slow=8.5,SNR=4.5							
	comp=Z,0.3nm,0.4s							
SONM	Songino Array	59.05	52	IAmb		IAmb	11 13 55.0	
	comp=Z,1.6nm,1.1s							
YKA	Yellowknife Ar	72.03	340	P		P	11 15 12.6	+0.6
	comp=Z,0.6nm,0.7s,baz=293,slow=11,SNR=5.0							
	comp=Z,0.6nm,0.7s							
ULM	Lac du Bonnet	74.68	324	P		P	11 15 26.8	-1.1
	comp=Z,4.3nm,0.6s,baz=58,slow=5.3,SNR=6.9							
	comp=Z,4.3nm,0.6s							
MJAR	Matsushiro Arr	84.50	46	P		P	11 16 20.7	-0.9
	comp=Z,0.9nm,0.5s,baz=312,slow=3.4,SNR=3.5							
	comp=Z,0.9nm,0.5s							
JOW	Kunigami	85.20	59	LR		LR	11 58 16.9	
	comp=Z,47nm,19.4s,baz=160,slow=38							
PDAR	Pinedale Array	86.47	326	P		P	11 16 30.9	-0.7
	comp=Z,0.3nm,0.7s,baz=64,slow=3.4,SNR=3.8							
	comp=Z,0.3nm,0.7s							
NVAR	Mina Array Bea	93.73	329	P		P	11 17 04.5	-1.1
	comp=Z,0.2nm,0.7s,baz=46,slow=7.7,SNR=2.4							
	comp=Z,0.2nm,0.7s							
TXAR	Lajitas Array	94.20	314	P		P	11 17 08.4	+0.6
	comp=Z,1.1nm,0.8s,baz=62,slow=4.4,SNR=15							
	comp=Z,1.1nm,0.8s							
WRA	Warramunga Arr	120.11	92	PKP		PKPdf	11 22 38.0	-1.6
	comp=Z,0.4nm,0.8s,baz=258,slow=3.3,SNR=1.8							

NOU 28 11:14:44.9, 17.03S×167.85E, h18km, MLv4.0/11, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	Devils Point	0.76	155	P	Pg	11 15 00.0	+0.1
LIFNC	LIFOU	3.77	189	P	Pn	11 15 41.5	-0.7
KOUNC	Koumac, New Ca	4.86	223	P	Pn	11 15 57.1	-0.1
YATNC	Mamie plateau,	5.08	190	P	Pn	11 15 59.6	-0.7
DZM	Mont Dzumac	5.19	195	P	Pn	11 16 02.1	+0.4
NOUC	Port Laguerre	5.25	196	P	Pn	11 16 03.0	+0.5
OUENC	Ouen Island, N	5.44	190	P	Pn	11 16 06.1	+0.9

IDC 28 11:15:11.4±10.0, 16.68S×175.85E, h0km, mb4.2/3, mbtmp4.3/4, ML4.2/1, Error ellipse: s-maj=202.9km s-min=107.7km az=111.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	Devils Point	7.40	261	P	Pb	11 17 13.3	-7.4
MARNC	Mare, Loyalty	8.80	236	P	Pn	11 17 25.5	+5.6
LIFNC	LIFOU	9.12	242	P	Pn	11 17 24.1	-0.2
PINNC	Pines Island,	9.87	232	P	Pn	11 17 41.9	+7.3
OUENC	Ouen Island, N	10.23	235	P	Pn	11 17 42.6	+3.1
DZM	Mont Dzumac	10.37	237	Pn	Pn	11 17 41.7	+0.2
	1.9nm,0.3s,baz=58,slow=16,SNR=11						
	16nm,0.7s						
DZM	Mont Dzumac	10.37	237	P	Pn	11 17 41.8	+0.3
NOUC	Port Laguerre	10.50	238	P	Pn	11 17 43.3	+0.1
STKA	Stephens Creek	34.52	238	P	P	11 22 02.2	+0.6
	1.9nm,0.6s,baz=75,slow=9.4,SNR=5.4						
	1.9nm,0.6s						
WRA	Warramunga Arr	39.47	259	P	P	11 22 43.3	-0.6
	0.6nm,0.2s,baz=112,slow=16,SNR=2.8						
	0.6nm,0.2s						
ASAR	Alice Springs	39.87	253	P	P	11 22 46.8	-0.4
	2.6nm,0.6s,baz=84,slow=9.4,SNR=9.9						
	2.6nm,0.6s						

*GUC **28** 11:18:51.6±0.8, 31.72S×72.19W, h34km±2km, ML3.5*
*NEIC **28** 11:18:51.5±1.2, 31.68S±0.04×72.22W±0.09, h22km±8km, mb4.3/2, ML3.5(GUC), Error ellipse: s-maj=11.0km s-min=5.8km az=89.0*

ISC 28 11:18:48.8±1.7, 31.66S±0.03×72.21W±0.07, h6km±11km, n49, c066/66, 1C-4D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO06	Fray Jorge	1.09	27		Pn	11 19 11.8	+1.1
CO06					Sn	11 19 26.8	+0.5
CO06	Fray Jorge	1.09	27	*e*P	Pn	11 19 11.8	+1.1
CO06				*i* S	Sn	11 19 26.7	+0.5
CO06				IAML		11 19 33.3	
	comp=N,904nm,0.5s						
CO02	Combarbal	1.12	67	Pn	Pn	11 19 11.8	+0.5
CO02				Sn	Sn	11 19 27.0	-0.2
CO02	Combarbal	1.12	67⇑	*i* P	Pn	11 19 11.9	+0.6
CO02				*i* S	Sn	11 19 26.9	-0.3
CO02				IAML		11 19 28.1	
	comp=N,8μm,0.3s						
VA06	Catapilco	1.19	140	Pn	Pb	11 19 11.9	+0.1
VA06	Catapilco	1.19	140⇓	*i* P	Pb	11 19 11.8	0.0
VA06				*i* S	Sb	11 19 27.1	-0.4
VA06	

ISC 28 11:18:55.3±0.3,22°65'55"±0'05"×175°53'W±0'07,h33km, n425,σ1°94/397,mb4.9/65,MS3.8/33,27C-1D,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**5.37**	**324**	P	Pn	11 20 17.1	+4.0
	4.0nm,0.7s						
NIUE	**Niue**	**6.33**	**57**	Pn	Pn	11 20 21.2	-5.2
GLKZ	**Green Lake**	**6.93**	**198**	S	**Sn**	**11 22 00.1**	**+7.9**
TAVE	**Taveuni**	**7.21**	**324**	P	Pn	11 20 42.7	+4.3
MSVF	**Nonsavu**	**7.76**	**308**	Pn	Pn	11 20 51.0	+4.8
	11nm,0.3s,baz=133,slow=11,SNR=51						
MSVF				LR	LR	11 23 21.0	
	comp=Z,1μm,21.9s,baz=109,slow=37						
MSVF	**Nonsavu**	**7.76**	**308**		Pn	11 20 50.5	+4.4
MSVF	**Nonsavu**	**7.76**	**308**	P	Pn	11 20 51.4	+5.3
AFI	**Afiamalu**	**9.39**	**23**	Pn	**Pn**	**11 21 03.8**	**-4.7**
	5.9nm,0.3s,baz=222,slow=5.0,SNR=9.0						
AFI				Sn	Sn	11 22 38.3	-15
	7.5nm,0.3s,baz=165,slow=20,SNR=1.9						
	30nm,0.5s						
AFI	**Afiamalu**	**9.39**	**23**	Pn	Pn	11 21 02.3	-6.2
RAR	**Rarotonga**	**14.69**	**87**	Pn	**Pn**	**11 22 19.2**	**-1.6**
	3.5nm,0.3s,baz=251,slow=10,SNR=14						
RAR				Sn	Sn	11 24 46.7	-16
	2.2nm,0.3s,baz=52,slow=15,SNR=1.6						
RAR	**Rarotonga**	**14.69**	**87**	Pn	Pn	11 22 17.2	-3.6
MARNC	**Mare, Loyalty**	**15.29**	**271**	Pn	**Pn**	**11 22 28.4**	**-0.4**
MARNC	**Mare, Loyalty**	**15.29**	**271**	P	**P**	**11 22 38.5**	**+5.2**
OUZ	**Omahuta**	**15.72**	**215**	P	**P**	**11 22 43.0**	**+5.1**
WCZ	**Waipu Caves**	**15.90**	**211**	P	**P**	**11 22 43.9**	**+3.8**
WMGZ	**Waiomatatini S**	**15.99**	**198**	P	**Pn**	**11 22 39.3**	**+1.5**
WMGZ				S	**Sn**	**11 25 29.3**	**-4.8**
DVP	**Devils Point**	**16.05**	**285**	P	**P**	**11 22 46.9**	**+5.2**
LIFNC	**LIFOU**	**16.12**	**273**	Pn	**Pn**	**11 22 37.2**	**-2.4**
LIFNC				IAmb	IAmb	11 22 47.2	
	comp=Z,72nm,0.8s						
LIFNC	**LIFOU**	**16.12**	**273**	P	**P**	**11 22 45.9**	**+3.4**
WIAZ	**Waiheke Island**	**16.25**	**208**	P	**P**	**11 22 49.0**	**+5.1**
PUZ	**Puketiti**	**16.27**	**198**	P	**Pn**	**11 22 40.2**	**-1.2**
PUZ				S	**Sn**	**11 25 33.3**	**-7.6**
OUENC	**Ouen Island, N**	**16.29**	**267**	P	P	11 22 51.7	+7.3
DZM	**Mont Dzumac**	**16.69**	**269**	Pn	**P**	**11 22 53.6**	**+4.7**
	comp=Z,1.0nm,0.3s,baz=86,slow=16,SNR=18						
DZM				LR	LR	11 27 46.6	
	comp=Z,328nm,19.9s,baz=98,slow=32						
DZM	**Mont Dzumac**	**16.69**	**269**	*e*LR	LR	11 26 37.7	
	comp=Z,536nm,25.1s						
DZM	**Mont Dzumac**	**16.69**	**269**	P	P	11 22 55.1	+6.2
URZ	**Urewera**	**16.79**	**200**	P	**P**	**11 22 52.5**	**+2.7**
	comp=Z,1.9nm,0.3s,baz=119,slow=23,SNR=9.2						
URZ				S	**Sn**	**11 25 51.9**	**-1.5**
	comp=Z,9.3nm,0.7s,baz=122,slow=23,SNR=2.4						
	comp=Z,18nm,0.7s						
URZ	**Urewera**	**16.79**	**200**	Pn	**Pn**	**11 22 49.4**	**+1.5**
URZ	**Urewera**	**16.79**	**200**	P	**P**	**11 22 53.0**	**+3.2**
NOUC	**Port Laguerre**	**16.82**	**268**	P	P	11 22 57.4	+7.2
BKZ	**Black Stump Fm**	**17.82**	**201**		**P**	**11 23 03.5**	**+2.3**
BKZ	**Black Stump Fm**	**17.82**	**201**	P	**Pn**	**11 23 01.6**	**+0.8**
BKZ				S	Sn	11 26 06.1	-12
MCHZ	**McNeill Hill**	**18.00**	**200**	P	**P**	**11 23 06.4**	**+3.2**
MCHZ				S	Sn	11 26 12.6	-10
OTVZ	**Oturere**	**18.10**	**203**	P	**Pn**	**11 23 03.8**	**-0.4**
SNVZ	**South Ngauruho**	**18.12**	**203**	P	**P**	**11 23 06.3**	**+1.6**
BHHZ	**Black Hill Sta**	**18.25**	**201**	P	**P**	**11 23 05.6**	**-0.5**
BHHZ				S	**Sn**	**11 26 20.6**	**-8.3**
WNVZ	**Wahianoa**	**18.27**	**202**	P	**Pn**	**11 23 08.2**	**+1.8**
WNVZ				S	**Sn**	**11 26 22.3**	**-7.0**
KAHZ	**Kahuranaki**	**18.27**	**199**	P	**Pn**	**11 23 08.0**	**+1.7**
KAHZ				S	**Sn**	**11 26 22.2**	**-7.1**
PXZ	**Pawanui**	**18.49**	**199**	P	**Pn**	**11 23 10.8**	**+1.9**
PXZ				S	Sn	11 26 22.0	-13
PRHZ	**Porangahau**	**18.78**	**199**	P	**P**	**11 23 12.7**	**+0.9**
PRHZ				S	Sn	11 26 29.8	-12
KOUNC	**Koumac, New Ca**	**18.89**	**273**	P	**P**	**11 23 10.3**	**-2.7**
KOUNC				IAmb	IAmb	11 23 21.1	
	comp=Z,99nm,1.7s						
KOUNC	**Koumac, New Ca**	**18.89**	**273**	P	**Pn**	**11 23 17.4**	**+3.6**
DVHZ	**Dannevirke**	**18.95**	**200**	P	**Pn**	**11 23 20.0**	**+5.5**
DVHZ				S	Sn	11 26 30.3	-15
BFZ	**Birch Farm**	**19.28**	**199**	P	**P**	**11 23 17.7**	**+0.5**
BFZ	**Birch Farm**	**19.28**	**199**	P	**Pn**	**11 23 19.8**	**+1.4**
BFZ				S	S	11 26 34.8	-19
MRZ	**Mangatainoka R**	**19.47**	**201**	P	**P**	**11 23 20.2**	**+0.9**
MRZ				S	S	11 26 39.8	-18
OGWZ	**Otaki Gorge**	**19.74**	**201**	P	**P**	**11 23 23.8**	**+1.5**
OGWZ				S	S	11 26 48.9	-14
TMWZ	**Te Maipa**	**19.77**	**199**	P	**Pn**	**11 23 24.9**	**+0.5**
TMWZ				S	S	11 26 50.0	-14
CAW	**Cannon Point**	**20.04**	**201**	P	Pn	11 23 29.1	+1.6
CAW				S	S	11 26 56.7	-12
PAWZ	**Paruwai Farm**	**20.17**	**200**	P	Pn	11 23 31.2	+2.2
PAWZ				S	S	11 26 56.6	-15
DUWZ	**D'Urville Isla**	**20.17**	**204**	P	Pn	11 23 36.8	+7.8
DUWZ				S	**S**	**11 27 02.2**	**-9.5**
MSWZ	**Moikau Station**	**20.26**	**200**	P	**P**	**11 23 27.5**	**-0.4**
PLWZ	**Palliser**	**20.39**	**200**	P	**P**	**11 23 31.1**	**+1.7**
TUWZ	**Tuamarina**	**20.71**	**203**	P	**P**	**11 23 31.3**	**-1.5**
NNZ	**Nelson**	**20.73**	**204**	P	**P**	**11 23 26.7**	**-6.4**
NNZ				S	S	11 27 05.9	-17
QRZ	**Quartz Range**	**20.74**	**206**	P	**P**	**11 23 31.1**	**-2.0**
QRZ				S	**S**	**11 27 13.3**	**-10**
QRZ	**Quartz Range**	**20.74**	**206**	P	Pn	11 23 36.2	+0.6
THZ	**Tophouse**	**21.39**	**204**	P	**P**	**11 23 39.9**	**-0.2**
THZ				S	S	11 27 25.3	-10
KHZ	**Kahutara**	**21.72**	**202**	P	**P**	**11 23 45.2**	**+1.5**
KHZ	**Kahutara**	**21.72**	**202**	P	**P**	**11 23 44.2**	**+0.5**
KHZ				S	S	11 27 30.8	-11
KHZ	**Kahutara**	**21.72**	**202**	P	**P**	**11 23 45.7**	**+2.1**
DSZ	**Denniston Nort**	**21.80**	**206**	P	**P**	**11 23 46.3**	**+1.6**
DSZ				S	**S**	**11 27 34.1**	**-10**
LTZ	**Lake Taylor**	**22.50**	**204**	P	**P**	**11 23 51.2**	**-0.9**
LTZ				S	**S**	**11 27 47.2**	**-10**
RPZ	**Rata Peaks**	**23.76**	**205**	P	**P**	**11 24 06.0**	**+1.3**
	comp=Z,14nm,0.7s,baz=4.8,slow=2.5,SNR=10						
RPZ				LR	LR	11 33 06.7	
	comp=Z,193nm,21.0s,baz=42,slow=36						
	comp=Z,14nm,0.7s						
TBI	**Tubuai**	**24.00**	**97**	*e*LR	LR	11 29 58.5	
	comp=Z,391nm,25.2s						
TBI	**Tubuai**	**24.00**	**97**	*e*T	T	11 48 45.1	
	comp=Z,14nm,0.2s						
PAE	**Paea**	**24.84**	**83**	*e*T	T	11 49 35.0	
	comp=Z,42nm,0.3s						
PPT2	**Papeete2**	**24.87**	**83**	*e*LR	LR	11 30 21.0	
	comp=Z,416nm,25.5s						
PPT2	**Papeete2**	**24.87**	**83**	*e*T	T	11 49 37.0	
	comp=Z,33nm,0.3s						
TVO	**Taravao**	**25.11**	**84**	*e*T	T	11 49 44.4	
	comp=Z,8.5nm,0.3s						
MEH	**Mehetia**	**26.18**	**85**	*e*T	T	11 51 28.5	
	comp=Z,61nm,0.3s						
HNR	**Honiara**	**26.93**	**295**	LR	LR	11 35 01.8	
	comp=Z,74nm,19.6s,baz=232,slow=37						
ARMA	**Armidale**	**30.31**	**248**	P	**P**	**11 25 05.0**	**+1.1**
ARMA				IAmb	IAmb	11 25 07.3	
	comp=Z,21nm,0.8s						
EIDS	**Eidsvold**	**30.58**	**258**	P	**P**	**11 25 06.7**	**+0.5**
CTA	**Charters Tower**	**35.62**	**267**	LR	LR	11 38 07.7	
	comp=Z,83nm,20.3s,baz=102,slow=33						
CTAO	**Charters Tower**	**35.62**	**267**	P	**P**	**11 25 49.5**	**-0.7**
KRVT	**Keravat (AS076**	**35.29**	**295**	LR	LR	11 39 05.9	
	comp=Z,47nm,18.0s,baz=280,slow=34						
TOO	**Toolangi**	**36.58**	**237**	P	**P**	**11 25 59.3**	**+1.0**
TOO				IAmb	IAmb	11 27 02.5	
	comp=Z,26nm,1.3s						
TAOE	**Nuku Hiva Isla**	**36.59**	**74**	*e*LR	LR	11 35 46.0	
	comp=Z,231nm,25.7s						
TAOE	**Nuku Hiva Isla**	**36.59**	**74**	*e*T	T	12 04 14.2	
	comp=Z,33nm,0.2s						
PMG	**Port Moresby**	**38.08**	**284**	P	**P**	**11 26 11.0**	**-0.2**
	comp=Z,30nm,1.0s,baz=104,slow=9.9,SNR=3.8						
PMG				LR	LR	11 38 11.9	
	comp=Z,93nm,21.7s,baz=162,slow=31						
	comp=Z,30nm,1.0s						
PMG	**Port Moresby**	**38.08**	**284**	P	**P**	**11 26 10.5**	**-0.7**
PMG				IAmb	IAmb	11 26 15.1	
	comp=Z,34nm,1.0s						
STKA	**Stephens Creek**	**39.00**	**247**	P	**P**	**11 26 19.5**	**+0.7**
	comp=Z,8.8nm,0.8s,baz=90,slow=11,SNR=22						
STKA				LR	LR	11 41 23.2	
	comp=Z,155nm,18.5s,baz=74,slow=35						
	comp=Z,8.8nm,0.8s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.00**	**247**	P	**P**	**11 26 19.4**	**+0.6**
BBOO	**Buckleboo**	**43.71**	**246**	P	**P**	**11 26 57.2**	**-0.3**
AS31	**Alice Springs**	**46.30**	**258**	P	**P**	**11 27 18.5**	**+0.3**
ASAR	**Alice Springs**	**46.30**	**258**	P	**P**	**11 27 18.1**	**-0.2**
	comp=Z,11nm,0.7s,baz=95,slow=8.0,SNR=56						
ASAR				PcP	**PcP**	**11 28 53.9**	**+0.6**
	comp=Z,2.4nm,0.6s,baz=112,slow=3.9,SNR=6.1						
ASAR				LR	LR	11 46 14.4	
	comp=Z,133nm,19.4s,baz=136,slow=36						
	comp=Z,11nm,0.7s						
ASAR	**Alice Springs**	**46.30**	**258**	P	**P**	**11 27 17.6**	**-0.7**
WR0	**Warramunga Arr**	**46.42**	**264**	P	**P**	**11 27 19.2**	**0.0**
WR0				IAmb	IAmb	11 27 21.8	
	comp=Z,8.2nm,0.9s						
WB0	**Warramunga Arr**	**46.60**	**264**	P	**P**	**11 27 20.2**	**-0.4**
WB0				IAmb	IAmb	11 27 23.5	
	comp=Z,12nm,0.8s						
WB2	**Warramunga Arr**	**46.60**	**263**	P	**P**	**11 27 19.5**	**-1.1**
WB2				IAmb	IAmb	11 27 23.6	
	comp=Z,14nm,0.8s						
WRAB	**Tennant Creek**	**46.61**	**264**	P	**P**	**11 27 19.9**	**-0.8**
WRAB				IAmb	IAmb	11 27 23.5	
	comp=Z,13nm,0.8s						
WRA	**Warramunga Arr**	**46.61**	**263**	P	**P**	**11 27 19.4**	**-1.3**
	comp=Z,9.8nm,0.7s,baz=101,slow=8.6,SNR=44						
WRA				PcP	**PcP**	**11 28 55.2**	**+0.8**
	comp=Z,2.1nm,0.8s,baz=94,slow=2.7,SNR=4.2						
	comp=Z,9.8nm,0.7s						
WRA	**Warramunga Arr**	**46.61**	**263**	P	**P**	**11 27 19.5**	**-1.3**
KIP	**Kipapa**	**47.02**	**23**	P	**P**	**11 27 19.7**	**-3.9**
FORT	**Forrest**	**50.59**	**248**	P	**P**	**11 27 50.4**	**-0.8**
KNRA	**Kununurra**	**52.83**	**267**	P	**P**	**11 28 07.4**	**-0.7**
GUMO	**Guam**	**52.94**	**309**	LR	LR	11 46 04.5	
	comp=Z,21nm,20.6s,baz=142,slow=31						
VNDA	**Vanda**	**56.00**	**186**	P	P	11 28 35.2	+5.1
	comp=Z,3.3nm,0.9s,baz=352,slow=7.9,SNR=21						
	comp=Z,3.3nm,0.9s						
VNDA	**Vanda**	**56.00**	**186**	P	**P**	**11 28 31.5**	**+1.3**
SIJI	**Sorong**	**56.01**	**285**	LR	LR	11 51 23.7	
	comp=Z,102nm,18.9s,baz=290,slow=35						
MORW	**Morawa**	**61.16**	**248**	P	**P**	**11 29 05.8**	**-1.1**
CASY	**Casey**	**63.03**	**206**	P	**P**	**11 29 20.0**	**+1.2**
CASY				IAmb	IAmb	11 29 22.9	
	comp=Z,9.2nm,0.8s						
LUWI	**Luwuk**	**63.59**	**281**	P	**P**	**11 29 22.8**	**-0.5**
JCJ	**Chichijima**	**64.17**	**318**	LR	LR	11 51 44.6	
	comp=Z,53nm,21.4s,baz=149,slow=31						
DAV	**Davao City (W)**	**64.73**	**290**	LR	LR	11 53 30.3	
	comp=Z,52nm,21.6s,baz=166,slow=32						
MPSI	**Mapaga**	**66.77**	**281**	P	**P**	**11 29 47.4**	**+3.4**
	comp=Z,16nm,0.9s						
QSPA	**South Pole Qui**	**67.43**	**180**	P	**P**	**11 29 48.6**	**+1.1**
MJAR	**Matsushiro Arr**	**73.30**	**323**	P	**P**	**11 30 21.5**	**-2.1**
	comp=Z,1.9nm,0.6s,baz=161,slow=6.0,SNR=5.7						
MJAR				LR	LR	11 58 31.3	
	comp=Z,22nm,19.7s,baz=171,slow=33						
	comp=Z,1.9nm,0.6s						
LEM	**Lembang**	**75.30**	**269**	P	**P**	**11 30 36.3**	**+0.4**
	comp=Z,22nm,0.7s,baz=316,slow=24,SNR=2.6						
	comp=Z,22nm,0.7s						
SHEM	**Shemya Is, Ala**	**75.60**	**354**	LR	LR	11 59 41.8	
	comp=Z,48nm,19.6s,baz=138,slow=33						
ASAJ	**Asahikawa**	**76.71**	**330**	LR	LR	11 57 47.4	
	comp=Z,41nm,21.9s,baz=162,slow=31						
BELA	**Belgrano 2**	**77.13**	**172**	P	**P**	**11 30 47.3**	**+2.2**
BELA				IAmb	IAmb	11 30 49.2	
	comp=Z,11nm,1.0s						
PKM	**Mcpherson Peak**	**77.89**	**44**	P	**P**	**11 30 49.8**	**-0.4**
	baz=231						
CHNA	**Chenabura Isl**	**78.37**	**9**	P	**P**	**11 30 52.8**	**+0.8**
	baz=195						
MURC	**Murrieta**	**78.82**	**46**	P	**P**	**11 30 56.8**	**+1.7**
	baz=233						
MONP2	**Monument Peak**	**78.92**	**47**	P	**P**	**11 30 57.0**	**+1.1**
	baz=234						
PEA0B	**Petropavlovsk-**	**78.94**	**344**	P	**P**	**11 30 53.8**	**-1.5**
PEA0B				IAmb	IAmb	11 30 55.7	
	comp=Z,24nm,1.2s						
PETK	**Petropavlovsk-**	**78.94**	**344**	P	**P**	**11 30 54.0**	**-1.3**
	comp=Z,5.2nm,0.9s,baz=133,slow=6.5,SNR=9.5						
PETK				LR	LR	11 58 43.4	
	comp=Z,42nm,21.5s,baz=138,slow=30						
	comp=Z,5.2nm,0.9s						
PETK	**Petropavlovsk-**	**78.94**	**344**	P	**P**	**11 30 53.7**	**-1.6**
IKP	**In-Ko-Pah, Jac**	**78.99**	**48**	P	**P**	**11 30 57.4**	**+1.3**
	baz=234						
EDW2	**Edwards Air Fo**	**79.06**	**45**	P	**P**	**11 30 58.1**	**+1.6**
	baz=234						
ISA	**Isabella, Lake**	**79.23**	**44**	P	**P**	**11 30 59.1**	**+1.7**
	baz=232						
PFO	**Pinyon Flats O**	**79.32**	**47**	P	**P**	**11 30 59.5**	**+1.5**
	baz=234						
TPFO	**Pinon Flats**	**79.32**	**47**	P	**P**	**11 30 59.3**	**+1.3**
	baz=234						
SWSC	**Sam W. Stewart**	**79.38**	**48**	P	**P**	**11 30 59.5**	**+1.4**
	baz=234						
LRMC	**Laurel Mtn Rad**	**79.63**	**45**	P	**P**	**11 31 01.3**	**+1.6**
	baz=233						
S14K	**Fog Glacier**	**79.78**	**9**	P	**P**	**11 31 01.3**	**+1.4**
	baz=195						
BELC	**Belle Mtn. Jos**	**79.86**	**47**	P	**P**	**11 31 02.5**	**+1.6**
	baz=234						
CWC	**Cottonwood Cre**	**79.96**	**44**	P	**P**	**11 31 03.4**	**+2.0**
	baz=232						
KSRS	**Korea Array**	**80.02**	**318**	P	**P**	**11 31 00.8**	**-0.7**
	comp=Z,1.6nm,0.8s,baz=128,slow=7.9,SNR=4.6						
KSRS				LR	LR	12 00 19.0	
	comp=Z,33nm,21.9s,baz=115,slow=31						
	comp=Z,1.6nm,0.8s						
BC3	**Big Chuckawall**	**80.03**	**47**	P	**P**	**11 31 03.6**	**+1.8**
	baz=234						
MDPB	**Devils Postpil**	**80.06**	**42**	P	**P**	**11 31 00.8**	**-1.3**
GSC	**Goldstone, Bar**	**80.09**	**45**	P	**P**	**11 31 03.5**	**+1.4**
	baz=233						
MPMC	**Manual Prospec**	**80.10**	**44**	P	**P**	**11 31 03.4**	**+1.1**
	baz=233						
HEC	**Hector,Ludlow**	**80.12**	**46**	P	**P**	**11 31 03.5**	**+1.2**
	baz=234						
MAW	**Mawson**	**80.32**	**199**	P	**P**	**11 31 05.7**	**+3.0**
	comp=Z,17nm,0.6s,baz=136,slow=6.4,SNR=69						
MAW				LR	LR	12 04 56.1	
	comp=Z,52nm,20.4s,baz=127,slow=34						
	comp=Z,17nm,0.6s						
MAW	**Mawson**	**80.32**	**199**	P	**P**	**11 31 03.8**	**+1.1**
IRM	**Iron Mountain**	**80.53**	**47**	P	**P**	**11 31 06.1**	**+1.7**
	baz=234						
GMRC	**Granite Mounta**	**80.55**	**46**	P	**P**	**11 31 06.0**	**+1.4**
	baz=234						
GRAC	**Grapevine Rang**	**80.75**	**44**	P	**P**	**11 31 07.3**	**+1.8**
	baz=233						
TUQ	**Turquoise Moun**	**80.75**	**46**	P	**P**	**11 31 07.0**	**+1.3**
	baz=234						
FURC	**Furnace Creek,**	**80.75**	**44**	P	**P**	**11 31 07.2**	**+1.8**
	baz=233						
214A	**Organ Pipe Nat**	**80.89**	**50**	P	**P**	**11 31 07.9**	**+1.5**
	baz=236						
NVAR	**Mina Array Bea**	**81.04**	**42**	P	**P**	**11 31 08.6**	**+1.3**
	comp=Z,5.3nm,1.2s,baz=222,slow=8.1,SNR=13						
	comp=Z,5.3nm,1.2s						
NVAR	**Mina Array Bea**	**81.04**	**42**	P	**P**	**11 31 05.7**	**-1.6**
L04D	**Klamath Falls**	**81.11**	**37**	P	**P**	**11 31 08.7**	**+1.3**
	baz=228						
PDMCI	**Parker Dam,Lak**	**81.29**	**47**	P	**P**	**11 31 10.2**	**+1.8**
TPNV	**Topopah Spring**	**81.44**	**44**	P	**P**	**11 31 10.0**	**+0.7**
	baz=233						
I03D	**Drain, OR**	**81.53**	**35**	P	**P**	**11 31 10.4**	**+1.0**
	baz=228						
R17K	**Ugashik Creek**	**81.57**	**10**	P	**P**	**11 31 09.5**	**+0.2**
	baz=198						
OHAK	**Old Harbor**	**81.73**	**12**	P	**P**	**11 31 11.3**	**+1.2**
	baz=201						
SHPR	**Sheep Range**	**81.88**	**45**	P	**P**	**11 31 10.3**	**-1.4**
J04D	**Umpqua Nationa**	**81.90**	**36**	P	**P**	**11 31 13.3**	**+1.7**
	baz=228						
I04A	**Tendick Farm,**	**82.10**	**36**	P	**P**	**11 31 13.3**	**+0.8**
	baz=228						
K05A	**Summer Lake**	**82.23**	**37**	P	**P**	**11 31 11.9**	**-1.5**
K05A				IAmb	IAmb	11 31 16.4	
	comp=Z,10nm,1.1s						
KDAK	**Kodiak Island**	**82.39**	**12**	LR	LR	11 59 47.8	
	comp=Z,54nm,21.2s,baz=216,slow=30						
KDAK	**Kodiak Island**	**82.39**	**12**	P	**P**	**11 31 15.2**	**+1.6**
	baz=201						
J05D	**Fort Rock, OR**	**82.41**	**37**	P	**P**	**11 31 15.4**	**+1.2**
	baz=229						
H04D	**Lebanon**	**82.41**	**35**	P	**P**	**11 31 15.2**	**+1.2**
	baz=228						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRN	**Pahroc Range**	**82.48**	**44**	P	**P**	**11 31 12.5**	**-2.3**
PRN				IAmb	IAmb	11 31 18.3	
	comp=Z,9.6nm,1.2s						
Q16K	**King Salmon**	**82.52**	**10**	P	**P**	**11 31 15.1**	**+0.9**
	baz=198						
TUC	**Tucson**	**82.53**	**51**	P	**P**	**11 31 13.5**	**-1.6**
TUC				IAmb	IAmb	11 31 18.7	
	comp=Z,8.4nm,1.2s						
TUC	**Tucson**	**82.53**	**51**	P	**P**	**11 31 16.2**	**+1.1**
	baz=237						
P16K	**Nushagak River**	**82.66**	**9**	P	**P**	**11 31 14.6**	**-0.4**
	baz=196						
R11A	**Troy Canyon, C**	**82.69**	**43**	P	**P**	**11 31 17.0**	**+1.0**
	baz=234						
Q18K	**Katmai Hardscr**	**82.76**	**11**	P	**P**	**11 31 15.8**	**+0.1**
	baz=199						
H03S2	**Juan Fernandez**	**82.89**	**124**	T	T	13 02 58.4	
	baz=245						
PINE	**Pine Mountain**	**82.90**	**36**	P	**P**	**11 31 15.3**	**-1.6**
PINE				IAmb	IAmb	11 31 20.0	
	comp=Z,11nm,1.1s						
H03S1	**Juan Fernandez**	**82.90**	**124**	T	T	13 02 47.9	
	baz=245						
H03S3	**Juan Fernandez**	**82.91**	**124**	T	T	13 02 57.6	
	baz=245						
BMN	**Battle Mountai**	**82.93**	**41**	P	**P**	**11 31 15.9**	**-1.2**
BMN				IAmb	IAmb	11 31 19.9	
	comp=Z,8.4nm,1.3s						
I05D	**Terrebonne, OR**	**83.04**	**36**	P	**P**	**11 31 18.3**	**+0.9**
	baz=229						
P17K	**Kvichak River**	**83.05**	**10**	P	**P**	**11 31 16.8**	**-0.2**
	baz=198						
O16K	**Kokwok River B**	**83.19**	**9**	P	**P**	**11 31 16.5**	**-1.2**
	baz=196,SNR=6.1						
Q20K	**Shuyak Island**	**83.20**	**12**	P	**P**	**11 31 17.5**	**-0.3**
	baz=201						
X16A	**Lo Mia Camp, P**	**83.20**	**48**	P	**P**	**11 31 17.0**	**-1.7**
X16A				IAmb	IAmb	11 31 22.3	
	comp=Z,6.5nm,1.0s						
Q19K	**Cape Douglas,**	**83.27**	**11**	P	**P**	**11 31 17.8**	**-0.4**
	baz=200						
LCMT	**Little Creek M**	**83.43**	**46**	P	**P**	**11 31 16.9**	**-2.8**
P18K	**Big Mountain,**	**83.43**	**10**	P	**P**	**11 31 18.6**	**-0.5**
	baz=199						
O17K	**Koliganek Bris**	**83.50**	**9**	P	**P**	**11 31 18.8**	**-0.5**
	baz=197						
CCUT	**Cedar City**	**83.66**	**45**	P	**P**	**11 31 19.3**	**-1.7**
CCUT				IAmb	IAmb	11 31 24.4	
	comp=Z,5.7nm,1.0s						
U15A	**North Rim**	**83.73**	**46**	P	**P**	**11 31 19.7**	**-1.8**
U15A				IAmb	IAmb	11 31 25.0	
	comp=Z,10nm,0.9s						
WUAZ	**Wupatki**	**83.85**	**48**	P	**P**	**11 31 22.8**	**+0.8**
	baz=237						
O18K	**Koktuh Hills**	**83.87**	**10**	P	**P**	**11 31 20.2**	**-1.1**
O18K				IAmb	IAmb	11 31 22.2	
	comp=Z,14nm,0.9s						
O18K	**Koktuh Hills**	**83.87**	**10**	P	**P**	**11 31 21.2**	**-0.1**
	baz=199,SNR=7.5						
N16K	**Nishlik Lake**	**83.94**	**8**	P	**P**	**11 31 21.8**	**+0.2**
	baz=196,SNR=6.2						
J08A	**Circle Bar Ran**	**84.00**	**38**	P	**P**	**11 31 22.1**	**-0.4**
J08A				IAmb	IAmb	11 31 25.1	
	comp=Z,6.9nm,1.1s						
HOM	**Homer**	**84.32**	**12**	P	**P**	**11 31 23.6**	**+0.1**
	baz=202						
ELK	**Elko**	**84.32**	**42**	P	**P**	**11 31 26.1**	**+1.8**
	comp=Z,2.5nm,0.9s,baz=261,slow=6.3,SNR=10						
	comp=Z,2.5nm,0.9s						
ELK	**Elko**	**84.32**	**42**	P	**P**	**11 31 23.1**	**-1.2**
O19K	**Port Alsworth**	**84.34**	**10**	P	**P**	**11 31 23.4**	**-0.2**
O19K	**Port Alsworth**	**84.34**	**10**	P	**P**	**11 31 23.2**	**-0.4**
	baz=200						
O20K	**Slope Mountain**	**84.53**	**11**	P	**P**	**11 31 24.1**	**-0.6**
	baz=201						
N18K	**Kilae Creek**	**84.55**	**10**	P	**P**	**11 31 24.6**	**-0.1**
	baz=198						
BRSE	**Bradley Lake S**	**84.57**	**12**	P	**P**	**11 31 24.8**	**0.0**
	baz=203						
D05A	**Enumclaw**	**84.58**	**33**	P	**P**	**11 31 25.6**	**+0.4**
W18A	**Petrified Fore**	**84.76**	**49**	P	**P**	**11 31 27.6**	**+1.0**
	baz=238						
121A	**Cookes Peak, D**	**84.80**	**52**	P	**P**	**11 31 25.6**

WRAK	Wrangell Islan	86.79	22	P		P	11 31 37.4	+1.5
	baz=219							
GHO	Glory Hole Cre	86.80	12	P		P	11 31 35.6	-0.3
GHO				IAmb		IAmb	11 31 37.0	
	comp=Z,12nm,0.8s							
MESA	MESA	86.96	16	P		P	11 31 38.9	+2.0
	baz=211							
ANMO	Albuquerque	86.98	50	P		P	11 31 36.4	-1.2
ANMO				IAmb		IAmb	11 31 40.7	
	comp=Z,5.9nm,1.0s							
ANMO	Albuquerque	86.98	50	P		P	11 31 39.1	+1.5
	baz=240							
BMRM	Bremner River	87.00	15	P		P	11 31 36.6	-0.3
BMRM				IAmb		IAmb	11 31 38.3	
	comp=Z,15nm,1.0s							
BMRM	Bremner River	87.00	15	P		P	11 31 37.1	+0.2
	baz=208							
M23K	Glacier View	87.06	13	P		P	11 31 36.8	-0.3
	baz=206							
CUT	Chulitna	87.12	11	P		P	11 31 37.0	-0.3
	baz=203							
SCM	Sheep Creek Mo	87.17	13	P		P	11 31 36.5	-1.2
SCM	Sheep Creek Mo	87.17	13	P		P	11 31 38.0	+0.3
	baz=206							
PINM	Pinnacle	87.33	17	P		P	11 31 38.9	+0.4
	baz=212							
K20K	Telida	87.37	10	P		P	11 31 38.2	-0.4
K20K				IAmb		IAmb	11 31 39.9	
	comp=Z,7.8nm,0.9s							
K20K	Telida	87.37	10	P		P	11 31 38.7	+0.1
	baz=200,SNR=9.5							
N25K	Chitina, Valde	87.56	14	P		P	11 31 39.7	0.0
N25K				IAmb		IAmb	11 31 41.1	
	comp=Z,8.1nm,0.8s							
N25K	Chitina, Valde	87.56	14	P		P	11 31 39.7	0.0
	baz=208							
GSI	Gunungsitoli	87.63	272	P		P	11 31 44.3	+3.3
M24K	Tolsona, Glenn	87.66	13	P		P	11 31 40.3	+0.2
	baz=207							
MCARA	McCarthy VSAT	87.74	15	P		P	11 31 40.4	0.0
	baz=210							
CAST	Castle Rocks	87.75	10	P		P	11 31 39.1	-1.3
	baz=202							
WAT6	Susitna Watana	87.77	12	P		P	11 31 40.8	+0.1
	baz=206,SNR=5.4							
CTG	Chitna Glacier	87.79	16	P		P	11 31 40.4	-0.4
	baz=211							
NEW	Newport	87.79	35	LR		LR	12 03 39.5	
	comp=Z,47nm,21.1s,baz=200,slow=31							
NEW	Newport	87.79	35	P		P	11 31 41.1	+0.1
	baz=232							
WAT1	Susitna Watana	87.83	12	P		P	11 31 40.6	-0.2
	baz=205							
KTH	Kantishna Hill	88.07	11	P		P	11 31 40.7	-1.3
KTH				IAmb		IAmb	11 31 42.2	
	comp=Z,12nm,1.0s							
TRF	Thorofare Moun	88.08	11	P		P	11 31 41.8	-0.4
	baz=203,SNR=13							
S22A	4UR Ranch, Cre	88.13	48	P		P	11 31 43.4	+0.2
	baz=240							
J20K	Nowinta River	88.14	9	P		P	11 31 41.3	-0.9
J20K				IAmb		IAmb	11 31 43.6	
	comp=Z,9.6nm,0.9s							
J20K	Nowinta River	88.14	9	P		P	11 31 41.9	-0.2
	baz=200,SNR=13							
CHUM	Lake Minchumin	88.14	10	P		P	11 31 41.4	-0.8
	baz=201,SNR=7.0							
HARP	HAARP	88.14	14	P		P	11 31 42.5	+0.2
	baz=208							
CMIG	Matias Romero	88.18	71	LR		LR	12 08 09.8	
	comp=Z,23nm,18.4s,baz=190,slow=34							
P30M	Million Dollar	88.27	18	P		P	11 31 43.3	+0.3
	baz=215							
RND	Reindeer	88.30	12	P		P	11 31 43.0	-0.1
O20A	White River Ci	88.42	45	P		P	11 31 44.1	-0.3
	baz=238							
YUK6	Outpost Mounta	88.56	17	P		P	11 31 44.6	0.0
	baz=214							
BPAW	Bear Paw Mtn.	88.56	11	P		P	11 31 43.2	-1.1
	baz=202							
PAX	Paxson	88.58	13	P		P	11 31 44.0	-0.5
PAX				IAmb		IAmb	11 31 45.5	
	comp=Z,6.7nm,1.2s							
PAX	Paxson	88.58	13	P		P	11 31 44.3	-0.2
	baz=208							
MCK	McKinley	88.59	11	P		P	11 31 43.5	-0.9
MCK	McKinley	88.59	11	P		P	11 31 44.3	0.0
	baz=204,SNR=5.7							
M26K	Nabesna, AK	88.63	15	P		P	11 31 45.3	+0.6
	baz=210							
MSO	Missoula	88.66	37	P		P	11 31 44.8	-0.4
	baz=234							
HYT	Haines Junctio	88.69	18	P		P	11 31 46.2	+1.2
	baz=215							
YUK3	Moose Creek	88.70	16	P		P	11 31 45.8	+0.6
	baz=212,SNR=9.2							
YUK4	Talbot Arm	88.81	17	P		P	11 31 47.2	+1.5
	baz=214							
P32M	Atlin	88.82	20	P		P	11 31 46.6	+1.0
	baz=218							
M27K	Edge Creek, AK	88.86	15	P		P	11 31 47.0	+1.1
	baz=211,SNR=9.4							
BW06	Boulder Array	88.97	42	P		P	11 31 48.0	+1.0
	baz=238							
PDAR	Pinedale Array	88.97	42	P		P	11 31 47.9	+0.9
	comp=Z,1.1nm,0.9s,baz=204,slow=3.3,SNR=9.0							
	comp=Z,1.1nm,0.9s							
SEY	Seymchan	88.99	346	P		P	11 31 46.0	-0.3
	baz=153,slow=8.9							
SEY				LR		LR	12 03 18.6	
	comp=Z,39nm,21.8s,baz=97,slow=30							
SDCO	Great Sand Dun	89.04	48	P		P	11 31 48.4	+0.9
	baz=240							
O30N	Mendenhall	89.05	18	P		P	11 31 48.0	+1.4
	baz=216							
L26K	Log Cabin Wild	89.09	14	P		P	11 31 46.4	-0.4
L26K				IAmb		IAmb	11 31 48.6	
	comp=Z,7.0nm,1.2s							
L26K	Log Cabin Wild	89.09	14	P		P	11 31 47.0	+0.2
	baz=209,SNR=6.2							
DLBC	Dease Lake	89.14	22	P		P	11 31 48.0	+0.8
	baz=221							
BVCY	Beaver Creek	89.15	15	P		P	11 31 48.1	+1.1
	baz=212,SNR=8.2							
MSTX	Muleshoe	89.16	53	P		P	11 31 46.3	-1.6
MSTX				IAmb		IAmb	11 31 50.0	
	comp=Z,5.2nm,0.7s							
MSTX	Muleshoe	89.16	53	P		P	11 31 49.3	+1.3
	baz=242							
833A	Chaparral WMA,	89.17	59	P		P	11 31 48.8	+0.9
	baz=244							
K24K	Donnelly Dome	89.26	13	P		P	11 31 48.5	+0.9
	baz=207							
BOZ	Bozeman (W)	89.27	39	P		P	11 31 48.4	+0.2
BOZ	Bozeman (W)	89.27	39	P		P	11 31 49.3	+1.1
	baz=236							
RIDG	Independent Ri	89.40	13	P		P	11 31 48.6	+0.4
	baz=208							
I21K	Tanana	89.41	10	P		P	11 31 47.9	-0.3
I21K				IAmb		IAmb	11 31 49.2	
	comp=Z,6.9nm,0.8s							
I21K	Tanana	89.41	10	P		P	11 31 48.2	+0.1
	baz=202,SNR=11							
WRH	Wood River Hil	89.42	12	P		P	11 31 47.5	-0.7
MLY	Manley	89.47	10	P		P	11 31 47.0	-1.5
MLY				IAmb		IAmb	11 31 48.8	
	comp=Z,10nm,1.4s							
MLY	Manley	89.47	10	P		P	11 31 48.0	-0.5
	baz=203,SNR=10							
L27K	Beaver Creek,	89.47	15	P		P	11 31 49.1	+0.5
	baz=211,SNR=6.6							
BCAR	Beaver Creek A	89.49	15	P		P	11 31 47.4	-1.2
T25A	Trinidad	89.50	49	P		P	11 31 48.5	-1.1
	baz=241							
HDA	Harding Lake	89.57	12	P		P	11 31 48.6	-0.3
HDA				IAmb		IAmb	11 31 49.9	
	comp=Z,7.9nm,1.1s							
HDA	Harding Lake	89.57	12	P		P	11 31 48.4	-0.5
	baz=206,SNR=6.2							
P33M	Teslin, Yukon	89.59	20	P		P	11 31 49.6	+0.4
	baz=219							
CCB	Clear Creek Bu	89.63	12	P		P	11 31 48.6	-0.6
N31M	Braeburn, Yuko	89.72	18	P		P	11 31 49.7	-0.1
	baz=216							
H21K	Melozitna Rive	89.73	9	P		P	11 31 49.6	0.0
H21K	Melozitna Rive	89.73	9	P		P	11 31 49.9	+0.2
	baz=201,SNR=12							
SCRK	Sand Creek	89.79	13	P		P	11 31 50.6	+0.5
	baz=209,SNR=5.9							
I23K	Minto, Yukon-K	89.81	11	P		P	11 31 49.3	-0.7
	baz=204							
TCOL	CIGO, UAF Yank	89.82	11	P		P	11 31 49.1	-0.9
TCOL	CIGO, UAF Yank	89.82	11	P		P	11 31 49.9	-0.1
	baz=205							
COLA	College	89.82	11	P		P	11 31 50.1	0.0
	baz=205							
MDM	Murphy Dome	89.83	11	P		P	11 31 48.8	-1.4
MDM				IAmb		IAmb	11 31 50.9	
	comp=Z,9.4nm,1.0s							
IMAR	Indian Mountai	89.90	9	P		P	11 31 49.8	-0.7
IL31		89.91	12	P		P	11 31 49.5	-0.9
IL31				IAmb		IAmb	11 31 52.1	
	comp=Z,7.5nm,1.4s							
ILAR	Eielson Array	89.91	12	P		P	11 31 50.3	-0.2
	comp=Z,2.3nm,0.9s,baz=222,slow=5.3,SNR=21							
ILAR				LR		LR	12 12 10.2	
	comp=Z,19nm,18.5s,baz=216,slow=36							
	comp=Z,2.3nm,0.9s							
ILAR	Eielson Array	89.91	12	P		P	11 31 49.1	-1.4
J25K	Salcha River,	90.07	13	P		P	11 31 51.6	+0.3
	baz=208,SNR=9.4							
POKR	Poker Flat Res	90.12	11	P		P	11 31 51.2	-0.3
	baz=206							
H22K	Ishtalitna Cre	90.17	10	P		P	11 31 51.7	-0.1
	baz=202							
K27K	Chicken	90.25	14	P		P	11 31 52.9	+0.8
	baz=211							
N23A	Red Feather La	90.31	45	P		P	11 31 54.3	+1.0
	baz=240							
M30M	Minto, Yukon	90.33	17	P		P	11 31 53.2	+0.6
	baz=215,SNR=8.1							
J26L	Joseph Creek	90.34	13	P		P	11 31 53.0	+0.4
J26L	Joseph Creek	90.34	13	P		P	11 31 53.7	+1.1
	baz=209,SNR=32							
AMTX	Amarillo	90.38	52	P		P	11 31 53.9	+0.3
	baz=243							
H23K	Yukon River	90.40	10	P		P	11 31 54.2	+1.4
	baz=204							
RLMT	Red Lodge	90.41	40	P		P	11 31 53.9	+0.3
	baz=238							
M31M	Drury Creek, Y	90.69	18	P		P	11 31 56.0	+1.7
	baz=217							
K22A	Casper	90.82	44	P		P	11 31 56.1	+0.6
	baz=240							
ABTX	Abilene, Hawle	90.88	55	P		P	11 31 56.6	+0.7
	baz=244							
DAWY	Dawson	90.91	15	P		P	11 31 56.1	+0.9
	baz=213,SNR=15							
I26K	Coal Creek Min	91.13	13	P		P	11 31 56.4	+0.2
	baz=210							
XAN	Xi'an	91.26	306	P		P	11 31 56.5	-1.1
XAN				pP		pP	11 32 03.5	-4.4
XAN				pmax		pmax		
	comp=Z,6.0nm,0.8s							
COLD	Coldfoot	91.58	10	P		P	11 31 59.0	+0.7
	baz=203							
EGMT	Eagleton	91.68	38	P		P	11 32 00.9	+1.6
	baz=238							
I29M	Ogilvie Camp,	92.25	15	P		P	11 32 01.1	-0.3
I29M				IAmb		IAmb	11 32 22.5	
	comp=Z,14nm,1.6s							
I29M	Ogilvie Camp,	92.25	15	P		P	11 32 02.5	+1.1
	baz=214							
WMOK	White Mounta	92.45	53	P		P	11 32 03.5	+0.4
	baz=244							
HHC	Hu-ho-hao-te	92.49	313	*e*P		P	11 32 05.0	+1.8
HHC				pmax		pmax		
	comp=Z,34nm,0.8s							
HHC				pmax		pmax		
	comp=Z,90nm,5.8s							
BMAR	Burnt Mountain	92.71	11	P		P	11 32 03.2	-0.3
CMAR	Chiang Mai Arr	92.99	289	P		P	11 32 04.9	-1.1
	comp=Z,2.5nm,0.2s,baz=98,slow=5.5,SNR=2.9							
CMAR				LR		LR	12 10 20.7	
	comp=Z,24nm,21.4s,baz=190,slow=33							
	comp=Z,2.5nm,0.2s							
D23K	Nanushuk River	93.12	9	P		P	11 32 06.0	+0.7
	baz=203							
RSSD	Black Hills	93.12	43	P		P	11 32 05.5	-0.7
RSSD				IAmb		IAmb	11 32 08.1	
	comp=Z,6.8nm,1.0s							
RSSD	Black Hills	93.12	43	P		P	11 32 06.9	+0.7
	baz=241							
NNA	Nana	93.30	104	LR		LR	12 03 56.8	
	comp=Z,69nm,21.1s,baz=252,slow=29							
EPYK	Eagle Plains	93.45	15	P		P	11 32 07.7	+0.7
	baz=215							
ATAH	Atahualpa	93.82	99	LR		LR	12 03 52.5	
	comp=Z,35nm,20.4s,baz=315,slow=29							
C23K	Itkillik River	93.93	8	P		P	11 32 09.8	+0.7
	baz=203							
C24K	Franklin Bluff	94.10	9	P		P	11 32 10.7	+0.9
	baz=205							
JTS	Las Juntas de	94.42	81	LR		LR	12 06 03.2	
	comp=Z,43nm,18.9s,baz=340,slow=30							
YAK	Yakutsk	94.97	337	LR		LR	12 11 25.6	
	comp=Z,34nm,19.1s,baz=260,slow=33							
YKA	Yellowknife Ar	97.51	24	P		P	11 32 24.4	-1.1
	comp=Z,0.7nm,0.8s,baz=216,slow=3.5,SNR=4.7							
YKA				LR		LR	12 10 34.0	
	comp=Z,27nm,18.6s,baz=83,slow=32							
	comp=Z,0.7nm,0.8s							
ECSD	EROS Data Cent	97.76	46	P		Pdif	11 32 28.5	+1.3
	baz=246							
MKAR	Makanchi Array	114.34	313	PKiKP		PKPdf	11 37 30.7	-0.9
	comp=Z,0.5nm,0.6s,baz=80,slow=1.8,SNR=4.0							
KURBB	Kurchatov Arra	117.18	316	PKP		PKPdf	11 37 36.5	-0.3
	comp=Z,0.7nm,0.9s,baz=106,slow=2.0,SNR=1.4							
ARU	Arti	128.27	325	PKP		PKiKP	11 37 58.6	0.0
	baz=262,slow=7.7							
ARCES	ARCESS Array B	131.43	350	PKP		PKPdf	11 38 03.6	0.0
	comp=Z,2.0nm,0.7s,baz=345,slow=1.4,SNR=9.5							
FINES	FINESS Array B	138.46	345	PKP		PKPdf	11 38 15.6	-1.4
	comp=Z,0.5nm,0.3s,baz=80,slow=3.1,SNR=3.0							
NOA	NORSAR Array B	141.35	355	PKhKP		PKPpre	11 38 16.1	
	comp=Z,0.6nm,0.7s,baz=30,slow=2.6,SNR=3.5							
NACGM	Naroch	143.72	338	⇑*e*PKP		PKPdf	11 38 25.7	-0.9
	baz=36							
LODK	Lodwar	144.50	242	PKPdf		PKPbc	11 38 28.7	+0.7
SUW	Suwalki	145.64	340	*e*PKPdf		PKPdf	11 38 29.7	-0.2
AKASG	Malin Array Be	145.99	332	PKPbc		PKPdf	11 38 30.8	+0.1
	comp=Z,4.1nm,0.5s,baz=42,slow=4.4,SNR=28							
SORM	Soroca	148.22	329	⇑P		PKPbc	11 38 37.9	0.0
KWP	Kalwaria Pacla	149.47	336	*e*PKPbc		PKPbc	11 38 39.1	-1.9
OJC	Ojcow	149.97	340	*e*PKPbc		PKPbc	11 38 42.4	+0.2
BRTR	Keskin Array B	149.98	311	PKPbc		PKPbc	11 38 42.8	0.0
	comp=Z,4.3nm,0.8s,baz=132,slow=3.5,SNR=9.0							
BRTR	Keskin Array B	149.98	311	PKPdf		PKPdf	11 38 36.9	-0.9
BRTR						PKPbc	11 38 43.0	+0.3
BRTR				PKPab		pPKPdf	11 38 48.6	+0.3
BURAR	Bucovina Array	150.05	331	⇑P		PKiKP	11 38 44.4	+1.0
GHRR		150.13	327	⇑P		PKiKP	11 38 44.1	+0.6
BIZ	Bicaz	150.14	330	⇑P		PKiKP	11 38 44.1	+0.5
CFR	Carcaliu	150.36	325	⇑P		PKiKP	11 38 43.9	-0.1
KSP	Ksiaz	150.38	345	*e*PKPbc		PKiKP	11 38 44.1	+0.2
TPGR	Topolog	150.41	324	⇑P		PKiKP	11 38 44.2	0.0
NIE	Niedzica	150.50	339	*e*PKPbc		PKiKP	11 38 44.4	+0.1
VRI	Vrincioaia	150.61	327	⇑P		PKPbc	11 38 43.8	0.0
CLL	Collm	150.63	349	*i* PKPbc		PKiKP	11 38 44.3	-0.1
	comp=Z,15nm,0.9s							
CLL				*i* (pPKPbc)			11 38 46.6	
CLL				*ex*		x	11 38 56.0	
CLL				*e*PP		PP	11 42 18.0	-1.5
PLOR	Plostina	150.66	327	⇑P		PKPbc	11 38 44.0	0.0
OSTC	Ostas	150.67	345	⇑*e*PKP		PKiKP	11 38 45.1	+0.6
HARR	Harsova	150.79	324	⇑P		PKiKP	11 38 44.6	-0.3
DPC	Dobruska-Polom	150.83	344	⇑*e*PKP		PKiKP	11 38 45.5	+0.6
BRG	Berggiesshubel	150.87	348	*e*PKP		PKiKP	11 38 45.4	+0.4
BRG				Amp			11 38 46.2	
	comp=Z,10.0nm,0.8s							
BRG				*ex*		x	11 38 51.8	
BRG				Amp			11 38 52.6	
	comp=Z,5.4nm,0.8s							
BRG				*ex*		x	11 38 59.1	
BRG				Amp			11 39 01.3	
	comp=Z,8.0nm,0.9s							
OZUR		150.91	329	⇑P		PKiKP	11 38 45.4	+0.2
MORC	Moravsky Berou	151.03	342	⇑P		PKiKP	11 38 45.5	+0.2
MORC	Moravsky Berou	151.03	342	PKPdf		PKPdf	11 38 36.9	-2.1
MORC						PKPbc	11 38 44.6	-0.1
MORC						sPKPdf	11 38 53.0	0.0
MORC	Moravsky Berou	151.03	342	*e*PKP		PKiKP	11 38 45.6	+0.2
DOPR	Dopca	151.19	329	⇑P		PKiKP	11 38 45.8	+0.1
ISR	Istrita	151.22	326	⇑P		PKPab	11 38 53.7	+0.4
MLR	Muntele Rosu	151.26	328	PKPdf		PKPdf	11 38 37.7	-1.9
MLR						PKPbc	11 38 45.8	+0.2
MDUB	Mudurnu	151.28	314	PKPdf		PKPdf	11 38 37.5	-2.2
MDUB						PKPbc	11 38 45.6	-0.1
MAUC	Maruska	151.32	342	⇑*e*PKP		PKiKP	11 38 46.5	+0.5
PRU	Pruhonice	151.59	346	⇑*e*PKP		PKiKP	11 38 47.2	+0.8
SULR		151.68	326	⇓P		PKiKP	11 38 47.7	+0.9
VRAC	Vranov	151.72	343	*e*PKP		PKiKP	11 38 47.6	+0.9
VOIR		151.74	328	⇑P		PKiKP	11 38 47.6	+0.6
JAVC	Velka Javorina	151.82	341	*e*PKP		PKiKP	11 38 48.5	+1.5
ARR	Arges	151.99	329	⇑P		PKiKP	11 38 48.4	+0.9
KRUC	Moravsky	152.00	343	*e*PKP		PKiKP	11 38 47.3	0.0
BORA	Eskisehir	152.07	314	PKPdf		PKPdf	11 38 38.9	-2.1
BORA						PKPbc	11 38 47.1	-0.5
LOT	Lotru	152.34	330	⇑P		PKPbc	11 38 47.7	-0.3
KHC	Kasperske Hory	152.60	347	⇑*e*PKP		PKiKP	11 38 49.1	+0.5
SIRR	Siria	152.62	334	⇑P		PKiKP	11 38 49.3	+0.6
GERES	GERESS Array B	152.85	347	PKPbc		PKPbc	11 38 48.9	-0.1
	comp=Z,1.2nm,0.6s,baz=37,slow=0.7,SNR=8.3							
GERES				PKPab		PKPab	11 39 00.6	+0.5
	comp=Z,0.4nm,0.3s,baz=349,slow=1.4,SNR=5.7							
BZS	Buzias	153.16	333	⇑P		PKPbc	11 38 49.3	-0.4
HERR	Herculane	153.39	331	⇑P		PKiKP	11 38 50.6	+0.3
MDVR	Moldovita	153.78	331	⇑P		PKPab	11 39 03.1	-0.9
MORH	Mrgy, Hungar	153.83	337	⇑P		PKPbc	11 38 49.3	-1.7
ESDC	Sonseca Array	161.57	21	PKPab		PKPab	11 39 38.6	+0.9
	comp=Z,1.2nm,0.8s,baz=323,slow=3.8,SNR=5.9							
TORD	Torodi Ar. Bea	170.19	164	PKP		PKPdf	11 38 59.9	-0.7
	comp=Z,1.0nm,0.9s,baz=160,slow=0.8,SNR=4.9							
TORD				PKPab		PKPab	11 40 19.4	+3.3
	comp=Z,1.2nm,0.9s,baz=168,slow=4.2,SNR=5.6							
TORD	Torodi Ar. Bea	170.19	164			PKPab	11 40 17.4	+1.3

TAP ***28*** *11:37:17.6,24.99N×122.19E,h135km,ML3.0,C*
JMA ***28*** *11:37:18.7±0.2,24.9N±0.9×122.1E±0.4,h130km±1km,*
MV2.2/11,TAIWAN REGION

ISC 28 11:37:18.4±1.8,24.97N±0.06×122.14E±0.03,h132km±9km,
n80,σ059/146,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	Santiao Chiao	0.15	286	*i* P	Pn	11 37 36.3	0.0
	baz=268						
TWB1				*i* S	Sn	11 37 49.4	-0.5
	baz=268						
EGS		0.23	237	*i* P	Pn	11 37 36.5	-0.1
	baz=236						
EGS				*i* S	Sn	11 37 49.9	-0.3
	baz=236						
SXI1	Grass Mountain	0.27	297	*e*P	Pn	11 37 36.6	-0.2
	baz=276						
SXI1				*e*S	Sn	11 37 50.0	-0.7
	baz=276						
TIPB	Shuangxi	0.29	271	*i* P	Pn	11 37 36.7	-0.1
	baz=254						
TIPB				*i* S	Sn	11 37 50.0	-0.6
	baz=254						
NTC	Toucheng	0.31	248	*e*S	Sn	11 37 49.8	-0.9
	baz=237						
NWF	Wu-fen Shan	0.34	287	*i* P	Pn	11 37 37.0	0.0
	baz=273						
NWF				*i* S	Sn	11 37 50.8	-0.4
	baz=273						
WFSB	Wu-fen Shan	0.34	287	P	Pn	11 37 36.9	-0.1
	baz=273						
WFSB				*e*S	Sn	11 37 50.9	0.0
	baz=273						
TNOU	National Taiwa	0.38	298	*i* P	Pn	11 37 36.9	-0.2
	baz=284						
TNOU				*i* S	Sn	11 37 51.0	-0.3
	baz=284						
TWC	Suao	0.45	217	*e*P	Pn	11 37 38.2	+0.8
	baz=217						
TWC				*e*S	Sn	11 37 50.8	-1.0
	baz=217						
TWE	Neicheng	0.50	240	*e*P	Pn	11 37 38.8	+1.1
	baz=238						
TWE				*e*S	Sn	11 37 53.6	+1.4
	baz=238						
TWA	Mucha	0.51	271	*e*P	Pn	11 37 38.7	+1.0
	baz=264						
TWA				*e*S	Sn	11 37 53.5	+1.1
	baz=264						
NDS	Dongshan	0.51	229	*e*P	Pn	11 37 38.8	+1.0
	baz=231						
NDS				*e*S	Sn	11 37 53.5	+1.1
	baz=231						
FUSB	Fushanzhiwuyua	0.55	248	P	Pn	11 37 37.9	-0.2
	baz=245						
FUSB				S	Sn	11 37 53.1	+0.2
	baz=245						
YM08	YM08	0.55	294	*e*P	Pn	11 37 37.9	-0.1
	baz=282						
YM01	YM01	0.55	289	P	Pn	11 37 37.8	-0.3
	baz=281						
YM01				*e*S	Sn	11 37 52.1	-0.7
	baz=281						
NHDH	Xindian Distri	0.56	270	*e*P	Pn	11 37 38.5	+0.5
	baz=265						
NHDH				*e*S	Sn	11 37 53.6	+0.7
	baz=265						
TWY	Chenhua	0.58	302	P	Pn	11 37 38.2	+0.1
	baz=294						
TWY				*e*S	Sn	11 37 52.8	-0.3
	baz=294						
TATO	Taipei	0.59	271	*e*P	Pn	11 37 38.5	+0.2
	baz=267						
TATO				*e*S	Sn	11 37 53.1	-0.2
	baz=267						
NWLT	Wulai	0.61	252	*e*P	Pn	11 37 38.5	+0.1
	baz=249						
NWLT				S	Sn	11 37 53.1	-0.4
	baz=249						
EWUT	Wuta	0.62	213	P	Pn	11 37 38.6	+0.2
	baz=213						
EWUT				*e*S	Sn	11 37 54.2	+0.6
	baz=213						
ENA	Nanau	0.65	214	P	Pn	11 37 39.0	+0.3
	baz=210						
ENA				*e*S	Sn	11 37 54.1	+0.2
	baz=210						
TWS1	Kuangyinshan	0.67	281	*e*P	Pn	11 37 38.7

NACB				*e*S		**Sn**	**11 37 57.8 -0.2**
	baz=213						
YOJ	**Yonaguni jima**	**0.94**	**122**	*e*P		**Pn**	**11 37 41.0 +0.1**
	baz=133						
YOJ				*e*S		**Sn**	**11 37 57.6 -0.4**
	baz=133						
YOJ	**Yonaguni jima**	**0.94**	**122**	P		**Pn**	**11 37 41.0 +0.1**
YOJ				S		**Sn**	**11 37 57.7 -0.2**
ETLH	**Xiulin Townshi**	**0.97**	**219**	*e*P		**Pn**	**11 37 41.2 -0.1**
	baz=223						
ETLH				*e*S		**Sn**	**11 37 57.8 -0.8**
	baz=223						
NFF	**Wufeng Townshi**	**0.99**	**250**	*e*P		**Pn**	**11 37 41.2 -0.2**
	baz=249						
NFF				*e*S		**Sn**	**11 37 58.2 -0.8**
	baz=249						
TWD	**Chiawan**	**1.02**	**209**	*e*S		**Sn**	**11 37 58.3 -1.0**
	baz=220						
LIOB	**Emei**	**1.07**	**253**	*e*P		**Pn**	**11 37 42.1 -0.1**
	baz=245						
LIOB				*e*S		**Sn**	**11 38 00.0 -0.3**
	baz=245						
FUSS	**Fushou**	**1.09**	**229**	*e*P		**Pn**	**11 37 43.1 +0.5**
	baz=224						
FUSS				*e*S		**Sn**	**11 38 01.0 0.0**
	baz=224						
NSTT	**Nanjuang**	**1.09**	**252**	*e*P		**Pn**	**11 37 42.2 -0.1**
	baz=244						
NSTT				*e*S		**Sn**	**11 37 59.8 -0.8**
	baz=244						
TWT	**Tachien**	**1.13**	**231**	P		**Pn**	**11 37 43.7 +0.7**
	baz=226						
TWT				S		**Sn**	**11 38 02.4 +0.8**
	baz=226						
TDCB	**Techi**	**1.15**	**232**	*e*P		**Pn**	**11 37 43.7 +0.6**
	baz=231						
WHF	**Hehuan Shan**	**1.15**	**224**	*e*P		**Pn**	**11 37 43.8 +0.4**
	baz=219						
WHF				S		**Sn**	**11 38 02.2 -0.1**
	baz=219						
ETM	**Tongmen**	**1.16**	**211**	P		**Pn**	**11 37 42.4 -0.7**
	baz=211						
ETM				*e*S		**Sn**	**11 38 00.8 -1.0**
	baz=211						
TEYL	**Yanliau Villag**	**1.20**	**204**	*e*P		**Pn**	**11 37 43.6 +0.1**
	baz=206						
TEYL				*e*S		**Sn**	**11 38 02.5 -0.1**
	baz=206						
CHGB	**Renai**	**1.26**	**224**	P		**Pn**	**11 37 45.0 +0.6**
	baz=220						
CHGB				*e*S		**Sn**	**11 38 04.6 +0.6**
	baz=220						
WHP	**Taichung City**	**1.29**	**238**	*e*P		**Pn**	**11 37 44.9 +0.4**
	baz=237						
WHP				*e*S		**Sn**	**11 38 04.2 -0.1**
	baz=237						
OWD	**Renai**	**1.34**	**221**	*e*P		**Pn**	**11 37 45.5 +0.4**
	baz=219						
OWD				*e*S		**Sn**	**11 38 05.2 -0.1**
	baz=219						
WUSB	**Renai**	**1.35**	**224**	*e*P		**Pn**	**11 37 45.9 +0.8**
	baz=221						
WUSB				*e*S		**Sn**	**11 38 06.3 +0.8**
	baz=221						
TEGC	**Jichi Village**	**1.37**	**204**	*e*P		**Pn**	**11 37 45.3 +0.1**
	baz=202						
NSY	**Sanyi**	**1.37**	**247**	*e*P		**Pn**	**11 37 45.6 +0.4**
	baz=244						
NSY				*e*S		**Sn**	**11 38 05.9 +0.2**
	baz=244						
TWQ1	**Liyutan**	**1.39**	**244**	P		**Pn**	**11 37 45.5 0.0**
	baz=243						
WCS	**Beigang Elemen**	**1.44**	**231**	*e*P		**Pn**	**11 37 46.4 +0.4**
	baz=235						
WCS				*e*S		**Sn**	**11 38 07.1 +0.1**
	baz=235						
EGFH	**Guangfu**	**1.45**	**207**	*e*P		**Pn**	**11 37 46.5 +0.4**
	baz=207						
EGFH				*e*S		**Sn**	**11 38 07.4 +0.2**
	baz=207						
VWDT	**VWDT**	**1.52**	**217**	*e*P		**Pn**	**11 37 47.5 +0.7**
	baz=213						
VWDT				*e*S		**Sn**	**11 38 09.7 +1.2**
	baz=213						
IRIF	**Iriomote-Funau**	**1.58**	**113**	P		**Pn**	**11 37 47.5 0.0**
IRIF				*e*S		**Sn**	**11 38 09.8 +0.1**
TYC	**Yuchr**	**1.58**	**228**	*e*P		**Pn**	**11 37 48.0 +0.5**
	baz=234						
SSLB	**Suanglung**	**1.60**	**223**	*e*P		**Pn**	**11 37 48.3 +0.5**
	baz=219						
SSLB				*e*S		**Sn**	**11 38 11.9 +1.7**
	baz=219						
HGSD	**Ruisui**	**1.61**	**204**	*e*P		**Pn**	**11 37 48.2 +0.3**
	baz=211						
HGSD				*e*S		**Sn**	**11 38 11.2 +0.7**
	baz=211						
WNT	**Mingjian**	**1.72**	**231**	*e*P		**Pn**	**11 37 49.4 +0.2**
	baz=236						
YULB	**Yu-li**	**1.75**	**206**	*e*P		**Pn**	**11 37 48.5 -1.0**
	baz=206						
YULB				*e*S		**Sn**	**11 38 11.8 -1.6**
	baz=206						
HATJ	**Hateruma jima**	**1.77**	**121**	*e*P		**Pn**	**11 37 50.0 +0.3**
JKRS	**Kuro-shima**	**1.85**	**113**	P		**Pn**	**11 37 51.2 +0.5**
JKRS				*e*S		**Sn**	**11 38 15.7 +0.4**
ALS	**Alishan**	**1.90**	**220**	*e*P		**Pn**	**11 37 51.9 +0.3**
	baz=227						
ALS				*e*S		**Sn**	**11 38 18.8 +1.9**
	baz=227						
JIJ	**Ishigaki jima**	**1.92**	**108**	P		**Pn**	**11 37 51.7 +0.2**
JIJ				S		**Sn**	**11 38 16.3 -0.5**
FULB	**Fuli**	**1.93**	**204**	*e*P		**Pn**	**11 37 52.0 +0.3**
	baz=210						
FULB				*e*S		**Sn**	**11 38 18.2 +1.2**
	baz=210						
WDLH	**Douliu**	**1.94**	**229**	*e*P		**Pn**	**11 37 51.7 -0.1**
	baz=236						
JISG	**Ishigakijimahi**	**2.01**	**100**	*e*P		**Pn**	**11 37 53.0 +0.5**
JISG				S		**Sn**	**11 38 19.3 +0.6**
WTK	**Tuku**	**2.05**	**232**	*e*S		**Sn**	**11 38 19.5 -0.1**
	baz=230						
EDH	**Donghe**	**2.13**	**201**	*e*P		**Pn**	**11 37 53.7 -0.4**
	baz=207						
EDH				*e*S		**Sn**	**11 38 20.5 -0.9**
	baz=207						
CHN4	**Tsaushan**	**2.15**	**222**	*e*P		**Pn**	**11 37 54.5 +0.2**
	baz=220						
CHN4				*e*S		**Sn**	**11 38 21.3 -0.5**
	baz=220						
TPUB	**Ta-pu**	**2.16**	**220**	*e*P		**Pn**	**11 37 54.8 +0.3**
	baz=219						
TPUB				*e*S		**Sn**	**11 38 21.9 -0.3**
	baz=219						
LONT	**Longtian**	**2.25**	**205**	*e*P		**Pn**	**11 37 54.8 -0.9**
	baz=200						
LONT				*e*S		**Sn**	**11 38 23.3 -0.9**
	baz=200						
WSL	**Shuilin Townsh**	**2.27**	**231**	*e*P		**Pn**	**11 37 55.6 -0.2**
	baz=234						
WSL				*e*S		**Sn**	**11 38 24.4 0.0**
	baz=234						
TWK	**Hsinying**	**2.27**	**222**	*e*P		**Pn**	**11 37 55.6 -0.3**
	baz=222						
CHN1	**Nanshi**	**2.31**	**220**	*e*P		**Pn**	**11 37 56.5 +0.1**
	baz=219						
CHN1				*e*S		**Sn**	**11 38 24.6 -0.9**
	baz=219						
JTJ	**Tarama**	**2.35**	**97**	S		**Sn**	**11 38 25.8 -0.4**
LDUT	**Ludao**	**2.37**	**195**	*e*P		**Pn**	**11 37 56.0 -1.1**
	baz=193						
MASBT	**Mashibuluo**	**2.72**	**211**	*e*P		**Pn**	**11 38 02.0 +0.4**
	baz=210						
MASBT				*e*S		**Sn**	**11 38 34.5 -0.3**
	baz=210						

IDC ***28*** *11:39:09.0±1.0, 39.°36N×73.°65E, h0km, mb3.7/7, mbtmp3.5/12, ML2.9/5, MS3.2/1, Error ellipse: s-maj=20.6km s-min=14.0km az=108.0*
SOME ***28*** *11:39:11.0, 39.°50N×73.°72E, h15km*
KRNET ***28*** *11:39:12.1±0.1, 39.°60N×73.°64E, mb4.1*
NNC ***28*** *11:39:15.8±1.4, 39.°63N×73.°81E, h0km, mb4.2, mpv3.8, Error ellipse: s-maj=11.1km s-min=7.2km az=173.0*
ISC 28 11:39:09.7±1.4, 39.°54N±0.°04×73.°75E±0.°03, h3km±9km, n78, σ2=06/114, mb3.7/7, 30C-18D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
OHH	**Osh**	**1.23**	**323**	⇓*i*P		**Pn**	**11 39 34.4**	**+0.5**
	baz=28							
OHH				⇓*i*S		**Sn**	**11 39 51.2**	**+0.1**
	baz=28							
DRK	**Karamyk**	**1.51**	**268**	⇓*i*P		**Pg**	**11 39 38.5**	**-0.1**
	baz=70							
DRK				⇓*i*S		**Sn**	**11 39 57.6**	**-0.6**
	baz=70							
BTK	**Batken**	**2.32**	**284**	⇑*i*P		**Pb**	**11 39 51.4**	**-0.8**
	baz=85							
BTK				⇑*i*S		**Sb**	**11 40 20.3**	**-0.9**
	baz=85							
ARLS	**Aral**	**2.36**	**10**	⇑*i*P		**Pg**	**11 39 53.9**	**-1.1**
	baz=12							
ARLS				⇑*i*S		**Sg**	**11 40 24.0**	**-1.6**
	baz=12							
AML	**Almayashu**	**2.59**	**359**	P		**Pg**	**11 39 58.1**	**-1.3**
	SNR=25							
GAR	**Garm**	**2.72**	**260**	⇑*i*P		**Pb**	**11 39 56.8**	**-2.2**
	baz=60							
GAR				⇑*i*S		**Sn**	**11 40 29.4**	**+1.6**
	baz=60							
UCH	**Uchtor**	**2.75**	**12**	P		**Pg**	**11 40 00.9**	**-1.5**
	SNR=104							
UCH	**Uchtor**	**2.75**	**12**	⇑*i*P		**Pb**	**11 39 59.5**	**-0.3**
	baz=13							
UCH				⇑*i*S		**Sb**	**11 40 34.0**	**0.0**
	baz=13							
TRKS	**Terek-Say**	**2.81**	**316**	⇓*i*P		**Pb**	**11 39 58.3**	**-2.4**
	baz=17							
TRKS				⇓*i*S		**Sn**	**11 40 31.4**	**+1.2**
	baz=17							
EKS2	**Erkin-Say**	**3.12**	**0**	P		**Pg**	**11 40 07.5**	**-2.0**
	SNR=8.1							
EKS2	**Erkin-Say**	**3.12**	**0**	⇑*i*P		**Pb**	**11 40 04.2**	**-1.7**
	baz=2.0							
EKS2				⇑*i*S		**Sb**	**11 40 42.0**	**-2.4**
	baz=2.0							
AAK	**Ala-Archa**	**3.15**	**10**	P		**Pg**	**11 40 07.6**	**-2.4**
	SNR=13							
AAK	**Ala-Archa**	**3.15**	**10**	Pn		**Pb**	**11 40 06.8**	**+0.4**
	4.9nm,0.3s,baz=172,slow=7.3,SNR=31							
AAK				Lg		Lg	11 40 52.4	
	8.0nm,0.3s,baz=308,slow=18,SNR=8.9 21nm,0.5s							
AAK	**Ala-Archa**	**3.15**	**10**	⇓*i*P		**Pb**	**11 40 04.6**	**-1.8**
	baz=11							
AAK				⇓*i*S		**Sb**	**11 40 43.1**	**-2.1**
	baz=11							
MRKS	**Merke**	**3.23**	**353**	*e*P		**Pg**	**11 40 13.6**	**+2.0**
	19nm,0.5s							
MRKS				*e*S		**Sg**	**11 40 58.4**	**+5.0**
	114nm,0.4s							
MRKS	**Merke**	**3.23**	**353**	Pg		**Pg**	**11 40 11.2**	**-0.4**
	12nm,0.4s							
MRKS				Lg		Lg	11 40 55.2	
	114nm,0.4s							
KBK	**Karagaybulak**	**3.25**	**16**	P		**Pb**	**11 40 08.8**	**+0.8**
	SNR=14							
KBK	**Karagaybulak**	**3.25**	**16**	⇑*i*P		**Pb**	**11 40 06.3**	**-1.7**
	baz=17							
KBK				⇑*i*S		**Sb**	**11 40 45.6**	**-2.4**
	baz=17							
ULHL	**Ulahol**	**3.30**	**34**	P		**Pb**	**11 40 09.9**	**+0.9**
	SNR=15							
ULHL	**Ulahol**	**3.30**	**34**	⇑*i*P		**Pb**	**11 40 07.3**	**-1.7**
	baz=35							
ULHL				⇑*i*S		**Sb**	**11 40 47.4**	**-2.2**
	baz=35							
BOOM	**Boomskoye usch**	**3.38**	**29**	⇓*i*P		**Pb**	**11 40 08.5**	**-1.9**
	baz=30							
BOOM				⇓*i*S		**Sb**	**11 40 49.3**	**-2.7**
	baz=30							
CHMS	**Chumysh**	**3.54**	**12**	P		**Pb**	**11 40 12.7**	**-0.3**
	SNR=9.1							
CHMS	**Chumysh**	**3.54**	**12**	⇑*i*P		**Pb**	**11 40 10.0**	**-3.0**
	baz=13							
CHMS				⇑*i*S		**Sb**	**11 40 52.3**	**-4.0**
	baz=13							
CHMS	**Chumysh**	**3.54**	**12**	⇑Pn		**Pb**	**11 40 12.3**	**-0.7**
	19nm,0.6s							
CHMS				⇓Lg		Lg	11 41 06.9	
	42nm,0.7s							
TKM2	**Tokmak 2**	**3.66**	**22**	P		**Pb**	**11 40 13.6**	**-1.4**
	SNR=17							
TKM2	**Tokmak 2**	**3.66**	**22**	⇓*i*P		**Pb**	**11 40 12.0**	**-3.1**
	baz=23							
TKM2				⇓*i*S		**Sb**	**11 40 55.7**	**-4.2**
	baz=23							
TKM2	**Tokmak 2**	**3.66**	**22**	⇑Pn		**Pb**	**11 40 13.1**	**-1.9**
	14nm,0.6s							
TKM2				⇓Lg		Lg	11 41 10.7	
	21nm,0.5s							
KDJ	**Kajisay**	**3.67**	**44**	⇑*i*P		**Pb**	**11 40 12.3**	**-3.0**
	baz=45							
KDJ				⇑*i*S		**Sb**	**11 40 56.6**	**-3.7**
	baz=45							
CHGR	**Chuyangaron**	**3.68**	**258**	⇑*i*P		**Pn**	**11 40 09.4**	**+1.8**
	baz=58							
CHGR				⇑*e*S		**Sn**	**11 40 52.4**	**+0.9**
	baz=58							
USP	**Ospenovka**	**3.77**	**8**	P		**Pb**	**11 40 15.6**	**-1.3**
	SNR=6.9							
USP	**Ospenovka**	**3.77**	**8**	⇑*i*P		**Pb**	**11 40 13.3**	**-3.6**
	baz=10.0							
USP				⇑*i*S		**Sb**	**11 40 57.8**	**-5.2**
	baz=10.0							
TARG	**Taragay, Kyrgy**	**3.78**	**53**	⇑*e*P		**Pb**	**11 40 14.2**	**-3.2**
	baz=54							
TARG				⇑*i*S		**Sb**	**11 40 59.6**	**-4.2**
	baz=54							
DZA	**Taraz**	**3.81**	**332**	*e*P		**Pg**	**11 40 23.3**	**+0.5**
	176nm,0.1s							
DZA				*e*S		**Sg**	**11 41 15.2**	**+3.0**
	179nm,0.2s							
KST	**Kastek**	**3.88**	**25**	*e*P		**Pg**	**11 40 23.6**	**-0.4**
	22nm,0.5s							
KST				*e*S		**Sg**	**11 41 15.5**	**+1.2**
	70nm,1.1s							
KST	**Kastek**	**3.88**	**25**	Pg		**Pg**	**11 40 23.6**	**-0.4**
	22nm,0.5s							
KST				Lg		Lg	11 41 15.5	
	70nm,1.1s							
SGDS	**Sogindy**	**3.97**	**9**	*e*P		**Pg**	**11 40 24.8**	**-0.9**
	22nm,0.6s							
SGDS				*e*S		**Sg**	**11 41 18.4**	**+1.3**
	37nm,1.1s							
SGDS	**Sogindy**	**3.97**	**9**	Pg		**Pg**	**11 40 26.1**	**+0.4**
	22nm,0.6s							
SGDS				Lg		Lg	11 41 20.1	
	37nm,1.1s							
DGS	**Degeres**	**4.00**	**22**	*e*P		**Pg**	**11 40 25.9**	**-0.5**
	32nm,0.8s							
DGS				*e*S		**Sg**	**11 41 20.1**	**+1.9**
	60nm,0.9s							
DGS	**Degeres**	**4.00**	**22**	Pg		**Pg**	**11 40 25.9**	**-0.5**
	32nm,0.8s							
DGS				Lg		Lg	11 41 20.3	
	60nm,0.9s							
MTBS	**Maitube**	**4.12**	**28**	*e*P		**Pg**	**11 40 29.4**	**+0.8**
	22nm,0.6s							
MTBS				*e*S		**Sg**	**11 41 25.8**	**+3.8**
	34nm,0.9s							
MTBS	**Maitube**	**4.12**	**28**	Pg		**Pg**	**11 40 29.4**	**+0.8**
	22nm,0.6s							
MTBS				Lg		Lg	11 41 25.8	
	34nm,0.9s							
TNSS	**Tian-Shan**	**4.25**	**34**	*e*P		**Pg**	**11 40 31.4**	**+0.3**
	15nm,0.4s							
TNSS				*e*S		**Sg**	**11 41 29.6**	**+3.5**
	18nm,1.3s							
TNSS	**Tian-Shan**	**4.25**	**34**	Pg		**Pg**	**11 40 31.3**	**+0.3**
	15nm,0.4s							
TNSS				Lg		Lg	11 41 29.6	
	18nm,1.3s							
KK31	**Karatay Array**	**4.32**	**327**	⇓Pn		Pb	11 40 20.7	-5.5
	2.5nm,0.3s,baz=137,slow=14,SNR=35							
KK31				⇑Sn		**Sb**	**11 41 14.5**	**-4.2**
	13nm,0.5s							
KK31				⇑Lg		Lg	11 41 29.5	
	13nm,0.4s,baz=140,slow=27,SNR=4.3							
KKAR	**Karatay Array**	**4.32**	**327**	⇓*i*P		**Pn**	**11 40 20.2**	**+4.0**
	baz=28							
KKAR				⇓*i*S		**Sn**	**11 41 09.6**	**+2.5**
	baz=28							
KRBS	**Karabastau**	**4.40**	**19**	*e*P		**Pg**	**11 40 33.1**	**-0.8**
	10nm,0.5s							
KRBS				*e*S		**Sg**	**11 40 32.5**	**+1.5**
	36nm,0.8s							
KRBS	**Karabastau**	**4.40**	**19**	Pg		**Pg**	**11 40 33.1**	**-0.8**
	10nm,0.5s							
KRBS				Lg		Lg	11 41 32.5	
	36nm,0.8s							
BRLS	**Boroldaу**	**4.57**	**321**	*e*P		**Pg**	**11 40 34.1**	**-3.1**
	4.9nm,0.3s							
BRLS				*e*S		**Sg**	**11 41 34.1**	**-2.3**
	74nm,0.8s							
KTBS	**Karatobe**	**4.71**	**27**	*e*P		**Pg**	**11 40 39.1**	**-0.9**
	12nm,0.7s							
KTBS				*e*S		**Sg**	**11 41 42.6**	**+1.5**
	37nm,0.6s							
KTBS	**Karatobe**	**4.71**	**27**	Pg		**Pg**	**11 40 39.2**	**-0.9**
	12nm,0.7s							
KTBS				Lg		Lg	11 41 42.6	
	37nm,0.6s							
KUU	**Kurty**	**4.76**	**23**	*e*P		**Pg**	**11 40 39.5**	**-1.5**
	11nm,1.0s							
KUU				*e*S		**Sg**	**11 41 43.8**	**+1.2**
	48nm,0.9s							
KUU	**Kurty**	**4.76**	**23**	Pg		**Pg**	**11 40 39.5**	**-1.5**
	11nm,1.0s							
KUU				Lg		Lg	11 41 43.8	
	48nm,0.9s							
CHKK	**Chushkaly**	**4.95**	**28**	*e*P		**Pg**	**11 40 43.6**	**-0.8**
	14nm,0.6s							
CHKK				*e*S		**Sg**	**11 41 50.4**	**+1.8**
	21nm,0.6s							
CHKK	**Chushkaly**	**4.95**	**28**	Pg		**Pg**	**11 40 43.6**	**-0.8**
	14nm,0.6s							
CHKK				Lg		Lg	11 41 50.4	
	21nm,0.6s							
SATY	**Saty**	**4.97**	**43**	*e*P		**Pg**	**11 40 44.6**	**-0.3**
	11nm,0.7s							
SATY				*e*S		**Sg**	**11 41 51.9**	**+2.7**
	46nm,1.0s							
SATY	**Saty**	**4.97**	**43**	Pg		**Pg**	**11 40 44.6**	**-0.3**
	11nm,0.7s							
SATY				Lg		Lg	11 41 51.9	
	46nm,1.0s							
KURS	**Kuram**	**5.16**	**39**	*e*P		**Pg**	**11 40 48.6**	**+0.1**
	19nm,0.9s							
KURS				*e*S		**Sg**	**11 41 59.0**	**+3.7**
	16nm,1.0s							
KURS	**Kuram**	**5.16**	**39**	Pg		**Pg**	**11 40 48.6**	**+0.1**
	19nm,0.9s							
KURS				Lg		Lg	11 41 59.0	
	16nm,1.0s							
KPKS	**Kokpek**	**5.40**	**42**	*e*P		**Pg**	**11 40 51.2**	**-1.9**
	12nm,0.6s							
KPKS				*e*S		**Sg**	**11 42 03.6**	**+0.6**
	31nm,0.9s							
KPKS	**Kokpek**	**5.40**	**42**	Pg		**Pg**	**11 40 51.2**	**-1.9**
	12nm,0.6s							
KPKS				Lg		Lg	11 42 03.6	
	31nm,0.9s							
BTLS	**Baital**	**5.50**	**2**	*e*P		**Pg**	**11 40 54.0**	**-1.1**
	8.0nm,0.5s							
BTLS				*e*S		**Sg**	**11 42 08.4**	**+2.0**
	13nm,1.1s							
ARXS	**Arharly**	**5.58**	**32**	*e*P		**Pg**	**11 40 54.9**	**-1.6**
	24nm,0.8s							
ARXS				*e*S		**Sg**	**11 42 09.9**	**+1.2**
	24nm,0.6s							
ARXS	**Arharly**	**5.58**	**32**	Pg		**Pg**	**11 40 54.9**	**-1.6**
	24nm,0.8s							
ARXS				Lg		Lg	11 42 09.9	
	24nm,0.6s							
PDGK	**Podgornoye**	**5.74**	**47**	Pg		**Pg**	**11 40 57.3**	**-2.4**
	1.9nm,0.6s							
PDGK				Lg		Lg	11 42 14.1	
	9.6nm,1.2s							
PDGK	**Podgornoye**	**5.74**	**47**	⇑Pn		Pn	11 40 40.6	+4.7
	4.8nm,0.6s							
PDGK				⇑Pg		**Pg**	**11 40 59.8**	**+0.2**
	7.0nm,0.7s							
PDGK				⇓Lg		Lg	11 42 14.6	
	28nm,0.9s							
BLB	**Baldybastay**	**5.76**	**36**	*e*P		**Pg**	**11 40 59.4**	**-0.8**
	20nm,0.5s							
BLB				*e*S		**Sg**	**11 42 17.7**	**+2.9**
	22nm,1.0s							
MKAR	**Makanchi Array**	**9.56**	**38**	Pn		**Pn**	**11 41 32.2**	**+4.0**
	0.1nm,0.3s,baz=214,slow=15,SNR=1.9							
MKAR				Lg		Lg	11 44 17.1	
	baz=234,slow=22,SNR=2.9 0.3nm,0.7s							
KURBB	**Kurchatov Arra**	**11.58**	**15**	Pn		**Pn**	**11 41 57.8**	**+2.0**
	baz=204,slow=12,SNR=3.4							
KURBB				Lg		Lg	11 45 18.8	
	baz=207,slow=27,SNR=12 0.2nm,0.6s							
AKTO	**Aktyubinsk**	**15.54**	**320**	Pn		**Pn**	**11 42 47.6**	**-2.0**
	baz=128,slow=16,SNR=1.8 0.5nm,0.5s							
ZALV	**Zalesovo Beam**	**16.26**	**24**	Pn		**P**	**11 43 00.8**	**-1.2**
	0.7nm,0.3s,baz=210,slow=10,SNR=6.1 1.3nm,0.4s							
KVAR	**Kislovodsk Arr**	**23.51**	**291**	LR		LR	11 55 33.1	
	comp=Z,66nm,20.4s,baz=248,slow=42							
FINES	**FINESS Array B**	**36.27**	**323**	P		**P**	**11 46 14.3**	**+0.4**
	0.5nm,0.4s,baz=111,slow=10,SNR=4.4 0.5nm,0.4s							
ARCES	**ARCESS Array B**	**39.23**	**335**	P		**P**	**11 46 40.2**	**+1.4**
	0.9nm,0.7s,baz=99,slow=7.5,SNR=6.9 0.9nm,0.7s							
NOA	**NORSAR Array B**	**43.33**	**321**	P		**P**	**11 47 13.3**	**+0.7**
	0.6nm,0.6s,baz=91,slow=7.9,SNR=3.9 0.6nm,0.6s							
TORD	**Torodi Ar. Bea**	**67.95**	**269**	P		**P**	**11 50 09.1**	**-1.1**
	0.8nm,0.7s,baz=44,slow=5.2,SNR=8.6 0.8nm,0.7s							
ILAR	**Eielson Array**	**71.25**	**17**	P		**P**	**11 50 30.2**	**+0.4**
	0.2nm,0.8s,baz=291,slow=3.8,SNR=2.4 0.2nm,0.8s							
WRA	**Warramunga Arr**	**81.82**	**124**	P		**P**	**11 51 29.8**	**-0.4**
	0.4nm,0.6s,baz=325,slow=4.7,SNR=8.1 0.4nm,0.6s							
ASAR	**Alice Springs**	**84.27**	**127**	P		**P**	**11 51 41.8**	**-1.1**
	0.3nm,0.6s,baz=315,slow=4.5,SNR=4.7 0.3nm,0.6s							

IDC 28 12:30:12.2±65.0, 24.°14S×178.°66W, h0km, mb4.1/3, mbtmp4.1/3, Error ellipse: s-maj=1184.0km s-min=167.6km az=88.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
STKA	**Stephens Creek**	**35.77**	**249**	P		P	12 37 12.8	-0.4
	1.0nm,0.4s,baz=78,slow=10,SNR=6.0 1.0nm,0.4s							
ASAR	**Alice Springs**	**43.21**	**261**	P		P	12 38 15.2	-0.2
	1.0nm,0.3s,baz=90,slow=7.7,SNR=25 1.0nm,0.3s							
WRA	**Warramunga Arr**	**43.61**	**266**	P		P	12 38 18.8	+0.1
	1.6nm,0.4s,baz=105,slow=7.8,SNR=66 1.6nm,0.4s							

IDC ***28*** *12:43:12.6±0.5, 39.°35N×73.°44E, h0km, mb4.5/31, mbtmp4.6/38, ML3.9/7, MS4.0/67, Error ellipse: s-maj=10.2km s-min=8.6km az=152.0*
ISU ***28*** *12:43:13.6, 39.°59N×73.°59E, h5km*
SOME ***28*** *12:43:13.0, 39.°52N×73.°50E, h0km, MS4.6*
BJI ***28*** *12:43:13.0±0.0, 39.°41N×73.°39E, h5km, mb4.6/44, mB4.8/30, ML4.5/7, Ms4.6/47, Ms7 4.5/43*
MOS ***28*** *12:43:13.1±1.0, 39.°29N×73.°38E, h11km, mb5.0/72, MS4.4/19, Error ellipse: s-maj=4.3km s-min=3.1km az=94.6*
MOS Felt (V) at Bordobo; (IV) at Sary-Tash; (III-IV) at Nura, Kara-Kindik.
KRNET ***28*** *12:43:14.8±0.1, 39.°45N×73.°40E, mb5.

-1.8578, Plg73.0000°, Azm208.0000°;
*NEIC **28** 12:43:16.6±1.5, 39.49N±0.05×73.39E±0.07, h18km±4km, mb4.9/155, Mwr4.8/15 Error ellipse: s-maj=8.5km s-min=6.9km az=146.0*
ISC 28 12:43:15.5±0.6, 39.40N±0.03×73.40E±0.02, h13km±3km, h12km:pP-P, n673, σ1s89/739, mb4.8/172, MS4.2/94, 88C-47D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.22**	**337**	⇓*iP*		**Pn**	**12 43 36.6**	**-1.7**
	baz=36							
OHH				⇓*iS*		**Sb**	**12 43 53.4**	**-0.7**
	baz=36							
OHH	**Osh**	**1.22**	**337**	*i* PG		**Pn**	**12 43 36.6**	**-1.7**
OHH				*i* S		**Sb**	**12 43 53.4**	**-0.7**
DRK	**Karamyk**	**1.24**	**274**	⇓*iP*		**Pn**	**12 43 38.3**	**-0.5**
	baz=72							
DRK				⇓*iS*		**Sn**	**12 43 55.7**	**+0.1**
	baz=72							
DRK	**Karamyk**	**1.24**	**274**			**Pn**	**12 43 37.4**	**-1.4**
FRG	**Fergana**	**1.58**	**309**	P		**Pn**	**12 43 43.5**	**+0.3**
FRG				S		**Sg**	**12 44 06.2**	**0.0**
CHMI	**Chimion**	**1.68**	**302**	P		**Pb**	**12 43 46.4**	**0.0**
CHMI				S		**Sg**	**12 44 10.2**	**+0.6**
KSH	**Kashi**	**2.00**	**86**	Pg		**Pn**	**12 43 45.3**	**-3.8**
KSH				Sg		Sn	12 44 02.8	-11
KSH				smax		smax		
	comp=N,7μm,0.6s							
KSH				smax		smax		
	comp=E,4μm,0.5s							
BTK	**Batken**	**2.09**	**289**	⇑*iP*		**Pb**	**12 43 52.8**	**-0.6**
	baz=88							
BTK				⇑*iS*		**Sb**	**12 44 20.4**	**+1.0**
	baz=88							
BTK	**Batken**	**2.09**	**289**	Pn		**Pn**	**12 43 51.7**	**+1.3**
BTK	**Batken**	**2.09**	**289**	*i* PN		**Pb**	**12 43 52.8**	**-0.6**
BTK				*i* S		**Sb**	**12 44 20.4**	**+1.0**
MINT	**Mingtut**	**2.14**	**301**	P		**Pb**	**12 43 54.5**	**+0.3**
MINT				S		**Sg**	**12 44 25.6**	**+1.2**
GAR	**Garm**	**2.43**	**261**			**Pn**	**12 43 55.5**	**+0.6**
ARLS	**Aral**	**2.56**	**16**	⇓*iP*		**Pn**	**12 43 58.6**	**+1.8**
	baz=16							
ARLS				⇓*iS*		**Sn**	**12 44 30.3**	**+2.4**
	baz=16							
ARLS	**Aral**	**2.56**	**16**	*i* PN		**Pn**	**12 43 58.6**	**+1.8**
ARLS				*i* S		**Sn**	**12 44 30.3**	**+2.4**
CHDK	**Chadak**	**2.56**	**309**	P		**Pb**	**12 43 59.4**	**-2.0**
CHDK				S		**Sg**	**12 44 37.3**	**-0.5**
ARK	**Arkit**	**2.63**	**336**	⇑*iP*		**Pn**	**12 43 59.5**	**+1.7**
	baz=36							
ARK				⇑*iS*		**Sb**	**12 44 32.6**	**-2.3**
	baz=36							
ARK	**Arkit**	**2.63**	**336**	*i* PN		**Pn**	**12 43 59.5**	**+1.7**
ARK				*i* S		**Sb**	**12 44 32.6**	**-2.3**
TRKS	**Terek-Say**	**2.74**	**322**	⇑*iP*		**Pn**	**12 44 00.1**	**+0.8**
	baz=21							
TRKS				⇑*iS*		**Sn**	**12 44 33.6**	**+1.3**
	baz=21							
TRKS	**Terek-Say**	**2.74**	**322**	*i* PN		**Pn**	**12 44 00.1**	**+0.8**
TRKS				*i* S		**Sn**	**12 44 33.6**	**+1.3**
AML	**Almayashu**	**2.74**	**5**	P		**Pn**	**12 44 01.3**	**+1.7**
	SNR=236							
AML	**Almayashu**	**2.74**	**5**	*i* PN		**Pn**	**12 44 01.2**	**+1.7**
AML				*i* S		**Sn**	**12 44 35.0**	**+2.3**
UCH	**Uchtor**	**2.95**	**16**	P		**Pn**	**12 44 04.9**	**+2.4**
	SNR=582							
UCH	**Uchtor**	**2.95**	**16**	⇓*iP*		**Pn**	**12 44 04.2**	**+1.7**
	baz=17							
UCH				⇓*iS*		**Sn**	**12 44 40.5**	**+2.5**
	baz=17							
UCH	**Uchtor**	**2.95**	**16**	*i* PN		**Pn**	**12 44 04.2**	**+1.7**
UCH				*i* S		**Sn**	**12 44 40.5**	**+2.5**
EKS2	**Erkin-Say**	**3.27**	**5**	P		**Pn**	**12 44 09.1**	**+2.5**
	SNR=77							
EKS2	**Erkin-Say**	**3.27**	**5**	⇑*iP*		**Pn**	**12 44 08.3**	**+1.7**
	baz=5.0							
EKS2				⇑*iS*		**Sn**	**12 44 47.7**	**+2.2**
	baz=5.0							
EKS2	**Erkin-Say**	**3.27**	**5**	*i* PN		**Pn**	**12 44 08.3**	**+1.7**
EKS2				*i* S		**Sn**	**12 44 47.7**	**+2.2**
AAK	**Ala-Archa**	**3.34**	**14**	P		**Pn**	**12 44 10.8**	**+3.2**
	SNR=28							
AAK	**Ala-Archa**	**3.34**	**14**	Pn		**Pn**	**12 44 10.7**	**+3.2**
	49nm,0.3s,baz=194,slow=11,SNR=256							
AAK				Sn		**Sb**	**12 44 53.2**	**-2.1**
	72nm,0.3s,baz=333,slow=21,SNR=8.8							
	263nm,0.3s							
AAK	**Ala-Archa**	**3.34**	**14**	⇓*iP*		**Pn**	**12 44 09.5**	**+1.9**
	baz=14							
AAK				⇓*iS*		**Sn**	**12 44 49.3**	**+2.1**
	baz=14							
AAK	**Ala-Archa**	**3.34**	**14**	Pn		**Pn**	**12 44 08.1**	**+0.5**
AAK	**Ala-Archa**	**3.34**	**14**	*i* PN		**Pn**	**12 44 09.5**	**+1.9**
AAK				*i* S		**Sn**	**12 44 49.3**	**+2.1**
MRKS	**Merke**	**3.34**	**358**	*e*P		**Pb**	**12 44 15.8**	**+1.1**
	171nm,0.5s							
MRKS				*e*S		**Sg**	**12 45 01.4**	**-1.4**
	2μm,0.6s							
MRKS	**Merke**	**3.34**	**358**	Pg		**Pb**	**12 44 15.8**	**+1.1**
	171nm,0.5s							
MRKS				Lg		Lg	12 45 01.5	
	2μm,0.6s							
CHGR	**Chuyangaron**	**3.38**	**259**	⇑*iP*		**Pn**	**12 44 10.5**	**+2.4**
	baz=58							
CHGR				⇑*iS*		**Sn**	**12 44 51.4**	**+3.2**
	baz=58							
CHGR	**Chuyangaron**	**3.38**	**259**	Pn		**Pn**	**12 44 10.6**	**+2.4**
CHGR	**Chuyangaron**	**3.38**	**259**	*i* PN		**Pn**	**12 44 10.5**	**+2.4**
CHGR				*i* S		**Sn**	**12 44 51.4**	**+3.2**
KBK	**Karagaybulak**	**3.46**	**19**	P		**Pn**	**12 44 12.5**	**+3.3**
	SNR=113							
KBK	**Karagaybulak**	**3.46**	**19**	⇓*iP*		**Pn**	**12 44 10.9**	**+1.7**
	baz=20							
KBK				⇓*iS*		**Sn**	**12 44 51.9**	**+1.7**
	baz=20							
KBK	**Karagaybulak**	**3.46**	**19**	*i* PN		**Pn**	**12 44 10.9**	**+1.7**
KBK				*i* S		**Sn**	**12 44 51.9**	**+1.7**
FRU1	**Bishkek**	**3.53**	**15**	PN		**Pn**	**12 44 09.4**	**-0.7**
ULHL	**Ulahol**	**3.57**	**36**	P		**Pn**	**12 44 13.3**	**+2.5**
	SNR=79							
ULHL	**Ulahol**	**3.57**	**36**	⇑*iP*		**Pn**	**12 44 12.9**	**+2.1**
	baz=37							
ULHL				⇑*iS*		**Sn**	**12 44 55.1**	**+2.1**
	baz=37							
ULHL	**Ulahol**	**3.57**	**36**	*i* PN		**Pn**	**12 44 12.9**	**+2.1**
ULHL				*i* S		**Sn**	**12 44 55.1**	**+2.1**
BOOM	**Boomskoye usch**	**3.64**	**31**	⇑*iP*		**Pn**	**12 44 13.6**	**+1.9**
	baz=31							
BOOM				⇑*e*S		**Sn**	**12 44 56.4**	**+1.8**
	baz=31							
BOOM	**Boomskoye usch**	**3.64**	**31**			**Pn**	**12 44 11.8**	**+0.1**
BOOM	**Boomskoye usch**	**3.64**	**31**	*i* PN		**Pn**	**12 44 13.6**	**+1.9**
BOOM				*e*S		**Sn**	**12 44 56.4**	**+1.8**
TAS	**Tashkent**	**3.67**	**303**	⇑*iP*		**Pn**	**12 44 14.2**	**+2.1**
	baz=2.0							
TAS				⇑*e*S		**Sn**	**12 44 57.9**	**+2.6**
	baz=2.0							
TAS	**Tashkent**	**3.67**	**303**	Pn		**Pn**	**12 44 11.4**	**-0.7**
TAS	**Tashkent**	**3.67**	**303**	PN		**Pn**	**12 44 11.4**	**-0.7**
CHMS	**Chumysh**	**3.74**	**15**	P		**Pn**	**12 44 15.4**	**+2.5**
	SNR=32							
CHMS	**Chumysh**	**3.74**	**15**	⇑*iP*		**Pn**	**12 44 15.0**	**+2.1**
	baz=16							
CHMS				⇑*iS*		**Sn**	**12 44 58.4**	**+1.6**
	baz=16							
CHMS	**Chumysh**	**3.74**	**15**	*i* PN		**Pn**	**12 44 15.0**	**+2.1**
CHMS				*i* S		**Sn**	**12 44 58.4**	**+1.6**
CHMS	**Chumysh**	**3.74**	**15**	⇓Pn		**Pn**	**12 44 15.6**	**+2.6**
	163nm,0.6s							
CHMS				⇑Lg		Lg	12 45 16.2	
	436nm,0.6s							
DZA	**Taraz**	**3.82**	**337**	*e*P		**Pb**	**12 44 24.2**	**+1.5**
	424nm,0.1s							
DZA				*e*S		**Sg**	**12 45 15.6**	**-2.5**
	4μm,0.4s							
TKM2	**Tokmak 2**	**3.89**	**25**	P		**Pn**	**12 44 18.0**	**+2.8**
	SNR=98							
TKM2	**Tokmak 2**	**3.89**	**25**	⇑*iP*		**Pn**	**12 44 17.2**	**+2.0**
	baz=25							
TKM2				⇑*iS*		**Sn**	**12 45 02.4**	**+1.6**
	baz=25							
TKM2	**Tokmak 2**	**3.89**	**25**	*i* PN		**Pn**	**12 44 17.2**	**+2.0**
TKM2				*i* S		**Sn**	**12 45 02.4**	**+1.6**
TKM2	**Tokmak 2**	**3.89**	**25**	⇓Pn		**Pn**	**12 44 17.6**	**+2.4**
	235nm,0.6s							
TKM2				⇑Lg		Lg	12 45 18.6	
	1μm,1.1s							
USP	**Ospenovka**	**3.95**	**12**	P		**Pn**	**12 44 18.1**	**+2.2**
	SNR=24							
USP	**Ospenovka**	**3.95**	**12**	⇑*iP*		**Pn**	**12 44 18.0**	**+2.2**
	baz=12							
USP				⇑*iS*		**Sn**	**12 45 03.8**	**+1.7**
	baz=12							
USP	**Ospenovka**	**3.95**	**12**	*i* PN		**Pn**	**12 44 18.0**	**+2.2**
USP				*i* S		**Sn**	**12 45 03.8**	**+1.7**
KDJ	**Kajisay**	**3.96**	**45**	⇓*iP*		**Pn**	**12 44 18.3**	**+2.2**
	baz=46							
KDJ				⇓*iS*		**Sn**	**12 45 04.6**	**+2.0**
	baz=46							
KDJ	**Kajisay**	**3.96**	**45**	Pn		**Pn**	**12 44 17.1**	**+1.0**
KDJ	**Kajisay**	**3.96**	**45**	*i* PN		**Pn**	**12 44 18.3**	**+2.2**
KDJ				*i* S		**Sn**	**12 45 04.6**	**+2.0**
TARG	**Taragay, Kyrgy**	**4.08**	**54**	P		**Pn**	**12 44 18.6**	**+0.5**
TARG	**Taragay, Kyrgy**	**4.08**	**54**	PN		**Pn**	**12 44 18.6**	**+0.5**
KST	**Kastek**	**4.12**	**27**	*e*P		**Pb**	**12 44 26.8**	**-1.2**
	82nm,0.9s							
KST				*e*S		**Sb**	**12 45 20.6**	**+2.8**
	1μm,1.4s							
KST	**Kastek**	**4.12**	**27**	Pg		**Pb**	**12 44 26.8**	**-1.2**
	82nm,0.9s							
KST				Lg		Lg	12 45 20.0	
	1μm,1.4s							
SGDS	**Sogindy**	**4.15**	**13**	*e*PN		**Pn**	**12 44 20.4**	**+1.7**
SGDS				*e*			12 44 30.5	
SGDS				*e*			12 45 24.2	
SGDS	**Sogindy**	**4.15**	**13**	*e*P		**Pb**	**12 44 28.4**	**0.0**
	86nm,0.7s							
SGDS				*e*S		**Sb**	**12 45 23.5**	**+4.9**
	319nm,0.6s							
SGDS	**Sogindy**	**4.15**	**13**	*e*Pn		**Pn**	**12 44 20.4**	**+1.7**
	baz=13							
SGDS				*e*Pg		**Pb**	**12 44 30.5**	**+2.1**
	baz=13							
SGDS				*e*Lg		Lg	12 45 24.2	
	baz=13							
SGDS	**Sogindy**	**4.15**	**13**	Pg		**Pb**	**12 44 28.4**	**0.0**
	86nm,0.7s							
SGDS				Lg		Lg	12 45 23.5	
	319nm,0.6s							
DGS	**Degeres**	**4.23**	**24**	*e*P		**Pb**	**12 44 30.9**	**+1.0**
	292nm,0.6s							
DGS				*e*S		**Sg**	**12 45 27.5**	**-3.9**
	1μm,0.7s							
DGS	**Degeres**	**4.23**	**24**	Pg		**Pb**	**12 44 30.9**	**+1.0**
	292nm,0.6s							
DGS				Lg		Lg	12 45 27.5	
	1μm,0.7s							
KK31	**Karatay Array**	**4.29**	**330**	Pn		**Pn**	**12 44 22.1**	**+1.6**
KK31	**Karatay Array**	**4.29**	**330**	PN		**Pn**	**12 44 22.5**	**+2.0**
KK31				PG		**Pb**	**12 44 34.0**	**+3.2**
KK31				SN		**Sn**	**12 45 15.2**	**+4.7**
KK31	**Karatay Array**	**4.29**	**330**	⇓Pn		**Pn**	**12 44 22.5**	**+2.0**
	40nm,0.4s,baz=137,slow=12,SNR=557							
KK31				Pg		**Pb**	**12 44 34.0**	**+3.2**
	149nm,0.5s,baz=153,slow=15,SNR=9.5							
KK31				⇓Sn		**Sn**	**12 45 15.2**	**+4.7**
	280nm,0.6s,baz=152,slow=23,SNR=4.2							
KK31				⇓Lg		Lg	12 45 31.7	
	442nm,0.5s,baz=139,slow=29,SNR=6.3							
KKAR	**Karatay Array**	**4.29**	**330**	⇓*iP*		**Pn**	**12 44 22.6**	**+2.1**
	baz=30							
KKAR				⇓*iS*		**Sn**	**12 45 12.1**	**+1.6**
	baz=30							
KKAR	**Karatay Array**	**4.29**	**330**	Pn		**Pn**	**12 44 22.0**	**+1.5**
KKAR	**Karatay Array**	**4.29**	**330**			**Pn**	**12 44 22.0**	**+1.5**
KKAR	**Karatay Array**	**4.29**	**330**	*i* PN		**Pn**	**12 44 22.6**	**+2.1**
KKAR				*i* S		**Sn**	**12 45 12.1**	**+1.6**
MTBS	**Maitube**	**4.37**	**31**	*e*P		**Pb**	**12 44 32.8**	**+0.6**
	242nm,0.6s							
MTBS				*e*S		**Sg**	**12 45 30.9**	**-4.9**
	645nm,0.5s							
MTBS	**Maitube**	**4.37**	**31**	Pg		**Pb**	**12 44 32.8**	**+0.6**
	242nm,0.6s							
MTBS				Lg		Lg	12 45 30.9	
	645nm,0.5s							
BRLS	**Boroldaу**	**4.51**	**325**	*e*PN		**Pn**	**12 44 23.2**	**-0.3**
BRLS				*e*			12 44 35.2	
BRLS				*e*			12 45 34.0	
BRLS	**Boroldaу**	**4.51**	**325**	*e*P		**Pb**	**12 44 34.5**	**-0.1**
	49nm,0.5s							
BRLS				*e*S		**Sb**	**12 45 33.3**	**+4.5**
	909nm,0.6s							
BRLS	**Boroldaу**	**4.51**	**325**	*e*Pn		**Pn**	**12 44 23.3**	**-0.3**
	baz=319							
BRLS				*e*Pg		**Pb**	**12 44 35.3**	**+0.7**
	baz=319							
BRLS				*e*Lg		Lg	12 45 34.1	
	baz=319							
BRLS	**Boroldaу**	**4.51**	**325**	Pg		**Pb**	**12 44 34.5**	**-0.1**
	49nm,0.5s							
BRLS				Lg		Lg	12 45 33.3	
	909nm,0.6s							
TNSS	**Tian-Shan**	**4.51**	**35**	*e*PN		**Pn**	**12 44 26.2**	**+2.3**
TNSS				*e*			12 44 37.9	
TNSS				*e*			12 45 36.5	
TNSS	**Tian-Shan**	**4.51**	**35**	*e*P		**Pb**	**12 44 36.7**	**+1.9**
	206nm,0.8s							
TNSS				*e*S		**Sg**	**12 45 37.4**	**-3.0**
	324nm,0.7s							
TNSS	**Tian-Shan**	**4.51**	**35**	*e*Pn		**Pn**	**12 44 26.2**	**+2.3**
	baz=37							
TNSS				*e*Pg		**Pb**	**12 44 38.0**	**+3.2**
	baz=37							
TNSS				*e*Lg		Lg	12 45 36.6	
	baz=37							
TNSS	**Tian-Shan**	**4.51**	**35**	Pg		**Pb**	**12 44 36.7**	**+1.9**
	206nm,0.8s							
TNSS				Lg		Lg	12 45 37.4	
	324nm,0.7s							
KRBS	**Karabastau**	**4.62**	**21**	*e*P		**Pb**	**12 44 38.3**	**+1.9**
	162nm,0.8s							
KRBS				*e*S		**Sg**	**12 45 40.2**	**-3.6**
	928nm,1.5s							
KRBS	**Karabastau**	**4.62**	**21**	Pg		**Pb**	**12 44 38.3**	**+1.9**
	162nm,0.8s							
KRBS				Lg		Lg	12 45 40.2	
	928nm,1.5s							
AAA	**Alma-Ata**	**4.64**	**34**	*e*P		**Pb**	**12 44 37.4**	**+0.7**
	156nm,0.6s							
AAA				*e*S		**Sg**	**12 45 39.2**	**-5.0**
	2μm,0.8s							
AAA	**Alma-Ata**	**4.64**	**34**	*e*Pg		**Pb**	**12 44 39.9**	**+3.2**
	baz=35							
AAA				*e*Lg		Lg	12 45 39.9	
	baz=35							
AAA	**Alma-Ata**	**4.64**	**34**	Pg		**Pb**	**12 44 37.4**	**+0.7**
	156nm,0.6s							
AAA				Lg		Lg	12 45 39.2	
	2μm,0.8s							
KNDC	**Almaty**	**4.67**	**34**	PN		**Pn**	**12 44 30.1**	**+4.4**
KNDC	**Almaty**	**4.67**	**34**	⇑Pn		**Pn**	**12 44 27.2**	**+1.5**
	982nm,1.0s							
KNDC				⇑Lg		Lg	12 45 41.8	
	5μm,1.1s							
ANVS	**Anan'yevo**	**4.67**	**42**	⇑*iP*		**Pn**	**12 44 28.2**	**+2.3**
	baz=43							
ANVS				⇑*iS*		**Sn**	**12 45 21.6**	**+1.5**
	baz=43							
PRZ	**Przheval'sk**	**4.88**	**49**	⇑*eP*		**Pn**	**12 44 31.2**	**+2.4**
	baz=50							
PRZ				⇑*e*S		**Sn**	**12 45 26.9**	**+1.6**
	baz=50							
PRZ	**Przheval'sk**	**4.88**	**49**			**Pn**	**12 44 31.0**	**+2.2**
PRZ	**Przheval'sk**	**4.88**	**49**	PN		**Pn**	**12 44 31.0**	**+2.2**
KTBS	**Karatobe**	**4.96**	**29**	*e*P		**Pb**	**12 44 44.1**	**+1.9**
	150nm,0.7s							
KTBS				*e*S		**Sg**	**12 45 49.6**	**-5.2**
	1μm,0.9s							
KTBS	**Karatobe**	**4.96**	**29**	Pg		**Pb**	**12 44 44.1**	**+1.9**
	150nm,0.7s							
KTBS				Lg		Lg	12 45 49.6	
	1μm,0.9s							
KUU	**Kurty**	**5.00**	**25**	*e*PN		**Pn**	**12 44 32.2**	**+2.0**
KUU				*e*			12 44 45.5	
KUU				*e*			12 45 50.7	
KUU	**Kurty**	**5.00**	**25**	*e*P		**Pb**	**12 44 44.4**	**+1.5**
	117nm,0.7s							
KUU				*e*S		**Sg**	**12 45 50.1**	**-5.8**
	1μm,0.7s							
KUU	**Kurty**	**5.00**	**25**	*e*Pn		**Pn**	**12 44 32.3**	**+2.0**
	baz=26							
KUU				*e*Pg		**Pb**	**12 44 45.5**	**+2.6**
	baz=26							
KUU				*e*Lg		Lg	12 45 50.8	
	baz=26							
KUU	**Kurty**	**5.00**	**25**	Pg		**Pb**	**12 44 44.4**	**+1.5**
	117nm,0.7s							
KUU				Lg		Lg	12 45 50.2	
	1μm,0.7s							
CHKK	**Chushkaly**	**5.20**	**30**	*e*P		**Pb**	**12 44 47.9**	**+1.6**
	46nm,0.6s							
CHKK				*e*S		**Sg**	**12 45 56.2**	**-6.1**
	328nm,0.7s							
CHKK	**Chushkaly**	**5.20**	**30**	*e*Pg		**Pb**	**12 44 49.6**	**+3.3**
	baz=31							
CHKK				*e*Lg		Lg	12 45 57.4	
	baz=31							
CHKK	**Chushkaly**	**5.20**	**30**	Pg		**Pb**	**12 44 47.9**	**+1.6**
	46nm,0.6s							
CHKK				Lg		Lg	12 45 56.2	
	328nm,0.7s							
SATY	**Saty**	**5.25**	**44**	*e*PN		**Pn**	**12 44 35.6**	**+1.8**
SATY				*e*			12 44 49.9	
SATY				*e*			12 45 57.6	
SATY	**Saty**	**5.25**	**44**	*e*P		**Pb**	**12 44 48.3**	**+1.1**
	84nm,0.7s							
SATY				*e*S		**Sb**	**12 45 57.4**	**+7.0**
	769nm,1.5s							
SATY	**Saty**	**5.25**	**44**	*e*Pn		**Pn**	**12 44 35.7**	**+1.8**
	baz=46							
SATY				*e*Pg		**Pb**	**12 44 50.0**	**+2.7**
	baz=46							
SATY				*e*Lg		Lg	12 45 57.6	
	baz=46							
SATY	**Saty**	**5.25**	**44**	Pg		**Pb**	**12 44 48.3**	**+1.1**
	84nm,0.7s							
SATY				Lg		Lg	12 45 57.4	
	769nm,1.5s							
ZHN	**Zhinishke**	**5.34**	**44**	*e*Pg		**Pb**	**12 44 51.6**	**+2.8**
	baz=45							
ZHN				*e*Lg		Lg	12 45 59.8	
	baz=45							
KURS	**Kuram**	**5.43**	**40**	*e*P		**Pb**	**12 44 51.8**	**+1.5**
	120nm,0.6s							
KURS				*e*S		**Sg**	**12 46 03.6**	**-6.3**
	321nm,1.6s							
KURS	**Kuram**	**5.43**	**40**	Pg		**Pb**	**12 44 51.8**	**+1.5**
	120nm,0.6s							
KURS				Lg		Lg	12 46 03.6	
	321nm,1.6s							
BTLS	**Baital**	**5.66**	**5**	*e*PN		**Pn**	**12 44 40.5**	**+1.3**
BTLS				*e*			12 44 57.0	
BTLS				*e*			12 46 09.9	
BTLS	**Baital**	**5.66**	**5**	*e*P		**Pb**	**12 44 57.1**	**+3.0**
	82nm,0.7s							
BTLS				*e*S		**Sg**	**12 46 12.4**	**-4.5**
	229nm,0.6s							
BTLS	**Baital**	**5.66**	**5**	*e*Pn		**Pn**	**12 44 40.6**	**+1.3**
	baz=4.5							
BTLS				*e*Pg		**Pb**	**12 44 57.0**	**+3.0**
	baz=4.5							
BTLS				*e*Lg		Lg	12 46 09.9	
	baz=4.5							
KPKS	**Kokpek**	**5.68**	**43**	*e*PN		**Pn**	**12 44 41.3**	**+1.6**
KPKS				*e*			12 44 58.0	
KPKS	**Kokpek**	**5.68**	**43**	*e*P		**Pb**	**12 44 56.6**	**+2.1**
	84nm,0.6s							
KPKS				*e*S		**Sg**	**12 46 11.6**	**-6.2**
	408nm,0.8s							
KPKS	**Kokpek**	**5.68**	**43**	*e*Pn		**Pn**	**12 44 41.3**	**+1.6**
	baz=44							
KPKS				*e*Pg		**Pb**	**12 44 58.0**	**+3.5**
	baz=44							
KPKS				*e*Lg		Lg	12 46 12.8	
	baz=44							
KPKS	**Kokpek**	**5.68**	**43**	Pg		**Pb**	**12 44 56.6**	**+2.1**
	84nm,0.6s							
KPKS				Lg		Lg	12 46 11.5	
	408nm,0.8s							
ARXS	**Arharly**	**5.84**	**33**	*e*PN		**Pn**	**12 44 43.8**	**+2.0**
ARXS	**Arharly**	**5.84**	**33**	*e*P		**Pb**	**12 44 58.9**	**+1.7**
	125nm,0.9s							
ARXS				*e*S		**Sb**	**12 46 15.0**	**+8.0**
	524nm,0.7s							
ARXS	**Arharly**	**5.84**	**33**	Pg		**Pb**	**12 44 58.9**	**+1.7**
	125nm,0.9s							
ARXS				Lg		Lg	12 46 15.0	
	524nm,0.7s							
KBL	**Kabul**	**5.97**	**217**			**Pn**	**12 44 47.8**	**+4.0**
KBL	**Kabul**	**5.97**	**217**	PN		**Pn**	**12 44 47.8**	**+4.0**
PDGK	**Podgornoye**	**6.03**	**47**	PN		**Pn**	**12 44 46.5**	**+2.0**
PDGK	**Podgornoye**	**6.03**	**47**	Pg		**Pb**	**12 45 03.0**	**+2.4**
	36nm,0.5s							
PDGK				Lg		Lg	12 46 22.3	
	163nm,1.7s							
PDGK	**Podgornoye**	**6.03**	**47**	⇓Pn		**Pn**	**12 44 46.6**	**+2.0**
	143nm,0.8s							
BLB	**Baldybastay**	**6.04**	**37**	*e*P		**Pb**	**12 45 03.9**	**+3.3**
	296nm,0.8s							
BLB				*e*S		**Sg**	**12 46 23.5**	**-5.7**
	434nm,1.1s							
DJR	**Jarkent**	**6.86**	**42**	*e*P		**Pb**	**12 45 17.2**	**+2.7**
	23nm,0.6s							
DJR				*e*S		**Sg**	**12 46 46.7**	**-8.8**
	246nm,1.4s							
DJR	**Jarkent**	**6.86**	**42**	Pg		**Pb**	**12 45 17.3**	**+2.7**
	23nm,0.6s							
DJR				Lg		Lg	12 46 46.7	
	246nm,1.4s							
SMLA	**Simla**	**8.81**	**158**	⇑*e*P		**Pn**	**12 45 24.7**	**+2.1**
SMLA				*e*S		Sn	12 46 49.9	-12
MAKZ	**Makanchi**	**9.70**	**37**			**Pn**	**12 45 32.2**	**-2.5**
MAKZ	**Makanchi**	**9.70**	**37**	P		**Pn**	**12 45 32.2**	**-2.5**
MAKZ	**Makanchi**	**9.70**	**37**	⇑Pn		**Pn**	**12 45 36.2**	**+1.5**
	14nm,1.3s							
MAKZ				⇑Lg		Lg	12 48 16.7	
	34nm,0.9s							
DDI	**Dehra Dun**	**9.83**	**156**

comp=Z,2.7nm,0.7s
KURBB **Kurchatov Arra** 11.79 16 P Pn 12 46 05.9 +2.6
KURBB **Kurchatov Arra** 11.79 16 ⇑Pn Pn 12 46 05.9 +2.6
comp=Z,9.0nm,0.7s
KURBB ⇑Lg Lg 12 49 30.0
comp=Z,214nm,0.8s
KURK Kurchatov 11.90 16 Pn 12 46 03.2 -1.6
KURK Kurchatov 11.90 16 P Pn 12 46 02.5 -2.2
KURK Kurchatov 11.90 16 ⇓Pn Pn 12 46 05.1 +0.3
comp=Z,18nm,1.3s
KURK ⇓Lg Lg 12 49 30.8
comp=Z,356nm,1.3s
SEM Semipalatinsk 12.02 22 *e*P Pn 12 46 06.5 -0.2
SEM Semipalatinsk 12.02 22 *e*Pn Pn 12 46 06.5 -0.2
baz=22
GEYT Alibeck 12.04 268 Pn Pn 12 46 04.1 -2.7
comp=Z,3.9nm,0.3s,baz=94,slow=14,SNR=13
GEYT Sn **Sn** 12 48 22.7 +1.8
comp=Z,2.1nm,0.3s,baz=88,slow=40,SNR=1.3
GEYT LR LR 12 51 35.3
comp=Z,2μm,18.7s,baz=78,slow=42
comp=Z,10nm,0.5s
GEYT Alibeck 12.04 268 Pn Pn 12 46 05.4 -1.4
GYA0 ALIBECK ARRAY 12.04 268 P Pn 12 46 05.3 -1.5
GYA0 SN **Sn** 12 48 22.5 +1.6
GYA0B ALIBECK ARRAY 12.04 268 Pn Pn 12 46 05.7 -1.1
GYA0B ALIBECK ARRAY 12.04 268 ⇑Pn Pn 12 46 05.3 -1.5
GYA0B ⇑Sn **Sn** 12 48 22.5 +1.6
AB31 Akbulak array 13.76 320 P Pn 12 46 30.4 +0.3
AB31 SN **Sn** 12 49 07.8 +5.1
AB31 Akbulak array 13.76 320 Pn Pn 12 46 30.4 +0.3
comp=Z,20nm,0.6s,baz=131,slow=12,SNR=247
AB31 ⇑Sn **Sn** 12 49 07.8 +5.1
comp=Z,14nm,0.6s,baz=156,slow=31,SNR=5.6
ABKAR Akbulak array 13.76 320 Pn 12 46 28.1 -2.0
BVAR Borovoye Array 13.78 352 LR LR 12 51 56.7
comp=Z,656nm,19.1s,baz=50,slow=38
PYUN Piuthan 13.80 142 *e*P Pn 12 46 28.7 -2.3
comp=Z,142nm,0.6s
DANN Dangsing 13.97 139 *e*P Pn 12 46 30.3 -3.2
comp=Z,68nm,0.4s
GKN Gorkha 14.71 137 *e*P Pn 12 46 40.1 -3.3
comp=Z,47nm,0.3s
PKIN Phulchoki 15.45 136 *e*P Pn 12 46 49.8 -3.6
GUN Gumba 15.45 134 *e*P Pn 12 46 49.8 -3.7
comp=Z,29nm,0.4s
PKI Pulchoki 15.46 136 *e*P Pn 12 46 50.0 -3.6
comp=Z,35nm,0.5s
AKTO Aktyubinsk 15.47 321 Pn Pn 12 46 49.7 -3.6
comp=Z,2.0nm,0.3s,baz=131,slow=15,SNR=25
AKTO Sn **Sn** 12 49 35.8 -8.6
comp=Z,0.4nm,0.3s,baz=32,slow=21,SNR=1.8
AKTO Lg Lg 12 51 28.2
comp=Z,0.5nm,0.3s,baz=210,slow=22,SNR=1.1
AKTO LR LR 12 53 23.2
comp=Z,2μm,19.7s,baz=135,slow=39
comp=Z,11nm,0.7s
AKTO Aktyubinsk 15.47 321 P Pn 12 46 54.3 +1.0
AKTO SN **Sn** 12 49 49.8 +5.3
AKTO Aktyubinsk 15.47 321 ⇑Pn Pn 12 46 54.3 +1.0
comp=Z,72nm,0.8s
AKTO ⇓Sn **Sn** 12 49 49.8 +5.3
comp=Z,27nm,0.8s
JIRN Jiri 15.82 134 *e*P Pn 12 46 54.2 -4.1
comp=Z,67nm,0.4s
BHPL Bhopal 16.47 167⇑ *e*P Pn 12 47 04.1 -2.3
BHPL IAmb IAmb 12 47 10.1
comp=Z,25nm,0.6s
BHPL *e*S Sn 12 49 52.9 -16
ZAA0 Zalesovo Array 16.50 24 Pn 12 47 05.6 -0.9
ZALV Zalesovo Beam 16.50 24 Pn Pn 12 47 05.5 -1.0
comp=Z,0.9nm,0.3s,baz=218,slow=11,SNR=22
ZALV Lg Lg 12 51 59.4
comp=Z,0.4nm,0.3s,baz=214,slow=23,SNR=1.9
ZALV LR LR 12 53 22.5
comp=Z,97nm,19.2s,baz=217,slow=37
comp=Z,7.9nm,0.6s
ZALV Zalesovo Beam 16.50 24 Pn 12 47 05.7 -0.8
ZALV Zalesovo Beam 16.50 24 P Pn 12 47 05.7 -0.8
RAMN Ramite 16.60 134 *e*P Pn 12 47 03.6 -4.6
comp=Z,95nm,0.6s
GOMU GeErMu 17.22 94 P Pn 12 47 13.8 -2.3
GOMU pP P 12 47 20.0 +2.3
GOMU S **Sn** 12 50 30.3 +2.6
GOMU pmax pmax
comp=Z,13nm,0.6s
GOMU pmax pmax
comp=Z,200nm,3.7s
GOMU LR LR
comp=Z,600nm,13.6s
GOMU LR LR
comp=Z,910nm,14.2s
GOMU LR LR
comp=Z,1μm,15.1s
LSA Lhasa 17.51 118 P P 12 47 22.1 +1.1
LSA Lhasa 17.51 118 P P 12 47 22.1 +1.1
LSA pmax pmax
comp=Z,14nm,0.6s
BOK Bokaro 18.82 142 *e*P P 12 47 33.8 -1.1
BOK IAmb IAmb 12 47 43.0
comp=Z,28nm,0.6s
BOK *e*S Sn 12 50 44.4 -22
SVE Sverdlovsk 19.35 339 *e*P P 12 47 41.0 +0.5
SVE *e*S **Sn** 12 51 17.5 -0.8
SVE pmax pmax
comp=Z,64nm,1.5s
SVE MLR MLR
comp=Z,1μm,11.0s
ARU Arti 19.65 335 P P 12 47 43.9 +0.1
baz=147,slow=8.2,SNR=39
ARU LR LR 12 55 52.6
comp=Z,820nm,20.4s,baz=150,slow=38
comp=Z,39nm,0.7s
ARU Arti 19.65 335 P P 12 47 42.8 -1.0
ARU IAmb IAmb 12 47 49.8
comp=Z,34nm,0.7s
ARU Arti 19.65 335 *d i*P P 12 47 44.2 +0.4
ARU S **Sn** 12 51 27.9 +2.3
ARU pmax pmax
comp=Z,42nm,0.8s
ARU MLR MLR
comp=Z,1μm,17.0s
MAK Makhachkala 19.78 289 *e*P P 12 47 42.0 -3.3
MAK *e*S **S** 12 51 23.4 -4.5
MAK pmax pmax
comp=Z,115nm,1.1s
MAK MLR MLR
comp=Z,925nm,12.0s
KNGR Kungurtug, Tuv 20.31 49 *i* P Pn 12 47 53.4 +0.2
KNGR pmax pmax
comp=Z,28nm,1.0s
GTA Gaotai 20.39 82 ⇓P P 12 47 52.8 +0.6
GTA pP pP 12 47 57.5 +0.5
GTA sP sP 12 48 00.0 +0.8
GTA S Sn 12 51 43.5 -0.5
GTA sS sS 12 51 50.5 +2.4
GTA pmax pmax
comp=Z,37nm,1.3s
GTA pmax pmax
comp=Z,370nm,4.2s
GTA LR LR
comp=Z,480nm,14.9s
GTA LR LR
comp=Z,950nm,14.9s
GTA LR LR
comp=Z,1μm,15.6s
WSAR Wadi Sarin 20.42 222 P P 12 47 52.0 -0.4
comp=Z,5.6nm,0.6s,baz=64,slow=6.3,SNR=6.8
WSAR LR LR 12 58 03.0
comp=Z,174nm,20.2s,baz=70,slow=44
comp=Z,5.6nm,0.6s
UOSS Minazif 20.43 230 P P 12 47 52.9 +0.3
SHL Shillong 20.77 126 P P 12 47 55.4 -1.0
SHL IAmb IAmb 12 48 09.2
comp=Z,30nm,0.9s
SHL Shillong 20.77 126 P P 12 47 55.4 -1.0
SHL pmax pmax
comp=Z,30nm,0.9s
GROC Groznyy 21.04 289 *e*P P 12 48 00.4 +1.4
GROC *e* 12 48 19.7
GROC *e*S **S** 12 51 55.8 +2.8
GROC pmax pmax
comp=Z,112nm,0.6s
GNI Garni 22.00 281 P P 12 48 10.9 +1.4
comp=Z,66nm,0.8s,baz=129,slow=1.2,SNR=16
GNI LR LR 12 58 10.5
comp=Z,284nm,20.2s,baz=102,slow=41
comp=Z,66nm,0.8s
GNI Garni 22.00 281 P P 12 48 10.0 +0.5
GNI Garni 22.00 281 *d i*P P 12 48 12.0 +2.4
GNI pmax pmax
comp=Z,42nm,0.7s
BELG Belogornoye 22.00 315 P P 12 48 09.1 -0.1
comp=Z,131nm,0.9s,baz=277,slow=2.5,SNR=18
BELG LR LR 12 58 07.8
comp=Z,724nm,18.9s,baz=131,slow=41
comp=Z,131nm,0.9s
BELG Belogornoye 22.00 315 *d i*P P 12 48 08.8 -0.4
BELG pmax pmax
comp=Z,21nm,0.9s
HYBB Hyderabad (bro 22.36 167 *e*P P 12 48 14.4 +1.0
HYBB *e*S **S** 12 52 23.8 +4.8
ZEI Tsey 22.43 288 *e*P P 12 48 15.2 +1.0
ZEI pmax pmax
comp=Z,24nm,0.6s
MOY Mondy 22.74 48 *e*P P 12 48 18.4 +1.1
MOY pmax pmax
comp=Z,40nm,1.7s
ONI Oni 22.77 288 P P 12 48 17.4 -0.2
ONI Oni 22.77 288 P P 12 48 17.4 -0.2
ONI pmax pmax
comp=Z,206nm,0.8s
GOF Gofitskoye 23.09 294⇑ *e*P P 12 48 21.4 +0.5
GOF pmax pmax
comp=Z,64nm,0.7s
KBZ Khabaz 23.16 291 P P 12 48 21.1 -0.4
comp=Z,12nm,0.9s,baz=105,slow=8.2,SNR=16
KBZ LR LR 12 59 41.2
comp=Z,640nm,18.2s,baz=85,slow=43
comp=Z,12nm,0.9s
KBZ Khabaz 23.16 291 *c e*P P 12 48 20.7 -0.8
KBZ pmax pmax
comp=Z,15nm,0.9s
KARS Kars 23.20 283 P P 12 48 22.3 +0.1
KARS Kars 23.20 283 P P 12 48 22.3 +0.1
KARS pmax pmax
comp=Z,330nm,0.9s
KVAR Kislovodsk Arr 23.30 291 LR LR 12 59 20.4
comp=Z,278nm,19.4s,baz=231,slow=41
KIV Kislovodsk 23.31 291 P P 12 48 22.5 -0.8
KIV IAmb IAmb 12 48 25.7
comp=Z,43nm,0.8s
KIV Kislovodsk 23.31 291 *c e*P P 12 48 25.0 +1.8
KIV *e*S **S** 12 52 31.6 -3.9
KIV pmax pmax
comp=Z,48nm,1.0s
KIV MLR MLR
comp=Z,350nm,18.0s
GEVA Gevas 23.60 277 P P 12 48 27.1 +0.8
ZAK Zakamensk 23.69 53 *e*P P 12 48 26.3 -0.6
ZAK pmax pmax
comp=Z,19nm,1.5s
CHVG Ch'k'valeri 23.77 288 ⇑P P 12 48 29.4 +1.7
BATM Batumi 24.14 285 ⇑P P 12 48 31.5 +0.4
LZH Lanzhou 24.25 88 *e*P P 12 48 33.3 +0.9
LZH sP pP 12 48 37.5 0.0
LZH PP sP 12 49 01.3 +22
LZH SS S 12 53 36.5 +46
LZH pmax pmax
comp=Z,78nm,1.3s
LZH pmax pmax
comp=Z,470nm,4.5s
LZH LR LR
comp=Z,1μm,13.0s
LZH LR LR
comp=Z,1μm,12.7s
LZH LR LR
comp=Z,1μm,15.2s
GURO Guroymak-BITLI 24.34 278 P P 12 48 33.7 +0.5
KIRV Kirov 24.59 329 P P 12 48 34.1 -0.9
comp=Z,23nm,0.6s,baz=156,slow=2.4,SNR=7.9
KIRV LR LR 12 58 59.6
comp=Z,1μm,20.3s,baz=137,slow=38
comp=Z,23nm,0.6s
KIRV Kirov 24.59 329 *d i*P P 12 48 35.6 +0.6
IRK Irkutsk 24.84 49 *e*P P 12 48 37.6 +0.1
IRK pmax pmax
comp=Z,27nm,2.8s
VRH Novokhopyorsk 25.01 309 *e*P P 12 48 38.0 -0.9
VRH pmax pmax
comp=Z,60nm,0.6s
VRH MLR MLR
comp=Z,2μm,16.0s
SONM Songino Array 25.18 60 P P 12 48 40.3 -0.4
comp=Z,2.9nm,0.7s,baz=267,slow=7.6,SNR=20
SONM LR LR 12 59 22.7
comp=Z,1μm,19.7s,baz=264,slow=38
comp=Z,2.9nm,0.7s
SONM Songino Array 25.18 60 P P 12 48 40.8 +0.1
SONM IAmb IAmb 12 48 47.5
comp=Z,18nm,1.1s
SONM Songino Array 25.18 60 P P 12 48 40.8 +0.1
SONM pmax pmax
comp=Z,18nm,1.1s
KOPT Kop Dagi 25.24 282 P P 12 48 41.1 -0.4
KOPT IAmb IAmb 12 48 56.2
comp=Z,24nm,0.8s
SOC Sochi 25.47 290 *e*P P 12 48 42.1 -1.1
SOC *e*PPP PPP 12 49 25.3
SOC *e*S **S** 12 53 10.2 +0.3
SOC *e*SS **SnSn** 12 54 04.8 +2.4
SOC *e*SSS SSS 12 54 18.6
SOC pmax pmax
comp=Z,27nm,0.7s
SOC MLR MLR
comp=Z,315nm,13.0s
MARD Mardin 25.59 276 P P 12 48 44.0 -0.5
MARD IAmb IAmb 12 48 48.9
comp=Z,36nm,1.1s
ULN Ulaanbaatar 25.62 60 P P 12 48 45.0 +0.3
ULN IAmb IAmb 12 48 51.6
comp=Z,31nm,1.2s
ULN Ulaanbaatar 25.62 60 P P 12 48 45.0 +0.3
ULN pmax pmax
comp=Z,31nm,1.3s
CD2 Chengdu 26.14 100 P P 12 48 50.8 +1.4
CD2 sP sP 12 48 56.5 -0.2
CD2 S **S** 12 53 25.8 +5.0
CD2 pmax pmax
comp=Z,20nm,1.0s
CD2 LR LR
comp=Z,730nm,12.0s
CD2 LR LR
comp=Z,1μm,13.7s
VSR Storozhevoye 26.57 308 *e*P P 12 48 52.8 -0.3
VSR pmax pmax
comp=Z,70nm,1.0s
VSR MLR MLR
comp=Z,2μm,18.0s
VORR Voronezh 26.65 309 *e*P P 12 48 54.4 +0.6
VORR pmax pmax
comp=Z,60nm,0.6s
LPSR Galich'ya Gora 27.05 311 *e*P P 12 48 57.7 +0.3
LPSR pmax pmax
comp=Z,60nm,1.0s
LPSR MLR MLR
comp=Z,1μm,14.0s
ANN Anapa 27.07 293 *e*P P 12 49 01.3 +3.7
ANN pmax pmax
comp=Z,85nm,1.1s
BTO Baotou 27.96 76 *e*P P 12 49 08.0 +2.2
BTO S **S** 12 53 46.0 -3.5
BTO LR LR
comp=Z,1μm,6.4s
BTO LR LR
comp=Z,970nm,11.2s
PRGR Permogore 28.01 332 *e*P P 12 49 05.8 -0.1
RAYN Ar Rayn 28.42 244 P P 12 49 10.5 +0.5
RAYN IAmb IAmb 12 49 18.5
comp=Z,39nm,1.5s
RAYN Ar Rayn 28.42 244 P P 12 49 10.5 +0.5
RAYN pmax pmax
comp=Z,39nm,1.5s
KMI Kunming 28.46 111 ⇓P P 12 49 17.0 +6.5
KMI S S 12 54 10.0 +12
KMI pmax pmax
comp=Z,11nm,1.8s
KMI LR LR
comp=N,390nm,18.6s
KMI LR LR
comp=E,460nm,21.3s
KMI LR LR
comp=Z,750nm,15.6s
MOS Moscow 28.73 317 *e*P P 12 49 12.0 -0.3
MOS *e* 12 50 08.6
MOS pmax pmax
comp=Z,54nm,1.3s
MOS MLR MLR
comp=Z,700nm,17.0s
XAN Xi'an 28.85 89 ⇑P P 12 49 14.3 +0.6
XAN pP pP 12 49 18.0 -0.9
XAN pmax pmax
comp=Z,9.0nm,0.7s
XAN LR LR
comp=Z,620nm,15.6s
XAN LR LR
comp=Z,850nm,14.9s
XAN LR LR
comp=Z,1μm,15.9s
DIKM Dikmen 28.92 287 ⇑P P 12 49 15.3 +1.1
HHC Hu-ho-hao-te 29.07 75 *e*P P 12 49 17.3 +1.6
HHC LR LR
comp=Z,460nm,12.1s
HHC LR LR
comp=Z,880nm,13.3s
HHC LR LR
comp=Z,1μm,13.3s
OBN Obninsk 29.10 315 P P 12 49 15.2 -0.4
comp=Z,9.8nm,0.4s,baz=138,slow=22,SNR=6.5
OBN LR LR 13 01 47.9
comp=Z,229nm,18.8s,baz=128,slow=38
comp=Z,9.8nm,0.4s
OBN Obninsk 29.10 315 IAmb IAmb 12 49 17.6
comp=Z,47nm,0.4s
OBN Obninsk 29.10 315 *c e*P P 12 49 15.5 -0.1
OBN pmax pmax
comp=Z,17nm,0.4s
OBN MLR MLR
comp=Z,789nm,17.0s
SIM Simferopol' 29.42 294 *e*P P 12 49 18.8 +0.2
SIM *e* 12 50 32.7
SIM *e*S **S** 12 54 08.5 -3.8
SIM pmax pmax
comp=Z,90nm,1.4s
KLMR Klimovskoe 29.98 327 *e*P P 12 49 21.8 -1.6
KLMR pmax pmax
comp=Z,35nm,1.3s
KLMR Klimovskoe 29.98 327 *e*P P 12 49 21.9 -1.5
KLMR AMP 12 49 29.8
comp=Z,35nm,1.3s
CHTO Chiang Mai 30.14 126 P P 12 49 25.7 +0.5
CHTO Chiang Mai 30.14 126 P P 12 49 25.7 +0.5
CHTO pmax pmax
comp=Z,8.0nm,1.4s
ILGA Ilgaz 30.16 286 P P 12 49 24.9 -0.6
CM31 Chiang Mai Arr 30.40 126 P P 12 49 27.8 +0.2
CM31 IAmb IAmb 12 49 42.6
comp=Z,20nm,1.6s
CMAR Chiang Mai Arr 30.40 126 P P 12 49 26.7 -0.9
comp=Z,0.8nm,0.5s,baz=315,slow=9.5,SNR=7.0
CMAR LR LR 13 04 13.4
comp=Z,207nm,19.5s,baz=310,slow=42
comp=Z,0.8nm,0.5s
BR131 Keskin Array S 30.48 283 P P 12 49 27.8 -0.4
BR131 Keskin Array S 30.48 283 P P 12 49 27.8 -0.4
BR131 pmax pmax
comp=Z,44nm,0.9s
BRTR Keskin Array B 30.48 283 P P 12 49 28.9 +0.7
comp=Z,20nm,0.7s,baz=89,slow=7.5,SNR=53
BRTR LR LR 13 03 50.2
comp=Z,222nm,18.1s,baz=87,slow=40
comp=Z,20nm,0.7s
BRTR Keskin Array B 30.48 283 P P 12 49 28.3 +0.1
BRTR Keskin Array B 30.48 283 *c e*P P 12 49 29.0 +0.7
BRTR pmax pmax
comp=Z,21nm,0.7s
GYA Guiyang 30.58 105 ⇓ *i*P P 12 49 31.0 +1.8
GYA PP **PP** 12 50 33.5 -4.7
GYA S **S** 12 54 25.0 -6.0
GYA pmax pmax
comp=Z,110nm,6.0s
GYA LR LR
comp=Z,460nm,14.7s
GYA LR LR
comp=Z,650nm,12.3s
GYA LR LR
comp=Z,850nm,14.8s
ENH Enshi 30.82 96 P P 12 49 31.2 0.0
ENH IAmb IAmb 12 49 43.4
comp=Z,15nm,0.9s
ANTO Ankara 31.09 284 ⇓P P 12 49 35.2 +1.7
ANTO Ankara 31.09 284 P P 12 49 32.3 -1.2
ANTO Ankara 31.09 284 P P 12 49 32.3 -1.2
ANTO pmax pmax
comp=Z,36nm,1.0s
BR231 Keskin MP Arra 31.10 284 P P 12 49 32.0 -1.7
LYN LuoYang 31.42 86 ⇑ *i*P P 12 49 41.5 +5.1
LYN S **S** 12 54 49.8 +6.1
LYN LR LR
comp=Z,550nm,12.2s
LYN LR LR
comp=Z,430nm,11.3s
LYN LR LR
comp=Z,550nm,12.2s
BOD Bodaibo 31.91 41 *e*P P 12 49 42.1 +1.6
BOD pmax pmax
comp=Z,16nm,1.1s
MDUB Mudurnu 32.15 286 P P 12 49 43.3 +0.4
HNS HongShan 32.24 80 ⇓P P 12 49 45.3 +1.8
HNS PP **PP** 12 50 54.5 -1.8
HNS S **S** 12 55 00.5 +4.1
HNS pmax pmax
comp=Z,9.0nm,1.0s
HNS LR LR
comp=Z,370nm,12.7s
HNS LR LR
comp=Z,730nm,13.9s
HNS LR LR
comp=Z,820nm,14.2s
PALK Pallekele 32.66 166 LR LR 13 03 43.0
comp=Z,548nm,20.1s,baz=97,slow=38
AKASG Malin Array Be 32.72 305 P P 12 49 47.1 -0.5
comp=Z,1.3nm,0.3s,baz=78,slow=7.6,SNR=46
AKASG LR LR 13 05 40.8
comp=Z,577nm,18.6s,baz=79,slow=41
comp=Z,1.3nm,0.3s
AKASG Malin Array Be 32.72 305 *c e*P P 12 49 47.0 -0.6
AKASG pmax pmax
comp=Z,4.0nm,0.4s
AKBB Malin Array Si 32.72 305 *c i*P P 12 49 46.8 -0.8
AKBB pmax pmax
comp=Z,28nm,0.9s
MILM Milestii Mici 33.01 298 *e*P P 12 49 50.0 -0.2
comp=Z,40nm,0.5s
MILM *e*L L 13 06 07.0
MILM LRM MLR 13 06 28.0
comp=Z,350nm,14.0s
MILM Milestii Mici 33.01 298 *e*P P 12 49 50.0 -0.2
MILM pmax pmax
comp=Z,40nm,0.5s
MILM MLR MLR
comp=Z,350nm,14.0s
TLCR 33.15 295 ⇑P P 12 49 51.9 +0.5
SORM Soroca 33.27 300 ⇑P P 12 49 51.9 -0.6
TPGR Topolog 33.46 294 ⇑P P 12 49 55.3 +1.0
CFR Carcaliu 33.63 295 ⇑P P 12 49 56.5 +0.9
SCTR Scanteiesti 33.67 296 ⇓P P 12 49 58.0 +2.0
GULI GuiLin 34.01 103 ⇑P P 12 49 50.0 -9.1
PANC Panciu 34.24 296 ⇑P P 12 50 02.4 +1.4
AKAS Kas 34.49 279 P P 12 50 02.3 -1.1
VRI Vrincioaia 34.54 296 ⇑P P 12 50 04.3 +0.8
VRI Vrincioaia 34.54 296 P P 12 50 04.3 +0.8
NACGM Naroch 34.56 312⇑ *e*P P 12 50 03.0 -0.6
baz=98
PLOR Plostina 34.59 296 ⇑P P 12 50 05.9 +1.9
PLOR Plostina 34.59 296 P P 12 50 05.9 +1.9
ISR Istrita 34.75 295 ⇓P P 12 50 06.6 +1.1
BIZ Bicaz 34.86 298 ⇓P P 12 50 07.0 +0.7
NEHR Nehoiu 34.89 296 ⇑P P 12 50 07.7 +1.1
COVR Voineasa-Covas 34.90 296 ⇑P P 12 50 07.7 +1.0
RAZG Razgrad 35.01 292 ⇓P P 12 50 09.4 +1.8
MLR Muntele Rosu 35.12 296 ⇑P P 12 50 10.8 +2.0
MLR Muntele Rosu 35.12 296 LR LR 13 07 11.8
comp=Z,286nm,19.5s,baz=68,slow=41
MLR Muntele Rosu 35.12 296 P P 12 50 09.0 +0.3
MLR Muntele Rosu 35.12 296 P P 12 50 09.0 +0.3
MLR pmax pmax

comp=Z,52nm,1.0s
VSU Vasula 35.18 318 *e*P **P 12 50 09.4 +0.5**
BURAR Bucovina Array 35.41 300 ⇓P **P 12 50 12.3 +1.2**
BURAR Bucovina Array 35.41 300 P **P 12 50 11.0 -0.1**
BURAR IAmb IAmb 12 50 18.4
comp=Z,15nm,1.1s
BURAR Bucovina Array 35.41 300 P **P 12 50 12.3 +1.2**
BURAR pmax pmax
comp=Z,15nm,1.1s
BUR08 Bucovina Ar. S 35.41 300 P **P 12 50 11.6 +0.4**
BUR08 IAmb IAmb 12 50 18.2
comp=Z,25nm,1.1s
DOPR Dopca 35.45 297 ⇑P **P 12 50 13.0 +1.6**
LVZ Lovozero 35.52 336 *i* P **P 12 50 12.4 +0.6**
LVZ pmax pmax
comp=Z,41nm,1.2s
VOIR 35.76 296 ⇑P **P 12 50 15.2 +1.1**
MTUR Matau 35.78 295 ⇑P **P 12 50 15.9 +1.6**
ALN Alexandroupoli 35.88 288 P **P 12 50 16.0 +0.9**
ALN IAmb IAmb 12 50 22.6
comp=Z,12nm,0.9s
ALN Alexandroupoli 35.88 288 P **P 12 50 16.0 +0.9**
ALN pmax pmax
comp=Z,12nm,0.9s
ARCR ARCALIA 36.04 299 ⇑P **P 12 50 18.6 +2.1**
LVV L'vov 36.05 303 *e*P **P 12 50 17.1 +0.6**
LVV *e* 12 51 45.6
LVV *e*SS **S 12 55 50.6 -4.6**
ARR Arges 36.06 296 ⇑P **P 12 50 17.5 +0.8**
FIA1 FINESS Array S 36.21 323 P **P 12 50 17.3 -0.4**
FINES FINESS Array B 36.21 323 P **P 12 50 17.4 -0.3**
comp=Z,6.7nm,0.4s,baz=112,slow=9.3,SNR=91
FINES LR LR 13 06 04.0
comp=Z,377nm,20.0s,baz=105,slow=38
comp=Z,6.7nm,0.4s
PABE Paberze 36.23 313 *e*P **P 12 50 18.9 +0.9**
SUW Suwalki 36.59 310 *e*P **P 12 50 21.1 +0.2**
SUW Suwalki 36.59 310 *e*P **P 12 50 22.4 +1.4**
KARP Karpathos 36.59 279 P **P 12 50 19.8 -1.5**
MEF Metsahovi 36.72 321 *e*P **P 12 50 22.7 +0.7**
MTSE Matsula 36.73 318 *e*P **P 12 50 22.4 +0.2**
PGB Panagyurishte 36.88 291 P **P 12 50 26.0 +2.2**
KWP Kalwaria Pacla 36.92 303 *e*P **P 12 50 24.7 +0.8**
KWP Kalwaria Pacla 36.92 303 P **P 12 50 22.6 -1.2**
KWP Kalwaria Pacla 36.92 303 P **P 12 50 22.7 -1.2**
MPEP Malo Peshtene 37.03 293 P **P 12 50 28.4 +3.5**
DRGR 37.19 298 ⇑P **P 12 50 27.3 +1.0**
KOLS Kolonicke sedl 37.26 302 *e*P **P 12 50 28.2 +1.4**
KOLS pmax pmax
comp=Z,15nm,1.4s
KOLS Kolonicke sedl 37.26 302 *e*P **P 12 50 28.2 +1.4**
UZH Uzhgorod 37.27 302 *e*P **P 12 50 25.2 -1.7**
UZH *i* 12 50 27.4
UZH *e* 12 50 32.0
NJ2 Nanjing 37.31 87 *e*P **P 12 50 26.0 -1.4**
NJ2 sP **pP 12 50 33.3 +0.7**
NJ2 pmax pmax
comp=Z,10.0nm,0.8s
NJ2 LR LR
comp=Z,430nm,15.3s
NJ2 LR LR
comp=Z,660nm,12.8s
NJ2 LR LR
comp=Z,730nm,11.8s
APE Apeiranthos 37.33 282 ⇓P **P 12 50 28.4 +0.8**
SLIT Slitere, Latvi 37.38 316 *e*P **P 12 50 27.3 -0.4**
QIZ Qiongzhong 37.39 112 P **P 12 50 31.3 +3.1**
QIZ S **S 12 56 22.0 +5.9**
QIZ LR LR
comp=Z,510nm,16.7s
QIZ LR LR
comp=Z,280nm,11.9s
QIZ LR LR
comp=Z,630nm,14.5s
MMB Musomiste 37.42 290 P **P 12 50 29.1 +0.8**
VTS Vitosha 37.54 292 P **P 12 50 30.2 +0.7**
HERR Herculane 37.68 295 ⇑P **P 12 50 30.7 +0.3**
CRVS Cervenica-Dubn 37.79 302 *e*P **P 12 50 32.1 +0.7**
CRVS Cervenica-Dubn 37.79 302 *e*P **P 12 50 32.0 +0.7**
KKB Krupnik 37.82 290 P **P 12 50 33.3 +1.6**
BZS Buzias 38.12 297 ⇑P **P 12 50 35.5 +1.5**
MDVR Moldovita 38.19 295 ⇑P **P 12 50 36.1 +1.3**
IDI Anoyia 38.41 280 LR LR 13 09 20.5
comp=Z,96nm,20.5s,baz=78,slow=41
BOVS Bovan 38.42 294 ⇑P **P 12 50 38.4 +1.8**
KECS Kecovo 38.48 301 *e*P **P 12 50 37.0 -0.1**
KECS pmax pmax
comp=Z,14nm,0.6s
KECS Kecovo 38.48 301 *e*P **P 12 50 37.0 -0.1**
NIE Niedzica 38.50 303 *e*P **P 12 50 38.4 +1.1**
ZEA Zeya 38.73 50 *e*P P 12 50 44.4 +5.2
ZEA pmax pmax
comp=Z,10.0nm,1.6s
ZEA MLR MLR
comp=Z,200nm,15.0s
OJC Ojcow 38.75 304 *e*P **P 12 50 39.3 0.0**
OJC Ojcow 38.75 304 P **P 12 50 37.6 -1.8**
OJC IAmb IAmb 12 50 41.0
comp=Z,21nm,0.9s
OJC Ojcow 38.75 304 P **P 12 50 37.6 -1.8**
OJC pmax pmax
comp=Z,21nm,0.9s
ATD Arta Tunnel 38.78 233 LR LR 13 09 56.1
comp=Z,119nm,19.2s,baz=332,slow=41
PSZ Piszkesteto 38.94 301 P **P 12 50 40.5 -0.6**
PSZ Piszkesteto 38.94 301 P **P 12 50 40.5 -0.6**
PSZ pmax pmax
comp=Z,10.0nm,0.9s
PSZ Piszkesteto 38.94 301 P **P 12 50 41.8 +0.7**
LANS Liptovska Anna 39.07 303 *e*P **P 12 50 42.0 -0.1**
LANS Liptovska Anna 39.07 303 *e*P **P 12 50 42.0 -0.1**
AGG Agios Georgios 39.13 286 P **P 12 50 42.1 -0.6**
AGG Agios Georgios 39.13 286 P **P 12 50 42.1 -0.6**
ARCES ARCESS Array B 39.24 336 P **P 12 50 42.3 -0.9**
comp=Z,4.7nm,0.5s,baz=110,slow=8.3,SNR=57
ARCES LR LR 13 08 06.2
comp=Z,252nm,18.4s,baz=140,slow=38
comp=Z,4.7nm,0.5s
ARCES ARCESS Array B 39.24 336 P **P 12 50 43.2 0.0**
ARCES IAmb IAmb 12 50 48.9
comp=Z,30nm,1.1s
ARCES ARCESS Array B 39.24 336 P **P 12 50 43.2 0.0**
ARCES pmax pmax
comp=Z,30nm,1.2s
FRGS Fruska Gora 39.45 296 ⇓P **P 12 50 47.1 +1.8**
DIVS Divibare 39.54 295 P **P 12 50 45.8 -0.3**
DIVS IAmb IAmb 12 50 48.8
comp=Z,24nm,0.9s
VYHS Vyhne 39.56 302 *e*P **P 12 50 47.6 +1.4**
VYHS pmax pmax
comp=Z,7.0nm,1.2s
VYHS Vyhne 39.56 302 *e*P **P 12 50 47.6 +1.4**
KTK1 Kautokeino 39.77 334 *e*P **P 12 50 47.6 -0.1**
ITM Ithomi 40.01 284 P **P 12 50 49.3 -0.8**
ITM IAmb IAmb 12 50 49.7
comp=Z,72nm,1.7s
MORH Mrgy, Hungar 40.05 298 ⇑P **P 12 50 51.3 +1.0**
MORH Mrgy, Hungar 40.05 298 P **P 12 50 50.5 +0.2**
MAUC Maruska 40.11 303 *e*P **P 12 50 52.7 +1.9**
MAUC AMS AMS 13 11 00.0
comp=Z,1μm,16.9s
MORC Moravsky Berou 40.24 304 ⇑P **P 12 50 53.0 +1.1**
MORC Moravsky Berou 40.24 304 P **P 12 50 51.5 -0.4**
MORC Moravsky Berou 40.24 304 P **P 12 50 51.5 -0.4**
MORC pmax pmax
comp=Z,8.0nm,0.9s
MORC Moravsky Berou 40.24 304 *e*P **P 12 50 52.4 +0.5**
HAMF Hammerfest 40.26 337 *e*P **P 12 50 52.2 +0.5**
HAMF IAmb IAmb 12 50 57.3
comp=Z,24nm,1.0s
JAVC Velka Javorina 40.28 302 *e*P **P 12 50 53.8 +1.6**
PDG Podgorica 40.45 292 ⇑P **P 12 50 54.8 +1.2**
PDG Podgorica 40.45 292 P **P 12 50 53.1 -0.5**
PDG IAmb IAmb 12 50 55.8
comp=Z,19nm,0.8s
KOVH Kovagotottos 40.45 298 P **P 12 50 54.1 +0.5**
YAK Yakutsk 40.51 37 P **P 12 50 51.8 -2.0**
comp=Z,4.8nm,0.3s,baz=351,slow=0.6,SNR=1.8
comp=Z,4.8nm,0.3s
YAK Yakutsk 40.51 37 *e*P **P 12 50 54.0 +0.2**
YAK *e**PP **sP 12 51 00.3 -0.8**
YAK *e* 12 52 52.1
YAK *e*S **S 12 57 08.1 +5.9**
YAK *e**SS **sS 12 57 15.5 +4.5**
YAK *e* 13 01 00.7
YAK pmax pmax
comp=Z,16nm,0.9s
YAK pmax pmax
comp=N,3.0nm,1.2s
YAK pmax pmax
comp=E,9.0nm,1.3s
YAK smax smax
comp=N,33nm,2.2s
YAK smax smax
comp=E,27nm,2.0s
YAK MLR MLR
comp=Z,413nm,15.0s
YAK MLR MLR
comp=E,225nm,15.0s
MODS Modra-Piesok 40.61 302 *e*P **P 12 50 56.0 +1.1**
MODS pmax pmax
comp=Z,18nm,1.1s
MODS Modra-Piesok 40.61 302 *e*P **P 12 50 56.0 +1.1**
MPLH Magyarpolny 40.63 300 P **P 12 50 56.6 +1.5**
KRLC Kraliky 40.70 304 *e*P **P 12 50 56.8 +1.2**
KRLC MLR MLR
comp=Z,400nm,10.7s
KRLC Kraliky 40.70 304 *e*P **P 12 50 56.8 +1.2**
KRLC AMS AMS 13 10 20.0
comp=Z,400nm,10.7s
KEK Kerkira 40.80 288 P **P 12 50 56.3 -0.3**
JETT Jettan, Norway 40.91 335 *e*P **P 12 50 57.4 +0.3**
JETT IAmb IAmb 12 51 04.0
comp=Z,18nm,0.7s
KSP Ksiaz 40.91 306 *e*P **P 12 50 58.2 +0.9**
VRAC Vranov 40.92 303 LR LR 13 10 11.3
comp=Z,248nm,18.9s,baz=81,slow=40
VRAC Vranov 40.92 303 *e*P **P 12 50 58.7 +1.3**
DPC Dobruska-Polom 40.95 305 *e*P **P 12 50 58.6 +0.9**
DPC MLR MLR
comp=Z,400nm,15.9s
DPC Dobruska-Polom 40.95 305 *e*P **P 12 50 58.6 +0.9**
DPC AMS AMS 13 10 30.0
comp=Z,400nm,15.9s
OSTC Ostas 41.00 305 AMS AMS 13 11 00.0
comp=Z,500nm,14.1s
KRUC Moravsky 41.08 303 *e*P **P 12 50 59.8 +1.0**
CHVC Chvalec 41.09 305 *e*P **P 12 50 59.4 +0.5**
CHVC AMS AMS 13 11 20.0
comp=Z,500nm,14.1s
UPC Upice 41.13 305 AMS AMS 13 11 10.0
comp=Z,600nm,12.3s
RONA Rosalia, Austr 41.37 301 *i* P **P 12 51 01.8 +0.6**
comp=Z,18nm,1.2s,SNR=7.1
CONA Conrad Observa 41.62 301 *i* P **P 12 51 04.1 +0.8**
comp=Z,30nm,1.3s,SNR=16
KLR Kul'dur 41.94 57 LR LR 13 09 43.3
comp=Z,340nm,18.7s,baz=276,slow=38
KLR Kul'dur 41.94 57*c i*P **P 12 51 05.8 +0.1**
KLR pmax pmax
comp=Z,3.0nm,1.4s
PVCC Panska Ves 42.04 305 AMS AMS 13 12 10.0
comp=Z,600nm,15.0s
PRU Pruhonice 42.14 305 *e*P **P 12 51 08.0 +0.6**
PRU MLR MLR
comp=Z,600nm,16.8s
PRU Pruhonice 42.14 305 *e*P **P 12 51 08.0 +0.6**
PRU AMS AMS 13 11 40.0
comp=Z,600nm,16.8s
FAUS Fauske 42.16 331 *e*P **P 12 51 07.7 +0.4**
FAUS IAmb IAmb 12 51 13.5
comp=Z,43nm,1.3s
KSAR Wonju Array Be 42.19 75 P **P 12 51 07.3 -0.6**
KSAR Wonju Array Be 42.19 75 P **P 12 51 07.4 -0.6**
KSRS Korea Array 42.21 75 P **P 12 51 05.2 -3.0**
comp=Z,1.2nm,0.7s,baz=276,slow=6.7,SNR=9.9
KSRS LR LR 13 11 35.3
comp=Z,220nm,18.4s,baz=280,slow=40
comp=Z,1.2nm,0.7s
DOBS Dobrina 42.23 299 *e*P **P 12 51 09.0 +0.8**
MOR8 Moi Rana 42.27 329⇑*e*P **P 12 51 08.2 0.0**
STEI Steigen 42.28 332 *e*P **P 12 51 08.3 0.0**
STEI IAmb IAmb 12 51 14.7
comp=Z,23nm,1.2s
CRES Cresnjev 42.31 298 *i* P **P 12 51 09.9 +1.0**
TIXI Tiksi 42.38 23 LR LR 13 08 26.1
comp=Z,91nm,18.6s,baz=183,slow=36
TIXI Tiksi 42.38 23 P **P 12 51 08.3 -0.7**
TIXI IAmb IAmb 12 51 15.6
comp=Z,12nm,0.8s
TIXI Tiksi 42.38 23⇑*i*P **P 12 51 08.3 -0.7**
TIXI pmax pmax
comp=Z,4.0nm,0.7s
BRG Berggiesshubel 42.39 306 *e*P **P 12 51 10.3 +0.8**
BRG Amp 12 51 11.8
comp=Z,11nm,0.9s
BRG *ex* x 12 51 15.8
BRG Amp 12 51 16.8
comp=Z,15nm,1.0s
BRG Amp 13 12 33.0
comp=N,0.2nm,15.1s
BRG Amp 13 12 34.0
comp=E,0.4nm,14.8s
BRG Amp 13 12 38.0
comp=Z,0.6nm,13.9s
BRG Berggiesshubel 42.39 306 *e*P **P 12 51 10.2 +0.8**
BRG *e* 12 51 15.7
BRG pmax pmax
comp=Z,11nm,0.9s
BRG MLR MLR
comp=N,210nm,15.1s
BRG MLR MLR
comp=E,380nm,14.8s
BRG MLR MLR
comp=Z,560nm,13.9s
SOKA Soboth 42.41 300 *i* P **P 12 51 08.8 -1.0**
comp=Z,28nm,1.4s,SNR=13
CKRC Cesky Krumlov 42.48 303 *e*P **P 12 51 11.8 +1.6**
CKRC AMS AMS 13 12 30.0
comp=Z,600nm,15.5s
HOPEN Hopen 42.66 345 *e*P **P 12 51 12.4 +1.1**
MOA Molln 42.69 301 *e*P **P 12 51 12.0 +0.1**
comp=Z,9.4nm,1.2s
VNDS Vrh nad Dolski 42.76 299 *e*P **P 12 51 13.5 +1.0**
OBKA Obir 42.77 300 *e*P **P 12 51 13.7 +0.9**
comp=Z,23nm,1.1s
IPM Ipoh 42.83 137 P **P 12 51 12.3 -1.0**
IPM IAmb IAmb 12 51 17.4
comp=Z,20nm,1.0s
GEC2 GERESS Array S 42.87 303 P **P 12 51 13.7 +0.2**
GEC2 IAmb IAmb 12 51 20.9
comp=Z,20nm,1.1s
GERES GERESS Array B 42.87 303 P **P 12 51 14.6 +1.1**
comp=Z,4.7nm,0.7s,baz=69,slow=7.3,SNR=39
GERES PP **PP 12 52 53.2 +0.4**
comp=Z,1.5nm,0.7s,baz=93,slow=7.9,SNR=2.3
GERES LR LR 13 13 02.1
comp=Z,403nm,18.5s,baz=78,slow=42
comp=Z,4.7nm,0.7s
GERES GERESS Array B 42.87 303 P **P 12 51 13.3 -0.2**
KHC Kasperske Hory 42.90 303 P **P 12 51 13.4 -0.2**
KHC IAmb IAmb 12 51 16.2
comp=Z,13nm,0.9s
KHC Kasperske Hory 42.90 303*d i*P **P 12 51 14.6 +1.0**
KHC pmax pmax
comp=Z,34nm,0.9s
KHC Kasperske Hory 42.90 303 *e*P **P 12 51 13.5 -0.2**
KHC *e*pP **pP 12 51 19.5 +0.6**
KHC AMS AMS 13 12 30.0
comp=Z,500nm,14.6s
SSLB Suanglung 42.90 97 P **P 12 51 12.9 -1.0**
CLL Collm 42.91 307 P **P 12 51 13.6 0.0**
CLL Collm 42.91 307 P **P 12 51 13.6 0.0**
CLL pmax pmax
comp=Z,14nm,1.1s
CLL Collm 42.91 307 *i* P **P 12 51 13.8 +0.2**
CLL *i* pP **pP 12 51 19.2 +0.3**
CLL *e*PP **PP 12 52 54.0 +0.9**
CLL Lm MLR 13 11 00.0
comp=Z,800nm,20.6s
LOF Lofoten 42.95 332 *e*P **P 12 51 14.4 +0.7**
NC405 NORSAR Array S 43.02 321 P **P 12 51 13.7 -0.7**
BJO1 Bjornoya 43.10 341 *e*P **P 12 51 15.8 +1.0**
NC602 NORSAR Array S 43.10 321 P **P 12 51 14.2 -0.8**
NC602 IAmb IAmb 12 51 21.2
comp=Z,43nm,1.2s
NC602 NORSAR Array S 43.10 321 *e*P **P 12 51 15.0 0.0**
NC602 IAmb IAmb 12 51 30.0
comp=Z,23nm,1.3s
BIOA Bad Ischl, Aus 43.13 301 *e*P **P 12 51 15.6 0.0**
comp=Z,6.7nm,0.7s
USRK Ussuriysk Ar. 43.15 64 P **P 12 51 15.0 -0.6**
comp=Z,0.7nm,0.5s,baz=260,slow=8.2,SNR=1.4
USRK LR LR 13 11 50.8
comp=Z,212nm,18.4s,baz=268,slow=40
comp=Z,0.7nm,0.5s
USRK Ussuriysk Ar. 43.15 64 P **P 12 51 15.0 -0.6**
NC303 NORSAR Array S 43.19 321 P **P 12 51 15.3 -0.4**
NC303 IAmb IAmb 12 51 16.6
comp=Z,24nm,0.6s
TIP Timpagrande 43.20 289 P **P 12 51 15.3 -0.9**
TIP IAmb IAmb 12 51 23.1
comp=Z,28nm,1.3s
NB201 NORSAR Array S 43.22 321 P **P 12 51 15.8 -0.3**
NB2 NORSAR Subarra 43.26 321 P **P 12 51 15.6 -0.8**
baz=91,slow=8.6
NB2 NORSAR Subarra 43.26 321 P **P 12 51 15.6 -0.8**
comp=Z,14nm,0.8s,baz=91,slow=8.6
NOA NORSAR Array B 43.26 321 P **P 12 51 15.7 -0.7**
comp=Z,7.4nm,0.6s,baz=91,slow=7.9,SNR=42
NOA LR LR 13 10 02.7
comp=Z,634nm,18.4s,baz=100,slow=37
comp=Z,7.4nm,0.6s
MYKA Terra Mystica 43.36 300 *e*P **P 12 51 18.6 +1.1**
comp=Z,6.1nm,0.6s
NAO01 NORSAR Array S 43.42 321 P **P 12 51 16.8 -0.8**
NKC Novy Kostel 43.43 305 AMS AMS 13 13 00.0
comp=Z,800nm,15.4s
KBA Koelnbreinsper 43.46 301 *e*P **P 12 51 18.5 +0.1**
comp=Z,6.3nm,0.9s
NBO00 NORSAR Array S 43.47 321 P **P 12 51 17.2 -0.9**
NBO00 IAmb IAmb 12 51 24.2
comp=Z,42nm,1.1s
NC204 NORSAR Array S 43.48 321 P **P 12 51 17.6 -0.6**
NC204 NORSAR Array S 43.48 321 *e*P **P 12 51 17.8 -0.4**
NC204 IAmb IAmb 12 51 18.5
comp=Z,15nm,0.5s
TRI Trieste 43.49 299 P **P 12 51 18.6 +0.2**
TRI IAmb IAmb 12 51 30.1
comp=Z,28nm,1.0s
TRI Trieste 43.49 299 P **P 12 51 18.6 +0.2**
TRI pmax pmax
comp=Z,28nm,1.0s
CUC Castrocucco 43.63 290 P **P 12 51 20.1 +0.5**
TBLU Trondheim 43.76 324 *e*P **P 12 51 20.1 -0.3**
GSI Gunungsitoli 43.87 144 P **P 12 51 21.5 -0.2**
CLUD Cludinico 43.91 300 P **P 12 51 20.9 -0.9**
KONO Kongsberg 44.08 319 P **P 12 51 22.6 -0.4**
KONO IAmb IAmb 12 51 39.4
comp=Z,13nm,0.9s
KONO Kongsberg 44.08 319 P **P 12 51 22.6 -0.4**
KONO pmax pmax
comp=Z,13nm,0.9s
KONO Kongsberg 44.08 319 *e*P **P 12 51 22.8 -0.2**
ABTA Abfaltersbach 44.09 300 *e*P **P 12 51 22.5 -0.9**
comp=Z,5.8nm,1.0s
CEL Celeste 44.15 288 P **P 12 51 23.1 -0.8**
DOMB Dombas 44.30 323 *e*P **P 12 51 24.8 0.0**
WTTA Wattenberg 44.55 301 *e*P **P 12 51 26.9 -0.3**
comp=Z,13nm,1.0s
WATA Walderalm 44.58 301 *e*P **P 12 51 27.3 0.0**
comp=Z,13nm,1.1s
SKAR Skarslia 44.69 321 *e*P **P 12 51 29.1 +1.2**
NRCA Norcia 44.70 295 P **P 12 51 27.4 -0.8**
NRCA IAmb IAmb 12 51 35.5
comp=Z,23nm,1.1s
CTI Castel Tesino 44.84 300 P **P 12 51 27.9 -1.4**
CTI IAmb IAmb 12 51 35.5
comp=Z,26nm,1.4s
CTI Castel Tesino 44.84 300 P **P 12 51 28.0 -1.4**
CTI pmax pmax
comp=Z,26nm,1.4s
HSPB Hornsund (broa 44.84 344 *e*P P 12 51 20.4 -8.4
SQTA Sankt Quirin 44.85 301 *e*P **P 12 51 29.3 -0.2**
comp=Z,12nm,1.0s
MOTA Moosalm 44.89 301 *e*P **P 12 51 29.6 -0.2**
comp=Z,6.0nm,0.8s
MURB Monte Urbino 44.99 295 P **P 12 51 29.6 -0.9**
RETA Reutte 45.08 302 *e*P **P 12 51 31.4 +0.2**
comp=Z,18nm,1.3s
SPB2 Spitsbergen Ar 45.12 346 P **P 12 51 30.8 -0.3**
SPITS Spitsbergen Ar 45.12 346 LR LR 13 12 48.9
comp=Z,211nm,19.6s,baz=80,slow=39
SPITS Spitsbergen Ar 45.12 346 P **P 12 51 31.1 0.0**
SPITS pmax pmax
comp=Z,22nm,1.1s
FETA Feichten 45.21 301 *e*P **P 12 51 31.6 -0.8**
comp=Z,14nm,1.2s
AKN Aaknes 45.26 323 *e*P **P 12 51 32.8 +0.3**
VAE Valguarnera 45.52 287 LR LR 13 13 23.4
comp=Z,112nm,19.2s,baz=25,slow=40
ODD1 Odda 45.57 320 *e*P **P 12 51 35.7 +0.8**
DAVA Damuels 45.71 302 *i* P **P 12 51 35.9 -0.4**
comp=Z,23nm,1.2s,SNR=9.4
SALO Salr 45.71 299 P **P 12 51 36.1 -0.1**
ZCCA Zocca 45.75 297 P **P 12 51 37.4 +0.9**
ZCCA IAmb IAmb 12 52 11.6
comp=Z,20nm,1.1s
OSSC Osservatorio P 45.80 296 P **P 12 51 36.3 -0.6**
OSSC IAmb IAmb 12 51 39.0
comp=Z,26nm,1.1s
DAVOX Davos/Dischmat 45.84 301 LR LR 13 13 28.5
comp=Z,338nm,20.0s,baz=83,slow=40
JNU Nakatsue 46.10 79 P **P 12 51 38.8 -0.7**
JNU IAmb IAmb 12 51 45.3
comp=Z,32nm,1.3s
FOO Floro 46.22 322 *e*P **P 12 51 40.3 +0.4**
KBS Kingsbay 46.22 346 P **P 12 51 40.2 +0.5**
KBS IAmb IAmb 12 51 41.7
comp=Z,17nm,0.9s
KBS Kingsbay 46.22 346 P **P 12 51 40.2 +0.5**
KBS pmax pmax
comp=Z,17nm,1.0s
KBS Kingsbay 46.22 346 *e*P **P 12 51 40.2 +0.5**
ASK Askoy 46.23 320 *e*P **P 12 51 40.5 +0.5**
TUE Stuetta 46.27 301 P **P 12 51 40.4 -0.4**
KMY Karmoy 46.33 319 *e*P **P 12 51 41.7 +0.9**
BFO Black Forest 46.46 303 P **P 12 51 42.2 +0.2**
BFO IAmb IAmb 12 51 48.8
comp=Z,13nm,1.2s
BFO Black Forest 46.46 303 P **P 12 51 42.3 +0.2**
BFO pmax pmax
comp=Z,13nm,1.2s
MSSA Maissana 46.76 298 P **P 12 51 44.0 -0.5**
WLF Walferdange 47.52 306 P **P 12 51 50.7 +0.4**
WLF Walferdange 47.52 306 P **P 12 51 50.7 +0.4**
WLF pmax pmax
comp=Z,62nm,1.7s
WLF Walferdange 47.52 306 *d*P **P 12 51 51.5 +1.2**
SENIN Lac Senin/Sane 47.66 301 P **P 12 51 51.7 0.0**
SENIN IAmb IAmb 12 51 58.0
comp=Z,13nm,0.9s
RCHB Rochefort 47.98 307 *d*P **P 12 51 54.2 +0.4**
BMRD Maredsous 48.23 307 *d*P **P 12 51 56.7 +0.9**
LPL La Plagne 48.29 300 *e*P **P 12 51 56.5 -0.1**
LPL pmax pmax
comp=Z,26nm,1.1s
DOU Dourbes 48.39 307 *d*P **P 12 51 57.6 +0.6**
BNI Bardonecchia 48.47 300 P **P 12 51 56.9 -1.0**
BNI Bardonecchia 48.47 300 P **P 12 51 56.9 -1.0**
BNI pmax pmax
comp=Z,32nm,1.3s
JSD Sado 49.62 70 P **P 12 52 05.1 -1.5**
JSD IAmb IAmb 12 52 11.9
comp=Z,9.5nm,1.0s
LODK Lodwar 49.71 234 P **P 12 52 07.5 -0.1**
LODK IAmb IAmb 12 52 19.8
comp=Z,19nm,1.5s
SSB Saint Sauveur 49.83 300 P **P 12 52 06.3 -1.9**
SSB IAmb IAmb 12 52 15.1
comp=Z,19nm,1.3s
SSB Saint Sauveur 49.83 300 P **P 12 52 06.3 -1.9**
SSB pmax pmax
comp=Z,19nm,1.3s
JGF Kuroka 49.94 73 P **P 12 52 08.7 -0.5**
KEST Kesra 49.95 287 P **P 12 52 09.0 -0.2**
comp=Z,6.2nm,0.7s,baz=181,slow=2.5,SNR=7.6
KEST LR LR 13 19 12.8
comp=Z,67nm,19.5s,baz=220,slow=43
comp=Z,6.2nm,0.7s
KEST Kesra 49.95 287 P **P 12 52 09.4 +0.2**
KEST IAmb IAmb 12 52 11.0
comp=Z,19nm,1.1s
MJB9 Matsu-Tunnel 50.18 72 P **P 12 52 11.0 +0.1**
MJB9 IAmb IAmb 12 52 14.7

comp=Z,13nm,0.9s
MAJO Matsushiro 50.18 72 P P 12 52 11.2 +0.3
MAJO IAmb IAmb 12 52 14.8
comp=Z,14nm,0.9s
MAJO Matsushiro 50.18 72 P P 12 52 11.2 +0.3
MAJO pmax pmax
comp=Z,14nm,1.0s
MJAR Matsushiro Arr 50.18 72 P P 12 52 10.1 -0.9
comp=Z,5.5nm,0.8s,baz=298,slow=7.6,SNR=7.0
MJAR LR LR 13 14 50.4
comp=Z,100nm,20.1s,baz=258,slow=38
comp=Z,5.5nm,0.8s
MJAR Matsushiro Arr 50.18 72 P P 12 52 11.3 +0.4
MJAR Matsushiro Arr 50.18 72 P P 12 52 11.3 +0.4
MJAR pmax pmax
comp=Z,7.0nm,1.1s
ASAJ Asahikawa 50.45 61 LR LR 13 15 22.7
comp=Z,397nm,18.1s,baz=292,slow=38
ASAJ Asahikawa 50.45 61 P P 12 52 12.0 -0.8
ASAJ pmax pmax
comp=Z,19nm,1.3s
JKA Kamikawa-asahi 50.45 61 P P 12 52 12.0 -0.9
JKA IAmb IAmb 12 52 25.0
comp=Z,20nm,1.3s
JTM Tenmabayashi 50.59 65 P P 12 52 13.9 0.0
JTM IAmb IAmb 12 52 20.2
comp=Z,19nm,0.9s
JMIC Jan Mayen 50.72 335 LR LR 13 13 48.0
comp=Z,149nm,18.2s,baz=70,slow=36
JMIC Jan Mayen 50.72 335 *eP* **P 12 52 15.6 +1.1**
MA2 Magadan 50.92 40 LR LR 13 15 05.5
comp=Z,56nm,19.2s,baz=276,slow=38
SBUM Sibu 50.95 126 P P 12 52 16.8 -0.1
SBUM IAmb IAmb 12 52 22.9
comp=Z,11nm,1.1s
SEY Seymchan 50.96 35 LR LR 13 13 17.5
comp=Z,177nm,18.1s,baz=306,slow=35
SEY Seymchan 50.96 35 *eP* **P 12 52 16.3 -0.1**
SEY pmax pmax
comp=Z,4.0nm,1.4s
EKA Eskdalemuir Ar 51.55 315 LR LR 13 16 11.2
comp=Z,414nm,20.5s,baz=74,slow=38
ESK Eskdalemuir 51.58 315 P P 12 52 20.2 -0.9
ESK Eskdalemuir 51.58 315 P P 12 52 20.3 -0.9
ESK pmax pmax
comp=Z,32nm,1.2s
CAF Calviac 51.60 301 *eP* **P 12 52 21.3 -0.2**
CAF pmax pmax
comp=Z,16nm,1.1s
JYT Yasato 51.77 71 P P 12 52 22.1 -0.7
KMBO Kilima Mbogo 52.18 228 P P 12 52 26.9 +0.5
comp=Z,2.6nm,0.7s,baz=27,slow=11,SNR=5.0
KMBO LR LR 13 16 26.8
comp=Z,42nm,20.7s,baz=60,slow=38
comp=Z,2.6nm,0.7s
KMBO Kilima Mbogo 52.18 228 P P 12 52 26.6 +0.3
KMBO IAmb IAmb 12 52 35.0
comp=Z,11nm,1.3s
KMBO Kilima Mbogo 52.18 228 P P 12 52 26.6 +0.3
KMBO pmax pmax
comp=Z,11nm,1.3s
LFF La Frestale 52.48 301 *eP* **P 12 52 27.7 -0.3**
LFF pmax pmax
comp=Z,13nm,0.7s
DAG Danmarks Havn 52.50 343 *i P* **P 12 52 27.2 -0.5**
DAG IAmb IAmb 12 52 27.8
comp=Z,12nm,0.6s
DBG Daneborg 53.48 340 *i P* **P 12 52 35.2 +0.2**
DBG IAmb IAmb 12 52 36.0
comp=Z,3.0nm,0.6s
BILL Bilibino 55.17 27⇑ *eP* **P 12 52 47.8 +0.5**
BILL *i* 12 52 52.9
BILL pmax pmax
comp=Z,5.0nm,0.9s
MBAR Mbarara 55.72 235 LR LR 13 19 36.1
comp=Z,302nm,18.5s,baz=22,slow=39
MBAR Mbarara 55.72 235 P P 12 52 52.3 +0.1
MBAR Mbarara 55.72 235 *ce* **P P 12 52 53.6 +1.4**
MBAR pmax pmax
comp=Z,5.0nm,1.0s
LEM Lembang 55.84 138 LR LR 13 20 12.8
comp=Z,152nm,18.1s,baz=322,slow=40
PETK Petropavlovsk- 56.58 46 P P 12 52 57.4 -0.3
comp=Z,2.1nm,0.8s,baz=343,slow=4.5,SNR=1.4
PETK LR LR 13 18 19.6
comp=Z,167nm,19.7s,baz=290,slow=37
comp=Z,2.1nm,0.8s
SKR Severo-Kuril's 56.62 49 *ce* **P P 12 52 57.0 -0.9**
DAV Davao City (W) 56.72 110 LR LR 13 20 52.0
comp=Z,271nm,19.4s,baz=346,slow=40
BORG Borgarnes 57.06 329 LR LR 13 17 14.4
comp=Z,248nm,19.1s,baz=82,slow=36
JCJ Chichijima 57.57 80 LR LR 13 18 52.7
comp=Z,74nm,21.2s,baz=234,slow=37
ESBB Sonseca Array 57.80 297 P P 12 53 06.2 -0.4
ESBB IAmb IAmb 12 53 12.9
comp=Z,7.5nm,0.8s
ESDC Sonseca Array 57.80 297 P P 12 53 05.8 -0.8
comp=Z,5.7nm,0.6s,baz=57,slow=7.0,SNR=56
ESDC LR LR 13 22 36.6
comp=Z,61nm,18.1s,baz=88,slow=41
comp=Z,5.7nm,0.6s
ESDC Sonseca Array 57.80 297 P P 12 53 05.5 -1.1
SUMG Summit 58.94 341 P P 12 53 13.4 -1.0
SUMG IAmb IAmb 12 53 15.9
comp=Z,10nm,0.8s
SUMG Summit 58.94 341 P P 12 53 13.4 -1.0
SUMG pmax pmax
comp=Z,10.0nm,0.8s
SUMG Summit 58.94 341 *i P* **P 12 53 13.3 -1.2**
TAM Tamanrasset 59.15 275 P P 12 53 14.9 -1.4
TAM Tamanrasset 59.15 275 P P 12 53 14.9 -1.4
TAM pmax pmax
comp=Z,3.0nm,0.7s
LUWI Luwuk 60.46 119 P P 12 53 25.6 +0.3
ICESG Greenland Ices 61.24 338 *i P* **P 12 53 30.2 0.0**
ICESG IAmb IAmb 12 53 31.1
comp=Z,13nm,0.8s
KAPI Kappang 61.45 125 LR LR 13 26 11.1
comp=Z,122nm,18.3s,baz=289,slow=42
MDT Midelt 61.54 290 LR LR 13 23 39.2
comp=Z,45nm,21.7s,baz=354,slow=39
DY2G Dye2 64.84 337 *i P* **P 12 53 53.8 -0.3**
DY2G IAmb IAmb 12 53 54.4
comp=Z,10nm,0.5s
SHEM Shemya Is, Ala 65.52 41 LR LR 13 22 59.2
comp=Z,58nm,18.5s,baz=292,slow=36
RES Resolute Bay 65.93 357 LR LR 13 26 47.3
comp=Z,108nm,18.2s,baz=32,slow=40
SIJI Sorong 66.27 112 LR LR 13 25 45.5
comp=Z,76nm,18.3s,baz=26,slow=39
TOLK Toolik Lake Re 67.63 16 P P 12 54 11.2 -0.4
TOLK IAmb IAmb 12 54 14.8
comp=Z,8.0nm,0.7s
TOA0 Torodi Ar. Sit 67.67 269 P P 12 54 11.6 -1.1
TOA0 IAmb IAmb 12 54 12.6
comp=Z,14nm,1.1s
TORD Torodi Ar. Bea 67.67 269 P P 12 54 11.2 -1.4
comp=Z,7.0nm,0.5s,baz=48,slow=5.4,SNR=79
TORD LR LR 13 28 40.9
comp=Z,127nm,18.4s,baz=214,slow=40
comp=Z,7.0nm,0.5s
TORD Torodi Ar. Bea 67.67 269 P P 12 54 11.5 -1.1
TORD IAmb IAmb 12 54 18.6
comp=Z,16nm,1.2s
COLD Coldfoot 68.66 17 P P 12 54 17.9 -0.1
COLD IAmb IAmb 12 54 24.1
comp=Z,6.3nm,0.8s
LSZ Lusaka 68.82 227 LR LR 13 29 10.7
comp=Z,92nm,18.1s,baz=58,slow=40
IMAR Indian Mountai 68.83 19 P P 12 54 18.1 -1.1
H21K Melozitna Rive 69.33 19 P P 12 54 21.8 -0.5
H21K IAmb IAmb 12 54 31.2
comp=Z,9.7nm,1.6s
BMAR Burnt Mountain 69.67 15 P P 12 54 24.9 +0.6
I21K Tanana 69.92 19 P P 12 54 25.6 -0.2
H23K Yukon River 69.97 17 P P 12 54 26.3 +0.1
H23K IAmb IAmb 12 54 32.2
comp=Z,5.7nm,1.0s
J20K Nowinta River 70.17 20 P P 12 54 27.5 +0.1
H24K Noodor Dome 70.34 17 P P 12 54 28.4 -0.2
MLY Manley 70.34 18 P P 12 54 28.0 -0.6
I23K Minto, Yukon-K 70.58 18 P P 12 54 29.5 -0.4
INK Inuvik 70.73 10 P P 12 54 29.6 -1.2
comp=Z,3.8nm,0.5s,baz=340,slow=6.1,SNR=26
INK LR LR 13 27 23.1
comp=Z,53nm,20.9s,baz=1.5,slow=37
comp=Z,3.8nm,0.5s
INK Inuvik 70.73 10 P P 12 54 30.5 -0.2
INK IAmb IAmb 12 54 40.0
comp=Z,5.4nm,0.7s
INK Inuvik 70.73 10 P P 12 54 30.5 -0.2
INK pmax pmax
comp=Z,5.0nm,0.7s
C36M Paulatuk 70.80 6 P P 12 54 30.6 -0.6
C36M IAmb IAmb 12 54 45.5
comp=Z,8.0nm,0.8s
K20K Telida 70.84 21 P P 12 54 31.5 -0.1
MDM Murphy Dome 71.00 17 P P 12 54 32.0 -0.5
BPAW Bear Paw Mtn. 71.05 19 P P 12 54 32.4 -0.5
BPAW IAmb IAmb 12 54 42.0
comp=Z,12nm,1.6s
POKR Poker Plat Res 71.05 17 P P 12 54 32.5 -0.3
POKR IAmb IAmb 12 54 38.6
comp=Z,7.0nm,0.8s
TCOL CIGO, UAF Yank 71.16 17 P P 12 54 33.0 -0.4
TCOL IAmb IAmb 12 54 39.4
comp=Z,10nm,0.9s
COLA College 71.16 17 P P 12 54 33.0 -0.4
COLA IAmb IAmb 12 54 39.3
comp=Z,9.7nm,0.9s
COLA College 71.16 17 P P 12 54 33.0 -0.4
COLA pmax pmax
comp=Z,10.0nm,0.9s
IL31 71.47 17 P P 12 54 33.9 -1.3
ILAR Eielson Array 71.47 17 P P 12 54 33.9 -1.4
comp=Z,1.6nm,0.7s,baz=325,slow=4.8,SNR=26
ILAR PP **PP 12 57 14.3 +1.1**
comp=Z,0.8nm,0.9s,baz=316,slow=6.4,SNR=3.0
ILAR LR LR 13 33 00.5
comp=Z,55nm,20.3s,baz=270,slow=42
comp=Z,1.6nm,0.7s
ILAR Eielson Array 71.47 17 P P 12 54 33.7 -1.7
KTH Kantishna Hill 71.52 19 P P 12 54 34.9 -0.8
KTH IAmb IAmb 12 54 41.0
comp=Z,11nm,1.0s
I26K Coal Creek Min 71.81 15 P P 12 54 37.1 -0.3
I26K IAmb IAmb 12 54 44.8
comp=Z,15nm,1.9s
J25K Salcha River, 71.94 16 P P 12 54 36.8 -1.5
EPYK Eagle Plains 72.04 12 P P 12 54 37.8 -1.0
RND Reindeer 72.16 19 P P 12 54 38.6 -1.0
RND IAmb IAmb 12 55 12.6
comp=Z,10nm,1.6s
RND Reindeer 72.16 19 P P 12 54 38.6 -1.0
RND pmax pmax
comp=Z,10.0nm,1.6s
J26L Joseph Creek 72.43 16 P P 12 54 40.5 -0.8
SKT Skwentna 72.65 20 P P 12 54 41.3 -1.2
SKT IAmb IAmb 12 54 50.6
comp=Z,11nm,1.1s
SCRK Sand Creek 72.80 16 P P 12 54 42.8 -0.7
RIDG Independent Ri 72.81 17 P P 12 54 42.1 -1.3
RIDG IAmb IAmb 12 55 02.1
comp=Z,5.8nm,0.8s
FRB Frobisher Bay 72.85 343 LR LR 13 31 34.7
comp=Z,69nm,18.0s,baz=4.0,slow=40
DOT Dot Lake 73.07 16 P P 12 54 44.3 -0.7
K27K Chicken 73.16 15 P P 12 54 45.2 -0.2
PAX Paxson 73.34 17 P P 12 54 45.6 -1.1
PAX Paxson 73.34 17 P P 12 54 45.6 -1.1
PAX pmax pmax
comp=Z,5.0nm,0.9s
SML Sawmill 73.64 19 P P 12 54 47.2 -1.2
SML IAmb IAmb 12 54 53.4
comp=Z,13nm,0.8s
DAWY Dawson 73.66 14 P P 12 54 48.0 -0.4
SCM Sheep Creek Mo 73.87 19 P P 12 54 49.2 -0.6
SCM IAmb IAmb 12 54 54.8
comp=Z,10.0nm,0.7s
SCM Sheep Creek Mo 73.87 19 P P 12 54 49.2 -0.6
SCM pmax pmax
comp=Z,10.0nm,0.7s
M24K Tolsona, Glenn 73.92 18 P P 12 54 49.8 -0.2
M24K IAmb IAmb 12 54 56.0
comp=Z,14nm,0.8s
L27K Beaver Creek, 74.06 16 P P 12 54 51.0 +0.1
BCAR Beaver Creek A 74.07 16 P P 12 54 50.4 -0.5
PSA00 Pilbara Seismi 74.59 136 P P 12 54 53.3 -1.0
PSA00 Pilbara Seismi 74.59 136 P P 12 54 54.3 0.0
PSA00 IAmb IAmb 12 55 43.1
comp=Z,53nm,1.9s
M27K Edge Creek, AK 74.68 16 P P 12 54 54.9 +0.3
N25K Chitina, Valde 74.73 18 P P 12 54 55.0 +0.2
N25K IAmb IAmb 12 55 24.8
comp=Z,8.5nm,1.2s
FID Port Fidalgo 75.01 19 P P 12 54 56.2 -0.1
M31M Drury Creek, Y 76.29 13 P P 12 55 03.4 -0.2
DBIC Dimbokro 76.72 268 P P 12 55 06.2 -0.7
comp=Z,7.2nm,0.8s,baz=90,slow=6.3,SNR=4.7
DBIC LR LR 13 33 28.5
comp=Z,156nm,18.3s,baz=64,slow=39
comp=Z,7.2nm,0.8s
DBIC Dimbokro 76.72 268 IAmb IAmb 12 55 11.3
comp=Z,16nm,1.0s
KIC Kosan Boka 76.83 267⇑ *iP* **P 12 55 06.9 -0.5**
comp=Z,5.4nm,0.3s
TIC Toumodi 76.87 268⇑ *iP* **P 12 55 07.0 -0.7**
comp=Z,2.8nm,0.2s
HYT Haines Junctio 76.98 15 P P 12 55 07.8 +0.1
HYT IAmb IAmb 12 55 20.3
comp=Z,6.4nm,0.9s
LIC Lamto 77.13 267⇑ *iP* **P 12 55 08.6 -0.5**
comp=Z,8.0nm,0.4s
TSUM Tsumeb 78.19 233 LR LR 13 32 39.4
comp=Z,104nm,19.3s,baz=335,slow=38
YKA Yellowknife Ar 78.25 4 P P 12 55 13.5 -1.0
comp=Z,3.2nm,0.6s,baz=353,slow=5.6,SNR=31
YKA LR LR 13 33 31.0
comp=Z,65nm,18.4s,baz=10,slow=38
comp=Z,3.2nm,0.6s
YKA Yellowknife Ar 78.25 4 P P 12 55 13.3 -1.3
P33M Teslin, Yukon 78.42 13 P P 12 55 15.0 -0.7
SCHQ Schefferville 80.15 338 P P 12 55 24.1 -1.0
comp=Z,2.3nm,0.6s,baz=72,slow=6.4,SNR=2.1
SCHQ LR LR 13 30 35.5
comp=Z,147nm,21.1s,baz=105,slow=35
comp=Z,2.3nm,0.6s
DLBC Dease Lake 80.58 12 LR LR 13 35 49.9
comp=Z,37nm,19.1s,baz=224,slow=39
WRA Warramunga Arr 81.97 124 P P 12 55 33.9 -1.3
comp=Z,3.2nm,0.5s,baz=326,slow=4.9,SNR=45
comp=Z,3.2nm,0.5s
WRA Warramunga Arr 81.97 124 P P 12 55 35.0 -0.2
WRA Warramunga Arr 81.97 124 P P 12 55 35.0 -0.2
WRA pmax pmax
comp=Z,1.0nm,1.2s
WRAB Tennant Creek 81.97 124 *ce* **P P 12 55 34.8 -0.4**
WRAB pmax pmax
comp=Z,16nm,1.7s
WB2 Warramunga Arr 81.98 124 P P 12 55 34.0 -1.2
WB2 IAmb IAmb 12 56 04.5
comp=Z,24nm,1.5s
ASAR Alice Springs 84.41 127 P P 12 55 47.1 -0.7
comp=Z,3.2nm,0.9s,baz=310,slow=5.1,SNR=21
comp=Z,3.2nm,0.9s
EDM Edmonton 87.57 4 P P 12 56 02.7 -0.4
EDM IAmb IAmb 12 56 09.5
comp=Z,8.0nm,0.9s
EDM Edmonton 87.57 4 P P 12 56 02.7 -0.4
EDM pmax pmax
comp=Z,8.0nm,0.9s
ULM Lac du Bonnet 90.23 353 P P 12 56 14.0 -1.6
comp=Z,1.4nm,0.4s,baz=114,slow=4.8,SNR=3.1
comp=Z,1.4nm,0.4s
ULM Lac du Bonnet 90.23 353 IAmb IAmb 12 56 27.1
comp=Z,12nm,1.6s
NEW Newport 92.22 7 LR LR 13 40 19.6
comp=Z,88nm,21.6s,baz=352,slow=37
SADO Sadowa 92.64 341 LR LR 13 38 40.1
comp=Z,80nm,18.5s,baz=208,slow=36
PDAR Pinedale Array 98.17 2 LR LR 13 46 28.7
comp=Z,43nm,18.3s,baz=352,slow=39
RIB01 Linhares ES 120.20 269 *eP* **PKiKP 13 02 06.9 +0.3**
BOAV Boa Vista 120.71 303 *eP* **PKiKP 13 02 08.8 +0.9**
JANB Januaria 120.75 276 *eP* **PKiKP 13 02 08.3 +0.4**
ALF01 Guarapari-ES 121.19 268 *eP* **PKiKP 13 02 08.8 +0.3**
TROLL Troll, Antarti 121.47 200 PKPdf **PKiKP 13 02 08.0 +0.3**
PARB Paraibuna 126.48 268 *eP* **PKPdf 13 02 18.7 +0.1**
CLDB Colider 126.83 288 *eP* **PKPdf 13 02 19.6 +0.2**
PLCA Paso Flores 152.49 256 PKPbc **PKPbc 13 03 10.6 -0.8**
comp=Z,0.9nm,0.5s,baz=63,slow=2.3,SNR=6.5
PLCA Paso Flores 152.49 256 PKPbc **PKPbc 13 03 11.1 -0.3**
PLCA Paso Flores 152.49 256 *eP* **PKPdf 13 03 04.6 +0.2**

IDC 28 12:57:47.4±2.4, 2°87N×96°13E, h0km, mb3.5/3, mbtmp3.5/4, Error ellipse: s-maj=108.3km s-min=30.8km az=56.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**15.73**	**10**	Pn	Pn	13 01 30.9	+0.4
	0.5nm,0.5s,baz=202,slow=11,SNR=4.9						
WRA	**Warramunga Arr**	**43.83**	**123**	P	P	13 05 55.1	-0.5
	0.4nm,0.7s,baz=301,slow=9.7,SNR=2.0						
	0.4nm,0.7s						
ASAR	**Alice Springs**	**45.25**	**128**	P	P	13 06 07.3	+0.3
	0.2nm,0.8s,baz=298,slow=7.4,SNR=1.3						
	0.2nm,0.8s						
ARCES	**ARCESS Array B**	**80.61**	**340**	P	P	13 10 01.6	0.0
	1.5nm,1.0s,baz=101,slow=6.4,SNR=6.0						
	1.5nm,1.0s						

NOU 28 13:02:13.3, 21°87S×169°51E, h0km, mb3.7/7, Southeast of Loyalty Islands, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**1.43**	**285**	P	Pn	13 02 39.0	-1.5
PINNC	**Pines Island,**	**2.05**	**248**	P	Pn	13 02 48.5	-0.5
LIFNC	**LIFOU**	**2.38**	**297**	P	Pn	13 02 52.8	-0.8
YATNC	**Mamie plateau,**	**2.44**	**265**	P	Pn	13 02 53.8	-0.6
OUENC	**Ouen Island, N**	**2.53**	**257**	P	Pn	13 02 55.9	+0.2
NOUC	**Port Laguerre**	**2.98**	**265**	P	Pn	13 03 02.0	+0.1
KOUNC	**Koumac, New Ca**	**5.05**	**284**	P	Pn	13 03 31.5	+1.2

*NOU **28** 13:04:46.3, 39°.45S×174°.18E, h229km, MLv3.5/9, North Island, New Zealand*
*WEL **28** 13:04:51.5±0.7, 40°S±4°×17°4E±°, h184km±4km, M2.5/24, ML2.5/9, MLv2.5/24, Error ellipse: s-maj=0.0km s-min=0.0km az=106.3*

ISC 28 13:04:45.8±1.8, 39°52S±0°.05×174°22E±0°.05, h223km±9km, n115, σ1°67/132, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LREZ	**Lake Rotokare**	**0.15**	**68**	P	**Pn**	**13 05 16.6**	**+1.8**
LREZ				S	**S**	**13 05 36.9**	**-0.4**
PREZ	**Palmer Road**	**0.18**	**344**	P	**Pn**	**13 05 16.6**	**+1.7**
PREZ				S	**S**	**13 05 37.0**	**-0.6**
NEZ	**North Egmont**	**0.27**	**338**	P	**Pn**	**13 05 16.6**	**+1.5**
NEZ				S	**S**	**13 05 37.5**	**-0.5**
VRZ	**Vera Road**	**0.57**	**47**	P	**Pn**	**13 05 16.7**	**+0.8**
VRZ				S	**S**	**13 05 37.6**	**-1.6**
WAZ	**Wanganui**	**0.64**	**112**	P	**Pn**	**13 05 18.4**	**+2.3**
WAZ				S	**S**	**13 05 39.3**	**-0.4**
PKVZ	**Pokaka**	**0.90**	**76**	P	**Pn**	**13 05 18.9**	**+1.5**
MTVZ	**Mangateitei**	**0.98**	**83**	P	**Pn**	**13 05 19.3**	**+1.4**
MTVZ				S	**S**	**13 05 41.7**	**-1.1**
TWVZ	**Taurewa**	**1.04**	**65**	P	**Pn**	**13 05 19.4**	**+1.1**
TRVZ	**Turoa**	**1.05**	**78**	P	**Pn**	**13 05 20.1**	**+1.5**
TRVZ				S	**S**	**13 05 42.1**	**-1.9**
FWVZ	**Far West T-bar**	**1.06**	**76**	P	**Pn**	**13 05 20.0**	**+1.4**
WNVZ	**Wahianoa**	**1.08**	**80**	P	**Pn**	**13 05 20.3**	**+1.7**
WNVZ				S	**S**	**13 05 41.8**	**-2.4**
WHVZ	**Whangaehu Hut**	**1.08**	**78**	P	**Pn**	**13 05 20.5**	**+1.8**
HIZ	**Hauiti**	**1.12**	**26**	P	**Pn**	**13 05 19.7**	**+1.0**
HIZ	**Hauiti**	**1.12**	**26**	P	**Pn**	**13 05 19.6**	**+0.9**
NGZ	**Ngauruhoe**	**1.12**	**73**	P	**Pn**	**13 05 20.6**	**+1.7**
WTVZ	**West Tongariro**	**1.13**	**70**	P	**Pn**	**13 05 20.4**	**+1.4**
TUVZ	**Tukino**	**1.14**	**78**	P	**Pn**	**13 05 20.9**	**+1.9**
TUVZ				S	**S**	**13 05 43.2**	**-1.6**
NNVZ	**North Ngauruho**	**1.15**	**71**	P	**Pn**	**13 05 20.9**	**+1.8**
SNVZ	**South Ngauruho**	**1.15**	**74**	P	**Pn**	**13 05 21.0**	**+1.9**
SNVZ				S	**S**	**13 05 43.8**	**-1.1**
KRVZ	**Karewarewa**	**1.18**	**69**	P	**Pn**	**13 05 20.9**	**+1.7**
MOVZ	**Moawhango**	**1.19**	**85**	P	**Pn**	**13 05 20.6**	**+1.3**
MOVZ				S	**S**	**13 05 42.4**	**-2.9**
NTVZ	**North Tongariro**	**1.20**	**70**	P	**Pn**	**13 05 21.3**	**+1.8**
ETVZ	**East Tongariro**	**1.22**	**72**	P	**Pn**	**13 05 21.5**	**+2.0**
TMVZ	**Te Maari**	**1.22**	**71**	P	**Pn**	**13 05 21.6**	**+2.1**
KATZ	**Kakaramea**	**1.27**	**65**	P	**Pn**	**13 05 21.5**	**+1.6**
DUWZ	**D'Urville Isla**	**1.30**	**190**	P	**Pn**	**13 05 21.7**	**+1.8**
DUWZ				S	**S**	**13 05 44.8**	**-2.0**
RATZ	**Rangitukua**	**1.37**	**62**	P	**Pn**	**13 05 22.4**	**+1.9**
RITZ	**Rihia Road**	**1.38**	**68**	P	**Pn**	**13 05 22.6**	**+2.0**
BHHZ	**Black Hill Sta**	**1.43**	**89**	P	**Pn**	**13 05 22.2**	**+1.3**
BHHZ				S	**S**	**13 05 45.4**	**-2.9**
KIW	**Kapiti Island**	**1.44**	**159**	P	**Pn**	**13 05 22.7**	**+1.7**
KIW				S	**S**	**13 05 46.3**	**-2.5**
TSZ	**Takapari Road**	**1.45**	**113**	P	**Pn**	**13 05 22.9**	**+1.8**
TSZ				S	**S**	**13 05 46.8**	**-1.7**
POWZ	**Post Office Ro**	**1.48**	**127**	P	**Pn**	**13 05 23.1**	**+1.8**
POWZ				S	**S**	**13 05 46.7**	**-2.3**
OGWZ	**Otaki Gorge**	**1.49**	**151**	P	**Pn**	**13 05 23.3**	**+1.9**
OGWZ				S	**S**	**13 05 46.8**	**-2.4**
MRZ	**Mangatainoka R**	**1.54**	**138**	P	**Pn**	**13 05 23.5**	**+1.7**
TLZ	**Tolley Road**	**1.57**	**41**	P	**Pn**	**13 05 23.2**	**+1.0**
PNHZ	**Pukenui**	**1.58**	**105**	P	**Pn**	**13 05 24.5**	**+2.4**
KRHZ	**Kereru**	**1.67**	**95**	P	**Pn**	**13 05 24.8**	**+1.8**
DVHZ	**Dannevirke**	**1.69**	**118**	P	**Pn**	**13 05 24.9**	**+1.8**
PRWZ	**Pori Road**	**1.70**	**128**	P	**Pn**	**13 05 25.3**	**+2.1**
HOWZ	**Holdsworth Sta**	**1.70**	**145**	P	**Pn**	**13 05 24.7**	**+1.5**
KWHZ	**Kaweka Forest**	**1.71**	**88**	P	**Pn**	**13 05 25.4**	**+2.0**
CAW	**Cannon Point**	**1.71**	**158**	P	**Pn**	**13 05 25.0**	**+1.7**
TIWZ	**Tintock**	**1.79**	**135**	P	**Pn**	**13 05 25.8**	**+1.8**
BKZ	**Black Stump Fm**	**1.79**	**79**	P	**Pn**	**13 05 25.5**	**+1.4**
BKZ	**Black Stump Fm**	**1.79**	**79**	P	**Pn**	**13 05 25.5**	**+1.4**
WEL	**Wellington**	**1.81**	**167**	P	**Pn**	**13 05 25.9**	**+1.7**
NNZ	**Nelson**	**1.82**	**200**	P	**Pn**	**13 05 25.9**	**+1.7**
SNZO	**South Karori**	**1.83**	**169**	P	**Pn**	**13 05 25.9**	**+1.6**
MRHZ	**Matea Rd**	**1.84**	**69**	P	**Pn**	**13 05 25.6**	**+1.0**
QRZ	**Quartz Range**	**1.84**	**224**	P	**Pn**	**13 05 25.7**	**+1.2**
QRZ	**Quartz Range**	**1.84**	**224**	P	**Pn**	**13 05 25.9**	**+1.4**
MTW	**Mount Morrison**	**1.91**	**150**	P	**Pn**	**13 05 26.6**	**+1.5**
MCHZ	**McNeill Hill**	**1.92**	**89**	P	**Pn**	**13 05 27.7**	**+2.5**
TUWZ	**Tuamarina**	**1.92**	**186**	P	**Pn**	**13 05 27.0**	**+1.8**
BFZ	**Birch Farm**	**1.94**	**127**	P	**Pn**	**13 05 27.1**	**+1.7**
BFZ	**Birch Farm**	**1.94**	**127**	P	**Pn**	**13 05 27.2**	**+1.8**
BHW	**Baring Head**	**1.95**	**166**	P	**Pn**	**13 05 26.9**	**+1.4**
ANWZ	**Angora Road**	**1.97**	**119**	P	**Pn**	**13 05 27.9**	**+2.2**
PRHZ	**Porangahau**	**2.00**	**113**	P	**Pn**	**13 05 28.2**	**+2.2**
TMWZ	**Te Maipa**	**2.04**	**142**	P	**Pn**	**13 05 28.0**	**+1.7**
TOZ	**Tahuroa Road**	**2.05**	**30**	P	**Pn**	**13 05 28.1**	**+1.6**
NMHZ	**Naumai**	**2.05**	**79**	P	**Pn**	**13 05 29.0**	**+2.4**
MSWZ	**Moikau Station**	**2.05**	**158**	P	**Pn**	**13 05 27.9**	**+1.4**
CPWZ	**Castlepoint**	**2.06**	**133**	P	**Pn**	**13 05 28.8**	**+2.3**
KAHZ	**Kahuranaki**	**2.07**	**99**	P	**Pn**	**13 05 29.1**	**+2.4**
PAWZ	**Paruwai Farm**	**2.08**	**154**	P	**Pn**	**13 05 28.2**	**+1.5**
PXZ	**Pawanui**	**2.10**	**105**	P	**Pn**	**13 05 29.1**	**+2.2**
MTHZ	**Maungataniwha**	**2.14**	**73**	P	**Pn**	**13 05 28.8**	**+1.3**
ARHZ	**Aropaoanui**	**2.17**	**84**	P	**Pn**	**13 05 29.8**	**+2.2**
MRNZ	**Matariki Terra**	**2.19**	**210**	P	**Pn**	**13 05 29.4**	**+1.5**
TRWZ	**Traveller**	**2.19**	**150**	P	**Pn**	**13 05 29.4**	**+1.6**
PLWZ	**Palliser**	**2.20**	**159**	P	**Pn**	**13 05 29.2**	**+1.2**
BSWZ	**Blackbirch Sta**	**2.21**	**187**	P	**Pn**	**13 05 30.2**	**+2.2**
CKHZ	**Cape Kidnapper**	**2.21**	**95**	P	**Pn**	**13 05 30.4**	**+2.3**
CMWZ	**Cape Campbell**	**2.23**	**180**	P	**Pn**	**13 05 30.5**	**+2.3**
MUGZ	**Murupara**	**2.24**	**63**	P	**Pn**	**13 05 29.3**	**+0.9**
RAHZ	**Arahi**	**2.30**	**76**	P	**Pn**	**13 05 31.0**	**+1.9**
RTZ	**Ruatahuna**	**2.33**	**68**	P	**Pn**	**13 05 30.6**	**+1.1**
THZ	**Tophouse**	**2.46**	**204**	P	**Pn**	**13 05 32.5**	**+1.8**
SNGZ	**Shannon Statio**	**2.53**	**74**	P	**Pn**	**13 05 32.3**	**+0.7**
URZ	**Urewera**	**2.58**	**62**	P	**Pn**	**13 05 32.7**	**+0.7**
URZ	**Urewera**	**2.58**	**62**	P	**Pn**	**13 05 32.7**	**+0.7**
RAGZ	**Rawiri**	**2.69**	**69**	P	**Pn**	**13 05 34.5**	**+1.2**
KNZ	**Kokohu**	**2.73**	**81**	P	**Pn**	**13 05 35.2**	**+1.6**
MWZ	**Matawai**	**2.84**	**66**	P	**Pn**	**13 05 35.8**	**+1.0**
RIGZ	**Rimuhau**	**2.87**	**75**	P	**Pn**	**13 05 36.8**	**+1.6**
MHGZ	**Mahia Peninsul**	**2.88**	**84**	P	**Pn**	**13 05 37.5**	**+2.2**
DSZ	**Denniston Nort**	**2.89**	**219**	P	**Pn**	**13 05 36.7**	**+1.4**
PRGZ	**Paritu Road**	**2.91**	**79**	P	**Pn**	**13 05 37.3**	**+1.7**
KHZ	**Kahutara**	**2.94**	**190**	P	**Pn**	**13 05 37.6**	**+1.7**
KHZ	**Kahutara**	**2.94**	**190**	P	**Pn**	**13 05 37.7**	**+1.8**
KUZ	**Kuaotunu**	**3.01**	**24**	P	**Pn**	**13 05 38.7**	**+1.9**
TKGZ	**Te Karaka**	**3.02**	**70**	P	**Pn**	**13 05 38.4**	**+1.5**
TWGZ	**Tauwhareparae**	**3.23**	**67**	P	**Pn**	**13 05 41.2**	**+1.9**
CNGZ	**Carnagh Statio**	**3.27**	**73**	P	**Pn**	**13 05 41.7**	**+1.9**
PKGZ	**Pakihiroa**	**3.43**	**63**	P	**Pn**	**13 05 42.6**	**+0.9**
PUZ	**Puketiti**	**3.47**	**67**	P	**

GVZ	**Greta Valley S**	**3.56**	**194**	P	**Pn**	**13 05 44.2**	**+1.2**
LTZ	**Lake Taylor**	**3.58**	**204**	P	**Pn**	**13 05 44.8**	**+1.5**
WMGZ	**Waiomatatini S**	**3.69**	**64**	P	**Pn**	**13 05 45.5**	**+0.7**
MXZ	**Matakaoa Point**	**3.75**	**60**	P	**Pn**	**13 05 46.4**	**+1.0**
INZ	**Inchbonnie**	**3.83**	**212**	P	**Pn**	**13 05 47.3**	**+1.0**
OXZ	**Oxford**	**4.14**	**203**	P	**Pn**	**13 05 51.0**	**+0.9**
OKCZ	**Okains Bay**	**4.29**	**191**	P	**Pn**	**13 05 53.2**	**+1.2**
MQZ	**McQueen's Vall**	**4.35**	**195**	P	**Pn**	**13 05 52.7**	**+0.2**
WVZ	**Waitaha Valley**	**4.42**	**215**	P	**Pn**	**13 05 55.0**	**+1.6**
RACZ	**Rakaia**	**4.49**	**200**	P	**Pn**	**13 05 55.1**	**+0.8**
WACZ	**Wakanui South**	**4.77**	**201**	P	**Pn**	**13 05 58.8**	**+1.1**
RPZ	**Rata Peaks**	**4.82**	**208**	P	**Pn**	**13 05 59.2**	**+0.8**
RPZ	**Rata Peaks**	**4.82**	**208**	P	**Pn**	**13 05 59.4**	**+1.0**
ARCZ	**Arundel**	**4.98**	**206**	P	**Pn**	**13 06 01.0**	**+0.6**
TMZ	**Timaru**	**5.42**	**205**	P	**Pn**	**13 06 07.2**	**+1.2**
JCZ	**Jackson Bay**	**6.10**	**220**	P	**Pn**	**13 06 15.1**	**+0.4**
ODZ	**Otahua Downs**	**6.13**	**204**	P	**Pn**	**13 06 16.4**	**+1.5**
ODZ	**Otahua Downs**	**6.13**	**204**	P	**Pn**	**13 06 16.4**	**+1.5**

*ISK **28** 13:11:51.8,38˙.83N×25˙.83E,h8km,ML3.1/22*
*ATH **28** 13:11:52.9,38˙.86N×25˙.97E,h30km±1km,ML2.8/10,Error ellipse: s-maj=2.1km s-min=1.1km az=86.0*
*DDA **28** 13:11:52.8±0.0,38˙.85N×25˙.97E,h34km±2km,ML3.0*
*THE **28** 13:11:53.5,38˙.85N×25˙.85E,h10km±1km,ML3.0/6,Error ellipse: s-maj=2.1km s-min=0.7km az=81.0*

ISC 28 13:11:53.4±0.9,38˙.85N±0˙.02×25˙.98E±0˙.02,h28km±8km, n72,σ1§46/98,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.37**	**345**	P	**Pb**	**13 12 01.1**	**-0.7**
SIGR				AML	AML	13 12 06.6	
	comp=E,3495µm,0.2s						
SIGR				S	**Sb**	**13 12 06.6**	**-0.8**
SIGR				AML	AML	13 12 06.9	
	comp=N,6052µm,0.4s						
SIGR	**SIGRI**	**0.37**	**345**	P	**Pb**	**13 12 01.0**	**-0.7**
SIGR				S	**Sb**	**13 12 06.2**	**-1.2**
	comp=N,2µm,0.3s						
PSRA	**Psara**	**0.45**	**227**	P	**Pn**	**13 12 03.7**	**-0.3**
PSRA				S	**Sb**	**13 12 09.4**	**+0.2**
PSRA				AML	AML	13 12 10.4	
	comp=N,8930µm,0.2s						
PSRA				AML	AML	13 12 14.4	
	comp=E,7429µm,0.2s						
PRK	**Paraskevi**	**0.46**	**30**	P	**Pn**	**13 12 03.5**	**-0.6**
PRK				S	**Sn**	**13 12 10.6**	**-0.8**
PRK				AML	AML	13 12 15.4	
	comp=E,2336µm,0.3s						
PRK				AML	AML	13 12 15.9	
	comp=N,3362µm,0.6s						
PRK	**Paraskevi**	**0.46**	**30**	P	**Pn**	**13 12 03.5**	**-0.6**
PRK				S	**Sn**	**13 12 11.2**	**-0.2**
	comp=N,1µm,0.4s						
CHOS	**Chios island**	**0.47**	**172**	P	**Pb**	**13 12 03.2**	**0.0**
CHOS				S	**Sb**	**13 12 09.9**	**0.0**
CHOS				AML	AML	13 12 10.5	
	comp=N,6432µm,0.2s						
CHOS				AML	AML	13 12 11.4	
	comp=E,11624µm,0.2s						
CHOS	**Chios island**	**0.47**	**172**	P	**Pb**	**13 12 03.2**	**0.0**
CHOS				S	**Sb**	**13 12 09.9**	**0.0**
	comp=E,4µm,0.2s						
FOCM	**Foa**	**0.61**	**103**	PG	**Pn**	**13 12 06.1**	**0.0**
FOCM				SG	**Sn**	**13 12 16.3**	**+1.3**
GPNR	**Gulpinar-Canak**	**0.62**	**11**	PG	**Pb**	**13 12 05.1**	**-0.6**
CAND	**Candarli**	**0.65**	**80**	PG	**Pn**	**13 12 06.9**	**+0.1**
CAND				SG	**Sn**	**13 12 18.1**	**+1.9**
KOCA	**Canakkale, Ayv**	**0.66**	**11**	P	**Pb**	**13 12 05.9**	**-0.5**
KOCA				S	**Sn**	**13 12 15.7**	**-0.8**
KOCA				*i* AML	AML	13 12 20.0	
	comp=E,838nm,0.3s						
KOCA				*i* AML	AML	13 12 21.0	
	comp=E,734nm,0.3s						
URLA	**Izmir**	**0.69**	**135**	PG	**Pn**	**13 12 07.7**	**+0.4**
AYVA	**Ayvalik**	**0.72**	**50**	P	**Pn**	**13 12 07.4**	**-0.3**
AYVA				*i* AML	AML	13 12 19.0	
	comp=E,1µm,0.3s						
ZEYE	**Izmir, Urla-Ze**	**0.74**	**146**	P	**Pb**	**13 12 07.3**	**-0.4**
ZEYE				*i* AML	AML	13 12 20.0	
	comp=E,933nm,0.5s						
ZEYE				*i* AML	AML	13 12 20.0	
	comp=E,558nm,0.2s						
DKL	**Dikili**	**0.76**	**73**	PG	**Pb**	**13 12 09.0**	**+1.0**
ZEDA	**zmir-Bergama**	**0.87**	**82**	P	**Pb**	**13 12 10.5**	**+0.7**
ZEDA				S	**Sb**	**13 12 22.5**	**+1.4**
ZEDA				*i* AML	AML	13 12 24.0	
	comp=E,484nm,0.3s						
ZEDA				*i* AML	AML	13 12 25.0	
	comp=E,364nm,0.5s						
BOZC	**Bozcaada**	**0.99**	**3**	PG	**Pb**	**13 12 11.7**	**-0.3**
BOZC	**Bozcaada**	**0.99**	**3**	P	**Pb**	**13 12 11.8**	**-0.2**
BOZC				S	**Sb**	**13 12 26.0**	**+1.3**
BOZC				*i* AML	AML	13 12 28.0	
	comp=E,316nm,0.6s						
BOZC				*i* AML	AML	13 12 28.0	
	comp=E,377nm,0.2s						
BAYC	**CANAKKALE_Bayr**	**0.99**	**26**	P	**Pb**	**13 12 12.1**	**0.0**
BAYC				S	**Sb**	**13 12 25.7**	**+0.9**
BAYC				*i* AML	AML	13 12 28.0	
	comp=E,307nm,0.2s						
EZN	**Ezine**	**1.01**	**15**	P	**Pb**	**13 12 12.2**	**-0.1**
EZN				S	**Sb**	**13 12 27.6**	**+2.4**
	comp=E,1µm,0.5s						
EZN	**Ezine**	**1.01**	**15**	PG	**Pb**	**13 12 12.4**	**+0.1**
EFSA	**Agios Efstrati**	**1.03**	**312**	P	**Pb**	**13 12 13.3**	**+0.6**
EFSA				S	**Sb**	**13 12 26.9**	**+1.1**
DGB	**zmir**	**1.07**	**138**	P	**Pb**	**13 12 12.6**	**-0.7**
DGB				S	**Sb**	**13 12 27.5**	**+0.7**
BUHA	**Balikesir, Bur**	**1.07**	**52**	P	**Pb**	**13 12 12.7**	**-0.7**
BUHA				S	**Sb**	**13 12 27.8**	**+0.7**
BUHA				*i* AML	AML	13 12 30.0	
	comp=E,292nm,0.5s						
BUHA				*i* AML	AML	13 12 32.0	
	comp=E,478nm,0.6s						
ECEA	**Canakkale, Ece**	**1.20**	**7**	P	**Pb**	**13 12 15.4**	**-0.1**
ECEA				S	**Sb**	**13 12 32.7**	**+2.0**
ECEA				*i* AML	AML	13 12 33.0	
	comp=E,296nm,0.4s						
ECEA				*i* AML	AML	13 12 35.0	
	comp=E,472nm,0.6s						
LIA	**Limnos Island**	**1.21**	**330**	P	**Pb**	**13 12 15.6**	**-0.2**
LIA				S	**Sb**	**13 12 31.7**	**+0.7**
LIA				AML	AML	13 12 34.4	
	comp=N,822µm,0.3s						
LIA				AML	AML	13 12 34.6	
	comp=E,1219µm,0.7s						
LIA	**Limnos Island**	**1.21**	**330**	P	**Pb**	**13 12 15.7**	**0.0**
LIA				S	**Sb**	**13 12 30.8**	**-0.2**
	comp=E,510nm,0.5s						
SMG	**Samos**	**1.32**	**149**	P	**Pb**	**13 12 16.9**	**-0.8**
SMG				S	**Sb**	**13 12 35.2**	**+1.0**
SMG				AML	AML	13 12 38.8	
	comp=N,1748µm,0.5s						
SMG				AML	AML	13 12 39.2	
	comp=E,2069µm,0.4s						
SMG	**Samos**	**1.32**	**149**	P	**Pb**	**13 12 17.1**	**-0.5**
SMG				S	**Sb**	**13 12 37.4**	**+3.2**
	comp=E,955nm,0.4s						
GADA	**Gvkgeada**	**1.34**	**357**	PN	**Pb**	**13 12 17.8**	**-0.1**
GOKA	**anakkale-Gk**	**1.34**	**358**	P	**Pb**	**13 12 18.0**	**+0.1**
STEP	**BALIKESIR_Sava**	**1.45**	**68**	P	**Pb**	**13 12 19.9**	**+0.1**
STEP				S	**Sb**	**13 12 37.6**	**-0.3**
STEP				*i* AML	AML	13 12 44.0	
	comp=E,181nm,0.3s						
STEP				*i* AML	AML	13 12 44.0	
	comp=E,241nm,0.3s						
KYMI	**Kymi, Euboea I**	**1.48**	**262**	P	**Pb**	**13 12 19.3**	**-1.0**
KYMI	**Kymi, Euboea I**	**1.48**	**262**	P	**Pb**	**13 12 19.5**	**-0.8**
KYMI				S	**Sb**	**13 12 43.8**	**+5.1**
GELI	**Tayfur-Gelibol**	**1.59**	**14**	PN	**Pb**	**13 12 21.6**	**-0.6**
SMTH	**Samothraki Isl**	**1.66**	**348**	P	**Pb**	**13 12 21.6**	**-1.7**
SMTH				AML	AML	13 12 47.8	
	comp=E,276µm,0.4s						
SMTH				AML	AML	13 12 50.0	
	comp=N,216µm,0.5s						
SMTH	**Samothraki Isl**	**1.66**	**348**	P	**Pb**	**13 12 21.8**	**-1.5**
AYDB	**Zeytinkoy-Aydi**	**1.75**	**120**	PN	**Pb**	**13 12 24.1**	**-0.9**
GONE	**Gonen-Balikesi**	**1.78**	**47**	PN	**Pb**	**13 12 25.2**	**-0.2**
APE	**Apeiranthos**	**1.81**	**191**	P	**Pb**	**13 12 24.0**	**-2.0**
APE				AML	AML	13 12 55.0	
	comp=E,156µm,0.3s						
APE				AML	AML	13 12 55.1	
	comp=N,205µm,0.2s						
APE	**Apeiranthos**	**1.81**	**191**	P	**Pb**	**13 12 23.9**	**-2.0**
CAVK	**Edirne/Enez-Ca**	**1.85**	**5**	P	**Pn**	**13 12 23.8**	**+0.5**
CAVK				S	**Sb**	**13 12 48.4**	**-0.8**
KRBG	**Karabiga-Canak**	**1.85**	**33**	PN	**Pb**	**13 12 25.1**	**-1.4**
KNL	**Balıkesir**	**1.86**	**40**	P	**Pb**	**13 12 28.4**	**+1.7**
ERIK	**Erikli-Kesan**	**1.87**	**13**	PN	**Pb**	**13 12 25.3**	**-1.5**
ENEZ	**Enez**	**1.89**	**4**	P	**Pb**	**13 12 25.2**	**-2.0**
ENEZ	**Enez**	**1.89**	**4**	PN	**Pb**	**13 12 25.8**	**-1.4**
AYDN	**Tasoluk**	**1.91**	**128**	P	**Pb**	**13 12 25.9**	**-1.8**
VLY	**Voula,Athens**	**1.98**	**241**	P	**Pb**	**13 12 26.3**	**-2.6**
THAS	**Thassos island**	**2.00**	**331**	P	**Pn**	**13 12 26.5**	**+1.1**
THAS				AML	AML	13 13 00.3	
	comp=N,129µm,0.3s						
THAS				AML	AML	13 13 02.5	
	comp=E,108µm,0.3s						
THAS	**Thassos island**	**2.00**	**331**	P	**Pn**	**13 12 25.7**	**+0.3**
ALN	**Alexandroupoli**	**2.05**	**1**	P	**Pn**	**13 12 27.2**	**+1.2**
ALN				AML	AML	13 13 02.0	
	comp=N,99µm,0.4s						
ALN				AML	AML	13 13 02.3	
	comp=E,130µm,0.4s						
ALN	**Alexandroupoli**	**2.05**	**1**	P	**Pb**	**13 12 27.3**	**-2.6**
ALN	**Alexandroupoli**	**2.05**	**1**	PN	**Pb**	**13 12 27.4**	**-2.5**
KESN	**Edirne-Kesan**	**2.05**	**15**	P	**Pb**	**13 12 27.9**	**-2.2**
KESN				*i* AML	AML	13 13 07.0	
	comp=E,88nm,0.5s						
RKY	**Sarkoy-Tekirda**	**2.06**	**26**	PN	**Pb**	**13 12 28.9**	**-1.2**
SART	**Tekirdag**	**2.06**	**26**	P	**Pb**	**13 12 29.4**	**-0.8**
BODT	**Bodrum**	**2.07**	**149**	PN	**Pb**	**13 12 27.9**	**-2.5**
DURS	**Dursunbey**	**2.08**	**68**	P	**Pb**	**13 12 28.5**	**-2.0**
DURS				S	**Sb**	**13 12 54.9**	**-1.1**
MAR6	**Marsite Statio**	**2.10**	**28**	PN	**Pb**	**13 12 29.1**	**-1.8**
KULA	**Kula-Manisa**	**2.13**	**98**	PN	**Pb**	**13 12 29.2**	**-2.1**
MAR3	**Marsite Statio**	**2.15**	**28**	PN	**Pb**	**13 12 29.8**	**-1.8**
MRMT	**Marmara Adasi**	**2.15**	**35**	PN	**Pb**	**13 12 29.9**	**-1.8**
GZKV	**Gazikoy-Tekird**	**2.16**	**28**	PN	**Pb**	**13 12 29.9**	**-2.0**
UKOP	**Ucunkopru-Edir**	**2.33**	**12**	PN	**Pb**	**13 12 32.0**	**-2.7**
SIMA	**Simav-Kutahya**	**2.36**	**83**	PN	**Pb**	**13 12 33.3**	**-1.9**
ULDT	**Uludag**	**2.77**	**61**	P	**Pb**	**13 12 44.7**	**+2.4**
TVSB	**Tavsanli**	**2.78**	**76**	PN	**Pb**	**13 12 39.5**	**-2.9**
ARMT	**Armutlu**	**2.81**	**51**	PN	**Pb**	**13 12 39.8**	**-3.1**
KIRK	**Kırklareli**	**3.05**	**16**	P	**Pn**	**13 12 41.1**	**+1.3**
VIZE	**Kirklareli, Vi**	**3.08**	**27**	P	**Pn**	**13 12 41.1**	**+1.0**
ARMN	**Kirklareli, Me**	**3.21**	**20**	P	**Pn**	**13 12 43.0**	**+1.0**

*NEIC **28** 13:22:09.7±1.2,17˙.9S±0˙.2×178˙.6W±0˙.1,h433km±11km, mb4.0/9,Error ellipse: s-maj=31.6km s-min=16.8km az=168.0*
*IDC **28** 13:22:18.0±32.0,19˙.42S×178˙.39W,h550km±386km, mb2.9/5,mbtmp3.9/5,Error ellipse: s-maj=227.1km s-min=78.1km az=142.0*

ISC 28 13:22:12.2±1.2,18˙.1S±0˙.2×179˙.0W±0˙.2,h450km,n21, σ1§32/19,mb3.7/10,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.86**	**276**	P	**P**	**13 23 16.3**	**-2.1**
MARNC	**Mare, Loyalty**	**12.71**	**252**	P	**P**	**13 24 58.6**	**-0.2**
LIFNC	**LIFOU**	**13.30**	**256**	P	**P**	**13 25 05.0**	**-0.2**
PINNC	**Pines Island,**	**13.53**	**248**	P	**P**	**13 25 06.5**	**-1.2**
OUENC	**Ouen Island, N**	**14.02**	**250**	P	**P**	**13 25 12.2**	**-0.7**
CTA	**Charters Tower**	**32.91**	**261**	P	**P**	**13 28 10.8**	**+3.0**
	3.6nm,0.8s,baz=99,slow=13,SNR=1.9						
	3.6nm,0.8s						
CTAO	**Charters Tower**	**32.91**	**261**	P	**P**	**13 28 10.4**	**+2.5**
PATS	**Pohnpei**	**33.38**	**316**	P	**P**	**13 28 11.0**	**-0.9**
WR0	**Warramunga Arr**	**43.90**	**260**	P	**P**	**13 29 38.7**	**+0.9**
WR0				IAmb	IAmb	13 30 20.1	
	comp=Z,12nm,1.4s						
WB0	**Warramunga Arr**	**44.06**	**260**	P	**P**	**13 29 40.1**	**+1.1**
WB0				IAmb	IAmb	13 30 21.9	
	comp=Z,5.9nm,1.1s						
WB2	**Warramunga Arr**	**44.08**	**260**	P	**P**	**13 29 40.2**	**+0.9**
WB2				IAmb	IAmb	13 30 00.1	
	comp=Z,17nm,1.4s						
WRA	**Warramunga Arr**	**44.09**	**260**	P	**P**	**13 29 40.1**	**+0.8**
	comp=Z,0.6nm,0.3s,baz=96,slow=7.7,SNR=43						
	comp=Z,0.6nm,0.3s						
WRA	**Warramunga Arr**	**44.09**	**260**	P	**P**	**13 29 39.1**	**-0.2**
AS31	**Alice Springs**	**44.25**	**254**	P	**P**	**13 29 40.0**	**-0.5**
ASAR	**Alice Springs**	**44.25**	**254**	P	**P**	**13 29 40.0**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=85,slow=8.3,SNR=15						
	comp=Z,0.7nm,0.5s						
ASAR	**Alice Springs**	**44.25**	**254**	P	**P**	**13 29 39.7**	**-0.8**
MBWA	**Marble Bar**	**57.53**	**256**	P	**P**	**13 31 18.0**	**+0.2**
MBWA				IAmb	IAmb	13 31 21.4	
	comp=Z,12nm,1.4s						
QSPA	**South Pole Qui**	**72.01**	**180**	P	**P**	**13 32 48.6**	**-0.5**
QSPA				IAmb	IAmb	13 33 23.2	
	comp=Z,1.6nm,1.2s						
NVAR	**Mina Array Bea**	**79.89**	**44**	P	**P**	**13 33 34.2**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=229,slow=8.2,SNR=2.6						
	comp=Z,0.5nm,0.6s						
TXAR	**Lajitas Array**	**86.51**	**58**	P	P	13 34 03.8	-3.1
	comp=Z,0.5nm,0.9s,baz=221,slow=3.6,SNR=5.4						
	comp=Z,0.5nm,0.9s						
TROLL	**Troll, Antarti**	**90.17**	**180**	P	P	13 34 34.5	+11

*IDC **28** 13:29:37.9±0.9,14˙.29S×166˙.70E,h0km,mb4.0/11, mbtmp4.0/11,MS4.1/12,Error ellipse: s-maj=28.2km s-min=19.9km az=109.0*
*NEIC **28** 13:29:43.5±1.0,14˙.40S±0˙.10×167˙.0E±0˙.1,h37km±6km, mb4.6/22,Error ellipse: s-maj=15.8km s-min=14.1km az=101.0*
*GCMT **28** 13:29:44.5±0.4,14˙.27S±0˙.02×166˙.53E±0˙.02,h18km±2km, MW4.8/72,Moment Tensor Solution. s10,c11; s72,c97; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.05±. 12; $M_{\theta\theta}$-0.41±.11; $M_{\phi\phi}$0.46±.10; $M_{r\theta}$0.22±.23; $M_{\theta\phi}$2.10±.10; $M_{\phi r}$0.47±.24; Best double couple: M_o2.20400×10^{16} NP1:ϕ8̲85.00000°,δ79.00000°,λ6.00000°. NP2: ϕ354.00000°,δ84.00000°,λ169.00000°. Principal axes: T 2.2820, Plg12.0000°, Azm309.0000°; N -0.1560, Plg77.0000°, Azm146.0000°; P -2.1270, Plg4.0000°, Azm40.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 13:29:43.1±0.6,14˙.40S±0˙.08×166˙.8E±0˙.1,h35km,n64, σ1§01/49,mb4.4/23,MS4.0/12,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIFNC	**LIFOU**	**6.36**	**176**	Pn	**Pn**	**13 31 13.9**	**-0.4**
KOUNC	**Koumac, New Ca**	**6.58**	**201**	Pn	**Pn**	**13 31 18.0**	**+0.6**
MARNC	**Mare, Loyalty**	**7.14**	**171**	Pn	**Pn**	**13 31 24.5**	**-0.5**
ONTNC	**Ouen Toro**	**7.87**	**183**		**Pn**	**13 31 35.9**	**+0.7**
OUENC	**Ouen Island, N**	**7.98**	**180**		**Pn**	**13 31 36.2**	**-0.4**
PINNC	**Pines Island,**	**8.19**	**176**		**Pn**	**13 31 38.2**	**-1.3**
HNR	**Honiara**	**8.35**	**306**	LR	LR	13 34 39.5	
	comp=Z,1µm,20.6s,baz=144,slow=37						
MSVF	**Nonsavu**	**11.29**	**109**	LR	LR	13 35 55.7	
	comp=Z,1µm,21.8s,baz=281,slow=33						
KRVT	**Keravat (AS076**	**17.70**	**303**	LR	LR	13 41 35.8	
	comp=Z,588nm,18.1s,baz=273,slow=41						
EIDS	**Eidsvold**	**18.37**	**231**	P	**P**	**13 33 55.5**	**+0.5**
PMG	**Port Moresby**	**19.87**	**282**	LR	LR	13 40 55.0	
	comp=Z,1µm,18.8s,baz=44,slow=34						
RAO	**Raoul Island**	**20.44**	**139**	LR	LR	13 40 30.3	
	comp=Z,817nm,21.3s,baz=42,slow=32						
CTA	**Charters Tower**	**20.44**	**251**	P	**P**	**13 34 17.2**	**-0.4**
	4.7nm,1.0s,baz=69,slow=13,SNR=4.0						
CTA				LR	LR	13 40 38.0	
	comp=Z,293nm,18.7s,baz=76,slow=32						
	4.7nm,1.0s						
CTAO	**Charters Tower**	**20.44**	**251**	Pn	Pn	13 34 21.0	+1.1
CTAO				IAmb	IAmb	13 34 25.4	
	comp=Z,30nm,1.2s						
URZ	**Urewera**	**25.45**	**161**	P	**P**	**13 35 10.0**	**+2.2**
	comp=Z,3.5nm,0.5s,baz=308,slow=19,SNR=2.1						
URZ				LR	LR	13 44 05.3	
	comp=Z,521nm,18.5s,baz=31,slow=34						
	comp=Z,3.5nm,0.5s						
BKZ	**Black Stump Fm**	**26.10**	**163**	P	**P**	**13 35 14.2**	**+0.5**
BKZ				IAmb	IAmb	13 35 26.1	
	comp=Z,20nm,1.2s						
STKA	**Stephens Creek**	**28.88**	**229**	P	**P**	**13 35 39.0**	**+0.3**
	comp=Z,2.3nm,0.5s,baz=52,slow=9.8,SNR=5.0						
STKA				LR	LR	13 46 52.4	
	comp=Z,495nm,18.3s,baz=52,slow=36						
	comp=Z,2.3nm,0.5s						
STKA	**Stephens Creek**	**28.88**	**229**	P	**P**	**13 35 39.1**	**+0.4**
RPZ	**Rata Peaks**	**29.44**	**174**	LR	LR	13 45 35.9	
	comp=Z,226nm,21.9s,baz=344,slow=32						
WHZ	**Wether Hill Ro**	**31.41**	**178**	P	**P**	**13 36 00.5**	**-0.3**
WB0	**Warramunga Arr**	**31.43**	**256**	P	**P**	**13 35 59.8**	**-1.5**
WB0				IAmb	IAmb	13 36 12.5	
	comp=Z,5.7nm,1.1s						
WB2	**Warramunga Arr**	**31.48**	**255**	P	**P**	**13 36 02.2**	**+0.5**
WB2				IAmb	IAmb	13 36 30.5	
	comp=Z,21nm,1.5s						
WRAB	**Tennant Creek**	**31.48**	**255**	P	**P**	**13 36 01.6**	**-0.2**
WRAB				IAmb	IAmb	13 36 07.2	
	comp=Z,7.6nm,0.5s						
WRA	**Warramunga Arr**	**31.49**	**255**	P	**P**	**13 35 59.9**	**-2.0**
	comp=Z,0.6nm,0.6s,baz=86,slow=9.4,SNR=11						
WRA				LR	LR	13 47 46.5	
	comp=Z,259nm,18.7s,baz=46,slow=35						
	comp=Z,0.6nm,0.6s						
WRA	**Warramunga Arr**	**31.49**	**255**	IAmb	IAmb	13 36 08.0	
	comp=Z,0.3nm,1.2s						
AS31	**Alice Springs**	**32.39**	**248**	P	**P**	**13 36 08.2**	**-1.6**
ASAR	**Alice Springs**	**32.39**	**248**	P	**P**	**13 36 08.1**	**-1.7**
	comp=Z,1.1nm,0.5s,baz=73,slow=9.4,SNR=21						
ASAR				PcP	**PcP**	**13 38 56.5**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=84,slow=2.8,SNR=2.0						
	comp=Z,1.1nm,0.5s						
ASAR	**Alice Springs**	**32.39**	**248**	P	**P**	**13 36 08.0**	**-1.8**
RAR	**Rarotonga**	**32.47**	**107**	LR	LR	13 46 35.6	
	comp=Z,143nm,21.0s,baz=274,slow=31						
BBOO	**Buckleboo**	**33.44**	**231**	P	**P**	**13 36 19.3**	**+0.4**
BBOO				IAmb	IAmb	13 36 27.4	
	comp=Z,19nm,1.1s						
GUMO	**Guam**	**35.30**	**321**	LR	LR	13 52 03.7	
	comp=Z,310nm,18.0s,baz=124,slow=38						
FORT	**Forrest**	**39.10**	**239**	P	**P**	**13 37 07.2**	**0.0**
PPT2	**Papeete2**	**41.97**	**100**	*e*LR	LR	13 49 07.3	
	comp=Z,329nm,30.2s						
TBI	**Tubuai**	**42.18**	**109**	*e*LR	LR	13 49 12.4	
	comp=Z,317nm,27.2s						
NWAO	**Narrogin (SRO)**	**48.55**	**239**	P	**P**	**13 38 23.7**	**+0.6**
MORW	**Morawa**	**49.02**	**244**	P	**P**	**13 38 27.5**	**+0.7**
JAGI	**Jajag, Banyuwa**	**51.87**	**270**	P	**P**	**13 38 48.7**	**+0.2**
TAOE	**Nuku Hiva Isla**	**52.14**	**90**	*e*LR	LR	13 53 50.0	
	comp=Z,97nm,22.6s						
VNDA	**Vanda**	**63.18**	**181**	P	**P**	**13 40 07.9**	**+0.7**
	comp=Z,2.3nm,1.1s,baz=17,slow=5.7,SNR=5.9						
	comp=Z,2.3nm,1.1s						
VNDA	**Vanda**	**63.18**	**181**	P	**P**	**13 40 07.2**	**+0.1**
VNDA				IAmb	IAmb	13 40 20.3	
	comp=Z,5.2nm,1.2s						
KSRS	**Korea Array**	**63.23**	**326**	P	**P**	**13 40 08.8**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=127,slow=8.4,SNR=3.0						
	comp=Z,0.3nm,0.3s						
PEA0B	**Petropavlovsk-**	**67.69**	**354**	P	**P**	**13 40 36.5**	**0.0**
PEA0B				IAmb	IAmb	13 40 47.8	
	comp=Z,16nm,1.2s						
PETK	**Petropavlovsk-**	**67.69**	**354**	P	**P**	**13 40 36.3**	**-0.3**
	comp=Z,3.0nm,0.9s,baz=164,slow=5.7,SNR=4.5						
	comp=Z,3.0nm,0.9s						
HHC	**Hu-ho-hao-te**	**75.06**	**320**	*e*P	P	13 41 27.0	+5.5
HHC				pmax	pmax		
	comp=Z,23nm,1.1s						
HHC				pmax	pmax		
	comp=Z,97nm,4.7s						
HHC				LR	LR		
	comp=N,380nm,15.9s						
HHC				LR	LR		
	comp=E,430nm,15.9s						
HHC				LR	LR		
	comp=Z,290nm,14.6s						
LZH	**Lanzhou**	**77.78**	**312**	*e*P	**P**	**13 41 35.0**	**-2.1**
LZH				sP	sP	13 41 55.0	+4.1
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
SONM	**Songino Array**	**81.98**	**324**	P	**P**	**13 41 59.1**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=140,slow=7.0,SNR=1.7						
	comp=Z,0.2nm,0.4s						
SONM	**Songino Array**	**81.98**	**324**	IAmb	IAmb	13 42 08.9	
	comp=Z,2.6nm,1.1s						
GTA	**Gaotai**	**82.13**	**314**	*e*P	P	13 42 08.8	+8.3
GTA				sP	sP	13 42 19.3	+4.5
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
IMAR	**Indian Mountai**	**85.36**	**15**	P	**P**	**13 42 17.9**	**+1.7**
WRH	**Wood River Hil**	**85.77**	**18**	P	**P**	**13 42 17.7**	**-0.7**
WRH				IAmb	IAmb	13 42 29.7	
	comp=Z,9.4nm,1.4s						
IL31		**86.35**	**18**	P	**P**	**13 42 21.4**	**+0.3**
IL31				IAmb	IAmb	13 42 46.3	
	comp=Z,1.9nm,0.8s						
ILAR	**Eielson Array**	**86.35**	**18**	P	**P**	**13 42 20.2**	**-0.9**
	comp=Z,0.8nm,0.6s,baz=241,slow=5.2,SNR=14						

mbtmp3.4/4, Error ellipse: s-maj=730.2km s-min=32.0km az=154.0

*NEIC **28** 13:32:14.2±0.6,51.8N±0.2×178.3E±0.1,h108km±6km, mb3.7/14, ML3.1(AEIC), Error ellipse: s-maj=22.4km s-min=9.3km az=181.0*

*AEIC **28** 13:32:15±1.2,51.8N±0.2×178.3E±0.1,h103km±5km, Error ellipse: s-maj=27.2km s-min=9.2km az=183.0*

ISC 28 13:32:13.9±0.8,51.9N±0.1×178.31E±0.07,h100km,n55, σ1§19/52,**mb3.6/9,Rat Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LSSA	**Little Sitkin**	**0.13**	**70**				**Pn**	**13 32 29.6**	**+1.6**
LSNW	**Little Sitkin**	**0.14**	**62**				**Pn**	**13 32 29.5**	**+1.5**
LSPA	**Little Sitkin**	**0.17**	**72**				**Pn**	**13 32 29.5**	**+1.5**
CESW	**Semis' Southwe**	**0.77**	**90**				**Pn**	**13 32 32.9**	**+1.0**
CEAP	**Semis' Anvil P**	**0.79**	**82**				**Pn**	**13 32 33.6**	**+1.5**
AMKA	**Amchitka**	**0.81**	**130**				**Pn**	**13 32 33.0**	**+0.7**
CERAA	**Semis' Rag'd T**	**0.85**	**89**				**Pn**	**13 32 33.8**	**+1.1**
GASW	**Gareloi Southw**	**1.76**	**93**				**Pn**	**13 32 44.0**	**+0.6**
GALAA	**Gareloi Lava P**	**1.81**	**93**				**Pn**	**13 32 45.1**	**+1.1**
GAEA	**Gareloi East**	**1.83**	**93**				**Pn**	**13 32 45.1**	**+0.9**
TASE	**Tanaga Southea**	**2.26**	**90**				**Pn**	**13 32 50.7**	**+0.8**
TAFP	**Tanaga Falls P**	**2.29**	**89**				**Pn**	**13 32 50.7**	**+0.5**
TAPA	**Tanaga Point A**	**2.40**	**91**				**Pn**	**13 32 52.5**	**+0.8**
SMY	**Shemya**	**2.71**	**289**				**Pn**	**13 32 57.2**	**+1.5**
KIMD	**Kanaga Island**	**2.77**	**91**				**Pn**	**13 32 57.0**	**+0.6**
KICM	**Kanaga Island**	**2.78**	**88**				**Pn**	**13 32 57.6**	**+0.9**
KIKV	**Kanaga Island**	**2.80**	**89**				**Pn**	**13 32 57.6**	**+0.7**
KIWB	**Kanaga Island**	**2.81**	**89**				**Pn**	**13 32 57.6**	**+0.5**
ADK	**Adak**	**3.10**	**88**				**Pn**	**13 33 01.0**	**+0.1**
GSCK	**Great Sitkin C**	**3.42**	**86**				**Pn**	**13 33 05.6**	**+0.4**
GSTD	**Great Sitkin T**	**3.43**	**85**				**Pn**	**13 33 06.1**	**+0.7**
GSTR	**Great Sitkin T**	**3.48**	**85**				**Pn**	**13 33 06.6**	**+0.6**
GSMY	**Great Sitkin M**	**3.48**	**86**				**Pn**	**13 33 06.8**	**+0.7**
ATKA	**Atka Island**	**4.63**	**83**				**Pn**	**13 33 22.4**	**+0.9**
KOFP	**Korovin Flat P**	**4.70**	**82**				**Pn**	**13 33 23.1**	**+0.7**
UNV	**Unalaska Valle**	**9.39**	**72**	Pn			**Pn**	**13 34 27.7**	**+1.6**
SDPT	**Sand Point**	**13.04**	**66**	Pn			**Pn**	**13 35 13.9**	**-1.1**
CNBA	**Chernabura Isl**	**13.50**	**69**	Pn			**Pn**	**13 35 18.5**	**-2.6**
OHAK	**Old Harbor**	**17.23**	**61**	P			**P**	**13 36 05.9**	**-2.1**
OHAK				IAmb			IAmb	13 36 22.8	
	comp=Z,9.2nm,1.1s								
N19K	**Bonanza Creek**	**17.39**	**49**	P			**P**	**13 36 09.6**	**-0.3**
N19K				IAmb			IAmb	13 36 15.7	
	comp=Z,5.1nm,1.1s								
KDAK	**Kodiak Island**	**17.67**	**59**	P			**P**	**13 36 11.1**	**-1.7**
RSO	**Redoubt South**	**18.10**	**50**	P			**P**	**13 36 17.0**	**-0.8**
K20K	**Telida**	**18.53**	**41**	Pn			**Pn**	**13 36 24.8**	**+1.2**
CNPM	**China Poot**	**18.64**	**54**	P			**P**	**13 36 23.5**	**+0.1**
J20K	**Nowinta River**	**18.87**	**39**	Pn			**P**	**13 36 28.2**	**+2.3**
J20K				IAmb			IAmb	13 37 06.6	
	comp=Z,4.8nm,1.5s								
RIDG	**Independent Ri**	**22.54**	**44**	P			**P**	**13 37 07.4**	**+2.1**
GLB	**Gilahina Butte**	**22.57**	**50**	P			**P**	**13 37 06.9**	**+1.3**
GLB				IAmb			IAmb	13 37 10.8	
	comp=Z,5.1nm,1.1s								
J26L	**Joseph Creek**	**23.28**	**43**	P			**P**	**13 37 12.5**	**0.0**
J26L				IAmb			IAmb	13 37 25.5	
	comp=Z,4.8nm,1.5s								
BARN	**Barnard Glacie**	**23.57**	**51**	P			**P**	**13 37 16.6**	**+1.4**
BARN				IAmb			IAmb	13 37 18.1	
	comp=Z,3.1nm,0.6s								
L27K	**Beaver Creek,**	**23.73**	**46**	P			**P**	**13 37 17.4**	**+0.9**
BCAR	**Beaver Creek A**	**23.75**	**46**	P			**P**	**13 37 18.6**	**+1.9**
BMAR	**Burnt Mountain**	**23.81**	**35**	P			**P**	**13 37 18.7**	**+1.5**
USA0B	**Ussuriysk Arra**	**31.45**	**274**	P			**P**	**13 38 23.7**	**-1.8**
USRK	**Ussuriysk Ar.**	**31.45**	**274**	P			**P**	**13 38 24.7**	**-0.9**
H11N2	**WAKE ISLAND Hy**	**33.33**	**200**	T			T	14 14 13.2	
	baz=11,slow=76,SNR=3.5								
H11N3	**WAKE ISLAND Hy**	**33.34**	**200**	T			T	14 14 14.7	
	baz=11,slow=76,SNR=3.2								
H11N1	**WAKE ISLAND Hy**	**33.35**	**200**	T			T	14 14 11.4	
	baz=11,slow=76,SNR=5.0								
NVAR	**Mina Array Bea**	**45.26**	**81**	P			**P**	**13 40 22.2**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=297,slow=8.0,SNR=3.7								
	comp=Z,0.3nm,0.6s								
BW06	**Boulder Array**	**47.85**	**71**	P			**P**	**13 40 41.2**	**-0.4**
BW06				IAmb			IAmb	13 40 41.3	
	comp=Z,1.0nm,0.9s								
PD31	**Pinedale Array**	**47.85**	**71**	P			**P**	**13 40 41.2**	**-0.4**
PD31				IAmb			IAmb	13 41 07.5	
	comp=Z,2.5nm,1.5s								
PDAR	**Pinedale Array**	**47.85**	**71**	P			**P**	**13 40 41.1**	**-0.4**
TXAR	**Lajitas Array**	**60.34**	**79**	P			**P**	**13 42 12.7**	**+0.4**
	comp=Z,0.1nm,0.5s,baz=316,slow=5.0,SNR=2.1								
	comp=Z,0.1nm,0.5s								
TXAR	**Lajitas Array**	**60.34**	**79**	P			**P**	**13 42 11.6**	**-0.6**
WRA	**Warramunga Arr**	**81.18**	**221**	P			**P**	**13 44 18.6**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=34,slow=5.9,SNR=2.1								
	comp=Z,0.4nm,0.6s								
ASAR	**Alice Springs**	**84.69**	**220**	P			**P**	**13 44 37.6**	**+1.2**
	comp=Z,0.2nm,0.6s,baz=30,slow=5.8,SNR=1.8								
	comp=Z,0.2nm,0.6s								

*BUL **28** 13:53:26.2±0.9,26.03S×28.99E,h10km,MD2.7*
*EAF **28** 13:53:26.2±0.9,26.03S×28.99E,h10km,MD2.8*
*PRE **28** 13:53:41.7±0.9,26.26S×27.69E,h2km,ML2.2*

ISC 28 13:53:41.0±1.4,26.26S±0.05×27.68E±0.05,h17km±13km, n8,σ0§57/16,**South Africa**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HRAO	**HartRAO**	**0.36**	**1**	*e*P			**Pb**	**13 53 49.1**	**0.0**
HRAO				*e*S			**Sg**	**13 53 54.3**	**+0.5**
HRAO				IAML				13 54 00.4	
	comp=Z,215nm,0.6s								
SLR	**Silverton**	**0.75**	**46**	*e*P			**Pg**	**13 53 55.4**	**-0.3**
SLR				*e*S			**Sb**	**13 54 06.3**	**+0.6**
SLR				IAML				13 54 11.0	
	comp=Z,46nm,0.7s								
KSR	**Koster**	**0.81**	**299**	*e*P			**Pb**	**13 53 56.9**	**+0.1**
KSR				*e*S			**Sb**	**13 54 08.5**	**+1.0**
KSR				IAML				13 54 17.4	
	comp=Z,135nm,0.2s								
LBTB	**Lobatse**	**2.25**	**303**	*i* P			**Pn**	**13 54 16.8**	**-0.8**
LBTB				*i* S			**Sg**	**13 54 53.6**	**+0.1**
LBTB	**Lobatse**	**2.25**	**303**	*i* P			**Pn**	**13 54 16.8**	**-0.8**
LBTB				*i* S			**Sg**	**13 54 53.6**	**+0.1**
SWZ	**Schweizer**	**2.30**	**246**	*e*P			**Pb**	**13 54 21.8**	**-0.3**
SWZ				*e*S			**Sb**	**13 54 51.0**	**+0.8**
SWZ				IAML				13 55 06.0	
	comp=Z,19nm,0.6s								
BOSA	**Boshof**	**3.19**	**222**	*i* P			**Pn**	**13 54 30.8**	**+0.3**
BOSA				*i* S			**Sb**	**13 55 15.8**	**-0.1**
BOSA	**Boshof**	**3.19**	**222**	*i* P			**Pn**	**13 54 30.8**	**+0.3**
BOSA				*i* S			**Sb**	**13 55 15.8**	**-0.1**

*IDC **28** 13:54:30.0±1.3,14.01S×166.67E,h0km,mb3.9/4, mbtmp3.9/4, MS3.5/2, Error ellipse: s-maj=59.0km s-min=30.5km az=124.0*

*NEIC **28** 13:54:32.8±1.0,14.13S±0.04×166.7E±0.1,h10km±1km, mb4.4/6, Error ellipse: s-maj=24.2km s-min=6.7km az=89.0*

ISC 28 13:54:32.8±0.8,14.2S±0.1×166.6E±0.1,h10km,n24, σ1§96/21,**mb4.0/4,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LIFNC	**LIFOU**	**6.59**	**175**	Pn			**Pn**	**13 56 10.3**	**+0.4**
KOUNC	**Koumac, New Ca**	**6.71**	**199**				**Pn**	**13 56 09.9**	**-1.6**
MARNC	**Mare, Loyalty**	**7.39**	**170**	Pn			**Pn**	**13 56 20.5**	**-0.4**
HNR	**Honiara**	**8.04**	**305**	LR			LR	13 59 31.5	
	comp=Z,208nm,19.8s,baz=127,slow=38								
HNR	**Honiara**	**8.04**	**305**	Pn			**Pn**	**13 56 30.2**	**+0.5**
ONTNC	**Ouen Toro**	**8.09**	**181**	Pn			**Pn**	**13 56 27.8**	**-2.6**
OUENC	**Ouen Island, N**	**8.20**	**178**				**Pn**	**13 56 29.5**	**-2.4**
MSVF	**Nonsavu**	**11.57**	**109**	LR			LR	14 00 45.4	
	comp=Z,373nm,18.5s,baz=242,slow=32								
CTA	**Charters Tower**	**20.30**	**250**	P			**P**	**13 59 09.7**	**+0.6**
	7.3nm,1.0s,baz=91,slow=12,SNR=2.8								
	7.3nm,1.0s								
BKZ	**Black Stump Fm**	**26.38**	**163**	P			**P**	**14 00 08.0**	**-1.4**
STKA	**Stephens Creek**	**26.87**	**228**	P			**P**	**14 00 31.6**	**-0.2**
	1.2nm,0.5s,baz=61,slow=10,SNR=3.8								
	1.2nm,0.5s								
BBOO	**Buckleboo**	**33.41**	**231**	P			**P**	**14 01 12.0**	**+0.2**
VNDA	**Vanda**	**63.40**	**181**	P			**P**	**14 05 02.2**	**+0.1**
	0.7nm,1.0s,baz=9.2,slow=5.7,SNR=3.2								
	0.7nm,1.0s								
VNDA	**Vanda**	**63.40**	**181**	IAmb			IAmb	14 05 10.2	

	comp=Z,1.6nm,0.9s								
QSPA	**South Pole Qui**	**75.85**	**180**	P			**P**	**14 06 19.1**	**-0.2**
IMAR	**Indian Mountai**	**85.20**	**15**	P			**P**	**14 07 08.7**	**-0.4**
ILAR	**Eielson Array**	**86.20**	**18**	P			**P**	**14 07 12.2**	**-1.9**
	comp=Z,0.5nm,0.7s,baz=233,slow=5.7,SNR=7.3								
	comp=Z,0.5nm,0.7s								
BELA	**Belgrano 2**	**87.32**	**176**	P			**P**	**14 07 21.1**	**+1.6**
BELA				IAmb			IAmb	14 07 23.5	
	comp=Z,4.0nm,1.0s								
TROLL	**Troll, Antarti**	**93.36**	**185**	P			**P**	**14 07 49.1**	**+1.1**
SNAA	**Sanae**	**94.06**	**183**	P			**P**	**14 07 54.0**	**+2.9**
VNA3	**Neumayer Olymp**	**94.75**	**181**	P			**P**	**14 07 57.6**	**+3.3**
VNA2	**Neumayer--Watz**	**95.01**	**182**	P			**P**	**14 07 59.7**	**+4.2**
	baz=176,slow=4.2								
ARCES	**ARCESS Array B**	**119.55**	**345**	PKP			**PKPdf**	**14 13 20.8**	**-1.6**
	comp=Z,1.9nm,0.9s,baz=59,slow=0.5,SNR=1.9								
KEST	**Kesra**	**150.37**	**320**	PKPbc			**PKPbc**	**14 14 23.2**	**-1.9**
	comp=Z,4.5nm,0.9s,baz=42,slow=3.7,SNR=4.1								

*BJI **28** 13:55:46.2±0.0,4.61S×133.88E,h5km,mb4.6/64, mB4.9/42, Ms4.7/57, Ms7 4.5/55*

*IDC **28** 13:55:49.6±0.5,4.28S×133.76E,h0km,mb4.6/19, mbtmp4.7/23, ML4.6/3, MS4.5/54, Error ellipse: s-maj=20.1km s-min=9.7km az=68.0*

*MOS **28** 13:55:50.0±1.2,4.36S×133.81E,h19km,mb5.1/35, Error ellipse: s-maj=11.1km s-min=6.0km az=113.9*

*NEIC **28** 13:55:51.1±1.6,4.21S±0.06×133.79E±0.08,h10km±1km, mb5.1/84, Error ellipse: s-maj=14.9km s-min=9.3km az=246.0*

*DJA **28** 13:55:51.4±0.7,4.5S±2.3×13.4E±.,h11km±5km,M5.0/75, mB5.5/44, mb5.2/75, MLv5.4/12, Mw(mB)5.0/44, MwMwp4.9/5, Mwp5.2/5*

*GCMT **28** 13:55:52.1±0.1,4.16S±0.01×133.72E±0.01,h12km, MW5.1/135, Moment Tensor Solution. s75,c107; s135,c242; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr-0.47±.10; Mθθ3.27±.09; Mφφ-2.80±.10; Mrθ0.82±.25; Mrφ4.72±.07; Mθφ-1.04±.26; Best double couple: M≥5.77800×10^16^ NP1:ϕs17.00000°,δ79.00000°, λ-171.00000°. NP2:ϕs286.00000°,δ82.00000°, λ-11.00000°. Principal axes: T 5.8540, Plg2.0000°, Azm332.0000°; N -0.1560, Plg76.0000°, Azm70.0000°; P -5.7020, Plg14.0000°, Azm241.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*KLM **28** 13:56:00,3.89S×134.20E,h99km,mb5.0*

ISC 28 13:55:50.8±0.3,4.32S±0.03×133.82E±0.04,h10km,n465, σ1§85/457,**mb5.0**/101,**MS4.5**/71,**11C-4D,Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**2.10**	**312**	Pn			**Pn**	**13 56 24.0**	**-2.0**
FAKI	**Fak Fak**	**2.10**	**312**	P			**Pn**	**13 56 24.1**	**-1.9**
FAKI				S			**Sb**	**13 56 54.7**	**-0.3**
FAKI	**Fak Fak**	**2.10**	**312**	P			**Pn**	**13 56 24.6**	**-1.4**
SRPI	**Serui, Papua**	**3.43**	**45**	P			**Pn**	**13 56 43.5**	**-0.9**
BAKI	**Biak**	**3.86**	**36**	P			**Pn**	**13 56 49.6**	**-0.6**
BNDI	**Bandanaira**	**3.91**	**267**	P			**Pn**	**13 56 51.5**	**+0.6**
SIJI	**Sorong**	**4.27**	**323**	Pn			**Pn**	**13 56 53.2**	**-2.8**
	8.8nm,0.3s,baz=150,slow=12,SNR=24								
SIJI				Sn			**Sn**	**13 57 40.1**	**-5.8**
	59nm,0.3s,baz=157,slow=20,SNR=3.6								
SIJI				LR			LR	13 58 56.2	
	comp=Z,12μm,19.7s,baz=158,slow=44								
	78nm,0.6s								
SWI	**Sorong**	**4.28**	**323**	P			**Pn**	**13 56 56.7**	**+0.6**
SWI				S			**Sb**	**13 57 54.5**	**-3.5**
SAUI	**Saumlaki**	**4.42**	**214**	Pn			**Pn**	**13 56 58.1**	**+0.2**
MSAI	**Masohi**	**4.97**	**281**	P			**Pn**	**13 57 05.8**	**+0.2**
	0.7nm1μm119nm,0.7s								
MSAI				S			**Sn**	**13 58 05.6**	**+2.4**
	0.7nm1μm119nm,0.7s								
SMPI	**Sarmi**	**5.40**	**65**	P			**Pn**	**13 57 12.1**	**+0.6**
	0.8nm6μm3μm148nm,0.9s								
SMPI				S			**Sn**	**13 58 12.2**	**-1.6**
	0.8nm6μm3μm148nm,0.9s								
AAI	**Ambon**	**5.65**	**276**	P			**Pn**	**13 57 14.6**	**-0.3**
	3.0nm8μm946nm,0.7s								
AAI				S			**Sn**	**13 58 16.3**	**-3.5**
	3.0nm8μm946nm,0.7s								
GENI	**Genyem**	**6.56**	**75**	P			**Pn**	**13 57 28.1**	**+0.6**
	1.7nm5μm5μm298nm,0.9s								
GENI	**Genyem**	**6.56**	**75**	P			**Pn**	**13 57 30.6**	**+3.1**
NLAI	**Namlea**	**6.79**	**279**	P			**Pn**	**13 57 32.9**	**+2.3**
	1.9nm3μm339nm,0.6s								
LBMI	**Labuha**	**7.29**	**300**	P			**Pn**	**13 57 36.2**	**-1.3**
	1.9nm3μm348nm,1.0s								
SANI	**Sanana**	**8.14**	**286**	P			**Pn**	**13 57 46.8**	**-2.3**
	2μm176nm,0.7s								
SANI	**Sanana**	**8.14**	**286**	P			**Pn**	**13 57 47.2**	**-1.9**
TNTI	**Ternate**	**8.19**	**308**	Pn			**Pn**	**13 57 47.7**	**-2.2**
TNTI	**Ternate**	**8.19**	**308**	P			**Pn**	**13 57 51.8**	**+1.9**
	3μm69nm,1.0s								
KDU	**Kakadu**	**8.42**	**189**	P			**Pn**	**13 57 54.0**	**+1.0**
	baz=8.4,SNR=289								
KDU				S			**Sn**	**13 59 25.3**	**-2.8**
	baz=8.4								
KDU	**Kakadu**	**8.42**	**189**	P			**Pn**	**13 57 54.7**	**+1.7**
MTN	**Manton Dam**	**8.88**	**197**	P			**Pn**	**13 57 59.6**	**+0.4**
	baz=8.8,SNR=400								
MTN				S			**Sn**	**13 59 36.6**	**-2.8**
	baz=8.8								
MTN	**Manton Dam**	**8.88**	**197**	Pn			**Pn**	**13 57 59.3**	**+0.1**
MTN	**Manton Dam**	**8.88**	**197**	P			**Pn**	**13 58 00.4**	**+1.2**
KMSI	**Cibinong**	**10.97**	**296**	P			**Pn**	**13 58 28.3**	**+0.4**
	3μm252nm,0.8s								
BBSI	**Bau Bau**	**11.27**	**264**	P			**Pn**	**13 58 34.9**	**+2.9**
	624nm51nm,0.9s								
SGSI	**Sangihe**	**11.48**	**314**	P			**Pn**	**13 58 38.2**	**+3.2**
	63nm,0.9s								
LUWI	**Luwuk**	**11.50**	**286**	P			**Pn**	**13 58 36.6**	**+1.3**
	2μm134nm,0.8s								
BATI	**Baumata**	**11.65**	**239**	P			**Pn**	**13 58 41.6**	**+4.4**
	1μm143nm,0.9s								
MMRI	**Maumere**	**12.28**	**249**	Pn			**Pn**	**13 58 46.3**	**+0.4**
MMRI	**Maumere**	**12.28**	**249**	P			**Pn**	**13 58 47.0**	**+1.1**
	3μm122nm,1.1s								
KNRA	**Kununurra**	**12.33**	**203**	P			**Pn**	**13 58 44.9**	**-1.7**
	baz=12,SNR=194								
KNRA				S			Sn	14 00 56.9	-7.4
	baz=12								
KNRA	**Kununurra**	**12.33**	**203**	Pn			**Pn**	**13 58 45.2**	**-1.4**
KNRA	**Kununurra**	**12.33**	**203**	P			**Pn**	**13 58 45.6**	**-1.0**
APSI	**Ampana**	**12.62**	**285**	P			**Pn**	**13 58 50.6**	**+0.1**
	1μm139nm,0.9s								
MRSI	**Marisa**	**12.79**	**292**	P			**Pn**	**13 58 51.9**	**-1.0**
	858nm129nm,1.1s								
EDFI	**Ende, Flores**	**12.83**	**249**	P			**Pn**	**13 58 54.9**	**+1.4**
	1μm49nm,1.2s								
COEN	**Coen**	**13.30**	**137**	P			**Pn**	**13 58 58.1**	**-1.7**
	baz=13,SNR=21								
COEN				S			**Sn**	**14 01 22.3**	**-5.6**
	baz=13								
COEN	**Coen**	**13.30**	**137**	Pn			**Pn**	**13 58 58.0**	**-1.8**
BSSI	**Bau Bau, Buton**	**13.40**	**262**	P			**Pn**	**13 59 01.2**	**0.0**
	1μm73nm,1.1s								
BNSI	**Bone**	**13.67**	**269**	P			**Pn**	**13 59 08.5**	**+3.6**
	71nm,0.8s								
BKSI	**Bulukumba**	**13.68**	**265**	P			**Pn**	**13 59 07.6**	**+2.5**
	2μm84nm,1.1s								
DAV	**Davao City (W)**	**13.99**	**324**	LR			LR	14 05 08.6	
	comp=Z,2μm,19.8s,baz=155,slow=40								
SPSI	**Sidrap Palu**	**14.02**	**271**	P			**Pn**	**13 59 11.5**	**+1.9**
	1μm110nm,0.9s								
TTSI	**Tana Toraja**	**14.03**	**275**	P			**P**	**13 59 20.2**	**+2.5**
KAPI	**Kappang**	**14.04**	**267**	*e*P			**Pn**	**13 59 12.2**	**+2.3**
TOLI2	**Tolitoli**	**14.10**	**292**	Pn			**Pn**	**13 59 09.8**	**-0.9**
TOLI2	**Tolitoli**	**14.10**	**292**	P			**Pn**	**13 59 12.1**	**+1.3**
PMG	**Port Moresby**	**14.17**	**112**	Pn			**Pn**	**13 59 10.8**	**-1.0**
	32nm,0.8s,baz=7.2,slow=7.6,SNR=5.8								
PMG				LR			LR	14 06 23.8	
	comp=Z,5μm,18.7s,baz=301,slow=45								
PMG	**Port Moresby**	**14.17**	**112**	Pn			**Pn**	**13 59 10.2**	**-1.6**
PMG	**Port Moresby**	**14.17**	**112**	P			**Pn**	**13 59 11.9**	**+0.1**
PMG	**Port Moresby**	**14.17**	**112**	P			**Pn**	**13 59 11.8**	**0.0**
BASI	**Baing, Sumba**	**14.38**	**245**	P			**Pn**	**13 59 17.6**	**+3.0**
	182nm,1.0s								
MPSI	**Mapaga**	**14.66**	**288**	P			**Pn**	**13 59 17.3**	**-1.1**
	852nm76nm,1.0s								
WBSI	**Waikabubak, Su**	**15.26**	**249**	P			**Pn**	**13 59 27.6**	**+1.0**
	3μm204nm,0.8s								

WB0	**Warramunga Arr**	**15.36**	**178**	Pn			**Pn**	**13 59 24.6**	**-3.3**
WRAB	**Tennant Creek**	**15.53**	**178**	Pn			**Pn**	**13 59 27.2**	**-2.8**
WRAB				IAmb			IAmb	13 59 47.3	
	comp=Z,183nm,1.1s								
WRAB	**Tennant Creek**	**15.53**	**178**	P			**Pn**	**13 59 27.2**	**-2.8**
WRAB				pmax			pmax		
	comp=Z,183nm,1.1s								
WRA	**Warramunga Arr**	**15.54**	**178**	Pn			**Pn**	**13 59 26.4**	**-3.8**
	comp=Z,2.4nm,0.3s,baz=0.1,slow=13,SNR=55								
WRA				Sn				14 02 12.5	-10
	comp=Z,2.4nm,0.3s,baz=358,slow=22,SNR=6.2								
WRA				LR			LR	14 06 18.7	
	comp=Z,2μm,18.9s,baz=12,slow=40								
WRA	**Warramunga Arr**	**15.54**	**178**	Pn			**Pn**	**13 59 26.9**	**-3.2**
WR0	**Warramunga Arr**	**15.56**	**177**				**Pn**	**13 59 27.1**	**-3.4**
WR0				IAmb			IAmb	13 59 43.3	
	comp=Z,155nm,0.9s								
PLAI	**Plampang**	**16.55**	**253**	P			**Pn**	**13 59 43.3**	**+0.1**
	comp=Z,139nm,1.0s								
PLAI	**Plampang**	**16.55**	**253**	P			**Pn**	**13 59 44.6**	**+1.4**
	comp=Z,138nm,1.1s								
QIS	**Mount Isa**	**17.09**	**161**	P			**Pn**	**13 59 48.3**	**-1.8**
	baz=17,SNR=12								
QIS	**Mount Isa**	**17.09**	**161**	P			**Pn**	**13 59 49.8**	**-0.3**
MTSU	**Mount Surprise**	**17.15**	**144**	P			**Pn**	**13 59 52.3**	**+1.5**
	baz=17,SNR=9.9								
MTSU	**Mount Surprise**	**17.15**	**144**	P			**Pn**	**13 59 50.9**	**+0.2**
BKB	**Balikpapan**	**17.17**	**280**				**Pn**	**13 59 51.4**	**+0.3**
BKB				IAmb			IAmb	14 00 13.3	
	comp=Z,148nm,1.0s								
BKB	**Balikpapan**	**17.17**	**280**	P			**P**	**13 59 56.0**	**+3.3**
	comp=Z,3μmcomp=Z,164nm,1.6s								
TWSI	**Taliwang, Sumb**	**17.39**	**255**	P			**P**	**13 59 56.6**	**+1.6**
	comp=Z,52nm,1.6s								
MYLDM	**Lahad Datu**	**17.98**	**302**				**Pn**	**14 00 00.6**	**-0.4**
MYLDM				IAmb			IAmb	14 00 21.8	
	comp=Z,144nm,1.2s								
KRVT	**Keravat (AS076**	**18.16**	**91**	P			**Pn**	**13 59 59.4**	**-3.9**
	comp=Z,22nm,0.8s,baz=270,slow=3.0,SNR=2.8								
KRVT				LR			LR	14 07 39.2	
	comp=Z,2μm,19.5s,baz=53,slow=39								
BBKI	**Banjar Baru**	**18.95**	**272**	P			**P**	**14 00 13.2**	**+0.8**
	comp=Z,8μmcomp=Z,71nm,0.8s								
MTKI	**Muara Teweh, K**	**19.20**	**280**	P			**P**	**14 00 15.9**	**+0.9**
	comp=Z,81nm,0.8s								
AS31	**Alice Springs**	**19.23**	**180**	P			**P**	**14 00 15.4**	**0.0**
ASAR	**Alice Springs**	**19.23**	**180**	P			**P**	**14 00 14.8**	**-0.6**
	comp=Z,2.2nm,0.3s,baz=4.7,slow=12,SNR=156								
ASAR				S			Sn	14 03 43.8	-8.4
	comp=Z,28nm,0.8s,baz=357,slow=26,SNR=5.4								
ASAR				LR			LR	14 08 04.8	
	comp=Z,1μm,21.1s,baz=358,slow=38								
	comp=Z,50nm,0.8s								
ASAR	**Alice Springs**	**19.23**	**180**	P			**P**	**14 00 15.0**	**-0.4**
ABJI	**Asem Bagus**	**19.78**	**259**	P			**Pn**	**14 00 25.0**	**+2.1**
	comp=Z,195nm,1.5s								
CTA	**Charters Tower**	**19.81**	**143**	P			**P**	**14 00 21.1**	**-0.6**
	comp=Z,3.2nm,0.3s,baz=323,slow=11,SNR=33								
CTA				S			**S**	**14 04 07.3**	**+2.3**
	comp=Z,4.8nm,0.8s,baz=15,slow=20,SNR=1.6								
CTA				LR			LR	14 09 10.3	
	comp=Z,6μm,19.1s,baz=328,slow=40								
	comp=Z,80nm,0.9s								
CTA	**Charters Tower**	**19.81**	**143**	P			**Pn**	**14 00 24.5**	**+1.3**
CTAO	**Char

CMSA	**Cobar Meteorol**	**29.29**	**159**	P	**P**	**14 01 54.2**	**+0.8**		
DSRI	**Dabo**	**29.46**	**277**	P	P	14 02 09.6	+14		
MORW	**Morawa**	**29.84**	**212**	P	**P**	**14 01 59.7**	**+1.3**		
	baz=30,SNR=5.0								
MORW	**Morawa**	**29.84**	**212**	P	**P**	**14 01 59.2**	**+0.8**		
BLDU	**Ballidu**	**30.73**	**210**	P	**P**	**14 02 08.2**	**+1.9**		
	baz=31,SNR=14								
BLDU	**Ballidu**	**30.73**	**210**	P	**P**	**14 02 07.6**	**+1.3**		
TWOA	**Tennyson Woods**	**30.88**	**172**	P	**P**	**14 02 11.0**	**+3.5**		
ARMA	**Armidale**	**30.93**	**149**	P	**P**	**14 02 09.6**	**+1.5**		
	baz=31,SNR=4.3								
ARMA	**Armidale**	**30.93**	**149**	P	**P**	**14 02 07.8**	**-0.3**		
ARMA				IAmb	IAmb	14 02 26.6			
	comp=Z,26nm,1.0s								
ARMA	**Armidale**	**30.93**	**149**	P	**P**	**14 02 09.5**	**+1.4**		
KLBR	**Kellerberrin**	**31.05**	**207**	P	**P**	**14 02 09.6**	**+0.5**		
	baz=31,SNR=11								
KLBR	**Kellerberrin**	**31.05**	**207**	P	**P**	**14 02 10.0**	**+1.0**		
JOW	**Kunigami**	**31.43**	**350**	LR	LR	14 13 40.7			
	comp=Z,3μm,20.0s,baz=138,slow=34								
JCJ	**Chichijima**	**32.26**	**14**	LR	LR	14 13 26.6			
	comp=Z,748nm,20.0s,baz=192,slow=33								
KRJI	**Kerinci**	**32.38**	**273**	P	**P**	**14 02 23.6**	**+2.5**		
	comp=Z,10μmcomp=Z,142nm,0.9s								
QIZ	**Qiongzhong**	**33.10**	**315**	P	**P**	**14 02 28.0**	**+0.8**		
QIZ				S	**S**	**14 07 45.5**	**-1.0**		
QIZ				LR	LR				
	comp=Z,470nm,19.9s								
QIZ				LR	LR				
	comp=Z,550nm,18.3s								
QIZ				LR	LR				
	comp=Z,750nm,14.3s								
ARPS	**Mount Arapiles**	**33.12**	**168**	P	**P**	**14 02 29.2**	**+2.0**		
	baz=33,SNR=15								
ARPS	**Mount Arapiles**	**33.12**	**168**	P	**P**	**14 02 29.4**	**+2.2**		
PPI	**Padang Panjang**	**33.61**	**276**	P	P	14 02 37.8	+6.1		
MNSI	**Mandailing Nat**	**34.59**	**278**	P	P	14 02 47.3	+7.1		
TOO	**Toolangi**	**34.78**	**164**	P	**P**	**14 02 43.2**	**+1.6**		
	baz=35,SNR=5.5								
TOO	**Toolangi**	**34.78**	**164**	P	**P**	**14 02 43.0**	**+1.4**		
TOO				IAmb	IAmb	14 02 44.4			
	comp=Z,49nm,1.2s								
TOO	**Toolangi**	**34.78**	**164**	P	**P**	**14 02 43.0**	**+1.4**		
TOO				pmax	pmax				
	comp=Z,49nm,1.3s								
TOO	**Toolangi**	**34.78**	**164**	P	**P**	**14 02 44.5**	**+2.9**		
PSI	**Prapat**	**35.58**	**281**	P	**P**	**14 02 49.8**	**+0.8**		
GSI	**Gunungsitoli**	**36.64**	**278**	P	**P**	**14 02 56.5**	**-1.4**		
GSI				IAmb	IAmb	14 03 11.4			
	comp=Z,39nm,1.1s								
GSI	**Gunungsitoli**	**36.64**	**278**	P	**P**	**14 02 55.3**	**-2.6**		
	comp=Z,33nm,1.2s								
SSE	**Sheshan**	**37.22**	**342**	P	**P**	**14 03 05.0**	**+2.4**		
SSE				S	**S**	**14 08 54.0**	**+4.3**		
SSE				pmax	pmax				
	comp=Z,24nm,0.7s								
SSE				pmax	pmax				
	comp=Z,53nm,4.1s								
SSE				LR	LR				
	comp=Z,300nm,19.1s								
SSE				LR	LR				
	comp=Z,130nm,19.1s								
JNU	**Nakatsue**	**37.34**	**356**	P	**P**	**14 03 02.0**	**-1.6**		
	comp=Z,19nm,0.8s,baz=166,slow=2.7,SNR=3.3								
JNU				LR	LR	14 17 43.2			
	comp=Z,1μm,19.5s,baz=162,slow=35								
	comp=Z,19nm,0.8s								
JNU	**Nakatsue**	**37.34**	**356**	P	**P**	**14 03 03.6**	**0.0**		
JNU				IAmb	IAmb	14 03 07.7			
	comp=Z,22nm,0.8s								
JHJ	**Hachijo jima 2**	**37.66**	**8**	LR	LR	14 15 15.7			
	comp=Z,1μm,21.1s,baz=127,slow=31								
NJ2	**Nanjing**	**38.87**	**340**	*e*P	**P**	**14 03 12.8**	**-3.7**		
NJ2				pmax	pmax				
	comp=Z,9.0nm,0.9s								
NJ2				LR	LR				
	comp=Z,540nm,15.7s								
NJ2				LR	LR				
	comp=Z,700nm,16.7s								
NJ2				LR	LR				
	comp=Z,560nm,18.7s								
WHN	**Wuhan**	**39.35**	**333**	P	**P**	**14 03 23.5**	**+3.0**		
WHN				S	**S**	**14 09 28.5**	**+6.7**		
WHN				LR	LR				
	comp=Z,780nm,13.9s								
WHN				LR	LR				
	comp=Z,450nm,10.9s								
WHN				LR	LR				
	comp=Z,2μm,28.8s								
GYA	**Guiyang**	**40.34**	**321**	⇑*i*P	**P**	**14 03 32.8**	**+3.8**		
GYA				S	**S**	**14 09 39.5**	**+2.4**		
GYA				pmax	pmax				
	comp=Z,34nm,1.1s								
GYA				pmax	pmax				
	comp=Z,99nm,5.1s								
GYA				LR	LR				
	comp=Z,360nm,16.0s								
GYA				LR	LR				
	comp=Z,260nm,15.0s								
GYA				LR	LR				
	comp=Z,1μm,23.6s								
MJAR	**Matsushiro Arr**	**40.85**	**5**	P	**P**	**14 03 32.3**	**-0.7**		
	comp=Z,3.4nm,0.7s,baz=180,slow=8.4,SNR=11								
MJAR				LR	LR	14 18 02.9			
	comp=Z,1μm,20.0s,baz=180,slow=33								
	comp=Z,3.4nm,0.7s								
MAJO	**Matsushiro**	**40.86**	**5**	*e*P	**P**	**14 03 34.7**	**+1.7**		
CM31	**Chiang Mai Arr**	**41.15**	**304**	P	**P**	**14 03 32.5**	**-3.1**		
CMAR	**Chiang Mai Arr**	**41.15**	**304**	P	**P**	**14 03 34.7**	**-1.0**		
	comp=Z,8.5nm,1.0s,baz=130,slow=7.0,SNR=27								
	comp=Z,8.5nm,1.0s								
CHTO	**Chiang Mai**	**41.33**	**305**	P	**P**	**14 03 35.6**	**-1.5**		
CHTO	**Chiang Mai**	**41.33**	**305**	P	**P**	**14 03 35.6**	**-1.5**		
CHTO				pmax	pmax				
	comp=Z,23nm,1.1s								
KSRS	**Korea Array**	**41.92**	**353**	P	**P**	**14 03 40.9**	**-0.7**		
	comp=Z,1.9nm,0.8s,baz=174,slow=10,SNR=8.8								
KSRS				LR	LR	14 19 35.3			
	comp=Z,918nm,20.6s,baz=175,slow=34								
	comp=Z,1.9nm,0.8s								
KMI	**Kunming**	**42.05**	**316**	⇑P	**P**	**14 03 43.5**	**+0.3**		
KMI				pP	sP	14 03 47.8	+0.6		
KMI				sP	pP	14 03 49.5	+3.5		
KMI				S	**S**	**14 10 05.3**	**+2.6**		
KMI				pmax	pmax				
	comp=Z,17nm,1.0s								
KMI				pmax	pmax				
	comp=Z,62nm,3.5s								
KMI				LR	LR				
	comp=Z,540nm,20.7s								
KMI				LR	LR				
	comp=Z,410nm,21.4s								
KMI				LR	LR				
	comp=Z,630nm,22.4s								
JSD	**Sado**	**42.34**	**5**	P	**P**	**14 03 43.6**	**-1.5**		
JMM	**Marumori**	**42.47**	**8**	P	**P**	**14 03 42.8**	**-3.3**		
JMM				IAmb	IAmb	14 03 49.8			
	comp=Z,64nm,1.5s								
TIA	**Tai'an**	**43.24**	**340**	⇑P	P	14 03 45.5	-6.9		
TIA				pmax	pmax				
	comp=Z,3.0nm,0.7s								
LYN	**LuoYang**	**43.59**	**334**	⇑P	**P**	**14 03 55.0**	**-0.2**		
LYN				S	**S**	**14 10 27.0**	**+2.4**		
LYN				pmax	pmax				
	comp=Z,10.0nm,0.9s								
LYN				LR	LR				
	comp=Z,320nm,16.2s								
LYN				LR	LR				
	comp=Z,140nm,15.2s								
LYN				LR	LR				
	comp=Z,400nm,16.7s								
XAN	**Xi'an**	**44.81**	**330**	⇓P	**P**	**14 04 03.8**	**-1.4**		
XAN				pP	pP	14 04 08.5	+0.5		
XAN				pmax	pmax				
	comp=Z,10.0nm,1.3s								
XAN				LR	LR				
	comp=Z,380nm,15.9s								
XAN				LR	LR				
	comp=Z,360nm,17.1s								
XAN				LR	LR				
	comp=Z,530nm,18.4s								
HNS	**HongShan**	**45.16**	**338**	⇑P	**P**	**14 04 06.5**	**-1.3**		
HNS				ScP	**ScP**	**14 09 43.0**	**+2.0**		
HNS				S	**S**	**14 10 45.3**	**-2.1**		
HNS				SS	**ScS**	**14 14 01.8**	**-3.4**		
HNS				pmax	pmax				
	comp=Z,11nm,1.1s								
HNS				pmax	pmax				
	comp=Z,90nm,4.6s								
HNS				LR	LR				
	comp=Z,260nm,15.1s								
HNS				LR	LR				
	comp=Z,420nm,15.9s								
HNS				LR	LR				
	comp=Z,550nm,21.0s								
MSVF	**Nonsavu**	**45.28**	**111**	LR	LR	14 23 18.5			
	comp=Z,751nm,18.2s,baz=298,slow=36								
MSVF	**Nonsavu**	**45.28**	**111**	⇑*i*P	**P**	**14 04 07.5**	**-1.7**		
MSVF				pmax	pmax				
	comp=Z,35nm,1.4s								
CD2	**Chengdu**	**45.29**	**323**	P	**P**	**14 04 08.0**	**-1.0**		
CD2				pmax	pmax				
	comp=Z,10.0nm,0.8s								
CD2				LR	LR				
	comp=Z,460nm,17.0s								
CD2				LR	LR				
	comp=Z,540nm,18.1s								
JTM	**Tenmabayashi**	**45.38**	**8**	P	**P**	**14 04 08.6**	**-0.8**		
JTM				IAmb	IAmb	14 04 32.9			
	comp=Z,15nm,0.9s								
BJI	**Beijing**	**47.03**	**341**	P	**P**	**14 04 22.5**	**0.0**		
BJI				pmax	pmax				
	comp=Z,10.0nm,1.0s								
BJI				LR	LR				
	comp=Z,58nm,16.2s								
BJI				LR	LR				
	comp=Z,310nm,17.0s								
BJI				LR	LR				
	comp=Z,380nm,17.9s								
USA0B	**Ussuriysk Arra**	**48.33**	**358**	P	**P**	**14 04 31.8**	**-0.7**		
USA0B				IAmb	IAmb	14 04 38.7			
	comp=Z,10nm,0.8s								
USA0B	**Ussuriysk Arra**	**48.33**	**358**	P	**P**	**14 04 31.8**	**-0.7**		
USA0B				pmax	pmax				
	comp=Z,10.0nm,0.9s								
USRK	**Ussuriysk Ar.**	**48.33**	**358**	P	**P**	**14 04 32.5**	**+0.1**		
	comp=Z,8.2nm,0.7s,baz=190,slow=7.3,SNR=7.6								
USRK				LR	LR	14 22 11.1			
	comp=Z,804nm,21.9s,baz=168,slow=33								
	comp=Z,8.2nm,0.7s								
USRK	**Ussuriysk Ar.**	**48.33**	**358**	P	**P**	**14 04 31.7**	**-0.7**		
CN2	**Changchun**	**48.49**	**352**	*e*P	**P**	**14 04 37.5**	**+3.7**		
CN2				S	**S**	**14 11 32.3**	**-2.6**		
CN2				pmax	pmax				
	comp=Z,10.0nm,0.5s								
CN2				pmax	pmax				
	comp=Z,100nm,3.0s								
CN2				LR	LR				
	comp=Z,600nm,19.0s								
CN2				LR	LR				
	comp=Z,500nm,19.0s								
CN2				LR	LR				
	comp=Z,500nm,18.0s								
ASAJ	**Asahikawa**	**48.86**	**8**	LR	LR	14 23 31.1			
	comp=Z,544nm,21.9s,baz=192,slow=34								
MDJ	**Mudanjiang**	**48.86**	**356**	P	**P**	**14 04 37.0**	**+0.4**		
MDJ				pP	sP	14 04 40.3	-0.4		
MDJ				PP	**PP**	**14 06 28.8**	**-1.3**		
MDJ				S	**S**	**14 11 43.0**	**+2.9**		
MDJ				pmax	pmax				
	comp=Z,8.0nm,0.8s								
MDJ				pmax	pmax				
	comp=Z,97nm,3.5s								
MDJ				LR	LR				
	comp=Z,400nm,16.7s								
MDJ				LR	LR				
	comp=Z,480nm,21.6s								
MDJ				LR	LR				
	comp=Z,670nm,18.6s								
LZH	**Lanzhou**	**49.02**	**328**	*e*P	**P**	**14 04 40.3**	**+2.1**		
LZH				sP	sP	14 04 45.3	+3.1		
LZH				PP	**PP**	**14 06 37.8**	**+6.0**		
LZH				S	**S**	**14 11 45.5**	**+2.5**		
LZH				sS	sS	14 11 56.5	+8.7		
LZH				pmax	pmax				
	comp=Z,35nm,1.3s								
LZH				LR	LR				
	comp=Z,470nm,14.2s								
LZH				LR	LR				
	comp=Z,460nm,14.5s								
LZH				LR	LR				
	comp=Z,690nm,16.5s								
HHC	**Hu-ho-hao-te**	**49.35**	**338**	*e*P	**P**	**14 04 41.0**	**+0.4**		
HHC				S	**S**	**14 11 45.3**	**-2.1**		
HHC				SS	**SS**	**14 15 15.3**	**-4.0**		
HHC				pmax	pmax				
	comp=Z,32nm,1.0s								
HHC				pmax	pmax				
	comp=Z,120nm,4.3s								
HHC				LR	LR				
	comp=Z,540nm,15.9s								
HHC				LR	LR				
	comp=Z,480nm,16.5s								
HHC				LR	LR				
	comp=Z,860nm,16.5s								
BTO	**Baotou**	**49.75**	**336**	*e*P	**P**	**14 04 39.5**	**-4.1**		
BTO				LR	LR				
	comp=Z,1μm,20.8s								
BTO				LR	LR				
	comp=Z,1μm,14.7s								
BNX	**BinXian**	**50.16**	**354**	⇓P	**P**	**14 04 47.3**	**+0.8**		
BNX				pP	**pP**	**14 04 49.5**	**+0.1**		
BNX				sP	**sP**	**14 04 51.5**	**+0.9**		
BNX				S	**S**	**14 12 01.0**	**+2.7**		
BNX				sS	**sS**	**14 12 04.8**	**+1.6**		
BNX				pmax	pmax				
	comp=Z,9.0nm,1.0s								
BNX				pmax	pmax				
	comp=Z,92nm,3.3s								
BNX				LR	LR				
	comp=Z,570nm,19.7s								
BNX				LR	LR				
	comp=Z,550nm,18.2s								
BNX				LR	LR				
	comp=Z,830nm,18.0s								
WHZ	**Wether Hill Ro**	**50.95**	**150**	P	**P**	**14 04 53.4**	**+0.9**		
LBZ	**Lake Benmore**	**51.10**	**147**	P	**P**	**14 04 54.6**	**+0.9**		
LBZ				IAmb	IAmb	14 04 56.3			
	comp=Z,39nm,1.3s								
RPZ	**Rata Peaks**	**51.16**	**146**	LR	LR	14 26 17.6			
	comp=Z,2μm,20.1s,baz=316,slow=36								
URZ	**Urewera**	**51.86**	**137**	LR	LR	14 26 07.7			
	comp=Z,999nm,20.5s,baz=29,slow=35								
RAO	**Raoul Island**	**51.94**	**124**	LR	LR	14 26 49.9			
	comp=Z,387nm,18.0s,baz=346,slow=36								
KLR	**Kul'dur**	**53.36**	**358**	LR	LR	14 25 19.4			
	comp=Z,470nm,21.3s,baz=183,slow=33								
KLR	**Kul'dur**	**53.36**	**358**	*e*P	**P**	**14 05 11.0**	**+0.7**		
KLR				pmax	pmax				
	comp=Z,12nm,0.7s								
GTA	**Gaotai**	**53.62**	**327**	*e*P	**P**	**14 05 12.3**	**-0.3**		
GTA				pP	sP	14 05 16.5	-0.2		
GTA				S	**S**	**14 12 41.5**	**-4.9**		
GTA				sS	sS	14 12 53.3	+2.1		
GTA				pmax	pmax				
	comp=Z,5.0nm,1.5s								
GTA				pmax	pmax				
	comp=Z,120nm,5.1s								
GTA				LR	LR				
	comp=Z,230nm,17.8s								
GTA				LR	LR				
	comp=Z,220nm,17.8s								
GTA				LR	LR				
	comp=Z,320nm,18.5s								
PALK	**Pallekele**	**54.24**	**282**	LR	LR	14 30 32.3			
	comp=Z,371nm,21.2s,baz=208,slow=38								
GOMU	**GeErMu**	**54.35**	**321**	P	**P**	**14 05 18.5**	**+0.2**		
GOMU				pP	sP	14 05 23.0	+0.6		
GOMU				PcP	**PcP**	**14 06 25.3**	**+3.0**		
GOMU				S	**S**	**14 12 58.5**	**+1.6**		
GOMU				sS	sS	14 13 05.0	+3.3		
GOMU				pmax	pmax				
	comp=Z,4.0nm,0.9s								
GOMU				pmax	pmax				
	comp=Z,82nm,4.2s								
GOMU				LR	LR				
	comp=Z,190nm,18.0s								
GOMU				LR	LR				
	comp=Z,270nm,20.5s								
GOMU				LR	LR				
	comp=Z,320nm,18.1s								
AFI	**Afiamalu**	**54.44**	**104**	LR	LR	14 28 11.1			
	comp=Z,219nm,18.2s,baz=258,slow=36								
GRNR	**Gornyy**	**54.92**	**2**	*e*P	P	14 05 32.5	+11		
ULN	**Ulaanbaatar**	**57.03**	**339**	P	**P**	**14 05 36.0**	**-1.1**		
ULN				IAmb	IAmb	14 05 55.3			
	comp=Z,25nm,1.4s								
ULN	**Ulaanbaatar**	**57.03**	**339**	P	**P**	**14 05 36.0**	**-1.1**		
ULN				pmax	pmax				
	comp=Z,25nm,1.4s								
SONM	**Songino Array**	**57.24**	**338**	P	**P**	**14 05 38.1**	**-0.5**		
	comp=Z,1.7nm,0.6s,baz=159,slow=5.5,SNR=8.2								
SONM				LR	LR	14 31 44.1			
	comp=Z,310nm,20.6s,baz=154,slow=38								
	comp=Z,1.7nm,0.6s								
SONM	**Songino Array**	**57.24**	**338**	P	**P**	**14 05 37.1**	**-1.5**		
SONM	**Songino Array**	**57.24**	**338**	P	**P**	**14 05 37.1**	**-1.5**		
SONM				pmax	pmax				
	comp=Z,13nm,1.4s								
ZEA	**Zeya**	**58.11**	**355**	*e*P	**P**	**14 05 47.2**	**+2.9**		
ZEA				pmax	pmax				
	comp=Z,10.0nm,1.5s								
HYBB	**Hyderabad (bro**	**58.66**	**293**	*e*P	**P**	**14 05 47.8**	**-1.1**		
HYBB				*e*S	**S**	**14 13 53.4**	**-0.5**		
ZAK	**Zakamensk**	**60.50**	**338**	*e*P	**P**	**14 06 00.3**	**-0.8**		
ZAK				pmax	pmax				
	comp=Z,9.0nm,1.2s								
PEA0B	**Petropavlovsk-**	**60.66**	**16**	P	**P**	**14 06 02.6**	**+0.6**		
PEA0B	**Petropavlovsk-**	**60.66**	**16**	P	**P**	**14 06 02.6**	**+0.6**		
PEA0B				pmax	pmax				
	comp=Z,33nm,1.3s								
PETK	**Petropavlovsk-**	**60.66**	**16**	P	**P**	**14 06 03.3**	**+1.3**		
	comp=Z,5.4nm,0.7s,baz=184,slow=4.0,SNR=10								
	comp=Z,5.4nm,0.7s								
PETK	**Petropavlovsk-**	**60.66**	**16**	P	**P**	**14 06 02.6**	**+0.6**		
MOY	**Mondy**	**62.40**	**338**	*e*P	**P**	**14 06 14.0**	**+0.1**		
MOY				pmax	pmax				
	comp=Z,32nm,2.2s								
KNGR	**Kungurtug, Tuv**	**62.97**	**335**	*e*P	**P**	**14 06 21.3**	**+3.5**		
WMQ	**Urumqi**	**63.34**	**324**	*e*P	**P**	**14 06 21.3**	**+1.0**		
WMQ				pP	sP	14 06 24.5	0.0		
WMQ				sP	pP	14 06 30.3	+7.0		
WMQ				pmax	pmax				
	comp=Z,38nm,1.1s								
WMQ				pmax	pmax				
	comp=Z,150nm,3.7s								
WMQ				LR	LR				
	comp=Z,350nm,16.7s								
WMQ				LR	LR				
	comp=Z,230nm,18.3s								
WMQ				LR	LR				
	comp=Z,220nm,18.9s								
CASY	**Casey**	**63.96**	**190**	P	**P**	**14 06 23.0**	**-0.9**		
BOD	**Bodaibo**	**63.97**	**348**	*e*P	**P**	**14 06 23.5**	**-0.6**		
BOD				pmax	pmax				
	comp=Z,27nm,1.8s								
MA2	**Magadan**	**65.10**	**9**	P	**P**	**14 06 33.6**	**+2.2**		
	comp=Z,4.8nm,0.8s,baz=202,slow=5.4,SNR=2.5								
	comp=Z,4.8nm,0.8s								
MA2	**Magadan**	**65.10**	**9**	IAmb	IAmb	14 06 38.0			
	comp=Z,28nm,1.5s								
SHEM	**Shemya Is, Ala**	**66.22**	**25**	LR	LR	14 33 05.7			
	comp=Z,240nm,20.6s,baz=206,slow=34								
YAK	**Yakutsk**	**66.24**	**358**	P	**P**	**14 06 39.2**	**+0.5**		
	comp=Z,27nm,0.7s,baz=188,slow=1.1,SNR=2.2								
YAK				LR	LR	14 34 30.5			
	comp=Z,247nm,20.1s,baz=189,slow=35								
	comp=Z,27nm,0.7s								
YAK	**Yakutsk**	**66.24**	**358**	*e*P	**P**	**14 06 39.2**	**+0.5**		
YAK				*e**PP	**sP**	**14 06 46.3**	**+3.4**		
YAK				*e*		14 07 10.0			
YAK				*e*		14 09 03.0			
YAK				*e*S	**S**	**14 15 29.2**	**+1.5**		
YAK				*e*		14 16 37.8			
YAK				*e*SS	**SS**	**14 19 45.7**	**+1.7**		
YAK				pmax	pmax				
	comp=E,3.0nm,0.9s								
YAK				pmax	pmax				
	comp=Z,40nm,0.9s								
YAK				pmax	pmax				
	comp=N,9.0nm,0.9s								
YAK				pmax	pmax				
	comp=Z,57nm,3.3s								
YAK				pmax	pmax				
	comp=N,30nm,3.2s								
YAK				smax	smax				
	comp=E,63nm,3.5s								
YAK				smax	smax				
	comp=N,18nm,3.2s								
PDGK	**Podgornoye**	**68.09**	**320**	P	**P**	**14 06 50.6**	**-0.5**		
MK31	**Makanchi Array**	**68.17**	**325**	P	**P**	**14 06 50.6**	**-0.7**		
MK31				IAmb	IAmb	14 06 58.4			
	comp=Z,12nm,1.1s								
MK31	**Makanchi Array**	**68.17**	**325**	P	**P**	**14 06 50.7**	**-0.7**		
MK31				pmax	pmax				
	comp=Z,12nm,1.1s								
MKAR	**Makanchi Array**	**68.17**	**325**	P	**P**	**14 06 51.1**	**-0.3**		
	comp=Z,3.6nm,0.7s,baz=123,slow=7.3,SNR=17								
MKAR				LR	LR	14 39 22.1			
	comp=Z,220nm,19.6s,baz=122,slow=38								
	comp=Z,3.6nm,0.7s								
MKAR	**Makanchi Array**	**68.17**	**325**	P	**P**	**14 06 50.8**	**-0.6**		
MAKZ	**Makanchi**	**68.36**	**324**	P	**P**	**14 06 52.0**	**-0.5**		
MAKZ				IAmb	IAmb	14 07 10.2			
	comp=Z,14nm,0.9s								
MAKZ	**Makanchi**	**68.36**	**324**	P	**P**	**14 06 52.1**	**-0.5**		
MAKZ				pmax	pmax				
	comp=Z,14nm,0.9s								
SEY	**Seymchan**	**68.54**	**9**	P	**P**	**14 06 54.4**	**+1.2**		
	comp=Z,6.9nm,0.9s,baz=192,slow=8.6,SNR=9.4								
	comp=Z,6.9nm,0.9s								
SEY	**Seymchan**	**68.54**	**9**	*ce*P	**P**	**14 06 54.3**	**+1.0**		
SEY				pmax	pmax				
	comp=Z,7.0nm,1.0s								
KSH	**Kashi**	**68.71**	**315**	P	**P**	**14 06 56.0**	**+1.0**		
KSH				pP	sP	14 06 59.5	+0.3		
KSH				pmax	pmax				
	comp=Z,6.0nm,0.9s								
KDJ	**Kajisay**	**69.03**	**318**	P	**P**	**14 06 56.6**	**-0.5**		
KDJ				IAmb	IAmb	14 07 14.6			
	comp=Z,14nm,1.2s								
KDJ	**Kajisay**	**69.03**	**318**	P	**P**	**14 06 56.6**	**-0.5**		
KDJ				pmax	pmax				
	comp=Z,14nm,1.2s								
BOOM	**Boomskoye usch**	**70.01**	**318**	P	**P**	**14 07 02.0**	**-1.1**		
BOOM				IAmb	IAmb	14 07 26.7			
	comp=Z,14nm,1.1s								
BOOM	**Boomskoye usch**	**70.01**	**318**	P	**P**	**14 07 02.0**	**-1.1**		
BOOM				pmax	pmax				
	comp=Z,14nm,1.1s								
TKM2	**Tokmak 2**	**70.43**	**318**	P	**P**	**14 07 05.6**	**-0.1**		
ZAA0	**Zalesovo Array**	**70.95**	**332**	P	**P**	**14 07 07.1**	**-1.2**		
ZALV	**Zalesovo Beam**	**70.95**	**332**	P	**P**	**14 07 07.2**	**-1.2**		
	comp=Z,3.3nm,0.8s,baz=126,slow=7.3,SNR=12								
ZALV				LR	LR	14 40 55.3			
	comp=Z,57nm,18.8s,baz=118,slow=38								
	comp=Z,3.3nm,0.8s								
ZALV	**Zalesovo Beam**	**70.95**	**332**	P	**P**	**14 07 06.8**	**-1.6**		
AAK	**Ala-Archa**	**71.04**	**318**	LR	LR	14 41 11.8			
	comp=Z,244nm,20.4s,baz=110,slow=38								
AAK	**Ala-Archa**	**71.04**	**318**	*ce*P	**P**	**14 07 09.5**	**+0.1**		
AAK				pmax	pmax				
	comp=Z,7.0nm,1.3s								
KURK	**Kurchatov**	**72.30**	**327**	P	**P**	**14 07 15.1**	**-1.5**		
KURK				IAmb	IAmb	14 07

VNDA	**Vanda**	**74.66**	**174**	P	**P**	**14 07 30.3**	**+0.2**		
VNDA	**Vanda**	**74.66**	**174**	P	**P**	**14 07 30.3**	**+0.2**		
VNDA				pmax	pmax				
	comp=Z,9.0nm,1.0s								
SBA	**Scott Base**	**75.50**	**173**	P	**P**	**14 07 35.1**	**+0.2**		
SBA	**Scott Base**	**75.50**	**173**	P	**P**	**14 07 35.1**	**+0.2**		
SBA				pmax	pmax				
	comp=Z,8.0nm,1.0s								
BILL	**Bilibino**	**75.69**	**12**	*c i* P	**P**	**14 07 39.9**	**+3.9**		
BILL				*e*		14 10 29.8			
BILL				pmax	pmax				
	comp=Z,6.0nm,1.1s								
TIXI	**Tiksi**	**75.89**	**358**	P	**P**	**14 07 37.4**	**+0.3**		
	comp=Z,12nm,0.7s,baz=266,slow=21,SNR=14								
TIXI				LR	LR	14 39 26.9			
	comp=Z,646nm,21.1s,baz=180,slow=34								
	comp=Z,12nm,0.7s								
TIXI	**Tiksi**	**75.89**	**358**	P	**P**	**14 07 36.6**	**-0.5**		
TIXI				lAmb	lAmb	14 07 42.2			
	comp=Z,12nm,0.6s								
TIXI	**Tiksi**	**75.89**	**358**	*c e* P	**P**	**14 07 36.8**	**-0.3**		
TIXI				pmax	pmax				
	comp=Z,5.0nm,1.0s								
PPT	**Papeete**	**75.95**	**107**	LR	LR	14 39 17.8			
	comp=Z,155nm,19.7s,baz=272,slow=34								
PPT2	**Papeete2**	**75.95**	**107**	*e* LR	LR	14 31 04.3			
	comp=Z,707nm,24.2s								
TBI	**Tubuai**	**76.11**	**113**	*e* LR	LR	14 31 07.5			
	comp=Z,532nm,23.0s								
WSAR	**Wadi Sarin**	**78.16**	**295**	LR	LR	14 44 25.0			
	comp=Z,116nm,21.8s,baz=125,slow=37								
MAW	**Mawson**	**78.82**	**202**	P	**P**	**14 07 55.7**	**+2.0**		
	comp=Z,4.0nm,0.9s,baz=76,slow=4.9,SNR=6.1								
	comp=Z,4.0nm,0.9s								
MAW	**Mawson**	**78.82**	**202**	P	**P**	**14 07 55.7**	**+2.0**		
	baz=79,SNR=4.9								
MAW	**Mawson**	**78.82**	**202**	P	**P**	**14 07 54.1**	**+0.4**		
MAW	**Mawson**	**78.82**	**202**	P	**P**	**14 07 54.1**	**+0.4**		
MAW				pmax	pmax				
	comp=Z,4.0nm,1.1s								
GAMB	**Gambell**	**79.03**	**22**	P	**P**	**14 07 52.7**	**-2.0**		
	baz=236								
SDPT	**Sand Point**	**80.04**	**32**	P	**P**	**14 07 59.7**	**-0.8**		
SDPT	**Sand Point**	**80.04**	**32**	P	**P**	**14 07 58.5**	**-2.0**		
	baz=247,SNR=6.9								
CHNA	**Chernabura Isl**	**80.32**	**33**	P	**P**	**14 08 00.7**	**-1.3**		
	baz=248								
S14K	**Fog Glacier**	**80.88**	**31**	P	**P**	**14 08 03.5**	**-1.6**		
	baz=248,SNR=6.7								
TNA	**Tin City**	**81.36**	**21**	P	**P**	**14 08 05.9**	**-1.4**		
	baz=239								
GEYT	**Alibeck**	**81.43**	**309**	P	**P**	**14 08 08.6**	**+0.1**		
	comp=Z,2.8nm,0.6s,baz=138,slow=7.3,SNR=6.8								
GEYT				LR	LR	14 49 29.6			
	comp=Z,119nm,18.8s,baz=93,slow=40								
	comp=Z,2.8nm,0.6s								
GEYT	**Alibeck**	**81.43**	**309**	P	**P**	**14 08 07.0**	**-1.4**		
GYA0	**ALIBECK ARRAY**	**81.43**	**309**	P	**P**	**14 08 07.0**	**-1.5**		
GYA0				pmax	pmax				
	comp=Z,16nm,1.1s								
GYA0B	**ALIBECK ARRAY**	**81.43**	**309**	P	**P**	**14 08 07.0**	**-1.4**		
GYA0B				lAmb	lAmb	14 08 23.1			
	comp=Z,16nm,1.1s								
P16K	**Nushagak River**	**82.67**	**29**	P	**P**	**14 08 13.0**	**-1.4**		
	baz=249								
AB31	**Akbulak array**	**82.82**	**321**	*i* P	P	14 08 07.4	-8.0		
ABKAR	**Akbulak array**	**82.82**	**321**	P	**P**	**14 08 13.7**	**-1.7**		
O16K	**Kokwok River B**	**82.83**	**28**	P	**P**	**14 08 13.4**	**-1.8**		
	baz=249,SNR=6.9								
N16K	**Nishlik Lake**	**82.83**	**27**	P	**P**	**14 08 13.5**	**-1.8**		
	baz=248								
R17K	**Ugashik Creek**	**82.98**	**31**	P	**P**	**14 08 14.0**	**-2.1**		
	baz=251								
O17K	**Koliganek Bris**	**83.36**	**28**	P	**P**	**14 08 16.2**	**-1.7**		
	baz=250,SNR=15								
P17K	**Kvichak River**	**83.48**	**29**	P	**P**	**14 08 16.5**	**-2.1**		
	baz=250								
Q18K	**Katmai Hardscr**	**84.00**	**30**	P	**P**	**14 08 19.6**	**-1.9**		
	baz=252								
P18K	**Big Mountain,**	**84.13**	**29**	P	**P**	**14 08 19.5**	**-2.5**		
	baz=251								
N18K	**Kilae Creek**	**84.24**	**28**	P	**P**	**14 08 21.7**	**-0.8**		
N18K				lAmb	lAmb	14 08 29.1			
	comp=Z,8.4nm,0.8s								
N18K	**Kilae Creek**	**84.24**	**28**	P	**P**	**14 08 20.0**	**-2.5**		
	baz=251,SNR=5.2								
O18K	**Koktuh Hills**	**84.29**	**29**	P	**P**	**14 08 19.8**	**-3.0**		
	baz=251								
RDOG	**Red Dog Mine**	**84.30**	**20**	P	**P**	**14 08 21.2**	**-1.5**		
RDOG	**Red Dog Mine**	**84.30**	**20**	P	**P**	**14 08 20.4**	**-2.2**		
	baz=244								
AKTO	**Aktyubinsk**	**84.33**	**321**	LR	LR	14 49 42.5			
	comp=Z,209nm,19.3s,baz=109,slow=38								
AKTO	**Aktyubinsk**	**84.33**	**321**	P	**P**	**14 08 22.0**	**-1.1**		
OHAK	**Old Harbor**	**84.45**	**31**	P	**P**	**14 08 20.8**	**-2.7**		
	baz=253								
SVE	**Sverdlovsk**	**84.48**	**328**	*e* P	**P**	**14 08 25.1**	**+1.3**		
SVE				pmax	pmax				
	comp=Z,34nm,1.6s								
SVW2	**Sparrevohn**	**84.52**	**27**	P	**P**	**14 08 24.2**	**+0.3**		
SVW2				lAmb	lAmb	14 08 30.5			
	comp=Z,8.6nm,0.8s								
Q19K	**Cape Douglas,**	**84.77**	**30**	P	**P**	**14 08 22.4**	**-2.8**		
	baz=253								
N19K	**Bonanza Creek**	**84.94**	**28**	P	**P**	**14 08 26.2**	**+0.1**		
N19K				lAmb	lAmb	14 08 32.5			
	comp=Z,14nm,0.8s								
N19K	**Bonanza Creek**	**84.94**	**28**	P	**P**	**14 08 22.9**	**-3.2**		
	baz=252								
TTA	**Tatalina**	**84.94**	**26**	P	**P**	**14 08 23.0**	**-3.0**		
	baz=250,SNR=5.9								
KDAK	**Kodiak Island**	**84.97**	**31**	P	**P**	**14 08 30.8**	**+4.6**		
	comp=Z,21nm,0.7s,baz=238,slow=9.5,SNR=21								
KDAK				LR	LR	14 44 38.4			
	comp=Z,264nm,19.0s,baz=259,slow=34								
KDAK	**Kodiak Island**	**84.97**	**31**	P	**P**	**14 08 24.9**	**-1.3**		
KDAK	**Kodiak Island**	**84.97**	**31**	*e* P	**P**	**14 08 29.8**	**+3.6**		
KDAK				pmax	pmax				
	comp=Z,33nm,0.8s								
KDAK	**Kodiak Island**	**84.97**	**31**	P	**P**	**14 08 23.3**	**-2.8**		
	baz=254								
L19K	**White Mountain**	**85.20**	**26**	P	**P**	**14 08 24.1**	**-3.2**		
	baz=252,SNR=11								
GCSA	**Galena City Sc**	**85.20**	**24**	P	**P**	**14 08 24.8**	**-2.4**		
	baz=250								
Q20K	**Shuyak Island**	**85.30**	**30**	P	**P**	**14 08 25.5**	**-2.3**		
	baz=254								
TAOE	**Nuku Hiva Isla**	**85.43**	**99**	*e* LR	LR	14 35 28.3			
	comp=Z,289nm,22.7s								
ARU	**Arti**	**85.48**	**327**	LR	LR	14 49 58.2			
	comp=Z,148nm,19.9s,baz=100,slow=38								
ARU	**Arti**	**85.48**	**327**	*d i* P	**P**	**14 08 29.8**	**+1.0**		
ARU						14 11 49.4			
ARU				S	**S**	**14 18 55.1**	**-5.1**		
ARU				SS	**SS**	**14 24 34.8**	**-0.8**		
ARU				pmax	pmax				
	comp=Z,9.0nm,1.0s								
O20K	**Slope Mountain**	**85.60**	**29**	P	**P**	**14 08 26.4**	**-3.0**		
	baz=254								
QSPA	**South Pole Qui**	**85.64**	**180**	LR	LR	14 48 14.3			
	comp=Z,298nm,18.0s,baz=360,slow=37								
VOI	**Vohitsoka**	**85.65**	**248**	P	**P**	**14 08 30.2**	**-0.4**		
VOI				lAmb	lAmb	14 08 37.6			
	comp=Z,12nm,0.7s								
L20K	**Farewell, AK**	**85.72**	**26**	P	**P**	**14 08 28.0**	**-2.0**		
	baz=252,SNR=5.4								
M20K	**Styx River**	**85.88**	**27**	P	**P**	**14 08 28.7**	**-2.1**		
	baz=253,SNR=7.9								
K20K	**Telida**	**85.91**	**25**	P	**P**	**14 08 31.1**	**+0.3**		
K20K	**Telida**	**85.91**	**25**	P	**P**	**14 08 29.1**	**-1.7**		
	baz=252,SNR=22								
HOM	**Homer**	**85.96**	**29**	P	**P**	**14 08 29.7**	**-1.4**		
	baz=254								
J20K	**Nowinta River**	**86.13**	**25**	P	**P**	**14 08 31.8**	**0.0**		
J20K	**Nowinta River**	**86.13**	**25**	P	**P**	**14 08 30.5**	**-1.3**		
	baz=252,SNR=33								
PPLA	**Purkeypile**	**86.59**	**26**	P	**P**	**14 08 34.0**	**-0.4**		
PPLA	**Purkeypile**	**86.59**	**26**	P	**P**	**14 08 32.6**	**-1.8**		
	baz=254								
SKT	**Skwentna**	**86.63**	**27**	P	**P**	**14 08 34.0**	**-0.5**		
SKT				lAmb	lAmb	14 08 39.7			
	comp=Z,15nm,1.0s								
SKT	**Skwentna**	**86.63**	**27**	P	**P**	**14 08 33.2**	**-1.2**		
	baz=254								
CAST	**Castle Rocks**	**86.78**	**26**	P	**P**	**14 08 34.1**	**-1.1**		
	baz=254								
CHUM	**Lake Minchumin**	**86.81**	**25**	P	**P**	**14 08 34.4**	**-0.8**		
	baz=254,SNR=48								
IMAR	**Indian Mountai**	**86.85**	**23**	P	**P**	**14 08 35.3**	**0.0**		
SUA	**Susitna One**	**86.86**	**28**	P	**P**	**14 08 34.0**	**-1.7**		
	baz=255								
O22K	**Cooper Landing**	**87.10**	**29**	P	**P**	**14 08 35.0**	**-1.6**		
	baz=256								
H21K	**Melozitna Rive**	**87.12**	**23**	P	**P**	**14 08 36.6**	**-0.2**		
H21K				lAmb	lAmb	14 08 43.7			
	comp=Z,22nm,1.4s								
H21K	**Melozitna Rive**	**87.12**	**23**	P	**P**	**14 08 36.5**	**-0.3**		
	baz=253,SNR=7.3								
SEW	**Seward**	**87.14**	**29**	P	**P**	**14 08 36.1**	**-0.7**		
	baz=256								
M22K	**Willow**	**87.22**	**28**	P	**P**	**14 08 37.4**	**+0.2**		
	baz=256								
RC01	**Rabbit Creek A**	**87.24**	**28**	P	**P**	**14 08 36.8**	**-0.5**		
RC01	**Rabbit Creek A**	**87.24**	**28**	P	**P**	**14 08 35.9**	**-1.4**		
	baz=256								
CUT	**Chulitna**	**87.32**	**27**	P	**P**	**14 08 36.9**	**-0.8**		
	baz=256								
I21K	**Tanana**	**87.32**	**24**	P	**P**	**14 08 36.8**	**-0.8**		
	baz=254,SNR=7.0								
KTH	**Kantishna Hill**	**87.32**	**26**	P	**P**	**14 08 37.9**	**+0.1**		
BPAW	**Bear Paw Mtn.**	**87.44**	**25**	P	**P**	**14 08 38.1**	**-0.2**		
	baz=255								
TRF	**Thorofare Moun**	**87.57**	**26**	P	**P**	**14 08 38.9**	**-0.2**		
TRF				lAmb	lAmb	14 09 05.4			
	comp=Z,17nm,1.3s								
TRF	**Thorofare Moun**	**87.57**	**26**	P	**P**	**14 08 37.8**	**-1.3**		
	baz=256								
PMR	**Palmer**	**87.64**	**28**	P	**P**	**14 08 37.7**	**-1.5**		
	baz=257,SNR=5.4								
H22K	**Ishtalitna Cre**	**87.76**	**23**	P	**P**	**14 08 39.5**	**-0.3**		
	baz=254								
MLY	**Manley**	**87.78**	**24**	P	**P**	**14 08 40.1**	**+0.2**		
MLY				lAmb	lAmb	14 08 46.1			
	comp=Z,8.3nm,0.7s								
MLY	**Manley**	**87.78**	**24**	P	**P**	**14 08 38.7**	**-1.2**		
	baz=255,SNR=22								
KNK	**Knik Glacier**	**87.91**	**28**	P	**P**	**14 08 39.7**	**-0.9**		
KNK	**Knik Glacier**	**87.91**	**28**	P	**P**	**14 08 39.6**	**-1.0**		
	baz=257								
SML	**Sawmill**	**88.06**	**28**	P	**P**	**14 08 41.1**	**-0.2**		
SML	**Sawmill**	**88.06**	**28**	P	**P**	**14 08 40.2**	**-1.2**		
	baz=257								
RND	**Reindeer**	**88.19**	**26**	P	**P**	**14 08 42.2**	**+0.3**		
RND	**Reindeer**	**88.19**	**26**	P	**P**	**14 08 42.2**	**+0.3**		
RND				pmax	pmax				
	comp=Z,20nm,0.8s								
WAT1	**Susitna Watana**	**88.19**	**27**	P	**P**	**14 08 40.7**	**-1.3**		
	baz=257								
MCK	**McKinley**	**88.23**	**26**	P	**P**	**14 08 42.1**	**0.0**		
MCK	**McKinley**	**88.23**	**26**	P	**P**	**14 08 42.1**	**0.0**		
MCK				pmax	pmax				
	comp=Z,28nm,1.5s								
MCK	**McKinley**	**88.23**	**26**	P	**P**	**14 08 41.0**	**-1.0**		
	baz=257,SNR=5.1								
M23K	**Glacier View**	**88.34**	**28**	P	**P**	**14 08 42.4**	**-0.2**		
	baz=258								
I23K	**Minto, Yukon-K**	**88.38**	**24**	P	**P**	**14 08 42.4**	**-0.2**		
	baz=256,SNR=23								
GLI	**Glacier Island**	**88.45**	**29**	P	**P**	**14 08 42.5**	**-0.7**		
GLI	**Glacier Island**	**88.45**	**29**	P	**P**	**14 08 42.3**	**-0.8**		
	baz=258								
H23K	**Yukon River**	**88.47**	**24**	P	**P**	**14 08 43.2**	**0.0**		
	baz=256,SNR=6.0								
WAT6	**Susitna Watana**	**88.50**	**27**	P	**P**	**14 08 42.8**	**-0.8**		
	baz=258,SNR=7.9								
SCM	**Sheep Creek Mo**	**88.53**	**28**	P	**P**	**14 08 42.7**	**-0.9**		
	baz=258,SNR=5.1								
WRH	**Wood River Hil**	**88.75**	**25**	P	**P**	**14 08 44.7**	**+0.2**		
WRH				lAmb	lAmb	14 08 50.2			
	comp=Z,17nm,1.2s								
D23K	**Nanushuk River**	**88.83**	**20**	P	**P**	**14 08 42.8**	**-2.0**		
	baz=255,SNR=7.6								
CCB	**Clear Creek Bu**	**88.91**	**25**	P	**P**	**14 08 44.2**	**-1.0**		
CCB				lAmb	lAmb	14 08 50.3			
	comp=Z,8.7nm,0.8s								
TCOL	**CIGO, UAF Yank**	**88.94**	**25**	P	**P**	**14 08 43.5**	**-1.9**		
	baz=258								
COLA	**College**	**88.94**	**25**	*d i* P	**P**	**14 08 46.1**	**+0.8**		
COLA				pmax	pmax				
	comp=Z,5.0nm,0.8s								
COLA	**College**	**88.94**	**25**	P	**P**	**14 08 44.4**	**-0.9**		
	baz=258								
C23K	**Itkillik River**	**89.08**	**20**	P	**P**	**14 08 44.3**	**-1.6**		
	baz=255								
M24K	**Tolsona, Glenn**	**89.12**	**28**	P	**P**	**14 08 44.9**	**-1.5**		
	baz=259								
KLU	**Klutina**	**89.12**	**28**	P	**P**	**14 08 44.4**	**-2.1**		
	baz=260								
DIV	**Divide**	**89.13**	**29**	P	**P**	**14 08 45.8**	**-0.7**		
H24K	**Noodor Dome**	**89.14**	**24**	P	**P**	**14 08 46.2**	**-0.1**		
H24K				lAmb	lAmb	14 08 52.4			
	comp=Z,10nm,1.1s								
H24K	**Noodor Dome**	**89.14**	**24**	P	**P**	**14 08 44.7**	**-1.6**		
	baz=258,SNR=6.4								
TOLK	**Toolik Lake Re**	**89.14**	**21**	P	**P**	**14 08 46.0**	**-0.3**		
TOLK	**Toolik Lake Re**	**89.14**	**21**	P	**P**	**14 08 45.2**	**-1.1**		
	baz=256								
POKR	**Poker Plat Res**	**89.17**	**25**	P	**P**	**14 08 45.1**	**-1.3**		
	baz=258								
HDA	**Harding Lake**	**89.23**	**25**	P	**P**	**14 08 45.5**	**-1.2**		
	baz=258								
IL31		**89.32**	**25**	P	**P**	**14 08 46.9**	**-0.2**		
ILAR	**Eielson Array**	**89.32**	**25**	P	**P**	**14 08 46.1**	**-1.0**		
	comp=Z,2.4nm,1.0s,baz=272,slow=4.4,SNR=21								
ILAR				LR	LR	14 45 01.5			
	comp=Z,187nm,20.3s,baz=239,slow=33								
	comp=Z,2.4nm,1.0s								
ILAR	**Eielson Array**	**89.32**	**25**	P	**P**	**14 08 46.3**	**-0.9**		
ILAR	**Eielson Array**	**89.32**	**25**	P	**P**	**14 08 46.3**	**-0.9**		
D24K	**Happy Valley**	**89.53**	**20**	P	**P**	**14 08 47.7**	**-0.4**		
	baz=257								
PAX	**Paxson**	**89.60**	**27**	P	**P**	**14 08 47.5**	**-1.2**		
	baz=260								
K24K	**Donnelly Dome**	**89.61**	**26**	P	**P**	**14 08 47.8**	**-0.8**		
	baz=260								
HARP	**HAARP**	**89.64**	**27**	P	**P**	**14 08 47.7**	**-1.1**		
	baz=260								
BMRM	**Bremner River**	**89.66**	**29**	P	**P**	**14 08 47.6**	**-1.3**		
	baz=261								
N25K	**Chitina, Valde**	**89.77**	**28**	P	**P**	**14 08 48.5**	**-0.9**		
	baz=261								
J25K	**Salcha River,**	**89.94**	**25**	P	**P**	**14 08 48.3**	**-1.8**		
	baz=260								
RIDG	**Independent Ri**	**90.01**	**26**	P	**P**	**14 08 49.3**	**-1.2**		
	baz=260								
RAYN	**Ar Rayn**	**90.16**	**293**	P	**P**	**14 08 51.9**	**-0.2**		
RAYN				lAmb	lAmb	14 09 06.8			
	comp=Z,9.7nm,1.1s								
RAYN	**Ar Rayn**	**90.16**	**293**	P	**P**	**14 08 51.9**	**-0.2**		
RAYN				pmax	pmax				
	comp=Z,10.0nm,1.2s								
BGLC	**Bering Glacier**	**90.17**	**30**	P	**P**	**14 08 50.2**	**-1.0**		
	baz=262								
CRQE	**Cirque**	**90.36**	**29**	P	**P**	**14 08 50.7**	**-1.6**		
	baz=262								
SCRK	**Sand Creek**	**90.42**	**26**	P	**P**	**14 08 50.9**	**-1.6**		
	baz=261								
MCARA	**McCarthy VSAT**	**90.48**	**29**	P	**P**	**14 08 51.3**	**-1.3**		
	baz=262								
L26K	**Log Cabin Wild**	**90.56**	**27**	P	**P**	**14 08 52.4**	**-0.6**		
	baz=262								
M26K	**Nabesna, AK**	**90.64**	**28**	P	**P**	**14 08 52.4**	**-1.0**		
	baz=262								
J26L	**Joseph Creek**	**90.69**	**25**	P	**P**	**14 08 53.7**	**0.0**		
J26L				lAmb	lAmb	14 09 07.9			
	comp=Z,7.9nm,1.1s								
J26L	**Joseph Creek**	**90.69**	**25**	P	**P**	**14 08 52.7**	**-0.9**		
	baz=262								
BMAR	**Burnt Mountain**	**90.73**	**22**	P	**P**	**14 08 54.5**	**+0.7**		
KIRV	**Kirov**	**90.73**	**329**	LR	LR	14 52 24.9			
	comp=Z,144nm,21.2s,baz=80,slow=37								
MESA	**MESA**	**90.84**	**30**	P	**P**	**14 08 53.2**	**-1.4**		
	baz=263								
BELG	**Belogornoye**	**91.06**	**322**	LR	LR	14 52 21.5			
	comp=Z,169nm,20.6s,baz=128,slow=37								
M27K	**Edge Creek, AK**	**91.15**	**28**	P	**P**	**14 08 54.2**	**-1.7**		
	baz=263								
CTG	**Chitna Glacier**	**91.24**	**29**	P	**P**	**14 08 55.1**	**-1.3**		
	baz=264								
L27K	**Beaver Creek,**	**91.26**	**27**	P	**P**	**14 08 55.3**	**-1.0**		
	baz=263								
BCAR	**Beaver Creek A**	**91.28**	**27**	P	**P**	**14 08 56.7**	**+0.3**		
BVCY	**Beaver Creek**	**91.62**	**28**	P	**P**	**14 08 57.2**	**-0.8**		
	baz=264								
YUK3	**Moose Creek**	**91.75**	**28**	P	**P**	**14 08 58.1**	**-0.7**		
	baz=264								
ATD	**Arta Tunnel**	**91.80**	**281**	LR	LR	14 47 37.9			
	comp=Z,72nm,21.9s,baz=123,slow=34								
GNI	**Garni**	**92.05**	**310**	LR	LR	14 56 49.0			
	comp=Z,51nm,19.6s,baz=98,slow=40								
PNL	**Peninsula**	**92.07**	**30**	P	**P**	**14 08 59.0**	**-1.1**		
	baz=265								
DAWY	**Dawson**	**92.44**	**26**	P	**P**	**14 09 01.2**	**-0.6**		
	baz=265								
YUK4	**Talbot Arm**	**92.57**	**29**	P	**P**	**14 09 01.1**	**-1.5**		
	baz=266								
HYT	**Haines Junctio**	**93.09**	**29**	P	**P**	**14 09 03.4**	**-1.6**		
	baz=267								
PLBC	**Pleasant Camp**	**93.59**	**31**	P	**P**	**14 09 05.3**	**-1.8**		
	baz=268								
KBZ	**Khabaz**	**93.62**	**313**	*i* P	**P**	**14 09 08.2**	**+0.7**		
KBZ				pmax	pmax				
	comp=Z,5.0nm,1.5s								
INK	**Inuvik**	**94.97**	**22**	LR	LR	14 47 35.6			
	comp=Z,105nm,21.8s,baz=266,slow=33								
INK	**Inuvik**	**94.97**	**22**	P	**P**	**14 09 11.2**	**-2.0**		
	baz=271								
N32M	**Quiet Lake**	**95.25**	**29**	P	**P**	**14 09 13.5**	**-1.2**		
	baz=271								
KLMR	**Klimovskoe**	**95.84**	**331**	*e* P	**P**	**14 09 14.8**	**-2.5**		
KLMR				*e*		14 13 07.3			
KLMR				pmax	pmax				
	comp=Z,6.0nm,0.6s								
KLMR	**Klimovskoe**	**95.84**	**331**	*e* P	**P**	**14 09 14.9**	**-2.5**		
KLMR				AMP		14 09 21.6			
	comp=Z,6.0nm,0.6s								
KLMR				*e* PP	**PP**	**14 13 07.3**	**-1.9**		
NVL	**N'lazarevskaya**	**96.00**	**196**	*e* P	P	14 09 29.4	+12		
NVL				pmax	pmax				
	comp=Z,8.0nm,1.0s								
NVL				MLR	MLR				
	comp=Z,574nm,18.0s								
KMBO	**Kilima Mbogo**	**96.46**	**268**	LR	LR	14 52 35.7			
	comp=Z,136nm,18.7s,baz=94,slow=35								
T35M	**Bob Quinn**	**96.84**	**33**	P	**P**	**14 09 21.1**	**-1.0**		
	baz=273								
DLBC	**Dease Lake**	**96.88**	**32**	LR	LR	14 47 34.7			
	comp=Z,226nm,22.0s,baz=299,slow=32								
TROLL	**Troll, Antarti**	**97.66**	**194**	P	Pdif	14 09 28.1	+2.4		
OBN	**Obninsk**	**97.67**	**325**	LR	LR	14 56 36.6			
	comp=Z,43nm,21.5s,baz=29,slow=37								
BBB	**Bella Bella**	**98.34**	**38**	LR	LR	14 45 39.7			
	comp=Z,210nm,21.9s,baz=278,slow=30								
SNAA	**Sanae**	**99.12**	**193**	LR	LR	14 54 30.6			
	comp=Z,327nm,19.1s,baz=124,slow=36								
SNAA	**Sanae**	**99.12**	**193**	*e* P	**Pdif**	**14 09 29.6**	**-2.5**		
SNAA				pmax	pmax				
	comp=Z,7.0nm,1.7s								
MMAI	**Mount Meron Ar**	**99.39**	**303**	LR	LR	15 01 47.6			
	comp=Z,75nm,19.6s,baz=250,slow=40								
SPITS	**Spitsbergen Ar**	**99.67**	**349**	LR	LR	14 55 35.4			
	comp=Z,198nm,21.7s,baz=14,slow=36								
ARCES	**ARCESS Array B**	**100.38**	**340**	P	**Pdif**	**14 09 38.1**	**+0.5**		
	comp=Z,3.5nm,1.0s,baz=46,slow=3.9,SNR=5.1								
NACGM	**Naroch**	**103.29**	**325**	*e* P	**Pdif**	**14 09 44.4**	**-6.4**		
YKA	**Yellowknife Ar**	**103.68**	**26**	Pdiff	**Pdif**	**14 09 55.9**	**+3.5**		
	comp=Z,0.6nm,0.9s,baz=297,slow=4.1,SNR=2.6								
NVAR	**Mina Array Bea**	**106.66**	**51**	Pdiff	**Pdif**	**14 10 14.9**	**+8.4**		
	comp=Z,0.7nm,0.8s,baz=245,slow=5.8,SNR=4.2								
CLL	**Collm**	**112.27**	**324**	*e* SS	SS	14 31 00.0	+9.3		
CLL				LmH		14 58 00.0			
	comp=N,400nm,19.4s								
CLL				LmH		14 58 00.0			
	comp=E,400nm,20.8s								
CLL				LmV		15 08 00.0			
	comp=Z,300nm,20.4s								
PDAR	**Pinedale Array**	**112.31**	**45**	PKKPab	PKKPab	14 25 22.9	-3.7		
	comp=Z,0.3nm,0.7s,baz=116,slow=4.1,SNR=3.5								
PDAR				PKKP	**PKKPdf**	**14 25 36.4**	**-2.8**		
	comp=Z,0.6nm,0.9s,baz=101,slow=4.7,SNR=3.6								
TXAR	**Lajitas Array**	**120.30**	**59**	PKP	**PKiKP**	**14 14 44.4**	**+1.1**		
	comp=Z,0.1nm,0.6s,baz=270,slow=1.8,SNR=1.5								
TXAR				PKKPab	**PKKPab**	**14 24 53.1**	**+1.6**		
	comp=Z,0.2nm,0.7s,baz=116,slow=4.2,SNR=3.8								
TORD	**Torodi Ar. Bea**	**131.95**	**284**	PKP	**PKiKP**	**14 15 07.6**	**+0.9**		
	comp=Z,1.1nm,0.8s,baz=53,slow=2.6,SNR=4.3								
TORD				SKP		14 18 41.8			
	comp=Z,4.1nm,1.3s,baz=72,slow

MT05				*i* S		**Sn**	**14 12 16.9**	**+0.9**
MT05				IAML			14 12 18.4	
	comp=E,739nm,0.4s							
MT02	**Curacav**	**2.97**	**217**	Pn		**Pn**	**14 11 42.6**	**+0.2**
MT02	**Curacav**	**2.97**	**217**	*i* P		**Pn**	**14 11 42.9**	**+0.5**
VA01	**Torpederas**	**3.09**	**226**			**Pn**	**14 11 43.4**	**-0.5**
LMEL	**Las Melosas**	**3.11**	**199**			**Pn**	**14 11 45.4**	**+1.0**
LMEL	**Las Melosas**	**3.11**	**199**	*i* P		**Pn**	**14 11 46.5**	**+2.2**
AC04	**Llanos de Chal**	**3.24**	**326**	Pn		**Pn**	**14 11 47.9**	**+1.9**
MT09	**Talagante**	**3.32**	**210**			**Pn**	**14 11 46.8**	**-0.4**
MT09	**Talagante**	**3.32**	**210**	*i* P		**Pn**	**14 11 47.2**	**+0.1**
BO04	**La Punta**	**3.37**	**203**			**Pn**	**14 11 48.4**	**+0.7**
BO04	**La Punta**	**3.37**	**203**	*i* P		**Pn**	**14 11 48.8**	**+1.2**
BO04				*i* S		**Sn**	**14 12 27.4**	**+0.2**
BO04				IAML			14 12 32.2	
	comp=N,171nm,0.6s							
GO03	**Copiap**	**3.47**	**342**			**Pn**	**14 11 50.6**	**+1.5**
GO03	**Copiap**	**3.47**	**342**	*i* P		**Pn**	**14 11 51.1**	**+2.0**
GO03				*i* S		**Sn**	**14 12 29.9**	**+0.2**
MT01	**Popeta**	**3.51**	**212**			**Pn**	**14 11 49.0**	**-0.5**
MT01	**Popeta**	**3.51**	**212**	*i* P		**Pn**	**14 11 49.1**	**-0.5**
VA05	**Santo Domingo**	**3.53**	**218**			**Pn**	**14 11 48.3**	**-1.4**
VA05	**Santo Domingo**	**3.53**	**218**	*e*P		**Pn**	**14 11 48.8**	**-0.9**
BO01	**Tunca**	**3.90**	**206**	Pn		**Pn**	**14 11 53.8**	**-0.9**
AC02	**Maricunga**	**4.05**	**358**	Pn		**Pn**	**14 12 00.1**	**+2.8**
AC01	**Pan de Azucar**	**4.94**	**343**	Pn		**Pn**	**14 12 10.2**	**+1.4**
ML02	**Panimavida**	**5.25**	**202**			**Pn**	**14 12 11.1**	**-1.7**
GO02	**Mina Guanaco**	**5.74**	**355**			**Pn**	**14 12 20.9**	**+1.1**
PB15	**IPOC Station P**	**7.67**	**357**			**Pn**	**14 12 46.4**	**+0.5**
PB06	**IPOC Station P**	**8.18**	**356**	Pn		**Pn**	**14 12 53.3**	**+0.7**
LVC	**Limon Verde**	**8.26**	**1**	P		**Pn**	**14 12 53.3**	**-0.6**
	comp=N,1.4nm,0.3s,baz=192,slow=12,SNR=12							
LVC				S		**Sn**	**14 14 20.9**	**-4.9**
	comp=N,2.5nm,0.4s,baz=234,slow=23,SNR=1.6							
	comp=N,2.4nm,0.3s							
LVC	**Limon Verde**	**8.26**	**1**	Pn		**Pn**	**14 12 53.5**	**-0.4**
PB04	**IPOC Station P**	**8.60**	**353**	Pn		**Pn**	**14 12 56.6**	**-1.7**
TRQA	**Tornquist**	**9.19**	**143**	Pn		**Pn**	**14 13 06.4**	**+0.3**
LR04	**Corral**	**9.66**	**201**	Pn		**Pn**	**14 13 08.8**	**-3.5**
PLCA	**Paso Flores**	**9.89**	**187**	Pn		**Pn**	**14 13 14.1**	**-1.5**
ITQB	**Itaqui**	**10.77**	**87**	Pn		**Pn**	**14 13 26.9**	**-0.5**
CPUP	**Villa Florida**	**11.22**	**69**	P		**Pn**	**14 13 32.0**	**-1.4**
	comp=N,0.3nm,0.3s,baz=266,slow=15,SNR=1.8							
	comp=N,0.8nm,0.3s							
LPAZ	**La Paz**	**14.57**	**3**	P		**Pn**	**14 14 16.0**	**-1.6**
	comp=N,0.1nm,0.3s,baz=180,slow=8.1,SNR=1.9							
	comp=N,0.8nm,0.7s							
SIV	**San Ignacio**	**16.52**	**28**	P		**P**	**14 14 42.3**	**+0.5**
	baz=200,slow=5.3,SNR=4.6							
	comp=N,0.8nm,0.4s							
PDAR	**Pinedale Array**	**82.23**	**331**	P		**P**	**14 23 08.7**	**+4.1**
	comp=N,0.2nm,0.4s,baz=144,slow=6.4,SNR=2.1							
	comp=N,0.2nm,0.4s							
WRA	**Warramunga Arr**	**124.69**	**207**	PKP		**PKiKP**	**14 29 45.1**	**+2.0**
	comp=N,0.6nm,1.0s,baz=153,slow=1.9,SNR=4.8							
ZALV	**Zalesovo Beam**	**150.25**	**32**	PKPbc		**PKPab**	**14 30 37.0**	**-2.7**
	comp=N,1.6nm,0.3s,baz=328,slow=3.5,SNR=6.7							

KRNET ***28*** *14:11:31.8±0.1,39.˚48N×73.˚74E,mb3.5*
SOME ***28*** *14:11:36.3,39.˚67N×73.˚72E,h0km*
NNC ***28*** *14:11:38.5±1.4,39.˚68N×73.˚71E,h0km,mb3.8,mpv3.3,*
Error ellipse: s-maj=11.2km s-min=5.6km az=175.0

ISC 28 14:11:34.0±1.2,39.˚60N±0.˚05×73.˚65E±0.˚03,h10km,n44,
σ1§94/70,15C-12D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.13**	**325**	⇑*e*P	**Pn**	**14 11 56.1**	**+0.1**
	baz=25						
OHH				⇑*e*S	**Sn**	**14 12 14.3**	**+2.6**
	baz=25						
BTK	**Batken**	**2.22**	**283**	⇑*i*P	**Pb**	**14 12 13.9**	**-0.5**
BTK	baz=85			⇑*i*S	**Sg**	**14 12 44.1**	**-1.4**
	baz=85						
ARLS	**Aral**	**2.31**	**13**	⇓*e*P	**Pb**	**14 12 14.6**	**-1.3**
ARLS	baz=10.0			⇓*i*S	**Sg**	**14 12 46.1**	**-2.3**
	baz=10.0						
AML	**Almayashu**	**2.52**	**1**	P	**Pb**	**14 12 20.1**	**+0.4**
	SNR=12						
GAR	**Garm**	**2.65**	**258**	⇓*e*P	**Pn**	**14 12 18.8**	**+1.8**
GAR	baz=61			⇓*e*S	**Sb**	**14 12 53.1**	**-1.2**
	baz=61						
UCH	**Uchtor**	**2.70**	**14**	P	**Pb**	**14 12 23.4**	**+0.6**
	SNR=26						
UCH	**Uchtor**	**2.70**	**14**	⇓*e*P	**Pb**	**14 12 20.4**	**-2.4**
	baz=12						
UCH				⇓*e*S	**Sb**	**14 12 55.9**	**-0.2**
	baz=12						
TRKS	**Terek-Say**	**2.71**	**316**	⇑*e*P	**Pn**	**14 12 19.9**	**+2.1**
	baz=16						
TRKS				⇑*e*S	**Sb**	**14 12 55.0**	**-1.1**
	baz=16						
EKS2	**Erkin-Say**	**3.06**	**2**	P	**Pb**	**14 12 28.4**	**-0.2**
	SNR=11						
EKS2	**Erkin-Say**	**3.06**	**2**	⇓*e*P	**Pn**	**14 12 25.2**	**+2.7**
	baz=0.0						
EKS2				⇓*e*S	**Sb**	**14 13 04.4**	**-1.6**
	baz=0.0						
AAK	**Ala-Archa**	**3.10**	**12**	P	**Pb**	**14 12 29.0**	**-0.4**
	SNR=8.7						
MRKS	**Merke**	**3.15**	**354**	*e*P	**Pg**	**14 12 35.3**	**+0.8**
	9.6nm,0.3s						
MRKS				*e*S	**Sg**	**14 13 17.5**	**+2.1**
	49nm,0.6s						
KBK	**Karagaybulak**	**3.21**	**17**	P	**Pg**	**14 12 34.5**	**-0.9**
	SNR=8.8						
KBK	**Karagaybulak**	**3.21**	**17**	⇓*e*P	**Pn**	**14 12 27.0**	**+2.4**
	baz=16						
KBK				⇓*e*S	**Sb**	**14 13 07.4**	**-2.9**
	baz=16						
ULHL	**Ulahol**	**3.29**	**36**	P	**Pg**	**14 12 34.9**	**-2.2**
	SNR=19						
BOOM	**Boomskoye usch**	**3.37**	**30**	⇓*i*P	**Pn**	**14 12 29.4**	**+2.6**
	baz=28						
BOOM				⇓*i*S	**Sb**	**14 13 10.9**	**-4.0**
	baz=28						
CHMS	**Chumysh**	**3.49**	**13**	⇑Pn	**Pb**	**14 12 33.7**	**-2.3**
	3.6nm,0.5s						
CHMS				⇑Lg	Lg	14 13 25.9	
	5.7nm,0.6s						
TKM2	**Tokmak 2**	**3.63**	**23**	⇑Pn	**Pb**	**14 12 35.9**	**-2.5**
	5.0nm,0.6s						
TKM2				⇑Lg	Lg	14 13 31.7	
	10nm,0.6s						
KDJ	**Kajisay**	**3.68**	**46**	⇑*e*P	**Pn**	**14 12 33.0**	**+1.8**
	baz=44						
KDJ				⇑*i*S	**Sn**	**14 13 17.6**	**+2.9**
	baz=44						
DZA	**Taraz**	**3.72**	**333**	*e*P	**Pg**	**14 12 45.1**	**-0.1**
	47nm,0.1s						
DZA				*e*S	**Sg**	**14 13 34.5**	**+1.0**
	80nm,0.3s						
KST	**Kastek**	**3.85**	**26**	*e*P	**Pg**	**14 12 47.5**	**-0.3**
	6.8nm,0.5s						
KST				*e*S	**Sg**	**14 13 38.7**	**+0.9**
	24nm,0.5s						
SGDS	**Sogindy**	**3.92**	**11**	*e*P	**Pg**	**14 12 49.0**	**0.0**
	5.8nm,0.8s						
SGDS				*e*S	**Sg**	**14 13 41.3**	**+1.6**
	11nm,0.5s						
DGS	**Degeres**	**3.97**	**23**	*e*P	**Pg**	**14 12 49.3**	**-0.8**
	8.0nm,0.3s						
DGS				*e*S	**Sg**	**14 13 42.1**	**+0.5**
	9.2nm,1.2s						
DGS	**Degeres**	**3.97**	**23**	Pg	**Pg**	**14 12 49.3**	**-0.8**
	8.0nm,0.3s						
DGS				Lg	Lg	14 13 42.1	
	18nm,0.7s						
MTBS	**Maitube**	**4.10**	**30**	*e*P	**Pg**	**14 12 52.5**	**0.0**
	5.2nm,0.1s						
MTBS				*e*S	**Sg**	**14 13 47.3**	**+1.7**
	12nm,0.2s						
MTBS	**Maitube**	**4.10**	**30**	Pg	**Pg**	**14 12 52.5**	**0.0**
	3.6nm,0.1s						
MTBS				Lg	Lg	14 13 47.3	
	12nm,0.2s						
KK31	**Karatay Array**	**4.22**	**327**	⇑Pn	**Pn**	**14 12 42.5**	**+4.1**
	0.5nm,0.3s,baz=135,slow=13,SNR=13						
KK31				Pg	**Pg**	**14 12 53.5**	**-1.3**
	1.4nm,0.4s,baz=153,slow=16,SNR=6.3						
KK31				⇑Sn	**Sb**	**14 13 35.1**	**-4.1**
	2.2nm,0.3s						
KK31				⇑Lg	Lg	14 13 48.6	
	5.3nm,0.5s,baz=156,slow=30,SNR=5.0						
TNSS	**Tian-Shan**	**4.24**	**35**	*e*P	**Pg**	**14 12 53.1**	**-2.1**
	5.6nm,0.2s						
TNSS				*e*S	**Sg**	**14 13 48.6**	**-1.5**
	4.8nm,0.4s						
TNSS	**Tian-Shan**	**4.24**	**35**	Pg	**Pg**	**14 12 53.1**	**-2.1**
	5.6nm,0.2s						
TNSS				Lg	Lg	14 13 48.6	
	4.8nm,0.4s						
KRBS	**Karabastau**	**4.36**	**20**	*e*P	**Pg**	**14 12 56.5**	**-1.1**
	0.1nm,0.1s						
KRBS				*e*S	**Sg**	**14 13 54.2**	**+0.1**
	6.2nm,0.4s						
KRBS	**Karabastau**	**4.36**	**20**	Pg	**Pg**	**14 12 56.5**	**-1.1**
	0.1nm,0.1s						
KRBS				Lg	Lg	14 13 54.2	
	6.2nm,0.4s						
BRLS	**Borolday**	**4.46**	**321**	*e*P	**Pg**	**14 12 57.5**	**-2.1**
BRLS				*e*S	**Sg**	**14 13 55.8**	**-1.5**
	17nm,0.5s						
BRLS	**Borolday**	**4.46**	**321**	Pg	**Pg**	**14 12 57.4**	**-2.1**
BRLS				Lg	Lg	14 13 55.8	
	17nm,0.5s						
KTBS	**Karatobe**	**4.69**	**28**	*e*P	**Pg**	**14 13 02.7**	**-1.2**
	3.8nm,0.6s						
KTBS				*e*S	**Sg**	**14 14 05.4**	**+0.7**
	21nm,0.6s						
KTBS	**Karatobe**	**4.69**	**28**	Pg	**Pg**	**14 13 02.7**	**-1.2**
	3.8nm,0.6s						
KTBS				Lg	Lg	14 14 05.4	
	21nm,0.6s						
CHKK	**Chushkaly**	**4.93**	**29**	*e*P	**Pg**	**14 13 06.3**	**-2.1**
	2.6nm,0.3s						
CHKK				*e*S	**Sg**	**14 14 10.9**	**-1.3**
	8.7nm,0.6s						
CHKK	**Chushkaly**	**4.93**	**29**	Pg	**Pg**	**14 13 06.3**	**-2.1**
	2.6nm,0.3s						
CHKK				Lg	Lg	14 14 10.9	
	8.7nm,0.6s						
SATY	**Saty**	**4.98**	**45**	*e*P	**Pg**	**14 13 07.6**	**-1.7**
	1.9nm,0.2s						
SATY				*e*S	**Sg**	**14 14 13.2**	**-0.6**
	5.5nm,0.1s						
KPKS	**Kokpek**	**5.40**	**43**	*e*P	**Pg**	**14 13 15.4**	**-2.1**
	1.4nm,0.3s						
KPKS				*e*S	**Sg**	**14 14 26.6**	**-0.8**
	9.5nm,0.7s						
KPKS	**Kokpek**	**5.40**	**43**	Pg	**Pg**	**14 13 15.4**	**-2.1**
	1.4nm,0.3s						
KPKS				Lg	Lg	14 14 26.6	
	9.5nm,0.7s						
ARXS	**Arharly**	**5.56**	**33**	*e*P	**Pg**	**14 13 17.9**	**-2.6**
	4.9nm,0.4s						
ARXS				*e*S	**Sg**	**14 14 31.4**	**-1.1**
	7.8nm,0.6s						
ARXS	**Arharly**	**5.56**	**33**	Pg	**Pg**	**14 13 17.9**	**-2.6**
	4.9nm,0.4s						
ARXS				Lg	Lg	14 14 31.4	
	7.8nm,0.6s						
PDGK	**Podgornoye**	**5.75**	**48**	Pg	**Pg**	**14 13 21.1**	**-3.2**
	0.7nm,0.4s						
PDGK				Lg	Lg	14 14 36.5	
	2.7nm,0.7s						
PDGK	**Podgornoye**	**5.75**	**48**	Pg	**Pb**	**14 13 18.9**	**+4.4**
	3.8nm,1.1s						
PDGK				Lg	Lg	14 14 35.9	
	7.1nm,0.8s						
KST				*e*S	**Sb**	**14 20 11.8**	**+1.9**
	23nm,0.6s						
DGS	**Degeres**	**4.24**	**26**	*e*P	**Pb**	**14 19 22.9**	**+1.5**
	6.0nm,0.4s						
DGS				*e*S	**Sb**	**14 20 15.2**	**+2.4**
	26nm,1.1s						
BRLS	**Borolday**	**4.38**	**326**	*e*P	**Pb**	**14 19 26.1**	**+2.5**
	2.8nm,0.4s						
BRLS				*e*S	**Sb**	**14 20 20.7**	**+4.1**
	7.2nm,0.6s						
MTBS	**Maitube**	**4.40**	**32**	*e*P	**Pb**	**14 19 25.9**	**+1.8**
	3.8nm,0.4s						
MTBS				*e*S	**Sb**	**14 20 20.6**	**+3.3**
	16nm,0.3s						
TNSS	**Tian-Shan**	**4.55**	**37**	*e*P	**Pb**	**14 19 28.4**	**+1.6**
	4.3nm,0.4s						
TNSS				*e*S	**Sb**	**14 20 24.8**	**+2.8**
	8.3nm,1.0s						
KRBS	**Karabastau**	**4.62**	**23**	*e*P	**Pb**	**14 19 30.2**	**+2.4**
	2.3nm,0.6s						
KRBS				*e*S	**Sb**	**14 20 28.0**	**+4.4**
	14nm,1.1s						
KTBS	**Karatobe**	**4.99**	**30**	*e*P	**Pb**	**14 19 35.8**	**+1.8**
	1.7nm,0.8s						
KTBS				*e*S	**Sb**	**14 20 37.5**	**+3.5**
	21nm,0.7s						
CHKK	**Chushkaly**	**5.22**	**32**	*e*P	**Pb**	**14 19 40.1**	**+2.0**
	0.6nm,0.2s						
CHKK				*e*S	**Sb**	**14 20 44.9**	**+3.9**
	12nm,0.5s						
KPKS	**Kokpek**	**5.74**	**44**	*e*P	**Pb**	**14 19 48.5**	**+1.5**
	2.9nm,1.1s						
KPKS				*e*S	**Sb**	**14 20 59.5**	**+3.6**
	11nm,0.5s						
ARXS	**Arharly**	**5.87**	**35**	*e*P	**Pb**	**14 19 51.1**	**+2.0**
	3.7nm,0.7s						
ARXS				*e*S	**Sb**	**14 21 03.7**	**+4.1**
	12nm,0.7s						

ASRS 28 14:32:00.4±0.4,54.˚N±2.˚×9.˚6E±.˚,h5km,MLh3.3/7,Error ellipse: s-maj=4.0km s-min=2.8km az=45.4,confirmed, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ORY	**Orie**	**0.89**	**321**	Pg	Pb	14 32 18.5	+0.1
ORY				Sg	Sg	14 32 29.5	+0.4
ARDR	**Aradan**	**2.36**	**223**	Pg	Pg	14 32 46.9	+1.3
ARDR				Sg	Sg	14 33 18.7	+2.5
GZL	**Zheleznogorsk**	**2.43**	**324**	Sg	Sg	14 33 18.9	+0.4
KZLR	**Kyzyl**	**2.80**	**201**	Pg	Pg	14 32 56.3	+2.2
KZLR				Sg	Sg	14 33 34.4	+4.0
ABNR	**Abakan**	**2.81**	**260**	Pg	Pg	14 32 55.8	+1.6
ABNR				Sg	Sg	14 33 33.8	+3.1
CERR	**Cheremushki**	**3.15**	**244**	Pg	Pg	14 33 01.7	+0.9
CERR				Sg	Sg	14 33 44.3	+2.7
DJOS	**Djoyskaya Sosn**	**3.19**	**243**	Pg	Pg	14 33 02.8	+1.3
DJOS				Sg	Sg	14 33 45.6	+2.8
DJO	**Djoy, Khakassi**	**3.29**	**244**	Pg	Pg	14 33 03.5	+0.1
DJO				Sg	Sg	14 33 48.0	+1.9
KNGR	**Kungurtug, Tuv**	**3.82**	**166**	Sg	Sg	14 34 06.7	+3.5
MOY	**Mondy**	**3.98**	**130**	Pg	Pg	14 33 18.2	+1.6
MOY				Sg	Sg	14 34 09.7	+1.5
ERNS	**Erzin**	**4.11**	**188**	Pg	Pg	14 33 18.1	-1.0
ERNS				Sg	Sg	14 34 13.4	+1.2
LUZB	**Luzhba, Kemero**	**4.30**	**264**	Pg	Pg	14 33 22.6	0.0
LUZB				Sg	Sg	14 34 21.6	+3.3
TASR	**Tashtagol**	**5.14**	**256**	Sg	Sg	14 34 46.8	+1.4

IDC ***28*** *14:49:38.4±1.3,24.˚17S×67.˚05W,h170km±11km,mb3.5/7,*
mbtmp3.9/13,Error ellipse: s-maj=21.3km s-min=14.2km
az=22.0
NEIC ***28*** *14:49:38.3±2.5,24.˚25S±0.˚06×67.˚16W±0.˚10,h175km±7km,*
mb4.0/9,ML4.2(GUC),Error ellipse: s-maj=12.9km
s-min=8.7km az=93.0
GUC ***28*** *14:49:39.5±0.7,24.˚27S×67.˚25W,h182km±7km,ML4.2*
VAO ***28*** *14:49:40.8±0.4,23.˚98S×67.˚18W,h193km±8km,mb4.1*

ISC 28 14:49:38.2±0.6,24.˚24S±0.˚04×67.˚18W±0.˚05,h178km±7km,
n91,σ1§18/101,mb3.9/10,11C-1D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AF01	**San Pedro de A**	**1.58**	**324**		**Pn**	**14 50 12.4**	**+1.2**
AF01	**San Pedro de A**	**1.58**	**324**	⇑*i*P	**Pn**	**14 50 12.8**	**+1.6**
AF01				IAML		14 50 40.7	
	comp=E,608nm,0.5s						
SLA	**San Lorenzo**	**1.60**	**108**	⇓*i*P	**Pn**	**14 50 12.8**	**+1.6**
SLA				*i* S	**Sn**	**14 50 38.4**	**+1.7**
LVC	**Limon Verde**	**2.27**	**315**	P	**Pn**	**14 50 19.8**	**+1.1**
	comp=E,251nm,0.5s,baz=138,slow=5.9,SNR=378						
LVC				S	**Sn**	**14 50 49.9**	**0.0**
	comp=E,128nm,0.3s,baz=274,slow=18,SNR=25						
LVC	**Limon Verde**	**2.27**	**315**	Pn	**Pn**	**14 50 19.6**	**+1.0**
LVC	**Limon Verde**	**2.27**	**315**	⇑*i*P	**Pn**	**14 50 19.9**	**+1.1**
LVC				*i* S	**Sn**	**14 50 49.9**	**0.0**
LVC	**Limon Verde**	**2.27**	**315**	*e*P	**Pn**	**14 50 19.7**	**+1.1**
LVC				*e*S	**Sn**	**14 50 49.9**	**0.0**
PB15	**IPOC Station P**	**2.34**	**296**		**Pn**	**14 50 20.2**	**+1.1**
PB15	**IPOC Station P**	**2.34**	**296**	⇑*i*P	**Pn**	**14 50 20.4**	**+1.2**
PB15				*i* S	**Sn**	**14 50 51.5**	**+0.6**
GO02	**Mina Guanaco**	**2.37**	**247**	Pn	**Pn**	**14 50 20.6**	**+0.9**
GO02	**Mina Guanaco**	**2.37**	**247**	⇑*i*P	**Pn**	**14 50 20.8**	**+1.1**
GO02				*i* S	**Sn**	**14 50 52.3**	**+0.5**
GO02				IAML		14 50 53.6	
	comp=N,1μm,0.4s						
PB06	**IPOC Station P**	**2.67**	**304**		**Pn**	**14 50 23.6**	**+0.5**
PB06	**IPOC Station P**	**2.67**	**304**	⇑*i*P	**Pn**	**14 50 24.0**	**+0.9**
PB06				*i* S	**Sn**	**14 50 57.2**	**-0.7**
PB06				IAML		14 50 59.6	
	comp=E,892nm,0.1s						
AC02	**Maricunga**	**3.12**	**214**	Pn	**Pn**	**14 50 29.8**	**+1.0**
AC02	**Maricunga**	**3.12**	**214**	⇑*i*P	**Pn**	**14 50 30.0**	**+1.2**
PB10	**IPOC Station P**	**3.17**	**283**	Pn	**Pn**	**14 50 29.2**	**+0.2**
PB10	**IPOC Station P**	**3.17**	**283**	⇑*i*P	**Pn**	**14 50 29.5**	**+0.6**
PB10				*i* S	**Sn**	**14 51 07.7**	**-0.7**
PB10				IAML		14 51 10.3	
	comp=N,330nm,0.2s						
PB04	**IPOC Station P**	**3.33**	**304**		**Pn**	**14 50 30.9**	**-0.1**
PB04	**IPOC Station P**	**3.33**	**304**	⇑*i*P	**Pn**	**14 50 31.2**	**+0.2**
PB04				*i* S	**Sn**	**14 51 10.2**	**-1.9**
AC01	**Pan de Azucar**	**3.63**	**238**	Pn	**Pn**	**14 50 34.0**	**-0.5**
AC01	**Pan de Azucar**	**3.63**	**238**	⇑*i*P	**Pn**	**14 50 34.1**	**-0.5**
PB02	**IPOC Station P**	**3.84**	**319**		**Pn**	**14 50 37.0**	**-0.4**
PB02	**IPOC Station P**	**3.84**	**319**	⇑*i*P	**Pn**	**14 50 37.2**	**-0.2**
GO03	**Copiap**	**4.32**	**219**		**Pn**	**14 50 42.5**	**-1.0**
GO03	**Copiap**	**4.32**	**219**	⇑*i*P	**Pn**	**14 50 42.6**	**-0.8**
GO03				*i* S	**Sn**	**14 51 32.5**	**-2.1**
PATCX	**Punta Patache**	**4.38**	**321**		**Pn**	**14 50 43.8**	**-0.4**
PB08	**IPOC Station P**	**4.47**	**336**	Pn	**Pn**	**14 50 45.9**	**+0.1**
TA01	**Diego Aracena**	**4.59**	**322**		**Pn**	**14 50 46.4**	**-0.6**
GO01	**Chusmiza**	**4.92**	**337**		**Pn**	**14 50 50.5**	**-1.2**
PB11	**IPOC Station P**	**5.02**	**332**		**Pn**	**14 50 51.3**	**-1.3**
AC04	**Llanos de Chal**	**5.27**	**221**		**Pn**	**14 50 53.9**	**-1.8**
LCO	**Las Campanas**	**5.70**	**213**	Pn	**Pn**	**14 50 59.5**	**-2.0**
PB16	**IPOC Station P**	**6.27**	**339**	Pn	**Pn**	**14 51 07.8**	**-1.5**
CO01	**Juntas del Tor**	**6.27**	**204**	Pn	**Pn**	**14 51 09.3**	**+0.3**
PB12	**IPOC Station P**	**6.32**	**332**	Pn	**Pn**	**14 51 08.1**	**-1.5**
GO04	**Tololo Observa**	**6.73**	**208**	Pn	**Pn**	**14 51 13.1**	**-1.8**
CO06	**Fray Jorge**	**7.53**	**211**	Pn	**Pn**	**14 51 23.1**	**-2.2**
CO02	**Combarbal**	**7.71**	**205**	Pn	**Pn**	**14 51 25.7**	**-2.2**
LPAZ	**La Paz**	**7.96**	**353**	P	**Pn**	**14 51 32.3**	**+0.5**
	comp=N,3.2nm,0.4s,baz=174,slow=9.8,SNR=19						
LPAZ	**La Paz**	**7.96**	**353**	Pn	**Pn**	**14 51 30.4**	**-1.3**
LPAZ	**La Paz**	**7.96**	**353**	*e*P	**Pn**	**14 51 31.2**	**-0.6**
CPUP	**Villa Florida**	**9.16**	**105**	P	**Pn**	**14 51 45.0**	**-1.7**
	comp=N,0.7nm,0.4s,baz=275,slow=12,SNR=1.9						
SIV	**San Ignacio**	**10.02**	**36**	P	**Pn**	**14 51 56.1**	**-2.0**
	comp=N,1.5nm,0.3s,baz=212,slow=13,SNR=11						
RODS	**Rosario do Sul**	**12.27**	**122**	*e*P	**P**	**14 52 32.3**	**+0.1**
TRCB	**Terra Rica**	**13.43**	**87**	P	**P**	**14 52 46.1**	**+0.9**
ALGR	**Alto Alegre (B**	**13.46**	**113**	*e*P	**P**	**14 52 45.6**	**+0.1**
BI05	**Punta Hualpn**	**13.49**	**201**	Pn	**Pn**	**14 52 40.9**	**-1.6**
CPSB	**Cacapava Do Su**	**13.67**	**120**	*e*P	**P**	**14 52 47.9**	**+0.1**
PTGB	**Pitanga**	**13.78**	**95**	*e*P	**P**	**14 52 49.5**	**+0.4**
ITAB	**Concordia**	**13.89**	**106**		**P**	**14 52 50.1**	**-0.1**
ITAB	**Concordia**	**13.89**	**106**	*e*P	**P**	**14 52 49.7**	**-0.6**
PLTB	**Pedras Altas**	**14.13**	**125**		**P**	**14 52 52.4**	**-0.6**
TRQA	**Tornquist**	**14.47**	**163**	Pn	**Pn**	**14 52 53.7**	**-1.1**
PCMB	**Pacaembu**	**14.90**	**83**	*e*P	**P**	**14 53 02.4**	**+0.8**

SAML	**Samuel**	**15.68**	**15**	P	**Pn**	**14 53 08.8**	**-1.1**
DVLD	**Doverlandia**	**15.97**	**65**	*e*P	**P**	**14 53 15.1**	**+1.7**
PDRB	**Porto dos Gac**	**16.01**	**40**	*e*P	**Pn**	**14 53 13.2**	**-0.7**
FRTB	**Fartura**	**16.15**	**90**	*e*P	**P**	**14 53 15.5**	**+0.1**
ITRB	**Iturama**	**16.24**	**77**	*e*P	**Pn**	**14 53 17.6**	**+1.0**
PLCA	**Paso Flores**	**16.68**	**189**	P	**Pn**	**14 53 23.0**	**+1.2**
	comp=N,0.5nm,0.4s,baz=9.0,slow=11,SNR=4.7						
PLCA	**Paso Flores**	**16.68**	**189**	Pn	**Pn**	**14 53 22.8**	**+0.9**
PLCA				IAmb	IAmb	14 53 47.6	
	comp=Z,6.3nm,1.2s						
PLCA	**Paso Flores**	**16.68**	**189**	*e*P	**Pn**	**14 53 25.9**	**+4.1**
ARAG	**Araguaiana, MT**	**16.75**	**62**	*e*P	**Pn**	**14 53 23.1**	**+0.4**
CLDB	**Colider**	**17.15**	**41**	*e*P	**P**	**14 53 25.7**	**-0.7**
BB19B	**Bebedouro**	**17.51**	**83**	*e*P	**P**	**14 53 30.5**	**+0.2**
RCLB	**Rio Claro- Sao**	**18.14**	**88**	*e*P	**Pn**	**14 53 38.0**	**-1.2**
IPMB	**Ipameri, GO**	**18.75**	**74**	*e*P	**P**	**14 53 44.0**	**0.0**
BDFB	**Brasilia**	**19.93**	**68**	P	**P**	**14 53 56.6**	**-0.1**
	comp=Z,22nm,0.8s,baz=245,slow=10,SNR=18						
BDFB	**Brasilia**	**19.93**	**68**	P	**P**	**14 53 56.5**	**-0.1**
BDFB	**Brasilia**	**19.93**	**68**	*e*P	**P**	**14 53 56.5**	**-0.1**
PEXB	**Peixe**	**21.59**	**59**	*e*P	**P**	**14 54 13.2**	**-1.0**
RCBR	**Riachuelo**	**35.18**	**64**	P	**P**	**14 56 13.0**	**-2.5**
VNA2	**Neumayer--Watz**	**57.55**	**160**	P	**P**	**14 59 10.2**	**+1.5**
	baz=282,slow=8.2						
SNAA	**Sanae**	**59.18**	**161**	P	**P**	**14 59 21.4**	**+1.3**
SNAA	**Sanae**	**59.18**	**161**	P	**P**	**14 59 19.4**	**-0.6**
SNAA				IAmb	IAmb	14 59 39.5	
	comp=Z,3.2nm,1.2s						
TROLL	**Troll, Antarti**	**60.89**	**161**	P	**P**	**14 59 33.4**	**+1.6**
TXAR	**Lajitas Array**	**63.78**	**325**	P	**P**	**14 59 51.5**	**0.0**
	comp=Z,0.5nm,0.8s,baz=147,slow=7.0,SNR=5.7						
	comp=Z,0.5nm,0.8s						
MNTX	**Cornudas Mount**	**66.55**	**325**	P	**P**	**15 00 09.1**	**-0.1**
MNTX				IAmb	IAmb	15 00 10.7	
	comp=Z,1.8nm,0.9s						
TOA0	**Torodi Ar. Sit**	**76.81**	**69**	P	**P**	**15 01 09.9**	**-0.9**
TOA0				IAmb	IAmb	15 01 22.7	
	comp=Z,3.9nm,1.2s						
TORD	**Torodi Ar. Bea**	**76.81**	**69**	P	**P**	**15 01 10.4**	**-0.4**
	comp=Z,1.6nm,0.6s,baz=264,slow=6.6,SNR=9.7						
	comp=Z,1.6nm,0.6s						
TORD	**Torodi Ar. Bea**	**76.81**	**69**	P	**P**	**15 01 10.3**	**-0.5**
PDAR	**Pinedale Array**	**77.27**	**329**	P	**P**	**15 01 14.3**	**+1.3**
	comp=Z,0.2nm,0.5s,baz=143,slow=5.7,SNR=4.1						
	comp=Z,0.2nm,0.5s						
NVAR	**Mina Array Bea**	**78.62**	**321**	P	**P**	**15 01 22.9**	**+2.3**
	comp=Z,0.2nm,0.5s,baz=170,slow=5.5,SNR=2.3						
	comp=Z,0.2nm,0.5s						
BOSA	**Boshof**	**80.77**	**117**	P	**P**	**15 01 33.1**	**+0.7**
	comp=Z,2.6nm,0.7s,baz=224,slow=2.1,SNR=4.5						
	comp=Z,2.6nm,0.7s						
BOSA	**Boshof**	**80.77**	**117**	P	**P**	**15 01 32.8**	**+0.4**
BOSA				IAmb	IAmb	15 02 01.7	
	comp=Z,13nm,1.2s						
MAW	**Mawson**	**81.25**	**163**	P	**P**	**15 01 35.6**	**+1.7**
	comp=Z,1.3nm,0.8s,baz=252,slow=6.4,SNR=1.8						
	comp=Z,1.3nm,0.8s						
YKA	**Yellowknife Ar**	**94.30**	**340**	P	**P**	**15 02 37.9**	**+1.1**
	comp=Z,0.7nm,0.7s,baz=128,slow=4.5,SNR=5.8						
	comp=Z,0.7nm,0.7s						
ASAR	**Alice Springs**	**128.16**	**205**	PKP	**PKPdf**	**15 08 24.4**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=138,slow=1.6,SNR=11						
WRA	**Warramunga Arr**	**131.33**	**207**	PKP	**PKPdf**	**15 08 31.1**	**+1.0**
	comp=Z,0.5nm,0.5s,baz=162,slow=1.6,SNR=12						
MKAR	**Makanchi Array**	**146.82**	**40**	PKPbc	**PKPbc**	**15 09 00.0**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=314,slow=2.4,SNR=5.3						
MKAR	**Makanchi Array**	**146.82**	**40**		**PKPdf**	**15 08 58.3**	**+1.0**

MAN 28 14:51:44.7, 6°.82N×125°.94E, h67km, mb3.9, ML2.6, MS2.2, Mindanao

NNC 28 14:54:37.0±1.9, 50°.20N×73°.60E, h0km, mb3.6, mpv3.3, 7C-3D, Error ellipse: s-maj=18.3km s-min=8.2km az=116.0, Suspected Mining explosion., Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**3.18**	**80**	⇓Pn	Pn	14 55 28.6	+0.3
	8.6nm,0.6s						
KURBB				⇓Lg	Lg	14 56 20.4	
	58nm,0.7s						
KURK	**Kurchatov**	**3.25**	**79**	⇑Pn	Pn	14 55 29.5	+0.3
	4.4nm,0.8s						
KURK				⇑Lg	Lg	14 56 19.3	
	19nm,0.6s						
BTLS	**Baital**	**5.17**	**177**	Pg	Pb	14 56 10.2	+2.0
	1.8nm,0.4s						
BTLS				Lg	Lg	14 57 19.1	
	7.0nm,0.6s						
MAKZ	**Makanchi**	**6.51**	**118**	⇑Pn	Pn	14 56 12.5	-1.6
	0.5nm,0.3s						
MAKZ				⇑Pg	Pb	14 56 35.2	+4.0
	1.2nm,0.7s						
MAKZ				⇑Lg	Lg	14 58 04.6	
	8.8nm,0.8s						
KUU	**Kurty**	**6.58**	**162**	Pg	Pb	14 56 36.7	+4.4
	1.3nm,0.2s						
KUU				Lg	Lg	14 58 03.9	
	25nm,0.8s						
ARXS	**Arharly**	**6.64**	**153**	Pg	Pb	14 56 38.2	+4.8
	0.9nm,0.4s						
ARXS				Lg	Lg	14 58 06.8	
	9.9nm,0.8s						
MK31	**Makanchi Array**	**6.70**	**117**	⇑Pn	Pn	14 56 16.7	0.0
	0.4nm,0.5s,baz=306,slow=13,SNR=11						
MK31				⇑Pg	Pb	14 56 38.1	+3.7
	0.5nm,0.3s,baz=298,slow=14,SNR=14						
MK31				⇓Lg	Lg	14 58 09.5	
	2.9nm,0.5s,baz=308,slow=27,SNR=6.4						
CHKK	**Chushkaly**	**6.75**	**159**	Pg	Pb	14 56 40.8	+5.5
	0.8nm,0.1s						
CHKK				Lg	Lg	14 58 10.9	
	15nm,0.4s						
KTBS	**Karatobe**	**6.82**	**161**	Pg	Pg	14 56 42.4	-5.2
	1.7nm,0.5s						
KTBS				Lg	Lg	14 58 14.6	
	23nm,1.1s						
TNSS	**Tian-Shan**	**7.52**	**161**	Pg	Pg	14 56 56.2	-4.9
	0.5nm,0.1s						
TNSS				Lg	Lg	14 58 37.8	
	5.1nm,1.0s						

*NOU **28** 14:56:05.1, 37°.83S×178°.06E, h123km, MLv3.6/4, Off E. Coast of N. Island, N.Z.*
*WEL **28** 14:56:09.4±0.9, 38°.S±6°×17°.7E±°, h101km±9km, M2.6/20, ML2.4/7, MLv2.6/20, Error ellipse: s-maj=0.0km s-min=0.0km az=23.7*
ISC 28 14:56:10.4±1.4, 37°.69S±0°.05×176°.95E±0°.04, h100km, n80, σ1s45/84, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARZ	**Manawahe**	**0.37**	**216**	P	**Pn**	**14 56 25.5**	**+0.2**
TGRZ	**Tauranga**	**0.55**	**266**	P	**Pn**	**14 56 26.3**	**-0.2**
URZ	**Urewera**	**0.58**	**168**	P	**Pn**	**14 56 27.2**	**+0.4**
URZ				S	**Sn**	**14 56 40.7**	**+1.6**
URZ	**Urewera**	**0.58**	**168**	P	**Pn**	**14 56 26.6**	**-0.2**
KARZ	**Kaharoa**	**0.65**	**239**	P	**Pn**	**14 56 27.4**	**0.0**
MYRZ	**Mayor Island**	**0.70**	**306**	P	**Pn**	**14 56 27.5**	**-0.3**
MWZ	**Matawai**	**0.79**	**145**	P	**Pn**	**14 56 28.7**	**0.0**
MWZ				S	**Sn**	**14 56 44.8**	**+2.3**
MUGZ	**Murupara**	**0.80**	**190**	P	**Pn**	**14 56 28.6**	**-0.1**
MUGZ				S	**Sn**	**14 56 45.6**	**+3.0**
KMRZ	**Kaimai**	**0.81**	**259**	P	**Pn**	**14 56 28.8**	**-0.2**
RAGZ	**Rawiri**	**0.89**	**156**	P	**Pn**	**14 56 29.9**	**+0.2**
PKGZ	**Pakihiroa**	**0.91**	**103**	P	**Pn**	**14 56 30.3**	**+0.3**
PRRZ	**Plateau Road**	**0.92**	**208**	P	**Pn**	**14 56 30.2**	**+0.2**
RTZ	**Ruatahuna**	**0.93**	**179**	P	**Pn**	**14 56 30.4**	**+0.3**
ALRZ	**Allen Road**	**1.00**	**209**	P	**Pn**	**14 56 31.6**	**+0.8**
TKGZ	**Te Karaka**	**1.03**	**137**	P	**Pn**	**14 56 30.5**	**-0.6**
TKGZ				S	**Sn**	**14 56 47.6**	**+0.8**
MXZ	**Matakaoa Point**	**1.08**	**84**	P	**Pn**	**14 56 31.6**	**-0.1**
PUZ	**Puketiti**	**1.10**	**111**	P	**Pn**	**14 56 31.1**	**-0.9**
SNGZ	**Shannon Statio**	**1.13**	**164**	P	**Pn**	**14 56 32.3**	**-0.1**
TOZ	**Tahuroa Road**	**1.15**	**267**	P	**Pn**	**14 56 32.2**	**-0.3**
MTHZ	**Maungataniwha**	**1.17**	**184**	P	**Pn**	**14 56 32.9**	**+0.2**
WMGZ	**Waiomatatini S**	**1.17**	**97**	P	**Pn**	**14 56 32.2**	**-0.5**
RIGZ	**Rimuhau**	**1.20**	**148**	P	**Pn**	**14 56 33.0**	**-0.1**
MRHZ	**Matea Rd**	**1.22**	**200**	P	**Pn**	**14 56 33.5**	**+0.1**
RAHZ	**Arahi**	**1.23**	**175**	P	**Pn**	**14 56 33.7**	**+0.3**
CNGZ	**Carnagh Statio**	**1.27**	**129**	P	**Pn**	**14 56 33.5**	**-0.4**
TLZ	**Tolley Road**	**1.29**	**240**	P	**Pn**	**14 56 34.0**	**-0.1**
KUZ	**Kuaotunu**	**1.36**	**313**	P	**Pn**	**14 56 33.5**	**-1.4**
NMHZ	**Naumai**	**1.41**	**185**	P	**Pn**	**14 56 36.1**	**+0.4**
PRGZ	**Paritu Road**	**1.43**	**150**	P	**Pn**	**14 56 35.4**	**-0.5**
KNZ	**Kokohu**	**1.45**	**157**	P	**Pn**	**14 56 35.0**	**-0.9**
BKZ	**Black Stump Fm**	**1.52**	**194**	P	**Pn**	**14 56 36.4**	**-0.5**
BKZ	**Black Stump Fm**	**1.52**	**194**	P	**Pn**	**14 56 36.5**	**-0.4**
RITZ	**Rihia Road**	**1.55**	**213**	P	**Pn**	**14 56 38.3**	**+1.1**
ARHZ	**Aropaoanui**	**1.57**	**179**	P	**Pn**	**14 56 38.5**	**+1.0**
KATZ	**Kakaramea**	**1.62**	**217**	P	**Pn**	**14 56 40.1**	**+1.8**
MHGZ	**Mahia Peninsul**	**1.64**	**153**	P	**Pn**	**14 56 37.8**	**-0.7**
WIAZ	**Waiheke Island**	**1.70**	**301**	P	**Pn**	**14 56 38.3**	**-0.9**
NTVZ	**North Tongarir**	**1.73**	**215**	P	**Pn**	**14 56 40.4**	**+0.8**
TMVZ	**Te Maari**	**1.73**	**214**	P	**Pn**	**14 56 40.3**	**+0.6**
KRVZ	**Karewarewa**	**1.74**	**216**	P	**Pn**	**14 56 40.6**	**+0.8**
ETVZ	**East Tongariro**	**1.74**	**214**	P	**Pn**	**14 56 40.3**	**+0.5**
MCHZ	**McNeill Hill**	**1.77**	**186**	P	**Pn**	**14 56 39.6**	**-0.4**
ETAZ	**East Tamaki Re**	**1.77**	**294**	P	**Pn**	**14 56 39.5**	**-0.5**
KWHZ	**Kaweka Forest**	**1.78**	**193**	P	**Pn**	**14 56 39.6**	**-0.7**
WTVZ	**West Tongariro**	**1.78**	**216**	P	**Pn**	**14 56 40.9**	**+0.6**
NNVZ	**North Ngauruho**	**1.78**	**216**	P	**Pn**	**14 56 41.0**	**+0.6**
OTVZ	**Oturere**	**1.79**	**214**	P	**Pn**	**14 56 40.8**	**+0.4**
SNVZ	**South Ngauruho**	**1.82**	**214**	P	**Pn**	**14 56 41.2**	**+0.5**
TWVZ	**Taurewa**	**1.82**	**220**	P	**Pn**	**14 56 41.6**	**+0.9**
NGZ	**Ngauruhoe**	**1.82**	**215**	P	**Pn**	**14 56 41.4**	**+0.6**
GRZ	**Great Barrier**	**1.87**	**320**	P	**Pn**	**14 56 39.8**	**-1.5**
TUVZ	**Tukino**	**1.88**	**212**	P	**Pn**	**14 56 41.6**	**+0.1**
MBAZ	**Motutapu North**	**1.88**	**299**	P	**Pn**	**14 56 40.6**	**-0.7**
FWVZ	**Far West T-bar**	**1.91**	**215**	P	**Pn**	**14 56 42.2**	**+0.1**
WHVZ	**Whangaehu Hut**	**1.92**	**213**	P	**Pn**	**14 56 42.1**	**-0.1**
DRZ	**Dome Shelter**	**1.92**	**214**	P	**Pn**	**14 56 43.1**	**+0.8**
BHHZ	**Black Hill Sta**	**1.93**	**201**	P	**Pn**	**14 56 41.2**	**-0.9**
TRVZ	**Turoa**	**1.95**	**214**	P	**Pn**	**14 56 42.5**	**0.0**
WNVZ	**Wahianoa**	**1.95**	**213**	P	**Pn**	**14 56 42.3**	**-0.2**
MOVZ	**Moawhango**	**1.96**	**208**	P	**Pn**	**14 56 41.7**	**-0.8**
CKHZ	**Cape Kidnapper**	**1.97**	**177**	P	**Pn**	**14 56 41.9**	**-0.7**
KRHZ	**Kereru**	**2.00**	**193**	P	**Pn**	**14 56 41.7**	**-1.4**
MTVZ	**Mangateitei**	**2.05**	**214**	P	**Pn**	**14 56 43.4**	**-0.3**
PNHZ	**Pukenui**	**2.30**	**195**	P	**Pn**	**14 56 45.5**	**-1.4**
PXZ	**Pawanui**	**2.34**	**182**	P	**Pn**	**14 56 44.9**	**-2.4**
WPHZ	**Waipukurau**	**2.41**	**189**	P	**Pn**	**14 56 46.9**	**-1.3**
TSZ	**Takapari Road**	**2.49**	**198**	P	**Pn**	**14 56 47.5**	**-1.9**
WAZ	**Wanganui**	**2.57**	**216**	P	**Pn**	**14 56 49.9**	**-0.6**
PRHZ	**Porangahau**	**2.59**	**185**	P	**Pn**	**14 56 48.7**	**-1.9**
DVHZ	**Dannevirke**	**2.68**	**193**	P	**Pn**	**14 56 49.5**	**-2.3**
ANWZ	**Angora Road**	**2.79**	**187**	P	**Pn**	**14 56 51.1**	**-2.2**
BFZ	**Birch Farm**	**3.04**	**190**	P	**Pn**	**14 56 53.6**	**-3.1**
BFZ	**Birch Farm**	**3.04**	**190**	P	**Pn**	**14 56 53.8**	**-2.8**
MRZ	**Mangatainoka R**	**3.15**	**199**	P	**Pn**	**14 56 54.7**	**-3.5**
TIWZ	**Tintock**	**3.19**	**195**	P	**Pn**	**14 56 55.7**	**-3.0**
OGWZ	**Otaki Gorge**	**3.42**	**203**	P	**Pn**	**14 56 58.5**	**-3.2**
TMWZ	**Te Maipa**	**3.51**	**193**	P	**Pn**	**14 56 59.4**	**-3.6**
CAW	**Cannon Point**	**3.71**	**203**	P	**Pn**	**14 57 01.6**	**-4.1**
PLWZ	**Palliser**	**4.09**	**198**	P	**Pn**	**14 57 06.2**	**-4.6**
KHZ	**Kahutara**	**5.40**	**208**	P	**Pn**	**14 57 28.0**	**-0.4**

IDC 28 14:56:23.9±6.3, 11°.30S×166°.91E, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=329.8km s-min=33.4km az=139.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**32.47**	**251**	P	P	15 02 56.2	-0.2
	0.3nm,0.5s,baz=82,slow=9.1,SNR=1.6						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**33.70**	**244**	P	P	15 03 07.3	+0.1
	0.5nm,1.0s,baz=68,slow=10,SNR=2.0						
	0.5nm,1.0s						
ILAR	**Eielson Array**	**83.39**	**18**	P	P	15 08 52.8	0.0
	0.3nm,0.5s,baz=235,slow=5.0,SNR=10						
	0.3nm,0.5s						

*FUNV **28** 15:03:08.0, 8°.25N×71°.86W, h8km, MW3.2*
ISC 28 15:03:07.0±1.3, 8°.32N±0°.04×71°.86W±0°.03, h8km±10km, n15, σ2s11/28, Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAPV	**Capacho**	**0.63**	**225**	*e*P	**Pg**	**15 03 19.0**	**-0.3**
CAPV				*e*S	**Sg**	**15 03 27.6**	**0.0**
SOCV	**Socops**	**0.99**	**92**	*e*P	**Pg**	**15 03 26.2**	**0.0**
SOCV	**Socops**	**0.99**	**92**	*e*P	**Pg**	**15 03 26.2**	**0.0**
SOCV				*e*S	**Sg**	**15 03 39.7**	**+0.5**
PAMC	**Pamplona, Colo**	**1.28**	**221**	*e*P	**Pn**	**15 03 31.8**	**+0.2**
PAMC				*e*S	**Sn**	**15 03 49.2**	**-0.1**
PAMC				*i*		15 03 51.6	
	comp=Z,85nm,0.3s						
SDV	**Santo Domingo**	**1.34**	**65**	*e*P	**Pn**	**15 03 32.8**	**+0.5**
SDV				*e*S	**Sb**	**15 03 49.7**	**-0.3**
SDV				*i*		15 03 54.6	
	comp=Z,30nm,0.3s						
LL6C	**La Loma 6 Bece**	**1.98**	**315**	*e*P	**Pn**	**15 03 41.0**	**0.0**
LL6C				*e*S	**Sn**	**15 04 06.2**	**+0.2**
LL6C				*i*		15 04 09.1	
	comp=Z,25nm,0.5s						
BARC	**Barichara**	**2.16**	**218**	*e*P	**Pn**	**15 03 45.2**	**+1.6**
BARC				*e*S	**Sb**	**15 04 13.4**	**-0.1**
BARC				*i*		15 04 19.0	
	comp=Z,22nm,0.3s						
DABV	**Dabajuro**	**2.86**	**25**	*e*P	**Pn**	**15 03 53.9**	**+0.8**
DABV				*e*S	**Sn**	**15 04 27.8**	**+0.1**
CRJC	**Cerrejon, Guaj**	**2.87**	**340**	*e*P	**Pn**	**15 04 53.7**	**0.0**
CRJC				*e*S	**Sn**	**15 04 26.7**	**-1.4**
CRJC				*i*		15 04 33.9	
	comp=Z,13nm,0.3s						
SIQV	**Siquisique**	**3.08**	**41**	*e*P	**Pn**	**15 03 56.5**	**+0.4**
SIQV				*e*S	**Sn**	**15 04 32.9**	**-0.3**
PTBC	**PUERTO BERRIO,**	**3.12**	**236**	*e*P	**Pn**	**15 03 55.0**	**-1.7**
PTBC				*e*S	**Sn**	**15 04 36.9**	**+2.8**
PTBC				*i*		15 04 49.7	
	comp=Z,5.3nm,0.3s						
MAPV	**Macapo**	**3.68**	**66**	*e*P	**Pn**	**15 04 04.9**	**+0.5**
MAPV				*e*S	**Sn**	**15 04 46.1**	**-2.0**
BAUV	**El Baul**	**3.83**	**80**	*e*P	**Pn**	**15 04 06.5**	**+0.1**
BAUV				*e*S	**Sn**	**15 04 49.5**	**-2.1**
PAYV	**Puerto Ayacuch**	**5.07**	**124**	*e*P	**Pn**	**15 04 22.6**	**-0.8**
PAYV				*e*S	**Sn**	**15 05 17.2**	**-5.0**
CACV	**CAICARA DEL OR**	**5.32**	**98**	*e*P	Pn	15 04 33.9	+6.9
CACV				*e*S	**Sn**	**15 05 36.0**	**+7.5**

*IDC **28** 15:07:46.1±1.3, 31°.68N×51°.09E, h0km, mb3.8/9, mbtmp3.8/15, ML3.7/6, MS2.9/3, Error ellipse: s-maj=26.3km s-min=19.0km az=168.0*
*NEIC **28** 15:07:47.5±1.1, 31°.71N±0°.09×51°.0E±0°.1, h10km±1km, mb4.4/10, Error ellipse: s-maj=18.9km s-min=11.6km az=49.0*
*TEH **28** 15:07:47.9, 31°.74N×51°.16E, h8km, ML3.8*
*DSN **28** 15:07:53.6±2.0, 31°.31N×51°.14E, h15km, ML3.7/7, Error ellipse: s-maj=29.9km s-min=10.6km az=19.0*
ISC 28 15:07:47.4±0.5, 31°.72N±0°.02×51°.07E±0°.03, h10km, n100, σ2s22/102, mb4.0/12, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IBRJ	**Brojen**	**0.25**	**41**	*e*Pg	**Pg**	**15 07 52.3**	**-0.3**
SHK1	**Shahrekord**	**0.63**	**346**	*e*Pg	**Pg**	**15 07 59.2**	**-0.4**
KLNJ	**Kolanjah**	**0.84**	**148**	*e*Sg	**Sb**	**15 08 16.7**	**+1.0**
KLNJ				*e*Pg	**Pg**	**15 08 03.2**	**-0.4**
KLNJ				*e*		15 08 25.0	
	comp=Z,49μm,0.5s						
IPIR	**Pirpir**	**0.97**	**351**	*e*Sg	**Sn**	**15 08 22.5**	**+1.0**
IPIR				*e*Pg	**Pb**	**15 08 06.7**	**+0.1**
IPIR				*e*		15 08 28.6	
	comp=Z,21μm,0.5s						
IGAR	**Gharneh**	**1.07**	**50**	*e*Pg	**Pg**	**15 08 07.2**	**-0.8**
IRAM	**Ramesheh**	**1.12**	**85**	*e*Sg	**Sb**	**15 08 23.2**	**-0.6**
IRAM				*e*Pg	**Pb**	**15 08 07.9**	**-1.1**
IRAM				*e*		15 08 25.6	
	comp=Z,17μm,0.4s						
ABEH	**Behbahan**	**1.32**	**212**	*e*Pg	**Pg**	**15 08 15.1**	**+2.4**
AMIS	**Naft Sefid**	**1.52**	**268**	*e*Pg	**Pg**	**15 08 18.5**	**+1.9**
AMIS				*e*		15 08 51.0	
	comp=Z,15μm,0.8s						
IZEF	**Zefreh**	**1.59**	**42**	*e*Pn	Pn	15 08 16.8	+1.0
IZEF				*e*		15 08 28.2	
	comp=Z,8μm,0.4s						
IKLH	**Kolahrood**	**1.65**	**15**	*e*Pn	**Pn**	**15 08 17.8**	**+1.1**
IKLH				*e*		15 08 55.4	
	comp=Z,10μm,0.5s						
NASN	**Na'in**	**1.83**	**53**	*e*Pg	**Pn**	**15 08 20.9**	**+1.7**
QAMS	**Qamsar**	**2.03**	**8**	*e*Pn	**Pb**	**15 08 24.9**	**+0.3**
QAMS				*e*		15 09 02.1	
	comp=Z,11μm,0.4s						
AHWZ	**Ahwaz**	**2.11**	**260**	*e*Pn	**Pg**	**15 08 26.4**	**-1.4**
KAZ1	**Kazerun**	**2.14**	**167**	*e*Pn	**Pb**	**15 08 25.9**	**-0.5**
KAZ1				*e*		15 09 09.1	
	comp=Z,12μm,0.3s						
KHMZ	**Khomeyn**	**2.22**	**335**	*e*Pn	**Pb**	**15 08 28.5**	**+0.7**
ISAD	**Sadrabad**	**2.24**	**84**	*e*Pn	**Pn**	**15 08 27.3**	**+2.5**
ISAD				*e*		15 09 06.5	
	comp=Z,4μm,0.6s						
SHI	**Shiraz**	**2.42**	**149**	*e*Pn	**Pb**	**15 08 30.4**	**-0.6**
SHI				*e*		15 09 19.9	
	comp=Z,5μm,0.7s						
KRSH	**Karshahi**	**2.42**	**22**	*e*Pn	**Pb**	**15 08 30.5**	**-0.6**
KRSH				*e*		15 09 19.2	
	comp=Z,4μm,0.8s						
ANAR	**Anarak**	**2.69**	**56**	*e*Pn	**Pb**	**15 08 34.3**	**-1.3**
GHVR	**GHOM**	**2.76**	**4**	*e*Pn	**Pb**	**15 08 35.1**	**-1.8**
ISFB	**Sefidab**	**2.81**	**20**	*e*Pn	**Pb**	**15 08 35.5**	**+3.1**
ISFB				*e*		15 09 22.8	
	comp=Z,3μm,1.1s						
AHBU	**AHRAM**	**2.85**	**176**	*e*Pn	**Pb**	**15 08 36.4**	**-2.0**
ICHK	**Chekchek**	**2.88**	**79**	*e*Pn	**Pn**	**15 08 36.9**	**+3.3**
ASAO	**Ashtian**	**2.96**	**343**	*e*Pn	**Pb**	**15 08 38.0**	**-2.3**
IMEH	**Mehriz**	**3.04**	**95**	*e*Pn	**Pn**	**15 08 38.6**	**+2.8**
IMEH				*e*		15 09 35.1	
	comp=Z,1μm,0.8s						
YZKH	**Yazd**	**3.06**	**76**	*e*Pn	**Pn**	**15 08 38.8**	**+2.8**
IQOM	**Qom**	**3.12**	**0**	*e*Pn	**Pn**	**15 08 40.0**	**+3.2**
IDOB	**Doab**	**3.19**	**311**	*e*Pn	**Pb**	**15 08 42.2**	**-2.1**
HSAM	**Samen**	**3.24**	**321**	*e*Pn	**Pb**	**15 08 42.0**	**-3.1**
IKFM	**Kafar-mosalman**	**3.26**	**304**	*e*Pn	**Pb**	**15 08 41.6**	**-3.8**
IVRN	**Varamin**	**3.31**	**9**	*e*Pn	**Pn**	**15 08 42.8**	**+3.4**
IVRN				*e*		15 10 06.6	
	comp=Z,3μm,1.2s						
IRAZ	**Razeghan**	**3.80**	**346**	*e*Pn	**Pn**	**15 08 49.9**	**+3.7**
IBZA	**Bozab**	**3.84**	**316**	*e*Pn	**Pn**	**15 08 50.2**	**+3.3**
IBZA				*e*		15 10 13.0	
	comp=Z,1μm,0.9s						
IKOM	**Komasi**	**3.87**	**310**	*e*Pn	**Pn**	**15 08 50.7**	**+3.6**
IDMV	**Damavand**	**3.93**	**12**	*e*Pn	**Pn**	**15 08 51.2**	**+3.1**
IMHD	**Mahdasht**	**3.97**	**355**	*e*Pn	**Pn**	**15 08 52.0**	**+3.5**
IMHD				*e*		15 09 05.5	
	comp=Z,2μm,0.6s						
DAMV	**Damavand**	**3.97**	**11**	*e*Pn	**Pn**	**15 08 51.8**	**+3.2**
IFIR	**Firoozkooh**	**4.16**	**19**	*e*Pn	**Pn**	**15 08 55.1**	**+3.9**
QABG	**Abgarm-Qazvin**	**4.17**	**343**	*e*	**Pg**	**15 09 09.1**	**+1.8**
	comp=Z,905nm,0.5s						
CHTH	**Charan**	**4.18**	**1**	*e*Pn	**Pn**	**15 08 55.2**	**+3.7**
KER	**Kermanshah**	**4.24**	**310**	*e*Pn	**Pn**	**15 08 55.7**	**+3.5**
IANJ	**Anjilo**	**4.43**	**32**	*e*Pn	**Pn**	**15 08 57.9**	**+3.0**
ISHM	**Shahmirzad**	**4.48**	**24**	*e*Pn	**Pn**	**15 08 59.0**	**+3.4**
SNGE	**Sanandaj**	**4.58**	**318**	*e*Pn	**Pn**	**15 09 00.8**	**+3.8**
QALM	**Alamut, Qazvin**	**4.71**	**356**	*e*Pn	**Pn**	**15 09 02.3**	**+3.5**
QALM				*e*		15 10 29.4	
	comp=Z,1μm,0.7s						
TPRV	**Parvadeh(Tabas**	**4.93**	**73**	*e*Pn	**Pn**	**15 09 05.5**	**+3.9**
TNSJ	**Nastanj**	**5.17**	**63**	*e*Pn	**Pn**	**15 09 08.0**	**+3.0**
TVBK	**TV Kerman**	**5.19**	**108**	*

TORD						IAmb	IAmb	15 16 45.4	
	comp=Z,3.5nm,1.2s								
KSRS	**Korea Array**	**61.90**	**61**	P		**P**		**15 18 06.5**	**-0.6**
	comp=Z,0.8nm,0.9s,baz=275,slow=6.3,SNR=3.4								
	comp=Z,0.8nm,0.9s								

*IDC **28** 15:08:25.1±1.5,39˚25N×73˚37E,h0km,mb3.6/3, mbtmp3.4/5,ML2.8/2,Error ellipse: s-maj=34.2km s-min=19.6km az=116.0*
*KRNET **28** 15:08:28.3±0.1,39˚38N×73˚53E,mb3.7*
*SOME **28** 15:08:29.0,39˚48N×73˚50E,h5km*

ISC 28 15:08:25.9±1.7,39˚42N±0˚06×73˚56E±0˚04,h0km±11km, n29,σ1§25/48,mb3.6/3,12C-4D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.26**	**332**	⇓	*i*	P	**Pn**	**15 08 52.5**	**+1.7**
	baz=34								
OHH				⇓	*e*	S	**Sn**	**15 09 10.3**	**+1.9**
	baz=34								
BTK	**Batken**	**2.21**	**288**	⇑	*e*	P	**Pg**	**15 09 08.2**	**0.0**
	baz=89								
BTK				⇑	*e*	S	**Sg**	**15 09 37.0**	**+0.2**
	baz=89								
ARLS	**Aral**	**2.51**	**13**	⇓	*e*	P	**Pb**	**15 09 12.7**	**+0.8**
	baz=14								
ARLS				⇓	*i*	S	**Sg**	**15 09 45.4**	**-1.1**
	baz=14								
GAR	**Garm**	**2.55**	**262**	⇑	*e*	P	**Pb**	**15 09 12.7**	**+0.1**
	baz=62								
GAR				⇑	*e*	S	**Sb**	**15 09 45.0**	**+0.4**
	baz=62								
AML	**Almayashu**	**2.71**	**2**	P			**Pg**	**15 09 17.1**	**-0.8**
	SNR=20								
TRKS	**Terek-Say**	**2.80**	**320**	⇑	*e*	P	**Pb**	**15 09 15.7**	**-1.2**
	baz=20								
TRKS				⇑	*i*	S	**Sb**	**15 09 50.3**	**-1.6**
	baz=20								
UCH	**Uchtor**	**2.90**	**14**	P			**Pg**	**15 09 21.8**	**+0.3**
	SNR=24								
UCH	**Uchtor**	**2.90**	**14**	⇑	*e*	P	**Pb**	**15 09 18.7**	**0.0**
	baz=14								
UCH				⇑	*e*	S	**Sb**	**15 09 55.4**	**+0.5**
	baz=14								
EKS2	**Erkin-Say**	**3.25**	**3**	P			**Pg**	**15 09 26.0**	**+1.6**
	SNR=15								
AAK	**Ala-Archa**	**3.29**	**12**	P			**Pg**	**15 09 27.6**	**-1.4**
	SNR=6.0								
AAK	**Ala-Archa**	**3.29**	**12**	Pn			**Pb**	**15 09 26.1**	**+0.8**
	2.5nm,0.3s,baz=197,slow=18,SNR=8.7								
AAK						Sn	**Sb**	**15 10 08.3**	**+2.3**
	3.1nm,0.3s,baz=180,slow=2.0,SNR=1.9								
	6.5nm,0.4s								
AAK	**Ala-Archa**	**3.29**	**12**	⇑			**Pb**	**15 09 23.8**	**-1.5**
	baz=12								
AAK				⇑	*i*	S	**Sb**	**15 10 04.2**	**-1.8**
	baz=12								
MRKS	**Merke**	**3.33**	**356**	*e*		P	**Pg**	**15 09 29.4**	**-0.4**
	5.2nm,0.5s								
MRKS				*e*		S	**Sg**	**15 10 12.8**	**-0.2**
	33nm,0.5s								
KBK	**Karagaybulak**	**3.40**	**18**	P			**Pg**	**15 09 32.1**	**+1.1**
	SNR=14								
ULHL	**Ulahol**	**3.48**	**35**	P			**Pg**	**15 09 33.1**	**+0.5**
	SNR=14								
BOOM	**Boomskoye usch**	**3.56**	**30**	⇑	*e*	P	**Pb**	**15 09 27.5**	**-2.3**
	baz=30								
BOOM				⇑	*i*	S	**Sb**	**15 10 10.9**	**-2.8**
	baz=30								
KST	**Kastek**	**4.05**	**26**	*e*		P	**Pg**	**15 09 43.2**	**-0.3**
	6.0nm,0.5s								
KST				*e*		S	**Sg**	**15 10 37.3**	**+1.2**
	39nm,0.8s								
DGS	**Degeres**	**4.17**	**23**	*e*		P	**Pg**	**15 09 45.5**	**-0.3**
	5.2nm,0.8s								
DGS				*e*		S	**Sg**	**15 10 40.7**	**+0.9**
	33nm,0.5s								
MTBS	**Maitube**	**4.29**	**29**	*e*		P	**Pg**	**15 09 48.1**	**0.0**
	4.8nm,0.4s								
MTBS				*e*		S	**Sg**	**15 10 44.9**	**+1.1**
	18nm,0.5s								
TNSS	**Tian-Shan**	**4.43**	**34**	*e*		P	**Pg**	**15 09 50.5**	**-0.3**
	5.9nm,0.5s								
TNSS				*e*		S	**Sg**	**15 10 49.3**	**+1.2**
	15nm,1.0s								
KRBS	**Karabastau**	**4.56**	**20**	*e*		P	**Pg**	**15 09 52.4**	**-0.9**
	2.6nm,0.4s								
KRBS				*e*		S	**Sg**	**15 10 52.5**	**+0.2**
	20nm,0.7s								
KTBS	**Karatobe**	**4.89**	**28**	*e*		P	**Pg**	**15 09 58.7**	**-0.9**
	3.4nm,0.5s								
KTBS				*e*		S	**Sg**	**15 11 03.4**	**+0.5**
	27nm,0.9s								
KUU	**Kurty**	**4.93**	**24**	*e*		P	**Pg**	**15 09 58.9**	**-1.6**
	1.8nm,0.1s								
KUU				*e*		S	**Sg**	**15 11 03.4**	**-0.9**
	27nm,0.8s								
KURS	**Kuram**	**5.34**	**39**	*e*		P	**Pg**	**15 10 07.3**	**-0.9**
	2.6nm,0.4s								
KURS				*e*		S	**Sg**	**15 11 17.8**	**+0.3**
	13nm,0.8s								
BTLS	**Baital**	**5.63**	**4**	*e*		P	**Pg**	**15 10 12.4**	**-1.3**
	1.8nm,0.6s								
BTLS				*e*		S	**Sg**	**15 11 26.9**	**+0.1**
	7.9nm,0.6s								
MKAR	**Makanchi Array**	**9.75**	**38**	Pn			**Pn**	**15 10 49.7**	**+2.4**
	baz=229,slow=11,SNR=1.8								
	0.2nm,0.5s								
FINES	**FINESS Array B**	**36.28**	**323**	P			**P**	**15 15 28.2**	**-2.4**
	1.5nm,0.9s,baz=116,slow=9.4,SNR=2.2								
	1.5nm,0.9s								
TORD	**Torodi Ar. Bea**	**67.80**	**269**	P			**P**	**15 19 25.2**	**-0.7**
	0.4nm,0.9s,baz=56,slow=8.1,SNR=1.4								
	0.4nm,0.9s								
WRA	**Warramunga Arr**	**81.88**	**124**	P			**P**	**15 20 46.9**	**-0.3**
	0.5nm,1.0s,baz=325,slow=4.1,SNR=1.7								
	0.5nm,1.0s								

*IDC **28** 15:09:51.8±0.8,39˚31N×73˚73E,h0km,mb3.8/14, mbtmp3.8/18,ML3.1/6,MS2.9/1,Error ellipse: s-maj=15.9km s-min=13.8km az=134.0*
*KRNET **28** 15:09:53.8±0.1,39˚56N×73˚85E,mb4.3*
*NEIC **28** 15:09:54±1.2,39˚39N±0˚04×73˚77E±0˚08,h10km±1km, mb4.4/24,Error ellipse: s-maj=10.4km s-min=5.8km az=106.0*
*NNC **28** 15:09:59.1±1.4,39˚68N×73˚76E,h0km,mb4.4,mpv4.0, Error ellipse: s-maj=10.8km s-min=6.4km az=173.0*
*SOME **28** 15:10:06.5,39˚97N×73˚87E,h0km*

ISC 28 15:09:52.6±1.3,39˚39N±0˚04×73˚83E±0˚03,h5km±8km, n120,σ2§11/156,mb4.0/23,39C-11D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.39**	**325**	⇓	*i*	P	**Pn**	**15 10 17.9**	**-0.8**
	baz=20								
OHH				⇓	*i*	S	**Sb**	**15 10 35.9**	**-1.3**
	baz=20								
DRK	**Karamyk**	**1.57**	**274**	⇑	*i*	P	**Pg**	**15 10 23.7**	**+1.0**
	baz=68								
DRK				⇑	*i*	S	**Sg**	**15 10 45.4**	**+2.3**
	baz=68								
DRK	**Karamyk**	**1.57**	**274**	Pn			**Pn**	**15 10 20.9**	**-0.5**
BTK	**Batken**	**2.42**	**287**	⇓	*i*	P	**Pb**	**15 10 36.5**	**0.0**
	baz=83								
BTK				⇓	*i*	S	**Sb**	**15 11 07.5**	**+0.8**
	baz=83								
BTK	**Batken**	**2.42**	**287**	Pn			**Pn**	**15 10 33.1**	**+0.3**
ARLS	**Aral**	**2.50**	**9**	⇑	*i*	P	**Pn**	**15 10 35.7**	**+1.6**
	baz=9.0								
ARLS				⇑	*i*	S	**Sn**	**15 11 06.2**	**+1.2**
	baz=9.0								
GAR	**Garm**	**2.75**	**263**	⇑	*i*	P	**Pb**	**15 10 42.1**	**-0.2**
	baz=60								
GAR				⇑	*i*	S	**Sb**	**15 11 17.4**	**+1.0**
	baz=60								
GAR	**Garm**	**2.75**	**263**	Pn			**Pn**	**15 10 37.7**	**+0.2**
UCH	**Uchtor**	**2.89**	**10**	⇑	*i*	P	**Pn**	**15 10 41.0**	**+1.4**
	baz=10.0								
UCH				⇑	*i*	S	**Sn**	**15 11 15.6**	**+0.7**
	baz=10.0								
TRKS	**Terek-Say**	**2.96**	**317**	⇑	*i*	P	**Pn**	**15 10 42.0**	**+1.6**
	baz=14								
TRKS				⇑	*i*	S	**Sn**	**15 11 17.3**	**+0.8**
	baz=14								
EKS2	**Erkin-Say**	**3.27**	**359**	⇑	*i*	P	**Pn**	**15 10 46.4**	**+1.8**
	baz=59								
EKS2				⇑	*i*	S	**Sn**	**15 11 24.9**	**+0.9**
	baz=59								
AAK	**Ala-Archa**	**3.29**	**9**	⇑	*i*	P	**Pn**	**15 10 46.8**	**+1.9**
	baz=9.0								
AAK				⇑	*i*	S	**Sn**	**15 11 25.3**	**+0.9**
	baz=9.0								
KBK	**Karagaybulak**	**3.38**	**14**	⇑	*i*	P	**Pn**	**15 10 48.0**	**+1.9**
	baz=15								
KBK				⇑	*i*	S	**Sn**	**15 11 27.5**	**+0.9**
	baz=15								
MRKS	**Merke**	**3.39**	**352**	*e*		P	**Pg**	**15 10 58.8**	**+1.4**
	60nm,0.3s								
MRKS				*e*		S	**Sb**	**15 11 36.1**	**+1.5**
	120nm,0.7s								
MRKS	**Merke**	**3.39**	**352**			Pg	**Pb**	**15 10 54.2**	**+1.1**
	28nm,0.4s								
MRKS						Lg	Lg	15 11 36.1	
	120nm,0.7s								
ULHL	**Ulahol**	**3.40**	**32**	⇑	*i*	P	**Pn**	**15 10 48.4**	**+2.0**
	baz=33								
ULHL				⇑	*i*	S	**Sn**	**15 11 28.3**	**+1.2**
	baz=33								
BOOM	**Boomskoye usch**	**3.49**	**27**	⇑	*i*	P	**Pn**	**15 10 49.7**	**+2.0**
	baz=28								
BOOM				⇑	*i*	S	**Sn**	**15 11 30.3**	**+0.9**
	baz=28								
BOOM	**Boomskoye usch**	**3.49**	**27**			Pn	**Pn**	**15 10 51.6**	**+3.9**
CHMS	**Chumysh**	**3.68**	**11**			P	**Pb**	**15 10 54.5**	**-3.5**
	SNR=7.2								
CHMS	**Chumysh**	**3.68**	**11**	⇑		Pn	**Pn**	**15 10 54.2**	**+4.1**
	52nm,0.9s								
CHMS				⇓		Lg	Lg	15 11 49.2	
	167nm,1.1s								
CHGR	**Chuyangaron**	**3.71**	**260**	⇓	*i*	P	**Pb**	**15 10 55.5**	**-3.1**
	baz=58								
CHGR				⇓	*i*	S	**Sb**	**15 11 40.8**	**-3.1**
	baz=58								
CHGR	**Chuyangaron**	**3.71**	**260**			Pn	**Pn**	**15 10 52.2**	**+1.6**
KDJ	**Kajisay**	**3.74**	**42**	⇑	*i*	P	**Pn**	**15 10 53.6**	**+2.5**
	baz=44								
KDJ				⇑	*i*	S	**Sn**	**15 11 36.9**	**+1.3**
	baz=44								
KDJ	**Kajisay**	**3.74**	**42**			Pn	**Pn**	**15 10 52.2**	**+1.0**
TKM2	**Tokmak 2**	**3.78**	**20**	⇑	*i*	P	**Pn**	**15 10 53.5**	**+1.9**
	baz=21								
TKM2				⇑	*i*	S	**Sn**	**15 11 37.1**	**+0.6**
	baz=21								
TKM2	**Tokmak 2**	**3.78**	**20**	⇑		Pn	**Pb**	**15 10 56.3**	**-3.5**
	44nm,0.8s								
TKM2				⇓		Lg	Lg	15 11 50.9	
	54nm,0.5s								
USP	**Ospenovka**	**3.91**	**7**	P			**Pb**	**15 11 04.3**	**+2.3**
	SNR=6.1								
USP	**Ospenovka**	**3.91**	**7**	⇑	*i*	P	**Pn**	**15 10 55.4**	**+2.1**
	baz=7.0								
USP				⇑	*i*	S	**Sn**	**15 11 40.2**	**+0.6**
	baz=7.0								
TAS	**Tashkent**	**3.97**	**301**	⇑	*i*	P	**Pn**	**15 10 57.5**	**+3.4**
	baz=99								
TAS				⇑	*i*	S	**Sn**	**15 11 44.1**	**+3.1**
	baz=99								
DZA	**Taraz**	**3.98**	**333**	*e*		P	**Pg**	**15 11 11.7**	**+2.9**
	68nm,0.1s								
DZA				*e*		S	**Sg**	**15 11 58.4**	**-1.9**
	250nm,0.4s								
KST	**Kastek**	**3.99**	**23**	*e*		P	**Pg**	**15 11 12.0**	**+2.9**
	20nm,0.7s								
KST				*e*		S	**Sg**	**15 11 59.8**	**-1.0**
	117nm,0.7s								
KST	**Kastek**	**3.99**	**23**			Pg	**Pb**	**15 11 06.3**	**+2.9**
	27nm,0.4s								
KST						Lg	Lg	15 11 57.1	
	144nm,0.7s								
SGDS	**Sogindy**	**4.11**	**8**	*e*		P	**Pg**	**15 11 13.4**	**+2.1**
	24nm,0.5s								
SGDS				*e*		S	**Sg**	**15 12 01.3**	**-3.2**
	76nm,0.4s								
DGS	**Degeres**	**4.12**	**20**	*e*		P	**Pg**	**15 11 13.9**	**+2.4**
	25nm,0.7s								
DGS				*e*		S	**Sg**	**15 12 03.0**	**-2.0**
	91nm,0.8s								
DGS	**Degeres**	**4.12**	**20**			Pg	**Pg**	**15 11 09.9**	**-1.7**
	41nm,0.9s								
DGS						Lg	Lg	15 12 03.0	
	121nm,0.7s								
MTBS	**Maitube**	**4.22**	**27**	*e*		P	**Pg**	**15 11 16.4**	**+2.9**
	42nm,0.9s								
MTBS				*e*		S	**Sg**	**15 12 06.8**	**-1.4**
	82nm,0.6s								
MTBS	**Maitube**	**4.22**	**27**			Pg	**Pg**	**15 11 12.1**	**-1.4**
	21nm,0.8s								
MTBS						Lg	Lg	15 12 06.8	
	82nm,0.6s								
TNSS	**Tian-Shan**	**4.34**	**32**	*e*		P	**Pg**	**15 11 19.0**	**+3.2**
	30nm,0.4s								
TNSS				*e*		S	**Sg**	**15 12 11.7**	**-0.3**
	27nm,0.5s								
TNSS	**Tian-Shan**	**4.34**	**32**			Pg	**Pg**	**15 11 15.0**	**-0.8**
	24nm,0.6s								
TNSS						Lg	Lg	15 12 11.7	
	27nm,0.5s								
ANVS	**Anan'yevo**	**4.47**	**39**	⇑	*i*	P	**Pn**	**15 11 03.5**	**+2.4**
	baz=41								
ANVS				⇑	*i*	S	**Sn**	**15 11 54.3**	**+0.8**
	baz=41								
KK31	**Karatay Array**	**4.48**	**327**			Pn	**Pn**	**15 11 01.5**	**+0.4**
KK31	**Karatay Array**	**4.48**	**327**	⇓		Pn	**Pn**	**15 11 02.0**	**+0.9**
	9.3nm,0.5s,baz=150,slow=30,SNR=3.6								
KK31				⇓		Pg	**Pb**	**15 11 13.7**	**+2.0**
	16nm,0.4s,baz=144,slow=16,SNR=8.3								
KK31				⇑		Sn	**Sn**	**15 11 57.0**	**+3.4**
	17nm,0.4s,baz=29,slow=16,SNR=4.6								
KK31				⇓		Lg	Lg	15 12 13.3	
	29nm,0.6s,baz=140,slow=30								
KKAR	**Karatay Array**	**4.48**	**327**	⇑	*i*	P	**Pn**	**15 11 03.6**	**+2.5**
	baz=26								
KKAR				⇑	*i*	S	**Sn**	**15 11 54.7**	**+1.2**
	baz=26								
KKAR	**Karatay Array**	**4.48**	**327**			Pn	**Pn**	**15 11 01.7**	**+0.6**
KNDC	**Almaty**	**4.50**	**31**	⇑		Pg	**Pg**	**15 11 18.5**	**-0.2**
	100nm,0.7s								
KNDC				⇑		Lg	Lg	15 12 16.0	
	223nm,0.7s								
KRBS	**Karabastau**	**4.53**	**17**	*e*		P	**Pg**	**15 11 20.9**	**+1.7**
	20nm,0.8s								
KRBS				*e*		S	**Sg**	**15 12 14.7**	**-3.1**
	70nm,0.4s								
KRBS	**Karabastau**	**4.53**	**17**			Pg	**Pg**	**15 11 16.4**	**-2.9**
	19nm,0.6s								
KRBS						Lg	Lg	15 12 14.7	
	37nm,0.9s								
PRZ	**Przheval'sk**	**4.64**	**47**				**Pn**	**15 11 05.6**	**+2.1**
KTBS	**Karatobe**	**4.83**	**25**	*e*		P	**Pg**	**15 11 26.9**	**+1.9**
	24nm,1.1s								
KTBS				*e*		S	**Sg**	**15 12 25.3**	**-2.2**
	173nm,0.6s								
KTBS	**Karatobe**	**4.83**	**25**			Pg	**Pg**	**15 11 22.5**	**-2.5**
	15nm,0.5s								
KTBS						Lg	Lg	15 12 25.1	
	173nm,0.6s								
KUU	**Kurty**	**4.88**	**22**	*e*		P	**Pg**	**15 11 27.4**	**+1.3**
	17nm,0.4s								
KUU				*e*		S	**Sg**	**15 12 25.8**	**-3.5**
	108nm,0.5s								
KUU	**Kurty**	**4.88**	**22**			Pg	**Pg**	**15 11 22.9**	**-3.2**
	22nm,0.6s								
KUU						Lg	Lg	15 12 25.1	
	108nm,0.5s								
SATY	**Saty**	**5.04**	**42**	*e*		P	**Pg**	**15 11 31.8**	**+2.7**
	20nm,0.4s								
SATY				*e*		S	**Sg**	**15 12 33.2**	**-1.1**
	43nm,0.8s								
SATY	**Saty**	**5.04**	**42**			Pg	**Pg**	**15 11 27.5**	**-1.5**
	11nm,0.5s								
SATY						Lg	Lg	15 12 33.2	
	74nm,1.0s								
CHKK	**Chushkaly**	**5.05**	**27**	*e*		P	**Pg**	**15 11 31.1**	**+1.7**
	16nm,0.5s								
CHKK				*e*		S	**Sg**	**15 12 32.0**	**-2.8**
	71nm,0.7s								
CHKK	**Chushkaly**	**5.05**	**27**			Pg	**Pg**	**15 11 26.6**	**-2.8**
	10nm,0.6s								
CHKK						Lg	Lg	15 12 31.9	
	71nm,0.7s								
KURS	**Kuram**	**5.24**	**37**	*e*		P	**Pg**	**15 11 35.9**	**+2.9**
	14nm,0.7s								
KURS				*e*		S	**Sg**	**15 12 39.5**	**-1.3**
	24nm,0.8s								
KURS	**Kuram**	**5.24**	**37**			Pg	**Pg**	**15 11 29.4**	**-3.5**
	9.3nm,0.6s								
KURS						Lg	Lg	15 12 37.3	
	26nm,1.8s								
KPKS	**Kokpek**	**5.47**	**40**	*e*		P	**Pg**	**15 11 39.9**	**+2.6**
	17nm,0.5s								
KPKS				*e*		S	**Sg**	**15 12 46.4**	**-1.9**
	45nm,0.8s								
KPKS	**Kokpek**	**5.47**	**40**			Pg	**Pg**	**15 11 34.3**	**-3.1**
	13nm,0.7s								
KPKS						Lg	Lg	15 12 45.3	
	45nm,0.8s								
BTLS	**Baital**	**5.66**	**2**	*e*		P	**Pg**	**15 11 41.1**	**+0.2**
	8.5nm,0.4s								
BTLS				*e*		S	**Sg**	**15 12 49.0**	**-5.1**
	23nm,1.0s								
ARXS	**Arharly**	**5.67**	**30**	*e*		P	**Pg**	**15 11 42.5**	**+1.3**
	22nm,0.9s								
ARXS				*e*		S	**Sg**	**15 12 51.9**	**-2.8**
	50nm,0.8s								
ARXS	**Arharly**	**5.67**	**30**			Pg	**Pg**	**15 11 37.8**	**-3.5**
	12nm,0.7s								
ARXS						Lg	Lg	15 12 50.8	
	50nm,0.8s								
CHCP	**Chirah Chowk**	**5.73**	**185**			P	Pb	15 11 26.5	-6.6
CEP	**Cherat**	**5.76**	**196**			P	Pn	15 11 26.0	+7.2
PDGK	**Podgornoye**	**5.80**	**45**			Pg	**Pg**	**15 11 41.5**	**-2.2**
	4.1nm,0.6s								
PDGK						Lg	Lg	15 12 56.9	
	18nm,0.8s								
PDGK	**Podgornoye**	**5.80**	**45**	⇑		Pn	Pn	15 11 24.8	+5.4
	7.2nm,0.6s								
PDGK						Pg	**Pg**	**15 11 43.8**	**+0.1**
	14nm,0.9s								
PDGK				⇑		Lg	Lg	15 12 58.2	
	31nm,0.8s								
BLB	**Baldybastay**	**5.85**	**35**	*e*		P	**Pg**	**15 11 46.8**	**+2.1**
	32nm,0.8s								
BLB				*e*		S	**Sg**	**15 12 58.5**	**-1.9**
	38nm,0.5s								
KBL	**Kabul**	**6.17**	**220**			Pn	**Pn**	**15 11 24.2**	**-0.2**
DJR	**Jarkent**	**6.65**	**40**	*e*		P	**Pg**	**15 12 02.9**	**+3.0**
	6.2nm,0.9s								
DJR				*e*		S	**Sg**	**15 13 26.6**	**+0.5**
	27nm,1.1s								
DJR	**Jarkent**	**6.65**	**40**			Pg	**Pg**	**15 11 57.4**	**-2.5**
	2.9nm,0.4s								
DJR						Lg	Lg	15 13 24.9	
	27nm,1.1s								
MKAR	**Makanchi Array**	**9.65**	**37**			Pn	**Pn**	**15 12 15.3**	**+3.3**
	baz=220,slow=11,SNR=2.2								
MKAR						Lg	Lg	15 14 56.8	
	0.1nm,0.3s,baz=223,slow=29,SNR=3.2								
MKAR						LR	LR	15 15 58.7	
	comp=Z,61nm,18.1s,baz=56,slow=38								
KURBB	**Kurchatov Arra**	**11.72**	**15**			Pn	**Pn**	**15 12 39.5**	**-0.7**
	baz=204,slow=12,SNR=2.1								
KURBB						Lg	Lg	15 16 00.0	
	0.1nm,0.3s,baz=199,slow=28,SNR=9.5								
KURK	**Kurchatov**	**11.82**	**15**				**Pn**	**15 12 42.1**	**+0.5**
GEYT	**Alibeck**	**12.37**	**268**			Pn	**Pn**	**15 12 47.7**	**-1.6**
	0.7nm,0.3s,baz=85,slow=18,SNR=2.3								
GEYT						Sn	**Sn**	**15 15 03.0**	**-4.5**
	0.4nm,0.3s,baz=98,slow=22,SNR=2.6								
	1.1nm,0.3s								
ABKAR	**Akbulak array**	**13.98**	**319**			Pn	**Pn**	**15 13 10.6**	**-0.6**
AKTO	**Aktyubinsk**	**15.70**	**320**			Pn	**Pn**	**15 13 31.5**	**-2.8**
	baz=133,slow=16,SNR=2.0								
AKTO						Sn	**Sn**	**15 16 18.2**	**-10**
	baz=106,slow=15								
	2.2nm,0.6s								
ZAA0	**Zalesovo Array**	**16.37**	**24**			P	**P**	**15 13 47.9**	**+2.0**
ZALV	**Zalesovo Beam**	**16.37**	**24**			Pn	**Pn**	**15 13 44.7**	**+1.7**
	0.5nm,0.3s,baz=214,slow=11,SNR=9.3								
	2.3nm,0.5s								
ZALV	**Zalesovo Beam**	**16.37**	**24**			P	**P**	**15 13 47.9**	**+2.0**
ONI	**Oni**	**23.09**	**288**			P	**P**	**15 14 59.8**	**+0.7**
ONI						IAmb	IAmb	15 15 03.1	
	comp=Z,9.5nm,0.7s								
SONM	**Songino Array**	**24.90**	**59**			P	**P**	**15 15 17.2**	**+0.8**
	comp=Z,0.8nm,0.7s,baz=251,slow=9.0,SNR=3.0								
	comp=Z,0.8nm,0.7s								
SONM	**Songino Array**	**24.90**	**59**			IAmb	IAmb	15 15 26.5	
	comp=Z,1.0nm,1.0s								
BRTR	**Keskin Array B**	**30.81**	**284**			P	**P**	**15 16 09.7**	**+0.3**
	comp=Z,1.3nm,0.6s,baz=81,slow=8.0,SNR=4.5								
	comp=Z,1.3nm,0.6s								
AKASG	**Malin Array Be**	**33.01**	**305**			P	**P**	**15 16 28.7**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=79,slow=8.4,SNR=4.4								
	comp=Z,0.2nm,0.3s								
FIA1	**FINESS Array S**	**36.43**	**323**			P	**P**	**15 16 58.5**	**+0.7**
FIA1						IAmb	IAmb	15 17 22.8	
	comp=Z,10nm,1.2s								
FINES	**FINESS Array B**	**36.43**	**323**			P	**P**	**15 16 58.3**	**+0.5**
	comp=Z,0.7nm,0.3s,baz=111,slow=10,SNR=12								
	comp=Z,0.7nm,0.3s								
KEV	**Kevo**	**39.01**	**336**			P	**P**	**15 17 20.0**	**+0.5**
KEV						IAmb	IAmb	15 17 57.9	
	comp=Z,16nm,1.3s								
ARCES	**ARCESS Array B**	**39.39**	**336**			P	**P**	**15 17 23.6**	**+0.9**
	comp=Z,1.1nm,0.4s,baz=107,slow=8.3,SNR=17								
	comp=Z,1.1nm,0.4s								
ARCES	**ARCESS Array B**	**39.39**	**336**			IAmb	IAmb	15 18 06.4	
	comp=Z,9.0nm,1.4s								
LHMI	**Lhok Sumawe**	**39.91**	**142**			P	**P**	**15 17 27.4**	**-0.2**
KLR	**Kul'dur**	**41.66**	**57**			P	**P**	**15 17 42.8**	**+1.0**
	comp=Z,0.7nm,0.5s,baz=297,slow=15,SNR=2.2								
	comp=Z,0.7nm,0.5s								
**TI

WB2	**Warramunga Arr**	**81.69**	**124**	P	**P**	**15 22 12.8 +0.7**
WR0	**Warramunga Arr**	**81.83**	**124**	P	**P**	**15 22 13.4 +0.6**
AS31	**Alice Springs**	**84.13**	**127**	P	**P**	**15 22 25.0 +0.3**
ASAR	**Alice Springs** comp=Z,0.5nm,0.6s,baz=322,slow=4.7,SNR=9.0 comp=Z,0.5nm,0.6s	**84.13**	**127**	P	**P**	**15 22 24.8 0.0**
FORT	**Forrest**	**86.10**	**136**	P	**P**	**15 22 35.5 +1.1**

MAN 28 15:11:21.2, 15°.00N×122°.04E, h1km, mb4.0, ML2.7, MS2.3, 2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCNP	**Jose Panganiba**	**0.95**	**138**	⇓*eP*	Pb	15 11 40.2	+0.2
PCPH	**Palayan**	**1.07**	**301**	⇓*eP*	Pn	15 11 43.0	+0.6
PCPH				*eS*		15 11 59.4	

NOU 28 15:12:56.8, 16°.82S×167°.47E, h14km, MLv3.6/4, Vanuatu Islands, Vanuatu Islands

*IDC **28** 15:15:56.8±1.5, 39°.27N×73°.59E, h0km, mb3.5/5, mbtmp3.5/8, ML2.6/3, Error ellipse: s-maj=30.2km s-min=19.6km az=119.0*
*KRNET **28** 15:15:56.9±0.1, 39°.43N×73°.78E, mb3.8*
*SOME **28** 15:16:00.0, 39°.52N×73°.70E, h0km*
*NNC **28** 15:16:04.5±1.2, 39°.64N×73°.74E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=9.3km s-min=5.5km az=174.0*
ISC 28 15:15:59.7±1.7, 39°.37N±0°.05×73.73E±0°.03, h5km±11km, n60, σ2s84/94, mb3.6/5, 32C-19D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh** baz=25	**1.36**	**328**	⇑*iP*	Pn	15 16 22.2	-3.4
OHH				⇑*iS*	**Sb**	**15 16 40.8**	**-2.8**
DRK	**Karamyk** baz=73	**1.50**	**275**	⇓*iP*	Pn	15 16 25.3	-2.3
DRK				⇓*iS*	**Sn**	**15 16 46.9**	**-0.8**
BTK	**Batken** baz=86	**2.35**	**288**	⇑*eP*	**Pn**	**15 16 38.8**	**-0.3**
BTK				⇑*eS*	**Sn**	**15 17 10.1**	**+1.7**
ARLS	**Aral** baz=10.0	**2.53**	**10**	⇓*iP*	**Pn**	**15 16 40.0**	**-1.7**
ARLS				⇓*iS*	**Sn**	**15 17 12.1**	**-0.9**
GAR	**Garm** baz=62	**2.68**	**263**	⇑*iP*	**Pn**	**15 16 44.0**	**+0.4**
GAR				⇑*iS*	**Sn**	**15 17 18.5**	**+2.0**
UCH	**Uchtor** baz=11	**2.92**	**12**	⇑*iP*	**Pn**	**15 16 46.0**	**-1.3**
UCH				⇑*iS*	**Sn**	**15 17 21.4**	**-1.5**
TRKS	**Terek-Say** baz=16	**2.93**	**318**	⇑*iP*	**Pn**	**15 16 45.8**	**-1.3**
TRKS				⇑*iS*	**Sn**	**15 17 21.1**	**-1.7**
EKS2	**Erkin-Say** baz=60	**3.29**	**1**	⇑*iP*	**Pn**	**15 16 50.8**	**-1.3**
EKS2				⇑*iS*	**Sn**	**15 17 30.2**	**-1.5**
AAK	**Ala-Archa** 2.0nm,0.3s,baz=164,slow=9.8,SNR=5.4	**3.32**	**10**	Pn	**Pn**	**15 16 54.6**	**+2.1**
AAK	4.5nm,0.3s,baz=151,slow=19,SNR=2.0 11nm,0.5s			Sn	**Sb**	**15 17 40.0**	**+0.1**
AAK	**Ala-Archa** baz=9.0	**3.32**	**10**	⇓*iP*	**Pn**	**15 16 51.3**	**-1.2**
AAK				⇓*iS*	**Sn**	**15 17 30.9**	**-1.5**
MRKS	**Merke** 12nm,0.4s	**3.40**	**354**	*eP*	**Pb**	**15 17 02.1**	**+1.7**
MRKS	63nm,0.4s			*eS*	**Sb**	**15 17 47.4**	**+5.3**
MRKS	**Merke** 10nm,0.3s	**3.40**	**354**	Pg	**Pb**	**15 17 01.2**	**+0.7**
MRKS	66nm,0.6s			Lg	Lg	15 17 45.9	
KBK	**Karagaybulak** baz=15	**3.41**	**15**	⇑*iP*	**Pn**	**15 16 52.6**	**-1.2**
KBK				⇑*iS*	**Sn**	**15 17 33.4**	**-1.3**
ULHL	**Ulahol** baz=33	**3.45**	**33**	⇑*iP*	**Pn**	**15 16 52.9**	**-1.4**
ULHL				⇑*iS*	**Sn**	**15 17 34.1**	**-1.6**
BOOM	**Boomskoye usch** baz=27	**3.54**	**28**	⇓*iP*	**Pn**	**15 16 54.4**	**-1.2**
BOOM				⇓*iS*	**Sn**	**15 17 35.9**	**-2.0**
CHGR	**Chuyangaron** baz=59	**3.63**	**260**	⇑*iP*	**Pn**	**15 16 56.9**	**+0.2**
CHGR				⇑*iS*	**Sn**	**15 17 41.1**	**+1.1**
CHMS	**Chumysh** baz=11	**3.71**	**12**	⇑*iP*	**Pn**	**15 16 56.7**	**-1.0**
CHMS				⇑*iS*	**Sn**	**15 17 40.0**	**-1.8**
CHMS	**Chumysh** 16nm,1.1s	**3.71**	**12**	⇑Pn	**Pn**	**15 17 00.2**	**+2.5**
CHMS	33nm,0.7s			⇓Lg	Lg	15 17 54.1	
KDJ	**Kajisay** baz=43	**3.81**	**42**	⇓*iP*	**Pn**	**15 16 58.2**	**-1.0**
KDJ				⇓*iS*	**Sn**	**15 17 42.9**	**-1.5**
TKM2	**Tokmak 2** baz=21	**3.82**	**21**	⇓*iP*	**Pn**	**15 16 58.0**	**-1.4**
TKM2				⇓*iS*	**Sn**	**15 17 42.8**	**-2.0**
TKM2	**Tokmak 2** 14nm,0.9s	**3.82**	**21**	⇓Pn	**Pn**	**15 17 02.0**	**+2.6**
TKM2	18nm,0.5s			⇑Lg	Lg	15 17 58.9	
TARG	**Taragay, Kyrgy** baz=52	**3.90**	**51**	⇑*iP*	**Pn**	**15 16 59.5**	**-1.2**
TARG				⇑*iS*	**Sn**	**15 17 45.0**	**-2.1**
TAS	**Tashkent** baz=0.0	**3.91**	**301**	⇑*eP*	**Pn**	**15 17 00.4**	**-0.1**
TAS				⇑*eS*	**Sn**	**15 17 46.4**	**-0.4**
USP	**Ospenovka** baz=8.0	**3.94**	**8**	⇓*iP*	**Pn**	**15 16 59.7**	**-1.2**
USP				⇓*iS*	**Sn**	**15 17 45.6**	**-1.9**
KST	**Kastek** 8.0nm,0.6s	**4.04**	**24**	*eP*	**Pb**	**15 17 12.3**	**+0.8**
KST	39nm,1.0s			*eS*	**Sb**	**15 18 04.7**	**+4.0**
KST	**Kastek** 8.0nm,0.6s	**4.04**	**24**	Pg	**Pb**	**15 17 12.0**	**+0.6**
KST	39nm,0.7s			Lg	Lg	15 18 04.3	
SGDS	**Sogindy** 7.3nm,0.2s	**4.14**	**9**	*eP*	**Pb**	**15 17 14.3**	**+1.2**
SGDS	30nm,0.5s			*eS*	**Sb**	**15 18 07.9**	**+4.5**
DGS	**Degeres** 14nm,0.7s	**4.17**	**21**	*eP*	**Pb**	**15 17 14.8**	**+1.2**
DGS	20nm,1.0s			*eS*	**Sb**	**15 18 08.9**	**+4.7**
DGS	**Degeres** 15nm,0.6s	**4.17**	**21**	Pg	**Pb**	**15 17 14.6**	**+1.0**
DGS	42nm,1.0s			Lg	Lg	15 18 08.7	
MTBS	**Maitube** 12nm,0.4s	**4.27**	**28**	*eP*	**Pb**	**15 17 17.5**	**+2.0**
MTBS	33nm,0.8s			*eS*	**Sb**	**15 18 13.4**	**+6.1**
MTBS	**Maitube** 14nm,0.3s	**4.27**	**28**	Pg	**Pb**	**15 17 17.3**	**+1.9**
MTBS	33nm,0.8s			Lg	Lg	15 18 13.5	
TNSS	**Tian-Shan** 13nm,0.4s	**4.40**	**32**	*eP*	**Pb**	**15 17 19.8**	**+2.1**
TNSS	14nm,0.8s			*eS*	**Sb**	**15 18 17.4**	**+6.2**
TNSS	**Tian-Shan**	**4.40**	**32**	Pg	**Pb**	**15 17 19.8**	**+2.1**
TNSS				Lg	Lg	15 18 17.8	
KK31	**Karatay Array** 1.1nm,0.3s,baz=136,slow=12,SNR=12	**4.45**	**328**	⇓Pn	**Pn**	**15 17 09.9**	**+2.0**
KK31	2.9nm,0.3s,baz=143,slow=14,SNR=7.3			Pg	**Pb**	**15 17 22.4**	**+4.0**
KK31	4.4nm,0.4s			⇓Sn	**Sn**	**15 18 01.6**	**+1.4**
KK31	12nm,0.5s,baz=152,slow=30,SNR=4.3			⇑Lg	Lg	15 18 17.2	
KKAR	**Karatay Array** baz=27	**4.45**	**328**	⇑*iP*	**Pn**	**15 17 07.5**	**-0.4**
KKAR	baz=27			⇑*iS*	**Sn**	**15 17 59.0**	**-1.1**
ANVS	**Anan'yevo** baz=40	**4.53**	**40**	⇑*iP*	**Pn**	**15 17 08.0**	**-1.1**
ANVS	baz=40			⇑*eS*	**Sn**	**15 17 59.8**	**-2.4**
KRBS	**Karabastau** 5.3nm,0.6s	**4.56**	**18**	*eP*	**Pb**	**15 17 21.2**	**+0.9**
KRBS	28nm,0.7s			*eS*	**Sb**	**15 18 19.8**	**+4.1**
KRBS	**Karabastau** 5.3nm,0.6s	**4.56**	**18**	Pg	**Pb**	**15 17 21.2**	**+0.9**
KRBS	28nm,0.7s			Lg	Lg	15 18 19.8	
KTBS	**Karatobe** 5.8nm,0.8s	**4.87**	**26**	*eP*	**Pb**	**15 17 28.6**	**+3.0**
KTBS	42nm,1.0s			*eS*	**Sg**	**15 18 32.9**	**-3.3**
KTBS	**Karatobe** 5.8nm,0.8s	**4.87**	**26**	Pg	**Pb**	**15 17 28.6**	**+3.0**
KTBS	42nm,1.0s			Lg	Lg	15 18 32.9	
KUU	**Kurty** 3.2nm,0.1s	**4.93**	**23**	*eP*	**Pb**	**15 17 28.4**	**+1.9**
KUU	32nm,0.6s			*eS*	**Sb**	**15 18 32.1**	**+6.1**
KUU	**Kurty** 3.2nm,0.1s	**4.93**	**23**	Pg	**Pb**	**15 17 28.3**	**+1.9**
KUU	32nm,0.6s			Lg	Lg	15 18 32.2	
SATY	**Saty** 3.3nm,0.3s	**5.10**	**42**	*eP*	**Pb**	**15 17 33.7**	**+4.1**
SATY	23nm,0.8s			*eS*	**Sg**	**15 18 41.3**	**-2.2**
SATY	**Saty** 3.3nm,0.3s	**5.10**	**42**	Pg	**Pb**	**15 17 33.7**	**+4.1**
SATY	23nm,0.8s			Lg	Lg	15 18 41.3	
CHKK	**Chushkaly** 3.0nm,0.2s	**5.10**	**28**	*eP*	**Pb**	**15 17 31.6**	**+2.1**
CHKK	20nm,0.4s			*eS*	**Sb**	**15 18 37.5**	**+6.4**
KURS	**Kuram** 3.6nm,0.3s	**5.30**	**38**	*eP*	**Pb**	**15 17 36.5**	**+3.6**
KURS	9.2nm,1.9s			*eS*	**Sg**	**15 18 46.4**	**-3.5**
KURS	**Kuram** 3.6nm,0.3s	**5.30**	**38**	Pg	**Pb**	**15 17 36.5**	**+3.6**
KURS	9.2nm,1.9s			Lg	Lg	15 18 46.3	
BTLS	**Baital** 1.2nm,0.3s	**5.67**	**2**	*eP*	**Pb**	**15 17 41.8**	**+2.6**
BTLS	2.9nm,1.0s			*eS*	**Sb**	**15 18 55.6**	**+8.1**
BTLS	**Baital** 1.2nm,0.3s	**5.67**	**2**	Pg	**Pb**	**15 17 41.8**	**+2.6**
BTLS	2.9nm,1.0s			Lg	Lg	15 18 55.6	
ARXS	**Arharly** 5.8nm,0.7s	**5.73**	**31**	*eP*	**Pb**	**15 17 43.1**	**+2.9**
ARXS	20nm,0.7s			*eS*	**Sb**	**15 18 57.6**	**+8.4**
ARXS	**Arharly** 5.8nm,0.7s	**5.73**	**31**	Pg	**Pb**	**15 17 43.1**	**+2.9**
ARXS	20nm,0.7s			Lg	Lg	15 18 57.6	
PDGK	**Podgornoye** 1.6nm,0.6s	**5.87**	**46**	Pg	**Pb**	**15 17 47.1**	**+4.5**
PDGK	6.0nm,1.0s			Lg	Lg	15 19 04.5	
PDGK	**Podgornoye** 6.0nm,0.8s	**5.87**	**46**	⇑Pg	**Pg**	**15 17 50.9**	**-1.2**
PDGK	14nm,0.8s			⇓Lg	Lg	15 19 07.7	
MKAR	**Makanchi Array** baz=220,slow=17,SNR=2.0	**9.71**	**37**	Pn	**Pn**	**15 18 21.2**	**+1.2**
ZALV	**Zalesovo Beam** 0.1nm,0.3s,baz=218,slow=11,SNR=2.2	**16.42**	**24**	Pn	**Pn**	**15 19 51.3**	**+0.5**
FINES	**FINESS Array B** 1.0nm,0.8s,baz=113,slow=11,SNR=1.8	**36.40**	**323**	P	**P**	**15 23 02.8**	**-1.9**
ARCES	**ARCESS Array B** 0.5nm,0.7s,baz=113,slow=6.9,SNR=1.2	**39.37**	**336**	P	P	15 23 27.1	-2.7
HFS	**Hagfors** 0.5nm,0.4s,baz=80,slow=10,SNR=1.4	**42.21**	**320**	P	P	15 23 50.8	-2.5
TORD	**Torodi Ar. Bea** 0.3nm,0.8s,baz=43,slow=6.9,SNR=1.4	**67.93**	**269**	P	**P**	**15 26 57.8**	**-2.0**
WRA	**Warramunga Arr** 0.3nm,0.9s,baz=326,slow=5.1,SNR=1.0	**81.74**	**124**	P	**P**	**15 28 17.4**	**-2.2**

*IDC **28** 15:26:59.6±2.1, 23°.89S×66°.53W, h195km±20km, mb3.1/2, mbtmp3.6/6, Error ellipse: s-maj=30.7km s-min=25.8km az=145.0*
*GUC **28** 15:27:01.2±0.6, 23°.97S×66°.76W, h209km±6km, ML4.1*
ISC 28 15:27:00.2±0.9, 23°.92S±0°.05×66°.73W±0°.06, h211km±8km, n21, σ1s30/33, 7C-2D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	**1.37**	**126**	⇓*iP*	**Pn**	**15 27 34.6**	**+0.6**
SLA				*i* S	**S**	**15 27 59.3**	**-0.8**
LVC	**Limon Verde** 30nm,0.4s,baz=131,slow=5.9,SNR=115	**2.40**	**303**	P	**Pn**	**15 27 45.1**	**+1.1**
LVC	35nm,0.5s,baz=162,slow=20,SNR=29			S	**S**	**15 28 18.5**	**+0.6**
LVC	**Limon Verde**	**2.40**	**303**	⇑*iP*	**Pn**	**15 27 45.0**	**+1.0**
LVC				*i* S	**S**	**15 28 18.3**	**+0.5**
PB15	**IPOC Station P**	**2.62**	**285**	⇑*iP*	**Pn**	**15 27 47.3**	**+1.0**
PB15				*i* S	**S**	**15 28 22.0**	**+0.1**
PB06	**IPOC Station P**	**2.88**	**294**	⇑*eP*	**Pn**	**15 27 50.1**	**+0.8**
PB06				*i* S	**S**	**15 28 26.6**	**-0.6**
PB06	comp=N,189nm,0.2s			IAML		15 28 28.5	
GO02	**Mina Guanaco**	**2.89**	**244**	⇓*eP*	**Pn**	**15 27 50.2**	**+0.9**
GO02				*i* S	**S**	**15 28 27.9**	**+0.5**
GO02	comp=E,416nm,0.2s			IAML		15 28 30.2	
PB04	**IPOC Station P**	**3.53**	**296**	⇑*eP*	**Pn**	**15 27 57.3**	**+0.5**
PB04				*eS*	**S**	**15 28 39.4**	**-1.4**
PB10	**IPOC Station P**	**3.53**	**276**	⇑*eP*	**Pn**	**15 27 57.4**	**+0.7**
PB10				*i* S	**S**	**15 28 40.0**	**-0.6**
AC02	**Maricunga**	**3.62**	**216**	*eP*	**Pn**	**15 27 59.2**	**+0.9**
PB02	**IPOC Station P**	**3.91**	**311**	*eP*	**Pn**	**15 28 01.7**	**+0.3**
PB02				*i* S	**S**	**15 28 45.5**	**-3.6**
AC01	**Pan de Azucar**	**4.15**	**237**	⇑*iP*	**Pn**	**15 28 03.8**	**-0.4**
AC01				*i* S	**S**	**15 28 52.0**	**-2.3**
PB08	**IPOC Station P**	**4.39**	**329**	*eP*	**Pn**	**15 28 08.7**	**+1.1**
PB08				*eS*	**S**	**15 28 59.5**	**-0.8**
PATCX	**Punta Patache**	**4.43**	**314**	⇑*eP*	**Pn**	**15 28 07.1**	**-0.7**
TA01	**Diego Aracena**	**4.63**	**316**	*eP*	**Pn**	**15 28 10.6**	**+0.4**
GO03	**Copiap**	**4.83**	**220**	*eP*	**Pn**	**15 28 12.1**	**-0.6**
GO03				*eS*	**S**	**15 29 07.5**	**-2.4**
LPAZ	**La Paz** comp=E,1.1nm,0.3s,baz=166,slow=6.3,SNR=4.7	**7.71**	**350**	P	**Pn**	**15 28 50.4**	**+0.1**
SIV	**San Ignacio** comp=E,0.6nm,0.3s,baz=221,slow=12,SNR=4.6	**9.51**	**35**	P	**Pn**	**15 29 10.2**	**-2.9**
PLCA	**Paso Flores** comp=E,0.7nm,0.5s,baz=2.7,slow=12,SNR=4.0	**17.07**	**190**	P	**P**	**15 30 45.8**	**+0.8**
TXAR	**Lajitas Array** comp=E,0.6nm,1.0s,baz=149,slow=4.2,SNR=3.3 comp=E,0.6nm,1.0s	**63.76**	**324**	P	**P**	**15 37 10.9**	**+1.1**
TORD	**Torodi Ar. Bea** comp=E,0.4nm,0.5s,baz=246,slow=6.6,SNR=5.7 comp=E,0.4nm,0.5s	**76.31**	**69**	P	**P**	**15 38 26.0**	**-0.2**
MKAR	**Makanchi Array** comp=E,0.7nm,0.7s,baz=321,slow=2.7,SNR=6.1	**146.31**	**40**	PKPbc	**PKPbc**	**15 46 16.9**	**+1.0**

*NEIC **28** 15:44:17.2±1.6, 45°.95N±0°.09×83°.81W±0°.09, h0km±2km, Error ellipse: s-maj=17.3km s-min=5.6km az=33.0*
*OTT **28** 15:44:17.6±0.0, 45°.96N×83°.80W, h0km, ML2.6/7, MN2.5/7, Michigan Mining explosion.*
ISC 28 15:44:16.5±0.9, 45°.93N±0°.05×83°.79W±0°.04, h0km, n15, σ0s79/17, Michigan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
E46A	**Sault Ste Mari**	**0.56**	**321**	Pg	**Pg**	**15 44 27.0**	**-0.2**
E46A				Sg	**Sg**	**15 44 34.5**	**0.0**
E46A	**Sault Ste Mari**	**0.56**	**321**	P	**Pg**	**15 44 27.2**	**-0.1**
E46A				S	**Sg**	**15 44 34.2**	**-0.3**
G45A	**Suttons Bay**	**1.59**	**236**	Pn	**Pb**	**15 44 46.1**	**-0.6**
G45A	**Suttons Bay**	**1.59**	**236**	Pn	**Pg**	**15 44 46.6**	**-0.3**
G45A				Sn	**Sn**	**15 45 06.6**	**-0.4**
TOBO	**Tobermory, Bru**	**1.74**	**113**	Pn	**Pb**	**15 44 48.9**	**-0.4**
SUNO	**Sudbury Onapin**	**1.84**	**66**	Pn	**Pn**	**15 44 49.9**	**+0.6**
SUNO				Sn	**Sb**	**15 45 13.9**	**-0.6**
E43A	**Lone Tree Farm**	**2.27**	**282**	Pn	**Pn**	**15 44 56.1**	**+0.8**
E43A	**Lone Tree Farm**	**2.27**	**282**	Pn	**Pn**	**15 44 56.3**	**+1.1**
J47A	**Sunmer** comp=Z,16nm,0.9s	**2.79**	**196**	IAmb_Lg		15 45 52.4	
F42A	**Maple Grove Fa**	**3.04**	**268**	Pn	**Pn**	**15 45 07.0**	**+1.2**
BUKO	**Buck Lake**	**3.12**	**97**	Pn	**Pn**	**15 45 08.1**	**+1.2**
PNPO	**Pukaskwa Natio**	**3.16**	**328**	Pn	**Pn**	**15 45 08.1**	**+0.7**
SADO	**Sadowa**	**3.48**	**108**	Pn	**Pn**	**15 45 12.6**	**+0.8**
D41A	**Chassel**	**3.49**	**291**	Pn	**Pn**	**15 45 12.9**	**+1.0**
L48A	**N Adams** comp=Z,26nm,1.1s	**4.01**	**187**	IAmb_Lg		15 46 37.4	

*KRNET **28** 15:48:44.1±0.1, 39°.46N×73°.65E, mb3.8*
*ISU **28** 15:48:45.8, 39°.54N×73°.64E, h5km*
*NNC **28** 15:48:55.4±2.4, 39°.80N×73°.63E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=18.4km s-min=11.7km az=174.0*
*SOME **28** 15:48:57.5, 39°.88N×73°.85E, h0km*
ISC 28 15:48:45.0±1.5, 39°.44N±0°.05×73.69E±0°.03, h0km±10km, n52, σ1s94/88, 27C-11D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh** baz=28	**1.29**	**328**	⇑*eP*	**Pb**	**15 49 08.1**	**-2.0**
OHH				⇑*eS*	**Sn**	**15 49 25.7**	**-2.6**
DRK	**Karamyk** baz=72	**1.46**	**272**	⇑*iP*	**Pn**	**15 49 11.3**	**-1.6**
DRK				⇑*iS*	**Sb**	**15 49 31.2**	**-1.2**
ANR	**Andizhan**	**1.66**	**323**	P	**Pg**	**15 49 17.2**	**+0.3**
ANR				S	**Sg**	**15 49 39.4**	**+1.0**
FRG	**Fergana**	**1.74**	**303**	P	**Pb**	**15 49 17.0**	**-0.7**
FRG				S	**Sg**	**15 49 39.8**	**-1.0**
CHMI	**Chimion**	**1.86**	**297**	P	**Pn**	**15 49 18.6**	**+0.5**
CHMI				S	**Sg**	**15 49 44.0**	**-0.8**
BTK	**Batken** baz=86	**2.30**	**287**	⇑*eP*	**Pn**	**15 49 25.0**	**+0.8**
BTK	baz=86			⇑*eS*	**Sb**	**15 49 54.8**	**-1.5**
BTK	**Batken**	**2.30**	**287**	P	**Pb**	**15 49 27.0**	**-0.3**
BTK				S	**Sg**	**15 49 58.3**	**-0.5**
MINT	**Mingtut**	**2.32**	**297**	P	**Pb**	**15 49 27.0**	**-0.7**
MINT				S	**Sg**	**15 49 59.2**	**-0.4**
ARLS	**Aral** baz=12	**2.47**	**11**	⇑*eP*	**Pn**	**15 49 27.7**	**+1.1**
ARLS	baz=12			⇑*eS*	**Sb**	**15 49 59.3**	**-2.0**
GAR	**Garm** baz=61	**2.66**	**262**	⇑*eP*	**Pn**	**15 49 29.9**	**+0.8**
GAR	baz=61			⇑*eS*	**Sn**	**15 50 03.4**	**+1.4**
TRKS	**Terek-Say** baz=17	**2.85**	**318**	⇓*eP*	**Pn**	**15 49 31.7**	**-0.2**
TRKS	baz=17			⇓*eS*	**Sn**	**15 50 06.5**	**-0.5**
UCH	**Uchtor** baz=13	**2.86**	**12**	⇑*eP*	**Pn**	**15 49 33.3**	**+1.1**
UCH	baz=13			⇑*eS*	**Sb**	**15 50 09.1**	**-3.6**
EKS2	**Erkin-Say** baz=2.0	**3.22**	**1**	⇓*eP*	**Pn**	**15 49 38.0**	**+1.1**
EKS2	baz=2.0			⇓*eS*	**Sn**	**15 50 17.3**	**+1.3**
AAK	**Ala-Archa** baz=11	**3.25**	**11**	⇑*eP*	**Pn**	**15 49 38.7**	**+1.3**
AAK	baz=11			⇑*eS*	**Sn**	**15 50 18.3**	**+1.4**
MRKS	**Merke** 15nm,0.4s	**3.32**	**354**	*eP*	**Pg**	**15 49 51.9**	**+3.2**
MRKS	38nm,1.4s			*eS*	**Sg**	**15 50 31.3**	**-0.4**
MRKS	**Merke** 15nm,0.4s	**3.32**	**354**	Pg	**Pg**	**15 49 51.1**	**+2.4**
MRKS	38nm,0.5s			Lg	Lg	15 50 30.1	
KBK	**Karagaybulak** baz=17	**3.35**	**16**	⇓*eP*	**Pn**	**15 49 40.0**	**+1.2**
KBK	baz=17			⇓*eS*	**Sn**	**15 50 20.9**	**+1.5**
BOOM	**Boomskoye usch** baz=29	**3.49**	**28**	⇑*iP*	**Pn**	**15 49 42.3**	**+1.6**
BOOM	baz=29			⇑*iS*	**Sn**	**15 50 24.2**	**+1.4**
CHGR	**Chuyangaron** baz=59	**3.61**	**259**	⇑*eP*	**Pn**	**15 49 43.2**	**+1.0**
CHGR	baz=59			⇑*eS*	**Sn**	**15 50 26.6**	**+1.0**
CHMS	**Chumysh** 4.4nm,0.5s	**3.65**	**12**	⇑Pn	**Pb**	**15 49 48.8**	**-1.5**
CHMS	17nm,0.6s			⇑Lg	Lg	15 50 40.9	
TKM2	**Tokmak 2** 5.7nm,0.7s	**3.77**	**22**	⇑Pn	**Pb**	**15 49 50.1**	**-2.4**
TKM2	14nm,0.6s			⇑Lg	Lg	15 50 45.7	
KDJ	**Kajisay** baz=44	**3.78**	**43**	⇓*eP*	**Pn**	**15 49 46.2**	**+1.6**
KDJ	baz=44			⇓*iS*	**Sn**	**15 50 31.6**	**+1.8**
TAS	**Tashkent** baz=1.0	**3.85**	**301**	⇑*iP*	**Pn**	**15 49 46.2**	**+0.8**
TAS	baz=1.0			⇑*iS*	**Sn**	**15 50 31.7**	**+0.4**
TAS	**Tashkent** baz=1.0	**3.85**	**301**	⇑*iP*	**Pn**	**15 49 46.2**	**+0.8**
TAS	baz=1.0			⇑*iS*	**Sn**	**15 50 31.7**	**+0.4**
KST	**Kastek** 4.7nm,0.4s	**3.99**	**25**	*eP*	**Pg**	**15 50 04.7**	**+3.2**
KST	43nm,0.7s			*eS*	**Sg**	**15 50 53.0**	**-0.2**
KST	**Kastek** 6.1nm,0.7s	**3.99**	**25**	Pg	**Pg**	**15 50 04.7**	**+3.2**
KST	43nm,0.7s			Lg	Lg	15 50 53.0	
SGDS	**Sogindy** 6.1nm,0.6s	**4.07**	**10**	*eP*	**Pg**	**15 50 06.1**	**+3.1**
SGDS	14nm,0.7s			*eS*	**Sg**	**15 50 55.2**	**-0.6**
SGDS	**Sogindy** 6.1nm,0.6s	**4.07**	**10**	Pg	**Pg**	**15 50 06.1**	**+3.1**
SGDS	14nm,0.7s			Lg	Lg	15 50 55.2	
DGS	**Degeres** 11nm,0.5s	**4.11**	**22**	*eP*	**Pg**	**15 50 06.4**	**+2.6**
DGS	24nm,0.8s			*eS*	**Sg**	**15 50 56.0**	**-1.1**
DGS	**Degeres** 11nm,0.5s	**4.11**	**22**	Pg	**Pg**	**15 50 06.4**	**+2.6**
DGS	24nm,0.8s			Lg	Lg	15 50 55.0	
MTBS	**Maitube** 5.5nm,0.2s	**4.23**	**28**	*eP*	**Pg**	**15 50 09.4**	**+3.4**
MTBS	18nm,0.6s			*eS*	**Sg**	**15 51 01.0**	**+0.3**
MTBS	**Maitube** 5.5nm,0.2s	**4.23**	**28**	Pg	**Pg**	**15 50 09.4**	**+3.4**
MTBS	18nm,0.6s			Lg	Lg	15 51 01.0	
TNSS	**Tian-Shan** 7.9nm,0.6s	**4.36**	**33**	*eP*	**Pg**	**15 50 11.5**	**+3.1**
TNSS	6.3nm,0.7s			*eS*	**Sg**	**15 51 05.0**	**+0.1**

TNSS	**Tian-Shan**	**4.36**	**33**	Pg	**Pg**	**15 50 11.5**	**+3.1**
	7.9nm,0.6s							
TNSS				Lg	Lg	15 51 05.0		
	6.3nm,0.7s							
KK31	**Karatay Array**	**4.37**	**328**	Pn	**Pn**	**15 49 55.2**	**+2.6**
	1.0nm,0.3s,baz=130,slow=13,SNR=21							
KK31				⇓Sn	**Sn**	**15 50 47.1**	**+2.8**
	2.3nm,0.3s,baz=160,slow=26,SNR=3.8							
KK31				⇑Lg	Lg	15 51 01.6		
	8.2nm,0.5s,baz=139,slow=29							
ANVS	**Anan'yevo**	**4.49**	**41**	⇓*i*P	**Pn**	**15 49 56.1**	**+1.6**
	baz=41							
ANVS				⇓*i*S	**Sn**	**15 50 48.6**	**+1.1**
	baz=41							
KRBS	**Karabastau**	**4.51**	**19**	*e*P	**Pg**	**15 50 13.4**	**+2.1**
	5.5nm,0.5s							
KRBS				*e*S	**Sg**	**15 51 08.2**	**-1.5**
	19nm,0.9s							
KRBS	**Karabastau**	**4.51**	**19**	Pg	**Pg**	**15 50 13.6**	**+2.2**
	5.5nm,0.5s							
KRBS				Lg	Lg	15 51 08.2		
	19nm,0.9s							
KTBS	**Karatobe**	**4.83**	**27**	*e*P	**Pg**	**15 50 18.7**	**+1.3**
	4.2nm,0.5s							
KTBS				*e*S	**Sg**	**15 51 17.5**	**-2.4**
	26nm,0.6s							
KTBS	**Karatobe**	**4.83**	**27**	Pg	**Pg**	**15 50 18.7**	**+1.3**
	4.2nm,0.5s							
KTBS				Lg	Lg	15 51 17.5		
	26nm,0.6s							
KUU	**Kurty**	**4.87**	**23**	*e*P	**Pg**	**15 50 19.6**	**+1.2**
	3.8nm,0.5s							
KUU				*e*S	**Sg**	**15 51 18.5**	**-3.0**
	20nm,0.6s							
KUU	**Kurty**	**4.87**	**23**	Pg	**Pg**	**15 50 19.6**	**+1.2**
	3.8nm,0.5s							
KUU				Lg	Lg	15 51 18.5		
	20nm,0.6s							
CHKK	**Chushkaly**	**5.06**	**28**	*e*P	**Pg**	**15 50 23.5**	**+1.6**
	1.7nm,0.1s							
CHKK				*e*S	**Sg**	**15 51 25.4**	**-2.0**
	10nm,0.6s							
CHKK	**Chushkaly**	**5.06**	**28**	Pg	**Pg**	**15 50 23.5**	**+1.6**
	1.7nm,0.1s							
CHKK				Lg	Lg	15 51 25.4		
	10nm,0.6s							
SATY	**Saty**	**5.07**	**43**	*e*P	**Pg**	**15 50 24.2**	**+2.1**
	4.9nm,0.2s							
SATY				*e*S	**Sg**	**15 51 26.8**	**-1.1**
	18nm,1.1s							
SATY	**Saty**	**5.07**	**43**	Pg	**Pg**	**15 50 24.2**	**+2.1**
	4.9nm,0.2s							
SATY				Lg	Lg	15 51 26.8		
	18nm,1.1s							
ARXS	**Arharly**	**5.69**	**32**	*e*P	**Pg**	**15 50 33.9**	**0.0**
	4.4nm,0.9s							
ARXS				*e*S	**Sg**	**15 51 43.3**	**-4.3**
	7.8nm,0.8s							
ARXS	**Arharly**	**5.69**	**32**	Pg	**Pg**	**15 50 33.9**	**0.0**
	4.4nm,0.9s							
ARXS				Lg	Lg	15 51 43.3		
	7.8nm,0.8s							
PDGK	**Podgornoye**	**5.84**	**46**	Pg	**Pg**	**15 50 37.9**	**+1.0**
	1.9nm,0.8s							
PDGK				Lg	Lg	15 51 50.0		
	3.3nm,0.8s							
PDGK	**Podgornoye**	**5.84**	**46**	Pn	**Pn**	**15 50 17.3**	**+4.4**
	1.4nm,0.6s							
PDGK				Pg	**Pg**	**15 50 34.7**	**-2.2**
	4.2nm,0.8s							
PDGK				Lg	Lg	15 51 49.9		
	9.5nm,0.9s							
BLB	**Baldybastay**	**5.87**	**36**	*e*P	**Pg**	**15 50 37.9**	**+0.4**
	5.0nm,0.9s							
BLB				*e*S	**Sg**	**15 51 50.3**	**-3.3**
	10nm,0.8s							
BLB	**Baldybastay**	**5.87**	**36**	Pg	**Pg**	**15 50 37.8**	**+0.4**
	5.0nm,0.9s							
BLB				Lg	Lg	15 51 50.3		
	10nm,0.8s							

*IDC **28** 15:50:15.9±0.7,28˚.09S×13˚.14W,h0km,mb4.1/10, mbtmp4.1/10,MS3.8/22,Error ellipse: s-maj=24.4km s-min=18.7km az=156.0*
*NEIC **28** 15:50:17.5±1.9,28˚.1S±0˚.1×13˚.1W±0˚.1,h10km±4km, mb4.6/18,Error ellipse: s-maj=21.8km s-min=16.8km az=141.0*
ISC 28 15:50:17.3±0.5,28˚.1S±0˚.1×13˚.2W±0˚.1,h10km,n58, σ0s78/37,mb4.4/18,MS3.8/22,Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSUM	**Tsumeb**	**29.45**	**79**	LR	LR	16 06 05.3	
	comp=Z,154nm,18.4s,baz=322,slow=32						
SUR	**Sutherland**	**29.59**	**107**	LR	LR	16 05 30.7	
	comp=Z,244nm,21.7s,baz=267,slow=31						
RCBR	**Riachuelo**	**30.91**	**312**	LR	LR	16 06 00.5	
	comp=Z,124nm,18.9s,baz=296,slow=30						
BOSA	**Boshof**	**33.72**	**100**	LR	LR	16 08 58.0	
	comp=Z,271nm,18.0s,baz=248,slow=33						
BDFB	**Brasilia**	**34.51**	**284**	LR	LR	16 08 36.2	
	comp=Z,249nm,21.4s,baz=108,slow=32						
LBTB	**Lobatse**	**34.71**	**94**	P	**P**	**15 57 07.3**	**-0.3**
	5.4nm,0.8s,baz=271,slow=9.8,SNR=7.2						
LBTB				LR	LR	16 08 54.9	
	comp=Z,165nm,20.3s,baz=263,slow=32						
	5.4nm,0.8s						
LBTB	**Lobatse**	**34.71**	**94**	IAmb	IAmb	15 57 14.2	
	comp=Z,13nm,0.9s						
DBIC	**Dimbokro**	**35.46**	**14**	LR	LR	16 08 40.9	
	comp=Z,58nm,18.9s,baz=181,slow=31						
MATP	**Matopo**	**38.59**	**88**	P	**P**	**15 57 39.3**	**-1.6**
	comp=Z,4.2nm,0.9s,baz=251,slow=11,SNR=4.6						
	comp=Z,4.2nm,0.9s						
CPUP	**Vila Florida**	**39.16**	**262**	LR	LR	16 10 53.5	
	comp=Z,176nm,21.9s,baz=91,slow=32						
LSZ	**Lusaka**	**40.29**	**80**	P	**P**	**15 57 56.9**	**+1.9**
	comp=Z,1.7nm,0.5s,baz=270,slow=12,SNR=3.8						
LSZ				LR	LR	16 13 12.8	
	comp=Z,270nm,18.5s,baz=288,slow=34						
	comp=Z,1.7nm,0.5s						
TRQA	**Tornquist**	**41.70**	**243**	P	**P**	**15 58 05.1**	**-1.2**
VNA2	**Neumayer--Watz**	**43.02**	**177**	P	**P**	**15 58 16.8**	**+0.2**
	baz=342,slow=11						
VNA3	**Neumayer Olymp**	**43.26**	**178**	P	**P**	**15 58 18.2**	**-0.3**
TOA0	**Torodi Ar. Sit**	**43.43**	**21**	P	**P**	**15 58 21.2**	**+0.7**
TORD	**Torodi Ar. Bea**	**43.43**	**21**	P	**P**	**15 58 20.1**	**-0.4**
	comp=Z,2.2nm,1.0s,baz=200,slow=8.4,SNR=7.5						
TORD				LR	LR	16 13 02.3	
	comp=Z,135nm,18.6s,baz=218,slow=32						
	comp=Z,2.2nm,1.0s						
TORD	**Torodi Ar. Bea**	**43.43**	**21**	P	**P**	**15 58 21.5**	**+1.0**
SNAA	**Sanae**	**44.02**	**175**	P	**P**	**15 58 25.9**	**+1.2**
SNAA	**Sanae**	**44.02**	**175**	P	**P**	**15 58 24.6**	**-0.1**
	comp=Z,1.3nm,0.9s,baz=22,slow=18,SNR=3.7						
	comp=Z,1.3nm,0.9s						
TROLL	**Troll, Antarti**	**44.82**	**173**	P	**P**	**15 58 31.3**	**+0.1**
SIV	**San Ignacio**	**45.75**	**275**	P	**P**	**15 58 39.4**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=87,slow=19,SNR=3.9						
SIV				LR	LR	16 15 21.9	
	comp=Z,192nm,19.3s,baz=107,slow=33						
	comp=Z,0.8nm,0.7s						
PLCA	**Paso Flores**	**48.23**	**239**	P	**P**	**15 58 57.9**	**-0.5**
	comp=Z,1.2nm,0.8s,baz=102,slow=11,SNR=3.6						
	comp=Z,1.2nm,0.8s						
PLCA	**Paso Flores**	**48.23**	**239**	IAmb	IAmb	15 59 31.5	
	comp=Z,5.6nm,1.2s						
MBAR	**Mbarara**	**50.09**	**65**	LR	LR	16 18 52.9	
	comp=Z,97nm,19.8s,baz=163,slow=34						
GO02	**Mina Guanaco**	**50.15**	**260**	P	**P**	**15 59 14.1**	**+0.6**
LVC	**Limon Verde**	**50.32**	**263**	LR	LR	16 19 58.3	
	comp=Z,50nm,19.3s,baz=144,slow=35						
MDP	**Montagnes des**	**50.36**	**305**	LR	LR	16 17 59.3	
	comp=Z,89nm,20.7s,baz=86,slow=33						
SAML	**Samuel**	**50.71**	**282**		**P**	**15 59 17.8**	**+0.3**
SAML				IAmb	IAmb	15 59 24.8	
	comp=Z,6.7nm,1.1s						
BELA	**Belgrano 2**	**50.85**	**186**	P	**P**	**15 59 17.4**	**-0.3**
BELA				IAmb	IAmb	15 59 19.5	
	comp=Z,5.7nm,1.0s						
PB16	**IPOC Station P**	**52.30**	**268**	P	**P**	**15 59 29.8**	**-0.3**
PB16				IAmb	IAmb	15 59 32.0	
	comp=Z,16nm,1.4s						
PB12	**IPOC Station P**	**52.92**	**267**	P	**P**	**15 59 32.3**	**-1.8**
KMBO	**Kilima Mbogo**	**55.10**	**70**	LR	LR	16 21 56.0	
	comp=Z,144nm,18.8s,baz=319,slow=34						
OPO	**Ambohidratompo**	**55.74**	**94**	LR	LR	16 20 50.3	
	comp=Z,75nm,21.6s,baz=38,slow=33						
NNA	**Nana**	**61.32**	**271**	LR	LR	16 26 26.0	
	comp=Z,112nm,19.1s,baz=121,slow=35						
QSPA	**South Pole Qui**	**62.15**	**180**	P	**P**	**16 00 39.3**	**+0.8**
SDV	**Santo Domingo**	**66.57**	**295**	LR	LR	16 27 50.4	
	comp=Z,99nm,21.6s,baz=110,slow=34						
ROSC	**El Rosal**	**67.33**	**289**	P	**P**	**16 01 14.5**	**+1.2**
	comp=Z,10nm,0.3s,baz=130,slow=18,SNR=3.6						
ESDC	**Sonseca Array**	**67.94**	**8**	LR	LR	16 28 42.3	
	comp=Z,72nm,18.4s,baz=282,slow=34						
IDI	**Anoyia**	**72.54**	**32**	LR	LR	16 31 53.0	
	comp=Z,20nm,20.8s,baz=262,slow=34						
SBA	**Scott Base**	**74.31**	**180**	P	**P**	**16 01 54.7**	**+0.4**
SBA				IAmb	IAmb	16 02 02.4	
	comp=Z,12nm,1.0s						
VNDA	**Vanda**	**74.61**	**179**	P	**P**	**16 01 56.4**	**+0.3**
	comp=Z,1.6nm,0.9s,baz=208,slow=5.5,SNR=7.9						
	comp=Z,1.6nm,0.9s						
MMAI	**Mount Meron Ar**	**76.26**	**40**	LR	LR	16 33 20.4	
	comp=Z,29nm,21.0s,baz=30,slow=34						
GERES	**GERESS Array B**	**80.25**	**18**	P	**P**	**16 02 27.5**	**-0.5**
BRTR	**Keskin Array B**	**80.30**	**35**	P	**P**	**16 02 29.2**	**+0.7**
	comp=Z,2.4nm,0.9s,baz=213,slow=4.3,SNR=6.1						
	comp=Z,2.4nm,0.9s						
BRTR	**Keskin Array B**	**80.30**	**35**	P	**P**	**16 02 27.1**	**-1.4**
GRA1	**Grafenberg Arr**	**80.41**	**16**	P	**P**	**16 02 28.4**	**-0.3**
GRA1				IAmb	IAmb	16 02 37.0	
	comp=Z,6.2nm,0.8s						
KHC	**Kasperske Hory**	**80.48**	**17**	P	**P**	**16 02 28.7**	**-0.5**
KHC				IAmb	IAmb	16 02 31.6	
	comp=Z,7.8nm,1.5s						
PSZ	**Piszkesteto**	**81.27**	**22**	P	**P**	**16 02 33.3**	**-0.2**
PSZ				IAmb	IAmb	16 02 36.3	
	comp=Z,6.3nm,1.0s						
MLR	**Muntele Rosu**	**81.40**	**27**	P	**P**	**16 02 34.4**	**+0.1**
MORC	**Moravsky Berou**	**82.18**	**20**	P	**P**	**16 02 38.5**	**+0.4**
WSAR	**Wadi Sarin**	**85.97**	**61**	LR	LR	16 40 03.4	
	comp=Z,52nm,20.5s,baz=258,slow=35						
AKASG	**Malin Array Be**	**86.92**	**25**	P	**P**	**16 03 01.6**	**-0.5**
	comp=Z,0.6nm,0.5s,baz=216,slow=4.1,SNR=10						
	comp=Z,0.6nm,0.5s						
SONM	**Songino Array**	**129.76**	**50**	PKP	**PKiKP**	**16 09 27.7**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=252,slow=0.9,SNR=4.7						
SONM	**Songino Array**	**129.76**	**50**	PKPdf	**PKPdf**	**16 09 26.4**	**-0.3**
SEY	**Seymchan**	**143.87**	**11**	PKP	PKPbc	16 09 50.6	+0.7
	comp=Z,1.8nm,0.8s,baz=29,slow=3.3,SNR=7.3						
KSRS	**Korea Array**	**146.16**	**64**	PKPbc	**PKPbc**	**16 09 57.5**	**-0.4**
	comp=Z,3.3nm,0.8s,baz=274,slow=4.1,SNR=16						
USRK	**Ussuriysk Ar.**	**147.87**	**51**	PKPbc	**PKPbc**	**16 10 02.4**	**-0.1**
	comp=Z,1.7nm,0.9s,baz=318,slow=2.6,SNR=4.2						
USRK	**Ussuriysk Ar.**	**147.87**	**51**		**PKPbc**	**16 10 02.7**	**+0.2**

*IDC **28** 15:55:31.8±1.3,38˚.36N×68˚.02E,h0km,mb3.8/8, mbtmp3.9/16,ML3.5/8,MS2.5/2,Error ellipse: s-maj=25.2km s-min=12.8km az=162.0*
*SOME **28** 15:55:35.0,38˚.63N×68˚.00E,h5km*
*NNC **28** 15:55:36.9±2.9,38˚.82N×67˚.83E,h0km,mb4.4,mpv4.1, Error ellipse: s-maj=26.4km s-min=15.2km az=4.0*
*ISU **28** 15:55:36.7,38˚.60N×68˚.10E,h24km*
*NEIC **28** 15:55:36.6±1.3,38˚.51N±0˚.05×68˚.15E±0˚.03,h27km±7km, mb4.3/8,Error ellipse: s-maj=8.5km s-min=2.2km az=159.0*
ISC 28 15:55:33.7±1.2,38˚.50N±0˚.05×68˚.10E±0˚.03,h14km±8km, n82,σ2s06/96,mb4.0/11,6C-6D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHGR	**Chuyangaron**	**0.84**	**79**		**Pb**	**15 55 50.7**	**+0.5**
KTAB	**Kitab**	**1.14**	**304**	P	**Pb**	**15 55 54.6**	**-0.7**
KTAB				S	**Sb**	**15 56 09.4**	**-0.7**
KTAB				S	**Sn**	**15 56 16.2**	**+5.3**
BXML	**Bakhmal**	**1.19**	**357**	P	**Pg**	**15 55 56.6**	**0.0**
BXML				S	**Sn**	**15 56 12.3**	**+0.2**
PKMR	**Pachkamar**	**1.34**	**272**	P	**Pg**	**15 55 59.4**	**-0.2**
PKMR				S	**Sg**	**15 56 16.2**	**-0.9**
AGL	**Agalyk**	**1.39**	**317**	P	**Pn**	**15 55 58.6**	**-0.3**
AGL				S	**Sb**	**15 56 16.2**	**-1.1**
SAM	**Samarkand**	**1.46**	**324**	P	**Pg**	**15 56 01.9**	**+0.1**
SAM				S	**Sb**	**15 56 19.1**	**0.0**
GAR	**Garm**	**1.80**	**73**		**Pn**	**15 56 04.6**	**+0.1**
BTK	**Batken**	**2.62**	**53**		**Pn**	**15 56 16.3**	**+0.6**
TAS	**Tashkent**	**2.97**	**18**	Pn	**Pn**	**15 56 20.2**	**-0.3**
YBZ	**Yangibazar**	**3.02**	**22**	P	**Pg**	**15 56 29.7**	**-1.9**
DRK	**Karamyk**	**3.04**	**70**	Pn	**Pn**	**15 56 22.1**	**+0.3**
FRG	**Fergana**	**3.41**	**56**	S	**Sb**	**15 57 14.3**	**-1.0**
GZLY	**Gazly**	**3.96**	**296**	S	**Sn**	**15 57 20.9**	**+0.6**
KBL	**Kabul**	**4.02**	**169**		**Pn**	**15 56 36.0**	**+0.9**
KK31	**Karatay Array**	**4.95**	**21**	Pn	**Pn**	**15 56 48.6**	**+0.9**
KK31	**Karatay Array**	**4.95**	**21**	Pn	**Pn**	**15 56 51.7**	**+4.0**
	2.5nm,0.3s,baz=195,slow=9.6,SNR=56						
KK31				⇓Pg	**Pg**	**15 57 05.6**	**-2.8**
	92nm,0.9s,baz=216,slow=16,SNR=21						
KK31				⇑Lg	Lg	15 58 08.6	
	79nm,0.5s,baz=205,slow=28,SNR=7.9						
KKAR	**Karatay Array**	**4.95**	**21**	Pn	**Pn**	**15 56 48.4**	**+0.7**
KKAR	**Karatay Array**	**4.95**	**21**		**Pn**	**15 56 49.2**	**+1.5**
DZA	**Taraz**	**5.03**	**28**	*e*P	**Pg**	**15 57 08.2**	**-1.8**
	42nm,0.1s						
DZA				*e*S	**Sg**	**15 58 15.9**	**+0.8**
	367nm,0.6s						
DZA	**Taraz**	**5.03**	**28**	Pg	**Pg**	**15 57 08.2**	**-1.8**
	42nm,0.1s						
DZA				Lg	Lg	15 58 15.9	
	298nm,0.6s						
AML	**Almayashu**	**5.60**	**48**	P	**Pn**	**15 56 59.8**	**+2.8**
	SNR=13						
MRKS	**Merke**	**5.76**	**41**	*e*P	**Pg**	**15 57 22.5**	**-1.5**
	12nm,0.4s						
MRKS				*e*S	**Sg**	**15 58 40.5**	**+1.9**
	54nm,0.6s						
EKS2	**Erkin-Say**	**5.99**	**44**	P	**Pn**	**15 57 05.6**	**+3.4**
	SNR=11						
UCH	**Uchtor**	**6.15**	**51**	P	**Pn**	**15 57 07.4**	**+2.8**
	SNR=8.5						
KSH	**Kashi**	**6.21**	**78**	P	**Pn**	**15 57 04.5**	**-0.7**
KSH				S	**Sn**	**15 58 11.3**	**-4.8**
KSH				smax	smax		
	comp=N,65nm,0.7s						
KSH				smax	smax		
	comp=E,53nm,0.7s						
KSH				LR	LR		
	comp=N,170nm,6.0s						
KSH				LR	LR		
	comp=E,230nm,5.3s						
KSH				LR	LR		
	comp=Z,110nm,8.2s						
HRA	**Herat**	**6.26**	**231**	Pn	**Pn**	**15 57 08.5**	**+2.6**
AAK	**Ala-Archa**	**6.38**	**48**	Pn	**Pn**	**15 57 09.2**	**+1.7**
	comp=Z,2.4nm,0.3s,baz=197,slow=2.6,SNR=6.1						
AAK				Lg	Lg	15 58 58.9	
	comp=Z,0.9nm,0.3s,baz=230,slow=7.9,SNR=3.6						
AAK				LR	LR	15 59 40.1	
	comp=Z,38nm,18.4s,baz=254,slow=38						
	comp=Z,4.3nm,0.3s						
KBK	**Karagaybulak**	**6.66**	**49**	P	**Pn**	**15 57 15.4**	**+4.1**
	SNR=7.5						
CHMS	**Chumysh**	**6.76**	**46**	⇑Pn	**Pn**	**15 57 16.3**	**+3.8**
	comp=Z,9.3nm,0.7s						
CHMS				⇓Sn	**Sn**	**15 58 32.8**	**+3.5**
	comp=Z,18nm,0.6s						
CHMS				⇑Lg	Lg	15 59 07.3	
	comp=Z,24nm,0.9s						
SGDS	**Sogindy**	**6.99**	**43**	*e*P	Pg	15 57 42.6	-4.9
	comp=Z,5.2nm,0.4s						
SGDS				*e*S	**Sg**	**15 59 14.5**	**-3.5**
	comp=Z,22nm,1.2s						
BOOM	**Boomskoye usch**	**7.18**	**54**	Pn	**Pn**	**15 57 18.5**	**0.0**
TKM2	**Tokmak 2**	**7.20**	**50**	P	**Pn**	**15 57 21.9**	**+3.1**
	SNR=13						
TKM2	**Tokmak 2**	**7.20**	**50**	⇓Pn	**Pn**	**15 57 21.7**	**+2.9**
	comp=Z,6.8nm,0.6s						
TKM2				⇓Lg	Lg	15 59 23.0	
	comp=Z,21nm,0.8s						
ULHL	**Ulahol**	**7.25**	**56**	P	**Pn**	**15 57 22.9**	**+3.4**
	SNR=7.6						
KST	**Kastek**	**7.49**	**50**	*e*P	**Pg**	**15 57 54.8**	**-2.4**
	comp=Z,4.4nm,0.4s						
KST				*e*S	**Sg**	**15 59 36.2**	**+2.1**
	comp=Z,28nm,0.8s						
KST	**Kastek**	**7.49**	**50**	Pg	**Pg**	**15 57 54.8**	**-2.4**
	comp=Z,4.4nm,0.4s						
KST				Lg	Lg	15 59 36.2	
	comp=Z,28nm,0.8s						
KDJ	**Kajisay**	**7.83**	**60**	Pn	**Pn**	**15 57 26.7**	**-0.6**
GEYT	**Alibeck**	**7.88**	**269**	Pn	**Pn**	**15 57 26.2**	**-1.9**
	comp=Z,1.0nm,0.3s,baz=105,slow=11,SNR=9.7						
GEYT				Sn	**Sn**	**15 58 54.3**	**-2.7**
	comp=Z,3.7nm,0.3s,baz=115,slow=21,SNR=2.3						
	comp=Z,2.2nm,0.3s						
GEYT	**Alibeck**	**7.88**	**269**		**Pn**	**15 57 26.8**	**-1.2**
GYA0B	**ALIBECK ARRAY**	**7.88**	**269**	Pn	**Pn**	**15 57 27.1**	**-0.9**
TARG	**Taragay, Kyrgy**	**8.10**	**63**		**Pn**	**15 57 33.3**	**+1.9**
KUU	**Kurty**	**8.22**	**46**	*e*P	**Pg**	**15 58 08.6**	**-2.4**
	comp=Z,7.9nm,1.1s						
KUU				*e*S	**Sg**	**15 59 59.5**	**+2.2**
	comp=Z,14nm,0.8s						
KUU	**Kurty**	**8.22**	**46**	Pg	**Pg**	**15 58 08.6**	**-2.4**
	comp=Z,7.9nm,1.1s						
KUU				Lg	Lg	15 59 59.5	
	comp=Z,14nm,0.8s						
CHKK	**Chushkaly**	**8.57**	**49**	*e*P	**Pg**	**15 58 16.4**	**-1.3**
	comp=Z,1.9nm,0.4s						
CHKK				*e*S	**Sg**	**16 00 12.5**	**+3.9**
	comp=Z,8.1nm,0.5s						
CHKK	**Chushkaly**	**8.57**	**49**	Pg	**Pg**	**15 58 16.4**	**-1.3**
	comp=Z,1.9nm,0.4s						
CHKK				Lg	Lg	16 00 12.5	
	comp=Z,8.1nm,0.5s						
PDGK	**Podgornoye**	**9.87**	**57**	⇑Pn	**Pn**	**15 57 57.2**	**+1.8**
	comp=Z,4.4nm,0.9s						
PDGK				Lg	Lg	16 00 48.6	
	comp=Z,11nm,0.9s						
OTUK	**Ortayu**	**10.21**	**16**	Pn	**Pn**	**15 58 02.1**	**+2.1**
	comp=Z,5.3nm,0.8s						
OTUK				⇑Sn	**Sn**	**15 59 52.7**	**-1.5**
	comp=Z,17nm,0.9s						
AB31	**Akbulak array**	**12.25**	**334**	⇑Pn	**Pn**	**15 58 26.7**	**-1.0**
	comp=Z,4.5nm,0.4s,baz=155,slow=12,SNR=207						
AB31				Sn	**Sn**	**16 00 39.8**	**-4.2**
	comp=Z,5.6nm,0.6s,baz=152,slow=25,SNR=8.7						
ABKAR	**Akbulak array**	**12.25**	**334**	Pn	**Pn**	**15 58 26.5**	**-1.2**
MAKZ	**Makanchi**	**13.15**	**46**	Pn	**Pn**	**15 58 40.9**	**+0.9**
MK31	**Makanchi Array**	**13.32**	**47**	Pn	**Pn**	**15 58 42.9**	**+0.6**
MKAR	**Makanchi Array**	**13.32**	**47**	Pn	**Pn**	**15 58 42.6**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=240,slow=14,SNR=14						
MKAR				Lg	Lg	16 02 35.4	
	comp=Z,0.1nm,0.3s,baz=247,slow=22,SNR=3.3						
	comp=Z,2.1nm,0.8s						
MKAR	**Makanchi Array**	**13.32**	**47**	Pn	**Pn**	**15 58 43.1**	**+0.8**
AKTO	**Aktyubinsk**	**13.92**	**332**	Pn	**Pn**	**15 58 48.6**	**-1.9**
	comp=Z,0.7nm,0.3s,baz=147,slow=12,SNR=10						
AKTO				Sn	Sn	16 01 15.7	-9.1
	comp=Z,0.9nm,0.3s,baz=59,slow=18,SNR=5.7						
AKTO				Lg	Lg	16 02 53.9	
	comp=Z,0.2nm,0.3s,baz=105,slow=20,SNR=1.5						
	comp=Z,1.7nm,0.3s						
AKTO	**Aktyubinsk**	**13.92**	**332**	⇓Pn	**Pn**	**15 58 50.2**	**-0.3**
	comp=Z,6.3nm,0.6s						
AKTO				⇓Sn	**Sn**	**16 01 20.6**	**-4.2**
	comp=Z,7.0nm,0.6s						
KURBB	**Kurchatov Arra**	**14.20**	**28**	Pn	**Pn**	**15 58 51.9**	**-2.4**
	baz=220,slow=10,SNR=2.9						
	comp=Z,0.7nm,0.7s						
KURK	**Kurchatov**	**14.31**	**28**		**Pn**	**15 58 51.9**	**-3.9**
BVAR	**Borovoye Array**	**14.61**	**5**	LR	LR	16 05 06.8	
	comp=Z,20nm,19.4s,baz=98,slow=39						
WMQ	**Urumqi**	**15.67**	**64**	*e*P	**Pn**	**15 59 16.3**	**+2.1**
ARU	**Arti**	**19.03**	**344**	P	**Pn**	**15 59 55.8**	**-0.1**
	baz=142,slow=12,SNR=6.7						
	comp=Z,3.2nm,0.4s						
ZAA0	**Zalesovo Array**	**19.22**	**31**	P	**P**	**15 59 57.0**	**-0.3**
ZALV	**Zalesovo Beam**	**19.22**	**31**	P	**P**	**15 59 57.6**	**+0.3**
	comp=Z,1.0nm,0.3s,baz=226,slow=11,SNR=18						
	comp=Z,4.8nm,0.5s						
ZALV	**Zalesovo Beam**	**19.22**	**31**	P	**P**	**15 59 56.9**	**-0.4**
KBZ	**Khabaz**	**19.66**	**293**	P	**P**	**16 00 01.7**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=60,slow=20,SNR=1.8						
	comp=Z,1.4nm,0.6s						
LZH	**Lanzhou**	**28.43**	**84**	*e*P	P	16 01 40.5	+12
LZH				pP	sP	16 01 43.5	+8.9
LZH				sP	pP	16 01 45.0	+12
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
AKASG	**Malin Array Be**	**29.90**	**307**	P	**P**	**16 01 39.9**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=107,slow=8.4,SNR=1.8						
	comp=Z,0.2nm,0.3s						
HHC	**Hu-ho-hao-te**	**33.28**	**72**	*e*P	**P**	**16 02 13.8**	**+2.9**
HHC				pmax	pmax		
	comp=Z,15nm,0.8s						
HHC				pmax	pmax		
	comp=Z,57nm,4.6s						
HHC				LR	LR		
	comp=N,170nm,13.3s						
HHC				LR	LR		
	comp=Z,150nm,14.6s						
FIA1	**FINESS Array S**	**34.54**	**325**	P	**P**	**16 02 22.5**	**+1.1**
FIA1				IAmb	IAmb	16 02 29.2	
	comp=Z,6.2nm,1.1s						
FINES	**FINESS Array B**	**34.54**	**325**	P	**P**	**16 02 22.0**	**+0.6**
	comp=Z,0.7nm,0.4s,baz=126,slow=10.

DAWY	**Dawson**	**4.22**	**199**	P	**Pn**	**16 05 38.0**	**+0.6**
	baz=16,SNR=19							
DAWY				S	**Sn**	**16 06 26.3**	**+0.5**
	baz=16							
C36M	**Paulatuk**	**4.60**	**68**	Pn	**Pn**	**16 05 43.7**	**+1.1**
C36M				Sn	**Sn**	**16 06 35.6**	**+0.6**
C36M	**Paulatuk**	**4.60**	**68**	P	**Pn**	**16 05 43.5**	**+0.9**
	baz=260,SNR=12							
C36M				S	**Sn**	**16 06 35.5**	**+0.6**
	baz=260							
J26L	**Joseph Creek**	**4.65**	**223**	P	**Pn**	**16 05 43.5**	**+0.2**
	baz=36,SNR=34							
J26L				S	**Sn**	**16 06 36.0**	**-0.4**
	baz=36							
D24K	**Happy Valley**	**4.75**	**289**	P	**Pn**	**16 05 44.5**	**-0.1**
	baz=97							
TOLK	**Toolik Lake Re**	**4.99**	**283**	P	**Pn**	**16 05 47.6**	**-0.3**
	baz=90							
TOLK				S	**Sn**	**16 06 44.5**	**-0.1**
	baz=90							
J25K	**Salcha River,**	**5.06**	**231**	P	**Pn**	**16 05 49.0**	**+0.1**
	baz=42,SNR=15							
J25K				S	**Sn**	**16 06 47.0**	**+0.5**
	baz=42							
H24K	**Noodor Dome**	**5.11**	**250**	P	**Pn**	**16 05 49.1**	**-0.4**
	baz=58							
H24K				S	**Sn**	**16 06 47.3**	**-0.2**
	baz=58							
SCRK	**Sand Creek**	**5.19**	**221**	P	**Pn**	**16 05 51.3**	**+0.5**
	baz=34,SNR=22							
SCRK				S	**Sn**	**16 06 48.7**	**-0.9**
	baz=34							
POKR	**Poker Plat Res**	**5.37**	**242**	P	**Pn**	**16 05 53.0**	**-0.1**
	baz=51							
POKR				S	**Sn**	**16 06 53.9**	**+0.1**
	baz=51							
D23K	**Nanushuk River**	**5.40**	**286**	P	**Pn**	**16 05 52.9**	**-0.6**
	baz=92,SNR=8.0							
COLD	**Coldfoot**	**5.41**	**268**	Pn	**Pn**	**16 05 54.5**	**+0.8**
COLD	**Coldfoot**	**5.41**	**268**	P	**Pn**	**16 05 54.1**	**+0.4**
	baz=74							
COLD				S	**Sn**	**16 06 53.6**	**-1.3**
	baz=74							
ILAR	**Eielson Array**	**5.41**	**237**	Pn	**Pn**	**16 05 53.5**	**-0.2**
	1.7nm,0.3s,baz=46,slow=13,SNR=57							
ILAR				Sn	**Sn**	**16 06 53.7**	**-1.3**
	0.8nm,0.3s,baz=56,slow=14,SNR=5.4 5.3nm,0.4s							
A36M	**Sachs Harbour**	**5.43**	**39**	Sn	**Sn**	**16 06 53.5**	**-1.8**
A36M	**Sachs Harbour**	**5.43**	**39**	P	**Pn**	**16 05 53.6**	**-0.3**
	baz=229							
A36M				S	**Sn**	**16 06 54.8**	**-0.6**
	baz=229							
DOT	**Dot Lake**	**5.48**	**220**	Pn	**Pn**	**16 05 54.9**	**+0.2**
C23K	**Itkillik River**	**5.49**	**296**	P	**Pn**	**16 05 54.9**	**+0.2**
	baz=102							
C23K				S	**Sn**	**16 06 55.4**	**-1.4**
	baz=102							
M30M	**Minto, Yukon**	**5.52**	**183**	Pn	**Pn**	**16 05 55.7**	**+0.5**
M30M				Sn	**Sn**	**16 06 56.4**	**-1.2**
M30M	**Minto, Yukon**	**5.52**	**183**	P	**Pn**	**16 05 56.1**	**+0.9**
	baz=2.0,SNR=70							
M30M				S	**Sn**	**16 06 57.3**	**-0.3**
	baz=2.0							
L27K	**Beaver Creek,**	**5.54**	**208**	P	**Pn**	**16 05 55.9**	**+0.4**
	baz=22,SNR=14							
L27K				S	**Sn**	**16 06 57.6**	**-0.5**
	baz=22							
RIDG	**Independent Ri**	**5.60**	**223**	P	**Pn**	**16 05 56.7**	**+0.4**
	baz=35,SNR=13							
RIDG				S	**Sn**	**16 06 58.8**	**-0.9**
	baz=35							
HDA	**Harding Lake**	**5.69**	**235**	S	**Sn**	**16 07 00.6**	**-1.1**
	baz=44							
H23K	**Yukon River**	**5.70**	**253**	P	**Pn**	**16 05 57.1**	**-0.6**
	baz=60,SNR=12							
H23K				S	**Sn**	**16 07 01.1**	**-1.0**
	baz=60							
MMPY	**Sheldon Lake,**	**5.84**	**157**	Pn	**Pn**	**16 06 01.0**	**+1.3**
MMPY				Sn	**Sn**	**16 07 03.3**	**-2.4**
L26K	**Log Cabin Wild**	**5.86**	**214**	P	**Pn**	**16 06 00.0**	**+0.1**
	baz=27							
M31M	**Drury Creek, Y**	**5.94**	**172**	Pn	**Pn**	**16 06 01.2**	**+0.3**
M31M	**Drury Creek, Y**	**5.94**	**172**	P	**Pn**	**16 06 01.2**	**+0.3**
	baz=353							
M31M				S	**Sn**	**16 07 07.4**	**-0.5**
	baz=353							
BVCY	**Beaver Creek**	**6.00**	**201**	Pn	**Pn**	**16 06 02.4**	**+0.6**
BVCY				Sn	**Sn**	**16 07 06.3**	**-3.2**
BVCY	**Beaver Creek**	**6.00**	**201**	S	**Sn**	**16 07 09.5**	**-0.1**
	baz=16							
I23K	**Minto, Yukon-K**	**6.00**	**247**	P	**Pn**	**16 06 01.3**	**-0.4**
	baz=54,SNR=6.6							
I23K				S	**Sn**	**16 07 09.6**	**+0.2**
	baz=54							
M27K	**Edge Creek, AK**	**6.21**	**205**	P	**Pn**	**16 06 04.5**	**-0.3**
	baz=20,SNR=11							
M27K				S	**Sn**	**16 07 13.7**	**-1.0**
	baz=20							
NEA2	**Nenana**	**6.24**	**242**	S	**Sn**	**16 07 13.7**	**-1.7**
	baz=50							
H22K	**Ishtalitna Cre**	**6.34**	**257**	P	**Pn**	**16 06 06.1**	**-0.3**
	baz=63,SNR=17							
H22K				S	**Sn**	**16 07 16.3**	**-1.4**
	baz=63							
M26K	**Nabesna, AK**	**6.36**	**210**	P	**Pn**	**16 06 07.3**	**+0.5**
	baz=23,SNR=18							
M26K				S	**Sn**	**16 07 17.6**	**-0.7**
	baz=23							
PAX	**Paxson**	**6.40**	**221**	P	**Pn**	**16 06 07.4**	**+0.1**
	baz=32,SNR=13							
MLY	**Manley**	**6.55**	**249**	P	**Pn**	**16 06 08.4**	**-0.9**
	baz=55							
MLY				S	**Sn**	**16 07 21.9**	**-1.1**
	baz=55							
YUK3	**Moose Creek**	**6.57**	**198**	Pn	**Pn**	**16 06 10.0**	**+0.2**
YUK3				Sn	**Sn**	**16 07 19.8**	**-3.9**
YUK3	**Moose Creek**	**6.57**	**198**	P	**Pn**	**16 06 08.9**	**-0.9**
	baz=14							
YUK3				S	**Sn**	**16 07 22.7**	**-1.0**
	baz=14							
YUK2	**White River**	**6.60**	**200**	Pn	**Pn**	**16 06 11.1**	**+0.9**
YUK2				Sn	**Sn**	**16 07 20.7**	**-3.7**
N30M	**Aishikik Lake**	**6.64**	**184**	P	**Pn**	**16 06 12.0**	**+1.3**
	baz=2.6,SNR=29							
N30M				S	**Sn**	**16 07 25.2**	**-0.2**
	baz=2.6							
HARP	**HAARP**	**6.81**	**218**	P	**Pn**	**16 06 14.3**	**+1.3**
	baz=29,SNR=5.8							
YUK4	**Talbot Arm**	**6.83**	**190**	Pn	**Pn**	**16 06 13.1**	**-0.2**
YUK4	**Talbot Arm**	**6.83**	**190**	P	**Pn**	**16 06 12.1**	**-1.2**
	baz=7.2							
I21K	**Tanana**	**6.91**	**253**	P	**Pn**	**16 06 14.5**	**+0.3**
	baz=58,SNR=5.6							
H21K	**Melozitna Rive**	**6.97**	**258**	P	**Pn**	**16 06 14.8**	**-0.3**
	baz=62,SNR=19							
YUK5	**Granite Creek**	**7.00**	**187**	Pn	**Pn**	**16 06 16.7**	**+1.1**
YUK5				Sn	**Sn**	**16 07 30.9**	**-3.4**
BPAW	**Bear Paw Mtn.**	**7.20**	**243**	P	**Pn**	**16 06 17.8**	**-0.4**
	baz=50							
YUK6	**Outpost Mounta**	**7.21**	**188**	Pn	**Pn**	**16 06 19.6**	**+0.9**
YUK6	**Outpost Mounta**	**7.21**	**188**	P	**Pn**	**16 06 19.5**	**+0.9**
	baz=6.2							
HYT	**Haines Junctio**	**7.29**	**185**	Pn	**Pn**	**16 06 21.0**	**+1.4**
HYT	**Haines Junctio**	**7.29**	**185**	P	**Pn**	**16 06 20.4**	**+0.8**
	baz=3.6,SNR=8.6							
MCARA	**McCarthy VSAT**	**7.31**	**207**	P	**Pn**	**16 06 20.4**	**+0.6**
	baz=20							
WAT6	**Susitna Watana**	**7.31**	**227**	P	**Pn**	**16 06 20.1**	**+0.1**
	baz=36							
O30N	**Mendenhall**	**7.33**	**180**	P	**Pn**	**16 06 20.7**	**+0.7**
	baz=359,SNR=18							
TRF	**Thorofare Moun**	**7.41**	**238**	P	**Pn**	**16 06 20.1**	**-1.2**
	baz=45							
WHY	**Whitehorse**	**7.46**	**175**	Pn	**Pn**	**16 06 22.8**	**+0.9**
WHY				Sn	**Sn**	**16 07 42.3**	**-3.1**
WHY	**Whitehorse**	**7.46**	**175**	P	**Pn**	**16 06 22.6**	**+0.7**
	baz=356							
KLU	**Klutina**	**7.79**	**217**	P	**Pn**	**16 06 28.5**	**+2.2**
	baz=28							
A21K	**Barrow**	**7.79**	**304**	P	**Pn**	**16 06 26.5**	**+0.2**
	baz=105							
SCM	**Sheep Creek Mo**	**7.83**	**222**	P	**Pn**	**16 06 27.4**	**+0.5**
	baz=32							
KUKN	**Kugluktuk,NWT**	**7.94**	**82**	Pn	**Pn**	**16 06 29.2**	**+0.9**
KUKN				Sn	**Sn**	**16 07 53.6**	**-3.4**
M23K	**Glacier View**	**7.96**	**223**	P	**Pn**	**16 06 28.0**	**-0.7**
	baz=32							
P33M	**Teslin, Yukon**	**8.02**	**168**	Pn	**Pn**	**16 06 29.8**	**+0.3**
P33M	**Teslin, Yukon**	**8.02**	**168**	P	**Pn**	**16 06 31.3**	**+1.8**
	baz=351							
SML	**Sawmill**	**8.11**	**225**	P	**Pn**	**16 06 31.9**	**+1.2**
	baz=34							
J20K	**Nowinta River**	**8.24**	**250**	P	**Pn**	**16 06 32.4**	**-0.2**
	baz=54,SNR=23							
P32M	**Atlin**	**8.58**	**172**	P	**Pn**	**16 06 37.0**	**-0.2**
	baz=354							
PLBC	**Pleasant Camp**	**8.64**	**181**	Pn	**Pn**	**16 06 37.8**	**-0.2**
PLBC	**Pleasant Camp**	**8.64**	**181**	P	**Pn**	**16 06 39.6**	**+1.6**
	baz=0.2							
SKAG	**Skagway**	**8.65**	**177**	P	**Pn**	**16 06 38.2**	**+0.1**
	baz=358							
K20K	**Telida**	**8.73**	**246**	P	**Pn**	**16 06 40.3**	**+1.1**
	baz=49							
BESE	**Bessie Mountai**	**9.54**	**176**	Pn	**Pn**	**16 06 52.0**	**+1.7**
TTA	**Tatalina**	**9.68**	**247**	P	**Pn**	**16 06 52.0**	**-0.2**
	baz=49							
DLBC	**Dease Lake**	**10.05**	**161**	Pn	**Pn**	**16 06 58.0**	**+0.7**
	0.6nm,0.3s,baz=7.8,slow=8.6,SNR=7.8							
DLBC				Sn	**Sn**	**16 08 48.5**	**-0.4**
	0.1nm,0.3s,baz=351,slow=27,SNR=1.5							
DLBC				Lg	Lg	16 09 51.5		
	0.1nm,0.3s,baz=44,slow=12,SNR=2.4 2.2nm,0.5s							
DLBC	**Dease Lake**	**10.05**	**161**	Pn	**Pn**	**16 06 58.0**	**+0.7**
DLBC	**Dease Lake**	**10.05**	**161**	P	**Pn**	**16 06 57.3**	**0.0**
	baz=347							
NBC2	**NorthernBC 2**	**10.24**	**138**	Pn	**Pn**	**16 07 00.0**	**+0.1**
YKA	**Yellowknife Ar**	**10.58**	**112**	Pn	**Pn**	**16 07 03.3**	**-1.2**
	1.0nm,0.3s,baz=311,slow=12,SNR=17							
YKA				Sn	**Sn**	**16 08 57.3**	**-4.6**
	1.2nm,0.3s,baz=313,slow=21,SNR=7.3							
YKA				Lg	Lg	16 10 03.3		
	baz=308,slow=28							
YKA				LR	LR	16 11 15.1		
	comp=Z,76nm,20.1s,baz=42,slow=37 1.7nm,0.4s							
N19K	**Bonanza Creek**	**10.69**	**236**	P	**Pn**	**16 07 05.5**	**-0.7**
	baz=39							
FNBB	**Fort Nelson**	**10.90**	**141**	Pn	**Pn**	**16 07 09.3**	**+0.4**
FNBB				Sn	**Sn**	**16 09 04.3**	**-5.4**
RES	**Resolute Bay**	**14.44**	**45**	Pn	**Pn**	**16 07 56.3**	**-0.7**
	0.5nm,0.3s,baz=262,slow=15,SNR=2.5							
RES				Sn	Sn	16 10 26.6	-9.2	
	0.3nm,0.3s,baz=337,slow=21,SNR=1.7 2.0nm,0.5s							
NVAR	**Mina Array Bea**	**31.30**	**152**	P	**P**	**16 10 56.1**	**+3.6**
	0.6nm,1.0s,baz=332,slow=5.3,SNR=1.5 0.6nm,1.0s							
TXAR	**Lajitas Array**	**43.26**	**137**	P	**P**	**16 12 36.6**	**+2.9**
	0.2nm,0.6s,baz=10,slow=7.9,SNR=4.7 0.2nm,0.6s							
FINES	**FINESS Array B**	**50.15**	**11**	P	**P**	**16 13 27.4**	**+0.2**
	0.2nm,0.3s,baz=356,slow=7.6,SNR=3.8 0.2nm,0.3s							
AKASG	**Malin Array Be**	**61.05**	**11**	P	**P**	**16 14 47.3**	**+1.8**
	0.6nm,0.5s,baz=354,slow=6.8,SNR=2.4 0.6nm,0.5s							

*IDC **28** 16:18:32.8±2.3, 47°.16N×27°.99W, h0km, mb3.5/3, mbtmp3.6/4, ML4.4/1, Error ellipse: s-maj=69.8km s-min=36.0km az=65.0*
ISC 28 16:18:34.3±2.2, 47°.2N±0°.3×27°.9W±0°.4, h10km, n11, σ0s 86/6, mb3.7/3, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
ESDC	**Sonseca Array**	**18.90**	**105**	P	**Pn**	**Pn**	**16 22 55.2**	**-0.4**
	0.2nm,0.3s,baz=294,slow=12,SNR=12 2.4nm,0.8s							
TORD	**Torodi Ar. Bea**	**42.01**	**134**	P	**P**	**P**	**16 26 26.1**	**+0.3**
	1.3nm,0.8s,baz=322,slow=8.1,SNR=6.8 1.3nm,0.8s							
H10N2	**ASCENSION HYDR**	**56.03**	**164**	T	T	T	17 28 14.3	
	baz=350,slow=75,SNR=30							
H10N3	**ASCENSION HYDR**	**56.04**	**164**	T	T	T	17 28 13.0	
	baz=350,slow=75,SNR=26							
H10N1	**ASCENSION HYDR**	**56.05**	**164**	T	T	T	17 28 16.6	
	baz=350,slow=75,SNR=39							
H10S3	**ASCENSION HYDR**	**57.10**	**164**	T	T	T	17 29 31.1	
	baz=349,slow=74,SNR=7.4							
H10S2	**ASCENSION HYDR**	**57.11**	**164**	T	T	T	17 29 35.6	
	baz=231,slow=74,SNR=4.5							
KURBB	**Kurchatov Arra**	**63.88**	**43**	P	**P**	**P**	**16 29 06.9**	**+0.1**
	0.5nm,0.8s,baz=315,slow=8.2,SNR=4.3 0.5nm,0.8s							
MKAR	**Makanchi Array**	**68.34**	**44**	P	**P**	**P**	**16 29 36.2**	**+0.6**
	0.2nm,0.7s,baz=314,slow=5.3,SNR=2.2 0.2nm,0.7s							
WRA	**Warramunga Arr**	**149.24**	**34**	PKPbc	**PKPbc**	**PKPbc**	**16 38 22.0**	**-1.2**
	0.5nm,0.9s,baz=336,slow=1.9,SNR=2.0							
ASAR	**Alice Springs**	**152.41**	**38**	PKPbc	**PKiKP**	**PKiKP**	**16 38 31.4**	**+0.4**
	0.5nm,0.8s,baz=332,slow=2.4,SNR=5.7							

*IDC **28** 16:29:01.4±0.9, 39°.32N×73°.49E, h0km, mb3.6/13, mbtmp3.6/19, ML2.9/6, MS3.7/5, Error ellipse: s-maj=15.5km s-min=14.4km az=139.0*
*KRNET **28** 16:29:03.5±0.1, 39°.46N×73°.49E, mb4.1*
*SOME **28** 16:29:03.1, 39°.50N×73°.53E, h15km*
ISC 28 16:29:03.2±0.6, 39°.54N±0°.04×73°.51E±0°.03, h10km, n66, σ2s 29/98, mb3.6/13, MS3.7/5, 22C-8D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
OHH	**Osh**	**1.14**	**331**	⇓*e*P		**Pn**	**16 29 25.5**	**+0.2**
	baz=33							
OHH				⇓*e*S		**Sn**	**16 29 41.8**	**+0.8**
	baz=33							
BTK	**Batken**	**2.14**	**285**	⇑*e*P		**Pb**	**16 29 41.2**	**-1.0**
	baz=87							
BTK				⇑*e*S		**Sb**	**16 30 08.6**	**-0.2**
	baz=87							
ARLS	**Aral**	**2.40**	**15**	⇑*e*P		**Pb**	**16 29 45.8**	**-0.9**
	baz=15							
ARLS				⇑*e*S		**Sb**	**16 30 16.6**	**+0.1**
	baz=15							
GAR	**Garm**	**2.54**	**259**	⇑*e*P		**Pb**	**16 29 46.3**	**-2.7**
	baz=60							
GAR				⇑*e*S		**Sb**	**16 30 17.4**	**-2.9**
	baz=60							
AML	**Almayashu**	**2.60**	**3**	P		**Pb**	**16 29 50.2**	**+0.1**
	SNR=39							
TRKS	**Terek-Say**	**2.69**	**319**	⇑*e*P		**Pb**	**16 29 48.5**	**-3.1**
	baz=19							
TRKS				⇑*e*S		**Sn**	**16 30 21.4**	**+1.9**
	baz=19							
UCH	**Uchtor**	**2.79**	**15**	P		**Pb**	**16 29 53.3**	**-0.3**
	SNR=47							
UCH	**Uchtor**	**2.79**	**15**	⇑*e*P		**Pb**	**16 29 51.4**	**-2.1**
	baz=15							
UCH				⇑*e*S		**Sb**	**16 30 26.7**	**-1.3**
	baz=15							
EKS2	**Erkin-Say**	**3.13**	**4**	P		**Pb**	**16 29 57.8**	**-1.2**
	SNR=13							
EKS2	**Erkin-Say**	**3.13**	**4**	⇑*e*P		**Pb**	**16 29 56.0**	**-3.0**
	baz=4.0							
EKS2				⇑*e*S		**Sb**	**16 30 34.4**	**-2.9**
	baz=4.0							
AAK	**Ala-Archa**	**3.19**	**13**	P		**Pb**	**16 29 59.0**	**-1.0**
	SNR=19							
AAK	**Ala-Archa**	**3.19**	**13**	Pn		**Pb**	**16 29 58.9**	**-1.1**
	6.3nm,0.3s,baz=190,slow=10.0,SNR=32							
AAK				Sn		**Sb**	**16 30 41.4**	**+2.4**
	4.8nm,0.3s,baz=168,slow=19,SNR=8.9 21nm,0.4s							
AAK	**Ala-Archa**	**3.19**	**13**	⇑*e*P		**Pb**	**16 29 56.7**	**-3.3**
	baz=13							
AAK				⇑*e*S		**Sb**	**16 30 35.5**	**-3.5**
	baz=13							
MRKS	**Merke**	**3.21**	**356**	*e*P		**Pg**	**16 30 04.7**	**-0.1**
	17nm,0.4s							
MRKS				*e*S		**Sg**	**16 30 48.8**	**+2.4**
	118nm,0.6s							
KBK	**Karagaybulak**	**3.30**	**19**	P		**Pb**	**16 30 00.8**	**-1.2**
	SNR=27							
KBK	**Karagaybulak**	**3.30**	**19**	⇓*e*P		**Pb**	**16 29 58.5**	**-3.5**
	baz=19							
KBK				⇓*e*S		**Sb**	**16 30 38.4**	**-3.9**
	baz=19							
ULHL	**Ulahol**	**3.41**	**36**	P		**Pb**	**16 30 02.0**	**-1.8**
	SNR=6.4							
ULHL	**Ulahol**	**3.41**	**36**	⇑*e*P		**Pb**	**16 29 59.7**	**-4.1**
	baz=36							
ULHL				⇑*e*S		**Sb**	**16 30 40.8**	**-4.6**
	baz=36							
CHGR	**Chuyangaron**	**3.50**	**257**	⇑*e*P		**Pn**	**16 29 59.7**	**+1.9**
	baz=58							
CHGR				⇑*e*S		**Sn**	**16 30 40.5**	**+1.2**
	baz=58							
CHMS	**Chumysh**	**3.58**	**15**	P		**Pb**	**16 30 04.1**	**-2.7**
	SNR=12							
CHMS	**Chumysh**	**3.58**	**15**	⇓*i*P		**Pb**	**16 30 02.0**	**-4.7**
	baz=15							
CHMS				⇓*i*S		**Sn**	**16 30 45.0**	**+3.7**
	baz=15							
TAS	**Tashkent**	**3.68**	**300**	⇑*e*P		**Pn**	**16 30 02.9**	**+2.7**
	baz=2.0							
TAS				⇑*e*S		**Sn**	**16 30 46.2**	**+2.5**
	baz=2.0							
TKM2	**Tokmak 2**	**3.73**	**24**	⇓*e*P		**Pn**	**16 30 04.1**	**+3.0**
	baz=24							
TKM2				⇓*e*S		**Sn**	**16 30 48.5**	**+3.4**
	baz=24							
USP	**Ospenovka**	**3.80**	**11**	P		**Pb**	**16 30 06.9**	**-3.5**
	SNR=10							
KST	**Kastek**	**3.96**	**27**	*e*P		**Pg**	**16 30 17.4**	**-1.7**
	16nm,0.4s							
KST				*e*S		**Sg**	**16 31 10.8**	**+0.4**
	65nm,0.9s							
SGDS	**Sogindy**	**4.00**	**12**	*e*P		**Pg**	**16 30 17.4**	**-2.5**
	15nm,0.3s							
SGDS				*e*S		**Sg**	**16 31 11.2**	**-0.6**
	28nm,1.1s							
DGS	**Degeres**	**4.07**	**24**	*e*P		**Pg**	**16 30 19.9**	**-1.4**
	18nm,0.6s							
DGS				*e*S		**Sg**	**16 31 15.0**	**+0.9**
	40nm,0.8s							
MTBS	**Maitube**	**4.21**	**30**	*e*P		**Pg**	**16 30 21.8**	**-2.0**
	14nm,0.3s							
MTBS				*e*S		**Sg**	**16 31 18.8**	**+0.4**
	35nm,0.5s							
KKAR	**Karatay Array**	**4.22**	**329**	⇑*e*P		**Pn**	**16 30 10.6**	**+3.0**
	baz=29							
KKAR				⇑*e*S		**Sn**	**16 30 59.9**	**+2.9**
	baz=29							
TNSS	**Tian-Shan**	**4.35**	**35**	*e*P		**Pg**	**16 30 24.9**	**-1.6**
	19nm,0.4s							
TNSS				*e*S		**Sg**	**16 31 24.1**	**+1.1**
	21nm,0.8s							
BRLS	**Borolday**	**4.46**	**323**	*e*P		**Pg**	**16 30 24.5**	**-4.1**
	5.1nm,0.4s							
BRLS				*e*S		**Sg**	**16 31 23.3**	**-3.0**
	29nm,0.9s							
KRBS	**Karabastau**	**4.46**	**21**	*e*P		**Pg**	**16 30 26.5**	**-2.1**
	13nm,0.5s							
KRBS				*e*S		**Sg**	**16 31 27.0**	**+0.5**
	33nm,0.6s							
KTBS	**Karatobe**	**4.80**	**29**	*e*P		**Pg**	**16 30 32.0**	**-3.2**
	8.2nm,0.4s							
KTBS				*e*S		**Sg**	**16 31 36.1**	**-1.2**
	51nm,0.4s							
KUU	**Kurty**	**4.84**	**25**	*e*P		**Pg**	**16 30 34.2**	**-1.7**
	10nm,0.4s							
KUU				*e*S		**Sg**	**16 31 39.8**	**+1.2**
	22nm,0.5s							
CHKK	**Chushkaly**	**5.04**	**30**	*e*P		**Pg**	**16 30 37.3**	**-2.4**
	4.4nm,0.2s							
CHKK				*e*S		**Sg**	**16 31 44.8**	**-0.1**
	27nm,0.7s							
SATY	**Saty**	**5.10**	**45**	*e*P		**Pg**	**16 30 38.3**	**-2.6**
	10nm,0.5s							
SATY				*e*S		**Sg**	**16 31 46.6**	**-0.2**
	26nm,0.5s							
ZHN	**Zhinishke**	**5.18**	**44**	*e*P		**Pg**	**16 30 40.5**	**-2.0**
	11nm,0.2s							
ZHN				*e*S		**Sg**	**16 31 49.9**	**+0.2**
	17nm,0.9s							
KURS	**Kuram**	**5.27**	**40**	*e*P		**Pg**	**16 30 42.5**	**-1.7**
	7.3nm,0.8s							
KURS				*e*S		**Sg**	**16 31 54.2**	**+1.7**
	13nm,1.0s							
BTLS	**Baital**	**5.52**	**4**	*e*P		**Pg**	**16 30 45.9**	**-2.9**
	5.4nm,0.5s							
BTLS				*e*S		**Sg**	**16 32 00.1**	**-0.2**
	8.4nm,1.0s							
KPKS	**Kokpek**	**5.52**	**43**	*e*P		**Pg**	**16 30 44.2**	**-4.7**
	6.5nm,0.5s							
KPKS				*e*S		**Sg**	**16 31 56.9**	**-3.6**
	20nm,0.8s							
ARXS	**Arharly**	**5.67**	**33**	*e*P		**Pg**	**16 30 48.6**	**-3.3**
	17nm,0.9s							
ARXS				*e*S		**Sg**	**16 32 04.1**	**-1.3**
	23nm,0.8s							
BLB	**Baldybastay**	**5.88**	**38**	*e*P		**Pg**	**16 30 52.1**	**-3.6**
	19nm,0.5s							
BLB				*e*S		**Sg**	**16 32 10.3**	**-1.5**
	21nm,0.9s							
DJR	**Jarkent**	**6.70**	**42**	*e*P		**Pg**	**16 31 08.4**	**-3.0**
	2.3nm,0.3s							
DJR				*e*S		**Sg**	**16 32 38.3**	**+0.1**
	9.2nm,1.3s							
MKAR	**Makanchi Array**	**9.68**	**39**	Pn		**Pn**	**16 31 26.1**	**+3.6**
	baz=226,slow=13,SNR=2.1 0.3nm,0.8s							
KURBB	**Kurchatov Arra**	**11.64**	**16**	Pn		**Pn**	**16 31 51.5**	**+2.2**
	baz=202,slow=12,SNR=3.8							
KURBB				Lg		Lg	16 35 09.6	
	baz=202,slow=30,SNR=6.4 0.4nm,0.7s							
AKTO	**Aktyubinsk**	**15.42**	**320**	Pn		**Pn**	**16 32 41.2**	**+0.4**
	0.1nm,0.3s,baz=140,slow=17,SNR=2.0							
AKTO				Sn		**Sn**	**16 35 27.1**	**-4.6**
	0.1nm,0.3s,baz=200,slow=12,SNR=1.9 0.6nm,0.5s							
ZALV	**Zalesovo Beam**	**16.34**	**24**	Pn		**P**	**16 32 54.7**	**-0.8**
	0.2nm,0.3s,baz=203,slow=12,SNR=5.9 1.2nm,0.6s							
ARU	**Arti**	**19.57**	**335**	P		**Pn**	**16 33 33.1**	**+0.7**
	baz=229,slow=11,SNR=3.4 1.4nm,0.3s							
SONM	**Songino Array**	**25.03**	**60**	P		**P**	**16 34 29.5**	**+2.0**
	0.4nm,0.5s,baz=246,slow=11,SNR=3.9 0.4nm,0.5s							
BRTR	**Keskin Array B**	**30.54**	**283**	P		**P**	**16 35 17.5**	**+0.6**
	0.5nm,0.4s,baz=101,slow=10,SNR=2.1 0.5nm,0.4s							
FINES	**

IDC 28 16:46:24.6±1.9, 6°65'S×128°53'E, h0km, mb3.3/1, mbtmp3.5/4, ML3.6/3, Error ellipse: s-maj=58.9km s-min=29.3km az=81.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.36**	**26**	Pn	Pn	16 48 01.8	+2.1
	0.6nm,0.3s,baz=152,slow=3.7,SNR=9.7						
SIJI				Sn	Sn	16 49 02.2	-11
	3.3nm,0.3s,baz=224,slow=22,SNR=14 2.3nm,0.4s						
WRA	**Warramunga Arr**	**14.37**	**157**	Pn	Pn	16 49 49.3	-0.2
	0.4nm,0.3s,baz=339,slow=12,SNR=33						
WRA				Sn	Sn	16 52 17.1	-13
	0.2nm,0.3s,baz=337,slow=22,SNR=6.0 0.4nm,0.3s						
ASAR	**Alice Springs**	**17.69**	**164**	P	Pn	16 50 33.0	+0.4
	0.2nm,0.3s,baz=346,slow=11,SNR=32 1.2nm,0.6s						
MKAR	**Makanchi Array**	**67.14**	**327**	P	P	16 57 19.6	-0.7
	0.2nm,0.4s,baz=129,slow=5.9,SNR=2.2 0.2nm,0.4s						

*KOLA **28** 17:00:43.9, 67°.08N×20°.08E, h0km, ML2.5*
*IDC **28** 17:00:44.5±1.2, 67°.14N×20°.64E, h0km, mbtmp2.4/3, ML1.7/3, Error ellipse: s-maj=18.4km s-min=4.0km az=157.0*
*UPP **28** 17:00:44.1±0.1, 67°.06N×20°.95E, h0km, ML1.9, Explosion*
*BER **28** 17:00:45.0±1.3, 66°.86N×21°.21E, h0km, ML1.8, Suspected explosion*

ISC 28 17:00:44.6±0.9, 67°.04N±0°.03×20°.90E±0°.03, h0km, n27, σ1§38/32, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DUNU	**Dundret**	**0.15**	**302**	P	**Pg**	**17 00 47.5**	**0.0**
DUNU				S	**Sg**	**17 00 50.0**	**+0.6**
MASU	**Masugnsbyn**	**0.60**	**45**	P	**Pg**	**17 00 55.1**	**-0.9**
PAJU	**Pajala**	**0.87**	**90**	P	**Pg**	**17 00 59.9**	**-1.3**
HARU	**Harads**	**0.88**	**178**	P	**Pg**	**17 01 01.0**	**-0.5**
RATU	**Laukkuluspa**	**0.93**	**328**	P	**Pg**	**17 01 01.2**	**-1.3**
SALU	**Saltoluokta**	**0.99**	**291**	P	**Pg**	**17 01 02.9**	**-0.7**
LANU	**Lannavaara**	**1.09**	**22**	P	**Pg**	**17 01 03.7**	**-1.8**
NIKU	**Nikkaluokta**	**1.10**	**320**	P	**Pg**	**17 01 04.3**	**-1.3**
KOVU	**Salmi**	**1.22**	**347**	P	**Pg**	**17 01 06.3**	**-1.6**
KALU	**Kalix**	**1.55**	**139**	P	**Pn**	**17 01 12.4**	**-0.9**
SJUU	**Sjulsmark**	**1.57**	**169**	P	**Pn**	**17 01 13.0**	**-0.7**
HEF	**Hetta**	**1.73**	**36**	*e*P	**Pn**	**17 01 14.9**	**-1.1**
KIF	**Kilpisjarvi**	**1.97**	**359**	*e*P	**Pn**	**17 01 19.9**	**+0.7**
KIF				*e*S	**Sg**	**17 01 47.6**	**-0.3**
KTK1	**Kautokeino**	**2.17**	**23**	*e*P	**Pn**	**17 01 22.6**	**+0.8**
KTK1				IAML		17 01 59.9	
	comp=Z,10nm,0.2s						
FAUS	**Fauske**	**2.21**	**281**	*e*P	**Pb**	**17 01 24.0**	**-1.4**
FAUS				IAML		17 02 02.0	
	comp=Z,19nm,0.2s						
I37NO	**I37NO**	**2.21**	**338**	*i*		17 14 20.0	
	baz=158,slow=316,SNR=7.9						
STEI	**Steigen**	**2.35**	**295**	*e*P	**Pn**	**17 01 24.6**	**+0.2**
LOF	**Lofoten**	**3.02**	**295**	*e*P	**Pn**	**17 01 34.9**	**+1.2**
LOF				IAML		17 02 34.0	
	comp=Z,5.1nm,0.2s						
ARA0	**ARCESS Array S**	**3.03**	**32**	*e*P	**Pn**	**17 01 33.6**	**-0.2**
ARA0				IAML		17 02 22.8	
	comp=Z,6.5nm,0.2s						
ARCES	**ARCESS Array B**	**3.03**	**32**	Pn	**Pn**	**17 01 33.3**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=214,slow=13,SNR=36						
ARCES				Lg	Lg	17 02 13.6	
	comp=Z,0.8nm,0.3s,baz=214,slow=27,SNR=9.6 comp=Z,0.6nm,0.3s						
ARCES	**ARCESS Array B**	**3.03**	**32**	P	**Pn**	**17 01 33.7**	**-0.1**
ARCES				S	**Sn**	**17 02 13.4**	**+2.7**
KEV	**Kevo**	**3.54**	**37**	*e*P	**Pn**	**17 01 40.7**	**0.0**
APA0	**Apatity Array**	**4.72**	**78**	P	**Pn**	**17 01 59.0**	**+2.1**
APA0				S	**Sn**	**17 02 56.3**	**+4.1**
PRVG	**Vayda Guba**	**4.97**	**52**	P	**Pn**	**17 02 02.5**	**+2.1**
PRVG				S	**Sn**	**17 02 58.9**	**+0.4**
TERR	**Teriberka**	**5.73**	**61**	S	**Sn**	**17 03 18.2**	**+1.0**
FINES	**FINESS Array B**	**6.06**	**156**	Pn	**Pn**	**17 02 16.1**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=342,slow=13,SNR=1.6						
FINES				Sn	**Sn**	**17 03 25.2**	**0.0**
	comp=Z,0.1nm,0.3s,baz=349,slow=27,SNR=1.9						
FINES				Lg	Lg	17 03 54.3	
	comp=Z,0.1nm,0.3s,baz=342,slow=24,SNR=1.5 comp=Z,0.3nm,0.3s						
NOA	**NORSAR Array B**	**7.37**	**220**	Pn	**Pn**	**17 02 33.9**	**+0.6**
	baz=36,slow=19,SNR=1.4 comp=Z,0.1nm,0.4s						

IDC 28 17:12:15.9±1.8, 29°.20S×61°.24E, h0km, mb3.6/4, mbtmp3.6/4, Error ellipse: s-maj=84.0km s-min=33.3km az=28.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**23.91**	**28**	T	T	17 42 18.0	
	baz=193,slow=76						
H08S2	**Diego Garcia H**	**23.92**	**29**	T	T	17 42 15.0	
	baz=193,slow=76						
H08S3	**Diego Garcia H**	**23.93**	**28**	T	T	17 42 17.8	
	baz=193,slow=76						
H01W2	**Cape Leeuwin H**	**44.77**	**111**	T	T	18 08 24.0	
	baz=261,slow=75,SNR=20						
H01W3	**Cape Leeuwin H**	**44.77**	**111**	T	T	18 08 35.2	
	baz=261,slow=75,SNR=18						
H01W1	**Cape Leeuwin H**	**44.79**	**111**	T	T	18 08 28.7	
	baz=261,slow=75,SNR=20						
ASAR	**Alice Springs**	**64.37**	**104**	P	P	17 22 54.1	+0.1
	0.6nm,0.8s,baz=243,slow=7.0,SNR=5.9 0.6nm,0.8s						
WRA	**Warramunga Arr**	**66.19**	**100**	P	P	17 23 05.7	-0.2
	0.3nm,0.6s,baz=247,slow=5.8,SNR=1.7 0.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**71.21**	**298**	P	P	17 23 37.1	0.0
	0.6nm,0.8s,baz=118,slow=5.4,SNR=3.0 0.6nm,0.8s						
MKAR	**Makanchi Array**	**78.00**	**15**	P	P	17 24 15.9	0.0
	0.4nm,0.7s,baz=190,slow=5.9,SNR=5.3 0.4nm,0.7s						

*ISK **28** 17:16:12.8, 38°.16N×26°.69E, h7km, ML3.0/12*
*ATH **28** 17:16:13.8, 38°.16N×26°.63E, h28km±8km, ML2.5/3, Error ellipse: s-maj=9.0km s-min=1.3km az=223.0*
*THE **28** 17:16:14.8, 38°.13N×26°.61E, h15km±1km, ML2.5/4, Error ellipse: s-maj=2.8km s-min=0.6km az=233.0*
*DDA **28** 17:16:14.0±0.0, 38°.20N×26°.72E, h7km±1km, ML2.9*

ISC 28 17:16:13.7±0.8, 38°.16N±0°.02×26°.67E±0°.03, h14km±6km, n40, σ0§67/64, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZEYE	**Izmir, Urla-Ze**	**0.15**	**300**	P	**Pg**	**17 16 17.8**	**+0.2**
ZEYE				S	**Sg**	**17 16 21.0**	**+0.9**
ZEYE				*i* AML	AML	17 16 21.0	
	comp=Z,3μm,0.2s						
ZEYE				*i* AML	AML	17 16 21.0	
	comp=N,7μm,0.2s						
ZEYE				*i* AML	AML	17 16 21.0	
	comp=E,4μm,0.1s						
DGB	**zmir**	**0.20**	**124**	P	**Pg**	**17 16 18.4**	**+0.2**
DGB				S	**Sg**	**17 16 21.3**	**0.0**
URLA	**Izmir**	**0.20**	**343**	PG	**Pg**	**17 16 17.8**	**-0.6**
URLA				SG	**Sg**	**17 16 21.3**	**-0.2**
URLA	**Izmir**	**0.20**	**343**	P	**Pg**	**17 16 18.2**	**-0.2**
URLA				S	**Sg**	**17 16 21.6**	**0.0**
URLA				*i* AML	AML	17 16 22.0	
	comp=E,2μm,0.4s						
URLA				*i* AML	AML	17 16 23.0	
	comp=N,3μm,0.5s						
SMG	**Samos**	**0.47**	**164**	P	**Pg**	**17 16 23.5**	**+0.4**
SMG				S	**Sb**	**17 16 30.7**	**+0.1**
SMG				AML	AML	17 16 33.5	
	comp=N,1395μm,0.3s						
SMG				AML	AML	17 16 34.3	
	comp=E,2025μm,0.2s						
SMG	**Samos**	**0.47**	**164**	P	**Pb**	**17 16 23.6**	**-0.2**
SMG				S	**Sb**	**17 16 31.2**	**+0.5**
	comp=E,860nm,0.2s						
CHOS	**Chios island**	**0.53**	**295**	P	**Pg**	**17 16 24.7**	**+0.5**
CHOS				S	**Sg**	**17 16 30.9**	**-0.5**
CHOS				AML	AML	17 16 33.3	
	comp=N,1145μm,0.3s						
CHOS				AML	AML	17 16 33.9	
	comp=E,1584μm,0.3s						
CHOS	**Chios island**	**0.53**	**295**	P	**Pg**	**17 16 24.7**	**+0.5**
CHOS				S	**Sb**	**17 16 32.9**	**+0.4**
	comp=E,655nm,0.3s						
FOCM	**Foa**	**0.55**	**5**	PG	**Pg**	**17 16 23.7**	**-0.8**
FOCM				SG	**Sg**	**17 16 32.4**	**+0.5**
CAND	**Candarli**	**0.80**	**7**	PG	**Pg**	**17 16 28.6**	**-0.6**
DDIM	**Aydin, Didim**	**0.84**	**147**	P	**Pn**	**17 16 30.6**	**-0.5**
DDIM				S	**Sb**	**17 16 41.1**	**-0.1**
ZEDA	**zmir-Bergama**	**0.86**	**22**	P	**Pb**	**17 16 29.3**	**-1.2**
ZEDA				S	**Sb**	**17 16 41.2**	**-0.7**
DKL	**Dikili**	**0.92**	**11**	PG	**Pb**	**17 16 30.7**	**-0.8**
AYDB	**Zeytinkoy-Aydi**	**0.99**	**102**	PG	**Pb**	**17 16 31.9**	**-0.8**
AYDN	**Tasoluk**	**1.08**	**117**	P	**Pg**	**17 16 34.7**	**+0.1**
AYDN				S	**Sb**	**17 16 47.8**	**-0.4**
AYDN				*i* AML	AML	17 16 51.0	
	comp=E,362nm,0.3s						
GOMA	**Golmarmara-Man**	**1.12**	**61**	PN	**Pb**	**17 16 34.5**	**-0.3**
PRK	**Paraskevi**	**1.12**	**344**	P	**Pb**	**17 16 34.1**	**-0.9**
PRK	**Paraskevi**	**1.12**	**344**	P	**Pn**	**17 16 35.5**	**+0.5**
PRK				S	**Sg**	**17 16 51.5**	**+1.4**
	comp=E,278nm,0.8s						
AYVA	**Ayvalik**	**1.14**	**1**	P	**Pn**	**17 16 35.1**	**-0.2**
AYVA				S	**Sg**	**17 16 51.1**	**+0.5**
AKS	**Akhisar**	**1.15**	**51**	PN	**Pb**	**17 16 35.1**	**-0.2**
BODT	**Bodrum**	**1.21**	**155**	P	**Pn**	**17 16 35.8**	**-0.5**
BODT	**Bodrum**	**1.21**	**155**	PN	**Pn**	**17 16 36.1**	**-0.2**
SIGR	**SIGRI**	**1.23**	**329**	P	**Pn**	**17 16 35.8**	**-0.6**
SIGR				S	**Sb**	**17 16 51.4**	**-0.9**
SIGR				AML	AML	17 16 54.5	
	comp=N,347μm,0.4s						
SIGR				AML	AML	17 16 56.0	
	comp=E,223μm,0.3s						
SIGR	**SIGRI**	**1.23**	**329**	P	**Pn**	**17 16 35.8**	**-0.6**
SIGR				S	**Sb**	**17 16 52.6**	**+0.3**
	comp=E,142nm,0.3s						
BDRM	**Kayabasi**	**1.26**	**151**	P	**Pn**	**17 16 36.2**	**-0.6**
BDRM				S	**Sg**	**17 16 54.3**	**0.0**
BUHA	**Balikesir, Bur**	**1.37**	**13**	P	**Pn**	**17 16 38.9**	**+0.4**
BUHA				S	**Sb**	**17 16 57.4**	**+0.9**
BUHA				*i* AML	AML	17 17 00.0	
	comp=E,249nm,0.6s						
KOCA	**Canakkale, Ayv**	**1.40**	**343**	P	**Pn**	**17 16 38.3**	**-0.5**
KOCA				S	**Sb**	**17 16 58.1**	**+0.8**
APE	**Apeiranthos**	**1.42**	**220**	P	**Pn**	**17 16 38.5**	**-0.6**
APE	**Apeiranthos**	**1.42**	**220**	P	**Pn**	**17 16 38.3**	**-0.8**
APE	**Apeiranthos**	**1.42**	**220**	PN	**Pn**	**17 16 39.6**	**+0.5**
STEP	**BALIKESIR_Sava**	**1.46**	**34**	P	**Pn**	**17 16 40.3**	**+0.6**
STEP				S	**Sg**	**17 17 00.7**	**-0.1**
BAYC	**CANAKKALE_Bayr**	**1.58**	**357**	P	**Pn**	**17 16 40.2**	**-1.0**
BAYC				S	**Sb**	**17 17 03.6**	**+1.1**
MULA	**Mugla, Merkez-**	**1.59**	**124**	P	**Pg**	**17 16 45.2**	**+0.9**
MULA				S	**Sg**	**17 17 04.9**	**-0.1**
KULA	**Kula-Manisa**	**1.60**	**77**	PN	**Pn**	**17 16 42.1**	**+0.4**
EZN	**Ezine**	**1.68**	**351**	PN	**Pn**	**17 16 43.4**	**+0.7**
BALY	**Balya**	**1.74**	**25**	P	**Pb**	**17 16 45.8**	**+0.4**
BALY				S	**Sb**	**17 17 08.6**	**+1.5**
BOZC	**Bozcaada**	**1.74**	**344**	PN	**Pn**	**17 16 44.4**	**+0.8**
BOZC	**Bozcaada**	**1.74**	**344**	P	**Pn**	**17 16 42.4**	**-1.2**
BOZC				S	**Sb**	**17 17 07.3**	**0.0**
LIA	**Limnos Island**	**2.08**	**327**	P	**Pn**	**17 16 49.5**	**+1.3**
LIA	**Limnos Island**	**2.08**	**327**	P	**Pn**	**17 16 48.3**	**+0.1**

*TUL **28** 17:29:46.9±0.6, 36°.358N±0°.010×98°.16W±0°.01, h7km±3km, ML2.6, mb_Lg2.1/11(NEIC), Error ellipse: s-maj=1.5km s-min=1.3km az=149.0*

NEIC 28 17:29:47.4±0.5, 36°.352N±0°.010×98°.17W±0°.01, h7km±3km, Error ellipse: s-maj=1.6km s-min=0.9km az=212.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FNO	**Franklin**	**1.26**	**150**	Pg	Pn	17 30 09.9	-1.5
T35A	**Sooner Cattle**	**1.45**	**67**		Pn	17 30 13.5	-0.5
WMOK	**Wichita Mounta**	**1.69**	**197**		Pn	17 30 17.1	-0.2
WMOK				IAmb_Lg		17 30 43.6	
	comp=Z,7.4nm,0.8s						
X34A	**Smith Ranch, M**	**1.77**	**171**	Pn	Pb	17 30 19.4	-0.8
TUL1	**Leonard**	**1.97**	**102**	Pn	Pn	17 30 20.2	-1.1
R32A	**Long Quarter,**	**2.11**	**348**	Pn	Pn	17 30 22.6	-0.6
X37A	**Clayton**	**2.88**	**127**	IAmb_Lg		17 31 21.1	
	comp=Z,5.0nm,0.9s						
AMTX	**Amarillo**	**3.21**	**244**		Pn	17 30 37.0	-1.4
S39A	**Bolivar**	**4.10**	**70**		Pb	17 31 00.2	+0.3
MIAR	**Mount Ida**	**4.16**	**114**	IAmb_Lg		17 32 08.1	
	comp=Z,5.7nm,0.8s						
KSCO	**Kaye Shedlock'**	**4.42**	**308**	IAmb_Lg		17 32 16.5	
	comp=Z,5.1nm,0.8s						
MGMO	**Mountain Grove**	**4.80**	**79**	IAmb_Lg		17 32 31.2	
	comp=Z,2.2nm,0.7s						
W41B	**Lowry Mavity, V**	**4.96**	**102**	IAmb_Lg		17 32 23.2	
	comp=Z,5.2nm,0.9s						
T25A	**Trinidad**	**5.08**	**281**	IAmb_Lg		17 32 31.2	
	comp=Z,4.4nm,0.8s						

*IDC **28** 17:32:19.5±0.7, 27°.51N×143°.48E, h0km, mb3.8/14, mbtmp3.8/19, ML3.6/5, MS2.9/3, Error ellipse: s-maj=19.7km s-min=13.8km az=79.0*
*MOS **28** 17:32:20.3±1.6, 27°.51N×143°.43E, h20km, mb4.6/5, Error ellipse: s-maj=16.9km s-min=7.3km az=112.4*
*NEIC **28** 17:32:21.6±2.3, 27°.59N±0°.07×143°.38E±0°.09, h10km±1km, mb4.7/23, Error ellipse: s-maj=15.2km s-min=10.1km az=131.0*
*JMA **28** 17:32:26.6±0.1, 27°.5N±0°.6×142°.8E±1°.0, h101km, MV4.0/25, NEAR CHICHIJIMA ISLAND*

ISC 28 17:32:20.5±0.5, 27°.63N±0°.05×143°.41E±0°.06, h10km, n97, σ1§98/100, mb4.4/32, MS2.9/3, 5C-1D, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.21**	**244**	P	**Pg**	**17 32 44.5**	**+0.7**
CBIJ				*e*S	**Sb**	**17 32 57.9**	**-1.4**
CBIJ	**Chichi jima**	**1.21**	**244**	A	A	17 32 44.5	
	comp=E,5.0nm,5.3s,comp=E,3.0nm,2.9s						
JCJ	**Chichijima**	**1.21**	**244**	Pn	**Pg**	**17 32 44.8**	**+0.9**
	117nm,0.3s,baz=347,slow=8.4,SNR=321						
JCJ				Sn	**Sg**	**17 32 59.4**	**-0.2**
	432nm,0.3s,baz=336,slow=20,SNR=17						
JCJ	**Chichijima**	**1.21**	**244**	Pn	**Pg**	**17 32 44.4**	**+0.6**
JCJ				Sn	**Sg**	**17 32 59.6**	**0.0**
JHH2	**Haha-jima-NKT2**	**1.48**	**228**	P	**Pb**	**17 32 48.1**	**0.0**
JHH2				*e*S	**Sn**	**17 33 03.9**	**-2.7**
JHH2	**Haha-jima-NKT2**	**1.48**	**228**	A	A	17 32 48.1	
	comp=E,4.0nm,8.9s,comp=E,3.0nm,6.2s						
JHJ2	**Mitsune**	**6.29**	**331**	Pn	**Pn**	**17 33 54.0**	**+0.7**
JHJ	**Hachijo jima 2**	**6.31**	**331**	Pn	**Pn**	**17 33 53.8**	**+0.2**
	4.2nm,0.3s,baz=88,slow=18,SNR=6.5						
JHJ				Sn	**Sn**	**17 34 59.7**	**-6.0**
	5.0nm,0.3s,baz=139,slow=19,SNR=2.3 24nm,0.3s						
JOD2	**Odawara 2**	**8.46**	**335**	*e*P	**Pn**	**17 34 25.1**	**+1.9**
JYN	**Shimob**	**8.88**	**333**	*e*P	**Pn**	**17 34 32.6**	**+3.7**
JHU	**Hanno**	**8.92**	**338**	*e*P	**Pn**	**17 34 29.3**	**-0.2**
JYT	**Yasato**	**9.00**	**343**	Pn	**Pn**	**17 34 31.6**	**+1.0**
JRY	**Ryogami san**	**9.20**	**337**	P	**Pn**	**17 34 34.0**	**+0.6**
JRY				S	**Sn**	**17 36 14.2**	**-2.8**
JHO	**Hitachi**	**9.28**	**346**	P	**Pn**	**17 34 33.5**	**-0.9**
JHO				S	Sn	17 36 10.7	-8.0
JAG	**Ashikaga**	**9.39**	**340**	P	**Pn**	**17 34 35.7**	**-0.2**
JAG				S	**Sn**	**17 36 15.8**	**-5.9**
INU	**Inuyama**	**9.44**	**326**	Pn	**Pn**	**17 34 38.6**	**+2.1**
JGF	**Kuroka**	**9.48**	**329**	Pn	**Pn**	**17 34 38.3**	**+1.2**
MJAR	**Matsushiro Arr**	**9.92**	**335**	Pn	**Pn**	**17 34 43.0**	**-0.2**
	0.3nm,0.3s,baz=156,slow=10,SNR=20						
MJAR				Sn	**Sn**	**17 36 32.1**	**-2.6**
	0.1nm,0.3s,baz=168,slow=26,SNR=1.8 3.4nm,0.5s						
MJAR	**Matsushiro Arr**	**9.92**	**335**	Pn	**Pn**	**17 34 43.2**	**0.0**
MJAR	**Matsushiro Arr**	**9.92**	**335**	P	**Pn**	**17 34 43.2**	**0.0**
MAJO	**Matsushiro**	**9.92**	**335**	Pn	**Pn**	**17 34 43.0**	**-0.2**
MAJO	**Matsushiro**	**9.92**	**335**	*i* P	**Pn**	**17 34 43.5**	**+0.3**
MJB9	**Matsu-Tunnel**	**9.93**	**335**		**Pn**	**17 34 44.4**	**+1.1**
JMM	**Marumori**	**10.45**	**349**		**Pn**	**17 34 48.2**	**-2.1**
JSD	**Sado**	**11.25**	**339**		**Pn**	**17 35 00.2**	**-1.1**
JNU	**Nakatsue**	**12.12**	**300**	Pn	**Pn**	**17 35 14.4**	**+1.0**
	0.7nm,0.3s,baz=128,slow=16,SNR=2.2 2.3nm,0.3s						
JOW	**Kunigami**	**13.49**	**270**	LR	LR	17 41 07.3	
	comp=Z,48nm,18.2s,baz=260,slow=39						
ERM	**Erimo**	**14.36**	**359**	Pn	Pn	17 35 40.0	-3.8
ERM	**Erimo**	**14.36**	**359**	P	Pn	17 35 40.0	-3.8
TJN	**Taejon**	**16.15**	**307**	*e*P	**Pn**	**17 36 07.8**	**+0.2**
KSRS	**Korea Array**	**16.31**	**311**	Pn	**P**	**17 36 13.4**	**+0.9**
	0.2nm,0.3s,baz=117,slow=13,SNR=6.5 1.2nm,0.7s						
SHO	**Shikotan**	**16.44**	**9**	*e*P	**Pn**	**17 36 07.5**	**-3.8**
USA0B	**Ussuriysk Arra**	**18.92**	**334**	P	**P**	**17 36 35.6**	**-5.8**
USA0B	**Ussuriysk Arra**	**18.92**	**334**	P	**P**	**17 36 35.6**	**-5.8**
USA0B				pmax	pmax		
	comp=Z,6.0nm,0.7s						
USRK	**Ussuriysk Ar.**	**18.92**	**334**	P	**Pn**	**17 36 44.8**	**+2.8**
	comp=Z,0.3nm,0.3s,baz=139,slow=7.3,SNR=5.0 comp=Z,3.0nm,0.7s						
USRK	**Ussuriysk Ar.**	**18.92**	**334**	P	**P**	**17 36 36.5**	**-4.9**
YHNB	**Yeheng**	**20.00**	**267**	P	**P**	**17 36 54.8**	**+1.3**
YHNB				IAmb	IAmb	17 37 10.6	
	comp=Z,50nm,1.5s						
YULB	**Yu-li**	**20.39**	**263**	P	**P**	**17 36 59.0**	**+1.3**
YULB				IAmb	IAmb	17 37 00.5	
	comp=Z,35nm,1.4s						
SSLB	**Suanglung**	**20.59**	**264**	P	**P**	**17 37 01.4**	**+1.6**
SSLB				IAmb	IAmb	17 37 05.3	
	comp=Z,31nm,1.1s						
NJ2	**Nanjing**	**21.74**	**288**	*e*P	**P**	**17 37 10.8**	**-1.3**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KLR	**Kul'dur**	**23.37**	**340**	P	**P**	**17 37 32.1**	**+3.0**
	comp=Z,1.2nm,0.7s,baz=131,slow=4.7,SNR=3.9 comp=Z,1.2nm,0.7s						
KLR	**Kul'dur**	**23.37**	**340**	*ce*P	**P**	**17 37 32.0**	**+2.8**
KLR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
DAV	**Davao City (W)**	**26.53**	**223**	LR	LR	17 47 06.6	
	comp=Z,38nm,20.9s,baz=71,slow=34						
PEA0B	**Petropavlovsk-**	**27.58**	**19**	*e*P	**P**	**17 38 07.4**	**-0.3**
ZEA	**Zeya**	**28.68**	**340**	*i* P	**P**	**17 38 20.1**	**+2.6**
HHC	**Hu-ho-hao-te**	**29.27**	**305**	*e*P	**P**	**17 38 24.5**	**+1.4**
HHC				pmax	pmax		
	comp=Z,23nm,0.8s						
HHC				pmax	pmax		
	comp=Z,110nm,5.0s						
TNTI	**Ternate**	**30.82**	**213**	P	**P**	**17 38 36.3**	**-0.4**
TNTI				IAmb	IAmb	17 38 52.8	
	comp=Z,11nm,0.8s						
FAKI	**Fak Fak**	**32.22**	**201**	P	**P**	**17 38 48.4**	**-0.7**
FAKI				IAmb	IAmb	17 38 57.5	
	comp=Z,24nm,1.2s						
SHEM	**Shemya Is, Ala**	**33.88**	**34**	LR	LR	17 52 04.1	
	comp=Z,19nm,20.1s,baz=306,slow=35						
LZH	**Lanzhou**	**34.46**	**294**	*e*P	**P**	**17 39 06.5**	**-2.2**
LZH				pP	sP	17 39 11.0	+1.7
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
SONM	**Songino Array**	**35.10**	**315**	P	**P**	**17 39 15.9**	**+1.8**
	comp=Z,0.3nm,0.3s,baz=116,slow=6.6,SNR=4.5 comp=Z,0.3nm,0.3s						
SONM	**Songino Array**	**35.10**	**315**	P	**P**	**17 39 13.1**	**-1.0**
SONM	**Songino Array**	**35.10**	**315**	P	**P**	**17 39 13.1**	**-1.0**
SONM				pmax	pmax		
	comp=Z,1.0nm,1.2s						
PMG	**Port Moresby**	**36.99**	**174**	P	**P**	**17 39 26.6**	**-3.7**
PMG	**Port Moresby**	**36.99**	**174**	P	**P**	**17 39 26.6**	**-3.7**
PMG				pmax	pmax		
	comp=Z,39nm,1.3s						
GTA	**Gaotai**	**37.86**	**300**	*e*P	**P**	**17 39 37.8**	**0.0**
GTA				pP	sP	17 39 43.0	+4.6
GTA				sP	pwP	17 39 46.0	-3.7
GTA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,34nm,4.5s						
GTA				LR	LR		
	comp=N,61nm,16.0s						
GTA				LR	LR		
	comp=E,67nm,16.4s						
GTA				LR	LR		
	comp=E,61nm,17.1s						
ZAK	**Zakamensk**	**37.94**	**318**	*e*P	**P**	**17 39 40.1**	**+1.8**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
CMAR	**Chiang Mai Arr**	**41.74**	**267**	P	**P**	**17 40 10.2**	**0.0**
	comp=Z,0.4nm,0.4s,baz=59,slow=8.1,SNR=4.8 comp=Z,0.4nm,0.4s						
CMAR	**Chiang Mai Arr**	**41.74**	**267**	*ce*P	**P**	**17 40 11.6**	**+1.5**
MTN	**Manton Dam**	**41.95**	**198**	P	**P**	**17 40 09.5**	**-2.2**
MTN				IAmb	IAmb	17 40 27.1	
	comp=Z,48nm,1.5s						
BILL	**Bilibino**	**42.70**	**12**	*ip*	**P**	**17 40 19.1**	**+1.8**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.1s						
WMQ	**Urumqi**	**47.15**	**305**	*e*P	**P**	**17 40 55.8**	**+2.6**
CTA	**Charters Tower**	**47.51**	**176**	P	**P**	**17 40 55.6**	**-0.4**
	comp=Z,7.9nm,1.1s,baz=7.1,slow=8.1,SNR=2.4 comp=Z,7.9nm,1.1s						
CTAO	**Charters Tower**	**47.51**	**176**	P	**P**	**17 40 55.7**	**-0.4**
CTAO	**Charters Tower**	**47.51**	**176**	P	**P**	**17 40 55.7**	**-0.3**
CTAO				pmax	pmax		
	comp=Z,18nm,1.3s						
WB0	**Warramunga Arr**	**47.91**	**191**	P	**P**	**17 40 58.6**	**-0.6**
WB0				IAmb	IAmb	17 41 00.2	
	comp=Z,18nm,1.2s						
WR0	**Warramunga Arr**	**48.08**	**191**	P	**P**	**17 40 58.0**	**-2.4**
WRAB	**

NVAR	**Mina Array Bea**	**79.33**	**52**	P		**P**	**17 44 27.6**	**+0.6**	
	comp=Z,0.2nm,0.5s,baz=243,slow=45,SNR=2.0								
	comp=Z,0.2nm,0.5s								
AKASG	**Malin Array Be**	**82.83**	**324**	P		**P**	**17 44 45.0**	**-0.1**	
	comp=Z,0.3nm,0.3s,baz=55,slow=2.7,SNR=5.0								
	comp=Z,0.3nm,0.3s								
AKASG	**Malin Array Be**	**82.83**	**324**	*ce*P		**P**	**17 44 46.5**	**+1.5**	
AKASG				pmax		pmax			
	comp=Z,1.0nm,0.2s								
NOA	**NORSAR Array B**	**83.52**	**339**	P		**P**	**17 44 49.5**	**+1.0**	
	comp=Z,0.6nm,0.8s,baz=44,slow=5.5,SNR=2.2								
	comp=Z,0.6nm,0.8s								
TXAR	**Lajitas Array**	**94.41**	**54**	P		**P**	**17 45 42.7**	**+1.5**	
	comp=Z,0.3nm,0.8s,baz=354,slow=5.0,SNR=3.9								
	comp=Z,0.3nm,0.8s								
TORD	**Torodi Ar. Bea**	**125.04**	**313**	PKP		**PKPdf**	**17 51 22.4**	**+0.5**	
	comp=Z,0.2nm,0.5s,baz=60,slow=3.1,SNR=1.6								
PLCA	**Paso Flores**	**149.21**	**124**	PKPbc		**PKPbc**	**17 52 10.0**	**+0.5**	
	comp=Z,0.6nm,0.5s,baz=275,slow=4.1,SNR=5.7								

ANF ***28*** *17:58:37.5±0.1,62.16N×150.81W,h65km±2km, ML3.5/68, ML3.4/69, Error ellipse: s-maj=1.2km s-min=1.1km az=32.0*

NEIC ***28*** *17:58:37.6±1.1,62.17N±0.03×150.81W±0.07,h68km±4km, Error ellipse: s-maj=4.7km s-min=4.2km az=107.0*

AEIC ***28*** *17:58:38±0.9,62.15N±0.03×150.81W±0.07,h68km±6km, ML3.1, ML3.2/162(NEIC), Error ellipse: s-maj=4.9km s-min=4.1km az=129.0*

ISC 28 17:58:37.4±1.2, 62.15N±0.02×150.82W±0.02, h71km±6km, n258, σ0.55/242, Central Alaska

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
CUT	**Chulitna**	**0.36**	**45**			**Pn**	**17 58 49.0**		**-0.1**
CUT	**Chulitna**	**0.36**	**45**			**Sn**	**17 58 58.1**		**+0.4**
CUT	**Chulitna**	**0.36**	**45**	IAML			17 58 58.0		
	comp=N,1μm,0.2s								
CUT	**Chulitna**	**0.36**	**45**	P		**Pn**	**17 58 49.0**		**-0.1**
	baz=226,SNR=65								
CUT				S		**Sn**	**17 58 58.0**		**+0.4**
	baz=226								
SKT	**Skwentna**	**0.38**	**243**			**Pn**	**17 58 48.8**		**-0.4**
SKT						**Sn**	**17 58 57.7**		**-0.2**
SKT	**Skwentna**	**0.38**	**243**	IAML			17 58 57.9		
	comp=N,2μm,0.3s								
SKT				IAML			17 58 59.1		
	comp=E,2μm,0.2s								
SKT	**Skwentna**	**0.38**	**243**	P		**Pn**	**17 58 48.9**		**-0.4**
	baz=62,SNR=120								
SKT				S		**Sn**	**17 58 57.6**		**-0.4**
	baz=62								
M22K	**Willow**	**0.52**	**140**			**Pn**	**17 58 50.0**		**-0.4**
M22K						**Sn**	**17 59 00.0**		**+0.1**
M22K	**Willow**	**0.52**	**140**	IAML			17 59 00.4		
	comp=E,2μm,0.5s								
M22K				IAML			17 59 01.1		
	comp=N,2μm,0.6s								
M22K	**Willow**	**0.52**	**140**	P		**Pn**	**17 58 50.0**		**-0.4**
	baz=322,SNR=15								
M22K				S		**Sn**	**17 58 59.8**		**-0.2**
	baz=322								
SUA	**Susitna One**	**0.69**	**177**			**Pn**	**17 58 52.4**		**0.0**
SUA						**Sn**	**17 59 04.2**		**+0.8**
SUA	**Susitna One**	**0.69**	**177**	P		**Pn**	**17 58 52.4**		**0.0**
	baz=358,SNR=118								
SUA				S		**Sn**	**17 59 03.9**		**+0.5**
	baz=358								
STLK	**Strandline Lak**	**0.81**	**217**			**Pn**	**17 58 53.5**		**-0.2**
GHO	**Glory Hole Cre**	**0.97**	**112**			**Pn**	**17 58 55.7**		**+0.1**
GHO	**Glory Hole Cre**	**0.97**	**112**	IAML			17 59 13.9		
	comp=N,698nm,0.6s								
PMR	**Palmer**	**0.98**	**124**			**Pn**	**17 58 55.7**		**+0.1**
PMR						**Sn**	**17 59 09.1**		**0.0**
PMR	**Palmer**	**0.98**	**124**	IAML			17 59 10.6		
	comp=N,737nm,0.6s								
PMR				IAML			17 59 11.1		
	comp=E,729nm,0.4s								
PMR	**Palmer**	**0.98**	**124**	P		**Pn**	**17 58 55.4**		**-0.2**
	baz=306,SNR=15								
PMR				S		**Sn**	**17 59 09.0**		**-0.1**
	baz=306								
PPLA	**Purkeypile**	**0.98**	**320**			**Pn**	**17 58 55.5**		**-0.3**
PPLA	**Purkeypile**	**0.98**	**320**	P		**Pn**	**17 58 55.7**		**-0.1**
	baz=139,SNR=129								
PPLA				S		**Sn**	**17 59 09.1**		**-0.4**
	baz=139								
FIS	**Fire Island**	**1.05**	**164**			**Pn**	**17 58 57.6**		**+1.1**
CRP	**Crater Peak**	**1.09**	**216**			**Pn**	**17 58 57.4**		**+0.1**
CRP						**Sn**	**17 59 12.4**		**+0.4**
M20K	**Styx River**	**1.12**	**257**			**Pn**	**17 58 57.4**		**-0.2**
M20K	**Styx River**	**1.12**	**257**	P		**Pn**	**17 58 57.6**		**0.0**
	baz=75,SNR=125								
M20K				S		**Sn**	**17 59 12.9**		**+0.2**
	baz=75								
CKN	**Chakachatna No**	**1.14**	**216**			**Pn**	**17 58 58.1**		**+0.4**
SPU	**Mount Spurr**	**1.14**	**212**			**Pn**	**17 58 57.5**		**-0.2**
RC01	**Rabbit Creek A**	**1.18**	**154**			**Pn**	**17 58 57.6**		**-0.6**
RC01	**Rabbit Creek A**	**1.18**	**154**	IAML			17 59 15.8		
	comp=N,387nm,0.3s								
RC01				IAML			17 59 16.3		
	comp=E,329nm,0.3s								
RC01	**Rabbit Creek A**	**1.18**	**154**	P		**Pn**	**17 58 57.7**		**-0.6**
	baz=335,SNR=16								
RC01				S		**Sn**	**17 59 14.0**		**+0.1**
	baz=335								
SPWE	**Spurr West**	**1.21**	**224**			**Pn**	**17 58 59.3**		**+0.7**
SML	**Sawmill**	**1.22**	**105**			**Pn**	**17 58 58.9**		**+0.1**
SML						**Sn**	**17 59 15.8**		**+1.0**
SML	**Sawmill**	**1.22**	**105**	IAML			17 59 19.6		
	comp=N,552nm,0.5s								
SML	**Sawmill**	**1.22**	**105**	P		**Pn**	**17 58 58.9**		**+0.1**
	baz=288,SNR=76								
SML				S		**Sn**	**17 59 15.1**		**+0.3**
	baz=288								
WAT1	**Susitna Watana**	**1.25**	**56**			**Pn**	**17 58 59.1**		**-0.1**
WAT1	**Susitna Watana**	**1.25**	**56**	P		**Pn**	**17 58 59.3**		**+0.1**
	baz=238								
WAT1				S		**Sn**	**17 59 15.9**		**+0.4**
	baz=238								
TRF	**Thorofare Moun**	**1.33**	**10**			**Pn**	**17 59 00.5**		**+0.2**
TRF						**Sn**	**17 59 17.5**		**+0.1**
TRF	**Thorofare Moun**	**1.33**	**10**	IAML			17 59 18.6		
	comp=E,509nm,0.5s								
TRF	**Thorofare Moun**	**1.33**	**10**	P		**Pn**	**17 59 00.5**		**+0.2**
	baz=191,SNR=89								
TRF				S		**Sn**	**17 59 17.5**		**+0.1**
	baz=191								
KNK	**Knik Glacier**	**1.34**	**122**			**Pn**	**17 59 00.3**		**0.0**
KNK	**Knik Glacier**	**1.34**	**122**	IAML			17 59 23.0		
	comp=N,445nm,0.5s								
KNK	**Knik Glacier**	**1.34**	**122**	P		**Pn**	**17 59 00.3**		**0.0**
	baz=305,SNR=39								
KNK				S		**Sn**	**17 59 17.5**		**-0.1**
	baz=305								
CAPN	**Captain Cook N**	**1.40**	**187**			**Pn**	**17 59 02.5**		**+1.5**
CAST	**Castle Rocks**	**1.40**	**336**			**Pn**	**17 59 01.0**		**-0.1**
CAST	**Castle Rocks**	**1.40**	**336**	P		**Pn**	**17 59 01.0**		**-0.1**
	baz=155,SNR=31								
CAST				S		**Sn**	**17 59 18.6**		**-0.2**
	baz=155								
KTH	**Kantishna Hill**	**1.41**	**358**			**Pn**	**17 59 01.7**		**+0.5**
L20K	**Farewell, AK**	**1.47**	**284**			**Pn**	**17 59 01.8**		**-0.1**
L20K	**Farewell, AK**	**1.47**	**284**	P		**Pn**	**17 59 01.8**		**-0.1**
	baz=101,SNR=73								
L20K				S		**Sn**	**17 59 20.2**		**-0.3**
	baz=101								
WAT6	**Susitna Watana**	**1.50**	**72**			**Pn**	**17 59 02.5**		**0.0**
WAT6	**Susitna Watana**	**1.50**	**72**	P		**Pn**	**17 59 02.5**		**0.0**
	baz=255,SNR=206								
WAT6				S		**Sn**	**17 59 21.5**		**+0.1**
	baz=255								
M23K	**Glacier View**	**1.50**	**102**			**Pn**	**17 59 02.5**		**0.0**
M23K	**Glacier View**	**1.50**	**102**	P		**Pn**	**17 59 02.4**		**0.0**
	baz=286,SNR=42								
M23K				S		**Sn**	**17 59 21.8**		**+0.6**
	baz=286								
RND	**Reindeer**	**1.55**	**35**			**Pn**	**17 59 03.0**		**-0.1**
SLKM	**Skilak Lake**	**1.67**	**170**			**Pn**	**17 59 04.2**		**-0.5**
SCM	**Sheep Creek Mo**	**1.68**	**99**			**Pn**	**17 59 04.7**		**-0.1**
SCM	**Sheep Creek Mo**	**1.68**	**99**	IAML			17 59 27.4		
	comp=E,420nm,0.7s								
SCM				IAML			17 59 31.4		
	comp=N,408nm,0.7s								
SCM	**Sheep Creek Mo**	**1.68**	**99**	P		**Pn**	**17 59 04.7**		**-0.1**
	baz=283,SNR=84								
SCM				S		**Sn**	**17 59 25.6**		**+0.1**
	baz=283								
M19K	**Big River Lodg**	**1.70**	**263**			**Pn**	**17 59 04.9**		**-0.2**
M19K	**Big River Lodg**	**1.70**	**263**	IAML			17 59 26.6		
	comp=N,277nm,0.2s								
M19K				IAML			17 59 26.7		
	comp=E,181nm,0.3s								
O22K	**Cooper Landing**	**1.76**	**162**			**Pn**	**17 59 05.6**		**-0.1**
O22K	**Cooper Landing**	**1.76**	**162**	P		**Pn**	**17 59 05.7**		**-0.1**
	baz=343,SNR=5.9								
O22K				S		**Sn**	**17 59 26.6**		**-0.6**
	baz=343								
MCK	**McKinley**	**1.81**	**28**			**Pn**	**17 59 06.7**		**+0.2**
MCK	**McKinley**	**1.81**	**28**	IAML			17 59 30.7		
	comp=E,187nm,0.7s								
MCK				IAML			17 59 31.4		
	comp=N,212nm,0.6s								
MCK	**McKinley**	**1.81**	**28**	P		**Pn**	**17 59 06.7**		**+0.2**
	baz=209,SNR=27								
MCK				S		**Sn**	**17 59 28.7**		**+0.3**
	baz=209								
DHY	**Denali Highway**	**1.84**	**58**			**Pn**	**17 59 07.2**		**+0.1**
DHY	**Denali Highway**	**1.84**	**58**	IAML			17 59 31.5		
	comp=N,325nm,0.5s								
DHY				IAML			17 59 31.9		
	comp=E,330nm,0.7s								
CHUM	**Lake Minchumin**	**1.87**	**339**			**Pn**	**17 59 07.5**		**+0.3**
CHUM	**Lake Minchumin**	**1.87**	**339**	P		**Pn**	**17 59 07.5**		**+0.3**
	baz=158,SNR=160								
CHUM				S		**Sn**	**17 59 29.4**		**-0.5**
	baz=158								
L19K	**White Mountain**	**1.90**	**273**			**Pn**	**17 59 07.8**		**+0.1**
L19K	**White Mountain**	**1.90**	**273**	IAML			17 59 32.0		
	comp=N,346nm,0.5s								
L19K	**White Mountain**	**1.90**	**273**	P		**Pn**	**17 59 07.8**		**+0.1**
	baz=89,SNR=51								
L19K				S		**Sn**	**17 59 30.8**		**+0.1**
	baz=89								
K20K	**Telida**	**1.93**	**310**			**Pn**	**17 59 08.0**		**0.0**
K20K	**Telida**	**1.93**	**310**	P		**Pn**	**17 59 08.1**		**0.0**
	baz=127,SNR=85								
K20K				S		**Sn**	**17 59 30.7**		**-0.6**
	baz=127								
RSO	**Redoubt South**	**1.94**	**210**			**Pn**	**17 59 08.7**		**+0.3**
BPAW	**Bear Paw Mtn.**	**1.96**	**358**			**Pn**	**17 59 08.4**		**-0.1**
BPAW	**Bear Paw Mtn.**	**1.96**	**358**	IAML			17 59 31.1		
	comp=N,255nm,0.2s								
BPAW	**Bear Paw Mtn.**	**1.96**	**358**	P		**Pn**	**17 59 08.4**		**-0.1**
	baz=178,SNR=66								
BPAW				S		**Sn**	**17 59 30.6**		**-1.5**
	baz=178								
BWN	**Browne**	**2.12**	**16**			**Pn**	**17 59 11.1**		**+0.4**
BWN	**Browne**	**2.12**	**16**	IAML			17 59 51.3		
	comp=E,224nm,0.7s								
SEW	**Seward**	**2.16**	**162**			**Pn**	**17 59 10.2**		**-0.9**
SEW	**Seward**	**2.16**	**162**	P		**Pn**	**17 59 11.6**		**+0.4**
	baz=343								
M24K	**Tolsona, Glenn**	**2.18**	**89**			**Pn**	**17 59 12.0**		**+0.4**
M24K	**Tolsona, Glenn**	**2.18**	**89**	IAML			17 59 56.7		
	comp=N,206nm,0.7s								
M24K	**Tolsona, Glenn**	**2.18**	**89**	P		**Pn**	**17 59 11.9**		**+0.4**
	baz=273,SNR=59								
GLI	**Glacier Island**	**2.19**	**124**			**Pn**	**17 59 10.5**		**-1.1**
GLI	**Glacier Island**	**2.19**	**124**	IAML			17 59 48.1		
	comp=N,231nm,0.4s								
GLI	**Glacier Island**	**2.19**	**124**	P		**Pn**	**17 59 10.5**		**-1.1**
	baz=307,SNR=11								
GLI				S		**Sn**	**17 59 36.7**		**-1.0**
	baz=307								
N19K	**Bonanza Creek**	**2.21**	**234**			**Pn**	**17 59 12.1**		**+0.1**
N19K	**Bonanza Creek**	**2.21**	**234**	P		**Pn**	**17 59 12.1**		**+0.1**
	baz=51,SNR=16								
O20K	**Slope Mountain**	**2.25**	**204**			**Pn**	**17 59 12.9**		**+0.4**
O20K	**Slope Mountain**	**2.25**	**204**	P		**Pn**	**17 59 12.9**		**+0.4**
	baz=22								
JPK	**Jack Peak**	**2.30**	**117**			**Pn**	**17 59 12.5**		**-0.6**
BRLK	**Bradley Lake**	**2.40**	**181**			**Pn**	**17 59 14.8**		**+0.4**
BRLK	**Bradley Lake**	**2.40**	**181**	IAML			17 59 50.6		
	comp=E,146nm,0.4s								
BRLK				IAML			17 59 52.1		
	comp=N,160nm,0.2s								
KLU	**Klutina**	**2.41**	**104**			**Pn**	**17 59 14.2**		**-0.5**
KLU	**Klutina**	**2.41**	**104**	IAML			17 59 51.9		
	comp=N,187nm,0.6s								
KLU				IAML			17 59 52.4		
	comp=E,114nm,0.6s								
KLU	**Klutina**	**2.41**	**104**	P		**Pn**	**17 59 14.2**		**-0.5**
	baz=288,SNR=33								
BRSE	**Bradley Lake S**	**2.42**	**179**			**Pn**	**17 59 14.9**		**+0.2**
BRSE	**Bradley Lake S**	**2.42**	**179**	P		**Pn**	**17 59 15.6**		**+0.9**
	baz=359								
SVW2	**Sparrevohn**	**2.51**	**247**			**Pn**	**17 59 15.6**		**-0.3**
SVW2	**Sparrevohn**	**2.51**	**247**	IAML			18 00 05.6		
	comp=N,80nm,0.6s								
FID	**Port Fidalgo**	**2.51**	**122**			**Pn**	**17 59 14.5**		**-1.4**
TT01	**Tatalina**	**2.53**	**290**			**Pn**	**17 59 15.8**		**-0.4**
TTA	**Tatalina**	**2.53**	**290**			**Pn**	**17 59 16.0**		**-0.3**
TTA	**Tatalina**	**2.53**	**290**	IAML			17 59 45.2		
	comp=N,88nm,0.3s								
TTA				IAML			17 59 45.5		
	comp=E,94nm,0.3s								
TTA	**Tatalina**	**2.53**	**290**	P		**Pn**	**17 59 16.0**		**-0.3**
	baz=106,SNR=20								
J20K	**Nowinta River**	**2.53**	**325**			**Pn**	**17 59 16.2**		**0.0**
J20K	**Nowinta River**	**2.53**	**325**	IAML			17 59 46.8		
	comp=N,96nm,0.6s								
J20K				IAML			17 59 47.1		
	comp=E,82nm,0.7s								
J20K	**Nowinta River**	**2.53**	**325**	P		**Pn**	**17 59 16.2**		**0.0**
	baz=142,SNR=113								
NEA2	**Nenana**	**2.57**	**17**			**Pn**	**17 59 16.5**		**-0.3**
NEA2	**Nenana**	**2.57**	**17**	P		**Pn**	**17 59 16.4**		**-0.4**
	baz=199								
O19K	**Port Alsworth**	**2.59**	**222**			**Pn**	**17 59 17.4**		**+0.4**
O19K	**Port Alsworth**	**2.59**	**222**	IAML			17 59 57.6		
	comp=E,172nm,0.5s								
O19K				IAML			18 00 07.1		
	comp=N,139nm,0.5s								
O19K	**Port Alsworth**	**2.59**	**222**	P		**Pn**	**17 59 17.1**		**+0.1**
	baz=39								
PAX	**Paxson**	**2.61**	**69**			**Pn**	**17 59 17.7**		**+0.4**
PAX	**Paxson**	**2.61**	**69**	P		**Pn**	**17 59 17.7**		**+0.4**
	baz=254,SNR=102								
DIV	**Divide**	**2.62**	**111**			**Pn**	**17 59 16.8**		**-0.7**
WRH	**Wood River Hil**	**2.63**	**27**			**Pn**	**17 59 17.5**		**0.0**
CNPM	**China Poot**	**2.64**	**185**			**Pn**	**17 59 18.8**		**+1.1**
HARP	**HAARP**	**2.66**	**82**			**Pn**	**17 59 18.6**		**+0.7**
HARP	**HAARP**	**2.66**	**82**	P		**Pn**	**17 59 18.5**		**+0.6**
	baz=267,SNR=19								
HIN	**Hinchinbrook I**	**2.73**	**128**			**Pn**	**17 59 17.7**		**-1.2**
K24K	**Donnelly Dome**	**2.83**	**52**			**Pn**	**17 59 21.3**		**+0.9**
K24K	**Donnelly Dome**	**2.83**	**52**	P		**Pn**	**17 59 21.5**		**+1.2**
	baz=236								
CCB	**Clear Creek Bu**	**2.85**	**27**			**Pn**	**17 59 20.3**		**-0.2**
N18K	**Kilae Creek**	**2.85**	**241**			**Pn**	**17 59 20.3**		**-0.2**
N18K	**Kilae Creek**	**2.85**	**241**	P		**Pn**	**17 59 20.3**		**-0.2**
	baz=56,SNR=15								
HDA	**Harding Lake**	**2.86**	**36**			**Pn**	**17 59 20.6**		**0.0**
HDA	**Harding Lake**	**2.86**	**36**	IAML			18 00 00.7		
	comp=N,84nm,0.6s								
HDA				IAML			18 00 14.1		
	comp=E,93nm,0.6s								
HDA	**Harding Lake**	**2.86**	**36**	P		**Pn**	**17 59 20.8**		**+0.1**
	baz=219,SNR=23								
MLY	**Manley**	**2.89**	**1**			**Pn**	**17 59 21.3**		**+0.1**
MLY	**Manley**	**2.89**	**1**	IAML			17 59 54.6		
	comp=N,71nm,0.4s								
MLY	**Manley**	**2.89**	**1**	P		**Pn**	**17 59 21.2**		**+0.1**
	baz=181,SNR=51								
EYAK	**Cordova Ski Ar**	**2.92**	**121**	Pn		**Pn**	**17 59 19.6**		**-1.8**
EYAK	**Cordova Ski Ar**	**2.92**	**121**	P		**Pn**	**17 59 20.2**		**-1.3**
	baz=306								
N25K	**Chitina, Valde**	**3.00**	**98**			**Pn**	**17 59 22.3**		**-0.3**
N25K	**Chitina, Valde**	**3.00**	**98**	IAML			17 59 58.4		
	comp=N,115nm,0.5s								
N25K				IAML			18 00 09.2		
	comp=E,64nm,0.5s								
N25K	**Chitina, Valde**	**3.00**	**98**	P		**Pn**	**17 59 22.2**		**-0.3**
	baz=283								
PS08	**TAPS Pump Stn8**	**3.00**	**35**			**Pn**	**17 59 22.7**		**+0.1**
COLA	**College**	**3.04**	**25**			**Pn**	**17 59 23.1**		**+0.1**
MDM	**Murphy Dome**	**3.05**	**21**			**Pn**	**17 59 23.2**		**0.0**
I23K	**Minto, Yukon-K**	**3.08**	**12**			**Pn**	**17 59 23.7**		**+0.2**
I23K	**Minto, Yukon-K**	**3.08**	**12**	IAML			18 00 13.0		
	comp=E,51nm,0.5s								
I23K				IAML			18 00 13.5		
	comp=N,50nm,0.9s								
I23K	**Minto, Yukon-K**	**3.08**	**12**	P		**Pn**	**17 59 23.8**		**+0.2**
	baz=193,SNR=25								
I21K	**Tanana**	**3.08**	**351**			**Pn**	**17 59 24.1**		**+0.4**
I21K	**Tanana**	**3.08**	**351**	IAML			17 59 59.8		
	comp=E,54nm,0.2s								
I21K				IAML			18 00 00.0		
	comp=N,42nm,0.6s								
I21K	**Tanana**	**3.08**	**351**	P		**Pn**	**17 59 23.8**		**+0.1**
	baz=170,SNR=30								
O18K	**Koktuh Hills**	**3.14**	**225**			**Pn**	**17 59 24.9**		**+0.3**
O18K	**Koktuh Hills**	**3.14**	**225**	IAML			18 00 02.0		
	comp=E,41nm,0.4s								
O18K	**Koktuh Hills**	**3.14**	**225**	P		**Pn**	**17 59 24.9**		**+0.3**
	baz=41,SNR=9.2								
RIDG	**Independent Ri**	**3.16**	**57**			**Pn**	**17 59 25.8**		**+1.0**
RIDG	**Independent Ri**	**3.16**	**57**	IAML			18 00 20.5		
	comp=N,81nm,0.6s								
RIDG	**Independent Ri**	**3.16**	**57**	P		**Pn**	**17 59 25.8**		**+1.0**
	baz=242,SNR=50								
IL31		**3.17**	**32**			**Pn**	**17 59 24.8**		**0.0**
ILAR	**Eielson Array**	**3.17**	**32**			**Pn**	**17 59 24.8**		**0.0**
BMRM	**Bremner River**	**3.20**	**109**			**Pn**	**17 59 24.5**		**-0.8**
BMRM	**Bremner River**	**3.20**	**109**	IAML			18 00 16.6		
	comp=N,88nm,0.5s								
BMRM	**Bremner River**	**3.20**	**109**	P		**Pn**	**17 59 24.3**		**-1.0**
	baz=295								
POKR	**Poker Plat Res**	**3.34**	**25**			**Pn**	**17 59 27.4**		**+0.2**
POKR	**Poker Plat Res**	**3.34**	**25**	P		**Pn**	**17 59 27.3**		**+0.2**
	baz=208								
MENT	**Mentasta**	**3.38**	**73**			**Pn**	**17 59 27.6**		**-0.1**
GLB	**Gilahina Butte**	**3.40**	**99**			**Pn**	**17 59 27.5**		**-0.6**
GLB	**Gilahina Butte**	**3.40**	**99**	IAML			18 00 18.4		
	comp=N,55nm,1.0s								
GLB				IAML			18 00 22.8		
	comp=E,39nm,0.8s								
DOT	**Dot Lake**	**3.44**	**61**			**Pn**	**17 59 28.6**		**+0.1**
J25K	**Salcha River,**	**3.48**	**42**			**Pn**	**17 59 29.1**		**0.0**
J25K	**Salcha River,**	**3.48**	**42**	IAML			18 00 14.9		
	comp=N,42nm,0.7s								
J25K				IAML			18 00 15.7		
	comp=E,62nm,0.6s								
J25K	**Salcha River,**	**3.48**	**42**	P		**Pn**	**17 59 29.1**		**0.0**
	baz=227,SNR=42								
P18K	**Big Mountain,**	**3.51**	**220**			**Pn**	**17 59 30.0**		**+0.4**
Q19K	**Cape Douglas,**	**3.52**	**205**			**Pn**	**17 59 31.5**		**+1.8**
L26K	**Log Cabin Wild**	**3.56**	**72**			**Pn**	**17 59 30.9**		**+0.7**
L26K				IAML			18 00 29.8		
	comp=E,62nm,0.4s								
L26K				IAML			18 00 37.9		
	comp=N,76nm,0.4s								
SCRK	**Sand Creek**	**3.61**	**56**			**Pn**	**17 59 31.0**		**0.0**
SCRK	**Sand Creek**	**3.61**	**56**	IAML			18 00 17.6		
	comp=E,28nm,0.8s								
SCRK				IAML			18 00 18.1		
	comp=N,34nm,0.6s								
SCRK	**Sand Creek**	**3.61**	**56**	P		**Pn**	**17 59 31.0**		**0.0**
	baz=243,SNR=36								
H21K	**Melozitna Rive**	**3.63**	**347**			**Pn**	**17 59 31.2**		**+0.1**
H21K	**Melozitna Rive**	**3.63**	**347**	P		**Pn**	**17 59 31.0**		**-0.1**
	baz=165,SNR=15								
VRDI	**Verde Repeater**	**3.63**	**102**			**Pn**	**17 59 30.6**		**-0.7**
VRDI	**Verde Repeater**	**3.63**	**102**	IAML			18 00 26.4		
	comp=N,29nm,1.1s								
SYI	**Shuyak Island**	**3.64**	**193**			**Pn**	**17 59 32.0**		**+0.8**
Q20K	**Shuyak Island**	**3.64**	**193**	P		**Pn**	**17 59 31.6**		**+0.4**
	baz=12								
HMT	**Hamilton**	**3.65**	**117**			**Pn**	**17 59 29.5**		**-1.9**
M26K	**Nabesna, AK**	**3.66**	**83**			**Pn**	**17 59 31.5**		**-0.2**
M26K				IAML			18 00 30.8		
	comp=N,44nm,0.6s								
M26K				IAML			18 00 36.4		
	comp=E,38nm,0.4s								
H23K	**Yukon River**	**3.73**	**8**			**Pn**	**17 59 33.0**		**+0.4**
H23K	**Yukon River**	**3.73**	**8**	IAML			18 00 15.4		
	comp=N,30nm,0.6s								
H23K				IAML			18 00 15.8		
	comp=E,47nm,0.6s								
H23K	**Yukon River**	**3.73**	**8**	P		**Pn**	**17 59 32.9**		**+0.4**
	baz=189,SNR=13								
H22K	**Ishtalitna Cre**	**3.77**	**356**			**Pn**	**17 59 32.9**		**-0.1**
H22K	**Ishtalitna Cre**	**3.77**	**356**	P		**Pn**	**17 59 32.9**		**-0.1**
	baz=176,SNR=19								
GCSA	**Galena City Sc**	**3.77**	**316**	P		**Pn**	**17 59 33.1**		**+0.1**
	baz=131								
MCARA	**McCarthy VSA

	baz=271							
CTG	**Chitna Glacier**	**4.69**	**101**	P	**Pn**	**17 59 45.8**	**+0.1**	
	baz=289,SNR=8.1							
CTGM	**Chitina Glacie**	**4.69**	**100**		**Pn**	**17 59 46.0**	**+0.3**	
CTGM	**Chitina Glacie**	**4.69**	**100**	IAML		18 00 58.8		
	comp=N,21nm,0.6s							
CTGM				IAML		18 01 06.4		
	comp=E,13nm,0.8s							
YUK2	**White River**	**4.72**	**90**		**Pn**	**17 59 45.8**	**-0.3**	
P16K	**Nushagak River**	**4.72**	**232**		**Pn**	**17 59 46.7**	**+0.7**	
P16K	**Nushagak River**	**4.72**	**232**	P	**Pn**	**17 59 46.5**	**+0.5**	
	baz=45							
MESA	**MESA**	**4.73**	**111**		**Pn**	**17 59 46.0**	**-0.3**	
MESA	**MESA**	**4.73**	**111**	P	**Pn**	**17 59 46.0**	**-0.3**	
	baz=299							
LOGN	**Logan Glacier**	**4.89**	**101**		**Pn**	**17 59 48.3**	**-0.1**	
LOGN	**Logan Glacier**	**4.89**	**101**	IAML		18 01 03.9		
	comp=E,18nm,0.8s							
LOGN				IAML		18 01 04.6		
	comp=N,18nm,0.6s							
YUK3	**Moose Creek**	**4.90**	**90**		**Pn**	**17 59 48.3**	**-0.4**	
YUK3	**Moose Creek**	**4.90**	**90**	P	**Pn**	**17 59 48.3**	**-0.4**	
	baz=279,SNR=11							
TABL	**Table Mountain**	**4.97**	**106**		**Pn**	**17 59 49.2**	**-0.4**	
TABL	**Table Mountain**	**4.97**	**106**	IAML		18 01 07.9		
	comp=N,20nm,0.7s							
TABL				IAML		18 01 19.4		
	comp=E,14nm,1.2s							
COLD	**Coldfoot**	**5.10**	**3**		**Pn**	**17 59 51.5**	**+0.3**	
COLD	**Coldfoot**	**5.10**	**3**	P	**Pn**	**17 59 51.7**	**+0.5**	
	baz=183							
DAWY	**Dawson**	**5.53**	**65**		**Pn**	**17 59 56.7**	**-0.4**	
YUK4	**Talbot Arm**	**5.84**	**93**	P	**Pn**	**18 00 01.5**	**+0.1**	
	baz=282							
BCPM	**Bancas Point**	**5.86**	**107**		**Pn**	**18 00 01.5**	**-0.1**	
BM03	**Burnt Mountain**	**5.92**	**24**		**Pn**	**18 00 02.5**	**+0.2**	
BMAR	**Burnt Mountain**	**5.93**	**24**	Pn	**Pn**	**18 00 03.2**	**+0.7**	
YUK6	**Outpost Mounta**	**6.08**	**96**	P	**Pn**	**18 00 04.1**	**-0.6**	
	baz=287							
I29M	**Ogilvie Camp,**	**6.41**	**54**		**Pn**	**18 00 10.9**	**+1.8**	
TOLK	**Toolik Lake Re**	**6.54**	**4**		**Pn**	**18 00 12.2**	**+1.4**	
TOLK	**Toolik Lake Re**	**6.54**	**4**	P	**Pn**	**18 00 12.7**	**+1.9**	
	baz=185							
N30M	**Aishikik Lake**	**6.54**	**90**	P	**Pn**	**18 00 09.9**	**-1.1**	
	baz=282							

*NEIC **28** 18:03:19.1±2.6, 43.79°N±0.03°×105.33°W±0.05, h0km±2km, ML3.1/48, Error ellipse: s-maj=6.0km s-min=5.1km az=230.0*

*IDC **28** 18:03:21.0±1.6, 44.22°N×105.87°W, h0km, mbtmp3.2/3, ML2.9/3, Error ellipse: s-maj=60.6km s-min=9.8km az=145.0*

ISC 28 18:03:18.4±1.1, 43.73°N±0.06°×105.35°W±0.05, h0km, n42, σ1s57/40, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**1.03**	**67**		**Pg**	**18 03 37.7**	**-0.4**
K22A	**Casper**	**1.38**	**219**		**Pn**	**18 03 44.7**	**-0.4**
K22A				IAML		18 04 08.2	
	comp=N,191nm,0.8s						
PHWY	**Pilot Hill**	**2.43**	**182**		**Pn**	**18 04 00.8**	**+1.2**
PHWY				IAML		18 04 40.0	
	comp=N,83nm,0.9s						
RWWY	**Rawlins**	**2.46**	**214**		**Pn**	**18 04 02.2**	**+2.2**
N23A	**Red Feather La**	**2.87**	**189**	Pn	**Pn**	**18 04 07.5**	**+1.8**
N23A				IAML		18 04 50.6	
	comp=N,84nm,0.6s						
N23A				IAML		18 05 03.7	
	comp=E,66nm,1.0s						
LAO	**LASA Array**	**3.02**	**349**	Pn	**Pn**	**18 04 07.3**	**-0.3**
RLMT	**Red Lodge**	**3.13**	**298**	Pn	**Pn**	**18 04 10.1**	**+0.9**
RLMT				IAML		18 05 03.8	
	comp=E,39nm,1.2s						
RLMT				IAML		18 05 08.0	
	comp=E,52nm,1.2s						
PD31	**Pinedale Array**	**3.22**	**254**	Pn	**Pn**	**18 04 12.4**	**+2.0**
PDAR	**Pinedale Array**	**3.22**	**254**	Pn	**Pn**	**18 04 13.0**	**+2.6**
	comp=E,0.6nm,0.3s,baz=70,slow=12,SNR=26						
PDAR				Lg	Lg	18 04 56.8	
	comp=E,2.3nm,0.3s,baz=64,slow=31,SNR=12						
	comp=E,1.5nm,0.4s						
PDAR	**Pinedale Array**	**3.22**	**254**	Pn	**Pn**	**18 04 12.0**	**+1.6**
BW06	**Boulder Array**	**3.22**	**254**	Pn	**Pn**	**18 04 12.7**	**+2.3**
GCMT	**Greycliff**	**3.70**	**305**		**Pn**	**18 04 18.0**	**+1.1**
LOHW	**Long Hollow**	**3.81**	**270**		**Pn**	**18 04 20.4**	**+1.8**
FLWY	**Flagg Ranch**	**3.88**	**277**		**Pn**	**18 04 20.4**	**+0.9**
FLWY				IAML		18 05 35.8	
	comp=E,38nm,0.9s						
FLWY				IAML		18 06 04.7	
	comp=E,39nm,1.2s						
MOOW	**Moose Ponds**	**3.91**	**272**		**Pn**	**18 04 22.0**	**+2.1**
SNOW	**Snow King Moun**	**3.93**	**268**	Pn	**Pn**	**18 04 21.9**	**+1.6**
SNOW				IAML		18 05 27.8	
	comp=E,36nm,1.3s						
SNOW				IAML		18 05 44.0	
	comp=E,37nm,1.3s						
ISCO	**Idaho Springs**	**3.94**	**183**	Pn	**Pn**	**18 04 20.7**	**+0.4**
ISCO				IAML		18 05 28.8	
	comp=E,22nm,0.9s						
ISCO				IAML		18 05 31.5	
	comp=E,16nm,0.8s						
YPP	**Pitchstone Pla**	**3.97**	**280**		**Pn**	**18 04 21.6**	**+0.8**
REDW	**Red Top Meadow**	**4.01**	**267**		**Pn**	**18 04 22.3**	**+0.9**
REDW				IAML		18 05 58.8	
	comp=E,35nm,1.0s						
YFT	**Old Faithful**	**4.01**	**282**		**Pn**	**18 04 22.9**	**+1.5**
YFT				IAML		18 05 30.7	
	comp=E,24nm,0.9s						
TPAW	**Teton Pass**	**4.07**	**269**		**Pn**	**18 04 24.6**	**+2.4**
TPAW				IAML		18 05 40.7	
	comp=E,33nm,0.8s						
TPAW				IAML		18 05 45.0	
	comp=E,25nm,1.0s						
O20A	**White River Ci**	**4.19**	**212**	Pn	**Pn**	**18 04 22.8**	**-1.0**
O20A				IAML		18 05 37.0	
	comp=E,35nm,1.0s						
O20A				IAML		18 05 43.1	
	comp=N,31nm,0.9s						
AHID	**Auburn Hatcher**	**4.31**	**259**		**Pn**	**18 04 25.7**	**+0.3**
AHID				IAML		18 05 52.6	
	comp=N,23nm,0.9s						
YHL	**Hebgen Lake**	**4.33**	**287**		**Pn**	**18 04 26.0**	**+0.2**
YHL				IAML		18 05 42.2	
	comp=N,23nm,1.1s						
YHL				IAML		18 05 44.9	
	comp=E,30nm,1.0s						
ECR	**Eagle Creek**	**4.44**	**263**		**Pn**	**18 04 28.3**	**+1.1**
SMCO	**Snowmass**	**4.71**	**196**	Pn	**Pn**	**18 04 31.9**	**+0.8**
BOZ	**Bozeman (W)**	**4.85**	**295**	Pn	**Pn**	**18 04 33.6**	**+0.8**
BOZ				IAML		18 05 52.2	
	comp=E,16nm,1.0s						
BOZ				IAML		18 05 54.0	
	comp=E,12nm,0.8s						
HWUT	**Hardware Ranch**	**5.05**	**247**		**Pn**	**18 04 36.9**	**+1.3**
KSCO	**Kaye Shedlock'**	**5.14**	**156**		**Pn**	**18 04 36.4**	**-0.4**
EGMT	**Eagleton**	**5.28**	**326**		**Pn**	**18 04 39.0**	**+0.4**
DLMT	**Dillon**	**5.43**	**290**		**Pg**	**18 05 00.4**	**-2.0**
HRY	**Holter Researc**	**5.46**	**305**		**Pn**	**18 04 40.2**	**-0.9**
P18A	**Preston Nutter**	**5.50**	**223**		**Pn**	**18 04 43.1**	**+1.3**
HVU	**Hansel Valley**	**5.80**	**253**		**Pn**	**18 04 45.5**	**-0.4**
PV07	**Paradox Valley**	**5.84**	**206**		**Pn**	**18 04 43.7**	**-2.8**
PV11	**David Mesa, Pa**	**6.04**	**207**		**Pn**	**18 04 49.4**	**+0.1**
TMUT	**Trail Mountain**	**6.24**	**227**		**Pn**	**18 04 51.2**	**-0.8**
ECSD	**EROS Data Cent**	**6.33**	**87**		**Pn**	**18 04 52.5**	**-0.4**
ULM	**Lac du Bonnet**	**9.19**	**41**	Pn	**Pn**	**18 05 31.7**	**-0.4**
	comp=E,0.5nm,0.3s,baz=232,slow=13,SNR=2.3						
ULM				Lg	Lg	18 08 01.0	
	comp=E,0.2nm,0.3s,baz=252,slow=20,SNR=2.2						
	comp=E,2.0nm,0.5s						
I56US	**NEWPORT INFRAS**	**9.36**	**303**	*i*		18 58 00.0	
	baz=117,slow=306,SNR=3.0						
NVAR	**Mina Array Bea**	**11.11**	**246**	Pn	**Pn**	**18 06 03.2**	**+4.4**
	comp=E,0.1nm,0.3s,baz=60,slow=18,SNR=3.4						
	comp=E,0.5nm,0.8s						
TXAR	**Lajitas Array**	**14.43**	**174**	Lg	Lg	18 11 10.8	
	baz=14,slow=28,SNR=5.8						

*IDC **28** 18:05:38.8±1.6, 14.98°S×167.07°E, h0km, mb3.9/8, mbtmp4.0/9, ML4.6/1, Error ellipse: s-maj=51.9km s-min=23.6km az=136.0*

*NEIC **28** 18:05:48.4±1.9, 14.74°S±0.09°×166.8E±0.1, h57km±5km, mb4.5/12, Error ellipse: s-maj=18.8km s-min=12.3km az=71.0*

ISC 28 18:05:47.9±0.8, 14.73°S±0.09°×166.7E±0.1, h50km, n28, σ1s05/28, mb4.1/11, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LIFNC	**LIFOU**	**6.03**	**175**	Pn	**Pn**	**18 07 14.1**	**-0.5**
KOUNC	**Koumac, New Ca**	**6.24**	**202**		**Pn**	**18 07 18.0**	**+0.6**
MARNC	**Mare, Loyalty**	**6.83**	**170**	Pn	**Pn**	**18 07 26.8**	**+1.3**
ONTNC	**Ouen Toro**	**7.54**	**182**	Pn	**Pn**	**18 07 34.5**	**-0.8**
OUENC	**Ouen Island, N**	**7.65**	**179**	Pn	**Pn**	**18 07 36.7**	**-0.1**
PINNC	**Pines Island,**	**7.87**	**175**	Pn	**Pn**	**18 07 40.1**	**+0.3**
HNR	**Honiara**	**8.47**	**308**	Pn	**Pn**	**18 07 49.5**	**+1.5**
	7.1nm,0.3s,baz=154,slow=9.3,SNR=2.8						
	94nm,0.8s						
EIDS	**Eidsvold**	**18.09**	**232**	P	**P**	**18 09 56.2**	**+0.6**
PMG	**Port Moresby**	**19.85**	**283**	P	**P**	**18 10 15.2**	**+0.3**
PMG				IAmb	IAmb	18 10 22.4	
	comp=Z,49nm,1.2s						
CTA	**Charters Tower**	**20.24**	**252**	P	**P**	**18 10 19.1**	**-0.1**
	comp=Z,6.0nm,0.9s,baz=86,slow=8.0,SNR=2.6						
	comp=Z,6.0nm,0.9s						
CTAO	**Charters Tower**	**20.24**	**252**	P	**P**	**18 10 19.8**	**+0.6**
CTAO				IAmb	IAmb	18 10 57.1	
	comp=Z,19nm,1.2s						
BKZ	**Black Stump Fm**	**25.82**	**162**	P	**P**	**18 11 15.5**	**+1.0**
BKZ				IAmb	IAmb	18 11 33.0	
	comp=Z,29nm,1.4s						
STKA	**Stephens Creek**	**28.59**	**229**	P	**P**	**18 11 38.4**	**-1.1**
	comp=Z,1.7nm,0.8s,baz=18,slow=9.6,SNR=1.5						
	comp=Z,1.7nm,0.8s						
WRA	**Warramunga Arr**	**31.32**	**256**	P	**P**	**18 12 01.9**	**-1.8**
	comp=Z,0.7nm,0.9s,baz=89,slow=9.9,SNR=1.7						
	comp=Z,0.7nm,0.9s						
AS31	**Alice Springs**	**32.18**	**249**	P	**P**	**18 12 09.9**	**-1.5**
ASAR	**Alice Springs**	**32.18**	**249**	P	**P**	**18 12 09.8**	**-1.6**
	comp=Z,0.6nm,0.6s,baz=75,slow=9.8,SNR=13						
	comp=Z,0.6nm,0.6s						
FORT	**Forrest**	**38.85**	**239**	P	**P**	**18 13 07.1**	**-1.3**
PEA0B	**Petropavlovsk-**	**68.01**	**354**	P	**P**	**18 16 40.4**	**-1.3**
PETK	**Petropavlovsk-**	**68.01**	**354**	P	**P**	**18 16 40.5**	**-1.2**
	comp=Z,1.6nm,0.8s,baz=128,slow=9.3,SNR=2.7						
	comp=Z,1.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**74.47**	**294**	P	**P**	**18 17 22.6**	**+1.0**
	comp=Z,0.7nm,0.8s,baz=137,slow=4.4,SNR=6.7						
	comp=Z,0.7nm,0.8s						
MA2	**Magadan**	**75.17**	**352**	P	**P**	**18 17 24.8**	**+0.1**
QSPA	**South Pole Qui**	**75.30**	**180**	P	**P**	**18 17 27.0**	**+1.4**
QSPA				IAmb	IAmb	18 17 50.7	
	comp=Z,5.8nm,1.4s						
SONM	**Songino Array**	**82.19**	**324**	P	**P**	**18 18 04.2**	**+0.5**
	comp=Z,0.2nm,0.4s,baz=113,slow=3.3,SNR=1.7						
	comp=Z,0.2nm,0.4s						
I21K	**Tanana**	**85.54**	**16**	P	**P**	**18 18 19.7**	**-0.6**
I21K				IAmb	IAmb	18 18 21.3	
	comp=Z,4.7nm,0.8s						
IMAR	**Indian Mountai**	**85.70**	**15**	P	**P**	**18 18 20.9**	**-0.2**
ILAR	**Eielson Array**	**86.69**	**18**	P	**P**	**18 18 24.6**	**-1.4**
	comp=Z,1.7nm,0.8s,baz=232,slow=5.6,SNR=17						
	comp=Z,1.7nm,0.8s						
J25K	**Salcha River,**	**87.04**	**19**	P	**P**	**18 18 26.9**	**-0.9**
J25K				IAmb	IAmb	18 18 35.8	
	comp=Z,2.5nm,1.1s						
ARCES	**ARCESS Array B**	**120.12**	**345**	PKP	**PKPdf**	**18 24 32.3**	**-0.4**
	comp=Z,1.2nm,0.8s,baz=69,slow=3.0,SNR=7.0						

MAN 28 18:10:36.5, 9.05N×126.39E, h23km, mb3.7, ML2.5, MS2.0, Mindanao

*SOME **28** 18:13:06.7, 39.43°N×73.72E, h5km*

*KRNET **28** 18:13:07.5±0.1, 39.42°N×73.69E, mb3.9*

*IDC **28** 18:13:08.0±1.4, 39.30°N×73.50E, h0km, mb3.6/6, mbtmp3.5/11, ML3.0/5, Error ellipse: s-maj=24.5km s-min=19.6km az=145.0*

*NNC **28** 18:13:11.6±1.1, 39.54°N×73.71E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=8.8km s-min=5.3km az=172.0*

ISC 28 18:13:09.4±0.8, 39.36N±0.05°×73.53E±0.03, h10km, n71, σ2s75/104, mb3.5/6, 19C-17D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.30**	**334**	⇓*e*P	**Pn**	**18 13 32.3**	**-1.4**
	baz=28						
OHH				⇓*e*S	**Sb**	**18 13 50.6**	**-0.2**
	baz=28						
DRK	**Karamyk**	**1.35**	**276**	⇑*e*P	**Pg**	**18 13 35.1**	**-0.2**
	baz=73						
DRK				⇑*e*S	**Sg**	**18 13 55.2**	**+2.4**
	baz=73						
BTK	**Batken**	**2.21**	**289**	⇑*i*P	**Pb**	**18 13 48.9**	**-0.6**
	baz=87						
BTK				⇑*e*S	**Sg**	**18 14 18.7**	**-1.6**
	baz=87						
GAR	**Garm**	**2.52**	**263**	⇑*i*P	**Pb**	**18 13 53.7**	**-1.2**
	baz=62						
GAR				⇑*e*S	**Sb**	**18 14 27.0**	**+1.0**
	baz=62						
ARLS	**Aral**	**2.57**	**13**	⇓*e*P	**Pn**	**18 13 51.7**	**+0.4**
	baz=11						
ARLS				⇓*e*S	**Sn**	**18 14 23.8**	**+1.1**
	baz=11						
AML	**Almayashu**	**2.77**	**2**	P	**Pn**	**18 13 55.6**	**+1.3**
	SNR=17						
TRKS	**Terek-Say**	**2.84**	**321**	⇓*e*P	**Pn**	**18 13 55.8**	**+0.9**
	baz=18						
TRKS				⇓*i*S	**Sn**	**18 14 30.9**	**+1.7**
	baz=18						
UCH	**Uchtor**	**2.96**	**14**	P	**Pn**	**18 13 59.0**	**+2.1**
	SNR=33						
UCH	**Uchtor**	**2.96**	**14**	⇓*e*P	**Pn**	**18 13 57.5**	**+0.6**
	baz=12						
UCH				⇓*e*S	**Sn**	**18 14 33.6**	**+0.8**
	baz=12						
EKS2	**Erkin-Say**	**3.31**	**3**	P	**Pn**	**18 14 03.7**	**+2.3**
	SNR=22						
EKS2	**Erkin-Say**	**3.31**	**3**	⇓*e*P	**Pn**	**18 14 02.2**	**+0.8**
	baz=1.0						
EKS2				⇓*e*S	**Sn**	**18 14 42.0**	**+1.2**
	baz=1.0						
AAK	**Ala-Archa**	**3.36**	**12**	P	**Pb**	**18 14 05.2**	**-3.8**
	SNR=14						
AAK	**Ala-Archa**	**3.36**	**12**	Pn	**Pb**	**18 14 05.3**	**-3.8**
	8.6nm,0.3s,baz=156,slow=7.9,SNR=20						
AAK				Sn	**Sb**	**18 14 47.3**	**-2.8**
	5.1nm,0.3s,baz=124,slow=9.6,SNR=2.3						
AAK				Lg	Lg	18 14 52.9	
	9.5nm,0.3s,baz=108,slow=20,SNR=11						
	15nm,0.3s						
AAK	**Ala-Archa**	**3.36**	**12**	⇓*e*P	**Pn**	**18 14 02.7**	**+0.6**
	baz=11						
AAK				⇓*e*S	**Sn**	**18 14 42.9**	**+0.8**
	baz=11						
MRKS	**Merke**	**3.39**	**356**	*e*P	**Pb**	**18 14 11.3**	**+1.7**
	17nm,0.5s						
MRKS				*e*S	**Sg**	**18 14 57.6**	**-0.8**
	53nm,0.7s						
MRKS	**Merke**	**3.39**	**356**	Pg	**Pb**	**18 14 09.5**	**-0.2**
	17nm,0.5s						
MRKS				Lg	Lg	18 14 55.7	
	53nm,0.7s						
KBK	**Karagaybulak**	**3.47**	**18**	P	**Pb**	**18 14 06.9**	**-4.1**
	SNR=6.6						
KBK	**Karagaybulak**	**3.47**	**18**	⇑*e*P	**Pn**	**18 14 04.2**	**+0.6**
	baz=16						
KBK				⇑*e*S	**Sn**	**18 14 45.5**	**+0.7**
	baz=16						
CHGR	**Chuyangaron**	**3.48**	**260**	⇑*e*P	**Pb**	**18 14 07.0**	**-4.1**
	baz=59						
CHGR				⇑*e*S	**Sb**	**18 14 50.0**	**-3.5**
	baz=59						
ULHL	**Ulahol**	**3.54**	**35**	P	**Pb**	**18 14 11.4**	**-0.9**
	SNR=47						
ULHL	**Ulahol**	**3.54**	**35**	⇑*i*P	**Pn**	**18 14 05.1**	**+0.4**
	baz=34						
ULHL				⇑*e*S	**Sn**	**18 14 46.9**	**+0.2**
	baz=34						
CHMS	**Chumysh**	**3.75**	**14**	P	**Pn**	**18 14 10.1**	**+2.7**
	SNR=7.0						
CHMS	**Chumysh**	**3.75**	**14**	⇓Pn	**Pn**	**18 14 09.6**	**+2.2**
	18nm,0.8s						
CHMS				⇑Lg	Lg	18 15 03.5	
	14nm,0.6s						

TKM2	**Tokmak 2**	**3.89**	**23**	P	**Pn**	**18 14 11.1**	**+1.6**	
	SNR=8.7							
TKM2	**Tokmak 2**	**3.89**	**23**	⇓Pn	**Pn**	**18 14 10.8**	**+1.4**	
	9.1nm,0.6s							
TKM2				⇑Lg	Lg	18 15 08.2		
	29nm,0.6s							
USP	**Ospenovka**	**3.97**	**10**	P	**Pn**	**18 14 13.0**	**+2.5**	
	SNR=8.0							
KST	**Kastek**	**4.11**	**26**	*e*P	**Pb**	**18 14 20.7**	**-1.2**	
	8.5nm,0.4s							
KST				*e*S	**Sb**	**18 15 14.2**	**+2.4**	
	33nm,0.7s							
KST	**Kastek**	**4.11**	**26**	Pg	**Pb**	**18 14 20.7**	**-1.2**	
	8.5nm,0.4s							
KST				Lg	Lg	18 15 14.2		
	33nm,0.7s							
SGDS	**Sogindy**	**4.17**	**11**	*e*P	**Pb**	**18 14 22.6**	**-0.3**	
	16nm,0.7s							
SGDS				*e*S	**Sb**	**18 15 17.6**	**+4.1**	
	19nm,0.7s							
SGDS	**Sogindy**	**4.17**	**11**	Pg	**Pb**	**18 14 22.6**	**-0.3**	
	16nm,0.7s							
SGDS				Lg	Lg	18 15 17.6		
	22nm,0.7s							
DGS	**Degeres**	**4.23**	**23**	*e*P	**Pb**	**18 14 25.0**	**+1.0**	
	16nm,0.6s							
DGS				*e*S	**Sg**	**18 15 20.9**	**-4.4**	
	40nm,0.8s							
DGS	**Degeres**	**4.23**	**23**	Pg	**Pb**	**18 14 24.0**	**0.0**	
	15nm,0.6s							
DGS				Lg	Lg	18 15 20.9		
	40nm,0.8s							
MTBS	**Maitube**	**4.36**	**29**	*e*P	**Pb**	**18 14 26.1**	**+0.1**	
	10nm,0.3s							
MTBS				*e*S	**Sg**	**18 15 23.7**	**-5.5**	
	22nm,0.6s							
MTBS	**Maitube**	**4.36**	**29**	Pg	**Pb**	**18 14 26.2**	**+0.1**	
	10nm,0.3s							
MTBS				Lg	Lg	18 15 23.7		
	22nm,0.6s							
KK31	**Karatay Array**	**4.38**	**330**	Pn	**Pn**	**18 14 18.6**	**+2.6**	
	1.9nm,0.3s,baz=145,slow=13,SNR=41							
KK31				⇑Pg	**Pb**	**18 14 28.0**	**+1.5**	
	4.8nm,0.5s,baz=144,slow=15,SNR=18							
KK31				⇑Sn	**Sn**	**18 15 11.1**	**+4.0**	
	3.6nm,0.3s							
KK31				⇓Lg	Lg	18 15 24.8		
	6.8nm,0.4s,baz=145,slow=30,SNR=3.8							
TNSS	**Tian-Shan**	**4.49**	**34**	*e*P	**Pb**	**18 14 29.5**	**+0.9**	
	10nm,0.4s							
TNSS				*e*S	**Sg**	**18 15 29.4**	**-4.2**	
	8.1nm,0.9s							
TNSS	**Tian-Shan**	**4.49**	**34**	Pg	**Pb**	**18 14 29.5**	**+0.9**	
	10nm,0.4s							
TNSS				Lg	Lg	18 15 29.4		
	8.1nm,0.9s							
BRLS	**Borolday**	**4.61**	**324**	*e*P	**Pb**	**18 14 30.6**	**+0.2**	
	3.4nm,0.3s							
BRLS				*e*S	**Sg**	**18 15 31.7**	**-5.7**	
	28nm,0.7s							
KRBS	**Karabastau**	**4.62**	**20**	*e*P	**Pb**	**18 14 30.4**	**-0.3**	
	4.0nm,0.4s							
KRBS				*e*S	**Sb**	**18 15 30.8**	**+4.3**	
	18nm,0.7s							
KNDC	**Almaty**	**4.64**	**33**	⇑Pg	**Pb**	**18 14 33.8**	**+2.8**	
	31nm,0.8s							
KNDC				⇓Lg	Lg	18 15 32.8		
	39nm,0.5s							
KTBS	**Karatobe**	**4.95**	**27**	*e*P	**Pb**	**18 14 37.0**	**+0.8**	
	6.9nm,0.7s							
KTBS				*e*S	**Sg**	**18 15 42.0**	**-6.4**	
	47nm,0.8s							
KTBS	**Karatobe**	**4.95**	**27**	Pg	**Pb**	**18 14 37.0**	**+0.8**	
	6.9nm,0.7s							
KTBS				Lg	Lg	18 15 42.0		
	47nm,0.8s							
KUU	**Kurty**	**5.00**	**24**	*e*P	**Pb**	**18 14 37.7**	**+0.7**	
	7.6nm,0.5s							
KUU				*e*S	**Sg**	**18 15 43.5**	**-6.3**	
	24nm,0.6s							
KUU	**Kurty**	**5.00**	**24**	Pg	**Pb**	**18 14 37.7**	**+0.7**	
	7.6nm,0.5s							
KUU				Lg	Lg	18 15 43.5		
	24nm,0.6s							
CHKK	**Chushkaly**	**5.19**	**29**	*e*P	**Pb**	**18 14 40.6**	**+0.5**	
	3.9nm,0.6s							
CHKK				*e*S	**Sb**	**18 15 48.5**	**+6.0**	
	18nm,0.8s							
CHKK	**Chushkaly**	**5.19**	**29**	Pg	**Pb**	**18 14 40.6**	**+0.5**	
	3.9nm,0.6s							
CHKK				Lg	Lg	18 15 48.5		
	18nm,0.8s							
SATY	**Saty**	**5.21**	**43**	*e*P	**Pb**	**18 14 41.3**	**+0.6**	
	1.3nm,0.1s							
SATY				*e*S	**Sb**	**18 15 49.5**	**+6.0**	
	16nm,0.8s							
SATY	**Saty**	**5.21**	**43**	Pg	**Pb**	**18 14 41.3**	**+0.6**	
	1.3nm,0.1s							
SATY				Lg	Lg	18 15 49.5		
	16nm,0.8s							
KURS	**Kuram**	**5.40**	**39**	*e*P	**Pb**	**18 14 45.0**	**+1.1**	
	6.8nm,0.8s							
KURS				*e*S	**Sg**	**18 15 55.9**	**-6.9**	
	9.0nm,1.4s							
KURS	**Kuram**	**5.40**	**39**	Pg	**Pb**	**18 14 45.0**	**+1.1**	
	6.8nm,0.8s							
KURS				Lg	Lg	18 15 55.9		
	9.0nm,1.4s							
KPKS	**Kokpek**	**5.64**	**42**	*e*P	**Pb**	**18 14 49.6**	**+1.6**	
	3.2nm,0.5s							
KPKS				*e*S	**Sg**	**18 16 04.1**	**-6.4**	
	18nm,0.7s							
KPKS	**Kokpek**	**5.64**	**42**	Pg	**Pb**	**18 14 49.6**	**+1.6**	
	3.2nm,0.5s							
KPKS				Lg	Lg	18 16 04.1		
	18nm,0.7s							
ARXS	**Arharly**	**5.82**	**32**	*e*P	**Pb**	**18 14 51.4**	**+0.4**	
	7.5nm,0.5s							
ARXS				*e*S	**Sb**	**18 16 07.5**	**+6.7**	
	17nm,0.9s							
ARXS	**Arharly**	**5.82**	**32**	Pg	**Pb**	**18 14 51.4**	**+0.4**	
	7.5nm,0.5s							
ARXS				Lg	Lg	18 16

1.0nm,0.5s
SONM **Songino Array** 25.11 59 P P 18 18 34.8 +0.4
0.8nm,0.9s,baz=258,slow=7.2,SNR=2.6
0.8nm,0.9s
FINES **FINESS Array B** 36.31 323 P P 18 20 13.4 +0.5
0.5nm,0.4s,baz=111,slow=10,SNR=8.9
0.5nm,0.4s
ARCES **ARCESS Array B** 39.32 336 P P 18 20 38.4 +0.2
0.4nm,0.5s,baz=98,slow=8.7,SNR=5.1
0.4nm,0.5s
NOA **NORSAR Array B** 43.36 321 P P 18 21 11.3 -0.3
0.4nm,0.5s,baz=92,slow=7.7,SNR=3.4
0.4nm,0.5s
TORD **Torodi Ar. Bea** 67.78 269 P P 18 24 07.2 -0.5
0.4nm,0.6s,baz=66,slow=6.5,SNR=2.5
0.4nm,0.6s
WRA **Warramunga Arr** 81.86 124 P P 18 25 29.5 +0.5
0.3nm,0.6s,baz=321,slow=5.1,SNR=2.1
0.3nm,0.6s

MAN 28 18:31:59.1, 6.90N×125.56E, h20km, mb4.1, ML2.8, MS2.5, Mindanao

*IDC **28** 19:00:44.7±2.7,21.38S×169.29E, h0km, mb3.8/5, mbtmp3.8/5, MS3.3/6, Error ellipse: s-maj=125.9km s-min=34.0km az=159.0*
*NOU **28** 19:00:53.8, 18.03S×167.77E, h0km, MLv5.2/7, Vanuatu Islands*
*NEIC **28** 19:00:55.5±2.2, 18.25S±0.10×168.09E±0.09, h32km±5km, mb4.5/8, Error ellipse: s-maj=14.3km s-min=11.8km az=161.0*
ISC 28 19:00:55.5±0.6, **18.14S**±0.08×**168.05E**±0.09, **h32**km, **n45**, σ1s**66**/34, **mb4.0**/8, **MS3.1**/4, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**0.43**	**18**	P	**Pb**	**19 01 03.7**	**-1.3**
LIFNC	**LIFOU**	**2.73**	**196**		**Pn**	**19 01 35.9**	**-1.3**
MARNC	**Mare, Loyalty**	**3.33**	**180**		**Pn**	**19 01 42.9**	**-2.4**
KOUNC	**Koumac, New Ca**	**4.29**	**235**		**Pn**	**19 01 57.4**	**-1.2**
OUENC	**Ouen Island, N**	**4.41**	**195**	Pn	**Pn**	**19 02 01.7**	**+1.5**
ONTNC	**Ouen Toro**	**4.41**	**200**	Pn	**Pn**	**19 02 00.3**	**0.0**
PINNC	**Pines Island,**	**4.49**	**187**	Pn	**Pn**	**19 02 01.5**	**+0.2**
MSVF	**Nonsavu**	**9.53**	**89**	LR	LR	19 06 17.8	
	comp=Z,312nm,19.0s,baz=229,slow=37						
MSVF	**Nonsavu**	**9.53**	**89**	Pn	**Pn**	**19 03 10.4**	**-0.2**
AFI	**Afiamalu**	**19.84**	**81**	LR	LR	19 11 19.9	
	comp=Z,78nm,18.8s,baz=114,slow=33						
CTA	**Charters Tower**	**20.69**	**261**	LR	LR	19 12 40.1	
	comp=Z,80nm,20.6s,baz=84,slow=33						
CTAO	**Charters Tower**	**20.69**	**261**	P	**P**	**19 05 32.4**	**-0.7**
CTAO				IAmb	IAmb	19 05 53.1	
	comp=Z,26nm,1.4s						
BKZ	**Black Stump Fm**	**22.20**	**162**	P	**P**	**19 05 47.3**	**-1.9**
BKZ				IAmb	IAmb	19 06 04.9	
	comp=Z,22nm,1.5s						
MSWZ	**Moikau Station**	**24.01**	**167**	P	**P**	**19 06 04.8**	**-2.5**
PLWZ	**Palliser**	**24.16**	**167**	P	**P**	**19 06 05.5**	**-3.3**
KHZ	**Kahutara**	**24.65**	**170**	P	**P**	**19 06 10.4**	**-2.8**
KHZ				IAmb	IAmb	19 06 26.1	
	comp=Z,37nm,1.5s						
LTZ	**Lake Taylor**	**24.83**	**173**	P	**P**	**19 06 12.7**	**-2.2**
STKA	**Stephens Creek**	**27.51**	**235**	LR	LR	19 15 33.3	
	comp=Z,48nm,18.9s,baz=21,slow=33						
WRA	**Warramunga Arr**	**31.89**	**261**	P	**P**	**19 07 17.2**	**-1.0**
	comp=Z,0.6nm,1.1s,baz=82,slow=6.3,SNR=1.5						
	comp=Z,0.6nm,1.1s						
WRA	**Warramunga Arr**	**31.89**	**261**	P	**P**	**19 07 17.2**	**-1.0**
WRA	**Warramunga Arr**	**31.89**	**261**	IAmb	IAmb	19 07 18.0	
	comp=Z,0.4nm,1.4s						
ASAR	**Alice Springs**	**32.32**	**254**	P	**P**	**19 07 20.1**	**-1.9**
	comp=Z,0.6nm,0.7s,baz=83,slow=8.4,SNR=8.7						
	comp=Z,0.6nm,0.7s						
ASAR	**Alice Springs**	**32.32**	**254**	P	**P**	**19 07 20.1**	**-1.9**
FAKI	**Fak Fak**	**38.19**	**289**	P	**P**	**19 08 13.6**	**+1.1**
FORT	**Forrest**	**38.32**	**243**	P	**P**	**19 08 13.8**	**+0.4**
ASAJ	**Asahikawa**	**66.18**	**340**	LR	LR	19 36 07.2	
	comp=Z,30nm,20.4s,baz=158,slow=30						
KSRS	**Korea Array**	**66.97**	**326**	LR	LR	19 39 17.9	
	comp=Z,13nm,20.6s,baz=240,slow=33						
PETK	**Petropavlovsk-**	**71.51**	**353**	P	**P**	**19 12 12.9**	**0.0**
QSPA	**South Pole Qui**	**71.91**	**180**	P	**P**	**19 12 18.4**	**+3.0**
QSPA				IAmb	IAmb	19 12 21.8	
	comp=Z,5.7nm,1.1s						
CMAR	**Chiang Mai Arr**	**77.03**	**294**	P	P	19 12 54.8	+9.0
	comp=Z,1.2nm,1.0s,baz=132,slow=3.9,SNR=5.0						
	comp=Z,1.2nm,1.0s						
CMAR	**Chiang Mai Arr**	**77.03**	**294**		pP	19 12 54.8	0.0
SONM	**Songino Array**	**85.67**	**324**	P	P	19 13 40.5	+9.4
	comp=Z,0.7nm,0.8s,baz=154,slow=4.5,SNR=5.6						
	comp=Z,0.7nm,0.8s						
SONM	**Songino Array**	**85.67**	**324**		pP	19 13 40.5	0.0
NVAR	**Mina Array Bea**	**88.92**	**49**	P	**P**	**19 13 47.4**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=240,slow=7.1,SNR=2.8						
	comp=Z,0.6nm,0.7s						
NVAR	**Mina Array Bea**	**88.92**	**49**	P	**P**	**19 13 47.4**	**+0.2**
TROLL	**Troll, Antarti**	**89.54**	**184**	P	**P**	**19 13 51.8**	**+2.3**
SNAA	**Sanae**	**90.20**	**183**	P	**P**	**19 13 53.8**	**+1.3**
VNA3	**Neumayer Olymp**	**90.84**	**181**	P	**P**	**19 13 57.8**	**+2.4**
VNA2	**Neumayer--Watz**	**91.11**	**181**	P	**P**	**19 13 58.6**	**+1.9**
ARCES	**ARCESS Array B**	**123.72**	**345**	PKP	**PKiKP**	**19 19 49.8**	**+0.2**
	comp=Z,3.0nm,0.9s,baz=48,slow=1.8,SNR=6.5						
ABTA	**Abfaltersbach**	**145.07**	**330**	*eP*	**PKPdf**	**19 20 29.5**	**-0.3**
	comp=Z,2.6nm,0.6s						
MOTA	**Moosalm**	**145.27**	**332**	*eP*	**PKPdf**	**19 20 30.4**	**+0.2**
	comp=Z,6.9nm,1.0s						
SQTA	**Sankt Quirin**	**145.32**	**332**	*eP*	**PKPdf**	**19 20 31.4**	**+1.1**
	comp=Z,3.7nm,0.7s						
FETA	**Feichten**	**145.69**	**332**	*eP*	**PKPab**	**19 20 32.6**	**+0.9**
	comp=Z,2.2nm,0.7s						
DAVA	**Damuels**	**145.85**	**333**	*eP*	**PKPab**	**19 20 32.8**	**+0.6**
	comp=Z,3.9nm,0.7s						

*IDC **28** 19:06:36.1±1.1, 8.07S×118.01E, h0km, mb3.8/7, mbtmp3.8/9, ML3.9/2, MS3.3/2, Error ellipse: s-maj=27.8km s-min=16.8km az=71.0*
*NEIC **28** 19:06:37.8±1.4, 8.09S±0.08×117.99E±0.07, h10km±1km, mb4.1/8, Error ellipse: s-maj=13.8km s-min=11.6km az=349.0*
*DJA **28** 19:06:38.5±0.5, 8°S±3'×117°8E±', h18km±4km, M4.1/18, MLv4.1/18*
ISC 28 19:06:37.4±0.6, **8.09S**±0.04×**117.98E**±0.03, **h10**km, **n42**, σ0s**85**/44, **mb4.0**/7, **Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**0.76**	**195**	P	**Pb**	**19 06 53.3**	**+0.5**
PLAI				S	**Sb**	**19 07 03.9**	**+0.7**
TWSI	**Taliwang, Sumb**	**1.26**	**239**	P	**Pn**	**19 07 00.8**	**-0.3**
TWSI				S	**Sb**	**19 07 17.9**	**+0.2**
WBSI	**Waikabubak, Su**	**2.08**	**138**	P	**Pn**	**19 07 13.5**	**+1.1**
SRBI	**Singaraja**	**2.74**	**270**	P	**Pn**	**19 07 20.5**	**-1.0**
SRBI				S	**Sn**	**19 07 53.9**	**-0.8**
DNP	**Denpasar**	**2.80**	**258**	P	**Pn**	**19 07 23.7**	**+1.4**
IGBI	**Denpasar**	**2.90**	**255**	P	**Pn**	**19 07 23.1**	**-0.5**
IGBI				S	**Sn**	**19 07 58.9**	**+0.4**
BSSI	**Bau Bau, Buton**	**3.15**	**52**	P	**Pn**	**19 07 27.3**	**+0.2**
BASI	**Baing, Sumba**	**3.33**	**130**	P	**Pn**	**19 07 29.8**	**+0.3**
BKSI	**Bulukumba**	**3.48**	**38**	P	**Pn**	**19 07 31.4**	**-0.2**
KAPI	**Kappang**	**3.52**	**30**	Pn	**Pn**	**19 07 31.8**	**-0.5**
	19nm,0.3s,baz=203,slow=4.7,SNR=45						
KAPI				Sn	**Sn**	**19 08 12.2**	**-1.8**
	14nm,0.3s,baz=258,slow=19,SNR=7.6						
KAPI				Lg	Lg	19 08 26.2	
	12nm,0.3s,baz=120,slow=16,SNR=4.0						
KAPI				LR	LR	19 08 40.2	
	comp=Z,15nm,19.2s,baz=271,slow=36						
	47nm,0.3s						
ABJI	**Asem Bagus**	**3.72**	**274**	P	**Pn**	**19 07 34.0**	**-1.0**
EDFI	**Ende, Flores**	**3.73**	**100**	P	**Pn**	**19 07 35.5**	**+0.3**
JAGI	**Jajag, Banyuwa**	**3.81**	**264**		**Pn**	**19 07 36.0**	**-0.2**
JAGI	**Jajag, Banyuwa**	**3.81**	**264**	P	**Pn**	**19 07 35.5**	**-0.7**
KMMI	**Kalianget**	**4.11**	**284**	P	**Pn**	**19 07 40.6**	**+0.3**
BNSI	**Bone**	**4.23**	**30**	P	**Pn**	**19 07 43.5**	**+1.6**
MMRI	**Maumere**	**4.25**	**98**		**Pn**	**19 07 42.5**	**+0.3**
MMRI	**Maumere**	**4.25**	**98**	P	**Pn**	**19 07 42.3**	**+0.1**
BLJI	**Banyuglugur**	**4.36**	**274**	P	**Pn**	**19 07 45.1**	**+1.4**
SPSI	**Sidrap Palu**	**4.46**	**24**	P	**Pn**	**19 07 47.2**	**+2.0**
KNRA	**Kununurra**	**12.96**	**127**		**Pn**	**19 09 41.2**	**-0.6**
MBWA	**Marble Bar**	**13.11**	**173**		**Pn**	**19 09 43.2**	**-0.5**
MTN	**Manton Dam**	**13.77**	**111**	Pn	**Pn**	**19 09 51.1**	**-1.7**
GIRL	**Giralia**	**14.91**	**194**	Pn	**Pn**	**19 10 08.5**	**0.0**
MNAI	**Manna**	**15.39**	**283**	Pn	**Pn**	**19 10 15.3**	**+0.5**
WB0	**Warramunga Arr**	**19.69**	**128**	P	**P**	**19 11 06.7**	**-0.3**
WB0				IAmb	IAmb	19 11 15.9	
	comp=Z,17nm,1.4s						
WRA	**Warramunga Arr**	**19.75**	**128**	P	**P**	**19 11 07.1**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=301,slow=13,SNR=9.5						
	comp=Z,0.6nm,0.5s						
WB2	**Warramunga Arr**	**19.75**	**128**	P	**P**	**19 11 06.9**	**-0.8**
WB2				IAmb	IAmb	19 11 14.4	
	comp=Z,8.6nm,1.1s						
WR0	**Warramunga Arr**	**19.91**	**128**	P	**P**	**19 11 08.9**	**-0.5**
WR0				IAmb	IAmb	19 11 50.7	
	comp=Z,20nm,1.5s						
AS31	**Alice Springs**	**21.75**	**137**	P	**P**	**19 11 27.4**	**-1.8**
ASAR	**Alice Springs**	**21.75**	**137**	P	**P**	**19 11 29.4**	**+0.1**
	comp=Z,2.3nm,0.6s,baz=316,slow=9.7,SNR=31						
	comp=Z,2.3nm,0.6s						
COEN	**Coen**	**25.40**	**105**	P	**P**	**19 12 05.9**	**+0.6**
STKA	**Stephens Creek**	**32.29**	**140**	P	**P**	**19 13 07.1**	**+0.5**
	comp=Z,1.0nm,0.4s,baz=316,slow=13,SNR=3.5						
	comp=Z,1.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**32.38**	**325**	P	**P**	**19 13 07.9**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=155,slow=7.0,SNR=3.4						
	comp=Z,0.6nm,0.8s						
KSRS	**Korea Array**	**46.25**	**11**	P	**P**	**19 15 03.5**	**+0.6**
	comp=Z,1.4nm,0.8s,baz=189,slow=9.7,SNR=8.0						
	comp=Z,1.4nm,0.8s						
MJAR	**Matsushiro Art**	**48.29**	**22**	LR	LR	19 32 14.3	
	comp=Z,20nm,22.0s,baz=168,slow=32						
SONM	**Songino Array**	**56.62**	**351**	P	**P**	**19 16 21.0**	**+0.4**
	comp=Z,1.3nm,0.8s,baz=168,slow=8.6,SNR=13						
	comp=Z,1.3nm,0.8s						
SONM	**Songino Array**	**56.62**	**351**	IAmb	IAmb	19 16 21.5	
	comp=Z,1.3nm,0.9s						
MKAR	**Makanchi Array**	**63.19**	**333**	P	**P**	**19 17 05.8**	**0.0**
	comp=Z,0.8nm,0.7s,baz=139,slow=7.9,SNR=6.9						
	comp=Z,0.8nm,0.7s						
MKAR	**Makanchi Array**	**63.19**	**333**	P	**P**	**19 17 05.5**	**-0.3**
ZALV	**Zalesovo Beam**	**67.84**	**340**	P	**P**	**19 17 35.0**	**-0.6**
	comp=Z,0.6nm,0.5s,baz=133,slow=6.5,SNR=4.1						
	comp=Z,0.6nm,0.5s						
YAK	**Yakutsk**	**70.50**	**6**	LR	LR	19 55 18.2	
	comp=Z,29nm,18.3s,baz=270,slow=42						

*KRNET **28** 19:11:38.6±0.1, 39.41N×73.38E, mb3.8*
*NNC **28** 19:11:50.8±2.5, 39.92N×73.42E, h0km, mb3.7, mpv3.5, Error ellipse: s-maj=19.0km s-min=9.3km az=173.0*
*SOME **28** 19:11:50.5, 40.00N×73.35E, h0km*
ISC 28 19:11:40.1±1.4, **39.61N**±0.04×**73.26E**±0.03, **h1**km±11km, **n59**, σ1s**75**/98, **35C-16D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**0.98**	**338**	⇑*eP*	**Pn**	**19 12 01.0**	**-0.2**
OHH	baz=37			⇑*eS*	**Sn**	**19 12 18.0**	**+2.1**
OHH	**Osh**	**0.98**	**338**	⇓*iP*	**Pn**	**19 12 01.1**	**-0.2**
OHH	baz=38			⇓*eS*	**Sn**	**19 12 17.8**	**+1.9**
DRK	**Karamyk**	**1.14**	**264**	⇓*iP*	**Pg**	**19 12 01.6**	**-0.3**
DRK	baz=75			⇓*iS*	**Sn**	**19 12 19.1**	**-0.8**
DRK	**Karamyk**	**1.14**	**264**	⇓*iP*	**Pg**	**19 12 01.5**	**-0.3**
DRK	baz=74			⇓*iS*	**Sb**	**19 12 18.5**	**+0.3**
BTK	**Batken**	**1.93**	**284**	⇑*eP*	**Pb**	**19 12 15.8**	**-0.4**
BTK	baz=89			⇑*eS*	**Sg**	**19 12 44.1**	**+1.9**
BTK	**Batken**	**1.93**	**284**	⇑*eP*	**Pb**	**19 12 16.0**	**-0.2**
BTK	baz=89			⇑*eS*	**Sg**	**19 12 43.4**	**+1.2**
GAR	**Garm**	**2.36**	**256**	⇓*eP*	**Pn**	**19 12 20.6**	**+0.4**
GAR	baz=62			⇓*iS*	**Sb**	**19 12 52.3**	**-1.0**
GAR	**Garm**	**2.36**	**256**	⇑*eP*	**Pn**	**19 12 21.0**	**+0.8**
GAR	baz=61			⇑*eS*	**Sb**	**19 12 51.7**	**-1.6**
ARLS	**Aral**	**2.39**	**19**	⇑*eP*	**Pb**	**19 12 22.3**	**-1.8**
ARLS	baz=15			⇑*iS*	**Sb**	**19 12 54.8**	**+0.6**
ARLS	**Aral**	**2.39**	**19**	⇑*eP*	**Pb**	**19 12 22.7**	**-1.4**
ARLS	baz=16			⇑*eS*	**Sb**	**19 12 54.6**	**+0.4**
TRKS	**Terek-Say**	**2.51**	**321**	⇑*eP*	**Pb**	**19 12 24.1**	**-2.0**
TRKS	baz=21			⇑*eS*	**Sb**	**19 12 58.2**	**+0.7**
TRKS	**Terek-Say**	**2.51**	**321**	⇑*eP*	**Pb**	**19 12 24.0**	**-2.0**
TRKS	baz=21			⇑*eS*	**Sb**	**19 12 57.4**	**-0.1**
UCH	**Uchtor**	**2.78**	**20**	⇑*eP*	**Pn**	**19 12 27.8**	**+1.5**
UCH	baz=16			⇑*eS*	**Sb**	**19 13 04.6**	**-1.1**
UCH	**Uchtor**	**2.78**	**20**	⇑*eP*	**Pb**	**19 12 28.4**	**-2.6**
UCH	baz=17			⇑*eS*	**Sb**	**19 13 04.7**	**-1.1**
EKS2	**Erkin-Say**	**3.08**	**7**	⇑*eP*	**Pn**	**19 12 32.3**	**+2.3**
EKS2	baz=5.0			⇑*eS*	**Sb**	**19 13 12.0**	**-1.8**
MRKS	**Merke**	**3.13**	**360**	*eP*	**Pg**	**19 12 43.1**	**+2.9**
MRKS	5.3nm,0.2s			*eS*	**Sg**	**19 13 21.0**	**+0.2**
MRKS	32nm,0.3s **Merke**	**3.13**	**360**	Pg	**Pg**	**19 12 43.1**	**+2.9**
MRKS	5.3nm,0.2s			Lg	Lg	19 13 21.0	
AAK	32nm,0.3s **Ala-Archa**	**3.17**	**17**	⇑*eP*	**Pn**	**19 12 33.2**	**+1.9**
AAK	baz=14			⇑*eS*	**Sb**	**19 13 13.6**	**-2.9**
AAK	baz=14 **Ala-Archa**	**3.17**	**17**	⇑*eP*	**Pn**	**19 12 33.7**	**+2.4**
AAK	baz=14			⇑*eS*	**Sb**	**19 13 13.5**	**-2.9**
KBK	**Karagaybulak**	**3.30**	**22**	⇓*eP*	**Pn**	**19 12 34.7**	**+1.5**
KBK	baz=19			⇓*eS*	**Sb**	**19 13 16.6**	**-3.8**
KBK	baz=19 **Karagaybulak**	**3.30**	**22**	⇑*iP*	**Pn**	**19 12 35.3**	**+2.1**
KBK	baz=20			⇑*eS*	**Sb**	**19 13 16.7**	**-3.7**
CHGR	**Chuyangaron**	**3.33**	**255**	⇓*eP*	**Pn**	**19 12 34.1**	**+0.6**
CHGR	baz=59			⇓*iS*	**Sn**	**19 13 14.9**	**+1.2**
CHGR	baz=59 **Chuyangaron**	**3.33**	**255**	⇑*iP*	**Pn**	**19 12 34.0**	**+0.6**
CHGR	baz=58			⇑*iS*	**Sn**	**19 13 14.4**	**+0.7**
CHMS	baz=58 **Chumysh**	**3.57**	**18**	⇓Pn	**Pn**	**19 12 39.8**	**+3.1**
CHMS	3.5nm,0.5s			⇓Lg	Lg	19 13 32.8	
DZA	17nm,0.7s **Taraz**	**3.59**	**337**	*eP*	**Pg**	**19 12 51.5**	**+2.6**
DZA	55nm,0.1s			*eS*	**Sg**	**19 13 35.2**	**-0.2**
DZA	157nm,0.3s **Taraz**	**3.59**	**337**	Pg	**Pg**	**19 12 51.5**	**+2.6**
DZA	55nm,0.1s			Lg	Lg	19 13 35.2	
TKM2	157nm,0.3s **Tokmak 2**	**3.75**	**27**	⇑Pg	**Pg**	**19 12 51.0**	**-0.9**
TKM2	4.6nm,0.8s			⇓Lg	Lg	19 13 37.1	
SGDS	10nm,0.7s **Sogindy**	**3.98**	**15**	*eP*	**Pg**	**19 12 58.2**	**+1.9**
SGDS	3.8nm,0.7s			*eS*	**Sg**	**19 13 47.2**	**-0.6**
SGDS	13nm,0.5s **Sogindy**	**3.98**	**15**	Pg	**Pg**	**19 12 58.2**	**+1.9**
SGDS	3.8nm,0.7s			Lg	Lg	19 13 47.2	
KST	13nm,0.5s **Kastek**	**3.99**	**30**	*eP*	**Pg**	**19 12 59.3**	**+2.8**
KST	3.2nm,0.4s			*eS*	**Sg**	**19 13 49.1**	**+0.8**
KST	30nm,0.7s **Kastek**	**3.99**	**30**	Pg	**Pg**	**19 12 59.3**	**+2.8**
KST	3.2nm,0.4s			Lg	Lg	19 13 49.1	
KK31	30nm,0.7s **Karatay Array**	**4.06**	**330**	⇑Pn	**Pb**	**19 12 48.5**	**-3.9**
KK31	0.6nm,0.2s,baz=127,slow=12,SNR=8.1			⇑Pg	**Pg**	**19 12 58.7**	**+0.8**
KK31	5.7nm,0.5s,baz=138,slow=14,SNR=13			⇑Sn	**Sb**	**19 13 40.5**	**-1.5**
KK31	4.0nm,0.4s,baz=162,slow=25,SNR=4.4			⇑Lg	Lg	19 13 52.9	
DGS	3.3nm,0.3s,baz=137,slow=30 **Degeres**	**4.09**	**27**	*eP*	**Pg**	**19 12 58.9**	**+0.3**
DGS	6.0nm,0.6s			*eS*	**Sg**	**19 13 48.3**	**-3.2**
DGS	25nm,0.8s **Degeres**	**4.09**	**27**	Pg	**Pg**	**19 12 58.9**	**+0.3**
DGS	6.0nm,0.6s			Lg	Lg	19 13 48.3	
MTBS	25nm,0.8s **Maitube**	**4.25**	**33**	*eP*	**Pg**	**19 13 04.0**	**+2.5**
MTBS	4.2nm,0.1s			*eS*	**Sg**	**19 13 56.8**	**+0.1**
MTBS	14nm,0.3s **Maitube**	**4.25**	**33**	Pg	**Pg**	**19 13 04.0**	**+2.5**
MTBS	4.2nm,0.1s			Lg	Lg	19 13 56.8	
BRLS	14nm,0.3s **Boroldav**	**4.28**	**324**	*eP*	**Pg**	**19 13 03.4**	**+1.3**
BRLS	3.7nm,0.0s			*eS*	**Sg**	**19 13 56.0**	**-1.7**
BRLS	28nm,0.3s **Boroldav**	**4.28**	**324**	Pg	**Pg**	**19 13 03.4**	**+1.3**
BRLS	3.7nm,0.0s			Lg	Lg	19 13 56.0	
TNSS	28nm,0.3s **Tian-Shan**	**4.41**	**38**	*eP*	**Pg**	**19 13 06.4**	**+1.8**
TNSS	6.0nm,0.7s			*eS*	**Sg**	**19 14 01.0**	**-0.7**
TNSS	9.1nm,0.6s **Tian-Shan**	**4.41**	**38**	Pg	**Pg**	**19 13 06.4**	**+1.8**
TNSS	6.0nm,0.7s			Lg	Lg	19 14 01.0	
KRBS	9.1nm,0.6s **Karabastau**	**4.47**	**23**	*eP*	**Pg**	**19 13 08.1**	**+2.4**
KRBS	2.1nm,0.4s			*eS*	**Sg**	**19 14 03.7**	**+0.1**
KRBS	12nm,0.6s **Karabastau**	**4.47**	**23**	Pg	**Pg**	**19 13 08.1**	**+2.4**
KRBS	2.1nm,0.4s			Lg	Lg	19 14 03.8	
KTBS	12nm,0.6s **Karatobe**	**4.83**	**31**	*eP*	**Pg**	**19 13 14.3**	**+1.5**
KTBS	2.3nm,0.4s			*eS*	**Sg**	**19 14 14.6**	**-0.8**
KTBS	26nm,0.5s **Karatobe**	**4.83**	**31**	Pg	**Pg**	**19 13 14.3**	**+1.5**
KTBS	2.3nm,0.4s			Lg	Lg	19 14 14.6	
KUU	26nm,0.5s **Kurty**	**4.86**	**27**	*eP*	**Pg**	**19 13 14.9**	**+1.6**
KUU	1.6nm,0.3s			*eS*	**Sg**	**19 14 15.8**	**-0.5**
KUU	16nm,0.9s **Kurty**	**4.86**	**27**	Pg	**Pg**	**19 13 14.9**	**+1.6**
KUU	1.6nm,0.3s			Lg	Lg	19 14 15.8	
CHKK	16nm,0.9s **Chushkaly**	**5.08**	**32**	*eP*	**Pg**	**19 13 18.7**	**+1.3**
CHKK	1.1nm,0.1s			*eS*	**Sg**	**19 14 22.2**	**-0.9**
CHKK	10nm,0.3s **Chushkaly**	**5.08**	**32**	Pg	**Pg**	**19 13 18.7**	**+1.3**
CHKK	1.1nm,0.1s			Lg	Lg	19 14 22.2	
SATY	10nm,0.3s **Saty**	**5.18**	**47**	*eP*	**Pg**	**19 13 21.0**	**+1.5**
SATY	3.2nm,0.7s			*eS*	**Sg**	**19 14 26.2**	**-0.4**
SATY	13nm,0.6s **Saty**	**5.18**	**47**	Pg	**Pg**	**19 13 21.0**	**+1.5**
SATY	3.2nm,0.7s			Lg	Lg	19 14 26.2	
KURS	13nm,0.6s **Kuram**	**5.35**	**42**	*eP*	**Pg**	**19 13 24.7**	**+2.1**
KURS	2.5nm,0.4s			*eS*	**Sg**	**19 14 32.2**	**+0.4**
KURS	7.2nm,0.9s **Kuram**	**5.35**	**42**	Pg	**Pg**	**19 13 24.7**	**+2.1**
KURS	2.5nm,0.4s			Lg	Lg	19 14 32.2	
BTLS	7.2nm,0.9s **Baital**	**5.46**	**6**	*eP*	**Pg**	**19 13 25.3**	**+0.6**
BTLS	1.3nm,0.3s			*eS*	**Sg**	**19 14 33.0**	**-2.4**
BTLS	3.5nm,0.4s **Baital**	**5.46**	**6**	Pg	**Pg**	**19 13 25.3**	**+0.6**
BTLS	1.3nm,0.3s			Lg	Lg	19 14 33.0	
ARXS	3.5nm,0.4s **Arharly**	**5.72**	**35**	*eP*	**Pg**	**19 13 30.6**	**+0.8**
ARXS	3.8nm,0.5s			*eS*	**Sg**	**19 14 42.6**	**-1.3**
ARXS	13nm,0.9s **Arharly**	**5.72**	**35**	Pg	**Pg**	**19 13 30.6**	**+0.8**
ARXS	3.8nm,0.5s			Lg	Lg	19 14 42.6	
BLB	13nm,0.9s **Baldybastay**	**5.94**	**39**	*eP*	**Pg**	**19 13 35.3**	**+1.4**
BLB	1.9nm,0.1s			*eS*	**Sg**	**19 14 50.3**	**-0.5**
BLB	9.5nm,0.8s **Baldybastay**	**5.94**	**39**	Pg	**Pg**	**19 13 35.3**	**+1.4**
BLB	1.9nm,0.1s			Lg	Lg	19 14 50.3	
PDGK	9.5nm,0.8s **Podgornoye**	**5.98**	**50**	⇓Lg	Lg	19 14 47.4	
	4.9nm,0.8s						

*IDC **28** 19:21:01.4±4.8, 40.05N×49.28E, h0km, mb3.4/3, mbtmp3.5/4, ML3.4/1, MS2.1/1, Error ellipse: s-maj=100.6km s-min=33.2km az=28.0*
*TEH **28** 19:21:02.0, 39.67N×49.02E, h22km, ML3.4*
*AZER **28** 19:21:03.5±0.0, 39.69N×48.92E, h46km±1km, Error ellipse: s-maj=0.8km s-min=0.4km az=281.0*
*MOS **28** 19:21:07.9±0.0, 40.06N×48.16E, h3km, MPVA3.2*
*DRS **28** 19:21:12.9±0.0, 39.62N×48.50E, h29km*
ISC 28 19:21:04.0±1.1, **39.69N**±0.02×**48.94E**±0.03, **h31**km±10km, **n81**, σ1s**52**/121, **mb3.2**/3, **Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ALIB	**Äli-Bayra**	**0.28**	**11**	*e*Pn	**Pn**	**19 21 12.0**	**+0.1**
ALIB	**Äli-Bayra**	**0.28**	**11**	P	**Pn**	**19 21 12.0**	**+0.1**
	SNR=126						
ALIB				S	**Sn**	**19 21 20.0**	**+3.0**
SAAT	**Saatly**	**0.43**	**294**	P	**Pn**	**19 21 15.7**	**+1.7**
	SNR=3.6						
SAAT				S	**Sn**	**19 21 25.8**	**+5.0**
GLBA	**Clilabad**	**0.61**	**224**	*e*Pn	**Pn**	**19 21 17.2**	**+0.8**
GLBA	**Clilabad**	**0.61**	**224**	P	**Pn**	**19 21 17.3**	**+0.8**
	SNR=54						
GLBA				S	**Sn**	**19 21 28.5**	**+3.3**
GBS	**Qobustan**	**0.85**	**0**	*e*Pn	**Pn**	**19 21 20.9**	**+1.1**
GBS	**Qobustan**	**0.85**	**0**	P	**Pn**	**19 21 20.9**	**+1.1**
	SNR=57						
GBS				S	**Sn**	**19 21 34.0**	**+2.7**
KDMR	**Kurdemir**	**0.90**	**320**	*e*Pn	**Pn**	**19 21 20.5**	**+0.1**
KDMR	**Kurdemir**	**0.90**	**320**	P	**Pn**	**19 21 20.5**	**+0.1**
	SNR=3.5						
KDMR				S	**Sn**	**19 21 34.9**	**+2.6**
YRD	**Yardimli**	**0.94**	**215**	*e*Pn	**Pn**	**19 21 21.6**	**+0.4**
YRD	**Yardimli**	**0.94**	**215**	P	**Pn**	**19 21 21.6**	**+0.4**
	SNR=214						
YRD				S	**Sn**	**19 21 35.2**	**+1.5**

GOBA	**Gobu**	**0.94**	**40**	*e*Pn		**Pn**	**19 21 22.5**	**+1.5**
GOBA	**Gobu**	**0.94**	**40**	P		**Pn**	**19 21 22.6**	**+1.6**
	SNR=17							
GOBA				S		**Sn**	**19 21 35.4**	**+2.1**
LKRN	**Lenkeran, Azer**	**0.98**	**187**	*e*Pn		**Pn**	**19 21 22.5**	**+1.0**
LKRN	**Lenkeran, Azer**	**0.98**	**187**	P		**Pn**	**19 21 22.6**	**+1.0**
	SNR=12							
LKRN				S		**Sn**	**19 21 36.5**	**+2.1**
BLQ	**Beylaqan**	**1.06**	**272**	*e*Pn		**Pn**	**19 21 22.8**	**+0.1**
BLQ	**Beylaqan**	**1.06**	**272**	P		**Pn**	**19 21 22.8**	**+0.1**
	SNR=9.1							
BLQ				S		**Sn**	**19 21 37.9**	**+1.5**
ASTR	**Astara**	**1.13**	**186**	*e*Pn		**Pb**	**19 21 24.6**	**-0.3**
ASTR	**Astara**	**1.13**	**186**	P		**Pb**	**19 21 24.7**	**-0.3**
	SNR=6.8							
ASTR				P		**Pb**	**19 21 24.7**	**-0.3**
	SNR=29							
ZRD	**Zardab**	**1.13**	**302**	*e*Pn		**Pb**	**19 21 24.2**	**-0.7**
ZRD	**Zardab**	**1.13**	**302**	P		**Pb**	**19 21 24.3**	**-0.7**
	SNR=7.0							
ZRD				S		**Sn**	**19 21 40.6**	**+2.6**
PQL	**Pirkuli**	**1.13**	**347**	*e*Pn		**Pn**	**19 21 24.2**	**+0.4**
PQL	**Pirkuli**	**1.13**	**347**	P		**Pn**	**19 21 24.3**	**+0.4**
	SNR=16							
PQL				S		**Sn**	**19 21 41.1**	**+2.7**
LRK	**Lerik**	**1.14**	**204**	*e*Pn		**Pn**	**19 21 23.9**	**0.0**
LRK	**Lerik**	**1.14**	**204**	P		**Pn**	**19 21 24.0**	**0.0**
	SNR=60							
LRK				S		**Sn**	**19 21 39.6**	**+1.0**
ATGJ	**Altiaghaj**	**1.17**	**0**	*e*Pn		**Pb**	**19 21 25.1**	**-0.6**
ATGJ	**Altiaghaj**	**1.17**	**0**	P		**Pb**	**19 21 25.1**	**-0.6**
	SNR=11							
ATGJ				S		**Sn**	**19 21 42.8**	**+3.4**
GRMI	**Germi**	**1.19**	**223**	*e*Pn		**Pn**	**19 21 25.0**	**+0.4**
GRMI				*e*Sg		**Sn**	**19 21 41.4**	**+1.6**
GRMI				*e*			19 21 43.3	
	comp=Z,99nm,0.2s							
NDR	**Nardaran**	**1.20**	**42**	*e*Pn		**Pn**	**19 21 25.1**	**+0.5**
NDR	**Nardaran**	**1.20**	**42**	P		**Pn**	**19 21 25.3**	**+0.7**
	SNR=15							
NDR				S		**Sb**	**19 21 44.3**	**+3.0**
IML	**Ismayilli**	**1.25**	**333**	*e*Pn		**Pn**	**19 21 25.0**	**-0.3**
IML	**Ismayilli**	**1.25**	**333**	P		**Pn**	**19 21 25.1**	**-0.3**
	SNR=18							
IML				S		**Sn**	**19 21 41.6**	**+0.6**
QRD	**Qoradiz**	**1.27**	**260**	P		**Pn**	**19 21 26.0**	**+0.4**
	SNR=5.3							
QRD				S		**Sb**	**19 21 42.3**	**-0.9**
SIZA	**Siyzn**	**1.39**	**359**	Pn		**Pn**	**19 21 28.1**	**+0.8**
	SNR=6.6							
SIZA				Sn		**Sb**	**19 21 46.3**	**-0.5**
AGDM	**Agdam**	**1.47**	**287**	Pn		**Pn**	**19 21 28.4**	**+0.1**
	SNR=15							
AGDM				Sn		**Sb**	**19 21 48.4**	**-0.6**
BRDA	**Brd**	**1.47**	**294**	Pn		**Pb**	**19 21 29.3**	**-1.4**
BRDA				Sg		**Sb**	**19 21 50.4**	**+1.5**
QBL	**Gabala**	**1.51**	**327**	Pn		**Pn**	**19 21 29.0**	**0.0**
	SNR=8.1							
QBL				Sn		**Sn**	**19 21 47.8**	**+0.2**
XNQ	**Khinaliq**	**1.60**	**338**	Pn		**Pn**	**19 21 30.8**	**+0.4**
	SNR=5.8							
XNQ				Sn		**Sn**	**19 21 50.0**	**-0.1**
QUBA	**Quba, Azerbaij**	**1.70**	**349**	Pn		**Pn**	**19 21 32.9**	**+1.3**
QUBA				Sn		**Sb**	**19 21 55.5**	**-0.1**
MNGR	**Mingechevir, A**	**1.79**	**308**	Pn		**Pn**	**19 21 32.8**	**+0.2**
MNGR				Sn		**Sb**	**19 21 57.3**	**-0.7**
QSAR	**Qusar**	**1.90**	**345**	Pn		**Pn**	**19 21 34.5**	**+0.3**
QSAR				Sn		**Sn**	**19 21 58.2**	**+1.1**
IHRS	**Heris**	**2.01**	**228**	*e*Pn		**Pn**	**19 21 37.1**	**+1.1**
IHRS				*e*			19 22 05.0	
	comp=Z,3μm,0.3s							
KSMR	**Kasumkent**	**2.01**	**342**	*e*Pg		**Pb**	**19 21 40.1**	**+0.2**
KSMR				*e*Sg		**Sn**	**19 22 02.1**	**+2.2**
AKT	**Akhty**	**2.01**	**333**	*e*Pg		**Pb**	**19 21 37.9**	**-2.1**
AKT				*e*Sg		**Sn**	**19 21 59.8**	**-0.2**
SEKA	**Sheki**	**2.02**	**319**	Pn		**Pn**	**19 21 36.5**	**+0.6**
	SNR=9.6							
SEKA				Sn		**Sn**	**19 22 00.2**	**+0.1**
ISRB	**Sarab**	**2.11**	**209**	*e*Pn		**Pn**	**19 21 38.3**	**+1.0**
TVRZ	**Varzaqan**	**2.12**	**237**	*e*Pn		**Pb**	**19 21 39.9**	**-2.0**
TVRZ				*e*			19 22 11.8	
	comp=Z,4μm,0.4s							
GANJ	**Ganja**	**2.22**	**296**	Pn		**Pn**	**19 21 39.0**	**+0.3**
	SNR=3.9							
GANJ				Sn		**Sn**	**19 22 05.2**	**+0.1**
ORD	**Ordubad**	**2.41**	**253**	Pn		**Pn**	**19 21 42.1**	**+0.9**
	SNR=10							
ORD				Sn		**Sn**	**19 22 11.8**	**+2.1**
ZKTA	**Zakatala**	**2.63**	**319**	Pn		**Pn**	**19 21 45.1**	**+0.9**
	SNR=8.2							
ZKTA				Sn		**Sn**	**19 22 15.8**	**+0.7**
SBZ	**Shahbuz**	**2.63**	**265**	Pn		**Pn**	**19 21 45.6**	**+1.2**
	SNR=9.8							
SBZ				Sn		**Sn**	**19 22 17.9**	**+2.6**
GDB	**GEDABAY**	**2.65**	**294**	Pn		**Pn**	**19 21 44.7**	**+0.1**
	SNR=7.4							
GDB				Sn		**Sn**	**19 22 15.5**	**-0.3**
IMRD	**Marand**	**2.69**	**250**	*e*Pn		**Pn**	**19 21 46.9**	**+1.6**
IMRD				*e*			19 22 42.0	
	comp=Z,1μm,0.4s							
NAX	**Nakhchivan**	**2.71**	**260**	Pn		**Pn**	**19 21 46.3**	**+0.8**
	SNR=6.6							
NAX				Sn		**Sn**	**19 22 17.6**	**+0.3**
KMKR	**Kumukh**	**2.81**	**331**	*e*Pg		**Pn**	**19 21 49.6**	**+2.7**
KMKR				*e*Sg		**Sn**	**19 22 19.8**	**-0.1**
GIDE	**GILAN DEYLAMAN**	**2.86**	**164**	*e*Pn		**Pn**	**19 21 46.6**	**-1.0**
ZNJK	**Zanjan**	**3.02**	**184**	*e*Pn		**Pn**	**19 21 49.9**	**+0.1**
QZX	**Qazax, Azerbai**	**3.05**	**298**	Pn		**Pn**	**19 21 50.8**	**+0.8**
	SNR=7.8							
QZX				Sn		**Sn**	**19 22 27.4**	**+1.9**
JIR1	**Jirandeh**	**3.05**	**167**	*e*Pn		**Pn**	**19 21 49.4**	**-0.8**
IAZR	**Azarshahr**	**3.06**	**230**	*e*Pn		**Pn**	**19 21 52.2**	**+1.8**
IAZR				*e*			19 22 03.7	
	comp=Z,671nm,0.5s							
HYR	**Heyderabad**	**3.15**	**272**	Sg		**Sb**	**19 22 42.8**	**+5.5**
GNI	**Garni**	**3.26**	**280**	LR		**Pn**	**19 23 36.4**	
	comp=Z,28nm,19.6s,baz=70,slow=45							
ARKR	**Arakani**	**3.26**	**334**	*e*Pn		**Pn**	**19 21 56.0**	**+3.0**
ARKR				*e*Sn		**Sn**	**19 22 30.9**	**+0.2**
XNZR	**Khunzakh**	**3.31**	**330**	*e*Pn		**Pn**	**19 21 56.2**	**+2.4**
XNZR				*e*Sn		**Sn**	**19 22 31.7**	**-0.5**
KRNR	**Karanay**	**3.49**	**335**	*e*Pn		**Pn**	**19 21 59.1**	**+2.9**
KRNR				*e*Sn		**Sn**	**19 22 36.4**	**-0.1**
QALM	**Alamut, Qazvin**	**3.52**	**157**	*e*Pn		**Pn**	**19 21 55.2**	**-1.5**
QALM				*e*			19 21 57.2	
	comp=Z,831nm,0.1s							
DVE	**Vedeno**	**3.89**	**328**	*e*Pn		**Pn**	**19 22 03.6**	**+1.9**
DVE				*e*Sn		**Sn**	**19 22 44.6**	**-1.7**
CHTH	**Charan**	**4.15**	**155**	*e*Pn		**Pn**	**19 22 04.3**	**-1.1**
IPRN	**Peran**	**4.36**	**141**	*e*			19 22 58.2	
	comp=Z,1μm,0.4s							
IPRN				*e*Pn		**Pn**	**19 22 07.7**	**-0.5**
DAMV	**Damavand**	**4.71**	**148**	*e*Pn		**Pn**	**19 22 11.8**	**-1.3**
SNGE	**Sanandaj**	**4.76**	**196**	*e*Pn		**Pn**	**19 22 14.2**	**+0.5**
IFIR	**Firoozkooh**	**5.05**	**142**	*e*Pn		**Pn**	**19 22 19.0**	**+1.3**
ISHM	**Shahmirzad**	**5.19**	**137**	*e*Pn		**Pn**	**19 22 19.4**	**-0.3**
ISHM				*e*			19 23 23.0	
	comp=Z,766nm,0.2s							
MRVT	**Maraveh tapeh**	**5.95**	**108**	*e*Pn		**Pn**	**19 22 29.1**	**-0.9**
SHRO	**Shahrood**	**6.70**	**121**	*e*Pn		**Pn**	**19 22 39.1**	**-1.2**
BJRD	**Bojnurd**	**6.92**	**104**	*e*Pn		**Pn**	**19 22 42.7**	**-0.6**
GEYT	**Alibeck**	**7.38**	**101**	Pn		**Pn**	**19 22 47.7**	**-1.9**
	comp=Z,0.6nm,0.3s,baz=289,slow=10,SNR=9.8							
GEYT				Sn		Sn	19 24 03.0	-9.2
	comp=Z,0.4nm,0.3s,baz=278,slow=14,SNR=2.0							
	comp=Z,1.2nm,0.2s							
IEMG	**Emamgholi**	**7.94**	**104**	*e*Pn		**Pn**	**19 22 57.1**	**-0.4**
MKAR	**Makanchi Array**	**25.18**	**63**	P		**P**	**19 26 25.7**	**-0.7**
	comp=Z,0.2nm,0.4s,baz=256,slow=9.3,SNR=5.5							
	comp=Z,0.2nm,0.4s							
FINES	**FINESS Array B**	**25.91**	**335**	P		**P**	**19 26 32.9**	**0.0**
	comp=Z,0.2nm,0.3s,baz=139,slow=11,SNR=3.5							
	comp=Z,0.2nm,0.3s							
ZALV	**Zalesovo Beam**	**28.04**	**47**	P		**P**	**19 26 49.1**	**-3.0**
	comp=Z,0.5nm,0.4s,baz=264,slow=8.0,SNR=2.2							
	comp=Z,0.5nm,0.4s							

ASRS 28 19:23:03.3±0.4, 54.°N±2.°×9.°6E±.°, h5km, MLh3.1/7, Error ellipse: s-maj=4.0km s-min=2.8km az=42.2, confirmed, Southwestern Siberia

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

ORY	**Orie**	**0.89**	**319**	Pg		Pb	19 23 21.4	+0.1	
ORY				Sg		Sg	19 23 32.6	+0.6	
ARDR	**Aradan**	**2.38**	**224**	Pg		Pg	19 23 50.7	+1.8	
ARDR				Sg		Sg	19 24 24.9	+5.1	
GZL	**Zheleznogorsk**	**2.44**	**324**	Sg		Sg	19 24 22.2	+0.8	
KZLR	**Kyzyl**	**2.82**	**202**	Pg		Pg	19 23 59.9	+2.6	
KZLR				Sg		Sg	19 24 37.7	+3.9	
ABNR	**Abakan**	**2.83**	**259**	Sg		Sg	19 24 38.2	+4.0	
CERR	**Cheremushki**	**3.17**	**244**	Pg		Pg	19 24 04.7	+0.6	
CERR				Sg		Sg	19 24 47.6	+2.4	
DJOS	**Djoyskaya Sosn**	**3.21**	**243**	Pg		Pg	19 24 08.3	+3.5	
DJOS				Sg		Sg	19 24 48.8	+2.4	
DJO	**Djoy, Khakassi**	**3.31**	**244**	Pg		Pg	19 24 09.2	+2.4	
DJO				Sg		Sg	19 24 51.4	+1.8	
KNGR	**Kungurtug, Tuv**	**3.83**	**167**	Pg		Pb	19 24 14.0	+2.6	
KNGR				Sg		Sg	19 25 09.8	+3.5	
MOY	**Mondy**	**3.97**	**130**	Pg		Pg	19 24 21.8	+2.5	
MOY				Sg		Sg	19 25 12.8	+2.1	
ERNS	**Erzin**	**4.12**	**189**	Pg		Pg	19 24 20.7	-1.5	
ERNS				Sg		Sg	19 25 15.7	+0.2	
LUZB	**Luzhba, Kemero**	**4.32**	**264**	Sg		Sg	19 25 21.0	-0.8	
TASR	**Tashtagol**	**5.16**	**256**	Sg		Sg	19 25 50.6	+1.6	

*TUL **28** 19:26:25.2±1.8, 36.°47N±0.°02×98.°75W±0.°05, h7km±6km, ML3.2, mb_Lg2.8/52(NEIC), Error ellipse: s-maj=5.5km s-min=3.1km az=84.0*

NEIC 28 19:26:24.8±1.3, 36.°48N±0.°02×98.°76W±0.°05, h14km±6km, Error ellipse: s-maj=6.3km s-min=2.6km az=96.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FNO	**Franklin**	**1.65**	**138**	Pg	Pb	19 26 54.9	0.0
WMOK	**Wichita Mounta**	**1.74**	**181**	Pn	Pb	19 26 55.6	-0.9
T35A	**Sooner Cattle**	**1.85**	**76**	Pn	Pb	19 26 57.9	-0.6
T35A				IAmb_Lg		19 27 23.9	
	comp=Z,50nm,0.9s						
R32A	**Long Quarter,**	**1.94**	**1**	Pn	Pn	19 26 58.4	+1.1
X34A	**Smith Ranch, M**	**2.02**	**158**	Pn	Pn	19 26 58.5	0.0
CBKS	**Cedar Bluff**	**2.45**	**342**	Pn	Pb	19 27 06.6	-2.1
TUL1	**Leonard**	**2.47**	**103**	Pn	Pn	19 27 05.0	+0.4
TUL1				IAmb_Lg		19 27 42.8	
	comp=Z,34nm,0.8s						
AMTX	**Amarillo**	**2.87**	**237**	Pn	Pn	19 27 11.6	+1.4
KSU1	**Kansas State U**	**3.12**	**32**	Pn	Pn	19 27 12.2	-1.4
KSU1				IAmb_Lg		19 28 11.0	
	comp=Z,21nm,0.8s						
X37A	**Clayton**	**3.35**	**123**	Pn	Pn	19 27 16.6	-0.1
Z35A	**Perchaven, San**	**3.38**	**158**	Pn	Pn	19 27 17.8	+0.6
U38A	**Gravette**	**3.52**	**89**	IAmb_Lg		19 28 16.6	
	comp=Z,30nm,0.9s						
ABTX	**Abilene, Hawle**	**3.92**	**191**	Pn	Pn	19 27 25.8	+1.2
KSCO	**Kaye Shedlock'**	**3.97**	**311**	IAmb_Lg		19 28 30.1	
	comp=Z,20nm,0.8s						
MSTX	**Muleshoe**	**4.13**	**234**	Pn	Pn	19 27 28.8	+1.1
W39A	**Magazine**	**4.24**	**106**	IAmb_Lg		19 28 46.3	
	comp=Z,31nm,0.9s						
N33A	**J Bar K, Exete**	**4.37**	**13**	Pn	Pn	19 27 31.7	+1.0
N33A				IAmb_Lg		19 28 54.8	
	comp=Z,28nm,1.1s						
Z38A	**Mt. Pleasant**	**4.47**	**135**	Pn	Pn	19 27 33.7	+1.6
S39A	**Bolivar**	**4.51**	**73**	Pn	Pn	19 27 33.6	+0.9
T25A	**Trinidad**	**4.58**	**280**	Pn	Pn	19 27 36.1	+2.2
T25A				IAmb_Lg		19 28 50.4	
	comp=Z,24nm,1.0s						
WHTX	**Lake Whitney,**	**4.61**	**166**	Pn	Pn	19 27 36.8	+2.8
MIAR	**Mount Ida**	**4.65**	**113**	Pn	Pn	19 27 36.0	+1.4
MIAR				IAmb_Lg		19 29 03.0	
	comp=Z,14nm,0.8s						
OGNE	**Ogallala**	**5.14**	**331**	Pn	Pn	19 27 43.1	+1.7
P38A	**Dawn**	**5.18**	**51**	Pn	Pn	19 27 43.7	+1.8
MGMO	**Mountain Grove**	**5.25**	**81**	Pn	Pn	19 27 44.9	+2.0
MGMO				IAmb_Lg		19 29 18.6	
	comp=Z,10nm,0.7s						
W41B	**Gary Mavity, V**	**5.45**	**102**	IAmb_Lg		19 29 18.7	
	comp=Z,21nm,0.9s						
R40A	**Maddies Statio**	**5.47**	**69**	Pn	Pn	19 27 45.2	-0.7
R40A				IAmb_Lg		19 29 26.6	
	comp=Z,12nm,1.0s						
UALR	**University of**	**5.50**	**106**	IAmb_Lg		19 29 24.5	
	comp=Z,18nm,1.0s						
SDCO	**Great Sand Dun**	**5.54**	**285**	Pn	Pn	19 27 48.4	+1.3
SDCO				IAmb_Lg		19 29 31.1	
	comp=Z,11nm,1.0s						
Q24A	**Divide**	**5.64**	**298**	Pn	Pn	19 27 49.0	+0.5
Q24A				IAmb_Lg		19 29 31.7	
	comp=Z,17nm,0.8s						
435B	**Jarrell**	**5.77**	**170**	IAmb_Lg		19 29 37.4	
	comp=Z,17nm,0.7s						
L34A	**Svendsen Farm,**	**5.78**	**18**	Pn	Pn	19 27 50.6	+0.5
JCT	**Junction City**	**6.05**	**189**	IAmb_Lg		19 29 51.4	
	comp=Z,14nm,0.7s						
N38A	**Joes South For**	**6.10**	**43**	Pn	Pn	19 27 53.8	-0.7
P40A	**Paris**	**6.11**	**58**	Pn	Pn	19 27 54.6	0.0
CCM	**Cathedral Cave**	**6.19**	**73**	IAmb_Lg		19 29 43.6	
	comp=Z,16nm,0.9s						
PBMO	**Poplar Bluff**	**6.70**	**85**	IAmb_Lg		19 29 57.4	
	comp=Z,14nm,0.7s						
FVM	**French Village**	**6.81**	**75**	Pn	Pn	19 28 03.0	-1.4
FVM				IAmb_Lg		19 29 58.9	
	comp=Z,13nm,0.9s						
BNM	**Barren Site**	**6.84**	**252**	Pn	Pn	19 28 04.8	-0.2
PHWY	**Pilot Hill**	**7.10**	**315**	IAmb_Lg		19 30 10.4	
	comp=Z,9.9nm,0.8s						
MNTX	**Cornudas Mount**	**7.28**	**231**	IAmb_Lg		19 30 25.7	
	comp=Z,8.9nm,0.8s						
RWWY	**Rawlins**	**8.38**	**311**	IAmb_Lg		19 30 53.9	
	comp=Z,6.2nm,0.7s						
K22A	**Casper**	**8.59**	**318**	IAmb_Lg		19 31 11.6	
	comp=Z,10nm,0.9s						
RSSD	**Black Hills**	**8.63**	**334**	IAmb_Lg		19 31 05.8	
	comp=Z,7.5nm,1.0s						

*TUL **28** 19:28:33.4±1.5, 36.°47N±0.°02×98.°75W±0.°02, h7km±5km, ML2.7, mb_Lg2.2/15(NEIC), Error ellipse: s-maj=4.0km s-min=1.3km az=146.0*

NEIC 28 19:28:33.0±2.9, 36.°41N±0.°03×98.°79W±0.°02, h11km±5km, Error ellipse: s-maj=4.0km s-min=2.6km az=196.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FNO	**Franklin**	**1.61**	**135**	Pn	Pg	19 29 03.4	-0.5
WMOK	**Wichita Mounta**	**1.67**	**180**	Pn	Pb	19 29 03.9	+0.1
T35A	**Sooner Cattle**	**1.90**	**74**	Pn	Pn	19 29 05.9	+0.6
T35A				IAmb_Lg		19 29 31.5	
	comp=Z,7.9nm,0.9s						
X34A	**Smith Ranch, M**	**1.97**	**156**	Pn	Pn	19 29 06.7	+0.4
X34A				IAmb_Lg		19 29 40.5	
	comp=Z,13nm,0.7s						
R32A	**Long Quarter,**	**2.01**	**2**	Pn	Pn	19 29 06.2	-0.7
CBKS	**Cedar Bluff**	**2.51**	**343**	IAmb_Lg		19 29 57.9	
	comp=Z,13nm,0.8s						
AMTX	**Amarillo**	**2.81**	**238**	IAmb_Lg		19 30 02.8	
	comp=Z,5.9nm,0.7s						
HHAR	**Hobbs**	**3.91**	**91**	IAmb_Lg		19 30 46.8	
	comp=Z,5.5nm,0.7s						
MSTX	**Muleshoe**	**4.08**	**234**	Pn	Pn	19 29 36.3	+0.9
MSTX				IAmb_Lg		19 30 50.9	
	comp=Z,8.1nm,0.8s						
S39A	**Bolivar**	**4.55**	**72**	IAmb_Lg		19 31 07.8	
	comp=Z,5.8nm,0.9s						

*IDC **28** 19:33:30.8±1.5, 27.°91N×139.°27E, h496km±37km, mb2.7/3, mbtmp3.7/6, Error ellipse: s-maj=97.9km s-min=14.8km az=77.0*

ISC 28 19:33:31.2±1.1, 28.°0N±0.°1×139.°4E±0.°2, h507km, n6, σ0.°86/8, mb3.2/3, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**2.59**	**109**	P		**P**	**19 34 41.1**	**+1.0**
	20nm,0.3s,baz=288,slow=20,SNR=69							
JCJ				S		**S**	**19 35 35.4**	**-0.7**
	76nm,0.5s,baz=287,slow=23,SNR=16							
JHJ	**Hachijo jima 2**	**5.15**	**3**	P		**P**	**19 35 00.9**	**+1.1**
	54nm,0.8s,baz=72,slow=19,SNR=1.4							
JHJ				S		**S**	**19 36 11.4**	**-0.8**
	112nm,0.9s,baz=241,slow=23,SNR=2.1							
MJAR	**Matsushiro Arr**	**8.62**	**353**	P		**P**	**19 35 33.7**	**-0.3**
	1.0nm,0.5s,baz=167,slow=12,SNR=2.5							
WRA	**Warramunga Arr**	**47.88**	**186**	P		**P**	**19 41 22.5**	**-0.3**
	1.0nm,1.0s,baz=2.9,slow=7.7,SNR=3.0							
	1.0nm,1.0s							
ASAR	**Alice Springs**	**51.60**	**186**	P		**P**	**19 41 50.3**	**0.0**
	0.1nm,0.3s,baz=359,slow=6.2,SNR=7.9							
	0.1nm,0.3s							
FINES	**FINESS Array B**	**76.08**	**333**	P		**P**	**19 44 26.1**	**+0.1**
	0.3nm,0.3s,baz=79,slow=7.2,SNR=4.5							
	0.3nm,0.3s							

*IDC **28** 19:57:54.3±1.2, 35.°92N×97.°23W, h0km, mbtmp3.5/4, ML2.8/3, Error ellipse: s-maj=16.1km s-min=12.5km az=166.0*

*NEIC **28** 19:57:55.8±0.3, 35.°853N±0.°003×97.°22W±0.°01, h5km±1km, Error ellipse: s-maj=2.8km s-min=1.5km az=278.0*

*ANF **28** 19:57:56.3±0.3, 35.°88N×97.°22W, h5km, ML4.3/13, Error ellipse: s-maj=4.3km s-min=2.5km az=133.0*

*TUL **28** 19:57:56±0.4, 35.°856N±0.°009×97.°23W±0.°01, h6km±4km, ML3.9, mb_Lg3.8/119(NEIC), Mwr3.6/63(NEIC), Error ellipse: s-maj=1.7km s-min=1.0km az=129.0*

*NEIC **28** 19:57:56, 35.°86N×97.°23W, h7km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.35; $M_{\theta\theta}$3.27; $M_{\phi\phi}$-2.92; $M_{r\theta}$-1.52; $M_{\theta r}$-0.25; $M_{\phi r}$-0.05; Fault plane solution: M_o3.47000×10^{14} NP1:ϕ_s319.24000°, δ73.96000°, λ12.34000°. NP2:ϕ_s225.78000°, δ78.15000°, λ163.60000°. Principal axes: T 3.8304, Plg20.0000°, Azm182.0000°; N -0.8984, Plg70.0000°, Azm11.0000°; P -2.9320, Plg3.0000°, Azm273.0000°;*

ISC 28 19:57:55.8±1.1, 35.°89N±0.°03×97.°20W±0.°03, h8km±9km, n157, σ1$30/162, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK005	**Luther M Schoo**	**0.23**	**178**		**Pg**	**19 58 00.5**	**0.0**
ADOK	**Arcadia Dam**	**0.27**	**211**	Pg	**Pg**	**19 58 01.0**	**-0.2**
OK009	**Oakdale Elemen**	**0.36**	**211**		**Pg**	**19 58 02.6**	**-0.2**
OKCFA	**Oklahoma City**	**0.51**	**204**		**Pg**	**19 58 05.5**	**-0.3**
OKCFA	**Oklahoma City**	**0.51**	**204**	P	**Pg**	**19 58 05.5**	**-0.3**
	baz=23,SNR=122						
OKCFA				S	**Sg**	**19 58 12.4**	**-0.1**
	baz=23						
OKCSW	**OKLAHOMA CITY**	**0.52**	**202**		**Pg**	**19 58 05.5**	**-0.4**
FNO	**Franklin**	**0.65**	**195**		**Pg**	**19 58 07.9**	**-0.5**
FNO				IAmb_Lg		19 58 16.2	
	comp=Z,3μm,1.2s						
TUL1	**Leonard**	**1.14**	**88**		**Pg**	**19 58 17.2**	**-0.6**
TUL1	**Leonard**	**1.14**	**88**	P	**Pg**	**19 58 17.2**	**-0.6**
	baz=268,SNR=364						
TUL1				S	**Sg**	**19 58 33.5**	**+0.9**
	baz=268						
TUL1	**Leonard**	**1.14**	**88**	P	**Pg**	**19 58 17.3**	**-0.4**
	baz=268,SNR=182						
TUL1				S	**Sg**	**19 58 33.1**	**+0.5**
	baz=268						
T35A	**Sooner Cattle**	**1.17**	**28**		**Pg**	**19 58 18.2**	**0.0**
T35B	**Sooner Cattle**	**1.17**	**28**	P	**Pg**	**19 58 18.1**	**-0.2**
	baz=209,SNR=370						
T35B				S	**Sb**	**19 58 34.8**	**+1.2**
	baz=209						
X34A	**Smith Ranch, M**	**1.38**	**202**		**Pn**	**19 58 21.3**	**-0.1**
WMOK	**Wichita Mounta**	**1.73**	**229**		**Pn**	**19 58 26.6**	**+0.4**
WMOK	**Wichita Mounta**	**1.73**	**229**	P	**Pn**	**19 58 26.6**	**+0.4**
	baz=48,SNR=235						
WMOK				S	**Sn**	**19 58 48.9**	**+0.4**
	baz=48						
WMOK	**Wichita Mounta**	**1.73**	**229**	P	**Pn**	**19 58 26.6**	**+0.4**
	baz=48,SNR=63						
WMOK				S	**Sn**	**19 58 49.1**	**+0.6**
	baz=48						
X37A	**Clayton**	**1.98**	**130**		**Pn**	**19 58 30.9**	**+1.2**
X37A				IAmb_Lg		19 59 01.4	
	comp=Z,622nm,0.8s						
X37A	**Clayton**	**1.98**	**130**	P	**Pn**	**19 58 30.9**	**+1.2**
	baz=310,SNR=46						
X37A				S	**Sb**	**19 58 57.6**	**+0.6**
	baz=310						
U38A	**Gravette**	**2.34**	**76**		**Pn**	**19 58 36.6**	**+2.0**
U38A				IAmb_Lg		19 59 10.0	
	comp=Z,380nm,0.8s						
U38A	**Gravette**	**2.34**	**76**	P	**Pn**	**19 58 37.2**	**+2.5**
	baz=256,SNR=24						
Z35A	**Perchaven, San**	**2.55**	**181**		**Pn**	**19 58 38.2**	**+0.7**
Z35A	**Perchaven, San**	**2.55**	**181**	P	**Pn**	**19 58 38.4**	**+0.8**
	baz=0.5,SNR=20						
HHAR

comp=Z,210nm,0.7s
W41B Gary Mavity, V 4.10 99 P **Pn** **19 58 60.0 +1.2**
baz=281,SNR=97
W41B Gary Mavity, V 4.10 99 P **Pn** **19 59 00.0 +1.2**
baz=281,SNR=39
W41B S **Sn** **19 59 48.1 +1.1**
baz=281
FCAR Ozark Folk Cen 4.12 88 Pn **Pn** **19 58 57.4 -1.8**
FCAR IAmb_Lg 20 00 10.4
comp=Z,153nm,0.7s
UALR University of 4.12 104 Pn **Pn** **19 59 00.7 +1.5**
UALR IAmb_Lg 20 00 19.0
comp=Z,147nm,0.7s
MGMO Mountain Grove 4.17 71 Pn **Pn** **19 59 00.3 +0.5**
MGMO IAmb_Lg 20 00 17.0
comp=Z,269nm,0.7s
Z41A Richland Creek 4.48 125 Pn **Pn** **19 59 03.6 -0.3**
Z41A IAmb_Lg 20 00 21.4
comp=Z,122nm,0.9s
Z41A Richland Creek 4.48 125 P **Pn** **19 59 03.7 -0.2**
baz=307
Z41A S **Sn** **19 59 56.3 0.0**
baz=307
R40A Maddies Statio 4.61 57 Pn **Pn** **19 59 06.8 +1.0**
R40A IAmb_Lg 20 00 24.8
comp=Z,333nm,0.8s
R40A Maddies Statio 4.61 57 P **Pn** **19 59 07.3 +1.4**
baz=240,SNR=10
P38A Dawn 4.73 37 Pn **Pn** **19 59 09.1 +1.6**
P38A IAmb_Lg 20 00 31.9
comp=Z,220nm,0.8s
N33A J Bar K, Exete 4.85 358 Pn **Pn** **19 59 09.0 -0.1**
N33A IAmb_Lg 20 00 36.4
comp=Z,151nm,0.8s
CCAR Cane Creek 4.87 112 Pn **Pn** **19 59 09.9 +0.4**
CCAR IAmb_Lg 20 00 39.9
comp=Z,241nm,0.8s
LCAR Lake Charles 4.91 86 Pn **Pn** **19 59 09.5 -0.4**
LCAR IAmb_Lg 20 00 38.9
comp=Z,142nm,0.9s
MSTX Muleshoe 4.96 249 Pn **Pn** **19 59 09.2 -1.6**
MSTX Muleshoe 4.96 249 P **Pn** **19 59 11.0 +0.2**
baz=66
435B Jarrell 5.10 184 Pn **Pn** **19 59 11.3 -1.3**
435B IAmb_Lg 20 00 47.3
comp=Z,174nm,1.0s
435B Jarrell 5.10 184 S **Sn** **20 00 11.5 -0.2**
baz=3.3
N35A Tabor 5.11 13 Pn **Pn** **19 59 11.7 -1.0**
N35A IAmb_Lg 20 00 50.0
comp=Z,302nm,0.7s
CCM Cathedral Cave 5.24 64 Pn **Pn** **19 59 14.3 -0.1**
CCM IAmb_Lg 20 00 44.5
comp=Z,295nm,0.8s
CCM Cathedral Cave 5.24 64 P **Pn** **19 59 16.0 +1.5**
baz=247
CCM S **Sn** **20 00 16.3 +1.3**
baz=247
KSCO Kaye Shedlock' 5.33 307 Pn **Pn** **19 59 15.2 -0.6**
KSCO IAmb_Lg 20 00 58.0
comp=Z,180nm,0.8s
KSCO Kaye Shedlock' 5.33 307 P **Pn** **19 59 17.1 +1.3**
baz=125
HBAR Harrisburg 5.33 92 Pn **Pn** **19 59 16.0 +0.3**
P40A Paris 5.47 47 Pn **Pn** **19 59 18.6 +1.0**
PBMO Poplar Bluff 5.54 79 Pn **Pn** **19 59 19.6 +1.0**
BGNE Belgrade 5.56 353 Pn **Pn** **19 59 18.8 -0.2**
BGNE IAmb_Lg 20 01 08.8
comp=Z,236nm,0.8s
BGNE Belgrade 5.56 353 P **Pn** **19 59 19.8 +0.8**
baz=172
143A Socs Landing, 5.75 122 IAmb_Lg 20 01 09.7
comp=Z,141nm,0.7s
N38A Joes South For 5.80 31 Pn **Pn** **19 59 23.2 +1.0**
FVM French Village 5.81 67 Pn **Pn** **19 59 21.9 -0.4**
FVM IAmb_Lg 20 01 06.5
comp=Z,219nm,0.9s
JCT Junction City 5.82 203 Pn **Pn** **19 59 21.8 -0.7**
JCT IAmb_Lg 20 01 12.1
comp=Z,153nm,0.8s
JCT Junction City 5.82 203 P **Pn** **19 59 22.3 -0.1**
baz=21
HDBT Hernando Brdge 5.87 95 Pn **Pn** **19 59 23.2 +0.1**
T25A Trinidad 5.94 284 Pn **Pn** **19 59 23.3 -1.0**
T25A IAmb_Lg 20 01 07.6
comp=Z,102nm,0.8s
T25A Trinidad 5.94 284 P **Pn** **19 59 24.3 -0.1**
baz=100,SNR=9.5
MET Memphis--Engin 5.98 95 IAmb_Lg 20 01 11.6
comp=Z,192nm,1.0s
PVMO Portageville 6.09 83 Pn **Pn** **19 59 27.6 +1.4**
L34A Svendsen Farm, 6.10 6 Pn **Pn** **19 59 26.0 -0.4**
OGNE Ogallala 6.32 325 Pn **Pn** **19 59 27.7 -1.7**
OGNE IAmb_Lg 20 01 26.0
comp=Z,239nm,0.7s
OGNE Ogallala 6.32 325 P **Pn** **19 59 30.8 +1.5**
baz=142
HALT Halls 6.38 87 IAmb_Lg 20 01 36.3
comp=Z,233nm,0.9s
OXF Oxford 6.52 100 Pn **Pn** **19 59 31.4 -0.8**
OXF IAmb_Lg 20 01 29.8
comp=Z,98nm,0.7s
OXF Oxford 6.52 100 P **Pn** **19 59 32.6 +0.5**
baz=284
W45A Hickory Valley 6.58 94 Pn **Pn** **19 59 30.9 -2.0**
W45A IAmb_Lg 20 01 39.4
comp=Z,124nm,0.7s
Y45A Yeager Farm, C 6.61 106 Pn **Pn** **19 59 31.0 -2.3**
S44A Carbondale 6.62 72 IAmb_Lg 20 01 41.2
comp=Z,230nm,0.8s
SIUC Southern Illin 6.66 72 IAmb_Lg 20 01 27.1
comp=Z,242nm,0.8s
SCIA State Center 6.76 26 IAmb_Lg 20 01 42.1
comp=Z,176nm,0.8s
K31A O'Neill 6.83 350 Pn **Pn** **19 59 36.7 +0.3**
SDCO Great Sand Dun 6.91 288 Pn **Pn** **19 59 39.0 +1.3**
SDCO IAmb_Lg 20 01 38.6
comp=Z,70nm,0.9s
SDCO Great Sand Dun 6.91 288 P **Pn** **19 59 38.7 +0.9**
baz=103,SNR=41
N41A Harden Midland 6.93 44 Pn **Pn** **19 59 38.3 +0.6**
735A Kenedy 7.03 184 IAmb_Lg 20 01 50.4
comp=Z,69nm,0.8s
Q24A Divide 7.03 298 Pn **Pn** **19 59 38.3 -1.1**
Q24A IAmb_Lg 20 01 44.6
comp=Z,87nm,0.8s
P43A Skaggs, Pawnee 7.14 56 Pn **Pn** **19 59 40.3 -0.3**
PLAL Pickwick Lake 7.50 94 Pn **Pn** **19 59 44.3 -1.3**
K38A Parkersburg 7.57 26 Pn **Pn** **19 59 45.3 -1.2**
WVT Waverly 7.60 85 Pn **Pn** **19 59 45.2 -1.7**
ANMO Albuquerque 7.62 266 Pg **Pb** **20 00 12.7 +4.4**
comp=Z,0.9nm,0.3s,baz=88,slow=15,SNR=20
ANMO Lg Lg 20 01 52.6
comp=Z,0.8nm,0.3s,baz=96,slow=16,SNR=2.0
ISCO Idaho Springs 7.72 303 Pn **Pn** **19 59 47.8 -1.0**
L40A Anamosa 7.72 35 Pn **Pn** **19 59 48.2 -0.4**
L40A IAmb_Lg 20 02 09.5
comp=Z,137nm,0.8s
833A Chaparral WMA, 7.77 194 Pn **Pn** **19 59 48.8 -0.4**
HDIL Hopedale 7.77 51 P **Pn** **19 59 50.1 +0.8**
baz=236
ECSD EROS Data Cent 7.85 3 Pn **Pn** **19 59 49.9 -0.4**
346A Big Creek Wild 7.86 123 Pn **Pn** **19 59 48.5 -1.9**
BNM Barren Site 7.93 260 Pn **Pn** **19 59 51.2 -0.4**
S22A 4UR Ranch, Cre 7.94 286 Pn **Pn** **19 59 51.1 -0.8**
MNTX Cornudas Mount 7.99 241 Pn **Pn** **19 59 51.0 -1.3**
MNTX IAmb_Lg 20 02 30.8
comp=Z,68nm,1.2s
MNTX Cornudas Mount 7.99 241 P **Pn** **19 59 51.7 -0.6**
baz=56,SNR=8.9
CRNM Carthage 8.07 259 Pn **Pn** **19 59 52.4 -1.1**
LENM Lemitar 8.20 261 Pn **Pn** **19 59 53.0 -2.3**
T47A Sharon Grove 8.21 79 Pn **Pn** **19 59 56.7 +1.5**
PHWY Pilot Hill 8.43 312 Pn **Pn** **19 59 57.2 -1.3**
PHWY IAmb_Lg 20 02 29.2
comp=Z,100nm,0.8s
X48A Hartselle 8.44 97 Pn **Pn** **19 59 57.1 -1.3**
L42A Oliver, Polo 8.47 42 Pn **Pn** **19 59 59.4 +0.6**
N23A Red Feather La 8.49 309 Pn **Pn** **20 00 00.6 +1.2**
N23A IAmb_Lg 20 02 36.5
comp=Z,138nm,0.8s
TX32 Lajitas Array 8.51 222 Pn **Pn** **19 59 58.0 -1.6**
TXAR Lajitas Array 8.51 222 Pn **Pn** **19 59 58.2 -1.3**
comp=Z,0.1nm,0.3s,baz=39,slow=14,SNR=2.6
TXAR Pg 20 00 23.5
comp=Z,0.5nm,0.3s,baz=48,slow=11,SNR=7.1
TXAR Lg Lg 20 02 18.8
comp=Z,1.7nm,0.3s,baz=42,slow=18,SNR=8.4
comp=Z,0.1nm,0.3s
TXAR Lajitas Array 8.51 222 Pn **Pn** **19 59 59.5 0.0**
I37A Lemond, Waseca 8.62 19 IAmb_Lg 20 02 40.9
comp=Z,134nm,1.0s
SUSD Miller 8.65 352 Pn **Pn** **20 00 02.5 +1.2**
SUSD IAmb_Lg 20 02 44.5
comp=Z,90nm,0.8s
JFWS Jewell Farm 8.84 35 Pn **Pn** **20 00 03.8 -0.1**
JFWS IAmb_Lg 20 02 39.2
comp=Z,139nm,0.8s
LRAL Lakeview Retre 8.89 106 Pn **Pn** **20 00 06.3 +1.7**
LRAL Lakeview Retre 8.89 106 P **Pn** **20 00 05.8 +1.2**
baz=291
U49A Red Boiling Sp 9.25 83 Pn **Pn** **20 00 09.5 -0.1**
I40A Norwalk 9.46 30 Pn **Pn** **20 00 11.9 -0.4**
I40A IAmb_Lg 20 02 59.0
comp=Z,127nm,1.1s
W50A Signal Mountai 9.71 91 Pn **Pn** **20 00 13.7 -2.2**
RWWY Rawlins 9.72 310 Pn **Pn** **20 00 15.2 -1.0**
RWWY IAmb_Lg 20 03 18.8
comp=Z,101nm,1.3s
RSSD Black Hills 9.75 330 IAmb_Lg 20 03 23.6
comp=Z,46nm,0.8s
K22A Casper 9.89 316 IAmb_Lg 20 03 28.7
comp=Z,143nm,1.0s
F33A 5 Mile Ranch, 9.97 4 **Pn** **20 00 18.6 -0.7**
X51A Calhoun 10.18 94 Pn **Pn** **20 00 21.4 -1.0**
I42A Draeger Farm, 10.21 36 Pn **Pn** **20 00 21.7 -1.0**
CPCT Cooper Cave 10.32 89 Pn **Pn** **20 00 24.4 +0.2**
F36A Milaca 10.34 14 Pn **Pn** **20 00 23.1 -1.4**
V51A Loudon 10.43 87 Pn **Pn** **20 00 24.7 -1.1**
G40A Rib Lake 10.77 27 Pn **Pn** **20 00 29.4 -1.0**
TKL Tuckaleechee C 10.91 87 Pn **Pn** **20 00 30.3 -2.0**
comp=Z,0.1nm,0.3s,baz=235,slow=11,SNR=1.1
TKL Lg Lg 20 03 34.7
comp=Z,2.0nm,0.3s,baz=349,slow=23,SNR=6.3
comp=Z,1.1nm,0.5s
TZTN Tazewell 11.05 83 Pn **Pn** **20 00 32.3 -1.9**
S51A Beattyville 11.05 77 Pn **Pn** **20 00 32.7 -1.5**
PDAR Pinedale Array 11.77 309 Pn **Pn** **20 00 42.7 -1.6**
comp=Z,0.8nm,0.4s,baz=117,slow=13,SNR=3.9
PDAR Sn Sn 20 02 46.6 -9.4
comp=Z,0.2nm,0.3s,baz=100,slow=12,SNR=2.1
PDAR Lg Lg 20 04 03.1
comp=Z,1.4nm,0.3s,baz=118,slow=29,SNR=8.8
AGMN Agassiz Nation 12.44 4 **Pn** **20 00 50.6 -2.6**
B35A Bob, Littlefor 12.72 11 Pn **Pn** **20 00 53.5 -3.5**
LAO LASA Array 12.74 331 Pn **Pn** **20 00 56.5 -0.7**
E43A Lone Tree Farm 12.98 33 Pn **Pn** **20 00 57.4 -3.2**
ULM Lac du Bonnet 14.39 3 Pn **Pn** 20 01 14.1 -5.6
comp=Z,0.4nm,0.3s,baz=181,slow=6.3,SNR=4.2
ULM Sn Sn 20 03 49.4 -10
comp=Z,0.6nm,0.3s,baz=131,slow=20,SNR=3.0
ULM Lg Lg 20 05 20.3
baz=104,slow=19
comp=Z,2.7nm,0.6s
SADO Sadowa 16.35 52 Lg Lg 20 06 25.1
comp=Z,0.9nm,0.3s,baz=330,slow=21,SNR=7.3

*NEIC **28** 20:34:56.5±1.4, 11°.59N±0°.09×140°.7E±0°.1, h72^{km}±5^{km}, mb4.7/25, Error ellipse: s-maj=18.0km s-min=10.1km az=119.0*
*IDC **28** 20:34:58.4±2.7, 11°.63N×140°.88E, h98^{km}±27^{km}, mb3.6/12, mbtmp4.1/14, MS3.2/13, Error ellipse: s-maj=22.2km s-min=13.7km az=100.0*

ISC 28 20:34:53.2±0.5, 11°.60N±0°.07×140°.64E±0°.09, h43^{km}, n61, σ1^{s}06/46, mb4.3/22, MS3.1/9, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**4.58**	**64**	P	**Pn**	**20 36 02.3**	**+2.3**
	366nm,0.9s,baz=196,slow=9.2,SNR=17						
GUMO				S	**Sn**	**20 36 52.5**	**+0.5**
	93nm,0.5s,baz=17,slow=21,SNR=1.7						
GUMO				LR	LR	20 37 53.4	
	comp=Z,334nm,21.1s,baz=242,slow=40						
GUMO	**Guam**	**4.58**	**64**		**Pn**	**20 36 01.2**	**+1.2**
JCJ	**Chichijima**	**15.49**	**5**	P	**Pn**	**20 38 29.9**	**+1.1**
	34nm,1.0s,baz=277,slow=18,SNR=2.4						
JCJ				LR	LR	20 43 46.1	
	comp=Z,45nm,19.8s,baz=164,slow=34						
JCJ	**Chichijima**	**15.49**	**5**	P	**P**	**20 38 33.7**	**+1.1**
JCJ				IAmb	IAmb	20 38 35.7	
	comp=Z,46nm,0.8s						
SIJI	**Sorong**	**15.49**	**218**	LR	LR	20 43 09.7	
	comp=Z,111nm,21.4s,baz=26,slow=31						
DAV	**Davao City (W)**	**15.52**	**254**	LR	LR	20 45 53.4	
	comp=Z,44nm,18.3s,baz=98,slow=42						
FAKI	**Fak Fak**	**16.66**	**211**	P	**P**	**20 38 46.8**	**+1.1**
FAKI				IAmb	IAmb	20 38 50.2	
	comp=Z,38nm,1.3s						
TNTI	**Ternate**	**17.00**	**232**		**P**	**20 38 50.4**	**+0.9**
LUWI	**Luwuk**	**21.74**	**236**	P	**P**	**20 39 42.3**	**+1.1**
LUWI				IAmb	IAmb	20 40 00.8	
	comp=Z,83nm,1.1s						
TOLI2	**Tolitoli**	**22.29**	**244**	P	**P**	**20 39 47.3**	**+0.2**
MJAR	**Matsushiro Arr**	**24.93**	**355**	LR	LR	20 48 35.4	
	comp=Z,31nm,20.6s,baz=165,slow=33						
MTN	**Manton Dam**	**26.05**	**202**	P	**P**	**20 40 22.5**	**-0.2**
MTN				IAmb	IAmb	20 40 25.7	
	comp=Z,66nm,1.4s						
H11S3	**WAKE ISLAND Hy**	**26.05**	**72**	T	T	21 09 08.3	
	baz=256,slow=75						
H11S1	**WAKE ISLAND Hy**	**26.07**	**72**	T	T	21 09 08.5	
	baz=256,slow=75,SNR=9.8						
H11S2	**WAKE ISLAND Hy**	**26.07**	**72**	T	T	21 09 09.5	
	baz=256,slow=75,SNR=29						
H11N1	**WAKE ISLAND Hy**	**26.51**	**69**	T	T	21 09 43.8	
	baz=254,slow=75,SNR=6.6						
H11N2	**WAKE ISLAND Hy**	**26.52**	**69**	T	T	21 09 45.8	
	baz=254,slow=75,SNR=6.3						
H11N3	**WAKE ISLAND Hy**	**26.53**	**69**	T	T	21 09 46.5	
	baz=254,slow=75,SNR=7.7						
KSRS	**Korea Array**	**28.17**	**338**	LR	LR	20 50 05.5	
	comp=Z,39nm,21.9s,baz=155,slow=32						
KNRA	**Kununurra**	**29.54**	**204**	P	**P**	**20 40 53.6**	**-0.3**
WB0	**Warramunga Arr**	**31.77**	**191**	P	**P**	**20 41 13.2**	**-0.4**
WB0				IAmb	IAmb	20 41 22.1	
	comp=Z,17nm,1.2s						
WR0	**Warramunga Arr**	**31.93**	**191**	P	**P**	**20 41 14.5**	**-0.5**
WR0				IAmb	IAmb	20 41 18.4	
	comp=Z,13nm,1.3s						
WB2	**Warramunga Arr**	**31.94**	**191**	P	**P**	**20 41 14.2**	**-1.0**
WB2				IAmb	IAmb	20 41 29.5	
	comp=Z,12nm,1.2s						
WRA	**Warramunga Arr**	**31.95**	**191**	P	**P**	**20 41 15.3**	**+0.2**
	comp=Z,3.2nm,0.6s,baz=6.1,slow=9.6,SNR=24						
	comp=Z,3.2nm,0.6s						
WRA	**Warramunga Arr**	**31.95**	**191**	P	**P**	**20 41 15.4**	**+0.2**
AS31	**Alice Springs**	**35.66**	**191**	P	**P**	**20 41 47.4**	**0.0**
AS31				IAmb	IAmb	20 41 50.0	
	comp=Z,1.8nm,0.5s						
ASAR	**Alice Springs**	**35.66**	**191**	P	**P**	**20 41 48.0**	**+0.5**
	comp=Z,1.2nm,0.5s,baz=19,slow=12,SNR=41						
ASAR				LR	LR	20 55 47.0	
	comp=Z,182nm,20.1s,baz=358,slow=35						
	comp=Z,1.2nm,0.5s						
ASAR	**Alice Springs**	**35.66**	**191**	P	**P**	**20 41 47.5**	**+0.1**
KLR	**Kul'dur**	**38.24**	**351**	LR	LR	20 55 38.8	
	comp=Z,34nm,21.1s,baz=183,slow=32						
CMAR	**Chiang Mai Arr**	**40.77**	**285**	P	**P**	**20 42 31.9**	**+1.3**
	comp=Z,1.2nm,0.7s,baz=88,slow=6.6,SNR=9.1						
	comp=Z,1.2nm,0.7s						
STKA	**Stephens Creek**	**43.23**	**179**	P	**P**	**20 42 50.4**	**0.0**
	comp=Z,2.0nm,0.6s,baz=352,slow=6.2,SNR=7.1						
	comp=Z,2.0nm,0.6s						
STKA	**Stephens Creek**	**43.23**	**179**	P	**P**	**20 42 50.8**	**+0.4**
PEA0B	**Petropavlovsk-**	**43.61**	**15**	P	**P**	**20 42 53.1**	**-0.1**
PEA0B				IAmb	IAmb	20 43 27.1	
	comp=Z,30nm,1.4s						
PETK	**Petropavlovsk-**	**43.61**	**15**	LR	LR	20 57 38.3	
	comp=Z,29nm,21.3s,baz=183,slow=31						
FORT	**Forrest**	**43.83**	**196**	P	**P**	**20 42 55.4**	**+0.2**
BBOO	**Buckleboo**	**44.37**	**186**	P	**P**	**20 43 00.2**	**+0.7**
SONM	**Songino Array**	**46.11**	**328**	P	**P**	**20 43 14.2**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=140,slow=6.5,SNR=3.5						
SONM				LR	LR	21 03 58.5	
	comp=Z,27nm,18.6s,baz=146,slow=38						
	comp=Z,0.3nm,0.5s						
MORW	**Morawa**	**46.89**	**210**	P	**P**	**20 43 20.0**	**+0.5**
MORW				IAmb	IAmb	20 43 52.4	
	comp=Z,20nm,1.4s						
MA2	**Magadan**	**48.49**	**7**	LR	LR	21 04 10.3	
	comp=Z,13nm,19.2s,baz=184,slow=36						
SHEM	**Shemya Is, Ala**	**49.03**	**26**	LR	LR	21 00 45.2	
	comp=Z,42nm,21.9s,baz=269,slow=32						
TOO	**Toolangi**	**49.12**	**175**	P	**P**	**20 43 36.9**	**+0.3**
NWAO	**Narrogin (SRO)**	**49.59**	**206**	P	**P**	**20 43 40.7**	**+0.4**
MKAR	**Makanchi Array**	**60.11**	**318**	P	**P**	**20 44 56.5**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=93,slow=8.0,SNR=7.8						
	comp=Z,0.3nm,0.4s						
MKAR	**Makanchi Array**	**60.11**	**318**	P	**P**	**20 44 55.8**	**-0.5**
MAKZ	**Makanchi**	**60.32**	**318**	P	**P**	**20 44 57.7**	**0.0**
MAKZ				IAmb	IAmb	20 45 39.9	
	comp=Z,3.1nm,0.8s						
BKZ	**Black Stump Fm**	**60.54**	**148**	P	**P**	**20 44 58.2**	**-1.1**
ZALV	**Zalesovo Beam**	**60.89**	**326**	P	**P**	**20 45 02.8**	**+1.4**
	comp=Z,0.4nm,0.3s,baz=98,slow=6.1,SNR=2.1						
	comp=Z,0.4nm,0.3s						
ZALV	**Zalesovo Beam**	**60.89**	**326**	P	**P**	**20 45 02.0**	**+0.6**
KURK	**Kurchatov**	**63.48**	**321**	P	**P**	**20 45 18.5**	**-0.3**
KURK				IAmb	IAmb	20 45 44.1	
	comp=Z,4.0nm,0.9s						
IMAR	**Indian Mountai**	**69.65**	**23**	P	**P**	**20 45 58.9**	**+0.9**
MLY	**Manley**	**70.58**	**25**	P	**P**	**20 46 01.6**	**-2.2**
ILAR	**Eielson Array**	**72.13**	**25**	P	**P**	**20 46 10.6**	**-2.5**
	comp=Z,0.3nm,0.4s,baz=244,slow=6.2,SNR=5.6						
	comp=Z,0.3nm,0.4s						
RIDG	**Independent Ri**	**72.83**	**27**	P	**P**	**20 46 16.6**	**-0.7**
BMAR	**Burnt Mountain**	**73.53**	**23**	P	**P**	**20 46 21.0**	**-0.4**
ABKAR	**Akbulak array**	**75.25**	**318**	P	**P**	**20 46 30.7**	**-1.0**
YKA	**Yellowknife Ar**	**86.50**	**27**	P	**P**	**20 47 30.1**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=288,slow=4.9,SNR=5.8						
	comp=Z,0.4nm,0.3s						
ARCES	**ARCESS Array B**	**87.67**	**341**	P	**P**	**20 47 36.0**	**-1.0**
	comp=Z,1.6nm,1.0s,baz=63,slow=8.2,SNR=4.0						
	comp=Z,1.6nm,1.0s						
ARCES	**ARCESS Array B**	**87.67**	**341**	IAmb	IAmb	20 48 07.5	
	comp=Z,11nm,1.5s						
FINES	**FINESS Array B**	**91.18**	**334**	P	**P**	**20 47 50.6**	**-2.9**
	comp=Z,0.9nm,0.6s,baz=65,slow=4.1,SNR=12						
	comp=Z,0.9nm,0.6s						
NVAR	**Mina Array Bea**	**91.38**	**50**	P	**P**	**20 47 54.0**	**-1.3**
	comp=Z,0.6nm,0.7s,baz=275,slow=4.4,SNR=2.6						
	comp=Z,0.6nm,0.7s						
ELK	**Elko**	**92.97**	**48**	LR	LR	21 24 21.3	
	comp=Z,21nm,20.2s,baz=226,slow=32						

NOU 28 20:36:18.9, 21°.18S×170°.23E, h0^{km}, mb4.0/8, Southeast of Loyalty Islands, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**2.07**	**261**	P	Pn	20 36 54.8	-0.2
LIFNC	**LIFOU**	**2.82**	**278**	P	Pn	20 37 04.8	-0.5
PINNC	**Pines Island,**	**2.95**	**241**	P	Pn	20 37 06.8	-0.3
YATNC	**Mamie plateau,**	**3.23**	**254**	P	Pn	20 37 09.9	-1.0
OUENC	**Ouen Island, N**	**3.38**	**248**	P	Pn	20 37 13.2	+0.2
ONTNC	**Ouen Toro**	**3.69**	**252**	P	Pn	20 37 17.2	0.0
NOUC	**Port Laguerre**	**3.77**	**255**	P	Pn	20 37 18.4	+0.1
KOUNC	**Koumac, New Ca**	**5.59**	**275**	P	Pn	20 37 43.7	+0.3

*IDC **28** 20:39:32.4±1.3, 5°.91S×153°.46E, h0^{km}, mb4.0/8, mbtmp4.0/10, ML2.8/2, MS3.4/4, Error ellipse: s-maj=35.0km s-min=19.5km az=100.0*
*NEIC **28** 20:39:45.6±2.8, 5°.57S±0°.04×152°.7E±0°.1, h66^{km}±9^{km}, mb4.2/14, Error ellipse: s-maj=19.9km s-min=5.6km az=87.0*

ISC 28 20:39:37.7±0.9, 5°.82S±0°.07×153°.5E±0°.1, h35^{km}, n33, σ1^{s}65/34, mb4.2/16, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**2.09**	**321**		**Pn**	**20 40 10.1**	**-0.2**
KRVT	**Keravat (AS076**	**2.10**	**316**	Pn	**Pn**	**20 40 10.4**	**+0.1**
	20nm,0.3s,baz=285,slow=1.8,SNR=12						
KRVT				Sn	**Sn**	**20 40 37.5**	**+2.3**
	33nm,0.3s,baz=312,slow=15,SNR=9.3						
	98nm,0.4s						
PMG	**Port Moresby**	**7.22**	**240**	Pn	**Pn**	**20 41 20.3**	**-0.6**
	2.3nm,0.3s,baz=46,slow=17,SNR=2.6						
PMG				Sn	**Sn**	**20 42 40.8**	**-0.9**
	1.5nm,0.3s,baz=53,slow=9.8,SNR=3.9						
PMG				LR	LR	20 44 35.3	
	comp=Z,226nm,18.0s,baz=46,slow=42						
	19nm,0.9s						
COEN	**Coen**	**12.99**	**231**	Pn	**Pn**	**20 42 40.7**	**+0.8**
CTA	**Charters Tower**	**15.84**	**206**	LR	LR	20 49 07.8	
	comp=Z,163nm,18.0s,baz=31,slow=36						
MTN	**Manton Dam**	**23.13**	**251**	P	**P**	**20 44 36.8**	**-4.2**
WR0	**Warramunga Arr**	**23.18**	**231**	P	**P**	**20 44 39.5**	**-1.9**
WR0				IAmb	IAmb	20 45 00.7	
	comp=Z,10nm,1.1s						
WB0	**Warramunga Arr**	**23.18**	**232**	P	**P**	**20 44 38.9**	**-2.6**
WB0				IAmb	IAmb	20 44 48.0	
	comp=Z,10nm,1.2s						
WB2	**Warramunga Arr**	**23.31**	**231**		**P**	**20 44 41.6**	**-1.2**
WB2				IAmb	IAmb	20 45 11.2	
	comp=Z,15nm,1.3s						
WRA	**Warramunga Arr**	**23.32**	**231**	P	**P**	**20 44 41.0**	**-1.9**
	comp=Z,2.3nm,0.9s,baz=60,slow=9.1,SNR=4.8						
WRA				PcP	**PcP**	**20 48 31.0**	**+1.4**
	comp=Z,0.4nm,0.5s,baz=58,slow=2.6,SNR=3.0						
WRA				LR	LR	20 54 11.1	
	comp=Z,205nm,18.8s,baz=14,slow=38						
	comp=Z,2.3nm,0.9s						
AS31	**Alice Springs**	**25.89**	**225**	P	**P**	**20 45 05.1**	**-1.5**
ASAR	**Alice Springs**	**25.89**	**225**	P	**P**	**20 45 04.7**	**-1.9**
	comp=Z,1.5nm,0.9s,baz=58,slow=9.3,SNR=19						
ASAR				PcP	**PcP**	**20 48 36.5**	**+1.3**
	comp=Z,0.4nm,0.5s,baz=60,slow=2.9,SNR=4.5						
	comp=Z,1.5nm,0.9s						
KNRA	**Kununurra**	**26.17**	**246**	P	**P**	**20 45 06.7**	**-2.4**
STKA	**Stephens Creek**	**28.22**	**202**	P	**P**	**20 45 30.7**	**+3.4**
FORT	**Forrest**	**34.46**	**221**		**P**	**20 46 23.8**	**+1.5**
MJAR	**Matsushiro Arr**	**44.51**	**342**	LR	LR	21 07 25.6	
	comp=Z,19nm,18.3s,baz=202,slow=38						
KSRS	**Korea Array**	**49.22**	**333**	P	**P**	**20 48 22.9**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=144,slow=8.4,SNR=5.8						
	comp=Z,0.9nm,0.7s						
USRK	**Ussuriysk Ar.**	**53.43**	**341**	P	**P**	**20 48 54.0**	**-0.2**
	comp=Z,2.1nm,0.7s,baz=151,slow=6.3,SNR=2.8						
	comp=Z,2.1nm,0.7s						
CMAR	**Chiang Mai Arr**	**58.94**	**295**	P	**P**	**20 49 34.7**	**+0.7**
	comp=Z,0.4nm,0.8s,baz=128,slow=5.0,SNR=2.7						
	comp=Z,0.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**58.94**	**295**	P	**P**	**20 49 32.7**	**-1.3**
ULN	**Ulaanbaatar**	**67.22**	**328**	P	**P**	**20 50 28.5**	**-0.2**
ULN				IAmb	IAmb	20 50 30.7	
	comp=Z,2.9nm,1.2s						
SONM	**Songino Array**	**67.55**	**328**	P	**P**	**20 50 31.4**	**+0.7**
	comp=Z,1.1nm,0.7s,baz=140,slow=5.7,SNR=9.0						
	comp=Z,1.1nm,0.7s						
SONM	**Songino Array**	**67.55**	**328**	IAmb	IAmb	20 50 31.8	
	comp=Z,3.7nm,1.4s						
MK31	**Makanchi Array**	**81.55**	**319**	P	**P**	**20 51 52.2**	**+0.4**
MKAR	**Makanchi Array**	**81.55**	**319**	P	**P**	**20 51 52.2**	**+0.4**
	comp=Z,1.8nm,0.6s,baz=96,slow=6.9,SNR=18						
	comp=Z,1.8nm,0.6s						
MKAR	**Makanchi Array**	**81.55**	**319**	P	**P**	**20 51 51.7**	**-0.1**
MAKZ	**Makanchi**	**81.75**	**319**	P	**P**	**20 51 52.4**	**-0.6**
MAKZ				IAmb	IAmb	20 51 53.6	
	comp=Z,2.1nm,

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.10**	**323**	⇓*e*P	**Pn**	**20 54 18.6**	**+0.3**
	baz=29						
OHH				⇓*e*S	**Sn**	**20 54 35.7**	**+2.0**
	baz=29						
DRK	**Karamyk**	**1.45**	**264**	⇓*i*P	**Pn**	**20 54 21.9**	**-1.3**
	baz=71						
DRK				⇓*i*S	**Sb**	**20 54 41.4**	**-1.1**
	baz=71						
FRG	**Fergana**	**1.61**	**297**	P	**Pg**	**20 54 27.8**	**+0.2**
FRG				S	Sg	20 54 54.0	+5.5
CHMI	**Chimion**	**1.75**	**291**	P	**Pg**	**20 54 32.5**	**+2.1**
CHMI				S	**Sg**	**20 54 57.0**	**+3.9**
MINT	**Mingtut**	**2.21**	**293**	P	Pn	20 54 20.0	-14
MINT				S	Sn	20 54 38.3	-23
BTK	**Batken**	**2.22**	**282**	⇑*i*P	**Pb**	**20 54 35.7**	**-1.4**
	baz=86						
BTK				⇑*e*S	**Sg**	**20 55 04.9**	**-3.3**
	baz=86						
ARLS	**Aral**	**2.27**	**13**	⇓*e*P	**Pg**	**20 54 38.8**	**-1.4**
	baz=13						
ARLS				⇓*e*S	**Sg**	**20 55 10.1**	**+0.5**
	baz=13						
UCH	**Uchtor**	**2.66**	**14**	⇓*e*P	**Pg**	**20 54 44.3**	**-3.4**
	baz=14						
UCH				⇓*e*S	**Sg**	**20 55 19.9**	**-2.3**
	baz=14						
GAR	**Garm**	**2.67**	**257**	⇑*e*P	**Pn**	**20 54 40.8**	**+0.9**
	baz=60						
GAR				⇑*e*S	**Sn**	**20 55 13.8**	**+1.4**
	baz=60						
TRKS	**Terek-Say**	**2.69**	**315**	⇑*e*P	**Pb**	**20 54 42.7**	**-2.3**
	baz=18						
TRKS				⇑*e*S	**Sb**	**20 55 16.7**	**-1.4**
	baz=18						
EKS2	**Erkin-Say**	**3.01**	**2**	⇑*e*P	**Pb**	**20 54 49.0**	**-1.6**
	baz=2.0						
EKS2				⇑*e*S	**Sg**	**20 55 27.9**	**-5.6**
	baz=2.0						
MRKS	**Merke**	**3.11**	**354**	*e*P	Pg	20 54 58.7	+2.4
	6.0nm,0.2s						
MRKS				*e*S	**Sg**	**20 55 39.7**	**+3.0**
	34nm,0.5s						
KBK	**Karagaybulak**	**3.16**	**18**	⇓*e*P	**Pb**	**20 54 51.2**	**-1.9**
	baz=17						
KBK				⇓*e*S	**Sb**	**20 55 31.8**	**0.0**
	baz=17						
CHGR	**Chuyangaron**	**3.63**	**256**	⇑*e*P	**Pn**	**20 54 54.1**	**+0.9**
	baz=58						
CHGR				⇑*e*S	**Sn**	**20 55 36.7**	**+0.5**
	baz=58						
KST	**Kastek**	**3.81**	**26**	*e*P	**Pg**	**20 55 11.5**	**+1.8**
	1.6nm,0.4s						
KST				*e*S	**Sg**	**20 56 01.7**	**+2.6**
	18nm,0.6s						
SGDS	**Sogindy**	**3.87**	**11**	*e*P	**Pg**	**20 55 12.5**	**+1.7**
	2.2nm,0.4s						
SGDS				*e*S	**Sg**	**20 56 03.2**	**+2.2**
	5.7nm,0.5s						
DGS	**Degeres**	**3.93**	**23**	*e*P	**Pg**	**20 55 14.1**	**+2.1**
	1.8nm,0.3s						
DGS				*e*S	**Sg**	**20 56 06.2**	**+3.3**
	8.8nm,0.6s						
MTBS	**Maitube**	**4.06**	**30**	*e*P	**Pg**	**20 55 15.9**	**+1.5**
	2.7nm,0.1s						
MTBS				*e*S	**Sg**	**20 56 08.9**	**+1.9**
	8.0nm,0.5s						
TNSS	**Tian-Shan**	**4.20**	**35**	*e*P	**Pg**	**20 55 18.1**	**+1.0**
	3.4nm,0.3s						
TNSS				*e*S	**Sg**	**20 56 13.1**	**+1.7**
	4.8nm,0.7s						
KRBS	**Karabastau**	**4.32**	**20**	*e*P	**Pg**	**20 55 20.2**	**+0.8**
	2.5nm,0.5s						
KRBS				*e*S	**Sg**	**20 56 16.8**	**+1.4**
	7.9nm,0.9s						
BRLS	**Borolday**	**4.44**	**321**	*e*P	**Pg**	**20 55 22.1**	**+0.4**
	3.1nm,0.2s						
BRLS				*e*S	**Sg**	**20 56 19.9**	**+0.7**
	4.7nm,0.4s						
KTBS	**Karatobe**	**4.65**	**28**	*e*P	**Pg**	**20 55 26.4**	**+0.7**
	1.1nm,0.4s						
KTBS				*e*S	**Sg**	**20 56 27.1**	**+1.1**
	15nm,0.6s						
KUU	**Kurty**	**4.69**	**24**	*e*P	**Pg**	**20 55 27.0**	**+0.4**
	1.5nm,0.3s						
KUU				*e*S	**Sg**	**20 56 28.4**	**+1.0**
	9.2nm,0.3s						
SATY	**Saty**	**4.94**	**45**	*e*P	**Pg**	**20 55 31.8**	**+0.5**
	1.0nm,0.2s						
SATY				*e*S	**Sg**	**20 56 36.2**	**+1.0**
	6.4nm,0.5s						
KPKS	**Kokpek**	**5.36**	**43**	*e*P	**Pg**	**20 55 38.4**	**-1.0**
	1.6nm,0.3s						
KPKS				*e*S	**Sg**	**20 56 47.5**	**-1.4**
	4.7nm,0.5s						
BTLS	**Baital**	**5.40**	**3**	*e*P	**Pg**	**20 55 40.7**	**+0.6**
	0.4nm,0.1s						
BTLS				*e*S	**Sg**	**20 56 51.8**	**+1.8**
	3.2nm,0.4s						

*IDC **28** 20:55:37.5±2.4, 41.°00N×112.°85W, h0km, mbtmp2.2/1, ML2.9/1, Error ellipse: s-maj=54.5km s-min=6.5km az=159.0*
*NEIC **28** 20:55:38.3±1.5, 41.°12N±0.°03×112.°94W±0.°03, h0km±2km, ML1.8/27, Error ellipse: s-maj=5.5km s-min=3.0km az=322.0*

ISC 28 20:55:37.9±1.0, 41.°13N±0.°04×112.°94W±0.°04, h0km, n22, σ0s81/21, Utah

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BGU	**Big Grassy Mou**	**0.21**	**199**		**Pg**	**20 55 43.1**	**+1.1**
HVU	**Hansel Valley**	**0.66**	**11**		**Pg**	**20 55 51.2**	**+0.6**
HVU				IAML		20 55 53.5	
	comp=N,72nm,0.4s						
HVU				IAML		20 56 04.5	
	comp=E,54nm,0.5s						
DUG	**Dugway, Tooele**	**0.94**	**174**		**Pb**	**20 55 56.5**	**-0.6**
DUG				IAML		20 56 16.4	
	comp=E,34nm,0.5s						
DUG				IAML		20 56 20.1	
	comp=E,36nm,0.4s						
CTU	**Camp Tracy**	**1.00**	**115**		**Pb**	**20 55 57.6**	**-0.6**
CTU				IAML		20 56 19.4	
	comp=E,32nm,0.5s						
HWUT	**Hardware Ranch**	**1.14**	**65**		**Pg**	**20 55 59.7**	**-0.1**
HWUT				IAML		20 56 20.6	
	comp=E,18nm,0.5s						
HWUT				IAML		20 56 23.3	
	comp=E,23nm,0.4s						
TCUT	**Toone Canyon**	**1.16**	**90**		**Pb**	**20 56 00.6**	**-0.3**
JLU	**Jordanelle**	**1.25**	**114**		**Pb**	**20 56 01.9**	**-0.6**
JLU				IAML		20 56 22.0	
	comp=E,17nm,0.4s						
NLU	**North Lily Min**	**1.34**	**150**		**Pb**	**20 56 03.3**	**-0.8**
NLU				IAML		20 56 09.9	
	comp=E,12nm,0.3s						
MPU	**Maple Canyon**	**1.49**	**138**	Pn	**Pn**	**20 56 05.1**	**-1.1**
ELK	**Elko**	**1.78**	**258**	Pg	**Pb**	**20 56 11.4**	**-0.2**
	comp=E,2.0nm,0.3s,baz=71,slow=8.5,SNR=1.5						
ELK				Lg	Lg	20 56 36.3	
	comp=E,2.6nm,0.3s,baz=345,slow=20,SNR=2.3						
ELK	**Elko**	**1.78**	**258**	Pn	**Pn**	**20 56 09.7**	**-0.5**
ELK				IAML		20 56 39.7	
	comp=E,9.9nm,0.3s						
ELK				IAML		20 56 40.5	
	comp=E,7.7nm,0.4s						
RDMU	**Red Mountain**	**2.62**	**101**	Pn	**Pn**	**20 56 21.3**	**-0.3**
PSUT	**Pine Spring**	**2.69**	**195**	Pn	**Pn**	**20 56 23.0**	**+0.4**
SRU	**San Rafael Swe**	**2.74**	**137**		**Pn**	**20 56 23.8**	**+0.5**
PD31	**Pinedale Array**	**3.01**	**56**		**Pn**	**20 56 26.9**	**-0.2**
PDAR	**Pinedale Array**	**3.01**	**56**	Pn	**Pn**	**20 56 28.6**	**+1.5**
	comp=E,0.2nm,0.3s,baz=227,slow=13,SNR=3.1						
PDAR				Pg	**Pb**	**20 56 33.0**	**+0.5**
	comp=E,1.3nm,0.3s,baz=230,slow=14,SNR=14						
PDAR				Lg	Lg	20 57 13.5	
	comp=E,1.1nm,0.3s,baz=232,slow=20,SNR=10						
	comp=E,0.7nm,0.3s						
LOHW	**Long Hollow**	**3.03**	**34**	Pn	**Pn**	**20 56 27.4**	**+0.2**
LOHW				IAML		20 56 48.2	
	comp=E,4.4nm,3.8s						
LOHW				IAML		20 57 59.6	
	comp=E,3.3nm,3.3s						
MOOW	**Moose Ponds**	**3.08**	**31**	Pn	**Pn**	**20 56 28.8**	**+0.8**
MOOW				IAML		20 57 54.9	
	comp=E,2.3nm,2.8s						
MOOW				IAML		20 57 57.9	
	comp=E,2.6nm,2.9s						
MFID	**Camas Ranch**	**3.13**	**318**		**Pn**	**20 56 28.2**	**-0.4**
MCMT	**McKenzie Canyo**	**3.70**	**1**		**Pn**	**20 56 34.9**	**-1.7**
I56US	**NEWPORT INFRAS**	**7.73**	**339**	*i*		21 39 20.0	
	comp=E,0.1nm,0.9s,baz=160,slow=314,SNR=4.0						
I57US	**PINON FLAT INF**	**8.01**	**202**	*i*		21 45 30.0	
	baz=15,slow=315,SNR=3.2						

TEH 28 20:56:07.8, 39.°68N×51.°46E, h10km, ML3.5, Caspian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRMI	**Germi**	**2.90**	**254**	*e*Pn	Pn	**20 56 55.8**	**+1.6**
GRMI				*e*		20 57 30.9	
	comp=Z,99nm,0.2s						
QALM	**Alamut, Qazvin**	**3.30**	**191**	*e*Pn	Pn	20 57 01.1	+1.3
QALM				*e*		20 57 42.0	
	comp=Z,781nm,0.1s						
ISRB	**Sarab**	**3.50**	**239**	*e*Pn	Pn	20 57 04.1	+1.7
IPRN	**Peran**	**3.50**	**168**	*e*Pn	Pn	20 57 04.1	+1.7
IPRN				*e*		20 57 47.9	
	comp=Z,1μm,0.1s						
IGLO	**Ghaloghah**	**3.68**	**149**	*e*		20 57 53.8	
	comp=Z,534nm,0.3s						
IGLO				*e*Pn	Pn	20 57 06.9	+2.0
IHRS	**Heris**	**3.70**	**250**	*e*		20 57 09.0	
	comp=Z,686nm,0.2s						
IHRS				*e*Pn	Pn	20 57 07.8	+2.5
IDMV	**Damavand**	**4.12**	**174**	*e*Pn	Pn	20 57 14.2	+3.2
ISHM	**Shahmirzad**	**4.13**	**159**	*e*	Sn	20 58 05.1	+5.5
	comp=Z,1μm,0.2s						
MRVT	**Maraveh tapeh**	**4.14**	**118**	*e*Pn	Pn	20 57 13.0	+1.8
MRVT				*e*		20 57 13.5	
	comp=Z,99nm,0.2s						
ILAS	**Lasjerd**	**4.45**	**164**	*e*Pn	Pn	20 57 20.1	+4.5
IMRD	**Marand**	**4.58**	**260**	*e*Pn	Pn	20 57 19.6	+2.4
ISFR	**Sfrayin**	**5.77**	**115**	*e*Pn	Pn	20 57 36.9	+3.2
IEMG	**Emamgholi**	**6.07**	**110**	*e*Pn	Pn	20 57 39.6	+1.7
IEMG				*e*		20 57 43.5	
	comp=N,436nm,0.2s						
IPAY	**Payeh**	**6.76**	**116**	*e*Pn	Pn	20 57 49.4	+2.1
IKRD	**Kardeh**	**6.97**	**112**	*e*Pn	Pn	20 57 51.9	+1.7

*ATH **28** 21:02:36.6, 37.°84N×21.°97E, h29km±1km, ML2.7/7, Error ellipse: s-maj=1.8km s-min=1.1km az=298.0*
*THE **28** 21:02:37.5, 37.°84N×22.°00E, h18km, ML2.5/6, Error ellipse: s-maj=1.2km s-min=0.6km az=294.0*

ISC 28 21:02:37.1±1.0, 37.°85N±0.°02×21.°97E±0.°02, h19km±2km, n27, σ0s61/45, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLV	**Kalavryta, Ach**	**0.24**	**37**	P	**Pb**	**21 02 42.8**	**0.0**
KLV				S	**Sg**	**21 02 47.2**	**+0.4**
KLV				AML	AML	21 02 47.2	
	comp=E,6910μm,0.2s						
KLV				AML	AML	21 02 47.5	
	comp=N,4066μm,0.2s						
KLV	**Kalavryta, Ach**	**0.24**	**37**	P	**Pb**	**21 02 42.7**	**0.0**
KLV				S	**Sg**	**21 02 47.1**	**+0.4**
	comp=N,3μm,0.2s						
LAKA	**Lakka**	**0.39**	**2**	P	**Pg**	**21 02 45.1**	**-0.1**
LAKA				S	**Sb**	**21 02 51.3**	**+0.1**
LAKA				AML	AML	21 02 52.0	
	comp=E,3903μm,0.3s						
LAKA				AML	AML	21 02 53.0	
	comp=N,2639μm,0.4s						
ALIK	**Aliki, Aigiali**	**0.42**	**16**	P	**Pg**	**21 02 45.9**	**0.0**
ALIK				S	**Sb**	**21 02 52.6**	**+0.4**
RLS	**Riolos of Patr**	**0.44**	**298**	P	**Pg**	**21 02 46.3**	**0.0**
RLS				S	**Sn**	**21 02 54.5**	**-1.6**
RLS				AML	AML	21 02 55.0	
	comp=E,2604μm,0.2s						
RLS				AML	AML	21 02 55.9	
	comp=N,1640μm,0.4s						
RLS	**Riolos of Patr**	**0.44**	**298**	P	**Pb**	**21 02 46.5**	**+0.1**
RLS				S	**Sb**	**21 02 54.1**	**+1.4**
	comp=N,1μm,0.3s						
UPR	**University Cam**	**0.45**	**342**	P	**Pb**	**21 02 46.7**	**+0.1**
UPR				S	**Sn**	**21 02 54.7**	**-1.6**
EFP	**Efpalio**	**0.58**	**355**	P	**Pb**	**21 02 48.3**	**-0.2**
EFP				S	**Sg**	**21 02 57.7**	**+1.2**
EFP				AML	AML	21 02 58.9	
	comp=N,1461μm,0.5s						
EFP				AML	AML	21 03 00.5	
	comp=E,840μm,0.4s						
EFP	**Efpalio**	**0.58**	**355**	P	**Pb**	**21 02 48.4**	**-0.2**
EFP				S	**Sn**	**21 02 58.3**	**-1.0**
	comp=E,570nm,0.4s						
THAL	**Thalero**	**0.58**	**71**	P	**Pb**	**21 02 48.4**	**-0.3**
THAL				S	**Sg**	**21 02 57.8**	**+1.2**
THAL				AML	AML	21 02 59.8	
	comp=N,4318μm,0.4s						
THAL				AML	AML	21 03 07.6	
	comp=E,3187μm,0.4s						
ITM	**Ithomi**	**0.67**	**183**	P	**Pb**	**21 02 49.7**	**-0.5**
ITM				S	**Sg**	**21 02 59.8**	**+0.4**
ITM				AML	AML	21 03 04.3	
	comp=E,510μm,0.5s						
ITM				AML	AML	21 03 05.8	
	comp=N,516μm,0.2s						
ITM	**Ithomi**	**0.67**	**183**	P	**Pg**	**21 02 50.3**	**-0.1**
ITM				S	**Sg**	**21 03 00.3**	**+1.0**
	comp=N,258nm,0.4s						
ANX	**Ano Chora**	**0.74**	**357**	P	**Pb**	**21 02 51.2**	**-0.4**
ANX				S	**Sn**	**21 03 03.3**	**-0.3**
ANX				AML	AML	21 03 04.3	
	comp=N,1216μm,0.3s						
ANX				AML	AML	21 03 09.7	
	comp=E,828μm,0.6s						
ANX	**Ano Chora**	**0.74**	**357**	P	**Pb**	**21 02 51.0**	**-0.5**
ANX				S	**Sn**	**21 03 03.2**	**-0.3**
	comp=E,498nm,0.3s						
DLFA	**Delphi**	**0.75**	**34**	P	**Pn**	**21 02 52.8**	**-0.1**
LTK	**Loutraki**	**0.81**	**77**	P	**Pb**	**21 02 52.3**	**-0.3**
LTK				S	**Sg**	**21 03 04.4**	**+0.6**
	comp=E,228nm,0.4s						
PVO	**Paravola**	**0.84**	**336**	P	**Pg**	**21 02 53.6**	**+0.1**
PVO				S	**Sn**	**21 03 05.8**	**0.0**
PVO	**Paravola**	**0.84**	**336**	P	**Pg**	**21 02 53.4**	**-0.1**
EPID	**Epidavros**	**0.94**	**104**	P	**Pg**	**21 02 55.5**	**0.0**
EPID				S	**Sn**	**21 03 09.2**	**+0.7**
PYL	**PYLOS**	**0.97**	**191**	P	**Pb**	**21 02 55.0**	**-0.4**
KRND	**KRANIDI**	**1.05**	**116**	P	**Pg**	**21 02 57.6**	**0.0**
EVR	**Evrytania**	**1.07**	**353**	P	**Pn**	**21 02 57.5**	**+0.3**
VIL2	**Platees**	**1.09**	**70**	P	**Pg**	**21 02 58.1**	**-0.2**
VLS	**Valsamata**	**1.13**	**287**	P	**Pb**	**21 02 58.0**	**-0.1**
ATAL	**Atalanti**	**1.18**	**44**	P	**Pn**	**21 02 58.8**	**+0.1**
ATAL				S	**Sg**	**21 03 15.1**	**-0.4**
ATHU	**Athens Univers**	**1.44**	**85**	P	**Pn**	**21 03 02.0**	**-0.3**
VLY	**Voula,Athens**	**1.45**	**89**	P	**Pn**	**21 03 02.2**	**-0.2**

MAN 28 21:06:34.2, 5.°86N×127.°26E, h30km, mb4.3, ML3.1, MS2.9, Philippine Islands region

IDC 28 21:07:30.9±3.3, 32.°98S×179.°01W, h0km, mb3.5/2, mbtmp3.6/3, ML3.5/1, Error ellipse: s-maj=73.3km s-min=47.4km az=111.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.14**	**210**	Pn	Pn	21 09 02.7	-0.2
	1.1nm,0.3s,baz=103,slow=18,SNR=11						
URZ				Sn	Sn	21 10 08.2	-5.6
	1.5nm,0.3s,baz=298,slow=20,SNR=2.2						
	2.9nm,0.4s						
ASAR	**Alice Springs**	**42.18**	**270**	P	P	21 15 25.6	0.0
	0.4nm,0.5s,baz=106,slow=7.2,SNR=7.0						
	0.4nm,0.5s						
WRA	**Warramunga Arr**	**43.41**	**275**	P	P	21 15 35.2	-0.3
	0.2nm,0.3s,baz=117,slow=7.8,SNR=7.7						
	0.2nm,0.3s						
FINES	**FINESS Array B**	**147.23**	**338**	PKPbc	PKPbc	21 27 14.6	-0.7
	0.5nm,0.7s,baz=24,slow=4.9,SNR=1.6						

*NEIC **28** 21:24:58.4±1.6, 6.°6S±0.°1×155.°74E±0.°09, h113km±6km, mb4.2/16, Error ellipse: s-maj=17.0km s-min=10.5km az=218.0*
*IDC **28** 21:25:01.9±1.3, 6.°83S×155.°75E, h155km±12km, mb3.8/6, mbtmp4.3/9, MS3.1/3, Error ellipse: s-maj=18.0km s-min=11.5km az=33.0*

ISC 28 21:25:01.3±0.6, 6.°73S±0.°08×155.°77E±0.°07, h150km, n44, σ1s16/41, mb3.9/11, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**4.39**	**305**	Pn	**Pn**	**21 26 02.1**	**-4.6**
KRVT	**Keravat (AS076**	**4.44**	**303**	P	**Pn**	**21 26 08.6**	**+1.2**
	68nm,0.7s,baz=164,slow=2.5,SNR=6.1						
KRVT				S	**Sn**	**21 27 01.0**	**+2.2**
	54nm,0.6s,baz=71,slow=20,SNR=1.5						
HNR	**Honiara**	**4.93**	**123**	P	**Pn**	**21 26 13.5**	**-0.3**
	57nm,0.3s,baz=283,slow=3.2,SNR=5.2						
HNR				S	**Sn**	**21 27 11.1**	**+0.7**
	107nm,0.6s,baz=248,slow=9.6,SNR=1.8						
HNR	**Honiara**	**4.93**	**123**	Pn	**Pn**	**21 26 12.0**	**-1.8**
PMG	**Port Moresby**	**8.93**	**252**	P	**Pn**	**21 27 07.8**	**+0.6**
	38nm,0.7s,baz=68,slow=8.7,SNR=8.9						
PMG				S	**Sn**	**21 28 46.2**	**-0.2**
	39nm,1.0s,baz=104,slow=18,SNR=3.2						
PMG				LR	LR	21 30 16.8	
	comp=Z,71nm,18.2s,baz=296,slow=35						
PMG	**Port Moresby**	**8.93**	**252**		**Pn**	**21 27 06.1**	**-1.1**
CTA	**Charters Tower**	**16.18**	**214**	LR	LR	21 33 38.2	
	comp=Z,49nm,18.6s,baz=58,slow=32						
CTAO	**Charters Tower**	**16.18**	**214**	P	**P**	**21 28 41.8**	**+1.2**
CTAO				IAmb	IAmb	21 28 54.3	
	comp=Z,27nm,1.4s						
OUENC	**Ouen Island, N**	**18.90**	**147**	P	**Pn**	**21 29 11.6**	**-1.2**
EIDS	**Eidsvold**	**19.07**	**193**	P	**P**	**21 29 11.5**	**-0.8**
EIDS				IAmb	IAmb	21 29 14.6	
	comp=Z,22nm,0.8s						
ARMA	**Armidale**	**23.88**	**189**	P	**P**	**21 30 02.2**	**+0.9**
ARMA				IAmb	IAmb	21 30 16.8	
	comp=Z,16nm,1.2s						
WR0	**Warramunga Arr**	**24.44**	**235**	P	**P**	**21 30 06.0**	**-0.4**
WR0				IAmb	IAmb	21 30 07.5	
	comp=Z,11nm,0.6s						
WB2	**Warramunga Arr**	**24.59**	**236**	P	**P**	**21 30 07.3**	**-0.4**
WRA	**Warramunga Arr**	**24.60**	**236**	P	**P**	**21 30 07.4**	**-0.5**
	comp=Z,5.4nm,0.4s,baz=60,slow=9.8,SNR=31						
	comp=Z,5.4nm,0.4s						
WRA	**Warramunga Arr**	**24.60**	**236**	P	**P**	**21 30 07.1**	**-0.8**
AS31	**Alice Springs**	**26.92**	**229**	P	**P**	**21 30 27.6**	**-1.1**
ASAR	**Alice Springs**	**26.93**	**229**	P	**P**	**21 30 27.8**	**-1.0**
	comp=Z,1.0nm,0.3s,baz=60,slow=9.5,SNR=19						
	comp=Z,1.0nm,0.3s						
ASAR	**Alice Springs**	**26.93**	**229**	P	**P**	**21 30 27.7**	**-1.1**
H11S3	**WAKE ISLAND Hy**	**27.28**	**23**	T	T	21 58 57.0	
	baz=203,slow=75,SNR=27						
H11S2	**WAKE ISLAND Hy**	**27.28**	**23**	T	T	21 59 07.2	
	baz=203,slow=75,SNR=25						
H11S1	**WAKE ISLAND Hy**	**27.30**	**23**	T	T	21 59 08.4	
	baz=203,slow=75,SNR=20						
STKA	**Stephens Creek**	**28.30**	**206**	P	**P**	**21 30 40.2**	**-0.7**
	comp=Z,1.4nm,0.6s,baz=20,slow=9.2,SNR=3.2						
STKA				LR	LR	21 40 50.3	
	comp=Z,55nm,19.6s,baz=21,slow=34						
	comp=Z,1.4nm,0.6s						
STKA	**Stephens Creek**	**28.30**	**206**	P	**P**	**21 30 41.1**	**+0.2**
H11N1	**WAKE ISLAND Hy**	**28.47**	**22**	T	T	22 00 21.6	
	baz=204,slow=74,SNR=4.6						
H11N3	**WAKE ISLAND Hy**	**28.48**	**22**	T	T	22 00 21.2	
	baz=204,slow=74,SNR=4.3						
H11N2	**WAKE ISLAND Hy**	**28.48**	**22**	T	T	22 00 48.8	
	baz=204						
BKZ	**Black Stump Fm**	**37.31**	**153**	P	**P**	**21 31 59.4**	**+0.3**
TUWZ	**Tuamarina**	**38.15**	**158**	P	**P**	**21 32 06.9**	**+0.9**
GSI	**Gunungsitoli**	**58.62**	**276**	P	**P**	**21 34 42.7**	**-0.5**
SONM	**Songino Array**	**69.53**	**327**	P	**P**	**21 35 54.4**	**+0.4**
	comp=Z,1.4nm,0.7s,baz=132,slow=5.4,SNR=10						
	comp=Z,1.4nm,0.7s						
SONM	**Songino Array**	**69.53**	**327**	P	**P**	**21 35 54.3**	**+0.3**
SONM				IAmb	IAmb	21 35 55.6	
	comp=Z,1.3nm,0.9s						
L19K	**White Mountain**	**78.43**	**21**	P	**P**	**21 36 46.7**	**+1.5**
L19K				IAmb	IAmb	21 37 14.5	
	comp=Z,2.7nm,1.1s						
IMAR	**Indian Mountai**	**81.23**	**19**	P	**P**	**21 37 01.0**	**+0.9**
QSPA	**South Pole Qui**	**83.24**	**180**	P	**P**	**21 37 12.3**	**+1.4**
QSPA				IAmb	IAmb	21 37 38.4	
	comp=Z,6.8nm,1.4s						
J25K	**Salcha River,**	**83.32**	**22**	P	**P**	**21 37 11.7**	**+0.6**
J25K				IAmb	IAmb	21 37 14.9	
	comp=Z,1.8nm,1.1s						
MK31	**Makanchi Array**	**83.72**	**318**	P	**P**	**21 37 13.5**	**0.0**
MKAR	**Makanchi Array**	**83.72**	**318**	P	**P**	**21 37 13.6**	**0.0**
	comp=Z,0.7nm,0.7s,baz=116,slow=5.5,SNR=8.1						
	comp=Z,0.7nm,0.7s						
MKAR	**Makanchi Array**	**83.72**	**318**	P	**P**	**21 37 13.5**	**-0.1**
MAW	**Mawson**	**84.94**	**203**	P	**P**	**21 37 19.4**	**+0.2**
	comp=Z,2.8nm,0.9s,baz=79,slow=5.7,SNR=3.7						
	comp=Z,2.8nm,0.9s						
MAW	**Mawson**	**84.94**	**203**	P	**P**	**21 37 20.1**	**+0.9**
GERES	**GERESS Array B**	**127.22**	**329**	PKP	**PKiKP**	**21 43 48.3**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=170,slow=0.8,SNR=6.3						
GERES	**GERESS Array B**	**127.22**	**329**		**PKiKP**	**21 43 48.7**	**0.0**
TORD	**Torodi Ar. Bea**	**153.70**	**286**	PKPbc	**PKiKP**	**21 44 43.6**	**0.0**
	comp=Z,0.9nm,0.7s,baz=38,slow=2.1,SNR=4.9						
TORD	**Torodi Ar. Bea**	**153.70**	**286**		**PKiKP**	**21 44 43.1**	**-0.6**
TORD				PKPab	**PKPab**	**21 44 56.3**	**-0.6**

*IDC **28** 21:30:36.7±1.3, 70.°92N×6.°59W, h0km, mb3.4/1, mbtmp3.4/4, ML2.6/2, Error ellipse: s-maj=35.5km s-min=9.2km az=6.0*
*BER **28** 21:30:37.6±0.6, 71.°11N×6.°87W, h0km±817km, ML2.8, Confirmed Earthquake*

ISC 28 21:30:37.6±0.9, 71.°0N±0.°1×6.°66W±0.°05, h9km, n10, σ0s79/16, 1C, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNE	**Jan Mayen East**	**0.54**	**268**	*i*P	**Pg**	**21 30 48.1**	**+0.1**
JNE				*e*S	**Sg**	**21 30 55.7**	**+0.7**
JNW	**Jan Mayen West**	**0.58**	**272**	*i*P	**Pg**	**21 30 48.8**	**0.0**
JNW				*e*S	**Sg**	**21 30 56.3**	**0.0**
JMIC	**Jan Mayen**	**0.61**	**268**	Pg	**Pg**	**21 30 49.0**	**-0.3**
	104nm,0.3s,baz=84,slow=4.2,SNR=227						
JMIC				Lg	Lg	21 30 57.4	
	393nm,0.3s,baz=34,slow=23,SNR=35

SPA0				Sg	Sb	21 37 41.5	-2.0	
	baz=121,slow=37							
SPA0				IAML		21 37 43.9		
	comp=Z,214nm,0.3s							
SPA0	**Spitsbergen Ar**	**0.98**	**299**	⇓*i*P	Pb	21 37 29.4	-1.6	
SPA0				*i* S	Sb	21 37 41.6	-1.9	
HSPB	**Hornsund (broa**	**1.32**	**239**	Pn	Pn	21 37 34.2	-1.5	
HSPB				Pg	Pb	21 37 35.5	-1.3	
HSPB				Lg	Lg	21 37 51.4		
HSPB	**Hornsund (broa**	**1.32**	**239**	*e*P	Pn	21 37 34.2	-1.5	
HSPB				*e*Pg	Pb	21 37 35.6	-1.2	
HSPB				*e*Sg	Sn	21 37 52.9	+0.3	
HSPB				IAML		21 37 53.5		
	comp=Z,157nm,0.2s							
BRBA	**Barentsburg A**	**1.37**	**287**	Pn	Pn	21 37 35.5	-0.9	
BRBA				Pg	Pb	21 37 36.9	-0.8	
BRBA				Lg	Lg	21 37 55.0		
BRBA	**Barentsburg A**	**1.37**	**287**	*e*P	Pn	21 37 35.5	-0.9	
BRBA				*e*Pg	Pb	21 37 36.8	-0.9	
BRBA				*e*Sg	Sb	21 37 54.9	+0.2	
BRBA				IAML		21 37 55.4		
	comp=Z,285nm,0.1s							
BRBB	**Barentsburg B**	**1.38**	**288**	Pn	Pn	21 37 35.7	-0.8	
BRBB				Pg	Pb	21 37 37.0	-0.8	
BRBB				Lg	Lg	21 37 55.1		
BRBB	**Barentsburg B**	**1.38**	**288**	*e*P	Pn	21 37 35.2	-1.2	
BRBB				*e*Pg	Pb	21 37 36.9	-0.9	
BRBB				*e*Sg	Sb	21 37 55.3	+0.4	
HOPEN	**Hopen**	**1.59**	**139**	Pn	Pn	21 37 37.7	-1.6	
HOPEN				Pg	Pb	21 37 40.1	-1.1	
HOPEN				Lg	Lg	21 38 00.5		
HOPEN	**Hopen**	**1.59**	**139**	*e*P	Pn	21 37 37.8	-1.5	
HOPEN				*e*Pg	Pb	21 37 40.1	-1.2	
HOPEN				*e*Sg	Sb	21 38 00.4	-0.4	
HOPEN				IAML		21 38 02.8		
	comp=Z,271nm,0.4s							
HOPEN	**Hopen**	**1.59**	**139**	*e*P	Pn	21 37 37.8	-1.5	
HOPEN				*e*S	Sn	21 37 57.8	-1.2	
KBS	**Kingsbay**	**2.12**	**309**	Pn	Pn	21 37 45.1	-1.5	
KBS				Pg	Pb	21 37 49.6	-0.7	
KBS				Lg	Lg	21 38 16.0		
KBS	**Kingsbay**	**2.12**	**309**	*e*P	Pn	21 37 44.6	-2.0	
KBS				*e*Pg	Pb	21 37 49.7	-0.6	
KBS				*e*S	Sn	21 38 09.1	-3.1	
KBS				*e*Sg	Sb	21 38 16.0	-0.1	
KBS				IAML		21 38 18.3		
	comp=Z,123nm,0.5s							
KBS	**Kingsbay**	**2.12**	**309**	P	Pn	21 37 44.8	-1.8	
KBS				*e*S	Sn	21 38 10.8	-1.4	
BJO1	**Bjornoya**	**3.27**	**187**	Pn	Pn	21 38 01.0	-1.4	
BJO1				Pg	Pb	21 38 10.0	+0.1	
BJO1				Lg	Lg	21 38 50.7		
BJO1	**Bjornoya**	**3.27**	**187**	*e*P	Pn	21 38 01.4	-1.0	
BJO1				*e*		21 38 10.2		
BJO1				*e*S	Sn	21 38 38.1	-2.4	
BJO1				*e*Sg	Sb	21 38 49.9	+0.7	
BJO1				IAML		21 38 56.5		
	comp=Z,30nm,0.4s							
BJO1	**Bjornoya**	**3.27**	**187**	*e*P	Pn	21 38 01.2	-1.2	
BJO1				*e*S	Sn	21 38 37.6	-2.9	
ZFI	**Zemlya Franca-**	**5.87**	**46**	*e*P	Pn	21 38 35.7	-2.3	
ZFI				*e*S	Sn	21 39 37.9	-6.5	
	comp=Z,12nm,0.9s							
ZFI2	**Zemlya Franca-**	**5.87**	**46**	*e*P	Pn	21 38 35.8	-2.2	
ZFI2				*e*S	Sn	21 39 38.3	-6.1	
	comp=Z,15nm,1.1s							
HAMF	**Hammerfest**	**7.18**	**172**	Pn	Pn	21 38 52.7	-3.3	
HAMF				Sn	Sn	21 40 06.8	-10	
HAMF	**Hammerfest**	**7.18**	**172**	*e*P	Pn	21 38 53.1	-2.9	
HAMF				*e*S	Sn	21 40 07.3	-9.4	
HAMF				IAML		21 40 32.5		
	comp=Z,3.7nm,0.7s							
TRO	**Tromso**	**8.16**	**184**	*e*P	Pn	21 39 06.2	-3.2	
TRO				*e*S	Sn	21 40 31.3	-9.4	
TRO				IAML		21 40 44.8		
	comp=Z,1.1nm,0.7s							
KEV	**Kevo**	**8.21**	**164**	*e*P	Pn	21 39 08.3	-1.9	
ARA0	**ARCESS Array S**	**8.36**	**168**	Pn	Pn	21 39 09.2	-2.9	
	baz=349,slow=12							
ARA0				Sn	Sn	21 40 37.5	-8.1	
	baz=360,slow=22							
ARA0	**ARCESS Array S**	**8.36**	**168**	Pn	Pn	21 39 09.2	-2.9	
	baz=349,slow=12							
ARA0				Sn	Sn	21 40 37.5	-8.1	
	baz=360,slow=22							
ARCES	**ARCESS Array B**	**8.36**	**168**	P	Pn	21 39 11.5	-0.7	
ARCES				S	Sn	21 40 34.1	-11	
PRVG	**Vayda Guba**	**8.64**	**152**	P	Pn	21 39 13.5	-2.5	
PRVG				S	Sn	21 40 41.8	-11	
KIF	**Kilpisjarvi**	**8.78**	**179**	*e*P	Pn	21 39 14.8	-3.2	
HEF	**Hetta**	**9.42**	**173**	*e*P	Pn	21 39 25.5	-1.2	
TERR	**Teriberka**	**9.48**	**147**	P	Pn	21 39 27.5	0.0	
TERR				S	Sn	21 41 03.1	-10	

*SOME **28** 21:37:59.7, 39°.33N×73°.47E, h0km, MS5.6*
*ISU **28** 21:38:00.8, 39°.59N×73°.57E, h5km*
*BJI **28** 21:38:01.3±0.0, 39°.51N×73°.32E, h7km, mb5.2/73, mB5.2/69, ML5.5/6, Ms5.5/96, Ms7 5.4/85*
*MOS **28** 21:38:02.4±1.1, 39°.36N×73°.43E, h13km, mb5.6/57, MS5.1/66, Error ellipse: s-maj=3.6km s-min=2.8km az=93.1*
MOS Felt (VI-VII) at Bordobo; (VI) at Sary-Tash, Archa-Bulak, Kara-Kindik; (V-VI) at Nura, Irkeshtam.
*IDC **28** 21:38:02.1±0.4, 39°.41N×73°.44E, h0km, mb5.0/44, mbtmp5.0/50, ML4.3/6, MS4.9/80, Error ellipse: s-maj=8.6km s-min=7.2km az=159.0*
*NNC **28** 21:38:02.5±1.2, 39°.33N×73°.46E, h0km, mb6.2, mpv5.9, Error ellipse: s-maj=10.2km s-min=6.1km az=170.0*
*NEIC **28** 21:38:03.8, 39°.47N×73°.33E, h19km, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr 0.13; Mθθ 0.03; Mφφ -0.16; Mrθ 0.24; Mφφ -1.64; Mθr -0.04; Fault plane solution: Mo 1.67000×10^17 NP1:φs 88.17000°, δ 87.47000°, λ 171.49000°. NP2:φs 178.55000°, δ 81.50000°, λ 2.56000°. Principal axes: T 1.6085, Plg 8.0000°, Azm 43.0000°; N 0.1148, Plg 81.0000°, Azm 252.0000°; P -1.7233, Plg 4.0000°, Azm 134.0000°;*
*KRNET **28** 21:38:03.1±0.1, 39°.47N×73°.36E, mb6.1*
*NEIC **28** 21:38:04.4±1.6, 39°.48N±0°.05×73°.34E±0°.06, h14km±3km, mb5.4/275, Ms_20 5.2/327, Mwb5.4/24, Mww5.5, Error ellipse: s-maj=7.8km s-min=6.3km az=158.0*
*GCMT **28** 21:38:05.4±0.1, 39°.49N±0°.01×73°.32E±0°.01, h22km, MW5.5/150, Moment Tensor Solution. s113, c193; s150, c313; Duration: 1s3 Moment tensor: Scale 10^17 Nm; Mrr 0.61±.03; Mθθ -0.18±.03; Mφφ -0.43±.02; Mrθ 0.55±.05; Mφφ -1.92±.02; Mθr -0.45±.04; Best double couple: Mo 2.10800×10^17 NP1:φs 181.00000°, δ 70.00000°, λ 19.00000°. NP2:φs 85.00000°, δ 72.00000°, λ 159.00000°. Principal axes: T 1.9840, Plg 27.0000°, Azm 43.0000°; N 0.2470, Plg 63.0000°, Azm 225.0000°; P -2.2320, Plg 1.0000°, Azm 133.0000°; nsta 1 refers to body waves, cutoff=40s. nsta 2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **28** 21:38:10, 39°.38N×73°.46E, h30km, Moment Tensor Solution. Duration: 10s6 Moment tensor: Scale 10^17 Nm; Mrr 0.04; Mθθ -0.21; Mφφ 0.17; Mrθ 0.86; Mφθ -2.03; Mθr 0.08; Fault plane solution: Mo 2.22000×10^17 NP1: φs 182.00000°, δ 67.00000°, λ -1.00000°. NP2:φs 273.00000°, δ 88.00000°, λ -157.00000°. Principal axes: T 2.1549, Plg 15.0000°, Azm 45.0000°; N 0.1161, Plg 67.0000°, Azm 277.0000°; P -2.2710, Plg 17.0000°, Azm 140.0000°;*
ISC 28 21:38:03.7±0.3, 39°.49N±0°.02×73°.43E±0°.02, h10km±1km, h10km:pP-P, n1477, σ1s89/1604, mb5.4/367, MS5.2/313, 100C-40D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.15**	**335**	P	**Pb**	**Pb**	**21 38 24.5**	**-1.2**
OHH				S	**Sn**	**Sn**	**21 38 42.3**	**+0.6**
DRK	**Karamyk**	**1.26**	**270**	Pn	**Pn**	**Pn**	**21 38 24.9**	**-2.7**
DRK				Sn	**Sb**	**Sb**	**21 38 42.7**	**-1.4**
FRG	**Fergana**	**1.55**	**306**	P	**Pn**	**Pn**	**21 38 31.2**	**-0.1**
FRG				S	**Sb**	**Sb**	**21 38 53.0**	**+0.9**
CHMI	**Chimion**	**1.66**	**299**	P	**Pn**	**Pn**	**21 38 33.7**	**+0.8**
CHMI				S	**Sb**	**Sb**	**21 38 56.3**	**+0.8**
KSH	**Kashi**	**1.97**	**88**	Pg	**Pn**	**Pn**	**21 38 34.0**	**-3.2**
KSH				Sg	**Sn**	**Sn**	**21 38 58.0**	**-3.9**
KSH				smax	smax			
	comp=N,106μm,0.8s							
KSH				smax	smax			
	comp=E,88μm,1.1s							
BTK	**Batken**	**2.09**	**287**	Pn	**Pn**	**Pn**	**21 38 39.1**	**+0.2**
BTK	**Batken**	**2.09**	**287**	PN	**Pn**	**Pn**	**21 38 39.1**	**+0.2**
BTK	**Batken**	**2.09**	**287**	P	**Pb**	**Pb**	**21 38 40.9**	**-0.9**
BTK				S	**Sg**	**Sg**	**21 39 10.8**	**-0.2**
MINT	**Mingtut**	**2.13**	**298**	P	**Pb**	**Pb**	**21 38 42.1**	**-0.2**
MINT				S	**Sg**	**Sg**	**21 39 12.4**	**+0.4**
GAR	**Garm**	**2.47**	**260**	⇑*i*P	**Pn**	**Pn**	**21 38 46.1**	**+2.1**
	baz=60							
GAR				⇑*i*S	**Sb**	**Sb**	**21 39 17.3**	**-1.3**
	baz=60							
GAR	**Garm**	**2.47**	**260**		**Pn**	**Pn**	**21 38 45.4**	**+1.4**
GAR	**Garm**	**2.47**	**260**	*i* PN	**Pn**	**Pn**	**21 38 46.1**	**+2.1**
GAR				*i* S	**Sb**	**Sb**	**21 39 17.3**	**-1.3**
ARK	**Arkit**	**2.57**	**335**	P	**Pb**	**Pb**	**21 38 48.4**	**-1.5**
ARK				S	**Sb**	**Sb**	**21 39 22.7**	**+1.2**
AML	**Almayashu**	**2.65**	**4**	P	**Pb**	**Pb**	**21 38 49.7**	**-1.7**
	SNR=716							
AML	**Almayashu**	**2.65**	**4**	*i* PN	**Pb**	**Pb**	**21 38 49.8**	**-1.7**
AML				*i* S	**Sb**	**Sb**	**21 39 23.6**	**-0.6**
AML	**Almayashu**	**2.65**	**4**	P	**Pb**	**Pb**	**21 38 49.8**	**-1.7**
AML	**Almayashu**	**2.65**	**4**	P	**Pb**	**Pb**	**21 38 49.9**	**-1.6**
TRKS	**Terek-Say**	**2.69**	**320**	⇑*i*P	**Pn**	**Pn**	**21 38 48.7**	**+1.6**
	baz=21							
TRKS				⇑*i*S	**Sn**	**Sn**	**21 39 22.0**	**+2.2**
	baz=21							
TRKS	**Terek-Say**	**2.69**	**320**	*i* PN	**Pn**	**Pn**	**21 38 48.7**	**+1.6**
TRKS				*i* S	**Sn**	**Sn**	**21 39 22.0**	**+2.2**
UCH	**Uchtor**	**2.86**	**16**	P	**Pb**	**Pb**	**21 38 53.1**	**-1.9**
	SNR=1123							
UCH	**Uchtor**	**2.86**	**16**	⇑*i*P	**Pb**	**Pb**	**21 38 52.7**	**-2.4**
	baz=17							
UCH				⇑*i*S	**Sb**	**Sb**	**21 39 28.9**	**-1.4**
	baz=17							
UCH	**Uchtor**	**2.86**	**16**	*i* PN	**Pb**	**Pb**	**21 38 52.7**	**-2.4**
UCH				*i* S	**Sb**	**Sb**	**21 39 28.9**	**-1.4**
EKS2	**Erkin-Say**	**3.18**	**5**	P	**Pb**	**Pb**	**21 38 57.4**	**-3.0**
	SNR=1067							
EKS2	**Erkin-Say**	**3.18**	**5**	⇑*i*P	**Pn**	**Pn**	**21 38 57.0**	**+3.1**
	baz=6.0							
EKS2				⇑*i*S	**Sb**	**Sb**	**21 39 36.3**	**-3.0**
	baz=6.0							
EKS2	**Erkin-Say**	**3.18**	**5**	*i* PN	**Pn**	**Pn**	**21 38 57.0**	**+3.1**
EKS2				*i* S	**Sb**	**Sb**	**21 39 36.3**	**-3.0**
AAK	**Ala-Archa**	**3.25**	**14**	P	**Pb**	**Pb**	**21 38 58.8**	**-2.7**
	SNR=97							
AAK	**Ala-Archa**	**3.25**	**14**	Pn	**Pb**	**Pb**	**21 38 58.9**	**-2.7**
	576nm,0.3s,baz=189,slow=8.2,SNR=1043							
AAK				Lg	Lg	Lg	21 39 44.3	
	545nm,0.3s,baz=343,slow=23,SNR=11							
AAK	**Ala-Archa**	**3.25**	**14**	⇑*i*P	**Pn**	**Pn**	**21 38 58.0**	**+3.2**
	baz=15							
AAK				⇑*i*S	**Sb**	**Sb**	**21 39 38.2**	**-3.0**
	baz=15							
AAK	**Ala-Archa**	**3.25**	**14**	Pn	**Pb**	**Pb**	**21 38 58.7**	**-2.7**
AAK	**Ala-Archa**	**3.25**	**14**	*i* PN	**Pn**	**Pn**	**21 38 58.0**	**+3.2**
AAK				*i* S	**Sb**	**Sb**	**21 39 38.2**	**-3.0**
AAK	**Ala-Archa**	**3.25**	**14**	P	**Pb**	**Pb**	**21 38 59.0**	**-2.6**
AAK				S	**Sb**	**Sb**	**21 39 40.2**	**-1.0**
AAK	**Ala-Archa**	**3.25**	**14**	P	**Pb**	**Pb**	**21 38 58.5**	**-3.0**
MRKS	**Merke**	**3.26**	**357**	*e*P	**Pg**	**Pg**	**21 39 04.9**	**-1.2**
	1μm,0.5s							
MRKS				*e*S	**Sg**	**Sg**	**21 39 51.9**	**+3.5**
	20μm,0.6s							
MRKS	**Merke**	**3.26**	**357**	Pg	**Pg**	**Pg**	**21 39 04.9**	**-1.2**
	1μm,0.5s							
MRKS				Lg	Lg	Lg	21 39 51.9	
	20μm,0.6s							
KBK	**Karagaybulak**	**3.37**	**19**	P	**Pb**	**Pb**	**21 39 00.4**	**-3.1**
	SNR=1939							
KBK	**Karagaybulak**	**3.37**	**19**	⇓*i*P	**Pn**	**Pn**	**21 38 59.8**	**+3.3**
	baz=20							
KBK				⇓*i*S	**Sb**	**Sb**	**21 39 41.2**	**-3.4**
	baz=20							
KBK	**Karagaybulak**	**3.37**	**19**	*i* PN	**Pn**	**Pn**	**21 38 59.8**	**+3.3**
KBK				*i* S	**Sb**	**Sb**	**21 39 41.2**	**-3.4**
CHGR	**Chuyangaron**	**3.43**	**257**	⇑*i*P	**Pn**	**Pn**	**21 38 58.7**	**+1.5**
	baz=57							
CHGR				⇑*i*S	**Sn**	**Sn**	**21 39 40.3**	**+2.4**
	baz=57							
CHGR	**Chuyangaron**	**3.43**	**257**	Pn	**Pn**	**Pn**	**21 38 58.3**	**+1.1**
CHGR	**Chuyangaron**	**3.43**	**257**	*i* PN	**Pn**	**Pn**	**21 38 58.7**	**+1.5**
CHGR				*i* S	**Sn**	**Sn**	**21 39 40.3**	**+2.4**
FRU1	**Bishkek**	**3.44**	**15**	PN	**Pb**	**Pb**	**21 39 01.8**	**-3.0**
ULHL	**Ulahol**	**3.48**	**37**	P	**Pb**	**Pb**	**21 39 01.8**	**-3.8**
	SNR=150							
ULHL	**Ulahol**	**3.48**	**37**	⇓*i*P	**Pn**	**Pn**	**21 39 01.4**	**+3.3**
	baz=37							
ULHL				⇓*i*S	**Sb**	**Sb**	**21 39 43.9**	**-4.1**
	baz=37							
ULHL	**Ulahol**	**3.48**	**37**	*i* PN	**Pn**	**Pn**	**21 39 01.4**	**+3.3**
ULHL				*i* S	**Sb**	**Sb**	**21 39 43.9**	**-4.1**
BOOM	**Boomskoye usch**	**3.55**	**32**	Pn	**Pn**	**Pn**	**21 39 01.9**	**+2.9**
BOOM	**Boomskoye usch**	**3.55**	**32**	PN	**Pn**	**Pn**	**21 39 01.9**	**+2.9**
CHMS	**Chumysh**	**3.65**	**15**	P	**Pn**	**Pn**	**21 39 04.1**	**+3.9**
	SNR=2711							
CHMS	**Chumysh**	**3.65**	**15**	⇑*i*P	**Pn**	**Pn**	**21 39 03.2**	**+3.0**
	baz=16							
CHMS				⇑*i*S	**Sn**	**Sn**	**21 39 47.3**	**+4.0**
	baz=16							
CHMS	**Chumysh**	**3.65**	**15**	*i* PN	**Pn**	**Pn**	**21 39 03.2**	**+3.0**
CHMS				*i* S	**Sn**	**Sn**	**21 39 47.3**	**+4.0**
CHMS	**Chumysh**	**3.65**	**15**	⇑Pn	**Pn**	**Pn**	**21 39 03.9**	**+3.7**
	3μm,0.7s							
CHMS				⇑Lg	Lg	Lg	21 40 03.9	
	10μm,0.7s							
TAS	**Tashkent**	**3.65**	**302**	⇑*i*P	**Pn**	**Pn**	**21 39 02.3**	**+2.1**
	baz=2.0							
TAS				⇑*i*S	**Sn**	**Sn**	**21 39 45.9**	**+2.5**
	baz=2.0							
TAS	**Tashkent**	**3.65**	**302**	Pn	**Pn**	**Pn**	**21 39 01.6**	**+1.4**
TAS	**Tashkent**	**3.65**	**302**	*i* PN	**Pn**	**Pn**	**21 39 02.3**	**+2.1**
TAS				*i* S	**Sn**	**Sn**	**21 39 45.9**	**+2.5**
DZA	**Taraz**	**3.75**	**336**	*e*PN	**Pn**	**Pn**	**21 39 03.6**	**+2.0**
DZA				*e*			21 39 12.5	
DZA				*e*			21 39 46.2	
DZA				*e*			21 40 04.2	
DZA	**Taraz**	**3.75**	**336**	*e*P	**Pb**	**Pb**	**21 39 12.1**	**+2.0**
	2μm,0.7s							
DZA				*e*S	**Sg**	**Sg**	**21 40 04.3**	**0.0**
	25μm,1.0s							
DZA	**Taraz**	**3.75**	**336**	*e*Pn	**Pn**	**Pn**	**21 39 03.6**	**+2.0**
	baz=335							
DZA				*e*Pb	**Pb**	**Pb**	**21 39 09.3**	**-0.8**
	baz=335							
DZA				*e*Pg	**Pg**	**Pg**	**21 39 12.5**	**-3.1**
	baz=335							
DZA				*e*Sn	**Sn**	**Sn**	**21 39 46.2**	**+0.3**
	baz=335							
DZA				*e*Lg	Lg	Lg	21 40 04.3	
	baz=335							
DZA	**Taraz**	**3.75**	**336**	Pg	**Pb**	**Pb**	**21 39 12.1**	**+2.0**
	2μm,0.7s							
DZA				Lg	Lg	Lg	21 40 04.3	
	25μm,1.0s							
TKM2	**Tokmak 2**	**3.80**	**25**	P	**Pn**	**Pn**	**21 39 06.5**	**+4.1**
	SNR=93							
TKM2	**Tokmak 2**	**3.80**	**25**	⇓*i*P	**Pn**	**Pn**	**21 39 05.8**	**+3.3**
	baz=25							
TKM2				⇓*i*S	**Sn**	**Sn**	**21 39 51.5**	**+4.2**
	baz=25							
TKM2	**Tokmak 2**	**3.80**	**25**	*i* PN	**Pn**	**Pn**	**21 39 05.8**	**+3.3**
TKM2				*i* S	**Sn**	**Sn**	**21 39 51.5**	**+4.2**
TKM2	**Tokmak 2**	**3.80**	**25**	⇑Pn	**Pn**	**Pn**	**21 39 06.2**	**+3.7**
	3μm,0.8s							
TKM2				⇑Lg	Lg	Lg	21 40 08.2	
	11μm,0.8s							
USP	**Ospenovka**	**3.86**	**12**	P	**Pn**	**Pn**	**21 39 06.5**	**+3.4**
	SNR=1256							
USP	**Ospenovka**	**3.86**	**12**	⇑*i*P	**Pn**	**Pn**	**21 39 06.5**	**+3.4**
	baz=12							
USP				⇑*i*S	**Sn**	**Sn**	**21 39 52.5**	**+3.9**
	baz=12							
USP	**Ospenovka**	**3.86**	**12**	*i* PN	**Pn**	**Pn**	**21 39 06.5**	**+3.4**
USP				*i* S	**Sn**	**Sn**	**21 39 52.5**	**+3.9**
KDJ	**Kajisay**	**3.88**	**46**	⇑*i*P	**Pn**	**Pn**	**21 39 07.3**	**+3.8**
	baz=46							
KDJ				⇑*i*S	**Sn**	**Sn**	**21 39 53.9**	**+4.6**
	baz=46							
KDJ	**Kajisay**	**3.88**	**46**	Pn	**Pn**	**Pn**	**21 39 06.3**	**+2.8**
KDJ	**Kajisay**	**3.88**	**46**	*i* PN	**Pn**	**Pn**	**21 39 07.3**	**+3.8**
KDJ				*i* S	**Sn**	**Sn**	**21 39 53.9**	**+4.6**
TARG	**Taragay, Kyrgy**	**4.01**	**55**	⇑*i*P	**Pn**	**Pn**	**21 39 09.0**	**+3.5**
	baz=55							
TARG				⇑*i*S	**Sn**	**Sn**	**21 39 56.9**	**+4.1**
	baz=55							
TARG	**Taragay, Kyrgy**	**4.01**	**55**	Pn	**Pn**	**Pn**	**21 39 08.6**	**+3.1**
TARG	**Taragay, Kyrgy**	**4.01**	**55**	*i* PN	**Pn**	**Pn**	**21 39 09.0**	**+3.5**
TARG				*i* S	**Sn**	**Sn**	**21 39 56.9**	**+4.1**
KST	**Kastek**	**4.03**	**27**	*e*P	**Pb**	**Pb**	**21 39 17.1**	**+2.2**
	1μm,0.8s							
KST				*e*S	**Sg**	**Sg**	**21 40 13.1**	**-0.2**
	21μm,0.8s							
KST	**Kastek**	**4.03**	**27**	Pg	**Pb**	**Pb**	**21 39 17.1**	**+2.2**
	1μm,0.8s							
KST				Lg	Lg	Lg	21 40 13.1	
	21μm,0.8s							
SGDS	**Sogindy**	**4.06**	**12**	*e*PN	**Pn**	**Pn**	**21 39 08.9**	**+3.0**
SGDS				*e*			21 39 18.5	
SGDS				*e*			21 40 12.0	
SGDS	**Sogindy**	**4.06**	**12**	*e*P	**Pb**	**Pb**	**21 39 16.6**	**+1.3**
	986nm,0.5s							
SGDS				*e*S	**Sg**	**Sg**	**21 40 12.3**	**-1.9**
	5μm,0.8s							
SGDS	**Sogindy**	**4.06**	**12**	*e*Pn	**Pn**	**Pn**	**21 39 08.9**	**+3.0**
	baz=12							
SGDS				*e*Pg	**Pg**	**Pg**	**21 39 18.6**	**-3.0**
	baz=12							
SGDS				*e*Lg	Lg	Lg	21 40 12.1	
	baz=12							
DGS	**Degeres**	**4.15**	**24**	*e*P	**Pb**	**Pb**	**21 39 18.7**	**+1.9**
	1μm,0.6s							
DGS				*e*S	**Sg**	**Sg**	**21 40 15.7**	**-1.1**
	14μm,0.9s							
KK31	**Karatay Array**	**4.23**	**330**	Pn	**Pn**	**Pn**	**21 39 09.9**	**+1.7**
KK31	**Karatay Array**	**4.23**	**330**	PN	**Pn**	**Pn**	**21 39 10.6**	**+2.4**
KK31				PG	**Pg**	**Pg**	**21 39 21.9**	**-2.8**
KK31				SN	**Sb**	**Sb**	**21 40 04.5**	**-4.8**
KK31	**Karatay Array**	**4.23**	**330**	⇑Pn	**Pn**	**Pn**	**21 39 10.6**	**+2.4**
	186nm,0.4s,baz=141,slow=12,SNR=6380							
KK31				⇓Pg	**Pg**	**Pg**	**21 39 22.0**	**-2.8**
	1μm,0.6s,baz=146,slow=14,SNR=30							
KK31				⇓Sn	**Sb**	**Sb**	**21 40 04.5**	**-4.8**
	1μm,0.5s,baz=147,slow=24,SNR=2.6							
KK31				⇑Lg	Lg	Lg	21 40 22.0	
	1μm,0.5s,baz=156,slow=27,SNR=6.6							
KKAR	**Karatay Array**	**4.23**	**330**	⇓*i*P	**Pn**	**Pn**	**21 39 10.9**	**+2.7**
	baz=30							
KKAR				⇓*i*S	**Sn**	**Sn**	**21 40 00.5**	**+2.9**
	baz=30							
KKAR	**Karatay Array**	**4.23**	**330**	Pn	**Pn**	**Pn**	**21 39 10.0**	**+1.9**
KKAR	**Karatay Array**	**4.23**	**330**		**Pn**	**Pn**	**21 39 09.9**	**+1.7**
KKAR	**Karatay Array**	**4.23**	**330**	*i* PN	**Pn**	**Pn**	**21 39 10.9**	**+2.7**
KKAR				*i* S	**Sn**	**Sn**	**21 40 00.5**	**+2.9**
MTBS	**Maitube**	**4.28**	**31**	*e*P	**Pb**	**Pb**	**21 39 22.0**	**+2.9**
	2μm,0.6s							
MTBS				*e*S	**Sg**	**Sg**	**21 40 21.2**	**0.0**
	11μm,0.7s							
MTBS	**Maitube**	**4.28**	**31**	Pg	**Pb**	**Pb**	**21 39 22.0**	**+2.9**
	2μm,0.6s							
MTBS				Lg	Lg	Lg	21 40 21.2	
	11μm,0.7s							
TNSS	**Tian-Shan**	**4.43**	**36**	*e*PN	**Pn**	**Pn**	**21 39 14.1**	**+2.9**
TNSS				*e*			21 39 25.6	
TNSS	**Tian-Shan**	**4.43**	**36**	*e*P	**Pg**	**Pg**	**21 39 25.8**	**-2.7**
	1μm,0.6s							
TNSS				*e*S	**Sg**	**Sg**	**21 40 27.5**	**+1.6**
	5μm,0.7s							
TNSS	**Tian-Shan**	**4.43**	**36**	*e*Pn	**Pn**	**Pn**	**21 39 14.2**	**+2.9**
	baz=36							
TNSS				*e*Pg	**Pg**	**Pg**	**21 39 25.6**	**-2.9**
	baz=36							
TNSS				*e*Lg	Lg	Lg	21 40 26.9	
	baz=36							
TNSS	**Tian-Shan**	**4.43**	**36**	Pg	**Pg**	**Pg**	**21 39 25.8**	**-2.7**
	1μm,0.6s							
TNSS				Lg	Lg	Lg	21 40 27.5	
	5μm,0.7s							
BRLS	**Borolday**	**4.46**	**324**	*e*PN	**Pn**	**Pn**	**21 39 12.4**	**+1.1**
BRLS				*e*			21 39 23.0	
BRLS				*e*			21 40 21.7	
BRLS	**Borolday**	**4.46**	**324**	*e*P	**Pb**	**Pb**	**21 39 23.9**	**+1.9**
	398nm,0.8s							
BRLS				*e*S	**Sg**	**Sg**	**21 40 24.7**	**-2.1**
	3μm,0.5s							
BRLS	**Borolday**	**4.46**	**324**	*e*Pn	**Pn**	**Pn**	**21 39 12.5**	**+1.1**
	baz=320							

SATY e 21 39 38.1
SATY Saty 5.18 45 eP **Pg 21 39 38.7 -4.1**
3µm,0.8s
SATY eS **Sg 21 40 49.9 +0.1**
8µm,1.2s
SATY Saty 5.18 45 ePn **Pn 21 39 24.1 +2.8**
baz=45
SATY ePg **Pb 21 39 38.2 +3.8**
baz=45
SATY eLg Lg 21 40 48.3
baz=45
ZHN Zhinishke 5.26 44 ePN **Pn 21 39 25.4 +2.9**
ZHN e 21 39 39.7
ZHN Zhinishke 5.26 44 eP **Pb 21 39 39.6 +3.8**
2µm,0.8s
ZHN eS **Sg 21 40 51.4 -1.3**
5µm,0.8s
ZHN Zhinishke 5.26 44 ePn **Pn 21 39 25.4 +2.9**
baz=44
ZHN ePg **Pb 21 39 39.8 +3.9**
baz=44
ZHN eLg Lg 21 40 49.7
baz=44
ZHN Zhinishke 5.26 44 Pg **Pb 21 39 39.6 +3.8**
2µm,0.8s
ZHN Lg Lg 21 40 51.4
5µm,0.8s
KURS Kuram 5.35 40 eP **Pb 21 39 41.1 +3.8**
954nm,0.8s
KURS eS **Sg 21 40 54.0 -1.5**
4µm,1.1s
KURS Kuram 5.35 40 Pg **Pb 21 39 41.1 +3.8**
954nm,0.8s
KURS Lg Lg 21 40 54.0
4µm,1.1s
BTLS Baital 5.57 4 ePN **Pn 21 39 29.1 +2.6**
BTLS e 21 39 45.9
BTLS e 21 40 59.6
BTLS Baital 5.57 4 eP **Pb 21 39 44.9 +3.9**
271nm,0.5s
BTLS eS **Sg 21 41 00.2 -2.2**
2µm,0.9s
BTLS Baital 5.57 4 ePn **Pn 21 39 29.1 +2.6**
baz=4.3
BTLS ePg **Pg 21 39 45.9 -4.4**
baz=4.3
BTLS eLg Lg 21 40 59.7
baz=4.3
KPKS Kokpek 5.60 43 ePN **Pn 21 39 29.7 +2.6**
KPKS e 21 39 45.0
KPKS Kokpek 5.60 43 eP **Pb 21 39 44.8 +3.2**
2µm,0.7s
KPKS eS **Sg 21 41 00.1 -3.4**
6µm,0.8s
KPKS Kokpek 5.60 43 ePn **Pn 21 39 29.8 +2.6**
baz=43
KPKS ePg **Pb 21 39 45.0 +3.5**
baz=43
KPKS eLg Lg 21 41 01.4
baz=43
KPKS Kokpek 5.60 43 Pg **Pb 21 39 44.8 +3.2**
2µm,0.7s
KPKS Lg Lg 21 41 00.1
6µm,0.8s
ARXS Arharly 5.75 33 ePN **Pn 21 39 31.3 +2.2**
ARXS Arharly 5.75 33 eP **Pb 21 39 47.8 +3.7**
558nm,0.6s
ARXS eS **Sg 21 41 05.7 -2.6**
8µm,0.8s
ARXS Arharly 5.75 33 Pg **Pb 21 39 47.8 +3.7**
558nm,0.6s
ARXS Lg Lg 21 41 05.6
8µm,0.8s
PDGK Podgornoye 5.96 48 PN **Pn 21 39 34.8 +2.8**
PDGK Podgornoye 5.96 48 ⇑Pn **Pn 21 39 34.8 +2.8**
2µm,0.7s
PDGK ⇑Lg Lg 21 41 17.1
3µm,0.8s
KBL Kabul 6.06 217 Pn **Pn 21 39 35.7 +2.3**
KBL Kabul 6.06 217 PN **Pn 21 39 35.7 +2.3**
KBL Kabul 6.06 217 P **Pn 21 39 37.4 +4.0**
SNR=363
KBL P **Pn 21 39 37.4 +4.0**
SNR=363
KBL S **Sn 21 40 47.3 +4.5**
KBL S **Sn 21 40 47.3 +4.5**
THW Thamme Wali 6.81 192 P **Pn 21 39 46.5 +2.8**
JMU Jammu 6.86 170 eP **Pn 21 39 43.0 -1.2**
JMU eP Pb 21 39 46.5 -16
THN Thein Dam 7.28 165 eP **Pn 21 39 52.8 +2.8**
SARP Sargodha 7.57 185 P **Pn 21 39 55.8 +1.7**
BHK Bhakra 8.41 162 eP **Pn 21 40 07.2 +1.6**
OTUK Ortayu 8.79 355 P **Pn 21 40 12.2 +1.4**
OTUK Ortayu 8.79 355 ⇑Pn **Pn 21 40 12.2 +1.4**
163nm,0.7s
OTUK ⇑Lg Lg 21 42 48.6
4µm,1.2s
SMLA Simla 8.88 159⇑eP **Pn 21 40 13.9 +1.9**
MAKZ Makanchi 9.62 38 **Pn 21 40 24.7 +2.6**
MAKZ Makanchi 9.62 38 P **Pn 21 40 24.7 +2.6**
MAKZ Makanchi 9.62 38 ⇑Pn **Pn 21 40 25.3 +3.2**
172nm,0.8s
MAKZ ⇓Lg Lg 21 43 12.4
2µm,1.4s
MK31 Makanchi Array 9.76 39 Pn **Pn 21 40 26.5 +2.5**
MK31 Makanchi Array 9.76 39 P **Pn 21 40 26.5 +2.5**
MK31 Makanchi Array 9.76 39 Pn **Pn 21 40 26.8 +2.8**
120nm,0.7s,baz=214,slow=14,SNR=561
MK31 ⇑Lg Lg 21 43 17.3
387nm,0.8s,baz=221,slow=29,SNR=3.5
MKAR Makanchi Array 9.76 39 Pn **Pn 21 40 26.8 +2.8**
2.5nm,0.3s,baz=216,slow=14,SNR=126
MKAR Lg Lg 21 43 13.1
7.9nm,0.3s,baz=227,slow=32,SNR=3.4
72nm,0.8s
MKAR Makanchi Array 9.76 39 Pn **Pn 21 40 26.2 +2.2**
MKAR Makanchi Array 9.76 39 P **Pn 21 40 26.2 +2.2**
DDI Dehra Dun 9.90 156 eP **Pn 21 40 25.0 -1.0**
HRA Herat 10.30 244 Pn **Pn 21 40 30.4 -1.2**
BRZS Berezniki 10.51 357 eP **Pn 21 40 35.2 +0.9**
BRZS Berezniki 10.51 357 ePn **Pn 21 40 35.2 +0.9**
baz=357
BRZS eLg Lg 21 43 40.2
baz=357
BHGR Bahadurgarh 11.15 164 eP **Pn 21 40 45.2 +2.1**
NDI New Delhi 11.22 163 eP **Pn 21 40 44.0 -0.1**
NDI eP **Pn 21 40 45.0 +0.9**
ASOR Ausora 11.29 160 eP **Pn 21 40 44.3 -0.7**
PTH Pithoragarh 11.38 149 eP **Pn 21 40 43.9 -2.5**
BISR Bishrakh 11.38 162 eP **Pn 21 40 47.1 +0.8**
AYAN Aya Nagar 11.39 163 eP **Pn 21 40 46.4 -0.1**
LGTI Lohaghat 11.48 149 eP **Pn 21 40 45.2 -2.4**
ZSN Zaisan 11.50 42c eP **Pn 21 40 49.5 +1.7**
ZSN Zaisan 11.50 42⇑ePn **Pn 21 40 49.5 +1.7**
baz=42
ZSN eLg Lg 21 44 07.5
baz=42
WMQ Urumqi 11.51 63 eP **Pn 21 40 50.0 +1.9**
WMQ pP 21 40 54.3
WMQ S **Sn 21 42 56.0 -0.7**
WMQ pmax pmax
comp=Z,220nm,1.1s
WMQ LR LR
comp=N,30µm,9.9s
WMQ LR LR
comp=E,20µm,13.5s
WMQ LR LR
comp=Z,10µm,24.5s
KHET Khetri 11.55 169 eP **Pn 21 40 47.1 -1.6**
KUDL Kundal 11.59 166 eP **Pn 21 40 48.0 -1.2**
SONA Sohna 11.61 164 eP **Pn 21 40 48.6 -0.7**
KURBB Kurchatov Arra 11.70 16 Pn **Pn 21 40 50.8 +0.2**
1.2nm,0.3s,baz=206,slow=11,SNR=64
KURBB Sn **Sn 21 42 58.9 -2.2**
0.5nm,0.3s,baz=206,slow=27,SNR=2.3
KURBB Lg Lg 21 44 14.0
4.1nm,0.3s,baz=206,slow=29,SNR=7.0
KURBB LR LR 21 45 43.9
comp=Z,12µm,20.3s,baz=180,slow=39
47nm,0.8s
KURBB Kurchatov Arra 11.70 16 P **Pn 21 40 50.3 -0.2**
KURBB Kurchatov Arra 11.70 16 ⇑Pn **Pn 21 40 50.3 -0.2**
119nm,0.8s
KURBB ⇑Lg Lg 21 44 20.6
4µm,0.9s
KURK Kurchatov 11.81 16 Pn **Pn 21 40 52.2 +0.2**

KURK Kurchatov 11.81 16d iP **Pn 21 40 53.2 +1.2**
KURK Kurchatov 11.81 16 P **Pn 21 40 52.4 +0.4**
KURK P **Pn 21 40 52.4 +0.4**
KURK S **Sn 21 43 05.0 +1.3**
KURK S **Sn 21 43 05.0 +1.3**
KURK Kurchatov 11.81 16 ⇑Pn **Pn 21 40 51.9 -0.1**
111nm,1.1s
KURK ⇑Lg Lg 21 44 23.0
9µm,1.5s
SEM Semipalatinsk 11.94 22 eP **Pn 21 40 54.6 +0.7**
SEM Semipalatinsk 11.94 22 ePn **Pn 21 40 54.7 +0.7**
baz=22
SEM eLg Lg 21 44 19.8
baz=22
GEYT Alibeck 12.07 267 Pn **Pn 21 40 53.9 -1.8**
8.6nm,0.3s,baz=96,slow=12,SNR=40
GEYT Sn **Sn 21 43 09.3 -1.0**
17nm,0.3s,baz=67,slow=26,SNR=2.6
GEYT LR LR 21 46 25.2
comp=Z,4µm,20.0s,baz=71,slow=42
29nm,0.6s
GEYT Alibeck 12.07 267 **Pn 21 40 53.2 -2.5**
GYA0 ALIBECK ARRAY 12.07 267 P **Pn 21 40 52.9 -2.8**
GYA0 S **Sn 21 43 09.1 -1.2**
GYA0B ALIBECK ARRAY 12.07 267 **Pn 21 40 53.3 -2.4**
GYA0B ALIBECK ARRAY 12.07 267 ⇓Pn **Pn 21 40 53.0 -2.7**
GYA0B ⇑Sn **Sn 21 43 09.1 -1.1**
JASL Jaisalmer 12.70 190 eP **Pn 21 41 04.8 +0.4**
AJM Ajmer 13.01 175 eP **Pn 21 41 06.9 -1.7**
AJM eS **Sn 21 43 30.7 -2.7**
AB31 Akbulak array 13.71 320 P **Pn 21 41 15.6 -2.4**
AB31 Akbulak array 13.71 320 ⇑Pn **Pn 21 41 15.6 -2.4**
60nm,0.6s,baz=134,slow=12,SNR=925
ABKAR Akbulak array 13.71 320 **Pn 21 41 15.6 -2.4**
ABKAR Akbulak array 13.71 320 Pn **Pn 21 41 15.8 -2.2**
PYUN Piuthan 13.85 142 eP **Pn 21 41 15.9 -4.3**
433nm,0.7s
DANN Dangsing 14.02 139 eP **Pn 21 41 18.4 -4.2**
358nm,0.6s
JHNI Jhansi 14.62 161 eP **Pn 21 41 26.5 -4.1**
GKN Gorkha 14.75 138 eP **Pn 21 41 28.0 -4.5**
DMN Daman 15.31 137 eP **Pn 21 41 35.4 -4.7**
196nm,0.6s
I31KZ AKTYUBINSK INF 15.39 320 i 23 12 20.0
baz=129,slow=329,SNR=1.8
AKTO Aktyubinsk 15.42 320 Pn **Pn 21 41 40.5 -0.7**
6.5nm,0.3s,baz=136,slow=14,SNR=89
AKTO Sn **Sn 21 44 26.2 -5.8**
4.4nm,0.3s,baz=5.5,slow=21,SNR=4.1
AKTO LR LR 21 48 05.0
comp=Z,5µm,21.7s,baz=134,slow=39
41nm,0.6s
AKTO Aktyubinsk 15.42 320 ⇑Pn **Pn 21 41 41.1 -0.1**
325nm,1.1s
GUN Gumba 15.49 134 eP **Pn 21 41 38.6 -3.9**
105nm,0.5s
PKIN Phulchoki 15.49 136 eP **Pn 21 41 38.0 -4.5**
151nm,0.6s
PKI Pulchoki 15.50 136 eP **Pn 21 41 38.0 -4.7**
86nm,0.5s
ALBI Allahabad 15.79 151 eP **Pn 21 41 40.6 -5.5**
JIRN Jiri 15.86 134 eP **Pn 21 41 43.3 -4.0**
239nm,0.5s
ZAA0 Zalesovo Array 16.41 24 **Pn 21 41 53.9 +0.1**
ZAA0 IAmb IAmb 21 41 59.8
comp=Z,192nm,0.8s
ZALV Zalesovo Beam 16.41 24 Pn **Pn 21 41 54.7 +0.9**
comp=Z,7.8nm,0.3s,baz=211,slow=11,SNR=193
ZALV Lg Lg 21 46 46.2
comp=Z,1.2nm,0.3s,baz=212,slow=27,SNR=1.8
ZALV LR LR 21 48 25.5
comp=Z,8µm,18.3s,baz=216,slow=38
comp=Z,159nm,0.7s
ZALV Zalesovo Beam 16.41 24 **Pn 21 41 54.0 +0.1**
ZALV Zalesovo Beam 16.41 24 i P **Pn 21 41 54.4 +0.6**
ZALV pmax pmax
comp=Z,204nm,0.8s
BHPL Bhopal 16.55 167 eP **Pn 21 41 52.1 -3.7**
BHPL eS **Sn 21 44 55.4 -4.1**
BHPL IAML 21 45 00.5
comp=N,184nm,0.6s
RAMN Ramite 16.64 135 eP **Pn 21 41 52.5 -4.7**
comp=N,311nm,0.8s
TAPN Taplejung 16.96 131 eP **Pn 21 41 56.4 -4.9**
comp=N,72nm,0.5s
JBP Jabalpur 17.20 159 eP **Pn 21 41 59.6 -4.4**
GOMU GeErMu 17.20 94 P **Pn 21 42 02.8 -1.6**
GOMU pP pP 21 42 10.0 -0.3
GOMU S **S 21 45 21.5 -3.7**
GOMU pmax pmax
comp=N,24nm,0.9s
GOMU LR LR
comp=N,8µm,14.8s
GOMU LR LR
comp=N,5µm,14.3s
GOMU LR LR
comp=N,5µm,14.4s
NGCH Negor - Chabah 17.47 220 P **P 21 42 11.0 +2.4**
SNR=10
NGCH S **S 21 45 30.1 0.0**
LSA Lhasa 17.53 118 **Pn 21 42 08.7 +0.2**
LSA Lhasa 17.53 118 P **Pn 21 42 08.7 +0.2**
LSA pmax pmax
comp=Z,42nm,0.7s
BHV Bhavnagar 17.71 184 eP **Pn 21 42 08.4 -2.0**
BLSP Bilaspur 18.83 154 eP **P 21 42 21.8 -1.8**
JASK Jask - Hormozg 18.83 229 P **Pn 21 42 26.0 +1.9**
BOK Bokaro 18.87 142 eP **P 21 42 20.5 -3.5**
BOK eS **Sn 21 45 46.3 -9.4**
BOK IAML 21 45 59.4
comp=E,182nm,1.6s
NGP Nagpur 18.90 164 eP **P 21 42 21.1 -3.3**
LKRN Lenkeran, Azer 19.14 276 P **Pn 21 42 29.6 +1.9**
SVE Sverdlovsk 19.28 338de P **Pn 21 42 29.3 0.0**
SVE eS **Sn 21 46 05.0 -0.2**
SVE pmax pmax
comp=Z,296nm,1.3s
SVE MLR MLR
comp=Z,15µm,11.0s
ARU Arti 19.59 335 P **Pn 21 42 32.7 -0.3**
baz=146,slow=7.5,SNR=75
ARU Lg Lg 21 48 27.2
baz=10,slow=19
ARU LR LR 21 50 41.5
comp=Z,5µm,21.2s,baz=137,slow=39
comp=Z,95nm,0.8s
ARU Arti 19.59 335 P **P 21 42 32.2 +0.6**
ARU IAmb IAmb 21 42 41.2
comp=Z,248nm,1.0s
ARU Arti 19.59 335c iP **P 21 42 32.1 +0.5**
ARU S **Sn 21 46 15.2 +2.6**
ARU pmax pmax
comp=Z,107nm,1.0s
ARU MLR MLR
comp=Z,10µm,18.0s
BANOM Banah 19.72 232 P **Pn 21 42 34.7 -0.2**
SHME Shamm 19.73 232 i P **P 21 42 34.1 +0.8**
SNR=5.1
MAK Makhachkala 19.78 288 eP **P 21 42 29.1 -4.8**
MAK eS **S 21 46 08.9 -7.7**
MAK pmax pmax
comp=Z,261nm,1.2s
MAK MLR MLR
comp=Z,4µm,12.0s
SEKA Sheki 20.05 283 P Pn 21 42 39.4 +0.7
MNGR Mingechevir, A 20.17 282 P Pn 21 42 41.4 +1.4
MASF Masafi 20.21 231 P Pn 21 42 40.3 -0.3
SNR=11
MSFE Esma-Masafi 20.22 231 i P **P 21 42 39.8 +1.0**
SNR=9.4
KNGR Kungurtug, Tuv 20.23 49d iP Pn 21 42 41.1 +0.3
KNGR pmax pmax
comp=Z,826nm,1.9s
GTA Gaotai 20.36 82 ⇑P Pn 21 42 42.3 -0.1
GTA pP sP 21 42 48.3 +1.6
GTA sP pP 21 42 51.8 +7.1
GTA S Sn 21 46 34.5 +2.9
GTA sS pS 21 46 39.5 -0.6
GTA pmax pmax
comp=Z,250nm,0.7s
GTA pmax pmax
comp=Z,1µm,5.5s
GTA LR LR
comp=Z,8µm,19.6s
GTA LR LR
comp=Z,6µm,18.5s
GTA LR LR
comp=Z,8µm,20.4s
UMQ Umm Al-Quwin 20.40 232 P Pn 21 42 46.0 +3.2
SNR=8.1
ZKTA Zakatala 20.46 285 P Pn 21 42 44.8 +1.4
WSAR Wadi Sarin 20.50 222 P **P 21 42 41.7 -0.1**
comp=Z,39nm,1.0s,baz=76,slow=3.1,SNR=14
WSAR LR LR 21 51 17.1
comp=Z,961nm,18.6s,baz=74,slow=39
comp=Z,39nm,1.0s
WSAR Wadi Sarin 20.50 222 P **P 21 42 42.6 +0.8**
SNR=13
UOSS Minazif 20.50 230 P **P 21 42 40.6 -1.3**
UOSS Minazif 20.50 230 P **P 21 42 41.4 -0.5**
UOSS Minazif 20.50 230 i P Pn 21 42 43.9 -0.1
SNR=10
HATD Hatta, Dubai 20.64 230 i P **P 21 42 43.6 +0.3**
SNR=12
LGD Lagodekhi 20.73 285 P Pn 21 42 46.7 +0.1
ASHO Ashiyiah 20.79 230 P **P 21 42 44.6 -0.4**
SNR=40
ASHO Ashiyiah 20.79 230 i P **P 21 42 44.6 -0.4**
SNR=14
SHL Shillong 20.79 126 P **P 21 42 43.8 -1.4**
SHL IAmb IAmb 21 43 01.4
comp=Z,184nm,0.9s
SHL Shillong 20.79 126 P **P 21 42 43.8 -1.4**
SHL pmax pmax
comp=Z,184nm,0.9s
SHL Shillong 20.79 126 P **P 21 42 44.0 -1.2**
SNR=58
SHL Shillong 20.79 126 eP **P 21 42 43.3 -1.9**
SHL IAmb IAmb 21 42 50.5
comp=Z,157nm,1.0s
NAZ Nazwa, Dubai 20.80 231 P Pn 21 42 47.1 -0.4
SNR=14
NAZ Nazwa, Dubai 20.80 231 i P **P 21 42 46.4 +1.3**
SNR=20
WBK Wadi Bani Khal 20.84 220 P Pn 21 42 47.6 -0.5
SNR=12
POO Poona 20.89 179 eP **P 21 42 44.2 -1.8**
POO ⇑iP Pn 21 42 47.0 -1.6
comp=Z,300nm,1.0s
POO IAmb IAmb 21 42 55.2
comp=Z,803nm,1.6s
HOQ Hoqain 20.93 225 P **P 21 42 47.5 +1.0**
SNR=10.0
FAQ Al Faqa, Dubai 21.02 231 P **P 21 42 50.8 +3.3**
SNR=16
FAQ Al Faqa, Dubai 21.02 231 P **P 21 42 49.5 +2.1**
GROC Groznyy 21.04 289 eP **P 21 42 48.4 +0.9**
GROC e 21 43 07.3
GROC eS Sn 21 46 46.2 -1.6
GROC pmax pmax
comp=Z,232nm,0.7s
LATR Latur 21.17 172 eP **P 21 42 48.2 -0.8**
ASUD Al Ashush, Dub 21.27 231 P **P 21 42 52.9 +2.8**
SNR=16
ASUD Al Ashush, Dub 21.27 231 i P **P 21 42 50.7 +0.6**
SNR=8.7
ALNE Al Ain 21.45 229 P **P 21 42 54.2 +2.2**
SNR=18
ALNE Al Ain 21.45 229 i P **P 21 42 52.3 +0.3**
SNR=23
JMDO Jabal Madar 21.49 222 P **P 21 42 55.8 +3.3**
SNR=8.1
AJN Ajban 21.52 232 P **P 21 42 56.2 +3.3**
SNR=21
AJN Ajban 21.52 232 i P **P 21 42 53.5 +0.6**
SNR=14
NAX Nakhchivan 21.58 278 P **P 21 42 56.0 +2.5**
BWNR Bhubaneshwar 21.89 147 eP **P 21 42 57.9 +1.1**
RAGD RAYAGADA 21.95 154 eP **P 21 42 57.3 -0.2**
BELG Belogornoye 21.96 314 P **P 21 42 58.1 +0.8**
comp=Z,1µm,1.1s,baz=318,slow=0.5,SNR=36
BELG LR LR 21 53 07.9
comp=Z,1µm,19.8s,baz=121,slow=41
BELG Belogornoye 21.96 314c iP **P 21 42 57.5 +0.2**
BELG pmax pmax
comp=Z,106nm,1.3s
GNI Garni 22.01 281 P **P 21 42 59.6 +1.4**
comp=Z,69nm,0.9s,baz=353,slow=5.2,SNR=16
comp=Z,69nm,0.9s
GNI Garni 22.01 281 P **P 21 42 58.2 0.0**
GNI Garni 22.01 281ce P **P 21 42 59.3 +1.1**
GNI pmax pmax
comp=Z,66nm,0.8s
GNI Garni 22.01 281 P **P 21 42 59.6 +1.4**
HYBB Hyderabad (bro 22.43 167 eP **P 21 43 01.9 -0.8**
HYBB IVmB_BB 21 43 02.8
comp=Z,834nm,3.0s
HYBB epP **pP 21 43 06.6 -0.4**
HYBB eS **S 21 47 10.6 +1.5**
HYBB IVMsBB 21 49 20.7
comp=Z,853nm,9.3s
HYB Hyderabad 22.44 167 eP **P 21 43 01.0 -1.7**
HYB IAmb IAmb 21 43 10.2
comp=Z,159nm,0.6s
JRN Qarnain Island 22.59 236 P **P 21 43 04.0 -0.2**
SNR=13
NCK Nalchik 22.64 290⇑iP **P 21 43 04.0 -0.8**
MOY Mondy 22.66 48 eP **P 21 43 06.9 +1.9**
MOY pmax pmax
comp=Z,405nm,1.6s
MHTO MHTO 22.71 220 P **P 21 43 09.3 +3.8**
SNR=13
ONI Oni 22.77 288 P **P 21 43 07.1 +0.9**
ONI Oni 22.77 288 P **P 21 43 07.1 +0.9**
ONI pmax pmax
comp=Z,361nm,0.8s
AKH Akhalkalaki 22.82 285 ⇓P **P 21 43 07.9 +1.0**
AKH Akhalkalaki 22.82 285 P **P 21 43 07.8 +1.0**
KHOR Al-Khor Airpor 23.00 240 P **P 21 43 09.8 +1.2**
KHOR S **S 21 47 20.1 +1.1**
GOF Gofitskoye 23.09 294⇑eP **P 21 43 08.9 -0.5**
GOF eS **S 21 47 22.9 +2.6**
GOF pmax pmax
comp=Z,405nm,1.3s
GOF smax smax
comp=N,151nm,1.0s
GOF smax smax
comp=E,191nm,1.4s
KBZ Khabaz 23.15 290 P **P 21 43 11.2 +1.1**
comp=E,11nm,0.7s,baz=104,slow=6.8,SNR=17
KBZ LR LR 21 54 11.4
comp=E,4µm,18.9s,baz=93,slow=42
comp=E,11nm,0.7s
KBZ Khabaz 23.15 290ce P **P 21 43 09.4 -0.6**
KBZ pmax pmax
comp=Z,129nm,1.1s
SHMA Al-Shehemyia 23.21 241 P **P 21 43 10.8 0.0**
SHMA S **S 21 47 24.0 +1.4**
KARS Kars 23.21 283 P **P 21 43 11.3 +0.5**
KARS Kars 23.21 283 P **P 21 43 11.3 +0.5**
KARS pmax pmax
comp=Z,682nm,1.0s
KVAR Kislovodsk Arr 23.30 291 P **P 21 43 11.9 +0.2**
comp=Z,11nm,0.6s,baz=255,slow=20,SNR=11
KVAR S **S 21 47 27.5 +3.4**
comp=Z,26nm,0.9s,baz=202,slow=9.4,SNR=1.7
KVAR LR LR 21 53 11.0
comp=Z,3µm,21.6s,baz=199,slow=39
comp=Z,11nm,0.6s
KIV Kislovodsk 23.30 291 ⇑P **P 21 43 12.9 +1.2**
KIV Kislovodsk 23.30 291 P **P 21 43 12.0 +0.3**
KIV Kislovodsk 23.30 291ce P **P 21 43 12.3 +0.6**
KIV e 21 43 38.0
KIV eS **S 21 47 25.7 +1.5**
KIV pmax pmax
comp=Z,36nm,0.8s
KIV MLR MLR
comp=Z,2µm,18.0s
KIV Kislovodsk 23.30 291 P **P 21 43 12.8 +1.1**
KIV Kislovodsk 23.30 291 i P **P 21 43 12.5 +0.8**
SNR=28
SHA1 Shidzhatmaz 23.33 291c iP **P 21 43 12.2 +0.1**
VIS Vishakhapatnam 23.33 156 eP **P 21 43 12.1 +0.1**
VIS IAmb IAmb 21 43 24.5
comp=Z,294nm,1.2s
MZR Muzera 23.60 232 P **P 21 43 14.6 -0.1**
SNR=17
MZR Muzera 23.60 232 i P **P 21 43 14.4 -0.3**
SNR=34
ZAK Zakamensk 23.62 53 eP **P 21 43 15.9 +1.1**
ZAK pmax pmax

comp=Z,174nm,1.1s
GEVA Gevas 23.62 277 P P 21 43 15.5 +0.5
CHVG Ch'k'valeri 23.77 288 ⇓P P 21 43 18.1 +1.8
SLWR Sila 23.95 237 P P 21 43 18.4 +0.4
SLWR P P 21 43 18.4 +0.4
SLWR S S 21 47 37.4 +2.9
SLWR S S 21 47 37.4 +2.9
SMRA Abu-Samra 24.05 239 P P 21 43 18.5 -0.4
SMRA S S 21 47 37.2 +1.1
BATM Batumi 24.14 285 ⇓P P 21 43 21.8 +2.1
LZH Lanzhou 24.22 88 ⇑P P 21 43 22.8 +2.1
LZH pP sP 21 43 28.3 +1.2
LZH sP pP 21 43 32.3 +7.1
LZH PP 21 43 52.3
LZH S S 21 47 40.8 +1.7
LZH sS sS 21 47 49.8 +3.2
LZH SS SnSn 21 48 31.0 +10
LZH pmax pmax
comp=Z,170nm,1.1s
LZH pmax pmax
comp=Z,1μm,4.7s
LZH LR LR
comp=Z,20μm,12.7s
LZH LR LR
comp=Z,9μm,13.4s
LZH LR LR
comp=Z,12μm,15.5s
GURO Guroymak-BITLI 24.36 278 P P 21 43 22.3 +0.4
KIRV Kirov 24.53 329 P P 21 43 24.1 +1.1
comp=Z,43nm,0.6s,baz=122,slow=8.1,SNR=23
KIRV LR LR 21 53 40.4
comp=Z,7μm,19.2s,baz=132,slow=38
comp=Z,43nm,0.6s
KIRV Kirov 24.53 329 ceP P 21 43 23.8 +0.8
IRK Irkutsk 24.77 49 eP P 21 43 25.4 +0.1
IRK pmax pmax
comp=Z,179nm,1.9s
VRH Novokhopyorsk 24.98 308 eP P 21 43 29.1 +1.9
VRH eS S 21 47 49.0 -1.7
VRH pmax pmax
comp=Z,270nm,1.5s
VRH smax smax
comp=N,2μm,12.1s
VRH MLR MLR
comp=Z,5μm,13.0s
SONM Songino Array 25.11 60 P P 21 43 29.4 +0.8
comp=Z,56nm,0.8s,baz=265,slow=9.1,SNR=108
SONM LR LR 21 54 22.8
comp=Z,11μm,20.9s,baz=264,slow=39
comp=Z,56nm,0.8s
SONM Songino Array 25.11 60 P P 21 43 29.3 +0.7
SONM IAmb IAmb 21 43 38.2
comp=Z,140nm,1.0s
SONM Songino Array 25.11 60 P P 21 43 29.3 +0.7
SONM pmax pmax
comp=Z,140nm,1.0s
SOC Sochi 25.46 290 eP P 21 43 30.8 -0.9
SOC ePPP PPP 21 44 10.8
SOC i S S 21 47 59.1 +0.5
SOC eSSS SSS 21 49 03.2
SOC pmax pmax
comp=Z,68nm,0.7s
SOC MLR MLR
comp=Z,964nm,11.0s
ULN Ulaanbaatar 25.56 60 P P 21 43 33.5 +0.8
ULN IAmb IAmb 21 43 42.5
comp=Z,97nm,0.8s
ULN Ulaanbaatar 25.56 60 IAMs_20 IAMs_20 21 54 26.4
comp=Z,10μm,21.0s
ULN Ulaanbaatar 25.56 60 c i P P 21 43 33.5 +0.8
ULN pmax pmax
comp=Z,87nm,0.8s
ULN Ulaanbaatar 25.56 60 P P 21 43 33.3 +0.7
ULN S S 21 47 55.1 -5.2
MARD Mardin 25.61 276 P P 21 43 33.1 -0.1
MARD IAmb IAmb 21 43 43.0
comp=Z,53nm,0.8s
CD2 Chengdu 26.12 100 P P 21 43 38.8 +1.0
CD2 PP PnPn 21 44 20.8 +4.8
CD2 S S 21 48 07.0 -2.4
CD2 pmax pmax
comp=Z,110nm,1.1s
CD2 pmax pmax
comp=Z,470nm,7.6s
CD2 LR LR
comp=Z,8μm,15.5s
CD2 LR LR
comp=Z,4μm,15.7s
VSR Storozhevoye 26.54 308 eP P 21 43 41.5 +0.2
VSR eS S 21 48 08.1 -7.3
VSR pmax pmax
comp=Z,220nm,1.1s
VSR smax smax
comp=N,630nm,7.7s
VORR Voronezh 26.62 309 eP P 21 43 44.5 +2.5
VORR pmax pmax
comp=Z,226nm,1.1s
PZH PanZhiHua 26.92 110 ⇑P P 21 43 47.3 +2.1
PZH sP sP 21 43 51.0 -0.6
PZH PP PnPn 21 44 27.3 +0.2
PZH S S 21 48 27.3 +5.1
PZH pmax pmax
comp=Z,30nm,1.1s
PZH pmax pmax
comp=Z,120nm,5.6s
PZH LR LR
comp=Z,5μm,18.2s
PZH LR LR
comp=Z,3μm,17.5s
PZH LR LR
comp=Z,5μm,18.1s
LPSR Galich'ya Gora 27.02 310 eP P 21 43 46.4 +0.8
LPSR eS S 21 48 24.2 +1.3
LPSR pmax pmax
comp=Z,310nm,1.0s
LPSR smax smax
comp=E,1μm,13.7s
LPSR MLR MLR
comp=Z,5μm,12.0s
ANN Anapa 27.07 293 eP P 21 43 48.1 +2.0
ANN e*PP sP 21 43 53.3 +1.2
ANN e 21 44 31.2
ANN eS S 21 48 28.5 +4.7
ANN pmax pmax
comp=Z,227nm,1.4s
BTO Baotou 27.91 76 eP P 21 43 52.5 -1.4
BTO S S 21 48 39.5 +2.0
BTO LR LR
comp=Z,38μm,15.4s
BTO LR LR
comp=Z,21μm,12.9s
PRGR Permogore 27.95 332 eP P 21 43 55.1 +1.2
TOKA Tokat 28.23 284 P P 21 43 56.9 +0.1
KMI Kunming 28.46 111 ⇓P P 21 43 58.8 -0.3
KMI pP sP 21 44 06.5 +1.0
KMI sP pP 21 44 10.5 +6.8
KMI PP PP 21 44 56.3 -7.0
KMI S S 21 48 48.0 +1.3
KMI sS sS 21 49 01.3 +6.9
KMI SS SnSn 21 50 12.8 +7.9
KMI pmax pmax
comp=Z,15nm,1.3s
KMI pmax pmax
comp=Z,160nm,5.1s
KMI LR LR
comp=Z,4μm,17.1s
KMI LR LR
comp=Z,4μm,16.9s
KMI LR LR
comp=Z,3μm,15.6s
RAYN Ar Rayn 28.48 244 P P 21 43 58.6 -0.5
RAYN Ar Rayn 28.48 244 P P 21 43 58.6 -0.5
RAYN pmax pmax
comp=Z,261nm,1.9s
RAYN MLR MLR
comp=Z,3μm,19.0s
RAYN Ar Rayn 28.48 244 P P 21 43 59.1 0.0
RAYN Ar Rayn 28.48 244 i P P 21 43 59.4 +0.3
SNR=43
MOS Moscow 28.68 316 eP P 21 44 01.6 +1.1
MOS e 21 44 58.0
MOS eS S 21 48 49.7 +0.6
MOS eSS SS 21 50 29.3 -21
MOS pmax pmax
comp=Z,242nm,1.4s
MOS MLR MLR
comp=Z,3μm,17.0s
MOS MLR MLR
comp=E,2μm,18.0s
XAN Xi'an 28.82 90 ⇑P P 21 44 02.8 +0.8
XAN pP pP 21 44 07.3 +0.7
XAN sP sP 21 44 09.8 +1.3
XAN S S 21 48 55.0 +3.1
XAN pmax pmax
comp=E,12nm,0.8s
XAN pmax pmax
comp=E,240nm,7.0s
XAN LR LR
comp=E,14μm,19.4s
XAN LR LR
comp=E,10μm,19.4s
XAN LR LR
comp=E,10μm,15.5s
BNN Bunyan 29.01 281 P P 21 44 04.4 +0.6
BNN IAmb IAmb 21 44 53.9
comp=Z,99nm,1.2s
HHC Hu-ho-hao-te 29.02 75 eP P 21 44 06.3 +2.5
HHC S S 21 48 56.0 +1.0
HHC pmax pmax
comp=Z,45nm,0.9s
HHC pmax pmax
comp=Z,430nm,6.8s
HHC LR LR
comp=Z,11μm,13.0s
HHC LR LR
comp=Z,8μm,12.4s
HHC LR LR
comp=Z,13μm,15.2s
OBN Obninsk 29.06 315 ⇑P P 21 44 05.2 +1.4
OBN Obninsk 29.06 315 P P 21 44 05.0 +1.2
comp=Z,5.2nm,0.4s,baz=346,slow=5.6,SNR=16
OBN LR LR 21 56 36.6
comp=Z,889nm,18.9s,baz=146,slow=38
comp=Z,5.2nm,0.4s
OBN Obninsk 29.06 315 P P 21 44 04.3 +0.5
OBN Obninsk 29.06 315 c i P P 21 44 03.6 -0.2
OBN e 21 44 58.3
OBN eS S 21 48 55.2 +0.2
OBN pmax pmax
comp=Z,22nm,0.6s
OBN MLR MLR
comp=Z,4μm,18.0s
I43RU DUBNA INFRASON 29.24 318 i 00 38 50.0
baz=114,slow=322,SNR=1.2
SIM Simferopol' 29.41 294 eP P 21 44 07.8 +0.7
SIM eS S 21 49 00.0 -0.9
SIM pmax pmax
comp=Z,154nm,0.9s
SIM MLR MLR
comp=Z,1μm,11.0s
BZK Bozkurt 29.81 288 P P 21 44 10.1 -0.5
KLMR Klimovskoe 29.93 327 eP P 21 44 11.5 +0.1
KLMR e 21 45 09.3
KLMR eS S 21 49 08.4 -0.1
KLMR pmax pmax
comp=Z,176nm,1.4s
KLMR MLR MLR
comp=Z,4μm,9.0s
KLMR Klimovskoe 29.93 327 eP P 21 44 11.6 +0.1
KLMR AMP 21 44 18.8
comp=Z,176nm,1.4s
KLMR ePP PP 21 45 09.3 -10
KLMR eS S 21 49 08.5 -0.1
KLMR eS S 21 49 08.5 -0.1
KLMR LQ LQ 21 53 31.5
KLMR LQ LQ 21 53 31.5
KLMR LR LR 21 54 23.3
KLMR AMP 21 56 49.0
comp=Z,4μm,8.9s
CHTO Chiang Mai 30.16 126 P P 21 44 13.3 -0.7
CHTO Chiang Mai 30.16 126 P P 21 44 13.3 -0.7
CHTO pmax pmax
comp=Z,29nm,1.0s
CHTO Chiang Mai 30.16 126 P P 21 44 12.9 -1.1
CHTO S S 21 49 12.4 -0.6
CHTO Chiang Mai 30.16 126 P P 21 44 15.2 +1.2
ILGA Ilgaz 30.17 286 P P 21 44 12.8 -1.3
ASF Jabal al Asfar 30.35 268 P P 21 44 17.4 +1.7
comp=Z,3.5nm,0.8s,baz=130,slow=7.9,SNR=4.1
comp=Z,3.5nm,0.8s
TIY Taiyuan 30.38 81 eP P 21 44 16.5 +0.7
TIY S S 21 49 19.5 +3.3
TIY pmax pmax
comp=Z,240nm,4.6s
TIY LR LR
comp=Z,3μm,12.7s
TIY LR LR
comp=Z,2μm,11.0s
TIY LR LR
comp=Z,3μm,11.7s
CM31 Chiang Mai Arr 30.43 126 P P 21 44 15.7 -0.6
CMAR Chiang Mai Arr 30.43 126 P P 21 44 16.0 -0.3
comp=Z,6.2nm,0.6s,baz=312,slow=8.7,SNR=16
comp=Z,6.2nm,0.6s
CMAR Chiang Mai Arr 30.43 126 P P 21 44 15.7 -0.6
CMAR Chiang Mai Arr 30.43 126 i P P 21 44 15.3 -1.0
CMAR pmax pmax
comp=Z,3.0nm,0.4s
BR131 Keskin Array S 30.49 283 P P 21 44 16.6 -0.2
BR131 Keskin Array S 30.49 283 P P 21 44 16.6 -0.2
BR131 pmax pmax
comp=Z,119nm,0.9s
BR131 Keskin Array S 30.49 283 P P 21 44 18.0 +1.2
SNR=36
BRTR Keskin Array B 30.49 283 P P 21 44 17.6 +0.7
comp=Z,17nm,0.7s,baz=86,slow=7.1,SNR=28
BRTR LR LR 21 58 17.8
comp=Z,2μm,20.7s,baz=99,slow=40
comp=Z,17nm,0.7s
BRTR Keskin Array B 30.49 283 P P 21 44 17.4 +0.5
GYA Guiyang 30.58 105 ⇑P P 21 44 19.3 +1.6
GYA pP sP 21 44 24.0 -0.2
GYA sP pP 21 44 29.0 +6.7
GYA PP PP 21 45 23.5 -3.2
GYA S S 21 49 21.3 +1.6
GYA sS sS 21 49 29.5 +2.1
GYA SS ScP 21 51 05.8 +7.0
GYA pmax pmax
comp=Z,20nm,1.2s
GYA pmax pmax
comp=Z,280nm,6.7s
GYA LR LR
comp=Z,2μm,16.6s
GYA LR LR
comp=Z,3μm,18.5s
GYA LR LR
comp=Z,3μm,13.4s
ENH Enshi 30.80 96 P P 21 44 20.0 +0.4
ENH IAmb IAmb 21 44 34.2
comp=Z,51nm,0.8s
ANTO Ankara 31.09 284 P P 21 44 22.4 +0.3
ANTO IAmb IAmb 21 44 30.6
comp=Z,80nm,0.9s
ANTO Ankara 31.09 284 P P 21 44 22.4 +0.3
ANTO pmax pmax
comp=Z,80nm,1.0s
ANTO MLR MLR
comp=Z,1μm,22.0s
ANTO Ankara 31.09 284 P P 21 44 22.8 +0.7
BR231 Keskin MP Arra 31.11 284 P P 21 44 22.4 0.0
BR231 IAmb IAmb 21 44 30.9
comp=Z,87nm,1.1s
MMAI Mount Meron Ar 31.17 270 P P 21 44 24.7 +1.8
comp=Z,0.5nm,0.4s,baz=66,slow=12,SNR=2.5
MMAI LR LR 22 00 06.5
comp=Z,1μm,18.0s,baz=220,slow=42
LYN LuoYang 31.38 87 ⇓P P 21 44 27.5 +2.9
LYN S S 21 49 36.3 +4.4
LYN pmax pmax
comp=Z,230nm,8.3s
LYN LR LR
comp=Z,6μm,18.8s
LYN LR LR
comp=Z,4μm,17.6s
LYN LR LR
comp=Z,4μm,16.7s
SLVN Son La 31.69 116 P P 21 44 27.9 +0.4
GHAJ Ghor Haditha 31.75 267 P 21 44 28.7 +0.9
GHAJ IAmb IAmb 21 45 01.6
comp=Z,42nm,1.1s
BOD Bodaibo 31.83 41 eP P 21 44 28.6 +0.3
BOD pmax pmax
comp=Z,150nm,1.1s
XLT XiLinHaoTe 31.89 68 ⇑i P P 21 44 30.8 +1.7
XLT pP sP 21 44 35.8 +0.7
XLT S S 21 49 44.5 +4.7
XLT pmax pmax
comp=Z,11nm,1.6s
XLT pmax pmax
comp=Z,240nm,4.7s
XLT LR LR
comp=Z,340nm,16.5s
XLT LR LR
comp=Z,3μm,11.8s
XLT LR LR
comp=Z,3μm,12.2s
MDUB Mudurnu 32.16 286 P P 21 44 31.6 +0.1
SOCY Socotra 32.18 218 P P 21 44 30.0 -1.8
SOCY IAmb IAmb 21 45 20.0
comp=Z,79nm,1.1s
HNS HongShan 32.20 80 ⇑P P 21 44 33.5 +1.8
HNS PP PnPn 21 45 40.0 +2.4
HNS S S 21 49 49.5 +5.0
HNS ScS ScS 21 55 03.5 +0.8
HNS pmax pmax
comp=Z,21nm,0.8s
HNS pmax pmax
comp=Z,250nm,5.6s
HNS LR LR
comp=Z,3μm,13.9s
HNS LR LR
comp=Z,4μm,16.3s
HNS LR LR
comp=Z,5μm,17.9s
PURM Purcari 32.29 297 ⇓P P 21 44 33.3 +0.9
BJT Baijiatuau 32.63 75 P P 21 44 36.6 +1.1
BJT Baijiatuau 32.63 75 IAMs_20 IAMs_20 21 59 28.5
comp=Z,5μm,18.0s
BJT Baijiatuau 32.63 75 P P 21 44 36.6 +1.1
BJT pmax pmax
comp=Z,22nm,0.8s
BJT MLR MLR
comp=Z,5μm,18.0s
BJI Beijing 32.63 75 P P 21 44 37.3 +1.8
BJI S S 21 49 55.3 +4.0
BJI pmax pmax
comp=Z,14nm,0.7s
BJI pmax pmax
comp=Z,210nm,7.9s
BJI LR LR
comp=Z,920nm,17.4s
BJI LR LR
comp=Z,4μm,17.0s
AKASG Malin Array Be 32.70 305 P P 21 44 35.6 -0.4
comp=Z,7.7nm,0.5s,baz=78,slow=7.5,SNR=102
AKASG LR LR 22 00 58.6
comp=Z,2μm,18.8s,baz=93,slow=42
comp=Z,7.7nm,0.5s
AKASG Malin Array Be 32.70 305 i P P 21 44 35.4 -0.6
AKASG pmax pmax
comp=Z,28nm,0.5s
AKBB Malin Array Si 32.70 305 c i P P 21 44 35.4 -0.6
AKBB pmax pmax
comp=Z,47nm,0.6s
PALK Pallekele 32.73 167 P P 21 44 36.1 -0.5
comp=Z,14nm,1.1s,baz=337,slow=15,SNR=1.9
PALK LR LR 21 57 49.9
comp=Z,6μm,19.6s,baz=101,slow=36
comp=Z,14nm,1.1s
PALK Pallekele 32.73 167 P P 21 44 37.4 +0.8
PALK IAmb IAmb 21 44 43.2
comp=Z,50nm,1.2s
PALK Pallekele 32.73 167 P P 21 44 37.4 +0.8
PALK pmax pmax
comp=Z,50nm,1.2s
PALK MLR MLR
comp=Z,8μm,18.0s
KIS Kishinev 32.99 298 eP P 21 44 37.0 -1.5
comp=Z,80nm,1.5s
KIS Kishinev 32.99 298 ePP PP 21 45 56.0 +3.0
KIS eL L 21 52 28.0
KIS LRM MLR 22 01 56.0
comp=Z,800nm,12.5s
KIS Kishinev 32.99 298 eP P 21 44 37.0 -1.5
KIS e 21 45 56.0
KIS pmax pmax
comp=Z,80nm,1.5s
KIS MLR MLR
comp=E,1μm,14.0s
KIS MLR MLR
comp=Z,1μm,14.0s
KIS MLR MLR
comp=N,800nm,12.5s
MILM Milestii Mici 32.99 298 eP P 21 44 36.0 -2.6
comp=N,130nm,0.8s
MILM Milestii Mici 32.99 298 i PP PP 21 45 57.0 +3.9
MILM i S S 21 49 56.0 -0.8
MILM eL L 21 52 08.0
MILM LRM MLR 22 01 57.0
comp=N,2μm,12.5s
MILM Milestii Mici 32.99 298 ⇑P P 21 44 39.3 +0.7
MILM Milestii Mici 32.99 298 eP P 21 44 36.0 -2.6
MILM i 21 45 57.0
MILM i S S 21 49 56.0 -0.8
MILM e 21 50 04.0
MILM pmax pmax
comp=Z,130nm,0.8s
MILM MLR MLR
comp=E,2μm,14.0s
MILM MLR MLR
comp=Z,2μm,14.0s
MILM MLR MLR
comp=N,2μm,12.5s
TLCR 33.14 295 ⇑P P 21 44 40.3 +0.4
SORM Soroca 33.25 300 ⇓P P 21 44 41.1 +0.3
LEOM Leova 33.41 297 ⇑P P 21 44 44.0 +1.7
TPGR Topolog 33.45 294 ⇑P P 21 44 43.2 +0.5
TIRR Tirgusor 33.51 293 P P 21 44 43.6 +0.5
TIRR IAmb IAmb 21 45 09.4
comp=Z,51nm,0.8s
TIRR Tirgusor 33.51 293 P P 21 44 43.6 +0.5
TIRR pmax pmax
comp=Z,51nm,0.8s
TIRR MLR MLR
comp=Z,2μm,22.0s
MFTR Murfatlar 33.54 293 ⇑P P 21 44 44.2 +0.8
VLDR Vladesti 33.59 296 ⇓P P 21 44 44.9 +1.1
CFR Carcaliu 33.62 295 ⇑P P 21 44 44.0 0.0
SCTR Scanteiesti 33.66 296 ⇑P P 21 44 45.9 +1.4
TLBR Topalu 33.76 294 ⇑P P 21 44 46.3 +1.0
HARR Harsova 33.82 294 ⇓P P 21 44 47.1 +1.2
MNK Minsk 33.84 312 i P P 21 44 46.7 +0.8
MNK i 21 45 59.5
MNK i S S 21 50 11.4 +1.6
MNK i SS SnSn 21 52 18.5 +3.8
MNK i SSS SSS 21 52 44.7
MNK pmax pmax
comp=N,19nm,0.9s
MNK pmax pmax
comp=E,7.0nm,0.9s
MNK pmax pmax
comp=Z,44nm,0.9s
MNK MLR MLR
comp=E,486nm,17.0s
MNK MLR MLR
comp=N,3μm,17.0s
MNK MLR MLR
comp=Z,4μm,17.0s
MNK Minsk 33.84 312 i P P 21 44 46.8 +0.8
comp=E,7.0nm,0.9s
MNK i P P 21 44 46.8 +0.8
comp=N,19nm,0.9s
MNK i P P 21 44 46.8 +0.8
comp=Z,44nm,0.9s,baz=98
MNK i PP PP 21 45 59.6 -2.8
MNK i PPP PPP 21 46 10.8
MNK i S S 21 50 11.4 +1.6
MNK i SS SnSn 21 52 18.5 +3.8
MNK i SSS SSS 21 52 44.8
MNK i LQ LQ 21 56 30.9
MNK i LR LR 21 57 42.0
MNK i LRM MLR 21 59 37.0
comp=E,486nm,17.2s
MNK i LRM MLR 21 59 37.3
comp=N,3μm,17.2s

MNK				*i*	LRM		MLR	21 59 40.5	
	comp=Z,4μm,17.2s								
VALR	**Valaam**	**33.94**	**324**	*c*	*i*P		**P**	**21 44 46.7**	**+0.1**
VALR					pmax		pmax		
	comp=Z,44nm,1.5s								
ICOR	**Ion Corvin**	**33.99**	**293**		⇑P		**P**	**21 44 48.6**	**+1.3**
GULI	**GuiLin**	**34.00**	**103**		⇓P		P	21 44 39.3	-8.3
GULI					S		S	21 50 01.3	-11
GULI					pmax		pmax		
	comp=Z,70nm,1.1s								
GULI					LR		LR		
	comp=N,3μm,18.4s								
GULI					LR		LR		
	comp=E,3μm,18.4s								
GULI					LR		LR		
	comp=Z,2μm,18.4s								
GHRR		**34.03**	**296**		⇓P		**P**	**21 44 48.8**	**+1.1**
HIA	**Hailar**	**34.03**	**58**		P		**P**	**21 44 48.8**	**+1.1**
HIA	**Hailar**	**34.03**	**58**		P		**P**	**21 44 48.8**	**+1.1**
HIA					pmax		pmax		
	comp=Z,40nm,1.3s								
HIA					MLR		MLR		
	comp=Z,7μm,22.0s								
PANC	**Panciu**	**34.23**	**296**		⇓P		**P**	**21 44 50.7**	**+1.3**
ODBI	**Odobesti**	**34.31**	**296**		⇑P		**P**	**21 44 52.3**	**+2.3**
TIA	**Tai'an**	**34.41**	**81**		⇓P		**P**	**21 44 53.0**	**+1.9**
TIA					S		**S**	**21 50 21.3**	**+2.4**
TIA					pmax		pmax		
	comp=Z,32nm,0.7s								
TIA					pmax		pmax		
	comp=Z,250nm,3.6s								
TIA					LR		LR		
	comp=Z,4μm,12.9s								
TIA					LR		LR		
	comp=Z,3μm,13.4s								
TIA					LR		LR		
	comp=Z,4μm,17.1s								
PRD	**Provadia**	**34.42**	**291**	*i*	P		**P**	**21 44 54.9**	**+3.8**
WHN	**Wuhan**	**34.44**	**92**		⇑P		**P**	**21 44 53.0**	**+1.7**
WHN					sP		**sP**	**21 44 59.0**	**+1.2**
WHN					S		**S**	**21 50 22.0**	**+2.6**
WHN					pmax		pmax		
	comp=Z,80nm,1.0s								
WHN					LR		LR		
	comp=Z,9μm,14.9s								
WHN					LR		LR		
	comp=Z,6μm,14.4s								
WHN					LR		LR		
	comp=Z,11μm,19.1s								
CNSH	**ChangSha**	**34.44**	**97**		⇓P		**P**	**21 44 52.3**	**+0.9**
CNSH					S		**S**	**21 50 18.8**	**-0.8**
CNSH					LR		LR		
	comp=Z,8μm,20.6s								
CNSH					LR		LR		
	comp=Z,6μm,24.0s								
CNSH					LR		LR		
	comp=Z,4μm,13.9s								
VRI	**Vrincioaia**	**34.52**	**296**		⇑P		**P**	**21 44 53.6**	**+1.7**
VRI	**Vrincioaia**	**34.52**	**296**		P		**P**	**21 44 53.6**	**+1.7**
NACGM	**Naroch**	**34.53**	**312**		⇓P		**P**	**21 44 53.2**	**+1.3**
PLOR	**Plostina**	**34.58**	**296**		⇑P		**P**	**21 44 54.3**	**+1.8**
IDID	**Didziasalis**	**34.60**	**313**	*e*	P		**P**	**21 44 54.1**	**+1.6**
IIGN	**Ignalina**	**34.90**	**313**	*e*	P		**P**	**21 44 56.8**	**+1.7**
ISAL	**Salakas**	**34.98**	**313**	*e*	P		**P**	**21 44 57.5**	**+1.7**
MLR	**Muntele Rosu**	**35.11**	**296**		LR		LR	22 00 34.6	
	comp=Z,1μm,20.7s,baz=67,slow=38								
MLR	**Muntele Rosu**	**35.11**	**296**		P		**P**	**21 44 58.4**	**+1.2**
MLR	**Muntele Rosu**	**35.11**	**296**		P		**P**	**21 44 58.4**	**+1.2**
MLR					pmax		pmax		
	comp=Z,185nm,1.0s								
VSU	**Vasula**	**35.14**	**318**	*c*	*i*P		**P**	**21 44 57.2**	**+0.2**
VSU					pmax		pmax		
	comp=Z,154nm,1.3s								
VSU	**Vasula**	**35.14**	**318**		*e*P		**P**	**21 44 57.6**	**+0.6**
JMB	**Yambol**	**35.15**	**290**		*i*P		**P**	**21 45 00.5**	**+3.1**
BURAR	**Bucovina Array**	**35.39**	**299**		P		**P**	**21 44 59.1**	**-0.4**
BUR08	**Bucovina Ar. S**	**35.40**	**299**		P		**P**	**21 44 59.4**	**-0.2**
BUR08					IAmb		IAmb	21 45 09.0	
	comp=Z,47nm,1.1s								
LVZ	**Lovozero**	**35.46**	**336**		P		**P**	**21 44 59.6**	**-0.2**
LVZ					IAMs_20		IAMs_20	22 00 12.3	
	comp=Z,4μm,21.0s								
LVZ	**Lovozero**	**35.46**	**336**	*ce*	P		**P**	**21 45 00.1**	**+0.3**
LVZ					pmax		pmax		
	comp=Z,62nm,1.0s								
APA	**Apatity**	**35.68**	**335**		*i*P		**P**	**21 45 01.7**	**+0.1**
APA					*i*			21 46 27.0	
APA					*i*S		**S**	**21 50 34.0**	**-3.8**
APA					pmax		pmax		
	comp=Z,19nm,1.1s								
APA					MLR		MLR		
	comp=Z,4μm,12.0s								
ALN	**Alexandroupoli**	**35.88**	**288**		P		**P**	**21 45 07.3**	**+3.6**
ALN	**Alexandroupoli**	**35.88**	**288**		P		**P**	**21 45 03.9**	**+0.2**
ALN	**Alexandroupoli**	**35.88**	**288**		P		**P**	**21 45 03.9**	**+0.2**
ALN					pmax		pmax		
	comp=Z,45nm,1.2s								
LVV	**L'vov**	**36.03**	**303**		*e*P		**P**	**21 45 06.2**	**+1.3**
LVV					*e*			21 46 21.3	
LVV					*e*S		**S**	**21 50 42.3**	**-1.3**
LVV					MLR		MLR		
	comp=Z,4μm,15.0s								
SMG	**Samos**	**36.15**	**282**		P		P	21 45 11.8	+5.8
FIA1	**FINESS Array S**	**36.16**	**323**		P		**P**	**21 45 05.9**	**+0.1**
FIA1					IAmb		IAmb	21 45 13.6	
	comp=Z,116nm,1.5s								
FINES	**FINESS Array B**	**36.16**	**323**		P		**P**	**21 45 06.4**	**+0.6**
	comp=Z,19nm,0.4s,baz=113,slow=9.2,SNR=138								
FINES					LR		LR	22 01 19.1	
	comp=Z,2μm,20.3s,baz=103,slow=39								
	comp=Z,19nm,0.4s								
FINES	**FINESS Array B**	**36.16**	**323**		P		**P**	**21 45 06.0**	**+0.2**
FINES	**FINESS Array B**	**36.16**	**323**	*i*	P		**P**	**21 45 06.0**	**+0.2**
FINES					pmax		pmax		
	comp=Z,19nm,0.4s								
KDZ	**Kurdzhali**	**36.17**	**289**	*i*	P		P	21 45 12.1	+5.9
RDO	**Rodhopi**	**36.20**	**288**		P		**P**	**21 45 03.9**	**-2.5**
RDO	**Rodhopi**	**36.20**	**288**		P		**P**	**21 45 06.5**	**+0.1**
RDO					IAmb		IAmb	21 45 13.5	
	comp=Z,72nm,1.5s								
PABE	**Paberze**	**36.20**	**313**		P		**P**	**21 45 06.1**	**-0.1**
PABE	**Paberze**	**36.20**	**313**	*e*	P		**P**	**21 45 07.2**	**+1.0**
VSVD	**Vaisvydziai**	**36.26**	**314**	*e*	P		**P**	**21 45 08.0**	**+1.2**
SMTH	**Samothraki Isl**	**36.36**	**287**		P		**P**	**21 45 06.8**	**-1.0**
CHOS	**Chios Island**	**36.53**	**284**		P		**P**	**21 45 12.9**	**+3.5**
SUW	**Suwalki**	**36.55**	**310**	*e*	P		**P**	**21 45 12.8**	**+3.5**
SUW					*e*PP		**PnPn**	**21 46 29.2**	**-2.7**
SUW					*e*S		**S**	**21 50 52.3**	**+0.9**
SUW					*e*SS		**SS**	**21 53 38.2**	**+7.4**
SUW					*e*L		L	22 00 58.8	
	comp=Z,5μm,15.2s								
SUW	**Suwalki**	**36.55**	**310**		P		**P**	**21 45 09.4**	**+0.1**
SUW	**Suwalki**	**36.55**	**310**		P		**P**	**21 45 09.4**	**+0.1**
SUW					pmax		pmax		
	comp=Z,128nm,1.1s								
SUW					MLR		MLR		
	comp=Z,6μm,19.0s								
SUW	**Suwalki**	**36.55**	**310**	*e*	P		**P**	**21 45 11.6**	**+2.3**
PLD	**Plovdiv**	**36.59**	**290**	*i*	P		P	21 45 15.4	+5.7
KARP	**Karpathos**	**36.60**	**279**		P		**P**	**21 45 09.0**	**-0.9**
RZN	**Rozhen**	**36.67**	**290**	*i*	P		**P**	**21 45 14.0**	**+3.3**
MEF	**Metsahovi**	**36.67**	**321**	*e*	P		**P**	**21 45 10.8**	**+0.6**
MTSE	**Matsula**	**36.69**	**318**	*e*	P		**P**	**21 45 11.2**	**+0.9**
LIA	**Limnos Island**	**36.77**	**286**		P		P	21 45 17.5	+6.2
PGB	**Panagyurishte**	**36.88**	**291**	*i*	P		**P**	**21 45 14.4**	**+2.1**
KWP	**Kalwaria Pacla**	**36.90**	**303**	*e*	P		**P**	**21 45 13.2**	**+0.9**
KWP					*e*S		**S**	**21 50 56.4**	**-0.5**
KWP					*e*L		L	22 00 16.3	
	comp=Z,2μm,28.4s								
KWP	**Kalwaria Pacla**	**36.90**	**303**		P		**P**	**21 45 12.5**	**+0.2**
KWP	**Kalwaria Pacla**	**36.90**	**303**		P		**P**	**21 45 12.5**	**+0.2**
KWP					MLR		MLR		
	comp=Z,15μm,18.0s								
DL2	**Dalian**	**37.00**	**75**		P		**P**	**21 45 14.0**	**+0.8**
DL2					PP		**PnPn**	**21 46 39.5**	**+1.9**
DL2					S		**S**	**21 50 56.3**	**-2.3**
DL2					pmax		pmax		
	comp=Z,45nm,1.3s								
DL2					pmax		pmax		
	comp=Z,220nm,8.7s								
DL2					LR		LR		
	comp=Z,3μm,17.4s								
DL2					LR		LR		
	comp=Z,4μm,18.9s								
DL2					LR		LR		
	comp=Z,6μm,18.1s								
DRGR		**37.17**	**298**		P		**P**	**21 45 16.5**	**+1.7**
DRGR					pmax		pmax		
	comp=Z,47nm,0.8s								
KOLS	**Kolonicke sedl**	**37.23**	**302**	*e*	P		**P**	**21 45 16.7**	**+1.5**
KOLS					pmax		pmax		
	comp=Z,14nm,0.6s								
KOLS	**Kolonicke sedl**	**37.23**	**302**	*e*	P		**P**	**21 45 16.7**	**+1.5**
UZH	**Uzhgorod**	**37.25**	**301**	*e*	P		**P**	**21 45 17.2**	**+2.0**
UZH				*e*				21 45 25.6	
UZH				*e*				21 46 47.6	
UZH				*e*	PPP		PPP	21 47 06.2	
UZH				*e*	S		**S**	**21 51 02.2**	**0.0**
UZH					MLR		MLR		
	comp=N,400nm,12.0s								
UZH					MLR		MLR		
	comp=E,400nm,12.0s								
UZH					MLR		MLR		
	comp=Z,250nm,12.0s								
NJ2	**Nanjing**	**37.28**	**87**		⇓P		**P**	**21 45 18.0**	**+2.3**
NJ2					pP		**sP**	**21 45 22.0**	**-0.2**
NJ2					sP		**pP**	**21 45 25.5**	**+5.2**
NJ2					PP		**PnPn**	**21 46 48.3**	**+7.2**
NJ2					S		**S**	**21 51 06.5**	**+3.6**
NJ2					pmax		pmax		
	comp=Z,16nm,1.1s								
NJ2					pmax		pmax		
	comp=Z,280nm,7.7s								
NJ2					LR		LR		
	comp=Z,6μm,16.2s								
NJ2					LR		LR		
	comp=Z,3μm,19.6s								
NJ2					LR		LR		
	comp=Z,3μm,16.2s								
APE	**Apeiranthos**	**37.34**	**282**		P		**P**	**21 45 17.3**	**+1.1**
APE	**Apeiranthos**	**37.34**	**282**	*c*	*i*P		**P**	**21 45 16.7**	**+0.5**
APE					pmax		pmax		
	comp=Z,40nm,0.7s								
SLIT	**Slitere, Latvi**	**37.34**	**316**	*e*	P		**P**	**21 45 16.5**	**+0.6**
NVR	**Nevrokopi**	**37.37**	**289**		P		**P**	**21 45 19.8**	**+3.3**
PBUR	**Paburge**	**37.39**	**314**	*e*	P		**P**	**21 45 17.2**	**+0.9**
QIZ	**Qiongzhong**	**37.40**	**112**		P		**P**	**21 45 16.6**	**-0.2**
QIZ	**Qiongzhong**	**37.40**	**112**		P		**P**	**21 45 18.3**	**+1.5**
QIZ					PP		**PnPn**	**21 46 49.8**	**+7.1**
QIZ					S		**S**	**21 51 08.0**	**+3.0**
QIZ					pmax		pmax		
	comp=Z,210nm,5.0s								
QIZ					LR		LR		
	comp=Z,4μm,16.3s								
QIZ					LR		LR		
	comp=Z,4μm,18.7s								
QIZ					LR		LR		
	comp=Z,2μm,10.4s								
KOKK	**Kokkinochori,**	**37.41**	**288**		P		**P**	**21 45 16.4**	**-0.3**
MMB	**Musomiste**	**37.41**	**290**	*i*	P		**P**	**21 45 20.9**	**+4.1**
ZKR	**Zakros**	**37.48**	**279**		P		**P**	**21 45 18.7**	**+1.3**
VTS	**Vitosha**	**37.54**	**291**	*i*	P		**P**	**21 45 20.2**	**+2.2**
SANT	**Santorini**	**37.62**	**281**		P		**P**	**21 45 17.4**	**-1.2**
SRS	**Serrai**	**37.63**	**289**		P		**P**	**21 45 20.2**	**+1.6**
LTVH	**Ltavrtes, Hu**	**37.65**	**299**		P		**P**	**21 45 21.8**	**+3.1**
SNY	**Shenyang**	**37.68**	**70**		⇑P		**P**	**21 45 18.5**	**-0.5**
SNY					S		**S**	**21 51 09.0**	**+0.1**
SNY					pmax		pmax		
	comp=Z,45nm,0.9s								
SNY					pmax		pmax		
	comp=Z,500nm,8.3s								
SNY					LR		LR		
	comp=Z,9μm,14.9s								
SNY					LR		LR		
	comp=Z,5μm,17.7s								
SNY					LR		LR		
	comp=Z,9μm,17.8s								
CRVS	**Cervenica-Dubn**	**37.77**	**302**	*e*	P		**P**	**21 45 20.6**	**+0.9**
CRVS					pmax		pmax		
	comp=Z,20nm,0.9s								
CRVS	**Cervenica-Dubn**	**37.77**	**302**	*e*	P		**P**	**21 45 20.6**	**+0.9**
KKB	**Krupnik**	**37.82**	**290**	*i*	P		**P**	**21 45 20.9**	**+0.7**
STHS	**Stebnicka Huta**	**37.86**	**303**	*e*	P		**P**	**21 45 24.5**	**+4.0**
SOH	**Sokhos**	**37.88**	**289**		P		**P**	**21 45 24.1**	**+3.4**
PLG	**Polygyros**	**37.93**	**288**		P		**P**	**21 45 22.8**	**+1.6**
BEL	**Belsk**	**38.00**	**307**	*e*	P		**P**	**21 45 22.3**	**+0.7**
BEL				*e*	PP		**PnPn**	**21 46 53.3**	**+3.8**
BEL				*e*	S		**S**	**21 51 15.3**	**+1.9**
BEL				*e*	SS		**SS**	**21 54 01.1**	**+1.0**
BEL				*e*	L		L	22 01 39.4	
	comp=Z,3μm,22.2s								
RAF	**Rauma**	**38.10**	**322**	*e*	P		**P**	**21 45 23.5**	**+1.2**
KNT	**Kendrikon**	**38.12**	**289**		P		**P**	**21 45 23.6**	**+0.8**
DION	**Dionisos Attik**	**38.22**	**284**		P		**P**	**21 45 28.2**	**+4.5**
PTL	**Penteli**	**38.28**	**284**		P		P	21 45 29.4	+5.2
KLNR	**Kaliningrad**	**38.31**	**311**	*d*	*i*P		**P**	**21 45 28.8**	**+4.7**
KLNR					pmax		pmax		
	comp=Z,287nm,1.5s								
VAY	**Valandovo**	**38.32**	**290**	*i*	P		**P**	**21 45 25.1**	**+0.7**
XOR	**Xorichti**	**38.39**	**286**		P		**P**	**21 45 26.0**	**+0.9**
VLY	**Voula,Athens**	**38.40**	**284**		P		**P**	**21 45 26.5**	**+1.4**
IDI	**Anoyia**	**38.43**	**279**		P		**P**	**21 45 25.2**	**-0.3**
	comp=Z,12nm,0.6s,baz=20,slow=22,SNR=2.8								
IDI					LR		LR	22 05 38.0	
	comp=Z,747nm,20.4s,baz=88,slow=43								
	comp=Z,12nm,0.6s								
IDI	**Anoyia**	**38.43**	**279**		P		**P**	**21 45 24.8**	**-0.7**
GRG	**Griva**	**38.54**	**289**		P		**P**	**21 45 29.2**	**+2.9**
CN2	**Changchun**	**38.59**	**66**	*e*	P		**P**	**21 45 26.0**	**-0.6**
CN2					PP		**PP**	**21 46 54.5**	**-0.3**
CN2					S		**S**	**21 51 21.0**	**-1.5**
CN2					pmax		pmax		
	comp=Z,10.0nm,0.5s								
CN2					pmax		pmax		
	comp=Z,100nm,8.0s								
CN2					LR		LR		
	comp=Z,3μm,14.0s								
CN2					LR		LR		
	comp=Z,3μm,14.0s								
CN2					LR		LR		
	comp=Z,3μm,16.5s								
SRIT	**Nakonsritamara**	**38.66**	**136**		P		**P**	**21 45 27.1**	**-0.4**
ZEA	**Zeya**	**38.66**	**50**	*e*	P		**P**	**21 45 28.2**	**+1.1**
ZEA				*e*				21 47 00.5	
ZEA				*e*	S		**S**	**21 51 20.7**	**-2.7**
ZEA					pmax		pmax		
	comp=E,100nm,3.4s								
ZEA					pmax		pmax		
	comp=Z,200nm,6.3s								
ZEA					pmax		pmax		
	comp=E,20nm,1.0s								
ZEA					pmax		pmax		
	comp=Z,30nm,1.0s								
ZEA					smax		smax		
	comp=E,300nm,12.5s								
ZEA					MLR		MLR		
	comp=E,2μm,11.0s								
ZEA					MLR		MLR		
	comp=N,2μm,9.0s								
ZEA					MLR		MLR		
	comp=Z,3μm,10.0s								
LIT	**Litokhoron**	**38.70**	**288**		P		**P**	**21 45 28.2**	**+0.5**
LIT	**Litokhoron**	**38.70**	**288**		P		**P**	**21 45 28.2**	**+0.5**
LIT					pmax		pmax		
	comp=Z,40nm,1.1s								
OJC	**Ojcow**	**38.73**	**304**	*e*	P		**P**	**21 45 28.9**	**+1.2**
OJC				*e*	PP		**PnPn**	**21 46 59.7**	**+1.4**
OJC				*e*	S		**S**	**21 51 21.0**	**-3.5**
OJC				*e*	L		L	22 01 03.2	
	comp=Z,2μm,19.3s								
OJC	**Ojcow**	**38.73**	**304**		P		**P**	**21 45 27.7**	**0.0**
OJC	**Ojcow**	**38.73**	**304**		P		**P**	**21 45 27.7**	**0.0**
OJC					pmax		pmax		
	comp=Z,44nm,0.8s								
LKR	**Lokris**	**38.75**	**285**		P		**P**	**21 45 25.5**	**-2.5**
SUJ	**Sinuiju**	**38.79**	**72**		P		**P**	**21 45 28.7**	**+0.3**
SUJ					pP		**sP**	**21 45 34.6**	**-0.3**
SUJ					S		S	21 51 42.9	+17
SUJ					AmB				
	comp=Z,235nm,1.7s								
SUJ					AMS		AMS		
	comp=N,1μm,3.9s								
SUJ					AMS		AMS		
	comp=E,1μm,5.1s								
SUJ					AMS		AMS		
	comp=Z,1μm,4.7s								
KEV	**Kevo**	**38.79**	**336**		P		**P**	**21 45 28.0**	**0.0**
KEV					IAmb		IAmb	21 45 35.7	
	comp=Z,108nm,1.5s								
KEV	**Kevo**	**38.79**	**336**		P		**P**	**21 45 28.0**	**0.0**
KEV					pmax		pmax		
	comp=Z,108nm,1.5s								
KEV					MLR		MLR		
	comp=Z,1μm,20.0s								
ATD	**Arta Tunnel**	**38.86**	**233**		P		**P**	**21 45 29.9**	**+0.7**
	comp=Z,10nm,0.9s,baz=287,slow=19,SNR=1.6								
ATD					LR		LR	22 03 27.8	
	comp=Z,2μm,21.0s,baz=42,slow=39								
	comp=Z,10nm,0.9s								
ATD	**Arta Tunnel**	**38.86**	**233**		P		**P**	**21 45 29.2**	**0.0**
ATD					IAmb		IAmb	21 45 44.6	
	comp=Z,96nm,1.2s								
PSZ	**Piszkesteto**	**38.92**	**301**		P		**P**	**21 45 29.5**	**0.0**
PSZ	**Piszkesteto**	**38.92**	**301**		P		**P**	**21 45 29.5**	**0.0**
PSZ					pmax		pmax		
	comp=Z,36nm,1.0s								
PSZ					MLR		MLR		
	comp=Z,1μm,20.0s								
PSZ	**Piszkesteto**	**38.92**	**301**		P		**P**	**21 45 30.8**	**+1.3**
SKO	**Skopje**	**38.98**	**291**	*i*	P		**P**	**21 45 32.6**	**+2.7**
LANS	**Liptovska Anna**	**39.05**	**303**	*e*	P		**P**	**21 45 33.1**	**+2.6**
LANS					pmax		pmax		
	comp=Z,9.0nm,1.0s								
LANS	**Liptovska Anna**	**39.05**	**303**	*e*	P		**P**	**21 45 33.1**	**+2.6**
AGG	**Agios Georgios**	**39.13**	**286**		P		**P**	**21 45 33.0**	**+1.7**
ARCES	**ARCESS Array B**	**39.17**	**336**		P		**P**	**21 45 31.9**	**+0.6**
	comp=Z,10nm,0.5s,baz=110,slow=8.6,SNR=127								
ARCES					LR		LR	22 03 55.2	
	comp=Z,1μm,18.8s,baz=111,slow=40								
	comp=Z,10nm,0.5s								
ARCES	**ARCESS Array B**	**39.17**	**336**		P		**P**	**21 45 31.6**	**+0.4**
ARCES					IAmb		IAmb	21 45 39.1	
	comp=Z,212nm,1.5s								
ARCES	**ARCESS Array B**	**39.17**	**336**		P		**P**	**21 45 31.6**	**+0.4**
ARCES					pmax		pmax		
	comp=Z,212nm,1.5s								
THL	**Klokotos Trika**	**39.21**	**287**		P		**P**	**21 45 34.8**	**+2.9**
SSE	**Sheshan**	**39.48**	**87**		P		**P**	**21 45 37.0**	**+2.8**
SSE					S		**S**	**21 51 39.0**	**+2.7**
SSE					pmax		pmax		
	comp=Z,34nm,1.2s								
SSE					pmax		pmax		
	comp=Z,150nm,7.7s								
SSE					LR		LR		
	comp=Z,2μm,19.9s								
SSE					LR		LR		
	comp=Z,750nm,20.1s								
DIVS	**Divibare**	**39.53**	**295**		P		**P**	**21 45 35.4**	**+0.8**
DIVS					IAmb		IAmb	21 45 45.6	
	comp=Z,100nm,1.0s								
VYHS	**Vyhne**	**39.55**	**302**	*e*	P		**P**	**21 45 36.1**	**+1.5**
VYHS					pmax		pmax		
	comp=Z,11nm,1.0s								
VYHS	**Vyhne**	**39.55**	**302**	*e*	P		**P**	**21 45 36.1**	**+1.5**
BUD	**Budapest**	**39.57**	**300**		P		**P**	**21 45 36.7**	**+1.9**
BNX	**BinXian**	**39.57**	**63**		⇓P		**P**	**21 45 36.0**	**+1.2**
BNX					pP		**pP**	**21 45 39.0**	**-0.2**
BNX					sP		**sP**	**21 45 41.3**	**+0.4**
BNX					PP		**PP**	**21 47 06.8**	**+1.3**
BNX					S		S	**21 51 37.5**	**+0.2**
BNX					SS		**SS**	**21 54 28.8**	**-3.0**
BNX					pmax		pmax		
	comp=Z,26nm,1.1s								
BNX					pmax		pmax		
	comp=Z,310nm,7.1s								
BNX					LR		LR		
	comp=Z,4μm,14.8s								
BNX					LR		LR		
	comp=Z,5μm,17.2s								
BNX					LR		LR		
	comp=Z,6μm,14.9s								
KLV	**Kalavryta, Ach**	**39.57**	**285**		P		**P**	**21 45 35.0**	**0.0**
OHR	**Ohrid**	**39.67**	**290**	*i*	P		P	21 45 40.6	+4.8
KTK1	**Kautokeino**	**39.71**	**334**	*e*	P		**P**	**21 45 35.8**	**+0.1**
KTK1					IAmb		IAmb	21 45 42.6	
	comp=Z,103nm,1.4s								
KTK1					IVmB_BB			22 01 05.9	
	comp=Z,3μm,11.2s								
SRO2	**Moca**	**39.94**	**301**	*e*	P		**P**	**21 45 39.4**	**+1.5**
SRO2					pmax		pmax		
	comp=Z,46nm,0.8s								
SRO2	**Moca**	**39.94**	**301**	*e*	P		**P**	**21 45 39.4**	**+1.5**
UPP	**Uppsala**	**39.98**	**319**	*e*	P		**P**	**21 45 38.6**	**+0.6**
SRO	**Srobarova**	**39.99**	**301**	*e*	P		**P**	**21 45 40.8**	**+2.5**
SRO					pmax		pmax		
	comp=Z,44nm,1.0s								
SRO	**Srobarova**	**39.99**	**301**	*e*	P		**P**	**21 45 40.8**	**+2.5**
ITM	**Ithomi**	**40.02**	**284**		P		**P**	**21 45 37.7**	**-1.0**
PYAG	**Pyongyang**	**40.03**	**73**		P		**P**	**21 45 39.9**	**+1.2**
PYAG					pP		**sP**	**21 45 46.2**	**+0.9**
PYAG					S		**S**	**21 51 48.0**	**+3.6**
PYAG					AmB				
	comp=Z,48nm,0.6s								
PYAG					AMS		AMS		
	comp=N,84nm,1.6s								
PYAG					AMS		AMS		
	comp=E,249nm,4.7s								
PYAG					AMS		AMS		
	comp=Z,46nm,0.9s								
MORH	**Mrgy, Hungar**	**40.04**	**298**		P		**P**	**21 45 39.3**	**+0.6**
MAUC	**Maruska**	**40.09**	**303**	*e*	P		**P**	**21 45 41.1**	**+2.0**
MAUC					AMS		AMS	22 05 40.0	
	comp=Z,6μm,12.5s								
GKP	**Gorka Klasztor**	**40.09**	**309**	*e*	P		**P**	**21 45 39.4**	**+0.3**
GKP				*e*	PP		**PnPn**	**21 47 13.9**	**-0.6**
GKP				*e*	S		**S**	**21 51 45.9**	**+0.9**
GKP				*e*	L		L	22 03 34.6	
	comp=Z,5μm,16.6s								
GKP	**Gorka Klasztor**	**40.09**	**309**	*e*	P		**P**	**21 45 40.2**	**+1.1**
CSKK	**Cskako**	**40.10**	**300**		P		**P**	**21 45 41.4**	**+2.2**
HAMF	**Hammerfest**	**40.20**	**337**	*e*	P		**P**	**21 45 40.2**	**+0.5**
HAMF					IVmBBB			22 02 50.4	
	comp=Z,3μm,18.3s								
MORC	**Moravsky Berou**	**40.22**	**304**		P		**P**	**21 45 40.2**	**-0.1**
MORC	**Moravsky Berou**	**40.22**	**304**		P		**P**	**21 45 40.2**	**-0.1**
MORC					pmax		pmax		
	comp=Z,29nm,1.0s								
MORC	**Moravsky Ber

QZH				S	**S**	**21 51 52.8**	**+1.9**
QZH				sS	**sS**	**21 51 57.5**	**-1.2**
QZH				SS	**SS**	**21 54 44.5**	**-5.5**
QZH				pmax	pmax		
	comp=Z,220nm,5.5s						
QZH				LR	LR		
	comp=Z,5µm,19.9s						
QZH				LR	LR		
	comp=Z,3µm,20.1s						
QZH				LR	LR		
	comp=Z,3µm,16.0s						
SMOL	**Smolenice**	**40.47**	**302**	*e*P	**P**	**21 45 44.2**	**+1.9**
SMOL				pmax	pmax		
	comp=Z,16nm,1.1s						
SMOL	**Smolenice**	**40.47**	**302**	*e*P	**P**	**21 45 44.2**	**+1.9**
SMOL				*e*PP	**PP**	**21 47 15.7**	**+0.4**
KIF	**Kilpisjarvi**	**40.53**	**334**	*e*P	**P**	**21 45 42.9**	**+0.4**
MODS	**Modra-Piesok**	**40.59**	**302**	*e*P	**P**	**21 45 44.8**	**+1.5**
MODS				pmax	pmax		
	comp=Z,134nm,1.9s						
MODS	**Modra-Piesok**	**40.59**	**302**	*e*P	**P**	**21 45 44.8**	**+1.5**
MPLH	**Magyarpolny**	**40.62**	**300**	P	**P**	**21 45 43.8**	**+0.3**
KRLC	**Kraliky**	**40.67**	**304**	*e*P	**P**	**21 45 44.4**	**+0.4**
KRLC				*e*		21 54 51.5	
KRLC	**Kraliky**	**40.67**	**304**	*e*P	**P**	**21 45 44.4**	**+0.4**
EGYH	**Egyhazaskeszo**	**40.71**	**300**	P	**P**	**21 45 45.5**	**+1.3**
ZST	**Bratislava**	**40.73**	**301**	*e*P	**P**	**21 45 46.8**	**+2.4**
ZST				pmax	pmax		
	comp=Z,45nm,1.0s						
ZST	**Bratislava**	**40.73**	**301**	*e*P	**P**	**21 45 46.8**	**+2.4**
ZST				*e*PP	**PP**	**21 47 18.8**	**+0.7**
JETT	**Jettan, Norway**	**40.84**	**335**	*e*P	**P**	**21 45 45.9**	**+0.8**
JETT				IAmb	IAmb	21 45 54.3	
	comp=Z,55nm,0.7s						
KSP	**Ksiaz**	**40.89**	**306**	*e*P	**P**	**21 45 47.6**	**+2.0**
KSP				*e*pP	**sP**	**21 45 51.4**	**-0.3**
KSP				*e*PP	**PP**	**21 47 20.1**	**+0.4**
KSP				*e*S	**S**	**21 51 56.7**	**-0.2**
KSP				*e*SS	**SS**	**21 54 52.6**	**-5.4**
KSP				*e*L	L	22 03 32.8	
	comp=Z,3µm,18.8s						
VRAC	**Vranov**	**40.90**	**303**	LR	LR	22 03 42.5	
	comp=Z,1µm,21.2s,baz=84,slow=38						
VRAC	**Vranov**	**40.90**	**303**	*e*P	**P**	**21 45 47.1**	**+1.3**
DPC	**Dobruska-Polom**	**40.93**	**305**	*e*P	**P**	**21 45 47.2**	**+1.1**
DPC				*e*		21 47 25.4	
DPC				*e*S	**S**	**21 51 56.0**	**-1.6**
DPC				MLR	MLR		
	comp=Z,2µm,11.9s						
DPC	**Dobruska-Polom**	**40.93**	**305**	*e*P	**P**	**21 45 47.2**	**+1.1**
DPC				*e*PP	**PP**	**21 47 25.4**	**+5.1**
DPC				*e*S	**S**	**21 51 56.0**	**-1.6**
DPC				AMS	AMS	22 04 10.0	
	comp=Z,2µm,11.9s						
OSTC	**Ostas**	**40.97**	**305**	*e*P	**P**	**21 45 48.1**	**+1.7**
OSTC				*e*PP	**PP**	**21 47 25.0**	**+4.3**
OSTC				*e*S	**S**	**21 52 00.5**	**+2.3**
OSTC				AMS	AMS	22 06 00.0	
	comp=Z,2µm,19.2s						
KRUC	**Moravsky**	**41.06**	**303**	*e*P	**P**	**21 45 47.7**	**+0.6**
CHVC	**Chvalec**	**41.07**	**305**	*e*P	**P**	**21 45 47.7**	**+0.5**
CHVC				AMS	AMS	22 03 40.0	
	comp=Z,3µm,17.3s						
HHU	**Hamhung**	**41.08**	**71**	P	P	**21 45 48.0**	**+0.7**
HHU				sP	**sP**	**21 45 54.8**	**+0.9**
HHU				S	**S**	**21 52 02.8**	**+2.9**
HHU				AmB			
	comp=Z,109nm,0.6s						
HHU				AMS	AMS		
	comp=N,367nm,4.7s						
HHU				AMS	AMS		
	comp=E,284nm,3.6s						
HHU				AMS	AMS		
	comp=Z,302nm,3.9s						
UPC	**Upice**	**41.10**	**305**	*e*P	**P**	**21 45 48.8**	**+1.3**
UPC				MLR	MLR		
	comp=Z,3µm,16.6s						
UPC	**Upice**	**41.10**	**305**	*e*P	**P**	**21 45 48.8**	**+1.3**
UPC				AMS	AMS	22 03 30.0	
	comp=Z,3µm,16.6s						
SOP	**Sopron**	**41.18**	**301**	P	**P**	**21 45 50.0**	**+1.9**
INCN	**Inchon**	**41.19**	**75**	P	**P**	**21 45 48.9**	**+0.5**
INCN				IAmb	IAmb	21 45 50.4	
	comp=Z,51nm,0.7s						
INCN	**Inchon**	**41.19**	**75**	P	**P**	**21 45 48.9**	**+0.5**
INCN				pmax	pmax		
	comp=Z,51nm,0.7s						
INCN				MLR	MLR		
	comp=Z,4µm,18.0s						
INCN	**Inchon**	**41.19**	**75**	P	**P**	**21 45 48.9**	**+0.5**
BEHE	**Becsehely**	**41.26**	**299**	P	**P**	**21 45 49.2**	**+0.4**
MDJ	**Mudanjiang**	**41.31**	**64**	P	**P**	**21 45 49.8**	**+0.5**
MDJ	**Mudanjiang**	**41.31**	**64**	P	**P**	**21 45 50.3**	**+1.0**
MDJ				pP	pP	21 45 53.3	-0.4
MDJ				PP	**PnPn**	**21 47 32.5**	**+3.4**
MDJ				S	**S**	**21 52 04.5**	**+1.1**
MDJ				pmax	pmax		
	comp=Z,18nm,0.5s						
MDJ				pmax	pmax		
	comp=Z,340nm,3.5s						
MDJ				LR	LR		
	comp=Z,4µm,15.7s						
MDJ				LR	LR		
	comp=Z,3µm,12.8s						
MDJ				LR	LR		
	comp=Z,5µm,12.2s						
RONA	**Rosalia, Austr**	**41.35**	**301**	*i* P	**P**	**21 45 50.7**	**+1.1**
	comp=Z,80nm,1.8s,SNR=32						
BSD	**Bornholm Skovb**	**41.36**	**312**	*e*P	**P**	**21 45 49.6**	**+0.1**
BSD	**Bornholm Skovb**	**41.36**	**312**	*i* P	**P**	**21 45 48.4**	**-1.1**
BSD				IAmb	IAmb	21 45 55.9	
	comp=Z,30nm,0.6s						
TRO	**Tromso**	**41.36**	**334**	*e*P	**P**	**21 45 49.8**	**+0.5**
TRO				IAmb	IAmb	21 45 56.6	
	comp=Z,60nm,1.2s						
TRO				IVmB_BB		22 03 32.9	
	comp=Z,3µm,8.8s						
CONA	**Conrad Observa**	**41.60**	**301**	*i* P	**P**	**21 45 52.5**	**+0.8**
	comp=Z,74nm,1.0s,SNR=52						
TREC	**Trest**	**41.61**	**303**	*e*P	**P**	**21 45 54.6**	**+2.9**
TREC	**Trest**	**41.61**	**303**	*e*P	**P**	**21 45 54.6**	**+2.9**
KLR	**Kul'dur**	**41.87**	**57**	P	**P**	**21 45 54.0**	**+0.3**
	comp=Z,19nm,0.5s,baz=280,slow=8.3,SNR=79						
KLR				LR	LR	22 04 42.8	
	comp=Z,4µm,18.5s,baz=276,slow=38						
	comp=Z,19nm,0.5s						
KLR	**Kul'dur**	**41.87**	**57***c*	*i* P	**P**	**21 45 54.0**	**+0.3**
KLR				pmax	pmax		
	comp=Z,70nm,1.7s						
DEL	**Delary**	**41.89**	**314**	*e*P	**P**	**21 45 54.1**	**+0.3**
ARSA	**Arzberg**	**41.95**	**300**	*e*P	**P**	**21 45 56.1**	**+1.6**
	comp=Z,18nm,0.7s						
HFS	**Hagfors**	**41.97**	**320**	LR	LR	22 03 27.8	
	comp=Z,3µm,18.1s,baz=91,slow=36						
KULM	**Kulim**	**41.99**	**137**	P	**P**	**21 45 54.6**	**-0.4**
KULM				IAmb	IAmb	21 46 01.9	
	comp=Z,70nm,1.2s						
PVCC	**Panska Ves**	**42.02**	**305**	*e*P	**P**	**21 45 57.6**	**+2.7**
PVCC				*e*S	**S**	**21 52 18.2**	**+4.6**
PVCC				MLR	MLR		
	comp=Z,3µm,11.5s						
PVCC	**Panska Ves**	**42.02**	**305**	*e*P	**P**	**21 45 57.6**	**+2.7**
PVCC				*e*S	**S**	**21 52 18.2**	**+4.6**
PVCC				AMS	AMS	22 05 00.0	
	comp=Z,3µm,11.5s						
KCSI	**Kotacane, Aceh**	**42.06**	**142**	P	**P**	**21 45 59.5**	**+3.8**
	comp=Z,46nm,0.9s						
FAUS	**Fauske**	**42.10**	**331**	*e*P	**P**	**21 45 56.0**	**+0.7**
FAUS				IAmb	IAmb	21 46 05.8	
	comp=Z,60nm,0.8s						
FAUS				IVmB_BB		22 04 14.8	
	comp=Z,3µm,8.3s						
KS19	**Wonju Array Si**	**42.11**	**75**	P	**P**	**21 45 56.4**	**+0.5**
PRU	**Pruhonice**	**42.11**	**305**	*e*P	**P**	**21 45 56.7**	**+1.0**
PRU				*e*S	**S**	**21 52 18.2**	**+3.1**
PRU				MLR	MLR		
	comp=Z,2µm,11.9s						
PRU	**Pruhonice**	**42.11**	**305**	*e*P	**P**	**21 45 56.7**	**+1.0**
PRU				*e*S	**S**	**21 52 18.2**	**+3.1**
PRU				AMS	AMS	22 05 00.0	
	comp=Z,2µm,11.9s						
TJN	**Taejon**	**42.12**	**77**	P	**P**	**21 45 55.4**	**-0.6**
TJN				IAmb	IAmb	21 46 02.8	
	comp=Z,87nm,0.8s						
TJN	**Taejon**	**42.12**	**77**	P	**P**	**21 45 55.4**	**-0.6**
TJN				pmax	pmax		
	comp=Z,87nm,0.8s						
TJN	**Taejon**	**42.12**	**77**	P	**P**	**21 45 56.2**	**+0.2**
SEHB	**SEOHWA**	**42.13**	**74**	P	**P**	**21 45 56.3**	**+0.2**
KSAR	**Wonju Array Be**	**42.14**	**75**	P	**P**	**21 45 56.4**	**+0.3**
KSAR	**Wonju Array Be**	**42.14**	**75**	P	**P**	**21 45 56.4**	**+0.3**
KSRS	**Korea Array**	**42.16**	**75**	P	**P**	**21 45 56.1**	**-0.2**
	comp=Z,8.8nm,0.6s,baz=285,slow=7.3,SNR=46						
KSRS				LR	LR	22 06 20.3	
	comp=Z,4µm,18.1s,baz=285,slow=40						
	comp=Z,8.8nm,0.6s						
MOR8	**Moi Rana**	**42.21**	**329**	*e*P	**P**	**21 45 55.8**	**-0.6**
MOR8				IAmb	IAmb	21 46 06.0	
	comp=Z,63nm,0.9s						
MOR8				IVmB_BB		22 03 37.4	
	comp=Z,4µm,11.6s						
STEI	**Steigen**	**42.22**	**331**	*e*P	**P**	**21 45 56.8**	**+0.5**
STEI				IAmb	IAmb	21 46 12.0	
	comp=Z,140nm,1.6s						
STEI				IVmB_BB		22 03 45.2	
	comp=Z,4µm,12.2s						
ANKE	**Ethiopia-Afar**	**42.28**	**234**	*e*P	**P**	**21 45 58.7**	**+0.8**
TIXI	**Tiksi**	**42.29**	**23**	P	**P**	**21 45 56.8**	**0.0**
	comp=Z,35nm,0.6s,baz=84,slow=23,SNR=80						
TIXI				LR	LR	22 03 15.7	
	comp=Z,2µm,20.2s,baz=184,slow=36						
	comp=Z,35nm,0.6s						
TIXI	**Tiksi**	**42.29**	**23**	P	**P**	**21 45 56.4**	**-0.5**
TIXI				IAmb	IAmb	21 46 04.6	
	comp=Z,94nm,1.0s						
TIXI	**Tiksi**	**42.29**	**23***c*	*i* P	**P**	**21 45 56.5**	**-0.3**
TIXI				pmax	pmax		
	comp=Z,61nm,1.3s						
RGN	**Rugen**	**42.32**	**311**	P	**P**	**21 45 57.3**	**0.0**
RGN				IAMs_20	IAMs_20	22 06 32.1	
	comp=Z,3µm,19.0s						
BRG	**Berggiesshubel**	**42.36**	**306**	*i* P	**P**	**21 45 58.6**	**+0.9**
BRG				Amp		21 45 59.0	
	comp=Z,4.5nm,0.8s						
BRG				*ex*	x	21 46 00.2	
BRG				Amp		21 46 00.7	
	comp=Z,47nm,1.2s						
BRG				PP	**PP**	**21 47 40.4**	**+4.7**
BRG				Amp		21 47 42.2	
	comp=Z,47nm,1.5s						
BRG	**Berggiesshubel**	**42.36**	**306**	*i* P	**P**	**21 45 58.6**	**+0.9**
BRG				*e*		21 46 00.1	
BRG						21 47 40.3	
BRG				S	**S**	**21 52 19.0**	**+0.3**
BRG				SS	**SS**	**21 55 25.0**	**-2.1**
BRG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRG				pmax	pmax		
	comp=Z,47nm,1.5s						
BRG				MLR	MLR		
	comp=E,3µm,11.5s						
BRG				MLR	MLR		
	comp=Z,4µm,12.4s						
SOKA	**Soboth**	**42.40**	**300**	*i* P	**P**	**21 45 58.8**	**+0.6**
	comp=Z,83nm,1.1s,SNR=48						
KSCH	**Chungju**	**42.41**	**76**	P	**P**	**21 45 58.2**	**-0.1**
CKRC	**Cesky Krumlov**	**42.46**	**303**	*e*P	**P**	**21 46 00.2**	**+1.6**
CKRC				*e*PP	**PP**	**21 47 43.7**	**+6.9**
CKRC				*e*S	**S**	**21 52 19.2**	**-1.1**
CKRC				AMS	AMS	22 07 10.0	
	comp=Z,2µm,16.8s						
NAWB	**Namwon**	**42.50**	**78**	P	**P**	**21 45 58.9**	**-0.2**
TATO	**Taipei**	**42.66**	**95**	IAMs_20	IAMs_20	22 06 30.1	
	comp=Z,3µm,20.0s						
MOA	**Molln**	**42.67**	**301**	*i* P	**P**	**21 46 01.3**	**+1.0**
	comp=Z,77nm,2.0s,SNR=12						
YHNB	**Yeheng**	**42.73**	**95**	P	**P**	**21 46 02.3**	**+1.1**
COP	**Copenhagen**	**42.74**	**313**	*i* P	**P**	**21 46 01.3**	**+0.6**
COP				IAmb	IAmb	21 46 06.3	
	comp=Z,60nm,0.7s						
OBKA	**Obir**	**42.76**	**299**	*i* P	**P**	**21 46 01.8**	**+0.6**
	comp=Z,42nm,0.8s,SNR=28						
KONS	**Konsvik**	**42.79**	**329**	*e*P	**P**	**21 46 01.5**	**+0.5**
KONS				IAmb	IAmb	21 46 07.3	
	comp=Z,57nm,1.4s						
GEC2	**GERESS Array S**	**42.85**	**303**	P	**P**	**21 46 01.5**	**-0.4**
GEC2				IAmb	IAmb	21 46 09.7	
	comp=Z,79nm,1.2s						
GERES	**GERESS Array B**	**42.85**	**303**	P	**P**	**21 46 02.8**	**+0.9**
	comp=Z,9.8nm,0.9s,baz=84,slow=5.5,SNR=33						
GERES				LR	LR	22 07 42.7	
	comp=Z,1µm,18.4s,baz=86,slow=42						
	comp=Z,9.8nm,0.9s						
GERES	**GERESS Array B**	**42.85**	**303**	P	**P**	**21 46 01.7**	**-0.2**
IPM	**Ipoh**	**42.87**	**137**	P	**P**	**21 46 01.4**	**-0.8**
IPM				IAmb	IAmb	21 46 08.4	
	comp=Z,80nm,1.1s						
IPM	**Ipoh**	**42.87**	**137**	P	**P**	**21 46 01.5**	**-0.7**
KHC	**Kasperske Hory**	**42.88**	**303**	P	**P**	**21 46 02.2**	**+0.2**
KHC	**Kasperske Hory**	**42.88**	**303**	*e*P	**P**	**21 46 02.8**	**+0.8**
KHC				*e*		21 47 47.5	
KHC				*e*S	**S**	**21 52 27.1**	**+0.7**
KHC				MLR	MLR		
	comp=Z,2µm,16.0s						
KHC	**Kasperske Hory**	**42.88**	**303**	*e*P	**P**	**21 46 02.8**	**+0.8**
KHC				*e*PP	**PcP**	**21 47 47.5**	**-5.3**
KHC				*e*S	**S**	**21 52 27.1**	**+0.7**
KHC				AMS	AMS	22 07 10.0	
	comp=Z,2µm,16.0s						
CLL	**Collm**	**42.88**	**307**	P	**P**	**21 46 01.3**	**-0.6**
CLL				IAMs_20	IAMs_20	22 05 45.0	
	comp=Z,4µm,18.0s						
CLL	**Collm**	**42.88**	**307**	*e*P	**P**	**21 46 02.0**	**0.0**
CLL				*i*		21 46 07.4	
CLL				*i*		21 47 45.0	
CLL				*e*S	**S**	**21 52 27.0**	**+0.6**
CLL				pmax	pmax		
	comp=Z,14nm,0.6s						
CLL				pmax	pmax		
	comp=Z,98nm,1.5s						
CLL				MLR	MLR		
	comp=Z,3µm,19.6s						
CLL	**Collm**	**42.88**	**307**	*e*P	**P**	**21 46 02.0**	**0.0**
	comp=Z,14nm,0.6s						
CLL				*i* sP	**sP**	**21 46 07.4**	**-0.6**
	comp=Z,54nm,1.4s						
CLL				*i* PP	**PP**	**21 47 45.0**	**+3.7**
	comp=Z,98nm,1.5s						
CLL				*e*sPcP		21 48 01.0	
CLL				*e*S	**S**	**21 52 27.0**	**+0.6**
CLL				*e*SS	**SS**	**21 55 40.0**	**+2.6**
CLL				*e*SSSS		21 56 24.0	
CLL				LmH		22 03 00.0	
	comp=N,4µm,20.7s						
CLL				LmH		22 03 00.0	
	comp=E,1µm,21.3s						
CLL				LmV		22 05 00.0	
	comp=Z,3µm,19.6s						
SSLB	**Suanglung**	**42.88**	**97**	P	**P**	**21 46 03.5**	**+1.2**
SSLB				IAmb	IAmb	21 46 12.3	
	comp=Z,86nm,1.0s						
LOF	**Lofoten**	**42.89**	**332**	*e*P	**P**	**21 46 03.3**	**+1.5**
LOF				IAmb	IAmb	21 46 16.0	
	comp=Z,64nm,1.4s						
LOF				IVmB_BB		22 04 13.1	
	comp=Z,4µm,11.7s						
NC405	**NORSAR Array S**	**42.97**	**321**	P	**P**	**21 46 02.4**	**-0.1**
BJO1	**Bjornoya**	**43.03**	**341**	*e*P	**P**	**21 46 03.6**	**+0.8**
BJO1				IAmb	IAmb	21 46 09.4	
	comp=Z,135nm,1.1s						
BJO1				IVmB_BB		22 05 04.4	
	comp=Z,3µm,9.5s						
NSS	**Namsos**	**43.04**	**326**	*e*P	**P**	**21 46 03.1**	**+0.1**
NSS				IVmB_BB		22 04 13.3	
	comp=Z,5µm,10.4s						
NC602	**NORSAR Array S**	**43.05**	**321**	P	**P**	**21 46 03.2**	**0.0**
NC602				IAmb	IAmb	21 46 37.9	
	comp=Z,70nm,1.1s						
USA0B	**Ussuriysk Arra**	**43.08**	**64**	P	**P**	**21 46 03.6**	**-0.1**
USA0B	**Ussuriysk Arra**	**43.08**	**64**	P	**P**	**21 46 03.6**	**-0.1**
USA0B				pmax	pmax		
	comp=Z,15nm,0.9s						
USRK	**Ussuriysk Ar.**	**43.08**	**64**	P	**P**	**21 46 03.6**	**-0.1**
	comp=Z,9.2nm,0.7s,baz=265,slow=8.2,SNR=20						
USRK				LR	LR	22 06 57.3	
	comp=Z,2µm,18.5s,baz=273,slow=40						
	comp=Z,9.2nm,0.7s						
USRK	**Ussuriysk Ar.**	**43.08**	**64**	P	**P**	**21 46 03.4**	**-0.3**
BIOA	**Bad Ischl, Aus**	**43.12**	**301**	*i* P	**P**	**21 46 05.0**	**+1.1**
	comp=Z,31nm,0.8s,SNR=16						
TIP	**Timpagrande**	**43.20**	**288**	P	**P**	**21 46 05.0**	**+0.1**
TIP				IAmb	IAmb	21 46 11.9	
	comp=Z,78nm,1.3s						
NB2	**NORSAR Subarra**	**43.21**	**321**	P	**P**	**21 46 04.7**	**+0.1**
	baz=91,slow=8.6						
NB2	**NORSAR Subarra**	**43.21**	**321**	P	**P**	**21 46 04.7**	**+0.1**
	comp=Z,52nm,1.1s,baz=91,slow=8.6						
NOA	**NORSAR Array B**	**43.21**	**321**	P	**P**	**21 46 04.9**	**+0.3**
	comp=Z,25nm,0.8s,baz=91,slow=7.9,SNR=132						
NOA				LR	LR	22 04 52.4	
	comp=Z,3µm,18.8s,baz=95,slow=37						
	comp=Z,25nm,0.8s						
PSI	**Prapat**	**43.24**	**141**	P	**P**	**21 46 03.5**	**-1.9**
PSI				pmax	pmax		
	comp=Z,28nm,0.8s						
PSI				MLR	MLR		
	comp=Z,1µm,18.0s						
PSI	**Prapat**	**43.24**	**141**	P	**P**	**21 46 03.9**	**-1.5**
VLA	**Vladivostok**	**43.30**	**65**⇑	*i*P	**P**	**21 46 06.5**	**+1.1**
VLA				pmax	pmax		
	comp=Z,58nm,1.0s						
AAE	**Adis Abeba**	**43.33**	**235**	*e*P	**P**	**21 46 03.5**	**-2.8**
RPSI	**Rantau Prapat**	**43.34**	**141**	P	**P**	**21 46 03.5**	**-2.4**
MYKA	**Terra Mystica**	**43.34**	**300**	*e*P	**P**	**21 46 10.4**	**+4.5**
	comp=Z,17nm,0.8s						
YULB	**Yu-li**	**43.36**	**97**	P	**P**	**21 46 07.3**	**+1.1**
YULB				IAmb	IAmb	21 46 23.7	
	comp=Z,74nm,1.4s						
NAO01	**NORSAR Array S**	**43.37**	**321**	*e*P	**P**	**21 46 05.8**	**0.0**
NAO01				IAmb	IAmb	21 46 16.1	
	comp=Z,87nm,1.4s						
NKC	**Novy Kostel**	**43.40**	**305**	AMS	AMS	22 05 50.0	
	comp=Z,4µm,11.3s						
NC204	**NORSAR Array S**	**43.43**	**321**	P	**P**	**21 46 06.3**	**-0.1**
NC204				IAmb	IAmb	21 46 17.6	
	comp=Z,65nm,0.6s						
PRED	**Cave del Predi**	**43.44**	**300**	P	**P**	**21 46 06.7**	**+0.1**
KBA	**Koelnbreinsper**	**43.44**	**301**	*i* P	**P**	**21 46 07.3**	**+0.5**
	comp=Z,20nm,0.6s,SNR=7.9						
OSL	**Oslo**	**43.46**	**319**	*e*P	**P**	**21 46 07.4**	**+0.9**
OSL				IAmb	IAmb	21 46 28.3	
	comp=Z,31nm,0.8s						
TRI	**Trieste**	**43.47**	**298**	P	**P**	**21 46 07.2**	**+0.4**
TRI	**Trieste**	**43.47**	**298**	P	**P**	**21 46 07.2**	**+0.4**
TRI				pmax	pmax		
	comp=Z,105nm,0.8s						
FURI	**Furi**	**43.48**	**235**	IAMs_20	IAMs_20	22 06 40.6	
	comp=Z,3µm,20.0s						
TWG	**Pinlang**	**43.50**	**98**	IAMs_20	IAMs_20	22 07 01.4	
	comp=Z,3µm,18.0s						
TBLU	**Trondheim**	**43.71**	**324**	*e*P	**P**	**21 46 08.1**	**-0.4**
TBLU				IAmb	IAmb	21 46 18.3	
	comp=Z,198nm,1.8s						
TBLU				IVmB_BB		22 04 29.9	
	comp=Z,3µm,9.1s						
CLUD	**Cludinico**	**43.89**	**300**	P	**P**	**21 46 10.3**	**+0.1**
GSI	**Gunungsitoli**	**43.92**	**144**	P	**P**	**21 46 10.1**	**-0.5**
GSI	**Gunungsitoli**	**43.92**	**144**	P	**P**	**21 46 10.0**	**-0.7**
	comp=Z,109nm,1.2s						
GSI	**Gunungsitoli**	**43.92**	**144**	P	**P**	**21 46 10.8**	**+0.1**
KONO	**Kongsberg**	**44.04**	**319**	P	**P**	**21 46 11.0**	**-0.2**
KONO	**Kongsberg**	**44.04**	**319**	IAMs_20	IAMs_20	22 04 29.6	
	comp=Z,2µm,19.0s						
KONO	**Kongsberg**	**44.04**	**319**	P	**P**	**21 46 11.0**	**-0.2**
KONO				pmax	pmax		
	comp=Z,42nm,1.1s						
KONO				MLR	MLR		
	comp=Z,2µm,19.0s						
KONO	**Kongsberg**	**44.04**	**319**	*e*P	**P**	**21 46 11.2**	**+0.1**
KONO				IAmb	IAmb	21 46 21.4	
	comp=Z,98nm,1.6s						
KONO				IVmB_BB		22 04 51.5	
	comp=Z,4µm,12.2s						
STAL	**STALIGIAL**	**44.05**	**300**	P	**P**	**21 46 10.7**	**-0.8**
ABTA	**Abfaltersbach**	**44.07**	**300**	*e*P	**P**	**21 46 12.1**	**+0.4**
	comp=Z,4.8nm,0.5s						
DOMB	**Dombas**	**44.24**	**322**	*e*P	**P**	**21 46 13.3**	**+0.5**
DOMB				IAmb	IAmb	21 46 23.9	
	comp=Z,44nm,0.9s						
DOMB				IVmB_BB		22 04 56.2	
	comp=Z,4µm,9.7s						
GRA1	**Grafenberg Arr**	**44.28**	**305**	P	**P**	**21 46 13.0**	**-0.3**
GRA1				IAmb	IAmb	21 46 21.1	
	comp=Z,47nm,0.9s						
GRA1				IAMs_20	IAMs_20	22 06 42.0	
	comp=Z,3µm,19.0s						
GRF	**Grafenberg Arr**	**44.28**	**305**	P	**P**	**21 46 13.0**	**-0.3**
GRF				pmax	pmax		
	comp=Z,47nm,0.9s						
GRF				MLR	MLR		
	comp=Z,2µm,19.0s						
GRFO	**Grafenberg**	**44.28**	**305**	P	**P**	**21 46 13.0**	**-0.3**
GRFO				IAmb	IAmb	21 46 31.5	
	comp=Z,46nm,0.9s						
GRFO				IAMs_20	IAMs_20	22 06 42.0	
	comp=Z,3µm,19.0s						
GRFO	**Grafenberg**	**44.28**	**305**	P	**P**	**21 46 13.0**	**-0.3**
GRFO				pmax	pmax		
	comp=Z,46nm,0.9s						
GRFO				MLR	MLR		
	comp=Z,3µm,19.0s						
JTU	**Tsushima**	**44.36**	**78**	P	**P**	**21 46 13.6**	**-0.5**
JTU				IAmb	IAmb	21 46 17.2	
	comp=Z,56nm,1.3s						
GOET	**G??ttrup**	**44.41**	**315**	*i* P	**P**	**21 46 14.8**	**+0.7**
MUD	**Monsted U'grnd**	**44.49**	**314**	*i* P	**P**	**21 46 15.0**	**+0.2**
WTTA	**Wattenberg**	**44.53**	**301**	*i* P	**P**	**21 46 15.5**	**0.0**
	comp=Z,34nm,0.7s,SNR=10						
WATA	**Walderalm**	**44.56**	**301**	*i* P	**P**	**21 46 16.3**	**+0.6**
	comp=Z,38nm,0.9s,SNR=30						
GRNR	**Gornyy**	**44.57**	**54**⇑	*i*P	**P**	**21 46 16.6**	**+1.0**
GRNR				*e*S	**S**	**21 52 55.6**	**+4.6**
GRNR				pmax	pmax		
	comp=E,6.0nm,0.6s						
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GRNR				smax	smax		
	comp=N,1.0nm,0.7s						
GRNR				MLR	MLR		
	comp=N,2µm,17.0s						
GRNR				MLR	MLR		
	comp=Z,2µm,11.0s						
SKAR	**Skarslia**	**44.64**	**321**	*e*P	**P**	**21 46 17.5**	**+1.4**
SKAR				IAmb	IAmb	21 46 43.8	
	comp=Z,51nm,1.2s						
SKAR				IVmB_BB		22 05 11.6	
	comp=Z,2µm,7.8s						
NRCA	**Norcia**	**44.69**	**295**	P	**P**	**21 46 17.3**	**+0.5**
NRCA				IAmb	IAmb	21 46 24.5	
	comp=Z,62nm,0.9s						
HSPB	**Hornsund (broa**

comp=Z,26nm,0.7s
ODD1 IVmB_BB 22 05 35.0
comp=Z,3µm,8.2s
VAE Valguarnera 45.52 287 LR LR 22 10 16.6
comp=Z,250nm,21.7s,baz=141,slow=42
FUORN Ofenpass-Fuorn 45.60 301 P **P** **21 46 23.9 -0.3**
DILA Dilla 45.62 233 *eP* **P** **21 46 26.3 +1.8**
BLS5 Blasjo 45.65 319 *eP* **P** **21 46 24.8 +0.8**
BLS5 IAmb IAmb 21 46 39.9
comp=Z,51nm,1.1s
BLS5 IVmB_BB 22 05 51.4
comp=Z,4µm,12.4s
HYA Hoyanger 45.65 321 *eP* **P** **21 46 23.4 -0.5**
HYA IAmb IAmb 21 46 39.7
comp=Z,81nm,1.6s
HYA IVmB_BB 22 05 44.4
comp=Z,2µm,9.9s
DAVA Damuels 45.69 302 *i* P **P** **21 46 24.7 0.0**
comp=Z,83nm,0.9s,SNR=38
STU Stuttgart 45.78 304 P **P** **21 46 24.5 -0.7**
STU Stuttgart 45.78 304 P **P** **21 46 24.5 -0.7**
STU pmax pmax
comp=Z,30nm,1.0s
STU MLR MLR
comp=Z,700nm,21.0s
DAVOX Davos/Dischmat 45.82 301 LR LR 22 09 31.7
comp=Z,971nm,18.6s,baz=70,slow=41
TEY Ternei 46.03 62 *eP* **P** **21 46 26.8 -0.4**
TEY *e* 21 48 15.2
TEY MLR MLR
comp=E,300nm,13.0s
TEY MLR MLR
comp=Z,300nm,14.0s
JNU Nakatsue 46.06 79 LR LR 22 08 39.2
comp=Z,1µm,18.4s,baz=294,slow=40
JNU Nakatsue 46.06 79 P **P** **21 46 28.5 +0.8**
JNU IAmb IAmb 21 46 40.8
comp=Z,65nm,1.0s
JNU Nakatsue 46.06 79 P **P** **21 46 29.5 +1.8**
BER Bergen 46.13 320 *eP* **P** **21 46 28.2 +0.5**
BER IAmb IAmb 21 46 39.1
comp=Z,49nm,0.9s
BER IVmB_BB 22 06 24.1
comp=Z,2µm,6.2s
KBS Kingsbay 46.15 346 P **P** **21 46 28.1 +0.4**
KBS Kingsbay 46.15 346 IAMs_20 IAMs_20 22 08 29.0
comp=Z,3µm,18.0s
KBS Kingsbay 46.15 346 P **P** **21 46 28.1 +0.4**
KBS pmax pmax
comp=Z,101nm,0.9s
KBS MLR MLR
comp=Z,3µm,18.0s
KBS Kingsbay 46.15 346 *eP* **P** **21 46 28.6 +0.9**
KBS IAmb IAmb 21 46 37.5
comp=Z,110nm,0.9s
KBS IVmB_BB 22 09 18.6
comp=Z,2µm,11.6s
FOO Floro 46.17 322 *eP* **P** **21 46 28.0 0.0**
FOO IVmB_BB 22 06 04.3
comp=Z,4µm,11.5s
ASK Askoy 46.19 320 *eP* **P** **21 46 28.9 +0.7**
ASK IAmb IAmb 21 46 39.5
comp=Z,86nm,0.8s
ASK IVmB_BB 22 06 00.5
comp=Z,5µm,13.6s
TUE Stuetta 46.25 301 P **P** **21 46 28.7 -0.5**
TUE IAmb IAmb 21 46 44.5
comp=Z,22nm,0.7s
KMY Karmoy 46.29 319 *eP* **P** **21 46 30.0 +1.0**
KMY IAmb IAmb 21 46 33.6
comp=Z,35nm,1.2s
KMY IVmB_BB 22 06 11.2
comp=Z,3µm,12.3s
BKNI Bangkinang 46.42 140 P **P** **21 46 29.8 -0.8**
BKNI Bangkinang 46.42 140 P **P** **21 46 27.0 -3.6**
comp=Z,3µmcomp=Z,190nm,0.8s
BKNI Bangkinang 46.42 140 P **P** **21 46 30.7 +0.1**
BFO Black Forest 46.44 303 P **P** **21 46 30.5 0.0**
BFO Black Forest 46.44 303 P **P** **21 46 30.5 0.0**
BFO pmax pmax
comp=Z,27nm,1.0s
BFO MLR MLR
comp=Z,1µm,21.0s
MYKOM Kota Tinggi 46.63 136 P **P** **21 46 31.7 -0.5**
NKL Nikolayevsk 46.70 50 *eP* **P** **21 46 30.8 -1.5**
NKL *e* 21 48 22.3
NKL *eS* **S** **21 53 21.8 +0.2**
NKL smax smax
comp=E,2.0nm,1.5s
NKL smax smax
comp=N,659nm,1.6s
NKL MLR MLR
comp=N,3µm,11.0s
NKL MLR MLR
comp=Z,4µm,11.0s
SISI Saibi 46.94 144 P P 21 46 42.2 +7.6
JOW Kunigami 46.96 88 LR LR 22 10 10.0
comp=Z,2µm,19.2s,baz=289,slow=41
JOW Kunigami 46.96 88 P **P** **21 46 34.7 0.0**
JOW IAmb IAmb 21 46 41.8
comp=Z,90nm,1.5s
JOW Kunigami 46.96 88 P **P** **21 46 35.4 +0.7**
JHS Saijyo 46.98 76 P **P** **21 46 34.3 -0.5**
JHS IAmb IAmb 21 46 41.7
comp=Z,43nm,0.8s
ECH Echery 47.23 303 P **P** **21 46 36.7 +0.1**
ECH Echery 47.23 303 P **P** **21 46 36.7 +0.1**
ECH pmax pmax
comp=Z,20nm,1.1s
ECH MLR MLR
comp=Z,2µm,20.0s
BTNL Ternell 47.29 307 *dP* **P** **21 46 37.8 +0.8**
comp=Z,15nm,1.1s
MEM Membach 47.36 307 *dP* **P** **21 46 38.3 +0.7**
comp=Z,15nm,1.0s
WLF Walferdange 47.50 306 P **P** **21 46 38.6 -0.1**
WLF IAmb IAmb 21 46 48.7
comp=Z,67nm,1.2s
WLF IAMs_20 IAMs_20 22 08 46.0
comp=Z,3µm,19.0s
WLF Walferdange 47.50 306 P **P** **21 46 38.6 -0.1**
WLF pmax pmax
comp=Z,67nm,1.2s
WLF MLR MLR
comp=Z,3µm,19.0s
WLF Walferdange 47.50 306 *dP* **P** **21 46 39.7 +1.1**
comp=Z,30nm,0.9s
SENIN Lac Senin/Sane 47.64 301 P **P** **21 46 39.7 -0.4**
SENIN IAmb IAmb 21 46 47.7
comp=Z,38nm,0.8s
TPRI Tanjung Pinang 47.73 136 P **P** **21 46 41.3 +0.5**
comp=Z,5µmcomp=Z,77nm,1.4s
RCHB Rochefort 47.95 306 *dP* **P** **21 46 42.3 +0.2**
comp=Z,11nm,0.9s
TYV Tymovskoe 48.40 52 *eP* **P** **21 46 47.4 +1.8**
TYV *eS* **S** **21 53 53.7 +7.8**
TYV pmax pmax
comp=Z,23nm,0.7s
TYV pmax pmax
comp=Z,400nm,3.4s
TYV smax smax
comp=N,300nm,8.0s
TYV smax smax
comp=E,400nm,8.0s
TYV MLR MLR
comp=E,3µm,12.0s
TYV MLR MLR
comp=Z,4µm,12.0s
UGL Uglegorsk 48.51 55 *eP* **P** **21 46 47.6 +1.2**
UGL *eS* **S** **21 53 50.2 +2.8**
UGL pmax pmax
comp=Z,130nm,1.1s
UGL MLR MLR
comp=E,3µm,12.0s
UGL MLR MLR
comp=N,3µm,14.0s
UGL MLR MLR
comp=Z,3µm,14.0s
KRJI Kerinci 48.72 141 P P 21 46 58.9 +10
DSRI Dabo 48.93 137 P **P** **21 46 50.0 0.0**
comp=Z,378nmcomp=Z,31nm,1.0s
JMBI JAMBI 49.41 139 P P 21 46 58.8 +5.0
YSS Yuzh-Sakhalins 49.57 57 P **P** **21 46 55.3 +0.7**
YSS Yuzh-Sakhalins 49.57 57 *oeP* **P** **21 46 55.2 +0.6**
YSS *e* 21 48 53.4
YSS *eS* **S** **21 53 59.1 -3.3**
YSS *eSS* **SS** **21 57 31.1 -2.9**
YSS pmax pmax
comp=Z,300nm,4.0s
YSS pmax pmax
comp=Z,70nm,1.2s
YSS MLR MLR
comp=Z,4µm,14.0s
YSS Yuzh-Sakhalins 49.57 57 P **P** **21 46 55.9 +1.3**
JSD Sado 49.57 70 P **P** **21 46 54.4 -0.3**
JSD IAmb IAmb 21 47 01.4
comp=Z,31nm,0.8s
INU Inuyama 49.74 74 P **P** **21 46 56.0 -0.2**
INU IAmb IAmb 21 47 05.8
comp=Z,50nm,0.9s
INU IAMs_20 IAMs_20 22 10 29.3
comp=Z,2µm,19.0s
INU Inuyama 49.74 74 P **P** **21 46 56.1 0.0**
LODK Lodwar 49.78 234 P **P** **21 46 56.7 0.0**
LODK Lodwar 49.78 234 P **P** **21 46 58.3 +1.6**
SNR=29
SSB Saint Sauveur 49.81 300 P **P** **21 46 56.4 -0.2**
SSB IAmb IAmb 21 47 03.2
comp=Z,59nm,1.3s
SSB Saint Sauveur 49.81 300 P **P** **21 46 56.4 -0.2**
SSB pmax pmax
comp=Z,59nm,1.3s
SSB MLR MLR
comp=Z,900nm,18.0s
JGF Kuroka 49.89 73 P **P** **21 46 56.8 -0.5**
JGF IAmb IAmb 21 46 58.8
comp=Z,45nm,0.7s
KEST Kesra 49.95 287 P **P** **21 46 58.2 +0.3**
comp=Z,6.3nm,0.8s,baz=318,slow=1.9,SNR=10
KEST LR LR 22 13 07.4
comp=Z,400nm,18.0s,baz=334,slow=42
comp=Z,6.3nm,0.8s
KEST Kesra 49.95 287 P **P** **21 46 57.9 0.0**
KEST IAmb IAmb 21 47 09.2
comp=Z,54nm,1.1s
KEST Kesra 49.95 287 P **P** **21 46 58.5 +0.6**
SNR=13
JEW Eniwo 50.05 63 P **P** **21 46 59.0 +0.6**
MAJO Matsushiro 50.13 72 P **P** **21 46 58.7 -0.4**
MAJO IAmb IAmb 21 46 59.9
comp=Z,44nm,0.7s
MAJO Matsushiro 50.13 72 IAMs_20 IAMs_20 22 10 47.1
comp=Z,2µm,18.0s
MAJO Matsushiro 50.13 72 P **P** **21 46 58.7 -0.4**
MAJO pmax pmax
comp=Z,44nm,0.7s
MAJO MLR MLR
comp=Z,2µm,18.0s
MAJO Matsushiro 50.13 72 P **P** **21 46 58.7 -0.4**
MJAR Matsushiro Arr 50.13 72 P **P** **21 46 58.9 -0.2**
comp=Z,27nm,0.7s,baz=296,slow=8.7,SNR=49
MJAR LR LR 22 10 49.2
comp=Z,1µm,18.2s,baz=300,slow=39
comp=Z,27nm,0.7s
MJAR Matsushiro Arr 50.13 72 P **P** **21 46 57.8 -1.3**
MJAR IAmb IAmb 21 47 00.2
comp=Z,23nm,0.7s
MJAR Matsushiro Arr 50.13 72 P **P** **21 46 57.8 -1.3**
MJAR pmax pmax
comp=Z,23nm,0.7s
ASAJ Asahikawa 50.39 61 LR LR 22 10 12.9
comp=Z,5µm,18.6s,baz=290,slow=38
ASAJ Asahikawa 50.39 61 P **P** **21 47 01.0 +0.1**
ASAJ pmax pmax
comp=Z,54nm,1.0s
JKA Kamikawa-asahi 50.39 61 P **P** **21 47 01.0 +0.1**
JKA IAmb IAmb 21 47 27.6
comp=Z,54nm,1.0s
CLF Chambon-Foret 50.42 304 P **P** **21 46 59.9 -1.2**
CLF IAmb IAmb 21 47 10.7
comp=Z,54nm,0.9s
CLF IAMs_20 IAMs_20 22 12 30.5
comp=Z,2µm,18.0s
JTM Tenmabayashi 50.53 65 P **P** **21 47 01.3 -0.7**
KSM Kuching 50.58 129 P **P** **21 47 03.0 +0.4**
KSM IAmb IAmb 21 47 12.5
comp=Z,98nm,1.4s
KSM Kuching 50.58 129 P **P** **21 47 03.5 +0.9**
JMIC Jan Mayen 50.66 335 LR LR 22 08 18.1
comp=Z,1µm,18.4s,baz=86,slow=36
DRUM Mains of Drumt 50.74 317 *eP* **P** **21 47 03.3 -0.1**
DRUM IAmb IAmb 21 47 04.7
comp=Z,26nm,0.7s
MA2 Magadan 50.84 40 LR LR 22 09 39.7
comp=Z,3µm,19.6s,baz=282,slow=37
MA2 Magadan 50.84 40 P **P** **21 47 04.4 +0.4**
MA2 Magadan 50.84 40 *oeP* **P** **21 47 05.0 +0.9**
MA2 pmax pmax
comp=Z,55nm,1.1s
MA2 Magadan 50.84 40 P **P** **21 47 05.2 +1.1**
KKM Kota Kinabalu 50.87 119 P **P** **21 47 05.7 +0.7**
KKM IAmb IAmb 21 47 26.8
comp=Z,80nm,1.2s
KKM Kota Kinabalu 50.87 119 P **P** **21 47 07.2 +2.2**
SEY Seymchan 50.87 35 LR LR 22 10 10.9
comp=Z,2µm,20.0s,baz=282,slow=38
SEY Seymchan 50.87 35 *oeP* **P** **21 47 04.7 +0.4**
SEY pmax pmax
comp=Z,23nm,1.1s
MCD Coleburn Disti 50.98 318 *eP* **P** **21 47 05.3 +0.2**
EDMD Edmundbyers 50.99 314 *eP* **P** **21 47 04.5 -0.8**
EDMD IAmb IAmb 21 47 11.4
comp=Z,40nm,0.8s
HPK Haverah Park 51.03 313 *eP* **P** **21 47 05.5 -0.2**
HPK IAmb IAmb 21 47 12.2
comp=Z,76nm,0.8s
ESY Stoneypath 51.06 315 *eP* **P** **21 47 05.5 -0.3**
BIGH Upper Bighouse 51.09 319 *eP* **P** **21 47 05.9 0.0**
PMBI Palembang 51.10 138 P **P** **21 47 06.1 -0.4**
PMBI Palembang 51.10 138 P P 21 47 11.5 +5.0
PPBI Pangkal Pinang 51.17 136 P **P** **21 47 07.5 +0.4**
comp=Z,4µmcomp=Z,50nm,0.8s
NOR Nord 51.23 349 *i* P **P** **21 47 07.2 +0.5**
NOR IAmb IAmb 21 47 07.9
comp=Z,6.1nm,0.7s
EBL Broad Law 51.33 315 *eP* **P** **21 47 08.5 +0.6**
EDI Edinburgh 51.37 315 *eP* **P** **21 47 07.5 -0.5**
MNAI Manna 51.42 141 P **P** **21 47 10.2 +1.2**
JMM Marumori 51.47 69 P **P** **21 47 08.8 -0.4**
JMM IAmb IAmb 21 47 21.4
comp=Z,52nm,0.7s
EKA Eskdalemuir Ar 51.52 315 LR LR 22 11 00.8
comp=Z,996nm,18.9s,baz=76,slow=38
ERM Erimo 51.52 63 P **P** **21 47 09.5 0.0**
ERM IAmb IAmb 21 47 17.4
comp=Z,38nm,0.7s
ERM Erimo 51.52 63 P **P** **21 47 09.5 0.0**
ERM pmax pmax
comp=Z,38nm,0.7s
ERM MLR MLR
comp=Z,4µm,18.0s
ERM Erimo 51.52 63 P **P** **21 47 10.2 +0.7**
ESK Eskdalemuir 51.55 315 P **P** **21 47 09.2 -0.2**
ESK IAmb IAmb 21 47 42.4
comp=Z,48nm,1.2s
ESK Eskdalemuir 51.55 315 P **P** **21 47 09.2 -0.2**
ESK pmax pmax
comp=Z,48nm,1.2s
ESK MLR MLR
comp=Z,1µm,18.0s
CAF Calviac 51.58 301 *eP* **P** **21 47 10.3 +0.4**
CAF pmax pmax
comp=Z,41nm,1.1s
MDO Dochfour 51.59 318 *eP* **P** **21 47 09.3 -0.4**
INVG Invergeldie, C 51.70 316 *eP* **P** **21 47 10.5 0.0**
JYT Yasato 51.72 71 P **P** **21 47 10.4 -0.6**
LINV Loch Inver, As 51.84 319 *eP* **P** **21 47 11.4 -0.1**
LINV IAmb IAmb 21 47 13.8
comp=Z,56nm,1.1s
EAB Aberfoyle 51.92 316 *eP* **P** **21 47 11.8 -0.4**
STRD Stroud 51.98 310 *eP* **P** **21 47 12.7 -0.1**
STRD IAmb IAmb 21 47 19.6
comp=Z,96nm,0.7s
KAC Achnashellach 52.06 318 *eP* **P** **21 47 13.0 -0.3**
PGBU Glenifferbraes 52.10 316 *eP* **P** **21 47 13.3 -0.2**
PGBU IAmb IAmb 21 47 19.9
comp=Z,52nm,0.7s
NEWG New Galloway 52.16 315 *eP* **P** **21 47 13.9 -0.1**
NEWG IAmb IAmb 21 47 16.1
comp=Z,35nm,0.9s
KMBO Kilima Mbogo 52.25 228 P **P** **21 47 15.6 +0.1**
comp=Z,17nm,1.0s,baz=41,slow=9.4,SNR=17
KMBO LR LR 22 11 06.2
comp=Z,1µm,19.8s,baz=44,slow=38
comp=Z,17nm,1.0s
KMBO Kilima Mbogo 52.25 228 P **P** **21 47 14.9 -0.5**
KMBO IAmb IAmb 21 47 22.0
comp=Z,57nm,1.1s
KMBO Kilima Mbogo 52.25 228 *i* P **P** **21 47 16.5 +1.0**
KMBO pmax pmax
comp=Z,24nm,1.0s
KMBO Kilima Mbogo 52.25 228 *i* P **P** **21 47 16.3 +0.8**
SNR=42
KPL Plockton 52.29 318 *eP* **P** **21 47 14.4 -0.6**
MONM Monmouth 52.34 310 *eP* **P** **21 47 14.8 -0.6**
MONM IAmb IAmb 21 47 21.6
comp=Z,65nm,0.8s
STKI Sintang 52.40 129 P **P** **21 47 19.4 +3.1**
comp=Z,40nm,1.1s
MCH1 Michaelchurch 52.41 311 *eP* **P** **21 47 15.2 -0.7**
MCH1 IAmb IAmb 21 47 22.3
comp=Z,68nm,0.7s
DAG Danmarks Havn 52.42 343 *i* P **P** **21 47 15.7 0.0**
DAG IAmb IAmb 21 47 16.6
comp=Z,45nm,0.6s
MFF Saint Martin d 52.44 303 *eP* **P** **21 47 16.4 +0.2**
MFF pmax pmax
comp=Z,37nm,1.2s
LAWE Loch Awe, Argy 52.47 316 *eP* **P** **21 47 16.2 -0.1**
LAWE IAmb IAmb 21 47 22.6
comp=Z,50nm,1.0s
TPI Tanjungpandan 52.49 135 P **P** **21 47 21.3 +4.4**
comp=Z,14nm,1.4s
GAL1 Galloway 52.50 315 *eP* **P** **21 47 16.5 0.0**
GAL1 IAmb IAmb 21 47 23.2
comp=Z,33nm,0.8s
LWLI Liwa 52.53 140 P **P** **21 47 20.7 +3.4**
comp=Z,2µmcomp=Z,66nm,0.7s
IOMK Kirk Michael 52.61 314 *eP* **P** **21 47 16.7 -0.7**
WIM Isle of Man 52.70 314 *eP* **P** **21 47 18.8 +0.7**
JHJ Hachijo jima 2 52.78 75 LR LR 22 10 58.2
comp=Z,1µm,20.1s,baz=298,slow=37
KIBK Kibwezi 52.79 227 P **P** **21 47 19.1 -0.1**
KIBK IAmb IAmb 21 47 25.6
comp=Z,39nm,0.9s
KIBK Kibwezi 52.79 227 P **P** **21 47 19.9 +0.6**
SNR=7.2
WLF1 Llynfaes 52.81 313 *eP* **P** **21 47 19.4 +0.5**
WLF1 IAmb IAmb 21 47 25.6
comp=Z,44nm,0.8s
YRC Rhoscolyn 52.92 313 *eP* **P** **21 47 19.5 -0.1**
MYLDM Lahad Datu 53.05 118 P **P** **21 47 22.2 +1.1**
DBG Daneborg 53.41 340 *i* P **P** **21 47 23.0 0.0**
DBG IAmb IAmb 21 47 24.5
comp=Z,9.7nm,0.7s
RSBS Rosebush, Pemb 53.44 311 *eP* **P** **21 47 23.0 -0.6**
KUR Kuril'sk 53.50 58 *eP* **P** **21 47 22.4 -1.6**
KUR S **S** **21 54 57.7 +1.1**
KUR *eSS* **SS** **21 58 36.5 +0.2**
KUR pmax pmax
comp=Z,83nm,1.4s
KUR MLR MLR
comp=E,2µm,14.0s
KUR MLR MLR
comp=Z,2µm,14.0s
KUR MLR MLR
comp=N,1µm,15.0s
TBP Tagbilaran 53.70 109 *eP* **P** **21 47 26.0 0.0**
DSB Dublin 53.95 313 P **P** **21 47 26.8 -0.5**
PBKI Pangkalan Bun 54.73 131 P P 21 47 42.3 +9.0
BILL Bilibino 55.08 27 P **P** **21 47 36.0 +0.7**
BILL IAmb IAmb 21 47 46.6
comp=Z,31nm,0.9s
BILL Bilibino 55.08 27 *ce* P **P** **21 47 36.0 +0.7**
BILL *i* 21 47 42.5
BILL *e* 21 49 39.0
BILL pmax pmax
comp=Z,37nm,1.3s
BILL MLR MLR
comp=Z,3µm,17.0s
SCO Scoresbysund 55.10 336 IAMs_20 IAMs_20 22 10 28.4
comp=Z,2µm,18.0s
MBAR Mbarara 55.80 235 LR LR 22 14 14.6
comp=Z,3µm,18.8s,baz=27,slow=39
MBAR Mbarara 55.80 235 P **P** **21 47 41.2 0.0**
MBAR Mbarara 55.80 235 *eP* **P** **21 47 41.5 +0.2**
MBAR pmax pmax
comp=Z,29nm,1.1s
LEM Lembang 55.88 138 LR LR 22 15 23.7
comp=Z,900nm,18.2s,baz=300,slow=40
KCP Kidapawan 56.41 111 ‖ *i* P **P** **21 47 46.9 +1.4**
PEA0B Petropavlovsk- 56.50 46 P **P** **21 47 45.5 -0.2**
PEA0B IAmb IAmb 21 47 47.8
comp=Z,40nm,1.1s
PEA0B Petropavlovsk- 56.50 46 P **P** **21 47 45.5 -0.2**
PEA0B pmax pmax
comp=Z,41nm,1.1s
PETK Petropavlovsk- 56.50 46 P **P** **21 47 46.0 +0.3**
comp=Z,11nm,0.8s,baz=270,slow=3.0,SNR=17
PETK LR LR 22 13 07.5
comp=Z,2µm,19.0s,baz=294,slow=37
comp=Z,11nm,0.8s
PETK Petropavlovsk- 56.50 46 P **P** **21 47 45.9 +0.2**
PETK Petropavlovsk- 56.50 46 P **P** **21 47 46.0 +0.3**
DAV Davao City (W) 56.72 110 LR LR 22 15 11.4
comp=Z,2µm,19.7s,baz=358,slow=39
DAV Davao City (W) 56.72 110 P **P** **21 47 48.7 +1.0**
DAV Davao City (W) 56.72 110 IAMs_20 IAMs_20 22 15 00.3
comp=Z,2µm,20.0s
BORG Borgarnes 57.01 329 LR LR 22 12 02.5
comp=Z,2µm,19.5s,baz=64,slow=36
PET Petropavlovsk 57.07 46 *eP* **P** **21 47 46.8 -2.8**
PET *e* 21 48 39.9
PET *e* 21 49 55.4
PET *eS* **S** **21 55 36.6 -7.5**
PET *eSSS* SSS 22 01 46.2
PET pmax pmax
comp=Z,200nm,12.7s
PET pmax pmax
comp=Z,200nm,12.6s
PET pmax pmax
comp=Z,61nm,1.2s
PET MLR MLR
comp=Z,2µm,16.0s
PET MLR MLR
comp=Z,2µm,15.0s
PET Petropavlovsk 57.07 46 P **P** **21 47 49.8 +0.2**
comp=Z,29nm,1.0s
BBKI Banjar Baru 57.22 128 P **P** **21 47 54.9 +3.7**
comp=Z,52nm,0.9s
JCJ Chichijima 57.52 80 LR LR 22 15 58.0
comp=Z,886nm,18.7s,baz=322,slow=40
MPSI Mapaga 57.54 121 P **P** **21 47 55.3 +1.8**
comp=Z,501nmcomp=Z,50nm,1.3s
TOLI2 Tolitoli 57.56 119 P **P** **21 47 53.6 0.0**
TOLI2 Tolitoli 57.56 119 P **P** **21 47 55.8 +2.2**
ESBB Sonseca Array 57.78 297 P **P** **21 47 54.3 -0.8**
ESBB IAmb IAmb 21 48 06.1
comp=Z,24nm,0.8s
ESDC Sonseca Array 57.79 297 P **P** **21 47 54.8 -0.2**
comp=Z,7.1nm,0.7s,baz=58,slow=7.0,SNR=69
ESDC LR LR 22 16 02.9
comp=Z,437nm,19.1s,baz=55,slow=39
comp=Z,7.1nm,0.7s
ESDC Sonseca Array 57.79 297 P **P** **21 47 54.6 -0.4**
PAB San Pablo 58.11 297 P **P** **21 47 56.8 -0.6**
PAB IAmb IAmb 21 48 09.0
comp=Z,71nm,1.8s
PAB San Pablo 58.11 297 P **P** **21 47 56.8 -0.6**
PAB pmax pmax
comp=Z,71nm,1.8s
PAB MLR MLR
comp=Z,600nm,22.0s
PBRG Braganca 58.71 300 *eP* **P** **21 48 00.1 -1.4**
PBRG *eS* **S** **21 56 09.3 +3.1**
MRSI Marisa 58.81 119 P **P** **21 48 03.9 +1.6**
comp=Z,1µmcomp=Z,88nm,0.7s
SUMG Summit 58.87 341 P **P** **21 48 02.9 +0.4**
SUMG Summit 58.87 341 P **P** **21 48 02.9 +0.4**
SUMG pmax pmax
comp=Z,56nm,0.8s
SUMG MLR MLR
comp=Z,900nm,20.0s
SUMG Summit 58.87 341 *i* P **P** **21 48 03.1 +0.6**
SUMG IAmb IAmb 21 48 04.0
comp=Z,26nm,0.7s
TAM Tamanrasset 59.17 275 P **P** **21 48 03.5 -1.5**

TAM	**Tamanrasset**	**59.17**	**275**	P	**P**	**21**	**48**	**03.5**	**-1.5**
TAM				pmax	pmax				
	comp=Z,26nm,1.3s								
MVO	**Moncorvo**	**59.20**	**300**	*e*P	**P**	**21**	**48**	**05.9**	**+1.0**
	comp=Z,51nm,1.3s								
MVO				*e*S	**S**	**21**	**56**	**14.8**	**+2.3**
MVO	**Moncorvo**	**59.20**	**300**	*e*LR	LR	22	12	37.7	
	comp=Z,505nm,18.0s								
PVRL	**Vila Real**	**59.60**	**300**	*e*P	**P**	**21**	**48**	**08.4**	**+0.7**
	comp=Z,36nm,1.2s								
POLO	**Lamas de Olo**	**59.61**	**300**	*e*P	P	21	48	12.8	+5.0
	comp=Z,20nm,2.5s								
POLO				*e*S	**S**	**21**	**56**	**21.2**	**+3.3**
APSI	**Ampana**	**59.63**	**120**	P	**P**	**21**	**48**	**08.6**	**+0.6**
	comp=Z,505nmcomp=Z,58nm,1.3s								
PGAV	**Gavieira, Arco**	**59.65**	**301**	*e*P	**P**	**21**	**48**	**08.9**	**+0.8**
	comp=Z,84nm,1.9s								
PGAV				*e*S	**S**	**21**	**56**	**22.9**	**+4.4**
PGAV	**Gavieira, Arco**	**59.65**	**301**	*e*LR	LR	22	13	48.9	
	comp=Z,851nm,18.0s								
MTE	**Manteigas**	**59.90**	**299**	*e*P	**P**	**21**	**48**	**12.6**	**+2.9**
	comp=Z,83nm,1.6s								
MTE				*e*S	**S**	**21**	**56**	**29.4**	**+7.8**
MTE	**Manteigas**	**59.90**	**299**	*e*LR	LR	22	13	05.6	
	comp=Z,540nm,18.0s								
MTE	**Manteigas**	**59.90**	**299**	P	**P**	**21**	**48**	**09.7**	**0.0**
PVIS	**Viseu**	**59.98**	**300**	*e*P	**P**	**21**	**48**	**10.9**	**+0.6**
	comp=Z,66nm,1.4s								
TTSI	**Tana Toraja**	**60.02**	**123**	P	**P**	**21**	**48**	**15.4**	**+4.7**
	comp=Z,37nm,1.1s								
PCBR	**Castelo Branco**	**60.11**	**299**	*e*P	**P**	**21**	**48**	**12.4**	**+1.3**
	comp=Z,34nm,1.3s								
KMSI	**Cibinong**	**60.13**	**117**	P	P	21	48	24.6	+13
EUNU	**Eureka**	**60.17**	**356**	P	**P**	**21**	**48**	**12.0**	**+1.0**
EUNU				IAmb	IAmb	21	48	29.0	
	comp=Z,46nm,1.1s								
PMRV	**Marv??o**	**60.25**	**298**	*e*P	**P**	**21**	**48**	**12.8**	**+0.7**
	comp=Z,69nm,1.2s								
PMRV				*e*S	**S**	**21**	**56**	**24.9**	**-1.2**
PMRV	**Marv??o**	**60.25**	**298**	*e*LR	LR	22	12	41.6	
	comp=Z,370nm,18.0s								
COI	**Coimbra**	**60.57**	**299**	*e*P	**P**	**21**	**48**	**15.1**	**+0.9**
	comp=Z,128nm,1.6s								
COI				*e*S	**S**	**21**	**56**	**33.0**	**+2.9**
PESTR	**Estremoz**	**60.65**	**298**	*e*S	**S**	**21**	**56**	**34.8**	**+3.6**
PCAS	**Casmilo, Conde**	**60.70**	**299**	*e*S	**S**	**21**	**56**	**33.7**	**+1.9**
JAGI	**Jajag, Banyuwa**	**60.82**	**132**	P	**P**	**21**	**48**	**15.9**	**-0.2**
ICESG	**Greenland Ices**	**61.17**	**338**	*i* P	**P**	**21**	**48**	**18.6**	**+0.3**
ICESG				IAmb	IAmb	21	48	20.0	
	comp=Z,39nm,0.7s								
PBEJ	**Beja**	**61.25**	**297**	*e*P	**P**	**21**	**48**	**20.2**	**+1.3**
	comp=Z,52nm,1.4s								
PVAQ	**Vaqueiros**	**61.45**	**296**	*e*P	**P**	**21**	**48**	**20.1**	**-0.2**
	comp=Z,73nm,1.6s								
PVAQ	**Vaqueiros**	**61.45**	**296**	*e*LR	LR	22	14	13.5	
	comp=Z,652nm,18.0s								
PVAQ	**Vaqueiros**	**61.45**	**296**	P	**P**	**21**	**48**	**19.9**	**-0.4**
PVAQ				IAmb	IAmb	21	48	34.6	
	comp=Z,68nm,1.4s								
KAPI	**Kappang**	**61.48**	**125**	LR	LR	22	20	38.4	
	comp=Z,458nm,18.4s,baz=305,slow=42								
KAPI	**Kappang**	**61.48**	**125**	P	**P**	**21**	**48**	**20.9**	**+0.2**
KAPI				IAmb	IAmb	21	49	09.5	
	comp=Z,67nm,1.4s								
KAPI	**Kappang**	**61.48**	**125**	P	**P**	**21**	**48**	**20.9**	**+0.2**
KAPI				pmax	pmax				
	comp=Z,67nm,1.5s								
KAPI				MLR	MLR				
	comp=Z,400nm,19.0s								
MDT	**Midelt**	**61.53**	**290**	LR	LR	22	19	05.2	
	comp=Z,209nm,21.0s,baz=70,slow=40								
PCVE	**Castro Verde**	**61.56**	**297**	*e*S	**S**	**21**	**56**	**45.6**	**+2.8**
MESJ	**Messejana**	**61.59**	**297**	*e*P	**P**	**21**	**48**	**20.4**	**-0.8**
	comp=Z,49nm,1.4s								
PNCL	**Nicolau / Gran**	**61.66**	**297**	*e*S	**S**	**21**	**56**	**45.0**	**+1.0**
PBDV	**Barranco-do-Ve**	**61.68**	**296**	*e*P	**P**	**21**	**48**	**22.1**	**+0.2**
	comp=Z,105nm,1.6s								
PBDV				*e*S	**S**	**21**	**56**	**45.7**	**+1.3**
PMAFR	**Mafra**	**61.77**	**299**	*e*S	**S**	**21**	**56**	**47.4**	**+2.0**
BKSI	**Bulukumba**	**61.95**	**125**	P	**P**	**21**	**48**	**25.4**	**+1.6**
	comp=Z,25nm,1.0s								
MORF	**Marmelete**	**62.15**	**297**	*e*S	**S**	**21**	**56**	**53.3**	**+3.0**
TNTI	**Ternate**	**62.35**	**114**	P	**P**	**21**	**48**	**26.8**	**+0.2**
TNTI	**Ternate**	**62.35**	**114**	P	**P**	**21**	**48**	**29.9**	**+3.3**
	comp=Z,981nmcomp=Z,89nm,1.3s								
TNTI	**Ternate**	**62.35**	**114**	P	**P**	**21**	**48**	**26.4**	**-0.2**
PFVI	**Vila Bisbo**	**62.35**	**297**	*e*S	**S**	**21**	**56**	**56.6**	**+3.8**
ANGG	**Ammassalik, Gr**	**62.57**	**334**	P	**P**	**21**	**48**	**27.1**	**-0.2**
OPO	**Ambohidratompo**	**62.75**	**208**	LR	LR	22	13	57.8	
	comp=Z,802nm,19.7s,baz=174,slow=34								
ABPO	**Ambohimpanom**	**63.14**	**208**	P	**P**	**21**	**48**	**31.1**	**-0.7**
ABPO	**Ambohimpanom**	**63.14**	**208**	P	**P**	**21**	**48**	**31.1**	**-0.7**
ABPO				pmax	pmax				
	comp=Z,11nm,0.9s								
ABPO				MLR	MLR				
	comp=Z,1µm,20.0s								
SANI	**Sanana**	**63.40**	**117**	P	**P**	**21**	**48**	**34.5**	**+1.0**
	comp=Z,645nmcomp=Z,31nm,1.0s								
SANI	**Sanana**	**63.40**	**117**	P	**P**	**21**	**48**	**32.8**	**-0.7**
LBMI	**Labuha**	**63.44**	**115**	P	**P**	**21**	**48**	**35.8**	**+2.0**
	comp=Z,547nmcomp=Z,52nm,0.9s								
A21K	**Barrow**	**63.93**	**16**	IAMs_20	IAMs_20	22	19	25.0	
	comp=Z,1µm,20.0s								
A21K	**Barrow**	**63.93**	**16**	P	**P**	**21**	**48**	**35.9**	**-0.3**
	baz=319								
ILULI	**Ilulissat**	**64.22**	**341**	P	**P**	**21**	**48**	**38.5**	**+0.3**
ILULI				IAMs_20	IAMs_20	22	21	01.3	
	comp=Z,2µm,20.0s								
ILULI	**Ilulissat**	**64.22**	**341**	P	**P**	**21**	**48**	**38.5**	**+0.3**
ILULI				pmax	pmax				
	comp=Z,55nm,0.8s								
ILULI				MLR	MLR				
	comp=Z,2µm,20.0s								
ILULI	**Ilulissat**	**64.22**	**341**	*i* P	**P**	**21**	**48**	**38.0**	**-0.1**
ILULI				IAmb	IAmb	21	48	38.8	
	comp=Z,33nm,0.6s								
DY2G	**Dye2**	**64.78**	**337**	*i* P	**P**	**21**	**48**	**42.1**	**0.0**
DY2G				IAmb	IAmb	21	48	43.2	
	comp=Z,28nm,0.5s								
RDOG	**Red Dog Mine**	**64.81**	**20**	IAMs_20	IAMs_20	22	17	01.7	
	comp=Z,1µm,18.0s								
RDOG	**Red Dog Mine**	**64.81**	**20**	P	**P**	**21**	**48**	**42.7**	**+0.6**
	baz=315								
WBSI	**Waikabubak, Su**	**64.84**	**128**	P	P	21	48	53.0	+10
GAMB	**Gambell**	**64.99**	**26**	P	**P**	**21**	**48**	**42.7**	**-0.5**
	baz=309								
GAMB				S	**S**	**21**	**57**	**26.6**	**+1.9**
	baz=309								
NLAI	**Namlea**	**65.03**	**117**	P	P	21	48	49.3	+5.1
TNA	**Tin City**	**65.07**	**24**	P	**P**	**21**	**48**	**43.7**	**0.0**
	baz=312								
TNA				S	**S**	**21**	**57**	**28.6**	**+3.0**
	baz=312								
SHEM	**Shemya Is, Ala**	**65.44**	**41**	LR	LR	22	18	39.4	
	comp=Z,890nm,19.1s,baz=294,slow=37								
EDFI	**Ende, Flores**	**65.57**	**126**	P	**P**	**21**	**48**	**49.7**	**+1.9**
	comp=Z,12nm,0.8s								
SFJD	**Kangerlussuaq**	**65.67**	**339**	P	**P**	**21**	**48**	**47.9**	**+0.3**
	comp=Z,21nm,0.7s,baz=46,slow=5.8,SNR=6.1								
SFJD				LR	LR	22	18	28.3	
	comp=Z,435nm,18.9s,baz=34,slow=37								
	comp=Z,21nm,0.7s								
SFJD	**Kangerlussuaq**	**65.67**	**339**	P	**P**	**21**	**48**	**47.5**	**-0.1**
SFJD				IAmb	IAmb	21	48	54.6	
	comp=Z,34nm,0.8s								
SFJD	**Kangerlussuaq**	**65.67**	**339**	IAMs_20	IAMs_20	22	21	20.6	
	comp=Z,1µm,18.0s								
SFJD	**Kangerlussuaq**	**65.67**	**339**	P	**P**	**21**	**48**	**47.5**	**-0.1**
SFJD				pmax	pmax				
	comp=Z,34nm,0.8s								
SFJD				MLR	MLR				
	comp=Z,1µm,18.0s								
SFJD	**Kangerlussuaq**	**65.67**	**339**	*i* P	**P**	**21**	**48**	**46.6**	**-1.0**
SFJD				IAmb	IAmb	21	48	48.3	
	comp=Z,19nm,0.7s								
MMRI	**Maumere**	**65.83**	**125**	P	**P**	**21**	**48**	**47.7**	**-1.6**
RES	**Resolute Bay**	**65.85**	**357**	P	**P**	**21**	**48**	**49.1**	**+0.5**
	comp=Z,7.3nm,0.8s,baz=13,slow=8.2,SNR=2.2								
RES				LR	LR	22	21	55.2	
	comp=Z,827nm,18.3s,baz=8.5,slow=40								
	comp=Z,7.3nm,0.8s								
RES	**Resolute Bay**	**65.85**	**357**	P	**P**	**21**	**48**	**48.4**	**-0.3**
RES	**Resolute Bay**	**65.85**	**357**	P	**P**	**21**	**48**	**48.4**	**-0.3**
RES				pmax	pmax				
	comp=Z,10.0nm,0.8s								
VOI	**Vohitsoka**	**65.95**	**207**	P	**P**	**21**	**48**	**49.1**	**-1.0**
VOI				IAmb	IAmb	21	48	56.7	
	comp=Z,25nm,1.0s								
VOI	**Vohitsoka**	**65.95**	**207**	P	P	21	48	55.5	+5.4
SWI	**Sorong**	**66.26**	**112**	P	**P**	**21**	**48**	**53.4**	**+1.2**
	comp=Z,67nm,1.3s								
SIJI	**Sorong**	**66.27**	**112**	LR	LR	22	21	15.5	
	comp=Z,209nm,20.6s,baz=338,slow=39								
C23K	**Itkillik River**	**66.35**	**15**	P	**P**	**21**	**48**	**51.2**	**-0.8**
	baz=324								
C23K				S	**S**	**21**	**57**	**41.9**	**+0.7**
	baz=324								
ANM	**Nome**	**66.54**	**24**	P	**P**	**21**	**48**	**53.5**	**+0.3**
	baz=314								
C24K	**Franklin Bluff**	**66.83**	**15**	P	**P**	**21**	**48**	**54.8**	**-0.2**
	baz=326								
C24K				S	**S**	**21**	**57**	**47.4**	**+0.4**
	baz=326								
D23K	**Nanushuk River**	**67.04**	**16**	P	**P**	**21**	**48**	**56.2**	**-0.2**
	baz=324								
D23K				S	**S**	**21**	**57**	**50.9**	**+1.2**
	baz=324								
GUMO	**Guam**	**67.21**	**91**	LR	LR	22	18	44.7	
	comp=Z,481nm,20.6s,baz=308,slow=36								
D24K	**Happy Valley**	**67.27**	**15**	P	**P**	**21**	**48**	**57.8**	**-0.1**
	baz=326								
TOLK	**Toolik Lake Re**	**67.54**	**16**	P	**P**	**21**	**48**	**59.5**	**-0.2**
TOLK				IAMs_20	IAMs_20	22	20	45.8	
	comp=Z,1µm,21.0s								
TOLK	**Toolik Lake Re**	**67.54**	**16**	P	**P**	**21**	**48**	**59.3**	**-0.4**
	baz=325,SNR=20								
TOLK				S	**S**	**21**	**57**	**55.1**	**-0.7**
	baz=325								
TOA0	**Torodi Ar. Sit**	**67.70**	**269**	P	**P**	**21**	**48**	**59.9**	**-1.5**
TOA0				IAmb	IAmb	21	49	13.6	
	comp=Z,27nm,0.8s								
TORD	**Torodi Ar. Bea**	**67.70**	**269**	P	**P**	**21**	**49**	**00.1**	**-1.4**
	comp=Z,5.2nm,0.4s,baz=50,slow=5.7,SNR=107								
TORD				LR	LR	22	24	49.3	
	comp=Z,531nm,18.6s,baz=86,slow=42								
	comp=Z,5.2nm,0.4s								
TORD	**Torodi Ar. Bea**	**67.70**	**269**	P	**P**	**21**	**48**	**59.7**	**-1.7**
TORD				IAmb	IAmb	21	49	13.6	
	comp=Z,25nm,0.8s								
A36M	**Sachs Harbour**	**68.05**	**6**	P	**P**	**21**	**49**	**02.4**	**-0.3**
A36M				IAMs_20	IAMs_20	22	19	34.7	
	comp=Z,2µm,22.0s								
A36M	**Sachs Harbour**	**68.05**	**6**	P	**P**	**21**	**49**	**02.4**	**-0.3**
	baz=345								
A36M				S	**S**	**21**	**58**	**01.0**	**-0.6**
	baz=345								
NRS	**Narsarsuaq**	**68.11**	**333**	P	**P**	**21**	**49**	**02.9**	**-0.3**
NRS	**Narsarsuaq**	**68.11**	**333**	P	**P**	**21**	**49**	**02.9**	**-0.3**
NRS				pmax	pmax				
	comp=Z,49nm,0.7s								
FAKI	**Fak Fak**	**68.40**	**113**	P	**P**	**21**	**49**	**05.6**	**-0.1**
FAKI	**Fak Fak**	**68.40**	**113**	P	**P**	**21**	**49**	**07.8**	**+2.0**
	comp=Z,793nmcomp=Z,79nm,1.1s								
FAKI	**Fak Fak**	**68.40**	**113**	P	**P**	**21**	**49**	**07.0**	**+1.2**
COLD	**Coldfoot**	**68.57**	**17**	P	**P**	**21**	**49**	**05.8**	**-0.3**
COLD				IAmb	IAmb	21	49	20.4	
	comp=Z,29nm,0.8s								
COLD	**Coldfoot**	**68.57**	**17**	P	**P**	**21**	**49**	**05.9**	**-0.2**
	baz=325,SNR=8.7								
IMAR	**Indian Mountai**	**68.74**	**19**	P	**P**	**21**	**49**	**06.5**	**-0.7**
AMKA	**Amchitka**	**68.85**	**40**	P	**P**	**21**	**49**	**07.6**	**-0.4**
GCSA	**Galena City Sc**	**68.89**	**21**	P	**P**	**21**	**49**	**07.9**	**-0.1**
	baz=320,SNR=10								
GCSA				S	**S**	**21**	**58**	**10.2**	**-1.7**
	baz=320								
LSZ	**Lusaka**	**68.90**	**227**	LR	LR	22	20	25.7	
	comp=Z,1µm,19.1s,baz=38,slow=37								
LSZ	**Lusaka**	**68.90**	**227**	P	**P**	**21**	**49**	**08.0**	**-0.9**
LSZ				IAmb	IAmb	21	49	14.6	
	comp=Z,36nm,0.9s								
LSZ	**Lusaka**	**68.90**	**227**	IAMs_20	IAMs_20	22	22	44.8	
	comp=Z,1µm,20.0s								
LSZ	**Lusaka**	**68.90**	**227**	P	**P**	**21**	**49**	**08.0**	**-0.9**
LSZ				pmax	pmax				
	comp=Z,36nm,0.9s								
H21K	**Melozitna Rive**	**69.24**	**19**	P	**P**	**21**	**49**	**09.7**	**-0.6**
H21K				IAmb	IAmb	21	49	12.1	
	comp=Z,38nm,1.4s								
H21K				IAMs_20	IAMs_20	22	23	47.7	
	comp=Z,1µm,20.0s								
H21K	**Melozitna Rive**	**69.24**	**19**	P	**P**	**21**	**49**	**09.8**	**-0.4**
	baz=323,SNR=19								
H21K				S	**S**	**21**	**58**	**14.8**	**-1.1**
	baz=323								
H22K	**Ishtalitna Cre**	**69.39**	**18**	P	**P**	**21**	**49**	**11.2**	**0.0**
	baz=324,SNR=19								
H22K				S	**S**	**21**	**58**	**16.2**	**-1.6**
	baz=324								
BMAR	**Burnt Mountain**	**69.58**	**15**	P	**P**	**21**	**49**	**12.6**	**+0.2**
I21K	**Tanana**	**69.83**	**19**	P	**P**	**21**	**49**	**13.8**	**-0.1**
I21K				IAMs_20	IAMs_20	22	24	37.3	
	comp=Z,1µm,20.0s								
I21K	**Tanana**	**69.83**	**19**	P	**P**	**21**	**49**	**13.9**	**0.0**
	baz=324,SNR=16								
H23K	**Yukon River**	**69.88**	**17**	P	**P**	**21**	**49**	**14.3**	**0.0**
H23K				IAmb	IAmb	21	49	16.7	
	comp=Z,59nm,1.5s								
H23K				IAMs_20	IAMs_20	22	24	13.7	
	comp=Z,1µm,20.0s								
H23K	**Yukon River**	**69.88**	**17**	P	**P**	**21**	**49**	**14.4**	**+0.2**
	baz=326,SNR=13								
H23K				S	**S**	**21**	**58**	**23.3**	**-0.3**
	baz=326								
J20K	**Nowinta River**	**70.08**	**20**	IAMs_20	IAMs_20	22	22	15.1	
	comp=Z,1µm,20.0s								
J20K	**Nowinta River**	**70.08**	**20**	P	**P**	**21**	**49**	**15.1**	**-0.4**
	baz=323,SNR=26								
J20K				S	**S**	**21**	**58**	**25.0**	**-0.9**
	baz=323								
H24K	**Noodor Dome**	**70.25**	**17**	IAMs_20	IAMs_20	22	23	57.4	
	comp=Z,1µm,19.0s								
H24K	**Noodor Dome**	**70.25**	**17**	P	**P**	**21**	**49**	**16.4**	**-0.2**
	baz=327,SNR=16								
H24K				S	**S**	**21**	**58**	**27.8**	**-0.2**
	baz=327								
MLY	**Manley**	**70.25**	**18**	P	**P**	**21**	**49**	**16.1**	**-0.5**
MLY				IAMs_20	IAMs_20	22	24	28.6	
	comp=Z,1µm,18.0s								
MLY	**Manley**	**70.25**	**18**	P	**P**	**21**	**49**	**16.1**	**-0.5**
	baz=325,SNR=16								
MLY				S	**S**	**21**	**58**	**27.6**	**-0.5**
	baz=325								
PMOZ	**Porto Moniz, M**	**70.46**	**297**	*e*LR	LR	22	17	28.4	
	comp=Z,260nm,18.0s								
I23K	**Minto, Yukon-K**	**70.49**	**18**	IAMs_20	IAMs_20	22	21	56.4	
	comp=Z,1µm,19.0s								
I23K	**Minto, Yukon-K**	**70.49**	**18**	P	**P**	**21**	**49**	**17.8**	**-0.2**
	baz=326,SNR=22								
I23K				S	**S**	**21**	**58**	**29.9**	**-0.7**
	baz=326								
ADK	**Adak**	**70.50**	**38**	IAMs_20	IAMs_20	22	23	22.3	
	comp=Z,1µm,19.0s								
TTA	**Tatalina**	**70.55**	**22**	P	**P**	**21**	**49**	**18.4**	**-0.1**
TTA	**Tatalina**	**70.55**	**22**	P	**P**	**21**	**49**	**18.4**	**-0.1**
TTA				pmax	pmax				
	comp=Z,20nm,1.2s								
TTA	**Tatalina**	**70.55**	**22**	P	**P**	**21**	**49**	**18.5**	**0.0**
	baz=322,SNR=13								
INK	**Inuvik**	**70.64**	**10**	LR	LR	22	22	12.1	
	comp=Z,1µm,21.3s,baz=344,slow=38								
INK	**Inuvik**	**70.64**	**10**	P	**P**	**21**	**49**	**18.6**	**-0.2**
INK	**Inuvik**	**70.64**	**10**	P	**P**	**21**	**49**	**18.6**	**-0.2**
INK				pmax	pmax				
	comp=Z,80nm,1.2s								
INK	**Inuvik**	**70.64**	**10**	P	**P**	**21**	**49**	**18.6**	**-0.2**
	baz=338,SNR=43								
INK				S	**S**	**21**	**58**	**31.4**	**-0.9**
	baz=338								
C36M	**Paulatuk**	**70.71**	**6**	P	**P**	**21**	**49**	**18.6**	**-0.6**
C36M	**Paulatuk**	**70.71**	**6**	P	**P**	**21**	**49**	**18.5**	**-0.7**
	baz=346,SNR=33								
C36M				S	**S**	**21**	**58**	**30.2**	**-2.8**
	baz=346								
K20K	**Telida**	**70.75**	**21**	P	**P**	**21**	**49**	**19.5**	**-0.1**
K20K				IAmb	IAmb	21	49	21.8	
	comp=Z,52nm,1.4s								
K20K				IAMs_20	IAMs_20	22	23	42.9	
	comp=Z,1µm,19.0s								
K20K	**Telida**	**70.75**	**21**	P	**P**	**21**	**49**	**19.5**	**-0.1**
	baz=323,SNR=27								
K20K				S	**S**	**21**	**58**	**35.0**	**+1.1**
	baz=323								
CHUM	**Lake Minchumin**	**70.80**	**20**	P	**P**	**21**	**49**	**19.7**	**-0.2**
	baz=324								
CHUM				S	**S**	**21**	**58**	**33.7**	**-0.5**
	baz=324								
MDM	**Murphy Dome**	**70.91**	**17**	P	**P**	**21**	**49**	**20.1**	**-0.4**
MDM				IAmb	IAmb	21	49	39.8	
	comp=Z,42nm,1.2s								
MDM				IAMs_20	IAMs_20	22	25	15.8	
	comp=Z,1µm,18.0s								
POKR	**Poker Plat Res**	**70.96**	**17**	P	**P**	**21**	**49**	**20.8**	**-0.1**
POKR				IAMs_20	IAMs_20	22	24	40.1	
	comp=Z,2µm,20.0s								
POKR	**Poker Plat Res**	**70.96**	**17**	P	**P**	**21**	**49**	**20.4**	**-0.5**
	baz=328,SNR=8.5								
POKR				S	**S**	**21**	**58**	**36.6**	**+0.4**
	baz=328								
BPAW	**Bear Paw Mtn.**	**70.96**	**19**	P	**P**	**21**	**49**	**20.1**	**-0.8**
	baz=325,SNR=16								
NEA2	**Nenana**	**71.02**	**18**	P	**P**	**21**	**49**	**20.8**	**-0.4**
NEA2				IAmb	IAmb	21	49	22.7	
	comp=Z,52nm,1.4s								
NEA2				IAMs_20	IAMs_20	22	25	30.8	
	comp=Z,1µm,18.0s								
NEA2	**Nenana**	**71.02**	**18**	P	**P**	**21**	**49**	**20.9**	**-0.3**
	baz=326,SNR=13								
NEA2				S	**S**	**21**	**58**	**35.0**	**-1.8**
	baz=326								
TCOL	**CIGO, UAF Yank**	**71.07**	**17**	IAMs_20	IAMs_20	22	24	49.7	
	comp=Z,2µm,22.0s								
TCOL	**CIGO, UAF Yank**	**71.07**	**17**	P	**P**	**21**	**49**	**19.7**	**-1.7**
	baz=327								
COLA	**College**	**71.07**	**17**	P	**P**	**21**	**49**	**21.5**	**+0.1**
COLA				IAmb	IAmb	21	49	29.7	
	comp=Z,37nm,0.8s								
COLA	**College**	**71.07**	**17**	IAMs_20	IAMs_20	22	24	50.0	
	comp=Z,1µm,22.0s								
COLA	**College**	**71.07**	**17**	*c i* P	**P**	**21**	**49**	**21.5**	**+0.1**
COLA				pmax	pmax				
	comp=Z,38nm,1.0s								
COLA	**College**	**71.07**	**17**	P	**P**	**21**	**49**	**20.1**	**-1.3**
	baz=327								
CAST	**Castle Rocks**	**71.24**	**20**	IAMs_20	IAMs_20	22	23	01.6	
	comp=Z,1µm,22.0s								
CAST	**Castle Rocks**	**71.24**	**20**	P	**P**	**21**	**49**	**22.2**	**-0.3**
	baz=324,SNR=24								
CCB	**Clear Creek Bu**	**71.27**	**17**	P	**P**	**21**	**49**	**22.4**	**-0.3**
CCB				IAmb	IAmb	21	49	40.8	
	comp=Z,42nm,1.5s								
CCB				IAMs_20	IAMs_20	22	21	42.5	
	comp=Z,1µm,22.0s								
WRH	**Wood River Hil**	**71.35**	**18**	IAMs_20	IAMs_20	22	25	19.6	
	comp=Z,1µm,18.0s								
IL31		**71.38**	**17**	P	**P**	**21**	**49**	**22.2**	**-1.1**
IL31				IAmb	IAmb	21	49	24.4	
	comp=Z,40nm,1.4s								
ILAR	**Eielson Array**	**71.38**	**17**	P	**P**	**21**	**49**	**22.6**	**-0.7**
	comp=Z,9.9nm,0.8s,baz=322,slow=4.8,SNR=86								
ILAR				LR	LR	22	25	03.1	
	comp=Z,1µm,19.2s,baz=301,slow=40								
	comp=Z,9.9nm,0.8s								
ILAR	**Eielson Array**	**71.38**	**17**	P	**P**	**21**	**49**	**22.4**	**-1.0**
KTH	**Kantishna Hill**	**71.43**	**19**	P	**P**	**21**	**49**	**23.2**	**-0.6**
KTH				IAmb	IAmb	21	49	32.8	
	comp=Z,44nm,1.0s								
L19K	**White Mountain**	**71.47**	**22**	P	**P**	**21**	**49**	**24.0**	**0.0**
L19K				IAMs_20	IAMs_20	22	23	44.7	
	comp=Z,1µm,20.0s								
L19K	**White Mountain**	**71.47**	**22**	P	**P**	**21**	**49**	**24.2**	**+0.1**
	baz=323,SNR=17								
L19K				S	**S**	**21**	**58**	**43.7**	**+1.4**
	baz=323								
L20K	**Farewell, AK**	**71.51**	**21**	P	**P**	**21**	**49**	**24.1**	**-0.1**
	baz=323,SNR=20								
L20K				S	**S**	**21**	**58**	**42.2**	**-0.5**
	baz=323								
N16K	**Nishlik Lake**	**71.62**	**24**	P	**P**	**21**	**49**	**25.5**	**+0.6**
	baz=320,SNR=18								
PPLA	**Purkeypile**	**71.63**	**20**	P	**P**	**21**	**49**	**23.5**	**-1.7**
	baz=324,SNR=9.5								
HDA	**Harding Lake**	**71.67**	**17**	IAMs_20	IAMs_20	22	24	52.0	
	comp=Z,1µm,18.0s								
HDA	**Harding Lake**	**71.67**	**17**	P	**P**	**21**

SKT IAMs_20 IAMs_20 22 22 18.4
comp=Z,1µm,20.0s
SKT Skwentna 72.56 20 P **P** **21 49 29.4 -1.2**
baz=325,SNR=38
SKT S **S** **21 58 52.3 -2.4**
baz=325
I29M Ogilvie Camp, 72.60 13 P **P** **21 49 29.7 -1.0**
I29M IAmb IAmb 21 49 38.2
comp=Z,25nm,0.8s
I29M Ogilvie Camp, 72.60 13 P **P** **21 49 29.8 -1.0**
baz=335
BLWY Bulawayo 72.60 224 *i* P **P** **21 49 30.7 -0.7**
BLWY Bulawayo 72.60 224 *i* P **P** **21 49 30.7 -0.7**
GIRL Giralia 72.62 141 P **P** **21 49 31.3 +0.1**
GIRL Giralia 72.62 141 P **P** **21 49 33.4 +2.2**
WAT1 Susitna Watana 72.63 19 P **P** **21 49 29.5 -1.4**
baz=327
N19K Bonanza Creek 72.67 22 IAMs_20 IAMs_20 22 23 51.5
comp=Z,1µm,19.0s
N19K Bonanza Creek 72.67 22 P **P** **21 49 31.6 +0.3**
baz=323
N19K S **S** **21 58 56.3 +0.1**
baz=323
O17K Koliganek Bris 72.70 24 P **P** **21 49 31.5 +0.2**
baz=321,SNR=6.2
O17K S **S** **21 58 56.2 0.0**
baz=321
SCRK Sand Creek 72.71 16 IAMs_20 IAMs_20 22 22 53.0
comp=Z,1µm,20.0s
SCRK Sand Creek 72.71 16 P **P** **21 49 30.8 -0.6**
baz=331,SNR=35
SCRK S **S** **21 58 55.3 -1.2**
baz=331
DHY Denali Highway 72.71 18 P **P** **21 49 30.8 -0.7**
DHY IAmb IAmb 21 49 45.9
comp=Z,26nm,0.7s
DHY Denali Highway 72.71 18 P **P** **21 49 30.8 -0.7**
baz=328
RIDG Independent Ri 72.72 17 IAMs_20 IAMs_20 22 25 01.8
comp=Z,1µm,20.0s
RIDG Independent Ri 72.72 17 P **P** **21 49 30.6 -0.9**
baz=330,SNR=16
RIDG S **S** **21 58 54.1 -2.5**
baz=330
FRB Frobisher Bay 72.78 343 P **P** **21 49 31.7 0.0**
comp=Z,11nm,0.8s,baz=62,slow=7.8,SNR=6.9
FRB LR LR 22 25 46.5
comp=Z,562nm,18.4s,baz=24,slow=39
comp=Z,11nm,0.8s
MATP Matopo 72.90 224 *i* P **P** **21 49 32.4 -0.8**
MATP Matopo 72.90 224 *i* P **P** **21 49 32.4 -0.8**
P16K Nushagak River 72.99 25 P **P** **21 49 33.2 +0.2**
baz=321,SNR=16
WAT6 Susitna Watana 73.04 19 P **P** **21 49 32.4 -1.2**
baz=328,SNR=13
K27K Chicken 73.07 16 P **P** **21 49 33.9 +0.4**
K27K IAmb IAmb 21 49 53.1
comp=Z,72nm,1.5s
K27K IAMs_20 IAMs_20 22 25 19.4
comp=Z,2µm,20.0s
SPU Mount Spurr 73.07 21 P **P** **21 49 33.5 -0.2**
M22K Willow 73.13 20 P **P** **21 49 33.3 -0.6**
baz=326
SUA Susitna One 73.20 20 IAMs_20 IAMs_20 22 27 01.3
comp=Z,1µm,18.0s
SUA Susitna One 73.20 20 P **P** **21 49 33.6 -0.9**
baz=326
SUA S **S** **21 58 59.1 -3.1**
baz=326
O19K Port Alsworth 73.22 23 P **P** **21 49 34.5 +0.1**
baz=323
O18K Koktuh Hills 73.22 23 IAMs_20 IAMs_20 22 25 03.1
comp=Z,1µm,18.0s
O18K Koktuh Hills 73.22 23 P **P** **21 49 34.6 +0.2**
baz=323
PAX Paxson 73.25 17 P **P** **21 49 33.9 -0.8**
PAX IAmb IAmb 21 49 52.8
comp=Z,50nm,1.2s
PAX Paxson 73.25 17 P **P** **21 49 33.9 -0.8**
PAX pmax pmax
comp=Z,50nm,1.2s
PAX Paxson 73.25 17 P **P** **21 49 33.8 -0.8**
baz=330,SNR=29
PAX S **S** **21 59 00.5 -2.2**
baz=330
NIKH Nikolski High 73.34 34 S **S** **21 59 00.4 -3.3**
baz=314
P17K Kvichak River 73.36 24 P **P** **21 49 35.4 +0.1**
baz=322,SNR=15
J29M Klondike Camp 73.44 14 P **P** **21 49 34.4 -1.4**
baz=335
PMR Palmer 73.52 20 P **P** **21 49 35.4 -0.7**
PMR IAmb IAmb 21 50 05.2
comp=Z,38nm,1.2s
PMR Palmer 73.52 20 P **P** **21 49 35.4 -0.7**
PMR pmax pmax
comp=Z,38nm,1.2s
PMR Palmer 73.52 20 P **P** **21 49 35.5 -0.7**
baz=327
SML Sawmill 73.55 19 P **P** **21 49 35.6 -0.8**
baz=328,SNR=23
SML S **S** **21 59 04.2 -1.8**
baz=328
DAWY Dawson 73.57 14 P **P** **21 49 36.1 -0.3**
DAWY IAmb IAmb 21 49 54.8
comp=Z,81nm,1.7s
DAWY Dawson 73.57 14 P **P** **21 49 36.0 -0.5**
baz=334,SNR=16
DAWY S **S** **21 59 05.8 -0.4**
baz=334
P18K Big Mountain, 73.58 24 P **P** **21 49 36.8 +0.1**
P18K IAmb IAmb 21 49 39.0
comp=Z,46nm,1.1s
P18K IAMs_20 IAMs_20 22 27 22.6
comp=Z,1µm,18.0s
P18K Big Mountain, 73.58 24 P **P** **21 49 36.8 +0.1**
baz=323
FIS Fire Island 73.61 20 IAMs_20 IAMs_20 22 22 37.4
comp=Z,1µm,20.0s
CAPN Captain Cook N 73.67 21 IAMs_20 IAMs_20 22 21 59.9
comp=Z,1µm,18.0s
CAPN Captain Cook N 73.67 21 P **P** **21 49 36.4 -0.5**
baz=326
L26K Log Cabin Wild 73.68 17 IAMs_20 IAMs_20 22 25 40.8
comp=Z,1µm,20.0s
L26K Log Cabin Wild 73.68 17 P **P** **21 49 36.7 -0.5**
baz=331,SNR=6.0
L26K S **SKiKP** **21 59 06.7 0.0**
baz=331
Q16K King Salmon 73.70 25 P **P** **21 49 36.8 -0.4**
baz=322
M23K Glacier View 73.71 19 P **P** **21 49 36.5 -0.8**
baz=328,SNR=20
SCM Sheep Creek Mo 73.78 19 IAMs_20 IAMs_20 22 26 30.5
comp=Z,1µm,18.0s
SCM Sheep Creek Mo 73.78 19 P **P** **21 49 36.9 -0.9**
baz=328,SNR=22
SCM S **SKiKP** **21 59 06.8 0.0**
baz=328
RC01 Rabbit Creek A 73.78 20 IAMs_20 IAMs_20 22 23 44.7
comp=Z,2µm,22.0s
RC01 Rabbit Creek A 73.78 20 P **P** **21 49 36.7 -1.0**
baz=327,SNR=5.8
RC01 S **S** **21 59 08.2 -0.4**
baz=327
O20K Slope Mountain 73.81 22 P **P** **21 49 37.2 -0.8**
baz=325
HARP HAARP 73.82 18 P **P** **21 49 37.9 -0.1**
baz=330,SNR=19
HARP S **S** **21 59 09.0 0.0**
baz=330
M24K Tolsona, Glenn 73.83 18 P **P** **21 49 37.8 -0.2**
baz=329,SNR=15
KNK Knik Glacier 73.85 20 P **P** **21 49 37.8 -0.3**
baz=328,SNR=6.6
KNK S **S** **21 59 08.3 -1.0**
baz=328
GENI Genyem 73.92 107 P **P** **21 49 42.5 +3.3**
comp=Z,2µmcomp=Z,145nm,1.2s
GENI Genyem 73.92 107 P **P** **21 49 42.0 +2.8**
MOPA Mopani 73.96 220 *i* P **P** **21 49 38.5 -0.7**
MOPA Mopani 73.96 220 *i* P **P** **21 49 38.5 -0.7**
L27K Beaver Creek, 73.98 16 IAMs_20 IAMs_20 22 22 16.5
comp=Z,1µm,21.0s
L27K Beaver Creek, 73.98 16 P **P** **21 49 38.9 0.0**
baz=332,SNR=22
L27K S **S** **21 59 10.8 0.0**
baz=332
BCAR Beaver Creek A 73.98 16 P **P** **21 49 39.1 +0.1**
MBWA Marble Bar 74.23 135 P **P** **21 49 40.2 -0.5**
MBWA IAmb IAmb 21 49 49.5
comp=Z,44nm,1.1s
MBWA Marble Bar 74.23 135 P **P** **21 49 41.2 +0.4**
Q18K Katmai Hardscr 74.25 24 P **P** **21 49 39.8 -0.9**
baz=323
O22K Copper Landing 74.30 21 IAMs_20 IAMs_20 22 27 14.3
comp=Z,1µm,21.0s
M26K Nabesna, AK 74.31 17 IAMs_20 IAMs_20 22 26 11.4
comp=Z,1µm,20.0s
M26K Nabesna, AK 74.31 17 P **P** **21 49 40.6 -0.3**
baz=332,SNR=7.6
M26K S **S** **21 59 14.4 -0.1**
baz=332
KLU Klutina 74.42 18 P **P** **21 49 41.4 -0.2**
KLU IAmb IAmb 21 49 51.0
comp=Z,36nm,1.1s
KLU IAMs_20 IAMs_20 22 26 50.4
comp=Z,1µm,19.0s
KLU Klutina 74.42 18 P **P** **21 49 41.6 0.0**
baz=330,SNR=12
Q19K Cape Douglas, 74.45 23 P **P** **21 49 42.1 +0.4**
baz=324
BRLK Bradley Lake 74.57 22 IAMs_20 IAMs_20 22 26 31.1
comp=Z,1µm,19.0s
S14K Fog Glacier 74.58 28 P **P** **21 49 42.5 0.0**
baz=320
M27K Edge Creek, AK 74.59 16 P **P** **21 49 42.8 +0.1**
M27K IAmb IAmb 21 50 02.4
comp=Z,51nm,1.3s
M27K IAMs_20 IAMs_20 22 26 45.8
comp=Z,1µm,18.0s
M27K Edge Creek, AK 74.59 16 P **P** **21 49 42.7 +0.1**
baz=332,SNR=11
M27K S **S** **21 59 17.0 -1.0**
baz=332
R17K Ugashik Creek 74.61 25 P **P** **21 49 42.0 -0.6**
baz=322
R17K S **S** **21 59 18.3 +0.4**
baz=322
PSA00 Pilbara Seismi 74.63 136 P **P** **21 49 42.4 -0.7**
PSA00 IAmb IAmb 21 49 52.3
comp=Z,122nm,1.9s
PSA00 Pilbara Seismi 74.63 136 P **P** **21 49 42.5 -0.6**
PSA00 IAmb IAmb 21 49 52.3
comp=Z,175nm,1.8s
PSA00 Pilbara Seismi 74.63 136 P **P** **21 49 43.2 +0.1**
BRSE Bradley Lake S 74.63 21 P **P** **21 49 42.1 -0.6**
baz=326
N25K Chitina, Valde 74.64 18 P **P** **21 49 43.3 +0.5**
N25K IAmb IAmb 21 50 02.8
comp=Z,81nm,1.6s
N25K Chitina, Valde 74.64 18 P **P** **21 49 42.9 +0.1**
baz=330,SNR=10
N25K S **S** **21 59 18.1 -0.2**
baz=330
GLI Glacier Island 74.65 19 P **P** **21 49 42.2 -0.7**
baz=329,SNR=10
GLI S **S** **21 59 16.5 -1.9**
baz=329
SEW Seward 74.69 21 P **P** **21 49 41.9 -1.1**
baz=327
BVCY Beaver Creek 74.76 16 P **P** **21 49 43.4 -0.1**
baz=333
DIV Divide 74.77 19 P **P** **21 49 43.4 -0.2**
DIV IAmb IAmb 21 50 02.2
comp=Z,94nm,1.8s
FID Port Fidalgo 74.92 19 P **P** **21 49 44.2 -0.2**
SDPT Sand Point 74.96 29 P **P** **21 49 43.5 -1.2**
baz=320
GLB Gilahina Butte 74.97 18 IAMs_20 IAMs_20 22 21 38.8
comp=Z,1µm,21.0s
Q20K Shuyak Island 75.08 23 P **P** **21 49 44.5 -0.8**
baz=325
BMRM Bremner River 75.19 18 P **P** **21 49 46.0 0.0**
BMRM IAmb IAmb 21 50 04.9
comp=Z,37nm,0.9s
BMRM Bremner River 75.19 18 P **P** **21 49 45.5 -0.5**
baz=331,SNR=9.1
BMRM S **S** **21 59 24.6 +0.1**
baz=331
MCARA McCarthy VSAT 75.20 17 IAMs_20 IAMs_20 22 28 05.0
comp=Z,1µm,20.0s
MCARA McCarthy VSAT 75.20 17 P **P** **21 49 45.3 -0.7**
baz=332
HIN Hinchinbrook I 75.22 19 IAMs_20 IAMs_20 22 27 17.6
comp=Z,1µm,18.0s
VRDI Verde Repeater 75.24 17 IAMs_20 IAMs_20 22 26 48.0
comp=Z,1µm,18.0s
EYAK Cordova Ski Ar 75.28 19 P **P** **21 49 46.4 0.0**
baz=330,SNR=5.9
EYAK S **S** **21 59 25.5 +0.3**
baz=330
KNRA Kununurra 75.29 125 P **P** **21 49 46.6 -0.4**
KNRA Kununurra 75.29 125 P **P** **21 49 47.4 +0.4**
YUK3 Moose Creek 75.42 16 P **P** **21 49 47.4 -0.1**
baz=334,SNR=20
M30M Minto, Yukon 75.42 14 P **P** **21 49 46.9 -0.4**
baz=336,SNR=12
M30M S **S** **21 59 27.1 +0.2**
baz=336
KDU Kakadu 75.50 120 P **P** **21 49 48.9 +0.6**
CHNA Chernabura Isl 75.69 28 P **P** **21 49 48.0 -0.8**
baz=320
CNBA Chernabura Isl 75.69 28 P **P** **21 49 48.0 -0.9**
KDAK Kodiak Island 75.71 23 LR LR 22 26 52.1
comp=Z,1µm,20.4s,baz=340,slow=39
KDAK Kodiak Island 75.71 23 P **P** **21 49 48.7 -0.2**
KDAK IAmb IAmb 21 49 50.6
comp=Z,33nm,1.1s
KDAK Kodiak Island 75.71 23 IAMs_20 IAMs_20 22 26 38.7
comp=Z,1µm,19.0s
KDAK Kodiak Island 75.71 23 P **P** **21 49 48.7 -0.2**
KDAK pmax pmax
comp=Z,33nm,1.1s
KDAK MLR MLR
comp=Z,1µm,19.0s
KDAK Kodiak Island 75.71 23 P **P** **21 49 48.1 -0.8**
baz=325
CRQM Cirque 75.73 18 IAMs_20 IAMs_20 22 27 59.3
comp=Z,1µm,20.0s
CRQE Cirque 75.74 18 P **P** **21 49 48.4 -0.8**
baz=332
BARN Barnard Glacie 75.80 17 IAMs_20 IAMs_20 22 26 34.7
comp=Z,1µm,21.0s
TGL Tana Glacier 75.80 17 IAMs_20 IAMs_20 22 28 01.9
comp=Z,1µm,20.0s
OHAK Old Harbor 75.94 24 P **P** **21 49 50.5 +0.2**
baz=325
CTG Chitna Glacier 75.95 17 P **P** **21 49 50.0 -0.4**
baz=333,SNR=6.4
CTGM Chitina Glacie 75.95 17 P **P** **21 49 50.6 +0.1**
CTGM IAmb IAmb 21 50 10.1
comp=Z,100nm,1.7s
CTGM IAMs_20 IAMs_20 22 26 32.8
comp=Z,1µm,19.0s
ISLE Juniper Island 76.05 17 IAMs_20 IAMs_20 22 28 20.4
comp=Z,975nm,19.0s
WAX Waxell Ridge 76.06 18 P **P** **21 49 50.5 -0.5**
WAX IAmb IAmb 21 50 11.7
comp=Z,28nm,0.9s
GRNC Granite Creek 76.07 17 P **P** **21 49 50.9 -0.3**
GRNC IAMs_20 IAMs_20 22 26 48.9
comp=Z,1µm,20.0s
LOGN Logan Glacier 76.15 17 IAMs_20 IAMs_20 22 29 17.1
comp=Z,1µm,19.0s
YUK4 Talbot Arm 76.18 15 P **P** **21 49 51.6 -0.3**
baz=335
SII Sitkinak Islan 76.20 25 IAMs_20 IAMs_20 22 27 28.8
comp=Z,1µm,18.0s
SII Sitkinak Islan 76.20 25 P **P** **21 49 51.8 0.0**
baz=324
M31M Drury Creek, Y 76.20 13 P **P** **21 49 51.8 +0.1**
M31M IAmb IAmb 21 50 03.9
comp=Z,26nm,0.9s
M31M IAMs_20 IAMs_20 22 24 56.1
comp=Z,1µm,20.0s
M31M Drury Creek, Y 76.20 13 P **P** **21 49 51.8 +0.1**
baz=338,SNR=15
M31M S **S** **21 59 34.6 -0.9**
baz=338
SNH Sunshine Point 76.31 18 IAMs_20 IAMs_20 22 28 07.3
comp=Z,1µm,18.0s
CHIR Chirikof Islan 76.31 26 P **P** **21 49 51.8 -0.6**
baz=323
FARO Faro, Yukon 76.35 13 P **P** **21 49 52.6 +0.1**
N30M Aishikik Lake 76.39 15 P **P** **21 49 53.1 +0.2**
baz=336,SNR=7.5
N30M S **S** **21 59 37.0 -0.7**
baz=336
YAH Yahtse 76.40 17 IAMs_20 IAMs_20 22 27 00.7
comp=Z,1µm,20.0s
TABL Table Mountain 76.47 17 IAMs_20 IAMs_20 22 27 21.4
comp=Z,1µm,20.0s
MESA MESA 76.52 17 IAMs_20 IAMs_20 22 27 06.7
comp=Z,1µm,20.0s
MESA MESA 76.52 17 P **P** **21 49 53.2 -0.5**
baz=333
YUK6 Outpost Mounta 76.61 15 P **P** **21 49 54.3 0.0**
baz=335,SNR=9.2
DBIC Dimbokro 76.75 268 P **P** **21 49 54.7 -0.9**
comp=Z,13nm,0.9s,baz=48,slow=6.0,SNR=8.1
DBIC LR LR 22 28 11.0
comp=Z,359nm,18.6s,baz=40,slow=39
comp=Z,13nm,0.9s
DBIC Dimbokro 76.75 268 P **P** **21 49 54.3 -1.2**
DBIC IAmb IAmb 21 50 04.2
comp=Z,33nm,0.9s
DBIC Dimbokro 76.75 268 P **P** **21 49 54.3 -1.2**
DBIC pmax pmax
comp=Z,33nm,0.9s
KIC Kosan Boka 76.86 267 *e* P **P** **21 49 54.8 -1.4**
comp=Z,41nm,0.7s
HYT Haines Junctio 76.89 15 P **P** **21 49 56.0 +0.3**
HYT IAmb IAmb 21 50 09.2
comp=Z,44nm,0.7s
HYT Haines Junctio 76.89 15 P **P** **21 49 55.6 -0.1**
baz=336,SNR=28
HYT S **S** **21 59 43.0 -0.3**
baz=336
TIC Toumodi 76.90 268⇑ *e* P **P** **21 49 55.9 -0.5**
comp=Z,6.6nm,0.2s
PINM Pinnacle 76.97 17 P **P** **21 49 56.1 0.0**
baz=334
LIC Lamto 77.17 267⇑ *e* P **P** **21 49 57.4 -0.5**
comp=Z,4.2nm,0.2s
O30N Mendenhall 77.22 14 P **P** **21 49 57.3 -0.2**
baz=337,SNR=14
O30N S **S** **21 59 47.0 +0.3**
baz=337
BCPM Bancas Point 77.24 16 IAMs_20 IAMs_20 22 25 24.6
comp=Z,906nm,20.0s
PNL Peninsula 77.55 16 P **P** **21 49 58.4 -1.0**
baz=335
PNL S **S** **21 59 51.3 +1.0**
baz=335
WHY Whitehorse 77.55 14 P **P** **21 49 58.7 -0.7**
WHY Whitehorse 77.55 14 P **P** **21 49 58.8 -0.7**
baz=338,SNR=7.8
TGTN Hyland Airport 77.80 10 P **P** **21 50 00.7 0.0**
baz=343
YKA Yellowknife Ar 78.16 4 P **P** **21 50 02.3 -0.3**
comp=Z,18nm,0.7s,baz=350,slow=5.7,SNR=79
YKA LR LR 22 28 30.6
comp=Z,790nm,18.2s,baz=350,slow=39
comp=Z,18nm,0.7s
YKA Yellowknife Ar 78.16 4 *i* P **P** **21 50 02.2 -0.4**
YKA pmax pmax
comp=Z,18nm,0.7s
LBTB Lobatse 78.17 223 LR LR 22 25 09.4
comp=Z,767nm,18.6s,baz=27,slow=36
LBTB Lobatse 78.17 223 P **P** **21 50 02.9 -0.4**
LBTB Lobatse 78.17 223 P **P** **21 50 02.9 -0.4**
LBTB pmax pmax
comp=Z,100nm,1.0s
LBTB Lobatse 78.17 223 *i* P **P** **21 50 02.9 -0.4**
LBTB Lobatse 78.17 223 *i* P **P** **21 50 02.9 -0.4**
TSUM Tsumeb 78.26 233 LR LR 22 27 58.4
comp=Z,1µm,18.9s,baz=38,slow=38
TSUM Tsumeb 78.26 233 P **P** **21 50 03.2 -0.7**
TSUM IAmb IAmb 21 50 12.7
comp=Z,57nm,1.4s
P33M Teslin, Yukon 78.34 13 P **P** **21 50 03.4 -0.4**
P33M IAmb IAmb 21 50 23.5
comp=Z,56nm,1.4s
P33M Teslin, Yukon 78.34 13 P **P** **21 50 03.2 -0.6**
baz=340,SNR=28
P33M S **S** **21 59 56.5 -2.4**
baz=340
PLBC Pleasant Camp 78.37 15 P **P** **21 50 03.9 0.0**
baz=337,SNR=19
SKAG Skagway 78.58 15 P **P** **21 50 05.2 +0.2**
baz=336
P32M Atlin 78.76 14 P **P** **21 50 05.8 -0.3**
baz=339
MORW Morawa 78.90 143 P **P** **21 50 06.7 -0.4**
MORW IAmb IAmb 21 50 16.9
comp=Z,53nm,1.1s
MORW Morawa 78.90 143 P **P** **21 50 07.1 0.0**
BESE Bessie Mountai 79.49 15 P **P** **21 50 09.7 -0.4**
JIS Juneau Island 79.86 15 IAMs_20 IAMs_20 22 30 20.0
comp=Z,944nm,20.0s
SCHQ Schefferville 80.08 338 P **P** **21 50 13.3 0.0**
comp=Z,9.4nm,0.9s,baz=27,slow=7.4,SNR=8.1
SCHQ LR LR 22 25 32.6
comp=Z,1µm,19.4s,baz=30,slow=36
comp=Z,9.4nm,0.9s
SCHQ Schefferville 80.08 338 P **P** **21 50 12.8 -0.5**
DLBC Dease Lake 80.49 12 LR LR 22 32 54.2
comp=Z,564nm,18.2s,baz=344,slow=41
DLBC Dease Lake 80.49 12 P **P** **21 50 15.6 0.0**
DLBC Dease Lake 80.49 12 P **P** **21 50 15.1 -0.5**
baz=342
DLBC S **S** **22 00 21.6 -0.2**
baz=342
BLDU Ballidu 80.52 143 P **P** **21 50 14.7 -1.1**
SIT Sitka 80.81 15 P **P** **21 50 16.6 -0.5**
baz=338
BOSA Boshof 81.26 222 P **P** **21 50 19.6 -0.4**
comp=Z,18nm,1.2s,baz=24,slow=2.9,SNR=18
BOSA LR LR 22 25 29.6
comp=Z,917nm,21.5s,baz=42,slow=35
comp=Z,18nm,1.2s
BOSA Boshof 81.26 222 P **P** **21 50 19.2 -0.8**
BOSA IAmb IAmb 21 50 25.6
comp=Z,67nm,1.2s
BOSA Boshof 81.26 222 P **P** **21 50 19.2 -0.8**
BOSA pmax pmax
comp=Z,67nm,1.2s
BOSA Boshof 81.26 222 *i* P **P** **21 50 19.4 -0.5**
BOSA Boshof 81.26 222 *i* P **P** **21 50 19.4 -0.5**
FCC Fort Churchill 81.56 353 P **P** **21 50 21.4 +0.4**
FCC IAmb IAmb 21 50 23.3
comp=Z,44nm,1.2s
FCC Fort Churchill 81.56 353 P **P** **21 50 21.5 +0.4**
FCC pmax pmax
comp=Z,44nm,1.3s
DRLN Deer Lake 81.59 330 P **P** **21 50 21.4 -0.1**
DRLN IAmb IAmb 21 51 05.3
comp=Z,94nm,1.5s
T35M Bob Quinn 81.84 13 P **P** **21 50 22.8 +0.1**
baz=342
WB0 Warramunga Arr 81.90 124 P **P** **21 50 23.0 -0.5**
WRAK Wrangell Islan 81.99 14 P **P** **21 50 23.2 -0.2**
baz=340
WRA Warramunga Arr 82.00 124 P **P** **21 50 23.8 -0.1**
comp=Z,26nm,0.8s,baz=327,slow=4.9,SNR=146
WRA LR LR 22 33 40.5
comp=Z,228nm,18.1s,baz=33,slow=41
comp=Z,26nm,0.8s
WRA Warramunga Arr 82.00 124 P **P** **21 50 23.7 -0.3**
WRA Warramunga Arr 82.00 124 *i* P **P** **21 50 24.1 +0.2**
WRA pmax pmax
comp=Z,28nm,0.9s
WRAB Tennant Creek 82.00 124 *c i* P **P** **21 50 24.5 +0.6**
WRAB pmax pmax
comp=Z,32nm,0.9s
WRAB Tennant Creek 82.00 124 P **P** **21 50 24.5 +0.6**
WRKA Warakurna 82.10 132 P **P** **21 50 25.0 +0.6**
WR0 Warramunga Arr 82.14 124 P **P** **21 50 24.3 -0.4**
WR0 IAmb IAmb 21 50 35.5
comp=Z,62nm,1.2s
NWAO Narrogin (SRO) 82.70 144 P **P** **21 50 26.3 -1.0**
NWAO Narrogin (SRO) 82.70 144 P **P** **21 50 26.3 -1.0**
NWAO pmax pmax
comp=Z,159nm,1.8s
CRAG Craig 82.74 15 P **P** **21 50 27.4 0.0**
baz=340
COEN Coen 83.78 114 P **P** **21 50 32.8 -0.5**
COEN Coen 83.78 114 P **P** **21 50 34.6 +1.3**
KRVT Keravat (AS076 83.95 101 P **P** **21 50 35.5 +1.3**
comp=Z,13nm,0.4s,baz=253,slow=14,SNR=1.1

comp=Z,13nm,0.4s
AS31 Alice Springs 84.44 127 P **P** 21 50 36.3 -0.2
ASAR Alice Springs 84.44 127 P **P** 21 50 36.5 0.0
comp=Z,16nm,0.8s,baz=323,slow=5.5,SNR=65
ASAR LR LR 22 32 09.3
comp=Z,287nm,19.9s,baz=322,slow=38
comp=Z,16nm,0.8s
ASAR Alice Springs 84.44 127 P **P** 21 50 36.1 -0.4
GRNB Grenville Isla 84.88 14 P **P** 21 50 38.0 -0.3
QIS Mount Isa 85.88 121 P **P** 21 50 44.4 +0.6
FFC Flin Flon 86.08 357 P **P** 21 50 44.0 -0.3
FFC IAmb IAmb 21 50 51.4
comp=Z,24nm,0.8s
FFC Flin Flon 86.08 357 IAMs_20 IAMs_20 22 33 46.5
comp=Z,1µm,22.0s
FFC Flin Flon 86.08 357 P **P** 21 50 44.0 -0.3
FFC pmax pmax
comp=Z,24nm,0.8s
FFC MLR MLR
comp=Z,1µm,22.0s
GBN Guysborough 86.31 330 P **P** 21 50 45.8 +0.2
GBN IAmb IAmb 21 50 55.1
comp=Z,51nm,1.1s
BATG Bathurst New B 86.38 334 P **P** 21 50 46.1 +0.2
BATG IAmb IAmb 21 50 50.8
comp=Z,26nm,0.9s
FORT Forrest 86.38 135 P **P** 21 50 44.7 -1.3
FORT Forrest 86.38 135 P **P** 21 50 47.2 +1.2
SUR Sutherland 86.56 222 LR LR 22 29 30.6
comp=Z,787nm,20.6s,baz=32,slow=36
SUR Sutherland 86.56 222 P **P** 21 50 45.6 -1.5
BBB Bella Bella 86.80 13 LR LR 22 35 47.8
comp=Z,379nm,18.3s,baz=334,slow=40
MTSU Mount Surprise 87.42 116 P **P** 21 50 52.0 +0.6
EDM Edmonton 87.48 4 P **P** 21 50 51.0 -0.3
EDM Edmonton 87.48 4 P **P** 21 50 51.0 -0.3
EDM pmax pmax
comp=Z,43nm,1.0s
LMQ La Malbaie 87.53 336 P **P** 21 50 51.4 -0.2
LMQ IAmb IAmb 21 51 31.2
comp=Z,43nm,1.5s
D62A Allapoint, All 87.54 335 P **P** 21 50 52.0 +0.3
D62A IAmb IAmb 21 51 04.0
comp=Z,12nm,0.8s
PQI Presque Isle 87.56 335 P **P** 21 50 51.7 0.0
PQI IAmb IAmb 21 51 00.8
comp=Z,14nm,0.8s
PQI IAMs_20 IAMs_20 22 28 38.7
comp=Z,784nm,20.0s
E62A Clayton Lake 88.10 335 P **P** 21 50 54.0 -0.3
E62A IAmb IAmb 21 51 32.8
comp=Z,25nm,1.4s
OOD Oodnadatta 88.55 128 P **P** 21 50 56.2 -0.3
VLDQ Val d'Or 89.03 341 P **P** 21 50 58.3 -0.3
VLDQ IAmb IAmb 21 51 13.9
comp=Z,48nm,1.3s
EMMW East Machias 89.09 333 IAMs_20 IAMs_20 22 30 18.1
comp=Z,846nm,18.0s
PKME Peaks-Kenny Pk 89.23 335 IAMs_20 IAMs_20 22 29 38.6
comp=Z,941nm,20.0s
PKME Peaks-Kenny Pk 89.23 335 P **P** 21 50 58.7 -0.9
baz=28
LLLB Lillooet 89.28 10 P **P** 21 50 59.6 -0.2
LLLB IAmb IAmb 21 51 21.9
comp=Z,23nm,1.3s
MULG Mulgathing 89.39 131 P **P** 21 51 00.1 -0.3
WVL Waterville 89.97 335 IAMs_20 IAMs_20 22 30 09.2
comp=Z,911nm,20.0s
TRQ Mont Tremblant 89.99 338 P **P** 21 51 02.7 -0.6
TRQ IAmb IAmb 21 51 19.1
comp=Z,31nm,1.5s
CTA Charters Tower 90.08 116 P **P** 21 51 04.7 +0.8
comp=Z,7.0nm,0.7s,baz=324,slow=6.0,SNR=3.8
comp=Z,7.0nm,0.7s
ULM Lac du Bonnet 90.15 353 P **P** 21 51 03.4 -0.4
comp=Z,6.4nm,0.8s,baz=35,slow=2.0,SNR=6.3
ULM LR LR 22 33 44.0
comp=Z,1µm,20.5s,baz=24,slow=37
comp=Z,6.4nm,0.8s
ULM Lac du Bonnet 90.15 353 P **P** 21 51 02.8 -1.1
ULM Lac du Bonnet 90.15 353 P **P** 21 51 02.8 -1.1
ULM pmax pmax
comp=Z,13nm,1.0s
LBNH Lisbon 90.99 336 P **P** 21 51 07.5 -0.4
LBNH IAmb IAmb 21 51 34.9
comp=Z,31nm,1.6s
LBNH IAMs_20 IAMs_20 22 32 06.3
comp=Z,806nm,18.0s
LBNH Lisbon 90.99 336 P **P** 21 51 07.5 -0.4
LBNH pmax pmax
comp=Z,31nm,1.6s
LBNH MLR MLR
comp=Z,800nm,18.0s
LBNH Lisbon 90.99 336 P **P** 21 51 07.5 -0.4
baz=26
VT1 Waterbury 91.17 336 IAMs_20 IAMs_20 22 33 22.2
comp=Z,814nm,18.0s
LONY Lake Ozonia 91.46 338 P **P** 21 51 10.0 -0.1
LONY IAmb IAmb 21 51 18.9
comp=Z,12nm,0.9s
LONY Lake Ozonia 91.46 338 P **P** 21 51 09.6 -0.5
baz=24
HNH Hanover 91.58 336 IAMs_20 IAMs_20 22 31 36.0
comp=Z,827nm,19.0s
FFD Franklin Falls 91.59 335 IAMs_20 IAMs_20 22 40 25.3
comp=Z,986nm,19.0s
WALA Waterton Lakes 91.60 5 P **P** 21 51 10.1 -0.7
WALA IAmb IAmb 21 51 32.8
comp=Z,28nm,1.1s
B08A Colville Reser 91.81 8 P **P** 21 51 11.6 0.0
B08A IAmb IAmb 21 51 14.4
comp=Z,35nm,1.4s
EYMN Ely 91.92 350 P **P** 21 51 11.5 -0.7
EYMN IAmb IAmb 21 51 27.6
comp=Z,23nm,1.0s
EYMN Ely 91.92 350 P **P** 21 51 11.5 -0.7
baz=12
EYMN S **S** 22 02 10.4 -3.1
baz=12
AGMN Agassiz Nation 92.08 353 P **P** 21 51 11.8 -1.1
AGMN IAMs_20 IAMs_20 22 33 44.2
comp=Z,850nm,21.0s
AGMN Agassiz Nation 92.08 353 P **P** 21 51 12.4 -0.4
baz=8.3
NEW Newport 92.13 7 LR LR 22 34 55.6
comp=Z,1µm,21.2s,baz=4.5,slow=37
NEW Newport 92.13 7 P **P** 21 51 12.2 -1.0
NEW IAmb IAmb 21 51 35.7
comp=Z,13nm,1.0s
NEW Newport 92.13 7 P **P** 21 51 12.2 -1.0
NEW pmax pmax
comp=Z,13nm,1.0s
NEW MLR MLR
comp=Z,1µm,21.0s
NEW Newport 92.13 7 P **P** 21 51 12.7 -0.4
baz=352
NLWA Neilton Lookou 92.14 12 IAMs_20 IAMs_20 22 39 12.5
comp=Z,829nm,18.0s
HRV Adam Dziewonsk 92.43 335 IAMs_20 IAMs_20 22 39 06.3
comp=Z,1µm,18.0s
HRV Adam Dziewonsk 92.43 335 P **P** 21 51 14.4 -0.1
baz=26
BCX Boston College 92.45 335 IAMs_20 IAMs_20 22 28 41.0
comp=Z,746nm,21.0s
WES Weston 92.46 335 IAMs_20 IAMs_20 22 31 24.1
comp=Z,686nm,19.0s
J59A Piesco 92.49 337 P **P** 21 51 13.9 -1.0
J59A IAmb IAmb 21 51 23.7
comp=Z,13nm,0.9s
SADO Sadowa 92.57 341 LR LR 22 37 36.8
comp=Z,941nm,18.2s,baz=18,slow=39
EGMT Eagleton 92.83 2 P **P** 21 51 16.6 +0.2
EGMT IAmb IAmb 21 51 18.3
comp=Z,29nm,1.3s
EGMT IAMs_20 IAMs_20 22 34 45.2
comp=Z,816nm,22.0s
EGMT Eagleton 92.83 2 P **P** 21 51 15.9 -0.5
baz=358
MDND Maddock 92.83 355 P **P** 21 51 15.9 -0.5
baz=5.5
L61B Northampton 92.84 336 IAMs_20 IAMs_20 22 31 51.3
comp=Z,697nm,21.0s
L61B Northampton 92.84 336 P **P** 21 51 14.9 -1.5
baz=26
L61B S **S** 22 02 18.4 -3.5
baz=26
JTMT Jette 92.88 5 P **P** 21 51 16.8 +0.1
JTMT IAmb IAmb 21 51 18.8
comp=Z,14nm,1.0s
QUA2 Belchertown 92.89 335 IAMs_20 IAMs_20 22 35 45.6
comp=Z,782nm,18.0s
TRY Troy 92.90 336 IAMs_20 IAMs_20 22 33 05.8
comp=Z,855nm,19.0s
BRYW Bryant College 92.95 335 IAMs_20 IAMs_20 22 40 00.1
comp=Z,884nm,18.0s
COWI Conover 93.38 348 IAMs_20 IAMs_20 22 34 18.4
comp=Z,1µm,21.0s
MSO Missoula 93.81 5 P **P** 21 51 21.0 0.0
MSO Missoula 93.81 5 P **P** 21 51 20.3 -0.7
baz=354
YLE Yale 93.95 335 IAMs_20 IAMs_20 22 32 20.3
comp=Z,774nm,21.0s
BINY Binghamton 94.08 338 P **P** 21 51 22.0 -0.2
baz=23
WSPT Westport, CT 94.20 335 IAMs_20 IAMs_20 22 32 39.3
comp=Z,821nm,19.0s
LAO LASA Array 94.21 360 P **P** 21 51 23.0 +0.2
LAO IAmb IAmb 21 51 31.5
comp=Z,21nm,0.8s
LAO IAMs_20 IAMs_20 22 35 53.6
comp=Z,1µm,21.0s
LAO LASA Array 94.21 360 P **P** 21 51 22.4 -0.4
baz=0.3
LAO S **S** 22 02 30.7 -3.2
baz=0.3
G03D McMinnville, O 94.36 12 IAMs_20 IAMs_20 22 36 19.2
comp=Z,777nm,20.0s
G03D McMinnville, O 94.36 12 P **P** 21 51 23.7 +0.3
baz=347
G05D Wamic, OR 94.62 10 S **S** 22 02 36.8 -0.7
baz=349
STKA Stephens Creek 95.05 128 P **P** 21 51 26.1 -0.5
comp=Z,2.7nm,0.7s,baz=334,slow=8.3,SNR=6.6
comp=Z,2.7nm,0.7s
STKA Stephens Creek 95.05 128 P **P** 21 51 26.3 -0.3
STKA Stephens Creek 95.05 128 P **P** 21 51 26.3 -0.3
STKA pmax pmax
comp=Z,5.0nm,1.6s
H04D Lebanon 95.11 12 IAMs_20 IAMs_20 22 34 05.1
comp=Z,722nm,22.0s
BOZ Bozeman (W) 95.18 4 P **P** 21 51 26.9 -0.5
BOZ IAMs_20 IAMs_20 22 37 35.5
comp=Z,673nm,20.0s
BOZ Bozeman (W) 95.18 4 P **P** 21 51 26.9 -0.5
BOZ pmax pmax
comp=Z,7.0nm,0.8s
BOZ MLR MLR
comp=Z,700nm,20.0s
BOZ Bozeman (W) 95.18 4 P **P** 21 51 26.4 -0.9
baz=356
I02E Swisshome, OR 95.34 12 P **P** 21 51 26.3 -1.6
baz=347
PLID Pearl Lake 95.38 7 IAMs_20 IAMs_20 22 22 41.0
comp=Z,1µm,22.0s
RLMT Red Lodge 95.74 2 P **P** 21 51 30.0 -0.1
RLMT IAmb IAmb 21 51 52.9
comp=Z,14nm,1.1s
RLMT Red Lodge 95.74 2 P **P** 21 51 29.2 -0.8
baz=358
I03D Drain, OR 95.82 12 P **P** 21 51 29.7 -0.4
baz=347
I04A Tendick Farm, 95.87 11 P **P** 21 51 30.2 -0.3
baz=348
YHL Hebgen Lake 95.94 3 P **P** 21 51 30.9 -0.2
AAM Ann Arbor 95.98 343 IAMs_20 IAMs_20 22 38 57.2
comp=Z,751nm,20.0s
SSPA Standing Stone 96.07 338 P **P** 21 51 30.2 -1.1
baz=22
J01E Myrtle Point 96.24 13 IAMs_20 IAMs_20 22 37 19.2
comp=Z,698nm,20.0s
J01E Myrtle Point 96.24 13 P **P** 21 51 30.8 -1.2
baz=347
J04D Umpqua Nationa 96.46 11 IAMs_20 IAMs_20 22 34 46.8
comp=Z,834nm,22.0s
JFWS Jewell Farm 96.66 348 IAMs_20 IAMs_20 22 40 03.2
comp=Z,947nm,19.0s
JFWS Jewell Farm 96.66 348 P **P** 21 51 33.6 -0.4
baz=13
ECSD EROS Data Cent 96.67 353 P **P** 21 51 33.5 -0.5
ECSD IAmb IAmb 21 51 44.7
comp=Z,18nm,1.1s
ECSD IAMs_20 IAMs_20 22 39 21.7
comp=Z,847nm,20.0s
RSSD Black Hills 96.74 358 P **P** 21 51 34.3 -0.3
RSSD IAmb IAmb 21 51 42.4
comp=Z,10nm,0.7s
RSSD Black Hills 96.74 358 P **P** 21 51 34.3 -0.3
RSSD pmax pmax
comp=Z,10.0nm,0.7s
RSSD MLR MLR
comp=Z,2µm,19.0s
RSSD Black Hills 96.74 358 P **P** 21 51 34.6 0.0
baz=2.0
L44A Lake County Fo 96.97 346 IAMs_20 IAMs_20 22 39 59.4
comp=Z,950nm,20.0s
HLID Hailey 97.03 6 IAMs_20 IAMs_20 22 36 48.6
comp=Z,1µm,21.0s
MFID Camas Ranch 97.06 7 IAMs_20 IAMs_20 22 36 39.3
comp=Z,797nm,21.0s
TPAW Teton Pass 97.31 3 IAMs_20 IAMs_20 22 35 56.9
comp=Z,777nm,22.0s
O53A New Philadelph 97.33 341 IAMs_20 IAMs_20 22 35 53.1
comp=Z,834nm,18.0s
REDW Red Top Meadow 97.44 3 IAMs_20 IAMs_20 22 40 21.4
comp=Z,817nm,18.0s
MCWV Mont Chateau 97.53 340 IAMs_20 IAMs_20 22 35 58.3
comp=Z,799nm,20.0s
WVOR Wild Horse Val 97.73 9 IAMs_20 IAMs_20 22 39 01.2
comp=Z,741nm,20.0s
YBH Yreka Blue Hor 97.84 12 IAMs_20 IAMs_20 22 39 11.4
comp=Z,719nm,20.0s
AHID Auburn Hatcher 98.03 3 IAMs_20 IAMs_20 22 36 29.9
comp=Z,690nm,21.0s
BW06 Boulder Array 98.08 2 IAMs_20 IAMs_20 22 38 16.3
comp=Z,986nm,21.0s
PD31 Pinedale Array 98.08 2 P **P** 21 51 39.8 -0.9
PDAR Pinedale Array 98.08 2 P Pdif 21 51 40.9 +0.1
comp=Z,1.0nm,0.8s,baz=29,slow=3.4,SNR=8.1
PDAR LR LR 22 40 19.6
comp=Z,604nm,19.6s,baz=5.0,slow=38
comp=Z,1.0nm,0.8s
PDAR Pinedale Array 98.08 2 P **P** 21 51 39.7 -1.0
P52A Corning 98.15 341 IAMs_20 IAMs_20 22 36 53.6
comp=Z,818nm,18.0s
CBN Corbin Frederi 98.17 337 IAMs_20 IAMs_20 22 35 20.4
comp=Z,1µm,20.0s
HDIL Hopedale 98.79 347 IAMs_20 IAMs_20 22 41 26.7
comp=Z,913nm,19.0s
HWUT Hardware Ranch 99.16 4 P **Pdif** 21 51 44.9 -0.6
HWUT IAmb IAmb 21 51 56.5
comp=Z,6.5nm,0.8s
HWUT IAMs_20 IAMs_20 22 41 56.9
comp=Z,774nm,19.0s
ELK Elko 99.76 7 LR LR 22 40 41.3
comp=Z,552nm,19.0s,baz=360,slow=38
ELK Elko 99.76 7 IAMs_20 IAMs_20 22 38 41.8
comp=Z,1µm,22.0s
OGNE Ogallala 99.84 357 P **Pdif** 21 51 47.7 -0.7
baz=3.6
BLA Blacksburg 99.97 339 IAMs_20 IAMs_20 22 37 13.1
comp=Z,906nm,19.0s
DUG Dugway, Tooele 100.49 5 IAMs_20 IAMs_20 22 43 50.2
comp=Z,637nm,18.0s
CNNC Cliffs of the 101.07 336 IAMs_20 IAMs_20 22 37 19.0
comp=Z,790nm,22.0s
KSU1 Kansas State U 101.26 352 IAMs_20 IAMs_20 22 40 48.1
comp=Z,733nm,20.0s
CCM Cathedral Cave 101.56 348 IAMs_20 IAMs_20 22 42 45.0
comp=Z,821nm,20.0s
CCM Cathedral Cave 101.56 348 P **Pdif** 21 51 54.4 -1.6
baz=12
NVAR Mina Array Bea 101.72 9 P **Pdif** 21 51 58.9 +1.9
comp=Z,0.5nm,0.7s,baz=29,slow=4.1,SNR=1.3
R11A Troy Canyon, C 102.10 7 P **Pdif** 21 51 57.3 -1.3
baz=353
WVT Waverly 102.80 345 IAMs_20 IAMs_20 22 39 49.7
comp=Z,822nm,18.0s
WVT Waverly 102.80 345 P **Pdif** 21 52 00.7 -0.8
baz=15
MVCO Mesa Verde 103.66 2 IAMs_20 IAMs_20 22 44 21.1
comp=Z,870nm,19.0s
T25A Trinidad 103.72 358 P **Pdif** 21 52 03.8 -2.1
baz=1.8
NHSC New Hope 103.74 337 IAMs_20 IAMs_20 22 40 31.8
comp=Z,863nm,18.0s
GOGA Godfrey 104.38 340 IAMs_20 IAMs_20 22 43 52.5
comp=Z,869nm,20.0s
OXF Oxford 104.68 345 IAMs_20 IAMs_20 22 45 28.6
comp=Z,833nm,18.0s
WUAZ Wupatki 105.24 4 IAMs_20 IAMs_20 22 42 55.7
comp=Z,938nm,20.0s
LRAL Lakeview Retre 105.60 343 IAMs_20 IAMs_20 22 40 10.5
comp=Z,754nm,20.0s
WMOK Wichita Mounta 105.80 353 IAMs_20 IAMs_20 22 41 37.2
comp=Z,776nm,21.0s
VBMS Vicksburg 107.12 346 IAMs_20 IAMs_20 22 42 22.1
comp=Z,837nm,20.0s
TUC Tucson 108.46 4 P **PKiKP** 21 56 32.8 +0.1
baz=357
MNTX Cornudas Mount 109.17 359 IAMs_20 IAMs_20 22 47 26.6
comp=Z,798nm,19.0s
JCT Junction City 110.11 354 IAMs_20 IAMs_20 22 44 54.4
comp=Z,706nm,20.0s
SEUS St. Eustatius 110.23 315 IAMs_20 IAMs_20 22 44 55.5
comp=Z,533nm,20.0s
TDBA Terre de Bas, 110.82 313 IAMs_20 IAMs_20 22 42 26.1
comp=Z,591nm,21.0s
TXAR Lajitas Array 111.48 357 Pdiff **Pdif** 21 52 43.2 +2.8
comp=Z,0.2nm,0.6s,baz=29,slow=2.9,SNR=4.1
TXAR PKiKP **PKiKP** 21 56 38.1 -0.4
comp=Z,0.2nm,0.5s,baz=328,slow=3.2,SNR=1.8
TXAR PKKPbc **PKKPbc** 22 07 31.4 -0.8
comp=Z,0.5nm,1.0s,baz=188,slow=5.5,SNR=1.9
SDDR Presa de Saban 113.14 324 IAMs_20 IAMs_20 22 42 07.3
comp=Z,621nm,21.0s
TROLL Troll, Antarti 121.55 200 PKPdf **PKiKP** 21 56 56.6 +0.1
SNAA Sanae 122.87 201 PKPdf **PKiKP** 21 56 59.0 0.0
VNA2 Neumayer--Watz 123.89 203 PKPdf **PKPdf** 21 57 00.6 -0.1
baz=28,slow=3.0
VNA1 Neumayer--Stat 124.05 203 PKPdf **PKiKP** 21 57 01.2 0.0
VNA3 Neumayer Olymp 124.69 203 PKPdf **PKPdf** 21 57 02.1 -0.1
BCIP Isla Barro Col 125.61 327 IAMs_20 IAMs_20 22 58 33.4
comp=Z,505nm,19.0s
CLDB Colider 126.83 288 *eP* **PKPdf** 21 57 08.1 0.0
VNDA Vanda 127.84 164 PKP **PKiKP** 21 57 09.7 +1.1
comp=Z,1.3nm,0.9s,baz=278,slow=5.3,SNR=8.0
PDRB Porto dos Gac 128.00 288 *eP* **PKPdf** 21 57 09.7 -0.6
ETMB Extrema 133.51 298 *eP* **PKPdf** 21 57 19.9 -0.8
CPUP Villa Florida 137.12 273 PKP **PKPdf** 21 57 27.4 +0.3
comp=Z,3.0nm,0.8s,baz=83,slow=3.6,SNR=5.0
LVC Limon Verde 143.92 287 *eP* PKPbc 21 57 38.5 +0.8
TRQA Tornquist 145.47 258 **PKPdf** 21 57 41.2 -0.5
TRQA Tornquist 145.47 258 PKIKP **PKPdf** 21 57 41.2 -0.5
GO02 Mina Guanaco 145.90 284 **PKPbc** 21 57 43.8 -0.1
GO03 Copiap 147.68 280 **PKPbc** 21 57 47.7 -0.9
ZON Zonda 148.34 273 **PKPbc** 21 57 49.3 -0.9
ZON Zonda 148.34 273 PKP2 **PKPbc** 21 57 49.3 -0.9
CO01 Juntas del Tor 148.74 276 **PKPbc** 21 57 50.8 -0.8
LCO Las Campanas 148.75 278 **PKPbc** 21 57 50.9 -0.8
LCO Las Campanas 148.75 278 PKP2 **PKPbc** 21 57 50.9 -0.8
GO04 Tololo Observa 149.37 277 **PKPbc** 21 57 52.1 -1.1
CO03 El Pedregal 149.59 275 **PKPbc** 21 57 52.8 -0.7
CO02 Combarbal 149.99 275 **PKPbc** 21 57 53.3 -1.2
VA03 San Esteban 150.29 272 **PKPbc** 21 57 54.4 -0.8
MT02 Curacav 150.93 271 **PKPbc** 21 57 55.5 -1.0
GO05 Huala 152.17 268 **PKPbc** 21 57 58.4 -1.0
PLCA Paso Flores 152.54 256 PKPbc **PKPbc** 21 57 60.0 -0.1
comp=Z,5.5nm,0.9s,baz=208,slow=1.0,SNR=6.3
PLCA Paso Flores 152.54 256 **PKPbc** 21 57 58.3 -1.7
PLCA Paso Flores 152.54 256 PKIKP **PKPbc** 21 57 58.3 -1.7

GUC 28 21:45:37.2±0.7, 34°.75S×71°.80W, h44km±1km, ML3.8, 1C-5D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GO05	**Huala**	**0.28**	**203**	*i* P	Pn	21 45 45.2	-0.4
GO05				*i* S	Sn	21 45 51.4	-0.2
BO03	**Pichilemu**	**0.29**	**332**	*i* P	Pn	21 45 45.8	+0.1
BO03				*i* S	Sn	21 45 51.7	+0.1
BO03				IAML		21 45 52.9	
comp=N,8µm,0.3s							
BO01	**Tunca**	**0.69**	**59**	*i* P	Pn	21 45 50.4	-0.2
BO01				*i* S	Sn	21 45 59.8	-0.4
BO01				IAML		21 46 00.6	
comp=N,5µm,0.2s							
MT01	**Popeta**	**0.99**	**27**	*i* P	Pn	21 45 54.6	-0.1
MT01				*i* S	Sn	21 46 07.2	-0.5
MT01				IAML		21 46 12.2	
comp=E,5µm,0.2s							
ML02	**Panimavida**	**1.05**	**163**	*i* P	Pn	21 45 55.5	0.0
ML02				*i* S	Sn	21 46 07.1	-2.0
ML02				IAML		21 46 13.7	
comp=E,2µm,0.8s							
VA05	**Santo Domingo**	**1.10**	**8**	*e*P	Pn	21 45 55.9	-0.3
VA05				*i* S	Sn	21 46 10.1	-0.2
VA05				IAML		21 46 15.5	
comp=E,2µm,0.3s							
MT09	**Talagante**	**1.18**	**35**	*i* P	Pn	21 45 57.8	+0.4
MT09				*i* S	Sn	21 46 13.2	+0.8
MT09				IAML		21 46 15.8	
comp=N,5µm,0.1s							
BO04	**La Punta**	**1.24**	**52**	*i* P	Pn	21 45 58.3	+0.1
BO04				*i* S	Sn	21 46 14.8	+1.0
BO04				IAML		21 46 16.5	
comp=N,6µm,0.2s							
MT02	**Curacav**	**1.59**	**20**	*i* P	Pn	21 46 03.1	+0.3
MT02				*i* S	Sn	21 46 22.7	+0.5
MT02				IAML		21 46 26.5	
comp=N,763nm,0.3s							
LMEL	**Las Melosas**	**1.60**	**56**	*i* P	Pn	21 46 03.6	+0.5
LMEL				*i* S	Sn	21 46 23.4	+0.7
LMEL				IAML		21 46 28.3	
comp=N,3µm,0.1s							
MT05	**Renca**	**1.62**	**33**	*i* P	Pn	21 46 03.8	+0.5
MT05				*i* S	Sn	21 46 24.0	+1.0
MT05				IAML		21 46 29.4	
comp=E,2µm,0.3s							
MT03	**Universidad Ad**	**1.65**	**41**	*i* P	Pn	21 46 04.2	+0.4
MT03				*i* S	Sn	21 46 24.5	+0.7
MT03				IAML		21 46 30.3	
comp=E,3µm,0.1s							
VA01	**Torpederas**	**1.73**	**4**	*e*P	Pn	21 46 04.8	0.0
PEL	**Peldehue**	**1.85**	**30**	*i* P	Pn	21 46 07.4	+0.8
PEL				*i* S	Sn	21 46 29.5	+0.8
PEL				IAML		21 46 37.1	
comp=E,915nm,0.5s							
FCH	**Farellones**	**1.89**	**42**	*i* P	Pn	21 46 07.8	+0.5
FCH				*i* S	Sn	21 46 31.4	+1.2
FCH				IAML		21 46 36.7	
comp=N,1µm,0.3s							
ROCH	**El Roble**	**1.89**	**20**	*i* P	Pn	21 46 07.8	+0.5
ROCH				*i* S	Sn	21 46 31.2	+1.2
ROCH				IAML		21 46 42.9	
comp=N,1µm,0.2s							
VA06	**Catapilco**	**2.23**	**11**	*i* P	Pn	21 46 11.7	+0.1
VA06				IAML		21 46 52.6	
comp=E,729nm,0.6s							
VA03	**San Esteban**	**2.24**	**28**	*i* P	Pn	21 46 12.4	+0.5
VA03				*i* S	Sn	21 46 39.2	+0.8
VA03				IAML		21 46 49.5	
comp=E,1µm,0.4s							
BI05	**Punta Hualpn**	**2.29**	**209**	IAML		21 46 51.8	
comp=N,311nm,0.6s							
CO02	**Combarbal**	**3.60**	**11**	*e*P	Pn	21 46 30.6	-0.1
CO02				IAML		21 47 35.9	
comp=E,484nm,0.5s							
CO03	**El Pedregal**	**4.01**	**14**	*i* P	Pn	21 46 36.6	+0.3
CO06	**Fray Jorge**	**4.07**	**2**	*e*P	Pn	21 46 36.1	-0.8

NEIC 28 21:49:00.3±0.6, 35°.636N±0°.008×97°.43W±0°.01, h6km±2km, mb_Lg1.9/5, Error ellipse: s-maj=1.7km s-min=0.5km az=49.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OK009	**Oakdale Elemen**	**0.05**	**176**	Pg	Pg	21 49 02.2	+0.3
OK009					Sg	21 49 03.4	+0.5
OKCFA	**Oklahoma City**	**0.22**	**185**	Pg	Pg	21 49 05.2	+0.5
OKCFA				Sg	Sg	21 49 08.5	+0.9
OKCSW	**OKLAHOMA CITY**	**0.23**	**182**		Pg	21 49 05.3	+0.5
OKCSW				Sg	Sg	21 49 08.9	+1.0
FNO	**Franklin**	**0.38**	**177**	Pg	Pg	21 49 08.0	+0.3
FNO				Sg	Sg	21 49 13.7	+1.1
X34A	**Smith Ranch, M**	**1.08**	**198**	Pg	Pg	21 49 21.0	-0.1
X34A				Sg	Sn	21 49 36.8	-0.6
TUL1	**Leonard**	**1.36**	**78**		Pn	21 49 24.7	-1.1

TUL1				IAmb_Lg		21 49 43.6		
	comp=Z,5.3nm,1.0s							
WMOK	**Wichita Mounta**	**1.43**	**231**		**Pn**	21 49 26.4	-0.4	
T35A	**Sooner Cattle**	**1.48**	**30**		**Pn**	21 49 27.3	-0.2	
X37A	**Clayton**	**1.98**	**121**	Pn	**Pb**	21 49 35.6	-1.2	
AMTX	**Amarillo**	**3.56**	**259**	IAmb_Lg		21 50 50.9		
	comp=Z,3.6nm,1.1s							

PRU 28 21:54:01.3±0.0, 50.14N×19.27E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LANS	**Liptovska Anna**	**1.00**	**173**	*e*PG	Pg	21 54 19.9	-0.5
LANS				*e*SG	Sg	21 54 33.1	-0.2
LANS				*e*LG	Lg	21 54 34.8	
MORC	**Moravsky Berou**	**1.17**	**253**	*e*PG	Pg	21 54 24.1	+0.3
MORC				*e*SG	Sb	21 54 39.8	-0.4
MAUC	**Maruska**	**1.22**	**231**	*e*PG	Pb	21 54 24.9	-0.3
MAUC				*e*SG	Sb	21 54 41.9	+0.5
	comp=Z,12nm,0.6s						
KRLC	**Kraliky**	**1.60**	**269**	*e*PG	Pn	21 54 30.2	-0.7
VYHS	**Vyhne**	**1.67**	**190**	*e*PN	Pn	21 54 30.7	-1.1
VYHS				*e*SN	Sn	21 54 52.2	-1.8
VYHS				*e*LG	Lg	21 54 54.1	
DPC	**Dobruska-Polom**	**1.90**	**277**	*e*PG	Pb	21 54 36.5	-0.4
DPC				*e*SG	Sg	21 55 02.2	-0.2
	comp=Z,4.7nm,0.7s						
CKRC	**Cesky Krumlov**	**3.49**	**250**	*e*SG	Sg	21 55 51.4	-2.1

*IDC **28** 22:01:53.7±1.3, 39.31N×73.43E, h0km, mb3.7/6, mbtmp3.5/11, ML2.7/4, Error ellipse: s-maj=22.6km s-min=16.6km az=129.0*
*KRNET **28** 22:01:55.6±0.1, 39.50N×73.47E, mb4.0*
*SOME **28** 22:01:55.2, 39.55N×73.50E, h10km*
*NNC **28** 22:02:00.3±1.3, 39.62N×73.58E, h0km, mb4.3, mpv3.9, Error ellipse: s-maj=9.8km s-min=5.6km az=177.0*

ISC 28 22:01:54.6±1.5, 39.57N±0.04×73.51E±0.03, h0km±10km, n74, σ1s91/104, mb3.6/6, 21C-13D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.10**	**330**	⇑*e*P	**Pn**	**22 02 17.6**	**+0.2**
	baz=33						
OHH				⇑*i*S	**Sn**	**22 02 33.5**	**+0.1**
	baz=33						
DRK	**Karamyk**	**1.33**	**267**	⇑*e*P	**Pb**	**22 02 20.2**	**-0.4**
	baz=70						
DRK				⇑*i*S	**Sn**	**22 02 38.2**	**-1.1**
	baz=70						
BTK	**Batken**	**2.13**	**284**	⇑*i*P	**Pb**	**22 02 34.3**	**+0.1**
	baz=86						
BTK				⇑*e*S	**Sg**	**22 03 02.6**	**-0.5**
	baz=86						
GAR	**Garm**	**2.55**	**258**	⇓*e*P	**Pb**	**22 02 39.7**	**-1.6**
	baz=59						
GAR				⇓*i*S	**Sb**	**22 03 11.8**	**-1.4**
	baz=59						
AML	**Almayashu**	**2.56**	**3**	P	**Pb**	**22 02 41.8**	**+0.2**
	SNR=61						
TRKS	**Terek-Say**	**2.66**	**318**	⇑*e*P	**Pb**	**22 02 41.5**	**-1.8**
	baz=19						
TRKS				⇑*i*S	**Sb**	**22 03 15.0**	**-1.6**
	baz=19						
UCH	**Uchtor**	**2.76**	**16**	P	**Pb**	**22 02 45.9**	**+0.8**
	SNR=53						
UCH	**Uchtor**	**2.76**	**16**	⇑*i*P	**Pb**	**22 02 44.5**	**-0.6**
	baz=16						
UCH				⇑*i*S	**Sb**	**22 03 20.1**	**+0.5**
	baz=16						
EKS2	**Erkin-Say**	**3.09**	**4**	P	**Pb**	**22 02 49.3**	**-1.3**
	SNR=14						
EKS2	**Erkin-Say**	**3.09**	**4**	⇓*i*P	**Pb**	**22 02 48.9**	**-1.7**
	baz=4.0						
EKS2				⇓*e*S	**Sb**	**22 03 27.8**	**-1.1**
	baz=4.0						
AAK	**Ala-Archa**	**3.15**	**13**	P	**Pb**	**22 02 50.2**	**-1.4**
	SNR=13						
AAK	**Ala-Archa**	**3.15**	**13**	Pn	**Pb**	**22 02 51.3**	**-0.3**
	5.9nm,0.3s,baz=192,slow=13,SNR=14						
AAK				Sn	**Sg**	**22 03 34.8**	**-1.1**
	8.5nm,0.3s,baz=359,slow=18,SNR=3.6						
	16nm,0.3s						
AAK	**Ala-Archa**	**3.15**	**13**	⇓*e*P	**Pb**	**22 02 49.8**	**-1.8**
	baz=14						
AAK				⇓*e*S	**Sb**	**22 03 29.2**	**-1.4**
	baz=14						
MRKS	**Merke**	**3.18**	**356**	*e*P	**Pg**	**22 02 57.4**	**+1.8**
	66nm,0.4s						
MRKS				*e*S	**Sg**	**22 03 41.8**	**+5.1**
	127nm,0.4s						
MRKS	**Merke**	**3.18**	**356**	Pg	**Pg**	**22 02 58.9**	**+3.3**
	66nm,0.4s						
MRKS				Lg	Lg	22 03 40.6	
	127nm,0.4s						
KBK	**Karagaybulak**	**3.27**	**19**	P	**Pb**	**22 02 53.2**	**-0.4**
	SNR=25						
KBK	**Karagaybulak**	**3.27**	**19**	⇑*e*P	**Pb**	**22 02 51.4**	**-2.2**
	baz=19						
KBK				⇑*e*S	**Sb**	**22 03 31.9**	**-2.1**
	baz=19						
ULHL	**Ulahol**	**3.38**	**37**	P	**Pb**	**22 02 55.2**	**-0.3**
	SNR=6.0						
CHGR	**Chuyangaron**	**3.51**	**256**	⇓*i*P	**Pn**	**22 02 53.0**	**+2.5**
	baz=57						
CHGR				⇓*i*S	**Sn**	**22 03 34.6**	**+1.8**
	baz=57						
CHMS	**Chumysh**	**3.55**	**15**	P	**Pb**	**22 02 56.8**	**-1.5**
	SNR=12						
CHMS	**Chumysh**	**3.55**	**15**	⇑Pn	**Pb**	**22 02 55.2**	**-3.1**
	27nm,0.8s						
CHMS				⇑Lg	Lg	22 03 50.9	
	46nm,0.6s						
TKM2	**Tokmak 2**	**3.69**	**24**	⇓*e*P	**Pb**	**22 02 57.2**	**-3.7**
	baz=24						
TKM2				⇓*e*S	**Sb**	**22 03 42.3**	**-4.0**
	baz=24						
TKM2	**Tokmak 2**	**3.69**	**24**	⇓Pn	**Pb**	**22 02 57.6**	**-3.4**
	13nm,0.5s						
TKM2				⇑Lg	Lg	22 03 54.3	
	24nm,0.5s						
USP	**Ospenovka**	**3.77**	**11**	P	**Pb**	**22 02 59.1**	**-2.9**
	SNR=8.5						
KST	**Kastek**	**3.93**	**27**	*e*P	**Pb**	**22 03 07.9**	**+3.1**
	20nm,0.4s						
KST				*e*S	**Sg**	**22 04 01.2**	**+0.4**
	56nm,0.5s						
SGDS	**Sogindy**	**3.96**	**12**	*e*P	**Pg**	**22 03 09.0**	**-1.7**
	18nm,0.5s						
SGDS				*e*S	**Sg**	**22 04 02.0**	**-0.1**
	36nm,0.6s						
SGDS	**Sogindy**	**3.96**	**12**	Pg	**Pg**	**22 03 12.6**	**+2.0**
	18nm,0.5s						
SGDS				Lg	Lg	22 04 04.1	
	36nm,0.6s						
DGS	**Degeres**	**4.04**	**24**	*e*P	**Pg**	**22 03 11.2**	**-0.9**
	27nm,0.5s						
DGS				*e*S	**Sg**	**22 04 06.1**	**+1.7**
	57nm,0.7s						
DGS	**Degeres**	**4.04**	**24**	Pg	**Pg**	**22 03 13.8**	**+1.8**
	27nm,0.5s						
DGS				Lg	Lg	22 04 06.1	
	57nm,0.7s						
MTBS	**Maitube**	**4.18**	**31**	*e*P	**Pg**	**22 03 14.1**	**-0.6**
	18nm,0.3s						
MTBS				*e*S	**Sg**	**22 04 10.1**	**+1.3**
	32nm,0.6s						
MTBS	**Maitube**	**4.18**	**31**	Pg	**Pg**	**22 03 16.4**	**+1.7**
	18nm,0.3s						
MTBS				Lg	Lg	22 04 10.2	
	32nm,0.6s						
KK31	**Karatay Array**	**4.19**	**328**	⇓Pn	Pb	22 03 04.4	-4.9
	1.5nm,0.3s,baz=135,slow=12,SNR=29						
KK31				⇓Pg	**Pg**	**22 03 14.1**	**-0.8**
	3.9nm,0.3s,baz=150,slow=16,SNR=9.2						
KK31				⇑Sn	**Sb**	**22 03 57.3**	**-3.0**
	6.1nm,0.4s,baz=144,slow=25,SNR=4.5						
KK31				⇑Lg	Lg	22 04 13.1	
	11nm,0.4s						
BRLS	**Borolday**	**4.43**	**322**	*e*P	**Pg**	**22 03 17.5**	**-2.0**
	4.8nm,0.3s						
BRLS				*e*S	**Sg**	**22 04 16.1**	**-0.8**
	44nm,0.5s						
BRLS	**Borolday**	**4.43**	**322**	Pg	**Pg**	**22 03 19.6**	**+0.1**
	4.8nm,0.3s						
BRLS				Lg	Lg	22 04 16.1	
	44nm,0.5s						
KRBS	**Karabastau**	**4.43**	**21**	*e*P	**Pg**	**22 03 17.9**	**-1.5**
	20nm,0.6s						
KRBS				*e*S	**Sg**	**22 04 17.0**	**+0.2**
	30nm,0.8s						
KRBS	**Karabastau**	**4.43**	**21**	Pg	**Pg**	**22 03 20.4**	**+0.9**
	20nm,0.6s						
KRBS				Lg	Lg	22 04 17.0	
	30nm,0.8s						
AAA	**Alma-Ata**	**4.44**	**34**	*e*P	**Pg**	**22 03 19.7**	**-0.1**
	22nm,0.3s						
AAA				*e*S	**Sg**	**22 04 19.9**	**+2.5**
	55nm,0.4s						
AAA	**Alma-Ata**	**4.44**	**34**	Pg	**Pg**	**22 03 21.9**	**+2.1**
	22nm,0.3s						
AAA				Lg	Lg	22 04 19.9	
	55nm,0.4s						
KNDC	**Almaty**	**4.47**	**34**	⇑Pg	**Pg**	**22 03 18.6**	**-1.8**
	39nm,0.7s						
KNDC				⇑Lg	Lg	22 04 19.4	
	74nm,0.6s						
KTBS	**Karatobe**	**4.77**	**29**	*e*P	**Pg**	**22 03 23.7**	**-2.3**
	9.5nm,0.4s						
KTBS				*e*S	**Sg**	**22 04 28.2**	**+0.4**
	43nm,0.6s						
KTBS	**Karatobe**	**4.77**	**29**	Pg	**Pg**	**22 03 27.3**	**+1.3**
	9.5nm,0.4s						
KTBS				Lg	Lg	22 04 29.2	
	43nm,0.6s						
KUU	**Kurty**	**4.81**	**25**	*e*P	**Pg**	**22 03 24.1**	**-2.6**
	11nm,0.3s						
KUU				*e*S	**Sg**	**22 04 28.3**	**-0.7**
	54nm,0.9s						
KUU	**Kurty**	**4.81**	**25**	Pg	**Pg**	**22 03 27.4**	**+0.7**
	11nm,0.3s						
KUU				Lg	Lg	22 04 29.3	
	54nm,0.9s						
CHKK	**Chushkaly**	**5.00**	**30**	*e*P	**Pg**	**22 03 27.9**	**-2.6**
	5.6nm,0.3s						
CHKK				*e*S	**Sg**	**22 04 34.9**	**-0.5**
	23nm,0.5s						
CHKK	**Chushkaly**	**5.00**	**30**	Pg	**Pg**	**22 03 30.8**	**+0.2**
	5.6nm,0.3s						
CHKK				Lg	Lg	22 04 34.9	
	23nm,0.5s						
SATY	**Saty**	**5.07**	**45**	*e*P	**Pg**	**22 03 29.5**	**-2.2**
	11nm,0.3s						
SATY				*e*S	**Sg**	**22 04 37.3**	**-0.2**
	17nm,0.4s						
SATY	**Saty**	**5.07**	**45**	Pg	**Pg**	**22 03 32.2**	**+0.4**
	11nm,0.3s						
SATY				Lg	Lg	22 04 37.3	
	17nm,0.4s						
ZHN	**Zhinishke**	**5.16**	**44**	*e*P	**Pg**	**22 03 30.9**	**-2.6**
	4.7nm,0.4s						
ZHN				*e*S	**Sg**	**22 04 39.5**	**-0.9**
	16nm,0.6s						
ZHN	**Zhinishke**	**5.16**	**44**	Pg	**Pg**	**22 03 33.5**	**0.0**
	4.7nm,0.4s						
ZHN				Lg	Lg	22 04 39.5	
	16nm,0.6s						
KURS	**Kuram**	**5.25**	**40**	*e*P	**Pg**	**22 03 34.2**	**-0.9**
	11nm,1.0s						
KURS				*e*S	**Sg**	**22 04 45.1**	**+2.0**
	20nm,1.0s						
KURS	**Kuram**	**5.25**	**40**	Pg	**Pg**	**22 03 36.7**	**+1.6**
	11nm,1.0s						
KURS				Lg	Lg	22 04 45.1	
	20nm,1.0s						
BTLS	**Baital**	**5.48**	**4**	*e*P	**Pb**	**22 03 34.1**	**+3.0**
	6.8nm,0.7s						
BTLS				*e*S	**Sg**	**22 04 45.4**	**-5.2**
	12nm,0.6s						
KPKS	**Kokpek**	**5.49**	**43**	*e*P	**Pg**	**22 03 36.6**	**-3.3**
	6.0nm,0.3s						
KPKS				*e*S	**Sg**	**22 04 48.8**	**-2.3**
	27nm,0.7s						
KPKS	**Kokpek**	**5.49**	**43**	Pg	**Pg**	**22 03 39.9**	**0.0**
	6.0nm,0.3s						
KPKS				Lg	Lg	22 04 50.9	
	27nm,0.7s						
ARXS	**Arharly**	**5.64**	**33**	*e*P	**Pg**	**22 03 39.4**	**-3.3**
	16nm,0.6s						
ARXS				*e*S	**Sg**	**22 04 54.0**	**-1.9**
	31nm,0.7s						
ARXS	**Arharly**	**5.64**	**33**	Pg	**Pg**	**22 03 44.0**	**+1.2**
	16nm,0.8s						
ARXS				Lg	Lg	22 04 58.0	
	31nm,0.7s						
BLB	**Baldybastay**	**5.85**	**38**	*e*P	Pb	22 03 42.6	+5.1
	19nm,0.5s						
BLB				*e*S	**Sg**	**22 05 00.5**	**-1.9**
	28nm,0.6s						
BLB	**Baldybastay**	**5.85**	**38**	Pg	**Pg**	**22 03 47.8**	**+1.2**
	19nm,0.5s						
BLB				Lg	Lg	22 05 04.3	
	28nm,0.6s						
PDGK	**Podgornoye**	**5.85**	**48**	Pg	**Pg**	**22 03 46.1**	**-0.6**
	2.8nm,0.6s						
PDGK				Lg	Lg	22 05 01.1	
	5.2nm,1.2s						
PDGK	**Podgornoye**	**5.85**	**48**	Pn	**Pn**	**22 03 26.2**	**+3.4**
	3.8nm,0.7s						
DJR	**Jarkent**	**6.67**	**42**	*e*P	**Pg**	**22 04 00.3**	**-2.1**
	2.5nm,0.5s						
DJR				*e*S	**Sg**	**22 05 29.4**	**+0.6**
	8.9nm,0.5s						
DJR	**Jarkent**	**6.67**	**42**	Pg	**Pg**	**22 04 02.7**	**+0.2**
	2.5nm,0.5s						
DJR				Lg	Lg	22 05 29.4	
	8.9nm,0.5s						
OTUK	**Ortayu**	**8.71**	**355**	⇑Pn	**Pn**	**22 04 05.0**	**+3.1**
	1.7nm,0.7s						
OTUK				⇑Lg	Lg	22 06 35.8	
	4.7nm,0.8s						
MKAR	**Makanchi Array**	**9.65**	**39**	Pn	Pn	22 04 19.4	+4.7
	baz=226,slow=12,SNR=3.7						
	0.5nm,0.8s						
KURBB	**Kurchatov Arra**	**11.60**	**16**	Pn	**Pn**	**22 04 43.3**	**+2.0**
	baz=206,slow=12,SNR=1.7						
KURBB				Lg	Lg	22 08 09.9	
	baz=200,slow=26,SNR=5.5						
	0.1nm,0.3s						
AKTO	**Aktyubinsk**	**15.40**	**320**	Pn	**Pn**	**22 05 32.1**	**-1.0**
	1.1nm,0.6s,baz=123,slow=15,SNR=2.4						
ZALV	**Zalesovo Beam**	**16.30**	**24**	Pn	**P**	**22 05 48.2**	**+0.4**
	0.2nm,0.3s,baz=217,slow=9.6,SNR=3.4						
	0.7nm,0.5s						
SONM	**Songino Array**	**25.01**	**60**	P	**P**	**22 07 21.4**	**+1.1**
	0.3nm,0.6s,baz=270,slow=8.5,SNR=3.7						
	0.3nm,0.6s						
FINES	**FINESS Array B**	**36.13**	**323**	P	**P**	**22 08 59.0**	**+0.9**
	0.6nm,0.3s,baz=114,slow=9.5,SNR=18						
	0.6nm,0.3s						
ARCES	**ARCESS Array B**	**39.12**	**336**	P	**P**	**22 09 24.5**	**+1.1**
	0.7nm,0.5s,baz=105,slow=8.9,SNR=11						
	0.7nm,0.5s						
NB2	**NORSAR Subarra**	**43.18**	**321**	P	**P**	**22 09 57.0**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=92,slow=7.9						
NOA	**NORSAR Array B**	**43.18**	**321**	P	**P**	**22 09 57.2**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=92,slow=7.8,SNR=6.4						
	comp=Z,0.7nm,0.6s						
TORD	**Torodi Ar. Bea**	**67.77**	**269**	P	**P**	**22 12 53.0**	**-1.5**
	comp=Z,0.3nm,0.5s,baz=52,slow=5.3,SNR=2.7						
	comp=Z,0.3nm,0.5s						
WRA	**Warramunga Arr**	**81.99**	**124**	P	**P**	**22 14 14.5**	**-2.1**
	comp=Z,0.3nm,0.5s,baz=325,slow=5.4,SNR=1.6						
	comp=Z,0.3nm,0.5s						

*IDC **28** 22:33:21.0±1.9, 41.53N×113.35W, h0km, mbtmp1.8/1, ML2.9/1, Error ellipse: s-maj=86.1km s-min=11.1km az=150.0*
*NEIC **28** 22:33:23.7±1.3, 41.11N±0.03×112.88W±0.03, h0km±2km, ML1.9/40, Error ellipse: s-maj=4.5km s-min=3.3km az=188.0*

ISC 28 22:33:20.5±1.0, 41.27N±0.03×112.96W±0.04, h0km, n26, σ0s92/25, Utah

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BGU	**Big Grassy Mou**	**0.35**	**188**	Pg	**Pg**	**22 33 27.9**	**+0.7**
HVU	**Hansel Valley**	**0.53**	**15**	Pg	**Pn**	**22 33 36.0**	**+0.5**
HVU				IAML		22 33 47.5	
	comp=E,58nm,0.6s						
DUG	**Dugway, Tooele**	**1.08**	**174**		**Pg**	**22 33 41.4**	**+0.2**
DUG				IAML		22 34 02.7	
	comp=E,41nm,0.5s						
CTU	**Camp Tracy**	**1.08**	**122**		**Pb**	**22 33 42.0**	**-0.3**
CTU				IAML		22 33 59.5	
	comp=N,36nm,0.6s						
CTU				IAML		22 34 04.7	
	comp=E,33nm,0.5s						
HWUT	**Hardware Ranch**	**1.10**	**72**		**Pn**	**22 33 44.4**	**+0.9**
HWUT				IAML		22 34 06.8	
	comp=E,22nm,0.4s						
HWUT				IAML		22 34 08.8	
	comp=E,26nm,0.4s						
TCUT	**Toone Canyon**	**1.18**	**97**		**Pn**	**22 33 45.0**	**+0.4**
JLU	**Jordanelle**	**1.33**	**120**		**Pn**	**22 33 46.4**	**-0.1**
JLU				IAML		22 34 09.6	
	comp=N,17nm,0.6s						
NLU	**North Lily Min**	**1.48**	**152**		**Pn**	**22 33 48.0**	**-0.6**
MPU	**Maple Canyon**	**1.61**	**141**	Pn	**Pn**	**22 33 49.9**	**-0.6**
ELK	**Elko**	**1.80**	**254**	Pn	**Pg**	**22 33 56.1**	**+1.1**
ELK				IAML		22 34 24.3	
	comp=N,9.0nm,0.4s						
AHID	**Auburn Hatcher**	**2.04**	**42**		**Pg**	**22 33 59.6**	**-0.1**
ECR	**Eagle Creek**	**2.14**	**33**	Pn	**Pg**	**22 34 02.0**	**+0.5**
TMUT	**Trail Mountain**	**2.38**	**145**		**Pn**	**22 34 01.5**	**+0.3**
HLID	**Hailey**	**2.53**	**335**	Pn	**Pg**	**22 34 09.0**	**0.0**
HLID				IAML		22 34 50.1	
	comp=N,5.2nm,0.3s						
HLID				IAML		22 34 59.3	
	comp=N,3.7nm,0.8s						
P18A	**Preston Nutter**	**2.64**	**127**		**Pn**	**22 34 06.3**	**+1.6**
P18A				IAML		22 34 51.6	
	comp=E,4.9nm,2.4s						
P18A				IAML		22 35 09.1	
	comp=N,4.0nm,3.0s						
PSUT	**Pine Spring**	**2.82**	**194**	Pn	**Pn**	**22 34 07.7**	**+0.7**
PSUT				IAML		22 35 03.5	
	comp=E,5.4nm,0.5s						
SRU	**San Rafael Swe**	**2.85**	**138**	Pn	**Pn**	**22 34 08.4**	**+0.9**
SRU				IAML		22 34 52.6	
	comp=N,3.5nm,0.7s						
SRU				IAML		22 34 53.0	
	comp=E,5.0nm,0.6s						
LOHW	**Long Hollow**	**2.92**	**36**	Pn	**Pb**	**22 34 13.3**	**-0.3**
LOHW				IAML		22 35 32.8	
	comp=E,2.9nm,4.0s						
LOHW				IAML		22 35 53.8	
	comp=E,3.5nm,3.4s						
BW06	**Boulder Array**	**2.94**	**58**		**Pb**	**22 34 12.4**	**-1.6**
BW06				IAML		22 35 01.2	
	comp=E,3.8nm,0.7s						
PD31	**Pinedale Array**	**2.94**	**58**		**Pb**	**22 34 12.7**	**-1.4**
PDAR	**Pinedale Array**	**2.94**	**58**	Pn	**Pb**	**22 34 12.5**	**-1.6**
	comp=E,0.2nm,0.3s,baz=234,slow=12,SNR=4.4						
PDAR				Pg	**Pg**	**22 34 17.8**	**+0.8**
	comp=E,1.1nm,0.3s,baz=237,slow=14,SNR=22						
PDAR				Lg	Lg	22 34 57.9	
	comp=E,1.5nm,0.3s,baz=226,slow=25,SNR=9.0						
	comp=E,0.2nm,0.3s						
PDAR	**Pinedale Array**	**2.94**	**58**		**Pb**	**22 34 13.1**	**-0.9**
MOOW	**Moose Ponds**	**2.97**	**33**	Pn	**Pb**	**22 34 14.3**	**-0.2**
NVAR	**Mina Array Bea**	**4.99**	**237**	Pg	**Pb**	**22 34 47.5**	**-1.5**
	comp=E,0.1nm,0.3s,baz=52,slow=17,SNR=1.7						
I56US	**NEWPORT INFRAS**	**7.59**	**338**	*i*		23 17 10.0	
	baz=160,slow=315,SNR=4.4						
I57US	**PINON FLAT INF**	**8.14**	**201**	*i*		23 22 10.0	
	baz=16,slow=326,SNR=0.8						

MAN 28 22:42:20.7, 16.53N×120.33E, h20km, mb3.9, ML2.7, MS2.2, 4D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.42**	**250**	⇓*e*P	Pn	22 42 30.7	+0.4
SMPP	**San Manuel, Pa**	**0.51**	**138**	⇓*e*P	Pn	22 42 32.0	+0.1
SAMP	**Sagada Mountai**	**0.78**	**45**	⇓*e*P	Pb	22 42 35.1	+0.4
BALP	**Baler**	**1.43**	**123**	⇓*e*P	Pn	22 42 44.4	+0.3

*SOME **28** 22:45:42.7, 39.40N×73.48E, h5km*
*KRNET **28** 22:45:43.8±0.1, 39.45N×73.46E, mb2.9*
*ISU **28** 22:45:48.4, 39.88N×73.46E, h30km*

ISC 28 22:45:46.3±1.5, 39.47N±0.07×73.39E±0.05, h10km, n20, σ2s23/40, 6C-6D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.15**	**336**	⇑*i*P	**Pb**	**22 46 05.9**	**-2.4**
	baz=35						
OHH				⇑*i*S	**Sb**	**22 46 22.2**	**-1.2**
	baz=35						
DRK	**Karamyk**	**1.23**	**271**	⇑*e*P	**Pn**	**22 46 07.6**	**-2.2**
	baz=72						
DRK				⇑*e*S	**Sb**	**22 46 25.4**	**-0.5**
	baz=72						
FRG	**Fergana**	**1.53**	**307**	P	**Pn**	**22 46 14.5**	**+0.8**
FRG				S	**Sb**	**22 46 35.0**	**+0.8**
CHMI	**Chimion**	**1.65**	**300**	P	**Pn**	**22 46 16.1**	**+0.8**
CHMI				S	**Sn**	**22 46 37.3**	**+0.8**
BTK	**Batken**	**2.07**	**287**	⇑*e*P	**Pn**	**22 46 21.5**	**+0.3**
	baz=88						
BTK				⇑*e*S	**Sn**	**22 46 48.9**	**+1.9**
	baz=88						
BTK	**Batken**	**2.07**	**287**	P	**Pb**	**22 46 23.2**	**-0.8**
BTK				S	**Sb**	**22 46 51.5**	**+1.7**
MINT	**Mingtut**	**2.11**	**299**	P	**Pb**	**22 46 25.5**	**+0.9**
MINT				S	**Sb**	**22 46 53.2**	**+2.4**
GAR	**Garm**	**2.43**	**260**	⇓*e*P	**Pn**	**22 46 26.3**	**+0.1**
	baz=61						
GAR				⇓*e*S	**Sn**	**22 46 57.3**	**+1.2**
	baz=61						
TRKS	**Terek-Say**	**2.68**	**321**	⇓*e*P	**Pn**	**22 46 29.1**	**-0.5**
	baz=20						
TRKS				⇓*e*S	**Sn**	**22 47 01.9**	**-0.3**
	baz=20						
UCH	**Uchtor**	**2.88**	**17**	⇓*e*P	**Pn**	**22 46 32.1**	**-0.6**
	baz=16						
UCH				⇓*e*S	**Sn**	**22 47 07.5**	**-0.1**
	baz=16						
MRKS	**Merke**	**3.27**	**358**	*e*P	**Pb**	**22 46 46.1**	**+1.6**
	3.5nm,0.3s						
MRKS				*e*S	**Sg**	**22 47 32.1**	**+0.7**
	11nm,0.3s						
KST	**Kastek**	**4.06**	**28**	*e*P	**Pb**	**22 46 58.8**	**+0.9**
	0.9nm,0.2s						
KST				*e*S	**Sg**	**22 47 53.8**	**-2.8**
	7.5nm,0.4s						
SGDS	**Sogindy**	**4.08**	**13**	*e*P	**Pb**	**22 46 57.9**	**-0.4**
	0.4nm,0.3s						
SGDS				*e*S	**Sb**	**22 47 52.3**	**+4.5**
	3.3nm,0.4s						
DGS	**Degeres**	**4.17**	**25**	*e*P	**Pb**	**22 47 00.9**	**+1.1**
	1.2nm,0.5s						
DGS				*e*S	**Sg**	**22 47 57.4**	**-2.8**
	8.3nm,0.8s						
BRLS	**Borolday**	**4.45**	**324**	*e*P	**Pb**	**22 47 04.0**	**-0.6**
	1.1nm,0.1s						
BRLS				*e*S	**Sb**	**22 48 02.4**	**+4.1**
	3.1nm,0.4s						
TNSS	**Tian-Shan**	**4.46**	**36**	*e*P	**Pb**	**22 47 06.3**	**+1.4**
	0.8nm,0.2s						
TNSS				*e*S	**Sg**	**22 48 06.2**	**-3.2**
	3.1nm,0.4s						
KRBS	**Karabastau**	**4.56**	**21**	*e*P	**Pb**	**22 47 08.4**	**

*NEIC **28** 22:46:46.6±1.8, 14.6°64S±0.0°07×166.6°46E±0.0°08, h9km±1km, mb5.6/179, Ms_20 5.6/396, Mwb5.8/37, Mww5.8, Error ellipse: s-maj=12.6km s-min=11.0km az=71.0*

*MOS **28** 22:46:46.9±1.1, 14.5°54S×166.7°42E, h21km, mb5.8/34, MS5.5/47, Error ellipse: s-maj=7.7km s-min=6.1km az=116.9*

*NEIC **28** 22:46:47, 14.6°69S×166.7°44E, h4km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}3.48; $M_{\theta\theta}$-0.71; $M_{\phi\phi}$-2.77; $M_{r\theta}$5.12; $M_{\theta\phi}$2.34; $M_{\phi r}$-1.57; Fault plane solution: M_o6.66000×10^{17} NP1:ϕ_s117.00000°, δ73.93000°, λ69.01000°. NP2:ϕ_s351.18000°, δ26.22000°, λ141.19000°. Principal axes: T 6.9192, Plg56.0000°, Azm360.0000°; N -0.5593, Plg20.0000°, Azm123.0000°; P -6.3599, Plg26.0000°, Azm223.0000°;*

*GCMT **28** 22:46:50.6±0.1, 14.5°53S±0.0°01×166.4°44E, h12km, MW5.8/154, Moment Tensor Solution. s143,c276; s154,c444; Duration: 1s9 Moment tensor: Scale 10^{17} Nm; M_{rr}3.82±.03; $M_{\theta\theta}$-1.16±.03; $M_{\phi\phi}$-2.67±.03; $M_{r\theta}$3.33±.09; $M_{\theta\phi}$3.10±.03; $M_{\phi r}$-0.78±.09; Best double couple: M_o5.72400×10^{17} NP1:ϕ_s347.00000°, δ35.00000°, λ134.00000°. NP2:ϕ_s118.00000°, δ65.00000°, λ64.00000°. Principal axes: T 5.5560, Plg61.0000°, Azm348.0000°; N 0.3260, Plg23.0000°, Azm130.0000°; P -5.8920, Plg16.0000°, Azm227.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **28** 22:46:50, 14.6°61S×166.6°62E, h12km, Moment Tensor Solution. Duration: 8s0 Moment tensor: Scale 10^{17}Nm; M_{rr}4.68; $M_{\theta\theta}$-1.58; $M_{\phi\phi}$-3.09; $M_{r\theta}$3.77; $M_{\theta\phi}$3.13; $M_{\phi r}$0.55; Fault plane solution: M_o6.42000×10^{17} NP1: ϕ_s346.00000°, δ41.00000°, λ134.00000°. NP2: ϕ_s114.00000°, δ62.00000°, λ59.00000°. Principal axes: T 6.8045, Plg60.0000°, Azm337.0000°; N -0.8454, Plg27.0000°, Azm130.0000°; P -5.9592, Plg12.0000°, Azm226.0000°;*

*NOU **28** 22:46:52.8, 14.6°63S×166.7°44E, h31km, ML5.6/75, Vanuatu Islands*

ISC 28 22:46:46.5±0.4, 14°64S±0°04×166°65E±0°04, h13km±2km, h13km:pP-P, n1253, σ2s11/1189, mb5.5/200, MS5.6/313, 45C-31D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**3.41**	**154**	P	**Pb**	**22 47 43.7**	**-3.1**
LIFNC	**LIFOU**	**6.13**	**175**	Pn	**Pn**	**22 48 16.1**	**-0.8**
KOUNC	**Koumac, New Ca**	**6.30**	**201**	Pn	**Pn**	**22 48 17.8**	**-1.2**
MARNC	**Mare, Loyalty**	**6.93**	**169**		**Pn**	**22 48 28.9**	**+1.1**
ONTNC	**Ouen Toro**	**7.63**	**181**	Pn	**Pn**	**22 48 37.5**	**+0.1**
OUENC	**Ouen Island, N**	**7.74**	**179**	Pn	**Pn**	**22 48 39.4**	**+0.4**
PINNC	**Pines Island,**	**7.97**	**175**	Pn	**Pn**	**22 48 42.8**	**+0.7**
HNR	**Honiara**	**8.35**	**308**	Pn	**Pn**	**22 48 48.0**	**+0.8**
	40nm,0.3s,baz=254,slow=9.4,SNR=8.9						
HNR				Sn	**Sn**	**22 50 20.4**	**-1.1**
	53nm,0.3s,baz=270,slow=20,SNR=1.5						
HNR				LR	LR	22 51 49.5	
	comp=Z,21μm,18.3s,baz=136,slow=37						
HNR	**Honiara**	**8.35**	**308**		**Pn**	**22 48 46.4**	**-0.9**
HNR	**Honiara**	**8.35**	**308**	P	**Pn**	**22 48 46.4**	**-0.9**
HNR	**Honiara**	**8.35**	**308**	P	**Pn**	**22 48 49.9**	**+2.6**
MSVF	**Nonsavu**	**11.38**	**107**	Pn	Pn	22 49 37.6	+8.7
	baz=271,slow=8.7						
MSVF				LR	LR	22 52 44.3	
	comp=Z,5μm,19.5s,baz=289,slow=31						
MSVF	**Nonsavu**	**11.38**	**107**		Pn	22 49 34.7	+5.8
MSVF	**Nonsavu**	**11.38**	**107**	P	Pn	22 49 34.7	+5.8
MSVF	**Nonsavu**	**11.38**	**107**	P	Pn	22 49 37.1	+8.2
DGTI	**Dogotuki**	**12.73**	**99**	P	**P**	**22 49 56.4**	**-2.1**
TAVE	**Taveuni**	**13.12**	**101**	P	**P**	**22 50 00.3**	**-2.5**
FUNA	**Funafuti**	**13.71**	**65**		**P**	**22 50 05.6**	**-3.8**
FUNA	**Funafuti**	**13.71**	**65**	P	**P**	**22 50 07.1**	**-2.3**
TARA	**Tarawa**	**17.06**	**22**		**Pn**	**22 50 44.8**	**-0.1**
TARA	**Tarawa**	**17.06**	**22**	P	**P**	**22 50 50.7**	**+4.0**
RK1H	**Rockhampton Ha**	**17.56**	**238**	P	**P**	**22 50 53.7**	**+1.5**
KRVT	**Keravat (AS076**	**17.68**	**304**	P	**P**	**22 50 53.5**	**-0.1**
	44nm,0.7s,baz=280,slow=10,SNR=4.5						
KRVT				LR	LR	22 58 08.4	
	comp=Z,10μm,19.5s,baz=277,slow=39						
EIDS	**Eidsvold**	**18.09**	**231**	P	**P**	**22 50 59.4**	**+1.4**
	baz=18,SNR=7.6						
EIDS	**Eidsvold**	**18.09**	**231**		**Pn**	**22 50 56.0**	**-1.6**
EIDS				IAmb	IAmb	22 51 04.2	
	comp=Z,784nm,2.6s						
EIDS	**Eidsvold**	**18.09**	**231**	P	**P**	**22 51 01.0**	**+3.0**
PMG	**Port Moresby**	**19.75**	**283**	P	**P**	**22 51 16.5**	**+0.3**
	comp=Z,1.9nm,0.3s,baz=101,slow=10,SNR=6.6						
PMG				LR	LR	22 57 57.4	
	comp=Z,40μm,18.8s,baz=38,slow=34						
	comp=Z,84nm,1.1s						
PMG	**Port Moresby**	**19.75**	**283**		**P**	**22 51 16.1**	**-0.2**
PMG				IAmb	IAmb	22 51 27.7	
	comp=Z,648nm,1.3s						
PMG	**Port Moresby**	**19.75**	**283**	*ce*P	**Pn**	**22 51 17.3**	**-0.5**
PMG				pmax	pmax		
	comp=Z,91nm,0.7s						
PMG	**Port Moresby**	**19.75**	**283**	P	**Pn**	**22 51 19.1**	**+1.3**
PMG	**Port Moresby**	**19.75**	**283**	P	**Pn**	**22 51 18.9**	**+1.1**
CTA	**Charters Tower**	**20.20**	**252**	P	**P**	**22 51 21.4**	**+0.3**
	comp=Z,43nm,0.8s,baz=76,slow=12,SNR=22						
CTA				LR	LR	22 57 41.3	
	comp=Z,14μm,21.3s,baz=76,slow=33						
	comp=Z,43nm,0.8s						
CTA	**Charters Tower**	**20.20**	**252**	P	Pn	22 51 23.7	+0.6
CTAO	**Charters Tower**	**20.20**	**252**		**P**	**22 51 20.2**	**-1.0**
CTAO				IAmb	IAmb	22 51 29.7	
	comp=Z,1μm,2.2s						
CTAO	**Charters Tower**	**20.20**	**252**	P	**P**	**22 51 20.2**	**-1.0**
CTAO				pmax	pmax		
	comp=Z,1μm,2.2s						
CTAO				MLR	MLR		
	comp=Z,13μm,20.0s						
CTAO	**Charters Tower**	**20.20**	**252**	P	Pn	22 51 23.3	+0.2
RAO	**Raoul Island**	**20.37**	**138**	LR	LR	22 56 55.5	
	comp=Z,3μm,21.4s,baz=311,slow=30						
RAO	**Raoul Island**	**20.37**	**138**	IAMs_20	IAMs_20	22 58 29.1	
	comp=Z,7μm,20.0s						
RMQ	**Roma**	**20.45**	**232**	P	Pn	22 51 25.5	-0.5
	baz=21,SNR=25						
RMQ	**Roma**	**20.45**	**232**	P	Pn	22 51 26.0	0.0
ARMA	**Armidale**	**20.92**	**219**	P	**P**	**22 51 30.2**	**+1.2**
	baz=21,SNR=7.0						
ARMA	**Armidale**	**20.92**	**219**	P	**P**	**22 51 27.5**	**-1.4**
ARMA				IAmb	IAmb	22 51 38.0	
	comp=Z,258nm,1.5s						
ARMA	**Armidale**	**20.92**	**219**	P	Pn	22 51 33.3	+1.8
AFI	**Afiamalu**	**20.93**	**91**	P	Pn	22 51 30.9	-0.8
	comp=Z,37nm,0.8s,baz=230,slow=17,SNR=2.3						
AFI				LR	LR	22 57 49.1	
	comp=Z,6μm,18.2s,baz=268,slow=32						
	comp=Z,37nm,0.8s						
AFI	**Afiamalu**	**20.93**	**91**	P	Pn	22 51 32.4	+0.7
AFI				IAmb	IAmb	22 51 40.0	
	comp=Z,189nm,1.0s						
AFI	**Afiamalu**	**20.93**	**91**	IAMs_20	IAMs_20	22 57 30.2	
	comp=Z,6μm,21.0s						
AFI	**Afiamalu**	**20.93**	**91**	P	Pn	22 51 32.4	+0.7
AFI				pmax	pmax		
	comp=Z,189nm,1.0s						
AFI				MLR	MLR		
	comp=Z,6μm,21.0s						
AFI	**Afiamalu**	**20.93**	**91**	P	Pn	22 51 36.5	+4.8
OUZ	**Omahuta**	**21.43**	**164**	P	**P**	**22 51 34.2**	**-0.1**
OUZ				IAmb	IAmb	22 51 44.2	
	comp=Z,362nm,1.4s						
MTSU	**Mount Surprise**	**21.70**	**258**	P	**P**	**22 51 37.5**	**+0.1**
	baz=22,SNR=23						
MTSU	**Mount Surprise**	**21.70**	**258**	P	**P**	**22 51 38.6**	**+1.2**
COEN	**Coen**	**22.75**	**269**	P	**P**	**22 51 49.0**	**+0.2**
	baz=23,SNR=5.4						
COEN	**Coen**	**22.75**	**269**	P	**P**	**22 51 47.4**	**-1.3**
COEN				IAmb	IAmb	22 51 57.4	
	comp=Z,174nm,1.2s						
COEN	**Coen**	**22.75**	**269**	P	**P**	**22 51 51.6**	**+2.9**
MANU	**Manus Island**	**22.78**	**302**	P	**P**	**22 51 47.7**	**-1.3**
MANU				IAmb	IAmb	22 51 58.2	
	comp=Z,291nm,1.4s						
PATS	**Pohnpei**	**22.88**	**338**	P	**P**	**22 51 49.9**	**-0.1**
	baz=23,SNR=32						
PATS	**Pohnpei**	**22.88**	**338**	P	**P**	**22 51 48.5**	**-1.4**
PATS				IAMs_20	IAMs_20	22 59 49.8	
	comp=Z,15μm,18.0s						
PATS	**Pohnpei**	**22.88**	**338**	P	**P**	**22 51 51.3**	**+1.3**
MGCD	**Mangrove Creek**	**23.26**	**215**	P	**P**	**22 51 56.4**	**+2.6**
SYDH	**Sydney Hard Ro**	**23.88**	**214**	P	**P**	**22 52 03.6**	**+3.8**
QLP	**Quilpie**	**24.06**	**237**	P	**P**	**22 52 02.3**	**+0.6**
	baz=24,SNR=5.5						
QLP	**Quilpie**	**24.06**	**237**	P	**P**	**22 52 04.2**	**+2.5**
TOZ	**Tahuroa Road**	**24.31**	**163**	P	**P**	**22 52 08.9**	**+5.2**
HIZ	**Hauiti**	**24.86**	**165**	P	**P**	**22 52 10.5**	**+1.7**
HIZ				IAmb	IAmb	22 52 20.3	
	comp=Z,214nm,1.1s						
HIZ				IAMs_20	IAMs_20	23 02 03.6	
	comp=Z,19μm,18.0s						
OMRZ	**Omania**	**24.91**	**162**	P	**P**	**22 52 14.8**	**+5.5**
MXZ	**Matakaoa Point**	**25.07**	**158**	P	**P**	**22 52 11.4**	**+0.6**
MXZ				IAmb	IAmb	22 52 25.8	
	comp=Z,264nm,1.7s						
MXZ	**Matakaoa Point**	**25.07**	**158**	P	**P**	**22 52 11.3**	**+0.6**
PKGZ	**Pakihiroa**	**25.28**	**158**	P	**P**	**22 52 14.1**	**+1.4**
URZ	**Urewera**	**25.29**	**160**	P	**P**	**22 52 14.2**	**+1.6**
	comp=Z,18nm,0.6s,baz=32,slow=5.8,SNR=8.9						
URZ				LR	LR	23 00 21.7	
	comp=Z,7μm,21.7s,baz=30,slow=32						
	comp=Z,18nm,0.6s						
URZ	**Urewera**	**25.29**	**160**	P	**P**	**22 52 13.8**	**+1.2**
URZ	**Urewera**	**25.29**	**160**	P	**P**	**22 52 15.9**	**+3.2**
WMGZ	**Waiomatatini S**	**25.34**	**158**	P	**P**	**22 52 14.2**	**+1.1**
MUGZ	**Murupara**	**25.38**	**161**	P	**P**	**22 52 18.6**	**+5.2**
TWGZ	**Tauwhareparae**	**25.50**	**159**	P	**P**	**22 52 19.1**	**+4.4**
CMSA	**Cobar Meteorol**	**25.50**	**225**	P	**P**	**22 52 15.9**	**+1.2**
	baz=26,SNR=39						
CMSA	**Cobar Meteorol**	**25.50**	**225**	P	**P**	**22 52 15.9**	**+1.2**
PUZ	**Puketiti**	**25.51**	**158**	P	**P**	**22 52 17.9**	**+3.2**
CNB	**Canberra Magne**	**25.79**	**214**	P	**P**	**22 52 17.7**	**+0.3**
	baz=26,SNR=7.3						
CNB	**Canberra Magne**	**25.79**	**214**	P	**P**	**22 52 20.5**	**+3.1**
SNGZ	**Shannon Statio**	**25.84**	**161**	P	**P**	**22 52 19.3**	**+1.6**
BKZ	**Black Stump Fm**	**25.93**	**162**	P	**P**	**22 52 20.1**	**+1.5**
BKZ				IAmb	IAmb	22 52 37.4	
	comp=Z,70nm,0.8s						
BKZ	**Black Stump Fm**	**25.93**	**162**	P	**P**	**22 52 24.8**	**+6.3**
CAN	**Canberra**	**25.99**	**214**	P	**P**	**22 52 19.2**	**+0.1**
CAN				IAmb	IAmb	22 52 31.8	
	comp=Z,154nm,1.5s						
CAN	**Canberra**	**25.99**	**214**	P	**P**	**22 52 19.3**	**+0.1**
CAN				pmax	pmax		
	comp=Z,154nm,1.5s						
CAN				MLR	MLR		
	comp=Z,10μm,21.0s						
CAN	**Canberra**	**25.99**	**214**	P	**P**	**22 52 21.5**	**+2.3**
QIS	**Mount Isa**	**26.42**	**253**	P	**P**	**22 52 23.7**	**+0.5**
	baz=26,SNR=11						
QIS	**Mount Isa**	**26.42**	**253**	P	**P**	**22 52 22.9**	**-0.3**
NNZ	**Nelson**	**27.12**	**169**	IAMs_20	IAMs_20	23 02 41.0	
	comp=Z,19μm,18.0s						
BFZ	**Birch Farm**	**27.27**	**164**	P	**P**	**22 52 31.0**	**+0.5**
BFZ				IAmb	IAmb	22 52 37.4	
	comp=Z,210nm,1.6s						
BFZ	**Birch Farm**	**27.27**	**164**	P	**P**	**22 52 35.4**	**+4.9**
SNZO	**South Karori**	**27.48**	**167**	IAMs_20	IAMs_20	23 02 58.7	
	comp=Z,16μm,18.0s						
KHZ	**Kahutara**	**28.31**	**169**	IAMs_20	IAMs_20	23 03 55.5	
	comp=Z,15μm,18.0s						
STKA	**Stephens Creek**	**28.60**	**229**	P	**P**	**22 52 42.5**	**-0.1**
	comp=Z,6.3nm,0.5s,baz=55,slow=8.4,SNR=19						
STKA				LR	LR	23 04 13.4	
	comp=Z,14μm,18.0s,baz=54,slow=37						
	comp=Z,6.3nm,0.5s						
STKA	**Stephens Creek**	**28.60**	**229**	P	**P**	**22 52 43.6**	**+1.1**
	baz=29,SNR=13						
STKA	**Stephens Creek**	**28.60**	**229**	P	**P**	**22 52 41.0**	**-1.5**
STKA	**Stephens Creek**	**28.60**	**229**	P	**P**	**22 52 41.0**	**-1.5**
STKA				pmax	pmax		
	comp=Z,105nm,2.4s						
STKA	**Stephens Creek**	**28.60**	**229**	P	**P**	**22 52 44.1**	**+1.6**
GENI	**Genyem**	**28.74**	**292**	P	P	22 52 54.3	+10
OXZ	**Oxford**	**28.96**	**172**	P	**P**	**22 52 46.5**	**+0.9**
OXZ				IAmb	IAmb	22 52 52.1	
	comp=Z,193nm,1.7s						
RPZ	**Rata Peaks**	**29.22**	**173**	P	**P**	**22 52 49.3**	**+1.3**
	comp=Z,9.3nm,0.6s,baz=289,slow=2.7,SNR=6.9						
RPZ				LR	LR	23 03 45.7	
	comp=Z,9μm,18.3s,baz=344,slow=35						
	comp=Z,9.3nm,0.6s						
RPZ	**Rata Peaks**	**29.22**	**173**	P	**P**	**22 52 48.9**	**+0.9**
RPZ				IAMs_20	IAMs_20	23 03 53.1	
	comp=Z,11μm,18.0s						
TOO	**Toolangi**	**29.57**	**216**	P	**P**	**22 52 54.4**	**+3.2**
	baz=30,SNR=5.0						
TOO	**Toolangi**	**29.57**	**216**	P	**P**	**22 52 51.0**	**-0.2**
TOO				IAmb	IAmb	22 53 05.8	
	comp=Z,149nm,1.8s						
TOO	**Toolangi**	**29.57**	**216**	P	**P**	**22 52 51.0**	**-0.2**
TOO				pmax	pmax		
	comp=Z,149nm,1.8s						
LBZ	**Lake Benmore**	**29.80**	**175**	IAMs_20	IAMs_20	23 03 59.3	
	comp=Z,12μm,20.0s						
WKZ	**Wanaka**	**30.16**	**177**	IAMs_20	IAMs_20	23 03 59.6	
	comp=Z,14μm,19.0s						
SMPI	**Sarmi**	**30.31**	**292**	P	**P**	**22 52 57.2**	**-0.7**
	comp=Z,1μmcomp=Z,57nm,1.2s						
LCRK	**Leigh Creek**	**30.49**	**234**	P	**P**	**22 53 01.3**	**+1.9**
ODZ	**Otahua Downs**	**30.50**	**174**	IAMs_20	IAMs_20	23 04 40.7	
	comp=Z,9μm,18.0s						
MLZ	**Mavora Lakes**	**30.66**	**178**	IAMs_20	IAMs_20	23 04 23.6	
	comp=Z,12μm,21.0s						
WB0	**Warramunga Arr**	**31.20**	**256**	P	**P**	**22 53 03.6**	**-2.1**
WRAB	**Tennant Creek**	**31.25**	**256**	P	**P**	**22 53 04.4**	**-1.8**
WRAB	**Tennant Creek**	**31.25**	**256**	IAMs_20	IAMs_20	23 03 54.4	
	comp=Z,12μm,22.0s						
WRAB	**Tennant Creek**	**31.25**	**256**	P	**P**	**22 53 04.4**	**-1.8**
WRAB				pmax	pmax		
	comp=Z,47nm,1.2s						
WRAB				MLR	MLR		
	comp=Z,12μm,22.0s						
WRAB	**Tennant Creek**	**31.25**	**256**	P	**P**	**22 53 10.6**	**+4.4**
WRA	**Warramunga Arr**	**31.26**	**256**	P	**P**	**22 53 04.3**	**-2.0**
	comp=Z,9.8nm,1.1s,baz=85,slow=8.7,SNR=19						
WRA				PcP	**PcP**	**22 56 01.7**	**+0.9**
	comp=Z,5.0nm,1.0s,baz=81,slow=3.3,SNR=4.7						
WRA				ScP	**ScP**	**22 59 46.6**	**+2.8**
	comp=Z,1.8nm,1.2s,baz=77,slow=3.7,SNR=2.5						
WRA				PKiKP	**PKiKP**	**23 03 30.8**	**0.0**
	comp=Z,0.7nm,0.7s,baz=345,slow=0.4,SNR=6.3						
WRA				LR	LR	23 04 16.6	
	comp=Z,12μm,22.0s,baz=80,slow=34						
	comp=Z,9.8nm,1.1s						
WRA	**Warramunga Arr**	**31.26**	**256**	P	**P**	**22 53 04.0**	**-2.3**
WRA	**Warramunga Arr**	**31.26**	**256**	P	**P**	**22 53 04.0**	**-2.3**
HTT	**Hallett**	**31.32**	**228**	P	**P**	**22 53 07.7**	**+0.9**
	baz=31,SNR=5.0						
HTT	**Hallett**	**31.32**	**228**	P	**P**	**22 53 08.6**	**+1.8**
OOD	**Oodnadatta**	**31.59**	**240**	P	**P**	**22 53 08.7**	**-0.3**
WHYH	**Whyalla**	**32.12**	**230**	P	**P**	**22 53 17.9**	**+4.2**
	comp=Z,31nm,1.0s						
AS31	**Alice Springs**	**32.14**	**249**	P	**P**	**22 53 11.8**	**-2.2**
ASAR	**Alice Springs**	**32.14**	**249**	P	**P**	**22 53 12.6**	**-1.5**
	comp=Z,9.5nm,0.8s,baz=78,slow=9.3,SNR=39						
ASAR				ScP	**ScP**	**22 59 48.3**	**+1.6**
	comp=Z,2.6nm,1.0s,baz=74,slow=3.3,SNR=5.3						
ASAR				LR	LR	23 04 35.1	
	comp=Z,13μm,21.3s,baz=84,slow=33						
	comp=Z,9.5nm,0.8s						
ASAR	**Alice Springs**	**32.14**	**249**	P	**P**	**22 53 11.4**	**-2.7**
ASAR	**Alice Springs**	**32.14**	**249**	P	**P**	**22 53 11.4**	**-2.7**
MOO	**Moorlands**	**32.39**	**207**	P	**P**	**22 53 19.9**	**+3.9**
	baz=33,SNR=3.0						
RAR	**Rarotonga**	**32.57**	**107**	LR	LR	23 05 09.6	
	comp=Z,1μm,20.5s,baz=276,slow=34						
H11S2	**WAKE ISLAND Hy**	**32.92**	**0**	T	T	23 28 32.5	
	baz=184,slow=76,SNR=52						
H11S3	**WAKE ISLAND Hy**	**32.92**	**0**	T	T	23 28 24.3	
	baz=184,slow=76,SNR=56						
H11S1	**WAKE ISLAND Hy**	**32.94**	**0**	T	T	23 28 32.2	
	baz=184,slow=76,SNR=35						
BBOO	**Buckleboo**	**33.16**	**232**	P	**P**	**22 53 22.9**	**+0.1**
	baz=33,SNR=13						
BBOO	**Buckleboo**	**33.16**	**232**	P	**P**	**22 53 21.9**	**-0.9**
BBOO	**Buckleboo**	**33.16**	**232**	P	**P**	**22 53 25.0**	**+2.2**
KDU	**Kakadu**	**33.24**	**269**	P	**P**	**22 53 23.5**	**-0.2**
	baz=33,SNR=4.9						
KDU	**Kakadu**	**33.24**	**269**	P	**P**	**22 53 25.9**	**+2.2**
MULG	**Mulgathing**	**33.75**	**237**	P	**P**	**22 53 29.0**	**+1.0**
H11N1	**WAKE ISLAND Hy**	**34.14**	**0**	T	T	23 29 58.9	
	baz=183,slow=76,SNR=28						
H11N3	**WAKE ISLAND Hy**	**34.14**	**0**	T	T	23 30 09.9	
	baz=183,slow=76,SNR=32						
H11N2	**WAKE ISLAND Hy**	**34.15**	**0**	T	T	23 30 10.6	
	baz=183,slow=76,SNR=26						
MTN	**Manton Dam**	**34.52**	**269**	P	**P**	**22 53 35.1**	**+0.3**
	baz=34,SNR=3.1						
GUMO	**Guam**	**35.37**	**321**	LR	LR	23 09 09.2	
	comp=Z,5μm,18.1s,baz=126,slow=38						
GUMO	**Guam**	**35.37**	**321**	IAMs_20	IAMs_20	23 10 08.4	
	comp=Z,7μm,18.0s						
FAKI	**Fak Fak**	**35.87**	**286**	P	**P**	**22 53 44.1**	**-2.3**
FAKI				IAmb	IAmb	22 53 57.3	
	comp=Z,76nm,1.3s						
FAKI	**Fak Fak**	**35.87**	**286**	P	**P**	**22 53 44.6**	**-1.8**
	comp=Z,2μmcomp=Z,1μmcomp=Z,48nm,1.3s						
KNRA	**Kununurra**	**36.55**	**263**	P	**P**	**22 53 51.1**	**-1.2**
	baz=36,SNR=5.2						
KNRA	**Kununurra**	**36.55**	**263**	P	**P**	**22 53 50.4**	**-1.8**
KNRA				IAmb	IAmb	22 53 58.5	
	comp=Z,74nm,0.9s						
KNRA	**Kununurra**	**36.55**	**263**	P	**P**	**22 53 51.9**	**-0.4**
WRKA	**Warakurna**	**37.41**	**248**	P	**P**	**22 53 58.5**	**-1.1**
	baz=37,SNR=12						
WRKA	**Warakurna**	**37.41**	**248**	P	**P**	**22 53 59.3**	**-0.3**
SIJI	**Sorong**	**37.54**	**288**	LR	LR	23 10 20.7	
	comp=Z,8μm,18.1s,baz=115,slow=38						
SWI	**Sorong**	**37.55**	**288**	P	**P**	**22 53 59.2**	**-1.6**
	comp=Z,2μmcomp=Z,1μmcomp=Z,88nm,1.4s						
FORT	**Forrest**	**38.83**	**239**	P	**P**	**22 54 13.0**	**+1.6**
	baz=39,SNR=17						
FORT	**Forrest**	**38.83**	**239**	P	**P**	**22 54 10.1**	**-1.3**
FORT				IAmb	IAmb	22 54 17.3	
	comp=Z,170nm,1.1s						
FORT	**Forrest**	**38.83**	**239**	P	**P**	**22 54 13.6**	**+2.2**
XMAS	**Kiritimati**	**39.23**	**68**	IAMs_20	IAMs_20	23 06 32.3	
	comp=Z,7μm,20.0s						
NLAI	**Namlea**	**40.59**	**282**	P	**P**	**22 54 27.7**	**+1.4**
	comp=Z,2μmcomp=Z,206nm,1.4s						
LBMI	**Labuha**	**41.11**	**286**	P	**P**	**22 54 31.4**	**+0.8**
	comp=Z,1μmcomp=Z,3μmcomp=Z,187nm,1.6s						
TNTI	**Ternate**	**41.77**	**288**	P	**P**	**22 54 35.0**	**-1.0**
TNTI				IAmb	IAmb	22 54 47.0	
	comp=Z,99nm,1.2s						
TNTI	**Ternate**	**41.77**	**288**	P	P	22 54 46.2	+10
SANI	**Sanana**	**42.03**	**283**	P	**P**	**22 54 38.8**	**+0.7**
	comp=Z,3μmcomp=Z,2μmcomp=Z,80nm,1.1s						
SANI	**Sanana**	**42.03**	**283**	P	**P**	**22 54 40.6**	**+2.5**
PPT2	**Papeete2**	**42.09**	**100**	*e*LR	LR	23 06 19.2	
	comp=Z,4μm,23.0s						
PPT	**Papeete**	**42.10**	**100**	LR	LR	23 08 07.4	
	comp=Z,2μm,22.0s,baz=264,slow=30						
BATI	**Baunata**	**42.16**	**271**	P	**P**	**22 54 40.3**	**+1.1**
	comp=Z,2μmcomp=Z,86nm,1.7s						
TBI	**Tubuai**	**42.27**	**109**	*e*LR	LR	23 06 24.4	
	comp=Z,4μm,25.5s						
MMRI	**Maumere**	**43.85**	**273**	P	**P**	**22 54 51.7**	**-1.2**
MMRI				IAmb	IAmb	22 55 00.6	
	comp=Z,271nm,1.4s						
MMRI	**Maumere**	**43.85**	**273**	P	P	22 54 58.6	+5.8
EDFI	**Ende, Flores**	**44.35**	**272**	P	**P**	**22 54 57.8**	**+0.8**
	comp=Z,686nmcomp=Z,25nm,1.3s						
SGSI	**Sangihe**	**44.63**	**291**	P	**P**	**22 55 03.7**	**+4.6**
KMSI	**Cibinong**	**44.83**	**286**	P	**P**	**22 55 00.9**	**+0.2**
	comp=Z,206nm,0.9s						
PSA00	**Pilbara Seismi**	**44.88**	**254**	P	**P**	**22 54 59.4**	**-1.7**
PSA00				IAmb	IAmb	22 55 07.0	
	comp=Z,259nm,1.8s						
PSA00	**Pilbara Seismi**	**44.88**	**254**	P	**P**	**22 54 59.8**	**-1.3**
PSA00				IAmb	IAmb	22 55 07.1	
	comp=Z,172nm,1.8s						
PSA00	**Pilbara Seismi**	**44.88**	**254**	P	**P**	**22 55 03.6**	**+2.5**
MBWA	**Marble Bar**	**44.99**	**255**	P	**P**	**22 55 00.5**	**-1.4**
MBWA				IAmb	IAmb	22 55 07.8	
	comp=Z,183nm,1.4s						
MBWA	**Marble Bar**	**44.99**	**255**	P	**P**	**22 55 04.0**	**+2.1**
LUWI	**Luwuk**	**45.40**	**283**	P	**P**	**22 55 03.7**	**-1.6**
LUWI	**Luwuk**	**45.40**	**283**	P	**P**	**22 55 08.1**	**+2.9**
	comp=Z,3μmcomp=Z,185nm,1.5s						
LUWI	**Luwuk**	**45.40**	**283**	P	**P**	**22 55 07.8**	**+2.6**
DAV	**Davao City (W)**	**46.08**	**295**	LR	LR	23 12 45.0	
	comp=Z,1μm,21.7s,baz=116,slow=34						
DAV	**Davao City (W)**	**46.08**	**295**	P	**P**	**22 55 10.5**	**-0.1**
APSI	**Ampana**	**46.50**	**283**	P	**P**	**22 55 15.8**	**+1.9**
	comp=Z,1μmcomp=Z,95n

BLJI **Banyuglugur** **52.39 271** P P 22 56 05.5 +6.5
GMJI **Gumukmas** **52.43 271** P P 22 56 09.6 +10
TGY **Tagaytay City** **53.49 300** LR LR 23 18 04.7
comp=Z,556nm,20.4s,baz=132,slow=35
JHJ **Hachijo jima 2** **53.98 332** LR LR 23 19 02.2
comp=Z,1μm,18.8s,baz=105,slow=36
KKM **Kota Kinabalu** **54.06 289** P **P** **22 56 11.1 -0.3**
KKM **Kota Kinabalu** **54.06 289** P **P** **22 56 14.4 +3.0**
PCJI **Pacitan** **54.64 270** P **P** **22 56 18.6 +3.1**
comp=Z,4μmcomp=Z,249nm,1.7s
WOJI **Wonogiri, Jawa** **54.96 271** P P 22 56 23.6 +5.8
UGM **Wanagama** **55.33 270** P **P** **22 56 19.6 -0.9**
JOW **Kunigami** **55.57 318** LR LR 23 20 07.4
comp=Z,3μm,18.7s,baz=118,slow=36
JOW **Kunigami** **55.57 318** P **P** **22 56 21.6 -0.3**
JOW IAmb IAmb 22 56 30.5
comp=Z,120nm,1.5s
SMRI **Semarang** **55.60 271** P **P** **22 56 21.5 -1.0**
SMRI **Semarang** **55.60 271** P P 22 56 29.5 +7.1
STKI **Sintang** **56.46 280** P **P** **22 56 31.0 +2.4**
comp=Z,4μmcomp=Z,50nm,1.6s
INU **Inuyama** **57.10 331** P **P** **22 56 32.3 -0.4**
INU IAmb IAmb 22 56 40.5
comp=Z,78nm,1.3s
INU **Inuyama** **57.10 331** P **P** **22 56 34.4 +1.7**
comp=Z,50nm,1.7s
JGF **Kuroka** **57.15 332** P **P** **22 56 32.9 -0.2**
JGF IAmb IAmb 22 56 40.5
comp=Z,38nm,1.0s
JSU **Suzuyama** **57.54 323** P **P** **22 56 35.8 -0.2**
JSU IAmb IAmb 22 56 53.2
comp=Z,144nm,1.4s
MJAR **Matsushiro Arr** **57.55 333** P **P** **22 56 35.2 -0.7**
comp=Z,14nm,0.9s,baz=157,slow=9.0,SNR=27
MJAR LR LR 23 21 45.6
comp=Z,969nm,19.1s,baz=150,slow=37
comp=Z,14nm,0.9s
MJAR **Matsushiro Arr** **57.55 333** P **P** **22 56 35.6 -0.2**
MJAR **Matsushiro Arr** **57.55 333** P **P** **22 56 35.7 -0.2**
MJAR pmax pmax
comp=Z,29nm,1.2s
MAJO **Matsushiro** **57.55 333** P **P** **22 56 35.7 -0.1**
MAJO IAmb IAmb 22 56 45.7
comp=Z,55nm,0.9s
MAJO **Matsushiro** **57.55 333** P **P** **22 56 35.7 -0.1**
MAJO pmax pmax
comp=Z,55nm,1.0s
MAJO MLR MLR
comp=Z,1μm,19.0s
MJB9 **Matsu-Tunnel** **57.55 333** P **P** **22 56 35.3 -0.6**
MJB9 IAmb IAmb 22 56 45.6
comp=Z,52nm,0.9s
JMM **Marumori** **57.59 336** P **P** **22 56 36.4 +0.3**
JMM IAmb IAmb 22 56 46.9
comp=Z,129nm,1.4s
KSM **Kuching** **58.00 281** P **P** **22 56 38.5 -1.0**
KSM **Kuching** **58.00 281** P **P** **22 56 40.5 +1.0**
comp=Z,81nm,1.7s
LEM **Lembang** **58.38 271** LR LR 23 21 53.1
comp=Z,1μm,21.4s,baz=92,slow=36
JNU **Nakatsue** **58.50 325** P **P** **22 56 41.7 -0.9**
JNU **Nakatsue** **58.50 325** P **P** **22 56 44.6 +2.0**
NACB **Ninganchiao** **58.51 311** P **P** **22 56 41.8 -1.0**
NACB IAmb IAmb 22 56 51.2
comp=Z,109nm,1.1s
TPUB **Ta-pu** **58.72 309** P **P** **22 56 43.9 -0.4**
JHS **Saijyo** **58.73 328** P **P** **22 56 43.2 -1.0**
JHS IAmb IAmb 22 56 57.6
comp=Z,172nm,1.8s
YHNB **Yeheng** **58.97 311** P **P** **22 56 45.1 -0.9**
YHNB **Yeheng** **58.97 311** P **P** **22 56 49.4 +3.3**
DBJI **Dramaga** **59.28 271** P **P** **22 56 50.5 +2.1**
comp=Z,8μmcomp=Z,179nm,1.8s
TPI **Tanjungpandan** **59.33 276** P **P** **22 56 50.7 +1.9**
comp=Z,611nmcomp=Z,31nm,1.7s
ERM **Erimo** **60.39 340** P **P** **22 56 55.0 -0.4**
ERM IAmb IAmb 22 57 05.6
comp=Z,29nm,0.9s
ERM **Erimo** **60.39 340** P **P** **22 56 55.0 -0.4**
ERM pmax pmax
comp=Z,29nm,1.0s
ERM MLR MLR
comp=Z,3μm,19.0s
ERM **Erimo** **60.39 340** P **P** **22 56 59.5 +4.1**
PPBI **Pangkal Pinang** **60.95 276** P **P** **22 57 01.6 +1.7**
comp=Z,60nm,1.8s
QZH **Quanzhou** **61.18 310**⇑ *i*P **P** **22 57 02.0 +0.8**
QZH S **S** **23 05 24.5 +3.8**
QZH pmax pmax
comp=Z,590nm,5.5s
QZH LR LR
comp=Z,1μm,15.0s
QZH LR LR
comp=Z,1μm,16.5s
QZH LR LR
comp=Z,1μm,16.9s
KASI **Kota Agung** **61.70 272** P **P** **22 57 05.5 +0.6**
comp=Z,2μmcomp=Z,93nm,1.4s
KUR **Kuril'sk** **61.98 345** *e*P **P** **22 57 06.6 +0.5**
KUR *e* 22 57 47.8
KUR *e* 22 59 18.2
KUR S **S** **23 05 33.1 +3.1**
KUR *e*SS **SS** **23 09 33.3 +0.4**
KUR pmax pmax
comp=Z,192nm,1.4s
KUR pmax pmax
comp=Z,2μm,4.5s
KUR MLR MLR
comp=Z,3μm,19.0s
KUR MLR MLR
comp=N,4μm,18.0s
KUR MLR MLR
comp=E,2μm,14.0s
PMBI **Palembang** **62.06 274** P **P** **22 57 07.3 -0.1**
NAWB **Namwon** **62.14 324** P **P** **22 57 06.9 -0.5**
NAWB IAmb IAmb 22 57 15.5
comp=Z,110nm,1.9s
LWLI **Liwa** **62.24 272** P **P** **22 57 10.2 +1.5**
comp=Z,74nm,1.2s
JKA **Kamikawa-asahi** **62.45 341** P **P** **22 57 09.3 -0.1**
ASAJ **Asahikawa** **62.45 341** LR LR 23 21 19.2
comp=Z,2μm,20.9s,baz=174,slow=33
ASAJ **Asahikawa** **62.45 341** P **P** **22 57 09.3 -0.1**
ASAJ pmax pmax
comp=Z,148nm,1.4s
TJN **Taejon** **62.85 325** P **P** **22 57 11.6 -0.6**
TJN **Taejon** **62.85 325** P **P** **22 57 11.6 -0.6**
TJN pmax pmax
comp=Z,703nm,1.8s
TJN **Taejon** **62.85 325** P **P** **22 57 14.0 +1.9**
comp=Z,162nm,1.7s
KSCHJ **Chungju** **62.87 326** P **P** **22 57 11.8 -0.5**
KSCHJ IAmb IAmb 22 57 19.1
comp=Z,28nm,0.9s
DSRI **Dabo** **62.90 277** P **P** **22 57 14.9 +1.9**
comp=Z,1μmcomp=Z,34nm,2.0s
VNDA **Vanda** **62.94 181** P **P** **22 57 13.7 +1.5**
comp=Z,4.5nm,0.7s,baz=356,slow=7.9,SNR=28
VNDA LR LR 23 20 56.9
comp=Z,3μm,20.1s,baz=15,slow=33
comp=Z,4.5nm,0.7s
VNDA **Vanda** **62.94 181** P **P** **22 57 13.0 +0.8**
VNDA IAmb IAmb 22 57 20.1
comp=Z,122nm,1.9s
VNDA **Vanda** **62.94 181** P **P** **22 57 13.0 +0.8**
VNDA pmax pmax
comp=Z,122nm,1.9s
SSE **Sheshan** **63.04 317** P **P** **22 57 12.0 -1.5**
SSE S **S** **23 05 45.8 +1.8**
SSE pmax pmax
comp=Z,24nm,0.7s
SSE pmax pmax
comp=Z,330nm,8.2s
SSE LR LR
comp=Z,520nm,21.0s
SSE LR LR
comp=Z,650nm,21.3s
SBA **Scott Base** **63.23 180** P **P** **22 57 15.2 +1.1**
SBA IAmb IAmb 22 57 22.1
comp=Z,156nm,1.8s
SBA **Scott Base** **63.23 180** P **P** **22 57 15.2 +1.1**
SBA pmax pmax
comp=Z,156nm,1.8s
SBA MLR MLR
comp=Z,2μm,20.0s
KSRS **Korea Array** **63.33 326** P **P** **22 57 15.6 +0.3**
comp=Z,7.0nm,0.9s,baz=142,slow=6.9,SNR=24
KSRS LR LR 23 24 47.7
comp=Z,735nm,18.1s,baz=130,slow=36
comp=Z,7.0nm,0.9s
KSAR **Wonju Array Be** **63.34 326** P **P** **22 57 14.8 -0.6**
KSAR **Wonju Array Be** **63.34 326** P **P** **22 57 14.8 -0.6**
CASY **Casey** **63.38 202** P **P** **22 57 15.7 +0.4**
KS19 **Wonju Array Si** **63.39 326** P **P** **22 57 15.1 -0.7**
KS19 IAmb IAmb 22 57 17.4
comp=Z,33nm,1.3s
SEHB **SEOHWA** **63.75 327** P **P** **22 57 17.9 -0.3**
SEHB IAmb IAmb 22 57 26.5
comp=Z,31nm,1.2s
INCN **Inchon** **64.05 325** P **P** **22 57 19.9 -0.2**
INCN IAmb IAmb 22 57 22.3
comp=Z,106nm,1.6s
INCN **Inchon** **64.05 325** P **P** **22 57 19.9 -0.2**
INCN pmax pmax
comp=Z,106nm,1.7s
INCN MLR MLR
comp=Z,1μm,19.0s
MYKOM **Kota Tinggi** **64.25 279** P **P** **22 57 20.5 -1.4**
HJU **Haeju** **64.95 325** P **P** **22 57 25.4 -0.6**
HJU pP **pP** **22 57 28.6 -1.5**
HJU S **S** **23 06 11.0 +3.5**
HJU AmB
comp=Z,116nm,1.2s
HJU AMS AMS
comp=N,390nm,5.2s
HJU AMS AMS
comp=E,654nm,8.8s
HJU AMS AMS
comp=Z,377nm,5.1s
YSS **Yuzh-Sakhalins** **64.95 342** P **P** **22 57 26.0 +0.3**
YSS **Yuzh-Sakhalins** **64.95 342** *ce*P **P** **22 57 26.1 +0.3**
YSS *e**PP **sP** **22 57 34.3 +2.9**
YSS *e*S **S** **23 06 00.2 -7.0**
YSS *e*PS **PnS** **23 06 19.1 -6.8**
YSS pmax pmax
comp=Z,100nm,1.1s
YSS pmax pmax
comp=N,500nm,10.3s
YSS pmax pmax
comp=Z,2μm,10.3s
YSS **Yuzh-Sakhalins** **64.95 342** P **P** **22 57 28.5 +2.7**
comp=Z,126nm,1.3s
QIZ **Qiongzhong** **65.17 299** P **P** **22 57 26.8 -1.0**
QIZ S **S** **23 06 12.3 +1.5**
QIZ ScS **SKSac** **23 07 18.5 -4.6**
QIZ LR LR
comp=Z,750nm,17.5s
QIZ LR LR
comp=Z,820nm,22.3s
QIZ LR LR
comp=Z,2μm,26.3s
NJ2 **Nanjing** **65.19 316**⇑ P **P** **22 57 29.3 +1.6**
NJ2 pP **pP** **22 57 31.0 -0.7**
NJ2 S **S** **23 06 12.8 +2.1**
NJ2 SS **SS** **23 10 21.5 -2.2**
NJ2 pmax pmax
comp=Z,11nm,0.5s
NJ2 pmax pmax
comp=Z,980nm,6.8s
NJ2 LR LR
comp=Z,2μm,12.8s
NJ2 LR LR
comp=Z,460nm,11.9s
NJ2 LR LR
comp=Z,2μm,20.4s
TEY **Ternei** **65.35 337**⇓ *e*P **P** **22 57 28.5 +0.1**
TEY pmax pmax
comp=Z,10.0nm,1.7s
TEY pmax pmax
comp=Z,100nm,10.3s
HHU **Hamhung** **65.36 328** P **P** **22 57 28.3 -0.3**
HHU pP **pP** **22 57 30.5 -2.2**
HHU S **S** **23 06 08.1 -4.3**
HHU AmB
comp=Z,503nm,3.2s
HHU AMS AMS
comp=N,75nm,7.6s
HHU AMS AMS
comp=E,62nm,6.3s
HHU AMS AMS
comp=Z,14nm,1.4s
MSHR **Mys Shultsa** **65.62 332** *ce*P **P** **22 57 30.3 +0.1**
MSHR pmax pmax
comp=Z,32nm,1.4s
PYAG **Pyongyang** **65.66 326** P **P** **22 57 31.7 +1.2**
PYAG pP **sP** **22 57 35.8 -0.3**
PYAG S **S** **23 06 17.4 +1.3**
PYAG AmB
comp=Z,66nm,1.0s
PYAG AMS AMS
comp=N,859nm,10.5s
PYAG AMS AMS
comp=E,226nm,2.8s
PYAG AMS AMS
comp=Z,116nm,1.4s
SKR **Severo-Kuril's** **65.69 353** *e*P **P** **22 57 30.1 -0.4**
SKR *e*S **S** **23 06 16.7 +0.7**
SKR pmax pmax
comp=Z,200nm,5.0s
VLA **Vladivostok** **65.72 333** *c i*P **P** **22 57 31.1 +0.3**
VLA pmax pmax
comp=Z,115nm,1.6s
BKNI **Bangkinang** **66.53 277** P **P** **22 57 35.8 -0.9**
BKNI **Bangkinang** **66.53 277** P **P** **22 57 39.5 +2.8**
comp=Z,3μmcomp=Z,210nm,1.3s
BKNI **Bangkinang** **66.53 277** P **P** **22 57 39.4 +2.8**
comp=Z,213nm,1.3s
USA0B **Ussuriysk Arra** **66.53 334** P **P** **22 57 35.2 -0.8**
USA0B **Ussuriysk Arra** **66.53 334** P **P** **22 57 35.2 -0.8**
USA0B pmax pmax
comp=Z,156nm,1.4s
USRK **Ussuriysk Ar.** **66.53 334** P **P** **22 57 36.3 +0.2**
comp=Z,36nm,1.0s,baz=116,slow=4.4,SNR=80
USRK LR LR 23 22 53.7
comp=Z,891nm,21.8s,baz=135,slow=33
comp=Z,36nm,1.0s
USRK **Ussuriysk Ar.** **66.53 334** P **P** **22 57 35.8 -0.2**
USRK **Ussuriysk Ar.** **66.53 334** P **P** **22 57 35.8 -0.2**
AMKA **Amchitka** **66.66 9** P **P** **22 57 36.8 +0.2**
UGL **Uglegorsk** **67.07 343** *e*P **P** **22 57 41.0 +1.7**
UGL *e*S **S** **23 06 36.5 +3.7**
UGL pmax pmax
comp=Z,1μm,5.0s
UGL pmax pmax
comp=Z,120nm,0.9s
UGL smax smax
comp=E,2μm,10.0s
UGL smax smax
comp=N,740nm,4.0s
SUJ **Sinuiju** **67.09 326** P **P** **22 57 39.2 -0.5**
SUJ pP **pP** **22 57 44.0 +0.2**
SUJ S **S** **23 06 34.3 +0.9**
SUJ AmB
comp=Z,350nm,2.0s
SUJ AMS AMS
comp=N,116nm,6.8s
SUJ AMS AMS
comp=E,133nm,7.8s
SUJ AMS AMS
comp=Z,23nm,1.4s
CNSH **ChangSha** **67.19 309**⇑ P **P** **22 57 41.8 +1.2**
CNSH S **S** **23 06 41.5 +6.4**
CNSH LR LR
comp=Z,890nm,14.9s
CNSH LR LR
comp=Z,1μm,22.2s
CNSH LR LR
comp=Z,1μm,20.6s
SHEM **Shemya Is, Ala** **67.40 5** P **P** **22 57 42.4 +1.1**
comp=Z,40nm,0.7s,baz=296,slow=7.1,SNR=5.1
SHEM LR LR 23 22 28.1
comp=Z,3μm,20.0s,baz=183,slow=32
comp=Z,40nm,0.7s
WHN **Wuhan** **67.43 312**⇓ P **P** **22 57 42.3 +0.2**
WHN sP **sP** **22 57 49.0 +1.4**
WHN S **S** **23 06 40.8 +2.8**
WHN pmax pmax
comp=Z,86nm,1.4s
WHN LR LR
comp=Z,3μm,15.5s
WHN LR LR
comp=Z,3μm,17.9s
WHN LR LR
comp=Z,4μm,17.8s
GULI **GuiLin** **67.68 306**⇑ P P 22 57 36.3 -7.5
GULI S **S** **23 06 36.3 -4.9**
KIWB **Kanaga Island** **67.69 11** P **P** **22 57 42.9 -0.4**
PET **Petropavlovsk** **67.73 355** P **P** **22 57 43.7 +0.2**
PET IAmb IAmb 22 57 45.2
comp=Z,159nm,1.6s
PET IAMs_20 IAMs_20 23 21 53.4
comp=Z,3μm,20.0s
PET **Petropavlovsk** **67.73 355** *ce i*P **P** **22 57 43.2 -0.3**
PET *e* 22 58 07.5
PET *e*S **S** **23 06 38.5 -2.2**
PET *e* 23 07 30.7
PET pmax pmax
comp=Z,77nm,1.5s
PET pmax pmax
comp=Z,1μm,5.4s
PET pmax pmax
comp=Z,900nm,9.9s
PET pmax pmax
comp=Z,500nm,10.2s
PET pmax pmax
comp=Z,800nm,8.0s
PET **Petropavlovsk** **67.73 355** P **P** **22 57 45.9 +2.4**
comp=Z,132nm,1.2s
IPM **Ipoh** **67.74 281** P **P** **22 57 43.9 -0.5**
IPM IAmb IAmb 22 57 53.4
comp=Z,140nm,1.4s
IPM **Ipoh** **67.74 281** P **P** **22 57 45.5 +1.1**
comp=Z,78nm,1.5s
DL2 **Dalian** **67.86 323** P **P** **22 57 45.0 +0.4**
DL2 S **S** **23 06 43.8 +1.0**
DL2 pmax pmax
comp=Z,50nm,1.2s
DL2 pmax pmax
comp=Z,720nm,8.1s
DL2 LR LR
comp=Z,2μm,16.9s
DL2 LR LR
comp=Z,2μm,16.7s
DL2 LR LR
comp=Z,1μm,16.8s
PEA0B **Petropavlovsk-** **67.91 354** P **P** **22 57 45.0 +0.4**
PEA0B **Petropavlovsk-** **67.91 354** P **P** **22 57 45.0 +0.4**
PEA0B pmax pmax
comp=Z,287nm,1.7s
PETK **Petropavlovsk-** **67.91 354** P **P** **22 57 44.9 +0.3**
comp=Z,18nm,0.9s,baz=155,slow=8.2,SNR=24
PETK LR LR 23 22 13.6
comp=Z,3μm,20.9s,baz=156,slow=31
comp=Z,18nm,0.9s
PETK **Petropavlovsk-** **67.91 354** P **P** **22 57 44.7 +0.1**
PETK **Petropavlovsk-** **67.91 354** P **P** **22 57 44.7 +0.1**
MDJ **Mudanjiang** **67.92 332** P **P** **22 57 44.7 -0.2**
MDJ IAmb IAmb 22 57 47.4
comp=Z,118nm,1.4s
MDJ **Mudanjiang** **67.92 332** P **P** **22 57 45.5 +0.7**
MDJ S **S** **23 06 49.3 +6.0**
MDJ SS **SS** **23 11 05.5 -0.1**
MDJ pmax pmax
comp=Z,69nm,1.4s
MDJ pmax pmax
comp=Z,1μm,5.9s
MDJ LR LR
comp=Z,990nm,13.7s
MDJ LR LR
comp=Z,1μm,14.1s
MDJ LR LR
comp=Z,1μm,17.2s
MNSI **Mandaling Nat** **68.06 277** P **P** **22 57 46.4 0.0**
comp=Z,1μmcomp=Z,58nm,1.6s
GSTR **Great Sitkin T** **68.13 11** P **P** **22 57 46.0 -0.1**
KULM **Kulim** **68.34 282** P **P** **22 57 47.3 -0.9**
TYV **Tymovskoe** **68.52 344** *e*P **P** **22 57 49.1 +0.6**
TYV *e*S **S** **23 06 53.7 +3.5**
TYV pmax pmax
comp=Z,28nm,1.7s
TYV pmax pmax
comp=Z,1μm,5.5s
TYV smax smax
comp=N,500nm,7.8s
TYV smax smax
comp=E,1μm,7.8s
TYV MLR MLR
comp=N,2μm,18.0s
TYV MLR MLR
comp=E,2μm,18.0s
SNY **Shenyang** **68.80 327**⇓ P **P** **22 57 51.0 +0.6**
SNY sP **sP** **22 58 01.5 +5.5**
SNY pmax pmax
comp=E,34nm,1.2s
SNY pmax pmax
comp=E,2μm,13.7s
SNY LR LR
comp=E,2μm,18.6s
SNY LR LR
comp=E,2μm,17.3s
SNY LR LR
comp=E,4μm,17.3s
TIA **Tai'an** **68.87 319**⇓ P **P** **22 57 50.8 -0.2**
TIA S **S** **23 07 00.3 +5.3**
TIA pmax pmax
comp=E,21nm,1.5s
TIA pmax pmax
comp=E,630nm,3.9s
TIA LR LR
comp=E,2μm,16.4s
TIA LR LR
comp=E,2μm,15.7s
TIA LR LR
comp=E,3μm,17.2s
RPSI **Rantau Prapat** **69.22 279** P **P** **22 57 52.9 -0.8**
RPSI IAmb IAmb 22 58 01.8
comp=Z,124nm,1.6s
PSI **Prapat** **69.25 279** P **P** **22 57 52.9 -1.1**
PSI pmax pmax
comp=Z,124nm,1.6s
PSI **Prapat** **69.25 279** P **P** **22 57 54.4 +0.4**
comp=Z,52nm,2.3s
CN2 **Changchun** **69.26 329** *e*P **P** **22 57 52.5 -0.7**
CN2 S **S** **23 07 00.8 +1.6**
CN2 SS **SS** **23 11 22.8 -3.6**
CN2 pmax pmax
comp=Z,500nm,7.0s
CN2 LR LR
comp=Z,2μm,18.0s
CN2 LR LR
comp=Z,700nm,18.0s
CN2 LR LR
comp=Z,900nm,19.0s
BNX **BinXian** **69.77 332**⇓ P **P** **22 57 55.8 -0.6**
BNX pP **sP** **22 58 03.8 +1.9**
BNX sP pP 22 58 08.3 +7.8
BNX PcP **PcP** **22 58 15.0 -4.0**
BNX S **S** **23 07 03.5 -1.7**
BNX pmax pmax
comp=Z,51nm,1.8s
BNX pmax pmax
comp=Z,920nm,8.0s
BNX LR LR
comp=Z,1μm,14.7s
BNX LR LR
comp=Z,930nm,15.7s
BNX LR LR
comp=Z,1μm,17.7s
GSI **Gunungsitoli** **70.12 277** P **P** **22 57 58.1 -1.2**
GSI IAmb IAmb 22 58 07.4
comp=Z,138nm,1.4s
GSI **Gunungsitoli** **70.12 277** P **P** **22 58 00.3 +1.1**
comp=Z,2μmcomp=Z,77nm,1.0s
GSI **Gunungsitoli** **70.12 277** P **P** **22 58 02.4 +3.2**
GRNR **Gornyy** **70.30 340**⇓ *i*P **P** **22 58 00.5 +1.0**
GRNR pmax pmax
comp=Z,20nm,1.3s
SRIT **Nakonsritamara** **70.36 285** P **P** **22 58 00.5 -0.2**
SRIT IAmb IAmb 22 58 10.6
comp=Z,214nm,1.8s
KCSI **Kotacane, Aceh** **70.56 279** P P 22 58 13.0 +11
NIKH **Nikolski High** **70.57 15** P **P** **22 57 58.5 -2.6**
baz=205
KLR **Kul'dur** **70.68 337** *ce*P **P** **22 58 01.7 -0.2**
KLR pmax pmax
comp=Z,111nm,1.6s
ENH **Enshi** **70.84 310** P **P** **22 58 02.6 -0.7**
ENH IAmb IAmb 22 58 11.7

comp=Z,158nm,1.4s
LYN LuoYang 70.98 315 *e*P **P** **22 58 03.3 -0.7**
LYN S **S** **23 07 13.5 -6.3**
LYN pmax pmax
comp=Z,30nm,1.4s
LYN pmax pmax
comp=Z,850nm,7.6s
LYN LR LR
comp=Z,2µm,19.1s
LYN LR LR
comp=Z,700nm,23.0s
LYN LR LR
comp=Z,2µm,20.0s
NKL Nikolayevsk 71.11 344 *e*P **P** **22 58 03.3 -1.1**
NKL *e*S **S** **23 07 19.1 -1.4**
NKL pmax pmax
comp=E,4.0nm,0.7s
NKL pmax pmax
comp=N,281nm,1.2s
NKL pmax pmax
comp=Z,54nm,1.0s
NKL smax smax
comp=E,2.0nm,0.9s
NKL smax smax
comp=N,919nm,1.9s
NKL MLR MLR
comp=E,68nm,10.0s
NKL MLR MLR
comp=N,4µm,13.0s
NKL MLR MLR
comp=Z,1µm,17.0s
HNS HongShan 71.13 318 ⇑P **P** **22 58 04.8 -0.1**
HNS PcP **PcP** **22 58 25.8 +0.9**
HNS PP **PP** **23 00 44.8 +1.9**
HNS S **S** **23 07 21.8 +0.4**
HNS SKS **SKSac** **23 07 58.0 -10**
HNS SS **SS** **23 11 57.5 +2.0**
HNS pmax pmax
comp=Z,37nm,1.6s
HNS pmax pmax
comp=Z,890nm,5.5s
HNS LR LR
comp=Z,1µm,16.7s
HNS LR LR
comp=Z,2µm,17.1s
HNS LR LR
comp=Z,2µm,16.9s
GYA Guiyang 71.17 305 ⇑*i*P **P** **22 58 06.8 +1.3**
GYA sP sP 22 58 12.5 +1.5
GYA PP **PP** **23 00 41.3 -2.2**
GYA S **S** **23 07 23.0 +0.5**
GYA pmax pmax
comp=Z,29nm,1.5s
GYA pmax pmax
comp=Z,930nm,7.6s
GYA LR LR
comp=Z,1µm,16.9s
GYA LR LR
comp=Z,1µm,16.5s
GYA LR LR
comp=Z,2µm,17.8s
BJT Baijiatuau 71.81 321 P **P** **22 58 08.2 -0.7**
BJT IAmb IAmb 22 58 17.3
comp=Z,105nm,1.4s
BJT Baijiatuau 71.81 321 P **P** **22 58 08.2 -0.7**
BJT pmax pmax
comp=Z,105nm,1.4s
BJI Beijing 71.82 321 P **P** **22 58 08.8 -0.1**
BJI sP **sP** **22 58 15.5 +1.0**
BJI S **S** **23 07 31.3 +2.1**
BJI pmax pmax
comp=Z,34nm,1.4s
BJI pmax pmax
comp=Z,980nm,8.0s
BJI LR LR
comp=Z,270nm,16.8s
BJI LR LR
comp=Z,700nm,17.5s
BJI LR LR
comp=Z,1µm,18.8s
UNV Unalaska Valle 71.97 16 P **P** **22 58 07.1 -2.4**
baz=208
TIY Taiyuan 72.78 318 *e*P **P** **22 58 16.8 +1.9**
TIY S **S** **23 07 44.0 +3.4**
TIY pmax pmax
comp=Z,820nm,4.3s
TIY LR LR
comp=Z,1µm,17.2s
TIY LR LR
comp=Z,1µm,17.7s
TIY LR LR
comp=Z,2µm,17.8s
XAN Xi'an 73.18 313 ⇑P **P** **22 58 16.8 -0.5**
XAN pP pP 22 58 21.5 +0.1
XAN sP sP 22 58 24.3 +1.4
XAN S **S** **23 07 45.0 -0.3**
XAN pmax pmax
comp=Z,15nm,1.7s
XAN pmax pmax
comp=Z,880nm,6.0s
XAN LR LR
comp=Z,2µm,18.4s
XAN LR LR
comp=Z,1µm,20.9s
XAN LR LR
comp=Z,3µm,22.9s
FALS False Pass 73.73 17 P **P** **22 58 18.1 -1.8**
baz=210
KMI Kunming 73.75 302 ⇑P **P** **22 58 21.8 +0.8**
KMI sP sP 22 58 29.0 +2.4
KMI S **S** **22 58 56.5 +4.2**
KMI SKS **SKSac** **23 08 27.3 -1.0**
KMI SS **SS** **23 12 32.0 -4.4**
KMI pmax pmax
comp=Z,51nm,1.5s
KMI pmax pmax
comp=Z,720nm,6.4s
KMI LR LR
comp=Z,470nm,17.5s
KMI LR LR
comp=Z,790nm,22.2s
KMI LR LR
comp=Z,1µm,25.0s
SPIA Saint Paul Isl 74.08 13 P **P** **22 58 19.9 -2.0**
baz=203
XLT XiLinHaoTe 74.28 325 ⇓*i*P **P** **22 58 24.0 +0.4**
XLT sP sP 22 58 31.0 +1.8
XLT S **S** **23 08 02.3 +5.0**
XLT pmax pmax
comp=Z,67nm,1.7s
XLT pmax pmax
comp=Z,1µm,3.9s
XLT LR LR
comp=Z,1µm,16.0s
XLT LR LR
comp=Z,630nm,15.2s
CMAR Chiang Mai Arr 74.36 294 P **P** **22 58 25.2 +0.7**
comp=Z,16nm,0.8s,baz=123,slow=4.2,SNR=46
CMAR LR LR 23 31 49.6
comp=Z,484nm,19.9s,baz=95,slow=36
comp=Z,16nm,0.8s
CMAR Chiang Mai Arr 74.36 294 P **P** **22 58 24.4 -0.1**
CMAR Chiang Mai Arr 74.36 294*ce*P **P** **22 58 25.2 +0.7**
CMAR pmax pmax
comp=Z,15nm,0.8s
CHTO Chiang Mai 74.49 295 P **P** **22 58 25.0 -0.2**
CHTO IAmb IAmb 22 58 34.8
comp=Z,88nm,1.3s
CHTO Chiang Mai 74.49 295 P **P** **22 58 25.0 -0.2**
CHTO pmax pmax
comp=Z,88nm,1.3s
CHTO Chiang Mai 74.49 295 P **P** **22 58 28.3 +3.1**
CHNA Chernabura Isl 74.89 19 P **P** **22 58 23.8 -2.9**
baz=214
SDPT Sand Point 75.04 19 P **P** **22 58 24.9 -2.6**
baz=213
MA2 Magadan 75.07 352 P **P** **22 58 28.3 +0.6**
comp=Z,16nm,0.6s,baz=164,slow=5.0,SNR=12
MA2 LR LR 23 26 35.9
comp=Z,2µm,21.4s,baz=170,slow=32
comp=Z,16nm,0.6s
MA2 Magadan 75.07 352 P **P** **22 58 27.4 -0.3**
MA2 IAmb IAmb 22 58 34.8
comp=Z,31nm,0.9s
MA2 Magadan 75.07 352*ce*P **P** **22 58 26.2 -1.5**
MA2 pmax pmax
comp=Z,130nm,2.3s
MA2 Magadan 75.07 352 P **P** **22 58 28.7 +1.0**
comp=Z,45nm,1.0s
HHC Hu-ho-hao-te 75.12 320 *e*P **P** **22 58 29.8 +1.2**
HHC S **S** **23 08 07.3 +0.3**
HHC SS **SS** **23 12 55.5 -1.1**
HHC pmax pmax
comp=Z,75nm,1.3s
HHC pmax pmax
comp=Z,1µm,6.8s
HHC LR LR
comp=Z,3µm,17.8s
HHC LR LR
comp=Z,1µm,18.4s
HHC LR LR
comp=Z,4µm,17.8s
QSPA South Pole Qui 75.39 180 LR LR 23 29 22.2
comp=Z,3µm,18.9s,baz=32,slow=34
QSPA South Pole Qui 75.39 180 P **P** **22 58 29.8 0.0**
QSPA South Pole Qui 75.39 180 IAMs_20 IAMs_20 23 28 51.9
comp=Z,2µm,20.0s
CD2 Chengdu 75.47 308 P **P** **22 58 32.3 +1.6**
CD2 S **S** **23 08 12.5 +1.4**
CD2 ScS **ScS** **23 08 46.0 +1.8**
CD2 SS **SS** **23 13 03.0 +0.8**
CD2 pmax pmax
comp=Z,40nm,1.3s
CD2 pmax pmax
comp=Z,830nm,8.6s
CD2 LR LR
comp=Z,1µm,15.7s
CD2 LR LR
comp=Z,1µm,17.3s
HIA Hailar 75.91 330 P **P** **22 58 32.5 -0.3**
HIA IAmb IAmb 22 58 34.8
comp=Z,91nm,1.5s
HIA Hailar 75.91 330 P **P** **22 58 32.5 -0.3**
HIA pmax pmax
comp=Z,91nm,1.5s
HIA MLR MLR
comp=Z,2µm,21.0s
ZEA Zeya 75.97 337 *e*P **P** **22 58 33.1 +0.1**
ZEA *e*SS SS 23 13 14.6 +5.9
ZEA pmax pmax
comp=Z,40nm,1.2s
ZEA pmax pmax
comp=E,200nm,9.7s
ZEA pmax pmax
comp=N,200nm,6.4s
ZEA pmax pmax
comp=Z,600nm,10.4s
ZEA MLR MLR
comp=N,400nm,15.0s
ZEA MLR MLR
comp=E,500nm,15.0s
S14K Fog Glacier 76.11 19 P **P** **22 58 31.5 -2.4**
baz=214
CHIR Chirikof Islan 77.01 21 P **P** **22 58 36.5 -2.3**
baz=218
LZH Lanzhou 77.81 313 ⇑P **P** **22 58 46.5 +2.5**
LZH sP sP 22 58 51.5 +1.9
LZH S **S** **23 08 39.8 +3.1**
LZH pmax pmax
comp=E,110nm,1.3s
LZH pmax pmax
comp=E,1µm,6.2s
LZH LR LR
comp=E,1µm,15.9s
LZH LR LR
comp=E,1µm,16.2s
LZH LR LR
comp=E,2µm,18.7s
SII Sitkinak Islan 78.09 21 IAMs_20 IAMs_20 23 25 32.2
comp=Z,4µm,22.0s
SII Sitkinak Islan 78.09 21 P **P** **22 58 43.2 -1.7**
baz=219
SEY Seymchan 78.12 353 P **P** **22 58 44.7 -0.1**
comp=Z,15nm,0.8s,baz=148,slow=4.6,SNR=34
SEY LR LR 23 28 59.3
comp=Z,4µm,20.8s,baz=164,slow=32
comp=Z,15nm,0.8s
SEY Seymchan 78.12 353*ce*P **P** **22 58 44.0 -0.9**
SEY pmax pmax
comp=Z,76nm,1.5s
R17K Ugashik Creek 78.22 19 P **P** **22 58 43.2 -2.3**
baz=217,SNR=5.3
RPN Rapa Nui 78.24 115 LR LR 23 26 37.0
comp=Z,800nm,18.8s,baz=268,slow=30
P16K Nushagak River 78.86 18 P **P** **22 58 46.7 -2.2**
baz=215
OHAK Old Harbor 78.92 21 P **P** **22 58 47.7 -1.7**
baz=220,SNR=5.1
Q16K King Salmon 78.97 19 P **P** **22 58 47.6 -2.0**
baz=216
O16K Kokwok River B 79.29 17 P **P** **22 58 49.0 -2.4**
baz=215,SNR=9.8
O16K S **S** **23 08 52.1 +0.9**
baz=215
P17K Kvichak River 79.46 18 P **P** **22 58 50.3 -2.0**
baz=216
Q18K Katmai Hardscr 79.46 19 P **P** **22 58 50.1 -2.4**
baz=218
KDAK Kodiak Island 79.59 21 P **P** **22 58 53.6 +0.5**
comp=Z,10nm,0.9s,baz=232,slow=2.1,SNR=3.6
KDAK LR LR 23 28 12.7
comp=Z,4µm,20.7s,baz=242,slow=31
comp=Z,10nm,0.9s
KDAK Kodiak Island 79.59 21 P **P** **22 58 53.6 +0.5**
KDAK Kodiak Island 79.59 21 IAMs_20 IAMs_20 23 27 39.9
comp=Z,4µm,21.0s
KDAK Kodiak Island 79.59 21 P **P** **22 58 53.6 +0.5**
KDAK pmax pmax
comp=Z,43nm,1.4s
KDAK MLR MLR
comp=Z,4µm,21.0s
KDAK Kodiak Island 79.59 21 P **P** **22 58 50.8 -2.2**
baz=220
KDAK S **S** **23 08 58.2 +3.8**
baz=220
O17K Koliganek Bris 79.73 18 P **P** **22 58 51.5 -2.3**
baz=216,SNR=13
O17K S **S** **23 08 58.0 +2.1**
baz=216
N16K Nishlik Lake 79.83 17 P **P** **22 58 53.6 -0.8**
baz=214,SNR=20
N16K S **S** **23 08 59.0 +2.0**
baz=214
GAMB Gambell 79.94 10 P **P** **22 58 55.4 +0.6**
GAMB IAmb IAmb 22 58 57.3
comp=Z,64nm,1.1s
GAMB Gambell 79.94 10 P **P** **22 58 52.6 -2.2**
baz=201
GAMB S **S** **23 09 02.5 +4.7**
baz=201
P18K Big Mountain, 79.99 19 IAMs_20 IAMs_20 23 26 52.1
comp=Z,3µm,22.0s
P18K Big Mountain, 79.99 19 P **P** **22 58 52.7 -2.6**
baz=218
Q19K Cape Douglas, 80.12 20 P **P** **22 58 56.0 0.0**
Q19K IAmb IAmb 22 59 11.6
comp=Z,81nm,1.3s
Q19K Cape Douglas, 80.12 20 P **P** **22 58 53.3 -2.7**
baz=219
Q19K S **S** **23 09 03.5 +3.4**
baz=219
Q20K Shuyak Island 80.29 20 P **P** **22 58 55.4 -1.4**
baz=220
O18K Koktuh Hills 80.36 18 P **P** **22 58 56.0 -1.3**
O18K IAmb IAmb 22 58 59.0
comp=Z,193nm,2.5s
O18K IAMs_20 IAMs_20 23 29 02.0
comp=Z,3µm,20.0s
O18K Koktuh Hills 80.36 18 P **P** **22 58 55.0 -2.3**
baz=218
CIT Chita 80.69 330 *e*P **P** **22 58 59.2 0.0**
CIT *e* 22 59 10.8
CIT pmax pmax
comp=Z,188nm,1.9s
N18K Kilae Creek 80.82 18 P **P** **22 58 59.5 -0.1**
N18K IAmb IAmb 22 59 02.4
comp=Z,117nm,2.1s
N18K IAMs_20 IAMs_20 23 29 18.0
comp=Z,4µm,20.0s
N18K Kilae Creek 80.82 18 P **P** **22 58 57.2 -2.5**
baz=217,SNR=5.9
N18K S **S** **23 09 10.7 +3.3**
baz=217
O19K Port Alsworth 80.91 19 IAMs_20 IAMs_20 23 29 18.4
comp=Z,3µm,20.0s
O19K Port Alsworth 80.91 19 P **P** **22 58 58.2 -1.9**
baz=218
MOKO MOKOCHONG 81.03 300 *e*P **P** **22 59 01.7 0.0**
MOKO IAmb IAmb 22 59 05.5
comp=Z,36nm,0.7s
KOHI KOHIMA 81.16 299 *e*P **P** **22 59 01.8 -0.7**
KOHI IAmb IAmb 22 59 10.3
comp=Z,191nm,1.5s
HOM Homer 81.34 20 P **P** **22 58 59.8 -2.7**
baz=221
N19K Bonanza Creek 81.34 18 IAMs_20 IAMs_20 23 29 42.9
comp=Z,4µm,20.0s
N19K Bonanza Creek 81.34 18 P **P** **22 59 00.6 -1.9**
baz=218,SNR=8.2
N19K S **S** **23 09 15.4 +2.5**
baz=218
O20K Slope Mountain 81.35 19 P **P** **22 59 00.1 -2.5**
baz=220,SNR=9.7
O20K S **S** **23 09 15.5 +2.5**
baz=220
CNPM China Poot 81.38 20 P **P** **22 59 02.4 -0.2**
CNPM IAmb IAmb 22 59 06.8
comp=Z,30nm,0.8s
RSO Redoubt South 81.60 19 P **P** **22 59 04.5 +0.4**
BRLK Bradley Lake 81.68 20 P **P** **22 59 03.4 -0.9**
BRLK IAmb IAmb 22 59 07.8
comp=Z,49nm,1.2s
AZL Aizawl 81.68 297 *e*P **P** **22 59 05.5 +0.3**
AZL IAmb IAmb 22 59 13.7
comp=Z,89nm,1.5s
ULN Ulaanbaatar 81.71 324 P **P** **22 59 04.5 -0.4**
ULN Ulaanbaatar 81.71 324 P **P** **22 59 04.5 -0.4**
ULN pmax pmax
comp=Z,429nm,2.4s
ULN MLR MLR
comp=Z,1µm,19.0s
BRSE Bradley Lake S 81.71 20 P **P** **22 59 01.3 -3.1**
baz=222,SNR=6.7
MAW Mawson 81.74 202 P **P** **22 59 05.3 +0.8**
comp=Z,2.8nm,1.1s,baz=102,slow=15,SNR=2.5
MAW LR LR 23 30 33.6
comp=Z,2µm,20.8s,baz=96,slow=32
comp=Z,2.8nm,1.1s
MAW Mawson 81.74 202 P **P** **22 59 05.5 +1.0**
baz=82,SNR=4.5
MAW Mawson 81.74 202 P **P** **22 59 05.1 +0.5**
MAW Mawson 81.74 202 P **P** **22 59 05.1 +0.5**
MAW pmax pmax
comp=Z,19nm,2.2s
YAK Yakutsk 81.77 343 LR LR 23 36 19.1
comp=Z,2µm,18.1s,baz=124,slow=36
YAK Yakutsk 81.77 343 P **P** **22 59 04.0 -0.6**
YAK IAmb IAmb 22 59 12.7
comp=Z,107nm,0.8s
YAK IAMs_20 IAMs_20 23 38 12.1
comp=Z,2µm,18.0s
YAK Yakutsk 81.77 343 *e*P **P** **22 59 04.7 +0.1**
YAK *e* 22 59 10.2
YAK *e* 23 02 10.1
YAK *e*S **S** **23 09 10.4 -6.6**
YAK *e*SS **SS** **23 14 37.6 +2.2**
YAK pmax pmax
comp=Z,117nm,1.2s
YAK pmax pmax
comp=E,22nm,1.5s
YAK pmax pmax
comp=N,34nm,1.4s
YAK pmax pmax
comp=Z,139nm,3.2s
YAK smax smax
comp=E,290nm,7.8s
YAK smax smax
comp=N,237nm,7.7s
YAK MLR MLR
comp=Z,3µm,18.0s
YAK MLR MLR
comp=N,1µm,17.0s
YAK MLR MLR
comp=E,897nm,18.0s
ANM Nome 81.80 12 P **P** **22 59 05.4 +0.7**
ANM IAmb IAmb 22 59 07.9
comp=Z,116nm,1.2s
ANM IAMs_20 IAMs_20 23 30 00.6
comp=Z,3µm,20.0s
ANM Nome 81.80 12 P **P** **22 59 05.4 +0.7**
ANM pmax pmax
comp=Z,116nm,1.2s
ANM MLR MLR
comp=Z,3µm,20.0s
ANM Nome 81.80 12 P **P** **22 59 02.1 -2.6**
baz=208
ANM S **S** **23 09 22.2 +4.9**
baz=208
ZIRO ZIRO 82.02 301 *e*P **P** **22 59 07.1 +0.1**
ZIRO IAmb IAmb 22 59 11.9
comp=Z,68nm,1.2s
SONM Songino Array 82.06 324 P **P** **22 59 06.4 -0.3**
comp=Z,9.1nm,0.9s,baz=143,slow=4.5,SNR=69
SONM PKKPbc **PKKPbc** **23 17 36.3 -2.0**
comp=Z,0.5nm,0.6s,baz=318,slow=1.9,SNR=4.6
SONM LR LR 23 36 35.9
comp=Z,763nm,18.5s,baz=116,slow=36
comp=Z,9.1nm,0.9s
SONM Songino Array 82.06 324 P **P** **22 59 05.9 -0.8**
SONM IAmb IAmb 22 59 09.9
comp=Z,233nm,2.1s
SONM Songino Array 82.06 324 P **P** **22 59 05.9 -0.8**
SONM pmax pmax
comp=Z,233nm,2.1s
GTA Gaotai 82.17 314 ⇑P **P** **22 59 08.0 +0.5**
GTA pP sP 22 59 14.5 +1.4
GTA S **S** **23 09 19.0 -3.5**
GTA SKS **SKSac** **23 09 23.5 -4.6**
GTA sS sS 23 09 30.0 +0.7
GTA pmax pmax
comp=Z,59nm,1.6s
GTA pmax pmax
comp=Z,820nm,5.1s
GTA LR LR
comp=Z,1µm,17.8s
GTA LR LR
comp=Z,1µm,18.9s
GTA LR LR
comp=Z,2µm,20.7s
TNA Tin City 82.22 10 P **P** **22 59 03.5 -3.5**
baz=205
TNA S **S** **23 09 21.0 -0.6**
baz=205
M19K Big River Lodg 82.23 17 P **P** **22 59 04.6 -2.5**
baz=218
L19K White Mountain 82.32 17 P **P** **22 59 07.7 +0.1**
L19K IAmb IAmb 22 59 09.8
comp=Z,61nm,1.5s
L19K White Mountain 82.32 17 P **P** **22 59 05.4 -2.2**
baz=218,SNR=18
L19K S **S** **23 09 23.5 +0.6**
baz=218
CAPN Captain Cook N 82.35 19 P **P** **22 59 05.0 -2.7**
baz=221
SEW Seward 82.41 21 P **P** **22 59 05.4 -2.7**
baz=223
SEW S **S** **23 09 25.5 +1.7**
baz=223
BILL Bilibino 82.45 360 P **P** **22 59 07.8 -0.2**
BILL Bilibino 82.45 360*d*iP **P** **22 59 07.4 -0.7**
BILL *i* 22 59 14.0
BILL *e* 23 02 14.8
BILL *e*SS SS 23 14 53.4 +8.0
BILL pmax pmax
comp=Z,151nm,1.5s
BILL MLR MLR
comp=Z,874nm,19.0s
TEZP TEZPUR 82.58 300 *e*P **P** **22 59 09.7 0.0**
TEZP IAmb IAmb 22 59 15.6
comp=Z,29nm,0.8s
M20K Styx River 82.59 18 P **P** **22 59 08.7 -0.4**
M20K IAMs_20 IAMs_20 23 30 21.8
comp=Z,3µm,20.0s
M20K Styx River 82.59 18 P **P** **22 59 06.3 -2.8**
baz=219,SNR=11
M20K S **S** **23 09 23.9 -1.8**
baz=219
O22K Cooper Landing 82.60 20 IAMs_20 IAMs_20 23 28 33.4
comp=Z,4µm,22.0s
O22K Cooper Landing 82.60 20 P **P** **22 59 06.3 -2.7**

	baz=222								
TTA	**Tatalina**	**82.60**	**16**	P	**P**	**22 59 07.5**	**-1.6**		
	baz=216,SNR=26								
L20K	**Farewell, AK**	**82.84**	**17**	P	**P**	**22 59 08.6**	**-1.7**		
	baz=218,SNR=54								
L20K				S	**S**	**23 09 29.1**	**+1.0**		
	baz=218								
SHL	**Shillong**	**82.99**	**299**	P	**P**	**22 59 11.6**	**-0.5**		
SHL	**Shillong**	**82.99**	**299**	P	**P**	**22 59 11.6**	**-0.5**		
SHL				pmax	pmax				
	comp=Z,324nm,1.8s								
SHL	**Shillong**	**82.99**	**299**	*e*P	**P**	**22 59 12.3**	**+0.1**		
SUA	**Susitna One**	**83.00**	**19**	P	**P**	**22 59 11.0**	**-0.3**		
SUA				IAMs_20	IAMs_20	23 29 11.9			
	comp=Z,3µm,21.0s								
SUA	**Susitna One**	**83.00**	**19**	P	**P**	**22 59 09.1**	**-2.1**		
	baz=221,SNR=22								
SUA				S	**S**	**23 09 31.5**	**+1.4**		
	baz=221								
Q23K	**Middleton Isla**	**83.02**	**22**	IAMs_20	IAMs_20	23 33 44.7			
	comp=Z,2µm,18.0s								
RC01	**Rabbit Creek A**	**83.05**	**20**	P	**P**	**22 59 10.8**	**-0.6**		
RC01				IAmb	IAmb	22 59 13.6			
	comp=Z,135nm,1.4s								
RC01	**Rabbit Creek A**	**83.05**	**20**	P	**P**	**22 59 09.1**	**-2.2**		
	baz=222,SNR=9.0								
RC01				S	**S**	**23 09 31.7**	**+1.4**		
	baz=222								
SKT	**Skwentna**	**83.15**	**18**	IAMs_20	IAMs_20	23 30 19.7			
	comp=Z,3µm,20.0s								
SKT	**Skwentna**	**83.15**	**18**	P	**P**	**22 59 09.3**	**-2.6**		
	baz=221,SNR=10								
SKT				S	**S**	**23 09 32.7**	**+1.4**		
	baz=221								
GUWA	**GUWAHATI**	**83.37**	**299**	*e*P	**P**	**22 59 14.3**	**+0.5**		
GUWA				IAmb	IAmb	22 59 21.9			
	comp=Z,65nm,1.1s								
M22K	**Willow**	**83.42**	**19**	IAMs_20	IAMs_20	23 29 24.9			
	comp=Z,4µm,22.0s								
M22K	**Willow**	**83.42**	**19**	P	**P**	**22 59 10.7**	**-2.5**		
	baz=222								
K20K	**Telida**	**83.48**	**17**	P	**P**	**22 59 11.5**	**-2.0**		
	baz=218,SNR=34								
K20K				S	**S**	**23 09 36.4**	**+1.8**		
	baz=218								
PMR	**Palmer**	**83.62**	**20**	P	**P**	**22 59 12.6**	**-1.6**		
	baz=223,SNR=9.2								
PMR				S	**S**	**23 09 38.6**	**+2.6**		
	baz=223								
HIN	**Hinchinbrook I**	**83.64**	**21**	IAMs_20	IAMs_20	23 28 49.1			
	comp=Z,3µm,21.0s								
PPLA	**Purkeypile**	**83.65**	**18**	P	**P**	**22 59 11.9**	**-2.7**		
	baz=220,SNR=12								
KNK	**Knik Glacier**	**83.71**	**20**	IAMs_20	IAMs_20	23 29 07.6			
	comp=Z,3µm,22.0s								
KNK	**Knik Glacier**	**83.71**	**20**	P	**P**	**22 59 13.0**	**-1.8**		
	baz=224,SNR=17								
GLI	**Glacier Island**	**83.78**	**21**	P	**P**	**22 59 14.7**	**-0.5**		
GLI				IAMs_20	IAMs_20	23 29 37.6			
	comp=Z,3µm,21.0s								
GLI	**Glacier Island**	**83.78**	**21**	P	**P**	**22 59 13.2**	**-1.9**		
	baz=225,SNR=25								
GLI				S	**S**	**23 09 37.4**	**-0.3**		
	baz=225								
GCSA	**Galena City Sc**	**83.85**	**15**	P	**P**	**22 59 13.5**	**-1.9**		
	baz=216								
GCSA				S	**S**	**23 09 37.8**	**-0.4**		
	baz=216								
CUT	**Chulitna**	**83.86**	**19**	IAMs_20	IAMs_20	23 30 53.6			
	comp=Z,2µm,20.0s								
CUT	**Chulitna**	**83.86**	**19**	P	**P**	**22 59 13.5**	**-2.0**		
	baz=222								
FID	**Port Fidalgo**	**83.90**	**21**	P	**P**	**22 59 15.2**	**-0.6**		
FID				IAMs_20	IAMs_20	23 29 17.4			
	comp=Z,3µm,22.0s								
EYAK	**Cordova Ski Ar**	**84.02**	**22**	P	**P**	**22 59 13.8**	**-2.5**		
	baz=226								
EYAK				S	**S**	**23 09 43.1**	**+3.1**		
	baz=226								
SML	**Sawmill**	**84.03**	**20**	IAMs_20	IAMs_20	23 29 31.2			
	comp=Z,3µm,21.0s								
SML	**Sawmill**	**84.03**	**20**	P	**P**	**22 59 14.8**	**-1.6**		
	baz=224,SNR=31								
SML				S	**S**	**23 09 41.2**	**+0.8**		
	baz=224								
CAST	**Castle Rocks**	**84.09**	**17**	IAMs_20	IAMs_20	23 30 50.4			
	comp=Z,3µm,20.0s								
CAST	**Castle Rocks**	**84.09**	**17**	P	**P**	**22 59 14.4**	**-2.3**		
	baz=220,SNR=57								
J20K	**Nowinta River**	**84.10**	**16**	P	**P**	**22 59 16.8**	**0.0**		
J20K				IAmb	IAmb	22 59 18.9			
	comp=Z,103nm,1.5s								
J20K				IAMs_20	IAMs_20	23 34 25.9			
	comp=Z,3µm,19.0s								
J20K	**Nowinta River**	**84.10**	**16**	P	**P**	**22 59 14.5**	**-2.2**		
	baz=218,SNR=37								
J20K				S	**S**	**23 09 42.0**	**+1.2**		
	baz=218								
BOD	**Bodaibo**	**84.13**	**335**	*e*P	**P**	**22 59 15.8**	**-1.2**		
BOD				pmax	pmax				
	comp=Z,63nm,1.5s								
M23K	**Glacier View**	**84.22**	**20**	P	**P**	**22 59 15.9**	**-1.5**		
	baz=224,SNR=6.6								
CHUM	**Lake Minchumin**	**84.38**	**17**	P	**P**	**22 59 16.0**	**-2.1**		
	baz=220,SNR=10.0								
SCM	**Sheep Creek Mo**	**84.38**	**20**	P	**P**	**22 59 17.9**	**-0.4**		
SCM	**Sheep Creek Mo**	**84.38**	**20**	P	**P**	**22 59 17.9**	**-0.4**		
SCM				pmax	pmax				
	comp=Z,189nm,1.6s								
SCM				MLR	MLR				
	comp=Z,2µm,22.0s								
SCM	**Sheep Creek Mo**	**84.38**	**20**	P	**P**	**22 59 16.6**	**-1.7**		
	baz=225,SNR=20								
SCM				S	**S**	**23 09 44.4**	**+0.5**		
	baz=225								
HMT	**Hamilton**	**84.41**	**22**	P	**P**	**22 59 18.3**	**-0.1**		
HMT				IAmb	IAmb	22 59 20.7			
	comp=Z,125nm,1.6s								
HMT				IAMs_20	IAMs_20	23 36 27.4			
	comp=Z,3µm,18.0s								
SUCK	**Suckling Hills**	**84.41**	**23**	IAMs_20	IAMs_20	23 29 39.4			
	comp=Z,2µm,20.0s								
GOMU	**GeErMu**	**84.46**	**309**	P	**P**	**22 59 19.8**	**+0.1**		
GOMU				pP	PcP	22 59 22.5	-0.8		
GOMU				S	**S**	**23 09 41.5**	**-4.9**		
GOMU				SS	**SS**	**23 15 14.5**	**-2.8**		
GOMU				pmax	pmax				
	comp=Z,17nm,1.5s								
GOMU				pmax	pmax				
	comp=Z,670nm,8.0s								
GOMU				LR	LR				
	comp=Z,590nm,20.0s								
GOMU				LR	LR				
	comp=Z,860nm,20.6s								
GOMU				LR	LR				
	comp=Z,1µm,19.9s								
JCC	**Jacoby Creek,**	**84.50**	**46**	IAMs_20	IAMs_20	23 29 35.3			
	comp=Z,2µm,20.0s								
KTH	**Kantishna Hill**	**84.53**	**18**	IAMs_20	IAMs_20	23 31 25.0			
	comp=Z,4µm,20.0s								
KLU	**Klutina**	**84.62**	**21**	IAMs_20	IAMs_20	23 30 24.8			
	comp=Z,3µm,22.0s								
KLU	**Klutina**	**84.62**	**21**	P	**P**	**22 59 18.0**	**-1.5**		
	baz=226,SNR=11								
KLU				S	**S**	**23 09 45.1**	**-1.1**		
	baz=226								
TRF	**Thorofare Moun**	**84.64**	**18**	P	**P**	**22 59 17.1**	**-2.6**		
	baz=222,SNR=45								
TRF				S	**S**	**23 09 46.2**	**-0.4**		
	baz=222								
WAT1	**Susitna Watana**	**84.71**	**19**	P	**P**	**22 59 17.6**	**-2.2**		
	baz=223								
WAT1				S	**S**	**23 09 46.0**	**-1.0**		
	baz=223								
BMRM	**Bremner River**	**84.72**	**22**	P	**P**	**22 59 18.0**	**-1.9**		
	baz=227,SNR=6.2								
BMRM				S	**S**	**23 09 47.6**	**+0.4**		
	baz=227								
WAT6	**Susitna Watana**	**84.79**	**19**	P	**P**	**22 59 18.6**	**-1.8**		
	baz=224,SNR=63								
WAT6				S	**S**	**23 09 48.4**	**+0.4**		
	baz=224								
SNH	**Sunshine Point**	**84.83**	**23**	IAMs_20	IAMs_20	23 36 40.6			
	comp=Z,3µm,18.0s								
BPAW	**Bear Paw Mtn.**	**84.92**	**17**	IAMs_20	IAMs_20	23 31 37.5			
	comp=Z,3µm,20.0s								
BPAW	**Bear Paw Mtn.**	**84.92**	**17**	P	**P**	**22 59 18.5**	**-2.4**		
	baz=221,SNR=38								
M24K	**Tolsona, Glenn**	**84.96**	**20**	P	**P**	**22 59 19.4**	**-1.8**		
	baz=226,SNR=9.0								
M24K				S	**S**	**23 09 50.3**	**+0.7**		
	baz=226								
LSA	**Lhasa**	**85.00**	**302**	P	**P**	**22 59 23.3**	**+0.6**		
LSA				IAmb	IAmb	22 59 31.4			
	comp=Z,54nm,1.3s								
LSA	**Lhasa**	**85.00**	**302**	P	**P**	**22 59 23.3**	**+0.6**		
LSA				pmax	pmax				
	comp=Z,54nm,1.3s								
LSA				MLR	MLR				
	comp=Z,500nm,21.0s								
WAX	**Waxell Ridge**	**85.00**	**23**	IAMs_20	IAMs_20	23 32 19.1			
	comp=Z,2µm,19.0s								
RND	**Reindeer**	**85.04**	**18**	P	**P**	**22 59 20.9**	**-0.7**		
RND	**Reindeer**	**85.04**	**18**	P	**P**	**22 59 20.9**	**-0.7**		
RND				pmax	pmax				
	comp=Z,268nm,1.4s								
RND				MLR	MLR				
	comp=Z,4µm,20.0s								
CRQM	**Cirque**	**85.10**	**22**	IAMs_20	IAMs_20	23 36 14.1			
	comp=Z,2µm,18.0s								
CRQE	**Cirque**	**85.12**	**22**	P	**P**	**22 59 19.3**	**-2.8**		
	baz=228								
ZAK	**Zakamensk**	**85.13**	**325**	*e*P	**P**	**22 59 21.6**	**-0.8**		
ZAK				*e*		23 09 46.4			
ZAK				pmax	pmax				
	comp=Z,52nm,1.5s								
N25K	**Chitina, Valde**	**85.16**	**21**	IAMs_20	IAMs_20	23 29 58.0			
	comp=Z,3µm,22.0s								
N25K	**Chitina, Valde**	**85.16**	**21**	P	**P**	**22 59 19.4**	**-2.8**		
	baz=227,SNR=18								
N25K				S	**S**	**23 09 50.2**	**-1.3**		
	baz=227								
MESA	**MESA**	**85.16**	**23**	IAMs_20	IAMs_20	23 29 20.5			
	comp=Z,3µm,22.0s								
MESA	**MESA**	**85.16**	**23**	P	**P**	**22 59 19.9**	**-2.5**		
	baz=230								
MESA				S	**S**	**23 09 52.3**	**+0.3**		
	baz=230								
SBC	**Santa Barbara**	**85.19**	**53**	P	**P**	**22 59 19.8**	**-3.0**		
	baz=249								
DIB	**Dawson Inlet,**	**85.25**	**32**	P	**P**	**22 59 23.8**	**+1.1**		
MCK	**McKinley**	**85.25**	**18**	P	**P**	**22 59 20.7**	**-1.9**		
	baz=223,SNR=38								
MCK				S	**S**	**23 09 49.2**	**-3.1**		
	baz=223								
DHY	**Denali Highway**	**85.26**	**19**	P	**P**	**22 59 20.7**	**-2.0**		
	baz=224								
PKM	**Mcpherson Peak**	**85.27**	**52**	P	**P**	**22 59 20.6**	**-2.9**		
	baz=249								
VRDI	**Verde Repeater**	**85.30**	**22**	IAMs_20	IAMs_20	23 37 06.0			
	comp=Z,2µm,18.0s								
RDOG	**Red Dog Mine**	**85.36**	**11**	IAMs_20	IAMs_20	23 29 48.6			
	comp=Z,3µm,22.0s								
RDOG	**Red Dog Mine**	**85.36**	**11**	P	P	22 59 16.4	-6.6		
	baz=210								
YAH	**Yahtse**	**85.36**	**23**	IAMs_20	IAMs_20	23 36 32.6			
	comp=Z,2µm,19.0s								
BWN	**Browne**	**85.42**	**18**	IAMs_20	IAMs_20	23 32 14.0			
	comp=Z,3µm,20.0s								
I21K	**Tanana**	**85.47**	**16**	P	**P**	**22 59 23.4**	**-0.1**		
I21K				IAMs_20	IAMs_20	23 35 27.9			
	comp=Z,3µm,19.0s								
I21K	**Tanana**	**85.47**	**16**	P	**P**	**22 59 22.5**	**-1.1**		
	baz=220,SNR=107								
I21K				S	**S**	**23 09 53.3**	**-1.1**		
	baz=220								
HARP	**HAARP**	**85.51**	**20**	P	**P**	**22 59 22.4**	**-1.4**		
	baz=226								
HARP				S	**S**	**23 09 53.0**	**-1.9**		
	baz=226								
K02D	**Willamette Mer**	**85.52**	**44**	P	**P**	**22 59 22.6**	**-1.9**		
	baz=246								
IRK	**Irkutsk**	**85.53**	**327**	*e*P	**P**	**22 59 21.1**	**-3.1**		
IRK				pmax	pmax				
	comp=Z,92nm,1.9s								
J01E	**Myrtle Point**	**85.54**	**43**	P	**P**	**22 59 22.7**	**-1.7**		
	baz=245								
MCARA	**McCarthy VSAT**	**85.56**	**22**	P	**P**	**22 59 22.1**	**-2.1**		
	baz=228								
MCARA				S	**S**	**23 09 52.8**	**-2.7**		
	baz=228								
GRNC	**Granite Creek**	**85.60**	**23**	P	**P**	**22 59 24.1**	**-0.5**		
GRNC				IAMs_20	IAMs_20	23 39 34.9			
	comp=Z,2µm,18.0s								
H21K	**Melozitna Rive**	**85.62**	**16**	P	**P**	**22 59 24.3**	**0.0**		
H21K				IAmb	IAmb	22 59 27.4			
	comp=Z,110nm,1.2s								
H21K				IAMs_20	IAMs_20	23 32 54.1			
	comp=Z,2µm,20.0s								
H21K	**Melozitna Rive**	**85.62**	**16**	P	**P**	**22 59 23.3**	**-1.0**		
	baz=219,SNR=91								
H21K				S	**S**	**23 09 55.0**	**-0.9**		
	baz=219								
IMAR	**Indian Mountai**	**85.64**	**15**	P	**P**	**22 59 24.1**	**-0.3**		
TABL	**Table Mountain**	**85.64**	**23**	P	**P**	**22 59 24.2**	**-0.6**		
TABL				IAmb	IAmb	22 59 33.9			
	comp=Z,27nm,0.8s								
TABL				IAMs_20	IAMs_20	23 29 46.1			
	comp=Z,2µm,22.0s								
MLY	**Manley**	**85.70**	**17**	IAMs_20	IAMs_20	23 34 07.9			
	comp=Z,3µm,19.0s								
MLY	**Manley**	**85.70**	**17**	P	**P**	**22 59 23.0**	**-1.8**		
	baz=221,SNR=59								
MLY				S	**S**	**23 09 52.4**	**-4.3**		
	baz=221								
PINM	**Pinnacle**	**85.76**	**24**	P	**P**	**22 59 22.5**	**-2.8**		
	baz=231								
ORV	**Oroville**	**85.77**	**47**	IAMs_20	IAMs_20	23 28 23.1			
	comp=Z,3µm,22.0s								
YBH	**Yreka Blue Hor**	**85.78**	**45**	P	**P**	**22 59 26.8**	**+1.0**		
YBH				IAMs_20	IAMs_20	23 29 59.1			
	comp=Z,2µm,20.0s								
YBH	**Yreka Blue Hor**	**85.78**	**45**	P	**P**	**22 59 26.8**	**+1.0**		
YBH				pmax	pmax				
	comp=Z,13nm,1.1s								
YBH				MLR	MLR				
	comp=Z,2µm,20.0s								
PAX	**Paxson**	**85.80**	**20**	P	**P**	**22 59 22.6**	**-2.8**		
	baz=226								
PAX				S	**S**	**23 09 52.9**	**-5.0**		
	baz=226								
CIS	**Catalina Islan**	**85.83**	**54**	P	**P**	**22 59 23.0**	**-3.1**		
	baz=250								
PNL	**Peninsula**	**85.83**	**24**	P	**P**	**22 59 23.2**	**-2.3**		
	baz=232								
NEA2	**Nenana**	**85.85**	**18**	IAMs_20	IAMs_20	23 30 39.0			
	comp=Z,3µm,22.0s								
NEA2	**Nenana**	**85.85**	**18**	P	**P**	**22 59 23.4**	**-2.1**		
	baz=223,SNR=52								
NEA2				S	**S**	**23 09 53.2**	**-5.0**		
	baz=223								
CTG	**Chitna Glacier**	**85.90**	**23**	P	**P**	**22 59 24.0**	**-2.0**		
	baz=230,SNR=6.2								
CTGM	**Chitina Glacie**	**85.91**	**23**	P	**P**	**22 59 25.9**	**-0.1**		
CTGM				IAmb	IAmb	22 59 28.2			
	comp=Z,91nm,1.8s								
LOGN	**Logan Glacier**	**85.94**	**23**	P	**P**	**22 59 26.7**	**+0.4**		
LOGN				IAMs_20	IAMs_20	23 39 35.9			
	comp=Z,2µm,18.0s								
I02E	**Swisshome, OR**	**85.99**	**43**	IAMs_20	IAMs_20	23 33 53.4			
	comp=Z,3µm,19.0s								
I02E	**Swisshome, OR**	**85.99**	**43**	P	**P**	**22 59 24.5**	**-2.2**		
	baz=245								
CMB	**Columbia Colle**	**86.00**	**49**	P	**P**	**22 59 27.5**	**+0.6**		
CMB	**Columbia Colle**	**86.00**	**49**	P	**P**	**22 59 27.5**	**+0.6**		
CMB				pmax	pmax				
	comp=Z,6.0nm,0.8s								
CMB				MLR	MLR				
	comp=Z,5µm,20.0s								
SIT	**Sitka**	**86.00**	**28**	P	**P**	**22 59 24.5**	**-1.9**		
	baz=236								
OSI	**Osito Audit: C**	**86.01**	**53**	P	**P**	**22 59 25.0**	**-2.0**		
	baz=249								
FMP	**Fort Macarthur**	**86.03**	**54**	P	**P**	**22 59 24.1**	**-2.9**		
	baz=250								
WRH	**Wood River Hil**	**86.05**	**18**	IAMs_20	IAMs_20	23 32 33.3			
	comp=Z,3µm,20.0s								
VOG	**Valley Oaks Go**	**86.11**	**51**	P	**P**	**22 59 25.6**	**-1.9**		
	baz=249								
CRAG	**Craig**	**86.14**	**30**	S	**S**	**23 09 59.6**	**-1.7**		
	baz=238								
I03D	**Drain, OR**	**86.15**	**43**	P	**P**	**22 59 25.2**	**-2.2**		
	baz=246								
I23K	**Minto, Yukon-K**	**86.18**	**17**	P	**P**	**22 59 26.2**	**-0.8**		
I23K				IAmb	IAmb	22 59 28.1			
	comp=Z,100nm,1.9s								
I23K				IAMs_20	IAMs_20	23 34 03.6			
	comp=Z,3µm,20.0s								
I23K	**Minto, Yukon-K**	**86.18**	**17**	P	**P**	**22 59 25.1**	**-1.9**		
	baz=222,SNR=23								
I23K				S	**S**	**23 09 57.7**	**-3.5**		
	baz=222								
H22K	**Ishtalina Cre**	**86.18**	**16**	P	**P**	**22 59 26.5**	**-0.6**		
	baz=221,SNR=105								
H22K				S	**S**	**23 09 59.7**	**-1.6**		
	baz=221								
DECC	**Green Verdugo**	**86.19**	**53**	P	**P**	**22 59 25.3**	**-2.6**		
	baz=250								
L04D	**Klamath Falls**	**86.25**	**45**	P	**P**	**22 59 28.2**	**+0.1**		
L04D				IAmb	IAmb	22 59 44.4			
	comp=Z,42nm,1.4s								
L04D	**Klamath Falls**	**86.25**	**45**	P	**P**	**22 59 26.3**	**-1.9**		
	baz=247								
M26K	**Nabesna, AK**	**86.25**	**21**	IAMs_20	IAMs_20	23 30 45.0			
	comp=Z,2µm,22.0s								
M26K	**Nabesna, AK**	**86.25**	**21**	P	**P**	**22 59 26.2**	**-1.4**		
	baz=228,SNR=12								
M26K				S	**S**	**23 10 01.6**	**-0.7**		
	baz=228								
CCB	**Clear Creek Bu**	**86.26**	**18**	IAMs_20	IAMs_20	23 33 09.9			
	comp=Z,3µm,20.0s								
K24K	**Donnelly Dome**	**86.28**	**19**	P	**P**	**22 59 25.4**	**-2.3**		
	baz=226,SNR=5.5								
K24K				S	**S**	**23 10 03.2**	**+0.7**		
	baz=226								
GTK	**Tadong**	**86.34**	**299**	*e*P	**P**	**22 59 30.0**	**+1.0**		
GTK				IAmb	IAmb	22 59 32.2			
	comp=Z,186nm,1.6s								
HDA	**Harding Lake**	**86.35**	**18**	P	**P**	**22 59 25.7**	**-2.2**		
	baz=225,SNR=71								
MDM	**Murphy Dome**	**86.36**	**18**	IAMs_20	IAMs_20	23 33 10.6			
	comp=Z,2µm,20.0s								
MENT	**Mentasta**	**86.36**	**20**	P	**P**	**22 59 28.8**	**+0.7**		
TCOL	**CIGO, UAF Yank**	**86.41**	**18**	IAMs_20	IAMs_20	23 33 23.8			
	comp=Z,3µm,20.0s								
TCOL	**CIGO, UAF Yank**	**86.41**	**18**	P	**P**	**22 59 26.2**	**-2.1**		
	baz=224,SNR=5.4								
COLA	**College**	**86.41**	**18**	P	**P**	**22 59 27.3**	**-0.9**		
COLA	**College**	**86.41**	**18**	IAMs_20	IAMs_20	23 33 23.8			
	comp=Z,2µm,20.0s								
COLA	**College**	**86.41**	**18**	P	**P**	**22 59 27.3**	**-0.9**		
COLA				pmax	pmax				
	comp=Z,288nm,1.8s								
COLA				MLR	MLR				
	comp=Z,2µm,20.0s								
COLA	**College**	**86.41**	**18**	P	**P**	**22 59 25.2**	**-3.0**		
	baz=224								
RIDG	**Independent Ri**	**86.54**	**20**	P	**P**	**22 59 26.8**	**-2.2**		
	baz=227,SNR=24								
RIDG				S	**S**	**23 10 08.4**	**+3.4**		
	baz=227								
COR	**Corvallis**	**86.54**	**42**	IAMs_20	IAMs_20	23 32 30.0			
	comp=Z,2µm,20.0s								
L26K	**Log Cabin Wild**	**86.55**	**20**	P	**P**	**22 59 29.4**	**+0.4**		
L26K				IAMs_20	IAMs_20	23 31 57.8			
	comp=Z,2µm,21.0s								
L26K	**Log Cabin Wild**	**86.55**	**20**	P	**P**	**22 59 26.0**	**-3.0**		
	baz=228,SNR=8.8								
ISA	**Isabella, Lake**	**86.57**	**52**	P	**P**	**22 59 26.4**	**-3.4**		
	baz=249								
M27K	**Edge Creek, AK**	**86.61**	**21**	P	**P**	**22 59 29.8**	**+0.3**		
M27K				IAMs_20	IAMs_20	23 30 33.6			
	comp=Z,2µm,22.0s								
M27K	**Edge Creek, AK**	**86.61**	**21**	P	**P**	**22 59 26.4**	**-3.1**		
	baz=230								
IL31		**86.63**	**18**	P	**P**	**22 59 27.5**	**-1.7**		
IL31				IAmb	IAmb	22 59 31.1			
	comp=Z,40nm,0.8s								
ILAR	**Eielson Array**	**86.63**	**18**	P	**P**	**22 59 27.5**	**-1.8**		
	comp=Z,29nm,0.7s,baz=235,slow=5.6,SNR=82								
ILAR				PKiKP	**PKiKP**	**23 04 36.5**	**+0.6**		
	comp=Z,0.4nm,0.6s,baz=262,slow=3.3,SNR=3.2								
ILAR				PKKPbc	**PKKPbc**	**23 17 26.3**	**-1.7**		
	comp=Z,0.4nm,0.6s,baz=6.8,slow=2.5,SNR=5.3								
ILAR				LR	LR	23 33 22.5			
	comp=Z,4µm,19.7s,baz=224,slow=32								
ILAR	**Eielson Array**	**86.63**	**18**	P	**P**	**22 59 27.4**	**-1.9**		
H23K	**Yukon River**	**86.63**	**17**	IAMs_20	IAMs_20	23 34 09.5			
	comp=Z,2µm,20.0s								
H23K	**Yukon River**	**86.63**	**17**	P	**P**	**22 59 27.6**	**-1.8**		
	baz=222,SNR=56								
H23K				S	**S**	**23 10 10.3**	**+4.6**		
	baz=222								
EDW2	**Edwards Air Fo**	**86.67**	**53**	P	**P**	**22 59 26.6**	**-3.7**		
	baz=250								
109C	**Camp Elliot, M**	**86.68**	**55**	P	**P**	**22 59 27.3**	**-3.0**		
	baz=250								
POKR	**Poker Plat Res**	**86.71**	**18**	IAMs_20	IAMs_20	23 33 32.8			
	comp=Z,2µm,20.0s								
POKR	**Poker Plat Res**	**86.71**	**18**	P	**P**	**22 59 26.8**	**-3.0**		
	baz=224,SNR=7.3								
YUK3	**Moose Creek**	**86.75**	**22**	P	**P**	**22 59 27.6**	**-2.7**		
	baz=231,SNR=8.1								
YUK3				S	**S**	**23 10 12.4**	**+4.9**		
	baz=231								
K04D	**Chiloquin, OR**	**86.79**	**45**	P	**P**	**22 59 27.0**	**-3.7**		
	baz=247								
J04D	**Umpqua Nationa**	**86.79**	**44**	IAMs_20	IAMs_20	23 35 33.7			
	comp=Z,2µm,18.0s								
J04D	**Umpqua Nationa**	**86.79**	**44**	P	**P**	**22 59 27.7**	**-3.2**		
	baz=247								
I04A	**Tendick Farm,**	**86.81**	**43**	P	**P**	**22 59 27.4**	**-3.4**		
	baz=246								
MDPB	**Devils Postpil**	**86.81**	**50**	P	**P**	**22 59 31.3**	**+0.1**		
G03D	**McMinnville, O**	**86.83**	**42**	IAMs_20	IAMs_20	23 36 02.5			
	comp=Z,2µm,19.0s								
G03D	**McMinnville, O**	**86.83**	**42**	P	**P**	**22 59 28.1**	**-2.7**		
	baz=246								
MURC	**Murrieta**	**86.85**	**54**	P	**P**	**22 59 27.7**	**-3.5**		
	baz=250							

H24K S **S** **23 10 13.6 +3.2**
baz=224
TAPN Taplejung 87.11 299 *e*P **P** **22 59 33.5 +0.6**
BCAR Beaver Creek A 87.11 21 P **P** **22 59 31.8 0.0**
LRMC Laurel Mtn Rad 87.11 52 P P 22 59 27.6 -5.0
baz=250
CWC Cottonwood Cre 87.14 51 P **P** **22 59 28.1 -4.6**
baz=250
YUK4 Talbot Arm 87.16 23 P **P** **22 59 28.8 -3.5**
baz=232,SNR=6.3
MONP2 Monument Peak 87.22 55 P **P** **22 59 29.1 -4.1**
baz=251
TIN Tinemaha, Big 87.24 51 P **P** **22 59 30.3 -2.8**
baz=250
HYT Haines Junctio 87.29 24 P **P** **22 59 32.8 0.0**
HYT Haines Junctio 87.29 24 P **P** **22 59 28.9 -3.9**
baz=233
HYT S **S** **23 10 16.0 +3.5**
baz=233
BBRC Big Bear Solar 87.29 54 P **P** **22 59 30.5 -3.1**
baz=250
PAHR Pah Rah Range 87.34 48 P **P** **22 59 33.3 -0.3**
F04D Rainier, OR 87.34 41 P **P** **22 59 30.0 -3.2**
baz=246
NLWA Neilton Lookou 87.35 40 IAMs_20 IAMs_20 23 32 41.1
comp=Z,2µm,20.0s
SKAG Skagway 87.37 26 P **P** **22 59 30.0 -3.0**
baz=235
SKAG S **S** **23 10 20.3 +7.3**
baz=235
J05D Fort Rock, OR 87.39 44 P **P** **22 59 30.6 -3.2**
baz=247
IKP In-Ko-Pah, Jac 87.39 55 P **P** **22 59 30.5 -3.4**
baz=251
K05A Summer Lake 87.41 45 P **P** **22 59 34.9 +1.0**
PFO Pinyon Flats O 87.43 54 LR LR 23 31 01.7
comp=Z,6µm,20.0s,baz=270,slow=30
PFO Pinyon Flats O 87.43 54 ⇑P **P** **22 59 34.1 0.0**
PFO pmax pmax
comp=Z,46nm,5.1s
PFO Pinyon Flats O 87.43 54 P P 22 59 29.1 -5.1
baz=251
RRX Edison Barstow 87.43 53 P **P** **22 59 31.2 -2.8**
baz=250
TPFO Pinon Flats 87.44 54 P **P** **22 59 29.5 -4.7**
baz=251
MPMC Manual Prospec 87.46 52 P **P** **22 59 30.4 -3.9**
baz=250
J26L Joseph Creek 87.47 19 IAMs_20 IAMs_20 23 31 19.1
comp=Z,3µm,22.0s
J26L Joseph Creek 87.47 19 P **P** **22 59 29.9 -3.6**
baz=228,SNR=8.5
COLD Coldfoot 87.50 15 P **P** **22 59 30.6 -2.9**
baz=222
COLD S **S** **23 10 21.9 +7.8**
baz=222
MOD Modoc Plateau 87.50 46 P **P** **22 59 35.4 +1.1**
MOD IAMs_20 IAMs_20 23 30 56.8
comp=Z,2µm,20.0s
BOK Bokaro 87.61 295 *e*P **P** **22 59 39.0 +4.0**
K27K Chicken 87.64 20 P **P** **22 59 30.9 -3.4**
baz=229
NVAR Mina Array Bea 87.67 49 P **P** **22 59 35.4 +0.1**
comp=Z,1.4nm,0.8s,baz=238,slow=8.1,SNR=9.6
NVAR PKPPKP **P'P'df** **23 25 30.9 +1.3**
comp=Z,0.1nm,0.3s,baz=116,slow=2.1,SNR=3.9
NVAR LR LR 23 31 14.1
comp=Z,5µm,20.3s,baz=284,slow=30
comp=Z,1.4nm,0.8s
NVAR Mina Array Bea 87.67 49 P **P** **22 59 35.2 -0.1**
GSC Goldstone, Bar 87.72 53 P **P** **22 59 30.7 -4.7**
baz=250
I05D Terrebonne, OR 87.73 43 P P 22 59 27.6 -7.6
baz=247
SWSC Sam W. Stewart 87.74 55 P P 22 59 27.0 -8.4
baz=251
NV11 Mina Array Sit 87.78 49 P **P** **22 59 35.6 -0.2**
O30N Mendenhall 87.81 24 P P 22 59 28.6 -6.6
baz=235
O30N S **S** **23 10 22.9 +5.5**
baz=235
N30M Aishikik Lake 87.83 24 P P 22 59 28.0 -7.2
baz=234
GRAC Grapevine Rang 87.87 51 P P 22 59 29.8 -6.3
baz=250
PALK Pallekele 87.92 278 P **P** **22 59 37.1 +0.3**
comp=Z,16nm,1.0s,baz=282,slow=7.8,SNR=3.7
PALK LR LR 23 39 08.6
comp=Z,459nm,18.8s,baz=219,slow=36
comp=Z,16nm,1.0s
PALK Pallekele 87.92 278 P **P** **22 59 36.2 -0.6**
PALK Pallekele 87.92 278 *c i*P **P** **22 59 39.4 +2.6**
PALK pmax pmax
comp=Z,115nm,1.9s
BELC Belle Mtn. Jos 87.92 54 P P 22 59 28.4 -8.1
baz=251
RAMN Ramite 87.93 298 *e*P **P** **22 59 37.1 +0.3**
HEC Hector,Ludlow 87.93 53 P P 22 59 29.0 -7.4
baz=251
HEC S **S** **23 10 22.4 +2.7**
baz=251
FURC Furnace Creek, 88.07 52 P **P** **22 59 33.3 -3.6**
baz=250
G05D Wamic, OR 88.10 42 S **S** **23 10 26.2 +5.5**
baz=247
P32M Atlin 88.13 26 P P 22 59 30.7 -6.0
baz=237
I26K Coal Creek Min 88.14 19 P P 22 59 30.3 -6.3
baz=228
BC3 Big Chuckawall 88.24 55 P P 22 59 29.9 -8.0
baz=251
WHY Whitehorse 88.24 25 P P 22 59 31.5 -5.8
baz=236
WHY S **S** **23 10 25.9 +4.3**
baz=236
T35M Bob Quinn 88.30 29 P **P** **22 59 32.9 -4.7**
baz=240
GMRC Granite Mounta 88.44 54 P P 22 59 33.6 -5.3
baz=251
GMRC S **S** **23 10 26.3 +1.6**
baz=251
TUQ Turquoise Moun 88.45 53 P P 22 59 32.0 -7.0
baz=251
JIRN Jiri 88.49 299 *e*P **P** **22 59 40.2 +0.6**
KNGR Kungurtug, Tuv 88.50 323 *d i*P **P** **22 59 38.9 +0.1**
KNGR pmax pmax
comp=Z,21nm,1.1s
GLA Glamis 88.55 55 P **P** **22 59 39.5 +0.1**
GLA IAmb IAmb 22 59 48.2
comp=Z,14nm,0.8s
GLA Glamis 88.55 55 P **P** **22 59 39.5 +0.1**
GLA pmax pmax
comp=Z,14nm,0.8s
GLA Glamis 88.55 55 P P 22 59 34.0 -5.4
baz=252
DAWY Dawson 88.58 21 P **P** **22 59 37.9 -0.8**
DAWY Dawson 88.58 21 P P 22 59 32.6 -6.2
baz=232,SNR=7.4
M30M Minto, Yukon 88.60 23 IAMs_20 IAMs_20 23 32 06.3
comp=Z,2µm,22.0s
M30M Minto, Yukon 88.60 23 P P 22 59 31.7 -7.2
baz=234,SNR=7.1
M30M S **S** **23 10 28.1 +3.3**
baz=234
IRM Iron Mountain 88.64 54 P P 22 59 32.9 -6.9
baz=251
D23K Nanushuk River 88.70 14 P **P** **22 59 34.6 -4.5**
baz=221,SNR=45
TPNV Topopah Spring 88.70 51 P **P** **22 59 40.6 +0.5**
TPNV Topopah Spring 88.70 51 P **P** **22 59 40.6 +0.5**
TPNV pmax pmax
comp=Z,11nm,1.3s
TPNV MLR MLR
comp=Z,900nm,20.0s
TPNV Topopah Spring 88.70 51 P P 22 59 31.1 -9.1
baz=251
TOLK Toolik Lake Re 88.72 15 P **P** **22 59 39.7 +0.3**
TOLK IAmb IAmb 22 59 42.6
comp=Z,43nm,1.1s
TOLK Toolik Lake Re 88.72 15 P **P** **22 59 35.7 -3.6**
baz=222,SNR=17
TOLK S **S** **23 10 30.1 +4.4**
baz=222
GUN Gumba 88.82 299 *e*P **P** **22 59 41.7 +0.5**
P33M Teslin, Yukon 88.84 26 P P 22 59 34.3 -5.9
baz=238
WVOR Wild Horse Val 88.85 46 P **P** **22 59 41.5 +0.8**
WVOR pmax pmax
comp=Z,17nm,0.5s
WVOR MLR MLR
comp=Z,2µm,21.0s
PKI Pulchoki 89.12 299 *e*P **P** **22 59 42.2 -0.3**
comp=Z,70nm,0.8s
PKIN Phulchoki 89.14 299 *e*P **P** **22 59 41.8 -0.7**
comp=Z,67nm,0.8s
DLBC Dease Lake 89.14 28 P **P** **22 59 41.9 +0.2**
comp=Z,2.3nm,0.8s,baz=94,slow=4.1,SNR=4.8
DLBC LR LR 23 36 45.4
comp=Z,2µm,18.1s,baz=252,slow=34
comp=Z,2.3nm,0.8s
DLBC Dease Lake 89.14 28 P **P** **22 59 41.8 +0.2**
DLBC Dease Lake 89.14 28 P P 22 59 34.7 -6.8
baz=240
BMN Battle Mountai 89.15 48 P **P** **22 59 42.7 +0.5**
BMN Battle Mountai 89.15 48 P **P** **22 59 42.7 +0.5**
BMN pmax pmax
comp=Z,8.0nm,1.0s
BMAR Burnt Mountain 89.16 17 P **P** **22 59 42.5 +1.0**
J29M Klondike Camp 89.22 21 IAMs_20 IAMs_20 23 32 28.4
comp=Z,3µm,22.0s
N32M Quilet Lake 89.25 25 P P 22 59 34.7 -7.3
baz=237
D24K Happy Valley 89.28 15 P P 22 59 35.9 -6.0
baz=223
J08A Circle Bar Ran 89.29 45 P **P** **22 59 43.2 +0.5**
J08A IAmb IAmb 22 59 51.6
comp=Z,21nm,0.9s
A21K Barrow 89.30 11 IAMs_20 IAMs_20 23 32 56.9
comp=Z,3µm,22.0s
A21K Barrow 89.30 11 P P 22 59 35.4 -6.5
baz=216
M31M Drury Creek, Y 89.30 24 IAMs_20 IAMs_20 23 38 06.0
comp=Z,2µm,19.0s
M31M Drury Creek, Y 89.30 24 P P 22 59 35.3 -6.9
baz=236
C23K Itkillik River 89.37 14 P P 22 59 34.7 -7.6
baz=221
C23K S **S** **23 10 37.6 +5.9**
baz=221
DMN Daman 89.39 299 *e*P **P** **22 59 44.2 +0.5**
comp=Z,92nm,0.8s
PDMCI Parker Dam,Lak 89.48 54 P P 22 59 36.3 -7.4
baz=252
R11A Troy Canyon, C 89.65 50 P **P** **22 59 45.1 +0.5**
R11A Troy Canyon, C 89.65 50 P P 22 59 37.1 -7.5
baz=251
R11A S **S** **23 10 41.9 +5.9**
baz=251
HAWA Hanford 89.69 42 P **P** **22 59 45.2 +0.9**
LPIG La Paz 89.71 65 LR LR 23 29 31.7
comp=Z,1µm,21.9s,baz=252,slow=29
C24K Franklin Bluff 89.73 14 P P 22 59 37.4 -6.5
baz=223
I29M Ogilvie Camp, 89.74 20 P P 22 59 36.9 -7.3
baz=233,SNR=9.2
TIXI Tiksi 89.76 349 P **P** **22 59 43.8 -0.2**
comp=Z,7.2nm,1.0s,baz=269,slow=22,SNR=15
TIXI LR LR 23 40 27.5
comp=Z,638nm,18.2s,baz=180,slow=36
comp=Z,7.2nm,1.0s
TIXI Tiksi 89.76 349 P **P** **22 59 43.8 -0.2**
TIXI Tiksi 89.76 349 *c i*P **P** **22 59 44.0 -0.1**
TIXI pmax pmax
comp=Z,14nm,1.4s
214A Organ Pipe Nat 89.83 57 P P 22 59 38.9 -6.5
baz=253
214A S **S** **23 10 39.2 +1.6**
baz=253
GKN Gorkha 89.90 299 *e*P **P** **22 59 45.9 -0.1**
BMO Blue Mountains 90.60 44 P **P** **22 59 48.4 -0.4**
BMO IAMs_20 IAMs_20 23 37 29.6
comp=Z,2µm,18.0s
BMO Blue Mountains 90.60 44 P **P** **22 59 48.4 -0.4**
BMO pmax pmax
comp=Z,11nm,1.2s
BMO MLR MLR
comp=Z,2µm,18.0s
ELK Elko 90.68 48 LR LR 23 35 20.6
comp=Z,3µm,19.1s,baz=250,slow=32
ELK Elko 90.68 48 P **P** **22 59 49.6 +0.2**
ELK Elko 90.68 48 P **P** **22 59 49.6 +0.2**
ELK pmax pmax
comp=Z,5.0nm,1.0s
ELK MLR MLR
comp=Z,4µm,22.0s
DANN Dangsing 90.74 299 *e*P **P** **22 59 49.6 -0.5**
EPYK Eagle Plains 90.87 20 P **P** **22 59 48.7 -0.7**
EPYK IAMs_20 IAMs_20 23 34 12.0
comp=Z,2µm,22.0s
EPYK Eagle Plains 90.87 20 P P 22 59 40.2 -9.2
baz=234
LCMT Little Creek M 91.00 52 P **P** **22 59 50.7 -0.2**
MFID Camas Ranch 91.12 45 P **P** **22 59 51.2 0.0**
MFID IAMs_20 IAMs_20 23 34 13.6
comp=Z,2µm,19.0s
PYUN Piuthan 91.33 299 *e*P **P** **22 59 51.9 -0.8**
comp=Z,36nm,1.0s
TGTN Hyland Airport 91.43 26 P P 22 59 45.8 -6.3
baz=242
TUC Tucson 91.58 57 P **P** **22 59 53.6 0.0**
TUC Tucson 91.58 57 IAMs_20 IAMs_20 23 33 30.8
comp=Z,3µm,20.0s
TUC Tucson 91.58 57 P **P** **22 59 53.6 0.0**
TUC pmax pmax
comp=Z,4.0nm,0.8s
TUC MLR MLR
comp=Z,3µm,20.0s
TUC Tucson 91.58 57 P P 22 59 47.6 -6.0
baz=254
TUC S **S** **23 10 56.2 +2.4**
baz=254
X16A Lo Mia Camp, P 91.65 55 P **P** **22 59 54.3 +0.3**
NEW Newport 91.89 40 LR LR 23 38 01.5
comp=Z,2µm,18.0s,baz=244,slow=34
NEW Newport 91.89 40 IAMs_20 IAMs_20 23 40 21.2
comp=Z,2µm,18.0s
NEW Newport 91.89 40 P P 22 59 48.0 -6.6
baz=250
NEW S **S** **23 10 57.7 +1.9**
baz=250
WUAZ Wupatki 92.01 54 P P 22 59 48.5 -7.1
baz=254
WUAZ S **S** **23 11 00.7 +3.0**
baz=254
PMSA Palmer Station 92.06 161 LR LR 23 35 36.1
comp=Z,2µm,19.8s,baz=224,slow=32
HLID Hailey 92.15 46 P **P** **22 59 56.8 +0.7**
HLID IAMs_20 IAMs_20 23 34 06.7
comp=Z,3µm,20.0s
HLID Hailey 92.15 46 P P 22 59 50.6 -5.5
baz=252
WMQ Urumqi 92.23 315 ⇑P **P** **22 59 57.3 +1.0**
WMQ sP sP 23 00 04.8 +2.8
WMQ PP **PP** **23 03 38.5 +1.6**
WMQ SKS S 23 10 32.0 -27
WMQ S **ScS** **23 11 01.0 -0.4**
WMQ SS **SS** **23 17 11.3 +1.7**
WMQ pmax pmax
comp=Z,48nm,1.5s
WMQ pmax pmax
comp=Z,510nm,5.7s
WMQ LR LR
comp=Z,780nm,17.1s
WMQ LR LR
comp=Z,860nm,17.1s
WMQ LR LR
comp=Z,600nm,17.1s
DUG Dugway, Tooele 92.27 49 P P 22 59 51.8 -4.9
baz=253
DUG S S 23 11 08.8 +9.0
baz=253
HYBB Hyderabad (bro 92.52 287 *e*P **P** **22 59 57.1 -1.0**
HYBB *es*P **pP** **23 00 01.6 -0.8**
HYBB *e*PP **PP** **23 03 38.0 -1.7**
TROLL Troll, Antarti 92.90 185 P **P** **22 59 59.5 +0.5**
INK Inuvik 93.00 19 LR LR 23 37 10.7
comp=Z,3µm,20.3s,baz=224,slow=32
INK Inuvik 93.00 19 P **P** **22 59 57.9 -1.2**
INK IAmb IAmb 22 59 59.4
comp=Z,25nm,1.7s
INK Inuvik 93.00 19 P **P** **22 59 57.9 -1.2**
INK pmax pmax
comp=Z,25nm,1.7s
INK Inuvik 93.00 19 P P 22 59 54.0 -5.1
baz=237
NVL N'lazarevskaya 93.06 188 *e*P **P** **22 59 56.2 -3.4**
NVL *e* 23 17 36.1
NVL *e*SSS SSS 23 21 09.1
NVL pmax pmax
comp=Z,24nm,1.1s
NVL MLR MLR
comp=Z,1µm,17.0s
W18A Petrified Fore 93.19 55 P P 22 59 55.5 -5.6
baz=254
W18A S **S** **23 11 16.0 +7.7**
baz=254
MSO Missoula 93.47 43 IAMs_20 IAMs_20 23 41 08.3
comp=Z,3µm,18.0s
MSO Missoula 93.47 43 P P 22 59 56.9 -5.2
baz=252
HWUT Hardware Ranch 93.58 48 IAMs_20 IAMs_20 23 32 49.9
comp=Z,2µm,22.0s
SNAA Sanae 93.61 183 P **P** **23 00 02.1 -0.1**
SNAA Sanae 93.61 183 P **P** **23 00 01.9 -0.3**
SNAA IAmb IAmb 23 00 13.5
comp=Z,27nm,1.1s
SNAA IAMs_20 IAMs_20 23 40 26.0
comp=Z,2µm,19.0s
SNAA Sanae 93.61 183 P **P** **23 00 01.9 -0.3**
SNAA pmax pmax
comp=Z,27nm,1.1s
SNAA MLR MLR
comp=Z,2µm,19.0s
121A Cookes Peak, D 94.08 58 P P 23 00 00.1 -5.2
baz=255
AHID Auburn Hatcher 94.23 47 IAMs_20 IAMs_20 23 34 30.1
comp=Z,3µm,21.0s
VNA3 Neumayer Olymp 94.29 181 P **P** **23 00 04.5 -0.9**
TPAW Teton Pass 94.54 46 IAMs_20 IAMs_20 23 33 48.0
comp=Z,3µm,22.0s
VNA2 Neumayer--Watz 94.55 182 P **P** **23 00 06.5 0.0**
baz=171,slow=4.4
REDW Red Top Meadow 94.57 47 IAMs_20 IAMs_20 23 33 36.9
comp=Z,3µm,22.0s
BOZ Bozeman (W) 94.65 44 P P 23 00 02.7 -4.8
baz=254
SNOW Snow King Moun 94.67 46 IAMs_20 IAMs_20 23 34 44.4
comp=Z,3µm,22.0s
MVCO Mesa Verde 94.70 53 P **P** **23 00 04.4 -3.7**
baz=255
MOOW Moose Ponds 94.75 46 IAMs_20 IAMs_20 23 35 20.6
comp=Z,3µm,20.0s
LOHW Long Hollow 94.81 46 IAMs_20 IAMs_20 23 35 11.3
comp=Z,3µm,22.0s
VNA1 Neumayer--Stat 94.85 182 P **P** **23 00 08.8 +1.0**
FLWY Flagg Ranch 94.87 46 IAMs_20 IAMs_20 23 35 54.8
comp=Z,3µm,20.0s
EPT El Paso 94.95 59 IAMs_20 IAMs_20 23 33 35.1
comp=Z,2µm,21.0s
BHPL Bhopal 94.96 293 *e*P **P** **23 00 09.7 +0.4**
BW06 Boulder Array 95.33 47 IAMs_20 IAMs_20 23 37 24.1
comp=Z,2µm,20.0s
PDAR Pinedale Array 95.33 47 P **P** **23 00 11.6 +0.7**
comp=Z,0.3nm,0.6s,baz=224,slow=2.5,SNR=2.6
PDAR PKKPbc **PKKPdf** **23 17 07.8 +2.0**
comp=Z,0.4nm,0.7s,baz=75,slow=6.3,SNR=4.7
comp=Z,0.3nm,0.6s
PDAR Pinedale Array 95.33 47 P **P** **23 00 10.8 0.0**
O20A White River Ci 95.62 50 P P 23 00 06.6 -5.6
baz=256
O20A S **S** **23 11 29.5 +0.1**
baz=256
ANMO Albuquerque 95.75 56 LR LR 23 35 42.1
comp=Z,3µm,20.1s,baz=275,slow=31
ANMO Albuquerque 95.75 56 *c e*P **P** **23 00 12.9 0.0**
ANMO pmax pmax
comp=Z,2.0nm,1.3s
ANMO Albuquerque 95.75 56 P P 23 00 07.1 -5.7
baz=256
ANMO S **S** **23 11 29.6 -1.1**
baz=256
MNTX Cornudas Mount 95.86 59 P **P** **23 00 10.3 -2.9**
baz=256
S22A 4UR Ranch, Cre 96.12 53 P P 23 00 08.8 -5.8
baz=256
RLMT Red Lodge 96.13 45 IAMs_20 IAMs_20 23 37 25.0
comp=Z,3µm,20.0s
RLMT Red Lodge 96.13 45 P P 23 00 07.5 -6.9
baz=256
C36M Paulatuk 96.51 20 P **P** **23 00 13.0 -2.1**
C36M IAmb IAmb 23 00 16.0
comp=Z,9.3nm,0.9s
C36M IAMs_20 IAMs_20 23 37 29.8
comp=Z,2µm,22.0s
C36M Paulatuk 96.51 20 P **P** **23 00 10.9 -4.2**
baz=246
EGMT Eagleton 96.53 42 IAMs_20 IAMs_20 23 39 47.2
comp=Z,2µm,19.0s
MK31 Makanchi Array 96.72 316 P **P** **23 00 15.7 -1.1**
MK31 IAmb IAmb 23 00 18.6
comp=Z,30nm,1.4s
MK31 Makanchi Array 96.72 316 P **P** **23 00 15.7 -1.1**
MK31 pmax pmax
comp=Z,30nm,1.4s
MK31 Makanchi Array 96.72 316 *c i*P **P** **23 00 16.0 -0.8**
MKAR Makanchi Array 96.72 316 P **P** **23 00 16.3 -0.5**
comp=Z,9.3nm,0.8s,baz=100,slow=4.9,SNR=36
MKAR PKKPbc **PKKPbc** **23 16 59.6 -1.6**
comp=Z,0.6nm,0.8s,baz=278,slow=3.4,SNR=4.9
MKAR SKKPbc SKKPbc 23 20 46.2 +3.5
comp=Z,0.5nm,0.5s,baz=329,slow=3.5,SNR=8.7
MKAR LR LR 23 46 45.4
comp=Z,767nm,18.4s,baz=97,slow=37
comp=Z,9.3nm,0.8s
MKAR Makanchi Array 96.72 316 P **P** **23 00 16.0 -0.8**
MKAR Makanchi Array 96.72 316 P **P** **23 00 16.0 -0.8**
RWWY Rawlins 96.76 49 IAMs_20 IAMs_20 23 34 58.0
comp=Z,3µm,22.0s
TXAR Lajitas Array 96.76 62 P **P** **23 00 18.4 +0.9**
comp=Z,0.4nm,0.7s,baz=220,slow=5.7,SNR=3.6
TXAR PP **PP** **23 04 14.4 +1.7**
comp=Z,0.2nm,0.6s,baz=242,slow=5.3,SNR=4.1
TXAR LR LR 23 35 03.5
comp=Z,2µm,21.7s,baz=262,slow=30
comp=Z,0.4nm,0.7s
TXAR Lajitas Array 96.76 62 P **P** **23 00 16.5 -1.0**
TXAR Lajitas Array 96.76 62 P **P** **23 00 16.5 -1.0**
MAKZ Makanchi 96.93 316 P **P** **23 00 17.5 -0.2**
MAKZ IAmb IAmb 23 00 25.4
comp=Z,27nm,1.2s
MAKZ Makanchi 96.93 316 P **P** **23 00 17.5 -0.2**
MAKZ pmax pmax
comp=Z,27nm,1.2s
MAKZ MLR MLR
comp=Z,1µm,19.0s
ZAA0 Zalesovo Array 96.96 324 P **P** **23 00 16.1 -1.5**
ZAA0 IAmb IAmb 23 00 19.0
comp=Z,16nm,1.0s
ZALV Zalesovo Beam 96.96 324 P **P** **23 00 16.1 -1.5**
comp=Z,7.6nm,0.7s,baz=108,slow=4.8,SNR=24
ZALV LR LR 23 47 32.9
comp=Z,737nm,18.0s,baz=100,slow=38
comp=Z,7.6nm,0.7s
ZALV Zalesovo Beam 96.96 324 P **P** **23 00 15.6 -2.0**
ZALV Zalesovo Beam 96.96 324 P **P** **23 00 15.6 -2.0**
SDCO Great Sand Dun 97.14 53 S **S** **23 11 43.2 +0.5**
baz=257
A36M Sachs Harbour 97.26 17 IAMs_20 IAMs_20 23 40 51.5
comp=Z,2µm,20.0s
K22A Casper 97.47 48 S **S** **23 11 45.2 +0.1**
baz=257
ISCO Idaho Springs 97.51 51 IAMs_20 IAMs_20 23 35 26.2
comp=Z,2µm,22.0s
ISCO Idaho Springs 97.51 51 P P 23 00 16.1 -4.8
baz=257
ISCO S **S** **23 11 47.4 +1.5**
baz=257
YKA Yellowknife Ar 97.74 27 P **P** **23 00 19.5 -1.5**
comp=Z,2.5nm,0.6s,baz=251,slow=4.4,SNR=13
T25A Trinidad 97.86 54 P P 23 00 16.0 -6.4
baz=258
T25A S **S** **23 11 50.9 +2.1**
baz=258
LAO LASA Array 98.56 44 IAMs_20 IAMs_20 23 44 00.1
comp=Z,2µm,18.0s
LAO LASA Array 98.56 44 S **S** **23 11 55.5 +1.5**

baz=258
RSSD **Black Hills** 99.55 47 IAMs_20 IAMs_20 23 43 26.8
comp=Z,2µm,18.0s
AMTX **Amarillo** 99.57 56 IAMs_20 IAMs_20 23 36 49.2
comp=Z,2µm,21.0s
KURK **Kurchatov** 99.94 320 IAMs_20 IAMs_20 23 49 24.3
comp=Z,2µm,18.0s
KURBB **Kurchatov Arra** 99.98 320 P **Pdif** **23 00 30.6 -0.7**
comp=Z,1.1nm,1.0s,baz=103,slow=4.5,SNR=9.3
KURBB LR LR 23 48 27.4
comp=Z,2µm,18.1s,baz=80,slow=37
comp=Z,1.1nm,1.0s
JCT **Junction City** 100.28 61 IAMs_20 IAMs_20 23 37 25.6
comp=Z,2µm,21.0s
WMOK **Wichita Mounta** 101.89 57 IAMs_20 IAMs_20 23 38 10.7
comp=Z,2µm,21.0s
435B **Jarrell** 102.22 61 IAMs_20 IAMs_20 23 38 35.8
comp=Z,3µm,21.0s
HKT **Hockley** 103.57 62 IAMs_20 IAMs_20 23 42 05.8
comp=Z,2µm,20.0s
NATX **Nacogdoches** 104.84 61 IAMs_20 IAMs_20 23 40 39.3
comp=Z,2µm,20.0s
AGMN **Agassiz Nation** 105.74 43 IAMs_20 IAMs_20 23 42 01.0
comp=Z,2µm,20.0s
W39A **Magazine** 106.02 57 IAMs_20 IAMs_20 23 40 42.0
comp=Z,3µm,22.0s
MIAR **Mount Ida** 106.11 58 IAMs_20 IAMs_20 23 44 53.5
comp=Z,2µm,19.0s
SNET **Serv Nac Est T** 106.78 80 IAMs_20 IAMs_20 23 38 21.7
comp=Z,2µm,22.0s
VBMS **Vicksburg** 108.39 61 IAMs_20 IAMs_20 23 41 58.3
comp=Z,1µm,21.0s
EYMN **Ely** 108.64 44 IAMs_20 IAMs_20 23 46 50.9
comp=Z,2µm,19.0s
EYMN **Ely** 108.64 44 P **PKiKP** **23 05 12.6 -2.7**
baz=269
FOMA **Nahampoana Res** 109.23 237 IAMs_20 IAMs_20 23 48 28.8
comp=Z,2µm,18.0s
OXF **Oxford** 109.53 58 IAMs_20 IAMs_20 23 50 52.1
comp=Z,1µm,18.0s
BOAB **BOACO BROADBAND** 109.94 82 IAMs_20 IAMs_20 23 45 47.7
comp=Z,1µm,19.0s
JTS **Las Juntas de** 110.20 84 IAMs_20 IAMs_20 23 40 31.6
comp=Z,2µm,20.0s
COWI **Conover** 110.23 46 IAMs_20 IAMs_20 23 44 52.2
comp=Z,2µm,20.0s
PLAL **Pickwick Lake** 110.66 58 IAMs_20 IAMs_20 23 44 57.0
comp=Z,2µm,20.0s
VOI **Vohitsoka** 110.75 239 IAMs_20 IAMs_20 23 46 00.8
comp=Z,2µm,21.0s
WVT **Waverly** 110.92 57 IAMs_20 IAMs_20 23 44 12.9
comp=Z,2µm,21.0s
HDC **Heredia** 110.95 85 IAMs_20 IAMs_20 23 40 59.5
comp=Z,2µm,20.0s
BRAL **Brewton** 111.24 62 IAMs_20 IAMs_20 23 50 59.8
comp=Z,1µm,18.0s
LRAL **Lakeview Retre** 111.42 60 IAMs_20 IAMs_20 23 43 55.4
comp=Z,2µm,22.0s
ARU **Arti** 112.07 325 PKiKP **PKiKP** **23 05 22.5 +1.1**
comp=Z,5.1nm,0.6s,baz=174,slow=2.4,SNR=7.5
ARU **Arti** 112.07 325 IAMs_20 IAMs_20 23 50 29.1
comp=Z,1µm,22.0s
ARU **Arti** 112.07 325 *i* PKiKP **PKiKP** **23 05 19.7 -1.7**
ARU 23 06 02.6
ARU 23 12 31.8
AKTO **Aktyubinsk** 113.00 319 PKiKP **PKiKP** **23 05 24.3 +0.9**
comp=Z,3.1nm,0.6s,baz=110,slow=7.6,SNR=2.3
GOGA **Godfrey** 114.40 60 IAMs_20 IAMs_20 23 48 18.2
comp=Z,2µm,20.0s
SPITS **Spitsbergen Ar** 114.77 354 PKP PKPdf 23 05 26.5 +0.4
comp=Z,8.3nm,0.8s,baz=112,slow=13,SNR=5.4
KIRV **Kirov** 116.48 329 PKP **PKiKP** **23 05 30.3 +0.6**
comp=Z,9.6nm,0.5s,baz=94,slow=1.3,SNR=7.1
M53A **Wl Miller and** 116.50 51 IAMs_20 IAMs_20 23 51 40.8
comp=Z,2µm,19.0s
NHSC **New Hope** 117.15 60 IAMs_20 IAMs_20 23 50 11.0
comp=Z,1µm,20.0s
PRGR **Permogore** 117.31 333 *e*PKiKP **PKPdf** **23 05 30.6 -0.7**
LPAZ **La Paz** 117.79 118 PKP **PKiKP** **23 05 35.6 +1.3**
comp=Z,3.0nm,0.6s,baz=206,slow=1.3,SNR=3.5
LPAZ **La Paz** 117.79 118 **PKPdf** **23 05 33.4 -1.0**
LPAZ **La Paz** 117.79 118 PKiKP **PKPdf** **23 05 33.4 -1.0**
DAG **Danmarks Havn** 117.80 1 *i* P **PKPdf** **23 05 31.0 -0.9**
LVZ **Lovozero** 118.52 341 IAMs_20 IAMs_20 23 56 53.3
comp=Z,2µm,21.0s
SSPA **Standing Stone** 118.66 52 P PKPpre 23 05 28.6
baz=275
L56A **Greenwood** 118.76 50 **PKPdf** **23 05 34.5 -0.2**
BELG **Belogornoye** 119.09 322 PKP **PKiKP** **23 05 35.5 +0.4**
comp=Z,21nm,0.6s,baz=3.6,slow=1.1,SNR=14
APA **Apatity** 119.10 341 ⇓*i* PKiKP PKPpre 23 05 28.7
APA *i* 23 12 40.0
APA *i* PS **PS** **23 16 38.0 -4.5**
APA pmax pmax
comp=Z,8.0nm,1.0s
KEV **Kevo** 119.48 345 PKPdf **PKiKP** **23 05 35.3 0.0**
KEV IAMs_20 IAMs_20 23 56 53.8
comp=Z,1µm,21.0s
KEV **Kevo** 119.48 345 PKiKP **PKiKP** **23 05 35.3 0.0**
KEV MLR MLR
comp=Z,1µm,21.0s
BINY **Binghamton** 119.91 50 P **PKPdf** **23 05 31.1 -5.9**
baz=278
ARCES **ARCESS Array B** 120.01 345 PKP **PKiKP** **23 05 36.5 +0.1**
comp=Z,8.2nm,0.5s,baz=100,slow=4.9,SNR=30
ARCES PKKPbc **PKKPab** **23 15 44.9 -0.9**
comp=Z,1.2nm,0.7s,baz=204,slow=2.0,SNR=8.5
ARCES **ARCESS Array B** 120.01 345 PKPdf **PKPdf** **23 05 35.6 -0.7**
ARCES **ARCESS Array B** 120.01 345 PKiKP **PKPdf** **23 05 35.6 -0.7**
DBG **Daneborg** 120.21 2 *i* P **PKiKP** **23 05 38.4 +1.7**
SUMG **Summit** 120.23 9 PKPdf **PKPdf** **23 05 37.0 -0.2**
SUMG IAMs_20 IAMs_20 23 55 03.9
comp=Z,2µm,21.0s
SUMG **Summit** 120.23 9 PKiKP **PKPdf** **23 05 37.0 -0.2**
SUMG MLR MLR
comp=Z,2µm,21.0s
SUMG **Summit** 120.23 9 *i* P **PKPdf** **23 05 37.0 -0.2**
KLMR **Klimovskoe** 120.33 333 *e*PKiKP **PKPdf** **23 05 36.6 -0.5**
KLMR pmax pmax
comp=Z,22nm,0.9s
KLMR MLR MLR
comp=Z,1µm,20.0s
KLMR **Klimovskoe** 120.33 333 *e*PKPdf **PKPdf** **23 05 36.7 -0.4**
KLMR AMP 23 05 39.0
comp=Z,22nm,0.9s
KLMR *e*PP **PP** **23 06 55.7 -7.3**
KLMR *e*PPP PPP 23 09 30.8
KLMR *e*SS SS 23 23 17.1 -13
KLMR *e*SS SS 23 23 17.1 -13
KLMR LQ LQ 23 43 04.2
KLMR LQ LQ 23 43 04.2
KLMR LR LR 23 53 54.5
KLMR AMP 23 58 29.3
comp=Z,1µm,19.8s
ILULI **Ilulissat** 120.52 15 IAMs_20 IAMs_20 23 58 23.0
comp=Z,1µm,19.0s
LONY **Lake Ozonia** 120.56 47 **PKPdf** **23 05 37.6 -0.5**
LONY **Lake Ozonia** 120.56 47 P **PKPdf** **23 05 32.1 -6.1**
baz=280
NCB **Newcomb** 120.93 47 **PKPdf** **23 05 38.0 -0.9**
KTK1 **Kautokeino** 120.95 345 *e*P **PKiKP** **23 05 39.0 +0.8**
KTK1 IAmb IAmb 23 05 44.0
comp=Z,9.3nm,1.0s
CPUP **Villa Florida** 120.95 133 PKP **PKiKP** **23 05 40.9 +1.3**
comp=Z,2.9nm,0.7s,baz=239,slow=4.0,SNR=7.4
CPUP **Villa Florida** 120.95 133 **PKPdf** **23 05 39.1 -0.4**
CPUP **Villa Florida** 120.95 133 PKiKP **PKPdf** **23 05 39.1 -0.4**
MAK **Makhachkala** 121.10 312 *i* P **Pdif** **23 01 59.1 -6.2**
MAK *e*PPP PPP 23 09 38.0
MAK *e* 23 12 33.1
JETT **Jettan, Norway** 121.19 347 *e*P **PKiKP** **23 05 39.7 +0.9**
JETT IAmb IAmb 23 05 40.6
comp=Z,11nm,0.7s
TRO **Tromso** 121.45 347 *e*P **PKPdf** **23 05 39.1 +0.1**
TRO IAmb IAmb 23 05 41.1
comp=Z,14nm,0.8s
PAL **Palisades** 121.62 51 IAMs_20 IAMs_20 23 53 47.3
comp=Z,2µm,19.0s
PAL **Palisades** 121.62 51 P PKPpre 23 05 33.8
baz=278
WSPT **Westport, CT** 122.03 50 IAMs_20 IAMs_20 23 50 06.1
comp=Z,2µm,22.0s
SFJD **Kangerlussuaq** 122.25 16 IAMs_20 IAMs_20 00 03 11.1
comp=Z,2µm,18.0s
GROC **Groznyy** 122.29 312 *i* PKiKP **PKiKP** **23 05 42.6 +1.0**
GROC *e* 23 07 17.3
GROC pmax pmax
comp=Z,21nm,0.7s
L61B **Northampton** 122.30 49 P PKPpre 23 05 35.5
baz=280
LBNH **Lisbon** 122.50 47 P PKPpre 23 05 34.3
baz=282
SCHQ **Schefferville** 122.55 33 PKP **PKiKP** **23 05 42.3 +0.5**
comp=Z,8.7nm,0.8s,baz=272,slow=4.6,SNR=8.3
SCHQ **Schefferville** 122.55 33 **PKPdf** **23 05 41.3 -0.3**
VRH **Novokhopyorsk** 122.94 322 *e*PKiKP **PKiKP** **23 05 42.7 +0.1**
VRH pmax pmax
comp=Z,20nm,0.7s
BOSA **Boshof** 123.05 221 PKP **PKiKP** **23 05 44.9 +1.1**
comp=Z,2.8nm,0.7s,baz=76,slow=0.2,SNR=6.3
BOSA **Boshof** 123.05 221 **PKiKP** **23 05 44.3 +0.5**
BOSA **Boshof** 123.05 221 PKiKP **PKiKP** **23 05 44.3 +0.5**
ICESG **Greenland Ices** 123.09 11 *i* P **PKiKP** **23 05 44.4 +1.5**
HRV **Adam Dziewonsk** 123.11 49 P **PKPdf** **23 05 37.6 -5.4**
baz=281
F62A **Pittston Farm,** 123.49 44 **PKPdf** **23 05 43.1 -0.6**
MOS **Moscow** 123.49 328 *i* PKiKP **PKPdf** **23 05 41.2 -2.1**
E62A **Clayton Lake** 123.60 43 **PKPdf** **23 05 43.7 -0.2**
GNI **Garni** 123.60 309 PKP **PKiKP** **23 05 44.8 +0.3**
comp=Z,13nm,0.8s,baz=354,slow=1.7,SNR=8.4
GNI **Garni** 123.60 309 ⇑*i* PKiKP **PKiKP** **23 05 44.9 +0.3**
GNI pmax pmax
comp=Z,46nm,1.7s
STEI **Steigen** 123.62 347 *e*P **PKPdf** **23 05 42.3 -0.9**
STEI IAmb IAmb 23 05 45.2
comp=Z,16nm,0.5s
VALR **Valaam** 123.65 336 ⇑*i* PKiKP **PKiKP** **23 05 44.0 +0.3**
D62A **Allapait, All** 123.79 43 PKPdf **PKPdf** **23 05 42.8 -1.4**
DY2G **Dye2** 123.79 15 *i* P **PKPdf** **23 05 42.4 -1.6**
GOF **Gofitskoye** 123.84 315 ⇑*e*PKiKP **PKiKP** **23 05 45.5 +0.8**
GOF pmax pmax
comp=Z,18nm,1.0s
SIV **San Ignacio** 123.89 121 PKP **PKiKP** **23 05 46.2 +0.6**
baz=252,slow=5.3
SCO **Scoresbysund** 123.93 3 IAMs_20 IAMs_20 23 57 40.0
comp=Z,1µm,19.0s
FAUS **Fauske** 124.07 347 *e*P **PKiKP** **23 05 47.6 +3.2**
FAUS IAmb IAmb 23 05 49.0
comp=Z,18nm,1.2s
LPSR **Galich'ya Gora** 124.07 324 *e*PKiKP **PKPdf** **23 05 44.6 0.0**
LPSR pmax pmax
comp=Z,30nm,1.0s
PKME **Peaks-Kenny Pk** 124.10 45 **PKPdf** **23 05 44.6 -0.2**
PKME IAMs_20 IAMs_20 23 54 39.1
comp=Z,2µm,20.0s
PKME **Peaks-Kenny Pk** 124.10 45 P **PKPdf** **23 05 38.8 -6.0**
baz=285
KBZ **Khabaz** 124.25 313 PKP **PKiKP** **23 05 45.5 0.0**
comp=Z,4.0nm,0.8s,baz=72,slow=3.2,SNR=6.1
KBZ **Khabaz** 124.25 313 ⇑*i* PKiKP **PKPdf** **23 05 45.3 +0.1**
VORR **Voronezh** 124.26 323 *e*PKiKP **PKiKP** **23 05 45.9 +0.7**
VORR pmax pmax
comp=Z,30nm,0.5s
OBN **Obninsk** 124.30 328 PKP **PKiKP** **23 05 45.3 +0.1**
comp=Z,4.2nm,0.4s,baz=249,slow=23,SNR=8.1
OBN **Obninsk** 124.30 328 IAMs_20 IAMs_20 00 04 04.7
comp=Z,1µm,19.0s
OBN **Obninsk** 124.30 328 ⇑*i* PKiKP **PKiKP** **23 05 45.6 +0.4**
OBN *e* 23 07 33.2
OBN *e*PS **PS** **23 17 25.4 -3.8**
OBN *e*SS SS 23 24 20.6 -0.7
OBN pmax pmax
comp=Z,46nm,1.7s
AKH **Akhalkalaki** 124.31 310 ⇑P **PKiKP** **23 05 46.0 +0.1**
AKH **Akhalkalaki** 124.31 310 PKiKP **PKiKP** **23 05 46.0 +0.1**
KIV **Kislovodsk** 124.35 313 ⇑*i* PKiKP **PKPdf** **23 05 45.5 0.0**
KIV *i* PS **PS** **23 17 25.5 -5.0**
KIV pmax pmax
comp=Z,19nm,1.4s
VSR **Storozhevoye** 124.45 323 *e*PKiKP **PKPdf** **23 05 44.7 -0.6**
VSR pmax pmax
comp=Z,20nm,0.7s
VSR MLR MLR
comp=Z,1µm,19.0s
SDDR **Presa de Saban** 124.58 77 IAMs_20 IAMs_20 23 49 41.3
comp=Z,1µm,22.0s
GRTK **Grand Turk** 124.90 74 IAMs_20 IAMs_20 23 52 59.7
comp=Z,1µm,19.0s
MOR8 **Moi Rana** 125.26 347 *e*P **PKPdf** **23 05 45.6 -1.0**
MOR8 IAmb IAmb 23 05 52.1
comp=Z,22nm,1.3s
ATD **Arta Tunnel** 125.28 274 IAMs_20 IAMs_20 00 00 16.8
comp=Z,1µm,18.0s
SAML **Samuel** 125.32 112 PKPdf **PKPdf** **23 05 46.8 -1.3**
SAML **Samuel** 125.32 112 PKiKP **PKPdf** **23 05 46.8 -1.3**
SAML MLR MLR
comp=Z,700nm,19.0s
FIA1 **FINESS Array S** 125.41 338 PKPdf **PKPdf** **23 05 46.9 0.0**
FINES **FINESS Array B** 125.41 338 PKP **PKPdf** **23 05 45.7 -1.1**
comp=Z,5.2nm,0.6s,baz=31,slow=2.9,SNR=21
FINES **FINESS Array B** 125.41 338 PKPdf **PKPdf** **23 05 46.7 -0.2**
FINES **FINESS Array B** 125.41 338 PKiKP **PKPdf** **23 05 46.7 -0.2**
GURO **Guroymak-BITLI** 125.94 307 **PKiKP** **23 05 49.4 +0.1**
TRB **Terra Rica** 126.49 133 **PKPdf** **23 05 49.6 -0.7**
SOC **Sochi** 126.52 314 *i* PKiKP **PKPdf** **23 05 48.6 -1.0**
SOC *e* 23 07 41.9
SOC *e*PS **PS** **23 17 45.3 -4.1**
SOC *e*SSS SSS 23 29 29.5
MEF **Metsahovi** 126.85 338 *e*P **PKPdf** **23 05 49.3 -0.3**
LMN **Caledonia Moun** 126.95 43 PKPdf **PKPdf** **23 05 49.2 -1.1**
VSU **Vasula** 127.08 335 *e*P **PKiKP** **23 05 51.6 +1.0**
NSS **Namsos** 127.21 347 *e*P **PKiKP** **23 05 50.8 +0.1**
NSS IAmb IAmb 23 05 56.5
comp=Z,89nm,1.9s
RAF **Rauma** 127.22 339 *e*P **PKiKP** **23 05 50.8 0.0**
KMBO **Kilima Mbogo** 127.54 257 PKP **PKPdf** **23 05 52.5 -0.2**
comp=Z,3.7nm,1.1s,baz=80,slow=4.8,SNR=5.5
KMBO **Kilima Mbogo** 127.54 257 PKPdf **PKPdf** **23 05 51.6 -1.1**
KMBO **Kilima Mbogo** 127.54 257 IAMs_20 IAMs_20 23 54 10.1
comp=Z,1µm,22.0s
KMBO **Kilima Mbogo** 127.54 257 PKiKP **PKPdf** **23 05 51.6 -1.1**
KMBO MLR MLR
comp=Z,1µm,22.0s
ANN **Anapa** 127.73 316 *i* PKiKP **PKiKP** **23 05 59.5 +7.1**
ANN *e* 23 07 51.8
ANN pmax pmax
comp=Z,26nm,0.8s
ANN MLR MLR
comp=N,1µm,21.0s
ANN MLR MLR
comp=Z,838nm,20.0s
MTSE **Matsula** 128.08 336 *e*P **PKiKP** **23 05 52.8 +0.2**
TBLU **Trondheim** 128.70 347 *e*P **PKiKP** **23 05 53.5 -0.3**
FURI **Furi** 128.83 270 IAMs_20 IAMs_20 23 58 48.7
comp=Z,1µm,19.0s
MNK **Minsk** 128.94 330 *i* PKiKP **PKiKP** **23 05 55.0 +0.5**
MNK *i* 23 07 58.4
MNK *i* 23 13 06.6
MNK *i* PS **PS** **23 18 06.2 -3.7**
MNK *i* SS SS 23 25 17.4 -1.7
MNK *i* SSS SSS 23 30 04.1
MNK pmax pmax
comp=E,1.0nm,0.9s
MNK pmax pmax
comp=Z,26nm,0.9s
MNK pmax pmax
comp=N,12nm,0.9s
MNK MLR MLR
comp=Z,6µm,20.0s
MNK **Minsk** 128.94 330 *i* PKP **PKiKP** **23 05 55.0 +0.5**
comp=E,1.0nm,0.9s
MNK *i* PKP **PKiKP** **23 05 55.0 +0.5**
comp=N,12nm,0.9s
MNK *i* PKP **PKiKP** **23 05 55.0 +0.5**
comp=Z,26nm,0.9s,baz=55
MNK *i* PP **PP** **23 07 58.4 -2.4**
MNK *i* SKP 23 09 07.8
MNK *i* PKS **PKSdf** **23 09 32.3 +2.2**
MNK *i* PPP PPP 23 11 04.1
MNK *i* SKS **SKSdf** **23 13 06.6 +1.5**
MNK *i* SKKS 23 16 06.1
MNK *i* PS **PS** **23 18 06.3 -3.7**
MNK *i* SS **SS** **23 25 17.5 -1.6**
MNK *i* SSS SSS 23 30 04.2
MNK *i* LR LR 23 56 13.6
MNK *i* LRM MLR 00 03 44.9
comp=Z,6µm,19.8s
MNK *i* LRM MLR 00 05 21.5
comp=E,80nm,20.6s
MNK *i* LRM MLR 00 05 22.0
comp=N,1µm,20.6s
IDID **Didziasalis** 129.00 332 *e*P **PKiKP** **23 05 56.3 +1.7**
ISAL **Salakas** 129.12 332 ⇑*e*P **PKiKP** **23 05 55.8 +1.0**
IIGN **Ignalina** 129.22 332 *e*P **PKiKP** **23 05 56.0 +1.0**
NACGM **Naroch** 129.23 331 ⇓*e*PKP **PKiKP** **23 05 56.0 +0.9**
comp=Z,33nm,1.3s,baz=54
UPP **Uppsala** 129.46 340 *e*P **PKPdf** **23 05 54.6 -0.1**
HUMP **Col San Antoni** 129.65 78 **PKPdf** **23 05 55.9 -0.4**
VSVD **Vaisvydziai** 129.83 334 *e*P **PKiKP** **23 05 57.4 +1.2**
SIM **Simferopol'** 129.90 317 PKiKP **PKPdf** **23 05 51.0 -5.0**
DOMB **Dombas** 130.03 346 *e*P **PKiKP** **23 05 56.7 +0.2**
DOMB IAmb IAmb 23 06 02.6
comp=Z,46nm,1.5s
PABE **Paberze** 130.12 333 PKPdf **PKPdf** **23 05 56.1 +0.1**
PABE **Paberze** 130.12 333 *e*P **PKiKP** **23 05 57.3 +0.5**
BBSR **BB Station** 130.20 60 IAMs_20 IAMs_20 23 59 36.7
comp=Z,909nm,20.0s
AKASG **Malin Array Be** 130.32 326 PKP **PKPdf** **23 05 56.2 -0.3**
comp=Z,3.0nm,0.6s,baz=53,slow=2.4,SNR=27
AKASG SKPbc **SKPbc** **23 09 21.8 +2.2**
comp=Z,1.9nm,0.7s,baz=45,slow=4.3,SNR=4.7
AKASG **Malin Array Be** 130.32 326 *c i* PKiKP **PKiKP** **23 05 57.0 -0.4**
AKASG pmax pmax
comp=Z,3.0nm,0.6s
AKBB **Malin Array Si** 130.32 326 *c i* PKiKP **PKiKP** **23 05 57.8 +0.4**
AKN **Aaknes** 130.36 348 *e*P **PKiKP** **23 05 58.0 +0.8**
NB2 **NORSAR Subarra** 130.38 345 PKPdf **PKPdf** **23 05 51.4 -5.0**
baz=31,slow=1.9
NB2 **NORSAR Subarra** 130.38 345 PKPdf **PKPdf** **23 05 51.4 -5.0**
comp=Z,18nm,1.4s,baz=31,slow=1.9
NOA **NORSAR Array B** 130.38 345 PKP **PKPdf** **23 05 56.4 -0.1**
comp=Z,2.8nm,0.7s,baz=33,slow=2.0,SNR=17
NOA SKPbc **SKPbc** **23 09 21.6 +2.1**
comp=Z,1.5nm,0.9s,baz=31,slow=3.0,SNR=4.9
HFS **Hagfors** 130.46 343 PKP **PKPdf** **23 05 55.9 -0.7**
comp=Z,2.9nm,0.6s,baz=264,slow=1.4,SNR=5.8
HFS SKPbc **SKPbc** **23 09 21.9 +2.2**
comp=Z,3.5nm,0.8s,baz=5.5,slow=4.6,SNR=4.5
NC602 **NORSAR Array S** 130.55 344 **PKiKP** **23 05 57.5 -0.1**
NAO01 **NORSAR Array S** 130.63 345 *e*P **PKPdf** **23 05 56.5 -0.4**
NAO01 IAmb IAmb 23 05 59.0
comp=Z,62nm,1.9s
LODK **Lodwar** 130.72 262 IAMs_20 IAMs_20 23 57 25.8
comp=Z,905nm,20.0s
ASF **Jabal al Asfar** 131.14 300 PKP **PKiKP** **23 05 59.4 -0.4**
comp=Z,4.0nm,0.7s,baz=134,slow=4.7,SNR=6.8
ASF SKPbc **SKPab** **23 09 25.8 +2.1**
comp=Z,6.7nm,1.1s,baz=121,slow=2.4,SNR=6.0
SKAR **Skarslia** 131.40 346 *e*P **PKiKP** **23 05 59.3 -0.1**
SUW **Suwalki** 131.43 332 *e*PKP **PKPdf** **23 05 58.8 +0.3**
SUW *e*L L 00 02 39.2
comp=Z,2µm,22.6s
SUW **Suwalki** 131.43 332 IAMs_20 IAMs_20 00 03 39.3
comp=Z,1µm,21.0s
SUW **Suwalki** 131.43 332 *e*P **PKiKP** **23 06 01.3 +1.7**
BRTR **Keskin Array B** 131.99 311 PKP **PKPdf** **23 06 00.3 0.0**
comp=Z,2.1nm,0.7s,baz=132,slow=4.1,SNR=4.3
BRTR SKPbc **SKPab** **23 09 27.6 +0.4**
comp=Z,0.5nm,0.5s,baz=149,slow=3.4,SNR=1.4
BRTR **Keskin Array B** 131.99 311 PKPdf **PKPdf** **23 05 59.4 -0.9**
BRTR **Keskin Array B** 131.99 311 PKiKP **PKPdf** **23 05 59.4 -0.9**
SORM **Soroca** 132.11 323 ⇑P **PKPdf** **23 06 00.2 +0.2**
MMAI **Mount Meron Ar** 132.25 301 PKP **PKiKP** **23 06 02.1 +0.1**
comp=Z,3.7nm,0.8s,baz=65,slow=6.0,SNR=6.8
MMAI SKPbc **SKPab** **23 09 29.6 +1.3**
comp=Z,5.6nm,0.9s,baz=82,slow=1.8,SNR=5.8
SEUS **St. Eustatius** 132.33 80 IAMs_20 IAMs_20 23 55 28.9
comp=Z,994nm,19.0s
GHAJ **Ghor Haditha** 132.40 299 IAMs_20 IAMs_20 00 06 09.2
comp=Z,921nm,20.0s
MILM **Milestii Mici** 132.43 321 *e*PKP **PKiKP** **23 06 02.0 +0.2**
MILM **Milestii Mici** 132.43 321 *i* PP PP 23 08 23.0 -0.7
MILM **Milestii Mici** 132.43 321 *e*PKS 23 09 29.0
MILM *e*SKP 23 09 32.0
MILM *e*L L 00 04 54.0
MILM LRM MLR 00 11 46.0
comp=Z,900nm,19.0s
MILM **Milestii Mici** 132.43 321 ⇓P **PKiKP** **23 06 02.9 +1.1**
ANTO **Ankara** 132.57 311 ⇓P **PKiKP** **23 06 04.0 +1.6**
BLS5 **Blasjo** 132.95 346 *e*P **PKiKP** **23 06 03.4 +0.8**
DEL **Delary** 133.36 340 *e*P **PKiKP** **23 06 04.2 +0.9**
TDBA **Terre de Bas,** 133.48 82 IAMs_20 IAMs_20 23 54 25.5
comp=Z,1µm,20.0s
CBE **Ff, Capester** 133.53 82 IAMs_20 IAMs_20 23 54 48.7
comp=Z,1µm,20.0s
FDF **Fort de France** 133.84 84 IAMs_20 IAMs_20 23 54 12.1
comp=Z,1µm,22.0s
BIM **Bigot** 133.89 84 IAMs_20 IAMs_20 23 54 04.5
comp=Z,1µm,20.0s
BEL **Belsk** 133.95 331 *e*PKPdf **PKiKP** **23 06 05.9 +1.3**
BEL *e*PP **PP** **23 08 34.0 +1.0**
BEL *e*L L 00 04 31.8
comp=Z,1µm,22.4s
BIZ **Bicaz** 134.03 323 ⇓P **PKPdf** **23 06 03.4 -0.3**
BSD **Bornholm Skovb** 134.05 338 *e*P **PKPdf** **23 06 04.0 +0.5**
MPOM **Morne Pois Mar** 134.09 84 IAMs_20 IAMs_20 23 54 09.6
comp=Z,1µm,21.0s
BURAR **Bucovina Array** 134.18 324 ⇑P **PKiKP** **23 06 05.7 +0.2**
BURAR **Bucovina Array** 134.18 324 PKPdf **PKPdf** **23 06 02.5 -1.6**
BUR01 **Bucovina Ar. S** 134.18 324 ⇓P **PKiKP** **23 06 06.9 +1.5**
KWP **Kalwaria Pacla** 134.39 328 *e*PKPdf **PKiKP** **23 06 05.4 -0.3**
KWP *e*PP **PP** **23 08 34.8 -1.3**
KWP *e*L L 00 05 20.6
comp=Z,1µm,22.1s
KWP **Kalwaria Pacla** 134.39 328 **PKPdf** **23 06 04.7 +0.3**
KWP **Kalwaria Pacla** 134.39 328 PKiKP **PKPdf** **23 06 04.7 +0.3**
BDFB **Brasilia** 134.41 130 PKP **PKiKP** **23 06 06.5 -0.3**
comp=Z,7.6nm,0.8s,baz=229,slow=2.3,SNR=10
BDFB SKPbc **SKPab** **23 09 38.1 -0.2**
comp=Z,6.9nm,0.9s,baz=158,slow=4.0,SNR=6.4
BDFB **Brasilia** 134.41 130 **PKPdf** **23 06 03.8 -1.7**
BDFB **Brasilia** 134.41 130 PKiKP **PKPdf** **23 06 03.8 -1.7**
GKP **Gorka Klasztor** 134.53 335 *e*PKPdf **PKiKP** **23 06 05.6 -0.2**
GKP *e*L L 00 07 46.4
comp=Z,2µm,21.2s
GKP **Gorka Klasztor** 134.53 335 *e*P **PKiKP** **23 06 08.5 +2.7**
MLR **Muntele Rosu** 134.86 321 ⇓P **PKiKP** **23 06 06.4 -0.5**
MLR **Muntele Rosu** 134.86 321 PKP **PKPdf** **23 06 05.6 +0.1**
comp=Z,11nm,1.2s,baz=92,slow=6.7,SNR=4.5
MLR SKPbc **SKPab** **23 09 37.9 -1.4**
comp=Z,4.1nm,1.1s,baz=170,slow=12,SNR=3.7
MLR **Muntele Rosu** 134.86 321 PKPdf **PKPdf** **23 06 04.9 -0.6**
MLR IAMs_20 IAMs_20 00 09 55.0
comp=Z,1µm,21.0s
MLR **Muntele Rosu** 134.86 321 PKiKP **PKPdf** **23 06 04.9 -0.6**
KOLS **Kolonicke sedl** 135.04 327 *e*PKiKP **PKiKP** **23 06 08.0 +1.0**
KOLS **Kolonicke sedl** 135.04 327 *e*PKP **PKiKP** **23 06 08.0 +1.0**
KOLS *e* 23 09 43.5
RGN **Rugen** 135.07 338 IAMs_20 IAMs_20 00 05 14.7
comp=Z,997nm,21.0s
BMR **Baia Mare** 135.12 325 ⇑P **PKiKP** **23 06 07.4 +0.2**
UZH **Uzhgorod** 135.21 327 *i* PKiKP **PKiKP** **23 06 08.4 +1.0**
UZH *e* 23 06 16.6
UZH *e*PPP PPP 23 11 37.2
UZH *e*SS SS 23 26 29.6 -6.1
OJC **Ojcow** 135.48 330 *e*PKPdf **PKiKP** **23 06 07.3 -0.6**
OJC *e*PP **PP** **23 08 42.2 -0.7**
OJC *e*L L 00 05 25.5
comp=Z,2µm,22.3s
CRVS **Cervenica-Dubn** 135.48 327 *e*PKiKP **PKiKP** **23 06 07.6 -0.4**
CRVS **Cervenica-Dubn** 135.48 327 *e*PKP **PKiKP** **23 06 07.6 -0.4**
CRVS *e* 23 09 41.3
CBBR **Cluj-Babes-Bol** 135.60 324 ⇓P **PKiKP** **23 06 08.9 +0.7**
CJR **Cluj-Napoca** 135.60 324 ⇑P **PKiKP** **23 06 08.1 -0.2**
ARR **Arges** 135.72 322 ⇑P **PKPdf** **23 06 06.8 -0.2**
JMB **Yambol** 135.90 317 *e*P **PKiKP** **23 06 09.0 0.0**
HUMR **Humele** 135.94 320 ⇓P **PKiKP** **23 06 08.8 -0.2**
SZH **Strazhica** 135.95 318 *e*P **PKiKP** **23 06 10.2 +1.1**
COPA **Copaceanca** 135.99 320 ⇑P **PKiKP** **23 06 09.6 +0.5**
DRGR 136.06 324 ⇑P **PKiKP** **23 06 09.0 -0.3**
LANS **Liptovska Anna** 136.34 329 *e*PKiKP **PKiKP** **23 06 10.2 +0.5**
LANS **Liptovska Anna** 136.34 329 *e*PKP **PKiKP** **23 06 10.2 +0.5**
RUE **Ruedersdorf** 136.51 336 *e*P **PKiKP** **23 06 10.2 +0.4**
KSP **Ksiaz** 136.68 333 *e*PKPdf **PKiKP** **23 06 09.4 -0.9**
KSP *e*L L 00 05 51.6
comp=Z,2µm,22.9s
DIM **Dimitrovgrad** 136.78 317 *e*P **PKPdf** **23 06 09.0 0.0**
MORC **Moravsky Berou** 136.86 331 ⇓P **PKiKP** **23 06 11.0 +0.2**
MORC **Moravsky Berou** 136.86 331 *e*PKP **PKiKP** **23 06 10.1 -0.7**
MORC *e*PP **PP** **23 08 53.7 +2.2**
PSZ **Piszkesteto** 136.91 327 ⇓P **PKiKP** **23 06 11.2 +0.2**
PSZ **Piszkesteto** 136.91 327 IAMs_20 IAMs_20 00 05 26.3
comp=Z,1µm,21.0s
PSZ **Piszkesteto** 136.91 327 PKP **PKiKP** **23 06 11.5 +0.6**
OSTC **Ostas** 136.92 333 AMS AMS 00 05 40.0

comp=Z,2µm,23.5s
CHVC Chvalec 136.97 333 *e*PKPDF **PKiKP** **23 06 13.1 +2.2**
CHVC AMS AMS 00 05 50.0
comp=Z,2µm,19.8s
MAUC Maruska 137.00 330 *e*PKPDF **PKiKP** **23 06 11.9 +0.8**
MAUC AMS AMS 00 13 30.0
comp=Z,2µm,18.4s
KRLC Kraliky 137.00 332 *e*PKPDF **PKiKP** **23 06 11.1 0.0**
KRLC *e*SP **SKiKP** **23 09 45.4 -1.7**
KRLC AMS AMS 00 12 10.0
comp=Z,900nm,16.8s
DPC Dobruska-Polom 137.02 332 *e*PKIKP **PKPdf** **23 06 04.1 -5.2**
DPC *e* 23 06 11.7
DPC MLR MLR
comp=Z,2µm,21.3s
DPC Dobruska-Polom 137.02 332 *e*PKPpre PKPpre 23 06 04.1
DPC *e*PKPDF **PKiKP** **23 06 11.7 +0.6**
DPC AMS AMS 00 06 00.0
comp=Z,2µm,21.3s
UPC Upice 137.05 333 *e*PKIKP **PKiKP** **23 06 12.0 +0.9**
UPC MLR MLR
comp=Z,2µm,19.5s
UPC Upice 137.05 333 *e*PKPDF **PKiKP** **23 06 12.0 +0.9**
UPC AMS AMS 00 12 50.0
comp=Z,2µm,19.5s
VYHS Vyhne 137.09 329 *e*PKIKP **PKiKP** **23 06 11.2 0.0**
VYHS Vyhne 137.09 329 *e*PKP **PKiKP** **23 06 11.2 0.0**
BZS Buzias 137.35 324 ⇓P **PKPdf** **23 06 09.5 -0.4**
JAVC Velka Javorina 137.42 330 *e*PKP **PKiKP** **23 06 11.9 -0.1**
JAVC *e*PP **PP** **23 08 58.2 +3.1**
RZN Rozhen 137.49 317 *e*P **PKPdf** **23 06 10.9 +0.3**
VRAC Vranov 137.63 331 ⇑P **PKPdf** **23 06 08.7 -1.7**
VRAC Vranov 137.63 331 *e*PKP **PKPdf** **23 06 10.3 -0.1**
VRAC *e*PP **PP** **23 08 56.4 +0.1**
PVCC Panska Ves 137.66 334 *e*PKIKP **PKiKP** **23 06 13.1 +0.8**
PVCC *e* 23 08 58.3
PVCC MLR MLR
comp=Z,800nm,16.9s
PVCC Panska Ves 137.66 334 *e*PKPDF **PKiKP** **23 06 13.1 +0.8**
PVCC *e*PP **PP** **23 08 58.3 +1.9**
PVCC AMS AMS 00 14 50.0
comp=Z,800nm,16.9s
BRG Berggiesshubel 137.67 334 *e*PKP **PKPdf** **23 06 11.2 +0.8**
BRG Amp 23 06 13.4
comp=Z,6.8nm,0.9s
BRG *ex* x 23 06 28.3
BRG Amp 23 06 29.2
comp=Z,17nm,1.3s
BRG PP **PP** **23 09 03.9 +7.5**
BRG Amp 23 09 05.9
comp=Z,25nm,1.8s
BRG Berggiesshubel 137.67 334 *e*PKIKP **PKPdf** **23 06 11.1 +0.8**
BRG 23 09 03.9
BRG pmax pmax
comp=Z,7.0nm,0.9s
BRG pmax pmax
comp=Z,25nm,1.8s
CLL Collm 137.72 336 IAMs_20 IAMs_20 00 08 29.7
comp=Z,1µm,20.0s
CLL Collm 137.72 336 *e*PKIKP **PKPdf** **23 06 11.0 +0.6**
CLL *e* 23 13 23.0
CLL MLR MLR
comp=Z,1µm,21.2s
CLL Collm 137.72 336 *e*PKPdf **PKPdf** **23 06 11.0 +0.6**
CLL *e*PKiKP **pPKPdf** **23 06 14.0 -0.7**
comp=Z,6.0nm,0.8s
CLL *e*PP **PP** **23 08 58.0 +1.3**
CLL *i* SKPbc **SKPbc** **23 09 46.2 +2.2**
comp=Z,133nm,2.5s
CLL *e*PKSab **PKSab** **23 09 56.0 +3.1**
CLL *i* x x 23 09 59.6
comp=Z,70nm,2.1s
CLL *ex* x 23 13 03.0
CLL *e*SKSac **SKSac** **23 13 23.0 -1.7**
CLL *ex* x 23 15 18.0
CLL *e*PPS PPS 23 21 12.0
CLL *e*SS **SS** **23 27 12.0 +6.9**
CLL *e*SSS SSS 23 32 18.0
CLL *e*SSSS 23 36 12.0
CLL LmV 00 08 00.0
comp=Z,1µm,21.2s
MDVR Moldovita 137.77 322 ⇓P **PKPdf** **23 06 10.0 -0.9**
KRUC Moravsky 137.89 331 *e*PKP **PKPdf** **23 06 11.0 +0.2**
MODS Modra-Piesok 137.94 330 *e*PKIKP **PKiKP** **23 06 12.3 -0.7**
MODS Modra-Piesok 137.94 330 *e*PKP **PKiKP** **23 06 12.3 -0.7**
MODS *e* 23 09 48.0
VTS Vitosha 138.00 319 *e*P **PKPdf** **23 06 10.9 -0.5**
PRU Pruhonice 138.07 333 *e*PKIKP **PKiKP** **23 06 13.2 0.0**
PRU MLR MLR
comp=Z,1µm,21.4s
PRU Pruhonice 138.07 333 *e*PKPDF **PKiKP** **23 06 13.2 0.0**
PRU *e*SKP 23 09 48.0
PRU AMS AMS 00 06 00.0
comp=Z,1µm,21.4s
CSKK Cskako 138.12 328 PKP **PKiKP** **23 06 14.0 +0.7**
TREC Trest 138.15 332 AMS AMS 00 09 20.0
comp=Z,1µm,19.7s
MMB Musomiste 138.19 317 *e*P **PKPdf** **23 06 10.9 -0.8**
KKB Krupnik 138.47 318 *e*P **PKPdf** **23 06 10.9 -1.3**
MPLH Magyarpolny 138.62 328 PKP **PKiKP** **23 06 14.0 -0.4**
EKA Eskdalemuir Ar 138.63 351 PKhKP PKPpre 23 06 04.2
comp=Z,0.4nm,0.4s,baz=360,slow=2.6,SNR=5.5
EKA PKP **PKPdf** **23 06 12.4 +0.4**
comp=Z,0.8nm,0.4s,baz=3.4,slow=2.6,SNR=5.0
EKA SKPbc **SKiKP** **23 09 48.5 -1.6**
comp=Z,2.4nm,0.8s,baz=1.1,slow=4.2,SNR=4.5
MORH Mrgy, Hungar 138.65 326 ⇑P **PKPdf** **23 06 13.2 +0.9**
FRGS Fruska Gora 138.66 324 ⇓P PKPdf 23 06 04.6 -7.8
SOP Sopron 138.77 329 PKP **PKiKP** **23 06 15.7 +1.1**
NKC Novy Kostel 138.78 335 *e*PKIKP **PKPdf** **23 06 12.8 +0.3**
NKC MLR MLR
comp=Z,1µm,17.3s
NKC Novy Kostel 138.78 335 *e*PKPDF **PKPdf** **23 06 12.8 +0.3**
NKC AMS AMS 00 15 20.0
comp=Z,1µm,17.3s
RONA Rosalia, Austr 138.88 329 *i* P **PKPdf** **23 06 13.8 +1.1**
comp=Z,15nm,1.4s,SNR=9.0
RONA *e*S **SKiKP** **23 09 51.2 +0.2**
comp=Z,20nm,1.7s
CONA Conrad Observa 138.94 330 *i* P **PKiKP** **23 06 14.2 -0.9**
comp=Z,12nm,0.7s,SNR=9.9
CONA *e*S **SKiKP** **23 09 49.8 -1.4**
comp=Z,17nm,1.6s
KOVH Kovagotottos 139.03 326 PKP **PKPdf** **23 06 14.0 +1.0**
CKRC Cesky Krumlov 139.03 332 *e*PKPpre PKPpre 23 06 07.1
CKRC *e*PKPDF **PKPdf** **23 06 13.9 +0.9**
CKRC *e*SKP 23 09 50.1
CKRC AMS AMS 00 12 00.0
comp=Z,1µm,22.9s
VAY Valandovo 139.08 318 *i* P **PKiKP** **23 06 14.6 -0.8**
KHC Kasperske Hory 139.13 333 *e*PKIKP **PKPdf** **23 06 14.3 +1.1**
KHC *e* 23 09 07.5
KHC MLR MLR
comp=Z,1µm,16.6s
KHC Kasperske Hory 139.13 333 *e*PKPDF **PKPdf** **23 06 14.3 +1.1**
KHC *e*PP **PP** **23 09 07.5 +2.0**
KHC *e*SKP 23 09 52.6
KHC AMS AMS 00 13 00.0
comp=Z,1µm,16.6s
DIVS Divibare 139.18 323 IAMs_20 IAMs_20 00 08 57.1
comp=Z,1µm,22.0s
GERES GERESS Array B 139.29 333 PKhKP PKPpre 23 06 07.8
comp=Z,2.0nm,0.9s,baz=54,slow=3.4,SNR=5.0
GERES PKP **PKPdf** **23 06 13.5 0.0**
comp=Z,3.3nm,0.7s,baz=80,slow=1.5,SNR=12
GERES SKPbc **SKiKP** **23 09 51.5 -0.4**
comp=Z,1.3nm,0.8s,baz=225,slow=0.9,SNR=5.7
GERES GERESS Array B 139.29 333 PKPdf **PKPdf** **23 06 12.5 -1.1**
GERES GERESS Array B 139.29 333 PKIKP **PKPdf** **23 06 12.5 -1.1**
SKO Skopje 139.47 319 *i* P **PKPdf** **23 06 15.1 +1.1**
ARSA Arzberg 139.57 330 *e*P **PKPdf** **23 06 14.2 +0.2**
comp=Z,5.6nm,1.0s
ARSA *e*S **SKiKP** **23 09 53.2 +0.8**
comp=Z,11nm,1.8s
GRA1 Grafenberg Arr 139.70 335 IAMs_20 IAMs_20 00 11 40.9
comp=Z,1µm,20.0s
GRFO Grafenberg 139.70 335 IAMs_20 IAMs_20 00 10 07.9
comp=Z,1µm,21.0s
MOA Molln 139.75 331 *e*P **PKPdf** **23 06 14.4 0.0**
comp=Z,3.6nm,0.8s
MOA *e*S **SKiKP** **23 09 53.7 +0.9**
comp=Z,11nm,1.7s
IDI Anoyia 140.03 308 PKP **PKPdf** **23 06 16.0 +0.8**
comp=Z,13nm,1.1s,baz=115,slow=5.2,SNR=2.4
BIOA Bad Ischl, Aus 140.16 331 *e*P **PKPdf** **23 06 14.7 -0.3**
comp=Z,21nm,1.7s
BIOA *e*S **SKPab** **23 10 04.8 +2.3**
comp=Z,9.1nm,1.4s
SOKA Soboth 140.21 329 *i* P **PKPdf** **23 06 15.1 -0.2**
comp=Z,6.4nm,0.9s,SNR=6.7
SOKA *e*S **SKiKP** **23 09 54.9 +1.1**
comp=Z,9.9nm,1.1s
OHR Ohrid 140.33 318 *i* P **PKPdf** **23 06 14.5 -1.1**
OBKA Obir 140.57 329 *e*P **PKPdf** **23 06 16.6 +0.7**
comp=Z,5.3nm,1.1s
OBKA *e*S **SKiKP** **23 09 55.8 +1.3**
comp=Z,14nm,1.7s
PDG Podgorica 140.58 321 IAMs_20 IAMs_20 00 12 57.1
comp=Z,1µm,21.0s
KBA Koelnbreinsper 140.74 331 *e*P **PKPdf** **23 06 16.0 -0.3**
comp=Z,6.5nm,0.9s
KBA *e*S **SKiKP** **23 09 55.9 +0.9**
comp=Z,8.7nm,0.9s
VNDS Vrh nad Dolski 140.78 329 *e*PKPdf **PKPdf** **23 06 16.2 0.0**
TIR Tirane 140.80 319 IAMs_20 IAMs_20 00 08 39.2
comp=Z,1µm,22.0s
BTNL Ternell 140.82 340 *d*PKPdf **PKPdf** **23 06 17.0 +0.8**
MEM Membach 140.84 340 *d*PKiKP **PKiKP** **23 06 19.4 +0.6**
LJU Ljubljana 140.91 329 *i* PKPdf **PKPdf** **23 06 16.8 +0.3**
LJU *e*PP **PP** **23 09 15.5 -1.0**
LJU *e* 23 09 56.5
BOJS Bojanci 140.91 328 *e*PP PP 23 09 15.9 -0.7
MYKA Terra Mystica 140.93 330 *e*P **PKPdf** **23 06 15.8 -0.8**
comp=Z,8.6nm,0.9s
MYKA *e*S **SKPab** **23 10 06.1 +0.1**
comp=Z,2.9nm,0.7s
BHOU Houvegnez 141.06 340 *d*PKiKP **PKiKP** **23 06 19.4 +0.1**
DSB Dublin 141.09 353 IAMs_20 IAMs_20 00 15 26.9
comp=Z,994nm,18.0s
PRED Cave del Predi 141.10 330 **PKPdf** **23 06 15.9 -0.9**
BCLA Clavier 141.23 341 *d*PKiKP **PKiKP** **23 06 20.1 +0.5**
WATA Walderalm 141.36 333 *e*P **PKiKP** **23 06 18.8 -1.3**
comp=Z,24nm,1.3s
WATA *e*S **SKiKP** **23 09 55.5 -0.7**
comp=Z,17nm,1.5s
ABTA Abfaltersbach 141.38 331 *i* P **PKPdf** **23 06 18.1 +0.7**
comp=Z,44nm,1.7s,SNR=11
ABTA *e*S **SKPbc** **23 09 49.1 -5.2**
comp=Z,12nm,1.4s
WTTA Wattenberg 141.39 333 *i* P **PKiKP** **23 06 19.1 -1.2**
comp=Z,33nm,1.8s,SNR=9.4
WTTA *e*S **SKPbc** **23 09 55.4 +1.0**
comp=Z,15nm,1.5s
BMRD Maredsous 141.50 341 *d*PKPdf **PKPdf** **23 06 18.4 +1.0**
MOTA Moosalm 141.56 333 *e*P **PKPdf** **23 06 19.2 +1.4**
comp=Z,14nm,1.1s
MOTA *e*S **SKiKP** **23 09 58.4 +1.7**
comp=Z,7.0nm,0.8s
RETA Reutte 141.60 334 *e*P **PKPdf** **23 06 17.6 -0.2**
comp=Z,9.2nm,1.0s
RETA *e*S **SKiKP** **23 09 57.5 +0.9**
comp=Z,11nm,1.5s
WLF Walferdange 141.60 340 IAMs_20 IAMs_20 00 18 04.4
comp=Z,1µm,20.0s
WLF Walferdange 141.60 340 *d*PKPdf **PKPdf** **23 06 17.7 +0.2**
WLF *d*PKiKP **PKiKP** **23 06 20.2 -0.2**
SQTA Sankt Quirin 141.61 333 *e*P **PKPdf** **23 06 17.7 -0.2**
comp=Z,12nm,1.0s
SQTA *e*S **SKiKP** **23 10 01.7 +4.9**
comp=Z,8.0nm,0.8s
STAL STALIGIAL 141.64 331 **PKPdf** **23 06 16.7 -1.1**
DOU Dourbes 141.74 341 *d*PKiKP **PKiKP** **23 06 21.1 +0.5**
FETA Feichten 141.97 333 *e*P **PKPdf** **23 06 19.7 +1.1**
comp=Z,12nm,1.0s
FETA *e*S **SKiKP** **23 09 59.6 +2.1**
comp=Z,12nm,1.3s
DAVA Damuels 142.13 334 *e*P **PKPdf** **23 06 19.3 +0.4**
comp=Z,9.5nm,0.8s
DAVA *e*S **SKiKP** **23 10 00.1 +2.2**
comp=Z,12nm,1.3s
CTI Castel Tesino 142.29 331 PKPdf **PKPdf** **23 06 17.9 -1.2**
CTI Castel Tesino 142.29 331 PKIKP **PKPdf** **23 06 17.9 -1.2**
ECH Echery 142.47 337 IAMs_20 IAMs_20 00 09 13.2
comp=Z,914nm,22.0s
FUORN Ofenpass-Fuorn 142.49 333 IAMs_20 IAMs_20 00 16 12.7
comp=Z,892nm,19.0s
DAVOX Davos/Dischmat 142.53 334 PKP **PKPdf** **23 06 17.9 -1.7**
comp=Z,7.2nm,0.7s,baz=222,slow=0.8,SNR=12
DAVOX SKPbc **SKiKP** **23 09 59.5 +0.8**
comp=Z,4.2nm,1.0s,baz=109,slow=3.3,SNR=6.7
MURB Monte Urbino 143.87 327 PKPdf PKPbc 23 06 20.3 +0.8
PRMA PARMA 143.88 331 **PKPdf** **23 06 20.6 -1.1**
SENIN Lac Senin/Sane 143.94 335 PKPdf PKPbc 23 06 20.6 +0.8
SENIN IAMs_20 IAMs_20 00 22 06.1
comp=Z,778nm,20.0s
TIP Timpagrande 143.98 318 PKPdf PKPbc 23 06 20.6 +0.6
PAOL Paolisi 144.22 323 PKPbc 23 06 20.5 -0.2
MSSA Maissana 144.59 331 PKPdf **PKPab** **23 06 21.4 -0.2**
CASP Castiglione de 145.06 328 PKPdf **PKPbc** **23 06 21.7 -1.6**
BNI Bardonecchia 145.26 335 **PKPbc** **23 06 22.9 -1.1**
BNI IAMs_20 IAMs_20 00 19 23.1
comp=Z,1µm,18.0s
BNI Bardonecchia 145.26 335 PKIKP **PKPbc** **23 06 22.9 -1.1**
SSB Saint Sauveur 145.91 337 PKPdf **PKPdf** **23 06 24.6 -0.7**
SSB Saint Sauveur 145.91 337 IAMs_20 IAMs_20 00 22 46.4
comp=Z,855nm,20.0s
SSB Saint Sauveur 145.91 337 PKP2 **PKPdf** **23 06 24.6 -0.7**
RCBR Riachuelo 149.78 131 IAMs_20 IAMs_20 00 08 50.7
comp=Z,1µm,21.0s
MAHO Mahon 150.48 332 IAMs_20 IAMs_20 00 20 20.1
comp=Z,786nm,20.0s
KEST Kesra 150.75 320 PKP **PKPdf** **23 06 34.5 +0.9**
comp=Z,25nm,1.0s,baz=177,slow=3.7,SNR=7.7
KEST PKPbc **PKPbc** **23 06 39.2 +0.1**
comp=Z,29nm,0.8s,baz=192,slow=1.5,SNR=21
KEST Kesra 150.75 320 PKPdf **PKPdf** **23 06 33.4 -0.2**
CMAH Djebel Manchou 151.31 324 P 23 06 41.1
ABSA Djebel Ababsia 151.52 323 P 23 06 42.5
CKFL Kef-Lekhel 151.87 324 P 23 06 43.1
DFRA Djebel Bou Aff 152.24 325 P 23 06 44.4
PGAV Gavieira, Arco 152.42 352 *e*PKPdf **PKPdf** **23 06 36.2 +0.3**
PGAV Gavieira, Arco 152.42 352 *e*LR LR 00 01 58.7
comp=Z,1µm,18.0s
PCAB Cabril 152.63 351 *e*PP PP 23 10 33.1 +8.0
ROSA Rosais 152.65 26 **PKPbc** **23 06 42.8 -0.5**
POLO Lamas de Olo 152.93 351 *e*PKPdf **PKPdf** **23 06 37.3 +0.6**
MVO Moncorvo 153.00 349 *e*PKPdf **PKPdf** **23 06 37.5 +0.7**
MVO Moncorvo 153.00 349 *e*LR LR 00 05 02.1
comp=Z,1µm,20.0s
PVRL Vila Real 153.01 351 *e*PKPdf **PKPdf** **23 06 37.1 +0.3**
PVRL Vila Real 153.01 351 *e*PP **PP** **23 10 34.1 +6.8**
PVIS Viseu 153.59 351 *e*PKPdf **PKPdf** **23 06 39.4 +1.8**
ESBB Sonseca Array 153.73 343 **PKiKP** **23 06 46.7 +0.9**
ESDC Sonseca Array 153.73 343 PKP **PKPdf** **23 06 38.6 +0.8**
comp=Z,1.0nm,1.0s,baz=318,slow=2.0,SNR=6.5
ESDC PKPbc **PKiKP** **23 06 46.2 +0.5**
comp=Z,2.2nm,0.7s,baz=358,slow=3.0,SNR=14
ESDC Sonseca Array 153.73 343 **PKiKP** **23 06 45.8 0.0**
MTE Manteigas 153.84 350 *e*PKPdf **PKPdf** **23 06 39.3 +1.3**
MTE Manteigas 153.84 350 *e*LR LR 00 02 41.2
comp=Z,892nm,20.0s
MTE Manteigas 153.84 350 **PKPbc** **23 06 45.6 -0.2**
MTE IAMs_20 IAMs_20 00 16 39.1
comp=Z,1µm,20.0s
PAB San Pablo 153.96 344 IAMs_20 IAMs_20 00 18 34.4
comp=Z,1µm,21.0s
COI Coimbra 154.16 351 *e*PKPdf **PKPdf** **23 06 39.8 +1.5**
COI Coimbra 154.16 351 *e*PP **PP** **23 10 37.9 +4.2**
COI Coimbra 154.16 351 IAMs_20 IAMs_20 00 17 49.7
comp=Z,1µm,20.0s
PCAS Casmilo, Conde 154.32 351 *e*PKPdf **PKPdf** **23 06 40.4 +1.8**
PCAS Casmilo, Conde 154.32 351 *e*PP **PP** **23 10 38.7 +4.1**
PCBR Castelo Branco 154.37 349 *e*PKPdf **PKPdf** **23 06 40.2 +1.5**
PCBR Castelo Branco 154.37 349 *e*PP **PP** **23 10 40.7 +5.8**
CART Cartagena 154.65 337 IAMs_20 IAMs_20 00 17 53.5
comp=Z,893nm,21.0s
PMRV Marv??o 154.75 349 *e*PKPdf **PKPdf** **23 06 40.7 +1.5**
PMRV Marv??o 154.75 349 *e*PP **PP** **23 10 40.7 +3.6**
PMRV Marv??o 154.75 349 *e*LR LR 00 03 57.5
comp=Z,747nm,20.0s
PSBE So Bento 154.90 352 *e*PKPdf **PKPdf** **23 06 41.1 +1.6**
PMTG Montargil 155.25 350 *e*PKPdf **PKPdf** **23 06 43.5 +3.6**
PMTG Montargil 155.25 350 *e*PP **PP** **23 10 45.9 +6.1**
PESTR Estremoz 155.33 349 *e*PKPdf **PKPdf** **23 06 42.6 +2.5**
PESTR Estremoz 155.33 349 *e*PP **PP** **23 10 44.2 +3.9**
PMAFR Mafra 155.51 352 *e*PKPdf **PKPdf** **23 06 44.5 +4.2**
PMAFR Mafra 155.51 352 *e*PP **PP** **23 10 44.9 +3.6**
LIS Lisbon 155.73 352 *e*PKPdf **PKPdf** **23 06 40.7 +0.2**
LIS *e*PP **PP** **23 10 45.0 +2.5**
LIS IAMs_20 IAMs_20 00 28 24.1
comp=Z,3µm,11.2s
LIS Lisbon 155.73 352 *e*PKIKP **PKPdf** **23 06 40.7 +0.2**
LIS *e* 23 10 44.9
EVO Evora 155.74 350 *e*PKPdf **PKPdf** **23 06 41.9 +1.3**
EVO Evora 155.74 350 *e*PP **PP** **23 10 46.3 +3.8**
PBEJ Beja 156.20 349 *e*PKPdf **PKPdf** **23 06 47.0 +5.8**
PBEJ Beja 156.20 349 *e*PP **PP** **23 10 51.5 +6.4**
PNCL Nicolau / Gran 156.23 351 *e*PKPdf **PKPdf** **23 06 42.7 +1.5**
PNCL Nicolau / Gran 156.23 351 *e*PP **PP** **23 10 48.4 +3.2**
MESJ Messejana 156.44 350 *e*PKPdf **PKPdf** **23 06 41.6 +0.1**
MESJ *e*PP **PP** **23 10 48.7 +2.3**
MESJ IAMs_20 IAMs_20 00 27 24.0
comp=Z,2µm,30.2s
MESJ Messejana 156.44 350 *e*PKPdf **PKPdf** **23 06 43.4 +1.9**
MESJ Messejana 156.44 350 *e*PP **PP** **23 10 49.7 +3.3**
MESJ Messejana 156.44 350 *e*PKIKP **PKPdf** **23 06 41.6 +0.1**
MESJ *e* 23 10 48.7
PCVE Castro Verde 156.62 349 *e*PKPdf **PKPdf** **23 06 46.0 +4.2**
PCVE Castro Verde 156.62 349 *e*PP **PP** **23 10 50.5 +3.1**
PVAQ Vaqueiros 156.78 349 *e*PKPdf **PKPdf** **23 06 46.7 +4.7**
PVAQ Vaqueiros 156.78 349 *e*PP **PP** **23 10 51.2 +2.9**
PVAQ Vaqueiros 156.78 349 *e*LR LR 00 05 03.0
comp=Z,1µm,18.0s
PBDV Barranco-do-Ve 156.97 349 *e*PKPdf **PKPdf** **23 06 42.7 +0.4**
PBDV Barranco-do-Ve 156.97 349 *e*PP **PP** **23 10 52.9 +3.5**
MORF Marmelete 157.04 350 *e*PKPdf **PKPdf** **23 06 42.4 0.0**
MORF *e*PP **PP** **23 10 52.2 +2.4**
MORF IAMs_20 IAMs_20 00 19 56.8
comp=Z,1µm,14.3s
MORF Marmelete 157.04 350 *e*PKPdf **PKPdf** **23 06 43.7 +1.3**
MORF Marmelete 157.04 350 *e*PP **PP** **23 10 56.1 +6.3**
MORF Marmelete 157.04 350 *e*PKIKP **PKPdf** **23 06 42.4 0.0**
MORF *e* 23 10 52.1
PFVI Vila Bisbo 157.24 351 *e*PKPdf **PKPdf** **23 06 47.6 +5.0**
PFVI Vila Bisbo 157.24 351 *e*PP **PP** **23 10 54.6 +3.8**
MDT Midelt 160.23 338 PKP **PKPdf** **23 06 46.9 +0.5**
comp=Z,3.3nm,1.1s,baz=165,slow=9.6,SNR=3.6
MDT PKPab **PKPab** **23 07 27.3 +0.7**
comp=Z,2.7nm,0.7s,baz=76,slow=1.8,SNR=4.5
TAM Tamanrasset 160.38 297 **PKPdf** **23 06 46.2 -0.7**
TAM Tamanrasset 160.38 297 PKIKP **PKPdf** **23 06 46.2 -0.7**
PMPST Porto Santo, M 161.44 8 *e*PKPdf **PKPdf** **23 06 49.0 +1.4**
PMPST Porto Santo, M 161.44 8 *e*PP **PP** **23 11 17.9 +4.2**
PMOZ Porto Moniz, M 161.56 10 *e*PKPdf **PKPdf** **23 06 52.0 +4.2**
PMOZ Porto Moniz, M 161.56 10 *e*PP **PP** **23 11 19.0 +4.5**
PMOZ Porto Moniz, M 161.56 10 *e*LR LR 00 02 45.4
comp=Z,1µm,18.0s
PMAR Madeira 161.71 10 *e*PKPdf **PKPdf** **23 06 51.6 +3.5**
TOA0 Torodi Ar. Sit 165.31 266 PKPab **PKPab** **23 07 48.9 -0.5**
TORD Torodi Ar. Bea 165.31 266 PKP **PKPdf** **23 06 51.6 -0.1**
comp=Z,1.3nm,0.7s,baz=14,slow=0.7,SNR=11
TORD PKPab **PKPab** **23 07 49.2 -0.2**
comp=Z,4.8nm,1.1s,baz=79,slow=2.8,SNR=7.7
TORD PP **PP** **23 11 38.0 +1.4**
comp=Z,0.8nm,0.9s,baz=171,slow=2.8,SNR=2.4
TORD Torodi Ar. Bea 165.31 266 **PKPdf** **23 06 50.9 -0.9**
TORD **PKPab** **23 07 49.8 +0.4**

*UCR **28** 22:48:23.0±1.6, 11°.15N×85°.91W, h83km±6km, ML3.7, MW4.2*
*INET **28** 22:48:23.3±1.3, 11°.06N×86°.11W, h15km±7km, MW3.9*
*SNET **28** 22:48:27.0±0.9, 11°.60N×85°.87W, h34km±999km, ML3.9*
ISC 28 22:48:23.3±1.4, **11°.17N**±0°.06×**85°.90W**±0°.07, **h79**km±12km, **n51**, σ=**0°.92**/63, **6D, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC h m s	ISC
HZTE	**Horizontes, Gu**	**0.55**	**147**	‖*e*P	**Pn**	**22 48 37.5**	**+0.1**
HZTE				*e*S	**Sn**	**22 48 48.6**	**+0.8**
VMAR	**Armenia, Volca**	**0.84**	**115**	‖*e*P	**Pn**	**22 48 40.2**	**-0.3**
VMAR				*e*S	**Sn**	**22 48 53.7**	**+0.4**
MASN	**Masaya**	**0.84**	**343**	*e*P	**Pn**	**22 48 40.1**	**-0.4**
MASN				*e*S	**Sn**	**22 48 53.9**	**+0.6**
WILN	**Americas 2**	**1.02**	**344**	*e*P	**Pn**	**22 48 42.4**	**-0.1**
MGAN	**Managua**	**1.02**	**341**	*e*P	**Pn**	**22 48 42.2**	**-0.4**
TISN	**Laguna Tiscapa**	**1.03**	**339**	*e*P	**Pn**	**22 48 42.5**	**-0.1**
SAJU	**San Juanillo,**	**1.11**	**170**	‖*e*P	**Pn**	**22 48 43.2**	**-0.5**
APYN	**Apoyeque**	**1.14**	**337**	*e*P	**Pn**	**22 48 43.7**	**-0.3**
DUNO	**Dulce Nombre,**	**1.16**	**160**	*e*P	**Pn**	**22 48 44.0**	**-0.2**
HUEN		**1.19**	**347**	*e*P	**Pn**	**22 48 44.6**	**0.0**
COPN	**Copaltepe**	**1.21**	**326**	*e*P	**Pn**	**22 48 44.7**	**-0.1**
JTS	**Las Juntas de**	**1.28**	**133**	‖*e*P	**Pn**	**22 48 45.2**	**-0.6**
JTS	**Las Juntas de**	**1.28**	**133**	*e*P	**Pn**	**22 48 45.1**	**-0.6**
ARE1	**Arenal 1**	**1.36**	**121**	‖*e*P	**Pn**	**22 48 46.9**	**+0.1**
MOMN	**Momotombo**	**1.38**	**333**	*e*P	**Pn**	**22 48 46.8**	**-0.2**
MOMN				*e*S	**Sn**	**22 49 05.3**	**+0.4**
CNGN	**Cerro Negro**	**1.53**	**329**	*e*P	**Pn**	**22 48 48.9**	**-0.1**
CNGN				*e*S	**Sn**	**22 49 09.3**	**+0.8**
LAFE	**Finca La Fe, P**	**1.67**	**144**	*e*P	**Pn**	**22 48 50.4**	**-0.4**
TEL3	**Telica 3**	**1.67**	**326**	*e*P	**Pn**	**22 48 51.1**	**+0.3**
TELN	**Telica**	**1.69**	**327**	*e*P	**Pn**	**22 48 51.2**	**+0.1**
CRIN	**San Cristobal**	**1.89**	**323**	*e*P	**Pn**	**22 48 53.7**	**-0.1**
CRIN				*e*S	**Sn**	**22 49 17.1**	**+0.1**
JACO	**JACO, Garabito**	**1.94**	**141**	*e*P	**Pn**	**22 48 54.5**	**+0.2**
HDC	**Heredia**	**2.11**	**123**	*e*P	**Pn**	**22 48 56.9**	**+0.2**
RCON	**San Juan de Ri**	**2.31**	**354**	*e*P	**Pn**	**22 48 60.0**	**+0.5**
LCR2	**La Lucha 2**	**2.34**	**127**	*e*P	**Pn**	**22 48 59.8**	**-0.1**
CSGN	**Ossiguino Volc**	**2.42**	**318**	*e*P	**Pn**	**22 49 01.0**	**+0.1**
RIMA	**Rio Macho**	**2.44**	**125**	‖*e*P	**Pn**	**22 49 01.5**	**+0.3**
CDM	**Cerro de Muert**	**2.65**	**127**	*e*P	**Pn**	**22 49 04.5**	**+0.3**
CNCH	**Conchagua**	**2.82**	**318**	*e*P	**Pn**	**22 49 06.4**	**+0.1**
CNCH				*e*S	**Sn**	**22 49 36.9**	**-2.5**
CNCH				IAML		22 49 48.2	
	comp=Z,702nm,0.3s						
CNCH	**Conchagua**	**2.82**	**318**	*e*P	**Pn**	**22 49 06.4**	**+0.1**
CNCH				*e*S	**Sn**	**22 49 36.9**	**-2.5**
CNCH				IAML		22 49 48.2	
	comp=Z,702nm,0.3s						
LCND	**La Caada**	**2.88**	**318**	*e*P	**Pn**	**22 49 06.7**	**-0.3**
LCND				IAML		22 49 43.2	
	comp=Z,218nm,0.4s						
LCND	**La Caada**	**2.88**	**318**	*e*P	**Pn**	**22 49 06.7**	**-0.3**
LCND				IAML		22 49 43.2	
	comp=Z,218nm,0.4s						
RANC	**El Ranchito**	**3.24**	**314**	*e*P	**Pn**	**22 49 12.7**	**+0.7**
RANC				*e*S	**Sn**	**22 49 47.8**	**-1.9**
RANC	**El Ranchito**	**3.24**	**314**	*e*P	**Pn**	**22 49 12.7**	**+0.7**
RANC				*e*S	**Sn**	**22 49 47.8**	**-1.9**
PACA	**Pacayal**	**3.29**	**314**	*e*P	**Pn**	**22 49 13.7**	**+1.1**
PACA				*e*S	**Sn**	**22 49 50.2**	**-0.5**
PACA	**Pacayal**	**3.29**	**314**	*e*P	**Pn**	**22 49 13.7**	**+1.1**
PACA				*e*S	**Sn**	**22 49 50.2**	**-0.5**
COEB	**Comit de Eme**	**3.46**	**312**	*e*P	**Pn**	**22 49 15.8**	**+0.9**
COEB	**Comit de Eme**	**3.46**	**312**	*e*P	**Pn**	**22 49 15.8**	**+0.9**
SCLA	**Alcaldia de Sa**	**3.73**	**313**	*e*P	**Pn**	**22 49 19.7**	**+1.0**
SCLA	**Alcaldia de Sa**	**3.73**	**313**	*e*P	**Pn**	**22 49 19.7**	**+1.0**
SJTE	**Alcalda de S**	**3.89**	**309**	*e*P	**Pn**	**22 49 21.5**	**+0.8**
SJTE	**Alcalda de S**	**3.89**	**309**	*e*P	**Pn**	**22 49 21.5**	**+0.8**
PAVA	**Las Pavas**	**3.90**	**311**	*e*P	**Pn**	**22 49 22.5**	**+1.6**
PAVA	**Las Pavas**	**3.90**	**311**	*e*P	**Pn**	**22 49 22.5**	**+1.6**
PMON	**Piamonte**	**4.18**	**307**	*e*P	**Pn**	**22 49 26.5**	**+1.7**
PMON	**Piamonte**	**4.18**	**307**	*e*P	**Pn**	**22 49 26.5**	**+1.7**
JAYA	**Jayaque - finc**	**4.25**	**306**	*e*P	**Pn**	**22 49 26.5**	**+0.6**
JAYA				IAML		22 50 18.9	
	comp=Z,375nm,0.2s						
JAYA	**Jayaque - finc**	**4.25**	**306**	*e*P	**Pn**	**22 49 26.5**	**+0.6**
JAYA				IAML		22 50 18.9	
	comp=Z,375nm,0.2s						
MTO3	**Montecristo**	**4.66**	**314**	*e*P	**Pn**	**22 49 32.3**	**+0.9**
MTO3	**Montecristo**	**4.66**	**314

ellipse: s-maj=5.8km s-min=3.9km az=88.7
MOS Felt (IV) at Bordobo; (III-IV) at Kara-Kindik; (III) at Sary-Tash; (II-III) at Nura.
*ISU **28** 22:57:51.8, 39°.52N×73°.45E, h30km*
*NNC **28** 22:57:52.5±1.3, 39°.49N×73°.60E, h0km, mb4.4, mpv4.1, Error ellipse: s-maj=10.1km s-min=5.5km az=178.0*
*NEIC **28** 22:57:52.2±2.5, 39°.47N±0°.06×73°.39E±0°.08, h10km±1km, mb4.4/20, Error ellipse: s-maj=11.7km s-min=8.6km az=138.0*

ISC 28 22:57:50.8±0.4, **39°.50N**±0°.03×**73°.50E**±0°.02, **h10**km, **n225,** σ**2s30**/286, **mb4.2**/42, **31C-18D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.16**	**332**	PG	**Pb**	**22 58 12.1**	**-0.8**
OHH	**Osh**	**1.16**	**332**	P	**Pb**	**22 58 11.7**	**-1.2**
OHH				S	**Sn**	**22 58 28.6**	**-0.4**
DRK	**Karamyk**	**1.31**	**269**	⇑*i*P	**Pn**	**22 58 14.0**	**-1.5**
	baz=70						
DRK				⇑*i*S	**Sb**	**22 58 31.2**	**-1.5**
	baz=70						
DRK	**Karamyk**	**1.31**	**269**		**Pn**	**22 58 13.9**	**-1.5**
FRG	**Fergana**	**1.58**	**304**	P	**Pg**	**22 58 19.7**	**-1.3**
FRG				S	**Sg**	**22 58 41.7**	**+0.2**
CHMI	**Chimion**	**1.70**	**297**	P	**Pg**	**22 58 22.3**	**-1.1**
CHMI				S	**Sg**	**22 58 45.3**	**-0.1**
KSH	**Kashi**	**1.92**	**89**	Pg	**Pn**	**22 58 19.5**	**-4.1**
KSH				Sg	**Sn**	**22 58 44.3**	**-3.6**
KSH				pmax	pmax		
	comp=Z,65nm,0.7s						
KSH				smax	smax		
	comp=N,940nm,0.6s						
KSH				smax	smax		
	comp=E,960nm,0.7s						
BTK	**Batken**	**2.14**	**286**	Pn	**Pb**	**22 58 28.1**	**-1.5**
BTK	**Batken**	**2.14**	**286**	PN	**Pb**	**22 58 28.1**	**-1.5**
BTK	**Batken**	**2.14**	**286**	P	**Pb**	**22 58 28.6**	**-1.0**
BTK				S	**Sg**	**22 58 57.8**	**-1.6**
MINT	**Mingtut**	**2.16**	**297**	P	**Pg**	**22 58 31.3**	**-0.9**
MINT				S	**Sg**	**22 59 01.4**	**+1.1**
GAR	**Garm**	**2.52**	**259**	⇑*i*P	**Pb**	**22 58 33.2**	**-3.0**
	baz=59						
GAR				⇑*i*S	**Sb**	**22 59 04.7**	**-2.6**
	baz=59						
GAR	**Garm**	**2.52**	**259**		**Pb**	**22 58 33.9**	**-2.3**
GAR	**Garm**	**2.52**	**259**	*i* PN	**Pb**	**22 58 33.2**	**-3.0**
GAR				*i* S	**Sb**	**22 59 04.7**	**-2.6**
CHDK	**Chadak**	**2.56**	**306**	P	**Pb**	**22 58 35.2**	**-1.7**
CHDK				S	**Sb**	**22 59 08.6**	**+0.1**
AML	**Almayashu**	**2.63**	**3**	P	**Pb**	**22 58 36.7**	**-1.6**
	SNR=96						
AML	**Almayashu**	**2.63**	**3**	*i* PN	**Pb**	**22 58 35.8**	**-2.4**
AML				*i* S	**Sb**	**22 59 09.2**	**-1.5**
TRKS	**Terek-Say**	**2.71**	**319**	⇓*i*P	**Pn**	**22 58 35.3**	**+0.8**
	baz=20						
TRKS				⇓*i*S	**Sn**	**22 59 08.1**	**+0.7**
	baz=20						
TRKS	**Terek-Say**	**2.71**	**319**	*i* PN	**Pn**	**22 58 35.3**	**+0.8**
TRKS				*i* S	**Sn**	**22 59 08.1**	**+0.7**
UCH	**Uchtor**	**2.83**	**16**	P	**Pb**	**22 58 39.7**	**-2.0**
	SNR=126						
UCH	**Uchtor**	**2.83**	**16**	⇓*i*P	**Pb**	**22 58 38.9**	**-2.8**
	baz=16						
UCH				⇓*i*S	**Sb**	**22 59 14.2**	**-2.3**
	baz=16						
UCH	**Uchtor**	**2.83**	**16**	*i* PN	**Pb**	**22 58 38.9**	**-2.8**
UCH				*i* S	**Sb**	**22 59 14.2**	**-2.3**
EKS2	**Erkin-Say**	**3.16**	**4**	P	**Pb**	**22 58 44.4**	**-2.8**
	SNR=48						
EKS2	**Erkin-Say**	**3.16**	**4**	⇓*i*P	**Pn**	**22 58 43.3**	**+2.6**
	baz=5.0						
EKS2				⇓*i*S	**Sn**	**22 59 21.5**	**+2.9**
	baz=5.0						
EKS2	**Erkin-Say**	**3.16**	**4**	*i* PN	**Pn**	**22 58 43.3**	**+2.6**
EKS2				*i* S	**Sn**	**22 59 21.5**	**+2.9**
AAK	**Ala-Archa**	**3.22**	**13**	P	**Pb**	**22 58 45.7**	**-2.4**
	SNR=37						
AAK	**Ala-Archa**	**3.22**	**13**	Pn	**Pb**	**22 58 45.7**	**-2.4**
	comp=E,15nm,0.3s,baz=181,slow=8.0,SNR=57						
AAK				Sn	**Sb**	**22 59 28.9**	**+1.4**
	comp=E,13nm,0.3s,baz=339,slow=22,SNR=9.3						
AAK				LR	LR	22 59 39.6	
	comp=E,32nm,18.5s,baz=231,slow=33						
	comp=E,29nm,0.3s						
AAK	**Ala-Archa**	**3.22**	**13**	⇓*i*P	**Pn**	**22 58 44.1**	**+2.5**
	baz=14						
AAK				⇓*i*S	**Sn**	**22 59 23.4**	**+3.3**
	baz=14						
AAK	**Ala-Archa**	**3.22**	**13**	Pn	**Pb**	**22 58 45.2**	**-3.0**
AAK	**Ala-Archa**	**3.22**	**13**	*i* PN	**Pn**	**22 58 44.1**	**+2.5**
AAK				*i* S	**Sn**	**22 59 23.4**	**+3.3**
MRKS	**Merke**	**3.24**	**356**	*e*P	**Pg**	**22 58 52.9**	**0.0**
	comp=E,44nm,0.5s						
MRKS				*e*S	**Sg**	**22 59 38.4**	**+3.4**
	comp=E,251nm,0.3s						
MRKS	**Merke**	**3.24**	**356**	Pg	**Pg**	**22 58 52.9**	**0.0**
	comp=E,44nm,0.5s						
MRKS				Lg	Lg	22 59 38.4	
	comp=E,251nm,0.3s						
KBK	**Karagaybulak**	**3.33**	**19**	P	**Pb**	**22 58 48.4**	**-1.7**
	SNR=36						
KBK	**Karagaybulak**	**3.33**	**19**	⇑*i*P	**Pn**	**22 58 45.9**	**+2.7**
	baz=20						
KBK				⇑*e*S	**Sn**	**22 59 26.0**	**+3.1**
	baz=20						
KBK	**Karagaybulak**	**3.33**	**19**	*i* PN	**Pn**	**22 58 45.9**	**+2.7**
KBK				*i* S	**Sn**	**22 59 26.0**	**+3.1**
FRU1	**Bishkek**	**3.41**	**14**		**Pb**	**22 58 48.3**	**-3.1**
FRU1	**Bishkek**	**3.41**	**14**	PN	**Pb**	**22 58 48.3**	**-3.1**
ULHL	**Ulahol**	**3.44**	**36**	P	**Pb**	**22 58 49.4**	**-2.6**
	SNR=73						
ULHL	**Ulahol**	**3.44**	**36**	⇑*i*P	**Pn**	**22 58 47.5**	**+2.8**
	baz=37						
ULHL				⇑*i*S	**Sn**	**22 59 29.0**	**+3.4**
	baz=37						
ULHL	**Ulahol**	**3.44**	**36**	*i* PN	**Pn**	**22 58 47.5**	**+2.8**
ULHL				*i* S	**Sn**	**22 59 29.0**	**+3.4**
CHGR	**Chuyangaron**	**3.48**	**257**	⇑*i*P	**Pn**	**22 58 46.4**	**+1.3**
	baz=57						
CHGR				⇑*i*S	**Sn**	**22 59 27.6**	**+1.2**
	baz=57						
CHGR	**Chuyangaron**	**3.48**	**257**	Pn	**Pn**	**22 58 46.3**	**+1.2**
CHGR	**Chuyangaron**	**3.48**	**257**	*i* PN	**Pn**	**22 58 46.4**	**+1.3**
CHGR				*i* S	**Sn**	**22 59 27.6**	**+1.2**
BOOM	**Boomskoye usch**	**3.51**	**31**	⇑*i*P	**Pn**	**22 58 48.3**	**+2.7**
	baz=32						
BOOM				⇑*i*S	**Sn**	**22 59 30.5**	**+3.3**
	baz=32						
BOOM	**Boomskoye usch**	**3.51**	**31**	Pn	**Pn**	**22 58 49.1**	**+3.5**
BOOM	**Boomskoye usch**	**3.51**	**31**	*i* PN	**Pn**	**22 58 48.3**	**+2.7**
BOOM				*i* S	**Sn**	**22 59 30.5**	**+3.3**
CHMS	**Chumysh**	**3.62**	**15**	P	**Pb**	**22 58 51.1**	**-3.8**
	SNR=12						
CHMS	**Chumysh**	**3.62**	**15**	⇑*e*P	**Pn**	**22 58 49.6**	**+2.7**
	baz=16						
CHMS				⇑*i*S	**Sn**	**22 59 32.5**	**+2.8**
	baz=16						
CHMS	**Chumysh**	**3.62**	**15**	*i* PN	**Pn**	**22 58 49.6**	**+2.7**
CHMS				*i* S	**Sn**	**22 59 32.5**	**+2.8**
CHMS	**Chumysh**	**3.62**	**15**	⇑Pn	**Pn**	**22 58 50.5**	**+3.6**
	comp=E,35nm,0.6s						
CHMS				⇑Lg	Lg	22 59 46.1	
	comp=E,136nm,0.8s						
TAS	**Tashkent**	**3.69**	**301**	Pn	**Pn**	**22 58 49.9**	**+2.0**
TAS	**Tashkent**	**3.69**	**301**	*e*PN	**Pn**	**22 58 50.2**	**+2.4**
DZA	**Taraz**	**3.76**	**335**	*e*PN	**Pn**	**22 58 49.4**	**+0.6**
DZA				*e*		22 58 58.9	
DZA				*e*		22 59 50.3	
DZA	**Taraz**	**3.76**	**335**	*e*P	**Pg**	**22 59 01.2**	**-1.6**
	comp=E,92nm,0.3s						
DZA				*e*S	**Sg**	**22 59 52.3**	**+0.8**
	comp=E,450nm,1.0s						
DZA	**Taraz**	**3.76**	**335**	*e*Pn	**Pn**	**22 58 49.4**	**+0.6**
	baz=335						
DZA				*e*Pb	**Pb**	**22 58 56.2**	**-1.1**
	baz=335						
DZA				*e*Pg	**Pg**	**22 58 59.0**	**-3.8**
	baz=335						
DZA				*e*Lg	Lg	22 59 50.3	
	baz=335						
TKM2	**Tokmak 2**	**3.76**	**24**	P	**Pn**	**22 58 52.2**	**+3.1**
	SNR=18						
TKM2	**Tokmak 2**	**3.76**	**24**	⇑*i*P	**Pn**	**22 58 51.7**	**+2.6**
	baz=25						
TKM2				⇑*i*S	**Sn**	**22 59 36.5**	**+3.0**
	baz=25						
TKM2	**Tokmak 2**	**3.76**	**24**	*i* PN	**Pn**	**22 58 51.7**	**+2.6**
TKM2				*i* S	**Sn**	**22 59 36.5**	**+3.0**
TKM2	**Tokmak 2**	**3.76**	**24**	⇑Pn	**Pb**	**22 58 53.2**	**-4.3**
	comp=E,52nm,0.7s						
TKM2				⇑Lg	Lg	22 59 50.3	
	comp=E,163nm,1.1s						
KDJ	**Kajisay**	**3.83**	**46**	Pn	**Pn**	**22 58 53.4**	**+3.4**
KDJ	**Kajisay**	**3.83**	**46**	PN	**Pn**	**22 58 53.4**	**+3.4**
USP	**Ospenovka**	**3.83**	**11**	P	**Pn**	**22 58 53.4**	**+3.4**
	SNR=31						
USP	**Ospenovka**	**3.83**	**11**	⇓*i*P	**Pn**	**22 58 52.4**	**+2.5**
	baz=12						
USP				⇓*i*S	**Sn**	**22 59 37.8**	**+2.7**
	baz=12						
USP	**Ospenovka**	**3.83**	**11**	*i* PN	**Pn**	**22 58 52.4**	**+2.5**
USP				*i* S	**Sn**	**22 59 37.8**	**+2.7**
TARG	**Taragay, Kyrgy**	**3.96**	**55**	Pn	**Pn**	**22 58 54.8**	**+2.8**
TARG	**Taragay, Kyrgy**	**3.96**	**55**	PN	**Pn**	**22 58 54.8**	**+2.8**
KST	**Kastek**	**3.99**	**27**	*e*P	**Pb**	**22 59 03.8**	**+2.4**
	comp=E,24nm,0.9s						
KST				*e*S	**Sg**	**22 59 56.7**	**-2.4**
	comp=E,152nm,0.6s						
SGDS	**Sogindy**	**4.04**	**12**	*e*PN	**Pn**	**22 58 55.1**	**+2.4**
SGDS				*e*		22 59 06.7	
SGDS				*e*		22 59 58.9	
SGDS	**Sogindy**	**4.04**	**12**	*e*P	**Pb**	**22 59 04.7**	**+2.7**
	comp=E,25nm,0.4s						
SGDS				*e*S	**Sg**	**22 59 58.2**	**-2.2**
	comp=E,114nm,0.7s						
SGDS	**Sogindy**	**4.04**	**12**	*e*Pn	**Pn**	**22 58 55.2**	**+2.4**
	baz=13						
SGDS				*e*Pb	**Pb**	**22 59 03.6**	**+1.6**
	baz=13						
SGDS				*e*Pg	**Pg**	**22 59 06.8**	**-1.3**
	baz=13						
SGDS				*e*Lg	Lg	22 59 58.9	
	baz=13						
DGS	**Degeres**	**4.11**	**24**	*e*P	**Pg**	**22 59 07.3**	**-2.2**
	comp=E,35nm,0.6s						
DGS				*e*S	**Sg**	**23 00 03.0**	**+0.3**
	comp=E,185nm,1.0s						
DGS	**Degeres**	**4.11**	**24**	Pg	**Pg**	**22 59 07.3**	**-2.2**
	comp=E,35nm,0.6s						
DGS				Lg	Lg	23 00 03.0	
	comp=E,185nm,1.0s						
KK31	**Karatay Array**	**4.24**	**329**	Pn	**Pn**	**22 58 57.5**	**+2.1**
KK31	**Karatay Array**	**4.24**	**329**	PN	**Pn**	**22 58 57.9**	**+2.5**
KK31				PG	**Pb**	**22 59 07.9**	**+2.5**
KK31				SN	**Sb**	**22 59 52.2**	**-4.5**
KK31	**Karatay Array**	**4.24**	**329**	⇓Pn	**Pn**	**22 58 58.0**	**+2.5**
	comp=E,3.1nm,0.2s,baz=139,slow=12,SNR=140						
KK31				⇑Pg	**Pb**	**22 59 07.9**	**+2.5**
	comp=E,23nm,0.6s,baz=159,slow=16,SNR=15						
KK31				⇓Sn	**Sb**	**22 59 52.2**	**-4.5**
	comp=E,20nm,0.3s						
KK31				⇑Lg	Lg	23 00 07.9	
	comp=E,187nm,0.8s,baz=165,slow=29,SNR=4.1						
KKAR	**Karatay Array**	**4.24**	**329**	⇑*i*P	**Pn**	**22 58 57.6**	**+2.1**
	baz=30						
KKAR				⇑*i*S	**Sn**	**22 59 46.6**	**+1.6**
	baz=30						
KKAR	**Karatay Array**	**4.24**	**329**	Pn	**Pn**	**22 58 57.8**	**+2.3**
KKAR	**Karatay Array**	**4.24**	**329**			**22 58 57.9**	**+2.4**
KKAR	**Karatay Array**	**4.24**	**329**	*i* PN	**Pn**	**22 58 57.6**	**+2.1**
KKAR				*i* S	**Sn**	**22 59 46.6**	**+1.6**
MTBS	**Maitube**	**4.24**	**30**	*e*P	**Pb**	**22 59 08.5**	**+3.0**
	comp=E,23nm,0.5s						
MTBS				*e*S	**Sg**	**23 00 04.7**	**-2.3**
	comp=E,64nm,0.6s						
MTBS	**Maitube**	**4.24**	**30**	Pg	**Pb**	**22 59 08.5**	**+3.0**
	comp=E,23nm,0.5s						
MTBS				Lg	Lg	23 00 04.7	
	comp=E,64nm,0.6s						
TNSS	**Tian-Shan**	**4.38**	**35**	*e*PN	**Pn**	**22 59 01.1**	**+3.3**
TNSS				*e*		22 59 14.2	
TNSS	**Tian-Shan**	**4.38**	**35**	*e*P	**Pg**	**22 59 12.0**	**-2.8**
	comp=E,28nm,0.4s						
TNSS				*e*S	**Sg**	**23 00 10.8**	**-0.8**
	comp=E,40nm,0.8s						
TNSS	**Tian-Shan**	**4.38**	**35**	*e*Pn	**Pn**	**22 59 01.1**	**+3.3**
	baz=37						
TNSS				*e*Pb	**Pb**	**22 59 10.3**	**+2.1**
	baz=37						
TNSS				*e*Pg	**Pg**	**22 59 14.2**	**-0.5**
	baz=37						
TNSS				*e*Lg	Lg	23 00 13.3	
	baz=37						
TNSS	**Tian-Shan**	**4.38**	**35**	Pg	**Pg**	**22 59 12.0**	**-2.8**
	comp=E,28nm,0.4s						
TNSS				Lg	Lg	23 00 10.8	
	comp=E,40nm,0.8s						
BRLS	**Borolday**	**4.47**	**323**	*e*P	**Pg**	**22 59 12.8**	**-3.6**
	comp=E,16nm,0.5s						
BRLS				*e*S	**Sg**	**23 00 12.2**	**-2.2**
	comp=E,125nm,0.7s						
BRLS	**Borolday**	**4.47**	**323**	Pg	**Pg**	**22 59 12.8**	**-3.6**
	comp=E,16nm,0.5s						
BRLS				Lg	Lg	23 00 12.2	
	comp=E,125nm,0.7s						
KRBS	**Karabastau**	**4.50**	**21**	*e*P	**Pg**	**22 59 13.4**	**-3.5**
	comp=E,14nm,0.5s						
KRBS				*e*S	**Sg**	**23 00 13.8**	**-1.3**
	comp=E,113nm,0.6s						
AAA	**Alma-Ata**	**4.51**	**34**	*e*PN	**Pn**	**22 59 02.4**	**+3.2**
AAA	**Alma-Ata**	**4.51**	**34**	*e*Pn	**Pn**	**22 59 02.5**	**+3.2**
	baz=36						
AAA				*e*Pb	**Pb**	**22 59 12.7**	**+2.6**
	baz=36						
AAA				*e*Lg	Lg	23 00 16.7	
	baz=36						
KNDC	**Almaty**	**4.54**	**34**	⇑Pg	**Pg**	**22 59 15.9**	**-1.8**
	comp=E,44nm,0.5s						
KNDC				⇑Lg	Lg	23 00 15.0	
	comp=E,441nm,0.9s						
PRZ	**Przheval'sk**	**4.76**	**50**		**Pn**	**22 59 06.9**	**+4.2**
PRZ	**Przheval'sk**	**4.76**	**50**	PN	**Pn**	**22 59 06.9**	**+4.2**
KTBS	**Karatobe**	**4.83**	**29**	*e*P	**Pg**	**22 59 20.5**	**-2.9**
	comp=E,13nm,0.4s						
KTBS				*e*S	**Sg**	**23 00 25.5**	**-0.5**
	comp=E,147nm,0.4s						
KTBS	**Karatobe**	**4.83**	**29**	Pg	**Pg**	**22 59 20.5**	**-2.9**
	comp=E,13nm,0.4s						
KTBS				Lg	Lg	23 00 25.5	
	comp=E,147nm,0.4s						
KUU	**Kurty**	**4.87**	**25**	*e*Pb	**Pb**	**22 59 18.8**	**+2.6**
	baz=27						
KUU				*e*Pg	**Pg**	**22 59 22.8**	**-1.4**
	baz=27						
KUU				*e*Lg	Lg	23 00 26.0	
	baz=27						
CHKK	**Chushkaly**	**5.07**	**30**	*e*Pb	**Pb**	**22 59 22.3**	**+2.7**
	baz=32						
CHKK				*e*Lg	Lg	23 00 34.1	
	baz=32						
SATY	**Saty**	**5.13**	**45**	*e*PN	**Pn**	**22 59 10.7**	**+3.0**
SATY				*e*		22 59 28.8	
SATY	**Saty**	**5.13**	**45**	*e*P	**Pg**	**22 59 26.1**	**-2.9**
	comp=E,10nm,0.6s						
SATY				*e*S	**Sg**	**23 00 34.9**	**-0.5**
	comp=E,94nm,1.1s						
SATY	**Saty**	**5.13**	**45**	*e*Pn	**Pn**	**22 59 10.8**	**+3.0**
	baz=46						
SATY				*e*Pb	**Pb**	**22 59 23.7**	**+3.1**
	baz=46						
SATY				*e*Pg	**Pg**	**22 59 28.8**	**-0.1**
	baz=46						
SATY				*e*Lg	Lg	23 00 35.2	
	baz=46						
ZHN	**Zhinishke**	**5.22**	**44**	*e*P	**Pb**	**22 59 26.1**	**+3.9**
	comp=E,11nm,0.1s						
ZHN				*e*S	**Sg**	**23 00 34.8**	**-3.5**
	comp=E,52nm,0.0s						
ZHN	**Zhinishke**	**5.22**	**44**	*e*Pg	**Pg**	**22 59 29.7**	**-1.0**
	baz=46						
ZHN				*e*Lg	Lg	23 00 37.8	
	baz=46						
ZHN	**Zhinishke**	**5.22**	**44**	Pg	**Pb**	**22 59 26.0**	**+3.9**
	comp=E,11nm,0.1s						
ZHN				Lg	Lg	23 00 34.8	
	comp=E,52nm,0.0s						
KURS	**Kuram**	**5.31**	**40**	*e*P	**Pb**	**22 59 27.5**	**+3.9**
	comp=E,8.2nm,0.6s						
KURS				*e*S	**Sg**	**23 00 37.8**	**-3.3**
	comp=E,48nm,1.5s						
KURS	**Kuram**	**5.31**	**40**	Pg	**Pb**	**22 59 27.5**	**+3.9**
	comp=E,8.2nm,0.6s						
KURS				Lg	Lg	23 00 37.8	
	comp=E,48nm,1.5s						
BTLS	**Baital**	**5.55**	**4**	*e*PN	**Pn**	**22 59 15.4**	**+2.0**
BTLS				*e*		22 59 34.3	
BTLS				*e*		23 00 45.5	
BTLS	**Baital**	**5.55**	**4**	*e*P	Pg	22 59 32.2	-4.8
	comp=E,8.2nm,0.8s						
BTLS				*e*S	**Sg**	**23 00 45.6**	**-3.2**
	comp=E,40nm,0.9s						
BTLS	**Baital**	**5.55**	**4**	*e*Pn	**Pn**	**22 59 15.4**	**+2.0**
	baz=4.8						
BTLS				*e*Pg	**Pg**	**22 59 34.4**	**-2.6**
	baz=4.8						
BTLS				*e*Lg	Lg	23 00 45.5	
	baz=4.8						
KPKS	**Kokpek**	**5.55**	**43**	*e*PN	**Pn**	**22 59 15.5**	**+2.0**
KPKS				*e*		22 59 33.0	
KPKS	**Kokpek**	**5.55**	**43**	*e*P	**Pg**	**22 59 32.9**	**-4.2**
	comp=E,7.3nm,0.3s						
KPKS				*e*S	**Sg**	**23 00 46.6**	**-2.4**
	comp=E,40nm,0.6s						
KPKS	**Kokpek**	**5.55**	**43**	*e*Pn	**Pn**	**22 59 15.6**	**+2.0**
	baz=45						
KPKS				*e*Pg	**Pg**	**22 59 33.0**	**-4.1**
	baz=45						
KPKS				*e*Lg	Lg	23 00 47.3	
	baz=45						
KPKS	**Kokpek**	**5.55**	**43**	Pg	**Pg**	**22 59 32.9**	**-4.2**
	comp=E,7.3nm,0.3s						
KPKS				Lg	Lg	23 00 46.6	
	comp=E,40nm,0.6s						
ARXS	**Arharly**	**5.71**	**33**	*e*P	**Pb**	**22 59 34.8**	**+4.3**
	comp=E,24nm,1.4s						
ARXS				*e*S	**Sg**	**23 00 50.7**	**-3.3**
	comp=E,67nm,0.9s						
ARXS	**Arharly**	**5.71**	**33**	Pg	**Pb**	**22 59 34.8**	**+4.3**
	comp=E,24nm,1.4s						
ARXS				Lg	Lg	23 00 50.7	
	comp=E,67nm,0.9s						
CEP	**Cherat**	**5.81**	**193**	P	**Pn**	**22 59 20.5**	**+3.3**
PDGK	**Podgornoye**	**5.91**	**48**	PN	**Pn**	**22 59 21.6**	**+3.1**
PDGK	**Podgornoye**	**5.91**	**48**	Pg	**Pb**	**22 59 38.4**	**+4.4**
	comp=E,4.6nm,0.7s						
PDGK				Lg	Lg	23 00 56.0	
	comp=E,24nm,1.3s						
PDGK	**Podgornoye**	**5.91**	**48**	Pn	**Pn**	**22 59 21.1**	**+2.6**
	comp=E,16nm,0.8s						
PDGK				Lg	Lg	23 01 00.1	
	comp=E,66nm,1.1s						
BLB	**Baldybastay**	**5.91**	**37**	*e*P	Pg	22 59 39.2	-4.8
	comp=E,20nm,0.6s						
BLB				*e*S	**Sg**	**23 00 57.7**	**-2.7**
	comp=E,60nm,0.8s						
BLB	**Baldybastay**	**5.91**	**37**	Pg	Pg	22 59 39.2	-4.8
	comp=E,20nm,0.6s						
BLB				Lg	Lg	23 00 57.7	
	comp=E,60nm,0.8s						
KBL	**Kabul**	**6.10**	**217**	Pn	**Pn**	**22 59 23.0**	**+1.8**
KBL	**Kabul**	**6.10**	**217**	PN	**Pn**	**22 59 23.0**	**+1.8**
KTMS	**Ketmen**	**6.48**	**50**	*e*P	Pb	22 59 49.0	+5.3
	comp=E,0.6nm,0.2s						
KTMS				*e*S	**Sg**	**23 01 14.9**	**-3.9**
	comp=E,4.0nm,0.2s						
KTMS	**Ketmen**	**6.48**	**50**	Pg	Pb	22 59 49.0	+5.3
	comp=E,0.6nm,0.2s						
KTMS				Lg	Lg	23 01 14.9	
	comp=E,4.0nm,0.2s						
DJR	**Jarkent**	**6.73**	**42**	*e*P	Pg	22 59 54.3	-5.3
	comp=E,1.7nm,0.2s						
DJR				*e*S	**Sg**	**23 01 23.8**	**-2.9**
	comp=E,30nm,0.9s						
DJR	**Jarkent**	**6.73**	**42**	Pg	Pg	22 59 54.3	-5.3
	comp=E,1.7nm,0.2s						
DJR				Lg	Lg	23 01 23.8	
	comp=E,30nm,0.9s						
THW	**Thamme Wali**	**6.84**	**192**	P	**Pn**	**22 59 33.9**	**+2.6**
OTUK	**Ortayu**	**8.78**	**355**	P	**Pn**	**22 59 59.9**	**+2.2**
OTUK	**Ortayu**	**8.78**	**355**	⇓Pn	**Pn**	**22 59 60.0**	**+2.2**
	comp=E,9.6nm,0.8s						
OTUK				⇑Lg	Lg	23 02 26.8	
	comp=E,65nm,1.2s						
MKAR	**Makanchi Array**	**9.71**	**39**	Lg	Lg	23 03 00.5	
	comp=E,0.2nm,0.3s,baz=223,slow=27,SNR=3.6						
MKAR				LR	LR	23 03 16.3	
	comp=E,53nm,19.7s,baz=232,slow=33						
WMQ	**Urumqi**	**11.46**	**63**	*e*P	**Pn**	**23 00 37.5**	**+3.0**
KURBB	**Kurchatov Arra**	**11.67**	**16**	Pn	**Pn**	**23 00 38.2**	**+0.9**
	baz=208,slow=12,SNR=10.0						
KURBB				Lg	Lg	23 04 00.3	
	comp=E,0.1nm,0.3s,baz=203,slow=31,SNR=8.1						
KURK	**Kurchatov**	**11.78**	**16**	P	**Pn**	**23 00 38.2**	**-0.5**
GEYT	**Alibeck**	**12.12**	**267**	Pn	**Pn**	**23 00 44.2**	**+0.7**
	comp=E,0.5nm,0.3s,baz=114,slow=6.6,SNR=5.1						
GEYT				Sn	**Sn**	**23 03 00.4**	**+1.7**
	comp=E,1.1nm,0.3s,baz=108,slow=24,SNR=7.0						
	comp=E,4.6nm,0.8s						
GEYT	**Alibeck**	**12.12**	**267**	Pn	**Pn**	**23 00 43.5**	**0.0**
GYA0B	**ALIBECK ARRAY**	**12.12**	**267**	Pn	**Pn**	**23 00 45.0**	**+1.5**
AB31	**Akbulak array**	**13.72**	**320**	P	**Pn**	**23 01 08.9**	**+3.6**
AB31	**Akbulak array**	**13.72**	**320**	⇑Pn	**Pn**	**23 01 09.0**	**+3.6**
	comp=E,2.1nm,0.5s,baz=130,slow=12,SNR=37						
ABKAR	**Akbulak array**	**13.72**	**320**		**Pn**	**23 01 04.6**	**-0.8**
ABKAR	**Akbulak array**	**13.72**	**320**		**Pn**	**23 01 03.8**	**-1.5**
AKTO	**Aktyubinsk**	**15.44**	**320**	Pn	**Pn**	**23 01 27.8**	**-0.7**
	comp=E,0.7nm,0.3s,baz=118,slow=10,SNR=12						
AKTO				Sn	**Sn**	**23 04 14.6**	**-4.9**
	comp=E,0.3nm,0.3s,baz=1.4,slow=16,SNR=4.2						
	comp=E,2.6nm,0.5s						
AKTO	**Aktyubinsk**	**15.44**	**320**	⇓Pn	**Pn**	**23 01 30.0**	**+1.4**
	comp=E,15nm,0.8s						
ZAA0	**Zalesovo

KIV					IAmb	IAmb	23 03 16.6		
	comp=Z,8.7nm,0.8s								
KIV	**Kislovodsk**	**23.34**	**291**	*eP*	**P**	**P**	**23 02 59.6**	**+0.3**	
KIV				*e*			23 03 25.3		
KIV					pmax	pmax			
	comp=Z,5.0nm,0.8s								
SHA1	**Shidzhatmaz**	**23.37**	**290**	*i* P	**P**		**23 03 00.6**	**+1.0**	
GEVA	**Gevas**	**23.66**	**277**	P	**P**		**23 03 03.1**	**+0.5**	
GEVA					IAmb	IAmb	23 03 10.3		
	comp=Z,14nm,1.5s								
LZH	**Lanzhou**	**24.17**	**88**	*eP*	**P**		**23 03 08.8**	**+1.4**	
LZH				sP	sP		23 03 15.5	+2.2	
LZH					pmax	pmax			
	comp=Z,18nm,1.0s								
VRH	**Novokhopyorsk**	**25.00**	**308**	*eP*	P		23 03 22.6	+8.0	
VRH					pmax	pmax			
	comp=Z,10.0nm,0.6s								
SONM	**Songino Array**	**25.06**	**60**	P	**P**		**23 03 15.9**	**+0.6**	
	comp=Z,1.6nm,0.8s,baz=280,slow=8.7,SNR=4.0								
	comp=Z,1.6nm,0.8s								
VSR	**Storozhevoye**	**26.57**	**308**	*eP*	**P**		**23 03 27.3**	**-1.4**	
VSR					pmax	pmax			
	comp=Z,9.0nm,0.9s								
VORR	**Voronezh**	**26.64**	**309**	*eP*	**P**		**23 03 30.4**	**+1.0**	
VORR					pmax	pmax			
	comp=Z,20nm,0.4s								
LPSR	**Galich'ya Gora**	**27.04**	**310**	*eP*	**P**		**23 03 36.3**	**+3.3**	
LPSR					pmax	pmax			
	comp=Z,10.0nm,1.0s								
PRGR	**Permogore**	**27.96**	**332**	*eP*	**P**		**23 03 41.1**	**0.0**	
HHC	**Hu-ho-hao-te**	**28.97**	**75**	*eP*	**P**		**23 03 52.0**	**+1.5**	
HHC					pmax	pmax			
	comp=Z,27nm,0.7s								
HHC					pmax	pmax			
	comp=Z,330nm,6.0s								
OBN	**Obninsk**	**29.08**	**315**	*eP*	**P**		**23 03 51.7**	**+0.5**	
OBN					pmax	pmax			
	comp=Z,3.0nm,0.8s								
BR131	**Keskin Array S**	**30.53**	**283**	P	**P**		**23 04 04.2**	**-0.2**	
BR131					IAmb	IAmb	23 04 05.8		
	comp=Z,5.6nm,0.7s								
BR131	**Keskin Array S**	**30.53**	**283**	P	**P**		**23 04 04.2**	**-0.2**	
BR131					pmax	pmax			
	comp=Z,6.0nm,0.7s								
BRTR	**Keskin Array B**	**30.53**	**283**	P	**P**		**23 04 04.6**	**+0.2**	
	comp=Z,2.8nm,0.8s,baz=94,slow=7.9,SNR=8.1								
	comp=Z,2.8nm,0.8s								
BRTR	**Keskin Array B**	**30.53**	**283**	P	**P**		**23 04 03.9**	**-0.6**	
BRTR	**Keskin Array B**	**30.53**	**283**	*i* P	**P**		**23 04 05.3**	**+0.9**	
BRTR					pmax	pmax			
	comp=Z,3.0nm,0.8s								
AKASG	**Malin Array Be**	**32.73**	**305**	P	**P**		**23 04 23.2**	**-0.2**	
	comp=Z,0.4nm,0.3s,baz=78,slow=7.6,SNR=10								
	comp=Z,0.4nm,0.3s								
AKASG	**Malin Array Be**	**32.73**	**305**	*i* P	**P**		**23 04 26.5**	**+3.1**	
AKASG					pmax	pmax			
	comp=Z,3.0nm,0.7s								
AKBB	**Malin Array Si**	**32.73**	**305**	*d iP*	**P**		**23 04 23.2**	**-0.2**	
AKBB					pmax	pmax			
	comp=Z,5.0nm,0.9s								
VALR	**Valaam**	**33.95**	**324**	*eP*	**P**		**23 04 35.5**	**+1.6**	
VALR					pmax	pmax			
	comp=Z,3.0nm,1.0s								
MLR	**Muntele Rosu**	**35.15**	**296**	P	**P**		**23 04 45.5**	**+0.9**	
	comp=Z,3.5nm,0.8s,baz=131,slow=9.3,SNR=7.1								
	comp=Z,3.5nm,0.8s								
MLR	**Muntele Rosu**	**35.15**	**296**	P	**P**		**23 04 44.4**	**-0.3**	
MLR					IAmb	IAmb	23 04 53.7		
	comp=Z,8.1nm,0.9s								
MLR	**Muntele Rosu**	**35.15**	**296**	P	**P**		**23 04 44.4**	**-0.3**	
MLR					pmax	pmax			
	comp=Z,8.0nm,0.9s								
BURAR	**Bucovina Array**	**35.42**	**299**	P	**P**		**23 04 47.0**	**+0.1**	
BURAR	**Bucovina Array**	**35.42**	**299**	P	**P**		**23 04 47.4**	**+0.4**	
BURAR					pmax	pmax			
	comp=Z,2.0nm,1.0s								
BUR08	**Bucovina Ar. S**	**35.43**	**299**	P	**P**		**23 04 47.5**	**+0.5**	
FIA1	**FINESS Array S**	**36.18**	**323**	P	**P**		**23 04 53.5**	**+0.4**	
FIA1					IAmb	IAmb	23 05 11.2		
	comp=Z,4.8nm,1.1s								
FINES	**FINESS Array B**	**36.18**	**323**	P	**P**		**23 04 53.4**	**+0.3**	
	comp=Z,0.7nm,0.3s,baz=118,slow=9.3,SNR=17								
	comp=Z,0.7nm,0.3s								
KWP	**Kalwaria Pacla**	**36.93**	**303**	P	**P**		**23 04 59.8**	**+0.1**	
KWP	**Kalwaria Pacla**	**36.93**	**303**	P	**P**		**23 04 59.8**	**+0.1**	
KWP					pmax	pmax			
	comp=Z,85nm,1.3s								
ARCES	**ARCESS Array B**	**39.17**	**336**	P	**P**		**23 05 18.8**	**+0.4**	
	comp=Z,1.3nm,0.8s,baz=111,slow=7.6,SNR=13								
	comp=Z,1.3nm,0.8s								
ARCES	**ARCESS Array B**	**39.17**	**336**	P	**P**		**23 05 18.8**	**+0.4**	
MORC	**Moravsky Berou**	**40.25**	**304**	*eP*	P		23 05 32.3	+4.6	
JAVC	**Velka Javorina**	**40.29**	**302**	*eP*	P		23 05 34.0	+6.0	
VRAC	**Vranov**	**40.93**	**303**	P	**P**		**23 05 33.0**	**-0.2**	
	comp=Z,1.8nm,0.8s,baz=110,slow=7.3,SNR=3.5								
	comp=Z,1.8nm,0.8s								
VRAC	**Vranov**	**40.93**	**303**	*eP*	**P**		**23 05 34.7**	**+1.5**	
HFS	**Hagfors**	**41.99**	**320**	P	**P**		**23 05 41.3**	**-0.5**	
	comp=Z,2.5nm,0.5s,baz=102,slow=11,SNR=20								
	comp=Z,2.5nm,0.5s								
TIXI	**Tiksi**	**42.25**	**23**	P	**P**		**23 05 45.8**	**+2.1**	
TIXI	**Tiksi**	**42.25**	**23**	*i* P	**P**		**23 05 46.6**	**+2.9**	
TIXI					pmax	pmax			
	comp=Z,5.0nm,1.0s								
GERES	**GERESS Array B**	**42.88**	**303**	P	**P**		**23 05 49.6**	**+0.3**	
	comp=Z,0.6nm,0.7s,baz=56,slow=5.0,SNR=7.4								
	comp=Z,0.6nm,0.7s								
GERES	**GERESS Array B**	**42.88**	**303**	P	**P**		**23 05 48.9**	**-0.4**	
RCHB	**Rochefort**	**47.98**	**306**	*d*PKiKP	P		23 06 19.9	-10	
MJAR	**Matsushiro Arr**	**50.08**	**72**	P	**P**		**23 06 45.4**	**-0.4**	
	comp=Z,1.0nm,0.5s,baz=315,slow=7.1,SNR=4.6								
	comp=Z,1.0nm,0.5s								
EKA	**Eskdalemuir Ar**	**51.54**	**315**	P	**P**		**23 06 56.3**	**-0.3**	
	comp=Z,2.2nm,0.8s,baz=88,slow=9.4,SNR=3.5								
	comp=Z,2.2nm,0.8s								
BILL	**Bilibino**	**55.04**	**27**	*eP*	**P**		**23 07 25.8**	**+3.7**	
BILL					pmax	pmax			
	comp=Z,3.0nm,0.9s								
ESDC	**Sonseca Array**	**57.82**	**297**	P	**P**		**23 07 42.1**	**-0.4**	
	comp=Z,1.4nm,0.7s,baz=46,slow=5.5,SNR=1.3								
	comp=Z,1.4nm,0.7s								
TORD	**Torodi Ar. Bea**	**67.75**	**269**	P	**P**		**23 08 47.5**	**-1.4**	
	comp=Z,0.9nm,0.7s,baz=59,slow=4.8,SNR=7.6								
	comp=Z,0.9nm,0.7s								
INK	**Inuvik**	**70.61**	**10**	P	**P**		**23 09 05.6**	**-0.2**	
	comp=Z,1.0nm,0.6s,baz=355,slow=3.2,SNR=6.2								
	comp=Z,1.0nm,0.6s								
INK	**Inuvik**	**70.61**	**10**	IAmb	IAmb		23 09 06.1		
	comp=Z,1.6nm,0.8s								
INK					P	**P**	**23 09 06.2**	**+0.4**	
ILAR	**Eielson Array**	**71.34**	**17**	P	**P**		**23 09 09.4**	**-0.9**	
	comp=Z,1.4nm,1.0s,baz=320,slow=5.4,SNR=5.1								
	comp=Z,1.4nm,1.0s								
ILAR	**Eielson Array**	**71.34**	**17**	P	**P**		**23 09 10.3**	**0.0**	
ILAR	**Eielson Array**	**71.34**	**17**	P	**P**		**23 09 10.3**	**0.0**	
YKA	**Yellowknife Ar**	**78.14**	**4**	P	**P**		**23 09 49.3**	**-0.4**	
	comp=Z,2.6nm,0.9s,baz=354,slow=5.3,SNR=6.6								
	comp=Z,2.6nm,0.9s								
LBTB	**Lobatse**	**78.22**	**223**	P	**P**		**23 09 50.7**	**0.0**	
LBTB					IAmb	IAmb	23 10 18.8		
	comp=Z,3.8nm,1.1s								
LBTB	**Lobatse**	**78.22**	**223**	P	**P**		**23 09 50.7**	**0.0**	
LBTB					pmax	pmax			
	comp=Z,4.0nm,1.1s								
WRA	**Warramunga Arr**	**81.97**	**124**	P	**P**		**23 10 09.6**	**-1.4**	
	comp=Z,2.1nm,1.0s,baz=320,slow=4.2,SNR=7.2								
	comp=Z,2.1nm,1.0s								
WRA	**Warramunga Arr**	**81.97**	**124**	P	**P**		**23 10 10.3**	**-0.6**	
WRA	**Warramunga Arr**	**81.97**	**124**	P	**P**		**23 10 10.4**	**-0.6**	
WB2	**Warramunga Arr**	**81.97**	**124**	P	**P**		**23 10 09.7**	**-1.3**	
ASAR	**Alice Springs**	**84.41**	**127**	P	**P**		**23 10 23.6**	**+0.1**	
	comp=Z,1.1nm,0.8s,baz=322,slow=5.4,SNR=6.5								
	comp=Z,1.1nm,0.8s								

*IDC **28** 23:07:24.9±0.7,30.4°42S×71.4°54W,h0km,mb4.2/8, mbtmp4.3/13,ML4.4/5,MS4.6/9,Error ellipse: s-maj=26.3km s-min=16.9km az=106.0*
*SJA **28** 23:07:24.2±2.3,30.4°36S×71.4°94W,h13km±18km,ML4.9, MW4.7*
*NEIC **28** 23:07:29.3,30.4°36S×71.4°69W,h35km,Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}3.47; $M_{\theta\theta}$0.85; $M_{\phi\phi}$-4.32; $M_{r\theta}$1.93; $M_{r\phi}$-1.80; $M_{\theta\phi}$-3.41; Fault plane solution: M_o5.86000×10^{15} NP1:ϕ_s45.88000°, δ36.42000°,λ142.09000°. NP2:ϕ_s167.95000°,δ68.60000°,*

λ59.79000°. Principal axes: T 5.9407, Plg56.0000°, Azm39.0000°; N -0.1717, Plg28.0000°, Azm180.0000°; P -5.7690, Plg18.0000°, Azm280.0000°;
*NEIC **28** 23:07:29.3±2.0,30.4°36S±0.02×71.4°69W±0.06,h29km±3km, mb4.9/55,Mwr4.4/68,Mwr4.8(GUC) Error ellipse: s-maj=7.7km s-min=0.9km az=112.0*
*GUC **28** 23:07:30.0±0.7,30.4°39S×71.4°62W,h28km±2km,ML5.0*
ISC 28 23:07:29.0±0.5,30.4°37S±0.03×71.4°66W±0.05,h31km±3km, h30km:pP-P,n197,σ1$\S$10/205,mb4.8/31,MS5.3/6,5D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.31**	**177**			**Pb**	**23 07 36.6**	**-0.1**
CO06					Sg	**Sb**	**23 07 41.5**	**-0.3**
CO06	**Fray Jorge**	**0.31**	**177**	*i* P		**Pb**	**23 07 36.5**	**-0.2**
CO06				*i* S		**Sb**	**23 07 41.5**	**-0.3**
CO06					IAML		23 07 43.4	
	comp=N,290μm,0.7s							
CO05	**La Serena**	**0.57**	**39**			**Pn**	**23 07 41.4**	**+0.3**
CO05					Sg	**Sn**	**23 07 49.1**	**-0.4**
CO05	**La Serena**	**0.57**	**39**	*i* P		**Pn**	**23 07 41.3**	**+0.3**
CO05				*i* S		**Sn**	**23 07 49.0**	**-0.4**
GO04	**Tololo Observa**	**0.77**	**76**			**Pn**	**23 07 44.1**	**+0.2**
GO04					Sn	**Sn**	**23 07 54.6**	**0.0**
GO04	**Tololo Observa**	**0.77**	**76**	*i* P		**Pb**	**23 07 43.8**	**-0.2**
GO04				*i* S		**Sn**	**23 07 54.6**	**0.0**
GO04					IAML		23 07 58.7	
	comp=E,106μm,0.6s							
GO04	**Tololo Observa**	**0.77**	**76**	*i* P		**Pn**	**23 07 44.0**	**0.0**
CO03	**El Pedregal**	**0.96**	**120**	Pn		**Pn**	**23 07 46.5**	**0.0**
CO03	**El Pedregal**	**0.96**	**120**	*i* P		**Pn**	**23 07 46.5**	**0.0**
CO03	**El Pedregal**	**0.96**	**120**	*i* P		**Pn**	**23 07 46.0**	**-0.5**
CO03					IAML		23 08 03.3	
	comp=Z,11μm,0.7s							
CO02	**Combarbal**	**1.01**	**146**			**Pn**	**23 07 47.3**	**+0.1**
CO02	**Combarbal**	**1.01**	**146**	*i* P		**Pn**	**23 07 47.2**	**+0.1**
CO02				*i* S		**Sn**	**23 08 00.1**	**-0.3**
CO02					IAML		23 08 04.1	
	comp=N,88μm,0.5s							
CO02	**Combarbal**	**1.01**	**146**	*i* P		**Pn**	**23 07 47.0**	**-0.2**
CO02					IAML		23 08 03.9	
	comp=Z,15μm,0.5s							
CO01	**Juntas del Tor**	**1.41**	**74**	Pn		**Pb**	**23 07 54.3**	**-0.5**
CO01	**Juntas del Tor**	**1.41**	**74**	*i* P		**Pb**	**23 07 54.3**	**-0.5**
CO01	**Juntas del Tor**	**1.41**	**74**	*i* P		**Pb**	**23 07 54.0**	**-0.8**
CO01					IAML		23 08 18.8	
	comp=Z,5μm,0.4s							
LCO	**Las Campanas**	**1.59**	**32**	Pn		**Pb**	**23 07 56.9**	**-0.9**
LCO	**Las Campanas**	**1.59**	**32**	*i* P		**Pn**	**23 07 56.5**	**+1.2**
LCO	**Las Campanas**	**1.59**	**32**	*i* P		**Pb**	**23 07 57.0**	**-0.9**
LCO					IAML		23 08 26.6	
	comp=Z,40μm,0.3s							
VA06	**Catapilco**	**2.21**	**172**	Pn		**Pn**	**23 08 04.0**	**+0.5**
VA06	**Catapilco**	**2.21**	**172**	*i* P		**Pn**	**23 08 03.7**	**+0.1**
VA06				*i* S		**Sb**	**23 08 34.3**	**-0.9**
VA06					IAML		23 08 43.8	
	comp=E,14μm,0.3s							
AC04	**Llanos de Chal**	**2.21**	**13**			**Pn**	**23 08 04.8**	**+1.1**
AC04	**Llanos de Chal**	**2.21**	**13**	*i* P		**Pn**	**23 08 04.6**	**+0.9**
AC04				*i* S		**Sb**	**23 08 34.5**	**-0.8**
AC04					IAML		23 08 42.4	
	comp=E,8μm,0.7s							
AC04	**Llanos de Chal**	**2.21**	**13**	*i* P		**Pn**	**23 08 04.0**	**+0.3**
AC04					IAML		23 08 43.3	
	comp=Z,6μm,0.5s							
VA03	**San Esteban**	**2.57**	**159**	Pn		**Pn**	**23 08 10.3**	**+1.7**
VA03	**San Esteban**	**2.57**	**159**	*i* P		**Pn**	**23 08 10.2**	**+1.5**
VA03				*i* S		**Sb**	**23 08 42.7**	**-3.0**
VA03					IAML		23 08 53.8	
	comp=N,9μm,0.5s							
VA03	**San Esteban**	**2.57**	**159**	*i* P		**Pn**	**23 08 10.0**	**+1.3**
VA03					IAML		23 08 50.3	
	comp=Z,6μm,0.9s							
VA01	**Torpederas**	**2.65**	**180**	Pn		**Pn**	**23 08 09.3**	**-0.3**
VA01	**Torpederas**	**2.65**	**180**	IAML			23 08 53.7	
	comp=E,4μm,0.3s							
ROCH	**El Roble**	**2.66**	**168**	*i* P		**Pn**	**23 08 10.8**	**+0.8**
ROCH				*i* S		**Sb**	**23 08 45.3**	**-3.0**
ROCH					IAML		23 08 56.6	
	comp=N,12μm,0.5s							
ROC1	**El Roble**	**2.66**	**168**			**Pn**	**23 08 10.7**	**+0.6**
ROC1	**El Roble**	**2.66**	**168**	*i* P		**Pn**	**23 08 11.0**	**+1.0**
ZON	**Zonda**	**2.81**	**115**	Pn		**Pn**	**23 08 15.2**	**+3.2**
PEL	**Peldehue**	**2.89**	**164**	Pn		**Pn**	**23 08 14.3**	**+1.3**
PEL	**Peldehue**	**2.89**	**164**	*i* P		**Pn**	**23 08 14.2**	**+1.2**
PEL					IAML		23 09 02.4	
	comp=N,5μm,0.5s							
PEL	**Peldehue**	**2.89**	**164**	*i* P		**Pn**	**23 08 14.0**	**+1.0**
RTLL	**Cerro Villicun**	**2.90**	**110**	*i* P		**Pn**	**23 08 16.0**	**+2.9**
MT02	**Curacav**	**2.92**	**171**	Pn		**Pn**	**23 08 13.3**	**0.0**
MT02	**Curacav**	**2.92**	**171**	*eP*		**Pn**	**23 08 13.6**	**+0.3**
MT02	**Curacav**	**2.92**	**171**	*i* P		**Pn**	**23 08 14.0**	**+0.6**
MT02					IAML		23 09 02.7	
	comp=Z,3μm,0.6s							
GO03	**Copiap**	**3.03**	**25**	Pn		**Pn**	**23 08 16.5**	**+1.5**
GO03	**Copiap**	**3.03**	**25**	*i* P		**Pn**	**23 08 16.4**	**+1.5**
GO03	**Copiap**	**3.03**	**25**	*i* P		**Pn**	**23 08 17.0**	**+2.0**
MT05	**Renca**	**3.12**	**166**			**Pn**	**23 08 17.4**	**+1.2**
MT05	**Renca**	**3.12**	**166**	*eP*		**Pn**	**23 08 17.4**	**+1.2**
MT05				*eS*		**Sn**	**23 08 53.1**	**+0.8**
MT05					IAML		23 09 14.7	
	comp=E,7μm,0.1s							
MT05	**Renca**	**3.12**	**166**	*i* P		**Pn**	**23 08 18.0**	**+1.9**
MT05					IAML		23 09 12.2	
	comp=Z,4μm,0.5s							
FCH	**Farellones**	**3.17**	**159**	*eP*		**Pn**	**23 08 19.2**	**+2.0**
FCH				*eS*		**Sb**	**23 08 59.2**	**-4.1**
FCH					IAML		23 09 17.0	
	comp=N,2μm,0.3s							
MT03	**Universidad Ad**	**3.27**	**163**	Pn		**Pn**	**23 08 19.6**	**+1.4**
MT03	**Universidad Ad**	**3.27**	**163**	*eP*		**Pn**	**23 08 19.8**	**+1.6**
MT03	**Universidad Ad**	**3.27**	**163**	*i* P		**Pn**	**23 08 20.0**	**+1.8**
MT03					IAML		23 09 23.5	
	comp=Z,3μm,0.7s							
VA05	**Santo Domingo**	**3.28**	**179**			**Pn**	**23 08 17.9**	**-0.4**
VA05	**Santo Domingo**	**3.28**	**179**	*eP*		**Pn**	**23 08 17.9**	**-0.4**
VA05					IAML		23 09 13.5	
	comp=N,6μm,0.4s							
VCA	**Vinchina**	**3.42**	**62**	*i* P		**Pb**	**23 08 26.0**	**-3.0**
VCA					IAML		23 09 24.3	
	comp=Z,3μm,0.5s							
MT09	**Talagante**	**3.45**	**171**	Pn		**Pn**	**23 08 21.8**	**+1.0**
MT09	**Talagante**	**3.45**	**171**	*eP*		**Pn**	**23 08 21.6**	**+0.8**
MT09					IAML		23 09 18.2	
	comp=N,3μm,0.6s							
MT01	**Popeta**	**3.50**	**174**			**Pn**	**23 08 21.8**	**+0.3**
MT01	**Popeta**	**3.50**	**174**	*eP*		**Pn**	**23 08 21.6**	**+0.2**
MT01					IAML		23 09 18.0	
	comp=E,2μm,0.5s							
MT01	**Popeta**	**3.50**	**174**	*i* P		**Pn**	**23 08 22.0**	**+0.6**
MT01					IAML		23 09 17.1	
	comp=Z,1μm,0.5s							
LMEL	**Las Melosas**	**3.68**	**161**	Pn		**Pn**	**23 08 26.2**	**+2.2**
LMEL	**Las Melosas**	**3.68**	**161**	*eP*		**Pn**	**23 08 26.5**	**+2.4**
BO04	**La Punta**	**3.72**	**166**			**Pn**	**23 08 25.8**	**+1.3**
BO04	**La Punta**	**3.72**	**166**	*i* P		**Pn**	**23 08 25.7**	**+1.3**
BO04				*i* S		**Sn**	**23 09 07.9**	**+0.7**
BO01	**Tunca**	**4.04**	**173**	Pn		**Pn**	**23 08 29.1**	**+0.3**
BO01	**Tunca**	**4.04**	**173**	*i* P		**Pn**	**23 08 29.0**	**+0.2**
BO01					IAML		23 09 40.9	
	comp=Z,1μm,0.6s							
AC02	**Maricunga**	**4.16**	**33**	Pn		**Pn**	**23 08 33.2**	**+2.3**
AC02	**Maricunga**	**4.16**	**33**	*i* P		**Pn**	**23 08 33.0**	**+2.1**
AC02					IAML		23 09 43.4	
	comp=Z,2μm,0.7s							
ACLC	**CERRO LA CRUZ**	**4.19**	**78**	*i* P		**Pn**	**23 08 34.0**	**+3.0**
ACLC					IAML		23 09 44.8	
	comp=Z,2μm,0.5s							
AC01	**Pan de Azucar**	**4.30**	**13**	Pn		**Pn**	**23 08 32.0**	**-0.5**
AC01	**Pan de Azucar**	**4.30**	**13**	*i* P		**Pn**	**23 08 32.0**	**-0.5**
AC01					IAML		23 09 44.1	
	comp=Z,826nm,0.8s							
APLL	**PUNTA DE LOS L**	**4.43**	**92**	*i* P		**Pn**	**23 08 37.0**	**+2.8**
GO05	**Huala**	**4.64**	**183**			**Pn**	**23 08 35.9**	**-1.1**
GO05	**Huala**	**4.64**	**183**	*i* P		**Pn**	**23 08 36.0**	**-1.0**
RFA	**San Rafael**	**5.15**	**149**	*i* P		**Pn**	**23 08 46.0**	**+1.9**
RFA					IAML		23 10 16.1	
	comp=Z,539nm,1.1s							
ML02	**Panimavida**	**5.38**	**178**			**Pn**	**23 08 45.1**	**-2.2**
GO02	**Mina Guanaco**	**5.50**	**20**			**Pn**	**23 08 48.5**	**-0.6**
BI05	**Punta Hualpn**	**6.49**	**191**	Pn		**Pn**	**23 09 03.4**	**+0.9**

H03N1	**Juan Fernandez**	**6.89**	**242**	T		T	23 16 08.8		
	baz=69,slow=72								
H03N2	**Juan Fernandez**	**6.90**	**242**	T		T	23 16 10.4		
	baz=69,slow=72								
H03N3	**Juan Fernandez**	**6.90**	**242**	T		T	23 16 07.2		
	baz=69,slow=72,SNR=6765								
VA04	**Juan Fernndez**	**6.91**	**240**	Pn		**Pn**	**23 09 06.1**	**-2.1**	
H03S3	**Juan Fernandez**	**7.05**	**239**	T		T	23 16 20.6		
	baz=73								
H03S1	**Juan Fernandez**	**7.06**	**239**	T		T	23 16 15.0		
	baz=73,SNR=43								
H03S2	**Juan Fernandez**	**7.07**	**239**	T		T	23 16 21.0		
	baz=73								
PB15	**IPOC Station P**	**7.39**	**16**	Pn		**Pn**	**23 09 15.2**	**+0.1**	
LVC	**Limon Verde**	**8.11**	**18**	Pn		**Pn**	**23 09 24.4**	**-0.6**	
	comp=Z,1.7nm,0.3s,baz=171,slow=9.9,SNR=19								
LVC					Sn	**Sn**	**23 10 58.0**	**+2.2**	
	comp=Z,6.3nm,0.3s,baz=229,slow=6.2,SNR=3.9								
LVC					LR	LR	23 12 28.6		
	comp=Z,694nm,18.9s,baz=215,slow=37								
	comp=Z,3.8nm,0.2s								
LVC	**Limon Verde**	**8.11**	**18**	Pn		**Pn**	**23 09 23.2**	**-1.8**	
PB02	**IPOC Station P**	**9.15**	**10**	Pn		**Pn**	**23 09 38.0**	**-1.0**	
LR03	**Panguipulli**	**9.26**	**183**	Pn		**Pn**	**23 09 40.5**	**0.0**	
PLCA	**Paso Flores**	**10.38**	**175**	Pn		**Pn**	**23 09 55.3**	**-0.6**	
	comp=Z,0.5nm,0.3s,baz=341,slow=9.9,SNR=9.2								
PLCA					LR	LR	23 14 11.5		
	comp=Z,470nm,21.3s,baz=354,slow=39								
	comp=Z,1.3nm,0.4s								
PLCA	**Paso Flores**	**10.38**	**175**	Pn		**Pn**	**23 09 55.8**	**-0.1**	
LL04	**Puerto Octay**	**10.54**	**183**	Pn		**Pn**	**23 09 57.5**	**-0.4**	
PB11	**IPOC Station P**	**10.71**	**10**	Pn		**Pn**	**23 09 59.2**	**-1.4**	
TRQA	**Tornquist**	**11.09**	**136**	Pn		**Pn**	**23 10 05.8**	**+0.4**	
PB12	**IPOC Station P**	**11.76**	**6**	Pn		**Pn**	**23 10 14.7**	**-0.1**	
ITQB	**Itaqui**	**13.05**	**91**	Pn		**Pn**	**23 10 31.6**	**-0.7**	
CPUP	**Villa Florida**	**13.24**	**76**	Pn		**Pn**	**23 10 33.4**	**-1.5**	
	comp=Z,0.6nm,0.3s,baz=259,slow=13,SNR=7.4								
CPUP					LR	LR	23 16 21.6		
	comp=Z,528nm,18.1s,baz=270,slow=41								
	comp=Z,1.7nm,0.4s								
CPUP	**Villa Florida**	**13.24**	**76**	Pn		**Pn**	**23 10 33.9**	**-1.1**	
LPAZ	**La Paz**	**14.38**	**14**	Pn		**Pn**	**23 10 52.0**	**+0.8**	
	comp=Z,1.6nm,0.3s,baz=204,slow=7.4,SNR=24								
	comp=Z,6.3nm,0.5s								
LPAZ	**La Paz**	**14.38**	**14**			**Pn**	**23 10 52.3**	**+1.2**	
PLTB	**Pedras Altas**	**15.54**	**100**	Pn		**Pn**	**23 11 05.2**	**-0.7**	
SIV	**San Ignacio**	**17.29**	**36**	P		**Pn**	**23 11 27.1**	**-1.1**	
	comp=Z,0.2nm,0.3s,baz=218,slow=12,SNR=67								
	comp=Z,25nm,0.9s								
ITAB	**Concordia**	**17.39**	**84**	P		**Pn**	**23 11 30.0**	**+0.6**	
SAML	**Samuel**	**22.73**	**22**	P		**P**	**23 12 28.4**	**-0.2**	
BDFB	**Brasilia**	**26.16**	**61**	P		**P**	**23 13 00.7**	**-0.2**	
	comp=Z,1.1nm,0.6s,baz=245,slow=7.3,SNR=16								
BDFB					LR	LR	23 23 54.5		
	comp=Z,224nm,18.2s,baz=292,slow=38								
	comp=Z,11nm,0.6s								
BDFB	**Brasilia**	**26.16**	**61**	P		**P**	**23 13 00.7**	**-0.2**	
BDFB					IAmb	IAmb	23 13 01.2		
	comp=Z,12nm,0.6s								
ZARC	**Zaragoza, Cauc**	**37.77**	**355**	P		**P**	**23 14 41.0**	**-1.4**	
BAUV	**El Baul**	**39.24**	**6**	P		**P**	**23 14 54.1**	**-0.7**	
BAUV					IAmb	IAmb	23 14 56.1		
	comp=Z,25nm,1.0s						

ECSD					IAmb	IAmb	23 19 30.3	
	comp=Z,13nm,0.9s							
SOE	**Somerset East**	**79.69**	**122**		P	**P**	**23 19 34.2**	**+0.1**
SOE					IAmb	IAmb	23 19 35.0	
	comp=Z,22nm,1.3s							
PDAR	**Pinedale Array**	**80.68**	**333**		P	**P**	**23 19 41.4**	**+2.3**
	comp=Z,0.1nm,0.4s,baz=150,slow=7.3,SNR=4.4							
	comp=Z,0.1nm,0.4s							
B35A	**Bob, Littlefor**	**80.83**	**345**		P	**P**	**23 19 40.0**	**+0.5**
OMMB	**Old Mammoth Mi**	**80.83**	**324**		P	**P**	**23 19 38.2**	**-1.9**
AGMN	**Agassiz Nation**	**81.26**	**344**		P	**P**	**23 19 42.3**	**+0.5**
AGMN					IAmb	IAmb	23 19 52.1	
	comp=Z,6.3nm,0.8s							
BOSA	**Boshof**	**81.48**	**118**		P	**P**	**23 19 43.9**	**+0.1**
	comp=Z,2.7nm,0.9s,baz=280,slow=6.1,SNR=4.2							
BOSA					LR	LR	23 50 25.3	
	comp=Z,1μm,21.8s,baz=128,slow=32							
	comp=Z,2.7nm,0.9s							
BOSA	**Boshof**	**81.48**	**118**		P	**P**	**23 19 42.7**	**-1.1**
TOA0	**Torodi Ar. Sit**	**82.67**	**70**		P	**P**	**23 19 50.2**	**+0.2**
TOA0					IAmb	IAmb	23 19 50.7	
	comp=Z,7.1nm,0.8s							
TORD	**Torodi Ar. Bea**	**82.67**	**70**		P	**P**	**23 19 50.4**	**+0.4**
	comp=Z,3.8nm,0.5s,baz=279,slow=6.1,SNR=75							
	comp=Z,3.8nm,0.5s							
TORD	**Torodi Ar. Bea**	**82.67**	**70**		P	**P**	**23 19 50.3**	**+0.3**
TORD					IAmb	IAmb	23 19 50.7	
	comp=Z,5.2nm,0.8s							
LBTB	**Lobatse**	**83.54**	**115**		LR	LR	23 56 18.8	
	comp=Z,1μm,18.1s,baz=118,slow=35							
MATP	**Matopo**	**88.19**	**113**		LR	LR	23 53 20.6	
	comp=Z,2μm,22.0s,baz=70,slow=31							
LSZ	**Lusaka**	**90.62**	**108**		LR	LR	23 59 12.8	
	comp=Z,1μm,18.0s,baz=126,slow=34							
AKASG	**Malin Array Be**	**119.47**	**46**		PKP	**PKPdf**	**23 26 14.4**	**-0.7**
	comp=Z,0.8nm,0.5s,baz=267,slow=1.6,SNR=6.3							
FINES	**FINESS Array B**	**119.80**	**33**		PKP	**PKPdf**	**23 26 16.0**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=270,slow=1.9,SNR=1.6							
ASAR	**Alice Springs**	**120.94**	**207**		PKP	**PKPdf**	**23 26 18.1**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=132,slow=1.8,SNR=4.1							
ASAR	**Alice Springs**	**120.94**	**207**			**PKPdf**	**23 26 18.9**	**-0.1**
WRA	**Warramunga Arr**	**124.08**	**210**		PKP	**PKPdf**	**23 26 24.8**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=150,slow=1.7,SNR=24							
WRA	**Warramunga Arr**	**124.08**	**210**		PKPdf	**PKPdf**	**23 26 23.4**	**-1.6**
H11S2	**WAKE ISLAND Hyl**	**126.07**	**272**		T	T	01 45 16.0	
	baz=115,slow=74,SNR=522							
H11S1	**WAKE ISLAND Hyl**	**126.08**	**272**		T	T	01 45 10.2	
	baz=115,slow=74,SNR=334							
H11S3	**WAKE ISLAND Hyl**	**126.09**	**272**		T	T	01 45 10.0	
	baz=115,slow=74,SNR=328							
KLMR	**Klimovskoe**	**126.26**	**34**	*e*PKPdf		**PKPdf**	**23 26 27.6**	**-0.2**
KLMR				AMP			23 26 29.1	
	comp=Z,8.0nm,1.1s							
H11N3	**WAKE ISLAND Hyl**	**126.39**	**273**		T	T	01 45 39.1	
	baz=116,slow=75,SNR=27							
H11N1	**WAKE ISLAND Hyl**	**126.41**	**273**		T	T	01 45 43.9	
	baz=116,slow=75,SNR=15							
H11N2	**WAKE ISLAND Hyl**	**126.41**	**273**		T	T	01 45 40.0	
	baz=116,slow=75,SNR=92							
EKS2	**Erkin-Say**	**149.84**	**56**		P	**PKiKP**	**23 27 17.4**	**+0.3**
	SNR=9.9							
USP	**Ospenovka**	**150.21**	**55**		P	**PKiKP**	**23 27 17.9**	**+0.2**
	SNR=10							
AAK	**Ala-Archa**	**150.36**	**56**		P	**PKiKP**	**23 27 18.9**	**+0.7**
	SNR=6.3							
UCH	**Uchtor**	**150.46**	**57**		P	**PKiKP**	**23 27 19.5**	**+0.7**
	SNR=18							
ZALV	**Zalesovo Beam**	**150.94**	**29**		PKPbc	**PKPbc**	**23 27 18.8**	**+0.6**
	comp=Z,14nm,0.5s,baz=298,slow=3.1,SNR=34							
ZALV	**Zalesovo Beam**	**150.94**	**29**		PKPdf	**PKPdf**	**23 27 12.8**	**+0.3**
ZALV					PKPbc	**PKPbc**	**23 27 18.4**	**+0.2**
ZALV					PKPab	**pPKPbc**	**23 27 27.9**	**-0.5**
TKM2	**Tokmak 2**	**151.08**	**55**		P	**PKPbc**	**23 27 20.0**	**+0.8**
	SNR=8.8							
ULHL	**Ulahol**	**151.71**	**56**		P	**PKiKP**	**23 27 22.1**	**+1.0**
	SNR=7.1							
MKAR	**Makanchi Array**	**154.02**	**44**		PKP	**PKPdf**	**23 27 17.6**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=245,slow=3.2,SNR=4.7							
MKAR					PKPbc	**PKPbc**	**23 27 25.6**	**+0.2**
	comp=Z,2.1nm,0.8s,baz=312,slow=1.8,SNR=14							
MKAR	**Makanchi Array**	**154.02**	**44**		PKPdf	**PKPdf**	**23 27 16.5**	**-0.8**
MKAR					PKPbc	**PKPbc**	**23 27 25.4**	**0.0**
MKAR					PKPab	**pPKPbc**	**23 27 36.3**	**+0.8**
WMQ	**Urumqi**	**158.82**	**45**	*e*P		**PKPdf**	**23 27 23.8**	**+0.1**
SONM	**Songino Array**	**162.49**	**4**		PKPab	**PKPab**	**23 28 16.8**	**+1.3**
	comp=Z,0.9nm,0.9s,baz=343,slow=4.5,SNR=4.0							
HHC	**Hu-ho-hao-te**	**169.22**	**347**	*e*P		**PKPdf**	**23 27 32.5**	**-0.8**
NJ2	**Nanjing**	**170.84**	**283**	*e*P		**PKPdf**	**23 27 34.5**	**+0.2**
NJ2				pmax		pmax		
	comp=Z,9.0nm,0.5s							

*IDC **28** 23:18:22.6±1.2, 14.2°81S×167.1°14E, h0km, mb4.1/8, mbtmp4.1/8, MS4.2/2, Error ellipse: s-maj=52.6km s-min=32.1km az=81.0*
*NEIC **28** 23:18:26.0±2.5, 14.42S±0.09°×166.7°E±0.2, h10km±1km, mb4.6/8, Error ellipse: s-maj=32.2km s-min=15.5km az=92.0*

ISC 28 23:18:33.0±0.6,**14.67S**±0.07°×**166.8E**±0.2,**h67**km,**n31, σ1.9s37/30, mb4.2/12, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOUNC	**Koumac, New Ca**	**6.30**	**202**		**Pn**	**23 20 01.8**	**-1.5**
KOUNC				Sn	**Sn**	**23 21 14.0**	**+0.1**
ONTNC	**Ouen Toro**	**7.60**	**182**	Pn	**Pn**	**23 20 18.7**	**-2.3**
OUENC	**Ouen Island, N**	**7.70**	**179**	**Pn**	**Pn**	**23 20 21.3**	**-1.1**
PINNC	**Pines Island,**	**7.92**	**175**	Pn	**Pn**	**23 20 24.9**	**-0.5**
KRVT	**Keravat (AS076**	**17.80**	**304**	LR	LR	23 29 14.9	
	comp=Z,415nm,19.9s,baz=63,slow=36						
BKZ	**Black Stump Fm**	**25.86**	**162**	P	**P**	**23 24 00.3**	**+2.0**
BKZ				IAmb	IAmb	23 24 07.8	
	comp=Z,10nm,1.1s						
STKA	**Stephens Creek**	**28.66**	**229**	LR	LR	23 34 49.2	
	comp=Z,813nm,18.5s,baz=21,slow=34						
RPZ	**Rata Peaks**	**29.18**	**174**		**P**	**23 24 29.6**	**+1.7**
RPZ				IAmb	IAmb	23 24 56.8	
	comp=Z,15nm,1.2s						
BBOO	**Buckleboo**	**33.23**	**232**	P	**P**	**23 25 04.3**	**+0.5**
VNDA	**Vanda**	**62.91**	**181**	P	**P**	**23 28 49.0**	**-2.7**
	comp=Z,0.7nm,0.9s,baz=5.0,slow=6.4,SNR=2.3						
	comp=Z,0.7nm,0.9s						
KSRS	**Korea Array**	**63.42**	**326**	P	**P**	**23 28 55.6**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=130,slow=7.0,SNR=4.0						
	comp=Z,0.5nm,0.4s						
USRK	**Ussuriysk Ar.**	**66.62**	**333**	P	**P**	**23 29 16.5**	**+0.2**
	comp=Z,2.4nm,0.7s,baz=129,slow=5.2,SNR=7.1						
	comp=Z,2.4nm,0.7s						
PETK	**Petropavlovsk-**	**67.95**	**354**	P	**P**	**23 29 24.6**	**0.0**
	comp=Z,1.2nm,0.5s,baz=8.5,slow=3.0,SNR=3.7						
	comp=Z,1.2nm,0.5s						
CMAR	**Chiang Mai Arr**	**74.48**	**294**	P	**P**	**23 30 06.2**	**+1.5**
	comp=Z,0.8nm,0.4s,baz=133,slow=4.9,SNR=8.3						
	comp=Z,0.8nm,0.4s						
QSPA	**South Pole Qui**	**75.35**	**180**	P	**P**	**23 30 10.9**	**+1.8**
SONM	**Songino Array**	**82.16**	**324**	P	**P**	**23 30 47.1**	**+0.4**
	comp=Z,1.0nm,0.9s,baz=139,slow=5.9,SNR=6.0						
	comp=Z,1.0nm,0.9s						
SONM	**Songino Array**	**82.16**	**324**	P	**P**	**23 30 46.5**	**-0.2**
RND	**Reindeer**	**85.04**	**18**	P	**P**	**23 30 59.6**	**-1.3**
H21K	**Melozitna Rive**	**85.63**	**16**	P	**P**	**23 31 04.5**	**+0.8**
H21K				IAmb	IAmb	23 31 05.5	
	comp=Z,4.5nm,1.0s						
IMAR	**Indian Mountai**	**85.64**	**15**	P	**P**	**23 31 02.4**	**-1.4**
IL31		**86.62**	**18**	P	**P**	**23 31 07.2**	**-1.5**
IL31				IAmb	IAmb	23 31 09.5	
	comp=Z,2.9nm,0.8s						
ILAR	**Eielson Array**	**86.62**	**18**	P	**P**	**23 31 07.6**	**-1.1**
	comp=Z,2.2nm,0.7s,baz=230,slow=5.8,SNR=20						
	comp=Z,2.2nm,0.7s						
ILAR	**Eielson Array**	**86.62**	**18**	P	**P**	**23 31 07.0**	**-1.7**
TROLL	**Troll, Antarti**	**92.88**	**185**	P	**P**	**23 31 39.6**	**+1.4**
SNAA	**Sanae**	**93.58**	**183**	P	**P**	**23 31 42.2**	**+0.8**
VNA3	**Neumayer Olymp**	**94.26**	**181**	P	**P**	**23 31 45.1**	**+0.7**
VNA2	**Neumayer--Watz**	**94.52**	**182**	P	**P**	**23 31 46.5**	**+0.9**
	baz=286,slow=1.9						
MKAR	**Makanchi Array**	**96.83**	**316**	P	**P**	**23 31 57.0**	**+0.4**
	comp=Z,0.9nm,0.8s,baz=108,slow=6.9,SNR=5.8						
	comp=Z,0.9nm,0.8s						
MKAR	**Makanchi Array**	**96.83**	**316**	P	**P**	**23 31 53.9**	**-2.7**
ARCES	**ARCESS Array B**	**120.08**	**345**	PKP	**PKiKP**	**23 37 15.7**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=63,slow=3.0,SNR=6.5						
ARCES	**ARCESS Array B**	**120.08**	**345**		**PKPdf**	**23 37 15.5**	**0.0**

*TUL **28** 23:18:41.9±0.6, 36.4°47N±0.02°×98.8°75W±0.03°, h8km±2km, ML2.5, mb_Lg2.2/7(NEIC), Error ellipse: s-maj=3.7km s-min=2.0km az=76.0*

NEIC 28 23:18:42.6±0.6,**36.47N**±0.01°×**98.74W**±0.02°,**h5**km±2km, **Error ellipse: s-maj=2.1km s-min=1.8km az=169.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FNO	**Franklin**	**1.62**	**138**	Pn	Pn	23 19 11.4	-0.5
WMOK	**Wichita Mounta**	**1.72**	**181**	Pn	Pn	23 19 12.2	-1.1
T35A	**Sooner Cattle**	**1.84**	**75**	Pn	Pn	23 19 14.5	-0.4
R32A	**Long Quarter,**	**1.96**	**1**	Pn	Pn	23 19 16.6	+0.1
X34A	**Smith Ranch, M**	**2.00**	**158**	Pn	Pn	23 19 17.6	+0.5
X34A				IAmb_Lg		23 19 44.0	
	comp=Z,7.4nm,1.0s						
AMTX	**Amarillo**	**2.87**	**238**	Pn	Pn	23 19 28.4	-0.8
X37A	**Clayton**	**3.32**	**123**	Pn	Pn	23 19 34.4	-0.9
X37A				IAmb_Lg		23 20 35.8	
	comp=Z,6.8nm,0.8s						
HHAR	**Hobbs**	**3.87**	**91**	IAmb_Lg		23 20 44.2	
	comp=Z,3.5nm,0.7s						
S39A	**Bolivar**	**4.50**	**73**	IAmb_Lg		23 21 12.4	
	comp=Z,5.2nm,0.7s						

MAN 28 23:24:34.2,10.21N×126.10E,h8km,mb4.0,ML2.8,MS2.4, Philippine Islands region

*KRNET **28** 23:31:33.1±0.1, 39.41N×73.40E, mb3.6*
*NNC **28** 23:31:43.3±2.6, 39.71N×73.41E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=20.0km s-min=10.6km az=175.0*
*SOME **28** 23:31:47.8, 39.93N×73.57E, h0km*

ISC 28 23:31:37.8±1.8,**39.58N**±0.06×**73.39E**±0.03,**h10**km±11km, **n56,σ2s26/82,19C-11D,Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.05**	**334**	⇑*e*P	**Pg**	**23 31 56.1**	**-2.0**
OHH				⇑*i*S	**Sn**	**23 32 13.1**	**-0.5**
	baz=37						
DRK	**Karamyk**	**1.23**	**266**	⇑*i*P	Pn	23 31 56.7	-4.8
DRK				⇑*e*S	Sb	23 32 14.0	-3.6
	baz=74						
BTK	**Batken**	**2.04**	**284**	⇑*i*P	**Pn**	**23 32 11.5**	**-0.9**
BTK				⇑*i*S	**Sn**	**23 32 39.6**	**+1.7**
	baz=89						
GAR	**Garm**	**2.45**	**257**	⇑*i*P	Pn	23 32 16.2	-1.9
GAR				⇑*e*S	**Sn**	**23 32 47.8**	**-0.4**
	baz=61						
AML	**Almayashu**	**2.56**	**5**	P	**Pn**	**23 32 21.7**	**+1.9**
	SNR=22						
TRKS	**Terek-Say**	**2.60**	**319**	⇑*e*P	**Pn**	**23 32 19.4**	**-0.7**
TRKS				⇑*e*S	**Sn**	**23 32 53.3**	**+1.5**
	baz=21						
UCH	**Uchtor**	**2.78**	**17**	P	**Pn**	**23 32 26.1**	**+3.2**
	SNR=14						
UCH	**Uchtor**	**2.78**	**17**	⇓*e*P	**Pn**	**23 32 23.6**	**+0.7**
UCH	baz=16			⇓*e*S	**Sb**	**23 33 00.3**	**-1.9**
	baz=16						
EKS2	**Erkin-Say**	**3.10**	**5**	⇑*e*P	**Pn**	**23 32 27.7**	**+0.8**
EKS2	baz=5.0			⇑*e*S	**Sb**	**23 33 07.5**	**-3.5**
	baz=5.0						
MRKS	**Merke**	**3.17**	**358**	*e*P	**Pg**	**23 32 42.9**	**+4.4**
MRKS	5.8nm,0.2s			*e*S	**Sg**	**23 33 23.0**	**+3.4**
	59nm,0.3s						
MRKS	**Merke**	**3.17**	**358**	Pg	**Pg**	**23 32 42.9**	**+4.4**
MRKS	5.8nm,0.2s			Lg	Lg	23 33 23.0	
	59nm,0.3s						
AAK	**Ala-Archa**	**3.17**	**15**	P	**Pn**	**23 32 31.2**	**+3.2**
	SNR=9.7						
AAK	**Ala-Archa**	**3.17**	**15**	⇑*e*P	**Pn**	**23 32 28.8**	**+0.8**
AAK	baz=14			⇑*e*S	**Sb**	**23 33 09.3**	**-3.8**
	baz=14						
KBK	**Karagaybulak**	**3.29**	**20**	P	**Pn**	**23 32 33.7**	**+4.0**
	SNR=9.3						
KBK	**Karagaybulak**	**3.29**	**20**	⇓*e*P	**Pn**	**23 32 30.3**	**+0.6**
KBK	baz=19			⇓*e*S	**Sb**	**23 33 12.1**	**-4.6**
	baz=19						
CHGR	**Chuyangaron**	**3.42**	**256**	⇓*i*P	Pn	23 32 29.4	-1.9
CHGR	baz=59			⇓*e*S	**Sn**	**23 33 10.6**	**-1.4**
	baz=59						
ULHL	**Ulahol**	**3.43**	**38**	P	**Pb**	**23 32 38.6**	**-0.3**
	SNR=8.0						
CHMS	**Chumysh**	**3.57**	**16**	P	**Pn**	**23 32 37.0**	**+3.7**
	SNR=6.1						
CHMS	**Chumysh**	**3.57**	**16**	⇓Pn	**Pn**	**23 32 36.5**	**+3.2**
CHMS	5.2nm,0.6s			⇓Lg	Lg	23 33 29.8	
	15nm,0.6s						
DZA	**Taraz**	**3.66**	**336**	*e*P	**Pg**	**23 32 50.2**	**+2.3**
DZA	22nm,0.2s			*e*S	**Sg**	**23 33 34.9**	**-0.4**
	75nm,0.6s						
TKM2	**Tokmak 2**	**3.73**	**26**	⇑Pn	**Pn**	**23 32 38.3**	**+2.6**
TKM2	7.5nm,0.7s			⇑Lg	Lg	23 33 35.4	
	18nm,0.7s						
USP	**Ospenovka**	**3.78**	**12**	P	**Pn**	**23 32 39.0**	**+2.8**
	SNR=5.2						
KST	**Kastek**	**3.97**	**28**	*e*P	**Pg**	**23 32 55.2**	**+1.4**
KST	3.8nm,0.4s			*e*S	**Sg**	**23 33 43.5**	**-1.7**
	24nm,0.5s						
KST	**Kastek**	**3.97**	**28**	Pg	**Pg**	**23 32 55.2**	**+1.4**
KST	3.8nm,0.4s			Lg	Lg	23 33 43.5	
	24nm,0.5s						
SGDS	**Sogindy**	**3.98**	**13**	*e*P	**Pg**	**23 32 53.4**	**-0.7**
SGDS	4.7nm,0.5s			*e*S	**Sg**	**23 33 40.4**	**-5.3**
	12nm,0.7s						
DGS	**Degeres**	**4.08**	**25**	*e*P	**Pg**	**23 32 56.6**	**+0.7**
DGS	11nm,0.6s			*e*S	**Sg**	**23 33 46.6**	**-2.1**
	19nm,0.9s						
DGS	**Degeres**	**4.08**	**25**	Pg	**Pg**	**23 32 56.6**	**+0.7**
DGS	11nm,0.6s			Lg	Lg	23 33 46.6	
	19nm,0.9s						
KK31	**Karatay Array**	**4.14**	**329**	⇑Pn	**Pn**	**23 32 42.8**	**+1.7**
KK31	0.7nm,0.4s,baz=126,slow=12,SNR=9.8			⇑Pg	**Pb**	**23 32 52.7**	**+1.9**
	2.3nm,0.4s,baz=144,slow=16,SNR=16						
KK31	1.5nm,0.3s			⇑Sn	**Sb**	**23 33 36.1**	**-4.7**
KK31	4.2nm,0.4s,baz=145,slow=31			⇓Lg	Lg	23 33 50.3	
MTBS	**Maitube**	**4.22**	**32**	*e*P	**Pg**	**23 33 00.8**	**+2.1**
MTBS	2.9nm,0.2s			*e*S	**Sg**	**23 33 53.2**	**-0.2**
	17nm,0.7s						
MTBS	**Maitube**	**4.22**	**32**	Pg	**Pg**	**23 33 00.8**	**+2.1**
MTBS	2.9nm,0.2s			Lg	Lg	23 33 53.2	
	17nm,0.7s						
BRLS	**Borolday**	**4.37**	**323**	*e*P	**Pg**	**23 33 02.9**	**+1.4**
BRLS	4.8nm,0.6s			*e*S	**Sg**	**23 33 57.0**	**-1.0**
	13nm,0.5s						
BRLS	**Borolday**	**4.37**	**323**	Pg	**Pg**	**23 33 02.9**	**+1.4**
BRLS	4.8nm,0.6s			Lg	Lg	23 33 57.0	
	13nm,0.5s						
TNSS	**Tian-Shan**	**4.37**	**37**	*e*P	**Pg**	**23 33 02.7**	**+1.1**
TNSS	4.7nm,0.5s			*e*S	**Sg**	**23 33 56.6**	**-1.7**
	11nm,0.7s						
TNSS	**Tian-Shan**	**4.37**	**37**	Pg	**Pg**	**23 33 02.7**	**+1.1**
TNSS	4.7nm,0.5s			Lg	Lg	23 33 56.6	
	11nm,0.7s						

KRBS	**Karabastau**	**4.46**	**22**	*e*P	**Pg**	**23 33 03.2**	**0.0**
	4.0nm,0.7s						
KRBS				*e*S	**Sg**	**23 33 57.7**	**-3.2**
	14nm,0.8s						
KRBS	**Karabastau**	**4.46**	**22**	Pg	**Pg**	**23 33 03.2**	**0.0**
	4.0nm,0.7s						
KRBS				Lg	Lg	23 33 57.5	
	14nm,0.8s						
AAA	**Alma-Ata**	**4.49**	**35**	*e*P	**Pg**	**23 33 06.1**	**+2.2**
	11nm,0.1s						
AAA				*e*S	**Sg**	**23 34 02.7**	**+0.6**
	41nm,0.3s						
AAA	**Alma-Ata**	**4.49**	**35**	Pg	**Pg**	**23 33 06.1**	**+2.2**
	11nm,0.1s						
AAA				Lg	Lg	23 34 02.7	
	41nm,0.3s						
KTBS	**Karatobe**	**4.81**	**30**	*e*P	**Pg**	**23 33 11.0**	**+1.0**
	3.6nm,0.5s						
KTBS				*e*S	**Sg**	**23 34 11.0**	**-1.2**
	20nm,1.0s						
KTBS	**Karatobe**	**4.81**	**30**	Pg	**Pg**	**23 33 11.0**	**+1.0**
	3.6nm,0.5s						
KTBS				Lg	Lg	23 34 11.0	
	20nm,1.0s						
CHKK	**Chushkaly**	**5.05**	**31**	*e*P	**Pg**	**23 33 15.1**	**+0.5**
	1.6nm,0.1s						
CHKK				*e*S	**Sg**	**23 34 17.7**	**-2.2**
	9.8nm,0.5s						
CHKK	**Chushkaly**	**5.05**	**31**	Pg	**Pg**	**23 33 15.1**	**+0.5**
	1.6nm,0.1s						
CHKK				Lg	Lg	23 34 17.7	
	9.8nm,0.5s						
SATY	**Saty**	**5.13**	**46**	*e*P	**Pg**	**23 33 16.2**	**+0.1**
	4.0nm,0.4s						
SATY				*e*S	**Sg**	**23 34 19.6**	**-3.0**
	13nm,1.0s						
SATY	**Saty**	**5.13**	**46**	Pg	**Pg**	**23 33 16.2**	**+0.1**
	4.0nm,0.4s						
SATY				Lg	Lg	23 34 19.6	
	13nm,1.0s						
KURS	**Kuram**	**5.30**	**41**	*e*P	**Pg**	**23 33 20.9**	**+1.5**
	4.2nm,0.3s						
KURS				*e*S	**Sg**	**23 34 27.8**	**-0.3**
	10.0nm,0.9s						
KURS	**Kuram**	**5.30**	**41**	Pg	**Pg**	**23 33 20.9**	**+1.5**
	4.2nm,0.3s						
KURS				Lg	Lg	23 34 27.7	
	10.0nm,0.9s						
BTLS	**Baital**	**5.48**	**5**	*e*P	**Pg**	**23 33 23.5**	**+0.7**
	1.1nm,0.4s						
BTLS				*e*S	**Sg**	**23 34 32.4**	**-1.4**
	5.8nm,0.6s						
BTLS	**Baital**	**5.48**	**5**	Pg	**Pg**	**23 33 23.5**	**+0.7**
	1.1nm,0.4s						
BTLS				Lg	Lg	23 34 32.4	
	5.8nm,0.6s						
KPKS	**Kokpek**	**5.56**	**44**	*e*P	**Pg**	**23 33 23.3**	**-0.9**
	4.9nm,0.6s						
KPKS				*e*S	**Sg**	**23 34 32.0**	**-4.1**
	9.5nm,0.8s						
KPKS	**Kokpek**	**5.56**	**44**	Pg	**Pg**	**23 33 23.3**	**-0.9**
	4.9nm,0.6s						
KPKS				Lg	Lg	23 34 32.0	
	9.5nm,0.8s						
ARXS	**Arharly**	**5.69**	**34**	*e*P	**Pg**	**23 33 26.0**	**-0.8**
	4.2nm,0.5s						
ARXS				*e*S	**Sg**	**23 34 36.7**	**-3.8**
	14nm,0.9s						
ARXS	**Arharly**	**5.69**	**34**	Pg	**Pg**	**23 33 26.0**	**-0.8**
	4.2nm,0.5s						
ARXS				Lg	Lg	23 34 36.7	
	14nm,0.9s						
BLB	**Baldybastay**	**5.90**	**38**	*e*P	**Pg**	**23 33 30.9**	**0.0**
	12nm,0.4s						
BLB				*e*S	**Sg**	**23 34 45.0**	**-2.2**
	12nm,0.7s						
BLB	**Baldybastay**	**5.90**	**38**	Pg	**Pg**	**23 33 30.9**	**0.0**
	12nm,0.4s						
BLB				Lg	Lg	23 34 45.0	
	12nm,0.7s						
PDGK	**Podgornoye**	**5.92**	**49**	Pg	**Pg**	**23 33 30.3**	**-0.8**
	0.9nm,0.3s						
PDGK				Lg	Lg	23 34 43.9	
	3.5nm,0.9s						
PDGK	**Podgornoye**	**5.92**	**49**	⇓Pg	**Pb**	**23 33 25.8**	**+4.6**
	2.7nm,0.7s						
PDGK				⇓Lg	Lg	23 34 50.7	
	9.1nm,0.8s						

*NEIC **28** 23:36:48.8±2.2, 16.35N±0.09°×98.0W±0.1, h10km±2km, mb4.5/161, Md4.7(MEX), Error ellipse: s-maj=20.8km s-min=9.4km az=228.0*
*MEX **28** 23:36:50.3±1.5, 16.25N×98.09W, h10km±6km, MD4.7*
*IDC **28** 23:36:56.2±4.6, 16.42N×97.58W, h77km±43km, mb3.7/9, mbtmp4.0/10, ML3.9/1, Error ellipse: s-maj=38.6km s-min=20.5km az=54.0*

ISC 28 23:36:47.9±1.1,**16.31N**±0.04°×**98.03W**±0.02,**h11**km±7km, **n266,σ1s67/272,mb4.4/58, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.12**	**313**	*i* P	**Pb**	**23 36 52.8**	**+0.6**
PNIG				*i* S	**Sg**	**23 36 55.6**	**+2.3**
YOIG	**Yosondua**	**0.72**	**40**	*i* P	**Pn**	**23 37 03.4**	**-0.8**
YOIG				*i* S	**Sn**	**23 37 13.9**	**-1.4**
TXIG	**Tlaxiaco**	**0.97**	**15**	*i* P	**Pn**	**23 37 07.5**	**-0.2**
TXIG				*i* S	**Sn**	**23 37 20.8**	**-0.9**
MGIG	**Malinaltepec**	**1.09**	**328**	*i* P	**Pb**	**23 37 08.0**	**-0.7**
MGIG				*i* S	**Sg**	**23 37 22.2**	**-0.9**
CRIG	**Cruz Grande**	**1.14**	**292**	*e*P	**Pb**	**23 37 07.8**	**-1.7**
CRIG				*e*S	**Sb**	**23 37 21.5**	**-2.8**
TLIG	**Tlapa**	**1.35**	**338**	P	**Pn**	**23 37 12.6**	**-0.2**
TLIG				S	**Sn**	**23 37 31.4**	**-0.1**
TLIG	**Tlapa**	**1.35**	**338**	*e*P	**Pn**	**23 37 12.7**	**-0.1**
TLIG				*e*S	**Sb**	**23 37 29.6**	**-1.0**
VHO	**Vista Hermosa**	**1.46**	**58**	*i* P	**Pb**	**23 37 14.7**	**-0.4**
VHO				*e*S	**Sb**	**23 37 33.6**	**-0.1**
OXBJ	**Oaxaca**	**1.46**	**59**	*e*P	**Pb**	**23 37 14.8**	**-0.5**
OXBJ				*e*S	**Sg**	**23 37 35.0**	**-0.1**
OXLC	**

CNCY eS **Sn** 23 38 13.9 -2.3
AOVM Tlapan 3.19 338 eP **Pb** 23 37 43.9 -1.0
AOVM eS **Sn** 23 38 14.6 -2.0
UNM Universidad Na 3.20 340 Pn **Pn** 23 37 38.5 +0.2
INVM La Marquesa 3.23 337 eP **Pb** 23 37 43.9 -1.6
INVM eS **Sn** 23 38 19.2 +1.6
JAUV Jalcomulco 3.26 21 eP **Pn** 23 37 40.8 +1.8
JAUV eS **Sb** 23 38 24.2 -1.3
CJVM Cuajimalpa 3.26 339 eP **Pg** 23 37 49.7 -0.8
CJVM eS **Sb** 23 38 22.0 -3.8
PBVM Pinon 3.27 342 eP **Pn** 23 37 35.5 -3.6
PBVM eS **Sn** 23 38 10.4 -7.6
GMVM Gustavo A Made 3.33 342 eP **Pb** 23 37 46.9 -0.2
GMVM eS **Sn** 23 38 17.3 -2.6
TOVM TOLUCA 3.35 332 eP **Pb** 23 37 46.4 -1.1
TOVM eS **Sn** 23 38 16.3 -4.1
PTVM Pico Tres Padr 3.43 343 eP **Pb** 23 37 45.9 -2.8
PTVM eS **Sn** 23 38 18.9 -3.3
AZVM Cuida Lopez Ma 3.47 340 eP **Pg** 23 37 52.1 -2.4
AZVM eS **Sb** 23 38 28.6 -3.2
ZIIG Zihuatanejo 3.53 292 eP **Pn** 23 37 41.7 -0.9
ZIIG eS **Sn** 23 38 27.3 +3.0
ZUVM ZUMPANGO 3.64 344 eP **Pb** 23 37 48.3 -4.1
ZUVM eS **Sn** 23 38 26.5 -1.0
LVIG Laguna Verde 3.73 24 eP **Pn** 23 37 44.3 -1.0
LVIG eS **Sn** 23 38 30.3 +1.1
UXUV UXUV 3.86 74 eP **Pn** 23 37 46.9 -0.2
UXUV eS **Sn** 23 38 32.2 -0.2
CXUV Coxquihui 3.87 6 eP **Pb** 23 37 53.0 -3.2
CXUV eS **Sb** 23 38 40.2 -2.9
DEIG Demacu 4.09 347 eP **Pb** 23 38 01.0 +1.0
DEIG eS **Sn** 23 38 40.9 +2.5
MOIG Morelia 4.50 319 Pn **Pn** 23 37 57.7 +1.5
MOIG Morelia 4.50 319 eP **Pb** 23 38 06.3 -0.8
MOIG eS **Sn** 23 38 52.2 +3.5
MMIG Aquila 5.45 292 eP **Pn** 23 38 09.4 +0.5
MMIG eS **Sn** 23 39 11.7 +0.1
CCIG Comitan 5.66 89 Pn **Pn** 23 38 14.7 +2.5
RPIG Rio Verde 5.85 342 *e* **Pb** 23 38 32.6 +2.7
RPIG eS **Sn** 23 39 25.2 +3.6
HUEH Huehuetenango 6.36 98 Pn **Pn** 23 38 25.1 +3.3
GTIG Gomez Farias 6.81 351 eP **Pn** 23 38 29.9 +2.1
GTIG *i* S Sn 23 39 53.8 +8.4
ZAIG Zacatecas 7.72 327 Pn **Pn** 23 38 42.2 +1.8
PETF Flores 7.85 84 Pn **Pn** 23 38 42.1 0.0
MTO3 Montecristo 8.58 102 **Pn** 23 38 54.7 +2.5
833A Chaparral WMA, 12.03 354 Pn **Pn** 23 39 41.2 +2.0
833A Chaparral WMA, 12.03 354 P **Pn** 23 39 41.0 +1.7
baz=174
JTS Las Juntas de 14.06 114 P **P** 23 40 14.6 -0.3
435B Jarrell 14.42 2 P **P** 23 40 19.3 +0.5
RIMA Rio Macho 15.25 113 **P** 23 40 27.3 -1.1
RIMA IAmb IAmb 23 40 38.7
comp=Z,19nm,1.2s
WHTX Lake Whitney, 15.62 2 Pn **Pn** 23 40 28.5 +0.5
WHTX IAmb IAmb 23 40 34.5
comp=Z,36nm,0.9s
WHTX Lake Whitney, 15.62 2 P **P** 23 40 31.3 -0.9
baz=182
NATX Nacogdoches 15.69 11 Pn **Pn** 23 40 30.2 +1.4
NATX IAmb IAmb 23 40 34.0
comp=Z,14nm,0.8s
237A Washetta, Mont 15.76 7 P **P** 23 40 33.5 -0.1
237A IAmb IAmb 23 40 35.8
comp=Z,34nm,0.8s
342A Flagon Creek P 15.88 18 P **P** 23 40 34.4 -0.6
342A IAmb IAmb 23 40 36.0
comp=Z,32nm,0.9s
ABTX Abilene, Hawle 16.31 355 P **P** 23 40 40.5 +0.6
ABTX IAmb IAmb 23 40 42.7
comp=Z,52nm,0.9s
ABTX Abilene, Hawle 16.31 355 P **P** 23 40 40.4 +0.5
baz=174,SNR=18
MNTX Cornudas Mount 16.72 338 P **P** 23 40 43.6 -0.8
MNTX Cornudas Mount 16.72 338 P **P** 23 40 44.4 0.0
baz=155
Z35A Perchaven, San 16.97 2 P **P** 23 40 47.1 0.0
Z35A IAmb IAmb 23 40 49.0
comp=Z,21nm,0.7s
Z38A Mt. Pleasant 17.10 9 P **P** 23 40 48.5 -0.1
Z38A IAmb IAmb 23 40 50.1
comp=Z,23nm,0.8s
VBMS Vicksburg 17.25 22 P **P** 23 40 50.0 -0.2
VBMS IAmb IAmb 23 40 59.3
comp=Z,32nm,0.9s
143A Socs Landing, 17.39 19 P **Pn** 23 40 49.8 -0.7
143A IAmb IAmb 23 40 53.4
comp=Z,36nm,1.1s
MSTX Muleshoe 18.10 347 Pn **Pn** 23 40 58.0 -1.4
MSTX Muleshoe 18.10 347 P **P** 23 40 59.9 +0.1
baz=165
X37A Clayton 18.36 7 **Pn** 23 41 02.0 -0.5
WMOK Wichita Mounta 18.37 358 P **Pn** 23 41 01.4 -1.1
WMOK Wichita Mounta 18.37 358 P **P** 23 41 02.6 0.0
baz=178
121A Cookes Peak, D 18.42 333 P **P** 23 41 05.2 +1.9
baz=149
MIAR Mount Ida 18.60 12 P **P** 23 41 04.2 -0.9
MIAR Mount Ida 18.60 12 P **P** 23 41 04.8 -0.3
baz=194
AMTX Amarillo 18.79 351 P **P** 23 41 06.4 -0.9
AMTX IAmb IAmb 23 41 13.1
comp=Z,27nm,1.0s
AMTX Amarillo 18.79 351 P **Pn** 23 41 08.2 +0.5
baz=169
OKCFA Oklahoma City 19.04 1 P **P** 23 41 10.1 +0.1
Y45A Yeager Farm, C 19.08 22 P **Pn** 23 41 11.0 -0.2
Y45A IAmb IAmb 23 41 18.2
comp=Z,30nm,0.9s
W39A Magazine 19.19 11 P **P** 23 41 11.6 0.0
W39A Magazine 19.19 11 P **P** 23 41 11.3 -0.3
baz=192,SNR=7.5
BNM Barren Site 19.38 338 P **Pn** 23 41 16.5 +1.4
LRAL Lakeview Retre 19.42 29 P **P** 23 41 13.7 -0.4
LRAL Lakeview Retre 19.42 29 P **P** 23 41 14.4 +0.3
baz=214
W41B Gary Mavity, V 19.49 14 P **P** 23 41 14.7 -0.2
baz=197
TUL1 Leonard 19.63 5 IAmb IAmb 23 41 19.1
comp=Z,24nm,0.8s
TUL1 Leonard 19.63 5 P **P** 23 41 16.5 +0.1
baz=186
TUC Tucson 19.69 326 P **Pn** 23 41 20.2 +1.5
TUC Tucson 19.69 326 P **Pn** 23 41 19.5 +0.8
baz=141
OXF Oxford 19.71 22 IAmb IAmb 23 41 24.0
comp=Z,24nm,1.0s
OXF Oxford 19.71 22 P **P** 23 41 16.9 -0.4
baz=205
ANMO Albuquerque 20.04 339 P Pn 23 41 23.3 +0.4
comp=Z,5.0nm,0.9s,baz=158,slow=11,SNR=7.2
comp=Z,5.0nm,0.9s
ANMO Albuquerque 20.04 339 P Pn 23 41 22.5 -0.4
ANMO Albuquerque 20.04 339 P Pn 23 41 22.9 0.0
baz=156
Y49A Blount Mountai 20.37 29 IAmb IAmb 23 41 32.9
comp=Z,12nm,0.7s
214A Organ Pipe Nat 20.57 322 P Pn 23 41 29.6 +0.7
baz=136
T35A Sooner Cattle 20.57 3 P **P** 23 41 25.3 -1.4
T35A IAmb IAmb 23 41 26.8
comp=Z,16nm,0.7s
MGMO Mountain Grove 21.38 13 IAmb IAmb 23 41 40.2
comp=Z,25nm,0.9s
T25A Trinidad 21.51 346 P **P** 23 41 38.7 +1.7
T25A Trinidad 21.51 346 P **P** 23 41 39.2 +2.2
baz=163,SNR=22
GOGA Godfrey 21.51 35 P **P** 23 41 36.2 -0.7
baz=221,SNR=5.9
X16A Lo Mia Camp, P 21.69 329 IAmb IAmb 23 41 50.2
comp=Z,10nm,0.7s
S39A Bolivar 21.70 10 IAmb IAmb 23 41 51.1
comp=Z,11nm,0.8s
SWET Swanee 21.72 28 IAmb IAmb 23 41 46.0
comp=Z,16nm,0.7s
WVT Waverly 21.73 23 P **P** 23 41 37.6 -1.6
WVT IAmb IAmb 23 41 50.4
comp=Z,14nm,0.8s
WVT Waverly 21.73 23 P **P** 23 41 38.4 -0.8
baz=207
V48A Smith Brothers 21.79 25 IAmb IAmb 23 41 45.3
comp=Z,30nm,1.1s
SDCO Great Sand Dun 22.35 344 P **P** 23 41 47.4 +1.2
baz=161,SNR=10

CCM Cathedral Cave 22.48 14 P **P** 23 41 46.6 -0.6
CCM IAmb IAmb 23 41 57.5
comp=Z,14nm,0.8s
CCM Cathedral Cave 22.48 14 P **P** 23 41 47.8 +0.6
baz=197
R40A Maddies Statio 22.48 12 IAmb IAmb 23 41 49.5
comp=Z,15nm,0.8s
WUAZ Wupatki 22.54 331 P **P** 23 41 51.1 +3.1
baz=145
GLA Glamis 22.55 321 P **P** 23 41 50.7 +2.7
baz=134
CPCT Cooper Cave 22.56 30 IAmb IAmb 23 41 55.8
comp=Z,15nm,1.0s
S22A 4UR Ranch, Cre 22.72 342 P **P** 23 41 51.6 +1.5
S22A 4UR Ranch, Cre 22.72 342 P **P** 23 41 52.2 +2.1
baz=158,SNR=16
KSU1 Kansas State U 22.74 3 P **P** 23 41 50.5 +0.5
baz=184,SNR=5.4
T47A Sharon Grove 22.76 23 IAmb IAmb 23 41 58.0
comp=Z,19nm,1.1s
MVCO Mesa Verde 22.79 338 P **P** 23 41 50.8 0.0
MVCO IAmb IAmb 23 42 02.3
comp=Z,23nm,1.1s
MVCO Mesa Verde 22.79 338 P **P** 23 41 51.4 +0.7
baz=153
HODGE Hodges 22.79 36 IAmb IAmb 23 41 58.2
comp=Z,12nm,0.7s
U49A Red Boiling Sp 22.88 26 IAmb IAmb 23 41 57.4
comp=Z,17nm,0.9s
V51A Loudon 22.93 30 IAmb IAmb 23 42 00.7
comp=Z,9.0nm,0.7s
TKL Tuckaleechee C 23.09 31 P **P** 23 41 52.6 -1.1
comp=Z,6.6nm,0.9s,baz=198,slow=10.0,SNR=7.0
comp=Z,6.6nm,0.9s
TKL Tuckaleechee C 23.09 31 IAmb IAmb 23 42 00.3
comp=Z,12nm,1.1s
BC3 Big Chuckawall 23.34 321 P **P** 23 41 59.1 +2.7
baz=134
Q24A Divide 23.42 346 P **P** 23 41 58.6 +1.3
Q24A IAmb IAmb 23 42 08.0
comp=Z,10nm,0.8s
P38A Dawn 23.56 9 P **P** 23 41 57.6 -0.7
P38A IAmb IAmb 23 41 59.9
comp=Z,15nm,0.9s
V53A Saluda 23.59 32 IAmb IAmb 23 42 07.9
comp=Z,19nm,1.4s
P40A Paris 23.72 12 P **P** 23 41 58.8 -1.0
PV15 Paradox Valley 23.80 339 IAmb IAmb 23 42 04.1
comp=Z,7.7nm,0.7s
BELC Belle Mtn. Jos 23.91 321 P **P** 23 42 04.6 +2.7
baz=133
TZTN Tazewell 23.91 30 IAmb IAmb 23 42 08.7
comp=Z,24nm,1.3s
TZTN Tazewell 23.91 30 P **P** 23 42 02.4 +0.6
baz=216
PV07 Paradox Valley 23.94 339 P **P** 23 42 03.2 +0.9
PV07 IAmb IAmb 23 42 05.3
comp=Z,10nm,0.9s
KMSC Kings Mountain 23.98 35 IAmb IAmb 23 42 11.5
comp=Z,8.9nm,0.8s
OLIL Olney 23.98 19 IAmb IAmb 23 42 11.8
comp=Z,16nm,1.0s
SMCO Snowmass 24.09 343 IAmb IAmb 23 42 09.5
comp=Z,8.2nm,0.9s
BIRD Birdtown, Kers 24.12 38 IAmb IAmb 23 42 06.1
comp=Z,8.4nm,0.9s
ISCO Idaho Springs 24.32 346 P **P** 23 42 06.4 +0.5
ISCO Idaho Springs 24.32 346 P **P** 23 42 07.3 +1.4
baz=162,SNR=28
PKCU Pink Cliffs 24.55 332 IAmb IAmb 23 42 23.6
comp=Z,7.3nm,0.9s
V55A Taylorsville 24.57 34 IAmb IAmb 23 42 16.5
comp=Z,9.1nm,0.8s
S51A Beattyville 24.78 28 IAmb IAmb 23 42 12.3
comp=Z,10nm,0.8s
MTPU Mount Pierson 24.98 333 P **P** 23 42 12.7 +0.8
SRU San Rafael Swe 25.21 337 P **P** 23 42 14.5 +0.6
SRU IAmb IAmb 23 42 25.6
comp=Z,10nm,0.9s
Q16A Castle Valley 25.30 335 P **P** 23 42 16.3 +1.7
O20A White River Ci 25.35 341 P **P** 23 42 16.5 +1.4
baz=157,SNR=9.3
MSU Marysvale 25.37 333 P **P** 23 42 16.3 +0.9
N23A Red Feather La 25.44 346 P **P** 23 42 18.4 +2.4
baz=162
TMUT Trail Mountain 25.64 336 P **P** 23 42 19.4 +1.6
V58A Windy Hill, Pi 25.71 37 IAmb IAmb 23 42 27.8
comp=Z,3nm,0.9s
PHWY Pilot Hill 25.72 347 IAmb IAmb 23 42 22.1
comp=Z,9.2nm,1.4s
EDW2 Edwards Air Fo 25.72 320 P **P** 23 42 21.1 +2.8
baz=131
SFIN Lafayette 25.80 19 P **P** 23 42 19.5 +0.6
baz=205
SCIA State Center 25.85 8 P **P** 23 42 20.5 +1.2
baz=191
P49A Miami Univ. Ec 25.90 24 P **P** 23 42 18.7 -1.1
baz=210,SNR=7.1
BLA Blacksburg 26.01 33 P **P** 23 42 20.7 -0.2
baz=221
TPNV Topopah Spring 26.14 325 P **P** 23 42 26.4 +4.2
baz=137
O48B Farmland 26.36 23 P **P** 23 42 23.8 -0.2
baz=209
T57A Hurt 26.48 35 P **P** 23 42 25.7 +0.6
T57A IAmb IAmb 23 42 35.7
comp=Z,14nm,0.9s
R11A Troy Canyon, C 26.84 328 P **P** 23 42 30.3 +1.7
baz=140
DUG Dugway, Tooele 27.05 335 P **P** 23 42 32.1 +1.7
DUG Dugway, Tooele 27.05 335 P **P** 23 42 32.3 +1.9
baz=148,SNR=6.0
K22A Casper 27.25 346 P **P** 23 42 32.7 +0.6
K22A IAmb IAmb 23 42 51.0
comp=Z,16nm,1.2s
ECSD EROS Data Cent 27.36 2 P **P** 23 42 32.6 -0.4
ECSD IAmb IAmb 23 42 33.9
comp=Z,6.1nm,0.8s
HWUT Hardware Ranch 27.78 338 IAmb IAmb 23 42 51.1
comp=Z,4.6nm,0.8s
PD31 Pinedale Array 28.16 342 P **P** 23 42 41.2 +0.9
PDAR Pinedale Array 28.16 342 P **P** 23 42 41.7 +1.3
comp=Z,0.7nm,0.7s,baz=140,slow=11,SNR=7.1
comp=Z,0.7nm,0.7s
NVAR Mina Array Bea 28.33 325 P **P** 23 42 44.8 +2.8
comp=Z,1.2nm,0.7s,baz=151,slow=10,SNR=8.2
comp=Z,1.2nm,0.7s
NVAR Mina Array Bea 28.33 325 P **P** 23 42 44.5 +2.5
ELK Elko 28.55 332 P **P** 23 42 46.4 +2.4
comp=Z,1.0nm,0.7s,baz=178,slow=8.6,SNR=4.5
comp=Z,1.0nm,0.7s
SNOW Snow King Moun 29.16 341 P **P** 23 42 50.1 +0.8
SNOW IAmb IAmb 23 42 58.5
comp=Z,5.5nm,0.8s
LOHW Long Hollow 29.24 341 IAmb IAmb 23 43 00.0
comp=Z,5.2nm,0.9s
F36A Milaca 29.71 6 P **P** 23 42 52.1 -1.7
F36A IAmb IAmb 23 42 56.5
comp=Z,5.0nm,0.8s
RLMT Red Lodge 30.24 344 P **P** 23 42 59.2 +0.4
RLMT IAmb IAmb 23 43 02.2
comp=Z,4.4nm,0.7s
RLMT Red Lodge 30.24 344 P **P** 23 43 00.0 +1.2
baz=158,SNR=7.4
HLID Hailey 30.53 336 P **P** 23 43 02.9 +1.5
baz=148
BOZ Bozeman (W) 31.35 342 P **P** 23 43 10.5 +1.9
WVOR Wild Horse Val 31.46 330 IAmb IAmb 23 43 12.6
comp=Z,4.5nm,0.8s
LRM Limekiln Ridge 31.81 341 P **P** 23 43 13.4 +0.7
AGMN Agassiz Nation 31.95 3 P **P** 23 43 13.2 -0.5
baz=184,SNR=13
EYMN Ely 32.01 8 P **P** 23 43 13.7 -0.4
baz=192
PLID Pearl Lake 32.43 336 IAmb IAmb 23 43 28.6
comp=Z,8.1nm,1.2s
MSO Missoula 33.18 340 P **P** 23 43 25.7 +1.2
baz=151
F10A Beach Ranch, E 33.65 336 IAmb IAmb 23 43 32.3
comp=Z,3.9nm,0.8s
ULM Lac du Bonnet 33.90 2 P **P** 23 43 30.4 -0.3
comp=Z,2.4nm,0.5s,baz=197,slow=8.0,SNR=4.1
comp=Z,2.4nm,0.5s
ULM Lac du Bonnet 33.90 2 IAmb IAmb 23 43 31.0
comp=Z,6.7nm,1.1s
NEW Newport 35.52 338 P **P** 23 43 45.9 +1.2
baz=147

EDM Edmonton 38.75 345 P **P** 23 44 12.0 -0.2
EDM IAmb IAmb 23 44 23.2
comp=Z,7.8nm,0.9s
LPAZ La Paz 43.81 136 P **P** 23 44 54.3 -0.4
YKA Yellowknife Ar 47.59 350 P **P** 23 45 22.9 -0.4
comp=Z,1.6nm,0.8s,baz=156,slow=7.8,SNR=6.4
comp=Z,1.6nm,0.8s
DLBC Dease Lake 48.27 338 P **P** 23 45 29.5 +0.8
WHY Whitehorse 51.59 338 P **P** 23 45 56.2 +2.2
baz=133
M31M Drury Creek, Y 52.48 339 P **P** 23 46 02.4 +1.9
baz=134
H03N2 Juan Fernandez 52.72 160 T T 00 42 55.1
baz=338,slow=77,SNR=564
H03N1 Juan Fernandez 52.73 160 T T 00 42 56.3
baz=338,slow=77,SNR=510
H03N3 Juan Fernandez 52.74 160 T T 00 42 55.3
baz=338,slow=77,SNR=463
YUK6 Outpost Mounta 53.07 337 P **P** 23 46 06.9 +1.7
baz=129
YUK4 Talbot Arm 53.43 337 P **P** 23 46 10.2 +2.5
baz=129
M30M Minto, Yukon 53.56 339 P **P** 23 46 10.0 +1.5
baz=132
BCAR Beaver Creek A 55.65 338 P **P** 23 46 24.5 +0.8
L27K Beaver Creek, 55.66 338 P **P** 23 46 25.3 +1.5
L27K IAmb IAmb 23 46 34.7
comp=Z,4.1nm,1.2s
L27K Beaver Creek, 55.66 338 P **P** 23 46 25.6 +1.8
baz=126
N25K Chitina, Valde 55.90 335 P **P** 23 46 27.7 +2.1
baz=123
L26K Log Cabin Wild 56.20 337 P **P** 23 46 29.1 +1.4
baz=125
K27K Chicken 56.33 338 P **P** 23 46 30.4 +2.0
baz=127
KLU Klutina 56.38 335 P **P** 23 46 31.1 +2.1
baz=121
HARP HAARP 56.55 336 P **P** 23 46 31.6 +1.5
baz=122
INK Inuvik 56.65 345 P **P** 23 46 30.5 -0.2
INK IAmb IAmb 23 46 32.3
comp=Z,5.1nm,0.7s
INK Inuvik 56.65 345 P **P** 23 46 31.1 +0.4
baz=138,SNR=8.2
PAX Paxson 56.98 336 P **P** 23 46 34.7 +1.5
baz=122
SCRK Sand Creek 56.98 338 P **P** 23 46 35.3 +2.0
SCRK Sand Creek 56.98 338 P **P** 23 46 35.2 +2.0
baz=125
J26L Joseph Creek 57.13 338 IAmb IAmb 23 46 45.4
comp=Z,7.7nm,1.1s
J26L Joseph Creek 57.13 338 P **P** 23 46 35.9 +1.6
baz=125,SNR=5.5
WAT6 Susitna Watana 57.67 335 P **P** 23 46 39.2 +1.0
baz=120
HDA Harding Lake 58.30 337 P **P** 23 46 43.5 +1.1
baz=122
SUA Susitna One 58.39 333 P **P** 23 46 44.9 +1.6
baz=116
ILAR Eielson Array 58.47 338 P **P** 23 46 44.7 +1.1
comp=Z,1.5nm,1.0s,baz=132,slow=5.1,SNR=11
comp=Z,1.5nm,1.0s
ILAR Eielson Array 58.47 338 P **P** 23 46 44.5 +0.9
O20K Slope Mountain 58.64 331 P **P** 23 46 46.3 +1.3
baz=114
SKT Skwentna 58.95 334 P **P** 23 46 48.3 +1.3
baz=116
TRF Thorofare Moun 59.11 336 P **P** 23 46 49.4 +1.2
baz=118,SNR=10.0
H24K Noodor Dome 59.39 339 P **P** 23 46 50.0 -0.1
H24K IAmb IAmb 23 46 59.8
comp=Z,3.2nm,0.9s
H24K Noodor Dome 59.39 339 P **P** 23 46 51.0 +1.0
baz=122
KTH Kantishna Hill 59.41 335 IAmb IAmb 23 46 52.3
comp=Z,4.5nm,0.8s
I23K Minto, Yukon-K 59.57 338 P **P** 23 46 52.2 +1.0
baz=120
M20K Styx River 59.60 333 P **P** 23 46 53.0 +1.4
baz=114
BPAW Bear Paw Mtn. 59.68 336 P **P** 23 46 52.8 +0.7
baz=117
O18K Koktuh Hills 59.76 331 P **P** 23 46 53.6 +1.0
baz=111
N19K Bonanza Creek 59.78 332 P **P** 23 46 53.5 +0.7
N19K Bonanza Creek 59.78 332 P **P** 23 46 53.2 +0.4
baz=112,SNR=5.6
CAST Castle Rocks 59.81 335 P **P** 23 46 53.7 +0.7
baz=116
H23K Yukon River 59.97 338 P **P** 23 46 55.0 +0.9
baz=120
MLY Manley 60.02 337 P **P** 23 46 55.1 +0.7
MLY IAmb IAmb 23 47 04.6
comp=Z,5.3nm,1.2s
MLY Manley 60.02 337 P **P** 23 46 55.4 +1.0
baz=118
P17K Kvichak River 60.12 330 P **P** 23 46 56.3 +1.2
baz=109
M19K Big River Lodg 60.16 333 P **P** 23 46 56.4 +1.1
baz=113
L20K Farewell, AK 60.16 334 P **P** 23 46 56.0 +0.6
baz=114
N18K Kilae Creek 60.37 331 P **P** 23 46 57.2 +0.4
baz=111
L19K White Mountain 60.47 333 P **P** 23 46 58.6 +1.2
baz=112
K20K Telida 60.60 335 P **P** 23 46 58.4 +0.1
K20K IAmb IAmb 23 47 09.6
comp=Z,4.8nm,1.1s
K20K Telida 60.60 335 P **P** 23 46 59.0 +0.7
baz=114
O17K Koliganek Bris 60.63 330 P **P** 23 46 59.7 +1.2
baz=109
H22K Ishtalitna Cre 60.67 338 P **P** 23 46 59.5 +0.7
baz=118
P16K Nushagak River 60.83 329 P **P** 23 47 01.5 +1.6
baz=108
COLD Coldfoot 60.90 339 P **P** 23 47 01.9 +1.6
baz=120
J20K Nowinta River 60.97 335 P **P** 23 47 01.0 +0.2
J20K IAmb IAmb 23 47 09.9
comp=Z,4.5nm,1.1s
J20K Nowinta River 60.97 335 P **P** 23 47 01.0 +0.2
baz=114
O16K Kokwok River B 61.05 330 P **P** 23 47 02.3 +0.9
baz=108
H21K Melozitna Rive 61.08 337 P **P** 23 47 02.3 +0.7
baz=116
TOLK Toolik Lake Re 61.42 341 P **P** 23 47 04.7 +0.8
baz=121
N16K Nishlik Lake 61.65 331 P **P** 23 47 06.3 +0.8
baz=108
D23K Nanushuk River 61.93 341 P **P** 23 47 08.2 +1.0
baz=120
PLCA Paso Flores 62.22 157 P **P** 23 47 09.4 -0.2
comp=Z,1.6nm,0.8s,baz=348,slow=11,SNR=2.8
comp=Z,1.6nm,0.8s
C23K Itkillik River 62.35 342 P **P** 23 47 11.5 +1.4
baz=121
A21K Barrow 64.82 342 P **P** 23 47 27.6 +1.3
baz=115
WRA Warramunga Arr 130.25 257 PKP **PKPdf** 23 55 59.1 +0.1
comp=Z,0.4nm,0.9s,baz=94,slow=2.8,SNR=1.2

NEIC ***28*** *23:51:00.4±1.9,21°.19S±0°.03×68°.69W±0°.07,h114*^{km}*±8*^{km}*, mb4.0/8,ML4.3(GUC),Error ellipse: s-maj=10.1km s-min=2.9km az=75.0*
GUC ***28*** *23:51:00.4±0.5,21°.19S×68°.64W,h121*^{km}*±4*^{km}*,ML4.3*
IDC ***28*** *23:51:01.1±1.2,21°.25S×68°.20W,h106*^{km}*±13*^{km}*,mb3.7/2, mbtmp4.1/6,Error ellipse: s-maj=40.8km s-min=13.6km az=113.0*

ISC 28 23:50:59.9±0.7,21°.18S±0°.04×68°.74W±0°.07,h128^{km}**±7**^{km}**, n65,σ0.98/68,3C-4D,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
PB02	**IPOC Station P**	**1.09**	**262**		**Pn**	**23 51 23.9**	**+0.4**
PB02				Sn	**Sn**	**23 51 41.3**	**-0.1**
PB02	**IPOC Station P**	**1.09**	**262**	⇑*i*P	**Pn**	**23 51 23.9**	**+0.4**
PB02				*i* S	**Sn**	**23 51 41.6**	**+0.2**
PB02				IAML		23 51 43.9	
	comp=E,8μm,0.5s						
PB08	**IPOC Station P**	**1.10**	**339**	Pn	**Pn**	**23 51 24.2**	**+0.2**
PB08				Sn	**Sn**	**23 51 41.9**	**-0.4**

PB08	**IPOC Station P**	**1.10**	**339**	⇓*iP*		**Pn**	**23 51 24.2**	**+0.2**
PB08				*iS*		**Sn**	**23 51 42.5**	**+0.2**
PATCX	**Punta Patache**	**1.37**	**285**			**Pn**	**23 51 27.1**	**+0.7**
PATCX					Sn	**Sn**	**23 51 46.8**	**+0.3**
PATCX	**Punta Patache**	**1.37**	**285**	⇑*iP*		**Pn**	**23 51 26.8**	**+0.4**
PATCX				*iS*		**Sn**	**23 51 47.0**	**+0.5**
PATCX				IAML			23 51 49.3	
	comp=N,8μm,0.3s							
LVC	**Limon Verde**	**1.43**	**186**	P		**Pn**	**23 51 27.7**	**+0.2**
	comp=N,210nm,0.4s,baz=38,slow=12,SNR=461							
LVC				S		**Sn**	**23 51 48.4**	**0.0**
	comp=N,368nm,0.3s,baz=266,slow=22,SNR=106							
LVC	**Limon Verde**	**1.43**	**186**	*iP*		**Pn**	**23 51 27.3**	**-0.1**
LVC				*iS*		**Sn**	**23 51 48.4**	**0.0**
TA01	**Diego Aracena**	**1.48**	**294**			**Pn**	**23 51 27.9**	**+0.4**
TA01	**Diego Aracena**	**1.48**	**294**	*iP*		**Pn**	**23 51 27.9**	**+0.4**
TA01				*iS*		**Sn**	**23 51 48.6**	**0.0**
TA01				IAML			23 51 50.2	
	comp=E,5μm,0.4s							
GO01	**Chusmiza**	**1.56**	**344**			**Pn**	**23 51 29.2**	**+0.1**
GO01	**Chusmiza**	**1.56**	**344**	⇓*iP*		**Pn**	**23 51 29.2**	**+0.1**
GO01				IAML			23 51 54.0	
	comp=N,4μm,0.2s							
TA02	**Huaiquique**	**1.58**	**305**			**Pn**	**23 51 29.0**	**+0.2**
TA02	**Huaiquique**	**1.58**	**305**	*iP*		**Pn**	**23 51 29.1**	**+0.3**
TA02				IAML			23 51 53.9	
	comp=N,6μm,0.1s							
PB11	**IPOC Station P**	**1.65**	**329**	Pn		**Pn**	**23 51 29.6**	**-0.1**
PB11	**IPOC Station P**	**1.65**	**329**	⇓*iP*		**Pn**	**23 51 29.7**	**-0.1**
PB11				*iS*		**Sn**	**23 51 52.6**	**+0.1**
PB11				IAML			23 51 54.3	
	comp=E,4μm,0.3s							
PB06	**IPOC Station P**	**1.70**	**207**	Pn		**Pn**	**23 51 30.5**	**+0.2**
PB06	**IPOC Station P**	**1.70**	**207**	⇑*iP*		**Pn**	**23 51 30.7**	**+0.4**
PB06				*iS*		**Sn**	**23 51 53.7**	**+0.1**
PB06				IAML			23 51 54.6	
	comp=E,3μm,0.3s							
PB04	**IPOC Station P**	**1.74**	**228**			**Pn**	**23 51 30.7**	**-0.1**
PB04	**IPOC Station P**	**1.74**	**228**	*iP*		**Pn**	**23 51 30.9**	**+0.2**
PB04				*iS*		**Sn**	**23 51 54.1**	**-0.2**
PB04				IAML			23 52 01.8	
	comp=N,1μm,0.2s							
AF01	**San Pedro de A**	**1.84**	**164**			**Pn**	**23 51 32.9**	**+0.9**
PB15	**IPOC Station P**	**2.13**	**198**	Pn		**Pn**	**23 51 36.1**	**+0.6**
PB15	**IPOC Station P**	**2.13**	**198**	*iP*		**Pn**	**23 51 35.9**	**+0.3**
PB15				*iS*		**Sn**	**23 52 03.3**	**+0.4**
PB10	**IPOC Station P**	**2.87**	**216**	Pn		**Pn**	**23 51 44.8**	**+0.1**
PB10	**IPOC Station P**	**2.87**	**216**	*iP*		**Pn**	**23 51 45.0**	**+0.3**
PB16	**IPOC Station P**	**2.92**	**346**	Pn		**Pn**	**23 51 46.6**	**+0.6**
PB16	**IPOC Station P**	**2.92**	**346**	⇓*iP*		**Pn**	**23 51 46.7**	**+0.6**
PB12	**IPOC Station P**	**2.96**	**329**	Pn		**Pn**	**23 51 45.0**	**-1.0**
PB12	**IPOC Station P**	**2.96**	**329**	*iP*		**Pn**	**23 51 45.0**	**-1.0**
PB12				IAML			23 52 28.3	
	comp=N,437nm,0.3s							
AP01	**Chacalluta**	**3.17**	**331**	Pn		**Pn**	**23 51 47.9**	**-0.8**
GO02	**Mina Guanaco**	**4.04**	**191**	Pn		**Pn**	**23 51 59.5**	**-0.9**
GO02	**Mina Guanaco**	**4.04**	**191**	*eP*		**Pn**	**23 51 59.6**	**-0.8**
LPAZ	**La Paz**	**4.90**	**7**	P		**Pn**	**23 52 13.7**	**+1.5**
	comp=N,26nm,0.4s,baz=178,slow=7.7,SNR=145							
LPAZ	**La Paz**	**4.90**	**7**	Pn		**Pn**	**23 52 13.1**	**+0.9**
AC01	**Pan de Azucar**	**5.23**	**199**	Pn		**Pn**	**23 52 14.3**	**-1.7**
AC02	**Maricunga**	**5.64**	**184**	Pn		**Pn**	**23 52 21.4**	**-0.6**
GO03	**Copiap**	**6.53**	**192**	Pn		**Pn**	**23 52 31.2**	**-2.3**
CO01	**Juntas del Tor**	**8.85**	**188**	Pn		**Pn**	**23 53 02.7**	**-2.2**
SIV	**San Ignacio**	**8.92**	**56**	P		**Pn**	**23 53 01.8**	**-3.9**
	comp=N,21nm,0.5s,baz=245,slow=14,SNR=118							
MT02	**Curacav**	**12.22**	**190**	Pn		**Pn**	**23 53 47.9**	**-1.8**
MT01	**Popeta**	**12.83**	**189**	Pn		**Pn**	**23 53 56.7**	**-0.8**
H03N1	**Juan Fernandez**	**15.18**	**214**	T		T	00 10 09.2	
	baz=34,slow=72,SNR=3.2							
H03N2	**Juan Fernandez**	**15.19**	**214**	T		T	00 10 07.3	
	baz=34,slow=72,SNR=4.3							
H03N3	**Juan Fernandez**	**15.20**	**214**	T		T	00 10 06.3	
	baz=34,slow=72,SNR=2.9							
ITAB	**Concordia**	**16.30**	**115**			**Pn**	**23 54 41.7**	**+0.2**
ITAB				IAmb		IAmb	23 54 42.4	
	comp=Z,7.3nm,0.9s							
PLTB	**Pedras Altas**	**17.15**	**131**	P		**P**	**23 54 49.9**	**-1.6**
TRQA	**Tornquist**	**17.81**	**162**	P		**P**	**23 54 57.7**	**-0.8**
TRQA				IAmb		IAmb	23 55 01.1	
	comp=Z,6.7nm,0.7s							
PLCA	**Paso Flores**	**19.55**	**184**	P		**Pn**	**23 55 20.3**	**+0.1**
	comp=Z,2.9nm,0.7s,baz=358,slow=12,SNR=5.6							
PLCA	**Paso Flores**	**19.55**	**184**	P		**Pn**	**23 55 18.7**	**-1.5**
PLCA				IAmb		IAmb	23 55 22.8	
	comp=Z,13nm,1.3s							
BDFB	**Brasilia**	**20.42**	**78**	P		**P**	**23 55 25.9**	**-1.3**
	comp=Z,1.9nm,0.4s,baz=246,slow=12,SNR=4.0							
BDFB	**Brasilia**	**20.42**	**78**	P		**P**	**23 55 25.9**	**-1.3**
BDFB				IAmb		IAmb	23 55 47.1	
	comp=Z,9.7nm,1.4s							
SNAA	**Sanae**	**62.53**	**161**	P		**P**	**00 01 11.7**	**+2.0**
	comp=Z,1.5nm,0.6s,baz=289,slow=7.2,SNR=13							
	comp=Z,1.5nm,0.6s							
SNAA	**Sanae**	**62.53**	**161**	P		**P**	**00 01 12.0**	**+2.3**
QSPA	**South Pole Qui**	**69.01**	**180**	P		**P**	**00 01 53.7**	**+2.3**
TORD	**Torodi Ar. Bea**	**77.10**	**70**	P		**P**	**00 02 40.4**	**+0.7**
	comp=Z,0.9nm,0.6s,baz=258,slow=5.6,SNR=12							
	comp=Z,0.9nm,0.6s							
TORD	**Torodi Ar. Bea**	**77.10**	**70**	P		**P**	**00 02 40.2**	**+0.6**
H11S2	**WAKE ISLAND Hyl**	**27.99**	**277**	T		T	02 30 04.6	
	baz=102,slow=74,SNR=9.1							
H11S1	**WAKE ISLAND Hyl**	**28.00**	**277**	T		T	02 29 55.9	
	baz=102,slow=74,SNR=7.3							
H11S3	**WAKE ISLAND Hyl**	**28.01**	**277**	T		T	02 30 02.1	
	baz=102,slow=74,SNR=7.8							
H11N3	**WAKE ISLAND Hyl**	**28.06**	**279**	T		T	02 30 05.2	
	baz=103,slow=74,SNR=8.4							
H11N2	**WAKE ISLAND Hyl**	**28.08**	**279**	T		T	02 30 06.3	
	baz=103,slow=74,SNR=5.1							
H11N1	**WAKE ISLAND Hyl**	**28.08**	**279**	T		T	02 30 07.0	
	baz=103,slow=74,SNR=5.3							
MKAR	**Makanchi Array**	**145.28**	**36**	PKPbc		**PKiKP**	**00 10 24.8**	**-1.7**
	comp=Z,0.5nm,0.9s,baz=5.7,slow=4.3,SNR=2.2							
MKAR	**Makanchi Array**	**145.28**	**36**			**PKPab**	**00 10 23.6**	**+0.8**
PZH	**PanZhiHua**	**169.81**	**57**	PKP		**PKPdf**	**00 10 51.0**	**-2.0**

IDC 28 23:55:14.5±3.9, 24°.65N×94°.95E, h135km±41km, mb3.1/4, mbtmp3.5/5, Error ellipse: s-maj=121.3km s-min=22.1km az=56.0, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**7.19**	**148**	P	Pn	23 56 57.1	-0.1
	0.8nm,0.4s,baz=323,slow=12,SNR=5.1						
MKAR	**Makanchi Array**	**24.31**	**339**	P	P	00 00 19.6	+0.1
	0.5nm,0.5s,baz=147,slow=9.1,SNR=6.9						
	0.5nm,0.5s						
WRA	**Warramunga Arr**	**58.60**	**136**	P	P	00 04 57.6	0.0
	0.4nm,0.8s,baz=322,slow=7.6,SNR=4.9						
	0.4nm,0.8s						
HFS	**Hagfors**	**64.64**	**327**	P	P	00 05 37.7	+0.2
	0.5nm,0.5s,baz=104,slow=6.1,SNR=5.6						
	0.5nm,0.5s						
NOA	**NORSAR Array B**	**65.76**	**328**	P	P	00 05 44.4	-0.4
	0.2nm,0.5s,baz=82,slow=6.3,SNR=1.9						
	0.2nm,0.5s						

OTT 29 00:07:46.7±0.2, 76°.40N×116°.28W, h18km, ML3.6/6, 83km east from Mould Bay, Nt Sverdrup Seismic Zone., Queen Elizabeth Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
A36M	**Sachs Harbour**	**5.06**	**213**	PN	Pn	00 09 00.6	-0.9
A36M				SN	Sn	00 09 56.4	-3.0
A36M				Trac		00 09 58.2	
	comp=Z,17nm,0.3s						
RES	**Resolute Bay**	**5.61**	**97**	PN	Pn	00 09 08.7	-0.3
RES				SN	Sn	00 10 09.1	-3.7
RES				Trac		00 10 16.7	
	comp=Z,3.6nm,0.2s						
C36M	**Paulatuk**	**7.44**	**202**	PN	Pn	00 09 34.6	+0.5
C36M				SN	Sn	00 10 52.8	-5.2
C36M				Trac		00 11 16.8	
	comp=Z,6.2nm,0.4s						
CB31	**Cambridge Bay**	**8.01**	**150**	PN	Pn	00 09 41.2	-0.7
CB31				SN	Sn	00 11 06.8	-4.9
CB31				Trac		00 11 15.6	
	comp=Z,10nm,0.2s						
KUKN	**Kugluktuk,NWT**	**8.63**	**177**	PN	Pn	00 09 49.0	-1.4
KUKN				SN	Sn	00 11 20.2	-7.0
KUKN				Trac		00 12 30.1	
	comp=Z,7.7nm,0.5s						
INK	**Inuvik**	**9.61**	**221**	PN	Pn	00 10 02.7	-1.1
INK				SN	Sn	00 11 43.8	-7.2
INK				Trac		00 11 50.3	
	comp=Z,1.8nm,0.1s						

IDC 29 00:18:36.3±70.0, 10°.80S×168°.38E, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=1188.0km s-min=128.6km az=61.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**32.43**	**226**	P	P	00 25 08.6	+0.2
	1.5nm,0.5s,baz=27,slow=11,SNR=4.0						
	1.5nm,0.5s						
WRA	**Warramunga Arr**	**34.00**	**250**	P	P	00 25 22.8	+0.6
	0.3nm,0.8s,baz=82,slow=9.0,SNR=6.0						
	0.3nm,0.8s						
ASAR	**Alice Springs**	**35.22**	**244**	P	P	00 25 31.8	-0.9
	1.0nm,0.9s,baz=80,slow=7.9,SNR=5.8						
	1.0nm,0.9s						

SOME ***29*** *00:19:31.5, 39°.53N×73°.28E, h5km*
ISU ***29*** *00:19:32.3, 39°.51N×73°.57E, h5km*
NNC ***29*** *00:19:34.2±1.1, 39°.57N×73°.38E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=8.1km s-min=5.5km az=170.0*
KRNET ***29*** *00:19:34.3±0.1, 39°.52N×73°.39E, mb3.1*

ISC 29 00:19:35.1±1.1, 39°.61N±0°.05×73°.43E±0°.03, h10km, n49, σ2s45/83, 20C-15D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.04**	**332**	⇓*iP*	**Pn**	**00 19 55.4**	**-0.5**
	baz=35						
OHH				⇓*iS*	**Sn**	**00 20 11.1**	**+0.6**
	baz=35						
OHH	**Osh**	**1.04**	**332**	P	**Pn**	**00 19 55.0**	**-0.9**
OHH				S	**Sn**	**00 20 12.9**	**+2.4**
DRK	**Karamyk**	**1.27**	**265**	⇑*iP*	**Pg**	**00 19 57.9**	**-1.6**
	baz=69						
DRK				⇑*iS*	**Sn**	**00 20 14.8**	**-1.6**
	baz=69						
FRG	**Fergana**	**1.48**	**302**	P	**Pg**	**00 20 03.5**	**0.0**
FRG				S	**Sg**	**00 20 25.9**	**+3.2**
CHMI	**Chimion**	**1.61**	**295**	P	**Pg**	**00 20 05.4**	**-0.6**
CHMI				S	**Sg**	**00 20 29.2**	**+2.3**
BTK	**Batken**	**2.06**	**283**	⇑*eP*	**Pb**	**00 20 12.1**	**-0.6**
	baz=86						
BTK				⇑*eS*	**Sg**	**00 20 39.9**	**-1.5**
	baz=86						
BTK	**Batken**	**2.06**	**283**	P	**Pg**	**00 20 12.7**	**-2.0**
BTK				S	**Sg**	**00 20 44.0**	**+2.6**
MINT	**Mingtut**	**2.07**	**295**	P	**Pg**	**00 20 13.5**	**-1.3**
MINT				S	**Sg**	**00 20 44.6**	**+2.9**
ARLS	**Aral**	**2.35**	**16**	⇓*eP*	**Pb**	**00 20 17.5**	**-0.1**
	baz=17						
ARLS				⇓*iS*	**Sb**	**00 20 49.1**	**+2.3**
	baz=17						
GAR	**Garm**	**2.49**	**257**	⇑*eP*	**Pb**	**00 20 17.7**	**-2.4**
	baz=59						
GAR				⇑*iS*	**Sb**	**00 20 49.0**	**-1.9**
	baz=59						
TRKS	**Terek-Say**	**2.60**	**318**	⇓*iP*	**Pb**	**00 20 19.5**	**-2.3**
	baz=20						
TRKS				⇓*iS*	**Sb**	**00 20 52.6**	**-1.2**
	baz=20						
UCH	**Uchtor**	**2.74**	**17**	⇓*eP*	**Pb**	**00 20 23.5**	**-1.0**
	baz=17						
UCH				⇓*iS*	**Sb**	**00 20 59.2**	**+0.9**
	baz=17						
EKS2	**Erkin-Say**	**3.06**	**5**	⇑*iP*	**Pb**	**00 20 27.5**	**-2.2**
	baz=5.0						
EKS2				⇑*iS*	**Sb**	**00 21 06.1**	**-1.1**
	baz=5.0						
AAK	**Ala-Archa**	**3.13**	**14**	⇑*iP*	**Pb**	**00 20 28.7**	**-2.2**
	baz=15						
AAK				⇑*iS*	**Sb**	**00 21 08.1**	**-1.1**
	baz=15						
MRKS	**Merke**	**3.14**	**357**	*eP*	**Pb**	**00 20 32.2**	**+1.2**
	2.7nm,0.3s						
MRKS				*eS*	**Sg**	**00 21 15.8**	**-0.1**
	36nm,0.4s						
MRKS	**Merke**	**3.14**	**357**	Pg	**Pb**	**00 20 32.3**	**+1.2**
	2.7nm,0.3s						
MRKS				Lg	Lg	00 21 15.8	
	36nm,0.4s						
KBK	**Karagaybulak**	**3.25**	**20**	⇑*iP*	**Pb**	**00 20 30.1**	**-2.9**
	baz=20						
KBK				⇑*iS*	**Sb**	**00 21 11.0**	**-1.8**
	baz=20						
ULHL	**Ulahol**	**3.39**	**38**	⇑*eP*	**Pb**	**00 20 32.0**	**-3.3**
	baz=37						
ULHL				⇑*iS*	**Sb**	**00 21 14.3**	**-2.3**
	baz=37						
BOOM	**Boomskoye usch**	**3.45**	**33**	⇓*iP*	**Pb**	**00 20 33.0**	**-3.3**
	baz=32						
BOOM				⇓*iS*	**Sb**	**00 21 15.8**	**-2.5**
	baz=32						
CHMS	**Chumysh**	**3.53**	**16**	⇑Pn	**Pn**	**00 20 32.0**	**+1.9**
	3.4nm,0.9s						
CHMS				⇓Lg	Lg	00 21 27.7	
	19nm,1.0s						
TKM2	**Tokmak 2**	**3.69**	**26**	⇓Pg	**Pb**	**00 20 41.6**	**+1.1**
	3.1nm,1.1s						
TKM2				⇑Lg	Lg	00 21 33.8	
	8.0nm,0.6s						
USP	**Ospenovka**	**3.74**	**12**	⇑*iP*	**Pn**	**00 20 36.9**	**+4.0**
	baz=12						
USP				⇑*iS*	**Sb**	**00 21 22.7**	**-4.0**
	baz=12						
KDJ	**Kajisay**	**3.80**	**47**	⇓*eP*	**Pn**	**00 20 37.7**	**+3.9**
	baz=47						
KDJ				⇓*iS*	**Sn**	**00 21 24.0**	**+5.4**
	baz=47						
KST	**Kastek**	**3.92**	**28**	*eP*	**Pb**	**00 20 46.9**	**+2.5**
	2.4nm,0.3s						
KST				*eS*	**Sg**	**00 21 41.2**	**+0.1**
	13nm,0.4s						
KST	**Kastek**	**3.92**	**28**	Pg	**Pb**	**00 20 46.9**	**+2.5**
KST				Lg	Lg	00 21 41.3	
SGDS	**Sogindy**	**3.94**	**13**	*eP*	**Pb**	**00 20 47.2**	**+2.5**
	2.3nm,0.6s						
SGDS				*eS*	**Sg**	**00 21 41.8**	**+0.1**
	6.7nm,0.7s						
SGDS	**Sogindy**	**3.94**	**13**	Pg	**Pb**	**00 20 47.2**	**+2.5**
	2.3nm,0.6s						
SGDS				Lg	Lg	00 21 41.8	
	6.7nm,0.7s						
DGS	**Degeres**	**4.03**	**25**	*eP*	**Pb**	**00 20 47.8**	**+1.5**
	4.7nm,0.4s						
DGS				*eS*	**Sg**	**00 21 42.4**	**-2.2**
	11nm,0.7s						
DGS	**Degeres**	**4.03**	**25**	Pg	**Pb**	**00 20 47.8**	**+1.5**
	4.7nm,0.4s						
DGS				Lg	Lg	00 21 42.4	
	11nm,0.7s						
KK31	**Karatay Array**	**4.13**	**329**	⇑Pn	**Pn**	**00 20 39.4**	**+1.2**
	0.8nm,0.5s,baz=168,slow=17,SNR=9.2						
KK31				⇓Sn	**Sn**	**00 21 29.5**	**+2.9**
	0.9nm,0.3s,baz=154,slow=17,SNR=6.9						
KK31				⇑Lg	Lg	00 21 47.3	
	2.3nm,0.5s						
MTBS	**Maitube**	**4.18**	**32**	*eP*	**Pb**	**00 20 50.9**	**+2.1**
	3.0nm,0.3s						
MTBS				*eS*	**Sg**	**00 21 47.8**	**-1.5**
	4.2nm,0.1s						
MTBS	**Maitube**	**4.18**	**32**	Pg	**Pb**	**00 20 50.9**	**+2.1**
	3.0nm,0.3s						
MTBS				Lg	Lg	00 21 47.8	
	4.2nm,0.1s						
TNSS	**Tian-Shan**	**4.33**	**37**	*eP*	**Pb**	**00 20 53.7**	**+2.3**
	3.2nm,0.5s						
TNSS				*eS*	**Sg**	**00 21 52.9**	**-1.1**
	4.8nm,0.6s						
TNSS	**Tian-Shan**	**4.33**	**37**	Pg	**Pb**	**00 20 53.7**	**+2.3**
	3.2nm,0.5s						
TNSS				Lg	Lg	00 21 52.9	
	4.8nm,0.6s						
BRLS	**Borolday**	**4.36**	**323**	*eP*	**Pb**	**00 20 50.3**	**-1.5**
	1.7nm,0.3s						
BRLS				*eS*	**Sb**	**00 21 46.9**	**+2.4**
	4.1nm,0.5s						
BRLS	**Borolday**	**4.36**	**323**	Pg	**Pb**	**00 20 50.3**	**-1.5**
	1.7nm,0.3s						
BRLS				Lg	Lg	00 21 46.9	
	4.1nm,0.5s						
KRBS	**Karabastau**	**4.42**	**22**	*eP*	**Pb**	**00 20 55.9**	**+3.1**
	0.1nm,0.1s						
KRBS				*eS*	**Sg**	**00 21 56.4**	**-0.5**
	8.2nm,1.3s						
KRBS	**Karabastau**	**4.42**	**22**	Pg	**Pb**	**00 20 55.9**	**+3.1**
	0.1nm,0.1s						
KRBS				Lg	Lg	00 21 56.4	
	8.2nm,1.3s						
KTBS	**Karatobe**	**4.77**	**30**	*eP*	**Pb**	**00 21 01.5**	**+2.7**
	2.4nm,0.6s						
KTBS				*eS*	**Sg**	**00 22 06.0**	**-2.1**
	9.1nm,0.7s						
KTBS	**Karatobe**	**4.77**	**30**	Pg	**Pb**	**00 21 01.5**	**+2.7**
	2.4nm,0.6s						
KTBS				Lg	Lg	00 22 06.0	
	9.1nm,0.7s						
KUU	**Kurty**	**4.80**	**26**	*eP*	**Pb**	**00 21 02.4**	**+3.1**
	2.1nm,0.4s						
KUU				*eS*	**Sg**	**00 22 07.9**	**-1.3**
	11nm,0.6s						
KUU	**Kurty**	**4.80**	**26**	Pg	**Pb**	**00 21 02.4**	**+3.1**
	2.1nm,0.4s						
KUU				Lg	Lg	00 22 07.9	
	11nm,0.6s						
CHKK	**Chushkaly**	**5.01**	**31**	*eP*	**Pb**	**00 21 05.8**	**+3.0**
	0.9nm,0.1s						
CHKK				*eS*	**Sg**	**00 22 13.1**	**-2.6**
	3.6nm,0.3s						
BTLS	**Baital**	**5.45**	**5**	*eP*	**Pg**	**00 21 15.2**	**-4.2**
	1.3nm,0.5s						
BTLS				*eS*	**Sg**	**00 22 29.8**	**-0.1**
	3.6nm,0.6s						
BTLS	**Baital**	**5.45**	**5**	Pg	**Pg**	**00 21 15.2**	**-4.2**
	1.3nm,0.5s						
BTLS				Lg	Lg	00 22 29.8	
	3.6nm,0.6s						
KPKS	**Kokpek**	**5.51**	**44**	*eP*	**Pb**	**00 21 15.7**	**+4.2**
	3.3nm,0.3s						
KPKS				*eS*	**Sg**	**00 22 30.8**	**-1.2**
	5.0nm,0.5s						
KPKS	**Kokpek**	**5.51**	**44**	Pg	**Pb**	**00 21 15.7**	**+4.2**
	3.3nm,0.3s						
KPKS				Lg	Lg	00 22 30.8	
	5.0nm,0.5s						
ARXS	**Arharly**	**5.65**	**34**	*eP*	**Pg**	**00 21 18.9**	**-4.3**
	3.9nm,0.7s						
ARXS				*eS*	**Sg**	**00 22 36.1**	**-0.3**
	5.4nm,0.6s						
ARXS	**Arharly**	**5.65**	**34**	Pg	**Pg**	**00 21 18.9**	**-4.3**
	3.9nm,0.7s						
ARXS				Lg	Lg	00 22 36.1	
	5.4nm,0.6s						

IDC ***29*** *00:27:21.6±1.3, 39°.21N×73°.69E, h0km, mb3.5/8, mbtmp3.6/13, ML3.0/5, Error ellipse: s-maj=23.3km s-min=20.8km az=145.0*
SOME ***29*** *00:27:22.1, 39°.47N×73°.67E, h15km*
KRNET ***29*** *00:27:22.2±0.1, 39°.44N×73°.73E, mb4.2*
NNC ***29*** *00:27:27.9±1.1, 39°.79N×73°.42E, h0km, mb4.5, mpv4.1, Error ellipse: s-maj=8.8km s-min=4.4km az=177.0*

ISC 29 00:27:23.1±1.1, 39°.35N±0°.05×73°.54E±0°.03, h3km±7km, n93, σ2s48/130, mb3.5/8, 39C-14D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.31**	**334**	⇓*iP*	**Pn**	**00 27 47.0**	**-1.4**
	baz=27						
OHH				⇓*iS*	**Sb**	**00 28 05.2**	**-0.5**
	baz=27						
DRK	**Karamyk**	**1.35**	**276**	⇑*iP*	**Pg**	**00 27 50.1**	**+1.0**
	baz=72						
DRK				⇑*iS*	**Sg**	**00 28 10.9**	**+4.2**
	baz=72						
BTK	**Batken**	**2.22**	**290**	⇑*iP*	**Pb**	**00 28 03.9**	**0.0**
	baz=86						
BTK				⇑*iS*	**Sg**	**00 28 34.3**	**-0.1**
	baz=86						
GAR	**Garm**	**2.53**	**263**	⇓*iP*	**Pb**	**00 28 08.7**	**-0.5**
	baz=62						
GAR				⇓*iS*	**Sg**	**00 28 43.0**	**-1.4**
	baz=62						
AML	**Almayashu**	**2.78**	**2**	P	**Pn**	**00 28 11.3**	**+2.4**
	SNR=146						
TRKS	**Terek-Say**	**2.85**	**321**	⇑*iP*	**Pn**	**00 28 10.7**	**+1.1**
	baz=17						
TRKS				⇑*iS*	**Sn**	**00 28 45.8**	**+1.3**
	baz=17						
UCH	**Uchtor**	**2.97**	**14**	P	**Pn**	**00 28 13.2**	**+1.6**
	SNR=53						
UCH	**Uchtor**	**2.97**	**14**	⇑*iP*	**Pn**	**00 28 11.5**	**0.0**
	baz=12						
UCH				⇑*iS*	**Sn**	**00 28 46.9**	**-1.0**
	baz=12						
EKS2	**Erkin-Say**	**3.32**	**3**	P	**Pn**	**00 28 19.3**	**+3.3**
	SNR=38						
EKS2	**Erkin-Say**	**3.32**	**3**	⇓*iP*	**Pn**	**00 28 16.3**	**+0.3**
	baz=1.0						
EKS2				⇓*iS*	**Sn**	**00 28 55.6**	**-0.3**
	baz=1.0						
AAK	**Ala-Archa**	**3.37**	**12**	P	**Pn**	**00 28 19.1**	**+2.4**
	SNR=25						
AAK	**Ala-Archa**	**3.37**	**12**	Pn	**Pn**	**00 28 19.8**	**+3.1**
	9.4nm,0.3s,baz=170,slow=5.9,SNR=25						
AAK				Sn	**Sn**	**00 29 00.9**	**+3.7**
	6.2nm,0.3s,baz=148,slow=19,SNR=1.9						
	36nm,0.4s						
MRKS	**Merke**	**3.40**	**356**	*eP*	**Pn**	**00 28 19.9**	**+2.7**
	52nm,0.5s						
MRKS				*eS*	**Sb**	**00 29 02.3**	**-3.6**
	144nm,0.3s						
MRKS	**Merke**	**3.40**	**356**	Pg	**Pn**	**00 28 21.0**	**+3.8**
	52nm,0.5s						
MRKS				Lg	Lg	00 29 02.3	
	144nm,0.3s						
KBK	**Karagaybulak**	**3.47**	**17**	P	**Pn**	**00 28 21.9**	**+3.7**
	SNR=8.6						
KBK	**Karagaybulak**	**3.47**	**17**	⇑*iP*	**

KDJ				⇑*i*S		Sn	00 29 08.7	-2.2	
	baz=43								
USP	**Ospenovka**	**3.98**	**10**	P		Pn	00 28 29.2	+4.1	
	SNR=12								
USP	**Ospenovka**	**3.98**	**10**	⇑*i*P		Pn	00 28 25.3	+0.2	
	baz=8.0								
USP				⇑*i*S		Sn	00 29 11.3	-0.9	
	baz=8.0								
TARG	**Taragay, Kyrgy**	**4.03**	**52**	⇑*i*P		Pn	00 28 25.1	-0.9	
	baz=52								
TARG				⇑*i*S		Sn	00 29 10.9	-3.0	
	baz=52								
KST	**Kastek**	**4.12**	**26**	*e*P		Pb	00 28 34.3	-2.0	
	30nm,0.6s								
KST				*e*S		Sb	00 29 27.1	+0.6	
	138nm,0.8s								
KST	**Kastek**	**4.12**	**26**	Pg		Pb	00 28 35.4	-1.0	
	30nm,0.6s								
KST				Lg		Lg	00 29 27.1		
	138nm,0.8s								
SGDS	**Sogindy**	**4.18**	**11**	*e*P		Pb	00 28 36.8	-0.5	
	33nm,0.6s								
SGDS				*e*S		Sb	00 29 31.2	+2.9	
	54nm,0.6s								
SGDS	**Sogindy**	**4.18**	**11**	Pg		Pb	00 28 35.0	-2.3	
	33nm,0.6s								
SGDS				Lg		Lg	00 29 26.3		
	54nm,0.6s								
DGS	**Degeres**	**4.24**	**23**	*e*P		Pb	00 28 38.1	-0.3	
	70nm,0.6s								
DGS				*e*S		Sb	00 29 33.8	+3.8	
	101nm,0.7s								
DGS	**Degeres**	**4.24**	**23**	Pg		Pb	00 28 37.4	-1.0	
	70nm,0.6s								
DGS				Lg		Lg	00 29 30.4		
	101nm,0.7s								
MTBS	**Maitube**	**4.36**	**29**	*e*P		Pb	00 28 39.9	-0.5	
	43nm,0.3s								
MTBS				*e*S		Sb	00 29 36.5	+3.0	
	84nm,0.5s								
MTBS	**Maitube**	**4.36**	**29**	Pg		Pb	00 28 40.2	-0.2	
	43nm,0.3s								
MTBS				Lg		Lg	00 29 35.3		
	84nm,0.5s								
KK31	**Karatay Array**	**4.39**	**330**	⇑Pn		Pn	00 28 31.2	+0.6	
	3.9nm,0.3s,baz=134,slow=13,SNR=51								
KK31				⇑Pg		Pb	00 28 41.8	+0.9	
	15nm,0.6s,baz=149,slow=16,SNR=8.0								
KK31				⇓Sn		Sn	00 29 19.9	-2.4	
	11nm,0.3s,baz=66,slow=45,SNR=4.2								
KK31				⇑Lg		Lg	00 29 35.4		
	25nm,0.5s,baz=142,slow=30,SNR=2.5								
KKAR	**Karatay Array**	**4.39**	**330**	⇑*i*P		Pn	00 28 32.3	+1.6	
	baz=28								
KKAR				⇑*i*S		Sn	00 29 23.6	+1.3	
	baz=28								
TNSS	**Tian-Shan**	**4.49**	**34**	*e*P		Pb	00 28 43.2	+0.3	
	42nm,0.4s								
TNSS				*e*S		Sb	00 29 41.4	+3.9	
	70nm,0.7s								
TNSS	**Tian-Shan**	**4.49**	**34**	Pg		Pb	00 28 44.2	+1.4	
	42nm,0.4s								
TNSS				Lg		Lg	00 29 41.9		
	70nm,0.7s								
AAA	**Alma-Ata**	**4.62**	**32**	*e*P		Pb	00 28 45.1	+0.3	
	56nm,0.2s								
AAA				*e*S		Sb	00 29 45.5	+4.6	
	22nm,0.5s								
AAA	**Alma-Ata**	**4.62**	**32**	Pg		Pb	00 28 46.0	+1.2	
	56nm,0.2s								
AAA				Lg		Lg	00 29 45.5		
	22nm,0.5s								
BRLS	**Borolday**	**4.62**	**324**	*e*P		Pb	00 28 45.0	+0.2	
	3.7nm,0.6s								
BRLS				*e*S		Sb	00 29 44.9	+4.1	
	74nm,0.4s								
BRLS	**Borolday**	**4.62**	**324**	Pg		Pn	00 28 38.9	+5.1	
	4.1nm,0.2s								
BRLS				Lg		Lg	00 29 33.3		
	74nm,0.4s								
KRBS	**Karabastau**	**4.63**	**20**	*e*P		Pb	00 28 44.9	-0.1	
	28nm,0.6s								
KRBS				*e*S		Sb	00 29 45.1	+3.9	
	34nm,0.7s								
KRBS	**Karabastau**	**4.63**	**20**	Pg		Pb	00 28 44.4	-0.6	
	28nm,0.6s								
KRBS				Lg		Lg	00 29 42.4		
	34nm,0.7s								
KNDC	**Almaty**	**4.65**	**33**	⇑Pg		Pb	00 28 46.4	+1.1	
	80nm,0.7s								
KNDC				⇑Lg		Lg	00 29 46.0		
	507nm,0.8s								
KTBS	**Karatobe**	**4.96**	**27**	*e*P		Pb	00 28 50.6	+0.1	
	18nm,0.4s								
KTBS				*e*S		Sb	00 29 54.3	+3.8	
	148nm,0.5s								
KTBS	**Karatobe**	**4.96**	**27**	Pg		Pb	00 28 51.3	+0.8	
	18nm,0.4s								
KTBS				Lg		Lg	00 29 54.3		
	148nm,0.5s								
KUU	**Kurty**	**5.00**	**24**	*e*P		Pb	00 28 51.5	+0.2	
	15nm,0.5s								
KUU				*e*S		Sb	00 29 55.8	+4.0	
	72nm,0.9s								
KUU	**Kurty**	**5.00**	**24**	Pg		Pb	00 28 51.8	+0.5	
	15nm,0.5s								
KUU				Lg		Lg	00 29 55.3		
	72nm,0.9s								
CHKK	**Chushkaly**	**5.19**	**29**	*e*P		Pb	00 28 54.7	+0.2	
	19nm,0.3s								
CHKK				*e*S		Sb	00 30 01.8	+4.5	
	52nm,0.8s								
CHKK	**Chushkaly**	**5.19**	**29**	Pg		Pb	00 28 56.0	+1.5	
	19nm,0.3s								
CHKK				Lg		Lg	00 30 02.3		
	52nm,0.8s								
SATY	**Saty**	**5.22**	**43**	*e*P		Pb	00 28 56.3	+1.3	
	41nm,0.7s								
SATY				*e*S		Sb	00 30 03.3	+5.2	
	62nm,0.6s								
SATY	**Saty**	**5.22**	**43**	Pg		Pb	00 28 57.9	+2.9	
	41nm,0.7s								
SATY				Lg		Lg	00 30 05.5		
	62nm,0.6s								
KURS	**Kuram**	**5.41**	**39**	*e*P		Pb	00 28 59.4	+1.3	
	12nm,0.5s								
KURS				*e*S		Sb	00 30 09.2	+5.8	
	28nm,1.2s								
KURS	**Kuram**	**5.41**	**39**	Pg		Pb	00 29 01.0	+2.8	
	12nm,0.5s								
KURS				Lg		Lg	00 30 10.9		
	28nm,1.2s								
KPKS	**Kokpek**	**5.65**	**42**	*e*P		Pb	00 29 02.7	+0.4	
	25nm,0.5s								
KPKS				*e*S		Sb	00 30 15.1	+4.7	
	73nm,0.6s								
KPKS	**Kokpek**	**5.65**	**42**	Pg		Pb	00 29 06.0	+3.7	
	25nm,0.5s								
KPKS				Lg		Lg	00 30 19.5		
	73nm,0.6s								
BTLS	**Baital**	**5.70**	**4**	*e*P		Pb	00 29 03.7	+0.5	
	11nm,0.6s								
BTLS				*e*S		Sb	00 30 17.4	+5.6	
	30nm,0.7s								
BTLS	**Baital**	**5.70**	**4**	Pg		Pb	00 29 03.7	+0.5	
	11nm,0.6s								
BTLS				Lg		Lg	00 30 15.7		
	30nm,0.7s								
ARXS	**Arharly**	**5.82**	**32**	*e*P		Pb	00 29 05.5	+0.3	
	36nm,1.0s								
ARXS				*e*S		Sb	00 30 20.3	+4.8	
	68nm,0.7s								
ARXS	**Arharly**	**5.82**	**32**	Pg		Pb	00 29 08.6	+3.3	
	36nm,1.0s								
ARXS				Lg		Lg	00 30 23.9		
	68nm,0.7s								
PDGK	**Podgornoye**	**5.99**	**46**	Pg		Pb	00 29 12.3	+4.1	
	8.5nm,0.7s								
PDGK				Lg		Lg	00 30 30.2		
	21nm,0.8s								
BLB	**Baldybastay**	**6.01**	**36**	*e*P		Pb	00 29 10.1	+1.5	
	32nm,0.6s								
BLB				*e*S		Sb	00 30 27.0	+6.1	
	24nm,0.7s								
BLB	**Baldybastay**	**6.01**	**36**	Pg		Pb	00 29 12.1	+3.6	
	32nm,0.6s								
BLB				Lg		Lg	00 30 30.1		
	24nm,0.7s								

KTMS	**Ketmen**	**6.56**	**49**	*e*P		Pg	00 29 26.4	-2.3	
	5.0nm,0.4s								
KTMS				*e*S		Sg	00 30 55.2	+1.6	
	11nm,0.8s								
KTMS	**Ketmen**	**6.56**	**49**	Pg		Pb	00 29 24.5	+6.7	
	5.0nm,0.4s								
KTMS				Lg		Lg	00 30 51.5		
	11nm,0.8s								
THW	**Thamme Wali**	**6.70**	**193**	⇑P		Pn	00 29 07.6	+5.2	
DJR	**Jarkent**	**6.82**	**41**	*e*P		Pb	00 29 28.2	+5.9	
	7.7nm,0.4s								
DJR				*e*S		Sg	00 30 57.7	-4.5	
	21nm,0.7s								
DJR	**Jarkent**	**6.82**	**41**	Pg		Pb	00 29 28.2	+5.9	
	7.7nm,0.4s								
DJR				Lg		Lg	00 30 57.7		
	21nm,0.7s								
OTUK	**Ortayu**	**8.94**	**355**	⇑Pn		Pn	00 29 32.7	-0.3	
	2.8nm,0.8s								
OTUK				⇓Lg		Lg	00 31 57.8		
	26nm,0.9s								
MAKZ	**Makanchi**	**9.67**	**37**	⇓Lg		Lg	00 32 25.9		
	12nm,1.8s								
MK31	**Makanchi Array**	**9.81**	**38**	Pn		Pn	00 29 46.1	+1.1	
	0.7nm,0.6s,baz=228,slow=16,SNR=4.7								
MK31				⇑Lg		Lg	00 32 30.2		
	4.2nm,0.8s								
MKAR	**Makanchi Array**	**9.81**	**38**	Pn		Pn	00 29 48.8	+3.8	
	0.1nm,0.3s,baz=232,slow=14,SNR=5.0								
MKAR				Lg		Lg	00 32 27.8		
	0.2nm,0.3s,baz=216,slow=27,SNR=2.7								
KURBB	**Kurchatov Arra**	**11.81**	**16**	Pn		Pn	00 30 12.7	+0.4	
	baz=202,slow=12,SNR=3.5								
KURBB				Lg		Lg	00 33 30.4		
	0.1nm,0.3s,baz=206,slow=30,SNR=11								
	0.3nm,0.6s								
KURK	**Kurchatov**	**11.92**	**16**	⇑Lg		Lg	00 33 32.5		
	38nm,1.5s								
AB31	**Akbulak array**	**13.87**	**320**	Pn		Pn	00 30 39.4	-1.0	
	0.6nm,0.5s,baz=127,slow=13,SNR=16								
AB31				⇓Sn		Sn	00 33 11.3	-3.6	
	1.4nm,0.6s,baz=132,slow=23,SNR=4.5								
AKTO	**Aktyubinsk**	**15.58**	**320**	Pn		Pn	00 31 03.4	-0.2	
	0.1nm,0.3s,baz=131,slow=14,SNR=2.8								
	0.7nm,0.6s								
AKTO	**Aktyubinsk**	**15.58**	**320**	⇓Pn		Pn	00 31 02.5	-1.1	
	3.1nm,0.8s								
AKTO				⇑Sn		Sn	00 33 56.2	-0.4	
	2.1nm,0.8s								
ZALV	**Zalesovo Beam**	**16.50**	**24**	Pn		Pn	00 31 15.1	-0.3	
	0.1nm,0.3s,baz=214,slow=15,SNR=1.8								
	0.7nm,0.4s								
ARU	**Arti**	**19.75**	**335**	P		Pn	00 31 56.6	+1.4	
	baz=142,slow=7.0,SNR=5.4								
	1.4nm,0.3s								
BELG	**Belogornoye**	**22.12**	**315**	P		P	00 32 21.7	+2.2	
	8.7nm,0.9s,baz=0.0,slow=5.1,SNR=2.8								
	8.7nm,0.9s								
SONM	**Songino Array**	**25.11**	**59**	P		P	00 32 47.9	-1.2	
	0.4nm,0.7s,baz=268,slow=9.6,SNR=2.3								
	0.4nm,0.7s								
AKASG	**Malin Array Be**	**32.84**	**305**	P		P	00 33 56.9	-0.9	
	0.2nm,0.3s,baz=81,slow=8.1,SNR=3.5								
	0.2nm,0.3s								
FINES	**FINESS Array B**	**36.32**	**323**	P		P	00 34 28.0	+0.3	
	0.4nm,0.4s,baz=110,slow=9.3,SNR=9.5								
	0.4nm,0.4s								
ARCES	**ARCESS Array B**	**39.33**	**336**	P		P	00 34 53.6	+0.6	
	0.4nm,0.4s,baz=108,slow=7.8,SNR=10								
	0.4nm,0.4s								
NOA	**NORSAR Array B**	**43.37**	**321**	P		P	00 35 26.1	-0.3	
	0.1nm,0.4s,baz=91,slow=8.0,SNR=2.4								
	0.1nm,0.4s								
TORD	**Torodi Ar. Bea**	**67.79**	**269**	P		P	00 38 22.2	-0.3	
	0.4nm,0.6s,baz=43,slow=4.1,SNR=5.5								
	0.4nm,0.6s								
WRA	**Warramunga Arr**	**81.85**	**124**	P		P	00 39 42.2	-1.5	
	0.2nm,0.6s,baz=312,slow=4.2,SNR=1.3								
	0.2nm,0.6s								

*NOU **29** 00:27:23.5, 41.75S×174.64E, h15km, MLv4.2/9, Cook Strait, New Zealand*
*WEL **29** 00:27:24.9, 42.3S×17.4E, h24km±5km, M3.9/20, ML4.1/20, MLv3.9/20, Error ellipse: s-maj=0.0km s-min=0.0km az=121.1*
ISC 29 00:27:23.4±1.2, 41.67S±0.03×174.53E±0.03, h19km±4km, n113, σ18 26/118, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.25**	**252**	P	**Pg**	**00 27 31.3**	**+2.1**
CMWZ				S	**Sn**	**00 27 36.7**	**-1.0**
BHW	**Baring Head**	**0.37**	**44**	P	**Pn**	**00 27 33.3**	**-0.5**
BHW				S	**Sn**	**00 27 39.7**	**-0.7**
SNZO	**South Karori**	**0.38**	**20**	P	**Pb**	**00 27 32.8**	**+1.1**
WEL	**Wellington**	**0.43**	**25**	P	**Pb**	**00 27 33.6**	**+1.2**
BSWZ	**Blackbirch Sta**	**0.49**	**265**	P	**Pb**	**00 27 34.3**	**+0.7**
BSWZ				S	**Sb**	**00 27 41.2**	**+0.8**
TCW	**Tory Channel**	**0.50**	**337**	P	**Pg**	**00 27 33.3**	**-0.2**
TCW				S	**Sg**	**00 27 39.0**	**-1.3**
TUWZ	**Tuamarina**	**0.51**	**298**	P	**Pg**	**00 27 33.4**	**-0.2**
TUWZ				S	**Sg**	**00 27 38.8**	**-1.6**
PLWZ	**Palliser**	**0.55**	**80**	P	**Pn**	**00 27 37.9**	**+1.6**
MSWZ	**Moikau Station**	**0.60**	**65**	P	**Pn**	**00 27 38.1**	**+1.2**
CAW	**Cannon Point**	**0.69**	**36**	P	**Pn**	**00 27 38.4**	**+0.1**
PAWZ	**Paruwai Farm**	**0.73**	**67**	P	**Pn**	**00 27 40.5**	**+1.7**
KIW	**Kapiti Island**	**0.86**	**19**	P	**Pg**	**00 27 40.6**	**+0.4**
MTW	**Mount Morrison**	**0.89**	**55**	P	**Pn**	**00 27 42.5**	**+1.5**
TRWZ	**Traveller**	**0.91**	**73**	P	**Pn**	**00 27 42.9**	**+1.7**
NNZ	**Nelson**	**0.98**	**297**	P	**Pb**	**00 27 41.6**	**-0.2**
OGWZ	**Otaki Gorge**	**0.98**	**30**	P	**Pg**	**00 27 42.9**	**+0.5**
DUWZ	**D'Urville Isla**	**0.98**	**332**	P	**Pb**	**00 27 41.7**	**-0.2**
KHZ	**Kahutara**	**1.05**	**225**	P	**Pg**	**00 27 44.5**	**+0.7**
KHZ	**Kahutara**	**1.05**	**225**	P	**Pg**	**00 27 44.6**	**+0.8**
HOWZ	**Holdsworth Sta**	**1.07**	**44**	P	**Pg**	**00 27 44.7**	**+0.6**
TMWZ	**Te Maipa**	**1.17**	**62**	P	**Pb**	**00 27 46.1**	**+1.0**
THZ	**Tophouse**	**1.22**	**265**	P	**Pn**	**00 27 46.2**	**+0.6**
MRZ	**Mangatainoka R**	**1.28**	**38**	P	**Pb**	**00 27 47.7**	**+0.8**
TIWZ	**Tintock**	**1.36**	**49**	P	**Pb**	**00 27 48.4**	**+0.1**
MRNZ	**Matariki Terra**	**1.36**	**281**	P	**Pn**	**00 27 48.2**	**+0.7**
CPWZ	**Castlepoint**	**1.47**	**59**	P	**Pb**	**00 27 50.3**	**+0.1**
OHWZ	**Ohakea**	**1.58**	**22**	P	**Pb**	**00 27 52.4**	**+0.3**
POWZ	**Post Office Ro**	**1.58**	**37**	P	**Pn**	**00 27 51.6**	**+1.1**
BFZ	**Birch Farm**	**1.63**	**53**	P	**Pn**	**00 27 51.7**	**+0.5**
BFZ	**Birch Farm**	**1.63**	**53**	P	**Pn**	**00 27 51.8**	**+0.7**
GVZ	**Greta Valley S**	**1.71**	**220**	P	**Pn**	**00 27 53.2**	**+1.0**
QRZ	**Quartz Range**	**1.73**	**299**	P	**Pn**	**00 27 53.8**	**+1.3**
QRZ	**Quartz Range**	**1.73**	**299**	P	**Pb**	**00 27 54.2**	**-0.4**
DVHZ	**Dannevirke**	**1.85**	**43**	P	**Pn**	**00 27 54.6**	**+0.5**
ANWZ	**Angora Road**	**1.90**	**51**	P	**Pn**	**00 27 55.3**	**+0.4**
TSZ	**Takapari Road**	**1.94**	**34**	P	**Pn**	**00 27 56.4**	**+0.9**
WAZ	**Wanganui**	**1.95**	**10**	P	**Pb**	**00 27 58.5**	**+0.2**
LTZ	**Lake Taylor**	**2.01**	**236**	P	**Pn**	**00 27 57.3**	**+0.8**
DSZ	**Denniston Nort**	**2.04**	**267**	P	**Pn**	**00 27 58.1**	**+1.2**
AMCZ	**Amberley**	**2.05**	**222**	P	**Pn**	**00 27 57.5**	**+0.6**
PRHZ	**Porangahau**	**2.12**	**49**	P	**Pn**	**00 27 58.0**	**+0.1**
WPHZ	**Waipukurau**	**2.16**	**43**	P	**Pn**	**00 27 59.0**	**+0.6**
PNHZ	**Pukenui**	**2.17**	**36**	P	**Pn**	**00 27 59.2**	**+0.6**
LREZ	**Lake Rotokare**	**2.21**	**357**	P	**Pb**	**00 28 03.2**	**+0.4**
OKCZ	**Okains Bay**	**2.32**	**207**	P	**Pn**	**00 28 01.0**	**+0.4**
PREZ	**Palmer Road**	**2.34**	**353**	P	**Pn**	**00 28 05.0**	**-0.1**
MTVZ	**Mangateitei**	**2.39**	**18**	P	**Pb**	**00 28 04.4**	**-1.5**
PXZ	**Pawanui**	**2.41**	**48**	P	**Pn**	**00 28 01.7**	**-0.2**
NEZ	**North Egmont**	**2.42**	**352**	P	**Pb**	**00 28 05.9**	**-0.5**
MOVZ	**Moawhango**	**2.45**	**23**	P	**Pn**	**00 28 03.7**	**+1.3**
NBEZ	**Newall Road No**	**2.45**	**348**	P	**Pb**	**00 28 05.9**	**-1.1**
PKVZ	**Pokaka**	**2.46**	**15**	P	**Pn**	**00 28 05.1**	**+2.5**
MQZ	**McQueen's Vall**	**2.46**	**214**	P	**Pn**	**00 28 02.1**	**-0.5**
KRHZ	**Kereru**	**2.46**	**35**	P	**Pn**	**00 28 03.0**	**+0.4**
BHHZ	**Black Hill Sta**	**2.47**	**29**	P	**Pn**	**00 28 04.0**	**+1.2**
OXZ	**Oxford**	**2.48**	**227**	P	**Pn**	**00 28 02.5**	**-0.3**
WNVZ	**Wahianoa**	**2.48**	**19**	P	**Pn**	**00 28 04.9**	**+1.9**
DREZ	**Durham Road**	**2.49**	**354**	P	**Pn**	**00 28 05.2**	**+2.2**
TRVZ	**Turoa**	**2.49**	**18**	P	**Pn**	**00 28 05.5**	**+2.3**
AKCZ	**Akaroa Harbour**	**2.50**	**208**	P	**Pn**	**00 28 03.2**	**0.0**
PKE	**Pukeiti**	**2.51**	**350**	P	**Pb**	**00 28 09.2**	**+1.2**
WHVZ	**Whangaehu Hut**	**2.52**	**19**	P	**Pn**	**00 28 05.6**	**+2.0**
DRZ	**Dome Shelter**	**2.52**	**19**	P	**Pb**	**00 28 07.5**	**-0.8**
INZ	**Inchbonnie**	**2.52**	**244**	P	**Pn**	**00 28 04.3**	**+0.9**
FWVZ	**Far West T-bar**	**2.54**	**18**	P	**Pn**	**00 28 05.9**	**+2.1**
TUVZ	**Tukino**	**2.55**	**20**	P	**Pn**	**00 28 05.8**	**+1.9**
VRZ	**Vera Road**	**2.55**	**4**	P	**Pb**	**00 28 06.7**	**-1.9**
KAHZ	**Kahuranaki**	**2.59**	**44**	P	**Pn**	**00 28 04.3**	**-0.1**
NGZ	**Ngauruhoe**	**2.62**	**18**	P	**Pn**	**00 28 07.0**	**+2.0**
SNVZ	**South Ngauruho**	**2.62**	**19**	P	**Pn**	**00 28 07.0**	**+2.0**
OTVZ	**Oturere**	**2.65**	**19**	P	**Pn**	**00 28 07.2**	**+1.9**
KWHZ	**Kaweka Forest**	**2.67**	**33**	P	**Pn**	**00 28 05.7**	**+0.2**
NNVZ	**North Ngauruho**	**2.67**	**18**	P	**Pn**	**00 28 07.8**	**+2.2**
WTVZ	**West Tongariro**	**2.68**	**18**	P	**Pb**	**00 28 10.7**	**-0.2**
ETVZ	**East Tongariro**	**2.69**	**20**	P	**Pn**	**00 28 07.8**	**+2.0**
TWVZ	**Taurewa**	**2.69**	**15**	P	**Pb**	**00 28 12.3**	**+1.3**
TMVZ	**Te Maari**	**2.71**	**20**	P	**Pn**	**00 28 07.7**	**+1.6**
RACZ	**Rakaia**	**2.71**	**220**	P	**Pn**	**00 28 05.5**	**-0.4**
KRVZ	**Karewarewa**	**2.71**	**19**	P	**Pb**	**00 28 12.9**	**+1.5**
NTVZ	**North Tongarir**	**2.71**	**19**	P	**Pn**	**00 28 07.9**	**+1.7**
MCHZ	**McNeill Hill**	**2.77**	**37**	P	**Pn**	**00 28 07.2**	**+0.3**
KATZ	**Kakaramea**	**2.84**	**19**	P	**Pb**	**00 28 14.2**	**+0.7**
RITZ	**Rihia Road**	**2.88**	**21**	P	**Pb**	**00 28 13.0**	**-1.2**
BKZ	**Black Stump Fm**	**2.92**	**32**	P	**Pn**	**00 28 08.9**	**0.0**
BKZ	**Black Stump Fm**	**2.92**	**32**	P	**Pn**	**00 28 09.2**	**+0.3**
RATZ	**Rangitukua**	**2.96**	**19**	P	**Pb**	**00 28 16.4**	**+0.8**
WACZ	**Wakanui South**	**3.01**	**220**	P	**Pn**	**00 28 10.2**	**+0.1**
ARHZ	**Aropaoanui**	**3.05**	**39**	P	**Pn**	**00 28 10.5**	**-0.2**
WVZ	**Waitaha Valley**	**3.14**	**242**	P	**Pn**	**00 28 12.7**	**+0.8**
HIZ	**Hauiti**	**3.17**	**5**	P	**Pn**	**00 28 15.1**	**+2.8**
HIZ	**Hauiti**	**3.17**	**5**	P	**Pn**	**00 28 15.1**	**+2.8**
MRHZ	**Matea Rd**	**3.18**	**28**	P	**Pn**	**00 28 12.5**	**0.0**
RPZ	**Rata Peaks**	**3.28**	**230**	P	**Pn**	**00 28 13.6**	**-0.2**
RPZ	**Rata Peaks**	**3.28**	**230**	P	**Pn**	**00 28 13.9**	**+0.1**
ARCZ	**Arundel**	**3.36**	**226**	P	**Pn**	**00 28 14.6**	**-0.3**
RAHZ	**Arahi**	**3.37**	**36**	P	**Pn**	**00 28 14.5**	**-0.6**
TLZ	**Tolley Road**	**3.43**	**13**	P	**Pb**	**00 28 21.2**	**-2.3**
GCSZ	**Gaunt Creek Bo**	**3.52**	**241**	P	**Pn**	**00 28 18.9**	**+1.9**
SNGZ	**Shannon Statio**	**3.60**	**38**	P	**Pn**	**00 28 17.6**	**-0.7**
MHGZ	**Mahia Peninsul**	**3.60**	**47**	P	**Pn**	**00 28 17.2**	**-1.1**
MUGZ	**Murupara**	**3.62**	**29**	P	**Pn**	**00 28 17.9**	**-0.6**
TMZ	**Timaru**	**3.75**	**222**	P	**Pn**	**00 28 20.4**	**+0.2**
PRGZ	**Paritu Road**	**3.75**	**44**	P	**Pn**	**00 28 19.6**	**-0.8**
URZ	**Urewera**	**3.94**	**31**	P	**Pn**	**00 28 23.2**	**+0.3**
FOZ	**Fox Glacier**	**3.95**	**240**	P	**Pn**	**00 28 23.4**	**+0.4**
TOZ	**Tahuroa Road**	**4.01**	**11**	P	**Pb**	**00 28 29.0**	**-4.4**
LBZ	**Lake Benmore**	**4.18**	**228**	P	**Pn**	**00 28 26.7**	**+0.4**
ODZ	**Otahua Downs**	**4.40**	**219**	P	**Pn**	**00 28 28.8**	**-0.5**
ODZ	**Otahua Downs**	**4.40**	**219**	P	**Pn**	**00 28 29.2**	**-0.1**
AWAZ	**Awhitu Peninsu**	**4.60**	**1**	P	**Pn**	**00 28 34.9**	**+2.9**
JCZ	**Jackson Bay**	**4.86**	**238**	P	**Pn**	**00 28 36.6**	**+1.0**
TUZ	**Tuapeka**	**5.56**	**218**	P	**Pn**	**00 28 45.4**	**+0.3**
CTZ	**Chatham Island**	**6.84**	**111**	P	**Pn**	**00 29 04.3**	**+1.7**

*TUL **29** 00:29:18.6±0.6, 35.73N±0.01×97.16W±0.01, h6km±4km, ML2.7, mb_Lg2.3/21(NEIC), Error ellipse: s-maj=2.0km s-min=1.2km az=140.0*
NEIC 29 00:29:19.3±0.7, 35.72N±0.01×97.16W±0.01, h6km±3km, Error ellipse: s-maj=2.1km s-min=1.2km az=137.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK005	**Luther M Schoo**	**0.07**	**198**	Pg	Pg	00 29 20.8	-0.3
OK005				Sg	Sg	00 29 22.1	-0.1
OKCFA	**Oklahoma City**	**0.39**	**217**	Pg	Pg	00 29 26.5	-0.3
OKCFA				Sg	Sg	00 29 32.3	+0.4
OKCSW	**OKLAHOMA CITY**	**0.39**	**215**		Pg	00 29 26.6	-0.3
OKCSW				Sg	Sg	00 29 32.4	+0.4
FNO	**Franklin**	**0.51**	**203**	Pg	Pg	00 29 28.6	-0.4
FNO				Sg	Sg	00 29 35.9	+0.3
TUL1	**Leonard**	**1.13**	**80**	Pg	Pg	00 29 39.2	-1.8
X34A	**Smith Ranch, M**	**1.25**	**206**	Pg	Pg	00 29 42.4	-0.9
T35A	**Sooner Cattle**	**1.30**	**24**	Pg	Pn	00 29 42.5	-1.6
X37A	**Clayton**	**1.85**	**127**	Pn	Pn	00 29 51.8	+0.1
W39A	**Magazine**	**2.81**	**100**	IAmb_Lg		00 30 54.5	
	comp=Z,9.6nm,1.1s						
MIAR	**Mount Ida**	**3.17**	**111**	Pn	Pn	00 30 09.9	+0.

WB2	**Warramunga Arr**	**47.41**	**192**	P	**P**	**00 41 26.9**	**-2.1**
WRA	**Warramunga Arr**	**47.41**	**192**	P	**P**	**00 41 26.8**	**-2.2**
	comp=Z,3.5nm,0.8s,baz=12,slow=8.5,SNR=22						
	comp=Z,3.5nm,0.8s						
WRA	**Warramunga Arr**	**47.41**	**192**	P	**P**	**00 41 26.4**	**-2.7**
RPSI	**Rantau Prapat**	**49.11**	**248**	P	**P**	**00 41 41.3**	**-1.0**
RPSI				IAmb	IAmb	00 42 22.1	
	comp=Z,5.6nm,1.0s						
ASAR	**Alice Springs**	**51.12**	**192**	P	**P**	**00 41 54.0**	**-3.3**
	comp=Z,0.5nm,0.9s,baz=13,slow=8.9,SNR=1.8						
	comp=Z,0.5nm,0.9s						
MK31	**Makanchi Array**	**51.65**	**310**	P	**P**	**00 42 02.4**	**+1.2**
MKAR	**Makanchi Array**	**51.65**	**310**	P	**P**	**00 42 02.0**	**+0.8**
	comp=Z,1.1nm,0.4s,baz=89,slow=8.3,SNR=3.8						
	comp=Z,1.1nm,0.4s						
MKAR	**Makanchi Array**	**51.65**	**310**	P	**P**	**00 42 02.3**	**+1.2**
SVW2	**Sparrevohn**	**52.77**	**32**	P	**P**	**00 42 10.9**	**+1.7**
SVW2				IAmb	IAmb	00 42 42.4	
	comp=Z,6.6nm,1.4s						
K20K	**Telida**	**53.93**	**30**	P	**P**	**00 42 19.8**	**+2.1**
K20K				IAmb	IAmb	00 42 30.5	
	comp=Z,1.7nm,0.8s						
J20K	**Nowinta River**	**54.07**	**29**	P	**P**	**00 42 20.3**	**+1.6**
J20K				IAmb	IAmb	00 42 24.8	
	comp=Z,3.1nm,0.8s						
KURK	**Kurchatov**	**54.09**	**315**	P	**P**	**00 42 20.5**	**+1.4**
KURK				IAmb	IAmb	00 42 21.1	
	comp=Z,5.4nm,0.9s						
KURBB	**Kurchatov Arra**	**54.15**	**315**	P	**P**	**00 42 20.9**	**+1.4**
	comp=Z,3.5nm,0.6s,baz=90,slow=8.1,SNR=32						
	comp=Z,3.5nm,0.6s						
IMAR	**Indian Mountai**	**54.65**	**26**	P	**P**	**00 42 23.3**	**+0.5**
BOOM	**Boomskoye usch**	**56.44**	**305**	P	**P**	**00 42 38.1**	**+1.7**
SCM	**Sheep Creek Mo**	**56.79**	**32**	P	**P**	**00 42 39.7**	**+1.3**
ILAR	**Eielson Array**	**57.27**	**28**	P	**P**	**00 42 41.9**	**+0.2**
	comp=Z,0.7nm,0.9s,baz=252,slow=5.3,SNR=5.8						
	comp=Z,0.7nm,0.9s						
SCRK	**Sand Creek**	**58.46**	**30**	P	**P**	**00 42 51.2**	**+1.0**
BMAR	**Burnt Mountain**	**58.48**	**25**	P	**P**	**00 42 52.2**	**+2.0**
J26L	**Joseph Creek**	**58.67**	**29**	P	**P**	**00 42 52.3**	**+0.7**
J26L				IAmb	IAmb	00 42 56.3	
	comp=Z,1.3nm,0.7s						
KK31	**Karatay Array**	**60.30**	**306**	P	**P**	**00 43 04.1**	**+1.0**
KKAR	**Karatay Array**	**60.30**	**306**	P	**P**	**00 43 04.7**	**+1.6**
INK	**Inuvik**	**62.68**	**25**	P	**P**	**00 43 20.9**	**+2.3**
INK				IAmb	IAmb	00 43 59.7	
	comp=Z,5.1nm,1.4s						
ARU	**Arti**	**65.42**	**323**	P	**P**	**00 43 37.8**	**+0.9**
	comp=Z,1.9nm,0.3s,baz=100,slow=19,SNR=4.0						
	comp=Z,1.9nm,0.3s						
ABKAR	**Akbulak array**	**66.21**	**315**	P	**P**	**00 43 43.2**	**+1.1**
ABKAR				IAmb	IAmb	00 43 47.2	
	comp=Z,2.8nm,1.1s						
FINES	**FINESS Array B**	**78.73**	**334**	P	**P**	**00 44 57.4**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=46,slow=5.5,SNR=4.6						
	comp=Z,0.4nm,0.5s						
FINES	**FINESS Array B**	**78.73**	**334**	P	**P**	**00 44 57.0**	**+0.5**
LPAZ	**La Paz**	**148.68**	**77**	PKPbc	**PKPab**	**00 52 42.6**	**-4.0**
	comp=Z,1.2nm,0.6s,baz=274,slow=4.3,SNR=3.5						

*IDC **29** 00:36:31.7±2.3,39.°64N×51.°38E,h0km,mb3.3/2, mbtmp3.4/5,ML3.8/3, Error ellipse: s-maj=27.5km s-min=26.5km az=169.0*
*TEH **29** 00:36:36.5,39.°59N×51.°44E,h60km,ML3.6*
*AZER **29** 00:36:36.7±0.2,39.°58N×51.°40E,h49km±5km, Error ellipse: s-maj=3.6km s-min=2.5km az=257.0*

ISC 29 00:36:36.5±0.9, 39°66N±0'.04×51°51E±0'.04, h70km±18km, n88,σ1§79/121, 1C-2D, Caspian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
NDR	**Nardaran**	**1.49**	**309**	*e*Pg		**Pn**	**00 37 03.2**	**+2.0**
NDR	**Nardaran**	**1.49**	**309**	Pn		**Pn**	**00 37 02.8**	**+1.6**
NDR				Sg		**Sn**	**00 37 25.6**	**+5.7**
ALIB	**Äli-Bayra**	**1.95**	**280**	Sg		**Sn**	**00 37 37.6**	**+6.7**
GBS	**Qobustan**	**2.15**	**295**	*e*Pn		**Pn**	**00 37 11.3**	**+1.1**
GBS	**Qobustan**	**2.15**	**295**	Pn		**Pn**	**00 37 11.1**	**+0.9**
	SNR=3.6							
GBS				Sn		**Sn**	**00 37 37.7**	**+1.7**
ATGJ	**Altiaghaj**	**2.31**	**302**	*e*Pn		**Pn**	**00 37 12.8**	**+0.5**
ATGJ	**Altiaghaj**	**2.31**	**302**	Pn		**Pn**	**00 37 13.0**	**+0.7**
ATGJ				Sn		**Sn**	**00 37 40.9**	**+1.2**
LKRN	**Lenkeran, Azer**	**2.32**	**247**	*e*Pn		**Pn**	**00 37 12.5**	**+0.2**
LKRN	**Lenkeran, Azer**	**2.32**	**247**	Pn		**Pn**	**00 37 12.6**	**+0.2**
LKRN				Sn		**Sn**	**00 37 39.8**	**-0.1**
ASTR	**Astara**	**2.38**	**243**	*e*Pn		**Pn**	**00 37 13.2**	**+0.1**
ASTR	**Astara**	**2.38**	**243**	Pn		**Pn**	**00 37 13.3**	**+0.1**
	SNR=12							
ASTR				Sn		**Sn**	**00 37 41.3**	**0.0**
GLBA	**Clilabad**	**2.45**	**261**	*e*Pn		**Pn**	**00 37 14.7**	**+0.6**
GLBA	**Clilabad**	**2.45**	**261**	Pn		**Pn**	**00 37 14.7**	**+0.6**
	SNR=3.3							
GLBA				Sn		**Sn**	**00 37 43.5**	**+0.5**
SIZA	**Siyzn**	**2.45**	**306**	*e*Pn		**Pn**	**00 37 15.5**	**+1.3**
SIZA	**Siyzn**	**2.45**	**306**	Pn		**Pn**	**00 37 15.6**	**+1.3**
SIZA				Sn		**Sn**	**00 37 43.0**	**-0.1**
PQL	**Pirkuli**	**2.50**	**298**	Pn		**Pn**	**00 37 15.5**	**+0.5**
PQL				Sn		**Sn**	**00 37 46.3**	**+1.8**
YRD	**Yardimli**	**2.64**	**255**	*e*Pn		**Pn**	**00 37 16.9**	**0.0**
YRD	**Yardimli**	**2.64**	**255**	Pn		**Pn**	**00 37 16.9**	**0.0**
	SNR=34							
YRD				Sn		**Sn**	**00 37 46.3**	**-1.7**
LRK	**Lerik**	**2.66**	**249**	*e*Pn		**Pn**	**00 37 17.3**	**+0.1**
LRK	**Lerik**	**2.66**	**249**	Pn		**Pn**	**00 37 17.4**	**+0.1**
	SNR=13							
LRK				Sn		**Sn**	**00 37 47.4**	**-1.1**
LHJ2	**Lahijan - Gila**	**2.73**	**205**	*e*Pn		**Pn**	**00 37 17.3**	**-0.7**
IML	**Ismayilli**	**2.79**	**295**	*e*Pn		**Pn**	**00 37 19.2**	**+0.4**
IML	**Ismayilli**	**2.79**	**295**	Pn		**Pn**	**00 37 19.2**	**+0.4**
IML				Sn		**Sn**	**00 37 52.4**	**+1.0**
QUBA	**Quba, Azerbaij**	**2.86**	**307**	Pn		**Pn**	**00 37 21.3**	**+1.5**
QUBA				Sn		**Sn**	**00 37 53.2**	**+0.2**
GRMI	**Germi**	**2.93**	**254**	*e*Pn		**Pn**	**00 37 21.5**	**+0.7**
QUB	**Quba**	**2.95**	**307**	*e*Pn		**Pn**	**00 37 21.2**	**+0.1**
XNQ	**Khinaliq**	**2.98**	**302**	*e*Pn		**Pn**	**00 37 22.8**	**+1.2**
XNQ	**Khinaliq**	**2.98**	**302**	Pn		**Pn**	**00 37 22.2**	**+0.6**
	SNR=6.3							
XNQ				Sn		**Sn**	**00 37 57.2**	**+0.8**
ZRD	**Zardab**	**3.00**	**283**	*e*Pn		**Pn**	**00 37 22.4**	**+0.8**
ZRD	**Zardab**	**3.00**	**283**	Pn		**Pn**	**00 37 22.4**	**+0.8**
ZRD				Sn		**Sn**	**00 37 58.2**	**+1.7**
GIDE	**GILAN DEYLAMAN**	**3.00**	**205**	*e*Pn		**Pn**	**00 37 21.5**	**-0.4**
BLQ	**Beylaqan**	**3.05**	**272**	*e*Pn		**Pn**	**00 37 23.2**	**+0.9**
BLQ	**Beylaqan**	**3.05**	**272**	Pn		**Pn**	**00 37 23.2**	**+0.9**
	SNR=3.4							
BLQ				Sn		**Sn**	**00 37 56.8**	**-0.8**
QBL	**Gabala**	**3.09**	**296**	*e*Pn		**Pn**	**00 37 23.0**	**+0.2**
QBL	**Gabala**	**3.09**	**296**	Pn		**Pn**	**00 37 23.1**	**+0.2**
QBL				Sn		**Sn**	**00 37 58.1**	**-0.6**
QSAR	**Qusar**	**3.09**	**308**	*e*Pn		**Pn**	**00 37 23.9**	**+1.0**
QSAR	**Qusar**	**3.09**	**308**	Pn		**Pn**	**00 37 24.0**	**+1.0**
	SNR=7.3							
QSAR				Sn		**Sn**	**00 37 59.8**	**+1.1**
JIR1	**Jirandeh**	**3.24**	**205**	*e*Pn		**Pn**	**00 37 24.6**	**-0.4**
QRD	**Qoradiz**	**3.24**	**268**	*e*Pn		**Pn**	**00 37 25.7**	**+0.8**
QRD	**Qoradiz**	**3.24**	**268**	Pn		**Pn**	**00 37 25.7**	**+0.8**
	SNR=3.8							
QRD				Sn		**Sn**	**00 38 01.5**	**-0.8**
QALM	**Alamut, Qazvin**	**3.29**	**192**	*e*Pn		**Pn**	**00 37 25.2**	**-0.6**
AGDM	**Agdam**	**3.41**	**279**	Pn		**Pn**	**00 37 28.2**	**+0.9**
AGDM				Sn		**Sn**	**00 38 06.7**	**+0.1**
IPRN	**Peran**	**3.47**	**169**	*e*Pn		**Pn**	**00 37 29.3**	**+1.1**
ISRB	**Sarab**	**3.52**	**240**	*e*Pn		**Pn**	**00 37 29.7**	**+0.8**
ISRB				*e*			00 37 30.2	
	comp=Z,469nm,0.2s							
SEKA	**Sheki**	**3.64**	**297**	Pn		**Pn**	**00 37 31.4**	**+1.0**
	SNR=3.9							
SEKA				Sn		**Sn**	**00 38 12.3**	**+0.2**
IGLO	**Ghaloghah**	**3.64**	**149**	*e*Pn		**Pn**	**00 37 32.1**	**+1.5**
IGLO				*e*			00 38 19.0	
	comp=Z,1μm,0.3s							
ZNJK	**Zanjan**	**3.72**	**218**	*e*Pn		**Pn**	**00 37 31.8**	**+0.1**
IHRS	**Heris**	**3.73**	**250**	*e*Pn		**Pn**	**00 37 32.8**	**+1.0**
IHRS				*e*			00 37 34.2	
	comp=Z,2μm,0.2s							
CHTH	**Charan**	**3.75**	**185**	*e*Pn		**Pn**	**00 37 33.3**	**+1.1**
TVRZ	**Varzaqan**	**3.94**	**255**	*e*Pn		**Pn**	**00 37 35.5**	**+0.9**
DAMV	**Damavand**	**4.04**	**175**	*e*Pn		**Pn**	**00 37 37.9**	**+1.9**
IDMV	**Damavand**	**4.09**	**174**	*e*		Sn	00 38 35.1	+11
	comp=Z,319nm,0.5s							
GANJ	**Ganja**	**4.09**	**286**	Pn		**Pn**	**00 37 35.8**	**-0.7**
GANJ				Sn		**Sn**	**00 38 21.3**	**-2.0**

ISHM	**Shahmirzad**	**4.09**	**159**	*e*Pn		**Pn**	**00 37 38.4**	**+1.5**
ISHM				*e*			00 38 30.3	
	comp=Z,2μm,0.2s							
MRVT	**Maraveh tapeh**	**4.10**	**118**	*e*Pn		**Pn**	**00 37 38.0**	**+1.2**
IFIR	**Firoozkooh**	**4.13**	**166**	*e*Pn		**Pn**	**00 37 39.7**	**+2.4**
IFIR				*e*			00 38 29.7	
	comp=Z,495nm,0.2s							
ZKTA	**Zakatala**	**4.21**	**300**	Pn		**Pn**	**00 37 40.0**	**+1.8**
ZKTA				Sn		**Sn**	**00 38 27.3**	**+1.2**
ORD	**Ordubad**	**4.34**	**262**	Pn		**Pn**	**00 37 40.9**	**+0.9**
	SNR=4.1							
ORD				Sn		**Sn**	**00 38 28.8**	**-0.5**
ILAS	**Lasjerd**	**4.42**	**164**	*e*Pn		**Pn**	**00 37 42.8**	**+1.5**
ILAS				*e*			00 38 38.6	
	comp=Z,474nm,0.4s							
IRAZ	**Razeghan**	**4.42**	**197**	*e*Pn		**Pn**	**00 37 43.3**	**+2.0**
IRAZ				*e*			00 38 35.7	
	comp=N,433nm,0.8s							
DDFL	**Dedoflistskaro**	**4.48**	**295**	P		**Pn**	**00 37 45.4**	**+3.6**
DDFL				S		**Sn**	**00 38 32.9**	**+0.2**
GDB	**GEDABAY**	**4.53**	**285**	Pn		**Pn**	**00 37 42.7**	**0.0**
	SNR=2.8							
GDB				Sn		**Sn**	**00 38 32.4**	**-1.8**
LGD	**Lagodekhi**	**4.55**	**300**	P		**Pn**	**00 37 45.0**	**+2.2**
LGD				S		**Sn**	**00 38 34.8**	**+0.4**
IANJ	**Anjilo**	**4.60**	**155**	*e*Pn		**Pn**	**00 37 46.7**	**+3.0**
IANJ				*e*			00 38 43.0	
	comp=Z,438nm,0.4s							
IMRD	**Marand**	**4.61**	**260**	*e*Pn		**Pn**	**00 37 45.1**	**+1.4**
IMRD				*e*			00 38 45.9	
	comp=Z,326nm,0.3s							
SBZ	**Shahbuz**	**4.61**	**269**	Pn		**Pn**	**00 37 44.8**	**+1.1**
	SNR=4.3							
SBZ				Sn		**Sn**	**00 38 35.9**	**-0.1**
NAX	**Nakhchivan**	**4.68**	**266**	Pn		**Pn**	**00 37 47.5**	**+2.9**
NAX				Sn		**Sn**	**00 38 39.0**	**+1.3**
QZX	**Qazax, Azerbai**	**4.89**	**289**	Pn		**Pn**	**00 37 49.2**	**+1.8**
QZX				Sn		**Sn**	**00 38 40.8**	**-1.9**
DGRG	**David-gareji**	**5.00**	**293**	P		**Pn**	**00 37 49.9**	**+0.9**
DGRG				S		**Sn**	**00 38 44.6**	**-0.9**
BJRD	**Bojnurd**	**5.01**	**111**	*e*Pn		**Pn**	**00 37 50.8**	**+1.6**
SHRO	**Shahrood**	**5.11**	**134**	*e*Pn		**Pn**	**00 37 52.8**	**+2.2**
ASAO	**Ashtian**	**5.23**	**194**	*e*Pn		**Pn**	**00 37 53.3**	**+0.9**
MAKU	**Maku**	**5.29**	**269**	*e*Pn		**Pn**	**00 37 55.0**	**+2.0**
GEYT	**Alibeck**	**5.44**	**106**	Pn		**Pn**	**00 37 55.8**	**+0.8**
	comp=Z,3.4nm,0.3s,baz=265,slow=12,SNR=50							
GEYT				Sn		**Sn**	**00 38 53.4**	**-3.0**
	comp=Z,0.3nm,0.3s,baz=152,slow=23,SNR=1.5							
	comp=Z,6.4nm,0.3s							
SNGE	**Sanandaj**	**5.63**	**217**	*e*Pn		**Pn**	**00 37 58.3**	**+0.5**
ISFR	**Sfrayin**	**5.73**	**115**	*e*			00 38 02.6	
	comp=Z,933nm,0.2s							
ISFR				*e*Pn		**Pn**	**00 38 01.4**	**+2.3**
SBZV	**Sabzevar**	**5.82**	**122**	*e*			00 38 07.1	
	comp=E,84nm,0.2s							
SBZV				*e*Pn		**Pn**	**00 38 02.3**	**+2.0**
IEMG	**Emamgholi**	**6.03**	**110**	*e*			00 38 08.7	
	comp=N,1μm,0.2s							
IEMG				*e*Pn		**Pn**	**00 38 04.7**	**+1.4**
IAKL	**Akhelmad**	**6.48**	**116**	*e*Pn		**Pn**	**00 38 11.1**	**+1.7**
IAKL				*e*			00 38 16.4	
	comp=Z,195nm,0.1s							
IPAY	**Payeh**	**6.72**	**116**	*e*Pn		**Pn**	**00 38 14.6**	**+1.9**
IPAY				*e*			00 38 16.6	
	comp=Z,197nm,0.2s							
IKRD	**Kardeh**	**6.93**	**112**	*e*Pn		**Pn**	**00 38 17.2**	**+1.7**
IKRD				*e*			00 38 19.3	
	comp=Z,330nm,0.2s							
IMYA	**Miami**	**7.55**	**113**	*e*Pn		**Pn**	**00 38 25.4**	**+1.4**
IMYA				*e*			00 38 26.7	
	comp=Z,51nm,0.2s							
AB31	**Akbulak array**	**11.32**	**29**	Pn		**Pn**	**00 39 12.8**	**-2.4**
	comp=Z,0.4nm,0.5s,baz=208,slow=13,SNR=7.2							
AB31				⇓Sn		**Sn**	**00 41 14.7**	**-5.2**
	comp=Z,1.6nm,0.6s,baz=223,slow=25,SNR=6.2							
AKTO	**Aktyubinsk**	**11.71**	**21**	Pn		**Pn**	**00 39 19.2**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=201,slow=10,SNR=8.6							
AKTO				Sn		**Sn**	**00 41 24.1**	**-5.4**
	comp=Z,0.6nm,0.3s,baz=6.4,slow=22,SNR=8.9							
	comp=Z,0.9nm,0.3s							
AKTO	**Aktyubinsk**	**11.71**	**21**	⇓Pn		**Pn**	**00 39 19.2**	**-1.3**
	comp=Z,1.7nm,0.6s							
AKTO				⇑Sn		**Sn**	**00 41 23.5**	**-5.9**
	comp=Z,2.3nm,0.5s							
AKASG	**Malin Array Be**	**19.12**	**313**	P		**Pn**	**00 40 55.9**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=105,slow=9.6,SNR=4.5							
	comp=Z,0.2nm,0.4s							
MKAR	**Makanchi Array**	**23.43**	**62**	P		**P**	**00 41 42.5**	**+3.1**
	comp=Z,0.3nm,0.6s,baz=257,slow=7.5,SNR=3.2							
	comp=Z,0.3nm,0.6s							
FINES	**FINESS Array B**	**26.82**	**333**	P		**P**	**00 42 12.2**	**+2.4**
	comp=Z,0.3nm,0.3s,baz=134,slow=11,SNR=5.9							
	comp=Z,0.3nm,0.3s							

*TUL **29** 00:58:29±0.7,36.°47N±0'.01×98.°75W±0'.01,h7km±2km, ML2.6,mb_Lg2.3/20(NEIC), Error ellipse: s-maj=2.0km s-min=1.0km az=165.0*

NEIC 29 00:58:29.8±0.7, 36°479N±0'.009×98°74W±0'.02, h6km±2km, Error ellipse: s-maj=2.5km s-min=1.1km az=109.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
OKCFA	**Oklahoma City**	**1.49**	**135**			Pn	00 58 56.4	-0.7
FNO	**Franklin**	**1.63**	**138**	Pn		Pn	00 58 59.0	-0.2
WMOK	**Wichita Mounta**	**1.74**	**181**	Pn		Pn	00 58 59.6	-0.9
T35A	**Sooner Cattle**	**1.84**	**76**	Pn		Pn	00 59 02.0	-0.1
R32A	**Long Quarter,**	**1.94**	**1**	Pn		Pn	00 59 02.3	-1.1
X34A	**Smith Ranch, M**	**2.01**	**158**	Pn		Pn	00 59 04.8	+0.4
X34A				IAmb_Lg			00 59 38.2	
	comp=Z,14nm,0.7s							
TUL1	**Leonard**	**2.45**	**103**	Pn		Pn	00 59 10.2	-0.2
TUL1				IAmb_Lg			00 59 46.5	
	comp=Z,8.3nm,0.8s							
AMTX	**Amarillo**	**2.88**	**237**	Pn		Pn	00 59 16.2	-0.1
X37A	**Clayton**	**3.33**	**123**	Pn		Pn	00 59 21.7	-0.8
X37A				IAmb_Lg			01 00 20.3	
	comp=Z,6.3nm,0.8s							
Z35A	**Perchaven, San**	**3.37**	**158**	IAmb_Lg			01 00 23.0	
	comp=Z,12nm,0.7s							
W39A	**Magazine**	**4.22**	**106**	IAmb_Lg			01 00 50.0	
	comp=Z,7.5nm,0.8s							
S39A	**Bolivar**	**4.50**	**73**	IAmb_Lg			01 00 51.4	
	comp=Z,5.2nm,0.7s							
MIAR	**Mount Ida**	**4.63**	**113**	Pn		Pn	00 59 40.5	+0.1
MGMO	**Mountain Grove**	**5.24**	**81**	IAmb_Lg			01 01 19.0	
	comp=Z,3.8nm,0.7s							
WHAR	**Wooly Hollow**	**5.37**	**101**	IAmb_Lg			01 01 21.5	
	comp=Z,4.4nm,0.8s							
CCM	**Cathedral Cave**	**6.18**	**73**	IAmb_Lg			01 01 55.3	
	comp=Z,4.7nm,0.7s							
PBMO	**Poplar Bluff**	**6.69**	**85**	IAmb_Lg			01 02 02.8	
	comp=Z,4.4nm,0.8s							

*SNET **29** 01:09:23.9±1.5,12.°78N×87.°13W,h76km±32km,ML2.9*
*INET **29** 01:09:24.4±0.7,12.°81N×87.°11W,h5km±1km,MW3.4*

ISC 29 01:09:24.0±1.3, 12°81N±0'.09×87°15W±0'.07, h13km±10km, n9,σ1§01/14, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CRIN	**San Cristobal**	**0.14**	**140**	*e*P		**Pb**	**01 09 28.2**	**-0.4**
CRIN				*e*S		**Sg**	**01 09 31.2**	**+0.9**
TEL3	**Telica 3**	**0.38**	**129**	*e*P		**Pb**	**01 09 32.0**	**-0.6**
MOMN	**Momotombo**	**0.71**	**124**	*e*P		**Pb**	**01 09 37.8**	**-0.5**
CNCH	**Conchagua**	**0.81**	**305**	*e*P		**Pn**	**01 09 40.5**	**-0.8**
CNCH				*e*S		**Sn**	**01 09 55.2**	**+1.9**
CNCH				IAML			01 10 02.1	
	comp=Z,475nm,0.5s							
COPN	**Copaltepe**	**0.83**	**139**	*e*P		**Pb**	**01 09 39.8**	**-0.5**
LCND	**La Caada**	**0.88**	**304**	*e*P		**Pn**	**01 09 41.4**	**-0.6**
LCND				*e*S		**Sn**	**01 09 56.3**	**+1.7**
LCND				IAML			01 10 00.5	
	comp=Z,160nm,0.4s							
TGUH	**Tegucigalpa,Un**	**1.25**	**354**	*e*P		**Pn**	**01 09 46.9**	**-0.3**
TGUH				*e*S		**Sb**	**01 10 03.3**	**-0.1**
PACA	**Pacayal**	**1.32**	**300**	*e*P		**Pb**	**01 09 48.4**	**-0.3**
PACA				*e*S		**Sg**	**01 10 05.8**	**-0.8**
BOAB	**BOACO BROADBAN**	**1.49**	**104**	*e*P		**Pn**	**01 09 50.1**	**-0.3**

*KRNET **29** 01:30:18.8±0.1,39.°44N×73.°52E,mb3.3*

*SOME **29** 01:30:24.4,39.°62N×73.°42E,h0km*
*NNC **29** 01:30:26.8±0.6,39.°65N×73.°43E,h3km±3km,mb3.7, mpv3.4,Error ellipse: s-maj=4.2km s-min=3.0km az=174.0*

ISC 29 01:30:21.5±1.5, 39°53N±0'.05×73°47E±0'.03, h3km±11km, n51,σ1§66/82, 20C-14D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
OHH	**Osh**	**1.13**	**332**	⇑*i*P		**Pg**	**01 30 42.0**	**-1.1**
	baz=33							
OHH				⇑*i*S		**Sn**	**01 30 59.1**	**-1.2**
	baz=33							
DRK	**Karamyk**	**1.30**	**268**	⇑*i*P		Pn	01 30 44.1	-2.7
	baz=73							
DRK				⇑*i*S		**Sg**	**01 31 02.4**	**-0.7**
	baz=73							
BTK	**Batken**	**2.11**	**285**	⇑*i*P		**Pn**	**01 30 58.1**	**+0.3**
	baz=87							
BTK				⇑*i*S		**Sn**	**01 31 26.9**	**+2.2**
	baz=87							
GAR	**Garm**	**2.51**	**259**	⇑*i*P		**Pn**	**01 31 03.0**	**-0.3**
	baz=61							
GAR				⇑*i*S		**Sn**	**01 31 35.4**	**+1.0**
	baz=61							
TRKS	**Terek-Say**	**2.68**	**319**	⇓*i*P		**Pn**	**01 31 05.5**	**-0.1**
	baz=19							
TRKS				⇓*i*S		**Sn**	**01 31 39.7**	**+1.0**
	baz=19							
UCH	**Uchtor**	**2.81**	**16**	⇑*i*P		**Pn**	**01 31 08.3**	**+0.6**
	baz=15							
UCH				⇑*i*S		**Sb**	**01 31 44.4**	**-3.2**
	baz=15							
EKS2	**Erkin-Say**	**3.14**	**4**	⇓*i*P		**Pn**	**01 31 12.8**	**+0.8**
	baz=3.0							
EKS2				⇓*i*S		**Sb**	**01 31 52.2**	**-4.6**
	baz=3.0							
AAK	**Ala-Archa**	**3.20**	**14**	⇓*i*P		**Pn**	**01 31 13.6**	**+0.7**
	baz=13							
AAK				⇓*i*S		**Sb**	**01 31 53.5**	**-5.1**
	baz=13							
MRKS	**Merke**	**3.22**	**357**	*e*P		**Pg**	**01 31 23.5**	**+0.3**
	11nm,0.6s							
MRKS				*e*S		**Sg**	**01 32 06.0**	**+1.1**
	23nm,0.5s							
MRKS	**Merke**	**3.22**	**357**	Pg		**Pg**	**01 31 23.5**	**+0.3**
	11nm,0.6s							
MRKS				Lg		Lg	01 32 06.0	
	23nm,0.5s							
KBK	**Karagaybulak**	**3.32**	**19**	⇓*i*P		**Pn**	**01 31 15.1**	**+0.6**
	baz=18							
KBK				⇓*i*S		**Sb**	**01 31 56.2**	**-5.8**
	baz=18							
CHGR	**Chuyangaron**	**3.47**	**257**	⇑*i*P		**Pn**	**01 31 16.3**	**-0.2**
	baz=58							
CHGR				⇑*i*S		**Sn**	**01 31 58.4**	**+0.3**
	baz=58							
BOOM	**Boomskoye usch**	**3.50**	**31**	⇓*i*P		**Pn**	**01 31 17.3**	**+0.3**
	baz=30							
BOOM				⇓*i*S		**Sn**	**01 32 00.3**	**+1.3**
	baz=30							
CHMS	**Chumysh**	**3.60**	**15**	⇓Pg		**Pg**	**01 31 31.2**	**+0.7**
	3.7nm,0.5s							
CHMS				⇑Lg		Lg	01 32 18.5	
	9.8nm,0.6s							
TKM2	**Tokmak 2**	**3.75**	**25**	⇓Pg		**Pg**	**01 31 32.5**	**-0.8**
	1.8nm,0.4s							
TKM2				⇑Lg		Lg	01 32 22.7	
	12nm,0.9s							
KDJ	**Kajisay**	**3.83**	**46**	⇑*i*P		**Pn**	**01 31 21.7**	**+0.2**
	baz=45							
KDJ				⇑*i*S		**Sn**	**01 32 07.7**	**+0.6**
	baz=45							
TARG	**Taragay, Kyrgy**	**3.96**	**55**	⇑*i*P		**Pn**	**01 31 23.4**	**-0.1**
	baz=54							
TARG				⇑*i

	2.2nm,0.2s							
SATY					Lg	Lg	01 33 07.8	
	6.9nm,0.4s							
BTLS	**Baital**	**5.53**	**4**	*e*P	**Pg**		**01 32 06.3**	**-1.0**
	2.3nm,0.5s							
BTLS				*e*S	**Sg**		**01 33 19.6**	**+0.7**
	4.0nm,0.6s							
BTLS	**Baital**	**5.53**	**4**	Pg	**Pg**		**01 32 06.3**	**-1.0**
	2.3nm,0.5s							
BTLS				Lg	Lg		01 33 19.6	
	4.0nm,0.6s							
KPKS	**Kokpek**	**5.55**	**43**	*e*P	**Pg**		**01 32 06.2**	**-1.5**
	2.8nm,0.4s							
KPKS				*e*S	**Sg**		**01 33 19.5**	**-0.1**
	10nm,0.6s							
KPKS	**Kokpek**	**5.55**	**43**	Pg	**Pg**		**01 32 06.2**	**-1.5**
	2.8nm,0.4s							
KPKS				Lg	Lg		01 33 19.5	
	10nm,0.6s							
ARXS	**Arharly**	**5.70**	**33**	*e*P	**Pg**		**01 32 09.0**	**-1.6**
	3.8nm,0.6s							
ARXS				*e*S	**Sg**		**01 33 24.5**	**+0.1**
	7.4nm,0.6s							
ARXS	**Arharly**	**5.70**	**33**	Pg	**Pg**		**01 32 09.0**	**-1.6**
	3.8nm,0.6s							
ARXS				Lg	Lg		01 33 24.5	
	7.4nm,0.6s							
BLB	**Baldybastay**	**5.90**	**38**	*e*P	**Pg**		**01 32 12.4**	**-2.1**
	5.6nm,0.2s							
BLB				*e*S	**Sg**		**01 33 29.9**	**-1.0**
	6.9nm,1.0s							
BLB	**Baldybastay**	**5.90**	**38**	Pg	**Pg**		**01 32 12.4**	**-2.1**
	5.6nm,0.2s							
BLB				Lg	Lg		01 33 29.9	
	6.9nm,1.0s							
PDGK	**Podgornoye**	**5.91**	**48**	Pg	**Pg**		**01 32 13.8**	**-0.8**
	1.3nm,0.6s							
PDGK				Lg	Lg		01 33 32.4	
	1.7nm,0.7s							
KTMS	**Ketmen**	**6.48**	**51**	*e*P	**Pg**		**01 32 24.6**	**-1.0**
	0.3nm,0.1s							
KTMS				*e*S	**Sg**		**01 33 51.1**	**+1.6**
	1.4nm,0.2s							
KTMS	**Ketmen**	**6.48**	**51**	Pg	**Pg**		**01 32 24.6**	**-1.0**
	0.3nm,0.1s							
KTMS				Lg	Lg		01 33 51.1	
	1.4nm,0.2s							

IDC 29 01:38:33.6±4.5, 30°32S×178°24W, h0km, mb3.6/2, mbtmp3.6/2, Error ellipse: s-maj=121.7km s-min=28.5km az=133.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.10**	**15**	Pn	Pn	01 38 56.2	-0.1
	44nm,0.3s,baz=75,slow=20,SNR=1.5						
RAO				Sn	Sg	01 39 08.3	-0.7
	210nm,0.3s,baz=271,slow=23,SNR=8.0						
ASAR	**Alice Springs**	**42.91**	**267**	P	P	01 46 33.5	-0.7
	0.2nm,0.3s,baz=107,slow=6.9,SNR=1.7						
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**43.89**	**272**	P	P	01 46 42.2	+0.1
	0.9nm,0.6s,baz=110,slow=8.1,SNR=27						
	0.9nm,0.6s						
FINES	**FINESS Array B**	**145.00**	**340**	PKPbc	PKPbc	01 58 10.7	-0.7
	0.8nm,0.6s,baz=66,slow=3.4,SNR=10						

*TAP **29** 01:44:51.4, 24°.51N×122°.56E, h9km, ML2.8, C*
*JMA **29** 01:44:52.1±0.1, 24°.48N±2°.×122°.6E±0°.5, h21km±1km, MV2.2/9, NW OFF ISHIGAKIJIMA IS*

ISC 29 01:44:51.5±1.0, 24°.48N±0°.03×122°.58E±0°.02, h18km±5km, n51, σ0s56/64, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.33**	**94**	P	**Pb**	**01 44 59.2**	**+0.3**
JYNG				S	**Sg**	**01 45 03.8**	**+0.4**
YOJ	**Yonaguni jima**	**0.39**	**92**	*i* P	**Pg**	**01 45 00.0**	**+0.4**
	baz=89						
YOJ	**Yonaguni jima**	**0.39**	**92**	P	**Pg**	**01 45 00.2**	**+0.6**
TWC	**Suao**	**0.68**	**281**	*i* P	**Pg**	**01 45 03.8**	**-1.2**
	baz=278						
TWC				*i* S	**Sg**	**01 45 13.4**	**-0.5**
	baz=278						
EGS		**0.70**	**302**	*e*P	**Pg**	**01 45 04.7**	**-0.5**
	baz=300						
EGS				*e*S	**Sg**	**01 45 13.9**	**-0.5**
	baz=300						
EWUT	**Wuta**	**0.73**	**268**	*i* P	**Pg**	**01 45 05.4**	**-0.5**
	baz=273						
TWB1	**Santiao Chiao**	**0.76**	**315**	*e*P	**Pg**	**01 45 06.3**	**-0.1**
	baz=303						
ENA	**Nanau**	**0.77**	**267**	*e*P	**Pg**	**01 45 06.0**	**-0.5**
	baz=273						
ENA				*e*S	**Sg**	**01 45 16.2**	**-0.5**
	baz=273						
NTC	**Toucheng**	**0.78**	**299**	*e*P	**Pg**	**01 45 06.6**	**-0.2**
	baz=297						
NDS	**Dongshan**	**0.80**	**281**	P	**Pg**	**01 45 06.5**	**-0.7**
	baz=279						
NDS				*e*S	**Sb**	**01 45 18.3**	**+0.8**
	baz=279						
TIPB	**Shuangxi**	**0.85**	**306**	*e*P	**Pb**	**01 45 07.5**	**-0.2**
	baz=304						
TIPB				*e*S	**Sg**	**01 45 19.5**	**+0.2**
	baz=304						
TWE	**Neicheng**	**0.87**	**286**	*i* P	**Pb**	**01 45 07.6**	**-0.4**
	baz=294						
SXI1	**Grass Mountain**	**0.89**	**314**	*e*P	**Pb**	**01 45 08.9**	**+0.5**
	baz=312						
SXI1				S	**Sb**	**01 45 20.4**	**+0.4**
	baz=312						
NWF	**Wu-fen Shan**	**0.94**	**309**	*e*P	**Pb**	**01 45 09.6**	**+0.3**
	baz=300						
WFSB	**Wu-fen Shan**	**0.94**	**309**	P	**Pb**	**01 45 09.7**	**+0.5**
	baz=300						
FUSB	**Fushanzhiwuyua**	**0.95**	**288**	*e*P	**Pb**	**01 45 09.3**	**-0.1**
	baz=294						
NACB	**Ninganchiao**	**0.95**	**252**	*e*P	**Pb**	**01 45 09.6**	**+0.2**
	baz=249						
LATG	**Datong**	**0.96**	**274**	*e*P	**Pb**	**01 45 10.0**	**+0.2**
	baz=280						
TWD	**Chiawan**	**0.98**	**247**	*e*P	**Pn**	**01 45 11.1**	**+0.7**
	baz=252						
NWLT	**Wulai**	**1.03**	**287**	*e*P	**Pb**	**01 45 11.1**	**+0.4**
	baz=286						
TWA	**Mucha**	**1.04**	**299**	*e*P	**Pb**	**01 45 11.4**	**+0.4**
	baz=298						
ETLH	**Xiulin Townshi**	**1.04**	**255**	*e*P	**Pb**	**01 45 11.2**	**+0.2**
	baz=253						
IRIF	**Iriomote-Funai**	**1.06**	**97**	P	**Pb**	**01 45 11.3**	**+0.1**
NHDH	**Xindian Distri**	**1.08**	**297**	*e*P	**Pn**	**01 45 12.1**	**+0.5**
	baz=296						
NNSB	**Datong**	**1.09**	**268**	*e*P	**Pb**	**01 45 12.0**	**0.0**
	baz=266						
NNSH	**Datong**	**1.09**	**268**	*e*P	**Pb**	**01 45 12.0**	**0.0**
	baz=266						
NNS	**Nan Shan**	**1.10**	**268**	*e*P	**Pb**	**01 45 12.4**	**+0.3**
	baz=266						
TATO	**Taipei**	**1.11**	**297**	*e*P	**Pn**	**01 45 12.7**	**+0.6**
	baz=295						
YHNB	**Yeheng**	**1.11**	**280**	*e*P	**Pb**	**01 45 12.6**	**+0.3**
	baz=278						
YHNB				*e*S	**Sb**	**01 45 27.3**	**+0.8**
	baz=278						
ETM	**Tongmen**	**1.12**	**243**	*e*P	**Pg**	**01 45 13.4**	**+0.2**
	baz=222						
NSK	**Sanguang**	**1.13**	**280**	*e*P	**Pb**	**01 45 12.9**	**+0.3**
	baz=278						
NSK				*e*S	**Sb**	**01 45 27.1**	**+0.1**
	baz=278						
YM01	**YM01**	**1.14**	**306**	*e*P	**Pn**	**01 45 13.3**	**+0.8**
	baz=305						
YM08	**YM08**	**1.15**	**308**	*e*P	**Pn**	**01 45 13.2**	**+0.5**
	baz=307						
HATJ	**Hateruma jima**	**1.19**	**110**	P	**Pn**	**01 45 13.4**	**+0.1**
HATJ				*e*S	**Sb**	**01 45 28.3**	**-0.3**
ESL	**Shilin**	**1.24**	**238**	*e*P	**Pg**	**01 45 15.3**	**-0.2**
	baz=218						
FUSS	**Fushou**	**1.24**	**260**	*e*P	**Pb**	**01 45 15.0**	**+0.5**
	baz=250						
WHF	**Hehuan Shan**	**1.25**	**255**	*e*P	**Pb**	**01 45 15.2**	**+0.5**
	baz=252						
JKRS	**Kuro-shima**	**1.32**	**100**	P	**Pn**	**01 45 15.1**	**+0.1**
NFF	**Wufeng Townshi**	**1.34**	**277**	*e*P	**Pb**	**01 45 16.6**	**+0.4**
	baz=275						
CHGB	**Renai**	**1.35**	**252**	*e*P	**Pg**	**01 45 17.3**	**-0.3**
	baz=251						
OWD	**Renai**	**1.39**	**248**	*e*P	**Pb**	**01 45 17.8**	**+0.8**
	baz=253						
OWD				*e*S	**Sg**	**01 45 36.4**	**0.0**
	baz=253						
WUSB	**Renai**	**1.42**	**250**	*e*P	**Pg**	**01 45 18.5**	**-0.4**
	baz=249						
JIJ	**Ishigaki jima**	**1.43**	**94**	P	**Pn**	**01 45 16.4**	**-0.1**
JIJ				S	**Sn**	**01 45 32.7**	**-2.1**
LIOB	**Emei**	**1.44**	**277**	*e*P	**Pb**	**01 45 18.6**	**+0.8**
	baz=275						
HGSD	**Ruisui**	**1.44**	**227**	*e*P	**Pg**	**01 45 18.9**	**-0.5**
	baz=225						
NSTT	**Nanjuang**	**1.45**	**276**	*e*P	**Pg**	**01 45 19.2**	**-0.2**
	baz=274						
VWDT	**VWDT**	**1.50**	**242**	*e*P	**Pb**	**01 45 19.6**	**+0.8**
	baz=239						
VWDT				*e*S	**Sg**	**01 45 40.0**	**0.0**
	baz=239						
WHP	**Taichung City**	**1.50**	**263**	*e*P	**Pg**	**01 45 20.0**	**-0.5**
	baz=261						
YULB	**Yu-li**	**1.59**	**228**	*e*P	**Pn**	**01 45 20.0**	**+1.2**
	baz=212						
YUS	**Yu-Shan**	**1.79**	**237**	*e*P	**Pb**	**01 45 23.7**	**-0.3**
	baz=218						
ALS	**Alishan**	**1.89**	**240**	*e*P	**Pb**	**01 45 25.3**	**-0.3**
	baz=221						

*IDC **29** 01:46:47.7±1.6, 24°.26S×70°.23E, h0km, mb3.8/6, mbtmp3.8/6, MS3.7/1, Error ellipse: s-maj=52.3km s-min=30.0km az=27.0*
*NEIC **29** 01:46:48.4±2.4, 24°.5S±0°.2×69°.99E±0°.09, h10km±1km, mb4.4/5, Error ellipse: s-maj=29.7km s-min=12.7km az=170.0*

ISC 29 01:46:48.0±0.8, 24°.4S±0°.2×70°.0E±0°.2, h10km, n23, σ1s06/16, mb4.1/8, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**16.86**	**8**	T	T	02 08 09.8	
	baz=190,slow=76,SNR=29						
H08S2	**Diego Garcia H**	**16.86**	**8**	T	T	02 08 11.5	
	baz=190,slow=76,SNR=56						
H08S3	**Diego Garcia H**	**16.88**	**8**	T	T	02 08 13.3	
	baz=190,slow=76,SNR=34						
VOI	**Vohitsoka**	**21.50**	**272**	P	**P**	**01 51 36.4**	**-0.9**
VOI				IAmb	IAmb	01 51 41.4	
	comp=Z,20nm,1.2s						
H01W2	**Cape Leeuwin H**	**39.45**	**116**	T	T	02 36 07.9	
	baz=272,slow=75,SNR=16						
H01W3	**Cape Leeuwin H**	**39.45**	**116**	T	T	02 36 08.0	
	baz=272,slow=75,SNR=17						
H01W1	**Cape Leeuwin H**	**39.46**	**116**	T	T	02 36 09.2	
	baz=272,slow=75,SNR=16						
BOSA	**Boshof**	**40.10**	**254**	LR	LR	02 08 00.2	
	comp=Z,110nm,19.6s,baz=165,slow=32						
CMAR	**Chiang Mai Arr**	**51.11**	**36**	P	**P**	**01 55 52.0**	**+0.9**
	comp=Z,0.5nm,0.2s,baz=236,slow=6.4,SNR=0.9						
	comp=Z,0.5nm,0.2s						
CMAR	**Chiang Mai Arr**	**51.11**	**36**	P	**P**	**01 55 51.2**	**0.0**
ASAR	**Alice Springs**	**57.85**	**104**	P	**P**	**01 56 40.5**	**+0.1**
	comp=Z,1.6nm,0.8s,baz=248,slow=6.4,SNR=11						
	comp=Z,1.6nm,0.8s						
ASAR	**Alice Springs**	**57.85**	**104**	P	**P**	**01 56 39.7**	**-0.6**
AS31	**Alice Springs**	**57.85**	**104**	P	**P**	**01 56 41.1**	**+0.7**
WRA	**Warramunga Arr**	**59.26**	**99**	P	**P**	**01 56 50.3**	**+0.1**
	comp=Z,1.6nm,0.9s,baz=255,slow=7.7,SNR=4.7						
	comp=Z,1.6nm,0.9s						
SNAA	**Sanae**	**61.63**	**200**	P	**P**	**01 57 05.3**	**-0.2**
MKAR	**Makanchi Array**	**71.76**	**9**	P	**P**	**01 58 09.1**	**-1.3**
	comp=Z,0.3nm,0.7s,baz=189,slow=8.0,SNR=2.6						
	comp=Z,0.3nm,0.7s						
MKAR	**Makanchi Array**	**71.76**	**9**	P	**P**	**01 58 09.8**	**-0.5**
ABKAR	**Akbulak array**	**73.91**	**353**	P	**P**	**01 58 23.5**	**+0.5**
TOA0	**Torodi Ar. Sit**	**76.41**	**291**	P	**P**	**01 58 38.5**	**+0.3**
TOA0				IAmb	IAmb	01 59 05.5	
	comp=Z,6.2nm,1.3s						
TORD	**Torodi Ar. Bea**	**76.41**	**291**	P	**P**	**01 58 40.7**	**+2.5**
	comp=Z,1.1nm,0.9s,baz=109,slow=4.8,SNR=4.3						
	comp=Z,1.1nm,0.9s						
TORD	**Torodi Ar. Bea**	**76.41**	**291**	P	**P**	**01 58 39.0**	**+0.8**
TORD				IAmb	IAmb	01 58 42.9	
	comp=Z,2.1nm,1.1s						
SONM	**Songino Array**	**79.02**	**24**	P	**P**	**01 58 52.1**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=228,slow=7.6,SNR=1.6						
	comp=Z,0.2nm,0.3s						
ZALV	**Zalesovo Beam**	**79.10**	**9**	P	**P**	**01 58 50.6**	**-1.7**

IDC 29 01:50:10.4±2.5, 6°.31S×129°.47E, h0km, mb3.7/1, mbtmp3.4/3, ML3.1/2, Error ellipse: s-maj=175.8km s-min=32.7km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.36**	**161**	Pn	Pn	01 53 35.5	+0.5
	0.1nm,0.3s,baz=345,slow=13,SNR=1.5						
WRA				Sn	Sn	01 56 02.6	-13
	0.3nm,0.3s,baz=342,slow=21,SNR=7.1						
	0.3nm,0.5s						
ASAR	**Alice Springs**	**17.78**	**167**	P	Pn	01 54 19.2	-0.3
	0.1nm,0.3s,baz=331,slow=9.9,SNR=5.3						
	0.3nm,0.3s						
MKAR	**Makanchi Array**	**67.36**	**327**	P	P	02 01 07.5	0.0
	0.3nm,0.4s,baz=117,slow=8.0,SNR=4.5						
	0.3nm,0.4s						

MAN 29 01:55:21.1, 6°.55N×126°.28E, h22km, mb4.3, ML3.1, MS2.8, 1C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.40**	**357**	*e*P	Pn	01 55 30.1	+0.9
DDMP	**Don Marcelino,**	**0.71**	**232**	*e*P	Pn	01 55 35.4	+0.3
KCP	**Kidapawan**	**1.27**	**291**	*i*P	Pb	01 55 42.9	+0.3
BIPH	**Bislig**	**1.63**	**3**	*i*P	Pb	01 55 49.4	+0.6
BIPH				*i* S		01 56 09.9	
GLSP	**General Luna,**	**3.22**	**357**	*e*P	Pn	01 56 13.2	+3.5

*IDC **29** 02:05:41.9±2.9, 61°.49S×156°.23E, h0km, mb4.2/4, mbtmp4.3/5, ML4.8/1, MS4.6/40, Error ellipse: s-maj=107.9km s-min=25.2km az=86.0*
*NEIC **29** 02:05:45.6±1.6, 61°.61S±0°.08×155°.9E±0°.3, h10km±1km, mb4.6/16, Error ellipse: s-maj=27.2km s-min=12.1km az=105.0*
*GCMT **29** 02:05:51.6±0.1, 61°.59S±0°.01×154°.32E±0°.02, h15km, MW5.4/139, Moment Tensor Solution. s101,c160; s139,c232; Duration: 1s2 Moment tensor: Scale 10^17 Nm; Mrr-0.09±.02; Mθθ 1.34±.02; Mφφ-1.25±.02; Mrθ-0.34±.06; Mθφ-0.98±.02; Mφr0.24±.07; Best double couple: M0 1.67100×10^17 NP1:φs243.00000°, δ78.00000°, λ175.00000°. NP2:φs334.00000°, δ85.00000°, λ12.00000°. Principal axes: T 1.7550, Plg12.0000°, Azm199.0000°; N -0.1670, Plg77.0000°, Azm357.0000°; P -1.5880, Plg5.0000°, Azm108.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 02:05:45.4±0.5, 61°.69S±0°.06×155°.8E±0°.1, h10km, n119, σ2s07/66, mb4.5/11, MS4.6/43, 11C-3D, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla**	**7.41**	**15**	Pn	**Pn**	**02 07 31.8**	**-1.6**
VNDA	**Vanda**	**16.03**	**175**	Pn	**Pn**	**02 09 29.3**	**-1.2**
	3.3nm,0.3s,baz=348,slow=14,SNR=117						
VNDA				Sn	**Sn**	**02 12 20.7**	**-7.3**
	0.3nm,0.3s,baz=218,slow=13,SNR=1.3						
VNDA				LR	LR	02 15 02.7	
	comp=Z,6μm,19.6s,baz=358,slow=35						
	8.1nm,0.4s						
VNDA	**Vanda**	**16.03**	**175**	Pn	**Pn**	**02 09 29.1**	**-1.5**
SBA	**Scott Base**	**16.62**	**172**	Pn	**Pn**	**02 09 38.7**	**+0.7**
SBA				IAmb	IAmb	02 09 46.6	
	comp=Z,26nm,0.9s						
WHZ	**Wether Hill Ro**	**17.34**	**30**		**Pn**	**02 09 47.8**	**+0.6**
CASY	**Casey**	**19.99**	**237**	P	**Pn**	**02 10 18.2**	**-1.1**
CASY				IAmb	IAmb	02 10 24.4	
	comp=Z,73nm,1.5s						
RPZ	**Rata Peaks**	**20.15**	**34**	LR	LR	02 17 04.3	
	comp=Z,3μm,18.9s,baz=186,slow=34						
RPZ	**Rata Peaks**	**20.15**	**34**	Pn	**P**	**02 10 20.1**	**+0.6**
MQZ	**McQueen's Vall**	**20.60**	**37**	Pn	**P**	**02 10 25.6**	**+1.2**
MQZ				IAmb	IAmb	02 10 36.1	
	comp=Z,62nm,1.5s						
URZ	**Urewera**	**26.93**	**39**	LR	LR	02 22 13.8	
	comp=Z,1μm,18.1s,baz=211,slow=37						
QSPA	**South Pole Qui**	**28.40**	**180**	P	**P**	**02 11 42.2**	**+2.5**
	comp=Z,4.4nm,1.0s,baz=14,slow=3.0,SNR=7.1						
QSPA				LR	LR	02 23 05.2	
	comp=Z,3μm,18.1s,baz=16,slow=36						
QSPA	**South Pole Qui**	**28.40**	**180**	P	**P**	**02 11 42.4**	**+2.7**
QSPA				IAmb	IAmb	02 12 09.0	
	comp=Z,11nm,0.9s						
STKA	**Stephens Creek**	**31.21**	**336**	P	**P**	**02 12 03.5**	**-1.2**
	comp=Z,3.1nm,0.8s,baz=155,slow=16,SNR=3.0						
STKA				LR	LR	02 21 32.4	
	comp=Z,1μm,22.0s,baz=160,slow=30						
	comp=Z,3.1nm,0.8s						
STKA	**Stephens Creek**	**31.21**	**336**	P	**P**	**02 12 03.2**	**-1.4**
MAW	**Mawson**	**36.60**	**220**	P	**P**	**02 12 52.1**	**+1.0**
	comp=Z,4.5nm,1.1s,baz=119,slow=9.9,SNR=3.8						
MAW				LR	LR	02 27 55.2	
	comp=Z,3μm,18.2s,baz=114,slow=36						
	comp=Z,4.5nm,1.1s						
MAW	**Mawson**	**36.60**	**220**	P	**P**	**02 12 51.5**	**+0.4**
RAO	**Raoul Island**	**36.80**	**40**	LR	LR	02 26 23.7	
	comp=Z,1μm,20.1s,baz=170,slow=34						
H01W1	**Cape Leeuwin H**	**37.47**	**296**	T	T	02 52 28.4	
	baz=148,slow=75,SNR=299						
H01W2	**Cape Leeuwin H**	**37.48**	**296**	T	T	02 52 28.6	
	baz=148,slow=75,SNR=461						
H01W3	**Cape Leeuwin H**	**37.49**	**296**	T	T	02 52 29.5	
	baz=148,slow=75,SNR=288						
BELA	**Belgrano 2**	**40.53**	**177**	P	**P**	**02 13 25.8**	**+1.9**
BELA				IAmb	IAmb	02 13 32.6	
	comp=Z,20nm,1.3s						
ASAR	**Alice Springs**	**40.84**	**329**	P	**P**	**02 13 24.3**	**-2.8**
	comp=Z,3.8nm,1.0s,baz=170,slow=9.2,SNR=10						
ASAR				PcP	**PcP**	**02 15 30.4**	**+2.6**
	comp=Z,1.5nm,1.0s,baz=144,slow=2.2,SNR=4.6						
ASAR				LR	LR	02 27 50.5	
	comp=Z,609nm,21.1s,baz=160,slow=33						
	comp=Z,3.8nm,1.0s						
ASAR	**Alice Springs**	**40.84**	**329**	P	**P**	**02 13 24.1**	**-2.9**
KOUNC	**Koumac, New Ca**	**41.53**	**12**	P	**P**	**02 13 30.4**	**-2.3**
CTA	**Charters Tower**	**42.09**	**347**	LR	LR	02 28 26.3	
	comp=Z,1μm,21.2s,baz=176,slow=32						
WR0	**Warramunga Arr**	**44.24**	**331**	P	**P**	**02 13 54.3**	**-0.5**
WR0				IAmb	IAmb	02 14 13.6	
	comp=Z,20nm,1.3s						
WB2	**Warramunga Arr**	**44.31**	**331**	P	**P**	**02 13 54.4**	**-0.8**
WB2				IAmb	IAmb	02 14 09.9	
	comp=Z,7.3nm,1.0s						
WRA	**Warramunga Arr**	**44.31**	**331**	P	**P**	**02 13 51.6**	**-3.7**
	comp=Z,3.8nm,1.1s,baz=163,slow=6.8,SNR=6.1						
WRA				LR	LR	02 29 53.1	
	comp=Z,692nm,20.9s,baz=148,slow=33						
	comp=Z,3.8nm,1.1s						
WRA	**Warramunga Arr**	**44.31**	**331**	P	**P**	**02 13 55.2**	**-0.1**
WB0	**Warramunga Arr**	**44.47**	**331**	P	**P**	**02 13 56.7**	**+0.1**
TROLL	**Troll, Antarti**	**45.31**	**191**	P	**P**	**02 14 03.6**	**+0.8**
SNAA	**Sanae**	**46.09**	**189**	P	**P**	**02 14 09.6**	**+0.6**
SNAA				S	**S**	**02 20 49.8**	**-4.3**
SNAA	**Sanae**	**46.09**	**189**	LR	LR	02 34 03.1	
	comp=Z,5μm,18.4s,baz=158,slow=37						
SNAA	**Sanae**	**46.09**	**189**	P	**P**	**02 14 11.2**	**+2.2**
SNAA				IAmb	IAmb	02 14 32.9	
	comp=Z,9.5nm,1.4s						
MSVF	**Nonsavu**	**46.65**	**30**	LR	LR	02 29 40.4	
	comp=Z,901nm,21.5s,baz=183,slow=31						
VNA3	**Neumayer Olymp**	**46.96**	**186**	P	**P**	**02 14 18.0**	**+2.3**
VNA3				S	S	02 21 20.0	+14
VNA2	**Neumayer--Watz**	**47.14**	**187**	P	**P**	**02 14 19.4**	**+2.2**
VNA2				S	S	02 21 01.1	-7.8
VNA1	**Neumayer--Stat**	**47.47**	**187**	P	**P**	**02 14 22.3**	**+2.7**
VNA1				S	**S**	**02 21 14.8**	**+1.3**
VNA1	**Neumayer--Stat**	**47.47**	**187**	ScP	**ScP**	**02 19 37.9**	**-5.4**
MBWA	**Marble Bar**	**47.52**	**312**	P	**P**	**02 14 22.7**	**+2.1**
PMSA	**Palmer Station**	**50.41**	**159**	LR	LR	02 34 28.9	
	comp=Z,723nm,18.5s,baz=211,slow=34						
RAR	**Rarotonga**	**50.68**	**58**	LR	LR	02 33 37.0	
	comp=Z,100nm,19.1s,baz=207,slow=33						
HNR	**Honiara**	**52.25**	**5**	LR	LR	02 31 58.5	
	comp=Z,1μm,21.7s,baz=172,slow=30						
PMG	**Port Moresby**	**52.56**	**349**	LR	LR	02 34 23.2	
	comp=Z,970nm,19.1s,baz=166,slow=33						
AFI	**Afiamalu**	**53.09**	**41**	LR	LR	02 37 21.3	
	comp=Z,129nm,19.1s,baz=199,slow=36						
TBI	**Tubuai**	**53.20**	**70**	*e*LR	LR	02 30 20.7	
	comp=Z,648nm,28.2s						
TBI	**Tubuai**	**53.20**	**70**	*e*T	T	03 12 44.5	
	comp=Z,34nm,0.3s						
KRVT	**Keravat (AS076**	**57.32**	**356**	LR	LR	02 37 31.8	
	comp=Z,147nm,20.6s,baz=311,slow=33						
PAE	**Paea**	**58.13**	**66**	*e*T	T	03 18 52.3	
	comp=Z,1.0nm,0.3s						
PPT2	**Papeete2**	**58.20**	**66**	*e*LQ	LQ	02 30 10.5	
	comp=Z,879nm,25.0s						
PPT2				*e*LR	LR	02 32 40.3	
	comp=Z,831nm,27.0s						
PPT2	**Papeete2**	**58.20**	**66**	*e*T	T	03 19 01.8	
	comp=Z,3.6nm,0.3s						
PPT	**Papeete**	**58.22**	**66**	LR	LR	02 37 41.7	
	comp=Z,286nm,18.0s,baz=212,slow=33						
USHA	**Ushuaia**	**58.72**	**152**	LR	LR	02 35 48.9	
	comp=Z,693nm,21.3s,baz=208,slow=31						
VAH	**Vaihoa**	**61.13**	**67**	*e*T	T	03 22 42.4	
	comp=Z,92nm,0.2s						
KAPI	**Kappang**	**62.58**	**319**	LR	LR	02 40 54.7	
	comp=Z,450nm,19.7s,baz=163,slow=34						
TAOE	**Nuku Hiva Isla**	**70.11**	**71**	*e*LR	LR	02 38 08.0	
	comp=Z,438nm,26.6s						
PLCA	**Paso Flores**	**71.27**	**145**	LR	LR	02 42 23.9	
	comp=Z,523nm,19.7s,baz=208,slow=31						
DAV	**Davao City (W)**	**72.45**	**328**	LR	LR	02 49 13.1	
	comp=Z,114nm,19.0s,baz=122,slow=36						
H03S2	**Juan Fernandez**	**75.06**	**135**	T	T	03 40 49.5	
	baz=201,SNR=150						
H03S1	**Juan Fernandez**	**75.06**	**135**	T	T	03 40 50.3	
	baz=201,SNR=168						
H03S3	**Juan Fernandez**	**75.08**	**135**	T	T	03 40 50.3	
	baz=201,SNR=164						
**

KMI					LR	LR			
	comp=N,200nm,23.0s								
KMI					LR	LR			
	comp=E,220nm,29.8s								
KMI					LR	LR			
	comp=Z,280nm,24.9s								
SIV	**San Ignacio**	**97.26**	**144**		LR	LR	02 59 12.4		
	comp=Z,162nm,18.9s,baz=252,slow=33								
PZH	**PanZhiHua**	**98.00**	**313**		P	Pdif	02 19 24.0	+2.5	
PZH					pmax	pmax			
	comp=Z,10.0nm,0.6s								
PZH					pmax	pmax			
	comp=Z,60nm,5.1s								
MJAR	**Matsushiro Arr**	**98.92**	**346**		LR	LR	03 01 10.9		
	comp=Z,138nm,21.0s,baz=164,slow=34								
ATAH	**Atahualpa**	**99.71**	**125**		LR	LR	02 56 48.4		
	comp=Z,234nm,18.1s,baz=207,slow=31								
WMQ	**Urumqi**	**118.53**	**310**	*eP*		**PKiKP**	**02 24 34.5**	**+2.1**	
TORD	**Torodi Ar. Bea**	**128.04**	**213**	PKP		**PKiKP**	**02 24 52.7**	**+0.7**	
	comp=Z,0.8nm,0.9s,baz=177,slow=1.5,SNR=2.2								
TORD	**Torodi Ar. Bea**	**128.04**	**213**			**PKPdf**	**02 24 51.0**	**-0.4**	
TIRR	**Tirgusor**	**145.15**	**265**	⇑P		**PKiKP**	**02 25 24.7**	**-1.1**	
KEST	**Kesra**	**146.53**	**235**	PKPbc		**PKiKP**	**02 25 30.3**	**+1.2**	
	comp=Z,11nm,1.0s,baz=225,slow=2.9,SNR=8.6								
VRI	**Vrincioaia**	**146.99**	**265**	⇑P		**PKPdf**	**02 25 24.6**	**-0.5**	
PLOR	**Plostina**	**147.02**	**265**	⇑P		**PKPbc**	**02 25 27.2**	**-0.1**	
MLR	**Muntele Rosu**	**147.09**	**264**	⇓P		**PKPbc**	**02 25 27.9**	**+0.3**	
COVR	**Voineasa-Covas**	**147.22**	**265**	⇑P		**PKiKP**	**02 25 30.0**	**-0.1**	
VOIR		**147.47**	**263**	⇑P		**PKPab**	**02 25 30.1**	**-0.6**	
ARR	**Arges**	**147.62**	**263**	⇓P		**PKPdf**	**02 25 26.4**	**+0.2**	
BOVS	**Bovan**	**147.68**	**257**	⇑P		**PKPbc**	**02 25 29.4**	**+0.3**	
LOT	**Lotru**	**148.08**	**262**	⇑P		**PKPdf**	**02 25 28.1**	**+1.0**	
BURAR	**Bucovina Array**	**148.97**	**266**	⇑P		**PKiKP**	**02 25 34.9**	**+1.2**	
AKASG	**Malin Array Be**	**149.19**	**274**	PKPbc		**PKPab**	**02 25 35.8**	**-1.6**	
	comp=Z,3.8nm,0.9s,baz=98,slow=3.0,SNR=7.1								
BZS	**Buzias**	**149.22**	**260**	⇑P		**PKPab**	**02 25 36.8**	**-0.8**	
DRGR		**149.57**	**263**	⇑P		**PKPbc**	**02 25 33.0**	**-1.0**	
KLMR	**Klimovskoe**	**150.42**	**297**	*e*		**PKPbc**	**02 25 35.4**	**0.0**	
KLMR					AMP		02 25 38.6		
	comp=Z,19nm,1.3s								
MORH	**Mrgy, Hungar**	**151.06**	**258**	⇑P		**PKPbc**	**02 25 37.6**	**+0.2**	
SOKA	**Soboth**	**153.07**	**254**	*eP*		**PKPdf**	**02 25 37.7**	**+0.9**	
	comp=Z,0.6nm,0.4s								
OBKA	**Obir**	**153.17**	**253**	*eP*		**PKPdf**	**02 25 35.8**	**+0.9**	
	comp=Z,1.9nm,0.8s								
RONA	**Rosalia, Austr**	**153.24**	**257**	*eP*		**PKPdf**	**02 25 37.3**	**+2.4**	
	comp=Z,5.8nm,1.1s								
CONA	**Conrad Observa**	**153.61**	**257**	*eP*		**PKPab**	**02 25 59.1**	**+3.2**	
	comp=Z,3.1nm,1.0s								
ABTA	**Abfaltersbach**	**154.27**	**251**	*eP*		**PKPab**	**02 26 02.6**	**+3.8**	
	comp=Z,2.7nm,0.7s								
MOA	**Molln**	**154.29**	**255**	*eP*		**PKPab**	**02 26 00.9**	**+2.2**	
	comp=Z,2.9nm,1.0s								
ESDC	**Sonseca Array**	**154.70**	**219**	PKPbc		**PKPbc**	**02 25 45.0**	**-0.8**	
	comp=Z,0.4nm,0.9s,baz=178,slow=2.0,SNR=1.7								
SQTA	**Sankt Quirin**	**155.22**	**251**	*eP*		**PKPab**	**02 26 00.8**	**-2.0**	
	comp=Z,3.0nm,0.8s								
GERES	**GERESS Array B**	**155.27**	**256**	PKPbc		PKPdf	02 25 50.4	+13	
	comp=Z,0.4nm,0.7s,baz=57,slow=3.6,SNR=3.6								
FETA	**Feichten**	**155.28**	**250**	*eP*		**PKPab**	**02 26 03.3**	**+0.1**	
	comp=Z,2.9nm,1.0s								
MOTA	**Moosalm**	**155.36**	**251**	*eP*		**PKPab**	**02 26 03.8**	**+0.3**	
	comp=Z,4.9nm,1.3s								
RETA	**Reutte**	**155.62**	**250**	*eP*		**PKPab**	**02 26 02.4**	**-2.1**	
	comp=Z,3.6nm,1.2s								
DAVA	**Damuels**	**155.86**	**249**	*eP*		**PKPab**	**02 26 03.6**	**-2.1**	
	comp=Z,4.6nm,1.0s								

*INET **29** 02:27:03.8±0.5, 12°.28N×86°.56W, h160km±2km, MW3.1*
*UCR **29** 02:27:05.2±3.0, 11°.58N×87°.23W, h8km±19km, MW3.5*
ISC 29 02:27:05.4±1.6, 12°.18N±0°.09×86°.65W±0°.08, h147km±12km, n44, σ0°88/59, Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
COPN	**Copaltepe**	**0.05**	**92**	*eP*		**Pn**	**02 27 24.6**	**-0.5**
MOMN	**Momotombo**	**0.25**	**25**	*eP*		**Pn**	**02 27 24.9**	**-0.6**
CNGN	**Cerro Negro**	**0.32**	**351**	*eP*		**Pn**	**02 27 25.2**	**-0.6**
TEL3	**Telica 3**	**0.43**	**333**	*eP*		**Pn**	**02 27 26.0**	**-0.1**
CRIN	**San Cristobal**	**0.65**	**322**	*eP*		**Pn**	**02 27 27.1**	**-0.2**
CRIN				*eS*		**Sn**	**02 27 45.9**	**+1.8**
BOAB	**BOACO BROADBAN**	**0.99**	**74**	*eP*		**Pn**	**02 27 29.1**	**-0.8**
BOAB				*eS*		**Sn**	**02 27 47.7**	**-0.7**
CSGN	**Cosiguina Volc**	**1.19**	**312**	*eP*		**Pn**	**02 27 31.4**	**-0.3**
ACON	**Acoyapa**	**1.46**	**98**	*eP*		**Pn**	**02 27 33.2**	**-1.0**
CNCH	**Conchagua**	**1.59**	**313**	*eP*		**Pn**	**02 27 35.8**	**-0.1**
CNCH				*eS*		**Sn**	**02 28 00.9**	**+1.8**
CNCH	**Conchagua**	**1.59**	**313**	*eP*		**Pn**	**02 27 35.8**	**-0.1**
CNCH				*eS*		**Sn**	**02 28 00.9**	**+1.8**
HZTE	**Horizontes, Gu**	**1.79**	**145**	*eP*		**Pn**	**02 27 38.5**	**+0.5**
BUEV	**Buena Vista**	**1.83**	**138**	*eP*		**Pn**	**02 27 38.7**	**+0.1**
LAPC	**Finca la Perla**	**1.84**	**140**	*eP*		**Pn**	**02 27 38.4**	**-0.2**
GPS2	**Hotel Rincn d**	**1.90**	**138**	*eP*		**Pn**	**02 27 40.0**	**+0.6**
VMAR	**Armenia, Volca**	**2.02**	**132**	*eP*		**Pn**	**02 27 40.2**	**-0.5**
VMAR				*eS*		**Sn**	**02 28 08.8**	**+1.0**
HORNC	**Hornillas**	**2.05**	**135**	*eP*		**Pn**	**02 27 40.7**	**-0.4**
COLC	**Colonia**	**2.07**	**137**	*eP*		Pn	02 27 35.1	-6.1
PACA	**Pacayal**	**2.08**	**308**	*eP*		**Pn**	**02 27 41.8**	**+0.4**
PACA				*eS*		**Sn**	**02 28 09.9**	**+0.9**
PACA	**Pacayal**	**2.08**	**308**	*eP*		**Pn**	**02 27 41.8**	**+0.4**
PACA				*eS*		**Sn**	**02 28 09.9**	**+0.9**
CUI	**Cuipilapa**	**2.10**	**136**	*eP*		**Pn**	**02 27 41.3**	**-0.3**
PTEN	**Parque Tenorio**	**2.18**	**132**	*eP*		**Pn**	**02 27 42.1**	**-0.5**
ACAL	**Aguas Claras**	**2.20**	**134**	*eP*		**Pn**	**02 27 43.3**	**+0.4**
SAJU	**San Juanillo,**	**2.29**	**156**	*eP*		**Pn**	**02 27 44.1**	**+0.2**
SAJU				*eS*		**Sn**	**02 28 11.5**	**-2.0**
JTS	**Las Juntas de**	**2.51**	**138**	*eP*		**Pn**	**02 27 46.8**	**+0.2**
SCLA	**Alcaldia de Sa**	**2.53**	**307**	*eP*		**Pn**	**02 27 46.4**	**-0.4**
SCLA				*eS*		**Sn**	**02 28 20.6**	**+1.8**
SCLA	**Alcaldia de Sa**	**2.53**	**307**	*eP*		**Pn**	**02 27 46.4**	**-0.4**
SCLA				*eS*		**Sn**	**02 28 20.6**	**+1.8**
CEDE	**Laguna Cedeo**	**2.54**	**131**	*eP*		**Pn**	**02 27 48.3**	**+1.3**
ARE1	**Arenal 1**	**2.55**	**132**	*eP*		**Pn**	**02 27 48.0**	**+0.9**
CASO	**Castillo**	**2.56**	**133**	*eP*		**Pn**	**02 27 46.8**	**-0.3**
PAVA	**Las Pavas**	**2.70**	**305**	*eP*		**Pn**	**02 27 48.7**	**-0.4**
PAVA				*eS*		**Sn**	**02 28 22.2**	**-0.5**
PAVA	**Las Pavas**	**2.70**	**305**	*eP*		**Pn**	**02 27 48.7**	**-0.4**
PAVA				*eS*		**Sn**	**02 28 22.2**	**-0.5**
SJTE	**Alcalda de S**	**2.71**	**302**	*eP*		**Pn**	**02 27 48.9**	**-0.2**
SJTE				*eS*		**Sn**	**02 28 21.7**	**-1.0**
SJTE	**Alcalda de S**	**2.71**	**302**	*eP*		**Pn**	**02 27 48.9**	**-0.2**
SJTE				*eS*		**Sn**	**02 28 21.7**	**-1.0**
LFRS	**El Faro**	**2.76**	**302**	*eP*		**Pn**	**02 27 49.5**	**-0.2**
LFRS	**El Faro**	**2.76**	**302**	*eP*		**Pn**	**02 27 49.5**	**-0.2**
LAFE	**Finca La Fe, P**	**2.91**	**144**	*eP*		**Pn**	**02 27 51.5**	**-0.1**
PMON	**Piamonte**	**3.01**	**301**	*eP*		**Pn**	**02 27 53.2**	**+0.2**
PMON				*eS*		**Sn**	**02 28 28.3**	**-1.4**
PMON	**Piamonte**	**3.01**	**301**	*eP*		**Pn**	**02 27 53.2**	**+0.2**
PMON				*eS*		**Sn**	**02 28 28.3**	**-1.4**
JACO	**JACO, Garabito**	**3.17**	**142**	*eP*		**Pn**	**02 27 55.1**	**+0.2**
NUBE	**Las Nubes**	**3.50**	**300**	*eS*		**Sn**	**02 28 39.6**	**-1.3**
NUBE	**Las Nubes**	**3.50**	**300**	*eS*		**Sn**	**02 28 39.6**	**-1.3**
LCR2	**La Lucha 2**	**3.55**	**133**	*eP*		**Pn**	**02 28 00.4**	**+0.4**
RIMA	**Rio Macho**	**3.64**	**131**	*eP*		**Pn**	**02 28 01.6**	**+0.5**
CDM	**Cerro de Muert**	**3.85**	**132**	*eP*		**Pn**	**02 28 05.0**	**+0.9**

*NNC **29** 02:31:40.7±5.0, 36°.88N×69°.89E, h169km±82km, mb2.7, mpv3.5, Error ellipse: s-maj=45.1km s-min=28.5km az=18.0*
ISC 29 02:31:38.7±3.5, 36°.7N±0°.2×69°.9E±0°.1, h150km, n11, σ1s05/14, 3C-4D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AML	**Almayashu**	**6.15**	**27**	P		**Pn**	**02 33 08.5**	**+0.8**
	SNR=21							
KK31	**Karatay Array**	**6.40**	**4**	P		**Pn**	**02 33 12.0**	**+1.4**
	0.3nm,0.2s,baz=182,slow=12,SNR=20							
KK31				⇓S		**Sn**	**02 34 21.0**	**-1.7**
	2.6nm,0.5s,baz=193,slow=22,SNR=6.6							
UCH	**Uchtor**	**6.55**	**31**	P		**Pn**	**02 33 13.6**	**+0.5**
	SNR=13							
EKS2	**Erkin-Say**	**6.64**	**25**	P		**Pn**	**02 33 15.1**	**+1.1**
	SNR=9.0							
AAK	**Ala-Archa**	**6.89**	**29**	P		**Pn**	**02 33 17.6**	**+0.3**
	SNR=7.0							
CHMS	**Chumysh**	**7.29**	**29**	⇓P		**Pn**	**02 33 22.1**	**-0.4**
	6.1nm,0.8s							
CHMS				⇓S		**Sn**	**02 34 44.9**	**+0.8**
	4.4nm,0.6s							
USP	**Ospenovka**	**7.43**	**27**	P		**Pn**	**02 33 24.4**	**0.0**
	SNR=9.5							
TKM2	**Tokmak 2**	**7.58**	**33**	P		**Pn**	**02 33 26.1**	**-0.5**
	SNR=8.0							
TKM2	**Tokmak 2**	**7.58**	**33**	⇑P		**Pn**	**02 33 25.9**	**-0.7**
	2.1nm,0.4s							
TKM2				⇑S		**Sn**	**02 34 51.5**	**+0.2**
	3.4nm,0.7s							
AB31	**Akbulak array**	**14.49**	**333**	⇑P		**Pn**	**02 34 57.0**	**+0.5**
	0.2nm,0.3s,baz=138,slow=11,SNR=9.3							
AKTO	**Aktyubinsk**	**16.17**	**332**	⇓P		**Pn**	**02 35 15.5**	**-1.8**
	1.0nm,0.6s							

*IDC **29** 02:35:29.8±3.4, 36°.46N×140°.61E, h54km±31km, mb3.5/7, mbtmp3.9/8, ML4.7/1, MS4.0/4, Error ellipse: s-maj=34.5km s-min=19.9km az=62.0*
*JMA **29** 02:35:30.7±0.1, 36°.5N±0°.2×140°.6E±0°.4, h57km, MD3.6/39, MV4.0/39, NORTHERN IBARAKI PREF*
JMA Felt III J1 at NORTHERN IBARAKI PREF .
ISC 29 02:35:29.5±0.8, 36°.42N±0°.05×140°.76E±0°.06, h61km±6km, n43, σ1s79/35, mb3.8/7, 7D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JHYU	**Hitachinakayam**	**0.16**	**242**	P		**Pn**	**02 35 39.9**	**+1.2**
JHYU				S		**Sn**	**02 35 46.4**	**+0.9**
JHYU	**Hitachinakayam**	**0.16**	**242**	A		A	02 35 39.9	
	comp=E,13nm,0.7s,comp=E,13nm,0.3s							
JHO	**Hitachi**	**0.25**	**321**	P		**Pn**	**02 35 39.4**	**+0.1**
JHO				S		**Sn**	**02 35 45.3**	**-1.1**
JHO	**Hitachi**	**0.25**	**321**	A		A	02 35 39.4	
	comp=E,15nm,0.2s,comp=E,7.0nm,1.4s							
JYT	**Yasato**	**0.50**	**248**	*i* P		**Pn**	**02 35 41.8**	**+0.4**
JYT				S		**Sn**	**02 35 49.4**	**-0.6**
JYT	**Yasato**	**0.50**	**248**	A		A	02 35 41.8	
	comp=E,33nm,0.4s,comp=E,30nm,0.3s							
ONAJ	**Iwakimizuishiy**	**0.68**	**2**	*i* P		**Pn**	**02 35 43.3**	**-0.3**
ONAJ				S		**Sn**	**02 35 52.6**	**-1.4**
ONAJ	**Iwakimizuishiy**	**0.68**	**2**	A		A	02 35 43.3	
	comp=E,16nm,0.3s,comp=E,10.0nm,0.3s							
JFFD	**Fukushimafurud**	**0.69**	**347**	A		A	02 35 43.2	
	comp=E,7.0nm,2.4s,comp=E,7.0nm,0.5s							
JSB	**Shiboa**	**0.87**	**309**	A		A	02 35 44.7	
	comp=E,6.0nm,0.8s,comp=E,4.0nm,1.0s							
JFK	**Kawauchi**	**0.95**	**5**	*i* P		**Pn**	**02 35 46.5**	**-0.5**
JFK				S		**Sn**	**02 35 58.1**	**-1.8**
JFK	**Kawauchi**	**0.95**	**5**	A		A	02 35 46.5	
	comp=E,0.0nm,0.8s,comp=E,3.0nm,0.5s							
JAG	**Ashikaga**	**1.05**	**271**	⇓*i* P		**Pn**	**02 35 47.6**	**-0.6**
JAG				⇓S		**Sn**	**02 35 59.4**	**-2.8**
JAG	**Ashikaga**	**1.05**	**271**	A		A	02 35 47.6	
	comp=E,4.0nm,0.5s,comp=E,3.0nm,0.8s							
JFT	**Otama**	**1.15**	**343**	⇓*i* P		**Pn**	**02 35 48.8**	**-0.7**
JFT				⇓S		**Sn**	**02 36 02.1**	**-2.4**
JKT	**Katashina**	**1.27**	**286**	⇓*i* P		**Pn**	**02 35 50.2**	**-0.9**
JKT				⇓S		**Sn**	**02 36 05.1**	**-2.2**
JKT	**Katashina**	**1.27**	**286**	A		A	02 35 50.2	
	comp=E,5.0nm,0.2s,comp=E,4.0nm,0.2s							
JFY	**Yanaizu**	**1.30**	**320**	⇓*i* P		**Pn**	**02 35 50.6**	**-0.9**
JMM	**Marumori**	**1.45**	**1**	*i* P		**Pn**	**02 35 53.4**	**-0.1**
JMM				S		**Sn**	**02 36 10.2**	**-1.2**
JUON	**Uonuma**	**1.58**	**301**	*i* P		**Pn**	**02 35 54.3**	**-0.9**
JUON				S		**Sn**	**02 36 13.6**	**-1.1**
MJAR	**Matsushiro Arr**	**2.06**	**274**	P		**Pn**	**02 36 00.5**	**-1.3**
	63nm,0.4s,baz=103,slow=9.5,SNR=117							
MJAR				S		**Sn**	**02 36 28.3**	**+1.9**
	38nm,0.3s,baz=92,slow=34,SNR=5.3							
ASAJ	**Asahikawa**	**7.82**	**10**	LR		LR	02 40 41.7	
	comp=Z,48nm,19.8s,baz=135,slow=40							
JCJ	**Chichijima**	**9.37**	**172**	P		**Pn**	**02 37 41.3**	**-0.5**
	6.9nm,0.3s,baz=122,slow=24,SNR=8.1							
JCJ				S		**Sn**	**02 39 20.1**	**-5.5**
	17nm,0.4s,baz=287,slow=19,SNR=3.5							
	13nm,0.3s							
USRK	**Ussuriysk Ar.**	**10.26**	**322**	P		**Pn**	**02 37 57.4**	**+3.6**
	2.4nm,0.6s,baz=138,slow=14,SNR=7.8							
KSRS	**Korea Array**	**10.33**	**280**	P		**Pn**	**02 37 58.1**	**+3.3**
	1.5nm,0.7s,baz=92,slow=14,SNR=5.6							
SONM	**Songino Array**	**27.70**	**305**	P		**P**	**02 41 11.3**	**-0.7**
	0.8nm,0.5s,baz=105,slow=8.4,SNR=6.0							
	0.8nm,0.5s							
H11N2	**WAKE ISLAND Hy**	**28.30**	**119**	T		T	03 11 22.3	
	baz=312,slow=75,SNR=52							
H11N1	**WAKE ISLAND Hy**	**28.30**	**119**	T		T	03 11 22.4	
	baz=312,slow=75,SNR=47							
H11N3	**WAKE ISLAND Hy**	**28.31**	**119**	T		T	03 11 23.3	
	baz=312,slow=75,SNR=36							
H11S1	**WAKE ISLAND Hy**	**28.98**	**121**	T		T	03 12 10.8	
	baz=314,slow=76,SNR=170							
H11S3	**WAKE ISLAND Hy**	**28.98**	**121**	T		T	03 12 12.3	
	baz=314,slow=76,SNR=87							
H11S2	**WAKE ISLAND Hy**	**28.99**	**121**	T		T	03 12 11.3	
	baz=314,slow=76,SNR=80							
ZALV	**Zalesovo Beam**	**41.95**	**313**	P		**P**	**02 43 14.0**	**0.0**
	2.4nm,0.5s,baz=96,slow=6.8,SNR=7.5							
	2.4nm,0.5s							
MKAR	**Makanchi Array**	**44.01**	**303**	P		**P**	**02 43 30.9**	**0.0**
	0.9nm,0.6s,baz=88,slow=10,SNR=11							
	0.9nm,0.6s							
ILAR	**Eielson Array**	**50.29**	**32**	P		**P**	**02 44 21.4**	**+1.9**
	0.4nm,0.9s,baz=279,slow=6.5,SNR=4.6							
	0.4nm,0.9s							
WRA	**Warramunga Arr**	**56.38**	**187**	P		**P**	**02 45 06.0**	**+1.5**
	0.5nm,0.5s,baz=360,slow=7.5,SNR=11							
	0.5nm,0.5s							
DLBC	**Dease Lake**	**59.43**	**38**	LR		LR	03 13 08.9	
	comp=Z,152nm,20.7s,baz=254,slow=38							
BBB	**Bella Bella**	**62.87**	**44**	LR		LR	03 11 50.4	
	comp=Z,213nm,20.0s,baz=214,slow=35							
FINES	**FINESS Array B**	**69.11**	**332**	P		**P**	**02 46 28.7**	**-0.1**
	1.0nm,0.7s,baz=54,slow=9.7,SNR=5.3							
	1.0nm,0.7s							
KBZ	**Khabaz**	**70.91**	**311**	LR		LR	03 21 15.1	
	comp=Z,79nm,19.7s,baz=139,slow=39							
KVAR	**Kislovodsk Arr**	**70.91**	**311**	LR		LR	03 20 22.4	
	comp=Z,78nm,20.8s,baz=57,slow=38							
NB2	**NORSAR Subarra**	**74.55**	**337**	P		**P**	**02 47 01.5**	**+0.1**
	comp=Z,1.8nm,0.9s,baz=40,slow=6.2							
NOA	**NORSAR Array B**	**74.55**	**337**	P		**P**	**02 47 01.6**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=39,slow=5.9,SNR=4.0							
	comp=Z,0.7nm,0.8s							

*NEIC **29** 03:06:00.1±0.9, 11°.0S±0°.1×162°.4E±0°.1, h43km±11km, mb4.5/6, Error ellipse: s-maj=24.5km s-min=13.1km az=51.0*
*IDC **29** 03:06:07.7±6.7, 10°.49S×161°.87E, h111km±49km, mb3.5/6, mbtmp3.9/7, MS3.1/4, Error ellipse: s-maj=93.9km s-min=24.4km az=136.0*
ISC 29 03:05:59.5±0.7, 11°.0S±0°.1×162°.3E±0°.1, h50km, n30, σ1s16/24, mb4.1/9, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HNR	**Honiara**	**2.83**	**304**	P		**Pn**	**03 06 42.8**	**+0.5**
	1µm,0.2s,baz=190,slow=9.4,SNR=90							
HNR				S		**Sn**	**03 07 14.1**	**-1.1**
	785nm,0.4s,baz=324,slow=22,SNR=8.2							
HNR				LR		LR	03 07 45.7	
	comp=Z,197nm,19.2s,baz=38,slow=45							
HNR	**Honiara**	**2.83**	**304**	Pn		**Pn**	**03 06 43.2**	**+0.9**
HNR				Sn		**Sn**	**03 07 14.4**	**-0.7**
KOUNC	**Koumac, New Ca**	**9.65**	**169**	Pn		**Pn**	**03 08 14.8**	**-1.1**
LIFNC	**LIFOU**	**10.78**	**155**	Pn		**Pn**	**03 08 29.4**	**-1.9**
MARNC	**Mare, Loyalty**	**11.74**	**153**	Pn		**Pn**	**03 08 44.9**	**+0.5**
ONTNC	**Ouen Toro**	**11.89**	**161**	Pn		**Pn**	**03 08 46.8**	**+0.3**
OUENC	**Ouen Island, N**	**12.12**	**160**	Pn		**Pn**	**03 08 50.2**	**+0.6**
CTA	**Charters Tower**	**17.90**	**238**	LR		LR	03 16 21.7	
	comp=Z,79nm,18.5s,baz=81,slow=34							
PATS	**Pohnpei**	**18.19**	**347**			**Pn**	**03 10 09.2**	**+0.5**
PATS				IAmb		IAmb	03 10 51.6	
	comp=Z,59nm,1.2s							
STKA	**Stephens Creek**	**28.23**	**220**	LR		LR	03 22 27.0	
	comp=Z,67nm,18.5s,baz=190,slow=34							
WB2	**Warramunga Arr**	**28.34**	**248**	P		**P**	**03 11 51.0**	**+2.0**
WB2				IAmb		IAmb	03 12 24.8	
	comp=Z,21nm,1.5s							
WRA	**Warramunga Arr**	**28.35**	**248**	P		**P**	**03 11 49.9**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=74,slow=9.0,SNR=7.6							
WRA				PcP		**PcP**	**03 15 00.6**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=82,slow=3.8,SNR=5.6							
	comp=Z,0.4nm,0.5s							
H11S2	**WAKE ISLAND Hy**	**29.65**	**8**	T		T	03 43 01.5	
	baz=188,slow=76,SNR=66							
H11S3	**WAKE ISLAND Hy**	**29.65**	**8**	T		T	03 43 05.6	
	baz=188,slow=76,SNR=103							
H11S1	**WAKE ISLAND Hy**	**29.67**	**8**	T		T	03 43 06.1	
	baz=188,slow=76,SNR=84							
ASAR	**Alice Springs**	**29.82**	**241**	P		**P**	**03 12 03.2**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=67,slow=9.6,SNR=2.5							
	comp=Z,0.4nm,0.5s							
H11N1	**WAKE ISLAND Hy**	**30.88**	**8**	T		T	03 44 36.8	
	baz=188,slow=76,SNR=86							
H11N3	**WAKE ISLAND Hy**	**30.89**	**8**	T		T	03 44 36.2	
	baz=188,slow=76,SNR=59							
H11N2	**WAKE ISLAND Hy**	**30.90**	**8**	T		T	03 44 38.4	
	baz=188,slow=76,SNR=42							
KSRS	**Korea Array**	**58.03**	**328**	LR		LR	03 37 39.1	
	comp=Z,13nm,22.0s,baz=210,slow=33							
CCB	**Clear Creek Bu**	**84.21**	**19**	P		**P**	**03 18 25.6**	**+0.4**
HDA	**Harding Lake**	**84.34**	**20**	P		**P**	**03 18 26.9**	**+1.0**
ILAR	**Eielson Array**	**84.59**	**19**	P		**P**	**03 18 26.8**	**-0.5**
	comp=Z,0.4nm,0.7s,baz=234,slow=5.8,SNR=7.8							
	comp=Z,0.4nm,0.7s							
ILAR	**Eielson Array**	**84.59**	**19**	P		**P**	**03 18 28.2**	**+1.0**
M27K	**Edge Creek, AK**	**84.88**	**23**	P		**P**	**03 18 29.9**	**+1.0**
M27K				IAmb		IAmb	03 18 31.2	
	comp=Z,2.9nm,0.8s							
J25K	**Salcha River,**	**84.99**	**20**	P		**P**	**03 18 30.3**	**+1.0**
J25K				IAmb		IAmb	03 18 31.2	
	comp=Z,2.4nm,0.7s							
NVAR	**Mina Array Bea**	**88.59**	**51**	P		**P**	**03 18 49.0**	**+1.4**
	comp=Z,0.8nm,0.7s,baz=236,slow=7.2,SNR=4.0							
	comp=Z,0.8nm,0.7s							
MKAR	**Makanchi Array**	**91.22**	**317**	P		**P**	**03 18 57.3**	**-2.2**
	comp=Z,0.3nm,0.5s,baz=134,slow=4.2,SNR=2.9							
	comp=Z,0.3nm,0.5s							
YKA	**Yellowknife Ar**	**96.51**	**28**	P		**P**	**03 19 22.1**	**-1.2**
	comp=Z,0.5nm,0.6s,baz=262,slow=4.2,SNR=4.1							
	comp=Z,0.5nm,0.6s							
ARCES	**ARCESS Array B**	**115.45**	**345**	PKP		**PKiKP**	**03 24 34.4**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=89,slow=1.7,SNR=11							

SCB 29 03:10:34.6±1.6, 21°.28S×66°.77W, h199km±17km, ML2.6/2, Error ellipse: s-maj=9.0km s-min=7.6km az=0.0, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MOCB	**Mochara**	**1.06**	**89**	P		Pn	03 11 06.4	+1.2
MOCB				S		Sn	03 11 26.6	-2.2
MOCB				IAML			03 11 32.4	
	20nm,0.3s							
MOCB	**Mochara**	**1.06**	**89**	P		Pn	03 11 06.3	+1.1
MOCB				S		Sn	03 11 28.4	-0.4
MOCB				IAML			03 11 35.1	
	16nm,0.6s							
YJA	**Yavi**	**1.47**	**128**	P		Pn	03 11 09.3	+0.8
YJA	**Yavi**	**1.47**	**128**	P		Pn	03 11 09.1	+0.6
PB08

MAN 29 03:19:40.6,6°52N×126°37E,h24km,mb4.0,ML2.8,MS2.5, 1C-5D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.44**	**345**	⇓*e*P	Pn	03 19 50.6	+0.2
DDMP	**Don Marcelino,**	**0.78**	**238**	⇓*e*P	Pn	03 19 56.0	+0.2
KCP	**Kidapawan**	**1.37**	**291**	⇓*e*P	Pn	03 20 03.3	+0.5
BIPH	**Bislig**	**1.66**	**360**	⇑*e*P	Pb	03 20 08.8	+0.7
BIPH				*i* S		03 20 29.4	
SKMP	**Bagumbayan, Su**	**1.82**	**270**	⇓*e*P	Pn	03 20 10.6	+1.3
CGP	**Cagayan de Oro**	**2.55**	**319**	⇓*e*P	Pn	03 20 17.5	+1.3

*FUNV **29** 03:21:41.0, 12°.71N×71°.40W, h10km, MW3.7*
*RSNC **29** 03:21:41.3±0.9, 12°.66N×71°.41W, h0km±7km, ML3.5, Mw3.6*

ISC 29 03:21:39.1±1.1, 12°.70N±0°.05×71°.36W±0°.04, h10km, n45, σ2s20/82, Near north coast of Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URIC	**Uribia, Colomb**	**1.17**	**212**	*e*P	**Pb**	**03 22 01.1**	**-0.3**
URIC				*e*S	**Sg**	**03 22 15.8**	**-1.0**
URIC				*i*		03 22 16.7	
	comp=Z,560nm,0.3s						
DABV	**Dabajuro**	**1.90**	**158**	*e*P	**Pn**	**03 22 13.8**	**+2.2**
DABV				*e*S	**Sb**	**03 22 39.1**	**+1.5**
DABV	**Dabajuro**	**1.90**	**158**	*e*P	**Pn**	**03 22 13.9**	**+2.3**
DABV				*e*S	**Sn**	**03 22 37.8**	**+2.2**
CRJC	**Cerrejon, Guaj**	**2.24**	**222**	*e*P	**Pn**	**03 22 16.9**	**+0.6**
CRJC				*e*S	**Sb**	**03 22 46.5**	**-1.1**
CRJC				*i*		03 22 51.0	
	comp=Z,339nm,0.3s						
SIQV	**Siquisique**	**2.54**	**143**	*e*P	**Pn**	**03 22 23.2**	**+2.7**
SIQV				*e*S	**Sn**	**03 22 52.7**	**+1.3**
MCQV	**Machiques**	**2.87**	**204**	*e*P	**Pn**	**03 22 25.7**	**+0.7**
MCQV				*e*S	**Sn**	**03 22 58.5**	**-1.2**
JACV	**Jacura**	**2.94**	**123**	*e*P	**Pn**	**03 22 28.2**	**+2.2**
JACV				*e*S	**Sn**	**03 23 01.6**	**+0.1**
LL6C	**La Loma 6 Bece**	**3.49**	**213**	*e*P	**Pn**	**03 22 34.7**	**+1.1**
LL6C				*e*S	**Sn**	**03 23 17.3**	**+2.3**
LL6C				*i*		03 23 20.2	
	comp=Z,101nm,0.3s						
LL1C	**La Loma 1 Cana**	**3.81**	**215**	*e*P	**Pn**	**03 22 39.1**	**+1.2**
LL1C				*e*S	**Sn**	**03 23 24.2**	**+1.5**
SDV	**Santo Domingo**	**3.85**	**169**	*e*P	**Pn**	**03 22 40.7**	**+2.1**
SDV				*e*S	**Sn**	**03 23 26.4**	**+2.3**
ARGC	**Ariguani, Magd**	**4.00**	**225**	*e*P	**Pn**	**03 22 42.3**	**+1.8**
ARGC				*e*S	**Sn**	**03 23 29.6**	**+2.1**
ARGC				*i*		03 23 40.4	
	comp=Z,43nm,0.6s						
MAPV	**Macapo**	**4.02**	**135**	*e*P	**Pn**	**03 22 43.0**	**+2.1**
MAPV				*e*S	**Sn**	**03 23 27.6**	**-0.6**
TURV	**Turiamo**	**4.10**	**123**	*e*P	**Pn**	**03 22 42.0**	**+0.1**
TURV				*e*S	**Sn**	**03 23 27.7**	**-2.3**
SOCV	**Socops**	**4.41**	**174**	*e*P	**Pn**	**03 22 48.1**	**+1.9**
SOCV				*e*S	**Sn**	**03 23 39.8**	**+2.1**
SOCV	**Socops**	**4.41**	**174**	*e*P	**Pn**	**03 22 47.8**	**+1.6**
SOCV				*e*S	**Sn**	**03 23 36.5**	**-1.2**
BENV	**Beln**	**4.58**	**126**	*e*P	**Pn**	**03 22 50.4**	**+1.8**
BENV				*e*S	**Sn**	**03 23 39.9**	**-1.9**
SJCC	**San Jacinto, C**	**4.67**	**234**	*e*P	**Pn**	**03 22 50.7**	**+0.9**
SJCC				*e*S	**Sn**	**03 23 46.7**	**+2.6**
SJCC				*i*		03 24 03.8	
	comp=Z,21nm,0.6s						
CAPV	**Capacho**	**4.89**	**191**	*e*P	**Pn**	**03 22 54.0**	**+1.0**
CAPV				*e*S	**Sn**	**03 23 46.0**	**-3.9**
BAUV	**El Baul**	**4.95**	**139**	*e*P	**Pn**	**03 22 55.1**	**+1.5**
BAUV				*e*S	**Sn**	**03 23 48.7**	**-2.3**
BIRV	**Birongo**	**5.45**	**113**	*e*P	**Pn**	**03 22 59.0**	**-1.5**
BIRV				*e*S	**Sn**	**03 23 59.5**	**-3.8**
PAMC	**Pamplona, Colo**	**5.49**	**194**	*e*P	**Pn**	**03 23 03.4**	**+2.0**
PAMC				*e*S	**Sn**	**03 24 04.1**	**-0.7**
PAMC				*i*		03 24 08.9	
	comp=Z,54nm,0.2s						
BRRC	**Barranca, Sant**	**6.02**	**203**	*e*P	**Pn**	**03 23 09.5**	**+1.2**
BRRC				*e*S	**Sn**	**03 24 18.5**	**+1.2**
BRRC				*i*		03 24 25.1	
	comp=Z,30nm,0.3s						
MERV	**Las Mercedes**	**6.03**	**124**	*e*P	**Pn**	**03 23 09.4**	**+0.9**
MERV				*e*S	**Sn**	**03 24 13.9**	**-3.7**
ZARC	**Zaragoza, Cauc**	**6.21**	**214**	*e*P	**Pn**	**03 23 15.4**	**+4.4**
ZARC				*e*S	**Sn**	**03 24 19.1**	**-3.1**
BARC	**Barichara**	**6.33**	**197**	*e*P	**Pn**	**03 23 14.5**	**+1.8**
BARC				*e*S	**Sn**	**03 24 26.7**	**+1.5**
BARC				*i*		03 24 31.0	
	comp=Z,30nm,0.5s						
PTBC	**PUERTO BERRIO,**	**6.84**	**207**	*e*P	**Pn**	**03 23 23.1**	**+3.6**
PTBC				*e*S	**Sn**	**03 24 36.5**	**-1.1**
CACV	**CAICARA DEL OR**	**6.96**	**137**	*e*P	Pn	03 23 27.3	+6.0
CACV				*e*S	**Sn**	**03 24 45.3**	**+4.8**
RUSC	**La Rusia**	**6.97**	**194**	*e*P	**Pn**	**03 23 23.1**	**+1.3**
RUSC				*e*S	**Sn**	**03 24 39.4**	**-2.1**
DBBC	**Dabeiba**	**7.40**	**221**	*i* P	**Pn**	**03 23 28.2**	**+0.9**
DBBC				*e*S	**Sn**	**03 24 51.7**	**+0.3**
SPBC	**San Pablo de B**	**7.50**	**201**	*e*P	Pn	03 23 33.8	+5.1
SPBC				*e*S	**Sn**	**03 24 52.9**	**-0.9**
HELC	**Santa Helena**	**7.66**	**213**	*e*P	Pn	03 23 36.0	+4.8
HELC				*e*S	**Sn**	**03 24 58.8**	**+0.4**
HELC				*i*		03 25 10.0	
	comp=Z,12nm,0.3s						
NORC	**Norcasia**	**7.89**	**206**	*e*P	**Pn**	**03 23 37.5**	**+3.5**
NORC				*e*S	**Sn**	**03 25 04.8**	**+1.3**
NORC				*i*		03 25 08.1	
	comp=Z,8.0nm,0.6s						
GTBY	**Guantanamo Bay**	**8.04**	**334**	*e*P	**Pn**	**03 23 35.6**	**-0.4**
GTBY				IVmB_BB		03 23 40.2	
	comp=Z,25nm,0.2s						
GTBY				*e*S	Sn	03 24 57.4	-10
CBOC	**Ciudad Bolivar**	**8.20**	**215**	*e*P	**Pn**	**03 23 40.4**	**+2.0**
CBOC				*e*S	**Sn**	**03 25 11.9**	**+0.7**
ROSC	**El Rosal**	**8.34**	**201**	*e*P	Pn	03 23 48.2	+7.7
ROSC				*e*S	**Sn**	**03 25 19.0**	**+4.0**
CHIC	**Chingaza**	**8.35**	**197**	*e*P	**Pn**	**03 23 42.5**	**+1.8**
CHIC				*e*S	**Sn**	**03 25 13.4**	**-1.9**
RCC	**Rio Carpintero**	**8.37**	**331**	*e*P	**Pn**	**03 23 41.2**	**+0.7**
RCC				IVmB_BB		03 23 43.0	
	comp=Z,40nm,0.3s						
RCC				*e*S	Sn	03 25 07.2	-7.9
RCC				IAML		03 25 10.1	
	comp=N,1.5nm,0.2s						
RCC				IAML		03 25 12.2	
	comp=E,1.9nm,0.2s						
GUY2C	**Guyana, Caldas**	**8.41**	**208**	*e*P	**Pn**	**03 23 45.2**	**+3.6**
GUY2C				*e*S	**Sn**	**03 25 16.2**	**-0.7**
GUY2C				*i*		03 25 34.9	
	comp=Z,10nm,0.5s						
PTGC	**Puerto Gaitan,**	**8.48**	**185**	*e*P	**Pn**	**03 23 42.5**	**+0.4**
PTGC				*e*S	**Sn**	**03 25 12.2**	**-5.7**
ANIL	**Santa Ana**	**9.08**	**206**	*e*P	**Pn**	**03 23 53.0**	**+2.4**
ANIL				*e*S	**Sn**	**03 25 34.0**	**+0.8**
LMGC	**Las Mercedes**	**9.11**	**324**	*e*P	**Pn**	**03 23 48.6**	**-2.1**
LMGC				IAML		03 23 52.4	
	comp=Z,0.6nm,0.1s						
LMGC				*e*S	Sn	03 25 20.9	-13
LMGC				IAML		03 25 25.9	
	comp=N,2.0nm,0.1s						
LMGC				IAML		03 25 26.8	
	comp=E,1.2nm,0.1s						
PLMC	**San Jos del P**	**9.14**	**213**	*e*P	**Pn**	**03 23 54.2**	**+2.9**
PLMC				*e*S	**Sn**	**03 25 32.6**	**-1.8**
ORTC	**Ortega, Tolima**	**9.54**	**204**	*e*P	**Pn**	**03 23 59.4**	**+2.7**
ORTC				*e*S	**Sn**	**03 25 43.3**	**-0.8**
PRAC	**Prado**	**9.58**	**202**	*e*P	**Pn**	**03 24 01.4**	**+4.1**
PRAC				*e*S	**Sn**	**03 25 43.6**	**-1.5**
MACC	**Macarena, Meta**	**10.77**	**193**	*e*P	**Pn**	**03 24 11.9**	**-1.7**
MACC				*e*S	Sn	03 26 06.2	-8.1

*IDC **29** 03:21:59.2±3.4, 39°.07N×73°.85E, h0km, mb3.5/3, mbtmp3.5/7, ML3.0/4, Error ellipse: s-maj=64.3km s-min=23.6km az=129.0*
*SOME **29** 03:22:00.8, 39°.42N×73°.75E, h15km*
*KRNET **29** 03:22:01.0±0.1, 39°.42N×73°.66E, mb4.1*
*NNC **29** 03:22:06.6±0.8, 39°.66N×73°.71E, h0km, mb4.1, mpv3.8, Error ellipse: s-maj=6.2km s-min=3.7km az=173.0*

ISC 29 03:22:02.4±0.9, 39°.48N±0°.05×73°.66E±0°.03, h10km, n64, σ2s87/91, mb3.5/3, 16C-13D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.24**	**328**	⇑*e*P	**Pg**	**03 22 25.7**	**-0.5**
	baz=29						
OHH				⇑*e*S	**Sn**	**03 22 43.7**	**+1.0**
	baz=29						
GAR	**Garm**	**2.64**	**261**	⇑*e*P	**Pb**	**03 22 46.9**	**-2.9**
	baz=62						
GAR				⇑*e*S	**Sb**	**03 23 20.7**	**-1.6**
	baz=62						
AML	**Almayashu**	**2.65**	**1**	P	**Pb**	**03 22 49.8**	**-0.4**
	SNR=43						
TRKS	**Terek-Say**	**2.81**	**318**	⇓*e*P	**Pn**	**03 22 49.2**	**+1.7**
	baz=18						
TRKS				⇓*e*S	**Sb**	**03 23 24.2**	**-3.0**
	baz=18						
UCH	**Uchtor**	**2.82**	**13**	P	**Pb**	**03 22 52.6**	**-0.5**
	SNR=42						
UCH	**Uchtor**	**2.82**	**13**	⇓*e*P	**Pb**	**03 22 50.5**	**-2.6**
	baz=13						
UCH				⇓*e*S	**Sb**	**03 23 26.7**	**-1.2**
	baz=13						
EKS2	**Erkin-Say**	**3.18**	**2**	P	**Pb**	**03 22 57.5**	**-1.5**
	SNR=20						
EKS2	**Erkin-Say**	**3.18**	**2**	⇑*e*P	**Pn**	**03 22 55.2**	**+2.6**
	baz=1.0						
EKS2				⇑*e*S	**Sb**	**03 23 34.9**	**-3.0**
	baz=1.0						
AAK	**Ala-Archa**	**3.22**	**11**	P	**Pb**	**03 22 59.2**	**-0.5**
	SNR=13						
AAK	**Ala-Archa**	**3.22**	**11**	Pn	**Pb**	**03 22 59.6**	**-0.1**
	7.3nm,0.3s,baz=167,slow=7.4,SNR=20						
AAK				Sn	**Sb**	**03 23 41.1**	**+2.1**
	3.9nm,0.3s,baz=87,slow=18,SNR=1.7 15nm,0.3s						
AAK	**Ala-Archa**	**3.22**	**11**	⇑*e*P	**Pn**	**03 22 55.7**	**+2.6**
	baz=11						
AAK				⇑*e*S	**Sb**	**03 23 36.0**	**-3.0**
	baz=11						
MRKS	**Merke**	**3.28**	**354**	*e*P	**Pg**	**03 23 02.8**	**-2.4**
	30nm,0.2s						
MRKS				*e*S	**Sg**	**03 23 47.7**	**0.0**
	51nm,0.3s						
MRKS	**Merke**	**3.28**	**354**	Pg	**Pg**	**03 23 02.8**	**-2.4**
	30nm,0.2s						
MRKS				Lg	Lg	03 23 44.8	
	51nm,0.3s						
KBK	**Karagaybulak**	**3.32**	**17**	P	**Pb**	**03 23 00.4**	**-1.0**
	SNR=12						
KBK	**Karagaybulak**	**3.32**	**17**	⇑*e*P	**Pn**	**03 22 57.0**	**+2.5**
	baz=16						
KBK				⇑*e*S	**Sb**	**03 23 38.5**	**-3.5**
	baz=16						
ULHL	**Ulahol**	**3.39**	**35**	P	**Pg**	**03 23 05.5**	**-1.8**
	SNR=12						
CHGR	**Chuyangaron**	**3.60**	**258**	⇓*e*P	**Pn**	**03 23 00.4**	**+2.1**
	baz=59						
CHGR				⇓*e*S	**Sn**	**03 23 43.7**	**+2.9**
	baz=59						
CHMS	**Chumysh**	**3.61**	**13**	P	**Pb**	**03 23 03.8**	**-2.5**
	SNR=7.2						
CHMS	**Chumysh**	**3.61**	**13**	⇓*e*P	**Pn**	**03 23 01.0**	**+2.6**
	baz=13						
CHMS				⇓*e*S	**Sn**	**03 23 45.5**	**+4.4**
	baz=13						
CHMS	**Chumysh**	**3.61**	**13**	⇑Pn	**Pn**	**03 23 01.7**	**+3.3**
	6.7nm,0.4s						
CHMS				⇓Lg	Lg	03 23 56.8	
	86nm,1.2s						
TKM2	**Tokmak 2**	**3.74**	**22**	P	**Pb**	**03 23 05.2**	**-3.3**
	SNR=9.6						
TKM2	**Tokmak 2**	**3.74**	**22**	⇑Pn	**Pb**	**03 23 04.2**	**-4.4**
	13nm,0.7s						
TKM2				⇑Lg	Lg	03 24 02.0	
	44nm,0.7s						
USP	**Ospenovka**	**3.84**	**9**	P	**Pb**	**03 23 07.1**	**-3.0**
	SNR=7.4						
KST	**Kastek**	**3.96**	**25**	*e*P	**Pg**	**03 23 15.1**	**-3.1**
	17nm,0.6s						
KST				*e*S	**Sg**	**03 24 09.2**	**-0.4**
	74nm,0.7s						
KST	**Kastek**	**3.96**	**25**	Pg	**Pb**	**03 23 14.8**	**+2.4**
	17nm,0.6s						
KST				Lg	Lg	03 24 05.6	
	74nm,0.7s						
SGDS	**Sogindy**	**4.04**	**10**	*e*P	**Pb**	**03 23 16.0**	**+2.4**
	13nm,0.4s						
SGDS				*e*S	**Sg**	**03 24 10.7**	**-1.2**
	23nm,0.7s						
SGDS	**Sogindy**	**4.04**	**10**	Pg	**Pg**	**03 23 16.4**	**-3.3**
	13nm,0.4s						
SGDS				Lg	Lg	03 24 08.5	
	23nm,0.7s						
DGS	**Degeres**	**4.08**	**22**	*e*P	**Pg**	**03 23 17.1**	**-3.5**
	24nm,0.6s						
DGS				*e*S	**Sg**	**03 24 12.8**	**-0.7**
	47nm,0.6s						
DGS	**Degeres**	**4.08**	**22**	Pg	**Pg**	**03 23 17.1**	**-3.5**
	24nm,0.6s						
DGS				Lg	Lg	03 24 09.8	
	47nm,0.6s						
MTBS	**Maitube**	**4.20**	**29**	*e*P	**Pb**	**03 23 18.8**	**+2.4**
	17nm,0.5s						
MTBS				*e*S	**Sg**	**03 24 15.7**	**-1.6**
	32nm,0.3s						
MTBS	**Maitube**	**4.20**	**29**	Pg	**Pg**	**03 23 19.4**	**-3.5**
	17nm,0.5s						
MTBS				Lg	Lg	03 24 13.4	
	32nm,0.3s						
KK31	**Karatay Array**	**4.33**	**328**	Pn	**Pn**	**03 23 12.1**	**+3.8**
	1.7nm,0.3s,baz=126,slow=12,SNR=22						
KK31				Pg	**Pg**	**03 23 22.6**	**-2.6**
	3.0nm,0.4s,baz=146,slow=14,SNR=6.7						
KK31				⇓Sn	**Sn**	**03 24 03.4**	**+4.7**
	15nm,0.5s,baz=152,slow=25,SNR=4.2						
KK31				⇑Lg	Lg	03 24 20.3	
	17nm,0.4s,baz=131,slow=55,SNR=5.1						
TNSS	**Tian-Shan**	**4.33**	**34**	*e*P	**Pg**	**03 23 21.9**	**-3.4**
	12nm,0.2s						
TNSS				*e*S	**Sg**	**03 24 20.5**	**-1.1**
	20nm,0.5s						
TNSS	**Tian-Shan**	**4.33**	**34**	Pg	**Pg**	**03 23 22.9**	**-2.5**
	12nm,0.2s						
TNSS				Lg	Lg	03 24 19.6	
	20nm,0.5s						
KRBS	**Karabastau**	**4.48**	**19**	*e*P	**Pb**	**03 23 23.9**	**+2.9**
	12nm,0.3s						
KRBS				*e*S	**Sg**	**03 24 23.8**	**-2.2**
	31nm,0.7s						
KRBS	**Karabastau**	**4.48**	**19**	Pg	**Pg**	**03 23 24.6**	**-3.5**
	12nm,0.3s						
KRBS				Lg	Lg	03 24 22.6	
	31nm,0.7s						
KTBS	**Karatobe**	**4.80**	**27**	*e*P	**Pg**	**03 23 30.0**	**-4.3**
	11nm,0.5s						
KTBS				*e*S	**Sg**	**03 24 34.4**	**-2.0**
	38nm,0.5s						
KTBS	**Karatobe**	**4.80**	**27**	Pg	**Pg**	**03 23 30.4**	**-3.9**
	11nm,0.5s						
KTBS				Lg	Lg	03 24 32.2	
	38nm,0.5s						
CHKK	**Chushkaly**	**5.03**	**29**	*e*P	**Pb**	**03 23 33.9**	**+3.3**
	7.1nm,0.3s						
CHKK				*e*S	**Sg**	**03 24 41.2**	**-2.7**
	22nm,0.2s						
CHKK	**Chushkaly**	**5.03**	**29**	Pg	**Pg**	**03 23 35.1**	**-3.6**
	7.1nm,0.3s						
CHKK				Lg	Lg	03 24 40.5	
	22nm,0.2s						
ZHN	**Zhinishke**	**5.15**	**43**	*e*P	**Pg**	**03 23 37.0**	**-3.9**
	4.7nm,0.2s						
ZHN				*e*S	**Sg**	**03 24 46.2**	**-1.4**
	29nm,1.4s						
KURS	**Kuram**	**5.25**	**39**	*e*P	**Pb**	**03 23 37.9**	**+3.7**
	15nm,1.2s						
KURS				*e*S	**Sg**	**03 24 47.5**	**-3.3**
	17nm,1.1s						
KURS	**Kuram**	**5.25**	**39**	Pg	**Pg**	**03 23 38.9**	**-4.0**
	15nm,1.2s						
KURS				Lg	Lg	03 24 46.8	
	17nm,1.1s						
KPKS	**Kokpek**	**5.49**	**42**	*e*P	**Pb**	**03 23 41.8**	**+3.5**
	3.1nm,0.5s						
KPKS				*e*S	**Sg**	**03 24 54.4**	**-4.1**
	22nm,0.5s						
KPKS	**Kokpek**	**5.49**	**42**	Pg	**Pg**	**03 23 43.0**	**-4.4**
	8.9nm,0.6s						
KPKS				Lg	Lg	03 24 54.4	
	22nm,0.5s						
BTLS	**Baital**	**5.56**	**3**	*e*P	**Pg**	**03 23 44.5**	**-4.4**
	5.9nm,0.6s						
BTLS				*e*S	**Sg**	**03 24 58.4**	**-2.6**
	12nm,0.6s						
BTLS	**Baital**	**5.56**	**3**	Pg	**Pg**	**03 23 45.5**	**-3.4**
	5.9nm,0.6s						
BTLS				Lg	Lg	03 24 58.4	
	12nm,0.6s						
ARXS	**Arharly**	**5.66**	**32**	*e*P	**Pg**	**03 23 46.2**	**-4.6**
	14nm,0.7s						
ARXS				*e*S	**Sg**	**03 25 01.1**	**-3.0**
	17nm,0.6s						
ARXS	**Arharly**	**5.66**	**32**	Pg	**Pg**	**03 23 47.0**	**-3.7**
	14nm,0.7s						
ARXS				Lg	Lg	03 25 01.1	
	17nm,0.6s						
PDGK	**Podgornoye**	**5.83**	**47**	Pg	**Pg**	**03 23 50.5**	**-3.5**
	2.6nm,0.7s						
PDGK				Lg	Lg	03 25 07.2	
	7.9nm,0.6s						
KTMS	**Ketmen**	**6.40**	**50**	*e*P	**Pg**	**03 24 01.6**	**-3.3**
	0.5nm,0.2s						
KTMS				*e*S	**Sg**	**03 25 27.8**	**0.0**
	4.6nm,0.5s						
KTMS	**Ketmen**	**6.40**	**50**	Pg	**Pg**	**03 24 01.3**	**-3.6**
	0.5nm,0.2s						
KTMS				Lg	Lg	03 25 25.7	
	4.6nm,0.5s						
DJR	**Jarkent**	**6.67**	**41**	*e*P	Pg	03 24 05.0	-4.9
	7.8nm,0.1s						
DJR				*e*S	**Sg**	**03 25 34.0**	**-2.2**
	8.8nm,0.6s						
DJR	**Jarkent**	**6.67**	**41**	Pg	**Pg**	**03 24 06.2**	**-3.7**
	7.8nm,0.1s						
DJR				Lg	Lg	03 25 34.1	
	8.8nm,0.6s						
OTUK	**Ortayu**	**8.81**	**354**	⇓Pn	**Pn**	**03 24 13.3**	**+3.5**
	1.7nm,0.7s						
OTUK				⇓Lg	Lg	03 26 40.8	
	15nm,0.9s						
KURBB	**Kurchatov Arra**	**11.66**	**16**	Pn	**Pn**	**03 24 51.8**	**+3.1**
	baz=205,slow=10,SNR=2.5						
	0.1nm,0.4s						
KURK	**Kurchatov**	**11.77**	**16**	⇑Lg	Lg	03 28 17.0	
	15nm,1.3s						
AB31	**Akbulak array**	**13.82**	**319**	Pn	**Pn**	**03 25 19.2**	**+0.9**
	0.9nm,0.7s,baz=129,slow=13,SNR=8.9						
AB31				⇑Sn	**Sn**	**03 27 54.5**	**+2.7**
	1.4nm,0.8s,baz=136,slow=24,SNR=2.8						
AKTO	**Aktyubinsk**	**15.54**	**320**	Pn	**P**	**03 25 43.2**	**-2.5**
	0.1nm,0.3s,baz=127,slow=11,SNR=4.6						
	1.0nm,0.6s						
AKTO	**Aktyubinsk**	**15.54**	**320**	⇓Pn	**P**	**03 25 43.7**	**-2.1**
	3.2nm,1.2s						
ZALV	**Zalesovo Beam**	**16.34**	**24**	Pn	**P**	**03 25 55.4**	**+0.7**
	0.2nm,0.3s,baz=215,slow=11,SNR=6.9						
	1.6nm,0.6s						
FINES	**FINESS Array B**	**36.27**	**323**	P	**P**	**03 29 07.2**	**+1.7**
	0.3nm,0.4s,baz=107,slow=10,SNR=4.7						
	0.3nm,0.4s						
ARCES	**ARCESS Array B**	**39.25**	**336**	P	**P**	**03 29 32.4**	**+1.8**
	0.5nm,0.6s,baz=96,slow=6.1,SNR=4.5						
	0.5nm,0.6s						
TORD	**Torodi Ar. Bea**	**67.88**	**269**	P	**P**	**03 33 00.6**	**-0.7**
	0.2nm,0.4s,baz=60,slow=6.3,SNR=5.7						
	0.2nm,0.4s						

*KRNET **29** 03:30:05.8±0.1, 39°.46N×73°.65E, mb3.6*
*SOME **29** 03:30:06.0, 39°.65N×73°.58E, h0km*
*NNC **29** 03:30:09.8±1.0, 39°.75N×73°.62E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=8.3km s-min=5.1km az=160.0*

ISC 29 03:30:08.2±1.2, 39°.57N±0°.06×73°.56E±0°.04, h10km, n46, σ2s54/69, 13C-8D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.12**	**328**	⇑*e*P	**Pn**	**03 30 29.0**	**-1.1**
	baz=28						
OHH				⇑*e*S	**Sb**	**03 30 45.8**	**+1.3**
	baz=28						
AML	**Almayashu**	**2.56**	**2**	P	**Pb**	**03 30 52.3**	**-2.2**
	SNR=27						
GAR	**Garm**	**2.58**	**258**	⇓*e*P	**Pn**	**03 30 49.6**	**-0.6**
	baz=61						
GAR				⇓*e*S	**Sn**	**03 31 21.3**	**-0.4**
	baz=61						
TRKS	**Terek-Say**	**2.69**	**318**	⇓*e*P	**Pn**	**03 30 51.5**	**-0.2**
	baz=17						
TRKS				⇓*e*S	**Sn**	**03 31 24.6**	**+0.2**
	baz=17						
UCH	**Uchtor**	**2.75**	**15**	P	**Pb**	**03 30 55.0**	**-2.8**
	SNR=22						
UCH	**Uchtor**	**2.75**	**15**	⇓*e*P	**Pn**	**03 30 52.6**	**-0.2**
	baz=13						
UCH				⇓*e*S	**Sn**	**03 31 26.8**	**+0.4**
	baz=13						
EKS2	**Erkin-Say**	**3.09**	**3**	P	**Pb**	**03 30 60.0**	**-3.5**
	SNR=7.3						
EKS2	**Erkin-Say**	**3.09**	**3**	⇑*e*P	**Pn**	**03 30 57.4**	**+0.2**
	baz=2.0						
EKS2				⇑*e*S	**Sn**	**03 31 35.1**	**+0.8**
	baz=2.0						
AAK	**Ala-Archa**	**3.15**	**13**	P	**Pb**	**03 31 00.7**	**-3.7**
	SNR=6.0						
AAK	**Ala-Archa**	**3.15**	**13**	⇑*e*P	**Pn**	**03 30 58.1**	**+0.1**
	baz=11						
AAK				⇑*e*S	**Sn**	**03 31 36.0**	**+0.3**
	baz=11						
MRKS	**Merke**	**3.18**	**356**	*e*P	**Pb**	**03 31 04.2**	**-0.8**
	11nm,0.3s						
MRKS				*e*S	**Sb**	**03 31 46.2**	**+4.2**
	44nm,0.3s						
MRKS	**Merke**	**3.18**	**356**	Pg	**Pb**	**03 31 04.2**	**-0.8**
	11nm,0.3s						
MRKS				Lg	Lg	03 31 46.2	
	44nm,0.3s						
KBK	**Karagaybulak**	**3.26**	**18**	⇑*e*P	**Pn**	**03 30 59.4**	**-0.1**
	baz=17						
KBK				⇑*e*S	**Sn**	**03 31 38.4**	**-0.1**
	baz=17						
ULHL	**Ulahol**	**3.36**	**36**	P	**Pb**	**03 31 06.4**	**-1.6**
	SNR=12						
CHMS	**Chumysh**	**3.54**	**14**	⇑Pn	**Pn**	**03 31 04.8**	**+1.5**
	6.4nm,0.8s						
CHMS				⇓Lg	Lg	03 31 56.2	
	18nm,0.8s						
CHGR	**Chuyangaron**	**3.54**	**256**	⇑*e*P	**

MTBS	**Maitube**	**4.16**	**30**	Pg	**Pb**	**03 31 21.6**	**0.0**		
	6.3nm,0.4s								
MTBS				Lg	Lg	03 32 16.1			
	14nm,0.3s								
KK31	**Karatay Array**	**4.21**	**328**	Pn	**Pn**	**03 31 13.9**	**+1.4**		
	0.7nm,0.3s,baz=142,slow=14,SNR=7.0								
KK31				Pg	**Pb**	**03 31 24.8**	**+2.4**		
	2.5nm,0.6s,baz=164,slow=18,SNR=4.3								
KK31				Lg	Lg	03 32 18.1			
	10.0nm,0.8s,baz=152,slow=31,SNR=6.2								
TNSS	**Tian-Shan**	**4.30**	**35**	*eP*	**Pb**	**03 31 24.5**	**+0.3**		
	6.3nm,0.3s								
TNSS				*eS*	**Sg**	**03 32 21.1**	**-5.3**		
	4.7nm,0.4s								
TNSS	**Tian-Shan**	**4.30**	**35**	Pg	**Pb**	**03 31 24.5**	**+0.3**		
	6.3nm,0.3s								
TNSS				Lg	Lg	03 32 21.1			
	4.7nm,0.4s								
KRBS	**Karabastau**	**4.42**	**20**	*eP*	**Pb**	**03 31 25.9**	**0.0**		
	3.0nm,0.4s								
KRBS				*eS*	**Sb**	**03 32 23.8**	**+4.5**		
	8.1nm,0.7s								
KRBS	**Karabastau**	**4.42**	**20**	Pg	**Pb**	**03 31 25.9**	**0.0**		
	3.0nm,0.4s								
KRBS				Lg	Lg	03 32 23.8			
	8.1nm,0.7s								
BRLS	**Borolday**	**4.45**	**322**	*eP*	**Pb**	**03 31 25.8**	**-0.7**		
	1.6nm,0.3s								
BRLS				*eS*	**Sb**	**03 32 23.3**	**+3.1**		
	16nm,0.5s								
BRLS	**Boroldy**	**4.45**	**322**	Pg	**Pb**	**03 31 25.7**	**-0.7**		
	1.6nm,0.3s								
BRLS				Lg	Lg	03 32 23.3			
	16nm,0.5s								
KTBS	**Karatobe**	**4.75**	**28**	*eP*	**Pb**	**03 31 32.2**	**+0.5**		
	4.9nm,0.8s								
KTBS				*eS*	**Sg**	**03 32 34.5**	**-6.3**		
	20nm,0.4s								
KTBS	**Karatobe**	**4.75**	**28**	Pg	**Pb**	**03 31 32.2**	**+0.5**		
	4.9nm,0.8s								
KTBS				Lg	Lg	03 32 34.5			
	20nm,0.4s								
KUU	**Kurty**	**4.79**	**25**	*eP*	**Pb**	**03 31 32.8**	**+0.5**		
	3.1nm,0.5s								
KUU				*eS*	**Sb**	**03 32 35.5**	**+5.4**		
	11nm,0.5s								
KUU	**Kurty**	**4.79**	**25**	Pg	**Pb**	**03 31 32.8**	**+0.5**		
	3.1nm,0.5s								
KUU				Lg	Lg	03 32 35.5			
	11nm,0.5s								
KPKS	**Kokpek**	**5.47**	**43**	*eP*	**Pb**	**03 31 46.0**	**+2.1**		
	3.4nm,0.3s								
KPKS				*eS*	**Sg**	**03 32 58.2**	**-5.6**		
	7.8nm,0.5s								
KPKS	**Kokpek**	**5.47**	**43**	Pg	**Pb**	**03 31 46.0**	**+2.1**		
	3.4nm,0.3s								
KPKS				Lg	Lg	03 32 58.2			
	7.8nm,0.5s								
BTLS	**Baital**	**5.48**	**4**	*eP*	**Pb**	**03 31 47.7**	**+3.7**		
	2.4nm,0.6s								
BTLS				*eS*	**Sg**	**03 33 01.1**	**-3.0**		
	4.1nm,0.7s								
BTLS	**Baital**	**5.48**	**4**	Pg	**Pb**	**03 31 47.7**	**+3.7**		
	2.4nm,0.6s								
BTLS				Lg	Lg	03 33 01.1			
	4.1nm,0.7s								
ARXS	**Arharly**	**5.63**	**33**	*eP*	**Pb**	**03 31 48.4**	**+1.9**		
	6.8nm,0.9s								
ARXS				*eS*	**Sg**	**03 33 02.6**	**-6.2**		
	8.2nm,0.6s								
ARXS	**Arharly**	**5.63**	**33**	Pg	**Pb**	**03 31 48.4**	**+1.9**		
	6.8nm,0.9s								
ARXS				Lg	Lg	03 33 02.6			
	8.2nm,0.6s								
BLB	**Baldybastay**	**5.83**	**37**	*eP*	**Pb**	**03 31 52.8**	**+2.8**		
	12nm,0.4s								
BLB	**Baldybastay**	**5.83**	**37**	P	**Pb**	**03 31 52.8**	**+2.8**		
	12nm,0.4s								
AB31	**Akbulak array**	**13.71**	**319**	Pn	**Pn**	**03 33 22.5**	**-0.1**		
	0.4nm,0.6s,baz=132,slow=9.6,SNR=3.7								

IDC ***29*** *03:51:46.7±1.5,36.˚22N×141.˚39E, h0km, mb3.5/2, mbtmp3.4/3, ML2.5/1, MS2.2/1, Error ellipse: s-maj=40.5km s-min=31.9km az=128.0*

JMA ***29*** *03:51:51.4±0.1,36.˚4N±0.˚3×141.˚1E±0.˚9, h45km±1km, MV3.4/34, E OFF IBARAKI PREF .*

JMA Felt I J1 at E OFF IBARAKI PREF .

ISC 29 03:51:51.1±2.2, 36.˚46N±0.˚07×141.˚2E±0.˚1, h33km±15km, n11, σ0s98/16, 6D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHYU	**Hitachinakayam**	**0.48**	**255**	⇓P	**Pb**	**03 52 01.5**	**+0.3**
JHYU				⇓S	**Sb**	**03 52 08.7**	**+0.4**
JHO	**Hitachi**	**0.50**	**287**	⇓P	**Pb**	**03 52 01.7**	**+0.1**
JHO				⇓S	**Sb**	**03 52 08.9**	**+0.1**
ONAJ	**Iwakimizuishiy**	**0.70**	**336**	P	**Pb**	**03 52 04.8**	**-0.1**
ONAJ				S	**Sb**	**03 52 14.3**	**-0.1**
JIHU	**Itakohorinouch**	**0.71**	**226**	P	**Pn**	**03 52 05.1**	**+0.3**
JYT	**Yasato**	**0.81**	**253**	⇓P	**Pn**	**03 52 05.8**	**-0.5**
JYT				⇓eS	**Sb**	**03 52 15.4**	**-2.0**
JFK	**Kawauchi**	**0.93**	**346**	P	**Pn**	**03 52 08.0**	**+0.1**
JFK				S	**Sb**	**03 52 19.7**	**-1.1**
JFT	**Otama**	**1.24**	**328**	P	**Pb**	**03 52 13.6**	**-0.4**
JAG	**Ashikaga**	**1.38**	**269**	P	**Pn**	**03 52 13.9**	**-0.1**
MJAR	**Matsushiro Arr**	**2.38**	**273**	Pn	**Pn**	**03 52 29.5**	**+1.7**
	1.0nm,0.3s,baz=90,slow=9.7,SNR=38						
MJAR				LR	LR	03 53 36.5	
	comp=Z,47nm,19.5s,baz=175,slow=43						
	3.6nm,0.3s						
ILAR	**Eielson Array**	**50.09**	**32**	P	**P**	**04 00 43.6**	**+1.2**
	0.5nm,0.9s,baz=276,slow=6.2,SNR=5.9						
	0.5nm,0.9s						
WRA	**Warramunga Arr**	**56.47**	**188**	P	**P**	**04 01 28.8**	**-1.0**
	0.5nm,0.6s,baz=5.4,slow=7.4,SNR=7.9						
	0.5nm,0.6s						

SJA ***29*** *03:54:16.0±1.1,30.˚10S×72.˚40W, h10km, ML4.1, MW4.0*

IDC ***29*** *03:54:21.1±0.8,30.˚15S×71.˚68W, h0km, mb4.1/8, mbtmp4.0/11, ML3.8/3, MS3.8/5, Error ellipse: s-maj=28.0km s-min=21.7km az=79.0*

NEIC ***29*** *03:54:21.6±1.4,30.˚12S±0.˚05×72.˚06W±0.˚05, h12km±4km, mb4.5/18, Mwr4.4/69, ML3.8(GUC), Error ellipse: s-maj=7.2km s-min=5.5km az=214.0*

GUC ***29*** *03:54:21.7±0.8,30.˚22S×72.˚06W, h40km±3km, ML3.9*

NEIC ***29*** *03:54:22.2,30.˚13S×72.˚02W, h13km, Moment Tensor Solution. Moment tensor: Scale 10^15 Nm; Mrr=2.51; Mθθ=0.10; Mφφ=-2.61; Mrθ=0.71; Mrφ=-1.16; Mθφ=-3.26; Fault plane solution: Mo=4.36000×10^15 NP1:φs=176.13000°, δ=71.52000°, λ=71.05000°. NP2:φs=43.41000°, δ=26.22000°, λ=134.18000°. Principal axes: T 4.3989, Plg59.0000°, Azm60.0000°; N -0.0825, Plg18.0000°, Azm182.0000°; P -4.3164, Plg24.0000°, Azm281.0000°;*

VAO ***29*** *03:54:49.7±1.2,30.˚79S×72.˚02W, h407km±10km, mb3.9*

ISC 29 03:54:20.4±1.4, 30.˚15S±0.˚02×72.˚14W±0.˚05, h5km±8km, n145, σ1s95/155, mb4.4/15, 1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	**Fray Jorge**	**0.68**	**140**		**Pg**	**03 54 33.9**	**+0.4**
CO06				Sg	**Sg**	**03 54 43.0**	**+0.6**
CO06	**Fray Jorge**	**0.68**	**140**	*eP*	**Pg**	**03 54 33.9**	**+0.4**
CO06				*i* S	**Sb**	**03 54 43.8**	**-0.7**
CO05	**La Serena**	**0.82**	**74**		**Pb**	**03 54 36.5**	**-0.6**
CO05				Sg	**Sn**	**03 54 48.4**	**-2.6**
CO05	**La Serena**	**0.82**	**74**	*eP*	**Pb**	**03 54 36.6**	**-0.4**
CO05				*i* S	**Sn**	**03 54 48.4**	**-2.6**
CO05				IAML		03 54 52.6	
	comp=E,4μm,0.3s						
GO04	**Tololo Observa**	**1.16**	**92**		**Pb**	**03 54 42.2**	**-1.0**
GO04				Sn	**Sb**	**03 54 56.4**	**-2.2**
GO04	**Tololo Observa**	**1.16**	**92**	⇓*eP*	**Pb**	**03 54 42.1**	**-1.0**
GO04				*i* S	**Sn**	**03 54 58.3**	**-1.6**
GO04	**Tololo Observa**	**1.16**	**92**	*i* P	**Pb**	**03 54 42.0**	**-1.1**
GO04				*eS*	**Sn**	**03 54 58.6**	**-1.3**
CO03	**El Pedregal**	**1.43**	**119**	Pn	**Pn**	**03 54 46.0**	**-1.0**
CO03	**El Pedregal**	**1.43**	**119**	*eP*	**Pn**	**03 54 46.1**	**-1.0**
CO03				*i* S	**Sn**	**03 55 04.9**	**-1.4**
CO03				IAML		03 55 13.1	
	comp=E,3μm,0.4s						
CO03	**El Pedregal**	**1.43**	**119**	*i* P	**Pn**	**03 54 46.0**	**-1.0**
CO03				IAML		03 55 14.2	
	comp=Z,1μm,0.6s						
CO02	**Combarbal**	**1.44**	**137**		**Pn**	**03 54 47.0**	**-0.3**
CO02	**Combarbal**	**1.44**	**137**	*eP*	**Pn**	**03 54 46.4**	**-0.8**
CO02				*i* S	**Sn**	**03 55 04.1**	**-2.4**
CO02				IAML		03 55 13.0	
	comp=N,5μm,0.5s						
CO02	**Combarbal**	**1.44**	**137**	*i* P	**Pn**	**03 54 46.0**	**-1.2**
CO02				IAML		03 55 14.2	
	comp=Z,2μm,1.2s						
LCO	**Las Campanas**	**1.69**	**48**		**Pn**	**03 54 50.3**	**-0.5**
LCO	**Las Campanas**	**1.69**	**48**	*eP*	**Pn**	**03 54 50.2**	**-0.6**
LCO				*i* S	**Sb**	**03 55 13.1**	**-0.7**
LCO	**Las Campanas**	**1.69**	**48**	*i* P	**Pn**	**03 54 50.0**	**-0.8**
LCO				*eS*	**Sg**	**03 55 16.2**	**+1.4**
LCO				IAML		03 55 23.3	
	comp=Z,8μm,0.6s						
CO01	**Juntas del Tor**	**1.79**	**85**	Pn	**Pn**	**03 54 51.8**	**-0.3**
CO01	**Juntas del Tor**	**1.79**	**85**	*eP*	**Pb**	**03 54 52.4**	**-1.3**
CO01				*i* S	**Sb**	**03 55 15.6**	**-0.9**
CO01	**Juntas del Tor**	**1.79**	**85**	*i* P	**Pn**	**03 54 52.0**	**-0.1**
CO01				IAML		03 55 21.2	
	comp=Z,692nm,0.5s						
AC04	**Llanos de Chal**	**2.15**	**26**	Pn	**Pn**	**03 54 55.6**	**-1.3**
AC04	**Llanos de Chal**	**2.15**	**26**	*eP*	**Pn**	**03 54 55.5**	**-1.3**
AC04	**Llanos de Chal**	**2.15**	**26**	*i* P	**Pn**	**03 54 55.0**	**-1.9**
AC04				*eS*	**Sg**	**03 55 37.0**	**+7.5**
AC04				IAML		03 55 46.3	
	comp=Z,563nm,1.2s						
VA06	**Catapilco**	**2.51**	**163**	Pn	**Pn**	**03 55 01.1**	**-0.7**
VA06	**Catapilco**	**2.51**	**163**	*eP*	**Pn**	**03 55 01.1**	**-0.7**
VA06				*i* S	**Sn**	**03 55 30.5**	**-2.3**
VA06				IAML		03 55 57.4	
	comp=E,901nm,0.6s						
VA01	**Torpederas**	**2.90**	**172**		**Pn**	**03 55 07.8**	**+0.7**
VA03	**San Esteban**	**2.94**	**153**		**Pn**	**03 55 08.0**	**+0.1**
VA03	**San Esteban**	**2.94**	**153**	*eP*	**Pn**	**03 55 08.6**	**+0.7**
VA03				*i* S	**Sn**	**03 55 42.5**	**-1.1**
VA03				IAML		03 55 59.5	
	comp=N,515nm,0.4s						
VA03	**San Esteban**	**2.94**	**153**	*i* P	**Pn**	**03 55 08.0**	**+0.1**
VA03				IAML		03 56 04.3	
	comp=Z,655nm,1.1s						
RTLS	**Leoncito**	**2.95**	**125**	*i* P	**Pb**	**03 55 11.0**	**-2.6**
RTLS				*eS*	**Sg**	**03 55 56.3**	**+1.2**
RTLS				IAML		03 56 06.4	
	comp=Z,208nm,1.3s						
ROCH	**El Roble**	**2.98**	**161**	*eP*	**Pn**	**03 55 08.3**	**-0.1**
ROCH				*i* S	**Sn**	**03 55 43.3**	**-1.3**
ROCH				IAML		03 56 09.8	
	comp=N,368nm,0.6s						
ROC1	**El Roble**	**2.98**	**161**		**Pn**	**03 55 09.1**	**+0.6**
ROC1	**El Roble**	**2.98**	**161**	*i* P	**Pn**	**03 55 08.0**	**-0.5**
ROC1				*eS*	**Sg**	**03 55 57.1**	**+0.9**
GO03	**Copiap**	**3.05**	**34**	Pn	**Pn**	**03 55 08.9**	**-0.3**
GO03	**Copiap**	**3.05**	**34**	*i* P	**Pn**	**03 55 09.0**	**-0.3**
MT02	**Curacav**	**3.22**	**165**		**Pn**	**03 55 11.4**	**-0.1**
MT02	**Curacav**	**3.22**	**165**	*i* P	**Pn**	**03 55 11.0**	**-0.6**
MT02				IAML		03 56 20.9	
	comp=Z,255nm,1.4s						
PEL	**Peldehue**	**3.23**	**158**	Pn	**Pn**	**03 55 12.4**	**+0.6**
PEL	**Peldehue**	**3.23**	**158**	*eP*	**Pn**	**03 55 12.2**	**+0.4**
PEL				*i* S	**Sn**	**03 55 48.3**	**-2.5**
PEL				IAML		03 56 14.5	
	comp=N,210nm,0.6s						
PEL	**Peldehue**	**3.23**	**158**	*i* P	**Pn**	**03 55 12.0**	**+0.2**
ZON	**Zonda**	**3.29**	**116**		**Pn**	**03 55 13.1**	**+0.5**
RTLL	**Cerro Villicun**	**3.37**	**111**	*i* P	**Pb**	**03 55 17.0**	**-3.6**
MT05	**Renca**	**3.45**	**160**	Pn	**Pn**	**03 55 15.3**	**+0.5**
MT05	**Renca**	**3.45**	**160**	*i* P	**Pn**	**03 55 16.0**	**+1.2**
MT05				IAML		03 56 21.6	
	comp=Z,560nm,1.1s						
VA05	**Santo Domingo**	**3.53**	**173**		**Pn**	**03 55 15.9**	**+0.1**
VA05	**Santo Domingo**	**3.53**	**173**	*eP*	**Pn**	**03 55 15.0**	**-0.8**
VA05				*eS*	**Sn**	**03 55 56.2**	**-1.7**
VA05				IAML		03 56 24.6	
	comp=E,273nm,0.4s						
MT03	**Universidad Ad**	**3.61**	**158**		**Pn**	**03 55 17.4**	**+0.3**
MT03	**Universidad Ad**	**3.61**	**158**	*i* P	**Pn**	**03 55 18.0**	**+0.9**
MT03				IAML		03 56 16.9	
	comp=Z,593nm,1.5s						
VCA	**Vinchina**	**3.71**	**69**	*i* P	**Pb**	**03 55 23.0**	**-3.5**
VCA				IAML		03 56 29.6	
	comp=Z,412nm,1.7s						
MT09	**Talagante**	**3.75**	**165**		**Pn**	**03 55 19.1**	**+0.2**
MT09	**Talagante**	**3.75**	**165**	*eP*	**Pn**	**03 55 19.4**	**+0.4**
MT09				*i* S	**Sn**	**03 56 02.4**	**-1.1**
MT01	**Popeta**	**3.78**	**169**		**Pn**	**03 55 18.8**	**-0.6**
MT01	**Popeta**	**3.78**	**169**	*i* P	**Pn**	**03 55 19.0**	**-0.3**
MT01				IAML		03 56 31.6	
	comp=Z,142nm,1.0s						
LMEL	**Las Melosas**	**4.04**	**156**		**Pn**	**03 55 22.8**	**-0.2**
BO04	**La Punta**	**4.04**	**162**		**Pn**	**03 55 23.3**	**+0.3**
AC01	**Pan de Azucar**	**4.21**	**19**	Pn	**Pn**	**03 55 23.2**	**-2.0**
AC01	**Pan de Azucar**	**4.21**	**19**	*i* P	**Pn**	**03 55 23.0**	**-2.2**
AC01				IAML		03 56 53.5	
	comp=Z,100nm,2.0s						
AC02	**Maricunga**	**4.23**	**40**	Pn	**Pn**	**03 55 25.9**	**0.0**
AC02	**Maricunga**	**4.23**	**40**	*i* P	**Pn**	**03 55 26.0**	**0.0**
AC02				IAML		03 56 39.3	
	comp=Z,171nm,2.6s						
BO01	**Tunca**	**4.33**	**168**	Pn	**Pn**	**03 55 26.9**	**+0.1**
BO01	**Tunca**	**4.33**	**168**	*i* P	**Pn**	**03 55 27.0**	**+0.2**
BO01				IAML		03 56 54.2	
	comp=Z,136nm,1.4s						
ACLC	**CERRO LA CRUZ**	**4.57**	**82**	*i* P	**Pn**	**03 55 32.0**	**+1.7**
ACLC				IAML		03 56 48.6	
	comp=Z,262nm,2.3s						
GO05	**Huala**	**4.85**	**178**	Pn	**Pn**	**03 55 33.5**	**-0.5**
GO05	**Huala**	**4.85**	**178**	*i* P	**Pn**	**03 55 33.0**	**-1.0**
APLL	**PUNTA DE LOS L**	**4.86**	**94**	*i* P	**Pn**	**03 55 36.0**	**+1.8**
APLL				IAML		03 57 02.6	
	comp=Z,259nm,1.8s						
GO02	**Mina Guanaco**	**5.46**	**25**	Pn	**Pn**	**03 55 41.2**	**-1.5**
ML02	**Panimavida**	**5.63**	**174**	Pn	**Pn**	**03 55 45.2**	**+0.5**
H03N1	**Juan Fernandez**	**6.63**	**239**	T	T	04 03 09.5	
	baz=69,slow=72,SNR=226						
H03N2	**Juan Fernandez**	**6.64**	**239**	T	T	04 03 05.0	
	baz=69,slow=72,SNR=205						
H03N3	**Juan Fernandez**	**6.65**	**239**	T	T	04 03 08.8	
	baz=69,slow=72,SNR=176						
LVC	**Limon Verde**	**8.05**	**22**	Pn	**Pn**	**03 56 15.7**	**-2.5**
	comp=Z,0.3nm,0.3s,baz=329,slow=6.6,SNR=2.0						
LVC				Sn	**Sn**	**03 57 44.7**	**-5.1**
	baz=194,slow=17						
	comp=Z,3.3nm,0.8s						
LVC	**Limon Verde**	**8.05**	**22**		**Pn**	**03 56 17.1**	**-1.2**
LVC	**Limon Verde**	**8.05**	**22**	*eP*	**Pg**	**03 56 51.9**	**-2.6**
PLCA	**Paso Flores**	**10.64**	**173**	Pn	**Pn**	**03 56 52.9**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=334,slow=11,SNR=10						
PLCA				LR	LR	04 01 08.4	
	comp=Z,277nm,18.7s,baz=1.5,slow=38						
	comp=Z,0.8nm,0.5s						
PLCA	**Paso Flores**	**10.64**	**173**		**Pn**	**03 56 52.1**	**-1.3**
ITQB	**Itaqui**	**13.47**	**92**	Pn	**Pn**	**03 57 31.2**	**-1.0**
ITQB	**Itaqui**	**13.47**	**92**	*eS*	**Sn**	**04 00 08.5**	**+6.2**
CPUP	**Villa Florida**	**13.60**	**77**	Pn	**Pn**	**03 57 34.6**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=241,slow=19,SNR=1.7						
CPUP				LR	LR	04 03 08.6	
	comp=Z,502nm,18.7s,baz=258,slow=40						
CPUP	**Villa Florida**	**13.60**	**77**	*eP*	**P**	**03 57 47.1**	**+4.0**
LPAZ	**La Paz**	**14.28**	**16**	Pn	**Pn**	**03 57 45.3**	**+1.5**
	comp=Z,0.2nm,0.3s,baz=194,slow=5.7,SNR=9.8						
	comp=Z,7nm,0.7s						
LPAZ	**La Paz**	**14.28**	**16**	Pn	**Pn**	**03 57 44.5**	**+0.6**
UNIS	**Unistalda (Bra**	**14.89**	**90**	*eP*	**P**	**03 58 00.6**	**+3.2**
CPSB	**Cacapava Do Su**	**16.16**	**96**	*eP*	**P**	**03 58 13.1**	**+1.5**
ANTJ	**Antonio Joao (**	**16.60**	**65**	*eP*	**P**	**03 58 20.9**	**+4.4**
AMBA	**Amambai (Brazi**	**16.94**	**69**	*eP*	**P**	**03 58 23.8**	**+3.6**
SIV	**San Ignacio**	**17.37**	**38**	P	**P**	**03 58 25.4**	**+0.4**
	comp=Z,5.2nm,1.0s,baz=226,slow=10,SNR=14						
SIV				LR	LR	04 05 59.2	
	comp=Z,231nm,18.4s,baz=284,slow=41						
ITAB	**Concordia**	**17.80**	**86**	*eP*	**P**	**03 58 32.0**	**+2.4**
CNLB	**Canela**	**18.51**	**93**	*eP*	**P**	**03 58 37.0**	**-0.6**
PTGB	**Pitanga**	**18.62**	**78**	*eP*	**Pn**	**03 58 42.0**	**+3.0**
TER01	**Tubaro-SC**	**20.12**	**91**	*eP*	**P**	**03 58 54.7**	**-0.5**
VILB	**Vilhena**	**20.37**	**35**	*eP*	Pn	03 59 00.9	+0.9
PCMB	**Pacaembu**	**20.60**	**71**	*eP*	**P**	**03 59 00.8**	**+0.3**
SALV	**Santo Antonio**	**20.71**	**50**	*eP*	**P**	**03 59 01.8**	**+0.3**
CZSB	**Cruzeiro do Su**	**22.31**	**359**	*eP*	**P**	**03 59 20.2**	**+1.4**
SAML	**Samuel**	**22.70**	**24**	P	**P**	**03 59 19.4**	**-3.5**
PET01	**Itanhaem-SP**	**22.85**	**81**	*eP*	**P**	**03 59 19.2**	**-5.3**
BB19B	**Bebedouro**	**23.10**	**72**	*eP*	**P**	**03 59 23.8**	**-3.4**
RCLB	**Rio Claro- Sao**	**23.34**	**77**	*eP*	**P**	**03 59 24.9**	**-4.8**
PDRB	**Porto dos Gac**	**23.35**	**41**	*eP*	**P**	**03 59 28.9**	**-0.9**
VAO	**Valinhos**	**23.59**	**78**	*eP*	**P**	**03 59 26.1**	**-6.0**
CLDB	**Colider**	**24.48**	**42**	*eP*	**P**	**03 59 38.4**	**-2.1**
IPMB	**Ipameri, GO**	**24.92**	**66**	*eP*	**P**	**03 59 39.4**	**-5.2**
BDFB	**Brasilia**	**26.43**	**62**	P	**P**	**03 59 55.6**	**-2.7**
	comp=Z,3.8nm,1.0s,baz=199,slow=8.9,SNR=3.5						
	comp=Z,3.8nm,1.0s						
BDFB	**Brasilia**	**26.43**	**62**	P	**P**	**03 59 57.7**	**-0.6**
BDFB				IAmb	IAmb	03 59 58.1	
	comp=Z,6.4nm,1.1s						
SNDB	**Serra Nova Dou**	**26.48**	**51**	*eP*	**P**	**03 59 57.0**	**-1.6**
DIAM	**Diamantina, MG**	**28.44**	**72**	*eP*	**P**	04 00 10.5	-5.8
MACA	**Manacapuru-AM**	**28.95**	**24**	*eP*	**P**	**04 00 18.0**	**-2.7**
ALF01	**Guarapari-ES**	**29.85**	**79**	*eP*	**P**	04 00 22.6	-6.1
SJMB	**Sao Joao De Ma**	**30.31**	**75**	*eP*	**P**	04 00 27.5	-5.3
BOAV	**Boa Vista**	**34.21**	**21**	*eP*	**P**	**04 01 04.5**	**-2.6**
MDP	**Montagnes des**	**39.72**	**31**	LR	LR	04 20 27.0	
	comp=Z,111nm,18.1s,baz=206,slow=40						
RCBR	**Riachuelo**	**41.80**	**62**	LR	LR	04 21 42.6	
	comp=Z,166nm,18.7s,baz=14,slow=40						
BELA	**Belgrano 2**	**50.68**	**170**	P	**P**	**04 03 20.7**	**+0.4**
BELA				IAmb	IAmb	04 03 30.3	
	comp=Z,3.3nm,1.0s						
VNA3	**Neumayer Olymp**	**52.96**	**159**	P	**P**	**04 03 37.8**	**+0.4**
VNA1	**Neumayer--Stat**	**53.26**	**158**	P	**P**	**04 03 40.4**	**+0.9**
VNA2	**Neumayer--Watz**	**53.60**	**158**	P	**P**	**04 03 41.6**	**-0.5**
SNAA	**Sanae**	**55.19**	**159**	P	**P**	**04 03 54.2**	**+0.6**
SNAA	**Sanae**	**55.19**	**159**	P	**P**	**04 03 54.3**	**+0.7**
TROLL	**Troll, Antarti**	**56.90**	**159**	P	**P**	**04 04 06.2**	**+0.2**
QSPA	**South Pole Qui**	**60.08**	**180**	P	**P**	**04 04 29.8**	**+1.5**
	comp=Z,2.6nm,0.9s,baz=172,slow=6.1,SNR=5.9						
	comp=Z,2.6nm,0.9s						
CPCT	**Cooper Cave**	**66.28**	**349**	P	**P**	**04 05 09.7**	**+0.2**
TXAR	**Lajitas Array**	**66.35**	**330**	P	**P**	**04 05 12.8**	**+2.6**
	comp=Z,0.8nm,0.7s,baz=150,slow=7.6,SNR=12						
	comp=Z,0.8nm,0.7s						
TX31	**Lajitas Ar. Si**	**66.35**	**330**	P	**P**	**04 05 10.1**	**-0.1**
TX32	**Lajitas Array**	**66.35**	**330**	P	**P**	**04 05 09.7**	**-0.5**
TX32				IAmb	IAmb	04 05 31.2	
	comp=Z,3.0nm,1.3s						
W39A	**Magazine**	**68.12**	**341**	P	**P**	**04 05 21.8**	**+0.6**
W39A				IAmb	IAmb	04 05 26.1	
	comp=Z,3.0nm,0.8s						
LCAR	**Lake Charles**	**68.25**	**343**	P	**P**	**04 05 21.4**	**-0.6**
LCAR				IAmb	IAmb	04 05 25.8	
	comp=Z,4.3nm,0.9s						
MNTX	**Cornudas Mount**	**69.13**	**330**	P	**P**	**04 05 28.7**	**+1.1**
MNTX				IAmb	IAmb	04 05 31.1	
	comp=Z,2.3nm,0.8s						
HHAR	**Hobbs**	**69.18**	**341**	P	**P**	**04 05 27.9**	**+0.1**
HHAR				IAmb	IAmb	04 05 30.9	
	comp=Z,3.3nm,0.8s						
R40A	**Maddies Statio**	**70.63**	**343**	P	**P**	**04 05 36.2**	**-0.4**
R40A				IAmb	IAmb	04 05 40.1	
	comp=Z,3.1nm,0.6s						
DBIC	**Dimbokro**	**74.06**	**72**	P	**P**	**04 05 57.0**	**-0.8**
	comp=Z,14nm,1.3s,baz=251,slow=9.0,SNR=2.5						
	comp=Z,14nm,1.3s						
PDAR	**Pinedale Array**	**80.30**	**333**	P	**P**	**04 06 34.5**	**+2.2**
	comp=Z,0.4nm,0.6s,baz=137,slow=7.5,SNR=4.1						
	comp=Z,0.4nm,0.6s						
PDAR	**Pinedale Array**	**80.30**	**333**	P	**P**	**04 06 32.9**	**+0.5**
NVAR	**Mina Array Bea**	**80.68**	**325**	P	**P**	**04 06 37.1**	**+2.5**
	comp=Z,0.6nm,0.8s,baz=165,slow=6.4,SNR=5.3						
	comp=Z,0.6nm,0.8s						
ULM	**Lac du Bonnet**	**82.77**	**345**	P	**P**	**04 06 47.4**	**+2.4**
	comp=Z,2.2nm,0.7s,baz=162,slow=3.2,SNR=3.4						
	comp=Z,2.2nm,0.7s						
ULM	**Lac du Bonnet**	**82.77**	**345**	P	**P**	**04 06 45.2**	**+0.3**
ULM				IAmb	IAmb	04 06 54.8	
	comp=Z,6.6nm,1.4s						

MSWZ	**Moikau Station**	**1.29**	**169**	P		Pn	03 58 46.2	-0.7
PAWZ	**Paruwai Farm**	**1.29**	**163**	P		Pn	03 58 46.5	-0.4
KATZ	**Kakaramea**	**1.32**	**27**	P		Pn	03 58 45.3	-2.0
PRHZ	**Porangahau**	**1.32**	**96**	P		Pn	03 58 46.9	-0.4
KWHZ	**Kaweka Forest**	**1.37**	**59**	P		Pn	03 58 46.4	-1.6
RITZ	**Rihia Road**	**1.38**	**32**	P		Pn	03 58 46.8	-1.3
TRWZ	**Traveller**	**1.38**	**155**	P		Pn	03 58 48.0	-0.2
RATZ	**Rangitukua**	**1.44**	**28**	P		Pn	03 58 47.9	-1.1
PLWZ	**Palliser**	**1.44**	**170**	P		Pn	03 58 48.7	-0.4
TUWZ	**Tuamarina**	**1.48**	**210**	P		Pn	03 58 48.6	-0.9
PXZ	**Pawanui**	**1.50**	**86**	P		Pn	03 58 49.6	-0.1
MCHZ	**McNeill Hill**	**1.54**	**63**	P		Pn	03 58 50.7	+0.4
KAHZ	**Kahuranaki**	**1.55**	**77**	P		Pn	03 58 49.9	-0.5
BKZ	**Black Stump Fm**	**1.56**	**52**	P		Pn	03 58 49.6	-1.0
WATZ	**Wairara**	**1.57**	**24**	P		Pn	03 58 50.1	-0.7
NNZ	**Nelson**	**1.58**	**227**	P		Pn	03 58 50.5	-0.4
HIZ	**Hauiti**	**1.63**	**358**	P		Pn	03 58 50.2	-1.4
CMWZ	**Cape Campbell**	**1.69**	**198**	P		Pb	03 58 53.7	0.0
MRHZ	**Matea Rd**	**1.75**	**42**	P		Pn	03 58 52.6	-0.7
BSWZ	**Blackbirch Sta**	**1.75**	**206**	P		Pn	03 58 53.5	+0.2
NMHZ	**Naumai**	**1.80**	**55**	P		Pn	03 58 54.2	+0.2
KUTZ	**Kaahu Road**	**1.80**	**23**	P		Pn	03 58 53.9	0.0
ARHZ	**Aropaoanui**	**1.83**	**62**	P		Pb	03 58 55.9	-0.2
TLZ	**Tolley Road**	**1.88**	**15**	P		Pn	03 58 54.6	-0.4
ALRZ	**Allen Road**	**1.93**	**35**	P		Pn	03 58 54.3	-1.4
QRZ	**Quartz Range**	**1.94**	**249**	P		Pn	03 58 55.4	-0.4
PRRZ	**Plateau Road**	**2.00**	**35**	P		Pn	03 58 57.4	+0.7
HRRZ	**Handcock Road**	**2.05**	**32**	P		Pb	03 58 59.2	-0.7
MRNZ	**Matariki Terra**	**2.06**	**232**	P		Pn	03 58 57.6	+0.1
RAHZ	**Arahi**	**2.08**	**54**	P		Pn	03 58 57.5	-0.3
MUGZ	**Murupara**	**2.20**	**41**	P		Pn	03 58 59.7	+0.3
THZ	**Tophouse**	**2.22**	**223**	P		Pn	03 59 00.4	+0.7
SNGZ	**Shannon Statio**	**2.32**	**55**	P		Pb	03 59 03.7	-0.8
TOZ	**Tahuroa Road**	**2.46**	**11**	P		Pn	03 59 04.3	+1.4
KHZ	**Kahutara**	**2.49**	**204**	P		Pn	03 59 02.6	-0.8
MHGZ	**Mahia Peninsul**	**2.51**	**68**	P		Pn	03 59 02.2	-1.5
URZ	**Urewera**	**2.54**	**43**	P		Pn	03 59 03.2	-0.9
MWZ	**Matawai**	**2.72**	**49**	P		Pn	03 59 05.6	-0.9
DSZ	**Denniston Nort**	**2.85**	**235**	P		Pn	03 59 08.4	+0.1
TWGZ	**Tauwhareparae**	**3.09**	**51**	P		Pn	03 59 11.4	-0.3
GVZ	**Greta Valley S**	**3.15**	**206**	P		Pn	03 59 11.3	-1.2
LTZ	**Lake Taylor**	**3.30**	**216**	P		Pn	03 59 13.5	-1.0
PKGZ	**Pakihiroa**	**3.34**	**48**	P		Pn	03 59 13.9	-1.2
WMGZ	**Waiomatatini S**	**3.58**	**51**	P		Pn	03 59 16.3	-2.1
INZ	**Inchbonnie**	**3.67**	**224**	P		Pn	03 59 18.9	-0.7
AKCZ	**Akaroa Harbour**	**4.01**	**201**	P		Pn	03 59 21.9	-2.4

*KRNET **29** 03:59:20.2±0.1, 39°.39N×73°.76E, mb3.6*
*SOME **29** 03:59:23.1, 39°.62N×73°.85E, h0km*
*NNC **29** 03:59:25.5±1.2, 39°.62N×73°.78E, h0km, mb3.8, mpv3.6, Error ellipse: s-maj=9.3km s-min=6.1km az=164.0*

ISC 29 03:59:15.8±1.6, 39°.32N±0°.05×73.79E±0°.03, h7km±14km, n50, σ1§33/77, 17C-12D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.43**	**328**	⇓*e*P	**Pg**	**03 59 45.7**	**+2.5**
	baz=27						
OHH				⇓*e*S	**Sg**	**04 00 04.6**	**+2.8**
	baz=27						
BTK	**Batken**	**2.41**	**289**	⇑*e*P	**Pg**	**04 00 02.3**	**+0.3**
	baz=87						
BTK				⇑*e*S	**Sg**	**04 00 32.9**	**-0.3**
	baz=87						
GAR	**Garm**	**2.72**	**264**	⇑*e*P	**Pg**	**04 00 07.0**	**-0.9**
	baz=63						
GAR				⇑*e*S	**Sb**	**04 00 40.9**	**+2.4**
	baz=63						
AML	**Almayashu**	**2.81**	**359**	P	**Pg**	**04 00 09.5**	**-0.2**
	SNR=7.3						
UCH	**Uchtor**	**2.96**	**10**	P	**Pg**	**04 00 12.9**	**+0.4**
	SNR=33						
UCH	**Uchtor**	**2.96**	**10**	⇑*i*P	**Pb**	**04 00 09.5**	**+0.4**
	baz=11						
UCH				⇑*e*S	**Sb**	**04 00 45.6**	**0.0**
	baz=11						
TRKS	**Terek-Say**	**3.00**	**318**	⇓*e*P	**Pb**	**04 00 08.9**	**-0.7**
	baz=17						
TRKS				⇓*e*S	**Sb**	**04 00 44.6**	**-1.9**
	baz=17						
EKS2	**Erkin-Say**	**3.34**	**360**	P	**Pb**	**04 00 15.8**	**+0.4**
	SNR=7.6						
EKS2	**Erkin-Say**	**3.34**	**360**	⇑*e*P	**Pb**	**04 00 14.7**	**-0.7**
	baz=0.0						
EKS2				⇑*e*S	**Sb**	**04 00 54.5**	**-1.8**
	baz=0.0						
AAK	**Ala-Archa**	**3.36**	**9**	P	**Pg**	**04 00 18.5**	**-1.7**
	SNR=7.1						
AAK	**Ala-Archa**	**3.36**	**9**	⇑*e*P	**Pb**	**04 00 15.2**	**-0.6**
	baz=9.0						
AAK				⇑*e*S	**Sb**	**04 00 55.1**	**-1.8**
	baz=9.0						
KBK	**Karagaybulak**	**3.45**	**14**	⇓*e*P	**Pb**	**04 00 16.2**	**-1.1**
	baz=15						
KBK				⇓*e*S	**Sb**	**04 00 57.3**	**-2.2**
	baz=15						
MRKS	**Merke**	**3.45**	**353**	*e*P	**Pg**	**04 00 22.9**	**+1.1**
	12nm,0.3s						
MRKS				*e*S	**Sg**	**04 01 06.2**	**-0.4**
	36nm,0.6s						
MRKS	**Merke**	**3.45**	**353**	Pg	**Pg**	**04 00 22.9**	**+1.1**
	12nm,0.3s						
MRKS				Lg	Lg	04 01 06.2	
	36nm,0.6s						
ULHL	**Ulahol**	**3.47**	**32**	P	**Pg**	**04 00 24.9**	**+2.7**
	SNR=21						
ULHL	**Ulahol**	**3.47**	**32**	⇑*e*P	**Pb**	**04 00 16.7**	**-0.9**
	baz=33						
ULHL				⇑*e*S	**Sb**	**04 00 58.0**	**-2.0**
	baz=33						
CHGR	**Chuyangaron**	**3.67**	**261**	⇓*e*P	**Pb**	**04 00 19.9**	**-1.1**
	baz=60						
CHGR				⇓*e*S	**Sb**	**04 01 03.7**	**-2.1**
	baz=60						
CHMS	**Chumysh**	**3.75**	**11**	⇓Pn	**Pb**	**04 00 21.4**	**-1.0**
	3.6nm,0.3s						
CHMS				⇓Lg	Lg	04 01 16.0	
	27nm,1.1s						
TKM2	**Tokmak 2**	**3.85**	**20**	⇓Pn	**Pb**	**04 00 23.6**	**-0.5**
	3.5nm,0.8s						
TKM2				⇑Pg	**Pg**	**04 00 31.1**	**+1.6**
	6.3nm,0.7s						
TKM2				⇑Lg	Lg	04 01 19.6	
	7.8nm,0.5s						
USP	**Ospenovka**	**3.98**	**7**	P	**Pb**	**04 00 27.0**	**+0.7**
	SNR=5.2						
KST	**Kastek**	**4.07**	**23**	*e*P	**Pg**	**04 00 33.8**	**+0.2**
	5.5nm,0.5s						
KST				*e*S	**Sg**	**04 01 25.0**	**-1.3**
	30nm,0.6s						
KST	**Kastek**	**4.07**	**23**	Pg	**Pg**	**04 00 33.8**	**+0.2**
	5.5nm,0.5s						
KST				Lg	Lg	04 01 25.0	
	30nm,0.6s						
SGDS	**Sogindy**	**4.18**	**8**	*e*P	**Pg**	**04 00 37.0**	**+1.2**
	6.2nm,0.5s						
SGDS				*e*S	**Sg**	**04 01 30.4**	**+0.5**
	9.8nm,0.5s						
SGDS	**Sogindy**	**4.18**	**8**	Pg	**Pg**	**04 00 37.0**	**+1.2**
	6.2nm,0.5s						
SGDS				Lg	Lg	04 01 30.4	
	9.8nm,0.5s						
DGS	**Degeres**	**4.19**	**20**	*e*P	**Pg**	**04 00 37.5**	**+1.3**
	11nm,0.7s						
DGS				*e*S	**Sg**	**04 01 31.3**	**+0.8**
	17nm,0.7s						
DGS	**Degeres**	**4.19**	**20**	Pg	**Pg**	**04 00 37.5**	**+1.3**
	11nm,0.7s						
DGS				Lg	Lg	04 01 31.3	
	17nm,0.7s						
MTBS	**Maitube**	**4.30**	**27**	*e*P	**Pg**	**04 00 37.8**	**-0.3**
	5.5nm,0.1s						
MTBS				*e*S	**Sg**	**04 01 31.9**	**-1.8**
	16nm,0.3s						
MTBS	**Maitube**	**4.30**	**27**	Pg	**Pg**	**04 00 37.8**	**-0.3**
	5.5nm,0.1s						
MTBS				Lg	Lg	04 01 31.9	
	16nm,0.3s						
TNSS	**Tian-Shan**	**4.41**	**32**	*e*P	**Pg**	**04 00 40.2**	**-0.1**
	8.1nm,0.3s						
TNSS				*e*S	**Sg**	**04 01 35.5**	**-2.0**
	6.0nm,0.4s						
TNSS	**Tian-Shan**	**4.41**	**32**	Pg	**Pg**	**04 00 40.2**	**-0.1**
	8.1nm,0.3s						
TNSS				Lg	Lg	04 01 35.5	
	6.0nm,0.4s						
KK31	**Karatay Array**	**4.52**	**328**	⇑Pn	**Pb**	**04 00 31.5**	**-3.9**
	1.0nm,0.3s,baz=131,slow=13,SNR=11						
KK31				⇑Pg	**Pg**	**04 00 42.7**	**+0.4**
	1.6nm,0.3s,baz=152,slow=15,SNR=9.3						
KK31				⇑Lg	Lg	04 01 38.8	
	2.3nm,0.3s						
KRBS	**Karabastau**	**4.60**	**17**	*e*P	**Pg**	**04 00 43.5**	**-0.3**
	5.6nm,0.5s						
KRBS				*e*S	**Sg**	**04 01 41.6**	**-1.7**
	13nm,0.7s						
KRBS	**Karabastau**	**4.60**	**17**	Pg	**Pg**	**04 00 43.5**	**-0.3**
	5.6nm,0.5s						
KRBS				Lg	Lg	04 01 41.6	
	13nm,0.7s						
BRLS	**Borolday**	**4.76**	**322**	*e*P	**Pg**	**04 00 46.1**	**-0.8**
	3.9nm,0.2s						
BRLS				*e*S	**Sg**	**04 01 45.9**	**-2.7**
	6.8nm,0.3s						
BRLS	**Borolday**	**4.76**	**322**	Pg	**Pg**	**04 00 46.2**	**-0.8**
	3.9nm,0.2s						
BRLS				Lg	Lg	04 01 45.9	
	6.8nm,0.3s						
KTBS	**Karatobe**	**4.90**	**25**	*e*P	**Pg**	**04 00 50.4**	**+0.8**
	5.2nm,0.6s						
KTBS				*e*S	**Sg**	**04 01 53.4**	**+0.5**
	18nm,0.5s						
KTBS	**Karatobe**	**4.90**	**25**	Pg	**Pg**	**04 00 50.3**	**+0.8**
	5.2nm,0.6s						
KTBS				Lg	Lg	04 01 53.4	
	18nm,0.5s						
KUU	**Kurty**	**4.95**	**22**	*e*P	**Pg**	**04 00 50.5**	**-0.2**
	5.0nm,0.4s						
KUU				*e*S	**Sg**	**04 01 53.7**	**-1.1**
	16nm,0.6s						
KUU	**Kurty**	**4.95**	**22**	Pg	**Pg**	**04 00 50.5**	**-0.2**
	5.0nm,0.4s						
KUU				Lg	Lg	04 01 53.7	
	16nm,0.6s						
SATY	**Saty**	**5.11**	**41**	*e*P	**Pg**	**04 00 53.4**	**-0.2**
	2.0nm,0.1s						
SATY				*e*S	**Sg**	**04 01 58.4**	**-1.4**
	8.1nm,0.3s						
SATY	**Saty**	**5.11**	**41**	Pg	**Pg**	**04 00 53.4**	**-0.2**
	2.0nm,0.1s						
SATY				Lg	Lg	04 01 58.4	
	8.1nm,0.3s						
CHKK	**Chushkaly**	**5.13**	**27**	*e*P	**Pg**	**04 00 55.2**	**+1.2**
	2.8nm,0.1s						
CHKK				*e*S	**Sg**	**04 02 01.1**	**+0.7**
	18nm,0.2s						
BTLS	**Baital**	**5.72**	**2**	*e*P	**Pg**	**04 01 05.6**	**+0.2**
	2.4nm,0.3s						
BTLS				*e*S	**Sg**	**04 02 19.5**	**0.0**
	4.5nm,0.4s						
BTLS	**Baital**	**5.72**	**2**	Pg	**Pg**	**04 01 05.6**	**+0.2**
	2.4nm,0.3s						
BTLS				Lg	Lg	04 02 19.5	
	4.5nm,0.4s						
ARXS	**Arharly**	**5.75**	**30**	*e*P	**Pg**	**04 01 06.0**	**+0.2**
	5.0nm,0.7s						
ARXS				*e*S	**Sg**	**04 02 20.4**	**+0.2**
	11nm,0.6s						
ARXS	**Arharly**	**5.75**	**30**	Pg	**Pg**	**04 01 06.0**	**+0.2**
	5.0nm,0.7s						
ARXS				Lg	Lg	04 02 20.4	
	11nm,0.6s						
PDGK	**Podgornoye**	**5.87**	**45**	Pg	**Pg**	**04 01 08.7**	**+0.5**
	1.4nm,0.6s						
PDGK				Lg	Lg	04 02 24.9	
	1.9nm,0.5s						
BLB	**Baldybastay**	**5.92**	**35**	*e*P	**Pg**	**04 01 09.6**	**+0.3**
	7.9nm,0.3s						
BLB				*e*S	**Sg**	**04 02 26.3**	**+0.3**
	8.4nm,0.5s						
BLB	**Baldybastay**	**5.92**	**35**	Pg	**Pg**	**04 01 09.6**	**+0.3**
	7.9nm,0.3s						
BLB				Lg	Lg	04 02 26.3	
	8.4nm,0.5s						
AB31	**Akbulak array**	**14.02**	**320**	⇓Pn	**Pn**	**04 02 38.2**	**+3.5**
	0.4nm,0.7s,baz=129,slow=15,SNR=5.1						

*IDC **29** 04:07:01.9±0.8, 41°.14S×91°.19W, h0km, mb3.9/8, mbtmp3.9/8, MS4.0/26, Error ellipse: s-maj=36.2km s-min=20.4km az=102.0*
*NEIC **29** 04:07:02.6±1.8, 41°.3S±0°.1×91°.4W±0°.2, h10km±1km, mb4.6/37, Error ellipse: s-maj=23.3km s-min=20.2km az=288.0*
*GCMT **29** 04:07:03.6±0.5, 40°.89S±0°.05×91°.08W±0°.04, h23km±1km, MW4.9/69, Moment Tensor Solution. s18,c19; s69,c83; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.63±.25; $M_{\theta\theta}$0.48±.15; $M_{\phi\phi}$2.15±.16; $M_{r\theta}$1.12±.28; $M_{\theta\phi}$-0.68±.09; $M_{\phi r}$-0.72±.20; Best double couple: M_o2.82500×10^{16} NP1:φs172.00000°, δ35.00000°, λ-68.00000°. NP2: φs326.00000°, δ58.00000°, λ-105.00000°. Principal axes: T 2.6150, Plg12.0000°, Azm66.0000°; N 0.4260, Plg13.0000°, Azm334.0000°; P -3.0360, Plg73.0000°, Azm198.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 04:07:02.9±0.6, 41°.17S±0°.10×91°.3W±0°.1, h10km, n84, σ0§96/56, mb4.5/21, MS4.0/25, Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**12.24**	**57**	T	T	04 22 20.4	
	baz=232,SNR=743						
H03S1	**Juan Fernandez**	**12.25**	**57**	T	T	04 22 20.8	
	baz=232,SNR=714						
H03S3	**Juan Fernandez**	**12.26**	**57**	T	T	04 22 19.2	
	baz=232,SNR=612						
H03N3	**Juan Fernandez**	**12.49**	**56**	T	T	04 22 38.6	
	baz=230,slow=71,SNR=921						
H03N2	**Juan Fernandez**	**12.49**	**56**	T	T	04 22 39.6	
	baz=230,slow=71,SNR=1182						
H03N1	**Juan Fernandez**	**12.51**	**56**	T	T	04 22 37.6	
	baz=230,slow=71,SNR=1166						
COYC	**Coyhaique**	**14.64**	**114**		**Pn**	**04 10 28.6**	**-1.4**
PLCA	**Paso Flores**	**15.68**	**95**	Pn	**P**	**04 10 46.9**	**-1.2**
	baz=309,slow=6.5,SNR=2.7						
PLCA				LR	LR	04 15 19.6	
	comp=Z,976nm,20.0s,baz=274,slow=32						
PLCA	**Paso Flores**	**15.68**	**95**	Pn	**Pn**	**04 10 43.6**	**-0.3**
ML02	**Panimavida**	**16.46**	**77**	Pn	**P**	**04 10 55.4**	**-1.2**
ML02				IAmb	IAmb	04 11 04.5	
	comp=Z,75nm,1.4s						
MT09	**Talagante**	**17.70**	**72**	P	**P**	**04 11 10.8**	**+0.3**
PEL	**Peldehue**	**18.25**	**71**	P	**P**	**04 11 16.4**	**0.0**
VA03	**San Esteban**	**18.55**	**70**	P	**Pn**	**04 11 19.6**	**-0.3**
CO02	**Combarbal**	**19.12**	**65**	P	**Pn**	**04 11 26.8**	**-0.2**
CO02				IAmb	IAmb	04 11 33.6	
	comp=Z,32nm,1.0s						
CO03	**El Pedregal**	**19.55**	**65**	P	**Pn**	**04 11 33.8**	**+1.6**
RPN	**Rapa Nui**	**20.41**	**308**	LR	LR	04 17 22.9	
	comp=Z,302nm,20.5s,baz=132,slow=30						
TRQA	**Tornquist**	**22.75**	**92**	P	**P**	**04 12 08.2**	**+3.0**
TRQA				IAmb	IAmb	04 12 31.6	
	comp=Z,33nm,1.4s						
AC02	**Maricunga**	**23.19**	**59**	P	**P**	**04 12 11.6**	**+1.2**
AC02				IAmb	IAmb	04 12 18.5	
	comp=Z,15nm,1.1s						
LVC	**Limon Verde**	**26.40**	**52**	LR	LR	04 20 04.2	
	comp=Z,665nm,21.9s,baz=216,slow=30						
CPUP	**Villa Florida**	**31.65**	**73**	LR	LR	04 24 43.6	
	comp=Z,374nm,20.3s,baz=232,slow=34						
NNA	**Nana**	**31.71**	**28**	LR	LR	04 22 53.8	
	comp=Z,136nm,19.5s,baz=194,slow=30						
LPAZ	**La Paz**	**31.86**	**46**	P	**P**	**04 13 29.4**	**+0.6**
	comp=Z,0.8nm,0.5s,baz=239,slow=5.9,SNR=5.4						
LPAZ				LR	LR	04 23 31.5	
	comp=Z,247nm,20.8s,baz=215,slow=31						
	comp=Z,0.8nm,0.5s						
LPAZ	**La Paz**	**31.86**	**46**	P	**P**	**04 13 29.4**	**+0.6**
ATAH	**Atahualpa**	**35.79**	**22**	LR	LR	04 25 02.4	
	comp=Z,270nm,21.5s,baz=220,slow=30						
SIV	**San Ignacio**	**36.20**	**55**	P	**P**	**04 14 05.6**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=234,slow=7.3,SNR=6.4						
SIV				LR	LR	04 27 19.3	
	comp=Z,255nm,20.9s,baz=288,slow=34						
	comp=Z,1.0nm,0.7s						
BDFB	**Brasilia**	**45.15**	**69**	LR	LR	04 33 35.9	
	comp=Z,419nm,18.2s,baz=239,slow=35						
ROSC	**El Rosal**	**48.35**	**23**	LR	LR	04 34 18.4	
	comp=Z,115nm,18.1s,baz=230,slow=34						
VNA3	**Neumayer Olymp**	**49.00**	**155**	P	**P**	**04 15 49.8**	**+0.6**
QSPA	**South Pole Qui**	**49.06**	**180**	P	**P**	**04 15 51.5**	**+1.5**
	comp=Z,2.0nm,1.0s,baz=138,slow=4.2,SNR=5.8						
	comp=Z,2.0nm,1.0s						
QSPA	**South Pole Qui**	**49.06**	**180**	P	**P**	**04 15 49.0**	**-0.9**
QSPA				IAmb	IAmb	04 16 17.4	
	comp=Z,11nm,1.4s						
VNA1	**Neumayer--Stat**	**49.55**	**154**	P	**P**	**04 15 54.5**	**+1.1**
VNA2	**Neumayer--Watz**	**49.78**	**155**	P	**P**	**04 15 55.9**	**+0.7**
SNAA	**Sanae**	**51.06**	**156**	P	**P**	**04 16 04.5**	**-0.4**
SNAA	**Sanae**	**51.06**	**156**	P	**P**	**04 16 04.2**	**-0.7**
JTS	**Las Juntas de**	**51.53**	**8**	LR	LR	04 32 52.8	
	comp=Z,83nm,18.4s,baz=266,slow=30						
TROLL	**Troll, Antarti**	**52.58**	**157**	P	**P**	**04 16 17.1**	**+0.7**
SDV	**Santo Domingo**	**53.31**	**26**	LR	LR	04 37 09.8	
	comp=Z,156nm,19.8s,baz=184,slow=34						
VNDA	**Vanda**	**53.67**	**195**	P	**P**	**04 16 25.2**	**+1.1**
	comp=Z,0.5nm,0.7s,baz=122,slow=9.9,SNR=4.3						
VNDA				LR	LR	04 36 54.5	
	comp=Z,84nm,18.3s,baz=252,slow=33						
	comp=Z,0.5nm,0.7s						
VNDA	**Vanda**	**53.67**	**195**	P	**P**	**04 16 22.7**	**-1.4**
VNDA				IAmb	IAmb	04 16 45.0	
	comp=Z,7.2nm,1.5s						
PPT	**Papeete**	**54.88**	**277**	LR	LR	04 35 04.0	
	comp=Z,65nm,18.6s,baz=172,slow=31						
MDP	**Montagnes des**	**58.04**	**47**	LR	LR	04 41 47.5	
	comp=Z,144nm,18.8s,baz=182,slow=36						
RAR	**Rarotonga**	**60.38**	**267**	LR	LR	04 36 34.2	
	comp=Z,143nm,21.7s,baz=190,slow=29						
RCBR	**Riachuelo**	**60.48**	**70**	LR	LR	04 42 37.2	
	comp=Z,332nm,18.1s,baz=340,slow=35						
SJG	**San Juan**	**63.42**	**27**	LR	LR	04 44 04.7	
	comp=Z,88nm,18.5s,baz=237,slow=35						
URZ	**Urewera**	**67.18**	**239**	LR	LR	04 41 16.8	
	comp=Z,262nm,18.6s,baz=211,slow=31						
RAO	**Raoul Island**	**69.04**	**249**	LR	LR	04 40 28.0	
	comp=Z,163nm,21.0s,baz=358,slow=29						
MAW	**Mawson**	**69.80**	**170**	P	**P**	**04 18 13.4**	**+0.5**
	comp=Z,1.1nm,0.6s,baz=225,slow=14,SNR=2.1						
	comp=Z,1.1nm,0.6s						
TXAR	**Lajitas Array**	**71.08**	**349**	P	**P**	**04 18 22.1**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=175,slow=7.9,SNR=6.6						
	comp=Z,0.4nm,0.7s						
TXAR	**Lajitas Array**	**71.08**	**349**	P	**P**	**04 18 21.1**	**-0.2**
TX31	**Lajitas Ar. Si**	**71.08**	**349**	P	**P**	**04 18 21.1**	**-0.2**
TX32	**Lajitas Array**	**71.08**	**349**	P	**P**	**04 18 22.0**	**+0.8**
TX32				IAmb	IAmb	04 18 34.3	
	comp=Z,6.8nm,1.4s						
AFI	**Afiamalu**	**73.87**	**266**	LR	LR	04 44 22.5	
	comp=Z,153nm,18.0s,baz=85,slow=30						
TUC	**Tucson**	**75.30**	**343**	P	**P**	**04 18 46.8**	**+0.8**
TUC				IAmb	IAmb	04 18 56.0	
	comp=Z,5.0nm,1.2s						
KMSC	**Kings Mountain**	**76.49**	**8**	P	**P**	**04 18 52.4**	**-0.3**
CPCT	**Cooper Cave**	**76.50**	**6**	P	**P**	**04 18 52.2**	**-0.5**
CPCT				IAmb	IAmb	04 18 54.6	
	comp=Z,4.3nm,0.8s						
V48A	**Smith Brothers**	**76.64**	**4**	P	**P**	**04 18 53.1**	**-0.4**
V48A				IAmb	IAmb	04 19 05.1	
	comp=Z,4.8nm,1.0s						
TKL	**Tuckaleechee C**	**76.77**	**6**	LR	LR	04 48 04.1	
	comp=Z,49nm,19.0s,baz=168,slow=32						
V53A	**Saluda**	**76.86**	**7**	P	**P**	**04 18 53.4**	**-1.4**
V53A				IAmb	IAmb	04 18 56.2	
	comp=Z,4.0nm,0.8s						
U49A	**Red Boiling Sp**	**77.47**	**5**	P	**P**	**04 18 57.3**	**-0.9**
U49A				IAmb	IAmb	04 19 10.5	
	comp=Z,5.6nm,0.8s						
S39A	**Bolivar**	**78.50**	**358**	P	**P**	**04 19 02.6**	**-1.3**
S39A				IAmb	IAmb	04 19 18.1	
	comp=Z,5.4nm,1.1s						
CCM	**Cathedral Cave**	**78.85**	**0**	P	**P**	**04 19 04.7**	**-1.1**
MSVF	**Nonsavu**	**79.03**	**256**	LR	LR	04 46 49.4	
	comp=Z,85nm,21.9s,baz=90,slow=30						
S22A	**4UR Ranch, Cre**	**79.81**	**348**	P	**P**	**04 19 10.5**	**-0.9**
SHPR	**Sheep Range**	**80.34**	**341**	P	**P**	**04 19 14.1**	**-0.1**
TPNV	**Topopah Spring**	**81.03**	**340**	P	**P**	**04 19 16.5**	**-1.4**
Q16A	**Castle Valley**	**81.74**	**344**	P	**P**	**04 19 22.2**	**+0.5**
Q16A				IAmb	IAmb	04 19 29.8	
	comp=Z,7.3nm,1.3s						
TPH	**Tonopah**	**82.35**	**340**	P	**P**	**04 19 25.3**	**+0.4**
NLU	**North Lily Min**	**82.93**	**344**	P	**P**	**04 19 27.2**	**-0.6**
NVAR	**Mina Array Bea**	**82.97**	**339**	P	**P**	**04 19 29.7**	**+1.6**
	comp=Z,1.6nm,0.9s,baz=193,slow=6.5,SNR=7.4						
	comp=Z,1.6nm,0.9s						
NVAR	**Mina Array Bea**	**82.97**	**339**	P	**P**	**04 19 28.1**	**0.0**
DUG	**Dugway, Tooele**	**83.31**	**344**	P	**P**	**04 19 30.7**	**+0.9**
KVN	**Kaiserville**	**83.50**	**339**	P	**P**	**04 19 30.9**	**+0.1**
KVN				IAmb	IAmb	04 19 32.8	
	comp=Z,7.4nm,1.4s						
ECSD	**EROS Data Cent**	**84.66**	**356**	P	**P**	**04 19 35.5**	**-0.9**
BW06	**Boulder Array**	**85.17**	**347**	P	**P**	**04 19 38.9**	**-0.3**
BW06				IAmb	IAmb	04 19 40.0	
	comp=Z,5.3nm,1.4s						
PD31	**Pinedale Array**	**85.17**	**347**	P	**P**	**04 19 38.2**	**-1.0**
PD31				IAmb	IAmb	04 19 40.0	
	comp=Z,5.4nm,1.4s						
PDAR	**Pinedale Array**	**85.17**	**347**	P	**P**	**04 19 39.6**	**+0.4**
	com

TSUM	**Tsumeb**	**53.15**	**268**	LR	LR	04 48 22.5		
	comp=Z,220nm,18.3s,baz=150,slow=33							
CMAR	**Chiang Mai Arr**	**53.48**	**28**	P	**P**	**04 28 15.2**	**+0.3**	
	comp=Z,1.7nm,0.3s,baz=213,slow=6.9,SNR=7.1							
	comp=Z,1.7nm,0.3s							
CMAR	**Chiang Mai Arr**	**53.48**	**28**	P	**P**	**04 28 14.6**	**-0.4**	
WRA	**Warramunga Arr**	**53.87**	**94**	P	**P**	**04 28 16.9**	**-1.2**	
	comp=Z,3.3nm,1.1s,baz=248,slow=8.1,SNR=5.6							
WRA				LR	LR	04 49 11.0		
	comp=Z,182nm,18.4s,baz=240,slow=34							
	comp=Z,3.3nm,1.1s							
WRA	**Warramunga Arr**	**53.87**	**94**	P	**P**	**04 28 16.1**	**-1.9**	
TROLL	**Troll, Antarti**	**56.24**	**201**	P	**P**	**04 28 36.0**	**+1.4**	
SNAA	**Sanae**	**57.90**	**201**	P	**P**	**04 28 47.5**	**+1.3**	
SNAA	**Sanae**	**57.90**	**201**	LR	LR	04 51 02.0		
	comp=Z,81nm,19.1s,baz=125,slow=33							
VNA2	**Neumayer--Watz**	**59.39**	**202**	P	**P**	**04 28 57.9**	**+1.4**	
VNA1	**Neumayer--Stat**	**59.70**	**203**	P	**P**	**04 29 00.4**	**+1.7**	
QSPA	**South Pole Qui**	**59.90**	**180**	P	**P**	**04 29 00.4**	**+0.1**	
	comp=Z,3.2nm,0.7s,baz=266,slow=1.0,SNR=17							
QSPA				LR	LR	04 51 52.7		
	comp=Z,137nm,19.3s,baz=286,slow=33							
	comp=Z,3.2nm,0.7s							
QSPA	**South Pole Qui**	**59.90**	**180**	P	**P**	**04 28 59.2**	**-1.1**	
QSPA				IAmb	IAmb	04 29 01.3		
	comp=Z,19nm,1.4s							
VNDA	**Vanda**	**59.95**	**165**	P	**P**	**04 29 00.0**	**-0.3**	
	comp=Z,2.3nm,1.0s,baz=270,slow=6.5,SNR=9.9							
VNDA				LR	LR	04 51 29.6		
	comp=Z,133nm,20.3s,baz=263,slow=33							
	comp=Z,2.3nm,1.0s							
VNDA	**Vanda**	**59.95**	**165**	P	**P**	**04 28 59.5**	**-0.8**	
VNDA				IAmb	IAmb	04 29 01.0		
	comp=Z,8.1nm,1.2s							
VNA3	**Neumayer Olymp**	**60.10**	**202**	P	**P**	**04 29 02.8**	**+1.4**	
DAV	**Davao City (W)**	**60.77**	**61**	LR	LR	04 56 54.8		
	comp=Z,57nm,18.3s,baz=178,slow=38							
AAK	**Ala-Archa**	**72.53**	**359**	LR	LR	04 59 15.0		
	comp=Z,94nm,20.6s,baz=171,slow=33							
KK31	**Karatay Array**	**73.13**	**356**	P	**P**	**04 30 24.0**	**-0.8**	
KK31				IAmb	IAmb	04 30 38.7		
	comp=Z,8.5nm,1.2s							
KKAR	**Karatay Array**	**73.13**	**356**	P	**P**	**04 30 25.2**	**+0.4**	
KKAR	**Karatay Array**	**73.13**	**356**	P	**P**	**04 30 24.4**	**-0.4**	
KKAR				IAmb	IAmb	04 30 38.8		
	comp=Z,8.5nm,1.2s							
MK31	**Makanchi Array**	**76.93**	**5**	P	**P**	**04 30 45.9**	**-0.8**	
MKAR	**Makanchi Array**	**76.93**	**5**	P	**P**	**04 30 46.3**	**-0.5**	
	comp=Z,2.1nm,1.0s,baz=189,slow=7.2,SNR=8.5							
MKAR				LR	LR	05 03 43.7		
	comp=Z,43nm,18.6s,baz=183,slow=35							
	comp=Z,2.1nm,1.0s							
MKAR	**Makanchi Array**	**76.93**	**5**	P	**P**	**04 30 46.0**	**-0.8**	
ARG	**Arkhangelos**	**79.62**	**323**	P	**P**	04 30 57.4	-4.4	
ABKAR	**Akbulak array**	**80.33**	**350**	P	**P**	**04 31 03.7**	**-1.6**	
KURBB	**Kurchatov Arra**	**80.56**	**2**	P	**P**	**04 31 07.4**	**+0.9**	
	comp=Z,1.0nm,0.2s,baz=193,slow=5.5,SNR=6.1							
	comp=Z,1.0nm,0.2s							
KURK	**Kurchatov**	**80.66**	**2**	P	**P**	**04 31 06.8**	**-0.3**	
KURK				IAmb	IAmb	04 31 09.0		
	comp=Z,3.7nm,1.1s							
SONM	**Songino Array**	**82.57**	**20**	P	**P**	**04 31 17.5**	**0.0**	
	comp=Z,0.3nm,0.6s,baz=187,slow=7.3,SNR=4.4							
	comp=Z,0.3nm,0.6s							
SONM	**Songino Array**	**82.57**	**20**	P	**P**	**04 31 16.8**	**-0.7**	
KSRS	**Korea Array**	**83.38**	**39**	P	**P**	**04 31 25.9**	**+4.3**	
	comp=Z,0.6nm,0.5s,baz=242,slow=2.6,SNR=4.8							
KSRS				LR	LR	05 08 32.1		
	comp=Z,46nm,18.0s,baz=220,slow=36							
ZALV	**Zalesovo Beam**	**84.24**	**6**	P	**P**	**04 31 26.5**	**+0.8**	
	comp=Z,0.5nm,0.4s,baz=209,slow=2.7,SNR=6.3							
	comp=Z,0.5nm,0.4s							
ZALV	**Zalesovo Beam**	**84.24**	**6**	P	**P**	**04 31 25.3**	**-0.4**	
MLR	**Muntele Rosu**	**87.72**	**328**	P	**P**	**04 31 44.4**	**+1.0**	
	comp=Z,1.9nm,0.6s,baz=40,slow=7.9,SNR=3.8							
	comp=Z,1.9nm,0.6s							
KLR	**Kul'dur**	**93.69**	**33**	LR	LR	05 14 34.7		
	comp=Z,45nm,19.4s,baz=212,slow=36							
DAVOX	**Davos/Dischmat**	**96.74**	**321**	LR	LR	05 15 00.4		
	comp=Z,77nm,21.6s,baz=262,slow=35							
YKA	**Yellowknife Ar**	**147.10**	**9**	PKPbc	**PKPdf**	**04 38 36.2**	**+1.5**	
	comp=Z,2.9nm,1.1s,baz=341,slow=3.1,SNR=12							
YKA	**Yellowknife Ar**	**147.10**	**9**	PKPdf	**PKPdf**	**04 38 33.6**	**-1.2**	

*KRNET **29** 04:25:10.8±0.1, 40°.09N×69°.16E, h14km, mb2.6*
*ISU **29** 04:25:11.4, 40°.06N×69°.24E, h25km*
ISC 29 04:25:12.3±1.8, 40°.09N±0°.04×69°.26E±0°.04, h15km±15km, n11, σ2s00/19, 8C, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
BXML	**Bakhmal**	**1.03**	**247**	P		**Pn**	**04 25 34.5**	**+2.2**
BXML				S		**Sn**	**04 25 50.8**	**+4.3**
BTK	**Batken**	**1.20**	**91**	⇑*e*P		**Pn**	**04 25 34.4**	**-0.2**
	baz=91							
BTK				⇑*e*S		**Sn**	**04 25 51.5**	**+0.9**
	baz=91							
MINT	**Mingtut**	**1.36**	**74**	S		**Sg**	**04 25 59.9**	**+3.5**
GAR	**Garm**	**1.37**	**143**	⇑*e*P		**Pb**	**04 25 36.8**	**-0.8**
	baz=40							
GAR				⇑*e*S		**Sg**	**04 25 55.8**	**-0.6**
	baz=40							
CHDK	**Chadak**	**1.44**	**52**	S		**Sn**	**04 25 56.6**	**+0.1**
CHGR	**Chuyangaron**	**1.44**	**183**	⇑*e*P		**Pb**	**04 25 37.2**	**-1.6**
	baz=80							
CHGR				⇑*e*S		**Sb**	**04 25 55.9**	**-1.0**
	baz=80							
CHMG	**Chimgan**	**1.56**	**21**	S		**Sn**	**04 25 59.6**	**-0.1**
CHRV	**Charvak**	**1.63**	**19**	P		**Pn**	**04 25 39.7**	**-0.8**
CHRV				S		**Sn**	**04 26 01.3**	**0.0**
AGL	**Agalyk**	**1.92**	**253**	P		**Pb**	**04 25 44.7**	**-2.3**
AGL				S		**Sb**	**04 26 08.1**	**-2.7**
TRKS	**Terek-Say**	**2.02**	**44**	⇑*e*P		**Pn**	**04 25 46.7**	**+0.7**
	baz=47							
TRKS				⇑*e*S		**Sb**	**04 26 13.0**	**-0.9**
	baz=47							
KK31	**Karatay Array**	**3.15**	**17**	P		**Pb**	**04 26 06.6**	**-1.3**
	0.8nm,0.3s,baz=201,slow=17,SNR=8.7							
KK31				S		**Sb**	**04 26 47.5**	**+1.3**
	3.0nm,0.3s,baz=204,slow=30,SNR=17							

*IDC **29** 04:26:59.7±1.1, 2°.10S×127°.77E, h0km, mb4.0/5, mbtmp4.1/7, ML4.4/2, Error ellipse: s-maj=39.9km s-min=18.9km az=62.0*
*DJA **29** 04:27:03.5±0.5, 2°.5±3°×12°.8E±°, h15km±5km, M4.1/10, mb4.8/5, mB4.8/3, MLv3.8/10, Mw(mB)4.1/3*
*NEIC **29** 04:27:05.5±1.9, 1°.92S±0°.10×128°.20E±0°.08, h49km±13km, mb4.0/8, Error ellipse: s-maj=15.8km s-min=9.8km az=211.0*
ISC 29 04:27:05.6±0.7, 1°.95S±0°.05×128°.05E±0°.06, h50km, n33, σ1s65/35, mb3.9/5, Halmahera

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**1.41**	**337**	P		**Pn**	**04 27 29.8**	**+0.8**
NLAI	**Namlea**	**1.60**	**217**	P		**Pn**	**04 27 31.0**	**-0.5**
MSAI	**Masohi**	**1.64**	**148**	P		**Pn**	**04 27 33.3**	**+1.2**
AAI	**Ambon**	**1.73**	**175**	P		**Pn**	**04 27 35.5**	**+2.1**
SANI	**Sanana**	**2.07**	**267**	P		**Pn**	**04 27 36.2**	**-1.7**
TNTI	**Ternate**	**2.79**	**346**	Pn		**Pn**	**04 27 48.1**	**+0.3**
TNTI	**Ternate**	**2.79**	**346**	P		**Pn**	**04 27 44.9**	**-2.9**
SWI	**Sorong**	**3.38**	**71**	P		**Pn**	**04 27 56.2**	**+0.3**
SIJI	**Sorong**	**3.38**	**72**	Pn		**Pn**	**04 27 56.8**	**+0.8**
	38nm,0.3s,baz=88,slow=7.4,SNR=30							
SIJI						Sn	**Sn**	**04 28 35.2**	**+0.2**
	32nm,0.3s,baz=155,slow=23,SNR=16							
	100nm,0.4s							
FAKI	**Fak Fak**	**4.30**	**103**	Pn		**Pn**	**04 28 06.5**	**-2.1**
FAKI						Sn	**Sn**	**04 28 53.0**	**-4.5**
FAKI	**Fak Fak**	**4.30**	**103**	P		**Pn**	**04 28 07.1**	**-1.5**
LUWI	**Luwuk**	**5.36**	**280**	Pn		**Pn**	**04 28 23.8**	**+0.7**
APSI	**Ampana**	**6.48**	**279**	P		**Pn**	**04 28 38.4**	**-0.1**
	1um88nm,0.5s							
MRSI	**Marisa**	**6.57**	**291**	P		**Pn**	**04 28 38.4**	**-1.3**
	751nm40nm,0.6s							
TOLI2	**Tolitoli**	**7.88**	**293**	Pn		**Pn**	**04 28 59.3**	**+1.7**
BKSI	**Bulukumba**	**8.60**	**247**	P		**Pn**	**04 29 08.0**	**+0.5**
	31nm,0.8s							
BSSI	**Bau Bau, Buton**	**8.62**	**241**	P		**Pn**	**04 29 09.3**	**+1.5**
MTN	**Manton Dam**	**11.25**	**164**	Pn		**Pn**	**04 29 43.3**	**-0.5**
KNRA	**Kununurra**	**13.66**	**177**	Pn		**Pn**	**04 30 17.0**	**+0.2**
WB0	**Warramunga Arr**	**18.77**	**161**	P		**P**	**04 31 18.9**	**-1.8**
WB0					IAmb	IAmb	04 31 30.2	
	comp=Z,11nm,1.3s							
WRAB	**Tennant Creek**	**18.91**	**161**	P		**P**	**04 31 20.4**	**-1.9**
WRAB					IAmb	IAmb	04 31 57.0	
	comp=Z,18nm,1.4s							
WRA	**Warramunga Arr**	**18.91**	**161**	P		**P**	**04 31 20.6**	**-1.8**
	comp=Z,1.0nm,0.3s,baz=338,slow=12,SNR=46							
	comp=Z,3.8nm,0.5s							
WRA	**Warramunga Arr**	**18.91**	**161**	P		**P**	**04 31 20.8**	**-1.5**
WB2	**Warramunga Arr**	**18.92**	**161**	P		**P**	**04 31 20.4**	**-2.0**
WR0	**Warramunga Arr**	**18.99**	**161**	P		**P**	**04 31 21.6**	**-1.7**
WR0					IAmb	IAmb	04 31 43.6	
	comp=Z,14nm,1.2s							
AS31	**Alice Springs**	**22.32**	**166**	P		**P**	**04 31 59.0**	**-0.3**
ASAR	**Alice Springs**	**22.32**	**166**	P		**P**	**04 31 58.8**	**-0.5**
	comp=Z,5.4nm,0.4s,baz=344,slow=10,SNR=72							
	comp=Z,5.4nm,0.4s							
CTA	**Charters Tower**	**25.33**	**137**	P		**P**	**04 32 30.6**	**+2.6**
	comp=Z,4.8nm,0.7s,baz=357,slow=9.4,SNR=3.9							
	comp=Z,4.8nm,0.7s							
CTAO	**Charters Tower**	**25.33**	**137**	P		**P**	**04 32 29.9**	**+1.9**
SONM	**Songino Array**	**53.07**	**342**	P		**P**	**04 36 19.1**	**+1.2**
	comp=Z,0.5nm,0.5s,baz=150,slow=10,SNR=4.3							
	comp=Z,0.5nm,0.5s							
SONM	**Songino Array**	**53.07**	**342**	P		**P**	**04 36 17.5**	**-0.4**
SONM					IAmb	IAmb	04 36 19.7	
	comp=Z,1.6nm,1.2s							
MKAR	**Makanchi Array**	**62.97**	**326**	P		**P**	**04 37 28.4**	**+1.2**
	comp=Z,0.6nm,0.7s,baz=130,slow=7.6,SNR=7.0							
	comp=Z,0.6nm,0.7s							
KURBB	**Kurchatov Arra**	**67.22**	**328**	P		**P**	**04 37 54.9**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=127,slow=5.6,SNR=3.2							
	comp=Z,0.5nm,0.4s							

*KRNET **29** 04:42:43.8±0.1, 39°.39N×73°.68E, mb3.5*
*SOME **29** 04:42:45.6, 39°.65N×73°.35E, h15km*
*NNC **29** 04:42:50.2±1.8, 39°.79N×73°.48E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=15.0km s-min=8.5km az=163.0*
ISC 29 04:42:49.0±1.1, 39°.71N±0°.05×73°.39E±0°.04, h10km, n43, σ2s39/65, 14C-8D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**0.93**	**331**	⇓*e*P		**Pn**	**04 43 09.0**	**+0.8**
	baz=29							
OHH				⇓*e*S		**Sn**	**04 43 27.3**	**+5.6**
	baz=29							
DRK	**Karamyk**	**1.25**	**260**	⇑*e*P		**Pn**	**04 43 11.2**	**-1.6**
	baz=74							
DRK				⇑*e*S		**Sb**	**04 43 31.3**	**+2.3**
	baz=74							
AML	**Almayashu**	**2.43**	**5**	P		**Pb**	**04 43 32.8**	**-0.2**
	SNR=20							
GAR	**Garm**	**2.48**	**254**	⇓*i*P		**Pn**	**04 43 29.5**	**-0.1**
	baz=63							
GAR				⇓*e*S		**Sn**	**04 44 03.0**	**+2.9**
	baz=63							
TRKS	**Terek-Say**	**2.49**	**317**	⇑*e*P		**Pn**	**04 43 32.1**	**+2.3**
	baz=18							
TRKS				⇑*e*S		**Sb**	**04 44 07.6**	**+2.8**
	baz=18							
UCH	**Uchtor**	**2.65**	**18**	P		**Pb**	**04 43 36.4**	**-0.5**
	SNR=27							
UCH	**Uchtor**	**2.65**	**18**	⇑*e*P		**Pn**	**04 43 33.4**	**+1.2**
	baz=12							
UCH				⇑*e*S		**Sb**	**04 44 09.1**	**-0.6**
	baz=12							
EKS2	**Erkin-Say**	**2.96**	**6**	P		**Pb**	**04 43 41.7**	**-0.2**
	SNR=6.7							
EKS2	**Erkin-Say**	**2.96**	**6**	⇑*e*P		**Pn**	**04 43 38.3**	**+2.1**
	baz=1.0							
EKS2				⇑*e*S		**Sb**	**04 44 18.3**	**+0.1**
	baz=1.0							
AAK	**Ala-Archa**	**3.04**	**16**	P		**Pb**	**04 43 42.2**	**-1.1**
	SNR=6.7							
AAK	**Ala-Archa**	**3.04**	**16**	⇓*e*P		**Pn**	**04 43 39.3**	**+2.0**
	baz=10.0							
AAK				⇓*e*S		**Sb**	**04 44 19.3**	**-1.2**
	baz=10.0							
KBK	**Karagaybulak**	**3.17**	**21**	P		**Pb**	**04 43 43.9**	**-1.6**
	SNR=6.5							
ULHL	**Ulahol**	**3.33**	**40**	P		**Pb**	**04 43 48.9**	**+0.7**
	SNR=7.2							
CHMS	**Chumysh**	**3.44**	**17**	⇓Pn		**Pn**	**04 43 45.0**	**+2.3**
	4.5nm,0.4s							
CHMS				⇑Lg		Lg	04 44 37.3	
	23nm,0.8s							
CHGR	**Chuyangaron**	**3.45**	**254**	⇑*e*P		**Pn**	**04 43 42.9**	**0.0**
	baz=60							
CHGR				⇑*e*S		**Sn**	**04 44 25.7**	**+1.8**
	baz=60							
TKM2	**Tokmak 2**	**3.61**	**27**	⇑Pn		**Pn**	**04 43 46.7**	**+1.5**
	1.5nm,0.6s							
TKM2				⇑Lg		Lg	04 44 42.2	
	10nm,0.6s							
SGDS	**Sogindy**	**3.85**	**14**	*e*P		**Pb**	**04 43 58.5**	**+1.4**
	4.3nm,0.4s							
SGDS				*e*S		**Sg**	**04 44 51.1**	**-1.5**
	4.8nm,0.7s							
SGDS	**Sogindy**	**3.85**	**14**	Pg		**Pb**	**04 43 58.4**	**+1.4**
	4.3nm,0.4s							
SGDS				Lg		Lg	04 44 51.1	
	4.8nm,0.7s							
KST	**Kastek**	**3.85**	**29**	*e*P		**Pb**	**04 43 58.7**	**+1.6**
	4.5nm,0.5s							
KST				*e*S		**Sg**	**04 44 51.1**	**-1.6**
	21nm,0.8s							
KST	**Kastek**	**3.85**	**29**	Pg		**Pb**	**04 43 56.6**	**-0.5**
	8.0nm,0.2s							
KST				Lg		Lg	04 44 48.0	
	21nm,0.8s							
DGS	**Degeres**	**3.95**	**26**	*e*P		**Pb**	**04 43 59.3**	**+0.5**
	11nm,0.4s							
DGS				*e*S		**Sg**	**04 44 52.6**	**-3.3**
	11nm,0.5s							
DGS	**Degeres**	**3.95**	**26**	Pg		**Pb**	**04 43 59.3**	**+0.5**
	11nm,0.4s							
DGS				Lg		Lg	04 44 52.6	
	11nm,0.5s							
KK31	**Karatay Array**	**4.02**	**328**	Pn		**Pn**	**04 43 54.3**	**+3.7**
	0.7nm,0.3s,baz=129,slow=11,SNR=20							
KK31				⇑Pg		**Pg**	**04 44 04.7**	**-1.2**
	1.5nm,0.3s,baz=149,slow=17,SNR=7.1							
KK31				⇓Lg		Lg	04 44 58.5	
	4.6nm,0.5s							
MTBS	**Maitube**	**4.11**	**33**	*e*P		**Pb**	**04 44 02.8**	**+1.3**
	6.3nm,0.1s							
MTBS				*e*S		**Sg**	**04 44 58.0**	**-2.9**
	9.7nm,0.2s							
MTBS	**Maitube**	**4.11**	**33**	Pg		**Pb**	**04 44 02.8**	**+1.3**
	6.3nm,0.1s							
MTBS				Lg		Lg	04 44 58.0	
	9.7nm,0.2s							
BRLS	**Borolday**	**4.25**	**322**	*e*P		**Pb**	**04 44 01.8**	**-2.1**
	1.8nm,0.2s							
BRLS				*e*S		**Sb**	**04 44 56.6**	**+1.2**
	7.3nm,0.4s							
BRLS	**Borolday**	**4.25**	**322**	Pg		**Pb**	**04 44 01.8**	**-2.1**
	1.8nm,0.2s							
BRLS				Lg		Lg	04 44 56.6	
	7.3nm,0.4s							
TNSS	**Tian-Shan**	**4.27**	**38**	*e*P		**Pb**	**04 44 05.5**	**+1.2**
	4.9nm,0.2s							
TNSS				*e*S		**Sg**	**04 45 03.3**	**-2.7**
	5.2nm,0.6s							
TNSS	**Tian-Shan**	**4.27**	**38**	Pg		**Pb**	**04 44 05.5**	**+1.2**
	4.9nm,0.2s							
TNSS				Lg		Lg	04 45 03.3	
	5.2nm,0.6s							
KRBS	**Karabastau**	**4.33**	**23**	*e*P		**Pb**	**04 44 07.9**	**+2.7**
	0.6nm,0.6s							
KRBS				*e*S		**Sg**	**04 45 07.0**	**-1.1**
	12nm,0.9s							
KRBS	**Karabastau**	**4.33**	**23**	Pg		**Pb**	**04 44 07.9**	**+2.7**
	0.6nm,0.6s							
KRBS				Lg		Lg	04 45 07.0	
	12nm,0.9s							
KTBS	**Karatobe**	**4.70**	**31**	*e*P		**Pb**	**04 44 13.2**	**+1.8**
	4.0nm,0.5s							
KTBS				*e*S		**Sg**	**04 45 16.4**	**-3.3**
	17nm,0.6s							
KTBS	**Karatobe**	**4.70**	**31**	Pg		**Pb**	**04 44 13.2**	**+1.8**
	4.0nm,0.5s							
KTBS				Lg		Lg	04 45 16.4	
	17nm,0.6s							
KUU	**Kurty**	**4.72**	**27**	*e*P		**Pb**	**04 44 13.1**	**+1.2**
	3.9nm,0.4s							
KUU				*e*S		**Sg**	**04 45 16.0**	**-4.6**
	9.9nm,0.3s							
KUU	**Kurty**	**4.72**	**27**	Pg		**Pb**	**04 44 13.1**	**+1.2**
	3.9nm,0.4s							
KUU				Lg		Lg	04 45 16.0	
	9.9nm,0.3s							
SATY	**Saty**	**5.04**	**47**	*e*P		**Pb**	**04 44 19.4**	**+2.0**
	2.9nm,0.2s							
SATY				*e*S		**Sg**	**04 45 26.9**	**-3.9**
	7.7nm,0.3s							
SATY	**Saty**	**5.04**	**47**	Pg		**Pb**	**04 44 19.3**	**+2.0**
	2.9nm,0.2s							
SATY				Lg		Lg	04 45 26.9	
	7.7nm,0.3s							
BTLS	**Baital**	**5.35**	**5**	*e*P		**Pg**	**04 44 26.9**	**-4.5**
	2.9nm,0.5s							
BTLS				*e*S		**Sg**	**04 45 39.8**	**-0.7**
	4.4nm,0.5s							
BTLS	**Baital**	**5.35**	**5**	Pg		**Pg**	**04 44 26.9**	**-4.5**
	2.9nm,0.5s							
BTLS				Lg		Lg	04 45 39.8	
	4.4nm,0.5s							
ARXS	**Arharly**	**5.58**	**35**	*e*P		**Pb**	**04 44 30.4**	**+3.9**
	5.1nm,0.7s							
ARXS				*e*S		**Sg**	**04 45 45.7**	**-2.5**
	14nm,0.5s							
ARXS	**Arharly**	**5.58**	**35**	Pg		**Pb**	**04 44 30.4**	**+3.9**
	5.1nm,0.7s							
ARXS				Lg		Lg	04 45 45.7	
	14nm,0.5s							
BLB	**Baldybastay**	**5.80**	**39**	*e*P		**Pb**	**04 44 34.3**	**+4.0**
	3.5nm,0.2s							
BLB				*e*S		**Sg**	**04 45 52.4**	**-2.7**
	5.0nm,0.2s							
BLB	**Baldybastay**	**5.80**	**39**	Pg		**Pb**	**04 44 34.3**	**+4.0**
	3.5nm,0.2s							
BLB				Lg		Lg	04 45 52.4	
	5.0nm,0.2s							

*JMA **29** 05:01:36.7±0.1, 38°.2N±0°.3×141°.7E±0°.5, h50km, MD3.9/40, MV4.3/40, E OFF MIYAGI PREF*
JMA Felt II J1 at E OFF MIYAGI PREF .
*NIED **29** 05:01:36.7, 38°.18N×141°.69E, h50km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.94; $M_{\theta\theta}$-0.14; $M_{\phi\phi}$-0.80; $M_{r\theta}$0.28; $M_{\theta\phi}$-0.10; $M_{r\phi}$0.66; Fault plane solution: $M_0$1.13000×10^{15} NP1: ϕ_s182.00000°, δ26.00000°, λ77.00000°. NP2:ϕ_s17.00000°, δ65.00000°, λ96.00000°.*
*IDC **29** 05:01:38.9±0.8, 38°.13N×141°.58E, h70km±5km, mb3.6/15, mbtmp3.9/17, MS2.9/2 Error ellipse: s-maj=17.6km s-min=15.4km az=88.0*
ISC 29 05:01:36.4±0.7, 38°.16N±0°.05×141°.74E±0°.07, h46km±4km, n52, σ0s78/48, mb3.9/15, 21D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.26**	**305**	⇓*i*P		**Pn**	**05 01 45.2**	**+0.5**
JIKH				⇓S		**Sn**	**05 01 51.1**	**+0.4**
JIKH	**Ishinomakikobu**	**0.26**	**305**	A		A	05 01 45.2	
	comp=E,109nm,0.3s,comp=E,38nm,0.5s							
JIO	**Ouri**	**0.43**	**314**	⇓*i*P		**Pn**	**05 01 46.7**	**+0.2**
JIO				⇓*i*S		**Sn**	**05 01 53.5**	**-0.1**
JIO	**Ouri**	**0.43**	**314**	A		A	05 01 46.7	
	comp=E,19nm,0.4s,comp=E,25nm,0.3s							
JKMT	**Kesennumamotoy**	**0.68**	**342**	⇓*i*P		**Pn**	**05 01 49.7**	**-0.1**
JKMT				⇓S		**Sn**	**05 01 58.7**	**-0.7**
JKMT	**Kesennumamotoy**	**0.68**	**342**	A		A	05 01 49.7	
	comp=E,10.0nm,1.2s,comp=E,5.0nm,0.9s							
JOFO	**Osakifurukawao**	**0.79**	**304**	A		A	05 01 51.0	
	comp=E,16nm,1.1s,comp=E,17nm,1.3s							
JMST	**Minamisoumatoc**	**0.80**	**238**	A		A	05 01 51.6	
	comp=E,13nm,0.3s,comp=E,16nm,0.3s							
JMM	**Marumori**	**0.80**	**249**	⇓*i*P		**Pn**	**05 01 51.0**	**-0.3**
JMM				⇓S		**Sn**	**05 02 01.4**	**-0.8**
JMM	**Marumori**	**0.80**	**249**	A		A	05 01 51.0	
	comp=E,8.0nm,0.4s,comp=E,5.0nm,0.8s							
JOU	**Okura**	**0.87**	**284**	⇓*i*P		**Pn**	**05 01 52.3**	**0.0**
JOU				⇓S		**Sn**	**05 02 03.7**	**-0.2**
JOU	**Okura**	**0.87**	**284**	A		A	05 01 52.3	
	comp=E,11nm,0.5s,comp=E,9.0nm,0.5s							
JMK	**Ichinoseki**	**0.89**	**333**	⇓*i*P		**Pn**	**05 01 52.6**	**+0.1**
JMK				⇓S		**Sn**	**05 02 03.8**	**-0.5**
OFUJ	**Ofunato**	**0.92**	**357**	A		A	05 01 53.2	
	comp=E,5.0nm,1.3s,comp=E,4.0nm,2.4s							
JFK	**Kawauchi**	**1.05**	**221**	*i*P		**Pn**	**05 01 54.6**	**-0.1**
JFK				S		**Sn**	**05 02 07.8**	**-0.3**
JFK	**Kawauchi**	**1.05**	**221**	A		A	05 01 54.6	
	comp=E,5.0nm,0.5s,comp=E,3.0nm,0.3s							
JFT	**Otama**	**1.28**	**241**	⇓*i*P		**Pn**	**05 01 58.3**	**+0.4**
JFT				⇓S		**Sn**	**05 02 14.2**	**+0.3**
JYAR	**Yonezawaarcadi**	**1.28**	**259**	A		A	05 01 58.2	
	comp=E,6.0nm,1.0s,comp=E,7.0nm,1.4

NOA LR LR 05 47 56.6
comp=Z,12nm,20.3s,baz=350,slow=38
comp=Z,0.8nm,0.5s
AKASG Malin Array Be 73.57 322 P **P 05 13 03.3 -1.1**
comp=Z,1.1nm,0.4s,baz=46,slow=6.2,SNR=8.3
AKASG pP **sP 05 13 21.9 -0.8**
comp=Z,0.8nm,0.4s,baz=45,slow=6.7,SNR=6.4
comp=Z,1.1nm,0.4s
PDAR Pinedale Array 76.69 46 P **P 05 13 23.4 +0.5**
comp=Z,0.4nm,0.8s,baz=270,slow=1.5,SNR=4.1
comp=Z,0.4nm,0.8s
GERES GERESS Array B 81.89 328 P **P 05 13 50.7 -0.3**
comp=Z,0.3nm,0.2s,baz=4.8,slow=8.0,SNR=3.8
comp=Z,0.3nm,0.2s
TXAR Lajitas Array 89.23 53 P **P 05 14 28.4 +0.7**
comp=Z,0.2nm,0.7s,baz=262,slow=2.5,SNR=3.5
TXAR pP **sP 05 14 47.7 +1.4**
comp=Z,0.2nm,0.7s,baz=292,slow=2.7,SNR=3.3
comp=Z,0.2nm,0.7s
LPAZ La Paz 145.89 59 PKPbc **PKPdf 05 21 11.1 -0.2**
comp=Z,0.8nm,0.6s,baz=33,slow=3.2,SNR=3.6

*SOME **29** 05:21:09.5, 39°.55N × 73°.58E, h0km*
*KRNET **29** 05:21:09.3±0.1, 39°.40N × 73°.58E, mb3.8*
*NNC **29** 05:21:13.4±1.1, 39°.63N × 73°.58E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=9.2km s-min=6.4km az=153.0*
ISC 29 05:21:13.9±1.2, 39°.46N±0°.06 × 73°.40E±0°.04, h10km, n45, σ2s16/70, 19C-12D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.16**	**336**	⇓*e*P		**Pb**	**05 21 33.6**	**-2.5**
	baz=32							
OHH				⇓*e*S		**Sg**	**05 21 51.4**	**0.0**
	baz=32							
DRK	**Karamyk**	**1.24**	**271**	⇓*e*P		**Pn**	**05 21 35.3**	**-2.3**
	baz=74							
DRK				⇓*e*S		**Sb**	**05 21 54.3**	**+0.6**
	baz=74							
GAR	**Garm**	**2.44**	**260**	⇑*e*P		**Pn**	**05 21 54.1**	**+0.2**
	baz=62							
GAR				⇑*e*S		**Sn**	**05 22 26.6**	**+2.8**
	baz=62							
AML	**Almayashu**	**2.68**	**5**	P		**Pn**	**05 21 56.0**	**-1.4**
	SNR=8.2							
TRKS	**Terek-Say**	**2.69**	**321**	⇓*e*P		**Pn**	**05 21 56.9**	**-0.5**
	baz=19							
TRKS				⇓*e*S		**Sn**	**05 22 31.6**	**+1.5**
	baz=19							
UCH	**Uchtor**	**2.89**	**17**	P		**Pn**	**05 22 00.6**	**+0.2**
	SNR=72							
UCH	**Uchtor**	**2.89**	**17**	⇑*e*P		**Pn**	**05 21 59.3**	**-1.1**
	baz=14							
UCH				⇑*e*S		**Sn**	**05 22 35.3**	**-0.2**
	baz=14							
EKS2	**Erkin-Say**	**3.21**	**5**	P		**Pn**	**05 22 05.0**	**+0.5**
	SNR=7.7							
EKS2	**Erkin-Say**	**3.21**	**5**	⇓*e*P		**Pn**	**05 22 03.8**	**-0.7**
	baz=3.0							
EKS2				⇓*e*S		**Sn**	**05 22 43.8**	**+0.9**
	baz=3.0							
AAK	**Ala-Archa**	**3.28**	**14**	P		**Pn**	**05 22 05.9**	**+0.4**
	SNR=10.0							
AAK	**Ala-Archa**	**3.28**	**14**	⇑*e*P		**Pn**	**05 22 04.6**	**-0.9**
	baz=12							
AAK				⇑*e*S		**Sn**	**05 22 45.1**	**+0.4**
	baz=12							
MRKS	**Merke**	**3.28**	**358**	*e*P		**Pn**	**05 22 09.1**	**+3.6**
	18nm,0.3s							
MRKS				*e*S		**Sb**	**05 22 52.2**	**-0.2**
	31nm,0.4s							
MRKS	**Merke**	**3.28**	**358**	Pg		**Pn**	**05 22 09.1**	**+3.6**
	18nm,0.3s							
MRKS				Lg		Lg	05 22 52.2	
	31nm,0.4s							
CHGR	**Chuyangaron**	**3.40**	**258**	⇑*e*P		**Pn**	**05 22 07.2**	**+0.1**
	baz=59							
CHGR				⇑*e*S		**Sn**	**05 22 49.6**	**+2.1**
	baz=59							
KBK	**Karagaybulak**	**3.40**	**20**	P		**Pb**	**05 22 12.6**	**-1.8**
	SNR=10							
KBK	**Karagaybulak**	**3.40**	**20**	⇑*e*P		**Pn**	**05 22 06.1**	**-1.1**
	baz=17							
KBK				⇑*e*S		**Sn**	**05 22 47.4**	**-0.3**
	baz=17							
ULHL	**Ulahol**	**3.52**	**37**	P		**Pn**	**05 22 12.7**	**+3.8**
	SNR=7.5							
CHMS	**Chumysh**	**3.68**	**16**	⇑Pn		**Pn**	**05 22 10.2**	**-0.6**
	9.2nm,0.7s							
CHMS				⇓Lg		Lg	05 23 04.0	
	37nm,1.2s							
TKM2	**Tokmak 2**	**3.83**	**25**	⇑*e*P		**Pn**	**05 22 12.0**	**-1.2**
	baz=23							
TKM2				⇑*e*S		**Sn**	**05 22 57.4**	**-1.0**
	baz=23							
TKM2	**Tokmak 2**	**3.83**	**25**	⇑Pn		**Pn**	**05 22 11.6**	**-1.6**
	4.2nm,0.7s							
TKM2				⇑Pg		**Pb**	**05 22 20.5**	**-1.3**
	7.6nm,0.7s							
TKM2				⇑Lg		Lg	05 23 09.4	
	17nm,0.8s							
KST	**Kastek**	**4.07**	**28**	*e*P		**Pb**	**05 22 22.8**	**-2.9**
	5.4nm,0.4s							
KST				*e*S		**Sb**	**05 23 15.6**	**+0.7**
	21nm,0.6s							
KST	**Kastek**	**4.07**	**28**	Pg		**Pb**	**05 22 22.8**	**-2.9**
	5.4nm,0.4s							
KST				Lg		Lg	05 23 15.6	
	21nm,0.6s							
SGDS	**Sogindy**	**4.09**	**13**	*e*P		**Pb**	**05 22 24.4**	**-1.7**
	9.0nm,0.4s							
SGDS				*e*S		**Sb**	**05 23 18.6**	**+3.0**
	14nm,0.7s							
SGDS	**Sogindy**	**4.09**	**13**	Pg		**Pb**	**05 22 24.4**	**-1.7**
	9.0nm,0.4s							
SGDS				Lg		Lg	05 23 18.6	
	14nm,0.7s							
DGS	**Degeres**	**4.18**	**25**	*e*P		**Pb**	**05 22 24.9**	**-2.6**
	11nm,0.5s							
DGS				*e*S		**Sb**	**05 23 19.9**	**+1.8**
	16nm,0.5s							
DGS	**Degeres**	**4.18**	**25**	Pg		**Pb**	**05 22 24.9**	**-2.6**
	11nm,0.5s							
DGS				Lg		Lg	05 23 19.9	
	16nm,0.5s							
KK31	**Karatay Array**	**4.24**	**330**	Pn		**Pn**	**05 22 18.6**	**+0.1**
	0.8nm,0.2s,baz=125,slow=12,SNR=15							
KK31				⇑Pg		**Pb**	**05 22 29.7**	**+1.1**
	5.7nm,0.6s,baz=147,slow=13,SNR=10							
KK31				⇓Lg		Lg	05 23 26.2	
	15nm,0.6s,baz=150,slow=29,SNR=4.0							
KKAR	**Karatay Array**	**4.24**	**330**	⇑*e*P		**Pn**	**05 22 19.1**	**+0.5**
	baz=29							
KKAR				⇑*e*S		**Sn**	**05 23 10.2**	**+2.1**
	baz=29							
MTBS	**Maitube**	**4.32**	**31**	*e*P		**Pb**	**05 22 27.2**	**-2.8**
	12nm,0.5s							
MTBS				*e*S		**Sb**	**05 23 23.4**	**+1.2**
	12nm,0.3s							
MTBS	**Maitube**	**4.32**	**31**	Pg		**Pb**	**05 22 27.2**	**-2.8**
	12nm,0.5s							
MTBS				Lg		Lg	05 23 23.3	
	12nm,0.3s							
TNSS	**Tian-Shan**	**4.46**	**36**	*e*P		**Pb**	**05 22 30.5**	**-2.1**
	6.9nm,0.3s							
TNSS				*e*S		**Sb**	**05 23 29.1**	**+2.5**
	5.3nm,0.3s							
TNSS	**Tian-Shan**	**4.46**	**36**	Pg		**Pb**	**05 22 30.5**	**-2.1**
	6.9nm,0.3s							
TNSS				Lg		Lg	05 23 29.1	
	5.3nm,0.3s							
KRBS	**Karabastau**	**4.56**	**21**	*e*P		**Pb**	**05 22 32.4**	**-1.7**
	4.7nm,0.7s							
KRBS				*e*S		**Sb**	**05 23 32.2**	**+3.1**
	8.3nm,0.4s							
KRBS	**Karabastau**	**4.56**	**21**	Pg		**Pb**	**05 22 32.3**	**-1.7**
	4.7nm,0.7s							
KRBS				Lg		Lg	05 23 32.2	
	8.3nm,0.4s							
KTBS	**Karatobe**	**4.91**	**29**	*e*P		**Pb**	**05 22 38.4**	**-1.6**
	4.5nm,0.5s							
KTBS				*e*S		**Sb**	**05 23 42.8**	**+3.7**
	24nm,0.7s							
KTBS	**Karatobe**	**4.91**	**29**	Pg		**Pb**	**05 22 38.4**	**-1.6**
	4.5nm,0.5s							
KTBS				Lg		Lg	05 23 42.7	
	24nm,0.7s							
KUU	**Kurty**	**4.95**	**25**	*e*P		**Pb**	**05 22 38.5**	**-2.0**
	7.3nm,0.5s							
KUU				⇓*i*S		**Sb**	**05 23 43.1**	**+3.0**
	18nm,0.3s							
KUU	**Kurty**	**4.95**	**25**	Pg		**Pb**	**05 22 38.5**	**-2.0**
	7.3nm,0.5s							
KUU				Lg		Lg	05 23 43.1	
	18nm,0.3s							
CHKK	**Chushkaly**	**5.15**	**30**	*e*P		**Pb**	**05 22 42.6**	**-1.4**
	3.6nm,0.2s							
CHKK				*e*S		**Sb**	**05 23 49.6**	**+3.7**
	17nm,0.3s							
CHKK	**Chushkaly**	**5.15**	**30**	Pg		**Pb**	**05 22 42.6**	**-1.4**
	3.6nm,0.2s							
CHKK				Lg		Lg	05 23 49.6	
	17nm,0.3s							
BTLS	**Baital**	**5.60**	**5**	*e*P		**Pb**	**05 22 53.7**	**+2.1**
	4.2nm,0.3s							
BTLS				*e*S		**Sg**	**05 24 09.1**	**-4.4**
	7.5nm,0.7s							
BTLS	**Baital**	**5.60**	**5**	Pg		**Pb**	**05 22 53.7**	**+2.1**
	4.2nm,0.3s							
BTLS				Lg		Lg	05 24 09.1	
	7.5nm,0.7s							
KPKS	**Kokpek**	**5.64**	**43**	*e*P		**Pb**	**05 22 52.2**	**-0.2**
	4.3nm,0.4s							
KPKS				*e*S		**Sb**	**05 24 06.4**	**+6.4**
	9.1nm,0.7s							
KPKS	**Kokpek**	**5.64**	**43**	Pg		**Pb**	**05 22 52.2**	**-0.2**
	4.3nm,0.4s							
KPKS				Lg		Lg	05 24 06.4	
	9.1nm,0.7s							
AB31	**Akbulak array**	**13.71**	**320**	⇓Pn		**Pn**	**05 24 26.5**	**-1.8**
	0.8nm,0.7s,baz=129,slow=14,SNR=5.9							

*IDC **29** 05:31:57.0±2.9, 7°.25N × 123°.85E, h627km±43km, mb3.1/9, mbtmp4.1/9, Error ellipse: s-maj=118.4km s-min=11.8km az=66.0*
ISC 29 05:31:55.1±0.8, 7°.2N±0°.3 × 123°.7E±0°.5, h600km, n10, σ0s68/11, mb3.8/9, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**1.38**	**99**	⇓*i*P		**P**	**05 33 07.4**	**0.0**
WRA	**Warramunga Arr**	**28.95**	**159**	P		**P**	**05 37 07.7**	**-0.2**
	1.2nm,0.5s,baz=332,slow=11,SNR=35							
	1.2nm,0.5s							
ASAR	**Alice Springs**	**32.28**	**162**	P		**P**	**05 37 37.0**	**+0.6**
	1.4nm,0.3s,baz=343,slow=6.8,SNR=25							
ASAR				PcP		**PcP**	**05 40 05.3**	**-0.6**
	0.5nm,0.4s,baz=344,slow=2.8,SNR=6.7							
	1.4nm,0.3s							
STKA	**Stephens Creek**	**42.47**	**157**	P		**P**	**05 38 59.5**	**+0.6**
	2.9nm,0.7s,baz=328,slow=6.4,SNR=3.8							
	2.9nm,0.7s							
SONM	**Songino Array**	**43.07**	**343**	P		**P**	**05 39 04.1**	**+0.5**
	0.5nm,0.7s,baz=165,slow=8.6,SNR=4.6							
	0.5nm,0.7s							
MKAR	**Makanchi Array**	**52.99**	**325**	P		**P**	**05 40 17.7**	**+0.6**
	2.9nm,0.4s,baz=119,slow=7.4,SNR=41							
	2.9nm,0.4s							
KURBB	**Kurchatov Arra**	**57.20**	**327**	P		**P**	**05 40 46.5**	**+0.3**
	2.3nm,0.6s,baz=128,slow=6.3,SNR=20							
	2.3nm,0.6s							
AKTO	**Aktyubinsk**	**69.08**	**321**	P		**P**	**05 42 02.3**	**+0.2**
	1.3nm,0.4s,baz=102,slow=9.9,SNR=2.5							
	1.3nm,0.4s							
VNDA	**Vanda**	**87.26**	**172**	P		**P**	**05 43 37.8**	**-0.5**
	0.4nm,0.6s,baz=323,slow=7.3,SNR=7.1							
	0.4nm,0.6s							
FINES	**FINESS Array B**	**87.35**	**332**	P		**P**	**05 43 37.9**	**-1.3**
	0.4nm,0.5s,baz=62,slow=5.2,SNR=3.7							
	0.4nm,0.5s							

*IDC **29** 05:36:02.6±4.1, 37°.27N × 71°.92E, h86km±27km, mb3.6/8, mbtmp3.9/13, Error ellipse: s-maj=49.2km s-min=21.7km az=147.0*
*NNC **29** 05:36:09.1±2.4, 37°.77N × 71°.73E, h121km±47km, mb3.5, mpv4.1, Error ellipse: s-maj=22.4km s-min=16.2km az=27.0*
ISC 29 05:36:05.3±0.6, 37°.59N±0°.05 × 71°.70E±0°.07, h100km, n36, σ2s79/39, mb3.9/8, 2C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.76**	**177**	P		**Pn**	**05 37 03.9**	**+2.5**
CEP				S		**Sn**	**05 37 46.0**	**+1.2**
CHCP	**Chirah Chowk**	**4.12**	**161**	P		**Pn**	**05 37 08.1**	**+1.9**
THW	**Thamme Wali**	**4.78**	**180**	P		**Pn**	**05 37 16.8**	**+1.7**
AML	**Almayashu**	**4.79**	**18**	P		**Pn**	**05 37 17.2**	**+1.6**
	SNR=33							
UCH	**Uchtor**	**5.12**	**24**	P		**Pn**	**05 37 21.5**	**+1.5**
	SNR=19							
EKS2	**Erkin-Say**	**5.32**	**17**	P		**Pn**	**05 37 24.4**	**+2.0**
	SNR=17							
AAK	**Ala-Archa**	**5.48**	**22**	P		**Pn**	**05 37 26.6**	**+1.9**
	SNR=9.4							
AAK	**Ala-Archa**	**5.48**	**22**	P		**Pn**	**05 37 26.6**	**+1.9**
	12nm,0.5s,baz=207,slow=7.0,SNR=14							
AAK				S		**Sn**	**05 38 25.9**	**-0.6**
	19nm,0.4s,baz=318,slow=21,SNR=10.0							
KK31	**Karatay Array**	**5.58**	**351**	⇑P		**Pn**	**05 37 27.8**	**+1.9**
	14nm,0.3s,baz=171,slow=11,SNR=95							
KK31				S		**Sn**	**05 38 28.9**	**+0.1**
	46nm,0.4s,baz=186,slow=26,SNR=14							
CHMS	**Chumysh**	**5.89**	**22**	P		**Pn**	**05 37 31.7**	**+1.6**
	SNR=8.5							
CHMS	**Chumysh**	**5.89**	**22**	⇓P		**Pn**	**05 37 31.4**	**+1.3**
	14nm,0.5s							
CHMS				⇓S		**Sn**	**05 38 36.6**	**+0.4**
	10nm,0.5s							
USP	**Ospenovka**	**6.06**	**20**	P		**Pn**	**05 37 33.6**	**+1.1**
	SNR=10							
TKM2	**Tokmak 2**	**6.11**	**28**	P		**Pn**	**05 37 34.8**	**+1.6**
	SNR=8.0							
TKM2	**Tokmak 2**	**6.11**	**28**	⇑P		**Pn**	**05 37 34.5**	**+1.2**
	6.7nm,0.6s							
GEYT	**Alibeck**	**10.76**	**276**	P		**Pn**	**05 38 34.9**	**-1.4**
	3.6nm,0.3s,baz=102,slow=14,SNR=8.0							
GEYT				S		**Sn**	**05 40 30.5**	**-4.2**
	2.6nm,0.3s,baz=81,slow=32,SNR=2.8							
MKAR	**Makanchi Array**	**12.09**	**37**	P		**Pn**	**05 38 53.4**	**-0.7**
	0.3nm,0.5s,baz=224,slow=14,SNR=3.6							
DANN	**Dangsing**	**13.68**	**129**	*e*P		Pn	05 39 10.1	-5.3
	7.6nm,0.2s							
KOLN	**Koldanda**	**14.00**	**131**	*e*Pg		Pn	05 39 04.8	-15
AB31	**Akbulak array**	**14.43**	**328**	P		**Pn**	**05 39 24.3**	**-0.4**
	1.1nm,0.5s,baz=136,slow=14,SNR=24							
GKN	**Gorkha**	**14.47**	**128**	*e*P		Pn	05 39 20.1	-5.4
	7.9nm,0.3s							
DMN	**Daman**	**15.04**	**128**	*e*P		**Pn**	**05 39 26.6**	**-6.2**
PKIN	**Phulchoki**	**15.25**	**127**	*e*P		**Pn**	**05 39 30.2**	**-5.3**
	7.2nm,0.3s							
PKI	**Pulchoki**	**15.26**	**127**	*e*P		**Pn**	**05 39 30.3**	**-5.4**
	4.5nm,0.3s							
AKTO	**Aktyubinsk**	**16.14**	**327**	P		**P**	**05 39 48.3**	**+0.8**
	7.3nm,0.4s,baz=126,slow=13,SNR=25							
AKTO				S		**Sn**	**05 42 36.1**	**-8.8**
	2.7nm,0.4s,baz=155,slow=15,SNR=4.4							
AKTO	**Aktyubinsk**	**16.14**	**327**	⇓P		**P**	**05 39 48.8**	**+1.2**
	5.6nm,0.5s							
RAMN	**Ramite**	**16.45**	**126**	*e*P		**Pn**	**05 39 45.4**	**-5.0**
ZALV	**Zalesovo Beam**	**18.70**	**25**	P		**P**	**05 40 16.2**	**+0.6**
	0.8nm,0.4s,baz=215,slow=12,SNR=2.4							
BRTR	**Keskin Array B**	**29.65**	**286**	P		**P**	**05 42 03.4**	**+1.9**
	0.8nm,0.5s,baz=90,slow=8.6,SNR=3.8							
	0.8nm,0.5s							
AKASG	**Malin Array Be**	**32.71**	**307**	P		**P**	**05 42 30.2**	**+2.1**
	0.5nm,0.4s,baz=106,slow=8.8,SNR=6.9							
	0.5nm,0.4s							
FINES	**FINESS Array B**	**36.90**	**325**	P		**P**	**05 43 05.5**	**+1.5**
	1.6nm,0.3s,baz=118,slow=8.9,SNR=23							
	1.6nm,0.3s							
ARCES	**ARCESS Array B**	**40.36**	**337**	P		**P**	**05 43 34.3**	**+1.5**
	0.7nm,0.3s,baz=114,slow=8.6,SNR=18							
	0.7nm,0.3s							
NB2	**NORSAR Subarra**	**43.85**	**322**	P		**P**	**05 44 02.2**	**+0.9**
	comp=Z,0.8nm,0.5s,baz=94,slow=7.9							
NOA	**NORSAR Array B**	**43.85**	**322**	P		**P**	**05 44 02.4**	**+1.0**
	comp=Z,1.3nm,0.6s,baz=94,slow=7.7,SNR=8.5							
	comp=Z,1.3nm,0.6s							
ESDC	**Sonseca Array**	**57.45**	**297**	P		**P**	**05 45 45.1**	**+1.4**
	comp=Z,0.5nm,0.4s,baz=57,slow=6.8,SNR=5.1							
	comp=Z,0.5nm,0.4s							
TORD	**Torodi Ar. Bea**	**66.30**	**269**	P		**P**	**05 46 43.3**	**0.0**
	comp=Z,1.1nm,0.6s,baz=48,slow=5.9,SNR=14							
	comp=Z,1.1nm,0.6s							
YKA	**Yellowknife Ar**	**80.14**	**3**	P		**P**	**05 48 04.0**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=352,slow=5.6,SNR=5.1							
	comp=Z,0.2nm,0.4s							

*CNRM **29** 05:38:10.2, 35°.56N × 10°.08W, h166km, ml3.1*
*MDD **29** 05:38:10.9±1.1, 36°.10N × 9°.98W, h0km±25km, mb_Lg2.6/5, Error ellipse: s-maj=31.1km s-min=10.8km az=45.0*
*INMG **29** 05:38:11.9±0.9, 35°.93N × 10°.14W, h31km, ML2.0, Error ellipse: s-maj=6.0km s-min=3.5km az=85.0*
*IGIL **29** 05:38:11.6, 35°.94N × 10°.15W, h28km, ML2.0*
ISC 29 05:38:08.9±1.8, 35°.87N±0°.03 × 10°.1W±0°.1, h35km, n29, σ1s39/46, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**1.64**	**39**	*e*P		**Pn**	**05 38 36.9**	**+1.6**
PFVI				*e*S		**Sn**	**05 38 55.1**	**0.0**
PFVI				A		A	05 38 56.3	
	8.6nm,0.3s							
MORF	**Marmelete**	**1.86**	**39**	*e*P		**Pn**	**05 38 39.8**	**+1.4**
MORF				*e*S		**Sn**	**05 39 00.3**	**-0.4**
MORF				IAML			05 39 01.8	
	comp=N,11nm,0.1s							
MORF	**Marmelete**	**1.86**	**39**	*e*Pn		**Pn**	**05 38 40.2**	**+1.8**
MORF				*e*Sn		**Sn**	**05 39 00.5**	**-0.2**
MORF				A		A	05 39 01.5	
	comp=N,10nm,0.1s							
PTEO	**Sao Teotonio**	**2.02**	**34**	*e*Sn		**Sn**	**05 39 04.1**	**-0.3**
PTEO				A		A	05 39 04.5	
	comp=N,10nm,0.6s							
PBDV	**Barranco-do-Ve**	**2.24**	**52**	*e*Sn		**Sn**	**05 39 09.9**	**0.0**
PBDV				A		A	05 39 12.2	
	comp=N,3.2nm,0.2s							
PCVE	**Castro Verde**	**2.43**	**43**	*e*Sn		**Sn**	**05 39 14.4**	**-0.2**
PCVE				A		A	05 39 16.7	
	comp=N,3.6nm,0.3s							
PVAQ	**Vaqueiros**	**2.47**	**51**	*e*Pn		**Pn**	**05 38 48.3**	**+1.6**
PVAQ				*e*Sn		**Sn**	**05 39 15.3**	**-0.3**
PVAQ				A		A	05 39 16.9	
	comp=N,6.9nm,0.1s							
MESJ	**Messejana**	**2.49**	**37**	*e*P		**Pn**	**05 38 48.2**	**+1.3**
MESJ				*e*S		**Sn**	**05 39 14.9**	**-1.2**
MESJ				IAML			05 39 18.0	
	comp=N,7.6nm,0.2s							
MESJ	**Messejana**	**2.49**	**37**	*e*Pn		**Pn**	**05 38 48.4**	**+1.4**
MESJ				*e*Sn		**Sn**	**05 39 15.7**	**-0.4**
MESJ				A		A	05 39 18.5	
	comp=N,3.7nm,0.5s							
PNCL	**Nicolau / Gran**	**2.58**	**29**	*e*Pn		**Pn**	**05 38 49.0**	**+0.8**
PNCL				*e*Sn		**Sn**	**05 39 17.1**	**-1.2**
PNCL				A		A	05 39 20.3	
	comp=N,3.1nm,0.2s							
EGRO	**El Granado**	**2.70**	**51**	P		**Pn**	**05 38 51.1**	**+1.3**
EGRO				S		**Sn**	**05 39 20.5**	**-0.8**
EGRO				*i* Vmb_Lg			05 39 22.5	
PBEJ	**Beja**	**2.81**	**39**	*e*Sn		**Sn**	**05 39 22.6**	**-1.5**
PBEJ				A		A	05 39 25.5	
	comp=N,3.2nm,0.2s							
PACT	**Alcochete**	**3.07**	**19**	*e*Sn		**Sn**	**05 39 30.4**	**0.0**
EVO	**Evora**	**3.15**	**32**	*e*Pn		**Pn**	**05 38 56.6**	**+0.6**
EVO				*e*Sn		**Sn**	**05 39 30.9**	**-1.4**
EVO				A		A	05 39 32.6	
	comp=N,5.3nm,0.3s							
EMIN	**Mina Concepcio**	**3.36**	**55**	P		**Pn**	**05 38 59.7**	**+0.8**
EMIN				S		**Sn**	**05 39 36.6**	**-0.9**
EMIN				*i* Vmb_Lg			05 39 40.2	
PMTG	**Montargil**	**3.53**	**25**	*e*Pn		**Pn**	**05 39 02.0**	**+0.7**
PMTG				*e*Sn		**Sn**	**05 39 39.6**	**-2.3**
PMTG				A		A	05 39 43.4	
	comp=N,3.0nm,0.6s							
PESTR	**Estremoz**	**3.61**	**33**	*e*Sn		**Sn**	**05 39 42.4**	**-1.4**
ZHG	**ZHG**	**3.75**	**129**	P		**Pn**	**05 39 03.5**	**-0.9**
ZHG				S		**Sn**	**05 39 49.0**	**+1.6**
PSBE	**So Bento**	**3.79**	**16**	*e*Sn		**Sn**	**05 39 46.4**	**-1.8**
EBAD	**Badajoz**	**3.80**	**40**	S		**Sn**	**05 39 46.8**	**-1.7**
EBAD				*i* Vmb_Lg			05 39 52.5	
PMRV	**Marv??o**	**4.16**	**31**	*e*Pn		**Pn**	**05 39 10.8**	**+0.8**
PMRV				*e*Sn		**Sn**	**05 39 54.6**	**-2.8**
PMRV				A		A	05 39 57.4	
	comp=N,2.2nm,0.2s							
ECAB	**El Cabril**	**4.37**	**58**	P		**Pn**	**05 39 14.0**	**+1.2**
ECAB				S		**Sn**	**05 40 00.1**	**-2.3**
ECAB				*i* Vmb_Lg			05 40 07.7	
EADA	**Adamuz**	**5.00**	**61**	P		**Pn**	**05 39 22.9**	**+1.4**
EADA				S		**Sn**	**05 40 16.4**	**-1.6**
EADA				*i* Vmb_Lg			05 40 19.7	
OUK	**Oukaimeden**	**5.02**	**157**	P		**Pn**	**05 39 23.7**	**+1.6**
OUK				S		**Sn**	**05 40 17.0**	**-2.0**
CZD	**Col de Zad**	**5.07**	**123**	P		**Pn**	**05 39 23.4**	**+0.7**
CZD				S		**Sn**	**05 40 21.0**	**+0.9**
MD31	**MD31**	**5.35**	**122**	P		**Pn**	**05 39 27.1**	**+0.7**
MD31				S		**Sn**	**05 40 24.0**	**-2.9**
MDT	**Midelt**	**5.49**	**122**	P		Pn	05 39 26.8	-1.5
MDT				S		**Sn**	**05 40 28.9**	**-1.3**
TTIG	**Tnine Tigouga,**	**5.49**	**165**	P		Pn	05 39 25.9	-2.5
TTIG				S		Sn	05 40 24.6	-5.8
OUZM	**OUZ**	**5.69**	**149**	P		Pn	05 39 29.1	-2.1
OUZM				S		**Sn**	**05 40 34.5**	**-0.8**

*IDC **29** 05:59:07.5±1.2, 26°.08N × 143°.99E, h0km, mb3.7/6, mbtmp3.7/6, Error ellipse: s-maj=28.4km s-min=25.4km az=21.0*
ISC 29 05:59:10.7±1.1, 26°.1N±0°.2 × 144°.0E±0°.1, h20km, n13, σ0s39/8, mb3.9/6, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**1.91**	**303**	Pn		**Pn**	**05 59 42.2**	**+0.1**
	5.0nm,0.3s,baz=282,slow=22,SNR=29							
JCJ				S		**Sn**	**06 00 05.5**	**0

H01W3	Cape Leeuwin H	32.15	108	T	T	06 50 54.5			
	baz=268,slow=74,SNR=9.4								
H01W1	Cape Leeuwin H	32.16	108	T	T	06 51 03.4			
	baz=268,slow=74,SNR=8.6								
ASAR	Alice Springs	51.38	97	P	P	06 19 20.2	-0.3		
	0.8nm,0.9s,baz=249,slow=7.8,SNR=2.1								
	0.8nm,0.9s								
WRA	Warrarunga Arr	53.14	93	P	P	06 19 33.8	+0.2		
	1.4nm,1.0s,baz=250,slow=7.7,SNR=4.1								
WRA				LR	LR	06 39 51.6			
	comp=Z,140nm,19.6s,baz=238,slow=33								
	1.4nm,1.0s								
CMAR	Chiang Mai Arr	53.19	27	P	P	06 19 33.9	+0.1		
	1.4nm,0.3s,baz=208,slow=7.2,SNR=4.1								
	1.4nm,0.3s								
TSUM	Tsumeb	53.87	267	LR	LR	06 39 17.3			
	comp=Z,150nm,18.6s,baz=148,slow=32								
VNDA	Vanda	59.72	165	P	P	06 20 19.8	+0.2		
	0.8nm,0.8s,baz=266,slow=5.0,SNR=5.7								
	0.8nm,0.8s								
CTA	Charters Tower	63.33	99	LR	LR	06 47 23.6			
	comp=Z,54nm,18.4s,baz=256,slow=35								
PMG	Port Moresby	68.89	89	LR	LR	06 50 22.5			
	comp=Z,79nm,18.1s,baz=80,slow=35								
JOW	Kunigami	75.54	47	LR	LR	06 50 25.5			
	comp=Z,27nm,21.5s,baz=270,slow=32								
MKAR	Makanchi Array	76.93	4	P	P	06 22 07.4	-0.2		
	0.5nm,0.8s,baz=184,slow=5.7,SNR=4.6								
	0.5nm,0.8s								
KURBB	Kurchatov Arra	80.59	1	P	P	06 22 28.2	+0.6		
	0.5nm,0.8s,baz=192,slow=5.0,SNR=1.9								
	0.5nm,0.8s								
USRK	Ussurisyk Ar.	89.94	36	LR	LR	07 03 16.1			
	comp=Z,36nm,19.8s,baz=209,slow=35								
YKA	Yellowknife Ar	147.03	9	PKPbc	PKPbc	06 29 56.8	-0.8		
	1.7nm,1.0s,baz=335,slow=4.1,SNR=5.7								

*ISK **29** 06:12:25.7,39˚.39N×25˚.84E,h5km,ML2.8/13*
*THE **29** 06:12:28.5,39˚.42N×25˚.92E,h4km±2km,ML2.3/6,Error ellipse: s-maj=2.7km s-min=0.9km az=147.0*
*DDA **29** 06:12:28.6±0.0,39˚.45N×25˚.97E,h11km,ML2.5*
*ATH **29** 06:12:28.5,39˚.41N×25˚.88E,h14km±2km,ML2.4/6,Error ellipse: s-maj=2.2km s-min=0.9km az=201.0*

ISC 29 06:12:28.2±0.9,39˚42N±0˚02×25˚93E±0˚02,h12km±7km, n47,σ0s56/74,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.19	62	P		Pg	06 12 31.9	-0.4
KOCA				*i* AML		AML	06 12 34.0	
	comp=N,2μm,0.4s							
KOCA				S		Sg	06 12 34.8	-0.5
KOCA				*i* AML		AML	06 12 37.0	
	comp=E,1μm,0.2s							
SIGR	SIGRI	0.21	195	P		Pg	06 12 32.5	-0.1
SIGR				S		Sg	06 12 36.0	+0.2
SIGR				AML		AML	06 12 36.5	
	comp=N,6761μm,0.4s							
SIGR				AML		AML	06 12 36.9	
	comp=E,4658μm,0.4s							
SIGR	SIGRI	0.21	195	P		Pg	06 12 32.6	-0.1
PRK	Paraskevi	0.32	122	P		Pg	06 12 35.5	+0.9
PRK				S		Sb	06 12 40.5	-0.4
PRK				AML		AML	06 12 40.6	
	comp=N,2518μm,0.2s							
PRK				AML		AML	06 12 41.5	
	comp=E,1342μm,0.3s							
PRK	Paraskevi	0.32	122	P		Pg	06 12 35.5	+0.9
PRK				S		Sg	06 12 39.8	+0.9
	comp=E,970nm,0.3s							
BOZC	Bozcaada	0.44	13	PG		Pg	06 12 36.5	-0.3
BOZC	Bozcaada	0.44	13	P		Pg	06 12 36.6	-0.3
BOZC				*i* AML		AML	06 12 44.0	
	comp=E,278nm,0.2s							
EZN	Ezine	0.51	37	P		Pg	06 12 37.8	-0.5
EZN				S		Sg	06 12 45.0	-0.1
	comp=E,360nm,0.2s							
EZN	Ezine	0.51	37	PG		Pg	06 12 37.8	-0.5
BAYC	CANAKKALE_Bayr	0.58	56	P		Pg	06 12 38.8	-0.7
BAYC				S		Sg	06 12 46.5	-0.7
BAYC				*i* AML		AML	06 12 47.0	
	comp=E,238nm,0.3s							
BAYC				*i* AML		AML	06 12 47.0	
	comp=E,159nm,0.4s							
AYVA	Ayvalik	0.60	100	P		Pg	06 12 39.6	-0.3
AYVA				S		Sg	06 12 48.7	+0.8
AYVA				*i* AML		AML	06 12 52.0	
	comp=E,252nm,0.5s							
ECEA	Canakkale, Ece	0.66	17	P		Pg	06 12 40.5	-0.4
ECEA				S		Sb	06 12 50.6	0.0
ECEA				*i* AML		AML	06 12 55.0	
	comp=E,238nm,0.4s							
ECEA				*i* AML		AML	06 12 55.0	
	comp=E,323nm,0.4s							
LIA	Limnos Island	0.75	310	P		Pg	06 12 42.6	-0.1
LIA				S		Sg	06 12 53.0	+0.5
LIA				AML		AML	06 12 56.2	
	comp=E,525μm,0.5s							
LIA				AML		AML	06 12 56.9	
	comp=N,365μm,0.4s							
LIA	Limnos Island	0.75	310	P		Pg	06 12 42.6	-0.1
LIA				S		Sb	06 12 53.7	+0.4
	comp=N,225nm,0.4s							
GADA	Gvkgeada	0.78	358	PG		Pg	06 12 42.4	-0.8
GOKA	anakkale-Gk	0.78	359	P		Pg	06 12 43.0	-0.2
GOKA				*i* AML		AML	06 12 57.0	
	comp=N,236nm,0.2s							
DKL	Dikili	0.83	114	PG		Pg	06 12 44.1	-0.2
DKL				SG		Sn	06 12 57.5	-0.4
BUHA	Balikesir, Bur	0.90	84	P		Pg	06 12 45.4	-0.1
BUHA				S		Sb	06 12 58.5	+1.0
BUHA				*i* AML		AML	06 13 01.0	
	comp=N,129nm,0.4s							
BUHA				*i* AML		AML	06 13 02.0	
	comp=N,202nm,0.4s							
FOCM	Foa	0.94	138	PG		Pg	06 12 45.2	-1.1
FOCM				SG		Sb	06 12 59.7	+0.9
ZEDA	zmir-Bergama	1.00	116	P		Pg	06 12 47.7	+0.2
CHOS	Chios island	1.03	174	P		Pg	06 12 47.6	-0.4
CHOS				S		Sg	06 13 01.9	+0.4
CHOS				AML		AML	06 13 04.8	
	comp=E,1252μm,0.3s							
CHOS				AML		AML	06 13 05.7	
	comp=N,639μm,0.4s							
CHOS	Chios island	1.03	174	P		Pg	06 12 47.8	-0.3
CHOS				S		Sb	06 13 02.3	+0.8
	comp=N,460nm,0.2s							
GELI	Tayfur-Gelibol	1.07	23	PN		Pb	06 12 48.0	-0.6
SMTH	Samothraki Isl	1.10	344	P		Pb	06 12 48.7	-0.4
SMTH				S		Sb	06 13 03.0	-0.3
SMTH				AML		AML	06 13 05.7	
	comp=E,316μm,0.4s							
SMTH				AML		AML	06 13 06.4	
	comp=N,299μm,0.6s							
SMTH	Samothraki Isl	1.10	344	P		Pb	06 12 49.1	0.0
URLA	Izmir	1.18	153	PN		Pb	06 12 49.5	-0.9
URLA				SN		Sg	06 13 06.8	+0.7
URLA	Izmir	1.18	153	P		Pb	06 12 49.6	-0.8
URLA				S		Sb	06 13 05.3	-0.3
ZEYE	Izmir, Urla-Ze	1.26	159	P		Pn	06 12 50.7	-0.9
CAVK	Edirne/Enez-Ca	1.29	8	P		Pn	06 12 52.3	+0.3
CAVK				S		Sn	06 13 09.4	+0.3
ENEZ	Enez	1.33	7	P		Pn	06 12 53.3	+0.2
ENEZ				S		Sg	06 13 11.2	+0.1
	comp=N,175nm,0.4s							
ENEZ	Enez	1.33	7	PN		Pn	06 12 52.8	+0.2
ERIK	Erikli-Kesan	1.33	20	PN		Pn	06 12 52.8	+0.2
BALY	Balya	1.35	76	P		Pn	06 12 52.9	+0.1
BALY				S		Sb	06 13 10.4	-0.3
STEP	BALIKESIR_Sava	1.39	91	P		Pb	06 12 54.5	+0.4
STEP				S		Sb	06 13 12.8	+1.0
KRBG	Karabiga-Canak	1.44	47	PN		Pn	06 12 54.4	+0.4
ALN	Alexandroupoli	1.48	4	P		Pn	06 12 55.0	+0.3
ALN				S		Sb	06 13 14.7	+0.2
ALN				AML		AML	06 13 16.1	
	comp=E,206μm,0.3s							
ALN				AML		AML	06 13 16.2	
	comp=N,130μm,0.6s							
ALN	Alexandroupoli	1.48	4	P		Pb	06 12 55.8	+0.1
ALN	Alexandroupoli	1.48	4	PN		Pn	06 12 54.9	+0.3
ALN				SN		Sg	06 13 15.9	0.0
KNL	Balıkesir	1.50	55	P		Pn	06 12 55.0	+0.1
KNL				S		Sb	06 13 15.4	+0.4
THAS	Thassos island	1.51	322	P		Pb	06 12 56.0	-0.1
THAS				S		Sn	06 13 15.0	+0.5
	comp=N,75nm,0.3s							
KESN	Edirne-Kesan	1.52	22	P		Pn	06 12 55.1	-0.4
RKY	Sarkoy-Tekirda	1.59	37	PN		Pn	06 12 56.9	+0.7
MAR3	Marsite Statio	1.69	38	PN		Pn	06 12 58.2	+0.7
GZKV	Gazikoy-Tekird	1.71	38	PN		Pn	06 12 58.9	+1.1
GZKV				SN		Sg	06 13 22.7	-0.5
MRMT	Marmara Adasi	1.75	47	PN		Pn	06 12 59.5	+1.1
RDO	Rodhopi	1.75	350	PN		Pn	06 12 58.7	+0.3
DURS	Dursunbey	1.98	84	P		Pn	06 13 00.4	-1.2

*DDA **29** 06:13:29.8±0.0,39˚.43N×25˚.98E,h10km±1km,ML2.4*
*ISK **29** 06:13:30.1,39˚.45N×26˚.07E,h10km,ML2.7/12*

ISC 29 06:13:29.9±1.4,39˚43N±0˚05×25˚99E±0˚05,h13km±7km, n23,σ0s40/35,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KOCA	Canakkale, Ayv	0.14	59	P		Pg	06 13 33.2	-0.1
KOCA				S		Sg	06 13 35.9	+0.1
KOCA				*i* AML		AML	06 13 36.0	
	comp=N,2μm,0.4s							
KOCA				*i* AML		AML	06 13 38.0	
	comp=E,1μm,0.3s							
BOZC	Bozcaada	0.41	7	PG		Pg	06 13 37.9	-0.2
BOZC				SG		Sb	06 13 44.5	-0.7
BOZC	Bozcaada	0.41	7	P		Pg	06 13 37.6	-0.5
BOZC				S		Sg	06 13 44.1	+0.4
BOZC				*i* AML		AML	06 13 45.0	
	comp=N,407nm,0.2s							
EZN	Ezine	0.47	34	PG		Pg	06 13 39.1	-0.1
EZN				SG		Sg	06 13 45.5	0.0
BAYC	CANAKKALE_Bayr	0.53	54	P		Pg	06 13 40.0	-0.3
BAYC				S		Sb	06 13 47.9	-0.7
AYVA	Ayvalik	0.56	103	P		Pb	06 13 41.1	-0.4
AYVA				S		Sb	06 13 49.7	+0.3
AYVA				*i* AML		AML	06 13 55.0	
	comp=N,235nm,0.6s							
ECEA	Canakkale, Ece	0.63	13	P		Pb	06 13 42.3	-0.3
ECEA				S		Sb	06 13 51.6	+0.2
ECEA				*i* AML		AML	06 13 52.0	
	comp=N,225nm,0.2s							
ECEA				*i* AML		AML	06 13 53.0	
	comp=E,247nm,0.3s							
GOKA	anakkale-Gk	0.76	355	P		Pb	06 13 45.4	+0.5
GOKA				S		Sb	06 13 55.4	+0.2
GADA	Gvkgeada	0.76	355	PG		Pb	06 13 45.3	+0.3
DKL	Dikili	0.80	117	PG		Pg	06 13 45.2	-0.1
BUHA	Balikesir, Bur	0.85	85	P		Pb	06 13 46.8	+0.4
BUHA				S		Sn	06 13 59.7	-0.1
BUHA				*i* AML		AML	06 14 01.0	
	comp=E,127nm,0.4s							
ZEDA	zmir-Bergama	0.97	118	P		Pb	06 13 48.5	+0.1
ZEDA				S		Sn	06 14 01.9	-0.8
ZEDA				*i* AML		AML	06 14 05.0	
	comp=N,140nm,0.3s							
ZEDA				*i* AML		AML	06 14 05.0	
	comp=E,120nm,0.3s							
GELI	Tayfur-Gelibol	1.03	21	PG		Pg	06 13 49.4	-0.4
GELI				SG		Sn	06 14 04.1	-0.3
BALY	Balya	1.30	76	P		Pg	06 13 55.0	+0.1
BALY				S		Sn	06 14 12.1	+1.1
BALY				*i* AML		AML	06 14 14.0	
	comp=N,67nm,0.6s							
ERIK	Erikli-Kesan	1.30	18	PN		Pb	06 13 54.2	0.0
ENEZ	Enez	1.31	6	PN		Pb	06 13 54.6	+0.3
KRBG	Karabiga-Canak	1.39	46	PN		Pn	06 13 55.0	0.0
ALN	Alexandroupoli	1.46	2	PN		Pb	06 13 56.8	-0.1
RKY	Sarkoy-Tekirda	1.55	36	PN		Pn	06 13 57.5	+0.3
MAR3	Marsite Statio	1.65	37	PN		Pn	06 13 58.9	+0.4
GZKV	Gazikoy-Tekird	1.67	38	PN		Pn	06 13 58.9	+0.1
MRMT	Marmara Adasi	1.70	46	PN		Pn	06 13 59.4	+0.1
OUR	Ouranopolis	1.79	301	PN		Pb	06 14 02.5	+0.1

IDC 29 06:14:24.4±533.0,49˚50N×44˚97E,h0km,Error ellipse: s-maj=263.2km s-min=48.6km az=155.0, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	8.60	330	*i*			07 05 40.0	
	baz=136,slow=322,SNR=0.8							
I26DE	FREYUNG INFRAS	20.37	280	*i*			08 20 50.0	
	baz=78,slow=329,SNR=1.0							
I37NO	I37NO	23.44	336	*i*			08 39 20.0	
	baz=134,slow=317,SNR=1.3							

*ISK **29** 06:15:00.2,39˚.42N×25˚.85E,h5km,ML3.2/22*
*ATH **29** 06:15:01.7,39˚.41N×25˚.88E,h14km±2km,ML2.8/8,Error ellipse: s-maj=2.3km s-min=0.8km az=215.0*
*THE **29** 06:15:01.8,39˚.42N×25˚.93E,h8km±1km,ML2.8/8,Error ellipse: s-maj=1.6km s-min=0.7km az=126.0*
*DDA **29** 06:15:01.4±0.0,39˚.42N×25˚.95E,h7km±2km,ML3.1*

ISC 29 06:15:01.3±0.9,39˚42N±0˚02×25˚91E±0˚02,h9km±7km, n66,σ0s62/109,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GPNR	Gulpinar-Canak	0.18	77	PG		Pg	06 15 04.3	-0.8
KOCA	Canakkale, Ayv	0.20	64	P		Pg	06 15 05.2	-0.3
KOCA				S		Sg	06 15 07.8	-0.4
KOCA				*i* AML		AML	06 15 08.0	
	comp=N,5μm,0.4s							
SIGR	SIGRI	0.21	191	P		Pg	06 15 05.8	+0.2
SIGR				S		Sg	06 15 09.2	+0.7
SIGR				AML		AML	06 15 09.8	
	comp=N,12088μm,0.4s							
SIGR				AML		AML	06 15 10.2	
	comp=E,8165μm,0.3s							
SIGR	SIGRI	0.21	191	P		Pg	06 15 05.7	+0.2
PRK	Paraskevi	0.33	121	P		Pb	06 15 08.7	-0.6
PRK				S		Sg	06 15 13.5	+1.2
PRK				AML		AML	06 15 13.8	
	comp=E,13891μm,0.5s							
PRK				AML		AML	06 15 13.8	
	comp=N,18849μm,0.3s							
PRK	Paraskevi	0.33	121	P		Pg	06 15 08.6	+0.8
PRK				S		Sg	06 15 13.4	+1.2
	comp=N,8μm,0.3s							
BOZC	Bozcaada	0.44	15	PG		Pg	06 15 09.7	-0.2
BOZC				SG		Sg	06 15 16.6	+0.8
BOZC	Bozcaada	0.44	15	P		Pg	06 15 10.1	+0.1
BOZC				S		Sg	06 15 16.1	+0.3
BOZC				*i* AML		AML	06 15 17.0	
	comp=N,854nm,0.2s							
EZN	Ezine	0.52	38	P		Pg	06 15 11.1	-0.4
EZN				S		Sg	06 15 18.3	0.0
	comp=N,1μm,0.4s							
EZN	Ezine	0.52	38	PG		Pg	06 15 11.1	-0.4
BAYC	CANAKKALE_Bayr	0.59	56	P		Pg	06 15 12.1	-0.7
BAYC				S		Sg	06 15 19.5	-1.1
AYVA	Ayvalik	0.62	100	P		Pg	06 15 12.9	-0.4
AYVA				S		Sg	06 15 21.7	+0.4
ECEA	Canakkale, Ece	0.66	18	P		Pg	06 15 14.0	-0.1
ECEA				S		Sb	06 15 23.8	-0.5
ECEA				*i* AML		AML	06 15 24.0	
	comp=N,752nm,0.3s							
ECEA				*i* AML		AML	06 15 25.0	
	comp=N,822nm,0.4s							
LIA	Limnos Island	0.74	311	P		Pg	06 15 15.8	+0.2
LIA				S		Sg	06 15 25.9	+0.7
LIA				AML		AML	06 15 29.5	
	comp=E,1201μm,0.5s							
LIA				AML		AML	06 15 30.2	
	comp=N,965μm,0.4s							
LIA	Limnos Island	0.74	311	P		Pg	06 15 15.9	+0.3
LIA				S		Sb	06 15 27.4	+0.9
	comp=N,542nm,0.4s							
GADA	Gvkgeada	0.78	359	PG		Pg	06 15 15.9	-0.4
GADA				SG		Sg	06 15 26.5	+0.1
GOKA	anakkale-Gk	0.78	0	P		Pg	06 15 16.2	-0.1
GOKA				S		Sg	06 15 26.7	+0.4
CAND	Candarli	0.83	123	PG		Pg	06 15 17.4	0.0
DKL	Dikili	0.85	114	PG		Pg	06 15 17.4	-0.2
DKL				SG		Sn	06 15 31.3	-0.6
BUHA	Balikesir, Bur	0.91	84	P		Pg	06 15 19.0	+0.2
BUHA				S		Sb	06 15 32.2	+0.8
BUHA				*i* AML		AML	06 15 35.0	
	comp=N,419nm,0.6s							
FOCM	Foa	0.95	137	PG		Pg	06 15 19.7	+0.1
ZEDA	zmir-Bergama	1.01	116	P		Pg	06 15 20.7	-0.1
ZEDA				S		Sg	06 15 34.2	+0.3
ZEDA				*i* AML		AML	06 15 37.0	
	comp=N,253nm,0.3s							
CHOS	Chios island	1.03	174	P		Pg	06 15 20.8	-0.3
CHOS				S		Sb	06 15 35.3	+0.2
CHOS				AML		AML	06 15 39.0	
	comp=N,1642μm,0.5s							
CHOS				AML		AML	06 15 39.2	
	comp=E,2050μm,0.3s							
CHOS	Chios island	1.03	174	P		Pg	06 15 21.2	0.0
CHOS				S		Sb	06 15 35.9	+0.9
	comp=E,918nm,0.4s							
GELI	Tayfur-Gelibol	1.07	24	PN		Pg	06 15 21.3	-0.7
GELI				SN		Sn	06 15 37.3	-0.2
SMTH	Samothraki Isl	1.09	345	P		Pg	06 15 22.0	-0.4
SMTH				S		Sb	06 15 37.3	+0.5
SMTH				AML		AML	06 15 38.0	
	comp=N,749μm,0.6s							
SMTH				AML		AML	06 15 38.9	
	comp=E,928μm,0.8s							
SMTH	Samothraki Isl	1.09	345	P		Pg	06 15 22.2	-0.1
URLA	Izmir	1.18	153	PN		Pb	06 15 22.9	-1.0
URLA				SN		Sn	06 15 41.1	+0.9
URLA	Izmir	1.18	153	P		Pb	06 15 22.8	-1.0
URLA				S		Sb	06 15 38.8	-0.4
ZEYE	Izmir, Urla-Ze	1.26	158	P		Pn	06 15 24.1	-1.0
ZEYE				S		Sb	06 15 41.3	-0.2
CAVK	Edirne/Enez-Ca	1.29	9	P		Pn	06 15 25.5	0.0
CAVK				S		Sg	06 15 43.4	+0.5
CAVK				*i* AML		AML	06 15 46.0	
	comp=E,333nm,0.6s							
CAVK				*i* AML		AML	06 15 53.0	
	comp=E,256nm,0.6s							
ENEZ	Enez	1.33	8	P		Pn	06 15 26.2	+0.1
ENEZ				S		Sn	06 15 44.1	+0.2
	comp=E,558nm,0.6s							
ENEZ	Enez	1.33	8	PN		Pn	06 15 25.8	-0.3
ENEZ				SN		Sg	06 15 44.8	+0.6
ERIK	Erikli-Kesan	1.34	20	PN		Pn	06 15 25.9	-0.2
ERIK				SN		Sn	06 15 44.2	+0.2
BALY	Balya	1.36	76	P		Pn	06 15 25.9	-0.6
BALY				S		Sb	06 15 43.6	-0.9
BALY				*i* AML		AML	06 15 46.0	
	comp=E,248nm,0.8s							
STEP	BALIKESIR_Sava	1.40	91	P		Pb	06 15 27.9	+0.3
STEP				S		Sg	06 15 47.2	+0.8
STEP				*i* AML		AML	06 15 50.0	
	comp=E,247nm,0.7s							
STEP				*i* AML		AML	06 15 55.0	
	comp=E,284nm,0.6s							
KRBG	Karabiga-Canak	1.45	47	PN		Pn	06 15 27.4	-0.2
KRBG				SN		Sg	06 15 47.7	-0.2
ALN	Alexandroupoli	1.48	4	P		Pn	06 15 28.3	+0.1
ALN				S		Sb	06 15 48.3	+0.3
ALN				AML		AML	06 15 49.4	
	comp=E,641μm,0.4s							
ALN				AML		AML	06 15 49.5	
	comp=N,490μm,0.7s							
ALN	Alexandroupoli	1.48	4	P		Pn	06 15 28.3	+0.1
ALN	Alexandroupoli	1.48	4	PN		Pn	06 15 28.5	+0.4
ALN				SN		Sb	06 15 48.5	+0.5
THAS	Thassos island	1.50	323	P		Pn	06 15 27.8	-0.5
THAS				S		Sn	06 15 48.0	-0.1
THAS				AML		AML	06 15 49.9	
	comp=E,359μm,0.5s							
THAS				AML		AML	06 15 51.3	
	comp=N,450μm,0.4s							
THAS	Thassos island	1.50	323	P		Pn	06 15 27.8	-0.5
THAS				S		Sn	06 15 47.9	-0.1
	comp=N,202nm,0.4s							
GONE	Gonen-Balikesi	1.51	65	PN		Pn	06 15 28.9	+0.4
KNL	Balıkesir	1.51	55	P		Pn	06 15 28.5	0.0
KNL				S		Sn	06 15 48.1	-0.1
KNL				*i* AML		AML	06 15 57.0	
	comp=N,372nm,0.6s							
KNL				*i* AML		AML	06 15 58.0	
	comp=N,336nm,0.7s							
KESN	Edirne-Kesan	1.53	23	P		Pn	06 15 29.1	0.0
KESN				S		Sn	06 15 49.0	-0.3
KESN				*i* AML		AML	06 15 50.0	
	comp=N,527nm,0.4s							
KESN				*i* AML		AML	06 15 53.0	
	comp=N,279nm,0.4s							
RKY	Sarkoy-Tekirda	1.60	37	PN		Pn	06 15 30.4	+0.6
RKY				SN		Sb	06 15 52.1	+0.7
SART	Tekirdag	1.60	37	P		Pn	06 15 30.1	+0.3
SART				S		Sb	06 15 51.8	+0.3
SART				*i* AML		AML	06 15 53.0	
	comp=N,418nm,0.5s							
SART				*i* AML		AML	06 16 00.0	
	comp=N,266nm,0.4s							
MAR6	Marsite Statio	1.66	39	PN		Pn	06 15 31.2	+0.7
MAR3	Marsite Statio	1.70	38	PN		Pn	06 15 31.7	+0.6
GZKV	Gazikoy-Tekird	1.72	39	PN		Pb	06 15 32.5	-0.5
OUR	Ouranopolis	1.74	302	PN		Pn	06 15 30.9	-0.8
RDO	Rodhopi	1.75	351	P		Pn	06 15 32.1	+0.3
RDO				S		Sb	06 15 55.1	-0.6
RDO				AML		AML	06 15 59.1	
	comp=E,174μm,0.7s							
RDO				AML		AML	06 16 01.1	
	comp=N,198μm,0.5s							
RDO	Rodhopi	1.75	351	P		Pn	06 15 32.0	+0.2
RDO				S		Sn	06 15 54.9	+0.7
	comp=N,92nm,0.6s							
RDO	Rodhopi	1.75	351	PN		Pn	06 15 31.6	-0.2
MRMT	Marmara Adasi	1.76	47	PN		Pn	06 15 32.6	+0.6
EDC	Edincik	1.77	58	PN		Pn	06 15 32.4	+0.3
UKOP	Uzunkopru-Edir	1.80	18	PN		Pn	06 15 32.4	-0.1
SMG	Samos	1.85	157	P		Pn	06 15 32.3	-0.9
SMG				S		Sn	06 15 56.8	+0.1
	comp=N,200nm,0.5s							
DURS	Dursunbey	1.99	84	P		Pn	06 15 35.1	-0.2
DURS				S		Sn	06 15 59.3	-1.1
AYDB	Zeytinkoy-Aydi	2.13	133	PN		Pn	06 15 37.9	+0.7
KDZ	Kurdzhali	2.26	351	*i* P		Pn	06 15 38.6	-0.3
KULA	Kula-Manisa	2.33	112	PN		Pn	06 15 41.1	+1.3
RZN	Rozhen	2.45	339	*e*P		Pg	06 15 48.8	+0.6
MMB	Musomiste	2.73	323	*i* P		Pg	06 15 53.2	-0.5
JMB	Yambol	3.09	9	*e*P		Pg	06 16 03.4	+2.9
KKB	Krupnik	3.26	320	*i* P		Pg	06 16 02.5	-1.2

*CNRM **29** 06:15:28.0,36˚.47N×11˚.15W,h183km,ml2.7*
*MDD **29** 06:15:33.2±1.5,36˚.71N×

PVAQ	**Vaqueiros**	**2.96**	**72**	P	**Pn**	**06 16 17.0**	**+2.2**
PVAQ				S	**Sn**	**06 16 51.7**	**+2.6**
EGRO	**El Granado**	**3.18**	**70**	P	**Pn**	**06 16 19.5**	**+1.8**
EGRO				S	**Sn**	**06 16 54.1**	**-0.3**
EGRO				*i* Vmb_Lg		06 16 58.8	
EVO	**Evora**	**3.26**	**51**	*e*Sn	**Sn**	**06 16 54.3**	**-2.3**
EVO				A	A	06 16 56.4	
	comp=N,3.3nm,0.3s						
PMTG	**Montargil**	**3.50**	**42**	*e*Sn	**Sn**	**06 17 00.1**	**-2.2**
PESTR	**Estremoz**	**3.73**	**50**	*e*Sn	**Sn**	**06 17 05.9**	**-2.2**
EMIN	**Mina Concepcio**	**3.86**	**70**	P	**Pn**	**06 16 27.9**	**+0.8**
EMIN				S	**Sn**	**06 17 09.8**	**-1.5**
EMIN				*i* Vmb_Lg		06 17 13.0	
PMRV	**Marv??o**	**4.21**	**45**	*e*Sn	**Sn**	**06 17 16.4**	**-3.5**
PMRV				A	A	06 17 19.8	
	comp=N,1.6nm,0.5s						
ECAB	**El Cabril**	**4.90**	**70**	P	**Pn**	**06 16 42.6**	**+1.1**
ECAB				S	**Sn**	**06 17 33.7**	**-3.3**
ECAB				*i* Vmb_Lg		06 17 37.1	
OUK	**Oukaimeden**	**5.99**	**151**	P	Pn	06 16 54.7	-2.1
OUK				S	**Sn**	**06 18 03.7**	**-0.7**
MD31	**MD31**	**6.46**	**122**	P	Pn	06 17 00.6	-2.5
MD31				S	**Sn**	**06 18 13.6**	**-2.0**
MDT	**Midelt**	**6.60**	**122**	P	Pn	06 17 03.7	-1.2
MDT				S	**Sn**	**06 18 15.1**	**-3.9**
OUZM	**OUZ**	**6.72**	**145**	P	Pn	06 17 01.2	-5.4
OUZM				S	**Sn**	**06 18 20.3**	**-1.8**
ZGR	**Zagora**	**7.93**	**142**	P	Pn	06 17 17.7	-5.4

*IDC **29** 06:17:16.8±1.0,30.°38S×75.°58E,h0km,mb3.9/9, mbtmp3.9/9,MS3.8/12,Error ellipse: s-maj=40.8km s-min=21.5km az=86.0*

ISC 29 06:17:18.5±1.1,30.°4S±0.°2×75.°6E±0.°3,h10km,n25, σ0s57/10,mb3.9/9,MS3.8/12,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**22.82**	**352**	T	T	06 45 41.2	
	baz=174,slow=76,SNR=59						
H08S1	**Diego Garcia H**	**22.83**	**352**	T	T	06 45 41.4	
	baz=174,slow=76,SNR=36						
H08S3	**Diego Garcia H**	**22.84**	**352**	T	T	06 45 42.7	
	baz=174,slow=76,SNR=50						
H01W2	**Cape Leeuwin H**	**32.61**	**108**	T	T	06 58 05.9	
	baz=268,slow=74,SNR=6.3						
H01W3	**Cape Leeuwin H**	**32.61**	**108**	T	T	06 58 06.1	
	baz=268,slow=74,SNR=7.7						
H01W1	**Cape Leeuwin H**	**32.63**	**108**	T	T	06 58 08.3	
	baz=268,slow=74,SNR=6.7						
PALK	**Pallekele**	**37.77**	**8**	LR	LR	06 35 43.5	
	comp=Z,163nm,20.2s,baz=303,slow=29						
MAW	**Mawson**	**38.00**	**188**	LR	LR	06 36 19.6	
	comp=Z,200nm,18.6s,baz=359,slow=30						
LEM	**Lembang**	**38.10**	**59**	LR	LR	06 39 00.5	
	comp=Z,114nm,18.8s,baz=204,slow=34						
BOSA	**Boshof**	**43.57**	**259**	LR	LR	06 40 02.4	
	comp=Z,124nm,18.8s,baz=134,slow=31						
KAPI	**Kappang**	**48.59**	**68**	LR	LR	06 44 50.1	
	comp=Z,73nm,19.9s,baz=243,slow=34						
ASAR	**Alice Springs**	**51.88**	**97**	P	**P**	**06 26 27.4**	**-0.1**
	1.6nm,1.0s,baz=247,slow=5.7,SNR=6.1 1.6nm,1.0s						
CMAR	**Chiang Mai Arr**	**53.52**	**28**	P	**P**	**06 26 39.9**	**+0.5**
	1.4nm,0.3s,baz=213,slow=6.9,SNR=6.0						
CMAR				LR	LR	06 46 25.3	
	comp=Z,69nm,18.8s,baz=200,slow=33 1.4nm,0.3s						
WRA	**Warramunga Arr**	**53.66**	**93**	P	**P**	**06 26 40.3**	**-0.3**
	1.6nm,1.1s,baz=246,slow=6.6,SNR=4.0 1.6nm,1.1s						
QSPA	**South Pole Qui**	**59.74**	**180**	P	**P**	**06 27 23.5**	**+0.1**
	1.0nm,0.6s,baz=298,slow=1.4,SNR=9.4						
QSPA				LR	LR	06 49 44.7	
	comp=Z,87nm,20.4s,baz=290,slow=33 1.0nm,0.6s						
VNDA	**Vanda**	**59.75**	**165**	P	**P**	**06 27 23.1**	**0.0**
	0.7nm,0.8s,baz=270,slow=7.4,SNR=4.2						
VNDA				LR	LR	06 50 23.1	
	comp=Z,140nm,18.7s,baz=261,slow=33 0.7nm,0.8s						
MKAR	**Makanchi Array**	**77.07**	**5**	P	**P**	**06 29 10.4**	**-1.2**
	1.3nm,1.0s,baz=184,slow=5.9,SNR=6.6 1.3nm,1.0s						
KURBB	**Kurchatov Arra**	**80.71**	**2**	P	**P**	**06 29 31.6**	**+0.1**
	1.2nm,1.0s,baz=193,slow=5.2,SNR=4.3 1.2nm,1.0s						
IDI	**Anoyia**	**80.91**	**320**	LR	LR	06 59 57.1	
	comp=Z,22nm,21.5s,baz=78,slow=32						
AKTO	**Aktyubinsk**	**81.97**	**349**	LR	LR	07 05 28.1	
	comp=Z,27nm,18.4s,baz=144,slow=35						
SONM	**Songino Array**	**82.64**	**20**	P	**P**	**06 29 42.5**	**+0.5**
	0.3nm,0.7s,baz=199,slow=3.1,SNR=4.7 0.3nm,0.7s						
KSRS	**Korea Array**	**83.37**	**39**	LR	LR	07 03 37.8	
	comp=Z,38nm,20.7s,baz=215,slow=33						
ZALV	**Zalesovo Beam**	**84.38**	**5**	P	**P**	**06 29 50.4**	**-0.1**
	0.4nm,0.3s,baz=184,slow=5.3,SNR=4.8 0.4nm,0.3s						
KLR	**Kul'dur**	**93.71**	**33**	LR	LR	07 14 29.9	
	comp=Z,57nm,18.1s,baz=211,slow=37						
YKA	**Yellowknife Ar**	**147.22**	**9**	PKPbc	**PKPbc**	**06 37 00.9**	**-0.4**
	1.3nm,0.9s,baz=341,slow=3.1,SNR=6.4						

DDA 29 06:25:12.9±0.0,39.°42N×25.°93E,h7km±2km,ML1.6, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOCA	**Canakkale, Ayv**	**0.18**	**62**	P	Pg	06 25 17.1	+0.4
KOCA				S	Sg	06 25 19.9	+0.7
KOCA				*i* AML	AML	06 25 20.0	
	comp=N,166nm,0.5s						
KOCA				*i* AML	AML	06 25 20.0	
	comp=E,96nm,0.2s						
BOZC	**Bozcaada**	**0.44**	**13**	P	Pg	06 25 21.3	-0.1
BOZC				S	Sg	06 25 28.0	+0.9
BOZC				*i* AML	AML	06 25 29.0	
	comp=N,50nm,0.2s						
BOZC				*i* AML	AML	06 25 29.0	
	comp=E,58nm,0.3s						
BAYC	**CANAKKALE_Bayr**	**0.58**	**56**	P	Pg	06 25 24.0	-0.1
BAYC				*i* AML	AML	06 25 32.0	
	comp=N,21nm,0.2s						
BAYC				*i* AML	AML	06 25 32.0	
	comp=E,28nm,0.3s						
BAYC				S	S	06 25 32.0	+0.4

*ISK **29** 06:26:01.5,39.°51N×26.°10E,h5km,ML2.1/9*

DDA 29 06:26:00.5±0.0,39.°43N×25.°96E,h8km±2km,ML1.8, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GPNR	**Gulpinar-Canak**	**0.14**	**78**	PG	Pg	06 26 03.2	-0.2
KOCA	**Canakkale, Ayv**	**0.16**	**61**	P	Pg	06 26 04.1	+0.3
KOCA				*i* AML	AML	06 26 07.0	
	comp=N,195nm,0.3s						
KOCA				*i* AML	AML	06 26 07.0	
	comp=E,152nm,0.3s						
KOCA				S	Sg	06 26 07.1	+1.0
BOZC	**Bozcaada**	**0.42**	**10**	PG	Pg	06 26 08.7	0.0
BOZC				SG	Sg	06 26 13.8	-0.5
BOZC	**Bozcaada**	**0.42**	**10**	P	Pg	06 26 08.8	+0.1
BOZC				S	Sg	06 26 15.2	+0.9
BOZC				*i* AML	AML	06 26 16.0	
	comp=N,132nm,0.3s						
BOZC				*i* AML	AML	06 26 16.0	
	comp=E,92nm,0.2s						
EZN	**Ezine**	**0.49**	**35**	PG	Pg	06 26 09.0	-1.0
EZN				SG	Sg	06 26 14.7	-1.7
BAYC	**CANAKKALE_Bayr**	**0.55**	**55**	P	Pg	06 26 11.0	-0.2
BAYC				S	Sg	06 26 18.8	+0.5
BAYC				*i* AML	AML	06 26 19.0	
	comp=N,24nm,0.4s						
BAYC				*i* AML	AML	06 26 19.0	
	comp=E,28nm,0.2s						
ECEA	**Canakkale, Ece**	**0.64**	**15**	P	Pb	06 26 14.4	+0.6
ECEA				S	Sb	06 26 22.2	-0.8
ECEA				*i* AML	AML	06 26 27.0	
	comp=E,76nm,0.4s						
ECEA				*i* AML	AML	06 26 34.0	
	comp=N,92nm,0.8s						
GOKA	**anakkale-Gk**	**0.76**	**357**	P	Pb	06 26 16.8	+0.8
GADA	**Gvkgeada**	**0.77**	**356**	PG	Pb	06 26 15.7	-0.4
GADA				SG	Sg	06 26 25.4	+0.2
BUHA	**Balikesir, Bur**	**0.87**	**85**	P	Pb	06 26 17.9	+0.1
BUHA				S	Sn	06 26 31.7	-0.1
BUHA				*i* AML	AML	06 26 34.0	
	comp=E,44nm,0.7s						
BUHA				*i* AML	AML	06 26 38.0	
	comp=N,38nm,0.8s						
BUHA	**Balikesir, Bur**	**0.87**	**85**	P	Pb	06 26 17.7	-0.1
BUHA				S	Sb	06 26 30.0	+0.5
BUHA				*i* AML	AML	06 26 34.0	
	comp=E,44nm,0.7s						
BUHA				*i* AML	AML	06 26 35.0	
	comp=N,22nm,0.4s						
ZEDA	**zmir-Bergama**	**0.98**	**118**	P	Pg	06 26 19.0	-0.3
GELI	**Tayfur-Gelibol**	**1.05**	**22**	PG	Pg	06 26 20.0	-0.6
GELI				SG	Sg	06 26 33.3	-0.9
ERIK	**Erikli-Kesan**	**1.31**	**19**	PN	Pn	06 26 25.0	-0.1
ERIK				SN	Sb	06 26 41.9	-0.5
ENEZ	**Enez**	**1.32**	**6**	PN	Pb	06 26 25.6	+0.2
KRBG	**Karabiga-Canak**	**1.41**	**46**	PN	Pn	06 26 26.4	0.0
ALN	**Alexandroupoli**	**1.47**	**2**	PN	Pn	06 26 27.3	0.0
MAR3	**Marsite Statio**	**1.67**	**37**	PN	Pn	06 26 29.9	-0.1
GZKV	**Gazikoy-Tekird**	**1.69**	**38**	PN	Pn	06 26 30.6	+0.4

*IDC **29** 06:31:35.0±0.9,30.°21S×75.°71E,h0km,mb4.1/8, mbtmp4.1/8,MS3.8/4,Error ellipse: s-maj=34.6km s-min=19.9km az=101.0*

ISC 29 06:31:36.5±0.9,30.°2S±0.°1×75.°7E±0.°3,h10km,n19, σ0s47/11,mb4.2/8,MS3.8/4,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**22.64**	**352**	T	T	06 59 58.5	
	baz=174,slow=76,SNR=43						
H08S1	**Diego Garcia H**	**22.65**	**352**	T	T	07 00 03.3	
	baz=174,slow=76,SNR=33						
H08S3	**Diego Garcia H**	**22.66**	**352**	T	T	06 59 60.0	
	baz=174,slow=76,SNR=36						
H01W2	**Cape Leeuwin H**	**32.59**	**108**	T	T	07 12 35.8	
	baz=267,slow=74,SNR=11						
H01W3	**Cape Leeuwin H**	**32.59**	**108**	T	T	07 12 27.8	
	baz=267,slow=74,SNR=13						
H01W1	**Cape Leeuwin H**	**32.61**	**108**	T	T	07 12 32.0	
	baz=267,slow=74,SNR=12						
PALK	**Pallekele**	**37.57**	**8**	LR	LR	06 50 23.5	
	comp=Z,85nm,19.2s,baz=290,slow=30						
BOSA	**Boshof**	**43.69**	**259**	LR	LR	06 54 25.8	
	comp=Z,133nm,18.1s,baz=130,slow=31						
ASAR	**Alice Springs**	**51.82**	**98**	P	**P**	**06 40 45.0**	**0.0**
	4.6nm,1.0s,baz=247,slow=6.2,SNR=16 4.6nm,1.0s						
CMAR	**Chiang Mai Arr**	**53.31**	**28**	P	**P**	**06 40 56.0**	**+0.2**
	0.9nm,0.3s,baz=216,slow=6.5,SNR=8.3 0.9nm,0.3s						
WRA	**Warramunga Arr**	**53.59**	**93**	P	**P**	**06 40 57.7**	**-0.4**
	4.2nm,1.0s,baz=253,slow=7.2,SNR=9.9						
WRA				LR	LR	06 59 51.2	
	comp=Z,144nm,21.6s,baz=240,slow=32 4.2nm,1.0s						
SNAA	**Sanae**	**58.05**	**201**	P	**P**	**06 41 29.6**	**+0.2**
	1.9nm,1.0s,baz=91,slow=6.1,SNR=4.6 1.9nm,1.0s						
VNDA	**Vanda**	**59.92**	**165**	P	**P**	**06 41 42.1**	**-0.1**
	0.8nm,0.9s,baz=280,slow=8.6,SNR=6.1 0.8nm,0.9s						
QSPA	**South Pole Qui**	**59.94**	**180**	P	**P**	**06 41 42.7**	**0.0**
	3.1nm,0.6s,baz=288,slow=3.6,SNR=26 3.1nm,0.6s						
MKAR	**Makanchi Array**	**76.87**	**5**	P	**P**	**06 43 28.1**	**-0.4**
	1.0nm,0.7s,baz=178,slow=6.3,SNR=8.7						
MKAR				LR	LR	07 16 58.4	
	comp=Z,29nm,19.0s,baz=186,slow=35 1.0nm,0.7s						
JNU	**Nakatsue**	**81.80**	**44**	PKiKP	**PKiKP**	**06 49 19.2**	**-0.1**
	9.3nm,0.4s,baz=183,slow=3.2,SNR=2.6						
SONM	**Songino Array**	**82.43**	**20**	P	**P**	**06 43 59.0**	**+0.2**
	0.2nm,0.3s,baz=212,slow=5.1,SNR=2.0 0.2nm,0.3s						
YKA	**Yellowknife Ar**	**147.01**	**9**	PKPbc	**PKPbc**	**06 51 18.0**	**-0.7**
	0.5nm,0.6s,baz=340,slow=2.9,SNR=5.7						
NVAR	**Mina Array Bea**	**165.82**	**51**	PKPab	**PKPab**	**06 52 42.4**	**+1.0**
	0.1nm,0.3s,baz=260,slow=5.0,SNR=3.2						

*IDC **29** 06:34:09.3±0.8,30.°16S×75.°63E,h0km,mb4.0/8, mbtmp4.0/8,Error ellipse: s-maj=28.0km s-min=23.3km az=108.0*

ISC 29 06:34:10.8±0.9,30.°2S±0.°2×75.°6E±0.°2,h10km,n15, σ0s35/9,mb4.0/8,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**22.59**	**352**	T	T	07 02 34.1	
	baz=174,slow=76,SNR=18						
H08S1	**Diego Garcia H**	**22.59**	**352**	T	T	07 02 34.2	
	baz=174,slow=76,SNR=13						
H08S3	**Diego Garcia H**	**22.61**	**352**	T	T	07 02 39.0	
	baz=174,slow=76,SNR=18						
H01W2	**Cape Leeuwin H**	**32.66**	**109**	T	T	07 15 05.2	
	baz=269						
H01W3	**Cape Leeuwin H**	**32.66**	**109**	T	T	07 15 05.9	
	baz=269						
H01W1	**Cape Leeuwin H**	**32.67**	**109**	T	T	07 15 05.6	
	baz=269						
BOSA	**Boshof**	**43.64**	**259**	P	**P**	**06 42 16.2**	**+0.3**
	2.9nm,0.7s,baz=94,slow=6.4,SNR=4.6 2.9nm,0.7s						
ASAR	**Alice Springs**	**51.88**	**98**	P	**P**	**06 43 20.3**	**+0.5**
	1.0nm,0.7s,baz=255,slow=6.0,SNR=7.1 1.0nm,0.7s						
WRA	**Warramunga Arr**	**53.64**	**94**	P	**P**	**06 43 33.0**	**+0.1**
	1.2nm,0.9s,baz=249,slow=7.6,SNR=2.6 1.2nm,0.9s						
SNAA	**Sanae**	**58.07**	**201**	P	**P**	**06 44 03.9**	**+0.1**
	1.4nm,0.9s,baz=98,slow=7.1,SNR=4.0 1.4nm,0.9s						
VNDA	**Vanda**	**59.98**	**165**	P	**P**	**06 44 16.8**	**-0.2**
	0.8nm,0.7s,baz=280,slow=6.5,SNR=6.0 0.8nm,0.7s						
QSPA	**South Pole Qui**	**59.98**	**180**	P	**P**	**06 44 17.0**	**-0.3**
	2.4nm,0.6s,baz=308,slow=3.3,SNR=15 2.4nm,0.6s						
MKAR	**Makanchi Array**	**76.83**	**5**	P	**P**	**06 46 02.1**	**-0.5**
	0.7nm,0.8s,baz=190,slow=7.3,SNR=4.9 0.7nm,0.8s						
ZALV	**Zalesovo Beam**	**84.14**	**5**	P	**P**	**06 46 41.6**	**0.0**
	0.6nm,0.4s,baz=188,slow=4.2,SNR=4.1 0.6nm,0.4s						
YKA	**Yellowknife Ar**	**146.98**	**9**	PKPbc	**PKPbc**	**06 53 53.0**	**0.0**
	0.6nm,0.7s,baz=338,slow=3.4,SNR=5.7						

*IDC **29** 06:37:22.9±1.6,30.°16S×75.°62E,h0km,mb3.7/5, mbtmp3.7/5,Error ellipse: s-maj=56.6km s-min=33.3km az=62.0*

ISC 29 06:37:24.3±1.5,30.°2S±0.°2×75.°6E±0.°4,h10km,n6,σ0s22/6, mb3.7/5,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**51.91**	**98**	P	**P**	**06 46 33.3**	**-0.3**
	0.7nm,0.7s,baz=253,slow=6.7,SNR=7.3 0.7nm,0.7s						
WRA	**Warramunga Arr**	**53.67**	**94**	P	**P**	**06 46 46.8**	**+0.3**
	0.8nm,0.9s,baz=247,slow=7.8,SNR=2.7 0.8nm,0.9s						
VNDA	**Vanda**	**59.98**	**165**	P	**P**	**06 47 30.5**	**0.0**
	0.5nm,0.7s,baz=275,slow=7.3,SNR=2.9 0.5nm,0.7s						
MKAR	**Makanchi Array**	**76.83**	**5**	P	**P**	**06 49 16.1**	**0.0**
	0.7nm,0.9s,baz=191,slow=4.8,SNR=3.6 0.7nm,0.9s						
ZALV	**Zalesovo Beam**	**84.14**	**5**	P	**P**	**06 49 55.1**	**0.0**
	0.5nm,0.4s,baz=176,slow=6.5,SNR=1.8 0.5nm,0.4s						
YKA	**Yellowknife Ar**	**146.98**	**9**	PKPbc	**PKPbc**	**06 57 06.5**	**0.0**
	0.2nm,0.6s,baz=336,slow=3.0,SNR=3.1						

*IDC **29** 06:38:19.0±1.3,30.°30S×75.°39E,h0km,mb3.8/6, mbtmp3.8/6,Error ellipse: s-maj=46.7km s-min=26.9km az=96.0*

ISC 29 06:38:21.0±1.3,30.°3S±0.°2×75.°5E±0.°3,h10km,n10, σ0s67/7,mb3.7/6,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**22.74**	**352**	T	T	07 06 48.1	
	baz=174						
H08S1	**Diego Garcia H**	**22.75**	**352**	T	T	07 06 47.5	
	baz=174						
H08S3	**Diego Garcia H**	**22.76**	**352**	T	T	07 06 51.6	
	baz=174						
ASAR	**Alice Springs**	**52.01**	**98**	P	**P**	**06 47 30.1**	**-0.8**
	0.5nm,0.7s,baz=248,slow=6.6,SNR=2.2 0.5nm,0.7s						
CMAR	**Chiang Mai Arr**	**53.52**	**28**	P	**P**	**06 47 42.4**	**+0.5**
	0.9nm,0.3s,baz=196,slow=6.4,SNR=1.7 0.9nm,0.3s						
WRA	**Warramunga Arr**	**53.78**	**93**	P	**P**	**06 47 44.4**	**+0.4**
	0.6nm,0.9s,baz=248,slow=8.7,SNR=5.3 0.6nm,0.9s						
QSPA	**South Pole Qui**	**59.81**	**180**	P	**P**	**06 48 26.2**	**0.0**
	1.7nm,0.7s,baz=278,slow=15,SNR=7.9 1.7nm,0.7s						
VNDA	**Vanda**	**59.84**	**165**	P	**P**	**06 48 26.3**	**+0.1**
	0.5nm,0.7s,baz=284,slow=6.0,SNR=3.1 0.5nm,0.7s						
MKAR	**Makanchi Array**	**77.02**	**5**	P	**P**	**06 50 13.1**	**-0.7**
	0.5nm,0.8s,baz=190,slow=5.9,SNR=2.7 0.5nm,0.8s						
YKA	**Yellowknife Ar**	**147.17**	**9**	PKPbc	**PKPdf**	**06 58 01.9**	**+0.5**
	0.2nm,0.5s,baz=332,slow=3.5,SNR=2.7						

*ATH **29** 06:42:19.0,38.°97N×24.°46E,h10km±31km,ML2.0/3,Error ellipse: s-maj=31.6km s-min=2.1km az=0.0*

THE 29 06:42:19.6,38.°96N×24.°43E,h5km±13km,ML1.9/2,Error ellipse: s-maj=14.1km s-min=1.2km az=88.0,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKY	**Skiros Island**	**0.13**	**131**	P	Pg	06 42 21.7	-0.5
SKY				S	Sg	06 42 23.6	-0.3
SKY				AML	AML	06 42 23.9	
	comp=N,5571μm,0.3s						
SKY				AML	AML	06 42 25.8	
	comp=E,3089μm,0.2s						
SKY	**Skiros Island**	**0.13**	**131**	P	Pg	06 42 21.6	-0.6
SKY				S	Sg	06 42 23.6	-0.3
	comp=E,2μm,0.2s						
KYMI	**Kymi, Euboea I**	**0.42**	**218**	P	Pg	06 42 27.1	-0.6
KYMI				S	Sg	06 42 33.3	+0.2
KYMI				AML	AML	06 42 33.7	
	comp=E,103μm,0.5s						
KYMI				AML	AML	06 42 37.2	
	comp=N,137μm,0.5s						
KYMI	**Kymi, Euboea I**	**0.42**	**218**	P	Pg	06 42 27.8	+0.2
KYMI				S	Sg	06 42 33.7	+0.6
DION	**Dionisos Attik**	**0.96**	**204**	P	Pg	06 42 38.0	-0.1
DION				S	Sg	06 42 50.6	0.0
DION				AML	AML	06 42 52.3	
	comp=E,246μm,0.8s						
DION				AML	AML	06 42 53.2	
	comp=N,206μm,0.9s						
DION	**Dionisos Attik**	**0.96**	**204**	P	Pg	06 42 38.0	-0.1
DION				S	Sg	06 42 51.0	+0.4
NEO	**Neokhori**	**1.00**	**291**	P	Pg	06 42 39.0	+0.3
NEO				S	Sg	06 42 51.8	+0.1
	comp=N,40nm,0.4s						
VILL	**Villia**	**1.18**	**228**	P	Pg	06 42 41.7	-0.6

DDA 29 06:42:23.2±0.0,39.°42N×25.°93E,h7km±3km,ML1.1, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOCA	**Canakkale, Ayv**	**0.18**	**63**	P	Pg	06 42 20.5	-6.4
KOCA				S	Sg	06 42 29.9	+0.5
KOCA				*i* AML	AML	06 42 30.0	
	comp=N,60nm,0.5s						
KOCA				*i* AML	AML	06 42 30.0	
	comp=E,35nm,0.2s						
BOZC	**Bozcaada**	**0.43**	**13**	P	Pg	06 42 31.8	+0.2
BOZC				S	Sg	06 42 37.9	+0.5
BOZC				*i* AML	AML	06 42 39.0	
	comp=N,26nm,0.5s						
BOZC				*i* AML	AML	06 42 39.0	
	comp=E,28nm,0.5s						
BAYC	**CANAKKALE_Bayr**	**0.58**	**56**	P	Pb	06 42 35.1	-0.5
BAYC				S	Sg	06 42 42.3	+0.5
BAYC				*i* AML	AML	06 42 44.0	
	comp=E,6.1nm,0.1s						

*ISK **29** 06:44:44.8,39.°40N×25.°79E,h6km,ML2.7/15*
*THE **29** 06:44:47.2,39.°43N×25.°92E,h2km±3km,ML2.3/5,Error ellipse: s-maj=3.5km s-min=0.9km az=340.0*
*ATH **29** 06:44:47.4,39.°40N×25.°88E,h11km±2km,ML2.3/6,Error ellipse: s-maj=2.1km s-min=0.9km az=166.0*
*DDA **29** 06:44:49.2±0.0,39.°55N×26.°15E,h8km±4km,ML1.8*

ISC 29 06:44:46.8±0.9,39.°43N±0.°02×25.°90E±0.°03,h11km±8km, n36,σ0s68/55,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOCA	**Canakkale, Ayv**	**0.20**	**67**	P	**Pg**	**06 44 50.6**	**-0.5**
KOCA				S	**Sg**	**06 44 53.3**	**-0.7**
KOCA				*i* AML	AML	06 44 54.0	
	comp=E,610nm,0.3s						
SIGR	**SIGRI**	**0.22**	**189**	P	**Pg**	**06 44 51.2**	**-0.1**
SIGR				S	**Sg**	**06 44 54.6**	**+0.2**
SIGR				AML	AML	06 44 55.1	
	comp=N,5453μm,0.4s						
SIGR				AML	AML	06 44 55.6	
	comp=E,3380μm,0.3s						
SIGR	**SIGRI**	**0.22**	**189**	P	**Pg**	**06 44 51.2**	**-0.1**
PRK	**Paraskevi**	**0.34**	**122**	P	**Pg**	**06 44 54.2**	**+0.6**
PRK				S	**Sg**	**06 44 59.0**	**+0.9**
PRK				AML	AML	06 44 59.2	
	comp=E,1591μm,0.2s						
PRK				AML	AML	06 44 59.3	
	comp=N,2231μm,0.2s						
PRK	**Paraskevi**	**0.34**	**122**	P	**Pg**	**06 44 54.2**	**+0.6**
PRK				S	**Sg**	**06 44 58.7**	**+0.6**
	comp=N,960nm,0.2s						
BOZC	**Bozcaada**	**0.43**	**16**	PG	**Pg**	**06 44 55.1**	**-0.2**
BOZC				SG	**Sg**	**06 45 01.9**	**+0.8**
BOZC	**Bozcaada**	**0.43**	**16**	P	**Pg**	**06 44 55.0**	**-0.2**
EZN	**Ezine**	**0.52**	**39**	P	**Pg**	**06 44 56.5**	**-0.4**
EZN				S	**Sg**	**06 45 03.7**	**0.0**
	comp=N,292nm,0.3s						
EZN	**Ezine**	**0.52**	**39**	PG	**Pg**	**06 44 56.5**	**-0.4**
BAYC	**CANAKKALE_Bayr**	**0.59**	**58**	P	**Pg**	**06 44 57.5**	**-0.8**
AYVA	**Ayvalik**	**0.62**	**101**	P	**Pg**	**06 44 58.2**	**-0.6**
LIA	**Limnos Island**	**0.73**	**311**	P	**Pg**	**06 45 01.4**	**+0.5**
LIA				S	**Sg**	**06 45 11.6**	**+1.2**
LIA				AML	AML	06 45 14.8	
	comp=E,408μm,0.5s						
LIA				AML	AML	06 45 19.6	
	comp=N,292μm,0.4s						
LIA	**Limnos Island**	**0.73**	**311**	P	**Pg**	**06 45 01.3**	**+0.5**
LIA				S	**Sb**	**06 45 12.0**	**+0.6**
	comp=N,175nm,0.4s						
GADA	**Gvkgeada**	**0.77**	**360**	PG	**Pg**	**06 45 00.8**	**-0.8**
GADA				SG	**Sg**	**06 45 12.1**	**+0.5**
CAND	**Candarli**	**0.84**	**124**	PG	**Pg**	**06 45 02.8**	**-0.3**
CAND				SG	**Sb**	**06 45 15.

SMTH	**Samothraki Isl**	**1.08**	**345**	P	**Pg**	**06 45 07.6**	**0.0**
URLA	**Izmir**	**1.19**	**153**	PN	**Pb**	**06 45 08.5**	**-0.9**
URLA				SN	**Sg**	**06 45 25.3**	**+0.1**
ENEZ	**Enez**	**1.32**	**8**	PN	**Pn**	**06 45 10.8**	**-0.4**
ENEZ				SN	**Sg**	**06 45 29.8**	**+0.4**
ERIK	**Erikli-Kesan**	**1.33**	**21**	PN	**Pn**	**06 45 10.9**	**-0.4**
KRBG	**Karabiga-Canak**	**1.45**	**48**	PN	**Pn**	**06 45 13.1**	**+0.2**
ALN	**Alexandroupoli**	**1.48**	**4**	P	**Pn**	**06 45 14.5**	**+1.2**
ALN				S	**Sg**	**06 45 34.4**	**+0.2**
ALN	comp=N,114µm,0.5s			AML	AML	06 45 34.8	
ALN	comp=E,129µm,0.3s			AML	AML	06 45 34.9	
ALN	**Alexandroupoli**	**1.48**	**4**	P	**Pn**	**06 45 14.3**	**+1.0**
ALN	**Alexandroupoli**	**1.48**	**4**	PN	**Pn**	**06 45 13.2**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.60**	**37**	PN	**Pn**	**06 45 15.2**	**+0.2**
MAR3	**Marsite Statio**	**1.70**	**39**	PN	**Pn**	**06 45 16.9**	**+0.5**
GZKV	**Gazikoy-Tekird**	**1.72**	**39**	PN	**Pn**	**06 45 17.2**	**+0.6**
OUR	**Ouranopolis**	**1.73**	**302**	PN	**Pn**	**06 45 14.8**	**-2.0**
RDO	**Rodhopi**	**1.74**	**351**	PN	**Pn**	**06 45 16.3**	**-0.6**
MRMT	**Marmara Adasi**	**1.76**	**47**	PN	**Pn**	**06 45 17.6**	**+0.4**
SMG	**Samos**	**1.86**	**156**	P	**Pn**	**06 45 18.5**	**-0.2**
SMG	comp=E,85nm,0.5s			S	**Sb**	**06 45 44.9**	**+0.7**

NEIC ***29*** *06:47:39.1±0.6,52.°1N±0.°2×176.°1W±0.°1, h77km±5km, Error ellipse: s-maj=34.8km s-min=5.5km az=165.0*

AEIC 29 06:47:38.4±0.7, 52.°0N±0.°3×176.°0W±0.°1, h76km±2km, ML3.5/29, Error ellipse: s-maj=48.8km s-min=5.9km az=166.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSMY	**Great Sitkin M**	**0.03**	**331**		Pn	06 47 50.0	+0.7
GSIG	**Igitkin Island**	**0.07**	**114**		Pn	06 47 49.8	+0.5
GSIG					Sn	06 47 58.2	+0.8
GSCK	**Great Sitkin C**	**0.08**	**267**		Pn	06 47 50.1	+0.8
GSTD	**Great Sitkin T**	**0.08**	**300**		Pn	06 47 50.1	+0.7
GSTD					Sn	06 47 58.7	+1.1
GSTR	**Great Sitkin T**	**0.08**	**348**		Pn	06 47 50.3	+0.9
ADK	**Adak**	**0.42**	**252**	Pn	Pn	06 47 51.6	+0.5
KIWB	**Kanaga Island**	**0.71**	**257**		Pn	06 47 54.5	+0.7
KIKV	**Kanaga Island**	**0.72**	**259**		Pn	06 47 54.7	+0.7
KIKV					Sn	06 48 05.9	+0.4
KICM	**Kanaga Island**	**0.73**	**263**		Pn	06 47 55.0	+1.0
KICM					Sn	06 48 06.2	+0.6
KIMD	**Kanaga Island**	**0.79**	**252**		Pn	06 47 55.0	+0.3
TAPA	**Tanaga Point A**	**1.12**	**260**		Pn	06 47 59.4	+0.6
ATKA	**Atka Island**	**1.15**	**80**		Pn	06 47 59.2	+0.2
ATKA					Sn	06 48 14.1	-0.3
KOKL	**Mount Kliuchef**	**1.17**	**74**		Pn	06 48 00.2	+0.9
TAFP	**Tanaga Falls P**	**1.21**	**265**		Pn	06 48 00.5	+0.6
TAFP					Sn	06 48 16.6	+0.7
KOFP	**Korovin Flat P**	**1.22**	**77**		Pn	06 48 00.8	+0.9
TASE	**Tanaga Southea**	**1.25**	**262**		Pn	06 48 01.0	+0.6
TANO	**Tanaga North**	**1.30**	**266**		Pn	06 48 01.8	+0.9
GANE	**Gareloi Northe**	**1.71**	**264**		Pn	06 48 07.0	+0.7
GANO	**Gareloi North**	**1.73**	**265**		Pn	06 48 07.0	+0.4
CERAA	**Semis' Rag'd T**	**2.65**	**269**		Pn	06 48 19.6	+0.7
CEPE	**Semis' Perret**	**2.67**	**271**		Pn	06 48 19.1	-0.1
CESW	**Semis' Southwe**	**2.73**	**269**		Pn	06 48 20.4	+0.5
AMKA	**Amchitka**	**2.97**	**259**		Pn	06 48 23.8	+0.6
LSSE	**Little Sitkin**	**3.34**	**271**		Pn	06 48 29.6	+1.4
UNV	**Unalaska Valle**	**6.05**	**69**	Pn	Pn	06 49 06.7	+1.7
CNBA	**Chernabura Isl**	**10.21**	**68**	Pn	Pn	06 50 02.1	+0.2
OHAK	**Old Harbor**	**14.14**	**59**	Pn	Pn	06 50 55.8	+1.1
Q19K	**Cape Douglas,**	**14.41**	**53**	Pn	Pn	06 50 59.5	+1.1
KDAK	**Kodiak Island**	**14.63**	**58**	Pn	Pn	06 51 00.6	-0.5

WEL 29 06:47:49.4±0.9, 33.°S±8.°×17.°9E±1.°8, h33km, M4.1/8, mB4.6/3, ML4.3/12, MLv4.1/8, Mw(mB)3.9/3, Error ellipse: s-maj=0.0km s-min=0.0km az=111.7, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.38**	**40**	P	Pn	06 48 52.7	-0.9
GLKZ				S	Sn	06 49 45.0	+1.6
MXZ	**Matakaoa Point**	**4.92**	**185**	P	Pn	06 48 59.4	-1.6
MXZ				S	Sn	06 49 58.6	+1.9
WMGZ	**Waiomatatini S**	**5.17**	**184**	P	Pn	06 49 05.1	+0.7
WMGZ				S	Sn	06 50 04.3	+1.5
PKGZ	**Pakihiroa**	**5.26**	**187**	P	Pn	06 49 06.7	+0.9
PKGZ				S	Sn	06 50 06.6	+1.3
PUZ	**Puketiti**	**5.43**	**185**	P	Pn	06 49 08.1	+0.1
PUZ				S	Sn	06 50 09.8	+0.5
TWGZ	**Tauwhareparae**	**5.56**	**187**	P	Pn	06 49 11.0	+1.3
TWGZ				S	Sn	06 50 14.4	+1.9
MWZ	**Matawai**	**5.77**	**190**	P	Pn	06 49 12.9	+0.2
MWZ				S	Sn	06 50 17.9	+0.1
URZ	**Urewera**	**5.77**	**194**	P	Pn	06 49 13.2	+0.5
URZ				S	Sn	06 50 19.6	+1.9
TKGZ	**Te Karaka**	**5.83**	**188**	P	Pn	06 49 13.6	+0.1
TKGZ				S	Sn	06 50 17.2	-2.0
CNGZ	**Carnagh Statio**	**5.84**	**185**	P	Pn	06 49 13.4	-0.3
MUGZ	**Murupara**	**6.05**	**196**	P	Pn	06 49 17.5	+0.9
MUGZ				S	Sn	06 50 27.2	+2.6
RIGZ	**Rimuhau**	**6.10**	**188**	P	Pn	06 49 16.8	-0.5
RIGZ				S	Sn	06 50 24.4	-1.5
SNGZ	**Shannon Statio**	**6.24**	**191**	P	Pn	06 49 18.2	-0.9
SNGZ				S	Sn	06 50 30.1	+0.9
NMHZ	**Naumai**	**6.64**	**194**	P	Pn	06 49 23.1	-1.6
NMHZ				S	Sn	06 50 39.6	+0.3

IDC ***29*** *06:58:59.7±0.5, 29.°19S×61.°23E, h0km, mb4.2/14, mbtmp4.2/15, ML4.8/1, MS3.8/23, Error ellipse: s-maj=19.5km s-min=18.0km az=58.0*

NEIC ***29*** *06:59:01.1±2.4, 29.°1S±0.°1×61.°1E±0.°1, h10km±1km, mb4.6/23, Error ellipse: s-maj=18.7km s-min=16.7km az=44.0*

ISC 29 06:59:01.1±0.5, 29.°1S±0.°1×61.°11E±0.°10, h10km, n80, σ1℗00/54, mb4.5/28, MS3.8/22, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	**Riviere de l'E**	**9.30**	**327**	Pn	**Pn**	**07 01 12.4**	**-3.0**
FOMA	**Nahampoana Res**	**13.25**	**285**	Pn	**Pn**	**07 02 07.5**	**-1.8**
VOI	**Vohitsoka**	**14.78**	**296**	Pn	**Pn**	**07 02 30.4**	**0.0**
ABPO	**Ambohimpanom**	**16.17**	**305**		**Pn**	**07 02 49.7**	**+1.0**
OPO	**Ambohidratompo**	**16.50**	**307**	Pn	**Pn**	**07 02 52.7**	**-0.1**
OPO	0.3nm,0.3s,baz=121,slow=14,SNR=13			Sn	Sn	07 05 42.8	-13
OPO	0.2nm,0.3s,baz=179,slow=22,SNR=6.0			LR	LR	07 07 48.5	
H08S1	comp=Z,197nm,18.6s,baz=22,slow=32 7.6nm,0.4s **Diego Carcia H**	**23.91**	**29**	T	T	07 28 57.6	
H08S2	baz=204,slow=76,SNR=13 **Diego Garcia H**	**23.91**	**29**	T	T	07 29 02.4	
H08S3	baz=204,slow=76,SNR=5.5 **Diego Garcia H**	**23.93**	**29**	T	T	07 28 59.1	
BOSA	baz=204,slow=76,SNR=9.1 **Boshof**	**31.32**	**262**	P	**P**	**07 05 19.4**	**-2.4**
BOSA	comp=Z,11nm,1.4s			IAmb	IAmb	07 05 43.5	
LBTB	**Lobatse** comp=Z,3.5nm,0.9s,baz=115,slow=9.5,SNR=4.2 comp=Z,3.5nm,0.9s	**31.81**	**269**	P	**P**	**07 05 27.4**	**+1.3**
LSZ	**Lusaka** comp=Z,168nm,18.5s,baz=146,slow=37	**33.32**	**287**	LR	LR	07 19 39.3	
LSZ	**Lusaka**	**33.32**	**287**	P	**P**	**07 05 40.1**	**+0.7**
LSZ	comp=Z,5.8nm,0.8s			IAmb	IAmb	07 05 42.4	
SUR	**Sutherland** comp=Z,200nm,18.4s,baz=140,slow=32	**34.64**	**254**	LR	LR	07 17 39.3	
KMBO	**Kilima Mbogo** comp=Z,190nm,19.1s,baz=94,slow=32	**35.96**	**316**	LR	LR	07 18 08.6	
MAW	**Mawson** comp=Z,260nm,18.7s,baz=354,slow=31	**38.51**	**179**	LR	LR	07 19 04.7	
MBAR	**Mbarara** comp=Z,102nm,18.6s,baz=108,slow=34	**40.55**	**309**	LR	LR	07 22 04.5	
ATD	**Arta Tunnel** comp=Z,162nm,18.6s,baz=169,slow=33	**44.10**	**334**	LR	LR	07 23 05.0	
H01W2	**Cape Leeuwin H** baz=262,slow=75,SNR=76	**44.90**	**112**	T	T	07 55 27.0	
H01W3	**Cape Leeuwin H** baz=262,slow=75,SNR=81	**44.90**	**111**	T	T	07 55 27.0	
H01W1	**Cape Leeuwin H** baz=262,slow=75,SNR=90	**44.92**	**112**	T	T	07 55 29.2	

WSAR	**Wadi Sarin**	**52.12**	**357**	LR	LR	07 24 32.6		
	comp=Z,76nm,20.6s,baz=188,slow=29							
SNAA	**Sanae**	**54.48**	**200**	P	**P**	**07 08 28.3**	**-0.2**
	comp=Z,2.0nm,1.0s,baz=64,slow=6.5,SNR=5.4							
SNAA				LR	LR	07 27 41.9		
	comp=Z,70nm,19.5s,baz=57,slow=32 comp=Z,2.0nm,1.0s							
SNAA	**Sanae**	**54.48**	**200**	IAmb	IAmb	07 08 31.2		
	comp=Z,4.7nm,1.2s							
CMAR	**Chiang Mai Arr**	**59.77**	**42**	P	**P**	**07 09 07.2**	**+0.6**
	comp=Z,1.6nm,0.5s,baz=227,slow=7.7,SNR=9.5 comp=Z,1.6nm,0.5s							
PYUN	**Piuthan**	**60.64**	**22**	*e*P	**P**	**07 09 12.8**	**+0.3**
	comp=Z,47nm,0.8s							
RAMN	**Ramite**	**60.88**	**26**	*e*P	**P**	**07 09 14.5**	**+0.2**
	comp=Z,38nm,1.0s							
DMN	**Daman**	**60.92**	**24**	*e*P	**P**	**07 09 15.0**	**+0.5**
	comp=Z,19nm,0.8s							
QSPA	**South Pole Qui**	**61.02**	**180**	P	**P**	**07 09 14.7**	**0.0**
	comp=Z,3.6nm,1.0s,baz=285,slow=3.2,SNR=6.4							
QSPA				LR	LR	07 31 20.6		
	comp=Z,84nm,21.1s,baz=274,slow=32 comp=Z,3.6nm,1.0s							
QSPA	**South Pole Qui**	**61.02**	**180**	P	**P**	**07 09 14.8**	**+0.1**
QSPA				IAmb	IAmb	07 09 17.8		
	comp=Z,8.4nm,1.2s							
GKN	**Gorkha**	**61.12**	**24**	*e*P	**P**	**07 09 15.8**	**+0.1**
DANN	**Dangsing**	**61.13**	**23**	*e*P	**P**	**07 09 16.0**	**0.0**
	comp=Z,36nm,0.7s							
JIRN	**Jiri**	**61.37**	**25**	*e*P	**P**	**07 09 17.9**	**+0.2**
GUN	**Gumba**	**61.48**	**25**	*e*P	**P**	**07 09 18.8**	**+0.4**
	comp=Z,27nm,0.9s							
TAPN	**Taplejung**	**61.68**	**27**	*e*P	**P**	**07 09 20.2**	**+0.5**
VNDA	**Vanda**	**64.07**	**166**	P	**P**	**07 09 34.5**	**-0.2**
	comp=Z,1.4nm,0.9s,baz=261,slow=6.3,SNR=8.0 comp=Z,1.4nm,0.9s							
ASAR	**Alice Springs**	**64.50**	**104**	P	**P**	**07 09 37.6**	**-0.8**
	comp=Z,2.9nm,0.8s,baz=244,slow=6.1,SNR=23 comp=Z,2.9nm,0.8s							
ASAR	**Alice Springs**	**64.50**	**104**	P	**P**	**07 09 38.0**	**-0.4**
WRA	**Warramunga Arr**	**66.32**	**100**	P	**P**	**07 09 49.7**	**-0.5**
	comp=Z,2.4nm,0.8s,baz=246,slow=6.0,SNR=21 comp=Z,2.4nm,0.8s							
WB2	**Warramunga Arr**	**66.33**	**100**	P	**P**	**07 09 50.1**	**-0.2**
WB0	**Warramunga Arr**	**66.44**	**100**	P	**P**	**07 09 50.3**	**-0.7**
WB0	comp=Z,12nm,1.4s			IAmb	IAmb	07 10 09.0		
WR0	**Warramunga Arr**	**66.48**	**100**	P	**P**	**07 09 50.3**	**-1.0**
GEYT	**Alibeck**	**66.77**	**357**	LR	LR	07 36 04.3		
	comp=Z,50nm,20.7s,baz=180,slow=33							
GAR	**Garm**	**68.32**	**8**	P	**P**	**07 10 03.2**	**+0.7**
GNI	**Garni**	**70.59**	**347**	LR	LR	07 39 03.6		
	comp=Z,83nm,20.2s,baz=173,slow=34							
TORD	**Torodi Ar. Bea**	**71.08**	**298**	P	**P**	**07 10 21.6**	**+1.7**
	comp=Z,2.8nm,0.9s,baz=118,slow=5.0,SNR=12							
TORD				LR	LR	07 41 14.9		
	comp=Z,145nm,19.7s,baz=211,slow=36 comp=Z,2.8nm,0.9s							
TORD	**Torodi Ar. Bea**	**71.08**	**298**	P	**P**	**07 10 20.0**	**+0.2**
TORD				IAmb	IAmb	07 10 23.1		
	comp=Z,4.8nm,1.1s							
KK31	**Karatay Array**	**72.40**	**7**	P	**P**	**07 10 27.7**	**+0.5**
KK31				IAmb	IAmb	07 10 32.0		
	comp=Z,5.3nm,1.2s							
KKAR	**Karatay Array**	**72.40**	**7**	P	**P**	**07 10 27.2**	**0.0**
KKAR				IAmb	IAmb	07 10 32.0		
	comp=Z,5.3nm,1.2s							
KKAR	**Karatay Array**	**72.40**	**7**	P	**P**	**07 10 26.0**	**-1.2**
KDJ	**Kajisay**	**72.44**	**12**	P	**P**	**07 10 27.6**	**-0.1**
KDJ				IAmb	IAmb	07 11 03.9		
	comp=Z,5.0nm,0.6s							
AAK	**Ala-Archa**	**72.47**	**10**	LR	LR	07 39 01.6		
	comp=Z,44nm,20.9s,baz=164,slow=33							
PRZ	**Przheval'sk**	**73.02**	**13**	P	**P**	**07 10 32.1**	**+1.0**
BRTR	**Keskin Array B**	**73.12**	**338**	LR	LR	07 39 59.2		
	comp=Z,37nm,20.2s,baz=149,slow=34							
KBZ	**Khabaz**	**74.40**	**346**	LR	LR	07 41 23.0		
	comp=Z,104nm,21.8s,baz=158,slow=34							
MAKZ	**Makanchi**	**77.91**	**14**	P	**P**	**07 11 00.4**	**+1.5**
MAKZ				IAmb	IAmb	07 11 03.2		
	comp=Z,5.6nm,1.1s							
MK31	**Makanchi Array**	**77.96**	**15**	P	**P**	**07 10 57.8**	**-1.4**
MKAR	**Makanchi Array**	**77.96**	**15**	P	**P**	**07 10 59.2**	**+0.1**
	comp=Z,1.5nm,0.8s,baz=194,slow=4.2,SNR=15 comp=Z,1.5nm,0.8s							
MKAR	**Makanchi Array**	**77.96**	**15**	P	**P**	**07 10 58.3**	**-0.9**
ABKAR	**Akbulak array**	**78.04**	**359**	P	**P**	**07 10 58.5**	**-1.0**
ABKAR	**Akbulak array**	**78.04**	**359**	P	**P**	**07 10 59.9**	**+0.4**
ABKAR				IAmb	IAmb	07 11 03.3		
	comp=Z,5.2nm,1.2s							
AKTO	**Aktyubinsk**	**79.26**	**358**	LR	LR	07 43 16.6		
	comp=Z,30nm,20.8s,baz=164,slow=34							
KEST	**Kesra**	**80.85**	**320**	LR	LR	07 48 47.9		
	comp=Z,113nm,18.2s,baz=150,slow=37							
MLR	**Muntele Rosu**	**80.86**	**336**	LR	LR	07 45 07.1		
	comp=Z,34nm,20.9s,baz=120,slow=34							
KURK	**Kurchatov**	**81.00**	**11**	P	**P**	**07 11 15.3**	**-0.2**
KURK				IAmb	IAmb	07 11 19.0		
	comp=Z,5.2nm,1.1s							
AKASG	**Malin Array Be**	**84.34**	**340**	P	**P**	**07 11 33.1**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=150,slow=3.9,SNR=6.1 comp=Z,0.7nm,0.5s							
ZAA0	**Zalesovo Array**	**85.25**	**14**	P	**P**	**07 11 37.8**	**+0.3**
ZAA0				IAmb	IAmb	07 11 46.3		
	comp=Z,2.9nm,0.8s							
ZALV	**Zalesovo Beam**	**85.25**	**14**	P	**P**	**07 11 37.6**	**+0.1**
	comp=Z,2.0nm,0.7s,baz=204,slow=3.3,SNR=7.3 comp=Z,2.0nm,0.7s							
SONM	**Songino Array**	**86.75**	**29**	P	**P**	**07 11 45.7**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=216,slow=5.2,SNR=2.7 comp=Z,0.3nm,0.4s							
VRAC	**Vranov**	**87.58**	**333**	LR	LR	07 51 22.2		
	comp=Z,23nm,18.9s,baz=166,slow=36							
MDT	**Midelt**	**87.60**	**310**	LR	LR	07 49 10.6		
	comp=Z,99nm,20.5s,baz=152,slow=34							
DAVOX	**Davos/Dischmat**	**88.58**	**328**	LR	LR	07 55 26.3		
	comp=Z,20nm,18.3s,baz=202,slow=38							
ESDC	**Sonseca Array**	**91.34**	**316**	P	**P**	**07 12 09.2**	**+2.1**
	comp=Z,1.3nm,0.9s,baz=113,slow=3.3,SNR=2.8 comp=Z,1.3nm,0.9s							
PLCA	**Paso Flores**	**97.30**	**215**	LR	LR	07 50 06.9		
	comp=Z,31nm,18.2s,baz=162,slow=32							
CPUP	**Villa Florida**	**99.22**	**233**	P	**Pdif**	**07 12 42.1**	**-1.3**
	comp=Z,0.7nm,0.4s,baz=98,slow=5.3,SNR=5.2 comp=Z,0.7nm,0.4s							
YKA	**Yellowknife Ar**	**146.52**	**356**	PKPbc	**PKPbc**	**07 18 41.3**	**-0.6**
	comp=Z,2.3nm,0.9s,baz=352,slow=2.7,SNR=17							
YKA	**Yellowknife Ar**	**146.52**	**356**	PKPdf	**PKPdf**	**07 18 38.3**	**-2.2**
ULM	**Lac du Bonnet**	**152.66**	**327**	PKPbc	**PKPbc**	**07 18 57.2**	**-0.4**
	comp=Z,2.2nm,0.6s,baz=169,slow=3.8,SNR=2.9							
PDAR	**Pinedale Array**	**164.45**	**334**	PKP	**PKPdf**	**07 19 05.4**	**+0.1**
	comp=Z,0.4nm,0.8s,baz=88,slow=2.8,SNR=4.4							
TXAR	**Lajitas Array**	**166.70**	**275**	PKP	**PKPdf**	**07 19 07.4**	**0.0**
	comp=Z,0.2nm,3.4s,baz=131,slow=2.7,SNR=7.1							
NVAR	**Mina Array Bea**	**170.71**	**357**	PKP	**PKPdf**	**07 19 11.3**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=111,slow=2.0,SNR=3.0							

IDC ***29*** *07:00:36.8±1.8, 14.°01S×166.°06E, h0km, mb3.8/3, mbtmp4.1/5, ML4.4/2, MS3.2/5, Error ellipse: s-maj=61.9km s-min=27.9km az=145.0*

NEIC ***29*** *07:00:37.3±2.5, 14.°2S±0.°1×166.°2E±0.°2, h10km±2km, mb4.5/7, Error ellipse: s-maj=28.0km s-min=15.2km az=69.0*

ISC 29 07:00:37.0±1.0, 14.°3S±0.°1×166.°2E±0.°1, h10km, n20, σ1℗23/16, mb4.5/7, MS3.1/3, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOUNC	**Koumac, New Ca**	**6.52**	**196**	Pn	**Pn**	**07 02 13.5**	**+0.5**
HNR	**Honiara**	**7.77**	**307**	Pn	**Pn**	**07 02 28.2**	**-1.9**
HNR	29nm,0.3s,baz=170,slow=21,SNR=6.0 comp=Z,152nm,21.8s,baz=150,slow=37 59nm,0.4s			LR	LR	07 05 12.6	
OUENC	**Ouen Island, N**	**8.14**	**176**	Pn	**Pn**	**07 02 34.3**	**-0.9**
PINNC	**Pines Island,**	**8.39**	**172**	Pn	**Pn**	**07 02 37.1**	**-1.7**
CTA	**Charters Tower**	**19.90**	**250**	P	**Pn**	**07 05 11.6**	**+1.1**
CTA	0.3nm,0.3s,baz=80,slow=8.2,SNR=4.8 comp=Z,73nm,20.0s,baz=132,slow=32 10.0nm,1.0s			LR	LR	07 11 03.0	
NNZ	**Nelson**	**27.58**	**168**	P	**P**	**07 06 23.3**	**-0.9**
STKA	**Stephens Creek** comp=Z,146nm,18.3s,baz=283,slow=35	**28.52**	**228**	LR	LR	07 17 23.9	
LTZ	**Lake Taylor**	**28.90**	**171**	P	**P**	**07 06 36.5**	**+0.3**
WRA	**Warramunga Arr**	**30.93**	**255**	P	**P**	**07 06 53.4**	**-0.9**
	0.9nm,1.0s,baz=86,slow=8.6,SNR=2.7 0.9nm,1.0s							
WRA	**Warramunga Arr** comp=Z,0.2nm,1.1s	**30.93**	**255**	IAmb	IAmb	07 07 01.3		
ASAR	**Alice Springs** comp=Z,0.8nm,0.5s,baz=75,slow=9.1,SNR=13 comp=Z,0.8nm,0.5s	**31.87**	**248**	P	**P**	**07 07 03.8**	**+1.1**
GUMO	**Guam** comp=Z,34nm,19.6s,baz=116,slow=35	**34.80**	**322**	LR	LR	07 20 58.0	
JCJ	**Chichijima** comp=Z,12nm,18.0s,baz=316,slow=37	**47.26**	**330**	LR	LR	07 29 54.9	
I21K	**Tanana**	**85.23**	**16**	P	**P**	**07 13 15.1**	**+1.7**
I21K	comp=Z,6.0nm,0.9s			IAmb	IAmb	07 13 20.8	
IMAR	**Indian Mountai**	**85.39**	**15**	P	**P**	**07 13 14.3**	**+0.1**
WRH	**Wood River Hil**	**85.83**	**18**	P	**P**	**07 13 16.9**	**+0.6**
WRH	comp=Z,2.5nm,0.7s			IAmb	IAmb	07 13 23.0	
MDM	**Murphy Dome**	**86.14**	**18**	P	**P**	**07 13 18.8**	**+0.8**
MDM	comp=Z,3.5nm,1.0s			IAmb	IAmb	07 13 24.6	
ILAR	**Eielson Array** comp=Z,1.0nm,0.8s,baz=236,slow=6.0,SNR=15 comp=Z,1.0nm,0.8s	**86.41**	**18**	P	**P**	**07 13 19.4**	**+0.1**
J25K	**Salcha River,**	**86.77**	**19**	P	**P**	**07 13 21.1**	**0.0**
J25K	comp=Z,2.9nm,1.0s			IAmb	IAmb	07 13 28.2	
ARCES	**ARCESS Array B** comp=Z,0.9nm,0.8s,baz=43,slow=1.6,SNR=6.7	**119.53**	**345**	PKP	**PKiKP**	**07 19 28.4**	**+1.9**

IDC ***29*** *07:13:17.2±1.9, 0.°66N×125.°57E, h0km, mb3.5/3, mbtmp3.6/3, MS3.7/1, Error ellipse: s-maj=181.1km s-min=24.8km az=64.0*

DJA ***29*** *07:13:19.6±0.4, 1.°1N±8.°×12.°6E±1.°, h10km, M3.4/6, MLv3.4/6*

ISC 29 07:13:22.3±1.3, 0.°8N±0.°2×126.°22E±0.°08, h44km, n7, σ1℗06/6, mb3.5/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.15**	**93**	P	**Pn**	**07 13 41.9**	**-0.1**
LBMI	**Labuha**	**1.94**	**139**	P	**Pn**	**07 13 52.0**	**-0.8**
KMSI	**Cibinong**	**2.25**	**264**	P	**Pn**	**07 13 56.9**	**-0.2**
WRA	**Warramunga Arr** 1.5nm,0.8s,baz=336,slow=11,SNR=10 1.5nm,0.8s	**22.12**	**159**	P	**P**	**07 18 14.7**	**+0.4**
ASAR	**Alice Springs** 0.5nm,0.4s,baz=344,slow=9.7,SNR=9.6 0.5nm,0.4s	**25.46**	**163**	P	**P**	**07 18 48.0**	**+1.5**
STKA	**Stephens Creek** comp=Z,102nm,18.6s,baz=208,slow=42	**35.64**	**157**	LR	LR	07 38 04.3	
MKAR	**Makanchi Array** 0.2nm,0.4s,baz=121,slow=8.1,SNR=7.5 0.2nm,0.4s	**59.66**	**326**	P	**P**	**07 23 21.8**	**-0.4**

IDC ***29*** *07:14:21.1±3.3, 53.°87N×90.°98E, h0km, mbtmp3.4/3, ML2.7/3, Error ellipse: s-maj=28.7km s-min=24.2km az=40.0*

NNC ***29*** *07:14:29.8±1.7, 53.°54N×90.°38E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=13.5km s-min=10.3km az=91.0, Suspected Mining explosion.*

ISC 29 07:14:23.4±4.1, 53.°8N±0.°1×90.°7E±0.°2, h0km, n10, σ1℗43/13, 7C-5D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** 0.2nm,1.0s,baz=91,slow=316,SNR=4.9	**3.48**	**274**	*i*		07 36 00.0	
ZAA0	**Zalesovo Array** 2.1nm,0.8s	**3.48**	**274**	⇓Pn	**Pb**	**07 15 23.7**	**-2.2**
ZAA0	24nm,1.2s			⇑Lg	Lg	07 16 15.2	
ZALV	**Zalesovo Beam** 0.4nm,0.3s,baz=96,slow=13,SNR=4.0	**3.48**	**274**	Pn	**Pn**	**07 15 20.4**	**+1.7**
ZALV	0.8nm,0.3s,baz=93,slow=25,SNR=4.7 5.2nm,0.7s			Lg	Lg	07 16 15.0	
KURK	**Kurchatov** 4.6nm,0.9s	**8.04**	**252**	⇑Pn	**Pn**	**07 16 23.9**	**+2.6**
KURK	17nm,1.0s			⇓Sn	**Sn**	**07 17 53.3**	**+0.4**
KURK	60nm,0.9s			⇓Lg	Lg	07 18 37.7	
KURBB	**Kurchatov Arra** 0.2nm,0.3s,baz=64,slow=14,SNR=16	**8.14**	**252**	Pn	**Pn**	**07 16 22.1**	**-0.6**
KURBB	0.1nm,0.3s,baz=68,slow=27,SNR=7.0			Sn	**Sn**	**07 17 55.5**	**+0.3**
KURBB	0.1nm,0.3s,baz=74,slow=31,SNR=3.1 2.2nm,0.4s			Lg	Lg	07 18 44.3	
KURBB	**Kurchatov Arra** 4.1nm,0.6s	**8.14**	**252**	⇑Pn	**Pn**	**07 16 23.3**	**+0.6**
KURBB	41nm,0.8s			⇓Sn	**Sn**	**07 17 56.4**	**+1.2**
KURBB	59nm,0.8s			⇑Lg	Lg	07 18 39.1	
MK31	**Makanchi Array** 2.2nm,0.8s,baz=38,slow=13,SNR=11	**8.87**	**221**	Pn	**Pn**	**07 16 34.1**	**+1.4**
MK31	4.3nm,0.8s,baz=44,slow=22,SNR=4.2			⇑Sn	**Sn**	**07 18 13.1**	**-0.1**
MK31	27nm,1.1s,baz=34,slow=27,SNR=4.7			⇑

ULHL	**Ulahol**	**3.25**	**34**	⇓*e*P		**Pn**	**07 24 29.5**	**+1.8**
	baz=32								
ULHL				⇓*e*S		**Sb**	**07 25 09.7**	**-4.4**
	baz=32								
CHMS	**Chumysh**	**3.50**	**12**	⇑Pg		**Pg**	**07 24 42.8**	**-0.6**
	11nm,0.7s								
CHMS				⇑Lg		Lg	07 25 30.8		
	14nm,0.7s								
TKM2	**Tokmak 2**	**3.61**	**21**	⇓Pn		**Pb**	**07 24 37.0**	**-3.5**
	7.1nm,0.8s								
TKM2				⇓Lg		Lg	07 25 35.0		
	14nm,0.6s								
CHGR	**Chuyangaron**	**3.72**	**257**	⇑*e*P		**Pn**	**07 24 35.6**	**+1.6**
	baz=59								
CHGR				⇑*e*S		**Sn**	**07 25 20.5**	**+2.6**
	baz=59								
KST	**Kastek**	**3.83**	**24**	*e*P		**Pg**	**07 24 48.1**	**-1.8**
	6.6nm,0.5s								
KST				*e*S		**Sg**	**07 25 42.0**	**+2.4**
	17nm,0.7s								
KST	**Kastek**	**3.83**	**24**	Pg		**Pg**	**07 24 48.1**	**-1.8**
	6.6nm,0.5s								
KST				Lg		Lg	07 25 42.0		
	17nm,0.7s								
IUG	**luzhnay**	**3.84**	**313**	*e*P		**Pb**	**07 24 42.1**	**-2.3**
	327nm,0.4s								
IUG				*e*S		**Sb**	**07 25 31.4**	**+0.4**
	80nm,0.4s								
IUG	**luzhnay**	**3.84**	**313**	Pg		**Pb**	**07 24 42.1**	**-2.3**
	327nm,0.4s								
IUG				Lg		Lg	07 25 31.4		
	80nm,0.4s								
SGDS	**Sogindy**	**3.93**	**9**	*e*P		**Pg**	**07 24 49.3**	**-2.3**
	10.0nm,0.7s								
SGDS				*e*S		**Sg**	**07 25 44.0**	**+1.5**
	10nm,0.5s								
SGDS	**Sogindy**	**3.93**	**9**	Pg		**Pg**	**07 24 49.3**	**-2.3**
	10.0nm,0.7s								
SGDS				Lg		Lg	07 25 44.0		
	10nm,0.5s								
DGS	**Degeres**	**3.96**	**21**	*e*P		**Pg**	**07 24 50.0**	**-2.2**
	9.7nm,0.5s								
DGS				*e*S		**Sg**	**07 25 44.7**	**+1.2**
	14nm,0.6s								
DGS	**Degeres**	**3.96**	**21**	Pg		**Pg**	**07 24 49.9**	**-2.2**
	9.7nm,0.5s								
DGS				Lg		Lg	07 25 44.7		
	14nm,0.6s								
MTBS	**Maitube**	**4.07**	**28**	*e*P		**Pg**	**07 24 51.9**	**-2.5**
	6.4nm,0.3s								
MTBS				*e*S		**Sg**	**07 25 48.0**	**+0.9**
	14nm,0.2s								
MTBS	**Maitube**	**4.07**	**28**	Pg		**Pg**	**07 24 51.9**	**-2.5**
	6.4nm,0.3s								
MTBS				Lg		Lg	07 25 48.0		
	14nm,0.2s								
TNSS	**Tian-Shan**	**4.20**	**33**	*e*P		**Pg**	**07 24 54.2**	**-2.6**
	5.9nm,0.7s								
TNSS				*e*S		**Sg**	**07 25 52.3**	**+1.1**
	5.0nm,0.4s								
TNSS	**Tian-Shan**	**4.20**	**33**	Pg		**Pg**	**07 24 54.2**	**-2.6**
	5.9nm,0.7s								
TNSS				Lg		Lg	07 25 52.3		
	5.0nm,0.4s								
KK31	**Karatay Array**	**4.31**	**326**	⇑Pn		**Pn**	**07 24 44.7**	**+2.7**
	1.3nm,0.4s,baz=130,slow=12,SNR=12								
KK31				⇑Pg		**Pg**	**07 24 55.5**	**-3.4**
	2.2nm,0.3s,baz=151,slow=16,SNR=7.8								
KK31				⇑Sn		**Sn**	**07 25 35.7**	**+3.4**
	6.5nm,0.5s,baz=0.0,slow=0.1,SNR=4.2								
KK31				⇓Lg		Lg	07 25 52.8		
	6.0nm,0.4s,baz=228,slow=21,SNR=4.3								
KRBS	**Karabastau**	**4.36**	**18**	*e*P		**Pg**	**07 24 57.1**	**-2.7**
KRBS				*e*S		**Sg**	**07 25 57.1**	**+0.9**
	12nm,0.7s								
KRBS	**Karabastau**	**4.36**	**18**	Pg		**Pg**	**07 24 57.1**	**-2.7**
KRBS				Lg		Lg	07 25 57.1		
	12nm,0.7s								
BRLS	**Borolday**	**4.56**	**320**	*e*P		**Pb**	**07 24 53.9**	**-2.6**
	6.1nm,0.3s								
BRLS				*e*S		**Sb**	**07 25 51.8**	**+0.1**
	20nm,0.5s								
BRLS	**Borolday**	**4.56**	**320**	Pg		**Pb**	**07 24 53.9**	**-2.6**
	6.1nm,0.3s								
BRLS				Lg		Lg	07 25 51.8		
	20nm,0.5s								
KTBS	**Karatobe**	**4.67**	**27**	*e*P		**Pg**	**07 25 03.5**	**-2.3**
	5.0nm,0.3s								
KTBS				*e*S		**Sg**	**07 26 08.0**	**+1.8**
	20nm,0.4s								
KTBS	**Karatobe**	**4.67**	**27**	Pg		**Pg**	**07 25 03.5**	**-2.3**
	5.0nm,0.3s								
KTBS				Lg		Lg	07 26 08.0		
	20nm,0.4s								
KUU	**Kurty**	**4.72**	**23**	*e*P		**Pg**	**07 25 04.5**	**-2.3**
	5.3nm,0.3s								
KUU				*e*S		**Sg**	**07 26 09.8**	**+1.9**
	14nm,0.6s								
KUU	**Kurty**	**4.72**	**23**	Pg		**Pg**	**07 25 04.5**	**-2.3**
	5.3nm,0.3s								
KUU				Lg		Lg	07 26 09.8		
	14nm,0.6s								
CHKK	**Chushkaly**	**4.90**	**28**	*e*P		**Pg**	**07 25 07.6**	**-2.6**
	3.6nm,0.4s								
CHKK				*e*S		**Sg**	**07 26 15.2**	**+1.5**
	9.1nm,0.4s								
CHKK	**Chushkaly**	**4.90**	**28**	Pg		**Pg**	**07 25 07.6**	**-2.6**
	3.6nm,0.4s								
CHKK				Lg		Lg	07 26 15.2		
	9.1nm,0.4s								
SATY	**Saty**	**4.92**	**43**	*e*P		**Pg**	**07 25 09.0**	**-1.6**
	4.2nm,0.5s								
SATY				*e*S		**Sg**	**07 26 17.9**	**+3.6**
	6.8nm,0.4s								
SATY	**Saty**	**4.92**	**43**	Pg		**Pg**	**07 25 09.0**	**-1.6**
	4.2nm,0.5s								
SATY				Lg		Lg	07 26 17.9		
	6.8nm,0.4s								
KURS	**Kuram**	**5.11**	**39**	*e*P		**Pg**	**07 25 13.2**	**-1.0**
	3.1nm,0.3s								
KURS				*e*S		**Sg**	**07 26 24.7**	**+4.4**
	6.9nm,0.7s								
KURS	**Kuram**	**5.11**	**39**	Pg		**Pg**	**07 25 13.2**	**-1.0**
	3.1nm,0.3s								
KURS				Lg		Lg	07 26 24.7		
	6.9nm,0.7s								
KPKS	**Kokpek**	**5.35**	**42**	*e*P		**Pg**	**07 25 17.3**	**-1.5**
	2.5nm,0.3s								
KPKS				*e*S		**Sg**	**07 26 31.9**	**+3.8**
	6.3nm,0.4s								
KPKS	**Kokpek**	**5.35**	**42**	Pg		**Pg**	**07 25 17.3**	**-1.5**
	2.5nm,0.3s								
KPKS				Lg		Lg	07 26 31.9		
	6.3nm,0.4s								
BTLS	**Baital**	**5.47**	**2**	*e*P		**Pg**	**07 25 18.2**	**-2.9**
	2.6nm,0.2s								
BTLS				*e*S		**Sg**	**07 26 33.2**	**+1.3**
	7.1nm,0.6s								
BTLS	**Baital**	**5.47**	**2**	Pg		**Pg**	**07 25 18.2**	**-2.9**
	2.6nm,0.2s								
BTLS				Lg		Lg	07 26 33.2		
	7.1nm,0.6s								
ARXS	**Arharly**	**5.53**	**32**	*e*P		**Pg**	**07 25 20.0**	**-2.3**
	4.2nm,0.6s								
ARXS				*e*S		**Sg**	**07 26 36.3**	**+2.4**
	11nm,0.9s								
ARXS	**Arharly**	**5.53**	**32**	Pg		**Pg**	**07 25 20.0**	**-2.3**
	4.2nm,0.6s								
ARXS				Lg		Lg	07 26 36.3		
	11nm,0.9s								
BLB	**Baldybastay**	**5.72**	**36**	*e*P		**Pg**	**07 25 24.0**	**-1.8**
	5.2nm,0.3s								
BLB				*e*S		**Sg**	**07 26 43.7**	**+3.8**
	6.6nm,0.9s								
BLB	**Baldybastay**	**5.72**	**36**	Pg		**Pg**	**07 25 24.0**	**-1.8**
	5.2nm,0.3s								
BLB				Lg		Lg	07 26 43.7		
	6.6nm,0.9s								
AB31	**Akbulak array**	**13.83**	**319**	⇑Pn		**Pn**	**07 26 52.4**	**+0.1**
	0.3nm,0.4s,baz=129,slow=14,SNR=11								

MAN 29 07:32:09.6,16.70N×120.40E,h72km,mb3.9,ML2.7, MS2.2,1C-3D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.56**	**236**	⇓*e*P	Pb	07 32 24.9	+0.2
SMPP	**San Manuel, Pa**	**0.61**	**154**	⇓*e*P	Pb	07 32 25.5	+0.4
SAMP	**Sagada Mountai**	**0.61**	**51**	⇓*e*P	Pb	07 32 25.2	0.0
PCPH	**Palayan**	**1.31**	**149**	⇑*e*P	Pn	07 32 33.5	+3.0

IDC 29 07:34:03.3±999.0,27.15N×35.71E,h0km,Error ellipse: s-maj=1293.0km s-min=239.0km az=126.0,Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I48TN	**KESRA INFRASON**	**24.05**	**298**	*i*		09 57 50.0	
	0.1nm,0.6s,baz=97,slow=314,SNR=1.7						
I26DE	**FREYUNG INFRAS**	**27.56**	**328**	*i*		10 22 30.0	
	baz=133,slow=323,SNR=1.8						
I42PT	**GRACIOSA ISLAN**	**53.70**	**300**	*i*		13 09 50.0	
	baz=84,slow=318,SNR=2.8						

*NEIC **29** 07:59:05.5±0.2,36.281N±0.010×97.52W±0.01,h5km±3km, Error ellipse: s-maj=1.7km s-min=0.9km az=221.0*
*TUL **29** 07:59:05.7±0.3,36.284N±0.010×97.51W±0.01,h7km±4km, ML3.3,mb_Lg3.1/99(NEIC),Error ellipse: s-maj=1.5km s-min=1.2km az=222.0*
*ANF **29** 07:59:05.5±0.6,36.30N×97.50W,h4km±3km,ML3.9/10, Error ellipse: s-maj=3.8km s-min=2.7km az=106.0*
ISC 29 07:59:06.1±0.9,36.28N±0.03×97.50W±0.04,h10km,n79, σ0s70/43,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK005	**Luther M Schoo**	**0.67**	**158**	Pg	**Pg**	**07 59 18.9**	**-0.2**
OKCFA	**Oklahoma City**	**0.86**	**178**	Pg	**Pg**	**07 59 22.1**	**-0.6**
OKCFA	**Oklahoma City**	**0.86**	**178**	P	**Pg**	**07 59 22.1**	**-0.6**
	baz=356,SNR=35						
OKCSW	**OKLAHOMA CITY**	**0.87**	**177**		**Pg**	**07 59 22.4**	**-0.5**
T35B	**Sooner Cattle**	**1.02**	**51**	P	**Pg**	**07 59 24.9**	**-0.8**
	baz=232,SNR=152						
T35B				S	**Sg**	**07 59 38.3**	**-0.6**
	baz=232						
FNO	**Franklin**	**1.02**	**176**	Pg	**Pg**	**07 59 24.9**	**-0.8**
TUL1	**Leonard**	**1.43**	**104**		**Pn**	**07 59 31.7**	**-0.4**
TUL1				IAmb_Lg		07 59 52.7	
	comp=Z,90nm,0.9s						
TUL1	**Leonard**	**1.43**	**104**	P	**Pn**	**07 59 31.6**	**-0.4**
	baz=286						
TUL1				S	**Sn**	**07 59 51.3**	**+0.3**
	baz=286						
X34A	**Smith Ranch, M**	**1.69**	**189**		**Pb**	**07 59 36.8**	**-0.5**
WMOK	**Wichita Mounta**	**1.86**	**215**	Pn	**Pn**	**07 59 38.4**	**+0.3**
WMOK	**Wichita Mounta**	**1.86**	**215**	S	**Sb**	**08 00 03.4**	**-0.1**
	baz=33						
R32A	**Long Quarter,**	**2.35**	**336**	Pn	**Pn**	**07 59 46.4**	**+1.6**
R32A	**Long Quarter,**	**2.35**	**336**	S	**Sn**	**08 00 14.3**	**+0.5**
	baz=156						
X37A	**Clayton**	**2.42**	**134**	Pn	**Pn**	**07 59 46.6**	**+0.9**
X37A				IAmb_Lg		08 00 24.7	
	comp=Z,75nm,0.7s						
X37A	**Clayton**	**2.42**	**134**	P	**Pn**	**07 59 46.8**	**+1.0**
	baz=315,SNR=48						
X37A				S	**Sn**	**08 00 17.5**	**+2.1**
	baz=315						
U38A	**Gravette**	**2.52**	**85**	Pn	**Pn**	**07 59 48.1**	**+1.0**
HHAR	**Hobbs**	**2.87**	**89**	Pn	**Pn**	**07 59 52.4**	**+0.4**
HHAR	**Hobbs**	**2.87**	**89**	P	**Pn**	**07 59 52.5**	**+0.5**
	baz=271						
KSU1	**Kansas State U**	**2.91**	**14**	Pn	**Pn**	**07 59 52.8**	**+0.3**
KSU1	**Kansas State U**	**2.91**	**14**	P	**Pn**	**07 59 52.6**	**+0.2**
	baz=195						
Z35A	**Perchaen, San**	**2.95**	**176**	Pn	**Pn**	**07 59 53.5**	**+0.5**
CBKS	**Cedar Bluff**	**3.10**	**326**	Pn	**Pn**	**07 59 55.8**	**+0.7**
W39A	**Magazine**	**3.21**	**109**	IAmb_Lg		08 00 52.3	
	comp=Z,62nm,0.9s						
S39A	**Bolivar**	**3.63**	**66**	Pn	**Pn**	**08 00 03.0**	**+0.6**
S39A				IAmb_Lg		08 01 01.3	
	comp=Z,66nm,1.0s						
S39A	**Bolivar**	**3.63**	**66**	P	**Pn**	**08 00 02.9**	**+0.6**
	baz=248,SNR=26						
MIAR	**Mount Ida**	**3.64**	**117**	Pn	**Pn**	**08 00 03.1**	**+0.6**
MIAR				IAmb_Lg		08 01 08.7	
	comp=Z,34nm,0.7s						
MIAR	**Mount Ida**	**3.64**	**117**	P	**Pn**	**08 00 03.4**	**+0.9**
	baz=300,SNR=32						
Z38A	**Mt. Pleasant**	**3.65**	**145**	Pn	**Pn**	**08 00 03.3**	**+0.6**
AMTX	**Amarillo**	**3.68**	**249**	Pn	**Pn**	**08 00 03.4**	**+0.2**
AMTX				IAmb_Lg		08 01 05.5	
	comp=Z,48nm,0.7s						
ABTX	**Abilene, Hawle**	**4.05**	**207**	IAmb_Lg		08 01 14.8	
	comp=Z,54nm,1.0s						
WHTX	**Lake Whitney,**	**4.28**	**180**	Pn	**Pn**	**08 00 11.8**	**+0.6**
MGMO	**Mountain Grove**	**4.29**	**77**	Pn	**Pn**	**08 00 12.0**	**+0.6**
MGMO				IAmb_Lg		08 01 29.2	
	comp=Z,31nm,0.7s						
WHAR	**Wooly Hollow**	**4.35**	**102**	Pn	**Pn**	**08 00 12.7**	**+0.5**
WHAR				IAmb_Lg		08 01 25.3	
	comp=Z,28nm,0.7s						
WLAR	**White Oak Lake**	**4.43**	**124**	Pn	**Pn**	**08 00 14.2**	**+0.8**
WLAR				IAmb_Lg		08 01 37.6	
	comp=Z,42nm,0.8s						
UALR	**University of**	**4.46**	**108**	IAmb_Lg		08 01 32.9	
	comp=Z,46nm,1.1s						
237A	**Washetta, Mont**	**4.49**	**161**	Pn	**Pn**	**08 00 14.1**	**-0.1**
237A	**Washetta, Mont**	**4.49**	**161**	P	**Pn**	**08 00 14.0**	**-0.1**
	baz=342,SNR=9.6						
P38A	**Dawn**	**4.58**	**42**	IAmb_Lg		08 01 33.0	
	comp=Z,53nm,0.8s						
R40A	**Maddies Statio**	**4.63**	**63**	Pn	**Pn**	**08 00 16.5**	**+0.4**
R40A	**Maddies Statio**	**4.63**	**63**	P	**Pn**	**08 00 16.4**	**+0.4**
	baz=246,SNR=9.6						
Z41A	**Richland Creek**	**4.90**	**127**	IAmb_Lg		08 01 51.0	
	comp=Z,41nm,0.8s						
KSCO	**Kaye Shedlock'**	**4.90**	**305**	IAmb_Lg		08 01 53.2	
	comp=Z,37nm,0.8s						
NATX	**Nacogdoches**	**5.08**	**152**	IAmb_Lg		08 01 58.6	
	comp=Z,27nm,0.8s						
LCAR	**Lake Charles**	**5.13**	**90**	IAmb_Lg		08 01 52.2	
	comp=Z,24nm,0.8s						
BGNE	**Belgrade**	**5.15**	**355**	Pn	**Pn**	**08 00 22.7**	**-0.6**
CCAR	**Cane Creek**	**5.25**	**115**	Pn	**Pn**	**08 00 25.1**	**+0.5**
CCAR				IAmb_Lg		08 01 59.2	
	comp=Z,37nm,0.8s						
CCM	**Cathedral Cave**	**5.30**	**69**	Pn	**Pn**	**08 00 25.4**	**+0.1**
CCM				IAmb_Lg		08 01 53.5	
	comp=Z,48nm,0.8s						
435B	**Jarrell**	**5.48**	**181**	Pn	**Pn**	**08 00 27.4**	**-0.4**
N38A	**Joes South For**	**5.61**	**35**	IAmb_Lg		08 02 12.2	
	comp=Z,52nm,0.8s						
T25A	**Trinidad**	**5.62**	**281**	IAmb_Lg		08 02 09.6	
	comp=Z,31nm,0.8s						
PBMO	**Poplar Bluff**	**5.71**	**83**	IAmb_Lg		08 02 17.8	
	comp=Z,38nm,0.7s						
FVM	**French Village**	**5.90**	**71**	IAmb_Lg		08 02 15.4	
	comp=Z,33nm,0.8s						
GNAR	**Gosnell**	**6.06**	**91**	IAmb_Lg		08 02 34.5	
	comp=Z,32nm,0.8s						
JCT	**Junction City**	**6.09**	**199**	IAmb_Lg		08 02 24.1	
	comp=Z,35nm,0.8s						
143A	**Socs Landing,**	**6.17**	**124**	IAmb_Lg		08 02 29.7	
	comp=Z,24nm,0.8s						
PARMO	**Parma**	**6.25**	**84**	IAmb_Lg		08 02 33.7	
	comp=Z,45nm,0.8s						
LNXT	**Lenox**	**6.48**	**89**	IAmb_Lg		08 02 32.2	
	comp=Z,32nm,0.7s						
SCIA	**State Center**	**6.53**	**29**	IAmb_Lg		08 02 37.3	
	comp=Z,43nm,0.8s						
HALT	**Halls**	**6.62**	**91**	IAmb_Lg		08 02 51.8	
	comp=Z,25nm,0.7s						
GLAT	**Glass**	**6.63**	**88**	IAmb_Lg		08 02 47.1	
	comp=Z,37nm,1.0s						
S44A	**Carbondale**	**6.75**	**75**	IAmb_Lg		08 02 40.8	
	comp=Z,31nm,0.7s						
W45A	**Hickory Valley**	**6.85**	**97**	IAmb_Lg		08 02 49.3	
	comp=Z,26nm,0.7s						
UTMT	**University of**	**6.97**	**87**	IAmb_Lg		08 03 01.9	
	comp=Z,32nm,0.8s						
T45A	**Paducah**	**7.16**	**81**	IAmb_Lg		08 03 09.6	
	comp=Z,37nm,0.8s						
L40A	**Anamosa**	**7.56**	**38**	IAmb_Lg		08 03 10.9	
	comp=Z,29nm,0.9s						
MNTX	**Cornudas Mount**	**7.98**	**237**	IAmb_Lg		08 03 29.0	
	comp=Z,15nm,1.1s						
PHWY	**Pilot Hill**	**7.99**	**311**	IAmb_Lg		08 03 30.4	
	comp=Z,14nm,0.8s						
Y22D	**IRIS PASSCAL I**	**8.02**	**257**	IAmb_Lg		08 03 35.4	
	comp=Z,31nm,0.9s						
N23A	**Red Feather La**	**8.06**	**307**	IAmb_Lg		08 03 30.1	
	comp=Z,29nm,1.0s						
833A	**Chaparral WMA,**	**8.09**	**192**	IAmb_Lg		08 03 36.9	
	comp=Z,13nm,1.0s						
SUSD	**Miller**	**8.23**	**353**	IAmb_Lg		08 03 32.1	
	comp=Z,16nm,0.8s						
I37A	**Lemond, Waseca**	**8.34**	**21**	IAmb_Lg		08 03 45.0	
	comp=Z,17nm,0.8s						
JFWS	**Jewell Farm**	**8.67**	**38**	IAmb_Lg		08 04 02.0	
	comp=Z,23nm,0.8s						
I40A	**Norwalk**	**9.25**	**33**	IAmb_Lg		08 04 04.2	
	comp=Z,14nm,0.7s						
RSSD	**Black Hills**	**9.29**	**329**	IAmb_Lg		08 04 07.0	
	comp=Z,15nm,1.1s						
RWWY	**Rawlins**	**9.29**	**308**	IAmb_Lg		08 04 11.5	
	comp=Z,14nm,1.0s						
K22A	**Casper**	**9.44**	**315**	IAmb_Lg		08 04 13.8	
	comp=Z,16nm,0.9s						
K43A	**Burlington**	**9.55**	**45**	IAmb_Lg		08 04 20.9	
	comp=Z,22nm,0.8s						
SPMN	**Marine on St.**	**9.62**	**20**	IAmb_Lg		08 04 31.8	
	comp=Z,13nm,1.1s						

*MEX **29** 08:02:49.5±0.5,14.27N×92.21W,h11km±86km,MD3.8*
*GCG **29** 08:02:51.3±0.4,14.59N×92.06W,h63km±6km,MD3.5*
ISC 29 08:02:49.8±2.2,14.43N±0.10×92.21W±0.06,h26km±16km, n10,σ0s62/19,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHUJ	**Union Juarez**	**0.67**	**8**	*e*P	**Pb**	**08 03 03.2**	**+0.1**
CHUJ				*e*S	**Sn**	**08 03 14.0**	**+0.5**
STG3	**Santiaguito 3,**	**0.68**	**66**	*e*P	**Pn**	**08 03 04.1**	**+0.2**
STG3				*e*S	**Sn**	**08 03 14.2**	**+0.5**
PATR	**El Naranjo**	**0.69**	**358**	*e*P	**Pb**	**08 03 03.2**	**-0.1**
PATR				*i* S	**Sn**	**08 03 14.4**	**+0.5**
PAVE	**Pavencul**	**0.76**	**2**	*e*P	**Pn**	**08 03 04.3**	**-0.7**
PAVE				*e*S	**Sn**	**08 03 16.5**	**+0.7**
FUG	**Fuego 3**	**1.32**	**89**	*e*P	**Pn**	**08 03 12.6**	**-0.1**
FUG				*e*S	**Sn**	**08 03 28.9**	**-0.7**
PCG	**Pacaya**	**1.55**	**91**	*e*S	**Sn**	**08 03 35.4**	**0.0**
PCIG		**1.60**	**323**	*e*P	**Pn**	**08 03 16.3**	**0.0**
PCIG				*e*S	**Sn**	**08 03 36.3**	**+0.1**
CCIG	**Comitan**	**1.84**	**2**	*e*P	**Pn**	**08 03 20.6**	**+0.7**
CCIG				*e*S	**Sn**	**08 03 41.5**	**-0.9**
TGIG		**2.50**	**339**	*e*P	**Pn**	**08 03 27.8**	**-1.0**
TGIG				*e*S	**Sn**	**08 03 57.6**	**-0.8**
CMIG	**Matias Romero**	**3.69**	**316**	*e*P	**Pn**	**08 03 45.5**	**+0.3**
CMIG				*e*S	**Sn**	**08 04 28.5**	**+0.7**

*ATH **29** 08:03:11.8,36.37N×26.44E,h103km±8km,ML2.9/4,Error ellipse: s-maj=8.4km s-min=2.3km az=189.0*
*DDA **29** 08:03:14.2±0.0,36.44N×26.48E,h32km±2km,ML2.4*
*ISK **29** 08:03:14.5,36.44N×26.31E,h21km,ML2.7/6*
*GII **29** 08:03:15.7±0.4,34.95N×25.89E,h80km*
*THE **29** 08:03:17.0,36.35N×26.39E,h67km±12km,ML2.6/3,Error ellipse: s-maj=12.1km s-min=1.6km az=55.0*
ISC 29 08:03:14.2±1.5,36.34N±0.04×26.47E±0.04,h106km±12km, n38,σ1s58/60,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THR8	**Santorini-Mono**	**0.80**	**275**	P	**Pn**	**08 03 33.0**	**-0.1**
SANT	**Santorini**	**0.82**	**272**	P	**Pn**	**08 03 33.4**	**+0.1**
THR6	**Thira Island,**	**0.86**	**271**	P	**Pn**	**08 03 34.1**	**+0.3**
DAT	**Datca**	**0.97**	**66**	P	**Pn**	**08 03 35.8**	**+0.8**
KARP	**Karpathos**	**0.97**	**145**	P	**Pn**	**08 03 36.2**	**+1.3**
KARP				S	**Sn**	**08 03 52.6**	**+2.2**
KARP				AML	AML	08 03 53.7	
	comp=N,1398μm,0.2s						
KARP				AML	AML	08 03 56.4	
	comp=E,1065μm,0.2s						
KARP	**Karpathos**	**0.97**	**145**	P	**Pn**	**08 03 36.2**	**+1.3**
KARP				S	**Sn**	**08 03 47.9**	**-2.5**
	comp=E,615nm,0.2s						
KARP	**Karpathos**	**0.97**	**145**	PN	**Pn**	**08 03 36.1**	**+1.2**
KARP				SN	**Sn**	**08 03 50.9**	**+0.5**
APE	**Apeiranthos**	**1.04**	**314**	P	**Pn**	**08 03 35.4**	**-0.2**
APE				S	**Sn**	**08 03 51.8**	**0.0**
APE	**Apeiranthos**	**1.04**	**314**	P	**Pn**	**08 03 35.4**	**-0.2**
APE				S	**Sn**	**08 03 48.9**	**-2.9**
APE	**Apeiranthos**	**1.04**	**314**	PG	**Pn**	**08 03 32.4**	**-3.2**
STIA	**Sitia Lasithi**	**1.18**	**195**	P	**Pn**	**08 03 38.1**	**+1.0**
STIA				S	**Sn**	**08 03 56.0**	**+1.7**
STIA				AML	AML	08 03 56.1	
	comp=N,1050μm,0.6s						
STIA				AML	AML	08 03 59.2	
	comp=E,759μm,0.4s						
ZKR	**Zakros**	**1.24**	**190**	P	**Pn**	**08 03 39.1**	**+1.3**
ZKR				S	**Sn**	**08 03 57.4**	**+1.8**
ZKR				AML	AML	08 04 00.0	
	comp=E,939μm,0.3s						
ZKR				AML	AML	08 04 00.6	
	comp=N,338μm,0.3s						
ZKR	**Zakros**	**1.24**	**190**	P	**Pn**	**08 03 39.2**	**+1.3**
ZKR	**Zakros**	**1.24**	**190**	PN	**Pn**	**08 03 39.0**	**+1.2**
ZKR				SN	**Sn**	**08 03 55.9**	**+0.2**
ARG	**Arkhangelos**	**1.34**	**95**	P	**Pn**	**08 03 40.3**	**+1.4**
ARG				S	**Sn**	**08 03 59.9**	**+2.3**
ARG				AML	AML	08 03 60.0	
	comp=N,132μm,0.2s						
ARG				AML	AML	08 04 00.1	
	comp=E,159μm,0.2s						
ARG	**Arkhangelos**	**1.34**	**95**	P	**Pn**	**08 03 40.3**	**+1.4**
ARG				S	**Sn**	**08 03 58.0**	**+0.3**
	comp=E,72nm,0.2s						
ARG	**Arkhangelos**	**1.34**	**95**	PN	**Pn**	**08 03 40.3**	**+1.4**
ARG				SN	**Sn**	**08 03 59.3**	**+1.6**
SMG	**Samos**	**1.39**	**12**	P	**Pn**	**08 03 39.4**	**-0.1**
SMG	**Samos**	**1.39**	**12**	P	**Pn**	**08 03 39.5**	**-0.1**
SMG				S	**Sn**	**08 03 58.1**	**-0.6**
TURN	**Turunc**	**1.49**	**73**	P	**Pn**	**08 03 41.0**	**+0.3**
TURN				S	**Sn**	**08 04 00.6**	**-0.2**
TUR

SOME **29** *08:08:10.6,39˙.30N×73˙.45E,h15km,MS4.5*
BJI **29** *08:08:10.5±0.0,39˙.46N×73˙.18E,h7km,mb4.8/52, mB4.7/34,ML4.7/7,Ms4.5/48,Ms7 4.3/47*
IDC **29** *08:08:11.8±0.4,39˙.43N×73˙.36E,h0km,mb4.9/36, mbtmp4.8/43,ML4.0/7,MS3.8/35,Error ellipse: s-maj=8.5km s-min=7.4km az=173.0*
MOS **29** *08:08:12.1±1.1,39˙.32N×73˙.38E,h12km,mb5.3/67, MS4.3/26,Error ellipse: s-maj=4.1km s-min=3.1km az=100.6*
MOS Felt (V) at Bordobo; (IV) at Nura, Irkeshtam, Ikizyak, Kara-Kindik; (III) at Kashka-Suu, Sary-Mogol, Sary-Tash, Achyk-Suu, Ak-Bosogo; (II-III) at Sopu-Korgon, Terek.
KRNET **29** *08:08:12.0±0.1,39˙.40N×73˙.43E,mb5.5*
ISU **29** *08:08:13.1,39˙.57N×73˙.62E,h30km*
NEIC **29** *08:08:14.3±2.8,39˙.43N±0˙.06×73˙.38E±0˙.04,h10km±1km, mb5.1/246,Error ellipse: s-maj=9.8km s-min=3.8km az=161.0*
NNC **29** *08:08:14.9±1.4,39˙.60N×73˙.15E,h0km,mb5.6,mpv5.4, Error ellipse: s-maj=10.9km s-min=5.6km az=0.0*
GCMT **29** *08:08:15.4±0.4,39˙.49N±0˙.02×73˙.46E±0˙.04,h20km±1km, MW4.8/65,Moment Tensor Solution. s16,c17; s65,c84; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr 1.80±.19; Mθθ-2.19±.13; Mφφ 0.38±.11; Mrθ-0.41±.18; Mφθ-0.2 1±.07; Mφr 1.07±.25; Best double couple: M₀2.32900×10¹⁶ NP1:ϕs291.00000°,δ56.00000°,λ125.00000°. NP2: ϕs=291.00000°,δ=56.00000°,λ=125.00000°. Principal axes: T 2.4210, Plg61.0000°, Azm258.0000°; N -0.1900, Plg28.0000°, Azm90.0000°; P -2.2360, Plg5.0000°, Azm358.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 08:08:13.5±0.4,39˙.41N±0˙.02×73˙.38E±0˙.02,h10km±2km, h10km:pP-P,n947,σ1§83/976,mb5.0/242,MS4.2/69, 111C-41D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.20**	**338**	⇑*i*P			**Pn**	**08 08 35.2**	**-1.3**
	baz=36								
OHH				⇑*i*S			**Sb**	**08 08 52.2**	**+0.2**
	baz=36								
OHH	**Osh**	**1.20**	**338**	*i* PG			**Pn**	**08 08 35.2**	**-1.3**
OHH				*i* S			**Sb**	**08 08 52.2**	**+0.2**
OHH	**Osh**	**1.20**	**338**	P			**Pn**	**08 08 35.0**	**-1.5**
OHH				S			**Sb**	**08 08 52.3**	**+0.2**
DRK	**Karamyk**	**1.22**	**274**	⇑*i*P			**Pb**	**08 08 36.0**	**-0.9**
	baz=74								
DRK				⇑*i*S			**Sn**	**08 08 53.6**	**-0.1**
	baz=74								
DRK	**Karamyk**	**1.22**	**274**				**Pg**	**08 08 37.0**	**0.0**
TSTA	**Tashata**	**1.35**	**330**	P			**Pn**	**08 08 37.4**	**-1.2**
TSTA				S			**Sn**	**08 08 56.9**	**+0.3**
FRG	**Fergana**	**1.56**	**309**	P			**Pn**	**08 08 41.6**	**+0.3**
FRG				S			**Sg**	**08 09 04.2**	**+0.6**
KSH	**Kashi**	**2.01**	**86**	Pg			**Pn**	**08 08 44.0**	**-3.7**
KSH				Sg			**Sn**	**08 09 05.3**	**-7.7**
KSH				smax		smax			
	comp=N,24μm,0.8s								
KSH				smax		smax			
	comp=E,17μm,0.9s								
BTK	**Batken**	**2.08**	**289**	⇑*i*P			**Pb**	**08 08 50.5**	**-0.8**
	baz=89								
BTK				⇑*i*S			**Sg**	**08 09 18.8**	**-1.4**
	baz=89								
BTK	**Batken**	**2.08**	**289**	Pn			**Pg**	**08 08 52.2**	**-1.1**
BTK	**Batken**	**2.08**	**289**	*i* PN			**Pb**	**08 08 50.5**	**-0.8**
BTK				*i* S			**Sg**	**08 09 18.8**	**-1.4**
MINT	**Mingtut**	**2.12**	**300**	P			**Pb**	**08 08 53.1**	**+1.0**
MINT				S			**Sg**	**08 09 24.0**	**+2.2**
GAR	**Garm**	**2.41**	**261**	⇑*i*P			**Pb**	**08 08 55.2**	**-1.9**
	baz=61								
GAR				⇑*i*S			**Sb**	**08 09 26.6**	**-0.3**
	baz=61								
GAR	**Garm**	**2.41**	**261**				**Pb**	**08 08 56.7**	**-0.4**
GAR	**Garm**	**2.41**	**261**	*i* PN			**Pb**	**08 08 55.2**	**-1.9**
GAR				*i* S			**Sb**	**08 09 26.6**	**-0.3**
CHDK	**Chadak**	**2.54**	**309**	P			**Pb**	**08 08 58.1**	**-1.2**
CHDK				S			**Sb**	**08 09 32.4**	**+1.7**
AML	**Almayashu** SNR=138	**2.73**	**5**	P			**Pn**	**08 09 00.4**	**+2.6**
AML	**Almayashu**	**2.73**	**5**	*i* PN			**Pn**	**08 08 59.1**	**+1.3**
AML				*i* S			**Sn**	**08 09 33.8**	**+2.8**
AML	**Almayashu** SNR=213	**2.73**	**5**	*e*P			**Pn**	**08 09 00.6**	**+2.8**
UCH	**Uchtor** SNR=1317	**2.94**	**17**	P			**Pn**	**08 09 03.4**	**+2.7**
UCH	**Uchtor**	**2.94**	**17**	⇑*e*P			**Pn**	**08 09 02.2**	**+1.4**
	baz=16								
UCH				⇑*i*S			**Sn**	**08 09 38.8**	**+2.4**
	baz=16								
UCH	**Uchtor**	**2.94**	**17**	*i* PN			**Pn**	**08 09 02.2**	**+1.4**
EKS2	**Erkin-Say** SNR=170	**3.26**	**5**	P			**Pn**	**08 09 08.0**	**+3.1**
EKS2	**Erkin-Say**	**3.26**	**5**	⇑*e*P			**Pn**	**08 09 06.6**	**+1.7**
	baz=5.0								
EKS2				⇑*i*S			**Sn**	**08 09 46.2**	**+2.4**
	baz=5.0								
EKS2	**Erkin-Say**	**3.26**	**5**	*i* PN			**Pn**	**08 09 06.6**	**+1.7**
EKS2				*i* S			**Sn**	**08 09 46.2**	**+2.4**
AAK	**Ala-Archa** SNR=567	**3.33**	**14**	P			**Pn**	**08 09 09.3**	**+3.4**
AAK	**Ala-Archa** 73nm,0.3s,baz=183,slow=7.3,SNR=793	**3.33**	**14**	Pn			**Pn**	**08 09 09.3**	**+3.4**
AAK				LR			LR	08 09 49.2	
	comp=Z,529nm,20.2s,baz=246,slow=29								
AAK				Sn			**Sb**	**08 09 51.6**	**-1.9**
	86nm,0.3s,baz=318,slow=21,SNR=8.7 1μm,0.7s								
AAK	**Ala-Archa**	**3.33**	**14**	⇑*i*P			**Pn**	**08 09 07.5**	**+1.6**
	baz=14								
AAK				⇑*i*S			**Sn**	**08 09 48.0**	**+2.4**
	baz=14								
AAK	**Ala-Archa**	**3.33**	**14**	*i* PN			**Pn**	**08 09 07.5**	**+1.6**
AAK				*i* S			**Sn**	**08 09 48.0**	**+2.4**
AAK	**Ala-Archa** SNR=591	**3.33**	**14**	*i* P			**Pn**	**08 09 09.3**	**+3.4**
MRKS	**Merke** 739nm,0.5s	**3.33**	**358**	*e*P			**Pb**	**08 09 10.6**	**-2.2**
MRKS	1μm,0.6s			*e*S			**Sb**	**08 09 53.9**	**+0.4**
MRKS	**Merke** 739nm,0.5s	**3.33**	**358**	Pg			**Pb**	**08 09 10.6**	**-2.2**
MRKS	1μm,0.6s			Lg			Lg	08 09 53.9	
CHGR	**Chuyangaron** baz=59	**3.37**	**258**	⇑*e*P			**Pn**	**08 09 08.5**	**+2.2**
CHGR				⇑*i*S			**Sn**	**08 09 49.7**	**+3.3**
	baz=59								
CHGR	**Chuyangaron**	**3.37**	**258**	Pn			**Pn**	**08 09 09.1**	**+2.8**
CHGR	**Chuyangaron**	**3.37**	**258**	*i* PN			**Pn**	**08 09 08.5**	**+2.2**
CHGR				*i* S			**Sn**	**08 09 49.7**	**+3.3**
KBK	**Karagaybulak** SNR=119	**3.45**	**20**	P			**Pn**	**08 09 10.6**	**+3.1**
KBK	**Karagaybulak**	**3.45**	**20**	⇑*e*P			**Pn**	**08 09 09.0**	**+1.5**
	baz=19								
KBK				⇑*i*S			**Sn**	**08 09 50.7**	**+2.1**
	baz=19								
KBK	**Karagaybulak**	**3.45**	**20**	*i* PN			**Pn**	**08 09 09.0**	**+1.5**
KBK				*i* S			**Sn**	**08 09 50.7**	**+2.1**
FRU1	**Bishkek**	**3.53**	**15**	PN			**Pn**	**08 09 12.3**	**+3.9**
ULHL	**Ulahol** SNR=65	**3.57**	**37**	P			**Pn**	**08 09 11.5**	**+2.3**
ULHL	**Ulahol**	**3.57**	**37**	⇑*i*P			**Pn**	**08 09 10.5**	**+1.3**
	baz=36								
ULHL				⇑*i*S			**Sn**	**08 09 53.2**	**+1.7**
	baz=36								
ULHL	**Ulahol**	**3.57**	**37**	*i* PN			**Pn**	**08 09 10.5**	**+1.3**
ULHL				*i* S			**Sn**	**08 09 53.2**	**+1.7**
TAS	**Tashkent** baz=3.0	**3.66**	**303**	⇓*i*P			**Pn**	**08 09 12.3**	**+2.1**
TAS				⇓*i*S			**Sn**	**08 09 56.5**	**+3.1**
	baz=3.0								
TAS	**Tashkent**	**3.66**	**303**	Pn			**Pn**	**08 09 12.8**	**+2.6**
TAS	**Tashkent**	**3.66**	**303**	*i* PN			**Pn**	**08 09 12.3**	**+2.1**
TAS				*i* S			**Sn**	**08 09 56.5**	**+3.1**
IUG	**Iuzhnay**	**3.73**	**318**	*e*PN			**Pn**	**08 09 14.1**	**+2.9**
IUG				*e*				08 09 22.5	
IUG				*e*				08 10 11.5	
IUG	**Iuzhnay** 72μm,1.1s	**3.73**	**318**	*e*P			**Pg**	**08 09 22.9**	**-2.1**
IUG	8μm,0.8s			*e*S			**Sg**	**08 10 15.7**	**+2.4**
IUG	**Iuzhnay** baz=314	**3.73**	**318**	*e*Pn			**Pn**	**08 09 14.2**	**+2.9**
IUG	baz=314			*e*Pg			**Pg**	**08 09 22.6**	**-2.4**
IUG	baz=314			*e*Lg			Lg	08 10 11.6	
IUG	**Iuzhnay** 72μm,1.1s	**3.73**	**318**	Pg			**Pn**	**08 09 14.4**	**+3.1**
IUG	4μm,0.7s			Lg			Lg	08 10 00.6	
CHMS	**Chumysh** SNR=196	**3.73**	**16**	P			**Pn**	**08 09 14.5**	**+3.2**
CHMS	**Chumysh** baz=15	**3.73**	**16**	⇑*e*P			**Pn**	**08 09 12.8**	**+1.6**
CHMS	baz=15			⇑*i*S			**Sn**	**08 09 57.2**	**+1.9**
CHMS	**Chumysh**	**3.73**	**16**	*i* PN			**Pn**	**08 09 12.8**	**+1.6**
CHMS				*i* S			**Sn**	**08 09 57.2**	**+1.9**
CHMS	**Chumysh** 694nm,0.7s	**3.73**	**16**	⇓Pn			**Pn**	**08 09 13.6**	**+2.4**
CHMS	1μm,0.7s			⇓Lg			Lg	08 10 10.0	
DZA	**Taraz**	**3.81**	**337**	*e*PN			**Pn**	**08 09 14.0**	**+1.8**
DZA				*e*				08 09 22.3	
DZA				*e*				08 10 14.0	
DZA	**Taraz** 2μm,0.3s	**3.81**	**337**	*e*P			**Pb**	**08 09 22.5**	**+1.6**
DZA	4μm,0.7s			*e*S			**Sg**	**08 10 13.0**	**-2.7**
DZA	**Taraz** baz=334	**3.81**	**337**	*e*Pn			**Pn**	**08 09 14.1**	**+1.8**
DZA	baz=334			*e*Pg			**Pb**	**08 09 22.4**	**+1.6**
DZA	baz=334			*e*Lg			Lg	08 10 14.0	
DZA	**Taraz** 2μm,0.3s	**3.81**	**337**	Pg			**Pb**	**08 09 16.8**	**-4.0**
DZA	3μm,0.5s			Lg			Lg	08 10 04.8	
TKM2	**Tokmak 2** SNR=114	**3.89**	**25**	P			**Pn**	**08 09 16.3**	**+2.8**
TKM2	**Tokmak 2** baz=24	**3.89**	**25**	⇑*e*P			**Pn**	**08 09 15.1**	**+1.6**
TKM2	baz=24			⇑*i*S			**Sn**	**08 10 01.1**	**+1.8**
TKM2	**Tokmak 2**	**3.89**	**25**	*e*PN			**Pn**	**08 09 15.1**	**+1.6**
TKM2				*i* S			**Sn**	**08 10 01.1**	**+1.8**
TKM2	**Tokmak 2** 72nm,0.6s	**3.89**	**25**	⇓Pn			**Pn**	**08 09 16.1**	**+2.6**
TKM2	541nm,0.6s			⇓Pg			**Pb**	**08 09 23.9**	**+1.6**
TKM2	647nm,0.6s			⇓Lg			Lg	08 10 16.5	
USP	**Ospenovka** SNR=351	**3.94**	**12**	P			**Pn**	**08 09 17.0**	**+2.9**
USP	**Ospenovka** baz=11	**3.94**	**12**	⇑*e*P			**Pn**	**08 09 15.9**	**+1.7**
USP	baz=11			⇑*i*S			**Sn**	**08 10 02.4**	**+1.9**
USP	**Ospenovka**	**3.94**	**12**	*e*PN			**Pn**	**08 09 15.9**	**+1.7**
USP				*i* S			**Sn**	**08 10 02.4**	**+1.9**
KDJ	**Kajisay** baz=45	**3.96**	**46**	⇑*e*P			**Pn**	**08 09 16.0**	**+1.4**
KDJ	baz=45			⇑*i*S			**Sn**	**08 10 02.7**	**+1.5**
KDJ	**Kajisay**	**3.96**	**46**				**Pn**	**08 09 18.1**	**+3.5**
KDJ	**Kajisay**	**3.96**	**46**	*e*PN			**Pn**	**08 09 16.0**	**+1.4**
KDJ				*i* S			**Sn**	**08 10 02.7**	**+1.5**
CHM	**Chimkent**	**4.08**	**317**	PN			**Pn**	**08 09 14.0**	**-1.9**
CHM	**Chimkent** 207nm,0.5s	**4.08**	**317**	*e*P			**Pb**	**08 09 27.6**	**+2.2**
CHM	6μm,0.3s			*e*S			**Sg**	**08 10 22.9**	**-1.5**
TARG	**Taragay, Kyrgy**	**4.09**	**54**				**Pn**	**08 09 19.4**	**+2.9**
TARG	**Taragay, Kyrgy**	**4.09**	**54**	PN			**Pn**	**08 09 19.4**	**+2.9**
KST	**Kastek** 520nm,0.8s	**4.12**	**27**	*e*P			**Pb**	**08 09 26.9**	**+0.7**
KST	2μm,0.6s			*e*S			**Sg**	**08 10 22.1**	**-3.7**
KST	**Kastek** 520nm,0.8s	**4.12**	**27**	Pg			**Pb**	**08 09 26.9**	**+0.7**
KST	2μm,0.6s			Lg			Lg	08 10 22.1	
SGDS	**Sogindy**	**4.15**	**13**	*e*PN			**Pn**	**08 09 19.3**	**+2.4**
SGDS				*e*				08 09 27.7	
SGDS				*e*				08 10 22.1	
SGDS	**Sogindy** 436nm,0.8s	**4.15**	**13**	*e*P			**Pb**	**08 09 26.5**	**-0.1**
SGDS	750nm,0.8s			*e*S			**Sb**	**08 10 21.6**	**+4.8**
SGDS	**Sogindy** baz=14	**4.15**	**13**	*e*Pn			**Pn**	**08 09 19.4**	**+2.4**
SGDS	baz=14			*e*Pg			**Pb**	**08 09 27.8**	**+1.2**
SGDS	baz=14			*e*Lg			Lg	08 10 22.1	
SGDS	**Sogindy** 436nm,0.8s	**4.15**	**13**	Pg			**Pb**	**08 09 26.5**	**-0.1**
SGDS	750nm,0.8s			Lg			Lg	08 10 21.6	
DGS	**Degeres** 690nm,0.5s	**4.23**	**24**	*e*P			**Pb**	**08 09 29.7**	**+1.6**
DGS	2μm,0.7s			*e*S			**Sg**	**08 10 27.0**	**-2.4**
DGS	**Degeres** 690nm,0.5s	**4.23**	**24**	Pg			**Pb**	**08 09 29.7**	**+1.6**
DGS	2μm,0.7s			Lg			Lg	08 10 27.0	
KK31	**Karatay Array**	**4.27**	**331**	Pn			**Pn**	**08 09 21.1**	**+2.5**
KK31	**Karatay Array**	**4.27**	**331**	*e*PN			**Pn**	**08 09 20.9**	**+2.2**
KK31				*e*				08 09 32.2	
KK31								08 10 14.6	
KK31	**Karatay Array** 173nm,0.5s,baz=141,slow=12,SNR=6065	**4.27**	**331**	⇑Pn			**Pn**	**08 09 20.3**	**+1.6**
KK31	1μm,1.1s,baz=156,slow=16,SNR=41			Pg			**Pb**	**08 09 29.6**	**+0.9**
KK31	326nm,0.5s,baz=226,slow=112,SNR=6.5			⇓Sn			**Sn**	**08 10 09.5**	**+0.9**
KK31	600nm,0.5s,baz=142,slow=30,SNR=5.0			⇑Lg			Lg	08 10 25.1	
KKAR	**Karatay Array**	**4.27**	**331**	Pn			**Pn**	**08 09 20.9**	**+2.2**
KKAR	**Karatay Array**	**4.27**	**331**				**Pn**	**08 09 21.2**	**+2.5**
KKAR	**Karatay Array**	**4.27**	**331**	PN			**Pn**	**08 09 21.2**	**+2.5**
IZV	**Izvestkoviy** 33nm,0.1s	**4.37**	**33**	*e*P			**Pb**	**08 09 31.7**	**+1.2**
IZV	2μm,1.2s			*e*S			**Sg**	**08 10 30.4**	**-3.3**
IZV	**Izvestkoviy** 306nm,0.7s	**4.37**	**33**	Pg			**Pb**	**08 09 31.7**	**+1.2**
IZV	1μm,0.6s			Lg			Lg	08 10 30.4	
MTBS	**Maitube** 536nm,0.5s	**4.37**	**31**	*e*P			**Pb**	**08 09 32.2**	**+1.8**
MTBS	569nm,0.9s			*e*S			**Sg**	**08 10 31.1**	**-2.8**
MTBS	**Maitube** 536nm,0.5s	**4.37**	**31**	Pg			**Pb**	**08 09 32.2**	**+1.8**
MTBS	569nm,0.9s			Lg			Lg	08 10 31.1	
BRLS	**Boroldaу**	**4.49**	**325**	*e*PN			**Pn**	**08 09 21.9**	**+0.2**
BRLS				*e*				08 09 33.4	
BRLS				*e*				08 10 31.0	
BRLS	**Boroldaу** 267nm,0.8s	**4.49**	**325**	*e*P			**Pb**	**08 09 32.6**	**+0.1**
BRLS	1μm,0.5s			*e*S			**Sb**	**08 10 30.9**	**+4.1**
BRLS	**Boroldaу** baz=319	**4.49**	**325**	*e*Pn			**Pn**	**08 09 21.9**	**+0.2**
BRLS	baz=319			*e*Pg			**Pb**	**08 09 33.4**	**+0.9**
BRLS	baz=319			*e*Lg			Lg	08 10 31.1	
BRLS	**Boroldaу** 267nm,0.8s	**4.49**	**325**	Pg			**Pn**	**08 09 25.9**	**+4.2**
BRLS	1μm,0.5s			Lg			Lg	08 10 20.2	
TNSS	**Tian-Shan** 352nm,0.7s	**4.51**	**35**	*e*PN			**Pn**	**08 09 24.9**	**+2.6**
TNSS				*e*				08 09 35.7	
TNSS	**Tian-Shan** 352nm,0.7s	**4.51**	**35**	*e*P			**Pb**	**08 09 35.3**	**+2.2**
TNSS	850nm,0.7s			*e*S			**Sg**	**08 10 36.2**	**-2.3**
TNSS	**Tian-Shan** baz=38	**4.51**	**35**	*e*Pn			**Pn**	**08 09 24.9**	**+2.6**
TNSS	baz=38			*e*Pg			**Pb**	**08 09 35.8**	**+2.7**
TNSS				*e*Lg			Lg	08 10 37.1	
TNSS	**Tian-Shan** 352nm,0.7s	**4.51**	**35**	Pg			**Pb**	**08 09 35.3**	**+2.2**
TNSS				Lg			Lg	08 10 36.2	
KRBS	**Karabastau** 0.1nm,0.3s	**4.62**	**21**	*e*P			**Pb**	**08 09 37.0**	**+2.4**
KRBS				*e*S			**Sg**	**08 10 39.6**	**-2.1**
KRBS	**Karabastau** 566nm,0.6s	**4.62**	**21**	Pg			**Pb**	**08 09 37.0**	**+2.4**
KRBS	980nm,0.6s			Lg			Lg	08 10 39.6	
AAA	**Alma-Ata**	**4.64**	**34**	*e*PN			**Pn**	**08 09 26.3**	**+2.6**
AAA				*e*				08 09 37.6	
AAA	**Alma-Ata** 368nm,0.8s	**4.64**	**34**	*e*P			**Pb**	**08 09 37.4**	**+2.4**
AAA	2μm,0.9s			*e*S			**Sg**	**08 10 40.4**	**-2.0**
AAA	**Alma-Ata** baz=36	**4.64**	**34**	*e*Pn			**Pn**	**08 09 26.4**	**+2.6**
AAA	baz=36			*e*Pg			**Pb**	**08 09 37.7**	**+2.7**
AAA	baz=36			*e*Lg			Lg	08 10 40.2	
AAA	**Alma-Ata** 599nm,0.7s	**4.64**	**34**	Pg			**Pb**	**08 09 37.4**	**+2.4**
AAA	131nm,0.4s			Lg			Lg	08 10 40.4	
KNDC	**Almaty**	**4.67**	**34**	PN			**Pn**	**08 09 27.8**	**+3.7**
KNDC	**Almaty** 404nm,0.8s	**4.67**	**34**	⇓Pn			**Pn**	**08 09 26.7**	**+2.7**
KNDC	2μm,0.7s			⇓Pg			**Pb**	**08 09 38.3**	**+2.9**
KNDC	8μm,1.1s			⇓Lg			Lg	08 10 41.9	
KTBS	**Karatobe** 244nm,0.5s	**4.96**	**29**	*e*P			**Pb**	**08 09 43.0**	**+2.5**
KTBS	2μm,0.6s			*e*S			**Sg**	**08 10 49.7**	**-3.1**
KTBS	**Karatobe** 244nm,0.5s	**4.96**	**29**	Pg			**Pb**	**08 09 43.0**	**+2.5**
KTBS	2μm,0.6s			Lg			Lg	08 10 49.7	
KUU	**Kurty**	**5.00**	**25**	*e*PN			**Pn**	**08 09 29.7**	**+1.1**
KUU				*e*				08 09 43.7	
KUU				*e*				08 10 50.5	
KUU	**Kurty** 275nm,0.8s	**5.00**	**25**	*e*P			**Pb**	**08 09 43.6**	**+2.5**
KUU	698nm,0.6s			*e*S			**Sg**	**08 10 50.6**	**-3.3**
KUU	**Kurty** baz=27	**5.00**	**25**	*e*Pn			**Pn**	**08 09 29.7**	**+1.1**
KUU	baz=27			*e*Pg			**Pb**	**08 09 43.8**	**+2.7**
KUU	baz=27			*e*Lg			Lg	08 10 50.5	
KUU	**Kurty** 275nm,0.8s	**5.00**	**25**	Pg			**Pb**	**08 09 43.6**	**+2.5**
KUU	698nm,0.6s			Lg			Lg	08 10 50.7	
CHKK	**Chushkaly**	**5.20**	**30**	*e*PN			**Pn**	**08 09 33.0**	**+1.7**
CHKK				*e*				08 09 47.5	
CHKK	**Chushkaly** 277nm,0.4s	**5.20**	**30**	*e*P			**Pb**	**08 09 48.3**	**+3.8**
CHKK	819nm,0.7s			*e*S			**Sg**	**08 10 59.1**	**-1.3**
CHKK	**Chushkaly** baz=32	**5.20**	**30**	*e*Pn			**Pn**	**08 09 33.1**	**+1.7**
CHKK	baz=32			*e*Pg			**Pb**	**08 09 47.5**	**+3.0**
CHKK	baz=32			*e*Lg			Lg	08 10 58.4	
CHKK	**Chushkaly** 277nm,0.4s	**5.20**	**30**	Pg			**Pb**	**08 09 48.3**	**+3.8**
CHKK	819nm,0.7s			Lg			Lg	08 10 59.1	
SATY	**Saty** 664nm,0.9s	**5.26**	**45**	*e*PN			**Pn**	**08 09 34.3**	**+2.0**
SATY				*e*				08 09 50.6	
SATY	**Saty** 664nm,0.9s	**5.26**	**45**	*e*P			**Pg**	**08 09 50.9**	**-3.4**
SATY	820nm,0.8s			*e*S			**Sg**	**08 11 03.2**	**+0.8**
SATY	**Saty** baz=47	**5.26**	**45**	*e*Pn			**Pn**	**08 09 34.4**	**+2.0**
SATY	baz=47			*e*Pg			**Pg**	**08 09 50.6**	**-3.6**
SATY	baz=47			*e*Lg			Lg	08 10 60.0	
SATY	**Saty** 664nm,0.9s	**5.26**	**45**	Pg			**Pg**	**08 09 50.9**	**-3.4**
SATY	820nm,0.8s			Lg			Lg	08 11 03.2	
ZHN	**Zhinishke**	**5.35**	**44**	*e*PN			**Pn**	**08 09 36.1**	**+2.6**
ZHN				*e*				08 09 49.8	
ZHN	**Zhinishke** 272nm,0.6s	**5.35**	**44**	*e*P			**Pb**	**08 09 51.1**	**+4.0**
ZHN	653nm,0.6s			*e*S			**Sg**	**08 11 03.7**	**-1.5**
ZHN	**Zhinishke** baz=46	**5.35**	**44**	*e*Pn			**Pn**	**08 09 36.1**	**+2.6**
ZHN	baz=46			*e*Pg			**Pb**	**08 09 49.9**	**+2.7**
ZHN	baz=46			*e*Lg			Lg	08 11 02.9	
ZHN	**Zhinishke** 272nm,0.6s	**5.35**	**44**	Pg			**Pb**	**08 09 51.1**	**+4.0**
ZHN	653nm,0.6s			Lg			Lg	08 11 03.7	
KURS	**Kuram** 418nm,0.6s	**5.44**	**40**	*e*P			**Pg**	**08 09 54.4**	**-3.3**
KURS	688nm,1.3s			*e*S			**Sg**	**08 11 08.8**	**+0.8**
KURS	**Kuram** 418nm,0.6s	**5.44**	**40**	Pg			**Pg**	**08 09 54.3**	**-3.3**
KURS	688nm,1.3s			Lg			Lg	08 11 08.8	
BTLS	**Baital**	**5.65**	**5**	*e*PN			**Pn**	**08 09 39.6**	**+2.1**
BTLS				*e*				08 09 56.4	
BTLS				*e*				08 11 09.2	
BTLS	**Baital** 228nm,0.6s	**5.65**	**5**	*e*P			**Pb**	**08 09 55.3**	**+3.2**
BTLS	109nm,0.5s			*e*S			**Sg**	**08 11 11.4**	**-3.4**
BTLS	**Baital** baz=5.0	**5.65**	**5**	*e*Pn			**Pn**	**08 09 39.6**	**+2.1**
BTLS	baz=5.0			*e*Pg			**Pb**	**08 09 56.4**	**+4.2**
BTLS	baz=5.0			*e*Lg			Lg	08 11 09.3	
BTLS	**Baital** 228nm,0.6s	**5.65**	**5**	Pg			**Pb**	**08 09 55.3**	**+3.2**
BTLS	109nm,0.5s			Lg			Lg	08 11 11.4	
KPKS	**Kokpek**	**5.69**	**43**	*e*PN			**Pn**	**08 09 40.6**	**+2.5**
KPKS				*e*				08 09 55.8	
KPKS	**Kokpek** 349nm,0.8s	**5.69**	**43**	*e*P			**Pb**	**08 09 57.2**	**+4.4**
KPKS	983nm,0.8s			*e*S			**Sg**	**08 11 14.2**	**-1.8**
KPKS	**Kokpek** baz=45	**5.69**	**43**	*e*Pn			**Pn**	**08 09 40.7**	**+2.5**
KPKS	baz=45			*e*Pg			**Pb**	**08 09 55.9**	**+3.0**
KPKS	baz=45			*e*Lg			Lg	08 11 14.1	
KPKS	**Kokpek** 349nm,0.8s	**5.69**	**43**	Pg			**Pb**	**08 09 57.2**	**+4.4**
KPKS	983nm,0.8s			Lg			Lg	08 11 14.2	
CEP	**Cherat**	**5.70**	**192**	P			Pn	08 09 43.1	+4.7
CEP				S			**Sn**	**08 10 51.0**	**+7.1**
CHCP	**Chirah Chowk**	**5.74**	**181**	P			Pn	08 09 43.6	+4.7
ARXS	**Arharly** 236nm,0.8s	**5.84**	**33**	*e*P			Pb	08 10 00.6	+5.2
ARXS	825nm,0.6s			*e*S			**Sg**	**08 11 20.2**	**-0.6**
ARXS	**Arharly** 356nm,1.1s	**5.84**	**33**	Pg			Pb	08 10 00.6	+5.2
ARXS	825nm,0.6s			Lg			Lg	08 11 20.2	
KBL	**Kabul**	**5.97**	**217**	Pn			Pn	08 09 46.9	+4.8
KBL	**Kabul**	**5.97**	**217**	PN			Pn	08 09 46.9	+4.7
BLB	**Baldybastay** 419nm,0.9s	**6.04**	**38**	*e*P			**Pg**	**08 10 05.8**	**-3.3**

BLB eS Sg 08 11 29.2 +1.8
428nm,0.8s
BLB Baldybastay 6.04 38 Pg Pg 08 10 05.8 -3.3
419nm,0.9s
BLB Lg Lg 08 11 29.2
428nm,0.8s
PDGK Podgornoye 6.04 48 Pg Pg 08 10 05.8 -3.4
161nm,0.6s
PDGK Lg Lg 08 11 29.1
315nm,1.0s
KTMS Ketmen 6.61 50 eP Pg 08 10 17.1 -3.0
96nm,0.5s
KTMS eS Sg 08 11 48.3 +2.6
138nm,0.7s
KTMS Ketmen 6.61 50 Pg Pg 08 10 17.1 -3.0
96nm,0.5s
KTMS Lg Lg 08 11 48.3
138nm,0.7s
THW Thamme Wali 6.73 192 P Pn 08 09 55.9 +3.4
JMU Jammu 6.79 169 eP Pn 08 09 56.4 +3.2
JMU eS Sn 08 11 08.6 -2.0
JMU eS Sn 08 11 12.7 +2.1
DJR Jarkent 6.86 42 eP Pg 08 10 20.6 -4.3
116nm,0.8s
DJR eS Sg 08 11 54.0 +0.4
223nm,1.2s
DJR Jarkent 6.86 42 Pg Pg 08 10 20.6 -4.3
116nm,0.8s
DJR Lg Lg 08 11 54.0
223nm,1.2s
THN Thein Dam 7.22 164 eP Pn 08 10 01.9 +2.9
BHK Bhakra 8.35 162 eP Pn 08 10 16.6 +1.9
BHK eS Sn 08 11 49.8 +0.7
BHK eS Sn 08 11 51.6 +2.5
SMLA Simla 8.82 158 eP Pn 08 10 23.4 +2.3
SMLA eS Sn 08 12 00.3 -0.3
SMLA IAML 08 12 06.6
comp=N,410nm,0.4s
SMLA IAML 08 12 06.7
comp=E,568nm,0.8s
OTUK Ortayu 8.86 355 P Pn 08 10 22.3 +0.7
OTUK Ortayu 8.86 355 ⇓Pn Pn 08 10 23.1 +1.5
comp=E,58nm,0.7s
OTUK ⇓Lg Lg 08 12 49.6
comp=E,461nm,1.1s
MAKZ Makanchi 9.70 38 Pn 08 10 35.4 +2.3
MAKZ Makanchi 9.70 38 P Pn 08 10 35.4 +2.3
MAKZ Makanchi 9.70 38 ⇑Pn Pn 08 10 35.2 +2.1
comp=E,11nm,0.7s
MAKZ ⇑Lg Lg 08 13 22.0
comp=E,100nm,1.2s
MK31 Makanchi Array 9.84 39 eP Pn 08 10 37.4 +2.4
MK31 Makanchi Array 9.84 39 Pn Pn 08 10 37.4 +2.4
comp=E,16nm,0.7s,baz=220,slow=14,SNR=80
MK31 ⇓Lg Lg 08 13 25.4
comp=E,101nm,1.1s,baz=231,slow=27,SNR=4.1
MKAR Makanchi Array 9.84 39 Pn Pn 08 10 36.3 +1.2
comp=E,0.6nm,0.3s,baz=217,slow=12,SNR=30
MKAR Lg Lg 08 13 20.0
comp=E,1.9nm,0.3s,baz=232,slow=28,SNR=5.0
MKAR LR LR 08 14 47.7
comp=E,608nm,20.3s,baz=226,slow=40
comp=E,6.5nm,0.8s
MKAR Makanchi Array 9.84 39 Pn Pn 08 10 36.8 +1.7
MKAR Makanchi Array 9.84 39 P Pn 08 10 36.8 +1.7
DDI Dehra Dun 9.85 156 eP Pn 08 10 35.6 +0.4
DDI eS Sn 08 12 26.2 +0.4
HRA Herat 10.22 244 Pn Pn 08 10 39.7 -0.8
NDI New Delhi 11.16 162 eP Pn 08 10 54.1 +0.9
NDI eS Sn 08 12 54.3 -3.8
LGTI Lohaghat 11.44 148 eP Pn 08 10 56.6 -0.3
LGTI eS Sn 08 12 57.2 -7.5
LGTI eS Sn 08 13 00.5 -4.2
KUDL Kundal 11.53 166 eP Pn 08 10 58.2 0.0
KUDL eS Sn 08 13 00.7 -6.3
SONA Sohna 11.55 163 eP Pn 08 10 58.6 +0.2
SONA eS Sn 08 13 01.7 -5.8
SONA eS Sn 08 13 03.2 -4.3
ZSN Zaisan 11.58 42 eP Pn 08 11 02.2 +3.4
ZSN Zaisan 11.58 42 eP Pn 08 11 42.1 +43
comp=E,9.6nm,0.9s
ZSN eS 08 14 14.5
comp=E,71nm,1.7s
ZSN Zaisan 11.58 42 ePn Pn 08 11 02.2 +3.4
baz=43
ZSN eLg Lg 08 14 16.8
baz=43
ZSN Zaisan 11.58 42 Pg Pn 08 11 42.1 +43
comp=E,14nm,0.6s
ZSN Lg Lg 08 14 14.6
comp=E,71nm,1.8s
WMQ Urumqi 11.59 63 eP Pn 08 11 02.5 +3.5
WMQ pmax pmax
comp=E,45nm,0.9s
WMQ pmax pmax
comp=E,160nm,4.1s
WMQ LR LR
comp=E,2μm,8.5s
WMQ LR LR
comp=E,2μm,11.3s
WMQ LR LR
comp=E,710nm,11.7s
KURBB Kurchatov Arra 11.79 16 Pn Pn 08 11 00.7 -0.9
comp=E,0.4nm,0.3s,baz=209,slow=12,SNR=35
KURBB Lg Lg 08 14 24.5
comp=E,0.5nm,0.3s,baz=198,slow=28,SNR=6.5
comp=E,3.8nm,0.7s
KURBB Kurchatov Arra 11.79 16 P Pn 08 11 00.8 -0.7
KURBB Kurchatov Arra 11.79 16 ⇓Pn Pn 08 11 00.9 -0.7
comp=E,18nm,0.7s
KURBB ⇑Lg Lg 08 14 27.0
comp=E,334nm,1.1s
KURK Kurchatov 11.89 16 Pn 08 11 02.9 -0.2
KURK Kurchatov 11.89 16 P Pn 08 11 02.9 -0.2
SEM Semipalatinsk 12.02 22 eP Pn 08 11 04.6 -0.4
SEM Semipalatinsk 12.02 22 eP Pn 08 11 04.7 -0.3
baz=22
GEYT Alibeck 12.02 268 Pn Pn 08 11 03.5 -1.4
comp=E,4.7nm,0.3s,baz=91,slow=12,SNR=18
GEYT Sn Sn 08 13 17.8 -1.2
comp=E,2.6nm,0.3s,baz=6.3,slow=40,SNR=3.5
GEYT LR LR 08 16 31.3
comp=E,1μm,18.1s,baz=82,slow=42
comp=E,12nm,0.4s
GEYT Alibeck 12.02 268 Pn Pn 08 11 02.9 -2.0
AJM Ajmer 12.94 175 eP Pn 08 11 13.7 -3.9
AB31 Akbulak array 13.74 320 P Pn 08 11 29.0 +0.8
AB31 SN Sn 08 14 05.0 +4.2
AB31 Akbulak array 13.74 320 ⇓Pn Pn 08 11 26.8 -1.5
comp=E,19nm,0.6s,baz=129,slow=12,SNR=228
AB31 ⇑Sn Sn 08 13 59.3 -1.5
comp=E,29nm,0.7s,baz=129,slow=21,SNR=6.8
ABKAR Akbulak array 13.74 320 Pn Pn 08 11 26.9 -1.3
ABKAR Akbulak array 13.74 320 Pn Pn 08 11 26.6 -1.6
BVAR Borovoye Array 13.77 352 LR LR 08 16 27.6
comp=E,216nm,18.2s,baz=48,slow=36
DANN Dangsing 13.99 139 eP Pn 08 11 28.7 -3.4
KOLN Koldanda 14.39 141 eP Pn 08 11 33.4 -4.1
comp=E,28nm,0.6s
JHNI Jhansi 14.57 161 eP Pn 08 11 36.3 -3.5
JHNI eS Sn 08 14 13.2 -8.2
JHNI eS Sn 08 14 14.4 -6.9
GKN Gorkha 14.72 137 eP Pn 08 11 38.4 -3.6
comp=E,34nm,0.4s
KKN Kakani 15.24 136 eP Pn 08 11 45.9 -3.1
DMN Daman 15.29 137 eP Pn 08 11 45.7 -4.0
AKTO Aktyubinsk 15.45 321 Pn Pn 08 11 50.5 -1.0
comp=E,1.0nm,0.3s,baz=132,slow=14,SNR=35
AKTO Sn Sn 08 14 39.5 -3.1
comp=E,3.2nm,0.3s,baz=31,slow=21,SNR=5.4
AKTO Lg Lg 08 16 25.4
comp=E,0.6nm,0.3s,baz=223,slow=14,SNR=2.1
AKTO LR LR 08 18 02.9
comp=E,599nm,19.0s,baz=136,slow=38
comp=E,26nm,0.8s
AKTO Aktyubinsk 15.45 321 P Pn 08 11 50.4 -1.0
AKTO 08 14 35.6
AKTO Aktyubinsk 15.45 321 ⇓Pn Pn 08 11 52.6 +1.1
comp=E,95nm,0.8s
AKTO ⇓Sn Sn 08 14 40.6 -2.0
comp=E,48nm,1.1s
PKIN Phulchoki 15.47 136 eP Pn 08 11 48.4 -3.6
GUN Gumba 15.47 134 eP Pn 08 11 48.9 -3.3
comp=E,24nm,0.5s
PKI Pulchoki 15.48 136 eP Pn 08 11 48.7 -3.6
comp=E,15nm,0.4s

JIRN Jiri 15.84 134 eP Pn 08 11 54.1 -2.9
comp=E,42nm,0.4s
BHPL Bhopal 16.48 167 eP Pn 08 12 01.3 -3.6
ZAA0 Zalesovo Array 16.49 24 P Pn 08 12 04.7 -0.1
ZAA0 Zalesovo Array 16.49 24 ⇑Pn Pn 08 12 03.8 -1.0
comp=E,8.3nm,1.1s
ZALV Zalesovo Beam 16.49 24 Pn Pn 08 12 04.5 -0.3
comp=E,3.3nm,0.3s,baz=215,slow=12,SNR=26
ZALV Lg Lg 08 16 52.6
baz=215,slow=23
ZALV LR LR 08 18 54.8
comp=E,284nm,21.1s,baz=220,slow=39
comp=E,24nm,0.6s
ZALV Zalesovo Beam 16.49 24 Pn Pn 08 12 04.2 -0.6
RAMN Ramite 16.62 134 eP Pn 08 12 02.8 -4.0
comp=E,67nm,0.6s
TAPN Taplejung 16.94 131 eP Pn 08 12 07.5 -3.5
comp=E,43nm,0.7s
GOMU GeErMu 17.24 94 P Pn 08 12 13.8 -0.9
GOMU sP pP 08 12 19.5 -0.8
GOMU S Sn 08 15 31.3 +4.6
GOMU pmax pmax
comp=E,9.0nm,0.9s
GOMU pmax pmax
comp=E,100nm,4.1s
GOMU LR LR
comp=E,430nm,15.7s
GOMU LR LR
comp=E,540nm,14.5s
GOMU LR LR
comp=E,570nm,14.5s
LSA Lhasa 17.53 118 P Pn 08 12 18.0 -0.5
LSA Lhasa 17.53 118 P Pn 08 12 18.0 -0.5
LSA pmax pmax
comp=Z,17nm,0.6s
BOK Bokaro 18.83 142 eP P 08 12 32.0 -1.5
BOK eS Sn 08 15 51.5 -13
AKL Akola 18.91 169 eP Pn 08 12 35.0 +0.1
LKRN Lenkeran, Azer 19.10 276 P Pn 08 12 37.1 -0.1
SVE Sverdlovsk 19.33 339 eP P 08 12 39.2 +0.4
SVE eS Sn 08 16 15.2 -1.3
SVE pmax pmax
comp=Z,104nm,1.5s
SVE MLR MLR
comp=Z,881nm,9.0s
ARU Arti 19.64 335 P P 08 12 42.6 +0.5
baz=152,slow=7.8,SNR=44
ARU S S 08 16 18.6 -4.9
comp=Z,5.6nm,0.2s,baz=231,slow=4.6,SNR=1.2
ARU Lg Lg 08 18 26.8
baz=284,slow=9.9,SNR=1.4
ARU LR LR 08 20 47.8
comp=Z,208nm,19.1s,baz=180,slow=38
comp=Z,39nm,0.6s
ARU Arti 19.64 335 P P 08 12 42.3 +0.3
ARU Arti 19.64 335 *d* iP P 08 12 42.9 +0.8
ARU S Sn 08 16 26.6 +2.8
ARU pmax pmax
comp=Z,56nm,0.9s
ARU MLR MLR
comp=Z,450nm,11.0s
BANOM Banah 19.64 232 P P 08 12 42.7 +0.3
SHME Shamm 19.64 232 P Pn 08 12 43.9 +0.1
MAK Makhachkala 19.76 289 eP P 08 12 39.8 -3.8
MAK eS S 08 16 21.7 -4.5
MAK pmax pmax
comp=Z,147nm,1.2s
MAK MLR MLR
comp=Z,632nm,13.0s
SEKA Sheki 20.02 284 P P 08 12 47.1 +0.6
MSFE Esma-Masafi 20.14 231 P P 08 12 48.1 +0.3
KNGR Kungurtug, Tuv 20.32 49 *i* P Pn 08 12 51.0 -0.7
GTA Gaotai 20.41 82 ⇑P Pn 08 12 52.3 -0.6
GTA pP sP 08 12 57.5 +0.7
GTA sP pP 08 13 01.0 +6.1
GTA S Sn 08 16 43.0 +0.1
GTA pmax pmax
comp=Z,32nm,1.2s
GTA pmax pmax
comp=Z,170nm,4.0s
GTA LR LR
comp=Z,400nm,18.5s
GTA LR LR
comp=Z,540nm,17.5s
GTA LR LR
comp=Z,560nm,18.5s
WSAR Wadi Sarin 20.41 222 P P 08 12 50.9 +0.1
comp=Z,15nm,0.7s,baz=32,slow=3.6,SNR=8.5
WSAR LR LR 08 23 01.5
comp=Z,166nm,19.7s,baz=60,slow=44
comp=Z,15nm,0.7s
UOSS Minazif 20.42 230 P P 08 12 51.5 +0.6
UOSS Minazif 20.42 230 P P 08 12 48.3 -2.6
ZKTA Zakatala 20.43 285 P P 08 12 50.9 0.0
HATD Hatta, Dubai 20.56 230 P P 08 12 52.1 -0.3
ASHO Ashiyiah 20.71 230 *i* P P 08 12 54.1 +0.1
SNR=6.8
SHL Shillong 20.78 126 P P 08 12 54.4 -0.6
SHL Shillong 20.78 126 P P 08 12 54.4 -0.6
SHL pmax pmax
comp=Z,22nm,0.7s
DDFL Dedoflistskaro 20.82 284 P P 08 12 55.6 +0.4
GROC Groznyy 21.02 289 eP P 08 12 58.2 +1.0
GROC *e* 08 13 17.8
GROC eS S 08 16 53.0 +1.8
GROC pmax pmax
comp=Z,124nm,0.7s
ASUD Al Ashush, Dub 21.19 231 P P 08 12 58.9 -0.3
GNI Garni 21.98 281 P P 08 13 09.1 +1.3
comp=Z,69nm,0.9s,baz=76,slow=1.8,SNR=18
GNI LR LR 08 23 06.7
comp=Z,202nm,19.8s,baz=104,slow=41
comp=Z,69nm,0.9s
GNI Garni 21.98 281 P P 08 13 09.1 +1.3
GNI IAmb IAmb 08 13 15.4
comp=Z,136nm,1.1s
GNI Garni 21.98 281 *ce* P P 08 13 09.3 +1.5
GNI pmax pmax
comp=Z,158nm,1.1s
GNI Garni 21.98 281 P P 08 13 09.0 +1.2
BELG Belogornoye 21.98 315 P P 08 13 07.1 -0.4
comp=Z,148nm,0.9s,baz=11,slow=0.7,SNR=27
BELG S S 08 17 11.2 +1.2
comp=Z,12nm,0.8s,baz=139,slow=22,SNR=1.6
BELG LR LR 08 21 59.6
comp=Z,194nm,18.1s,baz=115,slow=38
comp=Z,148nm,0.9s
HYBB Hyderabad (bro 22.37 167 eP P 08 13 13.0 +1.0
HYBB *ep* pP 08 13 15.9 -0.1
ZEI Tsey 22.41 288 eP P 08 13 11.6 -0.8
ZEI pmax pmax
comp=Z,46nm,0.9s
NCK Nalchik 22.63 290 *i* P P 08 13 14.3 -0.2
NCK pmax pmax
comp=Z,138nm,0.8s
MOY Mondy 22.75 48 eP P 08 13 16.5 +0.7
MOY pmax pmax
comp=Z,62nm,1.4s
ONI Oni 22.75 288 P P 08 13 17.5 +1.6
AKH Akhalkalaki 22.79 285 ⇑P P 08 13 17.9 +1.4
AKH Akhalkalaki 22.79 285 P P 08 13 17.8 +1.4
GOF Gofitskoye 23.07 294 ⇑eP P 08 13 19.0 -0.2
GOF pmax pmax
comp=Z,116nm,1.1s
KBZ Khabaz 23.14 291 P P 08 13 20.1 +0.4
comp=Z,18nm,0.9s,baz=118,slow=6.7,SNR=32
KBZ S S 08 17 33.2 +2.1
comp=Z,5.6nm,0.9s,baz=66,slow=23,SNR=2.1
KBZ LR LR 08 24 19.9
comp=Z,324nm,19.6s,baz=92,slow=42
comp=Z,18nm,0.9s
KARS Kars 23.18 283 P P 08 13 23.9 +3.4
KVAR Kislovodsk Arr 23.29 291 P P 08 13 21.9 +0.5
comp=Z,40nm,1.0s,baz=252,slow=23,SNR=8.4
KVAR S S 08 17 32.1 -1.8
comp=Z,2.1nm,0.4s,baz=342,slow=18,SNR=1.0
KVAR LR LR 08 24 17.5
comp=Z,242nm,19.3s,baz=174,slow=42
comp=Z,40nm,1.0s
KIV Kislovodsk 23.29 291 ⇑P P 08 13 22.6 +1.1
KIV Kislovodsk 23.29 291 P P 08 13 22.0 +0.5
KIV IAmb IAmb 08 13 24.1
comp=Z,64nm,0.8s
KIV Kislovodsk 23.29 291 *de* P P 08 13 21.4 -0.1
KIV *i* *PP pP 08 13 24.7 -0.8
KIV *e* *SP sP 08 13 27.0 -0.3

KIV eS S 08 17 32.6 -1.3
KIV *e* 08 17 40.6
KIV eSS SnSn 08 18 09.8 +2.0
KIV eSSS SSS 08 18 30.9
KIV pmax pmax
comp=Z,67nm,0.8s
KIV MLR MLR
comp=Z,261nm,17.0s
KIV Kislovodsk 23.29 291 *i* P P 08 13 23.2 +1.7
SNR=11
SHA1 Shidzhatmaz 23.31 291 *i* P P 08 13 21.7 -0.1
MZR Muzera 23.52 232 P P 08 13 24.2 +0.4
GEVA Gevas 23.58 277 P P 08 13 26.7 +2.2
GEVA IAmb IAmb 08 13 28.9
comp=Z,76nm,1.2s
ZAK Zakamensk 23.70 53 eP P 08 13 25.8 +0.4
ZAK pmax pmax
comp=Z,25nm,1.3s
CHVG Ch'k'valeri 23.75 288 ⇑P P 08 13 28.3 +2.4
BATM Batumi 24.12 285 ⇑P P 08 13 31.8 +2.4
LZH Lanzhou 24.26 88 ⇑P P 08 13 32.5 +1.5
LZH pP pP 08 13 35.5 +0.2
LZH sP sP 08 13 37.3 +0.2
LZH PP PnPn 08 14 07.8 +7.2
LZH pmax pmax
comp=Z,55nm,1.3s
LZH pmax pmax
comp=Z,310nm,5.2s
LZH LR LR
comp=Z,860nm,12.4s
LZH LR LR
comp=Z,770nm,11.7s
LZH LR LR
comp=Z,900nm,14.3s
GURO Guroymak-BITLI 24.32 278 P P 08 13 33.8 +2.3
KIRV Kirov 24.57 329 P P 08 13 33.8 +0.5
comp=Z,40nm,0.7s,baz=135,slow=4.1,SNR=17
KIRV Lg Lg 08 21 06.5
comp=Z,2.0nm,0.3s,baz=99,slow=23,SNR=1.2
comp=Z,40nm,0.7s
KIRV Kirov 24.57 329 *ce* P P 08 13 33.6 +0.3
IRK Irkutsk 24.85 49 eP P 08 13 37.0 +1.0
IRK pmax pmax
comp=Z,58nm,1.4s
VRH Novokhopyorsk 24.99 309 eP P 08 13 36.0 -1.2
VRH pmax pmax
comp=Z,130nm,1.4s
VRH MLR MLR
comp=Z,1μm,17.0s
SONM Songino Array 25.19 60 P P 08 13 39.8 +0.5
comp=Z,11nm,0.7s,baz=265,slow=9.3,SNR=50
SONM LR LR 08 24 32.7
comp=Z,834nm,18.4s,baz=262,slow=39
comp=Z,11nm,0.7s
SONM Songino Array 25.19 60 P P 08 13 39.9 +0.7
SONM Songino Array 25.19 60 P P 08 13 39.9 +0.7
SONM pmax pmax
comp=Z,21nm,1.0s
KOPT Kop Dagi 25.22 282 IAmb IAmb 08 14 01.1
comp=Z,33nm,0.9s
SOC Sochi 25.45 290 eP P 08 13 40.1 -1.3
SOC ePPP PPP 08 14 28.0
SOC eS S 08 18 07.4 -0.9
SOC eSS SnSn 08 19 04.4 +3.9
SOC eSSS SSS 08 19 19.4
SOC pmax pmax
comp=Z,31nm,1.1s
SOC MLR MLR
comp=Z,197nm,13.0s
MARD Mardin 25.57 276 IAmb IAmb 08 13 47.3
comp=Z,36nm,1.0s
ULN Ulaanbaatar 25.63 60 P P 08 13 43.6 +0.3
ULN Ulaanbaatar 25.63 60 *ce* P P 08 13 43.6 +0.3
ULN pmax pmax
comp=Z,27nm,1.4s
CD2 Chengdu 26.15 100 P P 08 13 50.3 +2.3
CD2 pmax pmax
comp=Z,30nm,0.9s
CD2 LR LR
comp=Z,560nm,13.1s
CD2 LR LR
comp=Z,560nm,14.1s
VSR Storozhevoye 26.55 308 eP P 08 13 51.4 +0.1
VSR pmax pmax
comp=Z,120nm,1.0s
VSR MLR MLR
comp=Z,940nm,16.0s
VORR Voronezh 26.63 309 eP P 08 13 51.6 -0.5
VORR pmax pmax
comp=Z,39nm,1.5s
PZH PanZhiHua 26.94 110 P P 08 13 56.0 +0.8
PZH pmax pmax
comp=Z,10.0nm,0.7s
PZH pmax pmax
comp=Z,60nm,3.5s
PZH LR LR
comp=Z,280nm,12.0s
PZH LR LR
comp=Z,180nm,13.0s
PZH LR LR
comp=Z,290nm,12.5s
LPSR Galich'ya Gora 27.03 311 eP P 08 13 55.8 +0.1
LPSR pmax pmax
comp=Z,80nm,0.9s
LPSR MLR MLR
comp=Z,610nm,12.0s
ANN Anapa 27.05 293 eP P 08 13 55.0 -0.9
ANN pmax pmax
comp=Z,108nm,1.3s
PRGR Permogore 28.00 332 eP P 08 14 03.8 -0.4
PRGR *e**PP pP 08 14 08.2 -0.3
RAYN Ar Rayn 28.41 244 P P 08 14 09.1 +0.7
RAYN IAmb IAmb 08 14 15.0
comp=Z,18nm,0.8s
RAYN Ar Rayn 28.41 244 P P 08 14 09.1 +0.7
RAYN pmax pmax
comp=Z,18nm,0.9s
RAYN Ar Rayn 28.41 244 *i* P P 08 14 09.5 +1.1
SNR=12
KMI Kunming 28.48 111 ⇑P P 08 14 09.3 +0.2
KMI pmax pmax
comp=Z,7.0nm,0.5s
KMI LR LR
comp=Z,230nm,17.7s
KMI LR LR
comp=Z,230nm,17.9s
KMI LR LR
comp=Z,330nm,21.2s
MOS Moscow 28.71 317 eP P 08 14 09.9 -0.7
MOS *e* 08 15 05.2
MOS pmax pmax
comp=Z,73nm,0.8s
MOS pmax pmax
comp=Z,100nm,1.1s
MOS MLR MLR
comp=Z,700nm,20.0s
XAN Xi'an 28.87 89 ⇑P P 08 14 12.8 +0.5
XAN pP sP 08 14 18.3 -0.2
XAN sP pP 08 14 22.0 +5.3
XAN pmax pmax
comp=Z,9.0nm,0.7s
XAN pmax pmax
comp=Z,110nm,6.5s
XAN LR LR
comp=Z,550nm,15.2s
XAN LR LR
comp=Z,520nm,13.7s
XAN LR LR
comp=Z,750nm,14.9s
DIKM Dikmen 28.90 287 ⇑P P 08 14 14.2 +1.7
OBN Obninsk 29.08 315 P P 08 14 14.1 +0.2
comp=Z,5.3nm,0.3s,baz=285,slow=23,SNR=9.2
OBN LR LR 08 26 11.2
comp=Z,41nm,21.6s,baz=180,slow=37
comp=Z,5.3nm,0.3s
OBN Obninsk 29.08 315 *ce* P P 08 14 14.0 +0.1
OBN *e**PP sP 08 14 19.3 -0.5
OBN *e**SP pP 08 14 21.4 +3.3
OBN *e* 08 15 06.1
OBN 08 17 25.0
OBN S S 08 19 09.0 +3.7
OBN pmax pmax
comp=Z,41nm,0.8s
OBN MLR MLR
comp=Z,345nm,17.0s
HHC Hu-ho-hao-te 29.08 75 eP P 08 14 15.3 +1.0

HHC pmax pmax
comp=Z,21nm,0.7s
HHC pmax pmax
comp=Z,140nm,6.2s
HHC LR LR
comp=Z,390nm,15.2s
HHC LR LR
comp=Z,1µm,15.2s
HHC LR LR
comp=Z,1µm,14.9s
SIM Simferopol' 29.41 294 *e*P **P 08 14 18.6 +1.7**
SIM 08 15 18.7
SIM pmax pmax
comp=Z,93nm,0.8s
SIM MLR MLR
comp=Z,100nm,15.0s
KLMR Klimovskoe 29.97 327 *e*P **P 08 14 20.5 -1.2**
KLMR *e*S **S 08 19 21.3 +2.2**
KLMR pmax pmax
comp=Z,24nm,1.0s
KLMR MLR MLR
comp=Z,405nm,9.0s
KLMR Klimovskoe 29.97 327 *e*P **P 08 14 20.6 -1.2**
KLMR AMP 08 14 22.8
comp=Z,24nm,1.0s
KLMR *e*S **S 08 19 21.4 +2.3**
KLMR *e*S **S 08 19 21.4 +2.3**
KLMR LQ LQ 08 23 44.2
KLMR LQ LQ 08 23 44.2
KLMR LR LR 08 25 37.9
KLMR AMP 08 26 40.4
comp=Z,405nm,9.1s
CMAR Chiang Mai Arr 30.42 126 P **P 08 14 25.5 -0.7**
comp=Z,1.7nm,0.3s,baz=320,slow=9.7,SNR=6.1
comp=Z,1.7nm,0.3s
CMAR Chiang Mai Arr 30.42 126 *i* P **P 08 14 27.3 +1.1**
CMAR pmax pmax
comp=Z,2.0nm,0.3s
BR131 Keskin Array S 30.46 283*c i*P **P 08 14 27.7 +1.2**
BRTR Keskin Array B 30.46 283 P **P 08 14 27.8 +1.2**
comp=Z,30nm,0.8s,baz=89,slow=7.6,SNR=79
BRTR LR LR 08 28 36.6
comp=Z,172nm,18.2s,baz=96,slow=40
comp=Z,30nm,0.8s
GYA Guiyang 30.60 105 ⇑P **P 08 14 30.0 +2.2**
GYA S **S 08 19 29.8 -0.2**
GYA pmax pmax
comp=Z,13nm,0.8s
GYA LR LR
comp=Z,330nm,13.8s
ENH Enshi 30.84 96 P **P 08 14 30.3 +0.5**
ANTO Ankara 31.07 284 P **P 08 14 32.3 +0.5**
ANTO Ankara 31.07 284 P **P 08 14 32.3 +0.5**
ANTO pmax pmax
comp=Z,107nm,1.5s
LYN LuoYang 31.43 86 *e*P **P 08 14 37.0 +2.1**
LYN LR LR
comp=Z,440nm,12.2s
LYN LR LR
comp=Z,400nm,13.5s
LYN LR LR
comp=Z,510nm,11.8s
HNS HongShan 32.25 80 ⇑P **P 08 14 43.0 +0.9**
HNS S **S 08 19 57.3 +1.9**
HNS pmax pmax
comp=Z,8.0nm,0.8s
HNS LR LR
comp=Z,260nm,10.8s
HNS LR LR
comp=Z,460nm,12.7s
HNS LR LR
comp=Z,460nm,13.7s
PALK Pallekele 32.67 166 LR LR 08 28 53.3
comp=Z,224nm,19.9s,baz=80,slow=38
BJI Beijing 32.69 75 P **P 08 14 46.8 +0.9**
BJI pmax pmax
comp=Z,6.0nm,0.5s
BJI LR LR
comp=Z,63nm,13.9s
BJI LR LR
comp=Z,230nm,12.9s
BJI LR LR
comp=Z,440nm,12.3s
AKASG Malin Array Be 32.70 305 P **P 08 14 45.9 0.0**
comp=Z,7.4nm,0.5s,baz=78,slow=7.6,SNR=116
AKASG LR LR 08 29 18.9
comp=Z,247nm,18.9s,baz=76,slow=39
comp=Z,7.4nm,0.5s
AKASG Malin Array Be 32.70 305 *i* P **P 08 14 45.9 0.0**
AKASG pmax pmax
comp=Z,28nm,0.6s
AKBB Malin Array Si 32.70 305*ce*P **P 08 14 45.7 -0.2**
KIS Kishinev 32.98 298 *e*P **P 08 14 48.0 -0.4**
comp=Z,60nm,0.7s
KIS *e*S **S 08 19 59.0 -7.6**
KIS LRM MLR 08 33 28.0
comp=Z,130nm,12.5s
KIS Kishinev 32.98 298 *e*P **P 08 14 48.0 -0.4**
KIS *e*S **S 08 19 59.0 -7.6**
KIS pmax pmax
comp=Z,60nm,0.7s
MILM Milestii Mici 32.99 298⇑ *i*P **P 08 14 48.5 0.0**
comp=Z,100nm,0.8s
MILM Milestii Mici 32.99 298 *e*PP PP 08 16 08.0 +5.1
MILM *e*S **S 08 20 01.0 -5.7**
MILM *e*L L 08 30 13.0
MILM LRM MLR 08 31 24.0
comp=Z,300nm,14.0s
MILM Milestii Mici 32.99 298 ⇑P **P 08 14 48.9 +0.4**
MILM Milestii Mici 32.99 298*c i*P **P 08 14 48.5 0.0**
MILM *e*S **S 08 20 01.0 -5.7**
MILM pmax pmax
comp=Z,100nm,0.8s
MILM pmax pmax
comp=E,60nm,1.0s
MILM MLR MLR
comp=Z,300nm,14.0s
TLCR 33.13 295 ⇑P **P 08 14 50.5 +0.8**
SORM Soroca 33.25 300 ⇑P **P 08 14 50.6 -0.1**
TPGR Topolog 33.45 294 ⇑P **P 08 14 53.7 +1.2**
VLDR Vladesti 33.58 296 ⇓P **P 08 14 55.0 +1.3**
CFR Carcaliu 33.61 295 ⇑P **P 08 14 55.0 +1.2**
HARR Harsova 33.81 294 ⇑P **P 08 14 56.8 +1.1**
MNK Minsk 33.86 312 *i* P **P 08 14 57.1 +1.2**
MNK *i* 08 16 12.1
MNK *i* S **S 08 20 21.7 +1.7**
MNK *i* SS **SnSn 08 22 32.9 +7.9**
MNK pmax pmax
comp=N,31nm,0.8s
MNK pmax pmax
comp=E,2.0nm,0.8s
MNK pmax pmax
comp=Z,39nm,0.8s
MNK MLR MLR
comp=N,856nm,24.0s
MNK MLR MLR
comp=Z,7µm,20.0s
MNK MLR MLR
comp=E,72nm,17.0s
MNK Minsk 33.86 312 *i* P **P 08 14 57.1 +1.2**
comp=E,2.0nm,0.8s
MNK *i* P **P 08 14 57.1 +1.2**
comp=N,31nm,0.8s
MNK *i* P **P 08 14 57.1 +1.2**
comp=Z,39nm,0.8s,baz=278
MNK *i* PP **PP 08 16 12.2 -0.3**
MNK *i* S **S 08 20 21.8 +1.7**
MNK *i* SS **SnSn 08 22 33.0 +7.9**
MNK *i* LQ LQ 08 25 52.1
MNK *i* LR LR 08 28 56.8
MNK *i* LRM MLR 08 31 35.5
comp=N,856nm,23.9s
MNK *i* LRM MLR 08 31 57.9
comp=Z,7µm,20.3s
MNK *i* LRM MLR 08 32 00.8
comp=E,72nm,17.4s
VALR Valaam 33.97 324 ⇓ *i*P **P 08 14 56.3 -0.5**
VALR pmax pmax
comp=Z,7.0nm,0.6s
PANC Panciu 34.23 296 ⇑P **P 08 15 01.1 +1.9**
TIA Tai'an 34.46 81 ⇑P **P 08 15 02.3 +0.9**
TIA pmax pmax
comp=Z,16nm,1.0s
TIA LR LR
comp=Z,220nm,16.7s
TIA LR LR
comp=Z,240nm,14.7s
TIA LR LR
comp=Z,320nm,12.8s
AKAS Kas 34.47 279 IAmb IAmb 08 15 02.2
comp=Z,36nm,0.8s
VRI Vrincioaia 34.52 296 ⇑P **P 08 15 03.2 +1.4**
VRI Vrincioaia 34.52 296 P **P 08 15 03.6 +1.8**
VRI pmax pmax
comp=Z,56nm,1.0s
NACGM Naroch 34.55 312⇓ *e*P **P 08 15 02.5 +0.6**
baz=96
PLOR Plostina 34.57 296 ⇓P **P 08 15 04.2 +1.8**
PLOR Plostina 34.57 296 P **P 08 15 04.0 +1.7**
PLOR pmax pmax
comp=Z,130nm,0.9s
IDID Didziasalis 34.62 313 *e*P **P 08 15 03.0 +0.5**
ISR Istrita 34.73 295 ⇑P **P 08 15 06.3 +2.6**
BIZ Bicaz 34.84 298 ⇑P **P 08 15 05.7 +1.1**
NEHR Nehoiu 34.87 296 ⇑P **P 08 15 05.2 +0.3**
COVR Voineasa-Covas 34.88 296 ⇑P **P 08 15 06.9 +1.9**
IIGN Ignalina 34.92 313 *e*P **P 08 15 06.4 +1.2**
RAZG Razgrad 34.99 292 ⇓P **P 08 15 07.7 +1.8**
ISAL Salakas 35.00 313 *e*P **P 08 15 06.9 +1.0**
MLR Muntele Rosu 35.11 296 ⇑P **P 08 15 09.2 +2.2**
MLR Muntele Rosu 35.11 296 LR LR 08 31 36.6
comp=Z,196nm,20.5s,baz=70,slow=40
VSU Vasula 35.16 318*c i*P **P 08 15 07.4 +0.2**
VSU pmax pmax
comp=Z,107nm,1.2s
VSU Vasula 35.16 318 *e*P **P 08 15 07.3 +0.2**
BURAR Bucovina Array 35.39 299 ⇑P **P 08 15 10.4 +1.0**
BURAR Bucovina Array 35.39 299 IAmb IAmb 08 15 11.9
comp=Z,20nm,0.8s
BUR08 Bucovina Ar. S 35.40 300 IAmb IAmb 08 15 11.8
comp=Z,17nm,0.8s
DOPR Dopca 35.43 297 ⇑P **P 08 15 11.2 +1.5**
LVZ Lovozero 35.51 336 P **P 08 15 10.0 -0.1**
LVZ IAmb IAmb 08 15 17.4
comp=Z,29nm,1.0s
LVZ Lovozero 35.51 336*ce*P **P 08 15 09.8 -0.3**
LVZ pmax pmax
comp=Z,18nm,0.9s
APA Apatity 35.73 335⇓ *i*P **P 08 15 16.0 +4.0**
APA pmax pmax
comp=Z,4.0nm,0.9s
APA MLR MLR
comp=Z,700nm,11.0s
VOIR 35.74 296 ⇑P **P 08 15 13.5 +1.1**
MTUR Matau 35.76 295 ⇑P **P 08 15 14.7 +2.1**
ALN Alexandroupoli 35.86 288 IAmb IAmb 08 15 15.6
comp=Z,22nm,1.0s
ARCR ARCALIA 36.02 299 ⇑P **P 08 15 17.0 +2.2**
LVV L'vov 36.03 303 *e*P **P 08 15 13.0 -1.8**
LVV MLR MLR
comp=Z,1µm,16.0s
ARR Arges 36.04 296 ⇑P **P 08 15 16.5 +1.5**
RDO Rodhopi 36.18 288 IAmb IAmb 08 15 18.3
comp=Z,22nm,0.9s
FIA1 FINESS Array S 36.20 323 P **P 08 15 16.4 +0.4**
FIA1 IAmb IAmb 08 15 17.4
comp=Z,18nm,0.8s
FINES FINESS Array B 36.20 323 P **P 08 15 16.3 +0.3**
comp=Z,13nm,0.7s,baz=107,slow=10,SNR=62
FINES LR LR 08 31 27.6
comp=Z,114nm,18.7s,baz=106,slow=39
comp=Z,13nm,0.7s
PABE Paberze 36.22 313 *e*P **P 08 15 17.4 +1.2**
VSVD Vaisvydziai 36.28 314 *e*P **P 08 15 17.6 +0.8**
BMR Baia Mare 36.54 300 ⇑P **P 08 15 21.0 +1.8**
SUW Suwalki 36.57 310 *e*P **P 08 15 19.5 +0.2**
SUW *e*S **S 08 20 58.7 -2.9**
LOT Lotru 36.63 296 ⇑P **P 08 15 21.5 +1.4**
RZN Rozhen 36.66 290 *i* P **P 08 15 20.2 -0.2**
MEF Metsahovi 36.70 321 *e*P **P 08 15 21.2 +0.9**
MTSE Matsula 36.71 318 *e*P **P 08 15 21.2 +0.8**
PGB Panagyurishte 36.87 291 *i* P **P 08 15 23.7 +1.6**
KWP Kalwaria Pacla 36.90 303 *e*P **P 08 15 23.1 +0.8**
DRGR 37.17 298 ⇑P **P 08 15 26.0 +1.4**
KOLS Kolonicke sedl 37.24 302 *e*P **P 08 15 26.2 +1.1**
KOLS pmax pmax
comp=Z,21nm,0.8s
KOLS Kolonicke sedl 37.24 302 *e*P **P 08 15 26.2 +1.1**
KOLS *e*PP **PnPn 08 16 51.3 +1.0**
UZH Uzhgorod 37.25 301 *e*P **P 08 15 25.9 +0.7**
UZH *e* 08 15 28.5
APE Apeiranthos 37.31 282 ⇑P **P 08 15 26.4 +0.5**
NJ2 Nanjing 37.32 87 *e*P **P 08 15 29.3 +3.3**
NJ2 pmax pmax
comp=Z,11nm,0.5s
SLIT Slitere, Latvi 37.36 316 *e*P **P 08 15 25.5 -0.4**
MMB Musomiste 37.40 290 *i* P **P 08 15 27.4 +0.8**
QIZ Qiongzhong 37.41 112 P **P 08 15 27.0 +0.2**
QIZ S **S 08 21 16.0 +0.9**
QIZ LR LR
comp=Z,360nm,17.5s
QIZ LR LR
comp=Z,350nm,12.8s
QIZ LR LR
comp=Z,350nm,15.5s
VTS Vitosha 37.52 292 *i* P **P 08 15 28.6 +0.8**
HERR Herculane 37.66 295 ⇑P **P 08 15 29.8 +1.0**
BORR Bors 37.76 299 ⇑P **P 08 15 29.6 +0.1**
CRVS Cervenica-Dubn 37.77 302 *e*P **P 08 15 31.4 +1.8**
CRVS pmax pmax
comp=Z,15nm,1.0s
CRVS Cervenica-Dubn 37.77 302 *e*P **P 08 15 31.4 +1.8**
KKB Krupnik 37.80 290 *i* P **P 08 15 30.4 +0.4**
SIRR Siria 37.96 298 ⇑P **P 08 15 33.1 +1.8**
BEL Belsk 38.01 307 *e*P **P 08 15 32.3 +0.8**
BZS Buzias 38.10 297 ⇑P **P 08 15 33.9 +1.6**
RAF Rauma 38.13 322 *e*P **P 08 15 33.2 +0.7**
MDVR Moldovita 38.17 295 ⇑P **P 08 15 34.6 +1.5**
IDI Anoyia 38.40 280 ⇑P **P 08 15 35.4 +0.3**
IDI Anoyia 38.40 280 LR LR 08 35 52.8
comp=Z,52nm,18.5s,baz=86,slow=43
IDI Anoyia 38.40 280 IAmb IAmb 08 15 50.3
comp=Z,76nm,1.6s
BOVS Bovan 38.40 294 ⇑P **P 08 15 36.1 +1.1**
KECS Kecovo 38.46 301 *e*P **P 08 15 36.6 +1.2**
KECS *e* 08 17 05.2
KECS Kecovo 38.46 301 *e*P **P 08 15 36.6 +1.2**
KECS *e*PP **PnPn 08 17 05.2 +0.1**
OJC Ojcow 38.73 304 *e*P **P 08 15 37.9 +0.2**
OJC Ojcow 38.73 304 IAmb IAmb 08 15 38.9
comp=Z,33nm,0.7s
ZEA Zeya 38.74 50 *e*P **P 08 15 39.1 +1.4**
ZEA pmax pmax
comp=Z,10.0nm,0.9s
ZEA MLR MLR
comp=E,100nm,12.0s
ZEA MLR MLR
comp=Z,300nm,12.0s
ATD Arta Tunnel 38.78 233 LR LR 08 35 11.6
comp=Z,112nm,21.8s,baz=200,slow=42
PSZ Piszkesteto 38.92 301 ⇑P **P 08 15 40.5 +1.2**
PSZ Piszkesteto 38.92 301 P **P 08 15 40.6 +1.2**
LANS Liptovska Anna 39.05 303 *e*P **P 08 15 42.5 +2.1**
LANS pmax pmax
comp=Z,7.0nm,0.8s
LANS Liptovska Anna 39.05 303 *e*P **P 08 15 42.5 +2.1**
AGG Agios Georgios 39.11 286 IAmb IAmb 08 15 43.0
comp=Z,34nm,1.1s
ARA0 ARCESS Array S 39.22 336 *e*P **P 08 15 42.1 +0.6**
ARCES ARCESS Array B 39.22 336 P **P 08 15 42.0 +0.4**
comp=Z,12nm,0.6s,baz=110,slow=8.5,SNR=83
ARCES LR LR 08 32 49.2
comp=Z,210nm,19.8s,baz=115,slow=38
comp=Z,12nm,0.6s
ARCES ARCESS Array B 39.22 336 P **P 08 15 41.9 +0.4**
ARCES ARCESS Array B 39.22 336 P **P 08 15 41.9 +0.4**
ARCES pmax pmax
comp=Z,19nm,0.8s
FRGS Fruska Gora 39.43 296 ⇑P **P 08 15 45.0 +1.4**
FRGS Fruska Gora 39.43 296⇑ *i*P **P 08 15 44.5 +0.9**
DIVS Divibare 39.52 295 IAmb IAmb 08 15 46.8
comp=Z,62nm,1.1s
DIVS Divibare 39.52 295⇑ *i*P **P 08 15 45.5 +1.1**
VYHS Vyhne 39.55 302 *e*P **P 08 15 45.8 +1.3**
VYHS pmax pmax
comp=Z,12nm,1.1s
VYHS Vyhne 39.55 302 *e*P **P 08 15 45.8 +1.3**
BUD Budapest 39.57 300 P **P 08 15 45.9 +1.2**
BNX BinXian 39.64 63 ⇓P **P 08 15 45.5 +0.2**
BNX pmax pmax
comp=Z,8.0nm,0.5s
BNX pmax pmax
comp=Z,54nm,3.8s
SJES Sjenica 39.72 293⇑ *i*P **P 08 15 47.3 +1.2**
TEKS Tekeris 39.75 295 *e*P **P 08 15 46.6 +0.3**
KTK1 Kautokeino 39.76 334 *e*P **P 08 15 46.1 +0.1**
IVA Berane 39.86 293 *e*P **P 08 15 49.4 +2.1**
PVY Plav 39.88 292 *e*P **P 08 15 49.6 +2.1**
BBLS Lazići 39.98 294⇑ *i*P **P 08 15 49.3 +1.0**
SRO Srobarova 39.99 301 *e*P **P 08 15 50.2 +2.0**
SRO Srobarova 39.99 301 *e*P **P 08 15 50.2 +2.0**
UPP Upsala 40.01 320 *e*P **P 08 15 48.7 +0.6**
MORH Mrgy, Hungar 40.04 298 ⇓P **P 08 15 49.4 +0.8**
MORH Mrgy, Hungar 40.04 298⇑ *i*P **P 08 15 49.2 +0.6**
MORH Mrgy, Hungar 40.04 298 P **P 08 15 49.4 +0.8**
MAUC Maruska 40.09 303 *e*P **P 08 15 50.5 +1.4**
MAUC AMS AMS 08 36 10.0
comp=Z,800nm,17.8s
CSKK Cskako 40.10 300 P **P 08 15 50.4 +1.3**
GKP Gorka Klasztor 40.11 309 *e*P **P 08 15 50.4 +1.4**
PLE Pljevlja 40.12 294⇓ *i*P **P 08 15 52.1 +2.7**
KOME Kolasin 40.14 293⇓ *i*P **P 08 15 51.1 +1.5**
MORC Moravsky Berou 40.23 304 ⇑P **P 08 15 50.5 +0.3**
MORC Moravsky Berou 40.23 304 *e*P **P 08 15 50.9 +0.7**
HAMF Hammerfest 40.25 337 *e*P **P 08 15 50.8 +0.8**
JAVC Velka Javorina 40.26 302 *e*P **P 08 15 52.3 +1.8**
VIKU Vikbolandet 40.39 317 *e*P **P 08 15 51.3 0.0**
PDG Podgorica 40.43 292 ⇑P **P 08 15 52.7 +0.8**
PDG Podgorica 40.43 292 IAmb IAmb 08 15 54.2
comp=Z,44nm,0.8s
PDG Podgorica 40.43 292 *e*P **P 08 15 52.4 +0.5**
TTG Podgorica 40.43 292⇓ *i*P **P 08 15 53.2 +1.3**
KOVH Kovagotottos 40.43 298 P **P 08 15 52.3 +0.5**
SMOL Smolenice 40.47 302 *e*P **P 08 15 53.3 +1.1**
SMOL Smolenice 40.47 302 *e*P **P 08 15 53.3 +1.1**
UPM Unac-Piva 40.49 294 *e*P **P 08 15 54.0 +1.4**
UPM Unac-Piva 40.49 294 *e*P **P 08 15 54.3 +1.7**
YAK Yakutsk 40.51 37 P **P 08 15 52.3 0.0**
comp=Z,14nm,0.5s,baz=266,slow=1.2,SNR=5.6
YAK LR LR 08 32 53.6
comp=Z,187nm,18.4s,baz=268,slow=37
comp=Z,14nm,0.5s
YAK Yakutsk 40.51 37 IAmb IAmb 08 15 53.1
comp=Z,43nm,0.9s
YAK Yakutsk 40.51 37 *e*P **P 08 15 51.5 -0.8**
YAK *e* 08 17 25.6
YAK *e* 08 17 53.2
YAK *e*S **S 08 21 56.3 -4.7**
YAK *e*SS **SS 08 24 58.4 -1.7**
YAK pmax pmax
comp=Z,41nm,0.9s
YAK pmax pmax
comp=N,2.0nm,0.9s
YAK pmax pmax
comp=E,21nm,1.3s
YAK pmax pmax
comp=Z,95nm,4.3s
YAK pmax pmax
comp=E,61nm,4.8s
YAK smax smax
comp=E,44nm,2.0s
YAK smax smax
comp=N,39nm,1.9s
DRME Dracevica, Mon 40.54 292 *e*P **P 08 15 53.2 +0.4**
NKME Niksic 40.56 293 *e*P **P 08 15 53.9 +0.8**
MODS Modra-Piesok 40.59 302 *e*P **P 08 15 53.7 +0.5**
MODS pmax pmax
comp=Z,32nm,1.1s
MODS Modra-Piesok 40.59 302 *e*P **P 08 15 53.7 +0.5**
MPLH Magyarpolny 40.61 300 P **P 08 15 54.2 +0.8**
CEME Cevo 40.64 293⇓ *i*P **P 08 15 54.8 +1.1**
KRLC Kraliky 40.68 304 *e*P **P 08 15 55.3 +1.4**
KRLC MLR MLR
comp=Z,200nm,13.2s
KRLC Kraliky 40.68 304 *e*P **P 08 15 55.3 +1.4**
KRLC AMS AMS 08 35 20.0
comp=Z,200nm,13.2s
BUM Brajici-Budva 40.72 292⇓ *i*P **P 08 15 55.3 +0.9**
ZST Bratislava 40.73 301 *e*P **P 08 15 55.1 +0.8**
ZST pmax pmax
comp=Z,27nm,0.9s
ZST Bratislava 40.73 301 *e*P **P 08 15 55.1 +0.8**
BRY Bratogost 40.82 293 *e*P **P 08 15 56.0 +0.7**
BRY Bratogost 40.82 293 *e*P **P 08 15 56.5 +1.2**
BLEU Blekinge 40.83 314 *i* P **P 08 15 52.3 -2.7**
JETT Jettan, Norway 40.89 335 *e*P **P 08 15 56.0 +0.5**
KSP Ksiaz 40.90 306 *e*P **P 08 15 56.5 +0.9**
VRAC Vranov 40.90 303 ⇓P **P 08 15 57.3 +1.6**
VRAC Vranov 40.90 303 LR LR 08 34 24.3
comp=Z,179nm,19.4s,baz=82,slow=38
VRAC Vranov 40.90 303 *e*P **P 08 15 56.6 +0.9**
DPC Dobruska-Polom 40.94 305 *e*P **P 08 15 57.9 +1.8**
DPC MLR MLR
comp=Z,300nm,15.0s
DPC Dobruska-Polom 40.94 305 *e*P **P 08 15 57.9 +1.8**
DPC AMS AMS 08 36 30.0
comp=Z,300nm,15.0s
HCY Herceg Novi 40.97 293 *e*P **P 08 15 57.4 +1.0**
HCY Herceg Novi 40.97 293⇓ *i*P **P 08 15 57.6 +1.2**
OSTC Ostas 40.98 305 AMS AMS 08 36 10.0
comp=Z,300nm,12.7s
KRUC Moravsky 41.06 303 *e*P **P 08 15 58.2 +1.1**
CHVC Chvalec 41.08 305 *e*P **P 08 15 58.4 +1.2**
CHVC AMS AMS 08 36 20.0
comp=Z,300nm,15.3s
UPC Upice 41.11 305 *e*P **P 08 15 59.1 +1.6**
UPC MLR MLR
comp=Z,300nm,16.1s
UPC Upice 41.11 305 *e*P **P 08 15 59.1 +1.6**
UPC AMS AMS 08 36 00.0
comp=Z,300nm,16.1s
SOP Sopron 41.18 301 P **P 08 15 59.1 +1.0**
BLY Banja Luka 41.34 296⇑ *i*P **P 08 16 00.1 +0.7**
RONA Rosalia, Austr 41.35 301 *i* P **P 08 16 00.5 +1.0**
comp=Z,29nm,1.2s,SNR=14
TRO Tromso 41.41 334 *e*P **P 08 15 59.8 +0.2**
STON Ston 41.43 293 *e*P **P 08 15 59.8 -0.3**
MGRS Mrkonjic Grad 41.48 296 *e*P **P 08 16 01.3 +0.7**
SRKY Kupres RS 41.51 295 *e*P **P 08 16 02.0 +1.1**
CONA Conrad Observa 41.60 301 *i* P **P 08 16 02.5 +1.0**
comp=Z,44nm,1.2s,SNR=26
DEL Delary 41.91 314 *e*P **P 08 16 04.2 +0.4**
DEL Delary 41.91 314 *i* P **P 08 16 02.5 -1.3**
KLR Kul'dur 41.94 57 LR LR 08 35 03.0
comp=Z,240nm,20.6s,baz=280,slow=38
ARSA Arzberg 41.95 300 *i* P **P 08 16 05.1 +0.7**
comp=Z,21nm,1.1s,SNR=7.6
HFS Hagfors 42.00 320 LR LR 08 33 10.9
comp=Z,130nm,19.7s,baz=94,slow=36
PVCC Panska Ves 42.02 305 AMS AMS 08 35 00.0
comp=Z,300nm,13.5s
PRU Pruhonice 42.12 305 *e*P **P 08 16 07.1 +1.4**
PRU MLR MLR
comp=Z,400nm,15.6s
PRU Pruhonice 42.12 305 *e*P **P 08 16 07.1 +1.4**
PRU AMS AMS 08 36 40.0
comp=Z,400nm,15.6s
FAUS Fauske 42.14 331 *e*P **P 08 16 05.9 +0.3**
KSRS Korea Array 42.23 75 P **P 08 16 06.5 -0.1**
comp=Z,5.3nm,0.9s,baz=282,slow=7.3,SNR=21
KSRS PcP **PcP 08 17 59.8 -0.9**
comp=Z,2.0nm,0.8s,baz=306,slow=2.8,SNR=5.8
KSRS LR LR 08 34 59.8
comp=Z,105nm,19.6s,baz=280,slow=38
comp=Z,5.3nm,0.9s
MOR8 Moi Rana 42.25 329 *e*P **P 08 16 06.1 -0.5**
STEI Steigen 42.27 331 *e*P **P 08 16 07.0 +0.4**
CRES Cresnjev 42.29 298 *e*P **P 08 16 07.0 -0.2**
PERS Pernice 42.35 300 *i* P **P 08 16 08.3 +0.6**
PERS *i* 08 16 09.7
comp=Z,24nm,1.2s
BRG Berggiesshubel 42.37 306 *e*P **P 08 16 08.8 +1.1**
BRG Amp 08 16 09.8
comp=Z,24nm,0.9s
BRG *ex* x 08 16 13.6
BRG Amp 08 16 14.6
comp=Z,14nm,1.0s
BRG *ex* x 08 16 24.2
BRG Amp 08 16 24.9
comp=Z,6.1nm,0.8s
BRG Amp 08 37 54.0
comp=N,0.1nm,14.9s
BRG Amp 08 37 56.0
comp=Z,0.4nm,12.2s

BRG Amp 08 37 59.0
comp=E,0.2nm,14.9s
BRG Berggiesshubel 42.37 306 *e*P **P** **08 16 08.8 +1.1**
BRG *e* 08 16 13.6
BRG pmax pmax
comp=Z,24nm,0.9s
BRG MLR MLR
comp=N,90nm,14.9s
BRG MLR MLR
comp=Z,370nm,12.2s
BRG MLR MLR
comp=E,210nm,14.9s
TIXI Tiksi 42.37 23 P **P** **08 16 07.0 -0.4**
comp=E,8.8nm,0.5s,baz=92,slow=24,SNR=27
TIXI LR LR 08 34 54.1
comp=E,144nm,20.8s,baz=182,slow=38
comp=E,8.8nm,0.5s
TIXI Tiksi 42.37 23 P **P** **08 16 07.1 -0.4**
TIXI IAmb IAmb 08 16 13.5
comp=Z,29nm,0.9s
TIXI Tiksi 42.37 23*ce*P **P** **08 16 07.1 -0.4**
TIXI pmax pmax
comp=Z,18nm,1.0s
SOKA Soboth 42.39 300 *i* P **P** **08 16 08.8 +0.7**
comp=Z,43nm,1.1s,SNR=26
BJUU Bjuv 42.40 314 *i* P **P** **08 16 06.8 -1.0**
CKRC Cesky Krumlov 42.46 303 *e*P **P** **08 16 09.8 +1.3**
CKRC AMS AMS 08 37 30.0
comp=Z,300nm,19.9s
BORU Boraas 42.47 316 *i* P **P** **08 16 06.8 -1.6**
BOJS Bojanci 42.50 298⇑ *i*P **P** **08 16 09.7 +0.8**
MOA Molln 42.67 301 *i* P **P** **08 16 11.0 +0.7**
comp=Z,20nm,1.6s,SNR=8.0
OBKA Obir 42.76 299 *i* P **P** **08 16 12.2 +1.1**
comp=Z,33nm,1.1s,SNR=8.1
KONS Konsvik 42.83 329 *e*P **P** **08 16 11.2 0.0**
IPM Ipoh 42.84 137 P **P** **08 16 12.4 +0.4**
IPM IAmb IAmb 08 16 15.6
comp=Z,20nm,0.8s
IPM Ipoh 42.84 137 P **P** **08 16 14.6 +2.7**
GEC2 GERESS Array S 42.85 303 IAmb IAmb 08 16 14.5
comp=Z,34nm,1.1s
GERES GERESS Array B 42.85 303 P **P** **08 16 12.8 +0.9**
comp=Z,16nm,1.0s,baz=66,slow=7.6,SNR=65
GERES PP **PP** **08 17 48.0 -3.0**
comp=Z,2.9nm,0.9s,baz=69,slow=11,SNR=2.1
comp=Z,16nm,1.0s
LJU Ljubljana 42.87 299⇑ *i*P **P** **08 16 12.8 +0.9**
LJU Ljubljana 42.87 299 *i* P **P** **08 16 13.0 +1.1**
LJU *i* 08 16 13.7
comp=Z,23nm,0.7s
KHC Kasperske Hory 42.88 303 IAmb IAmb 08 16 14.1
comp=Z,24nm,1.0s
KHC Kasperske Hory 42.88 303 *e*P **P** **08 16 13.0 +1.0**
KHC *e* 08 16 17.5
KHC MLR MLR
comp=Z,300nm,15.7s
KHC Kasperske Hory 42.88 303 *e*P **P** **08 16 13.0 +1.0**
KHC *e*pP **sP** **08 16 17.5 -0.4**
KHC AMS AMS 08 37 20.0
comp=Z,300nm,15.7s
CLL Collm 42.89 307 *i* P **P** **08 16 12.3 +0.3**
CLL *i* *PP **pP** **08 16 16.2 0.0**
CLL pmax pmax
comp=Z,19nm,0.9s
CLL MLR MLR
comp=Z,300nm,19.3s
CLL Collm 42.89 307 *i* P **P** **08 16 12.3 +0.3**
comp=Z,19nm,0.9s
CLL *i* pP **pP** **08 16 16.2 0.0**
CLL *e*PP **PP** **08 17 52.0 +0.7**
CLL *e*PcP **PcP** **08 18 06.0 +3.4**
CLL *e*PPP PPP 08 18 26.0
CLL *e*PPPP 08 18 34.0
CLL LmV 08 36 00.0
comp=Z,300nm,19.3s
LOF Lofoten 42.94 332 *e*P **P** **08 16 13.2 +1.1**
CEY Cerknica 43.01 298⇑ *i*P **P** **08 16 13.7 +0.6**
NSS Namsos 43.07 326 *e*P **P** **08 16 12.9 -0.3**
NC602 NORSAR Array S 43.08 321 *e*P **P** **08 16 13.3 -0.1**
BJO1 Bjornoya 43.08 341 *e*P **P** **08 16 13.7 +0.5**
BIOA Bad Ischl, Aus 43.12 301 *i* P **P** **08 16 14.6 +0.7**
comp=Z,11nm,0.8s,SNR=5.9
USRK Ussuriysk Ar. 43.16 64 P **P** **08 16 13.9 -0.3**
comp=Z,3.4nm,0.7s,baz=274,slow=5.9,SNR=9.3
comp=Z,3.4nm,0.7s
TIP Timpagrande 43.18 288⇑ P **P** **08 16 15.0 +0.4**
TIP Timpagrande 43.18 288 IAmb IAmb 08 16 16.6
comp=Z,31nm,1.1s
NB2 NORSAR Subarra 43.24 321 P **P** **08 16 14.2 -0.5**
baz=91,slow=8.6
NB2 NORSAR Subarra 43.24 321 P **P** **08 16 14.2 -0.5**
comp=Z,31nm,0.8s,baz=91,slow=8.6
NOA NORSAR Array B 43.24 321 P **P** **08 16 14.3 -0.4**
comp=Z,18nm,0.6s,baz=91,slow=8.0,SNR=102
NOA PP **PP** **08 17 52.3 -2.6**
comp=Z,3.3nm,0.8s,baz=95,slow=9.4,SNR=4.2
NOA LR LR 08 35 10.6
comp=Z,150nm,21.5s,baz=100,slow=38
comp=Z,18nm,0.6s
STRU Stroemstad 43.27 318 *i* P **P** **08 16 13.6 -1.3**
SKDS Skadanscina 43.34 298⇑ *i*P **P** **08 16 15.9 +0.2**
MYKA Terra Mystica 43.34 300 *e*P **P** **08 16 16.6 +0.8**
comp=Z,8.6nm,0.9s
CADS Cadrg 43.37 299 *i* P **P** **08 16 16.1 +0.2**
CADS *i* 08 16 17.5
comp=Z,32nm,1.2s
NKC Novy Kostel 43.41 305 AMS AMS 08 38 00.0
comp=Z,400nm,15.3s
KBA Koelnbreinsper 43.44 301 *i* P **P** **08 16 17.1 +0.4**
comp=Z,9.5nm,1.0s,SNR=7.4
NBO00 NORSAR Array S 43.45 321 IAmb IAmb 08 16 17.1
comp=Z,41nm,0.8s
TRI Trieste 43.47 299 IAmb IAmb 08 16 18.2
comp=Z,53nm,0.9s
OSL Oslo 43.49 319 *e*P **P** **08 16 17.4 +0.7**
TWG Pinlang 43.54 98 P **P** **08 16 19.1 +1.6**
TWG IAmb IAmb 08 16 24.5
comp=Z,48nm,1.1s
CUC Castrocucco 43.61 290 IAmb IAmb 08 16 21.1
comp=Z,40nm,0.9s
TBLU Trondheim 43.75 324 *e*P **P** **08 16 19.0 +0.4**
KONO Kongsberg 44.06 319 P **P** **08 16 21.1 -0.2**
KONO IAmb IAmb 08 16 22.2
comp=Z,25nm,0.8s
KONO Kongsberg 44.06 319*ce*P **P** **08 16 21.1 -0.2**
KONO pmax pmax
comp=Z,16nm,0.8s
KONO Kongsberg 44.06 319 *e*P **P** **08 16 20.0 -1.3**
ABTA Abfaltersbach 44.07 300 *i* P **P** **08 16 21.7 0.0**
comp=Z,10nm,1.1s,SNR=5.7
DOMB Dombas 44.28 323 *e*P **P** **08 16 23.4 +0.3**
GRA1 Grafenberg Arr 44.29 305 IAmb IAmb 08 16 26.4
comp=Z,28nm,0.9s
GRFO Grafenberg 44.29 305 P **P** **08 16 24.4 +1.2**
GRFO IAmb IAmb 08 16 26.4
comp=Z,27nm,0.9s
GRFO Grafenberg 44.29 305 P **P** **08 16 24.5 +1.2**
GRFO pmax pmax
comp=Z,27nm,0.9s
MUD Monsted U'grnd 44.51 315 *i* P **P** **08 16 25.5 +0.6**
WTTA Wattenberg 44.53 301 *i* P **P** **08 16 25.5 +0.1**
comp=Z,34nm,1.2s,SNR=8.3
WATA Walderalm 44.56 301 *e*P **P** **08 16 25.8 +0.2**
comp=Z,12nm,0.8s
GRNR Gornyy 44.65 54⇑ *i*P **P** **08 16 26.6 +0.5**
GRNR pmax pmax
comp=Z,7.0nm,1.0s
GRNR MLR MLR
comp=E,220nm,14.0s
GRNR MLR MLR
comp=Z,270nm,12.0s
SKAR Skarslia 44.67 321 *e*P **P** **08 16 27.0 +0.8**
NRCA Norcia 44.68 295 IAmb IAmb 08 16 28.7
comp=Z,27nm,0.9s
HSPB Hornsund (broa 44.83 344 *e*P **P** **08 16 28.2 +1.1**
HSPB Hornsund (broa 44.83 344 *e*P **P** **08 16 27.9 +0.8**
SQTA Sankt Quirin 44.83 301 *e*P **P** **08 16 27.8 +0.1**
comp=Z,10nm,0.7s
MOTA Moosalm 44.87 301 *e*P **P** **08 16 28.3 +0.2**
comp=Z,17nm,0.8s
MOL Molde 44.98 323 *e*P **P** **08 16 29.3 +0.8**
RETA Reutte 45.06 302 *i* P **P** **08 16 30.1 +0.5**
comp=Z,19nm,1.2s,SNR=5.2
SPB2 Spitsbergen Ar 45.11 346 IAmb IAmb 08 16 31.4
comp=Z,26nm,0.8s
SPA0 Spitsbergen Ar 45.11 346 *e*P **P** **08 16 31.0 +1.6**
SPITS Spitsbergen Ar 45.11 346 LR LR 08 37 56.8
comp=Z,71nm,19.8s,baz=71,slow=40
SPITS Spitsbergen Ar 45.11 346 P **P** **08 16 30.3 +0.8**
SPITS pmax pmax
comp=Z,25nm,0.8s
FETA Feichten 45.19 301 *i* P **P** **08 16 30.8 +0.1**
comp=Z,16nm,1.4s,SNR=6.0
SNART Snartemo 45.38 317 *i* P **P** **08 16 31.3 -0.5**
DAVA Damuels 45.69 302 *i* P **P** **08 16 34.6 0.0**
comp=Z,57nm,1.2s,SNR=15
ZCCA Zocca 45.73 297 IAmb IAmb 08 16 47.9
comp=Z,22nm,0.9s
DAVOX Davos/Dischmat 45.82 301 LR LR 08 38 27.1
comp=Z,185nm,19.9s,baz=84,slow=40
JNU Nakatsue 46.12 79 IAmb IAmb 08 16 39.3
comp=Z,28nm,1.0s
JNU Nakatsue 46.12 79 P **P** **08 16 38.7 +0.7**
KBS Kingsbay 46.21 346 P **P** **08 16 39.3 +1.2**
KBS Kingsbay 46.21 346 P **P** **08 16 39.3 +1.2**
KBS pmax pmax
comp=Z,41nm,0.8s
KBS Kingsbay 46.21 346 *e*P **P** **08 16 39.1 +1.0**
BFO Black Forest 46.45 303 P **P** **08 16 41.1 +0.7**
BFO IAmb IAmb 08 16 41.8
comp=Z,28nm,1.3s
BFO Black Forest 46.45 303 P **P** **08 16 41.1 +0.7**
BFO pmax pmax
comp=Z,28nm,1.3s
JOW Kunigami 47.01 88 LR LR 08 39 48.9
comp=Z,120nm,19.2s,baz=234,slow=40
JHS Saijyo 47.04 76 IAmb IAmb 08 16 45.0
comp=Z,13nm,0.6s
ECH Echery 47.23 304 IAmb IAmb 08 16 47.9
comp=Z,33nm,1.6s
BTNL Ternell 47.30 307 *d*P **P** **08 16 47.8 +0.8**
WLF Walferdange 47.50 306 IAmb IAmb 08 16 50.7
comp=Z,28nm,1.1s
WLF Walferdange 47.50 306 *d*P **P** **08 16 49.9 +1.3**
SENIN Lac Senin/Sane 47.65 301 IAmb IAmb 08 16 50.9
comp=Z,20nm,0.9s
RCHB Rochefort 47.96 306 *d*P **P** **08 16 52.7 +0.6**
BMRD Maredsous 48.21 307 *d*P **P** **08 16 54.9 +0.8**
LPL La Plagne 48.27 300 *e*P **P** **08 16 55.1 +0.2**
LPL *e* 08 17 08.5
LPL pmax pmax
comp=Z,21nm,0.8s
SNF Seneffe 48.46 307 *d*P **P** **08 16 56.9 +0.9**
DSRI Dabo 48.90 137 P **P** **08 17 04.2 +4.5**
YSS Yuzh-Sakhalins 49.64 57 P **P** **08 17 03.7 -1.4**
YSS Yuzh-Sakhalins 49.64 57 *e*P **P** **08 17 03.8 -1.3**
YSS *e* 08 17 08.5
YSS pmax pmax
comp=Z,20nm,1.0s
YSS MLR MLR
comp=Z,300nm,17.0s
YSS MLR MLR
comp=E,300nm,15.0s
YSS Yuzh-Sakhalins 49.64 57 P **P** **08 17 05.2 +0.1**
LODK Lodwar 49.70 234 IAmb IAmb 08 17 08.7
comp=Z,17nm,1.0s
INU Inuyama 49.81 74 IAmb IAmb 08 17 07.5
comp=Z,12nm,0.9s
SSB Saint Sauveur 49.81 300 IAmb IAmb 08 17 07.9
comp=Z,28nm,1.2s
SSF Saint Saulge 49.93 303 *e*P **P** **08 17 06.6 -0.7**
SSF pmax pmax
comp=Z,17nm,1.1s
KEST Kesra 49.94 287 P **P** **08 17 08.0 +0.4**
comp=Z,20nm,1.0s,baz=60,slow=8.1,SNR=13
KEST LR LR 08 43 46.0
comp=Z,69nm,18.5s,baz=335,slow=43
comp=Z,20nm,1.0s
KEST Kesra 49.94 287 IAmb IAmb 08 17 09.5
comp=Z,27nm,1.1s
JGF Kuroka 49.95 73 IAmb IAmb 08 17 11.5
comp=Z,17nm,0.8s
MJB9 Matsu-Tunnel 50.19 72 IAmb IAmb 08 17 13.0
comp=Z,24nm,0.9s
MAJO Matsushiro 50.19 72 P **P** **08 17 07.9 -1.6**
MAJO IAmb IAmb 08 17 13.0
comp=Z,24nm,0.8s
MAJO Matsushiro 50.19 72 P **P** **08 17 07.9 -1.6**
MAJO pmax pmax
comp=Z,24nm,0.9s
MJAR Matsushiro Arr 50.20 72 P **P** **08 17 08.8 -0.7**
comp=Z,12nm,0.7s,baz=292,slow=7.2,SNR=27
comp=Z,12nm,0.7s
CLF Chambon-Foret 50.43 305 IAmb IAmb 08 17 12.0
comp=Z,39nm,1.0s
JKA Kamikawa-asahi 50.46 61 IAmb IAmb 08 17 18.0
comp=Z,13nm,0.9s
KSM Kuching 50.57 129 P **P** **08 17 16.2 +3.8**
MA2 Magadan 50.92 40 P **P** **08 17 14.6 0.0**
MA2 IAmb IAmb 08 18 31.6
comp=Z,21nm,1.1s
MA2 Magadan 50.92 40 P **P** **08 17 14.6 0.0**
MA2 pmax pmax
comp=Z,21nm,1.1s
MA2 Magadan 50.92 40 P **P** **08 17 14.6 0.0**
SEY Seymchan 50.96 35*ce*P **P** **08 17 15.2 +0.4**
SEY pmax pmax
comp=Z,7.0nm,1.0s
SBUM Sibu 50.97 126 P **P** **08 17 14.4 -1.1**
PPBI Pangkal Pinang 51.15 136 P **P** **08 17 20.7 +3.9**
EKA Eskdalemuir Ar 51.54 315 LR LR 08 41 08.0
comp=Z,179nm,19.1s,baz=70,slow=38
JMM Marumori 51.54 69 IAmb IAmb 08 17 23.3
comp=Z,30nm,0.8s
ESK Eskdalemuir 51.57 315 P **P** **08 17 19.7 +0.2**
ESK IAmb IAmb 08 17 20.3
comp=Z,30nm,0.9s
ESK Eskdalemuir 51.57 315 P **P** **08 17 19.7 +0.2**
ESK pmax pmax
comp=Z,30nm,1.0s
CAF Calviac 51.58 301 *e*P **P** **08 17 20.0 +0.2**
CAF pmax pmax
comp=Z,33nm,1.2s
ERM Erimo 51.60 63 P **P** **08 17 18.8 -1.1**
ERM IAmb IAmb 08 17 24.0
comp=Z,15nm,0.8s
ERM Erimo 51.60 63 P **P** **08 17 18.8 -1.1**
ERM pmax pmax
comp=Z,15nm,0.9s
KMBO Kilima Mbogo 52.17 228 P **P** **08 17 25.6 +0.9**
comp=Z,13nm,1.0s,baz=27,slow=11,SNR=13
KMBO LR LR 08 39 59.2
comp=Z,65nm,18.2s,baz=98,slow=37
comp=Z,13nm,1.0s
KMBO Kilima Mbogo 52.17 228 P **P** **08 17 26.0 +1.2**
KMBO IAmb IAmb 08 17 26.8
comp=Z,21nm,1.1s
KMBO Kilima Mbogo 52.17 228 P **P** **08 17 26.0 +1.2**
KMBO pmax pmax
comp=Z,21nm,1.2s
KMBO Kilima Mbogo 52.17 228 P **P** **08 17 26.1 +1.4**
LFF La Frestale 52.46 301 *e*P **P** **08 17 26.3 0.0**
LFF pmax pmax
comp=Z,28nm,0.8s
DAG Danmarks Havn 52.48 343 *i* P **P** **08 17 25.0 -1.0**
DAG IAmb IAmb 08 17 26.8
comp=Z,32nm,0.7s
KIBK Kibwezi 52.71 227 P **P** **08 17 29.4 +0.8**
DBG Daneborg 53.47 340 *i* P **P** **08 17 33.3 0.0**
DBG IAmb IAmb 08 17 34.6
comp=Z,7.5nm,0.7s
BILL Bilibino 55.17 27*d* *i*P **P** **08 17 45.9 +0.1**
BILL *i* *PP **pP** **08 17 49.7 -0.6**
BILL *e*SP **sP** **08 17 52.7 +0.7**
BILL 08 18 52.0
BILL *i* 08 19 49.2
BILL SS **SS** **08 29 08.0 -3.8**
BILL pmax pmax
comp=Z,11nm,1.0s
BILL MLR MLR
comp=Z,452nm,18.0s
MBAR Mbarara 55.72 235 P **P** **08 17 50.4 -0.2**
MBAR IAmb IAmb 08 17 51.5
comp=Z,9.9nm,0.8s
MBAR Mbarara 55.72 235 P **P** **08 17 50.4 -0.2**
MBAR pmax pmax
comp=Z,10.0nm,0.8s
PEA0B Petropavlovsk- 56.59 46*ce*P **P** **08 17 56.1 -0.1**
PETK Petropavlovsk- 56.59 46 P **P** **08 17 55.5 -0.7**
comp=Z,8.3nm,1.0s,baz=298,slow=3.1,SNR=9.3
comp=Z,8.3nm,1.0s
ESBB Sonseca Array 57.78 297 IAmb IAmb 08 18 05.8
comp=Z,14nm,0.8s
ESDC Sonseca Array 57.78 297 P **P** **08 18 04.6 -0.4**
comp=Z,12nm,0.7s,baz=56,slow=7.1,SNR=85
ESDC PP **PP** **08 20 10.6 -2.1**
comp=Z,2.6nm,1.0s,baz=61,slow=9.0,SNR=4.2
comp=Z,12nm,0.7s
PAB San Pablo 58.10 297 P **P** **08 18 07.5 +0.3**
PAB San Pablo 58.10 297 P **P** **08 18 07.5 +0.3**
PAB pmax pmax
comp=Z,9.0nm,0.9s
PBRG Braganca 58.71 300 *e*P **P** **08 18 11.7 +0.3**
comp=Z,31nm,1.6s
SUMG Summit 58.92 341 P **P** **08 18 12.8 0.0**
SUMG Summit 58.92 341 P **P** **08 18 12.8 0.0**
SUMG pmax pmax
comp=Z,32nm,0.8s
SUMG Summit 58.92 341 *i* P **P** **08 18 12.7 0.0**
SUMG IAmb IAmb 08 18 14.1
comp=Z,23nm,0.7s
MVO Moncorvo 59.19 300 *e*P **P** **08 18 15.4 +0.6**
PCAB Cabril 59.61 301 *e*P **P** **08 18 18.4 +0.8**
comp=Z,60nm,1.2s
POLO Lamas de Olo 59.61 300 *e*P **P** **08 18 17.9 +0.2**
PGAV Gavieira, Arco 59.66 301 *e*P **P** **08 18 18.7 +0.7**
comp=Z,50nm,1.6s
MTE Manteigas 59.89 299 *e*P **P** **08 18 20.6 +1.0**
PVIS Viseu 59.98 300 *e*P **P** **08 18 20.9 +0.7**
comp=Z,32nm,1.8s
PCBR Castelo Branco 60.11 299 *e*P **P** **08 18 21.8 +0.8**
comp=Z,39nm,1.6s
EUNU Eureka 60.24 356 IAmb IAmb 08 18 23.9
comp=Z,13nm,1.1s
PMRV Marv??o 60.25 298 *e*P **P** **08 18 22.8 +0.8**
comp=Z,32nm,1.1s
COI Coimbra 60.57 300 *e*P **P** **08 18 25.4 +1.3**
comp=Z,70nm,1.1s
COI Coimbra 60.57 300 P **P** **08 18 25.2 +1.1**
COI Coimbra 60.57 300 P **P** **08 18 25.2 +1.1**
COI pmax pmax
comp=Z,46nm,0.8s
CHEFC Chefchaouen 60.90 293 P **P** **08 18 29.0 +2.4**
ICESG Greenland Ices 61.22 338 *i* P **P** **08 18 28.6 0.0**
ICESG IAmb IAmb 08 18 29.7
comp=Z,37nm,0.8s
PBEJ Beja 61.24 297 *e*P **P** **08 18 27.6 -1.2**
comp=Z,37nm,1.8s
SICH Sidi Chahed 61.38 292 P **P** **08 18 30.0 +0.2**
PVAQ Vaqueiros 61.45 296 *e*P **P** **08 18 30.5 +0.4**
comp=Z,84nm,1.8s
PVAQ Vaqueiros 61.45 296 P **P** **08 18 30.7 +0.5**
MDT Midelt 61.52 290 P **P** **08 18 31.6 +0.8**
PBDV Barranco-do-Ve 61.67 296 *e*P **P** **08 18 32.4 +0.7**
comp=Z,69nm,1.6s
CZD Col de Zad 61.72 291 P **P** **08 18 34.0 +1.5**
GOLM Goulmima 62.34 290 P **P** **08 18 38.0 +1.6**
TZRR Tazzarine 63.26 289 P **P** **08 18 43.0 +0.4**
ZGR Zagora 63.65 288 P **P** **08 18 45.5 +0.4**
A21K Barrow 64.01 16 P **P** **08 18 46.0 -0.7**
baz=319
OUZM OUZ 64.07 290 P **P** **08 18 49.0 +1.1**
OUK Oukaimeden 64.72 291 P **P** **08 18 53.3 +0.9**
DY2G Dye2 64.83 337 *i* P **P** **08 18 52.1 -0.3**
DY2G IAmb IAmb 08 18 53.3
comp=Z,18nm,0.6s
RDOG Red Dog Mine 64.89 20 P **P** **08 18 50.7 -1.9**
baz=315
GAMB Gambell 65.07 26 P **P** **08 18 52.8 -0.9**
baz=309
TNA Tin City 65.15 24 P **P** **08 18 53.8 -0.4**
baz=312
TTIG Tnine Tigouga, 65.49 290 P **P** **08 18 58.0 +0.8**
VOI Vohitsoka 65.87 207 P **P** **08 18 59.5 +0.1**
VOI IAmb IAmb 08 19 00.1
comp=Z,10nm,0.9s
RES Resolute Bay 65.92 357 P **P** **08 18 59.5 +0.5**
RES Resolute Bay 65.92 357 P **P** **08 18 59.6 +0.5**
RES pmax pmax
comp=Z,6.0nm,0.8s
C23K Itkillik River 66.43 15 P **P** **08 19 02.4 0.0**
baz=324
ANM Nome 66.62 24 P **P** **08 19 04.1 +0.3**
baz=314
C24K Franklin Bluff 66.91 15 P **P** **08 19 05.6 +0.1**
baz=326
D23K Nanushuk River 67.13 16 P **P** **08 19 06.6 -0.3**
baz=324
D24K Happy Valley 67.36 15 P **P** **08 19 07.7 -0.6**
baz=326
C26K Camden Bay 67.46 13 P **P** **08 19 08.5 -0.5**
baz=329
E22K Anaktuvuk Pass 67.56 17 P **P** **08 19 08.8 -0.9**
baz=324
TOLK Toolik Lake Re 67.63 16 IAmb IAmb 08 19 10.8
comp=Z,14nm,0.8s
TOLK Toolik Lake Re 67.63 16 P **P** **08 19 09.9 -0.2**
baz=325,SNR=18
TOA0 Torodi Ar. Sit 67.66 269 P **P** **08 19 10.2 -0.9**
TORD Torodi Ar. Bea 67.66 269 P **P** **08 19 10.2 -0.9**
comp=Z,12nm,0.5s,baz=48,slow=5.3,SNR=141
comp=Z,12nm,0.5s
TORD Torodi Ar. Bea 67.66 269 P **P** **08 19 09.5 -1.5**
D25K Kavik River 67.69 14 P **P** **08 19 10.0 -0.6**
baz=328
F21K Alatna River 67.90 18 P **P** **08 19 11.3 -0.5**
baz=322
C27K Jago River 67.92 13 P **P** **08 19 11.8 -0.1**
baz=330
A36M Sachs Harbour 68.13 6 P **P** **08 19 13.0 -0.1**
baz=345
G21K Allakaket 68.46 18 P **P** **08 19 14.5 -0.9**
baz=323
COLD Coldfoot 68.66 17 IAmb IAmb 08 19 17.3
comp=Z,13nm,0.9s
COLD Coldfoot 68.66 17 P **P** **08 19 16.2 -0.4**
baz=325,SNR=5.3
GCSA Galena City Sc 68.98 21 P **P** **08 19 18.3 -0.3**
baz=320
G23K Bananza Creek 69.12 17 P **P** **08 19 19.1 -0.4**
baz=325
H21K Melozitna Rive 69.32 19 P **P** **08 19 20.1 -0.6**
baz=323,SNR=11
H22K Ishtalitna Cre 69.48 18 P **P** **08 19 21.2 -0.5**
baz=324
I21K Tanana 69.91 19 P **P** **08 19 23.9 -0.4**
baz=324,SNR=7.8
SPIA Saint Paul Isl 69.95 31 P **P** **08 19 24.9 +0.3**
baz=312
H23K Yukon River 69.97 17 IAmb IAmb 08 19 25.9
comp=Z,9.4nm,0.9s
H23K Yukon River 69.97 17 P **P** **08 19 24.7 0.0**
baz=326,SNR=12
J20K Nowinta River 70.16 20 IAmb IAmb 08 19 26.8
comp=Z,11nm,0.9s
J20K Nowinta River 70.16 20 P **P** **08 19 25.7 -0.2**
baz=323,SNR=14
H24K Noodor Dome 70.33 17 P **P** **08 19 26.8 -0.2**
baz=327,SNR=11
MLY Manley 70.34 18 P **P** **08 19 26.4 -0.6**
baz=325,SNR=9.5
I23K Minto, Yukon-K 70.57 18 P **P** **08 19 27.9 -0.4**
baz=326,SNR=11
TTA Tatalina 70.64 22 P **P** **08 19 28.3 -0.6**
baz=322
INK Inuvik 70.72 10 P **P** **08 19 28.8 -0.4**
comp=Z,13nm,0.9s,baz=345,slow=5.5,SNR=23
comp=Z,13nm,0.9s
INK Inuvik 70.72 10 IAmb IAmb 08 19 36.4
comp=Z,15nm,0.8s
INK Inuvik 70.72 10 P **P** **08 19 28.7 -0.4**
baz=338,SNR=17
C36M Paulatuk 70.79 6 P **P** **08 19 28.8 -0.8**
baz=346,SNR=14
K20K Telida 70.84 21 IAmb IAmb 08 19 31.0
comp=Z,12nm,0.9s
K20K Telida 70.84 21 P **P** **08 19 29.9 -0.2**
baz=323,SNR=12
CHUM Lake Minchumin 70.88 20 P **P** **08 19 29.9 -0.4**
baz=324,SNR=9.4
POKR Poker Plat Res 71.04 17 P **P** **08 19 31.3 0.0**
baz=328
BPAW Bear Paw Mtn. 71.04 19 IAmb IAmb 08 19 31.5
comp=Z,8.9nm,1.0s
BPAW Bear Paw Mtn. 71.04 19 P **P** **08 19 30.5 -0.8**
baz=325,SNR=8.0
NEA2 Nenana 71.11 18 P **P** **08 19 30.8 -0.9**
baz=326,SNR=23
TCOL CIGO, UAF Yank 71.15 17 P **P** **08 19 31.5 -0.4**

	baz=327,SNR=8.8							
COLA	College	71.15	17	P	P	08 19 31.2	-0.7	
COLA	College	71.15	17	P	P	08 19 31.2	-0.7	
COLA	College	71.15	17	P	P	08 19 31.4	-0.4	
	baz=327							
CAST	Castle Rocks	71.32	20	IAmb	IAmb	08 19 33.7		
	comp=Z,12nm,1.0s							
CAST	Castle Rocks	71.32	20	P	P	08 19 32.7	-0.3	
	baz=324,SNR=8.6							
ILAR	Eielson Array	71.46	17	P	P	08 19 32.6	-1.2	
	comp=Z,7.1nm,0.8s,baz=319,slow=4.9,SNR=76							
	comp=Z,7.1nm,0.8s							
KTH	Kantishna Hill	71.51	19	IAmb	IAmb	08 19 35.0		
	comp=Z,19nm,0.9s							
L19K	White Mountain	71.56	22	P	P	08 19 34.5	0.0	
L19K				IAmb	IAmb	08 19 35.5		
	comp=Z,11nm,1.1s							
L19K	White Mountain	71.56	22	P	P	08 19 34.2	-0.3	
	baz=322,SNR=8.1							
L20K	Farewell, AK	71.60	21	P	P	08 19 34.3	-0.4	
	baz=323,SNR=9.8							
N16K	Nishlik Lake	71.71	24	P	P	08 19 36.1	+0.8	
	baz=320,SNR=11							
PPLA	Purkeypile	71.72	20	IAmb	IAmb	08 19 35.9		
	comp=Z,11nm,1.0s							
PPLA	Purkeypile	71.72	20	P	P	08 19 34.8	-0.7	
	baz=324							
HDA	Harding Lake	71.76	17	P	P	08 19 34.9	-0.7	
	baz=328							
TRF	Thorofare Moun	71.76	19	P	P	08 19 34.7	-1.1	
	baz=326							
I26K	Coal Creek Min	71.80	15	IAmb	IAmb	08 22 09.1		
	comp=Z,6.8nm,0.6s							
I26K	Coal Creek Min	71.80	15	P	P	08 19 35.3	-0.5	
	baz=331							
MCK	McKinley	71.86	18	P	P	08 19 35.2	-1.0	
	baz=327							
M19K	Big River Lodg	71.91	22	P	P	08 19 36.0	-0.6	
	baz=323							
J25K	Salcha River,	71.94	16	P	P	08 19 35.6	-1.1	
	baz=329,SNR=13							
EPYK	Eagle Plains	72.03	12	P	P	08 19 36.3	-0.9	
	baz=336							
M20K	Styx River	72.29	21	P	P	08 19 38.4	-0.5	
	baz=324							
J26L	Joseph Creek	72.42	16	IAmb	IAmb	08 19 40.0		
	comp=Z,7.7nm,0.8s							
J26L	Joseph Creek	72.42	16	P	P	08 19 39.0	-0.6	
	baz=331,SNR=14							
N18K	Kilae Creek	72.44	23	P	P	08 19 39.0	-0.8	
	baz=322							
SMPI	Sarmi	72.47	108	P	P	08 19 42.8	+2.3	
K24K	Donnelly Dome	72.54	17	P	P	08 19 38.9	-1.4	
	baz=329,SNR=12							
O16K	Kokwok River B	72.61	25	P	P	08 19 41.3	+0.6	
	baz=321,SNR=14							
SKT	Skwentna	72.65	20	P	P	08 19 39.6	-1.3	
	baz=325,SNR=19							
I29M	Ogilvie Camp,	72.68	13	P	P	08 19 40.2	-0.9	
	baz=335							
WAT1	Susitna Watana	72.71	19	P	P	08 19 39.5	-1.9	
	baz=327							
N19K	Bonanza Creek	72.76	22	P	P	08 19 40.7	-1.0	
N19K	Bonanza Creek	72.76	22	P	P	08 19 41.1	-0.6	
	baz=323							
O17K	Koliganek Bris	72.79	24	P	P	08 19 40.6	-1.2	
	baz=321							
SCRK	Sand Creek	72.79	16	P	P	08 19 41.5	-0.5	
	baz=331,SNR=12							
DHY	Denali Highway	72.79	18	IAmb	IAmb	08 19 43.3		
	comp=Z,12nm,0.8s							
DHY	Denali Highway	72.79	18	P	P	08 19 40.4	-1.5	
	baz=328,SNR=15							
RIDG	Independent Ri	72.81	17	P	P	08 19 40.6	-1.3	
	baz=330,SNR=9.2							
P16K	Nushagak River	73.08	25	P	P	08 19 44.0	+0.5	
	baz=321							
WAT6	Susitna Watana	73.12	19	P	P	08 19 42.6	-1.4	
	baz=328,SNR=10.0							
K27K	Chicken	73.15	15	P	P	08 19 43.5	-0.3	
	baz=332							
M22K	Willow	73.21	20	P	P	08 19 42.9	-1.3	
	baz=326							
SUA	Susitna One	73.28	20	P	P	08 19 43.0	-1.8	
	baz=326							
O18K	Koktuh Hills	73.31	23	IAmb	IAmb	08 19 46.3		
	comp=Z,19nm,0.9s							
O18K	Koktuh Hills	73.31	23	P	P	08 19 44.8	-0.1	
	baz=323							
PAX	Paxson	73.33	17	IAmb	IAmb	08 19 45.2		
	comp=Z,13nm,1.0s							
PAX	Paxson	73.33	17	P	P	08 19 43.9	-1.1	
	baz=330,SNR=12							
P17K	Kvichak River	73.45	24	P	P	08 19 45.9	+0.2	
	baz=322							
GHO	Glory Hole Cre	73.51	19	IAmb	IAmb	08 19 53.2		
	comp=Z,15nm,0.8s							
PMR	Palmer	73.61	20	P	P	08 19 45.6	-1.0	
	baz=327							
SML	Sawmill	73.63	19	P	P	08 19 45.9	-0.9	
	baz=328,SNR=17							
DAWY	Dawson	73.65	14	P	P	08 19 46.1	-0.8	
	baz=334,SNR=10							
P18K	Big Mountain,	73.67	24	IAmb	IAmb	08 19 48.1		
	comp=Z,14nm,0.9s							
P18K	Big Mountain,	73.67	24	P	P	08 19 46.6	-0.5	
	baz=323							
CAPN	Captain Cook N	73.75	21	P	P	08 19 46.7	-0.7	
	baz=326							
L26K	Log Cabin Wild	73.76	16	P	P	08 19 46.9	-0.6	
	baz=331							
Q16K	King Salmon	73.79	25	P	P	08 19 48.1	+0.5	
	baz=322							
M23K	Glacier View	73.80	19	P	P	08 19 46.9	-0.9	
	baz=328,SNR=16							
SCM	Sheep Creek Mo	73.86	19	P	P	08 19 47.0	-1.2	
	baz=328,SNR=10							
RC01	Rabbit Creek A	73.87	20	P	P	08 19 46.9	-1.3	
	baz=327							
HARP	HAARP	73.90	18	P	P	08 19 48.5	+0.1	
	baz=330,SNR=13							
M24K	Tolsona, Glenn	73.91	18	P	P	08 19 48.4	0.0	
	baz=329,SNR=8.5							
KNK	Knik Glacier	73.93	20	P	P	08 19 48.0	-0.6	
	baz=328							
L27K	Beaver Creek,	74.06	16	P	P	08 19 49.2	-0.1	
	baz=332,SNR=9.0							
Q18K	Katmai Hardscr	74.33	24	P	P	08 19 49.8	-1.3	
	baz=323							
M26K	Nabesna, AK	74.39	17	P	P	08 19 50.6	-0.6	
	baz=332							
KLU	Klutina	74.50	18	IAmb	IAmb	08 19 53.1		
	comp=Z,13nm,0.9s							
KLU	Klutina	74.50	18	P	P	08 19 51.2	-0.8	
	baz=329,SNR=7.5							
HOM	Homer	74.53	22	P	P	08 19 51.7	-0.3	
	baz=325							
PSA00	Pilbara Seismi	74.60	136	P	P	08 19 52.3	-0.6	
S14K	Fog Glacier	74.67	27	P	P	08 19 52.1	-0.9	
	baz=320							
M27K	Edge Creek, AK	74.67	16	P	P	08 19 52.9	-0.1	
	baz=332,SNR=8.8							
R17K	Ugashik Creek	74.69	25	P	P	08 19 52.8	-0.2	
	baz=322							
BRSE	Bradley Lake S	74.72	21	P	P	08 19 52.1	-1.1	
	baz=326							
N25K	Chitina, Valde	74.72	18	IAmb	IAmb	08 20 08.8		
	comp=Z,28nm,1.6s							
N25K	Chitina, Valde	74.72	18	P	P	08 19 53.1	-0.1	
	baz=330							
MAYO	Mayo, Yukon	74.72	13	IAmb	IAmb	08 20 04.3		
	comp=Z,10nm,0.7s							
GLI	Glacier Island	74.74	19	IAmb	IAmb	08 19 53.8		
	comp=Z,20nm,0.8s							
GLI	Glacier Island	74.74	19	P	P	08 19 52.3	-1.0	
	baz=329,SNR=9.1							
FID	Port Fidalgo	75.00	19	IAmb	IAmb	08 19 55.4		
	comp=Z,14nm,1.1s							
SDPT	Sand Point	75.05	29	P	P	08 19 54.1	-1.0	
	baz=320							
Q20K	Shuyak Island	75.17	23	P	P	08 19 53.7	-2.0	
	baz=325							
BMRM	Bremner River	75.28	18	IAmb	IAmb	08 19 57.7		
	comp=Z,16nm,1.0s							
BMRM	Bremner River	75.28	18	P	P	08 19 55.6	-0.8	
	baz=330,SNR=5.2							
MCARA	McCarthy VSAT	75.28	17	P	P	08 19 55.8	-0.6	
	baz=332							

EYAK	Cordova Ski Ar	75.36	19	IAmb	IAmb	08 19 58.2		
	comp=Z,15nm,0.9s							
EYAK	Cordova Ski Ar	75.36	19	P	P	08 19 55.7	-1.1	
	baz=330,SNR=5.1							
YUK3	Moose Creek	75.50	16	P	P	08 19 57.4	-0.5	
	baz=334							
M30M	Minto, Yukon	75.50	14	P	P	08 19 57.0	-0.6	
	baz=336,SNR=5.5							
CHNA	Charnabura Isl	75.77	28	P	P	08 19 57.9	-1.3	
	baz=320							
KDAK	Kodiak Island	75.79	23	P	P	08 19 58.0	-1.3	
	baz=325							
CRQE	Cirque	75.83	18	P	P	08 19 59.2	-0.5	
	baz=332							
OHAK	Old Harbor	76.03	24	P	P	08 20 00.2	-0.5	
	baz=325							
CTG	Chitna Glacier	76.03	17	P	P	08 20 00.5	-0.3	
	baz=333							
YUK4	Talbot Arm	76.27	15	P	P	08 19 60.0	-2.3	
	baz=335,SNR=5.1							
M31M	Drury Creek, Y	76.28	13	IAmb	IAmb	08 20 02.9		
	comp=Z,14nm,1.2s							
M31M	Drury Creek, Y	76.28	13	P	P	08 20 01.7	-0.4	
	baz=338,SNR=11							
SII	Sitkinak Islan	76.28	25	P	P	08 20 01.1	-1.0	
	baz=324							
CHIR	Chirikof Islan	76.40	26	P	P	08 20 01.3	-1.5	
	baz=323							
N30M	Aishikik Lake	76.47	15	P	P	08 20 03.0	-0.3	
	baz=336							
MESA	MESA	76.60	17	P	P	08 20 03.8	-0.3	
	baz=333							
YUK6	Outpost Mounta	76.69	15	P	P	08 20 04.6	-0.1	
	baz=335							
DBIC	Dimbokro	76.71	268	P	P	08 20 04.6	-0.6	
	comp=Z,12nm,0.8s,baz=43,slow=6.8,SNR=7.5							
	comp=Z,12nm,0.8s							
KIC	Kosan Boka	76.81	267	⇑*i*	P	08 20 05.3	-0.5	
	comp=Z,28nm,0.7s							
TIC	Toumodi	76.85	268	⇑*i*	P	08 20 05.4	-0.6	
	comp=Z,3.3nm,0.2s							
HYT	Haines Junctio	76.97	15	IAmb	IAmb	08 20 07.3		
	comp=Z,15nm,0.8s							
HYT	Haines Junctio	76.97	15	P	P	08 20 06.1	0.0	
	baz=336,SNR=21							
PCA	Pinnacle	77.05	17	IAmb	IAmb	08 20 19.8		
	comp=Z,10.0nm,0.8s							
PINM	Pinnacle	77.06	17	P	P	08 20 06.4	-0.1	
	baz=334							
LIC	Lamto	77.12	267	⇑*i*	P	08 20 06.9	-0.6	
	comp=Z,52nm,1.0s							
O30N	Mendenhall	77.30	14	P	P	08 20 07.5	-0.3	
	baz=337,SNR=9.2							
N32M	Quiet Lake	77.49	13	P	P	08 20 08.1	-0.9	
	baz=339							
PNL	Peninsula	77.63	16	P	P	08 20 09.6	-0.1	
	baz=335							
WHY	Whitehorse	77.63	14	P	P	08 20 09.2	-0.6	
	baz=338							
P30M	Million Dollar	77.72	15	P	P	08 20 09.9	-0.4	
	baz=336							
TGTN	Hyland Airport	77.88	10	P	P	08 20 11.3	+0.2	
	baz=343							
TSUM	Tsumeb	78.18	233	P	P	08 20 13.0	-0.4	
TSUM				IAmb	IAmb	08 20 14.7		
	comp=Z,19nm,1.2s							
YKA	Yellowknife Ar	78.24	4	P	P	08 20 12.6	-0.4	
	comp=Z,15nm,0.8s,baz=350,slow=5.6,SNR=131							
	comp=Z,15nm,0.8s							
YKA	Yellowknife Ar	78.24	4	*i* P	P	08 20 12.6	-0.4	
YKA				pmax	pmax			
	comp=Z,16nm,0.8s							
P33M	Teslin, Yukon	78.42	13	IAmb	IAmb	08 20 14.6		
	comp=Z,17nm,1.4s							
P33M	Teslin, Yukon	78.42	13	P	P	08 20 13.2	-1.0	
	baz=340,SNR=13							
PLBC	Pleasant Camp	78.46	15	P	P	08 20 14.0	-0.3	
	baz=337,SNR=9.4							
SKAG	Skagway	78.66	14	P	P	08 20 15.3	-0.1	
	baz=338,SNR=5.1							
P32M	Atlin	78.84	14	P	P	08 20 16.2	-0.3	
	baz=339							
SCHQ	Schefferville	80.13	338	P	P	08 20 22.6	-1.0	
	comp=Z,6.8nm,0.8s,baz=25,slow=3.9,SNR=8.6							
	comp=Z,6.8nm,0.8s							
SCHQ	Schefferville	80.13	338	P	P	08 20 23.3	-0.2	
DLBC	Dease Lake	80.57	12	P	P	08 20 25.6	-0.3	
	baz=342							
SIT	Sitka	80.89	15	P	P	08 20 27.3	-0.2	
	baz=338							
BOSA	Boshof	81.17	221	P	P	08 20 29.2	-0.2	
	comp=Z,13nm,1.0s,baz=47,slow=6.1,SNR=10							
	comp=Z,13nm,1.0s							
BOSA	Boshof	81.17	221	P	P	08 20 28.4	-1.1	
BOSA				IAmb	IAmb	08 20 30.4		
	comp=Z,29nm,1.1s							
BOSA	Boshof	81.17	221	P	P	08 20 28.4	-1.1	
BOSA				pmax	pmax			
	comp=Z,29nm,1.2s							
WB0	Warramunga Arr	81.90	124	IAmb	IAmb	08 20 34.1		
	comp=Z,11nm,1.0s							
T35M	Bob Quinn	81.92	13	P	P	08 20 32.9	-0.2	
	baz=342							
WRA	Warramunga Arr	81.99	124	P	P	08 20 33.0	-0.9	
	comp=Z,6.5nm,0.7s,baz=324,slow=5.1,SNR=55							
	comp=Z,6.5nm,0.7s							
WRA	Warramunga Arr	81.99	124	*i* P	P	08 20 33.2	-0.6	
WRA				pmax	pmax			
	comp=Z,7.0nm,0.7s							
WRAB	Tennant Creek	81.99	124	P	P	08 20 32.5	-1.3	
WRAB				IAmb	IAmb	08 20 40.0		
	comp=Z,15nm,0.8s							
WRAB	Tennant Creek	81.99	124	P	P	08 20 32.5	-1.3	
WRAB				pmax	pmax			
	comp=Z,15nm,0.8s							
WB2	Warramunga Arr	82.00	124	P	P	08 20 32.6	-1.3	
WB2				IAmb	IAmb	08 20 40.4		
	comp=Z,13nm,0.7s							
WRAK	Wrangell Islan	82.08	14	P	P	08 20 33.6	-0.2	
	baz=340							
WR0	Warramunga Arr	82.13	124	IAmb	IAmb	08 20 38.8		
	comp=Z,10nm,0.8s							
CRAG	Craig	82.82	15	P	P	08 20 37.7	0.0	
	baz=340							
ASAR	Alice Springs	84.43	127	P	P	08 20 45.6	-0.8	
	comp=Z,4.2nm,0.6s,baz=320,slow=5.0,SNR=19							
	comp=Z,4.2nm,0.6s							
FFC	Flin Flon	86.15	357	P	P	08 20 54.2	-0.4	
FFC				IAmb	IAmb	08 20 55.3		
	comp=Z,16nm,0.9s							
FFC	Flin Flon	86.15	357	P	P	08 20 54.2	-0.4	
FFC				pmax	pmax			
	comp=Z,16nm,0.9s							
BATG	Bathurst New B	86.42	334	IAmb	IAmb	08 20 57.8		
	comp=Z,16nm,0.9s							
VLDQ	Val d'Or	89.08	341	IAmb	IAmb	08 21 10.6		
	comp=Z,10nm,0.9s							
PKME	Peaks-Kenny Pk	89.27	335	P	P	08 21 09.6	-0.1	
	baz=28							
ULM	Lac du Bonnet	90.22	353	P	P	08 21 12.8	-1.3	
	comp=Z,6.9nm,0.9s,baz=347,slow=4.3,SNR=7.7							
	comp=Z,6.9nm,0.9s							
ULM	Lac du Bonnet	90.22	353	IAmb	IAmb	08 21 14.1		
	comp=Z,8.2nm,0.9s							
LBNH	Lisbon	91.04	336	P	P	08 21 17.7	-0.4	
	baz=26							
LONY	Lake Ozonia	91.51	338	IAmb	IAmb	08 21 21.5		
	comp=Z,11nm,1.1s							
LONY	Lake Ozonia	91.51	338	P	P	08 21 19.9	-0.3	
	baz=24							
WALA	Waterton Lakes	91.67	5	IAmb	IAmb	08 21 22.1		
	comp=Z,11nm,0.9s							
B08A	Colville Reser	91.89	8	IAmb	IAmb	08 21 22.9		
	comp=Z,12nm,1.2s							
EYMN	Ely	91.99	350	IAmb	IAmb	08 21 23.0		
	comp=Z,12nm,1.0s							
EYMN	Ely	91.99	350	P	P	08 21 22.0	-0.4	
	baz=12							
AGMN	Agassiz Nation	92.15	353	IAmb	IAmb	08 21 23.6		
	comp=Z,7.0nm,0.9s							
AGMN	Agassiz Nation	92.15	353	P	P	08 21 22.5	-0.5	
	baz=8.3							
NEW	Newport	92.21	7	IAmb	IAmb	08 21 25.0		
	comp=Z,6.6nm,0.9s							
NEW	Newport	92.21	7	P	P	08 21 23.2	-0.3	
	baz=352							
HRV	Adam Dziewonsk	92.47	335	P	P	08 21 24.2	-0.5	
	baz=26							

J59A	Piesco	92.54	337	IAmb	IAmb	08 21 26.3		
	comp=Z,8.9nm,1.1s							
C09A	Chrisman Ranch	92.55	8	IAmb	IAmb	08 21 26.1		
	comp=Z,11nm,1.1s							
MDND	Maddock	92.90	355	P	P	08 21 25.8	-0.8	
	baz=5.4							
EGMT	Eagleton	92.90	2	P	P	08 21 26.0	-0.7	
	baz=358							
JTMT	Jette	92.95	5	IAmb	IAmb	08 21 28.5		
	comp=Z,7.7nm,0.9s							
E38A	The Farm, Brul	93.31	350	IAmb	IAmb	08 21 28.7		
	comp=Z,6.2nm,0.8s							
COWI	Conover	93.44	348	IAmb	IAmb	08 21 29.3		
	comp=Z,5.3nm,1.0s							
MSO	Missoula	93.89	5	P	P	08 21 30.6	-0.7	
	baz=354							
LAO	LASA Array	94.28	360	P	P	08 21 33.4	+0.3	
	baz=0.3							
F36A	Milaca	94.30	351	IAmb	IAmb	08 21 33.8		
	comp=Z,6.1nm,1.1s							
G40A	Rib Lake	94.42	348	IAmb	IAmb	08 21 34.1		
	comp=Z,7.6nm,1.0s							
F10A	Beach Ranch, E	94.47	7	IAmb	IAmb	08 21 38.3		
	comp=Z,12nm,1.6s							
F33A	5 Mile Ranch,	94.62	353	IAmb	IAmb	08 21 35.2		
	comp=Z,9.1nm,0.9s							
G05D	Wamic, OR	94.70	10	P	P	08 21 33.7	-1.2	
	baz=349							
SPMN	Marine on St.	94.83	350	P	P	08 21 35.0	-0.5	
	baz=11							
STKA	Stephens Creek	95.03	128	P	P	08 21 37.6	+1.2	
	comp=Z,1.5nm,0.7s,baz=339,slow=8.6,SNR=1.2							
	comp=Z,1.5nm,0.7s							
BOZ	Bozeman (W)	95.25	4	IAmb	IAmb	08 21 38.7		
	comp=Z,6.0nm,1.0s							
BOZ	Bozeman (W)	95.25	4	P	P	08 21 37.0	-0.6	
	baz=356							
DLMT	Dillon	95.44	4	IAmb	IAmb	08 21 40.2		
	comp=Z,9.3nm,1.2s							
RLMT	Red Lodge	95.81	2	IAmb	IAmb	08 21 42.2		
	comp=Z,7.5nm,1.1s							
RLMT	Red Lodge	95.81	2	P	P	08 21 40.4	+0.1	
	baz=358							
YHL	Hebgen Lake	96.02	3	IAmb	IAmb	08 21 44.1		
	comp=Z,5.2nm,1.1s							
SUSD	Miller	96.24	354	P	P	08 21 41.3	-0.7	
	baz=6.0							
LKWY	Lake	96.34	3	IAmb	IAmb	08 21 45.2		
	comp=Z,5.2nm,0.9s							
H17A	Grant Village	96.50	3	IAmb	IAmb	08 21 46.8		
	comp=Z,5.7nm,1.1s							
H17A	Grant Village	96.50	3	P	P	08 21 45.0	+1.6	
	baz=357							
YPP	Pitchstone Pla	96.61	3	IAmb	IAmb	08 21 51.6		
	comp=Z,9.0nm,1.7s							
J05D	Fort Rock, OR	96.63	11	P	P	08 21 43.6	-0.3	
	baz=349							
JFWS	Jewell Farm	96.72	348	P	P	08 21 43.7	-0.4	
	baz=13							
ECSD	EROS Data Cent	96.74	353	P	P	08 21 44.1	-0.2	
	baz=7.8							
FLWY	Flagg Ranch	96.81	3	IAmb	IAmb	08 21 46.9		
	comp=Z,4.9nm,1.0s							
RSSD	Black Hills	96.82	358	P	P	08 21 45.2	+0.3	
RSSD				IAmb	IAmb	08 21 45.8		
	comp=Z,5.8nm,0.8s							
RSSD	Black Hills	96.82	358	P	P	08 21 45.2	+0.3	
RSSD				pmax	pmax			
	comp=Z,6.0nm,0.8s							
RSSD	Black Hills	96.82	358	P	P	08 21 44.5	-0.4	
	baz=2.0							
HLID	Hailey	97.11	6	P	P	08 21 46.1	0.0	
	baz=354							
BW06	Boulder Array	98.16	2	P	P	08 21 49.6	-1.3	
	baz=358							
PDAR	Pinedale Array	98.16	2	P	P	08 21 50.7	-0.3	
	comp=Z,0.6nm,0.8s,baz=1.4,slow=3.6,SNR=7.0							
	comp=Z,0.6nm,0.8s							
HVU	Hansel Valley	99.00	5	IAmb	IAmb	08 21 56.0		
	comp=Z,3.3nm,1.1s							
HWUT	Hardware Ranch	99.24	4	IAmb	IAmb	08 22 00.9		
	comp=Z,7.3nm,1.3s							
NVAR	Mina Array Bea	101.80	9	P	Pdif	08 22 08.5	+1.2	
	comp=Z,0.6nm,0.9s,baz=2.4,slow=3.6,SNR=4.0							
PKM	Mcpherson Peak	105.07	11	P	Pdif	08 22 22.1	+0.3	
	baz=350							
TROLL	Troll, Antarti	121.47	200	PKPdf	PKPdf	08 27 05.9	-0.2	
SNAA	Sanae	122.78	201	PKPdf	PKPdf	08 27 07.1	-1.5	
VNA2	Neumayer--Watz	123.80	203	PKPdf	PKiKP	08 27 10.6	-0.1	
VNA1	Neumayer--Stat	123.96	203	PKPdf	PKiKP	08 27 11.0	+0.1	
VNA3	Neumayer Olymp	124.61	203	PKPdf	PKPdf	08 27 11.9	0.0	
CPUP	Villa Florida	137.09	272	PKP	PKPdf	08 27 34.6	-2.3	
	comp=Z,11nm,0.9s,baz=52,slow=1.2,SNR=4.8							
TRQA	Tornquist	145.41	258		PKPbc	08 27 50.8	-0.8	
TRQA	Tornquist	145.41	258	PKIKP	PKPbc	08 27 50.8	-0.8	
GO02	Mina Guanaco	145.87	283		PKPbc	08 27 53.6	-0.1	
AC02	Maricunga	146.42	280		PKPdf	08 27 54.0	-0.2	
GO03	Copiap	147.66	280		PKPdf	08 27 56.9	+1.2	
LCO	Las Campanas	148.71	278		PKPbc	08 28 00.8	-0.7	
LCO	Las Campanas	148.71	278	PKP2	PKPbc	08 28 00.8	-0.7	
GO04	Tololo Observa	149.34	276		PKPbc	08 28 02.1	-0.8	
BO04	La Punta	150.75	269		PKPbc	08 28 05.7	-0.3	
PLCA	Paso Flores	152.48	256	PKPbc	PKPbc	08 28 08.9	-0.9	
	comp=Z,2.8nm,0.7s,baz=51,slow=4.2,SNR=2.9							

KRNET ***29*** *08:34:53.9±0.1,39°.29N×73°.54E,mb3.3*
SOME ***29*** *08:34:55.5,39°.45N×73°.62E,h0km*

ISC 29 08:34:54.1±1.4,39°.42N±0°.07×73°.69E±0°.04,h10km,n20,
σ2s01/40,8C-6D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OHH	Osh	1.31	328	⇑*i*	*e*	P	Pg	08 35 19.8	+0.7
	baz=35								
OHH				⇑	*e*	S	Sn	08 35 38.5	+2.5
	baz=35								
DRK	Karamyk	1.46	273	⇑	*e*	P	Pn	08 35 19.7	-1.1
	baz=79								
DRK				⇑	*e*	S	Sb	08 35 38.6	-1.7
	baz=79								
GAR	Garm	2.65	262	⇓	*e*	P	Pn	08 35 38.2	+1.2
	baz=64								
GAR				⇓	*e*	S	Sn	08 36 10.6	+1.4
	baz=64								
TRKS	Terek-Say	2.87	318	⇑	*e*	P	Pn	08 35 42.5	+2.5
	baz=21								
TRKS				⇑	*e*	S	Sb	08 36 17.8	-2.9
	baz=21								
UCH	Uchtor	2.88	12	⇓	*e*

BRLS				*e*S		**Sg**	**08 37 18.0**	**-4.8**
	9.7nm,0.4s							
KTBS	**Karatobe**	**4.84**	**27**	*e*P		**Pg**	**08 36 24.5**	**-2.4**
	1.7nm,0.6s							
KTBS				*e*S		**Sg**	**08 37 28.5**	**-1.1**
	12nm,0.4s							
KUU	**Kurty**	**4.89**	**23**	*e*P		**Pg**	**08 36 25.9**	**-1.9**
	2.9nm,0.6s							
KUU				*e*S		**Sg**	**08 37 31.0**	**-0.1**
	8.0nm,0.5s							
SATY	**Saty**	**5.09**	**43**	*e*P		**Pg**	**08 36 29.1**	**-2.4**
SATY				*e*S		**Sg**	**08 37 36.4**	**-1.0**
	5.7nm,0.7s							
BTLS	**Baital**	**5.63**	**3**	*e*P		**Pg**	**08 36 40.5**	**-1.3**
	0.7nm,0.3s							
BTLS				*e*S		**Sg**	**08 37 56.1**	**+1.4**
	2.4nm,0.7s							
ARXS	**Arharly**	**5.70**	**31**	*e*P		**Pg**	**08 36 39.9**	**-3.3**
	2.0nm,0.5s							
ARXS				*e*S		**Sg**	**08 37 55.6**	**-1.6**
	6.2nm,0.5s							
BLB	**Baldybastay**	**5.89**	**36**	*e*P		**Pg**	**08 36 44.8**	**-2.1**
	10.0nm,0.6s							
BLB				*e*S		**Sg**	**08 38 03.4**	**+0.2**
	4.3nm,0.4s							

IDC ***29*** *08:36:17.3±0.6, 12°.93S×14°.55W, h0km, mb4.2/15, mbtmp4.2/15, MS4.0/33, Error ellipse: s-maj=22.6km s-min=14.3km az=132.0*

NEIC ***29*** *08:36:19.7±1.4, 12°.89S±0°.07×14°.6W±0°.1, h10km±1km, mb4.6/19, Error ellipse: s-maj=19.2km s-min=7.6km az=58.0*

ISC 29 08:36:19.8±0.5, 12°.9S±0°.1×14°.6W±0°.1, h16km, n64, σ0.68/34, mb4.3/19, MS4.0/33, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N1	**ASCENSION HYDR**	**5.01**	**1**	T	T	08 42 45.7	
	baz=190,slow=78,SNR=86						
H10N3	**ASCENSION HYDR**	**5.02**	**1**	T	T	08 42 46.0	
	baz=190,slow=78,SNR=188						
H10N2	**ASCENSION HYDR**	**5.03**	**1**	T	T	08 42 46.0	
	baz=190,slow=78,SNR=76						
DBIC	**Dimbokro**	**21.70**	**27**	P	**P**	**08 41 10.3**	**0.0**
	8.1nm,0.9s,baz=225,slow=11,SNR=4.8						
DBIC				LR	LR	08 47 29.3	
	comp=Z,390nm,21.8s,baz=216,slow=31						
	8.1nm,0.9s						
DBIC	**Dimbokro**	**21.70**	**27**	IAmb	IAmb	08 41 19.5	
	comp=Z,20nm,1.1s						
RCBR	**Riachuelo**	**22.17**	**286**	LR	LR	08 47 33.2	
	comp=Z,366nm,21.1s,baz=246,slow=30						
TOA0	**Torodi Ar. Sit**	**30.49**	**33**	P	**P**	**08 42 32.1**	**-0.2**
TOA0				IAmb	IAmb	08 42 39.4	
	comp=Z,12nm,1.3s						
TORD	**Torodi Ar. Bea**	**30.49**	**33**	P	**P**	**08 42 31.6**	**-0.7**
	comp=Z,2.5nm,0.8s,baz=213,slow=8.6,SNR=9.6						
TORD				LR	LR	08 52 53.7	
	comp=Z,325nm,19.6s,baz=222,slow=33						
	comp=Z,2.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**30.49**	**33**	P	**P**	**08 42 32.0**	**-0.3**
TORD				IAmb	IAmb	08 42 39.4	
	comp=Z,11nm,1.4s						
TSUM	**Tsumeb**	**31.50**	**106**	LR	LR	08 52 38.1	
	comp=Z,202nm,20.2s,baz=335,slow=31						
BDFB	**Brasilia**	**32.51**	**261**	P	**P**	**08 42 49.9**	**-0.4**
	comp=Z,4.4nm,0.7s,baz=89,slow=7.2,SNR=7.2						
BDFB				LR	LR	08 53 42.7	
	comp=Z,196nm,20.4s,baz=100,slow=32						
	comp=Z,4.4nm,0.7s						
BDFB	**Brasilia**	**32.51**	**261**			**08 42 50.1**	**-0.2**
BDFB				IAmb	IAmb	08 43 09.0	
	comp=Z,20nm,1.4s						
SUR	**Sutherland**	**37.74**	**127**	LR	LR	08 56 45.1	
	comp=Z,205nm,18.9s,baz=272,slow=33						
LBTB	**Lobatse**	**39.71**	**114**	LR	LR	08 57 21.1	
	comp=Z,308nm,20.5s,baz=238,slow=32						
BOSA	**Boshof**	**40.18**	**119**	LR	LR	08 58 51.9	
	comp=Z,224nm,18.4s,baz=277,slow=34						
PLTB	**Pedras Altas**	**40.42**	**236**	P	**P**	**08 43 58.3**	**+0.8**
PLTB				IAmb	IAmb	08 44 04.9	
	comp=Z,16nm,1.3s						
LSZ	**Lusaka**	**41.50**	**99**	LR	LR	08 58 27.6	
	comp=Z,307nm,20.7s,baz=274,slow=32						
MDP	**Montagnes des**	**41.83**	**293**	LR	LR	08 58 23.6	
	comp=Z,117nm,21.9s,baz=103,slow=32						
MATP	**Matopo**	**41.84**	**106**	P	**P**	**08 44 08.7**	**-0.9**
	comp=Z,3.2nm,1.0s,baz=279,slow=7.2,SNR=3.9						
	comp=Z,3.2nm,1.0s						
CPUP	**Villa Florida**	**42.24**	**245**	P	**P**	**08 44 12.4**	**-0.2**
	comp=Z,1.8nm,1.0s,baz=86,slow=9.0,SNR=4.8						
CPUP				LR	LR	08 59 07.7	
	comp=Z,202nm,19.4s,baz=88,slow=32						
	comp=Z,1.8nm,1.0s						
ITQB	**Itaqui**	**42.33**	**240**	P	**P**	**08 44 14.0**	**+0.8**
SIV	**San Ignacio**	**45.07**	**260**	P	**P**	**08 44 36.0**	**+0.5**
	comp=Z,2.3nm,0.7s,baz=88,slow=8.9,SNR=11						
SIV				LR	LR	09 03 09.0	
	comp=Z,74nm,19.2s,baz=108,slow=36						
	comp=Z,2.3nm,0.7s						
MDT	**Midelt**	**46.44**	**12**	P	**P**	**08 44 46.7**	**+0.6**
	comp=Z,1.0nm,0.3s,baz=196,slow=7.5,SNR=5.1						
	comp=Z,1.0nm,0.3s						
MBAR	**Mbarara**	**46.52**	**78**	LR	LR	09 02 47.8	
	comp=Z,193nm,19.1s,baz=194,slow=34						
SAML	**Samuel**	**47.84**	**270**	P	**P**	**08 44 57.8**	**+0.5**
SAML				IAmb	IAmb	08 45 00.7	
	comp=Z,7.0nm,1.1s						
TRQA	**Tornquist**	**48.92**	**230**	P	**P**	**08 45 03.3**	**-2.1**
LPAZ	**La Paz**	**51.83**	**259**	P	**P**	**08 45 28.0**	**-0.3**
	comp=Z,2.8nm,0.9s,baz=82,slow=11,SNR=7.7						
LPAZ				LR	LR	09 08 17.3	
	comp=Z,43nm,18.0s,baz=68,slow=37						
	comp=Z,2.8nm,0.9s						
LPAZ	**La Paz**	**51.83**	**259**	P	**P**	**08 45 27.8**	**-0.6**
LVC	**Limon Verde**	**52.41**	**251**	LR	LR	09 06 25.0	
	comp=Z,120nm,21.2s,baz=100,slow=34						
KMBO	**Kilima Mbogo**	**52.63**	**81**	LR	LR	09 06 37.4	
	comp=Z,149nm,18.1s,baz=274,slow=35						
ESDC	**Sonseca Array**	**53.22**	**10**	P	**P**	**08 45 38.2**	**+0.7**
	comp=Z,1.4nm,0.9s,baz=197,slow=7.1,SNR=5.8						
	comp=Z,1.4nm,0.9s						
ESDC	**Sonseca Array**	**53.22**	**10**	P	**P**	**08 45 37.2**	**-0.4**
ESDC				IAmb	IAmb	08 45 46.1	
	comp=Z,8.4nm,1.5s						
KEST	**Kesra**	**53.39**	**24**	LR	LR	09 07 19.3	
	comp=Z,179nm,20.8s,baz=168,slow=35						
KEST	**Kesra**	**53.39**	**24**	P	**P**	**08 45 38.4**	**-0.6**
CO01	**Juntas del Tor**	**53.90**	**242**	P	**P**	**08 45 43.7**	**+0.6**
CO01				IAmb	IAmb	08 45 46.6	
	comp=Z,8.4nm,1.0s						
PLCA	**Paso Flores**	**56.03**	**229**	LR	LR	09 06 04.6	
	comp=Z,107nm,21.8s,baz=92,slow=32						
VNA1	**Neumayer--Stat**	**57.85**	**178**	P	**P**	**08 46 11.0**	**+0.6**
VNA2	**Neumayer--Watz**	**58.17**	**177**	P	**P**	**08 46 12.7**	**0.0**
VNA3	**Neumayer Olymp**	**58.40**	**178**	P	**P**	**08 46 13.5**	**-0.7**
USHA	**Ushuaia**	**59.10**	**213**	LR	LR	09 06 55.0	
	comp=Z,61nm,21.7s,baz=63,slow=31						
SNAA	**Sanae**	**59.18**	**176**	P	**P**	**08 46 20.0**	**+0.3**
SNAA	**Sanae**	**59.18**	**176**	P	**P**	**08 46 19.5**	**-0.2**
	comp=Z,4.0nm,0.9s,baz=335,slow=7.2,SNR=11						
	comp=Z,4.0nm,0.9s						
SNAA	**Sanae**	**59.18**	**176**	P	**P**	**08 46 18.6**	**-1.1**
SNAA				IAmb	IAmb	08 46 26.2	
	comp=Z,9.2nm,1.2s						
TROLL	**Troll, Antarti**	**59.98**	**174**	P	**P**	**08 46 25.6**	**+0.3**
NNA	**Nana**	**60.68**	**263**	LR	LR	09 11 19.6	
	comp=Z,154nm,19.5s,baz=96,slow=35						
IDI	**Anoyia**	**60.77**	**37**	LR	LR	09 14 41.6	
	comp=Z,62nm,18.9s,baz=276,slow=38						
ROSC	**El Rosal**	**61.90**	**283**	LR	LR	09 13 34.3	
	comp=Z,218nm,19.0s,baz=64,slow=36						
ATD	**Arta Tunnel**	**61.93**	**69**	LR	LR	09 10 57.5	
	comp=Z,142nm,20.2s,baz=200,slow=34						
ATAH	**Atahualpa**	**62.98**	**269**	LR	LR	09 12 24.4	
	comp=Z,174nm,21.6s,baz=79,slow=34						
DAVOX	**Davos/Dischmat**	**63.32**	**19**	LR	LR	09 13 42.6	
	comp=Z,160nm,21.1s,baz=263,slow=35						
GERES	**GERESS Array B**	**66.37**	**20**	P	**P**	**08 47 07.8**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=223,slow=5.5,SNR=5.1						
	comp=Z,0.3nm,0.3s						
VRAC	**Vranov**	**67.76**	**21**	LR	LR	09 17 33.0	
	comp=Z,105nm,18.2s,baz=228,slow=36						
MLR	**Muntele Rosu**	**68.66**	**29**	LR	LR	09 16 57.4	
	comp=Z,74nm,21.2s,baz=324,slow=36						
BRTR	**Keskin Array B**	**68.90**	**38**	P	**P**	**08 47 24.6**	**+0.4**
	comp=Z,1.9nm,0.9s,baz=223,slow=5.9,SNR=5.5						
	comp=Z,1.9nm,0.9s						
MAW	**Mawson**	**73.38**	**157**	P	**P**	**08 47 51.0**	**+0.3**
	comp=Z,4.6nm,0.9s,baz=281,slow=11,SNR=6.0						
MAW				LR	LR	09 13 38.0	
	comp=Z,227nm,19.7s,baz=356,slow=31						
	comp=Z,4.6nm,0.9s						
MAW	**Mawson**	**73.38**	**157**	IAmb	IAmb	08 47 52.0	
	comp=Z,1.3nm,1.0s						
JTS	**Las Juntas de**	**73.57**	**285**	LR	LR	09 20 58.3	
	comp=Z,76nm,20.7s,baz=122,slow=36						
AKASG	**Malin Array Be**	**73.95**	**27**	P	**P**	**08 47 54.5**	**+0.2**
	comp=Z,3.6nm,0.8s,baz=227,slow=6.1,SNR=21						
AKASG				LR	LR	09 21 44.5	
	comp=Z,64nm,19.8s,baz=28,slow=37						
	comp=Z,3.6nm,0.8s						
KBZ	**Khabaz**	**76.85**	**39**	P	**P**	**08 48 11.8**	**+0.7**
	comp=Z,3.5nm,0.9s,baz=248,slow=4.2,SNR=4.9						
	comp=Z,3.5nm,0.9s						
QSPA	**South Pole Qui**	**77.26**	**180**	P	**P**	**08 48 14.3**	**+1.0**
WSAR	**Wadi Sarin**	**80.08**	**63**	LR	LR	09 22 54.6	
	comp=Z,97nm,18.5s,baz=56,slow=35						
GEYT	**Alibeck**	**84.62**	**49**	LR	LR	09 28 07.1	
	comp=Z,91nm,18.2s,baz=316,slow=37						
SBA	**Scott Base**	**89.42**	**180**	P	**P**	**08 49 15.9**	**+0.5**
RES	**Resolute Bay**	**99.80**	**345**	LR	LR	09 27 40.1	
	comp=Z,43nm,19.2s,baz=65,slow=31						

IDC ***29*** *08:36:36.8±2.9, 5°.49S×154°.20E, h129km±20km, mb4.2/7, mbtmp4.6/8, Error ellipse: s-maj=33.8km s-min=16.0km az=82.0*

DJA ***29*** *08:36:36.4±3.3, 5°.5S×11°×15°5E±1°.8, h198km±27km, M4.5/8, mB4.8/1, mb4.5/8, Mw(mB)4.1/1*

NEIC ***29*** *08:36:37.5±2.3, 5°.45S±0°.09×154°.2E±0°.1, h125km±5km, mb5.2/80, Error ellipse: s-maj=15.1km s-min=13.4km az=72.0*

ISC 29 08:36:36.8±0.6, 5°.43S±0°.05×154°.21E±0°.06, h127km±4km, h128km:pP-P, n112, σ1.24/95, mb5.1/48, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**2.38**	**301**		**Pn**	**08 37 15.7**	**+0.3**
RABL	**Rabaul**	**2.38**	**301**	P	**Pn**	**08 37 16.1**	**+0.7**
KRVT	**Keravat (AS076**	**2.44**	**297**	P	**Pn**	**08 37 16.6**	**+0.5**
	201nm,0.3s,baz=270,slow=2.0,SNR=36						
KRVT				S	**Sn**	**08 37 47.4**	**+1.0**
	666nm,0.3s,baz=201,slow=20,SNR=16						
HNR	**Honiara**	**6.94**	**125**	S	**Sn**	**08 39 35.8**	**+2.1**
	84nm,0.5s,baz=271,slow=13,SNR=1.6						
PMG	**Port Moresby**	**8.03**	**240**	P	**Pn**	**08 38 32.9**	**+2.2**
	17nm,0.8s,baz=56,slow=11,SNR=1.8						
PMG				S	**Sn**	**08 40 03.3**	**+3.3**
	15nm,0.5s,baz=306,slow=14,SNR=1.8						
PMG	**Port Moresby**	**8.03**	**240**		**Pn**	**08 38 32.1**	**+1.4**
PMG	**Port Moresby**	**8.03**	**240**	P	Pn	08 38 37.9	+7.2
PATS	**Pohnpei**	**12.85**	**19**	Pn	**Pn**	**08 39 36.5**	**+1.5**
COEN	**Coen**	**13.78**	**231**	P	**P**	**08 39 52.8**	**+1.6**
SMPI	**Sarmi**	**15.84**	**282**	P	**Pn**	**08 40 12.8**	**0.0**
	42nm,1.1s						
CTA	**Charters Tower**	**16.50**	**207**	P	**P**	**08 40 23.3**	**+2.0**
	13nm,0.7s,baz=32,slow=12,SNR=14						
CTAO	**Charters Tower**	**16.50**	**207**	P	**P**	**08 40 22.6**	**+1.3**
KOUNC	**Koumac, New Ca**	**17.94**	**148**	P	**P**	**08 40 37.5**	**+0.3**
RK1H	**Rockhampton Ha**	**18.21**	**191**	P	**Pn**	**08 40 41.7**	**+0.2**
	59nm,0.8s						
LIFNC	**LIFO**	**19.82**	**142**	P	**P**	**08 40 57.9**	**+0.3**
EIDS	**Eidsvold**	**20.05**	**188**		**P**	**08 41 01.2**	**+1.1**
EIDS	**Eidsvold**	**20.05**	**188**	P	**P**	**08 41 01.1**	**+1.0**
QIS	**Mount Isa**	**20.67**	**222**	P	**P**	**08 41 07.7**	**+0.8**
RMQ	**Roma**	**21.58**	**193**	P	**P**	**08 41 17.7**	**+1.2**
QLP	**Quilpie**	**23.09**	**203**	P	**P**	**08 41 31.7**	**+0.1**
WR0	**Warramunga Arr**	**23.97**	**231**	P	**P**	**08 41 39.8**	**+0.1**
WB0	**Warramunga Arr**	**23.98**	**232**	P	**P**	**08 41 39.8**	**0.0**
WRAB	**Tennant Creek**	**24.10**	**231**	P	**P**	**08 41 41.3**	**+0.4**
WRAB	**Tennant Creek**	**24.10**	**231**	P	**P**	**08 41 41.2**	**+0.3**
WB2	**Warramunga Arr**	**24.11**	**231**	P	**P**	**08 41 41.3**	**+0.4**
WRA	**Warramunga Arr**	**24.12**	**231**	P	**P**	**08 41 41.1**	**0.0**
	18nm,0.7s,baz=57,slow=9.8,SNR=124						
WRA				PcP	**PcP**	**08 45 17.3**	**-1.8**
	0.3nm,0.4s,baz=59,slow=3.3,SNR=1.8						
WRA				ScP	**ScP**	**08 48 45.7**	**-0.4**
	0.5nm,0.9s,baz=55,slow=3.6,SNR=1.2						
	18nm,0.7s						
WRA	**Warramunga Arr**	**24.12**	**231**	P	**P**	**08 41 40.2**	**-0.8**
ARMA	**Armidale**	**24.98**	**185**	P	**P**	**08 41 49.2**	**+0.4**
ARMA	**Armidale**	**24.98**	**185**	P	**P**	**08 41 47.6**	**-1.2**
AS31	**Alice Springs**	**26.67**	**225**	P	**P**	**08 42 03.8**	**-0.3**
ASAR	**Alice Springs**	**26.67**	**225**	P	**P**	**08 42 03.8**	**-0.4**
	3.7nm,0.4s,baz=54,slow=9.2,SNR=74						
ASAR				PcP	**PcP**	**08 45 22.4**	**-2.4**
	0.5nm,0.7s,baz=71,slow=2.9,SNR=2.6						
ASAR				ScP	**ScP**	**08 48 50.8**	**-2.6**
	0.4nm,0.7s,baz=54,slow=2.5,SNR=2.9						
	3.7nm,0.4s						
H11S3	**WAKE ISLAND Hy**	**26.77**	**27**	T	T	09 10 28.6	
	baz=207,slow=73,SNR=12						
H11S2	**WAKE ISLAND Hy**	**26.77**	**27**	T	T	09 10 22.7	
	baz=207,slow=73,SNR=18						
H11S1	**WAKE ISLAND Hy**	**26.79**	**27**	T	T	09 10 23.8	
	baz=207,slow=73,SNR=12						
KNRA	**Kununurra**	**26.97**	**246**	P	**P**	**08 42 06.9**	**+0.1**
KNRA				IAmb	IAmb	08 43 03.1	
	comp=Z,58nm,1.5s						
KNRA	**Kununurra**	**26.97**	**246**	P	**P**	**08 42 05.9**	**-1.0**
CMSA	**Cobar Meteorol**	**27.17**	**196**	P	**P**	**08 42 08.2**	**-0.3**
STKA	**Stephens Creek**	**28.84**	**203**	P	**P**	**08 42 22.3**	**-1.0**
	comp=Z,6.8nm,0.5s,baz=5.7,slow=8.0,SNR=23						
	comp=Z,6.8nm,0.5s						
STKA	**Stephens Creek**	**28.84**	**203**	P	**P**	**08 42 22.8**	**-0.5**
STKA	**Stephens Creek**	**28.84**	**203**	P	**P**	**08 42 22.7**	**-0.6**
LCRK	**Leigh Creek**	**29.09**	**209**	P	**P**	**08 42 25.1**	**-0.4**
CAN	**Canberra**	**30.13**	**189**	P	**P**	**08 42 35.3**	**+0.5**
MULG	**Mulgathing**	**31.17**	**215**	P	**P**	**08 42 43.0**	**-0.9**
HTT	**Hallett**	**31.28**	**205**	P	**P**	**08 42 44.8**	**-0.1**
WRKA	**Warakurna**	**31.58**	**229**	P	**P**	**08 42 46.8**	**-0.9**
BBOO	**Buckleboo**	**32.07**	**210**	P	**P**	**08 42 50.9**	**-0.9**
BBOO	**Buckleboo**	**32.07**	**210**	P	**P**	**08 42 51.6**	**-0.2**
ARPS	**Mount Arapiles**	**33.19**	**198**	P	**P**	**08 43 01.0**	**-0.5**
OUZ	**Omahuta**	**34.63**	**151**	P	**P**	**08 43 13.1**	**-0.8**
OUZ				IAmb	IAmb	08 43 16.1	
	comp=Z,98nm,1.5s						
FORT	**Forrest**	**35.21**	**221**	P	**P**	**08 43 18.4**	**-0.6**
FORT				IAmb	IAmb	08 43 18.7	
	comp=Z,30nm,0.6s						
FORT	**Forrest**	**35.21**	**221**	P	**P**	**08 43 18.6**	**-0.4**
MBWA	**Marble Bar**	**36.89**	**242**	P	**P**	**08 43 32.3**	**-1.2**
MBWA				IAmb	IAmb	08 44 41.3	
	comp=Z,56nm,2.0s						
MBWA	**Marble Bar**	**36.89**	**242**	P	**P**	**08 43 32.5**	**-0.9**
MBWA				pP	**pP**	**08 43 58.2**	**-1.8**
PSA00	**Pilbara Seismi**	**36.94**	**241**	P	**P**	**08 43 32.8**	**-1.0**
TAU	**Tasmania Unive**	**37.82**	**188**	P	**P**	**08 43 41.4**	**+0.4**
TAU				IAmb	IAmb	08 44 43.1	
	comp=Z,127nm,1.8s						
LTZ	**Lake Taylor**	**40.50**	**159**	P	**P**	**08 44 03.4**	**+0.1**
LTZ				IAmb	IAmb	08 44 16.3	
	comp=Z,43nm,1.4s						
JOW	**Kunigami**	**40.73**	**323**	P	**P**	**08 44 05.1**	**-0.2**
JOW				IAmb	IAmb	08 44 10.4	
	comp=Z,127nm,1.8s						
MLZ	**Mavora Lakes**	**41.59**	**165**	P	**P**	**08 44 11.7**	**-0.5**
MLZ				IAmb	IAmb	08 44 12.9	
	comp=Z,26nm,0.9s						
WHZ	**Wether Hill Ro**	**42.04**	**166**	P	**P**	**08 44 14.7**	**-1.1**
WHZ				IAmb	IAmb	08 45 31.9	
	comp=Z,75nm,1.5s						
MORW	**Morawa**	**43.06**	**232**	P	**P**	**08 44 23.3**	**-1.1**
KSRS	**Korea Array**	**49.20**	**332**	P	**P**	**08 45 12.4**	**+0.3**
	comp=Z,2.0nm,0.6s,baz=147,slow=6.9,SNR=11						
	comp=Z,2.0nm,0.6s						
USRK	**Ussuriysk Ar.**	**53.30**	**340**	P	**P**	**08 45 43.5**	**+0.8**
	comp=Z,3.5nm,0.8s,baz=148,slow=5.7,SNR=3.6						
	comp=Z,3.5nm,0.8s						
CASY	**Casey**	**67.83**	**198**	P	**P**	**08 47 20.1**	**-0.9**
CASY				x	x	08 47 23.0	
CASY				pP	**pP**	**08 47 50.7**	**-0.3**
CASY				sP	**sP**	**08 48 01.7**	**-2.7**
CCD	**Concordia, Ant**	**71.84**	**188**	P	**P**	**08 47 45.3**	**-0.5**
VNDA	**Vanda**	**72.16**	**178**	P	**P**	**08 47 46.8**	**-0.4**
	comp=Z,4.4nm,0.7s,baz=332,slow=6.5,SNR=33						
	comp=Z,4.4nm,0.7s						
VNDA	**Vanda**	**72.16**	**178**	P	**P**	**08 47 47.0**	**-0.2**
SBA	**Scott Base**	**72.68**	**177**	P	**P**	**08 47 51.0**	**+0.7**
HYBB	**Hyderabad (bro**	**78.02**	**289**	*e*P	**P**	**08 48 22.3**	**+0.2**
HYBB				*e*PcP	**PcP**	**08 48 30.9**	**-0.4**
HYBB				*e*pP	**pP**	**08 48 53.0**	**-0.3**
HYBB				*e*sP	**sP**	**08 49 07.0**	**+0.4**
NEA2	**Nenana**	**81.32**	**21**	IAmb	IAmb	08 48 46.2	
	comp=Z,31nm,0.9s						
TCOL	**CIGO, UAF Yank**	**81.91**	**21**	P	**P**	**08 48 44.0**	**+2.1**
COLA	**College**	**81.92**	**21**	P	**P**	**08 48 44.5**	**+2.6**
HDA	**Harding Lake**	**82.01**	**22**	P	**P**	**08 48 45.5**	**+3.1**
IL31		**82.22**	**22**	P	**P**	**08 48 43.1**	**-0.3**
ILAR	**Eielson Array**	**82.22**	**22**	P	**P**	**08 48 43.2**	**-0.3**
ILAR	**Eielson Array**	**82.22**	**22**	ScP	**P**	**08 48 42.7**	**-0.8**
	comp=Z,6.1nm,0.7s,baz=279,slow=2.6,SNR=15						
COLD	**Coldfoot**	**82.39**	**19**	IAmb	IAmb	08 48 50.1	
	comp=Z,43nm,1.0s						
GRNC	**Granite Creek**	**82.40**	**26**	IAmb	IAmb	08 48 49.2	
	comp=Z,41nm,1.0s						
RIDG	**Independent Ri**	**82.48**	**23**	P	**P**	**08 48 46.5**	**+1.5**
RIDG				IAmb	IAmb	08 48 48.5	
	comp=Z,37nm,1.2s						
BARN	**Barnard Glacie**	**82.58**	**26**	IAmb	IAmb	08 48 49.3	
	comp=Z,26nm,1.1s						
M26K	**Nabesna, AK**	**82.60**	**25**	P	**P**	**08 48 46.8**	**+1.2**
M26K				IAmb	IAmb	08 48 48.7	
	comp=Z,30nm,0.9s						
CTGM	**Chitina Glacie**	**82.68**	**26**	IAmb	IAmb	08 48 49.5	
	comp=Z,20nm,0.9s						
L26K	**Log Cabin Wild**	**82.74**	**24**	IAmb	IAmb	08 48 49.0	
	comp=Z,21nm,0.9s						
LOGN	**Logan Glacier**	**82.77**	**27**	IAmb	IAmb	08 48 49.7	
	comp=Z,34nm,1.1s						
PCA	**Pinnacle**	**82.81**	**27**	IAmb	IAmb	08 48 49.9	
	comp=Z,38nm,1.1s						
TOLK	**Toolik Lake Re**	**83.38**	**18**	P	**P**	**08 48 49.6**	**+0.1**
TOLK				IAmb	IAmb	08 48 52.3	
	comp=Z,75nm,1.3s						
BCAR	**Beaver Creek A**	**83.39**	**24**	P	**P**	**08 48 47.9**	**-1.8**
SIT	**Sitka**	**84.08**	**31**	IAmb	IAmb	08 48 54.6	
	comp=Z,24nm,1.1s						
DIB	**Dawson Inlet,**	**84.44**	**35**	IAmb	IAmb	08 48 59.2	
	comp=Z,26nm,1.1s						
CRAG	**Craig**	**84.74**	**33**	IAmb	IAmb	08 48 56.9	
	comp=Z,22nm,1.1s						
MAW	**Mawson**	**85.53**	**203**	P	**P**	**08 48 59.5**	**-0.8**
	comp=Z,7.3nm,0.6s,baz=91,slow=5.3,SNR=26						
	comp=Z,7.3nm,0.6s						
AAK	**Ala-Archa**	**86.11**	**313**	P	**P**	**08 49 03.9**	**-0.1**
AAK				IAmb	IAmb	08 49 06.9	
	comp=Z,38nm,1.1s						
BBB	**Bella Bella**	**86.75**	**37**	IAmb	IAmb	08 49 05.1	
	comp=Z,35nm,1.1s						
TLCB	**Telegraph Cove**	**87.17**	**39**	IAmb	IAmb	08 49 08.7	
	comp=Z,23nm,1.1s						
E03A	**Lebam**	**88.57**	**43**	IAmb	IAmb	08 49 20.5	
	comp=Z,49nm,1.2s						
CLRS	**Cowichan Lake**	**88.57**	**41**	IAmb	IAmb	08 49 15.3	
	comp=Z,26nm,1.0s						
H04A	**Detroit Lake**	**89.24**	**45**	IAmb	IAmb	08 49 25.5	
	comp=Z,64nm,1.6s						
HOOD	**Mount Hood Mea**	**89.71**	**45**	IAmb	IAmb	08 49 25.9	
	comp=Z,36nm,1.1s						
PINE	**Pine Mountain**	**90.01**	**46**	IAmb	IAmb	08 49 30.6	
	comp=Z,34nm,1.1s						
ISA	**Isabella, Lake**	**90.95**	**54**	P	**P**	**08 49 25.1**	**-1.8**
ISA				IAmb	IAmb	08 49 52.7	
	comp=Z,14nm,1.1s						
F07A	**Phinny Hill Vi**	**90.98**	**44**	IAmb	IAmb	08 49 27.1	
	comp=Z,17nm,1.1s						
I07A	**Izee**	**91.07**	**46**	IAmb	IAmb	08 49 32.4	
	comp=Z,39nm,1.8s						
G08A	**Pilot Rock**	**91.59**	**45**	P	**P**	**08 49 27.8**	**-1.9**
MFID	**Camas Ranch**	**93.67**	**47**	IAmb	IAmb	08 49 40.2	
	comp=Z,36nm,1.4s						
ELK	**Elko**	**93.92**	**50**	P	**P**	**08 49 44.3**	**+3.6**
ELK				IAmb	IAmb	08 49 47.0	
	comp=Z,14nm,1.2s						
BGU	**Big Grassy Mou**	**95.61**	**50**	IAmb	IAmb	08 49 51.8	
	comp=Z,20nm,1.2s						
HVU	**Hansel Valley**	**95.83**	**49**	IAmb	IAmb	08 49 49.1	
	comp=Z,15nm,1.0s	

CHNA	Chernabura Isl	1.97	138	P		Pn	08 37 58.8	-2.8	
	baz=319,SNR=1000								
CHNA				S		S	08 38 25.7	-5.5	
	baz=319								
CNBA	Chernabura Isl	1.98	139	Pn		Pn	08 37 58.7	-3.0	
CNBA	Chernabura Isl	1.98	139			S	08 38 26.0	-5.3	
BRPK	Brown Peak	2.00	213			Pn	08 38 01.0	-0.9	
SSLS	Shishaldin Sou	2.02	218			Pn	08 38 01.8	-0.5	
ANPB	Aniakchak Plen	2.04	75			Pn	08 38 01.1	-1.2	
ANNW	Aniakchak Nort	2.11	71			Pn	08 38 02.8	-0.3	
ANNE	Aniakchak Nort	2.18	73			Pn	08 38 02.7	-1.0	
WESE	West Dahl East	2.42	221			Pn	08 38 06.4	-0.1	
WECS	Westdahl Cape	2.45	224			Pn	08 38 06.6	-0.1	
WECS						S	08 38 39.6	-0.7	
PLBL	Peulik Blue Cr	3.08	61			Pn	08 38 13.4	-0.4	
AKSA	Akutan Strait	3.11	227			Pn	08 38 14.2	0.0	
AKSA						S	08 38 52.7	-0.9	
AKUT	Akutan	3.14	227			Pn	08 38 14.3	-0.2	
AKGG	Akutan Green G	3.19	230			Pn	08 38 15.3	+0.2	
PLK5	Peulik 5	3.19	56			Pn	08 38 14.9	-0.1	
PLK1	Peulik 1	3.23	60			Pn	08 38 15.1	-0.4	
AKBBA	Akutan Broad B	3.23	228			Pn	08 38 14.2	-1.4	
R17K	Ugashik Creek	3.27	64			Pn	08 38 15.5	-0.5	
R17K	Ugashik Creek	3.27	64	P		Pn	08 38 15.6	-0.5	
	baz=242,SNR=1000								
R17K				S		S	08 38 54.9	-2.2	
	baz=242								
PLK3	Peulik 3	3.35	64			Pn	08 38 16.5	-0.5	
P16K	Nushagak River	3.42	36			Pn	08 38 18.0	+0.3	
P16K	Nushagak River	3.42	36	P		Pn	08 38 18.1	+0.4	
	baz=214								
P16K				S		S	08 38 59.8	-0.4	
	baz=214								
CHIR	Chirikof Islan	3.53	96			Pn	08 38 16.6	-2.5	
CHIR						S	08 38 57.1	-5.5	
CHIR	Chirikof Islan	3.53	96	P		Pn	08 38 16.8	-2.4	
	baz=276,SNR=170								
CHIR				S		S	08 38 57.3	-5.3	
	baz=276								
UNV	Unalaska Valle	3.65	229	Pn		Pn	08 38 20.0	-0.6	
UNV	Unalaska Valle	3.65	229	P		Pn	08 38 20.1	-0.6	
	baz=51,SNR=226								
UNV				S		S	08 39 02.7	-2.6	
	baz=51								
Q16K	King Salmon	3.67	48			Pn	08 38 20.8	0.0	
Q16K	King Salmon	3.67	48	P		Pn	08 38 20.9	+0.2	
	baz=227								
MNAT	Makushin Natee	3.70	231			Pn	08 38 20.9	-0.4	
Q17K	Contact Creek	3.78	57	P		Pn	08 38 21.9	-0.4	
	baz=236								
O16K	Kokwok River B	3.84	30			Pn	08 38 22.5	-0.4	
O16K	Kokwok River B	3.84	30	P		Pn	08 38 22.6	-0.2	
	baz=208,SNR=596								
O16K				S		S	08 39 06.5	-3.1	
	baz=208								
KELA	Mount Kelaz	3.93	55			Pn	08 38 23.7	-0.4	
P17K	Kvichak River	4.09	43			Pn	08 38 26.2	+0.3	
P17K	Kvichak River	4.09	43	P		Pn	08 38 26.3	+0.3	
	baz=223								
KCG	Knife Ck. Glac	4.16	59			Pn	08 38 26.5	-0.4	
SII	Sitkinak Islan	4.26	84	Pn		Pn	08 38 25.8	-2.4	
SII	Sitkinak Islan	4.26	84	P		Pn	08 38 25.8	-2.4	
	baz=266,SNR=236								
SII				S		S	08 39 13.4	-5.7	
	baz=266								
SII	Sitkinak Islan	4.26	84	P		Pn	08 38 26.0	-2.2	
O17K	Koliganek Bris	4.28	34			Pn	08 38 28.3	-0.1	
O17K	Koliganek Bris	4.28	34	P		Pn	08 38 28.4	0.0	
	baz=214,SNR=1000								
KAHC	Katmai Hardscr	4.37	55			Pn	08 38 29.2	-0.4	
Q18K	Katmai Hardscr	4.37	55	P		Pn	08 38 29.3	-0.2	
	baz=236								
Q18K				S		S	08 39 18.5	-3.0	
	baz=236								
N16K	Nishlik Lake	4.47	20			Pn	08 38 31.0	+0.3	
N16K	Nishlik Lake	4.47	20	P		Pn	08 38 31.1	+0.4	
	baz=199,SNR=738								
KAHG	Katmai Hook Gl	4.51	58			Pn	08 38 30.6	-0.7	
OKFG	Magazine Ridge	4.56	233			Pn	08 38 31.2	-0.7	
KAPH	Katmai Pasha	4.65	58			Pn	08 38 32.6	-0.5	
P18K	Big Mountain,	4.69	46			Pn	08 38 33.5	0.0	
P18K	Big Mountain,	4.69	46	P		Pn	08 38 33.7	+0.2	
	baz=226								
SPIA	Saint Paul Isl	4.70	284			Pn	08 38 35.3	+1.7	
SPIA	Saint Paul Isl	4.70	284	P		Pn	08 38 35.5	+1.9	
	baz=100,SNR=60								
OKSO	Okmok South	4.70	233			Pn	08 38 33.1	-0.7	
OHAK	Old Harbor	4.80	76	Pn		Pn	08 38 32.5	-2.4	
OHAK	Old Harbor	4.80	76	P		Pn	08 38 32.5	-2.4	
	baz=259,SNR=1000								
O18K	Koktuh Hills	5.00	42			Pn	08 38 37.5	+0.2	
O18K	Koktuh Hills	5.00	42	P		Pn	08 38 37.6	+0.3	
	baz=224,SNR=1000								
Q19K	Cape Douglas,	5.13	56	Pn		Pn	08 38 38.2	-0.9	
Q19K	Cape Douglas,	5.13	56	P		Pn	08 38 38.1	-0.9	
	baz=239,SNR=798								
KDAK	Kodiak Island	5.27	70	P		Pn	08 38 38.7	-2.1	
	2µm,0.3s,baz=264,slow=5.8								
KDAK				S		S	08 39 35.9	-6.1	
	1µm,0.4s,baz=160,slow=24,SNR=10.0								
KDAK	Kodiak Island	5.27	70			Pn	08 38 38.8	-2.0	
KDAK	Kodiak Island	5.27	70	*c i*		Pn	08 38 38.8	-2.0	
KDAK	Kodiak Island	5.27	70	P		Pn	08 38 38.9	-2.0	
	baz=254								
NIKH	Nikolski High	5.27	233			Pn	08 38 40.1	-0.9	
NIKH	Nikolski High	5.27	233	P		Pn	08 38 40.3	-0.7	
	baz=51,SNR=82								
N18K	Kilae Creek	5.37	33			Pn	08 38 42.1	0.0	
N18K	Kilae Creek	5.37	33	P		Pn	08 38 42.4	+0.2	
	baz=215,SNR=458								
AUCH	Augustine Cone	5.43	52			Pn	08 38 42.2	-0.7	
AUQ	Augustine Qik'	5.44	53			Pn	08 38 42.1	-0.9	
AUL	Augustine Lava	5.44	52			Pn	08 38 42.2	-0.9	
AU22	Augustine Moun	5.47	53			Pn	08 38 42.6	-0.7	
O19K	Port Alsworth	5.55	43			Pn	08 38 44.5	+0.1	
O19K	Port Alsworth	5.55	43	P		Pn	08 38 44.6	+0.1	
	baz=226								
Q20K	Shuyak Island	5.60	62	P		Pn	08 38 43.1	-1.8	
	baz=246,SNR=301								
SYI	Shuyak Island	5.60	62			Pn	08 38 43.0	-2.0	
SVW2	Sparrevohn	5.79	32			Pn	08 38 47.7	+0.2	
N19K	Bonanza Creek	5.92	38			Pn	08 38 49.9	+0.6	
N19K	Bonanza Creek	5.92	38	P		Pn	08 38 49.9	+0.6	
	baz=221,SNR=805								
IVE	Iliamna Volcan	5.96	48			Pn	08 38 49.0	-0.8	
O20K	Slope Mountain	6.16	49			Pn	08 38 51.6	-0.7	
O20K	Slope Mountain	6.16	49	P		Pn	08 38 51.8	-0.5	
	baz=233,SNR=638								
RDWB	Redoubt West	6.31	45			Pn	08 38 53.9	-0.5	
NCT	North Crescent	6.32	44			Pn	08 38 54.1	-0.3	
HOM	Homer	6.37	54			Pn	08 38 53.1	-1.8	
HOM	Homer	6.37	54	P		Pn	08 38 53.3	-1.7	
	baz=240,SNR=569								
RDJH	Redoubt Jeurge	6.39	44			Pn	08 38 55.1	-0.3	
DFR	Drift River	6.44	45			Pn	08 38 55.7	-0.2	
CNPM	China Poot	6.50	56			Pn	08 38 54.3	-2.4	
BRLK	Bradley Lake	6.76	55			Pn	08 38 57.5	-2.6	
M19K	Big River Lodg	6.78	31			Pn	08 39 01.1	+0.9	
M19K	Big River Lodg	6.78	31	P		Pn	08 39 01.2	+0.9	
	baz=215,SNR=728								
BRSE	Bradley Lake S	6.82	55			Pn	08 38 58.3	-2.5	
BRSE	Bradley Lake S	6.82	55	P		Pn	08 38 58.3	-2.5	
	baz=242,SNR=315								
L19K	White Mountain	6.88	29			Pn	08 39 02.0	+0.5	
L19K	White Mountain	6.88	29	P		Pn	08 39 02.2	+0.6	
	baz=212,SNR=890								
SPWE	Spurr West	6.92	40			Pn	08 39 02.9	+0.7	
SPBG	Spurr Blockage	6.98	41			Pn	08 39 03.4	+0.5	
N20K	Mount Spurr	7.00	42	P		Pn	08 39 03.3	+0.2	
	baz=227								
SPCR	Spurr Chakacha	7.00	42			Pn	08 39 03.4	+0.2	
SPCP	Crater Peak Br	7.06	41			Pn	08 39 04.4	+0.3	
SPCG	Spurr Capps Gl	7.13	42			Pn	08 39 04.8	0.0	
CAPN	Captain Cook N	7.15	47			Pn	08 39 04.1	-0.9	
CAPN	Captain Cook N	7.15	47	P		Pn	08 39 05.1	+0.1	
	baz=233,SNR=28								
M20K	Styx River	7.15	35			Pn	08 39 06.7	+1.6	
M20K	Styx River	7.15	35	P		Pn	08 39 06.7	+1.6	
	baz=220								
TT01	Tatalina	7.23	22			Pn	08 39 07.1	+1.0	
TTA	Tatalina	7.25	22			Pn	08 39 07.3	+0.9	
TTA	Tatalina	7.25	22	P		Pn	08 39 07.4	+0.9	
TTA	Tatalina	7.25	22	P		Pn	08 39 07.3	+0.9	
	baz=204,SNR=790								
STLK	Strandline Lak	7.33	41			Pn	08 39 07.5	0.0	
L20K	Farewell, AK	7.39	30			Pn	08 39 08.9	+0.8	
L20K	Farewell, AK	7.39	30	P		Pn	08 39 09.1	+0.9	
	baz=214,SNR=630								
SLKM	Skilak Lake	7.41	51			Pn	08 39 06.1	-2.3	
SEW	Seward	7.56	55			Pn	08 39 08.1	-2.3	
SEW	Seward	7.56	55	P		Pn	08 39 08.4	-2.0	
	baz=243,SNR=1000								
O22K	Cooper Landing	7.61	52			Pn	08 39 09.0	-2.0	
O22K	Cooper Landing	7.61	52	P		Pn	08 39 09.2	-1.8	
	baz=240,SNR=474								
SUA	Susitna One	7.72	44			Pn	08 39 11.1	-1.4	
SUA	Susitna One	7.72	44	P		Pn	08 39 10.7	-1.7	
	baz=230,SNR=186								
SKT	Skwentna	7.76	39			Pn	08 39 12.8	-0.2	
SKT	Skwentna	7.76	39	P		Pn	08 39 12.7	-0.2	
	baz=225,SNR=386								
RC01	Rabbit Creek A	7.91	48			Pn	08 39 12.4	-2.5	
RC01	Rabbit Creek A	7.91	48	P		Pn	08 39 12.5	-2.4	
	baz=236,SNR=85								
K20K	Telida	8.06	26			Pn	08 39 18.0	+1.1	
K20K	Telida	8.06	26	P		Pn	08 39 18.1	+1.2	
	baz=210,SNR=1000								
M22K	Willow	8.13	43			Pn	08 39 15.1	-2.6	
M22K	Willow	8.13	43	P		Pn	08 39 15.0	-2.6	
	baz=231,SNR=68								
PPLA	Purkeypile	8.20	33			Pn	08 39 20.2	+1.4	
PPLA	Purkeypile	8.20	33	P		Pn	08 39 20.4	+1.6	
	baz=219,SNR=1000								
KOFP	Korovin Flat P	8.23	246			Pn	08 39 19.1	0.0	
KOKL	Mount Kliuchef	8.25	246			Pn	08 39 19.8	+0.3	
ATKA	Atka Island	8.32	245			Pn	08 39 19.6	-0.6	
ATKA	Atka Island	8.32	245	P		Pn	08 39 20.2	0.0	
PMR	Palmer	8.43	46			Pn	08 39 18.0	-3.5	
PMR	Palmer	8.43	46	P		Pn	08 39 18.0	-3.5	
PMR	Palmer	8.43	46	P		Pn	08 39 18.3	-3.2	
	baz=234,SNR=74								
ANM	Nome	8.45	350			Pn	08 39 22.9	+1.1	
ANM	Nome	8.45	350	P		Pn	08 39 22.9	+1.1	
ANM	Nome	8.45	350	P		Pn	08 39 22.7	+0.9	
	baz=166,SNR=104								
CUT	Chulitna	8.48	39	P		Pn	08 39 20.1	-2.2	
	baz=227,SNR=16								
KNK	Knik Glacier	8.60	48			Pn	08 39 20.4	-3.6	
KNK	Knik Glacier	8.60	48	P		Pn	08 39 21.0	-2.9	
	baz=237,SNR=189								
CAST	Castle Rocks	8.64	31			Pn	08 39 25.1	+0.8	
CAST	Castle Rocks	8.64	31	P		Pn	08 39 25.2	+0.8	
	baz=217,SNR=844								
J20K	Nowinta River	8.75	23			Pn	08 39 26.6	+0.9	
J20K	Nowinta River	8.75	23	P		Pn	08 39 26.7	+0.9	
	baz=207,SNR=471								
GCSA	Galena City Sc	8.79	14			Pn	08 39 27.5	+1.2	
GCSA	Galena City Sc	8.79	14	P		Pn	08 39 27.7	+1.4	
	baz=197,SNR=166								
Q23K	Middleton Isla	8.82	63			Pn	08 39 24.0	-2.7	
Q23K	Middleton Isla	8.82	63	P		Pn	08 39 24.0	-2.7	
	baz=254,SNR=38								
MID	Middleton Isla	8.83	63			Pn	08 39 24.2	-2.6	
MID	Middleton Isla	8.83	63	P		Pn	08 39 24.2	-2.6	
SML	Sawmill	8.86	46			Pn	08 39 23.0	-4.3	
SML	Sawmill	8.86	46	P		Pn	08 39 24.2	-3.1	
	baz=236,SNR=116								
GAMB	Gambell	8.94	331			Pn	08 39 29.5	+1.3	
GAMB	Gambell	8.94	331	P		Pn	08 39 30.0	+1.8	
	baz=142,SNR=31								
CHUM	Lake Minchumin	8.94	28			Pn	08 39 29.4	+1.2	
CHUM	Lake Minchumin	8.94	28	P		Pn	08 39 29.5	+1.3	
	baz=214,SNR=1000								
GLI	Glacier Island	8.95	53			Pn	08 39 24.6	-3.7	
GLI	Glacier Island	8.95	53	P		Pn	08 39 24.9	-3.5	
	baz=244,SNR=222								
HIN	Hinchinbrook I	9.04	57			Pn	08 39 26.9	-2.6	
KTH	Kantishna Hill	9.08	33			Pn	08 39 29.5	-0.6	
M23K	Glacier View	9.10	47			Pn	08 39 27.4	-3.0	
M23K	Glacier View	9.10	47	P		Pn	08 39 28.2	-2.1	
	baz=237,SNR=338								
FID	Port Fidalgo	9.17	55			Pn	08 39 27.9	-3.4	
TRF	Thorofare Moun	9.20	34			Pn	08 39 30.2	-1.5	
TRF	Thorofare Moun	9.20	34	P		Pn	08 39 30.2	-1.5	
	baz=227,SNR=298								
JPK	Jack Peak	9.24	53			Pn	08 39 29.4	-2.8	
SCM	Sheep Creek Mo	9.28	48			Pn	08 39 29.5	-3.3	
SCM	Sheep Creek Mo	9.28	48	P		Pn	08 39 29.5	-3.3	
SCM	Sheep Creek Mo	9.28	48	P		Pn	08 39 30.0	-2.8	
	baz=238,SNR=536								
GSTR	Great Sitkin T	9.34	249			Pn	08 39 33.1	-0.4	
VMT	TAPS TI Valdez	9.36	53			Pn	08 39 31.2	-2.4	
GSMY	Great Sitkin M	9.36	249			Pn	08 39 33.6	-0.2	
WAT1	Susitna Watana	9.37	40			Pn	08 39 30.7	-3.1	
WAT1	Susitna Watana	9.37	40	P		Pn	08 39 30.9	-2.9	
	baz=230								
GSCK	Great Sitkin C	9.43	249			Pn	08 39 34.1	-0.6	
EYAK	Cordova Ski Ar	9.44	57			Pn	08 39 31.9	-2.8	
EYAK	Cordova Ski Ar	9.44	57	P		Pn	08 39 31.9	-2.8	
	baz=248,SNR=260								
BPAW	Bear Paw Mtn.	9.47	30			Pn	08 39 35.8	+0.6	
BPAW	Bear Paw Mtn.	9.47	30	P		Pn	08 39 35.8	+0.6	
	baz=218,SNR=606								
WAT6	Susitna Watana	9.52	43			Pn	08 39 32.0	-4.0	
WAT6	Susitna Watana	9.52	43	P		Pn	08 39 31.8	-4.2	
	baz=233,SNR=346								
RND	Reindeer	9.63	37			Pn	08 39 34.3	-3.0	
RND	Reindeer	9.63	37	P		Pn	08 39 34.3	-3.0	
DIV	Divide	9.64	53			Pn	08 39 34.8	-2.6	
TNA	Tin City	9.72	345			Pn	08 39 38.8	+0.5	
TNA	Tin City	9.72	345	P		Pn	08 39 36.5	-1.8	
	baz=159,SNR=22								
KLU	Klutina	9.72	51			Pn	08 39 35.6	-2.8	
KLU	Klutina	9.72	51	P		Pn	08 39 36.0	-2.4	
	baz=243,SNR=1000								
MCK	McKinley	9.83	36			Pn	08 39 37.0	-2.7	
MCK	McKinley	9.83	36	P		Pn	08 39 37.0	-2.7	
MCK	McKinley	9.83	36	P		Pn	08 39 37.1	-2.7	
	baz=225,SNR=50								
M24K	Tolsona, Glenn	9.89	48			Pn	08 39 38.5	-2.1	
M24K	Tolsona, Glenn	9.89	48	P		Pn	08 39 38.5	-2.1	
	baz=239,SNR=581								
DHY	Denali Highway	9.95	41			Pn	08 39 38.2	-3.2	
DHY	Denali Highway	9.95	41	P		Pn	08 39 39.3	-2.1	
	baz=232,SNR=69								
KICM	Kanaga Island	10.02	250			Pn	08 39 43.0	+0.7	
KIKV	Kanaga Island	10.03	250			Pn	08 39 42.3	-0.1	
KIWB	Kanaga Island	10.03	250			Pn	08 39 42.4	0.0	
I21K	Tanana	10.10	24	P		Pn	08 39 44.0	+0.9	
	baz=211,SNR=1000								
BMRM	Bremner River	10.11	56			Pn	08 39 41.0	-2.4	
BMRM	Bremner River	10.11	56	P		Pn	08 39 41.1	-2.3	
	baz=248,SNR=709								
MLY	Manley	10.28	27	P		Pn	08 39 45.8	+0.4	
	baz=215,SNR=1000								
H21K	Melozitna Rive	10.33	21	P		Pn	08 39 47.2	+1.1	
	baz=208,SNR=617								
N25K	Chitina, Valde	10.35	52	P		Pn	08 39 44.4	-2.1	
	baz=245,SNR=871								
NEA2	Nenana	10.40	32	P		Pn	08 39 44.3	-2.7	
	baz=221,SNR=225								
IMAR	Indian Mountai	10.44	19			Pn	08 39 48.2	+0.6	
HARP	HAARP	10.45	48	P		Pn	08 39 45.8	-2.0	
	baz=240,SNR=275								
BGLC	Bering Glacier	10.49	61	P		Pn	08 39 47.0	-1.2	
	baz=255,SNR=12								
PAX	Paxson	10.61	44	P		Pn	08 39 46.6	-3.3	
	baz=237,SNR=226								
I23K	Minto, Yukon-K	10.73	29	P		Pn	08 39 49.9	-1.3	
	baz=219,SNR=872								
CRQE	Cirque	10.75	58	P		Pn	08 39 49.8	-1.9	
	baz=252,SNR=177								
H22K	Ishtalitna Cre	10.84	23	P		Pn	08 39 53.5	+0.9	
	baz=211								
HDA	Harding Lake	10.93	36	P		Pn	08 39 50.4	-3.5	
	baz=227,SNR=170								
K24K	Donnelly Dome	10.96	40	P		Pn	08 39 51.8	-2.5	
	baz=232,SNR=152								
TCOL	CIGO, UAF Yank	10.96	33	P		Pn	08 39 51.0	-3.2	
	baz=223,SNR=62								
COLA	College	10.96	33			Pn	08 39 51.3	-3.0	
COLA	College	10.96	33	P		Pn	08 39 51.3	-3.0	
COLA	College	10.96	33	P		Pn	08 39 51.0	-3.2	
	baz=223								
G21K	Allakaket	10.96	18	P		Pn	08 39 55.4	+1.1	
	baz=204								
MCARA	McCarthy VSAT	10.97	55	P		Pn	08 39 52.7	-1.7	
	baz=249,SNR=946								
MESA	MESA	11.16	62	P		Pn	08 39 55.9	-1.1	
	baz=257,SNR=237								
ILAR	Eielson Array	11.19	35	P		Pn	08 39 53.1	-4.1	
	22nm,0.6s,baz=226,slow=12,SNR=203								
ILAR				S		S	08 41 49.4	-12	
	33nm,0.6s,baz=194,slow=7.6,SNR=4.2								
ILAR				PcP		PcP	08 45 33.0	-0.2	
	6.5nm,0.6s,baz=271,slow=2.6,SNR=5.2								
ILAR				PKiKP		PKiKP	08 53 29.2	-1.9	
	0.9nm,0.5s,baz=309,slow=2.9,SNR=8.6								
H23K	Yukon River	11.21	27	P		Pn	08 39 57.0	-0.5	
	baz=216,SNR=1000								
RIDG	Independent Ri	11.26	42	P		Pn	08 39 54.5	-3.7	
	baz=235,SNR=179								
POKR	Poker Plat Res	11.26	33	P		Pn	08 39 54.7	-3.4	
	baz=224,SNR=60								
M26K	Nabesna, AK	11.36	50	P		Pn	08 39 57.3	-2.1	
	baz=244,SNR=521								
L26K	Log Cabin Wild	11.48	47	P		Pn	08 39 58.9	-2.0	
	baz=241,SNR=827								
J25K	Salcha River,	11.59	38	P		Pn	08 39 58.9	-3.4	
	baz=230,SNR=326								
F21K	Alatna River	11.61	16	P		Pn	08 40 04.2	+1.6	
	baz=202								
CTG	Chitna Glacier	11.63	58	P		Pn	08 40 01.9	-1.0	
	baz=254,SNR=626								
H24K	Noodor Dome	11.66	29			Pn	08 40 00.7	-2.4	
H24K	Noodor Dome	11.66	29	P		Pn	08 40 00.6	-2.6	
	baz=220,SNR=238								
H24K				S		S	08 42 10.2	-2.2	
	baz=220								
G22K	Bettles	11.69	20	P		Pn	08 40 04.5	+1.0	
	baz=208								
SCRK	Sand Creek	11.71	42	P		Pn	08 39 60.0	-4.0	
	baz=236,SNR=1000								
RDOG	Red Dog Mine	11.78	358			Pn	08 40 01.0	-3.6	
RDOG	Red Dog Mine	11.78	358	P		Pn	08 40 01.1	-3.6	
	baz=176,SNR=38								
G23K	Bananza Creek	11.82	23	P		Pn	08 40 06.2	+1.0	
	baz=212								
M27K	Edge Creek, AK	11.82	51	P		Pn	08 40 04.0	-1.4	
	baz=247,SNR=642								
PINM	Pinnacle	11.98	63	P		Pn	08 40 06.5	-0.8	
	baz=259,SNR=297								
L27K	Beaver Creek,	12.12	48	Pn		Pn	08 40 06.9	-2.2	
L27K	Beaver Creek,	12.12	48	P		Pn	08 40 06.8	-2.2	
	baz=223,SNR=623								
J26L	Joseph Creek	12.15	40	P		Pn	08 40 05.5	-4.0	
	baz=234,SNR=256								
COLD	Coldfoot	12.22	22	P		Pn	08 40 11.2	+1.0	
	baz=211,SNR=125								
YUK3	Moose Creek	12.26	55	P		Pn	08 40 09.8	-1.2	
	baz=252								
PNL	Peninsula	12.35	65	P		Pn	08 40 10.7	-1.3	
	baz=262,SNR=267								
K27K	Chicken	12.46	44	P		Pn	08 40 10.1	-3.2	
	baz=239								
E22K	Anaktuvuk Pass	12.71	17	P		P	08 40 18.4	-1.5	
	baz=205								
I26K	Coal Creek Min	12.76	38	P		Pn	08 40 13.1	-3.9	
	baz=232								
YUK4	Talbot Arm	12.99	58	P		Pn	08 40 20.0	-0.1	
	baz=256,SNR=384								
YUK6	Outpost Mounta	13.04	60	P		Pn	08 40 20.2	-0.6	
	baz=258,SNR=576								
HYT	Haines Junctio	13.44	60	P		Pn	08 40 25.1	-0.6	
	baz=260,SNR=674								
DAWY	Dawson	13.53	46	P		Pn	08 40 24.6	-2.1	
	baz=244,SNR=1000								
TOLK	Toolik Lake Re	13.56	19	P		P	08 40 28.5	-0.7	
TOLK	Toolik Lake Re	13.56	19	P		P	08 40 28.5	-0.7	
	baz=209,SNR=310								
TOLK				S		S	08 43 03.8	+6.5	
	baz=209								
P30M	Million Dollar	13.62	64	P		Pn	08 40 27.3	-0.5	
	baz=263								
D23K	Nanushuk River	13.65	17	P		P	08 40 29.6	-0.6	
	baz=206,SNR=153								
D23K				S		S	08 43 07.4	+8.1	
	baz=206								
N30M	Aishikik Lake	13.75	58	P		Pn	08 40 28.3	-1.1	
	baz=258,SNR=773								
N30M				S		S	08 43

DIB	Dawson Inlet,	17.17	88	P		Pn	08 41 10.0	-0.7
DLBC	Dease Lake	17.20	70	P		Pn	08 41 11.7	+0.5
	455nm,1.0s,baz=278,slow=10,SNR=494							
DLBC				S		S	08 44 18.2	+0.4
	20nm,0.9s,baz=260,slow=16,SNR=1.2							
DLBC	Dease Lake	17.20	70	P		Pn	08 41 11.7	+0.5
	baz=276,SNR=658							
DLBC				S		S	08 44 21.3	+3.5
	baz=276							
T35M	Bob Quinn	17.31	75	P		Pn	08 41 13.2	+0.8
	baz=280,SNR=248							
T35M				S		S	08 44 23.5	+3.6
	baz=280							
INK	Inuvik	17.59	36	P		P	08 41 11.6	-2.0
	370nm,0.9s,baz=222,slow=13,SNR=219							
INK				S		S	08 44 20.1	-5.0
	37nm,0.9s,baz=228,slow=31,SNR=3.1							
INK				PcP		PcP	08 45 41.8	0.0
	16nm,0.6s,baz=216,slow=1.2,SNR=3.5							
INK				ScP		ScP	08 48 55.6	-1.3
	34nm,0.9s,baz=190,slow=4.1,SNR=22							
INK				ScS		ScS	08 52 35.2	-1.5
	7.7nm,1.1s,baz=21,slow=32,SNR=24							
INK	Inuvik	17.59	36	P		P	08 41 11.8	-1.8
	baz=240,SNR=311							
TGTN	Hyland Airport	17.95	59	P		P	08 41 18.7	+1.0
	baz=267,SNR=150							
TGTN				S		S	08 44 33.0	+0.3
	baz=267							
GRNB	Grenville Isla	18.34	84			Pn	08 41 23.6	-0.8
BILL	Bilibino	18.66	322	P		Pn	08 41 26.7	-1.4
BILL	Bilibino	18.66	322	*c i* P		Pn	08 41 27.2	-0.9
BILL				*e*S		S	08 44 51.7	+5.2
BILL				pmax	pmax			
	comp=Z,199nm,1.0s							
BBB	Bella Bella	20.02	88	P		P	08 41 41.1	+1.2
	comp=Z,44nm,1.0s,baz=288,slow=12,SNR=17							
BBB				S		S	08 45 12.7	-0.5
	comp=Z,7.5nm,1.1s,baz=182,slow=20,SNR=1.1							
BBB				PcP		PcP	08 45 46.7	+0.5
	comp=Z,27nm,0.8s,baz=263,slow=4.3,SNR=7.5							
C36M	Paulatuk	21.15	37	P		P	08 41 49.0	-2.7
C36M	Paulatuk	21.15	37	P		P	08 41 48.6	-3.1
	baz=250,SNR=50							
C36M				S		S	08 45 30.5	-3.3
	baz=250							
A36M	Sachs Harbour	21.82	30	P		P	08 41 57.5	-0.9
A36M	Sachs Harbour	21.82	30	P		P	08 41 57.6	-0.9
	baz=242,SNR=12							
A36M				S		S	08 45 44.4	-0.2
	baz=242							
CBB	Campbell River	22.55	91			PcP	08 45 52.6	+1.3
PET	Petropavlovsk	22.85	278	*e*P		P	08 42 09.2	+1.0
PET				*e**PP		pP	08 42 44.2	-0.6
PET				*e*S		S	08 46 01.6	0.0
PET							08 47 09.0	
PET				*e*			08 52 52.7	
PET				pmax	pmax			
	comp=Z,104nm,1.6s							
PET				pmax	pmax			
	comp=Z,300nm,4.0s							
PET	Petropavlovsk	22.85	278	P		P	08 42 09.6	+1.4
PEA0B	Petropavlovsk-	23.34	279	P		P	08 42 12.4	-0.2
PEA0B	Petropavlovsk-	23.34	279	*ce*P		P	08 42 12.7	+0.1
PETK	Petropavlovsk-	23.34	279	P		P	08 42 12.9	+0.2
	comp=Z,51nm,0.6s,baz=78,slow=12,SNR=87							
PETK				PcP		PcP	08 45 53.0	+0.1
	comp=Z,13nm,0.9s,baz=108,slow=4.7,SNR=5.1							
PETK				ScP		ScP	08 49 10.4	-0.6
	comp=Z,4.6nm,0.8s,baz=100,slow=6.2,SNR=5.8							
PETK				PKiKP		PKiKP	08 53 34.7	-1.4
	comp=Z,3.1nm,0.6s,baz=64,slow=3.4,SNR=5.2							
	comp=Z,51nm,0.6s							
PETK	Petropavlovsk-	23.34	279	P		P	08 42 12.3	-0.3
PETK						PcP	08 45 51.8	-1.1
SEY	Seymchan	23.61	305	P		P	08 42 15.7	+0.7
	comp=Z,234nm,0.7s,baz=98,slow=8.2,SNR=628							
SEY				PcP		PcP	08 45 53.4	+0.1
	comp=Z,5.2nm,0.5s,baz=45,slow=2.9,SNR=4.2							
SEY				ScP		ScP	08 49 11.1	-0.5
	comp=Z,5.3nm,0.8s,baz=109,slow=2.9,SNR=5.0							
SEY				ScS		ScS	08 52 58.2	+0.2
	comp=Z,0.4nm,0.2s,baz=172,slow=24,SNR=6.0							
SEY				PKiKP		PKiKP	08 53 35.2	-0.7
	comp=Z,1.3nm,0.4s,baz=194,slow=7.6,SNR=5.9							
	comp=Z,234nm,0.7s							
SEY	Seymchan	23.61	305	*ce*P		P	08 42 15.5	+0.5
SEY				pmax	pmax			
	comp=Z,238nm,0.8s							
C03A	Quillayute Air	24.11	94	IAmb	IAmb		08 42 23.9	
	comp=Z,119nm,1.1s							
LLLB	Lillooet	24.21	87	IAmb	IAmb		08 42 28.6	
	comp=Z,71nm,0.8s							
YKA	Yellowknife Ar	24.34	56	P		P	08 42 21.4	-0.2
	comp=Z,40nm,0.6s,baz=277,slow=9.8,SNR=154							
YKA				PcP		PcP	08 45 55.0	+0.1
	comp=Z,36nm,0.8s,baz=297,slow=1.0,SNR=20							
YKA				ScP		ScP	08 49 13.7	+0.1
	comp=Z,51nm,0.8s,baz=283,slow=2.4,SNR=56							
YKA				PKiKP		PKiKP	08 53 34.3	-2.0
	comp=Z,1.6nm,0.6s,baz=275,slow=0.7,SNR=14							
	comp=Z,40nm,0.6s							
YKA	Yellowknife Ar	24.34	56	P		P	08 42 21.5	-0.1
YKA	Yellowknife Ar	24.34	56	*i* P		P	08 42 21.3	-0.2
YKA				pmax	pmax			
	comp=Z,44nm,0.6s							
B04A	Port Angeles	24.64	93	IAmb	IAmb		08 42 30.7	
	comp=Z,56nm,1.0s							
MA2	Magadan	24.93	297	P		P	08 42 27.7	+0.9
	comp=Z,151nm,0.8s,baz=79,slow=10,SNR=67							
MA2				ScP		ScP	08 49 14.7	-0.5
	comp=Z,5.8nm,0.6s,baz=113,slow=6.1,SNR=6.4							
	comp=Z,151nm,0.8s							
MA2	Magadan	24.93	297	P		P	08 42 27.8	+0.9
MA2	Magadan	24.93	297	*ce*P		P	08 42 27.8	+0.9
MA2				pmax	pmax			
	comp=Z,197nm,0.8s							
MA2	Magadan	24.93	297	P		P	08 42 28.8	+1.9
WISH	Wishkah	25.03	95	IAmb	IAmb		08 43 11.7	
	comp=Z,126nm,1.2s							
SKR	Severo-Kuril's	25.31	275	*ce*P		P	08 42 30.6	+0.2
E03A	Lebam	25.48	96	IAmb	IAmb		08 43 16.1	
	comp=Z,78nm,1.0s							
E03A						PcP	08 45 59.1	+1.5
B06A	Marblemount	25.51	91	IAmb	IAmb		08 42 35.4	
	comp=Z,110nm,1.5s							
D05A	Enumclaw	25.98	94	IAmb	IAmb		08 42 40.5	
	comp=Z,69nm,0.8s							
G03D	McMinnville, O	26.46	98	P		P	08 42 42.0	+1.1
	baz=308							
G03D				S		S	08 47 02.5	+3.4
	baz=308							
F04A	Amboy	26.49	96	IAmb	IAmb		08 42 44.3	
	comp=Z,66nm,1.3s							
F04A						PcP	08 46 00.5	+0.4
B08A	Colville Reser	26.80	89	IAmb	IAmb		08 42 47.1	
	comp=Z,43nm,0.8s							
I02E	Swisshome, OR	26.85	101	P		P	08 42 46.5	+2.2
	baz=310							
I02E				S		S	08 47 10.6	+5.5
	baz=310							
H04D	Lebanon	27.19	99	IAmb	IAmb		08 42 50.9	
	comp=Z,164nm,1.6s							
H04D						PcP	08 46 02.6	+0.9
H04D	Lebanon	27.19	99	P		P	08 42 49.5	+2.2
	baz=309,SNR=12							
BUCK	Buck Mountain	27.26	100			PcP	08 46 03.9	+1.8
I03D	Drain, OR	27.39	101	P		P	08 42 50.9	+1.8
	baz=311							
I03D				S		S	08 47 19.4	+5.8
	baz=311							
H04A	Detroit Lake	27.39	98			PcP	08 46 02.6	+0.2
J01E	Myrtle Point	27.43	102	P		P	08 42 50.9	+1.5
	baz=312							
J01E				S		S	08 47 20.5	+6.3
	baz=312							
G05D	Wamic, OR	27.52	96	P		P	08 42 52.4	+2.1
	baz=308,SNR=15							
G05D				S		S	08 47 21.1	+5.3
	baz=308							
E07A	Sunnyside	27.54	93	IAmb	IAmb		08 42 53.7	
	comp=Z,45nm,0.8s							
C09A	Chrisman Ranch	27.70	89	IAmb	IAmb		08 42 54.8	
	comp=Z,73nm,1.4s							
D08A	Wollman Farm,	27.76	91	IAmb	IAmb		08 42 55.4	
	comp=Z,97nm,1.3s							
DBO	Dodson Butte	27.83	102	IAmb	IAmb		08 42 57.1	
	comp=Z,84nm,1.4s							
I04A	Tendick Farm,	27.84	100	P		P	08 42 54.9	+1.7
	baz=310,SNR=14							
I04A				S		S	08 47 25.4	+4.5
	baz=310							
K02D	Willamette Mer	27.89	103	P		P	08 42 53.9	+0.2
	baz=312							
K02D				S		S	08 47 26.7	+5.1
	baz=312							
E08A	Dider Farm, El	28.02	92	IAmb	IAmb		08 42 57.7	
	comp=Z,65nm,1.1s							
E08A						PcP	08 46 05.3	+1.6
I05D	Terrebonne, OR	28.08	98	P		P	08 42 57.2	+1.8
	baz=309,SNR=19							
I05D				S		S	08 47 29.7	+5.1
	baz=309							
NEW	Newport	28.08	88	P		P	08 42 56.4	+1.1
	comp=Z,17nm,0.5s,baz=310,slow=8.2,SNR=81							
NEW				PcP		PcP	08 46 04.1	+0.1
	comp=Z,5.9nm,0.5s,baz=324,slow=2.4,SNR=6.1							
	comp=Z,17nm,0.5s							
NEW	Newport	28.08	88	IAmb	IAmb		08 42 58.2	
	comp=Z,90nm,1.4s							
NEW	Newport	28.08	88	P		P	08 42 56.9	+1.6
	baz=303,SNR=47							
NEW				S		S	08 47 27.6	+3.1
	baz=303							
L02F	Cave Junction	28.33	104	P		P	08 42 57.8	+0.3
	baz=313							
L02F				S		S	08 47 33.3	+4.8
	baz=313							
J04D	Umpqua Nationa	28.37	100			PcP	08 46 05.6	+0.6
J04D	Umpqua Nationa	28.37	100	P		P	08 43 00.3	+2.2
	baz=311,SNR=17							
J04D				S		S	08 47 34.3	+4.8
	baz=311							
PINE	Pine Mountain	28.65	98	IAmb	IAmb		08 43 04.2	
	comp=Z,90nm,1.4s							
J05D	Fort Rock, OR	28.82	100	P		P	08 43 04.4	+2.5
	baz=311,SNR=58							
J05D				S		S	08 47 41.4	+5.0
	baz=311							
L04D	Klamath Falls	28.95	102	IAmb	IAmb		08 43 06.5	
	comp=Z,71nm,0.9s							
L04D	Klamath Falls	28.95	102	P		P	08 43 05.1	+1.9
	baz=312							
L04D				S		S	08 47 43.2	+4.7
	baz=312							
K04D	Chiloquin, OR	28.98	101	P		P	08 43 04.9	+1.6
	baz=312							
K04D				S		S	08 47 43.5	+4.7
	baz=312							
YBH	Yreka Blue Hor	29.06	103	P		P	08 43 06.1	+2.0
	comp=Z,14nm,1.0s,baz=320,slow=8.0,SNR=15							
	comp=Z,14nm,1.0s							
YBH	Yreka Blue Hor	29.06	103	P		P	08 43 05.5	+1.5
YBH				IAmb	IAmb		08 43 08.0	
	comp=Z,63nm,1.4s							
YBH	Yreka Blue Hor	29.06	103	P		P	08 43 05.6	+1.5
YBH				pmax	pmax			
	comp=Z,63nm,1.4s							
F10A	Beach Ranch, E	29.35	92	IAmb	IAmb		08 43 09.4	
	comp=Z,129nm,1.6s							
KMRM	Mail Ridge	29.59	107	IAmb	IAmb		08 43 13.8	
	comp=Z,48nm,1.1s							
BMO	Blue Mountains	29.99	93	IAmb	IAmb		08 43 15.3	
	comp=Z,56nm,1.2s							
MOD	Modoc Plateau	30.26	101	IAmb	IAmb		08 43 18.2	
	comp=Z,56nm,0.7s							
MSO	Missoula	30.67	87	P		P	08 43 19.5	+1.3
	baz=305,SNR=30							
HOPS	Hopland Field	30.81	108	IAmb	IAmb		08 43 22.6	
	comp=Z,128nm,1.3s							
RES	Resolute Bay	30.84	28	ScP		ScP	08 49 32.6	-0.7
	comp=Z,42nm,0.9s,baz=288,slow=4.0,SNR=16							
RES	Resolute Bay	30.84	28	P		P	08 43 18.9	-0.3
RES				IAmb	IAmb		08 43 20.3	
	comp=Z,34nm,0.7s							
RES	Resolute Bay	30.84	28	P		P	08 43 18.9	-0.3
RES				pmax	pmax			
	comp=Z,34nm,0.7s							
GDXM	Geysers	31.10	108	IAmb	IAmb		08 43 25.6	
	comp=Z,57nm,1.3s							
GDXM						PcP	08 46 13.3	+1.4
ORV	Oroville	31.25	105	IAmb	IAmb		08 43 25.6	
	comp=Z,33nm,0.6s							
BEKR	Beckworth	31.64	104	IAmb	IAmb		08 43 29.8	
	comp=Z,47nm,0.6s							
MFID	Camas Ranch	31.73	94	IAmb	IAmb		08 43 30.3	
	comp=Z,60nm,1.2s							
TIXI	Tiksi	31.77	326	pP		pP	08 44 10.1	+0.9
TIXI				PcP		PcP	08 46 12.7	-0.4
	comp=Z,13nm,0.8s,baz=92,slow=23,SNR=4.1							
TIXI				ScP		ScP	08 49 35.9	-0.6
	comp=Z,17nm,1.0s,baz=270,slow=22,SNR=17							
TIXI	Tiksi	31.77	326	P		P	08 43 28.6	+1.3
TIXI				IAmb	IAmb		08 43 29.5	
	comp=Z,69nm,0.8s							
TIXI	Tiksi	31.77	326			PcP	08 46 12.2	-0.9
TIXI	Tiksi	31.77	326	*d i* P		P	08 43 27.9	+0.5
TIXI				pmax	pmax			
	comp=Z,67nm,0.7s							
TIXI	Tiksi	31.77	326	P		P	08 43 28.1	+0.7
TIXI				pP		pP	08 44 10.8	+1.6
TIXI				x		PcP	08 46 12.5	-0.5
TIXI				ScP		ScP	08 49 36.5	+0.1
PAHR	Pah Rah Range	32.28	103	IAmb	IAmb		08 43 35.5	
	comp=Z,75nm,0.7s							
EGMT	Eagleton	32.30	82	IAmb	IAmb		08 43 38.9	
	comp=Z,34nm,0.7s							
EGMT	Eagleton	32.30	82	P		P	08 43 33.4	+1.0
	baz=304,SNR=23							
HLID	Hailey	32.42	93	P		P	08 43 35.2	+1.6
	baz=310,SNR=90							
EMB	Emerald Bay	32.42	104	IAmb	IAmb		08 43 36.6	
	comp=Z,43nm,0.6s							
EMB						PcP	08 46 16.4	+0.7
VCNR	Virginia City	32.43	104			PcP	08 46 16.9	+1.2
TYV	Tymovskoe	32.60	284	*e*P		P	08 43 36.1	+1.3
TYV				*e*S		S	08 48 40.6	+5.8
TYV				pmax	pmax			
	comp=Z,100nm,1.5s							
TYV				pmax	pmax			
	comp=Z,40nm,1.2s							
TYV				smax	smax			
	comp=N,100nm,5.1s							
TYV				smax	smax			
	comp=E,200nm,5.1s							
PNTR	Pine Nut	32.61	104			PcP	08 46 17.4	+1.2
BOZ	Bozeman (W)	32.69	87	P		P	08 43 37.3	+1.4
	baz=307,SNR=63							
YERR	Yerington	32.88	104	IAmb	IAmb		08 43 40.8	
	comp=Z,71nm,0.6s							
KUR	Kuril'sk	32.95	272	*i* P		P	08 43 37.2	-0.7
KUR				S		S	08 48 45.3	+5.1
KUR				MLR	MLR			
	comp=Z,153nm,14.0s							
CMB	Columbia Colle	32.95	106	IAmb	IAmb		08 43 41.1	
	comp=Z,37nm,0.6s							
CMB						PcP	08 46 17.5	+0.5
FFC	Flin Flon	33.00	67	P		P	08 43 38.7	+0.4
FFC	Flin Flon	33.00	67	P		P	08 43 38.7	+0.4
FFC				pmax	pmax			
	comp=Z,26nm,1.0s							
FFC	Flin Flon	33.00	67	P		P	08 43 38.8	+0.5
FFC				PP		PnPn	08 44 53.6	-2.4
FFC				x		x	08 45 01.2	
FFC				x		PcP	08 46 16.9	+0.1
FFC				x		x	08 47 09.6	
FFC				ScP		ScP	08 49 40.8	-0.2
KVN	Kaiserville	33.45	102	IAmb	IAmb		08 43 45.7	
	comp=Z,47nm,0.8s							
RYN	Ryan	33.52	103	IAmb	IAmb		08 43 46.2	
	comp=Z,44nm,0.7s							
NVAR	Mina Array Bea	33.78	103	P		P	08 43 47.3	+1.8
	comp=Z,30nm,0.6s,baz=306,slow=8.1,SNR=356							
NVAR				PcP		PcP	08 46 20.0	+0.4
	comp=Z,11nm,0.5s,baz=284,slow=3.3,SNR=19							
NVAR				ScP		ScP	08 49 44.6	+0.2
	comp=Z,8.3nm,0.8s,baz=295,slow=3.2,SNR=15							
NVAR				PKiKP		PKiKP	08 53 43.3	-0.1
	comp=Z,0.9nm,0.7s,baz=292,slow=0.4,SNR=5.2							
	comp=Z,30nm,0.6s							
LHV	Little Huntoon	33.80	104	IAmb	IAmb		08 43 49.0	
	comp=Z,65nm,0.9s							
ELK	Elko	33.83	97	IAmb	IAmb		08 43 49.1	
	comp=Z,180nm,1.6s							
YFT	Old Faithful	33.84	88	IAmb	IAmb		08 43 50.9	
	comp=Z,60nm,0.8s							
UGL	Uglegorsk	33.89	282	*e*P		P	08 43 47.0	+1.0
UGL				*e*			08 44 30.7	
UGL				*e*S		S	08 48 57.2	+2.5
UGL				pmax	pmax			
	comp=Z,110nm,0.9s							
UGL				smax	smax			
	comp=E,840nm,3.5s							
UGL				smax	smax			
	comp=N,210nm,2.2s							
MDPB	Devils Postpil	33.95	105	IAmb	IAmb		08 43 50.4	
	comp=Z,202nm,1.5s							
OMMB	Old Mammoth Mi	34.00	105	IAmb	IAmb		08 43 51.0	
	comp=Z,194nm,1.5s							
LKWY	Lake	34.02	88	IAmb	IAmb		08 43 51.6	
	comp=Z,136nm,1.4s							
H17A	Grant Village	34.02	88	P		P	08 43 50.7	+3.1
	baz=309,SNR=83							
YAK	Yakutsk	34.02	308	PcP		PcP	08 46 19.0	-0.5
	comp=Z,15nm,0.4s,baz=74,slow=0.5,SNR=4.3							
YAK				ScP		ScP	08 49 43.7	-0.7
	comp=Z,11nm,0.3s,baz=108,slow=1.7,SNR=4.0							
YAK	Yakutsk	34.02	308	P		P	08 43 47.5	+0.5
YAK	Yakutsk	34.02	308	*d i* P		P	08 43 47.0	+0.1
YAK				*e**PP		pP	08 44 28.3	-0.8
YAK				*e*			08 45 07.6	
YAK				*e*			08 46 18.9	
YAK				*e*S		S	08 48 57.7	+1.2
YAK				*e**SS		sS	08 50 09.4	-1.9
YAK				*e*			08 53 45.0	
YAK				pmax	pmax			
	comp=Z,324nm,0.8s							
YAK				pmax	pmax			
	comp=N,42nm,1.2s							
YAK				pmax	pmax			
	comp=E,93nm,1.3s							
YAK				pmax	pmax			
	comp=Z,75nm,1.5s							
YAK				pmax	pmax			
	comp=N,15nm,1.0s							
YAK				pmax	pmax			
	comp=E,28nm,1.5s							
YAK				smax	smax			
	comp=N,117nm,1.9s							
YAK				smax	smax			
	comp=E,44nm,1.3s							
YAK	Yakutsk	34.02	308	P		P	08 43 47.1	+0.1
YAK				pP		pP	08 44 28.9	-0.2
MLAC	Mammoth, Mammo	34.08	105	P		P	08 43 50.6	+2.6
	baz=317,SNR=24							
FLWY	Flagg Ranch	34.15	89	IAmb	IAmb		08 43 51.6	
	comp=Z,62nm,0.7s							
RLMT	Red Lodge	34.30	86	IAmb	IAmb		08 43 53.1	
	comp=Z,174nm,1.4s							
RLMT	Red Lodge	34.30	86	P		P	08 43 51.7	+1.8
	baz=308,SNR=80							
TPAW	Teton Pass	34.39	90	IAmb	IAmb		08 43 54.8	
	comp=Z,100nm,1.7s							
HVU	Hansel Valley	34.50	94	IAmb	IAmb		08 43 54.6	
	comp=Z,203nm,1.6s							
SNOW	Snow King Moun	34.52	90	IAmb	IAmb		08 43 55.9	
	comp=Z,77nm,1.4s							
REDW	Red Top Meadow	34.53	90	IAmb	IAmb		08 43 55.9	
	comp=Z,102nm,1.4s							
YSS	Yuzh-Sakhalins	34.74	278	*ce*P		P	08 43 53.6	+0.3
YSS				pmax	pmax			
	comp=Z,47nm,1.7s							
VOG	Valley Oaks Go	34.76	107	P		P	08 43 54.7	+1.2
	baz=318							
YUK	Yuzh-Kuril'sk	34.81	272	*i* P		P	08 43 55.1	+1.2
TIN	Tinemaha, Big	34.83	105	P		P	08 43 56.6	+2.3
	baz=317,SNR=11							
KIP	Kipapa	34.97	174	P		P	08 43 55.5	0.0
KIP	Kipapa	34.97	174	*ce*P		P	08 43 57.3	+1.8
KIP				pmax	pmax			
	comp=Z,178nm,1.7s							
KIP	Kipapa	34.97	174	P		P	08 43 56.8	+1.3
KIP	Kipapa	34.97	174	P		P	08 43 57.0	+1.5
KIP	Kipapa	34.97	174	P		P	08 43 57.0	+1.5
KIP				x		x	08 44 54.4	
KIP				x		PcP	08 46 24.1	+1.2
KIP				x		x	08 47 17.1	
LCH	Last Change Ra	35.01	104	IAmb	IAmb		08 43 59.3	
	comp=Z,63nm,0.9s							
LAO	LASA Array	35.03	82	IAmb	IAmb		08 43 58.3	
	comp=Z,87nm,1.4s							
LAO						PcP	08 46 24.4	+1.5
LAO	LASA Array	35.03	82	P		P	08 43 57.6	+1.7
	baz=307,SNR=8.6							
LAO				S		S	08 49 15.0	+2.6
	baz=307							
LAO	LASA Array	35.03	82	P		P	08 43 57.7	+1.7
	baz=306,SNR=8.6							
FCC	Fort Churchill	35.05	57	P		P	08 43 55.7	-0.1
FCC				IAmb	IAmb		08 44 40.8	
	comp=Z,140nm,1.4s							
FCC	Fort Churchill	35.05	57	P		P	08 43 55.7	-0.1
FCC				pmax	pmax			
	comp=Z,140nm,1.5s							
SMMC	Simmler	35.19	109	P		P	08 43 59.5	+2.2
	baz=320,SNR=13							
VES	Vestal, Richgr	35.28	107	P		P	08 43 59.3	+1.3
	baz=319,SNR=26							
HWUT	Hardware Ranch	35.29	93	IAmb	IAmb		08 44 01.3	
	comp=Z,72nm,1.1s							
R11A	Troy Canyon, C	35.32	101	IAmb	IAmb		08 44 01.4	
	comp=Z,55nm,0.7s							
R11A	Troy Canyon, C	35.32	101	P		P	08 44 00.1	+1.4
	baz=316,SNR=196							
GRAC	Grapevine Rang	35.34	104	IAmb	IAmb		08 44 02.3	
	comp=Z,70nm,0.7s							
GRAC	Grapevine Rang	35.34	104	P		P	08 44 00.9	+2.3
	baz=317,SNR=56							
CWC	Cottonwood Cre	35.36	105	P		P	08 44 00.7	+1.7
	baz=318							
DUG	Dugway, Tooele	35.55	96	IAmb	IAmb		08 44 03.4	
	comp=Z,118nm,1.4s							
DUG	Dugway, Tooele	35.55	96	P		P	08 44 02.1	+1.6
	baz=313,SNR=63							
PKM	Mcpherson Peak	35.61	109	P		P	08 44 03.1	+2.0
	baz=320,SNR=16							
BW06	Boulder Array	35.64	90	IAmb	IAmb		08 44 04.5	
	comp=Z,27nm,0.5s							
BW06	Boulder Array	35.64	90	P		P	08 44 02.5	+1.2
	baz=310,SNR=97							
PDAR	Pinedale Array	35.64	90	P		P	08 44 02.5	+1.2
	comp=Z,17nm,0.5s,baz=323,slow=3.0,SNR=344							
PDAR				PcP		PcP	08 46 24.4	-0.6
	comp=Z,3.7nm,0.5s,baz=43,slow=0.8,SNR=4.5							
PDAR				ScP		ScP	08 49 50.2	-0.7
	comp=Z,6.8nm,0.9s,baz=318,slow=2.0,SNR=14							
	comp=Z,17nm,0.5s							
ISA	Isabella, Lake	35.73	107	IAmb	IAmb		08 44 04.5	
	comp=Z,149nm,1.5s							
ISA	Isabella, Lake	35.73	107	P		P	08 44 03.2	+1.2
	baz=319,SNR=52							
BCW	Bitter Crk WRg	35.78

baz=319,SNR=13
SHOC Shoshone, Teco 36.74 104 P P 08 44 12.2 +1.7
baz=318,SNR=88
POHA Pohakuloa 36.82 170 P P 08 44 12.5 +1.0
POHA Pohakuloa 36.82 170 P P 08 44 12.7 +1.2
POHA Pohakuloa 36.82 170 P P 08 44 12.5 +1.0
POHA x PcP 08 46 30.2 +1.4
DECC Green Verdugo 36.88 108 P P 08 44 13.2 +1.5
baz=320,SNR=6.4
GSC Goldstone, Bar 36.90 105 IAmb IAmb 08 44 14.9
comp=Z,147nm,1.2s
GSC Goldstone, Bar 36.90 105 P P 08 44 13.6 +1.7
baz=319,SNR=64
KHLU Kahalu`u 36.95 171 IAmb IAmb 08 44 15.2
comp=Z,103nm,1.0s
PASC Pasadena Art C 37.02 108 IAmb IAmb 08 44 15.5
comp=Z,107nm,1.4s
SNCC San Nicolas Is 37.03 110 P P 08 44 14.6 +1.7
baz=321,SNR=6.0
TMUT Trail Mountain 37.07 95 IAmb IAmb 08 44 16.5
comp=Z,161nm,1.3s
RRX Edison Barstow 37.12 106 P P 08 44 15.2 +1.5
baz=319
P17A Butcher Ranch, 37.20 95 IAmb IAmb 08 44 16.6
comp=Z,33nm,0.6s
SZCU Shurtz Canyon 37.23 99 IAmb IAmb 08 44 17.5
comp=Z,73nm,1.3s
TUQ Turquoise Moun 37.27 104 P P 08 44 16.7 +1.6
baz=318,SNR=56
FMP Fort Macarthur 37.32 109 P P 08 44 15.9 +0.6
baz=320
P18A Preston Nutter 37.37 94 IAmb IAmb 08 44 19.7
comp=Z,82nm,1.1s
K22A Casper 37.40 87 IAmb IAmb 08 44 18.3
comp=Z,70nm,0.8s
K22A Casper 37.40 87 P P 08 44 17.1 +1.0
baz=311,SNR=54
K22A S S 08 49 50.4 +1.8
baz=311
K22A Casper 37.40 87 P P 08 44 17.1 +1.0
baz=311,SNR=54
CIS Catalina Islan 37.50 109 P P 08 44 18.0 +1.2
baz=321,SNR=12
HEC Hector,Ludlow 37.51 105 P P 08 44 18.5 +1.5
baz=319,SNR=46
LCMT Little Creek M 37.57 100 IAmb IAmb 08 44 20.7
comp=Z,168nm,1.7s
BBRC Big Bear Solar 37.63 107 P P 08 44 19.8 +1.6
baz=320,SNR=41
ERM Erimo 37.63 272 P P 08 44 18.0 +0.2
ERM IAmb IAmb 08 44 20.4
comp=Z,53nm,0.8s
ERM Erimo 37.63 272 *ce*P P 08 44 18.3 +0.5
ERM pmax pmax
comp=Z,78nm,1.0s
ERM Erimo 37.63 272 P P 08 44 18.6 +0.8
ERM Erimo 37.63 272 P P 08 44 17.8 0.0
ERM pP pP 08 45 02.2 +1.6
ERM x PcP 08 46 31.9 +1.2
ERM ScP ScP 08 49 58.5 +0.5
RWWY Rawlins 37.66 89 IAmb IAmb 08 44 20.5
comp=Z,172nm,1.4s
SCI2 San Clemente I 37.75 110 P P 08 44 20.3 +1.4
baz=321,SNR=13
RSSD Black Hills 37.83 84 P P 08 44 20.5 +0.7
RSSD IAmb IAmb 08 44 21.5
comp=Z,60nm,0.7s
RSSD Black Hills 37.83 84 P P 08 44 20.5 +0.7
RSSD pmax pmax
comp=Z,60nm,0.7s
RSSD Black Hills 37.83 84 P P 08 44 21.0 +1.3
baz=310,SNR=102
RSSD S S 08 49 55.1 -0.1
baz=310
RSSD Black Hills 37.83 84 P P 08 44 20.9 +1.1
baz=309
RSSD Black Hills 37.83 84 P P 08 44 21.0 +1.3
RSSD x PcP 08 46 32.1 +0.5
RSSD x x 08 47 24.2
RSSD ScP ScP 08 49 59.3 +0.2
GMRC Granite Mounta 37.91 105 P P 08 44 22.0 +1.6
baz=319,SNR=121
MDND Maddock 37.95 76 P P 08 44 21.5 +1.0
baz=307,SNR=27
MDND S S 08 49 57.7 +1.2
baz=307
MDND Maddock 37.95 76 P P 08 44 21.8 +1.3
baz=306,SNR=27
MURC Murrieta 37.99 108 P P 08 44 22.0 +1.0
baz=320,SNR=13
E28A Huff 38.13 78 P P 08 44 23.3 +1.3
baz=308,SNR=38
E28A S S 08 50 01.0 +1.7
baz=308
O20A White River Ci 38.13 92 P P 08 44 23.7 +1.4
baz=313,SNR=210
BELC Belle Mtn. Jos 38.32 106 P P 08 44 25.1 +1.3
baz=320,SNR=51
PFO Pinyon Flats O 38.37 107 P P 08 44 25.5 +1.2
PFO IAmb IAmb 08 44 26.8
comp=Z,170nm,1.5s
PFO PcP 08 46 34.5 +1.2
PFO Pinyon Flats O 38.37 107 *d*iP P 08 44 25.3 +1.1
PFO pmax pmax
comp=Z,130nm,1.0s
PFO Pinyon Flats O 38.37 107 P P 08 44 25.3 +1.1
baz=320,SNR=56
PFO Pinyon Flats O 38.37 107 P P 08 44 25.4 +1.2
PFO x x 08 45 16.1
PFO x PcP 08 46 33.9 +0.6
PFO x x 08 47 26.5
PFO ScP ScP 08 50 02.8 +1.6
TPFO Pinon Flats 38.38 107 P P 08 44 25.4 +1.1
baz=320,SNR=58
NEE2 Needles Airpor 38.48 104 P P 08 44 26.5 +1.5
baz=319,SNR=10
ULM Lac du Bonnet 38.53 70 P P 08 44 25.1 -0.1
comp=Z,14nm,0.5s,baz=305,slow=8.6,SNR=16
ULM pP pP 08 45 08.7 +0.5
comp=Z,19nm,0.9s,baz=296,slow=9.8,SNR=3.6
ULM PcP PcP 08 46 33.2 -0.1
comp=Z,27nm,0.6s,baz=317,slow=3.8,SNR=11
ULM ScP ScP 08 50 00.3 -1.0
comp=Z,14nm,0.5s
109C Camp Elliot, M 38.59 108 P P 08 44 27.6 +1.7
baz=321,SNR=17
IRM Iron Mountain 38.66 105 P P 08 44 28.3 +1.8
baz=319,SNR=122
BC3 Big Chuckawall 38.88 106 P P 08 44 29.3 +0.9
baz=320,SNR=38
PV23 Carpenter Ridg 38.88 94 IAmb IAmb 08 44 30.9
comp=Z,62nm,0.8s
N23A Red Feather La 38.90 89 IAmb IAmb 08 44 31.1
comp=Z,113nm,1.5s
N23A Red Feather La 38.90 89 P P 08 44 29.8 +1.1
baz=312,SNR=43
PV10 Paradox Valley 38.92 95 IAmb IAmb 08 44 31.6
comp=Z,48nm,0.7s
MONP2 Monument Peak 38.94 108 P P 08 44 30.7 +1.6
baz=321,SNR=39
BAR Barrett 38.98 108 IAmb IAmb 08 44 32.1
comp=Z,169nm,1.5s
BAR PcP 08 46 36.0 +0.9
ZEA Zeya 39.07 297 *e*P P 08 44 29.3 -0.4
ZEA *e**PP pP 08 45 13.8 +1.1
ZEA *e*S S 08 50 09.8 -3.3
ZEA pmax pmax
comp=Z,100nm,1.0s
ZEA pmax pmax
comp=E,40nm,0.6s
ZEA pmax pmax
comp=N,30nm,0.5s
ZEA pmax pmax
comp=Z,80nm,0.7s
ZEA smax smax
comp=N,100nm,4.7s
ZEA smax smax
comp=E,200nm,3.9s
PDMCI Parker Dam,Lak 39.09 104 P P 08 44 31.3 +1.3
baz=319,SNR=31
PV07 Paradox Valley 39.09 94 IAmb IAmb 08 44 32.6
comp=Z,181nm,1.4s
TKX Tecate 39.10 108 IAmb IAmb 08 44 33.0
comp=Z,90nm,1.3s
SWSC Sam W. Stewart 39.23 107 P P 08 44 32.6 +1.3
baz=320,SNR=23
IKP In-Ko-Pah, Jac 39.30 107 P P 08 44 33.5 +1.6
baz=321,SNR=29
KLR Kul'dur 39.34 289 ScP ScP 08 50 03.2 -1.3
comp=Z,0.7nm,0.3s,baz=11,slow=5.2,SNR=3.0
KLR Kul'dur 39.34 289 *ce*P P 08 44 31.7 -0.3
KLR pmax pmax
comp=Z,50nm,1.3s
YUH Yuha Desert 39.40 107 IAmb IAmb 08 44 35.3
comp=Z,123nm,1.4s
GLA Glamis 39.67 106 P P 08 44 36.4 +1.4
baz=320,SNR=20
AGMN Agassiz Nation 39.69 73 P P 08 44 34.9 +0.1
baz=307,SNR=23
AGMN S S 08 50 21.1 -1.3
baz=307
AGMN Agassiz Nation 39.69 73 P P 08 44 35.1 +0.3
baz=307,SNR=23
WUAZ Wupatki 39.69 100 IAmb IAmb 08 44 38.2
comp=Z,132nm,1.4s
WUAZ Wupatki 39.69 100 P P 08 44 37.0 +1.7
baz=318,SNR=59
D32B Dogwood Acres, 39.78 75 P P 08 44 35.4 -0.2
baz=308,SNR=7.5
D32B S S 08 50 22.5 -1.3
baz=308
ISCO Idaho Springs 39.83 90 P P 08 44 37.7 +1.2
baz=314,SNR=23
ISCO Idaho Springs 39.83 90 P P 08 44 37.7 +1.2
baz=313,SNR=23
CPBX Cerro Prieto 39.91 107 IAmb IAmb 08 44 39.6
comp=Z,137nm,1.3s
MVCO Mesa Verde 40.05 95 IAmb IAmb 08 44 40.2
comp=Z,105nm,1.4s
MVCO Mesa Verde 40.05 95 P P 08 44 39.0 +0.8
baz=316,SNR=46
SUSD Miller 40.42 80 IAmb IAmb 08 44 42.4
comp=Z,173nm,1.1s
SUSD Miller 40.42 80 P P 08 44 41.4 +0.4
baz=310,SNR=12
SUSD S S 08 50 33.5 +0.1
baz=310
SUSD Miller 40.42 80 P P 08 44 41.4 +0.4
baz=310,SNR=12
S22A 4UR Ranch, Cre 40.59 93 P P 08 44 44.3 +1.6
baz=315,SNR=55
Q24A Divide 40.67 91 P P 08 44 44.7 +1.4
baz=314,SNR=14
B35A Bob, Littlefor 40.78 71 P P 08 44 43.9 +0.1
baz=308,SNR=27
B35A S S 08 50 38.1 -0.5
baz=308
W18A Petrified Fore 40.89 99 IAmb IAmb 08 44 47.9
comp=Z,259nm,1.8s
W18A Petrified Fore 40.89 99 P P 08 44 46.5 +1.4
baz=318,SNR=6.1
F33A 5 Mile Ranch, 40.98 76 P P 08 44 45.4 0.0
baz=310,SNR=21
F33A S S 08 50 40.4 -1.2
baz=310
OGNE Ogallala 41.04 86 P P 08 44 47.5 +1.4
OGNE Ogallala 41.04 86 P P 08 44 47.2 +1.1
baz=313,SNR=25
OGNE S S 08 50 43.0 +0.2
baz=313
OGNE Ogallala 41.04 86 P P 08 44 47.3 +1.2
baz=312,SNR=25
NOR Nord 41.04 7 *i*P P 08 44 45.6 +0.1
NOR IAmb IAmb 08 44 47.4
comp=Z,7.5nm,1.0s
SFX San Felipe 41.22 108 P P 08 44 48.9 +1.4
SFX IAmb IAmb 08 44 50.1
comp=Z,119nm,1.5s
SDCO Great Sand Dun 41.33 92 P P 08 44 50.2 +1.4
SDCO IAmb IAmb 08 44 51.5
comp=Z,123nm,1.5s
SDCO Great Sand Dun 41.33 92 P P 08 44 50.2 +1.4
baz=316,SNR=95
SDCO Great Sand Dun 41.33 92 P P 08 44 50.2 +1.4
baz=315,SNR=95
UPNV Upernavik 41.60 26 *i*P P 08 44 49.8 -0.3
UPNV IAmb IAmb 08 44 50.9
comp=Z,70nm,0.5s
214A Organ Pipe Nat 41.60 105 P P 08 44 52.3 +1.6
baz=320,SNR=72
K31A O'Neill 41.73 81 IAmb IAmb 08 44 53.5
comp=Z,157nm,1.3s
K31A O'Neill 41.73 81 P P 08 44 52.2 +0.6
baz=312,SNR=8.0
K31A S S 08 50 53.5 +0.8
baz=312
KSCO Kaye Shedlock' 42.04 88 P P 08 44 55.8 +1.6
baz=314,SNR=24
KSCO Kaye Shedlock' 42.04 88 P P 08 44 55.9 +1.6
baz=313,SNR=24
ECSD EROS Data Cent 42.17 79 P P 08 44 54.7 -0.4
baz=311,SNR=30
ECSD S S 08 50 56.4 -2.7
baz=311
ECSD EROS Data Cent 42.17 79 P P 08 44 54.8 -0.4
baz=311,SNR=30
EYMN Ely 42.21 70 P P 08 44 55.5 +0.1
EYMN Ely 42.21 70 P P 08 44 55.5 +0.1
baz=309,SNR=67
EYMN S S 08 50 58.3 -1.4
baz=309
EYMN Ely 42.21 70 P P 08 44 55.7 +0.2
baz=308,SNR=67
USRK Ussuriysk Ar. 42.36 282 P P 08 44 55.0 -1.6
comp=Z,2.9nm,0.6s,baz=60,slow=8.6,SNR=6.0
USRK PcP PcP 08 46 45.9 +0.1
comp=Z,3.0nm,0.7s,baz=30,slow=2.2,SNR=5.0
USRK Ussuriysk Ar. 42.36 282 P P 08 44 54.9 -1.8
T25A Trinidad 42.37 92 IAmb IAmb 08 44 59.7
comp=Z,151nm,1.4s
T25A Trinidad 42.37 92 P P 08 44 58.6 +1.5
baz=316,SNR=61
TUC Tucson 42.42 102 P P 08 44 59.1 +1.7
TUC Tucson 42.42 102 P P 08 44 59.1 +1.7
TUC pmax pmax
comp=Z,68nm,1.1s
TUC Tucson 42.42 102 P P 08 44 58.9 +1.5
baz=320
TUC Tucson 42.42 102 P P 08 44 59.1 +1.7
TUC pP pP 08 45 43.3 +1.9
TUC PP PcP 08 46 47.6 +1.2
TUC x x 08 47 40.0
TUC ScP ScP 08 50 18.6 +1.6
F36A Milaca 42.46 74 P P 08 44 57.5 +0.1
baz=310,SNR=25
F36A S S 08 51 02.4 -0.8
baz=310
ANMO Albuquerque 42.83 96 P P 08 45 01.6 +0.9
ANMO Albuquerque 42.83 96 P P 08 45 01.7 +0.9
ANMO pmax pmax
comp=Z,48nm,1.3s
ANMO Albuquerque 42.83 96 P P 08 45 01.7 +0.9
baz=318,SNR=58
ANMO Albuquerque 42.83 96 P P 08 45 01.7 +0.9
baz=317
ANMO Albuquerque 42.83 96 P P 08 45 01.7 +0.9
ANMO sP sP 08 46 10.6 +2.5
ANMO PP PcP 08 46 49.2 +1.3
ANMO x x 08 47 41.7
ANMO ScP ScP 08 50 20.6 +1.8
BGNE Belgrade 42.88 82 P P 08 45 01.7 +0.9
baz=313,SNR=39
BGNE S S 08 51 10.2 +0.6
baz=313
BGNE Belgrade 42.88 82 P P 08 45 01.7 +0.9
baz=312,SNR=39
E38A The Farm, Brul 43.03 72 IAmb IAmb 08 45 03.0
comp=Z,151nm,1.2s
E38A The Farm, Brul 43.03 72 P P 08 45 02.0 0.0
baz=310,SNR=36
E38A S S 08 51 11.0 -0.6
baz=310
JSD Sado 43.09 271 P P 08 45 02.5 -0.1
JSD IAmb IAmb 08 45 03.7
comp=Z,76nm,0.9s
Y22D IRIS PASSCAL I 43.22 97 IAmb IAmb 08 45 07.1
comp=Z,133nm,1.1s
Y22D IRIS PASSCAL I 43.22 97 P P 08 45 05.9 +2.1
baz=318,SNR=8.6
Y22D IRIS PASSCAL I 43.22 97 P P 08 45 05.8 +2.0
baz=318,SNR=8.6
SPMN Marine on St. 43.26 74 IAmb IAmb 08 45 05.3
comp=Z,140nm,1.5s
SPMN Marine on St. 43.26 74 P P 08 45 04.2 +0.4
baz=311,SNR=23
SPMN S S 08 51 14.2 -0.7
baz=311
SPMN Marine on St. 43.26 74 P P 08 45 04.1 +0.3
baz=310,SNR=23
Y22A Socorro 43.29 97 P P 08 45 06.2 +1.7
baz=318,SNR=41
JYT Yasato 43.31 268 IAmb IAmb 08 45 04.7
comp=Z,78nm,0.6s
L34A Svendsen Farm, 43.47 80 P P 08 45 05.6 0.0
baz=313,SNR=17
L34A S S 08 51 16.9 -1.3
baz=313
N33B J Bar K, Exete 43.72 83 P P 08 45 07.9 +0.3
baz=314,SNR=27
N33B S S 08 51 21.5 -0.3
baz=314
I37A Lemond, Waseca 43.73 76 IAmb IAmb 08 45 09.8
comp=Z,144nm,1.1s
I37B Waseca 43.73 76 P P 08 45 08.1 +0.5
baz=312,SNR=51
I37B S S 08 51 21.7 -0.1
baz=312
CBKS Cedar Bluff 43.79 86 IAmb IAmb 08 45 10.4
comp=Z,200nm,1.2s
CBKS Cedar Bluff 43.79 86 P P 08 45 09.3 +1.1
baz=315,SNR=8.3
CBKS S S 08 51 24.7 +1.9
baz=315
CBKS Cedar Bluff 43.79 86 P P 08 45 09.2 +1.0
baz=314,SNR=8.3
BNX BinXian 43.82 287 ⇓P P 08 45 07.8 -0.5
BNX pP pP 08 45 52.0 -0.3
BNX sP sP 08 46 15.8 +0.4
BNX PP PP 08 46 53.0 -1.4
BNX S S 08 51 21.0 -2.1
BNX sS sS 08 52 34.0 -6.4
BNX pmax pmax
comp=Z,11nm,0.5s
BNX LR LR
comp=Z,530nm,17.1s
BNX LR LR
comp=Z,480nm,13.1s
BNX LR LR
comp=Z,370nm,14.5s
121A Cookes Peak, D 43.90 99 IAmb IAmb 08 45 12.2
comp=Z,169nm,1.5s
121A Cookes Peak, D 43.90 99 P P 08 45 11.1 +1.8
baz=320,SNR=46
121A Cookes Peak, D 43.90 99 P P 08 45 10.9 +1.6
baz=319,SNR=46
MAJO Matsushiro 44.19 270 P P 08 45 11.4 +0.1
MAJO IAmb IAmb 08 45 14.0
comp=Z,48nm,0.7s
MAJO Matsushiro 44.19 270 P P 08 45 11.4 +0.1
MAJO pmax pmax
comp=Z,48nm,0.7s
MAJO Matsushiro 44.19 270 P P 08 45 11.4 +0.1
MAJO Matsushiro 44.19 270 P P 08 45 11.3 -0.1
MAJO pP pP 08 45 58.7 +3.3
MAJO sP sP 08 46 19.2 +0.7
MAJO ScP ScP 08 50 23.2 -1.0
MJAR Matsushiro Arr 44.19 270 P P 08 45 09.9 -1.5
comp=Z,12nm,0.7s,baz=67,slow=8.4,SNR=27
MJAR pP pP 08 45 57.4 +2.1
comp=Z,4.3nm,0.9s,baz=61,slow=10.0,SNR=1.9
MJAR PcP PcP 08 46 52.2 -0.1
comp=Z,4.4nm,0.9s,baz=40,slow=2.1,SNR=4.2
MJAR ScP ScP 08 50 22.0 -2.1
comp=Z,1.2nm,0.6s,baz=360,slow=2.5,SNR=6.2
comp=Z,12nm,0.7s
MJB9 Matsu-Tunnel 44.19 270 IAmb IAmb 08 45 14.0
comp=Z,47nm,0.7s
D41A Chassel 44.31 70 P P 08 45 12.6 +0.5
baz=310,SNR=13
D41A S S 08 51 29.5 -0.6
baz=310
G40A Rib Lake 44.62 73 IAmb IAmb 08 45 15.7
comp=Z,144nm,1.4s
G40A Rib Lake 44.62 73 P P 08 45 14.8 +0.2
baz=311,SNR=58
G40A S S 08 51 33.2 -1.4
baz=311
R32A Long Quarter, 44.63 86 P P 08 45 15.4 +0.6
baz=315,SNR=20
COWI Conover 44.63 71 P P 08 45 14.7 -0.1
baz=311
HSIG 44.89 106 IAmb IAmb 08 45 19.6
comp=Z,250nm,1.5s
KBS Kingsbay 44.95 2 P P 08 45 18.6 +1.8
KBS Kingsbay 44.95 2 P P 08 45 18.6 +1.8
KBS pmax pmax
comp=Z,90nm,1.2s
KBS Kingsbay 44.95 2 *i*P P 08 45 18.1 +1.2
KBS Kingsbay 44.95 2 ⇓*i*P P 08 45 18.0 +1.2
KBS Kingsbay 44.95 2 P P 08 45 18.3 +1.5
KBS pP pP 08 46 02.1 +1.2
KBS x PcP 08 46 55.2 +1.1
KBS ScP ScP 08 50 26.8 +0.2
K38A Parkersburg 44.98 77 P P 08 45 17.3 -0.3
baz=313,SNR=15
DAG Danmarks Havn 45.14 11 *i*P P 08 45 18.0 -0.3
DAG IAmb IAmb 08 45 19.2
comp=Z,86nm,0.6s
KIDD KIDD Seismic O 45.18 99 P P 08 45 20.5 +1.2
baz=320,SNR=11
SCIA State Center 45.24 78 IAmb IAmb 08 45 20.9
comp=Z,151nm,1.5s
SCIA State Center 45.24 78 P P 08 45 19.6 -0.1
baz=313
SCIA S S 08 51 43.0 -0.7
baz=313
SCIA State Center 45.24 78 P P 08 45 19.5 -0.1
baz=313
I40A Norwalk 45.31 74 IAmb IAmb 08 45 20.7
comp=Z,75nm,0.6s
I40A Norwalk 45.31 74 P P 08 45 20.3 +0.2
baz=312,SNR=45
I40A S S 08 51 43.2 -1.3
baz=312
KSU1 Kansas State U 45.32 84 P P 08 45 20.2 0.0
baz=315,SNR=19
KSU1 S S 08 51 43.1 -1.7
baz=315
KSU1 Kansas State U 45.32 84 P P 08 45 20.1 -0.1
baz=314,SNR=19
F42A Maple Grove Fa 45.39 71 IAmb IAmb 08 45 22.2
comp=Z,155nm,1.3s
F42A Maple Grove Fa 45.39 71 P P 08 45 21.2 +0.6
baz=311,SNR=19
F42A S S 08 51 45.3 -0.3
baz=311
AMTX Amarillo 45.53 92 IAmb IAmb 08 45 24.1
comp=Z,261nm,1.8s
AMTX Amarillo 45.53 92 P P 08 45 22.8 +0.8
baz=318,SNR=25
AMTX Amarillo 45.53 92 P P 08 45 22.5 +0.5
baz=317
SRIG Santa Rosalia 45.55 108 IAmb IAmb 08 45 24.5
comp=Z,113nm,1.3s
E43A Lone Tree Farm 45.58 69 IAmb IAmb 08 45 23.4
comp=Z,76nm,0.7s
E43A Lone Tree Farm 45.58 69 P P 08 45 22.3 +0.2
baz=311,SNR=84
E43A S S 08 51 47.9 -0.4
baz=311
MSTX Muleshoe 45.59 94 IAmb IAmb 08 45 24.2
comp=Z,119nm,1.4s
MSTX Muleshoe 45.59 94 P P 08 45 23.0 +0.5
baz=318,SNR=37
MSTX Muleshoe 45.59 94 P P 08 45 23.0 +0.5
baz=318,SNR=37
SUMG Summit 45.61 21 *i*P P 08 45 22.0 -0.6
SUMG IAmb IAmb 08 45 25.2
comp=Z,73nm,0.6s
INU Inuyama 45.72 269 P P 08 45 22.7 -0.7
INU Inuyama 45.72 269 P P 08 45 22.5 -0.8
INU pP pP 08 46 09.5 +1.9
INU sP sP 08 46 32.6 +2.0
SPA0 Spitsbergen Ar 45.75 1 *e*P P 08 45 23.1 0.0
JHJ2 Mitsune 45.81 265 P P 08 45 24.2 +0.1
MNTX Cornudas Mount 45.85 98 IAmb IAmb 08 45 27.3
comp=Z,154nm,1.4s
MNTX Cornudas Mount 45.85 98 P P 08 45 26.1 +1.5
baz=320,SNR=132
MNTX Cornudas Mount 45.85 98 P P 08 45 26.1 +1.5
baz=320,SNR=132

N38A	**Joes South For**	**46.00**	**79**	P	**P**	**08 45 25.3**	**-0.2**
	baz=314,SNR=14						
N38A				S	**S**	**08 51 52.9**	**-1.6**
	baz=314						
CN2	**Changchun**	**46.15**	**287**	*e*P	**P**	**08 45 25.5**	**-1.1**
CN2				pP	pP	08 46 10.0	-1.0
CN2				sP	sP	08 46 33.0	-1.0
CN2				S	**S**	**08 51 52.8**	**-3.7**
CN2				sS	sS	08 53 11.3	-3.2
CN2				SS	**SS**	**08 55 15.0**	**-8.9**
CN2				pmax	pmax		
	comp=Z,30nm,1.0s						
CN2				pmax	pmax		
	comp=Z,4µm,3.0s						
CN2				LR	LR		
	comp=Z,400nm,21.0s						
CN2				LR	LR		
	comp=Z,340nm,21.0s						
CN2				LR	LR		
	comp=Z,240nm,22.0s						
JFWS	**Jewell Farm**	**46.17**	**75**	P	**P**	**08 45 26.1**	**-0.7**
	baz=313,SNR=19						
JFWS				S	**S**	**08 51 54.1**	**-2.7**
	baz=313						
JFWS	**Jewell Farm**	**46.17**	**75**	P	**P**	**08 45 26.1**	**-0.7**
	baz=312,SNR=19						
I42A	**Draeger Farm,**	**46.22**	**73**	IAmb	IAmb	08 45 28.1	
	comp=Z,139nm,1.2s						
I42A	**Draeger Farm,**	**46.22**	**73**	P	**P**	**08 45 27.2**	**0.0**
	baz=313,SNR=30						
I42A				S	**S**	**08 51 55.9**	**-1.6**
	baz=313						
L40A	**Anamosa**	**46.22**	**77**	P	**P**	**08 45 26.8**	**-0.5**
	baz=313,SNR=19						
H43A	**Windswept, Lux**	**46.44**	**72**	IAmb	IAmb	08 45 29.8	
	comp=Z,133nm,1.1s						
H43A	**Windswept, Lux**	**46.44**	**72**	P	**P**	**08 45 28.9**	**0.0**
	baz=312,SNR=24						
H43A				S	**S**	**08 51 59.2**	**-1.4**
	baz=312						
P38A	**Dawn**	**46.65**	**81**	IAmb	IAmb	08 45 31.3	
	comp=Z,215nm,1.4s						
P38A	**Dawn**	**46.65**	**81**	P	**P**	**08 45 30.4**	**-0.2**
	baz=315,SNR=72						
P38A				S	**S**	**08 52 02.0**	**-1.8**
	baz=315						
SFJD	**Kangerlussuaq**	**46.81**	**30**	P	**P**	**08 45 32.1**	**+0.6**
SFJD				IAmb	IAmb	08 45 33.1	
	comp=Z,81nm,0.8s						
SFJD	**Kangerlussuaq**	**46.81**	**30**	P	**P**	**08 45 32.1**	**+0.6**
SFJD				pmax	pmax		
	comp=Z,81nm,0.8s						
SFJD	**Kangerlussuaq**	**46.81**	**30**	*i* P	**P**	**08 45 31.0**	**-0.4**
SFJD				IAmb	IAmb	08 45 32.7	
	comp=Z,64nm,0.7s						
SFJD	**Kangerlussuaq**	**46.81**	**30**	P	**P**	**08 45 32.1**	**+0.6**
SFJD				pP	**pP**	**08 46 17.9**	**+1.9**
SFJD				ScP	**ScP**	**08 50 33.8**	**-0.7**
HSPB	**Hornsund (broa**	**46.92**	**1**	*e*P	**P**	**08 45 32.4**	**+0.2**
HSPB				epP	**pP**	**08 46 16.9**	**+0.2**
HSPB	**Hornsund (broa**	**46.92**	**1**	⇓*i* P	**P**	**08 45 32.1**	**-0.1**
T35B	**Sooner Cattle**	**46.93**	**86**	P	**P**	**08 45 32.6**	**-0.2**
	baz=316,SNR=25						
E46A	**Sault Ste Mari**	**46.98**	**68**	IAmb	IAmb	08 47 03.4	
	comp=Z,85nm,0.8s						
E46A	**Sault Ste Mari**	**46.98**	**68**	P	**P**	**08 45 33.1**	**+0.1**
	baz=312,SNR=23						
E46A				S	**S**	**08 52 07.3**	**-0.9**
	baz=312						
DBG	**Daneborg**	**47.14**	**13**	*i* P	**P**	**08 45 33.1**	**-0.8**
DBG				IAmb	IAmb	08 45 34.5	
	comp=Z,64nm,0.7s						
G45A	**Suttons Bay**	**47.16**	**70**	IAmb	IAmb	08 47 03.8	
	comp=Z,60nm,0.7s						
G45A	**Suttons Bay**	**47.16**	**70**	P	**P**	**08 45 34.4**	**-0.1**
	baz=313,SNR=8.6						
G45A				P	**P**	**08 45 34.4**	**-0.1**
	baz=313,SNR=8.6						
G45A				S	**S**	**08 52 10.3**	**-0.6**
	baz=313						
G45A				S	**S**	**08 52 10.3**	**-0.6**
	baz=313						
WMOK	**Wichita Mounta**	**47.25**	**90**	IAmb	IAmb	08 45 36.9	
	comp=Z,154nm,1.4s						
WMOK	**Wichita Mounta**	**47.25**	**90**	P	**P**	**08 45 35.8**	**+0.5**
	baz=318,SNR=34						
WMOK	**Wichita Mounta**	**47.25**	**90**	P	**P**	**08 45 35.6**	**+0.3**
	baz=317,SNR=34						
K43A	**Burlington**	**47.34**	**74**	IAmb	IAmb	08 45 36.4	
	comp=Z,124nm,1.1s						
K43A	**Burlington**	**47.34**	**74**	P	**P**	**08 45 35.3**	**-0.6**
	baz=314,SNR=9.8						
K43A				S	**S**	**08 52 11.6**	**-1.8**
	baz=314						
HOPEN	**Hopen**	**47.36**	**358**	⇓*i* P	**P**	**08 45 36.0**	**+0.4**
N41A	**Harden Midland**	**47.36**	**78**	IAmb	IAmb	08 45 36.7	
	comp=Z,152nm,1.1s						
N41A	**Harden Midland**	**47.36**	**78**	P	**P**	**08 45 35.6**	**-0.5**
	baz=314,SNR=42						
OKCFA	**Oklahoma City**	**47.49**	**88**	IAmb	IAmb	08 45 38.6	
	comp=Z,247nm,1.5s						
OKCFA	**Oklahoma City**	**47.49**	**88**	P	**P**	**08 45 37.3**	**+0.1**
	baz=317,SNR=6.1						
P40A	**Paris**	**47.53**	**80**	IAmb	IAmb	08 45 38.2	
	comp=Z,197nm,1.4s						
P40A	**Paris**	**47.53**	**80**	P	**P**	**08 45 37.0**	**-0.4**
	baz=315,SNR=71						
P40A				S	**S**	**08 52 14.1**	**-2.1**
	baz=315						
I45A	**Fountain**	**47.54**	**71**	IAmb	IAmb	08 45 38.0	
	comp=Z,72nm,0.6s						
I45A	**Fountain**	**47.54**	**71**	P	**P**	**08 45 37.3**	**-0.1**
	baz=313,SNR=9.6						
I45A				P	**P**	**08 45 37.3**	**-0.1**
	baz=313,SNR=9.6						
FNO	**Franklin**	**47.64**	**88**	IAmb	IAmb	08 45 39.1	
	comp=Z,81nm,0.6s						
X34A	**Smith Ranch, M**	**47.88**	**89**	IAmb	IAmb	08 45 42.1	
	comp=Z,121nm,1.4s						
L44A	**Lake County Fo**	**47.93**	**74**	P	**P**	**08 45 39.9**	**-0.5**
	baz=314						
L44A	**Lake County Fo**	**47.93**	**74**	P	**P**	**08 45 39.9**	**-0.5**
	baz=314						
ICESG	**Greenland Ices**	**48.05**	**24**	*i* P	**P**	**08 45 40.1**	**-1.2**
ICESG				IAmb	IAmb	08 45 41.8	
	comp=Z,63nm,0.6s						
TUL1	**Leonard**	**48.05**	**86**	P	**P**	**08 45 41.3**	**-0.1**
	baz=317,SNR=34						
TUL1				S	**S**	**08 52 22.7**	**-1.0**
	baz=317						
TUL1	**Leonard**	**48.05**	**86**	P	**P**	**08 45 41.4**	**-0.1**
	baz=316,SNR=34						
S39A	**Bolivar**	**48.14**	**82**	P	**P**	**08 45 40.5**	**-1.6**
	baz=316,SNR=55						
R40A	**Maddies Statio**	**48.29**	**81**	P	**P**	**08 45 42.2**	**-1.0**
	baz=316,SNR=123						
R40A				S	**S**	**08 52 23.2**	**-3.6**
	baz=316						
HDIL	**Hopedale**	**48.31**	**77**	IAmb	IAmb	08 45 44.0	
	comp=Z,103nm,0.7s						
HDIL	**Hopedale**	**48.31**	**77**	P	**P**	**08 45 43.0**	**-0.3**
	baz=315,SNR=42						
HDIL				S	**S**	**08 52 24.8**	**-2.3**
	baz=315						
HDIL	**Hopedale**	**48.31**	**77**	P	**P**	**08 45 42.8**	**-0.5**
	baz=314,SNR=42						
ABTX	**Abilene, Hawle**	**48.34**	**92**	P	**P**	**08 45 44.4**	**+0.6**
	baz=319,SNR=85						
ABTX	**Abilene, Hawle**	**48.34**	**92**	P	**P**	**08 45 44.3**	**+0.6**
	baz=318,SNR=85						
DY2G	**Dye2**	**48.39**	**29**	*i* P	**P**	**08 45 43.2**	**-0.7**
DY2G				IAmb	IAmb	08 45 45.1	
	comp=Z,48nm,0.6s						
M44A	**Midewin, Midew**	**48.41**	**75**	IAmb	IAmb	08 45 44.7	
	comp=Z,127nm,1.1s						
M44A	**Midewin, Midew**	**48.41**	**75**	P	**P**	**08 45 43.5**	**-0.6**
	baz=314,SNR=12						
M44A				S	**S**	**08 52 26.0**	**-2.4**
	baz=314						
U38A	**Gravette**	**48.45**	**84**	IAmb	IAmb	08 45 44.9	
	comp=Z,206nm,1.4s						
U38A	**Gravette**	**48.45**	**84**	P	**P**	**08 45 43.8**	**-0.7**
	baz=317,SNR=51						
U38A				S	**S**	**08 52 26.8**	**-2.4**
	baz=317						
SNY	**Shenyang**	**48.51**	**286**	⇓P	**P**	**08 45 45.0**	**+0.2**
SNY				pP	**pP**	**08 46 30.0**	**+0.4**
SNY				S	**S**	**08 52 31.3**	**+1.6**
SNY				sS	**sS**	**08 53 47.8**	**-0.5**
SNY				pmax	pmax		
	comp=Z,100nm,0.9s						
SNY				LR	LR		
	comp=Z,32µm,16.8s						
SNY				LR	LR		
	comp=Z,24µm,13.5s						
SNY				LR	LR		
	comp=Z,550nm,20.1s						
TX31	**Lajitas Ar. Si**	**48.61**	**98**	P	**P**	**08 45 46.8**	**+0.9**
	baz=321,SNR=123						
TX32	**Lajitas Array**	**48.61**	**98**	IAmb	IAmb	08 45 48.1	
	comp=Z,110nm,1.1s						
TXAR	**Lajitas Array**	**48.61**	**98**	P	**P**	**08 45 46.8**	**+0.9**
	comp=Z,38nm,0.9s,baz=305,slow=5.4,SNR=363						
TXAR				pP	**pP**	**08 46 33.0**	**+2.0**
	comp=Z,13nm,0.8s,baz=305,slow=4.4,SNR=3.0						
TXAR				PcP	**PcP**	**08 47 08.9**	**+0.8**
	comp=Z,12nm,0.5s,baz=225,slow=1.5,SNR=19						
TXAR				ScP	**ScP**	**08 50 42.6**	**-0.3**
	comp=Z,8.6nm,0.9s,baz=292,slow=3.6,SNR=12						
	comp=Z,38nm,0.9s						
HHAR	**Hobbs**	**48.81**	**84**	P	**P**	**08 45 46.3**	**-0.9**
	baz=317						
P43A	**Skaggs, Pawnee**	**48.83**	**78**	IAmb	IAmb	08 45 47.5	
	comp=Z,73nm,0.6s						
P43A	**Skaggs, Pawnee**	**48.83**	**78**	P	**P**	**08 45 46.8**	**-0.5**
	baz=315,SNR=18						
P43A				S	**S**	**08 52 32.0**	**-2.4**
	baz=315						
J47A	**Sunmer**	**48.84**	**71**	P	**P**	**08 45 47.2**	**-0.1**
	baz=314,SNR=8.5						
J47A				P	**P**	**08 45 47.2**	**-0.1**
	baz=314,SNR=8.5						
L46A	**Eue Claire**	**48.91**	**73**	IAmb	IAmb	08 45 48.5	
	comp=Z,114nm,1.1s						
L46A	**Eue Claire**	**48.91**	**73**	P	**P**	**08 45 47.5**	**-0.3**
	baz=314,SNR=8.1						
L46A				P	**P**	**08 45 47.5**	**-0.3**
	baz=314,SNR=8.1						
L46A				S	**S**	**08 52 33.1**	**-2.2**
	baz=314						
L46A				S	**S**	**08 52 33.1**	**-2.2**
	baz=314						
CCM	**Cathedral Cave**	**49.02**	**81**	P	**P**	**08 45 47.4**	**-1.4**
CCM				IAmb	IAmb	08 45 48.9	
	comp=Z,145nm,1.5s						
CCM	**Cathedral Cave**	**49.02**	**81**	P	**P**	**08 45 47.4**	**-1.4**
CCM				pmax	pmax		
	comp=Z,145nm,1.5s						
CCM	**Cathedral Cave**	**49.02**	**81**	P	**P**	**08 45 47.8**	**-1.0**
	baz=316,SNR=32						
CCM				S	**S**	**08 52 33.9**	**-3.2**
	baz=316						
CCM	**Cathedral Cave**	**49.02**	**81**	P	**P**	**08 45 47.7**	**-1.1**
	baz=316						
CCM	**Cathedral Cave**	**49.02**	**81**	P	**P**	**08 45 47.7**	**-1.1**
CCM				pP	**pP**	**08 46 32.8**	**-0.9**
CCM				x	**PcP**	**08 47 09.2**	**-0.1**
CCM				ScP	**ScP**	**08 50 45.1**	**+0.8**
O44A	**Mansfield**	**49.05**	**77**	P	**P**	**08 45 48.3**	**-0.7**
	baz=315,SNR=9.9						
O44A				S	**S**	**08 52 34.9**	**-2.4**
	baz=315						
JCJ	**Chichijima**	**49.14**	**258**	P	**P**	**08 45 48.9**	**-0.9**
	comp=Z,64nm,0.7s,baz=45,slow=8.6,SNR=10.0						
	comp=Z,64nm,0.7s						
JCJ	**Chichijima**	**49.14**	**258**	IAmb	IAmb	08 45 50.0	
	comp=Z,60nm,0.7s						
JCJ	**Chichijima**	**49.14**	**258**	P	**P**	**08 45 49.4**	**-0.4**
Z35A	**Perchaven, San**	**49.14**	**90**	IAmb	IAmb	08 45 51.9	
	comp=Z,104nm,1.2s						
Z35A	**Perchaven, San**	**49.14**	**90**	P	**P**	**08 45 49.8**	**+0.1**
	baz=318,SNR=13						
Z35A				S	**S**	**08 52 38.7**	**-0.1**
	baz=318						
SLM	**Saint Louis**	**49.16**	**79**	IAmb	IAmb	08 45 51.2	
	comp=Z,212nm,1.6s						
SLM	**Saint Louis**	**49.16**	**79**	P	**P**	**08 45 49.3**	**-0.5**
	baz=316,SNR=5.3						
KSRS	**Korea Array**	**49.24**	**279**	P	**P**	**08 45 51.0**	**+0.5**
	comp=Z,19nm,0.7s,baz=46,slow=7.0,SNR=77						
KSRS				pP	**pP**	**08 46 38.0**	**+2.7**
	comp=Z,16nm,1.0s,baz=51,slow=7.1,SNR=7.3						
KSRS				PcP	**PcP**	**08 47 10.6**	**+0.5**
	comp=Z,3.2nm,0.6s,baz=38,slow=2.9,SNR=5.7						
	comp=Z,19nm,0.7s						
X37A	**Clayton**	**49.26**	**87**	IAmb	IAmb	08 45 51.5	
	comp=Z,69nm,0.6s						
X37A	**Clayton**	**49.26**	**87**	P	**P**	**08 45 50.9**	**+0.3**
	baz=318,SNR=69						
X37A				S	**S**	**08 52 40.7**	**+0.3**
	baz=318						
FVM	**French Village**	**49.52**	**80**	P	**P**	**08 45 51.9**	**-0.6**
	baz=316,SNR=33						
FVM				S	**S**	**08 52 41.8**	**-2.3**
	baz=316						
SCHQ	**Schefferville**	**49.52**	**49**	P	**P**	**08 45 52.0**	**-0.4**
	comp=Z,19nm,0.6s,baz=325,slow=7.9,SNR=58						
	comp=Z,19nm,0.6s						
SFIN	**Lafayette**	**49.62**	**75**	IAmb	IAmb	08 45 54.1	
	comp=Z,111nm,0.9s						
SFIN	**Lafayette**	**49.62**	**75**	P	**P**	**08 45 53.1**	**-0.2**
	baz=315,SNR=22						
SFIN				S	**S**	**08 52 43.4**	**-2.0**
	baz=315						
SFIN	**Lafayette**	**49.62**	**75**	P	**P**	**08 45 53.2**	**-0.2**
	baz=315,SNR=22						
Q44A	**Meyer Farm, Va**	**49.63**	**78**	P	**P**	**08 45 52.9**	**-0.5**
	baz=316,SNR=9.1						
Q44A				S	**S**	**08 52 44.2**	**-1.4**
	baz=316						
W39A	**Magazine**	**49.69**	**85**	IAmb	IAmb	08 45 54.7	
	comp=Z,193nm,1.4s						
W39A	**Magazine**	**49.69**	**85**	P	**P**	**08 45 53.6**	**-0.3**
	baz=318,SNR=60						
W39A				S	**S**	**08 52 45.2**	**-1.2**
	baz=318						
W39A	**Magazine**	**49.69**	**85**	P	**P**	**08 45 53.6**	**-0.3**
	baz=317,SNR=60						
SLBS	**Sierra La Lagu**	**49.70**	**109**	P	**P**	**08 45 55.5**	**+1.3**
SLBS				IAmb	IAmb	08 45 56.7	
	comp=Z,132nm,1.4s						
SLBS	**Sierra La Lagu**	**49.70**	**109**	P	**P**	**08 45 55.4**	**+1.3**
SLBS				ScP	**ScP**	**08 50 48.8**	**+1.3**
JCT	**Junction City**	**49.87**	**94**	P	**P**	**08 45 55.7**	**+0.4**
	baz=320,SNR=72						
JCT				S	**S**	**08 52 49.0**	**-0.1**
	baz=320						
JCT	**Junction City**	**49.87**	**94**	P	**P**	**08 45 55.6**	**+0.3**
	baz=320,SNR=72						
L48A	**N Adams**	**49.95**	**72**	IAmb	IAmb	08 45 56.2	
	comp=Z,142nm,1.4s						
L48A	**N Adams**	**49.95**	**72**	P	**P**	**08 45 55.3**	**-0.4**
	baz=315,SNR=18						
L48A				P	**P**	**08 45 55.3**	**-0.4**
	baz=315,SNR=18						
L48A				S	**S**	**08 52 47.5**	**-2.4**
	baz=315						
L48A				S	**S**	**08 52 47.5**	**-2.4**
	baz=315						
N47A	**Urbana**	**50.02**	**74**	IAmb	IAmb	08 45 56.4	
	comp=Z,163nm,1.1s						
N47A	**Urbana**	**50.02**	**74**	P	**P**	**08 45 55.4**	**-0.9**
	baz=315,SNR=19						
N47A				P	**P**	**08 45 55.4**	**-0.9**
	baz=315,SNR=19						
N47A				S	**S**	**08 52 47.8**	**-3.2**
	baz=315						
N47A				S	**S**	**08 52 47.8**	**-3.2**
	baz=315						
WHTX	**Lake Whitney,**	**50.03**	**91**	IAmb	IAmb	08 45 58.0	
	comp=Z,222nm,1.4s						
WHTX	**Lake Whitney,**	**50.03**	**91**	P	**P**	**08 45 56.9**	**+0.5**
	baz=319,SNR=13						
WHTX				S	**S**	**08 52 51.8**	**+0.6**
	baz=319						
WHTX	**Lake Whitney,**	**50.03**	**91**	P	**P**	**08 45 56.8**	**+0.4**
	baz=319,SNR=13						
FCAR	**Ozark Folk Cen**	**50.10**	**83**	IAmb	IAmb	08 45 56.6	
	comp=Z,172nm,1.2s						
AAM	**Ann Arbor**	**50.10**	**71**	P	**P**	**08 45 55.9**	**-1.0**
	baz=314						
P46A	**Rosedale**	**50.11**	**76**	IAmb	IAmb	08 45 57.8	
	comp=Z,121nm,1.0s						
P46A	**Rosedale**	**50.11**	**76**	P	**P**	**08 45 56.6**	**-0.3**
	baz=316,SNR=17						
OLIL	**Olney**	**50.26**	**78**	IAmb	IAmb	08 45 58.7	
	comp=Z,139nm,1.4s						
OLIL	**Olney**	**50.26**	**78**	P	**P**	**08 45 57.6**	**-0.4**
	baz=316,SNR=18						
MIAR	**Mount Ida**	**50.29**	**85**	P	**P**	**08 45 58.1**	**-0.2**
	baz=318,SNR=48						
MIAR				S	**S**	**08 52 53.9**	**-0.8**
	baz=318						
MIAR	**Mount Ida**	**50.29**	**85**	P	**P**	**08 45 58.2**	**-0.2**
	baz=318,SNR=48						
SCO	**Scoresbysund**	**50.29**	**16**	P	**P**	**08 45 58.6**	**+0.8**
SCO	**Scoresbysund**	**50.29**	**16**	P	**P**	**08 45 58.6**	**+0.8**
SCO				pmax	pmax		
	comp=Z,39nm,0.6s						
SCO	**Scoresbysund**	**50.29**	**16**	*i* P	**P**	**08 45 57.4**	**-0.5**
SCO				IAmb	IAmb	08 45 59.1	
	comp=Z,31nm,0.6s						
K50A	**Casco**	**50.31**	**70**	IAmb	IAmb	08 45 59.3	
	comp=Z,162nm,1.4s						
K50A	**Casco**	**50.31**	**70**	P	**P**	**08 45 58.3**	**-0.2**
	baz=315,SNR=6.2						
K50A				P	**P**	**08 45 58.3**	**-0.2**
	baz=315,SNR=6.2						
TJN	**Taejon**	**50.33**	**278**	*ce*P	**P**	**08 45 58.8**	**+0.2**
S44A	**Carbondale**	**50.37**	**79**	IAmb	IAmb	08 45 59.4	
	comp=Z,302nm,1.9s						
S44A	**Carbondale**	**50.37**	**79**	P	**P**	**08 45 58.2**	**-0.8**
	baz=316,SNR=12						
S44A				S	**S**	**08 52 53.2**	**-2.6**
	baz=316						
PBMO	**Poplar Bluff**	**50.39**	**81**	IAmb	IAmb	08 45 59.9	
	comp=Z,147nm,1.3s						
PBMO	**Poplar Bluff**	**50.39**	**81**	P	**P**	**08 45 58.1**	**-0.9**
	baz=317,SNR=48						
WHAR	**Wooly Hollow**	**50.45**	**84**	IAmb	IAmb	08 46 00.9	
	comp=Z,186nm,1.9s						
Z38A	**Mt. Pleasant**	**50.46**	**88**	IAmb	IAmb	08 46 01.0	
	comp=Z,201nm,1.9s						
Z38A	**Mt. Pleasant**	**50.46**	**88**	P	**P**	**08 45 59.4**	**-0.2**
	baz=318,SNR=6.1						
LCAR	**Lake Charles**	**50.51**	**82**	P	**P**	**08 45 58.3**	**-1.6**
	baz=317,SNR=34						
SOEG	**Soedalen**	**50.56**	**22**	*i* P	**P**	**08 45 59.5**	**-0.4**
SOEG				IAmb	IAmb	08 46 01.0	
	comp=Z,74nm,0.7s						
W41B	**Gary Mavity, V**	**50.56**	**84**	IAmb	IAmb	08 46 00.7	
	comp=Z,115nm,1.5s						
W41B	**Gary Mavity, V**	**50.56**	**84**	P	**P**	**08 45 59.3**	**-1.0**
	baz=318,SNR=34						
W41B				S	**S**	**08 52 56.4**	**-2.1**
	baz=318						
W41B	**Gary Mavity, V**	**50.56**	**84**	P	**P**	**08 45 59.4**	**-1.0**
	baz=317,SNR=34						
O48B	**Farmland**	**50.76**	**74**	P	**P**	**08 46 00.4**	**-1.4**
	baz=316,SNR=35						
O48B	**Farmland**	**50.76**	**74**	P	**P**	**08 46 00.5**	**-1.4**
	baz=315,SNR=35						
JNU	**Nakatsue**	**50.78**	**272**	P	**P**	**08 46 01.5**	**-0.6**
	comp=Z,11nm,0.6s,baz=149,slow=9.7,SNR=4.7						
	comp=Z,11nm,0.6s						
BLO	**Bloomington**	**50.80**	**76**	IAmb	IAmb	08 46 02.6	
	comp=Z,153nm,1.3s						
N49A	**Columbus Grove**	**50.80**	**73**	IAmb	IAmb	08 46 02.4	
	comp=Z,148nm,1.2s						
N49A	**Columbus Grove**	**50.80**	**73**	P	**P**	**08 46 01.6**	**-0.6**
	baz=316,SNR=15						
N49A				P	**P**	**08 46 01.6**	**-0.6**
	baz=316,SNR=15						
N49A				S	**S**	**08 52 58.3**	**-3.3**
	baz=316						
N49A				S	**S**	**08 52 58.3**	**-3.3**
	baz=316						
IRK	**Irkutsk**	**50.82**	**308**	*e*P	**P**	**08 46 01.5**	**-0.6**
IRK				*e*		08 46 48.2	
IRK				pmax	pmax		
	comp=Z,52nm,1.5s						
435B	**Jarrell**	**50.87**	**92**	P	**P**	**08 46 03.3**	**+0.6**
	baz=320,SNR=6.4						
435B				S	**S**	**08 53 04.1**	**+1.2**
	baz=320						
435B	**Jarrell**	**50.87**	**92**	P	**P**	**08 46 03.1**	**+0.4**
	baz=320						
237A	**Washetta, Mont**	**50.94**	**89**	P	**P**	**08 46 03.4**	**+0.1**
	baz=319						
XLT	**XiLinHaoTe**	**50.99**	**293**	⇓*i* P	**P**	**08 46 04.3**	**+0.7**
XLT				pP	pP	08 46 50.5	+1.6
XLT				sP	sP	08 47 08.5	-3.1
XLT				PcP	**PcP**	**08 47 21.3**	**+4.7**
XLT				S	**S**	**08 53 05.3**	**+0.9**
XLT				sS	sS	08 54 20.8	-2.8
XLT				SS	**SS**	**08 56 39.0**	**-2.4**
XLT				pmax	pmax		
	comp=Z,55nm,1.2s						
XLT				pmax	pmax		
	comp=Z,79nm,3.5s						
XLT				LR	LR		
	comp=Z,26nm,15.7s						
XLT				LR	LR		
	comp=Z,200nm,14.0s						
XLT				LR	LR		
	comp=Z,240nm,15.9s						
HBAR	**Harrisburg**	**51.16**	**82**	IAmb	IAmb	08 46 05.1	
	comp=Z,666nm,0.6s						
HBAR	**Harrisburg**	**51.16**	**82**	S	**S**	**08 53 04.2**	**-2.5**
	baz=318						
P48A	**Milroy**	**51.18**	**75**	IAmb	IAmb	08 46 04.9	
	comp=Z,177nm,1.1s						
P48A	**Milroy**	**51.18**	**75**	P	**P**	**08 46 03.8**	**-1.1**
	baz=316,SNR=58						
P48A				P	**P**	**08 46 03.8**	**-1.1**
	baz=316,SNR=58						
P48A				S	**S**	**08 53 03.1**	**-3.8**
	baz=316						
P48A				S	**S**	**08 53 03.1**	**-3.8**
	baz=316						
T45A	**Paducah**	**51.20**	**80**	IAmb	IAmb	08 46 05.6	
	comp=Z,133nm,1.1s						
T45B	**Paducah**	**51.20**	**80**	P	**P**	**08 46 04.6**	**-0.5**
	baz=317,SNR=6.8						
T45B				S	**S**	**08 53 05.2**	**-1.9**
	baz=317						
GNAR	**Gosnell**	**51.21**	**81**	IAmb	IAmb	08 46 05.8	
	comp=Z,208nm,1.5s						
O49A	**Covington**	**51.24**	**74**	P	**P**	**08 46 04.3**	**-1.2**
	baz=316,SNR=9.2						
O49A				P	**P**	**08 46 04.3**	**-1.2**
	baz=316,SNR=9.2						
ANGG	**Ammassalik, Gr**	**51.28**	**26**	*i* P	**P**	**08 46 04.0**	**-1.3**
ANGG				IAmb	IAmb	08 46 05.5	
	comp=Z,20nm,0.4s						
LNXT	**Lenox**	**51.40**	**81**	P	**P**	**08 46 06.3**	**-0.4**
	baz=317,SNR=8.1						
P49A	**Miami Univ. Ec**	**51.51**	**74**	IAmb	IAmb	08 46 07.1	
	comp=Z,61nm,0.9s						
P49A	**Miami Univ. Ec**	**51.51**	**74**	P	**P**	**08 46 06.1**	**-1.3**
	baz=316,SNR=16						
P49A				S	**S**	**08 53 08.3**	**-3.0**
	baz=316						
P49A	**Miami Univ. Ec**	**51.51**	**74**	P	**P**	**08 46 06.0**	**-1.4**
	baz=316,SNR=16						
DELO	**Deloro Mine**	**51.66**	**65**	IAmb	IAmb	08 46 08.9	
	comp=Z,59nm,0.6s						
Z41A	**Richland Creek**	**51.67**	**86**	IAmb	IAmb	08 46 09.9	
	comp=Z,94nm,1.4s						
Z41A	**Richland Creek**	**51.67**	**86**	P	**P**	**08 46 08.6**	**-0.1**
	baz=319,SNR=9.6						
Z41A				P	**P**	**08 46 08.6**	**-0.1**
	baz=319,SNR=9.6						
Z41A

N51A	**Ashland**	**51.76**	**72**	IAmb	IAmb	08 46 09.6			
	comp=Z,111nm,1.1s								
N51A	**Ashland**	**51.76**	**72**	P	**P**	**08 46 08.6**	**-0.7**		
N51A	baz=316,SNR=8.8			P	**P**	**08 46 08.6**	**-0.7**		
	baz=316,SNR=8.8								
IVI	**Ivigtut**	**51.81**	**34**	*i* P	**P**	**08 46 08.0**	**-1.3**		
IVI	**Ivigtut**	**51.81**	**34**	P	**P**	**08 46 09.6**	**+0.4**		
IVI				pP	**pP**	**08 46 56.9**	**+2.2**		
M52A	**Chesterland**	**51.85**	**70**	IAmb	IAmb	08 46 10.5			
	comp=Z,57nm,0.8s								
M52A	**Chesterland**	**51.85**	**70**	P	**P**	**08 46 09.5**	**-0.4**		
M52A	baz=316,SNR=5.3			P	**P**	**08 46 09.5**	**-0.4**		
	baz=316,SNR=5.3								
M52A				S	**S**	**08 53 13.8**	**-2.2**		
	baz=316								
M52A				S	**S**	**08 53 13.8**	**-2.2**		
	baz=316								
ACSO	**Alum Creek Sta**	**51.93**	**73**	IAmb	IAmb	08 46 10.9			
	comp=Z,86nm,1.1s								
ACSO	**Alum Creek Sta**	**51.93**	**73**	P	**P**	**08 46 09.9**	**-0.7**		
	baz=316,SNR=15								
ACSO	**Alum Creek Sta**	**51.93**	**73**	P	**P**	**08 46 09.8**	**-0.7**		
	baz=316,SNR=15								
TRQ	**Mont Tremblant**	**51.98**	**62**	IAmb	IAmb	08 46 11.6			
	comp=Z,47nm,0.8s								
LATQ	**La Tuque**	**52.02**	**60**	IAmb	IAmb	08 46 11.7			
	comp=Z,48nm,0.8s								
J54A	**Appleton**	**52.03**	**67**	P	**P**	**08 46 11.2**	**+0.1**		
	baz=316,SNR=12								
J54A				P	**P**	**08 46 11.2**	**+0.1**		
	baz=316,SNR=12								
J54A				S	**S**	**08 53 16.8**	**-1.5**		
	baz=316								
J54A				S	**S**	**08 53 16.8**	**-1.5**		
	baz=316								
T47A	**Sharon Grove**	**52.06**	**78**	IAmb	IAmb	08 46 12.2			
	comp=Z,173nm,1.6s								
T47A	**Sharon Grove**	**52.06**	**78**	P	**P**	**08 46 10.9**	**-0.6**		
	baz=317,SNR=32								
T47A				S	**S**	**08 53 16.3**	**-2.6**		
	baz=317								
ERPA	**Erie**	**52.15**	**69**	IAmb	IAmb	08 46 12.6			
	comp=Z,52nm,0.6s								
ERPA	**Erie**	**52.15**	**69**	P	**P**	**08 46 12.0**	**-0.1**		
ERPA	baz=316			S	**S**	**08 53 19.5**	**-0.6**		
	baz=316								
ERPA	**Erie**	**52.15**	**69**	P	**P**	**08 46 11.8**	**-0.3**		
	baz=315								
R49A	**Shelbyville**	**52.16**	**76**	P	**P**	**08 46 11.4**	**-0.8**		
	baz=317,SNR=12								
R49A				P	**P**	**08 46 11.4**	**-0.8**		
	baz=317,SNR=12								
R49A				S	**S**	**08 53 17.9**	**-2.4**		
	baz=317								
R49A				S	**S**	**08 53 17.9**	**-2.4**		
	baz=317								
MEDO	**Medina**	**52.20**	**67**	IAmb	IAmb	08 46 13.6			
	comp=Z,104nm,1.0s								
735A	**Kenedy**	**52.22**	**94**	IAmb	IAmb	08 46 15.3			
	comp=Z,109nm,1.1s								
735A	**Kenedy**	**52.22**	**94**	P	**P**	**08 46 14.2**	**+1.4**		
	baz=321,SNR=11								
W45A	**Hickory Valley**	**52.26**	**82**	P	**P**	**08 46 12.9**	**-0.1**		
	baz=318,SNR=54								
W45A				S	**S**	**08 53 20.8**	**-1.0**		
	baz=318								
M53A	**WI Miller and**	**52.28**	**70**	IAmb	IAmb	08 46 13.9			
	comp=Z,98nm,0.8s								
M53A	**WI Miller and**	**52.28**	**70**	P	**P**	**08 46 12.8**	**-0.2**		
	baz=316,SNR=15								
WVT	**Waverly**	**52.29**	**80**	P	**P**	**08 46 13.0**	**-0.3**		
WVT				IAmb	IAmb	08 46 13.9			
	comp=Z,79nm,1.1s								
WVT	**Waverly**	**52.29**	**80**	P	**P**	**08 46 13.0**	**-0.3**		
WVT				pmax	pmax				
	comp=Z,79nm,1.2s								
WVT	**Waverly**	**52.29**	**80**	P	**P**	**08 46 12.9**	**-0.3**		
	baz=318,SNR=46								
WVT				S	**S**	**08 53 20.2**	**-1.9**		
	baz=318								
WVT	**Waverly**	**52.29**	**80**	P	**P**	**08 46 12.8**	**-0.4**		
	baz=317								
WVT	**Waverly**	**52.29**	**80**	P	**P**	**08 46 12.9**	**-0.4**		
WVT				pP	**pP**	**08 46 58.0**	**-0.7**		
WVT				sP	**PcP**	**08 47 21.8**	**+0.3**		
WVT				PP	**PP**	**08 48 13.6**	**0.0**		
WVT				ScP	**ScP**	**08 50 59.4**	**+0.9**		
PECO	**Prince Edward**	**52.39**	**65**	IAmb	IAmb	08 46 14.8			
	comp=Z,75nm,1.1s								
ALLY	**Alegheny Colle**	**52.41**	**69**	IAmb	IAmb	08 46 15.0			
	comp=Z,139nm,1.1s								
ALLY	**Alegheny Colle**	**52.41**	**69**	P	**P**	**08 46 14.0**	**0.0**		
	baz=316,SNR=6.4								
P51A	**Williamsport**	**52.43**	**73**	IAmb	IAmb	08 47 22.6			
	comp=Z,41nm,0.7s								
P51A	**Williamsport**	**52.43**	**73**	P	**P**	**08 46 13.2**	**-1.0**		
	baz=316								
P51A				P	**P**	**08 46 13.2**	**-1.0**		
	baz=316								
P51A				S	**S**	**08 53 21.3**	**-2.6**		
	baz=316								
P51A				S	**S**	**08 53 21.3**	**-2.6**		
	baz=316								
J55A	**Hilton**	**52.45**	**66**	IAmb	IAmb	08 46 15.3			
	comp=Z,85nm,0.8s								
J55A	**Hilton**	**52.45**	**66**	P	**P**	**08 46 14.3**	**+0.1**		
	baz=316,SNR=13								
J55A				P	**P**	**08 46 14.3**	**+0.1**		
	baz=316,SNR=13								
J55A				S	**S**	**08 53 23.6**	**-0.4**		
	baz=316								
J55A				S	**S**	**08 53 23.6**	**-0.4**		
	baz=316								
HKT	**Hockley**	**52.48**	**91**	P	**P**	**08 46 15.3**	**+0.7**		
HKT				IAmb	IAmb	08 46 16.8			
	comp=Z,93nm,1.5s								
HKT	**Hockley**	**52.48**	**91**	P	**P**	**08 46 15.3**	**+0.7**		
HKT				pmax	pmax				
	comp=Z,93nm,1.5s								
HKT	**Hockley**	**52.48**	**91**	P	**P**	**08 46 15.2**	**+0.6**		
	baz=320								
HKT	**Hockley**	**52.48**	**91**	P	**P**	**08 46 15.2**	**+0.6**		
HKT				pP	**pP**	**08 47 00.1**	**-0.1**		
HKT				sP	**PcP**	**08 47 21.7**	**-0.5**		
HKT				ScP	**ScP**	**08 51 01.7**	**+2.5**		
ZAK	**Zakamensk**	**52.58**	**307**	*e*P	**P**	**08 46 14.6**	**-0.6**		
ZAK				pmax	pmax				
	comp=Z,13nm,1.1s								
Q51A	**Peebles**	**52.61**	**74**	P	**P**	**08 46 15.1**	**-0.4**		
	baz=317,SNR=37								
Q51A				P	**P**	**08 46 15.1**	**-0.4**		
	baz=317,SNR=37								
Q51A				S	**S**	**08 53 24.3**	**-2.1**		
	baz=317								
Q51A				S	**S**	**08 53 24.3**	**-2.1**		
	baz=317								
OXF	**Oxford**	**52.62**	**82**	P	**P**	**08 46 15.3**	**-0.3**		
	baz=318,SNR=63								
OXF				S	**S**	**08 53 25.1**	**-1.4**		
	baz=318								
OXF	**Oxford**	**52.62**	**82**	P	**P**	**08 46 15.3**	**-0.3**		
	baz=318,SNR=63								
R50A	**Paris**	**52.62**	**75**	IAmb	IAmb	08 46 16.2			
	comp=Z,121nm,0.9s								
R50A	**Paris**	**52.62**	**75**	P	**P**	**08 46 15.2**	**-0.5**		
	baz=317,SNR=41								
R50A				P	**P**	**08 46 15.2**	**-0.5**		
	baz=317,SNR=41								
R50A				S	**S**	**08 53 24.2**	**-2.4**		
	baz=317								
R50A				S	**S**	**08 53 24.2**	**-2.4**		
	baz=317								
O52A	**Adamsville**	**52.62**	**72**	IAmb	IAmb	08 46 15.9			
	comp=Z,137nm,1.1s								
O52A	**Adamsville**	**52.62**	**72**	P	**P**	**08 46 14.8**	**-0.8**		
	baz=316,SNR=28								
O52A				P	**P**	**08 46 14.8**	**-0.8**		
	baz=316,SNR=28								
O52A				S	**S**	**08 53 23.3**	**-3.2**		
	baz=316								
O52A				S	**S**	**08 53 23.3**	**-3.2**		
	baz=316								
ULN	**Ulaanbaatar**	**52.64**	**302**	P	**P**	**08 46 16.1**	**+0.3**		
ULN	**Ulaanbaatar**	**52.64**	**302**	P	**P**	**08 46 16.1**	**+0.3**		
ULN				pmax	pmax				
	comp=Z,39nm,1.2s								
ULN	**Ulaanbaatar**	**52.64**	**302**	P	**P**	**08 46 16.1**	**+0.3**		
ULN				pP	**pP**	**08 47 02.8**	**+1.5**		
N53A	**Lisbon**	**52.65**	**71**	IAmb	IAmb	08 46 16.3			
	comp=Z,68nm,0.9s								
N53A	**Lisbon**	**52.65**	**71**	P	**P**	**08 46 15.1**	**-0.7**		
	baz=316,SNR=15								
N53A				P	**P**	**08 46 15.1**	**-0.7**		
	baz=316,SNR=15								
MOY	**Mondy**	**52.66**	**309**	*e*P	**P**	**08 46 16.9**	**+1.1**		
MOY				pmax	pmax				
	comp=Z,34nm,1.4s								
WVNY	**West Valley, N**	**52.66**	**68**	IAmb	IAmb	08 46 16.9			
	comp=Z,75nm,0.8s								
WVNY	**West Valley, N**	**52.66**	**68**	P	**P**	**08 46 15.5**	**-0.4**		
	baz=316,SNR=15								
WVNY				S	**S**	**08 53 26.7**	**-0.4**		
	baz=316								
P52A	**Corning**	**52.82**	**73**	IAmb	IAmb	08 46 17.6			
	comp=Z,79nm,1.3s								
P52A	**Corning**	**52.82**	**73**	P	**P**	**08 46 15.7**	**-1.3**		
	baz=316,SNR=12								
O53A	**New Philadelph**	**52.86**	**71**	IAmb	IAmb	08 46 17.5			
	comp=Z,53nm,1.0s								
O53A	**New Philadelph**	**52.86**	**71**	P	**P**	**08 46 16.3**	**-1.0**		
	baz=316,SNR=12								
143A	**Socs Landing,**	**52.86**	**85**	P	**P**	**08 46 17.8**	**+0.3**		
	baz=319,SNR=16								
143A				S	**S**	**08 53 30.1**	**+0.2**		
	baz=319								
J56A	**Wolcott**	**52.93**	**66**	IAmb	IAmb	08 46 18.7			
	comp=Z,88nm,0.8s								
J56A	**Wolcott**	**52.93**	**66**	P	**P**	**08 46 17.7**	**-0.1**		
	baz=316,SNR=15								
J56A				P	**P**	**08 46 17.7**	**-0.1**		
	baz=316,SNR=15								
J56A				S	**S**	**08 53 29.8**	**-0.8**		
	baz=316								
J56A				S	**S**	**08 53 29.8**	**-0.8**		
	baz=316								
SONM	**Songino Array**	**52.97**	**302**	P	**P**	**08 46 18.8**	**+0.6**		
	comp=Z,16nm,0.6s,baz=48,slow=7.4,SNR=117								
SONM				pP	**pP**	**08 47 05.0**	**+1.2**		
	comp=Z,26nm,0.7s,baz=47,slow=7.3,SNR=13								
SONM				PcP	**PcP**	**08 47 24.3**	**+0.3**		
	comp=Z,18nm,0.9s,baz=49,slow=2.7,SNR=7.3								
SONM				PP	**PP**	**08 48 16.6**	**-3.0**		
	comp=Z,8.0nm,0.8s,baz=63,slow=1.5,SNR=5.0								
SONM				ScP	**ScP**	**08 50 59.3**	**-2.1**		
	comp=Z,5.3nm,1.1s,baz=59,slow=3.7,SNR=6.3								
	comp=Z,16nm,0.6s								
SONM	**Songino Array**	**52.97**	**302**	IAmb	IAmb	08 47 06.8			
	comp=Z,87nm,1.4s								
BMNY	**Brushton-Moira**	**52.99**	**63**	P	**P**	**08 46 17.1**	**-1.1**		
	baz=316,SNR=11								
Y45A	**Yeager Farm, C**	**53.02**	**83**	P	**P**	**08 46 18.3**	**-0.3**		
	baz=318,SNR=23								
WCNY	**West Carthage**	**53.03**	**64**	P	**P**	**08 46 18.2**	**-0.3**		
	baz=316,SNR=31								
WCNY				S	**S**	**08 53 30.1**	**-1.9**		
	baz=316								
KWAJ	**Kwajalein Atol**	**53.09**	**219**	P	**P**	**08 46 20.6**	**+1.4**		
KWAJ	**Kwajalein Atol**	**53.09**	**219**	P	**P**	**08 46 20.6**	**+1.4**		
KWAJ				pmax	pmax				
	comp=Z,167nm,1.0s								
KWAJ	**Kwajalein Atol**	**53.09**	**219**	P	**P**	**08 46 20.8**	**+1.5**		
KWAJ	**Kwajalein Atol**	**53.09**	**219**	P	**P**	**08 46 20.6**	**+1.4**		
LONY	**Lake Ozonia**	**53.11**	**63**	P	**P**	**08 46 18.1**	**-1.0**		
	baz=316,SNR=11								
U49A	**Red Boiling Sp**	**53.13**	**78**	IAmb	IAmb	08 47 26.0			
	comp=Z,78nm,1.1s								
U49A	**Red Boiling Sp**	**53.13**	**78**	P	**P**	**08 46 18.7**	**-0.6**		
	baz=318,SNR=26								
V48A	**Smith Brothers**	**53.13**	**79**	P	**P**	**08 46 18.7**	**-0.7**		
	baz=318,SNR=17								
KVTX	**Kingsville**	**53.19**	**95**	P	**P**	**08 46 21.5**	**+1.7**		
	baz=322,SNR=5.8								
Q52A	**Bidwell**	**53.23**	**73**	IAmb	IAmb	08 46 20.1			
	comp=Z,77nm,1.3s								
Q52A	**Bidwell**	**53.23**	**73**	P	**P**	**08 46 18.9**	**-1.1**		
	baz=317,SNR=17								
Q52A				P	**P**	**08 46 18.9**	**-1.1**		
	baz=317,SNR=17								
M55A	**Ridgway**	**53.26**	**69**	IAmb	IAmb	08 46 20.7			
	comp=Z,51nm,0.8s								
M55A	**Ridgway**	**53.26**	**69**	P	**P**	**08 46 20.0**	**-0.2**		
	baz=316,SNR=26								
M55A				P	**P**	**08 46 20.0**	**-0.2**		
	baz=316,SNR=26								
M55A				S	**S**	**08 53 33.4**	**-1.7**		
	baz=316								
M55A				S	**S**	**08 53 33.4**	**-1.7**		
	baz=316								
HAMF	**Hammerfest**	**53.27**	**358**	*e*P	**P**	**08 46 19.4**	**-0.4**		
T50A	**Nancy**	**53.27**	**77**	P	**P**	**08 46 19.7**	**-0.6**		
	baz=318								
T50A				P	**P**	**08 46 19.7**	**-0.6**		
	baz=318								
T50A				S	**S**	**08 53 33.9**	**-1.4**		
	baz=318								
T50A				S	**S**	**08 53 33.9**	**-1.4**		
	baz=318								
J57A	**Williamstown**	**53.27**	**65**	IAmb	IAmb	08 46 21.1			
	comp=Z,71nm,0.9s								
J57A	**Williamstown**	**53.27**	**65**	P	**P**	**08 46 20.1**	**-0.2**		
	baz=316,SNR=21								
J57A				P	**P**	**08 46 20.1**	**-0.2**		
	baz=316,SNR=21								
UPAO	**U. Pittsburgh**	**53.31**	**70**	P	**P**	**08 46 20.0**	**-0.6**		
	baz=317								
P53A	**Whipple**	**53.32**	**72**	IAmb	IAmb	08 46 20.9			
	comp=Z,82nm,1.2s								
P53A	**Whipple**	**53.32**	**72**	P	**P**	**08 46 19.9**	**-0.7**		
	baz=317,SNR=16								
P53A				P	**P**	**08 46 19.9**	**-0.7**		
	baz=317,SNR=16								
441A	**DeRidder**	**53.35**	**88**	IAmb	IAmb	08 46 23.1			
	comp=Z,156nm,1.4s								
441A	**DeRidder**	**53.35**	**88**	P	**P**	**08 46 21.9**	**+0.9**		
	baz=320,SNR=7.4								
441A				S	**S**	**08 53 39.2**	**+2.8**		
	baz=320								
O54A	**Avella**	**53.35**	**71**	IAmb	IAmb	08 46 21.3			
	comp=Z,79nm,0.9s								
O54A	**Avella**	**53.35**	**71**	P	**P**	**08 46 20.2**	**-0.6**		
	baz=317,SNR=24								
O54A				P	**P**	**08 46 20.2**	**-0.6**		
	baz=317,SNR=24								
O54A				S	**S**	**08 53 34.2**	**-2.1**		
	baz=317								
O54A				S	**S**	**08 53 34.2**	**-2.1**		
	baz=317								
342B	**Flagon Creek P**	**53.35**	**87**	P	**P**	**08 46 21.6**	**+0.6**		
	baz=320,SNR=20								
L56A	**Greenwood**	**53.40**	**67**	P	**P**	**08 46 21.4**	**+0.2**		
	baz=316,SNR=64								
L56A				P	**P**	**08 46 21.4**	**+0.2**		
	baz=316,SNR=64								
L56A				S	**S**	**08 53 36.6**	**-0.3**		
	baz=316								
L56A				S	**S**	**08 53 36.6**	**-0.3**		
	baz=316								
FRNY	**Flat Rock**	**53.45**	**62**	P	**P**	**08 46 20.2**	**-1.4**		
	baz=316,SNR=19								
FRNY				S	**S**	**08 53 34.0**	**-3.5**		
	baz=316								
S51A	**Beattyville**	**53.49**	**75**	P	**P**	**08 46 21.2**	**-0.7**		
	baz=317,SNR=19								
S51A				P	**P**	**08 46 21.2**	**-0.7**		
	baz=317,SNR=19								
S51A				S	**S**	**08 53 36.9**	**-1.3**		
	baz=317								
S51A				S	**S**	**08 53 36.9**	**-1.3**		
	baz=317								
K57A	**Scipio Center**	**53.50**	**66**	IAmb	IAmb	08 46 22.8			
	comp=Z,107nm,1.2s								
K57A	**Scipio Center**	**53.50**	**66**	P	**P**	**08 46 21.7**	**-0.2**		
	baz=316,SNR=18								
K57A				S	**S**	**08 53 38.0**	**-0.3**		
	baz=316								
J58A	**Remsen**	**53.67**	**65**	IAmb	IAmb	08 46 24.1			
	comp=Z,75nm,0.8s								
J58A	**Remsen**	**53.67**	**65**	P	**P**	**08 46 23.1**	**0.0**		
	baz=316,SNR=50								
J58A				P	**P**	**08 46 23.1**	**0.0**		
	baz=316,SNR=50								
J58A				S	**S**	**08 53 38.1**	**-2.4**		
	baz=316								
VBMS	**Vicksburg**	**53.72**	**85**	P	**P**	**08 46 23.8**	**+0.2**		
	baz=319,SNR=14								
VBMS				S	**S**	**08 53 41.2**	**-0.2**		
	baz=319								
VBMS	**Vicksburg**	**53.72**	**85**	P	**P**	**08 46 23.7**	**+0.1**		
	baz=319,SNR=14								
NCB	**Newcomb**	**53.76**	**63**	P	**P**	**08 46 23.2**	**-0.6**		
	baz=316,SNR=13								
R53A	**Hurricane**	**53.86**	**73**	IAmb	IAmb	08 46 25.2			
	comp=Z,123nm,1.1s								
R53A	**Hurricane**	**53.86**	**73**	P	**P**	**08 46 24.0**	**-0.6**		
	baz=317,SNR=21								
R53A				P	**P**	**08 46 24.0**	**-0.6**		
	baz=317,SNR=21								
X48A	**Hartselle**	**53.97**	**80**	P	**P**	**08 46 24.3**	**-1.1**		
	baz=318,SNR=21								
Q54A	**Coxs Mills**	**53.98**	**72**	IAmb	IAmb	08 46 25.9			
	comp=Z,58nm,1.0s								
Q54A	**Coxs Mills**	**53.98**	**72**	P	**P**	**08 46 24.9**	**-0.6**		
	baz=317,SNR=19								
Q54A				P	**P**	**08 46 24.9**	**-0.6**		
	baz=317,SNR=19								
Q54A				S	**S**	**08 53 42.0**	**-2.8**		
	baz=317								
Q54A				S	**S**	**08 53 42.0**	**-2.8**		
	baz=317								
J59A	**Piesco**	**53.98**	**64**	P	**P**	**08 46 24.9**	**-0.6**		
	baz=317,SNR=18								
J59A				P	**P**	**08 46 24.9**	**-0.6**		
	baz=317,SNR=18								
J59A				S	**S**	**08 53 42.1**	**-2.7**		
	baz=317								
J59A				S	**S**	**08 53 42.1**	**-2.7**		
	baz=317								
SWET	**Sewanee**	**54.01**	**79**	IAmb	IAmb	08 46 25.9			
	comp=Z,140nm,1.7s								
MCWV	**Mont Chateau**	**54.01**	**71**	IAmb	IAmb	08 46 26.2			
	comp=Z,56nm,0.9s								
MCWV	**Mont Chateau**	**54.01**	**71**	P	**P**	**08 46 25.2**	**-0.5**		
	baz=317,SNR=6.2								
MCWV				S	**S**	**08 53 43.0**	**-2.1**		
	baz=317								
MCWV	**Mont Chateau**	**54.01**	**71**	P	**P**	**08 46 25.2**	**-0.5**		
	baz=317,SNR=6.2								
D62A	**Allapoint, All**	**54.01**	**58**	IAmb	IAmb	08 46 26.2			
	comp=Z,61nm,0.8s								
D62A	**Allapoint, All**	**54.01**	**58**	P	**P**	**08 46 25.1**	**-0.5**		
	baz=317,SNR=32								
D62A				P	**P**	**08 46 25.1**	**-0.5**		
	baz=317,SNR=32								
D62A				S	**S**	**08 53 41.8**	**-3.1**		
	baz=317								
D62A				S	**S**	**08 53 41.8**	**-3.1**		
	baz=317								
KEV	**Kevo**	**54.06**	**356**	P	**P**	**08 46 25.5**	**0.0**		
KEV				IAmb	IAmb	08 46 26.4			
	comp=Z,52nm,0.8s								
KEV	**Kevo**	**54.06**	**356**	P	**P**	**08 46 25.5**	**0.0**		
KEV				pmax	pmax				
	comp=Z,52nm,0.8s								
KEV	**Kevo**	**54.06**	**356**	P	**P**	**08 46 25.6**	**0.0**		
KEV				pP	**pP**	**08 47 11.4**	**+0.1**		
KEV				x	**PcP**	**08 47 26.9**	**-0.7**		
KEV				ScP	**ScP**	**08 51 02.8**	**-2.7**		
E62A	**Clayton Lake**	**54.12**	**58**	IAmb	IAmb	08 46 26.6			
	comp=Z,53nm,0.8s								
E62A	**Clayton Lake**	**54.12**	**58**	P	**P**	**08 46 25.7**	**-0.7**		
	baz=317,SNR=22								
E62A				P	**P**	**08 46 25.7**	**-0.7**		
	baz=317,SNR=22								
BINY	**Binghamton**	**54.16**	**66**	IAmb	IAmb	08 46 27.9			
	comp=Z,156nm,1.2s								
BINY	**Binghamton**	**54.16**	**66**	P	**P**	**08 46 26.9**	**+0.1**		
	baz=317,SNR=39								
BINY				S	**S**	**08 53 46.3**	**-0.8**		
	baz=317								
BINY	**Binghamton**	**54.16**	**66**	P	**P**	**08 46 26.9**	**+0.1**		
	baz=316,SNR=39								
344A	**Westbrook Farm**	**54.18**	**86**	P	**P**	**08 46 27.4**	**+0.4**		
	baz=320,SNR=7.1								
344A				S	**S**	**08 53 48.1**	**+0.5**		
	baz=320								
M57A	**Sunshine Farm,**	**54.20**	**68**	IAmb	IAmb	08 46 27.5			
	comp=Z,40nm,0.6s								
M57A	**Sunshine Farm,**	**54.20**	**68**	P	**P**	**08 46 26.9**	**-0.1**		
	baz=317,SNR=21								
M57A				P	**P**	**08 46 26.9**	**-0.1**		
	baz=317,SNR=21								
M57A				S	**S**	**08 53 46.7**	**-1.0**		
	baz=317								
M57A				S	**S**	**08 53 46.7**	**-1.0**		
	baz=317								
146A	**Union**	**54.21**	**84**	P	**P**	**08 46 27.1**	**-0.2**		
	baz=319,SNR=23								
146A				S	**S**	**08 53 47.3**	**-0.8**		
	baz=319								
XMAS	**Kiritimati**	**54.23**	**175**	P	**P**	**08 46 28.8**	**+1.3**		
SSPA	**Standing Stone**	**54.32**	**69**	P	**P**	**08 46 27.8**	**-0.1**		
SSPA				IAmb	IAmb	08 46 28.6			
	comp=Z,97nm,1.2s								
SSPA	**Standing Stone**	**54.32**	**69**	P	**P**	**08 46 27.5**	**-0.3**		
	baz=317,SNR=24								
SSPA				S	**S**	**08 53 48.2**	**-1.1**		
	baz=317								
SSPA	**Standing Stone**	**54.32**	**69**	P	**P**	**08 46 27.5**	**-0.3**		
	baz=317								
SSPA	**Standing Stone**	**54.32**	**69**	P	**P**	**08 46 27.6**	**-0.3**		
SSPA				pP	**pP**	**08 47 13.9**	**+0.2**		
SSPA				x	**PcP**	**08 47 29.5**	**+0.4**		
SSPA				sP	**sP**	**08 47 35.7**	**-0.7**		
SSPA				ScP	**ScP**	**08 51 07.0**	**-0.2**		
TZTN	**Tazewell**	**54.32**	**76**	IAmb	IAmb	08 46 28.7			
	comp=Z,65nm,1.1s								
TZTN	**Tazewell**	**54.32**	**76**	P	**P**	**08 46 27.5**	**-0.5**		
	baz=318,SNR=20								
TZTN				S	**S**	**08 53 48.4**	**-1.1**		
	baz=318								
TZTN	**Tazewell**	**54.32**	**76**	P	**P**	**08 46 27.8**	**-0.2**		
	baz=318,SNR=20								
ARA0	**ARCESS Array S**	**54.33**	**357**	‖ *i* P	**P**	**08 46 27.1**	**-0.4**		
ARCES	**ARCESS Array B**	**54.33**	**357**	P	**P**	**08 46 27.3**	**-0.2**		
	comp=Z,27nm,0.8s,baz=25,slow=7.2,SNR=127								
ARCES				pP	**pP**	**08 47 13.4**	**0.0**		
	comp=Z,25nm,0.8s,baz=8.9,slow=8.6,SNR=7.3								
ARCES				PcP	**PcP**	**08 47 29.0**	**+0.3**		
	comp=Z,17nm,0.7s,baz=2.7,slow=5.2,SNR=7.9								
ARCES				ScP	**ScP**	**08 51 04.2**	**-2.6**		
	comp=Z,5.1nm,0.8s,baz=20,slow=6.1,SNR=5.1								
ARCES				PKPPKP	**P'P'df**	**09 16 37.0**	**-4.0**		
	comp=Z,1.9nm,1.0s,baz=168,slow=4.6,SNR=3.9								
	comp=Z,27nm,0.8s								

S54A				S	**S**	**08 53 51.3**	**-1.8**		
	baz=318								
HCNY	**Howe Caverns**	**54.60**	**65**	P	**P**	**08 46 29.8**	**0.0**		
	baz=317,SNR=41								
L59A	**Walton**	**54.64**	**65**	P	**P**	**08 46 30.5**	**+0.2**		
	baz=317,SNR=90								
L59A				P	**P**	**08 46 30.5**	**+0.2**		
	baz=317,SNR=90								
L59A				S	**S**	**08 53 53.4**	**-0.3**		
	baz=317								
L59A				S	**S**	**08 53 53.4**	**-0.3**		
	baz=317								
G62A	**West of Eustis**	**54.66**	**60**	IAmb	IAmb	08 46 30.9			
	comp=Z,74nm,0.8s								
G62A	**West of Eustis**	**54.66**	**60**	P	**P**	**08 46 29.9**	**-0.4**		
	baz=317,SNR=30								
G62A				P	**P**	**08 46 29.9**	**-0.4**		
	baz=317,SNR=30								
G62A				S	**S**	**08 53 51.6**	**-2.1**		
	baz=317								
G62A				S	**S**	**08 53 51.6**	**-2.1**		
	baz=317								
FPAL	**Fort Paine**	**54.69**	**79**	IAmb	IAmb	08 46 30.3			
	comp=Z,65nm,0.6s								
LBNH	**Lisbon**	**54.70**	**62**	P	**P**	**08 46 29.9**	**-0.7**		
	baz=317,SNR=15								
LBNH	**Lisbon**	**54.70**	**62**	P	**P**	**08 46 30.0**	**-0.5**		
	baz=317,SNR=15								
KSPA	**Keystone Colle**	**54.73**	**66**	IAmb	IAmb	08 46 31.9			
	comp=Z,67nm,1.1s								
KSPA	**Keystone Colle**	**54.73**	**66**	P	**P**	**08 46 30.9**	**0.0**		
	baz=317,SNR=24								
KSPA				S	**S**	**08 53 53.4**	**-1.4**		
	baz=317								
Y49A	**Blount Mountai**	**54.76**	**80**	IAmb	IAmb	08 46 30.5			
	comp=Z,38nm,0.6s								
Y49A	**Blount Mountai**	**54.76**	**80**	P	**P**	**08 46 29.9**	**-1.2**		
	baz=319,SNR=20								
N58A	**Sunbury**	**54.77**	**68**	P	**P**	**08 46 30.9**	**-0.3**		
	baz=317,SNR=13								
N58A				P	**P**	**08 46 30.9**	**-0.3**		
	baz=317,SNR=13								
N58A				S	**S**	**08 53 54.7**	**-0.6**		
	baz=317								
N58A				S	**S**	**08 53 54.7**	**-0.6**		
	baz=317								
E63A	**Oxbow**	**54.79**	**58**	P	**P**	**08 46 30.1**	**-1.0**		
	baz=317,SNR=21								
E63A				P	**P**	**08 46 30.1**	**-1.0**		
	baz=317,SNR=21								
Q56A	**Snyder Ridge,**	**54.81**	**71**	IAmb	IAmb	08 47 32.2			
	comp=Z,48nm,0.7s								
Q56A	**Snyder Ridge,**	**54.81**	**71**	P	**P**	**08 46 30.9**	**-0.6**		
	baz=318,SNR=11								
Q56A				P	**P**	**08 46 30.9**	**-0.6**		
	baz=318,SNR=11								
Q56A				S	**S**	**08 53 52.7**	**-3.2**		
	baz=318								
Q56A				S	**S**	**08 53 52.7**	**-3.2**		
	baz=318								
V52A	**Sevierville**	**54.81**	**77**	IAmb	IAmb	08 46 32.1			
	comp=Z,53nm,1.1s								
V52A	**Sevierville**	**54.81**	**77**	P	**P**	**08 46 31.0**	**-0.6**		
	baz=318,SNR=18								
V52A				S	**S**	**08 53 54.5**	**-1.6**		
	baz=318								
H62A	**Milan**	**54.83**	**61**	IAmb	IAmb	08 46 32.0			
	comp=Z,75nm,0.8s								
H62A	**Milan**	**54.83**	**61**	P	**P**	**08 46 31.0**	**-0.6**		
	baz=317,SNR=28								
H62A				P	**P**	**08 46 31.0**	**-0.6**		
	baz=317,SNR=28								
TKL	**Tuckaleechee C**	**54.85**	**77**	IAmb	IAmb	08 47 32.2			
	comp=Z,30nm,0.6s								
TKL	**Tuckaleechee C**	**54.85**	**77**	P	**P**	**08 46 31.1**	**-0.7**		
	baz=318,SNR=19								
TKL				S	**S**	**08 53 54.5**	**-2.1**		
	baz=318								
KTK1	**Kautokeino**	**54.91**	**358**	⇓*i* P	**P**	**08 46 31.4**	**-0.4**		
KNGR	**Kungurtug, Tuv**	**54.93**	**310**	*i* P	**P**	**08 46 33.4**	**+1.1**		
346A	**Big Creek Wild**	**54.93**	**85**	IAmb	IAmb	08 46 32.9			
	comp=Z,58nm,0.8s								
346A	**Big Creek Wild**	**54.93**	**85**	P	**P**	**08 46 32.3**	**-0.1**		
	baz=320,SNR=5.6								
TRY	**Troy**	**54.94**	**64**	P	**P**	**08 46 32.0**	**-0.2**		
	baz=317								
F63A	**Nahmakanta, Br**	**54.99**	**59**	IAmb	IAmb	08 46 32.9			
	comp=Z,61nm,0.7s								
F63A	**Nahmakanta, Br**	**54.99**	**59**	P	**P**	**08 46 31.9**	**-0.8**		
	baz=317,SNR=30								
F63A				P	**P**	**08 46 31.9**	**-0.8**		
	baz=317,SNR=30								
J61A	**Chester**	**55.04**	**63**	P	**P**	**08 46 32.8**	**-0.3**		
	baz=317,SNR=15								
J61A				P	**P**	**08 46 32.8**	**-0.3**		
	baz=317,SNR=15								
LRAL	**Lakeview Retre**	**55.05**	**82**	P	**P**	**08 46 31.8**	**-1.4**		
	baz=319,SNR=18								
LRAL	**Lakeview Retre**	**55.05**	**82**	P	**P**	**08 46 31.8**	**-1.4**		
	baz=319,SNR=18								
X51A	**Calhoun**	**55.08**	**79**	IAmb	IAmb	08 46 33.8			
	comp=Z,57nm,1.1s								
X51A	**Calhoun**	**55.08**	**79**	P	**P**	**08 46 32.5**	**-0.9**		
	baz=319,SNR=13								
X51A				P	**P**	**08 46 32.5**	**-0.9**		
	baz=319,SNR=13								
X51A				S	**S**	**08 53 57.5**	**-2.0**		
	baz=319								
X51A				S	**S**	**08 53 57.5**	**-2.0**		
	baz=319								
P57A	**Homestead Farm**	**55.10**	**70**	IAmb	IAmb	08 46 33.7			
	comp=Z,31nm,0.7s								
P57A	**Homestead Farm**	**55.10**	**70**	P	**P**	**08 46 33.1**	**-0.3**		
	baz=318,SNR=18								
P57A				P	**P**	**08 46 33.1**	**-0.3**		
	baz=318,SNR=18								
W52A	**Murphy**	**55.19**	**78**	IAmb	IAmb	08 46 34.6			
	comp=Z,96nm,1.4s								
W52A	**Murphy**	**55.19**	**78**	P	**P**	**08 46 33.5**	**-0.8**		
	baz=319,SNR=21								
PKME	**Peaks-Kenny Pk**	**55.22**	**59**	IAmb	IAmb	08 46 34.7			
	comp=Z,48nm,0.8s								
PKME	**Peaks-Kenny Pk**	**55.22**	**59**	P	**P**	**08 46 33.6**	**-0.7**		
	baz=317,SNR=16								
PKME	**Peaks-Kenny Pk**	**55.22**	**59**	P	**P**	**08 46 33.1**	**-1.2**		
	baz=317,SNR=16								
F64A	**Sherman**	**55.23**	**58**	IAmb	IAmb	08 46 34.5			
	comp=Z,66nm,0.8s								
F64A	**Sherman**	**55.23**	**58**	P	**P**	**08 46 33.5**	**-0.8**		
	baz=318,SNR=26								
F64A				P	**P**	**08 46 33.5**	**-0.8**		
	baz=318,SNR=26								
F64A				S	**S**	**08 53 57.2**	**-4.0**		
	baz=318								
F64A				S	**S**	**08 53 57.2**	**-4.0**		
	baz=318								
BATG	**Bathurst New B**	**55.26**	**56**	IAmb	IAmb	08 46 35.2			
	comp=Z,94nm,1.0s								
U54A	**Nelsons Funny**	**55.27**	**75**	IAmb	IAmb	08 46 35.9			
	comp=Z,95nm,1.2s								
U54A	**Nelsons Funny**	**55.27**	**75**	P	**P**	**08 46 34.7**	**-0.1**		
	baz=318,SNR=17								
U54A				P	**P**	**08 46 34.7**	**-0.1**		
	baz=318,SNR=17								
U54A				S	**S**	**08 54 00.8**	**-1.4**		
	baz=318								
U54A				S	**S**	**08 54 00.8**	**-1.4**		
	baz=318								
V53A	**Saluda**	**55.37**	**76**	P	**P**	**08 46 35.1**	**-0.4**		
	baz=318,SNR=20								
V53A				P	**P**	**08 46 35.1**	**-0.4**		
	baz=318,SNR=20								
NPNY	**Mohonk Preserv**	**55.42**	**65**	P	**P**	**08 46 35.7**	**0.0**		
	baz=318,SNR=22								
LVZ	**Lovozero**	**55.49**	**353**	P	**P**	**08 46 35.9**	**0.0**		
LVZ				IAmb	IAmb	08 46 36.9			
	comp=Z,87nm,0.9s								
LVZ	**Lovozero**	**55.49**	**353**	*ce*P	**P**	**08 46 35.8**	**0.0**		
LVZ				pmax	pmax				
	comp=Z,99nm,0.9s								
LVZ	**Lovozero**	**55.49**	**353**	P	**P**	**08 46 35.9**	**0.0**		
LVZ				pP	**pP**	**08 47 22.3**	**+0.4**		
LVZ				x	x	08 47 37.3			
I63A	**Otisfield**	**55.49**	**61**	IAmb	IAmb	08 46 37.0			
	comp=Z,36nm,0.8s								
I63A	**Otisfield**	**55.49**	**61**	P	**P**	**08 46 35.9**	**-0.3**		
	baz=318,SNR=9.7								
I63A				P	**P**	**08 46 35.9**	**-0.3**		
	baz=318,SNR=9.7								
BLA	**Blacksburg**	**55.51**	**73**	IAmb	IAmb	08 46 37.2			
	comp=Z,77nm,1.1s								
BLA	**Blacksburg**	**55.51**	**73**	P	**P**	**08 46 36.2**	**-0.3**		
	baz=318,SNR=18								
BLA	**Blacksburg**	**55.51**	**73**	P	**P**	**08 46 36.1**	**-0.3**		
	baz=318,SNR=18								
HHC	**Hu-ho-hao-te**	**55.51**	**293**	*e*P	**P**	**08 46 37.3**	**+0.8**		
HHC				S	**S**	**08 54 02.3**	**-3.0**		
HHC				sS	sS	08 55 21.5	-4.3		
HHC				pmax	pmax				
	comp=Z,42nm,1.1s								
HHC				pmax	pmax				
	comp=Z,150nm,6.7s								
HHC				LR	LR				
	comp=Z,300nm,15.2s								
HHC				LR	LR				
	comp=Z,370nm,14.6s								
HHC				LR	LR				
	comp=Z,410nm,15.2s								
WVL	**Waterville**	**55.56**	**60**	IAmb	IAmb	08 46 36.9			
	comp=Z,50nm,1.0s								
WVL	**Waterville**	**55.56**	**60**	P	**P**	**08 46 35.8**	**-0.9**		
	baz=318,SNR=12								
ODNJ	**Ogdensburg**	**55.68**	**66**	P	**P**	**08 46 37.4**	**-0.2**		
	baz=318,SNR=32								
K62A	**Royalston**	**55.70**	**63**	IAmb	IAmb	08 46 38.5			
	comp=Z,58nm,0.8s								
K62A	**Royalston**	**55.70**	**63**	P	**P**	**08 46 37.5**	**-0.2**		
	baz=318,SNR=20								
K62A				P	**P**	**08 46 37.5**	**-0.2**		
	baz=318,SNR=20								
BRNY	**Black Rk. Fore**	**55.73**	**65**	P	**P**	**08 46 38.0**	**0.0**		
	baz=318,SNR=34								
BRNY				S	**S**	**08 54 08.4**	**+0.3**		
	baz=318								
KSCT	**Kent School, K**	**55.77**	**65**	IAmb	IAmb	08 46 39.4			
	comp=Z,100nm,1.3s								
BG3	**Lake Jocassee**	**55.81**	**77**	IAmb	IAmb	08 47 36.9			
	comp=Z,75nm,1.0s								
CASEE	**Lake Jocassee**	**55.81**	**77**	P	**P**	**08 46 38.2**	**-0.5**		
	baz=319,SNR=12								
LOF	**Lofoten**	**55.81**	**2**	*e*P	**P**	**08 46 37.9**	**-0.2**		
TRNY	**Table Rock, Ra**	**55.82**	**66**	IAmb	IAmb	08 46 39.5			
	comp=Z,51nm,0.8s								
Z51A	**Franklin**	**55.84**	**80**	IAmb	IAmb	08 46 37.9			
	comp=Z,46nm,0.5s								
Z51A	**Franklin**	**55.84**	**80**	P	**P**	**08 46 37.4**	**-1.5**		
	baz=319,SNR=9.9								
S57A	**Dark Hollow, R**	**55.88**	**72**	IAmb	IAmb	08 46 40.0			
	comp=Z,53nm,1.2s								
S57A	**Dark Hollow, R**	**55.88**	**72**	P	**P**	**08 46 38.9**	**-0.2**		
	baz=318,SNR=13								
S57A				P	**P**	**08 46 38.9**	**-0.2**		
	baz=318,SNR=13								
S57A				S	**S**	**08 54 09.3**	**-0.8**		
	baz=318								
S57A				S	**S**	**08 54 09.3**	**-0.8**		
	baz=318								
APA	**Apatity**	**55.90**	**353**	⇓*i* P	**P**	**08 46 37.2**	**-1.6**		
APA				*i* *PP	**pP**	**08 47 24.3**	**-0.5**		
APA				pmax	pmax				
	comp=Z,15nm,0.8s								
QUA2	**Belchertown**	**55.93**	**64**	P	**P**	**08 46 38.8**	**-0.5**		
	baz=318,SNR=7.2								
BRNJ	**Basking Ridge**	**55.99**	**66**	P	**P**	**08 46 39.9**	**+0.1**		
	baz=318,SNR=16								
BRNJ				S	**S**	**08 54 12.2**	**+0.7**		
	baz=318								
TIA	**Tai'an**	**56.03**	**286**	⇓P	**P**	**08 46 39.8**	**-0.4**		
TIA				pmax	pmax				
	comp=Z,15nm,1.2s								
STEI	**Steigen**	**56.04**	**1**	⇓*i* P	**P**	**08 46 39.5**	**-0.2**		
Y52A	**Lilburn**	**56.04**	**79**	IAmb	IAmb	08 46 40.5			
	comp=Z,79nm,1.4s								
Y52A	**Lilburn**	**56.04**	**79**	P	**P**	**08 46 39.3**	**-1.0**		
	baz=319,SNR=12								
Y52A				P	**P**	**08 46 39.3**	**-1.0**		
	baz=319,SNR=12								
TUPA	**Temple Univers**	**56.06**	**67**	P	**P**	**08 46 40.0**	**-0.2**		
	baz=318,SNR=20								
UNH	**University of**	**56.06**	**62**	P	**P**	**08 46 39.7**	**-0.6**		
	baz=318,SNR=7.8								
PAL	**Palisades**	**56.09**	**66**	IAmb	IAmb	08 46 41.5			
	comp=Z,78nm,0.8s								
PAL	**Palisades**	**56.09**	**66**	P	**P**	**08 46 40.5**	**0.0**		
	baz=318,SNR=12								
PAL				S	**S**	**08 54 12.9**	**+0.2**		
	baz=318								
PAL	**Palisades**	**56.09**	**66**	P	**P**	**08 46 40.2**	**-0.3**		
	baz=318,SNR=12								
GEDE	**Greenville**	**56.09**	**68**	P	**P**	**08 46 39.9**	**-0.6**		
	baz=318								
V55A	**Taylorsville**	**56.09**	**75**	IAmb	IAmb	08 46 41.4			
	comp=Z,50nm,0.9s								
V55A	**Taylorsville**	**56.09**	**75**	P	**P**	**08 46 40.3**	**-0.3**		
	baz=319,SNR=21								
V55A				P	**P**	**08 46 40.3**	**-0.3**		
	baz=319,SNR=21								
V55A				S	**S**	**08 54 11.5**	**-1.5**		
	baz=319								
V55A				S	**S**	**08 54 11.5**	**-1.5**		
	baz=319								
G65A	**Princeton**	**56.09**	**58**	IAmb	IAmb	08 46 40.8			
	comp=Z,42nm,0.8s								
G65A	**Princeton**	**56.09**	**58**	P	**P**	**08 46 39.8**	**-0.7**		
	baz=318,SNR=13								
G65A				P	**P**	**08 46 39.8**	**-0.7**		
	baz=318,SNR=13								
PANJ	**Princeton**	**56.15**	**67**	P	**P**	**08 46 40.5**	**-0.4**		
	baz=318,SNR=9.2								
PANJ				S	**S**	**08 54 13.5**	**-0.1**		
	baz=318								
HRV	**Adam Dziewonsk**	**56.16**	**63**	P	**P**	**08 46 40.5**	**-0.4**		
HRV	**Adam Dziewonsk**	**56.16**	**63**	P	**P**	**08 46 40.5**	**-0.4**		
HRV				pmax	pmax				
	comp=Z,62nm,1.5s								
HRV	**Adam Dziewonsk**	**56.16**	**63**	P	**P**	**08 46 40.6**	**-0.4**		
	baz=318								
HRV	**Adam Dziewonsk**	**56.16**	**63**	P	**P**	**08 46 40.6**	**-0.4**		
	baz=318								
HRV	**Adam Dziewonsk**	**56.16**	**63**	P	**P**	**08 46 40.4**	**-0.6**		
HRV				pP	**pP**	**08 47 26.6**	**-0.5**		
HRV				x	**PcP**	**08 47 36.3**	**+0.1**		
U56A	**King**	**56.17**	**74**	IAmb	IAmb	08 46 41.9			
	comp=Z,102nm,1.2s								
U56A	**King**	**56.17**	**74**	P	**P**	**08 46 40.9**	**-0.3**		
	baz=319,SNR=13								
U56A				P	**P**	**08 46 40.9**	**-0.3**		
	baz=319,SNR=13								
U56A				S	**S**	**08 54 12.4**	**-1.5**		
	baz=319								
U56A				S	**S**	**08 54 12.4**	**-1.5**		
	baz=319								
FOR	**Fordham**	**56.20**	**66**	P	**P**	**08 46 41.3**	**0.0**		
	baz=318,SNR=15								
FOR				S	**S**	**08 54 15.2**	**+1.0**		
	baz=318								
250A	**Grady**	**56.25**	**82**	IAmb	IAmb	08 46 41.2			
	comp=Z,42nm,0.8s								
250A	**Grady**	**56.25**	**82**	P	**P**	**08 46 40.7**	**-1.1**		
	baz=320,SNR=19								
T57A	**Hurt**	**56.28**	**73**	IAmb	IAmb	08 46 42.4			
	comp=Z,43nm,0.9s								
T57A	**Hurt**	**56.28**	**73**	P	**P**	**08 46 41.4**	**-0.5**		
	baz=318,SNR=14								
T57A				P	**P**	**08 46 41.4**	**-0.5**		
	baz=318,SNR=14								
R58B	**Mineral**	**56.29**	**71**	P	**P**	**08 46 41.7**	**-0.3**		
	baz=318,SNR=13								
R58B				P	**P**	**08 46 41.7**	**-0.3**		
	baz=318,SNR=13								
R58B				S	**S**	**08 54 15.0**	**-0.5**		
	baz=318								
R58B				S	**S**	**08 54 15.0**	**-0.5**		
	baz=318								
YLE	**Yale**	**56.35**	**65**	IAmb	IAmb	08 46 43.6			
	comp=Z,45nm,0.8s								
WES	**Weston**	**56.36**	**63**	IAmb	IAmb	08 46 43.0			
	comp=Z,54nm,0.8s								
WES	**Weston**	**56.36**	**63**	P	**P**	**08 46 42.1**	**-0.3**		
	baz=318,SNR=16								
N62A	**Caumsett State**	**56.37**	**65**	P	**P**	**08 46 42.3**	**-0.1**		
	baz=318,SNR=7.4								
N62A				P	**P**	**08 46 42.3**	**-0.1**		
	baz=318,SNR=7.4								
N62A				S	**S**	**08 54 16.6**	**+0.2**		
	baz=318								
N62A				S	**S**	**08 54 16.6**	**+0.2**		
	baz=318								
CBN	**Corbin Frederi**	**56.38**	**70**	P	**P**	**08 46 41.8**	**-0.7**		
	baz=318								
HNS	**HongShan**	**56.43**	**288**	⇓P	**P**	**08 46 43.5**	**+0.6**		
HNS				pP	**pP**	**08 47 31.0**	**+1.9**		
HNS				PcP	**PcP**	**08 47 34.0**	**-3.3**		
HNS				S	**S**	**08 54 16.8**	**-0.5**		
HNS				SS	**SS**	**08 58 08.5**	**+1.5**		
HNS				pmax	pmax				
	comp=Z,46nm,0.8s								
HNS				LR	LR				
	comp=Z,250nm,22.3s								
HNS				LR	LR				
	comp=Z,380nm,22.3s								
HNS				LR	LR				
	comp=Z,230nm,24.0s								
BRAL	**Brewton**	**56.44**	**83**	P	**P**	**08 46 42.9**	**-0.2**		
	baz=320,SNR=9.8								
BRAL	**Brewton**	**56.44**	**83**	P	**P**	**08 46 42.8**	**-0.3**		
	baz=320,SNR=9.8								
BCX	**Boston College**	**56.48**	**63**	IAmb	IAmb	08 47 31.0			
	comp=Z,122nm,1.8s								
GGN	**Saint George**	**56.49**	**58**	IAmb	IAmb	08 46 43.5			
	comp=Z,38nm,0.8s								
EMMW	**East Machias**	**56.51**	**58**	IAmb	IAmb	08 46 43.6			
	comp=Z,62nm,0.7s								
PAULI	**Pauline**	**56.54**	**76**	IAmb	IAmb	08 47 39.1			
	comp=Z,61nm,1.3s								
PAULI	**Pauline**	**56.54**	**76**	P	**P**	**08 46 43.1**	**-0.7**		
	baz=319								
KMSC	**Kings Mountain**	**56.56**	**76**	IAmb	IAmb	08 46 44.3			
	comp=Z,78nm,1.1s								
KMSC	**Kings Mountain**	**56.56**	**76**	P	**P**	**08 46 43.4**	**-0.6**		
	baz=319,SNR=20								
KMSC	**Kings Mountain**	**56.56**	**76**	P	**P**	**08 46 43.1**	**-0.9**		
	baz=319,SNR=20								
152A	**Waverly Hall**	**56.58**	**80**	P	**P**	**08 46 42.3**	**-1.8**		
	baz=320,SNR=12								
FAUS	**Fauske**	**56.59**	**1**	⇓*i* P	**P**	**08 46 43.5**	**-0.1**		
BRYW	**Bryant College**	**56.60**	**63**	IAmb	IAmb	08 46 44.2			
	comp=Z,37nm,0.7s								
GOGA	**Godfrey**	**56.71**	**79**	P	**P**	**08 46 43.5**	**-1.5**		
	baz=319,SNR=13								
GOGA	**Godfrey**	**56.71**	**79**	P	**P**	**08 46 43.4**	**-1.5**		
	baz=319,SNR=13								
M63A	**Gales Ferry**	**56.73**	**64**	IAmb	IAmb	08 46 45.7			
	comp=Z,102nm,1.1s								
M63A	**Gales Ferry**	**56.73**	**64**	P	**P**	**08 46 44.7**	**-0.3**		
	baz=318,SNR=13								
M63A				P	**P**	**08 46 44.7**	**-0.3**		
	baz=318,SNR=13								
HODGE	**Hodges**	**56.74**	**77**	IAmb	IAmb	08 46 45.4			
	comp=Z,74nm,1.3s								
HODGE	**Hodges**	**56.74**	**77**	P	**P**	**08 46 44.3**	**-0.9**		
	baz=319,SNR=23								
T59A	**Double "B" Far**	**57.21**	**71**	IAmb	IAmb	08 46 49.3			
	comp=Z,55nm,1.1s								
T59A	**Double "B" Far**	**57.21**	**71**	P	**P**	**08 46 48.3**	**-0.1**		
	baz=319,SNR=19								
T59A				P	**P**	**08 46 48.3**	**-0.1**		
	baz=319,SNR=19								
T59A				S	**S**	**08 54 26.3**	**-1.2**		
	baz=319								
T59A				S	**S**	**08 54 26.3**	**-1.2**		
	baz=319								
JSC	**Jenkinsville**	**57.25**	**76**	IAmb	IAmb	08 46 49.0			
	comp=Z,64nm,1.3s								
JSC	**Jenkinsville**	**57.25**	**76**	P	**P**	**08 46 47.8**	**-1.0**		
	baz=319,SNR=18								
V58A	**Windy Hill, Pi**	**57.26**	**73**	IAmb	IAmb	08 46 49.6			
	comp=Z,98nm,1.0s								
V58A	**Windy Hill, Pi**	**57.26**	**73**	P	**P**	**08 46 48.4**	**-0.4**		
	baz=319,SNR=23								
V58A				P	**P**	**08 46 48.4**	**-0.4**		
	baz=319,SNR=23								
V58A				S	**S**	**08 54 26.4**	**-1.8**		
	baz=319								
V58A				S	**S**	**08 54 26.4**	**-1.8**		
	baz=319								
W57A	**Gilead**	**57.27**	**75**	IAmb	IAmb	08 46 48.8			
	comp=Z,32nm,0.8s								
W57A	**Gilead**	**57.27**	**75**	P	**P**	**08 46 48.1**	**-0.8**		
	baz=319,SNR=16								
W57A				P	**P**	**08 46 48.1**	**-0.8**		
	baz=319,SNR=16								
ZALV	**Zalesovo Beam**	**57.35**	**320**	P	**P**	**08 46 49.5**	**+0.4**		
	comp=Z,8.0nm,0.3s,baz=24,slow=6.4,SNR=59								
ZALV				pP	**pP**	**08 47 37.4**	**+1.9**		
	comp=Z,10.0nm,0.7s,baz=42,slow=4.0,SNR=1.8								
ZALV				ScP	**ScP**	**08 51 19.2**	**-1.2**		
	comp=Z,3.4nm,0.9s,baz=49,slow=4.9,SNR=4.2								
	comp=Z,8.0nm,0.3s								
ZALV	**Zalesovo Beam**	**57.35**	**320**	*i* P	**P**	**08 46 49.5**	**+0.4**		
ZALV				pmax	pmax				
	comp=Z,15nm,0.6s								
352A	**Blakely**	**57.37**	**81**	P	**P**	**08 46 48.0**	**-1.6**		
	baz=320,SNR=7.2								
BIRD	**Birdtown, Kers**	**57.41**	**75**	IAmb	IAmb	08 46 50.2			
	comp=Z,46nm,1.0s								
BIRD	**Birdtown, Kers**	**57.41**	**75**	P	**P**	**08 46 49.1**	**-0.8**		
	baz=319,SNR=13								
KONS	**Konsvik**	**57.44**	**2**	*e*P	**P**	**08 46 49.8**	**+0.2**		
154A	**Montrose**	**57.51**	**79**	IAmb	IAmb	08 46 50.0			
	comp=Z,65nm,1.0s								
154A	**Montrose**	**57.51**	**79**	P	**P**	**08 46 49.2**	**-1.3**		
	baz=320,SNR=9.1								
T60A	**Surry**	**57.51**	**71**	IAmb	IAmb	08 46 51.2			
	comp=Z,79nm,0.8s								
T60A	**Surry**	**57.51**	**71**	P	**P**	**08 46 50.2**	**-0.3**		
	baz=319,SNR=7.8								
T60A				P	**P**	**08 46 50.2**	**-0.3**		
	baz=319,SNR=7.8								
DRLN	**Deer Lake**	**57.52**	**49**	IAmb	IAmb	08 46 50.7			
	comp=Z,35nm,0.8s								
U59A	**Littleton**	**57.55**	**72**	IAmb	IAmb	08 46 51.7			
	comp=Z,110nm,1.7s								
U59A	**Littleton**	**57.55**	**72**	P	**P**	**08 46 50.6**	**-0.2**		
	baz=319,SNR=9.2								
U59A				P	**P**	**08 46 50.6**	**-0.2**		
	baz=319,SNR=9.2								
STOK	**Stokkvaagen**	**57.60**	**2**	*e*P	**P**	**08 46 51.2**	**+0.5**		
HAW	**Hawthorne Fire**	**57.76**	**77**	P	**P**	**08 46 51.3**	**-1.0**		
	baz=320,SNR=7.2								
MOR8	**Moi Rana**	**57.79**	**2**	⇓*i* P	**P**	**08 46 50.8**	**-1.3**		
Y57A	**Sumter**	**57.92

	comp=Z,30nm,1.1s								
656A	**Willston**	**60.31**	**81**		IAmb	IAmb	08 47 10.4		
	comp=Z,111nm,1.4s								
PRGR	**Permogore**	**60.42**	**345**	⇓	*i*P	**P**	**08 47 10.5**	**+0.4**	
PRGR					*e*		08 47 56.5		
PRGR					*e*S	**S**	**08 55 07.5**	**-0.6**	
TBLU	**Trondheim**	**60.60**	**4**		*e*P	**P**	**08 47 10.6**	**-0.7**	
MOL	**Molde**	**61.15**	**6**	⇓	*i*P	**P**	**08 47 15.3**	**+0.3**	
AKN	**Aaknes**	**61.51**	**6**	⇓	*i*P	**P**	**08 47 18.2**	**+0.7**	
DOMB	**Dombas**	**61.76**	**5**	⇓	*i*P	**P**	**08 47 19.1**	**0.0**	
YOJ	**Yonaguni jima**	**61.82**	**272**		P	**P**	**08 47 18.7**	**-1.4**	
WHN	**Wuhan**	**61.84**	**283**	⇑	P	**P**	**08 47 20.0**	**-0.1**	
WHN					pmax	pmax			
	comp=Z,60nm,1.0s								
SEM	**Semipalatinsk**	**61.87**	**320**		*e*P	**P**	**08 47 19.0**	**-1.3**	
SEM	**Semipalatinsk**	**61.87**	**320**		*e*P	**P**	**08 47 19.1**	**-1.3**	
	baz=320								
DWPF	**Disney Wildern**	**61.89**	**81**		P	**P**	**08 47 20.0**	**-0.5**	
	baz=321								
KLMR	**Klimovskoe**	**61.95**	**348**		*e*P	**P**	**08 47 18.5**	**-1.9**	
KLMR					*e**PP	**PcP**	**08 48 03.1**	**+4.1**	
KLMR					*e*		08 49 38.4		
KLMR					pmax	pmax			
	comp=Z,157nm,1.0s								
KLMR	**Klimovskoe**	**61.95**	**348**		*e*P	**P**	**08 47 18.5**	**-1.9**	
KLMR					AMP		08 47 21.4		
	comp=Z,157nm,1.0s								
KLMR					*e*pP	**pP**	**08 48 03.2**	**-4.2**	
KLMR					*e*PP	**PP**	**08 49 38.4**	**-0.2**	
FOO	**Floro**	**61.97**	**7**		*e*P	**P**	**08 47 20.6**	**+0.2**	
XAN	**Xi'an**	**62.03**	**290**	⇓	P	**P**	**08 47 21.0**	**-0.4**	
XAN					pP	pP	08 48 09.3	+0.8	
XAN					sP	sP	08 48 30.0	-0.8	
XAN					pmax	pmax			
	comp=Z,27nm,1.3s								
XAN					pmax	pmax			
	comp=Z,84nm,7.3s								
XAN					LR	LR			
	comp=Z,280nm,16.8s								
XAN					LR	LR			
	comp=Z,310nm,15.9s								
XAN					LR	LR			
	comp=Z,180nm,16.2s								
XAN	**Xi'an**	**62.03**	**290**		P	**P**	**08 47 21.0**	**-0.4**	
SVE	**Sverdlovsk**	**62.10**	**335**		*e*P	**P**	**08 47 22.2**	**+0.7**	
SVE					pmax	pmax			
	comp=Z,82nm,0.8s								
KURK	**Kurchatov**	**62.19**	**321**		P	**P**	**08 47 22.8**	**+0.7**	
KURK					IAmb	IAmb	08 47 23.6		
	comp=Z,53nm,0.7s								
KURK	**Kurchatov**	**62.19**	**321**		P	**P**	**08 47 22.8**	**+0.7**	
KURK					pmax	pmax			
	comp=Z,53nm,0.7s								
KURK	**Kurchatov**	**62.19**	**321**		P	**P**	**08 47 22.5**	**+0.4**	
KURK					pP	**pP**	**08 48 09.4**	**+0.2**	
VALR	**Valaam**	**62.23**	**353**	*d*	*i*P	**P**	**08 47 22.1**	**-0.1**	
VALR					pmax	pmax			
	comp=Z,134nm,1.0s								
KURBB	**Kurchatov Arra**	**62.30**	**321**		P	**P**	**08 47 22.9**	**0.0**	
FINES	**FINESS Array B**	**62.41**	**356**		P	**P**	**08 47 23.2**	**-0.2**	
	comp=Z,90nm,0.7s,baz=12,slow=7.5,SNR=394								
FINES					pP	**pP**	**08 48 10.4**	**0.0**	
	comp=Z,36nm,0.9s,baz=17,slow=8.0,SNR=5.3								
FINES					PKPPKP	**P'P'df**	**09 16 25.1**	**-3.4**	
	comp=Z,5.0nm,0.9s,baz=132,slow=2.1,SNR=9.6								
	comp=Z,90nm,0.7s								
FINES	**FINESS Array B**	**62.41**	**356**	*i*	P	**P**	**08 47 23.2**	**-0.2**	
FINES					pmax	pmax			
	comp=Z,89nm,0.7s								
GTA	**Gaotai**	**62.45**	**300**	⇓	P	**P**	**08 47 24.0**	**-0.2**	
GTA					pP	pP	08 48 11.0	-0.3	
GTA					sP	sP	08 48 29.3	-4.3	
GTA					S	**S**	**08 55 34.8**	**+0.3**	
GTA					sS	sS	08 56 57.3	+0.5	
GTA					pmax	pmax			
	comp=Z,22nm,1.3s								
GTA					pmax	pmax			
	comp=Z,85nm,4.5s								
GTA					LR	LR			
	comp=Z,210nm,17.5s								
GTA					LR	LR			
	comp=Z,160nm,17.1s								
GTA					LR	LR			
	comp=Z,280nm,18.2s								
HYA	**Hoyanger**	**62.47**	**7**	⇓	*i*P	**P**	**08 47 23.9**	**+0.1**	
SUE	**Sulen**	**62.48**	**7**	⇓	*i*P	**P**	**08 47 23.9**	**+0.1**	
ZSN	**Zaisan**	**62.58**	**315**	*d*	*i*P	**P**	**08 47 25.5**	**+0.7**	
ZSN					*e**PP	**pP**	**08 48 11.9**	**0.0**	
ZSN					pmax	pmax			
	comp=Z,27nm,0.7s								
ZSN	**Zaisan**	**62.58**	**315**	⇓	*i*P	**P**	**08 47 25.5**	**+0.7**	
	comp=Z,27nm,0.7s,baz=315								
ZSN					*e*pP	**pP**	**08 48 11.9**	**0.0**	
	baz=315								
KIRV	**Kirov**	**62.74**	**342**	*ce*	P	**P**	**08 47 25.6**	**0.0**	
NB2	**NORSAR Subarra**	**62.85**	**4**		P	**P**	**08 47 26.3**	**-0.1**	
	baz=357,slow=6.5								
NB2	**NORSAR Subarra**	**62.85**	**4**		P	**P**	**08 47 26.3**	**-0.1**	
	comp=Z,65nm,0.7s,baz=357,slow=6.5								
NOA	**NORSAR Array B**	**62.85**	**4**		P	**P**	**08 47 26.4**	**0.0**	
	comp=Z,59nm,0.7s,baz=356,slow=6.6,SNR=317								
NOA					pP	**pP**	**08 48 14.6**	**+1.0**	
	comp=Z,26nm,0.9s,baz=356,slow=6.7,SNR=7.3								
NOA					PKPPKP	**P'P'df**	**09 16 24.5**	**-3.3**	
	comp=Z,2.5nm,0.9s,baz=155,slow=2.7,SNR=4.5								
	comp=Z,59nm,0.7s								
LRW	**Lerwick**	**62.88**	**11**		*e*P	**P**	**08 47 26.8**	**+0.2**	
LRW					IAmb	IAmb	08 47 27.7		
	comp=Z,143nm,0.7s								
BRVK	**Borovoye**	**62.89**	**328**		P	**P**	**08 47 27.5**	**+0.8**	
BRVK					pP	**pP**	**08 48 14.5**	**+0.6**	
BRVK					x	x	08 48 30.3		
ARU	**Arti**	**62.94**	**336**		P	**P**	**08 47 26.6**	**-0.4**	
ARU	**Arti**	**62.94**	**336**	*d*	*i*P	**P**	**08 47 27.0**	**0.0**	
ARU							08 48 02.5		
ARU					*PP	**pP**	**08 48 13.2**	**-1.0**	
ARU							08 49 43.3		
ARU					S	**S**	**08 55 42.0**	**+2.1**	
ARU							08 56 58.3		
ARU					SS	**SS**	**08 59 53.2**	**+5.3**	
ARU					pmax	pmax			
	comp=Z,86nm,0.8s								
ARU	**Arti**	**62.94**	**336**		P	**P**	**08 47 27.3**	**+0.3**	
ARU					pP	**pP**	**08 48 14.2**	**0.0**	
RAF	**Rauma**	**62.96**	**358**		*e*P	**P**	**08 47 27.4**	**+0.4**	
LZH	**Lanzhou**	**63.05**	**295**	⇓	P	**P**	**08 47 27.3**	**-1.0**	
LZH					pP	pP	08 48 11.8	-3.7	
LZH					PP	**PP**	**08 49 46.0**	**-3.2**	
LZH					S	**S**	**08 55 41.5**	**-0.8**	
LZH					sS	ScS	08 57 01.8	+1.1	
LZH					pmax	pmax			
	comp=Z,47nm,1.3s								
LZH					pmax	pmax			
	comp=Z,250nm,6.2s								
LZH					LR	LR			
	comp=Z,270nm,15.7s								
LZH					LR	LR			
	comp=Z,250nm,16.2s								
LZH					LR	LR			
	comp=Z,410nm,18.1s								
SKAR	**Skarslia**	**63.08**	**5**	⇓	*i*P	**P**	**08 47 28.1**	**+0.1**	
ASK	**Askoy**	**63.09**	**7**	⇓	*i*P	**P**	**08 47 28.2**	**+0.4**	
NC602	**NORSAR Array S**	**63.16**	**4**	⇓	*i*P	**P**	**08 47 28.4**	**-0.1**	
BER	**Bergen**	**63.19**	**7**	⇓	*i*P	**P**	**08 47 28.9**	**+0.3**	
SSLB	**Suanglung**	**63.50**	**274**		IAmb	IAmb	08 47 31.3		
	comp=Z,34nm,1.0s								
SSLB	**Suanglung**	**63.50**	**274**		P	**P**	**08 47 30.8**	**-0.4**	
YULB	**Yu-li**	**63.62**	**273**		IAmb	IAmb	08 48 24.6		
	comp=Z,72nm,1.7s								
MEF	**Metsahovi**	**63.70**	**357**		*e*P	**P**	**08 47 31.9**	**0.0**	
ODD1	**Odda**	**63.75**	**6**	⇓	*i*P	**P**	**08 47 32.6**	**+0.3**	
PUL	**Pulkovo**	**63.84**	**353**	*ce*	P	**P**	**08 47 33.6**	**+0.8**	
PUL					pmax	pmax			
	comp=Z,62nm,0.3s								
MK31	**Makanchi Array**	**64.12**	**317**	*i*	P	**P**	**08 47 34.4**	**-0.5**	
MK31					pmax	pmax			
	comp=Z,15nm,0.7s								
MKAR	**Makanchi Array**	**64.12**	**317**		P	**P**	**08 47 34.6**	**-0.3**	
	comp=Z,16nm,0.7s,baz=46,slow=6.2,SNR=119								
MKAR					pP	**pP**	**08 48 22.4**	**+0.1**	
	comp=Z,6.3nm,0.7s,baz=45,slow=5.3,SNR=3.9								
	comp=Z,16nm,0.7s								
LEWI	**Lewis, Hebride**	**64.13**	**14**		*e*P	**P**	**08 47 34.9**	**+0.1**	
LEWI					IAmb	IAmb	08 47 35.8		
	comp=Z,72nm,0.8s								
UPP	**Uppsala**	**64.16**	**0**		*e*P	**P**	**08 47 34.6**	**-0.2**	
KONO	**Kongsberg**	**64.17**	**5**		P	**P**	**08 47 35.6**	**+0.6**	
KONO	**Kongsberg**	**64.17**	**5**		P	**P**	**08 47 35.6**	**+0.6**	
KONO					pmax	pmax			
	comp=Z,109nm,0.8s								
KONO	**Kongsberg**	**64.17**	**5**	⇓	*i*P	**P**	**08 47 35.2**	**+0.2**	
KONO	**Kongsberg**	**64.17**	**5**		P	**P**	**08 47 35.5**	**+0.6**	
KONO					pP	**pP**	**08 48 23.1**	**+0.8**	
BIGH	**Upper Bighouse**	**64.18**	**13**		*e*P	**P**	**08 47 35.3**	**+0.2**	
BIGH					IAmb	IAmb	08 47 36.3		
	comp=Z,97nm,0.9s								
MAKZ	**Makanchi**	**64.23**	**317**		P	**P**	**08 47 35.5**	**-0.1**	
MAKZ					IAmb	IAmb	08 47 35.9		
	comp=Z,19nm,0.6s								
MAKZ	**Makanchi**	**64.23**	**317**		P	**P**	**08 47 35.5**	**-0.1**	
MAKZ					pmax	pmax			
	comp=Z,19nm,0.6s								
MAKZ	**Makanchi**	**64.23**	**317**		P	**P**	**08 47 35.5**	**-0.1**	
MAKZ					pP	**pP**	**08 48 23.9**	**+0.9**	
MAKZ					sP	**sP**	**08 48 47.2**	**+1.9**	
LINV	**Loch Inver, As**	**64.35**	**13**		*e*P	**P**	**08 47 35.6**	**-0.5**	
LINV					IAmb	IAmb	08 47 37.4		
	comp=Z,48nm,0.8s								
KMY	**Karmoy**	**64.35**	**7**	⇓	*i*P	**P**	**08 47 36.1**	**-0.1**	
WMQ	**Urumqi**	**64.40**	**311**	⇑	P	**P**	**08 47 37.8**	**+1.0**	
WMQ					pP	pP	08 48 26.5	+2.3	
WMQ					pmax	pmax			
	comp=Z,46nm,0.7s								
WMQ					LR	LR			
	comp=Z,440nm,15.1s								
WMQ					LR	LR			
	comp=Z,230nm,15.7s								
MLA1	**Latheron**	**64.43**	**12**		*e*P	**P**	**08 47 36.6**	**0.0**	
ENH	**Enshi**	**64.67**	**287**		IAmb	IAmb	08 47 39.6		
	comp=Z,44nm,1.2s								
KAC	**Achnashellach**	**64.97**	**14**		*e*P	**P**	**08 47 40.6**	**+0.4**	
KPL	**Plockton**	**65.08**	**14**		*e*P	**P**	**08 47 41.0**	**+0.2**	
KPL					IAmb	IAmb	08 47 41.9		
	comp=Z,58nm,0.7s								
MCD	**Coleburn Disti**	**65.14**	**13**		*e*P	**P**	**08 47 41.8**	**+0.5**	
MDO	**Dochfour**	**65.15**	**13**		*e*P	**P**	**08 47 41.9**	**+0.6**	
MTSE	**Matsula**	**65.22**	**357**		*e*P	**P**	**08 47 41.6**	**-0.1**	
SNART	**Snartemo**	**65.35**	**6**	⇓	*i*P	**P**	**08 47 43.2**	**+0.6**	
VSU	**Vasula**	**65.36**	**355**	*d*	*i*P	**P**	**08 47 42.8**	**+0.2**	
VSU					pmax	pmax			
	comp=Z,387nm,0.8s								
VSU	**Vasula**	**65.36**	**355**		*e*P	**P**	**08 47 42.8**	**+0.2**	
CCIG	**Comitan**	**65.36**	**98**		IAmb	IAmb	08 47 45.7		
	comp=Z,110nm,1.5s								
HOMB	**Homborsund**	**65.49**	**6**	⇓	*i*P	**P**	**08 47 43.9**	**+0.4**	
VIKU	**Vikbolandet**	**65.52**	**1**		*e*P	**P**	**08 47 43.7**	**0.0**	
DRUM	**Mains of Drumt**	**65.89**	**12**		*e*P	**P**	**08 47 46.3**	**+0.2**	
DRUM					IAmb	IAmb	08 47 47.5		
	comp=Z,369nm,0.7s								
LAWE	**Loch Awe, Argy**	**66.16**	**14**		*e*P	**P**	**08 47 48.1**	**+0.3**	
LAWE					IAmb	IAmb	08 47 48.9		
	comp=Z,107nm,0.8s								
INVG	**Invergeldie, C**	**66.17**	**13**		*e*P	**P**	**08 47 48.1**	**+0.2**	
INVG					IAmb	IAmb	08 47 48.9		
	comp=Z,72nm,0.8s								
EDU	**Dundee**	**66.19**	**13**		*e*P	**P**	**08 47 48.3**	**+0.3**	
SLIT	**Slitere, Latvi**	**66.35**	**358**		*e*P	**P**	**08 47 48.6**	**-0.4**	
EAB	**Aberfoyle**	**66.37**	**13**		*e*P	**P**	**08 47 49.5**	**+0.4**	
OTUK	**Ortayu**	**66.43**	**324**		P	**P**	**08 47 50.2**	**+0.4**	
OVD	**Ostervraa, Den**	**66.53**	**5**		*i*P	**P**	**08 47 49.9**	**-0.2**	
PGBU	**Glenifferbraes**	**66.72**	**14**		*e*P	**P**	**08 47 51.8**	**+0.4**	
PGBU					IAmb	IAmb	08 47 52.4		
	comp=Z,76nm,0.8s								
GOET	**G??ttrup**	**66.76**	**5**		*i*P	**P**	**08 47 53.0**	**+1.4**	
EDI	**Edinburgh**	**66.78**	**13**		*e*P	**P**	**08 47 51.9**	**+0.2**	
EDI					IAmb	IAmb	08 47 53.2		
	comp=Z,72nm,0.9s								
ESY	**Stoneypath**	**66.85**	**13**		*e*P	**P**	**08 47 52.6**	**+0.4**	
EBL	**Broad Law**	**66.94**	**13**		*e*P	**P**	**08 47 53.1**	**+0.3**	
MOS	**Moscow**	**67.18**	**348**		*e*P	**P**	**08 47 52.7**	**-1.5**	
MOS					*e**PP	**pP**	**08 48 40.4**	**-1.6**	
MOS					*e*PPP	PPP	08 51 59.6		
MOS					*e*		08 57 30.3		
MOS					pmax	pmax			
	comp=Z,148nm,0.7s								
MOS					pmax	pmax			
	comp=Z,200nm,0.7s								
CD2	**Chengdu**	**67.18**	**292**		P	**P**	**08 47 55.3**	**+0.6**	
CD2					pP	pP	08 48 43.3	+0.8	
CD2					S	**S**	**08 56 33.8**	**+1.5**	
CD2					sS	sS	08 57 54.0	-1.7	
CD2					pmax	pmax			
	comp=Z,40nm,0.7s								
MUD	**Monsted U'grnd**	**67.34**	**5**	*i*	P	**P**	**08 47 55.2**	**0.0**	
MUD					IAmb	IAmb	08 47 56.5		
	comp=Z,62nm,0.7s								
ESK	**Eskdalemuir**	**67.37**	**13**		P	**P**	**08 47 55.9**	**+0.5**	
ESK	**Eskdalemuir**	**67.37**	**13**		P	**P**	**08 47 55.9**	**+0.5**	
ESK					pmax	pmax			
	comp=Z,87nm,0.8s								
ESK	**Eskdalemuir**	**67.37**	**13**		P	**P**	**08 47 55.8**	**+0.4**	
ESK					pP	**pP**	**08 48 43.5**	**+0.2**	
ESK					sP	**sP**	**08 49 05.9**	**+0.5**	
TAOE	**Nuku Hiva Isla**	**67.39**	**157**		*e*P	**P**	**08 47 55.0**	**-1.2**	
	comp=Z,135nm,0.7s								
TAOE	**Nuku Hiva Isla**	**67.39**	**157**		P	**P**	**08 47 56.2**	**+0.1**	
TAOE	**Nuku Hiva Isla**	**67.39**	**157**		P	**P**	**08 47 56.2**	**+0.1**	
TAOE	**Nuku Hiva Isla**	**67.39**	**157**		P	**P**	**08 47 55.9**	**-0.2**	
GOMU	**GeErMu**	**67.39**	**302**		P	**P**	**08 47 55.8**	**-0.6**	
GOMU					S	**S**	**08 56 34.0**	**-1.4**	
GOMU					pmax	pmax			
	comp=Z,7.0nm,1.0s								
GOMU					pmax	pmax			
	comp=Z,46nm,6.5s								
GOMU					LR	LR			
	comp=Z,340nm,12.6s								
GOMU					LR	LR			
	comp=Z,290nm,14.7s								
GOMU					LR	LR			
	comp=Z,260nm,14.9s								
NEWG	**New Galloway**	**67.43**	**14**		*e*P	**P**	**08 47 56.1**	**+0.2**	
NEWG					IAmb	IAmb	08 47 56.8		
	comp=Z,38nm,0.8s								
BBSR	**BB Station**	**67.43**	**65**		P	**P**	**08 47 56.1**	**-0.1**	
BBSR					IAmb	IAmb	08 47 56.9		
	comp=Z,141nm,1.4s								
BBSR	**BB Station**	**67.43**	**65**		P	**P**	**08 47 55.6**	**-0.6**	
BBSR					pP	**pP**	**08 48 43.7**	**-0.3**	
DEL	**Delary**	**67.51**	**3**		*e*P	**P**	**08 47 56.3**	**0.0**	
GAL1	**Galloway**	**67.61**	**14**		*e*P	**P**	**08 47 57.1**	**+0.1**	
GAL1					IAmb	IAmb	08 47 58.3		
	comp=Z,95nm,0.8s								
OBN	**Obninsk**	**67.91**	**349**		P	**P**	**08 47 58.5**	**-0.3**	
OBN	**Obninsk**	**67.91**	**349**	*d*	*i*P	**P**	**08 47 58.3**	**-0.5**	
OBN					*i* *PP	**pP**	**08 48 47.4**	**+0.7**	
OBN					*i* S	**S**	**08 56 39.3**	**-0.8**	
OBN					SS	**SS**	**09 01 03.0**	**-1.8**	
OBN					pmax	pmax			
	comp=Z,116nm,0.8s								
OBN	**Obninsk**	**67.91**	**349**		P	**P**	**08 47 58.6**	**-0.3**	
VSVD	**Vaisvydziai**	**67.95**	**356**		*e*P	**P**	**08 47 59.5**	**+0.4**	
PBUR	**Paburge**	**67.97**	**358**		*e*P	**P**	**08 47 59.1**	**-0.1**	
KESW	**Keswick, Cumbr**	**68.09**	**13**		*e*P	**P**	**08 48 00.4**	**+0.4**	
KESW					IAmb	IAmb	08 48 01.1		
	comp=Z,89nm,0.8s								
IOMK	**Kirk Michael**	**68.22**	**14**		*e*P	**P**	**08 48 00.8**	**+0.1**	
COP	**Copenhagen**	**68.25**	**3**		*i*P	**P**	**08 48 01.4**	**+0.5**	
ISAL	**Salakas**	**68.27**	**355**		*e*P	**P**	**08 48 01.4**	**+0.3**	
KPKS	**Kokpek**	**68.30**	**317**	*d*	*i*P	**P**	**08 48 02.0**	**+0.4**	
KPKS					*e**PP	**pP**	**08 48 47.7**	**-1.8**	
KPKS					pmax	pmax			
	comp=Z,32nm,1.1s								
KPKS	**Kokpek**	**68.30**	**317**	⇓	*i*P	**P**	**08 48 02.1**	**+0.4**	
	comp=Z,32nm,1.1s,baz=317								
KPKS					*e*pP	**pP**	**08 48 47.8**	**-1.8**	
	baz=317								
PABE	**Paberze**	**68.43**	**356**		*e*P	**P**	**08 48 02.3**	**+0.2**	
MTO3	**Montecristo**	**68.43**	**96**		IAmb	IAmb	08 48 03.8		
	comp=Z,78nm,1.2s								
IIGN	**Ignalina**	**68.49**	**355**		*e*P	**P**	**08 48 02.7**	**+0.3**	
CHKK	**Chushkaly**	**68.60**	**318**		*e*P	**P**	**08 48 03.1**	**-0.2**	
CHKK	**Chushkaly**	**68.60**	**318**		*e*P	**P**	**08 48 03.2**	**-0.2**	
	baz=318								
BTLS	**Baital**	**68.64**	**321**	*d*	*i*P	**P**	**08 48 03.9**	**+0.4**	
BTLS					*e**PP	**pP**	**08 48 51.1**	**-0.4**	
BTLS					pmax	pmax			
	comp=Z,25nm,0.6s								
BTLS	**Baital**	**68.64**	**321**	⇓	*i*P	**P**	**08 48 04.0**	**+0.4**	
	comp=Z,25nm,0.6s,baz=321								
BTLS					*e*pP	**pP**	**08 48 51.1**	**-0.4**	
	baz=321								
ZHN	**Zhinishke**	**68.65**	**317**		*e*P	**P**	**08 48 03.9**	**+0.1**	
ZHN	**Zhinishke**	**68.65**	**317**		*e*P	**P**	**08 48 04.0**	**+0.1**	
	baz=317								
SATY	**Saty**	**68.75**	**317**	*de*	P	**P**	**08 48 04.1**	**-0.4**	
SATY					*e**PP	**pP**	**08 48 51.8**	**-0.6**	
SATY	**Saty**	**68.75**	**317**	⇓	*e*P	**P**	**08 48 04.1**	**-0.4**	
	baz=317								
SATY					*e*pP	**pP**	**08 48 51.9**	**-0.6**	
	baz=317								
KUU	**Kurty**	**68.81**	**319**	*d*	*i*P	**P**	**08 48 03.9**	**-0.8**	
KUU					*e**PP	**pP**	**08 48 50.6**	**-2.0**	
KUU					pmax	pmax			
	comp=Z,22nm,0.9s								
KUU	**Kurty**	**68.81**	**319**	⇓	*i*P	**P**	**08 48 03.9**	**-0.8**	
	comp=Z,22nm,0.9s,baz=319								
KUU					*e*pP	**pP**	**08 48 50.6**	**-2.0**	
	baz=319								
BSD	**Bornholm Skovb**	**68.89**	**2**		*e*P	**P**	**08 48 04.6**	**-0.3**	
BSD	**Bornholm Skovb**	**68.89**	**2**		*i*P	**P**	**08 48 04.4**	**-0.5**	
BSD					IAmb	IAmb	08 48 05.3		
	comp=Z,47nm,0.7s								
NACGM	**Naroch**	**68.91**	**355**		*i*P	**P**	**08 48 04.9**	**-0.1**	
BELG	**Belogornoye**	**68.96**	**341**	*d*	*i*P	**P**	**08 48 05.3**	**0.0**	
BELG					pmax	pmax			
	comp=Z,31nm,0.8s								
WME	**Myndd Eilian**	**69.10**	**14**		*e*P	**P**	**08 48 05.9**	**-0.3**	
AAA	**Alma-Ata**	**69.18**	**318**		*e*P	**P**	**08 48 07.1**	**+0.1**	
AAA	**Alma-Ata**	**69.18**	**318**		*e*P	**P**	**08 48 07.1**	**+0.1**	
	baz=318								
AB31	**Akbulak array**	**69.19**	**332**		*i*P	**P**	**08 48 07.2**	**+0.3**	
ABKAR	**Akbulak array**	**69.19**	**332**		IAmb	IAmb	08 48 08.3		
	comp=Z,68nm,0.7s								
GYA	**Guiyang**	**69.20**	**287**	⇑	*i*P	**P**	**08 48 07.8**	**+0.4**	
GYA					pP	pP	08 48 57.3	+1.8	
GYA					S	**S**	**08 56 57.3**	**+0.8**	
GYA					sS	sS	08 58 22.0	+1.7	
GYA					pmax	pmax			
	comp=Z,27nm,1.0s								
GYA					pmax	pmax			
	comp=Z,150nm,5.2s								
PRZ	**Przheval'sk**	**69.24**	**317**		IAmb	IAmb	08 49 00.7		
	comp=Z,78nm,1.3s								
MNK	**Minsk**	**69.25**	**354**		*i*P	**P**	**08 48 07.4**	**+0.4**	
MNK					*i*		08 48 29.1		
MNK					*i* *PP	**pP**	**08 48 52.2**	**-2.9**	
MNK					*i* *SP	**sP**	**08 49 12.1**	**-5.1**	
MNK					*i* PPP	PPP	08 52 28.5		
MNK					*i* S	**S**	**08 56 56.8**	**+0.9**	
MNK					*i* SS	**SS**	**09 01 28.8**	**+3.5**	
MNK					pmax	pmax			
	comp=E,4.0nm,1.0s								
MNK					pmax	pmax			
	comp=Z,225nm,1.0s								
MNK					pmax	pmax			
	comp=N,110nm,1.0s								
MNK	**Minsk**	**69.25**	**354**		*i*P	**P**	**08 48 07.5**	**+0.4**	
	comp=E,4.0nm,1.1s								
MNK					*i*P	**P**	**08 48 07.5**	**+0.4**	
	comp=N,110nm,1.0s								
MNK					*i*P	**P**	**08 48 07.5**	**+0.4**	
	comp=Z,225nm,1.0s,baz=186								
MNK					*i*pP	**pP**	**08 48 52.3**	**-2.9**	
MNK					*i*sP	**sP**	**08 49 12.2**	**-5.1**	
MNK					*i*PP	**PP**	**08 50 36.4**	**-5.7**	
MNK					*i*PPP	PPP	08 52 28.6		
MNK					*i*S	**S**	**08 56 56.9**	**+0.9**	
MNK					*i*sS	**sS**	**08 58 14.5**	**-5.3**	
MNK					*i*SS	**SS**	**09 01 28.9**	**+3.5**	
MNK					*i*SSS	SSS	09 04 47.4		
MNK					*i*LQ	LQ	09 11 54.5		
MNK					*i*LR	LR	09 17 08.3		
MNK					*i*LRM	MLR	09 24 22.2		
	comp=Z,9μm,21.5s								
MNK					*i*LRM	MLR	09 24 37.7		
	comp=E,75nm,19.4s								
MNK					*i*LRM	MLR	09 25 18.9		
	comp=N,599nm,23.2s								
TNSS	**Tian-Shan**	**69.32**	**318**		*e*P	**P**	**08 48 08.6**	**+0.3**	
TNSS	**Tian-Shan**	**69.32**	**318**		*e*P	**P**	**08 48 08.7**	**+0.3**	
	baz=318								
LBWR	**Ladybower, Pea**	**69.42**	**13**		*e*P	**P**	**08 48 08.7**	**+0.4**	
LBWR					IAmb	IAmb	08 48 09.3		
	comp=Z,68nm,0.9s								
LMK	**Market Rasen**	**69.53**	**12**		*e*P	**P**	**08 48 09.4**	**+0.5**	
STNC	**Stoke**	**69.67**	**13**		*e*P	**P**	**08 48 10.4**	**+0.7**	
FOEL

	comp=Z,89nm,0.9s								
KK31	**Karatay Array**	**71.56**	**322**		IAmb	IAmb	08 48 22.6		
	comp=Z,45nm,0.8s								
KK31	**Karatay Array**	**71.56**	**322**	*i*	P	**P**	**08 48 21.4**	**0.0**	
KKAR	**Karatay Array**	**71.56**	**322**		IAmb	IAmb	08 48 22.6		
	comp=Z,45nm,0.8s								
PZH	**PanZhiHua**	**71.76**	**290**		P	**P**	**08 48 24.0**	**+1.1**	
PZH					S	**S**	**08 57 25.5**	**-0.6**	
PZH					SKS	**SKSac**	**08 58 03.3**	**-3.5**	
PZH					sS	**sS**	**08 58 51.3**	**+0.8**	
PZH					pmax	pmax			
	comp=Z,30nm,0.7s								
PZH					pmax	pmax			
	comp=Z,80nm,4.0s								
PZH					LR	LR			
	comp=Z,530nm,22.9s								
PZH					LR	LR			
	comp=Z,550nm,24.3s								
PZH					LR	LR			
	comp=Z,390nm,24.5s								
GTBY	**Guantanamo Bay**	**71.87**	**81**		IAmb	IAmb	08 48 24.8		
	comp=Z,64nm,1.4s								
PMOR	**Pomariorio Ree**	**72.01**	**166**	*e*P		**P**	**08 48 24.7**	**+0.5**	
	comp=Z,248nm,1.3s								
PMOR	**Pomariorio Ree**	**72.01**	**166**	*e*T		T	10 05 24.9		
	comp=Z,47nm,0.2s								
DYA	**Yadsworthy**	**72.04**	**15**	*e*P		**P**	**08 48 24.6**	**+0.6**	
BEL	**Belsk**	**72.18**	**358**	*e*P		**P**	**08 48 25.3**	**+0.5**	
BEL				*e*pP		**pP**	**08 49 15.1**	**+1.9**	
BEL				*e*S		**S**	**08 57 26.9**	**-2.9**	
VAH	**Vaihoa**	**72.28**	**166**	*e*P		**P**	**08 48 25.3**	**-0.4**	
	comp=Z,119nm,1.0s								
KMI	**Kunming**	**72.36**	**289**	⇑*i*P		**P**	**08 48 26.0**	**-0.6**	
KMI				*i* *PP		**pP**	08 49 16.0	+0.9	
KMI				*e*S		**S**	**08 57 34.3**	**+1.2**	
KMI				*e*S		sS	08 58 55.3	-2.4	
KMI				pmax		pmax			
	comp=Z,9.0nm,1.3s								
KMI				LR		LR			
	comp=Z,320nm,20.8s								
KMI				LR		LR			
	comp=Z,270nm,22.1s								
KMI				LR		LR			
	comp=Z,210nm,25.5s								
IUG	**Iuzhnay**	**72.57**	**322**	*d*i*P		**P**	**08 48 27.8**	**+0.3**	
IUG				*e**PP		**pP**	**08 49 17.0**	**+1.0**	
IUG	**Iuzhnay**	**72.57**	**322**	⇓*i*P		**P**	**08 48 27.9**	**+0.3**	
	baz=322								
IUG				*e*pP		**pP**	**08 49 16.1**	**+0.1**	
	baz=322								
CLL	**Collm**	**72.65**	**3**		IAmb	IAmb	08 48 28.6		
	comp=Z,52nm,0.9s								
CLL	**Collm**	**72.65**	**3**	⇓*i*P		**P**	**08 48 27.5**	**-0.1**	
CLL				*i* *PP		**pP**	**08 49 16.1**	**0.0**	
CLL				*e*S		**S**	**08 57 36.0**	**+0.9**	
CLL				*e*			08 58 11.0		
CLL				pmax		pmax			
	comp=Z,57nm,0.9s								
CLL	**Collm**	**72.65**	**3**	⇓*i*P		**P**	**08 48 27.5**	**-0.1**	
	comp=Z,57nm,0.9s								
CLL				*e*PcP		**PcP**	**08 48 44.0**	**+0.1**	
CLL				*i* pP		**pP**	**08 49 16.1**	**0.0**	
CLL				*e*S		**S**	**08 57 36.0**	**+0.9**	
CLL				*e*SKSac		**SKSac**	**08 58 11.0**	**-1.4**	
CLL				*e*sS		**sS**	**08 59 03.0**	**+3.1**	
CLL				*e*SS		**SS**	**09 02 24.0**	**+6.6**	
CLL				*e*sSS		SSS	09 03 36.0		
CLL				*e*SSS		SSS	09 05 42.0		
KSH	**Kashi**	**72.73**	**317**		P	**P**	**08 48 32.0**	**+3.5**	
KSH					S	**SKiKP**	**08 57 45.5**	**+5.4**	
KSH					pmax	pmax			
	comp=Z,70nm,0.9s								
HNR	**Honiara**	**72.74**	**220**		P	**P**	**08 48 28.4**	**-0.1**	
	comp=Z,333nm,0.5s								
ACON	**Acoyapa**	**72.74**	**94**		IAmb	IAmb	08 48 29.2		
	comp=Z,105nm,1.3s								
SNF	**Seneffe**	**72.91**	**9**	*d*P		**P**	**08 48 29.6**	**+0.5**	
	comp=Z,44nm,0.9s								
SNF				*d*pP		**pP**	**08 49 18.7**	**+1.0**	
AKASG	**Malin Array Be**	**72.94**	**353**		P	**P**	**08 48 28.9**	**-0.5**	
	comp=Z,152nm,0.5s,baz=9.3,slow=6.1,SNR=139								
AKASG					pP	**pP**	**08 49 18.1**	**+0.2**	
	comp=Z,19nm,0.7s,baz=9.9,slow=6.2,SNR=2.9								
AKASG	**Malin Array Be**	**72.94**	**353**	*i* P		**P**	**08 48 27.8**	**-1.6**	
AKASG				pmax		pmax			
	comp=Z,152nm,0.5s								
AKBB	**Malin Array Si**	**72.94**	**353**	*ce*P		**P**	**08 48 28.8**	**-0.6**	
BSTI	**Sart Tilman**	**72.95**	**8**	*d*P		**P**	**08 48 29.8**	**+0.4**	
	comp=Z,13nm,0.8s								
BSTI				*d*pP		**pP**	**08 49 18.8**	**+0.9**	
MEM	**Membach**	**72.96**	**8**	*d*P		**P**	**08 48 29.5**	**+0.1**	
	comp=Z,45nm,0.9s								
MEM				*d*pP		**pP**	**08 49 19.0**	**+1.1**	
BTNL	**Ternell**	**72.99**	**8**	*d*P		**P**	**08 48 30.1**	**+0.4**	
BTNL				*d*pP		**pP**	**08 49 19.0**	**+0.7**	
BCLA	**Clavier**	**73.09**	**9**	*d*P		**P**	**08 48 30.3**	**+0.1**	
BCLA				*d*pP		**pP**	**08 49 19.4**	**+0.6**	
BRG	**Berggiesshubel**	**73.11**	**3**	*i* P		**P**	**08 48 30.6**	**+0.3**	
BRG				Amp			08 48 31.7		
	comp=Z,54nm,1.0s								
BRG				*ex*		x	08 48 40.5		
BRG				Amp			08 48 41.5		
	comp=Z,13nm,1.0s								
BRG				pP		**pP**	**08 49 19.4**	**+0.5**	
BRG				Amp			08 49 21.8		
	comp=Z,53nm,1.4s								
BRG				PP		**PP**	**08 51 17.3**	**+2.1**	
BRG				Amp			08 51 18.2		
	comp=Z,6.6nm,1.2s								
BRG	**Berggiesshubel**	**73.11**	**3**	*i* P		**P**	**08 48 30.6**	**+0.3**	
BRG				*e*			08 48 40.5		
BRG							08 49 19.4		
BRG				*e*			08 57 44.0		
BRG				pmax		pmax			
	comp=Z,54nm,1.0s								
BMRD	**Maredsous**	**73.16**	**9**	*d*P		**P**	**08 48 30.9**	**+0.2**	
BMRD				*d*pP		**pP**	**08 49 19.6**	**+0.4**	
KSP	**Ksiaz**	**73.19**	**1**	*e*P		**P**	**08 48 31.1**	**+0.3**	
KSP				*e*pP		**pP**	**08 49 19.9**	**+0.5**	
KSP				*e*S		**SKiKP**	**08 57 39.9**	**-0.5**	
BHOU	**Houvegnez**	**73.21**	**8**	*d*P		**P**	**08 48 31.0**	**0.0**	
BHOU				*d*pP		**pP**	**08 49 20.7**	**+1.2**	
RCHB	**Rochefort**	**73.34**	**9**	*d*P		**P**	**08 48 31.7**	**0.0**	
RCHB				*d*pP		**pP**	**08 49 21.0**	**+0.7**	
DOU	**Dourbes**	**73.35**	**9**	*d*P		**P**	**08 48 31.8**	**+0.1**	
DOU				*d*pP		**pP**	**08 49 21.0**	**+0.7**	
CHVC	**Chvalec**	**73.44**	**1**	*e*P		**P**	**08 48 32.8**	**+0.5**	
CHVC				*e*pP		**pP**	**08 49 21.7**	**+0.8**	
PVCC	**Panska Ves**	**73.47**	**2**	*e*P		**P**	**08 48 33.3**	**+0.8**	
PVCC	**Panska Ves**	**73.47**	**2**	*e*P		**P**	**08 48 33.3**	**+0.8**	
OSTC	**Ostas**	**73.47**	**1**	*e*P		**P**	**08 48 33.0**	**+0.5**	
OSTC				*e*pP		**pP**	**08 49 22.2**	**+1.1**	
UPC	**Upice**	**73.52**	**1**	*e*P		**P**	**08 48 33.4**	**+0.6**	
UPC	**Upice**	**73.52**	**1**	*e*P		**P**	**08 48 33.4**	**+0.6**	
DPC	**Dobruska-Polom**	**73.68**	**1**	*e*P		**P**	**08 48 34.3**	**+0.6**	
DPC				*e**PP		**pP**	**08 49 23.2**	**+0.8**	
DPC	**Dobruska-Polom**	**73.68**	**1**	*e*P		**P**	**08 48 34.3**	**+0.6**	
DPC				*e*pP		**pP**	**08 49 23.2**	**+0.8**	
NKC	**Novy Kostel**	**73.70**	**4**	*e*P		**P**	**08 48 34.4**	**+0.6**	
NKC				*e**PP		**pP**	**08 49 23.1**	**+0.6**	
NKC	**Novy Kostel**	**73.70**	**4**	*e*P		**P**	**08 48 34.4**	**+0.6**	
NKC				*e*pP		**pP**	**08 49 23.1**	**+0.6**	
OJC	**Ojcow**	**73.81**	**359**	*e*P		**P**	**08 48 34.3**	**-0.2**	
OJC				*e*pP		**pP**	**08 49 23.3**	**+0.2**	
OJC				*e*S		**S**	**08 57 34.9**	**+6.5**	
ORTG	**Ortega, Santa**	**73.90**	**96**		IAmb	IAmb	08 48 35.9		
	comp=Z,51nm,0.9s								
WLF	**Walferdange**	**73.91**	**8**		IAmb	IAmb	08 48 36.8		
	comp=Z,53nm,0.8s								
WLF	**Walferdange**	**73.91**	**8**	*d*P		**P**	**08 48 35.7**	**+0.7**	
	comp=Z,46nm,0.9s								
WLF				*d*pP		**pP**	**08 49 23.4**	**-0.3**	
KRLC	**Kraliky**	**73.96**	**1**	*e*P		**P**	**08 48 35.8**	**+0.4**	
KRLC				*e**PP		**pP**	**08 49 24.8**	**+0.8**	
KRLC	**Kraliky**	**73.96**	**1**	*e*P		**P**	**08 48 35.8**	**+0.4**	
KRLC				*e*pP		**pP**	**08 49 24.8**	**+0.8**	
PRU	**Pruhonice**	**74.01**	**2**	*e*P		**P**	**08 48 36.0**	**+0.4**	
PRU				*e**PP		**pP**	**08 49 25.0**	**+0.7**	
PRU	**Pruhonice**	**74.01**	**2**	*e*P		**P**	**08 48 36.0**	**+0.4**	
PRU				*e*pP		**pP**	**08 49 25.0**	**+0.7**	
LVV	**L'vov**	**74.11**	**356**	*e*P		**P**	**08 48 36.1**	**-0.1**	
LVV				*e*			08 48 53.7		
DUNO	**Dulce Nombre,**	**74.11**	**96**		IAmb	IAmb	08 48 37.1		
	comp=Z,93nm,1.2s								
GRA1	**Grafenberg Arr**	**74.19**	**5**		IAmb	IAmb	08 48 38.4		
	comp=Z,52nm,0.7s								
GRFO	**Grafenberg**	**74.19**	**5**		P	**P**	**08 48 37.8**	**+1.1**	
GRFO					IAmb	IAmb	08 49 27.9		
	comp=Z,77nm,1.1s								
GRFO	**Grafenberg**	**74.19**	**5**		P	**P**	**08 48 37.8**	**+1.1**	
GRFO					pmax	pmax			
	comp=Z,77nm,1.1s								
MORC	**Moravsky Berou**	**74.27**	**0**	⇓*i*P		**P**	**08 48 37.6**	**+0.4**	
MORC	**Moravsky Berou**	**74.27**	**0**		IAmb	IAmb	08 48 38.4		
	comp=Z,41nm,0.9s								
MORC	**Moravsky Berou**	**74.27**	**0**	*e*P		**P**	**08 48 37.1**	**0.0**	
MORC				*e*pP		**pP**	**08 49 25.9**	**+0.1**	
PPT	**Papeete**	**74.33**	**168**		P	**P**	**08 48 37.7**	**0.0**	
	comp=Z,97nm,1.1s,baz=230,slow=23,SNR=4.9								
	comp=Z,97nm,1.1s								
KWP	**Kalwaria Pacla**	**74.34**	**357**	*e*P		**P**	**08 48 38.1**	**+0.6**	
KWP				*e*PcP		**PcP**	**08 48 51.9**	**+0.6**	
KWP				*e*S		**SKiKP**	**08 57 33.8**	**-8.3**	
TIAR	**Tiarei**	**74.35**	**168**	*e*P		**P**	**08 48 38.6**	**+0.8**	
	comp=Z,30nm,1.1s								
TIAR	**Tiarei**	**74.35**	**168**	*e*T		T	10 08 26.9		
	comp=Z,4.9nm,0.2s								
PPT2	**Papeete2**	**74.35**	**168**	*e*P		**P**	**08 48 37.3**	**-0.6**	
	comp=Z,176nm,1.3s								
PPT2	**Papeete2**	**74.35**	**168**	*e*LR		LR	09 11 49.8		
	comp=Z,143nm,24.5s								
MAUC	**Maruska**	**74.68**	**0**	*e*P		**P**	**08 48 40.0**	**+0.5**	
TREC	**Trest**	**74.72**	**2**	*e*P		**P**	**08 48 40.2**	**+0.4**	
TREC	**Trest**	**74.72**	**2**	*e*P		**P**	**08 48 40.2**	**+0.4**	
VRAC	**Vranov**	**74.73**	**1**	⇓*i*P		**P**	**08 48 40.6**	**+0.8**	
VRAC	**Vranov**	**74.73**	**1**	*e*P		**P**	**08 48 40.1**	**+0.3**	
VRAC				*e*pP		**pP**	**08 49 28.8**	**+0.3**	
KHC	**Kasperske Hory**	**74.84**	**3**		IAmb	IAmb	08 48 42.3		
	comp=Z,60nm,0.9s								
KHC	**Kasperske Hory**	**74.84**	**3**	*e*P		**P**	**08 48 41.4**	**+0.9**	
KHC				*e**PP		**pP**	**08 49 30.1**	**+0.9**	
KHC				*e*			08 57 58.8		
KHC				MLR		MLR			
	comp=Z,200nm,17.4s								
KHC	**Kasperske Hory**	**74.84**	**3**	*e*P		**P**	**08 48 41.4**	**+0.9**	
KHC				*e*pP		**pP**	**08 49 30.1**	**+0.9**	
KHC				*e*S		**S**	**08 57 58.8**	**-1.1**	
KHC				AMS		AMS	09 16 10.0		
	comp=Z,200nm,17.4s								
LANS	**Liptovska Anna**	**74.89**	**359**	*e*P		**P**	**08 48 42.2**	**+1.5**	
LANS				pmax		pmax			
	comp=Z,39nm,0.8s								
LANS	**Liptovska Anna**	**74.89**	**359**	*e*P		**P**	**08 48 42.2**	**+1.5**	
LANS				*e*pP		**pP**	**08 49 30.9**	**+1.4**	
KRUC	**Moravsky**	**74.97**	**1**	*e*P		**P**	**08 48 41.2**	**+0.1**	
KRUC				*e*pP		**pP**	**08 49 29.9**	**0.0**	
KOLS	**Kolonicke sedl**	**75.05**	**357**	*e*P		**P**	**08 48 42.6**	**+1.0**	
KOLS				pmax		pmax			
	comp=Z,55nm,0.7s								
KOLS	**Kolonicke sedl**	**75.05**	**357**	*e*P		**P**	**08 48 42.6**	**+1.0**	
CRVS	**Cervenica-Dubn**	**75.11**	**358**	*e*P		**P**	**08 48 42.7**	**+0.8**	
CRVS				pmax		pmax			
	comp=Z,57nm,1.0s								
CRVS	**Cervenica-Dubn**	**75.11**	**358**	*e*P		**P**	**08 48 42.7**	**+0.8**	
CRVS				*e*pP		**pP**	**08 49 33.1**	**+2.4**	
GERES	**GERESS Array B**	**75.13**	**3**		P	**P**	**08 48 42.4**	**+0.2**	
	comp=Z,23nm,0.8s,baz=340,slow=3.5,SNR=88								
GERES					pP	**pP**	**08 49 31.8**	**+0.8**	
	comp=Z,16nm,0.9s,baz=328,slow=4.7,SNR=7.6								
	comp=Z,23nm,0.8s								
CKRC	**Cesky Krumlov**	**75.17**	**3**	*e*P		**P**	**08 48 42.8**	**+0.5**	
CKRC				*ex*		x	08 58 01.6		
JAVC	**Velka Javorina**	**75.18**	**0**	*e*P		**P**	**08 48 43.6**	**+1.2**	
JAVC				*e*pP		**pP**	**08 49 32.5**	**+1.3**	
GAR	**Garm**	**75.27**	**320**		IAmb	IAmb	08 48 44.5		
	comp=Z,86nm,0.9s								
UZH	**Uzhgorod**	**75.36**	**357**	*e*P		**P**	**08 48 43.7**	**+0.4**	
UZH				*e*			08 48 54.1		
UZH				*e**PP		**pP**	**08 49 32.1**	**0.0**	
UZH				*e*S		**S**	**08 58 02.7**	**-2.7**	
UZH				*e*PS		**PnS**	**08 58 57.3**	**-13**	
BFO	**Black Forest**	**75.39**	**7**	P		**P**	**08 48 44.0**	**+0.4**	
BFO	**Black Forest**	**75.39**	**7**	P		**P**	**08 48 44.0**	**+0.4**	
BFO				pmax		pmax			
	comp=Z,49nm,1.2s								
ECH	**Echery**	**75.42**	**8**		IAmb	IAmb	08 48 45.5		
	comp=Z,56nm,0.9s								
KOLL	**Kolacno**	**75.47**	**360**	*e*P		**P**	**08 48 45.1**	**+1.1**	
SMOL	**Smolenice**	**75.53**	**0**	*e*P		**P**	**08 48 45.5**	**+1.2**	
SMOL				pmax		pmax			
	comp=Z,33nm,0.9s								
SMOL	**Smolenice**	**75.53**	**0**	*e*P		**P**	**08 48 45.5**	**+1.2**	
SMOL				*e*pP		**pP**	**08 49 34.6**	**+1.4**	
KECS	**Kecovo**	**75.54**	**358**	*e*P		**P**	**08 48 45.5**	**+1.1**	
KECS				pmax		pmax			
	comp=Z,56nm,0.7s								
KECS	**Kecovo**	**75.54**	**358**	*e*P		**P**	**08 48 45.5**	**+1.1**	
VYHS	**Vyhne**	**75.55**	**360**	*e*P		**P**	**08 48 45.1**	**+0.6**	
VYHS				pmax		pmax			
	comp=Z,35nm,0.9s								
VYHS	**Vyhne**	**75.55**	**360**	*e*P		**P**	**08 48 45.1**	**+0.6**	
VYHS				*e*pP		**pP**	**08 49 34.0**	**+0.7**	
SORM	**Soroca**	**75.56**	**353**	⇓P		**P**	**08 48 44.0**	**-0.5**	
MODS	**Modra-Piesok**	**75.67**	**1**	*e*P		**P**	**08 48 46.2**	**+1.1**	
MODS				pmax		pmax			
	comp=Z,166nm,1.0s								
MODS	**Modra-Piesok**	**75.67**	**1**	*e*P		**P**	**08 48 46.2**	**+1.1**	
MODS				*e*pP		**pP**	**08 49 35.3**	**+1.3**	
MSVF	**Nonsavu**	**75.69**	**200**	P		**P**	**08 48 46.9**	**+1.4**	
MSVF				IAmb		IAmb	08 48 48.2		
	comp=Z,107nm,1.3s								
MSVF	**Nonsavu**	**75.69**	**200**	P		**P**	**08 48 46.9**	**+1.4**	
MSVF				pmax		pmax			
	comp=Z,107nm,1.3s								
MSVF	**Nonsavu**	**75.69**	**200**	P		**P**	**08 48 47.1**	**+1.5**	
ZST	**Bratislava**	**75.84**	**1**	*e*P		**P**	**08 48 47.1**	**+1.0**	
ZST				pmax		pmax			
	comp=Z,181nm,0.8s								
ZST	**Bratislava**	**75.84**	**1**	*e*P		**P**	**08 48 47.1**	**+1.0**	
ZST				*e*pP		**pP**	**08 49 36.1**	**+1.1**	
CONA	**Conrad Observa**	**76.10**	**2**	*i* P		**P**	**08 48 48.4**	**+0.7**	
	comp=Z,52nm,0.8s,SNR=49								
CONA				*i* P		**pP**	**08 49 37.6**	**+1.0**	
	comp=Z,22nm,0.8s,SNR=8.5								
PSZ	**Piszkesteto**	**76.12**	**359**	⇓P		**P**	**08 48 48.7**	**+1.0**	
PSZ	**Piszkesteto**	**76.12**	**359**		IAmb	IAmb	08 48 49.7		
	comp=Z,60nm,1.0s								
PSZ	**Piszkesteto**	**76.12**	**359**	P		**P**	**08 48 48.2**	**+0.4**	
MOA	**Molln**	**76.14**	**3**	*i* P		**P**	**08 48 48.1**	**+0.3**	
	comp=Z,29nm,1.3s,SNR=6.3								
MOA				*e*P		**pP**	**08 49 37.6**	**+0.8**	
	comp=Z,24nm,1.1s								
SRO	**Srobarova**	**76.23**	**360**	*e*P		**P**	**08 48 49.5**	**+1.2**	
SRO	**Srobarova**	**76.23**	**360**	*e*P		**P**	**08 48 49.5**	**+1.2**	
BUR08	**Bucovina Ar. S**	**76.23**	**355**		IAmb	IAmb	08 48 49.8		
	comp=Z,44nm,0.8s								
BURAR	**Bucovina Array**	**76.26**	**355**	⇓P		**P**	**08 48 48.8**	**+0.2**	
BURAR	**Bucovina Array**	**76.26**	**355**		IAmb	IAmb	08 48 50.2		
	comp=Z,67nm,0.8s								
BMR	**Baia Mare**	**76.27**	**356**	⇓*i*P		**P**	**08 48 49.5**	**+1.0**	
BIOA	**Bad Ischl, Aus**	**76.28**	**3**	*i* P		**P**	**08 48 49.2**	**+0.5**	
	comp=Z,36nm,1.5s,SNR=5.5								
BIOA				*e*P		**pP**	**08 49 38.3**	**+0.7**	
	comp=Z,21nm,1.3s								
RONA	**Rosalia, Austr**	**76.33**	**1**	*i* P		**P**	**08 48 49.8**	**+0.9**	
	comp=Z,27nm,0.8s,SNR=16								
RONA				*e*P		**pP**	**08 49 39.1**	**+1.2**	
	comp=Z,20nm,1.1s								
SOP	**Sopron**	**76.35**	**1**	P		**P**	**08 48 50.0**	**+1.0**	
RETA	**Reutte**	**76.37**	**5**	*i* P		**P**	**08 48 49.6**	**+0.4**	
	comp=Z,30nm,1.0s,SNR=14								
RETA				*i* P		**pP**	**08 49 38.8**	**+0.6**	
	comp=Z,42nm,1.4s,SNR=7.7								
DAVA	**Damuels**	**76.53**	**6**	*i* P		**P**	**08 48 50.7**	**+0.5**	
	comp=Z,15nm,0.9s,SNR=6.3								
DAVA				*e*P		**pP**	**08 49 40.3**	**+1.1**	
	comp=Z,17nm,0.9s								
MOTA	**Moosalm**	**76.53**	**5**	*i* P		**P**	**08 48 50.5**	**+0.3**	
	comp=Z,68nm,1.0s,SNR=32								
MOTA				*i* P		**pP**	**08 49 40.3**	**+1.1**	
	comp=Z,77nm,1.1s,SNR=11								
IAS	**Iasi**	**76.55**	**353**	⇓P		**P**	**08 48 50.5**	**+0.4**	
BUD	**Budapest**	**76.56**	**359**	P		**P**	**08 48 51.1**	**+1.0**	
WATA	**Walderalm**	**76.56**	**5**	*i* P		**P**	**08 48 50.8**	**+0.5**	
	comp=Z,84nm,1.1s,SNR=19								
WATA				*i* P		**pP**	**08 49 40.2**	**+0.8**	
	comp=Z,76nm,1.0s,SNR=14								
EGYH	**Egyhazaskeszo**	**76.62**	**1**	P		**P**	**08 48 51.6**	**+1.1**	
WTTA	**Wattenberg**	**76.64**	**5**	*i* P		**P**	**08 48 51.5**	**+0.7**	
	comp=Z,68nm,0.8s,SNR=26								
WTTA				*i* P		**pP**	**08 49 40.8**	**+1.0**	
	comp=Z,79nm,1.3s,SNR=8.7								
KIS	**Kishinev**	**76.66**	**353**	*e*P		**P**	**08 48 50.0**	**-0.7**	
	comp=Z,120nm,0.8s								
KIS				*e*pP		**pP**	**08 49 39.0**	**-0.7**	
KIS	**Kishinev**	**76.66**	**353**	*e*P		**P**	**08 48 50.0**	**-0.7**	
KIS				*e*			08 49 39.0		
KIS				pmax		pmax			
	comp=Z,120nm,0.8s								
SQTA	**Sankt Quirin**	**76.66**	**5**	*i* P		**P**	**08 48 51.6**	**+0.7**	
	comp=Z,102nm,0.9s,SNR=29								
SQTA				*i* P		**pP**	**08 49 40.7**	**+0.8**	
	comp=Z,83nm,0.9s,SNR=17								
CSKK	**Cskako**	**76.68**	**360**	P		**P**	**08 48 51.5**	**+0.7**	
MILM	**Milestii Mici**	**76.74**	**353**	⇓*i*P		**P**	**08 48 50.0**	**-1.1**	
	comp=Z,200nm,0.9s								
MILM				⇓pP		**pP**	**08 49 40.0**	**-0.1**	
MILM	**Milestii Mici**	**76.74**	**353**	⇑*i*P		**P**	**08 48 50.8**	**-0.3**	
MILM	**Milestii Mici**	**76.74**	**353**	*d*i*P		**P**	**08 48 50.0**	**-1.1**	
MILM				*i*			08 49 40.0		
MILM				pmax		pmax			
	comp=Z,200nm,0.9s								
MILM				pmax		pmax			
	comp=N,80nm,1.0s								
ARSA	**Arzberg**	**76.77**	**2**	*i* P		**P**	**08 48 52.3**	**+0.9**	
	comp=N,53nm,0.9s,SNR=22								
ARSA				*i* P		**pP**	**08 49 41.4**	**+1.0**	
	comp=N,27nm,1.0s,SNR=7.1								
ARCR	**ARCALIA**	**76.83**	**356**	⇓P		**P**	**08 48 52.9**	**+1.3**	
FETA	**Feichten**	**76.84**	**5**	*i* P		**P**	**08 48 52.8**	**+0.9**	
	comp=N,76nm,0.9s,SNR=37								
FETA				*i* P		**pP**	**08 49 42.0**	**+1.1**	
	comp=N,60nm,1.0s,SNR=16								
GOF	**Gofitskoye**	**76.84**	**342**	⇓*i*P		**P**	**08 48 52.4**	**+0.7**	
GOF				pmax		pmax			
	comp=Z,516nm,0.9s								
MPLH	**Magyarpolny**	**76.87**	**0**	P		**P**	**08 48 52.4**	**+0.5**	
KBA	**Koelnbreinsper**	**76.89**	**3**	*i* P		**P**	**08 48 53.2**	**+0.9**	
	comp=Z,108nm,1.1s,SNR=56								
KBA				*i* P		**pP**	**08 49 42.4**	**+1.2**	
	comp=Z,68nm,1.1s,SNR=8.8								
BIZ	**Bicaz**	**76.89**	**354**	⇓P		**P**	**08 48 52.5**	**+0.5**	
PURM	**Purcari**	**77.04**	**352**	⇓P		**P**	**08 48 52.6**	**-0.2**	
VASR	**Vaslui**	**77.08**	**353**	⇓P		**P**	**08 48 53.3**	**+0.3**	
TIH	**Tihany**	**77.14**	**0**	P		**P**	**08 48 54.3**	**+0.9**	
DRGR		**77.18**	**357**	⇓P		**P**	**08 48 54.0**	**+0.3**	
ABTA	**Abfaltersbach**	**77.19**	**4**	*i* P		**P**	**08 48 54.1**	**+0.3**	
	comp=Z,41nm,1.0s,SNR=21								
ABTA				*i* P		**pP**	**08 49 43.8**	**+1.0**	
	comp=Z,46nm,1.2s,SNR=8.2								
CJR	**Cluj-Napoca**	**77.23**	**356**	⇓P		**P**	**08 48 54.4**	**+0.4**	
RAR	**Rarotonga**	**77.25**	**178**	P		**P**	**08 48 53.9**	**-0.2**	
	comp=Z,28nm,0.8s,baz=307,slow=10,SNR=3.6								
	comp=Z,28nm,0.8s								
SOKA	**Soboth**	**77.33**	**2**	*i* P		**P**	**08 48 55.3**	**+0.7**	
	comp=Z,61nm,0.8s,SNR=38								
SOKA				*i* P		**pP**	**08 49 44.9**	**+1.2**	
	comp=Z,42nm,1.1s,SNR=13								
MYKA	**Terra Mystica**	**77.34**	**3**	*i* P		**P**	**08 48 54.9**	**+0.3**	
	comp=Z,28nm,1.0s,SNR=12								
MYKA				*e*P		**pP**	**08 49 44.6**	**+0.9**	
	comp=Z,16nm,0.9s								
PERS	**Pernice**	**77.38**	**2**	*i* P		**P**	**08 48 55.2**	**+0.4**	
PERS				*i* pP		**pP**	**08 49 45.0**	**+1.2**	
OBKA	**Obir**	**77.49**	**3**	*i* P		**P**	**08 48 56.1**	**+0.6**	
	comp=Z,142nm,0.7s,SNR=90								
OBKA			

FRGS	Fruska Gora	78.88	359	⇑	*i*	P	P	08 49 02.5	-0.5
ZEI	Tsey	78.89	341		*e*	P	P	08 49 02.2	-1.1
ZEI					pmax	pmax			
	comp=Z,66nm,1.1s								
CACAO	El Cacao, Vera	78.93	93		*e*	P	P	08 49 05.3	+1.6
RAMN	Ramite	78.94	302		*e*	P	P	08 49 03.5	-0.5
	comp=Z,71nm,0.7s								
GKN	Gorkha	78.97	304		*e*	P	P	08 49 03.5	-0.5
	comp=Z,64nm,0.8s								
PKI	Pulchoki	78.97	303		*e*	P	P	08 49 03.5	-0.7
	comp=Z,47nm,0.8s								
PKIN	Phulchoki	78.98	303		*e*	P	P	08 49 03.8	-0.4
HARR	Harsova	79.02	353	⇑		P	P	08 49 04.0	+0.3
DANN	Dangsing	79.07	305		*e*	P	P	08 49 04.7	0.0
	comp=Z,100nm,0.7s								
DMN	Daman	79.08	304		*e*	P	P	08 49 04.5	-0.2
HERR	Herculane	79.10	357	⇓		P	P	08 49 04.2	0.0
TIRR	Tirgusor	79.22	353	⇓		P	P	08 49 05.7	+0.9
TIRR	Tirgusor	79.22	353	⇓		P	P	08 49 05.7	+0.9
MDVR	Moldovita	79.22	357	⇓		P	P	08 49 04.7	-0.2
CHVG	Ch'k'valeri	79.27	342	⇓		P	P	08 49 06.0	+0.8
BLY	Banja Luka	79.29	1		*e*	P	P	08 49 05.1	-0.1
DJES	Djerdap	79.31	357	⇓		P	P	08 49 05.7	+0.4
HUMR	Humele	79.35	355	⇑		P	P	08 49 05.5	-0.1
MSSA	Maissana	79.47	6		IAmb	IAmb		08 49 07.4	
	comp=Z,30nm,0.7s								
TEKS	Tekeris	79.49	359	⇑	*i*	P	P	08 49 06.2	-0.1
ZCCA	Zocca	79.51	5		IAmb	IAmb		08 49 10.1	
	comp=Z,32nm,0.7s								
CHTO	Chiang Mai	79.52	288		P	P	P	08 49 06.3	-0.6
CHTO					IAmb	IAmb		08 49 58.6	
	comp=Z,127nm,1.6s								
CHTO	Chiang Mai	79.52	288		P	P	P	08 49 06.3	-0.6
CHTO					pmax	pmax			
	comp=Z,127nm,1.6s								
PGAV	Gavieira, Arco	79.56	20		*e*	P	P	08 49 08.0	+1.1
	comp=Z,50nm,1.3s								
SGRR	Singureni	79.61	354	⇓		P	P	08 49 06.9	0.0
PYUN	Piuthan	79.63	306		*e*	P	P	08 49 07.3	-0.3
KOLN	Koldanda	79.64	305		*e*	P	P	08 49 06.6	-1.1
KBL	Kabul	79.71	319		P	P	P	08 49 07.0	-0.9
KBL	Kabul	79.71	319		P	P	P	08 49 07.0	-0.9
KBL					pmax	pmax			
	comp=Z,25nm,1.0s								
CMAR	Chiang Mai Arr	79.82	288		P	P	P	08 49 08.2	-0.3
	comp=Z,15nm,0.8s,baz=13,slow=5.7,SNR=65								
CMAR					pP		pP	08 49 59.5	+1.6
	comp=Z,61nm,0.9s,baz=14,slow=5.8,SNR=16								
	comp=Z,15nm,0.8s								
CMAR	Chiang Mai Arr	79.82	288		*i* P		P	08 49 08.1	-0.4
CMAR					pmax	pmax			
	comp=Z,15nm,0.7s								
CAPC	Capurgana	79.83	90		*e*	P	P	08 49 08.2	-0.3
MANR	Mangalia	79.84	352	⇓		P	P	08 49 08.7	+0.5
PCAB	Cabril	79.85	20		*e*	P	P	08 49 09.6	+1.2
DIVS	Divibare	79.94	359	⇑	*i*	P	P	08 49 08.4	-0.4
PBRG	Braganca	80.00	19		*e*	P	P	08 49 09.9	+0.8
SJCC	San Jacinto, C	80.00	87		*e*	P	P	08 49 09.2	-0.4
TBI	Tubuai	80.05	168		*e*	LR	LR	09 14 27.8	
	comp=Z,1µm,27.0s								
GEYT	Alibeck	80.17	329		P	P	P	08 49 10.9	+0.8
	comp=Z,36nm,0.9s,baz=298,slow=3.1,SNR=33								
GEYT					pP		pP	08 50 00.7	+1.1
	comp=Z,21nm,0.8s,baz=32,slow=14,SNR=4.7								
	comp=Z,36nm,0.9s								
GYA0B	ALIBECK ARRAY	80.17	329			IAmb	IAmb	08 49 12.1	
	comp=Z,50nm,1.1s								
BBLS	Lazići	80.17	359	⇑	*i*	P	P	08 49 09.4	-0.7
POLO	Lamas de Olo	80.22	20		*e*	P	P	08 49 11.1	+0.7
	comp=Z,27nm,1.6s								
RAZG	Razgrad	80.23	354	⇓		P	P	08 49 09.8	-0.5
URIC	Uribia, Colomb	80.29	84			IAmb	IAmb	08 49 11.5	
	comp=Z,39nm,0.7s								
AKH	Akhalkalaki	80.30	341	⇓		P	P	08 49 12.5	+1.6
PTO	Porto	80.30	20		*e*	P	P	08 49 11.5	+0.8
PVRL	Vila Real	80.33	19		*e*	P	P	08 49 11.9	+1.0
	comp=Z,45nm,1.5s								
PAYG	Puerto Ayora	80.42	106		P	P	P	08 49 13.4	+1.7
PAYG						IAmb	IAmb	08 49 14.0	
	comp=Z,117nm,1.2s								
RUDO	Rudo	80.42	359		*e*	P	P	08 49 11.3	0.0
BATM	Batumi	80.42	342	⇓		P	P	08 49 11.9	+0.6
MVO	Moncorvo	80.57	19		*e*	P	P	08 49 12.8	+0.6
	comp=Z,34nm,1.1s								
PLE	Pljevlja	80.71	359		*e*	P	P	08 49 13.8	+0.8
SJES	Sjenica	80.77	359	⇓	*i*	P	P	08 49 13.9	+0.6
UPM	Unac-Piva	80.84	359	⇑	*i*	P	P	08 49 13.8	0.0
UPM	Unac-Piva	80.84	359		*e*	P	P	08 49 13.5	-0.3
PVIS	Viseu	80.84	20		*e*	P	P	08 49 14.5	+0.8
	comp=Z,62nm,1.2s								
CASP	Castiglione de	81.06	5		IAmb	IAmb		08 49 16.6	
	comp=Z,65nm,1.4s								
NRCA	Norcia	81.12	4		IAmb	IAmb		08 49 17.4	
	comp=Z,44nm,0.9s								
BRY	Bratogost	81.14	360	⇑	*i*	P	P	08 49 15.2	-0.1
BRY	Bratogost	81.14	360		*e*	P	P	08 49 15.0	-0.3
IVA	Berane	81.16	359		*e*	P	P	08 49 15.5	+0.1
STON	Ston	81.17	0		*e*	P	P	08 49 14.4	-0.8
KOME	Kolasin	81.19	359	⇓	*i*	P	P	08 49 15.5	0.0
MTE	Manteigas	81.21	20		*e*	P	P	08 49 16.4	+0.8
	comp=Z,48nm,1.5s								
MTE	Manteigas	81.21	20		IAmb	IAmb		08 49 17.2	
	comp=Z,103nm,1.6s								
COI	Coimbra	81.23	20		*e*	P	P	08 49 17.2	+1.6
	comp=Z,141nm,1.4s								
COI	Coimbra	81.23	20		IAmb	IAmb		08 49 18.1	
	comp=Z,119nm,1.2s								
MAPC	Malpelo	81.27	96		*e*	P		08 49 06.2	-10
NKME	Niksic	81.28	359		*e*	P	P	08 49 15.4	-0.5
GNI	Garni	81.28	340		P	P	P	08 49 17.4	+1.3
GNI						IAmb	IAmb	08 49 18.7	
	comp=Z,47nm,1.0s								
GNI	Garni	81.28	340		P	P	P	08 49 17.4	+1.3
GNI					pmax	pmax			
	comp=Z,47nm,1.0s								
DIKM	Dikmen	81.32	347	⇓		P	P	08 49 16.3	+0.2
KTUT	Trabzon	81.34	344	⇑		P	P	08 49 17.3	+1.1
PCAS	Casmilo, Conde	81.37	20		*e*	P	P	08 49 17.2	+0.8
	comp=Z,100nm,1.3s								
PVY	Plav	81.44	359		*e*	P	P	08 49 17.5	+0.6
CEME	Cevo	81.50	359	⇓	*i*	P	P	08 49 16.9	-0.2
UREC	San Jos de Ur	81.56	89		*e*	P	P	08 49 16.9	-0.9
HCY	Herceg Novi	81.60	360	⇑	*i*	P	P	08 49 17.1	-0.5
HCY	Herceg Novi	81.60	360	⇓	*i*	P	P	08 49 17.0	-0.5
PDG	Podgorica	81.61	359	⇓		P	P	08 49 18.1	+0.5
PDG	Podgorica	81.61	359			IAmb	IAmb	08 49 19.0	
	comp=Z,80nm,0.8s								
PDG	Podgorica	81.61	359	⇑	*i*	P	P	08 49 17.9	+0.3
TTG	Podgorica	81.61	359	⇓	*i*	P	P	08 49 17.5	-0.1
KOUNC	Koumac, New Ca	81.74	212		P	P	P	08 49 20.1	+1.8
BUM	Brajici-Budva	81.74	359	⇓	*i*	P	P	08 49 18.4	0.0
PCBR	Castelo Branco	81.77	20		*e*	P	P	08 49 18.9	+0.4
	comp=Z,50nm,1.3s								
DBBC	Dabeiba	81.79	90		*e*	P	P	08 49 18.9	-0.2
PSBE	So Bento	81.83	21		*e*	P	P	08 49 20.1	+1.3
	comp=Z,85nm,1.4s								
DRME	Dracevica, Mon	81.85	359	⇑	*i*	P	P	08 49 18.1	-0.8
DRME	Dracevica, Mon	81.85	359	⇓	*i*	P	P	08 49 19.1	+0.2
ILGA	Igaz	82.10	348			IAmb	IAmb	08 49 22.6	
	comp=Z,37nm,0.8s								
ZARC	Zaragoza, Cauc	82.15	88			IAmb	IAmb	08 49 21.4	
	comp=Z,55nm,1.2s								
ZARC	Zaragoza, Cauc	82.15	88		*e*	P	P	08 49 19.8	-1.0
PMRV	Marv??o	82.18	20		*e*	P	P	08 49 21.3	+0.6
	comp=Z,32nm,1.4s								
PMAFR	Mafra	82.27	21		*e*	P	P	08 49 21.8	+0.7
	comp=Z,220nm,1.9s								
PMTG	Montargil	82.37	20		*e*	P	P	08 49 21.9	+0.3
YATNC	Mamie plateau,	82.43	209		P	P	P	08 49 23.6	+1.7
ESDC	Sonseca Array	82.54	17		P	P	P	08 49 22.9	+0.3
	comp=Z,29nm,0.9s,baz=344,slow=4.6,SNR=100								
ESDC					pP		pP	08 50 14.4	+2.2
	comp=Z,8.5nm,1.0s,baz=343,slow=4.6,SNR=3.7								
ESDC					PKKPbc		PKKPbc	09 07 44.2	+0.5
	comp=Z,1.5nm,0.8s,baz=207,slow=1.2,SNR=9.1								
ESDC					PKPPKP		P'P'df	09 15 46.6	-6.9
	comp=Z,1.4nm,0.9s,baz=140,slow=2.1,SNR=7.1								
	comp=Z,29nm,0.9s								
ESDC	Sonseca Array	82.54	17			IAmb	IAmb	08 49 24.0	
	comp=Z,52nm,1.2s								
NVR	Nevrokopi	82.57	356			P	P	08 49 23.1	+0.4
PAB	San Pablo	82.61	17		P	P	P	08 49 23.3	+0.3
PAB	San Pablo	82.61	17		P	P	P	08 49 23.3	+0.3
PAB					pmax	pmax			
	comp=Z,18nm,0.9s								

NOUC	Port Laguerre	82.63	210			P	P	08 49 24.6	+1.7
VAY	Valandovo	82.65	357		*i*	P	P	08 49 24.1	+1.1
TIR	Tirane	82.69	359	⇓		P	P	08 49 24.0	+0.8
PESTR	Estremoz	82.69	20		*e*	P	P	08 49 23.6	+0.3
	comp=Z,82nm,1.7s								
RDO	Rodhopi	82.69	354			P	P	08 49 23.6	+0.4
OUENC	Ouen Island, N	82.79	209			P	P	08 49 26.3	+2.6
KNT	Kendrikon	82.80	356			P	P	08 49 24.3	+0.5
PINNC	Pines Island,	82.81	208			P	P	08 49 25.2	+1.4
SRS	Serrai	82.82	356			P	P	08 49 23.9	0.0
CBOC	Ciudad Bolivar	82.85	90		*e*	P	P	08 49 23.7	-0.9
HELC	Santa Helena	82.85	90		*e*	P	P	08 49 24.7	-1.2
OHR	Ohrid	82.91	358		*i*	P	P	08 49 25.5	+1.1
ALN	Alexandroupoli	82.92	354			P	P	08 49 24.4	0.0
EVO	Evora	82.93	20		*e*	P	P	08 49 25.0	+0.5
	comp=Z,62nm,1.3s								
PAOL	Paolisi	82.97	3			IAmb	IAmb	08 50 16.2	
	comp=Z,49nm,1.1s								
GRG	Griva	83.02	357			P	P	08 49 25.7	+0.7
KOKK	Kokkinochori,	83.10	356			P	P	08 49 25.2	-0.1
BRRC	Barranca, Sant	83.11	88		*e*	P	P	08 49 25.6	-0.1
PTBC	PUERTO BERRIO,	83.16	89		*e*	P	P	08 49 25.6	-0.4
PNCL	Nicolau / Gran	83.24	21		*e*	P	P	08 49 26.9	+0.8
	comp=Z,72nm,1.7s								
SDV	Santo Domingo	83.36	84			P	P	08 49 27.3	+0.1
SDV	Santo Domingo	83.36	84		*e*	P	P	08 49 27.6	+0.3
SDV					epP		pP	08 50 16.6	-0.4
ANTO	Ankara	83.37	349			P	P	08 49 27.7	+0.9
ANTO						IAmb	IAmb	08 49 28.8	
	comp=Z,50nm,0.8s								
ANTO	Ankara	83.37	349			P	P	08 49 27.7	+0.9
ANTO						pmax	pmax		
	comp=Z,50nm,0.9s								
GEVA	Gevas	83.38	341			IAmb	IAmb	08 49 29.2	
	comp=Z,54nm,1.1s								
MATE	Matera	83.39	1	⇑		P	P	08 49 28.1	+1.3
BRTR	Keskin Array B	83.42	348			P	P	08 49 27.4	+0.2
	comp=Z,19nm,0.8s,baz=29,slow=2.8,SNR=41								
BRTR						pP	pP	08 50 17.5	+0.5
	comp=Z,12nm,1.0s,baz=132,slow=1.8,SNR=5.1								
BRTR						PKKPbc	PKKPbc	09 07 42.6	+0.7
	comp=Z,2.6nm,0.5s,baz=163,slow=4.8,SNR=7.9								
	comp=Z,19nm,0.8s								
BRTR	Keskin Array B	83.42	348		*i*	P	P	08 49 27.3	+0.1
BRTR						pmax	pmax		
	comp=Z,20nm,0.8s								
PBEJ	Beja	83.45	20		*e*	P	P	08 49 28.1	+0.9
	comp=Z,41nm,1.5s								
PAMC	Pamplona, Colo	83.48	87		*e*	P	P	08 49 27.6	-0.7
PLMC	San Jos del P	83.49	91		*e*	P	P	08 49 24.7	-3.1
MESJ	Messejana	83.56	21		*e*	P	P	08 49 28.3	+0.6
MESJ						IAmb	IAmb	08 49 28.8	
	comp=Z,53nm,1.6s								
MESJ						*e*SKSac	S	08 59 32.3	+0.4
MESJ	Messejana	83.56	21		*e*	P	P	08 49 28.3	+0.6
MESJ					*e*			08 59 32.3	
OUR	Ouranopolis	83.58	356			P	P	08 49 27.6	-0.2
BORA	Eskisehir	83.59	350			IAmb	IAmb	08 49 29.4	
	comp=Z,54nm,0.7s								
COEN	Coen	83.61	233			IAmb	IAmb	08 49 29.2	
	comp=Z,78nm,1.0s								
COEN	Coen	83.61	233			P	P	08 49 28.0	-0.1
SOCV	Socops	83.73	85		*e*	P	P	08 49 27.6	-1.4
NORC	Norcasia	83.73	89		*e*	P	P	08 49 23.7	-5.3
GUY2C	Guyana, Caldas	83.74	90		*e*	P	P	08 49 29.5	0.0
PTEO	Sao Teotonio	83.74	21		*e*	P	P	08 49 29.7	+1.0
	comp=Z,97nm,1.7s								
PCVE	Castro Verde	83.80	21		*e*	P	P	08 49 29.9	+1.0
BARC	Barichara	83.83	87		*e*	P	P	08 49 28.5	-1.1
LIT	Litokhoron	83.87	357			IAmb	IAmb	08 49 30.8	
	comp=Z,46nm,0.9s								
MORF	Marmelete	83.99	21		*e*	P	P	08 49 30.6	+0.6
MORF						IAmb	IAmb	08 49 31.7	
	comp=Z,76nm,1.1s								
MORF	Marmelete	83.99	21		*e*	P	P	08 49 30.9	+0.9
	comp=Z,132nm,1.6s								
MORF	Marmelete	83.99	21		*e*	P	P	08 49 30.6	+0.6
PVAQ	Vaqueiros	84.08	20		*e*	P	P	08 49 31.1	+0.7
	comp=Z,53nm,1.7s								
SPBC	San Pablo de B	84.11	89		*e*	P	P	08 49 30.5	-0.4
PFVI	Vila Bisbo	84.12	21		*e*	P	P	08 49 31.7	+1.1
YOTC	Yotoco, Valle	84.21	92		*e*	P	P	08 49 30.5	-1.0
KEK	Kerkira	84.32	359			IAmb	IAmb	08 49 32.8	
	comp=Z,56nm,0.6s								
ANIL	Santa Ana	84.32	90		*e*	P	P	08 49 31.4	-0.8
THL	Klokotos Trika	84.42	357			P	P	08 49 31.2	-0.8
RUSC	La Rusia	84.46	88	⇓	*e*	P	P	08 49 27.6	-5.6
RUSC					*e*		PcP	08 49 31.4	-4.9
IGT	Igoumenitsa	84.49	358			P	P	08 49 32.5	+0.1
XOR	Xorichti	84.58	356			P	P	08 49 32.0	-0.9
ROSC	El Rosal	84.64	89			P	P	08 49 33.8	-0.1
	comp=Z,9.5nm,0.3s,baz=314,slow=3.5,SNR=5.8								
	comp=Z,9.5nm,0.3s								
ROSC	El Rosal	84.64	89		*e*	P	P	08 49 34.4	+0.4
TAMC	Tame, Arauca	84.73	86		*e*	P	P	08 49 34.4	+0.4
TIP	Timpagrande	84.86	1	⇓		P	P	08 49 35.3	+1.0
TIP	Timpagrande	84.86	1			IAmb	IAmb	08 49 36.4	
	comp=Z,42nm,0.9s								
ORTC	Ortega, Tolima	84.89	91		*e*	P	P	08 49 33.4	-1.4
AGG	Agios Georgios	84.95	357			IAmb	IAmb	08 49 35.6	
	comp=Z,44nm,0.8s								
MAKR	Makrakomi, Fth	84.97	357			P	P	08 49 34.8	0.0
EVR	Evrytania	85.07	357			P	P	08 49 35.6	+0.2
CHIC	Chingaza	85.14	89		*e*	P	P	08 49 35.3	-1.1
PRAC	Prado	85.25	90		*e*	P	P	08 49 34.4	-2.2
BBAC	Balboa, Cauca	85.33	93		*e*	P	P	08 49 38.2	+1.1
MARP	Paez Belalcaza	85.37	92		*e*	P	P	08 49 38.2	+0.8
ANX	Ano Chora	85.39	357			P	P	08 49 37.0	0.0
EFP	Efpalio	85.56	357			P	P	08 49 37.8	+0.1
ISP	Isparta	85.63	350			IAmb	IAmb	08 49 39.7	
	comp=Z,62nm,0.9s								
CEL	Celeste	85.76	2			IAmb	IAmb	08 49 40.0	
	comp=Z,44nm,0.7s								
BETC	Betania	85.79	91		*e*	P	P	08 49 38.2	-1.0
KLV	Kalavryta, Ach	85.93	357			P	P	08 49 39.4	-0.3
TULM	Tulcn-Chalpat	86.11	95			IAmb	IAmb	08 49 43.6	
	comp=Z,94nm,1.2s								
OTAV	Otavalo	86.14	95			P	P	08 49 41.9	+0.5
OTAV	Otavalo	86.14	95			P	P	08 49 41.9	+0.5
OTAV						pmax	pmax		
	comp=Z,20nm,0.8s								
OTAV	Otavalo	86.14	95		*e*	P	P	08 49 41.1	-0.3
OTAV	Otavalo	86.14	95		*e*	P	P	08 49 42.3	+0.9
OTAV					*e*	pP	pP	08 50 31.9	+0.4
GARC	Garzon, Huila	86.17	92		*e*	P	P	08 49 41.1	-0.2
PTGC	Puerto Gaitan,	86.38	88		*e*	P	P	08 49 40.2	-1.9
FLOC	Florencia	86.58	92		*e*	P	P	08 49 44.0	+1.0
ITM	Ithomi	86.80	357			IAmb	IAmb	08 49 45.1	
	comp=Z,71nm,0.9s								
MTSU	Mount Surprise	86.81	230			P	P	08 49 45.0	+1.1
MACC	Macarena, Meta	87.12	90		*e*	P	P	08 49 43.1	-2.6
VLI	Veliai	87.23	356			P	P	08 49 44.1	-1.8
SANT	Santorini	87.46	354	⇓		P	P	08 49 45.6	-1.4
KDU	Kakadu	87.55	243			P	P	08 49 47.7	+0.2
CTA	Charters Tower	87.73	228			P	P	08 49 49.1	+0.8
CTAO	Charters Tower	87.73	228			P	P	08 49 48.9	+0.6
CTAO	Charters Tower	87.73	228			P	P	08 49 48.9	+0.6
CTAO						pmax	pmax		
	comp=Z,127nm,1.2s								
CTAO	Charters Tower	87.73	228			P	P	08 49 49.1	+0.8
KAPI	Kappang	87.73	258			P	P	08 49 48.2	-0.3
KAPI						IAmb	IAmb	08 49 49.4	
	comp=Z,45nm,0.9s								
KAPI	Kappang	87.73	258			P	P	08 49 48.2	-0.3
KAPI						pmax	pmax		
	comp=Z,45nm,1.0s								
BKSI	Bulukumba	87.79	257			P	P	08 49 46.8	-1.9
	comp=Z,51nm,1.1s								
KEST	Kesra	88.00	7			P	P	08 49 49.1	-0.5
	comp=Z,7.2nm,0.7s,baz=278,slow=3.9,SNR=7.8								
KEST						pP	pP	08 50 41.5	+1.5
	comp=Z,13nm,1.0s,baz=141,slow=1.6,SNR=3.9								
	comp=Z,7.2nm,0.7s								
CSS	Mathiatis	88.16	348			IAmb	IAmb	08 50 42.9	
	comp=Z,86nm,1.3s								
PTLC	Puerto Leguiza	88.22	92		*e*	P	P	08 49 52.8	+1.9
BSSI	Bau Bau, Buton	88.27	256			P	P	08 49 49.8	-1.2
	comp=Z,47nm,1.5s								
ARNL	Arenillas	88.37	99			IAmb	IAmb	08 49 52.8	
	comp=Z,38nm,0.7s								
IMMV	Iera Moni Meta	88.44	355			P	P	08 49 52.1	+0.5
IDI	Anoyia	88.56	354	⇓		P	P	08 49 51.0	-1.3
BOSC	San Juan Bosco	88.91	97			IAmb	IAmb	08 49 56.6	
	comp=Z,34nm,1.1s								

RK1H	Rockhampton Ha	89.03	223			P	P	08 49 55.8	+1.6
EIDS	Eidsvold	90.61	221			IAmb	IAmb	08 50 55.4	
	comp=Z,44nm,1.6s								
EIDS	Eidsvold	90.61	221			P	P	08 50 03.1	+1.5
HYBB	Hyderabad (bro	90.89	304		*e*	P	pP	08 50 54.9	+1.1
HYBB					*i*			08 50 54.9	
QIS	Mount Isa	91.00	233			P	P	08 50 03.5	-0.1
KNRA	Kununurra	91.95	244			P	P	08 50 07.8	-0.2
WR0	Warramunga Arr	92.80	238			IAmb	IAmb	08 50 11.8	
	comp=Z,19nm,0.7s								
WRAB	Tennant Creek	92.87	238			P	P	08 50 11.6	-0.6
WRAB	Tennant Creek	92.87	238			P	P	08 50 11.6	-0.6
WRAB						pmax	pmax		
	comp=Z,48nm,1.1s								
WRA	Warramunga Arr	92.88	238			P	P	08 50 11.6	-0.6
	comp=Z,20nm,0.9s,baz=33,slow=5.7,SNR=103								
WRA						pP	pP	08 51 02.9	0.0
	comp=Z,5.2nm,1.0s,baz=30,slow=5.1,SNR=3.5								
WRA						PKIKP	PKiKP	08 54 57.6	-1.1
	comp=Z,0.6nm,0.4s,baz=5.4,slow=1.7,SNR=18								
WRA						PKKPbc	PKKPbc	09 07 20.7	+1.1
	comp=Z,0.5nm,0.6s,baz=237,slow=2.1,SNR=8.5								
	comp=Z,20nm,0.9s								
WRA	Warramunga Arr	92.88	238		*i*	P	P	08 50 11.6	-0.6
WRA						pmax	pmax		
	comp=Z,21nm,0.9s								
BOAV	Boa Vista	94.30	79		*e*	P	P	08 50 18.9	-0.1
BOAV					*e*	pP	pP	08 51 09.5	-0.1
TBTG	Tabatinga, AM	94.54	91		*e*	pP	pP	08 51 10.4	-0.3
CZSB	Cruzeiro do Su	95.90	95		*e*	P	P	08 50 26.0	-0.2
CZSB					*e*	pP	pP	08 51 17.1	+0.2
ASAR	Alice Springs	96.29	236			P	P	08 50 27.4	-0.3
	comp=Z,9.4nm,0.7s,baz=22,slow=4.8,SNR=68								
ASAR						pP	pP	08 51 19.2	+0.8
	comp=Z,2.8nm,1.0s,baz=40,slow=4.6,SNR=1.9								
ASAR						PKiKP	PKiKP	08 55 03.8	-0.8
	comp=Z,0.9nm,0.5s,baz=52,slow=1.5,SNR=8.2								
ASAR						PKKPbc	PKKPdf	09 07 12.0	-0.2
	comp=Z,2.8nm,0.6s,baz=198,slow=2.3,SNR=29								
	comp=Z,9.4nm,0.7s								
RAYN	Ar Rayn	97.15	335			P	P	08 50 31.9	0.0
RAYN	Ar Rayn	97.15	335			P	P	08 50 31.9	0.0
RAYN						pmax	pmax		
	comp=Z,31nm,1.0s								
STKA	Stephens Creek	100.09	226			P	Pdif	08 50 45.5	+1.0
	comp=Z,4.6nm,0.9s,baz=9.6,slow=7.6,SNR=4.7								
TORD	Torodi Ar. Bea	109.44	17			PKiKP	PKiKP	08 55 27.4	-1.5
	comp=Z,1.4nm,0.4s,baz=338,slow=2.8,SNR=16								
TORD						PP	PP	08 56 02.4	+1.2
	comp=Z,1.2nm,0.8s,baz=349,slow=5.8,SNR=4.4								
TORD						PKKPbc	PKKPbc	09 06 31.9	+0.3
	comp=Z,6.0nm,0.5s,baz=156,slow=2.0,SNR=57								
TORD						PKKP	PKKPdf	09 06 45.9	+0.1
	comp=Z,3.7nm,0.8s,baz=168,slow=3.9,SNR=6.6								
NBMA	Muriti-CE	114.04	65		*e*	P	Pdif	08 51 47.2	0.0

DVHZ	Dannevirke	0.94	61	P		Pn	08 42 04.5	-0.3
TSZ	Takapari Road	0.96	44	P		Pn	08 42 05.1	-0.1
WAZ	Wanganui	1.01	355	P		Pn	08 42 05.8	+0.1
ANWZ	Angora Road	1.09	75	P		Pn	08 42 06.6	-0.3
TUWZ	Tuamarina	1.10	232	P		Pn	08 42 07.0	+0.1
CMWZ	Cape Campbell	1.19	214	P		Pb	08 42 10.4	+0.2
PNHZ	Pukenui	1.20	45	P		Pn	08 42 07.9	-0.4
WPHZ	Waipukurau	1.24	56	P		Pn	08 42 08.4	-0.5
PRHZ	Porangahau	1.27	68	P		Pn	08 42 09.2	-0.2
BSWZ	Blackbirch Sta	1.32	224	P		Pn	08 42 10.2	+0.1
NNZ	Nelson	1.38	250	P		Pn	08 42 10.8	0.0
LREZ	Lake Rotokare	1.40	338	P		Pn	08 42 11.3	+0.2
MTVZ	Mangateitei	1.40	12	P		Pn	08 42 11.5	+0.3
MOVZ	Moawhango	1.44	21	P		Pn	08 42 11.4	-0.4
BHHZ	Black Hill Sta	1.47	31	P		Pn	08 42 12.0	-0.1
PKVZ	Pokaka	1.48	8	P		Pn	08 42 12.5	+0.2
WNVZ	Wahianoa	1.48	15	P		Pn	08 42 12.4	0.0
KRHZ	Kereru	1.48	42	P		Pn	08 42 11.4	-0.9
TRVZ	Turoa	1.50	14	P		Pn	08 42 13.0	+0.2
WHVZ	Whangaehu Hut	1.52	15	P		Pn	08 42 13.3	+0.3
DRZ	Dome Shelter	1.53	14	P		Pn	08 42 13.7	+0.5
PXZ	Pawanui	1.53	62	P		Pn	08 42 11.9	-1.0
FWVZ	Far West T-bar	1.54	13	P		Pn	08 42 13.4	+0.1
TUVZ	Tukino	1.55	16	P		Pn	08 42 13.6	+0.2
PREZ	Palmer Road	1.59	333	P		Pn	08 42 14.2	+0.4
SNVZ	South Ngauruho	1.63	15	P		Pn	08 42 15.0	+0.6
NGZ	Ngauruhoe	1.63	14	P		Pn	08 42 15.1	+0.7
OTVZ	Oturere	1.65	16	P		Pn	08 42 15.0	+0.2
VRZ	Vera Road	1.65	351	P		Pn	08 42 14.7	0.0
KAHZ	Kahuranaki	1.67	55	P		Pn	08 42 13.9	-0.9
NEZ	North Egmont	1.67	332	P		Pn	08 42 15.3	+0.3
NNVZ	North Ngauruho	1.68	14	P		Pn	08 42 15.6	+0.5
KWHZ	Kaweka Forest	1.68	38	P		Pn	08 42 14.1	-0.9
WTVZ	West Tongariro	1.69	13	P		Pn	08 42 15.9	+0.7
ETVZ	East Tongariro	1.69	16	P		Pn	08 42 15.4	+0.1
TWVZ	Taurewa	1.71	9	P		Pn	08 42 15.5	+0.1
TMVZ	Te Maari	1.71	16	P		Pn	08 42 15.5	0.0
DREZ	Durham Road	1.71	336	P		Pn	08 42 16.1	+0.6
KRVZ	Karewarewa	1.72	14	P		Pn	08 42 16.5	+0.9
NTVZ	North Tongarir	1.72	15	P		Pn	08 42 15.8	+0.2
NBEZ	Newall Road No	1.76	327	P		Pn	08 42 16.7	+0.6
PKE	Pukeiti	1.78	331	P		Pn	08 42 16.9	+0.5
MCHZ	McNeill Hill	1.80	44	P		Pn	08 42 16.0	-0.6
KATZ	Kakaramea	1.84	15	P		Pn	08 42 18.5	+1.2
MRNZ	Matariki Terra	1.88	249	P		Pn	08 42 17.8	+0.1
BKZ	Black Stump Fm	1.92	34	P		Pn	08 42 17.2	-1.2
THZ	Tophouse	1.93	238	P		Pn	08 42 18.4	-0.1
QRZ	Quartz Range	1.95	267	P		Pn	08 42 17.7	-0.9
RATZ	Rangitukua	1.96	16	P		Pn	08 42 20.2	+1.3
HATZ	Hinemaiaia	2.02	23	P		Pn	08 42 21.4	+1.7
KHZ	Kahutara	2.02	215	P		Pn	08 42 19.1	-0.6
ARHZ	Aropaoanui	2.09	45	P		Pn	08 42 19.6	-1.1
NMHZ	Naumai	2.12	39	P		Pn	08 42 20.4	-0.7
MRHZ	Matea Rd	2.18	28	P		Pn	08 42 20.6	-1.3
WHTZ	Whakaora	2.19	18	P		Pn	08 42 24.5	+2.4
HIZ	Hauiti	2.25	355	P		Pn	08 42 23.0	+0.2
KUTZ	Kaahu Road	2.34	14	P		Pn	08 42 25.7	+1.6
WPRZ	Whakapapatarin	2.38	21	P		Pn	08 42 27.0	+2.3
RAHZ	Arahi	2.40	40	P		Pb	08 42 31.3	+0.8
ALRZ	Allen Road	2.40	24	P		Pn	08 42 23.5	-1.4
TLZ	Tolley Road	2.45	8	P		Pn	08 42 26.2	+0.6
PRRZ	Plateau Road	2.47	24	P		Pn	08 42 28.4	+2.6
HRRZ	Handcock Road	2.54	22	P		Pn	08 42 29.5	+2.6
MUGZ	Murupara	2.62	30	P		Pb	08 42 31.3	-3.1
SNGZ	Shannon Statio	2.63	42	P		Pn	08 42 26.5	-1.6
DSZ	Denniston Nort	2.67	247	P		Pn	08 42 27.6	-1.0
GVZ	Greta Valley S	2.69	214	P		Pn	08 42 27.1	-1.2
RIGZ	Rimuhau	2.91	46	P		Pn	08 42 29.3	-2.6
LTZ	Lake Taylor	2.92	225	P		Pn	08 42 30.8	-1.3
LIRZ	Lichensteins R	2.93	20	P		Pn	08 42 29.8	-2.3
URZ	Urewera	2.94	33	P		Pn	08 42 29.9	-2.4
TOZ	Tahuroa Road	3.04	6	P		Pn	08 42 33.5	-0.2
MWZ	Matawai	3.07	39	P		Pn	08 42 31.7	-2.4
OKCZ	Okains Bay	3.32	206	P		Pn	08 42 35.7	-1.9
INZ	Inchbonnie	3.36	233	P		Pn	08 42 37.1	-1.0
TWGZ	Tauwhareparae	3.41	42	P		Pn	08 42 36.9	-1.9
OXZ	Oxford	3.43	221	P		Pn	08 42 36.6	-2.4
MQZ	McQueen's Vall	3.46	211	P		Pn	08 42 36.6	-2.7
AKCZ	Akaroa Harbour	3.51	207	P		Pn	08 42 38.2	-1.9
PKGZ	Pakihiroa	3.68	40	P		Pn	08 42 40.6	-2.0
AWAZ	Awhitu Peninsu	3.71	354	P		Pn	08 42 44.0	+1.1
ETAZ	East Tamaki Re	3.80	358	P		Pn	08 42 45.3	+1.2
WIAZ	Waiheke Island	3.96	0	P		Pn	08 42 46.6	+0.2
WVZ	Waitaha Valley	3.99	233	P		Pn	08 42 51.0	+4.3
WAKZ	Wakanui South	3.99	216	P		Pn	08 42 44.2	-2.5
RVAZ	Riverhead Bore	4.00	354	P		Pn	08 42 47.6	+0.7
GCSZ	Gaunt Creek Bo	4.37	233	P		Pn	08 42 56.9	+4.9
TMZ	Timaru	4.71	218	P		Pn	08 42 54.4	-2.3
FOZ	Fox Glacier	4.80	233	P		Pn	08 42 56.8	-1.0
ODZ	Otahua Downs	5.39	216	P		Pn	08 43 03.1	-2.8
JCZ	Jackson Bay	5.72	233	P		Pn	08 43 11.9	+1.2
CTZ	Chatham Island	6.83	119	P		Pn	08 43 25.1	-0.6

MOS ***29*** *09:10:28.1±1.1,29°.52N×81°.19E,h21km,mb4.9/20,Error ellipse: s-maj=8.9km s-min=5.1km az=106.2*

NEIC ***29*** *09:10:28.9±0.9,29°.56N±0°.07×81°.13E±0°.07,h9km±2km, mb4.6/50,Error ellipse: s-maj=9.9km s-min=8.9km az=175.0*

DMN ***29*** *09:10:29.5±0.3,29°.65N×81°.07E,h10km,Ml5.0/10,Error ellipse: s-maj=11.8km s-min=4.8km az=29.0*

NDI ***29*** *09:10:30.3±2.8,29°.36N×81°.26E,h10km,ML4.4, mb4.6(NEIC)*

BJI ***29*** *09:10:30.2±0.0,29°.81N×81°.50E,h5km,mb4.4/40, mbB4.5/17,Ms4.1/25,Ms7 4.0/24*

IDC ***29*** *09:10:32.4±2.6,29°.47N×81°.26E,h41km±23km,mb4.1/28, mbtmp4.4/30,ML4.2/1,MS3.8/19,Error ellipse: s-maj=12.3km s-min=11.3km az=60.0*

ISC 29 09:10:29.5±0.3,29°.47N±0°.04×81°.16E±0°.03,h17km,n232, σ1℘69/246,**mb4.6**/62,**MS3.8**/24,**12C-5D,Nepal**

Code	Station Name	Δ°	AZ°	Phase	ID		Time h m s	Res
				Op		ISC		ISC
LGTI	**Lohaghat**	**0.80**	**269**	*e*P		**Pn**	**09 10 48.5**	**+2.5**
PTH	**Pithoragarh**	**0.83**	**276**	*e*P		**Pn**	**09 10 47.6**	**+0.9**
BRCI	**Bahraich**	**1.93**	**169**	*e*P		**Pn**	**09 11 02.3**	**+0.7**
PYUN	**Piuthan**	**2.10**	**130**	*e*Pn		**Pn**	**09 11 05.6**	**+1.4**
PYUN				*e*Sn		**Sb**	**09 11 32.2**	**-1.1**
	5μm,0.4s							
DANN	**Dangsing**	**2.53**	**115**	*e*Pn		**Pn**	**09 11 11.8**	**+1.6**
DANN				*e*Sn		**Sn**	**09 11 42.4**	**+1.6**
	607nm,0.2s							
KOLN	**Koldanda**	**2.73**	**128**	*e*Sn		**Sn**	**09 11 47.6**	**+2.1**
DDI	**Dehra Dun**	**2.83**	**288**	*e*P		**Pb**	**09 11 18.4**	**-1.2**
DDI				*e*S		**Sn**	**09 11 49.8**	**+2.0**
DDI				IAML			09 11 53.6	
	comp=E,2μm,0.5s							
DDI				IAML			09 12 04.2	
	comp=N,3μm,0.2s							
GKN	**Gorkha**	**3.38**	**115**	*e*Pn		**Pn**	**09 11 23.0**	**+1.3**
GKN				*e*Sn		**Sn**	**09 12 02.7**	**+1.2**
	comp=N,2μm,0.4s							
NDI	**New Delhi**	**3.54**	**258**	*e*P		**Pn**	**09 11 26.8**	**+3.0**
NDI				*e*P		**Pb**	**09 11 29.0**	**-2.8**
NDI				*e*S		**Sn**	**09 12 08.0**	**+2.7**
AYAN	**Aya Nagar**	**3.67**	**255**	*e*P		**Pb**	**09 11 30.9**	**-3.0**
SONA	**Sohna**	**3.78**	**252**	*e*P		**Pn**	**09 11 30.1**	**+3.1**
SMLA	**Simla**	**3.83**	**297**	*e*P		**Pn**	**09 11 31.4**	**+3.6**
SMLA				*e*S		**Sn**	**09 12 16.2**	**+3.8**
SMLA				IAML			09 12 34.8	
	comp=E,2μm,0.6s							
SMLA				IAML			09 12 40.5	
	comp=N,861nm,0.8s							
DMN	**Daman**	**3.93**	**117**	*e*Pn		**Pn**	**09 11 30.1**	**+0.7**
DMN				*e*Sn		**Sn**	**09 12 15.0**	**-0.3**
	comp=N,261nm,0.3s							
KKN	**Kakani**	**3.98**	**114**	*e*Pn		**Pn**	**09 11 31.1**	**+1.0**
KKN				*e*Sn		**Sn**	**09 12 16.3**	**-0.2**
PKIN	**Phulchoki**	**4.17**	**116**	*e*Pn		**Pn**	**09 11 33.5**	**+0.8**
PKIN				*e*Sn		**Sn**	**09 12 21.3**	**+0.1**
	comp=N,1μm,0.4s							
ALBI	**Allahabad**	**4.18**	**172**	*e*P		**Pn**	**09 11 32.8**	**+0.2**
PKI	**Pulchoki**	**4.19**	**116**	*e*Pn		**Pn**	**09 11 33.5**	**+0.6**
PKI				*e*Sn		**Sn**	**09 12 21.4**	**-0.2**
	comp=N,733nm,0.3s							
KUDL	**Kundal**	**4.31**	**253**	*e*P		**Pn**	**09 11 37.5**	**+3.2**
GUN	**Gumba**	**4.42**	**109**	*e*Pn		**Pn**	**09 11 37.1**	**+0.9**
GUN				*e*Sn		**Sn**	**09 12 27.5**	**0.0**
	comp=N,247nm,0.3s							
BHK	**Bhakra**	**4.54**	**297**	*e*P		**Pn**	**09 11 41.9**	**+4.4**
JHNI	**Jhansi**	**4.62**	**211**	*e*P		**Pn**	**09 11 39.1**	**+0.6**
JIRN	**Jiri**	**4.77**	**111**	*e*Pn		**Pn**	**09 11 41.9**	**+0.8**
JIRN				*e*Sn		**Sn**	**09 12 35.6**	**-0.6**
	comp=N,473nm,0.3s							
RAMN	**Ramite**	**5.41**	**116**	*e*Pn		**Pn**	**09 11 50.1**	**+0.4**
RAMN				*e*Sn		**Sn**	**09 12 49.9**	**-1.9**
	comp=N,338nm,0.3s							
THN	**Thein Dam**	**5.54**	**304**	*e*P		**Pn**	**09 11 54.5**	**+3.4**
TAPN	**Taplejung**	**6.14**	**109**	*e*Pn		**Pn**	**09 12 00.5**	**+0.7**
TAPN				*e*Sn		**Sn**	**09 13 07.3**	**-2.5**
	comp=N,291nm,0.4s							
AJM	**Ajmer**	**6.49**	**244**	*e*P		**Pn**	**09 12 06.8**	**+2.5**
BHPL	**Bhopal**	**7.05**	**209**	*e*P		**Pn**	**09 12 12.4**	**+0.3**
BHPL				*e*S		**Sn**	**09 13 27.9**	**-3.8**
BHPL				IAML			09 13 31.6	
	comp=E,318nm,0.4s							
BHPL				IAML			09 13 34.7	
	comp=N,449nm,0.4s							
BOK	**Bokaro**	**7.05**	**142**	*e*P		**Pn**	**09 12 12.3**	**+0.3**
BOK				*e*S		**Sn**	**09 13 25.9**	**-6.0**
BLSP	**Bilaspur**	**7.36**	**173**	*e*P		**Pn**	**09 12 16.4**	**+0.2**
NGP	**Nagpur**	**8.50**	**193**	*e*P		**Pn**	**09 12 31.2**	**-0.7**
LSA	**Lhasa**	**8.70**	**86**	Pn		**Pn**	**09 12 37.3**	**+2.2**
LSA	**Lhasa**	**8.70**	**86**	P		**Pn**	**09 12 37.3**	**+2.2**
AKL	**Akola**	**9.50**	**204**	*e*P		**Pn**	**09 12 45.9**	**+0.3**
BWNR	**Bhubaneshwar**	**10.05**	**154**	*e*P		**Pn**	**09 12 52.7**	**-0.5**
SHL	**Shillong**	**10.28**	**110**	Pn		**Pn**	**09 12 53.9**	**-2.5**
SHL	**Shillong**	**10.28**	**110**	P		**Pn**	**09 12 53.9**	**-2.5**
SHL	**Shillong**	**10.28**	**110**	*e*P		**Pn**	**09 12 53.7**	**-2.8**
KBL	**Kabul**	**11.46**	**299**	Pn		**Pn**	**09 13 12.2**	**-0.5**
KBL	**Kabul**	**11.46**	**299**	P		**Pn**	**09 13 12.2**	**-0.5**
HYBB	**Hyderabad (bro**	**12.23**	**192**	*e*Pn		**Pn**	**09 13 24.1**	**+1.0**
HYBB				*e*Sn		**Sn**	**09 15 42.9**	**+3.9**
HYB	**Hyderabad**	**12.23**	**192**	*e*P		**Pn**	**09 13 20.2**	**-2.9**
TARG	**Taragay, Kyrgy**	**12.54**	**348**	Pn		**Pn**	**09 13 27.4**	**-0.1**
TARG	**Taragay, Kyrgy**	**12.54**	**348**	P		**Pn**	**09 13 27.4**	**-0.1**
DRK	**Karamyk**	**12.62**	**325**	Pn		**Pn**	**09 13 25.3**	**-3.2**
POO	**Poona**	**12.77**	**213**	*e*P		**Pn**	**09 13 27.9**	**-2.6**
KDJ	**Kajisay**	**13.04**	**347**	Pn		**Pn**	**09 13 32.9**	**-1.3**
KDJ	**Kajisay**	**13.04**	**347**	P		**Pn**	**09 13 32.9**	**-1.3**
PRZ	**Przheval'sk**	**13.18**	**351**	Pn		**Pn**	**09 13 35.0**	**-1.1**
PRZ	**Przheval'sk**	**13.18**	**351**	P		**Pn**	**09 13 35.0**	**-1.1**
GOMU	**GeErMu**	**13.29**	**56**	P		**Pn**	**09 13 34.3**	**-3.5**
GOMU				pmax	pmax			
	comp=N,2.0nm,0.6s							
ULHL	**Ulahol**	**13.36**	**344**	P		**Pn**	**09 13 37.7**	**-0.8**
BOOM	**Boomskoye usch**	**13.66**	**343**	Pn		**Pn**	**09 13 41.2**	**-1.4**
BOOM	**Boomskoye usch**	**13.66**	**343**	P		**Pn**	**09 13 41.2**	**-1.4**
WMQ	**Urumqi**	**15.25**	**18**	*e*P		**Pn**	**09 14 04.3**	**+0.2**
WMQ				LR	LR			
	comp=N,650nm,12.7s							
WMQ				LR	LR			
	comp=N,350nm,14.5s							
HRA	**Herat**	**16.79**	**292**	P		**Pn**	**09 14 22.7**	**-1.4**
MK31	**Makanchi Array**	**17.32**	**3**	P		**Pn**	**09 14 28.0**	**-2.5**
MK31	**Makanchi Array**	**17.32**	**3**	P		**Pn**	**09 14 28.0**	**-2.5**
MK31				pmax	pmax			
	comp=Z,15nm,1.0s							
MKAR	**Makanchi Array**	**17.32**	**3**	P		**Pn**	**09 14 29.4**	**-1.1**
	comp=Z,0.9nm,0.3s,baz=184,slow=13,SNR=11							
MKAR				S		**Sn**	**09 17 36.1**	**-6.7**
	comp=Z,2.5nm,0.9s,baz=183,slow=29,SNR=3.6							
MKAR				LR		LR	09 22 12.1	
	comp=Z,300nm,18.4s,baz=160,slow=40							
MKAR				ScP		**ScP**	**09 22 44.6**	**-2.0**
	comp=Z,1.4nm,1.1s,baz=223,slow=5.9,SNR=3.7							
	comp=Z,5.5nm,0.6s							
MKAR	**Makanchi Array**	**17.32**	**3**	P		**Pn**	**09 14 27.9**	**-2.6**
MAKZ	**Makanchi**	**17.33**	**2**	P		**Pn**	**09 14 28.2**	**-2.4**
MAKZ	**Makanchi**	**17.33**	**2**	P		**Pn**	**09 14 28.2**	**-2.4**
MAKZ				pmax	pmax			
	comp=Z,16nm,1.0s							
GTA	**Gaotai**	**18.27**	**52**	⇑P		**Pn**	**09 14 40.0**	**-2.4**
GTA				pP		pP	09 14 47.5	-0.5
GTA				sP		sP	09 14 51.0	+0.6
GTA				pmax	pmax			
	comp=Z,6.0nm,1.0s							
GTA				pmax	pmax			
	comp=Z,97nm,5.1s							
GTA				LR	LR			
	comp=Z,190nm,15.6s							
GTA				LR	LR			
	comp=Z,240nm,16.0s							
GTA				LR	LR			
	comp=Z,280nm,15.6s							
PZH	**PanZhiHua**	**18.41**	**94**	P		**Pn**	**09 14 45.3**	**+1.1**
PZH				pmax	pmax			
	comp=Z,10.0nm,0.8s							
PZH				pmax	pmax			
	comp=Z,70nm,5.5s							
CHTO	**Chiang Mai**	**19.36**	**119**	P		**P**	**09 14 54.6**	**+0.2**
CHTO	**Chiang Mai**	**19.36**	**119**	P		**P**	**09 14 54.6**	**+0.2**
CHTO				pmax	pmax			
	comp=Z,5.0nm,0.9s							
CM31	**Chiang Mai Arr**	**19.57**	**120**	P		**P**	**09 14 57.1**	**+0.3**
CMAR	**Chiang Mai Arr**	**19.57**	**120**	P		**P**	**09 14 56.1**	**-0.6**
	comp=Z,2.0nm,0.3s,baz=306,slow=12,SNR=17							
CMAR	**Chiang Mai Arr**	**19.57**	**120**	P		**P**	**09 14 57.2**	**+0.4**
CMAR	**Chiang Mai Arr**	**19.57**	**120**	*i* P		**P**	**09 14 56.7**	**-0.1**
CMAR				pmax	pmax			
	comp=Z,4.0nm,0.6s							
KMI	**Kunming**	**19.65**	**98**	⇓P		**Pn**	**09 15 04.8**	**+5.5**
KMI				pmax	pmax			
	comp=Z,16nm,0.9s							
LZH	**Lanzhou**	**20.16**	**65**	*e*P		Pn	09 15 04.0	-1.1
LZH				pP		pP	09 15 07.3	-1.4
LZH				pmax	pmax			
	comp=Z,23nm,1.2s							
LZH				LR	LR			
	comp=Z,350nm,11.0s							
LZH				LR	LR			
	comp=Z,440nm,11.3s							
LZH				LR	LR			
	comp=Z,410nm,15.1s							
GEYT	**Alibeck**	**20.91**	**300**	P		**P**	**09 15 10.3**	**-0.9**
	comp=Z,9.6nm,0.3s,baz=104,slow=11,SNR=29							
	comp=Z,9.6nm,0.3s							
GEYT	**Alibeck**	**20.91**	**300**	P		**P**	**09 15 10.6**	**-0.7**
GYA0B	**ALIBECK ARRAY**	**20.91**	**300**	P		**P**	**09 15 10.7**	**-0.5**
WSAR	**Wadi Sarin**	**21.11**	**258**	P		**P**	**09 15 15.9**	**+2.5**
	comp=Z,15nm,0.7s,baz=112,slow=10.0,SNR=15							
	comp=Z,15nm,0.7s							
KURBB	**Kurchatov Arra**	**21.23**	**355**	P		**P**	**09 15 13.8**	**-0.6**
	comp=Z,27nm,0.9s,baz=180,slow=10,SNR=181							
KURBB				S		**S**	**09 19 07.9**	**-1.8**
	comp=Z,0.5nm,0.5s,baz=172,slow=17,SNR=4.3							
	comp=Z,27nm,0.9s							
KURK	**Kurchatov**	**21.31**	**356**	P		**P**	**09 15 15.3**	**-0.1**
KURK	**Kurchatov**	**21.31**	**356**	P		**P**	**09 15 13.8**	**-1.6**
KURK				S		**S**	**09 19 07.9**	**-3.5**
SLVN	**Son La**	**22.05**	**106**	P		**P**	**09 15 24.2**	**+0.5**
XAN	**Xi'an**	**24.01**	**72**	⇑P		**P**	**09 15 46.5**	**+3.0**
XAN				pP		sP	09 15 50.5	-1.3
XAN				sP		pP	09 15 53.5	+4.2
XAN				pmax	pmax			
	comp=Z,9.0nm,1.3s							
XAN				LR	LR			
	comp=Z,170nm,10.8s							
XAN				LR	LR			
	comp=Z,160nm,11.7s							
XAN				LR	LR			
	comp=Z,160nm,14.0s							
KNGR	**Kungurtug, Tuv**	**24.44**	**26**	*i* P		**P**	**09 15 48.3**	**+0.9**
ENH	**Enshi**	**24.55**	**81**	P		**P**	**09 15 48.2**	**-0.3**
ENH				IAmb		IAmb	09 15 58.4	
	comp=Z,14nm,0.7s							
ZAA0	**Zalesovo Array**	**24.61**	**5**	P		**P**	**09 15 47.9**	**-0.8**
ZAA0				IAmb		IAmb	09 15 50.8	
	comp=Z,26nm,0.9s							
ZALV	**Zalesovo Beam**	**24.61**	**5**	P		**P**	**09 15 48.8**	**+0.1**
	comp=Z,28nm,0.8s,baz=194,slow=9.9,SNR=81							
ZALV				LR		LR	09 26 15.4	
	comp=Z,51nm,21.2s,baz=228,slow=38							
	comp=Z,28nm,0.8s							
ZALV	**Zalesovo Beam**	**24.61**	**5**	P		**P**	**09 15 48.2**	**-0.5**
ZALV	**Zalesovo Beam**	**24.61**	**5**	*i* P		**P**	**09 15 48.7**	**0.0**
ZALV				pmax	pmax			
	comp=Z,28nm,0.8s							
BVAR	**Borovoye Array**	**24.84**	**344**	LR		LR	09 26 35.8	
	comp=Z,152nm,21.3s,baz=46,slow=39							
ZAK	**Zakamensk**	**26.73**	**32**	*e*P		**P**	**09 16 08.3**	**+0.2**
ZAK				pmax	pmax			
	comp=Z,6.0nm,1.4s							
SONM	**Songino Array**	**26.73**	**40**	P		**P**	**09 16 08.9**	**+0.7**
	comp=Z,1.5nm,0.7s,baz=233,slow=8.2,SNR=9.2							
SONM				LR		LR	09 27 41.7	
	comp=Z,178nm,21.9s,baz=224,slow=39							
	comp=Z,1.5nm,0.7s							
SONM	**Songino Array**	**26.73**	**40**	P		**P**	**09 16 07.2**	**-1.0**
SONM	**Songino Array**	**26.73**	**40**	P		**P**	**09 16 07.2**	**-1.0**
SONM				pmax	pmax			
	comp=Z,4.0nm,1.1s							
ULN	**Ulaanbaatar**	**27.11**	**40**	P		**P**	**09 16 10.9**	**-0.8**
ULN	**Ulaanbaatar**	**27.11**	**40**	*ce*P		**P**	**09 16 12.6**	**+0.9**
ULN				pmax	pmax			
	comp=Z,5.0nm,1.0s							
HHC	**Hu-ho-hao-te**	**27.20**	**57**	*e*P		**P**	**09 16 11.5**	**-0.9**
HHC				pmax	pmax			
	comp=Z,13nm,0.9s							
HHC				pmax	pmax			
	comp=Z,140nm,7.6s							
HHC				LR	LR			
	comp=Z,310nm,14.0s							
HHC				LR	LR			
	comp=Z,400nm,12.8s							
HHC				LR	LR			
	comp=Z,380nm,14.0s							
AKTO	**Aktyubinsk**	**27.25**	**327**	P		**P**	**09 16 13.1**	**+0.4**
	comp=Z,22nm,0.5s,baz=186,slow=4.4,SNR=4.9							
AKTO				LR		LR	09 27 56.1	
	comp=Z,310nm,18.6s,baz=146,slow=38							
	comp=Z,22nm,0.5s							
AKTO	**Aktyubinsk**	**27.25**	**327**	⇑P		**P**	**09 16 12.8**	**+0.1**
	comp=Z,20nm,0.5s							
HNS	**HongShan**	**28.98**	**65**	⇑P		P	09 16 33.5	+5.3
HNS				S		**S**	**09 21 24.5**	**+6.0**
HNS				pmax	pmax			
	comp=Z,8.0nm,1.0s							
HNS				LR	LR			
	comp=Z,130nm,12.7s							
HNS				LR	LR			
	comp=Z,310nm,13.5s							
HNS				LR	LR			
	comp=Z,250nm,13.3s							
ARU	**Arti**	**31.33**	**336**	LR		LR	09 30 38.6	
	comp=Z,67nm,18.4s,baz=170,slow=38							
ARU	**Arti**	**31.33**	**336**	P		**P**	**09 16 50.3**	**+1.5**
ARU				pmax	pmax			
	comp=Z,17nm,0.8s							
GSI	**Gunungsitoli**	**32.07**	**148**	P		**P**	**09 16 56.4**	**+0.7**
NJ2	**Nanjing**	**32.39**	**76**	*e*P		**P**	**09 16 58.0**	**-0.4**
NJ2				pmax	pmax			
	comp=Z,9.0nm,0.5s							
KBZ	**Khabaz**	**33.54**	**306**	P		**P**	**09 17 08.7**	**+0.4**
	comp=Z,1.3nm,0.5s,baz=104,slow=6.2,SNR=2.5							
	comp=Z,1.3nm,0.5s							
HIA	**Hailar**	**35.28**	**45**	P		**P**	**09 17 22.1**	**-1.3**
HIA				IAmb		IAmb	09 17 23.4	
	comp=Z,7.1nm,0.6s							
HIA	**Hailar**	**35.28**	**45**	P		**P**	**09 17 22.1**	**-1.3**
HIA				pmax	pmax			
	comp=Z,7.0nm,0.6s							
KIRV	**Kirov**	**36.36**	**332**	P		**P**	**09 17 33.4**	**+0.9**
	comp=Z,18nm,0.6s,baz=141,slow=2.5							
KIRV				LR		LR	09 33 45.3	
	comp=Z,199nm,20.0s,baz=131,slow=38							
	comp=Z,18nm,0.6s							
KIRV	**Kirov**	**36.36**	**332**	*ce*P		**P**	**09 17 33.5**	**+1.1**
VORR	**Voronezh**	**38.11**	**318**	*e*P		**P**	**09 17 46.1**	**-1.4**
KSM	**Kuching**	**39.30**	**130**	P		**P**	**09 18 01.1**	**+3.4**
KSM				IAmb		IAmb	09 18 18.5	
	comp=Z,11nm,1.3s							
KSAR	**Wonju Array Be**	**39.46**	**66**	P		**P**	**09 17 57.5**	**-1.3**
KSAR	**Wonju Array Be**	**39.46**	**66**	P		**P**	**09 17 57.6**	**-1.3**
KSRS	**Korea Array**	**39.49**	**66**	P		**P**	**09 17 58.8**	**-0.3**
	comp=Z,1.4nm,0.7s,baz=

ARCES	**ARCESS Array B**	**50.86**	**338**	P	**P**	**09 19 28.6**	**-0.5**
ARCES	comp=Z,7.0nm,0.9s			IAmb	IAmb	09 19 45.2	
ARCES	**ARCESS Array B**	**50.86**	**338**	P	**P**	**09 19 28.6**	**-0.5**
ARCES	comp=Z,7.0nm,0.9s			pmax	pmax		
KTK1	**Kautokeino**	**51.44**	**337**	*eP*	**P**	**09 19 33.5**	**+0.2**
KMBO	**Kilima Mbogo**	**51.79**	**242**	P	**P**	**09 19 37.6**	**+0.6**
	comp=Z,3.3nm,0.5s,baz=48,slow=7.7,SNR=9.4						
	comp=Z,3.3nm,0.5s						
KMBO	**Kilima Mbogo**	**51.79**	**242**	P	**P**	**09 19 36.8**	**-0.2**
KMBO	comp=Z,6.6nm,0.9s			IAmb	IAmb	09 19 39.1	
KMBO	**Kilima Mbogo**	**51.79**	**242**	P	**P**	**09 19 36.8**	**-0.2**
KMBO	comp=Z,7.0nm,1.0s			pmax	pmax		
HAMF	**Hammerfest**	**51.85**	**339**	*eP*	**P**	**09 19 37.9**	**+1.5**
JETT	**Jettan, Norway**	**52.56**	**337**	*eP*	**P**	**09 19 42.6**	**+0.8**
TRO	**Tromso**	**53.08**	**337**	*eP*	**P**	**09 19 46.0**	**+0.4**
HFS	**Hagfors**	**53.78**	**325**	LR	LR	09 43 57.4	
	comp=Z,183nm,18.5s,baz=102,slow=37						
FAUS	**Fauske**	**53.90**	**334**	*eP*	**P**	**09 19 52.2**	**+0.6**
GERES	**GERESS Array B**	**53.97**	**311**	P	**P**	**09 19 52.7**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=58,slow=5.9,SNR=4.7						
	comp=Z,0.3nm,0.3s						
GERES	**GERESS Array B**	**53.97**	**311**	P	**P**	**09 19 52.0**	**-0.5**
STEI	**Steigen**	**54.02**	**335**	*eP*	**P**	**09 19 53.8**	**+1.4**
MOR8	**Moi Rana**	**54.04**	**333**	*eP*	**P**	**09 19 52.2**	**-0.4**
CLL	**Collm**	**54.23**	**314**	*eP*	**P**	**09 19 55.0**	**+0.8**
CLL	comp=Z,3.0nm,0.7s			pmax	pmax		
CLL	**Collm**	**54.23**	**314**	*eP*	**P**	**09 19 55.0**	**+0.8**
	comp=Z,3.0nm,0.7s						
KONS	**Konsvik**	**54.61**	**333**	*eP*	**P**	**09 19 57.4**	**+0.6**
LOF	**Lofoten**	**54.68**	**335**	*eP*	**P**	**09 19 58.0**	**+0.7**
NC405	**NORSAR Array S**	**54.80**	**326**	P	**P**	**09 19 57.8**	**-0.5**
NC602	**NORSAR Array S**	**54.87**	**326**	*eP*	**P**	**09 19 59.6**	**+0.9**
NSS	**Namsos**	**54.89**	**330**	*eP*	**P**	**09 19 59.2**	**+0.4**
STAL	**STALIGIAL**	**54.92**	**308**	P	**P**	**09 19 58.8**	**-0.6**
STAL	comp=Z,11nm,1.0s			IAmb	IAmb	09 20 00.4	
NB2	**NORSAR Subarra**	**55.04**	**326**	P	**P**	**09 19 59.6**	**-0.4**
	baz=88,slow=7.4						
NB2	**NORSAR Subarra**	**55.04**	**326**	P	**P**	**09 19 59.6**	**-0.4**
	comp=Z,7.5nm,1.4s,baz=88,slow=7.4						
NOA	**NORSAR Array B**	**55.04**	**326**	P	**P**	**09 19 59.4**	**-0.6**
	comp=Z,1.5nm,0.6s,baz=92,slow=7.2,SNR=9.1						
NOA				LR	LR	09 44 45.6	
	comp=Z,102nm,19.1s,baz=90,slow=37						
	comp=Z,1.5nm,0.6s						
SEY	**Seymchan**	**55.69**	**32**	P	**P**	**09 20 03.8**	**-0.8**
	comp=Z,0.7nm,0.4s,baz=202,slow=5.4,SNR=3.7						
	comp=Z,0.7nm,0.4s						
HSPB	**Hornsund (broa**	**56.07**	**346**	*eP*	**P**	**09 20 08.0**	**+0.8**
LATE	**Laterza**	**56.15**	**304**	P	**P**	**09 20 07.7**	**-0.6**
SPITS	**Spitsbergen Ar**	**56.26**	**347**	P	**P**	**09 20 09.1**	**+0.6**
	comp=Z,2.8nm,0.7s,baz=153,slow=4.5,SNR=2.3						
SPITS				LR	LR	09 47 48.2	
	comp=Z,157nm,20.2s,baz=96,slow=40						
	comp=Z,2.8nm,0.7s						
OSSC	**Osservatorio P**	**56.38**	**305**	P	**P**	**09 20 10.1**	**+0.1**
OSSC				IAmb	IAmb	09 20 11.2	
	comp=Z,9.7nm,1.0s						
KBS	**Kingsbay**	**57.32**	**348**	*eP*	**P**	**09 20 16.9**	**+0.9**
BNI	**Bardonecchia**	**59.30**	**307**	IAmb	IAmb	09 20 37.3	
	comp=Z,7.2nm,1.0s						
BNI	**Bardonecchia**	**59.30**	**307**	P	**P**	**09 20 30.5**	**-0.1**
BNI	comp=Z,7.0nm,1.2s			pmax	pmax		
KEST	**Kesra**	**59.61**	**296**	P	**P**	**09 20 33.5**	**+0.8**
	comp=Z,10nm,0.8s,baz=184,slow=1.5,SNR=12						
	comp=Z,10nm,0.8s						
KEST	**Kesra**	**59.61**	**296**	P	**P**	**09 20 32.1**	**-0.6**
BILL	**Bilibino**	**61.22**	**25**	⇓*eP*	**P**	**09 20 47.5**	**+4.4**
BILL				*e*		09 20 52.8	
BILL				S	**S**	**09 29 07.0**	**+5.1**
BILL	comp=Z,5.0nm,1.0s			pmax	pmax		
BILL				MLR	MLR		
	comp=Z,247nm,19.0s						
JMIC	**Jan Mayen**	**62.35**	**338**	LR	LR	09 47 03.8	
	comp=Z,30nm,19.6s,baz=242,slow=35						
LSZ	**Lusaka**	**67.75**	**236**	P	**P**	**09 21 26.5**	**-0.2**
LSZ	comp=Z,6.0nm,0.8s			IAmb	IAmb	09 21 27.7	
LSZ	**Lusaka**	**67.75**	**236**	P	**P**	**09 21 26.5**	**-0.2**
LSZ	comp=Z,6.0nm,0.8s			pmax	pmax		
ESDC	**Sonseca Array**	**68.38**	**304**	P	**P**	**09 21 30.8**	**+0.3**
	comp=Z,2.8nm,0.8s,baz=58,slow=6.9,SNR=16						
	comp=Z,2.8nm,0.8s						
ESDC	**Sonseca Array**	**68.38**	**304**	P	**P**	**09 21 29.8**	**-0.6**
ESDC	comp=Z,3.0nm,1.0s			IAmb	IAmb	09 21 31.4	
WB0	**Warramunga Arr**	**70.91**	**127**	P	**P**	**09 21 45.3**	**-0.7**
WB0	comp=Z,10nm,1.2s			IAmb	IAmb	09 21 45.7	
WRA	**Warramunga Arr**	**70.99**	**127**	P	**P**	**09 21 45.2**	**-1.3**
	comp=Z,3.3nm,0.9s,baz=320,slow=6.1,SNR=6.3						
	comp=Z,3.3nm,0.9s						
WRA	**Warramunga Arr**	**70.99**	**127**	P	**P**	**09 21 45.5**	**-1.0**
WRA	**Warramunga Arr**	**70.99**	**127**	*i* P	**P**	**09 21 45.4**	**-1.1**
WRA	comp=Z,2.0nm,0.6s			pmax	pmax		
WB2	**Warramunga Arr**	**71.00**	**127**	P	**P**	**09 21 45.9**	**-0.7**
WB2	comp=Z,11nm,1.1s			IAmb	IAmb	09 21 55.3	
ASAR	**Alice Springs**	**73.22**	**130**	P	**P**	**09 21 58.0**	**-1.9**
	comp=Z,1.9nm,0.8s,baz=318,slow=7.4,SNR=6.5						
	comp=Z,1.9nm,0.8s						
POGA	**Pongola**	**73.70**	**225**	P	**P**	**09 22 03.0**	**+0.4**
TOA0	**Torodi Ar. Sit**	**74.58**	**277**	P	**P**	**09 22 08.3**	**+0.3**
TOA0	comp=Z,5.6nm,0.8s			IAmb	IAmb	09 22 08.9	
TORD	**Torodi Ar. Bea**	**74.58**	**277**	P	**P**	**09 22 07.7**	**-0.4**
	comp=Z,4.1nm,0.7s,baz=57,slow=4.9,SNR=23						
	comp=Z,4.1nm,0.7s						
TORD	**Torodi Ar. Bea**	**74.58**	**277**	P	**P**	**09 22 08.2**	**+0.1**
TORD	comp=Z,4.7nm,0.9s			IAmb	IAmb	09 22 08.9	
TOLK	**Toolik Lake Re**	**75.33**	**17**	P	**P**	**09 22 11.8**	**+0.2**
TOLK	comp=Z,6.4nm,1.1s			IAmb	IAmb	09 22 36.1	
LBTB	**Lobatse**	**76.02**	**230**	P	**P**	**09 22 16.3**	**+0.1**
LBTB	**Lobatse**	**76.02**	**230**	P	**P**	**09 22 16.3**	**+0.1**
LBTB	comp=Z,12nm,0.9s			pmax	pmax		
IMAR	**Indian Mountai**	**76.03**	**20**	P	**P**	**09 22 14.8**	**-0.7**
RES	**Resolute Bay**	**76.08**	**359**	LR	LR	10 00 07.9	
	comp=Z,38nm,19.5s,baz=65,slow=39						
SFJD	**Kangerlussuaq**	**77.19**	**343**	LR	LR	10 00 58.5	
	comp=Z,40nm,18.3s,baz=68,slow=39						
BMAR	**Burnt Mountain**	**77.49**	**16**	P	**P**	**09 22 24.5**	**+0.6**
MLY	**Manley**	**77.60**	**20**	P	**P**	**09 22 25.3**	**+0.8**
MLY	comp=Z,4.2nm,1.3s			IAmb	IAmb	09 22 40.0	
CAST	**Castle Rocks**	**78.33**	**22**	IAmb	IAmb	09 22 44.1	
	comp=Z,6.0nm,0.9s						
BOSA	**Boshof**	**78.66**	**228**	P	**P**	**09 22 30.4**	**-0.5**
	comp=Z,7.1nm,0.7s,baz=39,slow=6.2,SNR=13						
	comp=Z,7.1nm,0.7s						
BOSA	**Boshof**	**78.66**	**228**	P	**P**	**09 22 31.1**	**+0.2**
BOSA	**Boshof**	**78.66**	**228**	P	**P**	**09 22 31.1**	**+0.2**
BOSA	comp=Z,13nm,1.0s			pmax	pmax		
ILAR	**Eielson Array**	**78.91**	**19**	P	**P**	**09 22 29.8**	**-1.9**
	comp=Z,0.4nm,0.8s,baz=310,slow=4.2,SNR=4.4						
ILAR				PP	**PP**	**09 25 29.1**	**-0.6**
	comp=Z,0.5nm,0.8s,baz=307,slow=7.0,SNR=4.6						
	comp=Z,0.4nm,0.8s						
CTA	**Charters Tower**	**79.74**	**120**	P	**P**	**09 22 35.8**	**-1.1**
	comp=Z,5.8nm,0.8s,baz=310,slow=5.8,SNR=4.3						
	comp=Z,5.8nm,0.8s						
J26L	**Joseph Creek**	**80.04**	**18**	P	**P**	**09 22 38.2**	**+0.2**
J26L	comp=Z,3.8nm,0.9s			IAmb	IAmb	09 22 48.2	
KDAK	**Kodiak Island**	**82.13**	**26**	LR	LR	10 05 23.7	
	comp=Z,81nm,19.7s,baz=18,slow=40						
DBIC	**Dimbokro**	**83.30**	**274**	P	**P**	**09 22 55.4**	**-0.5**
	comp=Z,5.1nm,0.8s,baz=37,slow=5.1,SNR=4.4						
	comp=Z,5.1nm,0.8s						
DBIC	**Dimbokro**	**83.30**	**274**	P	**P**	**09 22 56.5**	**+0.5**
DBIC	**Dimbokro**	**83.30**	**274**	P	**P**	**09 22 56.5**	**+0.5**
DBIC	comp=Z,21nm,1.3s			pmax	pmax		
SUR	**Sutherland**	**84.02**	**228**	P	**P**	**09 23 00.2**	**+0.8**
YKA	**Yellowknife Ar**	**87.49**	**7**	P	**P**	**09 23 14.1**	**-1.9**
	comp=Z,0.6nm,0.7s,baz=344,slow=4.9,SNR=7.8						
	comp=Z,0.6nm,0.7s						
YKA	**Yellowknife Ar**	**87.49**	**7**	*i* P	**P**	**09 23 15.0**	**-1.0**
YKA	comp=Z,1.0nm,0.6s			pmax	pmax		
TROLL	**Troll, Antarti**	**114.31**	**200**	PKPdf	**PKiKP**	**09 29 08.0**	**+0.5**
SNAA	**Sanae**	**115.81**	**200**	PKPdf	**PKiKP**	**09 29 10.8**	**+0.5**
VNA2	**Neumayer--Watz**	**117.06**	**202**	PKPdf	**PKPdf**	**09 29 12.7**	**+0.1**
VNA1	**Neumayer--Stat**	**117.29**	**202**	PKPdf	**PKPdf**	**09 29 12.2**	**-0.8**
VNA3	**Neumayer Olymp**	**117.85**	**201**	PKPdf	**PKPdf**	**09 29 13.9**	**-0.3**
TXAR	**Lajitas Array**	**121.35**	**5**	PKP	**PKPdf**	**09 29 21.3**	**-1.1**
	comp=Z,0.4nm,0.8s,baz=325,slow=0.7,SNR=5.4						
TXAR	**Lajitas Array**	**121.35**	**5**		**PKPdf**	**09 29 22.4**	**0.0**
TXAR	**Lajitas Array**	**121.35**	**5**	PKIKP	**PKPdf**	**09 29 22.4**	**0.0**
CPUP	**Villa Florida**	**143.32**	**265**	PKP	**PKPdf**	**09 30 02.9**	**-0.5**
	comp=Z,1.2nm,0.3s,baz=48,slow=2.2,SNR=5.7						
LPAZ	**La Paz**	**148.93**	**288**	PKPbc	**PKPdf**	**09 30 16.1**	**+2.1**
	comp=Z,2.9nm,0.9s,baz=36,slow=7.4,SNR=8.2						
PLCA	**Paso Flores**	**154.38**	**236**	PKPbc	**PKPbc**	**09 30 28.9**	**-0.2**
	comp=Z,2.6nm,1.0s,baz=76,slow=1.6,SNR=3.7						

*IDC **29** 09:12:33.5±4.8, 37.°95N×72.°71E, h109km±41km, mb3.6/6, mbtmp4.0/7, Error ellipse: s-maj=35.2km s-min=30.0km az=33.0*
*NNC **29** 09:12:34.1±3.3, 38.°16N×72.°33E, h155km±65km, mb3.7, mpv4.1, Error ellipse: s-maj=32.2km s-min=21.0km az=169.0*
ISC 29 09:12:33.5±0.8, 38.°05N±0.°07×72.°5E±0.°1, h100km, n28, σ1s62/30, mb3.9/6, 4C-6D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**4.19**	**13**	P	**Pn**	**09 13 36.7**	**+1.2**
	SNR=22						
CEP	**Cherat**	**4.24**	**186**	P	**Pn**	**09 13 38.5**	**+2.5**
CHCP	**Chirah Chowk**	**4.43**	**171**	⇑P	**Pn**	**09 13 41.1**	**+2.6**
UCH	**Uchtor**	**4.46**	**20**	P	**Pn**	**09 13 40.6**	**+1.4**
	SNR=62						
UCH	**Uchtor**	**4.46**	**20**	P	**Pn**	**09 13 40.7**	**+1.4**
EKS2	**Erkin-Say**	**4.72**	**12**	P	**Pn**	**09 13 44.2**	**+1.8**
	SNR=33						
AAK	**Ala-Archa**	**4.84**	**18**	P	**Pn**	**09 13 45.8**	**+1.7**
	SNR=7.8						
AAK	**Ala-Archa**	**4.84**	**18**	P	**Pn**	**09 13 45.9**	**+1.7**
	30nm,0.4s,baz=181,slow=4.2,SNR=34						
AAK				S	**Sn**	**09 14 40.2**	**+1.1**
	50nm,0.6s,baz=335,slow=19,SNR=24						
AAK	**Ala-Archa**	**4.84**	**18**	P	**Pn**	**09 13 45.9**	**+1.7**
KBK	**Karagaybulak**	**4.98**	**22**	P	**Pn**	**09 13 48.4**	**+2.3**
	SNR=9.4						
KBK	**Karagaybulak**	**4.98**	**22**	P	**Pn**	**09 13 48.5**	**+2.4**
CHMS	**Chumysh**	**5.25**	**19**	P	**Pn**	**09 13 50.9**	**+1.4**
	SNR=7.0						
CHMS	**Chumysh**	**5.25**	**19**	⇓P	**Pn**	**09 13 50.8**	**+1.3**
	12nm,0.5s						
CHMS				⇑S	**Sn**	**09 14 49.6**	**+0.9**
	50nm,0.7s						
KK31	**Karatay Array**	**5.26**	**344**	⇓P	**Pn**	**09 13 51.3**	**+1.6**
	15nm,0.2s,baz=150,slow=11,SNR=484						
KK31				S	**Sn**	**09 14 48.8**	**-0.3**
	123nm,0.8s,baz=177,slow=26,SNR=14						
THW	**Thamme Wali**	**5.27**	**187**	P	**Pn**	**09 13 51.2**	**+1.2**
TKM2	**Tokmak 2**	**5.42**	**25**	P	**Pn**	**09 13 50.8**	**-1.3**
TKM2	**Tokmak 2**	**5.42**	**25**	⇓P	**Pn**	**09 13 50.5**	**-1.6**
	12nm,0.8s						
TKM2				⇓S	**Sn**	**09 14 54.0**	**+0.7**
	16nm,0.7s						
USP	**Ospenovka**	**5.44**	**16**	P	**Pn**	**09 13 53.2**	**+1.0**
	SNR=15						
GYA0B	**ALIBECK ARRAY**	**11.32**	**274**	⇓P	Pn	09 15 09.4	-2.6
GYA0B				⇓S	Sn	09 17 12.2	-4.3
AB31	**Akbulak array**	**14.38**	**325**	⇑P	**Pn**	**09 15 50.1**	**-2.1**
	20nm,0.5s,baz=131,slow=12,SNR=426						
AB31				S	Sn	09 18 24.4	-6.1
	12nm,0.8s,baz=150,slow=22,SNR=8.8						
AKTO	**Aktyubinsk**	**16.10**	**325**	⇑S	Sn	09 19 04.1	-7.9
	13nm,0.9s						
FINES	**FINESS Array B**	**36.87**	**325**	P	**P**	**09 19 32.2**	**+0.4**
	2.0nm,0.4s,baz=117,slow=8.2,SNR=5.2						
	2.0nm,0.4s						
ARCES	**ARCESS Array B**	**40.17**	**337**	P	**P**	**09 19 59.5**	**+0.1**
	1.1nm,0.6s,baz=104,slow=7.5,SNR=1.6						
	1.1nm,0.6s						
NOA	**NORSAR Array B**	**43.86**	**322**	P	**P**	**09 20 29.4**	**-0.1**
	1.3nm,0.6s,baz=93,slow=7.6,SNR=4.4						
	1.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**66.91**	**269**	P	**P**	**09 23 15.7**	**+0.3**
	1.2nm,0.4s,baz=46,slow=5.8,SNR=13						
	1.2nm,0.4s						
YKA	**Yellowknife Ar**	**79.64**	**3**	P	**P**	**09 24 29.8**	**+0.4**
	0.4nm,0.7s,baz=350,slow=5.5,SNR=4.4						
	0.4nm,0.7s						
WRA	**Warramunga Arr**	**81.84**	**123**	P	**P**	**09 24 38.8**	**-3.0**
	0.6nm,0.8s,baz=323,slow=4.8,SNR=1.9						
	0.6nm,0.8s						
PLCA	**Paso Flores**	**151.42**	**253**	PKPbc	**PKPbc**	**09 32 14.8**	**-0.6**
	1.4nm,0.7s,baz=149,slow=0.8,SNR=2.9						

IDC 29 09:12:48.2±4.5, 7.°47S×129.°77E, h68km±48km, mb3.7/1, mbtmp4.0/4, ML4.1/3, Error ellipse: s-maj=107.2km s-min=18.7km az=89.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.72**	**13**	P	Pn	**09 14 26.2**	**+1.9**
	1.1nm,0.3s,baz=246,slow=19,SNR=1.7						
SIJI				S	Sn	09 15 38.3	-1.3
	3.9nm,0.2s,baz=251,slow=23,SNR=2.4						
	3.3nm,0.2s						
WRA	**Warramunga Arr**	**13.17**	**161**	P	Pn	09 15 53.0	+0.6
	1.6nm,0.3s,baz=335,slow=9.5,SNR=59						
WRA				S	Sn	09 18 15.3	-1.8
	2.5nm,0.5s,baz=346,slow=19,SNR=9.2						
	1.9nm,0.3s						
ASAR	**Alice Springs**	**16.59**	**167**	P	P	09 16 38.5	+0.5
	0.7nm,0.3s,baz=340,slow=9.7,SNR=37						
ASAR				S	Sn	09 19 37.8	-2.3
	0.9nm,0.4s,baz=343,slow=41,SNR=7.1						
	2.2nm,0.6s						
STKA	**Stephens Creek**	**26.67**	**157**	P	P	09 18 20.8	-0.1
	0.9nm,0.4s,baz=320,slow=9.7,SNR=6.8						
	0.9nm,0.4s						

*IDC **29** 09:14:42.5±1.1, 26.°68S×177.°88W, h358km±14km, mb3.6/8, mbtmp4.4/11, Error ellipse: s-maj=27.2km s-min=18.9km az=133.0*
*NOU **29** 09:14:43.8, 26.°71S×177.°99W, h361km, mb4.5/10, South of Fiji Islands*
ISC 29 09:14:42.6±0.7, 26.°94S±0.°06×177.°6W±0.°1, h400km, n33, σ2s39/47, mb3.8/8, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RIZ	**Raoul Island**	**2.32**	**187**	P	**Pn**	**09 15 40.1**	**-0.4**
RIZ				S	**S**	**09 16 26.3**	**-1.3**
RAO	**Raoul Island**	**2.33**	**187**	P	**Pn**	**09 15 40.4**	**-0.2**
	735nm,0.3s,baz=70,slow=8.8,SNR=15						
RAO				S	**S**	**09 16 23.3**	**-4.2**
	480nm,0.4s,baz=99,slow=19,SNR=2.3						
RAO	**Raoul Island**	**2.33**	**187**	P	**Pn**	**09 15 41.2**	**+0.6**
GLKZ	**Green Lake**	**2.34**	**187**	P	**Pn**	**09 15 40.6**	**-0.1**
GLKZ				S	**S**	**09 16 23.8**	**-3.9**
MSVF	**Nonsavu**	**10.00**	**335**	P	**P**	**09 16 56.2**	**-4.2**
	18nm,0.8s,baz=144,slow=13,SNR=11						
MSVF	**Nonsavu**	**10.00**	**335**	P	**P**	**09 16 56.5**	**-3.9**
WCZ	**Waipu Caves**	**11.31**	**215**	P	**Pn**	**09 17 18.6**	**+3.0**
WMGZ	**Waiomatatini S**	**11.36**	**196**	P	**P**	**09 17 14.6**	**-0.5**
WMGZ				S	**S**	**09 19 18.6**	**-2.4**
PKGZ	**Pakihiroa**	**11.52**	**197**	P	**P**	**09 17 16.5**	**-0.3**
PKGZ				S	**S**	**09 19 20.6**	**-3.7**
PUZ	**Puketiti**	**11.64**	**196**	P	**P**	**09 17 18.3**	**+0.1**
PUZ				S	**S**	**09 19 23.6**	**-3.2**
TWGZ	**Tauwhareparae**	**11.81**	**197**	P	**Pn**	**09 17 24.9**	**+3.4**
TWGZ				S	**S**	**09 19 29.4**	**-0.9**
CNGZ	**Carnagh Statio**	**12.04**	**196**	P	**P**	**09 17 23.1**	**+0.5**
CNGZ				S	**S**	**09 19 32.1**	**-2.8**
MWZ	**Matawai**	**12.08**	**199**	P	**P**	**09 17 24.0**	**+0.8**
MWZ				S	**S**	**09 19 33.3**	**-2.4**
TKGZ	**Te Karaka**	**12.09**	**197**	P	**P**	**09 17 22.1**	**-1.0**
TKGZ				S	**S**	**09 19 33.9**	**-1.9**
URZ	**Urewera**	**12.14**	**200**	P	**Pn**	**09 17 26.7**	**+1.5**
	10nm,0.3s,baz=282,slow=3.4,SNR=18						
URZ				S	**S**	**09 19 35.5**	**-1.2**
	3.5nm,0.3s,baz=338,slow=5.4,SNR=1.7						
URZ	**Urewera**	**12.14**	**200**	P	**Pn**	**09 17 26.7**	**+1.5**
URZ				S	**S**	**09 19 35.2**	**-1.5**
URZ	**Urewera**	**12.14**	**200**	P	**Pn**	**09 17 27.4**	**+2.2**
RIGZ	**Rimuhau**	**12.37**	**197**	P	**Pn**	**09 17 29.8**	**+1.9**
RIGZ				S	**S**	**09 19 37.2**	**-4.3**
MUGZ	**Murupara**	**12.45**	**201**	P	**Pn**	**09 17 31.5**	**+2.7**
MUGZ				S	**S**	**09 19 41.7**	**-1.3**
BKZ	**Black Stump Fm**	**13.16**	**201**	P	**Pn**	**09 17 38.0**	**+0.9**
AFI	**Afiamalu**	**14.05**	**24**	P	**Pn**	**09 17 45.8**	**+0.8**
	41nm,0.7s,baz=206,slow=6.3,SNR=7.9						
AFI				S	**S**	**09 20 12.1**	**-3.9**
	32nm,0.8s,baz=0.0,slow=20,SNR=2.0						
AFI	**Afiamalu**	**14.05**	**24**	P	**Pn**	**09 17 48.0**	**+3.0**
YATNC	**Mamie plateau,**	**14.93**	**286**	P	**P**	**09 17 53.7**	**-0.7**
KHZ	**Kahutara**	**17.06**	**203**	P	**P**	**09 18 19.8**	**+2.8**
CTA	**Charters Tower**	**33.76**	**274**	P	**P**	**09 20 50.4**	**+1.4**
	5.7nm,0.4s,baz=99,slow=10,SNR=14						
	5.7nm,0.4s						
STKA	**Stephens Creek**	**35.74**	**252**	P	**P**	**09 21 07.9**	**+2.3**
	3.4nm,1.0s,baz=87,slow=12,SNR=4.1						
	3.4nm,1.0s						
PMG	**Port Moresby**	**37.57**	**291**	P	**P**	**09 21 20.2**	**-0.7**
	15nm,0.8s,baz=100,slow=4.6,SNR=2.7						
	15nm,0.8s						
ASAR	**Alice Springs**	**43.76**	**263**	P	**P**	**09 22 12.7**	**+1.9**
	5.5nm,0.8s,baz=106,slow=8.4,SNR=19						
	5.5nm,0.8s						
WRA	**Warramunga Arr**	**44.44**	**268**	P	**P**	**09 22 15.8**	**-0.3**
	6.0nm,0.8s,baz=106,slow=7.8,SNR=11						
	6.0nm,0.8s						
MJAR	**Matsushiro Arr**	**75.62**	**325**	P	**P**	**09 25 46.5**	**+1.6**
	1.1nm,0.6s,baz=141,slow=7.9,SNR=4.8						
	1.1nm,0.6s						
KSRS	**Korea Array**	**81.96**	**319**	P	P	09 26 23.1	+4.2
	0.8nm,0.6s,baz=135,slow=6.3,SNR=3.1						
	0.8nm,0.6s						
NVAR	**Mina Array Bea**	**85.46**	**43**	P	**P**	**09 26 40.3**	**+3.5**
	0.5nm,1.1s,baz=239,slow=6.2,SNR=2.0						
	0.5nm,1.1s						
AKASG	**Malin Array Be**	**148.69**	**326**	PKPbc	**PKPab**	**09 33 45.5**	**-2.7**
	0.3nm,0.4s,baz=54,slow=2.2,SNR=4.2						

IDC 29 09:16:45.6±2.8, 53.°86N×86.°42E, h0km, mbtmp2.8/2, ML2.3/2, Error ellipse: s-maj=21.7km s-min=13.5km az=66.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.95**	**276**	*i*		09 23 05.5	
	baz=95,slow=314,SNR=1.1						
ZALV	**Zalesovo Beam**	**0.95**	**276**	Pg	Pg	09 17 02.9	-0.9
	0.2nm,0.3s,baz=94,slow=19,SNR=0.6						
ZALV				Lg	Lg	09 17 17.4	
	1.6nm,0.3s,baz=95,slow=29,SNR=8.2						
KURBB	**Kurchatov Arra**	**5.83**	**239**	Pn	Pn	09 18 14.4	+1.1
	0.1nm,0.3s,baz=56,slow=13,SNR=2.5						
	0.5nm,0.4s						
MKAR	**Makanchi Array**	**7.55**	**202**	Pn	Pn	09 18 37.9	+1.0
	0.1nm,0.3s,baz=16,slow=32,SNR=1.1						
	0.4nm,0.6s						

*IDC **29** 09:23:56.2±1.8, 55.°21N×161.°75E, h0km, mb3.3/4, mbtmp3.3/5, ML2.6/1, Error ellipse: s-maj=118.7km s-min=28.6km az=141.0*
*KRSC **29** 09:24:04.0±0.7, 55.°02N×161.°00E, h116km±11km, ML3.9*
ISC 29 09:24:05.7±0.8, 55.°02N±0.°04×160.°98E±0.°04, h113km±7km, n42, σ0s95/51, mb3.3/4, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TUMR	**Tumrok**	**0.55**	**299**	*eP*	**Pn**	**09 24 23.0**	**-0.2**
TUMR				*eS*	**Sn**	**09 24 36.0**	**-0.4**
MKZ	**Mys Kozlova**	**0.64**	**136**	*eP*	**Pn**	**09 24 23.9**	**+0.2**
MKZ				*eS*	**Sn**	**09 24 37.8**	**+0.5**
KMNR	**Kamenistaya**	**0.85**	**331**	*eP*	**Pn**	**09 24 25.3**	**-0.4**
KMNR				*eS*	**Sn**	**09 24 41.9**	**+1.1**
BZGR	**Bezymyannyi-Gr**	**0.94**	**350**	*eP*	**Pn**	**09 24 26.1**	**-0.4**
KIRR	**Kirishev**	**1.00**	**339**	*eP*	**Pn**	**09 24 26.5**	**-0.7**
KPT	**Kopyto**	**1.04**	**336**	*eP*	**Pn**	**09 24 25.9**	**-1.6**
KOZ	**Kozyrevsk**	**1.22**	**329**	*eP*	**Pn**	**09 24 28.8**	**-0.5**
KOZ				*eS*	**Sn**	**09 24 47.4**	**+0.1**
KLY	**Klyuchi**	**1.31**	**352**	*eP*	**Pn**	**09 24 29.7**	**-0

THW	**Thamme Wali**	**8.86**	**295**	P		**Pn**	**09 29 08.0**	**+0.1**
CEP	**Cherat**	**9.13**	**301**	P		**Pn**	**09 29 11.5**	**-0.3**
CEP				S		**Sn**	**09 30 49.0**	**-4.8**
AAK	**Ala-Archa**	**14.32**	**339**	Pn		**Pn**	**09 30 22.1**	**-0.6**
	comp=E,0.4nm,0.3s,baz=228,slow=16,SNR=1.5 comp=E,1.9nm,0.4s							
MKAR	**Makanchi Array**	**17.41**	**2**	P		**Pn**	**09 31 01.0**	**-1.6**
	comp=E,0.3nm,0.3s,baz=178,slow=12,SNR=9.1 comp=E,0.6nm,0.4s							
CMAR	**Chiang Mai Arr**	**19.44**	**120**	P		**P**	**09 31 26.2**	**0.0**
	comp=E,0.7nm,0.3s,baz=315,slow=10,SNR=1.3 comp=E,1.1nm,0.3s							
KURBB	**Kurchatov Arra**	**21.32**	**355**	P		**P**	**09 31 45.8**	**-0.5**
	comp=E,2.1nm,0.6s,baz=181,slow=10,SNR=28 comp=E,2.1nm,0.6s							
ZALV	**Zalesovo Beam**	**24.69**	**5**	P		**P**	**09 32 20.1**	**0.0**
	comp=E,2.6nm,0.4s,baz=195,slow=9.9,SNR=12 comp=E,2.6nm,0.4s							
SONM	**Songino Array**	**26.73**	**39**	P		**P**	**09 32 39.2**	**+0.2**
	comp=E,0.6nm,0.5s,baz=207,slow=9.1,SNR=3.6 comp=E,0.6nm,0.5s							
AKTO	**Aktyubinsk**	**27.38**	**327**	P		**P**	**09 32 44.4**	**-0.1**
	comp=E,1.2nm,0.6s,baz=316,slow=3.0,SNR=4.1 comp=E,1.2nm,0.6s							
MLR	**Muntele Rosu**	**45.88**	**306**	P		**P**	**09 35 23.5**	**+1.7**
	comp=E,3.0nm,0.8s,baz=155,slow=18,SNR=4.1 comp=E,3.0nm,0.8s							
FINES	**FINESS Array B**	**48.13**	**328**	P		**P**	**09 35 39.1**	**+0.1**
	comp=E,0.9nm,0.5s,baz=113,slow=9.2,SNR=7.5 comp=E,0.9nm,0.5s							
ARCES	**ARCESS Array B**	**50.98**	**338**	P		**P**	**09 35 59.8**	**-0.8**
	comp=E,1.5nm,0.8s,baz=112,slow=6.9,SNR=7.8 comp=E,1.5nm,0.8s							
HFS	**Hagfors**	**53.91**	**325**	P		**P**	**09 36 21.1**	**-1.2**
	comp=E,1.0nm,0.6s,baz=90,slow=12,SNR=2.5 comp=E,1.0nm,0.6s							
NOA	**NORSAR Array B**	**55.17**	**326**	P		**P**	**09 36 30.9**	**-0.6**
	comp=E,0.4nm,0.5s,baz=61,slow=10,SNR=2.7 comp=E,0.4nm,0.5s							
ESDC	**Sonseca Array**	**68.52**	**304**	P		**P**	**09 38 02.1**	**+0.3**
	comp=E,0.8nm,0.7s,baz=64,slow=6.0,SNR=5.3 comp=E,0.8nm,0.7s							
WRA	**Warramunga Arr**	**70.85**	**127**	P		**P**	**09 38 17.0**	**+0.6**
	comp=E,0.7nm,0.6s,baz=321,slow=6.1,SNR=13 comp=E,0.7nm,0.6s							
ASAR	**Alice Springs**	**73.08**	**130**	P		**P**	**09 38 30.5**	**+0.8**
	comp=E,0.3nm,0.4s,baz=316,slow=6.4,SNR=7.4 comp=E,0.3nm,0.4s							
TORD	**Torodi Ar. Bea**	**74.69**	**277**	P		**P**	**09 38 38.9**	**-0.4**
	comp=E,0.9nm,0.7s,baz=61,slow=5.3,SNR=5.1 comp=E,0.9nm,0.7s							
YKA	**Yellowknife Ar**	**87.56**	**7**	P		**P**	**09 39 46.6**	**-0.2**
	comp=E,0.3nm,0.7s,baz=351,slow=4.7,SNR=4.3 comp=E,0.3nm,0.7s							
TXAR	**Lajitas Array**	**121.43**	**5**	PKP		**PKiKP**	**09 45 53.9**	**+0.7**
	comp=E,0.1nm,0.6s,baz=162,slow=1.2,SNR=3.6							

*NNC **29** 09:32:27.3±4.5, 53.70N×88.22E, h0km, mb3.3, mpv2.9, Error ellipse: s-maj=40.8km s-min=21.1km az=48.0, Suspected Mining explosion.*

*IDC **29** 09:32:27.4±2.9, 53.76N×88.10E, h0km, mbtmp3.2/2, ML3.0/2, Error ellipse: s-maj=24.4km s-min=16.5km az=56.0*

ISC 29 09:32:28.5±3.4, 53.8N±0.1×87.9E±0.2, h0km, n7, σ1s 35/10, 5C-1D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.86**	**276**	*i*				09 44 58.6	
	0.2nm,0.9s,baz=92,slow=316,SNR=8.2								
ZAA0	**Zalesovo Array**	**1.86**	**276**	⇑Pn			**Pn**	**09 33 02.0**	**+0.4**
	1.1nm,0.5s								
ZAA0				⇑Sn			**Sg**	**09 33 30.0**	**+1.9**
	3.5nm,0.5s								
ZALV	**Zalesovo Beam**	**1.86**	**276**	Pg			**Pb**	**09 33 02.2**	**-1.1**
	3.6nm,0.3s,baz=94,slow=12,SNR=35								
ZALV				Lg			Lg	09 33 30.3	
	5.2nm,0.3s,baz=92,slow=24,SNR=19								
KURBB	**Kurchatov Arra**	**6.60**	**245**	Pn			**Pn**	**09 34 07.5**	**+0.7**
	0.3nm,0.3s,baz=61,slow=14,SNR=16								
KURBB				Sn			**Sn**	**09 35 21.2**	**-1.3**
	baz=38,slow=30,SNR=1.3								
KURBB				Lg			Lg	09 36 00.1	
	0.1nm,0.3s,baz=60,slow=30,SNR=7.4 1.2nm,0.3s								
KURBB	**Kurchatov Arra**	**6.60**	**245**	⇓Pn			**Pn**	**09 34 07.1**	**+0.4**
	1.8nm,0.3s								
KURBB				⇑Lg			Lg	09 35 56.5	
	4.7nm,0.6s								
MK31	**Makanchi Array**	**7.88**	**210**	Pn			**Pn**	**09 34 26.3**	**+1.9**
	0.2nm,0.4s,baz=27,slow=13,SNR=9.8								
MK31				⇑Sn			**Sn**	**09 35 53.3**	**-1.0**
	0.4nm,0.5s								
MK31				⇑Lg			Lg	09 36 33.9	
	1.1nm,0.7s								
MKAR	**Makanchi Array**	**7.88**	**210**	Pn			**Pn**	**09 34 24.7**	**+0.3**
	0.3nm,0.3s,baz=22,slow=12,SNR=6.0								
MKAR				Sn			**Sn**	**09 35 53.5**	**-0.8**
	0.1nm,0.3s,baz=28,slow=25,SNR=2.3								
MKAR				Lg			Lg	09 36 35.8	
	0.1nm,0.3s,baz=27,slow=29,SNR=2.4 0.4nm,0.3s								

*IDC **29** 09:40:17.5±1.0, 39.24N×73.59E, h0km, mb3.7/12, mbtmp3.8/19, ML3.3/7, MS3.6/2, Error ellipse: s-maj=18.2km s-min=13.5km az=166.0*

*KRNET **29** 09:40:17.7±0.1, 39.39N×73.62E, mb4.2*

*SOME **29** 09:40:18.1, 39.45N×73.60E, h15km*

*NEIC **29** 09:40:22.4±3.0, 39.50N±0.03×73.59E±0.07, h10km±1km, mb4.2/4, Error ellipse: s-maj=10.3km s-min=2.9km az=117.0*

*NNC **29** 09:40:23.5±1.4, 39.65N×73.56E, h0km, mb4.3, mpv4.1, Error ellipse: s-maj=10.9km s-min=6.2km az=171.0*

ISC 29 09:40:20.5±1.3, 39.31N±0.04×73.45E±0.03, h14km±8km, n116, σ2s 04/160, mb3.7/13, 36C-15D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**1.29**	**278**	⇑*i*P			**Pb**	**09 40 44.5**	**-0.2**
	baz=74								
DRK				⇑*i*S			**Sg**	**09 41 04.2**	**+2.0**
	baz=74								
DRK	**Karamyk**	**1.29**	**278**				**Pb**	**09 40 44.6**	**0.0**
DRK					Sn		**Sg**	**09 41 03.5**	**+1.4**
OHH	**Osh**	**1.32**	**337**	⇓*i*P			**Pn**	**09 40 42.5**	**-2.0**
	baz=31								
OHH				⇓*i*S			**Sb**	**09 41 00.7**	**-1.1**
	baz=31								
BTK	**Batken**	**2.16**	**291**	Pn			**Pg**	**09 41 00.7**	**-1.2**
GAR	**Garm**	**2.46**	**264**	⇑*i*P			**Pb**	**09 41 03.1**	**-1.3**
	baz=62								
GAR				⇑*i*S			**Sb**	**09 41 36.2**	**+1.6**
	baz=62								
GAR	**Garm**	**2.46**	**264**				**Pg**	**09 41 06.3**	**-1.3**
AML	**Almayashu**	**2.83**	**4**	P			**Pn**	**09 41 07.8**	**+2.3**
	SNR=23								
TRKS	**Terek-Say**	**2.83**	**322**	⇑*e*P			**Pn**	**09 41 05.8**	**+0.4**
	baz=19								
TRKS				⇑*i*S			**Sn**	**09 41 41.0**	**+1.6**
	baz=19								
UCH	**Uchtor**	**3.02**	**15**	P			**Pn**	**09 41 09.9**	**+1.6**
	SNR=87								
UCH	**Uchtor**	**3.02**	**15**	⇑*i*P			**Pn**	**09 41 07.8**	**-0.5**
	baz=13								
UCH				⇑*i*S			**Sn**	**09 41 44.3**	**-0.2**
	baz=13								
EKS2	**Erkin-Say**	**3.36**	**4**	P			**Pn**	**09 41 14.9**	**+2.3**
	SNR=34								
EKS2	**Erkin-Say**	**3.36**	**4**	⇑*e*P			**Pn**	**09 41 12.4**	**-0.2**
	baz=2.0								
EKS2				⇑*i*S			**Sn**	**09 41 52.4**	**+0.1**
	baz=2.0								
CHGR	**Chuyangaron**	**3.41**	**260**	⇑*i*P			**Pn**	**09 41 16.4**	**+3.2**
	baz=60								
CHGR				⇑*e*S			**Sb**	**09 41 59.0**	**-2.9**
	baz=60								
CHGR	**Chuyangaron**	**3.41**	**260**				**Pb**	**09 41 17.4**	**-3.2**
AAK	**Ala-Archa**	**3.42**	**13**	P			**Pn**	**09 41 15.6**	**+2.1**
	SNR=16								
AAK	**Ala-Archa**	**3.42**	**13**	Pn			**Pn**	**09 41 15.9**	**+2.4**
	6.2nm,0.3s,baz=183,slow=11,SNR=27								
AAK					Sn		**Sn**	**09 41 57.2**	**+3.4**
	16nm,0.3s,baz=337,slow=18,SNR=7.4								
AAK					Lg		Lg	09 42 02.6	
	16nm,0.3s,baz=118,slow=22,SNR=4.9 17nm,0.4s								
AAK	**Ala-Archa**	**3.42**	**13**	⇑*e*P			**Pn**	**09 41 12.9**	**-0.5**
	baz=11								
AAK				⇑*i*S			**Sn**	**09 41 53.5**	**-0.3**
	baz=11								
AAK	**Ala-Archa**	**3.42**	**13**	Pn			**Pn**	**09 41 13.9**	**+0.5**
MRKS	**Merke**	**3.44**	**357**	*e*P			**Pb**	**09 41 20.9**	**-0.3**
	27nm,0.6s								
MRKS				*e*S			**Sg**	**09 42 06.1**	**-4.8**
	120nm,0.6s								
MRKS	**Merke**	**3.44**	**357**	Pg			**Pb**	**09 41 20.9**	**-0.3**
	27nm,0.6s								
MRKS				Lg			Lg	09 42 02.9	
	231nm,0.3s								
KBK	**Karagaybulak**	**3.53**	**18**	P			**Pn**	**09 41 16.9**	**+1.9**
	SNR=11								
KBK	**Karagaybulak**	**3.53**	**18**	⇑*e*P			**Pn**	**09 41 14.4**	**-0.6**
	baz=17								
KBK				⇑*i*S			**Sn**	**09 41 55.8**	**-0.8**
	baz=17								
ULHL	**Ulahol**	**3.62**	**35**	P			**Pn**	**09 41 18.1**	**+1.8**
	SNR=19								
ULHL	**Ulahol**	**3.62**	**35**	⇑*e*P			**Pn**	**09 41 15.3**	**-1.0**
	baz=34								
ULHL				⇑*i*S			**Sn**	**09 41 57.4**	**-1.5**
	baz=34								
BOOM	**Boomskoye usch**	**3.70**	**30**	Pn			**Pn**	**09 41 17.3**	**0.0**
TAS	**Tashkent**	**3.76**	**304**	⇑*i*P			**Pn**	**09 41 20.1**	**+2.1**
	baz=2.0								
TAS				⇑*i*S			**Sn**	**09 42 05.8**	**+3.8**
	baz=2.0								
CHMS	**Chumysh**	**3.81**	**15**	P			**Pn**	**09 41 20.6**	**+1.8**
	SNR=12								
CHMS	**Chumysh**	**3.81**	**15**	⇑*e*P			**Pn**	**09 41 18.3**	**-0.5**
	baz=13								
CHMS				⇑*i*S			**Sn**	**09 42 02.6**	**-0.8**
	baz=13								
CHMS	**Chumysh**	**3.81**	**15**	⇑Pn			**Pn**	**09 41 19.2**	**+0.5**
	14nm,0.5s								
CHMS				⇓Pg			**Pb**	**09 41 28.2**	**+0.7**
	21nm,0.6s								
CHMS				⇓Lg			Lg	09 42 15.2	
	140nm,0.8s								
IUG	**Iuzhnay**	**3.84**	**319**	*e*P			**Pb**	**09 41 27.4**	**-0.7**
	984nm,0.4s								
IUG				*e*S			**Sb**	**09 42 17.0**	**+2.5**
	132nm,1.0s								
IUG	**Iuzhnay**	**3.84**	**319**	Pg			**Pb**	**09 41 29.2**	**+1.1**
	984nm,0.4s								
IUG				Lg			Lg	09 42 17.0	
	147nm,0.8s								
TKM2	**Tokmak 2**	**3.96**	**24**	P			**Pn**	**09 41 22.7**	**+1.9**
	SNR=13								
TKM2	**Tokmak 2**	**3.96**	**24**	⇑*i*P			**Pn**	**09 41 20.1**	**-0.8**
	baz=22								
TKM2				⇑*i*S			**Sn**	**09 42 05.8**	**-1.4**
	baz=22								
TKM2	**Tokmak 2**	**3.96**	**24**	⇓Pn			**Pn**	**09 41 22.2**	**+1.3**
	12nm,0.6s								
TKM2				⇓Pg			**Pb**	**09 41 30.5**	**+0.4**
	23nm,0.6s								
TKM2				⇓Lg			Lg	09 42 18.4	
	102nm,0.8s								
KDJ	**Kajisay**	**4.00**	**44**	⇑*e*P			**Pn**	**09 41 20.4**	**-1.0**
	baz=44								
KDJ				⇑*i*S			**Sn**	**09 42 06.4**	**-1.7**
	baz=44								
KDJ	**Kajisay**	**4.00**	**44**	Pn			**Pn**	**09 41 21.9**	**+0.5**
USP	**Ospenovka**	**4.03**	**11**	P			**Pn**	**09 41 23.9**	**+2.1**
	SNR=6.1								
USP	**Ospenovka**	**4.03**	**11**	⇓*e*P			**Pn**	**09 41 21.5**	**-0.3**
	baz=9.0								
USP				⇓*i*S			**Sn**	**09 42 08.0**	**-0.8**
	baz=9.0								
TARG	**Taragay, Kyrgy**	**4.11**	**53**	⇑*e*P			**Pn**	**09 41 22.1**	**-1.0**
	baz=52								
TARG				⇑*e*S			**Sn**	**09 42 09.1**	**-2.1**
	baz=52								
TARG	**Taragay, Kyrgy**	**4.11**	**53**				**Pn**	**09 41 24.0**	**+0.9**
KST	**Kastek**	**4.18**	**26**	*e*P			**Pb**	**09 41 32.3**	**-1.6**
	13nm,0.7s								
KST				*e*S			**Sb**	**09 42 25.5**	**+1.2**
	146nm,0.8s								
KST	**Kastek**	**4.18**	**26**	Pg			**Pb**	**09 41 33.7**	**-0.2**
	40nm,0.7s								
KST				Lg			Lg	09 42 26.0	
	146nm,0.8s								
SGDS	**Sogindy**	**4.23**	**12**	*e*P			**Pb**	**09 41 33.1**	**-1.6**
	16nm,0.3s								
SGDS				*e*S			**Sb**	**09 42 26.9**	**+1.3**
	96nm,0.6s								
SGDS	**Sogindy**	**4.23**	**12**	Pg			**Pb**	**09 41 34.6**	**-0.1**
	16nm,0.3s								
SGDS				Lg			Lg	09 42 27.4	
	96nm,0.6s								
DGS	**Degeres**	**4.30**	**23**	*e*P			**Pb**	**09 41 35.0**	**-0.8**
	34nm,0.4s								
DGS				*e*S			**Sb**	**09 42 30.3**	**+2.6**
	168nm,0.6s								
DGS	**Degeres**	**4.30**	**23**	Pg			**Pb**	**09 41 37.2**	**+1.3**
	34nm,0.4s								
DGS				Lg			Lg	09 42 31.6	
	168nm,0.6s								
KK31	**Karatay Array**	**4.39**	**331**	Pn			**Pn**	**09 41 28.6**	**+1.9**
KK31	**Karatay Array**	**4.39**	**331**	Pn			**Pn**	**09 41 28.6**	**+1.9**
	11nm,0.4s,baz=134,slow=13,SNR=106								
KK31				Pg			**Pb**	**09 41 38.8**	**+1.4**
	6.9nm,0.5s,baz=166,slow=15,SNR=10								
KK31				⇓Sn			**Sn**	**09 42 19.0**	**+1.4**
	38nm,0.3s,baz=145,slow=24,SNR=8.5								
KK31				⇓Lg			Lg	09 42 34.3	
	38nm,0.6s								
KKAR	**Karatay Array**	**4.39**	**331**	⇑*e*P			**Pn**	**09 41 28.0**	**+1.3**
	baz=29								
KKAR				⇑*i*S			**Sn**	**09 42 19.2**	**+1.6**
	baz=29								
KKAR	**Karatay Array**	**4.39**	**331**				**Pn**	**09 41 28.3**	**+1.6**
KKAR	**Karatay Array**	**4.39**	**331**	Pn			**Pn**	**09 41 28.4**	**+1.8**
MTBS	**Maitube**	**4.43**	**30**	*e*P			**Pb**	**09 41 37.0**	**-1.0**
	27nm,0.4s								
MTBS				*e*S			**Sb**	**09 42 33.8**	**+2.4**
	84nm,0.6s								
MTBS	**Maitube**	**4.43**	**30**	Pg			**Pb**	**09 41 38.4**	**+0.3**
	27nm,0.4s								
MTBS				Lg			Lg	09 42 33.8	
	84nm,0.6s								
TNSS	**Tian-Shan**	**4.56**	**34**	*e*P			**Pb**	**09 41 39.7**	**-0.9**
	34nm,0.5s								
TNSS				*e*S			**Sb**	**09 42 37.9**	**+2.4**
	44nm,0.8s								
TNSS	**Tian-Shan**	**4.56**	**34**	Pg			**Pb**	**09 41 39.9**	**-0.6**
	34nm,0.5s								
TNSS				Lg			Lg	09 42 37.6	
	44nm,0.8s								
BRLS	**Borolday**	**4.61**	**325**	*e*P			**Pb**	**09 41 40.4**	**-0.7**
	15nm,0.3s								
BRLS				*e*S			**Sb**	**09 42 39.7**	**+3.2**
	71nm,0.6s								
BRLS	**Borolday**	**4.61**	**325**	Pg			**Pb**	**09 41 41.8**	**+0.8**
	15nm,0.3s								
BRLS				Lg			Lg	09 42 39.7	
	71nm,0.6s								
KRBS	**Karabastau**	**4.69**	**20**	*e*P			**Pb**	**09 41 41.6**	**-0.9**
	13nm,0.4s								
KRBS				*e*S			**Sb**	**09 42 41.2**	**+2.4**
	78nm,0.6s								
KRBS	**Karabastau**	**4.69**	**20**	Pg			**Pb**	**09 41 42.8**	**+0.3**
	13nm,0.4s								
KRBS				Lg			Lg	09 42 41.8	
	78nm,0.6s								
PRZ	**Przheval'sk**	**4.91**	**48**	Pn			**Pn**	**09 41 34.5**	**+0.6**
KTBS	**Karatobe**	**5.02**	**28**	*e*P			**Pb**	**09 41 47.1**	**-1.1**
	12nm,0.5s								
KTBS				*e*S			**Sb**	**09 42 50.7**	**+2.3**
	164nm,0.4s								
KTBS	**Karatobe**	**5.02**	**28**	Pg			**Pb**	**09 41 48.4**	**+0.3**
	12nm,0.5s								
KTBS				Lg			Lg	09 42 50.7	
	164nm,0.4s								
KUU	**Kurty**	**5.07**	**24**	*e*P			**Pb**	**09 41 47.9**	**-1.0**
	9.1nm,0.9s								
KUU				*e*S			**Sb**	**09 42 52.5**	**+2.9**
	62nm,0.6s								
KUU	**Kurty**	**5.07**	**24**	Pg			**Pb**	**09 41 50.6**	**+1.7**
	9.1nm,0.9s								
KUU				Lg			Lg	09 42 53.8	
	62nm,0.6s								
CHKK	**Chushkaly**	**5.26**	**29**	*e*P			**Pb**	**09 41 50.9**	**-1.2**
	9.3nm,0.6s								
CHKK				*e*S			**Sb**	**09 42 58.1**	**+2.9**
	62nm,0.5s								
CHKK	**Chushkaly**	**5.26**	**29**	Pg			**Pb**	**09 41 53.0**	**+0.9**
	9.3nm,0.6s								
CHKK				Lg			Lg	09 42 58.1	
	62nm,0.5s								
SATY	**Saty**	**5.29**	**43**	*e*P			**Pb**	**09 41 52.1**	**-0.7**
	26nm,0.5s								
SATY				*e*S			**Sb**	**09 43 00.4**	**+4.2**
	52nm,0.8s								
SATY	**Saty**	**5.29**	**43**	Pg			**Pb**	**09 41 53.9**	**+1.1**
	26nm,0.5s								
SATY				Lg			Lg	09 43 00.4	
	52nm,0.8s								
ZHN	**Zhinishke**	**5.38**	**43**	Pg			**Pb**	**09 41 50.3**	**-4.0**
	17nm,0.1s								
ZHN				Lg			Lg	09 42 52.8	
	32nm,0.1s								
KURS	**Kuram**	**5.48**	**39**	*e*P			**Pb**	**09 41 57.5**	**+1.5**
	14nm,0.5s								
KURS				*e*S			**Sb**	**09 43 09.1**	**+7.6**
	35nm,1.0s								
KURS	**Kuram**	**5.48**	**39**	Pg			**Pb**	**09 41 59.1**	**+3.1**
	14nm,0.5s								
KURS				Lg			Lg	09 43 09.1	
	35nm,1.0s								
KPKS	**Kokpek**	**5.72**	**42**	*e*P			**Pb**	**09 41 59.7**	**-0.4**
	20nm,0.6s								
KPKS				*e*S			**Sb**	**09 43 13.9**	**+5.4**
	49nm,0.6s								
KPKS	**Kokpek**	**5.72**	**42**	Pg			**Pb**	**09 42 02.3**	**+2.2**
	20nm,0.6s								
KPKS				Lg			Lg	09 43 13.9	
	49nm,0.6s								
BTLS	**Baital**	**5.75**	**4**	*e*P			**Pb**	**09 41 58.7**	**-1.7**
	3.7nm,0.4s								
BTLS				*e*S			**Sb**	**09 43 11.8**	**+2.8**
	6.8nm,0.5s								
BTLS	**Baital**	**5.75**	**4**	Pg			**Pb**	**09 42 01.4**	**+1.0**
	3.7nm,0.4s								
BTLS				Lg			Lg	09 43 11.8	
	6.8nm,0.5s								
ARXS	**Arharly**	**5.89**	**32**	*e*P			**Pb**	**09 42 02.2**	**-0.8**
	20nm,0.6s								
ARXS				*e*S			**Sb**	**09 43 18.1**	**+4.7**
	55nm,0.5s								
ARXS	**Arharly**	**5.89**	**32**	Pg			**Pb**	**09 42 04.9**	**+1.9**
	20nm,0.6s								
ARXS				Lg			Lg	09 43 18.1	
	55nm,0.5s								
KBL	**Kabul**	**5.92**	**218**	Pn			**Pn**	**09 41 52.7**	**+4.8**
BLB	**Baldybastay**	**6.09**	**37**	*e*P			**Pb**	**09 42 06.2**	**-0.1**
	23nm,0.7s								
BLB				*e*S			**Sb**	**09 43 24.4**	**+5.4**
	30nm,0.5s								
BLB	**Baldybastay**	**6.09**	**37**	Pg			**Pb**	**09 42 08.3**	**+2.0**
	23nm,0.7s								
BLB				Lg			Lg	09 43 24.4	
	30nm,0.5s								
DJR	**Jarkent**	**6.90**	**41**	*e*P			**Pb**	**09 42 20.4**	**+0.3**
	4.5nm,1.0s								
DJR				*e*S			**Sb**	**09 43 49.1**	**+6.7**
	20nm,0.8s								
DJR	**Jarkent**	**6.90**	**41**	Pg			**Pb**	**09 42 23.3**	**+3.2**
	4.5nm,1.0s								
DJR				Lg			Lg	09 43 50.2	
	20nm,0.8s								
OTUK	**Ortayu**	**8.97**	**355**	⇓Pn			**Pn**	**09 42 30.2**	**+0.7**
	3.5nm,0.6s								
OTUK				⇑Lg			Lg	09 44 57.3	
	28nm,0.7s								
MAKZ	**Makanchi**	**9.75**	**37**	Pn			**Pn**	**09 42 39.2**	**-0.9**
MAKZ	**Makanchi**	**9.75**	**37**	⇓Pn			**Pn**	**09 42 39.7**	**-0.5**
	2.3nm,0.8s								
MAKZ				⇑Lg			Lg	09 45 22.4	
	6.1nm,0.9s								
MK31	**Makanchi Array**	**9.88**	**38**				**Pn**	**09 42 41.6**	**-0.5**
MK31	**Makanchi Array**	**9.88**	**38**	⇑Pn			**Pn**	**09 42 42.9**	**+0.8**
	0.7nm,0.6s,baz=225,slow=15,SNR=7.4								
MK31				⇓Lg			Lg	09 45 28.2	
	4.1nm,0.8s,baz=225,slow=26,SNR=5.0								
MKAR	**Makanchi Array**	**9.88**	**38**	Pn			**Pn**	**09 42 43.8**	**+1.8**
	0.1nm,0.3s,baz=225,slow=12,SNR=8.7								
MKAR					Lg		Lg	09 45 29.9	
	0.2nm,0.3s,baz=225,slow=26,SNR=7.1 1.4nm,0.9s								
MKAR	**Makanchi Array**	**9.88**	**38**	Pn			**Pn**	**09 42 43.0**	**+1.0**
KURBB	**Kurchatov Arra**	**11.87**	**16**	Pn			**Pn**	**09 43 08.4**	**-0.7**
	baz=207,slow=12,SNR=4.1								
KURBB					Lg		Lg	09 46 28.4	
	0.1nm,0.3s,baz=197,slow=2.1,SNR=7.4 0.2nm,0.3s								
GEYT	**Alibeck**	**12.07**	**268**	Pn			**Pn**	**09 43 13.9**	**+1.9**
	0.6nm,0.3s,baz=218,slow=42,SNR=1.9 1.7nm,0.4s								
AB31	**Akbulak array**	**13.85**	**320**	⇑Pn			**Pn**	**09 43 34.2**	**-2.0**
	0.7nm,0.5s,baz=129,slow=13,SNR=14								
AB31				⇑Sn			**Sn**	**09 46 09.6**	**-0.1**
	1.5nm,0.6s,baz=129,slow=25,SNR=4.0								
ABKAR	**Akbulak array**	**13.85**	**320**	Pn			**Pn**	**09 43 34.6**	**-1.6**
AKTO	**Aktyubinsk**	**15.57**	**321**	Pn			**Pn**	**09 43 58.7**	**-0.6**
	0.4nm,0.3s,baz=131,slow=13,SNR=10								
AKTO					Sn		**Sn**	**09 46 46.2**	**-5.2**
	0.1nm,0.3s,baz=3.4,slow=17,SNR=2.1 1.6nm,0.4s								
AKTO	**Aktyubinsk**	**15.57**	**321**	⇓Pn			**Pn**	**09 43 58.3**	**-1.1**
	3.6nm,0.8s								
ZAA0	**Zalesovo Array**	**16.56**	**24**	Pn			**Pn**	**09 44 10.3**	**-1.8**

WEL 29 09:43:47.9±1.1, 32°S±12°, 177°E±3°, 0, h201km±47km, M4.2/8, mB4.4/5, ML4.8/12, MLv4.5/8, Mw(mB)3.5/5, Error ellipse: s-maj=0.0km s-min=0.0km az=111.5, North of New Zealand

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.32**	**56**	P	Pn	09 44 53.9	+0.1
GLKZ				S	S	09 45 45.0	+0.1
MXZ	**Matakaoa Point**	**5.79**	**178**	P	Pn	09 45 13.6	+1.1
MXZ				S	S	09 46 19.7	+0.7
WMGZ	**Waiomatatini S**	**6.05**	**177**	P	Pn	09 45 16.2	+0.3
WMGZ				S	S	09 46 27.4	+2.2
PKGZ	**Pakihiroa**	**6.11**	**179**	P	Pn	09 45 17.1	+0.4
PKGZ				S	S	09 46 28.7	+2.0
PUZ	**Puketiti**	**6.30**	**178**	P	Pn	09 45 18.2	-0.8
PUZ				S	S	09 46 31.1	+0.1
TWGZ	**Tauwhareparae**	**6.40**	**180**	P	Pn	09 45 21.4	+1.0
TWGZ				S	S	09 46 36.8	+3.4
NGRZ	**Ngongotaha**	**6.50**	**193**	P	Pn	09 45 24.0	+2.4
URZ	**Urewera**	**6.52**	**186**	P	Pn	09 45 22.6	+0.7
URZ				S	S	09 46 38.0	+1.8
MWZ	**Matawai**	**6.57**	**183**	P	Pn	09 45 23.1	+0.6
MWZ				S	S	09 46 37.7	+0.3
TKGZ	**Te Karaka**	**6.66**	**181**	P	Pn	09 45 23.4	-0.3
TKGZ				S	S	09 46 39.7	+0.1
HSRZ	**Hossack Road**	**6.69**	**192**	S	S	09 46 39.9	-0.3
CNGZ	**Carnagh Statio**	**6.71**	**179**	P	Pn	09 45 23.8	-0.5
RIGZ	**Rimuhau**	**6.93**	**181**	P	Pn	09 45 26.3	-0.9
RIGZ				S	S	09 46 44.2	-1.8
SNGZ	**Shannon Statio**	**7.03**	**184**	P	Pn	09 45 28.6	+0.2
SNGZ				S	S	09 46 49.9	+1.7
RAHZ	**Arahi**	**7.18**	**186**	P	Pn	09 45 30.4	0.0
RAHZ				S	S	09 46 50.0	-1.8
NMHZ	**Naumai**	**7.38**	**187**	P	Pn	09 45 32.7	-0.5
NMHZ				S	S	09 46 54.8	-2.0
BKZ	**Black Stump Fm**	**7.49**	**189**	P	Pn	09 45 33.0	-1.5
BKZ				S	S	09 46 57.6	-1.6

*IDC **29** 09:48:11.8±9.3, 1°.54N×98°.88E, h111km±79km, mb3.7/8, mbtmp4.0/9, ML4.2/1, Error ellipse: s-maj=60.4km s-min=14.9km az=58.0*
*NEIC **29** 09:48:14.2±2.1, 1°.71N±0°.06×98°.95E±0°.07, h120km±7km, mb4.4/11, Error ellipse: s-maj=10.4km s-min=7.3km az=120.0*
*DJA **29** 09:48:15.5±0.4, 2°N±3°×9°9E±°, h104km±5km, M3.7/11, MLv3.7/11*

ISC 29 09:48:13.6±0.6, 1°.72N±0°.05×98°.94E±0°.06, h120km, n39, σ1§20/43, mb4.2/15, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPSI	**Rantau Prapat**	**0.97**	**359**		**Pn**	**09 48 36.2**	**+0.9**
RPSI				Sn	**Sn**	**09 48 52.4**	**+0.6**
MNSI	**Mandailing Nat**	**1.12**	**145**	P	**Pn**	**09 48 38.6**	**+1.8**
GSI	**Gunungsitoli**	**1.43**	**253**		**Pn**	**09 48 41.5**	**+1.3**
GSI				Sn	**Sn**	**09 49 00.8**	**+0.4**
GSI	**Gunungsitoli**	**1.43**	**253**	P	**Pn**	**09 48 41.5**	**+1.3**
GSI				S	**Sn**	**09 49 01.2**	**+0.8**
KCSI	**Kotacane, Aceh**	**2.14**	**327**	P	**Pn**	**09 48 49.7**	**+0.9**
KCSI				S	**Sn**	**09 49 15.3**	**-0.5**
BKNI	**Bangkinang**	**2.51**	**123**	Pn	**Pn**	**09 48 54.8**	**+1.2**
BKNI	**Bangkinang**	**2.51**	**123**	P	**Pn**	**09 48 55.0**	**+1.5**
SISI	**Saibi**	**3.03**	**177**	P	**Pn**	**09 49 00.7**	**+0.4**
IPM	**Ipoh**	**3.44**	**37**		**Pn**	**09 49 07.6**	**+1.8**
KULM	**Kulim**	**3.94**	**26**		**Pn**	**09 49 13.1**	**+0.8**
PPSI	**Pulau Pagai**	**4.58**	**167**	P	**Pn**	**09 49 23.5**	**+2.6**
CMAR	**Chiang Mai Arr**	**16.64**	**0**	P	**P**	**09 52 01.1**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=190,slow=11,SNR=8.4						
	2.0nm,0.6s						
H08S2	**Diego Garcia H**	**27.98**	**250**	T	T	10 22 00.7	
	baz=73,slow=75,SNR=6.4						
H08S3	**Diego Garcia H**	**27.98**	**250**	T	T	10 21 52.1	
	baz=73,slow=75,SNR=14						
H08S1	**Diego Garcia H**	**27.99**	**250**	T	T	10 21 55.1	
	baz=73,slow=75,SNR=9.0						
WB0	**Warramunga Arr**	**40.81**	**123**	P	**P**	**09 55 42.2**	**-1.4**
WB0				IAmb	IAmb	09 55 45.4	
	comp=Z,3.3nm,0.6s						
WRA	**Warramunga Arr**	**40.85**	**124**	P	**P**	**09 55 42.5**	**-1.5**
	comp=Z,1.8nm,0.4s,baz=303,slow=9.0,SNR=38						
WRA				PcP	**PcP**	**09 57 42.0**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=315,slow=2.5,SNR=7.3						
	comp=Z,1.8nm,0.4s						
WRA	**Warramunga Arr**	**40.85**	**124**	P	**P**	**09 55 42.5**	**-1.5**
WRAB	**Tennant Creek**	**40.85**	**124**	P	**P**	**09 55 42.7**	**-1.2**
WRAB				IAmb	IAmb	09 55 56.3	
	comp=Z,16nm,1.4s						
WB2	**Warramunga Arr**	**40.86**	**124**	P	**P**	**09 55 42.7**	**-1.3**
WB2				IAmb	IAmb	09 55 43.3	
	comp=Z,4.9nm,0.8s						
WR0	**Warramunga Arr**	**41.02**	**123**	P	**P**	**09 55 44.2**	**-1.2**
WR0				IAmb	IAmb	09 55 50.8	
	comp=Z,19nm,1.4s						
ASAR	**Alice Springs**	**42.34**	**129**	P	**P**	**09 55 54.4**	**-1.7**
	comp=Z,0.6nm,0.7s,baz=304,slow=8.2,SNR=9.6						
ASAR				PcP	**PcP**	**09 57 47.2**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=317,slow=2.8,SNR=4.8						
	comp=Z,0.6nm,0.7s						
KSRS	**Korea Array**	**44.45**	**33**	P	**P**	**09 56 12.5**	**-0.2**
	comp=Z,1.5nm,0.7s,baz=224,slow=8.5,SNR=7.9						
	comp=Z,1.5nm,0.7s						
JHS	**Saijyo**	**45.90**	**40**	P	**P**	**09 56 25.5**	**+1.2**
JHS				IAmb	IAmb	09 56 25.8	
	comp=Z,9.8nm,1.1s						
SONM	**Songino Array**	**46.39**	**7**	P	**P**	**09 56 29.0**	**+1.0**
	comp=Z,0.6nm,0.4s,baz=187,slow=9.2,SNR=6.3						
	comp=Z,0.6nm,0.4s						
SONM	**Songino Array**	**46.39**	**7**	P	**P**	**09 56 29.4**	**+1.4**
MK31	**Makanchi Array**	**47.19**	**344**	P	**P**	**09 56 34.9**	**+0.8**
MK31				IAmb	IAmb	09 56 35.3	
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	**47.19**	**344**	P	**P**	**09 56 34.6**	**+0.5**
	comp=Z,1.4nm,0.4s,baz=155,slow=9.1,SNR=24						
MKAR				pP	**pP**	**09 57 01.4**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=161,slow=7.3,SNR=3.5						
	comp=Z,1.4nm,0.4s						
ZAA0	**Zalesovo Array**	**53.34**	**350**	P	**P**	**09 57 20.8**	**+0.4**
ZALV	**Zalesovo Beam**	**53.34**	**350**	P	**P**	**09 57 20.7**	**+0.4**
	comp=Z,3.9nm,0.4s,baz=167,slow=6.1,SNR=13						
	comp=Z,3.9nm,0.4s						
ZALV	**Zalesovo Beam**	**53.34**	**350**	P	**P**	**09 57 20.9**	**+0.6**
EIDS	**Eidsvold**	**57.16**	**122**	P	**P**	**09 57 47.8**	**-0.5**
ABKAR	**Akbulak array**	**57.90**	**331**	P	**P**	**09 57 53.0**	**0.0**
CASY	**Casey**	**68.35**	**175**	P	**P**	**09 59 00.5**	**-1.2**
CASY				IAmb	IAmb	09 59 27.3	
	comp=Z,7.9nm,1.5s						
FINES	**FINESS Array B**	**80.35**	**332**	P	**P**	**10 00 10.6**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=108,slow=4.5,SNR=4.1						
	comp=Z,0.4nm,0.3s						
FINES	**FINESS Array B**	**80.35**	**332**	P	**P**	**10 00 11.3**	**0.0**
ARCES	**ARCESS Array B**	**82.64**	**340**	P	**P**	**10 00 22.8**	**-0.5**
	comp=Z,1.2nm,0.9s,baz=84,slow=5.0,SNR=8.0						
	comp=Z,1.2nm,0.9s						
CLL	**Collm**	**86.12**	**321**	*e*P	**P**	**10 00 42.0**	**+0.8**
CLL				Lm	MLR	10 40 00.0	
	comp=N,300nm,19.9s						
CLL				Lm	MLR	10 40 00.0	
	comp=E,400nm,19.7s						
CLL				Lm	MLR	10 40 00.0	
	comp=Z,600nm,18.3s						
TXAR	**Lajitas Array**	**142.30**	**33**	PKhKP	PKPpre	10 07 21.2	
	comp=Z,0.2nm,1.0s,baz=0.0,slow=0.2,SNR=1.5						
TXAR				PKP	**PKPdf**	**10 07 30.0**	**-2.9**
	comp=Z,0.1nm,0.5s,baz=318,slow=1.2,SNR=3.6						

*IDC **29** 09:58:54.4±0.5, 12°.89S×14°.58W, h0km, mb4.5/29, mbtmp4.5/29, MS4.1/3, Error ellipse: s-maj=17.1km s-min=11.7km az=136.0*
*GCMT **29** 09:58:54.9±0.3, 12°.89S±0°.03×14°.55W±0°.02, h12km, MW5.0/76, Moment Tensor Solution. s34,c37; s76,c89; Duration: 0 Moment tensor: Scale 10^16 Nm; Mr=3.19±.12; Mθθ=0.21±.12; Mφφ=2.98±.11; Mrθ=1.49±.46; Mrφ=-0.92±.11; Mθφ=0.51±.39; Best double couple: Mw=3.55 300×10^16 NP1: ϕs=322.00000°, δ=49.00000°, λ=-121.00000°. NP2: ϕs=184.00000°, δ=50.00000°, λ=-60.00000°. Principal axes: T 3.2590, Plg1.0000°, Azm253.0000°; N 0.5850, Plg23.0000°, Azm344.0000°; P -3.8470, Plg67.0000°, Azm162.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*MOS **29** 09:58:54.7±1.0, 12°.86S×14°.67W, h10km, mb5.1/29 Error ellipse: s-maj=12.0km s-min=7.2km az=58.4*
*NEIC **29** 09:58:56.9±1.5, 12°.82S±0°.09×14°.7W±0°.1, h10km±1km, mb5.1/153, Error ellipse: s-maj=17.3km s-min=15.0km az=120.0*

ISC 29 09:58:56.0±0.8, 12°.92S±0°.06×14°.67W±0°.06, h10km±4km, n360, σ1§26/326, mb5.0/135, MS4.8/11, 11C-3D, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASCN	**Ascension**	**4.96**	**4**	Pn	**Pn**	**10 00 08.8**	**-1.9**
H10N1	**ASCENSION HYDR**	**5.04**	**2**	T	T	10 05 18.4	
	baz=184						
H10N3	**ASCENSION HYDR**	**5.05**	**2**	T	T	10 05 28.8	
	baz=184,slow=74						
H10N2	**ASCENSION HYDR**	**5.06**	**2**	T	T	10 05 30.9	
	baz=184,slow=74						
NBRF	**Rio Formoso -**	**20.53**	**280**	*e*P	**P**	**10 03 35.2**	**+0.4**
LIC	**Lamto**	**21.30**	**27**	*e*PKP2	**P**	**10 03 45.3**	**+2.3**
	141nm,1.1s						
NBAN	**Anadia - AL**	**21.43**	**276**	*e*P	**P**	**10 03 45.6**	**+1.1**
NBCA	**Caruaru-PE**	**21.49**	**280**	*e*P	**P**	**10 03 46.7**	**+1.5**
KIC	**Kosan Boka**	**21.54**	**28**	*e*PKP2	**P**	**10 03 44.5**	**-1.2**
	15nm,0.7s						
TIC	**Toumodi**	**21.67**	**27**	*e*PKP2	**P**	**10 03 46.1**	**-1.0**
	2.5nm,0.2s						
DBIC	**Dimbokro**	**21.77**	**27**	P	**P**	**10 03 46.9**	**-1.2**
	11nm,0.8s,baz=223,slow=11,SNR=6.5						
	11nm,0.8s						
DBIC	**Dimbokro**	**21.77**	**27**	P	**P**	**10 03 47.3**	**-0.8**
DBIC	**Dimbokro**	**21.77**	**27**	P	**P**	**10 03 47.3**	**-0.8**
DBIC				pmax	pmax		
	comp=Z,44nm,1.4s						
RCBR	**Riachuelo**	**22.09**	**287**	P	**P**	**10 03 52.2**	**+0.5**
	comp=Z,19nm,0.9s,baz=240,slow=9.3,SNR=3.9						
	comp=Z,19nm,0.9s						
RCBR	**Riachuelo**	**22.09**	**287**	P	**P**	**10 03 50.9**	**-0.8**
RCBR				IAmb	IAmb	10 04 13.4	
	comp=Z,78nm,1.4s						
RCBR	**Riachuelo**	**22.09**	**287**	P	**P**	**10 03 50.9**	**-0.8**
RCBR				pmax	pmax		
	comp=Z,78nm,1.4s						
RCBR	**Riachuelo**	**22.09**	**287**	*e*P	**P**	**10 03 52.9**	**+1.3**
NBLA	**Lagarto - SE**	**22.70**	**272**	*e*P	**P**	**10 03 58.4**	**+0.3**
CMC01	**Camacan, BA**	**24.22**	**261**	*e*P	**P**	**10 04 13.6**	**+0.4**
GDU01	**Guandu, BA**	**24.25**	**265**	*e*P	**P**	**10 04 14.8**	**+1.3**
NBMA	**Muriti-CE**	**24.34**	**281**	*e*P	**P**	**10 04 15.0**	**+0.6**
GUA01	**Guaratinga, BA**	**24.57**	**258**	*e*P	**P**	**10 04 17.2**	**+0.7**
NAN01	**Guarapari, ES**	**25.02**	**255**	*e*P	**P**	**10 04 21.1**	**+0.7**
RIB01	**Linhares ES**	**25.50**	**252**	*e*P	**P**	**10 04 25.5**	**+0.7**
NBPB	**Pedra_Branca-C**	**25.64**	**284**	*e*P	**P**	**10 04 26.8**	**+0.6**
BSFB	**Barra de Sao F**	**25.84**	**253**	*e*P	**P**	**10 04 29.0**	**+1.1**
SJMB	**Sao Joao De Ma**	**26.14**	**254**	*e*P	**P**	**10 04 31.5**	**+0.9**
NBMO	**Morrinhos-CE**	**26.84**	**289**	*e*P	**P**	**10 04 37.9**	**+0.9**
CAM01	**Campos-RJ**	**27.20**	**247**	*e*P	**P**	**10 04 41.0**	**+0.8**
DUB01	**Friburgo-RJ**	**27.91**	**247**	*e*P	**P**	**10 04 47.4**	**+0.8**
DIAM	**Diamantina, MG**	**28.42**	**255**	*e*P	**P**	**10 04 51.9**	**+0.6**
JANB	**Januaria**	**28.83**	**262**	*e*P	**P**	**10 04 55.7**	**+0.8**
VAS01	**Vassouras-RJ**	**28.92**	**247**	*e*P	**P**	**10 04 55.7**	**+0.1**
SDBA	**SAO DESIDERIO**	**29.50**	**268**	*e*P	**P**	**10 05 00.7**	**-0.1**
ESAR	**Angra dos Reis**	**29.99**	**246**	*e*P	**P**	**10 05 05.9**	**+0.9**
TOA0	**Torodi Ar. Sit**	**30.56**	**33**	P	**P**	**10 05 09.0**	**-1.0**
TORD	**Torodi Ar. Bea**	**30.56**	**33**	P	**P**	**10 05 08.6**	**-1.5**
	comp=Z,7.3nm,1.0s,baz=221,slow=9.1,SNR=18						
	comp=Z,7.3nm,1.0s						
TORD	**Torodi Ar. Bea**	**30.56**	**33**	P	**P**	**10 05 08.1**	**-1.9**
ROSB	**Rosrio**	**30.79**	**286**	*e*P	**P**	**10 05 12.3**	**+0.1**
PMNB	**Patos De Minas**	**31.06**	**256**	*e*P	**P**	**10 05 14.1**	**-0.6**
PARB	**Paraibuna**	**31.12**	**246**	*e*P	**P**	**10 05 16.1**	**+1.0**
VAO	**Valinhos**	**32.25**	**247**	*e*P	**P**	**10 05 25.1**	**+0.1**
BDFB	**Brasilia**	**32.41**	**261**	P	**P**	**10 05 26.8**	**+0.2**
	comp=Z,9.3nm,0.8s,baz=74,slow=6.8,SNR=11						
	comp=Z,9.3nm,0.8s						
BDFB	**Brasilia**	**32.41**	**261**	P	**P**	**10 05 26.8**	**+0.2**
BDFB				IAmb	IAmb	10 05 29.5	
	comp=Z,23nm,1.2s						
BDFB	**Brasilia**	**32.41**	**261**	*e*P	**P**	**10 05 27.3**	**+0.8**
SMTB	**Santa Maria do**	**32.56**	**274**	*e*P	**P**	**10 05 28.2**	**+0.4**
IPMB	**Ipameri, GO**	**32.69**	**257**	*e*P	**P**	**10 05 29.4**	**+0.4**
PET01	**Itanhaem-SP**	**32.82**	**245**	*e*P	**P**	**10 05 30.2**	**+0.3**
PEXB	**Peixe**	**32.83**	**268**	*e*P	**P**	**10 05 30.5**	**+0.4**
BB19B	**Bebedouro**	**33.32**	**251**	*e*P	**P**	**10 05 35.2**	**+0.8**
FRTB	**Fartura**	**34.66**	**248**	*e*P	**P**	**10 05 46.9**	**+0.8**
TMAB	**Tom-Au,PA,Br**	**34.70**	**285**	*e*P	**P**	**10 05 47.2**	**+0.8**
PRPB	**Parauapebas**	**35.27**	**278**	*e*P	**P**	**10 05 53.5**	**-0.7**
TER01	**Tubarao-SC**	**35.62**	**239**	*e*P	**P**	**10 05 54.9**	**+0.7**
SNDB	**Serra Nova Dou**	**35.76**	**267**	*e*P	**P**	**10 05 56.4**	**+0.8**
PCMB	**Pacaembu**	**35.92**	**251**	*e*P	**P**	**10 05 57.7**	**+0.8**
DVLD	**Doverlandia**	**36.41**	**259**	*e*P	**P**	**10 06 02.2**	**+1.0**
C2SB	**Chapadao do Su**	**37.12**	**256**	*e*P	**P**	**10 06 09.4**	**+2.3**
MCPB	**Macapa, AP**	**39.10**	**286**	*e*P	**P**	**10 06 24.6**	**+0.7**
RVDE	**Rio Verde (Bra**	**39.12**	**256**	*e*P	**P**	**10 06 24.7**	**+0.6**
CPSB	**Cacapava Do Su**	**39.77**	**238**	*e*P	**P**	**10 06 30.1**	**+0.8**
SALV	**Santo Antonio**	**39.80**	**261**	*e*P	**P**	**10 06 30.4**	**+0.6**
NBRS	**Nobres**	**39.94**	**263**	*e*P	**P**	**10 06 32.2**	**+1.2**
BOSA	**Boshof**	**40.25**	**119**	P	**P**	**10 06 34.2**	**+0.7**
	comp=Z,7.5nm,1.1s,baz=293,slow=6.5,SNR=4.3						
	comp=Z,7.5nm,1.1s						
BOSA	**Boshof**	**40.25**	**119**	P	**P**	**10 06 33.5**	**+0.1**
BOSA	**Boshof**	**40.25**	**119**	P	**P**	**10 06 33.5**	**+0.1**
BOSA				pmax	pmax		
	comp=Z,35nm,1.5s						
CLDB	**Colider**	**40.27**	**268**	*e*P	**P**	**10 06 34.3**	**+0.7**
PLTB	**Pedras Altas**	**40.32**	**236**	P	**P**	**10 06 34.5**	**+0.5**
PLTB	**Pedras Altas**	**40.32**	**236**	*e*P	**P**	**10 06 34.6**	**+0.7**
NPGB	**Novo Progresso**	**40.46**	**274**	*e*P	**P**	**10 06 35.5**	**+0.3**
TAM	**Tamanrasset**	**40.63**	**29**	P	**P**	**10 06 36.6**	**0.0**
TAM	**Tamanrasset**	**40.63**	**29**	P	**P**	**10 06 36.6**	**0.0**
TAM				pmax	pmax		
	comp=Z,19nm,1.5s						
MALB	**Monte Alegre**	**40.71**	**282**	*e*P	**P**	**10 06 38.0**	**+0.7**
PDRB	**Porto dos Gac**	**41.09**	**267**	*e*P	**P**	**10 06 41.0**	**+0.6**
PTET	**Porto Estrela**	**41.23**	**261**	*e*P	**P**	**10 06 42.5**	**+0.9**
ITTB	**Itatiuba**	**41.43**	**278**	*e*P	**P**	**10 06 43.4**	**+0.2**
LSZ	**Lusaka**	**41.59**	**99**	P	**P**	**10 06 44.6**	**0.0**
LSZ	**Lusaka**	**41.59**	**99**	P	**P**	**10 06 44.6**	**0.0**
LSZ				pmax	pmax		
	comp=Z,31nm,1.5s						
CPUP	**Villa Florida**	**42.14**	**245**	P	**P**	**10 06 49.8**	**+0.8**
	comp=Z,1.3nm,0.3s,baz=92,slow=8.6,SNR=12						
	comp=Z,1.3nm,0.3s						
CPUP	**Villa Florida**	**42.14**	**245**	*e*P	**P**	**10 06 49.4**	**+0.5**
ITQB	**Itaqui**	**42.23**	**240**	*e*P	**P**	**10 06 50.3**	**+0.7**
PTLB	**Pontes e Lacer**	**43.13**	**261**	*e*P	**P**	**10 06 57.7**	**+0.7**
VBST	**Vila Bela da S**	**44.03**	**262**	*e*P	**P**	**10 07 05.8**	**+1.5**
VILB	**Vilhena**	**44.33**	**265**	*e*P	**P**	**10 07 07.3**	**+0.6**
LPA	**La Plata**	**44.76**	**233**	*e*P	P	10 07 16.9	+7.0
LPA				sP	pwP	10 07 22.1	+6.5
LPA				PCP	**PcP**	**10 08 45.7**	**-6.4**
LPA				PP	**PP**	**10 08 52.4**	**-2.0**
LPA				pPP		10 09 01.2	
LPA				PPP	PPP	10 09 33.2	
LPA				PPP	PPP	10 09 49.5	
LPA				S	**S**	**10 13 48.0**	**+1.0**
LPA				PSP	PSP	10 14 01.3	
LPA				PKIKP	**PKiKP**	**10 15 50.8**	**-0.8**
LPA				SCS	**SS**	**10 17 05.4**	**-2.3**
LPA				SS	**SnSn**	**10 17 27.9**	**-3.6**
LPA				SSS	SSS	10 18 03.6	
LPA				SSS	SSS	10 18 50.1	
LPA				SKIKP		10 19 23.7	
LPA				PKIKS		10 19 27.9	
LPA				SKIKS		10 22 54.8	
SIV	**San Ignacio**	**44.97**	**260**	P	**P**	**10 07 13.1**	**+1.2**
	comp=Z,4.8nm,0.8s,baz=95,slow=8.6,SNR=23						
	comp=Z,4.8nm,0.8s						
MACA	**Manacapuru-AM**	**46.51**	**278**	*e*P	**P**	**10 07 24.9**	**+0.8**
MBAR	**Mbarara**	**46.62**	**78**	*i* P	**P**	**10 07 24.6**	**-0.6**
MBAR				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BOAV	**Boa Vista**	**47.99**	**285**	*e*P	**P**	**10 07 36.5**	**+0.8**
ETMB	**Extrema**	**50.56**	**268**	*e*P	**P**	**10 07 56.1**	**+0.8**
LPAZ	**La Paz**	**51.73**	**259**	P	**P**	**10 08 04.8**	**+0.1**
	comp=Z,4.9nm,0.9s,baz=86,slow=8.8,SNR=18						
LPAZ				LR	LR	10 30 54.7	
	comp=Z,415nm,18.1s,baz=90,slow=37						
	comp=Z,4.9nm,0.9s						
LPAZ	**La Paz**	**51.73**	**259**	P	**P**	**10 08 04.0**	**-0.7**
LPAZ	**La Paz**	**51.73**	**259**	P	**P**	**10 08 04.0**	**-0.7**
LPAZ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
LPAZ	**La Paz**	**51.73**	**259**	*e*P	**P**	**10 08 04.5**	**-0.2**
LPAZ	**La Paz**	**51.73**	**259**	*e*P	**P**	**10 08 04.8**	**+0.1**
EFI	**East Falkland**	**52.05**	**213**	*i* P	**P**	**10 08 06.6**	**+0.7**
EFI				pmax	pmax		
	comp=Z,212nm,2.1s						
LVC	**Limon Verde**	**52.31**	**251**	*e*P	**P**	**10 08 09.0**	**+0.2**
KMBO	**Kilima Mbogo**	**52.73**	**81**	P	**P**	**10 08 12.1**	**+0.2**
	comp=Z,0.8nm,0.3s,baz=270,slow=20,SNR=1.6						
	comp=Z,0.8nm,0.3s						
KMBO	**Kilima Mbogo**	**52.73**	**81**	P	**P**	**10 08 12.1**	**+0.2**
KMBO	**Kilima Mbogo**	**52.73**	**81**	*i* P	**P**	**10 08 12.8**	**+1.0**
ESDC	**Sonseca Array**	**53.26**	**10**	P	**P**	**10 08 15.3**	**+0.3**
	comp=Z,1.7nm,0.8s,baz=198,slow=7.2,SNR=8.2						
	comp=Z,1.7nm,0.8s						
ESDC	**Sonseca Array**	**53.26**	**10**	P	**P**	**10 08 15.0**	**0.0**
KEST	**Kesra**	**53.45**	**24**	P	**P**	**10 08 17.4**	**+0.9**
	comp=Z,26nm,1.0s,baz=204,slow=2.8,SNR=20						
	comp=Z,26nm,1.0s						
KEST	**Kesra**	**53.45**	**24**	P	**P**	**10 08 17.4**	**+0.9**
CO01	**Juntas del Tor**	**53.81**	**242**	P	**P**	**10 08 20.6**	**+1.0**
CO01				IAmb	IAmb	10 08 39.2	
	comp=Z,15nm,1.1s						
BO04	**La Punta**	**54.74**	**237**	P	**P**	**10 08 26.1**	**0.0**
MT09	**Talagante**	**55.02**	**238**	P	**P**	**10 08 28.0**	**-0.2**
MT09				IAmb	IAmb	10 08 30.1	
	comp=Z,14nm,0.9s						
BO01	**Tunca**	**55.19**	**237**	P	**P**	**10 08 29.2**	**-0.1**
BO01				IAmb	IAmb	10 08 30.7	
	comp=Z,13nm,0.9s						
TBTG	**Tabatinga, AM**	**55.21**	**274**	*e*P	**P**	**10 08 29.6**	**-0.1**
PLCA	**Paso Flores**	**55.95**	**229**	*e*P	**P**	**10 08 35.4**	**+0.7**
CZSB	**Cruzeiro do Su**	**57.23**	**269**	*e*P	**P**	**10 08 43.5**	**-0.6**
VNA1	**Neumayer--Stat**	**57.83**	**177**	P	**P**	**10 08 47.7**	**+0.3**
VNA2	**Neumayer--Watz**	**58.15**	**177**	P	**P**	**10 08 49.6**	**-0.1**
VNA3	**Neumayer Olymp**	**58.37**	**178**	P	**P**	**10 08 50.5**	**-0.7**
VOI	**Vohitsoka**	**59.00**	**108**	P	**P**	**10 08 56.6**	**0.0**
VOI				IAmb	IAmb	10 08 59.8	
	comp=Z,24nm,1.3s						
SNAA	**Sanae**	**59.16**	**176**	P	**P**	**10 08 56.6**	**-0.1**
SNAA	**Sanae**	**59.16**	**176**	P	**P**	**10 08 56.3**	**-0.5**
SNAA				IAmb	IAmb	10 08 57.5	
	comp=Z,18nm,1.3s						
SNAA	**Sanae**	**59.16**	**176**	P	**P**	**10 08 56.3**	**-0.5**
SNAA				pmax	pmax		
	comp=Z,17nm,1.3s						
SJG	**San Juan**	**59.41**	**300**	LR	LR	10 35 08.8	
	comp=Z,89nm,18.3s,baz=88,slow=37						
SDV	**Santo Domingo**	**59.66**	**288**	*e*P	**P**	**10 09 01.9**	**+0.6**
TROLL	**Troll, Antarti**	**59.96**	**174**	P	**P**	**10 09 02.5**	**+0.1**
GO09	**Cerro Castillo**	**59.97**	**218**	P	**P**	**10 09 04.0**	**+1.4**
NVL	**N'lazarevskaya**	**60.08**	**170**	*e*P	P	10 09 08.7	+5.7
NVL				pmax	pmax		
	comp=Z,14nm,0.7s						
BNI	**Bardonecchia**	**60.86**	**17**	P	**P**	**10 09 09.6**	**+0.8**
BNI				IAmb	IAmb	10 09 16.6	
	comp=Z,15nm,1.1s						
BNI	**Bardonecchia**	**60.86**	**17**	P	**P**	**10 09 09.6**	**+0.8**
BNI				pmax	pmax		
	comp=Z,15nm,1.1s						
OSSC	**Osservatorio P**	**60.96**	**21**	P	**P**	**10 09 08.8**	**-0.6**
BARC	**Barichara**	**61.28**	**285**	*e*P	**P**	**10 09 11.4**	**-1.0**
ROSC	**El Rosal**	**61.82**	**283**	P	**P**	**10 09 17.9**	**+1.6**
	comp=Z,9.5nm,0.6s,baz=120,slow=20,SNR=6.9						
	comp=Z,9.5nm,0.6s						
ROSC	**El Rosal**	**61.82**	**283**	P	**P**	**10 09 17.6**	**+1.3**
ROSC				IAmb	IAmb	10 09 20.6	
	comp=Z,13nm,0.8s						
ROSC	**El Rosal**	**61.82**	**283**	P	**P**	**10 09 17.6**	**+1.3**
ROSC				pmax	pmax		
	comp=Z,13nm,0.8s						
**

RDO					IAmb	IAmb	10 09 39.7			
	comp=Z,13nm,1.3s									
BIOA	**Bad Ischl, Aus**	**65.41**	**21**	*eP*	**P**	**P**	**10 09 41.3**	**+2.5**		
	comp=Z,1.5nm,0.4s									
BIOA				*eP*	**PcP**	**PcP**	**10 10 14.8**	**+4.0**		
	comp=Z,1.1nm,0.3s									
ARSA	**Arzberg**	**65.70**	**22**	*eP*	**P**	**P**	**10 09 41.2**	**+0.4**		
	comp=Z,11nm,1.2s									
ARSA				*eP*	**PcP**	**PcP**	**10 10 16.8**	**+4.8**		
	comp=Z,13nm,1.5s									
BELA	**Belgrano 2**	**65.74**	**185**	P	**P**	**P**	**10 09 40.5**	**-0.1**		
BELA				IAmb	IAmb	IAmb	10 09 55.7			
	comp=Z,26nm,1.5s									
MOA	**Molln**	**65.76**	**21**	*eP*	**P**	**P**	**10 09 43.2**	**+2.0**		
	comp=Z,13nm,1.2s									
MOA				*eP*	**PcP**	**PcP**	**10 10 15.2**	**+2.9**		
	comp=Z,15nm,1.5s									
RONA	**Rosalia, Austr**	**66.36**	**22**	*eP*	**P**	**P**	**10 09 46.0**	**+1.0**		
	comp=Z,18nm,1.5s									
RONA				*eP*	**PcP**	**PcP**	**10 10 17.8**	**+3.0**		
	comp=Z,21nm,1.3s									
CONA	**Conrad Observa**	**66.39**	**22**	*eP*	**P**	**P**	**10 09 45.7**	**+0.4**		
	comp=Z,11nm,1.4s									
CONA				*eP*	**PcP**	**PcP**	**10 10 18.6**	**+3.6**		
	comp=Z,12nm,1.3s									
GERES	**GERESS Array B**	**66.42**	**20**	P	**P**	**P**	**10 09 45.2**	**-0.2**		
	comp=Z,1.1nm,0.8s,baz=215,slow=8.4,SNR=6.8									
	comp=Z,1.1nm,0.8s									
GERES	**GERESS Array B**	**66.42**	**20**	P	**P**	**P**	**10 09 44.9**	**-0.6**		
KHC	**Kasperske Hory**	**66.63**	**20**	*i* P	**P**	**P**	**10 09 46.5**	**-0.2**		
KHC				pmax	pmax					
	comp=Z,21nm,1.3s									
KHC	**Kasperske Hory**	**66.63**	**20**	*eP*	**P**	**P**	**10 09 46.0**	**-0.7**		
ZST	**Bratislava**	**67.08**	**22**	*eP*	**P**	**P**	**10 09 49.4**	**-0.1**		
ZST				pmax	pmax					
	comp=Z,211nm,2.1s									
ZST	**Bratislava**	**67.08**	**22**	*eP*	**P**	**P**	**10 09 49.4**	**-0.1**		
MODS	**Modra-Piesok**	**67.29**	**22**	*eP*	**P**	**P**	**10 09 51.3**	**+0.4**		
MODS				*e*			10 09 57.0			
MODS				pmax	pmax					
	comp=Z,142nm,1.9s									
MODS	**Modra-Piesok**	**67.29**	**22**	*eP*	**P**		**10 09 51.3**	**+0.4**		
MODS				*e*			10 09 57.0			
SMOL	**Smolenice**	**67.46**	**22**	*eP*	**P**		**10 09 52.3**	**+0.3**		
SMOL				*e*			10 09 58.2			
SMOL				pmax	pmax					
	comp=Z,54nm,2.6s									
SMOL	**Smolenice**	**67.46**	**22**	*eP*	**P**		**10 09 52.3**	**+0.3**		
SMOL				*e*			10 09 58.2			
KRUC	**Moravsky**	**67.54**	**22**	*eP*	**P**		**10 09 52.0**	**-0.4**		
VRAC	**Vranov**	**67.82**	**22**	*eP*	**P**		**10 09 54.2**	**0.0**		
JAVC	**Velka Javorina**	**67.84**	**22**	*eP*	**P**		**10 09 55.2**	**+0.8**		
PSZ	**Piszkesteto**	**67.93**	**24**	IAmb	IAmb		10 09 56.3			
	comp=Z,8.7nm,1.0s									
VYHS	**Vyhne**	**67.98**	**23**	*eP*	**P**		**10 09 55.4**	**+0.2**		
VYHS				*e*			10 10 01.1			
VYHS				pmax	pmax					
	comp=Z,9.0nm,1.4s									
VYHS	**Vyhne**	**67.98**	**23**	*eP*	**P**		**10 09 55.4**	**+0.2**		
VYHS				*e*			10 10 01.1			
BRG	**Berggiesshubel**	**68.26**	**19**	*eP*	**P**		**10 09 57.9**	**+0.9**		
BRG				Amp			10 09 58.3			
	comp=Z,8.7nm,1.2s									
BRG	**Berggiesshubel**	**68.26**	**19**	*eP*	**P**		**10 09 57.8**	**+0.9**		
BRG				pmax	pmax					
	comp=Z,9.0nm,1.2s									
CLL	**Collm**	**68.34**	**18**	*eP*	**P**		**10 10 00.0**	**+2.6**		
CLL				*eS*	**S**		**10 19 03.0**	**+4.6**		
CLL				MLR	MLR					
	comp=Z,600nm,18.3s									
MORC	**Moravsky Berou**	**68.55**	**22**	*eP*	**P**		**10 09 58.9**	**+0.1**		
EKA	**Eskdalemuir Ar**	**68.68**	**7**	P	**P**		**10 09 58.9**	**-0.5**		
	comp=Z,9.2nm,1.0s,baz=171,slow=5.7,SNR=8.4									
	comp=Z,9.2nm,1.0s									
MLR	**Muntele Rosu**	**68.73**	**29**	P	**P**		**10 09 59.3**	**-0.9**		
	comp=Z,7.6nm,0.9s,baz=350,slow=7.4,SNR=6.6									
	comp=Z,7.6nm,0.9s									
LANS	**Liptovska Anna**	**68.76**	**23**	*eP*	**P**		**10 10 01.0**	**+0.9**		
LANS	**Liptovska Anna**	**68.76**	**23**	*eP*	**P**		**10 10 01.0**	**+0.9**		
BR131	**Keskin Array S**	**68.98**	**38**	*i* P	**P**		**10 10 02.5**	**+0.6**		
BRTR	**Keskin Array B**	**68.98**	**38**	P	**P**		**10 10 02.2**	**+0.4**		
	comp=Z,2.3nm,0.8s,baz=199,slow=6.5,SNR=7.7									
	comp=Z,2.3nm,0.8s									
BRTR	**Keskin Array B**	**68.98**	**38**	*ceP*	**P**		**10 10 02.5**	**+0.6**		
BRTR				pmax	pmax					
	comp=Z,2.0nm,0.7s									
RAYN	**Ar Rayn**	**69.08**	**58**	P	**P**		**10 10 03.0**	**+0.2**		
RAYN				IAmb	IAmb		10 10 10.5			
	comp=Z,12nm,1.2s									
RAYN	**Ar Rayn**	**69.08**	**58**	P	**P**		**10 10 03.0**	**+0.2**		
RAYN				pmax	pmax					
	comp=Z,12nm,1.3s									
CRVS	**Cervenica-Dubn**	**69.35**	**25**	*eP*	**P**		**10 10 04.4**	**+0.6**		
CRVS				*e*			10 10 10.1			
CRVS				pmax	pmax					
	comp=Z,154nm,2.4s									
CRVS	**Cervenica-Dubn**	**69.35**	**25**	*eP*	**P**		**10 10 04.4**	**+0.6**		
CRVS				*e*			10 10 10.1			
UZH	**Uzhgorod**	**69.47**	**25**	*eP*	P		10 10 09.7	+5.2		
UZH				*e*			10 10 13.5			
UZH				*e*			10 10 25.7			
KOLS	**Kolonicke sedl**	**69.70**	**25**	*eP*	**P**		**10 10 07.0**	**+1.0**		
KOLS	**Kolonicke sedl**	**69.70**	**25**	*eP*	**P**		**10 10 07.0**	**+1.0**		
OJC	**Ojcow**	**69.75**	**23**	*eP*	**P**		**10 10 06.2**	**0.0**		
BNN	**Bunyan**	**69.80**	**40**	P	**P**		**10 10 06.5**	**-0.5**		
MAW	**Mawson**	**73.39**	**157**	P	**P**		**10 10 27.0**	**-0.9**		
	comp=Z,5.3nm,0.9s,baz=295,slow=6.4,SNR=7.0									
	comp=Z,5.3nm,0.9s									
GURO	**Guroymak-BITLI**	**73.63**	**43**	P	**P**		**10 10 30.2**	**+0.2**		
AKASG	**Malin Array Be**	**74.02**	**27**	P	**P**		**10 10 30.6**	**-1.2**		
	comp=Z,6.6nm,0.9s,baz=226,slow=6.0,SNR=38									
	comp=Z,6.6nm,0.9s									
AKASG	**Malin Array Be**	**74.02**	**27**	*ceP*	**P**		**10 10 31.2**	**-0.6**		
AKASG				pmax	pmax					
	comp=Z,7.0nm,0.9s									
AKBB	**Malin Array Si**	**74.02**	**27**	*ceP*	**P**		**10 10 30.5**	**-1.3**		
SUW	**Suwalki**	**74.03**	**22**	*eP*	**P**		**10 10 31.8**	**0.0**		
F64A	**Sherman**	**75.84**	**325**	P	**P**		**10 10 43.4**	**+0.9**		
F64A				IAmb	IAmb		10 10 44.3			
	comp=Z,24nm,1.2s									
NACGM	**Naroch**	**76.07**	**23**	*eP*	**P**		**10 10 44.2**	**+0.6**		
	baz=221									
F63A	**Nahmakanta, Br**	**76.18**	**324**	IAmb	IAmb		10 10 46.0			
	comp=Z,14nm,1.1s									
GNI	**Garni**	**76.25**	**43**	*ceP*	**P**		**10 10 46.3**	**+1.1**		
GNI				pmax	pmax					
	comp=Z,32nm,2.5s									
HFS	**Hagfors**	**76.28**	**14**	P	**P**		**10 10 43.3**	**-1.4**		
	comp=Z,3.2nm,1.0s,baz=207,slow=9.6,SNR=3.9									
	comp=Z,3.2nm,1.0s									
NB2	**NORSAR Subarra**	**76.53**	**13**	P	**P**		**10 10 46.4**	**+0.2**		
	baz=205,slow=6.2									
NB2	**NORSAR Subarra**	**76.53**	**13**	P	**P**		**10 10 46.4**	**+0.2**		
	comp=Z,72nm,2.5s,baz=205,slow=6.2									
NOA	**NORSAR Array B**	**76.53**	**13**	P	**P**		**10 10 45.6**	**-0.5**		
	comp=Z,3.1nm,1.0s,baz=206,slow=5.9,SNR=8.3									
	comp=Z,3.1nm,1.0s									
NC303	**NORSAR Array S**	**76.73**	**13**	IAmb	IAmb		10 10 54.7			
	comp=Z,14nm,1.0s									
SHA1	**Shidzhatmaz**	**76.79**	**39**	*i* P	**P**		**10 10 47.5**	**-0.8**		
KIV	**Kislovodsk**	**76.93**	**39**	*eP*	**P**		**10 10 50.0**	**+1.2**		
KIV				*e**PP	**sP**		**10 10 52.0**	**+0.1**		
KIV				*SP	**pwP**		**10 10 55.0**	**-0.4**		
KIV							10 11 01.0			
KIV				S	**S**		**10 20 37.0**	**-0.1**		
KIV				*e*			10 21 19.1			
KIV				SSS	SSS		10 28 50.0			
KIV				pmax	pmax					
	comp=Z,15nm,1.2s									
KIV				MLR	MLR					
	comp=Z,91nm,20.0s									
KBZ	**Khabaz**	**76.93**	**39**	P	**P**		**10 10 48.8**	**0.0**		
	comp=Z,2.3nm,0.7s,baz=216,slow=3.2,SNR=4.9									
	comp=Z,2.3nm,0.7s									
KBZ	**Khabaz**	**76.93**	**39**	*ceP*	**P**		**10 10 49.2**	**+0.5**		
D62A	**Allapoint, All**	**76.94**	**325**	P	**P**		**10 10 49.3**	**+0.6**		
D62A				IAmb	IAmb		10 10 50.0			
	comp=Z,15nm,1.1s									
U59A	**Littleton**	**77.01**	**312**	IAmb	IAmb		10 10 51.2			
	comp=Z,14nm,1.1s									
T59A	**Double "B" Far**	**77.12**	**313**	IAmb	IAmb		10 10 51.8			
	comp=Z,17nm,1.1s									
QSPA	**South Pole Qui**	**77.23**	**180**	P	**P**		**10 10 50.5**	**+0.2**		
	comp=Z,7.8nm,0.8s,baz=258,slow=0.6,SNR=35									
	comp=Z,7.8nm,0.8s									
QSPA	**South Pole Qui**	**77.23**	**180**	P	**P**		**10 10 50.5**	**+0.2**		
	comp=Z,17nm,1.1s									
V58A	**Windy Hill, Pi**	**77.73**	**311**	IAmb	IAmb		10 10 55.4			
	comp=Z,14nm,1.0s									
KSPA	**Keystone Colle**	**78.06**	**318**	P	**P**		**10 10 55.8**	**+0.7**		
KSPA				IAmb	IAmb		10 10 56.9			
	comp=Z,26nm,1.3s									
J59A	**Piesco**	**78.20**	**320**	IAmb	IAmb		10 10 57.4			
	comp=Z,16nm,1.1s									
UOSS	**Minazif**	**78.65**	**61**	P	**P**		**10 11 01.3**	**+2.5**		
U56A	**King**	**78.89**	**311**	IAmb	IAmb		10 11 02.2			
	comp=Z,34nm,1.4s									
SSPA	**Standing Stone**	**79.03**	**316**	P	**P**		**10 11 00.3**	**-0.2**		
KMSC	**Kings Mountain**	**79.09**	**310**	P	**P**		**10 11 02.3**	**+1.4**		
	baz=114									
Q56A	**Snyder Ridge,**	**79.20**	**314**	IAmb	IAmb		10 11 05.2			
	comp=Z,19nm,1.1s									
VORR	**Voronezh**	**79.39**	**31**	*eP*	**P**		**10 11 04.2**	**+2.0**		
VORR				pmax	pmax					
	comp=Z,50nm,0.4s									
MAK	**Makhachkala**	**79.44**	**41**	*eP*	P		10 10 56.4	-6.2		
MAK				*eS*	S		10 20 54.1	-10		
MAK				*e*SSS	SSS		10 29 25.2			
L56A	**Greenwood**	**79.52**	**318**	IAmb	IAmb		10 11 06.0			
	comp=Z,28nm,1.4s									
TRQ	**Mont Tremblant**	**79.64**	**322**	P	**P**		**10 11 03.8**	**0.0**		
U54A	**Nelsons Funny**	**80.02**	**311**	IAmb	IAmb		10 11 08.3			
	comp=Z,20nm,1.1s									
BG3	**Lake Jocassee**	**80.23**	**309**	IAmb	IAmb		10 11 09.6			
	comp=Z,30nm,1.3s									
OBN	**Obninsk**	**80.28**	**27**	*eP*	**P**		**10 11 07.8**	**+0.9**		
OBN				*e*			10 11 12.3			
OBN				*e*S	**S**		**10 21 06.1**	**-6.1**		
OBN				pmax	pmax					
	comp=Z,7.0nm,0.5s									
OBN				MLR	MLR					
	comp=Z,342nm,18.0s									
SCHQ	**Schefferville**	**80.51**	**332**	P	**P**		**10 11 08.3**	**0.0**		
	comp=Z,2.4nm,0.6s,baz=110,slow=5.7,SNR=6.4									
	comp=Z,2.4nm,0.6s									
SCHQ	**Schefferville**	**80.51**	**332**	P	**P**		**10 11 08.2**	**0.0**		
Y52A	**Lilburn**	**80.66**	**308**	IAmb	IAmb		10 11 11.6			
	comp=Z,17nm,1.2s									
FINES	**FINESS Array B**	**80.79**	**19**	P	**P**		**10 11 09.7**	**+0.2**		
	comp=Z,4.2nm,0.9s,baz=197,slow=6.0,SNR=10									
	comp=Z,4.2nm,0.9s									
FINES	**FINESS Array B**	**80.79**	**19**	P	**P**		**10 11 09.5**	**0.0**		
FIA1	**FINESS Array S**	**80.79**	**19**	P	**P**		**10 11 09.7**	**+0.2**		
W52A	**Murphy**	**81.03**	**309**	IAmb	IAmb		10 11 13.4			
	comp=Z,16nm,1.1s									
N53A	**Lisbon**	**81.12**	**315**	IAmb	IAmb		10 11 13.8			
	comp=Z,25nm,1.1s									
TKL	**Tuckaleechee C**	**81.13**	**310**	IAmb	IAmb		10 11 13.5			
	comp=Z,16nm,1.2s									
O53A	**New Philadelph**	**81.14**	**315**	IAmb	IAmb		10 11 13.9			
	comp=Z,24nm,1.0s									
O53A	**New Philadelph**	**81.14**	**315**	P	**P**		**10 11 13.2**	**+1.3**		
	baz=115									
MOS	**Moscow**	**81.14**	**27**	*eP*	**P**		**10 11 10.3**	**-1.2**		
MOS				MLR	MLR					
	comp=Z,500nm,22.0s									
M53A	**WI Miller and**	**81.28**	**316**	P	**P**		**10 11 13.2**	**+0.6**		
	baz=116									
Q52A	**Bidwell**	**81.34**	**313**	IAmb	IAmb		10 11 14.7			
	comp=Z,25nm,1.1s									
P52A	**Corning**	**81.52**	**314**	P	**P**		**10 11 14.7**	**+0.7**		
	baz=114									
SADO	**Sadowa**	**81.76**	**319**	IAmb	IAmb		10 11 16.2			
	comp=Z,26nm,1.3s									
S51A	**Beattyville**	**81.77**	**312**	IAmb	IAmb		10 11 16.6			
	comp=Z,16nm,1.1s									
VALR	**Valaam**	**82.28**	**20**	*i* P	**P**		**10 11 17.9**	**+0.5**		
VALR				pmax	pmax					
	comp=Z,13nm,1.1s									
VLDQ	**Val d'Or**	**82.30**	**323**	IAmb	IAmb		10 11 19.0			
	comp=Z,14nm,1.2s									
SWET	**Sewanee**	**82.59**	**309**	IAmb	IAmb		10 11 20.1			
	comp=Z,13nm,1.2s									
LRAL	**Lakeview Retre**	**82.64**	**306**	IAmb	IAmb		10 11 21.1			
	comp=Z,14nm,1.1s									
X48A	**Hartselle**	**83.17**	**308**	IAmb	IAmb		10 11 23.9			
	comp=Z,17nm,1.2s									
O49A	**Covington**	**83.30**	**314**	IAmb	IAmb		10 11 25.6			
	comp=Z,23nm,1.4s									
P49A	**Miami Univ. Ec**	**83.31**	**313**	P	**P**		**10 11 23.8**	**+0.5**		
	baz=113									
V48A	**Smith Brothers**	**83.46**	**309**	IAmb	IAmb		10 11 25.2			
	comp=Z,17nm,1.1s									
P48A	**Milroy**	**83.79**	**313**	IAmb	IAmb		10 11 26.2			
	comp=Z,18nm,1.1s									
O48B	**Farmland**	**83.90**	**313**	P	**P**		**10 11 26.1**	**-0.2**		
	baz=112									
T47A	**Sharon Grove**	**84.12**	**310**	IAmb	IAmb		10 11 27.7			
	comp=Z,14nm,1.2s									
PLAL	**Pickwick Lake**	**84.16**	**308**	IAmb	IAmb		10 11 28.3			
	comp=Z,10nm,1.1s									
WVT	**Waverly**	**84.36**	**309**	P	**P**		**10 11 28.5**	**-0.2**		
WVT				IAmb	IAmb		10 11 29.4			
	comp=Z,17nm,1.1s									
WVT	**Waverly**	**84.36**	**309**	P	**P**		**10 11 28.5**	**-0.2**		
WVT				pmax	pmax					
	comp=Z,17nm,1.1s									
GEYT	**Alibeck**	**84.71**	**49**	P	**P**		**10 11 30.8**	**+0.3**		
	comp=Z,2.0nm,0.5s,baz=227,slow=31,SNR=1.8									
	comp=Z,2.0nm,0.5s									
GEYT	**Alibeck**	**84.71**	**49**	P	**P**		**10 11 30.2**	**-0.4**		
KLMR	**Klimovskoe**	**85.09**	**23**	*eP*	**P**		**10 11 29.7**	**-2.1**		
KLMR				pmax	pmax					
	comp=Z,14nm,1.2s									
KLMR	**Klimovskoe**	**85.09**	**23**	*eP*	**P**		**10 11 29.7**	**-2.1**		
KLMR				AMP			10 11 38.1			
	comp=Z,14nm,1.2s									
P46A	**Rosedale**	**85.13**	**312**	IAmb	IAmb		10 11 32.7			
	comp=Z,13nm,0.9s									
SFIN	**Lafayette**	**85.33**	**313**	P	**P**		**10 11 32.5**	**-1.0**		
	baz=111									
OLIL	**Olney**	**85.47**	**311**	IAmb	IAmb		10 11 34.5			
	comp=Z,17nm,1.0s									
X43A	**Marvell**	**86.18**	**307**	P	**P**		**10 11 35.5**	**-2.4**		
	baz=108									
ARCES	**ARCESS Array B**	**86.90**	**13**	P	**P**		**10 11 40.1**	**-0.6**		
	comp=Z,1.5nm,0.8s,baz=208,slow=3.1,SNR=4.9									
	comp=Z,1.5nm,0.8s									
FVM	**French Village**	**86.94**	**310**	IAmb	IAmb		10 11 42.4			
	comp=Z,14nm,1.0s									
W41B	**Gary Mavity, V**	**87.45**	**307**	IAmb	IAmb		10 11 44.8			
	comp=Z,9.6nm,1.0s									
W41B	**Gary Mavity, V**	**87.45**	**307**	P	**P**		**10 11 44.0**	**-0.1**		
	baz=108									
CCM	**Cathedral Cave**	**87.57**	**310**	P	**P**		**10 11 44.3**	**-0.3**		
CCM	**Cathedral Cave**	**87.57**	**310**	P	**P**		**10 11 44.3**	**-0.3**		
CCM				pmax	pmax					
	comp=Z,27nm,1.2s									
PRGR	**Permogore**	**87.96**	**25**	*eP*	**P**		**10 11 45.4**	**-0.5**		
JFWS	**Jewell Farm**	**88.42**	**315**	IAmb	IAmb		10 11 49.0			
	comp=Z,9.0nm,0.9s									
W39A	**Magazine**	**88.66**	**306**	IAmb	IAmb		10 11 51.2			
	comp=Z,17nm,1.1s									
W39A	**Magazine**	**88.66**	**306**	P	**P**		**10 11 50.4**	**+0.6**		
	baz=107									
COWI	**Conover**	**88.73**	**318**	IAmb	IAmb		10 11 50.5			
	comp=Z,14nm,1.1s									
HKT	**Hockley**	**88.88**	**301**	P	**P**		**10 11 49.0**	**-1.9**		
HKT				IAmb	IAmb		10 11 52.7			
	comp=Z,8.9nm,1.2s									
HKT	**Hockley**	**88.88**	**301**	*i* P	**P**		**10 11 51.1**	**+0.2**		
HKT				pmax	pmax					
	comp=Z,14nm,1.6s									
I40A	**Norwalk**	**88.99**	**315**	IAmb	IAmb		10 11 52.1			
	comp=Z,12nm,0.9s									
HHAR	**Hobbs**	**89.10**	**307**	P	**P**		**10 11 51.5**	**-0.4**		
HHAR				IAmb	IAmb		10 11 52.6			
	comp=Z,12nm,1.1s									
AKTO	**Aktyubinsk**	**89.15**	**38**	P	**P**		**10 11 51.1**	**-0.7**		
	comp=Z,2.4nm,0.9s,baz=269,slow=3.1,SNR=8.1									
	comp=Z,2.4nm,0.9s									
SBA	**Scott Base**	**89.39**	**180**	P	**P**		**10 11 54.3**	**+1.8**		
SBA	**Scott Base**	**89.39**	**180**	P	**P**		**10 11 54.3**	**+1.8**		
SBA				pmax	pmax					
	comp=Z,19nm,1.2s									
U38A	**Gravette**	**89.49**	**307**	IAmb	IAmb		10 11 54.5			
	comp=Z,15nm,1.2s									
DAG	**Danmarks Havn**	**89.55**	**359**	*i* P	**P**		**10 11 53.0**	**-0.1**		
VNDA	**Vanda**	**89.71**	**179**	P	**P**		**10 11 54.1**	**+0.1**		
	comp=Z,2.4nm,0.9s,baz=223,slow=5.7,SNR=14									
	comp=Z,2.4nm,0.9s									
VNDA	**Vanda**	**89.71**	**179**	P	**P**		**10 11 54.9**	**+0.9**		
VNDA				pmax	pmax					
	comp=Z,5.0nm,1.1s									
ABKAR	**Akbulak array**	**89.90**	**39**	P	**P**		**10 11 56.0**	**+0.6**		
ABKAR	**Akbulak array**	**89.90**	**39**	IAmb	IAmb		10 12 02.0			
	comp=Z,6.2nm,1.1s									
TUL1	**Leonard**	**90.43**	**307**	P	**P**		**10 11 58.9**	**+0.8**		
	baz=106									
WHTX	**Lake Whitney,**	**90.75**	**303**	P	**P**		**10 12 00.3**	**+0.6**		
	baz=105									
ARU	**Arti**	**91.63**	**32**	P	**P**		**10 12 02.9**	**-0.3**		
	comp=Z,4.8nm,0.2s,baz=245,slow=4.4,SNR=4.2									
	comp=Z,4.8nm,0.2s									
ARU	**Arti**	**91.63**	**32**	P	**P**		**10 12 03.4**	**+0.2**		
ARU				IAmb	IAmb		10 12 10.2			
	comp=Z,13nm,1.3s									
ARU	**Arti**	**91.63**	**32**	P	**P**		**10 12 04.1**	**+0.9**		
ARU							10 15 43.6			
ARU				S	**SKSac**		**10 22 36.8**	**+1.0**		
ARU				SS	**SS**		**10 29 10.4**	**0.0**		
B35A	**Bob, Littlefor**	**92.41**	**319**	IAmb	IAmb		10 12 07.9			
	comp=Z,18nm,1.5s									
ABTX	**Abilene, Hawle**	**92.70**	**303**	IAmb	IAmb		10 12 10.3			
	comp=Z,11nm,1.1s									
ABTX	**Abilene, Hawle**	**92.70**	**303**	P	**P**		**10 12 09.5**	**+0.7**		
	baz=104									
AGMN	**Agassiz Nation**	**93.77**	**319**	IAmb	IAmb		10 12 14.2			
	comp=Z,15nm,1.4s									
ULM	**Lac du Bonnet**	**94.28**	**320**	*i* P	**P**		**10 12 14.5**	**-1.1**		
TXAR	**Lajitas Array**	**95.36**	**299**	LR	LR		10 56 04.9			
	comp=Z,55nm,18.8s,baz=100,slow=36									
T25A	**Trinidad**	**97.47**	**306**	P	Pdif		10 12 32.1	+1.3		
	baz=100									
Q24A	**Divide**	**98.37**	**308**	P	Pdif		10 12 35.8	+0.9		
	baz=100									
SDCO	**Great Sand Dun**	**98.43**	**307**	IAmb	IAmb		10 13 03.4			
	comp=Z,6.6nm,1.4s									
ANMO	**Albuquerque**	**98.72**	**304**	P	Pdif		10 12 36.7	+0.3		
ANMO				IAmb	IAmb		10 12 38.0			
	comp=Z,4.9nm,1.4s									
ANMO	**Albuquerque**	**98.72**	**304**	*ceP*	Pdif		10 12 37.2	+0.8		
ANMO				pmax	pmax					
	comp=Z,6.0nm,2.5s									
BNM	**Barren Site**	**98.73**	**303**	P	**P**		**10 12 36.4**	**-0.1**		
KURK	**Kurchatov**	**101.95**	**40**	*i* P	**Pdif**		**10 12 50.8**	**+0.7**		
KURK				pmax	pmax					
	comp=Z,4.0nm,1.9s									
NVAR	**Mina Array Bea**	**108.54**	**306**	PKKPbc	PKKPbc		10 28 42.4	+6.1		
	comp=Z,0.5nm,0.7s,baz=270,slow=2.7,SNR=5.5									
CMAR	**Chiang Mai Arr**	**116.14**	**76**	PKP	**PKiKP**		**10 17 40.5**	**0.0**		
	comp=Z,0.8nm,0.3s,baz=256,slow=3.6,SNR=1.5									
PZH	**PanZhiHua**	**119.16**	**67**	PKP	**PKiKP**		**10 17 48.3**	**+2.0**		
SONM	**Songino Array**	**120.21**	**42**	PKP	**PKPdf**		**10 17 45.7**	**-1.9**		
	comp=Z,0.9nm,0.9s,baz=235,slow=2.3,SNR=4.6									
SONM	**Songino Array**	**120.21**	**42**		**PKPdf**		**10 17 46.9**	**-0.7**		
SONM	**Songino Array**	**120.21**	**42**	PKIKP	**PKPdf**		**10 17 46.9**	**-0.7**		
TAOE	**Nuku Hiva Isla**	**121.69**	**251**	*e*LR	LR		10 55 20.2			
	comp=Z,423nm,30.6s									
TBI	**Tubuai**	**122.94**	**231**	*e*LR	LR		10 55 54.2			
	comp=Z,486nm,33.5s									
BILL	**Bilibino**	**124.93**	**360**	*i*PKIKP	**PKiKP**		**10 17 56.5**	**+0.3**		
BILL				*e*			10 18 02.0			
BILL							10 19 46.0			
BILL				*e*SSS	SSS		10 41

ATAH	**Atahualpa**	**62.96**	**269**	P	**P**	**10 09 59.7**	**+1.3**
	comp=Z,3.7nm,0.7s,baz=49,slow=9.3,SNR=3.9						
	comp=Z,3.7nm,0.7s						
ATAH	**Atahualpa**	**62.96**	**269**	P	**P**	**10 09 59.7**	**+1.3**
ZARC	**Zaragoza, Cauc**	**63.21**	**285**	P	**P**	**10 09 58.1**	**-1.5**
ZARC				IAmb	IAmb	10 10 00.2	
	comp=Z,16nm,1.2s						
BOSC	**San Juan Bosco**	**63.87**	**273**	P	**P**	**10 10 03.4**	**-0.7**
BOSC				IAmb	IAmb	10 10 05.9	
	comp=Z,12nm,0.8s						
ECH	**Echery**	**63.89**	**16**	P	**P**	**10 10 03.0**	**-0.4**
ECH				IAmb	IAmb	10 10 10.2	
	comp=Z,11nm,1.1s						
OTAV	**Otavalo**	**64.61**	**276**	P	**P**	**10 10 06.5**	**-2.8**
OTAV				IAmb	IAmb	10 10 14.8	
	comp=Z,12nm,1.2s						
COHC	**Cochancay**	**64.76**	**273**	P	**P**	**10 10 09.4**	**-0.3**
COHC				IAmb	IAmb	10 10 13.2	
	comp=Z,12nm,1.1s						
GERES	**GERESS Array B**	**66.42**	**20**	P	**P**	**10 10 19.5**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=190,slow=5.0,SNR=5.2						
	comp=Z,0.7nm,0.7s						
EKA	**Eskdalemuir Ar**	**68.69**	**7**	P	**P**	**10 10 33.5**	**-0.5**
	comp=Z,5.3nm,0.9s,baz=197,slow=6.7,SNR=4.6						
	comp=Z,5.3nm,0.9s						
MLR	**Muntele Rosu**	**68.72**	**29**	P	**P**	**10 10 35.0**	**+0.4**
	comp=Z,8.7nm,1.0s,baz=229,slow=10,SNR=4.0						
	comp=Z,8.7nm,1.0s						
MLR	**Muntele Rosu**	**68.72**	**29**	P	**P**	**10 10 35.0**	**+0.4**
MLR	**Muntele Rosu**	**68.72**	**29**	IAmb	IAmb	10 10 38.0	
	comp=Z,20nm,1.2s						
BRTR	**Keskin Array B**	**68.95**	**38**	P	**P**	**10 10 37.0**	**+0.8**
	comp=Z,1.5nm,0.7s,baz=208,slow=8.2,SNR=1.7						
	comp=Z,1.5nm,0.7s						
BRTR	**Keskin Array B**	**68.95**	**38**	P	**P**	**10 10 36.2**	**+0.1**
BNN	**Bunyan**	**69.77**	**40**	P	**P**	**10 10 40.8**	**-0.5**
BNN				IAmb	IAmb	10 10 49.2	
	comp=Z,22nm,0.9s						
MAW	**Mawson**	**73.34**	**157**	P	**P**	**10 11 01.7**	**-0.4**
	comp=Z,3.1nm,0.7s,baz=294,slow=9.2,SNR=4.1						
	comp=Z,3.1nm,0.7s						
MAW	**Mawson**	**73.34**	**157**	P	**P**	**10 11 01.4**	**-0.7**
AKASG	**Malin Array Be**	**74.00**	**27**	P	**P**	**10 11 05.5**	**-0.6**
	comp=Z,5.4nm,0.8s,baz=226,slow=5.7,SNR=5.7						
	comp=Z,5.4nm,0.8s						
AKASG	**Malin Array Be**	**74.00**	**27**	P	**P**	**10 11 05.5**	**-0.6**
HFS	**Hagfors**	**76.29**	**14**	P	**P**	**10 11 19.8**	**+0.6**
	comp=Z,2.3nm,0.8s,baz=208,slow=8.2,SNR=1.8						
	comp=Z,2.3nm,0.8s						
HFS	**Hagfors**	**76.29**	**14**	P	**P**	**10 11 19.8**	**+0.6**
NOA	**NORSAR Array B**	**76.54**	**13**	P	**P**	**10 11 20.5**	**-0.2**
	comp=Z,2.2nm,1.0s,baz=204,slow=6.2,SNR=2.7						
	comp=Z,2.2nm,1.0s						
NOA	**NORSAR Array B**	**76.54**	**13**	P	**P**	**10 11 20.5**	**-0.2**
QSPA	**South Pole Qui**	**77.21**	**180**	P	**P**	**10 11 25.5**	**+0.9**
	comp=Z,8.0nm,0.8s,baz=312,slow=1.6,SNR=8.8						
	comp=Z,8.0nm,0.8s						
QSPA	**South Pole Qui**	**77.21**	**180**	P	**P**	**10 11 25.5**	**+0.9**
VT1	**Waterbury**	**77.63**	**321**	P	**P**	**10 11 30.1**	**+2.9**
VT1				IAmb	IAmb	10 11 31.4	
	comp=Z,14nm,1.2s						
KSPA	**Keystone Colle**	**78.13**	**318**	IAmb	IAmb	10 11 32.5	
	comp=Z,15nm,1.2s						
W57A	**Gilead**	**78.17**	**310**	P	**P**	**10 11 30.4**	**+0.1**
BG3	**Lake Jocassee**	**80.30**	**309**	IAmb	IAmb	10 11 45.3	
	comp=Z,29nm,1.3s						
SCHQ	**Schefferville**	**80.56**	**332**	P	**P**	**10 11 42.9**	**-0.1**
	comp=Z,3.8nm,0.7s,baz=74,slow=9.5,SNR=4.2						
	comp=Z,3.8nm,0.7s						
SCHQ	**Schefferville**	**80.56**	**332**	P	**P**	**10 11 43.2**	**+0.3**
Y52A	**Lilburn**	**80.73**	**308**	P	**P**	**10 11 43.5**	**-0.8**
Y52A				IAmb	IAmb	10 11 47.3	
	comp=Z,22nm,1.2s						
FINES	**FINESS Array B**	**80.79**	**18**	P	**P**	**10 11 44.0**	**+0.1**
	comp=Z,2.0nm,0.6s,baz=200,slow=5.2,SNR=5.7						
	comp=Z,2.0nm,0.6s						
W52A	**Murphy**	**81.09**	**309**	IAmb	IAmb	10 11 49.0	
	comp=Z,28nm,1.3s						
TKL	**Tuckaleechee C**	**81.19**	**310**	IAmb	IAmb	10 11 49.1	
	comp=Z,20nm,1.3s						
O52A	**Adamsville**	**81.58**	**314**	IAmb	IAmb	10 11 51.6	
	comp=Z,22nm,1.1s						
250A	**Grady**	**81.76**	**305**	P	**P**	**10 11 49.7**	**-0.1**
SADO	**Sadowa**	**81.82**	**319**	P	**P**	**10 11 49.5**	**-0.4**
SADO				IAmb	IAmb	10 11 58.0	
	comp=Z,21nm,1.3s						
LRAL	**Lakeview Retre**	**82.71**	**306**		**P**	**10 11 54.6**	**-0.1**
LRAL				IAmb	IAmb	10 11 56.8	
	comp=Z,17nm,1.2s						
X48A	**Hartselle**	**83.24**	**307**		**P**	**10 11 57.7**	**+0.2**
X48A				IAmb	IAmb	10 11 59.5	
	comp=Z,11nm,1.1s						
V48A	**Smith Brothers**	**83.53**	**309**	P	**P**	**10 11 58.9**	**-0.1**
V48A				IAmb	IAmb	10 12 00.8	
	comp=Z,13nm,1.1s						
PLAL	**Pickwick Lake**	**84.22**	**308**	P	**P**	**10 12 02.0**	**-0.5**
PLAL				IAmb	IAmb	10 12 03.9	
	comp=Z,10nm,0.9s						
WVT	**Waverly**	**84.43**	**309**		**P**	**10 12 03.1**	**-0.4**
WVT				IAmb	IAmb	10 12 05.0	
	comp=Z,15nm,1.1s						
OXF	**Oxford**	**85.10**	**307**		**P**	**10 12 06.2**	**-0.7**
W45A	**Hickory Valley**	**85.14**	**308**		**P**	**10 12 06.8**	**-0.3**
VBMS	**Vicksburg**	**85.24**	**304**	P	**P**	**10 12 07.8**	**+0.2**
OLIL	**Olney**	**85.53**	**311**		**P**	**10 12 09.0**	**0.0**
143A	**Socs Landing,**	**86.10**	**305**	P	**P**	**10 12 11.7**	**-0.2**
HBAR	**Harrisburg**	**86.41**	**308**	P	**P**	**10 12 12.9**	**-0.4**
ARCES	**ARCESS Array B**	**86.91**	**13**	P	**P**	**10 12 14.7**	**-0.4**
	comp=Z,1.4nm,0.8s,baz=224,slow=3.8,SNR=2.6						
	comp=Z,1.4nm,0.8s						
ARCES	**ARCESS Array B**	**86.91**	**13**	P	**P**	**10 12 14.7**	**-0.4**
ARCES	**ARCESS Array B**	**86.91**	**13**	IAmb	IAmb	10 12 21.6	
	comp=Z,6.5nm,1.2s						
E43A	**Lone Tree Farm**	**87.50**	**319**	IAmb	IAmb	10 12 21.0	
	comp=Z,23nm,1.2s						
CCM	**Cathedral Cave**	**87.64**	**310**		**P**	**10 12 19.4**	**0.0**
FCAR	**Ozark Folk Cen**	**87.64**	**307**	IAmb	IAmb	10 12 23.2	
	comp=Z,5.4nm,0.6s						
W39A	**Magazine**	**88.73**	**306**	IAmb	IAmb	10 12 26.8	
	comp=Z,18nm,1.1s						
D41A	**Chassel**	**88.76**	**319**	P	**P**	**10 12 24.4**	**0.0**
COWI	**Conover**	**88.80**	**318**	IAmb	IAmb	10 12 26.8	
	comp=Z,8.2nm,1.0s						
HHAR	**Hobbs**	**89.17**	**307**		**P**	**10 12 26.3**	**-0.3**
U38A	**Gravette**	**89.55**	**307**	P	**P**	**10 12 28.0**	**-0.5**
VNDA	**Vanda**	**89.68**	**179**	P	**P**	**10 12 28.5**	**+0.2**
	comp=Z,2.0nm,1.0s,baz=218,slow=7.3,SNR=2.9						
	comp=Z,2.0nm,1.0s						
ABKAR	**Akbulak array**	**89.88**	**39**	P	**P**	**10 12 29.5**	**-0.1**
JCT	**Junction City**	**92.40**	**301**	P	**P**	**10 12 38.2**	**-3.7**
JCT				IAmb	IAmb	10 12 44.1	
	comp=Z,13nm,0.9s						
B35A	**Bob, Littlefor**	**92.47**	**319**	P	**P**	**10 12 41.9**	**+0.1**
B35A				IAmb	IAmb	10 12 43.5	
	comp=Z,9.6nm,1.2s						
WMOK	**Wichita Mounta**	**92.57**	**305**	P	**P**	**10 12 42.4**	**-0.1**
TXAR	**Lajitas Array**	**95.43**	**299**	P	**P**	**10 12 55.6**	**-0.3**
	comp=Z,1.3nm,0.9s,baz=107,slow=5.8,SNR=4.3						
	comp=Z,1.3nm,0.9s						
TXAR	**Lajitas Array**	**95.43**	**299**	P	**P**	**10 12 57.5**	**+1.6**
MSTX	**Muleshoe**	**95.62**	**303**		**P**	**10 12 55.2**	**-1.5**
ASAR	**Alice Springs**	**132.33**	**140**	PKP	**PKPdf**	**10 18 45.4**	**-0.4**
	comp=Z,0.5nm,0.8s,baz=223,slow=1.1,SNR=1.7						
ASAR	**Alice Springs**	**132.33**	**140**		**PKPdf**	**10 18 44.0**	**-1.9**
WRA	**Warramunga Arr**	**135.25**	**136**	PKP	**PKPdf**	**10 18 50.5**	**-0.9**
	comp=Z,0.6nm,0.7s,baz=221,slow=1.7,SNR=2.1						

*IDC **29** 10:06:31.1±1.0, 12.°88S×14.°53W, h0km, mb4.1/8, mbtmp4.0/8, Error ellipse: s-maj=66.8km s-min=21.4km az=103.0*

*GCMT **29** 10:06:36.0±0.3, 12.°67S±0.°05×14.°57W±0.°03, h20km±1km, MW4.9/86, Moment Tensor Solution. s15,c15; s86,c106; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-3.40±.29; Mθθ0.85±.16; Mϕϕ2.55±.18; Mrθ0.90±.35; Mθϕ-0.23±.09; Mϕr-0.20±.29; Best double couple: M₀3.09300×10¹⁶ NP1:φs182.00000°, δ43.00000°, λ-74.00000°. NP2: φs341.00000°, δ49.00000°, λ-105.00000°. Principal axes: T 2.5990, Plg3.0000°, Azm81.0000°; N 0.9940, Plg11.0000°, Azm350.0000°; P -3.5870, Plg79.0000°, Azm187.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 29 10:06:33.7±0.9, 12.°9S±0.°2×14.°5W±0.°4, h16km, n13, σ0s94/8, mb4.0/8, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H10S2	**ASCENSION HYDR**	**3.89**	**358**	T	T	10 11 37.5	
	baz=184,slow=74,SNR=72						
H10S3	**ASCENSION HYDR**	**3.90**	**358**	T	T	10 11 43.9	
	baz=36,slow=74,SNR=75						
H10N1	**ASCENSION HYDR**	**4.99**	**0**	T	T	10 12 56.2	
	baz=181,slow=73,SNR=58						
H10N3	**ASCENSION HYDR**	**5.00**	**0**	T	T	10 13 02.2	
	baz=181,slow=73,SNR=84						
H10N2	**ASCENSION HYDR**	**5.01**	**0**	T	T	10 13 02.5	
	baz=181,slow=73,SNR=47						
TORD	**Torodi Ar. Bea**	**30.44**	**32**	P	**P**	**10 12 44.9**	**-0.8**
	0.7nm,0.7s,baz=214,slow=8.9,SNR=2.7						
	0.7nm,0.7s						
KEST	**Kesra**	**53.35**	**24**	P	**P**	**10 15 54.1**	**+1.7**
	6.2nm,0.9s,baz=204,slow=5.5,SNR=5.4						
	6.2nm,0.9s						
SNAA	**Sanae**	**59.20**	**176**	P	**P**	**10 16 33.3**	**-0.4**
	2.3nm,1.0s,baz=312,slow=6.0,SNR=4.9						
	2.3nm,1.0s						
AKASG	**Malin Array Be**	**73.91**	**27**	P	**P**	**10 18 07.3**	**-0.5**
	1.4nm,0.8s,baz=222,slow=4.9,SNR=6.3						
	1.4nm,0.8s						
QSPA	**South Pole Qui**	**77.28**	**180**	P	**P**	**10 18 27.2**	**0.0**
	1.6nm,0.9s,baz=223,slow=2.6,SNR=7.9						
	1.6nm,0.9s						
FINES	**FINESS Array B**	**80.69**	**18**	P	**P**	**10 18 45.3**	**-0.3**
	0.7nm,0.6s,baz=232,slow=6.8,SNR=2.1						
	0.7nm,0.6s						
VNDA	**Vanda**	**89.75**	**179**	P	**P**	**10 19 31.4**	**+0.6**
	0.6nm,0.9s,baz=153,slow=2.3,SNR=2.5						
	0.6nm,0.9s						
TXAR	**Lajitas Array**	**95.47**	**299**	P	**P**	**10 19 58.1**	**-0.2**
	0.6nm,1.0s,baz=120,slow=7.5,SNR=4.4						
	0.6nm,1.0s						

*IDC **29** 10:08:10.4±1.8, 17.°32N×94.°04W, h126km±23km, mb3.4/6, mbtmp3.8/7, Error ellipse: s-maj=67.0km s-min=17.4km az=56.0*

*MEX **29** 10:08:13.1±0.8, 17.°27N×94.°39W, h145km±8km, MD4.2*

ISC 29 10:08:12.0±0.8, 17.°17N±0.°06×94.°47W±0.°05, h148km±6km, n20, σ1s78/32, mb3.6/5, Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**0.41**	**259**	P	**Pn**	**10 08 32.6**	**0.0**
	714nm,0.5s,baz=80,slow=2.9,SNR=6549						
CMIG				S	**Sn**	**10 08 48.0**	**-0.2**
	2μm,0.3s,baz=306,slow=19,SNR=36						
CMIG	**Matias Romero**	**0.41**	**259**	*i* P	**Pn**	**10 08 32.6**	**0.0**
CMIG				*e*S	**Sn**	**10 08 48.0**	**-0.2**
TGIG		**1.34**	**107**	*e*P	**Pn**	**10 08 39.0**	**-0.8**
TGIG				*e*S	**Sn**	**10 08 59.0**	**-1.9**
NEUV	**Arroyo Zacate**	**1.39**	**293**	*e*P	**Pn**	**10 08 39.6**	**-0.5**
NEUV				*e*S	**Sn**	**10 09 00.5**	**-1.2**
PCIG		**1.88**	**140**	*e*P	**Pn**	**10 08 45.8**	**+0.2**
PCIG				*e*S	**Sn**	**10 09 11.0**	**-0.3**
HUIG	**Huatulco**	**2.10**	**229**	*e*P	**Pn**	**10 08 46.7**	**-1.5**
HUIG				*e*S	**Sn**	**10 09 16.7**	**+0.7**
VHO	**Vista Hermosa**	**2.17**	**268**	*e*P	**Pn**	**10 08 50.4**	**+1.2**
VHO				*e*S	**Sn**	**10 09 19.6**	**+1.9**
TOIG	**Toxpalan**	**2.65**	**291**	*e*P	**Pn**	**10 08 55.4**	**+0.6**
TOIG				*e*S	**Sn**	**10 09 27.9**	**0.0**
YOIG	**Yosondua**	**2.96**	**264**	*e*P	**Pn**	**10 08 59.2**	**+0.2**
YOIG				*e*S	**Sn**	**10 09 32.1**	**-3.2**
JAUV	**Jalcomulco**	**3.12**	**315**	*e*P	**Pn**	**10 08 59.5**	**-1.3**
JAUV				*e*S	**Sn**	**10 09 35.4**	**-3.2**
TXIG	**Tlaxiaco**	**3.16**	**272**	*e*P	**Pn**	**10 09 02.4**	**+0.9**
TXIG				*e*S	**Sn**	**10 09 34.8**	**-5.0**
PNIG	**Pinotepa**	**3.59**	**258**	*e*P	**Pn**	**10 09 05.8**	**-1.1**
PNIG				*e*S	**Sn**	**10 09 46.8**	**-2.6**
TXAR	**Lajitas Array**	**14.76**	**327**	P	**Pn**	**10 11 35.2**	**+1.6**
	1.4nm,0.7s,baz=148,slow=14,SNR=6.2						
ANMO	**Albuquerque**	**20.69**	**331**	P	**P**	**10 12 43.4**	**+2.7**
	0.8nm,0.6s,baz=146,slow=8.1,SNR=5.5						
	0.8nm,0.6s						
NVAR	**Mina Array Bea**	**29.73**	**320**	P	**P**	**10 14 06.4**	**+1.8**
	1.1nm,0.9s,baz=130,slow=8.4,SNR=8.8						
	1.1nm,0.9s						
LPAZ	**La Paz**	**42.18**	**141**	P	**P**	**10 15 51.2**	**+0.1**
	0.8nm,0.8s,baz=328,slow=9.5,SNR=2.0						
	0.8nm,0.8s						
SIV	**San Ignacio**	**46.58**	**133**	P	**P**	**10 16 24.0**	**-1.3**
	1.5nm,0.9s,baz=305,slow=6.8,SNR=4.4						
	1.5nm,0.9s						
YKA	**Yellowknife Ar**	**47.43**	**347**	P	**P**	**10 16 30.2**	**-1.1**
	1.0nm,0.8s,baz=152,slow=7.8,SNR=5.9						
	1.0nm,0.8s						
ARCES	**ARCESS Array B**	**83.88**	**18**	P	**P**	**10 20 23.5**	**-1.3**
	1.0nm,0.7s,baz=297,slow=5.0,SNR=5.3						
	1.0nm,0.7s						
WRA	**Warramunga Arr**	**133.77**	**259**	PKP	**PKPdf**	**10 27 12.8**	**+0.7**
	baz=91,slow=2.8,SNR=1.6						

*IDC **29** 10:24:22.6±6.1, 28.°44S×179.°42W, h0km, mb3.5/2, mbtmp3.5/2, Error ellipse: s-maj=218.9km s-min=100.7km az=163.0*

ISC 29 10:25:04.3±2.7, 30.°6S±0.°2×179.°8W±0.°4, h400km, n12, σ1s09/12, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKZ	**Black Stump Fm**	**9.05**	**199**	P	**P**	**10 27 11.5**	**+0.3**
MCHZ	**McNeill Hill**	**9.26**	**197**	P	**Pn**	**10 27 14.4**	**+0.8**
OTVZ	**Oturere**	**9.30**	**202**	P	**Pn**	**10 27 15.0**	**+0.8**
FWVZ	**Far West T-bar**	**9.42**	**203**	P	**Pn**	**10 27 16.1**	**+0.5**
WNVZ	**Wahianoa**	**9.47**	**202**	P	**Pn**	**10 27 16.5**	**+0.3**
VRZ	**Vera Road**	**9.58**	**206**	P	**Pn**	**10 27 19.1**	**+1.7**
MRZ	**Mangatainoka R**	**10.70**	**199**	P	**P**	**10 27 28.5**	**-1.0**
OGWZ	**Otaki Gorge**	**10.96**	**200**	P	**P**	**10 27 30.6**	**-1.7**
CAW	**Cannon Point**	**11.26**	**200**	P	**P**	**10 27 34.2**	**-1.4**
ASAR	**Alice Springs**	**41.54**	**268**	P	**P**	**10 32 14.7**	**-0.2**
	0.7nm,1.0s,baz=105,slow=7.3,SNR=2.5						
	0.7nm,1.0s						
WRA	**Warramunga Arr**	**42.55**	**273**	P	**P**	**10 32 22.9**	**-0.1**
	0.3nm,0.3s,baz=109,slow=7.5,SNR=20						
	0.3nm,0.3s						
FINES	**FINESS Array B**	**144.80**	**339**	PKP	**PKiKP**	**10 43 57.8**	**+0.3**
	0.6nm,0.3s,baz=45,slow=4.7,SNR=12						

*INET **29** 10:43:07.1±1.5, 10.°37N×86.°91W, h15km±11km, MW3.9*

*IDC **29** 10:43:09.1±2.1, 11.°96N×84.°88W, h0km, mb3.5/3, mbtmp3.5/3, Error ellipse: s-maj=58.0km s-min=13.4km az=82.0*

*UCR **29** 10:43:11.0±1.3, 10.°56N×86.°60W, h10km, MW4.3*

ISC 29 10:43:10.1±1.2, 10.°64N±0.°06×86.°66W±0.°07, h23km, n36, σ1s11/40, mb3.4/3, 2C-1D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HZTE	**Horizontes, Gu**	**1.05**	**86**	*i*P	**Pb**	**10 43 29.6**	**0.0**
HZTE				*e*S	**Sb**	**10 43 42.8**	**-0.1**
HZTE	**Horizontes, Gu**	**1.05**	**86**	*e*P	**Pb**	**10 43 29.6**	**0.0**
SAJU	**San Juanillo,**	**1.09**	**121**	*e*P	**Pb**	**10 43 29.6**	**-0.8**
GBS3	**Finca Las Img**	**1.19**	**83**	*e*P	**Pb**	**10 43 31.5**	**-0.5**
ORTG	**Ortega, Santa**	**1.21**	**103**	*e*P	**Pb**	**10 43 31.6**	**-0.8**
LAPC	**Finca la Perla**	**1.21**	**84**	*e*P	**Pn**	**10 43 31.3**	**-0.4**
BUEV	**Buena Vista**	**1.24**	**83**	*e*P	**Pn**	**10 43 32.1**	**0.0**
GB1A	**Borinquen Arri**	**1.25**	**82**	*e*P	**Pb**	**10 43 32.7**	**-0.4**
DUNO	**Dulce Nombre,**	**1.27**	**116**	*e*P	**Pb**	**10 43 32.3**	**-1.1**
DUNO				*e*S	**Sn**	**10 43 47.8**	**-1.1**
GPS2	**Hotel Rincn d**	**1.29**	**85**	*e*P	**Pn**	**10 43 32.7**	**-0.1**
BUAI	**Buenos Aires**	**1.32**	**80**	*e*P	**Pb**	**10 43 33.5**	**-0.8**
GUAB	**Guayabo de Bag**	**1.41**	**87**	*e*P	**Pb**	**10 43 34.6**	**-1.1**
COLC	**Colonia**	**1.43**	**89**	*e*P	**Pb**	**10 43 34.9**	**-1.2**
HORNC	**Hornillas**	**1.46**	**87**	*e*P	**Pb**	**10 43 35.5**	**-1.1**
CUI	**Cuipilapa**	**1.47**	**89**	*e*P	**Pb**	**10 43 35.7**	**-1.1**
VMAR	**Armenia, Volca**	**1.52**	**83**	*i*P	**Pb**	**10 43 36.8**	**-0.9**
COPN	**Copaltepe**	**1.53**	**2**	*e*P	**Pb**	**10 43 36.7**	**-1.2**
TISN	**Laguna Tiscapa**	**1.54**	**14**	*e*P	**Pb**	**10 43 36.9**	**-1.1**
MGAN	**Managua**	**1.55**	**15**	*e*P	**Pn**	**10 43 36.5**	**+0.1**
MGAN				*e*P	**Pb**	**10 43 38.6**	**+0.4**
ACAL	**Aguas Claras**	**1.59**	**90**	*e*P	**Pb**	**10 43 38.1**	**-0.8**
PTEN	**Parque Tenorio**	**1.64**	**87**	*e*P	**Pb**	**10 43 38.5**	**-1.3**
JTS	**Las Juntas de**	**1.71**	**101**	Pn	**Pb**	**10 43 39.2**	**-1.8**
	6.7nm,0.3s,baz=3.6,slow=11,SNR=39						
JTS				Lg	Lg	10 44 02.1	
	24nm,0.3s,baz=4.5,slow=22,SNR=8.0						
JTS	**Las Juntas de**	**1.71**	**101**	*e*P	**Pn**	**10 43 38.8**	**+0.2**
JTS	**Las Juntas de**	**1.71**	**101**	*e*P	**Pn**	**10 43 38.9**	**+0.4**
MOMN	**Momotombo**	**1.76**	**4**	*e*P	**Pb**	**10 43 39.7**	**-2.2**
CASO	**Castillo**	**1.90**	**96**	*e*P	**Pb**	**10 43 42.4**	**-1.8**
LAFE	**Finca La Fe, P**	**1.91**	**116**	*e*P	**Pn**	**10 43 41.0**	**-0.3**
LAFE	**Finca La Fe, P**	**1.91**	**116**	*e*P	**Pn**	**10 43 40.9**	**-0.3**
ARE1	**Arenal 1**	**1.91**	**95**	*e*P	**Pn**	**10 43 42.1**	**+0.7**
ACON	**Acoyapa**	**1.96**	**48**	*e*P	**Pn**	**10 43 41.9**	**-0.2**
CRIN	**San Cristobal**	**2.08**	**349**	*e*P	**Pb**	**10 43 44.5**	**-2.9**
CRIN				*e*S	**Sb**	**10 44 12.8**	**-0.1**
MATN	**Matagalpa**	**2.39**	**17**	*e*P	**Pn**	**10 43 49.3**	**+1.4**
MATN				*e*S	**Sb**	**10 44 20.5**	**-1.1**
ESPN	**Las Esperanzas**	**2.78**	**56**	*e*P	**Pn**	**10 43 53.8**	**+0.5**
TXAR	**Lajitas Array**	**24.47**	**322**	P	**P**	**10 48 29.9**	**+2.3**
	1.5nm,0.7s,baz=135,slow=10.0,SNR=20						
	1.5nm,0.7s						
PDAR	**Pinedale Array**	**37.73**	**332**	P	**P**	**10 50 25.4**	**+1.0**
	0.2nm,0.6s,baz=134,slow=7.7,SNR=3.8						
	0.2nm,0.6s						
NVAR	**Mina Array Bea**	**39.57**	**320**	P	P	10 50 44.1	+4.2
	0.6nm,0.8s,baz=134,slow=7.7,SNR=6.1						
	0.6nm,0.8s						

*IDC **29** 10:56:50.5±1.1, 30.°63S×76.°12E, h0km, mb3.8/7, mbtmp3.8/7, Error ellipse: s-maj=39.8km s-min=29.0km az=67.0*

*NEIC **29** 10:56:52.8±1.3, 30.°7S±0.°1×75.°88E±0.°10, h10km±1km, mb4.5/14, Error ellipse: s-maj=19.9km s-min=11.8km az=330.0*

ISC 29 10:56:52.1±0.7, 30.°66S±0.°10×76.°0E±0.°2, h10km, n33, σ0s85/27, mb4.3/14, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AIS	**Amsterdam Isla**	**7.24**	**170**	Pn	**Pn**	**10 58 37.1**	**-0.9**
H08S2	**Diego Garcia H**	**23.12**	**351**	T	T	11 25 48.4	
	baz=173,slow=76,SNR=153						
H08S1	**Diego Garcia H**	**23.13**	**351**	T	T	11 25 48.6	
	baz=173,slow=76,SNR=88						
H08S3	**Diego Garcia H**	**23.14**	**351**	T	T	11 25 49.8	
	baz=173,slow=76,SNR=201						
H01W2	**Cape Leeuwin H**	**32.24**	**108**	T	T	11 37 14.3	
	baz=266,slow=74,SNR=13						
H01W3	**Cape Leeuwin H**	**32.25**	**108**	T	T	11 37 15.2	
	baz=266,slow=74,SNR=11						
H01W1	**Cape Leeuwin H**	**32.26**	**108**	T	T	11 37 16.3	
	baz=266,slow=74,SNR=15						
MORW	**Morawa**	**34.67**	**98**	P	**P**	**11 03 43.1**	**+1.1**
PSA00	**Pilbara Seismi**	**40.22**	**88**	P	**P**	**11 04 29.7**	**+0.5**
PSA00				IAmb	IAmb	11 04 32.3	
	comp=Z,9.9nm,1.1s						
CASY	**Casey**	**41.32**	**160**	P	**P**	**11 04 38.2**	**+0.6**
FORT	**Forrest**	**44.45**	**104**	P	**P**	**11 05 04.4**	**+0.9**
SBUM	**Sibu**	**47.73**	**53**	P	**P**	**11 05 29.4**	**0.0**
SBUM				IAmb	IAmb	11 05 30.6	
	comp=Z,2.3nm,0.6s						
ASAR	**Alice Springs**	**51.55**	**97**	P	**P**	**11 05 57.6**	**-1.0**
	comp=Z,1.3nm,0.7s,baz=254,slow=6.5,SNR=14						
	comp=Z,1.3nm,0.7s						
ASAR	**Alice Springs**	**51.55**	**97**	P	**P**	**11 05 59.0**	**+0.4**
AS31	**Alice Springs**	**51.55**	**97**	P	**P**	**11 05 58.4**	**-0.3**
WRA	**Warramunga Arr**	**53.34**	**93**	P	**P**	**11 06 10.8**	**-1.1**
WB2	**Warramunga Arr**	**53.35**	**93**	P	**P**	**11 06 11.3**	**-0.7**
WB2				IAmb	IAmb	11 06 16.0	
	comp=Z,6.7nm,1.1s						
WRAB	**Tennant Creek**	**53.35**	**93**	P	**P**	**11 06 12.5**	**+0.5**
WRAB				IAmb	IAmb	11 06 26.7	
	comp=Z,5.9nm,0.8s						
WB0	**Warramunga Arr**	**53.46**	**93**	P	**P**	**11 06 12.2**	**-0.5**
WR0	**Warramunga Arr**	**53.51**	**93**	P	**P**	**11 06 13.4**	**+0.3**
WR0				IAmb	IAmb	11 06 18.0	
	comp=Z,9.4nm,1.2s						
CMAR	**Chiang Mai Arr**	**53.61**	**27**	P	**P**	**11 06 12.8

SBLS	**San Blas**	**0.61**	**16**	*eP*		**Pn**	**11 06 25.9**	**+0.1**
SNJE	**San Jose**	**0.64**	**17**	*eP*		**Pn**	**11 06 26.4**	**+0.1**
SNJE	**San Jose**	**0.64**	**17**	*eP*		**Pn**	**11 06 26.4**	**+0.1**
NUBE	**Las Nubes**	**0.65**	**1‖**	*eP*		**Pn**	**11 06 26.3**	**0.0**
NUBE	**Las Nubes**	**0.65**	**1‖**	*eP*		**Pn**	**11 06 26.3**	**0.0**
ITCA	**Escuela Especi**	**0.65**	**50**	*eP*		**Pn**	**11 06 26.2**	**-0.1**
ITCA	**Escuela Especi**	**0.65**	**50**	*eP*		**Pn**	**11 06 26.2**	**-0.1**
PMON	**Piamonte**	**0.65**	**46**	*eP*		**Pn**	**11 06 26.4**	**0.0**
PMON	**Piamonte**	**0.65**	**46**	*eP*		**Pn**	**11 06 26.4**	**0.0**
CEDA	**San Andres**	**0.67**	**35**	*eP*		**Pn**	**11 06 26.6**	**+0.1**
CEDA				*eS*		**Sn**	**11 06 38.0**	**+1.5**
CEDA				IAML			11 06 46.1	
	comp=Z,4µm,0.5s							
CEDA	**San Andres**	**0.67**	**35**	*eP*		**Pn**	**11 06 26.6**	**+0.1**
CEDA				*eS*		**Sn**	**11 06 38.0**	**+1.5**
CEDA				IAML			11 06 46.1	
	comp=Z,4µm,0.5s							
CEDA	**San Andres**	**0.67**	**35**	*eP*		**Pn**	**11 06 26.7**	**+0.2**
BOQS	**Boqueron**	**0.69**	**46**	*eP*		**Pn**	**11 06 27.1**	**+0.1**
BOQS	**Boqueron**	**0.69**	**46**	*eP*		**Pn**	**11 06 27.1**	**+0.1**
SNET	**Serv Nac Est T**	**0.70**	**52**			**Pn**	**11 06 26.7**	**-0.2**
SNET	**Serv Nac Est T**	**0.70**	**52**	*eP*		**Pn**	**11 06 26.8**	**-0.2**
SNET	**Serv Nac Est T**	**0.70**	**52**	*eP*		**Pn**	**11 06 26.8**	**-0.2**
SNET	**Serv Nac Est T**	**0.70**	**52**	*eP*		**Pn**	**11 06 26.8**	**-0.2**
SNET				*eS*		**Sn**	**11 06 37.7**	**+0.4**
UEES	**Universidad Ev**	**0.71**	**50**	*eP*		**Pn**	**11 06 27.1**	**0.0**
UEES	**Universidad Ev**	**0.71**	**50**	*eP*		**Pn**	**11 06 27.1**	**0.0**
LOAL	**Lomas de Alarc**	**0.74**	**1**	*eP*		**Pn**	**11 06 28.1**	**+0.6**
LOAL	**Lomas de Alarc**	**0.74**	**1**	*eP*		**Pn**	**11 06 28.1**	**+0.6**
SLOZ	**Alcaldia de Sa**	**0.77**	**1**	*eP*		**Pn**	**11 06 28.1**	**+0.3**
AEIL	**Aeropuerto Ilo**	**0.79**	**56**	*eP*		**Pn**	**11 06 28.5**	**+0.2**
AEIL	**Aeropuerto Ilo**	**0.79**	**56**	*eP*		**Pn**	**11 06 28.5**	**+0.2**
LFU	**La Fuente**	**0.83**	**53**	*eP*		**Pn**	**11 06 29.0**	**+0.3**
LFU	**La Fuente**	**0.83**	**53**	*eP*		**Pn**	**11 06 29.0**	**+0.3**
SJTE	**Alcalda de S**	**0.85**	**65**	*eP*		**Pn**	**11 06 28.6**	**-0.4**
SJTE	**Alcalda de S**	**0.85**	**65**	*eP*		**Pn**	**11 06 28.6**	**-0.4**
LBRS	**Las Brisas**	**0.88**	**57**	*eP*		**Pn**	**11 06 29.7**	**+0.3**
LBRS	**Las Brisas**	**0.88**	**57**	*eP*		**Pn**	**11 06 29.7**	**+0.3**
PAVA	**Las Pavas**	**0.95**	**61**	*eP*		**Pn**	**11 06 30.6**	**+0.1**
PAVA	**Las Pavas**	**0.95**	**61**	*eP*		**Pn**	**11 06 30.6**	**+0.1**
PAVA	**Las Pavas**	**0.95**	**61**	*eP*		**Pn**	**11 06 30.8**	**+0.3**
COEG	**Centro de Oper**	**0.96**	**68**	*eP*		**Pn**	**11 06 30.4**	**-0.1**
COEG				*eS*		**Sn**	**11 06 44.1**	**+0.3**
COEG				IAML			11 06 48.9	
	comp=Z,4µm,0.4s							
COEG	**Centro de Oper**	**0.96**	**68**	*eP*		**Pn**	**11 06 30.4**	**-0.1**
COEG				*eS*		**Sn**	**11 06 44.1**	**+0.3**
COEG				IAML			11 06 48.9	
	comp=Z,4µm,0.4s							
COEG	**Centro de Oper**	**0.96**	**68**	*eP*		**Pn**	**11 06 30.5**	**-0.1**
SNVI	**San Vicente**	**1.00**	**69**	*eP*		**Pn**	**11 06 31.2**	**+0.1**
SNVI	**San Vicente**	**1.00**	**69**	*eP*		**Pn**	**11 06 31.2**	**+0.1**
SCLA	**Alcaldia de Sa**	**1.13**	**67**	*eP*		**Pg**	**11 06 33.3**	**-0.6**
SCLA				*eS*		**Sg**	**11 06 50.1**	**+1.3**
SCLA	**Alcaldia de Sa**	**1.13**	**67**	*eP*		**Pg**	**11 06 33.3**	**-0.6**
SCLA				*eS*		**Sg**	**11 06 50.1**	**+1.3**
MTO3	**Montecristo**	**1.22**	**20**			**Pg**	**11 06 34.9**	**-0.6**
MTO3				Sn		**Sg**	**11 06 51.8**	**+0.2**
MTO3	**Montecristo**	**1.22**	**20**	*eP*		**Pg**	**11 06 34.7**	**-0.9**
MTO3	**Montecristo**	**1.22**	**20**	*eP*		**Pg**	**11 06 34.7**	**-0.9**
MTO3	**Montecristo**	**1.22**	**20**	*eP*		**Pg**	**11 06 35.0**	**-0.6**
MTO3				*eS*		**Sg**	**11 06 52.6**	**+1.1**
LLGN	**La Laguna**	**1.23**	**42**	*eP*		**Pg**	**11 06 34.7**	**-1.0**
LLGN	**La Laguna**	**1.23**	**42**	*eP*		**Pg**	**11 06 34.7**	**-1.0**
COEB	**Comit de Eme**	**1.25**	**79**	*eP*		**Pn**	**11 06 34.2**	**-0.4**
COEB				*eS*		**Sn**	**11 06 50.9**	**-0.1**
COEB	**Comit de Eme**	**1.25**	**79**	*eP*		**Pn**	**11 06 34.2**	**-0.4**
COEB				*eS*		**Sn**	**11 06 50.9**	**-0.1**
COEB	**Comit de Eme**	**1.25**	**79**	*eP*		**Pn**	**11 06 34.2**	**-0.4**
COEB				*eS*		**Sn**	**11 06 51.0**	**-0.1**
PQSS	**Presa 15 de Se**	**1.26**	**73**	*eP*		**Pn**	**11 06 34.5**	**0.0**
PQSS	**Presa 15 de Se**	**1.26**	**73**	*eP*		**Pn**	**11 06 34.5**	**0.0**
ESQI	**Esquipulas**	**1.37**	**19**	Pn		**Pn**	**11 06 33.8**	**-2.4**
PCG	**Pacaya**	**1.38**	**325**	*eP*		**Pn**	**11 06 37.1**	**+0.6**
NBG	**Las Nubes**	**1.43**	**338**	*eP*		**Pg**	**11 06 39.3**	**-0.4**
FUG	**Fuego 3**	**1.56**	**320**	*eP*		**Pn**	**11 06 39.1**	**+0.2**
FUG				*eS*		**Sn**	**11 06 58.8**	**+0.1**
CAHU	**Cacacuatique**	**1.62**	**71**	*eP*		**Pn**	**11 06 39.8**	**0.0**
CAHU	**Cacacuatique**	**1.62**	**71**	*eP*		**Pn**	**11 06 39.8**	**0.0**
MRL	**Marmol**	**1.82**	**3**	*eP*		**Pb**	**11 06 44.5**	**-0.3**
LCND	**La Caada**	**1.86**	**88**	*eP*		**Pn**	**11 06 42.7**	**-0.1**
LCND				IAML			11 07 11.5	
	comp=Z,1µm,0.4s							
LCND	**La Caada**	**1.86**	**88**	*eP*		**Pn**	**11 06 42.7**	**-0.1**
LCND				IAML			11 07 11.5	
	comp=Z,1µm,0.4s							
CNCH	**Conchagua**	**1.91**	**89**	*eP*		**Pn**	**11 06 43.5**	**-0.2**
CNCH				IAML			11 07 13.1	
	comp=Z,2µm,0.4s							
CNCH	**Conchagua**	**1.91**	**89**	*eP*		**Pn**	**11 06 43.5**	**-0.2**
CNCH				IAML			11 07 13.1	
	comp=Z,2µm,0.4s							
CSGN	**Cosiguina Volc**	**2.20**	**97**	*eP*		**Pn**	**11 06 47.0**	**-0.5**
RTAL	**Retalhuleu**	**2.24**	**305**	Pn		**Pn**	**11 06 48.4**	**+0.4**
STG3	**Santiaguito 3,**	**2.25**	**310**	*eP*		**Pn**	**11 06 48.6**	**+0.2**
STG3				*eS*		**Sn**	**11 07 14.8**	**-0.9**
TGUH	**Tegucigalpa,Un**	**2.58**	**72**			**Pn**	**11 06 52.4**	**-0.4**
TGUH	**Tegucigalpa,Un**	**2.58**	**72**	*eP*		**Pn**	**11 06 53.1**	**+0.3**
HUEH	**Huehuetenango**	**2.64**	**321**	Pn		**Pn**	**11 06 53.2**	**-0.5**
CRIN	**San Cristobal**	**2.73**	**101**			**Pn**	**11 06 54.8**	**-0.1**
CNGN	**Cerro Negro**	**3.11**	**104**			**Pn**	**11 07 00.0**	**-0.1**
PETF	**Flores**	**3.64**	**359**	Pn		**Pn**	**11 07 07.0**	**-0.4**
CCIG	**Comitan**	**3.77**	**323**			**Pn**	**11 07 09.4**	**+0.1**
MATN	**Matagalpa**	**3.78**	**94**			**Pn**	**11 07 08.0**	**-1.4**
BOAB	**BOACO BROADBAN**	**4.11**	**101**			**Pn**	**11 07 13.7**	**-0.1**
ACON	**Acoyapa**	**4.69**	**105**	Pn		**Pn**	**11 07 21.4**	**-0.3**
HZTE	**Horizontes, Gu**	**4.82**	**121**	Pn		**Pn**	**11 07 23.5**	**-0.1**
ORTG	**Ortega, Santa**	**5.13**	**124**			**Pn**	**11 07 28.7**	**+0.8**
DUNO	**Dulce Nombre,**	**5.26**	**126**			**Pn**	**11 07 30.4**	**+0.7**
JTS	**Las Juntas de**	**5.58**	**121**			**Pn**	**11 07 34.1**	**0.0**
JACO	**JACO, Garabito**	**6.17**	**125**	Pn		**Pn**	**11 07 41.6**	**-0.6**
RIMA	**Rio Macho**	**6.77**	**120**			**Pn**	**11 07 51.8**	**+1.2**
SRBA	**San Rafael, Bu**	**7.47**	**122**	Pn		**Pn**	**11 08 00.5**	**+0.4**

*IDC **29** 11:07:05.5±0.4,19°.84S×11°.84W,h0ᵏᵐ,mb4.5/31, mbtmp4.5/31,MS4.4/52,Error ellipse: s-maj=13.8km s-min=11.9km az=134.0*
*MOS **29** 11:07:05.7±1.2,19°.84S×11°.91W,h10ᵏᵐ,mb5.2/34,Error ellipse: s-maj=12.0km s-min=7.9km az=56.4*
*NEIC **29** 11:07:08.1±0.9,19°.9S±0°.1×11°.9W±0°.1,h10ᵏᵐ±1ᵏᵐ, mb5.2/100,Error ellipse: s-maj=17.5km s-min=15.7km az=147.0*
*GCMT **29** 11:07:09.1±0.2,19°.77S±0°.02×11°.84W±0°.01,h12ᵏᵐ, MW5.1/131,Moment Tensor Solution. s53,c61; s131,c205; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mᵣᵣ-4.87±.10; Mᵩᵩ0.19±.11; Mᵩᵩ4.67±.09; Mᵣᵩ1.95±.38; Mᵩᵩ-0.93±.09; Mᵣᵣ1.39±.37; Best double couple: M₀5.37400×10¹⁶ NP1:φₛ330.00000°,δ43.00000°, λ-121.00000°. NP2:φₛ189.00000°,δ54.00000°, λ-65.00000°. Principal axes: T 4.9640, Plg6.0000°, Azm261.0000°; N 0.8140, Plg20.0000°, Azm354.0000°; P -5.7840, Plg69.0000°, Azm155.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 11:07:08.2±0.3,19°.85S±0°.06×11°.90W±0°.06,h16ᵏᵐ,n319, σ1s06/280,mb5.1/86,MS4.4/61,11C-2D,Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N1	**ASCENSION HYDR**	**12.19**	**348**	T	T	11 22 42.7	
	baz=171,slow=74						
H10N3	**ASCENSION HYDR**	**12.20**	**348**	T	T	11 22 32.5	
	baz=171,slow=74						
H10N2	**ASCENSION HYDR**	**12.21**	**348**	T	T	11 22 42.3	
	baz=171						
NBAN	**Anadia - AL**	**25.62**	**290**	*eP*	**P**	**11 12 37.0**	**-0.1**
NBLA	**Lagarto - SE**	**26.43**	**286**	*eP*	**P**	**11 12 44.5**	**0.0**
CMC01	**Camacan, BA**	**26.69**	**275**	*eP*	**P**	**11 12 47.1**	**+0.3**
GUA01	**Guaratinga, BA**	**26.69**	**272**	*eP*	**P**	**11 12 47.0**	**+0.1**
NAN01	**Guarapari, ES**	**26.77**	**270**	*eP*	**P**	**11 12 47.8**	**+0.3**
RIB01	**Linhares ES**	**26.84**	**266**	*eP*	**P**	**11 12 48.4**	**+0.3**
GDU01	**Guandu, BA**	**27.17**	**279**	*eP*	**P**	**11 12 51.4**	**+0.3**
RCBR	**Riachuelo**	**27.18**	**298**	LR	LR	11 20 45.7	
	comp=Z,1µm,21.8s,baz=264,slow=30						
RCBR	**Riachuelo**	**27.18**	**298**	*eP*	**P**	**11 12 51.4**	**+0.1**
DBIC	**Dimbokro**	**27.25**	**15**	P	**P**	**11 12 50.4**	**-1.4**
	7.0nm,1.0s,baz=207,slow=12,SNR=2.3						
DBIC				LR	LR	11 20 56.8	
	comp=Z,713nm,20.1s,baz=200,slow=30 7.0nm,1.0s						
DBIC	**Dimbokro**	**27.25**	**15**	P	**P**	**11 12 51.0**	**-0.7**
DBIC				IAmb	IAmb	11 12 56.3	
	comp=Z,48nm,1.3s						
DBIC	**Dimbokro**	**27.25**	**15**	P	**P**	**11 12 51.0**	**-0.7**
DBIC				pmax	pmax		
	comp=Z,48nm,1.3s						
SJMB	**Sao Joao De Ma**	**27.65**	**267**	*eP*	**P**	**11 12 55.8**	**+0.3**
TSUM	**Tsumeb**	**27.78**	**94**	P	**P**	**11 12 55.8**	**-1.0**
	comp=Z,4.2nm,1.0s,baz=271,slow=13,SNR=2.6						
TSUM				LR	LR	11 22 05.9	
	comp=Z,2µm,20.0s,baz=324,slow=32 comp=Z,4.2nm,1.0s						
TSUM	**Tsumeb**	**27.78**	**94**	P	**P**	**11 12 57.4**	**+0.6**
DUB01	**Friburgo-RJ**	**28.52**	**260**	*eP*	**P**	**11 13 03.0**	**-0.3**
VAS01	**Vassouras-RJ**	**29.51**	**260**	*eP*	**P**	**11 13 11.9**	**-0.1**
DIAM	**Diamantina, MG**	**30.05**	**268**	*eP*	**P**	**11 13 16.9**	**0.0**
JANB	**Januaria**	**31.25**	**274**	*eP*	**P**	**11 13 27.8**	**+0.3**
PARB	**Paraibuna**	**31.51**	**258**	*eP*	**P**	**11 13 29.8**	**+0.1**
SUR	**Sutherland**	**31.78**	**120**	P	**P**	**11 13 30.7**	**-1.5**
	comp=Z,7.0nm,0.8s,baz=252,slow=8.3,SNR=2.2						
SUR				LR	LR	11 23 30.8	
	comp=Z,877nm,21.1s,baz=286,slow=31 comp=Z,7.0nm,0.8s						
SDBA	**SAO DESIDERIO**	**32.51**	**278**	*eP*	**P**	**11 13 38.6**	**+0.1**
BB19B	**Bebedouro**	**34.29**	**261**	*eP*	**P**	**11 13 54.5**	**+0.4**
IPMB	**Ipameri, GO**	**34.36**	**267**	*eP*	**P**	**11 13 54.6**	**-0.1**
BDFB	**Brasilia**	**34.61**	**271**	P	**P**	**11 13 56.5**	**-0.4**
	comp=Z,5.9nm,0.8s,baz=53,slow=10,SNR=5.2						
BDFB				LR	LR	11 25 46.6	
	comp=Z,1µm,19.4s,baz=130,slow=32 comp=Z,5.9nm,0.8s						
BDFB	**Brasilia**	**34.61**	**271**	P	**P**	**11 13 56.1**	**-0.8**
BDFB	**Brasilia**	**34.61**	**271**	P	**P**	**11 13 56.1**	**-0.8**
BDFB				pmax	pmax		
	comp=Z,18nm,1.2s						
BDFB	**Brasilia**	**34.61**	**271**	*eP*	**P**	**11 13 56.6**	**-0.4**
TIJ01	**Guaruva-PR**	**34.61**	**254**	*eP*	**P**	**11 13 56.6**	**-0.3**
BOSA	**Boshof**	**34.87**	**112**	P	**P**	**11 13 58.7**	**-0.4**
	comp=Z,6.9nm,1.0s,baz=261,slow=11,SNR=4.4						
BOSA				LR	LR	11 25 51.8	
	comp=Z,589nm,20.6s,baz=277,slow=32 comp=Z,6.9nm,1.0s						
BOSA	**Boshof**	**34.87**	**112**	P	**P**	**11 13 59.1**	**0.0**
BOSA	**Boshof**	**34.87**	**112**	P	**P**	**11 13 59.1**	**0.0**
BOSA				pmax	pmax		
	comp=Z,23nm,1.2s						
TER01	**Tubaro-SC**	**34.93**	**248**	*eP*	**P**	**11 13 59.5**	**+0.1**
LBTB	**Lobatse**	**34.96**	**105**	P	**P**	**11 13 59.2**	**-0.6**
	comp=Z,2.8nm,0.6s,baz=50,slow=11,SNR=2.9						
LBTB				LR	LR	11 26 13.5	
	comp=Z,1µm,20.1s,baz=256,slow=33 comp=Z,2.8nm,0.6s						
LBTB	**Lobatse**	**34.96**	**105**	P	**P**	**11 14 00.2**	**+0.3**
LBTB	**Lobatse**	**34.96**	**105**	P	**P**	**11 14 00.2**	**+0.3**
LBTB				pmax	pmax		
	comp=Z,22nm,1.5s						
TOA0	**Torodi Ar. Sit**	**35.41**	**23**	P	**P**	**11 14 03.5**	**-0.2**
TOA0				IAmb	IAmb	11 14 10.9	
	comp=Z,30nm,1.1s						
TORD	**Torodi Ar. Bea**	**35.41**	**23**	P	**P**	**11 14 03.4**	**-0.2**
	comp=Z,11nm,0.8s,baz=203,slow=9.3,SNR=39						
TORD				LR	LR	11 25 43.6	
	comp=Z,864nm,20.4s,baz=198,slow=32 comp=Z,11nm,0.8s						
TORD	**Torodi Ar. Bea**	**35.41**	**23**	P	**P**	**11 14 04.0**	**+0.3**
TORD				IAmb	IAmb	11 14 10.9	
	comp=Z,26nm,1.1s						
ROSB	**Rosrio**	**35.68**	**294**	*eP*	**P**	**11 14 06.2**	**+0.2**
PEXB	**Peixe**	**35.77**	**277**	*eP*	**P**	**11 14 07.1**	**+0.3**
SMTB	**Santa Maria do**	**36.18**	**282**	*eP*	**P**	**11 14 10.3**	**0.0**
CNLB	**Canela**	**36.51**	**247**	*eP*	**P**	**11 14 13.1**	**0.0**
PCMB	**Pacaembu**	**36.79**	**260**	*eP*	**P**	**11 14 15.8**	**+0.2**
PTGB	**Pitanga**	**37.39**	**255**	*eP*	**P**	**11 14 20.1**	**-0.5**
ITAB	**Concordia**	**37.49**	**251**	P	**P**	**11 14 19.5**	**-1.8**
MATP	**Matopo**	**37.87**	**98**	P	**P**	**11 14 23.5**	**-1.3**
	comp=Z,8.5nm,0.9s,baz=261,slow=9.0,SNR=12 comp=Z,8.5nm,0.9s						
LSZ	**Lusaka**	**38.43**	**90**	P	**P**	**11 14 29.8**	**+0.3**
	comp=Z,2.2nm,0.4s,baz=258,slow=5.4,SNR=6.9						
LSZ				LR	LR	11 28 30.2	
	comp=Z,644nm,21.6s,baz=278,slow=34 comp=Z,2.2nm,0.4s						
LSZ	**Lusaka**	**38.43**	**90**	P	**P**	**11 14 29.3**	**-0.2**
LSZ				IAmb	IAmb	11 14 37.4	
	comp=Z,53nm,1.5s						
LSZ	**Lusaka**	**38.43**	**90**	P	**P**	**11 14 29.3**	**-0.2**
LSZ				pmax	pmax		
	comp=Z,53nm,1.5s						
SNDB	**Serra Nova Dou**	**38.61**	**276**	*eP*	**P**	**11 14 31.1**	**+0.1**
CPSB	**Cacapava Do Su**	**38.86**	**246**	*eP*	**P**	**11 14 32.9**	**0.0**
PLTB	**Pedras Altas**	**39.16**	**244**	P	**P**	**11 14 35.9**	**+0.5**
PLTB				IAmb	IAmb	11 14 44.7	
	comp=Z,53nm,1.5s						
PLTB	**Pedras Altas**	**39.16**	**244**	*eP*	**P**	**11 14 36.0**	**+0.7**
HOPE	**Hope Point**	**39.17**	**203**	P	**P**	**11 14 35.1**	**+0.1**
HOPE	**Hope Point**	**39.17**	**203**	P	**P**	**11 14 35.1**	**+0.1**
HOPE				pmax	pmax		
	comp=Z,384nm,2.0s						
PRPB	**Parauapebas**	**39.25**	**285**	*eP*	**P**	**11 14 36.3**	**0.0**
TMAB	**Tom-Au,PA,Br**	**39.39**	**292**	*eP*	**P**	**11 14 37.5**	**0.0**
ITQB	**Itaqui**	**41.56**	**247**	P	**P**	**11 14 55.5**	**+0.3**
ITQB				IAmb	IAmb	11 15 04.4	
	comp=Z,67nm,1.4s						
ITQB	**Itaqui**	**41.56**	**247**	*eP*	**P**	**11 14 55.5**	**+0.3**
SALV	**Santo Antonio**	**41.78**	**268**	*eP*	**P**	**11 14 56.9**	**-0.3**
CPUP	**Villa Florida**	**42.12**	**252**	P	**P**	**11 15 00.8**	**+0.9**
	comp=Z,4.7nm,0.8s,baz=75,slow=6.6,SNR=8.8						
CPUP				LR	LR	11 30 40.7	
	comp=Z,613nm,18.6s,baz=80,slow=34 comp=Z,4.7nm,0.8s						
CPUP	**Villa Florida**	**42.12**	**252**	P	**P**	**11 15 00.1**	**+0.2**
CPUP	**Villa Florida**	**42.12**	**252**	P	**P**	**11 15 00.1**	**+0.2**
CPUP				pmax	pmax		
	comp=Z,34nm,1.4s						
CPUP	**Villa Florida**	**42.12**	**252**	*eP*	**P**	**11 15 00.5**	**+0.6**
CLDB	**Colider**	**43.15**	**275**	*eP*	**P**	**11 15 08.4**	**0.0**
PDRB	**Porto dos Gac**	**43.81**	**274**	*eP*	**P**	**11 15 13.9**	**+0.1**
MCPB	**Macapa, AP**	**43.82**	**291**	*eP*	**P**	**11 15 14.0**	**+0.2**
NPGB	**Novo Progresso**	**44.00**	**281**	*eP*	**P**	**11 15 15.6**	**+0.3**
MALB	**Monte Alegre**	**45.09**	**288**	*eP*	**P**	**11 15 24.2**	**+0.3**
PTLB	**Pontes e Lacer**	**45.12**	**268**	*eP*	**P**	**11 15 25.2**	**+1.1**
ITTB	**Itaituba**	**45.36**	**284**	*eP*	**P**	**11 15 26.3**	**+0.1**
TAM	**Tamanrasset**	**45.67**	**23**	P	**P**	**11 15 28.6**	**+0.2**
TAM	**Tamanrasset**	**45.67**	**23**	P	**P**	**11 15 28.7**	**+0.2**
TAM				pmax	pmax		
	comp=Z,16nm,1.0s						
MBAR	**Mbarara**	**45.90**	**71**	LR	LR	11 31 55.3	
	comp=Z,282nm,21.1s,baz=234,slow=32						
MBAR	**Mbarara**	**45.90**	**71**	P	**P**	**11 15 31.1**	**+0.6**
MBAR				IAmb	IAmb	11 15 40.9	
	comp=Z,31nm,1.2s						
MBAR	**Mbarara**	**45.90**	**71**	*eP*	**P**	**11 15 32.0**	**+1.4**
MBAR				pmax	pmax		
	comp=Z,25nm,1.3s						
VBST	**Vila Bela da S**	**46.15**	**269**	*eP*	**P**	**11 15 34.2**	**+1.8**
VILB	**Vilhena**	**46.72**	**271**	*eP*	**P**	**11 15 36.9**	**+0.1**
SIV	**San Ignacio**	**46.82**	**266**	P	**P**	**11 15 39.3**	**+1.7**
	comp=Z,2.7nm,0.7s,baz=90,slow=10.0,SNR=7.5						
SIV				PcP	**PcP**	**11 17 10.1**	**-0.7**
	comp=Z,1.5nm,0.7s,baz=109,slow=8.7,SNR=3.8						
SIV				LR	LR	11 33 00.3	
	comp=Z,1µm,20.4s,baz=110,slow=33 comp=Z,2.7nm,0.7s						
TRQA	**Tornquist**	**46.84**	**236**	P	**P**	**11 15 37.7**	**+0.2**
TRQA	**Tornquist**	**46.84**	**236**	P	**P**	**11 15 37.7**	**+0.2**
TRQA				pmax	pmax		
	comp=Z,55nm,1.3s						
MDP	**Montagnes des**	**47.11**	**297**	LR	LR	11 33 07.3	
	comp=Z,209nm,20.7s,baz=124,slow=33						
EFI	**East Falkland**	**47.93**	**217**	*i* P	**P**	**11 15 45.5**	**-0.2**
VNA1	**Neumayer--Stat**	**50.85**	**178**	P	**P**	**11 16 08.3**	**+0.6**
VNA2	**Neumayer--Watz**	**51.15**	**178**	P	**P**	**11 16 10.1**	**+0.1**
VNA3	**Neumayer Olymp**	**51.42**	**179**	P	**P**	**11 16 11.5**	**-0.5**
KMBO	**Kilima Mbogo**	**51.53**	**75**	P	**P**	**11 16 14.8**	**+0.9**
	comp=Z,5.4nm,0.9s,baz=242,slow=7.6,SNR=4.5						
KMBO				LR	LR	11 36 25.4	
	comp=Z,682nm,19.4s,baz=260,slow=34 comp=Z,5.4nm,0.9s						
KMBO	**Kilima Mbogo**	**51.53**	**75**	P	**P**	**11 16 12.2**	**-1.7**
KMBO	**Kilima Mbogo**	**51.53**	**75**	P	**P**	**11 16 12.3**	**-1.7**
KMBO				pmax	pmax		
	comp=Z,19nm,1.2s						
LODK	**Lodwar**	**51.85**	**69**	P	**P**	**11 16 16.3**	**+0.1**
SNAA	**Sanae**	**52.10**	**176**	P	**P**	**11 16 17.2**	**-0.1**
SNAA	**Sanae**	**52.10**	**176**	PcP	**PcP**	**11 17 29.3**	**+0.3**
SNAA	**Sanae**	**52.10**	**176**	P	**P**	**11 16 17.3**	**+0.1**
	comp=Z,8.6nm,1.0s,baz=346,slow=7.6,SNR=20						
SNAA				LR	LR	11 33 47.7	
	comp=Z,96nm,19.0s,baz=327,slow=31 comp=Z,8.6nm,1.0s						
SNAA	**Sanae**	**52.10**	**176**	P	**P**	**11 16 17.1**	**-0.1**
SNAA				IAmb	IAmb	11 16 24.8	
	comp=Z,40nm,1.5s						
SNAA	**Sanae**	**52.10**	**176**	P	**P**	**11 16 17.1**	**-0.1**
SNAA				pmax	pmax		
	comp=Z,40nm,1.5s						
AC02	**Maricunga**	**52.64**	**251**	P	**P**	**11 16 21.1**	**-1.4**
AC02				IAmb	IAmb	11 16 31.3	
	comp=Z,36nm,1.4s						
MDT	**Midelt**	**52.83**	**8**	LR	LR	11 36 23.7	
	comp=Z,368nm,21.2s,baz=189,slow=33						
TROLL	**Troll, Antarti**	**52.84**	**174**	P	**P**	**11 16 22.9**	**+0.2**
TROLL	**Troll, Antarti**	**52.84**	**174**	PcP	**PcP**	**11 17 31.9**	**0.0**
NVL	**N'lazarevskaya**	**52.84**	**170**	*eP*	**P**	**11 16 21.8**	**-0.8**
NVL				pmax	pmax		
	comp=Z,16nm,0.8s						
LVC	**Limon Verde**	**52.94**	**256**	LR	LR	11 37 19.8	
	comp=Z,295nm,21.2s,baz=113,slow=34						
LMEL	**Las Melosas**	**53.22**	**242**	P	**P**	**11 16 26.2**	**0.0**
GO02	**Mina Guanaco**	**53.23**	**253**	P	**P**	**11 16 26.9**	**+0.3**
ETMB	**Extrema**	**53.25**	**272**	*eP*	**P**	**11 16 26.6**	**+0.2**
CO01	**Juntas del Tor**	**53.26**	**247**	P	**P**	**11 16 26.6**	**-0.1**
CO01				IAmb	IAmb	11 16 31.2	
	comp=Z,37nm,1.4s						
LPAZ	**La Paz**	**53.38**	**264**	P	**P**	**11 16 27.9**	**-0.2**
	comp=Z,1.9nm,0.7s,baz=89,slow=3.9,SNR=6.3						
LPAZ				LR	LR	11 38 41.2	
	comp=Z,979nm,18.1s,baz=109,slow=36 comp=Z,1.9nm,0.7s						
LPAZ	**La Paz**	**53.38**	**264**	P	**P**	**11 16 27.8**	**-0.3**
LPAZ	**La Paz**	**53.38**	**264**	P	**P**	**11 16 27.8**	**-0.3**
LPAZ				pmax	pmax		
	comp=Z,14nm,1.3s						
LPAZ	**La Paz**	**53.38**	**264**	*eP*	**P**	**11 16 27.7**	**-0.3**
VA03	**San Esteban**	**53.53**	**243**	P	**P**	**11 16 28.4**	**0.0**
BO04	**La Punta**	**53.56**	**242**	P	**P**	**11 16 28.8**	**+0.2**
BO04				IAmb	IAmb	11 16 36.4	
	comp=Z,51nm,1.6s						
PEL	**Peldehue**	**53.63**	**243**	P	**P**	**11 16 29.0**	**-0.1**
PEL				IAmb	IAmb	11 16 41.8	
	comp=Z,34nm,1.3s						
PEL	**Peldehue**	**53.63**	**243**	P	**P**	**11 16 29.0**	**-0.1**
PEL				pmax	pmax		
	comp=Z,34nm,1.3s						
PLCA	**Paso Flores**	**53.73**	**234**	P	**P

OTAV					lAmb	lAmb	11 18 21.6	
	comp=Z,26nm,1.4s							
OTAV	**Otavalo**	**68.09**	**279**		P	**P**	**11 18 06.9**	**-1.4**
OTAV					pmax	pmax		
	comp=Z,26nm,1.4s							
OTAV	**Otavalo**	**68.09**	**279**	*e*	P	P	11 18 15.4	+7.1
UREC	**San Jos de Ur**	**68.34**	**287**	*e*	P	**P**	**11 18 08.7**	**-0.6**
DAVOX	**Davos/Dischmat**	**69.17**	**16**		P	**P**	**11 18 13.8**	**-0.2**
	comp=Z,0.9nm,0.3s,baz=42,slow=21,SNR=1.4							
DAVOX					LR	LR	11 48 07.8	
	comp=Z,282nm,18.0s,baz=260,slow=36							
	comp=Z,0.9nm,0.3s							
MMAI	**Mount Meron Ar**	**69.31**	**41**		P	**P**	**11 18 15.6**	**+0.6**
	comp=Z,1.3nm,0.3s,baz=231,slow=9.1,SNR=4.6							
	comp=Z,1.3nm,0.3s							
CLUD	**Cludinico**	**69.70**	**18**		P	**P**	**11 18 17.8**	**+0.7**
PRED	**Cave del Predi**	**69.89**	**18**		P	**P**	**11 18 18.8**	**+0.5**
PRED					lAmb	lAmb	11 20 53.7	
	comp=Z,5.3nm,0.4s							
DIVS	**Divibare**	**70.02**	**24**		P	**P**	**11 18 19.5**	**+0.4**
QSPA	**South Pole Qui**	**70.34**	**180**		LR	LR	11 44 24.9	
	comp=Z,243nm,20.8s,baz=204,slow=32							
QSPA	**South Pole Qui**	**70.34**	**180**		P	**P**	**11 18 21.7**	**+0.7**
QSPA					lAmb	lAmb	11 18 29.1	
	comp=Z,25nm,1.2s							
UPD2	**Meteti**	**70.91**	**287**	*e*	P	P	11 18 13.5	-12
GERES	**GERESS Array B**	**72.10**	**17**		P	**P**	**11 18 31.2**	**-0.5**
	comp=Z,0.7nm,0.2s,baz=241,slow=5.5,SNR=4.9							
GERES					LR	LR	11 50 55.0	
	comp=Z,171nm,18.0s,baz=181,slow=36							
	comp=Z,0.7nm,0.2s							
KHC	**Kasperske Hory**	**72.32**	**17**	*i*	P	**P**	**11 18 32.8**	**-0.1**
MODS	**Modra-Piesok**	**72.75**	**20**	*e*	P	**P**	**11 18 35.8**	**+0.3**
MODS					pmax	pmax		
	comp=Z,17nm,1.1s							
MODS	**Modra-Piesok**	**72.75**	**20**	*e*	P	**P**	**11 18 35.8**	**+0.3**
BRTR	**Keskin Array B**	**72.92**	**35**		P	**P**	**11 18 37.0**	**+0.1**
	comp=Z,2.8nm,0.8s,baz=201,slow=6.6,SNR=9.7							
BRTR					LR	LR	11 50 04.1	
	comp=Z,84nm,21.2s,baz=216,slow=35							
	comp=Z,2.8nm,0.8s							
BRTR	**Keskin Array B**	**72.92**	**35**		P	**P**	**11 18 37.2**	**+0.3**
BRTR	**Keskin Array B**	**72.92**	**35**		P	**P**	**11 18 37.2**	**+0.3**
VRAC	**Vranov**	**73.36**	**19**		LR	LR	11 49 54.8	
	comp=Z,336nm,20.5s,baz=222,slow=35							
VYHS	**Vyhne**	**73.37**	**21**	*e*	P	**P**	**11 18 39.3**	**+0.2**
VYHS					pmax	pmax		
	comp=Z,5.0nm,0.8s							
VYHS	**Vyhne**	**73.37**	**21**	*e*	P	**P**	**11 18 39.3**	**+0.2**
MLR	**Muntele Rosu**	**73.56**	**27**		P	**P**	**11 18 40.4**	**-0.1**
	comp=Z,9.5nm,1.0s,baz=193,slow=6.5,SNR=8.2							
MLR					LR	LR	11 51 09.9	
	comp=Z,109nm,19.5s,baz=180,slow=36							
	comp=Z,9.5nm,1.0s							
MLR	**Muntele Rosu**	**73.56**	**27**		P	**P**	**11 18 40.4**	**-0.1**
CLL	**Collm**	**74.15**	**16**	*e*	S	S	11 28 30.0	+14
CLL				*e*	SSS	SSS	11 36 12.0	
CLL					Lm	MLR	11 50 00.0	
	comp=Z,200nm,22.0s							
CLL					Lm	MLR	12 00 00.0	
	comp=Z,100nm,20.2s							
EKA	**Eskdalemuir Ar**	**75.25**	**5**		LR	LR	11 50 53.3	
	comp=Z,142nm,19.6s,baz=194,slow=35							
JTS	**Las Juntas de**	**77.87**	**286**		LR	LR	11 52 06.9	
	comp=Z,394nm,20.8s,baz=170,slow=35							
SOC	**Sochi**	**78.88**	**35**	*e*	P	**P**	**11 19 10.2**	**-0.4**
SOC				*e*			11 22 08.3	
SOC				*e*	PPP	PPP	11 23 57.1	
SOC				*e*	S	**S**	**11 29 10.2**	**+2.0**
SOC				*e*	SS	**SS**	**11 34 14.9**	**+1.0**
SOC				*e*	SSS	SSS	11 37 39.7	
SOC					pmax	pmax		
	comp=Z,35nm,0.9s							
SOC					MLR	MLR		
	comp=Z,57nm,18.0s							
AKASG	**Malin Array Be**	**79.02**	**25**		P	**P**	**11 19 10.2**	**-0.9**
	comp=Z,4.5nm,0.8s,baz=217,slow=4.4,SNR=23							
AKASG					LR	LR	11 55 28.6	
	comp=Z,118nm,18.8s,baz=233,slow=37							
	comp=Z,4.5nm,0.8s							
GNI	**Garni**	**79.63**	**41**		LR	LR	11 52 44.8	
	comp=Z,75nm,21.8s,baz=222,slow=34							
GNI	**Garni**	**79.63**	**41**	*ce*	P	**P**	**11 19 16.7**	**+1.7**
GNI					pmax	pmax		
	comp=Z,10.0nm,1.2s							
SHA1	**Shidzhatmaz**	**80.61**	**37**	*i*	P	**P**	**11 19 21.6**	**+1.3**
KBZ	**Khabaz**	**80.74**	**37**		P	**P**	**11 19 20.0**	**-0.6**
	comp=Z,2.3nm,0.6s,baz=84,slow=4.2,SNR=4.0							
KBZ					LR	LR	11 56 23.4	
	comp=Z,81nm,18.4s,baz=210,slow=37							
	comp=Z,2.3nm,0.6s							
KBZ	**Khabaz**	**80.74**	**37**	*ce*	P	**P**	**11 19 22.6**	**+1.9**
KBZ					pmax	pmax		
	comp=Z,8.0nm,1.3s							
KIV	**Kislovodsk**	**80.76**	**37**	⇓*e*	P	**P**	**11 19 22.5**	**+1.5**
KIV				*e*			11 19 28.0	
KIV					PPP	PPP	11 24 16.0	
KIV				*e*	S	**S**	**11 29 35.9**	**+7.6**
KIV				*e*			11 30 34.8	
KIV					SS	**SS**	**11 34 38.0**	**-4.4**
KIV				*e*	SSS	SSS	11 38 10.4	
KIV					pmax	pmax		
	comp=Z,13nm,1.2s							
KIV					MLR	MLR		
	comp=Z,64nm,18.0s							
WSAR	**Wadi Sarin**	**81.02**	**61**		LR	LR	11 55 07.9	
	comp=Z,637nm,19.2s,baz=254,slow=36							
KONO	**Kongsberg**	**81.14**	**11**	*i*	P	**P**	**11 19 23.8**	**+1.4**
HFS	**Hagfors**	**82.37**	**13**		P	**P**	**11 19 28.4**	**-0.6**
	comp=Z,1.5nm,0.6s,baz=197,slow=9.0,SNR=3.8							
HFS					LR	LR	11 57 16.3	
	comp=Z,150nm,19.4s,baz=204,slow=37							
	comp=Z,1.5nm,0.6s							
SBA	**Scott Base**	**82.50**	**180**		P	**P**	**11 19 30.4**	**+0.8**
SBA	**Scott Base**	**82.50**	**180**		P	**P**	**11 19 30.4**	**+0.8**
SBA					pmax	pmax		
	comp=Z,74nm,1.9s							
NOA	**NORSAR Array B**	**82.73**	**11**		P	**P**	**11 19 31.1**	**+0.2**
	comp=Z,1.3nm,0.9s,baz=204,slow=4.9,SNR=3.8							
	comp=Z,1.3nm,0.9s							
VNDA	**Vanda**	**82.77**	**179**		P	**P**	**11 19 31.5**	**+0.5**
	comp=Z,4.1nm,0.9s,baz=223,slow=5.6,SNR=22							
	comp=Z,4.1nm,0.9s							
VNDA	**Vanda**	**82.77**	**179**		P	**P**	**11 19 31.4**	**+0.5**
VNDA	**Vanda**	**82.77**	**179**		P	**P**	**11 19 31.4**	**+0.5**
VNDA					pmax	pmax		
	comp=Z,9.0nm,1.0s							
HRV	**Adam Dziewonsk**	**82.85**	**320**		P	**P**	**11 19 32.3**	**+0.4**
HRV					lAmb	lAmb	11 19 39.8	
	comp=Z,24nm,0.9s							
HRV	**Adam Dziewonsk**	**82.85**	**320**		P	**P**	**11 19 32.3**	**+0.4**
HRV					pmax	pmax		
	comp=Z,24nm,0.9s							
UCCT	**U. Connecticut**	**82.86**	**319**		P	**P**	**11 19 32.2**	**+0.3**
F64A	**Sherman**	**82.99**	**324**		P	**P**	**11 19 32.3**	**-0.2**
F64A					lAmb	lAmb	11 19 40.2	
	comp=Z,17nm,1.1s							
QUA2	**Belchertown**	**83.21**	**319**		P	**P**	**11 19 34.0**	**+0.3**
QUA2					lAmb	lAmb	11 19 35.5	
	comp=Z,23nm,1.1s							
VSR	**Storozhevoye**	**83.70**	**29**	*e*	P	**P**	**11 19 35.4**	**-0.6**
VSR					pmax	pmax		
	comp=Z,20nm,1.2s							
WUPA	**West Chester U**	**83.98**	**316**		P	**P**	**11 19 38.0**	**+0.2**
CASY	**Casey**	**84.01**	**160**		P	**P**	**11 19 37.8**	**+0.3**
VORR	**Voronezh**	**84.03**	**29**	*e*	P	**P**	**11 19 35.0**	**-2.7**
VORR					pmax	pmax		
	comp=Z,50nm,0.4s							
E62A	**Clayton Lake**	**84.09**	**324**		P	**P**	**11 19 38.3**	**+0.1**
D62A	**Allapoint, All**	**84.11**	**325**		P	**P**	**11 19 38.5**	**+0.3**
D62A					lAmb	lAmb	11 19 52.5	
	comp=Z,26nm,1.2s							
LPSR	**Galich'ya Gora**	**84.54**	**28**	*e*	P	**P**	**11 19 39.7**	**-0.5**
LPSR					pmax	pmax		
	comp=Z,10.0nm,1.0s							
BORG	**Borgarnes**	**84.64**	**356**		LR	LR	11 49 04.6	
	comp=Z,99nm,20.3s,baz=198,slow=30							
L59A	**Walton**	**84.83**	**318**		P	**P**	**11 19 42.4**	**+0.3**
L59A					lAmb	lAmb	11 19 44.0	
	comp=Z,21nm,1.1s							
VRH	**Novokhopyorsk**	**84.90**	**31**	*e*	P	**P**	**11 19 39.5**	**-2.6**
VRH					pmax	pmax		
	comp=Z,5.0nm,0.9s							
N58A	**Sunbury**	**85.18**	**316**		lAmb	lAmb	11 19 51.6	
	comp=Z,13nm,1.1s							
J59A	**Piesco**	**85.18**	**320**		P	**P**	**11 19 43.4**	**-0.4**

OBN	**Obninsk**	**85.28**	**26**	⇑*e*	P	**P**	**11 19 46.1**	**+2.2**
OBN				*e*			11 19 48.2	
OBN					SSS	SSS	11 39 21.0	
OBN					pmax	pmax		
	comp=Z,6.0nm,1.1s							
OBN					MLR	MLR		
	comp=Z,119nm,19.0s							
SSPA	**Standing Stone**	**85.84**	**316**		P	**P**	**11 19 46.9**	**-0.2**
SSPA					lAmb	lAmb	11 19 48.6	
	comp=Z,18nm,1.2s							
Q56A	**Snyder Ridge,**	**85.91**	**314**		P	**P**	**11 19 47.8**	**+0.3**
MOS	**Moscow**	**86.14**	**26**	*e*	P	**P**	**11 19 45.9**	**-2.3**
MOS				*e*			11 30 16.6	
LATQ	**La Tuque**	**86.35**	**323**		P	**P**	**11 19 49.3**	**-0.1**
LATQ					lAmb	lAmb	11 19 57.4	
	comp=Z,29nm,1.4s							
L56A	**Greenwood**	**86.39**	**317**		P	**P**	**11 19 50.0**	**+0.2**
FINES	**FINESS Array B**	**86.53**	**17**		P	**P**	**11 19 49.8**	**-0.2**
	comp=Z,2.0nm,0.9s,baz=147,slow=4.5,SNR=7.0							
	comp=Z,2.0nm,0.9s							
FINES	**FINESS Array B**	**86.53**	**17**		P	**P**	**11 19 49.6**	**-0.3**
TRQ	**Mont Tremblant**	**86.72**	**322**		P	**P**	**11 19 51.7**	**+0.4**
TRQ					lAmb	lAmb	11 19 58.5	
	comp=Z,13nm,0.9s							
MMNY	**Mt. Morris Dam**	**86.91**	**318**		P	**P**	**11 19 52.7**	**+0.4**
MMNY					lAmb	lAmb	11 19 55.6	
	comp=Z,31nm,1.5s							
GEYT	**Alibeck**	**87.26**	**48**		LR	LR	11 58 04.7	
	comp=Z,261nm,20.2s,baz=260,slow=35							
O54A	**Avella**	**87.27**	**314**		P	**P**	**11 19 54.5**	**+0.3**
RPN	**Rapa Nui**	**87.45**	**242**		LR	LR	11 54 11.0	
	comp=Z,114nm,21.2s,baz=124,slow=32							
250A	**Grady**	**87.84**	**305**		P	**P**	**11 19 57.8**	**+0.8**
BELG	**Belogornoye**	**88.52**	**32**		P	**P**	**11 19 58.5**	**-1.2**
	comp=Z,17nm,1.0s,baz=78,slow=1.9,SNR=8.1							
BELG					LR	LR	12 00 57.6	
	comp=Z,45nm,18.4s,baz=188,slow=36							
	comp=Z,17nm,1.0s							
BELG	**Belogornoye**	**88.52**	**32**	*i*	P	**P**	**11 19 59.6**	**-0.1**
BELG					pmax	pmax		
	comp=Z,4.0nm,1.0s							
SADO	**Sadowa**	**88.71**	**319**		P	**P**	**11 20 00.8**	**-0.1**
SWET	**Sewanee**	**88.95**	**308**		P	**P**	**11 20 02.6**	**+0.3**
SWET					lAmb	lAmb	11 20 09.8	
	comp=Z,12nm,1.1s							
VLDQ	**Val d'Or**	**89.39**	**322**		lAmb	lAmb	11 20 12.6	
	comp=Z,14nm,1.3s							
X48A	**Hartselle**	**89.46**	**307**		lAmb	lAmb	11 20 13.1	
	comp=Z,30nm,1.4s							
CLTN	**Cedars of Leba**	**89.62**	**309**		lAmb	lAmb	11 20 13.6	
	comp=Z,32nm,1.7s							
V48A	**Smith Brothers**	**89.83**	**308**		P	**P**	**11 20 06.7**	**+0.3**
KLMR	**Klimovskoe**	**90.40**	**22**	*e*	P	**P**	**11 20 06.5**	**-1.8**
KLMR				*e*			11 23 38.9	
KLMR					pmax	pmax		
	comp=Z,12nm,1.2s							
KLMR	**Klimovskoe**	**90.40**	**22**	*e*	P	**P**	**11 20 06.6**	**-1.8**
KLMR					AMP		11 20 09.4	
	comp=Z,12nm,1.2s							
KLMR				*e*	PP	**PP**	**11 23 39.0**	**-4.1**
WVT	**Waverly**	**90.74**	**308**		P	**P**	**11 20 10.7**	**+0.1**
WVT					lAmb	lAmb	11 20 18.5	
	comp=Z,15nm,1.4s							
WVT	**Waverly**	**90.74**	**308**		P	**P**	**11 20 10.7**	**+0.1**
WVT					pmax	pmax		
	comp=Z,15nm,1.4s							
KIRV	**Kirov**	**92.92**	**27**		LR	LR	12 04 34.3	
	comp=Z,71nm,18.3s,baz=212,slow=37							
AKTO	**Aktyubinsk**	**93.02**	**37**		P	**P**	**11 20 20.3**	**-0.5**
	comp=Z,1.8nm,0.9s,baz=249,slow=3.7,SNR=5.0							
AKTO					LR	LR	12 04 13.1	
	comp=Z,80nm,20.9s,baz=216,slow=37							
	comp=Z,1.8nm,0.9s							
LCAR	**Lake Charles**	**93.19**	**307**		P	**P**	**11 20 21.4**	**-0.5**
ABKAR	**Akbulak array**	**93.60**	**39**		P	**P**	**11 20 23.5**	**0.0**
FCAR	**Ozark Folk Cen**	**93.85**	**307**		P	**P**	**11 20 24.9**	**-0.1**
FCAR					lAmb	lAmb	11 20 32.3	
	comp=Z,12nm,1.5s							
CCM	**Cathedral Cave**	**94.00**	**309**		P	**P**	**11 20 25.2**	**-0.4**
CCM					lAmb	lAmb	11 20 33.2	
	comp=Z,10nm,1.1s							
CCM	**Cathedral Cave**	**94.00**	**309**		P	**P**	**11 20 25.2**	**-0.4**
CCM					pmax	pmax		
	comp=Z,10.0nm,1.1s							
HKT	**Hockley**	**94.66**	**300**	*i*	P	**P**	**11 20 30.2**	**+1.5**
HKT					pmax	pmax		
	comp=Z,10.0nm,1.4s							
R40A	**Maddies Statio**	**94.84**	**309**		P	**P**	**11 20 29.0**	**-0.4**
R40A					lAmb	lAmb	11 20 37.5	
	comp=Z,19nm,1.5s							
PALK	**Pallekele**	**94.87**	**84**		LR	LR	11 57 31.3	
	comp=Z,441nm,21.7s,baz=8.2,slow=32							
SPITS	**Spitsbergen Ar**	**99.17**	**6**		LR	LR	12 04 32.5	
	comp=Z,97nm,20.3s,baz=196,slow=35							
WMQ	**Urumqi**	**110.27**	**50**	*e*	P	**PKiKP**	**11 25 40.3**	**+0.7**
WMQ					LR	LR		
	comp=Z,110nm,23.1s							
CMAR	**Chiang Mai Arr**	**115.09**	**78**		PKP	**PKPdf**	**11 25 48.9**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=286,slow=3.0,SNR=5.5							
PZH	**PanZhiHua**	**119.21**	**70**		PKP	**PKiKP**	**11 25 58.3**	**+0.9**
TBI	**Tubuai**	**120.36**	**226**	*e*	LR	LR	12 02 42.3	
	comp=Z,146nm,36.2s							
TAOE	**Nuku Hiva Isla**	**121.62**	**246**	*e*	LR	LR	12 03 21.1	
	comp=Z,85nm,27.2s							
STKA	**Stephens Creek**	**122.64**	**153**		PKP	**PKPdf**	**11 26 03.0**	**-0.6**
	comp=Z,3.3nm,1.0s,baz=214,slow=7.3,SNR=2.9							
SONM	**Songino Array**	**123.37**	**45**		PKP	**PKPdf**	**11 26 04.5**	**-0.1**
	comp=Z,1.9nm,0.9s,baz=240,slow=3.3,SNR=11							
SONM	**Songino Array**	**123.37**	**45**		PKPdf	**PKPdf**	**11 26 04.3**	**-0.3**
ULN	**Ulaanbaatar**	**123.81**	**45**	*c i*	PKiKP	**PKPdf**	**11 26 05.6**	**+0.1**
ULN					pmax	pmax		
	comp=Z,4.0nm,1.3s							
PPT2	**Papeete2**	**124.23**	**231**	*e*	LR	LR	12 04 30.4	
	comp=Z,159nm,23.0s							
BCAR	**Beaver Creek A**	**125.12**	**335**			**PKPdf**	**11 26 07.2**	**-0.2**
ASAR	**Alice Springs**	**125.39**	**141**		PKP	**PKPdf**	**11 26 08.2**	**-1.0**
	comp=Z,2.2nm,0.8s,baz=194,slow=1.7,SNR=21							
ASAR	**Alice Springs**	**125.39**	**141**			**PKPdf**	**11 26 08.4**	**-0.8**
ASAR	**Alice Springs**	**125.39**	**141**		PKIKP	**PKPdf**	**11 26 08.5**	**-0.8**
XAN	**Xi'an**	**126.05**	**62**	⇑	PKP	**PKPdf**	**11 26 09.8**	**-0.3**
ILAR	**Eielson Array**	**126.17**	**338**		PKP	**PKPdf**	**11 26 08.8**	**-0.5**
	comp=Z,1.1nm,0.8s,baz=339,slow=1.0,SNR=12							
MLY	**Manley**	**127.33**	**339**		PKPdf	**PKPdf**	**11 26 11.3**	**-0.3**
HHC	**Hu-ho-hao-te**	**127.86**	**53**	*e*	P	**PKPdf**	**11 26 10.3**	**-3.1**
HHC					LR	LR		
	comp=N,210nm,16.5s							
HHC					LR	LR		
	comp=E,280nm,17.8s							
HHC					LR	LR		
	comp=Z,350nm,17.8s							
WRA	**Warramunga Arr**	**128.45**	**138**		PKP	**PKPdf**	**11 26 14.2**	**-0.9**
	comp=Z,3.3nm,1.1s,baz=240,slow=2.1,SNR=9.9							
J20K	**Nowinta River**	**129.00**	**340**		PKPdf	**PKPdf**	**11 26 14.8**	**+0.1**
HNS	**HongShan**	**130.63**	**57**	*e*	PKP	**PKiKP**	**11 26 21.3**	**+1.8**
BILL	**Bilibino**	**131.81**	**1**	⇓ *i*	PKIKP	**PKiKP**	**11 26 20.8**	**-0.2**
BILL							11 28 43.0	
BILL					SS	SS	11 46 43.0	+29
BILL					pmax	pmax		
	comp=Z,9.0nm,1.5s							
NJ2	**Nanjing**	**134.43**	**64**	*e*	P	**PKiKP**	**11 26 27.0**	**-0.4**
NJ2					pmax	pmax		
	comp=Z,10.0nm,0.5s							
KLR	**Kul'dur**	**138.75**	**36**	*c i*	PKIKP	**PKPdf**	**11 26 32.6**	**-0.9**
KLR				*i*			11 26 33.9	
KSRS	**Korea Array**	**140.96**	**55**		PKhKP	PKPpre	11 26 29.6	
	comp=Z,1.3nm,0.8s,baz=276,slow=4.3,SNR=5.8							
PMG	**Port Moresby**	**144.36**	**143**	*c i*	PKIKP	**PKPdf**	**11 26 44.5**	**-0.1**
PMG					pmax	pmax		
	comp=Z,41nm,1.3s							
JHS	**Saijyo**	**145.68**	**57**		PKPdf	**PKPdf**	**11 26 45.5**	**-0.7**
PEA0B	**Petropavlovsk-**	**145.84**	**11**		PKPdf	**PKPdf**	**11 26 45.8**	**-0.1**
PEA0B	**Petropavlovsk-**	**145.84**	**11**	*c i*	PKP2	**PKPab**	**11 26 46.9**	**0.0**
PETK	**Petropavlovsk-**	**145.84**	**11**		PKPbc	**PKPdf**	**11 26 45.7**	**-0.3**
	comp=Z,16nm,1.0s,baz=72,slow=4.8,SNR=16							
PETK	**Petropavlovsk-**	**145.84**	**11**		PKPdf	**PKPdf**	**11 26 45.5**	**-0.4**
YSS	**Yuzh-Sakhalins**	**145.96**	**32**			**PKPab**	**11 26 47.4**	**-0.1**
YSS	**Yuzh-Sakhalins**	**145.96**	**32**	*e*	PKP2	**PKPbc**	**11 26 47.1**	**+0.1**
YSS					pmax	pmax		
	comp=Z,60nm,1.1s							
PET	**Petropavlovsk**	**146.09**	**10**	*c i*	PKP2	**PKPab**	**11 26 48.4**	**+0.6**
PET					pmax	pmax		
	comp=Z,72nm,1.7s							
ASAJ	**Asahikawa**	**147.79**	**36**		PKP2	**PKPbc**	**11 26 52.8**	**+0.4**
JKA	**Kamikawa-asahi**	**147.79**	**36**			**PKPbc**	**11 26 52.8**	**+0.4**
JEW	**Eniwo**	**147.94**	**38**			**PKPbc**	**11 26 53.3**	**+0.5**

JSD	**Sado**	**148.41**	**49**			**PKPbc**	**11 26 54.2**	**0.0**
JSD					PKPab	**PKPab**	**11 26 57.6**	**+0.2**
MAJO	**Matsushiro**	**149.01**	**51**			**PKPbc**	**11 26 55.9**	**0.0**
MAJO	**Matsushiro**	**149.01**	**51**		PKP2	**PKPbc**	**11 26 55.9**	**0.0**
MJAR	**Matsushiro Arr**	**149.02**	**51**		PKPbc	**PKPbc**	**11 26 55.3**	**-0.6**
	comp=Z,7.0nm,0.9s,baz=297,slow=2.7,SNR=17							
MJAR	**Matsushiro Arr**	**149.02**	**51**		PKPdf	**PKPdf**	**11 26 51.5**	**-0.3**
MJAR					PKPbc	**pPKPdf**	**11 26 56.2**	**0.0**
MJAR	**Matsushiro Arr**	**149.02**	**51**		PKIKP	**PKPdf**	**11 26 51.5**	**-0.3**
MJAR					PKP	**pPKPdf**	**11 26 56.2**	**0.0**
ERM	**Erimo**	**149.44**	**38**	*c i*	PKP2	**PKiKP**	**11 26 58.8**	**+1.0**
ERM					pmax	pmax		
	comp=Z,40nm,1.7s							

IDC 29 11:11:27.2±1.6, 15°.14S×167°.54E, h0km, mb3.7/3, mbtmp3.7/4, ML4.9/1, Error ellipse: s-maj=65.2km s-min=29.5km az=164.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**10.41**	**106**	Pn	Pn	11 13 57.3	-0.6
	0.3nm,0.3s,baz=248,slow=16,SNR=1.7						
	1.5nm,0.4s						
WRA	**Warramunga Arr**	**31.98**	**257**	P	P	11 17 54.2	-1.1
	0.7nm,1.0s,baz=90,slow=6.3,SNR=2.6						
	0.7nm,1.0s						
ASAR	**Alice Springs**	**32.77**	**250**	P	P	11 18 02.8	+0.5
	0.9nm,0.6s,baz=74,slow=9.5,SNR=18						
	0.9nm,0.6s						
ILAR	**Eielson Array**	**86.83**	**18**	P	P	11 24 13.5	+0.3
	0.5nm,0.8s,baz=224,slow=6.1,SNR=4.8						
	0.5nm,0.8s						

*IDC **29** 11:17:35.0±0.4, 19°.88S×11°.81W, h0km, mb4.4/23, mbtmp4.4/23, MS4.4/22, Error ellipse: s-maj=14.7km s-min=12.2km az=153.0*

*NEIC **29** 11:17:37.5±1.2, 19°.87S±0°.10×11°.82W±0°.08, h10km±1km, mb5.1/63, Error ellipse: s-maj=18.0km s-min=11.0km az=154.0*

*GCMT **29** 11:17:38.5±0.2, 20°.04S±0°.03×11°.67W±0°.02, h14km±1km, MW5.1/117, Moment Tensor Solution. s22,c24; s117,c181; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.56±.28; $M_{\theta\theta}$0.97±.16; $M_{\phi\phi}$3.59±.18; $M_{r\theta}$-2.77±.48; $M_{\theta\phi}$-1.16±.09; $M_{\phi r}$-1.75±.35; Best double couple: M_o5.12500×10^{16} NP1:ϕ_s140.00000°, δ44.00000°, λ-127.00000°. NP2:ϕ_s6.00000°, δ56.00000°, λ-59.00000°. Principal axes: T 4.1040, Plg6.0000°, Azm75.0000°; N 2.0410, Plg25.0000°, Azm168.0000°; P -6.1460, Plg64.0000°, Azm332.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 11:17:37.3±0.3, 19°.85S±0°.07×11°.79W±0°.07, h16km, n133, σ1§06/125, mb5.0/45, MS4.3/24, 1C, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N1	**ASCENSION HYDR**	**12.22**	**347**	T	T	11 33 01.7	
	baz=162						
H10N3	**ASCENSION HYDR**	**12.22**	**347**	T	T	11 33 06.7	
	baz=162						
H10N2	**ASCENSION HYDR**	**12.23**	**347**	T	T	11 33 05.8	
	baz=162						
DBIC	**Dimbokro**	**27.22**	**15**	P	**P**	**11 23 22.0**	**+1.3**
	12nm,1.1s,baz=239,slow=9.4,SNR=4.0						
DBIC				LR	LR	11 31 25.4	
	comp=Z,598nm,20.5s,baz=197,slow=30						
	12nm,1.1s						
DBIC	**Dimbokro**	**27.22**	**15**	P	**P**	**11 23 21.1**	**+0.4**
RCBR	**Riachuelo**	**27.27**	**298**	LR	LR	11 31 15.5	
	comp=Z,847nm,21.8s,baz=276,slow=30						
RCBR	**Riachuelo**	**27.27**	**298**	P	**P**	**11 23 21.2**	**0.0**
RCBR				lAmb	lAmb	11 23 50.4	
	comp=Z,62nm,1.4s						
TSUM	**Tsumeb**	**27.68**	**94**	LR	LR	11 32 34.4	
	comp=Z,1μm,20.1s,baz=324,slow=32						
TSUM	**Tsumeb**	**27.68**	**94**	P	**P**	**11 23 25.1**	**+0.1**
SUR	**Sutherland**	**31.69**	**120**	LR	LR	11 33 59.7	
	comp=Z,653nm,20.6s,baz=287,slow=31						
SUR	**Sutherland**	**31.69**	**120**	P	**P**	**11 24 01.1**	**+0.6

ZON Zonda 52.06 245 P P 11 26 46.2 -0.5
SNAA Sanae 52.09 176 P P 11 26 46.4 +0.1
SNAA Sanae 52.09 176 P P 11 26 46.6 +0.3
comp=Z,5.4nm,0.9s,baz=340,slow=8.1,SNR=16
comp=Z,5.4nm,0.9s
SNAA Sanae 52.09 176 P P 11 26 46.4 +0.1
AC02 Maricunga 52.74 251 P P 11 26 52.4 +0.1
AC02 IAmb IAmb 11 27 00.2
comp=Z,24nm,1.3s
MDT Midelt 52.82 8 LR LR 11 48 00.8
comp=Z,252nm,18.4s,baz=179,slow=34
TROLL Troll, Antarti 52.82 174 P P 11 26 52.2 +0.4
CO01 Juntas del Tor 53.35 247 P P 11 26 56.4 -0.1
CO01 IAmb IAmb 11 27 04.2
comp=Z,20nm,1.1s
LPAZ La Paz 53.48 264 P P 11 26 57.2 -0.8
comp=Z,2.0nm,0.8s,baz=78,slow=4.6,SNR=7.2
LPAZ LR LR 11 49 01.9
comp=Z,864nm,18.2s,baz=114,slow=35
comp=Z,2.0nm,0.8s
LPAZ La Paz 53.48 264 P P 11 26 57.0 -1.0
MT05 Renca 53.76 243 P P 11 26 59.3 0.0
PLCA Paso Flores 53.81 234 P P 11 26 59.0 -0.6
comp=Z,3.2nm,0.9s,baz=13,slow=1.8,SNR=3.4
PLCA LR LR 11 46 24.2
comp=Z,150nm,20.5s,baz=74,slow=32
comp=Z,3.2nm,0.9s
PLCA Paso Flores 53.81 234 P P 11 26 59.2 -0.3
PLCA IAmb IAmb 11 27 14.4
comp=Z,54nm,1.9s
MT09 Talagante 53.97 242 P P 11 26 59.8 -1.1
MT09 IAmb IAmb 11 27 06.6
comp=Z,26nm,1.2s
BO01 Tunca 54.04 241 P P 11 27 00.8 -0.4
CO02 Combarbal 54.06 245 P P 11 27 01.4 -0.1
CO02 IAmb IAmb 11 27 04.1
comp=Z,28nm,1.1s
PB16 IPOC Station P 54.33 261 P P 11 27 04.1 -0.1
PB16 IAmb IAmb 11 28 15.7
comp=Z,24nm,1.5s
VOI Vohitsoka 54.49 103 P P 11 27 03.3 -1.5
VOI IAmb IAmb 11 27 08.1
comp=Z,28nm,1.4s
DSPA Despedida 54.58 217 P P 11 27 04.5 -0.3
USHA Ushuaia 54.92 216 LR LR 11 50 41.3
comp=Z,145nm,18.0s,baz=70,slow=36
OPO Ambohidratompo 55.46 99 LR LR 11 47 40.9
comp=Z,213nm,21.7s,baz=348,slow=33
MG03 Isla Dawson 55.81 218 P P 11 27 14.6 +1.0
GO09 Cerro Castillo 56.40 221 P P 11 27 18.4 +0.4
PMSA Palmer Station 56.50 204 LR LR 11 47 08.9
comp=Z,223nm,18.9s,baz=69,slow=31
MG05 Puerto Natales 56.58 221 P P 11 27 19.6 +0.5
KEST Kesra 58.80 20 P P 11 27 37.1 +2.1
comp=Z,10nm,1.2s,baz=167,slow=5.1,SNR=11
comp=Z,10nm,1.2s
KEST Kesra 58.80 20 P P 11 27 35.9 +0.9
BELA Belgrano 2 59.12 185 P P 11 27 37.0 +0.4
ESDC Sonseca Array 59.66 7 P P 11 27 41.4 +0.5
comp=Z,2.5nm,0.9s,baz=186,slow=6.9,SNR=13
comp=Z,2.5nm,0.9s
ESDC Sonseca Array 59.66 7 P P 11 27 41.6 +0.7
SDV Santo Domingo 64.57 291 P P 11 28 15.4 +0.9
MAW Mawson 65.97 156 P P 11 28 22.9 +0.4
comp=Z,4.3nm,0.8s,baz=294,slow=8.3,SNR=10
MAW LR LR 11 51 52.9
comp=Z,181nm,21.7s,baz=344,slow=31
comp=Z,4.3nm,0.8s
ROSC El Rosal 66.15 285 P P 11 28 25.9 +0.9
comp=Z,7.4nm,0.4s,baz=182,slow=2.9,SNR=6.1
comp=Z,7.4nm,0.4s
OSSC Osservatorio P 66.52 18 P P 11 28 26.8 +0.5
OSSC IAmb IAmb 11 28 27.9
comp=Z,28nm,1.5s
ZARC Zaragoza, Cauc 67.73 287 P P 11 28 33.8 -0.8
ZARC IAmb IAmb 11 28 34.5
comp=Z,11nm,1.0s
CTI Castel Tesino 68.94 17 P P 11 28 42.4 +0.7
CTI IAmb IAmb 11 28 44.7
comp=Z,22nm,1.6s
STAL STALIGIAL 69.44 18 P P 11 28 45.4 +0.8
STAL IAmb IAmb 11 29 16.3
comp=Z,18nm,1.6s
QSPA South Pole Qui 70.34 180 P P 11 28 51.2 +1.0
QSPA IAmb IAmb 11 28 51.8
comp=Z,14nm,1.1s
RAYN Ar Rayn 70.56 55 P P 11 28 53.2 +1.2
RAYN IAmb IAmb 11 28 55.5
comp=Z,28nm,1.8s
GERES GERESS Array B 72.07 17 P P 11 29 00.4 -0.3
comp=Z,0.4nm,0.2s,baz=167,slow=6.6,SNR=5.4
comp=Z,0.4nm,0.2s
MODS Modra-Piesok 72.72 20 eP P 11 29 05.1 +0.6
BRTR Keskin Array B 72.87 35 P P 11 29 07.2 +1.5
comp=Z,2.1nm,0.8s,baz=217,slow=7.8,SNR=7.8
comp=Z,2.1nm,0.8s
BRTR Keskin Array B 72.87 35 P P 11 29 06.7 +1.0
PSZ Piszkesteto 73.20 22 P P 11 29 07.9 +0.5
VYHS Vyhne 73.34 21 eP P 11 29 08.5 +0.4
MLR Muntele Rosu 73.52 27 P P 11 29 09.5 +0.1
AKASG Malin Array Be 78.98 25 P P 11 29 39.0 -1.1
comp=Z,4.3nm,0.9s,baz=222,slow=3.9,SNR=18
comp=Z,4.3nm,0.9s
WSAR Wadi Sarin 80.93 61 P P 11 29 52.1 +0.8
comp=Z,18nm,1.2s,baz=234,slow=6.2,SNR=4.2
comp=Z,18nm,1.2s
SBA Scott Base 82.50 180 P P 11 30 00.5 +1.8
NOA NORSAR Array B 82.72 11 P P 11 30 00.4 +0.5
comp=Z,1.5nm,1.1s,baz=199,slow=5.5,SNR=4.2
comp=Z,1.5nm,1.1s
VNDA Vanda 82.76 179 P P 11 30 00.8 +0.7
comp=Z,2.6nm,0.8s,baz=214,slow=5.2,SNR=19
comp=Z,2.6nm,0.8s
VNDA Vanda 82.76 179 P P 11 30 00.8 +0.7
VNDA IAmb IAmb 11 30 24.8
comp=Z,19nm,1.9s
HRV Adam Dziewonsk 82.92 320 P P 11 30 02.6 +1.2
CASY Casey 83.97 160 P P 11 30 07.7 +1.2
CASY IAmb IAmb 11 30 08.5
comp=Z,21nm,1.3s
D62A Allapoint, All 84.18 325 P P 11 30 07.8 +0.1
D62A IAmb IAmb 11 30 08.6
comp=Z,15nm,0.9s
L59A Walton 84.90 318 P P 11 30 12.7 +1.1
L56A Greenwood 86.46 317 P P 11 30 19.9 +0.5
L56A IAmb IAmb 11 30 20.8
comp=Z,19nm,1.1s
TRQ Mont Tremblant 86.78 322 P P 11 30 20.9 +0.1
TRQ IAmb IAmb 11 30 21.6
comp=Z,10nm,0.9s
V48A Smith Brothers 89.91 308 P P 11 30 36.5 +0.6
V48A IAmb IAmb 11 30 37.3
comp=Z,24nm,1.4s
CCM Cathedral Cave 94.08 309 P P 11 30 55.7 +0.6
CCM IAmb IAmb 11 30 56.4
comp=Z,17nm,1.4s
TXAR Lajitas Array 101.04 297 P Pdif 11 31 26.4 -0.5
comp=Z,0.4nm,0.8s,baz=110,slow=6.8,SNR=5.8
WMQ Urumqi 110.19 50 eP PKiKP 11 36 10.0 +1.4
WMQ LR LR
comp=Z,150nm,19.7s
NVAR Mina Array Bea 114.78 304 PKP PKiKP 11 36 19.4 +1.7
comp=Z,0.1nm,0.3s,baz=132,slow=38,SNR=1.8
CMAR Chiang Mai Arr 115.00 78 PKP PKiKP 11 36 18.3 -0.1
comp=Z,0.5nm,0.3s,baz=238,slow=3.1,SNR=1.6
GTA Gaotai 118.81 55 eP PKPdf 11 36 19.5 -5.8
GTA sP pPKPdf 11 36 26.8 -3.1
GTA pmax pmax
comp=Z,4.0nm,1.5s
PZH PanZhiHua 119.12 70 PKP PKiKP 11 36 25.0 -1.3
SONM Songino Array 123.30 45 PKP PKiKP 11 36 33.6 -0.3
comp=Z,1.6nm,0.8s,baz=230,slow=3.0,SNR=9.7
ASAR Alice Springs 125.32 141 PKP PKiKP 11 36 37.6 -1.0
comp=Z,1.7nm,0.8s,baz=191,slow=1.3,SNR=12
XAN Xi'an 125.97 62 ⇑PKP PKiKP 11 36 39.3 -0.2
ILAR Eielson Array 126.21 338 PKP PKiKP 11 36 38.2 -0.8
comp=Z,1.0nm,0.9s,baz=351,slow=0.3,SNR=9.3
ILAR Eielson Array 126.21 338 PKiKP 11 36 39.0 -0.1
H21K Melozitna Rive 127.62 341 PKiKP 11 36 41.4 -0.4
IMAR Indian Mountai 127.69 341 PKiKP 11 36 41.0 -1.0
HHC Hu-ho-hao-te 127.77 53 eP PKPdf 11 36 38.8 -3.6
HHC LR LR
comp=N,220nm,15.9s
HHC LR LR
comp=E,280nm,17.8s
HHC LR LR
comp=Z,360nm,18.4s
WRA Warramunga Arr 128.38 138 PKP PKiKP 11 36 43.4 -1.4
comp=Z,0.7nm,0.9s,baz=44,slow=25,SNR=16
J20K Nowinta River 129.04 340 PKPdf PKiKP 11 36 44.8 +0.1
SEY Seymchan 135.60 10 PKP PKiKP 11 36 57.6 -0.3
comp=Z,1.5nm,0.8s,baz=106,slow=1.8,SNR=4.7
KSRS Korea Array 140.88 55 PKhKP PKPpre 11 37 01.6
comp=Z,0.4nm,0.3s,baz=269,slow=3.4,SNR=3.0
JNU Nakatsue 144.26 61 PKP PKPdf 11 37 11.3 -1.8
comp=Z,2.6nm,0.3s,baz=54,slow=11,SNR=5.1
PMG Port Moresby 144.29 143 PKP PKPdf 11 37 12.4 -1.3
comp=Z,34nm,0.9s,baz=274,slow=3.9,SNR=4.7
PMG Port Moresby 144.29 143 PKPdf 11 37 11.9 -1.7
JHS Saijyo 145.59 57 PKPdf PKPab 11 37 14.3 -1.5
PEA0B Petropavlovsk- 145.82 11 PKPab 11 37 15.3 -0.7
PETK Petropavlovsk- 145.82 11 PKPbc PKPab 11 37 15.4 -0.6
comp=Z,9.1nm,0.9s,baz=93,slow=3.3,SNR=14
PETK Petropavlovsk- 145.82 11 PKPdf PKPab 11 37 14.7 -1.3
YSS Yuzh-Sakhalins 145.91 32 PKPdf PKPab 11 37 16.2 -0.2
JKA Kamikawa-asahi 147.73 36 PKPdf PKPbc 11 37 19.2 -2.2
JKA PKPbc PKPab 11 37 22.0 -1.7
INU Inuyama 148.50 54 PKiKP 11 37 24.6 -0.7
JGF Kuroka 148.67 53 PKiKP 11 37 24.9 -0.7
MJB9 Matsu-Tunnel 148.93 51 PKPdf 11 37 20.2 -0.6
MJB9 PKPbc PKiKP 11 37 25.1 -1.1
MAJO Matsushiro 148.94 51 PKPdf 11 37 20.0 -0.8
MAJO PKPbc PKiKP 11 37 25.0 -1.2
MJAR Matsushiro Arr 148.94 51 PKPbc PKiKP 11 37 24.4 -1.7
comp=Z,7.5nm,1.0s,baz=295,slow=3.2,SNR=17
MJAR Matsushiro Arr 148.94 51 PKPdf PKPdf 11 37 20.5 -0.4
MJAR **sPKPdf 11 37 25.4 -1.6**
JMM Marumori 150.19 47 PKPdf PKPdf 11 37 22.9 +0.1
JMM **sPKPdf 11 37 28.1 -0.9**

TAP 29 11:21:38.1, 23.°18N × 120.°86E, h2km, ML1.1, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
STYH	**Taoyuan**	**0.08**	**266**	*i* P		Pg	11 21 40.2	+0.5
STYH	baz=267			*e*S		Sg	11 21 41.4	+0.6
STYT	**Tauyuan**	**0.10**	**262**	*i* P		Pg	11 21 40.6	+0.6
STYT	baz=261			*e*S		Sg	11 21 42.0	+0.7
ELDTW	**Lidau**	**0.15**	**85**	P		Pg	11 21 42.1	+1.1
ELDTW	baz=85			*i* S		Sg	11 21 44.5	+1.5
WTP	**Ta-pu**	**0.24**	**287**	P		Pg	11 21 43.9	+1.2
WTP	baz=288			*i* S		Sg	11 21 47.8	+2.0
TPUB	**Ta-pu**	**0.24**	**300**	P		Pg	11 21 44.2	+1.3
TPUB	baz=310			S		Sg	11 21 48.1	+2.1
SGST	**Jiashian**	**0.27**	**250**	P		Pg	11 21 44.0	+0.6
SGST	baz=244			S		Sb	11 21 49.0	-1.8
CHN4	**Tsaushan**	**0.30**	**306**	P		Pb	11 21 45.4	-0.8
CHN4	baz=319			*i* S		Sb	11 21 50.4	-1.2
CHN1	**Nanshi**	**0.30**	**272**	P		Pb	11 21 45.4	-0.9
CHN1	baz=272			*i* S		Sb	11 21 50.6	-1.1
YUS	**Yu-Shan**	**0.32**	**15**	*i* P		Pg	11 21 45.5	+1.0
YUS	baz=28			S		Sb	11 21 51.0	-1.7
ALS	**Alishan**	**0.34**	**352**	*e*P		Pg	11 21 44.9	+0.2
ALS	baz=352			S		Sb	11 21 51.6	-1.4
TWK	**Hsinying**	**0.35**	**285**	P		Pb	11 21 46.4	-0.8
TWK	baz=285			S		Sb	11 21 52.3	-0.9
FULB	**Fuli**	**0.40**	**87**	*e*P		Pb	11 21 47.6	-0.3
FULB	baz=76			*e*S		Sb	11 21 53.8	-0.8
TWF1	**Yuli**	**0.44**	**66**	P		Pg	11 21 47.5	+0.9
TWF1	baz=66			*e*S		Sg	11 21 53.1	+0.8
EYUL	**Yuli**	**0.46**	**68**	P		Pb	11 21 48.0	-0.9
YULB	**Yu-li**	**0.46**	**62**	*e*P		Pg	11 21 47.5	+0.6
YULB	baz=61			*e*S		Sg	11 21 53.0	+0.1
	baz=61							

JMA 29 11:22:37.8±0.1, **24.°N**±2.°, **122.°9E**±0.°4, **h45**km±2km,
MV1.9/7, NW OFF ISHIGAKIJIMA IS, Taiwan region

Code	Station Name	Δ°	AZ°	Op	ID	ISC	Time h m s	Res
JYNG	**Yonagunijimaku**	**0.30**	**4**	P		Pn	11 22 46.2	-0.2
JYNG				S		Sn	11 22 52.3	-0.2
YOJ	**Yonaguni jima**	**0.32**	**15**	P		Pn	11 22 46.6	0.0
YOJ				S		Sn	11 22 52.9	+0.1
IRIF	**Iriomote-Funau**	**0.76**	**76**	P		Pn	11 22 52.1	0.0
IRIF				S		Sn	11 23 02.2	-0.2
HATJ	**Hateruma jima**	**0.81**	**97**	*e*S		Sn	11 23 04.2	+0.4
JKRS	**Kuro-shima**	**0.99**	**85**	P		Pn	11 22 55.5	+0.2
JKRS				*e*S		Sn	11 23 08.7	+0.5
JIJ	**Ishigaki jima**	**1.13**	**79**	P		Pn	11 22 57.5	+0.3
JIJ				*e*S		Sn	11 23 12.0	+0.5

*IDC **29** 11:23:48.5±0.8, 39.°36N × 73.°57E, h0km, mb3.9/16, mbtmp3.9/23, ML3.2/6, MS3.2/8, Error ellipse: s-maj=14.3km s-min=12.0km az=153.0*
*KRNET **29** 11:23:49.6±0.1, 39.°47N × 73.°64E, mb4.5*
*SOME **29** 11:23:49.2, 39.°43N × 73.°68E, h15km*
*NNC **29** 11:23:50.2±1.3, 39.°47N × 73.°71E, h0km, mb4.6, mpv4.2, Error ellipse: s-maj=10.5km s-min=5.7km az=170.0*
*BJI **29** 11:23:51.1±0.0, 39.°33N × 73.°78E, h5km, mb4.1/12, mB4.4/4, ML3.7/5, Ms3.7/6, Ms7 3.4/6*
*NEIC **29** 11:23:52.2±3.0, 39.°52N±0.°07 × 73.°49E±0.°07, h10km±1km, mb4.4/8, Error ellipse: s-maj=11.9km s-min=7.7km az=150.0*

ISC 29 11:23:49.3±1.4, **39.°42N**±0.°04 × **73.°58E**±0.°02, **h1**km±9km,
n132, σ2**s17**/168, **mb4.0**/18, **MS3.3**/4, **34C-16D**,
Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res
OHH	**Osh**	**1.26**	**331**	⇑*e*P			**Pn**	**11 24 12.6**	**-1.5**
OHH	baz=28			⇑*e*S			**Sb**	**11 24 29.3**	**-1.4**
DRK	**Karamyk**	**1.38**	**273**	⇑*e*P			**Pn**	**11 24 15.7**	**-0.2**
DRK	baz=71			⇑*e*S			**Sg**	**11 24 34.9**	**+1.3**
DRK	**Karamyk**	**1.38**	**273**				**Pn**	**11 24 15.1**	**-0.8**
DRK						Sn	**Sg**	**11 24 34.9**	**+1.3**
KSH	**Kashi**	**1.86**	**86**		Pg		Pn	11 24 17.8	-4.6
KSH					Sg		Sn	11 24 38.0	-8.5
KSH	comp=N,1μm,0.8s				smax		smax		
KSH	comp=E,1μm,0.9s				smax		smax		
BTK	**Batken**	**2.22**	**288**				**Pn**	**11 24 28.6**	**+1.3**
GAR	**Garm**	**2.57**	**262**	⇑*e*P			**Pn**	**11 24 33.7**	**+1.6**
GAR	baz=61			⇑*e*S			**Sb**	**11 25 05.6**	**-2.7**
GAR	**Garm**	**2.57**	**262**				**Pn**	**11 24 34.1**	**+2.0**
AML	**Almayashu** SNR=24	**2.71**	**2**	P			**Pn**	**11 24 36.3**	**+1.9**
TRKS	**Terek-Say**	**2.81**	**319**	⇓*i*P			**Pn**	**11 24 35.3**	**-0.2**
TRKS	baz=17			⇓*e*S			**Sn**	**11 25 08.6**	**-1.5**
UCH	**Uchtor** SNR=90	**2.90**	**14**	P			**Pn**	**11 24 38.9**	**+2.0**
UCH	**Uchtor**	**2.90**	**14**	⇑*e*P			**Pn**	**11 24 36.8**	**-0.1**
UCH	baz=13			⇑*e*S			**Sn**	**11 25 11.2**	**-1.4**
EKS2	**Erkin-Say** SNR=16	**3.24**	**3**	P			**Pn**	**11 24 44.2**	**+2.8**
EKS2	**Erkin-Say**	**3.24**	**3**	⇓*e*P			**Pn**	**11 24 41.6**	**+0.2**
EKS2	baz=2.0			⇓*e*S			**Sn**	**11 25 19.6**	**-1.1**
AAK	**Ala-Archa** SNR=22	**3.29**	**12**	P			**Pn**	**11 24 44.9**	**+2.8**
AAK	**Ala-Archa**	**3.29**	**12**	P		Pn	**Pn**	**11 24 45.3**	**+3.2**
AAK	7.2nm,0.3s,baz=193,slow=11,SNR=21					Lg	Lg	11 25 33.1	
AAK	14nm,0.3s,baz=110,slow=18,SNR=8.2 38nm,0.5s **Ala-Archa**	**3.29**	**12**	⇓*i*P			**Pn**	**11 24 42.1**	**0.0**
AAK	baz=11			⇓*e*S			**Sn**	**11 25 20.5**	**-1.4**
AAK	**Ala-Archa**	**3.29**	**12**				**Pn**	**11 24 43.6**	**+1.5**
MRKS	**Merke** 16nm,0.6s	**3.33**	**356**	*e*P			**Pb**	**11 24 51.4**	**+2.1**
MRKS	400nm,0.7s			*e*S			**Sg**	**11 25 36.1**	**-0.3**
MRKS	**Merke** 22nm,0.2s	**3.33**	**356**	Pg			**Pb**	**11 24 49.5**	**+0.3**
MRKS	400nm,0.7s			Lg			Lg	11 25 36.5	
KBK	**Karagaybulak** SNR=5.9	**3.40**	**17**	P			**Pb**	**11 24 47.9**	**-2.5**
KBK	**Karagaybulak**	**3.40**	**17**	⇑*i*P			**Pn**	**11 24 43.6**	**0.0**
KBK	baz=17			⇑*e*S			**Sn**	**11 25 22.8**	**-1.8**
ULHL	**Ulahol** SNR=25	**3.47**	**35**	P			**Pb**	**11 24 52.6**	**+0.9**
ULHL	**Ulahol**	**3.47**	**35**	⇑*e*P			**Pn**	**11 24 44.4**	**-0.3**
ULHL	baz=35			⇑*e*S			**Sn**	**11 25 24.3**	**-2.2**
CHGR	**Chuyangaron** baz=58	**3.52**	**259**	⇓*e*P			**Pn**	**11 24 47.1**	**+1.9**
CHGR	baz=58			⇓*e*S			**Sn**	**11 25 28.8**	**+1.2**
CHGR	**Chuyangaron**	**3.52**	**259**				**Pn**	**11 24 48.3**	**+3.0**
BOOM	**Boomskoye usch**	**3.55**	**29**				**Pn**	**11 24 47.9**	**+2.2**
CHMS	**Chumysh** SNR=5.8	**3.69**	**14**	P			**Pn**	**11 24 50.7**	**+3.3**
CHMS	**Chumysh** baz=13	**3.69**	**14**	⇓*e*P			**Pn**	**11 24 47.5**	**+0.1**
CHMS	baz=13			⇓*e*S			**Sn**	**11 25 29.7**	**-1.8**
CHMS	**Chumysh** 42nm,0.8s	**3.69**	**14**	⇑Pn			**Pn**	**11 24 48.8**	**+1.4**
CHMS	258nm,1.1s			⇓Lg			Lg	11 25 43.5	
TAS	**Tashkent** baz=1.0	**3.78**	**302**	⇓*e*P			**Pn**	**11 24 49.9**	**+1.1**
TAS	baz=1.0			⇓*e*S			**Sn**	**11 25 33.9**	**0.0**
TAS	**Tashkent**	**3.78**	**302**				**Pn**	**11 24 51.0**	**+2.2**
TKM2	**Tokmak 2** SNR=17	**3.82**	**23**	P			**Pn**	**11 24 53.1**	**+3.7**
TKM2	**Tokmak 2** baz=22	**3.82**	**23**	⇑*i*P			**Pn**	**11 24 49.2**	**-0.2**
TKM2	baz=22			⇑*i*S			**Sn**	**11 25 33.0**	**-2.0**
TKM2	**Tokmak 2** 11nm,0.8s	**3.82**	**23**	⇑Pn			**Pn**	**11 24 50.3**	**+0.9**
TKM2	61nm,1.1s			⇑Pg			**Pb**	**11 24 58.9**	**+1.4**
TKM2	177nm,0.9s			⇑Lg			Lg	11 25 47.7	
IUG	**Iuzhnay** 2μm,0.5s	**3.83**	**316**	*e*P			**Pg**	**11 25 01.0**	**-1.7**
IUG	314nm,0.9s			*e*S			**Sg**	**11 25 52.4**	**+0.1**
IUG	**Iuzhnay** 2μm,0.5s	**3.83**	**316**	Pg			**Pb**	**11 24 59.0**	**+1.2**
IUG	314nm,0.9s			Lg			Lg	11 25 52.5	
KDJ	**Kajisay** baz=44	**3.85**	**44**	⇑*e*P			**Pn**	**11 24 49.6**	**-0.2**
KDJ	baz=44			⇑*e*S			**Sn**	**11 25 33.5**	**-2.3**
KDJ	**Kajisay**	**3.85**	**44**				**Pn**	**11 24 53.4**	**+3.6**
DZA	**Taraz** 141nm,0.3s	**3.86**	**335**	*e*P			**Pg**	**11 25 02.4**	**-0.9**
DZA	468nm,0.7s			*e*S			**Sg**	**11 25 55.1**	**+1.8**
DZA	**Taraz** 141nm,0.3s	**3.86**	**335**	Pg			**Pb**	**11 25 00.5**	**+2.3**
DZA	468nm,0.7s			Lg			Lg	11 25 55.1	
USP	**Ospenovka** SNR=9.4	**3.91**	**10**	P			**Pn**	**11 24 53.8**	**+3.4**
USP	**Ospenovka** baz=9.0	**3.91**	**10**	⇑*e*P			**Pn**	**11 24 50.5**	**0.0**
USP	baz=9.0			⇑*e*S			**Sn**	**11 25 35.0**	**-2.0**
TARG	**Taragay, Kyrgy** baz=53	**3.96**	**53**	⇑*e*P			**Pn**	**11 24 51.1**	**-0.5**
TARG	baz=53			⇑*e*S			**Sn**	**11 25 36.1**	**-2.7**
TARG	**Taragay, Kyrgy**	**3.96**	**53**				**Pn**	**11 24 54.2**	**+2.7**
KST	**Kastek** 19nm,0.7s	**4.04**	**26**	*e*P			**Pb**	**11 25 02.7**	**+1.3**
KST	244nm,0.9s			*e*S			**Sb**	**11 25 55.2**	**+4.4**
KST	**Kastek** 11nm,0.3s	**4.04**	**26**	Pg			**Pb**	**11 25 00.6**	**-0.8**
KST	244nm,0.9s			Lg			Lg	11 25 56.3	
CHM	**Chimkent** 9.3nm,0.6s	**4.18**	**315**	*e*P			**Pb**	**11 25 05.8**	**+2.1**
CHM	314nm,0.5s			*e*S			**Sg**	**11 26 00.7**	**-2.8**
MTBS	**Maitube** 19nm,0.6s	**4.29**	**29**	*e*P			**Pb**	**11 25 06.8**	**+1.3**
MTBS	99nm,0.7s			*e*S			**Sb**	**11 26 01.9**	**+4.2**
MTBS	**Maitube** 9.3nm,0.3s	**4.29**	**29**	Pg			**Pb**	**11 25 04.6**	**-0.9**
MTBS	99nm,0.7s			Lg			Lg	11 26 02.5	
KK31	**Karatay Array**	**4.35**	**329**				**Pn**	**11 24 57.8**	**+1.3**
KK31	**Karatay Array** 7.1nm,0.2s,baz=129,slow=12,SNR=247	**4.35**	**329**	⇑Pn			**Pn**	**11 24 58.2**	**+1.7**
KK31	12nm,0.3s,baz=143,slow=13,SNR=18			Pg			**Pb**	**11 25 08.8**	**+2.4**
KK31	64nm,0.6s,baz=134,slow=16,SNR=4.0			⇑Lg			Lg	11 26 07.3	
KKAR	**Karatay Array** baz=28	**4.35**	**329**	⇑*e*P			**Pn**	**11 24 57.3**	**+0.8**
KKAR	baz=28			⇑*e*S			**Sn**	**11 25 46.5**	**-1.3**
KKAR	**Karatay Array**	**4.35**	**329**	Pn			**Pn**	**11 24 57.5**	**+1.0**
TNSS	**Tian-Shan** 28nm,0.5s	**4.42**	**34**	*e*P			**Pb**	**11 25 10.8**	**+2.8**
TNSS	60nm,0.7s			*e*S			**Sg**	**11 26 09.6**	**-1.6**
TNSS	**Tian-Shan**	**4.42**	**34**	Pg			**Pb**	**11 25 09.4**	**+1.5**
TNSS				Lg			Lg	11 26 11.3	
AAA	**Alma-Ata** 18nm,0.3s	**4.54**	**32**	*e*P			**Pb**	**11 25 12.2**	**+2.4**
AAA	216nm,0.9s			*e*S			**Sg**	**11 26 12.1**	**-3.2**
AAA	**Alma-Ata** 42nm,0.2s	**4.54**	**32**	Pg			**Pb**	**11 25 10.5**	**+0.6**
AAA	216nm,0.9s			Lg			Lg	11 26 12.1	
KRBS	**Karabastau** 23nm,0.5s	**4.55**	**20**	*e*P			Pb	11 25 14.6	+4.5
KRBS	100nm,0.8s			*e*S			**Sg**	**11 26 15.6**	**+0.1**
KRBS	**Karabastau** 23nm,0.5s	**4.55**	**20**	Pg			**Pb**	**11 25 12.7**	**+2.7**
KRBS	100nm,0.8s			Lg			Lg	11 26 16.7	
BRLS	**Borolday** 7.0nm,0.5s	**4.58**	**323**	*e*P			**Pb**	**11 25 12.9**	**+2.5**
BRLS	88nm,0.5s			*e*S			**Sg**	**11 26 13.4**	**-3.0**
BRLS	**Borolday** 7.1nm,0.8s	**4.58**	**323**	Pg			**Pb**	**11 25 11.2**	**+0.7**
BRLS				Lg			Lg	11 26 13.4	

88nm,0.5s
PRZ Przheval'sk 4.76 48⇑*e*P Pn 11 25 02.5 +0.1
baz=48
PRZ ⇑*e*S **Sn 11 25 55.5 -2.8**
baz=48
PRZ Przheval'sk 4.76 48 Pn 11 25 05.7 +3.3
KTBS Karatobe 4.88 27 *e*P Pb 11 25 16.9 +1.4
KTBS *e*S **Sb 11 26 20.4 +5.6**
16nm,0.3s
KTBS Karatobe 4.88 27 Pg **Pb 11 25 15.5 0.0**
KTBS Lg Lg 11 26 20.9
16nm,0.3s
KUU Kurty 4.93 24 *e*P Pb 11 25 17.8 +1.4
12nm,0.5s
KUU *e*S **Sb 11 26 21.5 +5.5**
195nm,1.4s
KUU Kurty 4.93 24 Pg **Pb 11 25 16.2 -0.2**
12nm,0.5s
KUU Lg Lg 11 26 21.5
195nm,1.4s
CHKK Chushkaly 5.12 29 *e*P Pb 11 25 21.6 +2.1
9.1nm,0.7s
CHKK *e*S **Sb 11 26 28.4 +6.9**
79nm,0.8s
CHKK Chushkaly 5.12 29 Pg **Pb 11 25 20.1 +0.5**
9.1nm,0.7s
CHKK Lg Lg 11 26 28.4
79nm,0.8s
SATY Saty 5.14 43 *e*P Pb 11 25 22.8 +2.7
30nm,0.7s
SATY *e*S **Sb 11 26 30.3 +7.8**
120nm,0.8s
SATY Saty 5.14 43 Pg **Pb 11 25 22.0 +1.9**
30nm,0.7s
SATY Lg Lg 11 26 30.8
120nm,0.8s
ZHN Zhinishke 5.24 43 *e*P Pb 11 25 25.0 +3.3
15nm,0.4s
ZHN *e*S **Sg 11 26 33.7 -3.8**
104nm,0.8s
ZHN Zhinishke 5.24 43 Pg **Pb 11 25 23.4 +1.7**
15nm,0.4s
ZHN Lg Lg 11 26 33.7
104nm,0.8s
KURS Kuram 5.33 39 *e*P Pb 11 25 26.3 +3.0
26nm,0.7s
KURS *e*S **Sg 11 26 36.5 -4.0**
68nm,1.7s
KURS Kuram 5.33 39 Pg **Pb 11 25 25.3 +2.0**
26nm,0.7s
KURS Lg Lg 11 26 36.5
68nm,1.7s
KPKS Kokpek 5.57 42 *e*P Pb 11 25 31.4 +4.0
23nm,0.7s
KPKS *e*S **Sg 11 26 44.8 -3.5**
97nm,0.6s
KPKS Kokpek 5.57 42 Pg **Pb 11 25 29.8 +2.4**
23nm,0.7s
KPKS Lg Lg 11 26 44.8
97nm,0.6s
BTLS Baital 5.63 3 *e*P Pb 11 25 32.2 +3.9
13nm,0.5s
BTLS *e*S **Sg 11 26 46.6 -3.5**
12nm,0.9s
BTLS Baital 5.63 3 Pg **Pb 11 25 31.6 +3.3**
13nm,0.5s
BTLS Lg Lg 11 26 46.7
12nm,0.9s
ARXS Arharly 5.75 32 *e*P Pb 11 25 33.4 +3.0
17nm,0.6s
ARXS *e*S **Sg 11 26 48.5 -5.3**
52nm,1.2s
ARXS Arharly 5.75 32 Pg **Pb 11 25 31.7 +1.4**
17nm,0.6s
ARXS Lg Lg 11 26 48.5
52nm,1.2s
KBL Kabul 6.07 218 Pn **Pn 11 25 23.9 +3.5**
OTUK Ortayu 8.87 355 ⇑Pn **Pn 11 25 59.4 +0.9**
4.7nm,0.7s
OTUK ⇓Lg Lg 11 28 29.6
76nm,1.0s
MAKZ Makanchi 9.60 37 Pn **Pn 11 26 09.9 +1.4**
MAKZ Makanchi 9.60 37 ⇑Lg Lg 11 28 49.5
26nm,1.6s
MK31 Makanchi Array 9.74 38 Pn 11 26 10.0 -0.4
MK31 Makanchi Array 9.74 38 ⇓Pn **Pn 11 26 12.5 +2.0**
1.7nm,0.6s,baz=224,slow=13,SNR=5.1
MK31 ⇑Lg Lg 11 28 54.4
5.2nm,0.8s,baz=221,slow=26,SNR=4.2
MKAR Makanchi Array 9.74 38 Pn **Pn 11 26 13.1 +2.6**
0.1nm,0.3s,baz=218,slow=12,SNR=6.5
MKAR Lg Lg 11 28 54.8
0.1nm,0.3s,baz=225,slow=26,SNR=2.6
0.9nm,0.7s
MKAR Makanchi Array 9.74 38 Pn 11 26 10.0 -0.4
HRA Herat 10.37 245 Pn **Pn 11 26 20.5 +1.2**
WMQ Urumqi 11.44 63 *e*P Pn 11 26 35.0 +1.1
KURBB Kurchatov Arra 11.73 16 Pn **Pn 11 26 37.9 +0.2**
0.1nm,0.3s,baz=207,slow=12,SNR=2.0
KURBB Lg Lg 11 29 58.5
baz=205,slow=29,SNR=5.7
KURBB LR LR 11 30 31.8
comp=Z,37nm,21.4s,baz=183,slow=34
1.5nm,0.2s
KURK Kurchatov 11.84 16 Pn **Pn 11 26 38.5 -0.7**
GEYT Alibeck 12.18 268 Pn **Pn 11 26 45.0 +1.2**
0.5nm,0.3s,baz=93,slow=18,SNR=2.0
GEYT Sn **Sn 11 29 00.2 -0.1**
0.4nm,0.3s,baz=196,slow=31,SNR=2.0
2.1nm,0.4s
BVAR Borovoye Array 13.79 352 LR LR 11 32 49.6
comp=Z,45nm,19.4s,baz=52,slow=39
AB31 Akbulak array 13.83 320 Pn **Pn 11 27 05.3 -1.1**
2.5nm,0.6s,baz=133,slow=11,SNR=25
AB31 ⇓Sn **Sn 11 29 42.1 +1.5**
4.6nm,0.8s,baz=147,slow=18,SNR=4.2
ABKAR Akbulak array 13.83 320 Pn **Pn 11 27 04.8 -1.6**
AKTO Aktyubinsk 15.54 320 Pn **Pn 11 27 27.8 -1.8**
0.1nm,0.3s,baz=128,slow=15,SNR=7.6
AKTO Lg Lg 11 32 04.3
0.1nm,0.3s,baz=230,slow=20,SNR=1.4
AKTO LR LR 11 34 08.4
comp=Z,105nm,18.9s,baz=148,slow=40
2.4nm,0.7s
AKTO Aktyubinsk 15.54 320 ⇑Pn **Pn 11 27 30.6 +1.1**
14nm,0.9s
ZAA0 Zalesovo Array 16.42 24 Pn 11 27 41.0 +0.2
ZALV Zalesovo Beam 16.42 24 Pn **Pn 11 27 40.3 -0.5**
0.4nm,0.3s,baz=218,slow=10,SNR=5.2
ZALV Lg Lg 11 32 28.3
0.1nm,0.3s,baz=206,slow=34,SNR=1.8
1.2nm,0.5s
ZALV Zalesovo Beam 16.42 24 Pn 11 27 41.4 +0.6
GOMU GeErMu 17.08 94 P **Pn 11 27 50.5 +0.8**
GOMU pmax pmax
comp=Z,2.0nm,0.7s
ARU Arti 19.70 335 P **P 11 28 19.8 0.0**
6.2nm,0.6s,baz=148,slow=5.1,SNR=9.6
ARU LR LR 11 36 29.0
comp=Z,50nm,19.7s,baz=192,slow=38
ARU Arti 19.70 335 P 11 28 19.4 -0.3
ARU IAmb IAmb 11 28 23.0
comp=Z,8.1nm,0.9s
GTA Gaotai 20.25 82 *e*P P 11 28 27.3 +1.2
GTA pP pP 11 28 34.3 +6.5
GTA sP sP 11 28 37.8 +9.2
GTA pmax pmax
comp=Z,7.0nm,0.9s
BELG Belogornoye 22.09 315 P **P 11 28 43.9 -1.7**
comp=Z,21nm,1.2s,baz=226,slow=8.0,SNR=5.5
BELG LR LR 11 37 02.6
comp=Z,58nm,20.3s,baz=126,slow=36
comp=Z,21nm,1.2s
GNI Garni 22.14 281 P **P 11 28 45.6 -0.9**
comp=Z,9.6nm,0.6s,baz=170,slow=22,SNR=4.5
comp=Z,9.6nm,0.6s
GNI Garni 22.14 281 P P 11 28 45.3 -1.2
ONI Oni 22.90 288 P P 11 28 52.7 -1.7
ONI IAmb IAmb 11 28 59.0
comp=Z,16nm,0.8s
KBZ Khabaz 23.28 291 P P 11 28 59.2 +0.9
comp=Z,1.6nm,0.6s,baz=117,slow=9.6,SNR=3.2
comp=Z,1.6nm,0.6s
KIRV Kirov 24.64 329 LR LR 11 39 34.2
comp=Z,114nm,20.1s,baz=94,slow=38
SONM Songino Array 25.05 60 P P 11 29 15.8 +0.7
comp=Z,1.8nm,1.1s,baz=260,slow=8.7,SNR=5.3
SONM LR LR 11 39 47.3
comp=Z,96nm,21.0s,baz=223,slow=38
comp=Z,1.8nm,1.1s
SONM Songino Array 25.05 60 P P 11 29 15.6 +0.5
MARD Mardin 25.73 276 P P 11 29 21.6 +0.3
MARD IAmb IAmb 11 29 48.5
comp=Z,14nm,1.4s
CMAR Chiang Mai Arr 30.30 126 LR LR 11 43 33.9
comp=Z,70nm,18.5s,baz=150,slow=39
BRTR Keskin Array B 30.61 284 P P 11 30 05.8 +0.9
comp=Z,1.6nm,0.8s,baz=117,slow=7.1,SNR=3.6
comp=Z,1.6nm,0.8s
AKASG Malin Array Be 32.83 305 P P 11 30 23.8 -0.3
comp=Z,0.8nm,0.3s,baz=79,slow=7.8,SNR=4.4
comp=Z,0.8nm,0.3s
FINES FINESS Array B 36.28 323 P P 11 30 53.8 -0.1
comp=Z,0.6nm,0.3s,baz=100,slow=8.5,SNR=7.0
comp=Z,0.6nm,0.3s
ARCES ARCESS Array B 39.28 336 P P 11 31 19.0 -0.1
comp=Z,1.9nm,0.9s,baz=111,slow=8.7,SNR=10
comp=Z,1.9nm,0.9s
ARCES ARCESS Array B 39.28 336 P P 11 31 18.7 -0.4
ARCES IAmb IAmb 11 31 20.7
comp=Z,16nm,1.5s
KLR Kul'dur 41.81 57 P P 11 31 40.9 +0.6
comp=Z,0.6nm,0.5s,baz=294,slow=10,SNR=1.7
comp=Z,0.6nm,0.5s
NB2 NORSAR Subarra 43.33 321 P P 11 31 51.8 -0.8
comp=Z,2.2nm,0.8s,baz=91,slow=8.6
NOA NORSAR Array B 43.33 321 P P 11 31 52.1 -0.5
comp=Z,1.4nm,0.7s,baz=91,slow=8.0,SNR=6.8
comp=Z,1.4nm,0.7s
CTI Castel Tesino 44.95 300 P P 11 32 06.0 +0.1
ESDC Sonseca Array 57.92 297 P P 11 33 42.1 -0.9
comp=Z,0.8nm,0.7s,baz=52,slow=6.2,SNR=5.3
comp=Z,0.8nm,0.7s
TORD Torodi Ar. Bea 67.81 269 P P 11 34 48.1 -1.1
comp=Z,0.5nm,0.5s,baz=45,slow=5.8,SNR=2.7
comp=Z,0.5nm,0.5s
ILAR Eielson Array 71.41 17 P P 11 35 09.6 -1.1
comp=Z,0.6nm,0.8s,baz=328,slow=4.6,SNR=8.8
comp=Z,0.6nm,0.8s
ILAR Eielson Array 71.41 17 P P 11 35 09.4 -1.3
YKA Yellowknife Ar 78.22 4 P P 11 35 49.1 -1.0
comp=Z,0.6nm,0.8s,baz=350,slow=5.5,SNR=6.5
comp=Z,0.6nm,0.8s
WRA Warramunga Arr 81.86 124 P P 11 36 09.0 -1.3
comp=Z,1.0nm,0.6s,baz=322,slow=4.8,SNR=9.4
comp=Z,1.0nm,0.6s
ASAR Alice Springs 84.31 127 P P 11 36 21.9 -1.1
comp=Z,0.6nm,0.6s,baz=316,slow=5.1,SNR=16
comp=Z,0.6nm,0.6s

*IDC **29** 11:32:56.0±4.4, 6.75N×73.11W, h167km±33km, mb3.1/2, mbtmp3.7/3, Error ellipse: s-maj=78.7km s-min=35.1km az=87.0*
*RSNC **29** 11:32:56.3±0.9, 6.80N×73.14W, h150km±3km, ML3.7, Mw3.8*
ISC 29 11:32:54.8±0.9, 6.83N±0.04×73.11W±0.04, h157km±6km, n30, σ1°22/57, 4C-3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.24**	**197**	⇓*i*P	**Pn**	**Pn**	**11 33 16.4**	**-0.1**
BARC				*e*S	**Sn**	**Sn**	**11 33 31.6**	**-1.3**
BARC				*i*			11 33 33.0	
	comp=Z,862nm,0.2s							
PAMC	**Pamplona, Colo**	**0.65**	**39**	*e*P	**Pn**	**Pn**	**11 33 19.2**	**+0.7**
PAMC				*e*S	**Sn**	**Sn**	**11 33 36.5**	**0.0**
PAMC				*i*			11 33 39.6	
	comp=Z,497nm,0.5s							
BRRC	**Barranca, Sant**	**0.66**	**295**	⇑*i*P	**Pn**	**Pn**	**11 33 18.2**	**+0.3**
BRRC				*e*S	**Sn**	**Sn**	**11 33 35.3**	**-0.2**
BRRC				*i*			11 33 39.3	
	comp=Z,594nm,0.2s							
RUSC	**La Rusia**	**0.93**	**178**	⇓*i*P	**Pn**	**Pn**	**11 33 20.4**	**0.0**
RUSC				*e*S	**Sn**	**Sn**	**11 33 39.1**	**-0.8**
RUSC				*i*			11 33 40.5	
	comp=Z,333nm,0.2s							
TAMC	**Tame, Arauca**	**1.37**	**106**	⇑*i*P	**Pn**	**Pn**	**11 33 24.8**	**+1.1**
TAMC				*i*			11 33 45.7	
	comp=Z,309nm,0.4s							
TAMC				*e*S	**Sn**	**Sn**	**11 33 46.6**	**+0.8**
PTBC	**PUERTO BERRIO,**	**1.37**	**258**	*e*P	**Pn**	**Pn**	**11 33 22.9**	**-0.8**
PTBC				*e*S	**Sn**	**Sn**	**11 33 44.9**	**-0.8**
PTBC				*i*			11 33 49.4	
	comp=Z,361nm,0.2s							
SPBC	**San Pablo de B**	**1.51**	**219**	*e*P	**Pn**	**Pn**	**11 33 25.2**	**0.0**
SPBC				*e*S	**Sn**	**Sn**	**11 33 47.3**	**-1.2**
SPBC				*i*			11 33 51.6	
	comp=Z,699nm,0.1s							
ZARC	**Zaragoza, Cauc**	**1.86**	**291**	*e*P	**Pn**	**Pn**	**11 33 28.7**	**-0.1**
ZARC				*e*S	**Sn**	**Sn**	**11 33 54.5**	**-0.5**
ZARC				*i*			11 33 59.6	
	comp=Z,526nm,0.3s							
NORC	**Norcasia**	**2.15**	**234**	*e*P	**Pn**	**Pn**	**11 33 32.2**	**-0.1**
NORC				*e*S	**Sn**	**Sn**	**11 34 00.9**	**-0.3**
NORC				*i*			11 34 06.0	
	comp=Z,350nm,0.2s							
CHIC	**Chingaza**	**2.27**	**196**	*e*P	**Pn**	**Pn**	**11 33 34.5**	**+0.5**
CHIC				*e*S	**Sn**	**Sn**	**11 34 04.0**	**-0.2**
CHIC				*i*			11 34 09.0	
	comp=Z,247nm,0.5s							
ROSC	**El Rosal**	**2.31**	**211**	P	**Pn**	**Pn**	**11 33 36.2**	**+1.7**
	comp=Z,169nm,0.4s,baz=123,slow=21,SNR=138							
ROSC				S	**Sn**	**Sn**	**11 34 06.2**	**+1.1**
	comp=Z,888nm,0.4s,baz=204,slow=22,SNR=11							
ROSC	**El Rosal**	**2.31**	**211**	*e*P	**Pn**	**Pn**	**11 33 36.1**	**+1.7**
ROSC				*e*S	**Sn**	**Sn**	**11 34 06.4**	**+1.4**
ROSC				*i*			11 34 11.1	
	comp=Z,849nm,0.4s							
HELC	**Santa Helena**	**2.49**	**255**	*e*P	**Pn**	**Pn**	**11 33 36.9**	**+0.4**
HELC				*e*S	**Sn**	**Sn**	**11 34 09.0**	**+0.4**
HELC				*i*			11 34 16.7	
	comp=Z,228nm,0.3s							
UREC	**San Jos de Ur**	**2.57**	**291**	*e*P	**Pn**	**Pn**	**11 33 36.2**	**-1.1**
UREC				*e*S	**Sn**	**Sn**	**11 34 07.0**	**-3.0**
UREC				*i*			11 34 12.3	
	comp=Z,246nm,0.1s							
GUY2C	**Guyana, Caldas**	**2.75**	**235**	*e*P	**Pn**	**Pn**	**11 33 40.4**	**+0.5**
GUY2C				*e*S	**Sn**	**Sn**	**11 34 15.1**	**+0.5**
GUY2C				*i*			11 34 22.6	
	comp=Z,314nm,0.4s							
VILC	**Villavicencio,**	**2.76**	**192**	*e*P	**Pn**	**Pn**	**11 33 39.5**	**-0.2**
VILC				*e*S	**Sn**	**Sn**	**11 34 14.4**	**+0.1**
PTGC	**Puerto Gaitan,**	**2.79**	**160**	⇓*i*P	**Pn**	**Pn**	**11 33 39.5**	**-0.4**
PTGC				*e*S	**Sn**	**Sn**	**11 34 12.9**	**-1.9**
PTGC				*i*			11 34 17.9	
	comp=Z,136nm,0.3s							
CBOC	**Ciudad Bolivar**	**3.04**	**252**	*e*P	**Pn**	**Pn**	**11 33 44.0**	**+0.9**
CBOC				*e*S	**Sn**	**Sn**	**11 34 22.8**	**+2.2**
CBOC				*i*			11 34 34.0	
	comp=Z,73nm,0.2s							
DBBC	**Dabeiba**	**3.08**	**274**	⇑*i*P	**Pn**	**Pn**	**11 33 43.7**	**+0.1**
DBBC				*e*S	**Sn**	**Sn**	**11 34 20.2**	**-1.2**
DBBC				*i*			11 34 22.8	
	comp=Z,503nm,0.5s							
DBBC				*i*			11 34 23.0	
	comp=Z,509nm,0.5s							
ANIL	**Santa Ana**	**3.25**	**225**	*e*P	**Pn**	**Pn**	**11 33 46.9**	**+0.9**
ANIL				*e*S	**Sn**	**Sn**	**11 34 26.7**	**+1.0**
ANIL				*i*			11 34 30.5	
	comp=Z,542nm,0.4s							
PRAC	**Prado**	**3.56**	**210**	*e*P	**Pn**	**Pn**	**11 33 49.9**	**+0.1**
PRAC				*e*S	**Sn**	**Sn**	**11 34 31.8**	**-0.6**
PRAC				*i*			11 34 38.7	
	comp=Z,282nm,0.4s							
ORTC	**Ortega, Tolima**	**3.59**	**216**	*e*P	**Pn**	**Pn**	**11 33 50.4**	**+0.3**
ORTC				*e*S	**Sn**	**Sn**	**11 34 32.2**	**-0.9**
ORTC				*i*			11 34 37.9	
	comp=Z,167nm,0.2s							
PLMC	**San Jos del P**	**3.69**	**239**	⇑*i*P	**Pn**	**Pn**	**11 33 51.8**	**+0.4**
PLMC				*e*S	**Sn**	**Sn**	**11 34 34.4**	**-0.9**
PLMC				*i*			11 34 40.0	
	comp=Z,49nm,0.2s							
CRJC	**Cerrejon, Guaj**	**4.17**	**3**	*e*P	**Pn**	**Pn**	**11 33 56.8**	**-0.9**
CRJC				*e*S	**Sn**	**Sn**	**11 34 43.6**	**-3.1**
CRJC				*i*			11 34 47.7	
	comp=Z,88nm,0.1s							
GUVC	**San Jose del G**	**4.28**	**174**	*e*P	**Pn**	**Pn**	**11 33 58.8**	**-0.3**
GUVC				*e*S	**Sn**	**Sn**	**11 34 48.5**	**-0.6**
GUVC				*i*			11 34 53.6	
	comp=Z,97nm,0.3s							
MACC	**Macarena, Meta**	**4.71**	**189**	*e*P	**Pn**	**Pn**	**11 34 03.3**	**-1.3**
MACC				*e*S	**Sn**	**Sn**	**11 34 55.9**	**-3.2**
MACC				*i*			11 35 01.3	
	comp=Z,44nm,0.3s							
GARC	**Garzon, Huila**	**5.18**	**207**	*e*P	**Pn**	**Pn**	**11 34 10.6**	**-0.5**
GARC				*e*S	**Sn**	**Sn**	**11 35 07.2**	**-3.5**
GARC				*i*			11 35 14.7	
	comp=Z,65nm,0.2s							
TXAR	**Lajitas Array**	**36.47**	**312**	P	**P**	**P**	**11 39 46.1**	**+1.1**
	comp=Z,0.2nm,0.4s,baz=127,slow=10,SNR=4.9							
	comp=Z,0.2nm,0.4s							
YKA	**Yellowknife Ar**	**63.26**	**340**	P	**P**	**P**	**11 43 06.7**	**+0.3**
	comp=Z,0.7nm,0.5s,baz=132,slow=6.7,SNR=15							
	comp=Z,0.7nm,0.5s							
WRA	**Warramunga Arr**	**150.35**	**241**	PKPbc	**PKPbc**	**PKPbc**	**11 52 28.3**	**-0.2**
	comp=Z,0.2nm,0.7s,baz=103,slow=3.3,SNR=6.6							

*IDC **29** 11:45:22.2±1.3, 39.09N×106.59E, h0km, mb3.7/6, mbtmp3.6/8, ML3.3/2, Error ellipse: s-maj=51.7km s-min=21.1km az=94.0*
ISC 29 11:45:27.3±1.0, 39.1N±0.1×106.6E±0.2, h35km, n8, σ0°40/8, mb3.5/6, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**8.74**	**359**		Pn	**Pn**	**11 47 31.1**	**-0.1**
	0.3nm,0.3s,baz=184,slow=15,SNR=7.4							
	1.4nm,0.7s							
KSRS	**Korea Array**	**16.82**	**89**		Pn	**Pn**	**11 49 19.9**	**-0.1**
	0.1nm,0.3s,baz=283,slow=11,SNR=1.4							
	0.4nm,0.4s							
CMAR	**Chiang Mai Arr**	**21.61**	**200**	P	**P**	**P**	**11 50 14.2**	**-0.1**
	0.8nm,0.4s,baz=10,slow=12,SNR=5.7							
	0.8nm,0.4s							
ILAR	**Eielson Array**	**61.79**	**28**	P	**P**	**P**	**11 55 42.4**	**+0.3**
	0.3nm,0.8s,baz=278,slow=5.4,SNR=4.2							
	0.3nm,0.8s							
WRA	**Warramunga Arr**	**64.22**	**151**	P	**P**	**P**	**11 55 58.6**	**-0.1**
	0.4nm,0.7s,baz=342,slow=6.8,SNR=7.7							
	0.4nm,0.7s							
ASAR	**Alice Springs**	**67.46**	**153**	P	**P**	**P**	**11 56 20.2**	**+0.7**
	1.3nm,0.5s,baz=336,slow=6.4,SNR=30							
	1.3nm,0.5s							
YKA	**Yellowknife Ar**	**73.47**	**19**	P	**P**	**P**	**11 56 55.6**	**-0.1**
	0.3nm,0.8s,baz=311,slow=7.3,SNR=1.7							
	0.3nm,0.8s							
STKA	**Stephens Creek**	**77.75**	**150**	P	**P**	**P**	**11 57 20.1**	**-0.4**
	2.0nm,0.7s,baz=323,slow=9.0,SNR=3.3							
	2.0nm,0.7s							

*ASRS **29** 11:46:37.3±0.1, 52°N±1°×96°0E±0°8, h5km, MLh5.5/12, Error ellipse: s-maj=2.8km s-min=1.6km az=19.7, confirmed*
*IDC **29** 11:46:38.0±0.5, 51°82N×96°09E, h0km, mb4.1/24, mbtmp4.1/28, ML3.4/4, MS3.4/10, Error ellipse: s-maj=13.8km s-min=8.4km az=2.0*
*MOS **29** 11:46:38.2±1.2, 51°82N×95°87E, h12km, mb4.5/19, Error ellipse: s-maj=6.3km s-min=5.0km az=150.9*
*NEIC **29** 11:46:40.7±2.4, 51°88N±0°03×95°9E±0°1, h10km±1km, mb4.4/30, Error ellipse: s-maj=11.8km s-min=5.2km az=81.0*
*NNC **29** 11:46:45.3±1.9, 51°91N×95°14E, h0km, mb4.3, mpv3.9, Error ellipse: s-maj=17.6km s-min=12.8km az=81.0*
ISC 29 11:46:39.3±0.5, 51°87N±0°03×95°93E±0°02, h7km±3km, n212, σ2°35/254, mb4.3/40, MS3.4/10, 12C-12D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KZLR	**Kyzyl**	**0.93**	**261**	PG	**Pg**	**Pg**	**11 46 55.8**	**-1.3**
KZLR							11 47 09.0	
KZLR	**Kyzyl**	**0.93**	**261**	Pg	**Pg**	**Pg**	**11 46 55.7**	**-1.4**
KZLR				Sg	**Sg**	**Sg**	**11 47 08.1**	**-1.1**
KNGR	**Kungurtug, Tuv**	**1.61**	**141**	PN	**Pn**	**Pn**	**11 47 07.2**	**-1.1**
KNGR							11 47 28.1	
KNGR	**Kungurtug, Tuv**	**1.61**	**141**	⇑Pg	**Pn**	**Pn**	**11 47 06.8**	**-1.5**
KNGR				Sg	**Sn**	**Sn**	**11 47 29.5**	**+0.1**
ERNS	**Erzin**	**1.68**	**197**	PN	**Pn**	**Pn**	**11 47 07.2**	**-2.0**
ERNS	**Erzin**	**1.68**	**197**	⇓Pg	**Pn**	**Pn**	**11 47 07.0**	**-2.2**
ERNS				Sg	**Sn**	**Sn**	**11 47 28.3**	**-2.7**
ARDR	**Aradan**	**1.69**	**296**	Pg	**Pn**	**Pn**	**11 47 09.5**	**+0.1**
ARDR				Sg	**Sg**	**Sg**	**11 47 33.7**	**0.0**
ORL	**Orlik**	**2.48**	**73**	*e*PN	**Pn**	**Pn**	**11 47 21.8**	**+1.5**
ORL				*e*			11 47 52.0	
ORL				pmax	pmax			
	comp=Z,659nm,0.4s							
ORL				smax	smax			
	comp=E,4μm,1.0s							
DJOS	**Djoyskaya Sosn**	**2.93**	**290**	Pg	**Pb**	**Pb**	**11 47 32.6**	**+0.7**
DJOS				Sg	**Sg**	**Sg**	**11 48 10.6**	**-2.7**
CERR	**Cheremushki**	**2.94**	**291**	PN	**Pb**	**Pb**	**11 47 32.0**	**0.0**
CERR							11 48 11.4	
CERR	**Cheremushki**	**2.94**	**291**	Pg	**Pb**	**Pb**	**11 47 32.9**	**+0.9**
CERR				Sg	**Sg**	**Sg**	**11 48 11.1**	**-2.4**
DJO	**Djoy, Khakassi**	**3.03**	**289**	PN	**Pb**	**Pb**	**11 47 33.3**	**-0.3**
DJO							11 48 09.0	
DJO	**Djoy, Khakassi**	**3.03**	**289**	Pn	**Pn**	**Pn**	**11 47 29.6**	**+1.9**
DJO				Pg	**Pb**	**Pb**	**11 47 33.1**	**-0.5**
DJO				Sg	**Sb**	**Sb**	**11 48 12.6**	**+1.8**
MOY	**Mondy**	**3.15**	**92**	*e*PN	**Pn**	**Pn**	**11 47 31.7**	**+2.2**
MOY				*e*			11 48 12.9	
MOY				pmax	pmax			
	comp=Z,722nm,0.6s							
MOY				smax	smax			
	comp=N,8μm,1.2s							
MOY	**Mondy**	**3.15**	**92**	Pg	**Pn**	**Pn**	**11 47 32.5**	**+3.0**
MOY				Sg	**Sb**	**Sb**	**11 48 13.9**	**-0.5**
ORY	**Orie**	**3.18**	**351**	Pg	**Pb**	**Pb**	**11 47 36.1**	**0.0**
ORY	**Orie**	**3.18**	**351**	Sg	**Sb**	**Sb**	**11 48 15.7**	**+0.6**
ABNR	**Abakan**	**3.30**	**306**	PN	**Pn**	**Pn**	**11 47 33.2**	**+1.8**
ABNR	**Abakan**	**3.30**	**306**	Pn	**Pn**	**Pn**	**11 47 32.9**	**+1.5**
ABNR	**Abakan**	**3.30**	**306**	Pg	**Pb**	**Pb**	**11 47 38.7**	**+0.5**
ABNR	**Abakan**	**3.30**	**306**	Sg	**Sg**	**Sg**	**11 48 23.4**	**-1.8**
TBTR	**Tabat**	**3.36**	**290**	PN	**Pn**	**Pn**	**11 47 33.2**	**+0.9**
TBTR							11 48 16.5	
ARS	**Arshan**	**4.03**	**87**	*e*PN	**Pn**	**Pn**	**11 47 41.6**	**+0.2**
ARS				*e*			11 47 50.0	
ARS				*e*			11 48 41.1	
ARS				pmax	pmax			
	comp=Z,616nm,0.6s							
ARS				smax	smax			
	comp=E,8μm,0.8s							
KRAR	**Krasnoyarsk**	**4.53**	**338**	*i* PN	**Pn**	**Pn**	**11 47 47.3**	**-0.9**
GZL	**Zheleznogorsk**	**4.62**	**343**	PN	**Pb**	**Pb**	**11 48 01.7**	**+1.0**
GZL	**Zheleznogorsk**	**4.62**	**343**	Pg	**Pg**	**Pg**	**11 48 03.9**	**-4.0**
GZL				Sg	**Sb**	**Sb**	**11 49 00.9**	**+4.3**
LUZB	**Luzhba, Kemero**	**4.63**	**296**	PN	**Pb**	**Pb**	**11 48 00.6**	**-0.2**
LUZB	**Luzhba, Kemero**	**4.63**	**296**	Pn	**Pn**	**Pn**	**11 47 51.0**	**+1.4**
LUZB				Pg	**Pb**	**Pb**	**11 48 01.1**	**+0.3**
LUZB				Sg	**Sg**	**Sg**	**11 49 02.5**	**-5.3**
ZAK	**Zakamensk**	**4.86**	**105**	*e*PN	**Pn**	**Pn**	**11 47 53.3**	**+0.3**
ZAK				*e*			11 49 06.8	
ZAK				pmax	pmax			
	comp=Z,581nm,1.0s							
ZAK				smax	smax			
	comp=N,5μm,1.4s							
ZAK	**Zakamensk**	**4.86**	**105**	Pg	**Pb**	**Pb**	**11 48 03.1**	**-1.8**
ZAK				Sg	**Sb**	**Sb**	**11 49 07.1**	**+3.5**
TASR	**Tashtagol**	**5.02**	**283**	PN	**Pn**	**Pn**	**11 47 56.7**	**+1.7**
TASR	**Tashtagol**	**5.02**	**283**	Pn	**Pn**	**Pn**	**11 47 56.8**	**+1.8**
TASR				Pg	**Pb**	**Pb**	**11 48 08.1**	**+0.6**
TASR				Sg	**Sb**	**Sb**	**11 49 13.8**	**+5.8**
CUR	**Chagan-Uzun**	**5.10**	**253**	PN	**Pn**	**Pn**	**11 47 57.5**	**+1.2**
CUR	**Chagan-Uzun**	**5.10**	**253**	Pn	**Pn**	**Pn**	**11 47 58.4**	**+2.1**
CUR				Pg	**Pb**	**Pb**	**11 48 12.3**	**+3.3**
CUR				Sg	**Sb**	**Sb**	**11 49 15.0**	**+4.5**
ULGR	**Ulagan, Altay**	**5.16**	**259**	PN	**Pn**	**Pn**	**11 47 60.0**	**+3.0**
ULGR				Pg	**Pg**	**Pg**	**11 48 15.6**	**-2.4**
ULGR				Sg	**Sb**	**Sb**	**11 49 16.9**	**+4.8**
IRK	**Irkutsk**	**5.16**	**83**	*e*PN	**Pb**	**Pb**	**11 48 08.5**	**-1.4**
IRK				*e*			11 49 13.1	
IRK				pmax	pmax			
	comp=Z,236nm,0.3s							
IRK				smax	smax

CHBI	**Chibit, Altay**	**5.53**	**257**		Pn		**Pn**	**11 48 04.6**	**+2.5**
CHBI					Pg		**Pg**	**11 48 21.2**	**-4.0**
CHBI					Sg		**Sb**	**11 49 29.5**	**+6.8**
DGZ	**Jazzator, Alta**	**5.81**	**251**		Pn		**Pn**	**11 48 07.7**	**+1.8**
DGZ					Pg		**Pg**	**11 48 26.4**	**-4.1**
DGZ					Sg		**Sg**	**11 49 39.5**	**-6.2**
ELT	**Eltsovka**	**6.07**	**287**		Pn		**Pn**	**11 48 09.3**	**-0.2**
ELT					Pg		**Pb**	**11 48 24.4**	**-1.0**
ELT					Sg		**Sb**	**11 49 44.3**	**+6.1**
VCHU	**Verkh-Chumysh,**	**6.11**	**294**		Pn		**Pn**	**11 48 09.9**	**-0.1**
VCHU					Pg		**Pb**	**11 48 28.9**	**+2.9**
VCHU					Sg		**Sg**	**11 49 52.4**	**-2.8**
GALT	**Gorno-Altaysk,**	**6.18**	**275**		Pn		**Pn**	**11 48 11.3**	**+0.4**
GALT					Pg		**Pb**	**11 48 29.8**	**+2.7**
GALT					Sg		**Sg**	**11 49 50.7**	**-6.8**
POMOR	**Pomortsevo, Ku**	**6.20**	**298**		Pg		**Pb**	**11 48 31.2**	**+3.6**
POMOR					Sg		**Sg**	**11 49 53.6**	**-4.7**
BJR2	**Bachatsky-2, K**	**6.38**	**296**		Pg		**Pb**	**11 48 30.9**	**+0.3**
BJR2					Sg		**Sg**	**11 49 57.3**	**-6.7**
BJR1	**Bachatsky 1, K**	**6.42**	**296**		Pn		**Pn**	**11 48 14.3**	**+0.1**
BJR1					Pg		**Pb**	**11 48 32.4**	**+1.2**
BJR1					Sg		**Sg**	**11 49 57.2**	**-7.9**
TRG	**Tyrgan**	**6.45**	**78**	*e*	PN		**Pn**	**11 48 14.2**	**-0.5**
TRG				*e*				11 48 33.7	
TRG				*e*				11 49 54.1	
TRG					pmax	pmax			
	comp=Z,83nm,0.9s								
TRG					smax	smax			
	comp=N,2μm,1.7s								
SALR	**Pechorkino, Sa**	**6.66**	**297**		Pn		Pb	11 48 27.8	-7.6
SALR					Pg		Pg	11 48 39.5	-7.2
SALR					Sg		**Sg**	**11 50 04.6**	**-8.3**
KEM	**Kemerovo**	**6.81**	**305**		Pg		**Pb**	**11 48 40.4**	**+2.5**
KEM					Sg		**Sg**	**11 50 10.9**	**-6.8**
ZAA0	**Zalesovo Array**	**7.04**	**292**		Pn		**Pn**	**11 48 24.1**	**+1.5**
ZAA0	**Zalesovo Array**	**7.04**	**292**	⇓	Pn		**Pn**	**11 48 23.4**	**+0.8**
	comp=N,6.9nm,0.8s								
ZAA0				⇑	Pg		**Pb**	**11 48 43.7**	**+2.0**
	comp=N,12nm,1.1s								
ZAA0				⇓	Lg		Lg	11 50 14.8	
	comp=N,600nm,0.8s								
ZALV	**Zalesovo Beam**	**7.04**	**292**		Pn		**Pn**	**11 48 24.4**	**+1.8**
	comp=N,3.6nm,0.3s,baz=99,slow=12,SNR=65								
ZALV					Pg		**Pb**	**11 48 43.4**	**+1.6**
	comp=N,8.9nm,0.3s,baz=103,slow=14,SNR=12								
ZALV					Sn		**Sn**	**11 49 44.6**	**+1.8**
	comp=N,4.3nm,0.3s,baz=99,slow=25,SNR=2.8								
ZALV					Lg		Lg	11 50 16.8	
	comp=N,9.7nm,0.3s,baz=116,slow=24,SNR=6.3								
ZALV					LR		LR	11 51 18.8	
	comp=N,254nm,20.1s,baz=96,slow=39								
	comp=N,18nm,0.6s								
ZALV	**Zalesovo Beam**	**7.04**	**292**		Pn		**Pn**	**11 48 23.1**	**+0.4**
UKR	**Ust'-Kan**	**7.04**	**267**		Pg		Pb	11 48 47.3	+5.4
UKR					Sg		**Sg**	**11 50 19.4**	**-5.8**
ASR1	**Anjero-Sudjens**	**7.21**	**310**		Sg		**Sg**	**11 50 25.9**	**-4.7**
SONM	**Songino Array**	**7.88**	**117**		Pn		**Pn**	**11 48 34.0**	**-0.3**
	comp=N,0.1nm,0.3s,baz=300,slow=15,SNR=4.2								
SONM					Pg		**Pb**	**11 48 56.1**	**0.0**
	comp=N,4.9nm,0.3s,baz=298,slow=15,SNR=21								
SONM					Lg		Lg	11 50 44.2	
	comp=N,18nm,0.3s,baz=304,slow=27,SNR=11								
	comp=N,1.4nm,0.6s								
SONM	**Songino Array**	**7.88**	**117**		Pn		**Pn**	**11 48 37.6**	**+3.3**
KHAR	**Kharino, NSO,**	**7.90**	**295**		Sg		**Sg**	**11 50 47.2**	**-5.3**
NVSII	**Novosibirsk**	**8.15**	**296**		Pg		**Pb**	**11 49 02.1**	**+1.4**
NVSII					Sg		**Sg**	**11 50 52.4**	**-8.4**
NVS	**Novosibirsk**	**8.16**	**296**		Pg		**Pb**	**11 49 01.7**	**+0.9**
NVS					Sg		**Sg**	**11 50 52.2**	**-8.7**
ULN	**Ulaanbaatar**	**8.23**	**115**		Pn		**Pn**	**11 48 40.9**	**+1.8**
ULN	**Ulaanbaatar**	**8.23**	**115**	*ce*	P		**Pn**	**11 48 41.0**	**+1.8**
ULN					pmax	pmax			
	comp=Z,8.0nm,1.0s								
ULN	**Ulaanbaatar**	**8.23**	**115**		Pg		**Pb**	**11 49 03.2**	**+1.1**
ULN					Sg		Sg	11 50 52.5	-11
ZSN	**Zaisan**	**8.43**	**243**	*e*	Pg		Pb	11 49 10.4	+5.0
	baz=243								
ZSN				*e*	Lg		Lg	11 51 05.0	
	baz=243								
WMQ	**Urumqi**	**9.76**	**218**	*e*	P		Pn	11 48 49.5	-11
SEM	**Semipalatinsk**	**9.96**	**268**	*e*	P		**Pn**	**11 49 02.5**	**-0.5**
SEM	**Semipalatinsk**	**9.96**	**268**	*e*	P		**Pn**	**11 49 02.5**	**-0.5**
	baz=268								
MK31	**Makanchi Array**	**10.24**	**246**		Pn		**Pn**	**11 49 07.0**	**+0.4**
MK31	**Makanchi Array**	**10.24**	**246**	*i*	P		**Pn**	**11 49 07.3**	**+0.6**
MK31	**Makanchi Array**	**10.24**	**246**		Pn		**Pn**	**11 49 07.8**	**+1.1**
	comp=Z,1.1nm,0.9s,baz=69,slow=13,SNR=47								
MK31				⇑	Pg			11 49 43.8	
	comp=Z,3.3nm,1.1s								
MK31				⇓	Lg		Lg	11 51 58.2	
	comp=Z,114nm,1.4s,baz=83,slow=41,SNR=6.3								
MKAR	**Makanchi Array**	**10.24**	**246**		Pn		**Pn**	**11 49 07.3**	**+0.7**
	comp=Z,0.6nm,0.3s,baz=73,slow=9.6,SNR=40								
MKAR					Pg			11 49 43.4	
	comp=Z,1.1nm,0.3s,baz=56,slow=18,SNR=3.6								
MKAR					Lg		Lg	11 51 56.9	
	comp=Z,1.7nm,0.3s,baz=59,slow=14,SNR=2.3								
	comp=Z,5.0nm,0.8s								
MKAR	**Makanchi Array**	**10.24**	**246**		Pn		**Pn**	**11 49 07.0**	**+0.3**
MAKZ	**Makanchi**	**10.41**	**246**		Pn		**Pn**	**11 49 07.5**	**-1.4**
MAKZ	**Makanchi**	**10.41**	**246**		P		**Pn**	**11 49 07.6**	**-1.4**
MAKZ	**Makanchi**	**10.41**	**246**	⇑	Pn		**Pn**	**11 49 09.2**	**+0.2**
	comp=Z,8.3nm,0.7s								
MAKZ				⇓	Pg			11 49 47.7	
	comp=Z,11nm,0.8s								
MAKZ				⇑	Lg		Lg	11 52 04.4	
	comp=Z,276nm,1.4s								
KURK	**Kurchatov**	**10.90**	**271**				**Pn**	**11 49 14.9**	**-0.7**
KURK	**Kurchatov**	**10.90**	**271**		P		**Pn**	**11 49 18.1**	**+2.5**
KURK	**Kurchatov**	**10.90**	**271**	⇓	Pn		**Pn**	**11 49 15.3**	**-0.3**
	comp=Z,13nm,1.3s								
KURK				⇑	Lg		Lg	11 52 15.2	
	comp=Z,151nm,0.9s								
KURBB	**Kurchatov Arra**	**10.98**	**270**		Pn		**Pn**	**11 49 18.1**	**+1.5**
	comp=Z,0.3nm,0.3s,baz=75,slow=14,SNR=21								
KURBB					Pg			11 49 58.1	
	comp=Z,0.4nm,0.3s,baz=71,slow=16,SNR=4.9								
KURBB					Lg		Lg	11 52 22.2	
	comp=Z,0.4nm,0.3s,baz=72,slow=30,SNR=5.3								
	comp=Z,5.1nm,0.6s								
KURBB	**Kurchatov Arra**	**10.98**	**270**		P		**Pn**	**11 49 17.8**	**+1.1**
KURBB	**Kurchatov Arra**	**10.98**	**270**	⇓	Pn		**Pn**	**11 49 17.8**	**+1.1**
	comp=Z,15nm,1.0s								
KURBB				⇓	Lg		Lg	11 52 17.6	
	comp=Z,340nm,0.9s								
BOD	**Bodaibo**	**11.98**	**53**	*e*	P		**Pn**	**11 49 28.3**	**-2.1**
KPKS	**Kokpek**	**14.31**	**241**	*e*	P		**Pn**	**11 50 00.6**	**-1.7**
KPKS	**Kokpek**	**14.31**	**241**	*e*	P		**Pn**	**11 50 00.7**	**-1.7**
	baz=241								
ZHN	**Zhinishke**	**14.65**	**240**	*e*	P		**Pn**	**11 50 06.7**	**-0.2**
ZHN	**Zhinishke**	**14.65**	**240**	*e*	P		**Pn**	**11 50 06.8**	**-0.2**
	baz=240								
SATY	**Saty**	**14.73**	**240**	*e*	P		**Pn**	**11 50 07.6**	**-0.5**
SATY	**Saty**	**14.73**	**240**	*e*	P		**Pn**	**11 50 07.7**	**-0.5**
	baz=240								
CHKK	**Chushkaly**	**15.00**	**245**	*e*	P		**Pn**	**11 50 09.6**	**-2.0**
CHKK	**Chushkaly**	**15.00**	**245**	*e*	P		**Pn**	**11 50 09.7**	**-2.0**
	baz=245								
PRZ	**Przheval'sk**	**15.13**	**239**		Pn		**Pn**	**11 50 11.1**	**-2.5**
PRZ	**Przheval'sk**	**15.13**	**239**		P		**Pn**	**11 50 11.1**	**-2.5**
PRZ					pmax	pmax			
	comp=Z,14nm,0.5s								
HIA	**Hailar**	**15.34**	**90**				**P**	**11 50 18.6**	**-2.3**
HIA					IAmb		IAmb	11 50 22.5	
	comp=Z,12nm,0.9s								
HIA	**Hailar**	**15.34**	**90**		P		**P**	**11 50 18.6**	**-2.3**
HIA					pmax	pmax			
	comp=Z,12nm,0.9s								
KUU	**Kurty**	**15.34**	**246**	*e*	P		**Pn**	**11 50 15.2**	**-0.9**
KUU	**Kurty**	**15.34**	**246**	*e*	P		**Pn**	**11 50 15.2**	**-0.9**
	baz=246								
TNSS	**Tian-Shan**	**15.54**	**243**	*e*	P		**Pn**	**11 50 17.6**	**-1.6**
TNSS	**Tian-Shan**	**15.54**	**243**	*e*	P		**Pn**	**11 50 17.6**	**-1.6**
	baz=243								
TARG	**Taragay, Kyrgy**	**15.98**	**238**		Pn		Pn	11 50 16.3	-8.6
TARG	**Taragay, Kyrgy**	**15.98**	**238**		P		Pn	11 50 16.3	-8.6
TARG					pmax	pmax			
	comp=Z,6.0nm,0.7s								
BTLS	**Baital**	**16.01**	**253**	*e*	P		**Pn**	**11 50 22.8**	**-1.9**
BTLS	**Baital**	**16.01**	**253**	*e*	P		**Pn**	**11 50 22.9**	**-1.9**
	baz=253								
KDJ	**Kajisay**	**16.03**	**240**		Pn		**Pn**	**11 50 25.6**	**+0.3**
KDJ	**Kajisay**	**16.03**	**240**		P		**Pn**	**11 50 25.6**	**+0.3**
KDJ					pmax	pmax			
	comp=Z,7.0nm,0.9s								
TKM2	**Tokmak 2**	**16.37**	**245**		P		**Pn**	**11 50 29.0**	**-0.7**
ULHL	**Ulahol**	**16.46**	**242**		P		**Pn**	**11 50 30.9**	**+0.1**
BOOM	**Boomskoye usch**	**16.46**	**243**		Pn		**Pn**	**11 50 28.3**	**-2.5**
BOOM	**Boomskoye usch**	**16.46**	**243**		P		**Pn**	**11 50 28.3**	**-2.5**
BOOM					pmax	pmax			
	comp=Z,9.0nm,0.8s								
SGDS	**Sogindy**	**16.59**	**248**	*e*	P		**Pn**	**11 50 32.0**	**-0.3**
SGDS	**Sogindy**	**16.59**	**248**	*e*	P		**Pn**	**11 50 32.0**	**-0.3**
	baz=248								
USP	**Ospenovka**	**16.78**	**248**		P		**Pn**	**11 50 33.5**	**-1.2**
AAK	**Ala-Archa**	**17.18**	**246**		Lg		Lg	11 55 40.0	
	comp=Z,0.6nm,0.3s,baz=159,slow=19,SNR=1.7								
AAK	**Ala-Archa**	**17.18**	**246**				**Pn**	**11 50 38.3**	**-1.5**
AAK	**Ala-Archa**	**17.18**	**246**		P		**Pn**	**11 50 38.3**	**-1.5**
AAK					pmax	pmax			
	comp=Z,3.0nm,0.9s								
UCH	**Uchtor**	**17.43**	**245**		P		**Pn**	**11 50 41.8**	**-1.5**
EKS2	**Erkin-Say**	**17.57**	**247**		P		**Pn**	**11 50 43.7**	**-1.0**
BJT	**Baijiatuau**	**18.33**	**122**		P		**Pn**	**11 50 53.7**	**-0.2**
BJT	**Baijiatuau**	**18.33**	**122**		P		**Pn**	**11 50 53.7**	**-0.2**
BJT					pmax	pmax			
	comp=Z,10.0nm,1.1s								
ZEA	**Zeya**	**18.95**	**72**	*e*	P		**Pn**	**11 51 02.3**	**+0.9**
ZEA					MLR	MLR			
	comp=E,200nm,7.0s								
ZEA					MLR	MLR			
	comp=Z,200nm,10.0s								
KK31	**Karatay Array**	**19.20**	**253**		P		**P**	**11 51 02.9**	**-0.7**
KK31	**Karatay Array**	**19.20**	**253**		P		**P**	**11 51 02.9**	**-0.7**
KK31					pmax	pmax			
	comp=Z,4.0nm,1.1s								
KKAR	**Karatay Array**	**19.20**	**253**		P		**P**	**11 51 02.8**	**-0.9**
KKAR	**Karatay Array**	**19.20**	**253**		P		**P**	**11 51 02.8**	**-0.9**
TRKS	**Terek-Say**	**19.80**	**248**		P		**P**	**11 51 10.2**	**-0.2**
YAK	**Yakutsk**	**20.78**	**48**		P		**P**	**11 51 20.4**	**-0.2**
	comp=Z,8.3nm,0.4s,baz=246,slow=10.0,SNR=1.4								
YAK					LR		LR	11 59 45.3	
	comp=Z,94nm,21.9s,baz=265,slow=38								
	comp=Z,8.3nm,0.4s								
YAK	**Yakutsk**	**20.78**	**48**	*e*	P		**P**	**11 51 20.1**	**-0.5**
YAK				*e*	S		**S**	**11 55 12.5**	**0.0**
YAK					pmax	pmax			
	comp=Z,28nm,1.0s								
YAK					smax	smax			
	comp=E,36nm,2.8s								
YAK					smax	smax			
	comp=N,32nm,2.0s								
BTK	**Batken**	**20.96**	**246**		P		**P**	**11 51 23.0**	**+0.2**
BTK	**Batken**	**20.96**	**246**		P		**P**	**11 51 23.0**	**+0.2**
BTK					pmax	pmax			
	comp=Z,8.0nm,0.9s								
SVE	**Sverdlovsk**	**21.00**	**298**	*e*	P		**P**	**11 51 23.6**	**+0.6**
SVE					pmax	pmax			
	comp=Z,18nm,0.8s								
GAR	**Garm**	**21.96**	**244**		P		**P**	**11 51 33.6**	**-0.1**
GAR					lAmb	lAmb		11 51 42.2	
	comp=Z,16nm,0.8s								
ARU	**Arti**	**22.16**	**297**		P		**P**	**11 51 36.4**	**+0.9**
	comp=Z,7.6nm,0.6s,baz=102,slow=3.5,SNR=9.4								
	comp=Z,7.6nm,0.6s								
ARU	**Arti**	**22.16**	**297**		P		**P**	**11 51 36.4**	**+0.9**
ARU					lAmb	lAmb		11 51 42.4	
	comp=Z,9.4nm,0.7s								
ARU	**Arti**	**22.16**	**297**	*d i*	P		**P**	**11 51 33.4**	**-2.1**
ARU					S		**S**	**11 55 39.1**	**-0.6**
ARU					pmax	pmax			
	comp=Z,10.0nm,0.8s								
LSA	**Lhasa**	**22.43**	**191**		P		**P**	**11 51 40.3**	**+1.2**
LSA					lAmb	lAmb		11 51 43.1	
	comp=Z,9.0nm,1.2s								
LSA	**Lhasa**	**22.43**	**191**		P		**P**	**11 51 40.3**	**+1.2**
LSA					pmax	pmax			
	comp=Z,9.0nm,1.2s								
KLR	**Kul'dur**	**22.77**	**82**		P		**P**	**11 51 42.0**	**-0.1**
	comp=Z,2.7nm,0.8s,baz=287,slow=9.0,SNR=8.3								
KLR					Lg			11 58 32.0	
	comp=Z,0.1nm,0.3s,baz=232,slow=7.9,SNR=8.6								
KLR					LR		LR	12 01 00.7	
	comp=Z,132nm,18.6s,baz=116,slow=38								
	comp=Z,2.7nm,0.8s								
KLR	**Kul'dur**	**22.77**	**82**	*ce*	P		**P**	**11 51 40.7**	**-1.4**
KLR					pmax	pmax			
	comp=Z,3.0nm,0.9s								
CHGR	**Chuyangaron**	**22.85**	**245**		P		**P**	**11 51 43.1**	**0.0**
CHGR	**Chuyangaron**	**22.85**	**245**		P		**P**	**11 51 43.1**	**0.0**
CHGR					pmax	pmax			
	comp=Z,38nm,1.0s								
ABKAR	**Akbulak array**	**22.86**	**278**		P		**P**	**11 51 42.3**	**-0.8**
ABKAR					lAmb	lAmb		11 51 49.1	
	comp=Z,11nm,0.9s								
ABKAR	**Akbulak array**	**22.86**	**278**		P		**P**	**11 51 41.9**	**-1.1**
AKTO	**Aktyubinsk**	**23.65**	**282**		P		**P**	**11 51 51.4**	**+0.4**
	comp=Z,16nm,0.7s,baz=82,slow=9.1,SNR=46								
	comp=Z,16nm,0.7s								
TIXI	**Tiksi**	**24.63**	**24**		P		**P**	**11 51 59.4**	**-0.6**
	comp=Z,53nm,0.7s,baz=270,slow=22,SNR=88								
TIXI	**Tiksi**	**24.63**	**24**		P		**P**	**11 51 59.2**	**-0.8**
TIXI	**Tiksi**	**24.63**	**24**	*ce*	P		**P**	**11 51 59.1**	**-0.8**
TIXI					pmax	pmax			
	comp=Z,60nm,0.8s								
USRK	**Ussuriysk Ar.**	**25.10**	**93**		P		**P**	**11 52 04.4**	**0.0**
	comp=Z,2.9nm,0.9s,baz=335,slow=9.9,SNR=3.4								
	comp=Z,2.9nm,0.9s								
USRK	**Ussuriysk Ar.**	**25.10**	**93**		P		**P**	**11 52 05.7**	**+1.3**
USRK	**Ussuriysk Ar.**	**25.10**	**93**		P		**P**	**11 52 05.7**	**+1.3**
NJ2	**Nanjing**	**25.94**	**131**	*e*	P		**P**	**11 52 09.0**	**-3.1**
NJ2					pmax	pmax			
	comp=Z,10.0nm,0.5s								
SHL	**Shillong**	**26.44**	**188**		P		**P**	**11 52 18.0**	**+1.1**
SHL					lAmb	lAmb		11 52 36.7	
	comp=Z,6.2nm,0.8s								
SHL	**Shillong**	**26.44**	**188**		P		**P**	**11 52 18.0**	**+1.1**
SHL					pmax	pmax			
	comp=Z,6.0nm,0.8s								
KSAR	**Wonju Array Be**	**26.66**	**110**		P		**P**	**11 52 21.3**	**+2.7**
KSAR	**Wonju Array Be**	**26.66**	**110**		P		**P**	**11 52 21.3**	**+2.7**
KSRS	**Korea Array**	**26.67**	**110**		P		**P**	**11 52 18.4**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=318,slow=7.0,SNR=5.0								
KSRS					LR		LR	12 01 50.8	
	comp=Z,40nm,19.3s,baz=295,slow=34								
	comp=Z,0.6nm,0.5s								
SEY	**Seymchan**	**31.31**	**47**		P		**P**	**11 52 59.4**	**-0.3**
	comp=Z,1.3nm,0.6s,baz=293,slow=10,SNR=5.8								
SEY					LR		LR	12 06 06.5	
	comp=Z,87nm,18.2s,baz=298,slow=37								
	comp=Z,1.3nm,0.6s								
SEY	**Seymchan**	**31.31**	**47**	*i*	P		**P**	**11 52 59.4**	**-0.3**
SEY					pmax	pmax			
	comp=Z,2.0nm,1.0s								
CMAR	**Chiang Mai Arr**	**33.42**	**175**		P		**P**	**11 53 19.7**	**+1.0**
	comp=Z,0.7nm,0.2s,baz=356,slow=6.6,SNR=1.3								
CMAR					LR		LR	12 06 18.9	
	comp=Z,85nm,18.3s,baz=255,slow=35								
	comp=Z,0.7nm,0.2s								
MJAR	**Matsushiro Arr**	**33.43**	**100**		LR		LR	12 05 37.3	
	comp=Z,44nm,20.6s,baz=314,slow=34								
VORR	**Voronezh**	**34.34**	**293**	*e*	P		**P**	**11 53 30.8**	**+4.5**
OBN	**Obninsk**	**34.54**	**299**		LR		LR	12 08 36.2	
	comp=Z,49nm,18.8s,baz=190,slow=38								
OBN	**Obninsk**	**34.54**	**299**	⇓	*e* P		**P**	**11 53 27.5**	**-0.5**
OBN					*PP		**sP**	**11 53 32.0**	**+0.5**
OBN					*SP		**pP**	**11 53 34.0**	**+3.5**
OBN					pmax	pmax			
	comp=Z,4.0nm,0.7s								
OBN					MLR	MLR			
	comp=Z,170nm,18.0s								
KEV	**Kevo**	**35.60**	**326**		P		**P**	**11 53 38.3**	**+1.4**
KEV					lAmb	lAmb		11 53 54.0	
	comp=Z,17nm,1.5s								
KEV	**Kevo**	**35.60**	**326**		P		**P**	**11 53 38.3**	**+1.4**
KEV					pmax	pmax			
	comp=Z,17nm,1.5s								
KBZ	**Khabaz**	**35.83**	**278**		P		**P**	**11 53 40.7**	**+1.5**
	comp=Z,1.0nm,0.5s,baz=99,slow=9.4,SNR=2.3								
	comp=Z,1.0nm,0.5s								
KBZ	**Khabaz**	**35.83**	**278**	*i*	P		**P**	**11 53 39.4**	**+0.2**
KBZ					pmax	pmax			
	comp=Z,3.0nm,1.0s								
KIV	**Kislovodsk**	**35.84**	**279**	⇑	*e* P		**P**	**11 53 41.6**	**+2.1**
KIV					*PP		**sP**	**11 53 43.0**	**0.0**
KIV					*SP		**pP**	**11 53 45.0**	**+3.0**
KIV					SS		SS	12 01 41.0	-12
KIV					pmax	pmax			
	comp=Z,8.0nm,1.0s								
ARCES	**ARCESS Array B**	**36.15**	**326**		P		**P**	**11 53 42.3**	**+0.6**
	comp=Z,0.8nm,0.5s,baz=73,slow=8.0,SNR=13								
	comp=Z,0.8nm,0.5s								
ARCES	**ARCESS Array B**	**36.15**	**326**		P		**P**	**11 53 42.2**	**+0.5**
ARCES					lAmb	lAmb		11 53 48.7	
	comp=Z,7.6nm,1.2s								
ARCES	**ARCESS Array B**	**36.15**	**326**		P		**P**	**11 53 42.2**	**+0.5**
ARCES					pmax	pmax			
	comp=Z,8.0nm,1.3s								
BILL	**Bilibino**	**36.35**	**37**	⇓	*e* P		**P**	**11 53 44.3**	**+0.8**
BILL					*e* *PP		**sP**	**11 53 46.5**	**-0.5**
BILL								11 55 07.0	
BILL					pmax	pmax			
	comp=Z,8.0nm,1.7s								
BILL					MLR	MLR			
	comp=Z,89nm,16.0s								
PETK	**Petropavlovsk-**	**36.61**	**63**		P		**P**	**11 53 46.1**	**+0.3**
	comp=Z,3.7nm,0.9s,baz=261,slow=5.7,SNR=4.2								
	comp=Z,3.7nm,0.9s								
PETK	**Petropavlovsk-**	**36.61**	**63**		P		**P**	**11 53 46.3**	**+0.5**
PETK	**Petropavlovsk-**	**36.61**	**63**		P		**P**	**11 53 46.3**	**+0.5**
FIA1	**FINESS Array S**	**37.75**	**313**		P		**P**	**11 53 55.7**	**+0.3**
FIA1					lAmb	lAmb		11 54 01.1	
	comp=Z,7.5nm,1.4s								
FINES	**FINESS Array B**	**37.75**	**313**		P		**P**	**11 53 55.5**	**+0.1**
	comp=Z,2.8nm,0.7s,baz=81,slow=9.1,SNR=14								
	comp=Z,2.8nm,0.7s								
FINES	**FINESS Array B**	**37.75**	**313**		P		**P**	**11 53 55.7**	**+0.3**
FINES	**FINESS Array B**	**37.75**	**313**	*i*	P		**P**	**11 53 55.2**	**-0.2**
FINES					pmax	pmax			
	comp=Z,3.0nm,0.7s								
NACGM	**Naroch**	**39.83**	**303**	⇓	*e* P		**P**	**11 54 16.9**	**+4.0**
	baz=65								
AKASG	**Malin Array Be**	**40.41**	**296**		P		**P**	**11 54 17.6**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=54,slow=9.5,SNR=5.1								
	comp=Z,0.9nm,0.5s								
AKBB	**Malin Array Si**	**40.41**	**296**	*ce*	P		**P**	**11 54 18.1**	**+0.4**
BR131	**Keskin Array S**	**43.80**	**279**		P		**P**	**11 54 46.2**	**+0.5**
BR131					lAmb	lAmb		11 54 52.9	
	comp=Z,8.9nm,0.9s								
BR131	**Keskin Array S**	**43.80**	**279**		P		**P**	**11 54 46.2**	**+0.5**
BR131					pmax	pmax			
	comp=Z,9.0nm,0.9s								
BRTR	**Keskin Array B**	**43.80**	**279**		P		**P**	**11 54 47.2**	**+1.5**
	comp=Z,5.1nm,0.8s,baz=67,slow=7.4,SNR=10.0								
	comp=Z,5.1nm,0.8s								
BUR08	**Bucovina Ar. S**	**44.24**	**294**		P		**P**	**11 54 50.4**	**+1.2**
BUR08					lAmb	lAmb		11 54 56.8	
	comp=Z,4.1nm,1.1s								
NC405	**NORSAR Array S**	**44.26**	**316**		P		**P**	**11 54 49.5**	**+0.5**
NB2	**NORSAR Subarra**	**44.51**	**316**		P		**P**	**11 54 50.8**	**-0.2**
	comp=Z,3.6nm,0.7s,baz=61,slow=7.9								
NOA	**NORSAR Array B**	**44.51**	**316**		P		**P**	**11 54 50.9**	**-0.1**
	comp=Z,5.1nm,0.9s,baz=61,slow=7.9,SNR=10								
NOA					LR		LR	12 13 47.0	
	comp=Z,38nm,18.9s,baz=255,slow=36								
	comp=Z,5.1nm,0.9s								
ASF	**Jabal al Asfar**	**46.66**	**269**		P		**P**	**11 55 09.9**	**+1.4**
	comp=Z,3.7nm,0.8s,baz=140,slow=5.9,SNR=5.4								
	comp=Z,3.7nm,0.8s								
RAYN	**Ar Rayn**	**47.63**	**253**		P		**P**	**11 55 16.4**	**+0.3**
RAYN	**Ar Rayn**	**47.63**	**253**		P		**P**	**11 55 16.4**	**+0.3**
RAYN					pmax	pmax			
	comp=Z,6.0nm,0.9s	

ABPO **Ambohimpanom** 16.06 307 Pn **Pn** 12 01 10.7 0.0
OPO **Ambohidratompo** 16.39 309 Pn **P** 12 01 18.5 +0.8
baz=299,slow=14,SNR=1.6
OPO Sn Sn 12 03 59.9 -17
baz=78,slow=16,SNR=3.1
2.0nm,0.5s
H08S1 **Diego Garcia H** 24.41 29 T T 12 27 23.9
baz=204,slow=76,SNR=38
H08S2 **Diego Garcia H** 24.41 29 T T 12 27 23.9
baz=204,slow=76,SNR=21
H08S3 **Diego Garcia H** 24.43 29 T T 12 27 25.5
baz=204,slow=76,SNR=36
KMBO **Kilima Mbogo** 35.94 317 LR LR 12 15 51.9
comp=Z,82nm,20.1s,baz=92,slow=31
MAW **Mawson** 38.17 179 P **P** 12 04 43.4 -0.3
ATD **Arta Tunnel** 44.25 335 LR LR 12 20 38.1
comp=Z,113nm,21.1s,baz=142,slow=32
H01W2 **Cape Leeuwin H** 45.14 111 T T 12 53 20.7
baz=260,slow=75
H01W3 **Cape Leeuwin H** 45.14 111 T T 12 53 18.5
baz=260,slow=75
H01W1 **Cape Leeuwin H** 45.16 111 T T 12 53 22.0
baz=260,slow=75
CMAR **Chiang Mai Arr** 60.30 43 P **P** 12 07 32.7 -0.9
0.7nm,0.6s,baz=233,slow=7.5,SNR=1.6
0.7nm,0.6s
CMAR **Chiang Mai Arr** 60.30 43 P **P** 12 07 33.1 -0.4
QSPA **South Pole Qui** 60.67 180 P **P** 12 07 36.6 +1.0
VNDA **Vanda** 63.83 166 P **P** 12 07 57.5 +1.0
0.5nm,0.5s,baz=138,slow=3.8,SNR=11
VNDA LR LR 12 35 32.3
comp=Z,91nm,18.0s,baz=256,slow=36
0.5nm,0.5s
VNDA **Vanda** 63.83 166 P **P** 12 07 57.8 +1.3
VNDA IAmb IAmb 12 08 22.2
comp=Z,3.4nm,1.6s
SBA **Scott Base** 64.70 167 P **P** 12 08 02.0 -0.1
SBA IAmb IAmb 12 08 23.5
comp=Z,8.0nm,1.6s
ASAR **Alice Springs** 64.80 104 P **P** 12 08 04.0 +0.2
comp=Z,1.1nm,0.7s,baz=239,slow=6.4,SNR=11
comp=Z,1.1nm,0.7s
ASAR **Alice Springs** 64.80 104 P **P** 12 08 03.7 -0.1
WRA **Warramunga Arr** 66.64 100 P **P** 12 08 15.8 +0.1
comp=Z,1.6nm,1.0s,baz=245,slow=6.0,SNR=9.3
comp=Z,1.6nm,1.0s
WRA **Warramunga Arr** 66.64 100 P **P** 12 08 14.6 -1.1
WB0 **Warramunga Arr** 66.76 100 P **P** 12 08 16.4 0.0
WB0 IAmb IAmb 12 08 18.0
comp=Z,6.8nm,1.1s
WR0 **Warramunga Arr** 66.81 101 P **P** 12 08 15.1 -1.6
TORD **Torodi Ar. Bea** 70.89 298 P **P** 12 08 44.5 +2.4
comp=Z,1.2nm,0.9s,baz=107,slow=3.4,SNR=4.4
comp=Z,1.2nm,0.9s
TORD **Torodi Ar. Bea** 70.89 298 P **P** 12 08 40.6 -1.5
TORD IAmb IAmb 12 08 40.9
comp=Z,1.7nm,0.8s
MCQ **Macquarie Isla** 71.08 142 P **P** 12 08 40.7 -1.9
KK31 **Karatay Array** 72.80 8 P **P** 12 08 53.0 0.0
KK31 IAmb IAmb 12 08 57.0
comp=Z,2.5nm,0.8s
KKAR **Karatay Array** 72.80 8 P **P** 12 08 53.1 +0.2
KKAR IAmb IAmb 12 08 57.0
comp=Z,2.5nm,0.8s
BRTR **Keskin Array B** 73.30 339 LR LR 12 37 15.8
comp=Z,88nm,21.7s,baz=277,slow=33
ABKAR **Akbulak array** 78.39 360 P **P** 12 09 25.0 +0.2
ABKAR IAmb IAmb 12 09 29.5
comp=Z,2.8nm,1.2s
MKAR **Makanchi Array** 78.40 15 P **P** 12 09 26.3 +1.2
comp=Z,0.5nm,0.8s,baz=156,slow=7.6,SNR=4.2
comp=Z,0.5nm,0.8s
ZALV **Zalesovo Beam** 85.69 14 P **P** 12 10 04.1 +1.1
comp=Z,0.7nm,0.4s,baz=184,slow=5.8,SNR=2.6
comp=Z,0.7nm,0.4s
SONM **Songino Array** 87.24 29 P **P** 12 10 11.2 +0.2
comp=Z,0.1nm,0.3s,baz=266,slow=2.3,SNR=1.8
comp=Z,0.1nm,0.3s
YKA **Yellowknife Ar** 146.84 356 PKPbc **PKPab** 12 17 07.2 -0.3
comp=Z,0.8nm,0.8s,baz=350,slow=3.2,SNR=3.0
TXAR **Lajitas Array** 166.33 273 PKP **PKPdf** 12 17 31.5 +1.0
comp=Z,0.2nm,0.8s,baz=100,slow=3.7,SNR=3.1

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*IDC **29** 12:01:43.5±0.9,28.°52N×43.°70W,h0km,mb4.0/18, mbtmp4.0/18,MS4.0/45,Error ellipse: s-maj=27.2km s-min=15.3km az=179.0*

*NEIC **29** 12:01:46.2±1.5,28.°5N±0.°1×43.°70W±0.°06,h10km±1km, mb4.7/151,Error ellipse: s-maj=20.2km s-min=6.8km az=164.0*

*GCMT **29** 12:01:48.2±0.2,28.°75N±0.°03×43.°64W±0.°02,h12km, MW4.9/99,Moment Tensor Solution. s32,c35; s99,c129; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr-2.58±.08; Mθθ0.36±.10; Mφφ2.22±.07; Mrθ2.35±.35; Mrφ0.57±.07; Mθφ-1.06±.24; Best double couple: M◎3.27900×10^16^ NP1:φ214.00000°,δ43.00000°,λ-45.00000°. NP2: φ341.00000°,δ61.00000°,λ-123.00000°. Principal axes: T 2.4490, Plg10.0000°, Azm94.0000°; N 1.6620, Plg29.0000°, Azm359.0000°; P -4.1100, Plg59.0000°, Azm201.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 12:01:45.3±0.6,28.°5N±0.°1×43.°71W±0.°08,h12km,n175, σ0.°64/99,mb4.7/86,MS4.0/45,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCPR	**Guaynabo City**	**22.85**	**249**	P	**P**	**12 06 48.7**	**0.0**
GCPR				IAmb	IAmb	12 06 51.5	
	comp=Z,26nm,1.1s						
SJG	**San Juan**	**23.01**	**248**	LR	LR	12 13 58.4	
	comp=Z,278nm,21.7s,baz=84,slow=32						
SJG	**San Juan**	**23.01**	**248**	P	**P**	**12 06 49.5**	**-0.7**
DRLN	**Deer Lake**	**23.30**	**337**	P	**P**	**12 06 52.2**	**-0.8**
DRLN				IAmb	IAmb	12 07 01.3	
	comp=Z,41nm,1.3s						
LMN	**Caledonia Moun**	**24.05**	**322**	P	**P**	**12 06 59.9**	**-0.3**
LMN				IAmb	IAmb	12 07 06.7	
	comp=Z,41nm,1.6s						
MDP	**Montagnes des**	**24.74**	**202**	LR	LR	12 14 50.2	
	comp=Z,112nm,21.0s,baz=336,slow=32						
PAL	**Palisades**	**27.65**	**305**	P	**P**	**12 07 33.2**	**+0.3**
PAL				IAmb	IAmb	12 08 02.8	
	comp=Z,23nm,1.4s						
BAUV	**El Baul**	**30.02**	**234**	P	**P**	**12 07 54.5**	**+0.3**
SCHQ	**Schefferville**	**31.22**	**334**	LR	LR	12 19 39.8	
	comp=Z,235nm,19.7s,baz=126,slow=34						
SDV	**Santo Domingo**	**31.95**	**238**	LR	LR	12 20 25.3	
	comp=Z,145nm,21.1s,baz=76,slow=35						
N51A	**Ashland**	**33.87**	**302**	P	**P**	**12 08 29.8**	**+1.9**
ESDC	**Sonseca Array**	**34.51**	**61**	P	**P**	**12 08 33.5**	**0.0**
	comp=Z,0.9nm,0.9s,baz=278,slow=8.8,SNR=3.1						
ESDC				LR	LR	12 18 52.0	
	comp=Z,275nm,21.1s,baz=232,slow=30						
	comp=Z,0.9nm,0.9s						
TKL	**Tuckaleechee C**	**34.52**	**292**	P	**P**	**12 08 34.1**	**+0.5**
	comp=Z,9.4nm,1.1s,baz=102,slow=12,SNR=3.7						
TKL				LR	LR	12 19 45.0	
	comp=Z,542nm,21.7s,baz=102,slow=31						
	comp=Z,9.4nm,1.1s						
TKL	**Tuckaleechee C**	**34.52**	**292**	P	**P**	**12 08 34.4**	**+0.8**
TKL				IAmb	IAmb	12 08 42.6	
	comp=Z,21nm,1.4s						
W52A	**Murphy**	**34.65**	**291**	P	**P**	**12 08 35.5**	**+0.8**
W52A				IAmb	IAmb	12 08 43.1	
	comp=Z,19nm,1.4s						
R50A	**Paris**	**35.07**	**297**	P	**P**	**12 08 39.1**	**+0.8**
R50A				IAmb	IAmb	12 08 47.1	
	comp=Z,16nm,1.4s						
CPCT	**Cooper Cave**	**35.13**	**292**	P	**P**	**12 08 39.1**	**+0.3**
ZARC	**Zaragoza, Cauc**	**36.04**	**241**	P	**P**	**12 08 47.1**	**+0.3**
CLTN	**Cedars of Leba**	**36.60**	**293**	P	**P**	**12 08 52.0**	**+0.6**
CLTN				IAmb	IAmb	12 08 59.8	
	comp=Z,14nm,1.1s						
L46A	**Eue Claire**	**36.94**	**303**	P	**P**	**12 08 55.1**	**+0.9**
ROSC	**El Rosal**	**37.36**	**237**	LR	LR	12 23 54.3	
	comp=Z,239nm,21.7s,baz=42,slow=36						
P46A	**Rosedale**	**37.40**	**299**	P	**P**	**12 08 59.4**	**+1.3**
WVT	**Waverly**	**37.81**	**293**	P	**P**	**12 09 02.5**	**+0.8**
PLAL	**Pickwick Lake**	**38.05**	**291**	P	**P**	**12 09 04.7**	**+1.0**
PLAL				IAmb	IAmb	12 09 12.1	
	comp=Z,13nm,1.2s						
Z47A	**Carrollton**	**38.17**	**288**	P	**P**	**12 09 06.1**	**+1.4**
W45A	**Hickory Valley**	**38.95**	**292**	P	**P**	**12 09 11.6**	**+0.3**
BORG	**Borgarnes**	**38.97**	**15**	LR	LR	12 19 29.8	
	comp=Z,55nm,20.9s,baz=245,slow=27						
EKA	**Eskdalemuir Ar**	**39.52**	**36**	LR	LR	12 21 18.8	
	comp=Z,161nm,20.0s,baz=236,slow=30						
346A	**Big Creek Wild**	**39.55**	**286**	P	**P**	**12 09 16.7**	**+0.4**
PBMO	**Poplar Bluff**	**39.89**	**294**	P	**P**	**12 09 19.7**	**+0.6**
LCAR	**Lake Charles**	**40.51**	**293**	P	**P**	**12 09 24.4**	**+0.1**
143A	**Socs Landing,**	**41.01**	**288**	P	**P**	**12 09 28.6**	**+0.1**
FCAR	**Ozark Folk Cen**	**41.30**	**295**	P	**P**	**12 09 31.1**	**+0.3**
MGMO	**Mountain Grove**	**41.35**	**295**	P	**P**	**12 09 31.9**	**+0.7**
BATAN	**Batan**	**41.41**	**252**	P	**P**	**12 09 31.6**	**-0.4**
W41B	**Gary Mavity, V**	**41.46**	**292**	P	**P**	**12 09 32.3**	**+0.3**
W41B				IAmb	IAmb	12 09 39.7	
	comp=Z,16nm,1.2s						
WHAR	**Wooly Hollow**	**41.48**	**292**	P	**P**	**12 09 32.3**	**0.0**
WHAR				IAmb	IAmb	12 09 39.7	
	comp=Z,17nm,1.2s						
UALR	**University of**	**41.57**	**291**		**P**	**12 09 33.5**	**+0.5**
UALR				IAmb	IAmb	12 09 35.3	
	comp=Z,20nm,1.1s						
P38A	**Dawn**	**42.28**	**299**	P	**P**	**12 09 39.0**	**+0.3**
P38A				IAmb	IAmb	12 09 46.4	
	comp=Z,24nm,1.6s						
MIAR	**Mount Ida**	**42.60**	**291**	P	**P**	**12 09 42.5**	**+1.1**
JTS	**Las Juntas de**	**42.64**	**253**	LR	LR	12 29 11.7	
	comp=Z,65nm,18.3s,baz=42,slow=39						
W39A	**Magazine**	**42.71**	**292**	P	**P**	**12 09 43.1**	**+0.8**
W39A				IAmb	IAmb	12 09 50.0	
	comp=Z,14nm,1.2s						
HHAR	**Hobbs**	**42.74**	**294**	P	**P**	**12 09 43.0**	**+0.4**
U38A	**Gravette**	**43.09**	**294**	P	**P**	**12 09 45.9**	**+0.5**
U38A				IAmb	IAmb	12 09 52.8	
	comp=Z,14nm,1.1s						
NATX	**Nacogdoches**	**43.88**	**287**	P	**P**	**12 09 52.7**	**+0.9**
SUMG	**Summit**	**44.25**	**2**	P	**P**	**12 09 54.6**	**-0.1**
SUMG				IAmb	IAmb	12 10 01.6	
	comp=Z,12nm,1.0s						
SUMG	**Summit**	**44.25**	**2**	*i* P	**P**	**12 09 54.0**	**-0.7**
TUL1	**Leonard**	**44.27**	**293**		**P**	**12 09 54.9**	**0.0**
ULM	**Lac du Bonnet**	**44.75**	**314**	P	**P**	**12 09 57.6**	**-0.9**
	comp=Z,2.1nm,0.5s,baz=125,slow=5.5,SNR=3.0						
	comp=Z,2.1nm,0.5s						
T35A	**Sooner Cattle**	**44.75**	**295**		**P**	**12 09 59.0**	**+0.2**
TORD	**Torodi Ar. Bea**	**44.82**	**100**	P	**P**	**12 09 59.3**	**-0.2**
	comp=Z,1.7nm,1.0s,baz=279,slow=6.7,SNR=4.8						
TORD				LR	LR	12 27 02.5	
	comp=Z,455nm,20.6s,baz=224,slow=34						
	comp=Z,1.7nm,1.0s						
TORD	**Torodi Ar. Bea**	**44.82**	**100**	P	**P**	**12 09 59.1**	**-0.4**
KEST	**Kesra**	**45.07**	**67**	P	**P**	**12 10 01.9**	**+0.5**
	comp=Z,3.2nm,0.8s,baz=226,slow=5.2,SNR=3.7						
KEST				LR	LR	12 26 14.3	
	comp=Z,248nm,19.7s,baz=222,slow=33						
	comp=Z,3.2nm,0.8s						
KEST	**Kesra**	**45.07**	**67**	P	**P**	**12 10 01.7**	**+0.3**
HKT	**Hockley**	**45.20**	**285**	P	**P**	**12 10 03.6**	**+1.3**
H10N2	**ASCENSION HYDR**	**45.80**	**138**	T	T	12 58 54.4	
	baz=323,slow=75,SNR=251						
H10N3	**ASCENSION HYDR**	**45.80**	**138**	T	T	12 58 54.6	
	baz=323,slow=75,SNR=168						
H10N1	**ASCENSION HYDR**	**45.82**	**138**	T	T	12 59 01.6	
	baz=323,slow=75,SNR=330						
ZCCA	**Zocca**	**45.94**	**55**	P	**P**	**12 10 08.8**	**+0.7**
ZCCA				IAmb	IAmb	12 10 18.0	
	comp=Z,5.1nm,0.7s						
X34A	**Smith Ranch, M**	**46.08**	**292**		**P**	**12 10 10.8**	**+1.4**
H10S3	**ASCENSION HYDR**	**46.59**	**139**	T	T	12 59 57.6	
	baz=323,slow=74,SNR=80						
H10S2	**ASCENSION HYDR**	**46.61**	**139**	T	T	12 59 58.0	
	baz=257,slow=74,SNR=21						
JMIC	**Jan Mayen**	**46.86**	**15**	LR	LR	12 25 35.2	
	comp=Z,78nm,18.6s,baz=234,slow=31						
KHC	**Kasperske Hory**	**47.93**	**48**	P	**P**	**12 10 23.7**	**+0.1**
CMIG	**Matias Romero**	**48.21**	**268**	LR	LR	12 30 35.9	
	comp=Z,139nm,19.4s,baz=80,slow=36						
JCT	**Junction City**	**48.45**	**287**	P	**P**	**12 10 28.1**	**+0.3**
NOA	**NORSAR Array B**	**48.66**	**32**	LR	LR	12 28 41.4	
	comp=Z,24nm,18.4s,baz=260,slow=33						
ATAH	**Atahualpa**	**48.70**	**229**	LR	LR	12 31 53.2	
	comp=Z,96nm,20.6s,baz=14,slow=37						
NC602	**NORSAR Array S**	**48.73**	**32**	P	**P**	**12 10 30.6**	**+1.0**
NC602	**NORSAR Array S**	**48.73**	**32**	*e*S	**P**	**12 10 30.5**	**+1.0**
AMTX	**Amarillo**	**49.17**	**293**	P	**P**	**12 10 34.1**	**+0.7**
HFS	**Hagfors**	**49.62**	**34**	LR	LR	12 27 39.7	
	comp=Z,66nm,20.2s,baz=234,slow=31						
VRAC	**Vranov**	**49.91**	**48**	LR	LR	12 27 31.8	
	comp=Z,102nm,21.9s,baz=261,slow=31						
MSTX	**Muleshoe**	**50.22**	**292**	P	**P**	**12 10 41.7**	**+0.2**
MSTX				IAmb	IAmb	12 10 44.9	
	comp=Z,7.3nm,1.1s						
LPAZ	**La Paz**	**50.38**	**211**	P	**P**	**12 10 43.1**	**-0.1**
	comp=Z,1.8nm,0.5s,baz=21,slow=7.6,SNR=6.0						
	comp=Z,1.8nm,0.5s						
LPAZ	**La Paz**	**50.38**	**211**	P	**P**	**12 10 43.6**	**+0.3**
LPAZ				IAmb	IAmb	12 10 45.8	
	comp=Z,9.4nm,1.4s						
Q24A	**Divide**	**51.31**	**299**	P	**P**	**12 10 50.6**	**+0.7**
Q24A				IAmb	IAmb	12 10 58.0	
	comp=Z,18nm,1.4s						
TXAR	**Lajitas Array**	**51.98**	**286**	P	**P**	**12 10 54.7**	**-0.1**
	comp=Z,1.2nm,0.9s,baz=97,slow=7.9,SNR=8.8						
TXAR				LR	LR	12 33 36.0	
	comp=Z,115nm,18.4s,baz=80,slow=37						
	comp=Z,1.2nm,0.9s						
TXAR	**Lajitas Array**	**51.98**	**286**	P	**P**	**12 10 54.5**	**-0.3**
TX31	**Lajitas Ar. Si**	**51.98**	**286**	P	**P**	**12 10 54.1**	**-0.6**
TX31				IAmb	IAmb	12 11 01.4	
	comp=Z,12nm,1.1s						
RES	**Resolute Bay**	**52.86**	**345**	LR	LR	12 31 13.0	
	comp=Z,213nm,21.7s,baz=96,slow=34						
ANMO	**Albuquerque**	**53.02**	**294**	LR	LR	12 30 56.8	
	comp=Z,356nm,21.8s,baz=82,slow=33						
ANMO	**Albuquerque**	**53.02**	**294**	P	**P**	**12 11 02.8**	**+0.2**
EGMT	**Eagleton**	**53.74**	**310**	P	**P**	**12 11 07.1**	**-0.4**
EGMT				IAmb	IAmb	12 11 14.8	
	comp=Z,11nm,1.1s						
GO01	**Chusmiza**	**53.82**	**210**	P	**P**	**12 11 08.1**	**-0.6**
BW06	**Boulder Array**	**54.12**	**304**	IAmb	IAmb	12 11 17.6	
	comp=Z,14nm,1.2s						
PD31	**Pinedale Array**	**54.12**	**304**	IAmb	IAmb	12 11 17.7	
	comp=Z,13nm,1.2s						
PDAR	**Pinedale Array**	**54.12**	**304**	P	**P**	**12 11 10.7**	**+0.1**
	comp=Z,4.8nm,0.9s,baz=81,slow=9.2,SNR=20						
PDAR				LR	LR	12 32 30.7	
	comp=Z,422nm,20.7s,baz=92,slow=34						
	comp=Z,4.8nm,0.9s						
PDAR	**Pinedale Array**	**54.12**	**304**	P	**P**	**12 11 10.3**	**-0.3**
MVCO	**Mesa Verde**	**54.20**	**297**	IAmb	IAmb	12 11 19.9	
	comp=Z,7.8nm,1.1s						
RDMU	**Red Mountain**	**54.45**	**301**	IAmb	IAmb	12 11 22.9	
	comp=Z,7.9nm,1.2s						
121A	**Cookes Peak, D**	**54.63**	**291**	IAmb	IAmb	12 11 23.2	
	comp=Z,12nm,1.4s						
TPAW	**Teton Pass**	**55.04**	**305**	IAmb	IAmb	12 11 24.8	
	comp=Z,9.5nm,1.1s						
P18A	**Preston Nutter**	**55.12**	**300**	IAmb	IAmb	12 11 25.1	
	comp=Z,6.4nm,1.1s						
AHID	**Auburn Hatcher**	**55.25**	**304**	IAmb	IAmb	12 11 25.2	
	comp=Z,11nm,1.3s						
SRU	**San Rafael Swe**	**55.42**	**300**	IAmb	IAmb	12 11 27.8	
	comp=Z,10nm,1.2s						
BURAR	**Bucovina Array**	**55.71**	**50**	P	**P**	**12 11 20.8**	**-1.0**
EDM	**Edmonton**	**55.73**	**317**	P	**P**	**12 11 21.6**	**-0.2**
HWUT	**Hardware Ranch**	**55.77**	**303**	P	**P**	**12 11 22.6**	**+0.2**
HWUT				IAmb	IAmb	12 11 29.7	
	comp=Z,9.4nm,1.3s						
FINES	**FINESS Array B**	**55.80**	**33**	P	**P**	**12 11 21.5**	**-0.5**
	comp=Z,1.5nm,0.8s,baz=264,slow=4.2,SNR=3.5						
FINES				LR	LR	12 31 12.3	
	comp=Z,61nm,21.1s,baz=244,slow=32						
	comp=Z,1.5nm,0.8s						
JLU	**Jordanelle**	**55.85**	**302**	IAmb	IAmb	12 11 30.7	
	comp=Z,6.9nm,1.1s						
TMUT	**Trail Mountain**	**55.91**	**300**	IAmb	IAmb	12 11 27.9	
	comp=Z,15nm,1.7s						
MPU	**Maple Canyon**	**56.10**	**301**	IAmb	IAmb	12 11 32.5	
	comp=Z,16nm,1.5s						
LVC	**Limon Verde**	**56.30**	**208**	LR	LR	12 35 23.8	
	comp=Z,147nm,19.1s,baz=22,slow=36						
ARCES	**ARCESS Array B**	**56.38**	**23**	P	**P**	**12 11 25.9**	**-0.1**
	comp=Z,0.9nm,0.8s,baz=254,slow=6.5,SNR=2.0						
	comp=Z,0.9nm,0.8s						
ARCES	**ARCESS Array B**	**56.38**	**23**	P	**P**	**12 11 25.8**	**-0.3**
YKA	**Yellowknife Ar**	**56.38**	**328**	P	**P**	**12 11 25.2**	**-0.9**
	comp=Z,1.5nm,0.9s,baz=90,slow=7.4,SNR=8.4						
YKA				LR	LR	12 34 03.9	
	comp=Z,428nm,21.5s,baz=79,slow=34						
	comp=Z,1.5nm,0.9s						
YKA	**Yellowknife Ar**	**56.38**	**328**	P	**P**	**12 11 25.6**	**-0.5**
WALA	**Waterton Lakes**	**56.41**	**312**	P	**P**	**12 11 26.0**	**-0.7**
NLU	**North Lily Min**	**56.44**	**301**	IAmb	IAmb	12 11 35.9	
	comp=Z,13nm,1.3s						
MLR	**Muntele Rosu**	**56.47**	**52**	LR	LR	12 34 43.3	
	comp=Z,158nm,19.1s,baz=274,slow=35						
WUAZ	**Wupatki**	**56.83**	**296**	IAmb	IAmb	12 11 38.8	
	comp=Z,13nm,1.4s						
DUG	**Dugway, Tooele**	**56.95**	**301**	IAmb	IAmb	12 11 38.7	
	comp=Z,11nm,1.1s						
BGU	**Big Grassy Mou**	**56.98**	**302**	IAmb	IAmb	12 11 34.5	
	comp=Z,7.5nm,1.2s						
IDI	**Anoyia**	**57.62**	**64**	LR	LR	12 34 35.1	
	comp=Z,37nm,20.2s,baz=272,slow=34						
CCUT	**Cedar City**	**57.92**	**298**	IAmb	IAmb	12 11 46.0	
	comp=Z,7.3nm,1.1s						
AKASG	**Malin Array Be**	**57.98**	**46**	P	**P**	**12 11 36.3**	**-1.4**
	comp=Z,1.1nm,0.7s,baz=283,slow=5.4,SNR=4.9						
AKASG				LR	LR	12 34 02.2	
	comp=Z,96nm,18.6s,baz=244,slow=34						
	comp=Z,1.1nm,0.7s						
PLID	**Pearl Lake**	**58.38**	**308**	IAmb	IAmb	12 11 48.2	
	comp=Z,7.6nm,1.1s						
MFID	**Camas Ranch**	**58.55**	**306**	IAmb	IAmb	12 11 43.6	
	comp=Z,6.2nm,0.9s						
ELK	**Elko**	**58.66**	**302**	LR	LR	12 35 08.2	
	comp=Z,270nm,21.2s,baz=80,slow=34						
LPIG	**La Paz**	**59.20**	**282**	LR	LR	12 36 41.1	
	comp=Z,156nm,20.7s,baz=71,slow=35						
PRN	**Pahroc Range**	**59.26**	**299**	IAmb	IAmb	12 11 55.7	
	comp=Z,6.2nm,1.2s						
D08A	**Wollman Farm,**	**60.02**	**310**	P	**P**	**12 11 52.3**	**+0.4**
D08A				IAmb	IAmb	12 11 59.2	
	comp=Z,8.5nm,1.1s						
TPNV	**Topopah Spring**	**60.30**	**298**	IAmb	IAmb	12 12 03.0	
	comp=Z,8.6nm,1.6s						
G08A	**Pilot Rock**	**60.39**	**308**	P	**P**	**12 11 54.8**	**+0.1**
G08A				IAmb	IAmb	12 11 55.5	
	comp=Z,10nm,1.5s						
J08A	**Circle Bar Ran**	**60.46**	**306**	P	**P**	**12 11 55.1**	**0.0**
J08A				IAmb	IAmb	12 12 03.4	
	comp=Z,6.3nm,1.0s						
GWY	**Greenwater Val**	**60.83**	**298**	IAmb	IAmb	12 12 24.1	
	comp=Z,7.0nm,1.5s						
KVN	**Kaiserville**	**61.19**	**301**	P	**P**	**12 12 00.0**	**-0.3**
KVN				IAmb	IAmb	12 12 01.6	
	comp=Z,5.4nm,1.2s						
PFO	**Pinyon Flats O**	**61.37**	**295**	LR	LR	12 38 11.3	
	comp=Z,178nm,18.8s,baz=84,slow=36						
NVAR	**Mina Array Bea**	**61.50**	**301**	P	**P**	**12 12 02.5**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=78,slow=6.1,SNR=7.5						
NVAR				LR	LR	12 38 23.9	
	comp=Z,334nm,18.9s,baz=88,slow=36						
	comp=Z,0.7nm,0.6s						
NVAR	**Mina Array Bea**	**61.50**	**301**	P	**P**	**12 12 02.4**	**0.0**
OBN	**Obninsk**	**61.74**	**40**	LR	LR	12 37 25.2	
	comp=Z,22nm,18.6s,baz=295,slow=35						
PAHR	**Pah Rah Range**	**61.98**	**302**	P	**P**	**12 12 05.9**	**+0.3**
MOD	**Modoc Plateau**	**62.10**	**305**	IAmb	IAmb	12 12 08.2	
	comp=Z,9.1nm,1.2s						
BRTR	**Keskin Array B**	**63.22**	**57**	P	**P**	**12 12 14.1**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=279,slow=3.8,SNR=2.3						
	comp=Z,0.8nm,0.7s						
INK	**Inuvik**	**63.82**	**336**	P	**P**	**12 12 16.1**	**-0.9**
	comp=Z,1.7nm,0.8s,baz=107,slow=3.5,SNR=3.3						
INK				LR	LR	12 38 19.0	
	comp=Z,212nm,19.1s,baz=72,slow=34						
	comp=Z,1.7nm,0.8s						
INK	**Inuvik**	**63.82**	**336**	P	**P**	**12 12 16.9**	**-0.1**
INK				IAmb	IAmb	12 12 34.5	
	comp=Z,6.3nm,1.4s						
DLBC	**Dease Lake**	**64.34**	**324**	LR	LR	12 38 47.7	
	comp=Z,222nm,21.1s,baz=98,slow=35						
DLBC	**Dease Lake**	**64.34**	**324**	IAmb	IAmb	12 12 26.9	
	comp=Z,6.7nm,1.4s						
BBB	**Bella Bella**	**64.76**	**317**	LR	LR	12 39 14.3	
	comp=Z,215nm,20.9s,baz=92,slow=35						
FARO	**Faro, Yukon**	**65.07**	**329**	IAmb	IAmb	12 12 32.8	
	comp=Z,5.8nm,1.1s						
P33M	**Teslin, Yukon**	**65.31**	**327**	IAmb	IAmb	12 12 34.1	
	comp=Z,4.7nm,1.1s						
M31M	**Drury Creek, Y**	**65.55**	**329**	P	**P**	**12 12 29.2**	**+0.7**
M31M				IAmb	IAmb	12 12 36.3	
	comp=Z,6.8nm,1.2s						
M30M	**Minto, Yukon**	**66.53**	**330**	IAmb	IAmb	12 12 42.2	
	comp=Z,5.7nm,1.1s						
DAWY	**Dawson**	**67.20**	**332**	P	**P**	**12 12 39.8**	**+0.7**
DAWY				IAmb	IAmb	12 12 42.9	
	comp=Z,6.7nm,1.2s						
HYT	**Haines Junctio**	**67.37**	**328**	IAmb	IAmb	12 12 49.8	
	comp=Z,6.0nm,1.2s						
KIRV	**Kirov**	**67.74**	**34**	LR	LR	12 40 33.4	
	comp=Z,46nm,18.6s,baz=268,slow=34						
L27K	**Beaver Creek,**	**68.56**	**331**	IAmb	IAmb	12 12 54.9	
	comp=Z,6.7nm,1.2s						
KBZ	**Khabaz**	**68.63**	**51**	P	**P**	**12 12 47.8**	**-0.6**
	comp=Z,0.8nm,0.3s,baz=346,slow=4.2,SNR=2.7						
	comp=Z,0.8nm,0.3s						
IL31		**69.98**	**334**	IAmb	IAmb	12 13 03.8	
	comp=Z,8.5nm,1.2s						
ILAR	**Eielson Array**	**69.98**	**334**	P	**P**	**12 12 56.5**	**+0.1**
	comp=Z,2.2nm,1.0s,baz=66,slow=4.2,SNR=9.8						
ILAR				LR	LR	12 42 09.9	
	comp=Z,170nm,21.8s,baz=63,slow=35						
	comp=Z,2.2nm,1.0s						
ILAR	**Eielson Array**	**69.98**	**334**	P	**P**	**12 12 56.9**	**+0.5**
CCB	**Clear Creek Bu**	**70.39**	**334**	P	**P**	**12 12 59.0**	**+0.1**
CCB				IAmb	IAmb	12 13 06.3	
	comp=Z,10nm,1.2s						
MDM	**Murphy Dome**	**70.42**	**334**	IAmb	IAmb	12 13 03.2	
	comp=Z,6.7nm,1.4s						
H23K	**Yukon River**	**70.54**	**335**	IAmb	IAmb	12 13 08.2	
	comp=Z,10nm,1.3s						
BMRM	**Bremner River**	**70.57**	**329**	IAmb

NC602				IAML		12 10 37.6		
	comp=Z,4.9nm,0.9s							
NAO01	**NORSAR Array S**	**0.57**	**348**	*eP*	Pg	12 10 25.1	-0.9	
NAO01				*eS*	Sg	12 10 32.7	-0.6	
NAO01				IAML		12 10 33.5		
	comp=Z,8.2nm,0.6s							
NBO00	**NORSAR Array S**	**0.77**	**347**	*eP*	Pg	12 10 28.7	-1.0	
NBO00				*eS*	Sg	12 10 39.5	-0.1	
NBO00				IAML		12 10 42.0		
	comp=Z,4.2nm,0.5s							
NB201	**NORSAR Array S**	**0.77**	**6**	*eP*	Pg	12 10 28.8	-0.9	
NB201				*eS*	Sg	12 10 38.8	-0.9	
NB201				IAML		12 10 46.2		
	comp=Z,2.8nm,0.4s							
STRU	**Stroemstad**	**1.26**	**179**	*eP*	Pg	12 10 38.1	-1.0	
STRU				*eS*	Sg	12 10 53.5	-1.8	
SKAR	**Skarslia**	**1.45**	**287**	*eP*	Pn	12 10 40.2	-2.3	
SKAR				*eS*	Sg	12 10 59.2	-2.3	
SKAR				IAML		12 11 05.0		
	comp=Z,6.0nm,0.3s							

IDC ***29*** *12:17:40.5±0.8, 19°.63S×13°.66W, h0km, mb3.9/8, mbtmp3.9/8, MS4.0/35, Error ellipse: s-maj=48.9km s-min=21.2km az=111.0*

GCMT ***29*** *12:17:52.0±0.4, 19°.61S±0°.04×11°.75W±0°.03, h28km±1km, MW5.0/79, Moment Tensor Solution. s12,c12; s79,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.59±.31; $M_{\theta\theta}$0.47±.18; $M_{\phi\phi}$3.11±.21; $M_{r\theta}$1.24±.28; $M_{\theta\phi}$-0.34±.11; $M_{\phi r}$-0.24±.26; Best double couple: M◎3.56000×10^{16} NP1:ϕ_S187.00000°,δ43.00000°,λ-68.00000°. NP2: ϕ_S337.00000°,δ51.00000°,λ-110.00000°. Principal axes: T 3.1790, Plg4.0000°, Azm81.0000°; N 0.7570, Plg15.0000°, Azm350.0000°; P -3.9410, Plg74.0000°, Azm184.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 29 12:17:42.0±0.7, 19°.65S±0°.2×13°.7W±0°.3, h10km, n51, σ0°.78/16, mb3.9/8, MS4.0/35, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H10S2	**ASCENSION HYDR10**	**0.60**	**355**	T	T	12 31 58.6	
	baz=55,slow=74,SNR=9.4						
H10S3	**ASCENSION HYDR10**	**0.61**	**355**	T	T	12 31 48.0	
	baz=165,slow=74,SNR=24						
RCBR	**Riachuelo**	**25.56**	**299**	LR	LR	12 31 56.8	
	comp=Z,284nm,19.4s,baz=268,slow=33						
TSUM	**Tsumeb**	**29.50**	**95**	LR	LR	12 32 34.7	
	comp=Z,490nm,21.2s,baz=326,slow=30						
BDFB	**Brasilia**	**32.90**	**271**	LR	LR	12 36 08.2	
	comp=Z,301nm,21.7s,baz=138,slow=34						
SUR	**Sutherland**	**33.39**	**119**	LR	LR	12 34 29.9	
	comp=Z,270nm,19.0s,baz=280,slow=30						
TORD	**Torodi Ar. Bea**	**35.89**	**26**	P	**P**	**12 24 41.9**	**-0.6**
	2.5nm,0.8s,baz=200,slow=8.9,SNR=10						
TORD				LR	LR	12 36 42.5	
	comp=Z,320nm,18.4s,baz=197,slow=32 2.5nm,0.8s						
BOSA	**Boshof**	**36.55**	**112**	LR	LR	12 36 20.3	
	comp=Z,208nm,20.4s,baz=291,slow=31						
LBTB	**Lobatse**	**36.67**	**106**	LR	LR	12 36 31.8	
	comp=Z,337nm,21.6s,baz=268,slow=31						
CPUP	**Villa Florida**	**40.58**	**252**	P	**P**	**12 25 21.8**	**-0.3**
	0.6nm,0.4s,baz=1.1,slow=12,SNR=1.9						
CPUP				LR	LR	12 39 53.9	
	comp=Z,250nm,21.4s,baz=74,slow=33 0.6nm,0.4s						
SIV	**San Ignacio**	**45.14**	**267**	LR	LR	12 43 41.1	
	comp=Z,418nm,20.8s,baz=112,slow=34						
MDP	**Montagnes des**	**45.48**	**299**	LR	LR	12 42 35.3	
	comp=Z,63nm,20.5s,baz=168,slow=33						
VNA1	**Neumayer--Stat**	**51.17**	**178**	P	P	12 26 49.0	+4.1
LVC	**Limon Verde**	**51.35**	**256**	LR	LR	12 48 00.1	
	comp=Z,90nm,20.5s,baz=70,slow=35						
VNA2	**Neumayer--Watz**	**51.48**	**177**	P	**P**	**12 26 48.6**	**+1.3**
LPAZ	**La Paz**	**51.71**	**264**	LR	LR	12 48 54.3	
	comp=Z,216nm,18.8s,baz=88,slow=36						
VNA3	**Neumayer Olymp**	**51.72**	**178**	P	**P**	**12 26 50.3**	**+1.2**
SNAA	**Sanae**	**52.48**	**176**	P	**P**	**12 26 55.7**	**+0.8**
SNAA	**Sanae**	**52.48**	**176**	P	**P**	**12 26 54.3**	**-0.5**
	1.6nm,0.9s,baz=334,slow=9.2,SNR=6.5 1.6nm,0.9s						
MDT	**Midelt**	**52.82**	**10**	LR	LR	12 46 51.1	
	comp=Z,183nm,20.6s,baz=171,slow=33						
TROLL	**Troll, Antarti**	**53.27**	**174**	P	**P**	**12 27 00.6**	**-0.2**
PMSA	**Palmer Station**	**56.02**	**203**	LR	LR	12 47 37.8	
	comp=Z,109nm,18.2s,baz=54,slow=32						
KEST	**Kesra**	**59.10**	**22**	P	**P**	**12 27 43.5**	**+0.1**
	2.0nm,0.8s,baz=162,slow=20,SNR=2.3 2.0nm,0.8s						
NNA	**Nana**	**60.95**	**267**	LR	LR	12 53 48.9	
	comp=Z,166nm,20.9s,baz=128,slow=36						
VAE	**Valguarnera**	**62.63**	**25**	LR	LR	12 54 04.0	
	comp=Z,158nm,18.1s,baz=152,slow=35						
SDV	**Santo Domingo**	**62.79**	**291**	LR	LR	12 54 26.4	
	comp=Z,167nm,21.6s,baz=92,slow=35						
ATD	**Arta Tunnel**	**63.69**	**66**	LR	LR	12 52 44.7	
	comp=Z,209nm,21.6s,baz=244,slow=33						
ATAH	**Atahualpa**	**63.83**	**272**	LR	LR	12 55 03.5	
	comp=Z,274nm,21.5s,baz=122,slow=35						
ROSC	**El Rosal**	**64.34**	**286**	LR	LR	12 54 27.8	
	comp=Z,275nm,21.8s,baz=156,slow=34						
IDI	**Anoyia**	**65.72**	**34**	LR	LR	12 55 22.5	
	comp=Z,38nm,21.9s,baz=153,slow=34						
EIL	**Elat**	**67.79**	**45**	LR	LR	12 55 58.1	
	comp=Z,97nm,18.7s,baz=268,slow=34						
DAVOX	**Davos/Dischmat**	**69.40**	**17**	LR	LR	12 58 11.2	
	comp=Z,108nm,18.1s,baz=262,slow=35						
VRAC	**Vranov**	**73.69**	**20**	LR	LR	13 00 13.9	
	comp=Z,105nm,21.3s,baz=215,slow=35						
BRTR	**Keskin Array B**	**73.70**	**36**	P	**P**	**12 29 16.0**	**-0.3**
	0.4nm,0.4s,baz=203,slow=6.3,SNR=2.0						
BRTR				LR	LR	13 01 22.9	
	comp=Z,43nm,18.3s,baz=194,slow=36 0.4nm,0.4s						
MLR	**Muntele Rosu**	**74.11**	**28**	LR	LR	13 00 40.9	
	comp=Z,49nm,21.7s,baz=185,slow=35						
AKASG	**Malin Array Be**	**79.52**	**26**	P	**P**	**12 29 48.8**	**0.0**
	0.5nm,0.4s,baz=220,slow=4.9,SNR=4.1 0.5nm,0.4s						
WSAR	**Wadi Sarin**	**82.39**	**62**	LR	LR	13 05 17.9	
	comp=Z,207nm,20.2s,baz=262,slow=35						
NOA	**NORSAR Array B**	**82.81**	**12**	LR	LR	13 06 56.5	
	comp=Z,30nm,20.2s,baz=235,slow=36						
VNDA	**Vanda**	**83.07**	**179**	P	**P**	**12 30 06.6**	**-0.8**
	0.4nm,0.8s,baz=176,slow=2.4,SNR=2.1 0.4nm,0.8s						
FINES	**FINESS Array B**	**86.79**	**18**	P	**P**	**12 30 27.4**	**+1.3**
	0.9nm,0.9s,baz=227,slow=3.2,SNR=1.9 0.9nm,0.9s						
CMIG	**Matias Romero**	**87.65**	**289**	LR	LR	13 10 51.9	
	comp=Z,48nm,20.1s,baz=128,slow=36						
GEYT	**Alibeck**	**88.36**	**49**	LR	LR	13 08 55.7	
	comp=Z,62nm,21.2s,baz=286,slow=35						
JMIC	**Jan Mayen**	**90.40**	**2**	LR	LR	13 06 11.3	
	comp=Z,27nm,20.8s,baz=269,slow=32						
ARCES	**ARCESS Array B**	**93.15**	**13**	LR	LR	13 12 46.3	
	comp=Z,33nm,18.8s,baz=360,slow=36						
AKTO	**Aktyubinsk**	**93.84**	**37**	LR	LR	13 15 13.5	
	comp=Z,32nm,20.9s,baz=150,slow=37						
PALK	**Pallekele**	**96.53**	**85**	LR	LR	13 07 24.7	
	comp=Z,211nm,21.1s,baz=5.2,slow=31						
SPITS	**Spitsbergen Ar**	**99.08**	**6**	LR	LR	13 13 05.0	
	comp=Z,22nm,20.3s,baz=206,slow=34						
ASAR	**Alice Springs**	**126.66**	**142**	PKP	**PKiKP**	**12 36 46.5**	**-0.5**
	0.3nm,0.6s,baz=206,slow=1.2,SNR=4.4						
WRA	**Warramunga Arr**	**129.76**	**140**	PKP	**PKiKP**	**12 36 52.6**	**-0.7**
	0.6nm,1.0s,baz=214,slow=1.2,SNR=8.0						
PETK	**Petropavlovsk-**	**145.88**	**9**	PKPbc	**PKPab**	**12 37 22.0**	**+0.1**
	1.3nm,0.8s,baz=338,slow=1.6,SNR=2.3						
MJAR	**Matsushiro Arr**	**150.16**	**50**	PKPbc	**PKiKP**	**12 37 34.7**	**+0.3**
	1.7nm,0.8s,baz=232,slow=1.4,SNR=4.7						

SOME ***29*** *12:24:35.9, 39°.22N×73°.65E, h20km*

KRNET ***29*** *12:24:38.5±0.1, 39°.41N×73°.65E, mb3.5*

ISC 29 12:24:40.1±1.3, 39°.50N±0°.06×73°.56E±0°.04, h10km, n19, σ2°.33/37, 10C-6D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.18**	**330**	⇑*eP*	**Pb**	**12 25 03.1**	**+0.3**
	baz=30						
OHH				⇑*eS*	**Sg**	**12 25 21.3**	**+3.0**
	baz=30						
BTK	**Batken**	**2.18**	**286**	⇑*eP*	**Pb**	**12 25 19.4**	**-0.4**
	baz=88						
BTK				⇑*eS*	**Sb**	**12 25 49.3**	**+2.4**
	baz=88						
GAR	**Garm**	**2.56**	**260**	⇓*eP*	**Pb**	**12 25 24.3**	**-2.0**
	baz=62						
GAR				⇓*eS*	**Sb**	**12 25 57.4**	**-0.5**
	baz=62						
TRKS	**Terek-Say**	**2.74**	**319**	⇑*eP*	**Pn**	**12 25 26.4**	**+2.1**
	baz=18						
TRKS				⇑*eS*	**Sb**	**12 26 01.9**	**-1.2**
	baz=18						
UCH	**Uchtor**	**2.82**	**15**	⇓*iP*	**Pb**	**12 25 28.0**	**-2.9**
	baz=13						
UCH				⇓*eS*	**Sb**	**12 26 04.4**	**-1.3**
	baz=13						
EKS2	**Erkin-Say**	**3.17**	**3**	⇓*eP*	**Pb**	**12 25 33.1**	**-3.5**
	baz=2.0						
EKS2				⇓*iS*	**Sb**	**12 26 12.7**	**-2.5**
	baz=2.0						
AAK	**Ala-Archa**	**3.21**	**12**	⇑*eP*	**Pn**	**12 25 33.5**	**+2.6**
	baz=11						
AAK				⇑*eS*	**Sb**	**12 26 13.6**	**-3.1**
	baz=11						
MRKS	**Merke**	**3.25**	**356**	*eP*	**Pb**	**12 25 40.2**	**+2.1**
	5.2nm,0.3s						
MRKS				*eS*	**Sg**	**12 26 26.7**	**+2.0**
	77nm,0.2s						
KBK	**Karagaybulak**	**3.33**	**18**	⇑*eP*	**Pn**	**12 25 35.0**	**+2.6**
	baz=16						
KBK				⇑*eS*	**Sn**	**12 26 16.0**	**+3.9**
	baz=16						
IUG	**Iuzhnay**	**3.76**	**316**	*eP*	**Pb**	**12 25 47.2**	**+0.5**
	170nm,0.2s						
IUG				*eS*	**Sg**	**12 26 39.2**	**-1.8**
	33nm,0.5s						
KST	**Kastek**	**3.98**	**26**	*eP*	**Pb**	**12 25 51.7**	**+1.3**
	5.2nm,0.5s						
KST				*eS*	**Sg**	**12 26 46.1**	**-1.8**
	20nm,0.5s						
SGDS	**Sogindy**	**4.03**	**11**	*eP*	**Pb**	**12 25 52.4**	**+1.1**
	4.4nm,0.5s						
SGDS				*eS*	**Sg**	**12 26 47.4**	**-2.2**
	17nm,0.4s						
MTBS	**Maitube**	**4.22**	**30**	*eP*	**Pb**	**12 25 56.6**	**+2.0**
	9.8nm,0.5s						
MTBS				*eS*	**Sg**	**12 26 55.1**	**-0.7**
	12nm,0.3s						
TNSS	**Tian-Shan**	**4.36**	**35**	*eP*	**Pg**	**12 26 00.7**	**-3.1**
	4.7nm,0.3s						
TNSS				*eS*	**Sg**	**12 27 01.0**	**+0.7**
	8.1nm,0.4s						
BRLS	**Borolday**	**4.51**	**323**	*eP*	**Pb**	**12 26 00.8**	**+1.4**
	1.8nm,0.3s						
BRLS				*eS*	**Sg**	**12 27 02.0**	**-2.8**
	15nm,0.4s						
KUU	**Kurty**	**4.86**	**24**	*eP*	**Pb**	**12 26 07.6**	**+2.2**
	1.8nm,0.5s						
KUU				*eS*	**Sg**	**12 27 13.4**	**-2.8**
	14nm,0.6s						
SATY	**Saty**	**5.10**	**44**	*eP*	**Pg**	**12 26 15.4**	**-2.4**
	2.0nm,0.2s						
SATY				*eS*	**Sg**	**12 27 27.0**	**+3.2**
	11nm,0.8s						
KURS	**Kuram**	**5.28**	**40**	*eP*	**Pg**	**12 26 17.8**	**-3.4**
	1.8nm,0.7s						
KURS				*eS*	**Sg**	**12 27 31.0**	**+1.3**
	6.7nm,1.0s						
KPKS	**Kokpek**	**5.53**	**43**	*eP*	Pg	12 26 20.8	-5.2
	1.6nm,0.4s						
KPKS				*eS*	**Sg**	**12 27 36.1**	**-1.4**
	12nm,0.5s						

BJI ***29*** *12:25:40.6±0.0, 55°.19N×162°.28W, h55km, mb5.0/39, mB4.9/11, Ms4.5/4, Ms7 4.3/3*

MOS ***29*** *12:25:42.3±1.1, 55°.05N×161°.97W, h67km, mb4.9/44, Error ellipse: s-maj=8.6km s-min=5.4km az=83.4*

IDC ***29*** *12:25:43.5±1.4, 55°.03N×162°.11W, h64km±11km, mb4.2/31, mbtmp4.5/36, MS3.5/12, Error ellipse: s-maj=16.9km s-min=8.7km az=2.0*

AEIC ***29*** *12:25:44±3.7, 54°.72N±0°.05×161°.79W±0°.06, h45km±5km, Error ellipse: s-maj=8.0km s-min=4.5km az=160.0*

NEIC ***29*** *12:25:44.5±2.4, 54°.92N±0°.06×161°.90W±0°.06, h70km±3km, mb4.7/187, ML5.2/14, Mww4.6, ML4.9(AEIC), Error ellipse: s-maj=9.7km s-min=4.5km az=161.0*

NEIC ***29*** *12:25:45, 54°.63N×161°.78W, h50km, Moment Tensor Solution. Duration: 2◎0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.44; $M_{\theta\theta}$-0.38; $M_{\phi\phi}$-0.06; $M_{r\theta}$0.20; $M_{\theta\phi}$0.84; $M_{\phi r}$0.35; Fault plane solution: M_o1.02000×10^{16} NP1:ϕ_S91.00000°, δ62.00000°,λ27.00000°. NP2:ϕ_S348.00000°,δ67.00000°, λ149.00000°. Principal axes: T 0.9494, Plg38.0000°, Azm308.0000°; N 0.1329, Plg52.0000°, Azm134.0000°; P -1.0824, Plg3.0000°, Azm40.0000°;*

ISC 29 12:25:43.6±0.5, 54°.97N±0°.06×161°.89W±0°.03, h69km±4km, h68km:pP-P,n803,σ1°31/820, mb4.7/158, 93C-108D, Fault plane solution: NP1:ϕ_S355.95514°,δ45.84999°, λ172.07849°. **NP2:**ϕ_S91.49092°,δ84.32499°,λ44.42460°. **Principal axes:** T Plg34.2254°, Azm323.8464°; N Plg45.2896°, Azm97.2521°; P Plg24.9992°, Azm215.3531°; **Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DT1	**Dutton Round H**	**0.26**	**302**		**Pn**	**12 25 54.6**	**+0.2**
HAG	**Hague Volcano**	**0.35**	**359**		**Pn**	**12 25 56.3**	**+1.2**
HAG	**Hague Volcano**	**0.35**	**359**	P	**Pn**	**12 25 56.3**	**+1.2**
PS4A	**Pavlof South-4**	**0.38**	**3**		**Pn**	**12 25 56.4**	**+1.2**
PVV	**Pavlof Volcano**	**0.41**	**8**		**Pn**	**12 25 56.7**	**+1.2**
BLHA	**Black Hill**	**0.74**	**352**		**Pn**	**12 26 00.9**	**+1.9**
SDPT	**Sand Point**	**0.90**	**64**	Pn	**Pn**	**12 26 01.4**	**+0.6**
SDPT					**Sn**	**12 26 14.3**	**+0.9**
SDPT				IAML		12 26 15.0	
	comp=E,49μm,0.7s						
SDPT	**Sand Point**	**0.90**	**64**	P	**Pn**	**12 26 01.3**	**+0.6**
	baz=231,SNR=721						
ISLZ	**Isanotski Laza**	**1.08**	**258**		**Pn**	**12 26 02.8**	**-0.3**
ISLZ					**Sn**	**12 26 17.5**	**-0.1**
BRPK	**Brown Peak**	**1.12**	**254**		**Pn**	**12 26 03.0**	**-0.6**
SSLN	**Shishaldin Nor**	**1.23**	**263**		**Pn**	**12 26 05.6**	**+0.6**
SSLN					**Sn**	**12 26 22.9**	**+2.0**
SSLS	**Shishaldin Sou**	**1.25**	**259**		**Pn**	**12 26 05.4**	**+0.2**
SSLS					**Sn**	**12 26 22.8**	**+1.4**
CHNA	**Chernabura Isl**	**1.34**	**95**	P	**Pn**	**12 26 05.6**	**-0.7**
	baz=266,SNR=246						
CNBA	**Chernabura Isl**	**1.34**	**95**	Pn	**Pn**	**12 26 05.7**	**-0.6**
CNBA					**Sn**	**12 26 20.1**	**-3.3**
WESE	**West Dahl East**	**1.64**	**253**		**Pn**	**12 26 10.7**	**+0.2**
WESP	**Westdahl Peak**	**1.71**	**255**		**Pn**	**12 26 11.8**	**+0.4**
WECS	**Westdahl Cape**	**1.73**	**256**		**Pn**	**12 26 12.0**	**+0.4**
WECS					**Sn**	**12 26 33.4**	**+0.6**
S14K	**Fog Glacier**	**1.87**	**44**	P	**Pn**	**12 26 15.8**	**+2.3**
	baz=220,SNR=213						
VNFG	**Fog Glacier, M**	**1.87**	**44**		**Pn**	**12 26 15.8**	**+2.2**
VNSG	**Veniaminof 6**	**1.97**	**53**		**Pn**	**12 26 16.6**	**+1.7**
VNHG	**Veniaminof 1**	**1.99**	**50**		**Pn**	**12 26 17.0**	**+1.8**
AKSA	**Akutan Strait**	**2.37**	**251**		**Pn**	**12 26 20.4**	**+0.2**
AKSA					**Sn**	**12 26 48.1**	**-0.1**
AKUT	**Akutan**	**2.41**	**251**	Pn	**Pn**	**12 26 20.8**	**+0.1**
AKUT				IAML		12 27 01.1	
	comp=N,7μm,0.6s						
AKGG	**Akutan Green G**	**2.51**	**254**		**Pn**	**12 26 22.2**	**+0.1**
AKBBA	**Akutan Broad B**	**2.51**	**251**		**Pn**	**12 26 21.2**	**-0.9**
ANPB	**Aniakchak Plen**	**2.74**	**46**		**Pn**	**12 26 27.1**	**+1.8**
ANNW	**Aniakchak Nort**	**2.88**	**44**		**Pn**	**12 26 29.2**	**+2.0**
ANNE	**Aniakchak Nort**	**2.91**	**46**		**Pn**	**12 26 29.3**	**+1.8**
UNV	**Unalaska Valle**	**2.92**	**249**	Pn	**Pn**	**12 26 27.5**	**-0.2**
UNV	**Unalaska Valle**	**2.92**	**249**	P	**Pn**	**12 26 27.2**	**-0.5**
	baz=70,SNR=56						
MTBL	**Makushin Table**	**2.97**	**252**		**Pn**	**12 26 28.4**	**0.0**
MNAT	**Makushin Natee**	**3.00**	**251**		**Pn**	**12 26 28.4**	**-0.4**
MGOD	**Makushin Gods**	**3.14**	**250**		**Pn**	**12 26 30.6**	**-0.2**
CHIR	**Chirikof Islan**	**3.68**	**74**	Pn	**Pn**	**12 26 38.1**	**+0.1**
CHIR				IAML		12 27 40.2	
	comp=E,8μm,1.0s						
CHIR				IAML		12 27 43.6	
	comp=N,6μm,0.9s						
CHIR	**Chirikof Islan**	**3.68**	**74**	P	**Pn**	**12 26 38.2**	**+0.2**
	baz=255,SNR=34						
OKFG	**Magazine Ridge**	**3.87**	**249**		**Pn**	**12 26 40.4**	**-0.1**
PLBL	**Peulik Blue Cr**	**3.93**	**44**		**Pn**	**12 26 44.2**	**+2.7**
R17K	**Ugashik Creek**	**4.07**	**47**		**Pn**	**12 26 45.8**	**+2.5**
R17K	**Ugashik Creek**	**4.07**	**47**	P	**Pn**	**12 26 45.8**	**+2.5**
	baz=228,SNR=361						
PLK1	**Peulik 1**	**4.08**	**44**		**Pn**	**12 26 46.0**	**+2.5**
PLK5	**Peulik 5**	**4.12**	**40**		**Pn**	**12 26 46.6**	**+2.7**
NIKH	**Nikolski High**	**4.57**	**247**	Pn	**Pn**	**12 26 49.8**	**-0.4**
NIKH	**Nikolski High**	**4.57**	**247**	P	**Pn**	**12 26 49.8**	**-0.4**
	baz=64,SNR=9.8						
P16K	**Nushagak River**	**4.60**	**26**		**Pn**	**12 26 52.5**	**+2.0**
P16K	**Nushagak River**	**4.60**	**26**	P	**Pn**	**12 26 52.5**	**+2.0**
	baz=207,SNR=223						
SII	**Sitkinak Islan**	**4.64**	**67**	Pn	**Pn**	**12 26 51.1**	**+0.1**
SII				IAML		12 28 10.3	
	comp=E,4μm,0.7s						
SII	**Sitkinak Islan**	**4.64**	**67**	P	**Pn**	**12 26 51.1**	**+0.1**
	baz=250,SNR=67						
SII	**Sitkinak Islan**	**4.64**	**67**	P	**Pn**	**12 26 51.2**	**+0.1**
Q17K	**Contact Creek**	**4.68**	**43**	P	**Pn**	**12 26 53.9**	**+2.2**
	baz=225						
Q16K	**King Salmon**	**4.70**	**36**		**Pn**	**12 26 54.4**	**+2.6**
Q16K	**King Salmon**	**4.70**	**36**	P	**Pn**	**12 26 54.5**	**+2.6**
	baz=218,SNR=115						
KELA	**Mount Kelaz**	**4.86**	**42**		**Pn**	**12 26 56.7**	**+2.6**
O16K	**Kokwok River B**	**5.07**	**22**		**Pn**	**12 26 58.6**	**+1.6**
O16K	**Kokwok River B**	**5.07**	**22**	P	**Pn**	**12 26 58.7**	**+1.6**
	baz=204,SNR=208						
P17K	**Kvichak River**	**5.17**	**33**		**Pn**	**12 27 00.8**	**+2.4**
P17K	**Kvichak River**	**5.17**	**33**	P	**Pn**	**12 27 00.9**	**+2.4**
	baz=215						
SPIA	**Saint Paul Isl**	**5.18**	**299**	Pn	**Pn**	**12 26 59.4**	**+1.0**
SPIA	**Saint Paul Isl**	**5.18**	**299**	P	**Pn**	**12 26 60.0**	**+1.6**
	baz=114,SNR=7.7						
KAHC	**Katmai Hardscr**	**5.28**	**43**		**Pn**	**12 27 02.4**	**+2.4**
Q18K	**Katmai Hardscr**	**5.28**	**43**	P	**Pn**	**12 27 02.4**	**+2.4**
	baz=226						
OHAK	**Old Harbor**	**5.32**	**61**	Pn	**Pn**	**12 26 59.9**	**-0.4**
OHAK				IAML		12 28 24.2	
	comp=E,1μm,1.1s						
OHAK				IAML		12 28 28.1	
	comp=N,1μm,1.0s						
OHAK	**Old Harbor**	**5.32**	**61**	P	**Pn**	**12 27 00.1**	**-0.2**
	baz=248,SNR=80						
KAHG	**Katmai Hook Gl**	**5.37**	**46**		**Pn**	**12 27 03.6**	**+2.5**
O17K	**Koliganek Bris**	**5.47**	**26**		**Pn**	**12 27 04.1**	**+1.7**
O17K	**Koliganek Bris**	**5.47**	**26**	P	**Pn**	**12 27 04.1**	**+1.7**
	baz=209,SNR=165						
KAPH	**Katmai Pasha**	**5.51**	**46**		**Pn**	**12 27 05.3**	**+2.2**
P18K	**Big Mountain,**	**5.72**	**37**	Pn	**Pn**	**12 27 07.8**	**+1.9**
P18K	**Big Mountain,**	**5.72**	**37**	P	**Pn**	**12 27 08.7**	**+2.7**
	baz=220,SNR=225						
N16K	**Nishlik Lake**	**5.77**	**16**		**Pn**	**12 27 09.0**	**+2.5**
N16K	**Nishlik Lake**	**5.77**	**16**	P	**Pn**	**12 27 09.2**	**+2.7**
	baz=197,SNR=402						
KDAK	**Kodiak Island**	**5.89**	**58**	P	**Pn**	**12 27 08.0**	**-0.1**
	comp=N,152nm,0.3s,baz=256,slow=7.2,SNR=369						
KDAK				S	**Sn**	**12 28 10.6**	**-3.5**
	comp=N,195nm,0.6s,baz=212,slow=8.6,SNR=1.6						
KDAK				LR	LR	12 29 24.0	
	comp=N,359nm,20.7s,baz=244,slow=37						
KDAK	**Kodiak Island**	**5.89**	**58**	Pn	**Pn**	**12 27 08.2**	**-0.1**
KDAK	**Kodiak Island**	**5.89**	**58**	P	**Pn**	**12 27 08.1**	**-0.1**
	baz=243						
Q19K	**Cape Douglas,**	**6.01**	**45**	Pn	**Pn**	**12 27 10.4**	**+0.6**
Q19K	**Cape Douglas,**	**6.01**	**45**	P	**Pn**	**12 27 11.4**	**+1.6**
	baz=230,SNR=134						
O18K	**Koktuh Hills**	**6.08**	**34**		**Pn**	**12 27 13.5**	**+2.6**
O18K	**Koktuh Hills**	**6.08**	**34**	P	**Pn**	**12 27 13.3**	**+2.5**
	baz=218,SNR=209						
AUCH	**Augustine Cone**	**6.36**	**43**		**Pn**	**12 27 17.8**	**+3.1**
Q20K	**Shuyak Island**	**6.37**	**51**	P	**Pn**	**12 27 15.2**	**+0.5**
	baz=237,SNR=46						
SYI	**Shuyak Island**	**6.37**	**51**		**Pn**	**12 27 15.6**	**+1.0**
AUQ	**Augustine Qik'**	**6.37**	**43**		**Pn**	**12 27 17.9**	**+3.1**
AUL	**Augustine Lava**	**6.38**	**43**		**Pn**	**12 27 18.0**	**+3.2**
AU22	**Augustine Moun**	**6.40**	**43**		**Pn**	**12 27 18.0**	**+2.9**
N18K	**Kilae Creek**	**6.56**	**27**	Pn	**Pn**	**12 27 18.4**	**+1.0**
N18K	**Kilae Creek**	**6.56**	**27**	P	**Pn**	**12 27 18.9**	**+1.5**
	baz=210,SNR=103						
Q19K	**Port Alsworth**	**6.63**	**35**		**Pn**	**12 27 20.0**	**+1.7**
O19K	**Port Alsworth**	**6.63**	**35**	P	**Pn**	**12 27 20.9**	**+2.6**
	baz=220,SNR=82						
IVE	**Iliamna Volcan**	**6.96**	**40**		**Pn**	**12 27 25.2**	**+2.4**
SVW2	**Sparrevohn**	**7.00**	**26**	Pn	**Pn**	**12 27 25.0**	**+1.8**
N19K	**Bonanza Creek**	**7.06**	**31**	Pn	**Pn**	**12 27 26.4**	**+2.1**
N19K	**Bonanza Creek**	**7.06**	**31**	P	**Pn**	**12 27 27.2**	**+3.0**
	baz=216,SNR=216						
O20K	**Slope Mountain**	**7.15**	**40**		**Pn**	**12 27 27.9**	**+2.5**
O20K	**Slope Mountain**	**7.15**	**40**	P	**Pn**	**12 27 27.

baz=216,SNR=70
PMR Palmer 9.43 40 Pn 12 27 56.2 -0.3
PMR Palmer 9.43 40 P Pn 12 27 56.2 -0.3
PMR Palmer 9.43 40 P Pn 12 27 56.6 +0.1
baz=230,SNR=40
Q23K Middleton Isla 9.54 56 Pn 12 27 57.5 -0.5
Q23K Middleton Isla 9.54 56 P Pn 12 27 57.3 -0.6
baz=247
MID Middleton Isla 9.54 56 Pn 12 27 57.3 -0.7
MID Middleton Isla 9.54 56 P Pn 12 27 57.3 -0.7
KNK Knik Glacier 9.58 42 Pn 12 27 58.1 -0.4
KNK Knik Glacier 9.58 42 P Pn 12 27 58.4 -0.2
baz=232,SNR=45
CUT Chulitna 9.59 34 Pn 12 28 00.7 +2.1
CUT Chulitna 9.59 34 P Pn 12 27 59.8 +1.2
baz=223,SNR=30
GHO Glory Hole Cre 9.62 40 Pn 12 27 58.7 -0.5
KIKV Kanaga Island 9.63 258 Pn 12 27 59.3 0.0
KIWB Kanaga Island 9.63 257 Pn Pn 12 27 59.7 +0.5
ANM Nome 9.78 351 Pn Pn 12 28 03.9 +2.6
ANM Nome 9.78 351 P Pn 12 28 03.9 +2.6
ANM Nome 9.78 351 P Pn 12 28 03.6 +2.3
baz=168,SNR=5.1
GLI Glacier Island 9.84 47 Pn 12 28 01.4 -0.6
GLI Glacier Island 9.84 47 P Pn 12 28 01.2 -0.9
baz=238,SNR=24
CAST Castle Rocks 9.84 27 Pn 12 28 03.9 +1.8
CAST Castle Rocks 9.84 27 P Pn 12 28 03.2 +1.1
baz=214,SNR=37
HIN Hinchinbrook I 9.86 50 Pn 12 28 02.4 0.0
SML Sawmill 9.87 41 Pn 12 28 01.6 -0.9
SML Sawmill 9.87 41 P Pn 12 28 01.5 -1.0
baz=231,SNR=50
J20K Nowinta River 10.03 20 Pn Pn 12 28 06.4 +1.8
J20K Nowinta River 10.03 20 P Pn 12 28 06.1 +1.5
baz=206,SNR=145
FID Port Fidalgo 10.04 49 Pn 12 28 03.8 -1.0
M23K Glacier View 10.09 42 P Pn 12 28 04.9 -0.6
baz=232,SNR=100
GCSA Galena City Sc 10.12 12 P Pn 12 28 07.4 +1.5
baz=196,SNR=6.9
GAMB Gambell 10.14 335 Pn Pn 12 28 09.5 +3.4
GAMB Gambell 10.14 335 P Pn 12 28 09.2 +3.1
baz=146,SNR=7.6
CHUM Lake Minchumin 10.17 25 P Pn 12 28 07.8 +1.3
baz=212,SNR=72
KTH Kantishna Hill 10.26 29 Pn 12 28 09.7 +1.8
EYAK Cordova Ski Ar 10.26 50 Pn Pn 12 28 07.5 -0.4
EYAK Cordova Ski Ar 10.26 50 P Pn 12 28 07.3 -0.5
baz=243,SNR=50
SCM Sheep Creek Mo 10.26 42 Pn 12 28 07.2 -0.7
SCM Sheep Creek Mo 10.26 42 P Pn 12 28 07.2 -0.7
SCM Sheep Creek Mo 10.26 42 P Pn 12 28 08.0 +0.1
baz=233,SNR=101
TRF Thorofare Moun 10.36 30 Pn Pn 12 28 10.9 +1.5
TRF Thorofare Moun 10.36 30 P Pn 12 28 10.4 +1.1
baz=219,SNR=165
WAT1 Susitna Watana 10.45 36 P Pn 12 28 09.6 -0.9
baz=226
DIV Divide 10.52 48 Pn 12 28 11.6 +0.1
WAT6 Susitna Watana 10.57 38 P Pn 12 28 10.8 -1.3
baz=229,SNR=104
KLU Klutina 10.64 46 Pn 12 28 12.6 -0.5
KLU Klutina 10.64 46 P Pn 12 28 12.5 -0.5
baz=238,SNR=235
BPAW Bear Paw Mtn. 10.68 27 Pn Pn 12 28 15.4 +1.8
BPAW Bear Paw Mtn. 10.68 27 P Pn 12 28 14.7 +1.1
baz=215,SNR=56
RND Reindeer 10.76 33 Pn 12 28 15.1 +0.4
RND Reindeer 10.76 33 P Pn 12 28 15.1 +0.4
HMT Hamilton 10.85 53 Pn 12 28 15.9 0.0
M24K Tolsona, Glenn 10.87 43 Pn 12 28 16.0 -0.1
M24K Tolsona, Glenn 10.87 43 P Pn 12 28 15.8 -0.4
baz=235,SNR=67
BMRM Bremner River 10.95 50 Pn 12 28 16.9 -0.4
BMRM Bremner River 10.95 50 P Pn 12 28 16.8 -0.5
baz=243,SNR=48
MCK McKinley 10.97 32 Pn Pn 12 28 18.8 +1.2
MCK McKinley 10.97 32 P Pn 12 28 18.8 +1.2
MCK McKinley 10.97 32 P Pn 12 28 18.6 +1.1
baz=222,SNR=16
SUCK Suckling Hills 10.98 55 Pn 12 28 19.2 +1.6
DHY Denali Highway 11.02 37 Pn 12 28 17.7 -0.6
DHY Denali Highway 11.02 37 P Pn 12 28 17.5 -0.8
baz=228,SNR=44
TNA Tin City 11.03 347 Pn Pn 12 28 21.8 +3.5
TNA Tin City 11.03 347 P Pn 12 28 20.8 +2.5
baz=162,SNR=6.7
BGLC Bering Glacier 11.23 55 P Pn 12 28 20.8 -0.2
baz=250
N25K Chitina, Valde 11.25 47 Pn Pn 12 28 21.5 +0.2
N25K Chitina, Valde 11.25 47 P Pn 12 28 21.0 -0.3
baz=240,SNR=125
I21K Tanana 11.36 22 Pn 12 28 24.5 +1.8
I21K Tanana 11.36 22 P Pn 12 28 24.0 +1.3
baz=210,SNR=61
HARP HAARP 11.43 43 P Pn 12 28 23.9 +0.2
baz=236,SNR=43
SNH Sunshine Point 11.46 55 Pn 12 28 24.6 +0.3
GLB Gilahina Butte 11.51 48 Pn 12 28 24.6 -0.3
MLY Manley 11.51 24 Pn Pn 12 28 26.9 +2.1
MLY Manley 11.51 24 P Pn 12 28 26.3 +1.4
baz=213,SNR=95
CRQM Cirque 11.52 52 Pn 12 28 24.7 -0.5
CRQE Cirque 11.54 52 P Pn 12 28 24.5 -0.9
baz=247,SNR=13
WAX Waxell Ridge 11.55 54 Pn 12 28 25.1 -0.3
VRDI Verde Repeater 11.57 50 Pn Pn 12 28 25.6 -0.2
NEA2 Nenana 11.58 28 Pn 12 28 26.6 +0.7
NEA2 Nenana 11.58 28 P Pn 12 28 26.2 +0.3
baz=219,SNR=24
H21K Melozitna Rive 11.61 19 Pn Pn 12 28 28.4 +2.2
H21K Melozitna Rive 11.61 19 P Pn 12 28 27.5 +1.3
baz=206,SNR=59
PAX Paxson 11.63 40 Pn Pn 12 28 26.2 -0.4
PAX Paxson 11.63 40 P Pn 12 28 26.2 -0.4
PAX Paxson 11.63 40 P Pn 12 28 25.8 -0.8
baz=233,SNR=140
TGL Tana Glacier 11.66 52 Pn 12 28 26.9 -0.1
IMAR Indian Mountai 11.74 17 Pn Pn 12 28 30.0 +2.0
WRH Wood River Hil 11.77 30 Pn 12 28 27.4 -1.0
MCARA McCarthy VSAT 11.82 49 Pn 12 28 29.3 +0.1
MCARA McCarthy VSAT 11.82 49 P Pn 12 28 28.8 -0.4
baz=244,SNR=29
AMKA Amchitka 11.84 260 Pn Pn 12 28 29.4 +0.1
ISLE Juniper Island 11.84 54 Pn 12 28 29.4 -0.1
MESA MESA 11.88 56 Pn 12 28 29.9 -0.3
MESA MESA 11.88 56 P Pn 12 28 29.8 -0.3
baz=252,SNR=10
I23K Minto, Yukon-K 11.94 26 Pn 12 28 32.5 +1.8
I23K Minto, Yukon-K 11.94 26 P Pn 12 28 31.7 +0.9
baz=216,SNR=97
CCB Clear Creek Bu 11.98 30 Pn 12 28 29.5 -1.8
YAH Yahtse 12.04 55 Pn 12 28 32.5 +0.2
K24K Donnelly Dome 12.04 36 P Pn 12 28 32.5 +0.4
baz=229,SNR=88
HDA Harding Lake 12.07 32 Pn 12 28 31.0 -1.5
HDA Harding Lake 12.07 32 P Pn 12 28 31.3 -1.2
baz=224,SNR=44
MDM Murphy Dome 12.10 29 Pn 12 28 35.2 +2.4
H22K Ishtalitna Cre 12.10 21 P Pn 12 28 34.2 +1.3
baz=209,SNR=78
TCOL CIGO, UAF Yank 12.13 30 Pn 12 28 33.4 +0.1
TCOL CIGO, UAF Yank 12.13 30 P Pn 12 28 32.9 -0.4
baz=221,SNR=5.3
COLA College 12.14 30 Pn 12 28 33.2 -0.1
COLA College 12.14 30 P Pn 12 28 33.3 -0.1
COLA College 12.14 30 P Pn 12 28 32.9 -0.4
baz=221
GRNC Granite Creek 12.15 53 Pn 12 28 33.5 -0.3
G21K Allakaket 12.27 16 P Pn 12 28 36.9 +1.7
baz=203
MENT Mentasta 12.28 42 Pn 12 28 34.6 -0.7
M26K Nabesna, AK 12.29 45 Pn 12 28 35.5 -0.1
M26K Nabesna, AK 12.29 45 P Pn 12 28 35.1 -0.4
baz=240,SNR=240
BARN Barnard Glacie 12.31 52 Pn 12 28 35.9 -0.1
RIDG Independent Ri 12.32 38 Pn Pn 12 28 34.0 -2.0
RIDG Independent Ri 12.32 38 P Pn 12 28 35.5 -0.4
baz=231,SNR=132
IL31 12.35 31 Pn Pn 12 28 34.9 -1.2
ILAR Eielson Array 12.35 31 P Pn 12 28 34.7 -1.5
comp=N,4.7nm,0.4s,baz=222,slow=14,SNR=86
ILAR S Sn 12 30 48.6 -3.2
comp=N,1.3nm,0.7s,baz=254,slow=16,SNR=1.2
ILAR ScP ScP 12 37 38.3 -0.2
comp=N,0.7nm,0.5s,baz=272,slow=3.1,SNR=7.2
ILAR Eielson Array 12.35 31 Pn Pn 12 28 34.9 -1.3
ILAR Eielson Array 12.35 31 P Pn 12 28 34.9 -1.3
TABL Table Mountain 12.35 55 Pn 12 28 36.4 -0.1
CTG Chitna Glacier 12.42 53 P Pn 12 28 36.8 -0.6
baz=249,SNR=52
CTGM Chitina Glacie 12.42 53 Pn 12 28 37.1 -0.3
POKR Poker Plat Res 12.44 29 Pn 12 28 38.0 +0.4
POKR Poker Plat Res 12.44 29 P Pn 12 28 38.1 +0.6
baz=221,SNR=13
H23K Yukon River 12.45 24 Pn Pn 12 28 39.1 +1.5
H23K Yukon River 12.45 24 P Pn 12 28 38.4 +0.8
baz=214,SNR=65
L26K Log Cabin Wild 12.47 42 Pn 12 28 37.8 -0.2
L26K Log Cabin Wild 12.47 42 P Pn 12 28 37.3 -0.6
baz=237,SNR=103
LOGN Logan Glacier 12.53 54 Pn 12 28 39.2 +0.3
DOT Dot Lake 12.55 39 Pn 12 28 38.8 -0.2
PCA Pinnacle 12.68 57 Pn 12 28 40.8 0.0
PINM Pinnle 12.68 57 P Pn 12 28 40.6 -0.3
baz=254,SNR=26
J25K Salcha River, 12.71 34 Pn Pn 12 28 39.1 -2.1
J25K Salcha River, 12.71 34 P Pn 12 28 38.6 -2.6
baz=227,SNR=61
M27K Edge Creek, AK 12.73 46 Pn 12 28 42.0 +0.3
M27K Edge Creek, AK 12.73 46 P Pn 12 28 41.1 -0.5
baz=242,SNR=50
SCRK Sand Creek 12.77 38 P Pn 12 28 40.0 -2.1
baz=232,SNR=66
H24K Nodor Dome 12.87 27 P Pn 12 28 42.9 -0.5
baz=218,SNR=42
F21K Alatna River 12.93 15 P Pn 12 28 45.9 +1.7
baz=202
BCPM Bancas Point 12.95 58 Pn 12 28 43.7 -0.7
G22K Bettles 12.98 18 P Pn 12 28 46.6 +1.8
baz=207
PNL Peninsula 13.00 60 P Pn 12 28 44.1 -1.1
baz=258,SNR=61
L27K Beaver Creek, 13.08 44 Pn Pn 12 28 45.8 -0.5
L27K Beaver Creek, 13.08 44 P Pn 12 28 45.3 -1.0
baz=240,SNR=135
G23K Bananza Creek 13.09 21 P Pn 12 28 47.6 +1.3
baz=211
BCAR Beaver Creek A 13.10 44 Pn Pn 12 28 45.4 -1.1
YUK3 Moose Creek 13.11 50 P Pn 12 28 46.6 -0.1
baz=247
J26L Joseph Creek 13.23 36 Pn 12 28 48.0 -0.4
J26L Joseph Creek 13.23 36 P Pn 12 28 47.5 -0.9
baz=232,SNR=57
K27K Chicken 13.49 40 Pn 12 28 51.0 -0.6
K27K Chicken 13.49 40 P Pn 12 28 51.1 -0.5
baz=236
COLD Coldfoot 13.50 20 Pn Pn 12 28 54.5 +2.8
COLD Coldfoot 13.50 20 P Pn 12 28 52.6 +0.9
baz=209,SNR=19
YUK4 Talbot Arm 13.78 53 P Pn 12 28 56.7 +0.9
baz=252,SNR=21
YUK6 Outpost Mounta 13.80 55 P Pn 12 28 55.8 -0.3
baz=254,SNR=18
I26K Coal Creek Min 13.88 34 P Pn 12 28 54.1 -2.7
baz=230,SNR=34
E22K Anaktuvuk Pass 14.02 16 P P 12 29 02.2 -2.3
baz=204
HYT Haines Junctio 14.18 56 Pn Pn 12 29 01.3 +0.4
HYT Haines Junctio 14.18 56 P Pn 12 28 59.7 -1.2
baz=255,SNR=21
P30M Million Dollar 14.30 59 P Pn 12 29 00.9 -1.5
baz=259
SHEM Shemya Is, Ala 14.33 271 P Pn 12 29 01.4 -1.4
comp=N,20nm,0.7s,baz=22,slow=11,SNR=2.0
SHEM S Sn 12 31 40.5 +0.5
comp=N,9.4nm,0.5s,baz=217,slow=17,SNR=1.1
PLBC Pleasant Camp 14.49 62 P Pn 12 29 04.7 -0.2
baz=262,SNR=62
DAWY Dawson 14.52 42 Pn 12 29 05.3 0.0
DAWY Dawson 14.52 42 P Pn 12 29 04.2 -1.1
baz=241,SNR=72
N30M Aishikik Lake 14.53 53 P Pn 12 29 04.9 -0.6
baz=254,SNR=34
O30N Mendenhall 14.84 57 P Pn 12 29 09.3 -0.1
baz=258,SNR=34
TOLK Toolik Lake Re 14.85 18 P 12 29 13.0 -0.6
TOLK Toolik Lake Re 14.85 18 P Pn 12 29 11.4 +1.9
baz=208,SNR=51
BMAR Burnt Mountain 14.94 26 Pn Pn 12 29 08.5 -2.2
D23K Nanushuk River 14.96 16 P P 12 29 12.8 -1.9
baz=205,SNR=14
SIT Sitka 14.97 71 Pn Pn 12 29 11.2 +0.2
SIT Sitka 14.97 71 P Pn 12 29 11.2 +0.2
SIT Sitka 14.97 71 P Pn 12 29 09.8 -1.2
baz=272,SNR=6.6
M30M Minto, Yukon 15.00 49 Pn Pn 12 29 11.8 +0.3
M30M IAmb IAmb 12 29 19.0
comp=Z,35nm,0.8s
M30M Minto, Yukon 15.00 49 P Pn 12 29 11.1 -0.3
baz=250,SNR=68
SKAG Skagway 15.02 62 Pn 12 29 13.2 +1.6
SKAG IAmb IAmb 12 29 15.4
comp=Z,45nm,0.8s
SKAG Skagway 15.02 62 P Pn 12 29 12.0 +0.4
baz=263,SNR=35
J29M Klondike Camp 15.16 42 Pn Pn 12 29 14.0 +0.5
BESE Bessie Mountai 15.21 65 Pn 12 29 15.5 +1.4
BESE IAmb IAmb 12 29 21.4
comp=Z,60nm,0.7s
WHY Whitehorse 15.41 57 Pn Pn 12 29 18.1 +1.4
WHY IAmb IAmb 12 29 24.8
comp=Z,60nm,0.8s
WHY Whitehorse 15.41 57 P Pn 12 29 17.1 +0.4
baz=259,SNR=42
D24K Happy Valley 15.43 18 P P 12 29 18.5 -1.6
baz=3
JIS Juneau Island 15.45 66 Pn 12 29 18.7 +1.6
JIS IAmb IAmb 12 29 24.1
comp=Z,62nm,0.8s
I29M Ogilvie Camp, 15.57 39 Pn 12 29 18.2 -0.5
I29M IAmb IAmb 12 29 26.0
comp=Z,32nm,0.8s
I29M Ogilvie Camp, 15.57 39 P Pn 12 29 18.6 -0.1
baz=238
MAYO Mayo, Yukon 15.73 46 Pn 12 29 21.9 +1.1
C23K Itkilik River 15.76 14 P P 12 29 23.0 -0.6
baz=204,SNR=11
P32M Atlin 15.85 62 P Pn 12 29 22.8 +0.5
baz=264,SNR=41
C24K Franklin Bluff 15.95 17 P P 12 29 25.2 -0.6
baz=208,SNR=25
M31M Drury Creek, Y 15.96 52 Pn 12 29 24.8 +1.1
M31M Drury Creek, Y 15.96 52 P Pn 12 29 23.7 +0.1
baz=255,SNR=121
D25K Kavik River 16.04 20 P P 12 29 25.6 -1.1
baz=213
N32M Quiet Lake 16.36 56 P Pn 12 29 28.3 -0.3
baz=260,SNR=37
P33M Teslin, Yukon 16.36 59 P P 12 29 30.8 +0.3
P33M Teslin, Yukon 16.36 59 P Pn 12 29 28.3 -0.4
baz=263,SNR=41
CRAG Craig 16.38 76 Pn 12 29 29.6 +0.8
CRAG Craig 16.38 76 P Pn 12 29 27.2 -1.7
baz=279
FARO Faro, Yukon 16.44 52 P P 12 29 31.3 0.0
FARO IAmb IAmb 12 29 37.5
comp=Z,41nm,0.6s
A21K Barrow 16.57 6 P P 12 29 32.3 -0.3
baz=190
EPYK Eagle Plains 16.65 37 Pn Pn 12 29 32.5 +0.3
EPYK IAmb IAmb 12 29 39.4
comp=Z,45nm,0.6s
EPYK Eagle Plains 16.65 37 P Pn 12 29 32.2 -0.1
baz=238,SNR=40
WRAK Wrangell Islan 16.66 73 P Pn 12 29 33.4 +1.0
WRAK Wrangell Islan 16.66 73 P Pn 12 29 32.2 -0.2
baz=276,SNR=15
C26K Camden Bay 16.82 20 P P 12 29 35.2 -0.2
baz=215
C27K Jago River 16.84 22 P P 12 29 35.9 +0.3
baz=218
DIB Dawson Inlet, 17.29 84 P Pn 12 29 41.3 +1.1
DLBC Dease Lake 17.74 66 P Pn 12 29 47.3 +1.6
comp=Z,16nm,0.9s,baz=273,slow=11,SNR=55
DLBC Dease Lake 17.74 66 Pn 12 29 47.8 +2.1
DLBC Dease Lake 17.74 66 P Pn 12 29 48.0 +2.3
baz=272,SNR=27
T35M Bob Quinn 17.74 71 P P 12 29 44.5 -1.1
baz=276
RUBB Prince Rupert 18.24 79 P Pn 12 29 52.4 +0.7
GRNB Grenville Isla 18.54 80 P 12 29 55.2 +0.8
GRNB IAmb IAmb 12 30 19.1
comp=Z,42nm,1.2s
TGTN Hyland Airport 18.70 56 P Pn 12 29 58.2 +0.9
baz=264,SNR=14
INK Inuvik 18.72 33 P P 12 29 56.0 -0.3
comp=Z,28nm,0.7s,baz=235,slow=7.8,SNR=34
INK Inuvik 18.72 33 P P 12 29 55.4 -0.8
INK IAmb IAmb 12 29 59.9
comp=Z,32nm,0.9s
INK Inuvik 18.72 33 P P 12 29 55.4 -0.8
INK pmax pmax
comp=Z,32nm,1.0s
INK Inuvik 18.72 33 P P 12 29 55.9 -0.4
baz=238,SNR=23
BILL Bilibino 19.73 324 P P 12 30 08.1 +0.7
BILL Bilibino 19.73 324 *d iP* P 12 30 08.0 +0.7
BILL pmax pmax
comp=Z,17nm,0.8s
BILL MLR MLR
comp=Z,132nm,17.0s
BBB Bella Bella 20.14 84 P P 12 30 13.7 +1.9
comp=Z,7.0nm,0.9s,baz=289,slow=13,SNR=4.7
comp=Z,7.0nm,0.9s
C36M Paulatuk 22.26 35 P P 12 30 33.5 -1.0
C36M Paulatuk 22.26 35 P P 12 30 34.2 -0.3
baz=248
PET Petropavlovsk 23.07 282 P P 12 30 43.2 +0.3
PET IAmb IAmb 12 30 43.9
comp=Z,49nm,1.1s
PET Petropavlovsk 23.07 282 *ce*P P 12 30 42.5 -0.5
PET pmax pmax
comp=Z,46nm,1.3s
PET Petropavlovsk 23.07 282 P P 12 30 43.1 +0.1
PEA0B Petropavlovsk- 23.57 282 P P 12 30 47.1 -0.7
PEA0B Petropavlovsk- 23.57 282 P P 12 30 47.1 -0.7
PEA0B pmax pmax
comp=Z,89nm,1.5s
PETK Petropavlovsk- 23.57 282 P P 12 30 47.0 -0.7
comp=Z,14nm,0.5s,baz=82,slow=13,SNR=20
PETK PcP PcP 12 34 29.9 -0.7
comp=Z,2.2nm,0.9s,baz=207,slow=0.3,SNR=2.7
PETK LR LR 12 39 19.7
comp=Z,48nm,20.3s,baz=320,slow=35
comp=Z,14nm,0.5s
PETK Petropavlovsk- 23.57 282 P P 12 30 47.6 -0.2
PETK Petropavlovsk- 23.57 282 P P 12 30 47.6 -0.2
LLLB Lillooet 24.34 84 P P 12 30 57.8 +3.0
SEY Seymchan 24.40 308 P P 12 30 54.0 -1.1
comp=Z,4.1nm,0.4s,baz=97,slow=9.8,SNR=19
SEY ScP ScP 12 38 05.7 +1.2
comp=Z,1.0nm,0.7s,baz=130,slow=6.0,SNR=4.0
comp=Z,4.1nm,0.4s
SEY Seymchan 24.40 308 *ce*P P 12 30 53.4 -1.7
SEY pmax pmax
comp=Z,5.0nm,0.6s
NLWA Neilton Lookou 24.76 92 P P 12 31 01.9 +3.3
YKA Yellowknife Ar 25.15 53 P P 12 31 03.0 +1.1
comp=Z,4.8nm,0.5s,baz=270,slow=9.2,SNR=54
YKA PcP PcP 12 34 34.5 +0.6
comp=Z,0.5nm,0.4s,baz=277,slow=0.6,SNR=2.8
YKA ScP ScP 12 38 05.5 -1.2
comp=Z,0.4nm,0.7s,baz=2.1,slow=0.9,SNR=4.3
comp=Z,4.8nm,0.5s
YKA Yellowknife Ar 25.15 53 P P 12 31 03.3 +1.4
YKA Yellowknife Ar 25.15 53 P P 12 31 03.3 +1.4
E03A Lebam 25.39 93 P P 12 31 06.0 +1.7
E03A IAmb IAmb 12 31 28.1
comp=Z,18nm,0.9s
MA2 Magadan 25.56 300 P P 12 31 05.4 -0.2
comp=Z,27nm,0.8s,baz=85,slow=9.4,SNR=15
MA2 LR LR 12 41 37.8
comp=Z,88nm,18.5s,baz=352,slow=38
comp=Z,27nm,0.8s
MA2 Magadan 25.56 300 P P 12 31 06.4 +0.7
MA2 IAmb IAmb 12 31 08.2
comp=Z,27nm,0.8s
MA2 Magadan 25.56 300 *ce*P P 12 31 06.8 +1.2
MA2 pmax pmax
comp=Z,31nm,0.8s
G03D McMinnville, O 26.32 96 P P 12 31 11.1 -1.6
baz=305
B08A Colville Reser 26.87 86 P P 12 31 19.0 +1.4
HOOD Mount Hood Mea 27.18 94 P P 12 31 20.9 +0.2
HOOD IAmb IAmb 12 31 49.8
comp=Z,23nm,1.4s
H04A Detroit Lake 27.25 96 P P 12 31 22.5 +1.4
K02D Willamette Mer 27.63 100 P P 12 31 23.2 -1.4
baz=309
I04A Tendick Farm, 27.66 97 P P 12 31 22.8 -2.0
baz=307
C09A Chrisman Ranch 27.77 87 P P 12 31 25.1 -0.5
I05D Terrebonne, OR 27.94 95 P P 12 31 26.9 -0.4
baz=306
EDM Edmonton 28.07 73 P P 12 31 29.8 +1.4
EDM IAmb IAmb 12 31 30.9
comp=Z,18nm,0.8s
EDM Edmonton 28.07 73 P P 12 31 29.8 +1.4
EDM pmax pmax
comp=Z,18nm,0.8s
J04D Umpqua Nationa 28.17 98 P P 12 31 26.6 -2.9
baz=308,SNR=6.3
NEW Newport 28.19 85 P P 12 31 30.9 +1.4
comp=Z,2.2nm,0.7s,baz=71,slow=3.8,SNR=6.5
comp=Z,2.2nm,0.7s
NEW Newport 28.19 85 P P 12 31 30.9 +1.4
NEW Newport 28.19 85 P P 12 31 30.9 +1.4
NEW pmax pmax
comp=Z,4.0nm,0.9s
J05D Fort Rock, OR 28.65 97 P P 12 31 32.2 -1.5
baz=308,SNR=10
L04D Klamath Falls 28.71 100 P P 12 31 34.2 -0.1
baz=310
G08A Pilot Rock 28.75 92 P P 12 31 36.0 +1.5
YBH Yreka Blue Hor 28.80 101 P P 12 31 37.3 +2.3
comp=Z,2.6nm,0.8s,baz=340,slow=5.4,SNR=4.2
comp=Z,2.6nm,0.8s
I07A Izee 29.15 94 P P 12 31 40.6 +2.5
K05A Summer Lake 29.19 98 P P 12 31 40.8 +2.2
MOD Modoc Plateau 30.05 98 P P 12 31 47.6 +1.4
JTMT Jette 30.09 84 P P 12 31 47.9 +1.5
JTMT IAmb IAmb 12 32 04.4
comp=Z,11nm,1.0s
J08A Circle Bar Ran 30.18 94 P P 12 31 49.7 +2.5
WVOR Wild Horse Val 30.67 96 P P 12 31 53.8 +2.3
WVOR Wild Horse Val 30.67 96 P P 12 31 53.8 +2.3
WVOR pmax pmax
comp=Z,6.0nm,0.9s
BEKR Beckworth 31.37 101 P P 12 31 59.7 +1.9
MFID Camas Ranch 31.67 92 P P 12 32 00.8 +0.5
MPK Martis Peak 31.94 102 P P 12 32 04.2 +1.2
MPK IAmb IAmb 12 32 05.9
comp=Z,7.2nm,0.9s
PAHR Pah Rah Range 32.03 101 P P 12 32 05.4 +1.8
PAHR IAmb IAmb 12 32 06.5
comp=Z,8.1nm,0.8s
RES Resolute Bay 32.05 27 LR LR 12 47 37.1
comp=Z,98nm,19.6s,baz=130,slow=41
VCNR Virginia City 32.16 101 P P 12 32 06.6 +1.8
VCNR IAmb IAmb 12 32 08.1
comp=Z,7.0nm,0.8s
PNTR Pine Nut 32.33 102 P P 12 32 08.1 +1.8
PNTR IAmb IAmb 12 32 09.6
comp=Z,14nm,0.8s
HLID Hailey 32.40 91 P P 12 32 07.3 +0.5
baz=307
EGMT Eagleton 32.53 80 P P 12 32 08.2 +0.5
EGMT IAmb IAmb 12 32 25.8
comp=Z,7.8nm,0.8s
EGMT Eagleton 32.53 80 P P 12 32 07.8 0.0
baz=302
MCMT McKenzie Canyo 32.54 87 P P 12 32 08.2 +0.1
YERR Yerington 32.60 101 P P 12 32 10.7 +2.1
YERR IAmb IAmb 12 32 13.2
comp=Z,7.3nm,0.7s
BOZ Bozeman (W) 32.80 85 P P 12 32 11.1 +0.9
BOZ Bozeman (W) 32.80 85 P P 12 32 11.1 +0.9
BOZ pmax pmax
comp=Z,4.0nm,1.5s
BOZ Bozeman (W) 32.80 85 P P 12 32 10.6 +0.3
baz=305
TIXI Tiksi 32.89 327 P P 12 32 09.2 -1.3
TIXI Tiksi 32.89 327 *ce*P P 12 32 09.5 -1.0
TIXI pmax pmax

comp=Z,5.0nm,1.3s
KVN Kaiserville 33.20 100 P P 12 32 15.2 +1.3
KVN Kaiserville 33.20 100 P P 12 32 15.2 +1.3
KVN pmax pmax
comp=Z,5.0nm,0.9s
RYN Ryan 33.25 101 P P 12 32 15.7 +1.4
QLMT Earthquake Lak 33.36 86 P P 12 32 14.8 -0.4
NVAR Mina Array Bea 33.52 101 P P 12 32 18.7 +2.1
comp=Z,4.4nm,0.7s,baz=302,slow=8.4,SNR=41
NVAR ScP **ScP 12 38 33.3 -0.7**
comp=Z,1.6nm,0.7s,baz=295,slow=2.5,SNR=13
comp=Z,4.4nm,0.7s
NVAR Mina Array Bea 33.52 101 P P 12 32 18.2 +1.6
LHV Little Huntoon 33.53 102 P P 12 32 18.3 +1.9
NV11 Mina Array Sit 33.60 101 P P 12 32 18.7 +1.4
ELK Elko 33.70 95 P P 12 32 19.3 +1.0
ELK lAmb lAmb 12 32 37.1
comp=Z,7.0nm,0.8s
ELK Elko 33.70 95 P P 12 32 19.3 +1.0
ELK pmax pmax
comp=Z,7.0nm,0.9s
H17A Grant Village 34.11 86 P P 12 32 23.0 +1.2
baz=306
TPH Tonopah 34.37 101 P P 12 32 25.4 +1.4
TPH Tonopah 34.37 101 P P 12 32 25.4 +1.4
TPH pmax pmax
comp=Z,39nm,1.0s
RLMT Red Lodge 34.43 84 P P 12 32 26.5 +2.0
RLMT lAmb lAmb 12 32 43.4
comp=Z,9.8nm,1.1s
RLMT Red Lodge 34.43 84 P P 12 32 24.5 +0.1
baz=306
HVU Hansel Valley 34.45 92 P P 12 32 26.3 +1.6
HVU Hansel Valley 34.45 92 P P 12 32 26.3 +1.6
HVU pmax pmax
comp=Z,6.0nm,1.0s
LCH Last Change Ra 34.73 102 P P 12 32 27.7 +0.7
YAK Yakutsk 34.87 310 *e*P **P 12 32 26.3 -1.4**
YAK *e**PP **pP 12 32 41.5 -2.9**
YAK *e* 12 33 43.7
YAK *e* 12 34 58.7
YAK *e*S **S 12 37 52.8 -0.7**
YAK *e**SS **sS 12 38 22.9 +1.1**
YAK *e*SS **SnSn 12 40 04.8 -8.7**
YAK pmax pmax
comp=Z,30nm,0.9s
YAK pmax pmax
comp=N,4.0nm,0.9s
YAK pmax pmax
comp=E,4.0nm,1.1s
YAK pmax pmax
comp=Z,132nm,4.3s
YAK pmax pmax
comp=N,50nm,4.3s
YAK pmax pmax
comp=E,43nm,4.1s
YAK smax smax
comp=E,49nm,4.3s
YAK smax smax
comp=N,32nm,3.5s
VES Vestal, Richgr 34.92 105 P P 12 32 28.8 +0.4
baz=316
CWC Cottonwood Cre 35.05 104 P P 12 32 30.7 +0.9
baz=316
GRAC Grapevine Rang 35.05 102 P P 12 32 32.0 +2.3
GRAC lAmb lAmb 12 32 57.0
comp=Z,15nm,1.2s
GRAC Grapevine Rang 35.05 102 P P 12 32 30.5 +0.8
baz=315
R11A Troy Canyon, C 35.11 99 P P 12 32 31.6 +1.2
R11A lAmb lAmb 12 32 56.8
comp=Z,11nm,0.9s
R11A Troy Canyon, C 35.11 99 P P 12 32 30.7 +0.3
baz=313,SNR=6.9
PKM Mcpherson Peak 35.21 107 P P 12 32 31.3 0.0
baz=318
DUG Dugway, Tooele 35.46 94 P P 12 32 34.5 +1.2
DUG lAmb lAmb 12 32 52.2
comp=Z,10nm,1.1s
DUG Dugway, Tooele 35.46 94 P P 12 32 34.5 +1.2
DUG pmax pmax
comp=Z,10.0nm,1.1s
MPMC Manual Prospec 35.65 103 P P 12 32 35.5 +0.5
baz=316,SNR=6.7
BW06 Boulder Array 35.69 88 P P 12 32 36.5 +1.2
BW06 Boulder Array 35.69 88 P P 12 32 36.3 +1.0
baz=308
PD31 Pinedale Array 35.69 88 P P 12 32 36.1 +0.7
PDAR Pinedale Array 35.69 88 P P 12 32 36.5 +1.2
comp=Z,0.9nm,0.6s,baz=310,slow=5.5,SNR=11
comp=Z,0.9nm,0.6s
PDAR Pinedale Array 35.69 88 P P 12 32 35.5 +0.2
FURC Furnace Creek, 35.71 102 P P 12 32 36.5 +1.3
baz=315
TPNV Topopah Spring 35.71 101 P P 12 32 36.8 +1.3
TPNV Topopah Spring 35.71 101 P P 12 32 36.8 +1.3
TPNV pmax pmax
comp=Z,23nm,1.1s
TPNV Topopah Spring 35.71 101 P P 12 32 37.3 +1.8
baz=315,SNR=14
LRMC Laurel Mtn Rad 35.96 104 P P 12 32 38.2 +0.5
baz=316
GWY Greenwater Val 36.02 102 P P 12 32 39.5 +1.3
GWY lAmb lAmb 12 32 57.3
comp=Z,7.3nm,0.8s
QSM Queen of Sheba 36.07 103 P P 12 32 40.0 +1.6
QSM lAmb lAmb 12 32 41.1
comp=Z,7.0nm,0.8s
PRN Pahroc Range 36.07 99 P P 12 32 40.2 +1.6
PRN lAmb lAmb 12 32 57.6
comp=Z,13nm,1.0s
EDW2 Edwards Air Fo 36.23 105 P P 12 32 40.9 +1.1
baz=317
SHOC Shoshone, Teco 36.45 102 P P 12 32 43.0 +1.4
baz=316
GSC Goldstone, Bar 36.58 104 P P 12 32 44.0 +1.1
GSC lAmb lAmb 12 33 09.6
comp=Z,5.4nm,0.8s
GSC Goldstone, Bar 36.58 104 P P 12 32 44.0 +1.1
GSC pmax pmax
comp=Z,5.0nm,0.8s
GSC Goldstone, Bar 36.58 104 P P 12 32 43.3 +0.4
baz=316
FMP Fort Macarthur 36.92 107 P P 12 32 45.9 +0.3
baz=318
TUQ Turquoise Moun 36.98 103 P P 12 32 46.7 +0.4
baz=316
P18A Preston Nutter 37.31 92 P P 12 32 50.5 +1.2
LCMT Little Creek M 37.38 98 P P 12 32 51.2 +1.6
SRU San Rafael Swe 37.50 93 P P 12 32 52.4 +1.7
SRU lAmb lAmb 12 33 09.1
comp=Z,9.9nm,0.7s
SRU San Rafael Swe 37.50 93 P P 12 32 52.4 +1.7
SRU pmax pmax
comp=Z,10.0nm,0.7s
K22A Casper 37.51 86 P P 12 32 51.2 +0.5
K22A Casper 37.51 86 P P 12 32 50.9 +0.2
baz=308
GMRC Granite Mounta 37.60 103 P P 12 32 50.5 -1.0
baz=317
ERM Erimo 37.67 273 P P 12 32 51.2 -0.6
RWWY Rawlins 37.72 87 P P 12 32 53.7 +1.0
RWWY lAmb lAmb 12 33 10.0
comp=Z,9.2nm,1.1s
RSSD Black Hills 38.02 82 P P 12 32 56.3 +1.2
RSSD lAmb lAmb 12 33 13.4
comp=Z,7.4nm,0.7s
RSSD Black Hills 38.02 82 P P 12 32 56.3 +1.2
RSSD pmax pmax
comp=Z,7.0nm,0.7s
RSSD Black Hills 38.02 82 P P 12 32 55.5 +0.4
baz=307
TPFO Pinon Flats 38.02 105 P P 12 32 54.8 -0.3
baz=318
O20A White River Ci 38.13 90 P P 12 32 57.1 +1.0
O20A lAmb lAmb 12 33 14.4
comp=Z,15nm,1.1s
O20A White River Ci 38.13 90 P P 12 32 56.2 +0.1
baz=311,SNR=6.4
MDND Maddock 38.33 74 P P 12 32 59.3 +1.9
MDND Maddock 38.33 74 P P 12 32 58.5 +1.1
baz=304,SNR=5.7
IRM Iron Mountain 38.35 103 P P 12 32 58.4 +0.7
baz=317
E28A Huff 38.45 76 P P 12 32 59.9 +1.4
ULM Lac du Bonnet 39.02 69 P P 12 33 04.3 +1.2
comp=Z,8.6nm,0.7s,baz=300,slow=10.0,SNR=9.3
comp=Z,8.6nm,0.7s
ULM Lac du Bonnet 39.02 69 P P 12 33 04.1 +0.9
ULM lAmb lAmb 12 33 05.1
comp=Z,10nm,0.8s
ULM Lac du Bonnet 39.02 69 P P 12 33 04.1 +0.9
ULM pmax pmax
comp=Z,10.0nm,0.9s
PV13 Radium Mtn., P 39.12 93 P P 12 33 05.1 +0.7
PV13 lAmb lAmb 12 33 22.5
comp=Z,11nm,0.7s
WUAZ Wupatki 39.50 98 P P 12 33 08.8 +1.3
WUAZ lAmb lAmb 12 33 26.4
comp=Z,8.6nm,0.9s
WUAZ Wupatki 39.50 98 P P 12 33 07.1 -0.4
baz=315
ZEA Zeya 39.69 298 *i* P **P 12 33 07.1 -1.5**
KLR Kul'dur 39.77 290 *ce*P **P 12 33 07.4 -2.0**
KLR pmax pmax
comp=Z,4.0nm,0.9s
MVCO Mesa Verde 39.96 94 P P 12 33 10.7 -0.7
baz=314
AGMN Agassiz Nation 40.13 71 P P 12 33 13.1 +0.7
AGMN lAmb lAmb 12 33 14.2
comp=Z,13nm,0.8s
AGMN Agassiz Nation 40.13 71 P P 12 33 12.3 -0.1
baz=305,SNR=10.0
S22A 4UR Ranch, Cre 40.55 92 P P 12 33 16.1 -0.2
baz=313
SUSD Miller 40.71 78 P P 12 33 18.3 +1.1
SUSD Miller 40.71 78 P P 12 33 17.8 +0.5
baz=308
B35A Bob, Littlefor 41.25 70 P P 12 33 22.2 +0.6
B35A lAmb lAmb 12 33 23.1
comp=Z,9.0nm,0.8s
SDCO Great Sand Dun 41.32 91 P P 12 33 23.9 +1.3
SDCO Great Sand Dun 41.32 91 P P 12 33 22.9 +0.3
baz=313,SNR=5.7
TUC Tucson 42.17 101 P P 12 33 28.7 -0.7
baz=318
T25A Trinidad 42.37 90 P P 12 33 32.5 +1.4
T25A Trinidad 42.37 90 P P 12 33 31.4 +0.3
baz=314
ECSD EROS Data Cent 42.47 77 P P 12 33 31.5 -0.2
baz=309,SNR=5.7
USRK Ussuriysk Ar. 42.65 284 PcP PcP 12 35 23.8 0.0
comp=Z,1.0nm,0.6s,baz=44,slow=2.4,SNR=4.2
EYMN Ely 42.70 69 P P 12 33 33.7 +0.2
EYMN lAmb lAmb 12 34 01.1
comp=Z,8.5nm,0.6s
EYMN Ely 42.70 69 P P 12 33 33.4 0.0
baz=306,SNR=9.5
ANMO Albuquerque 42.73 94 LR LR 12 48 38.5
comp=Z,91nm,19.6s,baz=274,slow=32
F36A Milaca 42.86 73 P P 12 33 35.5 +0.8
E38A The Farm, Brul 43.48 71 P P 12 33 40.1 +0.3
E38A lAmb lAmb 12 34 04.8
comp=Z,12nm,0.8s
121A Cookes Peak, D 43.71 98 P P 12 33 42.0 +0.1
baz=317
L34A Svendsen Farm, 43.74 79 P P 12 33 42.5 +0.6
BOD Bodaibo 43.79 310 *e*P **P 12 33 39.9 -2.1**
BOD pmax pmax
comp=Z,10.0nm,1.3s
CBKS Cedar Bluff 43.91 85 P P 12 33 44.2 +0.9
CBKS lAmb lAmb 12 34 02.6
comp=Z,15nm,0.8s
CBKS Cedar Bluff 43.91 85 P P 12 33 44.2 +0.9
CBKS pmax pmax
comp=Z,15nm,0.9s
CBKS Cedar Bluff 43.91 85 P P 12 33 42.8 -0.5
baz=312
I37A Lemond, Waseca 44.09 75 P P 12 33 45.9 +1.3
MJAR Matsushiro Arr 44.17 271 P P 12 33 44.0 -1.4
comp=Z,1.0nm,0.3s,baz=48,slow=8.0,SNR=8.6
comp=Z,1.0nm,0.3s
MAJO Matsushiro 44.17 271 P P 12 33 44.8 -0.6
MAJO lAmb lAmb 12 33 46.1
comp=Z,11nm,1.0s
MAJO Matsushiro 44.17 271 P P 12 33 44.8 -0.6
MAJO pmax pmax
comp=Z,11nm,1.0s
MAJO Matsushiro 44.17 271 P P 12 33 45.3 -0.1
comp=Z,12nm,1.0s
MJB9 Matsu-Tunnel 44.17 271 P P 12 33 45.1 -0.3
MJB9 lAmb lAmb 12 33 46.1
comp=Z,10nm,1.0s
FRB Frobisher Bay 44.21 40 LR LR 12 52 47.6
comp=Z,79nm,19.1s,baz=13,slow=37
N35A Tabor 44.88 80 P P 12 33 52.1 +1.2
G40A Rib Lake 45.06 71 P P 12 33 53.0 +0.7
G40A lAmb lAmb 12 34 17.5
comp=Z,7.3nm,0.8s
MSTX Muleshoe 45.55 92 P P 12 33 56.1 -0.4
baz=316
MNTX Cornudas Mount 45.70 97 P P 12 33 55.9 -1.6
baz=318
I40A Norwalk 45.71 73 P P 12 33 57.6 +0.1
E43A Lone Tree Farm 46.09 68 P P 12 34 01.2 +0.7
E43A lAmb lAmb 12 34 25.8
comp=Z,9.4nm,0.8s
DAG Danmarks Havn 46.47 11 *i* P **P 12 34 02.7 -0.4**
DAG lAmb lAmb 12 34 04.3
comp=Z,7.0nm,0.5s
JFWS Jewell Farm 46.55 74 P P 12 34 04.0 0.0
JFWS lAmb lAmb 12 34 04.5
comp=Z,8.8nm,0.7s
JFWS Jewell Farm 46.55 74 P P 12 34 04.1 0.0
JFWS pmax pmax
comp=Z,9.0nm,0.7s
JFWS Jewell Farm 46.55 74 P P 12 34 03.7 -0.4
baz=311
L40A Anamosa 46.57 75 P P 12 34 05.1 +0.8
L40A lAmb lAmb 12 34 06.9
comp=Z,12nm,0.9s
I42A Draeger Farm, 46.65 72 P P 12 34 04.9 0.0
I42A lAmb lAmb 12 34 29.6
comp=Z,10nm,0.8s
SUMG Summit 46.89 20 P P 12 34 08.0 +1.1
SUMG lAmb lAmb 12 34 10.8
comp=Z,7.7nm,1.1s
SUMG Summit 46.89 20 P P 12 34 08.0 +1.1
SUMG pmax pmax
comp=Z,8.0nm,1.1s
SUMG Summit 46.89 20 *i* P **P 12 34 07.5 +0.6**
SUMG lAmb lAmb 12 34 09.2
comp=Z,4.2nm,0.4s
P38A Dawn 46.91 79 P P 12 34 06.9 0.0
P38A lAmb lAmb 12 34 07.7
comp=Z,12nm,0.8s
WMOK Wichita Mounta 47.30 88 P P 12 34 10.9 +0.8
WMOK lAmb lAmb 12 34 28.2
comp=Z,8.9nm,0.8s
WMOK Wichita Mounta 47.30 88 P P 12 34 10.9 +0.8
WMOK pmax pmax
comp=Z,9.0nm,0.8s
WMOK Wichita Mounta 47.30 88 P P 12 34 09.9 -0.1
baz=315
P40A Paris 47.81 78 P P 12 34 14.1 +0.2
ABTX Abilene, Hawle 48.32 91 P P 12 34 17.4 -0.7
baz=317
S39A Bolivar 48.35 81 P P 12 34 17.1 -1.0
S39A lAmb lAmb 12 34 34.4
comp=Z,6.0nm,1.0s
TX31 Lajitas Ar. Si 48.45 97 P P 12 34 19.7 +0.7
TX32 Lajitas Array 48.45 97 P P 12 34 19.7 +0.7
TXAR Lajitas Array 48.45 97 P P 12 34 19.9 +0.8
comp=Z,1.2nm,0.7s,baz=305,slow=5.6,SNR=18
TXAR LR LR 12 53 02.8
comp=Z,65nm,18.8s,baz=350,slow=34
comp=Z,1.2nm,0.7s
DBG Daneborg 48.47 13 *i* P **P 12 34 17.6 -0.9**
DBG lAmb lAmb 12 34 24.2
comp=Z,3.8nm,0.6s
R40A Maddies Statio 48.54 80 P P 12 34 18.7 -0.8
R40A lAmb lAmb 12 34 20.9
comp=Z,7.5nm,0.8s
U38A Gravette 48.62 83 P P 12 34 20.2 0.0
U38A lAmb lAmb 12 34 37.4
comp=Z,10nm,0.8s
HDIL Hopedale 48.66 76 P P 12 34 20.8 +0.3
HDIL Hopedale 48.66 76 P P 12 34 20.2 -0.2
baz=313
JCJ Chichijima 48.84 259 P P 12 34 23.2 +1.2
HHAR Hobbs 48.98 83 P P 12 34 23.0 0.0
HHAR lAmb lAmb 12 34 39.4
comp=Z,7.9nm,1.0s
P43A Skaggs, Pawnee 49.16 77 P P 12 34 24.5 +0.3
CCM Cathedral Cave 49.28 79 P P 12 34 24.2 -1.0
baz=314
ICESG Greenland Ices 49.30 24 *i* P **P 12 34 25.1 -0.3**
ICESG lAmb lAmb 12 34 25.8
comp=Z,3.3nm,0.7s
MGMO Mountain Grove 49.33 81 P P 12 34 24.4 -1.2
MGMO lAmb lAmb 12 34 42.1
comp=Z,8.4nm,1.0s
X37A Clayton 49.37 86 P P 12 34 26.5 +0.6
KS19 Wonju Array Si 49.43 280 P P 12 34 27.1 +0.7
KSRS Korea Array 49.44 280 P P 12 34 25.7 -0.7
comp=Z,4.1nm,0.6s,baz=49,slow=6.6,SNR=20
KSRS PcP **PcP 12 35 47.9 +0.3**
comp=Z,1.5nm,0.7s,baz=42,slow=3.9,SNR=5.4
KSRS LR LR 12 54 54.5
comp=Z,33nm,21.5s,baz=330,slow=36
comp=Z,4.1nm,0.6s
KSAR Wonju Array Be 49.47 280 P P 12 34 26.8 +0.2
KSAR Wonju Array Be 49.47 280 P P 12 34 26.8 +0.2
DY2G Dye2 49.59 28 *i* P **P 12 34 28.0 +0.5**
DY2G lAmb lAmb 12 34 31.1
comp=Z,3.6nm,0.6s
FVM French Village 49.79 79 P P 12 34 29.0 -0.1
FVM lAmb lAmb 12 34 46.7
comp=Z,13nm,1.1s
FVM French Village 49.79 79 P P 12 34 29.0 -0.1
FVM pmax pmax
comp=Z,13nm,1.1s
JCT Junction City 49.81 93 P P 12 34 29.9 +0.5
JCT lAmb lAmb 12 34 47.2
comp=Z,9.2nm,0.8s
JCT Junction City 49.81 93 P P 12 34 29.9 +0.5
JCT pmax pmax
comp=Z,9.0nm,0.8s
JCT Junction City 49.81 93 P P 12 34 29.1 -0.3
baz=318
W39A Magazine 49.84 84 P P 12 34 30.2 +0.7
W39A Magazine 49.84 84 P P 12 34 29.0 -0.5
baz=315
VLDQ Val d'Or 49.92 61 P P 12 34 29.4 -0.5
VLDQ lAmb lAmb 12 34 52.9
comp=Z,13nm,1.2s
SFIN Lafayette 50.00 74 P P 12 34 29.8 -0.9
baz=313
FCAR Ozark Folk Cen 50.30 82 P P 12 34 32.1 -0.9
MIAR Mount Ida 50.43 84 P P 12 34 34.2 +0.2
MIAR lAmb lAmb 12 34 51.9
comp=Z,11nm,0.9s
MIAR Mount Ida 50.43 84 P P 12 34 34.2 +0.2
MIAR pmax pmax
comp=Z,11nm,1.0s
MIAR Mount Ida 50.43 84 P P 12 34 33.1 -0.9
baz=316
SCHQ Schefferville 50.43 48 P P 12 34 34.2 +0.4
comp=Z,2.4nm,0.4s,baz=328,slow=8.3,SNR=11
SCHQ LR LR 12 56 42.1
comp=Z,61nm,18.4s,baz=278,slow=37
comp=Z,2.4nm,0.4s
TJN Taejon 50.51 279 *ce*P **P 12 34 35.2 +0.7**
PBMO Poplar Bluff 50.64 80 P P 12 34 35.1 -0.4
PBMO lAmb lAmb 12 34 37.3
comp=Z,7.7nm,1.1s
S44A Carbondale 50.66 78 P P 12 34 35.0 -0.6
S44A lAmb lAmb 12 34 53.2
comp=Z,9.6nm,0.9s
SIUC Southern Illin 50.66 78 P P 12 34 35.7 0.0
W41B Gary Mavity, V 50.74 83 P P 12 34 34.9 -1.4
baz=316
PARMO Parma 51.10 80 P P 12 34 39.2 +0.2
O48B Farmland 51.16 73 P P 12 34 38.2 -1.3
baz=314
XLT XiLinHaoTe 51.51 294 ⇓ *i*P **P 12 34 42.8 +0.7**
XLT sP pP 12 34 59.8 +0.2
XLT pmax pmax
comp=Z,26nm,1.0s
XLT pmax pmax
comp=Z,91nm,6.1s
WVT Waverly 52.57 79 P P 12 34 50.1 +0.2
WVT Waverly 52.57 79 P P 12 34 50.1 +0.2
WVT pmax pmax
comp=Z,10.0nm,0.7s
WVT Waverly 52.57 79 P P 12 34 49.7 -0.2
baz=316
OXF Oxford 52.84 81 P P 12 34 50.8 -1.1
baz=316
R50A Paris 53.00 74 P P 12 34 53.5 +0.4
R50A lAmb lAmb 12 34 53.7
comp=Z,7.7nm,0.6s
PLAL Pickwick Lake 53.25 80 P P 12 34 54.7 -0.3
PLAL lAmb lAmb 12 35 12.3
comp=Z,15nm,1.2s
ULN Ulaanbaatar 53.35 303 P P 12 34 55.8 +0.1
ULN lAmb lAmb 12 34 56.5
comp=Z,13nm,1.1s
ULN Ulaanbaatar 53.35 303 P P 12 34 55.8 +0.1
ULN pmax pmax
comp=Z,13nm,1.1s
CLTN Cedars of Leba 53.44 78 P P 12 34 56.7 +0.4
CLTN lAmb lAmb 12 35 14.0
comp=Z,9.7nm,0.9s
SONM Songino Array 53.69 303 P P 12 34 57.5 -0.7
comp=Z,5.8nm,0.5s,baz=40,slow=6.7,SNR=48
SONM PcP **PcP 12 36 03.9 +0.3**
comp=Z,6.5nm,0.6s,baz=77,slow=1.8,SNR=20
SONM ScP **ScP 12 39 55.7 +0.6**
comp=Z,1.3nm,0.8s,baz=61,slow=2.1,SNR=7.0
comp=Z,5.8nm,0.5s
SONM Songino Array 53.69 303 P P 12 34 58.3 +0.1
SONM lAmb lAmb 12 34 59.4
comp=Z,10nm,1.0s
SONM Songino Array 53.69 303 P P 12 34 58.3 +0.1
SONM pmax pmax
comp=Z,10.0nm,1.0s
M55A Ridgway 53.78 68 P P 12 34 59.1 +0.3
M55A lAmb lAmb 12 35 16.7
comp=Z,9.7nm,0.8s
HAMF Hammerfest 54.63 358 *e*P **P 12 35 03.8 -0.6**
SSPA Standing Stone 54.84 68 P P 12 35 06.7 +0.3
baz=315
FPAL Fort Paine 54.97 78 P P 12 35 07.0 -0.6
FPAL lAmb lAmb 12 35 07.6
comp=Z,6.4nm,0.8s
LRAL Lakeview Retre 55.28 81 P P 12 35 08.9 -0.8
baz=317
G62A West of Eustis 55.37 59 P P 12 35 11.4 +1.2
G62A lAmb lAmb 12 35 27.7
comp=Z,8.5nm,0.7s
LBNH Lisbon 55.37 61 P P 12 35 10.2 0.0
baz=315
ARA0 ARCESS Array S 55.69 357 *e*P **P 12 35 11.8 -0.3**
ARCES ARCESS Array B 55.69 357 P P 12 35 11.8 -0.3
comp=Z,1.7nm,0.4s,baz=24,slow=7.6,SNR=53
ARCES PcP **PcP 12 36 10.5 -0.2**
comp=Z,2.0nm,0.6s,baz=15,slow=5.0,SNR=6.1
ARCES ScP **ScP 12 40 04.0 +0.8**
comp=Z,1.2nm,0.8s,baz=25,slow=5.0,SNR=3.0
comp=Z,1.7nm,0.4s
ARCES ARCESS Array B 55.69 357 P P 12 35 11.8 -0.3
ARCES lAmb lAmb 12 35 12.8
comp=Z,13nm,1.4s
ARCES ARCESS Array B 55.69 357 P P 12 35 11.8 -0.3
ARCES pmax pmax
comp=Z,13nm,1.4s
TRO Tromso 55.70 360 *e*P **P 12 35 12.4 +0.2**
F63A Nahmakanta, Br 55.72 58 P P 12 35 13.3 +0.6
F63A lAmb lAmb 12 35 31.0
comp=Z,9.5nm,0.9s
JETT Jettan, Norway 55.77 359 *e*P **P 12 35 12.9 +0.1**
F64A Sherman 55.98 57 P P 12 35 14.7 +0.2
HHC Hu-ho-hao-te 56.03 294 *e*P **P 12 35 19.5 +4.3**
HHC pmax pmax
comp=Z,25nm,0.8s
HHC pmax pmax
comp=Z,80nm,4.2s
BATG Bathurst New B 56.05 55 P P 12 35 15.8 +0.7
ODNJ Ogdensburg 56.26 65 P P 12 35 15.0 -1.6
ODNJ lAmb lAmb 12 35 19.0
comp=Z,8.8nm,1.0s
KTK1 Kautokeino 56.27 358 *e*P **P 12 35 16.3 0.0**
LVZ Lovozero 56.83 353 P P 12 35 20.5 +0.2
LVZ Lovozero 56.83 353 *ce*P **P 12 35 19.8 -0.5**
LVZ pmax pmax
comp=Z,8.0nm,1.0s
BORG Borgarnes 56.84 19 LR LR 13 01 11.4

comp=Z,51nm,20.7s,baz=265,slow=38
JOW Kunigami 57.01 270 P **P** 12 35 21.9 -0.2
comp=Z,18nm,0.8s
comp=Z,18nm,0.8s
JOW Kunigami 57.01 270 P **P** 12 35 22.2 0.0
JOW Kunigami 57.01 270 P **P** 12 35 22.5 +0.3
comp=Z,29nm,1.4s
STEI Steigen 57.40 1 *eP* **P** 12 35 24.3 0.0
LMN Caledonia Moun 57.68 55 P **P** 12 35 27.3 +0.7
FAUS Fauske 57.95 1 *eP* **P** 12 35 28.0 -0.1
ZALV Zalesovo Beam 58.38 320 P **P** 12 35 30.8 -0.6
comp=Z,2.7nm,0.3s,baz=41,slow=6.9,SNR=11
ZALV PcP **PcP** 12 36 21.0 -0.4
comp=Z,1.7nm,0.4s,baz=34,slow=3.2,SNR=7.6
comp=Z,2.7nm,0.3s
ZALV Zalesovo Beam 58.38 320 P **P** 12 35 31.4 0.0
NJ2 Nanjing 58.48 282 *eP* **P** 12 35 28.0 -4.3
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
KONS Konsvik 58.80 2 *eP* **P** 12 35 34.5 +0.5
MOR8 Moi Rana 59.15 2 *eP* **P** 12 35 35.2 -1.3
GBN Guysborough 59.55 53 P **P** 12 35 40.8 +1.2
YOJ Yonaguni jima 61.86 273 P **P** 12 35 54.2 -1.4
YOJ Yonaguni jima 61.86 273 P **P** 12 35 54.2 -1.4
YOJ Yonaguni jima 61.86 273 P **P** 12 35 54.2 -1.4
XAN Xi'an 62.48 291 P **P** 12 35 59.0 -0.7
XAN PcP **PcP** 12 36 37.8 -0.6
XAN pmax pmax
comp=Z,19nm,0.9s
MOL Molde 62.51 5 *eP* **P** 12 35 59.7 +0.4
YHNB Yeheng 62.64 274 P **P** 12 36 01.3 +0.4
comp=Z,21nm,1.4s
DOMB Dombas 63.11 5 *eP* **P** 12 36 03.0 -0.5
GTA Gaotai 63.12 301 ⇑P **P** 12 36 03.5 -0.4
GTA pmax pmax
comp=Z,12nm,0.9s
KURK Kurchatov 63.24 322 P **P** 12 36 05.1 +0.8
KURK IAmb IAmb 12 36 05.4
comp=Z,3.7nm,0.6s
KURK Kurchatov 63.24 322 P **P** 12 36 05.1 +0.8
KURK pmax pmax
comp=Z,4.0nm,0.6s
KLMR Klimovskoe 63.28 348 *eP* **P** 12 36 02.5 -1.9
KLMR pmax pmax
comp=Z,9.0nm,1.3s
KLMR Klimovskoe 63.28 348 *eP* **P** 12 36 02.5 -1.9
KLMR AMP 12 36 04.8
comp=Z,9.0nm,1.3s
SSLB Suanglung 63.57 274 P **P** 12 36 06.3 -0.7
SSLB Suanglung 63.57 274 P **P** 12 36 06.5 -0.5
VALR Valaam 63.58 353 *i* P **P** 12 36 05.6 -0.8
LZH Lanzhou 63.62 296 ⇑P **P** 12 36 07.5 +0.2
LZH pP pP 12 36 19.3 -6.1
LZH sP sP 12 36 26.5 -6.6
LZH pmax pmax
comp=Z,49nm,1.2s
FIA1 FINESS Array S 63.76 356 P **P** 12 36 07.2 -0.3
FIA0 FINESS Array S 63.76 356 P **P** 12 36 07.6 0.0
FIA0 FINESS Array S 63.76 356 P **P** 12 36 07.6 0.0
FINES FINESS Array B 63.76 356 P **P** 12 36 07.1 -0.5
comp=Z,9.3nm,0.4s,baz=18,slow=7.4,SNR=135
comp=Z,9.3nm,0.4s
FINES FINESS Array B 63.76 356 *i* P **P** 12 36 07.0 -0.6
FINES pmax pmax
comp=Z,9.0nm,0.4s
NC204 NORSAR Array S 63.95 4 P **P** 12 36 09.8 +0.8
NC204 IAmb IAmb 12 36 10.0
comp=Z,14nm,0.9s
NC303 NORSAR Array S 64.03 4 P **P** 12 36 08.0 -1.4
NC303 IAmb IAmb 12 36 08.2
comp=Z,9.4nm,1.1s
NC405 NORSAR Array S 64.15 3 P **P** 12 36 10.9 +0.7
ARU Arti 64.18 336 P **P** 12 36 09.8 -0.6
ARU IAmb IAmb 12 36 11.9
comp=Z,3.8nm,0.4s
ARU Arti 64.18 336 *c i* P **P** 12 36 09.6 -0.8
ARU *PP **pP** 12 36 26.0 -2.5
ARU 12 36 43.6
ARU S **S** 12 44 43.4 +1.5
ARU SS **SS** 12 48 48.8 -2.2
ARU pmax pmax
comp=Z,1.0nm,0.4s
NB2 NORSAR Subarra 64.21 4 P **P** 12 36 10.5 -0.1
baz=358,slow=6.9
NB2 NORSAR Subarra 64.21 4 P **P** 12 36 10.5 -0.1
comp=Z,1.6nm,0.6s,baz=358,slow=6.9
NOA NORSAR Array B 64.21 4 P **P** 12 36 10.2 -0.4
comp=Z,2.6nm,0.7s,baz=357,slow=6.6,SNR=9.5
comp=Z,2.6nm,0.7s
SKAR Skarslia 64.43 5 *eP* **P** 12 36 12.6 +0.4
NC602 NORSAR Array S 64.52 4 *eP* **P** 12 36 12.1 -0.6
ENH Enshi 65.05 287 P **P** 12 36 16.5 0.0
MEF Metsahovi 65.05 357 *eP* **P** 12 36 15.7 -0.4
MK31 Makanchi Array 65.09 317 *i* P **P** 12 36 15.8 -0.8
MKAR Makanchi Array 65.09 317 P **P** 12 36 16.1 -0.5
comp=Z,1.3nm,0.3s,baz=39,slow=6.2,SNR=30
comp=Z,1.3nm,0.3s
MKAR Makanchi Array 65.09 317 P **P** 12 36 16.0 -0.7
MKAR Makanchi Array 65.09 317 P **P** 12 36 16.0 -0.7
WMQ Urumqi 65.28 312 *eP* P 12 36 24.5 +6.6
KONO Kongsberg 65.53 5 *c eP* **P** 12 36 18.0 -1.1
KONO pmax pmax
comp=Z,18nm,1.7s
KONO Kongsberg 65.53 5 *eP* **P** 12 36 20.0 +0.9
TAOE Nuku Hiva Isla 66.15 156 *eT* T 13 47 52.2
comp=Z,41nm,0.3s
MTSE Matsula 66.58 357 *eP* **P** 12 36 25.8 -0.1
VIKU Vikbolandet 66.88 1 *eP* **P** 12 36 27.7 -0.1
CD2 Chengdu 67.66 292 P **P** 12 36 33.3 0.0
CD2 pmax pmax
comp=Z,40nm,0.6s
SLIT Slitere, Latvi 67.71 358 *eP* **P** 12 36 32.9 -0.2
GOMU GeErMu 68.09 302 P **P** 12 36 35.5 -0.8
GOMU PcP **pP** 12 36 56.3 +1.7
GOMU pmax pmax
comp=Z,4.0nm,0.8s
GYA Guiyang 69.57 287 ⇓*i* P **P** 12 36 45.5 +0.2
GYA pP pP 12 37 02.0 -1.6
GYA pmax pmax
comp=Z,30nm,0.8s
PABE Paberze 69.78 356 *eP* **P** 12 36 46.2 +0.2
IIGN Ignalina 69.84 355 *eP* **P** 12 36 46.6 +0.3
NACGM Naroch 70.26 355 ⇓*eP* **P** 12 36 48.9 0.0
baz=5.2
ABKAR Akbulak array 70.38 332 P **P** 12 36 50.0 +0.2
PMOR Pomariorio Ree 70.70 166 *eT* T 13 53 29.0
comp=Z,128nm,0.2s
TARG Taragay, Kyrgy 71.09 317 P **P** 12 36 55.8 +1.0
TARG IAmb IAmb 12 36 57.2
comp=Z,4.8nm,0.5s
TARG Taragay, Kyrgy 71.09 317 P **P** 12 36 55.8 +1.0
TARG pmax pmax
comp=Z,5.0nm,0.5s
PZH PanZhiHua 72.22 291 P **P** 12 37 01.0 -0.4
PZH pmax pmax
comp=Z,30nm,0.9s
PZH pmax pmax
comp=Z,90nm,5.1s
VORR Voronezh 72.28 346 *eP* **P** 12 37 04.7 +3.5
KKAR Karatay Array 72.62 323 P **P** 12 37 03.8 +0.4
KKAR Karatay Array 72.62 323 P **P** 12 37 03.8 +0.4
TIAR Tiarei 73.03 167 *eT* T 13 56 23.8
comp=Z,12nm,0.2s
PPT2 Papeete2 73.03 168 *eLR* LR 12 59 27.5
comp=Z,98nm,24.5s
PPT2 Papeete2 73.03 168 *eT* T 13 56 20.3
comp=Z,3.6nm,0.3s
PAE Paea 73.10 168 *eT* T 13 56 29.6
comp=Z,1.3nm,0.3s
KSH Kashi 73.71 317 P **P** 12 37 13.5 +3.5
KSH pmax pmax
comp=Z,12nm,0.5s
AKASG Malin Array Be 74.29 353 P **P** 12 37 12.6 -0.4
comp=Z,3.3nm,0.4s,baz=10,slow=6.0,SNR=21
comp=Z,3.3nm,0.4s
AKBB Malin Array Si 74.29 353 *c eP* **P** 12 37 12.5 -0.5
CHVC Chvalec 74.80 1 *eP* **P** 12 37 16.7 +0.7
DPC Dobruska-Polom 75.04 1 *eP* **P** 12 37 18.2 +0.8
DPC Dobruska-Polom 75.04 1 *eP* **P** 12 37 18.2 +0.8
LSA Lhasa 75.14 301 P **P** 12 37 19.9 +1.0
LSA Lhasa 75.14 301 P **P** 12 37 19.9 +1.0
LSA pmax pmax
comp=Z,18nm,0.8s
SLVN Son La 75.16 286 P **P** 12 37 19.1 +0.5

KRLC Kraliky 75.32 1 *eP* **P** 12 37 19.3 +0.3
KRLC Kraliky 75.32 1 *eP* **P** 12 37 19.3 +0.3
KWP Kalwaria Pacla 75.70 357 P **P** 12 37 22.3 +1.1
KWP Kalwaria Pacla 75.70 357 P **P** 12 37 22.3 +1.1
KWP pmax pmax
comp=Z,47nm,0.6s
KHC Kasperske Hory 76.20 3 *eP* **P** 12 37 25.1 +1.0
KHC Kasperske Hory 76.20 3 *eP* **P** 12 37 25.1 +1.0
LANS Liptovska Anna 76.25 359 *eP* **P** 12 37 26.3 +1.9
LANS pmax pmax
comp=Z,3.0nm,0.6s
LANS Liptovska Anna 76.25 359 *eP* **P** 12 37 26.2 +1.9
KOLS Kolonicke sedl 76.41 357 *eP* **P** 12 37 26.5 +1.3
KOLS pmax pmax
comp=Z,9.0nm,1.4s
KOLS Kolonicke sedl 76.41 357 *eP* **P** 12 37 26.5 +1.3
GERES GERESS Array B 76.49 3 P **P** 12 37 26.2 +0.5
comp=Z,1.3nm,0.5s,baz=356,slow=5.4,SNR=7.8
comp=Z,1.3nm,0.5s
VYHS Vyhne 76.91 360 *eP* **P** 12 37 28.7 +0.7
VYHS pmax pmax
comp=Z,5.0nm,1.5s
VYHS Vyhne 76.91 360 *eP* **P** 12 37 28.7 +0.7
MODS Modra-Piesok 77.03 1 *eP* **P** 12 37 29.7 +1.0
MODS Modra-Piesok 77.03 1 *eP* **P** 12 37 29.7 +1.0
CHGR Chuyangaron 77.03 321 P **P** 12 37 29.4 +0.4
CHGR Chuyangaron 77.03 321 P **P** 12 37 29.4 +0.4
CHGR pmax pmax
comp=Z,36nm,0.5s
CONA Conrad Observa 77.46 2 *eP* **P** 12 37 32.2 +1.0
comp=Z,2.7nm,0.5s
BUR08 Bucovina Ar. S 77.58 355 P **P** 12 37 32.5 +0.6
BURAR Bucovina Array 77.61 355 P **P** 12 37 32.8 +0.7
RONA Rosalia, Austr 77.69 1 *eP* **P** 12 37 33.6 +1.1
comp=Z,2.9nm,0.6s
RETA Reutte 77.73 5 *eP* **P** 12 37 33.7 +1.0
comp=Z,2.2nm,0.4s
MOTA Moosalm 77.89 5 *eP* **P** 12 37 34.8 +1.1
comp=Z,7.8nm,0.9s
WATA Walderalm 77.92 5 *eP* **P** 12 37 34.8 +0.9
comp=Z,3.9nm,0.4s
WTTA Wattenberg 77.99 5 *eP* **P** 12 37 35.3 +1.0
comp=Z,6.1nm,0.5s
SQTA Sankt Quirin 78.02 5 *eP* **P** 12 37 35.5 +1.1
comp=Z,5.9nm,0.5s
FETA Feichten 78.19 5 *eP* **P** 12 37 36.4 +1.0
comp=Z,11nm,1.5s
KBA Koelnbreinsper 78.25 3 *eP* **P** 12 37 36.4 +0.6
comp=Z,6.7nm,0.6s
ABTA Abfaltersbach 78.55 4 *eP* **P** 12 37 38.2 +1.0
comp=Z,6.7nm,1.2s
FUORN Ofenpass-Fuorn 78.57 6 P **P** 12 37 39.1 +1.5
FUORN IAmb IAmb 12 37 39.2
comp=Z,4.2nm,0.6s
SOKA Soboth 78.69 2 *eP* **P** 12 37 39.2 +1.1
comp=Z,4.3nm,0.6s
MYKA Terra Mystica 78.70 3 *eP* **P** 12 37 39.4 +1.3
comp=Z,1.8nm,0.4s
TAPN Taplejung 78.78 302 *eP* **P** 12 37 38.7 -0.4
comp=Z,45nm,0.5s
OBKA Obir 78.85 3 *eP* **P** 12 37 40.0 +1.1
comp=Z,14nm,0.4s
ROBS Robic 79.08 3 *i* P **P** 12 37 39.9 -0.2
GUN Gumba 79.20 303 *eP* **P** 12 37 41.2 -0.3
comp=Z,26nm,0.4s
KIV Kislovodsk 79.25 342 ⇑*eP* **P** 12 37 41.3 +0.1
KIV *e* 12 37 46.9
KIV *PP **pP** 12 38 00.0 +0.1
KIV SS SS 12 52 48.0 +6.0
KIV pmax pmax
comp=Z,7.0nm,0.5s
JIRN Jiri 79.26 303 *eP* **P** 12 37 41.6 -0.2
ODAN Odare 79.34 302 *eP* **P** 12 37 41.5 -0.6
KBZ Khabaz 79.44 342 P **P** 12 37 42.4 +0.3
comp=Z,3.5nm,0.9s,baz=268,slow=2.2,SNR=7.3
comp=Z,3.5nm,0.9s
KBZ Khabaz 79.44 342 *c eP* **P** 12 37 43.5 +1.5
JAVS Javornik 79.45 3 *i* P **P** 12 37 41.9 -0.3
KKN Kakani 79.59 304 *eP* **P** 12 37 43.2 -0.2
RAMN Ramite 79.65 302 *eP* **P** 12 37 43.2 -0.6
PKI Pulchoki 79.71 304 *eP* **P** 12 37 43.7 -0.5
PKIN Phulchoki 79.71 304 *eP* **P** 12 37 43.7 -0.5
comp=Z,16nm,0.4s
GKN Gorkha 79.72 304 *eP* **P** 12 37 43.8 -0.2
DMN Daman 79.82 304 *eP* **P** 12 37 44.7 -0.1
comp=Z,35nm,0.4s
DANN Dangsing 79.84 305 *eP* **P** 12 37 44.7 -0.2
comp=Z,110nm,0.7s
BNI Bardonecchia 79.88 8 P **P** 12 37 46.5 +1.9
BNI IAmb IAmb 12 37 47.5
comp=Z,16nm,1.4s
BNI Bardonecchia 79.88 8 P **P** 12 37 46.5 +1.9
BNI pmax pmax
comp=Z,16nm,1.4s
CHTO Chiang Mai 79.92 288 P **P** 12 37 44.6 -0.5
CHTO IAmb IAmb 12 37 45.2
comp=Z,9.5nm,0.7s
CHTO Chiang Mai 79.92 288 P **P** 12 37 44.6 -0.5
CHTO pmax pmax
comp=Z,10.0nm,0.7s
CM31 Chiang Mai Arr 80.22 288 P **P** 12 37 46.7 0.0
CMAR Chiang Mai Arr 80.22 288 P **P** 12 37 46.4 -0.3
comp=Z,24nm,0.9s,baz=17,slow=5.6,SNR=108
comp=Z,24nm,0.9s
CMAR Chiang Mai Arr 80.22 288 P **P** 12 37 46.8 +0.1
CMAR Chiang Mai Arr 80.22 288 *c eP* **P** 12 37 46.4 -0.3
CMAR pmax pmax
comp=Z,26nm,0.9s
KOLN Koldanda 80.40 305 *eP* **P** 12 37 47.7 -0.1
PYUN Piuthan 80.41 306 *eP* **P** 12 37 47.3 -0.6
GEYT Alibeck 81.32 329 P **P** 12 37 52.5 +0.2
comp=Z,2.2nm,0.5s,baz=20,slow=4.7,SNR=4.4
comp=Z,2.2nm,0.5s
GEYT Alibeck 81.32 329 P **P** 12 37 53.3 +0.9
NRCA Norcia 82.48 4 P **P** 12 38 00.0 +1.7
GNI Garni 82.55 340 LR LR 13 19 09.5
comp=Z,36nm,19.3s,baz=278,slow=39
ESBB Sonseca Array 83.85 17 P **P** 12 38 06.8 +1.4
ESBB IAmb IAmb 12 38 07.4
comp=Z,6.0nm,0.8s
ESDC Sonseca Array 83.85 17 P **P** 12 38 06.2 +0.8
comp=Z,6.1nm,0.9s,baz=345,slow=5.3,SNR=22
comp=Z,6.1nm,0.9s
ESDC Sonseca Array 83.85 17 P **P** 12 38 06.4 +0.9
ESDC IAmb IAmb 12 38 07.5
comp=Z,6.4nm,0.9s
BR131 Keskin Array S 84.74 348 P **P** 12 38 11.5 +1.4
BR131 IAmb IAmb 12 38 12.8
comp=Z,4.6nm,0.7s
BR131 Keskin Array S 84.74 348 P **P** 12 38 11.5 +1.4
BR131 pmax pmax
comp=Z,5.0nm,0.7s
BRTR Keskin Array B 84.74 348 P **P** 12 38 10.8 +0.7
comp=Z,1.4nm,0.5s,baz=64,slow=3.1,SNR=9.4
comp=Z,1.4nm,0.5s
BRTR Keskin Array B 84.74 348 P **P** 12 38 11.0 +0.9
BRTR Keskin Array B 84.74 348 *c eP* **P** 12 38 10.8 +0.7
BRTR pmax pmax
comp=Z,4.0nm,1.0s
BNN Bunyan 85.32 346 P **P** 12 38 14.4 +1.4
SBUM Sibu 85.64 268 P **P** 12 38 15.4 +0.7
SBUM IAmb IAmb 12 38 16.2
comp=Z,11nm,1.0s
TIP Timpagrande 86.21 1 P **P** 12 38 18.5 +1.2
TIP IAmb IAmb 12 38 18.5
comp=Z,10nm,0.9s
KEST Kesra 89.35 7 P **P** 12 38 33.1 +0.7
comp=Z,3.7nm,0.9s,baz=317,slow=5.3,SNR=4.8
comp=Z,3.7nm,0.9s
WRA Warramunga Arr 92.14 238 P **P** 12 38 44.2 -1.0
comp=Z,1.0nm,0.7s,baz=35,slow=5.8,SNR=9.8
comp=Z,1.0nm,0.7s
ASAR Alice Springs 95.51 236 P **P** 12 39 00.1 -0.6
comp=Z,0.9nm,0.8s,baz=45,slow=3.7,SNR=6.9
comp=Z,0.9nm,0.8s
MDP Montagnes des 96.73 71 LR LR 13 27 31.2
comp=Z,26nm,18.1s,baz=164,slow=38
TSUM Tsumeb 144.29 1 PKP **PKPab** 12 45 09.4 -0.4
comp=Z,6.2nm,0.5s,baz=354,slow=6.4,SNR=9.7
TSUM Tsumeb 144.29 1 PKPbc 12 45 10.6 +0.4
MATP Matopo 144.62 343 PKP PKPbc 12 45 11.1 -0.1
comp=Z,22nm,0.5s,baz=349,slow=3.3,SNR=69
LBTB Lobatse 149.57 346 PKPbc **PKiKP** 12 45 25.6 -0.4
comp=Z,14nm,0.7s,baz=299,slow=2.6,SNR=4.6

*IDC **29** 12:34:29.3±0.7, 19.86S×11.87W, h0km, mb4.0/9, mbtmp4.0/9, MS3.9/26 Error ellipse: s-maj=27.5km s-min=20.1km az=135.0*
*NEIC **29** 12:34:33.0±1.2, 19.52S±0.07×11.8W±0.2, h10km±1km, mb4.5/11, Error ellipse: s-maj=25.9km s-min=12.5km az=269.0*
ISC 29 12:34:31.1±0.5, 19.63S±0.09×11.8W±0.1, h10km, n55, σ1s42/34, mb4.1/12, MS3.8/26, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ASCN	**Ascension**	**11.89**	**348**			Pn	**Pn**	**12 37 20.0**	**-0.8**
TRIS	**Tristan da Cun**	**17.39**	**181**			P	**P**	**12 38 36.5**	**+1.4**
DBIC	**Dimbokro**	**27.01**	**15**	LR		LR		12 48 20.3	
	comp=Z,128nm,18.1s,baz=174,slow=30								
DBIC	**Dimbokro**	**27.01**	**15**	P		**P**		**12 40 13.4**	**0.0**
DBIC				IAmb		IAmb		12 40 18.1	
	comp=Z,38nm,1.5s								
RCBR	**Riachuelo**	**27.17**	**297**	LR		LR		12 49 18.3	
	comp=Z,118nm,18.8s,baz=220,slow=33								
TSUM	**Tsumeb**	**27.70**	**94**	LR		LR		12 50 05.1	
	comp=Z,255nm,18.0s,baz=328,slow=34								
SUR	**Sutherland**	**31.81**	**120**	LR		LR		12 50 30.5	
	comp=Z,164nm,19.0s,baz=294,slow=30								
BDFB	**Brasilia**	**34.70**	**271**	LR		LR		12 53 01.6	
	comp=Z,180nm,20.1s,baz=142,slow=32								
BDFB	**Brasilia**	**34.70**	**271**	P		**P**		**12 41 22.4**	**+0.8**
BDFB				IAmb		IAmb		12 41 36.3	
	comp=Z,10.0nm,1.3s								
BOSA	**Boshof**	**34.86**	**112**	LR		LR		12 53 04.3	
	comp=Z,185nm,20.0s,baz=312,slow=32								
LBTB	**Lobatse**	**34.93**	**106**	LR		LR		12 54 14.7	
	comp=Z,140nm,18.1s,baz=253,slow=34								
TOA0	**Torodi Ar. Sit**	**35.17**	**23**	P		**P**		**12 41 25.3**	**-0.1**
TOA0				IAmb		IAmb		12 41 28.4	
	comp=Z,8.1nm,1.1s								
TORD	**Torodi Ar. Bea**	**35.17**	**23**	P		**P**		**12 41 27.2**	**+1.8**
	comp=Z,3.5nm,1.0s,baz=203,slow=8.6,SNR=12								
TORD				LR		LR		12 53 17.9	
	comp=Z,139nm,19.4s,baz=206,slow=32								
	comp=Z,3.5nm,1.0s								
TORD	**Torodi Ar. Bea**	**35.17**	**23**	P		**P**		**12 41 25.1**	**-0.2**
TORD				IAmb		IAmb		12 41 28.4	
	comp=Z,6.2nm,1.2s								
MATP	**Matopo**	**37.80**	**98**	P		**P**		**12 41 47.8**	**-0.3**
	comp=Z,1.9nm,0.7s,baz=252,slow=7.7,SNR=4.0								
	comp=Z,1.9nm,0.7s								
LSZ	**Lusaka**	**38.33**	**90**	LR		LR		12 56 13.2	
	comp=Z,118nm,19.3s,baz=215,slow=34								
CPUP	**Villa Florida**	**42.28**	**252**	P		**P**		**12 42 22.4**	**-2.7**
	comp=Z,1.2nm,0.3s,baz=18,slow=3.2,SNR=1.6								
CPUP				LR		LR		12 57 09.4	
	comp=Z,116nm,20.3s,baz=94,slow=32								
	comp=Z,1.2nm,0.3s								
MBAR	**Mbarara**	**45.73**	**71**	LR		LR		13 00 22.0	
	comp=Z,105nm,18.3s,baz=194,slow=34								
SIV	**San Ignacio**	**46.93**	**266**	P		**P**		**12 43 02.4**	**0.0**
	comp=Z,0.5nm,0.3s,baz=107,slow=20,SNR=1.5								
SIV				LR		LR		13 01 19.9	
	comp=Z,192nm,18.1s,baz=111,slow=34								
	comp=Z,0.5nm,0.3s								
TRQA	**Tornquist**	**47.05**	**236**	P		**P**		**12 43 05.7**	**+2.7**
MDP	**Montagnes des**	**47.10**	**297**	LR		LR		13 00 30.0	
	comp=Z,61nm,19.0s,baz=180,slow=33								
VNA1	**Neumayer--Stat**	**51.07**	**178**	P		**P**		**12 43 32.5**	**-0.8**
VNA2	**Neumayer--Watz**	**51.37**	**178**	P		**P**		**12 43 34.1**	**-1.5**
KMBO	**Kilima Mbogo**	**51.37**	**75**	LR		LR		13 03 48.6	
	comp=Z,121nm,19.2s,baz=264,slow=34								
VNA3	**Neumayer Olymp**	**51.64**	**179**	P		**P**		**12 43 35.6**	**-2.0**
SNAA	**Sanae**	**52.32**	**176**	P		**P**		**12 43 41.9**	**-0.8**
SNAA	**Sanae**	**52.32**	**176**	P		**P**		**12 43 40.0**	**-2.6**
	comp=Z,1.6nm,1.0s,baz=318,slow=11,SNR=5.0								
	comp=Z,1.6nm,1.0s								
SNAA	**Sanae**	**52.32**	**176**	P		**P**		**12 43 45.7**	**+3.0**
TROLL	**Troll, Antarti**	**53.05**	**174**	P		**P**		**12 43 46.9**	**-1.2**
LVC	**Limon Verde**	**53.09**	**256**	LR		LR		13 04 33.4	
	comp=Z,41nm,21.1s,baz=122,slow=34								
LPAZ	**La Paz**	**53.50**	**264**	P		**P**		**12 43 51.7**	**-1.2**
	comp=Z,0.9nm,0.9s,baz=58,slow=12,SNR=2.4								
LPAZ				LR		LR		13 06 05.9	
	comp=Z,132nm,18.1s,baz=84,slow=36								
	comp=Z,0.9nm,0.9s								
LPAZ	**La Paz**	**53.50**	**264**	P		**P**		**12 43 54.3**	**+1.4**
PLCA	**Paso Flores**	**53.95**	**233**	LR		LR		13 04 51.9	
	comp=Z,59nm,18.2s,baz=107,slow=34								
VAE	**Valguarnera**	**61.93**	**23**	LR		LR		13 11 07.3	
	comp=Z,87nm,18.5s,baz=148,slow=35								
ATD	**Arta Tunnel**	**62.07**	**65**	LR		LR		13 09 06.0	
	comp=Z,126nm,21.4s,baz=224,slow=33								
NNA	**Nana**	**62.74**	**266**	LR		LR		13 10 42.9	
	comp=Z,107nm,19.2s,baz=112,slow=35								
SDV	**Santo Domingo**	**64.49**	**290**	LR		LR		13 12 42.5	
	comp=Z,106nm,18.1s,baz=112,slow=36								
ATAH	**Atahualpa**	**65.63**	**271**	LR		LR		13 12 28.2	
	comp=Z,136nm,19.2s,baz=117,slow=35								
ROSC	**El Rosal**	**66.09**	**285**	LR		LR		13 12 38.7	
	comp=Z,160nm,19.1s,baz=106,slow=35								
EIL	**Elat**	**66.56**	**44**	LR		LR		13 10 21.2	
	comp=Z,67nm,21.2s,baz=270,slow=32								
BRTR	**Keskin Array B**	**72.69**	**35**	P		**P**		**12 46 00.8**	**+1.5**
	comp=Z,0.7nm,0.6s,baz=228,slow=3.7,SNR=3.5								
	comp=Z,0.7nm,0.6s								
BRTR	**Keskin Array B**	**72.69**	**35**	P		**P**		**12 45 59.9**	**+0.6**
AKASG	**Malin Array Be**	**78.78**	**25**	P		**P**		**12 46 34.9**	**+1.1**
	comp=Z,1.1nm,0.7s,baz=232,slow=3.9,SNR=6.4								
	comp=Z,1.1nm,0.7s								
VNDA	**Vanda**	**82.99**	**179**	P		**P**		**12 46 56.0**	**0.0**
	comp=Z,1.0nm,0.9s,baz=230,slow=5.3,SNR=6.6								
	comp=Z,1.0nm,0.9s								
VNDA	**Vanda**	**82.99**	**179**	P		**P**		**12 46 56.8**	**+0.8**
VNDA				IAmb		IAmb		12 47 02.4	
	comp=Z,2.4nm,1.0s								
BORG	**Borgarnes**	**84.42**	**356**	LR		LR		13 19 29.6	
	comp=Z,27nm,19.3s,baz=179,slow=32								
PALK	**Pallekele**	**94.74**	**84**	LR		LR		13 25 53.8	
	comp=Z,91nm,18.4s,baz=21,slow=32								
SONM	**Songino Array**	**123.14**	**45**	PKP		**PKiKP**		**12 53 27.8**	**-0.6**
	comp=Z,4.1nm,1.0s,baz=113,slow=3.4,SNR=5.5								
ASAR	**Alice Springs**	**125.50**	**141**	PKP		**PKiKP**		**12 53 32.6**	**-1.2**
	comp=Z,0.9nm,0.9s,baz=194,slow=1.9,SNR=4.7								
ILAR	**Eielson Array**	**126.00**	**338**	PKP		**PKiKP**		**12 53 33.6**	**+0.3**
	comp=Z,0.2nm,0.8s,baz=54,slow=1.6,SNR=2.3								
WRA	**Warramunga Arr**	**128.54**	**138**	PKP		**PKiKP**		**12 53 38.4**	**-1.5**
	comp=Z,1.4nm,1.2s,baz=221,slow=1.3,SNR=2.2								
PETK	**Petropavlovsk-**	**145.60**	**11**	PKPbc		**PKPab**		**12 54 09.5**	**-0.5**
	comp=Z,1.1nm,1.0s,baz=255,slow=2.2,SNR=2.7								
PETK	**Petropavlovsk-**	**145.60**	**11**			**PKPab**		**12 54 09.7**	**-0.3**
MJAR	**Matsushiro Arr**	**148.80**	**51**	PKPbc		**PKiKP**		**12 54 19.5**	**-1.2**
	comp=Z,2.2nm,0.8s,baz=280,slow=0.8,SNR=9.3								
MJAR	**Matsushiro Arr**	**148.80**	**51**	PKPdf		**PKPdf**		**12 54 16.2**	**+0.8**
MJAR						**pPKPbc**		**12 54 20.3**	**-1.5**

*ATH **29** 12:38:26.7, 40.47N×20.56E, h10km±31km, ML2.4/2, Error ellipse: s-maj=31.6km s-min=3.6km az=0.0*
*TIR **29** 12:38:27.7, 40.46N×20.78E, h0km±2km, Ml2.7*
*THE **29** 12:38:28.9, 40.50N×20.72E, h3km±2km, ML2.2/7, Error ellipse: s-maj=2.0km s-min=0.6km az=298.0*
*SKO **29** 12:38:28.4, 40.41N×20.61E, h0km*
ISC 29 12:38:28.6±1.1, 40.48N±0.03×20.71E±0.03, h4km±9km, n18, σ1s01/35, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KBN	**Korca**	**0.15**	**21**	P		P	**Pg**	**12 38 31.6**	**-0.1**
KBN				S		S	**Sg**	**12 38 33.6**	**-0.1**
	2μm,0.4s								
NEST	**Nestorio**	**0.26**	**104**	P		**P**	**Pg**	**12 38 34.0**	**+0.3**
NEST				S		S	**Sb**	**12 38 39.1**	**-1.7**
NEST				AML		AML		12 38 42.6	
	comp=N,2012μm,0.3s								
NEST				AML		AML		12 38 43.8	
	comp=E,1633μm,0.4s								
NEST	**Nestorio**	**0.26**	**104**	P		**P**	**Pg**	**12 38 34.0**	**+0.3**
NEST				S		S	**Sg**	**12 38 37.8**	**+0.6**
	comp=E,742nm,0.5s								
LSK	**Leskovik**	**0.34**	**195**	P		**P**	**Pg**	**12 38 34.9**	**-0.3**
LSK				S		S	**Sg**	**12 38 40.6**	**+0.9**
	comp=E,1μm,0.8s								
PENT	**Pentalofos**	**0.43**	**131**	P		P	**Pg**	**12 38 36.8**	**-0.1**
PENT				S		S	**Sb**	**12 38 43.8**	**-1.8**
PENT	**Pentalofos**	**0.43**	**131**	P		P	**Pg**	**12 38 36.6**	**-0.3**
PENT				S		S	**Sb**	**12 38 43.7**	**-1.9**
OHR	**Ohrid**	**0.63**	**6**	*i* Pg		**Pb**	**Pb**	**12 38 41.8**	**-0.5**
OHR				*i* Sg		**Sb**	**Sb**	**12 38 51.0**	**-0.5**

OHR				*e*Lg		Lg	12 38 52.0	
	comp=E,155nm,0.6s							
SRN	**Sarande**	**0.81**	**223**	P		**Pb**	**12 38 44.9**	**-0.3**
SRN				S		**Sb**	**12 38 56.2**	**-0.3**
KZN	**Kozani**	**0.83**	**102**	P		**Pg**	**12 38 44.6**	**+0.2**
KZN				S		**Sb**	**12 38 57.9**	**+0.9**
KZN				AML		AML	12 38 59.5	
	comp=E,382μm,0.1s							
KZN				AML		AML	12 39 00.3	
	comp=N,348μm,0.2s							
KZN	**Kozani**	**0.83**	**102**	P		**Pg**	**12 38 44.4**	**0.0**
KZN				S		**Sb**	**12 38 56.6**	**-0.4**
	comp=N,208nm,0.5s							
JAN	**Janina**	**0.83**	**173**	P		**Pb**	**12 38 45.0**	**-0.5**
JAN				S		**Sb**	**12 38 57.6**	**+0.6**
	comp=N,172nm,0.4s							
IGT	**Igoumenitsa**	**0.99**	**197**	P		**Pn**	**12 38 48.7**	**-0.5**
IGT				S		**Sn**	**12 39 02.4**	**-1.2**
	comp=N,112nm,0.6s							
IGT	**Igoumenitsa**	**0.99**	**197**	*i* Pg		**Pn**	**12 38 51.2**	**+2.0**
IGT				*i* Sg		**Sn**	**12 39 03.8**	**+0.2**
KTI	**Kastanea**	**1.07**	**94**	P		**Pg**	**12 38 49.0**	**-0.2**
GRG	**Griva**	**1.37**	**69**	*i* Pg		**Pn**	**12 38 53.6**	**-0.8**
GRG				*i* Sg		**Sn**	**12 39 15.5**	**+2.5**
LIT	**Litokhoron**	**1.41**	**105**	P		**Pn**	**12 38 55.0**	**0.0**
LIT				S		**Sn**	**12 39 14.1**	**+0.1**
	comp=N,98nm,0.4s							
LIT	**Litokhoron**	**1.41**	**105**	*i* Pg		**Pg**	**12 38 55.3**	**-0.3**
LIT				*i* Sg		**Sn**	**12 39 15.9**	**+1.9**
KNT	**Kendrikon**	**1.79**	**67**	*i* Pg		**Pb**	**12 39 01.2**	**-0.8**
KNT				*i* Sg		**Sg**	**12 39 27.2**	**+1.0**

IDC 29 13:01:22.2±2.1, 27°.30N×44°.01W, h0km, mb3.5/4, mbtmp3.5/4, MS3.5/8, Error ellipse: s-maj=105.8km s-min=30.9km az=20.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SADO	**Sadowa**	**33.01**	**311**	LR	LR	13 17 46.5	
	comp=Z,81nm,21.9s,baz=171,slow=30						
TKL	**Tuckaleechee C**	**34.74**	**294**	LR	LR	13 20 19.5	
	comp=Z,43nm,20.2s,baz=104,slow=33						
DBIC	**Dimbokro**	**42.43**	**112**	LR	LR	13 23 58.1	
	comp=Z,73nm,20.0s,baz=190,slow=32						
TORD	**Torodi Ar. Bea**	**44.88**	**99**	P	P	13 09 38.6	-0.2
	1.1nm,1.0s,baz=309,slow=9.1,SNR=3.4						
TORD				LR	LR	13 28 54.5	
	comp=Z,38nm,18.5s,baz=216,slow=37 1.1nm,1.0s						
H10N2	**ASCENSION HYDR**	**45.13**	**136**	T	T	13 58 33.6	
	baz=323,slow=75,SNR=139						
H10N3	**ASCENSION HYDR**	**45.13**	**136**	T	T	13 58 23.3	
	baz=323,slow=75,SNR=132						
H10N1	**ASCENSION HYDR**	**45.15**	**136**	T	T	13 58 31.4	
	baz=323,slow=75,SNR=201						
H10S3	**ASCENSION HYDR**	**45.91**	**138**	T	T	13 59 25.5	
	baz=257,slow=74,SNR=97						
H10S2	**ASCENSION HYDR**	**45.92**	**138**	T	T	13 59 23.3	
	baz=323,slow=74,SNR=54						
TXAR	**Lajitas Array**	**52.06**	**287**	P	P	13 10 34.6	+0.5
	0.2nm,0.8s,baz=92,slow=8.3,SNR=2.3 0.2nm,0.8s						
PDAR	**Pinedale Array**	**54.56**	**305**	P	P	13 10 51.6	-0.9
	0.4nm,0.6s,baz=94,slow=8.9,SNR=5.3						
PDAR				LR	LR	13 31 07.0	
	comp=Z,25nm,21.5s,baz=258,slow=33 0.4nm,0.6s						
YKA	**Yellowknife Ar**	**57.23**	**329**	LR	LR	13 36 36.6	
	comp=Z,83nm,18.1s,baz=102,slow=37						
BBB	**Bella Bella**	**65.43**	**318**	LR	LR	13 38 46.6	
	comp=Z,49nm,20.0s,baz=108,slow=34						
ILAR	**Eielson Array**	**70.90**	**334**	P	P	13 12 41.2	+0.4
	0.5nm,0.8s,baz=79,slow=4.7,SNR=6.3 0.5nm,0.8s						
KDAK	**Kodiak Island**	**76.50**	**329**	LR	LR	13 47 04.6	
	comp=Z,54nm,19.2s,baz=130,slow=36						

*NIC **29** 13:24:29.7±0.0, 33°.74N×35°.41E, h5km±1km, Ml3.2/3*
*IDC **29** 13:24:29.7±1.1, 33°.75N×35°.52E, h0km, mb3.4/3, mbtmp3.5/7, ML3.3/4, MS2.9/3, Error ellipse: s-maj=15.4km s-min=8.7km az=82.0*
*JSO **29** 13:24:30.8±1.4, 34°N±10°×3°.5E±°, h0km, MLv3.8/20*
*GII **29** 13:24:30.3±0.0, 33°.68N×35°.59E, h1km±1km, MD3.6/4, Mm3.6/5*
*HLW **29** 13:24:30.4, 33°.73N×35°.70E, h10km±15km, Md3.8, Ml4.0*
*GRAL **29** 13:24:31.5±0.5, 33°.68N×35°.58E, h4km±5km, MD4.0*
*NEIC **29** 13:24:32.1±1.6, 33°.80N±0°.07×35°.31E±0°.05, h14km±7km, mb3.7/2, Error ellipse: s-maj=9.5km s-min=6.1km az=187.0*
*ISK **29** 13:24:34.0, 33°.80N×35°.27E, h52km±1km, ML3.5/14*

ISC 29 13:24:30.7±1.0, 33°.72N±0°.02×35°.46E±0°.04, h8km±7km, n94, σ1§26/118, mb3.2/3, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DQRL	**Deir Qamar**	**0.09**	**100**	*e*P	**Pg**	**13 24 32.4**	**-0.6**
BEYL	**Beirut**	**0.15**	**10**	*e*P	**Pg**	**13 24 35.3**	**+1.3**
BHL	**Bhannes**	**0.24**	**41**	*e*P	**Pg**	**13 24 35.8**	**+0.2**
BHL				*e*S	**Sg**	**13 24 38.6**	**-0.3**
QRWL	**Qaraoun**	**0.25**	**133**	*e*P	**Pg**	**13 24 34.3**	**-1.4**
RCY	**Rachaya**	**0.38**	**126**	*e*P	**Pg**	**13 24 36.8**	**-1.5**
SHBL	**Chebaa**	**0.44**	**148**	*e*P	**Pg**	**13 24 37.8**	**-1.5**
NATI	**Neve Ativ**	**0.51**	**153**	Pg	**Pg**	**13 24 39.1**	**-1.5**
NATI				Sg	**Sg**	**13 24 47.3**	**0.0**
GEM	**Giv'at Ha'Em**	**0.54**	**162**	P	**Pg**	**13 24 39.8**	**-1.3**
GEM	**Giv'at Ha'Em**	**0.54**	**162**	Pg	**Pg**	**13 24 40.0**	**-1.1**
GEM				Sg	**Sg**	**13 24 48.3**	**+0.2**
HNTI	**Hanita**	**0.68**	**201**	P	**Pg**	**13 24 43.4**	**-0.4**
HNTI	**Hanita**	**0.68**	**201**	Pg	**Pg**	**13 24 43.9**	**+0.1**
HNTI				Sg	**Sb**	**13 24 54.9**	**+0.4**
HWQ	**Hawqa**	**0.69**	**36**	*e*P	**Pg**	**13 24 43.6**	**-0.3**
HWQ				*e*S	**Sg**	**13 24 52.2**	**-0.7**
MMA0B	**Mount Meron ar**	**0.71**	**184**	Pg	**Pg**	**13 24 43.8**	**-0.5**
MMA0B				Sg	**Sb**	**13 24 55.6**	**+0.3**
MMAI	**Mount Meron Ar**	**0.71**	**184**	LR	LR	13 24 41.4	
	comp=Z,28nm,20.4s,baz=202,slow=16						
MMAI				Pg	**Pg**	**13 24 44.4**	**0.0**
	175nm,0.3s,baz=9.7,slow=16,SNR=231						
MMAI				Lg	Lg	13 24 54.4	
	806nm,0.3s,baz=33,slow=42,SNR=18						
KSHT	**Keshet**	**0.79**	**158**	Pg	**Pg**	**13 24 45.0**	**-1.0**
BLGI	**Bet Lehem HaGe**	**1.01**	**193**	P	**Pg**	**13 24 49.2**	**-0.9**
BLGI	**Bet Lehem HaGe**	**1.01**	**193**	Pg	**Pg**	**13 24 49.8**	**-0.3**
BLGI				Sg	**Sg**	**13 25 04.7**	**+1.4**
SHMJ	**Saham**	**1.02**	**166**	P	**Pg**	**13 24 49.1**	**-1.3**
OFRI	**`Ofer**	**1.17**	**200**	P	**Pg**	**13 24 52.4**	**-0.7**
OFRI	**`Ofer**	**1.17**	**200**	Pg	**Pg**	**13 24 52.5**	**-0.7**
OFRI				Sg	**Sb**	**13 25 09.7**	**+1.2**
MMLI	**Mount Malkishu**	**1.28**	**182**	P	**Pn**	**13 24 54.0**	**-1.0**
MMLI				S	**Sn**	**13 25 13.5**	**+1.1**
MMLI	**Mount Malkishu**	**1.28**	**182**	Pg	**Pn**	**13 24 54.4**	**-0.6**
MMLI				Sg	**Sg**	**13 25 12.6**	**+0.7**
HMDT	**Nahal Hemdat**	**1.47**	**178**	Pn	**Pn**	**13 24 57.0**	**-0.5**
HMDT				Sn	**Sn**	**13 25 17.8**	**+0.9**
HSUJ	**Al Zarqa**	**1.73**	**159**	P	**Pn**	**13 25 00.9**	**-0.2**
PARAL	**Paralimni**	**1.73**	**318**	P	**Pn**	**13 24 59.5**	**-1.6**
PARAL				S	**Sn**	**13 25 22.8**	**-0.6**
PARAL				AML	AML	13 25 23.8	
	0.8nm,0.4s						
PARAL				AML	AML	13 25 23.8	
	0.8nm,0.4s						
PARAL				AML	AML	13 25 34.0	
	0.9nm,0.6s						
PARAL				AML	AML	13 25 34.0	
	0.9nm,0.6s						
UJAP	**Al Uja**	**1.77**	**180**	PN	**Pg**	**13 25 05.0**	**+0.4**
UJAP				SN	**Sb**	**13 25 26.3**	**+0.7**
ASF	**Jabal al Asfar**	**1.96**	**142**	Pg	**Pn**	**13 25 05.1**	**+0.7**
	110nm,0.3s,baz=322,slow=6.8,SNR=640						
ASF				Lg	Lg	13 25 30.9	
	71nm,0.3s,baz=86,slow=21,SNR=12						
MVOU	**Mavrovouni**	**1.99**	**311**	P	**Pn**	**13 25 03.6**	**-1.1**
MVOU				S	**Sn**	**13 25 29.5**	**-0.3**
MVOU				AML	AML	13 25 39.5	
	0.4nm,0.6s						
MVOU				AML	AML	13 25 39.5	
	0.4nm,0.6s						
MVOU				AML	AML	13 25 39.7	
	0.6nm,0.4s						
MVOU				AML	AML	13 25 39.7	
	0.6nm,0.4s						

DSI	**Dead Sea**	**2.15**	**182**	P		**Pn**	**13 25 08.0**	**+1.1**
DSI	**Dead Sea**	**2.15**	**182**	Pn		**Pn**	**13 25 07.1**	**+0.2**
CSS	**Mathiatis**	**2.15**	**306**	PN		**Pn**	**13 25 05.8**	**-1.2**
CSS	**Mathiatis**	**2.15**	**306**	Pn		**Pn**	**13 25 04.8**	**-2.2**
CSS	**Mathiatis**	**2.15**	**306**	P		**Pn**	**13 25 05.4**	**-1.6**
LFK	**Lefkose**	**2.23**	**315**	PN		**Pn**	**13 25 07.3**	**-0.7**
AMAZ	**Amatzia**	**2.23**	**192**	P		**Pn**	**13 25 09.0**	**+0.9**
AMAZ	**Amatzia**	**2.23**	**192**	Pn		**Pn**	**13 25 09.0**	**+0.9**
AMAZ				Sn		**Sn**	**13 25 37.6**	**+1.8**
YAYL	**Yayladag**	**2.37**	**13**	PN		**Pn**	**13 25 11.3**	**+1.3**
YTIR	**Yattir**	**2.37**	**187**	Pn		**Pn**	**13 25 11.0**	**+1.0**
YTIR				Sn		**Sn**	**13 25 41.4**	**+2.1**
SZAC	**Souni**	**2.37**	**296**	S		**Sn**	**13 25 38.7**	**-0.6**
GHAJ	**Ghor Haditha**	**2.41**	**178**	Pn		**Pn**	**13 25 11.2**	**+0.7**
GHAJ	**Ghor Haditha**	**2.41**	**178**	P		**Pn**	**13 25 11.9**	**+1.4**
LEF	**Lefka**	**2.54**	**304**	PN		**Pn**	**13 25 11.9**	**-0.4**
NATA	**Nata**	**2.62**	**295**	S		**Sn**	**13 25 45.0**	**-0.4**
TAHT	**Tahtakopru-Hat**	**2.71**	**12**	PN		**Pn**	**13 25 15.9**	**+1.2**
OSC2	**CSNet OBS 4**	**2.75**	**257**	P		**Pn**	**13 25 14.1**	**-1.0**
OSC2				S		**Sn**	**13 25 48.3**	**-0.3**
ALFC	**Alefka**	**2.77**	**302**	P		**Pn**	**13 25 15.0**	**-0.4**
ALFC				AML	AML	13 25 53.2		
	1.1nm,0.5s							
ALFC				AML	AML	13 25 57.5		
	0.8nm,0.8s							
AKMS	**Akamas**	**2.89**	**297**	S		**Sn**	**13 25 52.4**	**+0.3**
AKKU	**Akkuyu-Mersin**	**2.90**	**328**	PN		**Pn**	**13 25 17.1**	**0.0**
AKKU				SN		**Sn**	**13 25 48.7**	**-3.5**
IKL	**Isikli**	**2.90**	**330**	PN		**Pn**	**13 25 16.9**	**-0.4**
IKL				SN		**Sn**	**13 25 48.9**	**-3.5**
KZIT	**Kziot**	**2.95**	**198**	P		**Pn**	**13 25 19.1**	**+1.2**
KZIT				S		**Sn**	**13 25 56.3**	**+2.8**
KZIT	**Kziot**	**2.95**	**198**	Pn		**Pn**	**13 25 18.8**	**+0.9**
KIZK	**Mersin**	**2.96**	**339**	PN		**Pn**	**13 25 18.4**	**+0.4**
TEKE	**Tekeli-Mersin**	**3.09**	**322**	PN		**Pn**	**13 25 20.0**	**+0.1**
ZFRI	**Zfri**	**3.17**	**184**	Pn		**Pn**	**13 25 21.1**	**+0.2**
RMNI	**Mount Ramon**	**3.17**	**191**	Pn		**Pn**	**13 25 21.9**	**+0.8**
BERE	**Bereket-Mersin**	**3.20**	**326**	PN		**Pn**	**13 25 22.0**	**+0.5**
MERS	**Mersin**	**3.23**	**346**	PN		**Pn**	**13 25 22.2**	**+0.3**
MERS				SN		**Sn**	**13 25 57.7**	**-2.9**
PRNI	**Paran**	**3.38**	**187**	Pn		**Pn**	**13 25 24.6**	**+0.7**
OSC1	**CSNet OBS 1**	**3.50**	**268**	S		**Sn**	**13 26 07.3**	**+0.3**
GAZI	**Gazipasa**	**3.60**	**315**	PN		**Pn**	**13 25 27.1**	**+0.2**
KRMI	**Paran Flat**	**3.65**	**190**	Pn		**Pn**	**13 25 28.1**	**+0.6**
HRFI	**Mount Harif**	**3.69**	**186**	Pn		**Pn**	**13 25 28.4**	**+0.2**
KOZT	**Kozan**	**3.76**	**4**	PN		**Pn**	**13 25 30.7**	**+1.6**
CMRD	**Camardi-Nigde**	**3.95**	**355**	PN		**Pn**	**13 25 32.9**	**+1.1**
AQBJ	**Aqaba**	**4.00**	**185**	P		**Pn**	**13 25 32.1**	**-0.2**
EIL	**Elat**	**4.06**	**186**	Pn		**Pn**	**13 25 33.6**	**+0.4**
	2.1nm,0.3s,baz=12,slow=12,SNR=7.7							
EIL				Pg		**Pb**	**13 25 41.8**	**-0.7**
	8.4nm,0.3s,baz=5.7,slow=10,SNR=19							
EIL				Lg		Lg	13 26 37.4	
	32nm,0.3s,baz=61,slow=11,SNR=11							
EIL				LR		LR	13 27 10.6	
	comp=Z,85nm,18.1s,baz=274,slow=39 10nm,0.6s							
EIL	**Elat**	**4.06**	**186**	PN		**Pn**	**13 25 37.8**	**+4.6**
EIL	**Elat**	**4.06**	**186**	P		**Pn**	**13 25 33.8**	**+0.6**
EIL	**Elat**	**4.06**	**186**	Pn		**Pn**	**13 25 33.6**	**+0.4**
YESY	**Yesilyurt**	**4.29**	**341**	PN		**Pn**	**13 25 37.2**	**+0.8**
URFA	**Urfa**	**4.61**	**35**	PN		**Pn**	**13 25 44.4**	**+3.6**
KOT	**Kottamia**	**4.89**	**220**	P		**Pn**	**13 25 45.6**	**+1.1**
	baz=222							
KOT				S		**Sn**	**13 26 40.3**	**-1.0**
	baz=222							
HDHB	**Dhahab**	**5.04**	**188**	P		**Pn**	**13 25 48.2**	**+1.6**
	baz=191							
BNN	**Bunyan**	**5.13**	**3**	Pn		**Pn**	**13 25 46.9**	**-1.1**
GLL	**Jalalah**	**5.23**	**219**	P		**Pn**	**13 25 49.6**	**+0.3**
	baz=221							
HKAT	**Jabal Katrina**	**5.33**	**194**	P		**Pn**	**13 25 50.9**	**0.0**
	baz=197							
HMYD	**Mayadein**	**5.58**	**227**	P		**Pn**	**13 25 54.7**	**+0.7**
	baz=229							
SVRC	**Sivrice-ELAZID**	**5.59**	**33**	PN		**Pn**	**13 25 57.8**	**+3.4**
MARD	**Mardin**	**5.62**	**49**			**Pn**	**13 25 55.1**	**+0.3**
HNAT	**Natroun**	**5.80**	**227**	P		**Pn**	**13 25 57.7**	**+0.5**
	baz=228							
HNAT				S		**Sn**	**13 27 03.3**	**-0.6**
	baz=228							
GRB	**Gharib**	**5.90**	**204**	P		**Pn**	**13 25 58.5**	**0.0**
	baz=206							
BRTR	**Keskin Array B**	**6.17**	**347**	Pn		**Pn**	**13 26 02.2**	**0.0**
	0.2nm,0.3s,baz=170,slow=16,SNR=4.2							
BRTR				LR		LR	13 28 60.0	
	comp=Z,117nm,18.3s,baz=172,slow=44 1.5nm,0.6s							
RYAN	**Fayoum**	**6.41**	**225**	S		**Sn**	**13 27 18.0**	**-0.8**
	baz=227							
GURO	**Guroymak-BITLI**	**7.17**	**46**	Pn		**Pn**	**13 26 17.1**	**+1.0**
GEVA	**Gevas**	**7.67**	**51**			**Pn**	**13 26 24.1**	**+1.2**
IDI	**Anoyia**	**8.87**	**283**	Pn		**Pn**	**13 26 38.9**	**-0.4**
	0.5nm,0.3s,baz=103,slow=18,SNR=1.5							
IDI				Sn		**Sn**	**13 28 16.3**	**-3.1**
	1.2nm,0.3s,baz=247,slow=7.2,SNR=2.5 2.2nm,0.4s							
IDI	**Anoyia**	**8.87**	**283**	Pn		**Pn**	**13 26 38.5**	**-0.7**
MLR	**Muntele Rosu**	**13.84**	**331**	LR		LR	13 34 30.7	
	comp=Z,54nm,20.7s,baz=54,slow=43							
CUC	**Castrococco**	**16.91**	**297**	P		**Pn**	**13 28 28.3**	**+0.5**
CUC				IAmb		IAmb	13 28 34.4	
	comp=Z,7.4nm,0.8s							
AKASG	**Malin Array Be**	**17.57**	**347**	P		**Pn**	**13 28 35.3**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=163,slow=11,SNR=4.8 comp=Z,0.3nm,0.3s							
MORC	**Moravsky Berou**	**20.80**	**326**	P		**P**	**13 29 11.4**	**-0.9**
MORC				IAmb		IAmb	13 29 14.7	
	comp=Z,2.3nm,0.9s							
GERES	**GERESS Array B**	**22.15**	**319**	P		**P**	**13 29 27.0**	**0.0**
	comp=Z,0.7nm,0.7s,baz=127,slow=10,SNR=5.8 comp=Z,0.7nm,0.7s							
TORD	**Torodi Ar. Bea**	**36.89**	**244**	P		**P**	**13 31 40.5**	**+0.5**
	comp=Z,0.8nm,0.8s,baz=64,slow=6.6,SNR=5.4 comp=Z,0.8nm,0.8s							
MKAR	**Makanchi Array**	**37.51**	**55**	P		**P**	**13 31 45.9**	**+0.9**
	comp=Z,0.4nm,0.8s,baz=258,slow=5.7,SNR=3.0 comp=Z,0.4nm,0.8s							

IDC 29 13:32:45.5±1.6, 5°.81S×130°.45E, h0km, mb3.8/2, mbtmp4.0/5, ML4.1/3, Error ellipse: s-maj=76.1km s-min=26.1km az=79.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.97**	**9**	Pn	Pn	13 34 02.1	+0.5
	9.8nm,0.3s,baz=182,slow=15,SNR=52						
SIJI				Sn	Sn	13 34 49.4	-11
	17nm,0.3s,baz=61,slow=20,SNR=23 26nm,0.3s						
WRA	**Warramunga Arr**	**14.55**	**165**	Pn	Pn	13 36 11.9	-0.9
	0.7nm,0.3s,baz=349,slow=13,SNR=31						
WRA				Sn	Sn	13 38 42.3	-13
	1.0nm,0.3s,baz=352,slow=24,SNR=10 1.4nm,0.5s						
ASAR	**Alice Springs**	**18.06**	**170**	P	P	13 36 58.6	0.0
	0.7nm,0.3s,baz=348,slow=11,SNR=26						
ASAR				S	Sn	13 40 12.6	-7.9
	1.3nm,0.7s,baz=347,slow=26,SNR=5.8 1.9nm,0.6s						
SONM	**Songino Array**	**57.46**	**341**	P	P	13 42 36.1	-0.3
	0.4nm,0.6s,baz=142,slow=7.3,SNR=2.7 0.4nm,0.6s						
MKAR	**Makanchi Array**	**67.48**	**326**	P	P	13 43 43.4	0.0
	1.2nm,0.6s,baz=122,slow=8.1,SNR=17 1.2nm,0.6s						

*ISK **29** 13:45:22.3, 42°.25N×27°.87E, h5km, ML2.5/8*

ISC 29 13:45:21.9±1.1, 42°.29N±0°.03×27°.83E±0°.06, h10km, n17, σ0§96/19, 7C-1D, Bulgaria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTYL	**Yalikoy Yolu**	**0.89**	**157**	PG	**Pb**	**13 45 39.1**	**-0.2**
CTYL				SG	**Sb**	**13 45 50.8**	**-0.4**
EDRB	**Edirne**	**0.93**	**242**	PG	**Pb**	**13 45 40.4**	**+0.4**
EDRB				SG	**Sn**	**13 45 54.2**	**-0.1**
SLVT	**Silivri**	**1.10**	**165**	PG	**Pn**	**13 45 42.9**	**-0.4**
UKOP	**Uzunkopru-Edir**	**1.47**	**218**	PN	**Pb**	**13 45 49.7**	**+0.4**
GZKV	**Gazikoy-Tekird**	**1.59**	**194**	PN	**Pb**	**13 45 51.3**	**0.0**
MAR3	**Marsite Statio**	**1.60**	**195**	PN	**Pb**	**13 45 51.4**	**-0.1**
RAZG	**Razgrad**	**1.60**	**323**	⇑P	**Pn**	**13 45 49.2**	**-1.1**
MANR	**Mangalia**	**1.62**	**20**	⇑P	**Pn**	**13 45 52.0**	**+1.5**

ALN	**Alexandroupoli**	**1.94**	**224**	PN		**Pb**	**13 45 56.6**	**-0.6**
ENEZ	**Enez**	**2.00**	**220**	PN		**Pb**	**13 45 57.3**	**-1.1**
RDO	**Rodhopi**	**2.06**	**237**	PN		**Pn**	**13 45 58.3**	**+1.7**
TIRR	**Tirgusor**	**2.21**	**11**	⇓P		**Pb**	**13 46 02.3**	**+0.5**
HARR	**Harsova**	**2.40**	**2**	⇑P		**Pb**	**13 46 05.1**	**0.0**
TPGR	**Topolog**	**2.60**	**9**	⇑P		**Pb**	**13 46 08.1**	**-0.4**
CFR	**Carcaliu**	**2.89**	**4**	⇑P		**Pb**	**13 46 12.2**	**-1.4**
MLR	**Muntele Rosu**	**3.48**	**338**	⇑P		**Pn**	**13 46 15.2**	**-1.0**
VRI	**Vrincioaia**	**3.66**	**348**	⇑P		**Pn**	**13 46 20.2**	**+1.7**

KRNET 29 14:01:28.2±0.1, 39°.44N×73°.54E, mb2.9, 6C-4D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.23**	**332**	⇓*e*P	Pg	14 01 51.7	-0.1
	baz=32						
OHH				⇓*e*S	Sb	14 02 08.7	-0.1
	baz=32						
DRK	**Karamyk**	**1.35**	**272**	⇑*e*P	Pg	14 01 54.0	-0.1
	baz=72						
DRK				⇑*e*S	Sb	14 02 12.7	+0.2
	baz=72						
GAR	**Garm**	**2.54**	**261**	⇑*e*P	Pb	14 02 12.9	-1.9
	baz=61						
GAR				⇑*e*S	Sb	14 02 45.2	-1.5
	baz=61						
TRKS	**Terek-Say**	**2.78**	**319**	⇓*e*P	Pn	14 02 14.8	+0.7
	baz=19						
TRKS				⇓*e*S	Sn	14 02 49.3	+0.9
	baz=19						
UCH	**Uchtor**	**2.88**	**15**	⇑*e*P	Pn	14 02 17.5	+1.7
	baz=15						
UCH				⇑*e*S	Sn	14 02 53.8	+2.4
	baz=15						

SOME 29 14:02:19.3, 39°.02N×74°.35E, h5km, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KST	**Kastek**	**4.20**	**16**	*e*P	**Pn**	**14 03 36.6**	**-0.5**
	8.5nm,0.6s						
KST				*e*S	**Sn**	**14 04 32.5**	**-0.5**
	19nm,0.3s						
MTBS	**Maitube**	**4.40**	**20**	*e*P	**Pn**	**14 03 41.7**	**+0.7**
	1.6nm,0.1s						
MTBS				*e*S	**Sn**	**14 04 40.9**	**+1.0**
	13nm,0.2s						
SGDS	**Sogindy**	**4.44**	**3**	*e*P	Pn	14 03 42.0	+7.5
	1.8nm,0.2s						
SGDS				*e*S	Sn	14 04 41.6	+13
	9.5nm,0.7s						
TNSS	**Tian-Shan**	**4.47**	**25**	*e*P	**Pn**	**14 03 43.9**	**-0.1**
	2.4nm,0.5s						
TNSS				*e*S	**Sn**	**14 04 44.7**	**-0.5**
	5.7nm,0.4s						

*NNC **29** 14:03:20.9±29.0, 45°.00N×75°.41E, h0km, mb3.1, mpv2.6, Error ellipse: s-maj=217.7km s-min=194.1km az=49.0*

KRNET 29 14:03:20.4±0.1, 40°.88N×74°.80E, h35km, mb2.7, 7C-10D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UCH	**Uchtor**	**1.36**	**351**	⇓*e*P	Pn	14 03 45.0	+1.7
	baz=51						
UCH				⇓*e*S	Sn	14 04 02.9	+2.5
	baz=51						
ULHL	**Ulahol**	**1.74**	**38**	⇓*e*P	Pn	14 03 50.0	+1.7
	baz=38						
ULHL				⇓*e*S	Sn	14 04 11.7	+2.4
	baz=38						
KBK	**Karagaybulak**	**1.78**	**3**	⇑*e*P	Pn	14 03 50.5	+1.7
	baz=3.0						
KBK				⇑*e*S	Sn	14 04 12.5	+2.3
	baz=3.0						
CHMS	**Chumysh**	**2.12**	**359**	⇑Pg	Pn	14 03 58.6	+5.3
	2.9nm,0.5s						
CHMS				⇑Lg	Lg	14 04 27.7	
	7.3nm,0.6s						
TKM2	**Tokmak 2**	**2.12**	**16**	⇓*e*P	Pn	14 03 55.4	+1.9
	baz=16						
TKM2				⇓*e*S	Sn	14 04 21.1	+2.3
	baz=16						
TKM2	**Tokmak 2**	**2.12**	**16**	⇓Pg	Pn	14 03 58.4	+4.8
	3.0nm,0.6s						
TKM2				⇓Lg	Lg	14 04 27.6	
	7.9nm,0.6s						
USP	**Ospenovka**	**2.40**	**355**	⇑*e*P	Pn	14 03 59.0	+1.9
	baz=55						
USP				⇑*e*S	Sn	14 04 27.1	+1.8
	baz=55						
TARG	**Taragay, Kyrgy**	**2.42**	**68**	⇓*i*P	Pn	14 03 59.4	+1.7
	baz=68						
TARG				⇓*e*S	Sn	14 04 28.1	+1.8
	baz=68						
KK31	**Karatay Array**	**3.89**	**306**	⇑Lg	L

ϕ_s207.00000°, δ56.00000°, λ143.00000°. NP2:
ϕ_s320.00000°, δ60.00000°, λ40.00000°.

ISC 29 14:14:28.3±0.6, 32.80N±0.03×130.89E±0.06, h12km, n20, σ1.16/25, mb3.5/9, 2D, Kyushu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JIU3	**Izumi3**	**0.26**	**194**	P		**Pg**		**14 14 33.5**	**-0.1**
JIU3				S		**Sg**		**14 14 37.9**	**+0.6**
JNU	**Nakatsue**	**0.32**	**359**	Pg		**Pg**		**14 14 33.2**	**-1.8**
	557nm,0.3s,baz=188,slow=9.0,SNR=1243								
JNU				Lg		Lg		14 14 37.5	
	2μm,0.3s,baz=195,slow=20,SNR=72								
JNU	**Nakatsue**	**0.32**	**359**	P		**Pg**		**14 14 33.8**	**-1.2**
JNU				S		**Sg**		**14 14 38.0**	**-1.3**
JTA	**Tamana**	**0.34**	**299**	⇓*iP*		**Pg**		**14 14 34.4**	**-0.9**
JTA				⇓S		**Sg**		**14 14 39.1**	**-0.7**
JTZ	**Takazaki**	**0.91**	**169**	*iP*		**Pn**		**14 14 46.0**	**-0.9**
JTZ				S		**Sn**		**14 14 58.7**	**-1.4**
KSRS	**Korea Array**	**5.24**	**333**	Pn		**Pn**		**14 15 46.2**	**-0.3**
	0.5nm,0.3s,baz=150,slow=14,SNR=6.9								
KSRS				Pg		**Pb**		**14 16 00.6**	**+0.7**
	0.7nm,0.3s,baz=154,slow=17,SNR=6.1								
KSRS				Sn		**Sn**		**14 16 49.0**	**+2.2**
	0.8nm,0.3s,baz=163,slow=18,SNR=5.5								
KSRS				Lg		Lg		14 17 11.2	
	1.4nm,0.3s,baz=153,slow=29,SNR=5.4								
	1.1nm,0.3s								
JOW	**Kunigami**	**6.36**	**202**	Pn		**Pn**		**14 16 02.0**	**0.0**
	3.4nm,0.3s,baz=88,slow=14,SNR=13								
JOW				Sn		**Sn**		**14 17 13.9**	**-0.6**
	baz=141,slow=26								
	7.0nm,0.3s								
MJAR	**Matsushiro Arr**	**7.09**	**56**	Pn		**Pn**		**14 16 13.2**	**+1.2**
	0.2nm,0.3s,baz=239,slow=13,SNR=12								
MJAR				Lg		Lg		14 18 11.4	
	baz=240,slow=22,SNR=1.4								
MJAR				LR		LR		14 18 45.5	
	comp=Z,83nm,20.1s,baz=237,slow=36								
	3.1nm,0.5s								
ASAJ	**Asahikawa**	**14.54**	**36**	LR		LR		14 23 25.1	
	comp=Z,24nm,19.5s,baz=124,slow=37								
KLR	**Kul'dur**	**16.43**	**2**	Pn		**P**		**14 18 20.8**	**-0.6**
	baz=169,slow=7.6,SNR=2.9								
	1.5nm,0.8s								
SONM	**Songino Array**	**23.83**	**316**	P		**P**		**14 19 42.3**	**+0.9**
	0.5nm,0.7s,baz=119,slow=8.9,SNR=2.0								
	0.5nm,0.7s								
CMAR	**Chiang Mai Arr**	**32.00**	**251**	LR		LR		14 33 26.9	
	comp=Z,15nm,21.7s,baz=195,slow=36								
MKAR	**Makanchi Array**	**39.25**	**305**	P		**P**		**14 21 57.0**	**+0.3**
	0.2nm,0.4s,baz=101,slow=7.5,SNR=2.7								
	0.2nm,0.4s								
KURBB	**Kurchatov Arra**	**41.99**	**311**	P		**P**		**14 22 19.6**	**+0.4**
	0.6nm,0.7s,baz=98,slow=8.9,SNR=5.4								
	0.6nm,0.7s								
WRA	**Warramunga Arr**	**52.55**	**176**	P		**P**		**14 23 40.4**	**-1.3**
	0.4nm,0.6s,baz=356,slow=8.3,SNR=6.3								
	0.4nm,0.6s								
ASAR	**Alice Springs**	**56.22**	**177**	P		**P**		**14 24 07.6**	**-0.8**
	0.9nm,0.9s,baz=8.4,slow=14,SNR=11								
	0.9nm,0.9s								
ILAR	**Eielson Array**	**57.59**	**30**	P		**P**		**14 24 19.9**	**+2.2**
	0.3nm,0.8s,baz=280,slow=7.8,SNR=4.6								
	0.3nm,0.8s								
FINES	**FINESS Array B**	**68.32**	**330**	P		**P**		**14 25 27.6**	**-1.5**
	0.9nm,0.5s,baz=75,slow=8.1,SNR=6.0								
	0.9nm,0.5s								
AKASG	**Malin Array Be**	**72.07**	**319**	P		**P**		**14 25 51.5**	**-0.8**
	1.7nm,0.6s,baz=55,slow=6.6,SNR=8.9								
	1.7nm,0.6s								
NOA	**NORSAR Array B**	**74.45**	**334**	P		**P**		**14 26 06.5**	**+0.3**
	0.5nm,0.7s,baz=52,slow=5.9,SNR=4.0								
	0.5nm,0.7s								

IDC 29 14:26:07.7±1.8, 2.52N×127.90E, h0km, mb3.6/4, mbtmp3.6/5, ML3.5/1, Error ellipse: s-maj=97.4km s-min=25.9km az=62.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.76**	**135**	Pn		Pn		14 27 21.6	+1.0
	2.0nm,0.3s,baz=319,slow=19,SNR=7.5								
SIJI				Sn		Sn		14 28 11.9	-4.7
	0.7nm,0.3s,baz=241,slow=22,SNR=1.3								
	4.8nm,0.4s								
WRA	**Warramunga Arr**	**23.20**	**164**	P		P		14 31 16.4	0.0
	0.9nm,0.6s,baz=345,slow=10,SNR=14								
	0.9nm,0.6s								
ASAR	**Alice Springs**	**26.67**	**168**	P		P		14 31 48.9	+0.3
	0.4nm,0.9s,baz=352,slow=8.1,SNR=4.3								
	0.4nm,0.9s								
STKA	**Stephens Creek**	**36.59**	**160**	P		P		14 33 14.3	-1.3
	3.7nm,1.0s,baz=339,slow=8.6,SNR=3.0								
	3.7nm,1.0s								
MKAR	**Makanchi Array**	**59.21**	**325**	P		P		14 36 11.1	+0.3
	0.3nm,0.7s,baz=122,slow=7.1,SNR=2.3								
	0.3nm,0.7s								

*JMA **29** 14:30:11.7±0.1, 24.0N±0.6×121.6E±0.7, h22km, MV3.2/12, TAIWAN REGION*
*TAP **29** 14:30:13.7, 24.22N×121.73E, h10km, ML3.7, C*
ISC 29 14:30:13.3±0.8, 24.21N±0.01×121.79E±0.02, h9km±5km, n124, σ0.88/214, 7C-18D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.10**	**337**	⇓*iP*		**Pg**		**14 30 16.5**	**+0.6**
	baz=12								
EHP				S		**Sg**		**14 30 18.5**	**+0.7**
	baz=12								
ETL	**Fush Village**	**0.16**	**250**	⇑*iP*		**Pg**		**14 30 16.9**	**+0.1**
	baz=228								
ETL				S		**Sg**		**14 30 19.2**	**0.0**
	baz=228								
NACB	**Ninganchiao**	**0.18**	**257**	⇑*iP*		**Pg**		**14 30 17.1**	**0.0**
	baz=240								
NACB				S		**Sg**		**14 30 19.6**	**-0.1**
	baz=240								
ENA	**Nanau**	**0.22**	**349**	⇓*iP*		**Pg**		**14 30 18.2**	**+0.5**
	baz=5.0								
ENA				*i*S		**Sg**		**14 30 21.4**	**+0.6**
	baz=5.0								
TWD	**Chiawan**	**0.22**	**232**	⇑*iP*		**Pg**		**14 30 17.8**	**+0.1**
	baz=219								
TWD				*i*S		**Sg**		**14 30 20.9**	**0.0**
	baz=219								
EWUT	**Wuta**	**0.23**	**358**	⇓*iP*		**Pg**		**14 30 18.7**	**+0.7**
	baz=11								
EWUT				S		**Sg**		**14 30 21.8**	**+0.6**
	baz=11								
ETLH	**Xiulin Townshi**	**0.28**	**269**	⇓*iP*		**Pg**		**14 30 18.8**	**-0.2**
	baz=266								
ETLH				S		**Sg**		**14 30 22.4**	**-0.2**
	baz=266								
ETM	**Tongmen**	**0.36**	**227**	P		**Pg**		**14 30 20.4**	**-0.1**
	baz=213								
ETM				*e*S		**Sg**		**14 30 25.0**	**-0.3**
	baz=213								
TEYL	**Yanliau Villag**	**0.39**	**207**	P		**Pg**		**14 30 21.3**	**+0.4**
	baz=209								
LATG	**Datong**	**0.40**	**324**	⇓*iP*		**Pg**		**14 30 21.4**	**+0.2**
	baz=329								
LATG				*i*S		**Sg**		**14 30 26.4**	**0.0**
	baz=329								
TWC	**Suao**	**0.40**	**8**	⇓*iP*		**Pb**		**14 30 21.8**	**-0.7**
	baz=10.0								
TWC				S		**Sb**		**14 30 27.4**	**-1.3**
	baz=10.0								
NDS	**Dongshan**	**0.42**	**351**	⇓*iP*		**Pb**		**14 30 22.2**	**-0.7**
	baz=358								
NDS				S		**Sg**		**14 30 27.7**	**+0.5**
	baz=358								
NNSB	**Datong**	**0.42**	**300**	⇓*iP*		**Pg**		**14 30 21.8**	**+0.1**
	baz=303								
NNSB				*i*S		**Sg**		**14 30 26.9**	**-0.4**
	baz=303								
NNSH	**Datong**	**0.42**	**300**	⇓P		**Pg**		**14 30 21.8**	**+0.1**
	baz=302								
NNSH				S		**Sg**		**14 30 26.9**	**-0.4**
	baz=302								
NNS	**Nan Shan**	**0.44**	**301**	⇓*iP*		**Pg**		**14 30 22.0**	**+0.1**
	baz=304								
NNS				*i*S		**Sg**		**14 30 27.4**	**-0.4**
	baz=304								
WHF	**Hehuan Shan**	**0.48**	**262**	⇓*iP*		**Pg**		**14 30 22.6**	**-0.2**
	baz=260								
WHF				*i*S		**Sg**		**14 30 28.6**	**-0.6**
	baz=260								
FUSS	**Fushou**	**0.50**	**274**	P		**Pg**		**14 30 23.1**	**+0.1**
	baz=273								
FUSS				S		**Sg**		**14 30 29.1**	**-0.5**
	baz=273								
ESL	**Shilin**	**0.51**	**219**	⇑*iP*		**Pg**		**14 30 23.0**	**-0.2**
	baz=222								
ESL				S		**Sg**		**14 30 30.0**	**0.0**
	baz=222								
TWE	**Neicheng**	**0.52**	**348**	⇓*iP*		**Pb**		**14 30 24.0**	**-0.5**
	baz=355								
TWE				S		**Sg**		**14 30 30.7**	**+0.5**
	baz=355								
ILA	**Ilan**	**0.55**	**356**	P		**Pb**		**14 30 24.9**	**-0.2**
	baz=2.0								
ILA				S		**Sb**		**14 30 32.6**	**-0.5**
	baz=2.0								
TEGC	**Jichi Village**	**0.55**	**204**	*eP*		**Pb**		**14 30 25.7**	**+0.6**
	baz=189								
TEGC				*e*S		**Sn**		**14 30 35.1**	**-1.4**
	baz=189								
TWT	**Tachien**	**0.56**	**274**	P		**Pg**		**14 30 24.6**	**+0.5**
	baz=273								
TWT				S		**Sg**		**14 30 31.5**	**-0.1**
	baz=273								
FUSB	**Fushanzhiwuyua**	**0.57**	**342**	⇓*iP*		**Pb**		**14 30 25.1**	**-0.5**
	baz=346								
FUSB				*i*S		**Sg**		**14 30 32.1**	**+0.1**
	baz=346								
TDCB	**Techi**	**0.57**	**274**	⇓*iP*		**Pg**		**14 30 24.6**	**+0.1**
	baz=274								
TDCB				S		**Sg**		**14 30 31.4**	**-0.7**
	baz=274								
CHGB	**Renai**	**0.58**	**255**	⇑*iP*		**Pg**		**14 30 24.7**	**+0.1**
	baz=245								
CHGB				*i*S		**Sg**		**14 30 31.9**	**-0.3**
	baz=245								
YHNB	**Yeheng**	**0.59**	**321**	⇓*iP*		**Pg**		**14 30 25.1**	**+0.4**
	baz=323								
YHNB				S		**Sg**		**14 30 32.2**	**-0.2**
	baz=323								
NSK	**Sanguang**	**0.60**	**320**	⇓*iP*		**Pg**		**14 30 25.4**	**+0.4**
	baz=323								
NSK				S		**Sg**		**14 30 32.8**	**-0.1**
	baz=323								
OWD	**Renai**	**0.61**	**245**	P		**Pg**		**14 30 25.0**	**-0.2**
	baz=243								
OWD				S		**Sg**		**14 30 33.0**	**-0.3**
	baz=243								
NWLT	**Wulai**	**0.62**	**335**	P		**Pb**		**14 30 25.8**	**-0.5**
	baz=339								
NWLT				S		**Sg**		**14 30 33.5**	**+0.1**
	baz=339								
EGFH	**Guangfu**	**0.63**	**211**	*eP*		**Pg**		**14 30 25.7**	**+0.1**
	baz=215								
EGFH				*e*S		**Sb**		**14 30 35.9**	**+0.4**
	baz=215								
NTC	**Toucheng**	**0.64**	**4**	*eP*		**Pb**		**14 30 26.3**	**-0.3**
	baz=8.0								
NTC				*e*S		**Sb**		**14 30 34.8**	**-0.8**
	baz=8.0								
EGS		**0.64**	**12**	⇓*iP*		**Pb**		**14 30 26.6**	**-0.1**
	baz=24								
EGS				*e*S		**Sb**		**14 30 35.2**	**-0.5**
	baz=24								
WUSB	**Renai**	**0.65**	**250**	P		**Pg**		**14 30 25.9**	**0.0**
	baz=240								
WUSB				S		**Sg**		**14 30 33.5**	**-0.9**
	baz=240								
NFF	**Wufeng Townshi**	**0.74**	**304**	*eP*		**Pb**		**14 30 27.9**	**-0.4**
	baz=306								
NFF				*e*S		**Sg**		**14 30 36.9**	**-0.3**
	baz=306								
VWDT	**VWDT**	**0.75**	**232**	⇑*iP*		**Pg**		**14 30 27.6**	**-0.1**
	baz=230								
VWDT				S		**Sg**		**14 30 38.0**	**+0.6**
	baz=230								
TIPB	**Shuangxi**	**0.76**	**3**	P		**Pb**		**14 30 28.4**	**-0.2**
	baz=6.0								
TIPB				S		**Sg**		**14 30 37.7**	**0.0**
	baz=6.0								
WHP	**Taichung City**	**0.77**	**275**	P		**Pg**		**14 30 28.5**	**+0.4**
	baz=275								
WHP				S		**Sg**		**14 30 38.4**	**+0.1**
	baz=275								
NHDH	**Xindian Distri**	**0.78**	**342**	*eP*		**Pn**		**14 30 29.7**	**-0.7**
	baz=346								
NHDH				*e*S		**Sb**		**14 30 39.1**	**-0.7**
	baz=346								
TWA	**Mucha**	**0.79**	**346**	P		**Pb**		**14 30 29.3**	**+0.2**
	baz=350								
TWA				S		**Sg**		**14 30 38.4**	**-0.3**
	baz=350								
HGSD	**Ruisui**	**0.79**	**205**	P		**Pb**		**14 30 29.4**	**+0.2**
	baz=189								
HGSD				*e*S		**Sn**		**14 30 42.6**	**+0.1**
	baz=189								
TWB1	**Santiao Chiao**	**0.81**	**13**	P		**Pb**		**14 30 29.4**	**-0.1**
	baz=17								
TWB1				*e*S		**Sg**		**14 30 39.3**	**-0.2**
	baz=17								
WCS	**Beigang Elemen**	**0.81**	**259**	*eP*		**Pg**		**14 30 29.2**	**+0.2**
	baz=258								
WCS				*e*S		**Sg**		**14 30 38.5**	**-1.1**
	baz=258								
EHY	**Hungye**	**0.82**	**211**	P		**Pg**		**14 30 28.5**	**-0.7**
	baz=216								
EHY				S		**Sg**		**14 30 40.5**	**+0.6**
	baz=216								
LIOB	**Emei**	**0.82**	**302**	*eP*		**Pn**		**14 30 30.1**	**-1.0**
	baz=303								
NSTT	**Nanjuang**	**0.83**	**300**	P		**Pg**		**14 30 29.5**	**+0.2**
	baz=301								
NSTT				S		**Sg**		**14 30 39.9**	**-0.1**
	baz=301								
NWF	**Wu-fen Shan**	**0.85**	**360**	*eP*		**Pn**		**14 30 30.5**	**-1.0**
	baz=354								
NWF				*e*S		**Sb**		**14 30 41.4**	**-0.5**
	baz=354								
TAP	**Taipei**	**0.86**	**343**	*eP*		**Pn**		**14 30 31.2**	**-0.4**
	baz=346								
TAP				*e*S		**Sb**		**14 30 42.2**	**+0.2**
	baz=346								
SSLB	**Suanglung**	**0.87**	**241**	P		**Pg**		**14 30 29.7**	**-0.4**
	baz=239								
SSLB				S		**Sg**		**14 30 40.4**	**-1.1**
	baz=239								
SMLT	**Sun Moon Lake**	**0.88**	**248**	⇓*iP*		**Pg**		**14 30 30.3**	**+0.1**
	baz=237								
SMLT				S		**Sg**		**14 30 41.4**	**-0.1**
	baz=237								
SXI1	**Grass Mountain**	**0.88**	**5**	P		**Pn**		**14 30 30.9**	**-1.0**
	baz=15								
SXI1				S		**Sb**		**14 30 42.4**	**-0.3**
	baz=15								
TYC	**Yuchr**	**0.90**	**250**	P		**Pb**		**14 30 30.5**	**-0.6**
	baz=240								
TYC				S		**Sg**		**14 30 41.5**	**-1.0**
	baz=240								
NCU	**National Centr**	**0.93**	**324**	*eP*		**Pn**		**14 30 32.9**	**+0.3**
	baz=326								
NCU				*e*S		**Sn**		**14 30 44.9**	**-1.0**
	baz=326								
NCUH	**Zhongli**	**0.93**	**324**	*eP*		**Pn**		**14 30 32.5**	**+0.1**
	baz=326								
NCUH				*e*S		**Sn**		**14 30 45.9**	**-0.1**
	baz=326								
SBCB	**Hsinchu**	**0.93**	**308**	*eP*		**Pn**		**14 30 33.2**	**+0.7**
	baz=310								
SBCB				*e*S		**Sg**		**14 30 44.2**	**+0.9**
	baz=310								
YULB	**Yu-li**	**0.93**	**209**	*eP*		**Pb**		**14 30 30.1**	**-1.5**
	baz=218								
TWQ1	**Liyutan**	**0.93**	**278**	P		**Pn**		**14 30 32.7**	**+0.1**
	baz=278								
TWQ1				*e*S		**Sg**		**14 30 44.5**	**+1.0**
	baz=278								
TWS1	**Kuangyinshan**	**0.94**	**339**	P		**Pn**		**14 30 32.9**	**+0.2**
	baz=350								
TWS1				S		**Sn**		**14 30 46.1**	**-0.2**
	baz=350								
HSN	**Hsinchu**	**0.95**	**308**	*eP*		**Pn**		**14 30 32.5**	**-0.2**
	baz=312								
HSN				*e*S		**Sn**		**14 30 46.1**	**-0.2**
	baz=312								
YM01	**YM01**	**0.95**	**348**	P		**Pn**		**14 30 32.4**	**-0.5**
	baz=351								
YM01				*e*S		**Sg**		**14 30 44.7**	**+0.8**
	baz=351								
NSY	**Sanyi**	**0.96**	**282**	P		**Pn**		**14 30 32.8**	**-0.1**
	baz=282								
EYUL	**Yuli**	**0.96**	**206**	*eP*		**Pn**		**14 30 32.8**	**-0.2**
	baz=217								
NMLH	**Miaoli**	**0.96**	**290**	*eP*		**Pn**		**14 30 34.0**	**+1.1**
	baz=290								
NTST	**Danshui**	**0.99**	**342**	*eP*		**Pn**		**14 30 33.8**	**+0.4**
	baz=354								
NTST				*e*S		**Sn**		**14 30 47.7**	**+0.2**
	baz=354								
ANP	**Anpu**	**1.00**	**346**	*eP*		**Pn**		**14 30 33.5**	**0.0**
	baz=349								
TCU	**Taichung**	**1.02**	**266**	P		**Pn**		**14 30 35.1**	**+1.4**
	baz=266								
WJS	**Zhushan**	**1.04**	**248**	*eP*		**Pn**		**14 30 34.6**	**+0.5**
	baz=242								
WJS				*e*S		**Sn**		**14 30 49.1**	**+0.4**
	baz=242								
YUS	**Yu-Shan**	**1.05**	**227**	P		**Pb**		**14 30 33.5**	**-0.4**
	baz=216								
YUS				*e*S		**Sb**		**14 30 47.5**	**-0.4**
	baz=216								
WDJ	**Dajia District**	**1.05**	**277**	*eP*		**Pn**		**14 30 34.9**	**+0.6**
	baz=277								
WDJ				*e*S		**Sn**		**14 30 49.8**	**+0.8**
	baz=277								
WNT	**Mingjian**	**1.06**	**252**	*eP*		**Pg**		**14 30 34.6**	**+0.9**
	baz=246								
WNT				*e*S		**Sn**		**14 30 49.5**	**+0.3**
	baz=246								
JYNG	**Yonagunijimaku**	**1.08**	**77**	P		**Pg**		**14 30 35.4**	**+1.3**
JYNG				*e*S		**Sn**		**14 30 51.7**	**+2.0**
FULB	**Fuli**	**1.11**	**204**	*eP*		**Pb**		**14 30 34.5**	**-0.1**
	baz=217								
WCHH	**Zhanghua**	**1.13**	**263**	*eP*		**Pg**		**14 30 36.5**	**+1.5**
	baz=263								
WCHH				*e*S		**Sn**		**14 30 53.3**	**+2.5**
	baz=263								
ALS	**Alishan**	**1.14**	**232**	P		**Pb**		**14 30 35.1**	**-0.2**
	baz=231								
ALS				*e*S		**Sn**		**14 30 51.9**	**+0.4**
	baz=231								
YOJ	**Yonaguni jima**	**1.14**	**77**	*eP**		**Pg**		**14 30 36.2**	**+0.9**
	baz=67								
YOJ	**Yonaguni jima**	**1.14**	**77**	P		**Pg**		**14 30 36.1**	**+0.8**
YOJ				S		**Sn**		**14 30 53.5**	**+2.3**
ELDTW	**Lidau**	**1.24**	**215**	*eP*		**Pn**		**14 30 35.1**	**-1.8**
	baz=214								
WDLH	**Douliu**	**1.26**	**246**	*eP*		**Pg**		**14 30 37.9**	**+0.5**
	baz=245								
WDLH				*e*S		**Sg**		**14 30 56.3**	**+2.6**
	baz=245								
EDH	**Donghe**	**1.31**	**200**	*eP*		**Pn**		**14 30 36.7**	**-1.0**
	baz=182								
EDH				*e*S		**Sn**		**14 30 55.4**	**0.0**
	baz=182								
WRL	**Guolierlin Hig**	**1.32**	**257**	*eP*		**Pg**		**14 30 38.8**	**+0.1**
	baz=256								
WRL				*e*S		**Sg**		**14 30 57.1**	**+1.1**
	baz=256								
CHN2	**Minshiung**	**1.38**	**241**	*eP*		**Pg**		**14 30 40.8**	**+1.1**
	baz=240								
CHN2				*e*S		**Sg**		**14 31 00.7**	**+3.0**
	baz=240								
STYH	**Taoyuan**	**1.39**	**222**	*eP*		**Pn**		**14 30 38.9**	**+0.1**
	baz=222								
STYH				*e*S		**Sg**		**14 30 59.0**	**+0.9**
	baz=222								
TPUB	**Ta-pu**	**1.40**	**230**	*eP*		**Pg**		**14 30 39.9**	**-0.2**
	baz=217								
TPUB				*e*S		**Sg**		**14 30 58.9**	**+0.6**
	baz=217								
PCYT	**Pengchaiyu**	**1.43**	**10**	*eP*		**Pg**		**14 30 40.3**	**-0.5**
	baz=12								
LONT	**Longtian**	**1.43**	**205**	*eP*		**Pn**		**14 30 37.9**	**-1.5**
	baz=205								
CHY	**Chiayi**	**1.44**	**241**	*eP*		**Pg**		**14 30 41.2**	**+0.3**
	baz=240								
CHY				*e*S		**Sg**		**14 31 01.3**	**+1.8**
	baz=240								
WTP	**Ta-pu**	**1.44**	**228**	P		**Pb**		**14 30 40.6**	**+0.2**
	baz=228								
WTP				*e*S		**Sg**		**14 31 01.6**	**+1.9**
	baz=228								
TWK	**Hsinying**	**1.52**	**232**	P		**Pb**		**14 30 41.9**	**+0.3**
	baz=232								
TWK				*e*S		**Sg**		**14 31 02.5**	**+0.4**
	baz=232								
TWG	**Pinlang**	**1.53**	**205**	*eP*		**Pn**		**14 30 39.5**	**-1.3**
	baz=189								
TWGBT	**Beinan**	**1.53**	**205**	*eP*		**Pn**		**14 30 39.1**	**-1.7**
	baz=189								
SNST	**Tainan City**	**1.54**	**230**	*eP*		**Pg**		**14 30 43.0**	**+0.1**
	baz=231								
SNST				*e*S		**Sg**		**14 31 04.3**	**+1.4**
	baz=231								
CHN1	**Nanshi**	**1.54**	**229**	⇑P		**Pb**		**14 30 42.4**	**+0.4**
	baz=229								
CHN1				S		**Sg**		**14 31 04.8**	**+1.9**
	baz=229								
WSF	**Szhu**	**1.54**	**248**	*eP*		**Pb**		**14 30 42.5**	**+0.5**
	baz=259								
WSF				S		**Sg**		**14 31 03.9**	**+1.0**
	baz=259								
LDUT	**Ludao**	**1.56**	**191**	*eP*		**Pn**		**14 30 38.5**	**-2.7**
	baz=191								
SGST	**Jiashian**	**1.58**	**225**	P		**Pb**		**14 30 42.0**	**-0.6**
	baz=224								
SGST				S		**Sg**		**14 31 04.4**	**+0.4**
	baz=224								
WSL	**Shuilin Townsh**	**1.58**	**245**	*eP*		**Pb**		**14 30 42.9**	**+0.2**
	baz=245								
WSL				*e*S		**Sg**		**14 31 05.4**	**+1.2**
	baz=245								
ICHU	**Yijhu**	**1.62**	**239**	*eP*		**Pb**		**14 30 43.3**	**0.0**
	baz=224								
ICHU				*e*S		**Sg**		**14 31 05.9**	**+0.4**
	baz=224								
CHN3	**Shinhua**	**1.73**	**229**	*eP*		**Pb**		**14 30 45.4**	**+0.2**
	baz=232								
CHN3				*e*S		**Sg**		**14 31 10.6**	**+1.8**
	baz=232								
SHHT	**Tainan City**	**1.77**	**228**	*eP*		**Pg**		**14 30 46.8**	**-0.6**
	baz=230								
SCST	**Cishan**	**1.78**	**222**	*eP*		**Pb**		**14 30 46.0**	**0.0**
	baz=224								
IRIF	**Iriomote-Funau**	**1.78**	**86**	P		**Pb**		**14 30 44.9**	**-1.2**
IRIF				*e*S		**Sg**		**14 31 09.4**	**-1.1**
ECL	**Taimali**	**1.78**	**206**	*eP*		**Pb**		**14 30 46.1**	**+0.1**
	baz=192								
SCLT	**Jiali**	**1.79**	**235**	*eS*		**Sg**		**14 31 11.1**	**+0.3**
	baz=236								

	baz=187								
SLIU	**Shizi**	**2.19**	**205**	*e*P		**Pn**	**14 30 50.4**	**+0.6**
	baz=195								
VWUC	**VWUC**	**2.26**	**290**	*e*P		**Pn**	**14 30 50.5**	**-0.4**
	baz=277								
JISG	**Ishigakijimahi**	**2.33**	**80**	P		**Pn**	**14 30 52.7**	**+0.9**
JISG				S		**Sb**	**14 31 21.8**	**-2.6**
TWKBT	**Hengchun**	**2.43**	**202**	*e*P		**Pn**	**14 30 54.1**	**+0.9**
	baz=190								
PTMZ	**Houxiangcun**	**2.56**	**289**	*e*P		**Pn**	**14 30 54.7**	**-0.3**
	baz=288								
PTMZ				*e*S		**Sn**	**14 31 24.6**	**-1.6**
	baz=288								
JTJ	**Tarama**	**2.69**	**80**	S		**Sb**	**14 31 33.7**	**-1.0**
JMJ2	**Miyako jima3**	**3.27**	**80**	*e*S		**Sn**	**14 31 46.5**	**+2.8**
AXDP	**Jialang**	**3.54**	**282**	*e*P		**Pn**	**14 31 07.7**	**-0.7**
	baz=281								

IDC ***29*** *14:32:38.7±0.8, 10°.93N×125°.09E, h0km, mb3.8/11, mbtmp3.9/13, ML4.3/2, MS3.0/7, Error ellipse: s-maj=45.0km s-min=15.1km az=71.0*
MAN ***29*** *14:32:39.7, 10°.89N×124°.78E, h5km, mb4.9, ML3.9, MS3.9*
MAN INTENSITY III - ALBUERA AND BURAUEN LEYTE; ORMOC CITY; INTENSITY II - ISABEL LEYTE; TACLOBAN CITY.
ISC 29 14:32:40.1±1.3, 10°.93N±0°.03×124°.82E±0°.04, h7km±9km, n45, σ1§63/44, mb3.9/11, MS3.0/4, 9C-14D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.24**	**301**	⇓	*e*P		**Pg**	**14 32 45.6**	**+0.8**
MSLP	**Maasin**	**0.79**	**177**	⇑	*e*P		**Pg**	**14 32 55.1**	**-0.2**
MSLP					*e*S		**Sb**	**14 33 07.2**	**0.0**
BESP	**Borongan**	**0.91**	**42**	⇓	*e*P		**Pg**	**14 32 57.4**	**-0.2**
LLP	**Lapu-Lapu**	**1.03**	**234**	⇑	*i*P		**Pg**	**14 32 58.1**	**-1.8**
LLP					*i*S		**Sg**	**14 33 13.0**	**-0.4**
TBP	**Tagbilaran**	**1.55**	**217**	⇑	*i*P		**Pn**	**14 33 07.2**	**-0.9**
TBP					*i*S		**Sn**	**14 33 27.9**	**-0.5**
GLSP	**General Luna,**	**1.72**	**131**	⇓	*e*P		**Pn**	**14 33 08.5**	**-2.0**
BUTP	**Butuan**	**2.10**	**158**	⇓	*e*P		**Pb**	**14 33 17.7**	**-0.9**
RCP	**Roxas**	**2.13**	**287**	⇑	*e*P		**Pn**	**14 33 16.2**	**+0.1**
RCP					*e*S		**Sn**	**14 33 42.8**	**0.0**
GUIM	**Jordan**	**2.21**	**262**	⇓	*e*P		**Pn**	**14 33 16.7**	**-0.5**
SNPH	**Sibulan**	**2.21**	**225**	⇓	*i*P		**Pn**	**14 33 17.1**	**-0.2**
SNPH					*i*S		**Sb**	**14 33 49.8**	**+1.6**
PVCP	**Virac**	**2.73**	**346**	⇓	*e*P		**Pn**	**14 33 25.1**	**+0.8**
DCPH	**Dipolog City**	**2.74**	**212**	⇓	*e*P		**Pn**	**14 33 24.6**	**+0.1**
JAP	**San Jose, Anti**	**2.82**	**267**	⇓	*e*P		**Pn**	**14 33 27.1**	**+1.4**
BUKP	**Musuan**	**3.04**	**175**	⇑	*e*P		**Pn**	**14 33 29.3**	**+0.6**
BUKP					*e*S		**Sn**	**14 34 07.6**	**+2.2**
BIPH	**Bislig**	**3.12**	**151**	⇑	*i*P		**Pn**	**14 33 32.7**	**+2.9**
BIPH					*i*S		**Sb**	**14 34 15.4**	**+1.1**
PAGZ	**Pagadian**	**3.37**	**205**	⇓	*e*P		**Pn**	**14 33 33.5**	**+0.3**
CTBH	**Cotabato--PC H**	**3.73**	**189**	⇓	*i*P		**Pn**	**14 33 39.7**	**+1.6**
CUYO	**Cuyo Island**	**3.73**	**269**	⇓	*e*P		**Pn**	**14 33 38.2**	**0.0**
GQP	**Guinayangan**	**3.76**	**322**	⇓	*e*P		**Pn**	**14 33 38.5**	**0.0**
GQP					*e*S		**Sn**	**14 34 16.2**	**-6.8**
BOAC	**Boac**	**3.84**	**311**	⇓	*e*P		**Pn**	**14 33 41.1**	**+1.4**
KCP	**Kidapawan**	**3.90**	**176**	⇓	*e*P		**Pn**	**14 33 41.1**	**+0.5**
DAV	**Davao City (W)**	**3.91**	**169**	Pn			**Pn**	**14 33 39.6**	**-1.0**
	88nm,0.3s,baz=344,slow=15,SNR=2.4								
DAV				Lg			Lg	14 34 42.4	
	baz=49,slow=20 161nm,0.3s								
SJMP	**San Jose**	**3.93**	**293**	⇓	*e*P		**Pn**	**14 33 42.4**	**+1.5**
JCNP	**Jose Panganiba**	**3.93**	**328**	⇓	*e*P		**Pn**	**14 33 41.6**	**+0.8**
SIJI	**Sorong**	**13.36**	**151**	LR			LR	14 42 50.2	
	comp=Z,60nm,19.1s,baz=25,slow=46								
JOW	**Kunigami**	**16.15**	**11**	Pn			**Pn**	**14 36 28.2**	**+0.5**
	1.2nm,0.3s,baz=191,slow=13,SNR=4.4 6.5nm,0.5s								
KAPI	**Kappang**	**16.62**	**198**	LR			LR	14 43 39.5	
	comp=Z,73nm,18.6s,baz=36,slow=40								
GUMO	**Guam**	**19.77**	**80**	LR			LR	14 43 41.5	
	comp=Z,26nm,20.1s,baz=264,slow=34								
CMAR	**Chiang Mai Arr**	**26.10**	**290**	P			**P**	**14 38 18.5**	**+3.7**
	0.7nm,0.9s,baz=110,slow=8.0,SNR=1.9 0.7nm,0.9s								
KSRS	**Korea Array**	**26.56**	**6**	P			**P**	**14 38 18.7**	**0.0**
	0.6nm,0.6s,baz=187,slow=9.3,SNR=4.2								
KSRS				LR			LR	14 48 30.6	
	comp=Z,31nm,21.5s,baz=195,slow=36 0.6nm,0.6s								
MJAR	**Matsushiro Arr**	**28.23**	**23**	LR			LR	14 50 11.8	
	comp=Z,31nm,18.9s,baz=202,slow=37								
WRA	**Warramunga Arr**	**32.08**	**163**	P			**P**	**14 39 05.7**	**-2.2**
	0.7nm,0.9s,baz=339,slow=10.0,SNR=1.5 0.7nm,0.9s								
ASAR	**Alice Springs**	**35.51**	**166**	P			**P**	**14 39 36.9**	**-0.9**
	0.6nm,0.5s,baz=348,slow=6.9,SNR=14 0.6nm,0.5s								
ASAJ	**Asahikawa**	**36.46**	**22**	LR			LR	14 54 45.7	
	comp=Z,28nm,19.9s,baz=177,slow=36								
SONM	**Songino Array**	**39.92**	**341**	P			**P**	**14 40 15.4**	**+0.4**
	1.3nm,0.8s,baz=156,slow=10,SNR=3.9 1.3nm,0.8s								
H11N1	**WAKE ISLAND Hy**	**41.42**	**73**	T			T	15 23 50.9	
	baz=265,slow=74,SNR=10								
H11N2	**WAKE ISLAND Hy**	**41.42**	**73**	T			T	15 24 04.7	
	baz=265,slow=74,SNR=4.1								
H11N3	**WAKE ISLAND Hy**	**41.43**	**73**	T			T	15 23 54.6	
	baz=265,slow=74,SNR=7.9								
STKA	**Stephens Creek**	**45.49**	**160**	P			**P**	**14 40 60.0**	**-0.3**
	2.8nm,0.8s,baz=352,slow=10,SNR=3.7 2.8nm,0.8s								
MKAR	**Makanchi Array**	**50.64**	**323**	P			**P**	**14 41 39.9**	**-0.1**
	1.7nm,0.7s,baz=122,slow=8.4,SNR=15 1.7nm,0.7s								
ZALV	**Zalesovo Beam**	**53.37**	**332**	P			**P**	**14 42 00.0**	**-0.2**
	0.7nm,0.5s,baz=127,slow=11,SNR=3.5 0.7nm,0.5s								
AKTO	**Aktyubinsk**	**66.91**	**320**	P			**P**	**14 43 33.6**	**+0.5**
	1.1nm,0.7s,baz=112,slow=5.4,SNR=4.4 1.1nm,0.7s								
ARCES	**ARCESS Array B**	**83.08**	**340**	P			**P**	**14 45 06.1**	**-0.1**
	0.7nm,0.6s,baz=57,slow=8.8,SNR=2.8 0.7nm,0.6s								
FINES	**FINESS Array B**	**84.64**	**332**	P			**P**	**14 45 14.9**	**+0.6**
	0.4nm,0.6s,baz=57,slow=5.1,SNR=1.8 0.4nm,0.6s								
VRAC	**Vranov**	**93.36**	**321**	LR			LR	15 33 59.6	
	comp=Z,7.7nm,19.6s,baz=158,slow=39								

SSNC ***29*** *14:36:45.3±1.4, 19°.85N×76°.39W, h7km±5km, MD2.8, ML2.6, MW2.9*
JSN ***29*** *14:36:45.9±0.4, 19°.69N×76°.42W, h0km±398km, MD3.9*
ISC 29 14:36:41.0±1.5, 19°.80N±0°.06×76°.45W±0°.04, h5km±13km, n11, σ1§15/17, 2D, Cuba region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LMGC	**Las Mercedes**	**0.59**	**297**		*e*P		**Pb**	**14 36 56.1**	**+2.4**
RCC	**Rio Carpintero**	**0.74**	**74**		*e*P		**Pb**	**14 36 56.2**	**-0.1**
RCC					*e*S		**Sg**	**14 37 04.6**	**-0.2**
GTMO	**Guantanamo**	**1.27**	**77**		*e*P		**Pn**	**14 37 06.3**	**+0.9**
GTMO					*e*S		**Sn**	**14 37 22.7**	**0.0**
GTBY	**Guantanamo Bay**	**1.27**	**84**		*e*P		**Pn**	**14 37 05.5**	**+0.2**
GTBY					*e*S		**Sg**	**14 37 20.4**	**-1.4**
GWJ	**Greenwich**	**1.73**	**189**	⇓	*i*P		**Pg**	**14 37 14.4**	**+0.1**
STH	**Stony Hill**	**1.74**	**191**	⇓	*i*P		**Pg**	**14 37 14.6**	**+0.1**
HOJ	**Hope**	**1.80**	**189**		*i*P		**Pg**	**14 37 15.6**	**-0.1**
CCCC	**Cccc**	**1.86**	**319**		*e*P		**Pn**	**14 37 11.3**	**-2.3**
CCCC					*e*S		Sn	14 37 31.0	-6.5
CCCC					IAML			14 37 33.1	
	comp=N,24nm,0.5s								
CCCC					IAML			14 37 33.2	
	comp=E,46nm,0.2s								
MTDJ	**Mount Denham**	**1.87**	**213**		*e*P		**Pb**	**14 37 16.6**	**+0.9**
MTDJ					*e*S		**Sb**	**14 37 39.2**	**-0.2**
MASC	**Masc**	**2.12**	**79**		*e*P		**Pn**	**14 37 18.5**	**+1.4**
MASC					*e*S		**Sn**	**14 37 43.3**	**-0.5**
MCJ	**Malvern**	**2.20**	**212**		*i*P		**Pb**	**14 37 21.5**	**+0.1**
MCJ					*i*S		**Sb**	**14 37 48.2**	**-0.7**

JMA ***29*** *14:37:28.9±0.1, 24°.1N±0°.5×121°.6E±0°.7, h22km, MV3.4/10, TAIWAN REGION*
ASIES ***29*** *14:37:29.8, 24°.22N×121°.70E, h19km, MW3.5*
TAP ***29*** *14:37:30.7, 24°.21N×121°.74E, h11km, ML3.9, C*
IDC ***29*** *14:37:30.0±1.3, 23°.92N×121°.87E, h0km, mb3.4/4, mbtmp3.4/6, ML3.0/2, MS3.5/1, Error ellipse: s-maj=41.1km s-min=23.2km az=72.0*
ISC 29 14:37:30.8±0.8, 24°.20N±0°.01×121°.75E±0°.02, h10km±5km, n143, σ0§98/233, mb3.3/4, 10C-18D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.11**	**357**	⇓	*i*P		**Pg**	**14 37 33.6**	**+0.2**
	baz=5.0								
EHP					*i*S		**Sg**	**14 37 35.7**	**+0.3**
	baz=5.0								
ETL	**Fush Village**	**0.12**	**249**		*e*P		**Pg**	**14 37 34.0**	**+0.3**
	baz=235								
ETL					*i*S		**Sg**	**14 37 36.3**	**+0.6**
	baz=235								
NACB	**Ninganchiao**	**0.14**	**258**	⇓	*i*P		**Pg**	**14 37 34.2**	**+0.2**
	baz=246								
NACB					*i*S		**Sg**	**14 37 36.7**	**+0.5**
	baz=246								
TWD	**Chiawan**	**0.18**	**228**	⇑	*i*P		**Pg**	**14 37 34.9**	**+0.2**
	baz=224								
TWD					*i*S		**Sg**	**14 37 37.8**	**+0.4**
	baz=224								
ENA	**Nanau**	**0.22**	**359**	⇓	*i*P		**Pg**	**14 37 35.4**	**0.0**
	baz=2.0								
ENA					S		**Sg**	**14 37 38.6**	**0.0**
	baz=2.0								
ETLH	**Xiulin Townshi**	**0.24**	**271**	⇓	*i*P		**Pg**	**14 37 35.9**	**+0.1**
	baz=269								
ETLH					*e*S		**Sg**	**14 37 39.4**	**+0.2**
	baz=269								
EWUT	**Wuta**	**0.24**	**7**	⇓	*i*P		**Pg**	**14 37 35.8**	**+0.1**
	baz=9.0								
EWUT					*i*S		**Sg**	**14 37 39.4**	**+0.3**
	baz=9.0								
LATG	**Datong**	**0.39**	**329**	⇓	*i*P		**Pg**	**14 37 38.6**	**+0.1**
	baz=336								
NNSB	**Datong**	**0.40**	**304**	⇓	*i*P		**Pg**	**14 37 39.0**	**+0.2**
	baz=304								
TWC	**Suao**	**0.41**	**13**	⇓	*i*P		**Pg**	**14 37 39.0**	**0.0**
	baz=8.0								
TWC					*i*S		**Sg**	**14 37 43.8**	**-0.7**
	baz=8.0								
NNS	**Nan Shan**	**0.41**	**305**	⇓	*i*P		**Pg**	**14 37 39.1**	**+0.1**
	baz=304								
NNS					S		**Sg**	**14 37 44.5**	**0.0**
	baz=304								
NDS	**Dongshan**	**0.43**	**356**	⇓	*i*P		**Pg**	**14 37 39.4**	**+0.2**
	baz=357								
NDS					*i*S		**Sg**	**14 37 45.3**	**+0.4**
	baz=357								
WHF	**Hehuan Shan**	**0.44**	**263**	⇓	*i*P		**Pg**	**14 37 39.8**	**+0.1**
	baz=261								
WHF					*i*S		**Sg**	**14 37 45.6**	**+0.1**
	baz=261								
FUSS	**Fushou**	**0.46**	**276**	⇓	*i*P		**Pb**	**14 37 40.3**	**-1.0**
	baz=275								
FUSS					*e*S		**Sb**	**14 37 46.6**	**-1.7**
	baz=275								
ESL	**Shilin**	**0.48**	**217**	⇑	*i*P		**Pg**	**14 37 40.1**	**-0.1**
	baz=224								
ESL					*e*S		**Sg**	**14 37 46.7**	**+0.1**
	baz=224								
TWE	**Neicheng**	**0.52**	**352**	⇓	*i*P		**Pg**	**14 37 41.2**	**+0.3**
	baz=354								
TWE					S		**Sg**	**14 37 48.1**	**+0.3**
	baz=354								
TWT	**Tachien**	**0.52**	**276**		*e*P		**Pb**	**14 37 41.8**	**-0.5**
	baz=274								
TWT					S		**Sb**	**14 37 48.8**	**-1.2**
	baz=274								
TDCB	**Techi**	**0.54**	**275**	⇓	*i*P		**Pb**	**14 37 41.8**	**-0.7**
	baz=275								
TDCB					*i*S		**Sg**	**14 37 48.3**	**-0.1**
	baz=275								
CHGB	**Renai**	**0.54**	**255**		*e*P		**Pb**	**14 37 41.8**	**-0.8**
	baz=247								
CHGB					S		**Sb**	**14 37 49.1**	**-1.5**
	baz=247								
ILA	**Ilan**	**0.56**	**0**	⇓	P		**Pg**	**14 37 42.1**	**+0.4**
	baz=1.0								
ILA					*e*S		**Sg**	**14 37 49.8**	**+0.7**
	baz=1.0								
FUSB	**Fushanzhiwuyua**	**0.57**	**345**		*i*P		**Pg**	**14 37 42.1**	**+0.2**
	baz=345								
FUSB					S		**Sg**	**14 37 49.7**	**+0.1**
	baz=345								
YHNB	**Yeheng**	**0.57**	**324**	⇑	*i*P		**Pb**	**14 37 42.4**	**-0.7**
	baz=323								
YHNB					S		**Sg**	**14 37 48.9**	**-0.6**
	baz=323								
OWD	**Renai**	**0.58**	**245**		*e*P		**Pg**	**14 37 42.2**	**+0.2**
	baz=244								
OWD					S		**Sg**	**14 37 49.8**	**+0.1**
	baz=244								
NSK	**Sanguang**	**0.59**	**323**	⇑	*i*P		**Pg**	**14 37 42.5**	**+0.3**
	baz=323								
NSK					S		**Sg**	**14 37 49.8**	**-0.2**
	baz=323								
EGFH	**Guangfu**	**0.61**	**209**		P		**Pg**	**14 37 42.6**	**0.0**
	baz=216								
EGFH					*e*S		**Sb**	**14 37 52.5**	**+0.3**
	baz=216								
NWLT	**Wulai**	**0.61**	**339**	⇑	P		**Pg**	**14 37 43.0**	**+0.3**
	baz=339								
NWLT					*i*S		**Sg**	**14 37 50.7**	**-0.1**
	baz=339								
WUSB	**Renai**	**0.61**	**250**		*i*S		**Sg**	**14 37 50.2**	**-0.6**
	baz=242								
NTC	**Toucheng**	**0.65**	**7**	⇓	P		**Pg**	**14 37 43.7**	**+0.2**
	baz=7.0								
NTC					*e*S		**Sb**	**14 37 52.8**	**-0.7**
	baz=7.0								
EGS		**0.66**	**15**		*e*P		**Pg**	**14 37 43.7**	**+0.1**
	baz=23								
EGS					*e*S		**Sg**	**14 37 51.9**	**-0.3**
	baz=23								
VWDT	**VWDT**	**0.71**	**231**	⇑	*i*P		**Pg**	**14 37 44.6**	**+0.1**
	baz=231								
VWDT					*e*S		**Sb**	**14 37 54.8**	**-0.5**
	baz=231								
NFF	**Wufeng Townshi**	**0.71**	**307**		*e*P		**Pb**	**14 37 45.1**	**-0.4**
	baz=306								
NFF					*e*S		**Sb**	**14 37 54.5**	**-0.9**
	baz=306								
WHP	**Taichung City**	**0.73**	**276**		*e*P		**Pb**	**14 37 45.7**	**-0.1**
	baz=275								
WHP					*e*S		**Sb**	**14 37 55.5**	**-0.5**
	baz=275								
HGSD	**Ruisui**	**0.77**	**203**		*e*P		**Pn**	**14 37 47.0**	**-0.8**
	baz=217								
HGSD					*e*S		**Sn**	**14 37 59.9**	**+0.5**
	baz=217								
TIPB	**Shuangxi**	**0.77**	**5**		*e*P		**Pg**	**14 37 45.7**	**+0.1**
	baz=6.0								
TIPB					*e*S		**Sg**	**14 37 54.6**	**-1.1**
	baz=6.0								
WCS	**Beigang Elemen**	**0.78**	**259**		*e*P		**Pb**	**14 37 46.2**	**-0.2**
	baz=259								
WCS					*e*S		**Sb**	**14 37 56.4**	**-0.7**
	baz=259								
NHDH	**Xindian Distri**	**0.78**	**345**		*e*P		**Pb**	**14 37 46.5**	**-0.1**
	baz=345								
NHDH					*e*S		**Sg**	**14 37 55.8**	**-0.3**
	baz=345								
TWA	**Mucha**	**0.79**	**349**		*e*P		**Pg**	**14 37 46.1**	**+0.1**
	baz=350								
TWA					*e*S		**Sg**	**14 37 55.8**	**-0.5**
	baz=350								
EHY	**Hungye**	**0.80**	**209**		*e*P		**Pg**	**14 37 45.5**	**-0.7**
	baz=219								
EHY					*e*S		**Sb**	**14 37 58.1**	**+0.4**
	baz=219								
LIOB	**Emei**	**0.80**	**304**		*e*P		**Pb**	**14 37 47.1**	**+0.2**
	baz=303								
LIOB					*e*S		**Sb**	**14 37 57.6**	**-0.2**
	baz=303								
NSTT	**Nanjuang**	**0.80**	**302**		*e*P		**Pb**	**14 37 46.9**	**0.0**
	baz=302								
NSTT					*e*S		**Sb**	**14 37 56.8**	**-1.0**
	baz=302								
TWB1	**Santiao Chiao**	**0.83**	**15**		*e*P		**Pg**	**14 37 46.6**	**-0.2**
	baz=16								
TWB1					*e*S		**Sg**	**14 37 55.9**	**-1.8**
	baz=16								
SSLB	**Suanglung**	**0.84**	**240**	⇑	P		**Pg**	**14 37 46.9**	**0.0**
	baz=240								
SSLB					*i*S		**Sg**	**14 37 56.9**	**-0.9**
	baz=240								
SMLT	**Sun Moon Lake**	**0.84**	**248**	⇑	*i*P		**Pb**	**14 37 47.3**	**-0.2**
	baz=238								
SMLT					*e*S		**Sg**	**14 37 57.5**	**-0.5**
	baz=238								
TAP	**Taipei**	**0.86**	**345**		*e*P		**Pb**	**14 37 48.0**	**+0.1**
	baz=346								
TAP					*e*S		**Sb**	**14 37 59.5**	**0.0**
	baz=346								
NWF	**Wu-fen Shan**	**0.86**	**2**		*e*P		**Pb**	**14 37 47.9**	**-0.1**
	baz=353								
NWF					*e*S		**Sg**	**14 37 58.7**	**-0.1**
	baz=353								
TYC	**Yuchr**	**0.87**	**250**	⇑	*i*P		**Pb**	**14 37 47.7**	**-0.3**
	baz=241								
TYC					*e*S		**Sg**	**14 37 57.9**	**-0.9**
	baz=241								
SXI1	**Grass Mountain**	**0.89**	**7**	P			**Pg**	**14 37 48.3**	**+0.2**
	baz=354								
SXI1					*i*S		**Sb**	**14 38 00.4**	**-0.2**
	baz=354								
TWQ1	**Liyutan**	**0.90**	**279**		*e*P		**Pn**	**14 37 49.2**	**-0.5**
	baz=279								
TWQ1					*e*S		**Sn**	**14 38 01.8**	**-0.9**
	baz=279								
YULB	**Yu-li**	**0.91**	**207**	⇓	*i*P		**Pg**	**14 37 46.9**	**-1.4**
	baz=218								
YULB					*e*S		**Sg**	**14 37 59.9**	**-0.2**
	baz=218								
SBCB	**Hsinchu**	**0.91**	**310**		*e*P		**Pn**	**14 37 49.9**	**+0.2**
	baz=310								
SBCB					*e*S		**Sn**	**14 38 02.5**	**-0.4**
	baz=310								
NCUH	**Zhongli**	**0.92**	**326**		*e*P		**Pn**	**14 37 49.7**	**-0.2**
	baz=326								
NCUH					*e*S		**Sn**	**14 38 02.6**	**-0.5**
	baz=326								
NCU	**National Centr**	**0.92**	**326**		*e*P		**Pn**	**14 37 49.5**	**-0.4**
	baz=326								
NCU					*e*S		**Sn**	**14 38 03.4**	**+0.3**
	baz=326								
HSN	**Hsinchu**	**0.93**	**310**		*e*P		**Pn**	**14 37 50.1**	**+0.1**
	baz=302								
HSN					*e*S		**Sn**	**14 38 01.9**	**-1.4**
	baz=302								
NMLH	**Miaoli**	**0.93**	**291**		*e*P		**Pn**	**14 37 50.7**	**+0.6**
	baz=290								
NMLH					*e*S		**Sn**	**14 38 01.8**	**-1.7**
	baz=290								
EYUL	**Yuli**	**0.94**	**205**		*e*P		**Pb**	**14 37 49.2**	**0.0**
	baz=217								
EYUL					*e*S		**Sn**	**14 38 03.9**	**+0.2**
	baz=217								
TWS1	**Kuangyinshan**	**0.94**	**342**		*e*P		**Pn**	**14 37 50.0**	**-0.2**
	baz=350								
TWS1					*e*S		**Sn**	**14 38 03.0**	**-0.7**
	baz=350								
YM01	**YM01**	**0.95**	**350**		*e*P		**Pb**	**14 37 49.5**	**0.0**
	baz=350								
YM01					*e*S		**Sb**	**14 38 01.8**	**-0.4**
	baz=350								
TCU	**Taichung**	**0.98**	**267**	P			**Pn**	**14 37 51.5**	**+0.8**
	baz=267								
TCU					*e*S		**Sn**	**14 38 05.5**	**+0.9**
	baz=267								
NTST	**Danshui**	**0.99**	**344**		*e*P		**Pn**	**14 37 50.7**	**-0.2**
	baz=352								
NTST					*e*S		**Sn**	**14 38 05.8**	**+0.8**
	baz=352								
ANP	**Anpu**	**1.00**	**348**		*e*P		**Pb**	**14 37 50.4**	**+0.1**
	baz=348								
ANP					*e*S		**Sg**	**14 38 03.0**	**-0.1**
	baz=348								
WJS	**Zhushan**	**1.01**	**248**		*e*P		**Pn**	**14 37 51.1**	**0.0**
	baz=243								
WJS					*e*S		**Sn**	**14 38 04.0**	**-1.3**
	baz=243								
YUS	**Yu-Shan**	**1.02**	**226**	⇓	*i*P		**Pg**	**14 37 50.5**	**+0.1**
	baz=226								
YUS					*e*S		**Sn**	**14 38 06.1**	**-0.2**
	baz=226								
WDJ	**Dajia District**	**1.02**	**278**		*e*P		**Pn**	**14 37 52.2**	**+0.9**
	baz=278								
WDJ					*e*S		**Sn**	**14 38 05.4**	**-0.2**
	baz=278								
WNT	**Mingjian**	**1.02**	**252**		*e*P		**Pn**	**14 37 51.6**	**+0.3**
	baz=247								
WNT					*e*S		**Sn**	**14 38 05.8**	**0.0**
	baz=247								
FULB	**Fuli**	**1.08**	**203**		*e*P		**Pb**	**14 37 51.4**	**-0.3**
	baz=219								
FULB					*e*S		**Sn**	**14 38 06.8**	**-0.5**
	baz=219								
WCHH	**Zhanghua**	**1.09**	**264**		*e*P		**Pn**	**14 37 53.6**	**+1.3**
	baz=264								
ALS	**Alishan**	**1.10**	**232**		*e*P		**Pg**	**14 37 52.2**	**+0.1**
	baz=232								
ALS					*e*S		**Sn**	**14 38 07.8**	**-0.3**
	baz=232								
JYNG	**Yonagunijimaku**	**1.12**	**77**	P			**Pb**	**14 37 52.6**	**+0.3**
JYNG					*e*S		**Sn**	**14 38 09.2**	**+1.0**
YOJ	**Yonaguni jima**	**1.18**	**77**	P			**Pn**	**14 37 53.2**	**-0.2**
	baz=66								
YOJ					*e*S		**Sn**	**14 38 10.9**	**+1.3**
	baz=66								
YOJ	**Yonaguni jima**	**1.18**	**77**	P			**Pn**	**14 37 53.3**	**-0.2**
YOJ					S		**Sn**	**14 38 10.4**	**+0.8**
ELDTW	**Lidau**	**1.21**	**214**		*e*P		**Pn**	**14 37 52.1**	**-1.9**
	baz=215								
WDLH	**Douliu**	**1.22**	**245**		*e*P		**Pg**	**14 37 55.3**	**+1.1**
	baz=246								
WDLH					*e*S		**Sn**	**14 38 13.8**	**+3.2**
	baz=246								
WRL	**Guolierlin Hig**	**1.29**	**257**	P			**Pg**	**14 37 55.7**	**+0.1**
	baz=257								
WRL					*e*S		**

	baz=189									
LDUT	**Ludao**	**1.54**	**190**	*eP*		**Pn**	**14 37 55.9**	**-2.6**
	baz=192									
SGST	**Jiashian**	**1.54**	**224**	P		**Pn**	**14 37 58.5**	**0.0**
	baz=226									
SGST				*eS*		**Sg**	**14 38 23.2**	**+2.7**
	baz=226									
WSL	**Shuilin Townsh**	**1.55**	**244**	P		**Pb**	**14 37 59.7**	**+0.1**
	baz=245									
WSL				*eS*		**Sg**	**14 38 23.0**	**+2.4**
	baz=245									
ICHU	**Yijhu**	**1.58**	**238**	P		**Pb**	**14 38 00.4**	**+0.2**
	baz=225									
ICHU				*eS*		**Sg**	**14 38 23.2**	**+1.4**
	baz=225									
CHN8	**Yiju**	**1.65**	**239**	P		**Pb**	**14 38 00.8**	**-0.5**
	baz=227									
CHN8				*eS*		**Sg**	**14 38 25.1**	**+1.3**
	baz=227									
CHN3	**Shinhua**	**1.69**	**229**	*eP*		**Pg**	**14 38 04.1**	**+0.8**
	baz=232									
SHHT	**Tainan City**	**1.74**	**228**	*eP*		**Pb**	**14 38 03.4**	**+0.4**
	baz=232									
SCST	**Cishan**	**1.75**	**221**	*eP*		**Pb**	**14 38 02.6**	**-0.3**
	baz=225									
ECL	**Taimali**	**1.76**	**205**	*eP*		**Pn**	**14 37 59.1**	**-2.3**
	baz=193									
SSD	**Sandimen**	**1.78**	**215**	*eP*		**Pn**	**14 38 02.4**	**+0.7**
	baz=230									
SSD				*eS*		**Sg**	**14 38 28.4**	**+0.4**
	baz=230									
TSMG	**Majia**	**1.80**	**214**	*eP*		**Pb**	**14 38 03.3**	**-0.7**
	baz=229									
IRIF	**Iriomote-Funau**	**1.81**	**85**	P		**Pn**	**14 38 01.9**	**-0.3**
IRIF				*eS*		**Sn**	**14 38 26.1**	**+0.9**
TWM1	**Shoushan**	**1.83**	**222**	*eP*		**Pb**	**14 38 04.1**	**-0.4**
	baz=223									
SGLT	**Jiouru**	**1.87**	**218**	*eP*		**Pb**	**14 38 03.8**	**-1.3**
	baz=222									
HATJ	**Hateruma jima**	**1.89**	**94**	P		**Pn**	**14 38 03.3**	**+0.1**
HATJ				*eS*		**Sn**	**14 38 27.9**	**+0.9**
MASBT	**Mashibuluo**	**1.89**	**213**	*eP*		**Pn**	**14 38 02.8**	**-0.3**
	baz=216									
EAST	**Anshuo**	**1.99**	**205**	*eP*		**Pn**	**14 38 02.8**	**-1.9**
	baz=195									
TAW	**Tawu**	**2.00**	**203**	*eP*		**Pn**	**14 38 04.1**	**-0.6**
	baz=193									
TAWH	**Dawu Township**	**2.02**	**203**	*eP*		**Pn**	**14 38 03.2**	**-1.8**
	baz=194									
SSPT	**Xinbi**	**2.03**	**213**	*eP*		**Pb**	**14 38 07.3**	**-0.4**
	baz=198									
JKRS	**Kuro-shima**	**2.06**	**89**	P		**Pn**	**14 38 06.0**	**+0.4**
JKRS				*eS*		**Sn**	**14 38 32.7**	**+1.2**
SCZT	**Fangliau**	**2.10**	**210**	*eP*		**Pn**	**14 38 06.9**	**+0.9**
	baz=195									
PNG	**Penghu**	**2.10**	**253**	*eP*		**Pn**	**14 38 06.5**	**+0.3**
	baz=255									
PNG				*eS*		**Sb**	**14 38 33.4**	**-1.9**
	baz=255									
PHUB	**P'eng-hu**	**2.11**	**251**	*eP*		**Pn**	**14 38 06.0**	**-0.2**
	baz=253									
PHUB				*eS*		**Sn**	**14 38 32.7**	**+0.2**
	baz=253									
WDGT	**Dungji**	**2.13**	**244**	*eP*		**Pn**	**14 38 06.9**	**+0.4**
	baz=246									
SLIU	**Shizi**	**2.16**	**204**	*eP*		**Pn**	**14 38 06.8**	**-0.2**
	baz=195									
LAY	**Lan-yu**	**2.16**	**185**	*eP*		**Pn**	**14 38 04.4**	**-2.6**
	baz=188									
JIJ	**Ishigaki jima**	**2.19**	**85**	P		**Pn**	**14 38 07.2**	**-0.1**
JIJ				S		**Sn**	**14 38 34.4**	**-0.2**
LYUB	**Lan-yu**	**2.20**	**184**	*eP*		**Pn**	**14 38 04.8**	**-2.6**
	baz=187									
VWUC	**VWUC**	**2.23**	**291**	*eP*		**Pn**	**14 38 07.5**	**-0.4**
	baz=290									
VWUC				*eS*		**Sn**	**14 38 34.6**	**-1.0**
	baz=290									
VCHM	**Qimei**	**2.34**	**245**	*eP*		**Pn**	**14 38 10.1**	**+0.7**
	baz=233									
HEN	**Hengchun**	**2.38**	**203**	*eP*		**Pn**	**14 38 11.7**	**+1.7**
	baz=196									
TWK1	**Hengchun**	**2.41**	**201**	*eP*		**Pn**	**14 38 11.0**	**+0.6**
	baz=191									
TWKBT	**Hengchun**	**2.41**	**201**	*eP*		**Pn**	**14 38 11.7**	**+1.3**
	baz=191									
TSEB	**Hengchuen, Pin**	**2.42**	**199**	*eP*		**Pb**	**14 38 13.0**	**-1.5**
	baz=191									
PTMZ	**Houxiangcun**	**2.53**	**290**	*eP*		**Pn**	**14 38 11.7**	**-0.3**
	baz=289									
JTJ	**Tarama**	**2.73**	**80**	P		**Pn**	**14 38 15.7**	**+0.9**
JTJ				*eS*		**Sn**	**14 38 49.0**	**+1.1**
LYJJ	**Jianjiangzhen**	**2.95**	**323**	*eP*		**Pn**	**14 38 17.9**	**+0.1**
	baz=322									
QZH	**Quanzhou**	**2.97**	**285**	Pn		**Pn**	**14 38 17.8**	**-0.2**
QZH				Sn		**Sn**	**14 38 53.0**	**-0.7**
QZH				smax	smax			
	comp=N,67nm,0.5s							
QZH				smax	smax			
	comp=E,61nm,0.4s							
QZH				LR	LR			
	comp=Z,170nm,10.8s							
KNM	**Kinmen**	**3.03**	**275**	*eP*		**Pn**	**14 38 20.1**	**+1.2**
	baz=274									
KNMB	**Chin-men Tao**	**3.08**	**276**	*eP*		**Pn**	**14 38 19.2**	**-0.3**
	baz=275									
MHZQ	**Yeshan**	**3.10**	**308**	*eP*		**Pn**	**14 38 18.7**	**-1.2**
	baz=308									
AXDP	**Jialang**	**3.51**	**282**	*eP*		**Pn**	**14 38 25.1**	**-0.3**
	baz=281									
ZPLA	**Ao Xicun**	**3.66**	**267**	*eP*		**Pn**	**14 38 27.4**	**-0.2**
	baz=266									
JOW	**Kunigami**	**6.45**	**65**	Pn		**Pn**	**14 39 05.3**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=274,slow=14,SNR=1.2									
	comp=Z,4.2nm,0.5s									
KSRS	**Korea Array**	**14.23**	**20**	Pn		**P**	**14 40 57.4**	**-2.5**
	comp=Z,0.1nm,0.3s,baz=201,slow=12,SNR=6.3									
	comp=Z,0.9nm,0.6s									
SONM	**Songino Array**	**26.55**	**336**	P		**P**	**14 43 12.8**	**+3.8**
	comp=Z,0.3nm,0.6s,baz=147,slow=8.2,SNR=3.4									
	comp=Z,0.3nm,0.6s									
WMQ	**Urumqi**	**34.01**	**314**	*eP*		**P**	**14 44 17.0**	**+2.0**
MKAR	**Makanchi Array**	**38.68**	**316**	P		**P**	**14 44 57.1**	**+2.2**
	comp=Z,0.3nm,0.5s,baz=98,slow=7.4,SNR=3.4									
	comp=Z,0.3nm,0.5s									
H11S3	**WAKE ISLAND Hy**	**42.10**	**89**	T		T	15 30 36.6			
	baz=290									
H11S1	**WAKE ISLAND Hy**	**42.11**	**89**	T		T	15 30 41.7			
	baz=290									
H11S2	**WAKE ISLAND Hy**	**42.12**	**89**	T		T	15 30 42.6			
	baz=290									
WRA	**Warramunga Arr**	**45.56**	**163**	P		**P**	**14 45 48.7**	**-2.4**
	comp=Z,0.8nm,0.9s,baz=344,slow=8.8,SNR=2.5									
	comp=Z,0.8nm,0.9s									
ASAR	**Alice Springs**	**49.03**	**165**	P		**P**	**14 46 17.2**	**-0.9**
	comp=Z,0.3nm,0.7s,baz=341,slow=6.7,SNR=4.9									
	comp=Z,0.3nm,0.7s									
GEYT	**Alibeck**	**55.23**	**300**	LR		LR	15 13 43.3			
	comp=Z,43nm,18.5s,baz=148,slow=39									

IDC 29 14:42:20.3±2.1, 6°32S×151°91E, h0km, mb3.2/3, mbtmp3.4/5, ML2.5/2, Error ellipse: s-maj=64.6km s-min=18.8km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**2.01**	**3**	Pn	Pn	14 42 56.2	+0.8
	14nm,0.3s,baz=174,slow=10,SNR=30						
KRVT				Sn	Sn	14 43 21.6	+0.2
	49nm,0.3s,baz=134,slow=22,SNR=33						
	35nm,0.3s						
PMG	**Port Moresby**	**5.62**	**237**	Pn	Pn	14 43 46.6	+1.5
	2.5nm,0.3s,baz=66,slow=18,SNR=11						
PMG				Sn	Sn	14 44 49.5	-0.9
	2.4nm,0.3s,baz=186,slow=22,SNR=5.9						
	6.6nm,0.3s						
WRA	**Warramunga Arr**	**21.79**	**230**	P	P	14 47 14.4	+0.4
	1.7nm,1.2s,baz=54,slow=10,SNR=1.2						
	1.7nm,1.2s						
ASAR	**Alice Springs**	**24.44**	**223**	P	P	14 47 40.6	-0.3
	0.3nm,0.7s,baz=57,slow=9.2,SNR=5.4						
	0.3nm,0.7s						
ILAR	**Eielson Array**	**83.89**	**22**	P	P	14 54 51.2	-0.5
	0.3nm,0.8s,baz=232,slow=4.4,SNR=3.2						
	0.3nm,0.8s						

*IDC **29** 14:55:59.6±1.5, 39°31N×73°72E, h0km, mb3.4/5,*

mbtmp3.3/9, ML3.0/4, MS3.4/4, Error ellipse: s-maj=32.1km s-min=21.2km az=120.0
*SOME **29** 14:56:01.7, 39°53N×73°65E, h15km*
*KRNET **29** 14:56:01.9±0.1, 39°53N×73°65E, mb4.1*
*NNC **29** 14:56:04.7±1.5, 39°63N×73°63E, h0km, mb4.4, mpv4.1, Error ellipse: s-maj=11.5km s-min=5.9km az=173.0*

ISC 29 14:56:00.8±1.7, 39°55N±0°05×73°88E±0°03, h6km±10km, n66, σ1°81/93, mb3.4/5, MS3.5/4, 29C-12D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.29**	**320**	⇑*iP*	**Pn**	**14 56 24.6**	**-0.8**
	baz=27						
OHH				⇑*iS*	**Sb**	**14 56 41.0**	**-1.4**
	baz=27						
DRK	**Karamyk**	**1.61**	**268**	⇑*iP*	**Pn**	**14 56 28.5**	**-1.5**
	baz=69						
DRK				⇑*iS*	**Sn**	**14 56 48.5**	**-2.8**
	baz=69						
AML	**Almayashu**	**2.59**	**357**	P	**Pg**	**14 56 48.7**	**-1.7**
	SNR=17						
UCH	**Uchtor**	**2.72**	**10**	P	**Pg**	**14 56 51.7**	**-1.2**
	SNR=66						
UCH	**Uchtor**	**2.72**	**10**	⇑*iP*	**Pb**	**14 56 49.3**	**-0.9**
	baz=13						
UCH				⇑*iS*	**Sb**	**14 57 24.3**	**+0.3**
	baz=13						
GAR	**Garm**	**2.82**	**260**	⇓*iP*	**Pn**	**14 56 47.4**	**+0.9**
	baz=60						
GAR				⇓*iS*	**Sn**	**14 57 20.5**	**-0.4**
	baz=60						
TRKS	**Terek-Say**	**2.88**	**314**	⇑*iP*	**Pn**	**14 56 48.6**	**+1.2**
	baz=17						
TRKS				⇑*iS*	**Sn**	**14 57 22.4**	**0.0**
	baz=17						
EKS2	**Erkin-Say**	**3.11**	**359**	P	**Pb**	**14 56 55.7**	**-1.0**
	SNR=13						
EKS2	**Erkin-Say**	**3.11**	**359**	⇓*eP*	**Pb**	**14 56 54.4**	**-2.2**
	baz=2.0						
EKS2				⇓*iS*	**Sb**	**14 57 32.2**	**-2.7**
	baz=2.0						
AAK	**Ala-Archa**	**3.12**	**8**	P	**Pb**	**14 56 57.5**	**+0.7**
	SNR=11						
AAK	**Ala-Archa**	**3.12**	**8**	Pn	**Pb**	**14 56 57.3**	**+0.5**
	11nm,0.3s,baz=186,slow=12,SNR=14						
AAK				Sn	**Sg**	**14 57 38.3**	**-2.8**
	3.9nm,0.3s,baz=162,slow=20,SNR=1.5						
AAK				Lg	Lg	14 57 43.7	
	16nm,0.3s,baz=233,slow=20,SNR=4.5						
	23nm,0.4s						
AAK	**Ala-Archa**	**3.12**	**8**	⇓*iP*	**Pb**	**14 56 54.7**	**-2.1**
	baz=11						
AAK				⇓*iS*	**Sb**	**14 57 33.5**	**-1.8**
	baz=11						
KBK	**Karagaybulak**	**3.21**	**14**	P	**Pb**	**14 56 58.6**	**+0.3**
	SNR=19						
KBK	**Karagaybulak**	**3.21**	**14**	⇑*iP*	**Pb**	**14 56 56.4**	**-1.9**
	baz=17						
KBK				⇑*iS*	**Sb**	**14 57 36.1**	**-1.7**
	baz=17						
MRKS	**Merke**	**3.23**	**351**	*eP*	**Pg**	**14 57 01.3**	**-1.4**
	26nm,0.3s						
MRKS				*eS*	**Sg**	**14 57 43.9**	**-0.8**
	75nm,0.2s						
MRKS	**Merke**	**3.23**	**351**	Pg	**Pg**	**14 57 01.3**	**-1.4**
	26nm,0.3s						
MRKS				Lg	Lg	14 57 43.9	
	75nm,0.2s						
ULHL	**Ulahol**	**3.24**	**33**	P	**Pg**	**14 57 03.9**	**+1.1**
	SNR=6.8						
ULHL	**Ulahol**	**3.24**	**33**	⇑*eP*	**Pb**	**14 56 57.4**	**-1.4**
	baz=35						
ULHL				⇑*iS*	**Sb**	**14 57 38.0**	**-0.6**
	baz=35						
CHMS	**Chumysh**	**3.51**	**11**	P	**Pb**	**14 57 02.5**	**-0.9**
	SNR=8.3						
CHMS	**Chumysh**	**3.51**	**11**	⇑*iP*	**Pb**	**14 57 00.1**	**-3.3**
	baz=13						
CHMS				⇑*eS*	**Sb**	**14 57 42.6**	**-3.7**
	baz=13						
CHMS	**Chumysh**	**3.51**	**11**	⇓Pn	**Pb**	**14 57 02.0**	**-1.4**
	5.5nm,0.4s						
CHMS				⇑Pg	**Pg**	**14 57 07.7**	**-0.3**
	17nm,0.5s						
CHMS				⇓Lg	Lg	14 57 57.4	
	56nm,0.6s						
KDJ	**Kajisay**	**3.60**	**43**	⇑*iP*	**Pb**	**14 57 02.8**	**-2.1**
	baz=45						
KDJ				⇑*iS*	**Sb**	**14 57 47.2**	**-1.7**
	baz=45						
TKM2	**Tokmak 2**	**3.61**	**20**	P	**Pb**	**14 57 05.7**	**+0.5**
	SNR=12						
TKM2	**Tokmak 2**	**3.61**	**20**	⇑*iP*	**Pb**	**14 57 02.0**	**-3.2**
	baz=23						
TKM2				⇑*iS*	**Sb**	**14 57 46.2**	**-3.2**
	baz=23						
TKM2	**Tokmak 2**	**3.61**	**20**	⇑Pn	**Pb**	**14 57 03.1**	**-2.1**
	3.5nm,0.4s						
TKM2				⇑Pg	**Pg**	**14 57 09.4**	**-0.5**
	8.6nm,0.4s						
TKM2				⇑Lg	Lg	14 58 00.9	
	26nm,0.5s						
TARG	**Taragay, Kyrgy**	**3.70**	**53**	⇑*iP*	**Pb**	**14 57 04.5**	**-2.3**
	baz=54						
TARG				⇑*iS*	**Sb**	**14 57 50.2**	**-1.8**
	baz=54						
USP	**Ospenovka**	**3.75**	**7**	P	**Pb**	**14 57 04.7**	**-2.7**
	SNR=6.7						
USP	**Ospenovka**	**3.75**	**7**	⇑*iP*	**Pb**	**14 57 03.2**	**-4.2**
	baz=9.0						
USP				⇑*iS*	**Sb**	**14 57 48.3**	**-4.8**
	baz=9.0						
CHGR	**Chuyangaron**	**3.78**	**258**	⇑*eP*	**Pn**	**14 57 00.5**	**+0.8**
	baz=58						
CHGR				⇑*iS*	**Sn**	**14 57 43.6**	**-0.9**
	baz=58						
KST	**Kastek**	**3.83**	**24**	*eP*	**Pg**	**14 57 14.1**	**0.0**
	22nm,0.3s						
KST				*eS*	**Sg**	**14 58 06.1**	**+2.3**
	83nm,0.8s						
KST	**Kastek**	**3.83**	**24**	Pg	**Pg**	**14 57 14.1**	**0.0**
	22nm,0.3s						
KST				Lg	Lg	14 58 06.1	
	83nm,0.8s						
IUG	**Iuzhnay**	**3.91**	**313**	*eP*	**Pb**	**14 57 10.3**	**+0.1**
	261nm,0.3s						
IUG				*eS*	**Sb**	**14 57 59.9**	**+2.1**
	210nm,0.8s						
IUG	**Iuzhnay**	**3.91**	**313**	Pg	**Pb**	**14 57 10.3**	**+0.1**
	261nm,0.3s						
IUG				Lg	Lg	14 57 58.9	
	96nm,0.4s						
SGDS	**Sogindy**	**3.94**	**8**	*eP*	**Pg**	**14 57 15.2**	**-1.1**
	25nm,0.4s						
SGDS				*eS*	**Sg**	**14 58 08.3**	**+0.9**
	21nm,0.6s						
SGDS	**Sogindy**	**3.94**	**8**	Pg	**Pg**	**14 57 15.2**	**-1.1**
	25nm,0.4s						
SGDS				Lg	Lg	14 58 09.4	
	21nm,0.6s						
MTBS	**Maitube**	**4.06**	**27**	*eP*	**Pg**	**14 57 18.7**	**+0.1**
	27nm,0.3s						
MTBS				*eS*	**Sg**	**14 58 14.3**	**+3.0**
	42nm,0.4s						
MTBS	**Maitube**	**4.06**	**27**	Pg	**Pg**	**14 57 18.7**	**+0.1**
	27nm,0.3s						
MTBS				Lg	Lg	14 58 15.0	
	42nm,0.4s						
TNSS	**Tian-Shan**	**4.18**	**33**	*eP*	**Pg**	**14 57 21.3**	**+0.3**
	30nm,0.4s						
TNSS				*eS*	**Sg**	**14 58 18.5**	**+3.3**
	38nm,0.7s						
TNSS	**Tian-Shan**	**4.18**	**33**	Pg	**Pg**	**14 57 21.3**	**+0.3**
	30nm,0.4s						
TNSS				Lg	Lg	14 58 19.1	
	38nm,0.7s						
KNDC	**Almaty**	**4.34**	**31**	⇓Pg	**Pg**	**14 57 23.6**	**-0.3**
	38nm,0.6s						
KNDC				⇓Lg	Lg	14 58 24.0	
	241nm,0.7s						
KRBS	**Karabastau**	**4.36**	**17**	*eP*	**Pg**	**14 57 23.5**	**-0.7**
	16nm,0.3s						
KRBS				*eS*	**Sg**	**14 58 22.4**	**+1.6**
	40nm,0.6s						
KRBS	**Karabastau**	**4.36**	**17**	Pg	**Pg**	**14 57 23.5**	**-0.7**
	16nm,0.3s						
KRBS				Lg	Lg	14 58 22.3	
	40nm,0.6s						
KK31	**Karatay Array**	**4.37**	**326**	Pn	**Pn**	**14 57 11.3**	**+3.7**
	2.7nm,0.4s,baz=135,slow=12,SNR=24						
KK31				⇓Pg	**Pg**	**14 57 23.1**	**-1.3**
	2.9nm,0.3s,baz=143,slow=15,SNR=11						
KK31				⇑Sn	**Sn**	**14 58 01.8**	**+2.9**
	7.1nm,0.3s,baz=156,slow=25,SNR=4.3						
KK31				⇓Lg	Lg	14 58 16.2	
	11nm,0.3s,baz=148,slow=29,SNR=3.7						
BRLS	**Borolday**	**4.62**	**320**	*eP*	**Pb**	**14 57 22.7**	**+0.4**
	7.9nm,0.2s						
BRLS				*eS*	**Sb**	**14 58 20.6**	**+2.3**
	40nm,0.3s						
BRLS	**Borolday**	**4.62**	**320**	Pg	**Pb**	**14 57 22.7**	**+0.4**
	7.9nm,0.2s						
BRLS				Lg	Lg	14 58 21.3	
	40nm,0.3s						
KTBS	**Karatobe**	**4.66**	**26**	*eP*	**Pg**	**14 57 29.5**	**-0.6**
	13nm,0.7s						
KTBS				*eS*	**Sg**	**14 58 32.4**	**+2.0**
	74nm,0.5s						
KTBS	**Karatobe**	**4.66**	**26**	Pg	**Pg**	**14 57 29.5**	**-0.6**
	13nm,0.7s						
KTBS				Lg	Lg	14 58 32.8	
	74nm,0.5s						
CHKK	**Chushkaly**	**4.89**	**27**	*eP*	**Pg**	**14 57 34.0**	**-0.5**
	11nm,0.4s						
CHKK				*eS*	**Sg**	**14 58 39.8**	**+1.9**
	25nm,0.7s						
CHKK	**Chushkaly**	**4.89**	**27**	Pg	**Pg**	**14 57 34.0**	**-0.5**
	11nm,0.4s						
CHKK				Lg	Lg	14 58 39.4	
	25nm,0.7s						
SATY	**Saty**	**4.89**	**43**	*eP*	**Pg**	**14 57 34.9**	**+0.4**
	24nm,0.6s						
SATY				*eS*	**Sg**	**14 58 41.5**	**+3.7**
	39nm,0.9s						
SATY	**Saty**	**4.89**	**43**	Pg	**Pg**	**14 57 34.9**	**+0.4**
	24nm,0.6s						
SATY				Lg	Lg	14 58 41.5	
	39nm,0.9s						
ARXS	**Arharly**	**5.52**	**31**	*eP*	**Pg**	**14 57 44.9**	**-1.5**
	16nm,0.4s						
ARXS				*eS*	**Sg**	**14 58 58.5**	**+0.7**
	37nm,0.8s						
ARXS	**Arharly**	**5.52**	**31**	Pg	**Pg**	**14 57 44.9**	**-1.5**
	16nm,0.4s						
ARXS				Lg	Lg	14 58 58.5	
	10nm,0.3s						
MKAR	**Makanchi Array**	**9.49**	**38**	Pn	Pn	14 58 22.2	+4.1
	baz=225,slow=14,SNR=2.5						
MKAR				Lg	Lg	15 01 06.9	
	0.1nm,0.3s,baz=232,slow=25,SNR=3.2						
	0.1nm,0.5s						
KURBB	**Kurchatov Arra**	**11.55**	**15**	Pn	**Pn**	**14 58 49.2**	**+3.1**
	baz=202,slow=12,SNR=1.3						
KURBB				Lg	Lg	15 02 06.7	
	0.1nm,0.3s,baz=205,slow=30,SNR=8.0						
	0.1nm,0.3s						
AB31	**Akbulak array**	**13.89**	**319**	Pn	**Pn**	**14 59 16.7**	**-1.3**
	0.3nm,0.5s,baz=126,slow=12,SNR=9.5						
ZALV	**Zelesovo Beam**	**16.21**	**24**	Pn	**P**	**14 59 51.5**	**-0.7**
	0.3nm,0.3s,baz=213,slow=10,SNR=2.4						
	0.3nm,0.3s						
SONM	**Songino Array**	**24.78**	**60**	LR	LR	15 10 23.8	
	comp=Z,26nm,19.4s,baz=244,slow=35						
FINES	**FINESS Array B**	**36.32**	**323**	P	**P**	**15 03 04.7**	**-0.3**
	0.4nm,0.6s,baz=128,slow=11,SNR=1.4						
	0.4nm,0.6s						
ARCES	**ARCESS Array B**	**39.26**	**335**	P	**P**	**15 03 30.8**	**+1.0**
	0.3nm,0.5s,baz=106,slow=8.6,SNR=4.6						
	0.3nm,0.5s						
JOW	**Kunigami**	**46.61**	**89**	LR	LR	15 28 03.3	
	comp=Z,61nm,18.8s,baz=174,slow=41						
JCJ	**Chichijima**	**57.17**	**80**	LR	LR	15 30 57.8	
	comp=Z,70nm,20.8s,baz=132,slow=37						
SIJI	**Sorong**	**65.98**	**113**	LR	LR	15 37 58.7	
	comp=Z,24nm,20.3s,baz=78,slow=38						
TORD	**Torodi Ar. Bea**	**68.05**	**269**	P	**P**	**15 07 01.1**	**-0.4**
	0.3nm,0.7s,baz=58,slow=6.4,SNR=2.3						
	0.3nm,0.7s						
ILAR	**Eielson Array**	**71.22**	**17**	P	**P**	**15 07 21.4**	**+1.1**
	0.2nm,0.9s,baz=304,slow=5.3,SNR=2.9						
	0.2nm,0.9s						
WRA	**Warramunga Arr**	**81.74**	**124**	P	**P**	**15 08 20.0**	**-0.5**
	0.3nm,0.8s,baz=317,slow=3.8,SNR=1.4						
	0.3nm,0.8s						

*TUL **29** 15:15:39.1±1.0, 34°99N±0°03×97°80W±0°04, h4km±7km, ML2.8, mb_Lg2.9/76(NEIC), Error ellipse: s-maj=5.4km s-min=2.3km az=123.0*
*ANF **29** 15:15:40.3±0.7, 35°01N×97°84W, h7km±6km, ML3.6/10, Error ellipse: s-maj=6.1km s-min=2.6km az=117.0*
*NEIC **29** 15:15:40.2±1.6, 34°97N±0°03×97°79W±0°03, h11km±8km, Error ellipse: s-maj=5.0km s-min=2.1km az=135.0*

ISC 29 15:15:39.3±1.3, 35°02N±0°03×97°82W±0°04, h1km±11km, n59, σ0°74/43, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
X34A	**Smith Ranch, M**	**0.41**	**181**	Pg	**Pg**	**15 15 48.4**	**+1.2**
X34A				Sg	**Sg**	**15 15 51.9**	**-0.6**
FNO	**Franklin**	**0.42**	**55**	Pg	**Pg**	**15 15 47.8**	**+0.4**
FNO				Sg	**Sg**	**15 15 52.5**	**-0.4**
OKCFA	**Oklahoma City**	**0.50**	**37**	Pg	**Pg**	**15 15 48.9**	**0.0**
OKCFA				Sg	**Sg**	**15 15 55.9**	**+0.5**
WMOK	**Wichita Mounta**	**0.83**	**251**		**Pg**	**15 15 55.3**	**0.0**
WMOK				Sg	**Sg**	**15 16 05.3**	**-0.8**
WMOK	**Wichita Mounta**	**0.83**	**251**	P	**Pg**	**15 15 55.7**	**+0.4**
	baz=72,SNR=94						
Z35A	**Perchaven, San**	**1.75**	**164**		**Pn**	**15 16 09.9**	**-0.8**
Z35A	**Perchaven, San**	**1.75**	**164**	P	**Pn**	**15 16 10.4**	**-0.3**
	baz=345,SNR=33						
TUL1	**Leonard**	**1.88**	**61**		**Pn**	**15 16 12.3**	**-0.3**
TUL1				IAmb_Lg		15 16 39.3	
	comp=Z,42nm,0.7s						
TUL1	**Leonard**	**1.88**	**61**	P	**Pn**	**15 16 12.7**	**+0.1**
	baz=241,SNR=26						
TUL1				S	**Sb**	**15 16 38.1**	**-0.4**
	baz=241						
X37A	**Clayton**	**2.06**	**101**	IAmb_Lg		15 16 47.2	
	comp=Z,68nm,1.0s						
X37A	**Clayton**	**2.06**	**101**	P	**Pn**	**15 16 15.7**	**+0.6**
	baz=282,SNR=20						
T35B	**Sooner Cattle**	**2.17**	**29**	P	**Pn**	**15 16 17.2**	**+0.6**
	baz=209,SNR=15						
T35B				S	**Sn**	**15 16 45

UALR	**University of**	**4.51**	**91**	IAmb_Lg			15 18 03.6		
	comp=Z,32nm,0.8s								
Z41A	**Richland Creek**	**4.52**	**111**	IAmb_Lg			15 18 12.4		
	comp=Z,25nm,0.8s								
WHAR	**Wooly Hollow**	**4.54**	**85**	Pn		**Pn**	**15 16 49.4**	**+0.2**	
WHAR				IAmb_Lg			15 18 10.3		
	comp=Z,19nm,0.9s								
W41B	**Gary Mavity, V**	**4.57**	**86**	Pn		**Pn**	**15 16 49.4**	**-0.2**	
W41B	**Gary Mavity, V**	**4.57**	**86**	P		**Pn**	**15 16 49.8**	**+0.3**	
	baz=269,SNR=7.1								
FCAR	**Ozark Folk Cen**	**4.73**	**78**			**Pn**	**15 16 51.0**	**-0.8**	
FCAR				IAmb_Lg			15 18 09.7		
	comp=Z,16nm,0.8s								
JCT	**Junction City**	**4.82**	**201**	Pn		**Pn**	**15 16 51.9**	**-1.1**	
MGMO	**Mountain Grove**	**4.98**	**63**	IAmb_Lg			15 18 22.3		
	comp=Z,17nm,0.8s								
R40A	**Maddies Statio**	**5.53**	**52**	Pn		**Pn**	**15 17 02.1**	**-0.7**	
R40A				IAmb_Lg			15 18 37.4		
	comp=Z,15nm,0.7s								
LCAR	**Lake Charles**	**5.54**	**77**	Pn		**Pn**	**15 17 02.2**	**-0.6**	
P38A	**Dawn**	**5.73**	**35**	Pn		**Pn**	**15 17 04.8**	**-0.7**	
P38A				IAmb_Lg			15 18 44.5		
	comp=Z,19nm,0.7s								
T25A	**Trinidad**	**5.74**	**294**	IAmb_Lg			15 18 50.4		
	comp=Z,17nm,0.8s								
CCM	**Cathedral Cave**	**6.10**	**58**	IAmb_Lg			15 18 57.4		
	comp=Z,21nm,0.9s								
PBMO	**Poplar Bluff**	**6.25**	**72**	IAmb_Lg			15 19 05.0		
	comp=Z,19nm,0.7s								
FVM	**French Village**	**6.65**	**61**	Pn		**Pn**	**15 17 17.1**	**-1.0**	
FVM				IAmb_Lg			15 19 21.1		
	comp=Z,12nm,0.8s								
OGNE	**Ogallala**	**6.79**	**332**	IAmb_Lg			15 19 34.6		
	comp=Z,16nm,0.8s								
Q24A	**Divide**	**7.06**	**306**	IAmb_Lg			15 19 33.0		
	comp=Z,16nm,0.8s								
S44A	**Carbondale**	**7.41**	**66**	IAmb_Lg			15 19 40.0		
	comp=Z,11nm,0.8s								
SIUC	**Southern Illin**	**7.45**	**66**	IAmb_Lg			15 19 40.5		
	comp=Z,12nm,0.8s								
TXAR	**Lajitas Array**	**7.52**	**223**	Pn		**Pn**	**15 17 30.0**	**-0.3**	
ISCO	**Idaho Springs**	**7.82**	**310**	IAmb_Lg			15 20 04.4		
	comp=Z,8.4nm,1.1s								
PLAL	**Pickwick Lake**	**8.00**	**87**	IAmb_Lg			15 19 58.8		
	comp=Z,7.1nm,0.8s								
OLIL	**Olney**	**8.63**	**62**	IAmb_Lg			15 20 15.7		
	comp=Z,16nm,0.9s								
N23A	**Red Feather La**	**8.69**	**315**	IAmb_Lg			15 20 36.0		
	comp=Z,14nm,1.1s								
L40A	**Anamosa**	**8.73**	**34**	IAmb_Lg			15 20 16.8		
	comp=Z,17nm,1.0s								
ECSD	**EROS Data Cent**	**8.76**	**6**	IAmb_Lg			15 20 24.8		
	comp=Z,9.4nm,1.1s								
O44A	**Mansfield**	**9.02**	**53**	IAmb_Lg			15 20 45.6		
	comp=Z,14nm,0.7s								
JFWS	**Jewell Farm**	**9.84**	**35**	IAmb_Lg			15 20 59.1		
	comp=Z,12nm,0.7s								

SOME ***29*** *15:18:41.4,39˚.52N×73˚.67E,h5km*
KRNET ***29*** *15:18:41.9±0.1,39˚.44N×73˚.66E,mb3.9*
NNC ***29*** *15:18:46.5±1.5,39˚.63N×73˚.70E,h0km,mb4.3,mpv3.9,*
Error ellipse: s-maj=11.8km s-min=6.5km az=175.0

ISC 29 15:18:43.0±1.1,39˚.49N±0˚.05×73˚.64E±0˚.03,h10km,n45,
σ2ᵖ84/69,16C-11D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
OHH	**Osh**	**1.22**	**328**	⇓	*eP*	**Pb**	**15 19 06.1**		**-0.2**
OHH	baz=29			⇓	*eS*	**Sn**	**15 19 23.9**	**+1.0**	
GAR	**Garm**	**2.63**	**260**	⇓	*eP*	**Pb**	**15 19 27.8**		**-2.5**
GAR	baz=61			⇓	*eS*	**Sb**	**15 20 01.1**	**-1.6**	
AML	**Almayashu**	**2.64**	**1**	P		**Pb**	**15 19 29.8**		**-0.8**
	SNR=25								
TRKS	**Terek-Say**	**2.79**	**318**	⇓	*eP*	**Pn**	**15 19 29.7**		**+1.8**
TRKS	baz=18			⇓	*eS*	**Sn**	**15 20 04.6**	**+2.9**	
UCH	**Uchtor**	**2.81**	**13**	⇑	*eP*	**Pb**	**15 19 33.6**		**0.0**
	SNR=22								
UCH	**Uchtor**	**2.81**	**13**	⇑	*eP*	**Pb**	**15 19 31.0**		**-2.6**
UCH	baz=13			⇑	*eS*	**Sb**	**15 20 06.9**	**-1.3**	
EKS2	**Erkin-Say**	**3.17**	**2**	P		**Pb**	**15 19 38.3**		**-1.2**
	SNR=9.2								
EKS2	**Erkin-Say**	**3.17**	**2**	⇑	*iP*	**Pb**	**15 19 36.0**		**-3.5**
EKS2	baz=2.0			⇑	*eS*	**Sb**	**15 20 15.1**	**-3.1**	
AAK	**Ala-Archa**	**3.21**	**11**	P		**Pb**	**15 19 39.0**		**-1.2**
	SNR=11								
AAK	**Ala-Archa**	**3.21**	**11**	⇑	*eP*	**Pn**	**15 19 36.4**		**+2.8**
AAK	baz=11			⇑	*eS*	**Sb**	**15 20 16.1**	**-3.3**	
MRKS	**Merke**	**3.26**	**355**		*eP*	**Pb**	**15 19 41.1**		**-0.1**
MRKS	20nm,0.2s				*eS*	**Sb**	**15 20 24.7**	**+3.8**	
	38nm,0.4s								
MRKS	**Merke**	**3.26**	**355**	Pg		**Pg**	**15 19 44.0**		**-1.6**
MRKS	20nm,0.2s			Lg		Lg	15 20 24.8		
	38nm,0.4s								
KBK	**Karagaybulak**	**3.31**	**17**	P		**Pb**	**15 19 41.6**		**-0.4**
	SNR=29								
KBK	**Karagaybulak**	**3.31**	**17**	⇓	*eP*	**Pn**	**15 19 37.8**		**+2.7**
KBK	baz=17			⇓	*eS*	**Sn**	**15 20 18.6**	**+4.0**	
ULHL	**Ulahol**	**3.38**	**35**	P		**Pg**	**15 19 45.5**		**-2.3**
	SNR=26								
CHGR	**Chuyangaron**	**3.59**	**258**	⇑	*eP*	**Pn**	**15 19 41.0**		**+2.2**
CHGR	baz=59			⇑	*eS*	**Sn**	**15 20 24.4**	**+3.1**	
	baz=59								
CHMS	**Chumysh**	**3.60**	**13**	⇑	Pn	**Pb**	**15 19 43.5**		**-3.4**
CHMS	19nm,0.8s			⇑	Lg	Lg	15 20 37.3		
	42nm,0.7s								
TKM2	**Tokmak 2**	**3.73**	**23**	P		**Pb**	**15 19 45.2**		**-3.9**
	SNR=7.7								
TKM2	**Tokmak 2**	**3.73**	**23**	⇓	*eP*	**Pn**	**15 19 43.8**		**+3.0**
TKM2	baz=22			⇓	*eS*	**Sn**	**15 20 28.8**	**+3.9**	
	baz=22								
TKM2	**Tokmak 2**	**3.73**	**23**	⇑	Pn	**Pb**	**15 19 44.8**		**-4.3**
TKM2	7.0nm,0.6s			⇑	Lg	Lg	15 20 40.3		
	25nm,0.6s								
IUG	**Iuzhnay**	**3.81**	**315**		*eP*	**Pg**	**15 19 53.3**		**-2.8**
IUG	302nm,0.3s				*eS*	**Sg**	**15 20 46.0**	**+0.5**	
	97nm,0.5s								
IUG	**Iuzhnay**	**3.81**	**315**	Pg		**Pg**	**15 19 54.7**		**-1.3**
IUG	302nm,0.3s			Lg		Lg	15 20 46.0		
	97nm,0.5s								
KST	**Kastek**	**3.95**	**25**		*eP*	**Pb**	**15 19 54.1**		**+1.2**
KST	11nm,0.2s				*eS*	**Sg**	**15 20 47.4**	**-2.6**	
	53nm,0.5s								
KST	**Kastek**	**3.95**	**25**	Pg		**Pg**	**15 19 55.6**		**-3.2**
KST	11nm,0.2s			Lg		Lg	15 20 48.6		
	53nm,0.5s								
SGDS	**Sogindy**	**4.02**	**10**		*eP*	**Pb**	**15 19 56.3**		**+2.2**
SGDS	16nm,0.4s				*eS*	**Sg**	**15 20 50.5**	**-1.7**	
	15nm,0.4s								
SGDS	**Sogindy**	**4.02**	**10**	Pg		**Pb**	**15 19 56.6**		**+2.6**
SGDS	16nm,0.4s			Lg		Lg	15 20 51.2		
	15nm,0.4s								
DGS	**Degeres**	**4.07**	**22**		*eP*	**Pg**	**15 19 58.1**		**-3.0**
DGS	27nm,0.6s				*eS*	**Sg**	**15 20 53.7**	**-0.1**	
	41nm,0.7s								
MTBS	**Maitube**	**4.20**	**29**		*eP*	**Pb**	**15 19 59.1**		**+2.1**
MTBS	14nm,0.6s				*eS*	**Sg**	**15 20 55.5**	**-2.2**	
	25nm,0.3s								
MTBS	**Maitube**	**4.20**	**29**	Pg		**Pb**	**15 19 59.0**		**+2.1**
MTBS	14nm,0.6s			Lg		Lg	15 20 55.6		
	25nm,0.3s								
KK31	**Karatay Array**	**4.31**	**328**	⇑	Pn	**Pn**	**15 19 49.4**		**+0.7**
KK31	1.2nm,0.3s			⇑	Pg	**Pg**	**15 20 02.6**	**-3.0**	
	3.1nm,0.4s,baz=145,slow=15,SNR=7.0								
KK31				⇑	Sn	**Sn**	**15 20 44.6**	**+5.6**	
	5.5nm,0.3s,baz=141,slow=27,SNR=3.9								
KK31				⇑	Lg	Lg	15 20 57.5		
	9.0nm,0.4s,baz=143,slow=30,SNR=4.3								
TNSS	**Tian-Shan**	**4.33**	**34**		*eP*	**Pb**	**15 20 01.8**		**+2.3**
	15nm,0.3s								
TNSS					*eS*	**Sg**	**15 20 59.5**	**-2.5**	
	27nm,0.7s								
TNSS	**Tian-Shan**	**4.33**	**34**	Pg		**Pg**	**15 20 02.7**	**-3.2**	
	15nm,0.3s								
TNSS				Lg		Lg	15 21 00.5		
	27nm,0.7s								
AAA	**Alma-Ata**	**4.45**	**32**		*eP*	**Pg**	**15 20 05.2**	**-3.2**	
	44nm,0.4s								
AAA					*eS*	**Sg**	**15 21 05.4**	**-0.6**	
	40nm,0.1s								
KTBS	**Karatobe**	**4.79**	**27**		*eP*	**Pb**	**15 20 09.3**	**+2.2**	
	11nm,0.4s								
KTBS					*eS*	**Sg**	**15 21 13.1**	**-3.7**	
	58nm,0.5s								
KTBS	**Karatobe**	**4.79**	**27**	Pg		**Pb**	**15 20 09.8**	**+2.7**	
	11nm,0.4s								
KTBS				Lg		Lg	15 21 13.1		
	58nm,0.5s								
KUU	**Kurty**	**4.84**	**24**		*eP*	**Pb**	**15 20 10.6**	**+2.7**	
	6.5nm,0.8s								
KUU					*eS*	**Sg**	**15 21 15.5**	**-2.8**	
	34nm,0.6s								
CHKK	**Chushkaly**	**5.03**	**29**		*eP*	**Pb**	**15 20 14.7**	**+3.6**	
	7.3nm,0.4s								
CHKK					*eS*	**Sg**	**15 21 21.2**	**-3.2**	
	21nm,0.6s								
CHKK	**Chushkaly**	**5.03**	**29**	Pg		**Pg**	**15 20 15.3**	**-3.9**	
	7.3nm,0.4s								
CHKK				Lg		Lg	15 21 21.2		
	21nm,0.6s								
SATY	**Saty**	**5.06**	**44**		*eP*	**Pb**	**15 20 15.0**	**+3.3**	
	9.2nm,0.7s								
SATY					*eS*	**Sg**	**15 21 22.9**	**-2.5**	
	20nm,1.0s								
SATY	**Saty**	**5.06**	**44**	Pg		**Pg**	**15 20 16.5**	**-3.4**	
	16nm,0.6s								
SATY				Lg		Lg	15 21 21.9		
	20nm,1.0s								
BTLS	**Baital**	**5.55**	**3**		*eP*	**Pb**	**15 20 24.1**	**+4.1**	
	3.6nm,0.8s								
BTLS					*eS*	**Sg**	**15 21 37.8**	**-3.5**	
	8.2nm,1.1s								
ARXS	**Arharly**	**5.66**	**32**		*eP*	**Pb**	**15 20 25.5**	**+3.7**	
	6.8nm,0.6s								
ARXS					*eS*	**Sg**	**15 21 40.0**	**-4.6**	
	27nm,0.8s								
ARXS	**Arharly**	**5.66**	**32**	Pg		Pg	15 20 26.2	-5.1	
ARXS				Lg		Lg	15 21 40.9		
DJR	**Jarkent**	**6.66**	**41**		*eP*	Pg	15 20 44.3	-6.2	
	1.3nm,0.2s								
DJR					*eS*	**Sg**	**15 22 12.4**	**-4.4**	
	9.1nm,0.9s								
AB31	**Akbulak array**	**13.81**	**319**	⇓	Pn	**Pn**	**15 21 59.4**		**+0.7**
	0.6nm,0.7s,baz=127,slow=14,SNR=5.2								

MAN 29 15:19:39.9,6˚.42N×126˚.18E,h31km,mb4.8,ML3.6,MS3.6,
Mindanao

BJI ***29*** *15:23:10.0±0.0,27˚.40N×126˚.50E,h190km,mb4.7/56,*
mB4.5/23
IDC ***29*** *15:23:10.5±0.5,27˚.54N×126˚.64E,h183km±5km,mb3.9/20,*
mbtmp4.3/22,Error ellipse: s-maj=10.7km s-min=7.9km
az=64.0
NEIC ***29*** *15:23:10.6±1.4,27˚.48N±0˚.06×126˚.47E±0˚.07,*
h179km±4km,mb4.6/192,Error ellipse: s-maj=9.7km
s-min=8.8km az=131.0
JMA ***29*** *15:23:10.6±0.3,27˚.N±2˚×12˚6E±˚,h180km,MD4.4/34,*
MV4.8/34,NW OFF OKINAWAJIMA IS
NIED ***29*** *15:23:10.6,27˚.48N×126˚.48E,h180km,MW4.5,Moment*
Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm;
Mrr=4.12; Mθθ-0.39; Mϕϕ4.51; Mrθ-3.07; Mϕ2.40; Mϕr-2.20;
Fault plane solution: M₀6.20000×10¹⁵ NP1:
ϕs178.00000°,δ33.00000°,λ-131.00000°. NP2:
ϕs44.00000°,δ66.00000°,λ-67.00000°.
MOS ***29*** *15:23:11.3±1.1,27˚.47N×126˚.40E,h205km,mb4.5/27*
Error ellipse: s-maj=9.3km s-min=5.4km az=92.7

ISC 29 15:23:11.2±0.4,27˚.44N±0˚.04×126˚.53E±0˚.03,h192km±3km,
h192km:pP-P,n565,σ1ᵖ25/612,mb4.6/139,13C-5D,
Northwest of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
JAGN	**Aguni-jima**	**1.06**	**143**	P		**Pn**	**15 23 39.6**		**-1.0**
JAGN				S		**Sn**	**15 24 00.8**	**-2.4**	
JAGN	**Aguni-jima**	**1.06**	**143**	A		A	15 23 39.6		
	comp=E,15nm,1.1s,comp=E,7.0nm,0.3s								
JKE	**Kume jima 2**	**1.13**	**168**	P		**Pn**	**15 23 39.9**		**-1.2**
JKE					*eS*	**Sn**	**15 24 03.2**	**-1.1**	
JKE	**Kume jima 2**	**1.13**	**168**	A		A	15 23 39.9		
	comp=E,5.0nm,1.7s,comp=E,4.0nm,2.0s								
JIH	**Iheya**	**1.34**	**107**	P		**Pn**	**15 23 42.2**		**-0.6**
JIH				S		**Sn**	**15 24 04.1**		**-3.0**
JIH	**Iheya**	**1.34**	**107**	A		A	15 23 42.2		
	comp=E,6.0nm,0.5s,comp=E,11nm,0.7s								
JNTH	**Nagotoyohara**	**1.62**	**124**	P		**Pn**	**15 23 44.8**		**-0.5**
JNTH				S		**Sn**	**15 24 08.2**		**-3.5**
JNTH	**Nagotoyohara**	**1.62**	**124**	A		A	15 23 44.8		
	comp=E,8.0nm,2.3s,comp=E,9.0nm,0.7s								
JOW	**Kunigami**	**1.67**	**111**	P		**Pn**	**15 23 45.1**		**-0.7**
	992nm,0.3s,baz=128,slow=25,SNR=1072								
JOW				S		**Sn**	**15 24 08.2**		**-4.3**
	3µm,0.3s,baz=265,slow=30,SNR=63								
JOW	**Kunigami**	**1.67**	**111**	Pn		**Pn**	**15 23 44.8**		**-1.0**
JOW	**Kunigami**	**1.67**	**111**	P		**Pn**	**15 23 45.3**		**-0.4**
JOW	**Kunigami**	**1.67**	**111**	P		**Pn**	**15 23 45.0**		**-0.7**
JOW				S		**Sn**	**15 24 08.8**		**-3.7**
JOW	**Kunigami**	**1.67**	**111**	A		A	15 23 45.0		
	comp=E,8.0nm,1.0s,comp=E,8.0nm,0.4s								
JJT3	**Tamagusuku3**	**1.71**	**139**	P		**Pn**	**15 23 46.3**		**+0.2**
JJT3				S		**Sn**	**15 24 11.5**		**-1.8**
JJT3	**Tamagusuku3**	**1.71**	**139**	A		A	15 23 46.3		
	comp=E,26nm,2.2s,comp=E,18nm,2.0s								
JYRO	**Yoronjima**	**1.76**	**103**	P		**Pn**	**15 23 45.9**		**-0.7**
JYRO				S		**Sn**	**15 24 10.5**		**-3.6**
JYRO	**Yoronjima**	**1.76**	**103**	A		A	15 23 45.9		
	comp=E,5.0nm,2.7s,comp=E,8.0nm,3.0s								
JOKE	**Okinoerabujima**	**1.81**	**92**	P		**Pn**	**15 23 46.3**		**-0.9**
JOKE				S		**Sn**	**15 24 11.4**		**-3.7**
JOKE	**Okinoerabujima**	**1.81**	**92**	A		A	15 23 46.3		
	comp=E,4.0nm,0.6s,comp=E,6.0nm,0.2s								
JTK	**Tokunoshima**	**2.17**	**80**	P		**Pn**	**15 23 49.8**		**-1.1**
JTK				S		**Sn**	**15 24 18.2**		**-3.7**
JAMN	**Amaminishikomi**	**2.47**	**71**	P		**Pn**	**15 23 53.0**		**-1.2**
JAMN					*eS*	**Sn**	**15 24 24.8**		**-3.0**
JIKM	**Ikemajima**	**2.76**	**205**	P		**Pn**	**15 23 56.3**		**-1.3**
JIKM				S		**Sn**	**15 24 30.3**		**-3.5**
JMJ	**Miyako jima 2**	**2.84**	**203**	P		**Pn**	**15 23 58.3**		**-0.3**
JOGS	**Gusukube**	**2.85**	**201**	P		**Pn**	**15 23 57.7**		**-1.0**
JOGS				S		**Sn**	**15 24 32.6**		**-3.2**
JOGS	**Gusukube**	**2.85**	**201**	A		A	15 23 57.7		
	comp=E,4.0nm,1.3s,comp=E,3.0nm,3.3s								
JIRB	**Irabujima**	**2.87**	**205**	P		**Pn**	**15 23 57.3**		**-1.7**
JIRB					*eS*	**Sn**	**15 24 32.2**		**-4.0**
JAM	**Amami Oshima**	**2.89**	**70**	P		**Pn**	**15 23 57.8**		**-1.2**
JAM				S		**Sn**	**15 24 33.8**		**-2.5**
JMJ2	**Miyako jima3**	**2.90**	**202**	P		**Pn**	**15 23 58.1**		**-1.1**
JMJ2				S		**Sn**	**15 24 33.9**		**-2.9**
JTAJ	**Takarajima**	**2.91**	**53**	P		**Pn**	**15 23 59.1**		**-0.2**
JTAJ					*eS*	**Sn**	**15 24 35.9**		**-1.0**
JZK	**Kikaishima**	**3.17**	**73**	P		**Pn**	**15 24 02.1**		**-0.2**
JZK				S		**Sn**	**15 24 40.9**		**-1.5**
JTJ	**Tarama**	**3.24**	**211**	P		**Pn**	**15 24 01.5**		**-1.7**
JTJ				S		**Sn**	**15 24 39.7**		**-4.3**
JIJ	**Ishigaki jima**	**3.74**	**216**	*i*	P	**Pn**	**15 24 07.1**		**-2.4**
JIJ				S		**Sn**	**15 24 48.8**		**-6.4**
JKRS	**Kuro-shima**	**3.92**	**216**	P		**Pn**	**15 24 09.4**		**-2.3**
JKRS				S		**Sn**	**15 24 53.4**		**-5.7**

IRIF	**Iriomote-Funau**	**3.99**	**220**	*i*	P	**Pn**	**15 24 10.4**		**-2.2**
IRIF					S	**Sn**	**15 24 55.9**		**-4.9**
HATJ	**Hateruma jima**	**4.17**	**217**		P	**Pn**	**15 24 12.6**		**-2.3**
HATJ					*eS*	**Sn**	**15 25 00.1**		**-4.7**
YOJ	**Yonaguni jima**	**4.34**	**228**		Pn	**Pn**	**15 24 15.6**		**-1.4**
YOJ	**Yonaguni jima**	**4.34**	**228**		P	**Pn**	**15 24 15.6**		**-1.4**
YOJ	**Yonaguni jima**	**4.34**	**228**		P	**Pn**	**15 24 16.0**		**-1.0**
YOJ	**Yonaguni jima**	**4.34**	**228**		P	**Pn**	**15 24 15.8**		**-1.2**
YOJ					S	**Sn**	**15 25 06.5**		**-2.2**
JYNG	**Yonagunijimaku**	**4.39**	**228**		P	**Pn**	**15 24 16.4**		**-1.3**
JYNG					*eS*	**Sn**	**15 25 07.4**		**-2.4**
JKC	**Kuchinoerabu**	**4.40**	**46**		P	**Pn**	**15 24 15.8**		**-1.9**
JYAK	**Yakushimahirau**	**4.46**	**50**		S	**Sn**	**15 25 08.6**		**-2.9**
JMZ	**Minamidaito 2**	**4.50**	**110**	*i*	P	**Pn**	**15 24 18.0**		**-0.9**
JMZ					S	**Sn**	**15 25 07.2**		**-4.9**
JKDJ	**Kitadaitoujima**	**4.51**	**108**	*i*	P	**Pn**	**15 24 18.4**		**-0.7**
JKDJ					*eS*	**Sn**	**15 25 08.3**		**-4.2**
TATO	**Taipei**	**5.15**	**243**			**Pn**	**15 24 28.7**		**+1.3**
JSU	**Suzuyama**	**5.30**	**39**			**Pn**	**15 24 29.4**		**+0.1**
YHNB	**Yeheng**	**5.40**	**240**			**Pn**	**15 24 31.4**		**+0.8**
YHNB	**Yeheng**	**5.40**	**240**		P	**Pn**	**15 24 31.8**		**+1.2**
NACB	**Ninganchiao**	**5.51**	**235**			**Pn**	**15 24 29.7**		**-2.3**
SSLB	**Suanglung**	**6.21**	**235**			**Pn**	**15 24 39.2**		**-2.0**
SSLB	**Suanglung**	**6.21**	**235**		P	**Pn**	**15 24 39.6**		**-1.5**
YULB	**Yu-li**	**6.22**	**231**		Pn	**Pn**	**15 24 37.2**		**-4.0**
TPUB	**Ta-pu**	**6.74**	**234**			**Pn**	**15 24 46.2**		**-1.8**
TPUB	**Ta-pu**	**6.74**	**234**		P	**Pn**	**15 24 46.3**		**-1.8**
JNU	**Nakatsue**	**6.79**	**33**		P	**Pn**	**15 24 46.1**		**-2.5**
	7.0nm,0.4s,baz=71,slow=3.9,SNR=2.7								
JNU					S	**Sn**	**15 26 03.5**		**-2.4**
	3.7nm,0.4s,baz=199,slow=8.3,SNR=0.7								
JNU	**Nakatsue**	**6.79**	**33**		Pn	**Pn**	**15 24 46.4**		**-2.2**
JTU	**Tsushima**	**7.48**	**19**		Pn	**Pn**	**15 24 59.4**		**+1.9**
NAWB	**Namwon**	**7.99**	**5**		Pn	**Pn**	**15 25 02.3**		**-1.9**
NJ2	**Nanjing**	**8.10**	**306**	⇑	*iP*	**Pn**	**15 25 06.5**		**+0.8**
NJ2					pmax	pmax			
	comp=Z,93nm,0.5s								
TJN	**Taejon**	**8.94**	**4**		Pn	**Pn**	**15 25 17.8**		**+1.2**
TJN	**Taejon**	**8.94**	**4**		P	**Pn**	**15 25 17.8**		**+1.2**
KSAR	**Wonju Array Be**	**10.04**	**6**		Pn	**Pn**	**15 25 32.0**		**+1.1**
KSAR	**Wonju Array Be**	**10.04**	**6**		P	**Pn**	**15 25 32.0**		**+1.1**
KSRS	**Korea Array**	**10.05**	**6**		P	**Pn**	**15 25 32.3**		**+1.2**
	22nm,0.8s,baz=183,slow=13,SNR=69								
KSRS					S	**Sn**	**15 27 19.6**		**-3.5**
	0.3nm,0.5s,baz=189,slow=23,SNR=1.1								
KS19	**Wonju Array Si**	**10.10**	**6**			**Pn**	**15 25 32.5**		**+0.8**
WHN	**Wuhan**	**11.10**	**289**	⇑	P	**Pn**	**15 25 45.5**		**+0.8**
WHN					pmax	pmax			
	comp=Z,70nm,0.8s								
TIA	**Tai'an**	**11.84**	**320**	⇓	P	**Pn**	**15 25 56.0**		**+1.8**
TIA					pmax	pmax			
	comp=Z,10.0nm,0.8s								
JGF	**Kuroka**	**12.30**	**46**		P	**P**	**15 26 05.3**		**+0.7**
JHJ2	**Mitsune**	**12.79**	**61**		P	**P**	**15 26 10.5**		**+0.5**
MAJO	**Matsushiro**	**13.43**	**45**		P	**P**	**15 26 18.1**		**+1.0**
MAJO	**Matsushiro**	**13.43**	**45**	*i*	P	**P**	**15 26 17.2**		**+0.2**
MJAR	**Matsushiro Arr**	**13.43**	**45**		P	**P**	**15 26 17.0**		**-0.1**
	4.5nm,0.4s,baz=231,slow=11,SNR=17								
MJAR	**Matsushiro Arr**	**13.43**	**45**			**P**	**15 26 17.9**		**+0.9**
MJAR	**Matsushiro Arr**	**13.43**	**45**		P	**P**	**15 26 17.9**		**+0.9**
MJB9	**Matsu-Tunnel**	**13.43**	**45**		P	**P**	**15 26 18.1**		**+1.0**
JCJ	**Chichijima**	**13.93**	**88**		P	**P**	**15 26 22.4**		**-0.2**
	29nm,0.6s,baz=282,slow=2.9,SNR=4.3								
JCJ	**Chichijima**	**13.93**	**88**			**Pn**	**15 26 19.9**		**-0.6**
HNS	**HongShan**	**14.07**	**318**	⇓	P	**P**	**15 26 24.5**		**+0.4**
HNS					pmax	pmax			
	comp=Z,57nm,0.8s								
JSD	**Sado**	**14.44**	**40**			**Pn**	**15 26 26.9**		**+0.1**
JYT	**Yasato**	**14.53**	**50**			**Pn**	**15 26 28.0**		**+0.1**
BJT	**Baijiatuau**	**15.21**	**328**			**Pn**	**15 26 35.9**		**-0.2**
BJT					IAmb	IAmb	15 26 41.6		
	comp=Z,28nm,0.7s								
BJT	**Baijiatuau**	**15.21**	**328**		P	**Pn**	**15 26 35.9**		**-0.2**
BJT					pmax	pmax			
	comp=Z,28nm,0.7s								
BJI	**Beijing**	**15.22**	**328**		P	**P**	**15 26 40.5**		**+3.7**
BJI					pmax	pmax			
	comp=Z,38nm,0.7s								
JMM	**Marumori**	**15.87**	**45**		Pn	**P**	**15 26 42.0**		**-2.0**
CN2	**Changchun**	**16.35**	**357**		*eP*	**Pn**	**15 26 51.0**		**+1.1**
CN2					pmax	pmax			
	comp=Z,30nm,0.7s								
XAN	**Xi'an**	**16.50**	**298**	⇑	P	**Pn**	**15 26 52.5**		**+0.6**
XAN					pmax	pmax			
	comp=Z,9.0nm,0.7s								
USRK	**Ussuriysk Ar.**	**17.29**	**13**

ZEA	**Zeya**	**26.28**	**1**	*e*P		**P**		**15 28 30.6**	**+2.1**
ZEA				pmax		pmax			
	comp=Z,10.0nm,0.7s								
CMAR	**Chiang Mai Arr**	**26.88**	**256**	P		**P**		**15 28 35.9**	**+1.5**
	comp=Z,0.8nm,0.8s,baz=58,slow=8.7,SNR=4.7								
CMAR				pP		pP		15 29 14.7	+1.4
	comp=Z,1.8nm,1.0s,baz=46,slow=7.6,SNR=4.7								
CMAR				PcP		PcP		15 31 53.0	+1.3
	comp=Z,0.5nm,0.8s,baz=41,slow=1.3,SNR=7.0								
	comp=Z,0.8nm,0.8s								
CMAR	**Chiang Mai Arr**	**26.88**	**256**	P		**P**		**15 28 32.5**	**-1.9**
CMAR				PcP		PcP		15 31 52.5	+0.8
GOMU	**GeErMu**	**28.23**	**296**	P		**P**		**15 28 46.8**	**+0.2**
GOMU				pP		pP		15 29 30.5	+4.7
GOMU				pmax		pmax			
	comp=Z,4.0nm,0.6s								
FAKI	**Fak Fak**	**30.68**	**169**	P		**P**		**15 29 07.8**	**-0.2**
FAKI				IAmb		IAmb		15 29 09.4	
	comp=Z,12nm,0.7s								
MOY	**Mondy**	**30.90**	**328**	*e*P		**P**		**15 29 09.8**	**+0.1**
MOY				pmax		pmax			
	comp=Z,13nm,1.2s								
KULM	**Kulim**	**33.05**	**233**	P		**P**		**15 29 29.6**	**+0.9**
TAPN	**Taplejung**	**34.37**	**279**	*e*P		**PcP**		**15 32 13.0**	**+1.2**
	comp=Z,14nm,0.4s								
PEA0B	**Petropavlovsk-**	**34.49**	**33**	P		**P**		**15 29 40.4**	**-0.3**
PEA0B				IAmb		IAmb		15 29 49.8	
	comp=Z,29nm,1.5s								
PEA0B	**Petropavlovsk-**	**34.49**	**33**	P		**P**		**15 29 40.4**	**-0.3**
PEA0B				pmax		pmax			
	comp=Z,29nm,1.5s								
PETK	**Petropavlovsk-**	**34.49**	**33**	P		**P**		**15 29 40.7**	**0.0**
	comp=Z,1.0nm,0.5s,baz=86,slow=22,SNR=6.4								
	comp=Z,1.0nm,0.5s								
PETK	**Petropavlovsk-**	**34.49**	**33**	P		**P**		**15 29 40.2**	**-0.5**
YAK	**Yakutsk**	**34.65**	**3**	*ce*P		**P**		**15 29 41.1**	**-0.8**
YAK				pmax		pmax			
	comp=Z,6.0nm,0.6s								
PET	**Petropavlovsk**	**34.92**	**34**	P		**P**		**15 29 43.7**	**-0.6**
PET				IAmb		IAmb		15 30 09.9	
	comp=Z,15nm,1.2s								
WMQ	**Urumqi**	**35.18**	**308**	*e*P		**P**		**15 29 43.8**	**-3.0**
WMQ				pP		pP		15 30 25.0	-1.8
WMQ				pmax		pmax			
	comp=Z,25nm,0.7s								
RAMN	**Ramite**	**35.42**	**279**	*e*P		**PcP**		**15 32 15.8**	**+1.1**
	comp=Z,10.0nm,0.4s								
JIRN	**Jiri**	**35.66**	**280**	*e*P		**PcP**		**15 32 16.1**	**+0.5**
GUN	**Gumba**	**35.89**	**280**	*e*P		**PcP**		**15 32 16.4**	**+0.1**
	comp=Z,9.8nm,0.4s								
PKI	**Pulchoki**	**36.35**	**280**	*e*P		**PcP**		**15 32 17.8**	**+0.1**
	comp=Z,14nm,0.6s								
PKIN	**Phulchoki**	**36.36**	**280**	*e*P		**PcP**		**15 32 17.8**	**+0.2**
	comp=Z,10nm,0.5s								
DMN	**Daman**	**36.61**	**280**	*e*P		**PcP**		**15 32 18.8**	**+0.5**
KOLN	**Koldanda**	**37.90**	**281**	*e*P		**PcP**		**15 32 22.8**	**+0.6**
SEY	**Seymchan**	**39.33**	**18**	*ce*P		**P**		**15 30 19.9**	**-1.4**
SEY				pmax		pmax			
	comp=Z,6.0nm,1.0s								
MK31	**Makanchi Array**	**39.60**	**311**	P		**P**		**15 30 23.6**	**-0.2**
MK31				IAmb		IAmb		15 30 24.4	
	comp=Z,11nm,0.6s								
MK31	**Makanchi Array**	**39.60**	**311**	P		**P**		**15 30 23.6**	**-0.2**
MK31				pmax		pmax			
	comp=Z,11nm,0.6s								
MKAR	**Makanchi Array**	**39.60**	**311**	P		**P**		**15 30 23.9**	**0.0**
	comp=Z,16nm,0.5s,baz=100,slow=10,SNR=212								
MKAR				PcP		PcP		15 32 27.1	+0.1
	comp=Z,1.6nm,0.7s,baz=71,slow=4.4,SNR=5.9								
MKAR				ScP		ScP		15 35 58.0	+0.5
	comp=Z,3.0nm,0.9s,baz=100,slow=4.6,SNR=17								
	comp=Z,16nm,0.5s								
MKAR	**Makanchi Array**	**39.60**	**311**	P		**P**		**15 30 22.8**	**-1.0**
MKAR						PcP		15 32 26.8	-0.2
MTN	**Manton Dam**	**40.29**	**173**	P		**P**		**15 30 29.4**	**-0.4**
ZAA0	**Zalesovo Array**	**40.37**	**323**	P		**P**		**15 30 29.6**	**-0.4**
ZALV	**Zalesovo Beam**	**40.37**	**323**	P		**P**		**15 30 29.8**	**-0.2**
	comp=Z,29nm,0.4s,baz=113,slow=8.9,SNR=130								
ZALV				ScP		ScP		15 36 00.3	0.0
	comp=Z,0.8nm,0.5s,baz=131,slow=4.1,SNR=4.2								
ZALV	**Zalesovo Beam**	**40.37**	**323**	P		**P**		**15 30 29.9**	**-0.1**
ZALV	**Zalesovo Beam**	**40.37**	**323**	*i* P		**P**		**15 30 29.7**	**-0.3**
ZALV				pmax		pmax			
	comp=Z,29nm,0.4s								
TARG	**Taragay, Kyrgy**	**42.03**	**303**	P		**P**		**15 30 44.6**	**+0.4**
TARG	**Taragay, Kyrgy**	**42.03**	**303**	P		**P**		**15 30 44.6**	**+0.4**
TARG				pmax		pmax			
	comp=Z,4.0nm,0.8s								
KDJ	**Kajisay**	**42.52**	**303**	P		**P**		**15 30 48.3**	**+0.4**
KDJ	**Kajisay**	**42.52**	**303**	P		**P**		**15 30 48.3**	**+0.4**
KDJ				pmax		pmax			
	comp=Z,5.0nm,0.8s								
KURK	**Kurchatov**	**42.90**	**316**	P		**P**		**15 30 50.0**	**-0.6**
KURK				IAmb		IAmb		15 30 51.2	
	comp=Z,17nm,1.0s								
KURK	**Kurchatov**	**42.90**	**316**	P		**P**		**15 30 50.0**	**-0.6**
KURK				pmax		pmax			
	comp=Z,17nm,1.0s								
KNRA	**Kununurra**	**42.92**	**177**	P		**P**		**15 30 51.6**	**+0.6**
KNRA				IAmb		IAmb		15 30 57.2	
	comp=Z,20nm,1.3s								
BOOM	**Boomskoye usch**	**43.46**	**304**	P		**P**		**15 30 55.1**	**-0.3**
BOOM	**Boomskoye usch**	**43.46**	**304**	P		**P**		**15 30 55.2**	**-0.3**
BOOM				pmax		pmax			
	comp=Z,2.0nm,0.8s								
COEN	**Coen**	**44.21**	**156**	P		**P**		**15 31 02.2**	**+0.8**
COEN				IAmb		IAmb		15 31 30.1	
	comp=Z,23nm,1.3s								
TIXI	**Tiksi**	**44.27**	**1**	P		**P**		**15 31 00.7**	**-0.5**
TIXI	**Tiksi**	**44.27**	**1**	P		**P**		**15 31 00.7**	**-0.5**
TIXI				pmax		pmax			
	comp=Z,2.0nm,0.5s								
AMKA	**Amchitka**	**46.04**	**44**	P		**P**		**15 31 15.7**	**+0.3**
BILL	**Bilibino**	**47.02**	**19**	*e*P		**P**		**15 31 23.3**	**+0.6**
BILL				*PP		pP		15 32 12.0	+7.3
BILL				*i*				15 32 52.8	
BILL				*i*				15 33 20.3	
BILL				*e*PPP		PPP		15 34 15.9	
BILL				SS		SS		15 41 20.0	-8.4
KK31	**Karatay Array**	**47.48**	**305**	P		**P**		**15 31 27.3**	**+0.6**
KK31	**Karatay Array**	**47.48**	**305**	P		**P**		**15 31 27.3**	**+0.6**
KK31				pmax		pmax			
	comp=Z,2.0nm,0.7s								
KKAR	**Karatay Array**	**47.48**	**305**	P		**P**		**15 31 27.2**	**+0.5**
KKAR	**Karatay Array**	**47.48**	**305**	P		**P**		**15 31 27.3**	**+0.5**
KKAR				IAmb		IAmb		15 31 28.1	
	comp=Z,2.2nm,0.7s								
KKAR	**Karatay Array**	**47.48**	**305**	P		**P**		**15 31 27.3**	**+0.6**
KKAR				pmax		pmax			
	comp=Z,2.0nm,0.7s								
WB0	**Warramunga Arr**	**47.54**	**170**	P		**P**		**15 31 27.7**	**+0.3**
WRA	**Warramunga Arr**	**47.71**	**170**	P		**P**		**15 31 28.1**	**-0.5**
	comp=Z,3.3nm,0.6s,baz=358,slow=22,SNR=87								
WRA				pP		pP		15 32 11.2	+0.4
	comp=Z,2.0nm,0.7s,baz=351,slow=8.8,SNR=4.5								
	comp=Z,3.3nm,0.6s								
WRA	**Warramunga Arr**	**47.71**	**170**	P		**P**		**15 31 27.5**	**-1.1**
WB2	**Warramunga Arr**	**47.71**	**170**	P		**P**		**15 31 29.1**	**+0.4**
WR0	**Warramunga Arr**	**47.76**	**170**	P		**P**		**15 31 29.5**	**+0.5**
KIWB	**Kanaga Island**	**48.30**	**44**	P		**P**		**15 31 32.6**	**-0.3**
GSTR	**Great Sitkin T**	**49.00**	**44**	P		**P**		**15 31 37.9**	**-0.4**
CTA	**Charters Tower**	**50.96**	**156**	P		**P**		**15 31 54.4**	**+1.0**
	comp=Z,6.5nm,0.9s,baz=316,slow=4.8,SNR=2.4								
	comp=Z,6.5nm,0.9s								
CTAO	**Charters Tower**	**50.96**	**156**	P		**P**		**15 31 54.2**	**+1.0**
CTAO				IAmb		IAmb		15 32 15.3	
	comp=Z,34nm,1.4s								
CTAO	**Charters Tower**	**50.96**	**156**	P		**P**		**15 31 54.3**	**+1.0**
CTAO				pmax		pmax			
	comp=Z,34nm,1.5s								
AS31	**Alice Springs**	**51.30**	**171**	P		**P**		**15 31 56.4**	**+0.6**
ASAR	**Alice Springs**	**51.30**	**171**	P		**P**		**15 31 57.0**	**+1.2**
	comp=Z,0.9nm,0.4s,baz=360,slow=14,SNR=63								
ASAR				pP		pP		15 32 39.0	+0.6
	comp=Z,0.8nm,0.5s,baz=355,slow=9.0,SNR=3.7								
ASAR				PcP		PcP		15 33 08.7	+0.7
	comp=Z,1.1nm,0.8s,baz=351,slow=5.1,SNR=4.1								
	comp=Z,0.9nm,0.4s								
ASAR	**Alice Springs**	**51.30**	**171**	P		**P**		**15 31 54.6**	**-1.2**
ASAR						PcP		15 33 08.1	+0.1
GAMB	**Gambell**	**53.31**	**29**	P		**P**		**15 32 09.6**	**-0.4**
	baz=258								
NIKH	**Nikolski High**	**53.45**	**43**	P		**P**		**15 32 11.5**	**+0.2**
	baz=268								
ABKAR	**Akbulak array**	**54.71**	**313**	P		**P**		**15 32 20.3**	**-0.1**
TNA	**Tin City**	**55.26**	**27**	P		**P**		**15 32 23.7**	**-0.3**
	baz=260								
ARU	**Arti**	**55.50**	**321**	P		**P**		**15 32 25.2**	**-0.8**
ARU				IAmb		IAmb		15 32 26.1	
	comp=Z,5.6nm,0.5s								
ARU	**Arti**	**55.50**	**321**	*c i* P		**P**		**15 32 25.3**	**-0.7**
ARU				*PP		**pP**		**15 33 15.7**	**+6.3**
ARU				S		**S**		**15 39 52.6**	**-3.2**
ARU				SS		**SS**		**15 43 38.1**	**-5.1**
ARU				pmax		pmax			
	comp=Z,12nm,1.4s								
ANM	**Nome**	**56.18**	**29**	P		**P**		**15 32 31.1**	**+0.5**
	baz=263								
SDPT	**Sand Point**	**58.35**	**40**	P		**P**		**15 32 44.6**	**-1.3**
SDPT	**Sand Point**	**58.35**	**40**	P		**P**		**15 32 45.9**	**0.0**
	baz=273								
S14K	**Fog Glacier**	**58.81**	**39**	P		**P**		**15 32 49.7**	**+0.4**
	baz=274								
CHNA	**Chernabura Isl**	**58.89**	**40**	P		**P**		**15 32 49.0**	**-0.6**
	baz=274								
CNBA	**Chernabura Isl**	**58.89**	**40**	P		**P**		**15 32 48.9**	**-0.8**
CNBA				IAmb		IAmb		15 32 49.9	
	comp=Z,14nm,0.8s								
N16K	**Nishlik Lake**	**59.04**	**34**	P		**P**		**15 32 51.3**	**+0.6**
	baz=272								
O16K	**Kokwok River B**	**59.41**	**35**	P		**P**		**15 32 53.7**	**+0.5**
	baz=273,SNR=6.2								
P16K	**Nushagak River**	**59.50**	**36**	P		**P**		**15 32 54.5**	**+0.7**
	baz=273								
O17K	**Koliganek Bris**	**59.91**	**35**	P		**P**		**15 32 57.0**	**+0.4**
	baz=274								
A21K	**Barrow**	**60.06**	**21**	P		**P**		**15 32 57.7**	**+0.3**
	baz=267								
Q16K	**King Salmon**	**60.21**	**36**	P		**P**		**15 32 59.0**	**+0.4**
	baz=274								
TTA	**Tatalina**	**60.27**	**31**	P		**P**		**15 32 59.5**	**+0.4**
TTA	**Tatalina**	**60.27**	**31**	P		**P**		**15 32 59.5**	**+0.4**
TTA				pmax		pmax			
	comp=Z,4.0nm,0.7s								
TTA	**Tatalina**	**60.27**	**31**	P		**P**		**15 32 59.3**	**+0.2**
	baz=273,SNR=7.1								
P17K	**Kvichak River**	**60.28**	**35**	P		**P**		**15 32 59.5**	**+0.4**
	baz=274								
KIRV	**Kirov**	**60.38**	**324**	*ce*P		**P**		**15 33 00.4**	**+0.7**
R17K	**Ugashik Creek**	**60.44**	**37**	P		**P**		**15 33 00.2**	**0.0**
	baz=275								
N18K	**Kilae Creek**	**60.45**	**34**	P		**P**		**15 33 01.0**	**+0.7**
N18K	**Kilae Creek**	**60.45**	**34**	P		**P**		**15 33 00.2**	**-0.1**
	baz=274								
SVW2	**Sparrevohn**	**60.58**	**33**	P		**P**		**15 33 02.3**	**+1.1**
SVW2				IAmb		IAmb		15 33 03.0	
	comp=Z,6.7nm,0.7s								
STKA	**Stephens Creek**	**60.71**	**165**	P		**P**		**15 33 02.8**	**+0.5**
	comp=Z,2.5nm,0.7s,baz=343,slow=6.5,SNR=11								
	comp=Z,2.5nm,0.7s								
STKA	**Stephens Creek**	**60.71**	**165**	P		**P**		**15 33 02.9**	**+0.6**
STKA	**Stephens Creek**	**60.71**	**165**	P		**P**		**15 33 02.9**	**+0.6**
STKA				pmax		pmax			
	comp=Z,3.0nm,1.5s								
L19K	**White Mountain**	**60.85**	**32**	P		**P**		**15 33 03.6**	**+0.7**
L19K				IAmb		IAmb		15 33 04.9	
	comp=Z,6.6nm,0.9s								
L19K	**White Mountain**	**60.85**	**32**	P		**P**		**15 33 03.5**	**+0.6**
	baz=274,SNR=6.8								
O18K	**Koktuh Hills**	**60.86**	**34**	P		**P**		**15 33 04.2**	**+1.1**
O18K				IAmb		IAmb		15 33 05.5	
	comp=Z,16nm,1.1s								
O18K	**Koktuh Hills**	**60.86**	**34**	P		**P**		**15 33 04.0**	**+0.9**
	baz=275,SNR=8.8								
P18K	**Big Mountain,**	**60.89**	**35**	P		**P**		**15 33 03.6**	**+0.4**
P18K				IAmb		IAmb		15 33 04.7	
	comp=Z,10nm,0.9s								
P18K	**Big Mountain,**	**60.89**	**35**	P		**P**		**15 33 03.7**	**+0.4**
	baz=275								
J20K	**Nowinta River**	**61.04**	**29**	P		**P**		**15 33 04.9**	**+0.8**
J20K				IAmb		IAmb		15 33 06.2	
	comp=Z,9.0nm,0.6s								
J20K	**Nowinta River**	**61.04**	**29**	P		**P**		**15 33 05.3**	**+1.1**
	baz=274,SNR=12								
CHIR	**Chirikof Islan**	**61.05**	**39**	P		**P**		**15 33 04.7**	**+0.3**
CHIR	**Chirikof Islan**	**61.05**	**39**	P		**P**		**15 33 04.7**	**+0.3**
	baz=277								
Q18K	**Katmai Hardscr**	**61.07**	**36**	P		**P**		**15 33 04.0**	**-0.6**
	baz=276								
M19K	**Big River Lodg**	**61.09**	**32**	P		**P**		**15 33 05.4**	**+0.9**
M19K	**Big River Lodg**	**61.09**	**32**	P		**P**		**15 33 04.2**	**-0.4**
	baz=275								
IMAR	**Indian Mountai**	**61.11**	**27**	P		**P**		**15 33 05.5**	**+0.9**
IMAR						**PcP**		**15 33 46.5**	**+0.9**
K20K	**Telida**	**61.13**	**30**	P		**P**		**15 33 05.8**	**+1.0**
K20K				IAmb		IAmb		15 33 07.0	
	comp=Z,8.8nm,0.8s								
K20K	**Telida**	**61.13**	**30**	P		**P**		**15 33 05.7**	**+1.0**
	baz=274,SNR=14								
N19K	**Bonanza Creek**	**61.13**	**33**	P		**P**		**15 33 06.0**	**+1.1**
N19K	**Bonanza Creek**	**61.13**	**33**	P		**P**		**15 33 05.8**	**+0.9**
	baz=275								
F21K	**Alatna River**	**61.16**	**26**	P		**P**		**15 33 05.3**	**+0.3**
	baz=272								
G21K	**Allakaket**	**61.18**	**27**	P		**P**		**15 33 05.5**	**+0.4**
	baz=273								
O19K	**Port Alsworth**	**61.27**	**34**	P		**P**		**15 33 06.4**	**+0.7**
	baz=276								
L20K	**Farewell, AK**	**61.28**	**31**	P		**P**		**15 33 06.7**	**+0.8**
	baz=275,SNR=8.2								
H21K	**Melozitna Rive**	**61.52**	**28**	P		**P**		**15 33 08.3**	**+0.9**
H21K				IAmb		IAmb		15 33 09.3	
	comp=Z,6.0nm,0.8s								
H21K						**PcP**		**15 33 48.5**	**+1.2**
H21K	**Melozitna Rive**	**61.52**	**28**	P		**P**		**15 33 07.8**	**+0.5**
	baz=274,SNR=9.7								
M20K	**Styx River**	**61.68**	**32**	P		**P**		**15 33 10.0**	**+1.3**
M20K				IAmb		IAmb		15 33 10.7	
	comp=Z,7.1nm,0.8s								
M20K	**Styx River**	**61.68**	**32**	P		**P**		**15 33 09.7**	**+1.0**
	baz=276,SNR=5.6								
Q19K	**Cape Douglas,**	**61.75**	**35**	P		**P**		**15 33 07.8**	**-1.2**
Q19K	**Cape Douglas,**	**61.75**	**35**	P		**P**		**15 33 08.2**	**-0.8**
	baz=277								
E22K	**Anaktuvuk Pass**	**61.75**	**25**	P		**P**		**15 33 09.3**	**+0.4**
	baz=274								
SII	**Sitkinak Islan**	**61.76**	**38**	P		**P**		**15 33 09.5**	**+0.3**
SII	**Sitkinak Islan**	**61.76**	**38**	P		**P**		**15 33 09.2**	**0.0**
	baz=278								
CHUM	**Lake Minchumin**	**61.87**	**30**	P		**P**		**15 33 09.9**	**+0.2**
	baz=275,SNR=7.8								
I21K	**Tanana**	**61.89**	**28**	P		**P**		**15 33 10.6**	**+0.8**
I21K				IAmb		IAmb		15 33 12.1	
	comp=Z,7.5nm,0.8s								
I21K	**Tanana**	**61.89**	**28**	P		**P**		**15 33 10.6**	**+0.8**
	baz=275,SNR=8.8								
G22K	**Bettles**	**61.95**	**26**	P		**P**		**15 33 10.5**	**+0.3**
	baz=274								
CAST	**Castle Rocks**	**62.01**	**30**	P		**P**		**15 33 11.6**	**+0.9**
CAST				IAmb		IAmb		15 33 12.5	
	comp=Z,9.3nm,1.0s								
CAST	**Castle Rocks**	**62.01**	**30**	P		**P**		**15 33 11.4**	**+0.7**
	baz=276,SNR=7.7								
RSO	**Redoubt South**	**62.02**	**34**	P		**P**		**15 33 11.7**	**+0.7**
PPLA	**Purkeypile**	**62.02**	**31**	P		**P**		**15 33 11.9**	**+1.0**
PPLA				IAmb		IAmb		15 33 12.7	
	comp=Z,7.3nm,0.7s								
PPLA	**Purkeypile**	**62.02**	**31**	P		**P**		**15 33 11.3**	**+0.4**
	baz=276,SNR=6.0								
C23K	**Itkillik River**	**62.08**	**23**	P		**P**		**15 33 11.2**	**+0.2**
	baz=274								
H22K	**Ishtalitna Cre**	**62.08**	**27**	P		**P**		**15 33 12.2**	**+1.0**
	baz=275								
D23K	**Nanushuk River**	**62.11**	**24**	P		**P**		**15 33 11.9**	**+0.7**
	baz=274								
O20K	**Slope Mountain**	**62.13**	**34**	P		**P**		**15 33 11.8**	**+0.2**
	baz=27								
OHAK	**Old Harbor**	**62.15**	**37**	P		**P**		**15 33 11.7**	**0.0**
OHAK	**Old Harbor**	**62.15**	**37**	P		**P**		**15 33 11.5**	**-0.2**
	baz=278								
BELG	**Belogornoye**	**62.16**	**317**	*i* P		**P**		**15 33 11.5**	**-0.3**
BELG				pmax		pmax			
	comp=Z,1.0nm,0.6s								
SPCR	**Spurr Chakacha**	**62.19**	**33**	P		**P**		**15 33 12.7**	**+0.7**
	baz=277								
N20K	**Mount Spurr**	**62.20**	**33**	P		**P**		**15 33 11.8**	**-0.3**
	baz=277								
SPU	**Mount Spurr**	**62.27**	**33**	P		**P**		**15 33 12.8**	**+0.3**
ARMA	**Armidale**	**62.33**	**156**	P		**P**		**15 33 14.7**	**+1.4**
SKT	**Skwentna**	**62.42**	**32**	P		**P**		**15 33 13.5**	**0.0**
SKT				IAmb		IAmb		15 33 14.2	
	comp=Z,6.9nm,0.9s								
SKT	**Skwentna**	**62.42**	**32**	P		**P**		**15 33 13.1**	**-0.4**
	baz=277								
BPAW	**Bear Paw Mtn.**	**62.43**	**29**	P		**P**		**15 33 14.2**	**+0.7**
BPAW				IAmb		IAmb		15 33 15.1	
	comp=Z,5.8nm,0.7s								
BPAW	**Bear Paw Mtn.**	**62.43**	**29**	P		**P**		**15 33 13.8**	**+0.4**
	baz=276,SNR=6.1								
MLY	**Manley**	**62.43**	**28**	P		**P**		**15 33 14.3**	**+0.8**
MLY				IAmb		IAmb		15 33 15.4	
	comp=Z,7.3nm,0.7s								
MLY						**PcP**		**15 33 51.5**	**+0.4**
MLY	**Manley**	**62.43**	**28**	P		**P**		**15 33 13.8**	**+0.3**
	baz=276,SNR=14								
Q20K	**Shuyak Island**	**62.43**	**36**	P		**P**		**15 33 13.2**	**-0.4**
	baz=278								
KDAK	**Kodiak Island**	**62.45**	**37**	P		**P**		**15 33 13.8**	**+0.1**
KDAK	**Kodiak Island**	**62.45**	**37**	P		**P**		**15 33 13.8**	**+0.1**
KDAK				pmax		pmax			
	comp=Z,46nm,1.2s								
KDAK	**Kodiak Island**	**62.45**	**37**	P		**P**		**15 33 13.5**	**-0.1**
	baz=278								
KTH	**Kantishna Hill**	**62.52**	**30**	P		**P**		**15 33 14.7**	**+0.6**
TOLK	**Toolik Lake Re**	**62.54**	**24**	P		**P**		**15 33 14.7**	**+0.6**
TOLK	**Toolik Lake Re**	**62.54**	**24**	P		**P**		**15 33 14.3**	**+0.2**
	baz=275,SNR=5.4								
G23K	**Bananza Creek**	**62.55**	**26**	P		**P**		**15 33 14.6**	**+0.3**
	baz=276								
C24K	**Franklin Bluff**	**62.75**	**23**	P		**P**		**15 33 15.3**	**-0.1**
	baz=276								
D24K	**Happy Valley**	**62.76**	**24**	P		**P**		**15 33 16.1**	**+0.5**
	baz=276								
TRF	**Thorofare Moun**	**62.81**	**30**	P		**P**		**15 33 17.2**	**+1.0**
TRF	**Thorofare Moun**	**62.81**	**30**	P		**P**		**15 33 16.2**	**0.0**
	baz=277								
H23K	**Yukon River**	**62.84**	**27**	P		**P**		**15 33 17.3**	**+1.1**
H23K				IAmb		IAmb		15 33 18.6	
	comp=Z,11nm,0.7s								
H23K	**Yukon River**	**62.84**	**27**	P		**P**		**15 33 17.1**	**+0.9**
	baz=277,SNR=18								
SUA	**Susitna One**	**62.86**	**32**	P		**P**		**15 33 16.7**	**+0.2**
SUA	**Susitna One**	**62.86**	**32**	P		**P**		**15 33 16.7**	**+0.2**
	baz=278,SNR=9.2								
CNPM	**China Poot**	**62.90**	**35**	P		**P**		**15 33 16.0**	**-0.6**
I23K	**Minto, Yukon-K**	**63.00**	**28**	P		**P**		**15 33 18.2**	**+1.0**
I23K				IAmb		IAmb		15 33 18.9	
	comp=Z,4.0nm,0.6s								
I23K	**Minto, Yukon-K**	**63.00**	**28**	P		**P**		**15 33 17.6**	**+0.4**
	baz=277,SNR=9.5								
BRLK	**Bradley Lake**	**63.04**	**34**	P		**P**		**15 33 18.6**	**+1.1**
BWN	**Browne**	**63.08**	**29**	P		**P**		**15 33 19.4**	**+1.7**
BRSE	**Bradley Lake S**	**63.11**	**34**	P		**P**		**15 33 18.3**	**+0.3**
	baz=279,SNR=5.4								
M22K	**Willow**	**63.12**	**32**	P		**P**		**15 33 18.1**	**+0.1**
M22K	**Willow**	**63.12**	**32**	P		**P**		**15 33 18.0**	**0.0**
	baz=278								
NEA2	**Nenana**	**63.19**	**29**	P		**P**		**15 33 19.3**	**+0.8**
NEA2	**Nenana**	**63.19**	**29**	P		**P**		**15 33 18.6**	**+0.1**
	baz=278,SNR=19								
MCK	**McKinley**	**63.37**	**30**	P		**P**		**15 33 19.1**	**-0.6**
	baz=278								
RC01	**Rabbit Creek A**	**63.40**	**33**	P		**P**		**15 33 20.1**	**+0.3**
RC01				IAmb		IAmb		15 33 25.8	
	comp=Z,9.8nm,1.1s								
RC01	**Rabbit Creek A**	**63.40**	**33**	P		**P**		**15 33 20.0**	**+0.1**
	baz=279								
RND	**Reindeer**	**63.46**	**30**	P		**P**		**15 33 20.2**	**-0.1**
RND	**Reindeer**	**63.46**	**30**	P		**P**		**15 33 20.2**	**-0.1**
RND				pmax		pmax			
	comp=Z,23nm,0.6s								
MDM	**Murphy Dome**	**63.50**	**28**	P		**P**		**15 33 21.4**	**+0.9**
H24K	**Noodor Dome**	**63.52**	**27**	P		**P**		**15 33 21.8**	**+1.1**
H24K				IAmb		IAmb		15 33 22.9	
	comp=Z,5.2nm,0.8s								
H24K	**Noodor Dome**	**63.52**	**27**	P		**P**		**15 33 21.0**	**+0.3**
	baz=278,SNR=7.9								
PINNC	**Pines Island,**	**63.55**	**137**	P	

baz=282,SNR=6.5
DIV Divide 65.28 32 P P 15 33 32.9 +0.7
HARP HAARP 65.30 31 P P 15 33 32.5 +0.3
baz=282
EYAK Cordova Ski Ar 65.42 33 P P 15 33 32.5 -0.4
baz=282
SCRK Sand Creek 65.48 29 P P 15 33 33.4 -0.1
SCRK IAmb IAmb 15 33 34.4
comp=Z,8.2nm,1.0s
SCRK Sand Creek 65.48 29 P P 15 33 33.0 -0.5
baz=282,SNR=11
DOT Dot Lake 65.52 29 P P 15 33 33.8 +0.2
DOT IAmb IAmb 15 33 34.3
comp=Z,8.3nm,0.7s
I26K Coal Creek Min 65.55 27 P P 15 33 33.6 -0.1
I26K Coal Creek Min 65.55 27 P P 15 33 33.7 -0.1
baz=283
J26L Joseph Creek 65.55 28 P P 15 33 33.7 -0.2
J26L IAmb IAmb 15 33 34.4
comp=Z,8.6nm,0.7s
J26L Joseph Creek 65.55 28 P P 15 33 33.5 -0.4
baz=283,SNR=17
N25K Chitina, Valde 65.73 32 P P 15 33 35.9 +0.8
N25K IAmb IAmb 15 33 36.9
comp=Z,5.1nm,0.5s
N25K Chitina, Valde 65.73 32 P P 15 33 35.2 +0.1
baz=283,SNR=6.9
MENT Mentasta 65.83 30 P P 15 33 36.2 +0.6
MENT IAmb IAmb 15 33 37.3
comp=Z,9.5nm,0.6s
BMRM Bremner River 65.87 32 P P 15 33 36.4 +0.4
BMRM Bremner River 65.87 32 P P 15 33 36.1 +0.1
baz=283,SNR=7.5
L26K Log Cabin Wild 65.98 30 P P 15 33 37.1 +0.5
L26K IAmb IAmb 15 33 38.2
comp=Z,5.9nm,0.8s
L26K Log Cabin Wild 65.98 30 P P 15 33 37.2 +0.7
baz=283,SNR=9.1
GLB Gilahina Butte 66.14 32 P P 15 33 38.3 +0.6
GLB IAmb IAmb 15 33 39.0
comp=Z,19nm,1.2s
HMT Hamilton 66.19 33 P P 15 33 38.4 +0.5
HMT IAmb IAmb 15 34 02.9
comp=Z,11nm,1.0s
M26K Nabesna, AK 66.28 31 P P 15 33 39.4 +0.8
M26K Nabesna, AK 66.28 31 P P 15 33 39.2 +0.6
baz=284,SNR=23
K27K Chicken 66.29 29 P P 15 33 39.1 +0.6
baz=284
VRDI Verde Repeater 66.36 32 P P 15 33 39.7 +0.5
VRDI IAmb IAmb 15 33 40.4
comp=Z,11nm,0.7s
MCARA McCarthy VSAT 66.52 32 P P 15 33 40.7 +0.7
MCARA IAmb IAmb 15 33 42.8
comp=Z,12nm,0.8s
MCARA McCarthy VSAT 66.52 32 P P 15 33 40.2 +0.2
baz=284
CRQM Cirque 66.62 32 P P 15 33 41.5 +0.7
L27K Beaver Creek, 66.64 30 P P 15 33 41.3 +0.5
L27K IAmb IAmb 15 33 42.7
comp=Z,5.5nm,0.7s
L27K Beaver Creek, 66.64 30 P P 15 33 41.2 +0.5
baz=285,SNR=10
CRQE Cirque 66.64 32 P P 15 33 41.2 +0.2
baz=285
BCAR Beaver Creek A 66.66 30 P P 15 33 41.7 +0.8
M27K Edge Creek, AK 66.80 30 P P 15 33 42.5 +0.6
M27K IAmb IAmb 15 33 43.3
comp=Z,6.8nm,0.6s
M27K Edge Creek, AK 66.80 30 P P 15 33 42.3 +0.4
baz=285,SNR=11
WAX Waxell Ridge 66.83 33 P P 15 33 42.5 +0.4
WAX IAmb IAmb 15 33 43.4
comp=Z,10nm,0.6s
SNH Sunshine Point 66.91 33 P P 15 33 43.3 +0.7
SNH IAmb IAmb 15 34 12.3
comp=Z,19nm,1.0s
ISLE Juniper Island 67.04 32 P P 15 33 43.8 +0.4
ISLE IAmb IAmb 15 33 44.3
comp=Z,9.6nm,0.7s
KBZ Khabaz 67.22 309 P P 15 33 45.4 +0.7
comp=Z,1.8nm,0.5s,baz=116,slow=5.8,SNR=4.3
comp=Z,1.8nm,0.5s
KBZ Khabaz 67.22 309 *i* P P 15 33 44.8 +0.1
KBZ pmax pmax
comp=Z,4.0nm,0.9s
BARN Barnard Glacie 67.24 32 P P 15 33 45.3 +0.5
BARN IAmb IAmb 15 33 46.2
comp=Z,7.5nm,0.6s
GRNC Granite Creek 67.28 32 P P 15 33 45.3 +0.2
KIV Kislovodsk 67.30 309‖ *eP* P 15 33 46.5 +1.1
KIV *e* 15 34 11.0
KIV *PP pP 15 34 33.0 +2.6
KIV pmax pmax
comp=Z,12nm,1.5s
SPITS Spitsbergen Ar 67.33 348 P P 15 33 44.3 -0.6
SPITS pmax pmax
comp=Z,14nm,1.2s
MESA MESA 67.34 33 P P 15 33 44.3 -1.2
baz=286
YAH Yahtse 67.39 33 P P 15 33 46.3 +0.5
YAH IAmb IAmb 15 33 48.5
comp=Z,9.7nm,1.0s
CTG Chitna Glacier 67.42 32 P P 15 33 46.1 +0.3
baz=286
DAWY Dawson 67.42 28 P P 15 33 46.2 +0.5
DAWY Dawson 67.42 28 P P 15 33 45.4 -0.3
baz=286
I29M Ogilvie Camp, 67.50 27 P P 15 33 46.9 +0.8
I29M IAmb IAmb 15 33 48.0
comp=Z,7.7nm,1.0s
I29M Ogilvie Camp, 67.50 27 P P 15 33 47.1 +0.9
baz=287
YUK3 Moose Creek 67.60 31 P P 15 33 47.1 +0.1
baz=286
LOGN Logan Glacier 67.61 32 P P 15 33 47.3 +0.2
LOGN IAmb IAmb 15 33 48.5
comp=Z,9.8nm,0.8s
KEV Kevo 67.76 338 P P 15 33 46.8 -0.8
KEV IAmb IAmb 15 33 48.2
comp=Z,21nm,1.5s
KEV Kevo 67.76 338 P P 15 33 46.8 -0.8
KEV pmax pmax
comp=Z,21nm,1.5s
EPYK Eagle Plains 67.83 26 P P 15 33 48.9 +0.8
EPYK Eagle Plains 67.83 26 P P 15 33 48.7 +0.5
baz=288,SNR=9.0
OBN Obninsk 67.94 322‖ *eP* P 15 33 48.5 -0.5
OBN *e* 15 34 09.7
OBN S S 15 42 23.0 -9.0
OBN pmax pmax
comp=Z,8.0nm,0.5s
PINM Pinnacle 68.18 33 P P 15 33 51.2 +0.7
baz=287
ARCES ARCESS Array B 68.33 338 P P 15 33 49.6 -1.6
comp=Z,0.4nm,0.3s,baz=71,slow=8.0,SNR=13
comp=Z,0.4nm,0.3s
ARCES ARCESS Array B 68.33 338 P P 15 33 49.9 -1.3
ARCES ARCESS Array B 68.33 338 P P 15 33 49.9 -1.3
ARCES pmax pmax
comp=Z,5.0nm,1.3s
INK Inuvik 68.38 23 P P 15 33 51.5 0.0
INK Inuvik 68.38 23 P P 15 33 51.5 0.0
INK pmax pmax
comp=Z,5.0nm,0.9s
INK Inuvik 68.38 23 P P 15 33 51.7 +0.3
baz=290
YUK4 Talbot Arm 68.55 31 P P 15 33 53.5 +0.5
baz=288,SNR=5.1
PNL Peninsula 68.72 33 P P 15 33 54.6 +0.8
baz=288
YUK6 Outpost Mounta 68.81 31 P P 15 33 55.4 +0.8
baz=286
M30M Minto, Yukon 68.99 30 P P 15 33 56.5 +1.0
M30M Minto, Yukon 68.99 30 P P 15 33 56.5 +1.0
baz=289,SNR=11
SOCY Socotra 69.09 273 P P 15 33 55.4 -1.6
N30M Aishikik Lake 69.23 31 P P 15 33 57.7 +0.8
baz=289
HYT Haines Junctio 69.25 31 P P 15 33 58.0 +0.8
HYT IAmb IAmb 15 33 59.2
comp=Z,10nm,0.9s
HYT Haines Junctio 69.25 31 P P 15 33 58.1 +0.9
baz=289,SNR=6.7
P30M Million Dollar 69.73 32 P P 15 34 01.0 +0.9
baz=290

O30N Mendenhall 69.92 31 P P 15 34 01.7 +0.5
baz=290
M31M Drury Creek, Y 70.17 29 P P 15 34 03.5 +0.8
M31M IAmb IAmb 15 34 04.4
comp=Z,8.0nm,0.7s
M31M Drury Creek, Y 70.17 29 P P 15 34 03.3 +0.6
baz=291,SNR=16
PLBC Pleasant Camp 70.25 33 P P 15 34 03.4 +0.3
baz=290,SNR=7.4
WHY Whitehorse 70.51 31 P P 15 34 06.0 +1.0
WHY IAmb IAmb 15 34 06.5
comp=Z,6.2nm,0.7s
WHY Whitehorse 70.51 31 P P 15 34 05.9 +1.0
baz=291,SNR=7.0
FARO Faro, Yukon 70.62 29 P P 15 34 06.5 +1.1
SKAG Skagway 70.74 32 P P 15 34 07.7 +1.6
SKAG Skagway 70.74 32 P P 15 34 07.3 +1.3
baz=291
FIA1 FINESS Array S 71.06 330 P P 15 34 07.0 -1.0
FINES FINESS Array B 71.06 330 P P 15 34 07.1 -0.9
comp=Z,2.9nm,0.4s,baz=64,slow=5.6,SNR=44
comp=Z,2.9nm,0.4s
FINES FINESS Array B 71.06 330 P P 15 34 06.9 -1.1
C36M Paulatuk 71.10 21 P P 15 34 08.0 -0.1
baz=298
N32M Quiet Lake 71.14 30 P P 15 34 09.3 +0.7
baz=293
BESE Bessie Mountai 71.29 33 P P 15 34 09.4 -0.2
P32M Atlin 71.45 32 P P 15 34 11.3 +0.9
baz=293
P33M Teslin, Yukon 71.63 31 P P 15 34 12.2 +0.7
P33M IAmb IAmb 15 34 13.6
comp=Z,9.4nm,0.8s
P33M Teslin, Yukon 71.63 31 P P 15 34 12.5 +1.0
baz=293,SNR=16
SIT Sitka 71.63 35 P P 15 34 12.6 +1.1
baz=292
JIS Juneau Island 71.64 33 P P 15 34 11.9 +0.5
JIS IAmb IAmb 15 34 13.7
comp=Z,13nm,0.8s
CRAG Craig 73.39 36 P P 15 34 22.8 +0.9
CRAG IAmb IAmb 15 34 23.9
comp=Z,9.9nm,0.9s
CRAG Craig 73.39 36 P P 15 34 22.7 +0.9
baz=294
WRAK Wrangell Islan 73.39 35 P P 15 34 22.5 +0.6
baz=295
AKASG Malin Array Be 73.63 319 P P 15 34 22.2 -1.1
comp=Z,1.4nm,0.4s,baz=62,slow=6.4,SNR=7.1
AKASG pP **pP** 15 35 08.2 -0.9
comp=Z,0.2nm,0.3s,baz=62,slow=3.3,SNR=1.3
comp=Z,1.4nm,0.4s
DLBC Dease Lake 73.67 32 P P 15 34 24.5 +0.9
DLBC Dease Lake 73.67 32 P P 15 34 24.3 +0.7
baz=296,SNR=6.7
T35M Bob Quinn 74.20 34 P P 15 34 27.2 +0.5
baz=296
PABE Paberze 74.51 325 P P 15 34 28.3 -0.1
PABE IAmb IAmb 15 34 39.7
comp=Z,6.5nm,0.7s
RES Resolute Bay 74.64 11 P P 15 34 29.3 +0.5
RES IAmb IAmb 15 34 29.8
comp=Z,7.9nm,0.8s
RES Resolute Bay 74.64 11 P P 15 34 29.3 +0.5
RES pmax pmax
comp=Z,8.0nm,0.8s
DIB Dawson Inlet, 74.68 38 P P 15 34 29.9 +0.6
DIB IAmb IAmb 15 34 30.8
comp=Z,7.0nm,0.8s
BRTR Keskin Array B 75.10 307 P P 15 34 31.9 -0.4
comp=Z,2.1nm,0.8s,baz=111,slow=4.2,SNR=5.0
comp=Z,2.1nm,0.8s
BRTR Keskin Array B 75.10 307 P P 15 34 31.7 -0.5
GRNB Grenville Isla 75.75 36 P P 15 34 36.9 +1.3
GRNB IAmb IAmb 15 34 53.0
comp=Z,23nm,1.5s
CSS Mathiatis 77.25 303 P P 15 34 44.5 +0.2
CSS IAmb IAmb 15 35 05.0
comp=Z,22nm,1.3s
BUR08 Bucovina Ar. S 77.31 317 P P 15 34 43.9 -0.7
NC405 NORSAR Array S 77.31 333 P P 15 34 43.8 -0.4
NC405 IAmb IAmb 15 34 45.6
comp=Z,28nm,1.5s
BURAR Bucovina Array 77.32 317 P P 15 34 44.2 -0.3
NC303 NORSAR Array S 77.39 333 P P 15 34 44.0 -0.6
NB201 NORSAR Array S 77.52 333 P P 15 34 44.7 -0.6
NB201 IAmb IAmb 15 34 53.2
comp=Z,17nm,1.1s
NB2 NORSAR Subarra 77.56 333 P P 15 34 44.3 -1.3
comp=Z,0.9nm,0.4s,baz=54,slow=6.2
NOA NORSAR Array B 77.56 333 P P 15 34 44.6 -0.9
comp=Z,1.0nm,0.4s,baz=166,slow=3.9,SNR=16
comp=Z,1.0nm,0.4s
NC602 NORSAR Array S 77.60 333 P P 15 34 44.8 -0.9
NC602 IAmb IAmb 15 35 12.6
comp=Z,16nm,1.1s
NC204 NORSAR Array S 77.60 334 P P 15 34 44.9 -0.9
YKA Yellowknife Ar 78.06 25 P P 15 34 48.4 +0.1
comp=Z,6.6nm,0.7s,baz=306,slow=5.2,SNR=32
comp=Z,6.6nm,0.7s
YKA Yellowknife Ar 78.06 25 P P 15 34 48.6 +0.3
YKA Yellowknife Ar 78.06 25 P P 15 34 48.6 +0.3
SUMG Summit 79.72 355 P P 15 34 58.3 +0.7
SUMG Summit 79.72 355 P P 15 34 58.3 +0.7
SUMG pmax pmax
comp=Z,12nm,1.5s
SCO Scoresbysund 79.80 350 P P 15 34 58.4 +0.9
SCO Scoresbysund 79.80 350 P P 15 34 58.4 +0.9
SCO pmax pmax
comp=Z,7.0nm,1.1s
LLLB Lillooet 81.66 37 P P 15 35 08.9 +1.0
LLLB IAmb IAmb 15 35 09.9
comp=Z,9.4nm,0.9s
AGG Agios Georgios 83.25 310 P P 15 35 14.8 -1.5
AGG IAmb IAmb 15 35 20.6
comp=Z,16nm,1.2s
AGG Agios Georgios 83.25 310 P P 15 35 14.8 -1.5
IDI Anoyia 83.29 306 P P 15 35 15.4 -1.2
IDI IAmb IAmb 15 35 39.9
comp=Z,27nm,1.3s
GERES GERESS Array B 83.32 322 P P 15 35 17.1 +0.5
comp=Z,0.5nm,0.4s,baz=48,slow=4.0,SNR=5.3
comp=Z,0.5nm,0.4s
G03D McMinnville, O 83.84 42 P P 15 35 19.0 -0.1
baz=303
F04A Amboy 83.94 41 P P 15 35 20.5 +0.8
I02E Swisshome, OR 84.09 43 P P 15 35 22.1 +1.7
B08A Colville Reser 84.31 38 P P 15 35 22.0 +0.5
B08A IAmb IAmb 15 35 23.4
comp=Z,9.9nm,0.8s
EDM Edmonton 84.37 32 P P 15 35 22.2 +0.5
EDM Edmonton 84.37 32 P P 15 35 22.2 +0.5
EDM pmax pmax
comp=Z,26nm,1.1s
J01E Myrtle Point 84.55 44 P P 15 35 21.6 -1.1
baz=303
I03D Drain, OR 84.62 43 P P 15 35 22.7 -0.4
baz=303
HOOD Mount Hood Mea 84.73 41 P P 15 35 25.1 +1.3
K02D Willamette Mer 84.97 44 P P 15 35 26.7 +1.7
baz=303
G05D Wamic, OR 84.97 41 P P 15 35 25.0 +0.1
baz=304
DBO Dodson Butte 85.00 44 P P 15 35 26.7 +1.6
DBO IAmb IAmb 15 35 29.1
comp=Z,18nm,1.3s
I04A Tendick Farm, 85.13 43 P P 15 35 26.9 +1.1
baz=304
C09A Chrisman Ranch 85.21 38 P P 15 35 26.7 +0.7
D08A Wollman Farm, 85.29 39 P P 15 35 27.2 +0.8
D08A IAmb IAmb 15 35 28.3
comp=Z,6.2nm,0.7s
HAWA Hanford 85.34 39 P P 15 35 27.7 +1.1
L02F Cave Junction 85.34 45 P P 15 35 28.3 +1.6
baz=303
I05D Terrebonne, OR 85.47 42 P P 15 35 28.6 +1.2
baz=304
NEW Newport 85.56 37 P P 15 35 28.7 +1.0
baz=307
J04D Umpqua Nationa 85.62 43 P P 15 35 29.6 +1.3
J04D Umpqua Nationa 85.62 43 P P 15 35 29.6 +1.3
baz=304
E09A Wood Farm, Sta 86.04 39 P P 15 35 31.3 +1.2
E09A IAmb IAmb 15 35 32.4
comp=Z,7.4nm,1.0s
L04D Klamath Falls 86.07 44 P P 15 35 31.3 +0.8

L04D Klamath Falls 86.07 44 P P 15 35 31.9 +1.4
baz=304
J05D Fort Rock, OR 86.12 43 P P 15 35 32.4 +1.6
baz=305
FUORN Ofenpass-Fuorn 86.50 322 P P 15 35 32.5 -0.2
I07A Izee 86.69 41 P P 15 35 34.8 +1.3
WALA Waterton Lakes 86.74 35 P P 15 35 34.9 +1.3
WALA IAmb IAmb 15 35 35.8
comp=Z,8.1nm,0.8s
JTMT Jette 87.38 36 P P 15 35 37.6 +0.9
JTMT IAmb IAmb 15 35 39.0
comp=Z,7.9nm,1.0s
MOD Modoc Plateau 87.48 43 P P 15 35 37.4 +0.1
MOD IAmb IAmb 15 35 39.6
comp=Z,5.7nm,0.9s
BMO Blue Mountains 87.51 40 P P 15 35 37.4 +0.1
BMO Blue Mountains 87.51 40 P P 15 35 37.4 +0.1
BMO pmax pmax
comp=Z,3.0nm,0.7s
FCC Fort Churchill 87.73 20 P P 15 35 38.1 +0.2
FCC Fort Churchill 87.73 20 P P 15 35 38.1 +0.2
FCC pmax pmax
comp=Z,21nm,1.2s
PLID Pearl Lake 88.10 39 P P 15 35 39.4 -0.9
MSO Missoula 88.14 37 P P 15 35 40.6 +0.4
MSO IAmb IAmb 15 35 42.0
comp=Z,6.6nm,1.0s
MSO Missoula 88.14 37 P P 15 35 41.1 +0.8
baz=310
FFC Flin Flon 88.17 26 P P 15 35 40.3 +0.2
FFC Flin Flon 88.17 26 P P 15 35 40.3 +0.2
FFC pmax pmax
comp=Z,18nm,0.9s
MFID Camas Ranch 89.23 40 P P 15 35 46.4 +0.9
MFID IAmb IAmb 15 35 48.1
comp=Z,10nm,1.4s
HRY Holter Researc 89.32 36 P P 15 35 47.2 +1.3
EGMT Eagleton 89.51 34 P P 15 35 47.6 +1.0
baz=312
LRM Limekiln Ridge 89.57 37 P P 15 35 48.2 +1.0
HLID Hailey 89.94 39 P P 15 35 50.6 +1.7
baz=309
MCMT McKenzie Canyo 90.00 38 P P 15 35 50.2 +1.0
BOZ Bozeman (W) 90.16 37 P P 15 35 50.7 +0.9
BOZ IAmb IAmb 15 35 52.0
comp=Z,7.7nm,0.9s
BOZ Bozeman (W) 90.16 37 P P 15 35 50.7 +0.9
BOZ pmax pmax
comp=Z,8.0nm,1.0s
BOZ Bozeman (W) 90.16 37 P P 15 35 50.8 +1.0
baz=311
KVN Kaiserville 90.51 45 P P 15 35 52.6 +1.0
KVN IAmb IAmb 15 35 53.8
comp=Z,5.7nm,1.2s
KVN Kaiserville 90.51 45 P P 15 35 52.6 +1.0
KVN pmax pmax
comp=Z,6.0nm,1.2s
NVAR Mina Array Bea 90.75 45 P P 15 35 53.6 +0.8
comp=Z,1.4nm,0.9s,baz=287,slow=5.5,SNR=6.7
comp=Z,1.4nm,0.9s
QLMT Earthquake Lak 90.77 37 P P 15 35 54.1 +1.4
YHL Hebgen Lake 90.89 37 P P 15 35 55.1 +1.7
GCMT Greycliff 91.06 36 P P 15 35 55.1 +1.1
SMMC Simmler 91.47 49 P P 15 35 57.5 +1.5
baz=306
FLWY Flagg Ranch 91.65 37 P P 15 35 58.7 +1.8
RLMT Red Lodge 91.72 36 P P 15 35 58.4 +1.3
RLMT IAmb IAmb 15 35 59.6
comp=Z,12nm,1.2s
RLMT Red Lodge 91.72 36 P P 15 35 57.9 +0.8
baz=313
HVU Hansel Valley 92.01 40 P P 15 36 00.1 +1.6
HVU IAmb IAmb 15 36 01.1
comp=Z,6.0nm,1.0s
HVU Hansel Valley 92.01 40 P P 15 36 00.1 +1.6
HVU pmax pmax
comp=Z,6.0nm,1.0s
LAO LASA Array 92.17 33 P P 15 35 59.8 +0.8
baz=315
R11A Troy Canyon, C 92.50 44 P P 15 36 02.3 +1.5
baz=308
HWUT Hardware Ranch 92.81 40 P P 15 36 03.0 +0.8
HWUT IAmb IAmb 15 36 05.4
comp=Z,6.6nm,1.0s
FURC Furnace Creek, 92.84 46 P P 15 36 03.8 +1.7
baz=308
LRMC Laurel Mtn Rad 92.90 47 P P 15 36 04.4 +1.7
baz=307
TPNV Topopah Spring 92.94 46 P P 15 36 04.3 +1.4
baz=308
SNCC San Nicolas Is 92.99 50 P P 15 36 04.4 +1.5
baz=306
DUG Dugway, Tooele 93.00 41 P P 15 36 04.3 +1.2
baz=310
EDW2 Edwards Air Fo 93.06 48 P P 15 36 05.0 +1.7
baz=307
BW06 Boulder Array 93.15 38 P P 15 36 04.3 +0.5
BW06 IAmb IAmb 15 36 05.3
comp=Z,3.2nm,1.0s
BW06 Boulder Array 93.15 38 P P 15 36 04.8 +0.9
baz=313
PD31 Pinedale Array 93.15 38 P P 15 36 04.2 +0.4
PDAR Pinedale Array 93.15 38 P P 15 36 04.5 +0.7
comp=Z,2.2nm,0.9s,baz=333,slow=1.7,SNR=16
comp=Z,2.2nm,0.9s
FMP Fort Macarthur 93.55 49 P P 15 36 07.3 +1.8
baz=306
SCI2 San Clemente I 93.81 50 P P 15 36 07.2 +0.5
baz=306
TUQ Turquoise Moun 94.07 47 P P 15 36 08.2 +0.2
baz=308
GMRC Granite Mounta 94.64 47 P P 15 36 11.8 +1.1
baz=308
MSTX Muleshoe 103.10 40 P Pdif 15 36 49.2 +0.6
baz=316
TXAR Lajitas Array 105.86 44 Pdiff Pdif 15 37 03.3 +2.4
comp=Z,0.2nm,0.6s,baz=336,slow=2.7,SNR=3.9
TXAR PKiKP **PKiKP** 15 41 12.9 +0.3
comp=Z,0.2nm,0.7s,baz=270,slow=0.3,SNR=2.4
TXAR Lajitas Array 105.86 44 **PKiKP** 15 41 12.4 -0.2
TORD Torodi Ar. Bea 113.01 300 PKiKP **PKiKP** 15 41 25.9 -0.2
comp=Z,1.4nm,0.7s,baz=26,slow=1.8,SNR=11
QSPA South Pole Qui 117.22 180 PKPdf **PKiKP** 15 41 33.1 +0.4
DBIC Dimbokro 122.06 298 PKP **PKiKP** 15 41 43.9 +0.2
comp=Z,5.2nm,0.5s,baz=74,slow=1.3,SNR=9.0
DBIC Dimbokro 122.06 298 PKPdf **PKPdf** 15 41 43.4 -0.1
KIC Kosan Boka 122.16 298 ⇑*i* PKiKP **PKiKP** 15 41 44.0 0.0
comp=Z,14nm,0.4s
TIC Toumodi 122.20 299 ⇑*i* PKiKP **PKPdf** 15 41 44.0 +0.1
comp=Z,6.9nm,0.3s
LIC Lamto 122.47 298 ⇑*i* PKiKP **PKPdf** 15 41 44.4 0.0
comp=Z,6.6nm,0.2s
TROLL Troll, Antarti 126.17 199 PKPdf **PKiKP** 15 41 51.1 +0.8
SNAA Sanae 127.82 198 PKPdf **PKiKP** 15 41 53.8 +0.3
SNAA Sanae 127.82 198 PKPdf **PKPdf** 15 41 53.3 +0.3
SNAA Sanae 127.82 198 PKiKP **PKPdf** 15 41 53.3 +0.3
VNA2 Neumayer--Watz 129.47 198 PKPdf **PKiKP** 15 41 56.8 0.0
VNA2 Neumayer--Watz 129.47 198 SKPab SKPbc 15 45 02.1 +2.5
VNA1 Neumayer--Stat 129.86 198 PKPdf **PKiKP** 15 41 57.7 +0.2
VNA3 Neumayer Olymp 129.89 197 PKPdf **PKiKP** 15 41 57.5 -0.2
VNA3 Neumayer Olymp 129.89 197 SKPab SKPbc 15 45 02.8 +1.6
SAML Samuel 159.44 28 PKPab **PKPab** 15 43 25.1 -0.9
SAML Samuel 159.44 28 PKP2 **PKPab** 15 43 25.2 -0.9
LPAZ La Paz 162.46 54 PKP **PKPdf** 15 42 53.4 +2.1
comp=Z,0.5nm,0.5s,baz=18,slow=9.6,SNR=2.4
LPAZ PKPab **PKPab** 15 43 39.5 -0.5
comp=Z,1.2nm,0.8s,baz=310,slow=6.9,SNR=4.6

IDC 29 15:46:19.7±13.0, 27°09S×72°97E, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=421.6km s-min=45.5km az=48.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H** baz=176,slow=76,SNR=5.1	**19.34**	**359**	T	T	16 12 20.2	
H08S2	**Diego Garcia H** baz=176,slow=76,SNR=7.8	**19.34**	**359**	T	T	16 12 13.6	
H08S3	**Diego Garcia H** baz=176,slow=76,SNR=7.8	**19.36**	**359**	T	T	16 12 15.1	
ASAR	**Alice Springs** 0.6nm,0.7s,baz=248,slow=6.6,SNR=9.1 0.6nm,0.7s	**54.70**	**101**	P	P	15 55 50.8	-0.3
WRA	**Warramunga Arr** 1.1nm,0.8s,baz=253,slow=7.1,SNR=5.1	**56.26**	**97**	P	P	15 56 02.5	+0.2

1.1nm,0.8s
MKAR Makanchi Array 74.02 7 P P 15 57 57.1 +0.1
0.1nm,0.5s,baz=174,slow=6.9,SNR=2.2
0.1nm,0.5s

IDC 29 15:47:52.0±48.0, 23°81'S×175°91'W, h0km, mb3.7/3, mbtmp3.7/3, Error ellipse: s-maj=898.2km s-min=189.6km az=89.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
STKA	**Stephens Creek**	**38.23**	**248**	P		P	15 55 13.1	-0.8
	1.0nm,0.6s,baz=72,slow=13,SNR=3.1							
	1.0nm,0.6s							
ASAR	**Alice Springs**	**45.74**	**260**	P		P	15 56 17.2	+1.8
	0.9nm,0.7s,baz=94,slow=7.5,SNR=12							
	0.9nm,0.7s							
WRA	**Warramunga Arr**	**46.15**	**265**	P		P	15 56 16.7	-1.9
	0.2nm,0.5s,baz=106,slow=7.7,SNR=7.1							
	0.2nm,0.5s							

*KRSC **29** 15:52:05.8±1.6, 54°.28N×163°.38E, h64km±29km, ML4.4*
*MOS **29** 15:52:08.9±1.0, 54°.34N×163°.26E, h49km, mb4.5/20, Error ellipse: s-maj=6.2km s-min=4.3km az=88.5*
*NEIC **29** 15:52:09.0±1.8, 54°.32N±0°.07×163°.3E±0°.1, h32km±5km, mb4.3/58, Error ellipse: s-maj=10.2km s-min=8.5km az=168.0*
*IDC **29** 15:52:11.2±0.5, 54°.36N×163°.14E, h46km±4km, mb3.7/26, mbtmp4.0/30, MS3.2/18, Error ellipse: s-maj=14.6km s-min=8.2km az=156.0*

ISC 29 15:52:07.8±0.4, 54°26N±0°03×163°40E±0°03, h29km±2km, h29km:pP-P,n364,σ1§34/413, mb4.3/67, MS3.1/13, 6C, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MKZ	**Mys Kozlova**	**1.02**	**288**	PN		**Pn**	**15 52 26.0**	**-0.1**
MKZ				S		**Sn**	**15 52 38.3**	**-1.2**
MKZ	**Mys Kozlova**	**1.02**	**288**	*i* P		**Pn**	**15 52 26.0**	**-0.1**
MKZ				*eS*		**Sn**	**15 52 38.3**	**-1.2**
BKI	**Bering**	**1.77**	**57**	PN		**Pn**	**15 52 35.8**	**-0.6**
BKI				S		**Sn**	**15 52 54.9**	**-3.0**
BKI	**Bering**	**1.77**	**57**	*eP*		**Pn**	**15 52 35.8**	**-0.6**
BKI				*eS*		**Sn**	**15 52 54.9**	**-3.0**
KBTR	**Krutoberegovo**	**1.98**	**351**	PN		**Pn**	**15 52 38.0**	**-1.4**
KBTR				S		**Sn**	**15 53 00.1**	**-3.1**
KBTR	**Krutoberegovo**	**1.98**	**351**	*i* P		**Pn**	**15 52 38.0**	**-1.4**
KBTR				*eS*		**Sn**	**15 53 00.1**	**-3.1**
KBG	**Krutoberegovo**	**2.04**	**349**	PN		**Pn**	**15 52 38.9**	**-1.2**
KBG				S		**Sn**	**15 53 03.0**	**-1.6**
KBG	**Krutoberegovo**	**2.04**	**349**	*eP*		**Pn**	**15 52 38.9**	**-1.2**
KBG				*eS*		**Sn**	**15 53 03.0**	**-1.6**
TUMR	**Tumrok**	**2.15**	**300**	PN		**Pn**	**15 52 42.7**	**+1.0**
TUMR				S		**Sn**	**15 53 08.1**	**+0.7**
TUMR	**Tumrok**	**2.15**	**300**	*i* P		**Pn**	**15 52 42.7**	**+1.0**
TUMR				*eS*		**Sn**	**15 53 08.1**	**+0.7**
BZGR	**Bezymyannyi-Gr**	**2.29**	**318**	PN		**Pn**	**15 52 44.2**	**+0.5**
BZGR	**Bezymyannyi-Gr**	**2.29**	**318**	*eP*		**Pn**	**15 52 44.2**	**+0.5**
ZLN	**Zelenaya**	**2.31**	**321**	PN		**Pn**	**15 52 45.1**	**+1.1**
ZLN				S		**Sn**	**15 53 13.0**	**+1.6**
ZLN	**Zelenaya**	**2.31**	**321**	*eP*		**Pn**	**15 52 45.1**	**+1.1**
ZLN				*eS*		**Sn**	**15 53 13.0**	**+1.6**
SPN	**Mys Shipunski**	**2.32**	**241**	PN		**Pn**	**15 52 43.9**	**-0.1**
SPN				S		**Sn**	**15 53 10.0**	**-1.5**
SPN	**Mys Shipunski**	**2.32**	**241**	*eP*		**Pn**	**15 52 43.9**	**-0.1**
SPN				*eS*		**Sn**	**15 53 10.0**	**-1.5**
KII	**Karymskiy**	**2.33**	**266**	PN		**Pn**	**15 52 44.9**	**+0.6**
KII				S		**Sn**	**15 53 09.7**	**-2.3**
KII	**Karymskiy**	**2.33**	**266**	*eP*		**Pn**	**15 52 44.9**	**+0.6**
KII				*eS*		**Sn**	**15 53 09.7**	**-2.3**
KMNR	**Kamenistaya**	**2.36**	**311**	PN		**Pn**	**15 52 45.4**	**+0.7**
KMNR				S		**Sn**	**15 53 11.9**	**-0.8**
KMNR	**Kamenistaya**	**2.36**	**311**	*i* P		**Pn**	**15 52 45.4**	**+0.7**
KMNR				*eS*		**Sn**	**15 53 11.9**	**-0.8**
BZWR	**Bezymyannyi-We**	**2.39**	**317**	PN		**Pn**	**15 52 45.5**	**+0.4**
BZWR	**Bezymyannyi-We**	**2.39**	**317**	*eP*		**Pn**	**15 52 45.5**	**+0.4**
LGNR	**Loginova**	**2.40**	**321**	PN		**Pn**	**15 52 46.2**	**+0.8**
LGNR	**Loginova**	**2.40**	**321**	*eP*		**Pn**	**15 52 46.2**	**+0.8**
KIRR	**Kirishev**	**2.44**	**315**	PN		**Pn**	**15 52 46.3**	**+0.4**
KIRR	**Kirishev**	**2.44**	**315**	*eP*		**Pn**	**15 52 46.3**	**+0.4**
KPT	**Kopyto**	**2.50**	**314**	PN		**Pn**	**15 52 47.2**	**+0.6**
KPT	**Kopyto**	**2.50**	**314**	*eP*		**Pn**	**15 52 47.2**	**+0.6**
KRSR	**Krestovskiy**	**2.55**	**322**	PN		**Pn**	**15 52 47.5**	**+0.3**
KRSR				S		**Sn**	**15 53 17.7**	**+0.4**
KRSR	**Krestovskiy**	**2.55**	**322**	*eP*		**Pn**	**15 52 47.5**	**+0.3**
KRSR				*eS*		**Sn**	**15 53 17.7**	**+0.4**
SMKR	**Semkarok**	**2.58**	**335**	PN		**Pn**	**15 52 47.5**	**-0.1**
SMKR				S		**Sn**	**15 53 19.5**	**+1.5**
SMKR	**Semkarok**	**2.58**	**335**	*eP*		**Pn**	**15 52 47.5**	**-0.1**
SMKR				*eS*		**Sn**	**15 53 19.5**	**+1.5**
KLY	**Klyuchi**	**2.59**	**324**	PN		**Pn**	**15 52 47.0**	**-0.7**
KLY				S		**Sn**	**15 53 17.9**	**-0.3**
KLY	**Klyuchi**	**2.59**	**324**	*eP*		**Pn**	**15 52 47.0**	**-0.7**
KLY				*eS*		**Sn**	**15 53 17.9**	**-0.3**
BDR	**Baidarnaya**	**2.63**	**333**	PN		**Pn**	**15 52 48.6**	**+0.2**
BDR				S		**Sn**	**15 53 20.4**	**+1.1**
BDR	**Baidarnaya**	**2.63**	**333**	*eP*		**Pn**	**15 52 48.6**	**+0.2**
BDR				*eS*		**Sn**	**15 53 20.4**	**+1.1**
NLC	**Nalytchevo**	**2.65**	**247**	PN		**Pn**	**15 52 48.8**	**+0.4**
NLC				S		**Sn**	**15 53 17.5**	**-2.0**
NLC	**Nalytchevo**	**2.65**	**247**	*eP*		**Pn**	**15 52 48.8**	**+0.4**
NLC				*eS*		**Sn**	**15 53 17.5**	**-2.0**
KOZ	**Kozyrevsk**	**2.71**	**313**	PN		**Pn**	**15 52 50.0**	**+0.6**
KOZ				S		**Sn**	**15 53 22.6**	**+1.4**
KOZ	**Kozyrevsk**	**2.71**	**313**	*eP*		**Pn**	**15 52 50.0**	**+0.6**
KOZ				*eS*		**Sn**	**15 53 22.6**	**+1.4**
SRKR	**Sorokina**	**2.72**	**333**	PN		**Pn**	**15 52 49.8**	**+0.3**
SRKR	**Sorokina**	**2.72**	**333**	*eP*		**Pn**	**15 52 49.8**	**+0.3**
SDLR	**Sedlovina**	**2.85**	**252**	PN		**Pn**	**15 52 52.2**	**+0.7**
SDLR				S		**Sn**	**15 53 24.9**	**0.0**
SDLR	**Sedlovina**	**2.85**	**252**	*i* P		**Pn**	**15 52 52.2**	**+0.7**
SDLR				*eS*		**Sn**	**15 53 24.9**	**0.0**
SMAR	**Somma**	**2.91**	**252**	PN		**Pn**	**15 52 53.2**	**+0.9**
SMAR				S		**Sn**	**15 53 25.3**	**-1.0**
SMAR	**Somma**	**2.91**	**252**	*eP*		**Pn**	**15 52 53.2**	**+0.9**
SMAR				*eS*		**Sn**	**15 53 25.3**	**-1.0**
UGLR	**Uglovaya**	**2.91**	**251**	PN		**Pn**	**15 52 53.2**	**+0.9**
UGLR	**Uglovaya**	**2.91**	**251**	*i* P		**Pn**	**15 52 53.2**	**+0.9**
KRER	**Koryakskii**	**2.92**	**253**	PN		**Pn**	**15 52 53.6**	**+1.1**
KRER				S		**Sn**	**15 53 26.4**	**-0.2**
KRER	**Koryakskii**	**2.92**	**253**	*eP*		**Pn**	**15 52 53.6**	**+1.1**
KRER				*eS*		**Sn**	**15 53 26.4**	**-0.2**
AVH	**Avacha**	**2.94**	**252**	PN		**Pn**	**15 52 53.6**	**+1.0**
AVH				S		**Sn**	**15 53 27.9**	**+0.9**
AVH	**Avacha**	**2.94**	**252**	*eP*		**Pn**	**15 52 53.6**	**+1.0**
AVH				*eS*		**Sn**	**15 53 27.9**	**+0.9**
KRX	**Arik**	**2.96**	**254**	PN		**Pn**	**15 52 53.8**	**+0.9**
KRX				S		**Sn**	**15 53 25.5**	**-2.0**
KRX	**Arik**	**2.96**	**254**	*i* P		**Pn**	**15 52 53.8**	**+0.9**
KRX				*eS*		**Sn**	**15 53 25.5**	**-2.0**
KOK	**Koryaka**	**2.99**	**253**	PN		**Pn**	**15 52 54.3**	**+1.0**
KOK				S		**Sn**	**15 53 28.2**	**+0.1**
KOK	**Koryaka**	**2.99**	**253**	*i* P		**Pn**	**15 52 54.3**	**+1.0**
KOK				*eS*		**Sn**	**15 53 28.2**	**+0.1**
DALK	**Dalny**	**3.03**	**248**	PN		**Pn**	**15 52 54.3**	**+0.6**
DALK				S		**Sn**	**15 53 27.1**	**-1.8**
DALK	**Dalny**	**3.03**	**248**	*eP*		**Pn**	**15 52 54.3**	**+0.6**
DALK				*eS*		**Sn**	**15 53 27.1**	**-1.8**
PET	**Petropavlovsk**	**3.08**	**248**			**Pn**	**15 52 55.2**	**+0.8**
PET					Sn	**Sn**	**15 53 29.3**	**-1.0**
PET	**Petropavlovsk**	**3.08**	**248**	PN		**Pn**	**15 52 55.3**	**+0.8**
PET				S		**Sn**	**15 53 29.3**	**-1.0**
PET	**Petropavlovsk**	**3.08**	**248**	*eP*		**Pn**	**15 52 55.3**	**+0.8**
PET				*eS*		**Sn**	**15 53 29.3**	**-1.0**
ESO	**Esso**	**3.18**	**304**	PN		**Pn**	**15 52 56.3**	**+0.5**
ESO				S		**Sn**	**15 53 31.8**	**-0.9**
ESO	**Esso**	**3.18**	**304**	*eP*		**Pn**	**15 52 56.3**	**+0.5**
ESO				*eS*		**Sn**	**15 53 31.8**	**-0.9**
GNL	**Ganaly**	**3.27**	**262**	PN		**Pn**	**15 52 58.8**	**+1.6**
GNL	**Ganaly**	**3.27**	**262**	*eP*		**Pn**	**15 52 58.8**	**+1.6**
RUS	**Russkaya**	**3.45**	**240**	PN		**Pn**	**15 53 00.1**	**+0.5**
RUS				S		**Sn**	**15 53 37.8**	**-1.6**
RUS	**Russkaya**	**3.45**	**240**	*i* P		**Pn**	**15 53 00.1**	**+0.5**
RUS				*eS*		**Sn**	**15 53 37.8**	**-1.6**
KRMR	**Karymshinskiy**	**3.45**	**248**	PN		**Pn**	**15 53 00.6**	**+1.0**
KRMR				S		**Sn**	**15 53 39.7**	**+0.2**
KRMR	**Karymshinskiy**	**3.45**	**248**	*eP*		**Pn**	**15 53 00.6**	**+1.0**
KRMR				*eS*		**Sn**	**15 53 39.7**	**+0.2**
PEA0B	**Petropavlovsk-**		**3.58**	**254**		**Pn**	**15 53 02.9**	**+1.5**
PEA0B	**Petropavlovsk-**		**3.58**	**254**	PN	**Pn**	**15 53 02.9**	**+1.5**
PETK	**Petropavlovsk-**		**3.58**	**254**	P	**Pn**	**15 53 02.1**	**+0.8**
	16nm,0.5s,baz=80,slow=16,SNR=146							
PETK					S	**Sn**	**15 53 43.5**	**+0.8**
	29nm,0.6s,baz=193,slow=6.1,SNR=8.2							
PETK					LR	LR	15 54 40.9	
	comp=Z,214nm,21.3s,baz=73,slow=43							
PETK	**Petropavlovsk-**		**3.58**	**254**		**Pn**	**15 53 01.9**	**+0.6**
MTVR	**Mutnovka**		**3.59**	**242**	PN	**Pn**	**15 53 02.9**	**+1.2**
MTVR					S	**Sn**	**15 53 42.5**	**-0.7**
MTVR	**Mutnovka**		**3.59**	**242**	*i* P	**Pn**	**15 53 02.9**	**+1.2**
MTVR					*eS*	**Sn**	**15 53 42.5**	**-0.7**
GRL	**Gorelyy**		**3.62**	**244**	PN	**Pn**	**15 53 03.3**	**+1.3**
GRL					S	**Sn**	**15 53 44.2**	**+0.5**
GRL	**Gorelyy**		**3.62**	**244**	*eP*	**Pn**	**15 53 03.3**	**+1.3**
GRL					*eS*	**Sn**	**15 53 44.2**	**+0.5**
ASAK	**Asacha**		**3.80**	**243**	PN	**Pn**	**15 53 06.3**	**+1.9**
ASAK					S	**Sn**	**15 53 47.8**	**-0.2**
ASAK	**Asacha**		**3.80**	**243**	*eP*	**Pn**	**15 53 06.3**	**+1.9**
ASAK					*eS*	**Sn**	**15 53 47.8**	**-0.2**
APC	**Apacha**		**3.95**	**253**	PN	**Pn**	**15 53 08.9**	**+2.5**
APC	**Apacha**		**3.95**	**253**	*eP*	**Pn**	**15 53 08.9**	**+2.5**
KDTR	**Khodutka, Kamc**		**4.04**	**235**	PN	**Pn**	**15 53 08.1**	**+0.4**
KDTR	**Khodutka, Kamc**		**4.04**	**235**	*eP*	**Pn**	**15 53 08.1**	**+0.4**
KDTR					*eS*	**Sn**	**15 53 51.2**	**-2.8**
OSSR	**Ossora**		**5.01**	**358**	PN	**Pn**	**15 53 20.4**	**-0.5**
OSSR	**Ossora**		**5.01**	**358**	*eP*	**Pn**	**15 53 20.4**	**-0.5**
PALN	**Palana**		**5.20**	**340**	PN	**Pn**	**15 53 24.5**	**+1.0**
PALN	**Palana**		**5.20**	**340**	*eP*	**Pn**	**15 53 24.5**	**+1.0**
SKR	**Severo-Kuril's**		**5.71**	**234**	*ePn*	Pn	15 53 36.1	+5.5
SKR					pmax	pmax		
	comp=Z,27nm,0.9s							
TILK	**Tilichiki**		**6.38**	**12**	PN	**Pn**	**15 53 41.2**	**+1.5**
TILK	**Tilichiki**		**6.38**	**12**	*eP*	**Pn**	**15 53 41.2**	**+1.5**
TILK					*eS*	**Sn**	**15 54 49.4**	**-2.0**
SHEM	**Shemya Is, Ala**		**6.57**	**99**	LR	LR	15 56 12.7	
	comp=Z,91nm,20.6s,baz=301,slow=36							
SMY	**Shemya**		**6.57**	**99**	Pn	**Pn**	**15 53 41.5**	**-0.8**
SMY	**Shemya**		**6.57**	**99**	PN	**Pn**	**15 53 42.3**	**0.0**
MA2	**Magadan**		**8.72**	**313**	P	**Pn**	**15 54 12.4**	**+0.6**
	comp=Z,3.0nm,0.7s,baz=148,slow=14,SNR=4.4							
MA2					LR	LR	15 57 54.3	
	comp=Z,81nm,21.4s,baz=120,slow=40							
MA2	**Magadan**		**8.72**	**313**	Pn	**Pn**	**15 54 11.3**	**-0.5**
MA2	**Magadan**		**8.72**	**313**	PN	**Pn**	**15 54 11.3**	**-0.5**
AMKA	**Amchitka**		**10.05**	**100**	Pn	**Pn**	**15 54 31.1**	**+1.1**
SEY	**Seymchan**		**10.41**	**331**	LR	LR	15 58 59.1	
	comp=Z,67nm,19.2s,baz=190,slow=40							
GSTR	**Great Sitkin T**		**12.51**	**92**	Pn	**Pn**	**15 55 05.0**	**+1.4**
BILL	**Bilibino**		**13.90**	**4**	Pn	**Pn**	**15 55 24.5**	**+2.0**
BILL	**Bilibino**		**13.90**	**4**	*iP*	**Pn**	**15 55 25.8**	**+3.3**
BILL					pmax	pmax		
	comp=Z,8.0nm,1.2s							
BILL					MLR	MLR		
	comp=Z,111nm,19.0s							
SHO	**Shikotan**		**14.99**	**233**	*eP*	**Pn**	**15 55 33.1**	**-4.4**
SHO					pmax	pmax		
	comp=Z,2.0nm,0.2s							
SPIA	**Saint Paul Isl**		**15.10**	**68**	P	**Pn**	**15 55 37.1**	**-1.6**
	baz=270							
GAMB	**Gambell**		**15.86**	**43**	P	**Pn**	**15 55 47.2**	**-1.5**
	baz=245							
GRNR	**Gornyy**		**16.75**	**269**	*iP*	**P**	**15 56 03.1**	**+1.0**
GRNR					pmax	pmax		
	comp=Z,10.0nm,0.6s							
GRNR					MLR	MLR		
	comp=N,50nm,14.0s							
GRNR					MLR	MLR		
	comp=Z,60nm,13.0s							
UNV	**Unalaska Valle**		**17.62**	**79**	P	**Pn**	**15 56 10.5**	**-0.3**
	baz=284							
ERM	**Erimo**		**18.16**	**236**	Pn	**Pn**	**15 56 14.2**	**-3.3**
ERM					IAmb	IAmb	15 56 21.8	
	comp=Z,55nm,1.4s							
ERM	**Erimo**		**18.16**	**236**	P	**Pn**	**15 56 14.2**	**-3.3**
ERM					pmax	pmax		
	comp=Z,55nm,1.4s							
YAK	**Yakutsk**		**19.23**	**307**	P	**P**	**15 56 27.7**	**-1.5**
	comp=Z,8.2nm,0.5s,baz=276,slow=1.1,SNR=12							
YAK					LR	LR	16 04 23.5	
	comp=Z,49nm,18.1s,baz=103,slow=38							
YAK	**Yakutsk**		**19.23**	**307**	P	**P**	**15 56 26.8**	**-2.4**
YAK					IAmb	IAmb	15 56 28.6	
	comp=Z,20nm,0.8s							
YAK	**Yakutsk**		**19.23**	**307**	*eP*	**P**	**15 56 25.3**	**-3.9**
YAK					pmax	pmax		
	comp=Z,12nm,0.8s							
JTM	**Tenmabayashi**		**20.11**	**237**	P	**P**	**15 56 38.8**	**-0.2**
JTM					IAmb	IAmb	15 57 00.5	
	comp=Z,16nm,1.2s							
KLR	**Kul'dur**		**20.13**	**269**	P	**P**	**15 56 38.8**	**-0.4**
	comp=Z,0.9nm,0.4s,baz=81,slow=7.8,SNR=5.1							
KLR					LR	LR	16 05 36.5	
	comp=Z,49nm,18.2s,baz=56,slow=40							
KLR	**Kul'dur**		**20.13**	**269**	*i* P	**P**	**15 56 36.0**	**-3.2**
KLR					pmax	pmax		
	comp=Z,6.0nm,2.0s							
RDOG	**Red Dog Mine**		**20.95**	**36**	P	**P**	**15 56 48.3**	**+0.3**
	baz=246							
S14K	**Fog Glacier**		**21.04**	**69**	P	**P**	**15 56 48.9**	**-0.2**
	baz=280							
CHNA	**Chernabura Isl**		**21.32**	**73**	P	**P**	**15 56 51.8**	**-0.2**
	baz=284							
O16K	**Kokwok River B**		**21.45**	**60**	P	**P**	**15 56 53.6**	**+0.2**
	baz=273							
O17K	**Koliganek Bris**		**21.95**	**59**	P	**P**	**15 56 59.3**	**+0.6**
	baz=273							
GCSA	**Galena City Sc**		**22.32**	**46**	P	**P**	**15 57 03.6**	**+1.0**
	baz=261							
TTA	**Tatalina**		**22.49**	**51**	P	**P**	**15 57 06.8**	**+2.1**
TTA	**Tatalina**		**22.49**	**51**	P	**P**	**15 57 06.8**	**+2.1**
TTA					pmax	pmax		
	comp=Z,5.0nm,1.2s							
TTA	**Tatalina**		**22.49**	**51**	P	**P**	**15 57 05.7**	**+1.1**
	baz=266							
N18K	**Kilae Creek**		**22.51**	**57**	P	**P**	**15 57 08.3**	**+3.5**
N18K					IAmb	IAmb	15 57 22.3	
	comp=Z,12nm,1.5s							
N18K	**Kilae Creek**		**22.51**	**57**	P	**P**	**15 57 06.0**	**+1.2**
	baz=272							
R17K	**Ugashik Creek**		**22.53**	**65**	P	**P**	**15 57 05.3**	**+0.3**
	baz=279							
USRK	**Ussuriysk Ar.**		**22.67**	**257**	LR	LR	16 05 28.0	
	comp=Z,84nm,21.5s,baz=170,slow=35							
TIXI	**Tiksi**		**22.90**	**333**	P	**P**	**15 57 08.4**	**-0.3**
	comp=Z,4.5nm,0.7s,baz=266,slow=22,SNR=21							
TIXI					LR	LR	16 07 41.7	
	comp=Z,47nm,18.0s,baz=181,slow=41							
	comp=Z,4.5nm,0.7s							
TIXI	**Tiksi**		**22.90**	**333**	P	**P**	**15 57 07.8**	**-1.0**
TIXI	**Tiksi**		**22.90**	**333**	*ceP*	**P**	**15 57 08.2**	**-0.5**
TIXI					pmax	pmax		
	comp=Z,5.0nm,0.8s							
L19K	**White Mountain**		**23.00**	**53**	P	**P**	**15 57 09.6**	**-0.3**
	baz=269							
N19K	**Bonanza Creek**		**23.20**	**57**	P	**P**	**15 57 12.4**	**+0.4**
	baz=273							
M19K	**Big River Lodg**		**23.21**	**54**	P	**P**	**15 57 12.4**	**+0.4**
	baz=270							
K20K	**Telida**		**23.40**	**50**	P	**P**	**15 57 15.3**	**+1.4**
K20K	**Telida**		**23.40**	**50**	P	**P**	**15 57 15.0**	**+1.1**
	baz=267							
J20K	**Nowinta River**		**23.42**	**48**	P	**P**	**15 57 15.3**	**+1.3**
J20K					IAmb	IAmb	15 57 29.4	
	comp=Z,9.7nm,1.1s							
J20K	**Nowinta River**		**23.42**	**48**	P	**P**	**15 57 15.4**	**+1.3**
	baz=265,SNR=8.0							
L20K	**Farewell, AK**		**23.46**	**52**	P	**P**	**15 57 15.9**	**+1.5**
	baz=269							
JSD	**Sado**		**23.61**	**237**	P	**P**	**15 57 17.8**	**+1.7**
IMAR	**Indian Mountai**		**23.81**	**44**	P	**P**	**15 57 18.6**	**+0.9**
M20K	**Styx River**		**23.81**	**54**	P	**P**	**15 57 18.3**	**+0.3**
	baz=271							
G21K	**Allakaket**		**23.99**	**42**	P	**P**	**15 57 19.1**	**-0.3**
	baz=261							
F21K	**Alatna River**		**24.13**	**41**	P	**P**	**15 57 20.6**	**-0.2**
	baz=259							
H21K	**Melozitna Rive**		**24.15**	**45**	P	**P**	**15 57 22.2**	**+1.2**
H21K	**Melozitna Rive**		**24.15**	**45**	P	**P**	**15 57 22.0**	**+1.1**
	baz=263,SNR=5.1							
CHUM	**Lake Minchumin**		**24.21**	**49**	P	**P**	**15 57 21.9**	**+0.5**
	baz=268							
PPLA	**Purkeypile**		**24.24**	**51**	P	**P**	**15 57 21.8**	**-0.2**
PPLA					IAmb	IAmb	15 57 37.2	
	comp=Z,10.0nm,1.2s							
PPLA	**Purkeypile**	**24.24**	**51**	P	**P**	**15 57 22.4**	**+0.4**
	baz=270							
CAST	**Castle Rocks**	**24.30**	**50**	P	**P**	**15 57 23.8**	**+1.4**
CAST					**pwP**	**15 57 36.8**	**+0.2**
CAST	**Castle Rocks**	**24.30**	**50**	P	**P**	**15 57 23.2**	**+0.9**
	baz=269							
I21K	**Tanana**	**24.44**	**46**	P	**P**	**15 57 24.0**	**+0.4**
I21K					**pwP**	**15 57 37.4**	**-0.3**
I21K	**Tanana**	**24.44**	**46**	P	**P**	**15 57 24.8**	**+1.2**
	baz=265							
Q20K	**Shuyak Island**	**24.48**	**62**	P	**P**	**15 57 25.4**	**+1.4**
	baz=279							
KDAK	**Kodiak Island**	**24.52**	**64**	P	**P**	**15 57 25.2**	**+0.9**
	baz=281							
SKT	**Skwentna**	**24.57**	**54**	P	**P**	**15 57 26.6**	**+1.8**
SKT				IAmb	IAmb	15 57 40.9	
	comp=Z,7.8nm,1.2s							
SKT	**Skwentna**	**24.57**	**54**	P	**P**	**15 57 25.7**	**+0.9**
	baz=273							
H22K	**Ishtalitna Cre**	**24.76**	**44**	P	**P**	**15 57 28.1**	**+1.6**
	baz=264							
MJA0	**Matsu Arr-Jizo**	**24.80**	**235**	*eP*	**P**	**15 57 32.2**	**+5.0**
MJA0				pmax	pmax			
	comp=Z,5.0nm,1.0s							
BPAW	**Bear Paw Mtn.**	**24.80**	**48**	P	**P**	**15 57 28.1**	**+1.2**
	baz=268,SNR=5.5							
MJAR	**Matsushiro Arr**	**24.82**	**235**	P	**P**	**15 57 28.7**	**+1.4**
	comp=Z,4.5nm,1.0s,baz=33,slow=9.3,SNR=7.3							
MJAR				LR	LR	16 07 53.2		
	comp=Z,44nm,19.2s,baz=114,slow=38							
	comp=Z,4.5nm,1.0s							
MJAR	**Matsushiro Arr**	**24.82**	**235**	P	**P**	**15 57 27.9**	**+0.6**
MJAR	**Matsushiro Arr**	**24.82**	**235**	P	**P**	**15 57 27.9**	**+0.6**
MJAR				pmax	pmax			
	comp=Z,3.0nm,1.0s							
MAJO	**Matsushiro**	**24.82**	**235**	P	**P**	**15 57 29.5**	**+2.2**
MAJO				IAmb	IAmb	15 57 30.6		
	comp=Z,8.4nm,1.0s							
MAJO	**Matsushiro**	**24.82**	**235**	*i* P	**P**	**15 57 29.4**	**+2.1**
MAJO				pmax	pmax			
	comp=Z,9.0nm,1.1s							
G22K	**Bettles**	**24.84**	**42**	P	**P**	**15 57 28.6**	**+1.4**
	baz=262							
E22K	**Anaktuvuk Pass**	**24.93**	**39**	P	**P**	**15 57 29.3**	**+1.2**
	baz=259							
MLY	**Manley**	**24.95**	**46**	P	**P**	**15 57 29.6**	**+1.3**
MLY	**Manley**	**24.95**	**46**	P	**P**	**15 57 29.8**	**+1.5**
	baz=267							
TRF	**Thorofare Moun**	**25.10**	**50**	P	**P**	**15 57 31.1**	**+1.3**
TRF	**Thorofare Moun**	**25.10**	**50**	P	**P**	**15 57 30.7**	**+0.9**
	baz=270							
COLD	**Coldfoot**	**25.39**	**41**	P	**P**	**15 57 33.5**	**+1.3**
COLD				IAmb	IAmb	15 57 49.1		
	comp=Z,4.2nm,0.7s							
COLD	**Coldfoot**	**25.39**	**41**	P	**P**	**15 57 33.6**	**+1.5**
	baz=262							
G23K	**Bananza Creek**	**25.39**	**42**	P	**P**	**15 57 32.9**	**+0.7**
	baz=264							
H23K	**Yukon River**	**25.50**	**44**	P	**P**	**15 57 34.7**	**+1.4**
H23K				IAmb	IAmb	15 57 49.3		
	comp=Z,4.7nm,0.8s							
H23K	**Yukon River**	**25.50**	**44**	P	**P**	**15 57 35.0**	**+1.8**
	baz=266							
D23K	**Nanushuk River**	**25.51**	**37**	P	**P**	**15 57 34.4**	**+1.2**
	baz=258							
I23K	**Minto, Yukon-K**	**25.54**	**46**	P	**P**	**15 57 34.8**	**+1.2**
I23K				IAmb	IAmb	15 57 50.2		
	comp=Z,12nm,1.3s							
I23K	**Minto, Yukon-K**	**25.54**	**46**	P	**P**	**15 57 34.8**	**+1.2**
	baz=268							
NEA2	**Nenana**	**25.65**	**47**	P	**P**	**15 57 36.1**	**+1.6**
	baz=269							
C23K	**Itkillik River**	**25.72**	**35**	P	**P**	**15 57 36.5**	**+1.3

baz=282
YUK4 Talbot Arm 30.73 53 P **P** 15 58 21.5 +1.4
baz=283
M30M Minto, Yukon 31.31 50 P **P** 15 58 26.1 +1.0
baz=283
HYT Haines Junctio 31.40 54 P **P** 15 58 28.3 +2.3
HYT Haines Junctio 31.40 54 P **P** 15 58 27.1 +1.2
baz=285
N30M Aishikik Lake 31.43 53 P **P** 15 58 27.5 +1.4
baz=284
INK Inuvik 31.73 39 P **P** 15 58 29.6 +1.0
comp=Z,2.1nm,0.8s,baz=6.9,slow=6.6,SNR=2.5
comp=Z,2.1nm,0.8s
INK Inuvik 31.73 39 P **P** 15 58 30.4 +1.8
INK Inuvik 31.73 39 P **P** 15 58 30.4 +1.8
INK pmax pmax
comp=Z,2.0nm,0.8s
INK Inuvik 31.73 39 P **P** 15 58 29.3 +0.7
baz=276
O30N Mendenhall 32.08 54 P **P** 15 58 34.1 +2.3
baz=286
M31M Drury Creek, Y 32.48 51 P **P** 15 58 36.5 +1.1
baz=285
WHY Whitehorse 32.68 53 P **P** 15 58 38.1 +0.9
baz=287
P32M Atlin 33.57 55 P **P** 15 58 46.4 +1.5
baz=289
P33M Teslin, Yukon 33.79 54 P **P** 15 58 48.1 +1.2
baz=289
H11N2 WAKE ISLAND Hy 34.57 174 T T 16 36 39.2
baz=356
H11N3 WAKE ISLAND Hy 34.58 174 T T 16 36 39.8
baz=356,slow=74,SNR=7.7
H11N1 WAKE ISLAND Hy 34.59 174 T T 16 36 35.6
baz=356,slow=74,SNR=7.7
SONM Songino Array 35.54 284 P **P** 15 59 00.5 -1.7
comp=Z,0.5nm,0.5s,baz=68,slow=8.4,SNR=5.0
SONM LR LR 16 13 21.1
comp=Z,47nm,19.7s,baz=52,slow=36
comp=Z,0.5nm,0.5s
SONM Songino Array 35.54 284 P **P** 15 59 01.1 -1.1
SONM Songino Array 35.54 284 P **P** 15 59 01.1 -1.1
SONM pmax pmax
comp=Z,1.0nm,0.7s
DLBC Dease Lake 35.77 56 P **P** 15 59 04.8 +0.9
baz=293
HHC Hu-ho-hao-te 36.62 270 *e*P **P** 15 59 11.8 +0.4
HHC pmax pmax
comp=Z,14nm,0.8s
HHC pmax pmax
comp=Z,68nm,5.3s
NJ2 Nanjing 38.49 253 *e*P **P** 15 59 26.0 -1.1
NJ2 pmax pmax
comp=Z,11nm,0.5s
YKA Yellowknife Ar 40.96 45 P **P** 15 59 48.5 +1.1
comp=Z,0.7nm,0.6s,baz=296,slow=7.4,SNR=3.7
comp=Z,0.7nm,0.6s
YKA Yellowknife Ar 40.96 45 P **P** 15 59 47.8 +0.5
ZALV Zalesovo Beam 43.79 303 P **P** 16 00 11.1 +0.6
comp=Z,0.4nm,0.3s,baz=38,slow=7.3,SNR=2.5
comp=Z,0.4nm,0.3s
ZALV Zalesovo Beam 43.79 303 P **P** 16 00 09.7 -0.8
SPITS Spitsbergen Ar 46.30 351 P **P** 16 00 31.1 +1.0
comp=Z,3.2nm,0.8s,baz=78,slow=9.5,SNR=4.1
comp=Z,3.2nm,0.8s
SPITS Spitsbergen Ar 46.30 351 P **P** 16 00 31.1 +1.0
SPITS pmax pmax
comp=Z,15nm,1.3s
WMQ Urumqi 48.42 290 *e*P **P** 16 00 49.5 +2.3
L04D Klamath Falls 48.69 72 P **P** 16 00 50.2 +0.8
L04D **pwP** 16 01 05.0 +1.4
KURK Kurchatov 48.77 303 P **P** 16 00 48.3 -1.4
KURK IAmb IAmb 16 00 50.6
comp=Z,3.8nm,0.9s
KURK Kurchatov 48.77 303 *i* P **P** 16 00 48.4 -1.2
KURK pmax pmax
comp=Z,4.0nm,0.9s
MK31 Makanchi Array 49.41 297 P **P** 16 00 52.6 -2.0
MK31 IAmb IAmb 16 00 54.1
comp=Z,1.6nm,0.6s
MK31 Makanchi Array 49.41 297 P **P** 16 00 52.6 -2.0
MK31 pmax pmax
comp=Z,2.0nm,0.6s
MKAR Makanchi Array 49.41 297 P **P** 16 00 53.3 -1.3
comp=Z,2.1nm,0.6s,baz=59,slow=8.0,SNR=31
MKAR pP **pwP** 16 01 07.4 -1.2
comp=Z,0.7nm,0.7s,baz=48,slow=7.3,SNR=3.0
comp=Z,2.1nm,0.6s
MKAR Makanchi Array 49.41 297 P **P** 16 00 52.6 -2.0
MAKZ Makanchi 49.56 297 P **P** 16 00 54.2 -1.6
MAKZ IAmb IAmb 16 00 54.6
comp=Z,1.8nm,0.6s
MAKZ Makanchi 49.56 297 P **P** 16 00 54.2 -1.6
MAKZ pmax pmax
comp=Z,2.0nm,0.6s
PZH PanZhiHua 52.48 264 P **P** 16 01 18.8 +0.7
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,50nm,3.9s
BMN Battle Mountai 52.72 71 sP 16 01 34.9 +5.3
ARCES ARCESS Array B 52.77 343 P **P** 16 01 19.8 +0.3
comp=Z,1.0nm,0.8s,baz=23,slow=8.0,SNR=2.4
comp=Z,1.0nm,0.8s
ARCES ARCESS Array B 52.77 343 P **P** 16 01 19.6 0.0
ARCES IAmb IAmb 16 01 32.8
comp=Z,10.0nm,1.5s
ARCES ARCESS Array B 52.77 343 P **P** 16 01 19.6 0.0
ARCES pmax pmax
comp=Z,10.0nm,1.5s
KVN Kaiserville 53.19 72 sP 16 01 38.5 +5.4
RYN Ryan 53.24 73 sP 16 01 38.9 +5.4
NVAR Mina Array Bea 53.51 73 P **P** 16 01 27.3 +1.7
comp=Z,0.4nm,0.7s,baz=292,slow=8.3,SNR=2.6
NVAR pP **pwP** 16 01 41.0 +1.1
comp=Z,1.9nm,0.8s,baz=290,slow=8.3,SNR=12
comp=Z,0.4nm,0.7s
NVAR Mina Array Bea 53.51 73 P **P** 16 01 26.7 +1.1
NVAR **pwP** 16 01 41.0 +1.1
NV11 Mina Array Sit 53.59 73 sP 16 01 41.6 +5.5
RLMT Red Lodge 53.76 61 sP 16 01 42.2 +4.9
ARU Arti 53.85 318 LR LR 16 26 51.6
comp=Z,57nm,18.7s,baz=24,slow=39
ARU Arti 53.85 318 P **P** 16 01 28.0 +0.4
ARU Arti 53.85 318 *c i*P **P** 16 01 28.0 +0.4
ARU *PP **pwP** 16 01 40.1 -1.6
ARU 16 02 36.2
ARU S **S** 16 08 52.8 -7.5
ARU pmax pmax
comp=Z,6.0nm,0.6s
R11A Troy Canyon, C 55.08 71 sP 16 01 52.2 +5.2
PD31 Pinedale Array 55.24 64 sP 16 01 53.1 +5.0
PDAR Pinedale Array 55.24 64 P **P** 16 01 40.2 +2.0
comp=Z,0.4nm,0.8s,baz=356,slow=2.1,SNR=4.2
PDAR pP **pwP** 16 01 53.4 +0.6
comp=Z,1.6nm,0.9s,baz=338,slow=3.5,SNR=11
comp=Z,0.4nm,0.8s
PDAR Pinedale Array 55.24 64 sP 16 01 53.0 +4.8
KDJ Kajisay 55.25 295 P **P** 16 01 36.5 -1.6
KDJ IAmb IAmb 16 01 39.4
comp=Z,1.7nm,0.6s
KDJ Kajisay 55.25 295 P **P** 16 01 36.6 -1.6
KDJ pmax pmax
comp=Z,2.0nm,0.6s
DUG Dugway, Tooele 55.30 68 sP 16 01 54.1 +5.6
TPNV Topopah Spring 55.70 73 sP 16 01 57.0 +5.5
TPNV Topopah Spring 55.70 73 P **P** 16 01 42.0 +0.4
baz=316,SNR=5.6
GWY Greenwater Val 56.01 74 sP 16 01 58.7 +5.0
PRN Pahroc Range 56.05 72 sP 16 01 59.5 +5.7
QSM Queen of Sheba 56.06 74 sP 16 01 59.4 +5.6
AAK Ala-Archa 56.30 298 LR LR 16 27 25.6
comp=Z,28nm,18.2s,baz=194,slow=38
AAK Ala-Archa 56.30 298 *c e*P **P** 16 01 46.2 +0.5
AAK pmax pmax
comp=Z,4.0nm,1.7s
ULM Lac du Bonnet 56.58 49 pP pP 16 02 01.8 +7.2
comp=Z,4.5nm,0.7s,baz=341,slow=7.5,SNR=3.0
RDMU Red Mountain 56.78 65 sP 16 02 04.3 +5.1
TMUT Trail Mountain 56.81 68 sP 16 02 04.5 +5.0
CCUT Cedar City 56.88 70 sP 16 02 04.8 +4.8
KLMR Klimovskoe 56.91 331 *e*P **P** 16 01 47.9 -1.5
KLMR pmax pmax
comp=Z,7.0nm,0.8s
KLMR Klimovskoe 56.91 331 *e*P **P** 16 01 48.0 -1.5
KLMR AMP 16 01 51.4
comp=Z,7.0nm,0.8s
RSSD Black Hills 57.12 59 sP 16 02 05.3 +3.7
SRU San Rafael Swe 57.32 67 sP 16 02 08.0 +5.1
LCMT Little Creek M 57.34 71 sP 16 02 08.8 +5.7
O20A White River Ci 57.80 65 sP 16 02 11.8 +5.4
KK31 Karatay Array 58.01 300 P **P** 16 01 56.7 -1.0
KK31 IAmb IAmb 16 01 58.4
comp=Z,2.4nm,0.9s
KK31 Karatay Array 58.01 300 P **P** 16 01 56.7 -1.0
KK31 pmax pmax
comp=Z,2.0nm,0.9s
KKAR Karatay Array 58.01 300 P **P** 16 01 56.4 -1.2
KKAR Karatay Array 58.01 300 P **P** 16 01 56.4 -1.2
AKTO Aktyubinsk 58.46 314 LR LR 16 28 33.7
comp=Z,28nm,18.8s,baz=11,slow=37
N23A Red Feather La 58.47 63 P **P** 16 02 00.2 -0.9
N23A **pwP** 16 02 16.5 +0.8
ABKAR Akbulak array 58.51 312 P **P** 16 02 00.9 0.0
PV07 Paradox Valley 58.81 67 sP 16 02 18.6 +5.1
PV13 Radium Mtn., P 58.92 67 sP 16 02 19.4 +5.1
PV15 Paradox Valley 58.97 67 sP 16 02 19.8 +5.1
ISCO Idaho Springs 59.44 63 pwP 16 02 23.4 +0.9
FIA1 FINESS Array S 59.80 338 P **P** 16 02 10.2 +0.5
FIA1 IAmb IAmb 16 02 26.6
comp=Z,3.4nm,0.8s
FINES FINESS Array B 59.81 338 P **P** 16 02 10.4 +0.7
comp=Z,1.1nm,0.4s,baz=29,slow=8.1,SNR=24
FINES pP **pwP** 16 02 23.4 -0.6
comp=Z,2.4nm,0.7s,baz=30,slow=8.8,SNR=6.4
comp=Z,1.1nm,0.4s
FINES FINESS Array B 59.81 338 P **P** 16 02 09.9 +0.2
FINES **pwP** 16 02 23.9 0.0
FINES FINESS Array B 59.81 338 *e*P **P** 16 02 10.9 +1.2
FINES pmax pmax
comp=Z,1.0nm,0.4s
CHTO Chiang Mai 60.05 261 P **P** 16 02 13.4 +1.5
CHTO Chiang Mai 60.05 261 P **P** 16 02 13.5 +1.5
CHTO pmax pmax
comp=Z,7.0nm,0.8s
TAPN Taplejung 60.06 276 *e*P **P** 16 02 12.5 +0.1
EYMN Ely 60.22 48 sP 16 02 26.9 +4.0
CMAR Chiang Mai Arr 60.33 260 P **P** 16 02 14.7 +0.7
comp=Z,2.5nm,0.8s,baz=19,slow=7.0,SNR=17
CMAR LR LR 16 32 47.4
comp=Z,15nm,18.7s,baz=165,slow=40
comp=Z,2.5nm,0.8s
CMAR Chiang Mai Arr 60.33 260 P **P** 16 02 16.1 +2.1
CMAR Chiang Mai Arr 60.33 260 *e*P **P** 16 02 16.5 +2.6
CMAR pmax pmax
comp=Z,3.0nm,0.8s
GUN Gumba 60.71 278 *e*P **P** 16 02 16.2 -0.6
comp=Z,14nm,0.5s
RAMN Ramite 61.01 277 *e*P **P** 16 02 18.6 -0.2
comp=Z,13nm,0.4s
GAR Garm 61.12 297 P **P** 16 02 18.0 -1.2
PKI Pulchoki 61.24 278 *e*P **P** 16 02 20.1 -0.3
comp=Z,7.9nm,0.5s
PKIN Phulchoki 61.24 278 *e*P **P** 16 02 20.0 -0.3
comp=Z,7.0nm,0.6s
ANMO Albuquerque 62.58 68 P **P** 16 02 29.8 +0.6
ANMO **pwP** 16 02 44.5 +0.6
ANMO IAmb IAmb 16 02 46.0
comp=Z,2.5nm,0.9s
ANMO Albuquerque 62.58 68 P **P** 16 02 30.2 +1.0
ANMO pmax pmax
comp=Z,3.0nm,1.0s
LENM Lemitar 62.88 69 pwP 16 02 46.3 +0.5
NOA NORSAR Array B 62.95 345 P **P** 16 02 32.1 +1.1
comp=Z,0.3nm,0.4s,baz=20,slow=6.2,SNR=1.8
NOA LR LR 16 32 13.4
comp=Z,7.8nm,19.4s,baz=190,slow=38
comp=Z,0.3nm,0.4s
MNK Minsk 65.57 333 *i* P P 16 02 55.6 +7.4
MNK *i* *PP pwP 16 03 09.6 +7.1
MNK *i* 16 05 13.1
MNK *i* PPP PPP 16 06 45.9
MNK *i* SS SS 16 15 43.3 -0.7
MNK pmax pmax
comp=E,4.0nm,0.8s
MNK Minsk 65.57 333 *i* P P 16 02 55.6 +7.4
comp=E,4.0nm,0.8s
MNK *i* P P 16 02 55.6 +7.4
comp=N,35nm,0.7s
MNK *i* P P 16 02 55.6 +7.4
comp=Z,34nm,0.7s,baz=28
MNK *i* pP pwP 16 03 09.7 +7.1
MNK *i* PP **PP** **16 05 13.1 +1.1**
MNK *i* PPP PPP 16 06 45.9
MNK *i* S S 16 11 40.4 +9.3
MNK *i* SS **SS** **16 15 43.4 -0.6**
MNK *i* SSS SSS 16 18 46.0
MNK *i* LQ LQ 16 26 32.4
MNK *i* LR LR 16 31 26.9
MNTX Cornudas Mount 65.62 69 P **P** **16 02 48.4 -0.6**
MNTX **pwP** **16 03 04.2 +0.5**
MNTX IAmb IAmb 16 03 05.4
comp=Z,4.3nm,0.9s
WMOK Wichita Mounta 66.82 63 P **P** **16 02 56.7 +0.1**
WMOK **pwP** **16 03 11.2 -0.1**
WMOK IAmb IAmb 16 03 12.2
comp=Z,3.2nm,0.9s
WMOK Wichita Mounta 66.82 63 P **P** **16 02 56.7 +0.1**
GEYT Alibeck 68.08 305 P **P** **16 03 04.5 -0.1**
comp=Z,5.1nm,0.8s,baz=30,slow=12,SNR=7.2
comp=Z,5.1nm,0.8s
GEYT Alibeck 68.08 305 P **P** **16 03 03.5 -1.0**
GEYT **pwP** **16 03 19.4 +0.2**
GYA0B ALIBECK ARRAY 68.08 305 P **P** **16 03 03.4 -1.1**
TX31 Lajitas Ar. Si 68.38 70 pwP 16 03 21.6 +0.3
TX32 Lajitas Array 68.38 70 P **P** **16 03 08.3 +1.7**
TX32 **pwP** **16 03 21.5 +0.1**
TXAR Lajitas Array 68.38 70 P **P** **16 03 08.7 +2.0**
comp=Z,0.3nm,0.6s,baz=308,slow=4.1,SNR=5.7
TXAR pP **pwP** **16 03 22.0 +0.6**
comp=Z,1.6nm,0.6s,baz=300,slow=4.9,SNR=19
comp=Z,0.3nm,0.6s
TXAR Lajitas Array 68.38 70 P **P** **16 03 07.2 +0.6**
TXAR **pwP** **16 03 21.4 0.0**
AKASG Malin Array Be 68.59 331 P **P** **16 03 08.0 +0.5**
comp=Z,2.2nm,0.5s,baz=27,slow=6.8,SNR=9.8
AKASG pP **pwP** **16 03 20.9 -1.0**
comp=Z,0.9nm,0.4s,baz=28,slow=7.1,SNR=5.2
comp=Z,2.2nm,0.5s
AKASG Malin Array Be 68.59 331 *e*P **P** **16 03 08.3 +0.8**
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKBB Malin Array Si 68.59 331 *c e*P **P** **16 03 08.3 +0.8**
HRA Herat 68.81 300 P **P** **16 03 10.2 +0.8**
KBZ Khabaz 70.01 318 P **P** **16 03 16.9 +0.5**
comp=Z,3.6nm,0.7s,baz=64,slow=4.1,SNR=9.2
KBZ LR LR 16 36 30.7
comp=Z,34nm,18.5s,baz=45,slow=38
comp=Z,3.6nm,0.7s
KBZ Khabaz 70.01 318 *e*P **P** **16 03 18.4 +2.1**
KBZ pmax pmax
comp=Z,4.0nm,0.7s
CLL Collm 71.93 341 *i* P **P** **16 03 27.0 -0.9**
CLL pmax pmax
comp=Z,2.0nm,0.6s
CLL Collm 71.93 341 *i* P **P** **16 03 27.0 -0.9**
comp=Z,2.0nm,0.6s
EMMW East Machias 72.32 35 P **P** **16 03 29.5 -0.8**
BUR08 Bucovina Ar. S 72.49 332 P **P** **16 03 32.4 +0.9**
BUR08 IAmb IAmb 16 03 35.6
comp=Z,2.8nm,1.0s
BURAR Bucovina Array 72.52 332 P **P** **16 03 32.4 +0.8**
BURAR IAmb IAmb 16 03 35.2
comp=Z,2.4nm,0.7s
GERES GERESS Array B 74.14 340 P **P** **16 03 43.1 +2.0**
comp=Z,0.4nm,0.6s,baz=46,slow=3.9,SNR=4.2
comp=Z,0.4nm,0.6s
GERES GERESS Array B 74.14 340 *e*P **P** **16 03 45.8 +4.7**
BRTR Keskin Array B 76.93 323 P **P** **16 03 57.2 -0.1**
comp=Z,1.5nm,0.8s,baz=114,slow=3.0,SNR=4.6
comp=Z,1.5nm,0.8s
BRTR Keskin Array B 76.93 323 *e*P **P** **16 04 00.4 +3.0**
BRTR pmax pmax
comp=Z,2.0nm,0.7s
WRA Warramunga Arr 78.00 208 P **P** **16 04 04.0 +0.8**
comp=Z,0.2nm,0.7s,baz=27,slow=6.3,SNR=2.0
WRA pP **pwP** **16 04 17.9 +0.3**
comp=Z,0.8nm,0.5s,baz=20,slow=5.8,SNR=4.6
comp=Z,0.2nm,0.7s
ASAR Alice Springs 81.66 207 P **P** **16 04 25.1 +2.1**
comp=Z,0.3nm,0.8s,baz=15,slow=5.3,SNR=6.5
ASAR pP **pwP** **16 04 37.8 -0.2**
comp=Z,0.6nm,0.7s,baz=19,slow=4.8,SNR=4.5
comp=Z,0.3nm,0.8s
ASAR Alice Springs 81.66 207 P **P** **16 04 23.7 +0.7**
ASAR pwP **pwP** **16 04 38.5 +0.5**
ESDC Sonseca Array 85.81 350 P **P** **16 04 45.1 +0.8**
comp=Z,0.8nm,0.9s,baz=359,slow=5.1,SNR=3.0
ESDC pP **pwP** **16 04 58.5 -0.9**
comp=Z,1.1nm,0.9s,baz=15,slow=5.4,SNR=3.8
comp=Z,0.8nm,0.9s
KEST Kesra 87.62 339 P **P** **16 04 54.4 +1.2**
comp=Z,4.2nm,0.6s,baz=199,slow=5.0,SNR=7.7
comp=Z,4.2nm,0.6s
KEST Kesra 87.62 339 P **P** **16 04 53.7 +0.5**
JTS Las Juntas de 93.97 66 LR LR 16 50 18.5
comp=Z,56nm,19.2s,baz=66,slow=37

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*TRN **29** 15:54:21.9, 15°.37N×61°.08W, h127km, MD4.1*
*IDC **29** 15:54:22.5±0.8, 15°.34N×61°.21W, h125km±4km, mb3.4/15, mbtmp3.8/16, MS2.5/1, Error ellipse: s-maj=14.5km s-min=12.1km az=47.0*
*NEIC **29** 15:54:23.3±0.9, 15°.33N±0°.03×61°.14W±0°.06, h126km±4km, mb4.3/11, Error ellipse: s-maj=8.8km s-min=4.5km az=82.0*

ISC 29 15:54:22.9±0.6, 15°.35N±0°.03×61°.11W±0°.05, h128km±4km, n120, σ0°.76/162, mb3.7/18, 2C-2D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DLPL	**La Plaine**	**0.14**	**263**			**Pn**	**15 54 40.6**	**+0.2**
DLPL					Sn	**Sn**	**15 54 52.6**	**-0.8**
DLPL	**La Plaine**	**0.14**	**263**	*e*P		**Pn**	**15 54 40.6**	**+0.2**
DLPL				*e*S		**Sn**	**15 54 53.7**	**+0.2**
MDN	**Morne-Daniel**	**0.28**	**264**	⇓*i*P		**Pn**	**15 54 41.3**	**+0.7**
MDN				*e*S		**Sn**	**15 54 55.0**	**+1.0**
DSLB	**Salisbury**	**0.32**	**286**	⇓*i*P		**Pn**	**15 54 41.6**	**+0.8**
DSLB				*e*S		**Sn**	**15 54 55.5**	**+1.1**
MDVC	**Dominica, Viel**	**0.39**	**312**	*e*P		**Pn**	**15 54 41.5**	**+0.4**
MDVC				*e*S		**Sn**	**15 54 55.4**	**+0.4**
MDCT	**Cottage Hill,**	**0.43**	**308**	*e*P		**Pn**	**15 54 42.0**	**+0.6**
MDCT				*e*S		**Sn**	**15 54 56.1**	**+0.8**
SVN	**Savane Anatole**	**0.51**	**187**			**Pn**	**15 54 42.0**	**+0.1**
SVN					Sn	**Sn**	**15 54 55.7**	**-0.4**
SVN	**Savane Anatole**	**0.51**	**187**	*e*P		**Pn**	**15 54 42.0**	**+0.1**
BAMF	**Morne Balai**	**0.53**	**184**	*e*P		**Pn**	**15 54 42.2**	**+0.2**
CXM	**Morne La Croix**	**0.54**	**186**	*e*P		**Pn**	**15 54 41.7**	**-0.5**
PCM	**Pelee Case Pet**	**0.54**	**191**	*e*P		**Pn**	**15 54 42.2**	**+0.2**
GBMF	**Grand Be**	**0.55**	**186**	*e*P		**Pn**	**15 54 42.3**	**+0.2**
PML	**Morne Lenard**	**0.57**	**187**	*e*P		**Pn**	**15 54 42.4**	**+0.2**
FDF	**Fort de France**	**0.61**	**184**		Pn	**Pn**	**15 54 42.6**	**+0.1**
FDF					Sn	**Sn**	**15 54 57.7**	**+0.3**
FDF	**Fort de France**	**0.61**	**184**	*e*P		**Pn**	**15 54 42.9**	**+0.4**
FDF				*e*S		**Sn**	**15 54 57.3**	**0.0**
ILAM	**Ilet Lapin Mar**	**0.61**	**158**			**Pn**	**15 54 42.5**	**0.0**
ILAM					Sn	**Sn**	**15 54 56.8**	**-0.4**
ILAM	**Ilet Lapin Mar**	**0.61**	**158**	*e*P		**Pn**	**15 54 42.5**	**0.0**
ILAM				*e*S		**Sn**	**15 54 56.9**	**-0.3**
MAGL	**Barre de l'ile**	**0.62**	**344**			**Pn**	**15 54 42.6**	**+0.1**
MAGL					Sn	**Sn**	**15 54 57.2**	**-0.1**
MAGL	**Barre de l'ile**	**0.62**	**344**	⇑*i*P		**Pn**	**15 54 42.8**	**+0.3**
MAGL				*e*S		**Sn**	**15 54 57.3**	**0.0**
TDBA	**Terre de Bas,**	**0.71**	**314**			**Pn**	**15 54 43.2**	**+0.1**
TDBA					Sn	**Sn**	**15 54 58.8**	**+0.3**
TDBA	**Terre de Bas,**	**0.71**	**314**	*e*P		**Pn**	**15 54 43.6**	**+0.5**
TDBA				*e*S		**Sn**	**15 54 58.9**	**+0.5**
TBG	**Guadaloupe-3**	**0.72**	**314**	*e*P		**Pn**	**15 54 43.7**	**+0.5**
TBG				*e*S		**Sn**	**15 54 58.7**	**+0.2**
ZAM	**Aeronautique**	**0.78**	**174**	*e*P		**Pn**	**15 54 43.3**	**-0.3**
LPMF	**Morne Lapointe**	**0.78**	**170**	*e*P		**Pn**	**15 54 43.3**	**-0.4**
TRMF	**Trois Ilets**	**0.81**	**176**	*e*P		**Pn**	**15 54 43.9**	**-0.1**
BIM	**Bigot**	**0.83**	**178**			**Pn**	**15 54 44.3**	**+0.2**
BIM	**Bigot**	**0.83**	**178**	*e*P		**Pn**	**15 54 44.4**	**+0.2**
BIM				*e*S		**Sn**	**15 55 00.5**	**+0.3**
CBE	**Ff, Capester**	**0.86**	**326**			**Pn**	**15 54 44.4**	**0.0**
CBE					Sn	**Sn**	**15 55 00.6**	**-0.1**
CBE	**Ff, Capester**	**0.86**	**326**	*e*P		**Pn**	**15 54 44.7**	**+0.3**
CBE				*e*S		**Sn**	**15 55 00.8**	**+0.1**
MPOM	**Morne Pois Mar**	**0.93**	**165**			**Pn**	**15 54 44.8**	**-0.2**
MPOM					Sn	**Sn**	**15 55 01.4**	**-0.3**
MPOM	**Morne Pois Mar**	**0.93**	**165**	*e*P		**Pn**	**15 54 44.8**	**-0.2**
MPOM				*e*S		**Sn**	**15 55 01.1**	**-0.6**
H05S1	**Guadeloupe/Mar**	**0.96**	**164**	P		**Pn**	**15 54 45.2**	**0.0**
H05S1				S		**Sn**	**15 55 01.6**	**-0.5**
GDSD	**La Dsirade Is**	**0.96**	**2**	P		**Pn**	**15 54 45.0**	**-0.3**
GDSD				S		**Sn**	**15 55 01.8**	**-0.4**
H05N1	**Guadeloupe/Mar**	**0.96**	**3**	P		**Pn**	**15 54 45.5**	**+0.2**
H05N1				S		**Sn**	**15 55 02.0**	**-0.3**
GDHS	**Morne Mazeau,**	**1.11**	**325**			**Pn**	**15 54 47.4**	**+0.6**
GDHS					Sn	**Sn**	**15 55 04.8**	**-0.2**
ABD	**La Joyeuse, An**	**1.18**	**342**			**Pn**	**15 54 47.3**	**+0.2**
ABD					Sn	**Sn**	**15 55 05.3**	**-0.6**
ABD	**La Joyeuse, An**	**1.18**	**342**	*e*P		**Pn**	**15 54 47.5**	**+0.2**
ABD				*e*S		**Sn**	**15 55 05.6**	**-0.3**
SLBI	**Saint Lucia, B**	**1.33**	**174**	*e*P		**Pn**	**15 54 48.6**	**-0.3**
SLBI				*e*S		**Sn**	**15 55 08.3**	**-0.4**
SLCP	**Castries, St.**	**1.34**	**175**	*e*S		**Sn**	**15 55 08.2**	**-0.7**
SLB	**Belfond**	**1.52**	**178**	*e*P		**Pn**	**15 54 52.4**	**+1.3**
SLB				*e*S		**Sn**	**15 55 14.3**	**+1.8**
MCLT	**Moule a Chique**	**1.64**	**174**	Pn		**Pn**	**15 54 52.1**	**-0.4**
MCLT	**Moule a Chique**	**1.64**	**174**	*e*P		**Pn**	**15 54 52.4**	**-0.1**
MCLT				*e*S		**Sn**	**15 55 14.8**	**-0.2**
MLYT	**Lee's Yard**	**1.72**	**323**	*e*P		**Pn**	**15 54 53.6**	**+0.2**
MLYT				*e*S		**Sn**	**15 55 16.8**	**+0.2**
MBFL	**Flemmings, Mon**	**1.75**	**323**	*e*P		**Pn**	**15 54 53.8**	**+0.1**
MBFL				*e*S		**Sn**	**15 55 17.3**	**0.0**
ANBD	**Bethesda, Anti**	**1.80**	**340**	*i* P		**Pn**	**15 54 54.1**	**-0.3**
ANBD				*e*S		**Sn**	**15 55 17.8**	**-0.6**
BPA	**Boggy Peak**	**1.83**	**337**	*e*P		**Pn**	**15 54 54.2**	**-0.5**
BPA				*e*S		**Sn**	**15 55 17.9**	**-1.3**
SVV	**Soufriere Volc**	**2.02**	**183**	*e*P		**Pn**	**15 54 58.1**	**+1.0**
SVV				*e*S		**Sn**	**15 55 23.1**	**-0.1**
SVB	**Belmont**	**2.07**	**184**			**Pn**	**15 54 57.3**	**-0.4**
SVB	**Belmont**	**2.07**	**184**	*e*P		**Pn**	**15 54 57.7**	**0.0**
SVB				*e*S		**Sn**	**15 55 24.9**	**+0.6**
SVOC	**Richmond Hill,**	**2.19**	**183**	*e*P		**Pn**	**15 54 59.8**	**+0.7**
SVOC				*e*S		**Sn**	**15 55 27.2**	**+0.4**
ANWB	**Willy Bob**	**2.40**	**344**	Pn		**Pn**	**15 55 00.3**	**-1.4**
ANWB	**Willy Bob**	**2.40**	**344**	⇑*i*P		**Pn**	**15 55 00.8**	**-0.9**
ANWB				*e*S		**Sn**	**15 55 30.1**	**-1.4**
SKOC	**St. Kitts, UWI**	**2.48**	**321**	*e*P		**Pn**	**15 55 03.4**	**+0.6**
SKOC				*e*S		**Sn**	**15 55 33.7**	**+0.3**
SKI	**Saint Kitts**	**2.52**	**322**	*e*P		**Pn**	**15 55 04.0**	**+0.7**
SKI				*e*S		**Sn**	**15 55 34.0**	**-0.3**
BCHC	**Barbados, Cave**	**2.63**	**147**	*e*P		**Pn**	**15 55 05.9**	**+1.2**
BBGH	**Gun Hill**	**2.66**	**145**	Pn		**Pn**	**15 55 05.7**	**+0.7**
BBGH	**Gun Hill**	**2.66**	**145**	*e*P		**Pn**	**15 55 06.2**	**+1.1**
BBGH				*e*S		**Sn**	**15 55 38.1**	**+0.6**
BBSP	**Saint Philip**	**2.75**	**144**	*e*P		**Pn**	**15 55 07.4**	**+1.2**
BBSP				*e*S		**Sn**	**15 55 39.9**	**+0.4**
SEUS	**St. Eustatius**	**2.79**	**320**	Pn		**Pn**	**15 55 06.8**	**+0.1**
SEUS	**St. Eustatius**	**2.79**	**320**	*e*P		**Pn**	**15 55 07.5**	**+0.8**
SEUS				*e*S		**Sn**	**15 55 40.9**	**+0.5**
GCMP	**Grenada, Carri**	**2.86**	**186**	*e*P		**Pn**	**15 55 07.5**	**-0.2**
GCMP				*e*S		**Sn**	**15 55 42.8**	**+0.5**
GRGR	**Grenville**	**3.24**	**189**			**Pn**	**15 55 12.7**	**0.0**
GRGR	**Grenville**	**3.24**	**189**	*e*P		**Pn**	**15 55 12.7**	**0.0**
GRGR				*e*S		**Sn**	**15 55 51.2**	**+0.1**
SMRT	**St. Maarten**	**3.28**	**325**			**Pn**	**15 55 12.2**	**-0.9**
SMRT	**St. Maarten**	**3.28**	**325**	*e*P		**Pn**	**15 55 12.3**	**-0.9**
GRFF	**Grenada Fort F**	**3.34**	**191**	*e*P		**Pn**	**15 55 13.5**	**-0.4**
GRFF				*e*S		**Sn**	**15 55 52.9**	**-0.4**
TOSP	**Speyside**	**4.07**	**172**	Pn		**Pn**	**15 55 23.3**	**-0.2**
TOSP	**Speyside**	**4.07**	**172**	*e*P		**Pn**	**15 55 23.3**	**-0.2**
TOSP	**Speyside**	**4.07**	**172**	*e*S		**Sn**	**15 56 09.3**	**-1.2**
TRN	**Trinidad (W)**	**4.68**	**184**	*e*P		**Pn**	**15 55 32.4**	**+0.6**
TRN	**Trinidad (W)**	**4.68**	**184**	*e*S		**Sn**	**15 56 22.9**	**-2.4**
STVI	**Saint Thomas**	**4.74**	**310**	Pn		**Pn**	**15 55 32.7**	**+0.3**
CUPR	**Culebra, Puert**	**4.96**	**307**	Pn		**Pn**	**15 55 35.7**	**+0.3**
CBYP	**Canovanas**	**5.40**	**303**	Pn		**Pn**	**15 55 42.4**	**+1.1**
PDPR	**Patillas Dam,**	**5.41**	**300**	Pn		**Pn**	**15 55 42.5**	**+1.1**
SJG	**San Juan**	**5.56**	**300**	P		**Pn**	**15 55 43.3**	**-0.1**
	8.9nm,0.3s,baz=58,slow=8.5,SNR=4.2							
SJG				S		**Sn**	**15 56 44.3**	**-1.9**
	10nm,0.4s,baz=19,slow=20,SNR=1.5							
SJG				LR	LR	15 58 49.1		
	comp=Z,47nm,18.1s,baz=244,slow=49							
GCPR	**Guaynabo City**	**5.60**	**302**	Pn		**P

AOPR	**Arecibo Observ**	**6.17**	**300**	Pn	**Pn**	**15 55 52.3**	**+0.5**
MLPR	**Magueyes Islan**	**6.26**	**295**	Pn	**Pn**	**15 55 54.6**	**+1.7**
CRPR	**Cabo Rojo, PR**	**6.33**	**295**	Pn	**Pn**	**15 55 54.8**	**+1.0**
BIRV	**Birongo**	**6.99**	**227**	Pn	**Pn**	**15 56 02.0**	**-0.7**
MDP	**Montagnes des**	**13.15**	**140**	P	**Pn**	**15 57 22.3**	**-2.6**
	5.6nm,0.4s,baz=308,slow=16,SNR=17						
MDP				S	Sn	15 59 38.1	-12
	23nm,0.4s,baz=69,slow=18,SNR=25						
SJCC	**San Jacinto, C**	**14.76**	**250**	Pn	**Pn**	**15 57 44.2**	**-1.3**
SRBA	**San Rafael, Bu**	**22.57**	**257**	P	**P**	**15 59 13.2**	**+0.4**
SRBA				IAmb	IAmb	15 59 43.1	
	comp=Z,11nm,1.2s						
SAML	**Samuel**	**24.23**	**185**	P	**P**	**15 59 27.4**	**-0.6**
SAML				IAmb	IAmb	15 59 28.5	
	comp=Z,6.8nm,0.7s						
SCHQ	**Schefferville**	**39.65**	**355**	P	**P**	**16 01 42.4**	**+0.3**
	comp=Z,1.8nm,0.7s,baz=180,slow=8.1,SNR=2.3						
	comp=Z,1.8nm,0.7s						
SCHQ	**Schefferville**	**39.65**	**355**	P	**P**	**16 01 42.6**	**+0.5**
SCHQ				IAmb	IAmb	16 01 45.6	
	comp=Z,10nm,1.3s						
TXAR	**Lajitas Array**	**41.52**	**297**	P	**P**	**16 01 57.7**	**-0.3**
	comp=Z,0.1nm,0.4s,baz=135,slow=9.0,SNR=2.1						
	comp=Z,0.1nm,0.4s						
LCO	**Las Campanas**	**45.06**	**192**	P	**P**	**16 02 27.8**	**+1.3**
PDAR	**Pinedale Array**	**49.52**	**314**	P	**P**	**16 03 00.6**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=114,slow=9.9,SNR=4.0						
	comp=Z,0.4nm,0.5s						
H10N3	**ASCENSION HYDR**	**51.61**	**113**	T	T	16 58 51.7	
	baz=296,slow=75,SNR=33						
H10N2	**ASCENSION HYDR**	**51.61**	**113**	T	T	16 58 53.8	
	baz=296,slow=75,SNR=38						
H10N1	**ASCENSION HYDR**	**51.63**	**113**	T	T	16 58 53.6	
	baz=296,slow=75,SNR=40						
H10S3	**ASCENSION HYDR**	**51.97**	**115**	T	T	16 59 18.6	
	SNR=16						
H10S2	**ASCENSION HYDR**	**51.98**	**115**	T	T	16 59 18.6	
	SNR=4.7						
NVAR	**Mina Array Bea**	**55.02**	**306**	P	**P**	**16 03 41.0**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=86,slow=7.6,SNR=3.9						
	comp=Z,0.3nm,0.5s						
ESDC	**Sonseca Array**	**55.16**	**52**	P	**P**	**16 03 43.7**	**+1.3**
	comp=Z,0.9nm,0.8s,baz=248,slow=8.6,SNR=4.9						
	comp=Z,0.9nm,0.8s						
DBIC	**Dimbokro**	**55.75**	**92**	P	**P**	**16 03 47.7**	**+0.8**
	comp=Z,2.5nm,0.6s,baz=307,slow=4.7,SNR=3.9						
	comp=Z,2.5nm,0.6s						
DBIC	**Dimbokro**	**55.75**	**92**	P	**P**	**16 03 47.8**	**+0.8**
DBIC				IAmb	IAmb	16 04 14.2	
	comp=Z,7.5nm,1.1s						
PLCA	**Paso Flores**	**56.48**	**189**	P	**P**	**16 03 50.5**	**-1.1**
	comp=Z,3.8nm,1.1s,baz=356,slow=6.1,SNR=4.9						
	comp=Z,3.8nm,1.1s						
PLCA	**Paso Flores**	**56.48**	**189**	P	**P**	**16 03 50.7**	**-0.9**
YKA	**Yellowknife Ar**	**60.04**	**334**	P	**P**	**16 04 14.5**	**-1.5**
	comp=Z,0.4nm,0.7s,baz=105,slow=7.2,SNR=2.8						
	comp=Z,0.4nm,0.7s						
TOA0	**Torodi Ar. Sit**	**60.72**	**83**	P	**P**	**16 04 21.2**	**-0.3**
TOA0				IAmb	IAmb	16 04 22.4	
	comp=Z,2.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**60.72**	**83**	P	**P**	**16 04 21.8**	**+0.3**
	comp=Z,2.3nm,0.6s,baz=273,slow=6.4,SNR=14						
	comp=Z,2.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**60.72**	**83**	P	**P**	**16 04 22.1**	**+0.5**
TORD				IAmb	IAmb	16 04 22.8	
	comp=Z,2.3nm,0.8s						
NOA	**NORSAR Array B**	**68.14**	**30**	P	**P**	**16 05 10.3**	**+1.3**
	comp=Z,0.7nm,0.7s,baz=262,slow=6.5,SNR=3.1						
	comp=Z,0.7nm,0.7s						
GERES	**GERESS Array B**	**68.62**	**43**	P	**P**	**16 05 12.7**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=255,slow=3.8,SNR=2.3						
	comp=Z,0.3nm,0.5s						
BCAR	**Beaver Creek A**	**72.22**	**332**	P	**P**	**16 05 34.4**	**+0.5**
K27K	**Chicken**	**72.37**	**333**	P	**P**	**16 05 34.9**	**+0.2**
ILAR	**Eielson Array**	**74.45**	**334**	P	**P**	**16 05 46.1**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=75,slow=4.1,SNR=2.7						
	comp=Z,0.2nm,0.5s						
ARCES	**ARCESS Array B**	**74.56**	**21**	P	**P**	**16 05 47.0**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=289,slow=5.6,SNR=2.7						
	comp=Z,0.9nm,0.7s						
ARCES	**ARCESS Array B**	**74.56**	**21**	P	**P**	**16 05 48.1**	**+0.7**
ARCES				IAmb	IAmb	16 06 21.6	
	comp=Z,6.7nm,1.4s						
FINES	**FINESS Array B**	**75.32**	**30**	P	**P**	**16 05 52.0**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=261,slow=9.5,SNR=4.6						
	comp=Z,0.6nm,0.5s						
FINES	**FINESS Array B**	**75.32**	**30**	P	**P**	**16 05 52.2**	**+0.3**
TRF	**Thorofare Moun**	**76.04**	**332**	P	**P**	**16 05 56.3**	**+0.1**
BURAR	**Bucovina Array**	**76.38**	**44**	P	**P**	**16 06 00.4**	**+2.1**
IMAR	**Indian Mountai**	**77.18**	**335**	P	**P**	**16 06 02.1**	**-0.3**
BRTR	**Keskin Array B**	**83.92**	**51**	P	**P**	**16 06 39.1**	**0.0**
	comp=Z,0.5nm,0.5s,baz=306,slow=8.2,SNR=1.7						
	comp=Z,0.5nm,0.5s						

*INET **29** 16:19:33.7±0.5, 12°.54N×91°.53W, h15km, MW4.2*
*IDC **29** 16:19:40.5±1.4, 13°.23N×90°.50W, h0km, mb3.8/7, mbtmp3.8/9, ML3.5/2, MS3.3/4, Error ellipse: s-maj=42.4km s-min=18.6km az=43.0*
*GCG **29** 16:19:41.5±0.9, 12°.88N×90°.91W, h4km±23km, MD3.7*
*NEIC **29** 16:19:42.1±2.9, 13°.02N±0°.08×90°.83W±0°.07, h10km±1km, mb4.1/27, Md4.1(SNET), Error ellipse: s-maj=15.7km s-min=8.7km az=218.0*
*SNET **29** 16:19:55.7±1.5, 13°.46N×90°.10W, h44km±25km, ML3.4*

ISC 29 16:19:44.5±0.7, **13°.01N**±0°.06×**90°.66W**±0°.06, **h35**km, **n82, σ2§38/84, mb4.0**/18, **MS3.2**/4, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
NUBE	**Las Nubes**	**1.23**	**44**	*e*P		**Pn**	**16 20 07.1**	**+1.6**
NUBE				*e*S		**Sn**	**16 20 15.6**	**-5.3**
CEVE	**Cerro Verde**	**1.29**	**51**	*e*P		**Pn**	**16 20 08.5**	**+2.1**
CEVE				IAML			16 20 24.7	
	comp=Z,907nm,0.3s							
SLOZ	**Alcaldia de Sa**	**1.32**	**40**	*e*P		**Pn**	**16 20 08.9**	**+2.3**
SLOZ				*e*S		**Sn**	**16 20 18.1**	**-4.9**
JAYA	**Jayaque - finc**	**1.34**	**61**	*e*P		**Pn**	**16 20 09.3**	**+2.4**
JAYA				*e*S		**Sn**	**16 20 18.5**	**-5.1**
JAYA				IAML			16 20 22.3	
	comp=Z,892nm,0.2s							
PCG	**Pacaya**	**1.38**	**2**	*e*P		**Pn**	**16 20 10.2**	**+2.7**
PCG				*e*S		**Sn**	**16 20 31.4**	**+6.7**
FUG	**Fuego 3**	**1.44**	**353**	*e*P		**Pn**	**16 20 09.5**	**+1.1**
FUG				*e*S		**Sn**	**16 20 32.6**	**+6.4**
SNET	**Serv Nac Est T**	**1.54**	**64**	Pn		**Pn**	**16 20 11.7**	**+2.1**
SNET	**Serv Nac Est T**	**1.54**	**64**	*e*P		**Pn**	**16 20 12.6**	**+3.0**
UEES	**Universidad Ev**	**1.55**	**63**	*e*P		**Pn**	**16 20 12.3**	**+2.6**
NBG	**Las Nubes**	**1.60**	**11**	*e*P		**Pn**	**16 20 13.7**	**+3.1**
SJTE	**Alcalda de S**	**1.72**	**69**	*e*P		**Pn**	**16 20 14.6**	**+2.6**
RTAL	**Retalhuleu**	**1.81**	**326**	Pn		**Pn**	**16 20 11.9**	**-1.4**
PAVA	**Las Pavas**	**1.81**	**67**	*e*P		**Pn**	**16 20 16.4**	**+3.0**
PAVA	**Las Pavas**	**1.81**	**67**	*e*P		**Pn**	**16 20 16.8**	**+3.3**
COEG	**Centro de Oper**	**1.83**	**70**	*e*P		**Pn**	**16 20 16.3**	**+2.7**
COEG				IAML			16 20 18.1	
	comp=Z,2μm,0.3s							
COEG	**Centro de Oper**	**1.83**	**70**	*e*P		**Pn**	**16 20 16.4**	**+2.8**
MTO3	**Montecristo**	**1.87**	**42**	Pn		**Pn**	**16 20 17.4**	**+3.1**
MTO3	**Montecristo**	**1.87**	**42**	*e*P		**Pn**	**16 20 17.3**	**+3.1**
STG3	**Santiaguito 3,**	**1.91**	**332**	*e*P		**Pn**	**16 20 15.3**	**+0.4**
SCLA	**Alcaldía de Sa**	**2.00**	**70**	*e*P		**Pn**	**16 20 19.0**	**+3.1**
ESQI	**Esquipulas**	**2.00**	**39**	Pn		**Pn**	**16 20 19.3**	**+3.2**
PQSS	**Presa 15 de Se**	**2.13**	**73**	*e*P		**Pn**	**16 20 20.7**	**+3.1**
PACA	**Pacayal**	**2.32**	**78**	*e*P		**Pn**	**16 20 23.8**	**+3.4**
LCND	**La Caada**	**2.71**	**83**	*e*P		**Pn**	**16 20 27.7**	**+2.1**
LCND				IAML			16 21 06.5	
	comp=Z,322nm,0.3s							
CSGN	**Cosiguina Volc**	**3.02**	**90**	*e*P		**Pn**	**16 20 31.5**	**+1.5**
TGUH	**Tegucigalpa,Un**	**3.45**	**72**	Pn		**Pn**	**16 20 38.4**	**+2.5**
CRIN	**San Cristobal**	**3.53**	**95**	Pn		**Pn**	**16 20 38.5**	**+1.5**
CRIN	**San Cristobal**	**3.53**	**95**	*e*P		**Pn**	**16 20 38.7**	**+1.7**
CCIG	**Comitan**	**3.56**	**336**	Pn		**Pn**	**16 20 37.5**	**0.0**
CNGN	**Cerro Negro**	**3.90**	**97**	Pn		**Pn**	**16 20 43.4**	**+1.4**
MOMN	**Momotombo**	**4.06**	**98**	*e*P		**Pn**	**16 20 45.0**	**+0.8**
MATN	**Matagalpa**	**4.61**	**90**	Pn		**Pn**	**16 20 51.9**	**0.0**
BOAB	**BOACO BROADBAN**	**4.90**	**96**	Pn		**Pn**	**16 20 56.4**	**+0.6**
HZTE	**Horizontes, Gu**	**5.45**	**114**	Pn		**Pn**	**16 21 05.4**	**+2.0**
ORTG	**Ortega, Santa**	**5.73**	**117**	Pn		**Pn**	**16 21 08.8**	**+1.6**
CMIG	**Matias Romero**	**5.76**	**315**	Pn		**Pn**	**16 21 05.9**	**-1.7**
	comp=Z,0.9nm,0.3s,baz=152,slow=18,SNR=8.8							
CMIG				Sn		**Sn**	**16 22 07.4**	**-5.0**
	comp=Z,0.1nm,0.3s,baz=162,slow=20,SNR=1.2							
	comp=Z,1.8nm,0.3s							
JTS	**Las Juntas de**	**6.21**	**115**	Pn		**Pn**	**16 21 15.1**	**+1.3**
	comp=Z,1.8nm,0.3s,baz=336,slow=19,SNR=2.6							
JTS				Sn		**Sn**	**16 22 24.1**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=329,slow=23,SNR=1.2							
	comp=Z,8.4nm,0.4s							
JTS	**Las Juntas de**	**6.21**	**115**	Pn		**Pn**	**16 21 16.2**	**+2.5**
JACO	**JACO, Garabito**	**6.76**	**119**	Pn		**Pn**	**16 21 25.2**	**+3.9**
RIMA	**Rio Macho**	**7.40**	**115**	Pn		**Pn**	**16 21 33.2**	**+2.9**
SRBA	**San Rafael, Bu**	**8.08**	**117**	Pn		**Pn**	**16 21 42.9**	**+3.3**
SOR	**Soroa**	**12.15**	**36**	Pn		Pn	16 22 40.6	+5.4
SJCC	**San Jacinto, C**	**15.48**	**100**	P		**P**	**16 23 26.4**	**+1.9**
SJCC				IAmb		IAmb	16 23 27.8	
	comp=Z,17nm,0.8s							
ZARC	**Zaragoza, Cauc**	**16.48**	**108**	P		**P**	**16 23 37.5**	**+1.9**
TXAR	**Lajitas Array**	**20.25**	**325**	P		**P**	**16 24 17.5**	**+0.5**
	comp=Z,0.8nm,0.7s,baz=146,slow=12,SNR=13							
	comp=Z,0.8nm,0.7s							
TXAR	**Lajitas Array**	**20.25**	**325**	P		**P**	**16 24 16.9**	**-0.1**
TX31	**Lajitas Ar. Si**	**20.25**	**325**	P		**P**	**16 24 17.6**	**+0.6**
TX32	**Lajitas Array**	**20.25**	**325**	P		**P**	**16 24 17.7**	**+0.7**
WLAR	**White Oak Lake**	**20.71**	**354**	P		**P**	**16 24 22.4**	**+0.6**
Z51A	**Franklin**	**20.83**	**13**	P		Pn	16 24 26.0	+0.3
Z51A				IAmb		IAmb	16 24 29.4	
	comp=Z,11nm,1.0s							
Y49A	**Blount Mountai**	**21.11**	**10**	P		**P**	**16 24 26.6**	**+0.4**
Y49A				IAmb		IAmb	16 24 30.8	
	comp=Z,6.1nm,0.8s							
ABTX	**Abilene, Hawle**	**21.19**	**339**	P		**P**	**16 24 26.3**	**-0.8**
ABTX				IAmb		IAmb	16 24 36.8	
	comp=Z,13nm,1.4s							
X48A	**Hartselle**	**21.60**	**8**	P		**P**	**16 24 32.4**	**+1.0**
X48A				IAmb		IAmb	16 24 35.0	
	comp=Z,4.2nm,0.7s							
MIAR	**Mount Ida**	**21.61**	**353**	P		**P**	**16 24 29.5**	**-2.0**
FPAL	**Fort Paine**	**21.92**	**11**	P		**P**	**16 24 34.4**	**-0.5**
FPAL				IAmb		IAmb	16 24 37.4	
	comp=Z,6.2nm,0.9s							
W39A	**Magazine**	**22.27**	**353**	P		**P**	**16 24 37.3**	**-1.3**
SWET	**Sewanee**	**22.52**	**10**	P		**P**	**16 24 41.2**	**-0.2**
SWET				IAmb		IAmb	16 24 43.0	
	comp=Z,9.1nm,0.9s							
LCAR	**Lake Charles**	**22.97**	**359**	P		**P**	**16 24 45.5**	**-0.5**
LCAR				IAmb		IAmb	16 24 45.6	
	comp=Z,3.5nm,0.6s							
CPCT	**Cooper Cave**	**23.02**	**13**	P		**P**	**16 24 47.0**	**+0.5**
CPCT				IAmb		IAmb	16 24 47.8	
	comp=Z,10nm,1.1s							
WVT	**Waverly**	**23.16**	**6**	P		**P**	**16 24 47.2**	**-0.8**
WVT				IAmb		IAmb	16 24 48.1	
	comp=Z,4.7nm,1.0s							
HHAR	**Hobbs**	**23.36**	**353**	P		**P**	**16 24 47.4**	**-2.6**
HHAR				IAmb		IAmb	16 24 48.9	
	comp=Z,6.5nm,1.0s							
TKL	**Tuckaleechee C**	**23.39**	**14**	P		**P**	**16 24 50.2**	**0.0**
	comp=Z,2.3nm,0.5s,baz=200,slow=12,SNR=5.7							
TKL				LR		LR	16 34 50.4	
	comp=Z,56nm,19.9s,baz=168,slow=39							
	comp=Z,2.3nm,0.5s							
TKL	**Tuckaleechee C**	**23.39**	**14**	P		**P**	**16 24 49.8**	**-0.5**
U49A	**Red Boiling Sp**	**23.81**	**10**	P		**P**	**16 24 53.7**	**-0.6**
U49A				IAmb		IAmb	16 24 55.5	
	comp=Z,7.7nm,0.8s							
MGMO	**Mountain Grove**	**24.09**	**357**	P		**P**	**16 24 56.1**	**-0.8**
MGMO				IAmb		IAmb	16 24 57.5	
	comp=Z,6.2nm,1.0s							
TZTN	**Tazewell**	**24.29**	**14**	P		**P**	**16 24 58.4**	**-0.3**
TZTN				IAmb		IAmb	16 25 17.8	
	comp=Z,9.7nm,1.2s							
S39A	**Bolivar**	**24.70**	**355**	P		**P**	**16 25 02.3**	**-0.1**
SADO	**Sadowa**	**33.15**	**15**	LR		LR	16 41 11.3	
	comp=Z,35nm,18.4s,baz=152,slow=39							
NVAR	**Mina Array Bea**	**35.26**	**321**	P		**P**	**16 26 36.2**	**0.0**
	comp=Z,0.8nm,0.7s,baz=126,slow=9.1,SNR=8.1							
	comp=Z,0.8nm,0.7s							
NVAR	**Mina Array Bea**	**35.26**	**321**	P		**P**	**16 26 35.3**	**-0.9**
G65A	**Princeton**	**37.62**	**27**	P		**P**	**16 26 55.3**	**-0.7**
SIV	**San Ignacio**	**41.06**	**134**	P		**P**	**16 27 26.4**	**+1.3**
	comp=Z,1.0nm,0.8s,baz=288,slow=9.9,SNR=4.2							
	comp=Z,1.0nm,0.8s							
SCHQ	**Schefferville**	**45.71**	**19**	P		**P**	**16 28 00.2**	**-1.8**
	comp=Z,5.3nm,0.6s,baz=218,slow=6.1,SNR=14							
	comp=Z,5.3nm,0.6s							
SCHQ	**Schefferville**	**45.71**	**19**	P		**P**	**16 28 00.6**	**-1.5**
SFJD	**Kangerlussuaq**	**60.07**	**17**	LR		LR	16 58 18.0	
	comp=Z,34nm,18.2s,baz=244,slow=39							
BCAR	**Beaver Creek A**	**61.47**	**336**	P		**P**	**16 29 58.0**	**+0.5**
ILAR	**Eielson Array**	**64.26**	**337**	P		**P**	**16 30 16.5**	**+0.5**
	comp=Z,0.4nm,0.9s,baz=126,slow=4.6,SNR=2.8							
	comp=Z,0.4nm,0.9s							
BMAR	**Burnt Mountain**	**64.67**	**340**	P		**P**	**16 30 18.4**	**-0.3**
BORG	**Borgarnes**	**69.54**	**25**	LR		LR	17 00 12.5	
	comp=Z,18nm,18.9s,baz=311,slow=35							
ESDC	**Sonseca Array**	**79.30**	**52**	P		**P**	**16 31 45.6**	**-1.3**
	comp=Z,0.6nm,0.7s,baz=272,slow=5.0,SNR=2.2							
	comp=Z,0.6nm,0.7s							
CMAR	**Chiang Mai Arr**	**147.33**	**343**	PKPbc		**PKPab**	**16 39 26.5**	**-0.7**
	comp=Z,0.8nm,0.8s,baz=345,slow=4.3,SNR=4.7							
CMAR	**Chiang Mai Arr**	**147.33**	**343**			**PKPbc**	**16 39 24.8**	**-0.6**

*SOME **29** 16:51:09.9, 40°.62N×71°.65E, h0km*
*KRNET **29** 16:51:09.8±0.1, 40°.55N×71°.88E, h29km, mb2.4*
*NNC **29** 16:51:11.8±4.5, 40°.61N×71°.69E, h0km, mb3.8, mpv3.2, Error ellipse: s-maj=34.1km s-min=18.3km az=2.0*

ISC 29 16:51:08.9±2.4, **40°.55N**±0°.04×**71°.87E**±0°.04, **h15**km±20km, **n11, σ0§82/15, 7C-3D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
OHH	**Osh**	**0.70**	**92**	⇑*e*P		**Pb**	**16 51 23.1**	**+0.3**
OHH	baz=92			⇑*e*S		**Sb**	**16 51 32.6**	**+0.3**
BTK	**Batken**	**0.94**	**239**	⇓*e*P		**Pn**	**16 51 27.6**	**0.0**
BTK	baz=39			⇓*e*S		**Sn**	**16 51 40.8**	**0.0**
TRKS	**Terek-Say**	**1.13**	**331**	⇑*e*P		**Pn**	**16 51 29.5**	**-0.8**
TRKS	baz=30			⇑*e*S		**Sb**	**16 51 43.8**	**-0.9**
GAR	**Garm**	**1.95**	**218**	⇑*e*P		**Pb**	**16 51 44.0**	**-0.2**
GAR	baz=18			⇑*e*S		**Sb**	**16 52 08.9**	**+0.5**
IUG	**Iuzhnay**	**2.11**	**320**	*e*P		**Pb**	**16 51 48.2**	**+1.2**
IUG	275nm,0.3s			*e*S		**Sg**	**16 52 16.5**	**-0.3**
	16nm,0.6s							
IUG	**Iuzhnay**	**2.11**	**320**	Pg		**Pb**	**16 51 48.2**	**+1.2**
IUG	275nm,0.3s			Lg		Lg	16 52 16.5	
	16nm,0.6s							
MRKS	**Merke**	**2.42**	**24**	*e*P		Pg	16 51 56.3	+1.0
	1.4nm,0.1s							
MRKS				*e*S		Sg	16 52 30.3	+3.5
	8.9nm,0.3s							
MRKS	**Merke**	**2.42**	**24**	Pg		Pg	16 51 56.3	+1.0
	1.4nm,0.1s							
MRKS				Lg		Lg	16 52 30.3	
	8.9nm,0.3s							
KK31	**Karatay Array**	**2.75**	**339**	⇓Pg		**Pb**	**16 51 59.1**	**+1.3**
	0.2nm,0.2s,baz=146,slow=14,SNR=3.6							
KK31				⇑Lg		Lg	16 52 32.8	
	1.7nm,0.4s,baz=148,slow=29,SNR=6.4							
BRLS	**Boroldav**	**2.91**	**329**	*e*P		**Pb**	**16 51 60.0**	**-0.5**
	0.9nm,0.2s							
BRLS				*e*S		**Sb**	**16 52 36.4**	**+0.5**
	2.8nm,0.1s							
BRLS	**Boroldav**	**2.91**	**329**	Pg		**Pb**	**16 51 60.0**	**-0.5**
	0.9nm,0.2s							
BRLS				Lg		Lg	16 52 36.4	
	2.8nm,0.1s							

IDC 29 16:51:08.8±3.5, **25°.40N**×**95°.78E, h175**km±36km, **mb2.9**/4, **mbtmp3.3**/5, **Error ellipse: s-maj=69.0km s-min=18.1km az=69.0, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**7.51**	**156**	P		Pn	16 52 55.8	0.0
	0.6nm,0.4s,baz=332,slow=13,SNR=6.0							
MKAR	**Makanchi Array**	**23.90**	**337**	P		P	16 56 06.4	0.0
	0.2nm,0.4s,baz=144,slow=11,SNR=4.9							
	0.2nm,0.4s							
SONM	**Songino Array**	**23.91**	**18**	P		P	16 56 06.7	0.0
	0.3nm,0.7s,baz=190,slow=7.2,SNR=3.6							
	0.3nm,0.7s							
WRA	**Warramunga Arr**	**58.62**	**137**	P		P	17 00 47.5	-0.3
	0.5nm,0.6s,baz=322,slow=7.5,SNR=5.1							
	0.5nm,0.6s							
ASAR	**Alice Springs**	**61.18**	**140**	P		P	17 01 05.4	+0.1
	0.4nm,0.6s,baz=322,slow=7.0,SNR=15							
	0.4nm,0.6s							

*VIE **29** 16:52:25.4±1.4, 51°.36N×15°.88E, h0km, mb2.3/5, ml2.4/4, Error ellipse: s-maj=8.7km s-min=5.7km az=148.0 83 km NE of Liberec Suspected Mining induced.*
*PRU **29** 16:52:25.6±0.0, 51°.44N×16°.18E, h0km*
*IDC **29** 16:52:26.2±1.2, 51°.37N×16°.22E, h0km, mbtmp2.7/4, ML2.3/4, Error ellipse: s-maj=19.3km s-min=10.2km az=103.0*

ISC 29 16:52:23.9±0.9, **51°.51N**±0°.04×**16°.27E**±0°.03, **h0**km, **n27, σ1§05/49, Poland**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.67**	**178**	*e*Pg		**Pg**	**16 52 36.9**	**+0.3**
KSP				*e*Sg		**Sg**	**16 52 44.9**	**-0.3**
CHVC	**Chvalec**	**0.93**	**188**	*e*PG		**Pg**	**16 52 41.7**	**0.0**
CHVC				*e*SG		**Sg**	**16 52 53.4**	**-0.3**
OSTC	**Ostas**	**0.95**	**182**	*e*PG		**Pg**	**16 52 42.5**	**+0.4**
OSTC				*e*SG		**Sg**	**16 52 54.5**	**+0.1**
UPC	**Upice**	**1.01**	**189**	*e*PG		**Pg**	**16 52 43.3**	**0.0**
UPC				*e*SG		**Sg**	**16 52 55.9**	**-0.5**
	comp=Z,50nm,0.4s							
DPC	**Dobruska-Polom**	**1.16**	**178**	*e*PG		**Pg**	**16 52 45.7**	**-0.4**
DPC				*e*SG		**Sg**	**16 53 00.9**	**-0.2**
	comp=Z,24nm,0.6s							
PVCC	**Panska Ves**	**1.45**	**228**	*e*PG		**Pn**	**16 52 51.5**	**+0.1**
PVCC				*e*SG		**Sg**	**16 53 10.1**	**-0.4**
	comp=Z,75nm,0.3s							
KRLC	**Kraliky**	**1.47**	**167**	*e*PG		**Pn**	**16 52 51.4**	**-0.3**
KRLC				*e*SG		**Sg**	**16 53 09.8**	**-1.3**
	comp=Z,19nm,0.7s							
BRG	**Berggiesshubel**	**1.59**	**247**	Pg		**Pb**	**16 52 54.5**	**+0.4**
BRG				Sg		**Sn**	**16 53 14.7**	**+0.1**
BRG				Amp			16 53 17.3	
	comp=Z,21nm,0.6s							
PRU	**Pruhonice**	**1.87**	**216**	*e*PG		**Pn**	**16 52 58.3**	**+1.1**
PRU				*e*SG		**Sn**	**16 53 21.6**	**+0.1**
	comp=Z,17nm,0.4s							
MORC	**Moravsky Berou**	**1.91**	**154**	*e*PN		**Pn**	**16 52 56.9**	**-0.9**
MORC				*e*SG		**Sb**	**16 53 23.9**	**-0.2**
CLL	**Collm**	**2.05**	**266**	*e*Pg		**Pb**	**16 53 03.0**	**+1.0**
CLL				*e*Sg		**Sb**	**16 53 29.0**	**+1.0**
	comp=Z,8.0nm,0.5s							
VRAC	**Vranov**	**2.21**	**174**	Pn		**Pn**	**16 53 02.8**	**+1.0**
	comp=Z,1.0nm,0.3s,baz=343,slow=15,SNR=4.2							
VRAC				Pg		**Pb**	**16 53 05.4**	**+0.7**
	comp=Z,1.0nm,0.3s,baz=345,slow=16,SNR=3.1							
VRAC				Sn		**Sn**	**16 53 28.9**	**-1.0**
	comp=Z,0.7nm,0.3s,baz=61,slow=19,SNR=2.0							
VRAC				Lg		Lg	16 53 32.0	
	comp=Z,0.9nm,0.3s,baz=78,slow=20,SNR=4.0							
	comp=Z,3.1nm,0.4s							
VRAC	**Vranov**	**2.21**	**174**	*e*PN		**Pn**	**16 53 02.5**	**+0.7**
VRAC				*e*SG		**Sb**	**16 53 32.8**	**+0.2**
MAUC	**Maruska**	**2.37**	**154**	*e*PG		**Pg**	**16 53 08.6**	**-0.6**
KRUC	**Moravsky**	**2.45**	**178**	*e*SG		**Sg**	**16 53 41.3**	**-1.2**
OJC	**Ojcow**	**2.58**	**119**	*e*Pg		**Pg**	**16 53 13.3**	**0.0**
OJC				*e*Sg		**Sg**	**16 53 48.6**	**+1.8**
NKC	**Novy Kostel**	**2.73**	**244**	*e*SG		**Sg**	**16 53 50.3**	**-1.4**
	comp=Z,12nm,0.3s							
KHC	**Kasperske Hory**	**2.94**	**217**	*e*PN		**Pn**	**16 53 12.1**	**+0.3**
KHC				*e*PG		**

H11N1	**WAKE ISLAND Hy**	**34.81**	**173**	T	T	17 44 18.0		
	baz=355,slow=76							
MKAR	**Makanchi Array**	**48.87**	**296**	P	**P**	**17 08 48.8**	**+0.4**	
	0.3nm,0.8s,baz=37,slow=6.0,SNR=2.9							
	0.3nm,0.8s							
FINES	**FINESS Array B**	**59.46**	**337**	P	**P**	**17 10 03.6**	**-1.6**	
	0.4nm,0.4s,baz=31,slow=8.8,SNR=4.3							
	0.4nm,0.4s							
TXAR	**Lajitas Array**	**68.80**	**69**	P	**P**	**17 11 08.8**	**+1.6**	
	0.1nm,0.5s,baz=305,slow=3.2,SNR=2.5							
	0.1nm,0.5s							

DJA 29 17:09:31.3±0.3,3°S±2'×12°3E±°, h10km, M3.7/12, mb3.9/1, MLv3.7/12, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUWI	**Luwuk**	**1.92**	**8**	P	Pn	17 10 03.7	-0.3
APSI	**Ampana**	**2.20**	**337**	P	Pn	17 10 07.8	-0.1
BBSI	**Bau Bau**	**2.52**	**178**	P	Pn	17 10 13.3	+0.9
BBSI				S	Sn	17 10 44.0	+0.8
TTSI	**Tana Toraja**	**2.68**	**268**	P	Pn	17 10 13.0	-1.5
BNSI	**Bone**	**2.79**	**239**	P	Pn	17 10 15.3	-0.7
SPSI	**Sidrap Palu**	**2.91**	**250**	P	Pn	17 10 18.2	+0.6
BKSI	**Bulukumba**	**3.34**	**225**	P	Pn	17 10 24.6	+0.9
MRSI	**Marisa**	**3.45**	**351**	P	Pn	17 10 25.4	+0.3
BSSI	**Bau Bau, Buton**	**3.75**	**212**	P	Pn	17 10 29.6	+0.3
KMSI	**Cibinong**	**3.80**	**23**	P	Pn	17 10 29.1	-0.9
MPSI	**Mapaga**	**4.17**	**321**	P	Pn	17 10 34.8	-0.3
EDFI	**Ende, Flores**	**5.82**	**188**	P	Pn	17 10 56.6	-1.2

MAN 29 17:09:46.7, 18°40N×120°77E, h9km, mb4.0, ML2.7, MS2.3, 2C-3D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIPP	**Brgy, Tapao**	**0.56**	**213**	*i* P	Pg	17 09 57.5	+0.1
APYP	**Conner**	**0.69**	**140**	*e* P	Pb	17 10 00.8	0.0
APYP				*e* S		17 10 12.7	
SGCP	**Gonzaga**	**1.22**	**97**	*e* P	Pn	17 10 08.6	+0.4
SGCP				*e* S		17 10 26.8	
SAMP	**Sagada Mountai**	**1.31**	**175**	*e* P	Pn	17 10 09.7	+0.7
SMPP	**San Manuel, Pa**	**2.23**	**182**	*e* P	Pn	17 10 22.3	+0.7

VAO 29 17:18:55.2±1.3, 11°53S×73°58W, h10km, mb3.5, Central Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CZSB	**Cruzeiro do Su**	**3.87**	**13**	*e* P	Pn	17 19 56.0	+1.1
CZSB				*e* S	Sn	17 20 40.7	+0.2
VILB	**Vilhena**	**13.15**	**98**	*e* P	Pn	17 22 01.2	-1.0
PTLB	**Pontes e Lacer**	**14.57**	**107**	*e* P	Pn	17 22 21.8	+0.1
CLDB	**Colider**	**17.45**	**90**	*e* P	Pn	17 22 58.6	-0.4
CLDB				*e* S	Sn	17 26 15.1	+1.6

BJI ***29*** *17:19:14.1±0.0,50°37N×175°79W, h5km, mb4.7/63, mB4.9/36, Ms4.4/26, Ms7 4.0/24*
IDC ***29*** *17:19:15.6±0.4,50°35N×175°72W, h0km, mb4.7/38, mbtmp4.7/40, ML4.0/2, MS3.8/51, Error ellipse: s-maj=13.8km s-min=8.9km az=162.0*
MOS ***29*** *17:19:17.2±1.1,50°46N×175°65W, h17km, mb5.3/35, MS4.3/5, Error ellipse: s-maj=6.2km s-min=4.5km az=97.2*
NEIC ***29*** *17:19:18.2±1.4,50°52N±0°06×175°66W±0°06, h10km±1km, mb5.0/562, ML4.3/45(AEIC), Error ellipse: s-maj=10.1km s-min=6.7km az=170.0*
AEIC ***29*** *17:19:20±1.9,50°57N±0°07×175°61W±0°08, h63km±4km, Error ellipse: s-maj=10.0km s-min=6.7km az=168.0*
GCMT ***29*** *17:19:20.2±0.2,50°45N±0°01×175°53W±0°04, h13km, MW4.9/109, Moment Tensor Solution. s41,c52; s109,c163; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=3.10±.14; Mθθ=3.09±.10; Mϕϕ=0.01±.09; Mrθ=-0.17±.19; Mθϕ=-0.29±.07; Mϕr=-0.04±.29; Best double couple: M=3.11300×10^16 NP1=276.00000°, δ=44.00000°, λ=-89.00000°. NP2=94.00000°, δ=47.00000°, λ=-91.00000°. Principal axes: T 3.1220, Plg1.0000°, Azm185.0000°; N -0.0140, Plg1.0000°, Azm95.0000°; P -3.1050, Plg88.0000°, Azm331.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 17:19:18.6±0.5, 50°42N±0°04×175°64W±0°03, h17km±2km, h17km:pP-P, n1368, σ1°45/1408, mb5.0/380, MS4.0/68, 43C-15D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETKA	**Kagalaska Isla**	**1.52**	**342**		**Pn**	**17 19 43.5**	**-1.5**
GSIG	**Igitkin Island**	**1.58**	**354**		**Pn**	**17 19 44.5**	**-1.3**
ADK	**Adak**	**1.61**	**336**	Pn	**Pn**	**17 19 44.0**	**-2.1**
ADK	**Adak**	**1.61**	**336**	P	**Pn**	**17 19 44.0**	**-2.1**
GSCK	**Great Sitkin C**	**1.63**	**349**		**Pn**	**17 19 45.4**	**-1.1**
GSMY	**Great Sitkin M**	**1.65**	**351**		**Pn**	**17 19 45.6**	**-1.2**
GSTD	**Great Sitkin T**	**1.67**	**349**		**Pn**	**17 19 46.1**	**-1.0**
GSTD					**Sn**	**17 20 06.1**	**-2.0**
KIMD	**Kanaga Island**	**1.68**	**324**		**Pn**	**17 19 46.3**	**-1.1**
KIMD					**Sn**	**17 20 06.1**	**-2.1**
GSTR	**Great Sitkin T**	**1.70**	**351**		**Pn**	**17 19 46.3**	**-1.1**
KIWB	**Kanaga Island**	**1.72**	**327**		**Pn**	**17 19 46.6**	**-1.1**
KICM	**Kanaga Island**	**1.79**	**328**		**Pn**	**17 19 47.8**	**-0.8**
TAPA	**Tanaga Point A**	**1.96**	**316**		**Pn**	**17 19 50.2**	**-0.7**
ATKA	**Atka Island**	**2.00**	**26**		**Pn**	**17 19 49.9**	**-1.7**
ATKA					**Sn**	**17 20 13.3**	**-2.9**
ATKA	**Atka Island**	**2.00**	**26**	P	**Pn**	**17 19 50.8**	**-0.8**
TASE	**Tanaga Southea**	**2.07**	**314**		**Pn**	**17 19 52.1**	**-0.4**
TAFP	**Tanaga Falls P**	**2.09**	**316**		**Pn**	**17 19 52.3**	**-0.5**
TAFP					**Sn**	**17 20 16.8**	**-1.6**
KOFP	**Korovin Flat P**	**2.10**	**27**		**Pn**	**17 19 51.9**	**-1.0**
KOKL	**Mount Kliuchef**	**2.11**	**25**		**Pn**	**17 19 52.0**	**-1.1**
TANO	**Tanaga North**	**2.16**	**315**		**Pn**	**17 19 53.5**	**-0.2**
KOSE	**Korovin Southe**	**2.17**	**27**		**Pn**	**17 19 53.2**	**-0.7**
GAEA	**Gareloi East**	**2.39**	**306**		**Pn**	**17 19 56.4**	**-0.5**
GALAA	**Gareloi Lava P**	**2.39**	**305**		**Pn**	**17 19 56.6**	**-0.3**
GANO	**Gareloi North**	**2.44**	**306**		**Pn**	**17 19 57.3**	**-0.3**
GASW	**Gareloi Southw**	**2.44**	**305**		**Pn**	**17 19 57.2**	**-0.4**
CERAA	**Semis' Rag'd T**	**3.30**	**299**		**Pn**	**17 20 09.0**	**-0.3**
AMKA	**Amchitka**	**3.34**	**289**	Pn	**Pn**	**17 20 08.6**	**-1.4**
AMKA				Sn	**Sn**	**17 20 45.6**	**-3.6**
CESW	**Semis' Southwe**	**3.36**	**298**		**Pn**	**17 20 09.8**	**-0.4**
LSPA	**Little Sitkin**	**3.95**	**295**		**Pn**	**17 20 18.1**	**-0.3**
LSSA	**Little Sitkin**	**3.98**	**295**		**Pn**	**17 20 18.4**	**-0.5**
LSNW	**Little Sitkin**	**3.99**	**295**		**Pn**	**17 20 18.3**	**-0.6**
NIKH	**Nikolski High**	**4.94**	**56**	Pn	**Pn**	**17 20 31.8**	**-0.1**
NIKH					**Sn**	**17 21 26.3**	**-2.1**
NIKH	**Nikolski High**	**4.94**	**56**	P	**Pn**	**17 20 30.1**	**-1.7**
	baz=243,SNR=5.7						
OKSO	**Okmok South**	**5.49**	**55**		**Pn**	**17 20 40.0**	**+0.6**
OKFG	**Magazine Ridge**	**5.64**	**55**		**Pn**	**17 20 42.2**	**+0.6**
MNAT	**Makushin Natee**	**6.51**	**54**		**Pn**	**17 20 53.8**	**+0.3**
UNV	**Unalaska Valle**	**6.59**	**55**	Pn	**Pn**	**17 20 55.3**	**+0.8**
UNV	**Unalaska Valle**	**6.59**	**55**	P	**Pn**	**17 20 52.3**	**-2.2**
	baz=243						
SHEM	**Shemya Is, Ala**	**6.80**	**294**	Pn	**Pn**	**17 20 57.9**	**+0.5**
	4.6nm,0.3s,baz=118,slow=23,SNR=2.4						
SHEM				Sn	**Sn**	**17 22 12.4**	**-1.9**
	1.9nm,0.3s,baz=107,slow=19,SNR=1.5						
SHEM				LR	LR	17 24 02.7	
	comp=Z,470nm,19.6s,baz=104,slow=42						
	20nm,0.4s						
SMY	**Shemya**	**6.80**	**294**	Pn	**Pn**	**17 20 57.5**	**+0.1**
SMY	**Shemya**	**6.80**	**294**	P	**Pn**	**17 20 57.5**	**+0.1**
AKGG	**Akutan Green G**	**7.02**	**54**		**Pn**	**17 21 01.2**	**+0.7**
AKUT	**Akutan**	**7.11**	**55**	Pn	**Pn**	**17 21 02.6**	**+1.0**
SPIA	**Saint Paul Isl**	**7.48**	**23**	Pn	**Pn**	**17 21 05.8**	**-1.0**
SPIA	**Saint Paul Isl**	**7.48**	**23**	P	**Pn**	**17 21 05.3**	**-1.5**
	baz=208						
WECS	**Westdahl Cape**	**7.81**	**54**		**Pn**	**17 21 12.2**	**+0.9**
ISLZ	**Isanotski Laza**	**8.45**	**55**		**Pn**	**17 21 20.1**	**0.0**
SDPT	**Sand Point**	**10.40**	**56**		**Pn**	**17 21 45.9**	**-0.9**
SDPT	**Sand Point**	**10.40**	**56**	P	**Pn**	**17 21 44.8**	**-2.0**
	baz=249						
CNBA	**Chernabura Isl**	**10.70**	**60**	Pn	**Pn**	**17 21 49.5**	**-1.4**
CHNA	**Chernabura Isl**	**10.71**	**59**	P	**Pn**	**17 21 49.2**	**-1.7**
	baz=253						
S14K	**Fog Glacier**	**11.25**	**52**	P	**Pn**	**17 21 57.1**	**-1.4**
	baz=246						
CHIR	**Chirikof Islan**	**13.16**	**58**	Pn	**Pn**	**17 22 21.6**	**-2.9**
CHIR	**Chirikof Islan**	**13.16**	**58**	P	**Pn**	**17 22 21.9**	**-2.6**
	baz=255						
R17K	**Ugashik Creek**	**13.40**	**50**	P	**Pn**	**17 22 24.8**	**-2.9**
	baz=246						
GAMB	**Gambell**	**13.56**	**7**	Pn	**Pn**	**17 22 30.8**	**+1.0**
GAMB	**Gambell**	**13.56**	**7**	P	**Pn**	**17 22 26.4**	**-3.4**
	baz=191						
O16K	**Kokwok River B**	**13.59**	**41**	P	**Pn**	**17 22 27.7**	**-2.6**
	baz=236,SNR=19						
Q16K	**King Salmon**	**13.73**	**46**	P	**Pn**	**17 22 29.7**	**-2.5**
	baz=242						
N16K	**Nishlik Lake**	**13.85**	**37**	P	**Pn**	**17 22 31.2**	**-2.7**
	baz=231,SNR=5.7						
P17K	**Kvichak River**	**14.09**	**44**	P	**Pn**	**17 22 34.5**	**-2.6**
	baz=240						
O17K	**Koliganek Bris**	**14.11**	**41**	P	**Pn**	**17 22 35.3**	**-2.0**
	baz=237,SNR=5.4						
SII	**Sitkinak Islan**	**14.14**	**56**	Pn	**Pn**	**17 22 33.9**	**-4.0**
SII	**Sitkinak Islan**	**14.14**	**56**	P	**Pn**	**17 22 35.7**	**-2.2**
	baz=254						
SII	**Sitkinak Islan**	**14.14**	**56**	P	**Pn**	**17 22 34.6**	**-3.3**
Q18K	**Katmai Hardscr**	**14.49**	**47**	P	**Pn**	**17 22 39.3**	**-3.4**
	baz=245						
P18K	**Big Mountain,**	**14.73**	**45**		**Pn**	**17 22 42.8**	**-3.0**
P18K	**Big Mountain,**	**14.73**	**45**	P	**Pn**	**17 22 42.8**	**-3.0**
	baz=242,SNR=6.1						
OHAK	**Old Harbor**	**14.81**	**54**	Pn	Pn	17 22 41.8	-5.2
OHAK	**Old Harbor**	**14.81**	**54**	P	**Pn**	**17 22 42.5**	**-4.5**
	baz=243						
O18K	**Koktuh Hills**	**14.96**	**43**		**Pn**	**17 22 48.5**	**-0.5**
O18K	**Koktuh Hills**	**14.96**	**43**	P	**Pn**	**17 22 44.6**	**-4.4**
	baz=240,SNR=13						
N18K	**Kilae Creek**	**15.12**	**40**	Pn	**Pn**	**17 22 50.9**	**-0.2**
N18K				IAmb	IAmb	17 22 56.6	
	comp=Z,58nm,1.5s						
N18K	**Kilae Creek**	**15.12**	**40**	P	**Pn**	**17 22 47.7**	**-3.3**
	baz=236,SNR=11						
ANM	**Nome**	**15.19**	**17**		**Pn**	**17 22 51.4**	**-0.5**
ANM				IAmb	IAmb	17 23 03.0	
	comp=Z,50nm,0.9s						
ANM	**Nome**	**15.19**	**17**	P	**Pn**	**17 22 51.4**	**-0.5**
ANM				pmax	pmax		
	comp=Z,50nm,0.9s						
ANM	**Nome**	**15.19**	**17**	P	**Pn**	**17 22 47.4**	**-4.5**
	baz=206,SNR=5.1						
Q19K	**Cape Douglas,**	**15.25**	**48**	Pn	**Pn**	**17 22 50.2**	**-2.7**
Q19K				IAmb	IAmb	17 23 13.8	
	comp=Z,40nm,0.7s						
Q19K	**Cape Douglas,**	**15.25**	**48**	P	**Pn**	**17 22 49.2**	**-3.6**
	baz=246						
KDAK	**Kodiak Island**	**15.35**	**52**	Pn	**Pn**	**17 22 49.4**	**-4.7**
	comp=Z,1.5nm,0.3s,baz=226,slow=3.2,SNR=21						
KDAK				LR	LR	17 29 28.2	
	comp=Z,545nm,20.3s,baz=265,slow=40						
KDAK	**Kodiak Island**	**15.35**	**52**	Pn	**Pn**	**17 22 49.4**	**-4.7**
KDAK				IAmb	IAmb	17 23 05.8	
	comp=Z,92nm,1.4s						
KDAK	**Kodiak Island**	**15.35**	**52**	*i* P	**Pn**	**17 22 49.5**	**-4.6**
KDAK	**Kodiak Island**	**15.35**	**52**	P	**Pn**	**17 22 50.3**	**-3.8**
	baz=252						
SVW2	**Sparrevohn**	**15.48**	**39**	Pn	**Pn**	**17 22 55.4**	**-0.4**
TNA	**Tin City**	**15.70**	**12**		**P**	**17 23 00.8**	**-1.8**
TNA	**Tin City**	**15.70**	**12**	P	**Pn**	**17 22 55.0**	**-3.7**
	baz=198						
Q20K	**Shuyak Island**	**15.73**	**50**	P	**Pn**	**17 22 56.7**	**-2.3**
	baz=249						
N19K	**Bonanza Creek**	**15.77**	**41**	Pn	**Pn**	**17 22 59.5**	**-0.1**
N19K				IAmb	IAmb	17 23 04.3	
	comp=Z,110nm,1.4s						
N19K	**Bonanza Creek**	**15.77**	**41**	P	**Pn**	**17 22 57.0**	**-2.7**
	baz=238,SNR=33						
PET	**Petropavlovsk**	**16.11**	**289**	Pn	**Pn**	**17 23 03.2**	**-0.7**
PET	**Petropavlovsk**	**16.11**	**289**	*e* P	**P**	**17 23 06.0**	**-1.2**
PET				*e* S	**Sn**	**17 26 02.1**	**0.0**
PET				pmax	pmax		
	comp=Z,400nm,12.9s						
PET				pmax	pmax		
	comp=Z,200nm,12.8s						
PET				pmax	pmax		
	comp=Z,67nm,1.4s						
PET				MLR	MLR		
	comp=Z,300nm,20.0s						
PET	**Petropavlovsk**	**16.11**	**289**	P	**P**	**17 23 07.5**	**+0.3**
O20K	**Slope Mountain**	**16.22**	**45**	P	**Pn**	**17 23 02.2**	**-3.1**
	baz=244						
RSO	**Redoubt South**	**16.33**	**43**		**Pn**	**17 23 05.8**	**-1.2**
L19K	**White Mountain**	**16.39**	**36**	P	**P**	**17 23 08.9**	**-1.5**
L19K	**White Mountain**	**16.39**	**36**	P	**Pn**	**17 23 04.7**	**-2.8**
	baz=234,SNR=21						
M19K	**Big River Lodg**	**16.41**	**37**	P	**P**	**17 23 09.5**	**-1.0**
M19K	**Big River Lodg**	**16.41**	**37**	P	**Pn**	**17 23 04.3**	**-3.5**
	baz=235						
TTA	**Tatalina**	**16.44**	**33**	Pn	**Pn**	**17 23 08.8**	**+0.6**
TTA	**Tatalina**	**16.44**	**33**	P	**Pn**	**17 23 08.8**	**+0.6**
TTA				pmax	pmax		
	comp=Z,44nm,1.1s						
TTA	**Tatalina**	**16.44**	**33**	P	**Pn**	**17 23 04.6**	**-3.6**
	baz=230,SNR=21						
HOM	**Homer**	**16.49**	**47**	P	**Pn**	**17 23 06.8**	**-2.0**
	baz=247						
CNPM	**China Poot**	**16.62**	**47**	Pn	**Pn**	**17 23 07.9**	**-2.7**
PEA0B	**Petropavlovsk-**	**16.68**	**290**	Pn	**Pn**	**17 23 09.7**	**-1.7**
PEA0B	**Petropavlovsk-**	**16.68**	**290**	*e* P	**P**	**17 23 12.6**	**-1.0**
PETK	**Petropavlovsk-**	**16.68**	**290**	Pn	**Pn**	**17 23 12.1**	**+0.8**
	comp=Z,1.4nm,0.3s,baz=97,slow=14,SNR=31						
PETK				LR	LR	17 30 10.3	
	comp=Z,271nm,20.4s,baz=96,slow=39						
	comp=Z,7.9nm,0.6s						
PETK	**Petropavlovsk-**	**16.68**	**290**	Pn	**Pn**	**17 23 10.0**	**-1.3**
BRLK	**Bradley Lake**	**16.88**	**47**	Pn	**Pn**	**17 23 11.5**	**-2.3**
M20K	**Styx River**	**16.89**	**39**		**Pn**	**17 23 13.2**	**-0.8**
M20K	**Styx River**	**16.89**	**39**	P	**Pn**	**17 23 11.3**	**-2.6**
	baz=238,SNR=18						
N20K	**Mount Spurr**	**16.92**	**41**	P	**Pn**	**17 23 11.4**	**-2.9**
	baz=241						
SPCR	**Spurr Chakacha**	**16.92**	**41**	P	**Pn**	**17 23 11.5**	**-2.8**
	baz=241						
L20K	**Farewell, AK**	**16.93**	**36**	P	**Pn**	**17 23 12.2**	**-2.3**
	baz=235,SNR=8.5						
BRSE	**Bradley Lake S**	**16.94**	**47**	P	**Pn**	**17 23 11.9**	**-2.6**
	baz=248						
SPU	**Mount Spurr**	**16.98**	**42**	Pn	**Pn**	**17 23 15.1**	**+0.1**
K20K	**Telida**	**17.39**	**34**	Pn	**Pn**	**17 23 19.3**	**-0.8**
K20K	**Telida**	**17.39**	**34**	P	**Pn**	**17 23 19.2**	**-1.0**
	baz=232,SNR=30						
GCSA	**Galena City Sc**	**17.42**	**27**	P	**Pn**	**17 23 19.6**	**-0.8**
	baz=224,SNR=6.3						
SKT	**Skwentna**	**17.59**	**40**	Pn	**Pn**	**17 23 21.3**	**-1.3**
SKT	**Skwentna**	**17.59**	**40**	P	**Pn**	**17 23 20.9**	**-1.7**
	baz=240,SNR=5.9						
SUA	**Susitna One**	**17.67**	**42**	Pn	**Pn**	**17 23 20.2**	**-3.5**
SUA	**Susitna One**	**17.67**	**42**	P	**Pn**	**17 23 21.7**	**-1.9**
	baz=243						
SEW	**Seward**	**17.68**	**47**	Pn	**Pn**	**17 23 20.6**	**-3.0**
SEW	**Seward**	**17.68**	**47**	P	**Pn**	**17 23 21.1**	**-2.6**
	baz=249						
O22K	**Cooper Landing**	**17.70**	**45**	Pn	**Pn**	**17 23 20.6**	**-3.2**
O22K				IAmb	IAmb	17 23 41.1	
	comp=Z,83nm,0.6s						
O22K	**Cooper Landing**	**17.70**	**45**	P	**Pn**	**17 23 22.8**	**-1.1**
	baz=247						
PPLA	**Purkeypile**	**17.82**	**37**	Pn	**Pn**	**17 23 24.4**	**-1.0**
PPLA				IAmb	IAmb	17 23 35.4	
	comp=Z,96nm,1.3s						
PPLA	**Purkeypile**	**17.82**	**37**	P	**Pn**	**17 23 24.6**	**-0.9**
	baz=236,SNR=25						
J20K	**Nowinta River**	**17.89**	**32**	Pn	**Pn**	**17 23 25.0**	**-1.2**
J20K	**Nowinta River**	**17.89**	**32**	P	**Pn**	**17 23 25.9**	**-0.3**
	baz=230,SNR=34						
RC01	**Rabbit Creek A**	**17.94**	**44**		**Pn**	**17 23 25.9**	**-1.0**
RC01	**Rabbit Creek A**	**17.94**	**44**	P	**Pn**	**17 23 25.9**	**-1.0**
	baz=245						
M22K	**Willow**	**18.07**	**41**	Pn	**Pn**	**17 23 26.5**	**-1.9**
M22K	**Willow**	**18.07**	**41**	P	**Pn**	**17 23 26.6**	**-1.9**
	baz=243						
CAST	**Castle Rocks**	**18.15**	**35**		**Pn**	**17 23 28.8**	**-0.7**
CAST	**Castle Rocks**	**18.15**	**35**	P	**Pn**	**17 23 28.1**	**-1.4**
	baz=235,SNR=37						
CUT	**Chulitna**	**18.31**	**39**		**P**	**17 23 31.7**	**+0.2**
CUT				IAmb	IAmb	17 23 49.0	
	comp=Z,109nm,1.4s						
CUT	**Chulitna**	**18.31**	**39**	P	**Pn**	**17 23 28.7**	**-2.7**
	baz=241						
CHUM	**Lake Minchumin**	**18.34**	**34**	P	**Pn**	**17 23 29.3**	**-2.4**
	baz=234,SNR=13						
PMR	**Palmer**	**18.42**	**43**	P	**P**	**17 23 30.5**	**-2.2**
	baz=245						
GHO	**Glory Hole Cre**	**18.58**	**42**	P	**P**	**17 23 34.1**	**-0.4**
KNK	**Knik Glacier**	**18.64**	**43**	P	**P**	**17 23 31.8**	**-3.3**
KNK	**Knik Glacier**	**18.64**	**43**	P	**P**	**17 23 32.6**	**-2.5**
	baz=246						
KTH	**Kantishna Hill**	**18.66**	**36**	P	**P**	**17 23 35.2**	**-0.1**
KTH				IAmb	IAmb	17 23 41.1	
	comp=Z,104nm,1.1s						
RDOG	**Red Dog Mine**	**18.77**	**15**	P	**P**	**17 23 30.5**	**-6.0**
RDOG	**Red Dog Mine**	**18.77**	**15**	P	**P**	**17 23 31.9**	**-4.6**
	baz=206						
TRF	**Thorofare Moun**	**18.84**	**37**	P	**P**	**17 23 37.4**	**-0.1**
TRF				IAmb	IAmb	17 23 58.8	
	comp=Z,100nm,1.4s						
TRF	**Thorofare Moun**	**18.84**	**37**	P	**P**	**17 23 33.9**	**-3.5**
	baz=238,SNR=11						
SML	**Sawmill**	**18.85**	**42**	P	**P**	**17 23 36.9**	**-0.7**
SML	**Sawmill**	**18.85**	**42**	P	**P**	**17 23 35.4**	**-2.1**
	baz=246,SNR=6.6						
BPAW	**Bear Paw Mtn.**	**18.94**	**34**	P	**P**	**17 23 38.2**	**-0.2**
BPAW	**Bear Paw Mtn.**	**18.94**	**34**	P	**P**	**17 23 37.3**	**-1.1**
	baz=236,SNR=20						
Q23K	**Middleton Isla**	**18.95**	**50**	P	**P**	**17 23 36.6**	**-1.9**
	baz=255						
GLI	**Glacier Island**	**19.05**	**46**	P	**P**	**17 23 39.3**	**-0.3**
GLI	**Glacier Island**	**19.05**	**46**	P	**P**	**17 23 36.2**	**-3.4**
	baz=250						
M23K	**Glacier View**	**19.11**	**43**	P	**P**	**17 23 36.6**	**-3.7**
	baz=246,SNR=7.1						
HIN	**Hinchinbrook I**	**19.16**	**47**	P	**P**	**17 23 38.8**	**-2.1**
WAT1	**Susitna Watana**	**19.21**	**39**	P	**P**	**17 23 38.7**	**-2.7**
	baz=242						
IMAR	**Indian Mountai**	**19.23**	**28**	P	**P**	**17 23 40.6**	**-0.9**
I21K	**Tanana**	**19.25**	**31**		**Pn**	**17 23 42.2**	**-0.6**
I21K	**Tanana**	**19.25**	**31**	P	**P**	**17 23 39.1**	**-2.6**
	baz=231,SNR=22						
FID	**Port Fidalgo**	**19.29**	**46**	P	**P**	**17 23 40.1**	**-2.1**
H21K	**Melozitna Rive**	**19.29**	**29**	P	**P**	**17 23 41.1**	**-1.1**
H21K	**Melozitna Rive**	**19.29**	**29**	P	**P**	**17 23 39.6**	**-2.7**
	baz=229,SNR=44						
SCM	**Sheep Creek Mo**	**19.30**	**43**	P	**P**	**17 23 42.0**	**-0.4**
SCM	**Sheep Creek Mo**	**19.30**	**43**	P	**P**	**17 23 42.0**	**-0.4**
SCM				pmax	pmax		
	comp=Z,62nm,1.2s						
SCM	**Sheep Creek Mo**	**19.30**	**43**	P	**P**	**17 23 39.9**	**-2.5**
	baz=247,SNR=11						
RND	**Reindeer**	**19.37**	**38**	P	**P**	**17 23 43.0**	**-0.2**
RND	**Reindeer**	**19.37**	**38**	P	**P**	**17 23 43.0**	**-0.2**
RND				pmax	pmax		
	comp=Z,52nm,1.2s						
WAT6	**Susitna Watana**	**19.44**	**41**	P	**P**	**17 23 42.2**	**-1.8**
	baz=244						
MCK	**McKinley**	**19.50**	**37**	P	**P**	**17 23 43.9**	**-0.7**
MCK	**McKinley**	**19.50**	**37**	P	**P**	**17 23 43.9**	**-0.7**
MCK				pmax	pmax		
	comp=Z,44nm,1.1s						
MCK	**McKinley**	**19.50**	**37**	P	**P**	**17 23 43.6**	**-0.9**
	baz=240,SNR=10						
BWN	**Browne**	**19.54**	**35**	P	**P**	**17 23 44.4**	**-0.5**
BWN				IAmb	IAmb	17 24 06.3	
	comp=Z,127nm,1.3s						
EYAK	**Cordova Ski Ar**	**19.56**	**47**	P	**P**	**17 23 44.0**	**-1.1**
	baz=252						
MLY	**Manley**	**19.57**	**32**	P	**P**	**17 23 45.2**	**-0.2**
MLY	**Manley**	**19.57**	**32**	P	**P**	**17 23 44.3**	**-1.1**
	baz=234,SNR=40						
G21K	**Allakaket**	**19.67**	**27**	P	**P**	**17 23 44.9**	**-1.4**
	baz=226						
DIV	**Divide**	**19.74**	**46**	P	**P**	**17 23 46.9**	**-0.3**
KLU	**Klutina**	**19.79**	**45**	P	**P**	**17 23 47.6**	**-0.2**
KLU	**Klutina**	**19.79**	**45**	P	**P**	**17 23 46.2**	**-1.6**
	baz=250						
BILL	**Bilibino**	**19.80**	**340**	P	**P**	**17 23 46.4**	**-1.3**
BILL	**Bilibino**	**19.80**	**340**	*d* P	**P**	**17 23 47.5**	**-0.2**
BILL				*i* S	**Sn**	**17 27 30.3**	**-0.7**
BILL				pmax	pmax		
	comp=Z,59nm,1.4s						
BILL				MLR	MLR		
	comp=Z,196nm,17.0s						
DHY	**Denali Highway**	**19.81**	**40**	P	**P**	**17 23 48.3**	**+0.3**
DHY	**Denali Highway**	**19.81**	**40**	P	**P**	**17 23 45.5**	**-2.5**
	baz=244,SNR=18						
H22K	**Ishtalitna Cre**	**19.89**	**30**	P	**P**	**17 23 49.0**	**+0.1**
	baz=231						
M24K	**Tolsona, Glenn**	**19.91**	**43**	P	**P**	**17 23 49.5**	**+0.5**
M24K				IAmb	IAmb	17 23 54.0	
	comp=Z,80nm,1.2s						
**M24K

WAX Waxell Ridge 20.91 49 P P 17 23 59.7 -0.3
WAX IAmb IAmb 17 24 08.2
comp=Z,55nm,1.2s
H24K Noodor Dome 21.02 32 P P 17 24 00.5 -0.5
H24K Noodor Dome 21.02 32 P P 17 23 58.7 -2.3
baz=236,SNR=37
H24K S S **17 27 53.0 -1.2**
baz=236
MCARA McCarthy VSAT 21.08 46 P P 17 24 01.0 -0.6
MCARA McCarthy VSAT 21.08 46 P P 17 24 00.4 -1.3
baz=254
COLD Coldfoot 21.11 28 P P 17 24 01.7 -0.3
COLD Coldfoot 21.11 28 P P 17 24 00.6 -1.4
baz=230,SNR=56
COLD S S **17 27 55.5 -0.5**
baz=230
MA2 Magadan 21.12 309 P P 17 24 01.7 -0.4
comp=Z,7.6nm,0.8s,baz=76,slow=12,SNR=13
MA2 LR LR 17 32 37.6
comp=Z,163nm,18.8s,baz=104,slow=38
comp=Z,7.6nm,0.8s
MA2 Magadan 21.12 309 P P 17 24 01.0 -1.0
MA2 Magadan 21.12 309 *ce*P P **17 24 02.7 +0.6**
MA2 pmax pmax
comp=Z,12nm,0.9s
MA2 Magadan 21.12 309 P P 17 24 04.2 +2.1
RIDG Independent Ri 21.12 39 P P 17 24 02.3 +0.2
RIDG Independent Ri 21.12 39 P P 17 24 00.6 -1.5
baz=246,SNR=15
ISLE Juniper Island 21.20 49 P P 17 24 03.2 +0.1
E22K Anaktuvuk Pass 21.27 25 P P 17 24 03.2 -0.5
baz=226
MENT Mentasta 21.27 42 P P 17 24 03.8 -0.1
MESA MESA 21.29 50 P P 17 24 03.9 -0.2
MESA IAmb IAmb 17 24 14.2
comp=Z,63nm,1.2s
MESA MESA 21.29 50 P P 17 24 03.8 -0.4
baz=258
SEY Seymchan 21.30 318 P P 17 24 04.2 +0.2
comp=Z,32nm,0.9s,baz=118,slow=12,SNR=44
SEY PcP PcP **17 28 07.6 -0.1**
comp=Z,2.3nm,0.6s,baz=112,slow=6.8,SNR=4.9
comp=Z,32nm,0.9s
SEY Seymchan 21.30 318 *ce*P P **17 24 04.6 +0.7**
SEY pmax pmax
comp=Z,45nm,1.0s
J25K Salcha River, 21.30 37 P P 17 24 02.6 -1.4
J25K IAmb IAmb 17 24 07.3
comp=Z,79nm,1.3s
J25K Salcha River, 21.30 37 P P 17 24 02.3 -1.8
baz=243,SNR=72
J25K S S **17 27 53.0 -6.8**
baz=243
DOT Dot Lake 21.40 40 P P 17 24 04.1 -1.1
M26K Nabesna, AK 21.40 44 P P 17 24 04.9 -0.3
M26K Nabesna, AK 21.40 44 P P 17 24 04.2 -1.0
baz=251,SNR=31
M26K S S **17 28 04.3 +2.4**
baz=251
YAH Yahtse 21.43 49 P P 17 24 06.1 +0.4
L26K Log Cabin Wild 21.46 42 P P 17 24 07.2 +1.4
GRNC Granite Creek 21.51 48 P P 17 24 06.8 +0.3
SCRK Sand Creek 21.57 39 P P 17 24 04.8 -2.2
SCRK Sand Creek 21.57 39 P P 17 24 06.0 -1.0
baz=246,SNR=48
BARN Barnard Glacie 21.63 48 P P 17 24 07.5 -0.3
TABL Table Mountain 21.74 49 P P 17 24 09.7 +0.7
CTG Chitna Glacier 21.76 48 P P 17 24 06.8 -2.3
baz=257,SNR=9.0
CTGM Chitina Glacie 21.76 48 P P 17 24 11.2 +2.0
M27K Edge Creek, AK 21.89 44 P P 17 24 11.5 +1.0
M27K IAmb IAmb 17 24 16.1
comp=Z,37nm,0.8s
M27K Edge Creek, AK 21.89 44 P P 17 24 08.3 -2.2
baz=253,SNR=54
M27K S S **17 28 12.9 +1.4**
baz=253
LOGN Logan Glacier 21.89 48 P P 17 24 12.3 +1.7
J26L Joseph Creek 21.95 38 P P 17 24 08.8 -2.3
J26L IAmb IAmb 17 24 33.0
comp=Z,32nm,0.8s
J26L Joseph Creek 21.95 38 P P 17 24 08.6 -2.5
baz=246,SNR=62
J26L S S **17 28 05.4 -7.2**
baz=246
PCA Pinnacle 22.11 50 P P 17 24 12.2 -0.6
PCA IAmb IAmb 17 24 17.2
comp=Z,32nm,0.7s
PINM Pinnacle 22.11 50 P P 17 24 11.2 -1.6
baz=260,SNR=9.6
PINM S S **17 28 18.7 +3.1**
baz=260
L27K Beaver Creek, 22.13 42 P P 17 24 13.3 +0.4
L27K Beaver Creek, 22.13 42 P P 17 24 10.8 -2.1
baz=251,SNR=19
L27K S S **17 28 18.0 +2.1**
baz=251
BCAR Beaver Creek A 22.15 42 P P 17 24 13.7 +0.5
D23K Nanushuk River 22.16 24 P P 17 24 11.6 -1.5
baz=226,SNR=21
D23K S S **17 28 16.4 +0.1**
baz=226
TOLK Toolik Lake Re 22.23 25 P P 17 24 13.5 -0.5
TOLK Toolik Lake Re 22.23 25 P P 17 24 12.2 -1.8
baz=228,SNR=18
TOLK S S **17 28 15.9 -1.8**
baz=228
K27K Chicken 22.36 40 P P 17 24 13.7 -1.7
baz=249
YUK3 Moose Creek 22.37 46 P P 17 24 14.5 -1.2
baz=256
BCPM Bancas Point 22.39 51 P P 17 24 16.6 +0.8
BCPM IAmb IAmb 17 24 19.6
comp=Z,31nm,0.7s
I26K Coal Creek Min 22.45 36 P P 17 24 15.8 -0.5
I26K Coal Creek Min 22.45 36 P P 17 24 14.1 -2.3
baz=244
PNL Peninsula 22.46 52 P P 17 24 14.1 -2.4
baz=262,SNR=7.9
A21K Barrow 22.71 16 P P 17 24 19.0 0.0
A21K IAmb IAmb 17 24 22.9
comp=Z,81nm,1.3s
A21K Barrow 22.71 16 P P 17 24 15.8 -3.2
baz=213
A21K S S **17 28 23.4 -2.9**
baz=213
D24K Happy Valley 22.77 25 P P 17 24 17.3 -2.4
baz=228
C23K Itkillik River 22.79 22 P P 17 24 16.9 -3.0
baz=224,SNR=19
C23K S S **17 28 26.2 -1.7**
baz=224
BMAR Burnt Mountain 22.99 31 P P 17 24 21.8 -0.2
YUK4 Talbot Arm 23.12 48 P P 17 24 22.1 -1.5
baz=259,SNR=6.7
YUK6 Outpost Mounta 23.18 49 P P 17 24 22.3 -2.0
baz=260
C24K Franklin Bluff 23.19 24 P P 17 24 21.5 -2.4
baz=228
DAWY Dawson 23.48 41 P P 17 24 27.7 +0.6
DAWY Dawson 23.48 41 P P 17 24 25.2 -1.9
baz=252,SNR=7.9
D25K Kavik River 23.55 26 P P 17 24 25.1 -2.5
baz=232
HYT Haines Junctio 23.57 49 P P 17 24 28.7 +0.6
HYT Haines Junctio 23.57 49 P P 17 24 25.8 -2.3
baz=261,SNR=9.7
HYT S S **17 28 42.1 +0.8**
baz=261
P30M Million Dollar 23.74 51 P P 17 24 27.4 -2.2
baz=264
N30M Aishikik Lake 23.88 48 P P 17 24 28.9 -2.0
baz=260,SNR=16
N30M S S **17 28 47.3 +1.2**
baz=260
PLBC Pleasant Camp 23.98 53 P P 17 24 29.5 -2.2
baz=266,SNR=32
PLBC S S **17 28 50.6 +3.1**
baz=266
M30M Minto, Yukon 24.23 45 P P 17 24 32.6 -1.5
M30M Minto, Yukon 24.23 45 P P 17 24 31.7 -2.4
baz=258
M30M S S **17 28 52.5 +0.9**
baz=258
O30N Mendenhall 24.25 50 P P 17 24 32.0 -2.4
baz=263,SNR=11
O30N S S **17 28 56.4 +4.4**
baz=263
C26K Camden Bay 24.32 25 P P 17 24 32.2 -2.7
baz=233
I29M Ogilvie Camp, 24.35 38 P P 17 24 34.6 -0.6
SIT Sitka 24.46 59 P P 17 24 37.6 +1.4
SIT IAmb IAmb 17 24 52.0
comp=Z,31nm,1.2s
SIT Sitka 24.46 59 P P 17 24 37.6 +1.4
SIT pmax pmax
comp=Z,31nm,1.2s
SIT Sitka 24.46 59 P P 17 24 34.0 -2.2
baz=272
C27K Jago River 24.48 27 P P 17 24 34.0 -2.4
baz=235
SKAG Skagway 24.50 53 P P 17 24 38.4 +1.8
SKAG IAmb IAmb 17 24 40.2
comp=Z,55nm,1.0s
SKAG Skagway 24.50 53 P P 17 24 34.8 -1.8
baz=267,SNR=18
BESE Bessie Mountai 24.71 55 P P 17 24 40.0 +1.4
BESE IAmb IAmb 17 25 05.8
comp=Z,27nm,1.1s
WHY Whitehorse 24.83 50 P P 17 24 40.1 +0.5
WHY Whitehorse 24.83 50 P P 17 24 36.8 -2.9
baz=264,SNR=9.4
WHY S S **17 29 05.5 +4.1**
baz=264
KUR Kuril'sk 24.87 272 *i* P P **17 24 41.3 +1.3**
JIS Juneau Island 24.95 56 P P 17 24 41.2 +0.6
JIS IAmb IAmb 17 24 47.7
comp=Z,98nm,1.4s
M31M Drury Creek, Y 25.26 46 P P 17 24 42.7 -0.7
M31M Drury Creek, Y 25.26 46 P P 17 24 40.6 -2.9
baz=262,SNR=7.9
M31M S S **17 29 09.4 +1.2**
baz=262
EPYK Eagle Plains 25.31 36 P P 17 24 43.6 -0.3
EPYK IAmb IAmb 17 24 49.1
comp=Z,47nm,1.4s
EPYK Eagle Plains 25.31 36 P P 17 24 40.6 -3.3
baz=250,SNR=14
P32M Atlin 25.33 53 P P 17 24 40.5 -3.6
baz=268,SNR=40
P32M S S **17 29 11.7 +2.3**
baz=268
N32M Quiet Lake 25.75 49 P P 17 24 44.1 -3.9
baz=265,SNR=9.7
N32M S S **17 29 19.0 +3.1**
baz=265
CRAG Craig 25.80 62 P P 17 24 50.6 +2.2
CRAG Craig 25.80 62 P P 17 24 45.2 -3.1
baz=277,SNR=14
P33M Teslin, Yukon 25.81 51 P P 17 24 49.2 +0.7
P33M IAmb IAmb 17 24 52.6
comp=Z,60nm,1.0s
P33M Teslin, Yukon 25.81 51 P P 17 24 46.0 -2.6
baz=267,SNR=65
P33M S S **17 29 21.7 +4.7**
baz=267
WRAK Wrangell Islan 26.14 60 P P 17 24 52.6 +1.2
WRAK IAmb IAmb 17 25 06.8
comp=Z,48nm,1.3s
WRAK Wrangell Islan 26.14 60 P P 17 24 48.8 -2.6
baz=276
INK Inuvik 27.13 33 P P 17 25 00.5 +0.3
comp=Z,2.9nm,0.4s,baz=254,slow=4.7,SNR=11
INK PcP PcP **17 28 19.9 -0.3**
comp=Z,2.7nm,1.1s,baz=270,slow=1.0,SNR=3.8
INK LR LR 17 36 59.3
comp=Z,250nm,18.9s,baz=246,slow=39
comp=Z,2.9nm,0.4s
INK Inuvik 27.13 33 P P 17 25 00.8 +0.6
INK Inuvik 27.13 33 P P 17 24 58.1 -2.1
baz=250
T35M Bob Quinn 27.23 58 P P 17 24 59.9 -1.4
baz=276
DLBC Dease Lake 27.25 55 P P 17 25 02.4 +0.9
comp=Z,6.7nm,0.8s,baz=266,slow=8.2,SNR=18
comp=Z,6.7nm,0.8s
DLBC Dease Lake 27.25 55 P P 17 25 03.2 +1.7
DLBC Dease Lake 27.25 55 P P 17 24 60.0 -1.5
baz=273,SNR=32
YSS Yuzh-Sakhalins 27.42 279 *e*P P **17 25 04.3 +1.2**
YSS *e*S S **17 29 44.0 +1.6**
YSS pmax pmax
comp=Z,200nm,5.4s
JKA Kamikawa-asahi 28.73 274 P P 17 25 14.6 -0.2
JKA IAmb IAmb 17 25 16.5
comp=Z,20nm,1.0s
ASAJ Asahikawa 28.73 274 P P 17 25 14.6 -0.2
ASAJ pmax pmax
comp=Z,20nm,1.0s
BBB Bella Bella 29.36 68 P P 17 25 21.2 +1.0
comp=Z,8.1nm,0.9s,baz=300,slow=8.3,SNR=2.7
BBB LR LR 17 34 58.2
comp=Z,105nm,19.8s,baz=292,slow=32
comp=Z,8.1nm,0.9s
BBB Bella Bella 29.36 68 IAmb IAmb 17 25 49.4
comp=Z,26nm,1.2s
ERM Erimo 29.40 269 P P 17 25 22.2 +1.5
YAK Yakutsk 31.55 313 LR LR 17 40 15.2
comp=Z,156nm,18.0s,baz=88,slow=40
YAK Yakutsk 31.55 313 *e*P P **17 25 40.1 +0.6**
YAK pmax pmax
comp=Z,5.0nm,0.9s
YAK pmax pmax
comp=N,2.0nm,1.1s
YAK pmax pmax
comp=E,3.0nm,1.3s
TIXI Tiksi 32.45 331 LR LR 17 40 44.4
comp=E,367nm,18.1s,baz=184,slow=40
TIXI Tiksi 32.45 331 P P **17 25 45.9 -1.4**
TIXI Tiksi 32.45 331 *ce*P P **17 25 46.5 -0.8**
TIXI pmax pmax
comp=Z,4.0nm,1.0s
KLR Kul'dur 33.37 289 P P **17 25 55.4 -0.2**
comp=Z,9.6nm,0.6s,baz=68,slow=8.6,SNR=25
KLR PcP PcP **17 28 36.6 -0.3**
comp=Z,1.7nm,0.9s,baz=27,slow=6.8,SNR=1.6
KLR LR LR 17 41 35.1
comp=Z,106nm,19.2s,baz=75,slow=40
comp=Z,9.6nm,0.6s
KLR Kul'dur 33.37 289 *ce*P P **17 25 54.8 -0.8**
KLR pmax pmax
comp=Z,9.0nm,0.6s
LLLB Lillooet 33.56 68 P P **17 25 58.9 +1.6**
LLLB IAmb IAmb 17 25 60.0
comp=Z,13nm,1.1s
H11N2 WAKE ISLAND Hy 33.61 211 T T 18 02 45.8
baz=18,slow=76,SNR=14
H11N3 WAKE ISLAND Hy 33.62 211 T T 18 02 57.9
baz=18,slow=76,SNR=16
H11N1 WAKE ISLAND Hy 33.63 211 T T 18 02 57.7
baz=18,slow=76,SNR=15
E03A Lebam 34.15 76 P P **17 26 03.5 +1.1**
E03A IAmb IAmb 17 26 05.5
comp=Z,31nm,1.0s
ZEA Zeya 34.45 298 *e*P P **17 26 04.9 0.0**
ZEA *e*S S **17 31 27.7 -4.4**
ZEA pmax pmax
comp=E,10.0nm,1.6s
ZEA pmax pmax
comp=Z,20nm,1.4s
ZEA pmax pmax
comp=E,100nm,2.8s
ZEA pmax pmax
comp=Z,100nm,2.2s
ZEA smax smax
comp=E,100nm,6.6s
ZEA smax smax
comp=N,200nm,4.6s
YKA Yellowknife Ar 34.45 46 P P **17 26 05.8 +1.0**
comp=N,7.9nm,0.9s,baz=274,slow=8.7,SNR=33
YKA PcP PcP **17 28 40.0 +0.3**
comp=N,2.1nm,0.8s,baz=280,slow=3.0,SNR=6.7
YKA LR LR 17 42 04.4
comp=N,328nm,20.0s,baz=269,slow=40
comp=N,7.9nm,0.9s
YKA Yellowknife Ar 34.45 46 P P **17 26 05.2 +0.4**
YKA Yellowknife Ar 34.45 46 *i* P P **17 26 06.0 +1.1**
YKA pmax pmax
comp=Z,8.0nm,0.8s
JYT Yasato 34.58 263 P P 17 26 06.6 +0.4
JYT IAmb IAmb 17 26 08.3
comp=Z,21nm,1.1s
B06A Marblemount 34.60 72 P P 17 26 07.3 +1.0
JSD Sado 34.73 267 P P 17 26 06.8 -0.6
H11S1 WAKE ISLAND Hy 34.82 210 T T 18 04 21.5
baz=18,SNR=13
H11S2 WAKE ISLAND Hy 34.84 210 T T 18 04 18.5
baz=18
H11S3 WAKE ISLAND Hy 34.84 210 T T 18 04 16.8
baz=18
G03D McMinnville, O 34.94 78 P P 17 26 08.0 -1.3
baz=298
I02E Swisshome, OR 35.10 80 P P 17 26 09.8 -0.9
baz=299
F04A Amboy 35.14 76 P P 17 26 12.7 +1.7
F04A IAmb IAmb 17 26 13.5
comp=Z,18nm,0.8s
USRK Ussuriysk Ar. 35.42 281 P P 17 26 13.0 -0.4
comp=Z,5.1nm,0.8s,baz=61,slow=11,SNR=10
USRK PcP PcP **17 28 41.8 -1.0**
comp=Z,4.9nm,0.8s,baz=57,slow=5.3,SNR=6.2
comp=Z,5.1nm,0.8s
USRK Ussuriysk Ar. 35.42 281 P P 17 26 13.0 -0.4
J01E Myrtle Point 35.52 81 P P 17 26 12.8 -1.4
baz=301
H04D Lebanon 35.60 79 P P 17 26 17.1 +2.2
H04D IAmb IAmb 17 26 18.0
comp=Z,23nm,0.8s
H04D Lebanon 35.60 79 P P 17 26 13.5 -1.4
baz=299
I03D Drain, OR 35.62 80 P P 17 26 14.1 -1.0
baz=300
LTY Liberty 35.63 73 P P 17 26 16.5 +1.2
MJAR Matsushiro Arr 35.65 265 P P 17 26 14.5 -1.0
comp=Z,1.6nm,0.7s,baz=33,slow=21,SNR=6.6
MJAR LR LR 17 38 17.7
comp=Z,70nm,21.1s,baz=67,slow=32
comp=Z,1.6nm,0.7s
MJAR Matsushiro Arr 35.65 265 P P 17 26 14.6 -1.0
MJAR Matsushiro Arr 35.65 265 P P 17 26 14.6 -1.0
MJAR pmax pmax
comp=Z,4.0nm,1.3s
MAJO Matsushiro 35.65 265 P P 17 26 15.3 -0.2
MAJO Matsushiro 35.65 265 *i* P P **17 26 16.6 +1.1**
MAJO pmax pmax
comp=Z,28nm,1.6s
MJB9 Matsu-Tunnel 35.65 265 P P 17 26 15.4 -0.1
H04A Detroit Lake 35.87 78 P P 17 26 18.4 +1.1
H04A IAmb IAmb 17 26 20.0
comp=Z,31nm,0.9s
HOOD Mount Hood Mea 35.90 77 P P 17 26 19.4 +1.7
HOOD IAmb IAmb 17 26 20.5
comp=Z,60nm,1.4s
K02D Willamette Mer 35.92 82 P P 17 26 15.7 -2.1
baz=301
B08A Colville Reser 35.97 71 P P 17 26 18.8 +0.7
B08A IAmb IAmb 17 26 20.3
comp=Z,18nm,0.7s
DBO Dodson Butte 35.98 81 P P 17 26 21.1 +2.8
DBO IAmb IAmb 17 26 23.1
comp=Z,15nm,0.9s
G05D Wamic, OR 36.15 77 P P 17 26 17.7 -1.9
baz=299
I04A Tendick Farm, 36.16 79 P P 17 26 18.0 -1.8
baz=300,SNR=16
L02F Cave Junction 36.28 83 P P 17 26 19.2 -1.6
baz=302,SNR=5.4
HUMO Hull Mountain 36.42 82 P P 17 26 23.7 +1.7
HUMO IAmb IAmb 17 26 25.2
comp=Z,18nm,1.1s
E07A Sunnyside 36.44 74 P P 17 26 22.6 +0.4
I05D Terrebonne, OR 36.56 78 P P 17 26 21.9 -1.4
baz=300,SNR=8.1
J04D Umpqua Nationa 36.63 80 P P 17 26 24.8 +0.8
J04D IAmb IAmb 17 26 27.1
comp=Z,53nm,1.0s
J04D Umpqua Nationa 36.63 80 P P 17 26 22.9 -1.1
baz=301,SNR=7.6
F07A Phinny Hill Vi 36.70 75 P P 17 26 24.9 +0.6
F07A IAmb IAmb 17 26 27.0
comp=Z,14nm,0.7s
HAWA Hanford 36.71 74 P P 17 26 25.0 +0.6
HAWA IAmb IAmb 17 26 26.8
comp=Z,24nm,0.9s
MSHR Mys Shultsa 36.76 279 *ce*P P **17 26 27.0 +2.2**
MSHR pmax pmax
comp=Z,14nm,1.3s
D08A Wollman Farm, 36.78 73 P P 17 26 25.9 +0.9
D08A IAmb IAmb 17 26 26.9
comp=Z,14nm,0.8s
KMPM Mount Pierce 36.84 85 P P 17 26 25.0 -0.7
KMPM IAmb IAmb 17 26 29.6
comp=Z,49nm,1.0s
C09A Chrisman Ranch 36.85 71 P P 17 26 26.4 +0.8
C09A IAmb IAmb 17 26 27.5
comp=Z,17nm,0.7s
E08A Dider Farm, El 36.96 74 P P 17 26 25.9 -0.7
E08A IAmb IAmb 17 26 28.6
comp=Z,41nm,1.5s
YBH Yreka Blue Hor 37.03 83 LR LR 17 39 48.5
comp=Z,133nm,18.3s,baz=294,slow=33
YBH Yreka Blue Hor 37.03 83 P P 17 26 27.8 +0.5
YBH Yreka Blue Hor 37.03 83 P P 17 26 27.8 +0.5
YBH pmax pmax
comp=Z,16nm,1.0s
L04D Klamath Falls 37.03 82 P P 17 26 28.3 +0.9
L04D IAmb IAmb 17 26 30.3
comp=Z,31nm,1.1s
L04D Klamath Falls 37.03 82 P P 17 26 26.4 -1.0
baz=302,SNR=6.9
PINE Pine Mountain 37.09 79 P P 17 26 29.8 +1.9
PINE IAmb IAmb 17 26 31.7
comp=Z,36nm,1.0s
J05D Fort Rock, OR 37.16 79 P P 17 26 27.7 -0.8
baz=301,SNR=25
K04D Chiloquin, OR 37.17 81 P P 17 26 27.3 -1.2
baz=302
NEW Newport 37.34 70 LR LR 17 41 15.6
comp=Z,86nm,18.9s,baz=300,slow=35
NEW Newport 37.34 70 P P 17 26 30.2 +0.4
NEW IAmb IAmb 17 26 31.6
comp=Z,15nm,0.8s
NEW Newport 37.34 70 P P 17 26 30.2 +0.4
NEW pmax pmax
comp=Z,15nm,0.8s
NEW Newport 37.34 70 P P **17 26 28.0 -1.8**
baz=296,SNR=8.9
E09A Wood Farm, Sta 37.51 73 P P 17 26 31.8 +0.6
EDM Edmonton 37.53 61 P P 17 26 32.0 +0.6
EDM Edmonton 37.53 61 P P 17 26 32.0 +0.6
EDM pmax pmax
comp=Z,81nm,0.8s
BNX BinXian 37.54 286 ⇑P P **17 26 30.8 -0.6**
BNX pmax pmax
comp=Z,12nm,0.9s
BNX pmax pmax
comp=Z,91nm,3.6s
G08A Pilot Rock 37.59 75 P P 17 26 32.7 +0.7
K05A Summer Lake 37.66 80 P P 17 26 34.7 +1.9
K05A IAmb IAmb 17 26 36.1
comp=Z,46nm,0.9s
I07A Izee 37.84 77 P P 17 26 35.2 +1.0
I07A IAmb IAmb 17 26 36.8
comp=Z,20nm,0.9s
F10A Beach Ranch, E 38.32 73 P P 17 26 38.7 +0.5
MOD Modoc Plateau 38.46 81 P P 17 26 40.8 +1.3
MOD IAmb IAmb 17 26 42.3
comp=Z,26nm,0.8s
BMO Blue Mountains 38.82 75 P P 17 26 43.1 +0.7
BMO Blue Mountains 38.82 75 P P 17 26 43.1 +0.7
BMO pmax pmax
comp=Z,19nm,1.4s
J08A Circle Bar Ran 38.85 78 P P 17 26 43.8 +1.2
J08A IAmb IAmb 17 26 45.2
comp=Z,25nm,0.7s
WALA Waterton Lakes 38.90 67 P P 17 26 43.6 +0.5
WVOR Wild Horse Val 39.23 79 P P 17 26 46.6 +0.7
WVOR IAmb IAmb 17 26 48.5
comp=Z,31nm,0.9s
WVOR Wild Horse Val 39.23 79 P P 17 26 46.6 +0.7
WVOR pmax pmax
comp=Z,31nm,0.9s
JTMT Jette 39.28 69 P P 17 26 46.0 -0.2
BEKR Beckworth 39.54 84 P P 17 26 49.7 +1.1
JCJ Chichijima 39.57 250 P P 17 26 47.8 -0.8
comp=Z,39nm,0.6s,baz=289,slow=22,SNR=6.3
JCJ LR LR 17 45 50.7
comp=Z,48nm,18.1s,baz=100,slow=40
comp=Z,39nm,0.6s

JCJ	**Chichijima**	**39.57**	**250**		P	**P**	**17 26 47.3**	**-1.3**
JCJ					lAmb	lAmb	17 26 49.8	
	comp=Z,42nm,0.6s							
JCJ	**Chichijima**	**39.57**	**250**		P	**P**	**17 26 48.9**	**+0.2**
CN2	**Changchun**	**39.71**	**284**	*e*	P	**P**	**17 26 48.0**	**-1.7**
CN2					PP	**PnPn**	**17 28 23.3**	**-0.6**
CN2					S	**S**	**17 32 50.3**	**-2.0**
CN2					sS	sS	17 32 57.8	+0.1
CN2					SS	**SS**	**17 35 38.0**	**-10**
CN2					pmax	pmax		
	comp=Z,10.0nm,0.8s							
CN2					LR	LR		
	comp=Z,150nm,17.0s							
CN2					LR	LR		
	comp=Z,130nm,17.0s							
CN2					LR	LR		
	comp=Z,130nm,19.0s							
RES	**Resolute Bay**	**39.80**	**24**		LR	LR	17 46 16.9	
	comp=Z,62nm,20.8s,baz=250,slow=41							
JHS	**Saijyo**	**39.86**	**267**		P	**P**	**17 26 51.8**	**+0.7**
MSO	**Missoula**	**39.91**	**70**		P	**P**	**17 26 51.9**	**+0.4**
MSO	**Missoula**	**39.91**	**70**		P	**P**	**17 26 48.8**	**-2.7**
	baz=299,SNR=7.3							
MPK	**Martis Peak**	**40.08**	**84**		P	**P**	**17 26 53.9**	**+0.7**
MPK					lAmb	lAmb	17 26 56.3	
	comp=Z,54nm,1.2s							
BOD	**Bodaibo**	**40.15**	**309**	*e*	P	**P**	**17 26 53.2**	**+0.1**
BOD					pmax	pmax		
	comp=Z,14nm,1.8s							
EMB	**Emerald Bay**	**40.22**	**85**		P	**P**	**17 26 55.0**	**+0.8**
PAHR	**Pah Rah Range**	**40.25**	**83**		P	**P**	**17 26 55.6**	**+1.1**
PAHR					lAmb	lAmb	17 26 57.0	
	comp=Z,40nm,1.0s							
VCNR	**Virginia City**	**40.32**	**84**		P	**P**	**17 26 55.7**	**+0.7**
VCNR					lAmb	lAmb	17 26 57.9	
	comp=Z,42nm,1.2s							
MFID	**Camas Ranch**	**40.47**	**76**		P	**P**	**17 26 56.6**	**+0.4**
PNTR	**Pine Nut**	**40.47**	**84**		P	**P**	**17 26 57.7**	**+1.3**
PNTR					lAmb	lAmb	17 26 59.1	
	comp=Z,38nm,0.9s							
CMB	**Columbia Colle**	**40.58**	**86**		P	**P**	**17 26 57.9**	**+0.8**
CMB	**Columbia Colle**	**40.58**	**86**		P	**P**	**17 26 57.9**	**+0.8**
CMB					pmax	pmax		
	comp=Z,20nm,1.2s							
YERR	**Yerington**	**40.76**	**84**		P	**P**	**17 26 59.8**	**+1.1**
YERR					lAmb	lAmb	17 27 01.3	
	comp=Z,32nm,1.1s							
SEHB	**SEOHWA**	**40.98**	**275**		P	**P**	**17 27 01.2**	**+0.8**
BBGB	**Big Mountain B**	**41.03**	**88**		P	**P**	**17 27 02.8**	**+1.9**
BBGB					lAmb	lAmb	17 27 03.6	
	comp=Z,53nm,1.0s							
BMN	**Battle Mountai**	**41.21**	**81**		P	**P**	**17 27 03.7**	**+1.3**
BMN					lAmb	lAmb	17 27 04.7	
	comp=Z,18nm,0.9s							
BMN	**Battle Mountai**	**41.21**	**81**		P	**P**	**17 27 03.7**	**+1.3**
BMN					pmax	pmax		
	comp=Z,18nm,0.9s							
HLID	**Hailey**	**41.27**	**75**		P	**P**	**17 27 03.8**	**+1.0**
HLID	**Hailey**	**41.27**	**75**		P	**P**	**17 27 01.1**	**-1.7**
	baz=302,SNR=21							
LRM	**Limekiln Ridge**	**41.31**	**71**		P	**P**	**17 27 03.6**	**+0.4**
PMPB	**Monarch Peak**	**41.41**	**88**		P	**P**	**17 27 04.7**	**+0.8**
PMPB					lAmb	lAmb	17 27 31.6	
	comp=Z,35nm,1.2s							
RYN	**Ryan**	**41.42**	**84**		P	**P**	**17 27 04.8**	**+0.7**
RYN					lAmb	lAmb	17 27 06.5	
	comp=Z,22nm,1.0s							
KVN	**Kaiserville**	**41.45**	**83**		P	**P**	**17 27 05.3**	**+0.9**
KVN	**Kaiserville**	**41.45**	**83**		P	**P**	**17 27 05.3**	**+0.9**
KVN					pmax	pmax		
	comp=Z,17nm,0.9s							
MCMT	**McKenzie Canyo**	**41.57**	**73**		P	**P**	**17 27 05.1**	**-0.3**
MDPB	**Devils Postpil**	**41.65**	**85**		P	**P**	**17 27 07.4**	**+1.3**
MDPB					lAmb	lAmb	17 27 08.9	
	comp=Z,31nm,1.1s							
LHV	**Little Huntoon**	**41.65**	**84**		P	**P**	**17 27 06.7**	**+0.9**
LHV					lAmb	lAmb	17 27 09.6	
	comp=Z,43nm,1.3s							
KSRS	**Korea Array**	**41.68**	**274**		P	**P**	**17 27 05.8**	**-0.1**
	comp=Z,3.5nm,0.9s,baz=58,slow=8.2,SNR=15							
KSRS					PcP	**PcP**	**17 29 02.2**	**-0.2**
	comp=Z,1.2nm,0.8s,baz=57,slow=4.5,SNR=3.9							
	comp=Z,3.5nm,0.9s							
NVAR	**Mina Array Bea**	**41.68**	**84**		P	**P**	**17 27 06.9**	**+0.6**
	comp=Z,12nm,0.9s,baz=292,slow=8.2,SNR=59							
NVAR					PcP	**PcP**	**17 29 03.4**	**+0.6**
	comp=Z,2.9nm,0.8s,baz=266,slow=3.3,SNR=6.2							
	comp=Z,12nm,0.9s							
NVAR	**Mina Array Bea**	**41.68**	**84**		P	**P**	**17 27 07.2**	**+0.9**
KSAR	**Wonju Array Be**	**41.71**	**274**		P	**P**	**17 27 05.5**	**-0.8**
KSAR	**Wonju Array Be**	**41.71**	**274**		P	**P**	**17 27 05.5**	**-0.8**
OMMB	**Old Mammoth Mi**	**41.72**	**85**		P	**P**	**17 27 08.5**	**+1.8**
NV11	**Mina Array Sit**	**41.77**	**84**		P	**P**	**17 27 07.9**	**+1.0**
MLAC	**Mammoth, Mammo**	**41.81**	**85**		P	**P**	**17 27 06.0**	**-1.4**
	baz=307							
EGMT	**Eagleton**	**41.83**	**67**		P	**P**	**17 27 07.7**	**+0.4**
EGMT					lAmb	lAmb	17 27 09.6	
	comp=Z,34nm,0.8s							
EGMT	**Eagleton**	**41.83**	**67**		P	**P**	**17 27 05.4**	**-1.8**
	baz=299,SNR=16							
BOZ	**Bozeman (W)**	**41.92**	**71**		P	**P**	**17 27 08.2**	**+0.1**
BOZ	**Bozeman (W)**	**41.92**	**71**		P	**P**	**17 27 08.2**	**+0.1**
BOZ					pmax	pmax		
	comp=Z,11nm,0.8s							
BOZ	**Bozeman (W)**	**41.92**	**71**		P	**P**	**17 27 05.6**	**-2.5**
	baz=301,SNR=21							
SNY	**Shenyang**	**41.92**	**282**	⇑	P	**P**	**17 27 09.0**	**+1.1**
SNY					S	**S**	**17 33 34.0**	**+8.7**
SNY					pmax	pmax		
	comp=Z,30nm,1.0s							
SNY					LR	LR		
	comp=Z,160nm,12.3s							
SNY					LR	LR		
	comp=Z,260nm,15.4s							
SNY					LR	LR		
	comp=Z,250nm,14.5s							
PAGB	**Antelope Grade**	**42.06**	**89**		P	**P**	**17 27 10.3**	**+1.1**
PAGB					lAmb	lAmb	17 27 11.7	
	comp=Z,20nm,0.7s							
Q09A	**Carvers**	**42.15**	**83**		P	**P**	**17 27 11.8**	**+1.7**
Q09A					lAmb	lAmb	17 27 12.8	
	comp=Z,48nm,0.9s							
ELK	**Elko**	**42.29**	**79**		P	**P**	**17 27 12.0**	**+0.7**
ELK					lAmb	lAmb	17 27 13.4	
	comp=Z,15nm,0.8s							
ELK	**Elko**	**42.29**	**79**		P	**P**	**17 27 12.0**	**+0.7**
ELK					pmax	pmax		
	comp=Z,15nm,0.8s							
QLMT	**Earthquake Lak**	**42.43**	**72**		P	**P**	**17 27 13.0**	**+0.6**
JNU	**Nakatsue**	**42.48**	**267**		P	**P**	**17 27 12.4**	**-0.3**
	comp=Z,16nm,0.6s,baz=66,slow=5.9,SNR=6.3							
	comp=Z,16nm,0.6s							
JNU	**Nakatsue**	**42.48**	**267**		P	**P**	**17 27 12.8**	**+0.1**
JNU					lAmb	lAmb	17 27 15.0	
	comp=Z,38nm,1.1s							
YHL	**Hebgen Lake**	**42.57**	**72**		P	**P**	**17 27 14.2**	**+0.6**
TPH	**Tonopah**	**42.57**	**84**		P	**P**	**17 27 14.6**	**+1.0**
TPH	**Tonopah**	**42.57**	**84**		P	**P**	**17 27 14.6**	**+1.0**
TPH					pmax	pmax		
	comp=Z,137nm,1.2s							
TJN	**Taejon**	**42.68**	**273**		P	**P**	**17 27 14.6**	**+0.4**
TJN	**Taejon**	**42.68**	**273**		P	**P**	**17 27 14.6**	**+0.4**
TJN					pmax	pmax		
	comp=Z,142nm,1.5s							
CIT	**Chita**	**42.75**	**301**	*e*	P	**P**	**17 27 14.7**	**0.0**
CIT				*e*			17 27 19.2	
CIT				*e*			17 27 24.9	
CIT					pmax	pmax		
	comp=Z,71nm,1.5s							
YMR	**Madison River**	**42.80**	**72**		P	**P**	**17 27 16.0**	**+0.6**
YMR					lAmb	lAmb	17 27 20.3	
	comp=Z,30nm,1.5s							
LCH	**Last Change Ra**	**42.81**	**85**		P	**P**	**17 27 15.8**	**+0.3**
LCH					lAmb	lAmb	17 27 17.9	
	comp=Z,22nm,1.1s							
PKM	**Mcpherson Peak**	**42.86**	**89**		P	**P**	**17 27 14.1**	**-1.8**
	baz=309							
YNR	**Norris Junctio**	**42.95**	**71**		P	**P**	**17 27 17.7**	**+1.1**
YFT	**Old Faithful**	**42.99**	**72**		P	**P**	**17 27 17.8**	**+0.8**
GCMT	**Greycliff**	**43.00**	**70**		P	**P**	**17 27 17.7**	**+0.8**
CWC	**Cottonwood Cre**	**43.01**	**86**		P	**P**	**17 27 14.2**	**-2.9**
	baz=308							
FFC	**Flin Flon**	**43.08**	**55**		P	**P**	**17 27 17.8**	**+0.6**
FFC	**Flin Flon**	**43.08**	**55**		P	**P**	**17 27 17.8**	**+0.6**
FFC					pmax	pmax		
	comp=Z,9.0nm,0.9s							
BCW	**Bitter Crk WRg**	**43.08**	**89**		P	**P**	**17 27 19.6**	**+2.0**
BCW					lAmb	lAmb	17 27 20.8	
	comp=Z,18nm,0.8s							
YPP	**Pitchstone Pla**	**43.11**	**72**		P	**P**	**17 27 19.0**	**+1.1**
GRAC	**Grapevine Rang**	**43.13**	**85**		P	**P**	**17 27 18.6**	**+0.7**
GRAC					lAmb	lAmb	17 27 20.6	
	comp=Z,29nm,1.2s							
GRAC	**Grapevine Rang**	**43.13**	**85**		P	**P**	**17 27 15.5**	**-2.3**
	baz=308,SNR=5.9							
LKWY	**Lake**	**43.20**	**71**		P	**P**	**17 27 18.9**	**+0.3**
LKWY					lAmb	lAmb	17 27 23.0	
	comp=Z,10nm,0.6s							
LKWY	**Lake**	**43.20**	**71**		P	**P**	**17 27 18.9**	**+0.3**
LKWY					pmax	pmax		
	comp=Z,10.0nm,0.6s							
ISA	**Isabella, Lake**	**43.23**	**87**		P	**P**	**17 27 19.2**	**+0.5**
ISA					lAmb	lAmb	17 27 20.3	
	comp=Z,17nm,0.8s							
ISA	**Isabella, Lake**	**43.23**	**87**		P	**P**	**17 27 19.3**	**+0.5**
ISA					pmax	pmax		
	comp=Z,17nm,0.9s							
ISA	**Isabella, Lake**	**43.23**	**87**		P	**P**	**17 27 16.4**	**-2.4**
	baz=309,SNR=8.4							
HVU	**Hansel Valley**	**43.25**	**76**		P	**P**	**17 27 19.9**	**+1.0**
HVU	**Hansel Valley**	**43.25**	**76**		P	**P**	**17 27 19.9**	**+1.0**
HVU					pmax	pmax		
	comp=Z,13nm,0.9s							
FLWY	**Flagg Ranch**	**43.27**	**72**		P	**P**	**17 27 20.1**	**+0.9**
FLWY					lAmb	lAmb	17 27 24.9	
	comp=Z,29nm,1.5s							
ARVC	**Arvin**	**43.34**	**88**		P	**P**	**17 27 17.2**	**-2.3**
	baz=309							
ECR	**Eagle Creek**	**43.41**	**74**		P	**P**	**17 27 21.1**	**+0.7**
MOOW	**Moose Ponds**	**43.42**	**73**		P	**P**	**17 27 20.9**	**+0.5**
TPAW	**Teton Pass**	**43.44**	**73**		P	**P**	**17 27 21.4**	**+0.8**
R11A	**Troy Canyon, C**	**43.45**	**82**		P	**P**	**17 27 20.9**	**+0.3**
R11A					lAmb	lAmb	17 27 22.6	
	comp=Z,20nm,1.0s							
R11A	**Troy Canyon, C**	**43.45**	**82**		P	**P**	**17 27 17.5**	**-3.2**
	baz=307,SNR=37							
SCZ2	**Santa Cruz Isl**	**43.54**	**90**		P	**P**	**17 27 19.2**	**-2.0**
	baz=310							
REDW	**Red Top Meadow**	**43.57**	**73**		P	**P**	**17 27 22.9**	**+1.3**
REDW					lAmb	lAmb	17 27 37.0	
	comp=Z,32nm,1.5s							
BGU	**Big Grassy Mou**	**43.57**	**77**		P	**P**	**17 27 22.7**	**+1.1**
BGU					lAmb	lAmb	17 27 27.9	
	comp=Z,22nm,1.2s							
SNOW	**Snow King Moun**	**43.57**	**73**		P	**P**	**17 27 21.8**	**+0.1**
LOHW	**Long Hollow**	**43.58**	**73**		P	**P**	**17 27 22.3**	**+0.6**
RLMT	**Red Lodge**	**43.59**	**70**		P	**P**	**17 27 21.6**	**-0.1**
RLMT					lAmb	lAmb	17 27 23.7	
	comp=Z,17nm,0.9s							
RLMT	**Red Lodge**	**43.59**	**70**		P	**P**	**17 27 18.6**	**-3.2**
	baz=302,SNR=13							
MPMC	**Manual Prospec**	**43.62**	**86**		P	**P**	**17 27 19.5**	**-2.6**
	baz=308,SNR=7.2							
OSI	**Osito Audit: C**	**43.73**	**89**		P	**P**	**17 27 20.9**	**-1.9**
	baz=310							
AHID	**Auburn Hatcher**	**43.74**	**74**		P	**P**	**17 27 23.2**	**+0.2**
S11A	**Rachel**	**43.77**	**83**		P	**P**	**17 27 24.1**	**+0.9**
S11A					lAmb	lAmb	17 27 25.5	
	comp=Z,45nm,1.0s							
FURC	**Furnace Creek,**	**43.77**	**85**		P	**P**	**17 27 20.6**	**-2.4**
	baz=308,SNR=14							
LRMC	**Laurel Mtn Rad**	**43.85**	**87**		P	**P**	**17 27 21.6**	**-2.3**
	baz=309,SNR=8.2							
TPNV	**Topopah Spring**	**43.87**	**84**		P	**P**	**17 27 24.6**	**+0.6**
TPNV	**Topopah Spring**	**43.87**	**84**		P	**P**	**17 27 24.6**	**+0.6**
TPNV					pmax	pmax		
	comp=Z,13nm,0.9s							
TPNV	**Topopah Spring**	**43.87**	**84**		P	**P**	**17 27 22.1**	**-1.9**
	baz=308,SNR=33							
EDW2	**Edwards Air Fo**	**44.03**	**88**		P	**P**	**17 27 24.1**	**-1.1**
	baz=309,SNR=8.2							
GWY	**Greenwater Val**	**44.06**	**85**		P	**P**	**17 27 26.5**	**+0.9**
GWY					lAmb	lAmb	17 27 27.4	
	comp=Z,14nm,0.9s							
QSM	**Queen of Sheba**	**44.07**	**86**		P	**P**	**17 27 26.1**	**+0.6**
QSM					lAmb	lAmb	17 27 27.4	
	comp=Z,22nm,1.1s							
SNCC	**San Nicolas Is**	**44.09**	**91**		P	**P**	**17 27 24.5**	**-1.1**
	baz=311							
HWUT	**Hardware Ranch**	**44.10**	**76**		P	**P**	**17 27 26.8**	**+0.9**
HWUT					lAmb	lAmb	17 27 30.3	
	comp=Z,19nm,1.2s							
DUG	**Dugway, Tooele**	**44.12**	**78**		P	**P**	**17 27 26.8**	**+0.8**
DUG					lAmb	lAmb	17 27 28.1	
	comp=Z,48nm,1.3s							
DUG	**Dugway, Tooele**	**44.12**	**78**		P	**P**	**17 27 26.8**	**+0.8**
DUG	**Dugway, Tooele**	**44.12**	**78**		P	**P**	**17 27 24.2**	**-1.8**
	baz=306,SNR=28							
DECC	**Green Verdugo**	**44.21**	**89**		P	**P**	**17 27 25.0**	**-1.5**
	baz=310							
PRN	**Pahroc Range**	**44.35**	**83**		P	**P**	**17 27 28.6**	**+0.8**
PSUT	**Pine Spring**	**44.44**	**81**		P	**P**	**17 27 29.2**	**+0.6**
PSUT					lAmb	lAmb	17 27 30.4	
	comp=Z,15nm,0.8s							
TCUT	**Toone Canyon**	**44.47**	**76**		P	**P**	**17 27 29.8**	**+0.9**
TCUT					lAmb	lAmb	17 27 33.4	
	comp=Z,38nm,1.2s							
SHOC	**Shoshone, Teco**	**44.49**	**85**		P	**P**	**17 27 27.1**	**-1.7**
	baz=309							
CTU	**Camp Tracy**	**44.50**	**77**		P	**P**	**17 27 29.9**	**+0.8**
CTU					lAmb	lAmb	17 27 33.5	
	comp=Z,17nm,1.0s							
GSC	**Goldstone, Bar**	**44.52**	**87**		P	**P**	**17 27 29.8**	**+0.6**
GSC					lAmb	lAmb	17 27 31.2	
	comp=Z,29nm,0.8s							
GSC	**Goldstone, Bar**	**44.52**	**87**		P	**P**	**17 27 29.8**	**+0.6**
GSC					pmax	pmax		
	comp=Z,29nm,0.8s							
GSC	**Goldstone, Bar**	**44.52**	**87**		P	**P**	**17 27 27.8**	**-1.3**
	baz=309,SNR=16							
LAO	**LASA Array**	**44.58**	**67**		P	**P**	**17 27 27.1**	**-2.3**
	baz=302							
BW06	**Boulder Array**	**44.69**	**73**		P	**P**	**17 27 30.9**	**+0.3**
BW06					lAmb	lAmb	17 27 32.1	
	comp=Z,11nm,0.8s							
BW06	**Boulder Array**	**44.69**	**73**		P	**P**	**17 27 28.5**	**-2.1**
	baz=304,SNR=18							
PD31	**Pinedale Array**	**44.69**	**73**		P	**P**	**17 27 30.7**	**+0.1**
PD31					lAmb	lAmb	17 27 32.1	
	comp=Z,9.6nm,0.8s							
PDAR	**Pinedale Array**	**44.69**	**73**		P	**P**	**17 27 31.0**	**+0.4**
	comp=Z,6.4nm,0.6s,baz=302,slow=3.7,SNR=77							
	comp=Z,6.4nm,0.6s							
PDAR	**Pinedale Array**	**44.69**	**73**		P	**P**	**17 27 30.2**	**-0.4**
CIS	**Catalina Islan**	**44.70**	**90**		P	**P**	**17 27 29.1**	**-1.4**
	baz=310							
NLU	**North Lily Min**	**44.72**	**78**		P	**P**	**17 27 31.4**	**+0.5**
NLU					lAmb	lAmb	17 27 32.8	
	comp=Z,18nm,1.0s							
JLU	**Jordanelle**	**44.74**	**77**		P	**P**	**17 27 31.9**	**+0.9**
JLU					lAmb	lAmb	17 27 35.6	
	comp=Z,29nm,1.2s							
SHPR	**Sheep Range**	**44.83**	**84**		P	**P**	**17 27 32.5**	**+0.7**
SCI2	**San Clemente I**	**44.89**	**90**		P	**P**	**17 27 31.5**	**-0.5**
	baz=311							
MPU	**Maple Canyon**	**44.96**	**78**		P	**P**	**17 27 33.6**	**+0.8**
TUQ	**Turquoise Moun**	**45.00**	**86**		P	**P**	**17 27 30.8**	**-2.2**
	baz=309,SNR=11							
HEC	**Hector,Ludlow**	**45.12**	**87**		P	**P**	**17 27 31.9**	**-2.0**
	baz=309							
ELS	**Elsinore Mount**	**45.17**	**89**		P	**P**	**17 27 35.1**	**+0.7**
ELS					lAmb	lAmb	17 27 36.1	
	comp=Z,13nm,1.0s							
FCC	**Fort Churchill**	**45.17**	**47**		P	**P**	**17 27 34.8**	**+0.9**
FCC	**Fort Churchill**	**45.17**	**47**		P	**P**	**17 27 34.8**	**+0.9**
FCC					pmax	pmax		
	comp=Z,42nm,1.1s							
TCRU	**Three Creeks R**	**45.28**	**80**		P	**P**	**17 27 36.4**	**+1.0**
TCRU					lAmb	lAmb	17 27 37.8	
	comp=Z,24nm,1.1s							
CCUT	**Cedar City**	**45.34**	**82**		P	**P**	**17 27 36.7**	**+0.9**
CCUT					lAmb	lAmb	17 27 38.0	
	comp=Z,22nm,1.1s							
MURC	**Murrieta**	**45.35**	**89**		P	**P**	**17 27 33.2**	**-2.5**
	baz=310							
XLT	**XiLinHaoTe**	**45.39**	**289**	⇑	*i*P	**P**	**17 27 37.0**	**+1.0**
XLT					pP	sP	17 27 41.5	+1.0
XLT					sP	pwP	17 27 44.5	-4.0
XLT					PcP	**PcP**	**17 29 16.0**	**+0.9**
XLT					S	**S**	**17 34 15.5**	**-0.7**
XLT					sS	sS	17 34 24.5	+2.8
XLT					pmax	pmax		
	comp=Z,30nm,0.8s							
XLT					pmax	pmax		
	comp=Z,130nm,8.3s							
XLT					LR	LR		
	comp=Z,14nm,13.9s							
XLT					LR	LR		
	comp=Z,130nm,11.2s							
XLT					LR	LR		
	comp=Z,100nm,16.1s							
SZCU	**Shurtz Canyon**	**45.48**	**81**		P	**P**	**17 27 38.1**	**+1.2**
SZCU					lAmb	lAmb	17 27 38.8	
	comp=Z,13nm,1.2s							
MSU	**Marysvale**	**45.51**	**80**		P	**P**	**17 27 37.9**	**+0.8**
MSU	**Marysvale**	**45.51**	**80**		P	**P**	**17 27 37.9**	**+0.8**
GMRC	**Granite Mounta**	**45.58**	**86**		P	**P**	**17 27 35.2**	**-2.5**
	baz=310,SNR=12							
TMUT	**Trail Mountain**	**45.65**	**78**		P	**P**	**17 27 39.0**	**+0.7**
TMUT					lAmb	lAmb	17 27 40.5	
	comp=Z,22nm,1.0s							
LCMT	**Little Creek M**	**45.74**	**82**		P	**P**	**17 27 39.6**	**+0.7**
LCMT					lAmb	lAmb	17 27 41.2	
	comp=Z,26nm,1.0s							
MTPU	**Mount Pierson**	**45.78**	**80**		P	**P**	**17 27 40.1**	**+0.6**
MTPU					lAmb	lAmb	17 27 41.9	
	comp=Z,22nm,1.1s							
PFO	**Pinyon Flats O**	**45.81**	**88**		LR	LR	17 42 55.6	
	comp=Z,97nm,18.8s,baz=246,slow=31							
PFO	**Pinyon Flats O**	**45.81**	**88**		P	**P**	**17 27 39.6**	**+0.1**
PFO					lAmb	lAmb	17 27 41.2	
	comp=Z,10nm,0.9s							
PFO	**Pinyon Flats O**	**45.81**	**88**	*i*	P	**P**	**17 27 40.4**	**+0.9**
PFO					pmax	pmax		
	comp=Z,32nm,1.4s							
PFO	**Pinyon Flats O**	**45.81**	**88**		P	**P**	**17 27 38.0**	**-1.5**
	baz=310,SNR=6.6							
TPFO	**Pinon Flats**	**45.82**	**88**		P	**P**	**17 27 37.7**	**-1.8**
	baz=310,SNR=6.4							
P17A	**Butcher Ranch,**	**45.84**	**78**		P	**P**	**17 27 39.9**	**+0.3**
P17A					lAmb	lAmb	17 27 41.7	
	comp=Z,18nm,0.8s							
BELC	**Belle Mtn. Jos**	**45.86**	**87**		P	**P**	**17 27 38.3**	**-1.6**
	baz=310,SNR=8.7							
109C	**Camp Elliot, M**	**45.87**	**89**		P	**P**	**17 27 38.3**	**-1.5**
	baz=311							
Q16A	**Castle Valley**	**45.90**	**79**		P	**P**	**17 27 40.8**	**+0.6**
RDMU	**Red Mountain**	**45.93**	**76**		P	**P**	**17 27 40.9**	**+0.5**
RDMU					lAmb	lAmb	17 27 42.5	
	comp=Z,34nm,1.1s							
P18A	**Preston Nutter**	**46.06**	**77**		P	**P**	**17 27 42.2**	**+0.6**
P18A					lAmb	lAmb	17 27 43.7	
	comp=Z,29nm,1.0s							
PKCU	**Pink Cliffs**	**46.06**	**81**		P	**P**	**17 27 42.5**	**+0.8**
PKCU					lAmb	lAmb	17 27 44.1	
	comp=Z,15nm,0.9s							
SRU	**San Rafael Swe**	**46.19**	**78**		P	**P**	**17 27 43.1**	**+0.6**
SRU					lAmb	lAmb	17 27 45.3	
	comp=Z,28nm,1.0s							
SRU	**San Rafael Swe**	**46.19**	**78**		P	**P**	**17 27 43.1**	**+0.6**
SRU					pmax	pmax		
	comp=Z,28nm,1.0s							
NEE2	**Needles Airpor**	**46.26**	**86**		P	**P**	**17 27 41.8**	**-1.0**
	baz=310							
BAR	**Barrett**	**46.28**	**89**		P	**P**	**17 27 43.8**	**+0.7**
BAR					lAmb	lAmb	17 27 44.9	
	comp=Z,15nm,1.1s							
MONP2	**Monument Peak**	**46.30**	**89**		P	**P**	**17 27 41.7**	**-1.8**
	baz=311,SNR=5.0							
IRM	**Iron Mountain**	**46.31**	**87**		P	**P**	**17 27 41.7**	**-1.5**
	baz=310,SNR=5.8							
BC3	**Big Chuckawall**	**46.43**	**87**		P	**P**	**17 27 42.8**	**-1.5**
	baz=310							
CBX	**Cerro Bola**	**46.52**	**90**		P	**P**	**17 27 46.5**	**+1.4**
K22A	**Casper**	**46.60**	**72**		P	**P**	**17 27 45.8**	**+0.2**
K22A	**Casper**	**46.60**	**72**		P	**P**	**17 27 43.4**	**-2.2**
	baz=305							
IKP	**In-Ko-Pah, Jac**	**46.66**	**89**		P	**P**	**17 27 45.2**	**-0.9**
	baz=311							
SWSC	**Sam W. Stewart**	**46.67**	**88**		P	**P**	**17 27 45.1**	**-1.0**
	baz=311							
RWWY	**Rawlins**	**46.73**	**73**		P	**P**	**17 27 46.7**	**-0.1**
RWWY					lAmb	lAmb	17 28 09.0	
	comp=Z,19nm,1.4s							
YUH	**Yuha Desert**	**46.78**	**89**		P	**P**	**17 27 47.7**	**+0.8**
PDMCI	**Parker Dam,Lak**	**46.85**	**86**		P	**P**	**17 27 46.4**	**-1.1**
	baz=310							
BLYC	**Blythe**	**46.96**	**87**		P	**P**	**17 27 48.4**	**0.0**
BLYC					lAmb	lAmb	17 27 50.0	
	comp=Z,14nm,0.8s							
O20A	**White River Ci**	**47.00**	**75**		P	**P**	**17 27 49.1**	**+0.3**
O20A					lAmb	lAmb	17 27 50.3	
	comp=Z,30nm,1.1s							
O20A	**White River Ci**	**47.00**	**75**		P	**P**	**17 27 47.5**	**-1.3**
	baz=306							
GLA	**Glamis**	**47.22**	**87**		P	**P**	**17 27 49.6**	**-0.8**
	baz=311							
RSSD	**Black Hills**	**47.27**	**69**		P	**P**	**17 27 50.5**	**-0.4**
RSSD	**Black Hills**	**47.27**	**69**		P	**P**	**17 27 50.5**	**-0.4**
RSSD					pmax	pmax		
	comp=Z,5.0nm,0.9s							
RSSD	**Black Hills**	**

baz=308,SNR=10
GUMO Guam 48.74 235 LR LR 17 48 41.3
comp=Z,25nm,18.2s,baz=102,slow=36
ISCO Idaho Springs 48.83 74 P **P** **17 28 03.8 +0.7**
ISCO IAmb IAmb 17 28 09.0
comp=Z,19nm,1.4s
ISCO Idaho Springs 48.83 74 P **P** **17 28 03.8 +0.7**
ISCO pmax pmax
comp=Z,19nm,1.5s
ISCO Idaho Springs 48.83 74 P **P** **17 28 03.4 +0.3**
baz=307,SNR=8.0
ISCO Idaho Springs 48.83 74 P **P** **17 28 01.5 -1.6**
baz=307,SNR=8.0
SONM Songino Array 48.86 299 P **P** **17 28 02.0 -1.1**
comp=Z,7.8nm,0.9s,baz=63,slow=1.4,SNR=49
SONM PcP **PcP** **17 29 26.5 -0.9**
comp=Z,3.2nm,0.7s,baz=64,slow=3.2,SNR=7.2
SONM LR LR 17 50 08.1
comp=Z,196nm,19.2s,baz=56,slow=38
comp=Z,7.8nm,0.9s
SONM Songino Array 48.86 299 P **P** **17 28 02.6 -0.4**
SONM IAmb IAmb 17 28 05.2
comp=Z,23nm,1.3s
SONM Songino Array 48.86 299 P **P** **17 28 02.6 -0.4**
SONM pmax pmax
comp=Z,23nm,1.3s
W18A Petrified Fore 49.14 82 P **P** **17 28 06.3 +0.9**
W18A IAmb IAmb 17 28 07.3
comp=Z,26nm,0.9s
W18A Petrified Fore 49.14 82 P **P** **17 28 04.3 -1.1**
baz=310,SNR=6.0
ZAK Zakamensk 49.16 303 *e*P **P** **17 28 05.3 +0.1**
ZAK pmax pmax
comp=Z,38nm,1.3s
214A Organ Pipe Nat 49.22 87 P **P** **17 28 06.3 +0.4**
214A IAmb IAmb 17 28 07.5
comp=Z,25nm,1.2s
214A Organ Pipe Nat 49.22 87 P **P** **17 28 05.0 -0.9**
baz=312,SNR=5.6
TIA Tai'an 49.28 280 *e*P **P** **17 28 06.3 0.0**
TIA pmax pmax
comp=Z,9.0nm,1.7s
S22A 4UR Ranch, Cre 49.32 77 P **P** **17 28 07.2 +0.3**
S22A IAmb IAmb 17 28 09.2
comp=Z,30nm,1.2s
S22A 4UR Ranch, Cre 49.32 77 P **P** **17 28 05.6 -1.3**
baz=308,SNR=18
AGMN Agassiz Nation 49.61 60 P **P** **17 28 08.1 -0.5**
AGMN Agassiz Nation 49.61 60 P **P** **17 28 08.2 -0.5**
baz=304,SNR=19
AGMN Agassiz Nation 49.61 60 P **P** **17 28 06.8 -1.8**
baz=304,SNR=19
Q24A Divide 49.62 75 P **P** **17 28 09.7 +0.5**
Q24A Divide 49.62 75 P **P** **17 28 07.6 -1.6**
baz=308
D32A Dogwood Acres, 49.63 61 P **P** **17 28 08.2 -0.5**
MOY Mondy 49.65 306 *e*P **P** **17 28 09.7 +0.7**
MOY pmax pmax
comp=Z,29nm,1.6s
HHC Hu-ho-hao-te 49.88 289 *e*P **P** **17 28 11.0 +0.1**
HHC pmax pmax
comp=Z,45nm,0.9s
HHC pmax pmax
comp=Z,210nm,7.0s
HHC LR LR
comp=Z,210nm,15.9s
HHC LR LR
comp=Z,250nm,14.6s
HHC LR LR
comp=Z,210nm,15.9s
HNS HongShan 50.06 283 ⇑P **P** **17 28 13.0 +0.9**
HNS S **S** **17 35 23.0 +0.7**
HNS pmax pmax
comp=Z,13nm,0.9s
HNS pmax pmax
comp=Z,130nm,6.6s
HNS LR LR
comp=Z,80nm,12.7s
HNS LR LR
comp=Z,180nm,12.7s
HNS LR LR
comp=Z,97nm,13.5s
SUSD Miller 50.07 65 P **P** **17 28 10.3 -1.9**
baz=306
SDCO Great Sand Dun 50.15 76 P **P** **17 28 13.2 0.0**
SDCO IAmb IAmb 17 28 15.0
comp=Z,14nm,1.1s
SDCO Great Sand Dun 50.15 76 P **P** **17 28 13.6 +0.4**
baz=309,SNR=20
SDCO Great Sand Dun 50.15 76 P **P** **17 28 12.7 -0.5**
baz=309,SNR=20
TUC Tucson 50.28 85 P **P** **17 28 14.3 +0.3**
TUC IAmb IAmb 17 28 18.4
comp=Z,22nm,1.1s
TUC Tucson 50.28 85 P **P** **17 28 14.3 +0.3**
TUC pmax pmax
comp=Z,22nm,1.2s
TUC Tucson 50.28 85 P **P** **17 28 13.1 -1.0**
baz=312
OGNE Ogallala 50.32 71 P **P** **17 28 12.0 -2.2**
baz=307
B35A Bob, Littlefor 50.75 59 P **P** **17 28 17.6 +0.3**
B35A IAmb IAmb 17 28 18.0
comp=Z,20nm,0.8s
B35A Bob, Littlefor 50.75 59 P **P** **17 28 16.4 -0.9**
baz=305,SNR=11
F33A 5 Mile Ranch, 50.78 62 P **P** **17 28 16.9 -0.7**
F33A IAmb IAmb 17 28 17.9
comp=Z,22nm,1.1s
F33A 5 Mile Ranch, 50.78 62 P **P** **17 28 17.3 -0.2**
baz=306,SNR=6.9
NJ2 Nanjing 50.86 275 *e*P **P** **17 28 18.5 +0.2**
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
BTO Baotou 50.96 289 *e*P **P** **17 28 19.3 +0.2**
BTO S **S** **17 35 37.5 +2.4**
BTO LR LR
comp=Z,560nm,11.4s
BTO LR LR
comp=Z,440nm,12.5s
KSCO Kaye Shedlock' 51.14 73 P **P** **17 28 20.1 -0.4**
KSCO IAmb IAmb 17 28 25.0
comp=Z,19nm,0.9s
KSCO Kaye Shedlock' 51.14 73 P **P** **17 28 19.9 -0.5**
baz=308
T25A Trinidad 51.20 76 P **P** **17 28 21.6 +0.5**
T25A IAmb IAmb 17 28 23.7
comp=Z,48nm,1.2s
T25A Trinidad 51.20 76 P **P** **17 28 20.0 -1.1**
baz=309,SNR=22
K31A O'Neill 51.27 67 P **P** **17 28 21.3 0.0**
K31A IAmb IAmb 17 28 33.6
comp=Z,18nm,0.8s
ANMO Albuquerque 51.32 80 LR LR 17 49 24.3
comp=Z,76nm,18.1s,baz=306,slow=35
ANMO Albuquerque 51.32 80 P **P** **17 28 21.9 0.0**
ANMO Albuquerque 51.32 80 P **P** **17 28 21.9 0.0**
ANMO pmax pmax
comp=Z,11nm,1.0s
ANMO Albuquerque 51.32 80 P **P** **17 28 22.1 +0.2**
baz=310,SNR=13
ANMO Albuquerque 51.32 80 P **P** **17 28 21.4 -0.5**
baz=310
SPITS Spitsbergen Ar 51.46 357 LR LR 17 52 02.9
comp=Z,148nm,18.1s,baz=324,slow=38
SPITS Spitsbergen Ar 51.46 357 P **P** **17 28 22.1 -0.1**
SPITS pmax pmax
comp=Z,44nm,1.5s
SPB2 Spitsbergen Ar 51.46 357 P **P** **17 28 22.4 +0.2**
SPB2 IAmb IAmb 17 28 25.0
comp=Z,10.0nm,0.8s
LENM Lemitar 51.49 81 P **P** **17 28 24.6 +1.4**
Y22A Socorro 51.65 81 P **P** **17 28 23.5 -0.8**
baz=311,SNR=8.5
BNM Barren Site 51.72 81 P **P** **17 28 26.1 +1.1**
CRNM Carthage 51.78 81 P **P** **17 28 26.1 +0.7**
ECSD EROS Data Cent 51.85 65 P **P** **17 28 25.0 -0.5**
ECSD IAmb IAmb 17 28 25.9
comp=Z,19nm,1.2s
ECSD EROS Data Cent 51.85 65 P **P** **17 28 25.3 -0.3**
baz=307,SNR=7.5
ECSD EROS Data Cent 51.85 65 P **P** **17 28 24.1 -1.5**
baz=307,SNR=7.5
121A Cookes Peak, D 52.05 83 P **P** **17 28 27.8 +0.4**
121A IAmb IAmb 17 28 29.1
comp=Z,13nm,0.8s
121A Cookes Peak, D 52.05 83 P **P** **17 28 27.7 +0.3**
baz=311,SNR=10
121A Cookes Peak, D 52.05 83 P **P** **17 28 26.3 -1.1**
baz=312,SNR=10
EYMN Ely 52.20 58 P **P** **17 28 28.3 +0.1**
EYMN IAmb IAmb 17 28 29.1
comp=Z,25nm,1.0s
EYMN Ely 52.20 58 P **P** **17 28 28.5 +0.4**
baz=306,SNR=10
EYMN Ely 52.20 58 P **P** **17 28 26.2 -1.9**
baz=307,SNR=10
DAG Danmarks Havn 52.24 7 *i*P **P** **17 28 31.0 +3.0**
DAG IAmb IAmb 17 28 31.5
comp=Z,3.4nm,0.5s
F36A Milaca 52.33 61 P **P** **17 28 28.7 -0.4**
F36A IAmb IAmb 17 28 29.6
comp=Z,9.9nm,0.8s
F36A Milaca 52.33 61 P **P** **17 28 29.2 +0.1**
baz=307,SNR=6.6
BGNE Belgrade 52.36 68 P **P** **17 28 28.2 -1.2**
baz=308
FRB Frobisher Bay 52.79 32 LR LR 17 52 32.6
comp=Z,146nm,18.1s,baz=302,slow=38
E38A The Farm, Brul 52.98 59 P **P** **17 28 33.7 -0.1**
E38A IAmb IAmb 17 28 34.4
comp=Z,26nm,0.7s
E38A The Farm, Brul 52.98 59 P **P** **17 28 33.4 -0.5**
baz=307,SNR=5.3
CBKS Cedar Bluff 53.02 72 P **P** **17 28 33.8 -0.6**
CBKS IAmb IAmb 17 28 46.8
comp=Z,22nm,1.1s
CBKS Cedar Bluff 53.02 72 P **P** **17 28 33.8 -0.6**
CBKS pmax pmax
comp=Z,22nm,1.1s
CBKS Cedar Bluff 53.02 72 P **P** **17 28 32.8 -1.5**
baz=309
L34A Svendsen Farm, 53.06 66 P **P** **17 28 34.1 -0.5**
L34A IAmb IAmb 17 28 35.1
comp=Z,26nm,0.8s
SPMN Marine on St. 53.12 61 P **P** **17 28 34.7 -0.2**
SPMN IAmb IAmb 17 28 46.9
comp=Z,18nm,1.1s
SPMN Marine on St. 53.12 61 P **P** **17 28 32.3 -2.6**
baz=308
LYN LuoYang 53.27 282 *e*P **P** **17 28 36.0 -0.2**
LYN sP sP 17 28 43.0 +2.3
LYN pmax pmax
comp=Z,10.0nm,1.5s
LYN pmax pmax
comp=Z,100nm,4.9s
I37A Lemond, Waseca 53.52 63 P **P** **17 28 37.8 -0.1**
I37B Waseca 53.52 63 P **P** **17 28 38.5 +0.6**
baz=308,SNR=7.4
SUMG Summit 53.73 15 P **P** **17 28 39.2 -0.3**
SUMG IAmb IAmb 17 28 42.2
comp=Z,11nm,1.0s
SUMG Summit 53.73 15 P **P** **17 28 39.2 -0.3**
SUMG pmax pmax
comp=Z,11nm,1.0s
SUMG Summit 53.73 15 *i*P **P** **17 28 39.6 +0.1**
SUMG IAmb IAmb 17 28 41.8
comp=Z,4.0nm,0.9s
MNTX Cornudas Mount 54.12 82 P **P** **17 28 42.4 -0.1**
MNTX IAmb IAmb 17 28 44.2
comp=Z,18nm,1.0s
MNTX Cornudas Mount 54.12 82 P **P** **17 28 42.9 +0.4**
baz=312,SNR=25
MNTX Cornudas Mount 54.12 82 P **P** **17 28 41.3 -1.1**
baz=312,SNR=25
N35A Tabor 54.19 67 P **P** **17 28 42.8 0.0**
MSTX Muleshoe 54.26 78 P **P** **17 28 43.2 -0.4**
MSTX IAmb IAmb 17 28 45.4
comp=Z,25nm,0.8s
MSTX Muleshoe 54.26 78 P **P** **17 28 44.1 +0.5**
baz=311,SNR=13
MSTX Muleshoe 54.26 78 P **P** **17 28 42.6 -1.0**
baz=311,SNR=13
D41A Chassel 54.32 57 P **P** **17 28 44.0 +0.3**
D41A Chassel 54.32 57 P **P** **17 28 44.7 +1.0**
baz=308
AMTX Amarillo 54.35 77 P **P** **17 28 44.4 +0.2**
AMTX IAmb IAmb 17 28 56.5
comp=Z,13nm,0.9s
AMTX Amarillo 54.35 77 P **P** **17 28 42.8 -1.4**
baz=311
DBG Daneborg 54.46 8 *i*P **P** **17 28 45.4 +1.1**
G40A Rib Lake 54.54 60 P **P** **17 28 45.4 0.0**
G40A IAmb IAmb 17 28 46.1
comp=Z,19nm,0.8s
G40A Rib Lake 54.54 60 P **P** **17 28 45.7 +0.3**
baz=309,SNR=10
COWI Conover 54.61 58 P **P** **17 28 45.1 -0.7**
COWI IAmb IAmb 17 28 46.5
comp=Z,18nm,0.9s
COWI Conover 54.61 58 P **P** **17 28 45.4 -0.4**
baz=309
KSU1 Kansas State U 54.73 69 P **P** **17 28 46.1 -0.7**
KSU1 IAmb IAmb 17 28 48.4
comp=Z,13nm,0.6s
KSU1 Kansas State U 54.73 69 P **P** **17 28 45.4 -1.3**
baz=310
K38A Parkersburg 54.73 64 P **P** **17 28 46.4 -0.4**
K38A IAmb IAmb 17 28 47.4
comp=Z,20nm,0.9s
SCIA State Center 54.94 65 P **P** **17 28 46.4 -1.9**
baz=310
I40A Norwalk 55.17 61 P **P** **17 28 49.4 -0.6**
I40A IAmb IAmb 17 28 50.6
comp=Z,17nm,0.9s
SSLB Suanglung 55.20 266 P **P** **17 28 50.3 -0.1**
SSLB IAmb IAmb 17 28 51.7
comp=Z,22nm,1.1s
F42A Maple Grove Fa 55.37 58 P **P** **17 28 51.6 +0.3**
E43A Lone Tree Farm 55.59 57 P **P** **17 28 52.8 -0.1**
E43A Lone Tree Farm 55.59 57 P **P** **17 28 52.9 0.0**
baz=309,SNR=16
N38A Joes South For 55.64 66 P **P** **17 28 52.6 -0.7**
SFJD Kangerlussuaq 55.77 23 LR LR 17 57 16.0
comp=Z,68nm,18.1s,baz=308,slow=41
XAN Xi'an 55.82 284 ⇑P **P** **17 28 54.8 +0.1**
XAN pmax pmax
comp=Z,9.0nm,0.9s
XAN pmax pmax
comp=Z,100nm,7.5s
XAN LR LR
comp=Z,120nm,14.6s
XAN LR LR
comp=Z,210nm,17.5s
XAN LR LR
comp=Z,120nm,15.2s
L40A Anamosa 55.99 63 P **P** **17 28 55.0 -0.8**
L40A IAmb IAmb 17 28 56.1
comp=Z,23nm,1.1s
L40A Anamosa 55.99 63 P **P** **17 28 55.5 -0.3**
baz=310,SNR=6.1
JFWS Jewell Farm 56.00 62 P **P** **17 28 54.9 -1.0**
JFWS IAmb IAmb 17 28 56.0
comp=Z,15nm,0.8s
JFWS Jewell Farm 56.00 62 P **P** **17 28 54.9 -1.0**
JFWS pmax pmax
comp=Z,15nm,0.9s
JFWS Jewell Farm 56.00 62 P **P** **17 28 53.5 -2.4**
baz=310
I42A Draeger Farm, 56.12 60 P **P** **17 28 56.4 -0.3**
I42A IAmb IAmb 17 28 57.5
comp=Z,29nm,0.9s
I42A Draeger Farm, 56.12 60 P **P** **17 28 56.5 -0.3**
baz=310,SNR=6.0
ZAA0 Zalesovo Array 56.13 315 P **P** **17 28 56.4 -0.2**
ZALV Zalesovo Beam 56.13 315 P **P** **17 28 56.2 -0.4**
comp=Z,1.1nm,0.4s,baz=56,slow=6.8,SNR=6.6
ZALV PcP **PcP** **17 29 54.7 +0.3**
comp=Z,0.5nm,0.3s,baz=22,slow=4.8,SNR=4.2
ZALV LR LR 17 55 30.4
comp=Z,100nm,18.8s,baz=42,slow=39
comp=Z,1.1nm,0.4s
ZALV Zalesovo Beam 56.13 315 *i*P **P** **17 29 00.1 +3.5**
ZALV pmax pmax
comp=Z,1.0nm,0.4s
P38A Dawn 56.22 67 P **P** **17 28 56.4 -1.0**
P38A IAmb IAmb 17 28 57.3
comp=Z,8.6nm,0.7s
WMOK Wichita Mounta 56.24 75 P **P** **17 28 57.9 +0.2**
WMOK IAmb IAmb 17 28 58.9
comp=Z,12nm,0.8s
WMOK Wichita Mounta 56.24 75 P **P** **17 28 57.9 +0.2**
WMOK pmax pmax
comp=Z,12nm,0.9s
WMOK Wichita Mounta 56.24 75 P **P** **17 28 58.3 +0.5**
baz=312,SNR=6.8
WMOK Wichita Mounta 56.24 75 P **P** **17 28 56.3 -1.5**
baz=312,SNR=6.8
H43A Windswept, Lux 56.39 59 P **P** **17 28 58.8 +0.2**
H43A Windswept, Lux 56.39 59 P **P** **17 28 58.8 +0.2**
baz=310,SNR=6.2
ICESG Greenland Ices 56.48 17 *i*P **P** **17 28 58.9 -0.5**
ICESG IAmb IAmb 17 29 00.9
comp=Z,5.8nm,0.7s
FNO Franklin 56.74 73 P **P** **17 29 00.7 -0.6**
FNO IAmb IAmb 17 29 24.2
comp=Z,10nm,0.6s
SLBS Sierra La Lagu 56.74 92 P **P** **17 29 02.1 +0.6**
SLBS IAmb IAmb 17 29 23.0
comp=Z,21nm,1.4s
TX31 Lajitas Ar. Si 56.81 83 P **P** **17 29 01.8 -0.1**
TX31 Lajitas Ar. Si 56.81 83 P **P** **17 29 01.9 -0.1**
baz=314,SNR=7.2
TX32 Lajitas Array 56.81 83 P **P** **17 29 01.4 -0.6**
TX32 IAmb IAmb 17 29 03.1
comp=Z,18nm,1.0s
TXAR Lajitas Array 56.81 83 P **P** **17 29 01.7 -0.2**
comp=Z,13nm,1.0s,baz=300,slow=5.0,SNR=57
TXAR PcP **PcP** **17 29 57.9 +0.3**
comp=Z,3.9nm,0.8s,baz=224,slow=1.3,SNR=7.1
comp=Z,13nm,1.0s
TXAR Lajitas Array 56.81 83 P **P** **17 29 01.2 -0.7**
L42A Oliver, Polo 56.91 63 P **P** **17 29 01.3 -1.1**
L42A IAmb IAmb 17 29 02.4
comp=Z,28nm,1.2s
L42A Oliver, Polo 56.91 63 P **P** **17 29 01.8 -0.6**
baz=310
X34A Smith Ranch, M 56.91 74 P **P** **17 29 03.1 +0.6**
X34A IAmb IAmb 17 29 04.2
comp=Z,36nm,1.4s
E46A Sault Ste Mari 57.03 56 P **P** **17 29 03.6 +0.5**
E46A IAmb IAmb 17 29 04.6
comp=Z,22nm,0.8s
E46A Sault Ste Mari 57.03 56 P **P** **17 29 03.7 +0.5**
baz=310,SNR=9.0
N41A Harden Midland 57.08 64 P **P** **17 29 03.1 -0.5**
N41A IAmb IAmb 17 29 03.8
comp=Z,15nm,0.7s
N41A Harden Midland 57.08 64 P **P** **17 29 02.2 -1.3**
baz=311
ABTX Abilene, Hawle 57.11 77 P **P** **17 29 03.2 -0.8**
ABTX IAmb IAmb 17 29 05.0
comp=Z,29nm,1.1s
ABTX Abilene, Hawle 57.11 77 P **P** **17 29 04.5 +0.6**
baz=312,SNR=5.7
ABTX Abilene, Hawle 57.11 77 P **P** **17 29 02.1 -1.9**
baz=313,SNR=5.7
P40A Paris 57.15 66 P **P** **17 29 03.3 -0.8**
P40A IAmb IAmb 17 29 04.1
comp=Z,22nm,0.7s
P40A Paris 57.15 66 P **P** **17 29 03.2 -0.8**
baz=311,SNR=12
HPIG 57.19 86 P **P** **17 29 04.8 0.0**
HPIG IAmb IAmb 17 29 08.6
comp=Z,20nm,1.2s
DY2G Dye2 57.24 22 *i*P **P** **17 29 04.6 0.0**
DY2G IAmb IAmb 17 29 06.2
comp=Z,3.7nm,0.6s
TUL1 Leonard 57.29 72 P **P** **17 29 04.8 -0.4**
TUL1 IAmb IAmb 17 29 05.8
comp=Z,23nm,1.4s
TUL1 Leonard 57.29 72 P **P** **17 29 02.9 -2.2**
baz=312
I45A Fountain 57.51 59 P **P** **17 29 06.6 +0.1**
LZH Lanzhou 57.58 289 ⇑P **P** **17 29 08.5 +1.1**
LZH pP sP 17 29 12.0 +0.1
LZH pmax pmax
comp=Z,36nm,1.3s
LZH pmax pmax
comp=Z,190nm,6.5s
LZH LR LR
comp=Z,170nm,16.8s
LZH LR LR
comp=Z,200nm,15.5s
LZH LR LR
comp=Z,230nm,19.6s
S39A Bolivar 57.60 69 P **P** **17 29 05.7 -1.6**
GTA Gaotai 57.78 294 ⇑P **P** **17 29 09.5 +0.8**
GTA pP sP 17 29 15.3 +2.0
GTA S **S** **17 37 10.5 +3.5**
GTA pmax pmax
comp=Z,10.0nm,1.0s
GTA pmax pmax
comp=Z,100nm,4.0s
GTA LR LR
comp=Z,92nm,16.4s
GTA LR LR
comp=Z,150nm,17.4s
GTA LR LR
comp=Z,140nm,15.6s
L44A Lake County Fo 57.79 61 P **P** **17 29 06.8 -1.8**
baz=311
U38A Gravette 57.79 70 P **P** **17 29 06.4 -2.3**
R40A Maddies Statio 57.83 67 P **P** **17 29 06.6 -2.3**
R40A Maddies Statio 57.83 67 P **P** **17 29 06.4 -2.5**
baz=312,SNR=5.2
SCO Scoresbysund 57.91 10 *i*P **P** **17 29 09.5 +0.5**
HDIL Hopedale 58.07 64 P **P** **17 29 08.6 -2.0**
baz=312
Z35A Perchaven, San 58.12 75 P **P** **17 29 10.8 -0.2**
Z35A IAmb IAmb 17 29 31.7
comp=Z,32nm,1.3s
HHAR Hobbs 58.17 70 P **P** **17 29 10.4 -0.9**
M44A Midewin, Midew 58.24 62 P **P** **17 29 11.1 -0.6**
M44A Midewin, Midew 58.24 62 P **P** **17 29 11.7 0.0**
baz=311
X37A Clayton 58.43 73 P **P** **17 29 13.0 -0.2**
X37A IAmb IAmb 17 29 17.0
comp=Z,16nm,1.4s
JCT Junction City 58.47 79 P **P** **17 29 12.7 -0.8**
JCT IAmb IAmb 17 29 13.7
comp=Z,20nm,1.2s
JCT Junction City 58.47 79 P **P** **17 29 12.7 -0.8**
JCT pmax pmax
comp=Z,20nm,1.2s
JCT Junction City 58.47 79 P **P** **17 29 12.5 -1.0**
baz=314
JCT Junction City 58.47 79 P **P** **17 29 11.8 -1.7**
baz=314
P43A Skaggs, Pawnee 58.55 65 P **P** **17 29 13.4 -0.5**
P43A IAmb IAmb 17 29 14.2
comp=Z,20nm,0.8s
JMIC Jan Mayen 58.55 5 LR LR 17 53 44.5
comp=Z,43nm,21.6s,baz=54,slow=35
MGMO Mountain Grove 58.59 68 P **P** **17 29 12.6 -1.7**
MGMO IAmb IAmb 17 29 17.5
comp=Z,13nm,1.4s
CCM Cathedral Cave 58.59 67 P **P** **17 29 12.8 -1.5**
CCM Cathedral Cave 58.59 67 P **P** **17 29 12.8 -1.5**
CCM pmax pmax
comp=Z,5.0nm,0.9s
CCM Cathedral Cave 58.59 67 P **P** **17 29 12.0 -2.3**
baz=312
SLM Saint Louis 58.80 66 P **P** **17 29 15.0 -0.6**
SLM Saint Louis 58.80 66 P **P** **17 29 15.0 -0.6**
SLM pmax pmax
comp=Z,20nm,0.7s
J47A Sunmer 58.80 59 P **P** **17 29 15.7 0.0**
O44A Mansfield 58.81 63 P **P** **17 29 15.0 -0.8**
WHTX Lake Whitney, 58.90 76 P **P** **17 29 16.7 +0.2**
WHTX Lake Whitney, 58.90 76 P **P** **17 29 15.7 -0.8**
baz=313
W39A Magazine 58.99 71 P **P** **17 29 16.3 -0.7**
baz=312
W39A Magazine 58.99 71 P **P** **17 29 15.4 -1.6**
baz=313
FVM French Village 59.12 67 P **P** **17 29 15.9 -2.0**
FVM IAmb IAmb 17 29 17.4
comp=Z,7.9nm,0.8s
FVM French Village 59.12 67 P **P** **17 29 15.9 -2.0**
FVM pmax pmax
comp=Z,8.0nm,0.8s
ARCES ARCESS Array B 59.36 352 P **P** **17 29 18.1 -1.0**
comp=Z,3.1nm,0.7s,baz=23,slow=7.6,SNR=17
ARCES PcP **PcP** **17 30 06.8 0.0**
comp=Z,6.9nm,0.6s,baz=15,slow=5.0,SNR=12
ARCES LR LR 17 58 41.7
comp=Z,69nm,18.0s,baz=6.0,slow=40

comp=Z,3.1nm,0.7s
ARCES ARCESS Array B 59.36 352 P P 17 29 17.8 -1.3
ARCES lAmb lAmb 17 29 30.2
comp=Z,16nm,1.5s
ARCES ARCESS Array B 59.36 352 P P 17 29 17.8 -1.3
ARCES pmax pmax
comp=Z,16nm,1.5s
VLDQ Val d'Or 59.38 50 P P 17 29 18.3 -1.2
VLDQ lAmb lAmb 17 29 19.6
comp=Z,25nm,1.1s
I49A Point Hope 59.42 57 P P 17 29 19.8 -0.1
SFIN Lafayette 59.44 62 P P 17 29 20.3 +0.2
SFIN Lafayette 59.44 62 P P 17 29 20.0 -0.1
baz=312,SNR=5.0
SFIN Lafayette 59.44 62 P P 17 29 18.8 -1.3
baz=312,SNR=5.0
SCHQ Schefferville 59.50 39 P P 17 29 20.7 +0.4
comp=Z,4.7nm,0.8s,baz=316,slow=7.7,SNR=7.5
comp=Z,4.7nm,0.8s
SCHQ Schefferville 59.50 39 P P 17 29 21.1 +0.8
SCHQ lAmb lAmb 17 29 22.1
comp=Z,8.4nm,0.9s
FCAR Ozark Folk Cen 59.52 69 P P 17 29 19.2 -1.5
FCAR lAmb lAmb 17 29 20.4
comp=Z,18nm,1.3s
MIAR Mount Ida 59.55 72 P P 17 29 20.4 -0.5
MIAR lAmb lAmb 17 29 24.5
comp=Z,16nm,1.1s
MIAR Mount Ida 59.55 72 P P 17 29 20.5 -0.5
MIAR pmax pmax
comp=Z,16nm,1.1s
MIAR Mount Ida 59.55 72 P P 17 29 20.5 -0.5
baz=313,SNR=7.1
MIAR Mount Ida 59.55 72 P P 17 29 19.9 -1.0
baz=313,SNR=7.1
Z38A Mt. Pleasant 59.56 74 P P 17 29 20.8 -0.2
435B Jarrell 59.65 77 P P 17 29 21.6 -0.1
435B lAmb lAmb 17 29 22.7
comp=Z,18nm,0.9s
435B Jarrell 59.65 77 P P 17 29 21.0 -0.7
baz=314
WHAR Wooly Hollow 59.83 70 P P 17 29 21.9 -0.9
LVZ Lovozero 59.84 347 P P 17 29 22.3 -0.1
LVZ lAmb lAmb 17 29 23.9
comp=Z,12nm,0.8s
LVZ Lovozero 59.84 347 *ce* P P 17 29 22.0 -0.5
LVZ pmax pmax
comp=Z,16nm,1.7s
L48A N Adams 59.88 60 P P 17 29 22.9 -0.3
L48A N Adams 59.88 60 P P 17 29 23.7 +0.5
baz=312,SNR=5.5
L48A P P 17 29 23.7 +0.5
baz=312,SNR=5.5
P46A Rosedale 59.89 63 P P 17 29 22.0 -1.2
P46A lAmb lAmb 17 29 24.8
comp=Z,29nm,1.2s
N47A Urbana 59.90 61 P P 17 29 21.7 -1.5
237A Washetta, Mont 59.91 75 P P 17 29 23.5 +0.1
PBMO Poplar Bluff 59.93 68 P P 17 29 22.3 -1.2
PBMO lAmb lAmb 17 29 23.2
comp=Z,10nm,0.8s
W41B Gary Mavity, V 59.93 70 P P 17 29 22.3 -1.2
W41B lAmb lAmb 17 29 23.7
comp=Z,15nm,1.3s
W41B Gary Mavity, V 59.93 70 P P 17 29 21.7 -1.8
baz=313
OLIL Olney 59.97 64 P P 17 29 23.0 -0.8
OLIL lAmb lAmb 17 29 24.3
comp=Z,19nm,1.0s
LCAR Lake Charles 59.98 69 P P 17 29 22.5 -1.3
LCAR lAmb lAmb 17 29 24.4
comp=Z,12nm,1.5s
AAM Ann Arbor 60.07 59 P P 17 29 24.0 -0.4
AAM Ann Arbor 60.07 59 P P 17 29 24.0 -0.4
AAM pmax pmax
comp=Z,40nm,0.4s
833A Chaparral WMA, 60.21 81 P P 17 29 25.3 -0.2
833A Chaparral WMA, 60.21 81 P P 17 29 25.8 +0.3
baz=314
833A Chaparral WMA, 60.21 81 P P 17 29 24.1 -1.4
baz=315
WLAR White Oak Lake 60.42 72 P P 17 29 26.5 -0.3
WLAR lAmb lAmb 17 29 27.8
comp=Z,16nm,0.7s
O48B Farmland 60.62 61 P P 17 29 25.6 -2.6
baz=313
SADO Sadowa 60.80 54 LR LR 17 58 07.4
comp=Z,169nm,18.4s,baz=220,slow=38
SADO Sadowa 60.80 54 P P 17 29 29.8 +0.4
IVI Ivigtut 61.05 26 *i* P P 17 29 31.3 +0.6
IVI lAmb lAmb 17 29 32.2
comp=Z,16nm,0.6s
KURK Kurchatov 61.12 316 P P 17 29 31.0 -0.3
KURK Kurchatov 61.12 316 *ce* P P 17 29 31.1 -0.3
KURK pmax pmax
comp=Z,36nm,1.0s
KRVT Keravat (AS076 61.20 217 LR LR 17 53 09.4
comp=Z,41nm,18.6s,baz=202,slow=33
KURBB Kurchatov Arra 61.22 316 LR LR 17 58 33.1
comp=Z,122nm,18.8s,baz=20,slow=38
HKT Hockley 61.31 77 P P 17 29 32.3 -0.6
HKT lAmb lAmb 17 29 35.3
comp=Z,17nm,1.2s
HKT Hockley 61.31 77 P P 17 29 32.3 -0.6
HKT pmax pmax
comp=Z,17nm,1.3s
P49A Miami Univ. Ec 61.36 62 P P 17 29 32.1 -1.1
P49A Miami Univ. Ec 61.36 62 P P 17 29 31.7 -1.5
baz=314
WMQ Urumqi 61.53 305 *e* P P 17 29 35.5 +1.1
WMQ pP sP 17 29 40.0 +1.0
WMQ pmax pmax
comp=Z,20nm,0.9s
WMQ LR LR
comp=Z,240nm,18.5s
WMQ LR LR
comp=Z,120nm,21.7s
N51A Ashland 61.72 59 P P 17 29 35.6 0.0
T47A Sharon Grove 61.74 65 P P 17 29 35.5 -0.2
T47A lAmb lAmb 17 29 36.4
comp=Z,12nm,0.7s
DELO Deloro Mine 61.76 54 P P 17 29 37.0 +1.1
M52A Chesterland 61.84 58 P P 17 29 36.7 +0.3
ACSO Alum Creek Sta 61.85 60 P P 17 29 34.1 -2.5
baz=314
WVT Waverly 61.90 66 P P 17 29 34.5 -2.4
baz=314
OXF Oxford 62.08 69 P P 17 29 36.4 -1.7
baz=314
TRQ Mont Tremblant 62.11 50 P P 17 29 38.4 +0.1
ZAIG Zacatecas 62.12 87 P P 17 29 38.6 -0.3
ZAIG lAmb lAmb 17 29 39.9
comp=Z,15nm,1.2s
ERPA Erie 62.18 57 P P 17 29 36.2 -2.5
baz=314
MK31 Makanchi Array 62.19 311 P P 17 29 37.8 -0.9
MK31 lAmb lAmb 17 29 39.5
comp=Z,11nm,0.8s
MK31 Makanchi Array 62.19 311 P P 17 29 37.8 -0.9
MK31 pmax pmax
comp=Z,11nm,0.9s
MKAR Makanchi Array 62.19 311 P P 17 29 38.1 -0.7
comp=Z,12nm,0.7s,baz=51,slow=7.3,SNR=93
comp=Z,12nm,0.7s
MKAR Makanchi Array 62.19 311 P P 17 29 37.7 -1.0
M53A WI Miller and 62.28 58 P P 17 29 39.8 +0.4
M53A WI Miller and 62.28 58 P P 17 29 37.7 -1.7
baz=314,SNR=5.3
MAKZ Makanchi 62.33 311 P P 17 29 38.5 -1.2
MAKZ lAmb lAmb 17 29 40.4
comp=Z,15nm,0.8s
MAKZ Makanchi 62.33 311 P P 17 29 38.5 -1.2
MAKZ pmax pmax
comp=Z,15nm,0.8s
TGY Tagaytay City 62.37 258 P P 17 29 40.0 -0.3
comp=Z,84nm,0.3s,baz=9.3,slow=15,SNR=3.3
TGY Tagaytay City 62.37 258 P P 17 29 40.0 -0.3
ALLY Alegheny Colle 62.42 57 P P 17 29 40.9 +0.6
ALLY Alegheny Colle 62.42 57 P P 17 29 41.2 +0.8
baz=314,SNR=8.0
R50A Paris 62.44 63 P P 17 29 40.5 0.0
R50A lAmb lAmb 17 29 44.2
comp=Z,20nm,1.4s
Q51A Peebles 62.48 61 P P 17 29 40.8 0.0
Q51A lAmb lAmb 17 29 42.7
comp=Z,15nm,0.8s

PECO Prince Edward 62.49 54 P P 17 29 41.6 +0.9
PLAL Pickwick Lake 62.55 68 P P 17 29 40.5 -0.8
PLAL lAmb lAmb 17 29 41.4
comp=Z,12nm,1.0s
O52A Adamsville 62.57 60 P P 17 29 40.9 -0.4
O52A Adamsville 62.57 60 P P 17 29 41.4 +0.1
baz=314,SNR=6.1
O52A P P 17 29 41.4 +0.1
baz=314,SNR=6.1
P52A Corning 62.74 60 P P 17 29 40.6 -1.8
baz=314
O53A New Philadelph 62.82 59 P P 17 29 43.0 0.0
O53A New Philadelph 62.82 59 P P 17 29 41.4 -1.6
baz=314
MMNY Mt. Morris Dam 62.86 55 P P 17 29 44.3 +1.1
GOMU GeErMu 62.87 295 P P 17 29 44.3 +0.5
GOMU sP sP 17 29 48.3 -0.1
GOMU PcP **PcP** **17 30 22.8 +0.8**
GOMU pmax pmax
comp=Z,9.0nm,1.0s
BVAR Borovoye Array 62.90 322 LR LR 17 59 19.2
comp=Z,94nm,19.4s,baz=290,slow=38
T50A Nancy 63.02 64 P P 17 29 44.3 -0.1
T50A lAmb lAmb 17 29 48.6
comp=Z,21nm,1.2s
MNTQ Montreal, Queb 63.08 50 P P 17 29 44.1 -0.5
MNTQ lAmb lAmb 17 29 45.3
comp=Z,13nm,0.9s
BMNY Brushton-Moira 63.11 52 P P 17 29 45.0 +0.1
baz=315,SNR=6.3
WCNY West Carthage 63.14 53 P P 17 29 45.9 +0.8
baz=315,SNR=12
LONY Lake Ozonia 63.23 52 P P 17 29 45.2 -0.4
LONY lAmb lAmb 17 29 46.6
comp=Z,16nm,1.1s
LONY Lake Ozonia 63.23 52 P P 17 29 42.9 -2.8
baz=316,SNR=6.0
P53A Whipple 63.25 60 P P 17 29 46.2 +0.3
P53A lAmb lAmb 17 29 46.9
comp=Z,14nm,0.8s
M55A Ridgway 63.29 57 P P 17 29 46.8 +0.7
M55A Ridgway 63.29 57 P P 17 29 47.0 +0.8
baz=315,SNR=12
M55A P P 17 29 47.0 +0.8
baz=315,SNR=12
O54A Avella 63.32 59 P P 17 29 45.6 -0.7
J57A Williamstown 63.37 53 P P 17 29 47.3 +0.7
J57A Williamstown 63.37 53 P P 17 29 47.5 +0.9
baz=315,SNR=15
J57A P P 17 29 47.5 +0.9
baz=315,SNR=15
BORG Borgarnes 63.45 12 LR LR 18 01 13.0
comp=Z,38nm,18.3s,baz=326,slow=40
L56A Greenwood 63.46 55 P P 17 29 47.8 +0.5
L56A Greenwood 63.46 55 P P 17 29 47.5 +0.3
baz=315,SNR=14
L56A P P 17 29 47.5 +0.3
baz=315,SNR=14
SVE Sverdlovsk 63.46 329 *e* P P 17 29 48.4 +1.4
SVE pmax pmax
comp=Z,39nm,1.1s
PRGR Permogore 63.53 339 *e* P P 17 29 46.9 -0.4
FRNY Flat Rock 63.57 51 P P 17 29 47.4 -0.6
FRNY lAmb lAmb 17 29 48.6
comp=Z,19nm,1.4s
K57A Scipio Center 63.58 54 P P 17 29 48.6 +0.5
K57A Scipio Center 63.58 54 P P 17 29 48.4 +0.3
baz=315,SNR=8.1
R53A Hurricane 63.75 61 P P 17 29 49.5 +0.3
J58A Remsen 63.77 53 P P 17 29 49.7 +0.4
J58A Remsen 63.77 53 P P 17 29 49.7 +0.4
baz=316,SNR=16
J58A P P 17 29 49.7 +0.4
baz=316,SNR=16
NCB Newcomb 63.87 52 P P 17 29 50.3 +0.4
NCB Newcomb 63.87 52 P P 17 29 50.6 +0.7
baz=316,SNR=8.0
Q54A Coxs Mills 63.91 60 P P 17 29 50.8 +0.6
MCWV Mont Chateau 63.98 59 P P 17 29 51.2 +0.6
MCWV Mont Chateau 63.98 59 P P 17 29 49.1 -1.6
baz=315
J59A Piesco 64.09 53 P P 17 29 51.2 -0.2
J59A Piesco 64.09 53 P P 17 29 51.7 +0.2
baz=316,SNR=16
J59A P P 17 29 51.7 +0.2
baz=316,SNR=16
TZTN Tazewell 64.10 63 P P 17 29 49.5 -2.0
baz=315
D62A Allapoint, All 64.13 47 P P 17 29 52.1 +0.6
D62A lAmb lAmb 17 29 53.1
comp=Z,18nm,1.0s
AFI Afiamalu 64.14 176 LR LR 17 55 13.5
comp=Z,41nm,19.4s,baz=354,slow=34
BINY Binghamton 64.24 54 P P 17 29 53.5 +1.1
BINY Binghamton 64.24 54 P P 17 29 53.2 +0.9
baz=316,SNR=6.5
BINY Binghamton 64.24 54 P P 17 29 50.1 -2.2
baz=316,SNR=6.5
M57A Sunshine Farm, 64.25 56 P P 17 29 53.0 +0.5
M57A Sunshine Farm, 64.25 56 P P 17 29 52.0 -0.5
baz=316,SNR=8.5
M57A P P 17 29 52.0 -0.5
baz=316,SNR=8.5
SSPA Standing Stone 64.35 57 P P 17 29 53.4 +0.3
SSPA Standing Stone 64.35 57 P P 17 29 53.4 +0.3
baz=316,SNR=11
SSPA Standing Stone 64.35 57 P P 17 29 51.3 -1.8
baz=316
VT1 Waterbury 64.35 51 P P 17 29 53.2 +0.2
ARU Arti 64.45 330 LR LR 18 01 09.7
comp=Z,90nm,18.5s,baz=24,slow=39
ARU Arti 64.45 330 P P 17 29 53.4 -0.1
ARU Arti 64.45 330 *d* P P 17 29 53.8 +0.3
ARU 17 30 27.2
ARU 17 32 12.9
ARU S **S** **17 38 35.2 +4.0**
ARU pmax pmax
comp=Z,39nm,0.8s
ARU MLR MLR
comp=Z,161nm,18.0s
MCVT Middlebury Col 64.50 51 P P 17 29 54.4 +0.3
baz=316
LRAL Lakeview Retre 64.55 68 P P 17 29 53.2 -1.3
LRAL Lakeview Retre 64.55 68 P P 17 29 53.0 -1.5
baz=315
F62A Pittston Farm, 64.57 48 P P 17 29 55.0 +0.5
F62A lAmb lAmb 17 29 55.8
comp=Z,13nm,0.8s
F62A Pittston Farm, 64.57 48 P P 17 29 54.5 +0.1
baz=317
F62A P P 17 29 54.5 +0.1
baz=317
ACCN Adirondack Com 64.58 52 P P 17 29 54.8 +0.3
ACCN Adirondack Com 64.58 52 P P 17 29 55.1 +0.6
baz=316,SNR=9.4
HCNY Howe Caverns 64.70 53 P P 17 29 56.9 +1.5
baz=316,SNR=6.0
L59A Walton 64.73 54 P P 17 29 56.4 +0.8
L59A Walton 64.73 54 P P 17 29 56.7 +1.0
baz=316,SNR=16
L59A P P 17 29 56.7 +1.0
baz=316,SNR=16
G62A West of Eustis 64.79 49 P P 17 29 56.3 +0.4
G62A West of Eustis 64.79 49 P P 17 29 56.5 +0.5
baz=317,SNR=8.8
G62A P P 17 29 56.5 +0.5
baz=317,SNR=8.8
KSPA Keystone Colle 64.81 55 P P 17 29 56.6 +0.6
KSPA Keystone Colle 64.81 55 P P 17 29 56.7 +0.6
baz=316,SNR=5.1
N58A Sunbury 64.83 56 P P 17 29 56.9 +0.7
N58A Sunbury 64.83 56 P P 17 29 56.7 +0.5
baz=316,SNR=6.9
N58A P P 17 29 56.7 +0.5
baz=316,SNR=6.9
LBNH Lisbon 64.83 50 P P 17 29 56.7 +0.5
LBNH lAmb lAmb 17 29 57.6
comp=Z,18nm,0.9s
LBNH Lisbon 64.83 50 P P 17 29 56.7 +0.5
LBNH pmax pmax
comp=Z,18nm,1.0s
LBNH Lisbon 64.83 50 P P 17 29 54.7 -1.5
baz=317
PQI Presque Isle 64.92 46 P P 17 29 56.8 +0.1
PQI lAmb lAmb 17 29 57.6
comp=Z,12nm,0.8s

H62A Milan 64.96 50 P P 17 29 57.4 +0.4
H62A Milan 64.96 50 P P 17 29 57.2 +0.2
baz=317,SNR=16
H62A P P 17 29 57.2 +0.2
baz=317,SNR=16
DAV Davao City (W) 64.97 250 LR LR 17 53 30.4
comp=Z,44nm,20.2s,baz=82,slow=32
TRY Troy 65.05 53 P P 17 29 56.6 -1.0
P57A Homestead Farm 65.10 58 P P 17 29 58.4 +0.4
F63A Nahmakanta, Br 65.12 48 P P 17 29 58.5 +0.4
F63A lAmb lAmb 17 29 59.4
comp=Z,12nm,1.0s
J61A Chester 65.16 52 P P 17 29 59.2 +0.9
J61A Chester 65.16 52 P P 17 29 59.3 +0.9
baz=317,SNR=6.5
J61A P P 17 29 59.3 +0.9
baz=317,SNR=6.5
MOIG Morelia 65.24 89 P P 17 29 59.5 0.0
PAGS Pennsylvania G 65.26 56 P P 17 29 59.2 +0.1
KIRV Kirov 65.29 336 LR LR 18 02 06.5
comp=Z,63nm,18.2s,baz=20,slow=39
KIRV Kirov 65.29 336 *ce* P P 17 30 00.0 +1.1
PKME Peaks-Kenny Pk 65.36 48 P P 17 30 00.3 +0.7
PKME lAmb lAmb 17 30 00.9
comp=Z,15nm,1.0s
PKME Peaks-Kenny Pk 65.36 48 P P 17 29 57.8 -1.7
baz=318
F64A Sherman 65.36 47 P P 17 29 60.0 +0.4
F64A lAmb lAmb 17 30 00.7
comp=Z,17nm,0.8s
BLA Blacksburg 65.39 61 P P 17 29 59.0 -1.0
baz=316
PZH PanZhiHua 65.49 282 P P 17 30 01.3 +0.4
PZH pmax pmax
comp=Z,30nm,0.9s
PZH pmax pmax
comp=Z,60nm,4.2s
NPNY Mohonk Preserv 65.51 54 P P 17 30 01.5 +0.9
baz=317,SNR=9.3
FFD Franklin Falls 65.52 51 P P 17 30 00.9 +0.3
KLMR Klimovskoe 65.53 342 *e* P P 17 29 58.6 -1.8
KLMR pmax pmax
comp=Z,34nm,1.3s
KLMR Klimovskoe 65.53 342 *e* P P 17 29 58.7 -1.7
KLMR AMP 17 30 02.5
comp=Z,34nm,1.3s
I63A Otisfield 65.63 50 P P 17 30 02.0 +0.7
I63A Otisfield 65.63 50 P P 17 30 02.1 +0.8
baz=317,SNR=6.4
I63A P P 17 30 02.1 +0.8
baz=317,SNR=6.4
WVL Waterville 65.70 49 P P 17 30 02.2 +0.4
WVL Waterville 65.70 49 P P 17 30 02.0 +0.3
baz=318
LUPA Lehigh Univers 65.71 55 P P 17 30 03.0 +1.1
OTUK Ortayu 65.71 317 P P 17 30 02.0 +0.1
L61B Northampton 65.75 52 P P 17 30 02.9 +0.7
L61B lAmb lAmb 17 30 03.6
comp=Z,13nm,0.8s
L61B Northampton 65.75 52 P P 17 30 00.2 -2.0
baz=317
ODNJ Ogdensburg 65.76 54 P P 17 30 02.5 +0.3
ODNJ Ogdensburg 65.76 54 P P 17 30 03.4 +1.1
baz=317,SNR=8.2
K62A Royalston 65.82 52 P P 17 30 03.3 +0.7
K62A Royalston 65.82 52 P P 17 30 03.3 +0.7
baz=317
K62A P P 17 30 03.3 +0.7
baz=317
BRNY Black Rk. Fore 65.83 54 P P 17 30 03.3 +0.7
baz=317,SNR=7.3
KMI Kunming 65.85 281 ⇑P P 17 30 03.5 +0.1
KMI pmax pmax
comp=Z,9.0nm,1.1s
KSCT Kent School, K 65.87 53 P P 17 30 03.9 +1.0
TRNY Table Rock, Ra 65.91 54 P P 17 30 03.9 +0.7
PDGK Podgornoye 66.06 309 P P 17 30 04.1 -0.2
BRNJ Basking Ridge 66.07 55 P P 17 30 05.4 +1.1
PAL Palisades 66.18 54 P P 17 30 05.5 +0.6
PAL Palisades 66.18 54 P P 17 30 05.5 +0.6
PAL pmax pmax
comp=Z,52nm,0.9s
PAL Palisades 66.18 54 P P 17 30 05.4 +0.6
baz=317,SNR=8.9
PAL Palisades 66.18 54 P P 17 30 02.4 -2.5
baz=317,SNR=8.9
UNH University of 66.19 51 P P 17 30 05.7 +0.7
baz=318
HRV Adam Dziewonsk 66.28 52 P P 17 30 02.3 -3.2
baz=318
FOR Fordham 66.29 54 P P 17 30 06.4 +0.7
baz=317,SNR=5.5
CPNY Central Park 66.31 54 P P 17 30 06.6 +0.9
WSPT Westport, CT 66.36 54 P P 17 30 06.8 +0.7
KMSC Kings Mountain 66.36 63 P P 17 30 03.7 -2.5
baz=316
GOGA Godfrey 66.36 66 P P 17 30 03.4 -2.8
baz=316
YLE Yale 66.45 53 P P 17 30 07.0 +0.3
N62A Caumsett State 66.46 54 P P 17 30 07.0 +0.3
UCCT U. Connecticut 66.46 52 P P 17 30 07.9 +1.1
WES Weston 66.48 52 P P 17 30 07.0 +0.1
WES Weston 66.48 52 P P 17 30 07.0 +0.1
WES pmax pmax
comp=Z,28nm,0.8s
VALR Valaam 66.56 346 *i* P P 17 30 08.1 +1.1
VALR pmax pmax
comp=Z,36nm,1.0s
TAOE Nuku Hiva Isla 66.60 141 *e* LR LR 17 50 05.9
comp=Z,155nm,31.1s
GGN Saint George 66.62 47 P P 17 30 08.1 +0.4
GGN lAmb lAmb 17 30 08.9
comp=Z,18nm,1.0s
EMMW East Machias 66.64 48 P P 17 30 08.1 +0.3
BRYW Bryant College 66.72 52 P P 17 30 08.8 +0.4
M63A Gales Ferry 66.84 53 P P 17 30 09.7 +0.6
M63A Gales Ferry 66.84 53 P P 17 30 09.5 +0.3
baz=318,SNR=8.4
M63A P P 17 30 09.5 +0.3
baz=318,SNR=8.4
LMN Caledonia Moun 67.00 45 P P 17 30 09.8 -0.3
FIA1 FINESS Array S 67.14 349 P P 17 30 10.7 0.0
FIA1 lAmb lAmb 17 30 11.9
comp=Z,16nm,0.9s
FINES FINESS Array B 67.14 349 P P 17 30 10.6 -0.1
comp=Z,7.5nm,0.7s,baz=31,slow=7.8,SNR=30
FINES LR LR 18 00 51.9
comp=Z,55nm,21.1s,baz=322,slow=37
comp=Z,7.5nm,0.7s
FINES FINESS Array B 67.14 349 P P 17 30 10.2 -0.5
FINES FINESS Array B 67.14 349 *i* P P 17 30 11.0 +0.3
FINES pmax pmax
comp=Z,8.0nm,0.7s
T59A Double "B" Far 67.16 59 P P 17 30 11.9 +0.7
T59A Double "B" Far 67.16 59 P P 17 30 11.9 +0.7
baz=317,SNR=6.2
T59A P P 17 30 11.9 +0.7
baz=317,SNR=6.2
PRZ Przheval'sk 67.22 310 P P 17 30 13.2 +1.3
PRZ Przheval'sk 67.22 310 P P 17 30 13.2 +1.3
PRZ pmax pmax
comp=Z,38nm,1.1s
PMG Port Moresby 67.79 220 P P 17 30 14.1 -1.3
comp=Z,46nm,1.2s,baz=19,slow=15,SNR=3.1
comp=Z,46nm,1.2s
PMG Port Moresby 67.79 220 lAmb lAmb 17 30 16.3
comp=Z,110nm,1.4s
PMG Port Moresby 67.79 220 *ce* P P 17 30 16.8 +1.4
PMG pmax pmax
comp=Z,39nm,1.3s
RAF Rauma 68.03 351 *e* P P 17 30 17.8 +1.4
MSVF Nonsavu 68.08 186 LR LR 17 53 57.9
comp=Z,48nm,20.2s,baz=319,slow=31
TARG Taragay, Kyrgy 68.08 309 P P 17 30 18.6 +1.0
TARG lAmb lAmb 17 30 31.2
comp=Z,13nm,1.0s
TARG Taragay, Kyrgy 68.08 309 P P 17 30 18.6 +1.0
TARG pmax pmax
comp=Z,13nm,1.0s
KDJ Kajisay 68.09 310 P P 17 30 17.6 +0.3
KDJ Kajisay 68.09 310 P P 17 30 17.6 +0.3
KDJ pmax pmax
comp=Z,30nm,0.8s
SWI Sorong 68.12 239 P P 17 30 17.2 -0.4
comp=Z,624nmcomp=Z,58nm,1.0s

SIJI **Sorong** 68.13 239 P P 17 30 16.8 -0.8
comp=Z,31nm,0.8s,baz=31,slow=8.0,SNR=19
comp=Z,31nm,0.8s
TKM2 **Tokmak 2** 68.26 312 P P 17 30 19.0 +0.6
SNR=20
TKM2 **Tokmak 2** 68.26 312 P P 17 30 18.7 +0.3
BOOM **Boomskoye usch** 68.42 311 P P 17 30 19.7 +0.3
BOOM **Boomskoye usch** 68.42 311 P P 17 30 19.7 +0.3
BOOM pmax pmax
comp=Z,23nm,0.8s
ULHL **Ulahol** 68.46 311 P P 17 30 21.4 +1.8
SNR=8.5
MEF **Metsahovi** 68.53 349 *e*P P 17 30 20.4 +0.9
NC204 **NORSAR Array S** 68.54 357 P P 17 30 20.1 +0.4
NC303 **NORSAR Array S** 68.56 356 P P 17 30 20.8 +1.1
NC303 IAmb IAmb 17 30 21.7
comp=Z,18nm,0.8s
CHMS **Chumysh** 68.60 312 P P 17 30 20.8 +0.5
SNR=6.8
NC405 **NORSAR Array S** 68.66 356 P P 17 30 20.9 +0.5
NB201 **NORSAR Array S** 68.74 356 P P 17 30 20.9 +0.1
NB2 **NORSAR Subarra** 68.76 356 P P 17 30 21.3 +0.3
baz=7.6,slow=6.5
NB2 **NORSAR Subarra** 68.76 356 P P 17 30 21.3 +0.3
comp=Z,35nm,1.2s,baz=7.6,slow=6.5
NOA **NORSAR Array B** 68.76 356 P P 17 30 21.4 +0.3
comp=Z,9.8nm,0.9s,baz=4.3,slow=6.3,SNR=28
NOA LR LR 18 03 05.4
comp=Z,26nm,18.0s,baz=235,slow=38
comp=Z,9.8nm,0.9s
KBK **Karagaybulak** 68.77 312 P P 17 30 22.2 +0.6
SNR=13
AAK **Ala-Archa** 69.00 312 P P 17 30 23.6 +0.6
SNR=10
AAK **Ala-Archa** 69.00 312 P P 17 30 23.5 +0.5
comp=Z,19nm,0.7s,baz=98,slow=3.4,SNR=26
comp=Z,19nm,0.7s
AAK **Ala-Archa** 69.00 312 P P 17 30 23.4 +0.5
AAK **Ala-Archa** 69.00 312 *ce*P P 17 30 23.9 +0.9
AAK pmax pmax
comp=Z,56nm,1.7s
NC602 **NORSAR Array S** 69.05 356 P P 17 30 23.7 +0.9
UCH **Uchtor** 69.31 312 P P 17 30 27.4 +2.1
SNR=11
EKS2 **Erkin-Say** 69.32 312 P P 17 30 26.0 +1.0
SNR=22
UPP **Uppsala** 69.55 353 *e*P P 17 30 27.2 +1.4
AKTO **Aktyubinsk** 69.61 327 LR LR 18 04 23.4
comp=Z,158nm,18.5s,baz=33,slow=39
AKTO **Aktyubinsk** 69.61 327 P P 17 30 26.9 +0.5
AML **Almayashu** 69.77 312 P P 17 30 29.6 +1.5
SNR=5.8
AB31 **Akbulak array** 69.89 325 *i* P P 17 30 28.4 +0.3
ABKAR **Akbulak array** 69.89 325 P P 17 30 28.3 +0.1
ABKAR **Akbulak array** 69.89 325 P P 17 30 28.1 0.0
ABKAR IAmb IAmb 17 30 30.3
comp=Z,37nm,1.2s
VSU **Vasula** 69.94 348 *i* P P 17 30 29.0 +0.7
VSU pmax pmax
comp=Z,116nm,0.8s
VSU **Vasula** 69.94 348 *e*P P 17 30 29.5 +1.3
MTSE **Matsula** 70.07 349 *e*P P 17 30 30.2 +1.2
KONO **Kongsberg** 70.21 357 P P 17 30 30.8 +1.0
KONO **Kongsberg** 70.21 357 *ce*P P 17 30 31.8 +1.9
KONO pmax pmax
comp=Z,46nm,1.7s
KK31 **Karatay Array** 70.49 315 P P 17 30 31.9 0.0
KK31 **Karatay Array** 70.49 315 P P 17 30 32.0 0.0
KKAR **Karatay Array** 70.49 315 P P 17 30 32.1 +0.1
KKAR **Karatay Array** 70.49 315 P P 17 30 31.8 -0.2
KKAR **Karatay Array** 70.49 315 P P 17 30 31.8 -0.2
KKAR 17 30 32.1
MOS **Moscow** 70.65 341 *e*P P 17 30 32.3 -0.3
MOS pmax pmax
comp=Z,64nm,1.1s
KSH **Kashi** 70.67 309 P P 17 30 37.0 +3.8
KSH sP sP 17 30 40.0 +2.2
KSH PcP **PcP** 17 30 53.5 -0.7
KSH pmax pmax
comp=Z,31nm,0.7s
MYLDM **Lahad Datu** 70.76 254 P P 17 30 35.5 +1.6
MYLDM IAmb IAmb 17 30 36.6
comp=Z,30nm,1.2s
STRU **Stroemstad** 70.76 356 *i* P P 17 30 33.1 -0.2
VIKU **Vikbolandet** 70.97 353 *e*P P 17 30 35.4 +0.9
BELG **Belogornoye** 71.22 334 LR LR 18 06 02.9
comp=Z,69nm,18.5s,baz=338,slow=39
SLIT **Slitere, Latvi** 71.31 350 *e*P P 17 30 37.5 +1.0
OBN **Obninsk** 71.45 341 LR LR 18 06 41.0
comp=Z,23nm,18.0s,baz=360,slow=40
OBN **Obninsk** 71.45 341 P P 17 30 37.9 +0.5
OBN **Obninsk** 71.45 341 *d i* P P 17 30 38.0 +0.5
OBN *i* *PP **sP** 17 30 42.3 +0.2
OBN *i* *SP **pP** 17 30 44.0 +3.1
OBN 17 30 57.0
OBN S **S** 17 39 58.0 +3.3
OBN *e* 17 40 45.3
OBN pmax pmax
comp=Z,66nm,1.7s
OBN MLR MLR
comp=Z,132nm,16.0s
PPT **Papeete** 71.48 154 LR LR 17 58 05.3
comp=Z,51nm,18.8s,baz=328,slow=33
PPT2 **Papeete2** 71.50 154 *e*LR LR 17 52 21.5
comp=Z,279nm,32.2s
SNART **Snartemo** 71.58 358 *i* P P 17 30 39.2 +1.0
HOMB **Homborsund** 71.62 358 *i* P P 17 30 39.0 +0.6
TJOU **Tjoern** 71.75 356 *i* P P 17 30 39.4 +0.2
BORU **Boraas** 72.09 355 *i* P P 17 30 41.5 +0.2
SHL **Shillong** 72.24 289 P P 17 30 43.3 +0.3
SHL **Shillong** 72.24 289 P P 17 30 43.3 +0.3
SHL pmax pmax
comp=Z,31nm,1.0s
ONAU **Onsala** 72.37 356 *i* P P 17 30 42.5 -0.4
TAS **Tashkent** 72.45 314 P P 17 30 44.6 +0.8
TAS **Tashkent** 72.45 314 P P 17 30 44.6 +0.8
TAS pmax pmax
comp=Z,45nm,0.8s
RAR **Rarotonga** 72.68 164 LR LR 17 54 43.9
comp=Z,128nm,20.0s,baz=336,slow=29
DRK **Karamyk** 72.73 312 P P 17 30 45.4 -0.4
DRK IAmb IAmb 17 30 48.1
comp=Z,18nm,0.8s
BTK **Batken** 72.75 313 P P 17 30 45.5 -0.2
BTK **Batken** 72.75 313 P P 17 30 45.5 -0.2
BTK pmax pmax
comp=Z,27nm,0.9s
PBUR **Paburge** 72.92 350 *e*P P 17 30 47.4 +1.1
IDID **Didziasalis** 72.99 347 *e*P P 17 30 49.0 +2.3
IIGN **Ignalina** 73.03 347 *e*P P 17 30 47.4 +0.4
CMAR **Chiang Mai Arr** 73.12 279 P P 17 30 48.0 -0.1
comp=Z,3.0nm,0.7s,baz=28,slow=6.6,SNR=22
comp=Z,3.0nm,0.7s
CMAR **Chiang Mai Arr** 73.12 279 P P 17 30 47.6 -0.4
CMAR **Chiang Mai Arr** 73.12 279 *i* P P 17 30 47.7 -0.4
CMAR pmax pmax
comp=Z,3.0nm,0.7s
DEL **Delary** 73.19 355 *e*P P 17 30 49.3 +1.5
DEL **Delary** 73.19 355 *i* P P 17 30 47.6 -0.2
PABE **Paberze** 73.19 348 P P 17 30 47.8 -0.1
PABE **Paberze** 73.19 348 *e*P P 17 30 48.8 +1.0
BLEU **Blekinge** 73.22 353 *i* P P 17 30 47.9 -0.1
LPSR **Galich'ya Gora** 73.27 339 *e*P P 17 30 47.6 -0.8
LPSR pmax pmax
comp=Z,20nm,1.0s
NACGM **Naroch** 73.38 347 ⇓ *e*P P 17 30 48.9 -0.1
baz=15
MUD **Monsted U'grnd** 73.42 357 *i* P P 17 30 49.9 +0.7
TAPN **Taplejung** 73.42 293 *e*P P 17 30 50.9 +0.8
comp=Z,62nm,0.8s
TAPN **Taplejung** 73.42 293 *e*P P 17 30 51.0 +0.8
comp=Z,128nm,1.2s
BJUU **Bjuv** 73.63 355 *i* P P 17 30 50.7 +0.3
MPSI **Mapaga** 73.72 250 P P 17 30 50.9 -0.7
comp=Z,16nm,1.0s
GAR **Garm** 73.82 312 P P 17 30 52.4 +0.4
VRH **Novokhopyorsk** 73.88 337 *e*P P 17 30 51.2 -0.8
VRH pmax pmax
comp=Z,20nm,0.5s
ODAN **Odare** 73.97 293 *e*P P 17 30 53.2 -0.1
VORR **Voronezh** 74.07 338 *e*P P 17 30 54.8 +1.7
VORR pmax pmax
comp=Z,20nm,0.4s
GUN **Gumba** 74.07 294 *e*P P 17 30 54.3 +0.3
comp=Z,56nm,0.7s
GUN **Gumba** 74.07 294 *e*P P 17 30 54.2 +0.3
comp=Z,56nm,0.7s
JIRN **Jiri** 74.08 294 *e*P P 17 30 54.4 +0.3
comp=Z,61nm,0.8s
JIRN **Jiri** 74.08 294 *e*P P 17 30 54.4 +0.3
comp=Z,61nm,0.8s
RAMN **Ramite** 74.37 293 *e*P P 17 30 55.6 0.0
comp=Z,64nm,0.9s
RAMN **Ramite** 74.37 293 *e*P P 17 30 55.7 +0.1
comp=Z,64nm,0.9s
ESK **Eskdalemuir** 74.44 4 P P 17 30 56.2 +1.0
ESK **Eskdalemuir** 74.44 4 P P 17 30 56.2 +1.0
ESK pmax pmax
comp=Z,60nm,1.4s
BSD **Bornholm Skovb** 74.47 354 *i* P P 17 30 55.5 +0.1
VSR **Storozhevoye** 74.50 338 *e*P P 17 30 56.0 +0.4
VSR pmax pmax
comp=Z,30nm,1.2s
PKI **Pulchoki** 74.60 295 *e*P P 17 30 56.9 -0.1
comp=Z,44nm,1.1s
PKI **Pulchoki** 74.60 295 *e*P P 17 30 56.8 -0.2
comp=Z,44nm,1.1s
PKIN **Phulchoki** 74.60 295 *e*P P 17 30 56.7 -0.2
comp=Z,49nm,1.1s
PKIN **Phulchoki** 74.60 295 *e*P P 17 30 56.8 -0.2
comp=Z,49nm,1.1s
CHGR **Chuyangaron** 74.64 313 P P 17 30 56.7 -0.1
CHGR **Chuyangaron** 74.64 313 P P 17 30 56.7 -0.1
CHGR pmax pmax
comp=Z,74nm,0.8s
GKN **Gorkha** 74.72 295 *e*P P 17 30 57.5 0.0
comp=Z,45nm,0.8s
GKN **Gorkha** 74.72 295 *e*P P 17 30 57.5 0.0
comp=Z,45nm,0.8s
SUW **Suwalki** 74.75 349 *e*P P 17 30 57.2 +0.2
SUW *e*PcP **pwP** 17 31 08.7 -0.9
SUW **Suwalki** 74.75 349 P P 17 30 57.0 +0.1
SUW **Suwalki** 74.75 349 P P 17 30 57.1 +0.1
SUW pmax pmax
comp=Z,58nm,1.1s
SUW **Suwalki** 74.75 349 *e*P P 17 30 57.5 +0.5
DMN **Daman** 74.75 295 *e*P P 17 30 58.4 +0.6
comp=Z,36nm,0.8s
DMN **Daman** 74.75 295 *e*P P 17 30 58.3 +0.5
comp=Z,36nm,0.8s
DANN **Dangsing** 74.97 296 *e*P P 17 30 58.8 -0.3
comp=Z,56nm,0.8s
DANN **Dangsing** 74.97 296 *e*P P 17 30 59.0 -0.1
comp=Z,56nm,0.8s
KOLN **Koldanda** 75.50 296 *e*P P 17 31 02.0 -0.1
PYUN **Piuthan** 75.60 297 *e*P P 17 31 02.6 0.0
comp=Z,45nm,0.9s
SBUM **Sibu** 76.78 258 P P 17 31 08.8 -0.4
TBI **Tubuai** 77.01 155 *e*LR LR 17 54 55.8
comp=Z,199nm,33.0s
AKASG **Malin Array Be** 77.05 344 P P 17 31 10.2 0.0
comp=Z,9.5nm,0.6s,baz=18,slow=5.9,SNR=47
AKASG LR LR 18 09 44.2
comp=Z,66nm,18.1s,baz=5.5,slow=39
comp=Z,9.5nm,0.6s
AKASG **Malin Array Be** 77.05 344 *i* P P 17 31 10.6 +0.4
AKASG pmax pmax
comp=Z,10.0nm,0.6s
MTKI **Muara Teweh, K** 77.77 253 P P 17 31 15.8 +1.0
CTA **Charters Tower** 77.84 216 P P 17 31 14.2 -0.6
comp=Z,11nm,0.9s,baz=27,slow=7.2,SNR=5.8
comp=Z,11nm,0.9s
KBL **Kabul** 77.99 310 P P 17 31 15.6 -0.5
KBL IAmb IAmb 17 31 17.1
comp=Z,14nm,0.9s
KBL **Kabul** 77.99 310 P P 17 31 15.6 -0.5
KBL pmax pmax
comp=Z,14nm,0.9s
CLL **Collm** 78.38 354 P P 17 31 18.2 +0.6
CLL IAmb IAmb 17 31 19.4
comp=Z,12nm,1.0s
CLL **Collm** 78.38 354 P P 17 31 18.3 +0.6
CLL pmax pmax
comp=Z,12nm,1.0s
CLL **Collm** 78.38 354 *i* P P 17 31 18.5 +0.9
comp=Z,37nm,1.8s
CLL *i* PcP **pwP** 17 31 29.5 -0.8
CLL *e*S **S** 17 41 12.0 -0.1
CLL *e*SS **SS** 17 46 18.0 +4.5
KSP **Ksiaz** 78.60 352 *e*P P 17 31 19.6 +0.7
BRG **Berggiesshubel** 78.75 354 *e*P P 17 31 20.9 +1.1
BRG Amp 17 31 22.4
comp=Z,19nm,1.2s
BRG *ex* x 17 31 24.6
BRG Amp 17 31 25.8
comp=Z,37nm,1.8s
BRG *ex* x 17 31 32.2
BRG Amp 17 31 33.6
comp=Z,10nm,1.0s
BRG **Berggiesshubel** 78.75 354 *e*P P 17 31 20.8 +1.1
BRG *e* 17 31 24.6
BRG *e* 17 31 32.2
BRG pmax pmax
comp=Z,19nm,1.2s
OJC **Ojcow** 78.88 350 *e*P P 17 31 20.8 +0.4
CHVC **Chvalec** 78.88 352 AMS AMS 18 13 40.0
comp=Z,200nm,18.8s
OSTC **Ostas** 78.89 352 *e*P P 17 31 22.1 +1.6
DPC **Dobruska-Polom** 79.09 352 *e*P P 17 31 23.1 +1.5
DPC MLR MLR
comp=Z,200nm,18.7s
DPC **Dobruska-Polom** 79.09 352 *e*P P 17 31 23.1 +1.5
DPC AMS AMS 18 14 40.0
comp=Z,200nm,18.7s
KWP **Kalwaria Pacla** 79.10 348 *e*P P 17 31 22.6 +0.9
KWP **Kalwaria Pacla** 79.10 348 P P 17 31 21.9 +0.2
KWP **Kalwaria Pacla** 79.10 348 P P 17 31 21.9 +0.2
GOF **Gofitskoye** 79.15 333 ⇓ *e*P P 17 31 23.7 +1.7
GOF pmax pmax
comp=Z,76nm,1.3s
KRLC **Kraliky** 79.32 352 *e*P P 17 31 23.9 +1.0
KRLC **Kraliky** 79.32 352 *e*P P 17 31 23.9 +1.0
MEM **Membach** 79.34 359 *d*P P 17 31 24.5 +1.6
comp=Z,12nm,1.0s
BTNL **Ternell** 79.36 359 *d*P P 17 31 25.0 +1.9
comp=Z,12nm,0.9s
NKC **Novy Kostel** 79.49 355 AMS AMS 18 16 30.0
comp=Z,200nm,20.2s
BCLA **Clavier** 79.54 359 *d*P P 17 31 25.5 +1.5
comp=Z,9.5nm,0.9s
MORC **Moravsky Berou** 79.55 351 P P 17 31 25.3 +1.2
MORC **Moravsky Berou** 79.55 351 P P 17 31 25.3 +1.2
MORC pmax pmax
comp=Z,7.0nm,1.1s
MORC **Moravsky Berou** 79.55 351 *e*P P 17 31 25.2 +1.1
PRU **Pruhonice** 79.59 353 AMS AMS 18 11 50.0
comp=Z,100nm,18.8s
BMRD **Maredsous** 79.66 360 *d*P P 17 31 25.8 +1.2
comp=Z,21nm,1.0s
SORM **Soroca** 79.68 344 ⇑P P 17 31 25.2 +0.4
RCHB **Rochefort** 79.80 359 *d*P P 17 31 25.9 +0.4
KOLS **Kolonicke sedl** 79.84 348 *e*P P 17 31 27.1 +1.4
KOLS pmax pmax
comp=Z,10.0nm,0.7s
KOLS **Kolonicke sedl** 79.84 348 *e*P P 17 31 27.1 +1.4
DOU **Dourbes** 79.86 360 *d*P P 17 31 27.2 +1.4
comp=Z,12nm,1.2s
LANS **Liptovska Anna** 79.97 350 *e*P P 17 31 28.7 +2.3
LANS pmax pmax
comp=Z,10.0nm,1.2s
LANS **Liptovska Anna** 79.97 350 *e*P P 17 31 28.7 +2.3
EDFI **Ende, Flores** 79.97 243 P P 17 31 26.4 -0.5
CRVS **Cervenica-Dubn** 79.97 349 *e*P P 17 31 27.8 +1.4
CRVS pmax pmax
comp=Z,16nm,1.3s
CRVS **Cervenica-Dubn** 79.97 349 *e*P P 17 31 27.8 +1.4
GRA1 **Grafenberg Arr** 80.09 355 P P 17 31 28.3 +1.2
GRA1 IAmb IAmb 17 31 32.9
comp=Z,42nm,1.4s
GRF **Grafenberg Arr** 80.09 355 P P 17 31 28.3 +1.2
GRF pmax pmax
comp=Z,42nm,1.4s
GRFO **Grafenberg** 80.10 355 P P 17 31 28.9 +1.8
GRFO IAmb IAmb 17 31 32.8
comp=Z,49nm,1.5s
GRFO **Grafenberg** 80.10 355 P P 17 31 28.9 +1.8
GRFO pmax pmax
comp=Z,49nm,1.5s
VRAC **Vranov** 80.10 352 *e*P P 17 31 28.1 +1.0
GEYT **Alibeck** 80.13 320 P P 17 31 28.4 +0.8
comp=Z,14nm,0.8s,baz=341,slow=3.1,SNR=20
comp=Z,14nm,0.8s
GEYT **Alibeck** 80.13 320 P P 17 31 28.3 +0.8
GEYT IAmb IAmb 17 31 29.6
comp=Z,17nm,1.0s
GYA0 **ALIBECK ARRAY** 80.13 320 P P 17 31 28.3 +0.8
GYA0B **ALIBECK ARRAY** 80.13 320 P P 17 31 28.0 +0.5
GYA0B IAmb IAmb 17 31 30.1
comp=Z,19nm,0.9s
UZH **Uzhgorod** 80.13 348 *e*P P 17 31 26.9 -0.3
UZH *e* 17 31 35.1
KIV **Kislovodsk** 80.26 333 P P 17 31 27.3 -0.8
KIV IAmb IAmb 17 31 30.2
comp=Z,20nm,1.5s
KIV **Kislovodsk** 80.26 333 *d i* P P 17 31 28.6 +0.4
KIV *i* *PP **sP** 17 31 32.7 -0.1
KIV *e* 17 31 38.2
KIV *e**SS **sS** 17 41 41.3 +3.1
KIV *e* 17 42 17.6
KIV SS **SS** 17 46 47.0 +4.8
KIV pmax pmax
comp=Z,15nm,1.5s
KIV MLR MLR
comp=Z,103nm,23.0s
WLF **Walferdange** 80.28 359 *d*P P 17 31 29.2 +1.2
KRUC **Moravsky** 80.36 352 *e*P P 17 31 29.7 +1.2
KBZ **Khabaz** 80.40 333 P P 17 31 28.6 -0.1
comp=Z,2.4nm,0.8s,baz=4.8,slow=2.7,SNR=7.4
KBZ LR LR 18 14 15.0
comp=Z,76nm,18.1s,baz=9.5,slow=41
comp=Z,2.4nm,0.8s
JAVC **Velka Javorina** 80.44 351 *e*P P 17 31 31.4 +2.4
KHC **Kasperske Hory** 80.51 354 P P 17 31 30.4 +1.0
KHC IAmb IAmb 17 31 31.9
comp=Z,19nm,1.3s
KHC **Kasperske Hory** 80.51 354 P P 17 31 30.4 +1.0
KHC pmax pmax
comp=Z,19nm,1.3s
KHC **Kasperske Hory** 80.51 354 *e*P P 17 31 30.9 +1.5
KHC *ex* x 17 31 42.0
KHC AMS AMS 18 13 10.0
comp=Z,200nm,21.6s
BUR08 **Bucovina Ar. S** 80.68 346 P P 17 31 31.1 +0.8
BUR08 IAmb IAmb 17 31 32.6
comp=Z,10nm,0.8s
VYHS **Vyhne** 80.68 350 *e*P P 17 31 31.7 +1.4
VYHS pmax pmax
comp=Z,4.0nm,1.1s
VYHS **Vyhne** 80.68 350 *e*P P 17 31 31.7 +1.4
BURAR **Bucovina Array** 80.70 346 ⇑P P 17 31 31.5 +1.0
BURAR **Bucovina Array** 80.70 346 P P 17 31 31.6 +1.1
BURAR IAmb IAmb 17 31 33.0
comp=Z,13nm,0.8s
CKRC **Cesky Krumlov** 80.77 353 *e*P P 17 31 31.9 +1.2
CKRC AMS AMS 18 14 30.0
comp=Z,200nm,20.1s
GEC2 **GERESS Array S** 80.79 354 P P 17 31 31.8 +0.8
GERES **GERESS Array B** 80.79 354 P P 17 31 31.6 +0.7
comp=Z,1.6nm,0.7s,baz=355,slow=3.1,SNR=17
comp=Z,1.6nm,0.7s
GERES **GERESS Array B** 80.79 354 P P 17 31 31.1 +0.1
SMOL **Smolenice** 80.81 351 *e*P P 17 31 33.1 +2.2
SMOL pmax pmax
comp=Z,6.0nm,1.0s
SMOL **Smolenice** 80.81 351 *e*P P 17 31 33.1 +2.2
MODS **Modra-Piesok** 80.96 351 *e*P P 17 31 32.9 +1.1
MODS pmax pmax
comp=Z,38nm,1.3s
MODS **Modra-Piesok** 80.96 351 *e*P P 17 31 32.9 +1.1
PSZ **Piszkesteto** 81.13 349 ⇑P P 17 31 34.6 +1.9
PSZ **Piszkesteto** 81.13 349 P P 17 31 33.9 +1.2
PSZ IAmb IAmb 17 31 35.5
comp=Z,33nm,1.5s
PSZ **Piszkesteto** 81.13 349 P P 17 31 33.9 +1.2
PSZ pmax pmax
comp=Z,33nm,1.5s
PSZ **Piszkesteto** 81.13 349 P P 17 31 33.9 +1.2
ZST **Bratislava** 81.15 351 *e*P P 17 31 33.9 +1.2
ZST **Bratislava** 81.15 351 *e*P P 17 31 33.9 +1.2
BIZ **Bicaz** 81.22 345 ⇑P P 17 31 35.3 +2.2
ONI **Oni** 81.28 332 P P 17 31 33.6 0.0
ONI IAmb IAmb 17 31 43.5
comp=Z,14nm,1.4s
ONI **Oni** 81.28 332 P P 17 31 33.6 0.0
ONI pmax pmax
comp=Z,14nm,1.4s
HRA **Herat** 81.32 315 P P 17 31 34.4 +0.2
HRA IAmb IAmb 17 31 35.8
comp=Z,13nm,0.7s
ARCR **ARCALIA** 81.35 346 ⇑P P 17 31 35.9 +2.0
CONA **Conrad Observa** 81.53 352 *i* P P 17 31 36.7 +1.8
comp=Z,12nm,1.2s,SNR=12
BUD **Budapest** 81.66 350 P P 17 31 37.3 +1.9
ECH **Echery** 81.72 358 P P 17 31 36.4 +0.7
ECH IAmb IAmb 17 31 37.8
comp=Z,16nm,1.3s
ECH **Echery** 81.72 358 P P 17 31 36.4 +0.7
ECH pmax pmax
comp=Z,15nm,1.3s
RONA **Rosalia, Austr** 81.72 352 *e*P P 17 31 37.7 +1.9
comp=Z,8.2nm,1.1s
MOA **Molln** 81.74 353 *e*P P 17 31 39.6 +3.7
comp=Z,8.4nm,1.4s
CSKK **Cskako** 81.86 351 P P 17 31 37.5 +1.0
CLF **Chambon-Foret** 81.92 1 P P 17 31 38.6 +1.9
BIOA **Bad Ischl, Aus** 81.94 354 *e*P P 17 31 38.6 +1.6
comp=Z,0.3nm,0.3s
MPLH **Magyarpolny** 82.13 351 P P 17 31 39.4 +1.5
VRI **Vrincioaia** 82.15 344 ⇑P P 17 31 39.8 +1.7
PLOR **Plostina** 82.18 344 ⇑P P 17 31 40.0 +1.7
ARSA **Arzberg** 82.23 352 *i* P P 17 31 40.3 +1.8
comp=Z,11nm,1.3s,SNR=5.4
COVR **Voineasa-Covas** 82.26 345 ⇑P P 17 31 40.1 +1.4
DOPR **Dopca** 82.28 345 ⇑P P 17 31 40.9 +2.2
RETA **Reutte** 82.32 356 *e*P P 17 31 40.8 +1.7
comp=Z,4.7nm,1.0s
AKH **Akhalkalaki** 82.34 331 ⇓P P 17 31 41.6 +2.3
WATA **Walderalm** 82.43 355 *e*P P 17 31 41.1 +1.5
comp=Z,7.4nm,0.8s
TLCR 82.44 343 ⇑P P 17 31 40.5 +1.0
MOTA **Moosalm** 82.44 355 *e*P P 17 31 41.1 +1.3
comp=Z,7.7nm,1.0s
WTTA **Wattenberg** 82.50 355 *e*P P 17 31 41.8 +1.7
comp=Z,11nm,1.2s
SIRR **Siria** 82.54 348 ⇑P P 17 31 41.7 +1.6
DAVA **Damuels** 82.56 356 *i* P P 17 31 44.0 +3.7
comp=Z,6.8nm,1.3s
SQTA **Sankt Quirin** 82.56 355 *e*P P 17 31 41.9 +1.6
comp=Z,6.2nm,0.8s
CFR **Carcaliu** 82.57 343 ⇑P P 17 31 41.5 +1.3
KBA **Koelnbreinsper** 82.57 354 *i* P P 17 31 41.8 +1.3
comp=Z,30nm,0.8s,SNR=21
WB0 **Warramunga Arr** 82.58 227 P P 17 31 38.4 -2.1
WB0 IAmb IAmb 17 31 40.4
comp=Z,9.9nm,0.9s
MLR **Muntele Rosu** 82.65 345 ⇑P P 17 31 42.9 +2.0
MLR **Muntele Rosu** 82.65 345 P P 17 31 41.7 +0.9
MLR IAmb IAmb 17 31 45.0
comp=Z,22nm,1.2s
MLR **Muntele Rosu** 82.65 345 P P 17 31 41.7 +0.9
MLR pmax pmax
comp=Z,22nm,1.2s
NEHR **Nehoiu** 82.65 345 ⇓P P 17 31 42.7 +2.0
WRAB **Tennant Creek** 82.74 227 *ce*P P 17 31 41.7 +0.4
WRAB pmax pmax
comp=Z,17nm,1.7s
WB2 **Warramunga Arr** 82.75 227 P P 17 31 40.4 -1.0
WB2 IAmb IAmb 17 31 41.3
comp=Z,10nm,0.9s
WRA **Warramunga Arr** 82.76 227 P P 17 31 40.0 -1.4
comp=Z,6.4nm,0.8s,baz=32,slow=5.6,SNR=48
WRA LR LR 18 09 10.7
comp=Z,45nm,18.1s,baz=62,slow=36
comp=Z,6.4nm,0.8s
WRA **Warramunga Arr** 82.76 227 P P 17 31 40.5 -0.9
WRA **Warramunga Arr** 82.76 227 *i* P P 17 31 40.0 -1.4
WRA pmax pmax
comp=Z,7.0nm,0.8s
FETA **Feichten** 82.78 356 *e*P P 17 31 43.1 +1.6
comp=Z,6.2nm,1.1s
TPGR **Topolog** 82.83 343 ⇑P P 17 31 42.8 +1.2
SOKA **Soboth** 82.84 353 *i* P P 17 31 43.0 +1.2
comp=Z,18nm,1.2s,SNR=11
VOIR 82.85 345 ⇑P P 17 31 43.4 +1.6
ABTA **Abfaltersbach** 82.96 354 *e*P P 17 31 43.7 +1.3

	comp=Z,5.5nm,0.9s						
KOGS	**Kog**	**82.97 352**	*e*P	**P**	**17 31 42.9**	**+0.6**
ARR	**Arges**	**82.98 346**	⇑P	**P**	**17 31 44.2**	**+1.7**
MYKA	**Terra Mystica**	**83.00 354**	*e*P	**P**	**17 31 43.1**	**+0.5**
	comp=Z,1.9nm,0.4s						
LOT	**Lotru**	**83.04 346**	⇑P	**P**	**17 31 44.6**	**+1.8**
OBKA	**Obir**	**83.05 353**	*e*P	**P**	**17 31 44.4**	**+1.6**
	comp=Z,8.2nm,1.0s						
GNI	**Garni**	**83.10 330**	P	**P**	**17 31 43.9**	**+0.6**
GNI			IAmb	IAmb	17 31 49.9		
	comp=Z,24nm,1.1s						
GNI	**Garni**	**83.10 330**	P	**P**	**17 31 43.9**	**+0.6**
GNI			pmax	pmax			
	comp=Z,24nm,1.2s						
BZS	**Buzias**	**83.18 348**	⇑P	**P**	**17 31 44.7**	**+1.3**
PRED	**Cave del Predi**	**83.19 354**	P	**P**	**17 31 43.8**	**+0.3**
PRED			IAmb	IAmb	17 31 45.7		
	comp=Z,7.1nm,0.6s						
FUORN	**Ofenpass-Fuorn**	**83.21 356**	P	**P**	**17 31 45.1**	**+1.2**
FUORN			IAmb	IAmb	17 31 52.0		
	comp=Z,7.4nm,1.1s						
TUE	**Stuetta**	**83.39 357**	P	**P**	**17 31 46.3**	**+1.5**
TUE			IAmb	IAmb	17 31 50.1		
	comp=Z,12nm,1.0s						
JAVS	**Javornik**	**83.70 353**	*i* P	**P**	**17 31 46.0**	**-0.2**
HERR	**Herculane**	**83.79 347**	⇑P	**P**	**17 31 47.8**	**+1.2**
MDVR	**Moldovita**	**83.99 348**	⇑P	**P**	**17 31 48.4**	**+0.8**
KOPT	**Kop Dagi**	**84.52 333**	P	**P**	**17 31 52.5**	**+1.8**
KOPT			IAmb	IAmb	17 31 54.0		
	comp=Z,18nm,1.0s						
SSB	**Saint Sauveur**	**84.68 360**	P	**P**	**17 31 52.1**	**+0.9**
SSB	**Saint Sauveur**	**84.68 360**	P	**P**	**17 31 52.1**	**+0.9**
SSB			pmax	pmax			
	comp=Z,30nm,1.4s						
DIVS	**Divibare**	**84.88 349**	P	**P**	**17 31 52.8**	**+0.5**
BNI	**Bardonecchia**	**84.89 358**	P	**P**	**17 31 53.0**	**+0.7**
BNI	**Bardonecchia**	**84.89 358**	P	**P**	**17 31 53.0**	**+0.7**
BNI			pmax	pmax			
	comp=Z,20nm,1.0s						
PSI	**Prapat**	**84.94 268**	P	**P**	**17 31 51.8**	**-1.2**
PSI			pmax	pmax			
	comp=Z,11nm,0.9s						
RPSI	**Rantau Prapat**	**85.02 268**	P	**P**	**17 31 51.8**	**-1.4**
RPSI			IAmb	IAmb	17 31 53.6		
	comp=Z,10nm,0.9s						
BOVS	**Bovan**	**85.11 347**	⇓P	**P**	**17 31 54.1**	**+0.8**
GEVA	**Gevas**	**85.31 330**	P	**P**	**17 31 54.6**	**0.0**
TOKA	**Tokat**	**85.34 336**	P	**P**	**17 31 54.7**	**+0.2**
TOKA			IAmb	IAmb	17 31 56.8		
	comp=Z,18nm,1.1s						
GURO	**Guroymak-BITLI**	**85.41 331**	P	**P**	**17 31 54.6**	**-0.4**
GURO			IAmb	IAmb	17 31 58.2		
	comp=Z,9.5nm,1.2s						
ZCCA	**Zocca**	**85.44 355**	P	**P**	**17 31 55.7**	**+0.7**
AS31	**Alice Springs**	**86.18 225**	P	**P**	**17 31 58.4**	**-0.3**
ASAR	**Alice Springs**	**86.18 225**	P	**P**	**17 31 57.8**	**-0.9**
	comp=Z,2.9nm,0.6s,baz=23,slow=4.7,SNR=55						
ASAR			LR	LR	18 16 38.8		
	comp=Z,12nm,18.2s,baz=55,slow=40						
	comp=Z,2.9nm,0.6s						
ASAR	**Alice Springs**	**86.18 225**	P	**P**	**17 31 58.1**	**-0.5**
ASAR	**Alice Springs**	**86.18 225**	P	**P**	**17 31 58.2**	**-0.5**
OSSC	**Osservatorio P**	**86.25 355**	P	**P**	**17 31 59.3**	**+0.3**
OSSC			IAmb	IAmb	17 32 00.1		
	comp=Z,14nm,1.2s						
MURB	**Monte Urbino**	**86.43 354**	P	**P**	**17 32 00.3**	**+0.4**
MURB			IAmb	IAmb	17 32 29.7		
	comp=Z,22nm,1.0s						
PDG	**Podgorica**	**86.62 349**	⇓P	**P**	**17 32 02.2**	**+1.4**
PDG	**Podgorica**	**86.62 349**	P	**P**	**17 32 01.6**	**+0.9**
PDG			IAmb	IAmb	17 32 18.4		
	comp=Z,14nm,0.7s						
BR131	**Keskin Array S**	**86.62 338**	P	**P**	**17 32 01.1**	**+0.1**
BR131			IAmb	IAmb	17 32 02.9		
	comp=Z,6.7nm,0.8s						
BR131	**Keskin Array S**	**86.62 338**	P	**P**	**17 32 01.1**	**+0.1**
BR131			pmax	pmax			
	comp=Z,7.0nm,0.9s						
BRTR	**Keskin Array B**	**86.62 338**	P	**P**	**17 32 01.4**	**+0.4**
	comp=Z,3.5nm,0.8s,baz=47,slow=2.2,SNR=12						
	comp=Z,3.5nm,0.8s						
BRTR	**Keskin Array B**	**86.62 338**	P	**P**	**17 32 01.1**	**+0.1**
BRTR	**Keskin Array B**	**86.62 338**	*i* P	**P**	**17 32 02.2**	**+1.2**
BRTR			pmax	pmax			
	comp=Z,4.0nm,0.8s						
NRCA	**Norcia**	**86.81 354**	P	**P**	**17 32 02.5**	**+0.7**
NRCA			IAmb	IAmb	17 32 03.9		
	comp=Z,22nm,1.4s						
BNN	**Bunyan**	**86.89 336**	P	**P**	**17 32 03.1**	**+0.7**
MARD	**Mardin**	**86.93 332**	P	**P**	**17 32 02.2**	**-0.4**
MARD			IAmb	IAmb	17 32 06.7		
	comp=Z,7.9nm,0.8s						
RDO	**Rodhopi**	**86.94 344**	P	**P**	**17 32 02.2**	**-0.1**
RDO			IAmb	IAmb	17 32 03.9		
	comp=Z,8.5nm,1.0s						
URZ	**Urewera**	**88.53 186**	LR	LR	18 04 01.1		
	comp=Z,68nm,21.2s,baz=31,slow=30						
ESDC	**Sonseca Array**	**89.99 6**	P	**P**	**17 32 17.2**	**+0.3**
	comp=Z,2.5nm,0.8s,baz=345,slow=4.5,SNR=15						
	comp=Z,2.5nm,0.8s						
ESDC	**Sonseca Array**	**89.99 6**	P	**P**	**17 32 17.6**	**+0.7**
STKA	**Stephens Creek**	**90.25 215**	P	**P**	**17 32 17.5**	**-0.4**
	comp=Z,7.3nm,0.9s,baz=358,slow=5.0,SNR=9.9						
STKA			LR	LR	18 06 06.4		
	comp=Z,62nm,20.9s,baz=24,slow=31						
	comp=Z,7.3nm,0.9s						
STKA	**Stephens Creek**	**90.25 215**	P	**P**	**17 32 17.5**	**-0.4**
STKA			pmax	pmax			
	comp=Z,5.0nm,1.4s						
ZARC	**Zaragoza, Cauc**	**91.10 77**	P	**P**	**17 32 22.4**	**+0.1**
ZARC			IAmb	IAmb	17 32 23.4		
	comp=Z,9.2nm,1.1s						
RPZ	**Rata Peaks**	**94.47 190**	LR	LR	18 09 10.2		
	comp=Z,47nm,19.4s,baz=298,slow=32						
RAYN	**Ar Rayn**	**97.88 322**	P	**P**	**17 32 53.1**	**-0.3**
RAYN			IAmb	IAmb	17 32 54.6		
	comp=Z,7.5nm,0.9s						
RAYN	**Ar Rayn**	**97.88 322**	P	**P**	**17 32 53.1**	**-0.3**
RAYN			pmax	pmax			
	comp=Z,7.0nm,1.0s						
TORD	**Torodi Ar. Bea**	**116.66 3**	PKP	**PKPdf**	**17 38 00.6**	**-1.4**
	comp=Z,1.0nm,0.5s,baz=339,slow=2.5,SNR=10						
TORD			PKKPbc	**PKKPbc**	**17 48 26.9**	**-0.1**
	comp=Z,0.7nm,0.8s,baz=142,slow=1.4,SNR=3.5						
H03N2	**Juan Fernandez**	**118.95 108**	T	T	19 49 50.1		
	baz=317,slow=74						
H03N1	**Juan Fernandez**	**118.97 108**	T	T	19 49 49.5		
	baz=317						
H03N3	**Juan Fernandez**	**118.97 108**	T	T	19 49 43.7		
	baz=317,slow=74						
CPUP	**Villa Florida**	**127.69 87**	PKP	**PKPdf**	**17 38 21.6**	**-1.0**
	comp=Z,1.2nm,0.6s,baz=315,slow=2.9,SNR=4.9						
PLCA	**Paso Flores**	**128.77 110**	PKP	**PKPdf**	**17 38 24.7**	**+0.3**
	comp=Z,3.4nm,0.8s,baz=180,slow=0.9,SNR=7.5						
QSPA	**South Pole Qui**	**140.17 180**		PKPpre	17 38 39.9		
MAW	**Mawson**	**146.93 217**	PKPbc	**PKPbc**	**17 38 58.1**	**-0.4**
	comp=Z,14nm,0.7s,baz=104,slow=3.8,SNR=49						
MAW	**Mawson**	**146.93 217**	PKPdf	**PKPdf**	**17 38 57.5**	**+1.0**
POGA	**Pongola**	**148.94 308**		**PKPbc**	**17 39 04.7**	**-0.5**
BOSA	**Boshof**	**153.08 316**	PKPbc	**PKPbc**	**17 39 14.3**	**-0.7**
	comp=Z,5.0nm,0.6s,baz=16,slow=3.2,SNR=19						
BOSA			PKPab	**PKPab**	**17 39 25.9**	**-0.6**
	comp=Z,3.7nm,0.6s,baz=23,slow=0.3,SNR=5.8						
VNA3	**Neumayer Olymp**	**158.13 168**	PKPab	**PKPab**	**17 39 47.0**	**+0.1**
VNA3	**Neumayer Olymp**	**158.13 168**	PKPdf	**PKPdf**	**17 39 15.1**	**+2.1**
TROLL	**Troll, Antarti**	**158.32 178**	PKPab	**PKPab**	**17 39 46.5**	**-1.3**
TROLL	**Troll, Antarti**	**158.32 178**	PKPdf	**PKPdf**	**17 39 14.1**	**+0.8**
SNAA	**Sanae**	**158.43 174**	PKPab	**PKPab**	**17 39 47.5**	**-0.7**
SNAA	**Sanae**	**158.43 174**		**PKPab**	**17 39 46.7**	**-1.5**
SNAA	**Sanae**	**158.43 174**	PKP2	**PKPab**	**17 39 46.7**	**-1.5**
VNA2	**Neumayer--Watz**	**158.72 169**	PKPab	**PKPab**	**17 39 49.6**	**+0.2**
VNA2	**Neumayer--Watz**	**158.72 169**	PKPdf	**PKPdf**	**17 39 14.1**	**+0.5**
VNA1	**Neumayer--Stat**	**158.87 168**	PKPab	**PKPab**	**17 39 49.4**	**-0.6**
VNA1	**Neumayer--Stat**	**158.87 168**	PKPdf	**PKPdf**	**17 39 15.2**	**+1.4**

*JMA **29** 17:31:37.9±0.1,24.0°N±1.0°×121.8°E±0.6,h54km±1km, MV2.6/11,TAIWAN REGION*
*TAP **29** 17:31:39.4,24.1°N×121.78°E,h48km,ML3.0,B*
ISC 29 17:31:38.3±1.1,**24.02N**±0.02°×**121.91E**±0.02,**h20**km±2km, **n106,σ0§60/173,7C-13D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.28**	**262**	⇑*i*P	**Pn**	**17 31 47.6**	**+0.3**
	baz=228						
HWA				*e*S	**Sn**	**17 31 54.2**	**+1.2**
	baz=228						
TWD	**Chiawan**	**0.29**	**282**	⇑*i*P	**Pn**	**17 31 47.2**	**-0.3**
	baz=261						
TWD				S	**Sn**	**17 31 53.2**	**-0.1**
	baz=261						
ETL	**Fush Village**	**0.30**	**298**	*i* P	**Pn**	**17 31 47.2**	**-0.4**
	baz=290						
ETL				*e*S	**Sn**	**17 31 53.5**	**-0.1**
	baz=290						
TEYL	**Yanliau Villag**	**0.32**	**242**	P	**Pn**	**17 31 48.1**	**+0.2**
	baz=218						
TEYL				*e*S	**Sn**	**17 31 55.3**	**+1.3**
	baz=218						
NACB	**Ninganchiao**	**0.33**	**299**	⇑*i*P	**Pn**	**17 31 47.4**	**-0.7**
	baz=292						
NACB				S	**Sn**	**17 31 53.5**	**-0.7**
	baz=292						
EHP	**Heping Village**	**0.33**	**332**	*e*P	**Pn**	**17 31 47.6**	**-0.5**
	baz=353						
EHP				*e*S	**Sn**	**17 31 53.5**	**-0.8**
	baz=353						
ETM	**Tongmen**	**0.38**	**262**	P	**Pn**	**17 31 48.3**	**-0.5**
	baz=241						
ETM				*e*S	**Sn**	**17 31 55.1**	**-0.5**
	baz=241						
ETLH	**Xiulin Townshi**	**0.43**	**296**	⇑*i*P	**Pb**	**17 31 48.5**	**+1.0**
	baz=290						
ETLH				S	**Sb**	**17 31 55.2**	**+1.6**
	baz=290						
ENA	**Nanau**	**0.44**	**340**	⇑*i*P	**Pn**	**17 31 48.6**	**-0.9**
	baz=356						
ENA				*e*S	**Sn**	**17 31 56.1**	**-0.9**
	baz=356						
EWUT	**Wuta**	**0.44**	**344**	⇑*i*P	**Pn**	**17 31 48.8**	**-0.8**
EWUT				S	**Sn**	**17 31 56.1**	**-1.0**
TEGC	**Jichi Village**	**0.46**	**228**	P	**Pn**	**17 31 49.7**	**-0.1**
	baz=208						
TEGC				*e*S	**Sn**	**17 31 58.4**	**+1.0**
	baz=208						
ESL	**Shilin**	**0.48**	**245**	*i* P	**Pn**	**17 31 49.4**	**-0.7**
	baz=226						
ESL				*e*S	**Sn**	**17 31 57.4**	**-0.6**
	baz=226						
EGFH	**Guangfu**	**0.56**	**232**	*e*P	**Pn**	**17 31 50.5**	**-0.7**
	baz=216						
EGFH				*e*S	**Sn**	**17 31 59.1**	**-0.8**
	baz=216						
TWC	**Suao**	**0.59**	**355**	⇑*i*P	**Pn**	**17 31 51.0**	**-0.6**
	baz=9.0						
TWC				*e*S	**Sn**	**17 31 59.7**	**-1.1**
	baz=9.0						
WHF	**Hehuan Shan**	**0.60**	**282**	⇓*i*P	**Pg**	**17 31 50.9**	**+0.3**
	baz=275						
WHF				*e*S	**Sg**	**17 31 59.5**	**+0.7**
	baz=275						
LATG	**Datong**	**0.62**	**326**	*e*P	**Pg**	**17 31 51.0**	**+0.2**
	baz=332						
LATG				*e*S	**Sg**	**17 31 59.7**	**+0.5**
	baz=332						
NNSB	**Datong**	**0.63**	**311**	*e*P	**Pg**	**17 31 51.1**	**+0.1**
	baz=312						
NNSB				*e*S	**Sg**	**17 31 59.7**	**+0.2**
	baz=312						
NNSH	**Datong**	**0.63**	**311**	⇓P	**Pg**	**17 31 51.0**	**+0.1**
	baz=312						
NNSH				*e*S	**Sg**	**17 31 59.6**	**+0.1**
	baz=312						
NDS	**Dongshan**	**0.64**	**344**	*e*P	**Pg**	**17 31 51.2**	**+0.1**
	baz=354						
NDS				*e*S	**Sg**	**17 32 00.4**	**+0.7**
	baz=354						
NNS	**Nan Shan**	**0.65**	**311**	⇓*i*P	**Pg**	**17 31 51.2**	**0.0**
	baz=312						
NNS				*e*S	**Sg**	**17 31 60.0**	**+0.1**
	baz=312						
FUSS	**Fushou**	**0.65**	**291**	⇓P	**Pg**	**17 31 51.5**	**+0.2**
	baz=286						
FUSS				*e*S	**Sg**	**17 32 00.5**	**+0.4**
	baz=286						
CHGB	**Renai**	**0.67**	**274**	⇓*i*P	**Pg**	**17 31 52.0**	**+0.2**
	baz=265						
CHGB				*e*S	**Sg**	**17 32 01.3**	**+0.5**
	baz=265						
OWD	**Renai**	**0.67**	**265**	⇓P	**Pg**	**17 31 51.9**	**+0.1**
	baz=255						
OWD				*e*S	**Sg**	**17 32 00.8**	**0.0**
	baz=255						
NDT	**Datong Townshi**	**0.69**	**328**	P	**Pg**	**17 31 51.9**	**0.0**
	baz=334						
NDT				S	**Sg**	**17 32 01.1**	**0.0**
	baz=334						
HGSD	**Ruisui**	**0.69**	**220**	*e*P	**Pn**	**17 31 52.5**	**-0.4**
	baz=208						
HGSD				*e*S	**Sn**	**17 32 03.4**	**+0.4**
	baz=208						
TWT	**Tachien**	**0.71**	**290**	*e*P	**Pg**	**17 31 52.8**	**+0.4**
	baz=284						
TWT				*e*S	**Sg**	**17 32 02.1**	**+0.1**
	baz=284						
TDCB	**Techi**	**0.72**	**289**	⇓*e*P	**Pg**	**17 31 52.7**	**0.0**
	baz=284						
TDCB				*e*S	**Sb**	**17 32 01.9**	**0.0**
	baz=284						
WUSB	**Renai**	**0.72**	**268**	⇓P	**Pg**	**17 31 52.7**	**+0.1**
	baz=259						
WUSB				*e*S	**Sg**	**17 32 02.4**	**0.0**
	baz=259						
TWE	**Neicheng**	**0.73**	**343**	*e*P	**Pg**	**17 31 52.8**	**0.0**
	baz=352						
TWE				*e*S	**Sg**	**17 32 02.7**	**+0.1**
	baz=352						
EHY	**Hungye**	**0.74**	**227**	*e*P	**Pb**	**17 31 52.5**	**-0.1**
	baz=214						
EHY				*e*S	**Sb**	**17 32 02.5**	**+0.2**
	baz=214						
VWDT	**VWDT**	**0.75**	**250**	⇓P	**Pg**	**17 31 53.3**	**+0.2**
	baz=239						
VWDT				*e*S	**Sg**	**17 32 03.4**	**+0.3**
	baz=239						
ILA	**Ilan**	**0.76**	**349**	*e*P	**Pg**	**17 31 53.1**	**-0.1**
	baz=358						
FUSB	**Fushanzhiwuyua**	**0.80**	**338**	*e*P	**Pb**	**17 31 53.5**	**0.0**
	baz=345						
FUSB				*e*S	**Sb**	**17 32 04.1**	**+0.2**
	baz=345						
YHNB	**Yeheng**	**0.81**	**323**	⇓*i*P	**Pb**	**17 31 53.7**	**-0.2**
	baz=327						
YHNB				*e*S	**Sb**	**17 32 03.4**	**-1.0**
	baz=327						
EGS		**0.82**	**1**	*e*P	**Pn**	**17 31 55.6**	**+0.7**
	baz=12						
NSK	**Sanguang**	**0.83**	**323**	⇓P	**Pb**	**17 31 53.7**	**-0.4**
	baz=327						
NSK				*e*S	**Sb**	**17 32 03.9**	**-0.9**
	baz=327						
NTC	**Toucheng**	**0.84**	**355**	*e*P	**Pb**	**17 31 54.4**	**+0.1**
	baz=4.0						
YULB	**Yu-li**	**0.84**	**222**	⇓P	**Pb**	**17 31 53.8**	**-0.5**
	baz=212						
YULB				*e*S	**Sb**	**17 32 04.8**	**-0.3**
	baz=212						
NWLT	**Wulai**	**0.84**	**334**	P	**Pb**	**17 31 54.1**	**-0.3**
	baz=340						
NWLT				*e*S	**Sb**	**17 32 04.3**	**-0.9**
	baz=340						
EYUL	**Yuli**	**0.86**	**219**	*e*P	**Pb**	**17 31 54.4**	**-0.2**
	baz=209						
TWF1	**Yuli**	**0.87**	**220**	*e*P	**Pb**	**17 31 54.4**	**-0.3**
	baz=210						
TWF1				*e*S	**Sb**	**17 32 05.9**	**-0.1**
	baz=210						
WPL	**Puli Township**	**0.87**	**270**	*e*P	**Pb**	**17 31 54.7**	**-0.1**
	baz=263						
WPL				*e*S	**Sg**	**17 32 06.5**	**-0.5**
	baz=263						
DPDB	**Guoxing**	**0.90**	**271**	*e*P	**Pb**	**17 31 55.3**	**0.0**
	baz=265						
DPDB				*e*S	**Sg**	**17 32 07.6**	**-0.2**
	baz=265						
SSLB	**Suanglung**	**0.90**	**256**	⇓*e*P	**Pb**	**17 31 55.1**	**-0.2**
	baz=247						
SSLB				*e*S	**Sb**	**17 32 07.1**	**+0.1**
	baz=247						
WCS	**Beigang Elemen**	**0.91**	**273**	*e*P	**Pb**	**17 31 55.5**	**0.0**
	baz=266						
WCS				*e*S	**Sb**	**17 32 07.7**	**+0.5**
	baz=266						
WHP	**Taichung City**	**0.92**	**287**	*e*P	**Pb**	**17 31 55.7**	**+0.1**
	baz=283						
WHP				*e*S	**Sb**	**17 32 07.5**	**+0.1**
	baz=283						
SMLT	**Sun Moon Lake**	**0.93**	**262**	*e*P	**Pb**	**17 31 55.7**	**-0.3**
	baz=254						
SMLT				*e*S	**Sb**	**17 32 08.2**	**+0.3**
	baz=254						
NFF	**Wufeng Townshi**	**0.95**	**310**	*e*P	**Pb**	**17 31 55.8**	**-0.4**
	baz=311						
NFF				*e*S	**Sb**	**17 32 07.2**	**-1.1**
	baz=311						
TIPB	**Shuangxi**	**0.95**	**355**	*e*P	**Pb**	**17 31 56.4**	**+0.2**
	baz=3.0						
TIPB				*e*S	**Sb**	**17 32 08.6**	**+0.1**
	baz=3.0						
TYC	**Yuchr**	**0.97**	**264**	*e*P	**Pb**	**17 31 56.1**	**-0.3**
	baz=256						
TYC				*e*S	**Sb**	**17 32 08.3**	**-0.5**
	baz=256						
FULB	**Fuli**	**0.99**	**215**	*e*P	**Pb**	**17 31 56.9**	**0.0**
	baz=206						
FULB				*e*S	**Sb**	**17 32 09.6**	**+0.1**
	baz=206						
NHDH	**Xindian Distri**	**1.00**	**340**	*e*P	**Pb**	**17 31 56.6**	**-0.4**
	baz=345						
NHDH				*e*S	**Sb**	**17 32 09.4**	**-0.5**
	baz=345						
TWA	**Mucha**	**1.00**	**343**	*e*P	**Pb**	**17 31 56.1**	**-1.0**
	baz=349						
TWA				*e*S	**Sb**	**17 32 09.7**	**-0.2**
	baz=349						
YUS	**Yu-Shan**	**1.02**	**239**	*e*P	**Pb**	**17 31 57.6**	**0.0**
	baz=230						
YUS				*e*S	**Sb**	**17 32 10.5**	**-0.4**
	baz=230						
LIOB	**Emei**	**1.03**	**308**	*e*P	**Pb**	**17 31 57.5**	**0.0**
	baz=308						
LIOB				*e*S	**Sb**	**17 32 10.0**	**-0.6**
	baz=308						
NSTT	**Nanjuang**	**1.03**	**307**	*e*P	**Pb**	**17 31 57.4**	**-0.1**
	baz=307						
NSTT				*e*S	**Sb**	**17 32 10.1**	**-0.5**
	baz=307						
NJD	**Zhudong**	**1.03**	**314**	*e*P	**Pb**	**17 31 56.5**	**-1.1**
	baz=315						
CHKT	**Chengkung**	**1.04**	**209**	*e*P	**Pb**	**17 31 57.3**	**-0.4**
	baz=200						
CHKT				*e*S	**Sb**	**17 32 09.6**	**-1.3**
	baz=200						
JYNG	**Yonaguni jima**	**1.04**	**65**	P	**Pn**	**17 31 57.9**	**+0.1**
JYNG				*e*S	**Sg**	**17 32 12.0**	**-0.3**
NWF	**Wu-fen Shan**	**1.06**	**354**	*e*P	**Pn**	**17 31 58.1**	**0.0**
WFSB	**Wu-fen Shan**	**1.06**	**354**	*e*P	**Pn**	**17 31 58.1**	**+0.1**
WFSB				*e*S	**Sb**	**17 32 11.0**	**-0.3**
SXI1	**Grass Mountain**	**1.07**	**358**	*e*P	**Pb**	**17 31 58.0**	**-0.3**
	baz=5.0						
TWQ1	**Liyutan**	**1.09**	**288**	*e*P	**Pn**	**17 31 58.2**	**-0.3**
	baz=285						
WJS	**Zhushan**	**1.10**	**260**	*e*P	**Pb**	**17 31 59.0**	**+0.4**
	baz=254						
YOJ	**Yonaguni jima**	**1.10**	**66**	*e*P	**Pb**	**17 31 59.0**	**+0.3**
	baz=72						
YOJ				*e*S	**Sn**	**17 32 13.6**	**+0.3**
	baz=72						
YOJ	**Yonaguni jima**	**1.10**	**66**	P	**Pb**	**17 31 58.7**	**0.0**
YOJ				S	**Sn**	**17 32 13.4**	**+0.1**
WWF	**Wufeng**	**1.11**	**272**	*e*P	**Pb**	**17 31 59.2**	**+0.4**
	baz=266						
NSY	**Sanyi**	**1.12**	**291**	*e*P	**Pn**	**17 31 58.8**	**-0.2**
	baz=288						
WNT	**Mingjian**	**1.13**	**263**	*e*P	**Pb**	**17 31 59.5**	**+0.3**
	baz=257						
WNT1	**Nantou City**	**1.13**	**265**	*e*P	**Pg**	**17 31 59.8**	**-0.5**
	baz=259						
ALS	**Alishan**	**1.13**	**244**	*e*P	**Pb**	**17 31 59.5**	**+0.1**
	baz=236						
TCU	**Taichung**	**1.13**	**277**	*e*P	**Pn**	**17 31 59.1**	**0.0**
	baz=272						
NMLH	**Miaoli**	**1.14**	**297**	*e*P	**Pn**	**17 31 58.8**	**-0.5**
	baz=296						
NCUH	**Zhongli**	**1.15**	**325**	*e*P	**Pn**	**17 31 58.8**	**-0.6**
	baz=328						
ELDTW	**Lidau**	**1.16**	**225**	*e*P	**Pn**	**17 31 58.7**	**-0.9**
	baz=217						
ELDTW				*e*S	**Sb**	**17 32 13.1**	**-1.5**
	baz=217						
YM01	**YM01**	**1.17**	**345**	*e*P	**Pn**	**17 31 58.7**	**-0.9**
	baz=350						
TWS1	**Kuangyinshan**	**1.17**	**338**	*e*P	**Pn**	**17 31 58.7**	**-0.9**
	baz=342						
TWS1				*e*S	**Sb**	**17 32 13.8**	**-0.8**
	baz=342						
EDH	**Donghe**	**1.18**	**208**	*e*P	**Pn**	**17 31 58.8**	**-0.9**
	baz=201						
EDH				*e*S	**Sb**	**17 32 13.5**	**-1.4**
	baz=201						
WDJ	**Dajia District**	**1.20**	**286**	*e*P	**Pn**	**17 31 60.0**	**-0.1**
	baz=283						
WYL	**Yuanlin Townsh**	**1.22**	**268**	*e*P	**Pb**	**17 32 00.5**	**-0.2**
	baz=262						
WCHH	**Zhanghua**	**1.24**	**273**	*e*P	**Pn**	**17 32 00.2**	**-0.3**
	baz=269						
NHW	**Xinwu Township**	**1.26**	**322**	*e*P	**Pn**	**17 31 59.8**	**-1.1**
	baz=324						
WGK	**Gukeng**	**1.28**	**255**	*e*P	**Pb**	**17 32 01.6**	**-0.2**
	baz=249						
WDLH	**Douliu**	**1.30**	**256**	*e*P	**Pb**	**17 32 01.8**	**-0.3**
	baz=250						
WDLH				*e*S	**Sb**	**17 32 18.7**	**+0.4**
	baz=250						
CHN4	**Tsaushan**	**1.38**	**241**	*e*P	**Pb**	**17 32 03.4**	**0.0**
	baz=235						
LDUT	**Ludao**	**1.40**	**197**	*e*P	**Pn**	**17 32 01.4**	**-1.4**
	baz=191						
CHN2	**Minshiung**	**1.40**	**250**	*e*P	**Pb**	**17 32 04.1**	**+0.3**
	baz=244						
WRL	**Guolierlin Hig**	**1.41**	**266**	*e*P	**Pb**	**17 32 02.5**	**-0.3**
	baz=261						
WTP	**Ta-pu**	**1.41**	**237**	*e*P	**Pb**	**17 32 04.0**	**-0.1**
	baz=231						
TWGBT	**Beinan**	**1.42**	**213**	*e*P	**Pn**	**17 32 01.6**	**-1.4**
	baz=206						
TWGBT				*e*S	**Sn**	**17 32 18.4**	**-2.7**
	baz=206						
WTK	**Tuku**	**1.43**	**257**	*e*P	**Pn**	**17 32 03.5**	**+0.3**
	baz=252						
CHY	**Chiayi**	**1.46**	**249**	*e*P	**Pb**	**17 32 04.1**	**-0.6**
	baz=244						
TWK	**Hsinying**	**1.50

mbtmp3.6/10, Error ellipse: s-maj=24.0km s-min=17.3km az=86.0

ISC 29 17:39:46.7±0.7, 38°97N±0°06×15°48E±0°06, h276km±6km, n102, σ1$54/113, mb3.3/7, 24C-15D, Sicily

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOPP	**Joppolo**	**0.48**	**139**	⇓P	**Pn**	**17 40 23.2**	**+0.6**
JOPP				S	**S**	**17 40 49.9**	**-1.0**
JOPP				AML	AML		
	comp=N,858μm,1.3s						
JOPP				AML	AML		
	comp=E,1114μm,1.3s						
CAR1	**CAROLEI**	**0.64**	**63**	⇑P	**Pn**	**17 40 23.7**	**+0.8**
CAR1				S	**S**	**17 40 50.3**	**-1.4**
CAR1				AML	AML		
	comp=E,1405μm,0.7s						
CAR1				AML	AML		
	comp=N,1745μm,0.8s						
CAR1				AML	AML		
	comp=E,1400μm,0.7s						
CAR1				AML	AML		
	comp=N,1740μm,0.8s						
CAR1				AML	AML		
	comp=E,1795μm,0.7s						
CAR1				AML	AML		
	comp=N,1745μm,0.8s						
CAR1				AML	AML		
	comp=E,1400μm,0.7s						
CAR1				AML	AML		
	comp=N,1460μm,0.8s						
CAR1				AML	AML		
	comp=E,1800μm,0.7s						
LLI	**Lipari**	**0.67**	**219**	P	**Pn**	**17 40 24.2**	**+1.1**
CET2	**Cetraro**	**0.67**	**33**	⇑P	**Pn**	**17 40 23.9**	**+0.9**
CET2				S	**S**	**17 40 50.8**	**-1.1**
CET2				AML	AML		
	comp=E,1935μm,0.8s						
CET2				AML	AML		
	comp=N,1750μm,0.8s						
MSRU	**Castanea**	**0.71**	**178**	⇓P	**Pn**	**17 40 23.2**	**0.0**
MSRU				S	**S**	**17 40 51.0**	**-1.2**
MSRU				AML	AML		
	comp=E,492μm,1.0s						
MSRU				AML	AML		
	comp=N,545μm,1.6s						
VPL	**Vulcano Piano**	**0.71**	**213**	P	**Pn**	**17 40 24.1**	**+0.8**
VPL				AML	AML		
	comp=N,662μm,0.7s						
VPL				AML	AML		
	comp=E,677μm,0.3s						
VPL				AML	AML		
	comp=N,662μm,0.7s						
MILZ	**Milazzo**	**0.72**	**196**	AML	AML		
	comp=E,450μm,0.3s						
MILZ				AML	AML		
	comp=N,407μm,0.4s						
SPS2	**Spezzano della**	**0.74**	**64**	P	**Pn**	**17 40 24.5**	**+1.2**
SPS2				S	**S**	**17 40 52.3**	**-0.1**
SPS2				AML	AML		
	comp=N,454μm,0.3s						
SPS2				AML	AML		
	comp=E,354μm,0.5s						
SPS2				AML	AML		
	comp=N,453μm,0.3s						
GRI	**Girifalco**	**0.75**	**101**	P	**Pn**	**17 40 25.1**	**+1.7**
GRI				S	**S**	**17 40 52.2**	**-0.2**
GRI				AML	AML		
	comp=N,470μm,0.4s						
GRI				AML	AML		
	comp=E,736μm,0.4s						
MSCL	**Scilla**	**0.78**	**162**	P	**Pn**	**17 40 24.0**	**+0.4**
MSCL				AML	AML		
	comp=E,864μm,0.2s						
MSCL				AML	AML		
	comp=N,859μm,0.7s						
CEL	**Celeste**	**0.78**	**155**	P	**Pn**	**17 40 23.9**	**+0.3**
IFIL	**Filicudi I Eol**	**0.82**	**241**	P	**Pn**	**17 40 24.2**	**+0.6**
GMB	**Gambarie**	**0.85**	**161**	P	**Pn**	**17 40 24.5**	**+0.5**
GMB				S	**S**	**17 40 52.6**	**-0.9**
GMB				AML	AML		
	comp=E,1860μm,0.4s						
GMB				AML	AML		
	comp=N,1760μm,1.6s						
CELI	**Celico**	**0.91**	**61**	P	**Pn**	**17 40 26.1**	**+1.9**
CELI				S	**S**	**17 40 54.8**	**+1.0**
CELI				AML	AML		
	comp=E,810μm,0.5s						
CELI				AML	AML		
	comp=N,753μm,1.3s						
PLAC	**Placanica**	**0.91**	**124**	⇓P	**Pn**	**17 40 25.3**	**+1.2**
PLAC				S	**S**	**17 40 53.1**	**-0.6**
PLAC				AML	AML		
	comp=E,450μm,0.8s						
PLAC				AML	AML		
	comp=N,514μm,0.3s						
PLAC				AML	AML		
	comp=E,538μm,0.3s						
PLAC				AML	AML		
	comp=E,538μm,0.3s						
PLAC				AML	AML		
	comp=N,450μm,1.0s						
SERS	**Sersale**	**0.94**	**86**	⇑P	**Pn**	**17 40 25.9**	**+1.5**
SERS				AML	AML		
	comp=N,316μm,0.4s						
SERS				AML	AML		
	comp=E,342μm,1.6s						
TDS	**Terranova Siba**	**0.96**	**44**	P	**Pn**	**17 40 25.8**	**+1.6**
TDS				S	**S**	**17 40 54.4**	**+0.5**
TDS				AML	AML		
	comp=E,204μm,0.7s						
TDS				AML	AML		
	comp=N,140μm,0.7s						
TDS				AML	AML		
	comp=E,203μm,0.7s						
NOV	**Novara**	**0.98**	**196**	P	**Pn**	**17 40 25.4**	**+0.8**
NOV				AML	AML		
	comp=E,356μm,0.4s						
NOV				AML	AML		
	comp=N,381μm,0.5s						
NOV				AML	AML		
	comp=E,355μm,0.4s						
IACL	**Alicudi**	**0.98**	**244**	P	**Pn**	**17 40 24.9**	**+0.6**
MTTG	**Motta San Giov**	**0.98**	**170**	⇓P	**Pn**	**17 40 25.2**	**+0.7**
MTTG				S	**S**	**17 40 54.0**	**-0.4**
MTTG				AML	AML		
	comp=N,365μm,0.9s						
MTTG				AML	AML		
	comp=E,414μm,0.6s						
MMN	**Mormanno**	**1.00**	**23**	P	**Pn**	**17 40 25.4**	**+1.1**
SOI	**Samo**	**1.00**	**153**	⇓P	**Pn**	**17 40 25.3**	**+0.8**
SOI				S	**S**	**17 40 53.7**	**-0.8**
SOI				AML	AML		
	comp=E,223μm,0.4s						
SOI				AML	AML		
	comp=N,194μm,0.8s						
SOI				AML	AML		
	comp=E,726μm,0.5s						
SOI				AML	AML		
	comp=N,194μm,0.8s						
SOI				AML	AML		
	comp=N,193μm,0.8s						
SOI				AML	AML		
	comp=E,725μm,0.5s						
AIO	**Antillo**	**1.01**	**191**	P	**Pn**	**17 40 25.4**	**+0.7**
AIO				AML	AML		
	comp=E,202μm,0.7s						
AIO				AML	AML		
	comp=N,174μm,0.3s						
AIO				AML	AML		
	comp=E,202μm,0.7s						
TIP	**Timpagrande**	**1.02**	**78**	⇑P	**Pn**	**17 40 26.3**	**+1.7**
TIP				S	**S**	**17 40 54.4**	**-0.2**
TIP				AML	AML		
	comp=E,236μm,0.7s						
TIP				AML	AML		
	comp=E,196μm,0.7s						
TIP				AML	AML		
	comp=N,206μm,0.8s						
TIP				AML	AML		
	comp=E,236μm,0.7s						
TIP				AML	AML		
	comp=N,256μm,0.8s						
CUC	**Castrocucco**	**1.05**	**14**	P	**Pn**	**17 40 25.6**	**+0.9**
BULG	**Bulgheria - Ca**	**1.11**	**356**	⇑P	**Pn**	**17 40 26.5**	**+1.4**
BULG				AML	AML		
	comp=E,72μm,1.1s						
BULG				AML	AML		
	comp=N,160μm,0.5s						
PIPA	**Pietrapaola**	**1.16**	**63**	P	**Pn**	**17 40 27.0**	**+1.7**
PIPA				AML	AML		
	comp=E,296μm,0.3s						
PIPA				AML	AML		
	comp=N,325μm,1.0s						
PIPA				AML	AML		
	comp=E,296μm,0.3s						
MSFR	**San Fratello**	**1.17**	**217**	P	**Pn**	**17 40 25.9**	**+0.5**
MGR	**Morigerati**	**1.17**	**3**	⇑P	**Pn**	**17 40 26.6**	**+1.3**
MGR				AML	AML		
	comp=N,68μm,1.0s						
MGR				AML	AML		
	comp=E,81μm,0.4s						
MGR				AML	AML		
	comp=N,68μm,1.0s						
MNO	**Monte Soro**	**1.20**	**211**	P	**Pn**	**17 40 27.3**	**+1.4**
LADO	**San Nicola del**	**1.21**	**74**	⇑P	**Pn**	**17 40 27.1**	**+1.5**
SIRI	**Monte Sirino -**	**1.25**	**14**	⇑P	**Pn**	**17 40 27.0**	**+1.1**
SIRI				AML	AML		
	comp=N,107μm,0.3s						
SIRI				AML	AML		
	comp=E,150μm,0.3s						
MTSN	**Montesano sull**	**1.31**	**9**	⇑P	**Pn**	**17 40 27.2**	**+0.9**
MTSN				AML	AML		
	comp=N,82μm,0.5s						
MTSN				AML	AML		
	comp=E,69μm,0.2s						
SCHR	**S. Chirico Rap**	**1.31**	**20**	⇑P	**Pn**	**17 40 28.0**	**+1.8**
SCHR				AML	AML		
	comp=E,103μm,0.8s						
SCHR				AML	AML		
	comp=N,63μm,1.4s						
SCHR				AML	AML		
	comp=E,103μm,0.8s						
SCHR				AML	AML		
	comp=N,64μm,1.4s						
ORI	**Oriolo Calabro**	**1.33**	**34**	P	**Pn**	**17 40 27.9**	**+1.7**
ORI				AML	AML		
	comp=E,658μm,0.4s						
ORI				AML	AML		
	comp=N,548μm,0.4s						
CMPR	**Campora**	**1.35**	**354**	⇑P	**Pn**	**17 40 27.9**	**+1.5**
MCEL	**Monticello**	**1.38**	**10**	P	**Pn**	**17 40 28.0**	**+1.3**
MCEL				AML	AML		
	comp=E,112μm,0.3s						
MCEL				AML	AML		
	comp=N,93μm,0.9s						
AG11	**Viggiano (PZ)**	**1.41**	**15**	P	**Pn**	**17 40 29.1**	**+2.2**
AG11				AML	AML		
	comp=E,225μm,1.4s						
AG11				AML	AML		
	comp=N,178μm,0.8s						
PLLN	**Pollina**	**1.43**	**227**	P	**Pn**	**17 40 27.1**	**0.0**
PLLN				AML	AML		
	comp=N,208μm,0.9s						
PLLN				AML	AML		
	comp=E,199μm,1.6s						
GIB	**Gibilmanna**	**1.50**	**230**	⇓P	**Pn**	**17 40 27.7**	**+0.1**
GIB				AML	AML		
	comp=N,376μm,0.3s						
GIB				AML	AML		
	comp=E,298μm,0.5s						
CSLB	**Castelbuono**	**1.52**	**228**	⇓P	**Pn**	**17 40 27.7**	**0.0**
CSLB				AML	AML		
	comp=E,38μm,1.3s						
CSLB				AML	AML		
	comp=N,69μm,0.4s						
CDRU	**Civita di Ruta**	**1.52**	**355**	⇑P	**Pn**	**17 40 29.1**	**+1.4**
CDRU				AML	AML		
	comp=E,55μm,0.6s						
CDRU				AML	AML		
	comp=N,44μm,0.5s						
PETRA	**Petralia Sopra**	**1.56**	**224**	AML	AML		
	comp=N,218μm,0.3s						
PETRA				AML	AML		
	comp=E,124μm,0.7s						
PETRA				AML	AML		
	comp=N,217μm,0.3s						
CRAC	**Craco**	**1.58**	**28**	⇑P	**Pn**	**17 40 29.5**	**+1.6**
CRAC				AML	AML		
	comp=N,458μm,1.2s						
CRAC				AML	AML		
	comp=E,632μm,1.2s						
PTRP	**Pietrapertosa**	**1.61**	**16**	⇑P	**Pn**	**17 40 30.1**	**+1.7**
PTRP				AML	AML		
	comp=N,97μm,1.6s						
PTRP				AML	AML		
	comp=E,138μm,1.3s						
HLNI	**Lentini**	**1.69**	**197**	⇓P	**Pn**	**17 40 29.1**	**+0.3**
HLNI				AML	AML		
	comp=E,70μm,1.1s						
HLNI				AML	AML		
	comp=N,105μm,0.5s						
PZUN	**Potenza**	**1.69**	**8**	AML	AML		
	comp=N,384μm,0.1s						
PZUN				AML	AML		
	comp=E,174μm,0.5s						
HAGA	**Augusta**	**1.70**	**189**	P	**Pn**	**17 40 29.1**	**+0.1**
VAE	**Valguarnera**	**1.71**	**210**	P	**Pn**	**17 40 30.6**	**+1.5**
VAE	comp=E,14nm,0.4s,baz=0.0,slow=0.0,SNR=3.9				S	**S**	**17 41 06.5**	**+3.7**
	comp=E,12nm,0.8s,baz=60,slow=20,SNR=0.8						
MIGL	**Miglionico**	**1.79**	**24**	⇑P	**Pn**	**17 40 30.3**	**+0.7**
MIGL				AML	AML		
	comp=E,320μm,1.5s						
MIGL				AML	AML		
	comp=N,306μm,1.3s						
ALJA	**Alia**	**1.82**	**229**	⇓P	**Pn**	**17 40 30.8**	**+0.8**
ALJA				AML	AML		
	comp=E,102μm,0.8s						
ALJA				AML	AML		
	comp=N,121μm,0.4s						
MCRV	**Calabrutti - M**	**1.83**	**353**	⇑P	**Pn**	**17 40 31.5**	**+1.5**
MCRV				AML	AML		
	comp=N,66μm,1.1s						
MCRV				AML	AML		
	comp=E,87μm,0.4s						
SSY	**Sortino**	**1.84**	**190**	⇓P	**Pn**	**17 40 30.5**	**+0.4**
SSY				AML	AML		
	comp=E,136μm,1.1s						
SSY				AML	AML		
	comp=N,267μm,0.2s						
MEU	**Monte Lauro**	**1.92**	**193**	P	**Pn**	**17 40 31.2**	**+0.4**
MEU				AML	AML		
	comp=E,124μm,0.9s						
MEU				AML	AML		
	comp=N,196μm,0.3s						
MATE	**Matera**	**1.93**	**29**	⇑P	**Pn**	**17 40 31.1**	**+0.6**
MATE				AML	AML		
	comp=N,182μm,0.4s						
MATE				AML	AML		
	comp=E,124μm,0.5s						
LTRZ	**Laterza**	**1.93**	**32**	⇑P	**Pn**	**17 40 31.1**	**+0.4**
LTRZ				AML	AML		
	comp=N,746μm,1.2s						
LTRZ				AML	AML		
	comp=E,299μm,1.1s						
RAFF	**Raffo Rosso**	**1.95**	**207**	⇓P	**Pn**	**17 40 31.9**	**+0.9**
RAFF				AML	AML		
	comp=E,94μm,0.9s						
RAFF				AML	AML		
	comp=N,108μm,1.1s						
HAVL	**Avola**	**2.03**	**188**	⇓P	**Pn**	**17 40 32.2**	**+0.6**
HAVL				AML	AML		
	comp=N,188μm,0.4s						
HAVL				AML	AML		
	comp=E,124μm,1.6s						
CAFE	**Carife**	**2.06**	**355**	⇑P	**Pn**	**17 40 33.6**	**+1.7**
HMDC	**Modica**	**2.08**	**196**	⇓P	**Pn**	**17 40 32.9**	**+0.8**
HMDC				AML	AML		
	comp=E,80μm,1.3s						
HMDC				AML	AML		
	comp=N,113μm,1.4s						
CLTA	**Licata**	**2.17**	**214**	⇓P	**Pn**	**17 40 33.7**	**+0.9**
NOCI	**Noci**	**2.19**	**33**	⇑P	**Pn**	**17 40 33.4**	**+0.5**
NOCI				AML	AML		
	comp=E,95μm,0.5s						
NOCI				AML	AML		
	comp=N,125μm,1.4s						
VITU	**Vitulano (BN)**	**2.31**	**344**	⇑P	**Pn**	**17 40 35.3**	**+1.3**
VITU				AML	AML		
	comp=E,70μm,0.7s						
VITU				AML	AML		
	comp=N,108μm,0.7s						
SCTE	**Santa Cesarea**	**2.56**	**64**	⇑P	**Pn**	**17 40 38.1**	**+1.8**
SCTE				AML	AML		
	comp=N,290μm,0.4s						
SCTE				AML	AML		
	comp=E,335μm,0.2s						
LATB	**Latina**	**3.17**	**323**	P	Pn	17 40 48.1	+5.7
RMP	**Rome, Mte Porz**	**3.54**	**324**	⇑P	**Pn**	**17 40 44.7**	**-1.8**
FIAM	**Fiamignano**	**3.75**	**332**	S	**S**	**17 41 41.0**	**+2.4**
STON	**Ston**	**4.25**	**23**	⇓P	**Pn**	**17 40 55.4**	**+1.1**
PP3	**Marolino**	**4.62**	**343**	P	**Pn**	**17 41 02.8**	**+4.1**
CING	**Cingoli**	**4.73**	**339**	P	Pn	17 41 05.8	+5.8
PGF	**Pioggiola**	**6.08**	**308**	*e*Pn	**Pn**	**17 41 17.3**	**+0.9**
PGF				*e*Sn	**S**	**17 42 27.8**	**-0.6**
	comp=E,0.7nm,0.3s						
SERM	**Sermide**	**6.79**	**334**	P	**Pn**	**17 41 29.4**	**+4.5**
CANO	**Canova, Maglio**	**7.54**	**316**	⇑P	Pn	17 41 41.8	+7.6
LEOD	**Capriano del C**	**7.60**	**330**	P	Pn	17 41 42.3	+7.3
LMR	**La Mourre**	**8.05**	**306**	*e*Pn	**Pn**	**17 41 43.8**	**+3.2**
MBDF	**Montbardon**	**8.68**	**314**	*e*P	**Pn**	**17 41 50.6**	**+2.1**
MBDF				*e*Sn	**S**	**17 43 26.9**	**-0.3**
	comp=E,1.6nm,0.3s						
WTTA	**Wattenberg**	**8.75**	**343**	*e*Pn	**Pn**	**17 41 52.1**	**+2.7**
	comp=E,2.4nm,0.3s						
FETA	**Feichten**	**8.77**	**338**	*e*Pn	**Pn**	**17 41 51.7**	**+2.1**
	comp=E,3.7nm,0.9s						
SQTA	**Sankt Quirin**	**8.82**	**341**	*e*Pn	**Pn**	**17 41 52.0**	**+1.8**
	comp=E,6.2nm,0.4s						
DAVOX	**Davos/Dischmat**	**8.82**	**334**	P	**Pn**	**17 41 50.9**	**+0.6**
	comp=E,1.6nm,0.4s,baz=162,slow=20,SNR=3.5						
WATA	**Walderalm**	**8.83**	**342**	*i* Pn	**Pn**	**17 41 52.8**	**+2.4**
	comp=E,8.9nm,0.5s						
SMRF	**Simiane la Rot**	**8.96**	**307**	*e*Pn	**P**	**17 41 56.1**	**-1.7**
MOTA	**Moosalm**	**8.96**	**341**	*e*Pn	**Pn**	**17 41 53.5**	**+1.5**
	comp=E,2.0nm,0.5s						
LPG	**La Plagne**	**9.19**	**318**	*e*P	**Pn**	**17 41 57.5**	**+2.5**
LPG				*e*Sn	**S**	**17 43 38.8**	**-0.3**
	comp=E,0.7nm,0.3s						
LPL	**La Plagne**	**9.21**	**318**	*e*P	**Pn**	**17 41 57.2**	**+2.0**
LPL				*e*Sn	**S**	**17 43 40.3**	**+0.8**
	comp=E,1.2nm,0.2s						
ORIF	**Oris-en-Rattie**	**9.29**	**313**	*e*P	**P**	**17 41 59.2**	**-2.6**
GERES	**GERESS Array B**	**9.96**	**353**	P	**Pn**	**17 42 03.9**	**-0.4**
	comp=E,0.3nm,0.3s,baz=165,slow=12,SNR=1.9						
VIVF	**Saint-Julien-l**	**9.97**	**310**	*e*P	**P**	**17 42 06.7**	**-2.5**
CABF	**La Chapelle**	**10.29**	**321**	*e*P	**Pn**	**17 42 07.7**	**-0.8**
MTLF	**Montolieu**	**10.91**	**298**	*e*Pn	**P**	**17 42 21.1**	**+1.5**
CDF	**Champ du Feu**	**11.14**	**331**	*e*P	**Pn**	**17 42 18.0**	**-1.1**
CAF	**Calviac**	**11.62**	**305**	*e*Pn	**P**	**17 42 32.0**	**+4.5**
AKASG	**Malin Array Be**	**15.22**	**35**	P	**Pn**	**17 43 08.1**	**-0.2**
	comp=E,0.3nm,0.3s,baz=225,slow=9.0,SNR=6.6						
EKA	**Eskdalemuir Ar**	**20.59**	**329**	P	**P**	**17 44 02.3**	**-2.6**
	comp=E,0.4nm,0.4s,baz=136,slow=12,SNR=7.6						
	comp=E,0.4nm,0.4s						
HFS	**Hagfors**	**21.21**	**358**	P	**P**	**17 44 08.9**	**-2.1**
	comp=E,0.6nm,0.4s,baz=184,slow=11,SNR=9.4						
	comp=E,0.6nm,0.4s						
NB2	**NORSAR Subarra**	**22.25**	**355**	P	**P**	**17 44 19.5**	**-1.1**
	comp=Z,1.2nm,0.8s,baz=171,slow=10						
NOA	**NORSAR Array B**	**22.25**	**355**	P	**P**	**17 44 19.2**	**-1.3**
	comp=Z,0.9nm,0.9s,baz=181,slow=9.5,SNR=3.6						
	comp=Z,0.9nm,0.9s						
FINES	**FINESS Array B**	**23.44**	**13**	P	**P**	**17 44 30.9**	**-0.3**
	comp=Z,2.1nm,0.3s,baz=191,slow=8.8,SNR=29						
	comp=Z,2.1nm,0.3s						
TORD	**Torodi Ar. Bea**	**28.47**	**209**	P	**P**	**17 45 17.6**	**+0.8**
	comp=Z,0.2nm,0.4s,baz=8.4,slow=10,SNR=2.3						
	comp=Z,0.2nm,0.4s						
ARCES	**ARCESS Array B**	**31.09**	**7**	P	**P**	**17 45 38.0**	**-1.2**
	comp=Z,0.4nm,0.4s,baz=186,slow=8.6,SNR=12						
	comp=Z,0.4nm,0.4s						
ZALV	**Zalesovo Beam**	**48.10**	**48**	P	**P**	**17 47 59.3**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=295,slow=6.8,SNR=3.4						
	comp=Z,0.5nm,0.3s						
MKAR	**Makanchi Array**	**48.24**	**58**	P	**P**	**17 48 01.5**	**+1.6**
	comp=Z,0.4nm,0.4s,baz=283,slow=7.0,SNR=13						
	comp=Z,0.4nm,0.4s						

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*IDC **29** 17:42:01.2±0.7, 5°65N×32°93W, h0km, mb4.0/17, mbtmp4.0/17, MS4.0/28, Error ellipse: s-maj=26.4km s-min=15.5km az=140.0*

*NEIC **29** 17:42:03.6±1.8, 5°7N±0°1×32°8W±0°1, h10km±4km, mb4.5/31, Error ellipse: s-maj=20.1km s-min=14.3km az=138.0*

*GCMT **29** 17:42:04.6±0.3, 5°79N±0°03×33°07W±0°03, h18km±1km, MW5.0/95, Moment Tensor Solution. s21,c24; s95,c118; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.70±.20; $M_{\theta\theta}$0.61±.12; $M_{\phi\phi}$2.09±.13; $M_{r\theta}$0.06±.32; $M_{\theta\phi}$-0.93±.10; $M_{\phi r}$2.25±.31; Best double couple: M_o3.44200×10^{16} NP1:ϕ_s322.00000°, δ28.00000°, λ-116.00000°. NP2: ϕ_s171.00000°, δ65.00000°, λ-77.00000°. Principal axes: T 3.2530, Plg19.0000°, Azm251.0000°; N 0.3770, Plg12.0000°, Azm345.0000°; P -3.6300, Plg67.0000°, Azm104.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 17:42:03.0±0.5, 5°6N±0°1×32°8W±0°1, h12km, n77, σ1$00/47, mb4.4/31, MS4.0/26, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RCBR	**Riachuelo**	**11.77**	**195**	LR	LR	17 48 22.5	
	comp=Z,605nm,20.6s,baz=161,slow=32						
SACV	**Santiago Islan**	**12.98**	**44**		**Pn**	**17 45 06.8**	**-0.8**
MDP	**Montagnes des**	**19.73**	**269**	LR	LR	17 52 29.5	
	comp=Z,284nm,21.5s,baz=91,slow=32						
H10N3	**ASCENSION HYDR**	**22.64**	**126**	T	T	18 10 48.1	
	baz=305,slow=75,SNR=191						
H10N2	**ASCENSION HYDR**	**22.65**	**126**	T	T	18 10 48.2	
	baz=305,slow=75,SNR=298						
H10N1	**ASCENSION HYDR**	**22.66**	**126**	T	T	18 10 49.4	
	baz=305,slow=75,SNR=319						
H10S3	**ASCENSION HYDR**	**23.18**	**129**	T	T	18 11 22.1	
	baz=306,slow=74,SNR=73						
H10S2	**ASCENSION HYDR**	**23.20**	**128**	T	T	18 11 29.5	
	baz=274,slow=74,SNR=32						
BDFB	**Brasilia**	**25.93**	**215**	LR	LR	17 56 47.2	
	comp=Z,591nm,20.3s,baz=19,slow=34						
DBIC	**Dimbokro**	**27.83**	**86**	LR	LR	17 56 33.0	
	comp=Z,360nm,21.5s,baz=276,slow=31						
SAML	**Samuel**	**33.54**	**245**	P	**P**	**17 48 43.7**	**+0.6**
SAML					**pP**	**17 48 43.8**	**-1.9**
SAML				IAmb	IAmb	17 48 45.4	
	comp=Z,6.5nm,1.1s						
SJG	**San Juan**	**34.82**	**294**	LR	LR	18 00 00.8	
	comp=Z,249nm,21.6s,baz=87,slow=31						
TOA0	**Torodi Ar. Sit**	**34.84**	**75**	P	**P**	**17 48 52.5**	**-1.8**
TOA0				IAmb	IAmb	17 48 56.4	
	comp=Z,8.3nm,1.4s						
TORD	**Torodi Ar. Bea**	**34.84**	**75**	P	**P**	**17 48 53.6**	**-0.8**
	comp=Z,1.8nm,0.7s,baz=263,slow=8.3,SNR=6.8						
TORD				PcP	**PcP**	**17 51 29.0**	**+1.4**
	comp=Z,2.0nm,1.1s,baz=238,slow=1.8,SNR=4.9						
	comp=Z,1.8nm,0.7s						
TORD	**Torodi Ar. Bea**	**34.84**	**75**	IAmb	IAmb	17 48 56.3	
	comp=Z,7.1nm,1.5s						
SIV	**San Ignacio**	**35.25**	**232**	P	**P**	**17 48 58.8**	**+1.0**
	comp=Z,3.1nm,0.9s,baz=65,slow=7.0,SNR=9.0						
SIV				LR	LR	18 02 19.7	
	comp=Z,312nm,21.5s,baz=107,slow=35						
	comp=Z,3.1nm,0.9s						
SDV	**Santo Domingo**	**37.63**	**277**	LR	LR	18 04 24.3	
	comp=Z,158nm,20.6s,baz=97,slow=36						
MDT	**Midelt**	**37.73**	**41**	LR	LR	18 03 52.3	
	comp=Z,391nm,18.6s,baz=278,slow=35						
CPUP	**Villa Florida**	**39.66**	**216**	P	**P**	**17 49 34.6**	**-0.4**
	comp=Z,0.8nm,0.3s,baz=38,slow=13,SNR=2.3						
CPUP				LR	LR	18 05 41.2	
	comp=Z,373nm,18.9s,baz=32,slow=36						
	comp=Z,0.8nm,0.3s						
CPUP	**Villa Florida**	**39.66**	**216**	IAmb	IAmb	17 49 42.6	
	comp=Z,5.0nm,1.1s						
LPAZ	**La Paz**	**41.15**	**238**	P	**P**	**17 49 47.5**	**-0.8**
	comp=Z,1.8nm,0.8s,baz=33,slow=5.8,SNR=6.5						
LPAZ				LR	LR	18 06 21.1	
	comp=Z,390nm,18.9s,baz=84,slow=36						
	comp=Z,1.8nm,0.8s						
ROSC	**El Rosal**	**41.32**	**271**	LR	LR	18 07 37.9	
	comp=Z,242nm,19.3s,baz=66,slow=37						
ITQB	**Itaqui**	**41.87**	**212**	P	**P**	**17 49 53.7**	**+0.5**
ITQB				IAmb	IAmb	17 50 07.2	
	comp=Z,16nm,1.2s						
ESDC	**Sonseca Array**	**42.74**	**33**	P	**P**	**17 50 01.2**	**+0.9**

	comp=Z,2.7nm,1.2s,baz=235,slow=9.1,SNR=5.6							
	comp=Z,2.7nm,1.2s							
ESDC	**Sonseca Array**	**42.74**	**33**	IAmb	IAmb	17 50 05.9		
	comp=Z,2.2nm,1.2s							
LVC	**Limon Verde**	**45.08**	**230**	LR	LR	18 10 07.3		
	comp=Z,163nm,19.8s,baz=49,slow=37							
PEZE	**Perez Zeledon,**	**50.52**	**277**	P	**P**	**17 51 02.7**	**+0.9**	
JTS	**Las Juntas de**	**51.79**	**279**	LR	LR	18 15 41.9		
	comp=Z,129nm,18.1s,baz=144,slow=39							
EKA	**Eskdalemuir Ar**	**54.98**	**20**	LR	LR	18 10 21.5		
	comp=Z,188nm,21.1s,baz=238,slow=31							
TSUM	**Tsumeb**	**55.41**	**118**	LR	LR	18 09 56.5		
	comp=Z,178nm,21.5s,baz=298,slow=30							
SCHQ	**Schefferville**	**56.18**	**337**	P	**P**	**17 51 42.0**	**-0.7**	
	comp=Z,3.7nm,0.9s,baz=115,slow=6.2,SNR=3.8							
	comp=Z,3.7nm,0.9s							
SCHQ	**Schefferville**	**56.18**	**337**	IAmb	IAmb	17 51 43.7		
	comp=Z,4.7nm,0.9s							
PLCA	**Paso Flores**	**57.65**	**213**	LR	LR	18 16 40.6		
	comp=Z,373nm,19.7s,baz=48,slow=36							
GERES	**GERESS Array B**	**58.31**	**34**	P	**P**	**17 51 58.5**	**+0.5**	
	comp=Z,1.6nm,1.0s,baz=221,slow=8.8,SNR=13							
GERES				LR	LR	18 14 27.5		
	comp=Z,145nm,19.6s,baz=270,slow=33							
	comp=Z,1.6nm,1.0s							
BORG	**Borgarnes**	**59.60**	**6**	LR	LR	18 12 06.8		
	comp=Z,48nm,19.9s,baz=184,slow=30							
N41A	**Harden Midland**	**62.37**	**313**	P	**P**	**17 52 25.3**	**-0.5**	
MGMO	**Mountain Grove**	**62.44**	**309**	P	**P**	**17 52 27.6**	**+1.2**	
MBAR	**Mbarara**	**63.77**	**93**	LR	LR	18 17 49.9		
	comp=Z,175nm,19.1s,baz=310,slow=34							
LSZ	**Lusaka**	**63.89**	**110**	LR	LR	18 16 03.1		
	comp=Z,94nm,18.4s,baz=30,slow=32							
NB2	**NORSAR Subarra**	**64.34**	**22**	P	**P**	**17 52 39.0**	**+0.5**	
	comp=Z,0.9nm,0.8s,baz=228,slow=6.5							
NOA	**NORSAR Array B**	**64.34**	**22**	P	**P**	**17 52 38.8**	**+0.3**	
	comp=Z,2.5nm,1.0s,baz=230,slow=6.3,SNR=3.7							
	comp=Z,2.5nm,1.0s							
LBTB	**Lobatse**	**64.41**	**121**	LR	LR	18 15 12.0		
	comp=Z,102nm,21.1s,baz=266,slow=31							
MLR	**Muntele Rosu**	**64.41**	**42**	P	**P**	**17 52 39.5**	**+0.2**	
HFS	**Hagfors**	**64.73**	**24**	LR	LR	18 20 48.1		
	comp=Z,63nm,18.0s,baz=240,slow=36							
BOSA	**Boshof**	**65.39**	**125**	LR	LR	18 16 11.4		
	comp=Z,76nm,18.9s,baz=322,slow=31							
EIL	**Elat**	**67.95**	**60**	LR	LR	18 23 22.2		
	comp=Z,222nm,19.4s,baz=272,slow=36							
AKASG	**Malin Array Be**	**68.19**	**37**	P	**P**	**17 53 03.4**	**+0.1**	
	comp=Z,2.5nm,0.8s,baz=252,slow=5.6,SNR=11							
	comp=Z,2.5nm,0.8s							
TXAR	**Lajitas Array**	**70.58**	**299**	P	**P**	**17 53 18.4**	**-0.3**	
	comp=Z,0.2nm,0.6s,baz=128,slow=9.6,SNR=2.0							
TXAR				LR	LR	18 21 12.9		
	comp=Z,48nm,21.8s,baz=94,slow=33							
	comp=Z,0.2nm,0.6s							
FINES	**FINESS Array B**	**70.60**	**26**	P	**P**	**17 53 18.4**	**+0.4**	
	comp=Z,2.3nm,0.9s,baz=276,slow=7.3,SNR=7.7							
	comp=Z,2.3nm,0.9s							
ANMO	**Albuquerque**	**73.39**	**305**	LR	LR	18 21 51.8		
	comp=Z,61nm,21.7s,baz=101,slow=33							
N23A	**Red Feather La**	**73.59**	**311**	P	**P**	**17 53 37.0**	**+0.2**	
N23A				IAmb	IAmb	17 53 53.8		
	comp=Z,9.6nm,1.3s							
ATD	**Arta Tunnel**	**74.89**	**80**	LR	LR	18 27 50.6		
	comp=Z,85nm,18.4s,baz=328,slow=37							
BW06	**Boulder Array**	**76.47**	**313**	P	**P**	**17 53 53.7**	**+0.4**	
BW06				IAmb	IAmb	17 54 04.8		
	comp=Z,4.9nm,1.2s							
PDAR	**Pinedale Array**	**76.47**	**313**	P	**P**	**17 53 51.4**	**-1.9**	
	comp=Z,0.6nm,0.8s,baz=98,slow=6.5,SNR=6.4							
	comp=Z,0.6nm,0.8s							
P18A	**Preston Nutter**	**76.75**	**309**	P	**P**	**17 53 55.3**	**+0.2**	
P18A				IAmb	IAmb	17 54 10.7		
	comp=Z,5.0nm,1.0s							
LOHW	**Long Hollow**	**77.30**	**313**	P	**P**	**17 53 57.3**	**-0.7**	
MOOW	**Moose Ponds**	**77.42**	**313**	P	**P**	**17 53 58.7**	**+0.1**	
MOOW				IAmb	IAmb	17 53 59.8		
	comp=Z,4.9nm,1.4s							
REDW	**Red Top Meadow**	**77.46**	**313**	P	**P**	**17 53 58.2**	**-0.7**	
REDW				IAmb	IAmb	17 54 08.0		
	comp=Z,7.2nm,1.3s							
YHL	**Hebgen Lake**	**77.81**	**315**	P	**P**	**17 54 02.0**	**+1.1**	
YHL				IAmb	IAmb	17 54 12.7		
	comp=Z,6.2nm,1.3s							
MTPU	**Mount Pierson**	**78.19**	**308**	P	**P**	**17 54 04.2**	**+1.0**	
MTPU				IAmb	IAmb	17 54 12.8		
	comp=Z,5.9nm,1.2s							
BGU	**Big Grassy Mou**	**78.95**	**310**	P	**P**	**17 54 07.4**	**+0.3**	
BGU				IAmb	IAmb	17 54 08.7		
	comp=Z,6.8nm,1.3s							
MCMT	**McKenzie Canyo**	**78.99**	**314**	P	**P**	**17 54 07.6**	**+0.3**	
CCUT	**Cedar City**	**79.11**	**307**	P	**P**	**17 54 05.7**	**-2.4**	
EDM	**Edmonton**	**79.86**	**323**	P	**P**	**17 54 10.6**	**-1.0**	
WALA	**Waterton Lakes**	**79.94**	**319**	P	**P**	**17 54 12.5**	**+0.2**	
WALA				IAmb	IAmb	17 54 13.6		
	comp=Z,8.9nm,1.2s							
YKA	**Yellowknife Ar**	**81.25**	**332**	P	**P**	**17 54 17.9**	**-0.9**	
	comp=Z,1.6nm,0.9s,baz=89,slow=5.8,SNR=6.7							
	comp=Z,1.6nm,0.9s							
QSM	**Queen of Sheba**	**81.92**	**305**	P	**P**	**17 54 21.9**	**-1.1**	
QSM				IAmb	IAmb	17 54 32.6		
	comp=Z,6.0nm,1.1s							
TPH	**Tonopah**	**82.16**	**308**	P	**P**	**17 54 23.6**	**-0.9**	
NVAR	**Mina Array Bea**	**83.01**	**308**	P	**P**	**17 54 28.6**	**-0.2**	
	comp=Z,0.3nm,0.5s,baz=87,slow=1.9,SNR=3.8							
	comp=Z,0.3nm,0.5s							
BELA	**Belgrano 2**	**83.38**	**180**	P	**P**	**17 54 30.6**	**+1.0**	
BELA				IAmb	IAmb	17 54 33.5		
	comp=Z,4.6nm,1.1s							
ARU	**Arti**	**86.14**	**34**	P	**P**	**17 54 45.1**	**+1.1**	
	comp=Z,0.8nm,0.4s,baz=252,slow=3.1,SNR=4.3							
	comp=Z,0.8nm,0.4s							
ARU	**Arti**	**86.14**	**34**	IAmb	IAmb	17 54 46.7		
	comp=Z,3.7nm,1.0s							
AKTO	**Aktyubinsk**	**86.26**	**40**	P	**P**	**17 54 46.3**	**+1.6**	
	comp=Z,0.5nm,0.5s,baz=329,slow=1.1,SNR=2.4							
	comp=Z,0.5nm,0.5s							
WSAR	**Wadi Sarin**	**89.15**	**67**	LR	LR	18 36 10.2		
	comp=Z,168nm,19.1s,baz=296,slow=36							
ILAR	**Eielson Array**	**94.94**	**337**	P	**P**	**17 55 25.0**	**-0.1**	
	comp=Z,1.0nm,1.0s,baz=63,slow=3.7,SNR=5.2							
	comp=Z,1.0nm,1.0s							
CMAR	**Chiang Mai Arr**	**126.78**	**62**	PKP	**PKPdf**	**18 01 08.8**	**+1.2**	
	comp=Z,0.6nm,0.9s,baz=296,slow=3.7,SNR=6.1							
ASAR	**Alice Springs**	**157.96**	**146**	PKP	**PKPdf**	**18 01 59.6**	**-1.2**	
	comp=Z,1.7nm,1.1s,baz=201,slow=31,SNR=5.2							
ASAR				PKPab	**PKPab**	**18 02 32.1**	**-1.7**	
	comp=Z,0.2nm,0.8s,baz=196,slow=5.2,SNR=1.8							

IDC 29 17:55:51.7±17.0, 26.26N×141.96E, h0km, mb4.0/4, mbtmp4.0/4, Error ellipse: s-maj=502.9km s-min=112.6km az=4.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZALV	**Zalesovo Beam**	**49.99**	**320**	P	P	18 04 47.5	-0.1
	0.7nm,0.3s,baz=110,slow=8.5,SNR=3.8						
	0.7nm,0.3s						
MKAR	**Makanchi Array**	**50.85**	**310**	P	P	18 04 54.2	-0.1
	0.2nm,0.3s,baz=91,slow=9.2,SNR=5.8						
	0.2nm,0.3s						
KURBB	**Kurchatov Arra**	**53.48**	**315**	P	P	18 05 13.5	-0.2
	2.1nm,0.5s,baz=91,slow=8.0,SNR=45						
	2.1nm,0.5s						
FINES	**FINESS Array B**	**78.60**	**334**	P	P	18 07 55.1	0.0
	0.7nm,0.4s,baz=64,slow=5.4,SNR=14						
	0.7nm,0.4s						

*IDC **29** 17:56:53.8±1.6, 35.20N×27.78E, h0km, mb3.4/3, mbtmp3.6/10, ML3.8/7, MS2.7/1, Error ellipse: s-maj=28.8km s-min=19.3km az=20.0*
*NIC **29** 17:56:56.0±0.0, 34.99N×27.76E, h13km±1km, Ml4.3/5*
*HLW **29** 17:56:55.4, 35.07N×27.85E, h4km±20km, Md3.9, Ml3.8*
*ISK **29** 17:56:56.9, 35.08N×27.75E, h24km, ML3.5/24*
*ATH **29** 17:56:58.6, 35.22N×27.63E, h65km±3km, ML3.3/5, Error ellipse: s-maj=6.4km s-min=2.8km az=325.0*
*DDA **29** 17:56:59.0±0.0, 35.18N×27.74E, h64km±55km, MW3.5*
*THE **29** 17:57:01.1, 35.32N×27.62E, h63km±4km, ML3.2/6, Error ellipse: s-maj=5.4km s-min=1.2km az=321.0*
*GII **29** 17:57:02.1±0.3, 34.69N×27.95E, h80km, MD3.0/3, Mm3.5/1*
ISC 29 17:56:57.4±0.9, 35.04N±0.03×27.80E±0.03, h40km±8km, n133, σ1§60/176, mb3.1/3, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.72**	**314**	P	**Pn**	**17 57 11.0**	**-0.3**
KARP				S	**Sn**	**17 57 21.4**	**+0.2**
KARP				AML	AML	17 57 21.9	
	comp=N,13278μm,0.4s						
KARP				AML	AML	17 57 22.8	
	comp=E,21534μm,0.7s						
KARP	**Karpathos**	**0.72**	**314**	P	**Pn**	**17 57 10.6**	**-0.7**
KARP				S	**Sn**	**17 57 21.1**	**-0.1**
	comp=E,9μm,0.5s						
KARP	**Karpathos**	**0.72**	**314**	PG	**Pn**	**17 57 10.8**	**-0.4**
KARP				SG	**Sn**	**17 57 21.1**	**-0.1**
KARP	**Karpathos**	**0.72**	**314**	P	**Pn**	**17 57 10.5**	**-0.7**
KARP				S	**Sn**	**17 57 21.1**	**-0.1**
ARG	**Arkhangelos**	**1.20**	**13**	P	**Pn**	**17 57 19.0**	**+1.3**
ARG				AML	AML	17 57 42.3	
	comp=E,2313μm,0.6s						
ARG				AML	AML	17 57 42.6	
	comp=N,2638μm,0.6s						
ARG	**Arkhangelos**	**1.20**	**13**	P	**Pn**	**17 57 19.0**	**+1.3**
ARG				S	**Sn**	**17 57 32.1**	**-0.7**
	comp=N,1μm,0.6s						
ARG	**Arkhangelos**	**1.20**	**13**	PN	**Pn**	**17 57 18.5**	**+0.8**
ARG	**Arkhangelos**	**1.20**	**13**	P	**Pn**	**17 57 19.0**	**+1.3**
ARG				S	**Sn**	**17 57 37.0**	**+4.1**
ZKR	**Zakros**	**1.30**	**274**	P	**Pn**	**17 57 19.8**	**+0.8**
ZKR				AML	AML	17 57 37.3	
	comp=E,1658μm,0.5s						
ZKR				AML	AML	17 57 46.8	
	comp=N,1208μm,0.6s						
ZKR	**Zakros**	**1.30**	**274**	P	**Pn**	**17 57 19.9**	**+0.8**
ZKR				S	**Sn**	**17 57 36.4**	**+1.2**
	comp=N,705nm,0.6s						
ZKR	**Zakros**	**1.30**	**274**	PN	**Pn**	**17 57 19.9**	**+0.8**
ZKR				SN	**Sn**	**17 57 36.2**	**+1.0**
ZKR	**Zakros**	**1.30**	**274**	P	**Pn**	**17 57 19.8**	**+0.8**
ZKR				S	**Sn**	**17 57 37.2**	**+2.0**
STIA	**Sitia Lasithi**	**1.41**	**277**	P	**Pn**	**17 57 22.0**	**+1.4**
STIA				AML	AML	17 57 45.3	
	comp=N,2041μm,0.7s						
STIA				AML	AML	17 57 51.6	
	comp=E,2161μm,1.0s						
STIA	**Sitia Lasithi**	**1.41**	**277**	P	**Pn**	**17 57 21.8**	**+1.2**
STIA				S	**Sn**	**17 57 38.9**	**+1.0**
NIS1	**Nisyros Isl.**	**1.64**	**342**	PN	**Pn**	**17 57 24.3**	**+0.6**
DAT	**Datca**	**1.69**	**354**	P	**Pn**	**17 57 24.0**	**-0.3**
DAT				S	**Sn**	**17 57 40.4**	**-4.7**
DAT	**Datca**	**1.69**	**354**	PN	**Pn**	**17 57 24.4**	**-0.2**
DAT	**Datca**	**1.69**	**354**	P	**Pn**	**17 57 24.6**	**0.0**
FRMA	**Ierapetra Chan**	**1.69**	**270**	P	**Pn**	**17 57 24.2**	**-0.3**
FRMA				AML	AML	17 57 50.6	
	comp=E,921μm,0.4s						
FRMA				AML	AML	17 57 54.5	
	comp=N,1173μm,0.6s						
FRMA	**Ierapetra Chan**	**1.69**	**270**	P	**Pn**	**17 57 24.2**	**-0.3**
FRMA				S	**Sn**	**17 57 43.5**	**-1.4**
	comp=N,218nm,0.5s						
TURN	**Turunc**	**1.77**	**12**	PN	**Pn**	**17 57 26.6**	**+1.1**
TURN	**Turunc**	**1.77**	**12**	P	**Pn**	**17 57 26.7**	**+1.1**
KOSK	**Kos Island**	**1.83**	**339**	PN	**Pn**	**17 57 27.4**	**+1.0**
AKAS	**Kas**	**1.89**	**51**	PN	**Pn**	**17 57 29.3**	**+1.9**
AKAS				SN	**Sn**	**17 57 51.7**	**+1.7**
AKAS	**Kas**	**1.89**	**51**	P	**Pn**	**17 57 29.1**	**+1.7**
AKAS				S	**Sn**	**17 57 50.5**	**+0.4**
AKAS				*i* AML	AML	17 57 53.0	
	comp=N,661nm,0.3s						
AKAS				*i* AML	AML	17 57 54.0	
	comp=N,1μm,0.6s						
DALY	**Dalyan (Mula)**	**1.90**	**21**	PN	**Pn**	**17 57 28.5**	**+1.2**
FETY	**Fethiye**	**1.90**	**33**	PN	**Pn**	**17 57 28.5**	**+1.1**
FETY	**Fethiye**	**1.90**	**33**	P	**Pn**	**17 57 29.7**	**+2.3**
BDRM	**Kayabasi**	**2.04**	**352**	P	**Pn**	**17 57 28.1**	**-1.1**
BODT	**Bodrum**	**2.05**	**349**	PN	**Pn**	**17 57 30.5**	**+1.0**
DEMR	**Demre-Antalya**	**2.09**	**55**	PN	**Pn**	**17 57 31.6**	**+1.7**
YER	**Yerkesik**	**2.12**	**11**	P	**Pn**	**17 57 31.3**	**+0.8**
YER	**Yerkesik**	**2.12**	**11**	PN	**Pn**	**17 57 31.4**	**+0.9**
HRKL	**Herakleio**	**2.22**	**278**	PN	**Pn**	**17 57 32.1**	**+0.3**
MULA	**Mugla, Merkez-**	**2.25**	**11**	P	**Pn**	**17 57 33.6**	**+1.3**
CAME	**Cameli-Denizli**	**2.25**	**32**	PN	**Pn**	**17 57 34.0**	**+1.6**
CAME				SN	**Sn**	**17 58 00.4**	**+1.4**
SANT	**Santorini**	**2.32**	**306**	PN	**Pn**	**17 57 33.0**	**-0.1**
THR6	**Thira Island,**	**2.35**	**305**	P	**Pn**	**17 57 33.9**	**+0.4**
THR6	**Thira Island,**	**2.35**	**305**	P	**Pn**	**17 57 33.6**	**+0.1**
THR3	**Thira Island,**	**2.38**	**306**	P	**Pn**	**17 57 33.6**	**-0.3**
THR3	**Thira Island,**	**2.38**	**306**	P	**Pn**	**17 57 33.3**	**-0.6**
IDI	**Anoyia**	**2.39**	**277**	Pn	**Pn**	**17 57 34.5**	**+0.3**
	comp=N,5.3nm,0.3s,baz=90,slow=15,SNR=65						
IDI				Sn	**Sn**	**17 58 01.8**	**-0.6**
	comp=N,14nm,0.3s,baz=90,slow=20,SNR=9.4						
	comp=N,13nm,0.3s						
IDI	**Anoyia**	**2.39**	**277**	P	**Pn**	**17 57 35.1**	**+0.9**
IDI	**Anoyia**	**2.39**	**277**	P	**Pn**	**17 57 35.1**	**+0.9**
IDI				S	**Sn**	**17 58 01.4**	**-0.9**
	comp=N,178nm,0.7s						
IDI	**Anoyia**	**2.39**	**277**	PN	**Pn**	**17 57 35.3**	**+1.1**
CAEL	**Denizli, Camel**	**2.41**	**30**	P	**Pn**	**17 57 35.1**	**+0.6**
ELL	**Elmali**	**2.42**	**45**	PN	**Pn**	**17 57 36.5**	**+2.0**
ELL	**Elmali**	**2.42**	**45**	P	**Pn**	**17 57 36.8**	**+2.2**
ELL				S	**Sn**	**17 58 07.2**	**+4.3**
THR5	**Thira Island,**	**2.42**	**305**	P	**Pn**	**17 57 34.3**	**-0.2**
THR5	**Thira Island,**	**2.42**	**305**	P	**Pn**	**17 57 34.2**	**-0.2**
AKUM	**Antalya-Kumluc**	**2.43**	**58**	P	**Pn**	**17 57 35.5**	**+0.8**
AKUM				S	**Sn**	**17 58 01.9**	**-1.3**
AKUM				*i* AML	AML	17 58 07.0	
	comp=N,221nm,0.3s						
AKUM				*i* AML	AML	17 58 07.0	
	comp=N,124nm,0.5s						
TAVA	**DENIZLI_Tavas**	**2.58**	**20**	P	**Pn**	**17 57 37.4**	**+0.6**
GOLH	**Golhisar**	**2.61**	**33**	P	**Pn**	**17 57 38.9**	**+1.6**
GCAM	**G?zelcaml?**	**2.69**	**350**	PN	**Pn**	**17 57 39.8**	**+1.6**
APMY	**Acipayam-Deniz**	**2.71**	**26**	PN	**Pn**	**17 57 39.6**	**+1.0**
APE	**Apeiranthos**	**2.73**	**318**	P	**Pn**	**17 57 37.9**	**-0.9**
SMG	**Samos**	**2.77**	**344**	P	**Pn**	**17 57 39.0**	**-0.3**
KORT	**Korkueli**	**2.85**	**46**	PN	**Pn**	**17 57 42.5**	**+2.0**
KORT	**Korkueli**	**2.85**	**46**	P	**Pn**	**17 57 42.4**	**+2.0**
KORT				S	**Sn**	**17 58 15.3**	**+1.7**
KORT				*i* AML	AML	17 58 18.0	
	comp=N,38nm,0.9s						
GVD	**Gavdhos**	**3.05**	**267**	P	**Pn**	**17 57 44.1**	**+0.9**
GVD				S	**Sn**	**17 58 18.3**	**-0.2**
	comp=N,395nm,0.5s						
GVD	**Gavdhos**	**3.05**	**267**	PN	**Pn**	**17 57 45.2**	**+2.0**
DGB	**zmir**	**3.09**	**346**	P	**Pn**	**17 57 42.6**	**-1.1**
IMMV	**Iera Moni Meta**	**3.15**	**279**	P	**Pn**	**17 57 45.2**	**+0.7**
IMMV	**Iera Moni Meta**	**3.15**	**279**	P	**Pn**	**17 57 45.3**	**+0.7**
IMMV	**Iera Moni Meta**	**3.15**	**279**	PN	**Pn**	**17 57 45.4**	**+0.9**
BUCA	**Bonin, Bucak-**	**3.19**	**44**	P	**Pn**	**17 57 46.1**	**+0.9**
BUCA				S	**Sn**	**17 58 22.9**	**+0.9**
BUCA				*i* AML	AML	17 58 33.0	
	comp=N,50nm,0.9s						
MHLO	**Agia Marina, M**	**3.21**	**302**	P	**Pn**	**17 57 46.0**	**+0.7**
BRDR	**BÜRDUR-Merkez**	**3.22**	**34**	P	**Pn**	**17 57 46.1**	**+0.6**
OSC1	**CSNet OBS 1**	**3.27**	**117**	P	**Pn**	**17 57 47.5**	**+1.4**
OSC1				S	**Sn**	**17 58 27.3**	**+3.6**
RODP	**Rodopos**	**3.34**	**280**	P	**Pn**	**17 57 47.8**	**+0.6**
KNDR	**Palaiochora Ch**	**3.38**	**274**	P	**Pn**	**17 57 49.3**	**+1.8**
KNDR	**Palaiochora Ch**	**3.38**	**274**	PN	**Pn**	**17 57 48.8**	**+1.2**
BASM	**Basmaki-Afyon**	**3.40**	**32**	PN	**Pn**	**17 57 48.9**	**+0.9**
PASA	**Karahalli, USA**	**3.57**	**22**	P	**Pn**	**17 57 50.1**	**-0.2**
KEPZ	**Antalya-Kepez**	**3.60**	**58**	P	**Pn**	**17 57 52.6**	**+1.9**
MATC	**Matruh**	**3.72**	**187**	P	**Pn**	**17 57 54.7**	**+2.4**
	baz=189						
MATC				S	**Sn**	**17 58 35.1**	**+0.2**
	baz=189						
KZIL	**AFYON_Kizioren**	**3.72**	**30**	P	**Pn**	**17 57 52.0**	**-0.5**
AKMS	**Akamas**	**3.72**	**89**	P	**Pn**	**17 57 54.0**	**+1.6**
AKMS				AML	AML	17 58 37.4	
	comp=N,1.1nm,0.2s						
AKMS				AML	AML	17 58 37.8	
	comp=N,1.1nm,0.3s						
USAK	**Uak-Merkez**	**3.79**	**15**	P	**Pn**	**17 57 51.4**	**-2.0**
GAZI	**Gazipasa**	**3.87**	**71**	P	**Pn**	**17 57 54.6**	**+0.2**
GAZI				S	**Sn**	**17 58 33.8**	**-4.8**
NATA	**Nata**	**3.93**	**92**	P	**Pn**	**17 57 56.9**	**+1.7**
NATA				AML	AML	17 58 44.0	
	comp=N,1.6nm,0.4s						
NATA				AML	AML	17 58 44.1	
	comp=N,1.3nm,0.4s						
ALFC	**Alefka**	**3.94**	**87**	P	**Pn**	**17 57 56.9**	**+1.5**
ALFC				AML	AML	17 58 41.6	
	comp=N,1.1nm,0.2s						
ALFC				AML	AML	17 58 41.7	
	comp=N,0.9nm,0.2s						
SEDI	**Konya, Seydise**	**4.00**	**52**	P	**Pn**	**17 57 58.4**	**+2.0**
SEDI				S	**Sn**	**17 58 42.1**	**0.0**
SEDI				*i* AML	AML	17 58 47.0	
	comp=N,72nm,0.4s						
SEDI				*i* AML	AML	17 58 47.0	
	comp=N,82nm,0.5s						
SEDI				*i* AML	AML	17 58 49.0	
	comp=N,59nm,0.7s						
KTHR	**Kythira**	**4.09**	**289**	P	**Pn**	**17 57 57.2**	**-0.2**
SLUM	**Salum**	**4.15**	**212**	P	**Pn**	**17 57 59.8**	**+1.5**
	baz=213						
LEF	**Lefka**	**4.18**	**87**	P	**Pn**	**17 57 59.7**	**+1.0**
SZAC	**Souni**	**4.19**	**92**	P	**Pn**	**17 58 00.6**	**+1.8**
SZAC				AML	AML	17 58 49.2	
	comp=N,1.0nm,0.3s						
SZAC				AML	AML	17 58 49.3	
	comp=N,1.1nm,0.2s						
OSC2	**CSNet OBS 4**	**4.20**	**117**	P	**Pn**	**17 58 00.0**	**+1.1**
YVAC	**Isparta, Yalva**	**4.25**	**40**	P	**Pn**	**17 58 01.3**	**+1.6**
GDZ	**Gediz**	**4.26**	**18**	P	**Pn**	**17 57 58.3**	**-1.6**
VLI	**Veliai**	**4.29**	**294**	P	**Pn**	**17 57 59.4**	**-0.7**
DOGA	**KONYA_Doganhis**	**4.36**	**44**	P	**Pn**	**17 58 02.1**	**+0.8**
ASGA	**Asgata**	**4.49**	**92**	P	**Pn**	**17 58 04.3**	**+1.4**
ASGA				AML	AML	17 58 56.8	
	comp=N,0.7nm,0.3s						
ASGA				AML	AML	17 58 59.9	
	comp=N,0.9nm,0.3s						
CSS	**Mathiatis**	**4.54**	**89**	P	**Pn**	**17 58 05.4**	**+1.7**
KMER	**Konya-Meram**	**4.58**	**52**	P	**Pn**	**17 58 07.2**	**+2.9**
KONT	**Konya-~Tatoy**	**4.68**	**50**	P	**Pn**	**17 58 08.4**	**+2.8**
KKBE	**Karaman, Kazim**	**4.70**	**61**	P	**Pn**	**17 58 08.8**	**+3.0**
KKBE				S	**Sn**	**17 58 56.4**	**-2.7**
MVOU	**Mavrovouni**	**4.79**	**89**	P	**Pn**	**17 58 08.8**	**+1.8**
GULN	**MERSIN_Gulnar**	**4.82**	**75**	P	**Pn**	**17 58 09.1**	**+1.7**
GULN				S	**Sn**	**17 58 59.3**	**-2.6**
GULN				*i* AML	AML	17 59 06.0	
	comp=N,37nm,0.4s						
GULN				*i* AML	AML	17 59 07.0	
	comp=N,41nm,0.4s						
HNAT	**Natroun**	**5.90**	**155**	S	**Sn**	**17 59 27.7**	**-1.0**
	baz=155						
SWA2		**6.11**	**200**	P	**Pn**	**17 58 27.0**	**+1.7**
	baz=200						
KOT	**Kottamia**	**6.13**	**145**	P	**Pn**	**17 58 26.8**	**+1.3**
	baz=145						
KOT				S	**Sn**	**17 59 33.1**	**-1.3**
	baz=145						
HSAF	**As Saff**	**6.27**	**149**	P	**Pn**	**17 58 28.9**	**+1.4**
	baz=149						
GLL	**Jalalah**	**6.38**	**148**	P	**Pn**	**17 58 30.1**	**+1.2**
	baz=148						
HNTI	**Hanita**	**6.43**	**106**	Pn	**Pn**	**17 58 32.0**	**+2.5**
HNTI				Sn	**Sn**	**17 59 41.6**	**0.0**
BRTR	**Keskin Array B**	**6.59**	**43**	Pn	**Pn**	**17 58 32.9**	**+0.9**
	comp=N,0.5nm,0.3s,baz=231,slow=9.8,SNR=9.5						
BRTR				Sn	**Sn**	**17 59 46.1**	**+0.2**
	comp=N,0.6nm,0.3s,baz=213,slow=23,SNR=6.8						
	comp=N,1.7nm,0.6s						
MMA0B	**Mount Meron ar**	**6.63**	**106**	Pn	**Pn**	**17 58 34.1**	**+1.7**
MMAI	**Mount Meron Ar**	**6.63**	**106**	Pn	**Pn**	**17 58 33.1**	**+0.7**
	comp=N,3.5nm,0.3s,baz=295,slow=12,SNR=18						
MMAI				Sn	**Sn**	**17 59 48.3**	**+1.5**
	comp=N,9.6nm,0.3s,baz=311,slow=30,SNR=9.6						
	comp=N,2.1nm,0.2s						
SUZ	**Suez**	**6.71**	**139**	P	**Pn**	**17 58 34.9**	**+1.4**
	baz=139						
GEM	**Giv'at Ha'Em**	**6.77**	**103**	Pn	**Pn**	**17 58 35.3**	**+1.0**
NATI	**Neve Ativ**	**6.82**	**103**	Pn	**Pn**	**17 58 36.0**	**+1.1**
NATI				Sn	**Sn**	**17 59 51.2**	**0.0**
AMAZ	**Amatzia**	**6.91**	**118**	Pn	**Pn**	**17 58 37.3**	**+1.1**
AMAZ				Sn	**Sn**	**17 59 51.9**	**-1.7**
KZIT	**Kziot**	**6.91**	**125**	Pn	**Pn**	**17 58 37.1**	**+0.9**
KZIT

PVAQ	**Vaqueiros**	**2.05**	**59**	*e*Pn	**Pn**	**18 06 08.1**	**+1.3**
PVAQ				*e*Sn	**Sn**	**18 06 30.4**	**-0.8**
PVAQ				A	A	18 06 35.8	
	comp=N,5.5nm,0.8s						
PVAQ	**Vaqueiros**	**2.05**	**59**	P	**Pn**	**18 06 07.8**	**+1.0**
PVAQ				S	**Sn**	**18 06 29.8**	**-1.4**
PNCL	**Nicolau / Gran**	**2.07**	**32**	*e*Pn	**Pn**	**18 06 07.9**	**+0.8**
PNCL				*e*Sn	**Sn**	**18 06 30.8**	**-0.8**
PNCL				A	A	18 06 32.0	
	comp=N,4.2nm,0.3s						
PBEJ	**Beja**	**2.33**	**44**	*e*Sn	**Sn**	**18 06 37.2**	**-1.0**
PBEJ				A	A	18 06 41.0	
	comp=N,4.1nm,0.2s						
PMAFR	**Mafra**	**2.63**	**11**	*e*Pn	**Pn**	**18 06 16.3**	**+1.4**
PMAFR				*e*Sn	**Sn**	**18 06 45.4**	**-0.2**
EVO	**Evora**	**2.64**	**35**	*e*Pn	**Pn**	**18 06 15.7**	**+0.7**
EVO				*e*Sn	**Sn**	**18 06 44.2**	**-1.6**
EVO				A	A	18 06 45.0	
	comp=N,6.0nm,0.2s						
PBAR	**Barrancos**	**2.92**	**51**	*e*Pn	Pn	18 06 02.8	-16
PBAR				*e*Sn	Sn	18 06 34.6	-18
PBAR				A	A	18 06 39.9	
	comp=N,1.3nm,0.2s						
PMTG	**Montargil**	**3.02**	**26**	*e*Pn	**Pn**	**18 06 21.3**	**+1.2**
PMTG				*e*Sn	**Sn**	**18 06 53.3**	**-1.7**
PMTG				A	A	18 06 55.1	
	comp=N,3.0nm,0.3s						
PESTR	**Estremoz**	**3.11**	**36**	*e*Sn	**Sn**	**18 06 55.5**	**-1.8**
PMRV	**Marv??o**	**3.65**	**32**	*e*Pn	**Pn**	**18 06 30.1**	**+1.2**
PMRV				*e*Sn	**Sn**	**18 07 08.2**	**-2.6**
PMRV				A	A	18 07 10.9	
	comp=N,2.9nm,0.7s						
PCAS	**Casmilo, Conde**	**3.85**	**17**	*e*Sn	**Sn**	**18 07 13.8**	**-1.8**
POLO	**Lamas de Olo**	**5.27**	**18**	*e*Sn	**Sn**	**18 07 48.2**	**-2.5**
OUK	**Oukaimeden**	**5.42**	**161**	P	Pn	18 06 51.0	-2.5
OUK				S	**Sn**	**18 07 51.4**	**-3.4**
TTIG	**Tnine Tigouga,**	**5.93**	**168**	P	Pn	18 06 58.2	-2.2
TTIG				S	**Sn**	**18 08 07.9**	**+0.8**
OUZM	**OUZ**	**6.05**	**153**	P	**Pn**	**18 07 03.2**	**+1.3**
OUZM				S	Sn	18 08 03.9	-6.1

MAN 29 18:08:14.6, 12°.04N×125°.06E±0°.2, h10km, mb4.2, ML3.0, MS2.7, Samar

JMA 29 18:11:57.1±0.1, 37°.8N±0°.1×140°.0E±0°.2, h7km±1km, MV0.4/22, SOUTHERN YAMAGATA PREF, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYAR	**Yonezawaarcadi**	**0.17**	**32**	P	Pg	18 12 00.7	+0.1
JFT	**Otama**	**0.35**	**136**	P	Pg	18 12 04.3	+0.4
JFT				*e*S	Sg	18 12 08.5	0.0
JFY	**Yanaizu**	**0.45**	**216**	S	Sg	18 12 11.6	+0.1
JMM	**Marumori**	**0.61**	**81**	*e*P	Pg	18 12 08.8	0.0
JMM				*e*S	Sg	18 12 16.7	-0.1

*IDC **29** 18:12:36.3±0.5, 39°.72N×144°.86E, h0km, mb4.3/28, mbtmp4.4/34, ML4.7/6, MS3.8/60, Error ellipse: s-maj=12.6km s-min=10.8km az=134.0*

*MOS **29** 18:12:37.2±0.9, 39°.74N×144°.79E, h17km, mb5.1/24, Error ellipse: s-maj=5.8km s-min=3.8km az=103.9*

*BJI **29** 18:12:37.4±0.0, 39°.81N×144°.64E, h10km, mb4.9/77, mB4.9/49, Ms4.3/79, Ms7 4.1/75*

*NEIC **29** 18:12:38.3±1.6, 39°.73N±0°.06×144°.9E±0°.1, h10km±1km, mb5.0/264, Error ellipse: s-maj=13.7km s-min=10.7km az=104.0*

*JMA **29** 18:12:43.2±0.2, 39°.9N±0°.8×14°.5E±°, h43km, MD5.2/37, MW5.0/37, FAR E OFF NORTH HONSHU*

JMA Felt II J1 at FAR E OFF NORTH HONSHU .

*NIED **29** 18:12:43.2, 39°.87N×144°.61E, h43km, MW4.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^16^Nm; Mrr0.57; Mθθ 1.10; Mθφ -1.67; Mrθ 0.24; Mφφ 1.89; Mφr -0.91; Fault plane solution: M0 2.48000×10^16^ NP1: φs287.00000°, δ73.00000°, λ-5.00000°. NP2: φs18.00000°, δ85.00000°, λ-163.00000°.*

*GCMT **29** 18:12:44.3±0.3, 39°.76N±0°.02×144°.81E±0°.02, h55km±2km, MW5.0/89, Moment Tensor Solution. s34, c39; s89, c126; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr-0.25±.17; Mθθ 2.38±.12; Mφφ -2.13±.13; Mrθ -0.14±.10; Mθφ 2.44±.10; Mφr -1.12±.09; Best double couple: M0 1.51500×10^16^ NP1: φs290.00000°, δ72.00000°, λ-6.00000°. NP2: φs22.00000°, δ85.00000°, λ-162.00000°. Principal axes: T 3.5380, Plg9.0000°, Azm155.0000°; N -0.0470, Plg71.0000°, Azm38.0000°; P -3.4920, Plg17.0000°, Azm248.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 18:12:38.7±0.4, 39°.68N±0°.03×144°.90E±0°.04, h16km±1km, h16km:pP-P, n1002, σ1°82/609, mb5.0/220, MS4.0/91, 47C-32D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**2.35**	**277**	⇓*i*P	**Pn**	**18 13 17.0**	**+0.3**
JTH				⇓*e*S	**Sn**	**18 13 42.2**	**-3.0**
JTH	**Tanohata**	**2.35**	**277**	A	A	18 13 17.0	
	comp=E,19nm,0.3s,comp=E,21nm,0.8s						
MIYJ	**Miyakonagasawa**	**2.38**	**268**	⇓*i*P	**Pn**	**18 13 18.2**	**+1.1**
MIYJ				⇓*e*S	**Sn**	**18 13 43.6**	**-2.3**
MIYJ	**Miyakonagasawa**	**2.38**	**268**	A	A	18 13 18.2	
	comp=E,28nm,1.2s,comp=E,28nm,1.0s						
JKEN	**Kujiedanarisaw**	**2.51**	**283**	⇓*i*P	**Pn**	**18 13 18.9**	**0.0**
JKEN				⇓*e*S	**Sn**	**18 13 45.0**	**-4.0**
JKEN	**Kujiedanarisaw**	**2.51**	**283**	A	A	18 13 18.9	
	comp=E,33nm,0.3s,comp=E,34nm,0.9s						
OFUJ	**Ofunato**	**2.57**	**258**	A	A	18 13 21.3	
	comp=E,15nm,0.7s,comp=E,13nm,0.5s						
ERM	**Erimo**	**2.68**	**331**	Pn	**Pn**	**18 13 21.8**	**+0.6**
ERM	**Erimo**	**2.68**	**331**	*c*eP	**Pn**	**18 13 21.9**	**+0.7**
ERM				pmax	pmax		
	comp=Z,2μm,0.6s						
ERM	**Erimo**	**2.68**	**331**	P	**Pn**	**18 13 22.4**	**+1.2**
JEM	**Erimo**	**2.68**	**331**	A	A	18 13 21.4	
	comp=Z,8.0nm,3.4s,comp=Z,6.0nm,5.5s						
JANG	**Nango**	**2.69**	**286**	*i* P	**Pn**	**18 13 21.8**	**+0.4**
JANG				*e*S	**Sn**	**18 13 49.8**	**-3.7**
JANG	**Nango**	**2.69**	**286**	A	A	18 13 21.8	
	comp=Z,20nm,0.2s,comp=Z,22nm,0.5s						
JKZ	**Kuzumaki**	**2.76**	**277**	A	A	18 13 23.0	
	comp=Z,31nm,0.3s,comp=Z,79nm,0.8s						
JOM	**Ohasama**	**2.79**	**267**	⇓*i*P	**Pn**	**18 13 24.4**	**+1.6**
JOM				⇓S	**Sn**	**18 13 54.5**	**-1.6**
JOM	**Ohasama**	**2.79**	**267**	A	A	18 13 24.4	
	comp=Z,72nm,0.3s,comp=Z,52nm,0.6s						
JKMT	**Kesennumamotoy**	**2.80**	**253**	A	A	18 13 24.8	
	comp=Z,8.0nm,0.3s,comp=Z,8.0nm,0.6s						
JTHR	**Tokachihiroo**	**2.88**	**336**	A	A	18 13 24.3	
	comp=Z,14nm,0.8s,comp=Z,15nm,0.9s						
JMK	**Ichinoseki**	**2.94**	**257**	⇓*i*P	**Pn**	**18 13 26.2**	**+1.4**
JMK				⇓S	**Sn**	**18 13 58.1**	**-1.8**
JMK	**Ichinoseki**	**2.94**	**257**	A	A	18 13 26.2	
	comp=Z,7.0nm,0.8s,comp=Z,11nm,1.0s						
JARK	**Aomorirokkasho**	**3.01**	**297**	A	A	18 13 25.8	
	comp=Z,33nm,0.9s,comp=Z,57nm,0.9s						
JIO	**Ouri**	**3.02**	**247**	A	A	18 13 28.3	
	comp=Z,7.0nm,0.4s,comp=Z,16nm,0.3s						
JSZI	**Iwateshizukuis**	**3.04**	**272**	A	A	18 13 27.2	
	comp=Z,45nm,0.9s,comp=Z,75nm,1.5s						
JNBK	**Urakawa-nobuka**	**3.06**	**329**	*i* P	**Pn**	**18 13 27.8**	**+1.3**
JNBK				*e*S	**Sn**	**18 14 02.5**	**-0.2**
JNBK	**Urakawa-nobuka**	**3.06**	**329**	A	A	18 13 27.8	
	comp=Z,16nm,0.4s,comp=Z,17nm,0.5s						
JTM	**Tenmabayashi**	**3.13**	**292**	Pn	**Pn**	**18 13 28.6**	**+1.2**
JTM	**Tenmabayashi**	**3.13**	**292**	A	A	18 13 27.8	
	comp=Z,21nm,1.0s,comp=Z,24nm,2.1s						
JAHD	**Aomorihigashid**	**3.14**	**301**	A	A	18 13 27.7	
	comp=Z,59nm,0.8s,comp=Z,79nm,0.8s						
JCH	**Churui**	**3.15**	**339**	*i* P	**Pn**	**18 13 28.1**	**+0.5**
JCH				*e*S	**Sn**	**18 14 02.2**	**-2.7**
JCH	**Churui**	**3.15**	**339**	A	A	18 13 28.1	
	comp=Z,6.0nm,3.9s,comp=Z,9.0nm,3.0s						
JOFO	**Osakifurukawao**	**3.28**	**252**	A	A	18 13 31.7	
	comp=Z,105nm,0.6s,comp=Z,43nm,1.3s						
JSHD	**Hidakashinhida**	**3.29**	**327**	A	A	18 13 29.9	
	comp=Z,16nm,1.4s,comp=Z,22nm,1.1s						
JRG	**Rokugo**	**3.31**	**266**	A	A	18 13 31.2	
	comp=Z,28nm,0.7s,comp=Z,22nm,0.7s						
JAH	**Hinai**	**3.32**	**280**	A	A	18 13 30.7	
	comp=Z,42nm,0.4s,comp=Z,44nm,1.5s						
JAK	**Akkeshi**	**3.32**	**357**	*i* P	**Pn**	**18 13 30.2**	**+0.2**
JAK				S	**Sn**	**18 14 06.5**	**-2.5**
JAK	**Akkeshi**	**3.32**	**357**	A	A	18 13 30.2	
	comp=Z,55nm,1.8s,comp=Z,32nm,0.9s						
JOB	**Onbets**	**3.32**	**346**	A	A	18 13 31.0	
	comp=Z,27nm,2.1s,comp=Z,22nm,1.5s						
JOT	**Ohata**	**3.39**	**301**	*i* P	**Pn**	**18 13 31.8**	**+0.8**
JOT				S	**Sn**	**18 14 07.5**	**-3.3**
JOT	**Ohata**	**3.39**	**301**	A	A	18 13 31.8	
	comp=Z,18nm,0.6s,comp=Z,26nm,0.8s						
JKHN	**Kushirohamanak**	**3.40**	**3**	A	A	18 13 33.1	
	comp=Z,29nm,0.6s,comp=Z,53nm,0.5s						
JOU	**Okura**	**3.55**	**250**	A	A	18 13 35.6	
	comp=Z,15nm,0.9s,comp=Z,15nm,0.7s						
JYK	**Kaneyama**	**3.60**	**259**	⇓*i*P	**Pn**	**18 13 35.6**	**+1.8**
JYK				⇓eS	**Sn**	**18 14 15.7**	**-0.5**
JYK	**Kaneyama**	**3.60**	**259**	A	A	18 13 35.6	
	comp=Z,15nm,1.0s,comp=Z,11nm,2.4s						
JHHS	**Hirosakihyakuz**	**3.61**	**287**	A	A	18 13 34.6	
	comp=Z,32nm,1.0s,comp=Z,31nm,2.7s						
JYW	**Yuwa**	**3.62**	**269**	A	A	18 13 35.6	
	comp=Z,38nm,1.1s,comp=Z,52nm,1.4s						
JBT2	**Biratori 2**	**3.64**	**329**	A	A	18 13 34.9	
	comp=Z,6.0nm,2.6s,comp=Z,6.0nm,0.9s						
JKB	**Kayabe**	**3.67**	**308**	A	A	18 13 35.2	
	comp=Z,18nm,0.4s,comp=Z,13nm,1.1s						
JMM	**Marumori**	**3.69**	**242**	Pn	**Pn**	**18 13 35.7**	**+0.7**
JMM	**Marumori**	**3.69**	**242**	A	A	18 13 38.0	
	comp=Z,8.0nm,1.8s,comp=Z,8.0nm,0.4s						
JNTW	**Noshirotokiwa**	**3.69**	**281**	A	A	18 13 35.9	
	comp=Z,59nm,3.6s,comp=Z,81nm,2.4s						
JSI2	**Shiura 2**	**3.69**	**293**	A	A	18 13 35.7	
	comp=Z,20nm,0.8s,comp=Z,47nm,0.7s						
JMST	**Minamisoumatoc**	**3.70**	**239**	A	A	18 13 38.4	
	comp=Z,22nm,0.7s,comp=Z,12nm,0.4s						
JIAM	**Iburiatsuma**	**3.70**	**324**	A	A	18 13 35.6	
	comp=Z,33nm,0.8s,comp=Z,39nm,0.5s						
JAR	**Ashorobuto**	**3.71**	**347**	*i* P	**Pn**	**18 13 35.7**	**+0.3**
JAR				S	**Sn**	**18 14 15.5**	**-3.2**
JAR	**Ashorobuto**	**3.71**	**347**	A	A	18 13 35.7	
	comp=Z,14nm,0.8s,comp=Z,20nm,2.0s						
NEM2	**Nemuro 2**	**3.73**	**10**	*i* P	**Pn**	**18 13 35.5**	**-0.2**
NEM2				*e*S	**Sn**	**18 14 15.0**	**-4.3**
NEM2	**Nemuro 2**	**3.73**	**10**	A	A	18 13 35.5	
	comp=Z,13nm,1.6s,comp=Z,17nm,1.8s						
NMR	**Nemuro--Hokkai**	**3.74**	**9**	⇑*i*P	**Pn**	**18 13 35.5**	**-0.2**
NMR				*i* S	**Sn**	**18 14 14.8**	**-4.6**
JIW	**Iwasaki**	**3.86**	**285**	A	A	18 13 38.2	
	comp=Z,15nm,0.7s,comp=Z,17nm,1.4s						
JSR	**Shiriuchi**	**3.88**	**300**	A	A	18 13 38.2	
	comp=Z,13nm,2.3s,comp=Z,12nm,0.6s						
JFR	**Furan**	**3.89**	**334**	A	A	18 13 38.6	
	comp=Z,6.0nm,1.2s,comp=Z,5.0nm,0.8s						
JNK	**Nakash**	**3.90**	**358**	A	A	18 13 39.9	
	comp=Z,15nm,1.2s,comp=Z,13nm,1.0s						
JYYZ	**Yamagatayuza**	**3.91**	**262**	A	A	18 13 39.9	
	comp=Z,18nm,2.0s,comp=Z,21nm,4.6s						
JFK	**Kawauchi**	**3.91**	**235**	A	A	18 13 41.7	
	comp=Z,5.0nm,0.5s,comp=Z,5.0nm,0.8s						
JNB	**Noboribetsu**	**4.03**	**315**	A	A	18 13 40.3	
	comp=Z,11nm,1.0s,comp=Z,7.0nm,1.1s						
JYS	**Shirataka**	**4.04**	**250**	A	A	18 13 42.5	
	comp=Z,16nm,1.0s,comp=Z,11nm,0.8s						
GLVR	**Golovnino**	**4.08**	**6**	⇑*i*P	**Pn**	**18 13 40.2**	**-0.2**
GLVR				*i* S	**Sn**	**18 14 23.3**	**-4.5**
GLVR				pmax	pmax		
	comp=N,838nm,0.3s						
GLVR				pmax	pmax		
	comp=Z,3μm,0.3s						
GLVR				pmax	pmax		
	comp=E,384nm,0.2s						
GLVR				smax	smax		
	comp=E,20μm,0.2s						
GLVR				smax	smax		
	comp=N,31μm,0.3s						
JEW	**Eniwo**	**4.09**	**322**	Pn	**Pn**	**18 13 42.3**	**+1.8**
JEW	**Eniwo**	**4.09**	**322**	*i* P	**Pn**	**18 13 42.3**	**+1.8**
JEW				S	**Sn**	**18 14 26.7**	**-1.4**
JEW	**Eniwo**	**4.09**	**322**	A	A	18 13 42.3	
	comp=N,16nm,1.2s,comp=N,28nm,1.0s						
JNSB	**Nemuroshibetsu**	**4.09**	**1**	A	A	18 13 42.7	
	comp=N,22nm,1.2s,comp=N,18nm,2.3s						
JYAR	**Yonezawaarcadi**	**4.11**	**246**	A	A	18 13 43.8	
	comp=N,16nm,0.4s,comp=N,15nm,1.2s						
ONAJ	**Iwakimizuishiy**	**4.12**	**233**	A	A	18 13 44.8	
	comp=N,20nm,0.4s,comp=N,11nm,1.3s						
JOMM	**Oshimamatsumae**	**4.15**	**298**	P	**Pn**	**18 13 42.6**	**+1.2**
JOMM				*e*S	**Sn**	**18 14 26.9**	**-2.7**
JOMM	**Oshimamatsumae**	**4.15**	**298**	A	A	18 13 42.6	
	comp=N,7.0nm,0.5s,comp=N,6.0nm,0.9s						
JFT	**Otama**	**4.17**	**240**	A	A	18 13 45.0	
	comp=N,12nm,5.4s,comp=N,15nm,0.5s						
JYA	**Atsumi**	**4.17**	**257**	A	A	18 13 44.0	
	comp=N,14nm,0.7s,comp=N,15nm,1.1s						
JYM2	**Yakumo 2**	**4.21**	**307**	A	A	18 13 42.7	
	comp=N,9.0nm,0.8s,comp=N,9.0nm,0.6s						
JRA	**Irusu**	**4.26**	**2**	A	A	18 13 45.1	
	comp=N,11nm,1.6s,comp=N,11nm,0.3s						
JAB	**Ashibetsu**	**4.31**	**333**	A	A	18 13 44.6	
	comp=N,9.0nm,2.1s,comp=N,6.0nm,0.8s						
JTKR	**Abashiri--Toko**	**4.35**	**351**	*e*P	**Pn**	**18 13 45.2**	**+1.1**
JTKR				*e*S	**Sn**	**18 14 32.0**	**-2.5**
JTKR	**Abashiri--Toko**	**4.35**	**351**	A	A	18 13 45.2	
	comp=N,8.0nm,2.4s,comp=N,5.0nm,1.2s						
YUK	**Yuzh-Kuril'sk**	**4.41**	**9**	*c i*P	**Pn**	**18 13 44.5**	**-0.4**
YUK				*i* S	**Sn**	**18 14 31.0**	**-4.9**
YUK				pmax	pmax		
	comp=E,990nm,0.3s						
YUK				pmax	pmax		
	comp=Z,4μm,0.3s						
YUK				smax	smax		
	comp=N,10μm,0.6s						
YUK				smax	smax		
	comp=E,27μm,0.5s						
RUSJ	**Misakicho**	**4.43**	**3**	⇑*i*P	**Pn**	**18 13 45.3**	**+0.1**
RUSJ				*i* S	**Sn**	**18 14 33.5**	**-2.9**
SHO	**Shikotan**	**4.43**	**18**	*c i*P	**Pn**	**18 13 45.0**	**-0.2**
SHO				*i* S	**Sn**	**18 14 30.6**	**-5.8**
SHO				pmax	pmax		
	comp=Z,722nm,0.3s						
SHO				pmax	pmax		
	comp=E,348nm,0.4s						
SHO				smax	smax		
	comp=N,9μm,0.2s						
SHO				smax	smax		
	comp=E,16μm,0.4s						
JISS	**Ishikarishitsu**	**4.44**	**325**	A	A	18 13 46.1	
	comp=E,12nm,1.1s,comp=E,18nm,0.5s						
JMP	**Maruseppu**	**4.47**	**346**	A	A	18 13 47.3	
	comp=E,6.0nm,0.5s,comp=E,8.0nm,0.5s						
JOG3	**Oga3**	**4.49**	**275**	A	A	18 13 39.5	
	comp=E,11nm,4.1s,comp=E,24nm,3.5s						
JFY	**Yanaizu**	**4.66**	**242**	A	A	18 13 51.7	
	comp=E,5.0nm,0.6s,comp=E,3.0nm,1.9s						
JHR	**Hokuryu**	**4.70**	**331**	*e*P	**Pn**	**18 13 51.5**	**+2.5**
JHR				*e*S	**Sn**	**18 14 43.1**	**-0.1**
JHR	**Hokuryu**	**4.70**	**331**	A	A	18 13 51.5	
	comp=E,11nm,1.0s,comp=E,9.0nm,1.7s						
JKA	**Kamikawa-asahi**	**4.75**	**340**		**Pn**	**18 13 50.6**	**+1.0**
ASAJ	**Asahikawa**	**4.75**	**340**	LR	LR	18 15 14.2	
	comp=E,405nm,20.6s,baz=126,slow=34						
ASAJ	**Asahikawa**	**4.75**	**340**	P	**Pn**	**18 13 50.6**	**+0.9**
JOSM	**Okushiri--Mats**	**4.76**	**302**	*i* P	**Pn**	**18 13 50.3**	**+0.5**
JOSM				*e*S	**Sn**	**18 14 40.2**	**-4.4**
JSB	**Shiboa**	**4.76**	**237**	A	A	18 13 53.4	
	comp=E,9.0nm,3.6s,comp=E,8.0nm,1.2s						
JHYU	**Hitachinakayam**	**4.76**	**227**	A	A	18 13 54.2	
	comp=E,6.0nm,0.4s,comp=E,6.0nm,0.4s						
JYT	**Yasato**	**5.07**	**229**	Pn	**Pn**	**18 13 54.5**	**+0.4**
JYT	**Yasato**	**5.07**	**229**	A	A	18 13 58.4	
	comp=E,22nm,0.3s,comp=E,15nm,0.3s						
JIHU	**Itakohorinouch**	**5.07**	**224**	A	A	18 13 58.7	
	comp=E,22nm,3.7s,comp=E,20nm,2.3s						
JIZZ	**Izumozaki**	**5.30**	**248**	A	A	18 14 00.3	
	comp=E,8.0nm,5.3s,comp=E,7.0nm,3.7s						
JSMT	**Sammumatsuo**	**5.36**	**223**	A	A	18 14 02.8	
	comp=E,12nm,2.8s,comp=E,10.0nm,2.1s						
JAG	**Ashikaga**	**5.39**	**235**	A	A	18 14 02.4	
	comp=E,3.0nm,0.4s,comp=E,3.0nm,0.4s						
JSD	**Sado**	**5.43**	**255**	Pn	**Pn**	**18 14 00.5**	**+1.4**
JCN	**Nagara**	**5.66**	**223**	A	A	18 14 07.0	
	comp=E,12nm,3.1s,comp=E,7.0nm,4.1s						
TOK	**Tokyo**	**5.70**	**227**	A	A	18 14 07.3	
	comp=E,11nm,0.5s,comp=E,14nm,0.3s						
JGK	**Kuni**	**5.83**	**240**	A	A	18 14 08.3	
	comp=E,4.0nm,1.0s,comp=E,4.0nm,4.0s						
JKUC	**kamogawauchiur**	**5.86**	**221**	A	A	18 14 09.9	
	comp=E,5.0nm,1.3s,comp=E,5.0nm,1.2s						
JJN	**Nakama**	**5.88**	**246**	A	A	18 14 08.5	
	comp=E,4.0nm,0.5s,comp=E,3.0nm,0.5s						
BSO1	**Boso 1**	**5.91**	**213**	P	**Pn**	**18 14 05.6**	**+0.5**
BSO1				*e*S	**Sn**	**18 15 09.9**	**-2.4**
KUR	**Kuril'sk**	**5.97**	**21**	*c i*P	**Pn**	**18 14 06.7**	**+0.4**
KUR				*e*S	**Sn**	**18 15 07.9**	**-6.4**
KUR				pmax	pmax		
	comp=Z,783nm,0.6s						
KUR				pmax	pmax		
	comp=N,339nm,0.3s						
KUR				pmax	pmax		
	comp=E,156nm,0.3s						
KUR				smax	smax		
	comp=N,5μm,0.2s						
KUR				smax	smax		
	comp=E,4μm,0.2s						
JRY	**Ryogami san**	**5.99**	**234**	*i* P	**Pn**	**18 14 07.8**	**+1.1**
JRY				*e*S	**Sn**	**18 15 11.0**	**-4.0**
JWK2	**Keihoku**	**6.05**	**339**	*i* P	**Pn**	**18 14 09.6**	**+2.1**
MAJO	**Matsushiro**	**6.13**	**241**		**Pn**	**18 14 11.2**	**+2.5**
MAJO	**Matsushiro**	**6.13**	**241**	⇓*e*P	**Pn**	**18 14 11.3**	**+2.5**
MAJO	**Matsushiro**	**6.13**	**241**	P	**Pn**	**18 14 12.0**	**+3.3**
MJAR	**Matsushiro Arr**	**6.13**	**241**	Pn	**Pn**	**18 14 09.6**	**+0.9**
	comp=E,31nm,0.3s,baz=67,slow=12,SNR=1155						
MJAR				Sn	**Sn**	**18 15 18.6**	**+0.1**
	baz=250,slow=38						
MJAR	**Matsushiro Arr**	**6.13**	**241**		**Pn**	**18 14 09.9**	**+1.2**
MJB9	**Matsu-Tunnel**	**6.14**	**241**		**Pn**	**18 14 11.3**	**+2.6**
JGF	**Kuroka**	**7.24**	**238**		**Pn**	**18 14 25.6**	**+1.7**
YSS	**Yuzh-Sakhalins**	**7.43**	**349**		**Pn**	**18 14 26.5**	**0.0**
YSS	**Yuzh-Sakhalins**	**7.43**	**349**	*c*eP	**Pn**	**18 14 26.5**	**0.0**
YSS				*e*S	**Sn**	**18 15 46.0**	**-4.4**
YSS				pmax	pmax		
	comp=Z,500nm,2.9s						
YSS				pmax	pmax		
	comp=Z,480nm,0.5s						
YSS				MLR	MLR		
	comp=Z,600nm,16.0s						
YSS	**Yuzh-Sakhalins**	**7.43**	**349**	P	**Pn**	**18 14 28.1**	**+1.6**
INU	**Inuyama**	**7.61**	**238**		**Pn**	**18 14 29.9**	**+1.0**
INU	**Inuyama**	**7.61**	**238**	P	**Pn**	**18 14 31.5**	**+2.6**
JHJ2	**Mitsune**	**7.73**	**214**		**Pn**	**18 14 30.1**	**-0.5**
JHJ2	**Mitsune**	**7.73**	**214**	P	**Pn**	**18 14 30.7**	**+0.1**
TEY	**Ternei**	**8.14**	**314**	⇑*e*P	**Pn**	**18 14 36.9**	**+0.7**
TEY				*e*		18 16 06.7	
TEY				pmax	pmax		
	comp=N,300nm,1.3s						
TEY				pmax	pmax		
	comp=E,400nm,1.3s						
TEY				pmax	pmax		
	comp=Z,500nm,1.3s						
TEY				pmax	pmax		
	comp=N,290nm,0.7s						
TEY				pmax	pmax		
	comp=E,360nm,0.7s						
TEY				pmax	pmax		
	comp=Z,430nm,0.7s						
UGL	**Uglegorsk**	**9.61**	**349**	*e*P	**Pn**	**18 14 56.9**	**+0.6**
UGL				S	**Sn**	**18 16 41.0**	**-2.9**
UGL				pmax	pmax		
	comp=Z,300nm,1.1s						
UGL				pmax	pmax		
	comp=Z,213nm,1.0s						
VLA	**Vladivostok**	**10.36**	**294**	*i* P	**Pn**	**18 15 09.6**	**+3.0**
VLA				pmax	pmax		
	comp=Z,54nm,0.5s						
JHS	**Saijyo**	**10.48**	**247**		**Pn**	**18 15 09.1**	**+0.8**
USA0B	**Ussuriysk Arra**	**10.62**	**299**		**Pn**	**18 15 11.2**	**+1.0**
USA0B	**Ussuriysk Arra**	**10.62**	**299**	P	**Pn**	**18 15 11.2**	**+1.0**
USRK	**Ussuriysk Ar.**	**10.62**	**299**	Pn	**Pn**	**18 15 10.5**	**+0.3**
	comp=Z,7.4nm,0.3s,baz=100,slow=14,SNR=195						
USRK				Sn	**Sn**	**18 17 08.5**	**-0.2**
	baz=281,slow=19						
	comp=Z,143nm,0.8s						
USRK	**Ussuriysk Ar.**	**10.62**	**299**		**Pn**	**18 15 11.4**	**+1.2**
USRK	**Ussuriysk Ar.**	**10.62**	**299**	P	**Pn**	**18 15 11.4**	**+1.2**
USRK						18 17 08.5	
MSHR	**Mys Shultsa**	**10.76**	**290**	*c*eP	**Pn**	**18 15 14.4**	**+2.3**
MSHR				pmax	pmax		
	comp=Z,65nm,1.4s						
TYV	**Tymovskoe**	**11.29**	**353**	*e*P	**Pn**	**18 15 20.9**	**+1.6**
TYV				*e*S	**Sn**	**18 17 31.4**	**+6.3**
TYV				pmax	pmax		
	comp=Z,400nm,2.8s						
TYV				pmax	pmax		
	comp=Z,56nm,0.7s						
TYV				smax	smax		
	comp=N,200nm,3.1s						
TYV				smax	smax		
	comp=E,300nm,3.1s						
MDJ	**Mudanjiang**	**12.38**	**298**		**Pn**	**18 15

comp=Z,300nm,17.0s
KSCHJ Chungju 13.59 263 Pn 18 15 52.1 +1.3
NKL Nikolayevsk 13.78 349 *e*P **Pn 18 15 50.9 -2.3**
NKL *e*S **Sn 18 18 24.8 -1.0**
NKL pmax pmax
comp=E,2.0nm,0.9s
NKL pmax pmax
comp=N,428nm,1.3s
NKL pmax pmax
comp=Z,96nm,1.0s
NKL smax smax
comp=E,3.0nm,0.9s
NKL smax smax
comp=N,818nm,0.8s
NKL MLR MLR
comp=E,13nm,10.0s
NKL MLR MLR
comp=N,8μm,11.0s
NKL MLR MLR
comp=Z,270nm,16.0s
OKH Okha 13.94 355 *de*P **P 18 16 04.6 +1.1**
OKH *e*S **Sn 18 18 30.3 +0.6**
OKH MLR MLR
comp=E,1μm,18.0s
OKH MLR MLR
comp=N,800nm,17.0s
OKH MLR MLR
comp=Z,300nm,17.0s
BNX BinXian 14.21 301 ⇓P **Pn 18 15 58.5 -0.6**
BNX pP **P 18 16 03.5 -3.0**
BNX sP 18 16 07.5
BNX PP **PnPn 18 16 11.0 +4.0**
BNX S **Sn 18 18 37.5 +1.2**
BNX sS S 18 18 43.8 -13
BNX LR LR
comp=Z,510nm,15.5s
BNX LR LR
comp=Z,730nm,14.5s
BNX LR LR
comp=Z,680nm,15.3s
TJN Taejon 14.21 262 Pn 18 16 00.1 +0.8
TJN Taejon 14.21 262 P **Pn 18 16 00.1 +0.8**
TJN Taejon 14.21 262 P **Pn 18 16 00.5 +1.3**
JSU Suzuyama 14.29 240 Pn 18 15 58.9 -1.6
INCN Inchon 14.46 267 Pn 18 16 02.6 -0.1
INCN Inchon 14.46 267 P **Pn 18 16 02.6 -0.1**
NAWB Namwon 14.52 258 Pn **Pn 18 16 04.2 +0.8**
CN2 Changchun 15.09 292 *e*P **Pn 18 16 10.3 -0.8**
CN2 *e*S **Sn 18 18 59.0 +1.2**
CN2 *e*sS S 18 19 06.0 -9.1
CN2 LR LR
comp=Z,520nm,14.0s
CN2 LR LR
comp=Z,460nm,14.0s
CN2 LR LR
comp=Z,300nm,16.0s
PEA0B Petropavlovsk- 16.04 29 Pn **Pn 18 16 23.9 +0.5**
PEA0B IAmb IAmb 18 16 41.5
comp=Z,130nm,1.5s
PEA0B Petropavlovsk- 16.04 29 P **Pn 18 16 23.9 +0.5**
PEA0B pmax pmax
comp=Z,130nm,1.5s
PETK Petropavlovsk- 16.04 29 Pn **Pn 18 16 22.3 -1.1**
comp=Z,2.8nm,0.5s,baz=200,slow=12,SNR=24
PETK LR LR 18 22 13.0
comp=Z,253nm,21.2s,baz=218,slow=36
PETK Petropavlovsk- 16.04 29 Pn **Pn 18 16 20.9 -2.5**
SNY Shenyang 16.30 284 ⇑P **Pn 18 16 26.5 -0.3**
SNY S **Sn 18 19 25.8 -1.4**
SNY pmax pmax
comp=Z,21nm,0.5s
SNY LR LR
comp=Z,950nm,14.4s
SNY LR LR
comp=Z,690nm,20.8s
SNY LR LR
comp=Z,1μm,16.8s
PET Petropavlovsk 16.34 31 *e*P **P 18 16 34.5 +4.4**
PET *e*S **S 18 19 37.3 -3.2**
PET pmax pmax
comp=Z,47nm,1.2s
PET MLR MLR
comp=Z,500nm,18.0s
ZEA Zeya 18.48 325 *e*P **P 18 16 51.2 -2.5**
ZEA *e*S Sn 18 20 04.7 -15
ZEA pmax pmax
comp=E,50nm,0.8s
ZEA pmax pmax
comp=N,80nm,0.7s
ZEA pmax pmax
comp=Z,120nm,0.7s
ZEA pmax pmax
comp=E,100nm,2.3s
ZEA pmax pmax
comp=Z,100nm,4.3s
ZEA smax smax
comp=N,100nm,6.4s
ZEA smax smax
comp=E,100nm,3.4s
ZEA MLR MLR
comp=E,200nm,17.0s
ZEA MLR MLR
comp=N,300nm,18.0s
ZEA MLR MLR
comp=Z,300nm,15.0s
JOW Kunigami 18.87 232 P **P 18 16 57.7 -0.5**
comp=Z,8.6nm,0.3s,baz=43,slow=11,SNR=64
comp=Z,299nm,1.0s
JOW Kunigami 18.87 232 P **P 18 16 57.0 -1.2**
JOW Kunigami 18.87 232 P **Pn 18 17 00.5 +1.7**
MA2 Magadan 20.26 9 P **P 18 17 12.8 -0.4**
comp=Z,71nm,0.8s,baz=196,slow=9.1,SNR=75
MA2 S **S 18 20 56.9 -2.8**
comp=Z,3.0nm,0.9s,baz=141,slow=1.1,SNR=1.7
MA2 LR LR 18 24 48.3
comp=Z,132nm,20.8s,baz=190,slow=36
comp=Z,71nm,0.8s
MA2 Magadan 20.26 9 P **P 18 17 13.8 +0.6**
MA2 IAmb IAmb 18 17 15.8
comp=Z,80nm,0.8s
MA2 Magadan 20.26 9 P **P 18 17 13.8 +0.6**
MA2 S **S 18 20 56.9 -2.8**
MA2 pmax pmax
comp=Z,80nm,0.8s
MA2 Magadan 20.26 9 P Pn 18 17 14.4 -0.8
HIA Hailar 20.27 306 P **P 18 17 13.2 -0.2**
HIA Hailar 20.27 306 P **P 18 17 13.2 -0.2**
HIA pmax pmax
comp=Z,23nm,0.6s
SSE Sheshan 21.10 253 P **P 18 17 22.0 -0.5**
SSE S Sn 18 21 21.0 -2.4
SSE pmax pmax
comp=Z,33nm,1.0s
SSE pmax pmax
comp=Z,160nm,3.5s
SSE LR LR
comp=Z,310nm,14.5s
SSE LR LR
comp=Z,190nm,14.2s
XLT XiLinHaoTe 21.84 291 ⇑*i*P **P 18 17 30.0 -0.5**
XLT pP sP 18 17 34.0 -0.7
XLT sP pwP 18 17 37.0 -4.1
XLT S S 18 21 18.0 -13
XLT pmax pmax
comp=Z,39nm,1.4s
XLT pmax pmax
comp=Z,78nm,4.2s
XLT LR LR
comp=Z,35nm,15.3s
XLT LR LR
comp=Z,240nm,13.0s
XLT LR LR
comp=Z,220nm,13.8s
BJI Beijing 22.02 280 P **P 18 17 31.5 -0.8**
BJI S **S 18 21 24.5 -10**
BJI pmax pmax
comp=Z,29nm,0.8s
BJI LR LR
comp=Z,45nm,15.5s
BJI LR LR
comp=Z,270nm,16.4s
BJI LR LR
comp=Z,420nm,18.6s
BJT Baijiatuau 22.02 280 P **P 18 17 31.1 -1.3**
BJT Baijiatuau 22.02 280 P **P 18 17 31.1 -1.3**
BJT pmax pmax
comp=Z,23nm,0.9s
TIA Tai'an 22.14 270 ⇑P **P 18 17 32.5 -1.2**
TIA S **S 18 21 27.3 -10**
TIA pmax pmax
comp=Z,78nm,1.0s
TIA pmax pmax
comp=Z,210nm,3.5s
TIA LR LR
comp=Z,700nm,19.4s
TIA LR LR
comp=Z,330nm,18.4s
TIA LR LR
comp=Z,640nm,19.1s
JMJ Miyako jima 2 22.17 234 P **P 18 17 35.7 +1.7**
NJ2 Nanjing 22.39 258 *e*P **P 18 17 35.5 -0.8**
NJ2 pP **pP 18 17 38.5 -0.7**
NJ2 sP **sP 18 17 41.5 +1.0**
NJ2 S **S 18 21 43.5 +1.8**
NJ2 sS **sS 18 21 47.0 +0.6**
NJ2 pmax pmax
comp=Z,28nm,0.9s
NJ2 pmax pmax
comp=Z,77nm,3.5s
NJ2 LR LR
comp=Z,410nm,15.7s
NJ2 LR LR
comp=Z,330nm,18.7s
NJ2 LR LR
comp=Z,700nm,20.0s
HNS HongShan 23.67 274 ⇓P **P 18 17 47.5 -2.0**
HNS *e*S S 18 21 53.0 -11
HNS SS **SnSn 18 22 42.3 +1.1**
HNS pmax pmax
comp=Z,57nm,1.0s
HNS pmax pmax
comp=Z,180nm,6.3s
HNS LR LR
comp=Z,280nm,16.7s
HNS LR LR
comp=Z,440nm,19.1s
HNS LR LR
comp=Z,480nm,19.1s
SEY Seymchan 23.72 9 P **P 18 17 49.6 -0.1**
comp=Z,45nm,0.9s,baz=186,slow=8.0,SNR=120
SEY S **S 18 22 02.3 -1.6**
comp=Z,1.7nm,0.9s,baz=170,slow=15,SNR=1.4
SEY LR LR 18 29 10.4
comp=Z,193nm,18.2s,baz=190,slow=42
comp=Z,45nm,0.9s
SEY Seymchan 23.72 9*ce*P **P 18 17 50.1 +0.4**
SEY pmax pmax
comp=Z,52nm,1.0s
SHEM Shemya Is, Ala 23.86 47 P **P 18 17 51.2 0.0**
comp=Z,12nm,0.6s,baz=290,slow=19,SNR=1.3
SHEM S **S 18 22 08.8 +2.5**
comp=Z,25nm,0.8s,baz=285,slow=22,SNR=2.1
SHEM LR LR 18 25 09.8
comp=Z,159nm,20.9s,baz=317,slow=32
comp=Z,12nm,0.6s
YOJ Yonaguni jima 23.87 237 P **P 18 17 50.2 -1.3**
YOJ Yonaguni jima 23.87 237 P **P 18 17 50.2 -1.3**
YOJ pmax pmax
comp=Z,70nm,0.9s
YOJ Yonaguni jima 23.87 237 P **P 18 17 50.7 -0.8**
YAK Yakutsk 24.23 342 P **P 18 17 53.0 -1.5**
comp=Z,102nm,0.7s,baz=7.5,slow=1.8,SNR=106
YAK S **S 18 22 05.8 -6.2**
comp=Z,2.1nm,0.4s,baz=105,slow=7.7,SNR=1.5
YAK LR LR 18 28 41.1
comp=Z,185nm,19.1s,baz=130,slow=40
YAK Yakutsk 24.23 342 P **P 18 17 52.6 -1.9**
YAK Yakutsk 24.23 342*c* *i*P **P 18 17 52.9 -1.5**
YAK *e**PP **sP 18 17 59.4 +0.6**
YAK *e* 18 18 23.1
YAK *e*S **S 18 22 12.9 +0.9**
YAK *e**SS **sS 18 22 18.6 +1.6**
YAK *e*SS **SnSn 18 22 56.8 +2.4**
YAK pmax pmax
comp=Z,210nm,0.9s
YAK pmax pmax
comp=N,41nm,0.9s
YAK pmax pmax
comp=E,24nm,0.8s
YAK pmax pmax
comp=Z,54nm,0.8s
YAK pmax pmax
comp=N,30nm,0.8s
YAK pmax pmax
comp=E,25nm,0.8s
YAK smax smax
comp=E,172nm,2.8s
YAK smax smax
comp=N,93nm,1.5s
YAK MLR MLR
comp=Z,244nm,25.0s
TATO Taipei 24.53 240 P **P 18 17 58.8 +1.3**
YHNB Yeheng 24.81 240 P **P 18 17 59.0 -1.2**
YHNB Yeheng 24.81 240 P **P 18 18 01.6 +1.4**
CIT Chita 24.87 310 *e*P **P 18 18 01.9 +1.4**
CIT *e* 18 18 12.0
CIT *e* 18 18 36.8
CIT *e*S **S 18 22 25.2 +2.5**
CIT pmax pmax
comp=Z,147nm,1.4s
NACB Ninganchiao 25.00 239 P **P 18 18 00.2 -1.6**
NACB IAmb IAmb 18 18 05.9
comp=Z,36nm,0.7s
TIY Taiyuan 25.34 276 *e*P **P 18 18 06.3 +1.4**
TIY pmax pmax
comp=Z,250nm,3.5s
TIY LR LR
comp=Z,340nm,24.7s
TIY LR LR
comp=Z,220nm,27.5s
TIY LR LR
comp=Z,340nm,19.9s
HHC Hu-ho-hao-te 25.38 283 *e*P **P 18 18 05.3 0.0**
HHC S **S 18 22 29.0 -2.2**
HHC pmax pmax
comp=Z,27nm,0.9s
HHC pmax pmax
comp=Z,300nm,4.9s
HHC LR LR
comp=Z,330nm,19.4s
HHC LR LR
comp=Z,750nm,18.4s
HHC LR LR
comp=Z,1μm,19.9s
SSLB Suanglung 25.69 239 P **P 18 18 07.8 -0.3**
SSLB Suanglung 25.69 239 P **P 18 18 09.2 +1.1**
YULB Yu-li 25.74 238 P **P 18 18 08.8 +0.2**
GUMO Guam 25.99 180 LR LR 18 27 17.4
comp=Z,133nm,20.6s,baz=7.0,slow=34
TPUB Ta-pu 26.24 239 P **P 18 18 13.3 +0.2**
TPUB Ta-pu 26.24 239 P **P 18 18 14.9 +1.8**
LYN LuoYang 26.28 269 ⇓P **P 18 18 14.0 +0.7**
LYN S **S 18 22 45.5 +0.2**
LYN pmax pmax
comp=Z,70nm,0.9s
LYN pmax pmax
comp=Z,380nm,3.9s
LYN LR LR
comp=Z,630nm,17.2s
LYN LR LR
comp=Z,290nm,17.9s
LYN LR LR
comp=Z,680nm,15.0s
TWG Pinlang 26.29 237 P **P 18 18 14.4 +0.9**
WHN Wuhan 26.50 259 ⇓P **P 18 18 16.0 +0.7**
WHN pP **sP 18 18 19.5 -0.1**
WHN S **S 18 22 51.3 +2.5**
WHN pmax pmax
comp=Z,110nm,0.8s
WHN LR LR
comp=Z,1μm,16.3s
WHN LR LR
comp=Z,1μm,16.3s
WHN LR LR
comp=Z,720nm,17.6s
QZH Quanzhou 26.53 244 ⇑*i*P **P 18 18 15.0 -0.6**
QZH S **S 18 22 45.0 -4.3**
QZH pmax pmax
comp=Z,110nm,3.1s
QZH LR LR
comp=Z,340nm,17.4s
QZH LR LR
comp=Z,300nm,17.4s
QZH LR LR
comp=Z,270nm,13.3s
BOD Bodaibo 26.92 323 *e*P **P 18 18 18.5 -0.4**
BOD pmax pmax
comp=Z,56nm,0.8s
ULN Ulaanbaatar 28.29 299 P **P 18 18 30.9 -0.6**
ULN IAmb IAmb 18 18 59.1
comp=Z,19nm,0.7s
ULN Ulaanbaatar 28.29 299 P **P 18 18 30.9 -0.6**
ULN pmax pmax
comp=Z,19nm,0.7s
SONM Songino Array 28.73 299 P **P 18 18 35.7 +0.2**
comp=Z,3.9nm,0.7s,baz=78,slow=8.5,SNR=22
SONM S **S 18 23 25.3 +1.3**
comp=Z,1.1nm,1.1s,baz=359,slow=39,SNR=1.4
SONM LR LR 18 30 45.4
comp=Z,405nm,18.4s,baz=97,slow=38
comp=Z,3.9nm,0.7s
SONM Songino Array 28.73 299 P **P 18 18 35.6 +0.2**
CNSH ChangSha 28.75 256 ⇑P **P 18 18 36.0 +0.4**
CNSH S **S 18 23 20.8 -3.5**
CNSH pmax pmax
comp=Z,69nm,1.0s
CNSH LR LR
comp=Z,560nm,18.7s
CNSH LR LR
comp=Z,520nm,16.4s
XAN Xi'an 29.20 270 ⇑P **P 18 18 39.8 +0.2**
XAN pP sP 18 18 44.0 +0.2
XAN sP pwP 18 18 46.3 -4.2
XAN S **S 18 23 31.0 -0.4**
XAN pmax pmax
comp=Z,18nm,1.5s
XAN pmax pmax
comp=Z,140nm,7.0s
XAN LR LR
comp=Z,440nm,17.1s
XAN LR LR
comp=Z,360nm,16.5s
XAN LR LR
comp=Z,440nm,14.6s
ENH Enshi 30.33 263 P **P 18 18 49.3 -0.3**
IRK Irkutsk 30.49 308 *e*P **P 18 18 55.2 +4.4**
IRK pmax pmax
comp=Z,41nm,0.9s
BILL Bilibino 30.73 16 P **P 18 18 52.7 0.0**
BILL IAmb IAmb 18 19 17.0
comp=Z,21nm,1.0s
BILL Bilibino 30.73 16*de*P **P 18 18 52.5 -0.2**
BILL *i**SP **sP 18 18 58.4 +1.3**
BILL *e* 18 19 53.6
BILL *e*S **S 18 23 49.8 -4.9**
BILL *e*SS **ScP 18 25 30.8 -1.0**
BILL pmax pmax
comp=Z,10.0nm,0.9s
BILL MLR MLR
comp=Z,274nm,19.0s
ZAK Zakamensk 30.92 304 *e*P **P 18 18 58.3 +3.6**
ZAK pmax pmax
comp=Z,14nm,1.1s
GULI GuiLin 32.25 254 ⇓P P 18 18 57.5 -9.0
GULI S S 18 24 10.5 -8.8
GULI pmax pmax
comp=Z,20nm,1.1s
GULI LR LR
comp=N,250nm,19.5s
GULI LR LR
comp=E,280nm,19.5s
GULI LR LR
comp=Z,290nm,15.2s
LZH Lanzhou 32.40 277 ⇓P **P 18 19 08.8 +0.9**
LZH sP pwP 18 19 15.0 -3.9
LZH *e*S **S 18 24 18.0 -3.8**
LZH pmax pmax
comp=Z,50nm,1.3s
LZH pmax pmax
comp=Z,190nm,4.5s
LZH LR LR
comp=Z,400nm,12.0s
LZH LR LR
comp=Z,310nm,11.3s
LZH LR LR
comp=Z,450nm,14.2s
MOY Mondy 32.45 306 *e*P P 18 19 15.4 +7.2
MOY pmax pmax
comp=Z,31nm,1.7s
TIXI Tiksi 33.05 351 P **P 18 19 12.0 -1.0**
comp=Z,5.9nm,0.6s,baz=274,slow=22,SNR=20
comp=Z,5.9nm,0.6s
TIXI Tiksi 33.05 351 P **P 18 19 12.1 -0.9**
TIXI Tiksi 33.05 351 P **P 18 19 12.1 -0.9**
TIXI pmax pmax
comp=Z,7.0nm,0.7s
NIKH Nikolski High 33.98 51 P P 18 19 29.6 +8.3
baz=267
GYA Guiyang 34.39 259 ⇑*i*P **P 18 19 25.8 +0.5**
GYA S **S 18 24 47.0 -5.7**
GYA pmax pmax
comp=Z,120nm,0.8s
GYA pmax pmax
comp=Z,180nm,4.0s
GYA LR LR
comp=Z,320nm,17.2s
GYA LR LR
comp=Z,280nm,18.4s
GYA LR LR
comp=Z,370nm,19.4s
CD2 Chengdu 34.45 268 P **P 18 19 26.0 +0.3**
CD2 pmax pmax
comp=Z,30nm,0.9s
CD2 LR LR
comp=Z,360nm,16.7s
CD2 LR LR
comp=Z,320nm,20.6s
GTA Gaotai 34.49 284 ⇓P **P 18 19 26.8 +0.8**
GTA pP sP 18 19 32.0 +1.7
GTA sP pwP 18 19 35.3 -1.7
GTA S **S 18 24 51.5 -2.5**
GTA sS sS 18 25 01.5 +2.5
GTA pmax pmax
comp=Z,11nm,1.2s
GTA pmax pmax
comp=Z,87nm,4.7s
GTA LR LR
comp=Z,390nm,18.9s
GTA LR LR
comp=Z,390nm,18.5s
GTA LR LR
comp=Z,470nm,19.3s
GAMB Gambell 35.03 32 P P 18 19 36.8 +6.6
baz=249
UNV Unalaska Valle 35.44 50 P P 18 19 42.0 +8.1
baz=268
QIZ Qiongzhong 36.51 246 P **P 18 19 45.0 +1.5**
QIZ S **S 18 25 24.0 -1.1**
QIZ LR LR
comp=Z,410nm,17.2s
QIZ LR LR
comp=Z,350nm,16.2s
QIZ LR LR
comp=Z,570nm,14.4s
DAV Davao City (W) 36.82 213 LR LR 18 36 51.1
comp=Z,51nm,18.0s,baz=46,slow=40
TNA Tin City 37.20 30 P P 18 19 54.5 +5.7
baz=251,SNR=5.9
ANM Nome 37.90 32 P P 18 20 01.1 +6.4
baz=255
KMI Kunming 38.09 261 ⇓P **P 18 19 57.5 +0.5**
KMI pP sP 18 20 02.0 +0.7
KMI LR LR
comp=Z,350nm,18.5s
KMI LR LR
comp=Z,190nm,18.2s
KMI LR LR
comp=Z,400nm,21.0s
PZH PanZhiHua 38.12 263 P **P 18 19 57.5 +0.3**
PZH S **S 18 25 52.3 +2.6**
PZH pmax pmax
comp=Z,90nm,0.6s
PZH pmax pmax
comp=Z,80nm,4.1s
PZH LR LR
comp=Z,700nm,20.9s
PZH LR LR
comp=Z,680nm,20.1s

PZH LR LR
comp=Z,770nm,22.5s
SDPT Sand Point 38.99 48 P P 18 20 11.2 +7.1
baz=271
GOMU GeErMu 39.24 281 P **P** **18 20 07.5 +0.7**
GOMU sP sP 18 20 10.5 -0.6
GOMU pmax pmax
comp=Z,24nm,1.0s
CHNA Chernabura Isl 39.51 49 P P 18 20 16.3 +7.9
baz=272
S14K Fog Glacier 39.52 46 P P 18 20 15.9 +7.3
baz=270
RDOG Red Dog Mine 39.90 28 P P 18 20 16.9 +5.4
baz=253
N16K Nishlik Lake 40.15 40 P P 18 20 20.4 +6.8
baz=266,SNR=6.1
O16K Kokwok River B 40.42 41 P P 18 20 22.5 +6.7
baz=268
O17K Koliganek Bris 40.94 41 P P 18 20 26.9 +6.8
baz=266
P17K Kvichak River 41.25 42 P P 18 20 29.9 +7.2
baz=270
R17K Ugashik Creek 41.26 44 P P 18 20 30.4 +7.5
baz=272
GCSA Galena City Sc 41.51 33 P P 18 20 31.4 +6.6
baz=263,SNR=7.9
Q17K Contact Creek 41.53 43 P P 18 20 31.5 +6.4
baz=271
N18K Kilae Creek 41.58 40 P **P** **18 20 25.2 -0.3**
N18K Kilae Creek 41.58 40 P P 18 20 32.6 +7.2
baz=268,SNR=5.1
TTA Tatalina 41.68 36 **P** **18 20 28.0 +1.7**
TTA Tatalina 41.68 36 P **P** **18 20 28.0 +1.7**
TTA pmax pmax
comp=Z,23nm,1.1s
TTA Tatalina 41.68 36 P P 18 20 33.5 +7.2
baz=266,SNR=12
CHIR Chirikof Islan 41.74 47 P P 18 20 34.4 +7.6
baz=274
SVW2 Sparrevohn 41.75 39 P **P** **18 20 26.6 -0.2**
MYLDM Lahad Datu 41.80 222 P **P** **18 20 27.7 0.0**
P18K Big Mountain, 41.88 42 P **P** **18 20 27.2 -0.7**
P18K Big Mountain, 41.88 42 P P 18 20 35.0 +7.1
baz=270
O18K Koktuh Hills 41.89 41 P **P** **18 20 24.9 -3.1**
O18K Koktuh Hills 41.89 41 P P 18 20 34.7 +6.6
baz=270
Q18K Katmai Hardscr 41.99 43 P P 18 20 35.6 +6.7
baz=272
WMQ Urumqi 42.15 295 *eP* **P** **18 20 31.8 +1.4**
WMQ sP pwP 18 20 38.5 -2.9
WMQ pmax pmax
comp=Z,17nm,0.7s
WMQ LR LR
comp=Z,250nm,15.5s
WMQ LR LR
comp=Z,220nm,25.5s
L19K White Mountain 42.16 37 P **P** **18 20 31.7 +1.5**
L19K White Mountain 42.16 37 P P 18 20 35.9 +5.7
baz=268
ZAA0 Zalesovo Array 42.23 310 P **P** **18 20 30.4 -0.4**
ZAA0 lAmb lAmb 18 21 00.1
comp=Z,31nm,0.8s
ZALV Zalesovo Beam 42.23 310 P **P** **18 20 31.0 +0.3**
comp=Z,2.3nm,0.7s,baz=84,slow=7.1,SNR=9.8
ZALV S **S** **18 26 54.4 +4.1**
comp=Z,0.3nm,0.3s,baz=154,slow=44,SNR=1.3
comp=Z,2.3nm,0.7s
ZALV Zalesovo Beam 42.23 310 P **P** **18 20 31.1 +0.4**
SIJI Sorong 42.24 201 P **P** **18 20 31.6 +0.3**
comp=Z,5.5nm,0.8s,baz=0.0,slow=8.1,SNR=2.7
SIJI LR LR 18 35 27.4
comp=Z,84nm,21.9s,baz=59,slow=32
comp=Z,5.5nm,0.8s
N19K Bonanza Creek 42.27 39 P P 18 20 37.9 +6.7
baz=270
M19K Big River Lodg 42.36 38 P **P** **18 20 32.1 +0.3**
M19K Big River Lodg 42.36 38 P P 18 20 38.8 +7.0
baz=268
SII Sitkinak Islan 42.50 46 P P 18 20 41.4 +8.4
baz=274
K20K Telida 42.59 36 **P** **18 20 35.6 +2.0**
K20K Telida 42.59 36 P P 18 20 41.2 +7.5
baz=267,SNR=7.6
J20K Nowinta River 42.62 34 **P** **18 20 35.7 +1.8**
J20K lAmb lAmb 18 20 51.1
comp=Z,26nm,0.7s
J20K Nowinta River 42.62 34 P P 18 20 41.1 +7.2
baz=266,SNR=24
L20K Farewell, AK 42.63 37 P P 18 20 41.6 +7.6
baz=268
Q19K Cape Douglas, 42.69 42 P **P** **18 20 42.6 +8.0**
baz=272
A21K Barrow 42.94 24 **P** **18 20 35.9 -0.5**
A21K Barrow 42.94 24 P P 18 20 44.4 +8.0
baz=256,SNR=11
OHAK Old Harbor 42.95 45 P P 18 20 45.1 +8.5
baz=274
M20K Styx River 42.96 38 P P 18 20 45.3 +8.6
M20K Styx River 42.96 38 P P 18 20 44.7 +8.0
baz=270,SNR=6.8
IMAR Indian Mountai 42.97 32 P **P** **18 20 38.0 +1.3**
G21K Allakaket 43.13 31 P P 18 20 45.2 +7.2
baz=264
O20K Slope Mountain 43.19 41 P P 18 20 47.0 +8.3
baz=272
ZSN Zaisan 43.22 301 *eP* **P** **18 20 38.2 -0.8**
ZSN Zaisan 43.22 301 *eP* **P** **18 20 38.2 -0.8**
baz=301
F21K Alatna River 43.23 30 P P 18 20 45.4 +6.6
baz=264
KDAK Kodiak Island 43.30 44 LR LR 18 38 50.2
comp=Z,166nm,20.7s,baz=253,slow=36
KDAK Kodiak Island 43.30 44 P **P** **18 20 41.0 +1.6**
KDAK lAmb lAmb 18 20 48.8
comp=Z,18nm,0.8s
KDAK Kodiak Island 43.30 44 P **P** **18 20 41.0 +1.6**
KDAK pmax pmax
comp=Z,18nm,0.8s
KDAK Kodiak Island 43.30 44 P P 18 20 47.8 +8.4
baz=274
H21K Melozitna Rive 43.33 32 P **P** **18 20 40.3 +0.8**
H21K Melozitna Rive 43.33 32 P P 18 20 47.9 +8.3
baz=266
Q20K Shuyak Island 43.35 43 P P 18 20 48.7 +8.9
baz=274
CHUM Lake Minchumin 43.41 35 P P 18 20 48.3 +8.1
baz=268,SNR=6.2
PPLA Purkeypile 43.42 36 **P** **18 20 41.0 +0.4**
PPLA lAmb lAmb 18 21 00.7
comp=Z,18nm,0.8s
PPLA Purkeypile 43.42 36 P P 18 20 49.0 +8.4
baz=269,SNR=5.7
SPU Mount Spurr 43.46 39 P **P** **18 20 42.2 +1.4**
CAST Castle Rocks 43.49 36 P **P** **18 20 42.0 +1.1**
CAST lAmb lAmb 18 20 59.2
comp=Z,30nm,0.8s
CAST Castle Rocks 43.49 36 P P 18 20 49.2 +8.2
baz=269,SNR=12
I21K Tanana 43.63 33 P **P** **18 20 43.0 +1.1**
I21K Tanana 43.63 33 P P 18 20 50.0 +8.0
baz=267,SNR=7.9
SKT Skwentna 43.71 38 P **P** **18 20 44.8 +2.0**
SKT Skwentna 43.71 38 P P 18 20 51.3 +8.6
baz=271
CNPM China Poot 43.91 41 P **P** **18 20 45.3 +0.9**
CNPM lAmb lAmb 18 21 03.1
comp=Z,18nm,1.0s
H22K Ishtalitna Cre 43.93 32 P P 18 20 53.1 +8.7
baz=267
FAKI Fak Fak 43.96 198 P **P** **18 20 44.2 -0.9**
FAKI lAmb lAmb 18 21 09.2
comp=Z,20nm,1.1s
FAKI Fak Fak 43.96 198 P **P** **18 20 45.1 0.0**
E22K Anaktuvuk Pass 43.98 29 P P 18 20 53.2 +8.4
baz=264
BPAW Bear Paw Mtn. 44.00 35 **P** **18 20 47.5 +2.5**
BPAW Bear Paw Mtn. 44.00 35 P P 18 20 54.1 +9.0
baz=269,SNR=6.7
KTH Kantishna Hill 44.02 35 P **P** **18 20 45.7 +0.5**
SUA Susitna One 44.09 38 P **P** **18 20 47.2 +1.3**
SUA lAmb lAmb 18 21 04.9
comp=Z,16nm,0.6s
SUA Susitna One 44.09 38 P P 18 20 54.2 +8.2
baz=272
MLY Manley 44.15 33 P **P** **18 20 46.7 +0.4**
MLY Manley 44.15 33 P P 18 20 54.5 +8.3
baz=268,SNR=6.2
BRSE Bradley Lake S 44.15 41 P P 18 20 55.0 +8.7
baz=274
KRVT Keravat (AS076 44.26 170 LR LR 18 34 37.0
comp=Z,61nm,20.9s,baz=201,slow=30
MRSI Marisa 44.29 214 P **P** **18 20 48.6 +0.8**
comp=Z,384nmcomp=Z,42nm,1.0s
TRF Thorofare Moun 44.30 36 P **P** **18 20 49.8 +2.2**
TRF lAmb lAmb 18 21 06.0
comp=Z,12nm,0.7s
TRF Thorofare Moun 44.30 36 P P 18 20 55.5 +7.9
baz=270,SNR=6.9
D23K Nanushuk River 44.49 28 P P 18 20 57.1 +8.2
baz=264,SNR=9.0
COLD Coldfoot 44.50 30 P **P** **18 20 51.1 +2.1**
COLD Coldfoot 44.50 30 P P 18 20 56.5 +7.5
baz=267,SNR=8.5
G23K Bananza Creek 44.53 31 P P 18 20 56.9 +7.6
baz=267
RC01 Rabbit Creek A 44.59 39 P **P** **18 20 50.7 +0.9**
RC01 lAmb lAmb 18 21 07.2
comp=Z,12nm,0.8s
RC01 Rabbit Creek A 44.59 39 P P 18 20 57.8 +8.1
baz=273
CHTO Chiang Mai 44.60 256 P **P** **18 20 49.9 -0.4**
CHTO lAmb lAmb 18 20 52.1
comp=Z,25nm,1.0s
CHTO Chiang Mai 44.60 256 P **P** **18 20 49.9 -0.4**
CHTO pmax pmax
comp=Z,25nm,1.0s
CHTO Chiang Mai 44.60 256 P **P** **18 20 51.2 +0.9**
C23K Itkillik River 44.62 26 P P 18 20 56.4 +6.5
baz=264
BWN Browne 44.67 35 P P 18 21 00.7 +10
H23K Yukon River 44.68 32 P **P** **18 20 51.8 +1.3**
H23K lAmb lAmb 18 21 06.9
comp=Z,12nm,0.8s
H23K Yukon River 44.68 32 P P 18 20 58.4 +7.9
baz=269,SNR=12
I23K Minto, Yukon-K 44.73 33 P **P** **18 20 51.9 +1.1**
I23K lAmb lAmb 18 21 07.4
comp=Z,28nm,1.2s
I23K Minto, Yukon-K 44.73 33 P P 18 20 58.4 +7.5
baz=270,SNR=18
SEW Seward 44.78 40 P P 18 20 59.6 +8.4
baz=275
CM31 Chiang Mai Arr 44.81 255 P **P** **18 20 51.7 -0.4**
CM31 lAmb lAmb 18 20 53.5
comp=Z,11nm,0.7s
CMAR Chiang Mai Arr 44.81 255 P **P** **18 20 52.4 +0.3**
comp=Z,6.4nm,0.7s,baz=46,slow=7.3,SNR=58
CMAR PP **PP** **18 22 39.1 +2.3**
comp=Z,1.9nm,0.9s,baz=45,slow=9.0,SNR=1.8
CMAR LR LR 18 41 38.5
comp=Z,72nm,19.9s,baz=30,slow=39
comp=Z,6.4nm,0.7s
CMAR Chiang Mai Arr 44.81 255 P **P** **18 20 52.2 +0.2**
CMAR Chiang Mai Arr 44.81 255 *i* P **P** **18 20 53.0 +0.9**
CMAR pmax pmax
comp=Z,7.0nm,0.7s
NEA2 Nenana 44.85 34 P **P** **18 20 51.8 0.0**
NEA2 Nenana 44.85 34 P P 18 20 59.7 +7.9
baz=270,SNR=13
TOLK Toolik Lake Re 44.86 28 **P** **18 20 52.8 +0.9**
TOLK lAmb lAmb 18 21 06.4
comp=Z,15nm,0.6s
TOLK Toolik Lake Re 44.86 28 P P 18 20 58.3 +6.5
baz=266,SNR=8.9
PMR Palmer 44.86 38 P **P** **18 20 52.7 +0.8**
PMR lAmb lAmb 18 21 11.4
comp=Z,14nm,0.6s
PMR Palmer 44.86 38 P **P** **18 20 52.7 +0.8**
PMR pmax pmax
comp=Z,14nm,0.6s
PMR Palmer 44.86 38 P P 18 21 00.7 +8.9
baz=273
MCK McKinley 44.90 35 **P** **18 20 53.2 +0.9**
MCK lAmb lAmb 18 21 09.9
comp=Z,26nm,0.9s
MCK McKinley 44.90 35 P **P** **18 20 53.2 +0.9**
MCK pmax pmax
comp=Z,26nm,0.9s
MCK McKinley 44.90 35 P P 18 21 00.8 +8.6
baz=271,SNR=9.0
RND Reindeer 44.94 36 P **P** **18 20 54.2 +1.6**
RND lAmb lAmb 18 21 11.2
comp=Z,19nm,0.7s
RND Reindeer 44.94 36 P **P** **18 20 54.2 +1.6**
RND pmax pmax
comp=Z,19nm,0.7s
GHO Glory Hole Cre 44.95 38 P **P** **18 20 54.1 +1.4**
GHO lAmb lAmb 18 21 12.1
comp=Z,27nm,1.0s
SANI Sanana 45.01 207 P **P** **18 20 55.9 +2.4**
MK31 Makanchi Array 45.09 301 P **P** **18 20 53.7 -0.3**
MK31 lAmb lAmb 18 21 13.6
comp=Z,16nm,0.7s
MK31 Makanchi Array 45.09 301 P **P** **18 20 53.7 -0.3**
MK31 pmax pmax
comp=Z,15nm,0.7s
MKAR Makanchi Array 45.09 301 P **P** **18 20 53.6 -0.3**
comp=Z,2.9nm,0.8s,baz=82,slow=9.3,SNR=29
MKAR S **S** **18 27 39.3 +7.0**
comp=Z,0.7nm,0.9s,baz=40,slow=8.4,SNR=2.3
comp=Z,2.9nm,0.8s
MKAR Makanchi Array 45.09 301 P **P** **18 20 53.2 -0.7**
WAT1 Susitna Watana 45.09 36 P P 18 21 01.9 +8.1
baz=273
D24K Happy Valley 45.17 28 P P 18 21 01.8 +7.5
baz=266
KNK Knik Glacier 45.19 38 P P 18 21 03.5 +9.0
KNK lAmb lAmb 18 21 14.2
comp=Z,29nm,1.0s
KNK Knik Glacier 45.19 38 P P 18 21 02.4 +7.8
baz=274
MDM Murphy Dome 45.21 33 P **P** **18 20 55.5 +0.8**
MDM lAmb lAmb 18 21 11.3
comp=Z,25nm,1.2s
SML Sawmill 45.23 38 P **P** **18 20 56.0 +1.1**
SML Sawmill 45.23 38 P P 18 21 02.6 +7.7
baz=274,SNR=7.8
C24K Franklin Bluff 45.27 27 P P 18 21 02.5 +7.5
baz=266
WRH Wood River Hil 45.27 34 P **P** **18 20 55.7 +0.6**
WRH lAmb lAmb 18 21 12.6
comp=Z,22nm,0.8s
MAKZ Makanchi 45.29 301 P **P** **18 20 55.3 -0.3**
MAKZ lAmb lAmb 18 21 15.3
comp=Z,22nm,0.7s
MAKZ Makanchi 45.29 301 P **P** **18 20 55.3 -0.3**
MAKZ pmax pmax
comp=Z,22nm,0.7s
H24K Noodor Dome 45.37 32 P **P** **18 20 56.7 +0.7**
H24K **pwP** **18 21 05.5 -1.1**
H24K lAmb lAmb 18 21 12.5
comp=Z,22nm,1.1s
H24K Noodor Dome 45.37 32 P P 18 21 03.9 +8.0
baz=270,SNR=9.4
TCOL CIGO, UAF Yank 45.37 34 pwP 18 21 05.6 -1.0
CCB Clear Creek Bu 45.39 34 P **P** **18 20 55.9 -0.1**
CCB lAmb lAmb 18 21 12.6
comp=Z,15nm,1.1s
WAT6 Susitna Watana 45.47 37 P P 18 21 05.2 +8.2
baz=274,SNR=7.5
M23K Glacier View 45.52 38 P P 18 21 05.1 +7.9
baz=274
POKR Poker Plat Res 45.55 33 P **P** **18 20 57.7 +0.4**
POKR Poker Plat Res 45.55 33 P P 18 21 05.1 +7.8
baz=271,SNR=5.7
SEM Semipalatinsk 45.56 306 *eP* **P** **18 20 56.3 -1.6**
SEM Semipalatinsk 45.56 306 *eP* **P** **18 20 56.3 -1.6**
baz=306
DHY Denali Highway 45.62 36 P **P** **18 20 59.4 +1.2**
DHY Denali Highway 45.62 36 P P 18 21 06.2 +8.1
baz=273,SNR=17
SCM Sheep Creek Mo 45.71 38 P **P** **18 20 59.7 +1.0**
SCM lAmb lAmb 18 21 18.3
comp=Z,29nm,1.0s
SCM Sheep Creek Mo 45.71 38 P **P** **18 20 59.7 +1.0**
SCM pmax pmax
comp=Z,29nm,1.0s
SCM Sheep Creek Mo 45.71 38 P P 18 21 06.4 +7.7
baz=275
HDA Harding Lake 45.77 34 P **P** **18 20 59.1 +0.1**
HDA lAmb lAmb 18 21 16.1
comp=Z,39nm,1.4s
HDA Harding Lake 45.77 34 P P 18 21 06.2 +7.1
baz=272
IL31 45.78 34 P **P** **18 20 59.4 +0.3**
ILAR Eielson Array 45.78 34 P **P** **18 20 59.4 +0.2**
comp=Z,1.3nm,0.7s,baz=262,slow=6.2,SNR=11
comp=Z,1.3nm,0.7s
GLI Glacier Island 45.89 39 P **P** **18 21 00.2 +0.1**
GLI lAmb lAmb 18 21 22.1
comp=Z,12nm,0.9s
GLI Glacier Island 45.89 39 P P 18 21 08.1 +8.0
baz=276
D25K Kavik River 46.06 27 P P 18 21 08.2 +6.9
baz=268
SHL Shillong 46.19 269 P **P** **18 21 02.0 -1.1**
SHL lAmb lAmb 18 21 10.5
comp=Z,10nm,0.9s
SHL Shillong 46.19 269 P **P** **18 21 02.0 -1.1**
SHL pmax pmax
comp=Z,10.0nm,0.9s
M24K Tolsona, Glenn 46.23 37 P P 18 21 10.8 +7.9
baz=275
K24K Donnelly Dome 46.30 35 P P 18 21 11.2 +7.9
baz=274,SNR=13
KLU Klutina 46.40 38 P **P** **18 21 06.0 +1.8**
KLU Klutina 46.40 38 P P 18 21 12.5 +8.3
baz=276,SNR=5.6
Q23K Middleton Isla 46.40 41 P P 18 21 13.2 +9.1
baz=278
J25K Salcha River, 46.44 34 P **P** **18 21 05.3 +0.8**
J25K Salcha River, 46.44 34 P P 18 21 12.4 +8.0
baz=274,SNR=7.8
PAX Paxson 46.49 36 P **P** **18 21 05.9 +1.0**
PAX Paxson 46.49 36 P **P** **18 21 05.9 +1.0**
PAX pmax pmax
comp=Z,7.0nm,0.8s
PAX Paxson 46.49 36 P P 18 21 13.3 +8.4
baz=275
KURK Kurchatov 46.51 307 P **P** **18 21 04.7 -0.4**
KURK Kurchatov 46.51 307 P **P** **18 21 04.7 -0.4**
KURK pmax pmax
comp=Z,81nm,0.7s
DIV Divide 46.51 39 P **P** **18 21 05.0 0.0**
EYAK Cordova Ski Ar 46.58 40 P P 18 21 14.1 +8.6
baz=277
KURBB Kurchatov Arra 46.58 307 P **P** **18 21 05.4 -0.3**
comp=Z,4.1nm,0.7s,baz=79,slow=8.2,SNR=49
comp=Z,4.1nm,0.7s
C26K Camden Bay 46.59 27 P P 18 21 12.6 +7.1
baz=269
HARP HAARP 46.68 37 P P 18 21 15.0 +8.7
baz=276,SNR=11
BMAR Burnt Mountain 46.69 30 P **P** **18 21 07.5 +1.2**
RIDG Independent Ri 46.72 35 P **P** **18 21 07.9 +1.2**
RIDG Independent Ri 46.72 35 P P 18 21 15.1 +8.5
baz=275,SNR=12
C27K Jago River 47.00 27 P P 18 21 16.2 +7.4
baz=270
N25K Chitina, Valde 47.02 38 **P** **18 21 08.4 -0.7**
N25K lAmb lAmb 18 21 32.3
comp=Z,14nm,0.8s
N25K Chitina, Valde 47.02 38 P P 18 21 16.7 +7.6
baz=277
DOT Dot Lake 47.08 35 P **P** **18 21 10.0 +0.6**
DOT lAmb lAmb 18 21 27.0
comp=Z,13nm,0.8s
SCRK Sand Creek 47.08 35 P **P** **18 21 09.1 -0.5**
SCRK Sand Creek 47.08 35 P P 18 21 17.6 +8.0
baz=276
BMRM Bremner River 47.09 39 P P 18 21 18.4 +8.8
BMRM lAmb lAmb 18 21 30.3
comp=Z,20nm,0.9s
BMRM Bremner River 47.09 39 P P 18 21 17.4 +7.9
baz=278
J26L Joseph Creek 47.23 34 P **P** **18 21 11.2 +0.6**
J26L lAmb lAmb 18 21 28.6
comp=Z,12nm,0.9s
J26L Joseph Creek 47.23 34 P P 18 21 18.9 +8.3
baz=275,SNR=7.9
MENT Mentasta 47.29 36 P **P** **18 21 12.9 +1.8**
HMT Hamilton 47.34 40 P **P** **18 21 11.8 +0.4**
HMT lAmb lAmb 18 21 34.1
comp=Z,18nm,1.0s
I26K Coal Creek Min 47.34 33 P 18 21 20.5 +9.1
I26K lAmb lAmb 18 21 27.6
comp=Z,11nm,1.1s
I26K Coal Creek Min 47.34 33 P P 18 21 19.1 +7.7
baz=275,SNR=8.4
GLB Gilahina Butte 47.41 38 P P 18 21 21.7 +10
GLB lAmb lAmb 18 21 36.1
comp=Z,15nm,0.7s
L26K Log Cabin Wild 47.45 36 P **P** **18 21 13.5 +1.2**
L26K Log Cabin Wild 47.45 36 P P 18 21 20.8 +8.4
baz=277
SBUM Sibu 47.47 227 P **P** **18 21 12.9 0.0**
VRDI Verde Repeater 47.61 38 P **P** **18 21 14.7 +0.9**
M26K Nabesna, AK 47.68 37 pwP 18 21 23.2 -1.7
M26K Nabesna, AK 47.68 37 P P 18 21 21.9 +7.8
baz=278,SNR=7.1
MCARA McCarthy VSAT 47.80 38 P **P** **18 21 14.7 -0.3**
MCARA McCarthy VSAT 47.80 38 P P 18 21 22.6 +7.6
baz=279,SNR=5.4
CRQM Cirque 47.83 39 P **P** **18 21 16.8 +1.3**
CRQE Cirque 47.85 39 P P 18 21 23.7 +8.1
baz=279
K27K Chicken 47.92 35 P **P** **18 21 16.9 +1.0**
K27K Chicken 47.92 35 P P 18 21 23.0 +7.2
baz=277
PDGK Podgornoye 47.99 297 P P 18 21 22.5 +5.5
WAX Waxell Ridge 48.01 39 P **P** **18 21 17.6 +0.9**
SNH Sunshine Point 48.06 40 P **P** **18 21 17.0 -0.1**
L27K Beaver Creek, 48.14 36 P **P** **18 21 18.7 +1.0**
L27K Beaver Creek, 48.14 36 P P 18 21 26.3 +8.7
baz=278
BCAR Beaver Creek A 48.16 36 P **P** **18 21 18.4 +0.6**
M27K Edge Creek, AK 48.21 37 P **P** **18 21 19.4 +1.0**
M27K Edge Creek, AK 48.21 37 P P 18 21 27.1 +8.8
baz=279,SNR=39
BARN Barnard Glacie 48.50 38 P **P** **18 21 19.9 -0.7**
MESA MESA 48.50 40 P P 18 21 28.7 +8.1
baz=281
TAPN Taplejung 48.50 274 *eP* **P** **18 21 21.2 -0.1**
KPKS Kokpek 48.50 297 *eP* **P** **18 21 18.6 -2.2**
KPKS Kokpek 48.50 297 *eP* **P** **18 21 18.6 -2.2**
baz=297
GRNC Granite Creek 48.51 39 pwP 18 21 29.6 -1.8
CTG Chitna Glacier 48.67 39 P P 18 21 30.2 +8.3
baz=280,SNR=12
CTGM Chitina Glacie 48.67 39 P **P** **18 21 21.0 -1.0**
ZHN Zhinishke 48.78 297 *eP* **P** **18 21 21.8 -1.1**
ZHN Zhinishke 48.78 297 *eP* **P** **18 21 21.9 -1.1**
baz=297
SATY Saty 48.83 297 *eP* **P** **18 21 22.3 -1.1**
SATY Saty 48.83 297 *eP* **P** **18 21 22.4 -1.1**
baz=297
YUK3 Moose Creek 48.95 37 P P 18 21 32.5 +8.3
baz=280
ODAN Odare 48.99 273 *eP* **P** **18 21 25.1 +0.1**
DAWY Dawson 49.09 34 P **P** **18 21 25.5 +0.5**
DAWY Dawson 49.09 34 P P 18 21 32.6 +7.7
baz=279
PCA Pinnacle 49.35 40 P **P** **18 21 26.6 -0.4**
PCA lAmb lAmb 18 21 48.9
comp=Z,9.9nm,0.6s
PINM Pinnacle 49.35 40 P P 18 21 36.5 +9.4
baz=282
KSM Kuching 49.36 228 P **P** **18 21 26.2 -1.3**
KSM lAmb lAmb 18 21 54.4
comp=Z,20nm,1.0s
I29M Ogilvie Camp, 49.36 33 P **P** **18 21 27.4 +0.4**
I29M Ogilvie Camp, 49.36 33 P P 18 21 35.5 +8.5
baz=279
JIRN Jiri 49.52 275 *eP* **P** **18 21 29.4 +0.3**
CHKK Chushkaly 49.53 298 *eP* **P** **18 21 27.6 -1.0**
CHKK Chushkaly 49.53 298 *eP* **P** **18 21 27.6 -1.0**
baz=298
RAMN Ramite 49.56 274 *eP* **P** **18 21 29.3 0.0**
comp=Z,90nm,0.8s
GUN Gumba 49.63 275 *eP* **P** **18 21 30.1 +0.1**
comp=Z,101nm,0.9s
TARG Taragay, Kyrgy 49.72 295 P **P** **18 21 30.8 +0.3**
TARG lAmb lAmb 18 22 00.5
comp=Z,18nm,0.9s
TARG Taragay, Kyrgy 49.72 295 P **P** **18 21 30.8 +0.3**
TARG pmax pmax
comp=Z,17nm,0.9s

TNSS **Tian-Shan** 49.84 297 *e*P **P** **18 21 30.8 -0.7**
TNSS **Tian-Shan** 49.84 297 *e*P **P** **18 21 30.8 -0.7**
baz=297
PNL **Peninsula** 49.86 40 P P 18 21 39.1 +8.2
baz=283
EPYK **Eagle Plains** 49.86 31 P **P** **18 21 31.6 +0.8**
EPYK **Eagle Plains** 49.86 31 P P 18 21 38.7 +7.9
baz=280,SNR=7.8
YUK4 **Talbot Arm** 49.88 38 P P 18 21 39.7 +8.5
baz=282
KUU **Kurty** 49.96 298 *e*P **P** **18 21 29.8 -2.1**
KUU **Kurty** 49.96 298 *e*P **P** **18 21 29.8 -2.1**
baz=298
KDJ **Kajisay** 50.01 296 P **P** **18 21 31.5 -1.0**
KDJ IAmb IAmb 18 21 54.9
comp=Z,8.4nm,0.7s
KDJ **Kajisay** 50.01 296 P **P** **18 21 31.5 -1.0**
KDJ pmax pmax
comp=Z,8.0nm,0.7s
YUK6 **Outpost Mounta** 50.10 38 P P 18 21 41.2 +8.3
baz=283,SNR=8.5
KKN **Kakani** 50.15 275 *e*P **P** **18 21 33.8 0.0**
comp=Z,54nm,1.1s
KAPI **Kappang** 50.16 213 LR LR 18 43 49.4
comp=Z,25nm,19.5s,baz=21,slow=37
PKI **Pulchoki** 50.16 275 *e*P **P** **18 21 33.6 -0.4**
comp=Z,69nm,1.3s
PKIN **Phulchoki** 50.17 275 *e*P **P** **18 21 33.7 -0.3**
DMN **Daman** 50.38 275 *e*P **P** **18 21 35.5 0.0**
M30M **Minto, Yukon** 50.50 36 P **P** **18 21 35.0 -0.7**
M30M **Minto, Yukon** 50.50 36 P P 18 21 44.4 +8.7
baz=283,SNR=16
HYT **Haines Junctio** 50.53 38 P **P** **18 21 37.2 +1.1**
HYT **Haines Junctio** 50.53 38 P P 18 21 45.1 +9.0
baz=284
GKN **Gorkha** 50.54 276 *e*P **P** **18 21 36.4 -0.2**
N30M **Aishikik Lake** 50.59 37 P P 18 21 45.8 +9.3
baz=283,SNR=10
BOOM **Boomskoye usch** 50.73 297 P **P** **18 21 35.4 -2.5**
BOOM **Boomskoye usch** 50.73 297 P **P** **18 21 35.4 -2.5**
BOOM pmax pmax
comp=Z,23nm,0.6s
INK **Inuvik** 50.77 28 P **P** **18 21 37.1 -0.5**
comp=Z,0.9nm,0.5s,baz=325,slow=8.3,SNR=6.2
comp=Z,0.9nm,0.5s
INK **Inuvik** 50.77 28 P **P** **18 21 37.1 -0.5**
INK IAmb IAmb 18 21 52.9
comp=Z,14nm,0.5s
INK **Inuvik** 50.77 28 P **P** **18 21 37.1 -0.5**
INK pmax pmax
comp=Z,14nm,0.5s
INK **Inuvik** 50.77 28 P P 18 21 46.0 +8.4
baz=281,SNR=9.0
TKM2 **Tokmak 2** 50.81 298 *i* P **P** **18 21 38.4 -0.2**
TKM2 pmax pmax
comp=Z,10.0nm,0.5s
BVAR **Borovoye Array** 50.85 311 LR LR 18 44 35.4
comp=Z,128nm,19.8s,baz=310,slow=38
SRIT **Nakonsritamara** 50.86 245 P **P** **18 21 38.1 -0.8**
SRIT IAmb IAmb 18 21 40.9
comp=Z,23nm,0.7s
P30M **Million Dollar** 50.96 39 P P 18 21 47.8 +8.6
baz=284
DANN **Dangsing** 51.04 277 *e*P **P** **18 21 41.0 +0.4**
comp=Z,199nm,0.8s
BTLS **Baital** 51.10 301 *e*P **P** **18 21 38.5 -1.9**
BTLS **Baital** 51.10 301 *e*P **P** **18 21 38.5 -1.9**
baz=301
OTUK **Ortayu** 51.13 305 P **P** **18 21 40.1 -0.5**
O30N **Mendenhall** 51.22 38 P P 18 21 50.1 +8.9
baz=285,SNR=10
SGDS **Sogindy** 51.27 299 *e*P **P** **18 21 40.3 -1.5**
SGDS **Sogindy** 51.27 299 *e*P **P** **18 21 40.4 -1.5**
baz=298
PLBC **Pleasant Camp** 51.41 40 P P 18 21 51.7 +9.1
baz=286
KOLN **Koldanda** 51.45 276 *e*P **P** **18 21 43.1 -0.5**
comp=Z,49nm,1.3s
AAK **Ala-Archa** 51.67 298 LR LR 18 44 51.5
comp=Z,202nm,20.2s,baz=74,slow=38
AAK **Ala-Archa** 51.67 298 P **P** **18 21 42.7 -2.3**
AAK **Ala-Archa** 51.67 298 P **P** **18 21 42.7 -2.3**
AAK pmax pmax
comp=Z,5.0nm,0.4s
M31M **Drury Creek, Y** 51.67 36 P **P** **18 21 44.5 0.0**
M31M IAmb IAmb 18 22 05.3
comp=Z,26nm,0.8s
M31M **Drury Creek, Y** 51.67 36 P P 18 21 53.3 +8.8
baz=285,SNR=5.4
WHY **Whitehorse** 51.83 38 P **P** **18 21 46.6 +0.8**
WHY IAmb IAmb 18 22 07.8
comp=Z,24nm,0.8s
WHY **Whitehorse** 51.83 38 P P 18 21 54.8 +9.0
baz=286,SNR=5.7
SKAG **Skagway** 51.92 40 P P 18 21 55.5 +9.2
baz=286
BESE **Bessie Mountai** 52.40 41 P **P** **18 21 50.9 +0.9**
N32M **Quiet Lake** 52.55 37 P P 18 22 00.1 +9.0
baz=287
SIT **Sitka** 52.59 43 P P 18 22 00.9 +10
baz=288
P32M **Atlin** 52.68 39 P P 18 22 01.1 +9.0
baz=287,SNR=5.1
JIS **Juneau Island** 52.72 41 P **P** **18 21 53.0 +0.8**
JIS IAmb IAmb 18 22 16.1
comp=Z,9.4nm,0.6s
A36M **Sachs Harbour** 52.77 23 P P 18 22 00.1 +7.6
baz=285
IPM **Ipoh** 52.84 240 P **P** **18 21 52.8 -0.9**
IPM IAmb IAmb 18 22 14.6
comp=Z,12nm,0.7s
P33M **Teslin, Yukon** 52.93 38 **P** **18 21 54.4 +0.5**
P33M **Teslin, Yukon** 52.93 38 P P 18 22 02.5 +8.6
baz=288,SNR=6.3
MTN **Manton Dam** 53.80 197 P **P** **18 22 02.0 +1.4**
C36M **Paulatuk** 53.87 26 P P 18 22 08.0 +7.5
baz=288
KK31 **Karatay Array** 54.19 300 P **P** **18 22 02.4 -0.9**
KK31 **Karatay Array** 54.19 300 P **P** **18 22 02.4 -0.9**
KK31 pmax pmax
comp=Z,6.0nm,0.7s
KKAR **Karatay Array** 54.19 300 P **P** **18 22 02.8 -0.5**
KKAR **Karatay Array** 54.19 300 P **P** **18 22 02.7 -0.7**
KKAR IAmb IAmb 18 22 19.4
comp=Z,5.9nm,0.7s
KKAR **Karatay Array** 54.19 300 P **P** **18 22 02.8 -0.5**
KKAR pmax pmax
comp=Z,6.0nm,0.7s
CRAG **Craig** 54.26 44 P P 18 22 12.4 +8.8
baz=291
DRK **Karamyk** 54.80 295 P **P** **18 22 07.0 -1.2**
DRK IAmb IAmb 18 22 30.8
comp=Z,7.1nm,0.6s
DLBC **Dease Lake** 54.85 40 LR LR 18 50 29.0
comp=Z,34nm,18.9s,baz=286,slow=41
DLBC **Dease Lake** 54.85 40 P **P** **18 22 07.5 -0.5**
DLBC **Dease Lake** 54.85 40 P P 18 22 16.4 +8.4
baz=291
IUG **Iuzhnay** 54.90 299 *e*P **P** **18 22 07.4 -1.2**
IUG **Iuzhnay** 54.90 299 *e*P **P** **18 22 07.5 -1.2**
baz=299
T35M **Bob Quinn** 55.24 42 P P 18 22 20.0 +9.2
baz=292
PSI **Prapat** 55.49 241 P **P** **18 22 13.1 -0.1**
PSI pmax pmax
comp=Z,10.0nm,0.9s
RPSI **Rantau Prapat** 55.57 241 P **P** **18 22 13.1 -0.5**
RPSI IAmb IAmb 18 22 14.1
comp=Z,9.5nm,0.9s
GAR **Garm** 56.05 295 P **P** **18 22 13.9 -3.1**
GAR IAmb IAmb 18 22 43.5
comp=Z,12nm,0.6s
ARU **Arti** 56.21 318 LR LR 18 49 16.8
comp=Z,247nm,18.1s,baz=62,slow=39
ARU **Arti** 56.21 318 P **P** **18 22 17.2 -0.5**
ARU **Arti** 56.21 318 *c i*P **P** **18 22 18.8 +1.1**
ARU 18 24 22.2
ARU S **S** **18 30 12.6 +6.3**
ARU pmax pmax
comp=Z,11nm,1.7s
CHGR **Chuyangaron** 57.01 295 P **P** **18 22 23.0 -0.8**
CHGR **Chuyangaron** 57.01 295 P **P** **18 22 23.0 -0.8**
CHGR pmax pmax
comp=Z,47nm,0.8s
KNRA **Kununurra** 57.09 199 P **P** **18 22 24.9 +0.6**
GSI **Gunungsitoli** 57.50 241 P **P** **18 22 25.8 -1.5**
GSI IAmb IAmb 18 22 49.3
comp=Z,18nm,0.8s
GSI **Gunungsitoli** 57.50 241 P **P** **18 22 28.1 +0.8**
LEM **Lembang** 57.68 225 LR LR 18 48 54.3
comp=Z,63nm,18.8s,baz=187,slow=38
HOPEN **Hopen** 58.13 346 *e*P P 18 22 41.6 +11
AB31 **Akbulak array** 58.34 310 *i* P **P** **18 22 32.1 -0.7**
ABKAR **Akbulak array** 58.34 310 P **P** **18 22 32.5 -0.3**
ABKAR **Akbulak array** 58.34 310 P **P** **18 22 32.2 -0.6**
ABKAR IAmb IAmb 18 22 57.1
comp=Z,22nm,0.7s
SPA0 **Spitsbergen Ar** 58.45 349 *e*P P 18 22 43.0 +10
SPB2 **Spitsbergen Ar** 58.45 349 P **P** **18 22 32.8 -0.4**
SPITS **Spitsbergen Ar** 58.45 349 LR LR 18 47 50.5
comp=Z,75nm,21.9s,baz=7.0,slow=36
SPITS **Spitsbergen Ar** 58.45 349 P **P** **18 22 33.0 -0.2**
SPITS pmax pmax
comp=Z,13nm,0.6s
KBS **Kingsbay** 58.51 350 P **P** **18 22 34.0 +0.4**
KBS IAmb IAmb 18 22 35.0
comp=Z,17nm,0.8s
KBS **Kingsbay** 58.51 350 P **P** **18 22 34.0 +0.4**
KBS pmax pmax
comp=Z,17nm,0.9s
KBS **Kingsbay** 58.51 350 *e*P P 18 22 43.5 +10
NOR **Nord** 58.57 357 *i* P P 18 22 43.4 +9.4
NOR IAmb IAmb 18 22 45.2
comp=Z,9.0nm,0.7s
AKTO **Aktyubinsk** 58.95 312 LR LR 18 49 21.2
comp=Z,164nm,21.3s,baz=61,slow=37
KBL **Kabul** 59.03 291 P **P** **18 22 37.2 -0.9**
KBL IAmb IAmb 18 22 38.5
comp=Z,17nm,0.9s
KBL **Kabul** 59.03 291 P **P** **18 22 37.2 -0.9**
RES **Resolute Bay** 59.34 15 LR LR 18 49 32.6
comp=Z,49nm,21.2s,baz=44,slow=37
RES **Resolute Bay** 59.34 15 **P** **18 22 39.6 +0.2**
RES **Resolute Bay** 59.34 15 P **P** **18 22 39.6 +0.2**
RES pmax pmax
comp=Z,39nm,0.8s
HSPB **Hornsund (broa** 59.42 348 *e*P P 18 22 51.4 +11
KIRV **Kirov** 59.79 323 *ce*P **P** **18 22 42.6 -0.1**
WB0 **Warramunga Arr** 59.95 191 **P** **18 22 43.7 -0.4**
WB0 IAmb IAmb 18 23 11.9
comp=Z,11nm,0.7s
PRGR **Permogore** 60.04 327 *e*P **P** **18 22 43.8 -0.6**
PRGR *e* 18 24 58.3
WRAB **Tennant Creek** 60.12 191 P **P** **18 22 45.2 -0.2**
WRAB IAmb IAmb 18 23 12.8
comp=Z,12nm,0.9s
WRAB **Tennant Creek** 60.12 191 *ce*P **P** **18 22 47.2 +1.9**
WRAB pmax pmax
comp=Z,10.0nm,1.7s
WRAB **Tennant Creek** 60.12 191 P **P** **18 22 45.3 0.0**
WB2 **Warramunga Arr** 60.13 191 P **P** **18 22 45.2 -0.2**
WB2 IAmb IAmb 18 23 12.8
comp=Z,14nm,1.0s
WRA **Warramunga Arr** 60.13 191 P **P** **18 22 44.8 -0.6**
comp=Z,3.1nm,0.9s,baz=8.4,slow=7.0,SNR=38
comp=Z,3.1nm,0.9s
WRA **Warramunga Arr** 60.13 191 P **P** **18 22 43.7 -1.7**
QIS **Mount Isa** 60.13 186 P **P** **18 22 45.8 +0.4**
YKA **Yellowknife Ar** 60.13 32 P **P** **18 22 45.2 +0.2**
comp=Z,0.8nm,0.6s,baz=303,slow=6.0,SNR=5.7
YKA LR LR 18 48 57.4
comp=Z,36nm,21.4s,baz=304,slow=36
comp=Z,0.8nm,0.6s
YKA **Yellowknife Ar** 60.13 32 P **P** **18 22 44.6 -0.4**
BJO1 **Bjornoya** 60.60 346 *e*P P 18 22 57.1 +9.1
LVZ **Lovozero** 60.82 336 P **P** **18 22 49.5 -0.2**
LVZ IAmb IAmb 18 23 06.5
comp=Z,16nm,0.9s
LVZ **Lovozero** 60.82 336 P **P** **18 22 49.5 -0.2**
LVZ pmax pmax
comp=Z,16nm,0.9s
HYBB **Hyderabad (bro** 61.00 269 *e*P **P** **18 22 51.4 -0.2**
HYBB *es*P **sP** **18 22 56.3 +0.1**
HYBB *e*PcP **PcP** **18 23 35.0 +0.1**
HYBB *e*PP **PP** **18 25 05.8 -0.2**
APA **Apatity** 61.40 336 ⇓ *i* P P 18 23 04.3 +11
APA pmax pmax
comp=Z,7.0nm,0.7s
APA MLR MLR
comp=Z,200nm,16.0s
HAMF **Hammerfest** 62.21 341 *e*P P 18 23 08.8 +10
LLLB **Lillooet** 62.45 46 P **P** **18 23 01.0 +0.1**
ARA0 **ARCESS Array S** 62.48 340 *e*P P 18 23 09.9 +9.2
ARCES **ARCESS Array B** 62.48 340 P **P** **18 23 00.9 +0.1**
comp=Z,2.2nm,0.8s,baz=39,slow=7.8,SNR=7.1
ARCES LR LR 18 52 35.9
comp=Z,120nm,21.7s,baz=24,slow=38
comp=Z,2.2nm,0.8s
ARCES **ARCESS Array B** 62.48 340 **P** **18 22 59.9 -0.9**
ARCES IAmb IAmb 18 23 22.3
comp=Z,6.4nm,0.7s
ARCES **ARCESS Array B** 62.48 340 P **P** **18 22 59.9 -0.9**
ARCES pmax pmax
comp=Z,6.0nm,0.7s
KLMR **Klimovskoe** 62.98 328 *e*P **P** **18 23 01.0 -3.2**
KLMR *e* 18 25 19.4
KLMR pmax pmax
comp=Z,19nm,1.1s
KLMR **Klimovskoe** 62.98 328 *e*P **P** **18 23 01.0 -3.2**
KLMR AMP 18 23 19.2
comp=Z,19nm,1.1s
KLMR *e*PP **PP** **18 25 19.4 -2.9**
DAG **Danmarks Havn** 63.36 356 *i* P P 18 23 17.1 +11
DAG IAmb IAmb 18 23 19.3
comp=Z,15nm,0.8s
KTK1 **Kautokeino** 63.43 340 *e*P P 18 23 17.8 +11
BELG **Belogornoye** 63.72 317 LR LR 18 53 40.7
comp=Z,219nm,19.6s,baz=43,slow=39
JETT **Jettan, Norway** 63.78 341 *e*P P 18 23 20.7 +11
AS31 **Alice Springs** 63.85 191 **P** **18 23 10.7 +0.3**
ASAR **Alice Springs** 63.85 191 P **P** **18 23 10.4 0.0**
comp=Z,1.2nm,0.7s,baz=4.7,slow=6.0,SNR=27
comp=Z,1.2nm,0.7s
ASAR **Alice Springs** 63.85 191 P **P** **18 23 11.7 +1.3**
ASAR **Alice Springs** 63.85 191 P **P** **18 23 11.7 +1.3**
HRA **Herat** 63.95 294 P **P** **18 23 09.9 -1.5**
HRA IAmb IAmb 18 23 12.4
comp=Z,10.0nm,1.1s
TRO **Tromso** 64.08 342 *e*P P 18 23 20.9 +9.5
G03D **McMinnville, O** 64.38 52 P P 18 23 23.4 +10
baz=302
F04A **Amboy** 64.52 51 P **P** **18 23 14.9 +0.3**
I02E **Swisshome, OR** 64.60 53 P P 18 23 24.4 +9.2
baz=302
LTY **Liberty** 64.85 49 P **P** **18 23 18.1 +1.1**
LTY IAmb IAmb 18 23 35.6
comp=Z,5.7nm,0.7s
GEYT **Alibeck** 64.94 299 P **P** **18 23 16.9 -0.7**
comp=Z,4.8nm,0.9s,baz=31,slow=3.5,SNR=6.7
GEYT LR LR 18 53 44.6
comp=Z,138nm,18.8s,baz=89,slow=38
comp=Z,4.8nm,0.9s
GEYT **Alibeck** 64.94 299 P **P** **18 23 17.0 -0.6**
GYA0B **ALIBECK ARRAY** 64.94 299 P **P** **18 23 16.9 -0.7**
GYA0B IAmb IAmb 18 23 36.2
comp=Z,7.0nm,0.8s
MSVF **Nonsavu** 64.96 145 LR LR 18 45 57.5
comp=Z,106nm,19.5s,baz=325,slow=31
B08A **Colville Reser** 65.03 47 **P** **18 23 17.9 -0.2**
B08A IAmb IAmb 18 23 36.8
comp=Z,12nm,1.4s
J01E **Myrtle Point** 65.04 54 P P 18 23 26.9 +8.8
baz=302
H04D **Lebanon** 65.06 52 P P 18 23 27.2 +8.9
baz=303
I03D **Drain, OR** 65.12 53 P P 18 23 27.8 +9.2
baz=303
H04A **Detroit Lake** 65.31 52 P **P** **18 23 20.7 +0.8**
K02D **Willamette Mer** 65.45 54 P P 18 23 30.1 +9.1
baz=303
G05D **Wamic, OR** 65.54 51 P P 18 23 29.9 +8.5
baz=303
EDM **Edmonton** 65.57 40 **P** **18 23 22.2 +0.9**
EDM IAmb IAmb 18 23 47.9
comp=Z,21nm,1.1s
EDM **Edmonton** 65.57 40 P **P** **18 23 22.3 +0.9**
EDM pmax pmax
comp=Z,21nm,1.1s
I04A **Tendick Farm,** 65.65 53 P P 18 23 32.1 +10
baz=303
L02F **Cave Junction** 65.82 55 P P 18 23 33.1 +10
baz=303
DBG **Daneborg** 65.86 356 *i* P P 18 23 34.6 +12
DBG IAmb IAmb 18 23 38.3
comp=Z,3.5nm,0.3s
C09A **Chrisman Ranch** 65.93 47 P **P** **18 23 24.8 +1.0**
D08A **Wollman Farm,** 65.97 48 P **P** **18 23 25.6 +1.6**
I05D **Terrebonne, OR** 66.01 52 P P 18 23 34.7 +10
baz=303
J04D **Umpqua Nationa** 66.13 53 P **P** **18 23 26.7 +1.3**
J04D **Umpqua Nationa** 66.13 53 P P 18 23 35.9 +11
baz=303
STEI **Steigen** 66.25 341 *e*P P 18 23 35.1 +10
NEW **Newport** 66.32 46 LR LR 18 50 03.3
comp=Z,48nm,19.9s,baz=312,slow=34
NEW **Newport** 66.32 46 **P** **18 23 27.3 +0.9**
NEW IAmb IAmb 18 23 45.1
comp=Z,7.9nm,0.8s
NEW **Newport** 66.32 46 P **P** **18 23 27.3 +0.9**
NEW pmax pmax
comp=Z,8.0nm,0.8s
NEW **Newport** 66.32 46 P P 18 23 36.4 +10
baz=304
LOF **Lofoten** 66.51 342 *e*P P 18 23 37.3 +10
PINE **Pine Mountain** 66.55 52 P **P** **18 23 30.2 +2.1**
L04D **Klamath Falls** 66.56 54 P P 18 23 38.6 +11
baz=304
YBH **Yreka Blue Hor** 66.57 55 LR LR 18 46 49.6
comp=Z,65nm,21.5s,baz=266,slow=31
J05D **Fort Rock, OR** 66.64 53 P P 18 23 39.2 +11
baz=304
FAUS **Fauske** 66.66 341 *e*P P 18 23 37.7 +10
E09A **Wood Farm, Sta** 66.71 48 P **P** **18 23 29.8 +1.0**
E09A IAmb IAmb 18 23 47.9
comp=Z,8.3nm,0.7s
AFI **Afiamalu** 66.84 134 LR LR 18 46 47.0
comp=Z,69nm,21.5s,baz=21,slow=31
G08A **Pilot Rock** 66.91 50 **P** **18 23 32.1 +1.8**
K05A **Summer Lake** 67.16 53 P **P** **18 23 32.7 +0.7**
VRH **Novokhopyorsk** 67.44 318 *e*P P 18 23 40.8 +7.5
VRH pmax pmax
comp=Z,10.0nm,0.6s
OBN **Obninsk** 67.60 324 ⇑ *e*P **P** **18 23 34.0 -0.2**
OBN *i* *PP **sP** **18 23 38.9 +0.1**
OBN *i* *SP **pwP** **18 23 42.5 -2.7**
OBN *e* 18 24 04.5
OBN *e*SS SS 18 36 53.5 +3.4
OBN pmax pmax
comp=Z,6.0nm,1.1s
OBN MLR MLR
comp=Z,174nm,16.0s
FIA1 **FINESS Array S** 67.73 333 P **P** **18 23 34.5 -0.5**
FIA0 **FINESS Array S** 67.73 333 P **P** **18 23 32.0 -3.0**
FIA0 **FINESS Array S** 67.73 333 P **P** **18 23 32.0 -3.0**
FINES **FINESS Array B** 67.73 333 P **P** **18 23 34.7 -0.3**
comp=Z,3.5nm,0.6s,baz=50,slow=6.8,SNR=36
FINES LR LR 18 55 58.9
comp=Z,323nm,19.6s,baz=53,slow=38
comp=Z,3.5nm,0.6s
FINES **FINESS Array B** 67.73 333 P **P** **18 23 34.2 -0.8**
FINES **FINESS Array B** 67.73 333 *i* P **P** **18 23 34.7 -0.3**
FINES pmax pmax
comp=Z,3.0nm,0.5s
MOR8 **Moi Rana** 67.81 340 *e*P P 18 23 42.8 +7.3
KONS **Konsvik** 67.89 341 *e*P P 18 23 45.1 +9.2
MOD **Modoc Plateau** 67.98 53 pwP 18 23 47.1 -0.8
LPSR **Galich'ya Gora** 68.01 321 *e*P P 18 23 44.7 +7.8
LPSR pmax pmax
comp=Z,20nm,0.8s
SUMG **Summit** 68.02 1 P **P** **18 23 37.2 0.0**
SUMG **Summit** 68.02 1 P **P** **18 23 37.2 0.0**
SUMG pmax pmax
comp=Z,56nm,1.4s
SUMG **Summit** 68.02 1 *i* P P 18 23 50.1 +13
SUMG IAmb IAmb 18 23 55.7
comp=Z,15nm,0.7s
BMO **Blue Mountains** 68.13 49 P **P** **18 23 38.8 +0.8**
BMO **Blue Mountains** 68.13 49 P **P** **18 23 38.8 +0.8**
BMO pmax pmax
comp=Z,5.0nm,1.0s
JTMT **Jette** 68.19 46 **P** **18 23 38.7 +0.4**
JTMT IAmb IAmb 18 23 57.4
comp=Z,9.8nm,0.7s
J08A **Circle Bar Ran** 68.28 51 P **P** **18 23 39.9 +1.0**
J08A IAmb IAmb 18 23 58.5
comp=Z,19nm,1.2s
VORR **Voronezh** 68.43 320 *e*P P 18 23 46.1 +6.5
VORR pmax pmax
comp=Z,17nm,1.6s
WVOR **Wild Horse Val** 68.70 52 **P** **18 23 41.7 +0.1**
WVOR IAmb IAmb 18 23 53.1
comp=Z,14nm,1.4s
WVOR **Wild Horse Val** 68.70 52 P **P** **18 23 41.7 +0.1**
WVOR pmax pmax
comp=Z,14nm,1.4s
VSR **Storozhevoye** 68.72 319 *e*P P 18 23 49.1 +7.7
VSR pmax pmax
comp=Z,20nm,1.1s
MSO **Missoula** 68.91 46 P **P** **18 23 43.1 +0.2**
MSO IAmb IAmb 18 24 01.5
comp=Z,8.3nm,0.8s
MSO **Missoula** 68.91 46 P P 18 23 52.1 +9.2
baz=307
BEKR **Beckworth** 69.09 55 P **P** **18 23 45.8 +1.7**
BEKR IAmb IAmb 18 24 03.1
comp=Z,8.8nm,0.9s
MEF **Metsahovi** 69.18 333 *e*P **P** **18 23 48.0 +4.0**
RAF **Rauma** 69.51 334 *e*P **P** **18 23 48.6 +2.5**
VSU **Vasula** 69.54 330 *e*P **P** **18 23 50.3 +4.0**
SCO **Scoresbysund** 69.73 355 ⇑ *i* P P 18 24 00.6 +13
NSS **Namsos** 69.75 340 *e*P P 18 23 57.3 +10
PAHR **Pah Rah Range** 69.80 55 P **P** **18 23 49.1 +0.6**
PAHR IAmb IAmb 18 24 07.2
comp=Z,9.8nm,1.0s
MFID **Camas Ranch** 69.82 50 P **P** **18 23 48.8 +0.2**
FFC **Flin Flon** 69.99 35 P **P** **18 23 50.0 +0.8**
FFC IAmb IAmb 18 24 07.5
comp=Z,15nm,0.8s
FFC **Flin Flon** 69.99 35 P **P** **18 23 50.0 +0.8**
FFC pmax pmax
comp=Z,15nm,0.8s
CMB **Columbia Colle** 70.12 57 pwP 18 23 59.1 -2.1
HRY **Holter Researc** 70.15 45 P **P** **18 23 51.1 +0.6**
ZKTA **Zakatala** 70.26 308 P **P** **18 23 51.2 +0.1**
YERR **Yerington** 70.30 55 P **P** **18 23 51.9 +0.3**
YERR IAmb IAmb 18 24 11.0
comp=Z,17nm,0.9s
MTSE **Matsula** 70.45 332 *e*P **P** **18 23 55.9 +4.0**
EGMT **Eagleton** 70.47 43 pwP 18 24 00.2 -3.1
EGMT **Eagleton** 70.47 43 P P 18 24 00.7 +8.3
baz=309
MNGR **Mingechevir, A** 70.48 307 P **P** **18 23 52.6 +0.1**
DLMT **Dillon** 70.53 47 P **P** **18 23 52.4 -0.5**
DLMT IAmb IAmb 18 24 12.4
comp=Z,9.5nm,0.8s
HLID **Hailey** 70.57 49 pwP 18 24 01.8 -2.3
HLID **Hailey** 70.57 49 P P 18 24 02.3 +9.1
baz=307
LKRN **Lenkeran, Azer** 70.63 304 P **P** **18 23 53.4 +0.1**
BMN **Battle Mountai** 70.73 53 P P 18 24 03.1 +9.0
BMN IAmb IAmb 18 24 13.7
comp=Z,14nm,0.8s
BMN **Battle Mountai** 70.73 53 P P 18 24 03.2 +9.0
BMN pmax pmax
comp=Z,14nm,0.8s
BOZ **Bozeman (W)** 70.94 46 P P 18 24 04.0 +8.7
BOZ **Bozeman (W)** 70.94 46 P P 18 24 04.0 +8.6
BOZ pmax pmax
comp=Z,17nm,0.8s
BOZ **Bozeman (W)** 70.94 46 P P 18 24 04.4 +9.1
baz=308
RYN **Ryan** 70.97 55 P P 18 24 05.2 +10
RYN IAmb IAmb 18 24 15.0
comp=Z,8.0nm,0.9s
KVN **Kaiserville** 70.99 55 P 18 24 04.4 +8.6
KVN IAmb IAmb 18 24 15.2
comp=Z,16nm,0.9s
KVN **Kaiserville** 70.99 55 P P 18 24 04.4 +8.6
KVN pmax pmax
comp=Z,16nm,0.9s
GANJ **Ganja** 71.03 307 P **P** **18 23 55.4 -0.4**
LHV **Little Huntoon** 71.20 56 P P 18 24 08.1 +11
LHV IAmb IAmb 18 24 16.9
comp=Z,17nm,0.9s
ZEI **Tsey** 71.21 310 *e*P P 18 24 05.3 +8.2

ZEI pmax pmax
comp=Z,9.0nm,0.5s
KIV Kislovodsk 71.22 312 ⇑P **P 18 23 59.0 +2.0**
KIV Kislovodsk 71.22 312 P **P 18 23 57.3 +0.3**
KIV Kislovodsk 71.22 312*d* *i*P **P 18 23 57.6 +0.6**
KIV *i* *SP **sP 18 24 01.3 -0.3**
KIV *i* 18 24 07.5
KIV S **S 18 33 13.0 -0.5**
KIV pmax pmax
comp=Z,13nm,1.0s
KIV MLR MLR
comp=Z,144nm,18.0s
NVAR Mina Array Bea 71.22 55 P **P 18 23 58.5 +1.2**
comp=Z,0.2nm,0.3s,baz=289,slow=4.5,SNR=3.6
comp=Z,0.2nm,0.3s
NVAR Mina Array Bea 71.22 55 pwP 18 24 06.4 -1.7
KBZ Khabaz 71.23 312 P **P 18 23 57.4 +0.4**
comp=Z,4.5nm,0.9s,baz=43,slow=4.4,SNR=8.7
KBZ LR LR 19 00 36.1
comp=Z,136nm,19.1s,baz=40,slow=40
comp=Z,4.5nm,0.9s
KBZ Khabaz 71.23 312*ce*P **P 18 23 57.3 +0.4**
KBZ pmax pmax
comp=Z,8.0nm,1.0s
STKA Stephens Creek 71.26 183 P **P 18 23 57.4 +0.3**
comp=Z,2.3nm,0.6s,baz=12,slow=8.3,SNR=2.8
comp=Z,2.3nm,0.6s
ICESG Greenland Ices 71.49 2 *i* P P 18 24 12.3 +14
ICESG IAmb IAmb 18 24 19.4
comp=Z,12nm,0.6s
QLMT Earthquake Lak 71.52 47 P P 18 24 08.1 +9.2
ONI Oni 71.59 310 P **P 18 23 58.5 -0.8**
ONI IAmb IAmb 18 24 28.8
comp=Z,12nm,0.8s
ONI Oni 71.59 310 P **P 18 23 58.5 -0.8**
ONI pmax pmax
comp=Z,12nm,0.8s
YHL Hebgen Lake 71.64 47 P P 18 24 08.7 +8.9
YHL IAmb IAmb 18 24 19.1
comp=Z,9.8nm,0.9s
IDID Didziasalis 71.72 328 *eP* **P 18 24 03.4 +3.7**
UPP Uppsala 71.75 335 *eP* **P 18 24 04.3 +4.6**
ELK Elko 71.76 52 LR LR 18 52 57.0
comp=Z,41nm,19.6s,baz=290,slow=34
ELK Elko 71.76 52 P 18 24 09.3 +8.8
ELK Elko 71.76 52 P P 18 24 09.3 +8.8
ELK pmax pmax
comp=Z,4.0nm,1.1s
ISAL Salakas 71.79 328 *eP* **P 18 24 04.0 +3.8**
MNK Minsk 71.81 327 *i* P **P 18 23 59.6 -0.6**
MNK *i* 18 26 39.5
MNK *i* S **S 18 33 22.4 +2.6**
MNK *i* SS **SS 18 38 00.6 +5.7**
MNK pmax pmax
comp=N,25nm,0.9s
MNK pmax pmax
comp=Z,23nm,1.0s
MNK pmax pmax
comp=E,3.0nm,1.1s
MNK MLR MLR
comp=N,642nm,23.0s
MNK MLR MLR
comp=E,40nm,20.0s
MNK MLR MLR
comp=Z,6μm,25.0s
MNK Minsk 71.81 327 *i* P **P 18 23 59.6 -0.6**
comp=E,3.0nm,1.1s
MNK *i* P **P 18 23 59.6 -0.6**
comp=N,25nm,0.9s
MNK *i* P **P 18 23 59.6 -0.6**
comp=Z,23nm,1.0s,baz=226
MNK *i* PP **PP 18 26 39.6 +0.4**
MNK *i* PPP PPP 18 28 33.4
MNK *i* S **S 18 33 22.5 +2.6**
MNK *i* SS **SS 18 38 00.6 +5.7**
MNK *i* SSS SSS 18 41 20.5
MNK *i* LQ LQ 18 50 46.0
MNK *i* LR LR 18 55 10.6
MNK *i* LRM MLR 18 58 10.9
comp=E,40nm,19.7s
MNK *i* LRM MLR 18 58 10.9
comp=N,642nm,23.4s
MNK *i* LRM MLR 18 58 10.9
comp=Z,6μm,25.2s
YMR Madison River 71.88 47 P P 18 24 08.5 +7.3
GCMT Greycliff 71.90 45 P P 18 24 09.6 +8.4
IIGN Ignalina 71.91 328 *eP* **P 18 24 04.6 +3.8**
NACGM Naroch 71.99 328⇑*eP* P 18 24 15.1 +14
baz=46
YFT Old Faithful 72.08 47 P P 18 24 10.4 +8.0
YFT IAmb IAmb 18 24 23.9
comp=Z,20nm,1.1s
TPH Tonopah 72.12 55 P P 18 24 11.6 +9.0
TPH Tonopah 72.12 55 P P 18 24 11.6 +8.9
TPH pmax pmax
comp=Z,55nm,0.9s
YPP Pitchstone Pla 72.21 47 P 18 24 14.8 +12
AKH Akhalkalaki 72.28 309 ⇓P **P 18 24 08.1 +4.5**
GNI Garni 72.29 308 LR LR 19 00 59.7
comp=Z,56nm,18.6s,baz=64,slow=40
PKM Mcpherson Peak 72.32 59 P P 18 24 14.2 +10
baz=307
LCH Last Change Ra 72.35 56 P P 18 24 12.7 +8.7
NAX Nakhchivan 72.42 306 P **P 18 24 04.6 +0.3**
RLMT Red Lodge 72.54 46 P 18 24 14.6 +9.5
RLMT IAmb IAmb 18 24 24.4
comp=Z,8.1nm,0.8s
RLMT Red Lodge 72.54 46 P P 18 24 14.4 +9.4
baz=310
CWC Cottonwood Cre 72.54 57 P P 18 24 15.8 +11
baz=307
DOMB Dombas 72.54 340 *eP* P 18 24 14.0 +9.5
MOOW Moose Ponds 72.57 47 P 18 24 14.7 +9.4
MOOW IAmb IAmb 18 24 25.1
comp=Z,10nm,0.8s
NC405 NORSAR Array S 72.57 338 P **P 18 24 04.5 -0.2**
NC303 NORSAR Array S 72.58 338 P **P 18 24 06.0 +1.2**
NC303 IAmb IAmb 18 24 25.7
comp=Z,13nm,0.8s
HVU Hansel Valley 72.61 50 P 18 24 13.1 +7.6
HVU IAmb IAmb 18 24 25.4
comp=Z,11nm,1.0s
HVU Hansel Valley 72.61 50 P P 18 24 13.1 +7.6
HVU pmax pmax
comp=Z,11nm,1.0s
TPAW Teton Pass 72.61 48 P P 18 24 12.9 +7.3
TPAW IAmb IAmb 18 24 25.5
comp=Z,9.9nm,0.7s
GRAC Grapevine Rang 72.67 56 P P 18 24 16.1 +10
GRAC IAmb IAmb 18 24 25.4
comp=Z,18nm,0.8s
GRAC Grapevine Rang 72.67 56 P P 18 24 16.3 +11
baz=308
PABE Paberze 72.70 329 *eP* **P 18 24 09.6 +4.0**
LOHW Long Hollow 72.73 47 P P 18 24 14.4 +8.2
NB201 NORSAR Array S 72.74 338 P **P 18 24 04.8 -0.9**
ISA Isabella, Lake 72.75 58 P P 18 24 15.8 +10
baz=307
REDW Red Top Meadow 72.75 48 P P 18 24 16.1 +10
REDW IAmb IAmb 18 24 26.0
comp=Z,9.0nm,0.8s
HFS Hagfors 72.77 337 LR LR 19 01 02.9
comp=Z,68nm,18.7s,baz=28,slow=40
NB2 NORSAR Subarra 72.77 338 P **P 18 24 05.7 -0.3**
baz=33,slow=6.5
NB2 NORSAR Subarra 72.77 338 P **P 18 24 05.7 -0.3**
comp=Z,1.2nm,0.5s,baz=33,slow=6.5
NOA NORSAR Array B 72.77 338 P **P 18 24 05.5 -0.5**
comp=Z,2.9nm,0.6s,baz=36,slow=6.0,SNR=15
NOA LR LR 19 01 32.7
comp=Z,68nm,19.2s,baz=35,slow=40
comp=Z,2.9nm,0.6s
WSAR Wadi Sarin 72.80 286 LR LR 18 58 36.5
comp=Z,52nm,19.0s,baz=92,slow=38
ARVC Arvin 72.83 59 P P 18 24 17.4 +11
baz=307
NC602 NORSAR Array S 72.93 338 *eP* P 18 24 15.6 +8.8
R11A Troy Canyon, C 72.98 54 P P 18 24 17.2 +9.4
R11A IAmb IAmb 18 24 27.1
comp=Z,9.0nm,0.9s
R11A Troy Canyon, C 72.98 54 P P 18 24 17.7 +10
baz=308
SFJD Kangerlussuaq 72.99 6 LR LR 18 58 16.9
comp=Z,50nm,19.1s,baz=346,slow=38
VIKU Vikbolandet 73.10 334 *eP* **P 18 24 10.8 +2.9**
PBUR Paburge 73.11 331 *eP* **P 18 24 12.0 +4.0**
SOC Sochi 73.14 313 *eP* **P 18 24 07.9 -0.5**
SOC *e* 18 26 56.1
SOC *e*PPP PPP 18 28 34.1
SOC *e*S **SKiKP 18 33 37.9 -1.8**
SOC *e*SS **SS 18 38 16.2 +0.4**
SOC MLR MLR
comp=Z,84nm,17.0s
MPMC Manual Prospec 73.15 57 P P 18 24 18.5 +10
baz=308
FURC Furnace Creek, 73.31 56 P P 18 24 20.5 +11
baz=308
S11A Rachel 73.31 55 P P 18 24 17.9 +8.3
CCAC Calif City Air 73.35 58 P P 18 24 18.4 +8.6
CCAC IAmb IAmb 18 24 29.0
comp=Z,17nm,0.9s
LRMC Laurel Mtn Rad 73.37 58 P P 18 24 20.5 +10
baz=308
TPNV Topopah Spring 73.41 56 P 18 24 20.7 +10
TPNV IAmb IAmb 18 24 29.7
comp=Z,15nm,0.9s
TPNV Topopah Spring 73.41 56 P P 18 24 20.7 +10
TPNV pmax pmax
comp=Z,15nm,1.0s
TPNV Topopah Spring 73.41 56 P P 18 24 20.7 +10
baz=308
HWUT Hardware Ranch 73.43 50 P P 18 24 18.3 +7.9
EDW2 Edwards Air Fo 73.53 58 P P 18 24 21.0 +10
baz=308
FRB Frobisher Bay 73.55 15 LR LR 18 59 41.4
comp=Z,92nm,19.9s,baz=296,slow=38
DUG Dugway, Tooele 73.56 51 P P 18 24 21.4 +10
DUG IAmb IAmb 18 24 30.6
comp=Z,17nm,1.3s
DUG Dugway, Tooele 73.56 51 P P 18 24 21.4 +10
DUG pmax pmax
comp=Z,17nm,1.3s
DUG Dugway, Tooele 73.56 51 P P 18 24 21.3 +10
baz=309
GWY Greenwater Val 73.60 57 P 18 24 20.6 +9.2
GWY IAmb IAmb 18 24 30.6
comp=Z,11nm,0.8s
QSM Queen of Sheba 73.61 57 P P 18 24 20.0 +8.7
QSM IAmb IAmb 18 24 30.6
comp=Z,16nm,0.9s
TCUT Toone Canyon 73.82 50 P P 18 24 21.0 +8.2
DY2G Dye2 73.83 5 *i* P P 18 24 22.3 +10
AKASG Malin Array Be 73.85 323 P **P 18 24 11.9 -0.4**
comp=Z,1.5nm,0.5s,baz=44,slow=6.6,SNR=11
comp=Z,1.5nm,0.5s
AKASG Malin Array Be 73.85 323 *i* P **P 18 24 12.0 -0.4**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
BW06 Boulder Array 73.86 48 P P 18 24 21.4 +8.4
BW06 IAmb IAmb 18 24 31.6
comp=Z,9.8nm,0.6s
BW06 Boulder Array 73.86 48 P P 18 24 22.3 +9.3
baz=310
PD31 Pinedale Array 73.86 48 P P 18 24 21.2 +8.2
PD31 IAmb IAmb 18 24 31.6
comp=Z,8.5nm,0.6s
PDAR Pinedale Array 73.86 48 P **P 18 24 13.6 +0.6**
comp=Z,0.5nm,0.5s,baz=307,slow=1.0,SNR=8.6
comp=Z,0.5nm,0.5s
PDAR Pinedale Array 73.86 48 P P 18 24 21.0 +8.0
SKAR Skarslia 73.88 339 *eP* P 18 24 23.3 +11
PRN Pahroc Range 73.89 55 P P 18 24 19.7 +6.6
PSUT Pine Spring 73.95 53 P 18 24 22.3 +8.8
GSC Goldstone, Bar 74.05 57 P P 18 24 22.2 +8.2
GSC Goldstone, Bar 74.05 57 P P 18 24 22.2 +8.2
GSC pmax pmax
comp=Z,8.0nm,1.1s
GSC Goldstone, Bar 74.05 57 P P 18 24 24.2 +10
baz=308
JLU Jordanelle 74.12 50 P P 18 24 21.7 +7.2
CIS Catalina Islan 74.14 60 P P 18 24 25.1 +11
baz=308
NLU North Lily Min 74.15 51 P P 18 24 21.7 +7.0
SHPR Sheep Range 74.37 55 P 18 24 26.6 +11
MPU Maple Canyon 74.38 51 P P 18 24 24.0 +8.0
MPU IAmb IAmb 18 24 35.5
comp=Z,13nm,1.2s
TUQ Turquoise Moun 74.54 57 P P 18 24 26.7 +10
baz=309
HEC Hector,Ludlow 74.64 57 P P 18 24 27.8 +10
baz=308
MURC Murrieta 74.83 59 P P 18 24 28.0 +9.5
baz=308
CCUT Cedar City 74.86 54 P 18 24 27.1 +8.3
GURO Guroymak-BITLI 74.93 308 P **P 18 24 19.5 +0.4**
TMUT Trail Mountain 75.09 51 P P 18 24 27.7 +7.4
GMRC Granite Mounta 75.11 57 P P 18 24 30.2 +10
baz=309
RDMU Red Mountain 75.25 49 P P 18 24 29.5 +8.5
P17A Butcher Ranch, 75.25 51 P P 18 24 29.2 +8.2
P17A IAmb IAmb 18 24 41.2
comp=Z,12nm,0.9s
LCMT Little Creek M 75.27 54 P P 18 24 30.7 +10
LCMT IAmb IAmb 18 24 40.9
comp=Z,12nm,0.8s
MTPU Mount Pierson 75.28 53 P P 18 24 29.7 +8.2
PFO Pinyon Flats O 75.31 59 LR LR 18 49 36.9
comp=Z,84nm,19.7s,baz=293,slow=30
PFO Pinyon Flats O 75.31 59 P P 18 24 31.5 +10
baz=309
TPFO Pinon Flats 75.31 59 P P 18 24 31.9 +11
baz=309
BORG Borgarnes 75.35 354 LR LR 18 55 59.8
comp=Z,25nm,21.3s,baz=349,slow=35
Q16A Castle Valley 75.35 52 P P 18 24 31.4 +10
Q16A IAmb IAmb 18 24 49.7
comp=Z,17nm,1.4s
BELC Belle Mtn. Jos 75.37 58 P P 18 24 31.6 +10
baz=309
P18A Preston Nutter 75.45 50 P P 18 24 31.7 +9.4
SRU San Rafael Swe 75.61 51 P P 18 24 31.8 +8.6
SRU IAmb IAmb 18 24 42.9
comp=Z,11nm,0.8s
SRU San Rafael Swe 75.61 51 P P 18 24 31.8 +8.7
SRU pmax pmax
comp=Z,11nm,0.8s
K22A Casper 75.64 46 P P 18 24 33.0 +10
K22A IAmb IAmb 18 24 42.5
comp=Z,13nm,0.9s
K22A Casper 75.64 46 P P 18 24 33.2 +10
baz=312
MDND Maddock 75.74 39 P P 18 24 32.6 +9.1
baz=315
MONP2 Monument Peak 75.77 59 P P 18 24 34.8 +11
baz=309
ULM Lac du Bonnet 75.78 35 P **P 18 24 21.9 -1.7**
comp=Z,1.3nm,0.6s,baz=327,slow=8.5,SNR=1.1
comp=Z,1.3nm,0.6s
IRM Iron Mountain 75.83 57 P P 18 24 34.6 +10
baz=309
RWWY Rawlins 75.89 47 P P 18 24 32.4 +7.6
RWWY IAmb IAmb 18 24 43.5
comp=Z,14nm,0.8s
BC3 Big Chuckawall 75.94 58 P P 18 24 35.5 +10
baz=309
RSSD Black Hills 76.03 44 P P 18 24 33.7 +8.3
RSSD IAmb IAmb 18 24 43.9
comp=Z,16nm,0.9s
RSSD Black Hills 76.03 44 P P 18 24 33.7 +8.3
RSSD pmax pmax
comp=Z,16nm,0.9s
RSSD Black Hills 76.03 44 P P 18 24 34.6 +9.2
baz=313
SORM Soroca 76.05 322 ⇑P P 18 24 34.4 +9.2
SORM Soroca 76.05 322 ⇑P P 18 24 34.4 +9.3
IKP In-Ko-Pah, Jac 76.13 59 P P 18 24 35.8 +10
baz=309
SWSC Sam W. Stewart 76.15 59 P P 18 24 36.4 +10
baz=309
O20A White River Ci 76.31 49 P P 18 24 35.5 +8.4
O20A White River Ci 76.31 49 P P 18 24 36.3 +9.2
baz=311
PDMCI Parker Dam,Lak 76.39 57 P P 18 24 37.4 +10
baz=310
MARD Mardin 76.48 307 P **P 18 24 28.7 +0.7**
MARD IAmb IAmb 18 24 52.8
comp=Z,14nm,0.7s
GLA Glamis 76.73 58 P P 18 24 39.4 +10
baz=310
PV23 Carpenter Ridg 76.94 51 P P 18 24 40.0 +9.3
PV23 IAmb IAmb 18 24 50.1
comp=Z,26nm,1.4s
PV10 Paradox Valley 76.97 51 P **P 18 24 35.1 +4.1**
PV10 IAmb IAmb 18 24 50.6
comp=Z,15nm,0.8s
PV22 Blue Mesa, Par 77.02 51 P P 18 24 37.8 +6.7
PV20 West Nyswonger 77.04 51 P P **18 24 33.8 +2.5**
PV20 IAmb IAmb 18 24 50.6
comp=Z,17nm,1.1s
PV11 David Mesa, Pa 77.12 51 P P **18 24 33.2 +1.5**
PV11 IAmb IAmb 18 25 00.1
comp=Z,13nm,0.7s
N23A Red Feather La 77.13 47 P **P 18 24 34.4 +2.6**
N23A IAmb IAmb 18 24 51.4
comp=Z,16nm,0.9s
N23A Red Feather La 77.13 47 P P 18 24 41.2 +9.4
baz=312
PV07 Paradox Valley 77.17 51 P **P 18 24 35.8 +3.8**
AGMN Agassiz Nation 77.19 37 P P 18 24 37.9 +6.3
AGMN IAmb IAmb 18 24 49.5
comp=Z,8.9nm,0.7s
AGMN Agassiz Nation 77.19 37 P P 18 24 40.4 +8.8
baz=317
PV13 Radium Mtn., P 77.25 51 P **P 18 24 34.3 +1.9**
PV13 IAmb IAmb 18 24 53.1
comp=Z,14nm,1.0s
WUAZ Wupatki 77.38 54 P P 18 24 40.4 +7.2
WUAZ IAmb IAmb 18 24 53.5
comp=Z,12nm,0.9s
WUAZ Wupatki 77.38 54 P P 18 24 42.5 +9.3
baz=311
KWP Kalwaria Pacla 77.53 326 P **P 18 24 32.5 -1.1**
KWP Kalwaria Pacla 77.53 326 P **P 18 24 32.5 -1.1**
BUR08 Bucovina Ar. S 77.88 323 P **P 18 24 36.3 +0.7**
BUR08 IAmb IAmb 18 24 58.0
comp=Z,8.5nm,0.8s
BURAR Bucovina Array 77.89 323 ⇑P P 18 24 45.7 +10
BURAR Bucovina Array 77.89 323 P **P 18 24 36.2 +0.5**
BURAR IAmb IAmb 18 24 58.4
comp=Z,12nm,0.9s
BURAR Bucovina Array 77.89 323 P **P 18 24 38.0 +2.3**
BIZ Bicaz 77.97 322 ⇓P P 18 24 45.9 +10
ISCO Idaho Springs 78.05 48 P P 18 24 46.5 +10
baz=313
MVCO Mesa Verde 78.06 51 P P 18 24 46.3 +9.3
baz=312
B35A Bob, Littlefor 78.12 36 P **P 18 24 37.0 +0.1**
B35A IAmb IAmb 18 24 54.9
comp=Z,12nm,0.8s
KOLS Kolonicke sedl 78.25 325 *e* P 18 24 59.5 +22
TPGR Topolog 78.33 319 ⇓P P 18 24 46.8 +8.8
VRI Vrincioaia 78.44 321 ⇑P P 18 24 48.3 +10
VRI Vrincioaia 78.44 321 ⇑P P 18 24 48.3 +10
PLOR Plostina 78.49 321 ⇑P P 18 24 48.3 +9.3
PLOR Plostina 78.49 321 ⇑P P 18 24 48.3 +9.3
TIRR Tirgusor 78.61 319 ⇑P P 18 24 47.5 +7.9
TIRR Tirgusor 78.61 319 ⇑P P 18 24 47.5 +7.9
CRVS Cervenica-Dubn 78.62 326 *e* P 18 25 01.3 +22
HARR Harsova 78.69 320 ⇑P P 18 24 50.6 +11
S22A 4UR Ranch, Cre 78.70 50 P P 18 24 50.6 +10
baz=312
COVR Voineasa-Covas 78.71 321 ⇑P P 18 24 50.0 +10
214A Organ Pipe Nat 78.74 58 P P 18 24 50.7 +10
baz=310
F33A 5 Mile Ranch, 78.77 39 P P 18 24 47.4 +6.9
F33A IAmb IAmb 18 24 58.9
comp=Z,16nm,1.1s
DOPR Dopca 79.01 322 ⇑P P 18 24 51.6 +10
ISR Istrita 79.07 321 ⇑P P 18 24 52.5 +10
MLR Muntele Rosu 79.09 321 ⇓P P 18 24 52.4 +10
MLR Muntele Rosu 79.09 321 ⇓P P 18 24 52.4 +10
BRTR Keskin Array B 79.10 313 P **P 18 24 42.8 +0.2**
comp=Z,0.9nm,0.6s,baz=104,slow=5.2,SNR=5.3
BRTR PP **PP 18 27 43.8 +2.5**
comp=Z,1.7nm,1.0s,baz=46,slow=8.3,SNR=3.5
BRTR LR LR 19 04 44.4
comp=Z,86nm,19.6s,baz=26,slow=40
comp=Z,0.9nm,0.6s
BRTR Keskin Array B 79.10 313 P **P 18 24 41.9 -0.7**
OGNE Ogallala 79.27 45 P P 18 24 53.0 +10
baz=315
LANS Liptovska Anna 79.28 327 *e* P 18 24 56.1 +13
EYMN Ely 79.42 35 P P 18 24 53.2 +9.2
baz=320
SDCO Great Sand Dun 79.49 49 P P 18 24 50.9 +5.9
SDCO Great Sand Dun 79.49 49 P P 18 24 53.4 +8.5
baz=313
OSTC Ostas 79.50 330 AMS AMS 19 00 50.0
comp=Z,200nm,21.3s
VOIR 79.56 322 ⇓P P 18 24 55.5 +11
RAR Rarotonga 79.58 129 LR LR 18 53 50.9
comp=Z,69nm,20.1s,baz=326,slow=31
MORC Moravsky Berou 79.59 328 ⇑P P 18 24 57.5 +13
MORC Moravsky Berou 79.59 328 P **P 18 24 42.2 -2.7**
MORC IAmb IAmb 18 25 07.2
comp=Z,12nm,1.0s
MORC Moravsky Berou 79.59 328 P **P 18 24 42.2 -2.7**
MORC pmax pmax
comp=Z,12nm,1.0s
MORC Moravsky Berou 79.59 328 *eP* P 18 24 58.9 +14
UPC Upice 79.62 330 AMS AMS 19 01 20.0
comp=Z,200nm,22.8s
DPC Dobruska-Polom 79.63 329 *eP* P 18 24 59.8 +15
DPC AMS AMS 19 01 10.0
comp=Z,100nm,15.9s
ARR Arges 79.81 322 ⇑P P 18 24 56.2 +10
TUC Tucson 79.82 56 P P 18 24 55.9 +9.3
baz=311
PSZ Piszkesteto 80.05 326 ⇑P P 18 24 59.0 +11
PSZ Piszkesteto 80.05 326 P **P 18 24 47.9 +0.4**
PSZ IAmb IAmb 18 25 10.7
comp=Z,15nm,1.0s
PSZ Piszkesteto 80.05 326 P **P 18 24 47.9 +0.4**
PSZ pmax pmax
comp=Z,15nm,1.0s
CLL Collm 80.12 332 P **P 18 24 47.1 -0.6**
CLL IAmb IAmb 18 25 08.5
comp=Z,15nm,0.6s
CLL Collm 80.12 332 P **P 18 24 47.1 -0.6**
CLL pmax pmax
comp=Z,15nm,0.6s
CLL Collm 80.12 332 *eP* **P 18 24 47.0 -0.7**
CLL *i* PcP **pwP 18 24 57.1 -1.6**
comp=Z,8.0nm,1.1s
CLL *i* x x 18 25 07.6
comp=Z,17nm,0.7s
CLL *e*PP **PP 18 27 45.0 -4.1**
CLL *ex* x 18 40 36.0
CLL *e*SSS SSS 18 43 48.0
CLL LmH 19 00 00.0
comp=N,200nm,20.3s
CLL LmH 19 00 00.0
comp=E,200nm,21.9s
CLL LmV 19 04 00.0
comp=Z,200nm,19.9s
BRG Berggiesshubel 80.12 331 Amp 19 03 32.0
comp=N,0.2nm,16.0s
BRG Berggiesshubel 80.12 331 *eP* P 18 25 08.2 +20
BRG Berggiesshubel 80.12 331 Amp 18 25 12.8
comp=Z,3.4nm,0.6s
BRG Berggiesshubel 80.12 331 Amp 19 03 28.0
comp=E,0.1nm,16.0s
BRG Berggiesshubel 80.12 331 Amp 19 03 28.0
comp=N,0.2nm,16.0s
ECSD EROS Data Cent 80.14 40 **P 18 24 47.9 -0.1**
ECSD EROS Data Cent 80.14 40 P P 18 24 57.0 +9.0
baz=317
PVCC Panska Ves 80.16 330 AMS AMS 19 03 30.0
comp=N,200nm,21.1s
JAVC Velka Javorina 80.26 328 *eP* P 18 24 59.7 +11
VRAC Vranov 80.34 329 LR LR 19 03 52.7
comp=N,112nm,18.4s,baz=30,slow=38
VRAC Vranov 80.34 329 *eP* P 18 25 00.6 +12
SIRR Siria 80.53 324 ⇓P P 18 25 00.5 +11
T25A Trinidad 80.54 49 **P 18 24 50.9 +0.4**
T25A Trinidad 80.54 49 P P 18 24 60.0 +9.4
baz=314
PRU Pruhonice 80.61 330 *eP* P 18 25 00.4 +10
PRU MLR MLR
comp=Z,200nm,19.3s
PRU Pruhonice 80.61 330 *eP* P 18 25 00.4 +10
PRU AMS AMS 19 02 50.0
comp=Z,200nm,19.3s
KRUC Moravsky 80.62 329 *eP* P 18 25 00.6 +10
TREC Trest 80.79 329 AMS AMS 19 02 00.0
comp=Z,200nm,20.8s

ANMO	**Albuquerque**	**80.80**	**52**	P		P		18 25 02.5	+11
	baz=313								
MODS	**Modra-Piesok**	**80.80**	**328**	*e*P		P		18 25 00.8	+9.3
MODS	**Modra-Piesok**	**80.80**	**328**	*e*		P		18 25 00.8	+9.3
BZS	**Buzias**	**81.04**	**324**	⇑P		P		18 25 03.3	+11
NKC	**Novy Kostel**	**81.20**	**331**	AMS		AMS		19 03 50.0	
	comp=Z,200nm,15.5s								
HERR	**Herculane**	**81.22**	**323**	⇑P		P		18 25 03.4	+10
I37A	**Lemond, Waseca**	**81.50**	**38**	P		**P**		**18 24 54.8**	**-0.5**
121A	**Cookes Peak, D**	**81.58**	**55**	P		P		18 25 06.5	+10
	baz=313								
MDVR	**Moldovita**	**81.62**	**323**	⇑P		P		18 25 05.5	+10
CKRC	**Cesky Krumlov**	**81.64**	**330**	AMS		AMS		19 02 20.0	
	comp=Z,100nm,20.5s								
KHC	**Kasperske Hory**	**81.67**	**330**	P		**P**		**18 24 56.0**	**-0.1**
KHC	**Kasperske Hory**	**81.67**	**330**	P		**P**		**18 24 56.0**	**-0.1**
KHC				pmax		pmax			
	comp=Z,8.0nm,0.8s								
KHC	**Kasperske Hory**	**81.67**	**330**	*e*P		**P**		**18 24 56.0**	**-0.1**
KHC				*ex*		x		18 25 06.1	
KHC				*ex*		x		18 25 17.0	
KHC				AMS		AMS		19 03 30.0	
	comp=Z,200nm,23.8s								
CONA	**Conrad Observa**	**81.73**	**328**	*e*P		P		18 25 07.0	+10
	comp=Z,4.5nm,1.6s								
RONA	**Rosalia, Austr**	**81.74**	**328**	*e*P		P		18 25 07.2	+11
	comp=Z,7.2nm,1.2s								
GERES	**GERESS Array B**	**81.86**	**330**	P		**P**		**18 24 56.5**	**-0.7**
	comp=Z,0.2nm,0.2s,baz=18,slow=4.6,SNR=3.5								
	comp=Z,0.2nm,0.2s								
GERES	**GERESS Array B**	**81.86**	**330**	P		**P**		**18 24 53.8**	**-3.4**
SCHQ	**Schefferville**	**82.01**	**18**	LR		LR		19 05 03.7	
	comp=Z,58nm,19.6s,baz=296,slow=38								
RAYN	**Ar Rayn**	**82.14**	**294**	P		**P**		**18 24 58.6**	**-0.4**
RAYN	**Ar Rayn**	**82.14**	**294**	P		**P**		**18 24 58.6**	**-0.4**
RAYN				pmax		pmax			
	comp=Z,7.0nm,1.0s								
MMAI	**Mount Meron Ar**	**82.62**	**307**	LR		LR		19 05 01.7	
	comp=Z,113nm,19.2s,baz=212,slow=38								
URZ	**Urewera**	**83.00**	**155**	LR		LR		18 59 09.1	
	comp=Z,62nm,18.6s,baz=211,slow=34								
SOKA	**Soboth**	**83.07**	**328**	*e*P		**P**		**18 25 04.2**	**+0.7**
	comp=Z,10nm,1.4s								
KBA	**Koelnbreinsper**	**83.43**	**329**	*e*P		P		18 25 15.9	+10
	comp=Z,8.2nm,1.6s								
PPT	**Papeete**	**83.44**	**119**	LR		LR		18 57 25.0	
	comp=Z,68nm,21.8s,baz=333,slow=32								
MNTX	**Cornudas Mount**	**83.65**	**54**	P		P		18 25 16.0	+9.3
	baz=314								
MSTX	**Muleshoe**	**83.68**	**51**	P		P		18 25 16.1	+9.1
	baz=315								
AMTX	**Amarillo**	**83.69**	**49**	P		P		18 25 16.3	+9.4
	baz=315								
JFWS	**Jewell Farm**	**83.83**	**37**	P		P		18 25 16.3	+8.9
	baz=321								
PRED	**Cave del Predi**	**83.86**	**329**	P		**P**		**18 25 08.9**	**+1.3**
ABTA	**Abfaltersbach**	**84.03**	**329**	*e*P		P		18 25 17.4	+9.0
	comp=Z,5.5nm,1.5s								
RETA	**Reutte**	**84.09**	**331**	*e*P		**P**		**18 25 10.0**	**+1.3**
	comp=Z,9.0nm,1.4s								
DAVA	**Damuels**	**84.59**	**331**	P		P		18 25 16.7	+5.3
	comp=Z,2.1nm,0.8s								
DAVOX	**Davos/Dischmat**	**85.02**	**331**	LR		LR		19 07 35.0	
	comp=Z,202nm,18.4s,baz=74,slow=39								
EIL	**Elat**	**85.18**	**305**	LR		LR		19 11 22.9	
	comp=Z,36nm,18.1s,baz=84,slow=41								
LPIG	**La Paz**	**85.52**	**62**	LR		LR		19 01 23.1	
	comp=Z,50nm,18.7s,baz=230,slow=34								
HDIL	**Hopedale**	**86.11**	**38**	P		P		18 25 26.7	+7.8
	baz=322								
RPZ	**Rata Peaks**	**86.31**	**161**	LR		LR		19 02 02.5	
	comp=Z,90nm,20.8s,baz=268,slow=34								
TX31	**Lajitas Ar. Si**	**86.35**	**55**	P		**P**		**18 25 18.3**	**-2.1**
TX32	**Lajitas Array**	**86.35**	**55**	P		**P**		**18 25 17.6**	**-2.8**
TXAR	**Lajitas Array**	**86.35**	**55**	P		**P**		**18 25 20.9**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=305,slow=3.2,SNR=11								
	comp=Z,0.7nm,0.7s								
TXAR	**Lajitas Array**	**86.35**	**55**	P		**P**		**18 25 17.8**	**-2.5**
CCM	**Cathedral Cave**	**87.08**	**41**	P		P		18 25 32.5	+8.9
	baz=321								
IDI	**Anoyia**	**87.13**	**315**	LR		LR		19 08 02.2	
	comp=Z,54nm,21.7s,baz=44,slow=38								
W39A	**Magazine**	**87.91**	**44**	P		P		18 25 36.1	+8.4
	baz=320								
MIAR	**Mount Ida**	**88.52**	**45**	P		P		18 25 39.3	+8.7
	baz=320								
WVT	**Waverly**	**90.29**	**40**	P		P		18 25 47.0	+8.2
	baz=323								
ATD	**Arta Tunnel**	**91.81**	**286**	LR		LR		19 10 38.0	
	comp=Z,43nm,20.6s,baz=180,slow=38								
KEST	**Kesra**	**94.50**	**325**	LR		LR		19 13 45.8	
	comp=Z,200nm,19.1s,baz=237,slow=39								
ESDC	**Sonseca Array**	**96.05**	**336**	PP		**PP**		**18 29 57.9**	**+0.9**
	comp=Z,0.7nm,0.9s,baz=25,slow=7.4,SNR=2.1								
ESDC				LR		LR		19 16 41.4	
	comp=Z,123nm,18.0s,baz=26,slow=40								
LPAZ	**La Paz**	**143.00**	**60**	PKP		**PKPdf**		**18 32 11.7**	**-1.2**
	comp=Z,0.7nm,0.6s,baz=335,slow=4.2,SNR=2.0								
PLCA	**Paso Flores**	**153.01**	**104**	PKPbc		**PKiKP**		**18 32 36.5**	**+1.2**
	comp=Z,3.2nm,1.2s,baz=181,slow=7.4,SNR=2.4								

PRU 29 18:24:18.3±0.0, 50.27N×18.91E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MORC	**Moravsky Berou**	**1.01**	**241**	*e*PG		Pg		18 24 36.6	-1.1
MORC				*e*SG		Sg		18 24 50.4	-0.3
MAUC	**Maruska**	**1.15**	**218**	*e*PG		Pg		18 24 39.7	-0.5
MAUC				*e*SG		Sb		18 24 56.2	-0.2
LANS	**Liptovska Anna**	**1.18**	**162**	*e*PG		Pg		18 24 40.4	-0.4
LANS				*e*SG		Sg		18 24 54.8	-1.3
LANS				*e*LG		Lg		18 24 57.8	
KRLC	**Kraliky**	**1.38**	**263**	*e*PG		Pg		18 24 42.4	-2.4
KRLC				*e*SG		Sg		18 25 01.5	-1.2

IDC 29 18:25:29.5±1.3, 0.60N×123.09E, h0km, mb3.4/4, mbtmp3.4/4, MS3.5/1, Error ellipse: s-maj=157.7km s-min=21.5km az=65.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.20**	**152**	P		P	P	18 30 38.4	+0.2
	0.5nm,0.4s,baz=332,slow=10,SNR=40								
	0.5nm,0.4s								
ASAR	**Alice Springs**	**26.31**	**157**	P		P	P	18 31 06.8	-0.3
	0.4nm,0.9s,baz=332,slow=8.4,SNR=6.5								
	0.4nm,0.9s								
CTA	**Charters Tower**	**30.62**	**133**	LR		LR		18 45 56.6	
	comp=Z,79nm,18.1s,baz=6.0,slow=40								
SONM	**Songino Array**	**49.24**	**345**	P		P		18 34 20.6	+0.7
	0.3nm,0.5s,baz=161,slow=9.2,SNR=2.5								
	0.3nm,0.5s								
MKAR	**Makanchi Array**	**58.16**	**328**	P		P		18 35 24.7	-0.5
	0.3nm,0.4s,baz=128,slow=8.6,SNR=6.8								
	0.3nm,0.4s								

*MDD **29** 18:41:46.8±0.4, 35.13N×4.82W, h46km±12km, Mb3.9/9, M_mb3.2/9, Error ellipse: s-maj=4.2km s-min=3.4km az=24.0*
*CNRM **29** 18:41:46.1, 35.14N×4.89W, h24km, ml2.8*
*LDG **29** 18:41:46.9, 35.15N×4.79W, h30km*
*SFS **29** 18:41:46.0, 35.16N×4.83W, ML3.2, JEBHA (MARRUECOS)*
*INMG **29** 18:41:47.8±1.3, 35.24N×4.83W, h31km, ML2.6, Error ellipse: s-maj=5.3km s-min=3.5km az=3.0*
*IGIL **29** 18:41:47.8, 35.16N×4.84W, h32km, ML2.9*
ISC 29 18:41:45.7±1.1, 35.16N±0.03×4.79W±0.02, h35km, n65, σ2s15/113, 9C, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PVLZ	**Peæn de**	**0.40**	**88**	P		P	**Pn**	**18 41 57.6**	**+2.7**
PVLZ				S		S	**Sn**	**18 42 05.3**	**+3.9**
CHEFC	**Chefchaouen**	**0.45**	**263**	S		S	**Sn**	**18 41 59.3**	**-3.3**
CHEFC	**Chefchaouen**	**0.45**	**263**	P		P	**Pn**	**18 41 59.0**	**+3.2**
CHEFC				S		S	**Sn**	**18 42 09.3**	**+6.6**
PALE	**Palemas**	**0.70**	**85**	P		P	**Pn**	**18 42 01.1**	**+2.0**
PALE	**Palemas**	**0.70**	**85**	P		P	**Pn**	**18 42 01.3**	**+2.1**
PALE				S		S	**Sn**	**18 42 11.9**	**+3.1**
SMIR	**Smir Dam**	**0.71**	**318**	P		P	**Pn**	**18 42 02.4**	**+3.2**
SMIR				S		S	**Sn**	**18 42 16.9**	**+8.0**
CEU	**Ceuta**	**0.88**	**327**	P		P	**Pn**	**18 42 02.8**	**+1.3**
CEU				S		S	**Sn**	**18 42 19.1**	**+6.1**
AKLM	**AKL**	**1.00**	**130**	P		P	**Pn**	**18 42 05.8**	**+2.5**
AKLM				S		S	**Sn**	**18 42 17.7**	**+1.4**
EMIJ	**Mijas**	**1.40**	**1**	P		P	**Pn**	**18 42 08.7**	**-0.1**
EMIJ				⇑*i*Vmb_V				18 42 09.0	
	574nm,SNR=12								
EMIJ				S		S	**Sn**	**18 42 25.0**	**-1.1**
GOG	**Mont Gurugu**	**1.47**	**87**	P		P	**Pn**	**18 42 10.3**	**+0.5**
GOG				S		S	**Sn**	**18 42 28.3**	**+0.4**
WMELI	**Melilla**	**1.52**	**84**	P		P	**Pn**	**18 42 10.1**	**-0.2**
WMELI				S		S	**Sn**	**18 42 28.8**	**0.0**
EMAL	**Malaga-Limoner**	**1.63**	**10**	P		P	**Pn**	**18 42 13.0**	**+1.2**
EMAL				S		S	**Sn**	**18 42 31.5**	**0.0**
EALB	**Alboran**	**1.63**	**61**	P		P	**Pn**	**18 42 12.5**	**+0.6**
EALB				S		S	**Sn**	**18 42 31.2**	**-0.5**
IFR	**Ifrane**	**1.66**	**190**	P		P	**Pn**	**18 42 12.6**	**+0.1**
IFR				S		S	**Sn**	**18 42 30.9**	**-1.8**
CHAS	**Isla Isabel II**	**1.94**	**89**	P		P	**Pn**	**18 42 16.2**	**+0.2**
CHAS				S		S	**Sn**	**18 42 39.0**	**-0.2**
ELGU	**Los Guajares,**	**1.95**	**29**	P		P	**Pn**	**18 42 16.7**	**+0.3**
ELGU				⇑*i*Vmb_V				18 42 21.8	
	450nm,SNR=8.0								
ELGU				S		S	**Sn**	**18 42 39.5**	**-0.2**
JBK	**JBK**	**2.01**	**114**	P		P	**Pn**	**18 42 18.0**	**+0.7**
JBK	**JBK**	**2.01**	**114**	P		P	**Pn**	**18 42 17.5**	**+0.2**
JBK				S		S	**Sn**	**18 42 39.2**	**-2.1**
EGOR	**Sierra Gorda,**	**2.02**	**16**	P		P	**Pn**	**18 42 19.4**	**+1.9**
EGOR				S		S	**Sn**	**18 42 42.5**	**+0.9**
CZD	**Col de Zad**	**2.13**	**186**	P		P	**Pn**	**18 42 20.0**	**+0.9**
CZD	**Col de Zad**	**2.13**	**186**	P		P	**Pn**	**18 42 20.0**	**+0.9**
CZD				S		S	**Sn**	**18 42 44.8**	**+0.3**
MD31	**MD31**	**2.29**	**179**	P		P	**Pn**	**18 42 21.6**	**+0.5**
MD31				S		S	**Sn**	**18 42 45.8**	**-2.3**
ZHG	**ZHG**	**2.29**	**222**	P		P	**Pn**	**18 42 21.2**	**+0.1**
ZHG				S		S	**Sn**	**18 42 48.1**	**-0.1**
EQUE	**Quentar**	**2.32**	**28**	P		P	**Pn**	**18 42 23.6**	**+2.2**
EQUE				S		S	**Sn**	**18 42 48.0**	**-0.8**
EBER	**Berja**	**2.32**	**41**	P		P	**Pn**	**18 42 21.8**	**+0.2**
EBER				⇑*i*Vmb_V				18 42 26.8	
	212nm,SNR=2.2								
EBER				S		S	**Sn**	**18 42 48.6**	**-0.4**
MDT	**Midelt**	**2.34**	**176**	P		P	**Pn**	**18 42 22.8**	**+1.0**
MDT	**Midelt**	**2.34**	**176**	P		P	**Pn**	**18 42 22.8**	**+1.0**
MDT				S		S	**Sn**	**18 42 45.0**	**-4.5**
ECAB	**El Cabril**	**2.95**	**350**	P		P	**Pn**	**18 42 31.6**	**+1.5**
ECAB				⇑*i*Vmb_V				18 42 41.5	
	93nm,SNR=1.9								
ECAB				S		S	**Sn**	**18 43 02.9**	**-1.4**
EADA	**Adamuz**	**3.01**	**3**	P		P	**Pn**	**18 42 32.9**	**+2.0**
EADA				⇑*i*Vmb_V				18 42 42.5	
	82nm,SNR=2.0								
EADA				S		S	**Sn**	**18 43 05.8**	**+0.2**
EMIN	**Mina Concepcio**	**3.01**	**330**	P		P	**Pn**	**18 42 31.6**	**+0.7**
EMIN				⇑*i*Vmb_V				18 42 34.0	
	209nm,SNR=3.0								
EMIN				S		S	**Sn**	**18 43 02.9**	**-2.8**
EGRO	**El Granado**	**3.21**	**318**	P		P	**Pn**	**18 42 34.5**	**+0.9**
EGRO				⇑*i*Vmb_V				18 42 40.3	
	333nm,SNR=2.7								
EGRO				S		S	**Sn**	**18 43 09.2**	**-1.5**
PVAQ	**Vaqueiros**	**3.25**	**314**	*e*Pn		P	**Pn**	**18 42 35.1**	**+0.9**
PVAQ				*e*Sn		S	**Sn**	**18 43 10.2**	**-1.5**
PVAQ				A		A		18 43 10.7	
	41nm,0.2s								
PVAQ	**Vaqueiros**	**3.25**	**314**	P		P	**Pn**	**18 42 35.1**	**+0.9**
PVAQ				S		S	**Sn**	**18 43 09.9**	**-1.8**
PVAQ	**Vaqueiros**	**3.25**	**314**	P		P	**Pn**	**18 42 35.1**	**+0.9**
PVAQ				S		S	**Sn**	**18 43 09.9**	**-1.8**
PBDV	**Barranco-do-Ve**	**3.28**	**310**	*e*Pn		P	**Pn**	**18 42 35.4**	**+0.8**
PBDV				*e*Sn		S	**Sn**	**18 43 10.8**	**-1.6**
PBDV				A		A		18 43 12.6	
	12nm,0.1s								
PBAR	**Barrancos**	**3.51**	**330**	*e*Pn		Pn		18 42 21.4	-16
PBAR				*e*Sn		Sn		18 42 59.0	-19
PBAR				A		A		18 43 00.4	
	10nm,0.4s								
PCVE	**Castro Verde**	**3.60**	**314**	*e*Pn		**Pn**		**18 42 39.7**	**+0.8**
PCVE				*e*Sn		**Sn**		**18 43 18.3**	**-1.9**
PCVE				A		A		18 43 21.4	
	9.1nm,0.2s								
PBEJ	**Beja**	**3.78**	**320**	*e*Pn		**Pn**		**18 42 43.4**	**+1.9**
PBEJ				*e*Sn		**Sn**		**18 43 23.2**	**-1.5**
PBEJ				A		A		18 43 26.1	
	9.0nm,0.5s								
MORF	**Marmelete**	**3.78**	**306**	*e*S		**Sn**		**18 43 22.1**	**-2.7**
MORF				IAML				18 43 25.9	
	comp=E,31nm,0.3s								
MORF	**Marmelete**	**3.78**	**306**	*e*Sn		**Sn**		**18 43 22.4**	**-2.4**
MORF				A		A		18 43 27.2	
	comp=E,12nm,0.2s								
PFVI	**Vila Bisbo**	**3.81**	**302**	*e*Pn		**Pn**		**18 42 43.7**	**+1.8**
PFVI				*e*Sn		**Sn**		**18 43 23.0**	**-2.5**
PFVI				A		A		18 43 29.3	
	comp=E,11nm,0.5s								
MESJ	**Messejana**	**3.84**	**315**	*e*P		**Pn**		**18 42 43.1**	**+0.9**
MESJ				*e*S		**Sn**		**18 43 23.4**	**-2.8**
MESJ				IAML				18 43 25.2	
	comp=E,25nm,0.1s								
MESJ	**Messejana**	**3.84**	**315**	*e*Pn		**Pn**		**18 42 43.2**	**+0.9**
MESJ				*e*Sn		**Sn**		**18 43 23.6**	**-2.6**
MESJ				A		A		18 43 25.4	
	comp=E,10.0nm,0.3s								
PTEO	**Sao Teotonio**	**3.97**	**308**	*e*Pn		**Pn**		**18 42 44.8**	**+0.8**
PTEO				*e*Sn		**Sn**		**18 43 27.2**	**-2.1**
PTEO				A		A		18 43 30.5	
	comp=E,11nm,0.2s								
EBAD	**Badajoz**	**4.00**	**334**	P		**Pn**		**18 42 45.7**	**+1.2**
EBAD				⇑*i*Vmb_V				18 42 49.4	
	comp=E,235nm,SNR=2.9								
EBAD				S		**Sn**		**18 43 28.6**	**-1.6**
PNCL	**Nicolau / Gran**	**4.21**	**316**	*e*Pn		**Pn**		**18 42 48.1**	**+0.8**
PNCL				*e*Sn		**Sn**		**18 43 32.4**	**-2.8**
PNCL				A		A		18 43 33.7	
	comp=E,9.5nm,0.1s								
EVO	**Evora**	**4.24**	**323**	P		**Pn**		**18 42 48.8**	**+1.0**
EVO				S		**Sn**		**18 43 33.8**	**-2.3**
EVO	**Evora**	**4.24**	**323**	*e*Pn		**Pn**		**18 42 48.9**	**+1.1**
EVO				*e*Sn		**Sn**		**18 43 34.4**	**-1.7**
EVO				A		A		18 43 34.9	
	comp=E,17nm,0.1s								
PESTR	**Estremoz**	**4.32**	**330**	*e*Pn		**Pn**		**18 42 50.1**	**+1.2**
PESTR				*e*Sn		**Sn**		**18 43 35.6**	**-2.5**
PESTR				A		A		18 43 40.7	
	comp=E,4.0nm,0.4s								
PESTR	**Estremoz**	**4.32**	**330**	P		**Pn**		**18 42 50.6**	**+1.7**
PESTR				S		**Sn**		**18 43 39.5**	**+1.3**
ETOB	**Tobarra**	**4.34**	**36**	P		**Pn**		**18 42 51.8**	**+2.6**
ETOB				⇑*i*Vmb_V				18 42 54.9	
	comp=E,146nm,SNR=1.7								
OUZM	**OUZ**	**4.55**	**202**	P		**Pn**		**18 42 52.5**	**+0.4**
OUZM				S		**Sn**		**18 43 41.7**	**-2.2**
OUK	**Oukaimeden**	**4.71**	**214**	P		**Pn**		**18 42 55.0**	**+0.4**
OUK	**Oukaimeden**	**4.71**	**214**	P		**Pn**		**18 42 54.1**	**-0.5**
OUK				S		**Sn**		**18 43 43.8**	**-4.3**
PMRV	**Marv??o**	**4.74**	**335**	*e*Pn		**Pn**		**18 42 56.1**	**+1.5**
PMRV				*e*Sn		**Sn**		**18 43 46.5**	**-1.8**
PMRV				A		A		18 43 47.6	
	comp=E,2.9nm,0.2s								
PMTG	**Montargil**	**4.77**	**326**	*e*Pn		**Pn**		**18 42 55.9**	**+0.9**
PMTG				*e*Sn		**Sn**		**18 43 47.0**	**-2.1**
PMTG				A		A		18 43 48.7	
	comp=E,4.9nm,0.5s								
PCBR	**Castelo Branco**	**5.14**	**336**	*e*Sn		**Sn**		**18 43 55.5**	**-2.6**
PMAFR	**Mafra**	**5.22**	**318**	*e*Sn		**Sn**		**18 43 58.3**	**-1.9**
PSBE	**So Bento**	**5.39**	**325**	*e*Pn		**Pn**		**18 43 05.1**	**+1.5**
PSBE				*e*Sn		**Sn**		**18 44 02.3**	**-2.1**
PVIS	**Viseu**	**6.06**	**337**	*e*Sn		**Sn**		**18 44 19.7**	**-1.3**
MVO	**Moncorvo**	**6.25**	**344**	*e*Pn		**Pn**		**18 43 17.0**	**+1.6**
POLO	**Lamas de Olo**	**6.64**	**340**	*e*Pn		**Pn**		**18 43 22.5**	**+1.7**
POLO				*e*Sn		**Sn**		**18 44 33.0**	**-2.2**
ETSF	**Etsaut**	**8.40**	**22**	*e*Pn		**Pn**		**18 43 44.6**	**-0.3**
SJPF	**Ste Jean**	**8.41**	**18**	*e*Pn		**Pn**		**18 43 44.6**	**-0.4**
EPF	**Esparros**	**8.81**	**25**	*e*Pn		**Pn**		**18 43 49.8**	**-0.8**
EPF				*e*Sn		**Sn**		**18 45 22.5**	**-6.1**
	comp=E,0.1nm,0.2s								

*IDC **29** 18:44:12.2±1.1, 23.65N×45.17W, h0km, mb3.7/8, mbtmp3.7/8, MS3.4/17, Error ellipse: s-maj=33.1km s-min=23.9km az=0.0*
ISC 29 18:44:14.5±0.9, 23.6N±0.2×45.2W±0.1, h15km, n27, σ0s37/8, mb3.9/8, MS3.6/16, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MDP	**Montagnes des**	**19.79**	**202**	LR		LR	LR	18 54 17.3	
	comp=Z,54nm,19.4s,baz=258,slow=31								
SJG	**San Juan**	**20.35**	**258**	LR		LR	LR	18 55 00.2	
	comp=Z,72nm,21.8s,baz=89,slow=32								
SDV	**Santo Domingo**	**28.43**	**243**	LR		LR	LR	19 00 26.2	
	comp=Z,51nm,21.6s,baz=28,slow=34								
DBIC	**Dimbokro**	**42.22**	**107**	LR		LR	LR	19 06 17.8	
	comp=Z,94nm,20.1s,baz=328,slow=31								
H10N2	**ASCENSION HYDR**	**43.33**	**133**	T		T	T	19 38 15.4	
	baz=317,slow=76,SNR=13								
H10N3	**ASCENSION HYDR**	**43.33**	**133**	T		T	T	19 38 09.4	
	baz=317,slow=76,SNR=15								
H10N1	**ASCENSION HYDR**	**43.34**	**133**	T		T	T	19 38 17.1	
	baz=317,slow=76,SNR=18								
H10S3	**ASCENSION HYDR**	**44.03**	**134**	T		T	T	19 38 52.6	
	baz=264,slow=74,SNR=13								
H10S2	**ASCENSION HYDR**	**44.05**	**134**	T		T	T	19 38 50.8	
	baz=316,slow=74,SNR=8.9								
TORD	**Torodi Ar. Bea**	**45.50**	**95**	P		**P**	**P**	**18 52 33.7**	**+0.1**
	0.7nm,1.0s,baz=309,slow=9.1,SNR=2.1								
	0.7nm,1.0s								
LPAZ	**La Paz**	**45.59**	**212**	P		**P**	**P**	**18 52 34.9**	**0.0**
	1.2nm,0.8s,baz=11,slow=5.2,SNR=3.9								
	1.2nm,0.8s								
KEST	**Kesra**	**48.33**	**62**	P		**P**	**P**	**18 52 55.8**	**+0.2**
	1.6nm,0.7s,baz=271,slow=8.7,SNR=2.4								
	1.6nm,0.7s								
JMIC	**Jan Mayen**	**51.84**	**14**	LR		LR	LR	19 10 52.4	
	comp=Z,26nm,18.4s,baz=263,slow=31								
TXAR	**Lajitas Array**	**52.21**	**290**	P		**P**	**P**	**18 53 24.8**	**-0.4**
	0.3nm,0.9s,baz=107,slow=4.8,SNR=2.8								
TXAR				LR		LR	LR	19 16 54.4	
	comp=Z,32nm,18.1s,baz=331,slow=38								
	0.3nm,0.9s								
GERES	**GERESS Array B**	**52.23**	**46**	P		**P**	**P**	**18 53 24.7**	**-0.3**
	0.3nm,0.2s,baz=269,slow=6.9,SNR=3.7								
	0.3nm,0.2s								
NOA	**NORSAR Array B**	**53.46**	**30**	LR		LR	LR	19 12 05.1	
	comp=Z,27nm,21.6s,baz=125,slow=31								
ANMO	**Albuquerque**	**53.89**	**297**	LR		LR	LR	19 13 51.4	
	comp=Z,52nm,21.9s,baz=62,slow=33								
PDAR	**Pinedale Array**	**55.83**	**307**	P		**P**	**P**	**18 53 52.1**	**+0.5**
	0.5nm,0.4s,baz=84,slow=8.3,SNR=8.0								
PDAR				LR		LR	LR	19 15 24.6	
	comp=Z,50nm,21.1s,baz=104,slow=34								
	0.5nm,0.4s								
YKA	**Yellowknife Ar**	**59.82**	**330**	P		**P**	**P**	**18 54 18.7**	**-0.2**
	0.8nm,1.0s,baz=98,slow=7.5,SNR=2.8								
YKA				LR		LR	LR	19 18 35.2	
	comp=Z,37nm,19.6s,baz=18,slow=34								
	0.8nm,1.0s								
ELK	**Elko**	**60.21**	**305**	LR		LR	LR	19 20 05.0	
	comp=Z,52nm,18.2s,baz=130,slow=36								
FINES	**FINESS Array B**	**60.57**	**31**	LR		LR	LR	19 15 32.4	
	comp=Z,31nm,21.7s,baz=122,slow=31								
NEW	**Newport**	**60.89**	**313**	LR		LR	LR	19 19 57.8	
	comp=Z,59nm,19.3s,baz=132,slow=35								
PFO	**Pinyon Flats O**	**62.27**	**297**	LR		LR	LR	19 20 06.3	
	comp=Z,46nm,19.4s,baz=188,slow=35								
ILAR	**Eielson Array**	**73.71**	**334**	P		**P**	**P**	**18 55 47.7**	**+0.2**
	1.4nm,1.0s,baz=68,slow=5.1,SNR=11								
	1.4nm,1.0s								
AKTO	**Aktyubinsk**	**80.05**	**39**	LR		LR	LR	19 29 49.4	
	comp=Z,25nm,19.2s,baz=290,slow=34								
ATD	**Arta Tunnel**	**83.67**	**80**	LR		LR	LR	19 32 57.0	
	comp=Z,31nm,19.2s,baz=266,slow=35								
MA2	**Magadan**	**96.06**	**352**	LR		LR	LR	19 43 03.6	
	comp=Z,20nm,18.1s,baz=9.5,slow=37								

**IDC 29 18:47:10.1±4.0, 23.49N×45.08W, h0km, mb3.7/4, mbtmp3.7/4, Error ellipse: s-maj=124.2km s-min

baz=59
CHGR ⇓eS Sn 19 13 29.5 +2.5
baz=59
IUG luzhnay 3.83 316 eP Pn 19 12 51.9 +3.7
58nm,0.2s
IUG eS Sn 19 13 38.2 +4.1
18nm,0.3s
KST Kastek 4.02 25 eP Pg 19 13 02.2 -2.6
1.7nm,0.3s
KST eS Sg 19 13 55.5 -1.3
7.8nm,0.8s
SGDS Sogindy 4.09 11 eP Pb 19 13 02.3 +1.6
1.0nm,0.3s
SGDS eS Sg 19 13 55.4 -3.7
3.5nm,0.5s
KRBS Karabastau 4.53 19 eP Pb 19 13 11.1 +2.8
0.1nm,0.4s
KRBS eS Sg 19 14 10.7 -2.6
3.7nm,0.7s
KTBS Karatobe 4.86 27 eP Pb 19 13 17.0 +3.2
1.5nm,0.4s
KTBS eS Sg 19 14 21.2 -2.5
7.2nm,0.6s
KUU Kurty 4.90 24 eP Pg 19 13 18.1 -3.6
2.3nm,0.4s
KUU eS Sg 19 14 22.7 -2.5
8.2nm,0.7s

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*JMA **29** 19:17:20.9±0.2,35.7N±0.5×140.1E±0.8,h66km±1km, MV3.2/40,CENTRAL CHIBA PREF*
JMA Felt I J1 at CENTRAL CHIBA PREF .
*IDC **29** 19:17:24.0±3.5,35.21N×139.55E,h71km±34km,mb3.2/4, mbtmp3.5/4,MS2.3/1,Error ellipse: s-maj=37.6km s-min=25.0km az=93.0*
ISC 29 19:17:21.2±1.0,35.62N±0.04×140.11E±0.05,h72km±7km, n25,σ0974/28,mb3.5/4,11D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCN	**Nagara**	**0.21**	**159**	*i* P	**Pn**	**19 17 32.0**	**-0.1**
JCN				S	**Sn**	**19 17 40.5**	**+0.4**
JSMT	**Sammumatsuo**	**0.28**	**85**	*i* P	**Pn**	**19 17 32.0**	**-0.5**
TOK	**Tokyo**	**0.29**	**284**	P	**Pn**	**19 17 32.6**	**+0.1**
TOK				S	**Sn**	**19 17 41.8**	**+1.0**
BSO3	**Boso 3**	**0.88**	**158**	*i* P	**Pn**	**19 17 37.8**	**-0.3**
JOD2	**Odawara 2**	**0.91**	**247**	⇓*i* P	**Pn**	**19 17 38.3**	**-0.4**
JOD2				⇓S	**Sn**	**19 17 50.7**	**-0.9**
JAG	**Ashikaga**	**0.97**	**327**	⇓*i* P	**Pn**	**19 17 38.5**	**-0.9**
JAG				⇓S	**Sn**	**19 17 51.8**	**-1.2**
JIM2	**Oshima 3**	**1.06**	**212**	P	**Pn**	**19 17 39.5**	**-1.1**
JIM2				S	**Sn**	**19 17 53.7**	**-1.2**
JRY	**Ryogami san**	**1.06**	**292**	⇓*i* P	**Pn**	**19 17 40.7**	**+0.1**
BSO1	**Boso 1**	**1.20**	**143**	P	**Pn**	**19 17 41.2**	**-0.5**
BSO1				S	**Sn**	**19 17 57.7**	**+0.5**
JFNN	**Fujinakano**	**1.24**	**250**	P	**Pn**	**19 17 42.8**	**0.0**
JFNN				S	**Sn**	**19 17 59.0**	**0.0**
JYN	**Shimob**	**1.28**	**265**	⇓*i* P	**Pn**	**19 17 43.3**	**-0.1**
JYN				⇓S	**Sn**	**19 18 00.1**	**0.0**
JKT	**Katashina**	**1.34**	**329**	⇓*i* P	**Pn**	**19 17 43.4**	**-0.8**
JKT				⇓S	**Sn**	**19 18 00.2**	**-1.3**
JIZS	**Izushimoda**	**1.35**	**229**	⇓*i* P	**Pn**	**19 17 44.0**	**-0.2**
JIZS				⇓S	**Sn**	**19 18 00.8**	**-0.7**
MJAR	**Matsushiro Arr**	**1.80**	**301**	P	**Pn**	**19 17 50.3**	**+0.2**
	18nm,0.3s,baz=133,slow=15,SNR=44						
MJAR				S	**Sn**	**19 18 12.9**	**+0.7**
	11nm,0.4s,baz=143,slow=16,SNR=2.5						
KSRS	**Korea Array**	**9.98**	**284**	LR	LR	19 23 00.9	
	comp=Z,20nm,20.2s,baz=240,slow=35						
H11N2	**WAKE ISLAND Hy**	**28.39**	**117**	T	T	19 53 00.9	
	baz=308,slow=75,SNR=8.6						
H11N1	**WAKE ISLAND Hy**	**28.40**	**117**	T	T	19 53 01.5	
	baz=308,slow=75,SNR=8.6						
H11N3	**WAKE ISLAND Hy**	**28.41**	**117**	T	T	19 53 00.8	
	baz=308,slow=75,SNR=7.3						
H11S3	**WAKE ISLAND Hy**	**29.04**	**119**	T	T	19 53 16.6	
	baz=312,slow=76,SNR=4.9						
H11S1	**WAKE ISLAND Hy**	**29.04**	**119**	T	T	19 53 20.7	
	baz=312,slow=76,SNR=6.2						
H11S2	**WAKE ISLAND Hy**	**29.05**	**119**	T	T	19 53 23.5	
	baz=312,slow=76,SNR=4.2						
MKAR	**Makanchi Array**	**43.99**	**303**	P	**P**	**19 25 22.2**	**+0.9**
	0.3nm,0.5s,baz=88,slow=9.6,SNR=4.1						
	0.3nm,0.5s						
ILAR	**Eielson Array**	**51.25**	**32**	P	P	19 26 24.9	+7.8
	0.2nm,0.6s,baz=276,slow=9.0,SNR=2.5						
	0.2nm,0.6s						
WRA	**Warramunga Arr**	**55.52**	**187**	P	**P**	**19 26 48.2**	**-0.7**
	0.5nm,0.3s,baz=360,slow=7.4,SNR=14						
	0.5nm,0.3s						
ASAR	**Alice Springs**	**59.25**	**187**	P	**P**	**19 27 15.8**	**+0.7**
	0.5nm,0.8s,baz=1.9,slow=5.5,SNR=2.0						
	0.5nm,0.8s						

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*SOME **29** 19:31:14.6,39.03N×73.52E,h0km*
*KRNET **29** 19:31:32.5±0.1,39.50N×73.69E,mb2.7*
ISC 29 19:31:33.6±2.1,39.6N±0.1×73.69E±0.07,h10km,n9, σ2909/18,8C-2D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.14**	**323**	⇑*e*P	**Pn**	**19 31 55.8**	**+0.1**
	baz=26						
OHH				⇑*e*S	**Sn**	**19 32 12.7**	**+1.3**
	baz=26						
DRK	**Karamyk**	**1.46**	**265**	⇑*e*P	**Pb**	**19 31 59.6**	**-1.5**
	baz=70						
DRK				⇑*e*S	**Sg**	**19 32 19.5**	**-1.3**
	baz=70						
BTK	**Batken**	**2.25**	**282**	⇑*e*P	**Pb**	**19 32 12.7**	**-1.7**
	baz=85						
BTK				⇑*e*S	**Sb**	**19 32 42.3**	**-0.1**
	baz=85						
UCH	**Uchtor**	**2.68**	**13**	⇓*e*P	**Pb**	**19 32 20.4**	**-1.6**
	baz=13						
UCH				⇓*e*S	**Sb**	**19 32 55.4**	**+0.3**
	baz=13						
TRKS	**Terek-Say**	**2.72**	**315**	⇑*e*P	**Pn**	**19 32 19.1**	**+1.6**
	baz=16						
TRKS				⇑*e*S	**Sn**	**19 32 53.6**	**+3.0**
	baz=16						
MRKS	**Merke**	**3.14**	**354**	*e*P	**Pn**	**19 32 24.1**	**+0.9**
	1.6nm,0.2s						
MRKS				*e*S	**Sg**	**19 33 13.8**	**-0.8**
	14nm,0.5s						
KST	**Kastek**	**3.83**	**26**	*e*P	**Pn**	**19 32 36.9**	**+4.2**
	1.7nm,0.4s						
KST				*e*S	**Sg**	**19 33 36.7**	**+0.2**
	4.1nm,0.6s						
KRBS	**Karabastau**	**4.34**	**19**	*e*P	**Pb**	**19 32 46.8**	**-3.2**
	0.7nm,0.6s						
KRBS				*e*S	**Sg**	**19 33 53.0**	**+0.1**
	2.5nm,0.6s						
KTBS	**Karatobe**	**4.67**	**28**	*e*P	**Pb**	**19 32 52.0**	**-3.6**
	0.7nm,0.3s						
KTBS				*e*S	**Sg**	**19 34 02.1**	**-1.3**
	4.4nm,0.5s						

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*NEIC **29** 19:39:52.6±1.5,5.86N±0.09×127.47E±0.06,h35km±2km, mb4.1/12,Error ellipse: s-maj=17.2km s-min=6.2km az=209.0*
*IDC **29** 19:39:54.0±2.4,5.75N×127.53E,h55km±21km,mb3.6/5, mbtmp3.9/7,ML3.8/2,MS2.6/1,Error ellipse: s-maj=40.7km s-min=12.5km az=55.0*
*MAN **29** 19:39:55.6,5.98N×127.27E,h14km,mb4.5,ML3.3,MS3.1*
ISC 29 19:39:52.3±0.7,5.77N±0.08×127.57E±0.10,h35km,n25, σ1977/29,mb4.0/10,1C-1D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**2.37**	**303**	P	**Pn**	**19 40 30.4**	**+1.7**
	32nm,0.3s,baz=240,slow=6.7,SNR=1.5						
DAV				S	**Sn**	**19 40 58.4**	**+1.9**
	139nm,0.5s,baz=61,slow=23,SNR=3.6						
	88nm,0.3s						
DAV	**Davao City (W)**	**2.37**	**303**		**Pn**	**19 40 25.4**	**-3.3**
GSPH	**General Santos**	**2.63**	**277**	⇑*i* P	**Pn**	**19 40 29.1**	**-3.3**
GSPH				*i* S	Sn	19 40 50.7	-13
KCP	**Kidapawan**	**2.76**	**297**	⇓*e*P	**Pn**	**19 40 37.4**	**+3.2**
KCP				*i* S	**Sn**	**19 41 09.7**	**+3.4**
SIJI	**Sorong**	**7.55**	**151**	P	**Pn**	**19 41 42.2**	**+2.1**
	1.1nm,0.3s,baz=65,slow=19,SNR=18						
SIJI				S	Sn	19 42 58.3	-6.3
	1.5nm,0.6s,baz=147,slow=24,SNR=1.3						
SIJI				LR	LR	19 45 08.3	
	comp=Z,41nm,18.9s,baz=202,slow=42						
	2.0nm,0.3s						
TOLI2	**Tolitoli**	**8.21**	**236**	Pn	**Pn**	**19 41 49.5**	**+0.5**
FAKI	**Fak Fak**	**9.81**	**151**	Pn	**Pn**	**19 42 13.5**	**+2.5**
SBUM	**Sibu**	**15.66**	**258**	P	**P**	**19 43 33.1**	**-1.2**
KNRA	**Kununurra**	**21.34**	**177**	P	**P**	**19 44 36.6**	**0.0**
WB0	**Warramunga Arr**	**26.25**	**165**	P	**P**	**19 45 24.6**	**+0.2**
WRA	**Warramunga Arr**	**26.40**	**166**	P	**P**	**19 45 24.9**	**-0.9**
	0.3nm,0.3s,baz=346,slow=10,SNR=27						
WRA				PcP	**PcP**	**19 48 50.7**	**-0.3**
	0.2nm,0.5s,baz=334,slow=2.1,SNR=1.3						
	0.3nm,0.3s						
AS31	**Alice Springs**	**29.90**	**168**	P	**P**	**19 45 57.2**	**+0.1**
ASAR	**Alice Springs**	**29.90**	**168**	P	**P**	**19 45 56.1**	**-0.9**
	0.2nm,0.4s,baz=348,slow=6.5,SNR=8.8						
ASAR				PcP	**PcP**	**19 48 58.8**	**-0.8**
	0.5nm,0.4s,baz=353,slow=2.2,SNR=10						
ASAR				ScP	**ScP**	**19 52 36.4**	**-2.8**
	0.3nm,0.8s,baz=344,slow=3.0,SNR=2.2						
	0.2nm,0.4s						
STKA	**Stephens Creek**	**39.75**	**161**	P	**P**	**19 47 21.6**	**-0.2**
	5.5nm,1.0s,baz=340,slow=12,SNR=6.1						
	5.5nm,1.0s						
STKA	**Stephens Creek**	**39.75**	**161**	IAmb	IAmb	19 47 41.0	
	comp=Z,4.6nm,1.5s						
YAK	**Yakutsk**	**56.16**	**1**	P	**P**	**19 49 27.8**	**-0.5**
MK31	**Makanchi Array**	**56.39**	**324**	P	**P**	**19 49 29.0**	**-1.3**
MK31				IAmb	IAmb	19 49 30.5	
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**56.39**	**324**	P	**P**	**19 49 28.9**	**-1.4**
	comp=Z,0.9nm,0.7s,baz=130,slow=7.7,SNR=12						
	comp=Z,0.9nm,0.7s						
KURK	**Kurchatov**	**60.50**	**327**	P	**P**	**19 49 57.6**	**-1.2**
KURK				IAmb	IAmb	19 49 58.5	
	comp=Z,1.6nm,0.6s						
IMAR	**Indian Mountai**	**80.15**	**24**	P	**P**	**19 51 59.2**	**+0.5**
H23K	**Yukon River**	**81.85**	**24**	P	**P**	**19 52 08.8**	**+1.0**
H23K				IAmb	IAmb	19 52 10.0	
	comp=Z,1.8nm,0.8s						
H24K	**Noodor Dome**	**82.54**	**24**	P	**P**	**19 52 12.5**	**+1.1**
H24K				IAmb	IAmb	19 52 14.0	
	comp=Z,2.0nm,0.8s						
ILAR	**Eielson Array**	**82.91**	**26**	P	**P**	**19 52 12.9**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=248,slow=5.8,SNR=7.0						
	comp=Z,0.6nm,0.6s						
J25K	**Salcha River,**	**83.56**	**26**	P	**P**	**19 52 16.1**	**-0.6**
J25K				IAmb	IAmb	19 52 17.0	
	comp=Z,2.2nm,1.0s						
BMAR	**Burnt Mountain**	**83.89**	**23**	P	**P**	**19 52 19.3**	**+1.0**

MAN 29 20:04:25.6,4.25N×126.56E,h9km,mb4.1,ML2.8,MS2.5, Talaud Islands

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IDC 29 20:06:35.8±5.4,5.67S×147.47E,h199km±55km,mb3.1/1, mbtmp3.8/3,Error ellipse: s-maj=109.9km s-min=47.4km az=120.0,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.73**	**185**	P	Pn	20 07 35.4	+1.3
	30nm,0.3s,baz=327,slow=6.9,SNR=34						
PMG				S	Sn	20 08 19.8	-0.2
	26nm,0.3s,baz=214,slow=20,SNR=10						
WRA	**Warramunga Arr**	**19.09**	**221**	P	P	20 10 43.8	+0.2
	0.9nm,0.4s,baz=48,slow=12,SNR=36						
ASAR	**Alice Springs**	**22.15**	**215**	P	P	20 11 16.4	+0.8
	1.6nm,0.7s,baz=39,slow=11,SNR=11						
	1.6nm,0.7s						
TORD	**Torodi Ar. Bea**	**145.46**	**285**	PKPbc	PKPdf	20 25 49.4	-1.8
	0.5nm,0.6s,baz=56,slow=3.4,SNR=3.2						

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*IDC **29** 20:07:25.0±10.0,30.70S×76.22E,h0km,mb3.6/6, mbtmp3.6/6,MS3.5/5,Error ellipse: s-maj=353.7km s-min=37.0km az=41.0*
ISC 29 20:07:31.5±13.0,30.3S±2.7×76.7E±,h10km,n14,σ0954/6, mb3.5/6,MS3.5/5,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S2	**Diego Garcia H**	**22.52**	**348**	T	T	20 36 26.0	
	baz=173,slow=76,SNR=16						
H08S1	**Diego Carcia H**	**22.53**	**348**	T	T	20 36 26.2	
	baz=173,slow=76,SNR=15						
H08S3	**Diego Garcia H**	**22.54**	**348**	T	T	20 36 27.4	
	baz=173,slow=76,SNR=20						
LEM	**Lembang**	**36.73**	**58**	LR	LR	20 26 06.9	
	comp=Z,64nm,19.5s,baz=230,slow=30						
BOSA	**Boshof**	**44.92**	**258**	LR	LR	20 30 36.7	
	comp=Z,67nm,19.1s,baz=162,slow=32						
KAPI	**Kappang**	**47.21**	**67**	LR	LR	20 35 48.9	
	comp=Z,24nm,19.0s,baz=266,slow=35						
SUR	**Sutherland**	**47.77**	**252**	LR	LR	20 32 56.9	
	comp=Z,72nm,18.1s,baz=132,slow=33						
ASAR	**Alice Springs**	**50.68**	**97**	P	**P**	**20 16 31.9**	**+0.5**
	0.4nm,0.8s,baz=260,slow=5.5,SNR=2.0						
	0.4nm,0.8s						
WRA	**Warramunga Arr**	**52.41**	**93**	P	**P**	**20 16 43.9**	**-0.6**
	0.5nm,0.9s,baz=246,slow=7.0,SNR=2.0						
	0.5nm,0.9s						
MKAR	**Makanchi Array**	**76.45**	**4**	P	**P**	**20 19 21.1**	**0.0**
	0.7nm,1.0s,baz=178,slow=4.3,SNR=3.7						
	0.7nm,1.0s						
KURBB	**Kurchatov Arra**	**80.15**	**1**	P	**P**	**20 19 41.3**	**-0.1**
	0.4nm,0.9s,baz=189,slow=5.2,SNR=3.4						
	0.4nm,0.9s						
IDI	**Anoyia**	**81.34**	**319**	LR	LR	20 52 27.5	
	comp=Z,18nm,18.4s,baz=106,slow=33						
SONM	**Songino Array**	**81.71**	**19**	P	**P**	**20 19 50.5**	**+0.4**
	0.5nm,1.0s,baz=197,slow=4.5,SNR=2.2						
	0.5nm,1.0s						
ZALV	**Zalesovo Beam**	**83.74**	**5**	P	**P**	**20 19 59.8**	**-0.4**
	0.6nm,0.7s,baz=188,slow=5.8,SNR=1.7						
	0.6nm,0.7s						

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*INET **29** 20:23:33.7±1.2,13.78N×87.88W,h6km±6km,MW3.1*
*SNET **29** 20:23:35.3±0.8,13.51N×88.11W,h9km±6km,ML2.3*
ISC 29 20:23:32.4±1.8,13.7N±0.1×87.94W±0.08,h10km,n9, σ0889/12,Honduras

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LCND	**La Caada**	**0.39**	**172**	*e*P	**Pg**	**20 23 41.1**	**+0.9**
LCND				*e*S	**Sb**	**20 23 46.5**	**-1.1**
LCND				IAML		20 23 49.1	
	comp=Z,448nm,0.3s						
PQSS	**Presa 15 de Se**	**0.60**	**263**	*e*P	**Pb**	**20 23 44.9**	**-0.2**
TGUH	**Tegucigalpa,Un**	**0.74**	**61**	*e*P	Pg	20 23 46.4	-0.4
SCLA	**Alcaldia de Sa**	**0.76**	**270**	*e*P	**Pg**	**20 23 47.7**	**+0.5**
SCLA				*e*S	**Sb**	**20 23 57.8**	**-0.5**
SCLA				IAML		20 24 03.6	
	comp=Z,56nm,0.3s						
PAVA	**Las Pavas**	**0.97**	**271**	*e*P	**Pg**	**20 23 51.1**	**+0.1**
PAVA				IAML		20 24 08.9	
	comp=Z,212nm,0.2s						
SJTE	**Alcalda de S**	**1.04**	**265**	*e*P	**Pg**	**20 23 52.1**	**-0.3**
SJTE				*e*S	**Sb**	**20 24 04.6**	**-1.6**
CRIN	**San Cristobal**	**1.32**	**139**	*e*P	**Pn**	**20 23 57.3**	**+0.3**
NUBE	**Las Nubes**	**1.79**	**277**	*e*P	**Pn**	**20 24 04.8**	**+1.2**
NUBE				*e*S	**Sn**	**20 24 26.9**	**+0.4**
BOAB	**BOACO BROADBAN**	**2.54**	**119**	*e*P	**Pn**	**20 24 13.4**	**-0.3**

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*NEIC **29** 20:44:01.4±1.1,23.87S±0.07×179.3E±0.1,h547km±7km, mb4.7/48,Error ellipse: s-maj=16.8km s-min=10.4km az=89.0*
*IDC **29** 20:44:02.3±1.6,23.75S×179.09E,h549km±18km, mb3.3/11,mbtmp4.2/13,Error ellipse: s-maj=16.7km s-min=13.8km az=117.0*
ISC 29 20:44:01.6±0.5,23.85S±0.06×179.23E±0.07,h550km,n94, σ1945/98,mb4.5/29,1C,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**5.97**	**155**	P	**P**	**20 45 39.6**	**-0.3**
MSVF	**Nonsavu**	**6.18**	**350**	P	**P**	**20 45 41.5**	**-0.6**
	18nm,0.4s,baz=194,slow=6.4,SNR=61						
MSVF	**Nonsavu**	**6.18**	**350**	P	**P**	**20 45 41.3**	**-0.9**
MARNC	**Mare, Loyalty**	**10.60**	**281**	P	**P**	**20 46 26.4**	**+0.5**

PINNC	**Pines Island,**	**10.90**	**274**	P	**P**	**20 46 30.7**	**+1.8**
NIUE	**Niue**	**11.16**	**67**	P	**P**	**20 46 30.3**	**-1.2**
OUZ	**Omahuta**	**12.34**	**202**	P	**P**	**20 46 46.8**	**+3.3**
OUZ	**Omahuta**	**12.34**	**202**	P	**P**	**20 46 46.6**	**+3.0**
KUZ	**Kuaotunu**	**13.20**	**192**	P	**P**	**20 46 53.9**	**+1.5**
PKGZ	**Pakihiroa**	**14.03**	**184**	P	**P**	**20 46 59.0**	**-2.0**
PKGZ				S	**S**	**20 49 26.9**	**-1.8**
RUGZ	**Raukumara Rang**	**14.13**	**185**	P	**P**	**20 47 01.8**	**-0.3**
PUZ	**Puketiti**	**14.20**	**183**	P	**P**	**20 47 05.0**	**+2.2**
TWGZ	**Tauwhareparae**	**14.32**	**184**	P	**P**	**20 47 04.3**	**+0.3**
URZ	**Urewera**	**14.48**	**187**	P	**P**	**20 47 05.1**	**-0.5**
	11nm,0.3s,baz=274,slow=3.0,SNR=13						
URZ				S	**S**	**20 49 35.1**	**-2.0**
	4.6nm,0.5s,baz=251,slow=23,SNR=2.0						
URZ	**Urewera**	**14.48**	**187**	P	**P**	**20 47 04.2**	**-1.3**
URZ	**Urewera**	**14.48**	**187**	P	**P**	**20 47 03.3**	**-2.2**
URZ				S	**S**	**20 49 34.0**	**-3.1**
MWZ	**Matawai**	**14.51**	**185**	P	**P**	**20 47 04.5**	**-1.4**
MWZ				S	**S**	**20 49 35.2**	**-2.6**
CNGZ	**Carnagh Statio**	**14.62**	**183**	P	**P**	**20 47 07.4**	**+0.5**
BKZ	**Black Stump Fm**	**15.45**	**188**	P	**P**	**20 47 12.9**	**-2.6**
BKZ				IAmb	IAmb	20 47 26.1	
	comp=Z,37nm,1.4s						
BKZ	**Black Stump Fm**	**15.45**	**188**	P	**P**	**20 47 14.4**	**-1.1**
BKZ				S	**S**	**20 49 53.0**	**-1.7**
SNVZ	**South Ngauruho**	**15.59**	**190**	P	**P**	**20 47 14.1**	**-3.0**
BHHZ	**Black Hill Sta**	**15.82**	**189**	P	**P**	**20 47 17.1**	**-2.3**
BHHZ				S	**S**	**20 49 58.1**	**-2.9**
BFZ	**Birch Farm**	**16.97**	**188**	P	**P**	**20 47 28.4**	**-1.5**
SNZO	**South Karori**	**17.82**	**191**	P	**P**	**20 47 35.9**	**-1.8**
MSWZ	**Moikau Station**	**17.83**	**190**	P	**P**	**20 47 36.6**	**-1.2**
QRZ	**Quartz Range**	**17.84**	**197**	P	**P**	**20 47 39.3**	**+1.5**
NNZ	**Nelson**	**18.00**	**194**	P	**P**	**20 47 39.2**	**-0.1**
TUWZ	**Tuamarina**	**18.08**	**193**	P	**P**	**20 47 38.9**	**-1.2**
BSWZ	**Blackbirch Sta**	**18.37**	**193**	P	**P**	**20 47 42.1**	**-0.5**
THZ	**Tophouse**	**18.63**	**195**	P	**P**	**20 47 46.0**	**+0.9**
THZ				IAmb	IAmb	20 48 04.7	
	comp=Z,43nm,1.4s						
KHZ	**Kahutara**	**19.11**	**193**	P	**P**	**20 47 48.8**	**-0.6**
KHZ				IAmb	IAmb	20 48 12.3	
	comp=Z,34nm,1.2s						
LTZ	**Lake Taylor**	**19.74**	**195**	P	**P**	**20 47 54.9**	**-0.4**
LTZ				IAmb	IAmb	20 47 57.7	
	comp=Z,23nm,0.7s						
OXZ	**Oxford**	**20.31**	**195**	P	**P**	**20 47 59.7**	**-0.6**
MQZ	**McQueen's Vall**	**20.53**	**194**	P	**P**	**20 48 02.1**	**-0.2**
RPZ	**Rata Peaks**	**20.93**	**197**	P	**P**	**20 48 05.2**	**-0.7**
	comp=Z,8.3nm,0.6s,baz=130,slow=9.2,SNR=2.1						
	comp=Z,8.3nm,0.6s						
RPZ	**Rata Peaks**	**20.93**	**197**	IAmb	IAmb	20 48 23.8	
	comp=Z,32nm,1.2s						
FOZ	**Fox Glacier**	**21.11**	**199**	P	**P**	**20 48 06.8**	**-0.6**
LBZ	**Lake Benmore**	**21.78**	**198**	P	**P**	**20 48 12.2**	**-1.4**
LBZ				IAmb	IAmb	20 48 12.6	
	comp=Z,47nm,1.5s						
WKZ	**Wanaka**	**22.52**	**199**	P	**P**	**20 48 19.7**	**-0.6**
MLZ	**Mavora Lakes**	**23.29**	**200**	P	**P**	**20 48 27.8**	**+0.8**
MLZ				IAmb	IAmb	20 48 43.7	
	comp=Z,30nm,1.2s						
DCZ	**Deep Cove**	**23.69**	**201**	P	**P**	**20 48 30.5**	**0.0**
DCZ				IAmb	IAmb	20 48 41.7	
	comp=Z,50nm,1.3s						
WHZ	**Wether Hill Ro**	**23.81**	**200**	P	**P**	**20 48 31.9**	**+0.2**
ARMA	**Armidale**	**25.38**	**249**	P	**P**	**20 48 47.5**	**+1.7**
ARMA				IAmb	IAmb	20 49 14.7	
	comp=Z,20nm,1.4s						
EIDS	**Eidsvold**	**25.62**	**261**	P	**P**	**20 48 47.7**	**-0.2**
EIDS				IAmb	IAmb	20 48 49.6	
	comp=Z,13nm,1.2s						
CAN	**Canberra**	**28.56**	**239**	P	**P**	**20 49 13.9**	**+0.3**
CAN				IAmb	IAmb	20 49 16.3	
	comp=Z,9.7nm,0.8s						
CTAO	**Charters Tower**	**30.77**	**270**	P	**P**	**20 49 33.8**	**+0.9**
TOO	**Toolangi**	**31.88**	**237**	P	**P**	**20 49 43.5**	**+1.3**
TOO				IAmb	IAmb	20 50 11.9	
	comp=Z,30nm,1.4s						
TAU	**Tasmania Unive**	**32.45**	**226**	P	**P**	**20 49 48.4**	**+1.5**
TAU				IAmb	IAmb	20 49 50.7	
	comp=Z,34nm,1.1s						
PMG	**Port Moresby**	**33.81**	**290**	P	**P**	**20 49 58.9**	**+0.2**
STKA	**Stephens Creek**	**34.09**	**248**	P	**P**	**20 50 01.4**	**+0.6**
	comp=Z,2.6nm,0.5s,baz=92,slow=10,SNR=6.2						
	comp=Z,2.6nm,0.5s						
COEN	**Coen**	**35.41**	**280**	P	**P**	**20 50 12.7**	**+0.6**
COEN				IAmb	IAmb	20 50 14.1	
	comp=Z,42nm,1.4s						
BBOO	**Buckleboo**	**38.81**	**247**	P	**P**	**20 50 39.6**	**-0.1**
BBOO				IAmb	IAmb	20 50 47.2	
	comp=Z,39nm,1.4s						
AS31	**Alice Springs**	**41.34**	**261**	P	**P**	**20 51 00.4**	**+0.2**
ASAR	**Alice Springs**	**41.34**	**261**	P	**P**	**20 51 00.3**	**+0.1**
	comp=Z,2.7nm,0.5s,baz=95,slow=7.0,SNR=78						
ASAR				S	**S**	**20 56 34.3**	**-1.2**
	comp=Z,0.2nm,0.6s,baz=86,slow=15,SNR=1.7						
	comp=Z,2.7nm,0.5s						
WR0	**Warramunga Arr**	**41.52**	**266**	P	**P**	**20 51 01.0**	**-0.5**
WB2	**Warramunga Arr**	**41.69**	**266**	P	**P**	**20 51 02.4**	**-0.5**
WB2				IAmb	IAmb	20 51 02.8	
	comp=Z,6.4nm,0.5s						
WB0	**Warramunga Arr**	**41.70**	**267**	P	**P**	**20 51 02.5**	**-0.5**
WB0				IAmb	IAmb	20 51 03.1	
	comp=Z,14nm,0.3s						
WRAB	**Tennant Creek**	**41.70**	**266**	P	**P**	**20 51 02.4**	**-0.5**
WRAB				IAmb	IAmb	20 51 05.5	
	comp=Z,23nm,1.5s						
WRA	**Warramunga Arr**	**41.70**	**266**	P	**P**	**20 51 02.5**	**-0.5**
	comp=Z,4.3nm,0.5s,baz=90,slow=5.8,SNR=276						
WRA				S	**S**	**20 56 36.6**	**-4.1**
	comp=Z,0.9nm,0.8s,baz=97,slow=13,SNR=3.0						
	comp=Z,4.3nm,0.5s						
FORT	**Forrest**	**45.67**	**250**	P	**P**	**20 51 33.2**	**-0.3**
FORT				IAmb	IAmb	20 51 35.3	
	comp=Z,22nm,0.7s						
MTN	**Manton Dam**	**46.74**	**275**	P	**P**	**20 51 41.1**	**-0.8**
MTN				IAmb	IAmb	20 51 50.9	

ARCES	**ARCESS Array B**	**131.69**	**348**	PKP		**PKPdf**	**21 02 10.8**	**-0.7**
	comp=Z,0.8nm,0.7s,baz=48,slow=1.8,SNR=6.3							
FINES	**FINESS Array B**	**138.17**	**341**	PKhKP		PKPpre	21 02 14.8	
	comp=Z,0.2nm,0.3s,baz=64,slow=4.4,SNR=4.5							
FINES				PKP		**PKPdf**	**21 02 23.1**	**-0.7**
	comp=Z,1.7nm,0.9s,baz=64,slow=3.2,SNR=5.4							
NB2	**NORSAR Subarra1**	**141.92**	**351**	PKP		**PKPdf**	**21 02 26.4**	**-4.2**
	comp=Z,0.1nm,0.3s,baz=16,slow=3.2							
NOA	**NORSAR Array B**	**141.92**	**351**	PKhKP		PKPpre	21 02 26.1	
	comp=Z,0.1nm,0.4s,baz=26,slow=4.0,SNR=3.8							
AKASG	**Malin Array Be**	**144.54**	**327**	PKP		**PKPdf**	**21 02 34.9**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=46,slow=4.2,SNR=11							
BRTR	**Keskin Array B**	**146.98**	**307**	PKPbc		**PKPbc**	**21 02 42.5**	**-0.7**
	comp=Z,1.2nm,0.5s,baz=101,slow=2.4,SNR=2.2							
CLL	**Collm**	**150.60**	**342**	⇑*i*PKPbc		**PKiKP**	**21 02 51.9**	**+0.1**
	comp=Z,6.0nm,0.9s							
GERES	**GERESS Array B**	**152.56**	**339**	PKPbc		**PKiKP**	**21 02 56.2**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=51,slow=5.2,SNR=2.1							
TORD	**Torodi Ar. Bea**	**169.10**	**193**	PKPab		**PKPab**	**21 04 22.5**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=177,slow=5.3,SNR=2.5							

WEL 29 20:45:14.8±0.8, 39°S±6°×17°8E±°, h31km±4km, M2.1/6, ML2.4/12, MLv2.1/6, Error ellipse: s-maj=0.0km s-min=0.0km az=154.4, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MHGZ	**Mahia Peninsul**	**0.16**	**46**	P		Pn	20 45 21.9	+0.8
MHGZ				S		Sn	20 45 28.0	+3.1
KNZ	**Kokohu**	**0.25**	**344**	P		Pn	20 45 22.5	+0.2
KNZ				S		Sn	20 45 29.0	+1.9
PRGZ	**Paritu Road**	**0.35**	**16**	P		Pn	20 45 24.0	+0.2
RIGZ	**Rimuhau**	**0.56**	**0**	P		Pn	20 45 26.9	+0.3
SNGZ	**Shannon Statio**	**0.58**	**326**	P		Pn	20 45 27.3	+0.4
SNGZ				S		Sn	20 45 36.9	+1.4
ARHZ	**Aropaoanui**	**0.59**	**270**	P		Pn	20 45 28.5	+1.5
ARHZ				S		Sn	20 45 37.1	+1.4
RAHZ	**Arahi**	**0.63**	**303**	P		Pn	20 45 28.0	+0.4
RAHZ				S		Sn	20 45 38.0	+1.4
CNGZ	**Carnagh Statio**	**0.85**	**24**	P		Pn	20 45 30.9	-0.2
KAHZ	**Kahuranaki**	**0.86**	**232**	P		Pn	20 45 30.2	-0.6
MWZ	**Matawai**	**0.95**	**349**	P		Pn	20 45 32.2	+0.2
BKZ	**Black Stump Fm**	**0.99**	**275**	P		Pn	20 45 32.8	+0.2
URZ	**Urewera**	**1.12**	**333**	P		Pn	20 45 34.9	+0.5
URZ				S		Sb	20 45 49.4	-0.5
RUGZ	**Raukumara Rang**	**1.30**	**357**	P		Pn	20 45 37.0	+0.1
PKGZ	**Pakihiroa**	**1.40**	**10**	P		Pn	20 45 38.2	0.0
HAZ	**Te Kaha**	**1.50**	**1**	P		Pn	20 45 39.7	+0.1
WMGZ	**Waiomatatini S**	**1.53**	**20**	P		Pn	20 45 39.7	-0.2

*TAP **29** 20:50:49.7, 22°.99N×120°.09E, h18km, ML3.7, B*
ISC 29 20:50:49.0±1.1, 22°.95N±0°.02×120°.00E±0°.03, h17km±8km, n107, σ0°65/192, 21C-4D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TAI	**Tainan**	**0.19**	**76**	⇓*i*P		**Pb**	**20 50 54.2**	**+0.1**
	baz=89							
TAI				*i* S		**Sb**	**20 50 57.7**	**+0.3**
	baz=89							
TAI1	**Yung-k'ang**	**0.23**	**67**	*i* P		**Pb**	**20 50 54.8**	**0.0**
	baz=72							
TAI1				*i* S		**Sb**	**20 50 59.0**	**+0.5**
	baz=72							
SCLT	**Jiali**	**0.29**	**39**	⇓*i*P		**Pb**	**20 50 55.8**	**0.0**
	baz=30							
SCLT				*i* S		**Sb**	**20 51 00.8**	**+0.5**
	baz=30							
SSHA	**Shanhua**	**0.33**	**55**	⇓*i*P		**Pb**	**20 50 56.4**	**0.0**
	baz=52							
SSHA				S		**Sb**	**20 51 01.9**	**+0.5**
	baz=52							
SHHT	**Tainan City**	**0.33**	**78**	⇑*i*P		**Pb**	**20 50 56.4**	**-0.1**
	baz=84							
SHHT				S		**Sg**	**20 51 01.4**	**+0.7**
	baz=84							
CHN3	**Shinhua**	**0.36**	**70**	⇑*i*P		**Pb**	**20 50 57.0**	**+0.1**
	baz=72							
CHN3				*i* S		**Sb**	**20 51 02.9**	**+0.5**
	baz=72							
SNJT	**Kaohsiung City**	**0.37**	**122**	P		**Pb**	**20 50 57.1**	**0.0**
	baz=137							
SNJT				*e*S		**Sn**	**20 51 04.5**	**-1.9**
	baz=137							
WSSB	**Gushan**	**0.39**	**141**	⇑P		**Pn**	**20 50 59.7**	**-0.2**
	baz=156							
WSSB				*e*S		**Sn**	**20 51 07.9**	**+0.9**
	baz=156							
TWM1	**Shoushan**	**0.41**	**108**	⇑*i*P		**Pn**	**20 50 58.9**	**-1.3**
	baz=119							
TWM1				*e*S		**Sn**	**20 51 06.8**	**-0.7**
	baz=119							
WDGT	**Dungji**	**0.44**	**315**	⇑*i*P		**Pn**	**20 50 59.9**	**-0.6**
	baz=304							
WDGT				*i* S		**Sn**	**20 51 07.1**	**-1.0**
	baz=304							
CHN8	**Yiju**	**0.44**	**27**	*i* P		**Pb**	**20 50 58.6**	**+0.3**
	baz=19							
CHN8				*e*S		**Sb**	**20 51 05.5**	**+0.8**
	baz=19							
SCST	**Cishan**	**0.46**	**98**	⇑*i*P		**Pn**	**20 50 59.7**	**-1.1**
	baz=106							
SCST				*e*S		**Sn**	**20 51 07.9**	**-0.8**
	baz=106							
KAU	**Kaohsiung**	**0.48**	**143**	*e*P		**Pn**	**20 51 01.2**	**+0.2**
	baz=154							
ICHU	**Yijhu**	**0.49**	**33**	P		**Pb**	**20 50 58.8**	**-0.2**
	baz=26							
ICHU				*e*S		**Sg**	**20 51 05.6**	**+0.3**
	baz=26							
SGLT	**Jiouru**	**0.51**	**116**	P		**Pn**	**20 51 00.7**	**-0.8**
	baz=125							
SNST	**Tainan City**	**0.54**	**60**	P		**Pb**	**20 50 59.9**	**0.0**
	baz=59							
SNST				*e*S		**Sg**	**20 51 06.8**	**0.0**
	baz=59							
TSPT	**Pingtung City**	**0.54**	**120**	*e*P		**Pn**	**20 51 01.4**	**-0.5**
	baz=131							
TSPT				*e*S		**Sn**	**20 51 11.6**	**+1.1**
	baz=131							
CHN1	**Nanshi**	**0.54**	**64**	P		**Pb**	**20 50 59.9**	**-0.2**
	baz=65							
TWK	**Hsinying**	**0.55**	**55**	*i* P		**Pb**	**20 51 00.3**	**+0.1**
	baz=55							
TWK				*e*S		**Sg**	**20 51 08.1**	**+0.6**
	baz=55							
SGST	**Jiashian**	**0.56**	**76**	*e*P		**Pg**	**20 50 59.5**	**-0.6**
	baz=79							
VCHM	**Qimei**	**0.58**	**296**	P		**Pn**	**20 51 02.6**	**+0.1**
	baz=289							
VCHM				*e*S		**Sn**	**20 51 12.1**	**+0.4**
	baz=289							
SLGT	**Liugui**	**0.60**	**86**	*e*P		**Pb**	**20 51 01.6**	**+0.5**
	baz=90							
SLGT				*e*S		**Sb**	**20 51 10.2**	**+1.0**
	baz=90							
WSL	**Shuilin Townsh**	**0.61**	**21**	*e*P		**Pb**	**20 51 01.5**	**+0.3**
	baz=14							
WSL				*e*S		**Sg**	**20 51 10.0**	**+0.8**
	baz=14							
SSD	**Sandimen**	**0.62**	**109**	⇑*i*P		**Pn**	**20 51 02.2**	**-0.9**
	baz=116							
SSD				*e*S		**Sn**	**20 51 12.0**	**-0.6**
	baz=116							
WTP	**Ta-pu**	**0.64**	**62**	*e*P		**Pg**	**20 51 01.4**	**-0.3**
	baz=63							
WTP				*e*S		**Sg**	**20 51 09.9**	**-0.3**
	baz=63							
TSMG	**Majia**	**0.65**	**112**	⇑*i*P		**Pn**	**20 51 02.6**	**-0.8**
	baz=119							
TSMG				*e*S		**Sn**	**20 51 12.2**	**-1.0**
	baz=119							
CHY	**Chiayi**	**0.67**	**36**	*e*P		**Pb**	**20 51 02.5**	**+0.2**
	baz=32							
CHY				*e*S		**Sg**	**20 51 12.0**	**+0.8**
	baz=32							
MASBT	**Mashibuluo**	**0.68**	**120**	⇑*i*P		**Pn**	**20 51 03.5**	**-0.3**
	baz=127							
MASBT				*e*S		**Sn**	**20 51 13.2**	**-0.8**
	baz=127							
CHN4	**Tsaushan**	**0.68**	**54**	*e*P		**Pg**	**20 51 02.2**	**-0.2**
	baz=53							
CHN4				*e*S		**Sg**	**20 51 11.6**	**+0.2**
	baz=53							
TPUB	**Ta-pu**	**0.68**	**59**	P		**Pb**	**20 51 02.8**	**+0.4**
	baz=59							
TPUB				*e*S		**Sg**	**20 51 10.7**	**-0.7**
	baz=59							
PHUB	**P'eng-hu**	**0.68**	**325**	P		**Pn**	**20 51 02.9**	**-0.9**
	baz=318							
PHUB				*e*S		**Sn**	**20 51 13.3**	**-0.9**
	baz=318							
WLCH	**Liuqiu**	**0.69**	**149**	*e*P		**Pn**	**20 51 05.4**	**+1.4**
	baz=157							
SSPT	**Xinbi**	**0.70**	**131**	*e*P		**Pn**	**20 51 04.7**	**+0.5**
	baz=139							
SSPT				*e*S		**Sn**	**20 51 16.2**	**+1.6**
	baz=139							
WSF	**Szhu**	**0.72**	**17**	⇑P		**Pb**	**20 51 03.4**	**+0.3**
	baz=11							
WSF				*e*S		**Sb**	**20 51 13.6**	**+1.0**
	baz=11							
CHN2	**Minshiung**	**0.73**	**37**	*e*P		**Pn**	**20 51 03.9**	**-0.6**
	baz=34							
CHN2				*e*S		**Sg**	**20 51 13.7**	**+0.8**
	baz=34							
STYT	**Tauyuan**	**0.73**	**73**	P		**Pb**	**20 51 03.4**	**+0.1**
	baz=75							
STYT				*e*S		**Sg**	**20 51 13.8**	**+0.7**
	baz=75							
PNG	**Penghu**	**0.74**	**327**	P		**Pn**	**20 51 04.2**	**-0.4**
	baz=320							
PNG				*e*S		**Sn**	**20 51 14.6**	**-0.8**
	baz=320							
STYH	**Taoyuan**	**0.75**	**73**	*e*P		**Pg**	**20 51 03.4**	**-0.3**
	baz=74							
STYH				*e*S		**Sg**	**20 51 14.1**	**+0.4**
	baz=74							
SCZT	**Fangliau**	**0.81**	**135**	⇑P		**Pn**	**20 51 06.2**	**+0.5**
	baz=141							
SCZT				*e*S		**Sn**	**20 51 18.1**	**+0.8**
	baz=141							
WTK	**Tuku**	**0.82**	**26**	*e*P		**Pb**	**20 51 04.8**	**0.0**
	baz=22							
WTK				*e*S		**Sg**	**20 51 15.7**	**-0.1**
	baz=22							
WMLT	**Mailiao**	**0.88**	**14**	*e*P		**Pg**	**20 51 05.8**	**-0.2**
	baz=9.0							
WDLH	**Douliu**	**0.89**	**34**	*e*P		**Pg**	**20 51 06.1**	**-0.2**
	baz=31							
WDLH				*e*S		**Sb**	**20 51 17.9**	**+0.4**
	baz=31							
WGK	**Gukeng**	**0.90**	**35**	*e*P		**Pn**	**20 51 06.5**	**-0.3**
	baz=33							
WGK				*e*S		**Sb**	**20 51 18.9**	**+1.0**
	baz=33							
ALS	**Alishan**	**0.93**	**53**	*e*P		**Pb**	**20 51 06.7**	**-0.2**
	baz=52							
ALS				*e*S		**Sb**	**20 51 19.2**	**+0.2**
	baz=52							
WTCT	**Ta-ch'eng**	**0.95**	**16**	*e*P		**Pn**	**20 51 07.2**	**-0.3**
	baz=12							
WTCT				*e*S		**Sb**	**20 51 20.1**	**+0.9**
	baz=12							
ECL	**Taimali**	**0.95**	**111**	⇓P		**Pn**	**20 51 07.7**	**+0.1**
	baz=116							
ECL				*e*S		**Sn**	**20 51 20.4**	**-0.3**
	baz=116							
EAST	**Anshuo**	**0.97**	**125**	⇑*i*P		**Pn**	**20 51 08.4**	**+0.6**
	baz=131							
EAST				*e*S		**Sn**	**20 51 22.6**	**+1.4**
	baz=131							
ELDTW	**Lidau**	**0.97**	**76**	⇑*i*P		**Pg**	**20 51 07.5**	**-0.3**
	baz=77							
ELDTW				*e*S		**Sb**	**20 51 20.6**	**+0.6**
	baz=77							
TWG	**Pinlang**	**1.00**	**97**	*e*P		**Pn**	**20 51 08.2**	**0.0**
	baz=101							
TWG				*e*S		**Sg**	**20 51 21.5**	**0.0**
	baz=101							
TWGBT	**Beinan**	**1.01**	**97**	⇑*e*P		**Pn**	**20 51 08.4**	**0.0**
	baz=101							
TWGBT				*e*S		**Sb**	**20 51 21.6**	**+0.6**
	baz=101							
WRL	**Guolierlin Hig**	**1.01**	**20**	*e*P		**Pb**	**20 51 08.0**	**0.0**
	baz=16							
WRL				*e*S		**Sb**	**20 51 21.0**	**0.0**
	baz=16							
TAW	**Tawu**	**1.02**	**125**	*e*P		**Pn**	**20 51 09.1**	**+0.6**
	baz=130							
TAW				*e*S		**Sn**	**20 51 23.6**	**+1.2**
	baz=130							
TAWH	**Dawu Township**	**1.02**	**126**	⇑*e*P		**Pn**	**20 51 08.9**	**+0.4**
	baz=131							
TAWH				*e*S		**Sn**	**20 51 22.5**	**0.0**
	baz=131							
YUS	**Yu-Shan**	**1.03**	**58**	*e*P		**Pb**	**20 51 08.6**	**-0.1**
	baz=58							
YUS				*e*S		**Sb**	**20 51 22.0**	**-0.2**
	baz=58							
SLIU	**Shizi**	**1.04**	**134**	⇑P		**Pn**	**20 51 09.3**	**+0.5**
	baz=140							
SLIU				*e*S		**Sn**	**20 51 23.5**	**+0.5**
	baz=140							
LONT	**Longtian**	**1.05**	**92**	⇑*e*P		**Pg**	**20 51 08.9**	**-0.3**
	baz=95							
LONT				*e*S		**Sb**	**20 51 22.4**	**+0.3**
	baz=95							
TTN	**Taitung**	**1.08**	**100**	⇑*e*P		**Pg**	**20 51 10.5**	**+0.6**
	baz=104							
TTN				*e*S		**Sn**	**20 51 26.1**	**+2.2**
	baz=104							
WJS	**Zhushan**	**1.10**	**38**	*e*P		**Pn**	**20 51 09.1**	**-0.6**
	baz=35							
WJS				*e*S		**Sb**	**20 51 23.5**	**-0.1**
	baz=35							
WNT	**Mingjian**	**1.12**	**34**	*e*P		**Pn**	**20 51 09.5**	**-0.4**
	baz=32							
WNT				*e*S		**Sb**	**20 51 24.4**	**+0.2**
	baz=32							
ECS	**Chishang**	**1.14**	**82**	*e*P		**Pg**	**20 51 10.9**	**0.0**
	baz=84							
ECS				*e*S		**Sb**	**20 51 25.4**	**+0.7**
	baz=84							
WYL	**Yuanlin Townsh**	**1.14**	**28**	*e*P		**Pg**	**20 51 10.8**	**-0.2**
	baz=25							
WYL				*e*S		**Sb**	**20 51 25.4**	**+0.6**
	baz=25							
WNT1	**Nantou City**	**1.14**	**33**	*e*P		**Pn**	**20 51 10.1**	**-0.1**
	baz=31							
WNT1				*e*S		**Sb**	**20 51 25.4**	**+0.5**
	baz=31							
HEN	**Hengchun**	**1.16**	**144**	*e*P		**Pg**	**20 51 11.7**	**+0.2**
	baz=148							
EDH	**Donghe**	**1.21**	**89**	⇑*e*P		**Pb**	**20 51 11.3**	**0.0**
	baz=91							
EDH				*e*S		**Sb**	**20 51 27.1**	**+0.4**
	baz=91							
SMST	**Manzhou Townsh**	**1.21**	**140**	*e*P		**Pg**	**20 51 11.5**	**-0.9**
	baz=144							
SSLB	**Suanglung**	**1.21**	**46**	P		**Pn**	**20 51 11.1**	**-0.1**
SSLB	**Suanglung**	**1.21**	**46**	*e*P		**Pn**	**20 51 10.6**	**-0.7**
	baz=45							
SSLB				*e*S		**Sb**	**20 51 26.5**	**-0.5**
	baz=45							
FULB	**Fuli**	**1.22**	**78**	*e*P		**Pg**	**20 51 12.3**	**-0.3**
	baz=80							
FULB				*e*S		**Sn**	**20 51 28.2**	**+0.8**
	baz=80							
TYC	**Yuchr**	**1.24**	**40**	*e*P		**Pn**	**20 51 11.3**	**-0.2**
	baz=38							
TYC				*e*S		**Sb**	**20 51 27.8**	**+0.2**
	baz=38							
SMLT	**Sun Moon Lake**	**1.25**	**42**	*e*P		**Pn**	**20 51 11.5**	**-0.2**
	baz=40							
SMLT				*e*S		**Sb**	**20 51 27.8**	**-0.2**
	baz=40							
TWK1	**Hengchun**	**1.25**	**143**	*e*P		**Pg**	**20 51 12.4**	**-0.8**
	baz=147							
TWK1				*e*S		**Sg**	**20 51 29.1**	**-0.3**
	baz=147							
TWKBT	**Hengchun**	**1.26**	**143**	⇑*e*P		**Pg**	**20 51 12.4**	**-0.8**
	baz=147							
TWKBT				*e*S		**Sg**	**20 51 29.2**	**-0.5**
	baz=147							
TWF1	**Yuli**	**1.26**	**71**	*e*P		**Pb**	**20 51 12.2**	**-0.1**
	baz=72							
TWF1				*e*S		**Sb**	**20 51 28.1**	**-0.2**
	baz=72							
WWF	**Wufeng**	**1.27**	**31**	*e*P		**Pb**	**20 51 12.3**	**-0.1**
	baz=28							
WWF				*e*S		**Sb**	**20 51 29.1**	**+0.8**
	baz=28							
CHKT	**Chengkung**	**1.27**	**83**	*e*P		**Pg**	**20 51 12.9**	**-0.6**
	baz=85							
YULB	**Yu-li**	**1.28**	**70**	⇑P		**Pn**	**20 51 12.2**	**+0.1**
	baz=70							
YULB				*e*S		**Sn**	**20 51 27.8**	**-1.0**
	baz=70							
EYUL	**Yuli**	**1.28**	**72**	*e*P		**Pb**	**20 51 12.4**	**-0.3**
	baz=73							
EYUL				*e*S		**Sn**	**20 51 28.2**	**-0.7**
	baz=73							
VWDT	**VWDT**	**1.32**	**53**	*e*P		**Pb**	**20 51 13.0**	**-0.3**
	baz=52							
VWDT				*e*S		**Sn**	**20 51 29.2**	**-0.7**
	baz=52							
EHY	**Hungye**	**1.34**	**65**	*e*P		**Pb**	**20 51 13.4**	**-0.2**
	baz=66							
EHY				*e*S		**Sn**	**20 51 29.9**	**-0.5**
	baz=66							
TCU	**Taichung**	**1.35**	**28**	*e*P		**Pb**	**20 51 13.7**	**-0.1**
	baz=25							
TCU				*e*S		**Sn**	**20 51 31.4**	**+0.9**
	baz=25							
DPDB	**Guoxing**	**1.38**	**38**	*e*P		**Pn**	**20 51 13.5**	**0.0**
	baz=37							
DPDB				*e*S		**Sn**	**20 51 31.5**	**+0.2**
	baz=37							
WPL	**Puli Township**	**1.38**	**40**	*e*P		**Pn**	**20 51 13.5**	**+0.1**
	baz=38							
WPL				*e*S		**Sn**	**20 51 30.7**	**-0.6**
	baz=38							
WCS	**Beigang Elemen**	**1.39**	**37**	*e*P		**Pn**	**20 51 13.6**	**0.0**
	baz=36							
WCS				*e*S		**Sn**	**20 51 32.0**	**+0.5**
	baz=36							
LDUT	**Ludao**	**1.39**	**101**	*e*P		**Pb**	**20 51 14.2**	**-0.3**
	baz=104							
LDUT				*e*S		**Sb**	**20 51 32.3**	**+0.4**
	baz=104							
HGSD	**Ruisui**	**1.42**	**67**	*e*P		**Pb**	**20 51 15.4**	**+0.4**
	baz=68							
HGSD				*e*S		**Sn**	**20 51 33.4**	**+1.1**
	baz=68							
WUSB	**Renai**	**1.46**	**45**	*e*P		**Pn**	**20 51 14.9**	**+0.1**
	baz=44							
WUSB				*e*S		**Sn**	**20 51 33.0**	**-0.6**
	baz=44							
OWD	**Renai**	**1.48**	**47**	*e*P		**Pn**	**20 51 15.3**	**+0.4**
	baz=46							
OWD				*e*S		**Sn**	**20 51 33.1**	**-0.8**
	baz=46							
EGFH	**Guangfu**	**1.50**	**61**	*e*P		**Pn**	**20 51 15.3**	**+0.2**
	baz=61							
EGFH				*e*S		**Sn**	**20 51 34.8**	**+0.5**
	baz=61							
WDJ	**Dajia District**	**1.51**	**23**	*e*P		**Pb**	**20 51 16.9**	**+0.3**
	baz=21							
WDJ				*e*S		**Sb**	**20 51 36.5**	**+1.0**
	baz=21							
CHGB	**Renai**	**1.55**	**44**	*e*P		**Pn**	**20 51 16.2**	**+0.2**
	baz=43							
CHGB				*e*S		**Sn**	**20 51 35.1**	**-0.7**
	baz=43							
TWQ1	**Liyutan**	**1.56**	**27**	*e*P		**Pb**	**20 51 17.3**	**-0.2**
	baz=25							
TWQ1				*e*S		**Sb**	**20 51 37.4**	**+0.4**
	baz=25							
ESL	**Shilin**	**1.58**	**57**	*e*P		**Pb**	**20 51 17.4**	**-0.3**
	baz=57							
WHP	**Taichung City**	**1.58**	**33**	*e*P		**Pn**	**20 51 17.0**	**+0.6**
	baz=32							
NSY	**Sanyi**	**1.62**	**26**	*e*P		**Pb**	**20 51 18.4**	**0.0**
	baz=24							
WHF	**Hehuan Shan**	**1.67**	**44**	*e*P		**Pb**	**20 51 19.1**	**-0.3**
	baz=44							
WHF				*e*S		**Sn**	**20 51 39.3**	**+0.3**
	baz=44							
TDCB	**Techi**	**1.68**	**39**	*e*P		**Pn**	**20 51 18.5**	**+0.8**
	baz=38							
LAY	**Lan-yu**	**1.70**	**122**	*e*P		**Pn**	**20 51 17.7**	**-0.2**
	baz=125							
LAY				*e*S		**Sn**	**20 51 38.5**	**-0.7**
	baz=125							
FUSS	**Fushou**	**1.73**	**41**	*e*P		**Pn**	**20 51 19.0**	**+0.5**
	baz=40							
FUSS				*e*S		**Sn**	**20 51 40.4**	**+0.1**
	baz=40							
NMLH	**Miaoli**	**1.74**	**25**	*e*P		**Pb**	**20 51 20.1**	**-0.4**
	baz=23							
LYUB	**Lan-yu**	**1.75**	**122**	*e*P		**Pn**	**20 51 17.1**	**-1.4**
	baz=126							
LYUB				*e*S		**Sn**	**20 51 37.5**	**-2.9**
	baz=126							
ETLH	**Xiulin Townshi**	**1.85**	**47**	*e*P		**Pb**	**20 51 21.3**	**-1.2**
	baz=47							
NACB	**Ninganchiao**	**1.91**	**50**	*e*P		**Pn**	**20 51 21.4**	**+0.7**
	baz=50							
NFF	**Wufeng Townshi**	**1.96**	**31**	*e*P		**Pn**	**20 51 22.1**	**+0.5**
	baz=30							
LATG	**Datong**	**2.11**	**41**	*e*P		**Pb**	**20 51 25.5**	**-1.4**
	baz=41							
YHNB	**Yeheng**	**2.13**	**36**	P		**Pn**	**20 51 24.9**	**+1.1**
PTMZ	**Houxiangcun**	**2.23**	**339**	*e*P		**Pn**	**20 51 25.3**	**+0.1**
	baz=336							

*IDC **29** 20:56:41.5±0.8, 29°.20S×61°.20E, h0km, mb3.9/10, mbtmp4.0/11, ML4.1/1, MS3.5/18, Error ellipse: s-maj=28.5km s-min=21.4km az=55.0*
*NEIC **29** 20:56:43.0±0.9, 29°.18S±0°.09×61°.1E±0°.1, h10km±1km, mb4.3/12, Error ellipse: s-maj=20.7km s-min=14.7km az=99.0*
ISC 29 20:56:43.1±0.7, 29°.1S±0°.1×61°.1E±0°.1, h10km, n46, σ0°98/24, mb4.2/14, MS3.5/18, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RER	**Riviere de l'E**	**9.29**	**327**	Pn		**Pn**	**20 58 54.4**	**-2.9**
FOMA	**Nahampoana Res**	**13.27**	**285**	Pn		**Pn**	**20 59 49.8**	**-1.7**
VOI	**Vohitsoka**	**14.79**	**296**			**Pn**	**21 00 12.9**	**+0.4**
OPO	**Ambohidratompo**	**16.50**	**306**	Pn		**Pn**	**21 00 33.8**	**-1.0**
	0.1nm,0.3s,baz=116,slow=14,SNR=2.5							
	2.4nm,0.5s							
BOSA	**Boshof**	**31.35**	**262**	LR		LR	21 13 38.9	
	comp=Z,73nm,18.8s,baz=158,slow=32							
SUR	**Sutherland**	**34.67**	**254**	LR		LR	21 15 02.5	
	comp=Z,18nm,20.6s,baz=134,slow=32							
KMBO	**Kilima Mbogo**	**35.95**	**316**	LR		LR	21 15 29.9	
	comp=Z,59nm,18.1s,baz=100,slow=31							
MAW	**Mawson**	**38.54**	**179**	LR		LR	21 17 11.4	
	comp=Z,144nm,18.6s,baz=338,slow=32							
MBAR	**Mbarara**	**40.55**	**309**	LR		LR	21 18 32.6	
	comp=Z,59nm,22.0s,baz=128,slow=32							
TSUM	**Tsumeb**	**40.74**	**274**	LR		LR	21 19 16.1	
	comp=Z,45nm,18.5s,baz=146,slow=33							
PALK	**Pallekele**	**40.79**	**31**	LR		LR	21 15 49.4	
	comp=Z,48nm,21.7s,baz=332,slow=28							
ATD	**Arta Tunnel**	**44.09**

MMAI	**Mount Meron Ar**	**66.43**	**337**	LR	LR	21 33 24.0		
	comp=Z,38nm,19.8s,baz=354,slow=33							
GNI	**Garni**	**70.57**	**347**	LR	LR	21 37 25.5		
	comp=Z,40nm,19.4s,baz=180,slow=35							
TORD	**Torodi Ar. Bea**	**71.09**	**298**	P	**P**	**21 08 02.8**	**+0.9**	
	comp=Z,0.9nm,0.8s,baz=131,slow=4.6,SNR=4.8							
	comp=Z,0.9nm,0.8s							
KKAR	**Karatay Array**	**72.37**	**7**	P	**P**	**21 08 09.4**	**+0.4**	
KDJ	**Kajisay**	**72.41**	**12**	P	**P**	**21 08 09.4**	**-0.1**	
KDJ				IAmb	IAmb	21 08 13.8		
	comp=Z,2.3nm,0.9s							
AAK	**Ala-Archa**	**72.44**	**10**	LR	LR	21 37 47.9		
	comp=Z,24nm,18.1s,baz=168,slow=34							
BOOM	**Boomskoye usch**	**72.54**	**11**	P	**P**	**21 08 11.0**	**+0.8**	
BOOM				IAmb	IAmb	21 08 44.0		
	comp=Z,3.3nm,1.2s							
KBZ	**Khabaz**	**74.38**	**346**	LR	LR	21 39 04.4		
	comp=Z,30nm,21.6s,baz=170,slow=34							
MK31	**Makanchi Array**	**77.93**	**15**	P	**P**	**21 08 41.3**	**+0.3**	
MKAR	**Makanchi Array**	**77.93**	**15**	P	**P**	**21 08 41.3**	**+0.3**	
	comp=Z,0.7nm,0.8s,baz=194,slow=4.6,SNR=5.4							
	comp=Z,0.7nm,0.8s							
MKAR	**Makanchi Array**	**77.93**	**15**	P	**P**	**21 08 40.9**	**-0.1**	
ABKAR	**Akbulak array**	**78.02**	**359**	P	**P**	**21 08 41.7**	**+0.3**	
ABKAR				IAmb	IAmb	21 08 44.8		
	comp=Z,2.9nm,1.2s							
ABKAR	**Akbulak array**	**78.02**	**359**	P	**P**	**21 08 41.5**	**+0.2**	
AKTO	**Aktyubinsk**	**79.24**	**358**	LR	LR	21 41 32.7		
	comp=Z,23nm,19.9s,baz=154,slow=34							
KURBB	**Kurchatov Arra**	**80.86**	**11**	P	**P**	**21 08 57.2**	**+0.4**	
	comp=Z,0.8nm,0.9s,baz=204,slow=6.2,SNR=7.4							
	comp=Z,0.8nm,0.9s							
KURK	**Kurchatov**	**80.96**	**11**	P	**P**	**21 08 57.4**	**0.0**	
KURK				IAmb	IAmb	21 09 01.3		
	comp=Z,4.2nm,1.2s							
BVAR	**Borovoye Array**	**82.18**	**6**	LR	LR	21 43 45.9		
	comp=Z,15nm,19.2s,baz=66,slow=34							
ZALV	**Zalesovo Beam**	**85.22**	**14**	P	**P**	**21 09 19.3**	**0.0**	
	comp=Z,1.4nm,0.9s,baz=197,slow=3.1,SNR=5.3							
	comp=Z,1.4nm,0.9s							
DAVOX	**Davos/Dischmat**	**88.58**	**328**	LR	LR	21 49 09.2		
	comp=Z,18nm,20.0s,baz=262,slow=36							
ESDC	**Sonseca Array**	**91.34**	**316**	P	**P**	**21 09 50.6**	**+1.6**	
	comp=Z,1.5nm,1.2s,baz=119,slow=4.5,SNR=2.7							
	comp=Z,1.5nm,1.2s							
ESDC	**Sonseca Array**	**91.34**	**316**	IAmb	IAmb	21 09 51.9		
	comp=Z,2.1nm,1.3s							
NOA	**NORSAR Array B**	**98.54**	**338**	LR	LR	21 54 16.9		
	comp=Z,15nm,19.6s,baz=210,slow=35							

*IDC **29** 21:22:45.6±3.6, 12.°17N×142.°73E, h63km±37km, mb3.3/7, mbtmp3.6/8, ML3.7/1, MS2.3/3, Error ellipse: s-maj=34.1km s-min=18.4km az=105.0*

ISC 29 21:22:43.7±0.9, 12.°2N±0.°2×142.°6E±0.°1, h42km, n10, σ1s12/9, mb3.7/7, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.61**	**57**	P	**Pn**	**21 23 23.7**	**+0.2**
	16nm,0.3s,baz=174,slow=17,SNR=5.1						
GUMO				S	**Sn**	**21 23 54.6**	**+0.7**
	53nm,0.3s,baz=51,slow=22,SNR=7.1						
GUMO				LR	LR	21 24 29.4	
	comp=Z,53nm,21.9s,baz=295,slow=41						
	36nm,0.3s						
JCJ	**Chichijima**	**14.88**	**358**	LR	LR	21 29 58.6	
	comp=Z,12nm,21.8s,baz=160,slow=29						
ASAJ	**Asahikawa**	**31.85**	**360**	LR	LR	21 45 15.1	
	comp=Z,6.1nm,18.5s,baz=314,slow=42						
WRA	**Warramunga Arr**	**32.92**	**194**	P	**P**	**21 29 14.2**	**0.0**
	0.6nm,0.6s,baz=15,slow=9.4,SNR=5.9						
	0.6nm,0.6s						
ASAR	**Alice Springs**	**36.60**	**193**	P	**P**	**21 29 46.5**	**+0.4**
	0.5nm,0.7s,baz=17,slow=13,SNR=6.9						
	0.5nm,0.7s						
SONM	**Songino Array**	**46.69**	**327**	P	**P**	**21 31 09.6**	**+1.1**
	0.2nm,0.5s,baz=142,slow=6.3,SNR=2.5						
	0.2nm,0.5s						
MKAR	**Makanchi Array**	**61.02**	**317**	P	**P**	**21 32 53.3**	**+0.2**
	0.4nm,0.7s,baz=113,slow=7.0,SNR=2.6						
	0.4nm,0.7s						
KURBB	**Kurchatov Arra**	**64.32**	**321**	P	**P**	**21 33 14.7**	**-0.3**
	0.4nm,0.4s,baz=105,slow=6.6,SNR=6.3						
	0.4nm,0.4s						
ILAR	**Eielson Array**	**70.80**	**25**	P	**P**	**21 33 53.3**	**-2.3**
	0.2nm,0.7s,baz=251,slow=5.6,SNR=2.2						
	0.2nm,0.7s						
NVAR	**Mina Array Bea**	**89.52**	**51**	P	**P**	**21 35 37.5**	**+0.3**
	0.4nm,0.3s,baz=289,slow=5.6,SNR=3.8						
	0.4nm,0.3s						

*ISK **29** 21:31:05.8, 40.°35N×37.°92E, h4km, ML3.7/14*
*DDA **29** 21:31:06.2±0.0, 40.°32N×37.°88E, h17km±1km, MW3.6*
*IDC **29** 21:31:07.1±0.9, 40.°48N×37.°90E, h0km, mb3.4/5, mbtmp3.4/11, ML3.3/4, MS3.0/2, Error ellipse: s-maj=17.7km s-min=6.5km az=160.0*

ISC 29 21:31:05.9±1.1, 40.°34N±0.°02×37.°90E±0.°01, h2km±9km, n75, σ1s55/106, mb3.4/5, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SUSE	**Susehri**	**0.27**	**120**	P	**Pb**	**21 31 12.5**	**-1.1**
SUSE				S	**Sb**	**21 31 16.8**	**-1.8**
SUSE				*i* AML	AML	21 31 17.0	
	comp=N,4μm,0.2s						
SUSE				*i* AML	AML	21 31 17.0	
	comp=E,3μm,0.2s						
RSDY	**Resadiye-TOKAT**	**0.44**	**277**	PG	**Pb**	**21 31 15.8**	**-0.6**
RSDY				SG	**Sb**	**21 31 22.4**	**-1.0**
CUZAR	**Zara_SIVAS**	**0.46**	**192**	P	**Pb**	**21 31 16.0**	**-0.9**
CUZAR				S	**Sb**	**21 31 22.1**	**-2.2**
CUZAR				*i* AML	AML	21 31 24.0	
	comp=N,2μm,0.3s						
CUZAR				*i* AML	AML	21 31 26.0	
	comp=E,3μm,0.6s						
ALUC	**Giresun/Alucra**	**0.67**	**90**	P	**Pg**	**21 31 18.9**	**+0.2**
ALUC				S	**Sg**	**21 31 27.9**	**+0.5**
ALUC				*i* AML	AML	21 31 29.0	
	comp=N,2μm,0.4s						
ALUC				*i* AML	AML	21 31 30.0	
	comp=E,3μm,0.4s						
SCER	**sogukcermik**	**0.76**	**231**	P	**Pg**	**21 31 20.6**	**+0.2**
SCER				S	**Sb**	**21 31 31.4**	**-1.4**
REFA	**Refahiye_ERZN**	**0.80**	**123**	P	**Pg**	**21 31 21.7**	**+0.6**
REFA				S	**Sb**	**21 31 31.4**	**-2.4**
REFA				*i* AML	AML	21 31 34.0	
	comp=N,582nm,0.3s						
REFA				*i* AML	AML	21 31 35.0	
	comp=E,702nm,0.4s						
SVSK	**Karacayir**	**0.81**	**239**	PG	**Pg**	**21 31 21.9**	**+0.5**
ESPY	**Espiye-Giresun**	**0.85**	**48**	PG	**Pb**	**21 31 22.6**	**-0.8**
ESPY				SG	**Sb**	**21 31 34.4**	**-0.9**
TOKT	**Tokat**	**1.03**	**269**	PG	**Pg**	**21 31 26.1**	**+0.4**
TOKT				SG	**Sn**	**21 31 40.9**	**-1.6**
KELT	**Kelkit**	**1.06**	**100**	P	**Pb**	**21 31 26.1**	**-0.9**
KELT				S	**Sb**	**21 31 39.6**	**-1.7**
KELT				*i* AML	AML	21 31 42.0	
	comp=N,759nm,0.6s						
KELT				*i* AML	AML	21 31 43.0	
	comp=E,678nm,0.3s						
CUKAN	**kangal_SIVAS**	**1.08**	**198**	P	**Pg**	**21 31 26.8**	**+0.3**
CUKAN				S	**Sn**	**21 31 41.6**	**-2.1**
CUKAN				*i* AML	AML	21 31 47.0	
	comp=N,515nm,0.6s						
CUKAN				*i* AML	AML	21 31 48.0	
	comp=E,852nm,0.5s						
TOKA	**Tokat**	**1.08**	**269**	P	**Pg**	**21 31 27.1**	**+0.5**
TOKA				S	**Sg**	**21 31 41.5**	**+0.8**
TOKA				*i* AML	AML	21 31 46.0	
	comp=N,1μm,0.5s						
KEMA	**Kemaliye**	**1.17**	**157**	P	**Pg**	**21 31 28.4**	**+0.1**
KEMA				S	**Sg**	**21 31 45.0**	**+1.7**
KEMA				*i* AML	AML	21 31 46.0	
	comp=N,252nm,0.3s						
KEMA				*i* AML	AML	21 31 49.0	
	comp=E,850nm,0.6s						
GUMT	**Gumushane**	**1.22**	**84**	PN	**Pb**	**21 31 28.9**	**-0.7**
ARPR	**Arapgir-MALATY**	**1.29**	**165**	PN	**Pg**	**21 31 31.0**	**+0.3**
CUAYA	**Sivas-Altinyay**	**1.39**	**220**	P	**Pg**	**21 31 33.1**	**+0.5**
CUAYA				S	**Sg**	**21 31 52.9**	**+2.2**
HEKM	**Malatya_Hekimh**	**1.46**	**178**	P	**Pg**	**21 31 34.1**	**+0.2**
HEKM				S	**Sg**	**21 31 55.4**	**+2.5**
HEKM				*i* AML	AML	21 31 57.0	
	comp=N,599nm,0.3s						

EUZM	**Uzumlu**	**1.52**	**114**	P	**Pb**	**21 31 33.6**	**-1.3**	
EUZM				S	**Sg**	**21 31 55.4**	**+0.7**	
EUZM				*i* AML	AML	21 32 01.0		
	comp=E,383nm,0.6s							
KTUT	**Trabzon**	**1.56**	**65**	PN	**Pb**	**21 31 34.9**	**-0.6**	
KTUT				SN	**Sg**	**21 31 56.2**	**+0.2**	
CUSAR	**Sarkisla-SIVAS**	**1.57**	**235**	P	**Pg**	**21 31 35.4**	**-0.6**	
CUSAR				S	**Sg**	**21 31 57.1**	**+0.8**	
CUSAR				*i* AML	AML	21 31 58.0		
	comp=N,440nm,0.5s							
ERZN	**Erzincan**	**1.59**	**118**	PN	**Pb**	**21 31 35.3**	**-0.8**	
KIZO	**Buyukkizoglu-L**	**1.59**	**291**	PN	**Pb**	**21 31 35.8**	**-0.3**	
AMSY	**Amasya-Merkez**	**1.60**	**281**	P	**Pb**	**21 31 35.9**	**-0.3**	
SAMS	**Samsun-Alacam**	**1.65**	**309**	P	**Pb**	**21 31 36.6**	**-0.3**	
YARM	**Yarimca-Ladik(**	**1.68**	**291**	PN	**Pb**	**21 31 37.0**	**-0.5**	
TNCL	**Tunceli-Merkez**	**1.77**	**134**	P	**Pg**	**21 31 39.7**	**0.0**	
TNCL				S	**Sg**	**21 32 02.9**	**+0.4**	
TNCL				*i* AML	AML	21 32 07.0		
	comp=N,765nm,0.8s							
TNCL				*i* AML	AML	21 32 07.0		
	comp=E,589nm,0.9s							
HACI	**Hacifakili, Ak**	**1.78**	**250**	P	**Pb**	**21 31 37.2**	**-2.1**	
HACI				S	**Sg**	**21 32 02.2**	**-0.9**	
DARE	**Darende-Malaty**	**1.80**	**190**	PN	**Pb**	**21 31 38.7**	**-0.9**	
BAYB	**BAYBURT**	**1.81**	**92**	P	**Pb**	**21 31 39.4**	**-0.4**	
HAVZ	**Havza**	**1.81**	**295**	P	**Pg**	**21 31 40.6**	**0.0**	
CKRK	**Yozgat, Cekere**	**1.85**	**262**	P	**Pb**	**21 31 40.5**	**0.0**	
CKRK				S	**Sg**	**21 32 06.9**	**+1.4**	
CKRK				*i* AML	AML	21 32 12.0		
	comp=N,239nm,0.4s							
KOPT	**Kop Dagi**	**2.02**	**98**	P	**Pb**	**21 31 42.8**	**-0.6**	
KOPT				S	**Sg**	**21 32 09.8**	**-0.9**	
KOPT				*i* AML	AML	21 32 13.0		
	comp=N,221nm,0.6s							
ELZG	**Elazig**	**2.03**	**155**	P	**Pb**	**21 31 43.6**	**+0.1**	
AKCD	**Akcadag**	**2.04**	**179**	P	**Pb**	**21 31 43.2**	**-0.6**	
YOZ	**Yozgat**	**2.10**	**251**	PN	**Pb**	**21 31 43.1**	**-1.7**	
ELBS	**KAHRAMANMARAS**	**2.10**	**197**	P	**Pb**	**21 31 44.3**	**-0.4**	
BNN	**Bunyan**	**2.17**	**227**	PN	**Pb**	**21 31 44.2**	**-1.8**	
KOVA	**Elazig, Kovancr**	**2.21**	**137**	P	**Pb**	**21 31 45.2**	**-1.3**	
COAL	**Corum-Alaca**	**2.23**	**269**	P	**Pb**	**21 31 45.9**	**-1.0**	
YEDI	**Yedisu-Bingol**	**2.23**	**113**	PN	**Pb**	**21 31 44.6**	**-2.3**	
SVRC	**Sivrice-ELAZID**	**2.25**	**150**	PN	**Pb**	**21 31 44.9**	**-2.3**	
SARI	**SarD1z-Kayseri**	**2.25**	**211**	PN	**Pb**	**21 31 45.1**	**-2.2**	
CHAY	**Cayeli-Rize**	**2.27**	**70**	PN	**Pn**	**21 31 45.1**	**+0.7**	
CHOM	**Cayeli-Rize**	**2.30**	**70**	PN	**Pn**	**21 31 45.5**	**+0.6**	
KRIK	**Erzurum-spir**	**2.32**	**89**	P	**Pb**	**21 31 47.4**	**-1.1**	
KRIK				S	**Sb**	**21 32 16.2**	**-1.4**	
KRIK				*i* AML	AML	21 32 20.0		
	comp=N,155nm,0.5s							
KRIK				*i* AML	AML	21 32 24.0		
	comp=E,106nm,0.6s							
SIRC	**Yozgat**	**2.34**	**245**	P	**Pb**	**21 31 48.0**	**-0.9**	
SIRC				S	**Sb**	**21 32 18.1**	**-0.2**	
SIRC				*i* AML	AML	21 32 26.0		
	comp=E,109nm,0.6s							
EMRE	**Erzurum,Aziziy**	**2.38**	**97**	P	**Pg**	**21 31 51.6**	**+0.1**	
DIKM	**Dikmen**	**2.39**	**304**	PN	**Pb**	**21 31 47.0**	**-2.5**	
CTAK	**Corum_Osmancik**	**2.39**	**278**	P	**Pb**	**21 31 47.4**	**-2.3**	
CORM	**Corum**	**2.50**	**267**	PN	**Pb**	**21 31 48.9**	**-2.7**	
KOZK	**Kozakli-Nevseh**	**2.59**	**245**	PN	**Pb**	**21 31 50.1**	**-3.0**	
ERZM	**Erzurum**	**2.69**	**98**	P	**Pg**	**21 31 56.5**	**-1.0**	
BOYA	**Sinop/Boyabat-**	**2.71**	**297**	P	**Pn**	**21 31 51.2**	**+0.8**	
KAGI	**orum-Kargı**	**2.72**	**288**	P	**Pb**	**21 31 52.1**	**-3.0**	
AVNS	**Nevsehir-Avano**	**2.81**	**238**	P	**Pb**	**21 31 55.0**	**-1.9**	
DBAD	**Bademkaya**	**2.97**	**76**	P	**Pb**	**21 31 57.3**	**-2.2**	
DBAD				S	**Sn**	**21 32 31.0**	**+0.8**	
DDEM	**Demirkent**	**2.98**	**78**	P	**Pb**	**21 31 58.4**	**-1.4**	
BATM	**Batumi**	**3.14**	**65**	P	**Pn**	**21 31 57.2**	**+0.8**	
BATM				S	**Sb**	**21 32 36.8**	**-4.3**	
DAGI	**Agillar**	**3.14**	**75**	P	**Pb**	**21 31 58.8**	**-3.7**	
BRTR	**Keskin Array B**	**3.33**	**261**	Pn	**Pn**	**21 32 00.8**	**+1.8**	
	3.7nm,0.3s,baz=168,slow=16,SNR=62							
BRTR				Pg	**Pg**	**21 32 09.6**	**0.0**	
	4.6nm,0.3s,baz=90,slow=15,SNR=16							
BRTR				Sn	**Sb**	**21 32 43.5**	**-3.1**	
	2.0nm,0.3s,baz=343,slow=12,SNR=3.6							
BRTR				Lg	Lg	21 32 53.5		
	3.6nm,0.3s,baz=122,slow=28,SNR=6.6							
BRTR				LR	LR	21 33 29.0		
	comp=Z,147nm,18.4s,baz=122,slow=42							
	6.2nm,0.3s							
CHVG	**Ch'k'valeri**	**3.94**	**52**	P	**Pn**	**21 32 08.8**	**+1.5**	
CHVG				S	**Sn**	**21 32 54.0**	**-0.1**	
ABS	**Abastumani**	**3.98**	**68**	P	**Pn**	**21 32 10.4**	**+2.4**	
ABS				S	**Sn**	**21 32 56.9**	**+1.6**	
TKB	**Tkibuli**	**4.33**	**61**	P	**Pn**	**21 32 14.7**	**+1.9**	
TKB				S	**Sn**	**21 33 06.5**	**+2.8**	
ONI	**Oni**	**4.74**	**60**	P	**Pn**	**21 32 19.4**	**+1.0**	
ONI				S	**Sn**	**21 33 11.8**	**-2.1**	
KBZ	**Khabaz**	**5.03**	**46**	Pn	**Pn**	**21 32 24.2**	**+1.9**	
	0.6nm,0.3s,baz=234,slow=10,SNR=7.5							
KBZ				Sn	**Sn**	**21 33 23.3**	**+2.4**	
	0.4nm,0.3s,baz=290,slow=22,SNR=2.3							
	1.8nm,0.5s							
KVAR	**Kislovodsk Arr**	**5.07**	**43**	Pn	**Pn**	**21 32 24.9**	**+1.9**	
	baz=258,slow=20							
KVAR				Sn	**Sn**	**21 33 23.1**	**+0.9**	
	baz=99,slow=21							
	2.7nm,0.4s							
GNI	**Garni**	**5.24**	**90**	Pn	Pn	21 32 28.9	+3.5	
	1.6nm,0.4s,baz=51,slow=23,SNR=2.2							
GNI				Pg	Pg	21 32 42.8	-3.5	
	0.7nm,0.3s,baz=346,slow=4.8,SNR=11							
GNI				Lg	Lg	21 33 54.4		
	baz=179,slow=18							
MLR	**Muntele Rosu**	**10.16**	**304**	Pn	**Pn**	**21 33 33.4**	**+0.5**	
	0.1nm,0.3s,baz=78,slow=18,SNR=3.1							
	1.3nm,0.8s							
AKASG	**Malin Array Be**	**12.00**	**333**	Pn	**Pn**	**21 33 56.4**	**-1.4**	
	1.3nm,0.4s,baz=137,slow=14,SNR=17							
FINES	**FINESS Array B**	**22.33**	**345**	P	**P**	**21 36 06.0**	**+1.4**	
	1.0nm,0.5s,baz=144,slow=12,SNR=12							
	1.0nm,0.5s							
HFS	**Hagfors**	**24.88**	**331**	P	**P**	**21 36 31.0**	**+1.3**	
	0.9nm,0.7s,baz=114,slow=16,SNR=1.7							
	0.9nm,0.7s							
KURBB	**Kurchatov Arra**	**29.94**	**56**	P	**P**	**21 37 17.0**	**+1.9**	
	0.4nm,0.9s,baz=273,slow=9.0,SNR=2.9							
	0.4nm,0.9s							
MKAR	**Makanchi Array**	**32.46**	**64**	P	**P**	**21 37 39.3**	**+1.9**	
	0.4nm,0.8s,baz=260,slow=9.7,SNR=2.6							
	0.4nm,0.8s							
BORG	**Borgarnes**	**41.39**	**326**	LR	LR	21 55 36.8		
	comp=Z,29nm,18.9s,baz=338,slow=36							
ILAR	**Eielson Array**	**75.16**	**2**	P	**P**	**21 42 48.0**	**-1.2**	
	0.1nm,0.4s,baz=338,slow=6.8,SNR=1.9							
	0.1nm,0.4s							

*IDC **29** 21:55:18.1±1.9, 20.°44S×168.°86E, h0km, mb3.8/7, mbtmp3.9/7, MS3.5/1, Error ellipse: s-maj=88.6km s-min=24.4km az=151.0*
*NOU **29** 21:55:19.3, 20.°49S×168.°74E, h0km, MLv4.3/13, Loyalty Islands*
*NEIC **29** 21:55:21.9±1.8, 20.°60S±0.°05×168.°59E±0.°07, h10km±2km, mb4.3/8, Error ellipse: s-maj=12.8km s-min=5.3km az=55.0*

ISC 29 21:55:22.3±0.7, 20.°54S±0.°06×168.°73E±0.°08, h26km, n41, σ1s02/42, mb3.9/10, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**1.14**	**215**		**Pn**	**21 55 41.3**	**-1.3**
MARNC				Sn	**Sn**	**21 55 56.2**	**-1.2**
MARNC	**Mare, Loyalty**	**1.14**	**215**	P	**Pn**	**21 55 41.5**	**-1.1**
LIFNC	**LIFOU**	**1.41**	**260**		**Pn**	**21 55 44.7**	**-1.6**
LIFNC				Sn	**Sn**	**21 56 01.7**	**-2.4**
LIFNC	**LIFOU**	**1.41**	**260**	P	**Pn**	**21 55 45.0**	**-1.3**
YATNC	**Mamie plateau,**	**2.29**	**228**	P	**Pn**	**21 55 57.2**	**-1.2**
PINNC	**Pines Island,**	**2.38**	**210**		**Pn**	**21 55 59.2**	**-0.5**
PINNC	**Pines Island,**	**2.38**	**210**	P	**Pn**	**21 56 00.0**	**+0.3**
OUENC	**Ouen Island, N**	**2.57**	**223**		**Pn**	**21 56 02.3**	**+0.1**
OUENC	**Ouen Island, N**	**2.57**	**223**	P	**Pn**	**21 56 02.9**	**+0.7**
NOUC	**Port Laguerre**	**2.75**	**235**	P	**Pn**	**21 56 05.8**	**+1.1**
RTV	**Rentapao**	**2.75**	**354**	P	**Pn**	**21 56 05.2**	**+0.5**
ONTNC	**Ouen Toro**	**2.75**	**230**		**Pn**	**21 56 04.8**	**0.0**
ONTNC	**Ouen Toro**	**2.75**	**230**	P	**Pn**	**21 56 05.6**	**+0.8**
DVP	**Devils Point**	**2.84**	**350**	P	**Pn**	**21 56 04.7**	**-1.3**
KOUNC	**Koumac, New Ca**	**4.16**	**269**	Pn	**Pn**	**21 56 25.0**	**+0.8**
KOUNC	**Koumac, New Ca**	**4.16**	**269**	P	**Pn**	**21 56 25.0**	**+0.8**
MSVF	**Nonsavu**	**9.24**	**74**	LR	LR	22 00 25.4	
	comp=Z,287nm,19.4s,baz=325,slow=34						

EIDS	**Eidsvold**	**16.95**	**250**		**Pn**	**21 59 17.8**	**+0.1**	
EIDS				IAmb	IAmb	21 59 36.7		
	comp=Z,15nm,1.4s							
CTA	**Charters Tower**	**21.08**	**267**	P	**P**	**22 00 07.5**	**+2.6**	
	comp=Z,3.7nm,0.8s,baz=114,slow=10.0,SNR=2.1							
	comp=Z,3.7nm,0.8s							
STKA	**Stephens Creek**	**26.76**	**240**	P	**P**	**22 01 01.9**	**+1.8**	
	comp=Z,1.2nm,0.4s,baz=75,slow=9.0,SNR=3.9							
	comp=Z,1.2nm,0.4s							
STKA	**Stephens Creek**	**26.76**	**240**	P	**P**	**22 01 01.2**	**+1.1**	
WB0	**Warramunga Arr**	**32.21**	**265**		**P**	**22 01 48.0**	**-0.6**	
WB0				IAmb	IAmb	22 01 56.6		
	comp=Z,12nm,1.3s							
WRA	**Warramunga Arr**	**32.24**	**265**	P	**P**	**22 01 48.3**	**-0.5**	
	comp=Z,0.6nm,0.8s,baz=93,slow=8.4,SNR=15							
	comp=Z,0.6nm,0.8s							
WRA	**Warramunga Arr**	**32.24**	**265**	P	**P**	**22 01 48.5**	**-0.4**	
AS31	**Alice Springs**	**32.37**	**258**	P	**P**	**22 01 49.9**	**0.0**	
AS31				IAmb	IAmb	22 02 02.0		
	comp=Z,1.4nm,0.6s							
ASAR	**Alice Springs**	**32.37**	**258**	P	**P**	**22 01 50.4**	**+0.4**	
	comp=Z,1.8nm,0.5s,baz=85,slow=9.0,SNR=32							
	comp=Z,1.8nm,0.5s							
ASAR	**Alice Springs**	**32.37**	**258**	P	**P**	**22 01 50.3**	**+0.3**	
MTN	**Manton Dam**	**36.75**	**276**	P	**P**	**22 02 28.2**	**+0.3**	
KNRA	**Kununurra**	**38.23**	**271**	P	**P**	**22 02 39.8**	**-0.6**	
QSPA	**South Pole Qui**	**69.52**	**180**	P	**P**	**22 06 28.5**	**0.0**	
QSPA				IAmb	IAmb	22 06 40.8		
	comp=Z,6.7nm,1.3s							
TROLL	**Troll, Antarti**	**87.21**	**184**	P	**P**	**22 08 05.9**	**-0.3**	
SNAA	**Sanae**	**87.85**	**183**	P	**P**	**22 08 10.0**	**+0.9**	
SONM	**Songino Array**	**87.97**	**323**	P	**P**	**22 08 10.7**	**+0.7**	
	comp=Z,0.4nm,0.7s,baz=134,slow=4.2,SNR=2.3							
	comp=Z,0.4nm,0.7s							
VNA3	**Neumayer Olymp**	**88.46**	**181**	P	**P**	**22 08 11.9**	**0.0**	
VNA2	**Neumayer--Watz**	**88.74**	**181**	P	**P**	**22 08 13.6**	**+0.3**	
NVAR	**Mina Array Bea**	**90.02**	**49**	P	**P**	**22 08 19.3**	**-0.7**	
	comp=Z,0.3nm,0.6s,baz=240,slow=7.2,SNR=2.2							
	comp=Z,0.3nm,0.6s							
ILAR	**Eielson Array**	**91.61**	**17**	P	**P**	**22 08 25.9**	**-0.6**	
	comp=Z,0.2nm,0.5s,baz=201,slow=6.6,SNR=2.0							
	comp=Z,0.2nm,0.5s							
EKA	**Eskdalemuir Ar**	**144.72**	**352**	PKP	**PKPab**	**22 14 54.9**	**-0.3**	
	comp=Z,1.1nm,0.8s,baz=19,slow=4.6,SNR=1.8							
GERES	**GERESS Array B**	**145.39**	**331**	PKPbc	**PKPbc**	**22 14 56.2**	**-1.7**	
	comp=Z,0.2nm,0.5s,baz=77,slow=4.4,SNR=4.5							
GERES	**GERESS Array B**	**145.39**	**331**	PKPbc	**PKPdf**	**22 14 58.1**	**+0.2**	
DAVOX	**Davos/Dischmat**	**148.65**	**332**	PKPbc	**PKPbc**	**22 15 07.5**	**+0.1**	
	comp=Z,0.8nm,0.3s,baz=0.0,slow=4.0,SNR=2.0							

*KRNET **29** 22:01:25.5±0.1, 39.°40N×73.°66E, mb2.6*
*SOME **29** 22:01:33.6, 39.°63N×74.°08E, h5km*

ISC 29 22:01:22.9±2.2, 39.°3N±0.°1×73.°8E±0.°1, h6km±19km, n9, σ1s54/18, 12C, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.43**	**326**	⇑*i*P	**Pb**	**22 01 50.2**	**+0.2**
	baz=29						
OHH				⇑*e*S	**Sn**	**22 02 08.4**	**-0.3**
	baz=29						
DRK	**Karamyk**	**1.57**	**276**	⇑*i*P	**Pb**	**22 01 52.6**	**0.0**
	baz=74						
DRK				⇑*i*S	**Sn**	**22 02 12.3**	**-0.2**
	baz=74						
BTK	**Batken**	**2.42**	**288**	⇑*i*P	**Pb**	**22 02 06.5**	**-0.6**
	baz=88						
BTK				⇑*i*S	**Sb**	**22 02 36.1**	**-1.2**
	baz=88						
GAR	**Garm**	**2.75**	**264**	⇑*i*P	**Pb**	**22 02 11.2**	**-1.3**
	baz=62						
GAR				⇑*i*S	**Sb**	**22

PMG	Port Moresby	14.39	276	P		P		22 07 20.0	+2.9	
MSVF	Nonsavu	17.15	114	P		Pn		22 07 46.7	+0.3	
	22nm,1.0s,baz=271,slow=6.9,SNR=8.7									
MSVF				LR		LR		22 13 19.0		
	comp=Z,161nm,18.6s,baz=292,slow=34									
MSVF	Nonsavu	17.15	114	Pn		Pn		22 07 45.6	-0.8	
MSVF	Nonsavu	17.15	114	P		P		22 07 48.8	+1.0	
CTA	Charters Tower	17.31	237	P		Pn		22 07 48.2	0.0	
	0.8nm,0.3s,baz=64,slow=13,SNR=7.5									
CTA				LR		LR		22 13 29.8		
	comp=Z,393nm,21.0s,baz=57,slow=34									
	25nm,1.1s									
CTAO	Charters Tower	17.31	237			Pn		22 07 48.1	-0.2	
EIDS	Eidsvold	17.36	214			Pn		22 07 48.4	-0.5	
EIDS	Eidsvold	17.36	214	P		P		22 07 49.7	-0.3	
PATS	Pohnpei	18.17	349			P		22 07 59.0	0.0	
PATS				IAmb		IAmb		22 08 16.3		
	comp=Z,90nm,1.0s									
MTSU	Mount Surprise	18.18	245	P		P		22 08 02.1	+3.0	
COEN	Coen	18.28	259	P		Pn		22 08 00.9	+0.6	
TAVE	Taveuni	18.71	109	P		Pn		22 08 07.4	+1.9	
RMQ	Roma	19.54	217	P		Pn		22 08 15.4	0.0	
LKBA	Tubou, Lakemba	20.13	113	P		Pn		22 08 22.7	+0.2	
	comp=Z,2.4nm,1.3s									
KWAJ	Kwajalein Atol	20.67	17	P		P		22 08 26.3	0.0	
KWAJ				IAmb		IAmb		22 08 38.3		
	comp=Z,76nm,0.8s									
ARMA	Armidale	21.34	204	P		P		22 08 33.3	-0.3	
QLP	Quilpie	22.51	225	P		P		22 08 47.7	+1.6	
	comp=Z,37nm,1.2s									
SMPI	Sarmi	24.54	290	P		P		22 09 07.0	+0.9	
	comp=Z,696nmcomp=Z,48nm,1.0s									
WB0	Warramunga Arr	27.63	249	P		P		22 09 33.3	-0.7	
WB0				IAmb		IAmb		22 09 34.9		
	comp=Z,50nm,1.5s									
WRA	Warramunga Arr	27.72	248	P		P		22 09 33.8	-1.0	
	comp=Z,9.2nm,1.1s,baz=78,slow=9.2,SNR=14									
WRA				LR		LR		22 20 03.3		
	comp=Z,491nm,21.1s,baz=20,slow=35									
	comp=Z,9.2nm,1.1s									
WRA	Warramunga Arr	27.72	248	P		P		22 09 34.2	-0.6	
STKA	Stephens Creek	27.75	219	P		P		22 09 33.9	-1.0	
	comp=Z,2.3nm,0.7s,baz=350,slow=12,SNR=1.9									
STKA				LR		LR		22 20 17.7		
	comp=Z,807nm,18.3s,baz=37,slow=36									
	comp=Z,2.3nm,0.7s									
STKA	Stephens Creek	27.75	219	P		P		22 09 34.5	-0.4	
ASAR	Alice Springs	29.22	241	P		P		22 09 46.5	-1.7	
	comp=Z,2.9nm,0.8s,baz=70,slow=9.7,SNR=17									
ASAR				PcP		PcP		22 12 55.0	0.0	
	comp=Z,1.4nm,0.8s,baz=100,slow=2.9,SNR=4.6									
ASAR				ScP		ScP		22 16 37.0	+1.9	
	comp=Z,2.3nm,1.0s,baz=72,slow=3.8,SNR=8.7									
ASAR				LR		LR		22 20 32.9		
	comp=Z,352nm,20.6s,baz=70,slow=34									
	comp=Z,2.9nm,0.8s									
H11S2	WAKE ISLAND Hy	29.85	10	T		T		22 40 49.3		
	baz=188,slow=76,SNR=54									
H11S3	WAKE ISLAND Hy	29.85	10	T		T		22 40 53.6		
	baz=188,slow=76,SNR=48									
H11S1	WAKE ISLAND Hy	29.87	10	T		T		22 40 55.2		
	baz=188,slow=76,SNR=36									
TOO	Toolangi	30.07	206	P		P		22 09 55.7	+0.2	
TOO				IAmb		IAmb		22 10 33.5		
	comp=Z,29nm,1.2s									
URZ	Urewera	30.34	155	LR		LR		22 20 55.1		
	comp=Z,144nm,18.5s,baz=31,slow=34									
BKZ	Black Stump Fm	30.88	157	P		P		22 10 03.0	+0.3	
H11N1	WAKE ISLAND Hy	31.08	10	T		T		22 42 21.6		
	baz=188,slow=76,SNR=15									
H11N3	WAKE ISLAND Hy	31.09	10	T		T		22 42 26.1		
	baz=188,slow=76,SNR=26									
H11N2	WAKE ISLAND Hy	31.10	10	T		T		22 42 22.8		
	baz=188,slow=76,SNR=20									
SIJI	Sorong	31.88	287	LR		LR		22 24 05.8		
	comp=Z,87nm,20.5s,baz=98,slow=38									
BBOO	Buckleboo	31.93	224	P		P		22 10 10.9	-1.0	
KNRA	Kununurra	32.32	258	P		P		22 10 15.0	-0.5	
RPZ	Rata Peaks	33.46	168	LR		LR		22 21 53.6		
	comp=Z,152nm,18.9s,baz=335,slow=32									
FORT	Forrest	36.77	233	P		P		22 10 52.2	-1.7	
DAV	Davao City (W)	40.22	295	LR		LR		22 25 50.2		
	comp=Z,52nm,18.6s,baz=119,slow=33									
PSA00	Pilbara Seismi	41.34	250	P		P		22 11 31.5	-0.8	
PSA00				IAmb		IAmb		22 12 20.8		
	comp=Z,46nm,1.8s									
MBWA	Marble Bar	41.40	251	P		P		22 11 32.3	-0.4	
MBWA				IAmb		IAmb		22 12 04.0		
	comp=Z,40nm,1.6s									
KAPI	Kappang	41.92	275	LR		LR		22 28 17.1		
	comp=Z,37nm,21.2s,baz=91,slow=35									
TOLI2	Tolitoli	42.44	284	P		P		22 11 40.7	-0.7	
JCJ	Chichijima	42.45	334	P		P		22 11 38.6	-2.6	
	comp=Z,21nm,0.5s,baz=87,slow=23,SNR=3.5									
JCJ				LR		LR		22 27 03.5		
	comp=Z,153nm,20.7s,baz=131,slow=33									
	comp=Z,21nm,0.5s									
MYLDM	Lahad Datu	45.93	288	P		P		22 12 08.8	-0.4	
MYLDM				IAmb		IAmb		22 12 50.6		
	comp=Z,22nm,1.0s									
MORW	Morawa	46.10	240	P		P		22 12 10.6	+0.1	
MORW				IAmb		IAmb		22 12 59.3		
	comp=Z,30nm,1.4s									
JAGI	Jajag, Banyuwa	46.87	269	P		P		22 12 15.6	-1.2	
PPT	Papeete	47.55	104	LR		LR		22 29 44.0		
	comp=Z,44nm,18.3s,baz=302,slow=33									
JOW	Kunigami	49.77	320	LR		LR		22 34 18.8		
	comp=Z,49nm,18.0s,baz=130,slow=37									
SBUM	Sibu	51.01	282	P		P		22 12 48.3	-0.2	
MJAR	Matsushiro Arr	52.32	336	P		P		22 12 56.2	-1.7	
	comp=Z,0.9nm,0.6s,baz=227,slow=48,SNR=2.6									
MJAR				LR		LR		22 33 20.9		
	comp=Z,74nm,21.8s,baz=156,slow=34									
	comp=Z,0.9nm,0.6s									
KSM	Kuching	52.59	281	P		P		22 13 00.2	-0.1	
TPI	Tanjungpandan	54.20	275	P		P		22 13 23.5	+11	
JKA	Kamikawa-asahi	57.66	344	P		P		22 13 36.4	+0.1	
JKA				IAmb		IAmb		22 13 54.5		
	comp=Z,8.1nm,0.8s									
ASAJ	Asahikawa	57.66	344	LR		LR		22 37 29.6		
	comp=Z,86nm,19.7s,baz=176,slow=35									
KSRS	Korea Array	57.78	328	P		P		22 13 36.6	-0.7	
	comp=Z,3.2nm,1.0s,baz=145,slow=7.0,SNR=12									
KSRS				LR		LR		22 38 13.9		
	comp=Z,52nm,18.4s,baz=140,slow=36									
	comp=Z,3.2nm,1.0s									
KSAR	Wonju Array Be	57.79	328	P		P		22 13 36.5	-0.8	
SEHB	SEOHWA	58.24	329	P		P		22 13 40.4	-0.2	
SEHB				IAmb		IAmb		22 13 41.6		
	comp=Z,12nm,1.0s									
BKNI	Bangkinang	61.31	277	P		P		22 14 02.3	+0.2	
USRK	Ussuriysk Ar.	61.32	336	P		P		22 14 01.3	-0.3	
	comp=Z,8.2nm,1.0s,baz=143,slow=6.4,SNR=11									
	comp=Z,8.2nm,1.0s									
USRK	Ussuriysk Ar.	61.32	336	P		P		22 14 01.6	+0.1	
MNSI	Mandailing Nat	62.84	277	P		P		22 14 12.9	+0.5	
PETK	Petropavlovsk-	64.08	357	P		P		22 14 18.2	-1.6	
	comp=Z,1.8nm,0.8s,baz=174,slow=6.7,SNR=2.3									
PETK				LR		LR		22 37 38.1		
	comp=Z,45nm,21.6s,baz=157,slow=32									
	comp=Z,1.8nm,0.8s									
SHEM	Shemya Is, Ala	64.50	8	LR		LR		22 37 37.0		
	comp=Z,39nm,19.3s,baz=108,slow=32									
GSI	Gunungsitoli	64.90	277	P		P		22 14 26.0	0.0	
GSI	Gunungsitoli	64.90	277	P		P		22 14 27.6	+1.6	
HNS	HongShan	65.34	320	eP		P		22 14 37.0	+8.7	
KIWB	Kanaga Island	65.35	14	P		P		22 14 27.6	-0.5	
KLR	Kul'dur	65.63	339	LR		LR		22 39 57.3		
	comp=Z,53nm,21.6s,baz=142,slow=33									
VNDA	Vanda	66.37	180	P		P		22 14 34.5	+0.1	
	comp=Z,1.3nm,0.9s,baz=340,slow=2.5,SNR=5.6									
	comp=Z,1.3nm,0.9s									
VNDA	Vanda	66.37	180	P		P		22 14 35.5	+1.1	
XAN	Xi'an	67.28	314	⇑P		P		22 14 41.0	+0.1	
XAN				pP		pP		22 14 45.8	-2.4	
XAN				pmax		pmax				
	comp=Z,7.0nm,1.3s									
XAN				LR		LR				
	comp=Z,140nm,14.6s									
XAN				LR		LR				
	comp=Z,100nm,15.6s									
XAN				LR		LR				
	comp=Z,120nm,15.5s									
CMAR	Chiang Mai Arr	68.51	295	P		P		22 14 49.0	+0.1	
	comp=Z,0.7nm,0.4s,baz=122,slow=4.0,SNR=10									
	comp=Z,0.7nm,0.4s									
CMAR	Chiang Mai Arr	68.51	295	P		P		22 14 48.4	-0.5	

CHTO	Chiang Mai	68.63	295	P		P		22 14 49.7	0.0	
CHTO				IAmb		IAmb		22 15 00.2		
	comp=Z,8.9nm,1.2s									
NIKH	Nikolski High	68.66	19	P		P		22 14 49.4	+0.3	
	baz=211									
XLT	XiLinHaoTe	68.67	326	⇓P		P		22 14 50.0	+0.5	
XLT				sP		sP		22 14 58.5	-0.5	
XLT				PcP		PcP		22 15 14.5	+0.3	
XLT				S		S		22 23 53.5	+2.7	
XLT				pmax		pmax				
	comp=Z,13nm,1.2s									
XLT				pmax		pmax				
	comp=Z,72nm,3.9s									
XLT				LR		LR				
	comp=Z,14nm,17.2s									
XLT				LR		LR				
	comp=Z,140nm,15.0s									
PZH	PanZhiHua	69.18	304	P		P		22 14 55.0	+1.9	
PZH				pmax		pmax				
	comp=Z,10.0nm,0.6s									
PZH				pmax		pmax				
	comp=Z,50nm,4.3s									
HHC	Hu-ho-hao-te	69.37	322	eP		P		22 14 56.0	+2.1	
HHC				pmax		pmax				
	comp=Z,49nm,0.8s									
UNV	Unalaska Valle	70.15	19	P		P		22 14 58.8	+0.5	
	baz=213									
MA2	Magadan	71.02	354	LR		LR		22 42 06.8		
	comp=Z,24nm,21.5s,baz=144,slow=32									
SPIA	Saint Paul Isl	71.90	16	P		P		22 15 09.2	+0.4	
	baz=209									
LZH	Lanzhou	71.90	314	eP		P		22 15 09.0	-0.6	
LZH				sP		pP		22 15 15.0	-1.9	
LZH				pmax		pmax				
	comp=Z,20nm,1.3s									
LZH				LR		LR				
	comp=Z,820nm,16.0s									
LZH				LR		LR				
	comp=Z,540nm,15.6s									
LZH				LR		LR				
	comp=Z,440nm,18.2s									
CHNA	Chernabura Isl	73.35	22	P		P		22 15 18.3	+0.8	
	baz=220									
SDPT	Sand Point	73.43	21	P		P		22 15 18.9	+0.9	
	baz=219									
SEY	Seymchan	74.19	356	LR		LR		22 43 41.3		
	comp=Z,47nm,21.9s,baz=172,slow=32									
S14K	Fog Glacier	74.49	21	P		P		22 15 24.6	+0.3	
	baz=220									
CHIR	Chirikof Islan	75.60	23	P		P		22 15 31.3	+0.7	
	baz=223									
ULN	Ulaanbaatar	76.07	326	P		P		22 15 33.5	-0.2	
ULN				IAmb		IAmb		22 15 49.4		
	comp=Z,7.5nm,1.0s									
GTA	Gaotai	76.28	315	⇑P		P		22 15 36.3	+1.3	
GTA				pP		pP		22 15 41.0	-1.4	
GTA				sP		sP		22 15 43.8	-0.9	
GTA				pmax		pmax				
	comp=Z,5.0nm,1.0s									
GTA				pmax		pmax				
	comp=Z,70nm,4.6s									
GTA				LR		LR				
	comp=Z,83nm,17.1s									
GTA				LR		LR				
	comp=Z,69nm,19.3s									
GTA				LR		LR				
	comp=Z,68nm,17.1s									
SONM	Songino Array	76.42	325	P		P		22 15 35.9	+0.3	
	comp=Z,2.5nm,0.8s,baz=134,slow=5.9,SNR=17									
SONM				LR		LR		22 48 05.7		
	comp=Z,47nm,21.1s,baz=112,slow=35									
	comp=Z,2.5nm,0.8s									
SONM	Songino Array	76.42	325	P		P		22 15 35.4	-0.3	
R17K	Ugashik Creek	76.65	22	P		P		22 15 36.6	+0.1	
	baz=222									
SII	Sitkinak Islan	76.69	23	P		P		22 15 36.4	-0.4	
	baz=225									
YAK	Yakutsk	77.11	345	LR		LR		22 47 22.6		
	comp=Z,37nm,21.8s,baz=90,slow=34									
YAK	Yakutsk	77.11	345	P		P		22 15 38.5	-0.4	
Q17K	Contact Creek	77.29	21	P		P		22 15 40.3	0.0	
	baz=223									
GAMB	Gambell	77.41	12	P		P		22 15 40.6	0.0	
	baz=207									
OHAK	Old Harbor	77.51	23	P		P		22 15 40.4	-0.9	
	baz=225									
O16K	Kokwok River B	77.53	20	P		P		22 15 40.8	-0.7	
	baz=220									
P17K	Kvichak River	77.79	21	P		P		22 15 42.7	-0.1	
	baz=222									
Q18K	Katmai Hardscr	77.89	22	P		P		22 15 43.4	-0.2	
	baz=224									
N16K	Nishlik Lake	77.99	19	P		P		22 15 45.3	+1.3	
	baz=220									
O17K	Koliganek Bris	78.00	20	P		P		22 15 43.6	-0.4	
	baz=221									
KDAK	Kodiak Island	78.17	23	LR		LR		22 45 05.5		
	comp=Z,44nm,20.1s,baz=230,slow=32									
KDAK	Kodiak Island	78.17	23	P		P		22 15 45.1	0.0	
	baz=226									
P18K	Big Mountain,	78.35	21	P		P		22 15 45.7	-0.4	
P18K				IAmb		IAmb		22 15 46.7		
	comp=Z,20nm,1.1s									
P18K	Big Mountain,	78.35	21	P		P		22 15 45.4	-0.7	
	baz=223									
Q19K	Cape Douglas,	78.58	22	P		P		22 15 47.0	-0.4	
	baz=225									
O18K	Koktuh Hills	78.70	21	P		P		22 15 47.7	-0.2	
	baz=223									
Q20K	Shuyak Island	78.82	23	P		P		22 15 49.1	+0.5	
	baz=226									
QSPA	South Pole Qui	78.87	180	P		P		22 15 49.5	+0.5	
QSPA				IAmb		IAmb		22 16 07.3		
	comp=Z,27nm,1.8s									
BILL	Bilibino	79.04	2	P		P		22 15 49.7	+0.1	
BILL				IAmb		IAmb		22 15 51.3		
	comp=Z,16nm,1.1s									
N18K	Kilae Creek	79.08	20	P		P		22 15 50.4	+0.4	
	baz=222,SNR=5.4									
ANM	Nome	79.48	14	P		P		22 15 52.3	+0.2	
	baz=213									
SVW2	Sparrevohn	79.49	20	P		P		22 15 53.0	+0.7	
N19K	Bonanza Creek	79.64	20	P		P		22 15 53.0	-0.2	
	baz=224									
O20K	Slope Mountain	79.77	21	P		P		22 15 53.6	-0.2	
	baz=226									
CNPM	China Poot	79.89	22	P		P		22 15 54.7	+0.2	
CNPM				IAmb		IAmb		22 15 59.4		
	comp=Z,19nm,1.0s									
RSO	Redoubt South	79.99	21	P		P		22 15 54.9	-0.4	
BRSE	Bradley Lake S	80.22	22	P		P		22 15 55.6	-0.7	
	baz=227									
M19K	Big River Lodg	80.47	19	P		P		22 15 58.5	+0.9	
M19K				IAmb		IAmb		22 15 59.7		
	comp=Z,23nm,1.0s									
M19K	Big River Lodg	80.47	19	P		P		22 15 56.9	-0.6	
	baz=224									
L19K	White Mountain	80.52	19	P		P		22 15 58.7	+0.9	
	baz=223,SNR=15									
TTA	Tatalina	80.71	18	P		P		22 15 59.3	+0.4	
TTA				IAmb		IAmb		22 16 00.6		
	comp=Z,12nm,1.1s									
TTA	Tatalina	80.71	18	P		P		22 15 59.5	+0.7	
	baz=222,SNR=12									
M20K	Styx River	80.87	20	P		P		22 15 59.3	-0.5	
	baz=225									
SEW	Seward	80.95	22	P		P		22 15 59.4	-0.6	
	baz=228									
L20K	Farewell, AK	81.05	19	P		P		22 16 00.1	-0.5	
	baz=224,SNR=6.7									
SUA	Susitna One	81.39	21	P		P		22 16 02.1	-0.4	
	baz=227									
SKT	Skwentna	81.48	20	P		P		22 16 03.3	+0.4	
	baz=226									
RC01	Rabbit Creek A	81.50	22	P		P		22 16 03.2	+0.1	
	baz=228									
K20K	Telida	81.62	19	P		P		22 16 04.2	+0.6	
	baz=224,SNR=8.6									
GCSA	Galena City Sc	81.82	17	P		P		22 16 05.0	+0.4	
	baz=221									
PPLA	Purkeypile	81.90	19	P		P		22 16 04.8	-0.5	
	baz=226									
J20K	Nowinta River	82.19	18	P		P		22 16 07.1	+0.5	
J20K				IAmb		IAmb		22 16 08.6		
	comp=Z,11nm,1.0s									
J20K	Nowinta River	82.19	18	P		P		22 16 07.4	+0.8	
	baz=224,SNR=10									

CAST	Castle Rocks	82.30	19	P		P		22 16 06.7	-0.5	
	baz=226,SNR=13									
GLI	Glacier Island	82.34	23	P		P		22 16 07.3	-0.1	
	baz=230									
SML	Sawmill	82.48	22	P		P		22 16 09.2	+1.0	
	baz=229									
CHUM	Lake Minchumin	82.55	19	P		P		22 16 08.4	0.0	
	baz=225									
M23K	Glacier View	82.69	22	P		P		22 16 09.5	+0.2	
	baz=230									
SCM	Sheep Creek Mo	82.86	22	P		P		22 16 10.4	+0.2	
	baz=230									
TRF	Thorofare Moun	82.90	20	P		P		22 16 10.0	-0.5	
TRF	Thorofare Moun	82.90	20	P		P		22 16 09.6	-1.0	
	baz=227,SNR=5.1									
WAT1	Susitna Watana	83.08	21	P		P		22 16 11.1	-0.2	
	baz=229									
BPAW	Bear Paw Mtn.	83.12	19	P		P		22 16 10.3	-1.1	
	baz=227,SNR=6.9									
MAW	Mawson	83.13	202	P		P		22 16 11.7	+0.2	
	comp=Z,2.3nm,1.0s,baz=90,slow=5.1,SNR=3.0									
	comp=Z,2.3nm,1.0s									
MAW	Mawson	83.13	202	P		P		22 16 12.2	+0.6	
KLU	Klutina	83.17	23	P		P		22 16 12.6	+0.8	
KLU	Klutina	83.17	23	P		P		22 16 12.0	+0.2	
	baz=232									
WAT6	Susitna Watana	83.20	21	P		P		22 16 11.8	-0.3	
	baz=230									
BMRM	Bremner River	83.35	23	P		P		22 16 12.7	-0.1	
	baz=233									
M24K	Tolsona, Glenn	83.46	22	P		P		22 16 13.7	+0.4	
M24K	Tolsona, Glenn	83.46	22	P		P		22 16 14.2	+0.9	
	baz=231									
MCK	McKinley	83.54	20	P		P		22 16 13.3	-0.3	
MCK	McKinley	83.54	20	P		P		22 16 13.1	-0.6	
	baz=228,SNR=8.0									
I21K	Tanana	83.57	18	P		P		22 16 14.3	+0.7	
I21K				IAmb		IAmb		22 16 15.5		
	comp=Z,17nm,1.2s									
I21K	Tanana	83.57	18	P		P		22 16 14.0	+0.3	
	baz=226,SNR=13									
IMAR	Indian Mountai	83.62	17	P		P		22 16 14.2	+0.2	
DHY	Denali Highway	83.65	21	P		P		22 16 14.5	+0.1	
	baz=230									
H21K	Melozitna Rive	83.66	17	P		P		22 16 14.9	+0.7	
	baz=225,SNR=9.6									
N25K	Chitina, Valde	83.74	23	P		P		22 16 15.3	+0.5	
	baz=233									
CRQE	Cirque	83.81	24	P		P		22 16 15.0	-0.2	
	baz=234									
MLY	Manley	83.84	18	P		P		22 16 15.1	-0.1	
MLY				IAmb		IAmb		22 16 16.2		
	comp=Z,6.5nm,0.9s									
MLY	Manley	83.84	18	P		P		22 16 15.3	+0.1	
	baz=227,SNR=13									
MESA	MESA	83.94	25	P		P		22 16 15.6	-0.4	
	baz=235									
HARP	HAARP	84.02	22	P		P		22 16 17.1	+1.0	
	baz=232									
NEA2	Nenana	84.07	19	P		P		22 16 15.6	-0.7	
	baz=228,SNR=9.6									
G21K	Allakaket	84.08	16	P		P		22 16 16.8	+0.5	
	baz=224									
MCARA	McCarthy VSAT	84.21	23	P		P		22 16 17.1	0.0	
	baz=234									
H22K	Ishtalina Cre	84.25	18	P		P		22 16 17.9	+0.7	
	baz=226,SNR=12									
PAX	Paxson	84.25	21	P		P		22 16 16.6	-0.8	
	baz=232									
I23K	Minto, Yukon-K	84.35	19	P		P		22 16 17.0	-0.6	
	baz=228									
TABL	Table Mountain	84.42	25	P		P		22 16 18.5	+0.1	
F21K	Alatna River	84.59	16	P		P		22 16 19.1	+0.1	
	baz=224									
PINM	Pinnacle	84.60	25	P		P		22 16 19.4	+0.2	
	baz=237									
CTG	Chitna Glacier	84.64	24	P		P		22 16 20.1	+0.6	
	baz=236,SNR=7.0									
CTGM	Chitina Glacie	84.64	24	P		P		22 16 20.1	+0.6	
HDA	Harding Lake	84.65	20	P		P		22 16 19.0	-0.3	
	baz=230,SNR=10									
K24K	Donnelly Dome	84.67	21	P		P		22 16 19.7	+0.3	
	baz=231,SNR=6.5									
PNL	Peninsula	84.73	26	P		P		22 16 19.8	0.0	
	baz=238									
H23K	Yukon River	84.75	18	P		P		22 16 20.1	+0.3	
	baz=228									
M26K	Nabesna, AK	84.82	23	P		P		22 16 20.7	+0.5	
	baz=234									
MENT	Mentasta	84.87	22	P		P		22 16 20.9	+0.5	
MENT				IAmb		IAmb		22 16 24.2		
	comp=Z,5.3nm,0.7s									
IL31		84.90	20	P		P		22 16 20.0	-0.5	
IL31				IAmb		IAmb		22 16 46.1		
	comp=Z,7.3nm,1.3s									
ILAR	Eielson Array	84.90	20	P		P		22 16 19.6	-0.9	
	comp=Z,2.0nm,1.0s,baz=244,slow=4.7,SNR=12									
ILAR				LR		LR		22 51 40.5		
	comp=Z,24nm,19.4s,baz=254,slow=34									
	comp=Z,2.0nm,1.0s									
ILAR	Eielson Array	84.90	20	P		P		22 16 19.3	-1.2	
POKR	Poker Plat Res	84.95	19	P		P		22 16 20.1	-0.6	
	baz=230									
RIDG	Independent Ri	84.95	21	P		P		22 16 20.8

I02E	**Swisshome, OR**	**86.78**	**44**	P	**P**	**22 16 30.7**	**+0.4**
	baz=251						
YBH	**Yreka Blue Hor**	**86.83**	**47**	LR	LR	22 52 08.6	
	comp=Z,30nm,18.2s,baz=260,slow=34						
A21K	**Barrow**	**86.88**	**12**	P	**P**	**22 16 30.7**	**+0.6**
	baz=221						
BBB	**Bella Bella**	**86.94**	**35**	LR	LR	22 47 15.0	
	comp=Z,30nm,21.9s,baz=174,slow=30						
SCZ2	**Santa Cruz Isl**	**86.95**	**55**	P	**P**	**22 16 31.4**	**0.0**
	baz=254						
PKM	**Mcpherson Peak**	**87.05**	**54**	P	**P**	**22 16 32.2**	**+0.2**
	baz=254						
DAWY	**Dawson**	**87.11**	**22**	P	**P**	**22 16 32.7**	**+1.2**
DAWY				IAmb	IAmb	22 16 34.3	
	comp=Z,16nm,1.1s						
DAWY	**Dawson**	**87.11**	**22**	P	**P**	**22 16 32.3**	**+0.8**
	baz=237,SNR=12						
C23K	**Itkillik River**	**87.19**	**15**	P	**P**	**22 16 32.7**	**+1.1**
	baz=227						
D24K	**Happy Valley**	**87.19**	**16**	P	**P**	**22 16 32.6**	**+0.9**
	baz=228						
P32M	**Atlin**	**87.20**	**27**	P	**P**	**22 16 32.2**	**+0.2**
	baz=242						
L04D	**Klamath Falls**	**87.26**	**46**	P	**P**	**22 16 33.3**	**+0.5**
	baz=252						
BMAR	**Burnt Mountain**	**87.30**	**18**	P	**P**	**22 16 33.6**	**+1.3**
M30M	**Minto, Yukon**	**87.33**	**24**	P	**P**	**22 16 33.4**	**+0.8**
	baz=240,SNR=7.5						
C24K	**Franklin Bluff**	**87.60**	**15**	P	**P**	**22 16 34.6**	**+0.9**
	baz=228						
P33M	**Teslin, Yukon**	**87.88**	**27**	P	**P**	**22 16 35.4**	**+0.1**
	baz=243						
D25K	**Kavik River**	**87.96**	**16**	P	**P**	**22 16 36.4**	**+0.9**
	baz=231						
M31M	**Drury Creek, Y**	**88.12**	**25**	P	**P**	**22 16 37.0**	**+0.6**
	baz=242						
I29M	**Ogilvie Camp,**	**88.20**	**21**	P	**P**	**22 16 37.1**	**+0.5**
I29M	**Ogilvie Camp,**	**88.20**	**21**	P	**P**	**22 16 37.9**	**+1.3**
	baz=238						
J05D	**Fort Rock, OR**	**88.33**	**45**	P	**P**	**22 16 38.8**	**+0.8**
	baz=253						
DLBC	**Dease Lake**	**88.41**	**29**	LR	LR	22 52 01.5	
	comp=Z,74nm,19.0s,baz=252,slow=33						
EDW2	**Edwards Air Fo**	**88.49**	**54**	P	**P**	**22 16 39.4**	**+0.6**
	baz=255						
PINE	**Pine Mountain**	**88.68**	**45**	P	**P**	**22 16 40.1**	**+0.5**
PINE				IAmb	IAmb	22 16 41.8	
	comp=Z,5.1nm,0.9s						
C26K	**Camden Bay**	**88.74**	**16**	P	**P**	**22 16 40.6**	**+1.5**
	baz=232						
CWC	**Cottonwood Cre**	**88.81**	**53**	P	**P**	**22 16 40.4**	**0.0**
	baz=255						
LRMC	**Laurel Mtn Rad**	**88.89**	**54**	P	**P**	**22 16 40.6**	**-0.1**
	baz=256						
C27K	**Jago River**	**88.89**	**17**	P	**P**	**22 16 40.4**	**+0.6**
	baz=233						
NVAR	**Mina Array Bea**	**89.15**	**51**	P	**P**	**22 16 42.1**	**+0.1**
	comp=Z,2.6nm,0.9s,baz=238,slow=6.6,SNR=9.2						
NVAR				LR	LR	22 48 56.0	
	comp=Z,45nm,19.8s,baz=271,slow=30						
	comp=Z,2.6nm,0.9s						
MPMC	**Manual Prospec**	**89.18**	**53**	P	**P**	**22 16 42.8**	**+0.6**
	baz=256						
MONP2	**Monument Peak**	**89.27**	**56**	P	**P**	**22 16 43.4**	**+0.7**
	baz=256,SNR=5.2						
PFO	**Pinyon Flats O**	**89.41**	**56**	LR	LR	22 48 01.1	
	comp=Z,68nm,21.7s,baz=254,slow=30						
PFO	**Pinyon Flats O**	**89.41**	**56**	P	**P**	**22 16 43.0**	**-0.2**
	baz=256						
TPFO	**Pinon Flats**	**89.42**	**56**	P	**P**	**22 16 43.5**	**+0.3**
	baz=256						
IKP	**In-Ko-Pah, Jac**	**89.47**	**57**	P	**P**	**22 16 44.1**	**+0.6**
	baz=256						
GSC	**Goldstone, Bar**	**89.54**	**54**	P	**P**	**22 16 44.2**	**+0.5**
	baz=256						
FURC	**Furnace Creek,**	**89.77**	**53**	P	**P**	**22 16 45.1**	**+0.5**
	baz=256						
SWSC	**Sam W. Stewart**	**89.80**	**56**	P	**P**	**22 16 45.1**	**+0.2**
	baz=257						
HEC	**Hector,Ludlow**	**89.80**	**55**	P	**P**	**22 16 45.0**	**0.0**
	baz=256						
BELC	**Belle Mtn. Jos**	**89.88**	**55**	P	**P**	**22 16 46.0**	**+0.5**
	baz=256,SNR=5.2						
WVOR	**Wild Horse Val**	**89.94**	**47**	P	**P**	**22 16 46.2**	**+0.7**
WVOR				IAmb	IAmb	22 16 47.6	
	comp=Z,11nm,1.1s						
SHOC	**Shoshone, Teco**	**90.10**	**54**	P	**P**	**22 16 47.2**	**+0.9**
	baz=256						
BC3	**Big Chuckawall**	**90.24**	**56**	P	**P**	**22 16 47.4**	**+0.3**
	baz=257						
TUQ	**Turquoise Moun**	**90.27**	**54**	P	**P**	**22 16 47.6**	**+0.4**
	baz=257						
J08A	**Circle Bar Ran**	**90.29**	**46**	P	**P**	**22 16 47.7**	**+0.6**
J08A				IAmb	IAmb	22 16 49.5	
	comp=Z,8.9nm,1.0s						
GMRC	**Granite Mounta**	**90.33**	**55**	P	**P**	**22 16 47.8**	**+0.2**
	baz=257						
TPNV	**Topopah Spring**	**90.36**	**53**	P	**P**	**22 16 47.9**	**+0.3**
TPNV	**Topopah Spring**	**90.36**	**53**	P	**P**	**22 16 48.1**	**+0.4**
	baz=256,SNR=5.6						
IRM	**Iron Mountain**	**90.60**	**55**	P	**P**	**22 16 49.1**	**+0.4**
	baz=257						
GLA	**Glamis**	**90.61**	**57**	P	**P**	**22 16 48.5**	**-0.2**
	baz=257						
MKAR	**Makanchi Array**	**90.88**	**318**	P	**P**	**22 16 48.5**	**-1.1**
	comp=Z,0.9nm,0.8s,baz=96,slow=5.5,SNR=4.5						
	comp=Z,0.9nm,0.8s						
MKAR	**Makanchi Array**	**90.88**	**318**	P	**P**	**22 16 48.3**	**-1.3**
SHPR	**Sheep Range**	**91.11**	**53**	P	**P**	**22 16 51.1**	**-0.1**
SHPR				IAmb	IAmb	22 16 53.0	
	comp=Z,7.3nm,1.2s						
R11A	**Troy Canyon, C**	**91.20**	**51**	P	**P**	**22 16 52.0**	**+0.4**
	baz=257,SNR=7.1						
INK	**Inuvik**	**91.30**	**20**	LR	LR	22 53 16.9	
	comp=Z,60nm,19.9s,baz=206,slow=33						
INK	**Inuvik**	**91.30**	**20**	P	**P**	**22 16 51.8**	**+0.7**
	baz=243						
ELK	**Elko**	**92.00**	**49**	LR	LR	22 52 17.3	
	comp=Z,35nm,18.9s,baz=253,slow=32						
ELK	**Elko**	**92.00**	**49**	P	**P**	**22 16 55.9**	**+0.6**
ELK				IAmb	IAmb	22 16 57.0	
	comp=Z,5.9nm,1.1s						
214A	**Organ Pipe Nat**	**92.05**	**58**	P	**P**	**22 16 56.1**	**+0.6**
	baz=258						
NEW	**Newport**	**92.43**	**41**	LR	LR	22 54 25.2	
	comp=Z,31nm,18.4s,baz=301,slow=33						
NEW	**Newport**	**92.43**	**41**	P	**P**	**22 16 56.8**	**-0.1**
NEW				IAmb	IAmb	22 16 58.0	
	comp=Z,7.5nm,1.3s						
NEW	**Newport**	**92.43**	**41**	P	**P**	**22 16 56.9**	**+0.1**
	baz=256						
LPIG	**La Paz**	**92.68**	**66**	LR	LR	22 54 05.1	
	comp=Z,32nm,18.0s,baz=243,slow=33						
HLID	**Hailey**	**93.21**	**46**	P	**P**	**22 17 01.5**	**+0.8**
	baz=258						
TUC	**Tucson**	**93.80**	**58**	P	**P**	**22 17 04.0**	**+0.4**
	baz=259						
WUAZ	**Wupatki**	**93.92**	**55**	P	**P**	**22 17 03.5**	**-0.7**
	baz=259						
C36M	**Paulatuk**	**94.87**	**20**	P	**P**	**22 17 08.1**	**+0.7**
	baz=251						
BOZ	**Bozeman (W)**	**95.56**	**45**	P	**P**	**22 17 11.8**	**+0.4**
	baz=260						
121A	**Cookes Peak, D**	**96.34**	**58**	P	**P**	**22 17 14.7**	**-0.6**
	baz=261						
PDAR	**Pinedale Array**	**96.56**	**48**	P	**P**	**22 17 16.2**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=265,slow=4.5,SNR=2.1						
PDAR				LR	LR	22 56 50.3	
	comp=Z,25nm,18.1s,baz=282,slow=33						
	comp=Z,0.3nm,0.7s						
YKA	**Yellowknife Ar**	**96.89**	**28**	P	**P**	**22 17 15.9**	**-1.0**
	comp=Z,1.8nm,0.9s,baz=254,slow=4.8,SNR=6.5						
YKA				LR	LR	22 57 57.7	
	comp=Z,25nm,18.0s,baz=179,slow=34						
	comp=Z,1.8nm,0.9s						
ANMO	**Albuquerque**	**97.79**	**56**	LR	LR	22 54 43.9	
	comp=Z,27nm,18.6s,baz=250,slow=31						
TXAR	**Lajitas Array**	**99.39**	**62**	LR	LR	22 53 18.2	
	comp=Z,38nm,21.1s,baz=266,slow=30						
ARCES	**ARCESS Array B**	**115.38**	**344**	PKP	**PKiKP**	**22 22 26.7**	**-0.4**
	comp=Z,1.0nm,0.8s,baz=79,slow=4.7,SNR=2.8						
BOSA	**Boshof**	**122.26**	**226**	PKP	**PKiKP**	**22 22 41.8**	**-0.2**
	comp=Z,1.2nm,0.6s,baz=187,slow=3.1,SNR=5.9						
BOSA	**Boshof**	**122.26**	**226**		**PKPdf**	**22 22 41.5**	**-0.3**

*SOME **29** 22:07:33.0,39˚.75N×73˚.18E,h5km*

*KRNET **29** 22:07:33.4±0.1,39˚.43N×73˚.43E,mb2.6*
ISC 29 22:07:35.2±1.9,**39˚.54N**±0˚.10×**73˚.35E**±0˚.06,**h10**km,**n9,**
σ2s50/18,2C-8D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.08**	**336**	⇑*i*	**Pb**	**22 07 56.3**	**+0.3**
	baz=36						
OHH				⇑*i*	**Sn**	**22 08 12.9**	**+1.3**
	baz=36						
DRK	**Karamyk**	**1.20**	**268**	⇓*i*	**Pn**	**22 07 57.4**	**-1.0**
	baz=73						
DRK				⇓*i*	**Sn**	**22 08 15.2**	**+0.3**
	baz=73						
BTK	**Batken**	**2.02**	**286**	⇓*i*	**Pb**	**22 08 11.8**	**-0.3**
	baz=88						
BTK				⇓*i*	**Sg**	**22 08 40.1**	**-0.1**
	baz=88						
TRKS	**Terek-Say**	**2.61**	**320**	⇓*i*	**Pn**	**22 08 19.6**	**+2.0**
	baz=20						
TRKS				⇓*i*	**Sb**	**22 08 53.4**	**-1.0**
	baz=20						
UCH	**Uchtor**	**2.83**	**18**	⇓*i*	**Pb**	**22 08 23.2**	**-2.9**
	baz=16						
UCH				⇓*i*	**Sb**	**22 08 59.5**	**-1.5**
	baz=16						
IUG	**Iuzhnay**	**3.63**	**317**	*e*P	**Pn**	**22 08 35.5**	**+3.9**
	22nm,0.3s						
IUG				*e*S	**Sb**	**22 09 20.6**	**-2.9**
	6.4nm,0.5s						
KST	**Kastek**	**4.02**	**28**	*e*P	**Pb**	**22 08 45.7**	**-0.4**
	0.9nm,0.2s						
KST				*e*S	**Sb**	**22 09 38.3**	**+3.4**
	3.4nm,1.0s						
KRBS	**Karabastau**	**4.51**	**22**	*e*P	**Pb**	**22 08 53.4**	**-1.0**
	0.1nm,0.4s						
KRBS				*e*S	**Sb**	**22 09 51.3**	**+2.5**
	1.6nm,0.5s						
KTBS	**Karatobe**	**4.86**	**30**	*e*P	**Pb**	**22 09 02.0**	**+1.5**
	1.5nm,0.5s						
KTBS				*e*S	**Sg**	**22 10 05.8**	**-5.4**
	2.7nm,0.4s						

*IDC **29** 22:33:19.3±0.5,33˚.44S×77˚.82E,h0km,mb4.4/18,*
mbtmp4.4/18,MS4.0/27,Error ellipse: s-maj=16.3km
s-min=15.7km az=28.0
*NEIC **29** 22:33:21.6±1.5,33˚.61S±0˚.09×77˚.9E±0˚.1,h10km±1km,*
mb4.8/46,Error ellipse: s-maj=18.3km s-min=15.0km
az=97.0
*GCMT **29** 22:33:23.5±0.3,33˚.34S±0˚.02×77˚.87E±0˚.02,h18km±1km,*
MW5.0/98,Moment Tensor Solution. s19,c22; s98,c136;
Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr0.29±.13;
Mθθ-3.02±.12; Mφφ2.73±.12; Mrθ1.69±.36; Mθφ0.12±.11;
Mφr-1.25±.29; Best double couple: Mo3.54800×10¹⁶
NP1:φ135.00000°,δ89.00000°,λ144.00000°. Principal axes:
T 3.3120, Plg25.0000°, Azm84.0000°; N 0.4790,
Plg54.0000°, Azm313.0000°; P -3.7850, Plg24.0000°,
Azm186.0000°; nsta1 refers to body waves, cutoff=40s.
nsta2 refers to surface waves, cutoff=50s. Triangular
moment-rate function
ISC 29 22:33:21.1±0.4,**33˚.57S**±0˚.07×**77˚.85E**±0˚.08,**h10**km,**n115,**
σ1s17/91,mb4.7/42,MS4.1/30,3C-5D,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AIS	**Amsterdam Isla**	**4.22**	**183**	Pn	**Pn**	**22 34 24.5**	**-1.0**
H08S2	**Diego Garcia H**	**26.27**	**348**	T	T	23 05 59.5	
	baz=170,slow=76,SNR=458						
H08S1	**Diego Garcia H**	**26.28**	**348**	T	T	23 05 59.8	
	baz=170,slow=76,SNR=590						
H08S3	**Diego Garcia H**	**26.29**	**348**	T	T	23 06 01.0	
	baz=170,slow=76,SNR=583						
VOI	**Vohitsoka**	**29.73**	**285**	P	**P**	**22 39 26.1**	**-1.8**
VOI				IAmb	IAmb	22 39 55.5	
	comp=Z,14nm,1.2s						
H01W2	**Cape Leeuwin H**	**29.93**	**103**	T	T	23 10 57.0	
	baz=262,slow=74,SNR=358						
H01W3	**Cape Leeuwin H**	**29.93**	**103**	T	T	23 11 06.3	
	baz=262,slow=74,SNR=300						
H01W1	**Cape Leeuwin H**	**29.95**	**103**	T	T	23 10 48.5	
	baz=262,slow=74,SNR=329						
OPO	**Ambohidratompo**	**31.19**	**291**	P	**P**	**22 39 40.2**	**-0.6**
	comp=Z,6.8nm,1.1s,baz=196,slow=12,SNR=3.3						
OPO				LR	LR	22 49 06.9	
	comp=Z,133nm,19.6s,baz=1.5,slow=30						
	comp=Z,6.8nm,1.1s						
MAW	**Mawson**	**35.17**	**190**	P	**P**	**22 40 15.4**	**+0.6**
	comp=Z,5.3nm,0.9s,baz=5.9,slow=12,SNR=8.7						
MAW				LR	LR	22 51 10.2	
	comp=Z,163nm,18.1s,baz=24,slow=30						
	comp=Z,5.3nm,0.9s						
MAW	**Mawson**	**35.17**	**190**	P	**P**	**22 40 15.1**	**+0.4**
LEM	**Lemband**	**38.31**	**53**	LR	LR	22 53 24.2	
	comp=Z,155nm,19.2s,baz=296,slow=32						
PSA00	**Pilbara Seismi**	**38.86**	**83**	P	**P**	**22 40 44.8**	**-1.9**
MBWA	**Marble Bar**	**38.95**	**82**	P	**P**	**22 40 46.5**	**-1.1**
MBWA				IAmb	IAmb	22 41 02.7	
	comp=Z,22nm,1.2s						
BKNI	**Bangkinang**	**40.16**	**38**	P	**P**	**22 40 57.7**	**+0.1**
PALK	**Pallekele**	**40.71**	**4**	LR	LR	22 54 04.3	
	comp=Z,212nm,20.1s,baz=292,slow=31						
RPSI	**Rantau Prapat**	**41.20**	**33**	P	**P**	**22 41 06.5**	**+0.4**
KULM	**Kulim**	**44.28**	**34**	P	**P**	**22 41 29.9**	**-1.2**
KULM				IAmb	IAmb	22 41 34.6	
	comp=Z,27nm,1.3s						
BOSA	**Boshof**	**44.91**	**262**	P	**P**	**22 41 35.5**	**-0.9**
	comp=Z,3.6nm,0.9s,baz=133,slow=9.2,SNR=5.2						
BOSA				LR	LR	22 56 44.8	
	comp=Z,203nm,19.6s,baz=122,slow=31						
	comp=Z,3.6nm,0.9s						
BOSA	**Boshof**	**44.91**	**262**	P	**P**	**22 41 35.5**	**-0.9**
BOSA				IAmb	IAmb	22 41 38.6	
	comp=Z,29nm,1.7s						
MATP	**Matopo**	**45.48**	**274**	P	**P**	**22 41 39.7**	**-1.2**
	comp=Z,3.2nm,0.8s,baz=136,slow=9.4,SNR=7.0						
	comp=Z,3.2nm,0.8s						
LBTB	**Lobatse**	**45.96**	**266**	P	**P**	**22 41 43.5**	**-1.1**
	comp=Z,4.0nm,0.6s,baz=117,slow=8.6,SNR=6.9						
LBTB				LR	LR	22 56 44.7	
	comp=Z,169nm,21.7s,baz=116,slow=31						
	comp=Z,4.0nm,0.6s						
LBTB	**Lobatse**	**45.96**	**266**	P	**P**	**22 41 43.6**	**-1.0**
SUR	**Sutherland**	**47.33**	**255**	LR	LR	22 57 34.9	
	comp=Z,206nm,20.6s,baz=126,slow=31						
KAPI	**Kappang**	**48.18**	**63**	LR	LR	23 00 36.8	
	comp=Z,78nm,19.6s,baz=236,slow=34						
LSZ	**Lusaka**	**48.26**	**280**	LR	LR	23 00 21.0	
	comp=Z,165nm,18.3s,baz=138,slow=34						
LSZ	**Lusaka**	**48.26**	**280**	P	**P**	**22 42 01.8**	**-0.9**
SBUM	**Sibu**	**48.31**	**49**	P	**P**	**22 42 01.9**	**-1.0**
SBUM				IAmb	IAmb	22 42 03.5	
	comp=Z,9.6nm,1.0s						
KNRA	**Kununurra**	**49.09**	**82**	P	**P**	**22 42 08.1**	**-0.8**
ASAR	**Alice Springs**	**49.67**	**94**	P	**P**	**22 42 12.9**	**-0.5**
	comp=Z,6.3nm,0.9s,baz=242,slow=6.4,SNR=34						
ASAR				LR	LR	22 59 57.7	
	comp=Z,196nm,21.8s,baz=250,slow=32						
	comp=Z,6.3nm,0.9s						
ASAR	**Alice Springs**	**49.67**	**94**	P	**P**	**22 42 12.7**	**-0.7**
AS31	**Alice Springs**	**49.68**	**94**	P	**P**	**22 42 12.0**	**-1.4**
KMBO	**Kilima Mbogo**	**49.87**	**302**	P	**P**	**22 42 14.3**	**-0.9**
	comp=Z,1.6nm,0.8s,baz=82,slow=7.2,SNR=4.8						
	comp=Z,1.6nm,0.8s						
KMBO	**Kilima Mbogo**	**49.87**	**302**	P	**P**	**22 42 13.8**	**-1.3**
KMBO				IAmb	IAmb	22 42 47.4	
	comp=Z,9.0nm,1.4s						
WRA	**Warramunga Arr**	**51.67**	**90**	P	**P**	**22 42 28.1**	**-0.4**
	comp=Z,12nm,0.8s,baz=246,slow=7.5,SNR=33						
WRA				LR	LR	23 02 49.1	
	comp=Z,170nm,18.7s,baz=316,slow=34						
	comp=Z,12nm,0.8s						
WRA	**Warramunga Arr**	**51.67**	**90**	P	**P**	**22 42 27.7**	**-0.8**
WB2	**Warramunga Arr**	**51.68**	**90**	P	**P**	**22 42 27.6**	**-0.9**
WB2				IAmb	IAmb	22 42 29.3	
	comp=Z,20nm,1.1s						
WRAB	**Tennant Creek**	**51.68**	**90**	P	**P**	**22 42 28.2**	**-0.3**
WRAB				IAmb	IAmb	22 42 29.4	
	comp=Z,17nm,1.0s						
WR0	**Warramunga Arr**	**51.83**	**90**	P	**P**	**22 42 29.3**	**-0.4**
STKA	**Stephens Creek**	**52.88**	**107**	LR	LR	23 02 19.5	
	comp=Z,206nm,19.0s,baz=208,slow=33						
TROLL	**Troll, Antarti**	**53.92**	**202**	P	**P**	**22 42 45.9**	**+1.3**
MYLDM	**Lahad Datu**	**54.45**	**53**	P	**P**	**22 42 48.7**	**-0.2**

MBAR	**Mbarara**	**54.97**	**297**	LR	LR	23 01 46.1	
	comp=Z,121nm,21.4s,baz=62,slow=31						
TSUM	**Tsumeb**	**55.16**	**269**	LR	LR	23 03 15.4	
	comp=Z,248nm,18.9s,baz=124,slow=33						
TSUM	**Tsumeb**	**55.16**	**269**	P	**P**	**22 42 54.4**	**+0.1**
TSUM				IAmb	IAmb	22 42 56.6	
	comp=Z,11nm,1.0s						
CMAR	**Chiang Mai Arr**	**55.52**	**24**	P	**P**	**22 42 55.3**	**-1.2**
	comp=Z,2.4nm,0.3s,baz=218,slow=20,SNR=4.6						
CMAR				LR	LR	23 02 09.0	
	comp=Z,78nm,21.8s,baz=235,slow=31						
	comp=Z,2.4nm,0.3s						
CMAR	**Chiang Mai Arr**	**55.52**	**24**	P	**P**	**22 42 56.9**	**+0.3**
SNAA	**Sanae**	**55.60**	**202**	P	**P**	**22 42 57.7**	**+1.1**
SNAA	**Sanae**	**55.60**	**202**	P	**P**	**22 42 57.1**	**+0.5**
	comp=Z,2.5nm,0.9s,baz=111,slow=6.5,SNR=6.9						
SNAA				LR	LR	23 04 22.3	
	comp=Z,54nm,18.0s,baz=306,slow=33						
	comp=Z,2.5nm,0.9s						
SNAA	**Sanae**	**55.60**	**202**	P	**P**	**22 42 57.0**	**+0.3**
VNDA	**Vanda**	**56.21**	**165**	P	**P**	**22 43 01.8**	**+1.0**
	comp=Z,2.9nm,0.9s,baz=266,slow=4.9,SNR=17						
VNDA				LR	LR	23 04 31.9	
	comp=Z,188nm,20.1s,baz=274,slow=33						
	comp=Z,2.9nm,0.9s						
VNDA	**Vanda**	**56.21**	**165**	P	**P**	**22 43 01.8**	**+1.0**
VNDA				IAmb	IAmb	22 43 06.9	
	comp=Z,8.0nm,1.2s						
QSPA	**South Pole Qui**	**56.58**	**180**	P	**P**	**22 43 04.7**	**+0.9**
	comp=Z,8.8nm,0.8s,baz=282,slow=3.1,SNR=26						
QSPA				LR	LR	23 05 20.5	
	comp=Z,141nm,19.1s,baz=286,slow=34						
	comp=Z,8.8nm,0.8s						
QSPA	**South Pole Qui**	**56.58**	**180**	P	**P**	**22 43 04.7**	**+0.9**
QSPA				IAmb	IAmb	22 43 06.3	
	comp=Z,11nm,0.9s						
VNA2	**Neumayer--Watz**	**57.14**	**203**	P	**P**	**22 43 08.5**	**+0.9**
VNA1	**Neumayer--Stat**	**57.46**	**203**	P	**P**	**22 43 11.3**	**+1.6**
VNA3	**Neumayer Olymp**	**57.82**	**202**	P	**P**	**22 43 13.5**	**+1.2**
SIJI	**Sorong**	**59.62**	**69**	LR	LR	23 07 15.6	
	comp=Z,20nm,21.9s,baz=65,slow=34						
SHL	**Shillong**	**60.31**	**15**	P	**P**	**22 43 31.0**	**+0.7**
SHL				IAmb	IAmb	22 43 32.8	
	comp=Z,8.1nm,0.7s						
DAV	**Davao City (W)**	**60.66**	**57**	LR	LR	23 07 16.3	
	comp=Z,41nm,21.6s,baz=222,slow=34						
CTA	**Charters Tower**	**61.53**	**96**	LR	LR	23 07 46.0	
	comp=Z,10nm,20.8s,baz=250,slow=34						
BELA	**Belgrano 2**	**61.93**	**193**	P	**P**	**22 43 40.9**	**+0.4**
PZH	**PanZhiHua**	**63.91**	**24**	P	P	22 43 59.5	+5.1
PZH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PZH				pmax	pmax		
	comp=Z,120nm,5.5s						
LSA	**Lhasa**	**64.18**	**13**	P	**P**	**22 43 56.6**	**+0.1**
LSA				IAmb	IAmb	22 44 10.9	
	comp=Z,10.0nm,1.2s						
RAYN	**Ar Rayn**	**64.60**	**327**	P	**P**	**22 43 59.5**	**+0.7**
RAYN				IAmb	IAmb	22 44 01.1	
	comp=Z,6.5nm,0.8s						
PMG	**Port Moresby**	**67.64**	**87**	LR	LR	23 13 40.0	
	comp=Z,194nm,18.1s,baz=214,slow=36						
KBL	**Kabul**	**68.26**	**352**	P	**P**	**22 44 23.2**	**+1.0**
KBL				IAmb	IAmb	22 44 24.9	
	comp=Z,5.3nm,0.8s						
RPZ	**Rata Peaks**	**69.81**	**130**	LR	LR	23 08 48.3	
	comp=Z,145nm,18.3s,baz=254,slow=30						
XAN	**Xi'an**	**73.32**	**27**	P	**P**	**22 44 54.3**	**+1.4**
XAN				pP	pwP	22 44 59.8	+0.1
XAN				sP	PcP	22 45 02.8	-6.4
XAN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LZH	**Lanzhou**	**73.44**	**22**	*e*P	**P**	**22 44 55.8**	**+2.1**
LZH				pP	pwP	22 45 01.0	+0.5
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
LZH				pmax	pmax		
	comp=Z,85nm,6.8s						
LZH				LR	LR		
	comp=Z,630nm,15.8s						
LZH				LR	LR		
	comp=Z,500nm,16.0s						
LZH				LR	LR		
	comp=Z,460nm,18.3s						
GEYT	**Alibeck**	**73.47**	**344**	P	**P**	**22 44 54.6**	**+1.0**
GYA0B	**ALIBECK ARRAY**	**73.47**	**344**	P	**P**	**22 44 54.7**	**+1.0**
GYA0B				IAmb	IAmb	22 45 11.9	
	comp=Z,6.9nm,1.4s						
BTK	**Batken**	**73.55**	**354**	P	**P**	**22 44 54.9**	**+0.7**
BTK				IAmb	IAmb	22 44 58.0	
	comp=Z,10nm,1.2s						
KRVT	**Keravat (AS076**	**74.45**	**85**	LR	LR	23 18 47.5	
	comp=Z,99nm,18.0s,baz=82,slow=37						
KDJ	**Kajisay**	**75.34**	**359**	P	**P**	**22 45 05.2**	**+0.5**
AAK	**Ala-Archa**	**75.90**	**357**	P	**P**	**22 45 08.7**	**+0.9**
AAK				IAmb	IAmb	22 45 39.0	
	comp=Z,13nm,1.7s						
KK31	**Karatay Array**	**76.60**	**354**	P	**P**	**22 45 12.3**	**+0.7**
KK31				IAmb	IAmb	22 45 27.6	
	comp=Z,6.8nm,0.9s						
KKAR	**Karatay Array**	**76.60**	**354**	P	**P**	**22 45 10.5**	**-1.1**
KKAR	**Karatay Array**	**76.60**	**354**	P	**P**	**22 45 12.6**	**+1.0**
KKAR				IAmb	IAmb	22 45 27.6	
	comp=Z,6.8nm,0.9s						
DZM	**Mont Dzumac**	**77.02**	**108**	LR	LR	23 14 34.7	
	comp=Z,79nm,19.3s,baz=24,slow=32						
PMSA	**Palmer Station**	**77.54**	**196**	LR	LR	23 16 08.9	
	comp=Z,66nm,21.9s,baz=130,slow=33						
WMQ	**Urumqi**	**77.55**	**7**

MLR	**Muntele Rosu**	**91.66**	**326**	⇑P	**P**	**22 46 30.1**	**+1.7**
MLR	**Muntele Rosu**	**91.66**	**326**	P	**P**	**22 46 29.2**	**+0.8**
COVR	**Voineasa-Covas**	**91.80**	**327**	⇓P	**P**	**22 46 30.4**	**+1.4**
VOIR		**92.03**	**326**	⇓P	**P**	**22 46 34.0**	**+3.9**
ARR	**Arges**	**92.17**	**326**	⇓P	**P**	**22 46 30.9**	**+0.1**
BZS	**Buzias**	**93.81**	**324**	⇑P	**P**	**22 46 40.0**	**+1.9**
AKASG	**Malin Array Be**	**94.23**	**331**	P	**P**	**22 46 40.3**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=128,slow=3.6,SNR=5.0						
	comp=Z,0.6nm,0.5s						
SCHQ	**Schefferville**	**147.47**	**322**	PKPbc	**PKPbc**	**22 53 04.4**	**-0.4**
	comp=Z,5.7nm,0.8s,baz=40,slow=7.9,SNR=5.3						
SCHQ	**Schefferville**	**147.47**	**322**		**PKPbc**	**22 53 03.9**	**-0.9**
YKA	**Yellowknife Ar**	**150.00**	**12**	PKPbc	**PKPbc**	**22 53 09.0**	**-2.0**
	comp=Z,2.3nm,1.0s,baz=354,slow=2.7,SNR=6.5						
YKA	**Yellowknife Ar**	**150.00**	**12**		**PKPbc**	**22 53 08.8**	**-2.3**
NVAR	**Mina Array Bea**	**166.06**	**65**	PKPab	**PKPab**	**22 54 25.9**	**-1.2**
	comp=Z,0.9nm,0.8s,baz=272,slow=6.5,SNR=4.9						

SOME ***29*** *22:37:00.0, 39.43N × 73.22E, h0km*
KRNET ***29*** *22:37:02.2± 0.1, 39.54N × 73.54E, mb3.1*

ISC 29 22:37:04.6±1.6, 39.64N±0.07 × 73.44E±0.05, h10km, n14, σ2s 62/28, 12C-2D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.01**	**331**	⇑*iP*	**Pb**	**22 37 23.9**	**-0.4**
	baz=30						
OHH				⇑*iS*	**Sn**	**22 37 40.2**	**+0.8**
	baz=30						
DRK	**Karamyk**	**1.28**	**263**	⇑*iP*	**Pb**	**22 37 27.9**	**-1.0**
	baz=68						
DRK				⇑*iS*	**Sg**	**22 37 46.7**	**+0.9**
	baz=68						
BTK	**Batken**	**2.06**	**282**	⇑*iP*	**Pb**	**22 37 41.4**	**-0.7**
	baz=85						
BTK				⇑*iS*	**Sg**	**22 38 10.1**	**-0.7**
	baz=85						
GAR	**Garm**	**2.50**	**256**	⇑*iP*	**Pb**	**22 37 46.9**	**-2.9**
	baz=59						
GAR				⇑*iS*	**Sb**	**22 38 19.7**	**-1.0**
	baz=59						
TRKS	**Terek-Say**	**2.57**	**318**	⇓*iP*	**Pn**	**22 37 48.1**	**+1.6**
	baz=18						
TRKS				⇓*iS*	**Sb**	**22 38 21.6**	**-1.1**
	baz=18						
UCH	**Uchtor**	**2.71**	**17**	⇑*iP*	**Pb**	**22 37 50.3**	**-3.1**
	baz=15						
UCH				⇑*iS*	**Sb**	**22 38 25.5**	**-1.4**
	baz=15						
MRKS	**Merke**	**3.10**	**357**	*eP*	**Pb**	**22 38 00.5**	**+0.6**
	5.0nm,0.3s						
MRKS				*eS*	**Sg**	**22 38 43.4**	**-0.9**
	19nm,0.4s						
IUG	**Iuzhnay**	**3.60**	**315**	*eP*	**Pb**	**22 38 04.6**	**-3.7**
	24nm,0.5s						
IUG				*eS*	**Sb**	**22 38 50.7**	**-1.3**
	12nm,0.6s						
KST	**Kastek**	**3.89**	**28**	*eP*	**Pb**	**22 38 13.6**	**+0.2**
	1.9nm,0.5s						
KST				*eS*	**Sg**	**22 39 05.8**	**-3.8**
	9.7nm,0.5s						
SGDS	**Sogindy**	**3.91**	**13**	*eP*	**Pb**	**22 38 14.8**	**+1.1**
	2.0nm,0.5s						
SGDS				*eS*	**Sg**	**22 39 07.7**	**-2.5**
	4.1nm,0.7s						
KKAR	**Karatay Array**	**4.10**	**328**	⇑*iP*	**Pn**	**22 38 10.0**	**+2.7**
	baz=28						
KKAR				⇑*iS*	**Sn**	**22 38 59.6**	**+4.2**
	baz=28						
KRBS	**Karabastau**	**4.38**	**22**	*eP*	**Pb**	**22 38 22.0**	**+0.3**
	1.4nm,0.4s						
KRBS				*eS*	**Sg**	**22 39 20.4**	**-4.9**
	2.9nm,0.5s						
KTBS	**Karatobe**	**4.74**	**30**	*eP*	**Pb**	**22 38 28.3**	**+0.6**
	1.2nm,0.6s						
KTBS				*eS*	**Sg**	**22 39 31.1**	**-5.6**
	7.6nm,0.5s						
KUU	**Kurty**	**4.77**	**26**	*eP*	**Pb**	**22 38 28.3**	**0.0**
	1.2nm,0.5s						
KUU				*eS*	**Sb**	**22 39 30.8**	**+5.0**
	6.6nm,0.6s						

NNC ***29*** *22:56:11.4±0.7, 37.60N × 57.26E, h11km±5km, mb4.9, Error ellipse: s-maj=13.4km s-min=4.5km az=149.0*
TEH ***29*** *22:56:11.7, 37.44N × 57.46E, h6km, ML4.9*
MOS ***29*** *22:56:12.2± 1.6, 37.54N × 57.51E, h10km, mb4.7/32, Error ellipse: s-maj=3.8km s-min=3.4km az=11.5*
IDC ***29*** *22:56:13.5± 0.5, 37.56N × 57.31E, h0km, mb4.4/28, mbtmp4.4/40, ML4.0/11, MS3.9/58, Error ellipse: s-maj=10.9km s-min=6.2km az=162.0*
THR ***29*** *22:56:13.5± 0.9, 37.48N × 57.47E, h15km± 9km, ML4.5*
DSN ***29*** *22:56:13.1± 0.5, 37.50N × 57.47E, h15km, mb4.5/2, Error ellipse: s-maj=8.8km s-min=6.7km az=103.0*
NEIC ***29*** *22:56:14.4±2.2, 37.51N±0.06 × 57.50E±0.03, h10km±1km, mb4.7/92, mb_Lg4.9(TEH), Error ellipse: s-maj=9.8km s-min=3.6km az=13.0*
BJI ***29*** *22:56:16.3±0.0, 37.55N × 57.96E, h10km, mb4.5/38, mB4.6/24, Ms4.6/32, Ms7 4.3/32*
GCMT ***29*** *22:56:17.4±0.4, 37.58N±0.02 × 57.54E±0.02, h22km±2km, MW4.8/79, Moment Tensor Solution. s4,c4; s79,c105; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.23±.15; $M_{\theta\theta}$-1.51±.10; $M_{\phi\phi}$ 1.74±.11; $M_{r\theta}$-0.41±.19; $M_{\theta\phi}$0.86±.08; $M_{\phi r}$-0.30±.15; Best double couple: $M_0$1.90900×10^{16} NP1:φs149.00000°, δ74.00000°, λ-178.00000°. NP2: φs59.00000°, δ89.00000°, λ-16.00000°. Principal axes: T 2.0230, Plg10.0000°, Azm105.0000°; N -0.2320, Plg74.0000°, Azm233.0000°; P -1.7940, Plg12.0000°, Azm13.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 22:56:14.2±0.5, 37.51N±0.02 × 57.46E±0.02, h14km±2km, h14km: pP-P, n745, σ1s 91/758, mb4.6/116, MS4.0/80, 57C-13D, Iran-Turkmenistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BJRD	**Bojnurd**	**0.20**	**348**	*ePg*	**Pg**	**22 56 18.4**	**-0.4**
BJRD				*eSg*	**Sg**	**22 56 22.6**	**+0.7**
BJRD				IAML		22 56 23.8	
	comp=E,106μm,0.5s						
ISFR	**Sfrayin**	**0.63**	**136**	Pg	**Pg**	**22 56 24.4**	**-2.2**
ISFR	**Sfrayin**	**0.63**	**136**	*ePg*	**Pg**	**22 56 24.4**	**-2.2**
ISFR				*e*		22 56 40.3	
	comp=Z,24μm,0.6s						
GEYT	**Alibeck**	**0.67**	**51**	Pg	**Pb**	**22 56 26.7**	**-1.0**
	comp=Z,552nm,0.3s,baz=222,slow=24,SNR=871						
GEYT				Lg	Lg	22 56 37.8	
	comp=Z,3μm,0.3s,baz=352,slow=40,SNR=31						
GEYT	**Alibeck**	**0.67**	**51**	Pg	**Pb**	**22 56 26.6**	**-1.2**
GEYT	**Alibeck**	**0.67**	**51**	*ePg*	**Pb**	**22 56 26.6**	**-1.2**
GYA0	**ALIBECK ARRAY**	**0.67**	**51**	P	**Pb**	**22 56 26.5**	**-1.3**
GYA0				SN	**Sb**	**22 56 37.4**	**+0.4**
GYA0B	**ALIBECK ARRAY**	**0.67**	**51**	Pg	**Pb**	**22 56 26.6**	**-1.1**
GYA0B				Sg	**Sb**	**22 56 36.6**	**-0.4**
GYA0B	**ALIBECK ARRAY**	**0.67**	**51**	⇑P	**Pb**	**22 56 26.5**	**-1.3**
GYA0B				⇓S	**Sn**	**22 56 37.4**	**-2.3**
IEMG	**Emamgholi**	**0.95**	**95**	Pg	**Pg**	**22 56 30.8**	**-1.9**
IEMG	**Emamgholi**	**0.95**	**95**	*ePg*	**Pg**	**22 56 30.8**	**-1.9**
IEMG				*e*		22 56 49.1	
	comp=N,18μm,0.2s						
MRVT	**Maraveh tapeh**	**1.10**	**278**		**Pg**	**22 56 33.8**	**-1.6**
MRVT	**Maraveh tapeh**	**1.10**	**278**	*ePg*	**Pg**	**22 56 33.9**	**-1.5**
MRVT	**Maraveh tapeh**	**1.10**	**278**	*ePg*	**Pg**	**22 56 33.9**	**-1.5**
MRVT				IAML		22 56 55.7	
	comp=N,8μm,0.5s						
MRVT				IAML		22 56 56.4	
	comp=E,10μm,0.4s						
SBZV	**Sabzevar**	**1.12**	**174**		**Pb**	**22 56 33.2**	**-2.4**
SBZV				Sg	**Sg**	**22 56 48.1**	**-2.6**
SBZV	**Sabzevar**	**1.12**	**174**	*ePg*	**Pb**	**22 56 33.2**	**-2.4**
SBZV				*eSg*	**Sg**	**22 56 48.1**	**-2.6**
IAKL	**Akhelmad**	**1.38**	**131**		**Pn**	**22 56 37.5**	**-1.8**
IAKL					**Sb**	**22 56 57.2**	**-0.3**
IAKL	**Akhelmad**	**1.38**	**131**	*ePg*	**Pn**	**22 56 37.6**	**-1.8**
IAKL				*eSg*	**Sb**	**22 56 57.3**	**-0.3**
IAKL				*e*		22 57 07.2	
	comp=Z,49μm,0.4s						
IPAY	**Payeh**	**1.62**	**130**	Pn	**Pn**	**22 56 41.8**	**-0.9**
IPAY	**Payeh**	**1.62**	**130**	*ePn*	**Pn**	**22 56 41.8**	**-0.9**
IPAY				*eSg*	**Sg**	**22 57 06.9**	**+0.4**
IPAY				*e*		22 57 11.8	
	comp=Z,89μm,0.6s						
IMND	**Minoodasht**	**1.65**	**262**		**Pb**	**22 56 43.7**	**-0.8**
IMND	**Minoodasht**	**1.65**	**262**	*ePg*	**Pb**	**22 56 43.7**	**-0.8**
IKRD	**Kardeh**	**1.80**	**113**	*ePn*	**Pn**	**22 56 45.6**	**+0.5**
IKRD				*e*		22 57 18.8	
	comp=Z,98μm,0.6s						
SHRO	**Shahrood**	**1.91**	**218**	*ePn*	**Pn**	**22 56 47.1**	**+0.6**
SHRO				IAML		22 57 15.3	
	comp=E,4μm,0.7s						
IMOG	**Moghan**	**2.06**	**132**	Pn	**Pn**	**22 56 49.0**	**+0.4**
IMOG	**Moghan**	**2.06**	**132**	*ePn*	**Pn**	**22 56 49.1**	**+0.4**
IMOG				*e*		22 57 26.0	
	comp=Z,45μm,0.6s						
IMYA	**Miami**	**2.42**	**118**	*ePn*	**Pn**	**22 56 54.7**	**+1.2**
IMYA				*e*		22 57 39.0	
	comp=Z,45μm,1.2s						
TBHD	**Torbat heydari**	**2.54**	**145**	*ePn*	**Pn**	**22 56 56.7**	**+1.5**
IGLO	**Ghaloghah**	**3.07**	**252**	*ePn*	**Pn**	**22 57 03.4**	**+0.8**
TBJM	**Torbat-e-JAM**	**3.22**	**133**	*ePn*	**Pn**	**22 57 05.2**	**+0.6**
IANJ	**Anjilo**	**3.51**	**236**	*ePn*	**Pn**	**22 57 10.3**	**+1.7**
TNSJ	**Nastanj**	**3.60**	**191**	*ePn*	**Pn**	**22 57 10.5**	**+0.7**
TNSJ				*e*		22 58 20.7	
	comp=Z,30μm,0.8s						
ISHM	**Shahmirzad**	**3.75**	**244**	*ePn*	**Pn**	**22 57 12.9**	**+0.9**
ISHM				*e*		22 57 36.0	
	comp=Z,25μm,0.5s						
TABS	**Tabas**	**3.86**	**184**	*ePn*	**Pn**	**22 57 14.1**	**+0.8**
TABS				IAML		22 58 31.1	
	comp=N,480nm,0.7s						
TKDS	**Koohdasht(Taba**	**3.90**	**184**	*ePn*	**Pn**	**22 57 14.4**	**+0.6**
TKDS				*e*		22 57 25.2	
	comp=Z,11μm,0.8s						
ILAS	**Lasjerd**	**4.20**	**241**	*ePn*	**Pn**	**22 57 19.2**	**+1.1**
ILAS				*e*		22 58 45.5	
	comp=Z,20μm,1.1s						
IFIR	**Firoozkooh**	**4.22**	**245**	*ePn*	**Pn**	**22 57 19.8**	**+1.4**
IFIR				*e*		22 58 54.8	
	comp=Z,14μm,1.0s						
AFRZ	**Afriz**	**4.27**	**162**	*ePn*	**Pn**	**22 57 19.9**	**+0.9**
IPRN	**Peran**	**4.29**	**254**	*ePn*	**Pn**	**22 57 20.2**	**+0.9**
SHRT	**Shahrakht**	**4.49**	**148**	*ePn*	**Pn**	**22 57 22.7**	**+0.8**
TPRV	**Parvadeh(Tabas**	**4.51**	**188**	*ePn*	**Pn**	**22 57 22.6**	**+0.3**
TPRV				*e*		22 59 04.2	
	comp=Z,10μm,1.3s						
IMON	**Monand**	**4.67**	**157**	*ePn*	**Pn**	**22 57 25.6**	**+1.0**
ITEG	**Tejag**	**4.72**	**167**	*ePn*	**Pn**	**22 57 26.2**	**+1.0**
ITEG				*e*		22 57 31.0	
	comp=Z,10μm,0.3s						
IDMV	**Damavand**	**4.78**	**248**	*ePn*	**Pn**	**22 57 27.8**	**+1.8**
IDMV				*e*		22 57 54.3	
	comp=Z,11μm,0.8s						
DAMV	**Damavand**	**4.80**	**249**	*ePn*	**Pn**	**22 57 28.4**	**+2.0**
DAMV				IAML		22 58 54.4	
	comp=N,211nm,0.6s						
DAMV				IAML		22 59 11.1	
	comp=E,267nm,0.6s						
HRA	**Herat**	**4.98**	**127**	Pn	**Pn**	**22 57 28.8**	**0.0**
IDAH	**Dahanechah**	**5.15**	**157**	*ePn*	**Pn**	**22 57 32.3**	**+1.1**
IDAH				*e*		22 57 32.9	
	comp=Z,5μm,0.3s						
IKOO	**Kooshah**	**5.23**	**165**	*ePn*	**Pn**	**22 57 33.2**	**+0.9**
IKOO				*e*		22 57 33.8	
	comp=Z,7μm,0.5s						
IVRN	**Varamin**	**5.27**	**243**	*ePn*	**Pn**	**22 57 33.8**	**+1.2**
IVRN				*e*		22 59 20.9	
	comp=Z,6μm,0.7s						
ANAR	**Anarak**	**5.28**	**216**	*ePn*	**Pn**	**22 57 33.8**	**+1.0**
CHTH	**Charan**	**5.33**	**254**	*eP*	**Pn**	**22 57 35.8**	**+2.1**
IHSB	**Hasanabad**	**5.39**	**249**	*ePn*	**Pn**	**22 57 35.8**	**+1.4**
QALM	**Alamut, Qazvin**	**5.56**	**261**	*ePn*	**Pn**	**22 57 36.6**	**-0.2**
KRSH	**Karshahi**	**5.59**	**232**	*ePn*	**Pn**	**22 57 37.9**	**+0.8**
KRSH				*e*		22 59 26.4	
	comp=Z,6μm,0.8s						
YZKH	**Yazd**	**5.62**	**206**	*ePn*	**Pn**	**22 57 38.1**	**+0.5**
BSRN	**Basiran**	**5.70**	**166**	*ePn*	**Pn**	**22 57 39.5**	**+0.9**
IQOM	**Qom**	**5.81**	**245**	*ePn*	**Pn**	**22 57 41.4**	**+1.1**
ICHK	**Chekchek**	**5.82**	**206**	*ePn*	**Pn**	**22 57 41.1**	**+0.8**
ICHK				*e*		22 57 42.4	
	comp=Z,5μm,0.4s						
GHVR	**GHOM**	**5.84**	**241**	*ePn*	**Pn**	**22 57 42.3**	**+1.8**
LHJ2	**Lahijan - Gila**	**5.90**	**269**	*ePn*	**Pn**	**22 57 40.1**	**-1.1**
IGZV	**Ghazvin**	**5.91**	**261**	*ePn*	**Pn**	**22 57 43.0**	**+1.5**
NASN	**Na'in**	**6.05**	**220**	*ePn*	**Pn**	**22 57 44.0**	**+0.4**
GIDE	**GILAN DEYLAMAN**	**6.05**	**267**	*ePn*	**Pn**	**22 57 41.9**	**-1.6**
IBAF	**Bafgh**	**6.11**	**195**	*ePn*	**Pn**	**22 57 45.5**	**+1.3**
IBAF				*e*		22 57 47.0	
	comp=Z,4μm,0.5s						
JIR1	**Jirandeh**	**6.17**	**265**	*ePn*	**Pn**	**22 57 44.7**	**-0.4**
QAMS	**Qamsar**	**6.21**	**234**	*ePn*	**Pn**	**22 57 46.5**	**+0.8**
IZEF	**Zefreh**	**6.23**	**224**	*ePn*	**Pn**	**22 57 47.1**	**+1.1**
IKLH	**Kolahrood**	**6.36**	**231**	*ePn*	**Pn**	**22 57 49.0**	**+1.1**
ISAD	**Sadrabad**	**6.39**	**210**	*ePn*	**Pn**	**22 57 48.7**	**+0.5**
IRAZ	**Razeghan**	**6.42**	**253**	*ePn*	**Pn**	**22 57 50.4**	**+1.8**
NHDN	**Nehbandan**	**6.47**	**160**	*ePn*	**Pn**	**22 57 49.8**	**+0.7**
IMEH	**Mehriz**	**6.54**	**202**	*ePn*	**Pn**	**22 57 51.0**	**+0.7**
IMEH				*e*		23 00 19.0	
	comp=Z,4μm,1.0s						
CSN1	**Caspian**	**6.65**	**273**	*ePn*	**Pn**	**22 57 51.0**	**-0.4**
ASAO	**Ashtian**	**6.71**	**246**	*ePn*	**Pn**	**22 57 54.0**	**+1.4**
IGAR	**Gharneh**	**6.76**	**223**	*ePn*	**Pn**	**22 57 54.8**	**+1.5**
IRAM	**Ramesheh**	**7.06**	**218**	*ePn*	**Pn**	**22 57 58.2**	**+0.9**
ZNJK	**Zanjan**	**7.06**	**266**	*ePn*	**Pn**	**22 57 58.0**	**+0.6**
KHGB	**Koh Gabri**	**7.16**	**187**	*ePn*	**Pn**	**22 57 59.7**	**+0.9**
KHMZ	**Khomeyn**	**7.17**	**241**	*ePn*	**Pn**	**22 58 01.0**	**+2.1**
IPIR	**Pirpir**	**7.22**	**230**	*ePn*	**Pn**	**22 58 02.3**	**+2.7**
HAGD	**Aghdareh**	**7.24**	**251**	*ePn*	**Pn**	**22 58 00.5**	**+0.6**
SHK1	**Shahrekord**	**7.47**	**228**	*ePn*	**Pn**	**22 58 04.9**	**+1.8**
TVBK	**TV Kerman**	**7.53**	**185**	*ePn*	**Pn**	**22 58 05.6**	**+1.7**
KRBR	**Kerman**	**7.53**	**185**	*ePn*	**Pn**	**22 58 05.6**	**+1.7**
IBRJ	**Brojen**	**7.56**	**224**	*ePn*	**Pn**	**22 58 06.5**	**+2.1**
GRMI	**Germi**	**7.65**	**283**	*ePn*	**Pn**	**22 58 04.0**	**-1.3**
GRMI	**Germi**	**7.65**	**283**	*ePn*	**Pn**	**22 58 03.9**	**-1.4**
ISRB	**Sarab**	**7.77**	**275**	*ePn*	**Pn**	**22 58 07.2**	**+0.1**
NGRK	**Negar Kerman**	**7.87**	**185**	*ePn*	**Pn**	**22 58 09.2**	**+0.6**
KLNJ	**Kolanjah**	**8.10**	**219**	*ePn*	**Pn**	**22 58 12.7**	**+0.9**
IHSH	**Hashtrud**	**8.12**	**272**	*ePn*	**Pn**	**22 58 12.7**	**+0.7**
IHRS	**Heris**	**8.27**	**279**	*ePn*	**Pn**	**22 58 13.7**	**-0.3**
ZHSF	**Zahedan**	**8.35**	**160**	*ePn*	**Pn**	**22 58 15.1**	**+0.1**
IBST	**Bostanabad**	**8.39**	**275**	*ePn*	**Pn**	**22 58 15.6**	**0.0**
KBAM	**BAM**	**8.39**	**174**	*ePn*	**Pn**	**22 58 15.6**	**0.0**
SNGE	**Sanandaj**	**8.51**	**257**	*ePn*	**Pn**	**22 58 19.0**	**+1.7**
TVRZ	**Varzaqan**	**8.58**	**280**	*ePn*	**Pn**	**22 58 18.0**	**-0.1**
SHI	**Shiraz**	**8.86**	**209**	*ePn*	**Pn**	**22 58 23.2**	**+1.1**
AMIS	**Naft Sefid**	**8.91**	**232**	*ePn*	**Pn**	**22 58 24.6**	**+2.1**
ITBZ	**Tabriz**	**8.97**	**278**	*ePn*	**Pn**	**22 58 23.4**	**-0.2**
IAZR	**Azarshahr**	**9.11**	**275**	*ePn*	**Pn**	**22 58 26.8**	**+1.2**
ABEH	**Behbahan**	**9.12**	**223**	*ePn*	**Pn**	**22 58 28.3**	**+2.9**
CHGR	**Chuyangaron**	**9.30**	**79**	Pn	**Pn**	**22 58 26.6**	**-1.3**
CHGR	**Chuyangaron**	**9.30**	**79**	P	**Pn**	**22 58 26.6**	**-1.3**
IMRD	**Marand**	**9.34**	**281**	*ePn*	**Pn**	**22 58 29.0**	**+0.4**
MAK	**Makhachkala**	**9.36**	**309**	*eP*	Pn	22 58 22.5	-6.1
MAK				pmax	pmax		
	comp=Z,185nm,0.8s						
MAK				MLR	MLR		
	comp=Z,597nm,11.0s						
ISHB	**Shabestar**	**9.39**	**278**	*ePn*	**Pn**	**22 58 29.3**	**-0.1**
DDFL	**Dedoflistskaro**	**9.61**	**298**	P	**Pn**	**22 58 34.5**	**+2.4**
DDFL				S	**Sn**	**23 00 19.8**	**-0.1**
DDFL	**Dedoflistskaro**	**9.61**	**298**	P	**Pn**	**22 58 34.5**	**+2.4**
DDFL				S	**Sn**	**23 00 19.8**	**-0.1**
LGD	**Lagodekhi**	**9.66**	**300**	P	**Pn**	**22 58 33.6**	**+0.7**
LGD				S	**Sn**	**23 00 17.9**	**-3.3**
LGD	**Lagodekhi**	**9.66**	**300**	P	**Pn**	**22 58 33.6**	**+0.7**
LGD				S	**Sn**	**23 00 17.9**	**-3.3**
KBL	**Kabul**	**9.84**	**104**	Pn	**Pn**	**22 58 36.2**	**+0.7**
KBL	**Kabul**	**9.84**	**104**	P	**Pn**	**22 58 36.2**	**+0.7**
TAS	**Tashkent**	**9.92**	**64**	Pn	**Pn**	**22 58 35.4**	**-1.0**
TAS	**Tashkent**	**9.92**	**64**	P	**Pn**	**22 58 35.4**	**-1.0**
DGRG	**David-gareji**	**10.14**	**297**	P	**Pn**	**22 58 39.0**	**-0.4**
DGRG				S	**Sn**	**23 00 31.9**	**-0.9**
DGRG	**David-gareji**	**10.14**	**297**	P	**Pn**	**22 58 39.0**	**-0.4**
DGRG				S	**Sn**	**23 00 31.9**	**-0.9**
MAKU	**Maku**	**10.19**	**284**	*ePn*	**Pn**	**22 58 40.8**	**+0.5**
MAKU	**Maku**	**10.19**	**284**	*ePn*	**Pn**	**22 58 41.4**	**+1.2**
GAR	**Garm**	**10.22**	**78**		**Pn**	**22 58 39.1**	**-1.5**
GNI	**Garni**	**10.27**	**289**	Pn	**Pn**	**22 58 41.4**	**+0.1**
	comp=Z,26nm,0.6s,baz=45,slow=4.9,SNR=34						
GNI				Sn	**Sn**	**23 00 36.4**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=267,slow=23,SNR=1.3						
GNI	**Garni**	**10.27**	**289**	Pn	**Pn**	**22 58 41.5**	**+0.3**
GNI	**Garni**	**10.27**	**289**	P	**Pn**	**22 58 41.3**	**+0.1**
CHM	**Chimkent**	**10.49**	**59**	*eP*	**Pn**	**22 58 45.4**	**+1.2**
CHM				*eS*	**Sn**	**23 00 41.7**	**+0.2**
CHM	**Chimkent**	**10.49**	**59**	*eP*	**Pn**	**22 58 45.4**	**+1.2**
	baz=60						
CHM				*eS*	**Sn**	**23 00 41.7**	**+0.2**
	baz=60						
GROC	**Groznyy**	**10.56**	**306**	*eP*	**Pn**	**22 58 46.0**	**+0.9**
GROC				*eS*	**Sn**	**23 00 44.6**	**+1.5**
GROC				pmax	pmax		
	comp=Z,64nm,0.6s						
SEAG	**Tbilisi Sea**	**10.64**	**297**	P	**Pn**	**22 58 46.4**	**+0.1**
SEAG	**Tbilisi Sea**	**10.64**	**297**	P	**Pn**	**22 58 46.4**	**+0.1**
IUG	**Iuzhnay**	**10.72**	**61**	*eP*	**Pn**	**22 58 45.2**	**-2.2**
IUG				*eS*	**Sn**	**23 00 46.1**	**-1.1**
IUG	**Iuzhnay**	**10.72**	**61**	*eP*	**Pn**	**22 58 45.3**	**-2.2**
	baz=62						
IUG				*eS*	**Sn**	**23 00 46.2**	**-1.1**
	baz=62						
BTK	**Batken**	**10.74**	**72**	Pn	**Pn**	**22 58 45.1**	**-2.5**
BTK	**Batken**	**10.74**	**72**	P	**Pn**	**22 58 45.1**	**-2.5**
SRVN	**Saravan**	**10.90**	**156**	*ePn*	**Pn**	**22 58 52.8**	**+2.8**
DMNI	**Dmanisi**	**10.95**	**294**	P	**Pn**	**22 58 49.7**	**-0.8**
DMNI	**Dmanisi**	**10.95**	**294**	P	**Pn**	**22 58 49.7**	**-0.8**
TRLG	**Trialeti**	**11.07**	**295**	P	**Pn**	**22 58 51.8**	**-0.5**
TRLG				S	**Sn**	**23 00 48.2**	**-7.7**
TRLG	**Trialeti**	**11.07**	**295**	P	**Pn**	**22 58 51.8**	**-0.5**
PNSH	**Pansheti**	**11.09**	**301**	P	**Pn**	**22 58 52.8**	**+0.3**
PNSH				S	**Sn**	**23 00 56.1**	**-0.4**
PNSH	**Pansheti**	**11.09**	**301**	P	**Pn**	**22 58 52.8**	**+0.3**
PNSH				S	**Sn**	**23 00 56.0**	**-0.4**
GUDG	**Gudauri**	**11.12**	**300**	P	**Pn**	**22 58 52.5**	**-0.5**
GUDG				S	**Sn**	**23 00 57.1**	**-0.1**
GUDG	**Gudauri**	**11.12**	**300**	P	**Pn**	**22 58 52.4**	**-0.5**
GUDG				S	**Sn**	**23 00 57.0**	**-0.1**
BRNG	**Burnasheti**	**11.29**	**296**	P	**Pn**	**22 58 57.3**	**+2.0**
GEVA	**Gevas**	**11.41**	**278**	Pn	**Pn**	**22 58 57.6**	**+0.7**
DRK	**Karamyk**	**11.41**	**76**	Pn	**Pn**	**22 58 56.6**	**-0.4**
KK31	**Karatay Array**	**11.42**	**57**	Pn	**Pn**	**22 58 55.6**	**-1.3**
KK31	**Karatay Array**	**11.42**	**57**	P	**Pn**	**22 58 55.6**	**-1.3**
KK31	**Karatay Array**	**11.42**	**57**	⇑Pn	**Pn**	**22 58 54.9**	**-2.0**
	comp=Z,8.4nm,0.4s,baz=239,slow=16,SNR=102						
KK31				⇓Lg	Lg	23 02 18.3	
	comp=Z,106nm,0.9s						
KKAR	**Karatay Array**	**11.42**	**57**	Pn	**Pn**	**22 58 56.0**	**-0.9**
KKAR	**Karatay Array**	**11.42**	**57**	P	**Pn**	**22 58 56.0**	**-0.9**
AKH	**Akhalkalaki**	**11.48**	**294**	P	**Pn**	**22 58 58.3**	**+0.4**
AKH	**Akhalkalaki**	**11.48**	**294**	P	**Pn**	**22 58 58.2**	**+0.4**
SHME	**Shamm**	**11.48**	**186**	P	**Pn**	**22 58 56.6**	**-1.2**
BKRG	**Bakuriani**	**11.55**	**296**	P	**Pn**	**22 58 58.8**	**-0.1**
BKRG	**Bakuriani**	**11.55**	**296**	P	**Pn**	**22 58 58.7**	**-0.1**
BANOM	**Banah**	**11.59**	**185**	P	**Pn**	**22 58 58.0**	**-1.4**
KARS	**Kars**	**11.60**	**290**		**Pn**	**22 58 59.7**	**+0.2**
KARS	**Kars**	**11.60**	**290**	P	**Pn**	**22 58 59.7**	**+0.2**
ZEI	**Tsey**	**11.63**	**301**	*eP*	**Pn**	**22 58 57.5**	**-2.5**
ZEI				pmax	pmax		
	comp=Z,44nm,0.7s						
ONI	**Oni**	**11.87**	**300**	P	**Pn**	**22 59 04.0**	**+0.9**
ONI	**Oni**	**11.87**	**300**		**Pn**	**22 59 02.4**	**-0.7**
ONI	**Oni**	**11.87**	**300**	P	**Pn**	**22

SNR=12
SGDS Sogindy 14.35 60 *e*P **Pn** **22 59 34.2 -2.7**
SGDS *e*S **Sn** **23 02 15.7 -0.1**
SGDS Sogindy 14.35 60 *e*P **Pn** **22 59 34.2 -2.7**
baz=61
SGDS *e*S **Sn** **23 02 15.8 -0.1**
baz=61
BTLS Baital 14.55 54 *e*P **Pn** **22 59 37.5 -2.1**
BTLS *e*S **Sn** **23 02 19.4 -1.3**
BTLS pmax pmax
comp=Z,17nm,1.4s
BTLS Baital 14.55 54 *e*P **Pn** **22 59 37.6 -2.1**
comp=Z,17nm,1.4s,baz=54
BTLS *e*S **Sn** **23 02 19.4 -1.3**
baz=54
KSH Kashi 14.64 76 P Pn 22 59 33.8 -7.2
KSH S Sn 23 02 02.0 -21
KSH pmax pmax
comp=Z,21nm,0.8s
KSH LR LR
comp=Z,1μm,12.0s
KSH LR LR
comp=Z,1μm,9.7s
KSH LR LR
comp=Z,1μm,15.1s
SOC Sochi 14.78 300 *e*P **Pn** **22 59 43.3 +0.5**
SOC *e*S **Sn** **23 02 29.1 +2.9**
SOC pmax pmax
comp=Z,19nm,1.1s
SOC MLR MLR
comp=Z,184nm,20.0s
MZR Muzera 14.86 194 P **Pn** **22 59 42.0 -2.0**
TKM2 Tokmak 2 14.87 63 P **Pn** **22 59 41.9 -2.3**
SNR=8.9
TKM2 Tokmak 2 14.87 63 *i* P **Pn** **22 59 42.9 -1.2**
TKM2 pmax pmax
comp=Z,19nm,0.8s
TKM2 Tokmak 2 14.87 63 ⇑Pn **Pn** **22 59 43.0 -1.2**
comp=Z,19nm,0.8s
BOOM Boomskoye usch 15.01 65 Pn **Pn** **22 59 44.1 -1.9**
BOOM Boomskoye usch 15.01 65 P **Pn** **22 59 44.1 -1.9**
ULHL Ulahol 15.17 66 P **Pn** **22 59 45.8 -2.5**
SNR=16
OTUK Ortayu 15.27 41 P **Pn** **22 59 46.8 -2.6**
OTUK SN **Sn** **23 02 36.1 -2.1**
OTUK Ortayu 15.27 41 ⇓Pn **Pn** **22 59 46.8 -2.6**
comp=Z,45nm,0.8s
OTUK ⇑Sn **Sn** **23 02 36.1 -2.1**
comp=Z,34nm,1.1s
KUU Kurty 15.66 60 *e*P **Pn** **22 59 53.4 -1.0**
KUU Kurty 15.66 60 *e*P **Pn** **22 59 53.5 -1.0**
baz=61
KDJ Kajisay 15.83 67 **Pn** **22 59 55.2 -1.7**
KDJ Kajisay 15.83 67 P **Pn** **22 59 55.2 -1.7**
KDJ pmax pmax
comp=Z,30nm,1.0s
TNSS Tian-Shan 15.86 64 *e*P **Pn** **22 59 58.2 +0.9**
TNSS Tian-Shan 15.86 64 *e*P **Pn** **22 59 58.3 +0.9**
baz=64
AAA Alma-Ata 15.88 63 *e*P **Pn** **22 59 57.1 -0.1**
AAA Alma-Ata 15.88 63 *e*P **Pn** **22 59 57.2 -0.1**
baz=64
CHKK Chushkaly 16.10 61 *e*P **Pn** **22 59 58.7 -1.4**
CHKK Chushkaly 16.10 61 *e*P **Pn** **22 59 58.8 -1.4**
baz=61
TARG Taragay, Kyrgy 16.23 69 Pn **Pn** **22 59 59.5 -2.7**
TARG IAmb IAmb 23 00 12.4
comp=Z,46nm,0.7s
TARG Taragay, Kyrgy 16.23 69 P **Pn** **22 59 59.5 -2.7**
TARG pmax pmax
comp=Z,46nm,0.7s
BELG Belogornoye 16.41 338 Pn **Pn** **23 00 01.9 -1.9**
comp=Z,3.1nm,0.3s,baz=327,slow=4.9,SNR=11
BELG LR LR 23 08 17.1
comp=Z,676nm,18.3s,baz=143,slow=44
comp=Z,83nm,0.9s
BELG Belogornoye 16.41 338 P **Pn** **23 00 02.0 -1.9**
ANN Anapa 16.72 302 *e*P **P** **23 00 11.8 +1.5**
ANN *e*S **S** **23 03 18.9 -5.6**
ANN pmax pmax
comp=Z,106nm,2.0s
ANN MLR MLR
comp=Z,366nm,12.0s
PRZ Przheval'sk 16.79 66 Pn **Pn** **23 00 07.8 -1.3**
PRZ Przheval'sk 16.79 66 P **Pn** **23 00 07.8 -1.3**
PRZ pmax pmax
comp=Z,26nm,0.8s
SATY Saty 16.90 64 *e*P **Pn** **23 00 09.9 -0.5**
SATY Saty 16.90 64 *e*P **Pn** **23 00 09.9 -0.5**
baz=65
ZHN Zhinishke 16.95 64 *e*P **Pn** **23 00 10.9 0.0**
ZHN Zhinishke 16.95 64 *e*P **Pn** **23 00 11.0 0.0**
baz=65
BNN Bunyan 17.05 281 Pn **Pn** **23 00 12.8 +0.6**
BNN IAmb IAmb 23 00 41.9
comp=Z,55nm,1.0s
KPKS Kokpek 17.19 63 *e*P **P** **23 00 15.8 +0.2**
KPKS Kokpek 17.19 63 *e*P **P** **23 00 15.8 +0.2**
baz=64
RAYN Ar Rayn 17.31 220 **Pn** **23 00 13.8 -1.8**
RAYN Ar Rayn 17.31 220 P **Pn** **23 00 13.8 -1.8**
RAYN pmax pmax
comp=Z,28nm,1.0s
RAYN Ar Rayn 17.31 220 P **Pn** **23 00 14.0 -1.6**
VRH Novokhopyorsk 17.67 326 *e*P **Pn** **23 00 18.1 -1.6**
VRH *e*S **Sn** **23 03 30.1 -6.1**
VRH pmax pmax
comp=Z,30nm,0.7s
VRH smax smax
comp=N,200nm,0.7s
VRH MLR MLR
comp=Z,200nm,10.0s
ASF Jabal al Asfar 17.69 259 P **P** **23 00 21.1 0.0**
comp=Z,0.3nm,0.3s,baz=89,slow=6.3,SNR=6.9
comp=Z,4.8nm,0.8s
BVAR Borovoye Array 17.94 26 LR LR 23 08 15.4
comp=Z,222nm,19.4s,baz=98,slow=40
MMAI Mount Meron Ar 18.55 263 P **Pn** **23 00 32.0 +1.2**
comp=Z,0.3nm,0.3s,baz=66,slow=11,SNR=4.0
MMAI LR LR 23 08 37.5
comp=Z,222nm,18.0s,baz=238,slow=40
comp=Z,1.6nm,0.7s
ILGA Ilgaz 18.70 288 P **P** **23 00 31.8 -0.6**
ILGA IAmb IAmb 23 00 42.6
comp=Z,28nm,0.8s
BR131 Keskin Array S 18.73 284 P **P** **23 00 31.5 -1.2**
BR131 Keskin Array S 18.73 284 *i* P **Pn** **23 00 33.6 +0.5**
BRTR Keskin Array B 18.73 284 P **Pn** **23 00 34.0 +0.8**
comp=Z,0.3nm,0.3s,baz=107,slow=12,SNR=13
comp=Z,4.2nm,0.8s
BRTR Keskin Array B 18.73 284 P **P** **23 00 32.0 -0.6**
BRTR Keskin Array B 18.73 284*ce*P **Pn** **23 00 34.7 +1.6**
BRTR pmax pmax
comp=Z,4.0nm,0.8s
VSR Storozhevoye 18.87 322 *e*P **P** **23 00 33.2 -0.7**
VSR *e*S **Sn** **23 03 56.3 -9.0**
VSR pmax pmax
comp=Z,50nm,0.7s
VSR smax smax
comp=N,90nm,1.0s
VSR MLR MLR
comp=Z,100nm,10.0s
ARU Arti 18.94 2 P **Pn** **23 00 35.3 0.0**
baz=191,slow=12,SNR=28
ARU LR LR 23 08 38.8
comp=Z,327nm,19.3s,baz=190,slow=39
comp=Z,33nm,0.8s
ARU Arti 18.94 2 P **P** **23 00 33.5 -1.2**
ARU IAmb IAmb 23 00 41.8
comp=Z,39nm,0.8s
ARU Arti 18.94 2*d i*P **Pn** **23 00 35.1 -0.2**
ARU S **S** **23 04 08.7 -0.7**
ARU pmax pmax
comp=Z,20nm,0.8s
SIM Simferopol' 19.02 300 *e*P **P** **23 00 31.0 -4.7**
SIM *e*S **Sn** **23 03 59.5 -10**
SIM pmax pmax
comp=Z,179nm,1.3s
VORR Voronezh 19.14 324 *e*P **Pn** **23 00 37.5 -0.3**
VORR *e*S **Sn** **23 04 03.2 -8.7**
VORR pmax pmax
comp=Z,90nm,1.6s
ANTO Ankara 19.38 285 ⇑P **Pn** **23 00 43.0 +2.1**
ANTO Ankara 19.38 285 P **P** **23 00 39.6 -0.1**
ANTO Ankara 19.38 285 P **P** **23 00 39.6 -0.1**
ANTO pmax pmax
comp=Z,21nm,0.8s
BR231 Keskin MP Arra 19.40 285 P **Pn** **23 00 40.3 -0.7**
SVE Sverdlovsk 19.44 5 *e*P **Pn** **23 00 40.6 -0.7**
SVE *e*S **Sn** **23 04 12.5 -6.6**
SVE pmax pmax
comp=Z,30nm,0.9s
SVE MLR MLR
comp=Z,633nm,12.0s
CSS Mathiatis 19.62 270 P **P** **23 00 42.1 -0.2**
LPSR Galich'ya Gora 19.89 325 *e*P **Pn** **23 00 45.7 -0.9**
LPSR *e*S **S** **23 04 19.1 -9.3**
LPSR pmax pmax
comp=Z,20nm,0.6s
LPSR smax smax
comp=N,30nm,0.8s
LPSR MLR MLR
comp=Z,70nm,9.0s
KURBB Kurchatov Arra 19.94 42 P **Pn** **23 00 47.5 +0.3**
comp=Z,0.1nm,0.3s,baz=240,slow=12,SNR=53
KURBB LR LR 23 08 56.3
comp=Z,275nm,19.6s,baz=216,slow=38
comp=Z,9.4nm,0.8s
KURK Kurchatov 20.04 42 P Pn 23 00 47.6 -0.8
KURK IAmb IAmb 23 00 54.6
comp=Z,33nm,0.8s
KURK Kurchatov 20.04 42 *i* P Pn 23 00 49.9 +1.5
KURK pmax pmax
comp=Z,28nm,0.8s
KURK Kurchatov 20.04 42 ⇓P **P** **23 00 45.7 -0.9**
comp=Z,28nm,0.8s
EIL Elat 20.28 254 P Pn 23 00 51.1 -0.4
comp=Z,11nm,0.9s,baz=36,slow=4.5,SNR=11
comp=Z,11nm,0.9s
MAKZ Makanchi 20.34 55 P Pn 23 00 50.7 -1.5
MAKZ IAmb IAmb 23 00 55.2
comp=Z,22nm,0.8s
MAKZ Makanchi 20.34 55 P Pn 23 00 50.7 -1.4
MAKZ pmax pmax
comp=Z,22nm,0.8s
MK31 Makanchi Array 20.55 55 P Pn 23 00 53.1 -1.4
MK31 Makanchi Array 20.55 55 *i* P Pn 23 00 54.1 -0.4
MK31 pmax pmax
comp=Z,21nm,0.7s
MK31 Makanchi Array 20.55 55 P **P** **23 00 50.6 -1.7**
comp=Z,21nm,0.8s,baz=243,slow=8.8,SNR=74
MKAR Makanchi Array 20.55 55 P Pn 23 00 54.1 -0.3
comp=Z,16nm,0.8s,baz=243,slow=9.8,SNR=37
comp=Z,16nm,0.8s
MKAR Makanchi Array 20.55 55 P Pn 23 00 53.6 -0.9
MDUB Mudurnu 20.60 286 P Pn 23 00 54.0 -1.3
SEM Semipalatinsk 20.76 44 *e*P Pn 23 00 56.7 -0.5
SEM pmax pmax
comp=Z,16nm,1.0s
SEM Semipalatinsk 20.76 44 *e*P Pn 23 00 56.8 -0.5
comp=Z,16nm,1.0s,baz=45
BORA Eskisehir 21.18 285 P **P** **23 00 59.8 +0.5**
BORA IAmb IAmb 23 01 06.9
comp=Z,25nm,0.9s
KIRV Kirov 21.73 349 P **P** **23 01 06.3 +1.4**
comp=Z,52nm,0.7s,baz=102,slow=20,SNR=14
KIRV LR LR 23 11 13.3
comp=Z,355nm,21.0s,baz=170,slow=42
comp=Z,52nm,0.7s
KIRV Kirov 21.73 349*ce*P **P** **23 01 07.1 +2.2**
ELL Elmali 21.95 276 P **P** **23 01 08.6 +1.0**
ELL Elmali 21.95 276 P **P** **23 01 08.6 +1.0**
AKAS Kas 22.29 275 P **P** **23 01 10.5 -0.8**
PURM Purcari 22.30 303 ⇑P **P** **23 01 13.4 +2.3**
OBN Obninsk 22.61 328 ⇑P **P** **23 01 16.9 +2.6**
OBN Obninsk 22.61 328 P **P** **23 01 14.4 +0.1**
comp=Z,6.5nm,1.0s,baz=121,slow=4.7,SNR=8.5
OBN LR LR 23 11 08.9
comp=Z,67nm,18.2s,baz=204,slow=40
OBN Obninsk 22.61 328 P **P** **23 01 14.3 0.0**
OBN Obninsk 22.61 328*c i*P **P** **23 01 14.6 +0.3**
OBN *i* *PP **pP** **23 01 17.2 -1.4**
OBN *e**SP **sP** **23 01 22.6 +2.0**
OBN *e*PPP PPP 23 01 49.4
OBN *i* S **S** **23 05 23.8 +2.3**
OBN pmax pmax
comp=Z,84nm,1.3s
OBN MLR MLR
comp=Z,246nm,17.0s
MOS Moscow 22.62 330 *e*P **P** **23 01 15.7 +1.3**
MOS *e* 23 01 35.2
MOS *e*S **S** **23 05 24.7 +3.2**
MOS *e*SS **SnSn** **23 06 01.8 +11**
MOS *e*SSS SSS 23 06 13.9
MOS pmax pmax
comp=Z,118nm,1.7s
MOS pmax pmax
comp=Z,200nm,1.9s
TLCR 22.75 299 ⇓P **P** **23 01 18.4 +2.6**
MFTR Murfatlar 22.88 296 ⇑P **P** **23 01 19.5 +2.3**
TIRR Tirgusor 22.92 297 ⇑P **P** **23 01 20.5 +2.8**
TIRR Tirgusor 22.92 297 P **P** **23 01 18.8 +1.1**
TIRR Tirgusor 22.92 297 P **P** **23 01 18.8 +1.1**
TIRR pmax pmax
comp=Z,57nm,1.0s
TPGR Topolog 22.97 298 ⇑P **P** **23 01 20.5 +2.3**
PSN Preselentsi 23.00 295 *e*P **P** **23 01 19.7 +1.2**
MILM Milestii Mici 23.10 303 ⇓*i*P **P** **23 01 21.0 +1.5**
comp=Z,140nm,2.1s
MILM Milestii Mici 23.10 303 ⇑P **P** **23 01 21.3 +1.8**
MILM Milestii Mici 23.10 303*d i*P **P** **23 01 21.0 +1.5**
MILM *e* 23 01 56.0
MILM *e*S **S** **23 05 31.0 +0.9**
MILM pmax pmax
comp=Z,140nm,2.1s
MILM smax smax
comp=N,220nm,8.5s
MILM smax smax
comp=E,280nm,6.4s
MILM MLR MLR
comp=Z,400nm,16.0s
KIS Kishinev 23.11 303 *e*P **P** **23 01 23.0 +3.4**
comp=Z,100nm,2.3s
KIS LRM MLR 23 12 23.0
comp=Z,150nm,15.5s
KIS Kishinev 23.11 303 *e*P **P** **23 01 23.0 +3.4**
KIS pmax pmax
comp=Z,100nm,2.3s
KIS MLR MLR
comp=Z,150nm,15.5s
TLBR Topalu 23.19 297 ⇑P **P** **23 01 23.0 +2.5**
CFR Carcaliu 23.22 299 ⇑P **P** **23 01 21.9 +1.2**
ICOR Ion Corvin 23.32 296 ⇑P **P** **23 01 24.1 +2.3**
LEOM Leova 23.38 302 ⇑P **P** **23 01 25.3 +2.9**
PRD Provadia 23.53 293 *e*P **P** **23 01 25.6 +1.8**
WMQ Urumqi 23.70 65 *e*P **P** **23 01 28.8 +3.1**
WMQ sP sP 23 01 33.3 +1.2
WMQ pmax pmax
comp=Z,33nm,1.1s
WMQ pmax pmax
comp=Z,96nm,3.9s
WMQ LR LR
comp=Z,700nm,12.5s
WMQ LR LR
comp=Z,460nm,15.1s
WMQ LR LR
comp=Z,230nm,16.1s
SORM Soroca 23.71 306 ⇑P **P** **23 01 26.9 +1.4**
DANN Dangsing 23.83 105 *e*P **P** **23 01 29.0 +1.7**
comp=Z,116nm,1.2s
KOLN Koldanda 23.99 106 *e*P **P** **23 01 29.1 +0.4**
AKASG Malin Array Be 24.01 312 P **P** **23 01 28.8 +0.3**
comp=Z,4.4nm,0.6s,baz=108,slow=7.9,SNR=33
AKASG LR LR 23 12 51.2
comp=Z,264nm,18.8s,baz=114,slow=42
comp=Z,4.4nm,0.6s
AKASG Malin Array Be 24.01 312*c i*P **P** **23 01 28.7 +0.3**
AKASG pmax pmax
comp=Z,7.0nm,0.6s
AKBB Malin Array Si 24.01 312*ce*P **P** **23 01 29.1 +0.7**
ODBI Odobesti 24.06 300 ⇑P **P** **23 01 31.6 +2.6**
RAZG Razgrad 24.20 294 ⇑P **P** **23 01 31.7 +1.5**
VRI Vrincioaia 24.30 300 ⇑P **P** **23 01 34.0 +2.8**
VRI Vrincioaia 24.30 300 P **P** **23 01 33.6 +2.4**
VRI pmax pmax
comp=Z,31nm,1.0s
ISR Istrita 24.33 298 ⇑P **P** **23 01 34.0 +2.5**
PLOR Plostina 24.36 300 ⇑P **P** **23 01 34.2 +2.5**
KARP Karpathos 24.38 275 P **P** **23 01 32.0 0.0**
ALN Alexandroupoli 24.51 288 P **P** **23 01 33.3 +0.2**
ALN Alexandroupoli 24.51 288 P **P** **23 01 33.3 +0.2**
ALN pmax pmax
comp=Z,11nm,1.0s
NEHR Nehoiu 24.54 299 ⇑P **P** **23 01 36.2 +2.8**
COVR Voineasa-Covas 24.66 300 ⇑P **P** **23 01 37.3 +2.8**
GKN Gorkha 24.67 105 *e*P **P** **23 01 35.7 +0.8**
comp=Z,35nm,0.5s
MLR Muntele Rosu 24.79 299 ⇑P **P** **23 01 38.5 +2.7**
MLR Muntele Rosu 24.79 299 P **P** **23 01 37.6 +1.8**
comp=Z,14nm,0.8s,baz=111,slow=3.7,SNR=23
MLR LR LR 23 14 00.1
comp=Z,348nm,18.8s,baz=72,slow=43
comp=Z,14nm,0.8s
MLR Muntele Rosu 24.79 299 P **P** **23 01 37.0 +1.2**
MLR Muntele Rosu 24.79 299 P **P** **23 01 37.0 +1.2**
MLR pmax pmax
comp=Z,36nm,1.0s
RDO Rodhopi 24.88 288 P **P** **23 01 37.5 +1.1**
RDO IAmb IAmb 23 01 42.7
comp=Z,27nm,0.9s
BIZ Bicaz 24.91 302 ⇑P **P** **23 01 38.5 +1.8**
ZAA0 Zalesovo Array 24.97 40 P **P** **23 01 38.2 +1.1**
ZAA0 IAmb IAmb 23 01 42.6
comp=Z,18nm,0.9s
ZALV Zalesovo Beam 24.97 40 P **P** **23 01 39.4 +2.3**
comp=Z,18nm,0.9s,baz=247,slow=9.4,SNR=38
ZALV LR LR 23 11 36.0
comp=Z,160nm,18.7s,baz=231,slow=37
comp=Z,18nm,0.9s
ZALV Zalesovo Beam 24.97 40 P **P** **23 01 38.0 +0.9**
ZALV Zalesovo Beam 24.97 40 *i* P **P** **23 01 39.4 +2.3**
ZALV pmax pmax
comp=Z,13nm,0.8s
DMN Daman 25.23 105 *e*P **P** **23 01 41.5 +1.5**
DOPR Dopca 25.24 300 ⇑P **P** **23 01 42.4 +2.7**
PRGR Permogore 25.26 347 *e*P **P** **23 01 42.0 +2.4**
KKN Kakani 25.27 104 *e*P **P** **23 01 42.3 +1.9**
HUMR Humele 25.37 296 ⇑P **P** **23 01 43.6 +2.8**
SOCY Socotra 25.41 188 P **P** **23 01 38.3 -3.1**
VOIR 25.41 298 ⇑P **P** **23 01 43.6 +2.3**
PKIN Phulchoki 25.47 105 *e*P **P** **23 01 44.3 +2.1**
comp=Z,66nm,0.7s
PKI Pulchoki 25.48 105 *e*P **P** **23 01 44.1 +1.7**
comp=Z,57nm,0.7s
RZN Rozhen 25.48 290 *e*P **P** **23 01 43.9 +1.8**
BURAR Bucovina Array 25.64 303 ⇑P **P** **23 01 45.5 +2.2**
BURAR Bucovina Array 25.64 303 P **P** **23 01 44.6 +1.2**
BURAR IAmb IAmb 23 01 45.8
comp=Z,15nm,0.7s
BURAR Bucovina Array 25.64 303 P **P** **23 01 44.6 +1.2**
BURAR pmax pmax
comp=Z,15nm,0.7s
BUR08 Bucovina Ar. S 25.66 304 P **P** **23 01 44.5 +1.0**
BUR08 IAmb IAmb 23 02 09.0
comp=Z,12nm,0.8s
GUN Gumba 25.68 104 *e*P **P** **23 01 46.1 +1.9**
ARR Arges 25.69 298 ⇑P **P** **23 01 45.8 +1.9**
PGB Panagyurishte 25.88 292 *e*P **P** **23 01 47.6 +2.0**
KLMR Klimovskoe 25.96 340 *e*P **P** **23 01 45.2 -0.8**
KLMR S **S** **23 06 13.7 -2.1**
KLMR pmax pmax
comp=Z,24nm,0.9s
KLMR MLR MLR
comp=Z,406nm,12.0s
KLMR Klimovskoe 25.96 340 *e*P **P** **23 01 45.3 -0.8**
KLMR AMP 23 01 49.9
comp=Z,24nm,0.9s
KLMR S **S** **23 06 13.8 -2.1**
KLMR S **S** **23 06 13.8 -2.1**
KLMR LQ LQ 23 10 12.9
KLMR LQ LQ 23 10 12.9
KLMR LR LR 23 11 22.0
KLMR AMP 23 15 24.5
comp=Z,406nm,11.7s
JIRN Jiri 26.04 104 *e*P **P** **23 01 49.1 +1.6**
comp=Z,71nm,0.8s
ARCR ARCALIA 26.12 302 ⇑P **P** **23 01 50.0 +2.3**
IDI Anoyia 26.24 275 P **P** **23 01 49.4 +0.5**
comp=Z,22nm,0.7s,baz=50,slow=11,SNR=31
comp=Z,22nm,0.7s
IDI Anoyia 26.24 275 P **P** **23 01 49.2 +0.3**
IDI IAmb IAmb 23 01 54.6
comp=Z,21nm,0.7s
LOT Lotru 26.31 298 ⇑P **P** **23 01 51.7 +2.2**
MNK Minsk 26.38 320 *i* P **P** **23 01 48.2 -1.6**
MNK *i* 23 02 27.9
MNK *i* S **S** **23 06 21.0 -1.5**
MNK *i* SS **SnSn** **23 07 23.1 +0.2**
MNK pmax pmax
comp=E,2.0nm,1.0s
MNK pmax pmax
comp=N,26nm,0.9s
MNK pmax pmax
comp=Z,21nm,1.1s
MNK MLR MLR
comp=N,603nm,15.0s
MNK MLR MLR
comp=E,48nm,21.0s
MNK Minsk 26.38 320 *i* P **P** **23 01 48.2 -1.6**
comp=E,2.0nm,1.0s
MNK *i* P **P** **23 01 48.2 -1.6**
comp=N,26nm,0.9s
MNK *i* P **P** **23 01 48.2 -1.6**
comp=Z,21nm,1.1s,baz=299
MNK *i* PP **PnPn** **23 02 27.9 -1.4**
MNK *i* S **S** **23 06 21.0 -1.5**
MNK *i* SS **SnSn** **23 07 23.1 +0.2**
MNK *i* LQ LQ 23 10 07.8
MNK *i* LR LR 23 12 07.7
MNK *i* LRM MLR 23 13 02.2
comp=N,603nm,15.5s
MNK *i* LRM MLR 23 13 02.2
comp=Z,8μm,28.9s
MNK *i* LRM MLR 23 13 19.8
comp=E,48nm,21.1s
VTS Vitosha 26.57 292 *e*P **P** **23 01 53.4 +1.5**
RAMN Ramite 26.71 105 *e*P **P** **23 01 54.1 +0.7**
comp=E,64nm,0.8s
BMR Baia Mare 26.79 303 ⇑P **P** **23 01 56.6 +2.8**
LVV L'vov 26.90 308 *e*P **P** **23 01 55.8 +1.2**
LVV *e*S **S** **23 06 36.6 +5.7**
LVV MLR MLR
comp=Z,500nm,15.0s
NACGM Naroch 27.13 320 ⇑*e*P **P** **23 01 58.4 +1.8**
baz=117
DRGR 27.19 301 ⇑P **P** **23 01 59.9 +2.5**
DRGR 27.19 301 P **P** **23 02 00.1 +2.7**
DRGR pmax pmax
comp=Z,8.0nm,1.4s
LIT Litokhoron 27.27 286 P **P** **23 01 59.0 +1.0**
LIT Litokhoron 27.27 286 P **P** **23 01 59.1 +1.0**
LIT pmax pmax
comp=Z,10.0nm,1.1s
IDID Didziasalis 27.34 321 *e*P **P** **23 02 00.3 +1.7**
ODAN Odare 27.36 104 *e*P **P** **23 02 00.3 +1.0**
comp=Z,23nm,1.0s
TAPN Taplejung 27.37 103 *e*P **P** **23 02 01.6 +2.2**
IIGN Ignalina 27.62 320 *e*P **P** **23 02 02.7 +1.7**
BOVS Bovan 27.69 294 ⇑P **P** **23 02 03.5 +1.7**
KWP Kalwaria Pacla 27.69 307 *e*P **P** **23 02 03.4 +1.6**
KWP Kalwaria Pacla 27.69 307 P **P** **23 02 02.9 +1.1**
KWP Kalwaria Pacla 27.69 307 P **P** **23 02 02.9 +1.1**
MDVR Moldovita 27.71 297 ⇑P **P** **23 02 04.3 +2.2**
UZH Uzhgorod 27.75 305 *e*P **P** **23 02 03.9 +1.6**
UZH *e* 23 02 10.7
UZH *e* 23 02 58.1
UZH *e*S **S** **23 06 42.9 -1.5**
UZH MLR MLR
comp=N,50nm,15.0s
UZH MLR MLR
comp=E,50nm,15.0s
UZH MLR MLR
comp=Z,50nm,15.0s
ISAL Salakas 27.77 321 *e*P **P** **23 02 04.0 +1.6**
LTVH Ltavrtes, Hu 27.82 302 P **P** **23 02 02.8 0.0**
KOLS Kolonicke sedl 27.82 306 *e*P **P** **23 02 09.8 +6.8**
KOLS Kolonicke sedl 27.82 306 *e*P **P** **23 02 09.8 +6.8**
BZS Buzias 27.83 298 ⇑P **P** **23 02 04.5 +1.5**
SIRR Siria 27.85 300 ⇑P **P** **23 02 06.1 +2.8**
CRVS Cervenica-Dubn 28.34 305 *e*P P 23 02 14.1 +6.5
CRVS Cervenica-Dubn 28.34 305 *e*P P 23 02 14.1 +6.5
SUW Suwalki 28.68 316 *e*P **P** **23 02 12.2 +1.7**
SUW Suwalki 28.68 316 P **P** **23 02 10.9 +0.4**
SUW Suwalki 28.68 316 P **P** **23 02 10.9 +0.4**
SUW pmax pmax

comp=Z,17nm,0.6s
SUW Suwalki 28.68 316 *e*P **P 23 02 11.8 +1.2**
PABE Paberze 28.84 319 P **P 23 02 12.8 +0.9**
PABE Paberze 28.84 319 *e*P **P 23 02 13.7 +1.7**
DIVS Divibare 28.93 295 P **P 23 02 13.6 +0.6**
VSU Vasula 28.94 326 *i* P **P 23 02 12.6 -0.1**
VSU pmax pmax
comp=Z,29nm,1.0s
VSU Vasula 28.94 326 *e*P **P 23 02 13.2 +0.5**
ATD Arta Tunnel 29.00 211 LR LR 23 15 31.4
comp=Z,255nm,18.2s,baz=350,slow=40
LSA Lhasa 29.01 96 P **P 23 02 14.2 0.0**
LSA Lhasa 29.01 96 P **P 23 02 14.2 0.0**
LSA pmax pmax
comp=Z,7.0nm,1.1s
VALR Valaam 29.08 334 *i* P **P 23 02 14.4 +0.5**
VALR pmax pmax
comp=Z,6.0nm,0.8s
PSZ Piszkesteto 29.23 303 P P 23 02 21.7 +6.1
OJC Ojcow 29.65 307 *e*P **P 23 02 20.7 +1.5**
OJC *e*PP **PP 23 03 28.4 +2.3**
OJC Ojcow 29.65 307 P **P 23 02 20.1 +0.9**
OJC Ojcow 29.65 307 P **P 23 02 20.1 +0.9**
OJC pmax pmax
comp=Z,7.0nm,0.9s
GOMU GeErMu 29.80 81 P **P 23 02 19.5 -1.6**
GOMU pmax pmax
comp=Z,2.0nm,1.2s
GOMU pmax pmax
comp=Z,86nm,6.0s
GOMU LR LR
comp=Z,280nm,19.7s
GOMU LR LR
comp=Z,260nm,18.2s
GOMU LR LR
comp=Z,290nm,19.1s
MORH Mrgy, Hungar 29.94 299 ⇑P **P 23 02 23.7 +2.0**
MORH Mrgy, Hungar 29.94 299 P **P 23 02 23.4 +1.7**
CSKK Cskako 30.27 302 P **P 23 02 26.0 +1.3**
KOVH Kovagotottos 30.31 299 P **P 23 02 26.5 +1.5**
MTSE Matsula 30.38 325 *e*P **P 23 02 27.2 +1.7**
TIH Tihany 30.49 301 P **P 23 02 28.2 +1.5**
MPLH Magyarpolny 30.75 301 P **P 23 02 29.8 +0.8**
MAUC Maruska 30.77 305 AMS AMS 23 16 50.0
comp=Z,600nm,21.8s
MEF Metsahovi 30.90 328 *e*P **P 23 02 32.1 +2.0**
FIA1 FINESS Array S 30.91 331 P **P 23 02 31.8 +1.6**
FIA1 IAmb IAmb 23 02 47.5
comp=Z,20nm,1.6s
FINES FINESS Array B 30.91 331 P **P 23 02 31.0 +0.8**
comp=Z,1.9nm,0.5s,baz=121,slow=8.8,SNR=12
FINES LR LR 23 16 13.6
comp=Z,151nm,21.7s,baz=127,slow=39
comp=Z,1.9nm,0.5s
FINES FINESS Array B 30.91 331 P **P 23 02 31.3 +1.1**
FINES FINESS Array B 30.91 331 *i* P **P 23 02 32.4 +2.2**
FINES pmax pmax
comp=Z,3.0nm,0.6s
MORC Moravsky Berou 31.01 306 P **P 23 02 31.8 +0.5**
MORC Moravsky Berou 31.01 306 P **P 23 02 31.8 +0.5**
MORC pmax pmax
comp=Z,4.0nm,0.8s
MODS Modra-Piesok 31.02 303 *e*P P 23 02 37.3 +5.9
MODS Modra-Piesok 31.02 303 *e*P P 23 02 37.3 +5.9
KNGR Kungurtug, Tuv 31.23 52 *i* P **P 23 02 36.8 +3.5**
KRLC Kraliky 31.54 307 *e*P **P 23 02 37.4 +1.5**
KRLC *e* 23 02 44.1
KRLC MLR MLR
comp=Z,200nm,18.9s
KRLC Kraliky 31.54 307 *e*P **P 23 02 37.4 +1.5**
KRLC *ex* x 23 02 44.1
KRLC AMS AMS 23 16 50.0
comp=Z,200nm,18.9s
VRAC Vranov 31.57 305 LR LR 23 17 27.9
comp=Z,232nm,20.2s,baz=81,slow=40
TIP Timpagrande 31.78 286 P **P 23 02 38.3 +0.2**
GKP Gorka Klasztor 31.85 313 *e*P **P 23 02 39.1 +0.7**
GKP *e*PP **PnPn 23 03 38.3 -4.7**
DPC Dobruska-Polom 31.87 307 *e*P **P 23 02 40.7 +1.9**
DPC MLR MLR
comp=Z,200nm,15.0s
DPC Dobruska-Polom 31.87 307 *e*P **P 23 02 40.7 +1.9**
DPC AMS AMS 23 17 20.0
comp=Z,200nm,15.0s
KSP Ksiaz 31.96 308 *e*P **P 23 02 39.4 -0.2**
OSTC Ostas 31.97 307 AMS AMS 23 17 10.0
comp=Z,300nm,16.5s
CHVC Chvalec 32.07 307 AMS AMS 23 17 20.0
comp=Z,300nm,14.8s
UPC Upice 32.09 307 AMS AMS 23 17 20.0
comp=Z,300nm,16.8s
ARSA Arzberg 32.13 301 *e*P **P 23 02 42.6 +1.5**
comp=Z,3.2nm,0.8s
TREC Trest 32.29 305 AMS AMS 23 17 20.0
comp=Z,300nm,19.7s
SOKA Soboth 32.45 300 *e*P **P 23 02 45.4 +1.4**
comp=Z,3.8nm,0.9s
OBKA Obir 32.78 300 *e*P **P 23 02 51.1 +4.2**
comp=Z,5.9nm,1.3s
PRU Pruhonice 32.97 306 AMS AMS 23 18 20.0
comp=Z,200nm,12.6s
GTA Gaotai 33.00 73 *e*P P 23 02 56.3 +7.3
GTA pP sP 23 02 59.5 +4.0
GTA sP pP 23 03 02.8 +9.2
GTA pmax pmax
comp=Z,5.0nm,1.0s
GTA pmax pmax
comp=Z,50nm,5.1s
GTA LR LR
comp=N,500nm,17.8s
GTA LR LR
comp=E,330nm,17.4s
GTA LR LR
comp=Z,370nm,18.5s
LVZ Lovozero 33.00 344 P **P 23 02 49.5 +0.9**
LVZ Lovozero 33.00 344 ⇓*e*P **P 23 02 49.7 +1.2**
LVZ pmax pmax
comp=Z,15nm,0.8s
PVCC Panska Ves 33.01 307 AMS AMS 23 17 50.0
comp=Z,300nm,14.7s
APA Apatity 33.01 343 ⇑*i*P **P 23 02 49.2 +0.7**
APA pmax pmax
comp=Z,21nm,0.8s
APA MLR MLR
comp=Z,800nm,15.0s
CKRC Cesky Krumlov 33.02 304 *e*P **P 23 02 50.1 +1.2**
CKRC *ex* x 23 02 57.6
CKRC AMS AMS 23 18 10.0
comp=Z,200nm,19.4s
GEC2 GERESS Array S 33.42 304 P **P 23 02 53.1 +0.5**
GERES GERESS Array B 33.42 304 P **P 23 02 52.9 +0.4**
comp=Z,0.8nm,0.6s,baz=98,slow=9.6,SNR=9.7
comp=Z,0.8nm,0.6s
GERES GERESS Array B 33.42 304 P **P 23 02 53.3 +0.8**
GERES GERESS Array B 33.42 304 P **P 23 02 53.3 +0.8**
BRG Berggiesshubel 33.44 308 *e*P **P 23 02 55.0 +2.4**
BRG Amp 23 02 57.8
comp=Z,4.4nm,0.8s
BRG Berggiesshubel 33.44 308 *e*P **P 23 02 54.9 +2.4**
BRG pmax pmax
comp=Z,4.0nm,0.8s
KHC Kasperske Hory 33.52 304 *i* P **P 23 02 54.0 +0.7**
KHC pmax pmax
comp=Z,2.0nm,0.5s
KHC Kasperske Hory 33.52 304 *e*P **P 23 02 53.8 +0.5**
KHC AMS AMS 23 18 10.0
comp=Z,200nm,18.1s
KBA Koelnbreinsper 33.61 301 *e*P **P 23 02 56.2 +2.0**
comp=Z,8.9nm,1.0s
NRCA Norcia 34.00 293 P **P 23 02 57.9 +0.3**
NRCA IAmb IAmb 23 03 02.2
comp=Z,8.1nm,1.0s
CLL Collm 34.08 308 *i* P **P 23 02 59.4 +1.4**
CLL *i* 23 03 03.2
CLL pmax pmax
comp=Z,4.0nm,0.9s
CLL Collm 34.08 308 *i* P **P 23 02 59.4 +1.4**
comp=Z,4.0nm,0.9s
CLL *i* sP **sP 23 03 03.2 -1.3**
comp=Z,10.0nm,1.4s
CLL *e*PP **PP 23 04 17.0 +1.9**
CLL *e*PPP PPP 23 04 24.0
CLL *e*PPPP 23 04 31.0
CLL *e*S **S 23 08 24.0 +0.8**
CLL *ex* x 23 09 54.0
CLL *e*SS **SS 23 10 54.0 +3.6**
CLL LmH 23 16 00.0
comp=N,300nm,21.2s
CLL LmH 23 16 00.0
comp=E,200nm,21.1s
CLL LmH 23 16 00.0
comp=Z,200nm,22.0s
ABTA Abfaltersbach 34.18 300 *i* P **P 23 02 60.0 +0.9**
comp=Z,3.0nm,0.9s
NKC Novy Kostel 34.33 306 AMS AMS 23 18 50.0
comp=Z,200nm,18.5s
MURB Monte Urbino 34.38 294 P **P 23 03 01.8 +1.0**
CTI Castel Tesino 34.80 299 P **P 23 03 05.0 +0.5**
CTI IAmb IAmb 23 03 09.1
comp=Z,7.8nm,1.1s
CTI Castel Tesino 34.80 299 P **P 23 03 05.0 +0.5**
CTI pmax pmax
comp=Z,8.0nm,1.1s
WATA Walderalm 34.81 301 *e*P **P 23 03 06.0 +1.3**
comp=Z,2.2nm,0.6s
TEOL Teolo 34.82 298 P **P 23 03 04.5 0.0**
TEOL IAmb IAmb 23 03 06.5
comp=Z,9.5nm,0.8s
ZAK Zakamensk 34.86 53 *e*P **P 23 03 07.9 +2.9**
ZAK pmax pmax
comp=Z,5.0nm,1.5s
SQTA Sankt Quirin 35.07 301 *e*P **P 23 03 07.0 +0.2**
comp=Z,2.9nm,0.7s
OSSC Osservatorio P 35.28 295 P **P 23 03 09.0 +0.5**
OSSC IAmb IAmb 23 03 13.3
comp=Z,6.4nm,0.9s
RETA Reutte 35.37 301 P **P 23 03 12.4 +3.1**
comp=Z,3.6nm,0.9s
FETA Feichten 35.40 301 *e*P **P 23 03 09.9 +0.2**
comp=Z,3.1nm,0.8s
HFS Hagfors 35.67 324 LR LR 23 19 31.4
comp=Z,227nm,18.8s,baz=106,slow=39
FUORN Ofenpass-Fuorn 35.73 300 P **P 23 03 13.1 +0.4**
DAVA Damuels 35.97 301 *e*P **P 23 03 14.6 0.0**
comp=Z,16nm,1.8s
DAVOX Davos/Dischmat 35.99 300 LR LR 23 21 04.5
comp=Z,193nm,18.1s,baz=76,slow=42
KEV Kevo 36.20 343 P **P 23 03 17.4 +1.4**
KEV IAmb IAmb 23 03 22.1
comp=Z,11nm,0.9s
KEV Kevo 36.20 343 P **P 23 03 17.4 +1.4**
KEV pmax pmax
comp=Z,11nm,0.9s
TUE Stuetta 36.37 300 P **P 23 03 17.9 -0.2**
ARA0 ARCESS Array S 36.40 342 *e*P **P 23 03 18.9 +1.0**
ARCES ARCESS Array B 36.40 342 P **P 23 03 19.7 +1.9**
comp=Z,3.6nm,0.8s,baz=139,slow=9.0,SNR=22
ARCES PP PnPn 23 04 27.0 -13
comp=Z,1.6nm,0.6s,baz=135,slow=12,SNR=4.1
ARCES LR LR 23 20 17.6
comp=Z,309nm,18.1s,baz=130,slow=40
comp=Z,3.6nm,0.8s
ARCES ARCESS Array B 36.40 342 P **P 23 03 19.4 +1.6**
ARCES IAmb IAmb 23 03 22.8
comp=Z,35nm,1.6s
ARCES ARCESS Array B 36.40 342 P **P 23 03 19.4 +1.6**
ARCES pmax pmax
comp=Z,35nm,1.6s
MSSA Maissana 36.44 296 P **P 23 03 19.5 +1.0**
MSSA IAmb IAmb 23 03 22.3
comp=Z,8.6nm,0.9s
KTK1 Kautokeino 36.63 340 *e*P **P 23 03 21.5 +1.7**
PALK Pallekele 36.76 139 LR LR 23 20 09.5
comp=Z,240nm,18.4s,baz=71,slow=39
SONM Songino Array 36.87 58 P **P 23 03 24.8 +2.6**
comp=Z,2.0nm,0.7s,baz=274,slow=10,SNR=13
comp=Z,2.0nm,0.7s
SONM Songino Array 36.87 58 P **P 23 03 23.1 +0.8**
SONM Songino Array 36.87 58 P **P 23 03 23.1 +0.8**
SONM pmax pmax
comp=Z,4.0nm,1.1s
NC602 NORSAR Array S 36.88 324 *e*P **P 23 03 23.2 +1.2**
LZH Lanzhou 36.88 78 *e*P **P 23 03 18.3 -4.2**
LZH pP sP 23 03 27.5 -1.6
LZH pmax pmax
comp=Z,73nm,5.2s
LZH LR LR
comp=N,230nm,12.7s
LZH LR LR
comp=E,250nm,13.1s
LZH LR LR
comp=Z,240nm,14.8s
NC405 NORSAR Array S 36.92 325 P **P 23 03 23.4 +1.1**
NB2 NORSAR Subarra 37.12 324 P **P 23 03 24.4 +0.3**
baz=108,slow=8.6
NB2 NORSAR Subarra 37.12 324 P **P 23 03 24.4 +0.3**
comp=Z,9.5nm,0.9s,baz=108,slow=8.6
NOA NORSAR Array B 37.12 324 P **P 23 03 24.1 -0.1**
comp=Z,4.5nm,0.8s,baz=110,slow=8.2,SNR=12
NOA PP **PP 23 04 38.4 -10**
comp=Z,2.5nm,0.9s,baz=116,slow=11,SNR=4.0
NOA LR LR 23 20 17.4
comp=Z,217nm,20.2s,baz=110,slow=39
comp=Z,4.5nm,0.8s
ULN Ulaanbaatar 37.31 58 P **P 23 03 27.2 +1.2**
ULN IAmb IAmb 23 03 35.2
comp=Z,9.2nm,0.7s
ULN Ulaanbaatar 37.31 58 *ce*P **P 23 03 28.8 +2.8**
ULN pmax pmax
comp=Z,17nm,1.3s
KONO Kongsberg 37.51 322 *e*P **P 23 03 28.1 +0.8**
HAMF Hammerfest 37.62 342 *e*P **P 23 03 29.1 +0.9**
NSS Namsos 38.02 330 *e*P **P 23 03 32.2 +0.6**
FAUS Fauske 38.09 335 *e*P **P 23 03 33.6 +1.5**
TRO Tromso 38.21 339 *e*P **P 23 03 34.6 +1.5**
LPL La Plagne 38.27 299 *e*P **P 23 03 34.7 +0.4**
LPL pmax pmax
comp=Z,2.0nm,0.5s
KEST Kesra 38.33 282 P **P 23 03 34.6 -0.1**
comp=Z,4.3nm,0.8s,baz=330,slow=5.2,SNR=5.5
comp=Z,4.3nm,0.8s
KEST Kesra 38.33 282 P **P 23 03 35.2 +0.6**
STEI Steigen 38.38 336 *e*P **P 23 03 36.4 +1.9**
SKAR Skarslia 38.39 323 *e*P **P 23 03 36.0 +1.1**
CD2 Chengdu 38.54 86 P **P 23 03 37.0 +0.5**
CD2 pmax pmax
comp=Z,20nm,0.9s
CD2 LR LR
comp=Z,370nm,16.7s
CD2 LR LR
comp=Z,280nm,14.7s
PZH PanZhiHua 38.81 93 P **P 23 03 39.5 +0.6**
PZH S **S 23 09 32.0 -4.2**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,80nm,4.3s
PZH LR LR
comp=Z,230nm,17.1s
PZH LR LR
comp=Z,280nm,18.8s
PZH LR LR
comp=Z,490nm,19.1s
MOL Molde 39.24 326 *e*P **P 23 03 41.6 -0.2**
KMI Kunming 40.25 95 ⇓P **P 23 03 52.8 +1.8**
KMI pmax pmax
comp=Z,8.0nm,1.1s
CM31 Chiang Mai Arr 40.86 106 P **P 23 03 57.8 +1.9**
CMAR Chiang Mai Arr 40.86 106 P **P 23 03 57.9 +2.0**
comp=Z,3.3nm,0.6s,baz=300,slow=8.3,SNR=11
CMAR LR LR 23 23 55.1
comp=Z,120nm,20.1s,baz=300,slow=40
comp=Z,3.3nm,0.6s
CMAR Chiang Mai Arr 40.86 106 P **P 23 03 57.3 +1.4**
CMAR Chiang Mai Arr 40.86 106 *i* P **P 23 03 57.9 +2.0**
CMAR pmax pmax
comp=Z,4.0nm,0.6s
XAN Xi'an 41.48 79 P **P 23 04 03.0 +2.2**
XAN pmax pmax
comp=Z,5.0nm,1.4s
XAN pmax pmax
comp=Z,72nm,6.3s
XAN LR LR
comp=Z,690nm,17.1s
XAN LR LR
comp=Z,480nm,17.1s
XAN LR LR
comp=Z,380nm,16.8s
HHC Hu-ho-hao-te 41.52 68 *e*P **P 23 04 01.8 +0.6**
HHC pmax pmax
comp=Z,25nm,0.9s
HHC pmax pmax
comp=Z,120nm,4.6s
HHC LR LR
comp=Z,470nm,15.2s
HHC LR LR
comp=Z,370nm,16.5s
HHC LR LR
comp=Z,490nm,16.5s
CAF Calviac 41.62 298 *e*P **P 23 04 02.0 +0.1**
CAF pmax pmax
comp=Z,17nm,1.6s
BOD Bodaibo 41.69 42 *e*P **P 23 04 03.9 +1.7**
BOD pmax pmax
comp=Z,28nm,1.4s
GYA Guiyang 42.74 90 ⇑P **P 23 04 10.5 -0.8**
GYA S **S 23 10 28.8 -6.0**
GYA pmax pmax
comp=Z,120nm,4.5s
GYA LR LR
comp=Z,470nm,20.7s
GYA LR LR
comp=Z,350nm,18.3s
GYA LR LR
comp=Z,500nm,27.5s
KMBO Kilima Mbogo 42.75 211 P **P 23 04 12.6 +1.0**
comp=Z,3.3nm,0.8s,baz=50,slow=12,SNR=7.8
KMBO LR LR 23 23 27.3
comp=Z,248nm,18.7s,baz=50,slow=38
comp=Z,3.3nm,0.8s
KMBO Kilima Mbogo 42.75 211 P **P 23 04 12.4 +0.8**
KMBO Kilima Mbogo 42.75 211 P **P 23 04 12.4 +0.8**
KMBO pmax pmax
comp=Z,9.0nm,1.2s
KMBO Kilima Mbogo 42.75 211 P **P 23 04 12.7 +1.2**
KIBK Kibwezi 43.55 209 P **P 23 04 18.2 +0.4**
KIBK IAmb IAmb 23 04 19.6
comp=Z,8.6nm,0.9s
EKA Eskdalemuir Ar 43.90 314 LR LR 23 26 32.2
comp=Z,193nm,18.2s,baz=71,slow=42
SPITS Spitsbergen Ar 44.20 349 LR LR 23 25 52.3
comp=Z,186nm,18.0s,baz=114,slow=40
HNS HongShan 44.82 72 *e*P P 23 04 32.3 +4.5
HNS *e*S **S 23 11 09.0 +4.3**
HNS LR LR
comp=Z,350nm,15.9s
HNS LR LR
comp=Z,160nm,14.3s
HNS LR LR
comp=Z,310nm,15.9s
MBAR Mbarara 45.26 219 P **P 23 04 32.1 +0.6**
comp=Z,0.9nm,0.3s,baz=52,slow=20,SNR=1.9
MBAR LR LR 23 22 42.3
comp=Z,125nm,18.1s,baz=20,slow=35
comp=Z,0.9nm,0.3s
ESBB Sonseca Array 47.22 293 P **P 23 04 46.8 0.0**
ESBB IAmb IAmb 23 04 50.4
comp=Z,6.4nm,1.0s
ESDC Sonseca Array 47.22 293 P **P 23 04 46.8 0.0**
comp=Z,3.0nm,0.7s,baz=65,slow=7.6,SNR=23
comp=Z,3.0nm,0.7s
ESDC Sonseca Array 47.22 293 P **P 23 04 46.6 -0.1**
JMIC Jan Mayen 47.24 336 LR LR 23 25 50.3
comp=Z,231nm,19.0s,baz=68,slow=38
TIXI Tiksi 49.05 23 P **P 23 05 02.0 +1.7**
comp=Z,5.3nm,0.8s,baz=270,slow=24,SNR=3.6
TIXI LR LR 23 26 22.2
comp=Z,127nm,20.4s,baz=187,slow=37
comp=Z,5.3nm,0.8s
TIXI Tiksi 49.05 23 *ce*P **P 23 05 03.8 +3.5**
TIXI pmax pmax
comp=Z,16nm,1.3s
YAK Yakutsk 49.52 36 LR LR 23 30 15.4
comp=Z,58nm,20.8s,baz=269,slow=41
YAK Yakutsk 49.52 36 *e*P **P 23 05 06.6 +2.6**
YAK pmax pmax
comp=Z,14nm,1.1s
YAK pmax pmax
comp=N,3.0nm,1.0s
YAK pmax pmax
comp=E,7.0nm,1.3s
NJ2 Nanjing 49.95 77 *e*P **P 23 05 06.0 -1.7**
NJ2 pmax pmax
comp=E,5.0nm,0.5s
DAG Danmarks Havn 50.66 343 *i* P **P 23 05 12.0 -0.5**
PSI Prapat 51.34 122 P **P 23 05 19.3 +0.7**
PSI pmax pmax
comp=Z,10.0nm,0.8s
RPSI Rantau Prapat 51.42 122 P **P 23 05 19.3 +0.3**
RPSI IAmb IAmb 23 05 24.1
comp=Z,9.8nm,0.8s
BORG Borgarnes 52.12 328 LR LR 23 28 50.3
comp=Z,155nm,18.4s,baz=85,slow=38
KLR Kul'dur 53.20 52 LR LR 23 30 19.6
comp=Z,162nm,18.6s,baz=284,slow=38
KLR Kul'dur 53.20 52 *ce*P **P 23 05 33.9 +2.1**
KLR pmax pmax
comp=Z,3.0nm,0.8s
BKNI Bangkinang 54.59 122 P **P 23 05 43.3 +0.9**
KSAR Wonju Array Be 54.61 67 P **P 23 05 44.1 +1.8**
KSAR Wonju Array Be 54.61 67 P **P 23 05 44.1 +1.8**
KSRS Korea Array 54.64 67 P **P 23 05 44.0 +1.5**
comp=Z,3.2nm,0.6s,baz=281,slow=6.7,SNR=19
KSRS LR LR 23 32 13.8
comp=Z,156nm,20.4s,baz=245,slow=40
comp=Z,3.2nm,0.6s
TORD Torodi Ar. Bea 55.05 259 P **P 23 05 45.1 -0.6**
comp=Z,4.5nm,0.9s,baz=50,slow=6.2,SNR=14
comp=Z,4.5nm,0.9s
SUMG Summit 56.40 339 P **P 23 05 57.2 +2.1**
SUMG Summit 56.40 339 P **P 23 05 57.2 +2.1**
SUMG pmax pmax
comp=Z,29nm,1.6s
SUMG Summit 56.40 339 *i* P **P 23 05 57.0 +1.9**
OPO Ambohidratompo 56.61 192 LR LR 23 31 45.1
comp=Z,54nm,18.1s,baz=178,slow=38
ICESG Greenland Ices 57.96 335 *i* P **P 23 06 07.0 +0.9**
LSZ Lusaka 59.29 213 LR LR 23 32 58.1
comp=Z,235nm,20.3s,baz=38,slow=37
LSZ Lusaka 59.29 213 P **P 23 06 16.4 +0.7**
LSZ IAmb IAmb 23 06 16.9
comp=Z,4.5nm,0.8s
LSZ Lusaka 59.29 213 P **P 23 06 16.4 +0.7**
LSZ pmax pmax
comp=Z,5.0nm,0.9s
SEY Seymchan 59.48 32 LR LR 23 34 51.0
comp=Z,153nm,18.8s,baz=300,slow=39
SEY Seymchan 59.48 32 *ce*P **P 23 06 20.6 +4.3**
SEY pmax pmax
comp=Z,7.0nm,1.3s
JOW Kunigami 59.62 78 LR LR 23 35 52.5
comp=Z,157nm,19.0s,baz=157,slow=40
MA2 Magadan 60.10 36 LR LR 23 35 31.0
comp=Z,121nm,18.5s,baz=284,slow=39
YSS Yuzh-Sakhalins 60.90 51 *e*P **P 23 06 25.5 -0.8**
YSS MLR MLR
comp=Z,200nm,13.0s
ASAJ Asahikawa 62.02 54 LR LR 23 35 40.1
comp=Z,201nm,19.0s,baz=258,slow=38
BILL Bilibino 62.27 24 P **P 23 06 37.8 +2.5**
BILL IAmb IAmb 23 06 40.5
comp=Z,8.4nm,1.0s
BILL Bilibino 62.27 24 *de*P **P 23 06 38.5 +3.2**
BILL *e*PP **sP 23 06 41.4 -0.5**
BILL *e*SP **pP 23 06 43.3 +3.2**
BILL S **S 23 15 01.0 +0.5**
BILL pmax pmax
comp=Z,8.0nm,1.0s
BILL MLR MLR
comp=Z,96nm,14.0s
SFJD Kangerlussuaq 62.58 335 LR LR 23 34 25.8
comp=Z,215nm,19.7s,baz=49,slow=37
DBIC Dimbokro 64.09 258 P **P 23 06 48.6 +0.5**
comp=Z,2.1nm,0.7s,baz=46,slow=4.8,SNR=1.4
comp=Z,2.1nm,0.7s
LEM Lembang 64.26 122 LR LR 23 37 36.0
comp=Z,54nm,18.5s,baz=357,slow=39
PETK Petropavlovsk- 66.52 40 LR LR 23 38 20.8
comp=Z,158nm,18.2s,baz=302,slow=38
RES Resolute Bay 66.59 352 LR LR 23 40 15.7
comp=Z,132nm,18.6s,baz=46,slow=40
TSUM Tsumeb 67.76 221 P **P 23 07 12.8 +1.1**
DAV Davao City (W) 68.39 98 LR LR 23 39 19.3
comp=Z,96nm,20.5s,baz=348,slow=38
A21K Barrow 68.79 11 P **P 23 07 16.3 -1.1**
baz=331
LBTB Lobatse 69.03 211 LR LR 23 39 22.1
comp=Z,142nm,18.8s,baz=34,slow=38

LBTB	**Lobatse**	**69.03**	**211**	P	**P**	**23 07 19.9**	**+0.4**
LBTB				IAmb	IAmb	23 07 39.2	
	comp=Z,10nm,1.1s						
LBTB	**Lobatse**	**69.03**	**211**	P	**P**	**23 07 19.9**	**+0.4**
LBTB				pmax	pmax		
	comp=Z,10.0nm,1.2s						
FRB	**Frobisher Bay**	**70.42**	**338**	LR	LR	23 39 56.3	
	comp=Z,155nm,18.7s,baz=72,slow=37						
A36M	**Sachs Harbour**	**70.79**	**1**	P	**P**	**23 07 28.8**	**-0.8**
	baz=358						
C23K	**Itkillik River**	**71.01**	**10**	P	**P**	**23 07 31.0**	**-0.1**
	baz=337						
C24K	**Franklin Bluff**	**71.37**	**9**	P	**P**	**23 07 32.9**	**-0.3**
	baz=338						
KAPI	**Kappang**	**71.60**	**112**	LR	LR	23 44 09.5	
	comp=Z,46nm,18.2s,baz=313,slow=40						
C26K	**Camden Bay**	**71.64**	**8**	P	**P**	**23 07 34.9**	**+0.1**
	baz=341						
D23K	**Nanushuk River**	**71.81**	**10**	P	**P**	**23 07 36.0**	**+0.1**
	baz=337						
GAMB	**Gambell**	**71.81**	**21**	P	**P**	**23 07 35.5**	**-0.4**
	baz=321						
D24K	**Happy Valley**	**71.89**	**10**	P	**P**	**23 07 36.5**	**+0.1**
	baz=338						
D25K	**Kavik River**	**72.04**	**9**	P	**P**	**23 07 37.5**	**+0.2**
	baz=340						
C27K	**Jago River**	**72.05**	**8**	P	**P**	**23 07 37.0**	**-0.3**
	baz=342						
TOLK	**Toolik Lake Re**	**72.26**	**10**	P	**P**	**23 07 37.7**	**-1.0**
	baz=338						
BOSA	**Boshof**	**72.38**	**209**	P	**P**	**23 07 40.4**	**+0.5**
	comp=Z,2.6nm,0.7s,baz=49,slow=4.5,SNR=7.6						
BOSA				LR	LR	23 40 37.3	
	comp=Z,153nm,21.2s,baz=17,slow=37						
	comp=Z,2.6nm,0.7s						
BOSA	**Boshof**	**72.38**	**209**	P	**P**	**23 07 40.4**	**+0.5**
BOSA				IAmb	IAmb	23 08 13.1	
	comp=Z,15nm,1.4s						
BOSA	**Boshof**	**72.38**	**209**	P	**P**	**23 07 40.4**	**+0.5**
BOSA				pmax	pmax		
	comp=Z,15nm,1.4s						
E22K	**Anaktuvuk Pass**	**72.40**	**11**	P	**P**	**23 07 39.0**	**-0.5**
	baz=336						
ANM	**Nome**	**72.84**	**18**	P	**P**	**23 07 41.5**	**-0.6**
	baz=326						
F21K	**Alatna River**	**72.97**	**12**	P	**P**	**23 07 42.3**	**-0.6**
	baz=335						
C36M	**Paulatuk**	**73.45**	**1**	P	**P**	**23 07 46.5**	**+0.9**
C36M				IAmb	IAmb	23 07 49.1	
	comp=Z,9.5nm,0.8s						
C36M	**Paulatuk**	**73.45**	**1**	P	**P**	**23 07 45.2**	**-0.4**
	baz=359						
COLD	**Coldfoot**	**73.48**	**11**	P	**P**	**23 07 44.7**	**-1.2**
	baz=337						
G22K	**Bettles**	**73.56**	**11**	P	**P**	**23 07 45.7**	**-0.7**
	baz=336						
G21K	**Allakaket**	**73.61**	**12**	P	**P**	**23 07 45.9**	**-0.7**
	baz=335						
G23K	**Bananza Creek**	**73.99**	**11**	P	**P**	**23 07 48.1**	**-0.8**
	baz=338						
IMAR	**Indian Mountai**	**74.05**	**13**	P	**P**	**23 07 51.1**	**+1.9**
INK	**Inuvik**	**74.18**	**4**	P	**P**	**23 07 52.7**	**+2.8**
	comp=Z,2.0nm,0.8s,baz=8.7,slow=8.0,SNR=3.2						
	comp=Z,2.0nm,0.8s						
INK	**Inuvik**	**74.18**	**4**	P	**P**	**23 07 48.9**	**-1.0**
	baz=351						
H21K	**Melozitna Rive**	**74.51**	**13**	P	**P**	**23 07 51.0**	**-1.0**
	baz=335,SNR=5.2						
H22K	**Ishtalitna Cre**	**74.53**	**12**	P	**P**	**23 07 50.7**	**-1.3**
	baz=336,SNR=7.6						
GCSA	**Galena City Sc**	**74.57**	**15**	P	**P**	**23 07 51.7**	**-0.6**
	baz=332						
SHEM	**Shemya Is, Ala**	**74.67**	**34**	LR	LR	23 43 40.4	
	comp=Z,78nm,19.9s,baz=62,slow=38						
H23K	**Yukon River**	**74.89**	**11**	P	**P**	**23 07 56.7**	**+2.5**
H23K	**Yukon River**	**74.89**	**11**	P	**P**	**23 07 53.4**	**-0.8**
	baz=338,SNR=6.4						
I21K	**Tanana**	**75.09**	**12**	P	**P**	**23 07 54.5**	**-0.7**
	baz=336						
H24K	**Noodor Dome**	**75.12**	**11**	P	**P**	**23 07 54.6**	**-0.9**
	baz=339						
MLY	**Manley**	**75.43**	**12**	P	**P**	**23 07 59.4**	**+2.1**
MLY				IAmb	IAmb	23 08 02.5	
	comp=Z,18nm,1.6s						
MLY	**Manley**	**75.43**	**12**	P	**P**	**23 07 56.7**	**-0.6**
	baz=337,SNR=11						
I23K	**Minto, Yukon-K**	**75.55**	**11**	P	**P**	**23 07 56.9**	**-0.9**
	baz=338						
J20K	**Nowinta River**	**75.61**	**14**	P	**P**	**23 07 59.5**	**+1.2**
J20K				IAmb	IAmb	23 08 11.8	
	comp=Z,13nm,1.6s						
J20K	**Nowinta River**	**75.61**	**14**	P	**P**	**23 07 58.3**	**0.0**
	baz=334						
POKR	**Poker Plat Res**	**75.87**	**11**	P	**P**	**23 08 00.2**	**+0.4**
	baz=340						
MDM	**Murphy Dome**	**75.90**	**11**	P	**P**	**23 08 01.6**	**+1.7**
MDM				IAmb	IAmb	23 08 06.0	
	comp=Z,21nm,1.7s						
NEA2	**Nenana**	**76.11**	**11**	P	**P**	**23 08 01.2**	**+0.1**
	baz=338						
CHUM	**Lake Minchumin**	**76.22**	**13**	P	**P**	**23 08 01.2**	**-0.5**
	baz=336						
BPAW	**Bear Paw Mtn.**	**76.25**	**12**	P	**P**	**23 08 03.2**	**+1.2**
BPAW				IAmb	IAmb	23 08 07.8	
	comp=Z,12nm,1.4s						
BPAW	**Bear Paw Mtn.**	**76.25**	**12**	P	**P**	**23 08 01.2**	**-0.8**
	baz=337						
I26K	**Coal Creek Min**	**76.26**	**9**	P	**P**	**23 08 01.3**	**-0.6**
	baz=343						
ILAR	**Eielson Array**	**76.27**	**10**	P	**P**	**23 08 03.5**	**+1.5**
	comp=Z,1.4nm,0.8s,baz=334,slow=4.3,SNR=9.8						
	comp=Z,1.4nm,0.8s						
TTA	**Tatalina**	**76.37**	**15**	P	**P**	**23 08 04.5**	**+1.8**
TTA				IAmb	IAmb	23 08 08.6	
	comp=Z,4.9nm,1.1s						
TTA	**Tatalina**	**76.37**	**15**	P	**P**	**23 08 04.5**	**+1.8**
TTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TTA	**Tatalina**	**76.37**	**15**	P	**P**	**23 08 02.8**	**+0.1**
	baz=333						
K20K	**Telida**	**76.37**	**14**	P	**P**	**23 08 02.6**	**-0.1**
	baz=335						
SCHQ	**Schefferville**	**76.39**	**331**	P	**P**	**23 08 04.4**	**+1.5**
	comp=Z,4.7nm,0.7s,baz=21,slow=4.1,SNR=7.7						
	comp=Z,4.7nm,0.7s						
SCHQ	**Schefferville**	**76.39**	**331**	P	**P**	**23 08 04.0**	**+1.1**
SCHQ				IAmb	IAmb	23 08 08.8	
	comp=Z,8.2nm,0.8s						
J25K	**Salcha River,**	**76.64**	**10**	P	**P**	**23 08 03.9**	**-0.3**
	baz=342						
CAST	**Castle Rocks**	**76.69**	**13**	P	**P**	**23 08 03.9**	**-0.6**
	baz=336						
I29M	**Ogilvie Camp,**	**76.72**	**7**	P	**P**	**23 08 06.2**	**+1.6**
I29M				IAmb	IAmb	23 08 16.8	
	comp=Z,4.1nm,0.8s						
I29M	**Ogilvie Camp,**	**76.72**	**7**	P	**P**	**23 08 03.6**	**-1.0**
	baz=347						
MCK	**McKinley**	**76.94**	**12**	P	**P**	**23 08 05.3**	**-0.6**
	baz=339						
TRF	**Thorofare Moun**	**76.97**	**12**	P	**P**	**23 08 05.4**	**-0.9**
	baz=338						
J26L	**Joseph Creek**	**76.98**	**9**	P	**P**	**23 08 07.5**	**+1.4**
J26L				IAmb	IAmb	23 08 11.6	
	comp=Z,5.9nm,0.7s						
J26L	**Joseph Creek**	**76.98**	**9**	P	**P**	**23 08 05.3**	**-0.9**
	baz=343,SNR=11						
PPLA	**Purkeypile**	**77.15**	**13**	P	**P**	**23 08 06.0**	**-1.2**
	baz=336						
L20K	**Farewell, AK**	**77.21**	**14**	P	**P**	**23 08 06.8**	**-0.6**
	baz=335						
L19K	**White Mountain**	**77.28**	**15**	P	**P**	**23 08 09.5**	**+1.7**
L19K				IAmb	IAmb	23 08 20.3	
	comp=Z,8.5nm,1.2s						
L19K	**White Mountain**	**77.28**	**15**	P	**P**	**23 08 07.7**	**-0.1**
	baz=334						
K24K	**Donnelly Dome**	**77.35**	**10**	P	**P**	**23 08 07.6**	**-0.6**
	baz=341						
SCRK	**Sand Creek**	**77.43**	**10**	P	**P**	**23 08 07.6**	**-1.1**
	baz=343,SNR=13						
SUR	**Sutherland**	**77.48**	**211**	LR	LR	23 43 02.8	
	comp=Z,156nm,18.0s,baz=11,slow=36						
RIDG	**Independent Ri**	**77.54**	**10**	P	**P**	**23 08 08.9**	**-0.4**
	baz=342						
K27K	**Chicken**	**77.62**	**9**	P	**P**	**23 08 12.2**	**+2.5**
K27K	**Chicken**	**77.62**	**9**	P	**P**	**23 08 08.4**	**-1.2**
	baz=344						
M19K	**Big River Lodg**	**77.63**	**15**	P	**P**	**23 08 09.9**	**+0.1**
	baz=335						
SIJI	**Sorong**	**77.73**	**101**	LR	LR	23 49 02.1	
	comp=Z,19nm,18.0s,baz=34,slow=41						
DHY	**Denali Highway**	**77.80**	**11**	P	**P**	**23 08 09.9**	**-1.0**
	baz=340						
WAT1	**Susitna Watana**	**77.84**	**12**	P	**P**	**23 08 10.9**	**-0.1**
	baz=339						
DAWY	**Dawson**	**77.89**	**7**	P	**P**	**23 08 12.8**	**+1.6**
DAWY				IAmb	IAmb	23 08 16.6	
	comp=Z,5.3nm,0.8s						
DAWY	**Dawson**	**77.89**	**7**	P	**P**	**23 08 09.4**	**-1.7**
	baz=346						
M20K	**Styx River**	**77.90**	**14**	P	**P**	**23 08 10.2**	**-1.1**
	baz=336						
N16K	**Nishlik Lake**	**77.94**	**17**	P	**P**	**23 08 10.7**	**-0.8**
	baz=331						
SKT	**Skwentna**	**78.11**	**14**	P	**P**	**23 08 11.8**	**-0.7**
	baz=337						
PAX	**Paxson**	**78.19**	**10**	P	**P**	**23 08 12.9**	**-0.1**
	baz=342						
WAT6	**Susitna Watana**	**78.21**	**12**	P	**P**	**23 08 12.2**	**-1.0**
	baz=340						
N18K	**Kilae Creek**	**78.42**	**16**	P	**P**	**23 08 13.2**	**-0.9**
	baz=334						
L27K	**Beaver Creek,**	**78.58**	**9**	P	**P**	**23 08 17.2**	**+2.1**
L27K	**Beaver Creek,**	**78.58**	**9**	P	**P**	**23 08 14.8**	**-0.2**
	baz=344,SNR=8.3						
BCAR	**Beaver Creek A**	**78.59**	**9**	P	**P**	**23 08 17.0**	**+1.9**
N19K	**Bonanza Creek**	**78.60**	**15**	P	**P**	**23 08 14.8**	**-0.5**
	baz=335						
SUA	**Susitna One**	**78.74**	**13**	P	**P**	**23 08 16.0**	**0.0**
	baz=338						
HARP	**HAARP**	**78.78**	**11**	P	**P**	**23 08 15.3**	**-0.8**
	baz=342						
SML	**Sawmill**	**78.84**	**12**	P	**P**	**23 08 16.1**	**-0.4**
	baz=339						
O16K	**Kokwok River B**	**78.88**	**18**	P	**P**	**23 08 16.3**	**-0.3**
	baz=332						
M24K	**Tolsona, Glenn**	**78.90**	**11**	P	**P**	**23 08 16.5**	**-0.4**
	baz=341						
PMR	**Palmer**	**78.91**	**13**	P	**P**	**23 08 16.3**	**-0.5**
	baz=339						
O17K	**Koliganek Bris**	**78.95**	**17**	P	**P**	**23 08 17.0**	**-0.1**
	baz=333						
M23K	**Glacier View**	**78.95**	**12**	P	**P**	**23 08 16.5**	**-0.6**
	baz=340						
SCM	**Sheep Creek Mo**	**78.98**	**12**	P	**P**	**23 08 16.3**	**-1.0**
	baz=340						
M26K	**Nabesna, AK**	**79.07**	**10**	P	**P**	**23 08 18.1**	**+0.3**
	baz=344						
M27K	**Edge Creek, AK**	**79.26**	**9**	P	**P**	**23 08 18.2**	**-0.7**
	baz=344,SNR=8.7						
O18K	**Koktuh Hills**	**79.31**	**16**	P	**P**	**23 08 18.0**	**-1.0**
	baz=334						
KLU	**Klutina**	**79.53**	**11**	P	**P**	**23 08 19.6**	**-0.7**
	baz=341,SNR=5.5						
M30M	**Minto, Yukon**	**79.60**	**7**	P	**P**	**23 08 22.0**	**+1.3**
M30M	**Minto, Yukon**	**79.60**	**7**	P	**P**	**23 08 19.8**	**-0.8**
	baz=348						
N25K	**Chitina, Valde**	**79.61**	**11**	P	**P**	**23 08 19.9**	**-0.9**
	baz=342						
GUMO	**Guam**	**79.83**	**81**	LR	LR	23 46 49.9	
	comp=Z,28nm,20.0s,baz=114,slow=38						
GLI	**Glacier Island**	**79.92**	**12**	P	**P**	**23 08 21.4**	**-0.9**
	baz=340						
YUK3	**Moose Creek**	**80.00**	**9**	P	**P**	**23 08 22.3**	**-0.7**
	baz=346						
MCARA	**McCarthy VSAT**	**80.05**	**10**	P	**P**	**23 08 22.3**	**-0.8**
	baz=344						
YKA	**Yellowknife Ar**	**80.14**	**356**	P	**P**	**23 08 24.6**	**+1.2**
	comp=Z,1.8nm,0.7s,baz=3.3,slow=6.1,SNR=10						
	comp=Z,1.8nm,0.7s						
YKA	**Yellowknife Ar**	**80.14**	**356**	P	**P**	**23 08 24.9**	**+1.4**
M31M	**Drury Creek, Y**	**80.17**	**6**	P	**P**	**23 08 24.8**	**+1.1**
M31M				IAmb	IAmb	23 08 28.5	
	comp=Z,11nm,1.5s						
M31M	**Drury Creek, Y**	**80.17**	**6**	P	**P**	**23 08 22.9**	**-0.8**
	baz=350						
FARO	**Faro, Yukon**	**80.22**	**5**	P	**P**	**23 08 25.6**	**+1.5**
FARO				IAmb	IAmb	23 08 29.9	
	comp=Z,20nm,1.7s						
BMRM	**Bremner River**	**80.22**	**11**	P	**P**	**23 08 24.0**	**-0.1**
	baz=342						
SEW	**Seward**	**80.24**	**13**	P	**P**	**23 08 23.5**	**-0.5**
	baz=339						
BRSE	**Bradley Lake S**	**80.33**	**14**	P	**P**	**23 08 23.7**	**-0.9**
	baz=338						
Q18K	**Katmai Hardscr**	**80.44**	**17**	P	**P**	**23 08 24.2**	**-1.2**
	baz=334						
EYAK	**Cordova Ski Ar**	**80.45**	**11**	P	**P**	**23 08 23.5**	**-1.7**
	baz=342						
Q19K	**Cape Douglas,**	**80.49**	**16**	P	**P**	**23 08 23.8**	**-1.6**
	baz=335						
Q17K	**Contact Creek**	**80.59**	**17**	P	**P**	**23 08 24.5**	**-1.6**
	baz=334						
CRQE	**Cirque**	**80.65**	**10**	P	**P**	**23 08 23.3**	**-3.1**
	baz=344						
N30M	**Aishikik Lake**	**80.67**	**7**	P	**P**	**23 08 24.7**	**-1.8**
	baz=348						
CTG	**Chitna Glacier**	**80.68**	**9**	P	**P**	**23 08 24.8**	**-1.8**
	baz=345						
HYT	**Haines Junctio**	**81.25**	**7**	P	**P**	**23 08 31.2**	**+1.6**
HYT				IAmb	IAmb	23 08 34.5	
	comp=Z,7.2nm,0.9s						
HYT	**Haines Junctio**	**81.25**	**7**	P	**P**	**23 08 29.9**	**+0.3**
	baz=348,SNR=5.4						
N32M	**Quiet Lake**	**81.31**	**5**	P	**P**	**23 08 30.5**	**+0.6**
	baz=352						
NIKH	**Nikolski High**	**81.33**	**26**	P	**P**	**23 08 29.2**	**-0.8**
	baz=324						
UNV	**Unalaska Valle**	**81.42**	**25**	P	**P**	**23 08 29.0**	**-1.5**
	baz=326						
S14K	**Fog Glacier**	**81.42**	**20**	P	**P**	**23 08 29.2**	**-1.4**
	baz=331						
O30N	**Mendenhall**	**81.44**	**7**	P	**P**	**23 08 29.2**	**-1.3**
	baz=349						
PINM	**Pinnacle**	**81.66**	**9**	P	**P**	**23 08 29.7**	**-2.1**
	baz=346						
WHY	**Whitehorse**	**81.66**	**6**	P	**P**	**23 08 29.9**	**-1.9**
	baz=350						
KDAK	**Kodiak Island**	**81.77**	**16**	LR	LR	23 50 59.1	
	comp=Z,114nm,19.1s,baz=304,slow=40						
KDAK	**Kodiak Island**	**81.77**	**16**	P	**P**	**23 08 30.5**	**-1.7**
	baz=336						
SDPT	**Sand Point**	**81.98**	**21**	P	**P**	**23 08 31.5**	**-1.9**
	baz=330						
OHAK	**Old Harbor**	**82.13**	**16**	P	**P**	**23 08 32.3**	**-1.8**
	baz=336						
PNL	**Peninsula**	**82.17**	**9**	P	**P**	**23 08 33.2**	**-1.2**
	baz=346						
P33M	**Teslin, Yukon**	**82.26**	**5**	P	**P**	**23 08 36.5**	**+1.5**
P33M				IAmb	IAmb	23 08 38.4	
	comp=Z,3.9nm,0.8s						
P33M	**Teslin, Yukon**	**82.26**	**5**	P	**P**	**23 08 33.8**	**-1.1**
	baz=352,SNR=7.5						
SII	**Sitkinak Islan**	**82.53**	**17**	P	**P**	**23 08 34.6**	**-1.7**
	baz=335						
CHNA	**Chernabura Isl**	**82.69**	**21**	P	**P**	**23 08 35.0**	**-2.0**
	baz=331						
PLBC	**Pleasant Camp**	**82.71**	**7**	P	**P**	**23 08 36.0**	**-1.1**
	baz=349						
P32M	**Atlin**	**82.81**	**6**	P	**P**	**23 08 35.6**	**-2.1**
	baz=351						
DLBC	**Dease Lake**	**84.21**	**4**	LR	LR	23 49 42.4	
	comp=Z,54nm,19.2s,baz=313,slow=38						
EDM	**Edmonton**	**89.29**	**354**	P	**P**	**23 09 10.7**	**+0.9**
EDM	**Edmonton**	**89.29**	**354**	P	**P**	**23 09 10.7**	**+0.9**
EDM				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ULM	**Lac du Bonnet**	**89.50**	**343**	P	**P**	**23 09 13.3**	**+2.4**
	comp=Z,3.5nm,0.6s,baz=114,slow=1.6,SNR=3.8						
	comp=Z,3.5nm,0.6s						
BINY	**Binghamton**	**90.03**	**327**	P	**P**	**23 09 12.0**	**-1.5**
	baz=35						
WRA	**Warramunga Arr**	**92.05**	**114**	P	**P**	**23 09 26.2**	**+3.1**
	comp=Z,0.6nm,0.8s,baz=315,slow=4.5,SNR=4.7						
	comp=Z,0.6nm,0.8s						
WRA	**Warramunga Arr**	**92.05**	**114**	*i* P	P	23 09 30.1	+7.0
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
NEW	**Newport**	**94.47**	**356**	LR	LR	23 59 08.8	
	comp=Z,51nm,19.1s,baz=16,slow=40						
RCBR	**Riachuelo**	**96.17**	**267**	LR	LR	23 56 56.2	
	comp=Z,20nm,18.1s,baz=214,slow=38						
TKL	**Tuckaleechee C**	**98.80**	**329**	LR	LR	23 56 14.7	
	comp=Z,72nm,19.4s,baz=50,slow=36						
PDAR	**Pinedale Array**	**99.23**	**350**	LR	LR	23 59 41.7	
	comp=Z,60nm,19.3s,baz=20,slow=38						
SNAA	**Sanae**	**116.78**	**198**	PKPdf	**PKPdf**	**23 14 53.6**	**-3.5**
VNA2	**Neumayer--Watz**	**117.48**	**200**	PKPdf	**PKiKP**	**23 14 59.0**	**+0.7**
VNA3	**Neumayer Olymp**	**118.28**	**200**	PKPdf	**PKiKP**	**23 15 00.5**	**+0.6**

NEIC ***29*** *23:31:25.5±0.8, 18.2°2S±0.1°×178.2°2W±0.1°, h540km±7km, mb4.2/18, Error ellipse: s-maj=23.8km s-min=14.6km az=134.0*

IDC ***29*** *23:31:28.0±2.4, 17.98S×178.51W, h555km±15km, mb3.0/6, mbtmp3.9/7, Error ellipse: s-maj=62.5km s-min=20.4km az=141.0*

ISC 29 23:31:26.3±0.7, 18.2S±0.1×178.3W±0.1, h550km, n30, σ0.97/31, mb4.0/16, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.50**	**276**	P	**P**	**23 32 43.6**	**-1.1**
	32nm,0.8s,baz=132,slow=13,SNR=24						
MSVF				S	**S**	**23 33 49.7**	**+1.1**
	1.0nm,0.4s,baz=123,slow=21,SNR=0.8						
MSVF	**Nonsavu**	**3.50**	**276**	P	**P**	**23 32 43.9**	**-0.9**
KNTN	**Kanton**	**16.60**	**24**	P	**P**	**23 34 49.6**	**-1.9**
OUZ	**Omahuta**	**18.45**	**201**	P	**P**	**23 35 09.2**	**+1.1**
URZ	**Urewera**	**20.42**	**190**	P	**P**	**23 35 23.1**	**-3.0**
MLZ	**Mavora Lakes**	**29.40**	**200**	P	**P**	**23 36 44.8**	**-0.5**
ARMA	**Armidale**	**29.91**	**240**	P	**P**	**23 36 50.2**	**+0.1**
ARMA				IAmb	IAmb	23 36 55.4	
	comp=Z,22nm,1.4s						
STKA	**Stephens Creek**	**38.60**	**241**	P	**P**	**23 38 03.5**	**+0.8**
	comp=Z,0.7nm,0.3s,baz=98,slow=10,SNR=3.7						
	comp=Z,0.7nm,0.3s						
STKA	**Stephens Creek**	**38.60**	**241**	P	**P**	**23 38 03.6**	**+0.9**
BBOO	**Buckleboo**	**43.38**	**241**	P	**P**	**23 38 40.8**	**+0.2**
BBOO				IAmb	IAmb	23 38 43.2	
	comp=Z,21nm,1.1s						
WB0	**Warramunga Arr**	**44.66**	**260**	P	**P**	**23 38 50.7**	**0.0**
WB0				IAmb	IAmb	23 39 00.7	
	comp=Z,22nm,1.5s						
WRA	**Warramunga Arr**	**44.69**	**260**	P	**P**	**23 38 50.2**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=98,slow=7.5,SNR=12						
	comp=Z,0.3nm,0.3s						
WRA	**Warramunga Arr**	**44.69**	**260**	P	**P**	**23 38 51.0**	**0.0**
AS31	**Alice Springs**	**44.82**	**254**	P	**P**	**23 38 51.4**	**-0.6**
ASAR	**Alice Springs**	**44.83**	**254**	P	**P**	**23 38 52.4**	**+0.4**
	comp=Z,1.9nm,0.4s,baz=90,slow=8.1,SNR=32						
	comp=Z,1.9nm,0.4s						
ASAR	**Alice Springs**	**44.83**	**254**	P	**P**	**23 38 51.9**	**-0.1**
SBA	**Scott Base**	**60.17**	**184**	P	**P**	**23 40 40.8**	**+0.1**
VNDA	**Vanda**	**60.20**	**185**	P	**P**	**23 40 41.5**	**+0.6**
ADK	**Adak**	**69.76**	**1**	P	**P**	**23 41 40.9**	**-0.3**
ADK				IAmb	IAmb	23 41 58.7	
	comp=Z,26nm,1.3s						
QSPA	**South Pole Qui**	**71.89**	**180**	P	**P**	**23 41 54.1**	**+0.3**
QSPA				IAmb	IAmb	23 41 58.0	
	comp=Z,5.3nm,1.2s						
PETK	**Petropavlovsk-**	**73.95**	**345**	P	**P**	**23 42 05.5**	**0.0**
	comp=Z,2.6nm,0.9s,baz=146,slow=11,SNR=4.1						
	comp=Z,2.6nm,0.9s						
K20K	**Telida**	**83.43**	**11**	P	**P**	**23 42 56.2**	**+0.5**
K20K				IAmb	IAmb	23 42 57.4	
	comp=Z,3.6nm,0.8s						
KTH	**Kantishna Hill**	**84.20**	**12**	P	**P**	**23 42 59.6**	**-0.1**
KTH				IAmb	IAmb	23 43 00.5	
	comp=Z,4.2nm,0.9s						
TRF	**Thorofare Moun**	**84.23**	**12**	P	**P**	**23 43 00.0**	**+0.1**
TRF				IAmb	IAmb	23 43 01.0	
	comp=Z,5.2nm,0.7s						
WRH	**Wood River Hil**	**85.59**	**13**	P	**P**	**23 43 06.8**	**+0.5**
WRH				IAmb	IAmb	23 43 08.0	
	comp=Z,3.5nm,0.9s						
TXAR	**Lajitas Array**	**86.04**	**58**	P	**P**	**23 43 11.2**	**+1.8**
	comp=Z,0.3nm,0.8s,baz=211,slow=6.7,SNR=3.9						
	comp=Z,0.3nm,0.8s						
TXAR	**Lajitas Array**	**86.04**	**58**	P	**P**	**23 43 10.6**	**+1.2**
ILAR	**Eielson Array**	**86.11**	**13**	P	**P**	**23 43 09.3**	**+0.6**
	comp=Z,1.0nm,0.9s,baz=234,slow=5.5,SNR=7.4						
	comp=Z,1.0nm,0.9s						
M30M	**Minto, Yukon**	**86.84**	**18**	P	**P**	**23 43 13.1**	**+0.8**
M30M				IAmb	IAmb	23 43 13.7	
	comp=Z,2.3nm,1.0s						
CLL	**Collm**	**145.73**	**347**	*i* PKPbc	**PKPab**	**23 50 05.1**	**-0.4**
	comp=Z,3.0nm,0.8s						

IDC ***29*** *23:37:42.6±0.5, 19.22N×64.78W, h0km, mb4.0/17, mbtmp4.1/19, ML3.3/2, MS3.4/20, Error ellipse: s-maj=15.0km s-min=14.2km az=86.0*

NEIC ***29*** *23:37:48.6±1.4, 19.05N±0.05×64.91W±0.04, h34km±5km, Error ellipse: s-maj=7.5km s-min=6.0km az=202.0*

RSPR ***29*** *23:37:48.4, 19.09N×64.88W, h11km±3km*

NEIC ***29*** *23:37:48.6, 19.03N×64.92W, h25km, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr-1.18; Mθθ1.16; Mϕϕ0.03; Mrθ-1.36; Mϕθ-0.22; Mϕr0.14; Fault plane solution: M₀1.81000×10¹⁵ NP1:φ₁96.92000°, δ69.49000°, λ-92.55000°. NP2:φ₂284.16000°, δ20.66000°, λ-83.22000°. Principal axes: T 1.8167, Plg24.0000°, Azm189.0000°; N -0.0087, Plg2.0000°, Azm98.0000°; P -1.8080, Plg65.0000°, Azm3.0000°;*

OSPL ***29*** *23:37:50.6±3.3, 19.08N×64.90W, h31km±227km, ML4.0*

ISC 29 23:37:47.0±1.2, 19.11N±0.04×64.91W±0.03, h30km±9km, n388, σ1.9/403, mb4.4/45, MS3.5/17, 19C-2D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TBVI	**Tortola**	**0.74**	**158**	*e*P	**Pb**	**23 38 00.7**	**-0.8**
TBVI	**Tortola**	**0.74**	**158**	*e*S	**Sn**	**23 38 11.1**	**-0.6**
STVI	**Saint Thomas**	**0.76**	**184**	*e*P	**Pb**	**23 38 01.0**	**-0.8**
STVI	**Saint Thomas**	**0.76**	**184**	*e*S	**Sb**	**23 38 11.5**	**-0.2**
STVI	**Saint Thomas**	**0.76**	**184**		**Pb**	**23 38 00.9**	**-0.8**
STVI					**Sb**	**23 38 11.5**	**-0.2**
STVI				IAML		23 38 12.3	
	comp=N,10μm,0

CELP IAML 23 38 45.1
comp=N,2µm,0.7s
AOPR Arecibo Observ 1.91 247 eP Pn 23 38 18.2 +0.6
AOPR Arecibo Observ 1.91 247 Pn 23 38 18.2 +0.6
AOPR Arecibo Observ 1.91 247 eP Pn 23 38 17.9 +0.3
AOPR eS Sn **23 38 41.1 +0.5**
UUPR Utuado, UPR, P 1.92 244 eP Pn 23 38 18.2 +0.5
UUPR Utuado, UPR, P 1.92 244 eS Sn 23 38 41.2 +0.4
OBIP Obispado Ponce 1.93 237 eP Pn 23 38 18.5 +0.6
OBIP Obispado Ponce 1.93 237 eS Sn 23 38 41.9 +0.8
OBIP Obispado Ponce 1.93 237 Pn **Pn 23 38 18.5 +0.6**
OBIP IAML 23 38 47.8
comp=N,2µm,0.8s
ICMP Isla Caja de M 1.96 232 eP Pn 23 38 18.8 +0.5
ICMP Isla Caja de M 1.96 232 eS Sn 23 38 42.8 +0.9
ICMP Isla Caja de M 1.96 232 Pn 23 38 19.5 +1.2
ICMP IAML 23 38 52.6
comp=N,2µm,0.6s
ICMP IAML 23 38 56.2
comp=E,3µm,0.6s
SMRT St. Maarten 2.03 121 Pn 23 38 19.7 +0.5
SMRT IAML 23 38 54.8
comp=N,2µm,0.4s
SMRT IAML 23 38 54.9
comp=E,2µm,0.3s
SMRT St. Maarten 2.03 121 eP Pn 23 38 19.4 +0.1
SMRT eS Sn **23 38 42.2 -1.4**
AGPR Aguadilla, PR 2.19 253 eP Pn 23 38 21.7 +0.4
AGPR Aguadilla, PR 2.19 253 Pn 23 38 22.1 +0.8
AGPR IAML 23 38 51.8
comp=N,2µm,0.4s
AGPR IAML 23 38 57.0
comp=E,2µm,0.6s
AGPR Aguadilla, PR 2.19 253 *i* P Pn 23 38 21.9 +0.6
AGPR eS Sn **23 38 48.4 +0.9**
AGPR IAML 23 38 49.1
comp=Z,694nm,0.5s
GBPR Guanica, Bosqu 2.19 239 eP Pn 23 38 22.5 +1.1
GBPR Guanica, Bosqu 2.19 239 eS Sn 23 38 48.2 +0.8
PRSN Puerto Rico Se 2.30 248 eP Pn 23 38 24.2 +1.2
PRSN Puerto Rico Se 2.30 248 eS Sn 23 38 51.2 +0.9
PRSN Puerto Rico Se 2.30 248 Pn 23 38 24.2 +1.2
PRSN IAML 23 39 08.1
comp=N,3µm,0.3s
MLPR Magueyes Islan 2.33 241 eP Pn 23 38 24.3 +1.0
MLPR Magueyes Islan 2.33 241 eS Sn 23 38 51.6 +0.8
MLPR Magueyes Islan 2.33 241 Pn **Pn 23 38 24.5 +1.2**
MLPR IAML 23 38 58.2
comp=E,1µm,1.0s
CRPR Cabo Rojo, PR 2.36 243 eP Pn 23 38 24.1 +0.3
CRPR Cabo Rojo, PR 2.36 243 eS Sn 23 38 53.0 +1.2
CRPR Cabo Rojo, PR 2.36 243 Pn 23 38 24.9 +1.1
CRPR IAML 23 39 02.6
comp=N,1µm,1.1s
CRPR Cabo Rojo, PR 2.36 243 *i* P Pn 23 38 24.8 +1.1
CRPR eS Sn **23 38 48.6 -3.1**
CRPR IAML 23 39 07.4
comp=Z,778nm,0.7s
SEUS St. Eustatius 2.44 131 Pn **Pn 23 38 25.9 +1.2**
SEUS IAML 23 39 11.1
comp=N,1µm,0.4s
SEUS St. Eustatius 2.44 131 eP Pn 23 38 25.4 +0.6
IDE Isla Desecheo 2.54 254 eP Pn 23 38 26.8 +0.6
IDE Isla Desecheo 2.54 254 eS Sn 23 38 58.9 +2.8
SKI Saint Kitts 2.71 130 eP Pn 23 38 29.6 +1.0
SKI eS Sn **23 39 02.1 +1.6**
SKOC St. Kitts, UWI 2.74 131 eP Pb 23 38 32.3 -3.1
SKOC eS Sn **23 39 00.9 -0.3**
ANWB Willy Bob 3.29 115 Pn **Pn 23 38 37.3 +0.7**
ANWB IAML 23 39 35.6
comp=N,472nm,1.2s
ANWB Willy Bob 3.29 115 eP Pb 23 38 42.8 -2.0
ANWB eS Sn **23 39 16.7 +2.1**
MBFL Flemmings, Mon 3.48 132 eP Pn 23 38 39.5 +0.4
MLYT Lee's Yard 3.51 132 eP Pn 23 38 42.3 +2.7
MLYT eS Sn **23 39 22.0 +1.8**
ANDO Antigua, Disas 3.54 124 eP Pb 23 38 44.2 -4.7
ANDO eS Sn **23 39 13.9 -6.8**
BPA Boggy Peak 3.55 125 eP Pn 23 38 39.1 -1.1
BPA eS Sn **23 39 20.5 -0.7**
ANBD Bethesda, Anti 3.62 124 eP Pn 23 38 38.6 -2.5
ANBD eS Sn **23 39 20.9 -1.9**
GDHS Morne Mazeau, 4.11 133 Pn 23 38 48.2 +0.3
GDHS IAML 23 40 03.7
comp=N,700nm,0.6s
GDHS IAML 23 40 07.7
comp=E,685nm,0.6s
ABD La Joyeuse, An 4.18 128 Pn **Pn 23 38 49.3 +0.5**
ABD IAML 23 39 43.9
comp=N,334nm,1.6s
ABD IAML 23 39 56.0
comp=E,366nm,1.9s
ABD La Joyeuse, An 4.18 128 eP Pn 23 38 49.3 +0.5
ABD eS Sn **23 39 33.7 -3.0**
DR12 Loma Pena Alta 4.25 266 Pn 23 38 50.5 +0.7
CBE Ff, Capester 4.36 133 Pn 23 38 52.9 +1.5
CBE Ff, Capester 4.36 133 eP Pn 23 38 54.0 +2.6
CBE Ff, Capester 4.36 133 eS Sn 23 39 42.8 +1.6
TBG Guadaloupe-3 4.49 136 eP Pn 23 38 55.0 +1.9
TDBA Terre de Bas, 4.50 136 eP Pn 23 38 55.0 +1.8
TDBA Terre de Bas, 4.50 136 eS Sn 23 39 49.3 +4.7
GDSD La Dsirade Is 4.60 127 Pn **Pn 23 38 55.2 +0.7**
MAGL Barre de l'ile 4.67 132 Pn 23 38 57.4 +1.9
MAGL IAML 23 40 09.7
comp=N,278nm,1.4s
MAGL IAML 23 40 19.5
comp=E,377nm,1.4s
MAGL Barre de l'ile 4.67 132 eP Pn 23 38 57.5 +1.9
MAGL Barre de l'ile 4.67 132 eS Sn 23 39 47.0 -1.8
MDCT Cottage Hill, 4.78 136 eP Pn 23 38 59.2 +2.2
MDCT Cottage Hill, 4.78 136 eS Sn 23 39 48.2 -3.3
DSLB Salisbury 4.94 137 eP Pn 23 38 59.5 +0.3
DSLB Salisbury 4.94 137 eS Sn 23 39 52.7 -2.7
BANI BANI 5.22 263 Pn 23 39 06.0 +2.8
SC01 Santiago de lo 5.51 274 Pn 23 39 09.0 +1.9
SVN Savane Anatole 5.55 139 Pn **Pn 23 39 08.8 +1.2**
BIM Bigot 5.86 141 Pn **Pn 23 39 12.5 +0.6**
BIM Bigot 5.86 141 eP Pn 23 39 13.0 +1.0
BIM Bigot 5.86 141 eS Sn 23 40 13.7 -4.4
LOBA2 Hotel Casa Bon 5.96 261 *i* P Pn 23 39 15.4 +2.2
SDDR Presa de Saban 6.04 270 Pn 23 39 16.1 +1.7
SDDR Presa de Saban 6.04 270 eP Pn 23 39 16.5 +2.1
SDDR Presa de Saban 6.04 270 eP Pn 23 39 16.2 +1.8
SDDR Presa de Saban 6.04 270 eS Sn 23 40 26.5 +3.9
SDDR Presa de Saban 6.04 270 eP Pn 23 39 16.5 +2.1
SDDR eS Sn **23 40 16.5 -6.0**
SDDR Presa de Saban 6.04 270 *i* P Pn 23 39 16.7 +2.3
SDDR IAML 23 40 44.7
comp=Z,59nm,0.5s
MPOM Morne Pois Mar 6.04 140 Pn **Pn 23 39 15.8 +1.3**
MPOM Morne Pois Mar 6.04 140 eP Pn 23 39 13.9 -0.5
MPOM Morne Pois Mar 6.04 140 eS Sn 23 40 20.2 -2.4
SLBI Saint Lucia, B 6.31 143 eP Pn 23 39 18.6 +0.6
GRTK Grand Turk 6.31 293 Pn **Pn 23 39 17.5 -0.6**
GRTK Grand Turk 6.31 293 eP Pn 23 39 17.5 -0.6
GRTK eS Sn **23 40 23.9 -5.3**
GRTK Grand Turk 6.31 293 *i* P Pn 23 39 17.5 -0.6
GRTK eS Sn **23 40 23.7 -5.6**
GRTK IAML 23 40 30.6
comp=Z,104nm,0.9s
SVB Belmont 6.78 148 Pn **Pn 23 39 24.2 -0.4**
MASC Masc 8.85 278 eP Pn 23 39 50.4 -2.5
MASC eS Sn **23 41 25.1 -6.7**
MASC IAML 23 41 31.2
comp=E,12nm,0.4s
MASC IAML 23 41 31.6
comp=N,14nm,0.8s
GTBY Guantanamo Bay 9.66 277 eP Pn 23 40 03.0 -1.1
GTBY eS Sn **23 41 47.8 -3.8**
RCC Rio Carpintero 10.21 277 eP Pn 23 40 10.4 -1.2
RCC eS Sn **23 41 59.7 -5.5**
BAUV El Baul 10.55 197 Pn **Pn 23 40 16.7 +0.3**
SDV Santo Domingo 11.58 209 Pn **Pn 23 40 33.6 +3.0**
comp=N,2.1nm,0.3s,baz=58,slow=11,SNR=2.6
SDV Sn **Sn 23 42 35.6 -3.5**
comp=N,2.4nm,0.3s,baz=358,slow=16,SNR=1.8
SDV LR LR 23 45 26.3
comp=N,237nm,19.1s,baz=54,slow=40
comp=N,13nm,0.7s
SOCV Socops 12.21 209 eP Pn 23 40 42.7 +3.6
SJCC San Jacinto, C 13.52 229 Pn **Pn 23 40 57.2 +0.3**
BARC Barichara 14.82 214 eP P 23 41 18.1 -2.4

ZARC Zaragoza, Cauc 15.06 221 Pn **Pn 23 41 16.7 -1.2**
ZARC Zaragoza, Cauc 15.06 221 eP Pn 23 41 18.2 +0.3
UREC San Jos de Ur 15.30 224 eP Pn 23 41 22.4 +1.4
RUSC La Rusia 15.37 212 eP Pn 23 41 23.6 +1.3
PTBC PUERTO BERRIO, 15.57 218 eP Pn 23 41 22.9 -1.7
SPBC San Pablo de B 16.09 215 eP P 23 41 33.6 -0.7
DBBC Dabeiba 16.29 224 eP P 23 41 39.0 +2.4
HELC Santa Helena 16.49 220 eP P 23 41 39.7 +0.6
NORC Norcasia 16.60 217 eP P 23 41 41.4 +1.4
CHIC Chingaza 16.77 212 eP P 23 41 42.7 +0.4
ROSC El Rosal 16.90 214 P **P 23 41 45.0 +1.3**
comp=N,2.0nm,0.3s,baz=126,slow=7.5,SNR=7.9
ROSC LR LR 23 48 46.9
comp=N,274nm,21.0s,baz=42,slow=39
comp=N,15nm,0.4s
ROSC El Rosal 16.90 214 P 23 41 43.9 +0.3
ROSC IAmb IAmb 23 41 48.6
comp=Z,32nm,0.9s
GUY2C Guyana, Caldas 17.16 218 eP P 23 41 47.4 +0.8
SOR Soroa 17.30 285 Pn **Pn 23 41 47.1 +0.6**
PLMC San Jos del P 17.96 220 eP P 23 41 55.7 +0.6
PRAC Prado 18.15 214 eP Pn 23 41 54.9 -2.1
MDP Montagnes des 18.36 138 LR LR 23 50 26.3
comp=Z,54nm,18.5s,baz=0.0,slow=42
POPC Popayan, Colom 20.10 216 eP P 23 42 19.7 +1.1
PCON Cinco Dias 20.12 215 eP Pn 23 42 23.3 +2.1
V58A Windy Hill, Pi 20.82 326 P Pn 23 42 29.6 +0.9
V58A IAmb IAmb 23 42 41.4
comp=Z,16nm,1.1s
BBAC Balboa, Cauca 20.84 217 eP P 23 42 26.5 -0.3
TIGA Tifton 20.85 310 P **P 23 42 28.0 +1.6**
TIGA Tifton 20.85 310 P **P 23 42 27.2 +0.8**
baz=122
JSC Jenkinsville 20.98 319 P **P 23 42 28.9 +1.1**
JSC IAmb IAmb 23 42 51.9
comp=Z,12nm,0.5s
KMSC Kings Mountain 21.60 321 P **P 23 42 35.2 +0.7**
baz=134
PAULI Pauline 21.68 320 P **P 23 42 35.5 +0.2**
PAULI IAmb IAmb 23 43 04.5
comp=Z,10nm,0.6s
JSRW J. Sargeant Re 21.71 331 P **P 23 42 36.5 +0.9**
GOGA Godfrey 21.86 314 P **P 23 42 38.6 +1.3**
GOGA IAmb IAmb 23 42 41.5
comp=Z,14nm,0.8s
GOGA Godfrey 21.86 314 P **P 23 42 38.6 +1.3**
baz=126
TULM Tulcn-Chalpat 22.22 216 P **P 23 42 42.7 +0.9**
BLA Blacksburg 22.58 326 P **P 23 42 46.8 +1.8**
baz=139
V53A Saluda 22.85 320 P **P 23 42 48.3 +0.4**
V53A IAmb IAmb 23 43 14.9
comp=Z,9.4nm,0.7s
OTAV Otavalo 22.99 217 P **P 23 42 50.5 +0.6**
OTAV IAmb IAmb 23 43 12.5
comp=Z,11nm,1.0s
PAL Palisades 23.14 342 P **P 23 42 53.4 +2.6**
baz=158
BRAL Brewton 23.32 305 P **P 23 42 53.9 +1.3**
baz=116
TKL Tuckaleechee C 23.43 319 P **P 23 42 53.9 +0.2**
comp=Z,4.4nm,0.8s,baz=133,slow=9.2,SNR=6.8
TKL S **S 23 47 02.4 -2.8**
comp=Z,3.0nm,0.6s,baz=222,slow=21,SNR=2.3
comp=Z,4.4nm,0.8s
TKL Tuckaleechee C 23.43 319 P **P 23 42 54.6 +0.9**
CPCT Cooper Cave 23.78 317 P **P 23 42 58.4 +1.3**
CPCT IAmb IAmb 23 43 27.6
comp=Z,9.9nm,0.6s
TZTN Tazewell 23.87 320 P **P 23 42 59.6 +1.6**
baz=132
FPAL Fort Paine 23.96 314 P **P 23 42 59.9 +1.0**
FPAL IAmb IAmb 23 43 00.9
comp=Z,12nm,0.9s
HRV Adam Dziewonsk 24.00 348 P **P 23 43 01.0 +1.9**
baz=164
LRAL Lakeview Retre 24.14 309 P **P 23 43 02.0 +1.6**
LRAL Lakeview Retre 24.14 309 P **P 23 43 02.6 +2.1**
baz=120
SSPA Standing Stone 24.17 335 P **P 23 43 02.7 +2.0**
baz=149
L61B Northampton 24.18 346 P **P 23 43 03.6 +2.8**
baz=162
MCWV Mont Chateau 24.20 331 P **P 23 43 02.2 +1.3**
baz=144
PORT Chimborazo Vol 24.57 215 P **P 23 43 06.2 +1.0**
PORT IAmb IAmb 23 43 29.7
comp=Z,12nm,0.8s
BINY Binghamton 24.87 340 P **P 23 43 09.3 +2.3**
baz=154
M55A Ridgway 25.23 335 P **P 23 43 11.1 +0.8**
P52A Corning 25.29 328 P **P 23 43 12.8 +2.0**
baz=139
O53A New Philadelph 25.31 330 P **P 23 43 12.6 +1.6**
baz=142
LBNH Lisbon 25.74 348 P **P 23 43 17.3 +2.5**
baz=165
PLAL Pickwick Lake 25.90 312 P **P 23 43 17.4 +1.0**
M53A WI Miller and 26.01 332 P **P 23 43 19.5 +2.1**
baz=144
PKME Peaks-Kenny Pk 26.33 353 P **P 23 43 21.8 +1.6**
baz=171
WVT Waverly 26.35 315 P **P 23 43 21.3 +0.8**
WVT IAmb IAmb 23 43 24.3
comp=Z,5.0nm,0.7s
WVT Waverly 26.35 315 P **P 23 43 21.4 +0.9**
baz=124
P49A Miami Univ. Ec 26.58 324 P **P 23 43 24.6 +2.0**
baz=134
OXF Oxford 26.61 310 P **P 23 43 24.3 +1.4**
baz=119
O48B Farmland 27.33 325 P **P 23 43 30.7 +1.4**
baz=135
X43A Marvell 27.69 309 P **P 23 43 33.4 +0.8**
baz=117
SAML Samuel 27.93 176 P **P 23 43 34.8 -0.1**
SAML IAmb IAmb 23 43 59.1
comp=Z,9.9nm,1.3s
SIUC Southern Illin 28.16 316 P **P 23 43 37.5 +0.8**
SIUC IAmb IAmb 23 43 39.5
comp=Z,7.7nm,0.9s
SADO Sadowa 28.21 338 LR LR 23 56 11.9
comp=Z,84nm,19.3s,baz=134,slow=39
W41B Gary Mavity, V 28.99 309 P **P 23 43 44.7 +0.5**
W41B IAmb IAmb 23 43 46.4
comp=Z,11nm,1.2s
W41B Gary Mavity, V 28.99 309 P **P 23 43 45.7 +1.6**
baz=116
FCAR Ozark Folk Cen 29.22 310 P **P 23 43 46.9 +0.7**
FCAR IAmb IAmb 23 43 48.2
comp=Z,13nm,1.4s
CCM Cathedral Cave 29.69 315 P **P 23 43 50.7 +0.4**
CCM Cathedral Cave 29.69 315 P **P 23 43 51.4 +1.1**
baz=122
MIAR Mount Ida 29.71 307 P **P 23 43 52.1 +1.6**
baz=114
HDIL Hopedale 29.90 321 P **P 23 43 53.2 +1.1**
baz=128
W39A Magazine 30.14 308 P **P 23 43 55.0 +0.7**
baz=115
GLMI Grayling 30.45 332 P **P 23 43 58.5 +1.6**
baz=141
TUL1 Leonard 31.92 308 P **P 23 44 11.2 +1.1**
TUL1 IAmb IAmb 23 44 12.1
comp=Z,7.2nm,0.8s
TUL1 Leonard 31.92 308 P **P 23 44 11.2 +1.1**
baz=114
JFWS Jewell Farm 31.94 324 P **P 23 44 11.3 +1.2**
baz=130
WMOK Wichita Mounta 33.78 304 P **P 23 44 26.3 -0.1**
ABTX Abilene, Hawle 33.87 300 P **P 23 44 28.1 +1.0**
baz=105
LPAZ La Paz 35.32 185 P **P 23 44 42.1 +1.8**
comp=Z,1.6nm,0.7s,baz=348,slow=1.7,SNR=5.5
comp=Z,1.6nm,0.7s
LPAZ La Paz 35.32 185 P **P 23 44 41.6 +1.2**
SCHQ Schefferville 35.69 358 P **P 23 44 42.5 -0.1**
comp=Z,4.8nm,0.7s,baz=187,slow=6.2,SNR=8.2
SCHQ LR LR 23 58 21.8
comp=Z,91nm,19.9s,baz=102,slow=35
comp=Z,4.8nm,0.7s
SCHQ Schefferville 35.69 358 P **P 23 44 42.8 +0.2**
SCHQ IAmb IAmb 23 44 43.3
comp=Z,5.3nm,0.8s
CBKS Cedar Bluff 35.95 311 P **P 23 44 46.2 +1.1**
baz=113

ECSD EROS Data Cent 36.17 320 P **P 23 44 47.8 +1.0**
ECSD EROS Data Cent 36.17 320 P **P 23 44 47.6 +0.7**
baz=123
TX32 Lajitas Array 36.64 294 P **P 23 44 51.9 +0.7**
TXAR Lajitas Array 36.64 294 P **P 23 44 52.2 +1.1**
comp=Z,1.6nm,0.7s,baz=110,slow=11,SNR=25
comp=Z,1.6nm,0.7s
TXAR Lajitas Array 36.64 294 P **P 23 44 51.9 +0.8**
MSTX Muleshoe 36.74 301 P **P 23 44 52.4 +0.4**
baz=104
B35A Bob, Littlefor 37.34 328 P **P 23 44 57.0 +0.3**
B35A IAmb IAmb 23 44 57.8
comp=Z,18nm,1.5s
PB16 IPOC Station P 37.49 187 P **P 23 44 58.6 -0.3**
PB16 IAmb IAmb 23 45 13.1
comp=Z,10nm,1.3s
BDFB Brasilia 38.33 153 P **P 23 45 07.0 +1.6**
comp=Z,1.5nm,0.7s,baz=349,slow=9.8,SNR=3.1
comp=Z,1.5nm,0.7s
AGMN Agassiz Nation 38.40 326 P **P 23 45 05.8 +0.2**
AGMN IAmb IAmb 23 45 06.8
comp=Z,4.2nm,0.5s
AGMN Agassiz Nation 38.40 326 P **P 23 45 06.4 +0.8**
baz=128
MNTX Cornudas Mount 38.44 297 P **P 23 45 07.3 +1.1**
baz=99
GO01 Chusmiza 38.77 186 P **P 23 45 07.8 -1.7**
GO01 IAmb IAmb 23 45 25.6
comp=Z,19nm,1.4s
T25A Trinidad 38.86 306 P **P 23 45 10.9 +0.9**
T25A IAmb IAmb 23 45 13.0
comp=Z,11nm,1.2s
T25A Trinidad 38.86 306 P **P 23 45 11.4 +1.4**
baz=107
PB11 IPOC Station P 38.91 187 P **P 23 45 09.6 -0.8**
PB08 IPOC Station P 39.23 186 P **P 23 45 12.2 -1.1**
PB08 IAmb IAmb 23 45 29.9
comp=Z,17nm,1.4s
SDCO Great Sand Dun 39.87 306 P **P 23 45 20.2 +1.8**
baz=106,SNR=6.8
ANMO Albuquerque 39.93 302 P **P 23 45 20.6 +1.7**
baz=102
Q24A Divide 39.96 308 P **P 23 45 20.3 +1.0**
baz=108
PB01 IPOC Station P 40.16 187 P **P 23 45 18.8 -1.9**
ISCO Idaho Springs 40.56 309 P **P 23 45 25.0 +0.7**
ISCO Idaho Springs 40.56 309 P **P 23 45 24.9 +0.7**
baz=109,SNR=5.0
PB07 IPOC Station P 40.88 187 P **P 23 45 24.8 -1.9**
S22A 4UR Ranch, Cre 40.88 306 P **P 23 45 27.3 +0.5**
baz=105
RSSD Black Hills 41.06 316 P **P 23 45 29.3 +1.2**
baz=115
N23A Red Feather La 41.16 311 P **P 23 45 30.2 +1.1**
baz=110
K22A Casper 42.17 313 P **P 23 45 38.2 +1.1**
baz=111
PV15 Paradox Valley 42.29 306 P **P 23 45 38.7 +0.3**
O20A White River Ci 42.59 309 P **P 23 45 42.2 +1.6**
baz=106
W18A Petrified Fore 42.60 301 P **P 23 45 42.4 +1.6**
baz=100
LAO LASA Array 43.54 319 P **P 23 45 49.7 +1.6**
baz=115
WUAZ Wupatki 43.99 302 P **P 23 45 53.4 +1.4**
baz=99
SRU San Rafael Swe 44.03 307 P **P 23 45 53.3 +1.0**
BW06 Boulder Array 44.31 312 P **P 23 45 55.6 +1.0**
baz=108,SNR=14
PD31 Pinedale Array 44.31 312 P **P 23 45 55.1 +0.5**
PD31 IAmb IAmb 23 45 56.4
comp=Z,6.4nm,0.8s
PDAR Pinedale Array 44.31 312 P **P 23 45 54.8 +0.1**
comp=Z,5.6nm,0.8s,baz=115,slow=9.2,SNR=51
PDAR PcP **PcP 23 47 39.0 +0.4**
comp=Z,1.5nm,0.7s,baz=112,slow=5.5,SNR=6.7
comp=Z,5.6nm,0.8s
PDAR Pinedale Array 44.31 312 P **P 23 45 55.3 +0.7**
RLMT Red Lodge 44.89 315 P **P 23 45 59.9 +0.7**
RLMT IAmb IAmb 23 46 01.1
comp=Z,6.5nm,1.0s
RLMT Red Lodge 44.89 315 P **P 23 46 00.4 +1.2**
baz=110,SNR=5.4
GCMT Greycliff 45.39 316 P **P 23 46 03.8 +0.8**
AHID Auburn Hatcher 45.40 312 P **P 23 46 04.1 +0.9**
HWUT Hardware Ranch 45.42 310 P **P 23 46 03.8 +0.5**
HWUT IAmb IAmb 23 46 05.5
comp=Z,5.1nm,0.8s
H17A Grant Village 45.53 314 P **P 23 46 05.7 +1.5**
baz=109
CPUP Villa Florida 45.77 170 P **P 23 46 04.9 -1.0**
comp=Z,3.0nm,0.9s,baz=341,slow=6.6,SNR=8.0
comp=Z,3.0nm,0.9s
CPUP Villa Florida 45.77 170 P **P 23 46 04.2 -1.7**
CPUP IAmb IAmb 23 46 13.1
comp=Z,4.5nm,1.1s
AC02 Maricunga 45.86 185 P **P 23 46 06.0 -1.2**
AC02 IAmb IAmb 23 46 12.8
comp=Z,5.1nm,1.0s
DUG Dugway, Tooele 46.00 308 P **P 23 46 08.4 +0.6**
DUG Dugway, Tooele 46.00 308 P **P 23 46 09.1 +1.2**
baz=103
EGMT Eagleton 46.27 319 P **P 23 46 11.6 +1.7**
baz=113
BOZ Bozeman (W) 46.62 315 P **P 23 46 13.5 +0.8**
BOZ IAmb IAmb 23 46 15.0
comp=Z,4.1nm,0.8s
BOZ Bozeman (W) 46.62 315 P **P 23 46 14.2 +1.5**
baz=109,SNR=7.6
IRM Iron Mountain 46.89 299 P **P 23 46 15.7 +0.8**
baz=95
GMRC Granite Mounta 47.38 300 P **P 23 46 19.8 +1.0**
baz=96
IKP In-Ko-Pah, Jac 47.58 297 P **P 23 46 21.9 +1.5**
baz=93
BELC Belle Mtn. Jos 47.58 299 P **P 23 46 21.3 +0.9**
baz=95
R11A Troy Canyon, C 47.77 305 P **P 23 46 23.1 +1.4**
baz=99
MONP2 Monument Peak 47.86 297 P **P 23 46 23.5 +0.8**
baz=94
TPFO Pinon Flats 47.93 298 P **P 23 46 23.3 +0.2**
baz=94
HLID Hailey 47.95 312 P **P 23 46 24.7 +1.6**
HLID IAmb IAmb 23 46 25.7
comp=Z,3.4nm,0.8s
HLID Hailey 47.95 312 P **P 23 46 24.7 +1.6**
baz=104,SNR=7.5
MSO Missoula 48.53 316 P **P 23 46 28.3 +0.8**
baz=108
SFJD Kangerlussuaq 48.75 7 LR LR 00 05 05.2
comp=Z,24nm,20.3s,baz=178,slow=34
JTMT Jette 49.03 317 P **P 23 46 32.3 +0.9**
JTMT IAmb IAmb 23 46 34.0
comp=Z,4.0nm,0.8s
CIS Catalina Islan 49.56 298 P **P 23 46 35.5 0.0**
baz=93
NVAR Mina Array Bea 49.89 304 P **P 23 46 39.3 +1.1**
comp=Z,1.1nm,0.7s,baz=92,slow=6.8,SNR=9.3
comp=Z,1.1nm,0.7s
NVAR Mina Array Bea 49.89 304 P **P 23 46 38.6 +0.5**
NEW Newport 51.01 317 P **P 23 46 46.9 +0.6**
NEW Newport 51.01 317 P **P 23 46 46.5 +0.3**
baz=106,SNR=6.5
J05D Fort Rock, OR 52.76 310 P **P 23 47 00.1 +0.6**
baz=99
L04D Klamath Falls 53.40 309 P **P 23 47 04.9 +0.7**
baz=97
H04D Lebanon 54.02 312 P **P 23 47 09.0 +0.5**
baz=98
G03D McMinnville, O 54.49 312 P **P 23 47 12.4 +0.4**
baz=99
YKA Yellowknife Ar 55.10 334 P **P 23 47 15.2 -0.8**
comp=Z,1.7nm,1.0s,baz=108,slow=7.8,SNR=3.7
comp=Z,1.7nm,1.0s
MDT Midelt 55.25 63 P **P 23 47 17.4 -0.3**
comp=Z,2.5nm,0.9s,baz=297,slow=6.8,SNR=4.4
comp=Z,2.5nm,0.9s
SUMG Summit 55.57 9 *i* P **P 23 47 18.0 -1.8**
ESDC Sonseca Array 55.85 55 P **P 23 47 21.2 -0.7**
comp=Z,1.4nm,1.1s,baz=252,slow=9.2,SNR=5.0
ESDC LR LR 00 06 07.4
comp=Z,22nm,21.9s,baz=208,slow=31
comp=Z,1.4nm,1.1s
RES Resolute Bay 57.90 351 LR LR 00 11 17.7
comp=Z,42nm,20.8s,baz=70,slow=35
EKA Eskdalemuir Ar 58.48 36 LR LR 00 07 16.4

comp=Z,40nm,21.9s,baz=183,slow=30
DBIC **Dimbokro** 59.57 93 P P 23 47 48.8 +0.4
comp=Z,6.5nm,1.1s,baz=309,slow=12,SNR=2.5
comp=Z,6.5nm,1.1s
DBIC **Dimbokro** 59.57 93 P P 23 47 48.4 0.0
PLCA **Paso Flores** 59.77 185 LR LR 00 16 34.5
comp=Z,82nm,18.5s,baz=94,slow=39
DLBC **Dease Lake** 60.92 327 P P 23 47 57.8 +0.8
DLBC IAmb IAmb 23 47 59.0
comp=Z,4.0nm,0.8s
DLBC **Dease Lake** 60.92 327 P P 23 47 58.7 +1.7
baz=101
JMIC **Jan Mayen** 61.38 18 LR LR 00 09 26.0
comp=Z,32nm,21.8s,baz=256,slow=31
P33M **Teslin, Yukon** 62.65 329 P P 23 48 09.8 +1.2
baz=99
P32M **Atlin** 63.00 328 P P 23 48 11.7 +0.7
baz=98
M31M **Drury Creek, Y** 63.72 331 P P 23 48 16.6 +1.0
M31M **Drury Creek, Y** 63.72 331 P P 23 48 16.7 +1.0
baz=99,SNR=5.3
SKAG **Skagway** 63.80 328 P P 23 48 17.5 +1.4
baz=97
TORD **Torodi Ar. Bea** 63.94 84 P P 23 48 17.0 -0.8
comp=Z,1.3nm,0.8s,baz=294,slow=6.5,SNR=7.5
comp=Z,1.3nm,0.8s
O30N **Mendenhall** 64.33 329 P P 23 48 20.8 +1.1
baz=97
INK **Inuvik** 64.52 337 LR LR 00 17 57.2
comp=Z,54nm,19.0s,baz=126,slow=38
P30M **Million Dollar** 64.69 328 P P 23 48 23.5 +1.5
baz=96
M30M **Minto, Yukon** 64.88 331 P P 23 48 24.4 +1.1
baz=97
N30M **Aishikik Lake** 64.89 330 P P 23 48 24.6 +1.3
baz=96
HYT **Haines Junctio** 65.02 329 P P 23 48 25.7 +1.4
baz=96
YUK6 **Outpost Mounta** 65.45 329 P P 23 48 27.8 +0.6
baz=95
YUK4 **Talbot Arm** 65.62 329 P P 23 48 29.4 +1.1
baz=95
DAWY **Dawson** 66.20 332 P P 23 48 33.3 +1.5
baz=95
PINM **Pinnacle** 66.33 328 P P 23 48 33.7 +1.1
baz=93
NOA **NORSAR Array B** 66.75 31 LR LR 00 12 17.4
comp=Z,19nm,21.5s,baz=260,slow=31
CTG **Chitna Glacier** 66.90 329 P P 23 48 37.4 +1.0
baz=92
BCAR **Beaver Creek A** 67.20 331 P P 23 48 39.0 +0.8
M27K **Edge Creek, AK** 67.22 330 P P 23 48 40.2 +1.8
baz=92
L27K **Beaver Creek,** 67.22 331 P P 23 48 39.3 +1.1
L27K IAmb IAmb 23 48 40.2
comp=Z,4.2nm,1.0s
L27K **Beaver Creek,** 67.22 331 P P 23 48 39.4 +1.1
baz=93,SNR=6.6
K27K **Chicken** 67.38 332 P P 23 48 40.5 +1.3
baz=93
MCARA **McCarthy VSAT** 67.73 329 P P 23 48 43.3 +1.8
baz=91
M26K **Nabesna, AK** 67.74 331 P P 23 48 42.4 +0.8
baz=91
BGLC **Bering Glacier** 67.85 328 P P 23 48 42.9 +0.7
baz=90
I26K **Coal Creek Min** 67.90 334 P P 23 48 43.5 +1.0
baz=92
L26K **Log Cabin Wild** 67.91 331 P P 23 48 43.8 +1.1
baz=91
HFS **Hagfors** 67.96 32 LR LR 00 13 47.1
comp=Z,31nm,21.1s,baz=280,slow=32
J26L **Joseph Creek** 68.05 333 P P 23 48 45.0 +1.5
J26L IAmb IAmb 23 48 48.0
comp=Z,1.6nm,0.7s
J26L **Joseph Creek** 68.05 333 P P 23 48 45.0 +1.5
baz=92
SCRK **Sand Creek** 68.22 332 P P 23 48 45.9 +1.2
baz=91,SNR=5.0
C27K **Jago River** 68.34 338 P P 23 48 46.4 +1.3
baz=94
GERES **GERESS Array B** 68.42 44 P P 23 48 44.8 -1.4
comp=Z,0.1nm,0.3s,baz=220,slow=23,SNR=1.7
comp=Z,0.1nm,0.3s
N25K **Chitina, Valde** 68.49 330 P P 23 48 47.2 +0.9
baz=90
RIDG **Independent Ri** 68.60 332 P P 23 48 48.4 +1.5
baz=90
J25K **Salcha River,** 68.83 333 P P 23 48 48.7 +0.3
baz=90
PAX **Paxson** 68.88 331 P P 23 48 49.1 +0.3
baz=89
KLU **Klutina** 69.12 330 P P 23 48 51.9 +1.6
baz=88
D25K **Kavik River** 69.27 338 P P 23 48 51.6 +0.6
baz=91
Q23K **Middleton Isla** 69.42 327 P P 23 48 53.0 +1.0
baz=87
IL31 69.48 333 P P 23 48 53.4 +1.2
ILAR **Eielson Array** 69.48 333 P P 23 48 51.8 -0.6
comp=Z,1.0nm,0.8s,baz=93,slow=5.3,SNR=10.0
ILAR LR LR 00 18 52.3
comp=Z,42nm,21.4s,baz=46,slow=36
comp=Z,1.0nm,0.8s
ILAR **Eielson Array** 69.48 333 P P 23 48 51.9 -0.5
GLI **Glacier Island** 69.72 329 P P 23 48 54.8 +0.9
baz=87
DHY **Denali Highway** 69.75 331 P P 23 48 55.0 +0.8
baz=88
SCM **Sheep Creek Mo** 69.78 330 P P 23 48 55.2 +0.8
baz=87
H24K **Noodor Dome** 69.87 334 P P 23 48 55.6 +0.8
baz=88
WAT6 **Susitna Watana** 69.94 331 P P 23 48 55.9 +0.5
baz=87
C24K **Franklin Bluff** 70.08 338 P P 23 48 56.4 +0.4
baz=89
WAT1 **Susitna Watana** 70.30 331 P P 23 48 58.2 +0.8
baz=86
KNK **Knik Glacier** 70.34 330 P P 23 48 58.5 +0.8
baz=86
MCK **McKinley** 70.42 332 P P 23 48 59.0 +0.8
baz=86
NEA2 **Nenana** 70.42 333 P P 23 48 58.8 +0.6
baz=87
I23K **Minto, Yukon-K** 70.52 334 P P 23 48 60.0 +1.4
baz=87
H23K **Yukon River** 70.55 334 P P 23 49 00.2 +1.3
baz=87
G23K **Bananza Creek** 70.69 335 P P 23 49 00.8 +0.9
baz=87
C23K **Itkillik River** 70.75 339 P P 23 49 01.8 +1.8
baz=87
D23K **Nanushuk River** 70.81 338 P P 23 49 01.5 +1.0
baz=87
SEW **Seward** 70.93 328 P P 23 49 02.2 +0.9
baz=85
RC01 **Rabbit Creek A** 70.98 329 P P 23 49 02.3 +0.7
baz=85
TRF **Thorofare Moun** 71.04 332 P P 23 49 02.3 +0.2
baz=85
MLY **Manley** 71.11 333 P P 23 49 02.1 -0.2
baz=85
E22K **Anaktuvuk Pass** 71.29 337 P P 23 49 04.0 +0.6
baz=86
BPAW **Bear Paw Mtn.** 71.29 332 P P 23 49 03.6 +0.1
baz=85,SNR=5.3
H22K **Ishtalitna Cre** 71.30 334 P P 23 49 04.4 +0.9
baz=85
I21K **Tanana** 71.62 334 P P 23 49 05.2 -0.2
baz=84
CAST **Castle Rocks** 71.85 332 P P 23 49 06.6 -0.2
baz=84
CHUM **Lake Minchumin** 71.90 332 P P 23 49 06.9 -0.1
baz=84
H21K **Melozitna Rive** 71.91 334 P P 23 49 07.5 +0.3
baz=84
PPLA **Purkeypile** 71.95 331 P P 23 49 07.4 -0.2
baz=83
G21K **Allakaket** 72.10 335 P P 23 49 08.6 +0.4
baz=83
IMAR **Indian Mountai** 72.26 335 P P 23 49 09.6 +0.5
ARCES **ARCESS Array B** 72.41 22 P P 23 49 09.5 -0.5
comp=Z,0.5nm,0.6s,baz=305,slow=11,SNR=1.3
ARCES LR LR 00 17 19.0
comp=Z,18nm,19.4s,baz=277,slow=33
comp=Z,0.5nm,0.6s
ARCES **ARCESS Array B** 72.41 22 P P 23 49 09.4 -0.5

J20K **Nowinta River** 72.66 333 P P 23 49 11.7 +0.1
baz=82
K20K **Telida** 72.74 332 P P 23 49 11.7 -0.4
baz=82
L20K **Farewell, AK** 72.78 331 P P 23 49 12.8 +0.3
baz=82
M19K **Big River Lodg** 73.10 330 P P 23 49 14.2 -0.1
baz=81
Q19K **Cape Douglas,** 73.20 327 P P 23 49 14.8 -0.2
baz=81
L19K **White Mountain** 73.27 331 P P 23 49 15.3 0.0
baz=81
TTA **Tatalina** 73.68 332 P P 23 49 17.1 -0.6
baz=80
FINES **FINESS Array B** 73.88 30 P P 23 49 18.0 -0.9
comp=Z,1.3nm,1.0s,baz=183,slow=32,SNR=2.0
comp=Z,1.3nm,1.0s
FINES **FINESS Array B** 73.88 30 P P 23 49 18.2 -0.6
N18K **Kilae Creek** 74.02 329 P P 23 49 19.4 -0.3
O17K **Koliganek Bris** 74.79 328 P P 23 49 24.1 0.0
baz=78
R17K **Ugashik Creek** 74.86 326 P P 23 49 25.3 +0.7
baz=78
CHNA **Chernabura Isl** 77.25 324 P P 23 49 38.6 +0.4
baz=75
SPIA **Saint Paul Isl** 82.14 328 P P 23 50 04.1 -0.7
baz=67
BELG **Belogornoye** 87.99 34 LR LR 00 26 25.1
comp=Z,17nm,20.5s,baz=146,slow=33
ARU **Arti** 91.09 28 LR LR 00 27 29.7
comp=Z,18nm,21.2s,baz=310,slow=33
SHEM **Shemya Is, Ala** 92.17 329 LR LR 00 32 48.7
comp=Z,19nm,20.8s,baz=134,slow=36
MA2 **Magadan** 96.36 343 LR LR 00 36 20.5
comp=Z,20nm,21.3s,baz=85,slow=36
PZH **PanZhiHua** 132.84 16 PKP PKiKP 23 57 03.0 +1.8
WRA **Warramunga Arr** 161.84 264 PKP PKPdf 23 57 45.5 -0.6
comp=Z,0.4nm,0.7s,baz=86,slow=1.8,SNR=1.8
WRA PKPab PKPab 23 58 31.7 -0.2
comp=Z,0.3nm,0.7s,baz=82,slow=4.5,SNR=1.5
WRA **Warramunga Arr** 161.84 264 PKPdf 23 57 45.1 -1.0
ASAR **Alice Springs** 161.91 252 PKP PKPdf 23 57 46.2 +0.1
comp=Z,0.3nm,0.4s,baz=182,slow=36,SNR=2.1
ASAR PKPab PKPab 23 58 31.6 -0.6
comp=Z,1.8nm,1.1s,baz=97,slow=2.9,SNR=5.4

*KRNET **29** 23:45:02.6±0.1, 39°.43N×73°.52E, mb2.8*
*SOME **29** 23:45:11.0, 39°.80N×73°.38E, h15km*
ISC 29 23:45:03.6±1.8, 39.60N±0.07×73.47E±0.05, h8km±13km, n9, σ1s60/18, 8C-2D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.06**	**331**	↑*eP*			**Pg**	**23 45 25.6**	**+1.6**
	baz=33								
OHH				↑*iS*			**Sn**	**23 45 42.2**	**+2.3**
	baz=33								
DRK	**Karamyk**	**1.29**	**265**	↑*eP*			**Pb**	**23 45 27.3**	**-1.1**
DRK	baz=73			↑*eS*			**Sg**	**23 45 45.6**	**+0.3**
	baz=73								
BTK	**Batken**	**2.09**	**284**	↓*eP*			**Pb**	**23 45 41.1**	**-0.7**
BTK	baz=88			↓*eS*			**Sb**	**23 46 08.8**	**+0.8**
	baz=88								
GAR	**Garm**	**2.52**	**257**	↑*eP*			**Pn**	**23 45 45.6**	**+0.7**
GAR	baz=61			↑*eS*			**Sb**	**23 46 17.3**	**-2.9**
	baz=61								
UCH	**Uchtor**	**2.75**	**16**	↑*eP*			**Pb**	**23 45 50.9**	**-2.3**
UCH	baz=15			↑*eS*			**Sb**	**23 46 26.4**	**-0.8**
	baz=15								
MRKS	**Merke**	**3.15**	**357**	*eP*			**Pg**	**23 46 05.1**	**+1.1**
MRKS	2.1nm,0.1s			*eS*			**Sg**	**23 46 44.3**	**-0.5**
	11nm,0.4s								
IUG	**luzhnay**	**3.64**	**315**	*eP*			**Pg**	**23 46 13.8**	**+0.4**
IUG	22nm,0.2s			*eS*			**Sg**	**23 46 58.7**	**-1.9**
	8.5nm,0.7s								
KST	**Kastek**	**3.92**	**28**	*eP*			**Pg**	**23 46 19.1**	**+0.3**
KST	2.1nm,0.5s			*eS*			**Sg**	**23 47 08.3**	**-1.2**
	7.6nm,0.5s								
TNSS	**Tian-Shan**	**4.32**	**36**	*eP*			**Pg**	**23 46 28.1**	**+1.7**
TNSS	0.5nm,0.2s			*eS*			**Sg**	**23 47 23.3**	**+0.9**
	1.3nm,0.5s								

IDC 30 00:06:43.3±2.5, 6°.61S×130°.18E, h0km, mb3.4/1, mbtmp3.3/3, ML3.2/2, Error ellipse: s-maj=141.2km s-min=33.7km az=70.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.86**	**163**	Pn	Pn		Pn	00 10 01.1	-0.1
WRA	0.1nm,0.3s,baz=347,slow=13,SNR=11			Sn	Sn		Sn	00 12 23.2	-13
	0.2nm,0.3s,baz=339,slow=22,SNR=3.3								
	0.3nm,0.5s								
ASAR	**Alice Springs**	**17.34**	**168**	P	Pn		Pn	00 10 47.0	+0.1
	0.1nm,0.3s,baz=346,slow=10,SNR=4.7								
	0.3nm,0.5s								
MKAR	**Makanchi Array**	**68.00**	**327**	P	P		P	00 17 44.5	0.0
	0.2nm,0.4s,baz=135,slow=7.0,SNR=2.0								
	0.2nm,0.4s								

*IDC **30** 00:22:21.8±1.0, 5°.61S×130°.58E, h0km, mb4.0/6, mbtmp4.0/8, ML4.1/2, Error ellipse: s-maj=90.2km s-min=18.4km az=64.0*
*NEIC **30** 00:22:31.1±1.5, 5°.54S±0°.05×130°.9E±0°.1, h71km±9km, mb4.1/11, Error ellipse: s-maj=20.3km s-min=7.9km az=92.0*
*DJA **30** 00:22:32.5±0.4, 5°.5S±4°×13°.1E±°, h107km±12km, M4.6/6, mb4.5/6, mB5.2/3, MLv4.6/6, Mw(mB)4.6/3*
ISC 30 00:22:32.4±0.6, 5°.54S±0°.04×131°.05E±0°.06, h100km, n42, σ1s70/46, mb3.9/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.52**	**311**	P			**Pn**	**00 22 59.8**	**+0.8**
SAUI	**Saumlaki**	**2.44**	**174**	Pn			**Pn**	**00 23 11.8**	**+1.0**
SAUI				Sn			**Sn**	**00 23 38.7**	**-1.6**
FAKI	**Fak Fak**	**2.86**	**25**				**Pn**	**00 23 17.1**	**+0.7**
FAKI				Sn			**Sn**	**00 23 50.1**	**-0.1**
FAKI	**Fak Fak**	**2.86**	**25**	P			**Pn**	**00 23 17.2**	**+0.8**
FAKI				S			**Sn**	**00 23 50.9**	**+0.7**
FAKI	**Fak Fak**	**2.86**	**25**	P			**Pn**	**00 23 17.4**	**+1.0**
MSAI	**Masohi**	**3.04**	**316**	P			**Pn**	**00 23 18.8**	**+0.1**
MSAI				S			**Sn**	**00 23 52.3**	**-2.1**
AAI	**Ambon**	**3.39**	**303**	P			**Pn**	**00 23 23.0**	**-0.4**
NLAI	**Namlea**	**4.55**	**300**	P			**Pn**	**00 23 42.9**	**+3.8**
SIJI	**Sorong**	**4.64**	**3**	Pn			**Pn**	**00 23 40.2**	**-0.2**
	41nm,0.3s,baz=292,slow=24,SNR=55								
SIJI				Sn			**Sn**	**00 24 29.6**	**-3.6**
	50nm,0.3s,baz=88,slow=23,SNR=28								
SWI	**Sorong**	**4.65**	**3**	P			**Pn**	**00 23 40.4**	**0.0**
SWI				S			**Sn**	**00 24 30.8**	**-2.5**
SANI	**Sanana**	**6.13**	**304**	P			**Pn**	**00 24 00.8**	**+0.3**
	0.2nm37nm,0.6s								
KDU	**Kakadu**	**7.24**	**169**	P			**Pn**	**00 24 13.8**	**-1.9**
MTN	**Manton Dam**	**7.26**	**179**				**Pn**	**00 24 14.1**	**-1.9**
MTN	**Manton Dam**	**7.26**	**179**	P			**Pn**	**00 24 14.6**	**-1.3**
KNRA	**Kununurra**	**10.32**	**192**				**Pn**	**00 24 54.4**	**-3.2**
KNRA	**Kununurra**	**10.32**	**192**	P			**Pn**	**00 24 54.4**	**-3.2**
WB0	**Warramunga Arr**	**14.51**	**167**	Pn			**Pn**	**00 25 48.9**	**-4.2**
COEN	**Coen**	**14.58**	**126**	Pn			**Pn**	**00 25 52.4**	**-1.6**
COEN	**Coen**	**14.58**	**126**	P			**Pn**	**00 25 53.1**	**-0.8**
WRA	**Warramunga Arr**	**14.67**	**168**	Pn			Pn	00 25 49.5	-5.7
	0.8nm,0.3s,baz=351,slow=14,SNR=41								
WRA				Sn			Sn	00 28 22.0	-15
	3.5nm,0.3s,baz=357,slow=22,SNR=14								
	3.2nm,0.5s								
WRA	**Warramunga Arr**	**14.67**	**168**				Pn	00 25 50.1	-5.0
QIS	**Mount Isa**	**17.09**	**152**	P			**Pn**	**00 26 24.5**	**-0.7**
AS31	**Alice Springs**	**18.23**	**172**	P			**P**	**00 26 37.2**	**-0.8**
ASAR	**Alice Springs**	**18.23**	**172**	P			**P**	**00 26 38.0**	**0.0**
	0.8nm,0.3s,baz=346,slow=12,SNR=18								
ASAR				S			S	00 29 50.5	-11
	1.6nm,0.5s,baz=356,slow=30,SNR=9.2								
	1.8nm,0.4s								
MBWA	**Marble Bar**	**19.02**	**214**	P			**P**	**00 26 45.0**	**-1.6**
MBWA					IAmb		IAmb	00 27 12.6	
	comp=Z,17nm,1.3s								
PSA00	**Pilbara Seismi**	**19.29**	**213**	P			**P**	**00 26 48.4**	**-1.1**
PSA00					IAmb		IAmb	00 26 56.8	
	comp=Z,14nm,1.3s								
PSA00	**Pilbara Seismi**	**19.29**	**213**	P			**P**	**00 26 48.4**	**-1.1**
PSA00					IAmb		IAmb	00 27 13.1	
	comp=Z,6.8nm,1.3s								
WRKA	**Warakurna**	**19.57**	**187**	P			**P**	**00 26 52.7**	**+0.1**
CTA	**Charters Tower**	**20.68**	**136**	P			**P**	**00 27 06.8**	**+2.2**
	comp=Z,3.9nm,0.7s,baz=320,slow=13,SNR=5.4								
	comp=Z,3.9nm,0.7s								
CTAO	**Charters Tower**	**20.68**	**136**	P			**P**	**00 27 06.2**	**+1.6**
CTAO					IAmb		IAmb	00 27 13.8	
	comp=Z,20nm,1.4s								
STKA	**Stephens Creek**	**28.00**	**161**	P			**P**	**00 28 15.0**	**+1.0**
	comp=Z,0.9nm,0.3s,baz=322,slow=14,SNR=4.4								
	comp=Z,0.9nm,0.3s								
STKA	**Stephens Creek**	**28.00**	**161**	P			**P**	**00 28 14.6**	**+0.6**
STKA					IAmb		IAmb	00 28 34.6	
	comp=Z,4.8nm,1.4s								
SONM	**Songino Array**	**57.41**	**341**	P			**P**	**00 32 12.1**	**+1.4**
	comp=Z,0.5nm,0.5s,baz=159,slow=6.6,SNR=5.9								
	comp=Z,0.5nm,0.5s								
SONM	**Songino Array**	**57.41**	**341**	P			**P**	**00 32 11.9**	**+1.2**
SONM					IAmb		IAmb	00 32 19.1	
	comp=Z,2.5nm,1.4s								
MK31	**Makanchi Array**	**67.59**	**326**	P			**P**	**00 33 19.1**	**+0.6**
MK31					IAmb		IAmb	00 33 22.1	
	comp=Z,3.9nm,1.2s								
MKAR	**Makanchi Array**	**67.59**	**326**	P			**P**	**00 33 19.8**	**+1.4**
	comp=Z,1.0nm,0.3s,baz=112,slow=7.9,SNR=20								
	comp=Z,1.0nm,0.3s								
MKAR	**Makanchi Array**	**67.59**	**326**	P			**P**	**00 33 19.4**	**+1.0**
MAKZ	**Makanchi**	**67.78**	**326**	P			**P**	**00 33 20.1**	**+0.6**
ZALV	**Zalesovo Beam**	**70.75**	**333**	P			**P**	**00 33 38.0**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=140,slow=6.4,SNR=2.7								
	comp=Z,0.6nm,0.6s								
VOI	**Vohitsoka**	**82.64**	**249**	P			**P**	**00 34 47.4**	**+1.8**
AKTO	**Aktyubinsk**	**83.57**	**322**	P			**P**	**00 34 49.7**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=96,slow=9.2,SNR=3.5								
	comp=Z,0.7nm,0.5s								
QSPA	**South Pole Qui**	**84.43**	**180**	P			**P**	**00 34 56.0**	**+2.3**
QSPA					IAmb		IAmb	00 35 00.2	
	comp=Z,1.8nm,1.1s								

*IPEC **30** 00:32:35.7±0.4, 51°.56N×16°.21E, h1km±1km, ML2.3/5, Error ellipse: s-maj=2.6km s-min=1.2km az=30.0*
*IDC **30** 00:32:37.5±1.2, 51°.45N×16°.11E, h0km, mbtmp3.1/4, ML2.5/4, Error ellipse: s-maj=21.2km s-min=10.5km az=109.0*
*PRU **30** 00:32:37.2±0.0, 51°.51N×16°.09E, h0km*
*VIE **30** 00:32:39.4, 51°.29N×16°.31E, h0km, ML2.3/2 53 km WNW of Wroclaw Suspected Mining induced.*
ISC 30 00:32:35.3±0.8, 51°.58N±0°.03×16°.16E±0°.03, h0km, n42, σ0s96/78, Poland

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.74**	**174**	*e*Pg			**Pg**	**00 32 50.0**	**+0.5**
KSP				*e*Sg			**Sg**	**00 32 59.0**	**0.0**
CHVC	**Chvalec**	**0.99**	**184**	*e*PG			**Pb**	**00 32 54.9**	**-0.5**
CHVC				*e*SG			**Sg**	**00 33 06.8**	**-0.4**
	comp=Z,31nm,0.4s								
OSTC	**Ostas**	**1.02**	**178**	*e*PG			**Pb**	**00 32 55.4**	**-0.5**
OSTC				*e*SG			**Sg**	**00 33 08.2**	**+0.1**
	comp=Z,18nm,0.3s								
UPC	**Upice**	**1.08**	**185**	*e*PG			**Pg**	**00 32 56.1**	**+0.2**
UPC				*e*SG			**Sg**	**00 33 09.5**	**-0.3**
DPC	**Dobruska-Polom**	**1.23**	**175**	*e*PG			**Pg**	**00 32 58.8**	**-0.1**
DPC				*e*SG			**Sg**	**00 33 14.4**	**-0.5**
PVCC	**Panska Ves**	**1.45**	**224**	*e*PG			**Pn**	**00 33 02.8**	**0.0**
PVCC				*e*SG			**Sn**	**00 33 22.5**	**-0.1**
	comp=Z,58nm,0.6s								
KRLC	**Kraliky**	**1.56**	**165**	*e*PG			**Pn**	**00 33 04.2**	**-0.1**
KRLC				*e*SG			**Sg**	**00 33 24.8**	**-0.4**
	comp=Z,20nm,0.2s								
BRG	**Berggiesshubel**	**1.56**	**244**	Pg			**Pb**	**00 33 05.3**	**+0.2**
BRG				Sg			**Sg**	**00 33 25.6**	**+0.1**
BRG				Amp				00 33 27.7	
	comp=Z,28nm,0.4s								
PRU	**Pruhonice**	**1.90**	**214**	*e*PN			**Pn**	**00 33 07.8**	**-1.1**
PRU				*e*PG			**Pb**	**00 33 10.1**	**-0.6**
PRU				*e*SG			**Sb**	**00 33 34.8**	**-0.1**
	comp=Z,16nm,0.4s								
CLL	**Collm**	**2.00**	**263**	*e*Pn			**Pn**	**00 33 10.0**	**-0.3**
CLL				*e*Pg			**Pb**	**00 33 13.0**	**+0.5**
CLL				*i* x			x	00 33 16.2	
CLL				*e*Sg			**Sg**	**00 33 39.0**	**-0.4**
	comp=Z,21nm,0.7s								
MORC	**Moravsky Berou**	**2.00**	**153**	*e*Pn			**Pn**	**00 33 10.2**	**-0.3**
	baz=335								
MORC				*e*Sg			**Sb**	**00 33 37.5**	**-0.6**
	comp=Z,22nm,0.7s,baz=335								
MORC	**Moravsky Berou**	**2.00**	**153**	*e*PN			**Pn**	**00 33 10.2**	**-0.3**
MORC				*e*SG			**Sb**	**00 33 37.6**	**-0.6**
VRAC	**Vranov**	**2.29**	**173**	Pn			**Pn**	**00 33 14.8**	**+0.5**
	comp=Z,1.4nm,0.3s,baz=350,slow=17,SNR=11								
VRAC				Lg			Lg	00 33 46.3	
	comp=Z,3.4nm,0.3s,baz=93,slow=20,SNR=9.5								
	comp=Z,3.0nm,0.2s								
VRAC	**Vranov**	**2.29**	**173**	*e*Pn			**Pn**	**00 33 14.1**	**-0.2**
	baz=354								
VRAC				*e*Sg			**Sb**	**00 33 46.7**	**+0.5**
	comp=Z,14nm,0.5s,baz=354								
VRAC	**Vranov**	**2.29**	**173**	*e*PN			**Pn**	**00 33 14.2**	**-0.1**
VRAC				*e*SG			**Sb**	**00 33 46.8**	**+0.5**
TREC	**Trest**	**2.33**	**191**	*e*PG			**Pb**	**00 33 18.7**	**+0.6**
TREC				*e*SG			**Sb**	**00 33 47.9**	**+0.5**
MAUC	**Maruska**	**2.46**	**154**	*e*PG			**Pg**	**00 33 21.8**	**-0.6**
KRUC	**Moravsky**	**2.52**	**177**	*e*Pn			**Pn**	**00 33 17.7**	**+0.2**
	baz=357								
KRUC				*e*Sg			**Sb**	**00 33 54.3**	**+1.3**
	comp=Z,10nm,0.5s,baz=357								
KRUC	**Moravsky**	**2.52**	**177**	*e*PN			**Pn**	**00 33 17.8**	**+0.2**
KRUC				*e*SG			**Sb**	**00 33 54.3**	**+1.3**
OJC	**Ojcow**	**2.67**	**119**	*e*Pg			**Pg**	**00 33 26.7**	**+0.2**
OJC				*e*Sg			**Sg**	**00 34 01.9**	**+0.8**
NKC	**Novy Kostel**	**2.71**	**242**	*e*PN			**Pn**	**00 33 20.7**	**+0.6**
NKC				*e*PG			**Pg**	**00 33 26.6**	**-0.6**
NKC				*e*SG			**Sg**	**00 34 01.6**	**-0.7**
	comp=Z,21nm,0.6s								
JAVC	**Velka Javorina**	**2.89**	**160**	*e*Pn			**Pn**	**00 33 22.6**	**0.0**
	baz=341								
JAVC	**Velka Javorina**	**2.89**	**160**	*e*PN			**Pn**	**00 33 22.6**	**0.0**
KHC	**Kasperske Hory**	**2.96**	**215**	*e*PN			**Pn**	**00 33 23.6**	**+0.1**
KHC				*e*PG			**Pb**	**00 33 29.8**	**+0.9**
KHC				*e*SG			**Sb**	**00 34 07.0**	**+1.5**
	comp=Z,5.0nm,0.4s								
CKRC	**Cesky Krumlov**	**3.01**	**204**	*e*PN			**Pn**	**00 33 25.0**	**+0.8**
CKRC				*e*PG			**Pb**	**00 33 30.1**	**+0.4**
CKRC				*e*SG			**Sb**	**00 34 08.9**	**+1.9**
	comp=Z,9.2nm,0.5s								
GERES	**GERESS Array B**	**3.16**	**211**	Pn			**Pn**	**00 33 27.0**	**+0.6**
	comp=Z,0.7nm,0.3s,baz=33,slow=13,SNR=21								
GERES				Pg			**Pb**	**00 33 32.8**	**+0.4**
	comp=Z,1.3nm,0.3s,baz=31,slow=18,SNR=22								
GERES				Lg			Lg	00 34 12.5	
	comp=Z,2.1nm,0.3s,baz=41,slow=27,SNR=6.9								
	comp=Z,1.2nm,0.4s								
SMOL	**Smolenice**	**3.17**	**165**	*e*PG			**Pg**	**00 33 36.2**	**+0.1**
SMOL				*e*SG			**Sg**	**00 34 18.4**	**+1.2**
LANS	**Liptovska Anna**	**3.22**	**138**	*e*PN			**Pn**	**00 33 28.1**	**+0.9**
LANS				*e*PG			**Pg**	**00 33 36.7**	**-0.3**
LANS				*e*SG			**Sg**	**00 34 18.1**	**-0.7**
MODS	**Modra-Piesok**	**3.29**	**167**	*e*PG			**Pg**	**00 33 38.1**	**-0.2**
MODS				*e*SG			**Sg**	**00 34 19.2**	**-1.7**
BSD	**Bornholm Skovb**	**3.62**	**349**	*i* P			**Pn**	**00 33 32.7**	**+0.1**
CONA	**Conrad Observa**	**3.66**	**183**	*e*Pn			**Pn**	**00 33 34.2**	**+1.0**
	comp=Z,0.7nm,0.2s								
CONA				*e*Sg			**Sg**	**00 34 32.0**	**-0.8**
	comp=Z,4.4nm,0.3s								
RONA	**Rosalia, Austr**	**3.88**	**179**	*e*Pn			**Pg**	**00 33 49.7**	**0.0**
	comp=Z,0.7nm,0.2s								
RONA				*e*Sg			**Sg**	**00 34 37.0**	**-3.0**
	comp=Z,3.6nm,0.5s								
MOA	**Molln**	**3.93**	**199**	*i* Pn			**Pn**	**00 33 37.5**	**+0.6**
	comp=Z,2.1nm,0.3s								
MOA				*e*Sg			**Sg**	**00 34 40.7**	**-0.8**
	comp=Z,2.4nm,0.3s								
BIOA	**Bad Ischl, Aus**	**4.22**	**204**	*e*Pn			**Pn**	**00 33 44.7**	**+3.8**
	comp=Z,1.8nm,0.3s								
BIOA				*i* Sg			**Sg**	**00 34 50.4**	**-0.5**

ARSA	**Arzberg**	**4.35**	**186**	*e*Sg		**Sg**	**00 34 51.5**	**-3.5**
	comp=Z,3.6nm,0.6s								
KOLS	**Kolonicke sedl**	**4.73**	**122**	*e*PN		**Pn**	**00 33 49.1**	**+1.2**
KOLS				*e*PG		**Pg**	**00 34 06.6**	**+0.7**
BLEU	**Blekinge**	**4.74**	**358**	*i* P		**Pn**	**00 33 48.5**	**+0.5**
BJUU	**Bjuv**	**4.87**	**339**	*i* P		**Pn**	**00 33 49.2**	**-0.5**
DEL	**Delary**	**5.08**	**345**	*i* P		**Pn**	**00 33 52.8**	**+0.1**
ABTA	**Abfaltersbach**	**5.39**	**208**	*e*Pn		Pb	00 34 04.3	-6.1
	comp=Z,1.2nm,0.4s								
ABTA				*e*Sg		**Sg**	**00 35 27.4**	**-1.1**
	comp=Z,1.6nm,0.5s								
FINES	**FINESS Array B**	**11.29**	**25**	Pn		**Pn**	**00 35 16.6**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=232,slow=15,SNR=3.5								
	comp=Z,0.9nm,0.7s								
ARCES	**ARCESS Array B**	**18.55**	**10**	Pn		**P**	**00 36 52.5**	**-0.7**
	baz=180,slow=9.7,SNR=1.5								
	comp=Z,0.8nm,1.0s								

*IDC **30** 01:09:59.9±0.6, 4°00S±0°09×150°41E±0°06, **h10**km, **n49**, σ1§51/27, **mb4.3**/11, **MS3.4**/24, **New Ireland region***

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.65**	**101**	Pn	**Pg**	**01 10 31.6**	**+0.1**
	56nm,0.3s,baz=84,slow=1.4,SNR=15						
KRVT				Sn	**Sg**	**01 10 53.0**	**0.0**
	79nm,0.3s,baz=277,slow=19,SNR=5.2						
RABL	**Rabaul**	**1.77**	**96**	Pn	**Pb**	**01 10 32.2**	**-0.2**
PMG	**Port Moresby**	**6.26**	**211**	Pn	Pn	01 11 38.6	+6.1
	3.3nm,0.3s,baz=70,slow=5.7,SNR=5.0						
PMG				LR	LR	01 14 14.0	
	comp=Z,540nm,19.8s,baz=96,slow=41						
PMG	**Port Moresby**	**6.26**	**211**		**Pn**	**01 11 31.3**	**-1.2**
HNR	**Honiara**	**10.90**	**120**	LR	LR	01 17 05.9	
	comp=Z,141nm,21.7s,baz=326,slow=39						
CTA	**Charters Tower**	**16.50**	**194**	Pn	**P**	**01 13 56.5**	**+2.1**
	0.3nm,0.3s,baz=7.6,slow=12,SNR=4.7						
CTA				LR	LR	01 20 25.9	
	comp=Z,180nm,18.1s,baz=29,slow=38						
CTAO	**Charters Tower**	**16.50**	**194**	Pn	**Pn**	**01 13 51.7**	**+0.1**
FAKI	**Fak Fak**	**18.16**	**273**	P	**Pn**	**01 14 10.5**	**-1.9**
FAKI				IAmb	IAmb	01 14 13.4	
	comp=Z,23nm,1.1s						
GUMO	**Guam**	**18.32**	**343**	LR	LR	01 19 37.5	
	comp=Z,130nm,20.2s,baz=151,slow=32						
SIJI	**Sorong**	**19.37**	**279**	LR	LR	01 20 42.2	
	comp=Z,132nm,20.7s,baz=48,slow=33						
EIDS	**Eidsvold**	**21.26**	**178**	P	**P**	**01 14 46.1**	**-0.3**
EIDS				IAmb	IAmb	01 14 57.3	
	comp=Z,22nm,1.1s						
WB0	**Warramunga Arr**	**22.12**	**224**	P	**P**	**01 14 53.4**	**-2.5**
WB0				IAmb	IAmb	01 15 19.4	
	comp=Z,16nm,1.2s						
WR0	**Warramunga Arr**	**22.16**	**223**	P	**P**	**01 14 57.1**	**+0.9**
WB2	**Warramunga Arr**	**22.27**	**223**	P	**P**	**01 14 57.6**	**+0.1**
WB2				IAmb	IAmb	01 15 21.6	
	comp=Z,14nm,1.1s						
WRA	**Warramunga Arr**	**22.28**	**223**	P	**P**	**01 14 57.9**	**+0.3**
	comp=Z,4.2nm,0.8s,baz=46,slow=10,SNR=25						
WRA				LR	LR	01 24 14.7	
	comp=Z,130nm,21.6s,baz=40,slow=38						
	comp=Z,4.2nm,0.8s						
WRA	**Warramunga Arr**	**22.28**	**223**	P	**P**	**01 14 57.0**	**-0.6**
DZM	**Mont Dzumac**	**23.76**	**141**	LR	LR	01 23 39.8	
	comp=Z,289nm,18.3s,baz=34,slow=34						
ASAR	**Alice Springs**	**25.22**	**218**	P	**P**	**01 15 27.5**	**+1.3**
	comp=Z,7.5nm,1.0s,baz=52,slow=8.9,SNR=30						
ASAR				LR	LR	01 25 22.5	
	comp=Z,115nm,20.3s,baz=30,slow=37						
	comp=Z,7.5nm,1.0s						
ASAR	**Alice Springs**	**25.22**	**218**	P	**P**	**01 15 24.9**	**-1.3**
DAV	**Davao City (W)**	**27.11**	**294**	LR	LR	01 25 56.1	
	comp=Z,30nm,19.8s,baz=348,slow=35						
STKA	**Stephens Creek**	**28.94**	**196**	LR	LR	01 28 22.2	
	comp=Z,118nm,18.7s,baz=24,slow=38						
MSVF	**Nonsavu**	**30.32**	**119**	LR	LR	01 29 07.8	
	comp=Z,124nm,18.3s,baz=27,slow=38						
KAPI	**Kappang**	**30.57**	**267**	LR	LR	01 30 47.5	
	comp=Z,37nm,18.0s,baz=92,slow=41						
FORT	**Forrest**	**33.97**	**216**	P	**P**	**01 16 44.2**	**+0.4**
JOW	**Kunigami**	**37.38**	**326**	LR	LR	01 29 16.4	
	comp=Z,51nm,20.4s,baz=143,slow=31						
AFI	**Afiamalu**	**38.57**	**107**	P	**P**	**01 17 21.9**	**-1.6**
MJAR	**Matsushiro Arr**	**41.91**	**345**	LR	LR	01 34 33.6	
	comp=Z,50nm,19.2s,baz=152,slow=35						
JHS	**Saijyo**	**42.06**	**339**	P	**P**	**01 17 49.9**	**-2.1**
JHS				IAmb	IAmb	01 17 52.4	
	comp=Z,13nm,1.1s						
LEM	**Lembang**	**42.68**	**264**	LR	LR	01 38 31.8	
	comp=Z,25nm,19.4s,baz=1.0,slow=40						
RPZ	**Rata Peaks**	**43.56**	**158**	LR	LR	01 34 26.2	
	comp=Z,123nm,18.2s,baz=302,slow=34						
KSRS	**Korea Array**	**46.24**	**335**	P	**P**	**01 18 25.6**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=144,slow=8.4,SNR=5.7						
KSRS				LR	LR	01 38 31.3	
	comp=Z,13nm,18.2s,baz=155,slow=37						
	comp=Z,0.7nm,0.3s						
ASAJ	**Asahikawa**	**48.41**	**352**	LR	LR	01 37 47.8	
	comp=Z,21nm,21.9s,baz=109,slow=34						
KLR	**Kul'dur**	**55.44**	**345**	LR	LR	01 43 36.9	
	comp=Z,24nm,18.1s,baz=148,slow=36						
PETK	**Petropavlovsk-**	**57.23**	**5**	LR	LR	01 39 37.8	
	comp=Z,60nm,21.5s,baz=200,slow=31						
SHEM	**Shemya Is, Ala**	**59.96**	**16**	LR	LR	01 40 11.8	
	comp=Z,29nm,21.8s,baz=230,slow=30						
MA2	**Magadan**	**63.38**	**0**	LR	LR	01 50 28.0	
	comp=Z,29nm,18.0s,baz=134,slow=38						
SONM	**Songino Array**	**64.39**	**329**	P	**P**	**01 20 38.6**	**+2.2**
	comp=Z,0.3nm,0.3s,baz=134,slow=4.2,SNR=2.6						
SONM				LR	LR	01 47 43.0	
	comp=Z,34nm,22.0s,baz=140,slow=35						
	comp=Z,0.3nm,0.3s						
SONM	**Songino Array**	**64.39**	**329**	P	**P**	**01 20 36.2**	**-0.2**
SONM				IAmb	IAmb	01 20 55.6	
	comp=Z,2.8nm,1.4s						
SEY	**Seymchan**	**66.77**	**1**	LR	LR	01 50 28.1	
	comp=Z,23nm,18.5s,baz=130,slow=36						
VNDA	**Vanda**	**73.72**	**177**	P	**P**	**01 21 35.8**	**+2.1**
	comp=Z,0.6nm,0.7s,baz=343,slow=5.4,SNR=3.8						
	comp=Z,0.6nm,0.7s						
VNDA	**Vanda**	**73.72**	**177**	P	**P**	**01 21 34.5**	**+0.8**
KDAK	**Kodiak Island**	**76.56**	**28**	LR	LR	01 51 46.3	
	comp=Z,41nm,20.4s,baz=196,slow=33						
ZALV	**Zalesovo Beam**	**79.17**	**327**	P	**P**	**01 22 09.0**	**+4.0**
	comp=Z,1.2nm,0.7s,baz=111,slow=6.3,SNR=4.5						
ZALV				LR	LR	01 56 53.5	
	comp=Z,17nm,20.2s,baz=281,slow=36						
ZALV	**Zalesovo Beam**	**79.17**	**327**	P	**P**	**01 22 04.0**	**-1.0**
WRH	**Wood River Hil**	**81.73**	**23**	P	**P**	**01 22 18.3**	**-0.3**
WRH				IAmb	IAmb	01 22 58.3	
	comp=Z,3.0nm,0.8s						
ILAR	**Eielson Array**	**82.33**	**23**	LR	LR	01 59 29.7	
	comp=Z,19nm,18.8s,baz=146,slow=36						
ARU	**Arti**	**94.33**	**326**	LR	LR	02 07 34.6	
	comp=Z,27nm,18.8s,baz=71,slow=37						
AKTO	**Aktyubinsk**	**94.58**	**320**	LR	LR	02 08 16.5	
	comp=Z,19nm,18.3s,baz=66,slow=37						
TORD	**Torodi Ar. Bea**	**147.79**	**288**	PKPbc	**PKPbc**	**01 29 46.5**	**+0.2**
	comp=Z,1.1nm,0.7s,baz=47,slow=3.1,SNR=6.7						

*IDC **30** 01:23:52.2±1.4, 29°33N×81°26E, **h0**km, **mb3.5**/4, **mbtmp3.5**/5, **ML3.3**/1, **MS3.8**/2, **Error ellipse: s-maj=47.4km s-min=29.9km az=62.0, Nepal***

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**17.45**	**2**	P	P	01 27 58.8	+0.6
	0.1nm,0.3s,baz=193,slow=10,SNR=3.4						
	0.3nm,0.4s						
ZALV	**Zalesovo Beam**	**24.73**	**5**	P	P	01 29 14.7	-0.4
	0.8nm,0.5s,baz=192,slow=11,SNR=4.5						
	0.8nm,0.5s						
ASF	**Jabal al Asfar**	**38.03**	**286**	LR	LR	01 50 51.4	
	comp=Z,359nm,19.9s,baz=107,slow=43						
FINES	**FINESS Array B**	**48.16**	**328**	P	P	01 32 33.3	-0.5
	0.4nm,0.6s,baz=96,slow=14,SNR=5.6						
	0.4nm,0.6s						
WRA	**Warramunga Arr**	**70.84**	**127**	P	P	01 35 11.1	0.0
	0.2nm,0.6s,baz=321,slow=6.3,SNR=4.9						
	0.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**74.68**	**277**	P	P	01 35 34.4	+0.3
	0.5nm,1.0s,baz=45,slow=6.0,SNR=2.3						
	0.5nm,1.0s						
SFJD	**Kangerlussuaq**	**77.34**	**343**	LR	LR	02 13 29.9	
	comp=Z,19nm,19.4s,baz=332,slow=38						

*KRNET **30** 01:32:13.8±0.1, 39°51N×73°56E, mb3.2*
*SOME **30** 01:32:16.1, 39°50N×74°00E, h5km*
*NNC **30** 01:32:19.6±6.0, 39°90N×73°30E, h0km, mb3.4, mpv3.1,*
Error ellipse: s-maj=51.8km s-min=20.4km az=166.0
ISC 30 01:32:06.8±1.9, 39°12N±0°08×74°00E±0°05, h6km±12km**, n25, σ2§09/40, 7C-7D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.69**	**327**	⇓*i*P	**Pn**	**01 32 36.0**	**-0.9**
	baz=30						
OHH				⇓*i*S	**Sn**	**01 32 52.6**	**-6.3**
	baz=30						
DRK	**Karamyk**	**1.74**	**283**	⇓*i*P	**Pb**	**01 32 39.8**	**+0.4**
	baz=69						
DRK				⇓*i*S	**Sn**	**01 32 58.6**	**-1.9**
	baz=69						
GAR	**Garm**	**2.87**	**269**	⇓*i*P	**Pb**	**01 32 58.6**	**+0.1**
	baz=60						
GAR				⇓*i*S	**Sb**	**01 33 31.5**	**-2.3**
	baz=60						
UCH	**Uchtor**	**3.13**	**7**	⇑*e*P	**Pb**	**01 33 02.3**	**-0.9**
	baz=15						
UCH				⇑*e*S	**Sn**	**01 33 37.5**	**+2.5**
	baz=15						
TRKS	**Terek-Say**	**3.25**	**319**	⇑*i*P	**Pn**	**01 33 00.1**	**+1.6**
	baz=18						
TRKS				⇑*i*S	**Sn**	**01 33 34.0**	**-3.6**
	baz=18						
MRKS	**Merke**	**3.67**	**351**	*e*P	**Pg**	**01 33 16.9**	**-0.2**
	4.1nm,0.4s						
MRKS				*e*S	**Sb**	**01 34 00.2**	**+3.3**
	9.1nm,0.4s						
TKM2	**Tokmak 2**	**3.99**	**17**	⇓Pg	**Pg**	**01 33 22.8**	**-0.4**
	1.1nm,0.4s						
TKM2				⇑Lg	Lg	01 34 13.4	
	3.5nm,0.6s						
KST	**Kastek**	**4.19**	**20**	*e*P	**Pg**	**01 33 27.3**	**+0.1**
	2.1nm,0.3s						
KST				*e*S	**Sg**	**01 34 18.6**	**-2.9**
	9.2nm,0.7s						
KST	**Kastek**	**4.19**	**20**	Pg	**Pg**	**01 33 27.3**	**+0.1**
	2.1nm,0.3s						
KST				Lg	Lg	01 34 19.6	
	9.2nm,0.7s						
IUG	**Iuzhnay**	**4.27**	**316**	*e*P	**Pg**	**01 33 30.6**	**+2.0**
	111nm,0.4s						
IUG				*e*S	**Sg**	**01 34 24.1**	**0.0**
	36nm,0.7s						
IUG	**Iuzhnay**	**4.27**	**316**	Pg	**Pn**	**01 33 15.7**	**+3.2**
IUG				Lg	Lg	01 33 58.9	
DGS	**Degeres**	**4.33**	**17**	*e*P	**Pg**	**01 33 30.6**	**+0.8**
	3.4nm,0.5s						
DGS				*e*S	**Sg**	**01 34 24.4**	**-1.6**
	4.9nm,0.6s						
DGS	**Degeres**	**4.33**	**17**	Pg	**Pg**	**01 33 30.6**	**+0.8**
	3.4nm,0.5s						
DGS				Lg	Lg	01 34 24.4	
	4.9nm,0.6s						
SGDS	**Sogindy**	**4.36**	**6**	*e*P	Pb	01 33 28.3	+4.4
	2.1nm,0.6s						
SGDS				*e*S	**Sb**	**01 34 19.7**	**+3.0**
	3.2nm,0.7s						
TNSS	**Tian-Shan**	**4.50**	**29**	*e*P	**Pg**	**01 33 33.0**	**-0.2**
	1.6nm,0.5s						
TNSS				*e*S	**Sg**	**01 34 28.6**	**-3.0**
	2.9nm,1.0s						
TNSS	**Tian-Shan**	**4.50**	**29**	Pg	**Pg**	**01 33 33.0**	**-0.2**
	1.6nm,0.5s						
TNSS				Lg	Lg	01 34 28.6	
	2.9nm,1.0s						
KK31	**Karatay Array**	**4.77**	**328**	⇑Pn	**Pn**	**01 33 22.9**	**+3.7**
	0.2nm,0.2s,baz=139,slow=14,SNR=4.2						
KK31				⇑Lg	Lg	01 34 28.6	
	2.9nm,0.5s,baz=143,slow=29,SNR=4.2						
KTBS	**Karatobe**	**5.01**	**23**	*e*P	**Pg**	**01 33 43.4**	**+0.6**
	0.9nm,0.4s						
KTBS				*e*S	**Sg**	**01 34 45.6**	**-2.2**
	7.8nm,0.6s						
KUU	**Kurty**	**5.08**	**19**	*e*P	**Pg**	**01 33 44.5**	**+0.3**
	1.2nm,0.3s						
KUU				*e*S	**Sg**	**01 34 47.6**	**-2.5**
	5.3nm,0.6s						
ARXS	**Arharly**	**5.84**	**28**	*e*P	**Pg**	**01 33 59.4**	**+0.7**
	1.8nm,0.5s						
ARXS				*e*S	**Sg**	**01 35 13.6**	**-0.8**
	4.0nm,0.4s						
ARXS	**Arharly**	**5.84**	**28**	Pg	**Pg**	**01 33 59.4**	**+0.7**
	1.8nm,0.5s						
ARXS				Lg	Lg	01 35 13.6	
	4.0nm,0.4s						
BTLS	**Baital**	**5.92**	**0**	*e*P	**Pg**	**01 34 00.7**	**+0.5**
	0.9nm,0.3s						
BTLS				*e*S	**Sg**	**01 35 15.8**	**-1.1**
	1.5nm,0.3s						
BTLS	**Baital**	**5.92**	**0**	Pg	**Pg**	**01 34 00.7**	**+0.5**
	0.9nm,0.3s						
BTLS				Lg	Lg	01 35 15.8	
	1.5nm,0.3s						
BLB	**Baldybastay**	**6.00**	**33**	*e*P	**Pg**	**01 34 02.4**	**+0.7**
	2.7nm,0.1s						
BLB				*e*S	**Sg**	**01 35 18.8**	**-0.7**
	2.8nm,0.6s						
BLB	**Baldybastay**	**6.00**	**33**	Pg	**Pg**	**01 34 02.4**	**+0.7**
	2.7nm,0.1s						
BLB				Lg	Lg	01 35 18.8	
	2.8nm,0.6s						

*IDC **30** 01:54:07.7±0.8, 14°48S×13°46W, h0km, mb4.1/12,*
mbtmp4.1/12, MS4.0/65, Error ellipse: s-maj=32.9km
s-min=19.1km az=102.0
*NEIC **30** 01:54:09.4±1.0, 14°57S±0°10×13°5W±0°1, h15km±3km,*
mb4.7/12, Error ellipse: s-maj=20.4km s-min=13.8km
az=98.0
*GCMT **30** 01:54:12.4±0.2, 14°40S±0°03×13°47W±0°01, h12km,*
MW4.8/101, Moment Tensor Solution. s31,c34;
s101,c149; Duration: 0 Moment tensor: Scale 10¹⁶Nm;
Mrr=-2.48±.07; Mθθ 0.28±.07; Mφφ 2.20±.06; Mrθ -0.06±.31;
Mθφ-0.34±.06; Mφr-0.08±.24; Best double couple:
M₀2.37100×10¹⁶ NP1:φs169.00000°, δ44.00000°,
λ-92.00000°. NP2:φs352.00000°, δ46.00000°,
λ-88.00000°. Principal axes: T 2.2600, Plg1.0000°,
Azm80.0000°; N 0.2270, Plg1.0000°, Azm170.0000°; P
-2.4830, Plg88.0000°, Azm319.0000°; nsta1 refers to
body waves, cutoff=40s. nsta2 refers to surface waves,
cutoff=50s. Triangular moment-rate function
ISC 30 01:54:08.6±0.6, 14°51S±0°10×13°5W±0°1, h10km**, n90, σ0§87/30, mb4.3**/16**, MS4.1**/65**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H10S2	**ASCENSION HYDR**	**5.63**	**348**	T	T	02 01 12.1	
	baz=169,slow=74,SNR=67						
H10S3	**ASCENSION HYDR**	**5.64**	**348**	T	T	02 01 16.6	
	baz=51,slow=74,SNR=162						
H10N1	**ASCENSION HYDR**	**6.70**	**352**	T	T	02 02 36.5	
	baz=149,slow=75,SNR=6.8						
H10N3	**ASCENSION HYDR**	**6.70**	**351**	T	T	02 02 41.5	
	baz=149,slow=75,SNR=19						
H10N2	**ASCENSION HYDR**	**6.71**	**352**	T	T	02 02 40.9	
	baz=149,slow=75,SNR=5.3						
SHEL	**Horse Pasture**	**7.61**	**102**	Pn	**Pn**	**01 55 59.6**	**-0.1**
DBIC	**Dimbokro**	**22.72**	**23**	P	**P**	**01 59 12.2**	**+1.4**
	8.4nm,1.0s,baz=189,slow=3.9,SNR=3.8						
DBIC				LR	LR	02 05 41.2	
	comp=Z,523nm,21.9s,baz=207,slow=31						
	8.4nm,1.0s						
DBIC	**Dimbokro**	**22.72**	**23**	P	**P**	**01 59 10.9**	**+0.1**
RCBR	**Riachuelo**	**23.67**	**289**	LR	LR	02 06 16.2	
	comp=Z,498nm,21.4s,baz=253,slow=31						
RCBR	**Riachuelo**	**23.67**	**289**	P	**P**	**01 59 20.9**	**+0.3**
RCBR				IAmb	IAmb	01 59 48.1	
	comp=Z,40nm,1.2s						
TSUM	**Tsumeb**	**30.08**	**103**	LR	LR	02 09 52.0	
	comp=Z,568nm,21.3s,baz=298,slow=31						

TORD	**Torodi Ar. Bea**	**31.33**	**29**	P		**P**	**02 00 28.8**	**-0.6**
	comp=Z,2.1nm,0.7s,baz=213,slow=9.2,SNR=14								
TORD				LR		LR	02 10 52.2		
	comp=Z,503nm,21.2s,baz=214,slow=32								
	comp=Z,2.1nm,0.7s								
BDFB	**Brasilia**	**33.33**	**264**	LR		LR	02 11 38.5		
	comp=Z,762nm,21.3s,baz=118,slow=32								
SUR	**Sutherland**	**35.94**	**126**	LR		LR	02 12 21.5		
	comp=Z,336nm,20.4s,baz=322,slow=30								
LBTB	**Lobatse**	**38.12**	**112**	LR		LR	02 14 47.1		
	comp=Z,354nm,19.3s,baz=275,slow=32								
BOSA	**Boshof**	**38.49**	**118**	LR		LR	02 14 20.2		
	comp=Z,494nm,21.2s,baz=286,slow=32								
LSZ	**Lusaka**	**40.24**	**97**	LR		LR	02 15 58.3		
	comp=Z,556nm,20.9s,baz=279,slow=33								
MATP	**Matopo**	**40.40**	**105**	P		**P**	**02 01 47.7**	**+0.3**	
	comp=Z,3.0nm,0.9s,baz=264,slow=9.5,SNR=4.6								
	comp=Z,3.0nm,0.9s								
CPUP	**Villa Florida**	**42.54**	**247**	LR		LR	02 17 05.0		
	comp=Z,403nm,21.0s,baz=90,slow=32								
MDP	**Montagnes des**	**43.44**	**294**	LR		LR	02 17 21.4		
	comp=Z,138nm,21.8s,baz=129,slow=32								
MBAR	**Mbarara**	**45.85**	**76**	LR		LR	02 19 11.0		
	comp=Z,428nm,20.8s,baz=246,slow=33								
SIV	**San Ignacio**	**45.85**	**262**	P		**P**	**02 02 32.3**	**+0.8**	
	comp=Z,0.9nm,0.7s,baz=76,slow=4.2,SNR=2.7								
SIV				LR		LR	02 19 42.6		
	comp=Z,379nm,19.9s,baz=112,slow=34								
	comp=Z,0.9nm,0.7s								
MDT	**Midelt**	**47.82**	**10**	LR		LR	02 21 24.3		
	comp=Z,411nm,19.0s,baz=192,slow=34								
EFI	**East Falkland**	**51.36**	**214**	P		**P**	**02 03 11.6**	**-1.7**	
KMBO	**Kilima Mbogo**	**51.86**	**80**	LR		LR	02 22 33.0		
	comp=Z,276nm,21.3s,baz=269,slow=33								
LPAZ	**La Paz**	**52.58**	**260**	LR		LR	02 24 03.6		
	comp=Z,222nm,20.6s,baz=96,slow=34								
LVC	**Limon Verde**	**52.91**	**253**	LR		LR	02 24 57.1		
	comp=Z,178nm,20.1s,baz=107,slow=35								
CART	**Cartagena**	**53.14**	**12**	P		**P**	**02 03 26.3**	**-0.3**	
KEST	**Kesra**	**54.45**	**23**	P		**P**	**02 03 38.0**	**+1.7**	
	comp=Z,6.3nm,1.0s,baz=212,slow=9.0,SNR=4.6								
KEST				LR		LR	02 25 60.0		
	comp=Z,162nm,19.3s,baz=177,slow=35								
	comp=Z,6.3nm,1.0s								
KEST	**Kesra**	**54.45**	**23**	P		**P**	**02 03 35.5**	**-0.8**	
KEST				IAmb		IAmb	02 03 39.8		
	comp=Z,10nm,1.1s								
ESDC	**Sonseca Array**	**54.63**	**9**	LR		LR	02 26 37.6		
	comp=Z,138nm,18.2s,baz=180,slow=36								
PLCA	**Paso Flores**	**55.80**	**230**	LR		LR	02 24 53.1		
	comp=Z,202nm,19.5s,baz=88,slow=33								
SNAA	**Sanae**	**57.49**	**176**	P		**P**	**02 03 58.5**	**+0.8**	
	comp=Z,2.0nm,1.0s,baz=341,slow=6.1,SNR=4.7								
SNAA				LR		LR	02 23 07.5		
	comp=Z,70nm,20.9s,baz=82,slow=30								
	comp=Z,2.0nm,1.0s								
VAE	**Valguarnera**	**57.99**	**26**	LR		LR	02 26 41.7		
	comp=Z,151nm,21.2s,baz=182,slow=34								
USHA	**Ushuaia**	**58.33**	**214**	LR		LR	02 24 58.0		
	comp=Z,57nm,20.4s,baz=179,slow=32								
PMSA	**Palmer Station**	**60.75**	**202**	LR		LR	02 26 45.3		
	comp=Z,89nm,18.1s,baz=66,slow=32								
SJG	**San Juan**	**61.20**	**300**	LR		LR	02 26 18.7		
	comp=Z,38nm,20.0s,baz=89,slow=32								
SDV	**Santo Domingo**	**61.25**	**289**	LR		LR	02 30 06.6		
	comp=Z,222nm,19.3s,baz=116,slow=35								
IDI	**Anoyia**	**61.45**	**35**	LR		LR	02 29 20.6		
	comp=Z,57nm,21.8s,baz=236,slow=34								
ATD	**Arta Tunnel**	**61.53**	**68**	LR		LR	02 29 46.3		
	comp=Z,293nm,18.7s,baz=214,slow=35								
NNA	**Nana**	**61.55**	**264**	LR		LR	02 30 12.9		
	comp=Z,334nm,18.3s,baz=132,slow=35								
OSSC	**Osservatorio P**	**62.03**	**20**	P		**P**	**02 04 29.1**	**-0.1**	
OSSC				IAmb		IAmb	02 04 31.5		
	comp=Z,7.7nm,1.2s								
ROSC	**El Rosal**	**63.29**	**283**	LR		LR	02 30 24.0		
	comp=Z,590nm,21.8s,baz=162,slow=34								
ATAH	**Atahualpa**	**64.00**	**269**	LR		LR	02 32 50.1		
	comp=Z,271nm,18.0s,baz=111,slow=36								
EIL	**Elat**	**64.12**	**46**	LR		LR	02 32 56.4		
	comp=Z,105nm,18.5s,baz=266,slow=36								
DAVOX	**Davos/Dischmat**	**64.53**	**18**	LR		LR	02 32 07.4		
	comp=Z,147nm,19.1s,baz=247,slow=35								
DIVS	**Divibare**	**65.84**	**26**	P		**P**	**02 04 53.5**	**-0.9**	
MMAI	**Mount Meron Ar**	**66.42**	**44**	LR		LR	02 34 29.4		
	comp=Z,66nm,19.1s,baz=61,slow=36								
GERES	**GERESS Array B**	**67.53**	**19**	P		**P**	**02 05 04.3**	**-0.7**	
	comp=Z,0.3nm,0.5s,baz=129,slow=3.6,SNR=4.0								
	comp=Z,0.3nm,0.5s								
VRAC	**Vranov**	**68.89**	**21**	LR		LR	02 35 39.4		
	comp=Z,156nm,18.9s,baz=216,slow=36								
BRTR	**Keskin Array B**	**69.53**	**37**	P		**P**	**02 05 19.1**	**+1.3**	
	comp=Z,2.0nm,0.8s,baz=198,slow=6.3,SNR=7.2								
BRTR				LR		LR	02 36 11.0		
	comp=Z,80nm,20.9s,baz=248,slow=36								
	comp=Z,2.0nm,0.8s								
BRTR	**Keskin Array B**	**69.53**	**37**	P		**P**	**02 05 17.1**	**-0.7**	
MLR	**Muntele Rosu**	**69.56**	**28**	LR		LR	02 37 28.2		
	comp=Z,121nm,18.2s,baz=220,slow=37								
MLR	**Muntele Rosu**	**69.56**	**28**	P		**P**	**02 05 17.7**	**-0.1**	
MAW	**Mawson**	**71.49**	**157**	P		**P**	**02 05 29.6**	**+0.4**	
	comp=Z,3.5nm,0.

ARU	**Arti**	**92.36**	**32**	LR	LR	02 51 02.8		
	comp=Z,31nm,18.6s,baz=244,slow=37							
SPITS	**Spitsbergen Ar**	**94.04**	**6**	LR	LR	02 47 52.0		
	comp=Z,35nm,20.4s,baz=178,slow=34							
PALK	**Pallekele**	**95.83**	**84**	LR	LR	02 45 09.8		
	comp=Z,131nm,18.9s,baz=18,slow=32							
TXAR	**Lajitas Array**	**97.12**	**298**	LR	LR	02 52 48.6		
	comp=Z,19nm,18.4s,baz=130,slow=36							
BVAR	**Borovoye Array**	**97.82**	**37**	LR	LR	02 55 42.5		
	comp=Z,43nm,20.1s,baz=110,slow=38							
SONM	**Songino Array**	**120.61**	**43**	PKP	**PKiKP**	**02 13 02.3**	**+1.2**	
	comp=Z,0.4nm,0.7s,baz=255,slow=2.8,SNR=3.5							
SONM	**Songino Array**	**120.61**	**43**		**PKPdf**	**02 12 59.6**	**-1.3**	
MJAR	**Matsushiro Arr**	**146.55**	**44**	PKPbc	**PKPab**	**02 13 52.8**	**+1.0**	
	comp=Z,1.2nm,0.4s,baz=311,slow=4.4,SNR=7.5							
MJAR	**Matsushiro Arr**	**146.55**	**44**	PKPdf	**PKPdf**	**02 13 48.7**	**-0.6**	

*IDC **30** 02:07:07.4±1.5,5˚.48S×150˚.90E, h76km±20km, mb3.4/3, mbtmp3.8/4, Error ellipse: s-maj=70.3km s-min=14.2km az=130.0*

ISC 30 02:07:03.3±1.2,**4˚.8S**±0˚.2×**150˚.2E**±0˚.2,**h35**km,**n6**,σ1§**41**/8, **mb3.6**/3,**New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KRVT	**Keravat (AS076**	**1.87**	**76**	P		**Pn**	**02 07 33.4**	**+0.7**
	928nm,0.4s,baz=220,slow=1.2,SNR=70							
KRVT				S		**Sn**	**02 07 54.7**	**-0.4**
	377nm,0.3s,baz=151,slow=4.8,SNR=5.3							
PMG	**Port Moresby**	**5.51**	**213**	P		**Pn**	**02 08 24.7**	**+1.8**
	18nm,0.4s,baz=37,slow=6.9,SNR=7.5							
PMG				S		**Sn**	**02 09 22.7**	**-2.3**
	37nm,0.6s,baz=132,slow=18,SNR=2.4							
WRA	**Warramunga Arr**	**21.59**	**224**	P		**P**	**02 11 50.6**	**+0.4**
	2.2nm,0.6s,baz=52,slow=10,SNR=32							
	2.2nm,0.6s							
ASAR	**Alice Springs**	**24.50**	**218**	P		**P**	**02 12 19.1**	**-0.4**
	1.0nm,0.5s,baz=55,slow=8.6,SNR=13							
	1.0nm,0.5s							
ILAR	**Eielson Array**	**83.12**	**23**	P		**P**	**02 19 24.6**	**-0.6**
	0.4nm,0.8s,baz=258,slow=5.4,SNR=3.1							
	0.4nm,0.8s							
TORD	**Torodi Ar. Bea**	**147.84**	**287**	PKPbc		**PKiKP**	**02 26 47.6**	**-0.1**
	1.1nm,0.6s,baz=78,slow=2.3,SNR=12							

*SJA **30** 02:15:44.3±0.8,29˚.52S×70˚.09W, h113km±3km, ML4.1, MW3.8*
*NEIC **30** 02:15:44.6±1.8,29˚.51S±0˚.03×70˚.09W±0˚.08, h115km±8km, mb3.8/1, ML4.2(GUC), Error ellipse: s-maj=10.0km s-min=2.9km az=104.0*
*GUC **30** 02:15:46.3±0.6,29˚.53S×70˚.18W, h107km±2km, ML4.2*

ISC 30 02:15:44.3±0.9,**29˚.56S**±0˚.02×**70˚.16W**±0˚.04,**h116**km±7km, **n88**,σ1§**41**/127,**4C-1D**,**Central Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CO01	**Juntas del Tor**	**0.42**	**172**			**Pn**	**02 16 02.0**	**+0.3**
CO01				Sn		**Sn**	**02 16 14.2**	**-0.6**
CO01	**Juntas del Tor**	**0.42**	**172**	⇓*i*	*i*P	**Pn**	**02 16 02.4**	**+0.6**
CO01				*i* S		**Sn**	**02 16 14.2**	**-0.6**
CO01				IAML			02 16 14.9	
	comp=N,12μm,0.4s							
CO01	**Juntas del Tor**	**0.42**	**172**	*e*P		**Pn**	**02 16 02.5**	**+0.7**
CO01				*e*S		**Sn**	**02 16 14.8**	**-0.1**
CO01				IAML			02 16 14.9	
	comp=Z,3μm,0.1s							
LCO	**Las Campanas**	**0.72**	**319**			**Pn**	**02 16 04.4**	**+0.6**
LCO				Sn		**Sn**	**02 16 18.3**	**-0.1**
LCO	**Las Campanas**	**0.72**	**319**	*i* P		**Pn**	**02 16 04.2**	**+0.4**
LCO				*i* S		**Sn**	**02 16 17.6**	**-0.8**
LCO	**Las Campanas**	**0.72**	**319**	*e*P		**Pn**	**02 16 04.0**	**+0.2**
GO04	**Tololo Observa**	**0.83**	**222**			**Pn**	**02 16 05.5**	**+0.8**
GO04				Sn		**Sn**	**02 16 21.1**	**+1.0**
GO04	**Tololo Observa**	**0.83**	**222**	*i* P		**Pn**	**02 16 05.5**	**+0.8**
GO04				*i* S		**Sn**	**02 16 19.0**	**-1.0**
GO04				IAML			02 16 23.4	
	comp=E,14μm,0.3s							
GO04	**Tololo Observa**	**0.83**	**222**	*e*P		**Pn**	**02 16 05.8**	**+1.2**
GO04				*e*S		**Sn**	**02 16 21.3**	**+1.3**
CO05	**La Serena**	**1.01**	**249**			**Pn**	**02 16 07.2**	**+1.2**
CO05				Sn		**Sn**	**02 16 23.2**	**+0.7**
CO05	**La Serena**	**1.01**	**249**	*e*P		**Pn**	**02 16 07.0**	**+1.0**
CO05				*i* S		**Sn**	**02 16 22.8**	**+0.3**
CO05				IAML			02 16 27.6	
	comp=E,3μm,0.2s							
CO03	**El Pedregal**	**1.36**	**200**	Pn		**Pn**	**02 16 11.5**	**+1.5**
CO03	**El Pedregal**	**1.36**	**200**	⇑*i*P		**Pn**	**02 16 11.3**	**+1.3**
CO03				*i* S		**Sn**	**02 16 30.5**	**+1.1**
CO03				IAML			02 16 34.3	
	comp=N,4μm,0.3s							
CO03	**El Pedregal**	**1.36**	**200**	*e*P		**Pn**	**02 16 11.4**	**+1.5**
CO03				*e*S		**Sn**	**02 16 31.6**	**+2.2**
CO03				IAML			02 16 35.5	
	comp=Z,2μm,0.4s							
AC04	**Llanos de Chal**	**1.57**	**329**	Pn		**Pn**	**02 16 13.8**	**+1.4**
AC04	**Llanos de Chal**	**1.57**	**329**	*i* P		**Pn**	**02 16 13.7**	**+1.4**
AC04				*i* S		**Sn**	**02 16 33.7**	**+0.1**
AC04				IAML			02 16 42.4	
	comp=E,2μm,0.2s							
AC04	**Llanos de Chal**	**1.57**	**329**	*e*P		**Pn**	**02 16 13.0**	**+0.7**
AC04				*e*S		**Sn**	**02 16 39.0**	**+5.5**
CO06	**Fray Jorge**	**1.70**	**229**			**Pn**	**02 16 14.9**	**+1.1**
CO06	**Fray Jorge**	**1.70**	**229**	⇑*i*P		**Pn**	**02 16 14.9**	**+1.1**
CO06				*i* S		**Sn**	**02 16 36.7**	**+0.4**
CO06				IAML			02 16 49.0	
	comp=N,2μm,0.2s							
CO02	**Combarbal**	**1.80**	**204**			**Pn**	**02 16 16.5**	**+1.4**
CO02	**Combarbal**	**1.80**	**204**	⇑*i*P		**Pn**	**02 16 16.6**	**+1.4**
CO02				*i* S		**Sn**	**02 16 40.0**	**+1.3**
CO02				IAML			02 16 45.2	
	comp=N,5μm,0.2s							
CO02	**Combarbal**	**1.80**	**204**	*e*P		**Pn**	**02 16 16.6**	**+1.4**
CO02				*e*S		**Sn**	**02 16 40.8**	**+2.0**
CO02				IAML			02 16 49.5	
	comp=Z,1μm,0.3s							
VCA	**Vinchina**	**1.89**	**65**	*e*P		**Pn**	**02 16 18.0**	**+1.6**
VCA				*e*S		**Sn**	**02 16 42.6**	**+1.7**
VCA				*e*S			02 16 43.1	
VCA				IAML			02 16 45.6	
	comp=Z,3μm,0.3s							
GO03	**Copiap**	**1.96**	**358**	Pn		**Pn**	**02 16 18.0**	**+0.9**
GO03	**Copiap**	**1.96**	**358**	*i* P		**Pn**	**02 16 18.1**	**+0.9**
GO03				*e*S		**Sn**	**02 16 42.2**	**+0.1**
GO03				IAML			02 16 46.9	
	comp=E,982nm,0.4s							
GO03	**Copiap**	**1.96**	**358**	*e*P		**Pn**	**02 16 18.0**	**+0.9**
GO03				*e*S		**Sn**	**02 16 42.5**	**+0.4**
RTLL	**Cerro Villicun**	**2.29**	**141**	*e*P		**Pn**	**02 16 22.0**	**+0.7**
RTLL				*e*S		**Sn**	**02 16 50.2**	**+0.6**
RTLS	**Leoncito**	**2.36**	**162**	*e*P		**Pn**	**02 16 24.6**	**+2.3**
RTLS				*e*S		**Sn**	**02 16 53.5**	**+1.9**
ZON	**Zonda**	**2.36**	**148**	Pn		**Pn**	**02 16 23.5**	**+1.3**
ZON	**Zonda**	**2.36**	**148**	*e*P		**Pn**	**02 16 24.0**	**+1.8**
ZON				*e*S		**Sn**	**02 16 53.6**	**+2.4**
ACLC	**CERRO LA CRUZ**	**2.80**	**88**	*e*P		**Pn**	**02 16 28.4**	**+0.3**
ACLC				*e*S		**Sn**	**02 17 01.1**	**-0.6**
AC02	**Maricunga**	**2.86**	**19**	Pn		**Pn**	**02 16 30.5**	**+1.4**
AC02	**Maricunga**	**2.86**	**19**	⇑*i*P		**Pn**	**02 16 30.7**	**+1.6**
AC02				*i* S		**Sn**	**02 17 04.4**	**+0.9**
AC02				IAML			02 17 11.1	
	comp=N,583nm,0.7s							
AC02	**Maricunga**	**2.86**	**19**	*e*P		**Pn**	**02 16 30.8**	**+1.7**
AC02				*e*S		**Sn**	**02 17 06.2**	**+2.7**
VA06	**Catapilco**	**3.15**	**198**	Pn		**Pn**	**02 16 33.8**	**+1.4**
VA06	**Catapilco**	**3.15**	**198**	*i* P		**Pn**	**02 16 33.9**	**+1.4**
VA06				*i* S		**Sn**	**02 17 11.2**	**+1.6**
VA06				IAML			02 17 23.2	
	comp=E,1μm,0.3s							
VA03	**San Esteban**	**3.22**	**186**			**Pn**	**02 16 35.1**	**+1.6**
VA03	**San Esteban**	**3.22**	**186**	*i* P		**Pn**	**02 16 35.5**	**+2.1**
VA03				IAML			02 17 21.5	
	comp=E,686nm,0.2s							
VA03	**San Esteban**	**3.22**	**186**	*e*P		**Pn**	**02 16 35.0**	**+1.6**
VA03				*e*P			02 16 35.8	
VA03				*e*S		**Sn**	**02 17 10.6**	**-0.8**
APLL	**PUNTA DE LOS L**	**3.26**	**106**	*e*P		**Pn**	**02 16 34.3**	**+0.4**
APLL				*e*S		**Sn**	**02 17 11.8**	**-0.6**
AC01	**Pan de Azucar**	**3.42**	**353**	Pn		**Pn**	**02 16 36.5**	**+0.4**
AC01	**Pan de Azucar**	**3.42**	**353**	*i* P		**Pn**	**02 16 36.6**	**+0.6**
AC01				IAML			02 17 28.4	
	comp=E,507nm,0.7s							
AC01	**Pan de Azucar**	**3.42**	**353**	*e*P		**Pn**	**02 16 36.7**	**+0.6**
AC01				*e*S		**Sn**	**02 17 12.6**	**-3.4**
ROCH	**El Roble**	**3.48**	**192**	*i* P		**Pn**	**02 16 38.4**	**+1.4**
ROCH				*i* S		**Sn**	**02 17 19.4**	**+1.5**
ROCH				IAML			02 17 38.0	
	comp=N,503nm,0.5s							
ROC1	**El Roble**	**3.49**	**192**			**Pn**	**02 16 37.7**	**+0.5**
ROC1	**El Roble**	**3.49**	**192**	*e*P		**Pn**	**02 16 39.0**	**+1.9**
ROC1				*e*S		**Sn**	**02 17 16.6**	**-1.4**
ROC1				*e*S			02 17 21.3	
PEL	**Peldehue**	**3.61**	**187**	Pn		**Pn**	**02 16 39.9**	**+1.4**
PEL	**Peldehue**	**3.61**	**187**	*i* P		**Pn**	**02 16 40.1**	**+1.6**
PEL				*i* S		**Sn**	**02 17 21.4**	**+0.9**
PEL	**Peldehue**	**3.61**	**187**	*e*P		**Pn**	**02 16 40.5**	**+1.9**
PEL				*e*P			02 16 41.0	
PEL				*e*S		**Sn**	**02 17 18.6**	**-1.9**
VA01	**Torpederas**	**3.68**	**200**			**Pn**	**02 16 40.0**	**+0.5**
VA01	**Torpederas**	**3.68**	**200**	*e*P		**Pn**	**02 16 41.0**	**+1.5**
VA01				*e*S		Sn	02 17 35.8	+14
FCH	**Farellones**	**3.76**	**182**	*i* P		**Pn**	**02 16 43.4**	**+2.5**
MT02	**Curacav**	**3.79**	**193**			**Pn**	**02 16 41.2**	**+0.4**
MT02	**Curacav**	**3.79**	**193**	*i* P		**Pn**	**02 16 41.4**	**+0.5**
MT02	**Curacav**	**3.79**	**193**	*e*P		**Pn**	**02 16 41.0**	**+0.1**
MT02				*e*P			02 16 41.5	
MT02				*e*S		**Sn**	**02 17 26.1**	**+1.3**
MT05	**Renca**	**3.86**	**187**	Pn		**Pn**	**02 16 43.5**	**+1.6**
MT05	**Renca**	**3.86**	**187**	*i* P		**Pn**	**02 16 43.8**	**+1.9**
MT05	**Renca**	**3.86**	**187**	*e*P		**Pn**	**02 16 43.7**	**+1.9**
MT05				*e*S		**Sn**	**02 17 26.1**	**-0.5**
MT05				*e*S			02 17 29.1	
MT03	**Universidad Ad**	**3.94**	**184**			**Pn**	**02 16 45.2**	**+2.1**
MT03	**Universidad Ad**	**3.94**	**184**	*i* P		**Pn**	**02 16 45.1**	**+2.1**
MT03	**Universidad Ad**	**3.94**	**184**	*e*P		**Pn**	**02 16 45.0**	**+2.0**
MT03				*e*S		**Sn**	**02 17 29.1**	**+0.5**
MT09	**Talagante**	**4.27**	**189**			**Pn**	**02 16 48.1**	**+0.6**
MT09	**Talagante**	**4.27**	**189**	*i* P		**Pn**	**02 16 48.0**	**+0.6**
VA05	**Santo Domingo**	**4.27**	**197**			**Pn**	**02 16 46.9**	**-0.5**
LMEL	**Las Melosas**	**4.28**	**180**			**Pn**	**02 16 50.1**	**+2.5**
LMEL	**Las Melosas**	**4.28**	**180**	*i* P		**Pn**	**02 16 50.2**	**+2.6**
MT01	**Popeta**	**4.40**	**192**			**Pn**	**02 16 49.2**	**+0.2**
MT01	**Popeta**	**4.40**	**192**	*i* P		**Pn**	**02 16 49.1**	**+0.2**
MT01	**Popeta**	**4.40**	**192**	*e*P		**Pn**	**02 16 49.4**	**+0.3**
MT01				*e*S		**Sn**	**02 17 39.5**	**+0.2**
GO02	**Mina Guanaco**	**4.40**	**7**	Pn		**Pn**	**02 16 49.6**	**+0.1**
GO02	**Mina Guanaco**	**4.40**	**7**	*i* P		**Pn**	**02 16 49.5**	**+0.1**
GO02	**Mina Guanaco**	**4.40**	**7**	*e*P		**Pn**	**02 16 49.9**	**+0.3**
GO02				*e*S		**Sn**	**02 17 43.1**	**+3.1**
BO04	**La Punta**	**4.44**	**185**			**Pn**	**02 16 50.5**	**+0.9**
BO04	**La Punta**	**4.44**	**185**	*i* P		**Pn**	**02 16 50.5**	**+0.9**
MRA	**San Martin**	**4.76**	**128**	*e*P		**Pn**	**02 16 54.5**	**+0.5**
BO01	**Tunca**	**4.89**	**189**	Pn		**Pn**	**02 16 55.5**	**-0.1**
PB14	**IPOC Station P**	**4.91**	**357**	Pn		**Pn**	**02 16 55.8**	**-0.5**
TCA	**Tanti**	**5.12**	**112**	*e*P		**Pn**	**02 16 58.5**	**-0.4**
GO05	**Huala**	**5.64**	**195**	Pn		**Pn**	**02 17 04.3**	**-1.5**
PB10	**IPOC Station P**	**6.03**	**357**	Pn		**Pn**	**02 17 09.7**	**-1.4**
PB15	**IPOC Station P**	**6.35**	**6**	Pn		**Pn**	**02 17 14.5**	**-1.1**
PB06	**IPOC Station P**	**6.84**	**5**			**Pn**	**02 17 21.0**	**-1.3**
LVC	**Limon Verde**	**7.01**	**10**			**Pn**	**02 17 23.1**	**-1.6**
PB02	**IPOC Station P**	**8.20**	**2**			**Pn**	**02 17 41.1**	**+0.5**
VA04	**Juan Fernndez**	**8.44**	**239**	Pn		**Pn**	**02 17 45.4**	**+1.7**
TRQA	**Tornquist**	**10.87**	**143**	Pn		**Pn**	**02 18 16.2**	**-0.3**
ITQB	**Itaqui**	**11.78**	**94**	Pn		**Pn**	**02 18 27.9**	**-0.7**
LPAZ	**La Paz**	**13.34**	**8**	Pn		**Pn**	**02 18 48.6**	**-1.1**

*IDC **30** 02:21:47.9±2.2,20˚.12S×177˚.62W, h369km±21km, mb3.5/10, mbtmp4.3/12, Error ellipse: s-maj=24.6km s-min=16.6km az=136.0*
*NEIC **30** 02:21:47.9±2.0,20˚.1S±0˚.2×177˚.5W±0˚.1, h363km±9km, mb4.3/8, Error ellipse: s-maj=24.6km s-min=13.1km az=193.0*
*NOU **30** 02:21:47.3,20˚.07S×177˚.36W, h348km, mb4.7/13, Fiji Islands Region*

ISC 30 02:21:46.1±0.7,**20˚.2S**±0˚.1×**177˚.44W**±0˚.09,**h350**km,**n41**, σ1§**13**/40,**mb3.9**/13,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LKBA	**Tubou, Lakemba**	**2.31**	**325**	P		**Pn**	**02 22 40.8**	**+1.1**
TAVE	**Taveuni**	**4.15**	**325**	P		**Pn**	**02 22 57.1**	**+0.4**
MSVF	**Nonsavu**	**4.90**	**299**	P		**Pn**	**02 23 05.9**	**+1.2**
	24nm,0.5s,baz=132,slow=16,SNR=25							
MSVF	**Nonsavu**	**4.90**	**299**	P		**Pn**	**02 23 06.8**	**+2.0**
NIUE	**Niue**	**7.16**	**83**	P		**Pn**	**02 23 31.3**	**+0.9**
	203nm,2.2s							
MARNC	**Mare, Loyalty**	**13.65**	**262**	P		**Pn**	**02 24 47.1**	**-0.3**
MARNC	**Mare, Loyalty**	**13.65**	**262**	P		**P**	**02 24 46.9**	**+0.9**
	2.1nm,0.5s							
DVP	**Devils Point**	**13.81**	**278**	P		**Pn**	**02 24 51.6**	**+2.4**
	973nm,1.3s							
PINNC	**Pines Island,**	**14.29**	**257**	P		**Pn**	**02 24 55.9**	**+1.1**
LIFNC	**LIFOU**	**14.38**	**265**	P		**P**	**02 24 54.5**	**+0.5**
LIFNC	**LIFOU**	**14.38**	**265**	P		**Pn**	**02 24 56.2**	**+0.4**
	102nm,1.1s							
YATNC	**Mamie plateau,**	**14.75**	**260**	P		**Pn**	**02 25 00.4**	**+0.3**
	30nm,0.5s							
OUENC	**Ouen Island, N**	**14.83**	**258**	P		**P**	**02 24 56.9**	**-2.0**
DZM	**Mont Dzumac**	**15.16**	**260**	P		**Pn**	**02 25 04.7**	**-0.3**
	51nm,0.6s,baz=80,slow=20,SNR=47							
DZM	**Mont Dzumac**	**15.16**	**260**	P		**P**	**02 25 03.5**	**+0.8**
DZM	**Mont Dzumac**	**15.16**	**260**	P		**Pn**	**02 25 04.4**	**-0.6**
	82nm,1.0s							
NOUC	**Port Laguerre**	**15.30**	**260**	P		**Pn**	**02 25 07.0**	**+0.6**
	35nm,0.8s							
MXZ	**Matakaoa Point**	**17.74**	**191**	P		**P**	**02 25 32.0**	**+1.8**
MXZ				IAmb		IAmb	02 25 41.6	
	comp=Z,48nm,1.0s							
URZ	**Urewera**	**18.66**	**194**	P		**P**	**02 25 39.9**	**+0.1**
	comp=Z,35nm,0.4s,baz=249,slow=3.3,SNR=48							
URZ	**Urewera**	**18.66**	**194**	P		**P**	**02 25 39.7**	**-0.1**
QRZ	**Quartz Range**	**22.32**	**200**	P		**P**	**02 26 16.6**	**+1.5**
QRZ				IAmb		IAmb	02 26 33.9	
	comp=Z,20nm,1.1s							
STKA	**Stephens Creek**	**38.42**	**244**	P		**P**	**02 28 35.2**	**0.0**
	comp=Z,2.2nm,0.5s,baz=92,slow=12,SNR=3.1							
	comp=Z,2.2nm,0.5s							
STKA	**Stephens Creek**	**38.42**	**244**	P		**P**	**02 28 34.9**	**-0.4**
AS31	**Alice Springs**	**45.11**	**256**	P		**P**	**02 29 28.2**	**-0.9**
AS31				IAmb		IAmb	02 29 29.1	
	comp=Z,2.9nm,0.8s							
ASAR	**Alice Springs**	**45.11**	**256**	P		**P**	**02 29 28.4**	**-0.8**
	comp=Z,8.4nm,0.6s,baz=94,slow=8.2,SNR=117							
	comp=Z,8.4nm,0.6s							
ASAR	**Alice Springs**	**45.11**	**256**	P		**P**	**02 29 28.0**	**-1.2**
WRA	**Warramunga Arr**	**45.17**	**262**	P		**P**	**02 29 27.9**	**-1.7**
	comp=Z,2.3nm,0.3s,baz=96,slow=7.6,SNR=174							
	comp=Z,2.3nm,0.3s							
WRA	**Warramunga Arr**	**45.17**	**262**	P		**P**	**02 29 28.0**	**-1.7**
MJAR	**Matsushiro Arr**	**70.24**	**323**	P		**P**	**02 32 20.1**	**-2.0**
	comp=Z,1.5nm,0.5s,baz=155,slow=7.5,SNR=5.3							
	comp=Z,1.5nm,0.5s							
PETK	**Petropavlovsk-**	**76.07**	**345**	P		**P**	**02 32 55.2**	**-0.3**
	comp=Z,1.9nm,0.5s,baz=132,slow=8.6,SNR=4.5							
	comp=Z,1.9nm,0.5s							
NVAR	**Mina Arraya Bea**	**80.41**	**43**	P		**P**	**02 33 20.7**	**+0.9**
	comp=Z,0.9nm,0.7s,baz=222,slow=7.9,SNR=5.8							
	comp=Z,0.9nm,0.7s							
TRF	**Thorofare Moun**	**86.00**	**12**	P		**P**	**02 33 47.4**	**0.0**
TRF				IAmb		IAmb	02 33 48.2	
	comp=Z,2.8nm,0.7s							
TXAR	**Lajitas Array**	**86.42**	**57**	P		**P**	**02 33 51.4**	**+1.3**
	comp=Z,0.6nm,0.8s,baz=227,slow=4.8,SNR=8.7							
	comp=Z,0.6nm,0.8s							
TXAR	**Lajitas Array**	**86.42**	**57**	P		**P**	**02 33 50.1**	**0.0**
ILAR	**Eielson Array**	**87.86**	**13**	P		**P**	**02 33 55.7**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=230,slow=4.8,SNR=7.2							
	comp=Z,0.5nm,0.8s							
PDAR	**Pinedale Array**	**88.35**	**43**	P		**P**	**02 33 59.1**	**0.0**
	comp=Z,0.2nm,0.5s,baz=242,slow=3.8,SNR=2.6							
	comp=Z,0.2nm,0.5s							
PDAR	**Pinedale Array**	**88.35**	**43**	P		**P**	**02 33 58.9**	**-0.2**
CMAR	**Chiang Mai Arr**	**90.50**	**289**	P		**P**	**02 34 10.1**	**+0.7**
	comp=Z,1.3nm,0.6s,baz=124,slow=3.2,SNR=7.6							
	comp=Z,1.3nm,0.6s							
ARCES	**ARCESS Array B**	**128.67**	**350**	PKP		**PKPdf**	**02 40 09.3**	**-2.1**
	comp=Z,2.3nm,1.1s,baz=27,slow=3.0,SNR=7.2							
AKASG	**Malin Array Be**	**142.96**	**332**	PKhKP		PKPpre	02 40 33.4	
	comp=Z,1.3nm,0.5s,baz=44,slow=4.4,SNR=5.4							
GERES	**GERESS Array B**	**150.00**	**345**	PKPbc		**PKPbc**	**02 40 54.7**	**-0.9**
	comp=Z,1.3nm,0.8s,baz=52,slow=2.2,SNR=10							

*IDC **30** 02:38:30.5±1.5,4˚.67S×150˚.81E, h0km, mb3.7/2, mbtmp3.8/2, MS3.5/2, Error ellipse: s-maj=66.3km s-min=17.3km az=153.0*
*NEIC **30** 02:38:35.6±1.3,4˚.9S±0˚.2×151˚.0E±0˚.2, h25km±5km, mb4.3/6, Error ellipse: s-maj=35.5km s-min=7.4km az=143.0*

ISC 30 02:38:35.7±1.0,**4˚.8S**±0˚.3×**150˚.9E**±0˚.1,**h35**km,**n14**, σ0§**92**/14,**mb4.2/6**,**New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KRVT	**Keravat (AS076**	**1.23**	**68**	Pn		**Pn**	**02 38 56.3**	**0.0**
	148nm,0.3s,baz=230,slow=1.4,SNR=49							
KRVT				Sn		**Sn**	**02 39 12.6**	**+0.9**
	369nm,0.3s,baz=126,slow=20,SNR=43							
RABL	**Rabaul**	**1.40**	**66**	Pn		**Pn**	**02 38 57.9**	**-0.8**
RABL				Sn		**Sn**	**02 39 16.2**	**+0.3**
HNR	**Honiara**	**10.11**	**118**	LR		LR	02 44 40.1	
	comp=Z,182nm,21.8s,baz=285,slow=36							
WB0	**Warramunga Arr**	**21.92**	**226**	P		**P**	**02 43 26.6**	**+0.4**
WB0				IAmb		IAmb	02 44 10.8	
	comp=Z,14nm,1.4s							
WR0	**Warramunga Arr**	**21.94**	**225**	P		**P**	**02 43 28.1**	**+1.7**
WR0				IAmb		IAmb	02 43 41.1	
	comp=Z,11nm,1.4s							
WB2	**Warramunga Arr**	**22.06**	**225**	P		**P**	**02 43 27.8**	**+0.2**
WB2				IAmb		IAmb	02 43 56.8	
	comp=Z,14nm,1.4s							
WRA	**Warramunga Arr**	**22.07**	**225**	P		**P**	**02 43 27.7**	**0.0**
	comp=Z,0.9nm,0.5s,baz=52,slow=10,SNR=18							
	comp=Z,0.9nm,0.5s							
WRA	**Warramunga Arr**	**22.07**	**225**	P		**P**	**02 43 27.8**	**0.0**
KNRA	**Kununurra**	**24.29**	**242**	P		**P**	**02 43 48.3**	**-1.7**
KNRA				IAmb		IAmb	02 44 23.7	
	comp=Z,25nm,1.3s							
ASAR	**Alice Springs**	**24.92**	**219**	P		**P**	**02 43 55.6**	**-0.1**
	comp=Z,2.9nm,0.8s,baz=54,slow=9.2,SNR=18							
	comp=Z,2.9nm,0.8s							
ASAR	**Alice Springs**	**24.92**	**219**	P		**P**	**02 43 56.3**	**+0.5**
MYLDM	**Lahad Datu**	**33.82**	**287**	P		**P**	**02 45 15.9**	**+1.0**
GEYT	**Alibeck**	**95.08**	**308**	LR		LR	03 36 01.5	
	comp=Z,35nm,20.9s,baz=4.5,slow=36							
TORD	**Torodi Ar. Bea**	**148.48**	**287**	PKPbc		**PKPbc**	**02 58 19.0**	**-0.8**
	comp=Z,0.4nm,0.7s,baz=95,slow=2.1,SNR=11							

*SOME **30** 02:46:02.6,39˚.43N×73˚.67E, h0km*
*KRNET **30** 02:46:06.2±0.1,39˚.48N×73˚.63E, mb3.4*
*NNC **30** 02:46:07.4±2.2,39˚.58N×73˚.72E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=18.0km s-min=9.1km az=166.0*

ISC 30 02:46:07.2±1.5,**39˚.38N**±0˚.07×**73˚.51E**±0˚.03,**h10**km,**n41**, σ2§**75**/64,**9C-3D**,**Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
OHH	**Osh**	**1.27**	**334**	⇓*i*P		**Pn**	**02 46 28.7**	**-2.4**
	baz=28							
OHH				⇓*i*S		**Sb**	**02 46 46.4**	**-1.4**
	baz=28							
BTK	**Batken**	**2.19**	**289**	⇑*i*P		**Pb**	**02 46 46.6**	**-0.3**
	baz=86							
BTK				⇑*i*S		**Sb**	**02 47 15.4**	**+1.3**
	baz=86							
GAR	**Garm**	**2.51**	**262**	⇑*i*P		**

	1.0nm,0.1s								
SATY					*e*S		**Sb**	**02 48 46.0**	**+5.0**
	3.5nm,0.1s								
SATY	**Saty**	**5.21**	**44**	Pg			**Pb**	**02 47 37.2**	**-1.2**
	1.0nm,0.1s								
SATY				Lg		Lg		02 48 46.0	
	3.5nm,0.1s								
ZHN	**Zhinishke**	**5.30**	**43**	*e*P			**Pb**	**02 47 40.4**	**+0.4**
	2.8nm,0.1s								
ZHN					*e*S		**Sg**	**02 48 50.4**	**-6.8**
	18nm,0.1s								
KURS	**Kuram**	**5.39**	**39**	*e*P			**Pb**	**02 47 42.9**	**+1.4**
	2.5nm,0.7s								
KURS					*e*S		**Sg**	**02 48 54.8**	**-5.5**
	4.0nm,0.7s								
UZB	**Uzynbulak**	**5.60**	**46**	*e*P			**Pb**	**02 47 43.9**	**-1.3**
	0.3nm,0.1s								
UZB					*e*S		**Sb**	**02 48 57.4**	**+5.0**
	2.8nm,0.7s								
UZB	**Uzynbulak**	**5.60**	**46**	Pg			**Pb**	**02 47 43.9**	**-1.3**
	0.3nm,0.1s								
UZB				Lg		Lg		02 48 57.4	
	2.8nm,0.7s								
KPKS	**Kokpek**	**5.63**	**42**	*e*P			**Pb**	**02 47 45.2**	**-0.5**
	2.5nm,0.4s								
KPKS					*e*S		**Sb**	**02 48 59.1**	**+5.8**
	7.2nm,0.5s								
KPKS	**Kokpek**	**5.63**	**42**	Pg			**Pb**	**02 47 45.2**	**-0.5**
	2.5nm,0.4s								
KPKS				Lg		Lg		02 48 59.1	
	7.2nm,0.5s								
BTLS	**Baital**	**5.67**	**4**	*e*P			**Pb**	**02 47 45.9**	**-0.3**
	1.3nm,0.4s								
BTLS					*e*S		**Sb**	**02 49 00.4**	**+6.2**
	3.0nm,0.6s								
BTLS	**Baital**	**5.67**	**4**	Pg			**Pb**	**02 47 45.9**	**-0.3**
	1.3nm,0.4s								
BTLS				Lg		Lg		02 49 00.4	
	3.0nm,0.6s								
ARXS	**Arharly**	**5.80**	**32**	*e*P			**Pb**	**02 47 47.8**	**-0.8**
	2.2nm,0.6s								
ARXS					*e*S		**Sb**	**02 49 03.4**	**+5.2**
	3.7nm,0.4s								
ARXS	**Arharly**	**5.80**	**32**	Pg			**Pb**	**02 47 47.8**	**-0.8**
	2.2nm,0.6s								
ARXS				Lg		Lg		02 49 03.4	
	3.7nm,0.4s								
BLB	**Baldybastay**	**6.00**	**37**	*e*P			**Pb**	**02 47 52.2**	**+0.3**
	2.3nm,0.2s								
BLB					*e*S		**Sb**	**02 49 10.6**	**+6.8**
	4.3nm,0.9s								

KRNET 30 02:46:37.3±0.1,39°42N×73°72E, mb3.8, 5C-4D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
OHH	**Osh**	**1.32**	**327**	⇑	*i*P	Pg	02 47 02.7	+0.1
	baz=27							
OHH				⇑	*i*S	Sb	02 47 21.0	+0.4
	baz=27							
BTK	**Batken**	**2.33**	**287**	⇓	*i*P	Pb	02 47 19.1	-1.2
	baz=87							
BTK				⇓	*i*S	Sb	02 47 49.8	+0.2
	baz=87							
GAR	**Garm**	**2.68**	**262**	⇑	*e*P	Pn	02 47 24.0	+2.2
	baz=62							
GAR				⇑	*i*S	Sb	02 47 58.3	-1.4
	baz=62							
GAR	**Garm**	**2.68**	**262**	⇑	*i*S	Pn	02 47 23.5	+1.7
	baz=61							
TRKS	**Terek-Say**	**2.89**	**318**	⇓	*e*P	Pn	02 47 26.1	+1.3
	baz=17							
TRKS				⇓	*i*S	Sn	02 48 01.5	+1.2
	baz=17							

MAN 30 02:47:00.2, 8°90N×126°52E, h30km, mb4.1, ML2.8, MS2.5, 4C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
BIPH	**Bislig**	**0.73**	**193**	⇓	*i*P	Pn	02 47 14.8	+1.6
BIPH					*e*S		02 47 24.8	
BUTP	**Butuan**	**0.90**	**275**	⇑	*e*P	Pn	02 47 16.7	+1.5
BUTP					*e*S		02 47 28.8	
BUKP	**Musuan**	**1.77**	**235**	⇑	*i*P	Pn	02 47 32.5	+5.1
BUKP					*i* S		02 47 53.9	
MSLP	**Maasin**	**2.05**	**307**	⇑	*e*P	Pn	02 47 38.2	+7.5
MSLP					*e*S		02 48 02.6	
KCP	**Kidapawan**	**2.35**	**217**	⇓	*e*P	Pn	02 47 45.1	+10
KCP					*i* S		02 48 08.2	
TBP	**Tagbilaran**	**2.74**	**287**	⇑	*e*P	Pn	02 47 44.0	+3.5
TBP					*i* S		02 48 15.3	

*TEH **30** 02:49:33.5, 39°.38N×51°.56E, h35km, ML3.3*
*AZER **30** 02:49:34.3±0.1, 39°.49N×51°.45E, h36km±7km, Error ellipse: s-maj=7.9km s-min=0.6km az=280.0*
ISC 30 02:49:34.3±2.5,39°44N±0°04×51°56E±0°06, h32km±22km, n53, σ0°92/79, Caspian Sea

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
NDR	**Nardaran**	**1.67**	**314**	Sn		**Sn**	**02 50 21.7**	**+0.2**
GOBA	**Gobu**	**1.71**	**305**	Sg		**Sb**	**02 50 25.9**	**-0.2**
LKRN	**Lenkeran, Azer**	**2.29**	**252**	*e*Pn		**Pn**	**02 50 10.7**	**+1.0**
LKRN	**Lenkeran, Azer**	**2.29**	**252**	Pn		**Pn**	**02 50 10.8**	**+1.0**
	SNR=3.8							
LKRN				Sn		**Sn**	**02 50 38.5**	**+1.8**
ASTR	**Astara**	**2.33**	**249**	*e*Pn		**Pn**	**02 50 10.6**	**+0.2**
ASTR				*e*Pn		**Pn**	**02 50 10.6**	**+0.2**
ASTR	**Astara**	**2.33**	**249**	Pn		**Pn**	**02 50 10.6**	**+0.2**
	SNR=4.8							
ASTR				Sn		**Sn**	**02 50 38.9**	**+1.0**
GLBA	**Clilabad**	**2.47**	**266**	*e*Pn		**Pn**	**02 50 13.2**	**+1.0**
GLBA	**Clilabad**	**2.47**	**266**	Pn		**Pn**	**02 50 13.3**	**+1.0**
	SNR=2.8							
GLBA				Sn		**Sn**	**02 50 42.2**	**+1.0**
LHJ2	**Lahijan - Gila**	**2.56**	**208**	*e*Pn		**Pn**	**02 50 12.5**	**-1.0**
SIZA	**Siyzn**	**2.62**	**310**	*e*Pn		**Pn**	**02 50 15.7**	**+1.4**
SIZA	**Siyzn**	**2.62**	**310**	Pn		**Pn**	**02 50 15.7**	**+1.4**
SIZA				Sn		**Sn**	**02 50 45.2**	**+0.2**
LRK	**Lerik**	**2.63**	**254**	*e*Pn		**Pn**	**02 50 14.8**	**+0.1**
LRK	**Lerik**	**2.63**	**254**	Pn		**Pn**	**02 50 14.8**	**+0.1**
	SNR=6.7							
LRK				Sn		**Sn**	**02 50 45.9**	**+0.3**
YRD	**Yardimli**	**2.63**	**260**	*e*Pn		**Pn**	**02 50 15.0**	**+0.3**
YRD	**Yardimli**	**2.63**	**260**	Pn		**Pn**	**02 50 15.1**	**+0.3**
	SNR=11							
YRD				Sn		**Sn**	**02 50 46.1**	**+0.4**
PQL	**Pirkuli**	**2.65**	**302**	*e*Pn		**Pn**	**02 50 15.0**	**+0.1**
PQL				*e*Pn		**Pn**	**02 50 15.0**	**+0.1**
PQL	**Pirkuli**	**2.65**	**302**	Pn		**Pn**	**02 50 15.0**	**+0.1**
PQL				Sn		**Sn**	**02 50 46.1**	**+0.2**
GRMI	**Germi**	**2.92**	**259**	*e*Pn		**Pn**	**02 50 18.8**	**+0.2**
GRMI				*e*			02 50 19.8	
	comp=Z,99nm,0.1s							
IML	**Ismayilli**	**2.93**	**299**	*e*Pn		**Pn**	**02 50 18.9**	**+0.3**
IML	**Ismayilli**	**2.93**	**299**	Pn		**Pn**	**02 50 18.9**	**+0.3**
	SNR=3.6							
IML				Sn		**Sn**	**02 50 53.7**	**+1.0**
QUBA	**Quba, Azerbaij**	**3.03**	**310**	Pn		**Pn**	**02 50 20.2**	**+0.6**
QUBA				Sn		**Sn**	**02 50 54.4**	**-0.8**
JIR1	**Jirandeh**	**3.06**	**208**	*e*Pn		**Pn**	**02 50 18.9**	**-1.6**
QALM	**Alamut, Qazvin**	**3.09**	**194**	*e*Pn		**Pn**	**02 50 20.0**	**-1.0**
ZRD	**Zardab**	**3.10**	**287**	*e*Pn		**Pn**	**02 50 21.6**	**+0.7**
ZRD	**Zardab**	**3.10**	**287**	Pn		**Pn**	**02 50 21.6**	**+0.7**
ZRD				Sn		**Sn**	**02 50 58.0**	**+1.1**
BLQ	**Beylaqan**	**3.11**	**277**	*e*Pn		**Pn**	**02 50 22.6**	**+1.5**
BLQ	**Beylaqan**	**3.11**	**277**	Pn		**Pn**	**02 50 22.6**	**+1.5**
BLQ				Sn		**Sn**	**02 50 57.8**	**+0.7**
XNQ	**Khinaliq**	**3.14**	**305**	*e*Pn		**Pn**	**02 50 21.9**	**+0.2**
XNQ	**Khinaliq**	**3.14**	**305**	Pn		**Pn**	**02 50 21.9**	**+0.2**
	SNR=7.4							
XNQ				Sn		**Sn**	**02 50 57.9**	**-0.3**
QBL	**Gabala**	**3.23**	**299**	*e*Pn		**Pn**	**02 50 22.5**	**-0.2**
QBL	**Gabala**	**3.23**	**299**	Pn		**Pn**	**02 50 22.5**	**-0.2**
QBL				Sn		**Sn**	**02 50 59.7**	**-0.4**
QSAR	**Qusar**	**3.26**	**311**	Pn		**Pn**	**02 50 23.8**	**+0.6**
	SNR=6.8							
QSAR				Sn		**Sn**	**02 51 01.6**	**+0.6**
QRD	**Qoradiz**	**3.29**	**272**	*e*Pn		**Pn**	**02 50 22.7**	**-0.8**
QRD	**Qoradiz**	**3.29**	**272**	Pn		**Pn**	**02 50 22.8**	**-0.8**
QRD				Sn		**Sn**	**02 51 01.7**	**+0.3**
IGLO	**Ghaloghah**	**3.43**	**148**	*e*Pn		**Pn**	**02 50 26.1**	**+0.4**
IGLO				*e*			02 51 15.9	
	comp=Z,741nm,0.4s							
ISRB	**Sarab**	**3.45**	**243**	*e*Pn		**Pn**	**02 50 26.2**	**+0.2**
ISRB				*e*			02 51 11.6	
	comp=Z,396nm,0.3s							
MNGR	**Mingechevir, A**	**3.69**	**293**	Pn		**Pn**	**02 50 29.3**	**+0.3**
MNGR				Sn		**Sn**	**02 51 12.1**	**+0.9**
IHRS	**Heris**	**3.70**	**254**	*e*Pn		**Pn**	**02 50 30.0**	**+0.6**
IHRS				*e*			02 50 31.6	
	comp=Z,560nm,0.2s							
SEKA	**Sheki**	**3.78**	**299**	Pn		**Pn**	**02 50 30.1**	**-0.2**
	SNR=5.1							
SEKA				Sn		**Sn**	**02 51 11.9**	**-1.8**
ISHM	**Shahmirzad**	**3.87**	**159**	*e*Pn		**Pn**	**02 50 32.5**	**+0.6**
IHSH	**Hashtrud**	**3.99**	**239**	*e*Pn		**Pn**	**02 50 34.0**	**+0.5**
QABG	**Abgarm-Qazvin**	**4.04**	**204**	*e*Pn		**Pn**	**02 50 33.9**	**-0.2**
IBST	**Bostanabad**	**4.05**	**246**	*e*Pn		**Pn**	**02 50 35.2**	**+1.0**
GANJ	**Ganja**	**4.20**	**288**	Pn		**Pn**	**02 50 35.1**	**-1.0**
	SNR=3.1							
GANJ				Sn		**Sn**	**02 51 21.6**	**-2.5**
ORD	**Ordubad**	**4.36**	**265**	Pn		**Pn**	**02 50 38.7**	**+0.4**
	SNR=5.0							
ORD				Sn		**Sn**	**02 51 28.0**	**-0.1**
ZKTA	**Zakatala**	**4.36**	**302**	Pn		**Pn**	**02 50 39.3**	**+1.0**
	SNR=7.3							
ZKTA				Sn		**Sn**	**02 51 26.6**	**-1.4**
IANJ	**Anjilo**	**4.38**	**154**	*e*Pn		**Pn**	**02 50 39.7**	**+0.9**
IANJ				*e*			02 51 38.8	
	comp=Z,263nm,0.6s							
IMRD	**Marand**	**4.62**	**263**	*e*Pn		**Pn**	**02 50 42.1**	**+0.1**
GDB	**GEDABAY**	**4.64**	**288**	Pn		**Pn**	**02 50 41.4**	**-0.9**
	SNR=9.6							
GDB				Sn		**Sn**	**02 51 32.2**	**-2.9**
SBZ	**Shahbuz**	**4.66**	**271**	Pn		**Pn**	**02 50 41.7**	**-0.8**
	SNR=5.3							
SBZ				Sn		**Sn**	**02 51 35.3**	**-0.2**
NAX	**Nakhchivan**	**4.71**	**269**	Pn		**Pn**	**02 50 44.3**	**+1.0**
	SNR=3.0							
NAX				Sn		**Sn**	**02 51 37.2**	**+0.3**
QZX	**Qazax, Azerbai**	**5.01**	**291**	Pn		**Pn**	**02 50 46.9**	**-0.3**
QZX				Sn		**Sn**	**02 51 41.7**	**-2.3**
ISFB	**Sefidab**	**5.10**	**174**	*e*Pn		**Pn**	**02 50 48.3**	**-0.3**

*SOME **30** 03:07:38.6, 39°.52N×73°.70E, h0km*
*KRNET **30** 03:07:39.6±0.1, 39°.52N×73°.69E, mb3.2*
ISC 30 03:07:37.9±1.4,39°52N±0°05×73°75E±0°04, h14km±12km, n25, σ1°89/48, 22C-2D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
OHH	**Osh**	**1.24**	**324**	⇑	*e*P	**Pg**	**03 08 02.9**	**+1.1**
	baz=25							
OHH				⇑	*i*S	**Sn**	**03 08 20.1**	**+2.6**
	baz=25							
OHH	**Osh**	**1.24**	**324**	⇑	*i*P	**Pg**	**03 08 03.7**	**+1.9**
	baz=27							
OHH				⇑	*i*S	**Sn**	**03 08 18.8**	**+1.3**
	baz=27							
DRK	**Karamyk**	**1.51**	**269**	⇑	*e*P	**Pg**	**03 08 07.5**	**+0.6**
	baz=69							
DRK				⇑	*i*S	**Sg**	**03 08 27.5**	**+1.0**
	baz=69							
DRK	**Karamyk**	**1.51**	**269**	⇑	*i*P	**Pg**	**03 08 09.0**	**+2.1**
	baz=65							
DRK				⇑	*i*S	**Sg**	**03 08 27.7**	**+1.2**
	baz=65							
BTK	**Batken**	**2.32**	**284**	⇑	*i*P	**Pb**	**03 08 20.4**	**+0.9**
	baz=84							
BTK				⇑	*i*S	**Sg**	**03 08 51.2**	**-1.2**
	baz=84							
BTK	**Batken**	**2.32**	**284**	⇑	*i*P	**Pg**	**03 08 22.1**	**-0.2**
	baz=83							
BTK				⇑	*i*S	**Sg**	**03 08 51.6**	**-0.8**
	baz=83							
GAR	**Garm**	**2.71**	**260**	⇑	*i*P	**Pb**	**03 08 26.4**	**+0.2**
	baz=60							
GAR				⇑	*i*S	**Sb**	**03 08 59.5**	**+0.1**
	baz=60							
GAR	**Garm**	**2.71**	**260**	⇑	*i*P	**Pg**	**03 08 28.2**	**-1.7**
	baz=57							
GAR				⇑	*i*S	**Sg**	**03 09 02.8**	**-2.3**
	baz=57							
TRKS	**Terek-Say**	**2.82**	**316**	⇑	*i*P	**Pb**	**03 08 27.2**	**-0.9**
	baz=16							
TRKS				⇑	*i*S	**Sb**	**03 09 02.9**	**+0.3**
	baz=16							
TRKS	**Terek-Say**	**2.82**	**316**	⇓	*i*P	**Pb**	**03 08 28.1**	**0.0**
	baz=16							
TRKS				⇓	*i*S	**Sb**	**03 09 01.5**	**-1.1**
	baz=16							
MRKS	**Merke**	**3.24**	**353**	*e*P		**Pg**	**03 08 38.5**	**-1.5**
	2.2nm,0.2s							
MRKS					*e*S	**Sg**	**03 09 21.3**	**-0.7**
	9.6nm,0.3s							
TKM2	**Tokmak 2**	**3.67**	**22**	⇑	Pn	**Pb**	**03 08 42.2**	**-0.4**
	2.1nm,0.7s							
TKM2				⇑	Lg	Lg	03 09 37.5	
	3.3nm,0.5s							
IUG	**Iuzhnay**	**3.85**	**314**	*e*P		**Pg**	**03 08 48.8**	**-2.7**
	20nm,0.4s							
IUG					*e*S	**Sg**	**03 09 39.7**	**-1.7**
	16nm,0.4s							
KST	**Kastek**	**3.89**	**25**	*e*P		**Pg**	**03 08 51.6**	**-0.8**
	2.0nm,0.3s							
KST					*e*S	**Sg**	**03 09 44.1**	**+1.3**
	7.7nm,0.7s							
SGDS	**Sogindy**	**3.98**	**9**	*e*P		**Pg**	**03 08 53.2**	**-0.9**
	2.0nm,0.4s							
SGDS					*e*S	**Sg**	**03 09 46.5**	**+0.9**
	3.3nm,0.6s							
DGS	**Degeres**	**4.01**	**22**	*e*P		**Pg**	**03 08 53.7**	**-1.1**
	3.8nm,0.6s							
DGS					*e*S	**Sg**	**03 09 48.1**	**+1.3**
	6.5nm,0.7s							
KK31	**Karatay Array**	**4.33**	**327**	⇑	Pn	Pb	03 08 49.0	-4.7
	0.7nm,0.4s,baz=131,slow=12,SNR=14							
KK31				⇑	Sn	**Sb**	**03 09 41.2**	**-4.5**
	0.8nm,0.4s,baz=149,slow=24,SNR=4.2							
KK31				Lg		Lg	03 09 53.9	
	3.0nm,0.5s,baz=147,slow=30,SNR=5.1							
KRBS	**Karabastau**	**4.41**	**19**	*e*P		**Pg**	**03 09 00.8**	**-1.5**
	0.2nm,0.9s							
KRBS					*e*S	**Sg**	**03 09 60.0**	**+0.5**
	3.9nm,0.6s							
BRLS	**Boroldday**	**4.58**	**321**	*e*P		**Pb**	**03 09 01.7**	**+3.8**
	1.6nm,0.2s							
BRLS					*e*S	**Sg**	**03 10 01.1**	**-3.6**
	8.6nm,0.7s							
KTBS	**Karatobe**	**4.73**	**27**	*e*P		**Pg**	**03 09 06.7**	**-1.7**
	1.5nm,0.6s							
KTBS					*e*S	**Sg**	**03 10 10.3**	**+0.8**
	12nm,0.6s							
KUU	**Kurty**	**4.78**	**23**	*e*P		**Pg**	**03 09 07.3**	**-2.1**
	1.9nm,0.5s							
KUU					*e*S	**Sg**	**03 10 11.0**	**-0.2**
	4.9nm,0.6s							
KPKS	**Kokpek**	**5.41**	**42**	*e*P		**Pg**	**03 09 20.6**	**-0.8**
	1.0nm,0.1s							
KPKS					*e*S	**Sg**	**03 10 33.9**	**+2.4**
	4.8nm,0.5s							
BTLS	**Baital**	**5.52**	**2**	*e*P		**Pg**	**03 09 23.9**	**+0.4**
	1.4nm,0.6s							
BTLS					*e*S	**Sg**	**03 10 39.8**	**+4.8**
	2.1nm,0.5s							
ARXS	**Arharly**	**5.59**	**32**	*e*P		**Pg**	**03 09 21.9**	**-3.0**
	2.4nm,0.7s							
ARXS					*e*S	**Sg**	**03 10 36.5**	**-0.7**
	2.4nm,0.4s							
BLB	**Baldybastay**	**5.78**	**36**	*e*P		**Pg**	**03 09 26.8**	**-1.6**
	2.7nm,0.1s							
BLB					*e*S	**Sg**	**03 10 44.8**	**+1.5**
	3.3nm,0.9s							

*KRNET **30** 03:09:56.2±0.1, 39°.68N×73°.47E, mb2.8*
*SOME **30** 03:10:01.0, 39°.90N×73°.23E, h0km*
ISC 30 03:09:58.2±1.3,39°65N±0°06×73°39E±0°05, h10km, n13, σ1°76/26, 10C, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
OHH	**Osh**	**0.99**	**332**	⇑	*i*P	**Pg**	**03 10 14.9**	**-2.3**
	baz=28							
OHH				⇑	*i*S	**Sg**	**03 10 29.3**	**-0.8**
	baz=28							
DRK	**Karamyk**	**1.24**	**262**	⇑	*i*P	**Pb**	**03 10 21.1**	**-0.8**
	baz=62							
DRK				⇑	*e*S	**Sg**	**03 10 38.9**	**+0.7**
	baz=62							
BTK	**Batken**	**2.02**	**282**	⇑	*i*P	**Pb**	**03 10 34.5**	**-0.6**
	baz=81							
BTK				⇑	*i*S	**Sg**	**03 11 01.9**	**-1.3**
	baz=81							
GAR	**Garm**	**2.47**	**256**	⇑	*i*P	**Pn**	**03 10 40.5**	**+1.8**
	baz=55							
GAR				⇑	*i*S	**Sb**	**03 11 13.2**	**-0.2**
	baz=55							
TRKS	**Terek-Say**	**2.54**	**318**	⇑	*i*P	**Pn**	**03 10 40.2**	**+0.5**
	baz=16							
TRKS				⇑	*i*S	**Sn**	**03 11 12.4**	**+1.7**
	baz=16							
MRKS	**Merke**	**3.09**	**358**	*e*P		**Pg**	**03 10 55.8**	**-1.7**
	4.2nm,0.3s							
MRKS					*e*S	**Sg**	**03 11 35.2**	**-2.3**
	6.0nm,0.5s							
IUG	**Iuzhnay**	**3.56**	**315**	*e*P		**Pb**	**03 11 02.3**	**+0.9**
	62nm,0.4s							
IUG					*e*S	**Sb**	**03 11 46.5**	**+1.8**
	9.8nm,0.4s							
KST	**Kastek**	**3.90**	**29**	*e*P		**Pg**	**03 11 11.7**	**-1.3**
	0.9nm,0.3s							
KST					*e*S	**Sg**	**03 12 02.6**	**-0.9**
	5.9nm,0.5s							
SGDS	**Sogindy**	**3.91**	**13**	*e*P		**Pb**	**03 11 09.1**	**+1.9**
	0.5nm,0.2s							
SGDS					*e*S	**Sb**	**03 11 57.9**	**+3.2**
	1.7nm,0.6s							
BRLS	**Boroldday**	**4.30**	**323**	*e*P		**Pb**	**03 11 14.5**	**+0.5**
	2.4nm,0.2s							
BRLS					*e*S	**Sb**	**03 12 07.3**	**+1.3**
	4.4nm,0.2s							
TNSS	**Tian-Shan**	**4.31**	**37**	*e*P		**Pg**	**03 11 19.6**	**-1.3**
	1.2nm,0.5s							
TNSS					*e*S	**Sg**	**03 12 16.2**	**-0.5**
	1.4nm,0.7s							
KRBS	**Karabastau**	**4.39**	**22**	*e*P		**Pg**	**03 11 19.5**	**-2.8**
	0.1nm,0.3s							
KRBS					*e*S	**Sg**	**03 12 16.0**	**-3.1**
	2.7nm,0.4s							
KTBS	**Karatobe**	**4.75**	**30**	*e*P		**Pg**	**03 11 27.0**	**-2.1**
	1.3nm,0.5s							
KTBS					*e*S	**Sg**	**03 12 29.2**	**-1.4**
	4.0nm,0.5s							

*TUL **30** 03:10:09.5±0.8, 36°.88N±0°.03×97°.32W±0°.03, h7km±7km, ML2.7, mb_Lg2.6/45(NEIC), Error ellipse: s-maj=4.4km s-min=2.2km az=223.0*
NEIC 30 03:10:09.6±0.7,36°87N±0°02×97°33W±0°03, h7km±7km, Error ellipse: s-maj=3.6km s-min=2.3km az=47.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
T35A	**Sooner Cattle**	**0.65**	**86**	Pg		Pg	03 10 22.1	-0.1
OKCFA	**Oklahoma City**	**1.46**	**184**			Pn	03 10 36.2	-0.1
OKCFA				IAmb_Lg			03 10 59.7	
	comp=Z,30nm,0.8s							
OKCSW	**OKLAHOMA CITY**	**1.47**	**184**			Pn	03 10 36.3	-0.2
TUL1	**Leonard**	**1.57**	**127**			Pn	03 10 37.8	-0.1
FNO	**Franklin**	**1.61**	**182**			Pn	03 10 39.1	+0.6
R32A	**Long Quarter,**	**1.90**	**325**	Pn		Pn	03 10 41.8	-0.6
KSU1	**Kansas State U**	**2.29**	**14**			Pn	03 10 47.8	-0.1
X34A	**Smith Ranch, M**	**2.31**	**190**	Pn		Pn	03 10 47.9	-0.1
U38A	**Gravette**	**2.40**	**100**			Pn	03 10 48.8	-0.5
WMOK	**Wichita Mounta**	**2.44**	**209**			Pn	03 10 50.0	+0.2
CBKS	**Cedar Bluff**	**2.72**	**316**	IAmb_Lg			03 11 38.9	
	comp=Z,17nm,0.7s							
X37A	**Clayton**	**2.78**	**145**	Pn		Pn	03 10 54.2	-0.3
X37A				IAmb_Lg			03 11 41.5	
	comp=Z,20nm,1.0s							
HHAR	**Hobbs**	**2.79**	**101**			Pn	03 10 54.5	-0.1
S39A	**Bolivar**	**3.29**	**74**	Pn		Pn	03 11 02.0	+0.4
W39A	**Magazine**	**3.32**	**119**	IAmb_Lg			03 11 57.5	
	comp=Z,21nm,0.7s							
MIAR	**Mount Ida**	**3.83**	**126**	Pn		Pn	03 11 08.0	-1.0
MIAR				IAmb_Lg			03 12 12.8	
	comp=Z,15nm,1.0s							
AMTX	**Amarillo**	**4.06**	**242**	IAmb_Lg			03 12 22.1	
	comp=Z,19nm,0.7s							
MGMO	**Mountain Grove**	**4.06**	**85**	Pn		Pn	03 11 12.2	+0.1
MGMO				IAmb_Lg			03 12 19.4	
	comp=Z,14nm,1.1s							
P38A	**Dawn**	**4.06**	**46**	IAmb_Lg			03 12 18.8	
	comp=Z,14nm,0.8s							
Z38A	**Mt. Pleasant**	**4.08**	**151**	IAmb_Lg			03 12 27.4	
	comp=Z,16nm,0.7s							
R40A	**Maddies Statio**	**4.26**	**69**	Pn		Pn	03 11 14.1	-0.7
R40A				IAmb_Lg			03 12 29.6	
	comp=Z,12nm,0.8s							
WHAR	**Wooly Hollow**	**4.37**	**110**	Pn		Pn	03 11 16.0	-0.4
WHAR				IAmb_Lg			03 12 32.9	
	comp=Z,14nm,0.8s							
W41B	**Gary Mavity, V**	**4.45**	**111**	IAmb_Lg			03 12 30.7	
	comp=Z,9.1nm,0.9s							
WLAR	**White Oak Lake**	**4.69**	**131**	IAmb_Lg			03 12 37.6	
	comp=Z,9.1nm,0.8s							
P40A	**Paris**	**4.93**	**56**	IAmb_Lg			03 12 48.0	
	comp=Z,11nm,0.7s							
CCM	**Cathedral Cave**	**4.98**	**74**	IAmb_Lg			03 12 54.3	
	comp=Z,8.5nm,0.7s							
PBMO	**Poplar Bluff**	**5.53**	**89**	IAmb_Lg			03 13 11.4	
	comp=Z,6.6nm,0.8s							
SIUC	**Southern Illin**	**6.52**	**80**	IA

WLAR	**White Oak Lake**	**4.04**	**122**	IAmb_Lg			03 38 02.1		
	comp=Z,6.5nm,0.7s								
WHAR	**Wooly Hollow**	**4.08**	**97**	Pn	Pn		03 36 54.4	-0.1	
WHAR				IAmb_Lg			03 38 04.8		
	comp=Z,7.6nm,1.0s								
W41B	**Gary Mavity, V**	**4.13**	**98**	Pn	Pn		03 36 55.3	+0.1	
FCAR	**Ozark Folk Cen**	**4.15**	**88**	Pn	Pn		03 36 56.1	+0.6	
MGMO	**Mountain Grove**	**4.20**	**71**	IAmb_Lg			03 38 04.0		
	comp=Z,13nm,0.8s								
R40A	**Maddies Statio**	**4.65**	**57**	IAmb_Lg			03 38 20.7		
	comp=Z,9.3nm,0.7s								
P38A	**Dawn**	**4.76**	**37**	Pn	Pn		03 37 03.6	-0.2	
P38A				IAmb_Lg			03 38 34.3		
	comp=Z,6.4nm,0.9s								
N35A	**Tabor**	**5.13**	**14**	IAmb_Lg			03 38 42.6		
	comp=Z,10nm,0.7s								
CCM	**Cathedral Cave**	**5.27**	**64**	IAmb_Lg			03 38 43.3		
	comp=Z,10nm,0.7s								
JCT	**Junction City**	**5.79**	**202**	IAmb_Lg			03 39 07.2		
	comp=Z,4.5nm,0.7s								
FVM	**French Village**	**5.85**	**67**	IAmb_Lg			03 39 02.1		
	comp=Z,7.1nm,0.9s								
L34A	**Svendsen Farm,**	**6.12**	**6**	IAmb_Lg			03 39 23.7		
	comp=Z,10nm,0.9s								
S44A	**Carbondale**	**6.66**	**72**	IAmb_Lg			03 39 35.9		
	comp=Z,8.4nm,0.7s								
SIUC	**Southern Illin**	**6.69**	**72**	IAmb_Lg			03 39 24.3		
	comp=Z,10nm,0.9s								
L40A	**Anamosa**	**7.75**	**35**	IAmb_Lg			03 40 04.5		
	comp=Z,6.0nm,0.9s								

*KRNET **30** 03:57:53.1±0.1,39°.10N×74°.29E,mb3.2*
*SOME **30** 03:58:26.8,40°.35N×73°.93E,h20km*
ISC 30 03:58:03.0±1.8,**39°.36N**±0°.09×**73°.49E**±0°.06,**h10**km,**n11,**
σ**1°.33**/21,**6C, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	**Batken**	**2.18**	**290**	⇑*i*P	**Pn**	**03 58 39.2**	**-0.2**
	baz=91						
BTK				⇑*i*S	**Sg**	**03 59 13.1**	**+0.1**
	baz=91						
GAR	**Garm**	**2.50**	**263**	⇑*i*P	**Pn**	**03 58 42.8**	**-1.0**
	baz=69						
GAR				⇑*i*S	**Sb**	**03 59 18.2**	**-0.6**
	baz=69						
TRKS	**Terek-Say**	**2.82**	**321**	⇑*i*P	**Pn**	**03 58 46.1**	**-2.1**
	baz=16						
TRKS				⇑*i*S	**Sn**	**03 59 23.4**	**+1.1**
	baz=16						
MRKS	**Merke**	**3.39**	**357**	*e*P	**Pg**	**03 59 10.4**	**+2.5**
	3.9nm,0.5s						
MRKS				*e*S	**Sb**	**03 59 42.1**	**-2.4**
	5.8nm,0.3s						
KST	**Kastek**	**4.12**	**26**	*e*P	**Pg**	**03 59 23.2**	**+1.3**
	1.5nm,0.4s						
KST				*e*S	**Sb**	**04 00 03.9**	**-1.8**
	3.5nm,0.4s						
DGS	**Degeres**	**4.24**	**23**	*e*P	**Pg**	**03 59 25.9**	**+1.7**
	2.0nm,0.5s						
DGS				*e*S	**Sb**	**04 00 08.5**	**-0.5**
	2.7nm,0.6s						
TNSS	**Tian-Shan**	**4.50**	**34**	*e*P	**Pg**	**03 59 30.9**	**+1.7**
	1.5nm,0.3s						
TNSS				*e*S	**Sb**	**04 00 17.0**	**+0.1**
	1.9nm,0.6s						
BRLS	**Borolday**	**4.59**	**324**	*e*P	Pg	03 59 38.7	+7.8
	4.1nm,0.7s						
BRLS				*e*S	**Sg**	**04 00 30.1**	**-0.3**
	2.9nm,0.8s						
KRBS	**Karabastau**	**4.63**	**20**	*e*P	**Pg**	**03 59 32.9**	**+1.3**
	0.4nm,0.7s						
KRBS				*e*S	**Sb**	**04 00 20.7**	**+0.5**
	2.3nm,0.9s						
KTBS	**Karatobe**	**4.96**	**28**	*e*P	**Pg**	**03 59 37.8**	**-0.3**
	2.2nm,0.5s						
KTBS				*e*S	**Sb**	**04 00 28.9**	**-0.8**
	0.9nm,0.7s						
KUU	**Kurty**	**5.01**	**24**	*e*P	**Pg**	**03 59 39.0**	**+0.2**
	1.3nm,0.2s						
KUU				*e*S	**Sb**	**04 00 31.1**	**+0.1**
	4.7nm,0.6s						

IDC 30 04:01:47.1±1.3,**18°.27N**×**145°.75E,h0**km,**mb3.7/5,**
mbtmp3.7/5,Error ellipse: s-maj=39.7km s-min=32.9km az=102.0,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**39.59**	**197**	P	P	04 09 20.3	-0.1
	0.5nm,0.8s,baz=19,slow=8.5,SNR=1.9						
	0.5nm,0.8s						
MKAR	**Makanchi Array**	**58.79**	**314**	P	P	04 11 47.8	+0.5
	0.4nm,0.5s,baz=90,slow=7.6,SNR=4.4						
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**61.67**	**318**	P	P	04 12 06.5	-0.4
	1.2nm,0.5s,baz=96,slow=7.2,SNR=14						
	1.2nm,0.5s						
ILAR	**Eielson Array**	**64.01**	**26**	P	P	04 12 22.5	+0.2
	0.5nm,0.6s,baz=248,slow=6.1,SNR=5.1						
	0.5nm,0.6s						
NVAR	**Mina Array Bea**	**83.37**	**52**	P	P	04 14 16.6	-0.2
	0.4nm,0.5s,baz=265,slow=5.4,SNR=4.0						
	0.4nm,0.5s						

SVSA 30 04:20:51.2±1.0,**36°.85N**×**24°.03W,h10**km,**ML3.7**(INMG),
Error ellipse: s-maj=5.6km s-min=3.5km az=52.0,
Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSMN	**Pico do Norte,**	**0.84**	**281**	*e*P	Pg	04 21 04.3	-3.1
PSMN				*e*S	Sg	04 21 13.9	-4.5
PSMN				A	A	04 21 15.4	
	297nm,0.1s						
PSMA	**Santa Maria**	**0.89**	**279**	*e*P	Pg	04 21 04.7	-3.6
PSMA				*e*S	Sg	04 21 15.3	-4.6
PSMA				A	A	04 21 22.1	
	344nm,0.2s						
BART	**Pico Bartolome**	**1.29**	**316**	*e*P	Pn	04 21 10.3	-5.1
BART				*e*S	Sb	04 21 24.8	-7.5
BART				A	A	04 21 25.5	
	552nm,0.2s						
PPOV	**Povoa§£o**	**1.32**	**313**	*e*P	Pn	04 21 11.1	-4.5
PPOV				*e*S	Sb	04 21 25.8	-7.1
PPOV				A	A	04 21 26.2	
	301nm,0.1s						
PNOR2	**Nordeste**	**1.32**	**318**	*e*P	Pn	04 21 11.0	-4.7
PNOR2				*e*S	Sb	04 21 25.9	-7.2
PNOR2				A	A	04 21 28.5	
	487nm,0.3s						
PCALD	**Caldeiras da R**	**1.49**	**310**	*e*P	Pn	04 21 13.9	-4.2
PCALD				*e*S	Sn	04 21 30.2	-7.5
PCALD				A	A	04 21 32.9	
	140nm,0.3s						
CMLA	**Cha da Macela**	**1.50**	**308**	*e*P	Pn	04 21 13.4	-4.7
CMLA				*e*S	Sn	04 21 30.3	-7.4
CMLA				A	A	04 21 33.7	
	1µm,0.3s						
GRON	**Grota Negra**	**1.50**	**308**	*e*P	Pn	04 21 12.2	-6.1
GRON				*e*S	Sn	04 21 28.3	-10
GRON				A	A	04 21 29.0	
	286nm,0.1s						
PRIG	**Ribeira Grande**	**1.53**	**309**	*e*S	Sn	04 21 30.9	-7.6
PRIG				A	A	04 21 33.7	
	442nm,0.3s						
PDA	**Ponta Delgada**	**1.58**	**305**	*e*P	Pn	04 21 14.4	-4.8
PDA				*e*S	Sn	04 21 32.2	-7.4
PDA				A	A	04 21 37.1	
	125nm,0.2s						
PSET	**Sete Cidades**	**1.66**	**306**	*e*P	Pn	04 21 15.8	-4.6
PSET				*e*S	Sn	04 21 34.3	-7.4
PSET				A	A	04 21 39.3	
	238nm,0.4s						
PMOS	**Mosteiros**	**1.76**	**307**	*e*P	Pn	04 21 17.0	-4.7
PMOS				*e*S	Sn	04 21 36.4	-7.8
PMOS				A	A	04 21 38.1	
	314nm,0.1s						
PAGU	**Agualva, Azore**	**3.14**	**308**	*e*P	Pn	04 21 36.6	-4.2
PAGU				*e*S	Sn	04 22 10.6	-7.7
PAGU				A	A	04 22 12.9	
	223nm,0.2s						
PID	**Ribeirinha**	**3.61**	**297**	*e*P	Pn	04 21 43.1	-4.1
PID				*e*S	Sn	04 22 21.5	-8.4
PID				A	A	04 22 23.3	
	18nm,0.2s						
PMAN	**Manadas**	**3.67**	**300**	*e*P	Pn	04 21 43.9	-4.1
PMAN				*e*S	Sn	04 22 23.2	-8.2
PMAN				A	A	04 22 24.4	
	29nm,0.4s						
ROSA	**Rosais**	**3.82**	**300**	*e*P	Pn	04 21 46.1	-4.0
ROSA				*e*S	Sn	04 22 26.7	-8.3
ROSA				A	A	04 22 31.1	
	22nm,0.1s						
SRBC	**Serra Branca**	**3.84**	**306**	*e*P	Pn	04 21 45.6	-4.8
SRBC				*e*S	Sn	04 22 27.4	-8.3
SRBC				A	A	04 22 31.6	
	52nm,0.3s						
PICO	**Pico**	**3.85**	**297**	*e*P	Pn	04 21 46.0	-4.6
PICO				*e*S	Sn	04 22 27.9	-8.1
PICO				A	A	04 22 30.1	
	43nm,0.2s						
PCAN	**Candelaria**	**3.88**	**296**	*e*P	Pn	04 21 46.9	-4.0
PCAN				*e*S	Sn	04 22 28.4	-8.2
PCAN				A	A	04 22 32.2	
	44nm,0.3s						
HOR	**Horta**	**4.01**	**296**	*e*P	Pn	04 21 48.4	-4.3
HOR				*e*S	Sn	04 22 31.3	-8.4
HOR				A	A	04 22 33.3	
	50nm,0.2s						
CALA	**Caldeira**	**4.08**	**296**	*e*P	Pn	04 21 49.8	-4.0
CALA				*e*S	Sn	04 22 33.4	-8.3
CALA				A	A	04 22 35.4	
	63nm,0.2s						
PCED	**Cedros**	**4.10**	**297**	*e*P	Pn	04 21 49.7	-4.3
PCED				*e*S	Sn	04 22 32.5	-10
PCED				A	A	04 22 36.4	
	21nm,0.1s						

*PRU **30** 04:34:31.2±0.0,51°.53N×16°.01E,h0km*
*VIE **30** 04:34:32.5±1.3,51°.39N×15°.99E,h0km,mb2.3/5,ml2.5/5,*
Error ellipse: s-maj=7.9km s-min=6.4km az=153.0 78 km
WNW of Wroclaw Suspected Mining induced.
ISC 30 04:34:30.1±1.2,**51°.57N**±0°.05×**16°.02E**±0°.03,**h0**km,**n25,**
σ**0°.91**/48,**Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.75**	**166**	*e*Pg	**Pg**	**04 34 44.9**	**+0.5**
KSP				*e*Sg	**Sg**	**04 34 54.9**	**+0.9**
CHVC	**Chvalec**	**0.98**	**179**	*e*PG	**Pb**	**04 34 49.6**	**-0.4**
CHVC				*e*SG	**Sb**	**04 35 02.6**	**-0.8**
	comp=Z,36nm,0.4s						
OSTC	**Ostas**	**1.02**	**173**	*e*PG	**Pb**	**04 34 50.9**	**+0.3**
OSTC				*e*SG	**Sb**	**04 35 03.7**	**-0.9**
	comp=Z,47nm,0.3s						
UPC	**Upice**	**1.06**	**180**	*e*PG	**Pg**	**04 34 50.9**	**+0.5**
UPC				*e*SG	**Sg**	**04 35 04.7**	**+0.6**
	comp=Z,93nm,0.3s						
DPC	**Dobruska-Polom**	**1.23**	**171**	*e*PG	**Pg**	**04 34 53.8**	**+0.1**
DPC				*e*SG	**Sg**	**04 35 08.7**	**-1.0**
	comp=Z,46nm,0.3s						
PVCC	**Panska Ves**	**1.39**	**222**	*e*PG	**Pg**	**04 34 56.7**	**+0.1**
PVCC				*e*SG	**Sn**	**04 35 15.8**	**+0.1**
	comp=Z,118nm,0.2s						
BRG	**Berggiesshubel**	**1.48**	**243**	Pg	**Pn**	**04 34 58.1**	**+0.1**
BRG				Sg	**Sg**	**04 35 17.7**	**+0.2**
BRG				Amp		04 35 21.0	
	comp=Z,33nm,0.4s						
KRLC	**Kraliky**	**1.57**	**162**	*e*PG	**Pn**	**04 34 59.2**	**-0.1**
KRLC				*e*SG	**Sn**	**04 35 19.5**	**-0.8**
	comp=Z,33nm,0.3s						
PRU	**Pruhonice**	**1.84**	**211**	*e*PG	**Pb**	**04 35 04.0**	**-0.5**
PRU				*e*SG	**Sg**	**04 35 29.0**	**-0.1**
	comp=Z,16nm,0.2s						
CLL	**Collm**	**1.91**	**263**	*i* Pn	**Pn**	**04 35 02.8**	**-1.0**
CLL				*e*Pg	**Pb**	**04 35 06.0**	**+0.3**
CLL				*i* x	x	04 35 09.8	
CLL				*e*x	x	04 35 26.0	
CLL				*e*Sg	**Sg**	**04 35 32.0**	**+0.8**
	comp=Z,15nm,0.5s						
MORC	**Moravsky Berou**	**2.04**	**151**	*e*PN	**Pn**	**04 35 05.1**	**-0.6**
MORC				*e*SG	**Sb**	**04 35 33.7**	**-0.2**
VRAC	**Vranov**	**2.29**	**171**	*e*PN	**Pn**	**04 35 09.7**	**+0.6**
VRAC				*e*SG	**Sg**	**04 35 43.8**	**+0.1**
KRUC	**Moravsky**	**2.52**	**174**	*e*SG	**Sg**	**04 35 52.1**	**+1.1**
NKC	**Novy Kostel**	**2.62**	**241**	*e*PN	**Pn**	**04 35 13.8**	**+0.1**
NKC				*e*PG	**Pg**	**04 35 20.3**	**-0.1**
NKC				*e*SG	**Sg**	**04 35 54.6**	**+0.2**
	comp=Z,27nm,0.3s						
OJC	**Ojcow**	**2.75**	**118**	*e*Pg	**Pg**	**04 35 23.0**	**+0.2**
OJC				*e*Sg	**Sg**	**04 35 57.8**	**-0.6**
KHC	**Kasperske Hory**	**2.90**	**214**	*e*PN	**Pn**	**04 35 17.8**	**+0.3**
KHC				*e*PG	**Pb**	**04 35 23.7**	**+1.1**
KHC				*e*SN	**Sn**	**04 35 51.7**	**-1.3**
KHC				*e*SG	**Sg**	**04 36 01.3**	**-1.8**
	comp=Z,7.4nm,0.3s						
JAVC	**Velka Javorina**	**2.91**	**158**	*e*PN	**Pn**	**04 35 17.6**	**-0.1**
CKRC	**Cesky Krumlov**	**2.96**	**202**	*e*PG	**Pb**	**04 35 23.9**	**+0.2**
CKRC				*e*SG	**Sg**	**04 36 03.7**	**-1.5**
	comp=Z,7.7nm,0.3s						
LANS	**Liptovska Anna**	**3.28**	**136**	*e*PG	**Pg**	**04 35 34.4**	**+1.5**
LANS				*e*SN	Sn	04 35 46.6	-16
LANS				*e*SG	**Sg**	**04 36 14.7**	**-0.6**
MODS	**Modra-Piesok**	**3.30**	**165**	*e*SG	**Sg**	**04 36 14.6**	**-1.4**
CONA	**Conrad Observa**	**3.64**	**182**	*e*Pn	**Pn**	**04 35 29.8**	**+2.0**
	comp=Z,0.5nm,0.2s						
CONA				*e*Sg	**Sg**	**04 36 25.9**	**-1.2**
	comp=Z,4.1nm,0.3s						
MOA	**Molln**	**3.89**	**198**	*i* Pn	**Pn**	**04 35 31.8**	**+0.7**
	comp=Z,1.9nm,0.2s						
MOA				*e*Sg	**Sg**	**04 36 34.2**	**-0.9**
	comp=Z,5.8nm,0.4s						
ARSA	**Arzberg**	**4.33**	**184**	*e*Sg	**Sg**	**04 36 49.8**	**+0.6**
	comp=Z,2.7nm,0.4s						
KBA	**Koelnbreinsper**	**4.82**	**202**	*e*Sg	**Sg**	**04 37 05.2**	**+0.4**
	comp=Z,3.9nm,0.5s						
ABTA	**Abfaltersbach**	**5.34**	**207**	*e*Sg	**Sg**	**04 37 24.4**	**+2.8**
	comp=Z,3.9nm,0.7s						

*IDC **30** 04:38:29.9±1.1,37°.49N×16°.42W,h0km,mb3.7/14,*
mbtmp3.8/17,ML4.4/3,MS3.1/10,Error ellipse:
s-maj=26.8km s-min=17.6km az=11.0
*NEIC **30** 04:38:30.9±1.8,37°.50N±0°.07×16°.37W±0°.09,h13km±5km,*
mb4.3/9,Error ellipse: s-maj=11.4km s-min=9.9km
az=136.0
*MDD **30** 04:38:32.5±0.3,37°.45N×16°.30W,h20km,Mb4.9/38,Error*
ellipse: s-maj=3.5km s-min=2.0km az=129.0
*IGIL **30** 04:38:32.9,37°.49N×16°.33W,h14km,ML4.3*
*CNRM **30** 04:38:35.8,36°.88N×16°.17W,h6km*
*INMG **30** 04:38:36.4±2.1,37°.50N×16°.35W,h10km,MD4.0,ML4.3,*
Error ellipse: s-maj=5.6km s-min=2.9km az=127.0
*LDG **30** 04:38:40.6±0.3,37°.91N×15°.36W,h25km,Ml4.1/30,Error*
ellipse: s-maj=5.3km s-min=4.2km az=79.0
ISC 30 04:38:29.2±0.5,**37°.39N**±0°.04×**16°.29W**±0°.04,**h10**km,**n248,**
σ**3°.64**/307,**mb4.0**/23,**MS3.3**/9,**42C-1D, Azores-Cape St.**
Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMPST	**Porto Santo, M**	**4.30**	**181**	*e*P	**Pn**	**04 39 36.9**	**+2.2**
PMPST				*e*S	**Sn**	**04 40 20.1**	**-4.7**
PMPST				A	A	04 40 22.7	
	367nm,0.3s						
PMPST				*e*T	T	04 43 41.7	
PMPS	**Porto Santo**	**4.32**	**181**	*e*P	**Pn**	**04 39 37.4**	**+2.5**
PMPS				*e*S	**Sn**	**04 40 20.4**	**-4.9**
PMPS				A	A	04 40 22.8	
	211nm,0.3s						
PMPS				*e*T	T	04 43 47.4	
PMOZ	**Porto Moniz, M**	**4.61**	**190**	*e*P	**Pn**	**04 39 41.6**	**+2.5**
PMOZ				*e*S	**Sn**	**04 40 27.8**	**-5.0**
PMOZ				A	A	04 40 30.4	
	1µm,0.4s						
PMOZ				*e*T	T	04 44 14.3	
PMOZ	**Porto Moniz, M**	**4.61**	**190**	Pn	**Pn**	**04 39 41.6**	**+2.5**
PMOZ				Sn	**Sn**	**04 40 27.7**	**-5.1**
PMOZ	**Porto Moniz, M**	**4.61**	**190**	P	**Pn**	**04 39 41.6**	**+2.5**
PMOZ				S	**Sn**	**04 40 36.0**	**+3.3**
PMAR	**Madeira**	**4.68**	**186**	⇑*e*P	**Pn**	**04 39 42.6**	**+2.5**
PMAR				*e*S	**Sn**	**04 40 29.2**	**-5.3**
PMAR				A	A	04 40 33.3	
	636nm,0.7s						
PMAR				*e*T	T	04 44 09.8	
FUL	**Funchal**	**4.75**	**186**	⇑*e*P	**Pn**	**04 39 43.3**	**+2.4**
FUL				*e*S	**Sn**	**04 40 30.3**	**-5.8**
FUL				A	A	04 40 34.2	
	364nm,0.2s						
FUL				*e*T	T	04 44 13.6	
PMAFR	**Mafra**	**5.74**	**72**	*e*P	**Pn**	**04 39 56.2**	**+1.7**
PMAFR				*e*S	**Sn**	**04 40 55.3**	**-5.1**
PMAFR				A	A	04 40 59.7	
	377nm,0.4s						
LIS	**Lisbon**	**5.79**	**75**	*e*P	**Pn**	**04 39 56.4**	**+1.2**
LIS				*e*S	**Sn**	**04 40 57.1**	**-4.5**
LIS				IAML		04 41 04.8	
	comp=E,892nm,0.3s						
LIS	**Lisbon**	**5.79**	**75**	*e*P	**Pn**	**04 39 57.4**	**+2.3**
LIS				*e*S	**Sn**	**04 40 57.1**	**-4.5**
LIS				A	A	04 41 05.0	
	comp=E,367nm,0.4s						
PFVI	**Vila Bisbo**	**5.96**	**90**	⇑*e*P	**Pn**	**04 39 59.0**	**+1.5**
PFVI				*e*S	**Sn**	**04 41 01.3**	**-4.4**
PFVI				A	A	04 41 08.6	
	comp=E,128nm,0.4s						
PFVI	**Vila Bisbo**	**5.96**	**90**		**Pn**	**04 39 58.9**	**+1.5**
PFVI	**Vila Bisbo**	**5.96**	**90**	P	**Pn**	**04 39 59.3**	**+1.8**
PFVI				S	**Sn**	**04 41 00.5**	**-5.3**
PTEO	**Sao Teotonio**	**6.02**	**86**	⇑*i*P	**Pn**	**04 39 59.7**	**+1.4**
PTEO				*e*S	**Sn**	**04 41 01.6**	**-5.7**
PTEO				A	A	04 41 10.9	
	comp=E,165nm,0.4s						
PACT	**Alcochete**	**6.04**	**75**	*e*P	**Pn**	**04 40 00.4**	**+1.8**
PACT				*e*S	**Sn**	**04 41 03.0**	**-4.8**
PACT				A	A	04 41 28.3	
	comp=E,185nm,0.5s						
MORF	**Marmelete**	**6.08**	**88**	*e*P	**Pn**	**04 40 00.7**	**+1.4**
MORF				*e*S	**Sn**	**04 41 04.6**	**-4.4**
MORF				IAML		04 41 07.8	
	comp=N,246nm,0.3s						
MORF	**Marmelete**	**6.08**	**88**	*e*P	**Pn**	**04 40 00.7**	**+1.4**
MORF				*e*S	**Sn**	**04 41 04.4**	**-4.6**
MORF				A	A	04 41 10.6	
	comp=N,104nm,0.6s						
PNCL	**Nicolau / Gran**	**6.19**	**81**	*e*P	**Pn**	**04 40 01.7**	**+1.0**
PNCL				*e*S	**Sn**	**04 41 05.6**	**-5.9**
PNCL				A	A	04 41 15.4	
	comp=N,140nm,0.4s						
PSBE	**So Bento**	**6.25**	**68**	*e*P	**Pn**	**04 40 02.8**	**+1.2**
PSBE				*e*S	**Sn**	**04 41 07.8**	**-5.3**
PSBE				A	A	04 41 23.3	
	comp=N,111nm,0.5s						
MESJ	**Messejana**	**6.42**	**83**	*e*P	**Pn**	**04 40 04.9**	**+1.0**
MESJ				*e*S	**Sn**	**04 41 12.3**	**-4.8**
MESJ				IAML		04 41 16.4	
	comp=N,140nm,0.0s						
MESJ	**Messejana**	**6.42**	**83**	*e*P	**Pn**	**04 40 05.0**	**+1.2**
MESJ				*e*S	**Sn**	**04 41 12.4**	**-4.8**
MESJ				A	A	04 41 16.6	
	comp=N,99nm,0.6s						
PCVE	**Castro Verde**	**6.56**	**85**	⇑*i*P	**Pn**	**04 40 06.9**	**+1.1**
PCVE				*e*S	**Sn**	**04 41 16.6**	**-4.1**
PCVE				A	A	04 41 23.0	
	comp=N,68nm,0.6s						
PMTG	**Montargil**	**6.57**	**73**	*e*P	**Pn**	**04 40 06.9**	**+1.1**
PMTG				*e*S	**Sn**	**04 41 14.5**	**-6.2**
PMTG				A	A	04 41 19.3	
	comp=N,69nm,0.2s						
EVO	**Evora**	**6.64**	**78**	P	**Pn**	**04 40 07.6**	**+0.8**
EVO				S	**Sn**	**04 41 16.9**	**-5.6**
EVO	**Evora**	**6.64**	**78**	*e*P	**Pn**	**04 40 08.1**	**+1.3**
EVO				*e*S	**Sn**	**04 41 17.0**	**-5.6**
EVO				A	A	04 41 26.9	
	comp=N,108nm,0.7s						
PCAS	**Casmilo, Conde**	**6.65**	**64**	*e*P	**Pn**	**04 40 08.1**	**+1.1**
PCAS				*e*S	**Sn**	**04 41 15.9**	**-6.9**
PCAS				A	A	04 41 20.6	
	comp=N,80nm,0.5s						
PBDV	**Barranco-do-Ve**	**6.66**	**89**	*e*P	**Pn**	**04 40 08.9**	**+1.7**
PBDV				*e*S	**Sn**	**04 41 17.8**	**-5.4**
PBDV				A	A	04 41 25.0	
	comp=N,92nm,0.6s						
PBEJ	**Beja**	**6.71**	**82**	*e*P	**Pn**	**04 40 08.9**	**+1.1**
PBEJ				*e*S	**Sn**	**04 41 18.7**	**-5.6**
PBEJ				A	A	04 41 21.4	
	comp=N,58nm,0.6s						
COI	**Coimbra**	**6.76**	**63**	*e*P	**Pn**	**04 40 09.2**	**+0.6**
COI				*e*S	**Sn**	**04 41 18.1**	**-7.5**
COI				A	A	04 41 31.3	
	comp=N,155nm,0.5s						
COI	**Coimbra**	**6.76**	**63**		**Pn**	**04 40 09.0**	**+0.5**
PVAQ	**Vaqueiros**	**6.82**	**87**	*e*P	**Pn**	**04 40 10.7**	**+1.4**
PVAQ				*e*S	**Sn**	**04 41 22.0**	**-5.1**
PVAQ				A	A	04 41 27.9	
	comp=N,105nm,0.6s						
PVAQ	**Vaqueiros**	**6.82**	**87**	Pn	**Pn**	**04 40 10.7**	**+1.4**
PVAQ	**Vaqueiros**	**6.82**	**87**	P	**Pn**	**04 40 11.0**	**+1.6**
PVAQ				S	**Sn**	**04 41 20.5**	**-6.6**
EGRO	**El Granado**	**7.00**	**86**	P	**Pn**	**04 40 13.1**	**+1.2**
EGRO				⇑*i*Vmb_V		04 40 20.7	
	comp=N,1µm,SNR=8.5						
EGRO				S	**Sn**	**04 41 26.7**	**-4.9**
PESTR	**Estremoz**	**7.01**	**75**	*e*P	**Pn**	**04 40 13.2**	**+1.2**
PESTR				*e*S	**Sn**	**04 41 25.1**	**-6.7**
PESTR				A	A	04 41 35.7	
	comp=N,105nm,0.7s						
PESTR	**Estremoz**	**7.01**	**75**		**Pn**	**04 40 12.8**	**+0.8**
PESTR	**Estremoz**	**7.01**	**75**	P	**Pn**	**04 40 12.6**	**+0.6**
PSMN	**Pico do Norte,**	**7.02**	**270**	*e*P	**Pn**	**04 40 08.2**	**-3.8**
PTO	**Porto**	**7.04**	**55**	*e*P	**Pn**	**04 40 13.0**	**+0.7**
PTO				*e*S	Sn	04 41 23.4	-9.0
PTO				A	A	04 41 28.4	
	comp=N,293nm,0.5s						
BART	**Pico Bartolome**	**7.06**	**276**	*e*P	**Pn**	**04 40 11.3**	**-1.5**
PSMA	**Santa Maria**	**7.07**	**270**	*e*P	**Pn**	**04 40 09.2**	**-3.5**
PMRV	**Marv??o**	**7.28**	**71**	⇑*e*P	**Pn**	**04 40 16.5**	**+0.9**
PMRV				*e*S	**Sn**	**04 41 31.2**	**-7.1**
PMRV				A	A	04 41 50.8	
	comp=N,84nm,0.3s						
PCBR	**Castelo Branco**	**7.32**	**68**	⇓*e*P	**Pn**	**04 40 17.5**	**+1.3**
PCBR				*e*S	**Sn**	**04 41 31.4**	**-7.9**
PCBR				A	A	04 41 37.6	
	comp=N,65nm,0.5s						
PVIS	**Viseu**	**7.33**	**60**	*e*P	**Pn**	**04 40 17.2**	**+0.8**
PVIS				*e*S	**Sn**	**04 41 32.1**	**-7.5**
PVIS				A	A	04 41 36.6	
	comp=N,80nm,0.1s						
CMLA	**Cha da Macela**	**7.35**	**276**	*e*P	**Pn**	**

comp=N,178nm,0.6s
ELOB Lobios 7.77 52 P **Pn 04 40 22.2 -0.2**
ELOB ⇑*i*Vmb_V 04 40 26.4
comp=N,869nm,SNR=8.5
ELOB S Sn 04 41 41.4 -9.1
EMAZ Mazaricos 7.89 43 P **Pn 04 40 23.5 -0.5**
EMAZ ⇑*i*Vmb_V 04 40 26.2
comp=N,804nm,SNR=4.2
EMAZ S Sn 04 41 42.4 -11
MVO Moncorvo 8.11 59 *e*P **Pn 04 40 27.8 +0.7**
MVO *e*S Sn 04 41 49.6 -9.3
MVO A A 04 41 56.7
comp=N,124nm,0.5s
EAGO Agolada(Pontev 8.29 47 P **Pn 04 40 30.0 +0.5**
EAGO ⇑*i*Vmb_V 04 40 31.5
comp=N,710nm,SNR=4.8
EAGO S Sn 04 41 51.8 -11
AVE Averroes 8.32 117 P **Pn 04 40 32.9 +3.0**
AVE S **Sn 04 42 01.2 -2.6**
AVE Averroes 8.32 117 P **Pn 04 40 32.9 +3.0**
AVE Averroes 8.32 117 P **Pn 04 40 33.6 +3.8**
AVE S **Sn 04 42 00.4 -3.4**
ESPR Espera 8.35 90 P **Pn 04 40 31.9 +1.6**
ESPR ⇑*i*Vmb_V 04 40 38.6
comp=N,1µm,SNR=16
ESPR S **Sn 04 42 01.4 -3.2**
EPLA Plasencia 8.41 68 P **Pn 04 40 31.9 +0.6**
EPLA ⇑*i*Vmb_V 04 40 41.1
comp=N,596nm,SNR=9.7
EPLA S **Sn 04 41 58.3 -8.0**
SRHM Skhour des Reh 8.45 123 P Pn 04 40 37.0 +5.2
SRHM S **Sn 04 42 09.0 +1.6**
EFAM Famara 8.55 164 P **Pn 04 40 35.4 +2.3**
EFAM ⇑*i*Vmb_V 04 40 41.8
comp=N,825nm,SNR=1.5
EFAM S **Sn 04 42 05.0 -4.7**
PBRG Braganca 8.59 56 *e*P **Pn 04 40 34.7 +1.1**
PBRG *e*S Sn 04 42 01.5 -9.1
PBRG A A 04 42 07.4
comp=N,80nm,0.5s
ECAB El Cabril 8.64 82 P **Pn 04 40 35.6 +1.3**
ECAB ⇑*i*Vmb_V 04 40 36.9
comp=N,838nm,SNR=17
ECAB S **Sn 04 42 04.0 -7.9**
ECAL Calabor 8.66 55 P **Pn 04 40 35.4 +0.8**
ECAL ⇑*i*Vmb_V 04 40 41.3
comp=N,824nm,SNR=6.3
ECAL S Sn 04 42 02.9 -9.4
PAGU Agualva, Azore 8.70 282 *e*P **Pn 04 40 34.5 -0.7**
EJIF Jimena Fronter 8.72 93 P **Pn 04 40 39.0 +3.6**
EJIF S **Sn 04 42 06.5 -7.2**
TBT Taburiente 8.79 189 S Sn 04 42 03.3 -12
ZHG ZHG 8.80 114 P **Pn 04 40 39.0 +2.4**
ZHG S **Sn 04 42 16.1 +0.2**
ZHG ZHG 8.80 114 P **Pn 04 40 39.0 +2.4**
ZHG S **Sn 04 42 08.9 -6.9**
CLOB Isla de Lobos, 8.84 166 P **Pn 04 40 39.8 +2.7**
CLOB ⇑*i*Vmb_V 04 40 42.9
comp=N,856nm,SNR=3.5
CLOB S **Sn 04 42 11.2 -5.6**
CEU Ceuta 8.90 96 P **Pn 04 40 41.8 +4.0**
CEU S **Sn 04 42 14.8 -3.3**
CFUE Fuerteventura 8.93 167 P **Pn 04 40 38.1 -0.2**
CFUE ⇑*i*Vmb_V 04 40 42.5
comp=N,968nm,SNR=4.9
CFUE S Sn 04 42 10.3 -8.8
SMIR Smir Dam 8.94 98 P **Pn 04 40 43.0 +4.5**
SMIR Smir Dam 8.94 98 P **Pn 04 40 40.9 +2.4**
SMIR S **Sn 04 42 17.5 -1.7**
CGUI Guimar, Teneri 9.04 181 P **Pn 04 40 40.8 +0.9**
CGUI ⇑*i*Vmb_V 04 40 44.4
comp=N,571nm,SNR=0.8
CGUI S **Sn 04 42 15.7 -6.1**
CRAJ Montana Rajada 9.10 182 P Pn 04 40 49.9 +9.0
CRAJ S Sn 04 42 14.4 -9.2
MACI Morro de la Ar 9.11 181 P **Pn 04 40 44.8 +3.9**
MACI S **Sn 04 42 16.9 -6.8**
CCAN Las Canadas 9.14 182 P **Pn 04 40 43.4 +1.9**
CCAN S **Sn 04 42 16.7 -7.9**
EPON Pontenova 9.15 47 P **Pn 04 40 41.5 +0.1**
EPON ⇑*i*Vmb_V 04 40 46.5
comp=N,387nm,SNR=1.9
EPON S Sn 04 42 13.4 -11
EGOM La Gomera 9.23 185 P **Pn 04 40 42.2 -0.2**
EGOM ⇑*i*Vmb_V 04 40 48.5
comp=N,414nm,SNR=1.1
EGOM S Sn 04 42 16.4 -10
EMIJ Mijas 9.25 92 P **Pn 04 40 44.2 +1.5**
EMIJ ⇑*i*Vmb_V 04 40 46.1
comp=N,337nm,SNR=11
EMIJ S **Sn 04 42 19.8 -7.0**
OUK Oukaimeden 9.30 129 P **Pn 04 40 48.0 +4.3**
OUK S **Sn 04 42 23.8 -4.7**
EADA Adamuz 9.31 82 P **Pn 04 40 44.0 +0.5**
EADA ⇑*i*Vmb_V 04 40 50.3
comp=N,589nm,SNR=12
EADA S **Sn 04 42 21.3 -6.9**
EOSO Osorio 9.31 176⇑*i*Vmb_V 04 40 50.3
comp=N,433nm,SNR=1.1
EOSO S **Sn 04 42 22.2 -6.2**
CGIN Giniginamar, F 9.34 168 P **Pn 04 40 46.3 +2.4**
CGIN ⇑*i*Vmb_V 04 40 51.7
comp=N,375nm,SNR=2.0
CGIN S **Sn 04 42 22.1 -6.9**
SRBC Serra Branca 9.40 284 *e*P **Pn 04 40 43.3 -1.4**
PMAN Manadas 9.40 281 *e*P **Pn 04 40 43.8 -0.9**
PID Ribeirinha 9.41 280 *e*P **Pn 04 40 44.3 -0.6**
TTIG Tnine Tigouga, 9.43 134 P **Pn 04 40 46.0 +0.7**
TTIG Tnine Tigouga, 9.43 134 P **Pn 04 40 46.0 +0.7**
TTIG S **Sn 04 42 29.3 -2.1**
EMAL Malaga-Limoner 9.50 90 P **Pn 04 40 48.3 +2.2**
EMAL S **Sn 04 42 28.5 -4.3**
ROSA Rosais 9.52 282 *e*P **Pn 04 40 45.6 -0.8**
ROSA Rosais 9.52 282 **Pn 04 40 45.6 -0.8**
PAB San Pablo 9.61 73 Pn **Pn 04 40 48.5 +0.8**
PICO Pico 9.65 280 *e*P **Pn 04 40 47.5 -0.8**
PCAN Candelaria 9.70 280 *e*P **Pn 04 40 47.9 -0.9**
EGOR Sierra Gorda, 9.71 88 P **Pn 04 40 51.5 +2.3**
EGOR ⇑*i*Vmb_V 04 40 57.0
comp=N,163nm,SNR=4.9
EGOR S **Sn 04 42 33.7 -4.7**
CCUM Cumbre, El Hie 9.72 189 S Sn 04 42 29.2 -9.3
CJUL El Julan, El H 9.75 189 P Pn 04 41 01.0 +11
CJUL S Sn 04 42 27.9 -11
CMCL Mercadel, El H 9.75 189 S Sn 04 42 30.1 -9.3
HOR Horta 9.81 280 *e*P **Pn 04 40 49.2 -1.2**
CALA Caldeira 9.88 281 *e*P **Pn 04 40 50.4 -0.9**
PCED Cedros 9.88 281 *e*P **Pn 04 40 50.1 -1.1**
PFCBR Castelo Branco 9.88 280 *e*P **Pn 04 40 50.3 -1.0**
IFR Ifrane 9.89 110 P **Pn 04 40 52.6 +1.0**
IFR S **Sn 04 42 36.5 -6.2**
TANT Tantan 9.91 153 P **Pn 04 40 56.4 +4.7**
TANT S **Sn 04 42 40.8 -2.2**
ESDC Sonseca Array 9.92 73 Pn **Pn 04 40 52.9 +1.0**
comp=N,2.9nm,0.3s,baz=254,slow=13,SNR=96
ESDC Sn **Sn 04 42 35.9 -7.6**
comp=N,2.6nm,0.3s,baz=260,slow=23,SNR=8.6
comp=N,22nm,0.7s
ESDC Sonseca Array 9.92 73 Pn **Pn 04 40 52.6 +0.7**
ESDC Sonseca Array 9.92 73 P **Pn 04 40 52.4 +0.4**
ESDC ⇑*i*Vmb_V 04 40 55.6
comp=N,464nm,SNR=8.0
ESDC S **Sn 04 42 34.9 -8.5**
ESBB Sonseca Array 9.93 73 Pn **Pn 04 40 52.2 +0.3**
PVLZ Pæan de 9.93 99 P **Pn 04 40 56.4 +4.5**
PVLZ S **Sn 04 42 39.1 -4.3**
GUD Guadarrama 9.99 67 P **Pn 04 40 53.6 +0.7**
GUD ⇑*i*Vmb_V 04 40 57.9
comp=N,113nm,SNR=2.8
GUD S Sn 04 42 34.5 -11
ELGU Los Guajares, 10.12 89 P **Pn 04 40 57.4 +2.7**
ELGU ⇑*i*Vmb_V 04 41 02.9
comp=N,140nm,SNR=3.6
ELGU S **Sn 04 42 45.4 -3.0**
CZD Col de Zad 10.17 112 P **Pn 04 40 59.4 +3.8**
CZD S **Sn 04 42 43.7 -6.1**
OUZM OUZ 10.20 127 S **Sn 04 42 49.0 -1.3**
OUZM OUZ 10.20 127 P Pn 04 41 01.2 +5.4
OUZM S **Sn 04 42 47.1 -3.2**
PALE Palemas 10.20 99 P **Pn 04 40 58.3 +2.5**
PALE S **Sn 04 42 41.5 -8.6**
EQUE Quentar 10.24 87 P **Pn 04 40 59.1 +2.8**
EQUE ⇑*i*Vmb_V 04 40 59.1
comp=N,192nm,SNR=6.4
EQUE S **Sn 04 42 45.8 -5.4**
EARI Arriondas 10.31 52 P **Pn 04 40 57.4 +0.2**
EARI ⇑*i*Vmb_V 04 41 04.5
comp=N,305nm,SNR=1.7
EARI S **Sn 04 42 43.9 -8.9**
MD31 MD31 10.46 112 P **Pn 04 41 02.0 +2.6**
MD31 S **Sn 04 42 49.7 -7.0**
AKLM AKL 10.47 102 P **Pn 04 41 03.4 +3.9**
AKLM S **Sn 04 42 50.8 -6.2**
EQES Quesada 10.50 84 P **Pn 04 41 01.4 +1.5**
EQES ⇑*i*Vmb_V 04 41 03.4
comp=N,211nm,SNR=4.1
EQES S **Sn 04 42 51.9 -5.7**
UCM Universidad Co 10.58 70 P **Pn 04 41 02.4 +1.5**
UCM S **Sn 04 42 51.8 -7.8**
MDT Midelt 10.60 112 Pn **Pn 04 41 03.8 +2.5**
comp=N,1.2nm,0.3s,baz=208,slow=6.0,SNR=44
MDT Sn **Sn 04 42 53.3 -6.7**
comp=N,16nm,0.3s,baz=167,slow=16,SNR=28
MDT LR LR 04 44 37.7
comp=N,46nm,18.2s,baz=208,slow=34
comp=N,4.5nm,0.3s
MDT Midelt 10.60 112 P **Pn 04 41 03.7 +2.5**
MDT Midelt 10.60 112 P **Pn 04 41 03.7 +2.5**
MDT S **Sn 04 42 52.2 -7.8**
EBER Berja 10.71 89 P Pn 04 41 09.5 +6.7
EBER ⇑*i*Vmb_V 04 41 13.4
comp=N,184nm,SNR=2.7
EBER S **Sn 04 42 59.0 -3.8**
GOLM Goulmima 10.93 118 P **Pn 04 41 10.0 +4.2**
GOLM S **Sn 04 43 04.8 -3.3**
WMELI Melilla 10.95 97 S **Sn 04 43 04.2 -4.4**
TZRR Tazzarine 11.05 123 S **Sn 04 43 12.0 +0.8**
CHAS Isla Isabel II 11.40 97 P **Pn 04 41 14.2 +2.1**
CHAS S Sn 04 43 10.5 -9.0
ELAN Lanestosa 11.41 55 P **Pn 04 41 13.7 +1.4**
ELAN ⇑*i*Vmb_V 04 41 15.0
comp=N,227nm,SNR=2.5
ELAN S Sn 04 43 10.5 -9.4
ETOR Torete 11.58 68 P **Pn 04 41 15.4 +0.8**
ETOR ⇑*i*Vmb_V 04 41 19.4
comp=N,301nm,SNR=5.7
ETOR S Sn 04 43 13.5 -11
EZAR Zarzadilla de 11.59 83 P **Pn 04 41 15.6 +0.9**
EZAR S **Sn 04 43 17.8 -6.4**
ETOB Tobarra 11.70 79 P **Pn 04 41 16.4 +0.2**
ETOB ⇑*i*Vmb_V 04 41 21.1
comp=N,236nm,SNR=3.5
ETOB S **Sn 04 43 20.1 -6.8**
EMUR La Murta 11.95 83 P **Pn 04 41 22.3 +2.7**
EMUR ⇑*i*Vmb_V 04 41 22.9
comp=N,123nm,SNR=2.0
EMUR S **Sn 04 43 28.5 -4.4**
CART Cartagena 12.15 84 P Pn 04 41 31.3 +9.0
CART S **Sn 04 43 29.8 -8.0**
ECHE Chera 12.21 75 P **Pn 04 41 26.1 +2.9**
ECHE ⇑*i*Vmb_V 04 41 35.6
comp=N,91nm,SNR=5.3
ECHE S Sn 04 43 25.7 -14
EMOS Mosqueruela 12.68 72 P **Pn 04 41 30.7 +0.9**
EMOS ⇑*i*Vmb_V 04 41 37.9
comp=N,215nm,SNR=3.2
EMOS S Sn 04 43 41.2 -10
EORO Oroz-Betelu 12.71 60 P **Pn 04 41 30.7 +0.7**
EORO ⇑*i*Vmb_V 04 41 38.5
comp=N,152nm,SNR=7.4
EORO S Sn 04 43 41.1 -10
SJPF Ste Jean 12.85 59 *e*Pn Pn 04 41 25.0 -6.8
SJPF Ste Jean 12.85 59 *e*P **Pn 04 41 32.6 +0.8**
SJPF *e*Sn Sn 04 43 31.7 -23
comp=N,9.2nm,0.4s
ETSF Etsaut 13.23 61 *e*Pn Pn 04 41 30.9 -6.2
ETSF Etsaut 13.23 61 *e*P **Pn 04 41 37.0 -0.1**
ETSF *e*Sn Sn 04 43 41.6 -23
comp=N,17nm,0.5s
ECHI Chisagues Biel 13.68 62 P **Pn 04 41 44.9 +1.5**
ECHI S Sn 04 44 03.7 -12
EPF Esparros 13.89 61 *e*Pn Pn 04 41 40.6 -5.6
EPF Esparros 13.89 61 *e*P **Pn 04 41 46.0 -0.2**
EPF *e*Sn Sn 04 43 55.5 -25
comp=N,30nm,0.7s
QUIF Quistinic 14.26 38 *e*P **Pn 04 41 50.9 -0.2**
QUIF *e*Sn Sn 04 44 06.4 -23
comp=N,17nm,0.4s
ROSF Rostrenen 14.50 37 *e*Pn Pn 04 41 49.5 -4.9
ROSF Rostrenen 14.50 37 *e*P **Pn 04 41 55.2 +0.8**
ROSF *e*Sn Sn 04 44 11.6 -23
comp=N,24nm,0.6s
SGMF Saint Gilles 14.79 38 *e*P **Pn 04 41 57.5 -0.9**
SGMF *e*Sn Sn 04 44 18.9 -23
LFF La Frestale 14.86 54 *e*Pn Pn 04 41 53.2 -6.2
LFF La Frestale 14.86 54 *e*P **Pn 04 41 58.9 -0.5**
CCA1 Carnmenellis 15.06 28 P **Pn 04 42 01.7 -0.3**
CCA1 S Sn 04 44 28.6 -20
MFF Saint Martin d 15.10 47 *e*Pn **Pn 04 41 57.7 -4.9**
MFF Saint Martin d 15.10 47 *e*P **Pn 04 42 02.1 -0.5**
MFF *e*Sn Sn 04 44 26.3 -24
comp=N,15nm,0.6s
MTLF Montolieu 15.30 61 *e*Pn **Pn 04 41 59.6 -5.6**
MTLF Montolieu 15.30 61 *e*P **Pn 04 42 03.9 -1.3**
MTLF *e*Sn Sn 04 44 32.5 -22
comp=N,17nm,0.9s
RJF Les Rejaudoux 15.52 54 *e*Pn **Pn 04 42 01.5 -6.5**
RJF Les Rejaudoux 15.52 54 *e*P **Pn 04 42 07.8 -0.2**
RJF *e*Sn Sn 04 44 34.9 -25
comp=N,4.7nm,0.2s
CAF Calviac 15.72 56 *e*Pn **Pn 04 42 05.9 -4.9**
CAF Calviac 15.72 56 *e*P **Pn 04 42 10.5 -0.3**
CAF *e*Sn Sn 04 44 40.0 -25
comp=N,4.1nm,0.4s
GRR Gorron 15.74 41 *e*Pn **Pn 04 42 05.0 -5.9**
GRR Gorron 15.74 41 *e*P **Pn 04 42 10.8 -0.1**
GRR *e*Sn Sn 04 44 41.3 -24
comp=N,16nm,0.5s
DYA Yadsworthy 15.77 30 P **Pn 04 42 11.2 0.0**
DYA S Sn 04 44 48.5 -17
FLN La Foliniere 16.17 40 *e*P **Pn 04 42 17.2 +0.8**
baz=219
FLN *e*Sn Sn 04 44 51.9 -24
comp=N,5.3nm,0.4s
LDF La Druitiere 16.25 41 *e*Pn **Pn 04 42 13.6 -3.9**
LDF La Druitiere 16.25 41 *e*P **Pn 04 42 17.2 -0.3**
LDF *e*Sn Sn 04 44 54.6 -23
comp=N,11nm,0.5s
TCF Toulx Ste Croi 16.38 51 *e*Pn **Pn 04 42 14.1 -5.0**
TCF *e*Sn Sn 04 44 55.2 -26
comp=N,9.2nm,0.6s
LASF Ste Croix 16.65 60 *e*Pn **Pn 04 42 17.7 -4.9**
LASF Ste Croix 16.65 60 *e*P **Pn 04 42 22.4 -0.2**
LASF *e*Sn Sn 04 45 00.8 -27
comp=N,16nm,0.9s
BGF Bois d'Agland 16.89 51 *e*Pn **Pn 04 42 22.8 -2.8**
BGF *e*Sn Sn 04 45 09.3 -24
AVF Avril sur Loir 17.30 51 *e*Pn **Pn 04 42 28.8 -2.0**
AVF *e*Sn Sn 04 45 19.1 -24
VIVF Saint-Julien-l 17.44 58 *e*P **P 04 42 34.0 +0.2**
VIVF *e*Sn Sn 04 45 18.6 -28
comp=N,6.5nm,0.7s
SSF Saint Saulge 17.52 50 *e*Pn **Pn 04 42 30.8 -2.7**
SSF *e*Sn Sn 04 45 23.2 -25
SMF Signal de Mont 17.55 52 *e*Pn **Pn 04 42 30.1 -3.8**
SMF *e*Sn Sn 04 45 23.0 -26
SMRF Simiane la Rot 17.82 61 *e*Pn **Pn 04 42 35.3 -1.9**
SMRF *e*Sn Sn 04 45 31.8 -24
comp=N,0.9nm,0.4s
LOR Lormes 17.83 50 *e*Pn **Pn 04 42 37.4 +0.1**
baz=232
LOR *e*Sn Sn 04 45 32.1 -24
ORIF Oris-en-Rattie 18.28 59 *e*P **P 04 42 43.5 +0.4**
LMR La Mourre 18.34 64 *e*P **P 04 42 45.7 +2.0**
LMR *e*Sn Sn 04 45 44.5 -24
comp=N,4.1nm,0.8s
MBDF Montbardon 18.84 60 *e*Pn **P 04 42 47.8 -1.5**
MBDF Montbardon 18.84 60 *e*P **Pn 04 42 50.7 +0.9**
SFTF Sexfontaines 18.96 48 *e*P **Pn 04 42 51.7 +0.6**
SFTF *e*Sn Sn 04 45 52.6 -31
comp=N,3.1nm,0.4s
CABF La Chapelle 18.96 54 *e*P **Pn 04 42 51.4 +0.1**
CABF *e*Sn Sn 04 45 57.5 -26
comp=N,9.8nm,0.7s
LPL La Plagne 19.03 57 *e*Pn **Pn 04 42 52.5 +0.3**
LPG La Plagne 19.03 58 *e*Pn **Pn 04 42 53.6 +1.2**
SBF Sospel 19.10 63 *e*Pn **Pn 04 42 54.3 +1.4**
MEZF Maizieres J'vi 19.10 48 *e*P **Pn 04 42 53.7 +0.9**
MEZF *e*Sn Sn 04 46 10.9 -16
comp=N,3.2nm,0.3s
SAVF Savonnieres en 19.20 47 *e*P **Pn 04 42 54.9 +0.9**
baz=232
BAIF Baives 19.41 43 *e*P **Pn 04 43 00.3 +3.8**
BAIF *e*Sn Sn 04 46 20.3 -14
comp=N,4.4nm,0.5s
HAU Haudompre 19.66 50 *e*Pn **Pn 04 42 59.7 +0.1**
HAU *e*Sn S 04 46 24.4 -16
comp=N,3.4nm,0.3s
GIVF Givet 19.77 43 *e*P **Pn 04 43 03.7 +2.9**
GIVF *e*Sn S 04 46 26.4 -16
comp=N,4.0nm,0.3s
HINF Hinteralfeld 19.90 51 *e*P **Pn 04 43 06.6 +4.2**
HINF *e*Sn S 04 46 31.8 -13
comp=N,1.6nm,0.4s
PGF Pioggiola 20.02 67 *e*Pn **P 04 43 02.7 +0.4**
PGF *e*Sn S 04 46 31.7 -16
comp=N,1.4nm,0.5s
EKA Eskdalemuir Ar 20.05 22 P Pn 04 43 05.7 +1.6
baz=207,slow=9.4
comp=N,2.3nm,0.8s
ECH Echery 20.25 50 P Pn 04 43 06.5 0.0
WLF Walferdange 20.29 46 P Pn 04 43 06.7 -0.2
CDF Champ du Feu 20.40 50 *e*P Pn 04 43 11.0 +2.7
CDF *e*Sn S 04 46 43.5 -11
comp=N,0.7nm,0.3s
KEST Kesra 20.64 87 P Pn 04 43 13.7 +2.4
comp=N,9.2nm,1.0s,baz=1.3,slow=1.6,SNR=7.2
comp=N,9.2nm,1.0s
KEST Kesra 20.64 87 Pn 04 43 11.7 +0.4
KEST IAmb IAmb 04 43 29.0
comp=Z,13nm,1.0s
BFO Black Forest 21.01 51 P **P 04 43 12.9 0.0**
BFO IAmb IAmb 04 43 20.3
comp=Z,14nm,1.0s
DAVOX Davos/Dischmat 21.49 56 P **P 04 43 21.4 +3.2**
comp=Z,5.2nm,0.7s,baz=274,slow=9.2,SNR=9.5
DAVOX LR LR 04 51 01.1
comp=Z,40nm,19.4s,baz=260,slow=35
comp=Z,5.2nm,0.7s
DAVA Damuels 21.64 55 *e*P **P 04 43 22.4 +2.7**
comp=Z,6.5nm,0.7s
FETA Feichten 22.11 56 *e*P **P 04 43 28.3 +3.4**
comp=Z,7.2nm,1.0s
MOTA Moosalm 22.45 55 *e*P **P 04 43 31.0 +2.6**
comp=Z,5.7nm,1.2s
SQTA Sankt Quirin 22.48 55 *e*P **P 04 43 31.9 +3.1**
comp=Z,13nm,1.2s
WATA Walderalm 22.76 55 *e*P **P 04 43 35.4 +3.7**
comp=Z,8.7nm,1.0s
WTTA Wattenberg 22.78 55 *e*P **P 04 43 34.9 +3.0**
comp=Z,2.8nm,0.6s
NRCA Norcia 23.07 67 P **P 04 43 35.6 +0.7**
CLUD Cludinico 23.41 58 P **P 04 43 39.9 +1.6**
CLUD IAmb IAmb 04 44 04.9
comp=Z,6.1nm,0.8s
GEC2 GERESS Array S 24.55 53 P **P 04 43 50.4 +1.3**
GERES GERESS Array B 24.55 53 P **P 04 43 51.1 +2.0**
comp=Z,4.1nm,0.8s,baz=245,slow=12,SNR=26
comp=Z,4.1nm,0.8s
GERES GERESS Array B 24.55 53 P **P 04 43 49.9 +0.8**
KHC Kasperske Hory 24.55 52 *e*P **P 04 43 52.2 +3.1**
CLL Collm 24.95 47 *e*P **P 04 43 55.0 +2.5**
CLL *ex* x 04 44 23.0
CLL *e*PPP PPP 04 44 32.0
CLL *ex* x 04 46 16.0
TOA0 Torodi Ar. Sit 28.99 142 P **P 04 44 31.4 +2.1**
TOA0 IAmb IAmb 04 45 04.7
comp=Z,6.8nm,1.2s
TORD Torodi Ar. Bea 28.99 142 P **P 04 44 32.8 +3.5**
comp=Z,0.7nm,0.7s,baz=329,slow=9.3,SNR=5.0
comp=Z,0.7nm,0.7s
NOA NORSAR Array B 29.31 27 LR LR 04 54 47.1
comp=Z,17nm,21.6s,baz=265,slow=33
HFS Hagfors 29.69 30 LR LR 04 55 50.2
comp=Z,33nm,20.6s,baz=241,slow=35
DBIC Dimbokro 32.30 158 LR LR 04 57 21.9
comp=Z,73nm,19.7s,baz=11,slow=35
AKASG Malin Array Be 34.76 53 P **P 04 45 20.3 +0.8**
comp=Z,0.7nm,0.6s,baz=261,slow=9.4,SNR=4.6
comp=Z,0.7nm,0.6s
FINES FINESS Array B 35.61 34 P **P 04 45 28.2 +1.5**
comp=Z,1.1nm,0.9s,baz=243,slow=12,SNR=1.5
comp=Z,1.1nm,0.9s
FINES FINESS Array B 35.61 34 P **P 04 45 27.3 +0.6**
ARCES ARCESS Array B 39.21 22 P **P 04 45 58.6 +1.5**
comp=Z,0.7nm,0.7s,baz=212,slow=8.5,SNR=1.2
ARCES LR LR 05 01 13.5
comp=Z,47nm,19.9s,baz=255,slow=35
comp=Z,0.7nm,0.7s
ARCES ARCESS Array B 39.21 22 P **P 04 45 57.8 +0.6**
ARCES IAmb IAmb 04 46 20.3
comp=Z,9.3nm,1.4s
KBZ Khabaz 44.58 62 P **P 04 46 45.3 +3.9**
comp=Z,2.5nm,0.8s,baz=280,slow=4.4,SNR=5.1
comp=Z,2.5nm,0.8s
ARU Arti 51.80 43 LR LR 05 11 00.1
comp=Z,28nm,18.6s,baz=284,slow=38
BVAR Borovoye Array 59.35 45 LR LR 05 14 25.2
comp=Z,16nm,19.7s,baz=230,slow=36
YKA Yellowknife Ar 61.19 328 P **P 04 48 43.8 +0.1**
comp=Z,0.6nm,0.8s,baz=70,slow=7.5,SNR=5.5
comp=Z,0.6nm,0.8s
YKA Yellowknife Ar 61.19 328 P **P 04 48 44.5 +0.8**
SIV San Ignacio 67.78 227 LR LR 05 17 57.8
comp=Z,20nm,18.7s,baz=110,slow=35
PDAR Pinedale Array 67.94 308 P **P 04 49 29.4 +0.8**
comp=Z,0.3nm,0.6s,baz=51,slow=7.1,SNR=2.7
comp=Z,0.3nm,0.6s
KSH Kashi 68.97 56 P **P 04 49 37.5 +2.6**
KSH pmax pmax
comp=Z,6.0nm,0.7s
MKAR Makanchi Array 69.04 47 P **P 04 49 37.4 +2.3**
comp=Z,0.8nm,0.8s,baz=299,slow=5.0,SNR=5.2
comp=Z,0.8nm,0.8s
MKAR Makanchi Array 69.04 47 P **P 04 49 36.3 +1.3**
TXAR Lajitas Array 70.94 293 P **P 04 49 49.4 +2.3**
comp=Z,0.3nm,0.8s,baz=81,slow=7.7,SNR=5.2
comp=Z,0.3nm,0.8s
ILAR Eielson Array 71.09 340 P **P 04 49 49.5 +2.2**
comp=Z,0.2nm,0.5s,baz=320,slow=33,SNR=1.7
comp=Z,0.2nm,0.5s
SONM Songino Array 80.97 35 P **P 04 50 46.1 +2.0**
comp=Z,0.1nm,0.3s,baz=298,slow=3.1,SNR=1.7
comp=Z,0.1nm,0.3s
KSRS Korea Array 98.52 28 LR LR 05 40 07.4
comp=Z,11nm,20.1s,baz=105,slow=38

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*KRNET **30** 04:42:18.7±0.1,39°.34N×73°.85E,mb3.3*
*SOME **30** 04:42:22.1,39°.50N×73°.88E,h10km*
*NNC **30** 04:42:24.6±5.1,39°.65N×73°.68E,h0km,mb3.5,mpv3.1,*
Error ellipse: s-maj=38.9km s-min=20.5km az=164.0
ISC 30 04:42:13.5±2.1,39°.13N±0°.09×74°.02E±0°.06,h10km,n23,
σ2s01/34,8C-5D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
OHH	**Osh** baz=26	**1.69**	**326**	⇑*i*P		**Pg**	**04 42 45.5**	**-0.4**
OHH				⇑*i*S		**Sn**	**04 43 05.0**	**+0.1**
DRK	**Karamyk** baz=76	**1.76**	**282**	⇓*i*P		**Pg**	**04 42 48.1**	**+0.9**
DRK				⇓*i*S		**Sg**	**04 43 11.6**	**+1.6**
GAR	**Garm** baz=64	**2.88**	**269**	⇑*i*P		**Pg**	**04 43 07.0**	**-1.8**
GAR				⇑*i*S		**Sb**	**04 43 40.3**	**-0.2**
TRKS	**Terek-Say** baz=17	**3.26**	**318**	⇑*i*P		**Pb**	**04 43 10.2**	**-1.3**
TRKS				⇑*i*S		**Sn**	**04 43 47.0**	**+3.3**
MRKS	**Merke** 2.6nm,0.3s	**3.67**	**351**	*e*P		**Pg**	**04 43 23.5**	**-0.3**
MRKS	11nm,0.6s			*e*S		**Sg**	**04 44 08.0**	**-3.2**
MRKS	**Merke** 2.6nm,0.3s	**3.67**	**351**	Pg		**Pg**	**04 43 23.5**	**-0.3**
MRKS	11nm,0.6s			Lg		Lg	04 44 09.2	
TKM2	**Tokmak 2**	**3.98**	**17**	⇓Pg		Pg	04 43 35.0	+5.3

	1.7nm,0.6s							
TKM2				⇑Lg		Lg	04 44 22.8	
	2.9nm,0.6s							
KST	**Kastek**	**4.18**	**20**	*e*P		**Pg**	**04 43 30.9**	**-2.7**
	1.9nm,0.3s							
KST				*e*S		**Sb**	**04 44 20.5**	**+2.7**
	7.7nm,0.5s							
KST	**Kastek**	**4.18**	**20**	Pg		**Pg**	**04 43 30.9**	**-2.7**
	1.9nm,0.3s							
KST				Lg		Lg	04 44 20.5	
	7.7nm,0.5s							
IUG	**luzhnay**	**4.28**	**316**	Pg		**Pb**	**04 43 28.5**	**-0.4**
	128nm,0.2s							
IUG				Lg		Lg	04 44 16.7	
	11nm,0.5s							
DGS	**Degeres**	**4.32**	**17**	*e*P		**Pg**	**04 43 36.0**	**-0.2**
	1.6nm,0.5s							
DGS				*e*S		**Sg**	**04 44 29.5**	**-2.7**
	3.4nm,0.5s							
DGS	**Degeres**	**4.32**	**17**	Pg		**Pg**	**04 43 36.0**	**-0.2**
	1.6nm,0.5s							
DGS				Lg		Lg	04 44 29.5	
	3.4nm,0.5s							
TNSS	**Tian-Shan**	**4.49**	**29**	*e*P		**Pg**	**04 43 38.7**	**-0.8**
	1.4nm,0.3s							
TNSS				*e*S		**Sg**	**04 44 34.1**	**-3.6**
	1.3nm,0.4s							
TNSS	**Tian-Shan**	**4.49**	**29**	Pg		**Pg**	**04 43 38.7**	**-0.8**
	1.4nm,0.3s							
TNSS				Lg		Lg	04 44 34.2	
	1.3nm,0.4s							
KRBS	**Karabastau**	**4.73**	**15**	*e*P		**Pg**	**04 43 41.9**	**-2.2**
	0.5nm,0.6s							
KRBS				*e*S		**Sb**	**04 44 39.4**	**+5.7**
	1.2nm,0.5s							
KRBS	**Karabastau**	**4.73**	**15**	Pg		**Pg**	**04 43 41.9**	**-2.2**
	0.5nm,0.6s							
KRBS				Lg		Lg	04 44 39.4	
	1.2nm,0.5s							
KK31	**Karatay Array**	**4.78**	**327**	⇑Pn		Pb	04 43 32.0	-5.3
	0.2nm,0.3s,baz=133,slow=13,SNR=8.1							
KK31				⇓Pg		**Pg**	**04 43 42.7**	**-2.3**
	0.4nm,0.4s,baz=137,slow=14,SNR=4.0							
KK31				⇓Lg		Lg	04 44 38.7	
	1.0nm,0.5s,baz=139,slow=24							
KTBS	**Karatobe**	**5.00**	**23**	*e*P		**Pg**	**04 43 50.2**	**+0.9**
	1.0nm,0.5s							
KTBS				*e*S		**Sg**	**04 44 53.6**	**-0.5**
	5.5nm,0.5s							
KTBS	**Karatobe**	**5.00**	**23**	Pg		**Pg**	**04 43 50.2**	**+0.9**
	1.0nm,0.5s							
KTBS				Lg		Lg	04 44 53.6	
	5.5nm,0.5s							
KUU	**Kurty**	**5.07**	**19**	*e*P		**Pg**	**04 43 50.7**	**+0.1**
	0.9nm,0.3s							
KUU				*e*S		**Sg**	**04 44 54.9**	**-1.4**
	3.4nm,0.8s							
KUU	**Kurty**	**5.07**	**19**	Pg		**Pg**	**04 43 50.7**	**+0.1**
	0.9nm,0.3s							
KUU				Lg		Lg	04 44 54.9	
	3.4nm,0.8s							
ARXS	**Arharly**	**5.83**	**28**	*e*P		**Pg**	**04 44 05.6**	**+0.5**
	1.7nm,0.6s							
ARXS				*e*S		**Sg**	**04 45 20.5**	**0.0**
	2.7nm,0.6s							
ARXS	**Arharly**	**5.83**	**28**	Pg		**Pg**	**04 44 05.6**	**+0.5**
	1.7nm,0.6s							
ARXS				Lg		Lg	04 45 20.2	
	2.7nm,0.6s							

*IDC **30** 04:48:15.5±1.3,55°.22S×26°.87W,h0km,mb3.8/2, mbtmp3.8/2,MS3.4/4,Error ellipse: s-maj=97.6km s-min=35.0km az=100.0*
*NEIC **30** 04:48:17.8±1.8,55°.4S±0°.2×27°.2W±0°.2,h16km±5km, mb4.1/6,Error ellipse: s-maj=23.0km s-min=14.6km az=204.0*
ISC 30 04:48:18.6±0.8,55°.4S±0°.1×27°.2W±0°.1,h25km,n23, σ0s76/19,mb4.1/5,MS3.4/4,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.47**	**278**	Pn	**Pn**	**04 49 37.8**	**-0.6**
HOPE				Sn	**Sn**	**04 50 40.1**	**-0.3**
VNA1	**Neumayer--Stat**	**17.43**	**159**	P	**P**	**04 52 20.9**	**+0.2**
VNA3	**Neumayer Olymp**	**17.64**	**161**	P	**P**	**04 52 22.9**	**-0.2**
VNA2	**Neumayer--Watz**	**17.83**	**159**	P	**Pn**	**04 52 24.3**	**-0.3**
	baz=312,slow=13						
SNAA	**Sanae**	**19.37**	**157**	P	**Pn**	**04 52 43.5**	**+0.2**
SNAA	**Sanae**	**19.37**	**157**	P	**P**	**04 52 41.8**	**-0.3**
TROLL	**Troll, Antarti**	**20.86**	**154**	P	Pn	04 52 59.5	-1.4
BELA	**Belgrano 2**	**22.75**	**184**	P	**P**	**04 53 17.2**	**-1.2**
BELA				IAmb	IAmb	04 53 19.3	
	comp=Z,4.4nm,0.9s						
QSPA	**South Pole Qui**	**34.88**	**180**	P	**P**	**04 55 07.6**	**0.0**
QSPA				IAmb	IAmb	04 55 42.8	
	comp=Z,6.1nm,1.4s						
CPUP	**Villa Florida**	**36.36**	**311**	LR	LR	05 09 35.9	
	comp=Z,34nm,18.9s,baz=184,slow=35						
MT09	**Talagante**	**37.09**	**287**	P	**P**	**04 55 27.2**	**+0.4**
MAW	**Mawson**	**40.70**	**144**	P	**P**	**04 55 56.0**	**-0.5**
LVC	**Limon Verde**	**44.95**	**300**	LR	LR	05 15 25.8	
	comp=Z,18nm,21.9s,baz=164,slow=36						
VNDA	**Vanda**	**47.25**	**183**	P	**P**	**04 56 50.7**	**+1.8**
	comp=Z,1.4nm,0.8s,baz=182,slow=4.9,SNR=10						
	comp=Z,1.4nm,0.8s						
VNDA	**Vanda**	**47.25**	**183**	P	**P**	**04 56 49.6**	**+0.8**
VNDA				IAmb	IAmb	04 56 58.3	
	comp=Z,2.2nm,1.0s						
LPAZ	**La Paz**	**49.98**	**305**	P	**P**	**04 57 11.9**	**+0.7**
LPAZ				IAmb	IAmb	04 57 24.8	
	comp=Z,2.1nm,0.9s						
ROSC	**El Rosal**	**71.44**	**310**	LR	LR	05 31 47.9	
	comp=Z,44nm,19.2s,baz=233,slow=36						
TORD	**Torodi Ar. Bea**	**72.47**	**30**	P	**P**	**04 59 42.1**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=190,slow=7.2,SNR=2.8						
	comp=Z,0.5nm,0.7s						
SDV	**Santo Domingo**	**73.52**	**315**	LR	LR	05 35 37.1	
	comp=Z,38nm,18.1s,baz=85,slow=39						
DAWY	**Dawson**	**146.32**	**313**		**PKPab**	**05 07 56.2**	**-0.4**
RIDG	**Independent Ri**	**148.55**	**311**	PKPdf	**PKPdf**	**05 07 59.4**	**+1.3**
ILAR	**Eielson Array**	**149.65**	**313**	PKPbc	**PKiKP**	**05 08 05.2**	**-0.3**
	comp=Z,0.6nm,0.8s,baz=100,slow=2.5,SNR=6.1						
SONM	**Songino Array**	**150.69**	**85**	PKPbc	**PKiKP**	**05 08 08.2**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=220,slow=3.8,SNR=3.8						

*IDC **30** 04:51:22.7±11.0,23°.20S×179°.80E,h570km±144km, mb3.2/4,mbtmp4.1/4,Error ellipse: s-maj=138.8km s-min=51.5km az=171.0*
*NEIC **30** 04:51:23.6±0.8,23°.7S±0°.2×180°.0E±0°.2,h590km±13km, mb4.3/14,Error ellipse: s-maj=33.3km s-min=12.5km az=134.0*
ISC 30 04:51:24.0±0.9,23°.8S±0°.2×180°.0E±0°.1,h600km,n24, σ0s66/24,mb4.0/11,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.79**	**161**	P	**P**	**04 53 02.8**	**-0.4**
QRZ	**Quartz Range**	**18.13**	**198**	P	**P**	**04 55 00.9**	**+0.3**
LTZ	**Lake Taylor**	**20.02**	**197**	P	**P**	**04 55 16.5**	**-1.2**
LTZ				IAmb	IAmb	04 55 32.7	
	comp=Z,16nm,1.1s						
MLZ	**Mavora Lakes**	**23.61**	**201**	P	**P**	**04 55 51.1**	**+1.3**
MLZ				IAmb	IAmb	04 56 02.0	
	comp=Z,17nm,1.2s						
WHZ	**Wether Hill Ro**	**24.13**	**201**	P	**P**	**04 55 54.8**	**+0.4**
WHZ				IAmb	IAmb	04 56 08.2	
	comp=Z,18nm,1.1s						
ARMA	**Armidale**	**26.05**	**249**	P	**P**	**04 56 12.9**	**+1.2**
ARMA				IAmb	IAmb	04 56 20.2	
	comp=Z,5.3nm,1.1s						
CTAO	**Charters Tower**	**31.45**	**270**	P	**P**	**04 56 58.2**	**-0.1**
STKA	**Stephens Creek**	**34.76**	**248**	P	**P**	**04 57 26.6**	**+0.7**
	comp=Z,1.6nm,0.4s,baz=91,slow=10,SNR=6.2						
	comp=Z,1.6nm,0.4s						
STKA	**Stephens Creek**	**34.76**	**248**	P	**P**	**04 57 26.3**	**+0.4**
BBOO	**Buckleboo**	**39.48**	**247**	P	**P**	**04 58 04.2**	**-0.2**
BBOO				IAmb	IAmb	04 58 15.1	
	comp=Z,17nm,1.1s						
AS31	**Alice Springs**	**42.04**	**260**	P	**P**	**04 58 24.6**	**-0.1**
ASAR	**Alice Springs**	**42.04**	**260**	P	**P**	**04 58 24.8**	**0.0**
	comp=Z,1.9nm,0.5s,baz=101,slow=7.0,SNR=21						
	comp=Z,1.9nm,0.5s						

ASAR	**Alice Springs**	**42.04**	**260**	P		**P**	**04 58 24.6**	**-0.1**
WR0	**Warramunga Arr**	**42.21**	**266**	P		**P**	**04 58 25.4**	**-0.6**
WR0				IAmb		IAmb	04 58 38.8	
	comp=Z,4.7nm,1.1s							
WB2	**Warramunga Arr**	**42.38**	**266**	P		**P**	**04 58 26.5**	**-0.9**
WB2				IAmb		IAmb	04 58 27.8	
	comp=Z,5.1nm,0.9s							
WB0	**Warramunga Arr**	**42.39**	**266**	P		**P**	**04 58 26.7**	**-0.8**
WB0				IAmb		IAmb	04 58 28.1	
	comp=Z,4.4nm,0.8s							
WRA	**Warramunga Arr**	**42.40**	**266**	P		**P**	**04 58 27.0**	**-0.6**
	comp=Z,2.9nm,0.5s,baz=90,slow=5.9,SNR=101							
	comp=Z,2.9nm,0.5s							
WRA	**Warramunga Arr**	**42.40**	**266**	P		**P**	**04 58 26.8**	**-0.8**
FORT	**Forrest**	**46.34**	**249**	P		**P**	**04 58 57.6**	**-0.1**
TXAR	**Lajitas Array**	**90.38**	**58**	P		**P**	**05 03 23.3**	**+0.5**
	comp=Z,0.3nm,0.7s,baz=229,slow=5.8,SNR=6.3							
	comp=Z,0.3nm,0.7s							
TXAR	**Lajitas Array**	**90.38**	**58**	P		**P**	**05 03 22.9**	**+0.2**
ARCES	**ARCESS Array B**	**131.75**	**348**	PKP		**PKPdf**	**05 09 28.8**	**-0.2**
	comp=Z,2.3nm,1.2s,baz=84,slow=3.7,SNR=4.8							
AKASG	**Malin Array Be**	**144.84**	**327**	PKP		**PKPdf**	**05 09 53.5**	**+0.2**
	comp=Z,0.7nm,0.4s,baz=45,slow=4.4,SNR=6.3							
CLL	**Collm**	**150.72**	**343**	*e*PKPbc		**PKPbc**	**05 10 09.0**	**-0.1**

*ISK **30** 05:13:08.2,35°.24N×23°.38E,h14km,ML2.5/5*
*THE **30** 05:13:08.6,35°.31N×23°.38E,h16km±1km,ML2.2/4,Error ellipse: s-maj=1.6km s-min=0.4km az=49.0*
ISC 30 05:13:07.5±1.6,35°.26N±0°.06×23°.34E±0°.07,h13km±10km, n9,σ0s57/16,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDR	**Palaiochora Ch**	**0.28**	**95**	PG	**Pg**	**05 13 12.9**	**-0.5**
KNDR				SG	**Sg**	**05 13 16.8**	**-0.5**
RODP	**Rodopos**	**0.45**	**48**	PG	**Pb**	**05 13 17.5**	**+0.1**
RODP				SG	**Sb**	**05 13 24.4**	**+0.4**
IMMV	**Iera Moni Meta**	**0.56**	**69**	P	**Pg**	**05 13 18.6**	**+0.1**
IMMV				S	**Sb**	**05 13 26.7**	**-0.4**
	275nm,0.4s						
IMMV	**Iera Moni Meta**	**0.56**	**69**	PG	**Pb**	**05 13 19.3**	**+0.1**
IMMV				SG	**Sb**	**05 13 27.4**	**+0.3**
ANKY	**Antikythira Is**	**0.60**	**357**	P	**Pg**	**05 13 19.8**	**+0.4**
ANKY				S	**Sg**	**05 13 28.0**	**+0.6**
	225nm,0.3s						
GVD	**Gavdhos**	**0.74**	**124**	P	**Pb**	**05 13 22.7**	**+0.4**
GVD				S	**Sn**	**05 13 33.8**	**-1.1**
	355nm,0.6s						
GVD	**Gavdhos**	**0.74**	**124**	PG	**Pg**	**05 13 22.5**	**+0.6**
KTHA	**Kythira Island**	**1.02**	**347**	P	**Pb**	**05 13 26.4**	**-0.7**
KTHA				S	**Sb**	**05 13 40.6**	**+0.2**
	142nm,0.6s						
IDI	**Anoyia**	**1.27**	**88**	PN	**Pb**	**05 13 31.9**	**+0.6**

*IDC **30** 05:27:02.6±12.0,43°.99N×147°.81E,h0km,mb3.4/3, mbtmp3.4/3,Error ellipse: s-maj=390.4km s-min=123.5km az=92.0*
*MOS **30** 05:27:05.4±0.9,43°.83N×147°.74E,h33km,mb4.2/3,Error ellipse: s-maj=12.0km s-min=9.7km az=51.2*
*JMA **30** 05:27:06.9±0.3,44°.N±1°.×14°.7E±°,h11km,MV3.9/29,E OFF HOKKAIDO*
*SKHL **30** 05:27:06.6±0.2,43°.80N×147°.70E,h48km±5km,mb5.0/4*
ISC 30 05:27:06.5±1.6,43°.80N±0°.07×147°.64E±0°.07,h31km±10km, n42,σ1s19/62,mb3.5/5,5C-7D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.59**	**277**	*d* PN	**Pb**	**05 27 17.9**	**-0.5**
SHO				*i* S	**Sb**	**05 27 26.7**	**0.0**
SHO				pmax	pmax		
	comp=Z,333nm,0.3s						
SHO				pmax	pmax		
	comp=N,221nm,0.4s						
SHO				pmax	pmax		
	comp=E,181nm,0.1s						
SHO				smax	smax		
	comp=N,13μm,0.2s						
SHO				smax	smax		
	comp=E,8μm,0.2s						
SHO	**Shikotan**	**0.59**	**277**	*i* P	**Pb**	**05 27 18.0**	**-0.5**
SHO				AMB	AMB	05 27 18.8	
	comp=E,260nm,0.2s						
SHO				*i* S	**Sb**	**05 27 26.7**	**0.0**
SHO				A	A	05 27 27.7	
	comp=E,12μm,0.3s						
SHO				A	A	05 27 27.7	
	comp=E,10μm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.31**	**281**	*d* PN	**Pn**	**05 27 27.9**	**-0.7**
YUK	**Yuzh-Kuril'sk**	**1.31**	**281**	*i* P	**Pn**	**05 27 27.8**	**-0.8**
YUK				AMB	AMB	05 27 28.4	
	comp=E,540nm,0.2s						
YUK				*i* S	**Sn**	**05 27 43.6**	**-1.4**
YUK				A	A	05 27 44.8	
	comp=E,3μm,0.3s						
YUK				A	A	05 27 44.8	
	comp=E,3μm,0.3s						
KUR	**Kuril'sk**	**1.44**	**6**	*e*PN	**Pn**	**05 27 30.6**	**+0.1**
KUR				*e*S	**Sn**	**05 27 46.8**	**-1.5**
KUR				pmax	pmax		
	comp=Z,82nm,0.1s						
KUR				pmax	pmax		
	comp=N,30nm,0.2s						
KUR				pmax	pmax		
	comp=E,39nm,0.2s						
KUR				smax	smax		
	comp=N,782nm,0.2s						
KUR				smax	smax		
	comp=E,233nm,0.1s						
KUR	**Kuril'sk**	**1.44**	**6**	*e*P	**Pn**	**05 27 29.8**	**-0.7**
KUR				AMB	AMB	05 27 31.5	
	comp=E,40nm,0.3s						
KUR				*e*S	**Sn**	**05 27 46.8**	**-1.5**
KUR				A	A	05 27 49.0	
	comp=E,670nm,0.2s						
KUR				A	A	05 27 49.0	
	comp=E,370nm,0.2s						
NEM2	**Nemuro 2**	**1.45**	**253**	*e*P	**Pn**	**05 27 29.5**	**-1.0**
NEM2				*e*S	**Sn**	**05 27 45.6**	**-2.8**
NMR	**Nemuro--Hokkai**	**1.46**	**254**	*e*PN	**Pn**	**05 27 29.7**	**-0.9**
NMR				*i* S	**Sn**	**05 27 49.0**	**+0.4**
NMR	**Nemuro--Hokkai**	**1.46**	**254**	*e*P	**Pn**	**05 27 29.7**	**-0.9**
NMR				*i* S	**Sn**	**05 27 46.4**	**-2.2**
GLVR	**Golovnino**	**1.54**	**268**	⇑*i* PN	**Pn**	**05 27 31.7**	**-0.1**
GLVR				*i* S	**Sn**	**05 27 49.9**	**-0.8**
GLVR				pmax	pmax		
	comp=Z,555nm,0.2s						
GLVR				pmax	pmax		
	comp=E,96nm,0.3s						
GLVR				pmax	pmax		
	comp=N,60nm,0.2s						
GLVR				smax	smax		
	comp=E,2μm,0.3s						
GLVR				smax	smax		
	comp=N,3μm,0.4s						
GLVR	**Golovnino**	**1.54**	**268**	*i* P	**Pn**	**05 27 31.7**	**-0.1**
GLVR				AMB	AMB	05 27 32.1	
	comp=N,560nm,0.2s						
GLVR				*i* S	**Sn**	**05 27 49.9**	**-0.8**
GLVR				A	A	05 27 50.7	
	comp=N,3μm,0.4s						
GLVR				A	A	05 27 50.7	
	comp=N,2μm,0.4s						
RUSJ	**Misakicho**	**1.76**	**281**	⇓*i* PN	**Pn**	**05 27 35.1**	**+0.3**
RUSJ				*i* S	**Sn**	**05 27 55.8**	**-0.3**
JRA	**Rausu**	**1.83**	**275**	*e*P	**Pn**	**05 27 35.8**	**+0.1**
JRA				*e*S	**Sn**	**05 27 57.1**	**-0.8**
JNSB	**Nemuroshibetsu**	**1.91**	**270**	P	**Pn**	**05 27 37.0**	**+0.1**
JNSB				*e*S	**Sn**	**05 27 59.1**	**-0.8**
JKHN	**Kushirohamanak**	**1.94**	**249**	P	**Pn**	**05 27 37.1**	**-0.3**
JKHN				*e*S	**Sn**	**05 27 58.8**	**-1.9**
JNK	**Nakash**	**2.13**	**265**	*e*P	**Pn**	**05 27 39.8**	**-0.2**
JNK				*e*S	**Sn**	**05 28 03.4**	**-2.0**
AKK	**Akkeshi**	**2.19**	**250**	*e*P	**Pn**	**05 27 40.5**	**-0.2**
AKK				*e*S	**Sn**	**05 28 04.7**	**-2.0**
JAK	**Akkeshi**	**2.29**	**251**	*e*P	**Pn**	**05 27 41.8**	**-0.3**
JAK				*e*S	**Sn**	**05 28 08.1**	**-1.2**
JTKR	**Abashiri--Toko**	**2.71**	**275**	*e*P	**Pn**	**05 27 48.7**	**+0.8**
JAR	**Ashorobuto**	**2.86**	**261**	*e*P	**Pn**	**05 27 51.1**	**+1.1**
JAR				*e*S	**Sn**	**05 28 23.4**	**0.0**
JOB	**Onbets**	**2.92**	**253**	*e*P	**Pn**	**05 27 51.2**	**+0.4**
JOB				*e*S	**Sn**	**05 28 23.8**	**-1.0**

JMP	**Maruseppu**	**3.10**	**275**	*e*P		**Pn**	**05 27 54.3**	**+1.0**
JCH	**Churui**	**3.35**	**251**	*e*P		**Pn**	**05 27 57.4**	**+0.7**
JCH				*e*S		**Sn**	**05 28 33.3**	**-2.0**
ERM	**Erimo**	**3.75**	**243**	*ce*PN		**Pn**	**05 28 04.8**	**+2.7**
YSS	**Yuzh-Sakhalins**	**4.67**	**314**	*e*PN		**Pn**	**05 28 15.9**	**+1.1**
YSS	**Yuzh-Sakhalins**	**4.67**	**314**	*e*P		**Pn**	**05 28 15.9**	**+1.1**
YSS				AMB		AMB	05 28 16.7	
	comp=N,50nm,0.7s							
SKR	**Severo-Kuril's**	**8.98**	**37**	⇓*e*PN		**Pn**	**05 29 13.3**	**-0.6**
SKR	**Severo-Kuril's**	**8.98**	**37**	*e*P		**Pn**	**05 29 13.4**	**-0.5**
SKR				AMB		AMB	05 29 14.7	
	comp=N,30nm,0.6s							
MAJO	**Matsushiro**	**10.22**	**228**	⇓*e*PN		**Pn**	**05 29 34.5**	**+3.4**
PEA0B	**Petropavlovsk-**	**11.45**	**32**	⇑*e*PN		**Pn**	**05 29 49.2**	**+1.5**
SONM	**Songino Array**	**28.78**	**293**	*e*P		**P**	**05 33 01.9**	**+0.4**
TIXI	**Tiksi**	**29.39**	**348**	⇓*e*P		**P**	**05 33 06.4**	**0.0**
TIXI	**Tiksi**	**29.39**	**348**	*e*P		**P**	**05 33 06.4**	**0.0**
COLA	**College**	**40.82**	**36**	⇓*e*P		**P**	**05 34 44.1**	**-0.6**
ILAR	**Eielson Array**	**41.24**	**36**	P		**P**	**05 34 46.9**	**-1.3**
	comp=N,0.6nm,0.8s,baz=256,slow=6.1,SNR=5.2							
	comp=N,0.6nm,0.8s							
ILAR	**Eielson Array**	**41.24**	**36**	*e*P		**P**	**05 34 47.3**	**-0.9**
ILAR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
KURK	**Kurchatov**	**45.80**	**304**	⇑*e*P		**P**	**05 35 27.4**	**+2.3**
KURK				pmax	pmax			
	comp=Z,2.0nm,0.7s							
AAK	**Ala-Archa**	**51.66**	**296**	⇑*e*P		**P**	**05 36 10.5**	**+0.1**
AAK				pmax	pmax			
	comp=Z,1.0nm,0.6s							
AAK	**Ala-Archa**	**51.66**	**296**	*e*P		**P**	**05 36 10.5**	**+0.1**
YKA	**Yellowknife Ar**	**55.56**	**34**	P		**P**	**05 36 37.9**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=304,slow=7.7,SNR=4.3							
	comp=Z,0.3nm,0.5s							
YKA	**Yellowknife Ar**	**55.56**	**34**	*e*P		**P**	**05 36 39.2**	**+0.7**
TXAR	**Lajitas Array**	**82.33**	**57**	P		**P**	**05 39 24.9**	**-0.5**
	comp=Z,0.2nm,0.6s,baz=308,slow=4.4,SNR=4.1							
	comp=Z,0.2nm,0.6s							

IDC 30 05:41:09.1±3.3,54°.43N×86°.90E,h0km,mbtmp2.9/2, ML2.6/2,Error ellipse: s-maj=30.7km s-min=18.1km az=53.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.32**	**249**	*i*		05 49 15.5	
	baz=68,slow=321,SNR=3.4						
ZALV	**Zalesovo Beam**	**1.32**	**249**	Pg	Pg	05 41 32.6	-1.7
	1.4nm,0.3s,baz=68,slow=17,SNR=7.6						
ZALV				Lg	Lg	05 41 51.4	
	1.8nm,0.3s,baz=68,slow=28,SNR=6.0						
KURBB	**Kurchatov Arra**	**6.37**	**237**	Pn	Pn	05 42 45.0	+0.9
	0.1nm,0.3s,baz=54,slow=14,SNR=8.4						
	0.9nm,0.5s						
MKAR	**Makanchi Array**	**8.19**	**203**	Pn	Pn	05 43 10.2	+1.2
	0.2nm,0.3s,baz=24,slow=16,SNR=5.4						
	0.2nm,0.3s						

*KRNET **30** 05:43:51.7±0.1,39°.53N×73°.64E,mb3.4*
*ISU **30** 05:43:53.7,39°.64N×73°.61E,h30km*
*SOME **30** 05:43:58.7,39°.62N×73°.67E,h5km*
*NNC **30** 05:43:59.3±3.5,39°.64N×73°.60E,h0km,mb3.7,mpv3.2, Error ellipse: s-maj=24.1km s-min=16.2km az=176.0*
ISC 30 05:43:50.9±1.8,39°.35N±0°.07×73°.73E±0°.05,h17km±13km, n27,σ1s84/44,5C-5D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.38**	**328**	⇓*i* P		**Pn**	**05 44 13.9**	**-1.6**
	baz=27							
OHH				⇓*i* S		**Sb**	**05 44 30.6**	**-3.1**
	baz=27							
OHH	**Osh**	**1.38**	**328**	P		**Pn**	**05 44 13.8**	**-1.7**
OHH				S		**Sb**	**05 44 29.9**	**-3.8**
ANR	**Andizhan**	**1.76**	**324**	S		**Sb**	**05 44 44.2**	**-0.2**
FRG	**Fergana**	**1.82**	**305**	P		**Pn**	**05 44 22.2**	**+0.8**
FRG				S		**Sn**	**05 44 44.7**	**+0.6**
BTK	**Batken**	**2.36**	**288**	P		**Pb**	**05 44 31.0**	**-1.9**
BTK				S		**Sb**	**05 45 01.0**	**-0.8**
MINT	**Mingtut**	**2.40**	**299**	P		**Pb**	**05 44 32.7**	**-0.9**
MINT				S		**Sb**	**05 45 02.8**	**-0.1**
GAR	**Garm**	**2.68**	**264**	⇑*i* P		**Pb**	**05 44 37.3**	**-1.1**
	baz=59							
GAR				⇑*i* S		**Sb**	**05 45 10.2**	**-0.9**
	baz=59							
TRKS	**Terek-Say**	**2.94**	**319**	⇑*i* P		**Pn**	**05 44 38.3**	**+1.3**
	baz=17							
TRKS				⇑*i* S		**Sn**	**05 45 12.6**	**+0.5**
	baz=17							
MRKS	**Merke**	**3.41**	**354**	*e*P		**Pg**	**05 44 58.1**	**+1.8**
	4.4nm,0.3s							
MRKS				*e*S		**Sg**	**05 45 40.7**	**+0.2**
	7.8nm,0.3s							
MRKS	**Merke**	**3.41**	**354**	Pg		**Pg**	**05 44 58.1**	**+1.8**
	4.4nm,0.3s							
MRKS				Lg		Lg	05 45 41.7	
	7.8nm,0.3s							
TKM2	**Tokmak 2**	**3.84**	**21**	⇓Pg		**Pg**	**05 45 02.8**	**-1.5**
	1.7nm,0.5s							
TKM2				⇓Lg		Lg	05 45 50.5	
	4.4nm,0.8s							
IUG	**luzhnay**	**3.96**	**316**	*e*P		**Pg**	**05 45 08.3**	**+1.5**
	315nm,0.7s							
IUG				*e*S		**Sg**	**05 45 58.2**	**0.0**
	25nm,0.7s							
IUG	**luzhnay**	**3.96**	**316**	Pg		**Pb**	**05 44 57.9**	**-2.4**
	316nm,0.8s							
IUG				Lg		Lg	05 45 39.9	
	28nm,0.6s							
KST	**Kastek**	**4.06**	**24**	*e*P		**Pg**	**05 45 09.4**	**+0.9**
	2.5nm,0.5s							
KST				*e*S		**Sg**	**05 46 00.6**	**-0.5**
	8.3nm,0.6s							
KST	**Kastek**	**4.06**	**24**	Pg		**Pg**	**05 45 09.4**	**+0.9**
	2.5nm,0.5s							
KST				Lg		Lg	05 46 00.6	
	8.3nm,0.6s							
DGS	**Dege

	1.8nm,0.7s						
ARXS				*e*S	**Sg**	**05 46 53.8**	**-1.4**
	4.2nm,0.4s						

IDC ***30*** *05:55:41.7±6.8, 36°.65N×142°.11E, h0km, mb3.8/4, mbtmp3.8/5, ML3.1/1, MS2.7/2, Error ellipse: s-maj=148.6km s-min=42.8km az=159.0*
JMA ***30*** *05:55:48.0±0.5, 36°.8N±0°.9×14°.2E±°, h54km±4km, MV3.6/34, E OFF FUKUSHIMA PREF*
NIED ***30*** *05:55:48.0, 36°.77N×141°.69E, h54km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr2.07; Mθθ-0.16; Mφφ-1.91; Mrθ1.08; Mrφ-1.11; Mθφ2.75; Fault plane solution: M0 3.73000×10¹⁴ NP1: φs211.00000°, δ19.00000°, λ98.00000°. NP2: φs22.00000°, δ71.00000°, λ87.00000°.*

ISC 30 05:55:50.0±1.9, 36°.9N±0°.1×141°.6E±0°.1, h33km, n23, σ0§90/17, mb3.8/4, 6D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.65**	**289**	⇓*i*P	**Pn**	**05 56 02.9**	**0.0**
JFK	**Kawauchi**	**0.72**	**310**	⇓*i*P	**Pn**	**05 56 04.1**	**+0.1**
JFFD	**Fukushimafurud**	**0.83**	**284**	*e*P	**Pn**	**05 56 05.4**	**0.0**
JHO	**Hitachi**	**0.85**	**251**	⇓P	**Pn**	**05 56 04.5**	**-1.2**
JMM	**Marumori**	**1.15**	**328**	⇓*i*P	**Pn**	**05 56 10.4**	**+0.7**
JFT	**Otama**	**1.16**	**303**	⇓P	**Pb**	**05 56 11.5**	**-0.1**
JIO	**Ouri**	**1.56**	**354**	⇓P	**Pn**	**05 56 15.7**	**+0.2**
JOU	**Okura**	**1.63**	**334**	*e*P	**Pb**	**05 56 18.0**	**-1.5**
JAG	**Ashikaga**	**1.76**	**255**	P	**Pn**	**05 56 18.1**	**-0.1**
JYS	**Shirataka**	**1.78**	**318**	*e*P	**Pb**	**05 56 20.6**	**-1.4**
JKT	**Katashina**	**1.86**	**267**	*e*P	**Pn**	**05 56 20.9**	**+1.2**
MJAR	**Matsushiro Arr**	**2.72**	**264**	Pn	**Pn**	**05 56 32.7**	**+1.3**
	2.2nm,0.3s,baz=90,slow=10.0,SNR=41						
MJAR				Sn	**Sb**	**05 57 10.4**	**-0.5**
	0.9nm,0.3s,baz=94,slow=20,SNR=6.6						
MJAR				LR	LR	05 57 56.4	
	comp=Z,98nm,19.2s,baz=160,slow=43 15nm,0.4s						
KSRS	**Korea Array**	**10.90**	**277**	LR	LR	06 02 34.3	
	comp=Z,42nm,18.6s,baz=80,slow=36						
SONM	**Songino Array**	**27.96**	**304**	P	**P**	**06 01 38.9**	**+1.3**
	1.1nm,0.6s,baz=104,slow=10,SNR=5.3 1.1nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**27.97**	**121**	T	T	06 30 45.1	
	baz=313,slow=75,SNR=18						
H11N1	**WAKE ISLAND Hy**	**27.98**	**121**	T	T	06 30 49.1	
	baz=313,slow=75,SNR=36						
H11N3	**WAKE ISLAND Hy**	**27.99**	**121**	T	T	06 30 50.4	
	baz=313,slow=75,SNR=19						
H11S1	**WAKE ISLAND Hy**	**28.68**	**123**	T	T	06 31 37.7	
	baz=316,slow=74,SNR=18						
H11S3	**WAKE ISLAND Hy**	**28.68**	**123**	T	T	06 31 45.6	
	baz=316,slow=74,SNR=13						
H11S2	**WAKE ISLAND Hy**	**28.70**	**123**	T	T	06 31 48.4	
	baz=316,SNR=10						
MKAR	**Makanchi Array**	**44.30**	**302**	P	**P**	**06 03 56.8**	**+0.2**
	0.4nm,0.6s,baz=86,slow=7.4,SNR=3.8 0.4nm,0.6s						
KURBB	**Kurchatov Arra**	**46.18**	**308**	P	**P**	**06 04 11.3**	**-0.1**
	0.6nm,0.2s,baz=83,slow=7.8,SNR=5.6 0.6nm,0.2s						
AKASG	**Malin Array Be**	**74.48**	**322**	P	**P**	**06 07 24.8**	**-0.1**
	0.5nm,0.4s,baz=48,slow=6.7,SNR=4.3 0.5nm,0.4s						

KRNET ***30*** *05:56:52.6±0.1, 39°.53N×73°.57E, mb3.7*
SOME ***30*** *05:56:55.7, 39°.63N×73°.55E, h10km*
NNC ***30*** *05:56:56.5±1.6, 39°.60N×73°.52E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=11.8km s-min=5.3km az=177.0*

ISC 30 05:56:52.8±1.3, 39°.60N±0°.06×73°.49E±0°.03, h10km, n32, σ1§75/51, 10C, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.07**	**330**	⇑*i*P	**Pn**	**05 57 14.8**	**+0.8**
	baz=29						
OHH				⇑*i*S	**Sn**	**05 57 31.2**	**+2.3**
	baz=29						
GAR	**Garm**	**2.53**	**257**	⇑*i*P	**Pb**	**05 57 38.9**	**+0.5**
	baz=59						
GAR				⇑*i*S	**Sb**	**05 58 11.2**	**+1.5**
	baz=59						
TRKS	**Terek-Say**	**2.63**	**318**	⇑*i*P	**Pb**	**05 57 38.4**	**-1.7**
	baz=17						
TRKS				⇑*i*S	**Sb**	**05 58 12.3**	**-0.3**
	baz=17						
MRKS	**Merke**	**3.15**	**356**	*e*P	**Pg**	**05 57 55.7**	**+2.5**
	9.1nm,0.4s						
MRKS				*e*S	**Sg**	**05 58 39.1**	**+5.2**
	31nm,0.4s						
MRKS	**Merke**	**3.15**	**356**	Pg	**Pg**	**05 57 55.7**	**+2.5**
	9.1nm,0.4s						
MRKS				Lg	Lg	05 58 39.1	
	31nm,0.4s						
IUG	**luzhnay**	**3.65**	**315**	*e*P	**Pg**	**05 58 02.2**	**-0.6**
	130nm,0.4s						
IUG				*e*S	**Sg**	**05 58 50.0**	**-0.1**
	28nm,0.5s						
IUG	**luzhnay**	**3.65**	**315**	Pg	**Pg**	**05 58 02.2**	**-0.6**
	130nm,0.4s						
IUG				Lg	Lg	05 58 51.1	
	28nm,0.5s						
TKM2	**Tokmak 2**	**3.68**	**25**	⇑Pg	**Pg**	**05 58 03.6**	**+0.3**
	1.7nm,0.4s						
TKM2				⇑Lg	Lg	05 58 52.0	
	9.5nm,0.7s						
KST	**Kastek**	**3.91**	**28**	*e*P	**Pg**	**05 58 07.7**	**0.0**
	1.6nm,0.3s						
KST				*e*S	**Sg**	**05 58 59.8**	**+1.4**
	11nm,0.5s						
KST	**Kastek**	**3.91**	**28**	Pg	**Pg**	**05 58 07.7**	**0.0**
	1.6nm,0.3s						
KST				Lg	Lg	05 58 59.8	
	11nm,0.5s						
SGDS	**Sogindy**	**3.94**	**12**	*e*P	**Pg**	**05 58 05.5**	**-2.9**
	1.4nm,0.5s						
SGDS				*e*S	**Sg**	**05 58 55.4**	**-4.1**
	5.0nm,0.5s						
DGS	**Degeres**	**4.02**	**25**	*e*P	**Pg**	**05 58 09.7**	**-0.2**
	4.2nm,0.4s						
DGS				*e*S	**Sg**	**05 59 03.1**	**+1.1**
	12nm,0.7s						
DGS	**Degeres**	**4.02**	**25**	Pg	**Pg**	**05 58 09.7**	**-0.2**
	4.2nm,0.4s						
DGS				Lg	Lg	05 59 03.7	
	12nm,0.7s						
KK31	**Karatay Array**	**4.16**	**328**	Pg	**Pg**	**05 58 11.2**	**-1.2**
	1.5nm,0.5s,baz=143,slow=16,SNR=10						
KK31				⇑Sn	**Sb**	**05 58 53.3**	**-3.1**
	2.1nm,0.5s						
KK31				⇑Lg	Lg	05 59 06.4	
	4.2nm,0.5s,baz=144,slow=29,SNR=2.8						
MTBS	**Maitube**	**4.16**	**31**	*e*P	**Pg**	**05 58 13.1**	**+0.6**
	2.5nm,0.1s						
MTBS				*e*S	**Sg**	**05 59 09.0**	**+2.5**
	8.8nm,0.3s						
MTBS	**Maitube**	**4.16**	**31**	Pg	**Pg**	**05 58 13.1**	**+0.6**
	2.5nm,0.1s						
MTBS				Lg	Lg	05 59 09.0	
	8.8nm,0.3s						
TNSS	**Tian-Shan**	**4.31**	**36**	*e*P	**Pg**	**05 58 14.7**	**-0.7**
	2.4nm,0.4s						
TNSS				*e*S	**Sg**	**05 59 11.7**	**+0.5**
	5.9nm,0.7s						
TNSS	**Tian-Shan**	**4.31**	**36**	Pg	**Pg**	**05 58 14.7**	**-0.7**
	2.4nm,0.4s						
TNSS				Lg	Lg	05 59 11.7	
	5.9nm,0.7s						
BRLS	**Borolday**	**4.39**	**322**	*e*P	**Pg**	**05 58 14.8**	**-2.2**
	1.9nm,0.2s						
BRLS				*e*S	**Sg**	**05 59 12.1**	**-1.8**
	9.3nm,0.5s						
BRLS	**Borolday**	**4.39**	**322**	Pg	**Pg**	**05 58 14.8**	**-2.2**
	1.9nm,0.2s						
BRLS				Lg	Lg	05 59 12.1	
	9.3nm,0.5s						
KRBS	**Karabastau**	**4.41**	**21**	*e*P	**Pg**	**05 58 18.0**	**+0.8**
KRBS				*e*S	**Sg**	**05 59 17.4**	**+3.0**
	6.8nm,0.7s						
KRBS	**Karabastau**	**4.41**	**21**	Pg	**Pg**	**05 58 18.0**	**+0.8**
KRBS				Lg	Lg	05 59 17.4	
	6.8nm,0.7s						
KUU	**Kurty**	**4.79**	**25**	*e*P	**Pg**	**05 58 23.1**	**-1.4**
	1.7nm,0.4s						
KUU				*e*S	**Sg**	**05 59 26.2**	**-0.4**
	8.9nm,0.6s						
KUU	**Kurty**	**4.79**	**25**	Pg	**Pg**	**05 58 23.1**	**-1.4**
	1.7nm,0.4s						
KUU				Lg	Lg	05 59 26.2	
	8.9nm,0.6s						
SATY	**Saty**	**5.06**	**45**	*e*P	**Pg**	**05 58 28.8**	**-1.0**
	1.4nm,0.1s						
SATY				*e*S	**Sg**	**05 59 35.8**	**+0.5**
	5.0nm,0.8s						
SATY	**Saty**	**5.06**	**45**	Pg	**Pg**	**05 58 28.8**	**-1.0**
	1.4nm,0.1s						
SATY				Lg	Lg	05 59 35.8	
	5.0nm,0.8s						
BTLS	**Baital**	**5.45**	**4**	*e*P	**Pg**	**05 58 36.9**	**-0.3**
	1.5nm,0.4s						
BTLS				*e*S	**Sg**	**05 59 49.4**	**+1.6**
	4.0nm,0.6s						
KPKS	**Kokpek**	**5.49**	**44**	*e*P	**Pg**	**05 58 36.0**	**-1.9**
	1.3nm,0.3s						
KPKS				*e*S	**Sg**	**05 59 48.1**	**-0.8**
	7.2nm,0.5s						
KPKS	**Kokpek**	**5.49**	**44**	Pg	**Pg**	**05 58 35.9**	**-1.9**
	1.3nm,0.3s						
KPKS				Lg	Lg	05 59 48.1	
	7.2nm,0.5s						
ARXS	**Arharly**	**5.63**	**34**	*e*P	**Pg**	**05 58 38.8**	**-1.8**
	0.9nm,0.4s						
ARXS				*e*S	**Sg**	**05 59 52.8**	**-0.8**
	7.0nm,0.4s						
BLB	**Baldybastay**	**5.84**	**38**	*e*P	**Pg**	**05 58 43.3**	**-1.3**
	2.7nm,0.5s						
BLB				*e*S	**Sg**	**06 00 00.9**	**+0.8**
	5.7nm,0.9s						
BLB	**Baldybastay**	**5.84**	**38**	Pg	**Pg**	**05 58 43.3**	**-1.3**
	2.7nm,0.5s						
BLB				Lg	Lg	06 00 00.9	
	5.7nm,0.9s						

IDC ***30*** *06:04:10.3±11.0, 36°.23N×142°.62E, h0km, mb3.9/3, mbtmp3.8/5, ML3.1/2, MS3.0/3, Error ellipse: s-maj=223.8km s-min=66.3km az=155.0*
JMA ***30*** *06:04:23.7±0.3, 36°.8N±0°.7×14°.1E±°, h51km±3km, MV3.4/35, E OFF IBARAKI PREF*

ISC 30 06:04:18.2±2.6, 36°.7N±0°.1×142°.1E±0°.2, h19km, n21, σ1§56/15, mb3.9/3, 6D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**1.11**	**292**	⇓P	**Pn**	**06 04 36.6**	**-2.2**
JFK	**Kawauchi**	**1.18**	**305**	⇓P	**Pn**	**06 04 37.8**	**-2.0**
JHO	**Hitachi**	**1.22**	**267**	⇓P	**Pn**	**06 04 38.2**	**-2.1**
JHYU	**Hitachinakayam**	**1.25**	**254**	*e*P	**Pn**	**06 04 39.4**	**-1.3**
JFFD	**Fukushimafurud**	**1.28**	**289**	⇓P	**Pn**	**06 04 38.9**	**-2.3**
JMM	**Marumori**	**1.56**	**319**	⇓P	**Pn**	**06 04 44.0**	**-0.9**
JFT	**Otama**	**1.62**	**301**	⇓P	**Pn**	**06 04 45.2**	**-0.7**
JFY	**Yanaizu**	**2.03**	**291**	P	**Pn**	**06 04 51.4**	**-0.1**
JAG	**Ashikaga**	**2.13**	**264**	P	**Pn**	**06 04 51.8**	**-1.0**
MJAR	**Matsushiro Arr**	**3.12**	**268**	Pn	**Pn**	**06 05 06.3**	**-0.1**
	2.6nm,0.3s,baz=94,slow=10,SNR=48						
MJAR				Sn	**Sn**	**06 05 43.4**	**+0.3**
	0.9nm,0.3s,baz=77,slow=27,SNR=5.6						
MJAR				LR	LR	06 06 30.3	
	comp=Z,134nm,20.2s,baz=141,slow=39 15nm,0.3s						
KSRS	**Korea Array**	**11.34**	**278**	Pn	**Pn**	**06 07 01.8**	**+2.6**
	0.1nm,0.3s,baz=83,slow=14,SNR=2.2						
KSRS				LR	LR	06 11 08.2	
	comp=Z,49nm,19.1s,baz=60,slow=35 0.6nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**27.51**	**121**	T	T	06 39 29.0	
	baz=313,slow=75,SNR=25						
H11N1	**WAKE ISLAND Hy**	**27.52**	**121**	T	T	06 39 26.8	
	baz=313,slow=75,SNR=33						
H11N3	**WAKE ISLAND Hy**	**27.53**	**121**	T	T	06 39 28.6	
	baz=313,slow=75,SNR=25						
H11S1	**WAKE ISLAND Hy**	**28.22**	**123**	T	T	06 40 21.7	
	baz=315,slow=76,SNR=17						
H11S3	**WAKE ISLAND Hy**	**28.22**	**123**	T	T	06 40 21.7	
	baz=315,slow=76,SNR=13						
H11S2	**WAKE ISLAND Hy**	**28.24**	**123**	T	T	06 40 22.9	
	baz=315,slow=76,SNR=13						
SONM	**Songino Array**	**28.42**	**304**	P	**P**	**06 10 11.8**	**+0.1**
	1.2nm,0.6s,baz=102,slow=9.1,SNR=6.7 1.2nm,0.6s						
MKAR	**Makanchi Array**	**44.76**	**303**	P	**P**	**06 12 30.4**	**0.0**
	0.7nm,0.8s,baz=87,slow=8.8,SNR=5.4 0.7nm,0.8s						
KURBB	**Kurchatov Arra**	**46.64**	**308**	P	**P**	**06 12 45.3**	**+0.1**
	0.7nm,0.2s,baz=83,slow=8.0,SNR=5.5 0.7nm,0.2s						
AAK	**Ala-Archa**	**51.12**	**299**	LR	LR	06 35 58.2	
	comp=Z,41nm,19.1s,baz=152,slow=37						

IDC 30 06:15:36.0±2.4, 54°.11N×86°.44E, h0km, mbtmp3.3/2, ML3.1/2, Error ellipse: s-maj=19.5km s-min=11.8km az=60.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.97**	**261**	*i*		06 22 11.7	
	baz=79,slow=319,SNR=6.9						
ZALV	**Zalesovo Beam**	**0.97**	**261**	Pg	Pg	06 15 53.3	-1.2
	1.7nm,0.3s,baz=84,slow=18,SNR=7.7						
ZALV				Lg	Lg	06 16 08.1	
	2.2nm,0.3s,baz=81,slow=29,SNR=14						
KURBB	**Kurchatov Arra**	**5.97**	**237**	Pn	Pn	06 17 06.6	+1.1
	0.2nm,0.3s,baz=56,slow=14,SNR=14						
KURBB				Lg	Lg	06 18 46.1	
	0.1nm,0.3s,baz=53,slow=34,SNR=5.4 2.2nm,0.5s						
MKAR	**Makanchi Array**	**7.79**	**202**	Pn	Pn	06 17 31.3	+0.8
	0.4nm,0.3s,baz=21,slow=14,SNR=13						
MKAR				Sn	Sn	06 18 59.4	+0.1
	baz=21,slow=21						
MKAR				Lg	Lg	06 19 41.5	
	baz=22,slow=29 0.6nm,0.3s						

NEIC ***30*** *06:46:57.1±1.4, 18°.2S±0°.1×178°.2W±0°.2, h481km±10km, mb4.1/13, Error ellipse: s-maj=21.9km s-min=15.1km az=103.0*
IDC ***30*** *06:46:59.1±2.4, 18°.03S×178°.50W, h490km±20km, mb3.1/7, mbtmp3.9/8, Error ellipse: s-maj=62.8km s-min=18.7km az=148.0*

ISC 30 06:46:59.2±0.7, 18°.2S±0°.1×178°.4W±0°.1, h500km, n27, σ0§77/26, mb4.0/14, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.37**	**277**	P	**P**	**06 48 11.9**	**-1.0**
	34nm,0.5s,baz=120,slow=5.7,SNR=84						
MSVF	**Nonsavu**	**3.37**	**277**		**P**	**06 48 12.1**	**-0.8**
NIUE	**Niue**	**8.12**	**98**	P	P	06 48 51.3	-5.5
EIDS	**Eidsvold**	**29.15**	**250**	P	**P**	**06 52 19.1**	**-0.2**
EIDS				IAmb	IAmb	06 52 39.6	
	comp=Z,12nm,1.3s						
ARMA	**Armidale**	**29.78**	**240**	P	**P**	**06 52 24.5**	**-0.3**
ARMA				IAmb	IAmb	06 52 44.5	
	comp=Z,18nm,1.5s						
WHZ	**Wether Hill Ro**	**29.86**	**199**	P	**P**	**06 52 24.0**	**-1.1**
CTAO	**Charters Tower**	**33.37**	**261**	P	**P**	**06 52 56.9**	**+1.3**
WR0	**Warramunga Arr**	**44.36**	**260**	P	**P**	**06 54 24.9**	**+0.2**
WR0				IAmb	IAmb	06 54 35.6	
	comp=Z,6.0nm,1.2s						
WB0	**Warramunga Arr**	**44.52**	**260**	P	**P**	**06 54 25.7**	**-0.3**
WB0				IAmb	IAmb	06 54 40.4	
	comp=Z,5.7nm,1.0s						
WB2	**Warramunga Arr**	**44.54**	**260**	P	**P**	**06 54 25.9**	**-0.3**
WB2				IAmb	IAmb	06 54 50.2	
	comp=Z,11nm,1.3s						
WRA	**Warramunga Arr**	**44.55**	**260**	P	**P**	**06 54 26.1**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=97,slow=6.9,SNR=18 comp=Z,0.6nm,0.5s						
WRA	**Warramunga Arr**	**44.55**	**260**	P	**P**	**06 54 26.0**	**-0.2**
AS31	**Alice Springs**	**44.69**	**254**	P	**P**	**06 54 27.8**	**+0.6**
ASAR	**Alice Springs**	**44.69**	**254**	P	**P**	**06 54 27.8**	**+0.5**
	comp=Z,2.7nm,0.4s,baz=89,slow=8.4,SNR=52 comp=Z,2.7nm,0.4s						
ASAR	**Alice Springs**	**44.69**	**254**	P	**P**	**06 54 27.5**	**+0.2**
PSA00	**Pilbara Seismi**	**57.81**	**256**	P	**P**	**06 56 03.5**	**+0.9**
MBWA	**Marble Bar**	**57.98**	**256**	P	**P**	**06 56 04.3**	**+0.6**
MBWA				IAmb	IAmb	06 56 29.1	
	comp=Z,16nm,1.2s						
SBA	**Scott Base**	**60.15**	**184**	P	**P**	**06 56 19.1**	**+1.7**
QSPA	**South Pole Qui**	**71.88**	**180**	P	**P**	**06 57 29.9**	**-1.0**
QSPA				IAmb	IAmb	06 57 51.2	
	comp=Z,6.4nm,1.4s						
PETK	**Petropavlovsk-**	**73.93**	**345**	P	**P**	**06 57 43.0**	**+0.4**
	comp=Z,2.5nm,0.7s,baz=140,slow=7.8,SNR=5.6 comp=Z,2.5nm,0.7s						
NVAR	**Mina Array Bea**	**79.64**	**44**	P	**P**	**06 58 15.2**	**+0.6**
	comp=Z,0.3nm,0.7s,baz=232,slow=10,SNR=3.5 comp=Z,0.3nm,0.7s						
ILAR	**Eielson Array**	**86.16**	**13**	P	**P**	**06 58 45.4**	**-1.1**
	comp=Z,0.3nm,0.4s,baz=220,slow=5.2,SNR=10 comp=Z,0.3nm,0.4s						
TXAR	**Lajitas Array**	**86.17**	**58**	P	**P**	**06 58 47.9**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=211,slow=4.4,SNR=5.0 comp=Z,0.3nm,0.6s						
YKA	**Yellowknife Ar**	**94.59**	**25**	P	**P**	**06 59 24.9**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=237,slow=4.6,SNR=4.9 comp=Z,0.3nm,0.5s						
BRTR	**Keskin Array B**	**144.95**	**315**	PKP	**PKPab**	**07 05 41.4**	**+0.7**
	comp=Z,1.0nm,0.5s,baz=106,slow=3.5,SNR=2.6						
CLL	**Collm**	**145.72**	**347**	*i* PKPbc	**PKPab**	**07 05 43.1**	**0.0**
	comp=Z,5.0nm,0.5s						
GERES	**GERESS Array B**	**147.86**	**345**	PKPbc	**PKiKP**	**07 05 48.5**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=5.5,slow=4.2,SNR=7.1						

IDC 30 06:59:22.3±2.9, 54°.02N×86°.60E, h0km, mbtmp2.9/2, ML2.8/1, Error ellipse: s-maj=24.9km s-min=15.7km az=47.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.05**	**267**	*i*		07 06 20.0	
	baz=86,slow=316,SNR=3.6						
ZALV	**Zalesovo Beam**	**1.05**	**267**	Pg	Pg	06 59 41.9	-0.5
	0.6nm,0.3s,baz=81,slow=19,SNR=4.2						
ZALV				Lg	Lg	06 59 56.7	
	2.0nm,0.3s,baz=97,slow=28,SNR=8.4						
KURBB	**Kurchatov Arra**	**6.00**	**239**	Pn	Pn	07 00 53.4	+1.1
	0.7nm,0.4s,baz=56,slow=14,SNR=8.7						
KURBB				Lg	Lg	07 02 32.7	
	baz=52,slow=32,SNR=2.7						
MKAR	**Makanchi Array**	**7.74**	**203**	Pn	Pn	07 01 16.8	+0.6
	0.1nm,0.3s,baz=24,slow=13,SNR=5.2 0.2nm,0.3s						

IDC ***30*** *07:06:06.4±2.0, 23°.94S×66°.79W, h190km±16km, mb3.1/3, mbtmp3.7/7, Error ellipse: s-maj=31.6km s-min=19.3km az=172.0*
VAO ***30*** *07:06:06.9±0.4, 23°.91S×67°.29W, h258km±5km, mb3.7*
GUC ***30*** *07:06:07.8±0.5, 23°.91S×67°.20W, h233km±11km, ML3.9*

ISC 30 07:06:06.2±0.7, 23°.93S±0°.05×66°.94W±0°.08, h207km±10km, n51, σ1§12/65, mb3.5/3, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.24**	**305**	P	**Pn**	**07 06 49.3**	**+1.2**
	91nm,0.3s,baz=125,slow=11,SNR=529						
LVC				S	**S**	**07 07 21.1**	**+1.0**
	32nm,0.3s,baz=254,slow=21,SNR=15						
LVC	**Limon Verde**	**2.24**	**305**	*e*P	**Pn**	**07 06 49.3**	**+1.2**
PB15	**IPOC Station P**	**2.43**	**287**	*e*P	**Pn**	**07 06 51.2**	**+1.2**
PB15				*i* S	**S**	**07 07 23.8**	**+0.1**
PB06	**IPOC Station P**	**2.71**	**296**	*e*P	**Pn**	**07 06 54.0**	**+1.0**
PB06				*i* S	**S**	**07 07 29.0**	**-0.1**
PB06				IAML		07 07 30.9	
	comp=E,461nm,0.1s						
GO02	**Mina Guanaco**	**2.71**	**242**	*e*P	**Pn**	**07 06 53.8**	**+0.6**
GO02				*i* S	**S**	**07 07 29.9**	**+0.5**
PB09	**IPOC Station P**	**3.00**	**314**	*e*P	**Pn**	**07 06 57.9**	**+1.5**
PB09				*i* S	**S**	**07 07 36.2**	**+1.1**
PB09				IAML		07 07 39.5	
	comp=E,98nm,0.3s						
PB10	**IPOC Station P**	**3.34**	**276**	*e*P	**Pn**	**07 07 00.9**	**+0.7**
PB10				*i* S	**S**	**07 07 40.8**	**-1.2**
PB04	**IPOC Station P**	**3.35**	**298**	*e*P	**Pn**	**07 07 01.1**	**+0.5**
PB04				*i* S	**S**	**07 07 41.8**	**-0.9**
PB07	**IPOC Station P**	**3.49**	**308**	*e*P	**Pn**	**07 07 02.9**	**+0.6**
PB07				*i* S	**S**	**07 07 44.8**	**-0.8**
PB01	**IPOC Station P**	**3.71**	**320**	*e*P	**Pn**	**07 07 05.4**	**+0.5**
PB01				*i* S	**S**	**07 07 49.8**	**-0.6**
PB02	**IPOC Station P**	**3.77**	**313**	*e*P	**Pn**	**07 07 06.0**	**+0.4**
PB02				*i* S	**S**	**07 07 50.3**	**-1.3**
PATCX	**Punta Patache**	**4.29**	**315**	*e*P	**Pn**	**07 07 11.6**	**-0.4**
PATCX				*i* S	**S**	**07 08 01.9**	**-1.4**
PB08	**IPOC Station P**	**4.29**	**331**	*e*P	**Pn**	**07 07 13.6**	**+1.3**
PB08				*i* S	**S**	**07 08 04.6**	**+0.9**
PB11	**IPOC Station P**	**4.85**	**328**	*e*P	**Pn**	**07 07 18.8**	**-0.4**
PB11				*i* S	**S**	**07 08 14.4**	**-1.9**
LPAZ	**La Paz**	**7.68**	**351**	P	**Pn**	**07 07 57.4**	**+1.4**
	comp=E,0.6nm,0.4s,baz=167,slow=4.2,SNR=8.5						
LPAZ				S	**S**	**07 09 24.5**	**+1.2**
	comp=E,0.5nm,0.5s,baz=253,slow=23,SNR=2.0						
SIV	**San Ignacio**	**9.63**	**36**	P	**Pn**	**07 08 19.4**	**-1.2**
	comp=E,1.2nm,0.5s,baz=234,slow=10,SNR=6.1						
FRBT	**Francisco Belt**	**12.75**	**102**	*e*P	**P**	**07 09 04.6**	**+0.8**
TRCB	**Terra Rica**	**13.19**	**88**	*e*P	**P**	**07 09 09.5**	**+0.8**
SALV	**Santo Antonio**	**13.24**	**55**	*e*P	**P**	**07 09 08.8**	**-0.5**
PTGB	**Pitanga**	**13.58**	**96**	*e*P	**P**	**07 09 14.3**	**+1.2**
CPSB	**Cacapava Do Su**	**13.63**	**121**	*e*P	**P**	**07 09 13.3**	**-0.2**
PLTB	**Pedras Altas**	**14.14**	**126**	*e*P	**P**	**07 09 19.2**	**+0.1**
PCMB	**Pacaembu**	**14.64**	**84**	*e*P	**P**	**07 09 26.1**	**+1.3**
TRQA	**Tornquist**	**14.71**	**164**	*e*P	**Pn**	**07 09 24.8**	**+0.2**
CNLB	**Canela**	**15.35**	**114**	*e*P	**P**	**07 09 33.5**	**+0.9**
TER01	**Tubaro-SC**	**16.62**	**110**	*e*P	**P**	**07 09 46.7**	**+0.2**
CLDB	**Colider**	**16.76**	**41**	*e*P	**Pn**	**07 09 48.4**	**-1.1**
CZSB	**Cruzeiro do Su**	**17.03**	**340**	*e*P	**P**	**07 09 47.6**	**-3.5**
PLCA	**Paso Flores**	**17.03**	**189**	*e*P	**P**	**07 09 48.4**	**-2.6**
PET01	**Itanhaem-SP**	**17.96**	**95**	*e*P	**Pn**	**07 10 02.5**	**-0.9**
VAO	**Valinhos**	**18.35**	**91**	*e*P	**P**	**07 10

DRK	**Karamyk**	**1.63**	**332**			**Pn**	**07 10 06.7**	**-3.1**
DRK					Sn	**Sn**	**07 10 25.1**	**-5.8**
GAR	**Garm**	**2.16**	**297**			**Pn**	**07 10 18.9**	**+2.0**
OHH	**Osh**	**2.48**	**0**	PN		**Pn**	**07 10 20.5**	**-0.7**
BTK	**Batken**	**2.53**	**323**	Pn		**Pn**	**07 10 23.5**	**+1.6**
BTK	**Batken**	**2.53**	**323**	PN		**Pn**	**07 10 23.5**	**+1.6**
KSH	**Kashi**	**2.89**	**59**	Pg		Pn	07 10 21.0	-6.0
KSH				Sg		Sn	07 10 48.5	-13
KSH				smax		smax		
	comp=N,3µm,0.7s							
KSH				smax		smax		
	comp=E,3µm,0.8s							
CHGR	**Chuyangaron**	**2.91**	**283**			**Pb**	**07 10 31.3**	**-1.6**
CHGR	**Chuyangaron**	**2.91**	**283**	PN		**Pb**	**07 10 31.3**	**-1.6**
AML	**Almayashu**	**4.14**	**9**	P		**Pn**	**07 10 43.7**	**-0.7**
	SNR=31							
AML	**Almayashu**	**4.14**	**9**	PN		**Pn**	**07 10 44.1**	**-0.3**
TAS	**Tashkent**	**4.24**	**322**			**Pn**	**07 10 45.6**	**+0.2**
TAS	**Tashkent**	**4.24**	**322**	PN		**Pn**	**07 10 45.6**	**+0.2**
CEP	**Cherat**	**4.27**	**190**	P		**Pb**	**07 10 56.2**	**+0.2**
CEP				S		**Sg**	**07 11 52.0**	**-5.9**
UCH	**Uchtor**	**4.38**	**17**	P		**Pn**	**07 10 47.1**	**-0.7**
	SNR=31							
UCH	**Uchtor**	**4.38**	**17**	PN		**Pn**	**07 10 47.1**	**-0.7**
CHCP	**Chirah Chowk**	**4.39**	**175**	P		**Pb**	**07 10 57.7**	**-0.4**
IUG	**Iuzhnay**	**4.61**	**334**	*e*PN		**Pn**	**07 10 50.4**	**-0.1**
IUG				*e*			07 11 03.4	
IUG				*e*			07 11 58.9	
IUG	**Iuzhnay**	**4.61**	**334**	*e*P		**Pb**	**07 11 04.4**	**+2.7**
	6µm,0.8s							
IUG				*e*S		**Sb**	**07 12 02.9**	**+5.5**
	2µm,0.6s							
IUG	**Iuzhnay**	**4.61**	**334**	*e*Pn		**Pn**	**07 10 50.5**	**-0.1**
	baz=329							
IUG				*e*Pg		**Pb**	**07 11 03.5**	**+1.8**
	baz=329							
IUG				*e*Lg		Lg	07 11 58.9	
	baz=329							
IUG	**Iuzhnay**	**4.61**	**334**	Pg		**Pg**	**07 11 06.8**	**-2.2**
	6µm,0.8s							
IUG				Lg		Lg	07 12 02.9	
	2µm,0.6s							
KBL	**Kabul**	**4.62**	**222**			**Pb**	**07 10 58.6**	**-3.4**
KBL	**Kabul**	**4.62**	**222**	PN		**Pb**	**07 10 58.6**	**-3.4**
EKS2	**Erkin-Say**	**4.67**	**9**	P		Pn	07 10 56.9	+5.4
	SNR=28							
EKS2	**Erkin-Say**	**4.67**	**9**	PN		**Pn**	**07 10 53.3**	**+1.8**
MRKS	**Merke**	**4.71**	**4**	*e*P		**Pb**	**07 11 02.9**	**-0.5**
	104nm,0.5s							
MRKS				*e*S		**Sb**	**07 12 00.2**	**+0.1**
	225nm,0.5s							
MRKS	**Merke**	**4.71**	**4**	Pg		**Pb**	**07 11 05.4**	**+2.0**
	104nm,0.5s							
MRKS				Lg		Lg	07 12 01.1	
	225nm,0.5s							
AAK	**Ala-Archa**	**4.77**	**15**	P		Pn	07 10 58.6	+5.8
	SNR=66							
AAK	**Ala-Archa**	**4.77**	**15**	Pn		**Pn**	**07 10 52.7**	**-0.2**
	2.9nm,0.3s,baz=299,slow=15,SNR=17							
AAK				Sn		**Sn**	**07 11 52.1**	**+3.9**
	baz=349,slow=22							
AAK				LR		LR	07 12 48.8	
	comp=Z,524nm,20.0s,baz=206,slow=41							
AAK	**Ala-Archa**	**4.77**	**15**			**Pn**	**07 10 51.9**	**-1.0**
KBK	**Karagaybulak**	**4.89**	**19**	P		**Pn**	**07 10 54.8**	**+0.3**
	SNR=20							
KBK	**Karagaybulak**	**4.89**	**19**	PN		**Pn**	**07 10 55.4**	**+0.9**
CHM	**Chimkent**	**4.91**	**331**	*e*P		**Pb**	**07 11 08.1**	**+1.2**
	219nm,0.1s							
CHM				*e*S		**Sb**	**07 12 09.2**	**+3.1**
	903nm,0.7s							
ULHL	**Ulahol**	**4.96**	**31**	P		**Pb**	**07 11 05.3**	**-2.5**
	SNR=7.0							
ULHL	**Ulahol**	**4.96**	**31**	PN		**Pn**	**07 10 55.2**	**-0.3**
FRU1	**Bishkek**	**4.96**	**16**	Pn		**Pn**	**07 10 53.8**	**-1.6**
FRU1	**Bishkek**	**4.96**	**16**	PN		**Pn**	**07 10 53.8**	**-1.6**
DZA	**Taraz**	**4.97**	**348**	*e*PN		**Pn**	**07 10 54.4**	**-1.0**
DZA				*e*			07 12 09.9	
DZA	**Taraz**	**4.97**	**348**	*e*Pn		**Pn**	**07 10 54.5**	**-1.0**
	baz=344							
DZA				*e*Lg		Lg	07 12 10.0	
	baz=344							
CHMS	**Chumysh**	**5.17**	**16**	P		Pn	07 11 03.8	+5.6
	SNR=39							
CHMS	**Chumysh**	**5.17**	**16**	PN		**Pn**	**07 10 58.6**	**+0.4**
CHMS				LG		Lg	07 12 11.6	
CHMS	**Chumysh**	**5.17**	**16**	⇑Pn		**Pn**	**07 10 58.6**	**+0.4**
	79nm,0.5s							
CHMS				⇓Lg		Lg	07 12 11.6	
	217nm,0.7s							
KDJ	**Kajisay**	**5.29**	**38**	Pn		**Pn**	**07 10 57.1**	**-2.9**
KDJ	**Kajisay**	**5.29**	**38**	PN		**Pn**	**07 10 57.1**	**-2.9**
TKM2	**Tokmak 2**	**5.32**	**23**	P		Pn	07 11 05.7	+5.2
	SNR=27							
TKM2	**Tokmak 2**	**5.32**	**23**	PN		**Pn**	**07 11 03.1**	**+2.7**
TKM2							07 11 12.8	
TKM2	**Tokmak 2**	**5.32**	**23**	⇑Pn		**Pn**	**07 11 03.1**	**+2.7**
	31nm,0.6s							
TKM2				⇓Pg		**Pb**	**07 11 17.5**	**+3.5**
	213nm,0.8s							
TKM2				⇓Lg		Lg	07 12 17.6	
	244nm,0.9s							
TARG	**Taragay, Kyrgy**	**5.33**	**45**			**Pn**	**07 10 59.9**	**-0.9**
TARG	**Taragay, Kyrgy**	**5.33**	**45**	PN		**Pn**	**07 10 59.9**	**-0.9**
KK31	**Karatay Array**	**5.34**	**342**			**Pn**	**07 10 59.0**	**-1.5**
KK31	**Karatay Array**	**5.34**	**342**	PN		**Pn**	**07 10 59.8**	**-0.7**
KK31							07 11 59.3	
KK31	**Karatay Array**	**5.34**	**342**	⇑Pn		**Pn**	**07 10 59.9**	**-0.7**
	10nm,0.3s,baz=154,slow=12,SNR=884							
KK31				⇑Sn		**Sn**	**07 11 59.3**	**-2.8**
	80nm,0.5s,baz=152,slow=26,SNR=5.1							
KK31				⇑Lg		Lg	07 12 18.7	
	190nm,0.6s,baz=152,slow=30							
KKAR	**Karatay Array**	**5.34**	**342**			**Pn**	**07 10 59.0**	**-1.5**
KKAR	**Karatay Array**	**5.34**	**342**			**Pn**	**07 10 59.3**	**-1.2**
KKAR	**Karatay Array**	**5.34**	**342**	PN		**Pn**	**07 10 59.3**	**-1.2**
USP	**Ospenovka**	**5.38**	**14**	P		Pn	**07 11 04.5**	**+3.4**
	SNR=21							
BRLS	**Boroldy**	**5.46**	**337**	*e*PN		**Pn**	**07 10 59.7**	**-2.5**
BRLS				*e*			07 12 19.8	
BRLS	**Boroldy**	**5.46**	**337**	*e*P		**Pb**	**07 11 13.3**	**-2.9**
	25nm,0.7s							
BRLS				*e*S		**Sb**	**07 12 19.0**	**-2.8**
	114nm,0.4s							
BRLS	**Boroldy**	**5.46**	**337**	*e*Pn		**Pn**	**07 10 59.8**	**-2.5**
	baz=330							
BRLS				*e*Pg		**Pb**	**07 11 13.1**	**-3.2**
	baz=330							
BRLS				*e*Lg		Lg	07 12 19.9	
	baz=330							
BRLS	**Boroldy**	**5.46**	**337**	Pg		**Pb**	**07 11 16.2**	**0.0**
	25nm,0.7s							
BRLS				Lg		Lg	07 12 19.0	
	114nm,0.4s							
KST	**Kastek**	**5.55**	**25**	*e*P		**Pb**	**07 11 17.6**	**-0.2**
	69nm,0.6s							
KST				*e*S		**Sb**	**07 12 25.0**	**+0.6**
	297nm,0.7s							
KST	**Kastek**	**5.55**	**25**	Pg		**Pb**	**07 11 21.2**	**+3.4**
	69nm,0.6s							
KST				Lg		Lg	07 12 27.4	
	297nm,0.7s							
SGDS	**Sogindy**	**5.58**	**14**	*e*PN		**Pn**	**07 11 03.1**	**-0.8**
SGDS				*e*			07 11 17.7	
SGDS				*e*			07 12 26.8	
SGDS	**Sogindy**	**5.58**	**14**	*e*Pn		**Pn**	**07 11 03.2**	**-0.7**
	baz=14							
SGDS				*e*Pg		**Pb**	**07 11 17.8**	**-0.5**
	baz=14							
SGDS				*e*Lg		Lg	07 12 26.8	
	baz=14							
JMU	**Jammu**	**5.59**	**161**	*e*P		Pb	07 11 11.1	-7.3
DGS	**Degeres**	**5.67**	**23**	*e*P		**Pb**	**07 11 18.9**	**-0.9**
	106nm,0.5s							
DGS				*e*S		**Sb**	**07 12 27.6**	**-0.2**
	188nm,0.7s							
DGS	**Degeres**	**5.67**	**23**	Pg		**Pb**	**07 11 21.5**	**+1.7**
	106nm,0.5s							
DGS				Lg		Lg	07 12 28.5	
	188nm,0.7s							
MTBS	**Maitube**	**5.79**	**28**	*e*P		**Pb**	**07 11 20.3**	**-1.5**
	77nm,0.6s							
MTBS				*e*S		**Sb**	**07 12 30.6**	**-0.6**
	125nm,0.7s							
MTBS	**Maitube**	**5.79**	**28**	Pg		**Pb**	**07 11 25.1**	**+3.3**
	77nm,0.6s							
MTBS				Lg		Lg	07 12 34.1	
	125nm,0.7s							
TNSS	**Tian-Shan**	**5.91**	**31**	*e*PN		**Pn**	**07 11 07.2**	**-1.4**
TNSS				*e*			07 11 24.9	
TNSS				*e*			07 12 37.7	
TNSS	**Tian-Shan**	**5.91**	**31**	*e*P		**Pb**	**07 11 23.1**	**-1.0**
	33nm,0.5s							
TNSS				*e*S		**Sb**	**07 12 34.6**	**-0.5**
	61nm,0.5s							
TNSS	**Tian-Shan**	**5.91**	**31**	*e*Pn		**Pn**	**07 11 07.3**	**-1.4**
	baz=33							
TNSS				*e*Pg		**Pb**	**07 11 24.9**	**+0.9**
	baz=33							
TNSS				*e*Lg		Lg	07 12 37.7	
	baz=33							
TNSS	**Tian-Shan**	**5.91**	**31**	Pg		**Pb**	**07 11 25.5**	**+1.5**
	33nm,0.5s							
TNSS				Lg		Lg	07 12 34.6	
	61nm,0.5s							
AAA	**Alma-Ata**	**6.04**	**30**	*e*P		**Pb**	**07 11 26.8**	**+0.7**
	76nm,0.3s							
AAA				*e*S		**Sb**	**07 12 40.8**	**+2.3**
	209nm,0.8s							
AAA	**Alma-Ata**	**6.04**	**30**	*e*Pg		**Pb**	**07 11 26.1**	**0.0**
	baz=32							
AAA				*e*Lg		Lg	07 12 40.9	
	baz=32							
AAA	**Alma-Ata**	**6.04**	**30**	Pg		**Pb**	**07 11 29.0**	**+2.9**
	76nm,0.3s							
AAA				Lg		Lg	07 12 40.8	
	209nm,0.8s							
KRBS	**Karabastau**	**6.06**	**20**	*e*P		**Pb**	**07 11 25.5**	**-0.8**
	0.1nm,0.3s							
KRBS				*e*S		**Sb**	**07 12 39.0**	**+0.1**
	93nm,0.8s							
KRBS	**Karabastau**	**6.06**	**20**	Pg		**Pb**	**07 11 27.9**	**+1.6**
	0.1nm,0.3s							
KRBS				Lg		Lg	07 12 39.0	
	93nm,0.8s							
THN	**Thein Dam**	**6.09**	**156**	*e*P		Pb	07 11 18.1	-8.8
KTBS	**Karatobe**	**6.38**	**26**	*e*P		**Pb**	**07 11 32.2**	**+0.2**
	31nm,0.5s							
KTBS				*e*S		**Sb**	**07 12 51.1**	**+2.7**
	177nm,0.8s							
KTBS	**Karatobe**	**6.38**	**26**	Pg		**Pb**	**07 11 35.0**	**+3.0**
	31nm,0.5s							
KTBS				Lg		Lg	07 12 51.1	
	177nm,0.8s							
KUU	**Kurty**	**6.43**	**24**	*e*PN		**Pn**	**07 11 14.0**	**-1.5**
KUU				*e*			07 11 33.1	
KUU				*e*			07 12 51.6	
KUU	**Kurty**	**6.43**	**24**	*e*P		**Pb**	**07 11 32.4**	**-0.4**
	46nm,0.9s							
KUU				*e*S		**Sb**	**07 12 50.6**	**+0.9**
	69nm,0.7s							
KUU	**Kurty**	**6.43**	**24**	*e*Pn		**Pn**	**07 11 14.1**	**-1.5**
	baz=24							
KUU				*e*Pg		**Pb**	**07 11 33.2**	**+0.4**
	baz=24							
KUU				*e*Lg		Lg	07 12 51.6	
	baz=24							
KUU	**Kurty**	**6.43**	**24**	Pg		**Pb**	**07 11 34.7**	**+2.0**
	46nm,0.9s							
KUU				Lg		Lg	07 12 50.6	
	69nm,0.7s							
SATY	**Saty**	**6.59**	**39**	*e*PN		**Pn**	**07 11 17.1**	**-0.6**
SATY				*e*			07 11 36.1	
SATY				*e*			07 12 57.6	
SATY	**Saty**	**6.59**	**39**	*e*P		**Pb**	**07 11 36.1**	**+0.6**
	40nm,1.0s							
SATY				*e*S		**Sb**	**07 12 57.4**	**+3.1**
	116nm,1.2s							
SATY	**Saty**	**6.59**	**39**	*e*Pn		**Pn**	**07 11 17.1**	**-0.6**
	baz=41							
SATY				*e*Pg		**Pb**	**07 11 36.2**	**+0.6**
	baz=41							
SATY				*e*Lg		Lg	07 12 57.6	
	baz=41							
SATY	**Saty**	**6.59**	**39**	Pg		**Pb**	**07 11 38.4**	**+2.9**
	40nm,1.0s							
SATY				Lg		Lg	07 12 57.7	
	116nm,1.2s							
CHKK	**Chushkaly**	**6.62**	**27**	*e*PN		**Pn**	**07 11 18.7**	**+0.6**
CHKK				*e*			07 11 35.9	
CHKK				*e*			07 12 58.3	
CHKK	**Chushkaly**	**6.62**	**27**	*e*P		**Pb**	**07 11 36.4**	**+0.5**
	22nm,0.6s							
CHKK				*e*S		**Sb**	**07 12 57.8**	**+2.7**
	133nm,0.7s							
CHKK	**Chushkaly**	**6.62**	**27**	*e*Pn		**Pn**	**07 11 18.7**	**+0.6**
	baz=28							
CHKK				*e*Pg		**Pb**	**07 11 36.0**	**0.0**
	baz=28							
CHKK				*e*Lg		Lg	07 12 58.4	
	baz=28							
CHKK	**Chushkaly**	**6.62**	**27**	Pg		**Pb**	**07 11 38.9**	**+3.0**
	22nm,0.6s							
CHKK				Lg		Lg	07 12 57.7	
	133nm,0.7s							
ZHN	**Zhinishke**	**6.68**	**38**	*e*P		**Pb**	**07 11 37.3**	**+0.2**
	18nm,0.3s							
ZHN				*e*S		**Sb**	**07 12 59.1**	**+2.1**
	90nm,1.0s							
ZHN	**Zhinishke**	**6.68**	**38**	*e*Pg		**Pb**	**07 11 36.1**	**-1.0**
	baz=40							
ZHN				*e*Lg		Lg	07 13 01.6	
	baz=40							
ZHN	**Zhinishke**	**6.68**	**38**	Pg		**Pb**	**07 11 39.9**	**+2.8**
	18nm,0.3s							
ZHN				Lg		Lg	07 12 59.1	
	90nm,1.0s							
KURS	**Kuram**	**6.80**	**35**	*e*P		**Pb**	**07 11 38.9**	**-0.1**
	26nm,0.7s							
KURS				*e*S		**Sb**	**07 13 02.4**	**+2.0**
	82nm,1.7s							
KURS	**Kuram**	**6.80**	**35**	Pg		**Pb**	**07 11 41.3**	**+2.3**
	26nm,0.7s							
KURS				Lg		Lg	07 13 03.5	
	82nm,1.7s							
UZB	**Uzynbulak**	**6.96**	**41**	*e*PN		**Pn**	**07 11 21.2**	**-1.7**
UZB				*e*			07 11 43.3	
UZB	**Uzynbulak**	**6.96**	**41**	*e*P		**Pb**	**07 11 42.3**	**+0.4**
	22nm,0.8s							
UZB				*e*S		**Sb**	**07 13 08.9**	**+3.8**
	82nm,1.1s							
UZB	**Uzynbulak**	**6.96**	**41**	*e*Pn		**Pn**	**07 11 21.2**	**-1.7**
	baz=43							
UZB				*e*Pg		**Pb**	**07 11 43.4**	**+1.5**
	baz=43							
UZB				*e*Lg		Lg	07 13 10.3	
	baz=43							
UZB	**Uzynbulak**	**6.96**	**41**	Pg		**Pb**	**07 11 45.6**	**+3.7**
	22nm,0.8s							
UZB				Lg		Lg	07 13 08.9	
	82nm,1.1s							
KPKS	**Kokpek**	**7.03**	**38**	*e*PN		**Pn**	**07 11 22.7**	**-1.0**
KPKS				*e*			07 11 44.1	
KPKS				*e*			07 13 10.3	
KPKS	**Kokpek**	**7.03**	**38**	*e*P		**Pb**	**07 11 45.9**	**+3.0**
	43nm,0.6s							
KPKS				*e*S		**Sb**	**07 13 14.7**	**+7.8**
	74nm,1.1s							
KPKS	**Kokpek**	**7.03**	**38**	*e*Pn		**Pn**	**07 11 22.8**	**-1.0**
	baz=40							
KPKS				*e*Pg		**Pb**	**07 11 44.2**	**+1.3**
	baz=40							
KPKS				*e*Lg		Lg	07 13 10.3	
	baz=40							
KPKS	**Kokpek**	**7.03**	**38**	Pg		Pg	07 11 48.7	-6.5
	43nm,0.6s							
KPKS				Lg		Lg	07 13 14.7	
	74nm,1.1s							
BTLS	**Baital**	**7.05**	**7**	*e*PN		**Pn**	**07 11 23.7**	**-0.3**
BTLS				*e*			07 11 43.7	
BTLS				*e*			07 13 12.7	
BTLS	**Baital**	**7.05**	**7**	*e*P		**Pb**	**07 11 43.6**	**+0.4**
	16nm,0.5s							
BTLS				*e*S		**Sb**	**07 13 10.7**	**+3.2**
	73nm,0.6s							
BTLS	**Baital**	**7.05**	**7**	*e*Pn		**Pn**	**07 11 23.8**	**-0.3**
	baz=6.6							
BTLS				*e*Pg		**Pb**	**07 11 43.7**	**+0.4**
	baz=6.6							
BTLS				*e*Lg		Lg	07 13 12.8	
	baz=6.6							
BTLS	**Baital**	**7.05**	**7**	Pg		**Pb**	**07 11 46.4**	**+3.1**
	16nm,0.5s							
BTLS				Lg		Lg	07 13 10.7	
	73nm,0.6s							
SHLS	**Shalkode**	**7.20**	**43**	*e*P		**Pn**	**07 11 28.6**	**+2.4**
SHLS	**Shalkode**	**7.20**	**43**	*e*P		**Pg**	**07 11 55.3**	**-3.3**
	48nm,0.7s							
SHLS				*e*S		**Sg**	**07 13 30.6**	**-1.2**
	71nm,1.0s							
SHLS	**Shalkode**	**7.20**	**43**	*e*Pn		**Pn**	**07 11 28.6**	**+2.4**
	baz=47							
SHLS				*e*Pg		Pb	07 11 50.9	+5.0
	baz=47							
SHLS				*e*Lg		Lg	07 13 27.7	
	baz=47							
SHLS	**Shalkode**	**7.20**	**43**	Pg		**Pg**	**07 11 58.0**	**-0.7**
	48nm,0.7s							
SHLS				Lg		Lg	07 13 31.6	
	71nm,1.0s							
ARXS	**Arharly**	**7.24**	**30**	*e*PN		**Pn**	**07 11 25.0**	**-1.7**
ARXS	**Arharly**	**7.24**	**30**	*e*P		**Pb**	**07 11 48.1**	**+1.6**
	61nm,0.8s							
ARXS				*e*S		**Sb**	**07 13 18.2**	**+5.2**
	128nm,1.3s							
ARXS	**Arharly**	**7.24**	**30**	Pg		**Pb**	**07 11 50.8**	**+4.3**
	61nm,0.8s							
ARXS				Lg		Lg	07 13 18.3	
	128nm,1.3s							
BHK	**Bhakra**	**7.26**	**155**	*e*P		Pn	07 11 33.2	+6.3
BHK				*e*S		**Sn**	**07 12 55.6**	**+6.3**
PDGK	**Podgornoye**	**7.34**	**42**	Pg		**Pb**	**07 11 50.8**	**+2.6**
	10nm,0.5s							
PDGK				Lg		Lg	07 13 18.3	
	39nm,0.7s							
BLB	**Baldybastay**	**7.42**	**34**	*e*P		**Pb**	**07 11 52.3**	**+2.7**
	70nm,0.7s							
BLB				*e*S		**Sb**	**07 13 26.3**	**+8.1**
	86nm,0.9s							
BLB	**Baldybastay**	**7.42**	**34**	Pg		Pb	07 11 55.5	+5.9
	70nm,0.7s							
BLB				Lg		Lg	07 13 26.3	
	86nm,0.9s							
SMLA	**Simla**	**7.79**	**151**	*e*P		Pn	07 11 39.6	+5.5
SMLA				*e*S		**Sn**	**07 13 00.6**	**-1.8**
SMLA				IAML			07 13 13.1	
	comp=N,149nm,0.5s							
SMLA				IAML			07 13 23.0	
	comp=E,204nm,0.8s							
HRA	**Herat**	**9.26**	**250**			Pn	07 12 00.4	+5.8
NDI	**New Delhi**	**10.04**	**157**	*e*P		Pn	07 12 10.0	+4.9
OTUK	**Ortayu**	**10.20**	**358**	P		**Pn**	**07 12 04.5**	**-2.7**
OTUK	**Ortayu**	**10.20**	**358**	⇑Pn		**Pn**	**07 12 04.5**	**-2.7**
	comp=E,11nm,0.8s							
KUDL	**Kundal**	**10.35**	**161**	*e*P		Pn	07 12 12.8	+3.6
SONA	**Sohna**	**10.41**	**159**	*e*P		Pn	07 12 15.4	+5.4
MAKZ	**Makanchi**	**11.08**	**35**			**Pn**	**07 12 16.3**	**-2.9**
MAKZ	**Makanchi**	**11.08**	**35**	P		**Pn**	**07 12 16.3**	**-2.9**
MK31	**Makanchi Array**	**11.21**	**36**			**Pn**	**07 12 20.1**	**-0.9**
MK31	**Makanchi Array**	**11.21**	**36**	⇓*e*P		**Pn**	**07 12 20.4**	**-0.6**
MK31	**Makanchi Array**	**11.21**	**36**	⇑Pn		**Pn**	**07 12 20.4**	**-0.6**
	comp=E,3.9nm,0.7s,baz=212,slow=12,SNR=44							
MKAR	**Makanchi Array**	**11.21**	**36**	Pn		**Pn**	**07 12 20.6**	**-0.3**
	comp=E,0.4nm,0.3s,baz=214,slow=13,SNR=24							
MKAR				Lg		Lg	07 15 30.3	
	comp=E,0.2nm,0.3s,baz=224,slow=28,SNR=5.7							
MKAR				LR		LR	07 16 54.2	
	comp=E,156nm,21.7s,baz=224,slow=39							
	comp=E,5.0nm,0.7s							
MKAR	**Makanchi Array**	**11.21**	**36**			**Pn**	**07 12 20.2**	**-0.7**
GEYT	**Alibeck**	**11.58**	**274**	Pn		**Pn**	**07 12 26.6**	**+0.6**
	comp=E,3.0nm,0.3s,baz=115,slow=13,SNR=10							
GEYT				Sn		**Sn**	**07 14 38.6**	**+3.2**
	comp=E,0.7nm,0.3s,baz=322,slow=19,SNR=1.4							
GEYT				LR		LR	07 17 56.5	
	comp=E,234nm,19.6s,baz=92,slow=43							
	comp=E,12nm,0.5s							
GEYT	**Alibeck**	**11.58**	**274**	Pn		**Pn**	**07 12 27.3**	**+1.2**
GYA0	**ALIBECK ARRAY**	**11.58**	**274**	P		**Pn**	**07 12 26.8**	**+0.7**
GYA0B	**ALIBECK ARRAY**	**11.58**	**274**			**Pn**	**07 12 26.8**	**+0.7**
AJM	**Ajmer**	**11.64**	**172**	*e*P		Pn	07 12 32.4	+5.4
WMQ	**Urumqi**	**12.66**	**58**	*e*P		Pn	07 12 36.0	-4.9
WMQ				pP			07 12 43.8	
WMQ				pmax		pmax		
	comp=E,27nm,0.8s							
WMQ				LR		LR		
	comp=E,440nm,12.1s							
WMQ				LR		LR		
	comp=E,360nm,15.3s							
WMQ				LR		LR		
	comp=E,230nm,10.1s							
ZSN	**Zaisan**	**12.92**	**39**	*e*Pg		Pg	07 13 31.9	
	baz=40							
ZSN				*e*Lg		Lg	07 16 21.3	
	baz=40							
KURBB	**Kurchatov Arra**	**13.22**	**16**	Pn		**Pn**	**07 12 46.1**	**-2.4**
	comp=E,0.1nm,0.3s,baz=204,slow=12,SNR=18							
KURBB				Lg		Lg	07 16 33.4	
	comp=E,0.1nm,0.3s,baz=202,slow=30,SNR=5.5							
KURBB				LR		LR	07 17 51.2	
	comp=E,275nm,19.2s,baz=156,slow=38							
	comp=E,2.9nm,0.7s							
KURBB	**Kurchatov Arra**	**13.22**	**16**	Lg		Lg	07 16 29.1	
DANN	**Dangsing**	**13.33**	**133**	*e*P		**Pn**	**07 12 48.5**	**-1.8**
	comp=E,25nm,0.3s							
KURK	**Kurchatov**	**13.33**	**16**			**Pn**	**07 12 46.7**	**-3.2**
KURK	**Kurchatov**	**13.33**	**16**	P		**Pn**	**07 12 46.7**	**-3.2**
KURK	**Kurchatov**	**13.33**	**16**	Lg		Lg	07 16 30.2	
KOLN	**Koldanda**	**13.68**	**135**	*e*P		**Pn**	**07 12 53.1**	**-1.9**
GKN	**Gorkha**	**14.10**	**132**	*e*P		**Pn**	**07 12 58.8**	**-1.9**
	comp=E,24nm,0.3s							
AB31	**Akbulak array**	**14.53**	**325**	P		Pn	07 13 01.7	-4.7
AB31	**Akbulak array**	**14.53**	**325**	P		Pn	07 13 01.6	-4.7
	comp=E,7.3nm,0.6s,baz=132,slow=12,SNR=151							
ABKAR	**Akbulak array**	**14.53**	**325**	Pn		Pn	07 13 02.0	-4.4
ABKAR	**Akbulak array**	**14.53**	**325**	Pn		Pn	07 13 01.7	-4.7
KKN	**Kakani**	**14.64**	**131**	*e*P		**Pn**	**07 13 05.0**	**-3.1**
DMN	**Daman**

SHL IAmb IAmb 07 14 23.0
comp=Z,14nm,0.6s
SHL Shillong 20.40 122 P **P** **07 14 16.8 -1.3**
SHL pmax pmax
comp=Z,14nm,0.6s
SVE Sverdlovsk 20.45 341 *e*P **P**
SVE pmax pmax
comp=Z,19nm,0.7s
GANJ Ganja 20.60 286 P Pn 07 14 22.1 -0.2
ARU Arti 20.70 337 P **P** **07 14 20.4 -0.4**
comp=Z,3.5nm,0.5s,baz=342,slow=4.5,SNR=3.8
ARU Lg Lg 07 20 36.4
baz=333,slow=18,SNR=1.3
ARU LR LR 07 22 58.3
comp=Z,169nm,18.0s,baz=146,slow=39
comp=Z,3.5nm,0.5s
ARU Arti 20.70 337 P **P** **07 14 18.6 -2.3**
ARU IAmb IAmb 07 14 31.4
comp=Z,15nm,0.8s
ARU Arti 20.70 337 P Pn 07 14 23.3 +0.2
ARU PPP PPP 07 14 46.6
ARU S **S** **07 18 13.7 +1.9**
ARU SS **SnSn** **07 18 32.1 +0.9**
ARU MLR MLR
comp=Z,245nm,13.0s
BWNR Bhubaneshwar 20.99 144 *e*P Pn 07 14 27.6 +0.8
GROC Groznyy 21.08 293 *e*P **P** **07 14 27.3 +2.2**
GROC *e* 07 14 46.1
GROC pmax pmax
comp=Z,50nm,0.7s
GTA Gaotai 21.11 78 *e*P **P** **07 14 26.0 +0.4**
GTA pP sP 07 14 32.3 +0.6
GTA sP pP 07 14 37.0 +7.2
GTA pmax pmax
comp=Z,5.0nm,1.0s
GTA pmax pmax
comp=Z,39nm,4.5s
GTA LR LR
comp=Z,140nm,15.3s
GTA LR LR
comp=Z,130nm,16.7s
GTA LR LR
comp=Z,180nm,16.4s
HYBB Hyderabad (bro 21.16 165 *e*P P 07 14 32.4 +6.2
HYBB *e*S Sn 07 18 28.4 +0.1
KNGR Kungurtug, Tuv 21.58 46⇓ *e*P **P** **07 14 32.6 +2.1**
KNGR pmax pmax
comp=Z,14nm,0.7s
GNI Garni 21.83 284 P **P** **07 14 38.4 +5.0**
comp=Z,30nm,1.0s,baz=124,slow=1.7,SNR=12
GNI LR LR 07 24 36.3
comp=Z,89nm,19.1s,baz=104,slow=41
GNI Garni 21.83 284 P **P** **07 14 35.1 +1.7**
GNI Garni 21.83 284 P **P** **07 14 35.1 +1.7**
ZEI Tsey 22.44 291 *e*P **P** **07 14 44.0 +4.1**
ZEI pmax pmax
comp=Z,8.0nm,0.6s
BELG Belogornoye 22.64 317 P **P** **07 14 40.0 -1.7**
comp=Z,64nm,0.9s,baz=114,slow=1.9,SNR=18
BELG LR LR 07 24 31.5
comp=Z,129nm,19.8s,baz=130,slow=39
comp=Z,64nm,0.9s
ONI Oni 22.76 291 P **P** **07 14 44.8 +1.6**
ONI IAmb IAmb 07 14 51.3
comp=Z,22nm,0.8s
ONI Oni 22.76 291 P **P** **07 14 44.8 +1.6**
ONI pmax pmax
comp=Z,22nm,0.8s
KBZ Khabaz 23.22 294 P **P** **07 14 47.4 -0.5**
comp=Z,1.5nm,0.8s,baz=98,slow=7.1,SNR=3.6
KBZ LR LR 07 25 33.2
comp=Z,114nm,19.7s,baz=88,slow=41
comp=Z,1.5nm,0.8s
GOF Gofitskoye 23.25 297⇑ *e*P **P** **07 14 54.2 +6.1**
KIV Kislovodsk 23.39 294 P **P** **07 14 51.0 +1.3**
KIV IAmb IAmb 07 15 08.5
comp=Z,16nm,0.7s
KIV Kislovodsk 23.39 294 *i* P **P** **07 14 55.0 +5.3**
KIV *i* 07 15 04.0
KIV *i* 07 15 21.3
KIV *i* S **S** **07 18 54.0 -8.8**
KIV pmax pmax
comp=Z,9.0nm,0.9s
KIV MLR MLR
comp=Z,78nm,17.0s
LZH Lanzhou 24.81 85 *e*P **P** **07 15 03.5 +0.3**
LZH sP sP 07 15 09.5 +0.1
LZH pmax pmax
comp=Z,11nm,1.0s
ZAK Zakamensk 24.91 50 *e*P **P** **07 15 02.2 -1.7**
ZAK pmax pmax
comp=Z,6.0nm,1.1s
VRH Novokhopyorsk 25.51 311 *e*P **P** **07 15 12.3 +3.2**
VRH pmax pmax
comp=Z,10.0nm,0.6s
KIRV Kirov 25.52 331 P **P** **07 15 08.7 -0.4**
comp=Z,10nm,0.6s,baz=15,slow=4.3,SNR=5.2
KIRV LR LR 07 25 42.0
comp=Z,219nm,19.3s,baz=137,slow=38
comp=Z,10nm,0.6s
KIRV Kirov 25.52 331⇓ *e*P **P** **07 15 11.9 +2.8**
SOC Sochi 25.52 293 *e*P **P** **07 15 13.6 +4.3**
SOC *e*PPP PPP 07 16 02.6
SOC *e*S **S** **07 19 42.1 +5.4**
SOC *e*SS **SnSn** **07 20 42.8 +13**
SOC *e*SSS SSS 07 20 55.6
SOC MLR MLR
comp=Z,118nm,19.0s
SONM Songino Array 26.30 57 P **P** **07 15 15.6 -0.9**
comp=Z,3.2nm,0.9s,baz=261,slow=11,SNR=17
SONM LR LR 07 26 36.2
comp=Z,142nm,18.6s,baz=252,slow=39
comp=Z,3.2nm,0.9s
SONM Songino Array 26.30 57 P **P** **07 15 15.7 -0.9**
SONM Songino Array 26.30 57 P **P** **07 15 15.7 -0.9**
SONM pmax pmax
comp=Z,5.0nm,1.0s
ULN Ulaanbaatar 26.74 57⇑ *e*P **P** **07 15 25.6 +5.1**
ULN pmax pmax
comp=Z,4.0nm,0.8s
PZH PanZhiHua 26.95 107 P **P** **07 15 24.5 +2.0**
PZH pmax pmax
comp=Z,10.0nm,0.8s
PZH pmax pmax
comp=Z,50nm,4.1s
VSR Storozhevoye 27.04 310 *e*P **P** **07 15 20.9 -2.1**
VSR pmax pmax
comp=Z,10.0nm,0.6s
VORR Voronezh 27.15 311 *e*P **P** **07 15 23.6 -0.3**
VORR pmax pmax
comp=Z,40nm,0.4s
ANN Anapa 27.20 296 *e*P P 07 15 35.7 +11
ANN *e**PP sP 07 15 40.3 +10
ANN *e* 07 16 13.1
ANN pmax pmax
comp=Z,66nm,1.2s
LPSR Galich'ya Gora 27.59 313 *e*P **P** **07 15 30.6 +2.7**
LPSR pmax pmax
comp=Z,10.0nm,0.7s
PRGR Permogore 28.99 333 *e*P **P** **07 15 41.9 +1.6**
PRGR *e* 07 16 32.3
OBN Obninsk 29.74 317 LR LR 07 28 37.1
comp=Z,67nm,21.6s,baz=71,slow=38
OBN Obninsk 29.74 317 *i* P **P** **07 15 50.8 +3.8**
OBN *i* 07 18 53.8
OBN pmax pmax
comp=Z,29nm,1.1s
OBN MLR MLR
comp=Z,122nm,16.0s
HHC Hu-ho-hao-te 29.92 72 *e*P **P** **07 15 48.8 -0.1**
HHC pmax pmax
comp=Z,21nm,0.9s
HHC pmax pmax
comp=Z,150nm,6.2s
HHC LR LR
comp=Z,230nm,13.5s
HHC LR LR
comp=Z,210nm,15.0s
HHC LR LR
comp=Z,270nm,18.9s
CMAR Chiang Mai Arr 30.03 123 P **P** **07 15 49.7 -0.2**
comp=Z,1.1nm,0.3s,baz=304,slow=11,SNR=6.6
comp=Z,1.1nm,0.3s
BRTR Keskin Array B 30.35 286 P **P** **07 15 54.0 +1.2**
comp=Z,0.6nm,0.4s,baz=119,slow=6.0,SNR=2.5
BRTR LR LR 07 31 48.0
comp=Z,52nm,18.2s,baz=88,slow=44
comp=Z,0.6nm,0.4s
BRTR Keskin Array B 30.35 286 P **P** **07 15 54.0 +1.2**
KLMR Klimovskoe 30.87 328 *e*P **P** **07 15 59.1 +2.2**
KLMR *e* 07 16 56.6
KLMR pmax pmax
comp=Z,6.0nm,1.0s
KLMR Klimovskoe 30.87 328 *e*P **P** **07 15 59.1 +2.2**
KLMR AMP 07 16 12.3
comp=Z,6.0nm,1.0s
KLMR *e*PP **PnPn** **07 16 56.7 -0.4**
EIL Elat 32.33 266 LR LR 07 31 51.2
comp=Z,119nm,19.6s,baz=90,slow=41
AKASG Malin Array Be 33.12 307 P **P** **07 16 16.3 -0.5**
comp=Z,0.4nm,0.4s,baz=80,slow=7.6,SNR=6.3
AKASG LR LR 07 32 02.9
comp=Z,82nm,19.1s,baz=66,slow=40
comp=Z,0.4nm,0.4s
AKBB Malin Array Si 33.12 307⇑ *e*P **P** **07 16 20.8 +4.0**
AKBB pmax pmax
comp=Z,9.0nm,0.8s
BOD Bodaibo 33.26 40 *e*P **P** **07 16 19.1 +1.2**
BOD pmax pmax
comp=Z,5.0nm,2.1s
MNK Minsk 34.44 313 *i* P **P** **07 16 31.4 +3.2**
MNK *i* 07 17 45.4
MNK *i* PPP PPP 07 17 57.3
MNK *i* 07 19 07.1
MNK *i* S **S** **07 21 59.3 +3.1**
MNK *i* SS **SnSn** **07 24 09.3 +3.0**
MNK pmax pmax
comp=E,7.0nm,0.7s
MNK pmax pmax
comp=N,31nm,1.0s
MNK pmax pmax
comp=Z,21nm,0.7s
MNK MLR MLR
comp=Z,4μm,14.0s
MNK MLR MLR
comp=N,284nm,15.0s
MNK MLR MLR
comp=E,26nm,15.0s
MNK Minsk 34.44 313 *i* P **P** **07 16 31.5 +3.2**
comp=E,7.0nm,0.7s
MNK *i* P **P** **07 16 31.5 +3.2**
comp=N,31nm,1.0s
MNK *i* P **P** **07 16 31.5 +3.2**
comp=Z,21nm,0.7s,baz=99
MNK *i* PP **PP** **07 17 45.5 -0.7**
MNK *i* PPP PPP 07 17 57.3
MNK *i* PcP **PcP** **07 19 07.2 +3.8**
MNK *i* S **S** **07 21 59.4 +3.1**
MNK *i* SS **SnSn** **07 24 09.3 +3.0**
MNK *i* SSS SSS 07 24 24.8
MNK *i* LQ LQ 07 26 46.9
MNK *i* LR LR 07 28 07.0
MNK *i* LRM MLR 07 31 01.3
comp=Z,4μm,14.2s
MNK *i* LRM MLR 07 31 04.7
comp=N,284nm,14.9s
MNK *i* LRM MLR 07 31 34.5
comp=E,26nm,14.9s
NACGM Naroch 35.14 314⇓ *e*P **P** **07 16 34.6 +0.4**
baz=97
MLR Muntele Rosu 35.30 297 LR LR 07 33 25.6
comp=E,103nm,19.3s,baz=60,slow=40
BURAR Bucovina Array 35.67 301 P **P** **07 16 38.9 -0.2**
BURAR Bucovina Array 35.67 301 P **P** **07 16 38.9 -0.2**
BURAR pmax pmax
comp=Z,3.0nm,1.3s
VSU Vasula 35.89 320⇑ *e*P **P** **07 16 44.2 +3.5**
VSU pmax pmax
comp=Z,38nm,1.1s
LVZ Lovozero 36.57 337 P **P** **07 16 46.1 -0.4**
LVZ Lovozero 36.57 337⇓ *e*P **P** **07 16 49.7 +3.2**
LVZ pmax pmax
comp=Z,42nm,1.7s
FINES FINESS Array B 37.02 324 P **P** **07 16 49.6 -0.7**
comp=Z,2.3nm,0.6s,baz=111,slow=7.9,SNR=15
FINES LR LR 07 32 53.0
comp=Z,207nm,19.3s,baz=80,slow=38
comp=Z,2.3nm,0.6s
KWP Kalwaria Pacla 37.27 305 P **P** **07 16 52.4 -0.2**
KWP Kalwaria Pacla 37.27 305 P **P** **07 16 52.4 -0.2**
UZH Uzhgorod 37.58 303 *e*P **P** **07 17 00.0 +4.8**
UZH *e* 07 17 02.5
UZH *e* 07 17 08.6
NJ2 Nanjing 37.88 85 *e*P **P** **07 16 58.3 +0.3**
NJ2 pmax pmax
comp=Z,11nm,0.6s
IDI Anoyia 38.18 281 LR LR 07 35 26.2
comp=Z,16nm,19.0s,baz=77,slow=40
ARCES ARCESS Array B 40.28 336 P **P** **07 17 16.6 -1.0**
comp=Z,10nm,0.7s,baz=107,slow=8.1,SNR=22
ARCES LR LR 07 35 11.3
comp=Z,95nm,20.2s,baz=108,slow=38
comp=Z,10nm,0.7s
ARCES ARCESS Array B 40.28 336 P **P** **07 17 16.2 -1.3**
ARCES IAmb IAmb 07 17 22.0
comp=Z,14nm,0.8s
ARCES ARCESS Array B 40.28 336 P **P** **07 17 16.2 -1.3**
ARCES pmax pmax
comp=Z,14nm,0.8s
VRAC Vranov 41.27 304 LR LR 07 36 29.0
comp=Z,59nm,21.7s,baz=30,slow=39
YAK Yakutsk 41.88 36 LR LR 07 35 02.2
comp=Z,74nm,19.2s,baz=268,slow=36
YAK Yakutsk 41.88 36⇓ *e*P P 07 17 36.1 +5.3
YAK pmax pmax
comp=Z,11nm,0.5s
CONA Conrad Observa 41.93 303 *e*P P 07 17 38.5 +7.0
comp=Z,3.4nm,0.8s
MDJ Mudanjiang 42.42 62 P **P** **07 17 32.8 -2.6**
MDJ ScP **ScP** **07 23 18.3 -0.8**
MDJ S **S** **07 23 51.0 -5.9**
MDJ ScS **ScS** **07 27 36.5 -0.8**
MDJ pmax pmax
comp=Z,8.0nm,1.4s
MDJ LR LR
comp=Z,57nm,5.0s
MDJ LR LR
comp=Z,96nm,5.4s
MDJ LR LR
comp=Z,170nm,5.8s
HFS Hagfors 42.75 321 LR LR 07 36 20.6
comp=Z,140nm,18.1s,baz=90,slow=38
KSRS Korea Array 43.05 73 P **P** **07 17 38.0 -2.6**
comp=Z,0.5nm,0.3s,baz=287,slow=8.4,SNR=5.2
KSRS LR LR 07 37 56.0
comp=Z,75nm,18.7s,baz=285,slow=40
comp=Z,0.5nm,0.3s
KSRS Korea Array 43.05 73 P **P** **07 17 38.0 -2.6**
KLR Kul'dur 43.09 55 P **P** **07 17 40.5 -0.3**
comp=Z,1.3nm,0.8s,baz=353,slow=4.1,SNR=3.8
KLR LR LR 07 36 58.3
comp=Z,50nm,19.0s,baz=208,slow=38
comp=Z,1.3nm,0.8s
GERES GERESS Array B 43.22 304 P **P** **07 17 42.4 +0.3**
comp=Z,0.3nm,0.4s,baz=82,slow=9.0,SNR=3.6
comp=Z,0.3nm,0.4s
KHC Kasperske Hory 43.26 305 *e*P **P** **07 17 43.0 +0.8**
KHC *e* 07 17 48.0
KHC Kasperske Hory 43.26 305 *e*P **P** **07 17 43.0 +0.8**
KHC *ex* x 07 17 48.0
CLL Collm 43.35 308 *e*pP **pP** **07 17 50.0 +2.5**
CLL LmV 11 04 00.0
comp=Z,100nm,20.4s
CLL Lm MLR 11 29 00.0
comp=Z,100nm,21.1s
TIXI Tiksi 43.81 22 LR LR 07 36 52.9
comp=Z,59nm,20.8s,baz=308,slow=37
NB2 NORSAR Subarra 44.02 322 P **P** **07 17 46.9 -1.3**
comp=Z,8.1nm,0.8s,baz=92,slow=8.6
NOA NORSAR Array B 44.02 322 P **P** **07 17 47.3 -0.9**
comp=Z,6.3nm,1.1s,baz=103,slow=8.2,SNR=6.5
NOA LR LR 07 37 10.5
comp=Z,124nm,20.6s,baz=85,slow=38
comp=Z,6.3nm,1.1s
DAVOX Davos/Dischmat 46.13 302 LR LR 07 40 35.4
comp=Z,53nm,19.9s,baz=86,slow=40
SPITS Spitsbergen Ar 46.32 346 LR LR 07 39 45.5
comp=Z,70nm,19.0s,baz=99,slow=39
BMRD Maredsous 48.66 308 *e*P **P** **07 18 26.5 +1.7**
MJAR Matsushiro Arr 51.08 70 P **P** **07 18 42.1 -1.3**
comp=Z,1.9nm,0.8s,baz=294,slow=9.7,SNR=2.1
comp=Z,1.9nm,0.8s
JMIC Jan Mayen 51.76 336 LR LR 07 42 09.6
comp=Z,9.3nm,18.3s,baz=66,slow=38
EKA Eskdalemuir Ar 52.17 315 LR LR 07 43 25.2
comp=Z,81nm,18.2s,baz=28,slow=39
MA2 Magadan 52.27 39 LR LR 07 40 41.3
comp=Z,28nm,18.9s,baz=242,slow=36
SEY Seymchan 52.34 35 LR LR 07 43 00.6
comp=Z,57nm,18.4s,baz=123,slow=38
DAG Danmarks Havn 53.65 343 *i* P **P** **07 19 04.0 +2.1**
BILL Bilibino 56.59 27 *i* P **P** **07 19 25.9 +2.7**
BILL pmax pmax
comp=Z,1.0nm,0.9s
PETK Petropavlovsk- 57.87 45 LR LR 07 45 25.5
comp=Z,62nm,18.3s,baz=329,slow=37
ESDC Sonseca Array 58.00 298 P **P** **07 19 34.0 +0.3**
comp=Z,0.6nm,0.7s,baz=59,slow=6.8,SNR=4.7
comp=Z,0.6nm,0.7s
ESDC Sonseca Array 58.00 298 P **P** **07 19 34.0 +0.3**
SUMG Summit 60.06 341 *i* P **P** **07 19 51.0 +3.1**
SFJD Kangerlussuaq 66.83 339 LR LR 07 51 36.8
comp=Z,23nm,18.9s,baz=308,slow=38
TORD Torodi Ar. Bea 67.17 269 P **P** **07 20 35.3 +0.2**
comp=Z,0.9nm,0.5s,baz=45,slow=6.0,SNR=8.4
comp=Z,0.9nm,0.5s
RES Resolute Bay 67.25 356 LR LR 07 53 47.7
comp=Z,23nm,18.4s,baz=308,slow=39
INK Inuvik 72.15 10 P **P** **07 21 03.6 -1.4**
comp=Z,0.8nm,0.4s,baz=326,slow=5.0,SNR=5.9
comp=Z,0.8nm,0.4s
INK Inuvik 72.15 10 IAmb IAmb 07 21 10.4
comp=Z,6.2nm,1.1s
INK Inuvik 72.15 10 P **P** **07 21 03.6 -1.4**
INK pmax pmax
comp=Z,6.0nm,1.1s
MDM Murphy Dome 72.44 17 P **P** **07 21 05.7 -1.2**
MDM IAmb IAmb 07 21 12.0
comp=Z,6.6nm,1.4s
COLA College 72.59 17 P **P** **07 21 05.4 -2.3**
COLA College 72.59 17 P **P** **07 21 05.4 -2.3**
COLA pmax pmax
comp=Z,19nm,1.5s
ILAR Eielson Array 72.90 17 P **P** **07 21 07.3 -2.3**
comp=Z,1.4nm,0.8s,baz=321,slow=4.8,SNR=16
comp=Z,1.4nm,0.8s
ILAR Eielson Array 72.90 17 P **P** **07 21 06.3 -3.3**
J25K Salcha River, 73.38 16 P **P** **07 21 09.9 -2.6**
J25K IAmb IAmb 07 21 23.8
comp=Z,2.3nm,0.9s
DHY Denali Highway 74.23 18 P **P** **07 21 15.9 -1.8**
DHY IAmb IAmb 07 21 16.4
comp=Z,3.0nm,0.8s
K27K Chicken 74.59 15 P **P** **07 21 18.4 -1.1**
K27K IAmb IAmb 07 21 25.3
comp=Z,4.6nm,1.3s
SML Sawmill 75.07 19 P **P** **07 21 20.3 -2.2**
SML IAmb IAmb 07 21 28.5
comp=Z,6.6nm,0.9s
BCAR Beaver Creek A 75.50 15 P **P** **07 21 23.5 -1.4**
M27K Edge Creek, AK 76.11 16 P **P** **07 21 27.7 -0.8**
M27K IAmb IAmb 07 21 34.7
comp=Z,7.8nm,1.4s
TSUM Tsumeb 76.98 233 LR LR 07 58 46.8
comp=Z,41nm,18.1s,baz=149,slow=38
HYT Haines Junctio 78.41 15 P **P** **07 21 40.1 -1.2**
HYT IAmb IAmb 07 21 41.5
comp=Z,3.8nm,0.8s
YKA Yellowknife Ar 79.63 3 P **P** **07 21 46.2 -1.6**
comp=Z,0.6nm,0.5s,baz=350,slow=5.5,SNR=18
YKA LR LR 08 00 43.7
comp=Z,54nm,18.6s,baz=18,slow=38
comp=Z,0.6nm,0.5s
SCHQ Schefferville 81.22 338 LR LR 07 57 20.4
comp=Z,54nm,20.2s,baz=140,slow=35
WRA Warramunga Arr 81.62 123 P **P** **07 21 58.0 -1.2**
comp=Z,0.9nm,0.6s,baz=326,slow=4.7,SNR=17
WRA LR LR 08 03 13.4
comp=Z,26nm,18.5s,baz=242,slow=39
comp=Z,0.9nm,0.6s
WRA Warramunga Arr 81.62 123 P **P** **07 21 58.0 -1.2**
ASAR Alice Springs 83.99 126 P **P** **07 22 10.5 -1.0**
comp=Z,0.3nm,0.7s,baz=316,slow=5.2,SNR=2.1
comp=Z,0.3nm,0.7s
PDAR Pinedale Array 99.54 2 LR LR 08 13 28.9
comp=Z,18nm,18.0s,baz=316,slow=38
TROLL Troll, Antarti 120.03 200 PKPdf **PKiKP** **07 28 31.8 +1.2**
VNA2 Neumayer--Watz 122.36 203 PKPdf **PKiKP** **07 28 35.7 +0.6**
baz=14,slow=1.6
VNA1 Neumayer--Stat 122.52 203 PKPdf **PKiKP** **07 28 37.1 +1.8**
VNA3 Neumayer Olymp 123.17 203 PKPdf **PKiKP** **07 28 37.7 +1.0**
PLCA Paso Flores 151.66 253 PKPbc **PKiKP** **07 29 36.0 +0.3**
comp=Z,2.1nm,0.9s,baz=49,slow=2.8,SNR=7.8

*KRNET **30** 07:42:50.4±0.1, 41°.67N×72°.28E, h35km, mb2.5*
*NNC **30** 07:42:53.5±3.0, 41°.92N×72°.28E, h0km, mb3.2, mpv2.8,*
Error ellipse: s-maj=33.5km s-min=8.8km az=163.0
ISC 30 07:42:51.6±1.4, 41°.61N±0°.08×72°.29E±0°.03, h24km±17km,
n14, σ1s01/24, 10C-4D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
TRKS	**Terek-Say**	**0.87**	**265**⇑	*e*P	**Pb**	**07 43 06.3**	**-1.7**
TRKS	baz=57			⇑*e*S	**Sb**	**07 43 18.7**	**-0.6**
	baz=57						
MRKS	**Merke**	**1.33**	**31**	P	**Pb**	**07 43 16.3**	**+0.4**
	2.3nm,0.1s						
MRKS				S	**Sn**	**07 43 31.2**	**-0.6**
	26nm,0.2s						
UCH	**Uchtor**	**1.77**	**69**⇑	*i*P	**Pn**	**07 43 20.8**	**-0.3**
	baz=71						
UCH				⇑*i*S	**Sn**	**07 43 43.5**	**+0.4**
	baz=71						
IUG	**Iuzhnay**	**1.77**	**288**	P	**Pb**	**07 43 25.8**	**+2.4**
	74nm,0.3s						
IUG				S	**Sb**	**07 43 47.4**	**+2.1**
	23nm,0.2s						
KK31	**Karatay Array**	**1.99**	**319**	Pn	**Pn**	**07 43 23.4**	**-0.3**
	0.6nm,0.3s,baz=137,slow=16,SNR=11						
KK31				Sn	**Sn**	**07 43 48.0**	**+0.1**
	0.9nm,0.2s,baz=131,slow=30,SNR=8.6						
KKAR	**Karatay Array**	**1.99**	**319**⇑	*i*P	**Pn**	**07 43 23.2**	**-0.6**
	baz=18						
KKAR				⇑*i*S	**Sn**	**07 43 47.8**	**-0.2**
	baz=18						
KBK	**Karagaybulak**	**2.24**	**61**⇓	*i*P	**Pn**	**07 43 27.8**	**+0.5**
	baz=63						
KBK				⇓*i*S	**Sn**	**07 43 54.3**	**+0.1**
	baz=63						
BRLS	**Borolday**	**2.31**	**309**	Pg	**Pb**	**07 43 31.7**	**-0.9**
	2.5nm,0.3s						
BRLS				Lg	Lg	07 43 58.6	
	10nm,0.4s						
USP	**Ospenovka**	**2.33**	**44**⇑	*i*P	**Pn**	**07 43 28.2**	**-0.2**
	baz=45						
USP				⇑*i*S	**Sn**	**07 43 56.0**	**-0.3**
	baz=45						
TKM2	**Tokmak 2**	**2.78**	**61**⇓	*i*P	**Pn**	**07 43 35.4**	**+0.6**
	baz=62						
TKM2				⇓*i*S	**Sn**	**07 44 07.4**	**-0.3**
	baz=62						
ULHL	**Ulahol**	**3.02**	**77**⇑	*e*P	**Pn**	**07 43 38.5**	**+0.5**
	baz=78						
ULHL				⇑*i*S	**Sn**	**07 44 13.0**	**-0.5**
	baz=78						
KST	**Kastek**	**3.08**	**61**	Pg	**Pb**	**07 43 46.3**	**+0.6**
	1.1nm,0.2s						
KST				Lg	Lg	07 44 22.5	
	4.9nm,0.7s						
KRBS	**Karabastau**	**3.25**	**49**	Pg	**Pb**	**07 43 47.2**	**-1.4**
	0.1nm,0.3s						
KRBS				Lg	Lg	07 44 24.1	
	2.6nm,0.5s						
BTLS	**Baital**	**3.66**	**20**	Pg	**Pb**	**07 43 54.5**	**-1.1**
	1.4nm,0.5s						
BTLS				Lg	Lg	07 44 36.4	
	1.6nm,0.3s						

IDC 30 07:47:37.5±3.4, 6°.53S×153°.16E, h0km, mb3.7/2,
mbtmp3.9/3, ML4.3/1, Error ellipse: s-maj=83.3km
s-min=30.2km az=98.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**2.49**	**333**	Pn	Pn	07 48 19.2	-0.1
	71nm,0.3s,baz=222,slow=3.1,SNR=32						

KRVT				Sn	Sn	07 48 46.6	-3.7
	33nm,0.3s,baz=234,slow=23,SNR=4.4						
	173nm,0.3s						
WRA	**Warramunga Arr**	**22.62**	**232**	P	P	07 52 39.7	-0.5
	1.4nm,0.8s,baz=59,slow=11,SNR=8.6						
	1.4nm,0.8s						
ASAR	**Alice Springs**	**25.16**	**225**	P	P	07 53 05.0	+0.3
	2.1nm,0.6s,baz=60,slow=9.0,SNR=28						
	2.1nm,0.6s						
TORD	**Torodi Ar. Bea**	**151.15**	**285**	PKPbc	PKPbc	08 07 33.6	-0.3
	1.0nm,0.7s,baz=78,slow=2.9,SNR=5.1						

*TAP **30** 07:49:58.1,23°.77N×121°.61E,h39km,ML3.5,B*
*JMA **30** 07:49:58.2±0.1,23°.8N±0°.4×121°.7E±0°.6,h29km±1km,*
MV3.2/10,TAIWAN REGION
ISC 30 07:49:58.4±1.0,**23°.76N**±0°.02×**121°.62E**±0°.02,**h34**km±2km,
n82,σ0s72/142,6C-13D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TEGC	**Jichi Village**	**0.09**	**236**	*i* P			**Pb**	**07 50 04.5**	**+0.3**
	baz=222								
TEGC				*e*S			**Sb**	**07 50 09.7**	**+1.4**
	baz=222								
TEYL	**Yanliau Villag**	**0.11**	**349**	⇑*i*P			**Pb**	**07 50 04.8**	**+0.4**
	baz=357								
TEYL				S			**Sb**	**07 50 10.3**	**+1.8**
	baz=357								
ESL	**Shilin**	**0.18**	**287**	⇑*i*P			**Pb**	**07 50 04.7**	**-0.2**
	baz=285								
ESL				*e*S			**Sb**	**07 50 08.9**	**-0.5**
	baz=285								
EGFH	**Guangfu**	**0.20**	**243**	⇑*i*P			**Pb**	**07 50 04.9**	**-0.2**
	baz=239								
EGFH				*e*S			**Sb**	**07 50 10.1**	**+0.4**
	baz=239								
HWA	**Hwalien**	**0.22**	**356**	P			**Pb**	**07 50 05.3**	**0.0**
	baz=1.0								
HWA				*e*S			**Sb**	**07 50 11.7**	**+1.7**
	baz=1.0								
ETM	**Tongmen**	**0.24**	**330**	P			**Pb**	**07 50 05.3**	**-0.2**
	baz=331								
ETM				*e*S			**Sb**	**07 50 10.5**	**+0.2**
	baz=331								
TWD	**Chiawan**	**0.32**	**356**	*e*P			**Pb**	**07 50 06.2**	**-0.3**
	baz=359								
TWD				*e*S			**Sb**	**07 50 12.6**	**+0.6**
	baz=359								
HGSD	**Ruisui**	**0.32**	**214**	*e*P			**Pn**	**07 50 06.9**	**+0.2**
	baz=211								
HGSD				*e*S			**Sb**	**07 50 13.7**	**+1.6**
	baz=211								
EHY	**Hungye**	**0.37**	**227**	*i* P			**Pb**	**07 50 06.6**	**-0.6**
	baz=224								
EHY				*e*S			**Sb**	**07 50 12.4**	**-0.8**
	baz=224								
ETL	**Fush Village**	**0.40**	**0**	*e*P			**Pb**	**07 50 07.3**	**-0.3**
	baz=2.0								
ETL				*e*S			**Sb**	**07 50 13.3**	**-0.5**
	baz=2.0								
NACB	**Ninganchiao**	**0.41**	**357**	*i* P			**Pb**	**07 50 07.3**	**-0.5**
	baz=358								
NACB				*e*S			**Sn**	**07 50 14.8**	**+0.4**
	baz=358								
OWD	**Renai**	**0.45**	**296**	⇑*i*P			**Pb**	**07 50 08.2**	**-0.3**
	baz=295								
OWD				*e*S			**Sb**	**07 50 14.7**	**-0.7**
	baz=295								
ETLH	**Xiulin Townshi**	**0.46**	**344**	*i* P			**Pb**	**07 50 07.8**	**-0.7**
	baz=345								
ETLH				*e*S			**Sb**	**07 50 14.3**	**-1.3**
	baz=345								
YULB	**Yu-li**	**0.47**	**219**	⇓*i*P			**Pb**	**07 50 07.9**	**-0.7**
	baz=217								
EYUL	**Yuli**	**0.50**	**214**	P			**Pb**	**07 50 08.5**	**-0.5**
	baz=212								
EYUL				*e*S			**Sb**	**07 50 15.4**	**-0.9**
	baz=212								
TWF1	**Yuli**	**0.50**	**216**	⇓*i*P			**Pb**	**07 50 08.4**	**-0.7**
	baz=214								
TWF1				*e*S			**Sb**	**07 50 15.4**	**-1.0**
	baz=214								
WHF	**Hehuan Shan**	**0.50**	**320**	⇑*i*P			**Pb**	**07 50 08.8**	**-0.7**
	baz=320								
WHF				*e*S			**Sb**	**07 50 16.3**	**-0.7**
	baz=320								
CHGB	**Renai**	**0.51**	**306**	⇑P			**Pb**	**07 50 09.1**	**-0.2**
	baz=306								
CHGB				*e*S			**Sb**	**07 50 16.5**	**-0.3**
	baz=306								
WUSB	**Renai**	**0.52**	**297**	⇓*e*P			**Pn**	**07 50 09.1**	**-0.3**
	baz=296								
WUSB				*e*S			**Sb**	**07 50 16.6**	**-0.4**
	baz=296								
FUSS	**Fushou**	**0.59**	**325**	P			**Pn**	**07 50 10.3**	**-0.3**
	baz=325								
FUSS				*e*S			**Sb**	**07 50 18.7**	**-0.6**
	baz=325								
SSLB	**Suanglung**	**0.61**	**273**	*e*P			**Pn**	**07 50 10.3**	**-0.3**
	baz=272								
SSLB				*e*S			**Sn**	**07 50 18.9**	**-0.5**
	baz=272								
FULB	**Fuli**	**0.63**	**208**	*e*P			**Pn**	**07 50 10.8**	**-0.1**
	baz=207								
FULB				*e*S			**Sb**	**07 50 22.0**	**+2.0**
	baz=207								
TWT	**Tachien**	**0.64**	**320**	*e*P			**Pb**	**07 50 11.4**	**0.0**
	baz=319								
TWT				*e*S			**Sn**	**07 50 19.8**	**-0.4**
	baz=319								
TDCB	**Techi**	**0.65**	**319**	⇓*e*P			**Pn**	**07 50 11.3**	**+0.1**
	baz=319								
TDCB				*e*S			**Sn**	**07 50 19.8**	**-0.6**
	baz=319								
YUS	**Yu-Shan**	**0.67**	**246**	⇓*i*P			**Pn**	**07 50 12.0**	**+0.1**
	baz=245								
YUS				*e*S			**Sn**	**07 50 20.9**	**-0.5**
	baz=245								
SMLT	**Sun Moon Lake**	**0.67**	**281**	⇓P			**Pn**	**07 50 11.6**	**0.0**
	baz=280								
SMLT				*e*S			**Sb**	**07 50 21.8**	**+0.7**
	baz=280								
ENA	**Nanau**	**0.67**	**9**	*e*P			**Pn**	**07 50 11.1**	**-0.4**
	baz=11								
ENA				*e*S			**Sb**	**07 50 21.4**	**+0.4**
	baz=11								
DPDB	**Guoxing**	**0.69**	**293**	*e*P			**Pn**	**07 50 11.9**	**+0.2**
	baz=293								
DPDB				*e*S			**Sn**	**07 50 21.2**	**-0.1**
	baz=293								
EWUT	**Wuta**	**0.70**	**12**	*e*P			**Pn**	**07 50 11.5**	**-0.3**
	baz=13								
EWUT				*e*S			**Sn**	**07 50 20.9**	**-0.5**
	baz=13								
CHKT	**Chengkung**	**0.70**	**200**	*e*P			**Pn**	**07 50 11.7**	**-0.1**
	baz=198								
CHKT				*e*S			**Sb**	**07 50 22.6**	**+1.0**
	baz=198								
NNSB	**Datong**	**0.70**	**342**	*e*P			**Pn**	**07 50 11.6**	**-0.4**
	baz=342								
NNSB				*e*S			**Sn**	**07 50 20.6**	**-1.0**
	baz=342								
NNSH	**Datong**	**0.70**	**342**	*e*P			**Pn**	**07 50 11.5**	**-0.5**
	baz=342								
NNSH				*e*S			**Sn**	**07 50 20.5**	**-1.2**
	baz=342								
WCS	**Beigang Elemen**	**0.71**	**295**	⇓*e*P			**Pn**	**07 50 12.1**	**+0.1**
	baz=294								
WCS				*e*S			**Sn**	**07 50 21.7**	**-0.2**
	baz=294								
NNS	**Nan Shan**	**0.71**	**342**	*e*P			**Pn**	**07 50 12.0**	**-0.2**
	baz=343								
NNS				*e*S			**Sn**	**07 50 21.3**	**-0.8**
	baz=343								
TYC	**Yuchr**	**0.71**	**282**	⇓*e*P			**Pn**	**07 50 12.1**	**0.0**
	baz=281								
TYC				*e*S			**Sn**	**07 50 22.1**	**+0.2**
	baz=281								
ECS	**Chishang**	**0.76**	**209**	*e*P			**Pb**	**07 50 13.2**	**-0.1**
	baz=208								
LATG	**Datong**	**0.78**	**354**	*e*P			**Pn**	**07 50 12.5**	**-0.5**
	baz=354								
LATG				*e*S			**Sn**	**07 50 23.5**	**-0.1**
	baz=354								
ALS	**Alishan**	**0.79**	**252**	⇓*e*P			**Pn**	**07 50 13.7**	**+0.3**
	baz=250								
ALS				*e*S			**Sn**	**07 50 24.2**	**+0.1**
	baz=250								
ELDTW	**Lidau**	**0.79**	**224**	*e*P			**Pn**	**07 50 10.5**	**-2.8**
	baz=223								
WHP	**Taichung City**	**0.80**	**310**	*e*P			**Pn**	**07 50 13.7**	**+0.3**
	baz=310								
WHP				*e*S			**Sn**	**07 50 24.5**	**+0.3**
	baz=310								
WJS	**Zhushan**	**0.82**	**274**	*e*P			**Pb**	**07 50 14.4**	**+0.1**
	baz=274								
WJS				*e*S			**Sb**	**07 50 26.4**	**+1.3**
	baz=274								
EDH	**Donghe**	**0.84**	**200**	*e*P			**Pn**	**07 50 13.2**	**-0.5**
	baz=199								
EDH				*e*S			**Sb**	**07 50 25.2**	**-0.3**
	baz=199								
NDT	**Datong Townshi**	**0.84**	**353**	*e*P			**Pn**	**07 50 13.5**	**-0.4**
	baz=354								
NDT				*e*S			**Sn**	**07 50 24.6**	**-0.4**
	baz=354								
WNT	**Mingjian**	**0.87**	**278**	*e*P			**Pb**	**07 50 15.3**	**+0.3**
	baz=277								
TWC	**Suao**	**0.87**	**14**	*e*P			**Pn**	**07 50 14.3**	**+0.1**
	baz=15								
NDS	**Dongshan**	**0.87**	**6**	*e*P			**Pn**	**07 50 14.1**	**-0.2**
	baz=7.0								
YHNB	**Yeheng**	**0.93**	**346**	*e*P			**Pn**	**07 50 15.2**	**+0.1**
	baz=347								
YHNB				*e*S			**Sn**	**07 50 26.7**	**-0.7**
	baz=347								
NSK	**Sanguang**	**0.94**	**345**	*e*P			**Pn**	**07 50 15.4**	**+0.1**
	baz=346								
TCU	**Taichung**	**0.95**	**294**	*e*P			**Pb**	**07 50 16.8**	**+0.4**
	baz=294								
TWE	**Neicheng**	**0.96**	**3**	*e*P			**Pn**	**07 50 15.4**	**0.0**
	baz=4.0								
TWE				*e*S			**Sb**	**07 50 29.2**	**+0.3**
	baz=4.0								
LONT	**Longtian**	**0.96**	**208**	*e*P			**Pn**	**07 50 14.0**	**-1.5**
	baz=207								
TWQ1	**Liyutan**	**0.97**	**307**	⇓*e*P			**Pb**	**07 50 17.0**	**+0.2**
	baz=307								
TWQ1				*e*S			**Sb**	**07 50 29.9**	**+0.5**
	baz=307								
STYH	**Taoyuan**	**0.97**	**233**	⇓*e*P			**Pn**	**07 50 16.0**	**+0.4**
	baz=232								
STYH				*e*S			**Sn**	**07 50 28.3**	**+0.1**
	baz=232								
WGK	**Gukeng**	**0.97**	**266**	*e*P			**Pb**	**07 50 16.9**	**+0.1**
	baz=265								
WYL	**Yuanlin Townsh**	**0.97**	**282**	*e*P			**Pb**	**07 50 17.0**	**+0.2**
	baz=281								
NFF	**Wufeng Townshi**	**0.98**	**332**	*e*P			**Pn**	**07 50 16.3**	**+0.5**
	baz=332								
NFF				*e*S			**Sn**	**07 50 28.3**	**-0.3**
	baz=332								
STYT	**Tauyuan**	**0.99**	**233**	*e*P			**Pn**	**07 50 16.4**	**+0.5**
	baz=232								
WDLH	**Douliu**	**0.99**	**266**	*e*P			**Pb**	**07 50 16.9**	**-0.3**
	baz=265								
WDLH				*e*S			**Sb**	**07 50 30.6**	**+0.6**
	baz=265								
FUSB	**Fushanzhiwuyua**	**1.00**	**358**	*e*P			**Pn**	**07 50 15.9**	**-0.1**
	baz=359								
NWLT	**Wulai**	**1.02**	**354**	*e*P			**Pn**	**07 50 16.5**	**+0.2**
	baz=354								
TPUB	**Ta-pu**	**1.02**	**244**	*e*P			**Pb**	**07 50 17.3**	**-0.3**
	baz=242								
TPUB				*e*S			**Sb**	**07 50 31.7**	**+1.0**
	baz=242								
NSY	**Sanyi**	**1.02**	**310**	*e*P			**Pb**	**07 50 17.8**	**+0.1**
	baz=310								
NSY				*e*S			**Sb**	**07 50 32.1**	**+1.3**
	baz=310								
WCHH	**Zhanghua**	**1.02**	**288**	⇓*e*P			**Pb**	**07 50 17.6**	**0.0**
	baz=288								
WCHH				*e*S			**Sb**	**07 50 32.0**	**+1.2**
	baz=288								
CHN4	**Tsaushan**	**1.03**	**247**	*e*P			**Pb**	**07 50 17.5**	**-0.2**
	baz=246								
CHN4				*e*S			**Sb**	**07 50 32.4**	**+1.5**
	baz=246								
NSTT	**Nanjuang**	**1.03**	**327**	*e*P			**Pb**	**07 50 17.9**	**0.0**
	baz=327								
NSTT				*e*S			**Sn**	**07 50 30.6**	**+0.8**
	baz=327								
LIOB	**Emei**	**1.04**	**328**	*e*P			**Pb**	**07 50 18.2**	**+0.2**
	baz=328								
LIOB				*e*S			**Sb**	**07 50 32.1**	**+0.7**
	baz=328								
WTP	**Ta-pu**	**1.06**	**241**	⇓*e*P			**Pb**	**07 50 17.9**	**-0.4**
	baz=240								
WTP				*e*S			**Sb**	**07 50 33.0**	**+1.2**
	baz=240								
TWG	**Pinlang**	**1.06**	**208**	*e*P			**Pn**	**07 50 15.6**	**-1.3**
	baz=207								
TWGBT	**Beinan**	**1.06**	**208**	*e*P			**Pn**	**07 50 15.4**	**-1.4**
	baz=207								
LDUT	**Ludao**	**1.09**	**187**	*e*P			**Pn**	**07 50 16.1**	**-1.2**
	baz=187								
TIPB	**Shuangxi**	**1.22**	**9**	*e*P			**Pb**	**07 50 19.9**	**-1.2**
	baz=9.0								
TWB1	**Santiao Chiao**	**1.29**	**15**	*e*P			**Pb**	**07 50 21.1**	**-1.0**
	baz=16								
TWB1				*e*S			**Sb**	**07 50 38.9**	**+0.5**
	baz=16								
NWF	**Wu-fen Shan**	**1.31**	**6**	*e*P			**Pn**	**07 50 21.2**	**+0.8**
	baz=7.0								
SXI1	**Grass Mountain**	**1.35**	**10**	*e*P			**Pb**	**07 50 21.7**	**-1.5**
	baz=10.0								
YOJ	**Yonaguni jima**	**1.45**	**61**	P			**Pn**	**07 50 22.4**	**+0.2**
	baz=61								
YOJ				*e*S			**Sn**	**07 50 40.6**	**+0.6**
	baz=61								
YOJ	**Yonaguni jima**	**1.45**	**61**	P			**Pn**	**07 50 22.4**	**+0.2**
YOJ				S			**Sn**	**07 50 40.6**	**+0.6**
MASBT	**Mashibuluo**	**1.46**	**219**	*e*P			**Pn**	**07 50 22.7**	**+0.3**
	baz=218								
MASBT				*e*S			**Sb**	**07 50 43.0**	**-0.3**
	baz=218								
IRIF	**Iriomote-Funau**	**2.01**	**73**	*e*S			**Sn**	**07 50 54.3**	**+0.4**
HATJ	**Hateruma jima**	**2.02**	**81**	P			**Pn**	**07 50 30.3**	**+0.2**
HATJ				*e*S			**Sn**	**07 50 54.0**	**-0.1**
JKRS	**Kuro-shima**	**2.23**	**77**	P			**Pn**	**07 50 33.7**	**+0.7**
JKRS				*e*S			**Sn**	**07 51 00.4**	**+1.0**
JIJ	**Ishigaki jima**	**2.38**	**75**	P			**Pn**	**07 50 35.0**	**0.0**
JIJ				S			**Sn**	**07 51 02.5**	**-0.6**
JTJ	**Tarama**	**2.95**	**72**	S			**Sn**	**07 51 17.8**	**+0.8**

*AZER **30** 07:53:36.8±0.0,40°.94N×47°.97E,h11km,Error ellipse:*
s-maj=0.6km s-min=0.4km az=355.0
*IDC **30** 07:53:36.6±1.1,41°.03N×47°.94E,h0km,mb3.6/4,*
mbtmp3.8/9,ML3.3/4,MS2.4/4,Error ellipse: s-maj=20.1km
s-min=8.8km az=153.0
*DRS **30** 07:53:37.6±0.0,40°.89N×48°.18E,h16km*
*TEH **30** 07:53:37.7,40°.94N×47°.90E,h6km,ML3.7*
*MOS **30** 07:53:40.2±0.0,41°.17N×48°.02E,h2km,MPVA4.4*
*NSSP **30** 07:53:41.9,41°.00N×47°.73E,h10km,Ms3.8*
ISC 30 07:53:38.9±0.7,**40°.96N**±0°.01×**47°.98E**±0°.01,**h19**km±1km,
n158,σ1s72/239,mb3.7/6,5C-8D,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
QBL	**Gabala**	**0.11**	**263**	P			**Pb**	**07 53 40.0**	**-0.1**
	SNR=785								
QBL				S			**Sb**	**07 53 42.3**	**+1.6**
IML	**Ismayilli**	**0.23**	**137**	*e*Pg			**Pb**	**07 53 42.5**	**-1.5**
IML	**Ismayilli**	**0.23**	**137**	P			**Pb**	**07 53 42.6**	**-1.5**
	SNR=473								
IML				S			**Sg**	**07 53 48.1**	**+0.1**
XNQ	**Khinaliq**	**0.24**	**29**	*e*Pg			**Pb**	**07 53 43.4**	**-1.2**
XNQ	**Khinaliq**	**0.24**	**29**	P			**Pb**	**07 53 43.5**	**-1.2**
	SNR=2290								
XNQ				S			**Sg**	**07 53 48.7**	**-0.1**
PQL	**Pirkuli**	**0.49**	**110**	*e*Pg			**Pg**	**07 53 48.3**	**-0.6**
PQL	**Pirkuli**	**0.49**	**110**	P			**Pg**	**07 53 48.4**	**-0.6**
	SNR=46								
PQL				S			**Sn**	**07 53 57.7**	**-1.5**
QUB	**Quba**	**0.51**	**34**	*e*Pn			**Pn**	**07 53 50.2**	**-1.0**
QUBA	**Quba, Azerbaij**	**0.55**	**44**	P			**Pg**	**07 53 50.2**	**+0.2**
	SNR=177								
QUBA				S			**Sn**	**07 54 00.0**	**-0.5**
AKT	**Akhty**	**0.55**	**340**	*i* PG			**Pg**	**07 53 50.0**	**-0.1**
AKT				*i* S			**Sb**	**07 53 57.7**	**+0.1**
AKT	**Akhty**	**0.55**	**340**	*i* Pg			**Pg**	**07 53 50.0**	**-0.1**
AKT				*i* Sg			**Sb**	**07 53 57.7**	**+0.1**
QSAR	**Qusar**	**0.59**	**21**	*e*Pn			**Pb**	**07 53 50.5**	**-0.1**
QSAR	**Qusar**	**0.59**	**21**	P			**Pb**	**07 53 50.6**	**-0.1**
	SNR=154								
QSAR				S			**Sg**	**07 53 60.0**	**+1.2**
KDMR	**Kurdemir**	**0.60**	**165**	*e*Pn			**Pb**	**07 53 49.9**	**-0.8**
KDMR	**Kurdemir**	**0.60**	**165**	P			**Pb**	**07 53 50.0**	**-0.8**
	SNR=7.0								
KDMR				S			**Sn**	**07 54 00.2**	**-1.4**
SEKA	**Sheki**	**0.64**	**293**	PG			**Pb**	**07 53 49.9**	**-1.5**
SEKA	**Sheki**	**0.64**	**293**	*e*Pn			**Pb**	**07 53 49.9**	**-1.5**
SEKA	**Sheki**	**0.64**	**293**	P			**Pb**	**07 53 50.0**	**-1.5**
	SNR=104								
SEKA				S			**Sg**	**07 54 00.9**	**+0.6**
KSMR	**Kasumkent**	**0.65**	**10**	*e*PG			**Pb**	**07 53 51.5**	**-0.1**
KSMR				*e*S			**Sg**	**07 54 00.9**	**+0.3**
KSMR	**Kasumkent**	**0.65**	**10**	*e*Pg			**Pb**	**07 53 51.5**	**-0.1**
KSMR				*e*Sg			**Sg**	**07 54 00.9**	**+0.3**
SIZA	**Siyzn**	**0.70**	**80**	*e*Pn			**Pg**	**07 53 52.6**	**-0.1**
SIZA	**Siyzn**	**0.70**	**80**	P			**Pg**	**07 53 52.7**	**-0.1**
	SNR=144								
SIZA				S			**Sn**	**07 54 04.5**	**+0.2**
MNGR	**Mingechevir, A**	**0.70**	**255**	PG			**Pb**	**07 53 51.9**	**-0.6**
MNGR	**Mingechevir, A**	**0.70**	**255**	*e*Pn			**Pb**	**07 53 51.9**	**-0.6**
MNGR	**Mingechevir, A**	**0.70**	**255**	P			**Pb**	**07 53 52.0**	**-0.6**
	SNR=16								
MNGR				S			**Sn**	**07 54 04.1**	**0.0**
ZRD	**Zardab**	**0.72**	**199**	*e*Pn			**Pb**	**07 53 51.9**	**-0.8**
ZRD	**Zardab**	**0.72**	**199**	P			**Pb**	**07 53 52.0**	**-0.8**
	SNR=85								
ZRD				S			**Sn**	**07 54 04.6**	**+0.2**
ATGJ	**Altiaghaj**	**0.73**	**97**	P			**Pb**	**07 53 52.8**	**-0.2**
	SNR=45								
ATGJ				S			**Sn**	**07 54 05.7**	**+0.7**
GBS	**Qobustan**	**0.84**	**120**	*e*Pn			**Pn**	**07 53 55.9**	**+0.1**
GBS	**Qobustan**	**0.84**	**120**	P			**Pn**	**07 53 56.0**	**+0.1**
	SNR=24								
GBS				S			**Sn**	**07 54 12.1**	**+4.4**
BRDA	**Brd**	**0.93**	**222**	*e*Pn			**Pb**	**07 53 55.8**	**-0.5**
BRDA	**Brd**	**0.93**	**222**	P			**Pb**	**07 53 55.8**	**-0.5**
	SNR=12								
BRDA				S			**Sn**	**07 54 11.7**	**+2.1**
AGDM	**Agdam**	**1.08**	**218**	P			**Pb**	**07 53 57.5**	**-1.5**
	SNR=43								
AGDM				S			**Sg**	**07 54 14.7**	**+0.6**
DRN	**Derbent**	**1.10**	**14**	*e*PG			**Pg**	**07 53 59.9**	**-0.4**
DRN				*e*S			**Sg**	**07 54 17.1**	**+2.4**
DRN				pmax			pmax		
	comp=Z,577nm,0.3s								
DRN				smax			smax		
	comp=E,4μm,0.4s								
DRN	**Derbent**	**1.10**	**14**	*e*Pg			**Pg**	**07 53 59.8**	**-0.5**
DRN				*e*Sg			**Sg**	**07 54 15.0**	**+0.3**
SAAT	**Saatly**	**1.15**	**163**	*e*Pn			**Pn**	**07 53 58.2**	**-1.7**
SAAT	**Saatly**	**1.15**	**163**	P			**Pn**	**07 53 58.2**	**-1.7**
	SNR=11								
SAAT				S			**Sn**	**07 54 15.3**	**+0.2**
ZKT	**Zaqatala**	**1.21**	**305**	*e*Pn			**Pn**	**07 54 00.2**	**-0.6**
ZKTA	**Zakatala**	**1.23**	**304**	PG			**Pn**	**07 54 00.2**	**-0.8**
ZKTA	**Zakatala**	**1.23**	**304**	P			**Pn**	**07 54 00.3**	**-0.8**
	SNR=53								
ZKTA				S			**Sg**	**07 54 19.4**	**+0.6**
URKR	**Urkarakh**	**1.23**	**348**	*e*PG			**Pg**	**07 54 02.3**	**-0.5**
URKR				*e*S			**Sg**	**07 54 19.0**	**0.0**
URKR	**Urkarakh**	**1.23**	**348**	*e*Pg			**Pg**	**07 54 02.3**	**-0.5**
URKR				*e*Sg			**Sg**	**07 54 18.9**	**0.0**
ALIB	**Äli-Bayra**	**1.27**	**142**	*e*Pg			**Pb**	**07 54 02.5**	**+0.4**
ALIB	**Äli-Bayra**	**1.27**	**142**	Pg			**Pb**	**07 54 02.6**	**+0.4**
	SNR=18								
ALIB				Sg			**Sg**	**07 54 23.9**	**+3.9**
BLQ	**Beylaqan**	**1.28**	**195**	S			**Sb**	**07 54 19.1**	**+0.7**
GANJ	**Ganja**	**1.30**	**257**	PG			**Pn**	**07 54 00.0**	**-2.0**
GANJ	**Ganja**	**1.30**	**257**	*e*Pn			**Pn**	**07 54 00.0**	**-2.0**
GANJ	**Ganja**	**1.30**	**257**	P			**Pn**	**07 54 00.1**	**-2.0**
	SNR=30								
GANJ				Sg			**Sn**	**07 54 17.7**	**-1.2**
KMKR	**Kumukh**	**1.35**	**331**	*e*PG			**Pg**	**07 54 05.1**	**+0.2**
KMKR				*e*S			**Sg**	**07 54 24.5**	**+1.9**
KMKR	**Kumukh**	**1.35**	**331**	*e*Pg			**Pg**	**07 54 05.1**	**+0.2**
KMKR				*e*Sg			**Sg**	**07 54 24.4**	**+1.9**
GOBA	**Gobu**	**1.44**	**112**	*e*Pn			**Pn**	**07 54 03.7**	**-0.3**
GOBA	**Gobu**	**1.44**	**112**	Pn			**Pn**	**07 54 03.7**	**-0.3**
	SNR=9.8								
GOBA				Sg			**Sg**	**07 54 29.6**	**+4.0**
DDFL	**Dedoflistskaro**	**1.49**	**290**	P			**Pg**	**07 54 07.2**	**-0.4**
DDFL	**Dedoflistskaro**	**1.49**	**290**	PN			**Pg**	**07 54 07.2**	**-0.4**
SGKR	**Sergokala**	**1.52**	**351**	*e*PN			**Pg**	**07 54 07.8**	**-0.4**
SGKR				*e*S			**Sg**	**07 54 28.9**	**+0.9**
SGKR	**Sergokala**	**1.52**	**351**	*e*Pg			**Pg**	**07 54 07.8**	**-0.4**
SGKR				*e*Sg			**Sg**	**07 54 28.9**	**+0.9**
LGD	**Lagodekhi**	**1.57**	**304**	P			**Pb**	**07 54 06.6**	**-0.9**
LGD				S			**Sg**	**07 54 28.8**	**-0.9**
LGD	**Lagodekhi**	**1.57**	**304**	PN			**Pb**	**07 54 06.5**	**-0.9**
QRD	**Qoradiz**	**1.58**	**199**	*e*Pn			**Pn**	**07 54 05.1**	**-0.8**
QRD	**Qoradiz**	**1.58**	**199**	Pn			**Pn**	**07 54 05.1**	**-0.8**
	SNR=31								
QRD				Sn			**Sb**	**07 54 26.7**	**-0.4**
GNBR	**Gunib**	**1.62**	**332**	*e*PN			**Pg**	**07 54 09.2**	**-0.9**
GNBR				*e*S			**Sg**	**07 54 33.7**	**+2.5**
GNBR				pmax			pmax		
	comp=Z,234nm,0.5s								
GNBR				smax			smax		
	comp=E,1μm,0.5s								
GNBR	**Gunib**	**1.62**	**332**	*e*Pg		

SBZ	**Shahbuz**	**2.43**	**231**	Pn		**Pn**	**07 54 18.0**	**+0.4**
SBZ				Sn		**Sb**	**07 54 51.2**	**-0.4**
DVE	**Vedeno**	**2.43**	**326**	*e*Pn		**Pb**	**07 54 23.0**	**+1.0**
DVE				*i* S		**Sb**	**07 54 53.6**	**+2.0**
DVE	**Vedeno**	**2.43**	**326**	*e*Pg		**Pb**	**07 54 23.0**	**+1.0**
DVE				*i* Sg		**Sb**	**07 54 53.6**	**+2.0**
ASTR	**Astara**	**2.48**	**165**	Pn		**Pn**	**07 54 17.8**	**-0.4**
	SNR=9.1							
ASTR				Sn		**Sn**	**07 54 48.7**	**+0.8**
BTNK	**Botanikuri**	**2.50**	**288**	P		**Pn**	**07 54 17.9**	**-0.7**
BTNK				S		**Sn**	**07 54 49.8**	**+1.1**
BTNK	**Botanikuri**	**2.50**	**288**	PN		**Pn**	**07 54 17.9**	**-0.7**
ORD	**Ordubad**	**2.54**	**218**	Pn		**Pn**	**07 54 19.1**	**-0.1**
	SNR=47							
ORD				Sn		**Sn**	**07 54 51.9**	**+2.3**
KAPZ	**Kaputan**	**2.58**	**257**	*e*P		**Pn**	**07 54 21.1**	**+1.3**
KAPZ				*e*S		**Sb**	**07 54 53.4**	**-2.6**
GNI	**Garni**	**2.60**	**253**	Pn		**Pb**	**07 54 22.5**	**-2.4**
	comp=Z,21nm,0.4s,baz=66,slow=5.0,SNR=8.3							
GNI				Pg		**Pg**	**07 54 27.9**	**-0.8**
	comp=Z,13nm,0.3s,baz=45,slow=11,SNR=11							
GNI				LR		LR	07 54 58.2	
	comp=Z,23nm,21.4s,baz=182,slow=32							
GNI				Lg		Lg	07 54 58.5	
	comp=Z,34nm,0.3s,baz=39,slow=6.5,SNR=7.9							
GNI	**Garni**	**2.60**	**253**	⇑*i*P		**Pn**	**07 54 22.3**	**+2.3**
GNI				⇑*i*S		**Sb**	**07 54 55.7**	**-0.8**
NAX	**Nakhchivan**	**2.61**	**228**	PN		**Pb**	**07 54 22.7**	**-2.4**
NAX	**Nakhchivan**	**2.61**	**228**	Pg		**Pb**	**07 54 22.7**	**-2.4**
	SNR=8.9							
NAX				Sg		**Sb**	**07 54 57.3**	**+0.5**
HYR	**Heyderabad**	**2.69**	**244**	Sg		**Sb**	**07 55 01.6**	**+2.4**
NRKZ	**NAREK**	**2.71**	**250**	*e*P		**Pn**	**07 54 23.9**	**+2.4**
IHRS	**Heris**	**2.73**	**196**	*e*Pn		**Pn**	**07 54 21.7**	**-0.3**
IHRS				*e*			07 55 00.3	
	comp=Z,3μm,0.3s							
STE	**Stepanavan**	**2.73**	**272**	*e*P		**Pn**	**07 54 23.3**	**+1.4**
STE				*e*S		**Sb**	**07 54 58.3**	**-2.1**
GROC	**Groznyy**	**2.77**	**325**	*e*PN		**Pn**	**07 54 21.5**	**-0.7**
GROC				*e*SG		**Sg**	**07 55 08.3**	**+0.4**
GROC	**Groznyy**	**2.77**	**325**	*e*Pn		**Pg**	**07 54 33.6**	**+1.7**
GROC				*e*Sn		**Sg**	**07 55 08.9**	**+1.0**
IMRD	**Marand**	**2.85**	**219**	*e*Pn		**Pn**	**07 54 23.7**	**+0.2**
IMRD				*e*			07 54 43.9	
	comp=Z,3μm,0.6s							
DMNI	**Dmanisi**	**2.89**	**279**	P		**Pn**	**07 54 26.5**	**+2.5**
DMNI				S		**Sn**	**07 55 00.6**	**+2.4**
DMNI	**Dmanisi**	**2.89**	**279**	PN		**Pn**	**07 54 26.4**	**+2.5**
DMNI				S		**Sn**	**07 55 00.6**	**+2.4**
TRLG	**Trialeti**	**2.98**	**282**	P		**Pn**	**07 54 27.6**	**+2.3**
TRLG				S		**Sn**	**07 55 02.2**	**+1.6**
TRLG	**Trialeti**	**2.98**	**282**	PN		**Pn**	**07 54 27.6**	**+2.3**
TRLG				S		**Sn**	**07 55 02.2**	**+1.6**
PNSH	**Pansheti**	**3.02**	**305**	P		**Pn**	**07 54 28.1**	**+2.1**
PNSH				S		**Sn**	**07 55 05.2**	**+3.5**
PNSH	**Pansheti**	**3.02**	**305**	PN		**Pn**	**07 54 28.0**	**+2.1**
PNSH				S		**Sn**	**07 55 05.1**	**+3.5**
ITBZ	**Tabriz**	**3.07**	**208**	*e*Pn		**Pn**	**07 54 26.7**	**+0.2**
MTEO	**Meteo**	**3.10**	**305**	P		**Pb**	**07 54 30.4**	**-3.2**
KMGR	**Komgaron**	**3.13**	**313**	*e*PN		**Pb**	**07 54 33.5**	**-0.4**
KMGR				*e*S		**Sb**	**07 55 11.7**	**0.0**
KMGR	**Komgaron**	**3.13**	**313**	*e*Pn		**Pb**	**07 54 33.5**	**-0.4**
KMGR				*e*Sn		**Sb**	**07 55 11.7**	**0.0**
ISRB	**Sarab**	**3.14**	**185**	*e*Pn		**Pn**	**07 54 27.4**	**-0.1**
ISRB				*e*			07 54 43.2	
	comp=Z,1μm,0.4s							
VLKR	**Vladikavkaz**	**3.23**	**311**	⇓*e*PN		**Pn**	**07 54 28.8**	**+0.2**
VNNZ	**Vanand**	**3.28**	**256**	*e*P		**Pb**	**07 54 36.9**	**+0.3**
VNNZ				*e*S		**Sb**	**07 55 19.7**	**+3.5**
LACR	**Lac**	**3.32**	**305**	⇓*e*PN		**Pn**	**07 54 30.6**	**+0.6**
AKH	**Akhalkalaki**	**3.42**	**279**	⇑*e*PN		**Pn**	**07 54 34.0**	**+2.7**
BTKR	**Batakoyurt**	**3.51**	**314**	*e*PN		**Pb**	**07 54 37.9**	**-2.6**
BTKR				*i* S		**Sb**	**07 55 20.8**	**-2.0**
BTKR	**Batakoyurt**	**3.51**	**314**	*e*Pn		**Pb**	**07 54 37.9**	**-2.6**
BTKR				*i* Sn		**Sb**	**07 55 20.8**	**-2.0**
IAZR	**Azarshahr**	**3.62**	**206**	*e*Pn		**Pn**	**07 54 35.7**	**+1.5**
TRKR	**Terskaya**	**3.67**	**320**	*i* PN		**Pn**	**07 54 34.4**	**-0.1**
IHSH	**Hashtrud**	**3.69**	**189**	*e*Pn		**Pn**	**07 54 35.3**	**+0.1**
IHSH				*e*			07 55 32.9	
	comp=Z,683nm,0.5s							
ONI	**Oni**	**3.76**	**297**	P		**Pn**	**07 54 38.9**	**+3.0**
ONI	**Oni**	**3.76**	**297**	PN		**Pn**	**07 54 38.9**	**+3.0**
DIGR	**Digorskoe uzhe**	**3.81**	**302**	⇑*e*PN		**Pn**	**07 54 38.5**	**+1.7**
ABS	**Abastumani**	**3.97**	**283**	P		**Pb**	**07 54 44.2**	**-4.1**
ABS	**Abastumani**	**3.97**	**283**	PN		**Pb**	**07 54 44.2**	**-4.1**
GIDE	**GILAN DEYLAMAN**	**4.30**	**159**	*e*Pn		**Pn**	**07 54 42.0**	**-1.5**
JIR1	**Jirandeh**	**4.48**	**161**	*e*Pn		**Pn**	**07 54 44.3**	**-1.6**
KBZ	**Khabaz**	**4.67**	**308**	Pn		**Pn**	**07 54 50.6**	**+2.2**
	comp=Z,0.3nm,0.3s,baz=144,slow=16,SNR=2.3							
KBZ				Pg		**Pb**	**07 55 01.4**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=92,slow=14,SNR=5.2							
	comp=Z,0.8nm,0.5s							
SHA1	**Shidzhatmaz**	**4.83**	**307**	⇓*e*PN		**Pn**	**07 54 53.8**	**+3.1**
IGZV	**Ghazvin**	**4.89**	**158**	*e*		**Sn**	**07 55 51.0**	**+3.2**
	comp=Z,770nm,0.5s							
QALM	**Alamut, Qazvin**	**4.98**	**154**	*e*		**Sn**	**07 55 50.4**	**+0.4**
	comp=Z,808nm,0.4s							
CHTH	**Charan**	**5.61**	**153**	*e*Pn		**Pn**	**07 55 00.2**	**-1.4**
IPRN	**Peran**	**5.81**	**143**	*e*Pn		**Pn**	**07 55 02.8**	**-1.4**
DAMV	**Damavand**	**6.18**	**148**	*e*Pn		**Pn**	**07 55 08.0**	**-1.3**
ISHM	**Shahmirzad**	**6.62**	**139**	*e*Pn		**Pn**	**07 55 16.0**	**+0.6**
MRVT	**Maraveh tapeh**	**7.10**	**115**	*e*Pn		**Pn**	**07 55 20.8**	**-1.0**
BJRD	**Bojnurd**	**8.00**	**111**	*e*Pn		**Pn**	**07 55 33.1**	**-1.1**
SHRO	**Shahrood**	**8.01**	**126**	*e*Pn		**Pn**	**07 55 33.1**	**-1.3**
GEYT	**Alibeck**	**8.40**	**108**	Pn		**Pn**	**07 55 39.6**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=277,slow=11,SNR=2.2							
	comp=Z,1.7nm,0.4s							
BELG	**Belogornoye**	**11.44**	**359**	LR		LR	08 02 07.7	
	comp=Z,41nm,20.8s,baz=138,slow=45							
AKTO	**Aktyubinsk**	**11.78**	**33**	Pn		**Pn**	**07 56 24.0**	**-1.7**
	comp=Z,0.6nm,0.3s,baz=222,slow=14,SNR=12							
AKTO				LR		LR	08 02 01.4	
	comp=Z,36nm,18.1s,baz=229,slow=43							
	comp=Z,1.3nm,0.3s							
AKTO	**Aktyubinsk**	**11.78**	**33**	P		**Pn**	**07 56 24.7**	**-1.1**
AKTO				SN		**Sn**	**07 58 32.6**	**-4.0**
AKTO	**Aktyubinsk**	**11.78**	**33**	⇑Pn		**Pn**	**07 56 24.7**	**-1.1**
	comp=Z,2.3nm,0.7s							
AKTO				⇑Sn		**Sn**	**07 58 32.6**	**-4.0**
	comp=Z,3.0nm,0.6s							
AB31	**Akbulak array**	**11.83**	**41**	P		**Pn**	**07 56 27.4**	**+0.9**
AB31				SN		**Sn**	**07 58 34.6**	**-3.3**
AB31	**Akbulak array**	**11.83**	**41**	Pn		**Pn**	**07 56 27.4**	**+0.9**
	comp=Z,0.7nm,0.4s,baz=230,slow=13,SNR=14							
AB31				⇓SN		**Sn**	**07 58 34.6**	**-3.3**
	comp=Z,0.7nm,0.3s,baz=229,slow=30,SNR=4.3							
ARU	**Arti**	**16.95**	**20**	Pn		**Pn**	**07 57 30.6**	**-4.2**
	baz=209,slow=12,SNR=4.6							
ARU				LR		LR	08 05 06.7	
	comp=Z,11nm,19.3s,baz=148,slow=41							
	comp=Z,5.8nm,0.2s							
ARU	**Arti**	**16.95**	**20**	P		**Pn**	**07 57 34.6**	**-0.2**
ARU				S		**Sn**	**08 00 42.1**	**-0.4**
KLMR	**Klimovskoe**	**20.59**	**348**	*e*P		**P**	**07 58 13.8**	**-2.6**
KLMR				pmax		pmax		
	comp=Z,5.0nm,0.8s							
KLMR	**Klimovskoe**	**20.59**	**348**	*e*P		**P**	**07 58 13.8**	**-2.6**
KLMR				AMP			07 58 21.0	
	comp=Z,5.0nm,0.8s							
PRGR	**Permogore**	**20.76**	**357**	*e*P		**P**	**07 58 16.6**	**-1.6**
KURBB	**Kurchatov Arra**	**23.24**	**55**	P		**P**	**07 58 45.3**	**+0.4**
	comp=Z,0.2nm,0.4s,baz=267,slow=9.1,SNR=6.5							
	comp=Z,0.2nm,0.4s							
KURK	**Kurchatov**	**23.32**	**55**	⇓*e*P		**P**	**07 58 50.3**	**+4.7**
KURK				pmax		pmax		
	comp=Z,3.0nm,1.2s							
FINES	**FINESS Array B**	**24.45**	**334**	P		**P**	**07 58 55.3**	**-0.9**
	comp=Z,2.2nm,0.5s,baz=139,slow=10,SNR=17							
	comp=Z,2.2nm,0.5s							
MK31	**Makanchi Array**	**25.27**	**65**	⇓*e*P		**P**	**07 59 09.8**	**+6.0**
MKAR	**Makanchi Array**	**25.27**	**65**	P		**P**	**07 59 04.5**	**+0.6**
	comp=Z,0.8nm,0.5s,baz=268,slow=9.2,SNR=11							
	comp=Z,0.8nm,0.5s							
MKAR	**Makanchi Array**	**25.27**	**65**	*i* P		**P**	**07 59 08.0**	**+4.2**
MKAR				pmax		pmax		
	comp=Z,1.0nm,0.5s							
KHC	**Kasperske Hory**	**25.47**	**300**	⇓*e*P		**P**	**07 59 06.9**	**+1.3**
KHC				pmax		pmax		
	comp=Z,8.0nm,1.6s							
ARCES	**ARCESS Array B**	**30.97**	**345**	P		**P**	**07 59 54.2**	**-0.2**
	comp=Z,1.3nm,1.0s,baz=147,slow=12,SNR=4.1							
	comp=Z,1.3nm,1.0s							

*TUL **30** 07:57:21.5±0.3,36.78°N±0.02°×98.50°W±0.02°,h6km±4km, ML2.6,mb_Lg2.1/17(NEIC),Error ellipse: s-maj=3.3km s-min=1.5km az=143.0*

NEIC 30 07:57:22.1±0.4,**36.77°N**±0.02°×**98.51°W**±0.02°,**h3**km±6km, **Error ellipse: s-maj=3.2km s-min=0.7km az=134.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKCFA	**Oklahoma City**	**1.60**	**147**	IAmb_Lg		07 58 12.2	
	comp=Z,10nm,0.9s						
T35A	**Sooner Cattle**	**1.61**	**84**		Pn	07 57 50.8	-0.5
WMOK	**Wichita Mounta**	**2.04**	**186**		Pn	07 57 57.4	+0.1
WMOK	**Wichita Mounta**	**2.04**	**186**	IAmb_Lg		07 58 30.4	
	comp=Z,3.3nm,0.7s						
X34A	**Smith Ranch, M**	**2.23**	**166**		Pn	07 57 59.8	-0.1
CBKS	**Cedar Bluff**	**2.26**	**335**	IAmb_Lg		07 58 34.4	
	comp=Z,5.9nm,0.8s						
TUL1	**Leonard**	**2.35**	**111**	IAmb_Lg		07 58 38.5	
	comp=Z,8.8nm,0.8s						
X37A	**Clayton**	**3.35**	**130**	IAmb_Lg		07 59 12.4	
	comp=Z,5.6nm,0.8s						
HHAR	**Hobbs**	**3.71**	**96**	Pn	Pn	07 58 19.9	-0.4
WHTX	**Lake Whitney,**	**4.85**	**169**	IAmb_Lg		08 00 05.0	
	comp=Z,4.4nm,1.0s						
FCAR	**Ozark Folk Cen**	**5.23**	**98**	IAmb_Lg		08 00 15.2	
	comp=Z,2.7nm,1.0s						
P40A	**Paris**	**5.79**	**60**	IAmb_Lg		08 00 29.1	
	comp=Z,4.4nm,0.7s						
PHWY	**Pilot Hill**	**7.05**	**312**	IAmb_Lg		08 01 13.1	
	comp=Z,1.9nm,0.9s						

*IDC **30** 08:13:01.1±1.4, 17.62°S×178.78°W,h596km±13km, mb3.3/8, mbtmp4.3/10,Error ellipse: s-maj=55.0km s-min=15.0km az=148.0*

ISC 30 08:13:01.3±0.9,**17.6°S**±0.3°×**178.8°W**±0.2°,**h600**km,**n10**, σ0.8**2**/12,**mb3.6**/8,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.02**	**267**	P		**08 14 19.4**	**-1.3**
	55nm,0.6s,baz=101,slow=5.2,SNR=57						
MSVF				S		**S 08 15 25.1**	**-0.2**
	6.1nm,0.9s,baz=315,slow=21,SNR=1.2						
DZM	**Mont Dzumac**	**14.58**	**250**	P		**P 08 16 07.0**	**+1.2**
	5.9nm,0.6s,baz=77,slow=15,SNR=6.9						
STKA	**Stephens Creek**	**38.45**	**241**	P		**P 08 19 34.0**	**+0.6**
	5.9nm,0.4s,baz=88,slow=10,SNR=18						
	5.9nm,0.4s						
WRA	**Warrumunga Arr**	**44.33**	**259**	P		**P 08 20 19.6**	**-0.3**
	2.8nm,0.5s,baz=96,slow=7.5,SNR=104						
	2.8nm,0.5s						
ASAR	**Alice Springs**	**44.52**	**254**	P		**P 08 20 21.6**	**+0.4**
	27nm,0.6s,baz=88,slow=8.4,SNR=480						
ASAR				PcP		**PcP 08 21 50.4**	**-0.8**
	1.1nm,0.7s,baz=106,slow=3.8,SNR=2.3						
	27nm,0.6s						
NVAR	**Mina Array Bea**	**79.47**	**44**	P		**P 08 24 07.5**	**+0.5**
	0.8nm,0.7s,baz=226,slow=8.9,SNR=7.7						
	0.8nm,0.7s						
MAW	**Mawson**	**84.01**	**200**	P		**P 08 24 28.4**	**-0.9**
	0.8nm,0.5s,baz=170,slow=6.1,SNR=2.0						
	0.8nm,0.5s						
ILAR	**Eielson Array**	**85.69**	**13**	P		**P 08 24 37.0**	**-0.3**
	0.3nm,0.4s,baz=221,slow=5.0,SNR=5.0						
	0.3nm,0.4s						
TXAR	**Lajitas Array**	**86.15**	**58**	P		**P 08 24 41.2**	**+0.8**
	0.8nm,0.8s,baz=219,slow=5.7,SNR=12						
	0.8nm,0.8s						
PDAR	**Pinedale Array**	**87.39**	**44**	P		**P 08 24 46.2**	**+0.1**
	0.4nm,0.5s,baz=235,slow=3.4,SNR=6.5						
	0.4nm,0.5s						

*JMA **30** 08:39:35.1±0.1, 42.5°N±0.3°×143.1°E±0.4,h34km±1km, MV2.8/38,HIDAKA MOUNTAINS REGION*
*SKHL **30** 08:39:36.2±0.3, 42.10°N×143.60E,h49km±2km,mb4.0/4*

ISC 30 08:39:34.7±1.2,**42.50N**±0.05°×**143.10E**±0.04,**h33**km±4km, **n14**,σ1**9**16/**21**,**Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCH	**Churui**	**0.23**	**59**	P	**Pn**	**08 39 42.5**	**+1.0**
JTHR	**Tokachihiroo**	**0.26**	**144**	P	**Pn**	**08 39 42.0**	**+0.1**
JTHR				*e*S	**Sb**	**08 39 47.1**	**+0.4**
JNBK	**Urakawa-nobuka**	**0.33**	**230**	*e*P	**Pb**	**08 39 42.8**	**-0.1**
JNBK				*e*S	**Sn**	**08 39 48.7**	**0.0**
JSHD	**Hidakashinhida**	**0.47**	**260**	*e*P	**Pb**	**08 39 45.0**	**+0.2**
JEM	**Erimo**	**0.48**	**174**	*e*P	**Pb**	**08 39 44.9**	**-0.1**
JBT2	**Biratori 2**	**0.61**	**298**	*e*P	**Pn**	**08 39 46.4**	**-0.6**
JOB	**Onbets**	**0.68**	**53**	*e*P	**Pn**	**08 39 49.0**	**+1.0**
JFR	**Furan**	**0.76**	**331**	*e*P	**Pn**	**08 39 48.4**	**-0.8**
JAR	**Ashorobuto**	**0.94**	**32**	P	**Pn**	**08 39 51.8**	**+0.2**
JAR				*e*S	**Sn**	**08 40 04.2**	**+0.4**
JEW	**Eniwo**	**1.26**	**286**	*e*P	**Pn**	**08 39 57.2**	**+1.2**
AKK	**Akkeshi**	**1.39**	**67**	*e*P	**Pn**	**08 39 57.6**	**-0.1**
AKK				*e*S	**Sn**	**08 40 13.9**	**-1.0**
NMR	**Nemuro--Hokkai**	**2.12**	**65**	*e*P	**Pn**	**08 40 07.6**	**-0.2**
NMR				AMB	AMB	08 40 09.2	
	10.0nm,0.3s						
NMR				*i* S	**Sn**	**08 40 31.0**	**-2.0**
NMR				A	A	08 40 33.4	
	40nm,0.2s						
NMR				A	A	08 40 33.4	
	20nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**2.54**	**52**	*e*P	**Pn**	**08 40 15.5**	**+2.0**
YUK				AMB	AMB	08 40 16.4	
	40nm,0.3s						
YUK				*i* S	**Sn**	**08 40 44.8**	**+1.5**
YUK				A	A	08 40 46.7	
	120nm,0.5s						
YUK				A	A	08 40 46.7	
	110nm,0.5s						
SHO	**Shikotan**	**3.06**	**62**	*e*P	**Pn**	**08 40 20.6**	**-0.1**
SHO				AMB	AMB	08 40 21.6	
	20nm,0.2s						
SHO				*i* S	**Sn**	**08 40 53.5**	**-2.6**
SHO				A	A	08 40 57.1	
	50nm,0.4s						
SHO				A	A	08 40 57.1	
	40nm,0.4s						

*MOS **30** 08:41:40.4±0.0, 42.91N×46.96E,h22km,MPVA4.1*
*NORS **30** 08:41:41.5±0.0, 42.94N×46.94E,h11km,MPVA4.2*
*DRS **30** 08:41:41.6±0.0, 42.98N×47.10E,h16km*

ISC 30 08:41:41.8±1.0,**42.94N**±0.03°×**46.96E**±0.02°,**h16**km±8km, **n24**,σ1**8**01/**48**,**Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRNR	**Karanay**	**0.12**	**198**	*e*Pg	**Pb**	**08 41 46.3**	**+0.5**
KRNR				*e*Sg	**Sb**	**08 41 49.4**	**+1.1**
DBC	**Dubki**	**0.12**	**312**	*e*Pg	**Pb**	**08 41 46.3**	**+0.4**
DBC				*e*Sg	**Sb**	**08 41 49.6**	**+1.0**
BUJR	**Buynaksk**	**0.16**	**135**	*e*Pg	**Pb**	**08 41 46.0**	**-0.5**
BUJR				*e*Sg	**Sb**	**08 41 50.9**	**+1.4**
UNCR	**Uncukul**	**0.25**	**208**	*e*Pg	**Pb**	**08 41 47.6**	**-0.4**
UNCR				*e*Sg	**Sb**	**08 41 52.5**	**+0.3**
DLMR	**Dylym**	**0.27**	**299**	*e*Pg	**Pb**	**08 41 48.2**	**-0.2**
DLMR				*e*Sg	**Sb**	**08 41 53.2**	**+0.4**
ARKR	**Arakani**	**0.34**	**175**	*i* Pg	**Pg**	**08 41 48.6**	**-0.2**
ARKR				*e*Sg	**Sg**	**08 41 53.7**	**+0.1**
MAK	**Makhachkala**	**0.40**	**86**	*e*Pg	**Pg**	**08 41 49.8**	**-0.2**
MAK				*e*Sg	**Sb**	**08 41 57.7**	**+1.1**
XNZR	**Khunzakh**	**0.44**	**205**	*e*Pg	**Pg**	**08 41 50.5**	**-0.2**
XNZR				*e*Sg	**Sb**	**08 41 57.6**	**0.0**
GNBR	**Gunib**	**0.55**	**179**	*e*Pg	**Pg**	**08 41 52.5**	**-0.2**
GNBR				*e*Sg	**Sb**	**08 42 00.8**	**+0.1**
DVE	**Vedeno**	**0.61**	**272**	*e*Pg	**Pg**	**08 41 53.5**	**-0.4**
DVE				*e*Sg	**Sb**	**08 42 02.4**	**-0.1**
KMKR	**Kumukh**	**0.81**	**172**	*e*Pg	**Pg**	**08 41 57.2**	**-0.5**
KMKR				*e*Sg	**Sb**	**08 42 08.4**	**-0.1**
GROC	**Groznyy**	**0.89**	**288**	*e*Pg	**Pb**	**08 41 58.5**	**-0.4**
GROC				*e*Sg	**Sn**	**08 42 11.8**	**-0.4**
URKR	**Urkarakh**	**0.92**	**147**	*e*Pg	**Pb**	**08 41 58.0**	**-1.5**
URKR				*e*Sg	**Sg**	**08 42 11.9**	**+0.1**
LGD	**Lagodekhi**	**1.22**	**206**	P	**Pn**	**08 42 03.8**	**-0.5**
LGD				S	**Sb**	**08 42 18.8**	**-1.3**
DRN	**Derbent**	**1.36**	**131**	*e*Pg	**Pb**	**08 42 06.4**	**-0.5**
DRN				*e*Sg	**Sg**	**08 42 25.1**	**-0.7**
AKT	**Akhty**	**1.56**	**158**	*e*Pg	**Pn**	**08 42 09.3**	**+0.2**
AKT				*e*Sg	**Sb**	**08 42 30.2**	**+0.1**
KSMR	**Kasumkent**	**1.59**	**146**	*e*Pg	**Pn**	**08 42 09.8**	**+0.4**
KSMR				*e*Sg	**Sb**	**08 42 31.1**	**+0.3**
DDFL	**Dedoflistskaro**	**1.61**	**203**	P	**Pg**	**08 42 12.9**	**0.0**
DDFL				S	**Sg**	**08 42 39.2**	**+5.3**
PNSH	**Pansheti**	**1.75**	**261**	P	**Pn**	**08 42 11.0**	**-0.7**
PNSH				S	**Sb**	**08 42 34.3**	**-1.1**
MTEO	**Meteo**	**1.80**	**263**	P	**Pn**	**08 42 12.7**	**+0.1**
MTEO				S	**Sn**	**08 42 36.0**	**+0.6**
BTKR	**Batakoyurt**	**1.82**	**285**	*e*Pg	**Pg**	**08 42 16.6**	**-0.2**
BTKR				*e*Sg	**Sg**	**08 42 40.2**	**-0.1**
DGRG	**David-gareji**	**1.89**	**219**	P	**Pb**	**08 42 15.7**	**-0.4**
DGRG				S	**Sg**	**08 42 42.3**	**-0.5**
LACR	**Lac**	**1.96**	**268**	*e*Pg	**Pn**	**08 42 13.4**	**-1.0**
LACR				*e*Sg	**Sn**	**08 42 38.8**	**+0.1**
SHA1	**Shidzhatmaz**	**3.24**	**286**	*e*Pn	**Sn**	**08 42 32.3**	**+0.2**
SHA1				*e*Sn	**Sn**	**08 43 10.7**	**+0.2**

*UCR **30** 08:44:52.4±1.5, 13.2°N×90.03W,h26km±4km, ML4.0, mb4.0(NEIC)*
*SNET **30** 08:44:52.3±1.5, 13.21N×90.03W,h25km±4km, ML4.1*
*NEIC **30** 08:44:54.9±1.0, 13.36N±0.09×89.92W±0.05,h30km±14km, mb4.0/3,Md4.1(SNET), Error ellipse: s-maj=13.6km s-min=4.7km az=200.0*
*GCG **30** 08:44:55.1±0.6, 13.29N×90.27W,h41km±220km,MD4.0*

ISC 30 08:44:53.9±1.5,**13.28N**±0.05°×**90.03W**±0.04°,**h28**km±11km, **n91**,σ0**98**/131,**4C**,**Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NUBE	**Las Nubes**	**0.67**	**21**	*i* P	**Pb**	**08 45 06.3**	**-0.8**
NUBE				*e*S	**Sb**	**08 45 16.8**	**+0.7**
NUBE				*e*S	**Sb**	**08 45 16.9**	**+0.7**
NUBE	**Las Nubes**	**0.67**	**21**	*i* P	**Pb**	**08 45 06.3**	**-0.8**
NUBE				*e*S	**Sb**	**08 45 16.8**	**+0.7**
NUBE				*e*S	**Sb**	**08 45 16.9**	**+0.7**
CEVE	**Cerro Verde**	**0.67**	**35**	⇑*i*P	**Pb**	**08 45 06.8**	**-0.5**
CEVE				*e*S	**Sn**	**08 45 18.0**	**+0.5**
CEVE				IAML		08 45 19.5	
	comp=Z,44μm,0.2s						
CEVE	**Cerro Verde**	**0.67**	**35**	⇑*i*P	**Pb**	**08 45 06.8**	**-0.5**
CEVE				*e*S	**Sn**	**08 45 18.0**	**+0.5**
CEVE				IAML		08 45 19.5	
	comp=Z,44μm,0.2s						
JAYA	**Jayaque - finc**	**0.68**	**56**	*i* P	**Pb**	**08 45 06.3**	**-1.0**
JAYA				*e*S	**Sb**	**08 45 17.1**	**+0.7**
JAYA				IAML		08 45 21.1	
	comp=Z,8μm,0.2s						
JAYA	**Jayaque - finc**	**0.68**	**56**	*i* P	**Pb**	**08 45 06.3**	**-1.0**
JAYA				*e*S	**Sb**	**08 45 17.1**	**+0.7**
JAYA				IAML		08 45 21.1	
	comp=Z,8μm,0.2s						
SBLS	**San Blas**	**0.68**	**35**	⇑*i*P	**Pb**	**08 45 06.9**	**-0.6**
SBLS	**San Blas**	**0.68**	**35**	⇑*i*P	**Pb**	**08 45 06.9**	**-0.6**
SNJE	**San Jose**	**0.72**	**35**	*e*P	**Pb**	**08 45 07.2**	**-0.8**
SNJE	**San Jose**	**0.72**	**35**	*e*P	**Pb**	**08 45 07.2**	**-0.8**
RTR	**El Retiro**	**0.72**	**31**	*e*P	**Pb**	**08 45 07.6**	**-0.4**
RTR	**El Retiro**	**0.72**	**31**	*e*P	**Pb**	**08 45 07.6**	**-0.4**
SLOZ	**Alcaldia de Sa**	**0.78**	**18**	*i* P	**Pn**	**08 45 08.1**	**-1.0**
SLOZ				*e*S	**Sn**	**08 45 20.4**	**+0.5**
CEDA	**San Andres**	**0.81**	**50**	*e*P	**Pn**	**08 45 08.2**	**-1.2**
CEDA				*e*S	**Sb**	**08 45 20.8**	**+0.8**
CEDA				IAML		08 45 25.3	
	comp=Z,6μm,0.3s						
CEDA	**San Andres**	**0.81**	**50**	*e*P	**Pn**	**08 45 08.2**	**-1.2**
CEDA				*e*S	**Sb**	**08 45 20.8**	**+0

RTAL	**Retalhuleu**	**2.04**	**308**			**Pn**	**08 45 26.8**	**+0.4**
STG3	**Santiaguito 3,**	**2.07**	**314**	*e*	P	**Pn**	**08 45 26.1**	**-0.8**
STG3				*e*	S	**Sn**	**08 45 49.5**	**-2.4**
LCND	**La Caada**	**2.08**	**89**	*e*	P	**Pn**	**08 45 26.0**	**-0.9**
LCND				*e*	S	**Sn**	**08 45 52.5**	**+0.6**
LCND	**La Caada**	**2.08**	**89**	*e*	P	**Pn**	**08 45 26.0**	**-0.9**
LCND				*e*	S	**Sn**	**08 45 52.5**	**+0.6**
CNCH	**Conchagua**	**2.13**	**90**	*e*	P	**Pn**	**08 45 26.7**	**-1.0**
CNCH				*e*	S	**Sn**	**08 45 55.5**	**+2.1**
CNCH					IAML		08 45 59.0	
	comp=Z,3μm,0.3s							
CNCH	**Conchagua**	**2.13**	**90**	*e*	P	**Pn**	**08 45 26.7**	**-1.0**
CNCH				*e*	S	**Sn**	**08 45 55.5**	**+2.1**
CNCH					IAML		08 45 59.0	
	comp=Z,3μm,0.3s							
HUEH	**Huehuetenango**	**2.48**	**325**			**Pn**	**08 45 32.8**	**+0.1**
TGUH	**Tegucigalpa,Un**	**2.79**	**74**			**Pn**	**08 45 35.6**	**-1.1**
CRIN	**San Cristobal**	**2.96**	**101**	Pn		**Pn**	**08 45 39.3**	**+0.3**
CNGN	**Cerro Negro**	**3.33**	**103**			**Pn**	**08 45 43.4**	**-0.8**
CCIG	**Comitan**	**3.62**	**326**			**Pn**	**08 45 48.8**	**+0.5**
PETF	**Flores**	**3.62**	**2**			**Pn**	**08 45 48.1**	**0.0**
MATN	**Matagalpa**	**4.01**	**94**			**Pn**	**08 45 51.5**	**-2.1**
ACON	**Acoyapa**	**4.91**	**105**	Pn		**Pn**	**08 46 03.9**	**-2.0**
HZTE	**Horizontes, Gu**	**5.03**	**120**	Pn		**Pn**	**08 46 07.5**	**0.0**
ORTG	**Ortega, Santa**	**5.33**	**122**			**Pn**	**08 46 11.6**	**-0.1**
DUNO	**Dulce Nombre,**	**5.46**	**125**			**Pn**	**08 46 12.9**	**-0.6**
JTS	**Las Juntas de**	**5.79**	**120**			**Pn**	**08 46 18.1**	**+0.2**
JACO	**JACO, Garabito**	**6.37**	**124**	Pn		**Pn**	**08 46 25.9**	**0.0**
PEZE	**Perez Zeledon,**	**7.33**	**121**	Pn		**Pn**	**08 46 38.9**	**-0.3**
SRBA	**San Rafael, Bu**	**7.67**	**121**			**Pn**	**08 46 44.5**	**+0.5**
DRK0	**Durika**	**7.75**	**120**			**Pn**	**08 46 46.7**	**+1.5**
SOR	**Soroa**	**11.58**	**34**	Pn		**Pn**	**08 47 37.9**	**+0.6**
342A	**Flagon Creek P**	**18.14**	**354**	P		**Pn**	**08 49 04.1**	**+0.4**
342A				IAmb	IAmb		08 49 09.2	
	comp=Z,15nm,0.9s							
NATX	**Nacogdoches**	**18.88**	**348**	P		**P**	**08 49 11.7**	**-0.4**
NATX				IAmb	IAmb		08 49 36.9	
	comp=Z,11nm,0.9s							
TXAR	**Lajitas Array**	**20.38**	**324**	P		**P**	**08 49 28.8**	**+0.1**
TX31	**Lajitas Ar. Si**	**20.38**	**324**	P		**P**	**08 49 28.5**	**-0.1**
TX31				IAmb	IAmb		08 49 30.1	
	comp=Z,3.0nm,0.8s							

*IDC **30** 08:51:40.2±1.1,5°.08N×125°.31E,h0km,mb3.8/5, mbtmp3.8/5,MS2.9/1,Error ellipse: s-maj=57.7km s-min=19.2km az=77.0*
*MAN **30** 08:51:42.0,5°.44N×126°.64E,h10km,mb4.6,ML3.5,MS3.4*
ISC 30 08:51:44.6±1.2,5°.3N±0°.1×126°.6E±0°.1,h35km,n12, σ2s15/10,mb3.9/5,1C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**1.77**	**295**	⇑*i* P	**Pn**	**08 52 11.6**	**-1.2**
GSPH				*i* S	**Sn**	**08 52 36.3**	**+2.2**
DAV	**Davao City (W)**	**1.98**	**330**	Pn	**Pn**	**08 52 15.6**	**0.0**
	89nm,0.3s,baz=205,slow=7.8,SNR=2.5						
DAV				Sn	**Sn**	**08 52 41.6**	**+2.4**
	91nm,0.3s,baz=251,slow=19,SNR=5.6						
DAV				LR	LR	08 53 20.4	
	comp=Z,184nm,19.9s,baz=151,slow=50						
KCP	**Kidapawan**	**2.21**	**319**	⇓*i* P	**Pn**	**08 52 18.6**	**-0.3**
SIJI	**Sorong**	**7.75**	**143**	LR	LR	08 56 38.1	
	comp=Z,67nm,18.6s,baz=312,slow=36						
WRA	**Warramunga Arr**	**26.26**	**163**	P	**P**	**08 57 18.8**	**+2.0**
	0.8nm,0.8s,baz=341,slow=10,SNR=4.3 0.8nm,0.8s						
ASAR	**Alice Springs**	**29.70**	**166**	P	**P**	**08 57 48.7**	**+1.2**
	0.4nm,0.9s,baz=336,slow=6.6,SNR=1.9 0.4nm,0.9s						
H11N1	**WAKE ISLAND Hy**	**41.75**	**66**	T	T	09 43 52.9	
	baz=255,slow=75,SNR=9.3						
H11N2	**WAKE ISLAND Hy**	**41.76**	**66**	T	T	09 43 53.1	
	baz=255,slow=75,SNR=5.1						
H11N3	**WAKE ISLAND Hy**	**41.76**	**66**	T	T	09 43 53.8	
	baz=255,slow=75,SNR=6.5						
MKAR	**Makanchi Array**	**56.15**	**325**	P	**P**	**09 01 18.2**	**-2.6**
	0.6nm,0.5s,baz=119,slow=7.6,SNR=8.2 0.6nm,0.5s						
KURBB	**Kurchatov Arra**	**60.30**	**327**	P	**P**	**09 01 47.0**	**-2.7**
	1.1nm,0.6s,baz=126,slow=6.2,SNR=12 1.1nm,0.6s						
ARCES	**ARCESS Array B**	**88.89**	**340**	P	**P**	**09 04 35.6**	**+0.6**
	1.1nm,0.8s,baz=81,slow=5.6,SNR=1.8 1.1nm,0.8s						

*IDC **30** 09:02:04.9±1.2,21°.92S×67°.05W,h158km±15km,mb3.4/2, mbtmp3.7/4,Error ellipse: s-maj=29.0km s-min=13.0km az=125.0*
*GUC **30** 09:02:07.6±0.6,21°.93S×67°.49W,h192km±6km,ML3.6*
*SCB **30** 09:02:08.5±1.9,21°.89S×67°.40W,h129km±25km,ML3.3/4, Error ellipse: s-maj=6.8km s-min=5.2km az=0.0*
ISC 30 09:02:06.2±1.0,21°.87S±0°.05×67°.35W±0°.04,h176km±9km, n32,σ1s37/52,4C-1D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.63**	**243**	P	**Pn**	**09 02 40.2**	**+0.7**
	32nm,0.5s,baz=58,slow=9.3,SNR=62						
LVC				S	**Sn**	**09 03 05.6**	**+0.4**
	14nm,0.3s,baz=249,slow=20,SNR=27						
LVC	**Limon Verde**	**1.63**	**243**	*i* P	**Pn**	**09 02 40.4**	**+0.9**
LVC				*i* S	**Sn**	**09 03 05.6**	**+0.4**
MOCB	**Mochara**	**1.70**	**69**	P	**Pn**	**09 02 41.7**	**+1.3**
MOCB				S	**Sn**	**09 03 04.5**	**-2.3**
MOCB					IAML	09 03 09.4	
	152nm,0.4s						
YJA	**Yavi**	**1.73**	**101**	P	**Pn**	**09 02 41.8**	**+1.2**
PB09	**IPOC Station P**	**1.76**	**272**	⇓*i* P	**Pn**	**09 02 41.9**	**+1.2**
PB01	**IPOC Station P**	**2.15**	**292**	⇑*i* P	**Pn**	**09 02 45.5**	**+0.7**
PB01				*i* S	**Sn**	**09 03 14.8**	**+0.1**
PB01					IAML	09 03 16.4	
	comp=N,260nm,0.6s						
PB06	**IPOC Station P**	**2.22**	**247**	*i* P	**Pn**	**09 02 45.9**	**+0.2**
PB06				*i* S	**Sn**	**09 03 15.8**	**-0.5**
PB06					IAML	09 03 17.8	
	comp=E,100nm,0.3s						
PB06	**IPOC Station P**	**2.22**	**247**	P	**Pn**	**09 02 46.0**	**+0.3**
PB07	**IPOC Station P**	**2.36**	**273**	*i* P	**Pn**	**09 02 47.6**	**+0.3**
PB07				*i* S	**Sn**	**09 03 18.1**	**-1.0**
PB07					IAML	09 03 19.9	
	comp=E,230nm,0.2s						
PB15	**IPOC Station P**	**2.38**	**235**	*i* P	**Pn**	**09 02 48.0**	**+0.5**
PB15				*i* S	**Sn**	**09 03 19.1**	**-0.4**
PB15	**IPOC Station P**	**2.38**	**235**	P	**Pn**	**09 02 48.0**	**+0.5**
PB08	**IPOC Station P**	**2.41**	**315**	⇑*i* P	**Pn**	**09 02 49.9**	**+1.9**
PB08				*i* S	**Sn**	**09 03 21.8**	**+1.4**
PB08					IAML	09 03 25.0	
	comp=E,66nm,0.2s						
PB08	**IPOC Station P**	**2.41**	**315**	P	**Pn**	**09 02 50.0**	**+2.0**
PB08				S	**Sn**	**09 03 18.7**	**-1.7**
PB08					IAML	09 03 25.1	
	comp=E,51nm,0.2s						
PB02	**IPOC Station P**	**2.43**	**282**	*e*P	**Pn**	**09 02 48.5**	**+0.4**
PB02				*i* S	**Sn**	**09 03 19.2**	**-1.3**
PB02					IAML	09 03 21.0	
	comp=E,262nm,0.2s						
PB02	**IPOC Station P**	**2.43**	**282**	P	**Pn**	**09 02 48.8**	**+0.8**
PB02				S	**Sn**	**09 03 17.9**	**-2.6**
PB02					IAML	09 03 21.1	
	comp=E,188nm,0.2s						
PB04	**IPOC Station P**	**2.64**	**259**	*i* P	**Pn**	**09 02 50.6**	**0.0**
PB04				*i* S	**Sn**	**09 03 23.0**	**-1.9**
PB04					IAML	09 03 25.4	
	comp=N,107nm,0.1s						
PB04	**IPOC Station P**	**2.64**	**259**	P	**Pn**	**09 02 50.9**	**+0.4**
GO01	**Chusmiza**	**2.79**	**321**	⇑*i* P	**Pn**	**09 02 54.1**	**+1.4**
GO01				*i* S	**Sn**	**09 03 29.4**	**+0.8**
GO01					IAML	09 03 34.5	
	comp=E,213nm,0.2s						
PATCX	**Punta Patache**	**2.81**	**291**	*i* P	**Pn**	**09 02 52.7**	**+0.2**
PATCX				*i* S	**Sn**	**09 03 27.3**	**-1.2**
PATCX					IAML	09 03 29.2	
	comp=N,217nm,0.3s						
TA01	**Diego Aracena**	**2.94**	**296**	*i* P	**Pn**	**09 02 54.0**	**0.0**
TA01				*i* S	**Sn**	**09 03 29.5**	**-1.7**
TA01					IAML	09 03 30.8	
	comp=E,99nm,0.2s						
PB11	**IPOC Station P**	**3.01**	**314**	*e*P	**Pn**	**09 02 55.5**	**+0.5**
PB11				*i* S	**Sn**	**09 03 32.3**	**-0.7**
PB11					IAML	09 03 33.9	
	comp=N,202nm,0.2s						
PB11	**IPOC Station P**	**3.01**	**314**	P	**Pn**	**09 02 55.5**	**+0.5**
PB11				S	**Sn**	**09 03 30.6**	**-2.3**
PB11					IAML	09 03 33.8	
	comp=N,189nm,0.2s						
SLA	**San Lorenzo**	**3.31**	**150**	P	**Pn**	**09 02 58.8**	**+0.1**
PB16	**IPOC Station P**	**4.06**	**330**	*i* P	**Pn**	**09 03 10.2**	**+1.6**
PB16				⇑*i* S	**Sn**	**09 03 57.2**	**0.0**
PB12	**IPOC Station P**	**4.28**	**319**	*e*P	**Pn**	**09 03 10.1**	**-0.8**
PB12				*e*S	**Sn**	**09 03 57.6**	**-3.9**
BBOE	**La Paz, Chanca**	**5.06**	**353**	P	**Pn**	**09 03 23.9**	**+2.4**
BBOD	**La Paz, Gloria**	**5.33**	**347**	P	**Pn**	**09 03 25.9**	**+0.9**
LPAZ	**La Paz**	**5.60**	**352**	P	**Pn**	**09 03 30.0**	**+1.5**
	comp=N,1.0nm,0.4s,baz=181,slow=7.2,SNR=21						
LPAZ				S	**Sn**	**09 04 33.8**	**+0.7**
	comp=N,0.5nm,0.4s,baz=75,slow=20,SNR=1.4						
LPAZ	**La Paz**	**5.60**	**352**	P	**Pn**	**09 03 30.5**	**+2.0**
SIV	**San Ignacio**	**8.33**	**47**	P	**Pn**	**09 04 01.5**	**-2.5**
	comp=N,2.7nm,0.3s,baz=226,slow=10,SNR=26						
SIV				S	Sn	09 05 29.6	-7.7
	comp=N,1.4nm,0.3s,baz=135,slow=20,SNR=8.5						
TORD	**Torodi Ar. Bea**	**76.11**	**70**	P	**P**	**09 13 34.5**	**-0.5**
	comp=N,0.8nm,0.5s,baz=248,slow=5.1,SNR=14 comp=N,0.8nm,0.5s						
YKA	**Yellowknife Ar**	**92.02**	**340**	P	**P**	**09 14 55.0**	**+0.5**
	comp=N,0.2nm,0.7s,baz=133,slow=4.7,SNR=2.3 comp=N,0.2nm,0.7s						

IDC 30 09:03:12.8±3.0,54°.30N×87°.18E,h0km,mbtmp3.1/2, ML2.8/2,Error ellipse: s-maj=26.4km s-min=18.5km az=56.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.44**	**257**	*i*		09 11 10.0	
	0.1nm,1.0s,baz=73,slow=317,SNR=4.1						
ZALV	**Zalesovo Beam**	**1.44**	**257**	Pg	Pn	09 03 38.3	-1.8
	3.0nm,0.3s,baz=72,slow=17,SNR=6.4						
ZALV				Lg	Lg	09 03 58.8	
	2.5nm,0.3s,baz=74,slow=28,SNR=6.6						
KURBB	**Kurchatov Arra**	**6.44**	**239**	Pn	Pn	09 04 50.0	+1.2
	0.1nm,0.3s,baz=54,slow=14,SNR=13						
KURBB				Lg	Lg	09 06 36.1	
	baz=58,slow=33,SNR=4.5 2.9nm,0.8s						
MKAR	**Makanchi Array**	**8.14**	**204**	Pn	Pn	09 05 12.8	+0.6
	0.2nm,0.3s,baz=17,slow=10,SNR=4.8						
MKAR				Lg	Lg	09 07 29.0	
	0.1nm,0.3s,baz=21,slow=29,SNR=2.5 0.3nm,0.4s						

*IDC **30** 09:05:46.1±1.5,10°.80S×161°.12E,h0km,mb3.9/6, mbtmp4.0/8,ML3.3/2,MS3.3/2,Error ellipse: s-maj=31.8km s-min=23.3km az=99.0*
ISC 30 09:05:49.0±1.2,10°.8S±0°.1×161°.1E±0°.1,h18km,n11, σ0s74/10,mb3.8/6,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.71**	**320**	Pn	**Pb**	**09 06 19.3**	**-0.5**
	33nm,0.3s,baz=193,slow=7.1,SNR=8.5						
HNR				Sn	**Sb**	**09 06 41.1**	**+0.2**
	76nm,0.3s,baz=224,slow=10,SNR=5.1						
PMG	**Port Moresby**	**13.74**	**274**	Pn	**Pn**	**09 09 03.9**	**+0.8**
	1.2nm,0.3s,baz=38,slow=12,SNR=1.3 7.3nm,0.5s						
CTA	**Charters Tower**	**17.00**	**235**	P	**P**	**09 09 46.8**	**-1.1**
	0.3nm,0.3s,baz=70,slow=18,SNR=2.5 1.7nm,0.5s						
MSVF	**Nonsavu**	**17.87**	**115**	LR	LR	09 16 30.7	
	comp=Z,114nm,18.7s,baz=256,slow=36						
AFI	**Afiamalu**	**26.72**	**100**	LR	LR	09 20 10.9	
	comp=Z,47nm,19.9s,baz=169,slow=32						
WRA	**Warramunga Arr**	**27.29**	**247**	P	**P**	**09 11 32.7**	**-0.1**
	1.2nm,0.7s,baz=74,slow=9.4,SNR=11 1.2nm,0.7s						
STKA	**Stephens Creek**	**27.66**	**218**	P	**P**	**09 11 36.8**	**+0.9**
	2.4nm,0.8s,baz=49,slow=12,SNR=4.8 2.4nm,0.8s						
ASAR	**Alice Springs**	**28.86**	**240**	P	**P**	**09 11 46.3**	**-0.5**
	0.8nm,0.9s,baz=72,slow=10,SNR=6.2 0.8nm,0.9s						
SONM	**Songino Array**	**75.76**	**325**	P	**P**	**09 17 34.5**	**+0.7**
	0.7nm,0.5s,baz=133,slow=4.9,SNR=3.7 0.7nm,0.5s						
NVAR	**Mina Array Bea**	**89.39**	**51**	P	**P**	**09 18 45.2**	**+0.1**
	0.5nm,0.8s,baz=251,slow=5.4,SNR=2.7 0.5nm,0.8s						
MKAR	**Makanchi Array**	**90.18**	**318**	P	**P**	**09 18 47.8**	**-0.5**
	0.2nm,0.5s,baz=87,slow=5.7,SNR=2.9 0.2nm,0.5s						

*KRNET **30** 09:29:22.6±0.1,39°.47N×73°.20E,mb3.4*
*SOME **30** 09:29:24.6,39°.70N×73°.57E,h10km*
*NNC **30** 09:29:25.5±2.5,39°.70N×73°.53E,h0km,mb3.7,mpv3.4, Error ellipse: s-maj=19.6km s-min=10.3km az=166.0*
ISC 30 09:29:18.6±1.2,39°.43N±0°.05×73°.65E±0°.03,h10km,n48, σ2s23/83,29C-7D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.28**	**329**	⇓*i* P	**Pg**	**09 29 43.7**	**+0.5**
	baz=44						
OHH				⇓*i* S	**Sb**	**09 29 59.2**	**-0.2**
	baz=44						
DRK	**Karamyk**	**1.43**	**273**	⇑*i* P	**Pn**	**09 29 43.6**	**-1.3**
	baz=71						
DRK				⇑*i* S	**Sn**	**09 29 58.1**	**-5.9**
	baz=71						
GAR	**Garm**	**2.62**	**262**	⇑*i* P	**Pn**	**09 30 03.7**	**+2.5**
	baz=59						
GAR				⇑*e*S	**Sn**	**09 30 33.2**	**+0.1**
	baz=59						
TRKS	**Terek-Say**	**2.84**	**318**	⇑*i* P	**Pn**	**09 30 07.1**	**+2.9**
	baz=23						
TRKS				⇑*i* S	**Sn**	**09 30 39.3**	**+0.8**
	baz=23						
UCH	**Uchtor**	**2.87**	**13**	⇑*i* P	**Pg**	**09 30 12.7**	**-1.0**
	baz=20						
UCH				⇑*i* S	**Sg**	**09 30 49.5**	**-1.5**
	baz=20						
EKS2	**Erkin-Say**	**3.23**	**2**	⇑*i* P	**Pb**	**09 30 16.6**	**+0.4**
	baz=8.0						
EKS2				⇑*i* S	**Sb**	**09 30 56.2**	**+0.6**
	baz=8.0						
AAK	**Ala-Archa**	**3.27**	**11**	⇑*i* P	**Pb**	**09 30 17.8**	**+1.0**
	baz=17						
AAK				⇑*i* S	**Sb**	**09 30 58.5**	**+1.7**
	baz=17						
MRKS	**Merke**	**3.33**	**355**	*e*P	**Pb**	**09 30 19.0**	**+1.2**
	2.7nm,0.3s						
MRKS				*e*S	**Sb**	**09 30 58.1**	**-0.3**
	27nm,0.3s						
MRKS	**Merke**	**3.33**	**355**	Pg	**Pg**	**09 30 23.0**	**+0.6**
	13nm,0.4s						
MRKS				Lg	Lg	09 31 06.3	
	27nm,0.3s						
KBK	**Karagaybulak**	**3.37**	**17**	⇓*i* P	**Pb**	**09 30 19.7**	**+1.1**
	baz=22						
KBK				⇓*e*S	**Sb**	**09 31 01.8**	**+2.1**
	baz=22						
ULHL	**Ulahol**	**3.43**	**34**	⇑*i* P	**Pg**	**09 30 21.9**	**-2.5**
	baz=39						
ULHL				⇑*i* S	**Sg**	**09 31 05.9**	**-3.0**
	baz=39						
BOOM	**Boomskoye usch**	**3.52**	**29**	⇑*i* P	**Pb**	**09 30 22.7**	**+1.6**
	baz=34						
BOOM				⇑*i* S	**Sg**	**09 31 06.9**	**-4.7**
	baz=34						
CHGR	**Chuyangaron**	**3.58**	**259**	⇑*e*P	**Pn**	**09 30 17.3**	**+3.0**
	baz=57						
CHGR				⇑*e*S	**Sn**	**09 30 56.6**	**-0.1**
	baz=57						
CHMS	**Chumysh**	**3.66**	**13**	⇑*i* P	**Pb**	**09 30 23.3**	**-0.2**
	baz=18						
CHMS				⇑*i* S	**Sb**	**09 31 08.0**	**0.0**
	baz=18						
TKM2	**Tokmak 2**	**3.79**	**22**	⇑*i* P	**Pb**	**09 30 25.9**	**+0.2**
	baz=27						
TKM2				⇑*i* S	**Sb**	**09 31 12.6**	**+0.9**
	baz=27						
TKM2	**Tokmak 2**	**3.79**	**22**	⇑Pg	**Pg**	**09 30 33.9**	**+2.7**
	4.2nm,0.5s						
TKM2				⇑Lg	Lg	09 31 19.8	
	7.5nm,0.5s						
KDJ	**Kajisay**	**3.81**	**44**	⇓*e*P	**Pb**	**09 30 27.8**	**+1.8**
	baz=48						
KDJ				⇓*e*S	**Sg**	**09 31 15.9**	**-4.9**
	baz=48						
IUG	**Iuzhnay**	**3.86**	**316**	*e*P	**Pg**	**09 30 30.9**	**-1.7**
	90nm,0.3s						
IUG				*e*S	**Sb**	**09 31 18.3**	**+4.6**
	51nm,0.7s						
USP	**Ospenovka**	**3.89**	**9**	⇑*i* P	**Pb**	**09 30 26.1**	**-1.2**
	baz=14						
USP				⇑*e*S	**Sb**	**09 31 12.8**	**-1.7**
	baz=14						
KST	**Kastek**	**4.01**	**25**	*e*P	**Pg**	**09 30 33.8**	**-1.7**
	2.8nm,0.4s						
KST				*e*S	**Sg**	**09 31 23.9**	**-3.5**
	15nm,0.5s						
KST	**Kastek**	**4.01**	**25**	Pg	**Pg**	**09 30 33.8**	**-1.7**
	2.8nm,0.4s						
KST				Lg	Lg	09 31 23.9	
	15nm,0.5s						
SGDS	**Sogindy**	**4.09**	**10**	*e*P	**Pg**	**09 30 35.2**	**-1.8**
	3.7nm,0.4s						
SGDS				*e*S	**Sg**	**09 31 25.8**	**-4.1**
	9.0nm,0.7s						
DGS	**Degeres**	**4.13**	**22**	*e*P	**Pg**	**09 30 38.2**	**+0.4**
	8.6nm,0.6s						
DGS				*e*S	**Sg**	**09 31 31.3**	**0.0**
	46nm,0.3s						
DGS	**Degeres**	**4.13**	**22**	Pg	**Pg**	**09 30 38.2**	**+0.4**
	8.6nm,0.6s						
DGS				Lg	Lg	09 31 31.3	
	46nm,0.3s						
MTBS	**Maitube**	**4.25**	**29**	*e*P	**Pg**	**09 30 39.8**	**-0.2**
	3.4nm,0.2s						
MTBS				*e*S	**Sg**	**09 31 34.2**	**-0.9**
	2.6nm,0.1s						
MTBS	**Maitube**	**4.25**	**29**	Pg	**Pg**	**09 30 39.8**	**-0.2**
	3.4nm,0.2s						
MTBS				Lg	Lg	09 31 34.6	
	2.6nm,0.1s						
KK31	**Karatay Array**	**4.37**	**328**	Pn	**Pn**	**09 30 27.6**	**+2.6**
	0.4nm,0.2s,baz=134,slow=13,SNR=22						
KK31				⇓Pg	**Pb**	**09 30 38.1**	**+2.7**
	1.8nm,0.4s,baz=137,slow=16,SNR=14						
KK31				⇑Lg	Lg	09 31 32.2	
	5.0nm,0.4s,baz=141,slow=30,SNR=4.9						
KKAR	**Karatay Array**	**4.37**	**328**	⇑*i* P	**Pn**	**09 30 29.5**	**+4.5**
	baz=32						
KKAR				⇑*i* S	**Sn**	**09 31 18.4**	**+2.4**
	baz=32						
TNSS	**Tian-Shan**	**4.38**	**34**	*e*P	**Pg**	**09 30 41.7**	**-0.8**
	3.2nm,0.6s						
TNSS				*e*S	**Sg**	**09 31 37.2**	**-2.1**
	6.4nm,0.5s						
TNSS	**Tian-Shan**	**4.38**	**34**	Pg	**Pg**	**09 30 41.7**	**-0.8**
	3.2nm,0.6s						
TNSS				Lg	Lg	09 31 38.1	
	6.4nm,0.5s						
KRBS	**Karabastau**	**4.53**	**19**	*e*P	**Pg**	**09 30 44.8**	**-0.5**
	2.8nm,0.4s						
KRBS				*e*S	**Sg**	**09 31 42.8**	**-1.1**
	8.0nm,0.6s						
KRBS	**Karabastau**	**4.53**	**19**	Pg	**Pg**	**09 30 44.8**	**-0.5**
	2.8nm,0.4s						
KRBS				Lg	Lg	09 31 42.8	
	8.0nm,0.6s						
BRLS	**Borolday**	**4.61**	**323**	*e*P	**Pg**	**09 30 44.2**	**-2.6**
	4.1nm,0.6s						
BRLS				*e*S	**Sg**	**09 31 41.6**	**-4.9**
	22nm,0.7s						
BRLS	**Borolday**	**4.61**	**323**	Pg	**Pb**	**09 30 41.3**	**+1.8**
	3.1nm,0.3s						
BRLS				Lg	Lg	09 31 36.8	
	5.9nm,0.2s						
KTBS	**Karatobe**	**4.85**	**27**	*e*P	**Pg**	**09 30 50.3**	**-1.1**
	2.8nm,0.6s						
KTBS				*e*S	**Sg**	**09 31 52.3**	**-2.0**
	13nm,0.4s						
KTBS	**Karatobe**	**4.85**	**27**	Pg	**Pg**	**09 30 50.3**	**-1.1**
	2.8nm,0.6s						
KTBS				Lg	Lg	09 31 52.3	
	13nm,0.4s						
KUU	**Kurty**	**4.89**	**23**	*e*P	**Pg**	**09 30 51.8**	**-0.5**
	2.6nm,0.2s						
KUU				*e*S	**Sg**	**09 31 54.9**	**-0.9**
	12nm,0.4s						
KUU	**Kurty**	**4.89**	**23**	Pg	**Pg**	**09 30 51.8**	**-0.5**
	2.6nm,0.2s						
KUU				Lg	Lg	09 31 54.8	
	12nm,0.4s						
CHKK	**Chushkaly**	**5.08**	**28**	*e*P	**Pg**	**09 30 56.3**	**+0.4**
	2.0nm,0.2s						
CHKK				*e*S	**Sg**	**09 32 02.0**	**+0.3**
	23nm,0.4s						
SATY	**Saty**	**5.10**	**43**	*e*P	**Pg**	**09 30 55.6**	**-0.7**
	1.2nm,0.1s						
SATY				*e*S	**Sg**	**09 32 01.1**	**-1.3**
	3.3nm,0.1s						
SATY	**Saty**	**5.10**	**43**	Pg	**Pg**	**09 30 55.6**	**-0.7**
	1.2nm,0.1s						
SATY				Lg	Lg	09 32 01.7	
	3.3nm,0.1s						
KURS	**Kuram**	**5.29**	**38**	*e*P	**Pg**	**09 30 59.9**	**0.0**
	2.5nm,0.6s						
KURS				*e*S	**Sg**	**09 32 08.2**	**-0.3**
	5.1nm,1.0s						
UZB	**Uzynbulak**	**5.49**	**46**	*e*P	**Pg**	**09 31 01.7**	**-2.1**
	1.6nm,0.1s						
UZB				*e*S	**Sg**	**09 32 11.3**	**-3.7**
	3.9nm,0.5s						
KPKS	**Kokpek**	**5.53**	**42**	*e*P	**Pg**	**09 31 03.4**	**-1.2**
	2.2nm,0.6s						
KPKS				*e*S	**Sg**	**09 32 14.6**	**-1.5**
	11nm,0.6s						
KPKS	**Kokpek**	**5.53**	**42**	Pg	**Pg**	**09 31 03.4**	**-1.2**
	2.2nm,0.6s						
KPKS				Lg	Lg	09 32 14.6	
	11nm,0.6s						
BTLS	**Baital**	**5.62**	**3**	*e*P	**Pg**	**09 31 02.6**	**-3.5**
	1.6nm,0.2s						
BTLS				*e*S	**Sg**	**09 32 12.8**	**-6.1**
	4.5nm,0.2s						
ARXS	**Arharly**	**5.71**	**32**	*e*P	**Pg**	**09 31 06.0**	**-1.9**

*HEL **30** 09:51:22.4±0.2,68°.22N×33°.21E, h0km, ML2.0, Explosion*
*UPP **30** 09:51:23.1±2.8,68°.02N×33°.09E, h0km, ML1.9, Suspected explosion*

KOLA 30 09:51:23.0,68°.15N×33°.19E, h0km, ML2.2, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APA0	**Apatity Array**	**0.55**	**188**	P	Pg	09 51 32.6	-0.9
APA0				S	Sg	09 51 40.2	-0.4
APA	**Apatity**	**0.59**	**172**	P	Pg	09 51 33.5	-0.8
APA				S	Sg	09 51 41.6	-0.3
LVZ	**Lovozero**	**0.61**	**114**	P	Pg	09 51 33.8	-0.8
LVZ				S	Sg	09 51 41.4	-1.1
LVZ	**Lovozero**	**0.61**	**114**	PG	Pg	09 51 33.9	-0.7
LVZ				SG	Sg	09 51 41.9	-0.6
TERR	**Teriberka**	**1.27**	**33**	P	Pg	09 51 45.6	-1.7
TERR				S	Sg	09 52 03.0	-0.8
VRF	**Varrio**	**1.41**	**255**	PG	Pn	09 51 48.3	-1.6
VRF				MSG		09 52 05.7	
	comp=Z,14nm,0.2s						
VRF				SG	Sg	09 52 06.8	-1.5
PRVG	**Vayda Guba**	**1.64**	**348**	P	Pn	09 51 52.2	-0.9
PRVG				S	Sn	09 52 12.6	-2.4
OLKF	**Oulanka, Finla**	**2.35**	**220**	PN	Pn	09 52 03.1	+0.2
OLKF				SB	Sb	09 52 34.3	-1.5
KU6	**Riekki**	**2.49**	**213**	PB	Pn	09 52 06.0	+1.2
KU6				MSG		09 52 37.8	
	comp=Z,3.7nm,0.2s						
KU6				SB	Sb	09 52 39.0	-0.8
SGF	**Sodankyl**	**2.63**	**257**	PN	Pn	09 52 06.2	-0.4
	baz=65						
KEV	**Kevo**	**2.75**	**309**	*eP*	Pn	09 52 08.7	+0.4
KEV				*eS*	Sn	09 52 42.2	0.0
KEV	**Kevo**	**2.75**	**309**	PB	Pn	09 52 08.6	+0.3
KEV				MSG		09 52 42.5	
	comp=Z,8.7nm,0.2s						
KEV				SB	Sn	09 52 42.8	+0.6
MSF	**Maaselka**	**2.77**	**218**	PG	Pb	09 52 13.7	+0.3
MSF				SB	Sb	09 52 47.0	-0.9
MSF	**Maaselka**	**2.77**	**218**	PN	Pb	09 52 13.7	+0.3
ARA0	**ARCESS Array S**	**3.11**	**300**	*eP*	Pn	09 52 13.4	+0.1
ARA0				*eS*	Sn	09 52 50.9	-0.3
ARA0				IAML		09 53 04.2	
	comp=Z,4.3nm,0.4s						
ARA0	**ARCESS Array S**	**3.11**	**300**	SN	Sn	09 52 50.3	-0.9
ARCES	**ARCESS Array B**	**3.11**	**300**	P	Pn	09 52 13.2	-0.1
ARCES				S	Sn	09 52 49.8	-1.4
RNF	**Rovaniemi**	**3.17**	**244**	PN	Pn	09 52 13.9	-0.2
RNF				SN	Sn	09 52 52.3	-0.3
HEF	**Hetta**	**3.55**	**279**	*eP*	Pn	09 52 18.6	-0.8
HEF	**Hetta**	**3.55**	**279**	PN	Pn	09 52 18.6	-0.7
	baz=90						
HEF				SG	Sb	09 53 12.7	+2.4
KLF	**Kolari**	**3.63**	**260**	PN	Pn	09 52 20.3	-0.2
KLF				SN	Sn	09 53 04.5	+0.5
KTK1	**Kautokeino**	**3.75**	**288**	*eP*	Pn	09 52 21.4	-0.7
KTK1				*eS*	Sn	09 53 04.1	-2.8
KTK1				IAML		09 53 19.9	
	comp=Z,2.8nm,0.4s						
KTK1	**Kautokeino**	**3.75**	**288**	PN	Pn	09 52 21.6	-0.5
PAJU	**Pajala**	**4.02**	**258**	PN	Pn	09 52 25.2	-0.6
PAJU				SN	Sn	09 53 13.2	-0.3
TOF	**Tornio**	**4.04**	**243**	PN	Pn	09 52 24.9	-1.1
TOF				SN	Sn	09 52 12.5	-1.3
TOF	**Tornio**	**4.04**	**243**	PG	Pn	09 52 24.9	-1.1
TOF				SG	Sn	09 53 12.5	-1.3
LANU	**Lannavaara**	**4.20**	**274**	P	Pn	09 52 27.2	-1.0
LANU				S	Sn	09 53 16.0	-1.8
LANU	**Lannavaara**	**4.20**	**274**	PN	Pn	09 52 27.1	-1.1
OUL	**Oulu**	**4.23**	**227**	PB	Pb	09 52 36.6	-1.6
KALU	**Kalix**	**4.49**	**244**	P	Pn	09 52 30.5	-1.7
KALU	**Kalix**	**4.49**	**244**	PN	Pn	09 52 32.1	-0.1
KIF	**Kilpisjarvi**	**4.62**	**286**	SN	Sn	09 53 26.2	-2.0
KUA	**Kurravaara**	**4.83**	**274**	P	Pn	09 52 35.3	-1.5
KUA				S	Sn	09 53 31.5	-1.8
KOVU	**Salmi**	**4.86**	**277**	P	Pn	09 52 36.4	-1.0
KOVU				S	Sn	09 53 32.2	-2.0
RATU	**Laukkuluspa**	**5.12**	**273**	P	Pn	09 52 40.4	-0.6
HARU	**Harads**	**5.16**	**253**	P	Pn	09 52 39.0	-2.4
SJUU	**Sjulsmark**	**5.28**	**245**	P	Pn	09 52 41.3	-1.7
NIKU	**Nikkaluokta**	**5.33**	**274**	P	Pn	09 52 42.6	-1.0

*IDC **30** 10:03:07.9±0.9,21°.32S×68°.33W, h118km±12km, mb3.2/2, mbtmp3.7/4, Error ellipse: s-maj=36.4km s-min=12.0km az=103.0*
*GUC **30** 10:03:08.4±0.5,21°.27S×68°.65W, h120km±3km, ML3.6*

ISC 30 10:03:08.3±1.0,21°.27S±0°.03×68°.73W±0°.07, h123km±8km, n23, σ0°971/39, 4C-3D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.71**	**222**	*i* P	**Pn**	**10 03 28.4**	**+0.2**
PB09				*i* S	**Sn**	**10 03 43.4**	**+0.2**
PB01	**IPOC Station P**	**0.74**	**287**	*i* P	**Pn**	**10 03 28.1**	**-0.3**
PB01				*i* S	**Sn**	**10 03 43.7**	**+0.2**
PB01				IAML		10 03 45.0	
	comp=E,2μm,0.2s						
PB02	**IPOC Station P**	**1.09**	**267**	⇑*i* P	**Pn**	**10 03 31.6**	**+0.1**
PB02				*i* S	**Sn**	**10 03 49.1**	**0.0**
PB02				IAML		10 03 51.9	
	comp=E,2μm,0.6s						
PB07	**IPOC Station P**	**1.17**	**247**	⇑*i* P	**Pn**	**10 03 32.4**	**0.0**
PB07				*i* S	**Sn**	**10 03 51.2**	**+0.4**
PB07				IAML		10 03 52.6	
	comp=E,1μm,0.3s						
PB08	**IPOC Station P**	**1.19**	**341**	⇓*i* P	**Pn**	**10 03 33.0**	**+0.1**
PB08				*i* S	**Sn**	**10 03 51.7**	**+0.2**
LVC	**Limon Verde**	**1.35**	**187**	P	**Pn**	**10 03 34.4**	**-0.1**
	comp=E,43nm,0.3s,baz=27,slow=11,SNR=122						
LVC				S	**Sn**	**10 03 54.3**	**-0.2**
	comp=E,86nm,0.3s,baz=101,slow=23,SNR=12						
LVC	**Limon Verde**	**1.35**	**187**	⇓*i* P	**Pn**	**10 03 34.4**	**-0.1**
LVC				*i* S	**Sn**	**10 03 54.2**	**-0.3**
PATCX	**Punta Patache**	**1.40**	**288**	*i* P	**Pn**	**10 03 35.1**	**+0.3**
PATCX				*i* S	**Sn**	**10 03 55.2**	**+0.2**
PATCX				IAML		10 03 57.5	
	comp=E,1μm,0.3s						
TA01	**Diego Aracena**	**1.52**	**297**	⇑*i* P	**Pn**	**10 03 36.1**	**0.0**
TA01				*i* S	**Sn**	**10 03 57.1**	**-0.3**
TA01				IAML		10 03 58.9	
	comp=N,785nm,0.4s						
PB06	**IPOC Station P**	**1.63**	**208**	⇑*i* P	**Pn**	**10 03 37.6**	**0.0**
PB06				*i* S	**Sn**	**10 04 00.1**	**+0.2**
PB06				IAML		10 04 01.0	
	comp=E,547nm,0.2s						
TA02	**Huaiquique**	**1.64**	**307**	*i* P	**Pn**	**10 03 37.1**	**-0.4**
TA02				IAML		10 04 04.9	
	comp=E,785nm,0.1s						
GO01	**Chusmiza**	**1.65**	**345**	*i* P	**Pn**	**10 03 37.9**	**-0.3**
GO01				*i* S	**Sn**	**10 04 00.8**	**-0.1**
GO01				IAML		10 04 04.7	
	comp=E,523nm,0.1s						
PB04	**IPOC Station P**	**1.69**	**231**	*i* P	**Pn**	**10 03 38.1**	**-0.2**
PB04				*i* S	**Sn**	**10 04 01.4**	**+0.2**
PB04				IAML		10 04 07.8	
	comp=N,404nm,0.2s						
PB11	**IPOC Station P**	**1.73**	**330**	⇓*i* P	**Pn**	**10 03 38.2**	**-0.6**
PB11				*i* S	**Sn**	**10 04 01.7**	**-0.4**
PB11				IAML		10 04 03.8	
	comp=E,799nm,0.2s						
AF01	**San Pedro de A**	**1.75**	**163**	*i* P	**Pn**	**10 03 37.8**	**-1.4**
AF01				*i* S	**Sn**	**10 04 02.2**	**-0.5**
AF01				IAML		10 04 15.7	
	comp=E,246nm,0.4s						
PB15	**IPOC Station P**	**2.05**	**199**	*i* P	**Pn**	**10 03 43.0**	**+0.2**
PB15				*i* S	**Sn**	**10 04 09.3**	**+0.3**
PB16	**IPOC Station P**	**3.01**	**346**	*i* P	**Pn**	**10 03 55.7**	**+0.3**
PB16				*i* S	**Sn**	**10 04 32.2**	**+0.6**
PB12	**IPOC Station P**	**3.04**	**330**	*i* P	**Pn**	**10 03 53.6**	**-1.7**
PB12				*i* S	**Sn**	**10 04 28.8**	**-2.7**
PB12				IAML		10 04 34.3	
	comp=E,79nm,0.4s						
LPAZ	**La Paz**	**4.99**	**7**	P	**Pn**	**10 04 23.4**	**+1.6**
	comp=E,1.3nm,0.3s,baz=202,slow=15,SNR=24						
LPAZ				S	**Sn**	**10 05 18.5**	**-0.2**
	comp=E,0.5nm,0.5s,baz=260,slow=20,SNR=1.0						
SIV	**San Ignacio**	**8.96**	**55**	P	Pn	10 05 10.2	-4.6
	comp=E,6.7nm,0.5s,baz=243,slow=11,SNR=34						
TORD	**Torodi Ar. Bea**	**77.12**	**70**	P	P	10 14 46.7	-2.1

comp=E,0.4nm,0.9s,baz=246,slow=5.4,SNR=4.4
comp=E,0.4nm,0.9s

YKA	**Yellowknife Ar**	**91.02**	**341**	P	**P**	**10 15 58.5**	**+0.3**
	comp=E,0.2nm,0.5s,baz=134,slow=4.6,SNR=5.4						
	comp=E,0.2nm,0.5s						
MKAR	**Makanchi Array**	**145.35**	**36**	PKPbc	**PKPdf**	**10 22 31.7**	**+0.1**
	comp=E,0.4nm,0.7s,baz=302,slow=1.4,SNR=2.8						

*KRNET **30** 10:17:12.6±0.1,39°.34N×73°.59E, mb2.9*
*SOME **30** 10:17:23.0,39°.80N×73°.55E, h15km*

ISC 30 10:17:14.7±1.5,39°.51N±0°.07×73°.44E±0°.05, h10km, n11, σ2°12/22, 4C-6D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.13**	**334**	⇑*eP*	**Pb**	**10 17 37.1**	**+0.7**
	baz=33						
OHH				⇑*eS*	**Sn**	**10 17 54.9**	**+2.6**
	baz=33						
DRK	**Karamyk**	**1.27**	**269**	⇓*eP*	**Pn**	**10 17 38.5**	**-0.3**
	baz=76						
DRK				⇓*eS*	**Sn**	**10 17 57.1**	**+1.0**
	baz=76						
GAR	**Garm**	**2.48**	**259**	⇓*eP*	**Pn**	**10 17 55.9**	**+0.6**
	baz=63						
GAR				⇓*eS*	**Sn**	**10 18 27.7**	**+2.0**
	baz=63						
TRKS	**Terek-Say**	**2.67**	**320**	⇑*eP*	**Pn**	**10 17 59.4**	**+1.4**
	baz=20						
TRKS				⇑*eS*	**Sb**	**10 18 33.9**	**-1.7**
	baz=20						
UCH	**Uchtor**	**2.83**	**16**	⇓*eP*	**Pn**	**10 18 01.9**	**+1.4**
	baz=13						
UCH				⇓*eS*	**Sn**	**10 18 37.5**	**+2.6**
	baz=13						
MRKS	**Merke**	**3.23**	**357**	*eP*	**Pg**	**10 18 19.0**	**+2.3**
	1.9nm,0.3s						
MRKS				*eS*	**Sg**	**10 18 59.3**	**+0.7**
	7.4nm,0.3s						
KST	**Kastek**	**4.01**	**28**	*eP*	**Pg**	**10 18 31.5**	**0.0**
	0.4nm,0.5s						
KST				*eS*	**Sg**	**10 19 21.2**	**-2.2**
	1.4nm,0.5s						
DGS	**Degeres**	**4.12**	**24**	*eP*	**Pg**	**10 18 33.0**	**-0.6**
	1.3nm,0.4s						
DGS				*eS*	**Sg**	**10 19 23.8**	**-3.2**
	3.8nm,0.6s						
BRLS	**Borolday**	**4.44**	**323**	*eP*	**Pg**	**10 18 38.7**	**-1.1**
	0.9nm,0.2s						
BRLS				*eS*	**Sg**	**10 19 33.1**	**-4.2**
	3.3nm,0.5s						
KTBS	**Karatobe**	**4.85**	**29**	*eP*	**Pg**	**10 18 46.7**	**-0.9**
	0.6nm,0.2s						
KTBS				*eS*	**Sg**	**10 19 46.9**	**-3.5**
	3.8nm,0.5s						
ARXS	**Arharly**	**5.72**	**33**	*eP*	**Pg**	**10 19 04.0**	**-0.3**
	1.6nm,0.8s						
ARXS				*eS*	**Sg**	**10 20 16.2**	**-2.3**
	1.8nm,0.6s						

*TUL **30** 10:18:16.1±1.3,36°.35N±0°.02×96°.80W±0°.02, h6km±7km, ML2.7, mb_Lg2.6/45(NEIC), Error ellipse: s-maj=2.7km s-min=2.1km az=56.0*

NEIC 30 10:18:15.8±0.8,36°.378N±0°.007×96°.81W±0°.02, h14km±7km, Error ellipse: s-maj=2.8km s-min=1.0km az=95.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T35A	**Sooner Cattle**	**0.59**	**24**	Pg	Pg	10 18 27.3	-0.1
TUL1	**Leonard**	**0.94**	**119**		Pb	10 18 33.8	-0.1
OKCFA	**Oklahoma City**	**1.09**	**209**	Pg	Pb	10 18 36.1	-0.3
OKCSW	**OKLAHOMA CITY**	**1.10**	**208**	Pg	Pg	10 18 37.3	+0.3
FNO	**Franklin**	**1.22**	**204**		Pn	10 18 38.2	-0.2
U38A	**Gravette**	**1.95**	**87**		Pb	10 18 50.4	-0.7
X34A	**Smith Ranch, M**	**1.96**	**206**	IAmb_Lg		10 19 19.0	
	comp=Z,17nm,0.9s						
X37A	**Clayton**	**2.13**	**146**		Pb	10 18 53.0	-1.2
WMOK	**Wichita Mounta**	**2.30**	**225**		Pb	10 18 55.2	-1.8
HHAR	**Hobbs**	**2.32**	**92**	Pn	Pb	10 18 55.8	-1.6
R32A	**Long Quarter,**	**2.54**	**324**		Pn	10 18 58.2	+1.6
R32A				IAmb_Lg		10 19 36.3	
	comp=Z,14nm,0.8s						
KSU1	**Kansas State U**	**2.72**	**3**	Pn	Pn	10 19 01.0	+1.9
W39A	**Magazine**	**2.73**	**115**	Pn	Pn	10 19 01.2	+2.2
S39A	**Bolivar**	**3.08**	**64**		Pn	10 19 06.1	+2.1
S39A				IAmb_Lg		10 19 59.8	
	comp=Z,19nm,0.8s						
MIAR	**Mount Ida**	**3.21**	**124**		Pn	10 19 07.5	+1.8
MIAR				IAmb_Lg		10 20 03.6	
	comp=Z,16nm,0.8s						
CBKS	**Cedar Bluff**	**3.37**	**317**	IAmb_Lg		10 20 10.3	
	comp=Z,12nm,0.8s						
Z38A	**Mt. Pleasant**	**3.45**	**154**	IAmb_Lg		10 20 13.3	
	comp=Z,12nm,0.7s						
FCAR	**Ozark Folk Cen**	**3.82**	**96**	Pn	Pn	10 19 15.9	+1.8
WHAR	**Wooly Hollow**	**3.83**	**105**	Pn	Pn	10 19 16.2	+2.0
WHAR				IAmb_Lg		10 20 22.4	
	comp=Z,12nm,0.8s						
W41B	**Gary Mavity, V**	**3.90**	**107**	Pn	Pn	10 19 16.6	+1.5
W41B				IAmb_Lg		10 20 19.7	
	comp=Z,17nm,0.8s						
UALR	**University of**	**3.97**	**112**	IAmb_Lg		10 20 31.9	
	comp=Z,13nm,0.9s						
WLAR	**White Oak Lake**	**4.05**	**130**	IAmb_Lg		10 20 28.6	
	comp=Z,11nm,0.7s						
R40A	**Maddies Statio**	**4.09**	**61**	Pn	Pn	10 19 19.5	+1.7
R40A				IAmb_Lg		10 20 26.9	
	comp=Z,9.5nm,0.8s						
LCAR	**Lake Charles**	**4.58**	**92**	Pn	Pn	10 19 26.1	+1.5
CCM	**Cathedral Cave**	**4.74**	**68**	Pn	Pn	10 19 28.8	+2.0
CCM				IAmb_Lg		10 20 54.0	
	comp=Z,11nm,0.8s						
P40A	**Paris**	**4.90**	**49**	IAmb_Lg		10 20 57.9	
	comp=Z,14nm,0.8s						
KSCO	**Kaye Shedlock'**	**5.31**	**301**	IAmb_Lg		10 21 15.0	
	comp=Z,8.4nm,0.7s						
T25A	**Trinidad**	**6.15**	**279**	IAmb_Lg		10 21 33.6	
	comp=Z,11nm,0.7s						
SIUC	**Southern Illin**	**6.21**	**75**	IAmb_Lg		10 21 38.5	
	comp=Z,10nm,1.1s						
W45A	**Hickory Valley**	**6.31**	**99**	IAmb_Lg		10 21 41.3	
	comp=Z,12nm,0.9s						
K31A	**O'Neill**	**6.42**	**347**	IAmb_Lg		10 21 45.5	
	comp=Z,10.0nm,0.8s						
P43A	**Skaggs, Pawnee**	**6.61**	**58**	IAmb_Lg		10 21 45.2	
	comp=Z,11nm,0.8s						
O44A	**Mansfield**	**7.56**	**58**	IAmb_Lg		10 22 11.6	
	comp=Z,8.1nm,0.8s						
JFWS	**Jewell Farm**	**8.26**	**36**	IAmb_Lg		10 22 38.4	
	comp=Z,6.3nm,0.7s						
N23A	**Red Feather La**	**8.45**	**305**	IAmb_Lg		10 22 50.6	
	comp=Z,5.5nm,0.7s						
I40A	**Norwalk**	**8.87**	**30**	IAmb_Lg		10 23 02.0	
	comp=Z,7.5nm,1.2s						

MAN 30 10:18:52.1,9°.88N×122°.73E, h32km, mb3.9, ML2.6, MS2.2, 1C-1D, Negros

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNPH	**Sibulan**	**0.73**	**137**	⇑*i* P	Pn	10 19 06.0	+0.2
SNPH				*i* S		10 19 16.4	
GUIM	**Jordan**	**0.75**	**350**	⇓*eP**	Pb	10 19 07.0	+0.5
GUIM				*eS*		10 19 17.2	
TBP	**Tagbilaran**	**1.13**	**100**	*eP*	Pb	10 19 12.3	+0.6
TBP				*i* S		10 19 26.1	
LLP	**Lapu-Lapu**	**1.29**	**70**	*eP*	Pn	10 19 13.9	+0.3
LLP				*eS*		10 19 29.8	

*BJI **30** 10:19:14.1±0.0,3°.37S×148°.06E, h10km, mb4.7/19, mB4.8/7, Ms4.8/8, Ms7 4.4/8*
*DJA **30** 10:19:16.7±0.7,3°.5S×14°.8E±°, h10km, M4.7/15, mB5.3/7, mb4.5/15, MLv4.6/3, Mw(mB)4.8/7*
*IDC **30** 10:19:17.6±0.6,3°.06S×147°.62E, h0km, mb4.1/15, mbtmp4.1/17, ML1.2/1, MS4.0/37, Error ellipse: s-maj=23.6km s-min=15.2km az=88.0*
*NEIC **30** 10:19:19.5±2.7,2°.92S±0°.06×147°.64E±0°.10, h10km±1km, mb4.5/28, Error ellipse: s-maj=16.5km s-min=9.2km az=80.0*

*GCMT **30** 10:19:23.5±0.2,2°.99S±0°.01×147°.50E±0°.02, h14km±1km, MW4.9/101, Moment Tensor Solution. s23,c24; s101,c147; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.05±.08; Mθθ0.76±.08; Mφφ-0.71±.08; Mrθ-0.11±.19; Mrφ2.29±.08; Mθφ-0.40±.16; Best double couple: Mo2.44100×10^16 NP1:φs279.00000°,δ80.00000°, λ1.00000°. NP2:φs189.00000°,δ89.00000°,λ170.00000°. Principal axes: T 2.4730, Plg7.0000°, Azm144.0000°; N -0.0640, Plg80.0000°, Azm5.0000°; P -2.4090, Plg6.0000°, Azm234.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 10:19:19.5±0.5,3°.01S±0°.07×147°.65E±0°.09, h10km, n99, σ1°19/54, mb4.4/37, MS4.2/35, 2C, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MANU	**Manus Island**	**1.00**	**344**		**Pg**	**10 19 36.3**	**-2.4**
KRVT	**Keravat (AS076**	**4.56**	**107**	Pn	**Pn**	**10 20 28.0**	**-0.5**
	39nm,0.6s,baz=358,slow=2.9,SNR=5.5						
KRVT				LR	LR	10 22 13.4	
	comp=Z,2μm,19.6s,baz=50,slow=38						
PMG	**Port Moresby**	**6.38**	**184**	Pn	**Pn**	**10 20 52.9**	**-0.7**
	0.3nm,0.3s,baz=14,slow=8.5,SNR=1.8						
	11nm,0.7s						
PMG	**Port Moresby**	**6.38**	**184**	Pn	**Pn**	**10 20 53.9**	**+0.4**
GENI	**Genyem**	**7.48**	**273**	P	**Pn**	**10 21 09.8**	**+1.1**
	0.4nm2μm90nm,1.0s						
SMPI	**Sarmi**	**8.98**	**276**	P	**Pn**	**10 21 30.0**	**+0.6**
	31nm,2.0s						
COEN	**Coen**	**11.74**	**202**	Pn	**Pn**	**10 22 07.2**	**0.0**
HNR	**Honiara**	**13.79**	**118**	LR	LR	10 27 48.8	
	comp=Z,706nm,18.4s,baz=296,slow=37						
FAKI	**Fak Fak**	**15.38**	**270**	P	**Pn**	**10 22 57.8**	**+1.1**
	17nm,1.5s						
SIJI	**Sorong**	**16.51**	**277**	LR	LR	10 29 53.9	
	comp=Z,714nm,18.7s,baz=42,slow=39						
GUMO	**Guam**	**16.72**	**351**	LR	LR	10 28 15.4	
	comp=Z,308nm,19.1s,baz=168,slow=32						
CTA	**Charters Tower**	**17.03**	**184**	LR	LR	10 29 29.9	
	comp=Z,505nm,18.1s,baz=4.0,slow=36						
MTN	**Manton Dam**	**19.04**	**238**	P	**P**	**10 23 40.5**	**-1.4**
MTN				IAmb	IAmb	10 23 41.2	
	comp=Z,38nm,1.1s						
WB0	**Warramunga Arr**	**21.09**	**217**	P	**P**	**10 24 03.9**	**-0.4**
WR0	**Warramunga Arr**	**21.16**	**216**	P	**P**	**10 24 04.0**	**-1.0**
WR0				IAmb	IAmb	10 24 13.8	
	comp=Z,36nm,1.1s						
WRAB	**Tennant Creek**	**21.25**	**217**	P	**P**	**10 24 05.0**	**-1.0**
WB2	**Warramunga Arr**	**21.25**	**217**	P	**P**	**10 24 04.8**	**-1.2**
WRA	**Warramunga Arr**	**21.26**	**217**	P	**P**	**10 24 05.0**	**-1.1**
	comp=Z,4.1nm,0.7s,baz=42,slow=11,SNR=33						
WRA				LR	LR	10 33 10.3	
	comp=Z,744nm,19.7s,baz=50,slow=39						
	comp=Z,4.1nm,0.7s						
WRA	**Warramunga Arr**	**21.26**	**217**	P	**P**	**10 24 05.7**	**-0.4**
DAV	**Davao City (W)**	**24.19**	**295**	LR	LR	10 33 00.8	
	comp=Z,142nm,19.5s,baz=114,slow=34						
AS31	**Alice Springs**	**24.46**	**212**	P	**P**	**10 24 38.2**	**-0.6**
ASAR	**Alice Springs**	**24.46**	**212**	P	**P**	**10 24 38.5**	**-0.4**
	comp=Z,3.6nm,0.7s,baz=44,slow=7.0,SNR=41						
ASAR				LR	LR	10 35 29.3	
	comp=Z,475nm,18.6s,baz=38,slow=40						
	comp=Z,3.6nm,0.7s						
ASAR	**Alice Springs**	**24.46**	**212**	P	**P**	**10 24 38.6**	**-0.2**
LUWI	**Luwuk**	**24.93**	**274**	P	**P**	**10 24 43.3**	**+0.1**
	comp=Z,1μmcomp=Z,104nm,1.1s						
APSI	**Ampana**	**26.06**	**274**	P	**P**	**10 24 53.5**	**0.0**
	comp=Z,17nm,1.1s						
DZM	**Mont Dzumac**	**26.31**	**138**	LR	LR	10 33 57.9	
	comp=Z,886nm,19.9s,baz=310,slow=34						
BNSI	**Bone**	**27.52**	**266**	P	**P**	**10 25 06.8**	**+0.3**
	comp=Z,24nm,1.2s						
SPSI	**Sidrap Palu**	**27.84**	**267**	P	**P**	**10 25 09.6**	**+0.1**
	comp=Z,2μmcomp=Z,12nm,1.2s						
KAPI	**Kappang**	**27.89**	**265**	LR	LR	10 38 15.9	
	comp=Z,126nm,18.7s,baz=84,slow=41						
H11S3	**WAKE ISLAND Hy**	**28.43**	**41**	T	T	10 55 01.5	
	baz=223,slow=76,SNR=2450						
H11S2	**WAKE ISLAND Hy**	**28.44**	**41**	T	T	10 55 02.1	
	baz=223,slow=76,SNR=2733						
H11S1	**WAKE ISLAND Hy**	**28.45**	**41**	T	T	10 55 03.0	
	baz=223,slow=76,SNR=3478						
STKA	**Stephens Creek**	**29.28**	**191**	LR	LR	10 37 31.8	
	comp=Z,368nm,20.8s,baz=8.2,slow=37						
H11N1	**WAKE ISLAND Hy**	**29.45**	**39**	T	T	10 56 17.2	
	baz=222,slow=76						
H11N3	**WAKE ISLAND Hy**	**29.47**	**39**	T	T	10 56 18.3	
	baz=222,slow=76						
H11N2	**WAKE ISLAND Hy**	**29.47**	**39**	T	T	10 56 18.4	
	baz=222,slow=76						
JCJ	**Chichijima**	**30.39**	**350**	LR	LR	10 35 57.5	
	comp=Z,179nm,21.9s,baz=148,slow=33						
SMKI	**Samarinda**	**30.53**	**274**	P	**P**	**10 25 33.4**	**0.0**
CAN	**Canberra**	**32.18**	**178**	P	**P**	**10 25 47.8**	**+0.1**
MSVF	**Nonsavu**	**33.21**	**118**	LR	LR	10 37 47.8	
	comp=Z,275nm,21.8s,baz=301,slow=33						
JOW	**Kunigami**	**35.07**	**329**	LR	LR	10 37 53.5	
	comp=Z,384nm,19.2s,baz=142,slow=32						
KSM	**Kuching**	**37.59**	**276**	P	**P**	**10 26 34.2**	**-0.5**
KSM				IAmb	IAmb	10 26 36.6	
	comp=Z,8.0nm,1.0s						
MJAR	**Matsushiro Arr**	**40.32**	**348**	LR	LR	10 42 21.4	
	comp=Z,138nm,18.0s,baz=152,slow=34						
AFI	**Afiamalu**	**41.50**	**108**	LR	LR	10 42 36.9	
	comp=Z,150nm,18.2s,baz=218,slow=34						
RAO	**Raoul Island**	**41.83**	**132**	LR	LR	10 41 43.4	
	comp=Z,191nm,21.0s,baz=293,slow=32						
URZ	**Urewera**	**44.22**	**146**	LR	LR	10 43 24.9	
	comp=Z,452nm,20.8s,ba

GTA pmax pmax
comp=Z,4.0nm,1.2s
SONM Songino Array 62.14 330 P **P 10 29 41.8 +0.8**
comp=Z,1.5nm,1.1s,baz=145,slow=5.4,SNR=7.1
SONM LR LR 10 54 42.9
comp=Z,144nm,21.5s,baz=132,slow=34
comp=Z,1.5nm,1.1s
PPT Papeete 63.17 108 LR LR 10 52 45.0
comp=Z,40nm,21.1s,baz=20,slow=32
VNDA Vanda 74.84 177 P **P 10 30 58.8 -1.0**
comp=Z,2.0nm,0.8s,baz=316,slow=5.9,SNR=10
comp=Z,2.0nm,0.8s
VNDA Vanda 74.84 177 P **P 10 30 58.3 -1.4**
MKAR Makanchi Array 75.63 320 P **P 10 31 03.6 -1.3**
comp=Z,1.3nm,1.0s,baz=102,slow=7.8,SNR=5.9
MKAR LR LR 11 04 43.5
comp=Z,118nm,18.9s,baz=90,slow=36
comp=Z,1.3nm,1.0s
ZALV Zalesovo Beam 76.85 327 P **P 10 31 10.2 -1.4**
comp=Z,0.6nm,0.3s,baz=98,slow=8.9,SNR=1.9
ZALV LR LR 11 04 39.7
comp=Z,137nm,19.9s,baz=106,slow=35
comp=Z,0.6nm,0.3s
TTA Tatalina 78.06 23 P **P 10 31 20.1 +1.8**
L19K White Mountain 78.13 24 IAmb IAmb 10 31 22.7
comp=Z,4.7nm,0.8s
KURK Kurchatov 79.22 323 P **P 10 31 24.4 -0.5**
KURBB Kurchatov Arra 79.25 323 P **P 10 31 24.4 -0.6**
comp=Z,2.2nm,1.1s,baz=114,slow=4.4,SNR=8.7
KURBB LR LR 11 05 47.6
comp=Z,127nm,19.9s,baz=112,slow=35
comp=Z,2.2nm,1.1s
J20K Nowinta River 79.42 22 IAmb IAmb 10 31 31.1
comp=Z,12nm,1.5s
AAK Ala-Archa 79.72 314 LR LR 11 06 19.4
comp=Z,156nm,21.4s,baz=110,slow=35
CAST Castle Rocks 79.85 23 IAmb IAmb 10 31 31.6
comp=Z,6.1nm,1.3s
KTH Kantishna Hill 80.37 24 IAmb IAmb 10 31 36.1
comp=Z,5.5nm,1.2s
WRH Wood River Hil 81.90 23 IAmb IAmb 10 31 44.3
comp=Z,5.7nm,1.2s
CCB Clear Creek Bu 82.08 23 IAmb IAmb 10 31 41.9
comp=Z,3.9nm,1.2s
ILAR Eielson Array 82.50 23 P **P 10 31 41.5 -0.5**
comp=Z,1.1nm,0.8s,baz=241,slow=5.4,SNR=9.7
ILAR LR LR 11 03 38.2
comp=Z,34nm,20.5s,baz=152,slow=32
comp=Z,1.1nm,0.8s
J25K Salcha River, 83.03 24 IAmb IAmb 10 31 49.6
comp=Z,3.0nm,0.9s
K27K Chicken 84.17 25 **P 10 31 54.0 +3.3**
BVAR Borovoye Array 84.75 324 LR LR 11 11 38.3
comp=Z,33nm,18.0s,baz=338,slow=37
HYT Haines Junctio 85.27 28 IAmb IAmb 10 32 00.3
comp=Z,3.3nm,1.0s
DAWY Dawson 85.31 25 IAmb IAmb 10 32 02.9
comp=Z,3.9nm,1.2s
M30M Minto, Yukon 86.04 27 P **P 10 32 00.9 +0.8**
N31M Braeburn, Yuko 86.24 28 IAmb IAmb 10 32 05.0
comp=Z,4.4nm,1.0s
EPYK Eagle Plains 87.01 23 P **P 10 32 07.5 +2.6**
FARO Faro, Yukon 87.53 27 IAmb IAmb 10 32 11.0
comp=Z,4.1nm,1.1s
DLBC Dease Lake 88.52 31 LR LR 11 05 54.7
comp=Z,158nm,20.1s,baz=282,slow=32
INK Inuvik 88.65 21 LR LR 11 08 17.4
comp=Z,112nm,19.5s,baz=248,slow=33
BBB Bella Bella 88.82 38 LR LR 11 05 09.3
comp=Z,148nm,19.9s,baz=272,slow=31
GEYT Alibeck 91.46 308 LR LR 11 15 18.8
comp=Z,94nm,20.5s,baz=110,slow=37
YBH Yreka Blue Hor 91.71 48 LR LR 11 04 44.7
comp=Z,143nm,21.7s,baz=287,slow=30
ARU Arti 91.98 326 LR LR 11 13 05.1
comp=Z,182nm,21.9s,baz=115,slow=35
AKTO Aktyubinsk 92.06 320 LR LR 11 13 43.0
comp=Z,168nm,20.9s,baz=94,slow=36
NVAR Mina Array Bea 95.03 52 P **P 10 32 43.9 +0.7**
comp=Z,1.1nm,1.0s,baz=251,slow=8.1,SNR=6.0
comp=Z,1.1nm,1.0s
YKA Yellowknife Ar 96.24 28 P **P 10 32 47.8 0.0**
comp=Z,0.8nm,0.7s,baz=274,slow=4.3,SNR=9.5
comp=Z,0.8nm,0.7s
KIRV Kirov 96.85 329 LR LR 11 18 20.7
comp=Z,188nm,19.1s,baz=93,slow=37
TORD Torodi Ar. Bea 144.87 289 PKP **PKPab 10 38 55.3 -1.7**
comp=Z,3.5nm,1.2s,baz=336,slow=3.3,SNR=6.9
TORD Torodi Ar. Bea 144.87 289 **PKPab 10 38 55.8 -1.2**
SIV San Ignacio 145.90 124 PKPbc **PKPdf 10 38 59.6 -0.2**
comp=Z,4.5nm,0.8s,baz=228,slow=2.8,SNR=20

IDC 30 10:27:54.4±1.8,2°38S×124°16E,h0km,mb3.2/3, mbtmp3.5/4,ML3.8/1,Error ellipse: s-maj=51.6km s-min=28.6km az=61.0,Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**7.26**	**78**	Pn	Pn	10 29 42.8	+1.0
	1.4nm,0.3s,baz=228,slow=22,SNR=1.6						
SIJI				Sn	Sn	10 30 52.7	-12
	0.5nm,0.3s,baz=219,slow=23,SNR=1.6						
	7.4nm,0.6s						
WRA	**Warramunga Arr**	**20.09**	**151**	P	P	10 32 28.0	-1.7
	0.6nm,0.8s,baz=332,slow=11,SNR=2.7						
	0.6nm,0.8s						
ASAR	**Alice Springs**	**23.17**	**157**	P	P	10 33 03.6	+0.8
	1.0nm,0.8s,baz=341,slow=11,SNR=8.8						
	1.0nm,0.8s						
MKAR	**Makanchi Array**	**61.24**	**328**	P	P	10 38 11.1	-0.2
	0.3nm,0.8s,baz=148,slow=8.5,SNR=2.0						
	0.3nm,0.8s						

*BJI **30** 10:29:48.5±0.0,33°.06N×85°.05E,h10km,mb4.4/23, mB4.6/9,ML3.7/1,Ms4.3/18,Ms7 4.0/16*
*NEIC **30** 10:29:52.5±4.0,32°.8N±0°.1×84°.83E±0°.08,h39km±5km, mb4.3/13,Error ellipse: s-maj=15.4km s-min=8.5km az=200.0*
*IDC **30** 10:29:53.7±3.6,32°.91N×84°.93E,h42km±33km,mb3.8/20, mbtmp4.1/24,ML3.5/3,MS3.6/20,Error ellipse: s-maj=18.7km s-min=12.7km az=23.0*
*DMN **30** 10:30:01.6±2.3,32°.00N×84°.81E,h282km±19km,Mb4.4/2, Error ellipse: s-maj=63.8km s-min=14.3km az=179.0*

ISC 30 10:29:54.4±0.4,32°99N±0°05×84°90E±0°05,h50km,n90, σ1§62/72,mb4.1/22,MS3.6/20,1C-1D,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DANN	**Dangsing**	**4.72**	**192**	*eP*	**Pn**	**10 31 04.8**	**+1.4**
	166nm,0.4s						
GKN	**Gorkha**	**4.97**	**183**	*eP*	**Pn**	**10 31 07.5**	**+0.8**
	40nm,0.5s						
GUN	**Gumba**	**5.13**	**170**	*eP*	**Pn**	**10 31 09.2**	**+0.2**
	101nm,0.6s						
KKN	**Kakani**	**5.19**	**176**	*eP*	**Pn**	**10 31 11.5**	**+1.8**
KOLN	**Koldanda**	**5.32**	**193**	*eP*	**Pn**	**10 31 11.9**	**+0.4**
	38nm,0.5s						
DMN	**Daman**	**5.36**	**178**	*eP*	**Pn**	**10 31 12.3**	**+0.2**
	32nm,0.6s						
PKIN	**Phulchoki**	**5.41**	**175**	*eP*	**Pn**	**10 31 12.8**	**+0.1**
	82nm,0.6s						
PKI	**Pulchoki**	**5.42**	**175**	*eP*	**Pn**	**10 31 13.0**	**+0.1**
	84nm,0.5s						
JIRN	**Jiri**	**5.42**	**168**	*eP*	**Pn**	**10 31 13.6**	**+0.5**
	90nm,0.4s						
TAPN	**Taplejung**	**6.12**	**156**	*eP*	**Pn**	**10 31 22.9**	**+0.3**
	35nm,0.5s						
RAMN	**Ramite**	**6.19**	**166**	*eP*	**Pn**	**10 31 22.3**	**-1.2**
	117nm,0.6s						
LSA	**Lhasa**	**6.27**	**120**	Pn	**Pn**	**10 31 25.1**	**+0.3**
ODAN	**Odare**	**6.48**	**160**	*eP*	**Pn**	**10 31 26.2**	**-1.2**
GOMU	**GeErMu**	**8.78**	**66**	P	Pn	10 32 04.0	+5.0
GOMU				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GOMU				LR	LR		
	comp=N,1μm,10.1s						
GOMU				LR	LR		
	comp=E,550nm,9.5s						
GOMU				LR	LR		
	comp=Z,560nm,9.3s						
SHL	**Shillong**	**9.58**	**139**	Pn	**Pn**	**10 32 06.5**	**-3.3**
KSH	**Kashi**	**9.71**	**315**	P	**Pn**	**10 32 11.8**	**+0.3**
KSH				pP		10 32 14.5	
KSH				S	**Sn**	**10 34 02.0**	**+2.7**
KSH				pmax	pmax		
	comp=Z,12nm,0.8s						
KSH				LR	LR		
	comp=Z,650nm,10.7s						
KSH				LR	LR		
	comp=Z,1μm,9.6s						
KSH				LR	LR		
	comp=Z,960nm,8.3s						
TARG	**Taragay, Kyrgy**	**10.39**	**329**	Pn	**Pn**	**10 32 21.6**	**+0.6**
KDJ	**Kajisay**	**10.99**	**328**	Pn	**Pn**	**10 32 29.6**	**+0.7**
WMQ	**Urumqi**	**11.04**	**11**	*eP*	Pn	10 32 40.8	+11
WMQ				LR	LR		
	comp=N,430nm,13.9s						
WMQ				LR	LR		
	comp=E,410nm,21.1s						
WMQ				LR	LR		
	comp=Z,310nm,16.7s						
BOOM	**Boomskoye usch**	**11.84**	**326**	Pn	**Pn**	**10 32 39.0**	**-1.6**
AAK	**Ala-Archa**	**12.66**	**323**	P	**Pn**	**10 32 50.6**	**-1.2**
	comp=Z,0.5nm,0.3s,baz=180,slow=10.0,SNR=3.6						
AAK				LR	LR	10 39 04.5	
	comp=Z,29nm,21.2s,baz=134,slow=43						
	comp=Z,2.0nm,0.3s						
AAK	**Ala-Archa**	**12.66**	**323**	Pn	**Pn**	**10 32 48.9**	**-2.9**
GAR	**Garm**	**13.24**	**301**		**Pn**	**10 32 56.0**	**-3.7**
KBL	**Kabul**	**13.29**	**281**	Pn	**Pn**	**10 32 56.6**	**-3.9**
BTK	**Batken**	**13.33**	**306**	Pn	**Pn**	**10 32 58.0**	**-3.0**
GTA	**Gaotai**	**13.64**	**58**	⇑P	**Pn**	**10 33 04.8**	**-0.4**
GTA				pP	P	10 33 13.0	+0.3
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
MK31	**Makanchi Array**	**13.93**	**353**	Pn	**Pn**	**10 33 07.5**	**-1.6**
MKAR	**Makanchi Array**	**13.93**	**353**	P	**Pn**	**10 33 07.7**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=163,slow=13,SNR=14						
MKAR				LR	LR	10 39 22.0	
	comp=Z,207nm,20.9s,baz=168,slow=41						
	comp=Z,5.8nm,1.0s						
MKAR	**Makanchi Array**	**13.93**	**353**	Pn	**Pn**	**10 33 07.4**	**-1.7**
CHGR	**Chuyangaron**	**13.96**	**298**	Pn	**Pn**	**10 33 06.2**	**-3.3**
KK31	**Karatay Array**	**15.16**	**316**	Pn	**Pn**	**10 33 24.8**	**-0.4**
KKAR	**Karatay Array**	**15.16**	**316**	Pn	**Pn**	**10 33 23.4**	**-1.8**
LZH	**Lanzhou**	**15.92**	**74**	*eP*	**P**	**10 33 37.0**	**-1.0**
LZH				pmax	pmax		
	comp=Z,12nm,0.9s						
LZH				LR	LR		
	comp=Z,1μm,11.7s						
LZH				LR	LR		
	comp=Z,520nm,10.1s						
LZH				LR	LR		
	comp=Z,480nm,12.0s						
PZH	**PanZhiHua**	**15.98**	**109**	P	**Pn**	**10 33 33.5**	**-2.5**
PZH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PZH				pmax	pmax		
	comp=Z,80nm,4.5s						
PZH				LR	LR		
	comp=Z,370nm,10.4s						
PZH				LR	LR		
	comp=Z,250nm,10.0s						
PZH				LR	LR		
	comp=Z,260nm,8.4s						
HYBB	**Hyderabad (bro**	**16.52**	**202**	*e*Pn	**Pn**	**10 33 41.9**	**-0.9**
HYBB				*e*Sn	**Sn**	**10 36 46.8**	**+1.5**
KURBB	**Kurchatov Arra**	**18.24**	**347**	P	**P**	**10 34 03.2**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=157,slow=9.5,SNR=28						
KURBB				LR	LR	10 42 01.9	
	comp=Z,260nm,18.1s,baz=149,slow=40						
	comp=Z,7.4nm,0.9s						
KURK	**Kurchatov**	**18.31**	**347**	P	**P**	**10 34 03.5**	**-0.7**
HRA	**Herat**	**18.90**	**280**	P	**P**	**10 34 09.2**	**-1.9**
HRA				IAmb	IAmb	10 34 16.6	
	comp=Z,31nm,1.4s						
CMAR	**Chiang Mai Arr**	**19.19**	**136**	P	**P**	**10 34 14.6**	**+0.5**
	comp=Z,4.3nm,0.7s,baz=317,slow=11,SNR=15						
XAN	**Xi'an**	**20.05**	**80**	P	**P**	**10 34 23.0**	**-0.4**
XAN				pP	Pn	10 34 27.5	+2.0
XAN				pmax	pmax		
	comp=Z,12nm,0.8s						
XAN				LR	LR		
	comp=Z,1μm,15.6s						
XAN				LR	LR		
	comp=Z,470nm,12.7s						
XAN				LR	LR		
	comp=Z,470nm,14.3s						
ZAA0	**Zalesovo Array**	**20.95**	**360**	P	**P**	**10 34 33.7**	**+0.8**
ZAA0				IAmb	IAmb	10 34 38.9	
	comp=Z,23nm,1.4s						
ZALV	**Zalesovo Beam**	**20.95**	**360**	P	Pn	10 34 34.4	-1.6
	comp=Z,3.0nm,0.6s,baz=189,slow=8.8,SNR=11						
ZALV				LR	LR	10 44 22.4	
	comp=Z,58nm,18.1s,baz=42,slow=41						
	comp=Z,3.0nm,0.6s						
ZALV	**Zalesovo Beam**	**20.95**	**360**	P	**P**	**10 34 33.0**	**+0.1**
ENH	**Enshi**	**21.10**	**91**	P	**P**	**10 34 32.7**	**-2.0**
ENH				IAmb	IAmb	10 34 45.1	
	comp=Z,13nm,0.9s						
SONM	**Songino Array**	**21.98**	**41**	P	**P**	**10 34 45.4**	**+1.2**
	comp=Z,9.5nm,1.0s,baz=229,slow=10.0,SNR=34						
	comp=Z,9.5nm,1.0s						
SONM	**Songino Array**	**21.98**	**41**	P	**P**	**10 34 45.6**	**+1.4**
SONM				IAmb	IAmb	10 34 52.1	
	comp=Z,18nm,1.0s						
GEYT	**Alibeck**	**22.33**	**290**	LR	LR	10 45 03.6	
	comp=Z,315nm,20.0s,baz=97,slow=41						
ULN	**Ulaanbaatar**	**22.37**	**42**	P	**P**	**10 34 49.1**	**+0.8**
ULN				IAmb	IAmb	10 34 57.2	
	comp=Z,12nm,1.1s						
BVAR	**Borovoye Array**	**22.58**	**337**	LR	LR	10 43 55.4	
	comp=Z,126nm,19.8s,baz=30,slow=37						
GULI	**GuiLin**	**23.49**	**102**	⇓P	P	10 34 49.5	-10
ABKAR	**Akbulak array**	**24.69**	**319**	P	**P**	**10 35 11.2**	**+0.7**
ABKAR				IAmb	IAmb	10 35 15.8	
	comp=Z,4.5nm,0.8s						
WSAR	**Wadi Sarin**	**25.06**	**254**	LR	LR	10 47 45.1	
	comp=Z,136nm,20.0s,baz=84,slow=43						
PALK	**Pallekele**	**25.88**	**190**	LR	LR	10 46 32.3	
	comp=Z,100nm,18.8s,baz=103,slow=39						
QIZ	**Qiongzhong**	**26.29**	**116**	P	**P**	**10 35 31.3**	**+6.0**
QIZ				S	S	10 40 09.5	+15
QIZ				LR	LR		
	comp=E,320nm,17.5s						
QIZ				LR	LR		
	comp=Z,330nm,20.2s						
AKTO	**Aktyubinsk**	**26.37**	**319**	LR	LR	10 46 30.6	
	comp=Z,228nm,18.1s,baz=124,slow=38						
ARU	**Arti**	**29.66**	**330**	LR	LR	10 47 46.6	
	comp=Z,70nm,19.9s,baz=136,slow=36						
GNI	**Garni**	**32.82**	**294**	LR	LR	10 53 31.2	
	comp=Z,86nm,18.3s,baz=107,slow=43						
KBZ	**Khabaz**	**34.31**	**301**	LR	LR	10 52 55.8	
	comp=Z,106nm,18.8s,baz=73,slow=40						
KSRS	**Korea Array**	**35.20**	**70**	P	**P**	**10 36 43.1**	**-0.6**
	comp=Z,1.2nm,0.7s,baz=271,slow=9.5,SNR=5.3						
	comp=Z,1.2nm,0.7s						
USRK	**Ussuriysk Ar.**	**38.00**	**59**	P	**P**	**10 37 07.8**	**+0.4**
	comp=Z,2.5nm,0.9s,baz=252,slow=9.0,SNR=5.5						
	comp=Z,2.5nm,0.9s						
KLR	**Kul'dur**	**38.19**	**51**	P	**P**	**10 37 09.8**	**+0.8**
	comp=Z,2.0nm,0.7s,baz=300,slow=6.5,SNR=4.7						
	comp=Z,2.0nm,0.7s						
BRTR	**Keskin Array B**	**41.36**	**294**	P	**P**	**10 37 36.7**	**+1.0**
	comp=Z,0.7nm,0.5s,baz=66,slow=7.0,SNR=3.7						
	comp=Z,0.7nm,0.5s						
EIL	**Elat**	**42.48**	**279**	LR	LR	10 59 20.9	
	comp=Z,162nm,18.0s,baz=88,slow=42						
MJAR	**Matsushiro Arr**	**43.48**	**70**	P	**P**	**10 37 52.3**	**-0.4**
	comp=Z,1.2nm,0.5s,baz=277,slow=8.4,SNR=6.6						
	comp=Z,1.2nm,0.5s						
MJAR	**Matsushiro Ar**	**43.48**	**70**	P	**P**	**10 37 51.0**	**-1.8**
AKASG	**Malin Array Be**	**43.98**	**311**	P	**P**	**10 37 57.1**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=78,slow=7.8,SNR=7.4						
AKASG				LR	LR	10 57 34.3	
	comp=Z,139nm,21.7s,baz=64,slow=38						
	comp=Z,0.3nm,0.3s						
MLR	**Muntele Rosu**	**46.37**	**304**	P	**P**	**10 38 16.2**	**+0.5**
FINES	**FINESS Array B**	**46.82**	**326**	P	**P**	**10 38 19.1**	**+0.3**
	comp=Z,0.7nm,0.5s,baz=99,slow=12,SNR=5.4						
	comp=Z,0.7nm,0.5s						
ARCES	**ARCESS Array B**	**48.87**	**336**	P	**P**	**10 38 35.0**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=82,slow=8.7,SNR=4.9						
	comp=Z,0.6nm,0.6s						
ARCES	**ARCESS Array B**	**48.87**	**336**	P	**P**	**10 38 33.4**	**-1.2**
SEY	**Seymchan**	**51.02**	**33**	P	**P**	**10 38 51.6**	**+0.7**
	comp=Z,3.1nm,0.9s,baz=274,slow=6.9,SNR=8.6						
	comp=Z,3.1nm,0.9s						
VRAC	**Vranov**	**52.19**	**310**	LR	LR	11 05 02.8	
	comp=Z,58nm,19.6s,baz=74,slow=40						
SPITS	**Spitsbergen Ar**	**53.58**	**346**	LR	LR	11 05 38.0	
	comp=Z,63nm,20.9s,baz=76,slow=40						
NOA	**NORSAR Array B**	**53.97**	**325**	P	**P**	**10 39 14.0**	**+1.1**
	comp=Z,0.5nm,0.6s,baz=85,slow=7.4,SNR=2.5						
NOA				LR	LR	11 03 56.7	
	comp=Z,35nm,20.4s,baz=90,slow=38						
	comp=Z,0.5nm,0.6s						
GERES	**GERESS Array B**	**54.14**	**310**	P	**P**	**10 39 16.1**	**+1.7**
	comp=Z,1.2nm,0.7s,baz=52,slow=8.6,SNR=5.7						
GERES				LR	LR	11 03 27.1	
	comp=Z,60nm,22.0s,baz=84,slow=37						
	comp=Z,1.2nm,0.7s						
DAVOX	**Davos/Dischmat**	**57.12**	**308**	LR	LR	11 07 05.9	
	comp=Z,59nm,18.4s,baz=83,slow=39						
JMIC	**Jan Mayen**	**60.29**	**338**	LR	LR	11 07 03.4	
	comp=Z,28nm,18.6s,baz=72,slow=37						
SUMG	**Summit**	**67.82**	**344**	*i*P	P	10 40 52.0	+4.8
ESDC	**Sonseca Array**	**69.06**	**304**	LR	LR	11 17 32.0	
	comp=Z,40nm,18.6s,baz=328,slow=41						
WRA	**Warramunga Arr**	**70.71**	**131**	P	**P**	**10 41 04.8**	**-0.5**
	comp=Z,1.3nm,0.4s,baz=327,slow=6.4,SNR=66						
	comp=Z,1.3nm,0.4s						
ASAR	**Alice Springs**	**73.19**	**134**	P	**P**	**10 41 19.9**	**-0.2**
	comp=Z,1.6nm,0.7s,baz=316,slow=6.0,SNR=18						
	comp=Z,1.6nm,0.7s						
ASAR	**Alice Springs**	**73.19**	**134**	P	**P**	**10 41 18.2**	**-1.9**
ILAR	**Eielson Array**	**74.53**	**20**	P	**P**	**10 41 27.4**	**+0.1**
	comp=Z,1.5nm,0.9s,baz=307,slow=4.9,SNR=9.5						
	comp=Z,1.5nm,0.9s						
ILAR	**Eielson Array**	**74.53**	**20**	P	**P**	**10 41 25.5**	**-1.9**
TORD	**Torodi Ar. Bea**	**77.33**	**278**	P	**P**	**10 41 44.6**	**+0.4**
	comp=Z,1.0nm,0.4s,baz=55,slow=5.2,SNR=18						
	comp=Z,1.0nm,0.4s						
TORD	**Torodi Ar. Bea**	**77.33**	**278**	P	**P**	**10 41 43.4**	**-0.7**
TORD				IAmb	IAmb	10 41 46.7	
	comp=Z,5.4nm,1.3s						
BOSA	**Boshof**	**83.38**	**230**	P	**P**	**10 42 16.1**	**-0.3**
	comp=Z,1.7nm,0.8s,baz=50,slow=6.6,SNR=1.8						
	comp=Z,1.7nm,0.8s						
YKA	**Yellowknife Ar**	**83.56**	**9**	P	**P**	**10 42 17.1**	**+0.3**
	comp=Z,1.3nm,0.6s,baz=335,slow=5.4,SNR=24						
	comp=Z,1.3nm,0.6s						
DBIC	**Dimbokro**	**86.21**	**275**	P	**P**	**10 42 31.0**	**+0.1**
	comp=Z,5.0nm,0.9s,baz=27,slow=2.3,SNR=3.5						
	comp=Z,5.0nm,0.9s						
DBIC	**Dimbokro**	**86.21**	**275**	IAmb	IAmb	10 42 36.4	
	comp=Z,14nm,1.1s						

*INET **30** 10:34:15.6±0.9,10°.48N×86°.70W,h0km±2km,MW4.0*
*UCR **30** 10:34:18.8±1.5,10°.63N×86°.64W,h13km±6km,ML3.6, MW4.8,mb4.7(NEIC)*
*NEIC **30** 10:34:22.5±2.6,10°.83N±0°.06×86°.45W±0°.07,h34km±5km, mb4.7/220,Error ellipse: s-maj=11.5km s-min=6.0km az=55.0*
*IDC **30** 10:34:24.7±1.7,11°.31N×86°.04W,h43km±17km,mb4.0/14, mbtmp4.2/15,ML4.1/1,MS3.7/12,Error ellipse: s-maj=33.8km s-min=10.4km az=50.0*
*SNET **30** 10:34:26.0±2.0,11°.34N×86°.46W,h30km±999km,ML3.8*

ISC 30 10:34:21.5±0.7,10°70N±0°05×86°58W±0.05,h36km±1km, n362,σ1§30/288,mb4.6/108,MS3.5/9,15C-3D,Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HZTE	**Horizontes, Gu**	**0.97**	**89**		**Pn**	**10 34 38.0**	**-0.6**
HZTE	**Horizontes, Gu**	**0.97**	**89**	*eP*	**Pn**	**10 34 38.0**	**-0.6**
HZTE				*eS*	**Sn**	**10 34 51.3**	**+0.2**
SAJU	**San Juanillo,**	**1.06**	**126**	⇓*eP*	**Pn**	**10 34 38.0**	**-1.9**
SAJU				*eS*	**Sn**	**10 34 51.1**	**-2.3**
GBS3	**Finca Las Img**	**1.11**	**86**	⇑*eP*	**Pn**	**10 34 39.6**	**-0.9**
LAPC	**Finca la Perla**	**1.13**	**87**	⇑*iP*	**Pn**	**10 34 39.8**	**-1.0**
GUAI	**GUAI**	**1.14**	**112**	*eP*	**Pn**	**10 34 39.8**	**-1.1**
GUAI				*eS*	**Sn**	**10 34 54.1**	**-1.1**
ORTG	**Ortega, Santa**	**1.15**	**107**		**Pn**	**10 34 40.1**	**-1.1**
BUEV	**Buena Vista**	**1.16**	**85**	⇑*iP*	**Pn**	**10 34 40.4**	**-0.8**
GB1A	**Borinquen Arri**	**1.17**	**84**	*eP*	**Pn**	**10 34 40.8**	**-0.6**
GPS2	**Hotel Rincn d**	**1.21**	**87**	⇑*eP*	**Pn**	**10 34 41.3**	**-0.7**
DUNO	**Dulce Nombre,**	**1.23**	**120**		**Pn**	**10 34 40.9**	**-1.3**
BUAI	**Buenos Aires**	**1.24**	**82**	⇑*eP*	**Pn**	**10 34 42.1**	**-0.2**
LIM1	**Limonal**	**1.30**	**90**	*eP*	**Pn**	**10 34 42.7**	**-0.6**
GUAB	**Guayabo de Bag**	**1.33**	**90**	*eP*	**Pn**	**10 34 43.0**	**-0.5**
COLC	**Colonia**	**1.35**	**91**	⇑*eP*	**Pn**	**10 34 43.4**	**-0.5**
HORNC	**Hornillas**	**1.38**	**89**	⇑*eP*	**Pn**	**10 34 43.7**	**-0.6**
CUI	**Cuipilapa**	**1.39**	**92**	⇑*eP*	**Pn**	**10 34 44.1**	**-0.4**
VMAR	**Armenia, Volca**	**1.44**	**85**	⇑*eP*	**Pn**	**10 34 45.2**	**+0.1**
ACAL	**Aguas Claras**	**1.52**	**92**	⇑*eP*	**Pn**	**10 34 46.1**	**-0.1**
APYN	**Apoyeque**	**1.54**	**8**	*eP*	**Pn**	**10 34 46.0**	**-0.5**
APYN				*eS*	**Sn**	**10 35 10.5**	**+5.3**
PTEN	**Parque Tenorio**	**1.57**	**89**	⇑*eP*	**Pn**	**10 34 47.0**	**+0.1**
JTS	**Las Juntas de**	**1.65**	**104**	P	**Pn**	**10 34 47.2**	**-0.7**
	212nm,0.6s,baz=7.2,slow=20,SNR=64						
JTS				S	**Sn**	**10 35 07.2**	**-0.8**
	297nm,0.4s,baz=352,slow=17,SNR=4.1						
JTS				LR	LR	10 35 09.0	
	comp=Z,311nm,20.2s,baz=25,slow=30						
JTS	**Las Juntas de**	**1.65**	**104**	⇑*eP*	**Pn**	**10 34 47.3**	**-0.7**
HUEN		**1.68**	**14**	*eP*	**Pn**	**10 34 48.0**	**-0.3**
CNGN	**Cerro Negro**	**1.79**	**356**	Pn	**Pn**	**10 34 49.6**	**-0.4**
CASO	**Castillo**	**1.83**	**98**	*eP*	**Pn**	**10 34 50.7**	**+0.1**
ARE1	**Arenal 1**	**1.84**	**97**	⇑*eP*	**Pn**	**10 34 50.9**	**+0.3**
CEDE	**Laguna Cedeo**	**1.86**	**96**	*eP*	**Pn**	**10 34 51.2**	**+0.3**
ACON	**Acoyapa**	**1.87**	**47**		**Pn**	**10 34 50.4**	**-0.6**
ACON	**Acoyapa**	**1.87**	**47**	*eP*	**Pn**	**10 34 50.3**	**-0.6**
ACON	**Acoyapa**	**1.87**	**47**	*eP*	**Pn**	**10 34 50.3**	**-0.6**
LAFE	**Finca La Fe, P**	**1.87**	**118**	⇑*eP*	**Pn**	**10 34 49.4**	**-1.5**
FORC	**Fortuna**	**1.89**	**97**	*eP*	**Pn**	**10 34 51.9**	**+0.6**
BOAB	**BOACO BROADBAN**	**1.95**	**27**	Pn	**Pn**	**10 34 51.5**	**-0.6**
CRIN	**San Cristobal**	**2.04**	**347**		**Pn**	**10 34 53.1**	**-0.3**
CRIN	**San Cristobal**	**2.04**	**347**	*eP*	**Pn**	**10 34 53.1**	**-0.3**
CRIN				*eS*	**Sn**	**10 35 21.4**	**+3.8**
JACO	**JACO, Garabito**	**2.15**	**118**	Pn	**Pn**	**10 34 56.2**	**+1.3**
MATN	**Matagalpa**	**2.31**	**16**		**Pn**	**10 34 55.7**	**-1.4**
HDC	**Heredia**	**2.52**	**106**		**Pn**

CCIG **Comitan** 7.74 316 Pn **10 36 13.8 +1.8**
CMIG **Matias Romero** 10.26 309 P Pn **10 36 48.5 +2.3**
comp=Z,1.4nm,0.3s,baz=136,slow=9.2,SNR=15
CMIG S Sn **10 38 38.6 -1.6**
comp=Z,2.3nm,0.7s,baz=223,slow=3.3,SNR=1.4
comp=Z,13nm,0.9s
ROSC **El Rosal** 13.47 115 LR LR 10 43 46.7
comp=Z,302nm,19.2s,baz=236,slow=42
TLIG **Tlapa** 13.47 302 Pn Pn **10 37 33.7 +3.3**
SDV **Santo Domingo** 15.82 95 LR LR 10 46 09.5
comp=Z,228nm,18.1s,baz=258,slow=46
ATAH **Atahualpa** 19.50 155 LR LR 10 45 26.8
comp=Z,316nm,18.2s,baz=337,slow=33
352A **Blakely** 20.73 4 P P **10 38 57.8 -1.2**
352A IAmb IAmb 10 39 04.3
comp=Z,25nm,0.8s
TIGA **Tifton** 20.82 7 P P **10 39 00.0 +0.1**
TIGA IAmb IAmb 10 39 05.6
comp=Z,27nm,0.8s
TIGA **Tifton** 20.82 7 P P **10 38 59.3 -0.6**
baz=188
HKT **Hockley** 21.00 337 P P **10 39 01.4 -0.5**
HKT IAmb IAmb 10 39 11.0
comp=Z,28nm,1.2s
344A **Westbrook Farm** 21.01 350 IAmb IAmb 10 39 06.5
comp=Z,35nm,0.8s
342A **Flagon Creek P** 21.25 346 IAmb IAmb 10 39 06.8
comp=Z,32nm,0.9s
833A **Chaparral WMA,** 21.26 327 P P **10 39 03.4 -1.3**
833A **Chaparral WMA,** 21.26 327 P P **10 39 05.8 +1.1**
baz=142
LRAL **Lakeview Retre** 22.23 359 P P **10 39 15.4 +0.4**
LRAL IAmb IAmb 10 39 18.2
comp=Z,18nm,0.8s
LRAL **Lakeview Retre** 22.23 359 P P **10 39 13.9 -1.2**
baz=178,SNR=16
NATX **Nacogdoches** 22.25 342 P P **10 39 16.2 +0.9**
NATX IAmb IAmb 10 39 18.1
comp=Z,29nm,0.7s
NATX **Nacogdoches** 22.25 342 P P **10 39 14.7 -0.6**
baz=158
Z47A **Carrollton** 22.43 357 P P **10 39 15.3 -1.9**
Z47A IAmb IAmb 10 39 31.1
comp=Z,20nm,0.9s
435B **Jarrell** 22.45 335 P P **10 39 16.7 -0.7**
baz=150
GOGA **Godfrey** 22.78 7 P P **10 39 19.7 -1.3**
GOGA IAmb IAmb 10 39 22.6
comp=Z,30nm,1.1s
GOGA **Godfrey** 22.78 7 P P **10 39 20.0 -1.0**
baz=187,SNR=9.8
237A **Washetta, Mont** 22.85 339 IAmb IAmb 10 39 25.8
comp=Z,16nm,0.8s
Y49A **Blount Mountai** 23.05 0 IAmb IAmb 10 39 25.0
comp=Z,24nm,0.8s
NHSC **New Hope** 23.06 14 P P **10 39 23.9 +0.1**
baz=196
Z41A **Richland Creek** 23.17 347 P P **10 39 23.6 -1.3**
baz=164
Y52A **Lilburn** 23.17 5 IAmb IAmb 10 39 26.0
comp=Z,17nm,0.8s
JCT **Junction City** 23.21 330 P P **10 39 25.6 +0.2**
baz=145
WHTX **Lake Whitney,** 23.45 336 IAmb IAmb 10 39 29.1
comp=Z,19nm,0.9s
WHTX **Lake Whitney,** 23.45 336 P P **10 39 27.0 -0.7**
baz=152
FPAL **Fort Paine** 23.75 2 P P **10 39 30.2 -0.3**
FPAL IAmb IAmb 10 39 32.7
comp=Z,15nm,0.8s
HODGE **Hodges** 23.75 9 IAmb IAmb 10 39 31.3
comp=Z,17nm,0.7s
OXF **Oxford** 23.84 354 P P **10 39 29.4 -2.0**
baz=173,SNR=6.0
JSC **Jenkinsville** 23.97 11 IAmb IAmb 10 39 33.5
comp=Z,21nm,0.8s
PLAL **Pickwick Lake** 24.21 357 IAmb IAmb 10 39 35.4
comp=Z,19nm,0.8s
PAULI **Pauline** 24.40 10 IAmb IAmb 10 39 37.4
comp=Z,26nm,1.0s
W52A **Murphy** 24.40 5 IAmb IAmb 10 39 37.4
comp=Z,16nm,0.8s
BG3 **Lake Jocassee** 24.41 7 P P **10 39 36.7 0.0**
BG3 IAmb IAmb 10 39 37.6
comp=Z,26nm,0.8s
SWET **Sewanee** 24.41 1 IAmb IAmb 10 39 38.5
comp=Z,18nm,1.0s
W50A **Signal Mountai** 24.41 3 IAmb IAmb 10 39 38.7
comp=Z,24nm,0.8s
TXAR **Lajitas Array** 24.46 322 P P **10 39 38.1 +0.8**
comp=Z,7.5nm,0.7s,baz=135,slow=10,SNR=138
TXAR PcP PcP **10 43 17.3 +1.7**
comp=Z,1.0nm,0.8s,baz=148,slow=5.3,SNR=5.3
comp=Z,7.5nm,0.7s
BIRD **Birdtown, Kers** 24.48 12 IAmb IAmb 10 39 37.9
comp=Z,19nm,0.8s
UALR **University of** 24.53 349 P P **10 39 36.0 -1.7**
UALR IAmb IAmb 10 39 37.5
comp=Z,16nm,0.8s
MIAR **Mount Ida** 24.58 346 P P **10 39 36.9 -1.2**
baz=163,SNR=14
CPCT **Cooper Cave** 24.71 4 IAmb IAmb 10 39 41.6
comp=Z,20nm,0.8s
KMSC **Kings Mountain** 24.80 10 IAmb IAmb 10 39 41.0
comp=Z,24nm,0.8s
KMSC **Kings Mountain** 24.80 10 P P **10 39 39.1 -1.0**
baz=192,SNR=9.0
W41B **Gary Mavity, V** 24.90 349 IAmb IAmb 10 39 40.9
comp=Z,14nm,0.9s
W41B **Gary Mavity, V** 24.90 349 P P **10 39 39.6 -1.5**
baz=166,SNR=12
ABTX **Abilene, Hawle** 24.92 333 IAmb IAmb 10 39 43.3
comp=Z,12nm,1.0s
ABTX **Abilene, Hawle** 24.92 333 P P **10 39 40.7 -0.6**
baz=148
TKL **Tuckaleechee C** 24.98 5 P P **10 39 40.1 -1.7**
comp=Z,9.7nm,0.9s,baz=174,slow=13,SNR=9.7
TKL LR LR 10 50 12.6
comp=Z,111nm,18.7s,baz=257,slow=39
comp=Z,9.7nm,0.9s
TKL **Tuckaleechee C** 24.98 5 IAmb IAmb 10 39 44.8
comp=Z,18nm,1.1s
WHAR **Wooly Hollow** 25.02 349 P P **10 39 40.8 -1.4**
WHAR IAmb IAmb 10 39 42.3
comp=Z,21nm,0.9s
W57A **Gilead** 25.07 13 IAmb IAmb 10 39 42.9
comp=Z,14nm,0.7s
V51A **Loudon** 25.07 4 P P **10 39 41.8 -0.8**
V51A IAmb IAmb 10 39 43.4
comp=Z,14nm,0.8s
V53A **Saluda** 25.09 7 IAmb IAmb 10 39 52.2
comp=Z,12nm,0.9s
X37A **Clayton** 25.10 343 IAmb IAmb 10 39 43.5
comp=Z,12nm,0.7s
V52A **Sevierville** 25.17 6 IAmb IAmb 10 39 51.3
comp=Z,14nm,1.1s
W39A **Magazine** 25.25 346 IAmb IAmb 10 39 45.0
comp=Z,18nm,0.9s
W39A **Magazine** 25.25 346 P P **10 39 43.3 -1.0**
baz=163,SNR=14
CLTN **Cedars of Leba** 25.28 0 IAmb IAmb 10 39 46.6
comp=Z,12nm,0.7s
WVT **Waverly** 25.34 358 P P **10 39 44.5 -0.5**
WVT **Waverly** 25.34 358 P P **10 39 43.6 -1.4**
baz=177
LCAR **Lake Charles** 25.59 351 IAmb IAmb 10 39 46.6
comp=Z,15nm,0.9s
U49A **Red Boiling Sp** 25.71 1 IAmb IAmb 10 39 51.1
comp=Z,13nm,1.0s
TZTN **Tazewell** 25.87 6 P P **10 39 48.4 -1.5**
TZTN **Tazewell** 25.87 6 P P **10 39 48.8 -1.1**
baz=186
X34A **Smith Ranch, M** 25.91 338 P **10 39 49.9 -0.4**
X34A IAmb IAmb 10 39 54.1
comp=Z,13nm,0.7s
U54A **Nelsons Funny** 26.06 9 IAmb IAmb 10 39 55.0
comp=Z,25nm,1.1s
U56A **King** 26.14 11 IAmb IAmb 10 39 53.3
comp=Z,20nm,1.1s
T47A **Sharon Grove** 26.18 359 IAmb IAmb 10 39 52.8
comp=Z,14nm,0.8s
LPIG **La Paz** 26.21 304 LR LR 10 48 58.8
comp=Z,58nm,20.2s,baz=134,slow=33
FNO **Franklin** 26.36 340 IAmb IAmb 10 39 55.1
comp=Z,20nm,0.8s
WMOK **Wichita Mounta** 26.39 337 IAmb IAmb 10 39 58.0
comp=Z,21nm,0.9s
WMOK **Wichita Mounta** 26.39 337 P P **10 39 54.5 -0.2**
baz=152,SNR=12
TUL1 **Leonard** 26.45 343 IAmb IAmb 10 39 55.2
comp=Z,21nm,1.1s
TUL1 **Leonard** 26.45 343 P P **10 39 53.0 -2.1**
baz=159
U38A **Gravette** 26.58 346 IAmb IAmb 10 39 56.2
comp=Z,14nm,1.0s
S51A **Beattyville** 26.96 5 IAmb IAmb 10 39 59.8
comp=Z,12nm,0.8s
BLA **Blacksburg** 26.97 11 IAmb IAmb 10 40 00.8
comp=Z,15nm,0.9s
BLA **Blacksburg** 26.97 11 P P **10 39 58.7 -1.2**
baz=193
S44A **Carbondale** 26.98 355 IAmb IAmb 10 39 59.5
comp=Z,14nm,0.8s
SIUC **Southern Illin** 27.00 355 IAmb IAmb 10 39 59.7
comp=Z,18nm,0.8s
T57A **Hurt** 27.00 13 IAmb IAmb 10 40 00.6
comp=Z,13nm,0.7s
MNTX **Cornudas Mount** 27.19 323 P P **10 40 02.3 +0.5**
baz=136
MSTX **Muleshoe** 27.50 330 P P **10 40 04.3 -0.4**
baz=143
R49A **Shelbyville** 27.50 2 IAmb IAmb 10 40 04.2
comp=Z,12nm,0.8s
S39A **Bolivar** 27.55 348 IAmb IAmb 10 40 04.7
comp=Z,14nm,0.8s
CCM **Cathedral Cave** 27.56 352 P P **10 40 03.2 -1.8**
CCM IAmb IAmb 10 40 04.8
comp=Z,9.8nm,0.8s
CCM **Cathedral Cave** 27.56 352 P P **10 40 03.2 -1.8**
baz=170
AMTX **Amarillo** 27.73 333 IAmb IAmb 10 40 11.8
comp=Z,9.6nm,0.8s
AMTX **Amarillo** 27.73 333 P P **10 40 06.4 -0.3**
baz=146
S57A **Dark Hollow, R** 27.80 13 IAmb IAmb 10 40 07.3
comp=Z,9.4nm,0.7s
R53A **Hurricane** 27.82 8 P P **10 40 05.8 -1.6**
R53A IAmb IAmb 10 40 07.5
comp=Z,19nm,0.8s
OLIL **Olney** 27.95 357 IAmb IAmb 10 40 08.3
comp=Z,16nm,0.8s
P48A **Milroy** 28.66 2 IAmb IAmb 10 40 14.0
comp=Z,16nm,0.8s
P46A **Rosedale** 28.80 359 IAmb IAmb 10 40 15.5
comp=Z,20nm,1.0s
P51A **Williamsport** 28.83 6 IAmb IAmb 10 40 16.3
comp=Z,17nm,0.9s
P52A **Corning** 29.08 7 P P **10 40 17.1 -1.5**
baz=189,SNR=7.7
O49A **Covington** 29.43 4 IAmb IAmb 10 40 21.3
comp=Z,16nm,1.1s
MCWV **Mont Chateau** 29.45 11 P P **10 40 20.4 -1.5**
baz=193
O48B **Farmland** 29.46 2 P P **10 40 20.1 -1.9**
baz=182,SNR=6.0
SFIN **Lafayette** 29.56 359 P P **10 40 20.9 -1.9**
baz=179,SNR=7.9
ACSO **Alum Creek Sta** 29.58 6 P P **10 40 21.8 -1.2**
baz=187,SNR=5.3
KSU1 **Kansas State U** 29.66 344 IAmb IAmb 10 40 23.9
comp=Z,12nm,0.7s
KSU1 **Kansas State U** 29.66 344 P P **10 40 22.3 -1.4**
baz=159
O53A **New Philadelph** 29.81 8 P P **10 40 24.2 -0.9**
baz=190,SNR=16
HDIL **Hopedale** 29.83 356 P P **10 40 23.1 -2.1**
baz=174,SNR=5.3
O54A **Avella** 29.87 10 IAmb IAmb 10 40 25.6
comp=Z,9.7nm,0.8s
N41A **Harden Midland** 30.12 354 IAmb IAmb 10 40 26.6
comp=Z,11nm,0.7s
ANMO **Albuquerque** 30.18 326 P P **10 40 29.8 +1.1**
comp=Z,2.7nm,0.8s,baz=144,slow=7.2,SNR=13
comp=Z,2.7nm,0.8s
ANMO **Albuquerque** 30.18 326 P P **10 40 29.7 +1.1**
ANMO **Albuquerque** 30.18 326 P P **10 40 29.2 +0.6**
baz=138
CBKS **Cedar Bluff** 30.36 339 P P **10 40 28.7 -1.3**
baz=153
SAML **Samuel** 30.38 129 P P **10 40 30.1 -0.2**
N53A **Lisbon** 30.41 9 P P **10 40 29.2 -1.1**
MVL **Millersville** 30.56 16 IAmb IAmb 10 40 32.6
comp=Z,18nm,1.1s
SSPA **Standing Stone** 30.79 13 P P **10 40 32.9 -0.9**
SSPA **Standing Stone** 30.79 13 P P **10 40 33.4 -0.3**
baz=196
T25A **Trinidad** 30.84 331 P P **10 40 34.6 +0.1**
baz=144
TUC **Tucson** 30.99 318 P P **10 40 37.3 +1.6**
baz=128
M53A **Wi Miller and** 31.05 9 P P **10 40 34.7 -1.4**
baz=191,SNR=9.2
L44A **Lake County Fo** 31.38 358 P P **10 40 37.0 -1.9**
baz=177
M55A **Ridgway** 31.41 11 IAmb IAmb 10 40 39.1
comp=Z,11nm,0.9s
ERPA **Erie** 31.82 9 P P **10 40 41.4 -1.4**
baz=192
SDCO **Great Sand Dun** 31.84 331 P P **10 40 43.1 -0.3**
baz=142,SNR=8.0
K43A **Burlington** 31.92 358 IAmb IAmb 10 40 42.7
comp=Z,12nm,0.9s
214A **Organ Pipe Nat** 32.16 315 P P **10 40 48.2 +2.3**
baz=125
KSPA **Keystone Colle** 32.17 15 IAmb IAmb 10 40 45.9
comp=Z,17nm,1.1s
JFWS **Jewell Farm** 32.25 355 P P **10 40 44.5 -2.1**
baz=173,SNR=7.9
L56A **Greenwood** 32.30 13 IAmb IAmb 10 40 47.6
comp=Z,10nm,0.8s
LPAZ **La Paz** 32.44 145 P P 10 40 54.1 +5.0
comp=Z,1.0nm,0.3s,baz=330,slow=5.1,SNR=2.5
LPAZ LR LR 10 55 29.5
comp=Z,72nm,18.3s,baz=301,slow=39
comp=Z,1.0nm,0.3s
LPAZ **La Paz** 32.44 145 IAmb IAmb 10 41 03.7
comp=Z,3.2nm,0.5s
S22A **4UR Ranch, Cre** 32.50 329 P P **10 40 49.3 +0.2**
baz=140
BINY **Binghamton** 32.72 15 P P **10 40 49.7 -1.0**
baz=199,SNR=6.6
L59A **Walton** 32.96 16 IAmb IAmb 10 40 53.2
comp=Z,12nm,0.8s
MVCO **Mesa Verde** 32.96 327 P P **10 40 53.2 +0.1**
baz=137
WUAZ **Wupatki** 33.43 322 P P **10 40 59.3 +2.1**
baz=131
L61B **Northampton** 33.88 19 P P **10 41 00.3 -0.5**
baz=205
PV11 **David Mesa, Pa** 33.97 328 IAmb IAmb 10 41 04.5
comp=Z,6.8nm,0.6s
ECSD **EROS Data Cent** 34.04 347 IAmb IAmb 10 41 01.5
comp=Z,14nm,1.1s
ECSD **EROS Data Cent** 34.04 347 P P **10 41 00.1 -2.1**
baz=162,SNR=13
PV23 **Carpenter Ridg** 34.15 328 IAmb IAmb 10 41 12.7
comp=Z,4.6nm,0.8s
HRV **Adam Dziewonsk** 34.30 20 P P **10 41 01.9 -2.5**
baz=207
PDMCI **Parker Dam,Lak** 34.43 317 P P **10 41 07.7 +2.0**
baz=126
SADO **Sadowa** 34.55 9 LR LR 10 55 21.4
comp=Z,98nm,20.0s,baz=196,slow=37
SADO **Sadowa** 34.55 9 P P **10 41 04.8 -1.6**
SPMN **Marine on St.** 34.81 352 P P **10 41 06.1 -2.8**
baz=169,SNR=7.2
BC3 **Big Chuckawall** 34.95 315 P P **10 41 12.4 +2.1**
baz=124
MONP2 **Monument Peak** 35.22 313 P P **10 41 14.9 +2.2**
baz=122
SUSD **Miller** 35.28 345 P P **10 41 11.4 -1.4**
baz=158
COWI **Conover** 35.34 357 IAmb IAmb 10 41 11.9
comp=Z,8.7nm,0.8s
LONY **Lake Ozonia** 35.34 15 IAmb IAmb 10 41 12.6
comp=Z,6.7nm,0.8s
LONY **Lake Ozonia** 35.34 15 P P **10 41 11.9 -1.6**
baz=200
SRU **San Rafael Swe** 35.44 327 P P **10 41 15.1 +0.6**
SRU IAmb IAmb 10 41 16.9
comp=Z,4.6nm,0.7s
BELC **Belle Mtn. Jos** 35.52 315 P P **10 41 17.4 +2.1**
baz=124
F36A **Milaca** 35.54 352 IAmb IAmb 10 41 13.9
comp=Z,10nm,0.9s
E43A **Lone Tree Farm** 35.55 360 IAmb IAmb 10 41 14.3
comp=Z,11nm,0.8s
LBNH **Lisbon** 35.74 18 P P **10 41 15.6 -1.2**
baz=205
P17A **Butcher Ranch,** 35.82 327 IAmb IAmb 10 41 20.2
comp=Z,5.8nm,0.7s
E38A **The Farm, Brul** 36.03 354 IAmb IAmb 10 41 17.9
comp=Z,8.2nm,0.8s
K22A **Casper** 36.28 335 P P **10 41 21.1 -0.6**
baz=145
SIV **San Ignacio** 36.62 136 P P **10 41 28.2 +3.5**
comp=Z,3.4nm,0.9s,baz=302,slow=10,SNR=1.7
SIV LR LR 10 56 18.7
comp=Z,58nm,21.3s,baz=308,slow=36
comp=Z,3.4nm,0.9s
TPNV **Topopah Spring** 37.39 319 P P **10 41 33.6 +2.4**
TPNV **Topopah Spring** 37.39 319 P P **10 41 32.8 +1.6**
baz=126
DUG **Dugway, Tooele** 37.45 326 P P **10 41 32.0 +0.4**
baz=134
PKME **Peaks-Kenny Pk** 37.50 20 P P **10 41 30.9 -0.9**
baz=208
FURC **Furnace Creek,** 37.50 318 P P **10 41 34.2 +2.3**
baz=125
MPMC **Manual Prospec** 37.68 317 P P **10 41 35.2 +1.5**
baz=124
BW06 **Boulder Array** 37.71 332 P P **10 41 33.5 -0.4**
baz=141
PDAR **Pinedale Array** 37.71 332 P P **10 41 34.2 +0.4**
comp=Z,1.4nm,0.6s,baz=130,slow=10,SNR=19
PDAR PcP PcP **10 43 51.9 +1.3**
comp=Z,0.2nm,0.5s,baz=126,slow=4.6,SNR=2.5
comp=Z,1.4nm,0.6s
HWUT **Hardware Ranch** 37.80 329 IAmb IAmb 10 41 36.6
comp=Z,4.7nm,0.7s
R11A **Troy Canyon, C** 37.83 322 P P **10 41 36.5 +1.6**
baz=129
AGMN **Agassiz Nation** 38.28 350 IAmb IAmb 10 41 44.2
comp=Z,13nm,1.1s
AGMN **Agassiz Nation** 38.28 350 P P **10 41 35.6 -2.7**
baz=165,SNR=5.6
LATQ **La Tuque** 38.38 15 IAmb IAmb 10 41 38.9
comp=Z,9.4nm,0.8s
MDND **Maddock** 38.62 346 P P **10 41 39.6 -1.6**
MDND **Maddock** 38.62 346 P P **10 41 40.2 -1.0**
baz=159
REDW **Red Top Meadow** 38.77 331 IAmb IAmb 10 41 44.6
comp=Z,5.2nm,0.7s
RLMT **Red Lodge** 39.44 335 P P **10 41 48.0 -0.3**
baz=143
OMMB **Old Mammoth Mi** 39.56 318 P P **10 41 48.2 -1.4**
NVAR **Mina Array Bea** 39.58 320 P P **10 41 52.3 +2.7**
comp=Z,4.0nm,0.8s,baz=137,slow=7.2,SNR=33
NVAR PcP PcP **10 43 59.1 +2.6**
comp=Z,2.0nm,0.6s,baz=134,slow=4.2,SNR=12
comp=Z,4.0nm,0.8s
NVAR **Mina Array Bea** 39.58 320 P P **10 41 51.2 +1.6**
ULM **Lac du Bonnet** 40.17 351 P P **10 41 52.2 -1.9**
comp=Z,3.8nm,0.7s,baz=177,slow=9.4,SNR=2.7
comp=Z,3.8nm,0.7s
YERR **Yerington** 40.49 320 P P **10 41 58.4 +1.1**
HLID **Hailey** 40.67 329 P P **10 41 58.0 -0.5**
HLID **Hailey** 40.67 329 P P **10 41 58.8 +0.2**
baz=135,SNR=6.4
BOZ **Bozeman (W)** 40.84 333 P P **10 41 59.4 -0.6**
BOZ **Bozeman (W)** 40.84 333 P P **10 41 59.8 -0.1**
baz=140,SNR=9.3
EGMT **Eagleton** 41.99 337 P P **10 42 08.7 -0.5**
baz=144
MSO **Missoula** 42.82 332 P P **10 42 15.9 -0.2**
baz=138
J05D **Fort Rock, OR** 44.24 323 P P **10 42 28.2 +0.6**
baz=126
L04D **Klamath Falls** 44.26 322 P P **10 42 29.0 +1.3**
baz=124
J04D **Umpqua Nationa** 44.73 323 P P **10 42 32.7 +1.2**
baz=126
NEW **Newport** 45.34 331 P P **10 42 36.1 0.0**
baz=135
I03D **Drain, OR** 45.73 323 P P **10 42 40.2 +1.0**
baz=124
J01E **Myrtle Point** 45.78 322 P P **10 42 40.4 +0.8**
baz=123
BDFB **Brasilia** 46.30 124 P P **10 42 44.7 +0.5**
comp=Z,4.5nm,0.6s,baz=307,slow=9.0,SNR=5.0
comp=Z,4.5nm,0.6s
BDFB **Brasilia** 46.30 124 IAmb IAmb 10 42 46.2
comp=Z,7.3nm,1.0s
G03D **McMinnville, O** 46.56 324 P P **10 42 46.9 +1.2**
baz=126
SCHQ **Schefferville** 46.71 16 P P **10 42 43.8 -3.0**
comp=Z,4.5nm,0.7s,baz=210,slow=5.8,SNR=14
SCHQ LR LR 11 03 02.6
comp=Z,128nm,18.9s,baz=236,slow=37
comp=Z,4.5nm,0.7s
RCBR **Riachuelo** 53.06 106 LR LR 11 08 08.5
comp=Z,106nm,19.9s,baz=86,slow=38
YKA **Yellowknife Ar** 55.51 345 P P **10 43 51.0 -1.7**
comp=Z,2.4nm,1.0s,baz=136,slow=7.5,SNR=18
YKA PcP PcP **10 44 52.5 +0.2**
comp=Z,0.4nm,0.7s,baz=141,slow=4.2,SNR=4.9
YKA LR LR 11 12 00.9
comp=Z,59nm,18.5s,baz=279,slow=41
comp=Z,2.4nm,1.0s
DLBC **Dease Lake** 57.84 335 P P **10 44 09.1 -0.3**
DLBC IAmb IAmb 10 44 18.2
comp=Z,5.0nm,0.9s
DLBC **Dease Lake** 57.84 335 P P **10 44 09.8 +0.4**
baz=127,SNR=6.1
P33M **Teslin, Yukon** 60.05 335 P P **10 44 24.5 -0.2**
baz=125
N32M **Quiet Lake** 60.70 336 P P **10 44 29.2 +0.1**
baz=125
SFJD **Kangerlussuaq** 61.16 15 LR LR 11 11 24.1
comp=Z,116nm,18.3s,baz=216,slow=37
O30N **Mendenhall** 61.71 335 P P **10 44 35.9 -0.1**
baz=122
P30M **Million Dollar** 61.74 334 P P **10 44 36.3 +0.1**
baz=120
M31M **Drury Creek, Y** 61.81 337 P P **10 44 37.0 +0.4**
baz=124
N30M **Aishikik Lake** 62.48 335 P P **10 44 41.0 -0.1**
baz=121
M30M **Minto, Yukon** 62.95 336 P P **10 44 43.7 -0.5**
baz=122
BVCY **Beaver Creek** 64.51 335 P P **10 44 54.0 -0.5**
baz=118
DAWY **Dawson** 64.73 337 P P **10 44 55.3 -0.6**
baz=120
M27K **Edge Creek, AK** 64.90 335 P P **10 44 57.0 -0.1**
baz=117
EPYK **Eagle Plains** 64.99 340 P P **10 44 57.4 -0.2**
baz=123
I29M **Ogilvie Camp,** 64.99 339 P P **10 44 57.2 -0.4**
baz=121
INK **Inuvik** 65.12 343 P P **10 44 56.8 -1.5**
comp=Z,3.8nm,1.0s,baz=113,slow=8.7,SNR=4.2
comp=Z,3.8nm,1.0s
INK **Inuvik** 65.12 343 P P **10 44 56.9 -1.4**
INK IAmb IAmb 10 44 58.4
comp=Z,6.9nm,1.2s
INK **Inuvik** 65.12 343 P P **10 44 57.4 -0.8**
baz=127
BCAR **Beaver Creek A** 65.19 336 P P **10 44 59.0 0.0**
L27K **Beaver Creek,** 65.20 336 IAmb IAmb 10 45 06.7
comp=Z,4.2nm,0.9s
L27K **Beaver Creek,** 65.20 336 P P **10 44 58.5 -0.5**
baz=117
K27K **Chicken** 65.75 337 P P **10 45 01.9 -0.6**
baz=117
L26K **Log Cabin Wild** 65.81 335 P P **10 45 04.1 +1.2**
baz=115
EYAK **Cordova Ski Ar** 65.84 332 P P **10 45 03.0 0.0**
baz=112
KLU **Klutina** 66.28 333 P P **10 45 05.6 -0.4**
baz=112
SCRK **Sand Creek** 66.48 336 P P **10 45 07.8 +0.5**
baz=115
J26L **Joseph Creek** 66.54 337 IAmb IAmb 10 45 15.6
comp=Z,4.0nm,0.9s
J26L **Joseph Creek** 66.54 337 P P **10 45 07.6 0.0**
baz=116,SNR=6.0
RIDG **Independent Ri** 66.72 336 P P **10 45 08.5 -0.2**
baz=114
I26K **Coal Creek Min** 66.74 338 IAmb IAmb 10 45 16.1
comp=Z,4.2nm,0.8s
I26K **Coal Creek Min** 66.74 338 P P **10 45 08.4 -0.4**
baz=116
J25K **Salcha River,** 67.29 336 IAmb IAmb 10 45 20.1

comp=Z,3.1nm,0.8s

J25K	**Salcha River,** baz=114	67.29	336	P	P	10 45 12.4	0.0	
SML	**Sawmill** baz=110	67.46	333	P	P	10 45 13.6	+0.1	
WAT6	**Susitna Watana** baz=111	67.48	334	P	P	10 45 13.6	-0.1	
HDA	**Harding Lake** comp=Z,6.7nm,1.2s	67.84	336	IAmb	IAmb	10 45 16.8		
HDA	**Harding Lake** baz=112	67.84	336	P	P	10 45 15.3	-0.5	
BRSE	**Bradley Lake S** baz=107	67.91	331	P	P	10 45 17.0	+0.6	
ILAR	**Eielson Array** comp=Z,2.0nm,1.0s,baz=140,slow=4.3,SNR=7.8 comp=Z,2.0nm,1.0s	67.95	336	P	P	10 45 15.8	-0.7	
MCK	**McKinley** baz=110	68.40	335	P	P	10 45 19.1	-0.2	
CAPN	**Captain Cook N** baz=107	68.42	332	P	P	10 45 20.3	+0.9	
SUA	**Susitna One** baz=108	68.44	332	P	P	10 45 19.3	-0.4	
H24K	**Noodor Dome** baz=112	68.75	337	P	P	10 45 21.1	-0.4	
NEA2	**Nenana** baz=110	68.76	336	P	P	10 45 21.0	-0.5	
TRF	**Thorofare Moun** baz=109	68.87	334	P	P	10 45 22.0	-0.5	
SKT	**Skwentna** baz=107	68.95	333	P	P	10 45 22.7	-0.1	
I23K	**Minto, Yukon-K** comp=Z,6.8nm,1.2s	69.07	336	IAmb	IAmb	10 45 24.2		
I23K	**Minto, Yukon-K** baz=110	69.07	336	P	P	10 45 23.1	-0.3	
BPAW	**Bear Paw Mtn.** comp=Z,6.0nm,0.9s	69.38	335	IAmb	IAmb	10 45 32.6		
BPAW	**Bear Paw Mtn.** baz=108	69.38	335	P	P	10 45 24.6	-0.8	
CHIR	**Chirikof Islan** baz=101	69.47	326	P	P	10 45 26.1	0.0	
MLY	**Manley** comp=Z,4.5nm,0.9s	69.58	336	IAmb	IAmb	10 45 34.4		
MLY	**Manley** baz=109,SNR=8.9	69.58	336	P	P	10 45 25.8	-0.9	
CAST	**Castle Rocks** baz=107	69.63	334	P	P	10 45 25.7	-1.3	
D25K	**Kavik River** baz=115	69.63	341	P	P	10 45 26.5	-0.4	
M20K	**Styx River** baz=106	69.65	332	P	P	10 45 26.5	-0.7	
G23K	**Bananza Creek** baz=110	69.88	338	P	P	10 45 28.2	-0.3	
N19K	**Bonanza Creek** baz=104	70.00	331	P	P	10 45 28.8	-0.6	
Q17K	**Contact Creek** baz=102	70.11	328	P	P	10 45 29.4	-0.7	
H22K	**Ishtalitna Cre** baz=109	70.12	337	P	P	10 45 29.1	-0.8	
O18K	**Koktuh Hills** baz=103	70.12	330	P	P	10 45 29.7	-0.3	
I21K	**Tanana** comp=Z,4.5nm,1.1s	70.13	336	IAmb	IAmb	10 45 37.7		
I21K	**Tanana** baz=108	70.13	336	P	P	10 45 28.8	-1.1	
L20K	**Farewell, AK** baz=105	70.15	333	P	P	10 45 29.2	-1.0	
M19K	**Big River Lodg** baz=104	70.23	332	P	P	10 45 30.1	-0.6	
TOLK	**Toolik Lake Re** baz=111	70.42	340	P	P	10 45 31.4	-0.3	
K20K	**Telida** comp=Z,6.5nm,1.2s	70.47	334	IAmb	IAmb	10 45 32.4		
K20K	**Telida** baz=105,SNR=5.9	70.47	334	P	P	10 45 31.4	-0.7	
L19K	**White Mountain** baz=104	70.51	332	P	P	10 45 31.7	-0.7	
P17K	**Kvichak River** baz=102	70.59	329	P	P	10 45 32.4	-0.5	
H21K	**Melozitna Rive** baz=107	70.60	336	P	P	10 45 32.5	-0.3	
N18K	**Kilae Creek** baz=103	70.64	331	P	P	10 45 33.0	-0.2	
J20K	**Nowinta River**	70.72	335	P	P	10 45 32.4	-1.2	
J20K	**Nowinta River** baz=106	70.72	335	P	P	10 45 33.5	-0.1	
D23K	**Nanushuk River** baz=110	70.91	340	P	P	10 45 34.7	0.0	
E22K	**Anaktuvuk Pass** baz=109	71.02	339	P	P	10 45 35.2	-0.2	
O17K	**Koliganek Bris** baz=101	71.03	330	P	P	10 45 35.9	+0.3	
G21K	**Allakaket** baz=107	71.13	337	P	P	10 45 35.9	-0.1	
TTA	**Tatalina** baz=103	71.22	333	P	P	10 45 36.4	-0.3	
F21K	**Alatna River** baz=107	71.33	338	P	P	10 45 37.1	-0.2	
O16K	**Kokwok River B** baz=100	71.50	329	P	P	10 45 38.5	+0.1	
ANM	**Nome** baz=95	75.59	334	P	P	10 46 02.0	-0.3	
TORD	**Torodi Ar. Bea** comp=Z,0.5nm,0.8s,baz=270,slow=5.8,SNR=1.5 comp=Z,0.5nm,0.8s	85.96	77	P	P	10 46 55.9	-2.8	
SONM	**Songino Array** comp=Z,0.3nm,0.4s,baz=22,slow=1.6,SNR=2.2	120.59	350	PKP	PKPdf	10 53 10.2	+0.4	
KSRS	**Korea Array** comp=Z,1.1nm,0.8s,baz=5.6,slow=1.4,SNR=7.8	122.20	328	PKP	PKiKP	10 53 14.2	+1.1	
CMAR	**Chiang Mai Arr** comp=Z,1.1nm,0.3s,baz=343,slow=2.8,SNR=5.3	150.52	349	PKPbc	PKPbc	10 54 11.4	+1.0	
PALK	**Pallekele** comp=Z,10.0nm,1.0s,baz=198,slow=6.4,SNR=3.8	158.11	36	PKP	PKPdf	10 54 17.5	+1.7	

*GCMT **30** 10:46:16.5±0.4, 1°.19N±0°.03×121°.77E±0°.03, h44km±1km, MW4.9/47, Moment Tensor Solution. s36,c43; s47,c66; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.69±.17; $M_{\theta\theta}$-2.58±.09; $M_{\phi\phi}$-0.11±.12; $M_{r\theta}$-0.88±.07; $M_{\theta\phi}$0.36±.09; M_{rr}0.11±.11; Best double couple: $M_0$2.80400×10^{16} NP1:ϕ_s98.00000°, δ36.00000°, λ91.00000°. NP2: ϕ_s278.00000°, δ54.00000°, λ90.00000°. Principal axes: T 2.8340, Plg81.0000°, Azm186.0000°; N -0.0670, Plg0.0000°, Azm278.0000°; P -2.7740, Plg9.0000°, Azm8.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **30** 10:46:18.6±0.2, 1°.2°×12°.2E±°, h53km±2km, M4.9/61, mb5.0/61, mB5.4/28, MLv5.3/29, Mw(mB)4.9/28, MwMwp4.8/6, Mwp5.1/6*

*NEIC **30** 10:46:19.5±2.1, 1°.08N±0°.04×121°.74E±0°.04, h54km±5km, mb4.8/97, Error ellipse: s-maj=7.2km s-min=4.0km az=133.0*

*BJI **30** 10:46:20.0±0.0, 1°.10N×121°.80E, h60km, mb4.8/51, mB4.9/25, Ms4.2/19, Ms7 3.9/20*

*IDC **30** 10:46:20.2±1.6, 0°.97N×121°.86E, h70km±14km, mb4.2/29, mbtmp4.6/33, MS3.8/20, Error ellipse: s-maj=13.9km s-min=7.9km az=75.0*

ISC 30 10:46:18.3±0.4, 1°.03N±0°.03×121°.79E±0°.04, h51km±3km, **h51**km:**pP-P, n428,** σ1§**20**/438, **mb4.8**/93, **MS3.8**/26, **5C-5D, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MRSI	**Marisa**	0.56	165	P		P	Pn	10 46 30.0	-0.4
MRSI				S		S	Sn	10 46 39.0	-0.1
TOLI2	**Tolitoli**	1.01	275				Pn	10 46 34.5	-1.8
TOLI2	**Tolitoli**	1.01	275	P		P	Pn	10 46 35.0	-1.2
APSI	**Ampana**	1.93	184	P		P	Pn	10 46 50.8	+2.1
MPSI	**Mapaga**	2.02	250	P		P	Pn	10 46 50.1	+0.3
KMSI	**Cibinong**	2.23	102	P		P	Pn	10 46 53.2	+0.4
LUWI	**Luwuk**	2.27	155	Pn		P	Pn	10 46 55.9	+2.5
LUWI	**Luwuk**	2.27	155	P		P	Pn	10 46 55.4	+2.0
LUWI	**Luwuk**	2.27	155	P		P	Pn	10 46 56.4	+3.0
TTSI	**Tana Toraja**	4.50	206	P		P	Pn	10 47 25.4	+1.5
SGSI	**Sangihe**	4.57	55	P		P	Pn	10 47 23.3	-1.7
SMKI	**Samarinda**	4.81	252	P		P	Pn	10 47 29.6	+1.4
SANI	**Sanana** 2.4nm4µm273nm,0.5s	5.19	126	P		P	Pn	10 47 33.7	+0.3
SANI	**Sanana**	5.19	126	P		P	Pn	10 47 33.9	+0.5
MYLDM	**Lahad Datu**	5.28	322	Pn		Pn	Pn	10 47 35.6	+1.0
SPSI	**Sidrap Palu** 1.8nm3µm4µm555nm,0.9s	5.35	202	P		P	Pn	10 47 36.9	+1.2
BKB	**Balikpapan**	5.40	245	Pn		Pn	Pn	10 47 36.6	+0.3
BKB	**Balikpapan**	5.40	245	P		P	Pn	10 47 36.6	+0.3
TNTI	**Ternate** 1.3nm3µm4µm313nm,0.9s	5.58	93				Pn	10 47 39.0	+0.3
TNTI	**Ternate** 0.4nm76nm,0.9s	5.58	93	P		P	Pn	10 47 39.6	+0.9
BNSI	**Bone** 1.9nm4µm605nm,0.9s	5.65	197	P		P	Pn	10 47 42.1	+2.4
ZCP	**Zamboanga City**	5.88	3	↓	*i*	P	Pn	10 47 42.0	-0.8
ZCP					*i*	S	Sn	10 48 45.5	-3.3
GSPH	**General Santos**	5.93	32	↑	*i*	P	Pn	10 47 42.6	-1.1
GSPH					*i*	S	Sn	10 48 46.0	-4.5
LBMI	**Labuha** 1.7nm2µm158nm,0.5s	5.94	106	P		P	Pn	10 47 45.2	+1.5
KAPI	**Kappang** 28nm,0.8s,baz=32,slow=11,SNR=15	6.34	199	P		P	Pn	10 47 50.5	+1.3
KAPI	64nm,0.5s,baz=157,slow=17,SNR=1.7					S	Sn	10 49 05.2	+5.0
KAPI	**Kappang**	6.34	199				Pn	10 47 50.2	+1.0
KAPI	**Kappang**	6.34	199	P		P	Pn	10 47 51.0	+1.8
BBSI	**Bau Bau** 0.2nm457nm42nm,0.7s	6.51	173	P		P	Pn	10 47 53.7	+2.1
BKSI	**Bulukumba** 0.5nm1µm134nm,0.7s	6.52	195	P		P	Pn	10 47 52.5	+0.8
CTBH	**Cotabato--PC H**	6.62	22	↑	*e*	P	Pn	10 47 50.9	-2.2
NLAI	**Namlea** 2.6nm44µm5µm414nm,0.6s	6.79	129	P		P	Pn	10 47 57.1	+1.8
KCP	**Kidapawan**	6.79	29	↓	*e*	P	Pn	10 47 54.3	-1.2
PAGZ	**Pagadian**	6.96	13	↑	*i*	P	Pn	10 47 55.5	-2.2
DAV	**Davao City (W)** 191nm,0.3s,baz=223,slow=0.8,SNR=14	7.09	32	P		P	Pn	10 48 00.4	+0.8
DAV	267nm,0.5s,baz=111,slow=22,SNR=1.9					S	Sn	10 49 21.4	+2.6
DAV	comp=Z,1µm,20.3s,baz=212,slow=39					LR	LR	10 50 56.6	
DAV	**Davao City (W)**	7.09	32				Pn	10 48 00.5	+1.0
MTKI	**Muara Teweh, K** 0.9nm74nm,0.8s	7.17	254	P		P	Pn	10 48 01.1	+0.5
BSSI	**Bau Bau, Buton** 0.4nm1µm116nm,0.7s	7.24	190	P		P	Pn	10 48 03.1	+1.6
KKM	**Kota Kinabalu**	7.47	312	Pn			Pn	10 48 04.9	0.0
KKM	**Kota Kinabalu**	7.47	312	P			Pn	10 48 05.5	+0.7
BUKP	**Musuan**	7.55	25	↓	*e*	P	Pn	10 48 04.6	-1.3
AAI	**Ambon** 1.1nm4µm4µm348nm,1.1s	7.93	126	P		P	Pn	10 48 12.7	+1.7
BBKI	**Banjar Baru** 0.5nm5µm87nm,0.7s	8.26	237	P		P	Pn	10 48 16.9	+1.4
MSAI	**Masohi** 539nm38nm,0.6s	8.35	121	P		P	Pn	10 48 18.4	+1.6
SNPH	**Sibulan**	8.39	10	↑	*i*	P	Pn	10 48 17.6	+0.3
TBP	**Tagbilaran**	8.85	13	*e*		P	Pn	10 48 22.9	-0.8
PPR	**Puerto Princes**	9.21	341	↑	*i*	P	Pn	10 48 29.2	+0.6
SWI	**Sorong** 62nm,0.7s	9.65	101	P		P	Pn	10 48 36.0	+1.4
SIJI	**Sorong** 22nm,0.7s,baz=124,slow=21,SNR=2.2	9.66	101	P		P	Pn	10 48 34.4	-0.3
SIJI	17nm,0.8s,baz=13,slow=23,SNR=1.8					S	Sn	10 50 24.0	+2.1
SBUM	**Sibu**	9.67	279				Pn	10 48 35.2	+0.3
EDFI	**Ende, Flores** 28nm,0.9s	9.71	181	P		P	Pn	10 48 37.0	+1.5
STKI	**Sintang** 23nm,0.6s	10.36	265	P		P	Pn	10 48 45.8	+1.5
RCP	**Roxas**	10.51	5	↓	*e*	P	Pn	10 48 48.8	+2.4
FAKI	**Fak Fak**	11.16	111				Pn	10 48 54.1	-1.1
FAKI	**Fak Fak** 47nm,0.8s	11.16	111	P		P	Pn	10 48 54.5	-0.8
FAKI	**Fak Fak**	11.16	111	P			Pn	10 48 54.2	-1.1
KSM	**Kuching**	11.49	272				Pn	10 48 60.0	+0.2
JAGI	**Jajag, Banyuwa**	12.12	219	Pn			Pn	10 49 09.1	+0.7
JAGI	**Jajag, Banyuwa** 111nm,1.0s	12.12	219	P		P	Pn	10 49 09.0	+0.6
GMJI	**Gumukmas** 39nm,0.9s	12.43	222	P		P	Pn	10 49 14.7	+2.1
TGY	**Tagaytay City** 106nm,0.4s,baz=168,slow=9.5,SNR=4.0	13.02	356	P		P	Pn	10 49 24.6	+3.9
SMRI	**Semarang**	13.88	235	Pn			Pn	10 49 33.3	+0.8
SMRI	**Semarang** 105nm,1.1s	13.88	235	P		P	Pn	10 49 34.3	+1.9
WOJI	**Wonogiri, Jawa** 21nm,1.2s	13.96	231	P		P	Pn	10 49 35.5	+2.0
TPI	**Tanjungpandan** 14nm,1.0s	14.63	255	P		P	Pn	10 49 44.1	+1.8
LEM	**Lembang** 40nm,0.8s,baz=336,slow=21,SNR=1.8	16.16	241	P		P	Pn	10 50 02.8	+0.6
MTN	**Manton Dam** baz=17,SNR=25	16.61	146	P		P	Pn	10 50 08.5	+0.8
MTN	**Manton Dam**	16.61	146	Pn		P		10 50 08.7	-0.8
MTN				IAmb		IAmb	IAmb	10 50 24.6	
MTN	comp=Z,102nm,1.3s **Manton Dam**	16.61	146	P		Pn	Pn	10 50 08.1	+0.4
CBJI	**Citeko** comp=Z,21µmcomp=Z,90nm,0.6s	16.65	243	P		P	Pn	10 50 10.5	+0.5
DBJI	**Dramaga** comp=Z,57nm,0.9s	16.80	243	P		P	Pn	10 50 10.5	+0.4
CNJI	**Cibinong** comp=Z,2µmcomp=Z,154nm,1.2s	16.81	240	P		P	P	10 50 12.1	+0.3
KDU	**Kakadu** baz=17,SNR=7.4	17.26	142	P		P	P	10 50 16.7	0.0
KDU	**Kakadu**	17.26	142	P		P	Pn	10 50 16.2	+0.4
KNRA	**Kununurra** baz=18,SNR=37	17.97	158	P		P	Pn	10 50 25.0	+0.5
KNRA	**Kununurra** comp=Z,72nm,0.9s	17.97	158				Pn	10 50 25.4	+0.9
KNRA				IAmb		IAmb	IAmb	10 50 28.3	
KNRA	**Kununurra**	17.97	158	P		P	Pn	10 50 24.7	+0.2
KASI	**Kota Agung** comp=Z,75nm,1.1s	18.46	249	P		P	Pn	10 50 31.4	+0.9
LWLI	**Liwa** comp=Z,100nm,0.8s	18.70	251	P		P	Pn	10 50 34.7	+1.1
GENI	**Genyem** comp=Z,73nm,0.8s	18.72	101	P		P	Pn	10 50 33.9	+0.2
KRJI	**Kerinci**	20.56	261	P		P	P	10 50 53.5	+0.4
IPM	**Ipoh**	21.02	280	P		P	P	10 50 57.7	-0.2
QIZ	**Qiongzhong**	21.39	328	P		P	P	10 51 05.5	+3.7
QIZ	comp=Z,310nm,11.4s					LR	LR		
QIZ	comp=Z,220nm,12.0s					LR	LR		
QIZ	comp=Z,190nm,15.5s					LR	LR		
KULM	**Kulim**	21.53	282	P		P	P	10 51 02.9	-0.5
KULM						pP	pP	10 51 12.9	-2.3
MBWA	**Marble Bar**	22.14	185	P		P	P	10 51 08.7	-1.1
MBWA	**Marble Bar**	22.14	185	P		P	P	10 51 09.1	-0.7
TPUB	**Ta-pu**	22.17	357	P		P	P	10 51 11.6	+1.4
TPUB	comp=Z,46nm,0.9s					IAmb	IAmb	10 51 27.6	
MNSI	**Mandailing Nat** comp=Z,68nm,0.8s	22.21	270	P		P	P	10 51 11.1	+0.4
YULB	**Yu-li**	22.24	359	P		P	P	10 51 11.2	+0.3
YULB	comp=Z,30nm,1.0s					IAmb	IAmb	10 51 15.9	
PSA00	**Pilbara Seismi**	22.54	185	P		P	P	10 51 12.5	-1.6
PSA00	comp=Z,27nm,0.9s					IAmb	IAmb	10 51 35.0	
PSA00	**Pilbara Seismi**	22.54	185	P		P	P	10 51 12.4	-1.7
SSLB	**Suanglung**	22.64	358	P		P	P	10 51 14.5	-0.7
SSLB	comp=Z,22nm,0.7s					IAmb	IAmb	10 51 27.3	
SISI	**Saibi** comp=Z,85nm,0.9s	22.82	264	P		P	P	10 51 15.8	-1.4
RPSI	**Rantau Prapat**	22.92	274	P		P	P	10 51 17.5	-0.7
RPSI	comp=Z,40nm,1.0s					IAmb	IAmb	10 51 19.9	
YOJ	**Yonaguni jima**	23.33	3	P		P	P	10 51 22.8	+0.7
TSI	**Tuntungan**	23.34	276	P		P	P	10 51 23.0	+0.7
KCSI	**Kotacane, Aceh** comp=Z,1µmcomp=Z,84nm,1.1s	24.13	276	P		P	P	10 51 28.2	-1.5
WRAB	**Tennant Creek**	24.20	150	P		P	P	10 51 28.7	-1.5
WRAB	comp=Z,50nm,0.9s					IAmb	IAmb	10 51 30.6	
WRAB	**Tennant Creek**	24.20	150	P		P	P	10 51 28.8	-1.4
WRA	**Warramunga Arr** comp=Z,41nm,0.9s,baz=323,slow=11,SNR=206	24.20	150	P		P	P	10 51 28.7	-1.5
WRA	comp=Z,2.6nm,0.8s,baz=320,slow=2.2,SNR=4.9					PcP	PcP	10 55 09.0	-1.0
WRA	comp=Z,2.6nm,0.9s,baz=331,slow=16,SNR=2.7					S	S	10 55 39.6	-5.6
WRA	comp=Z,197nm,18.9s,baz=76,slow=41 comp=Z,41nm,0.9s					LR	LR	11 02 58.2	
WRA	**Warramunga Arr**	24.20	150	P		P	P	10 51 28.8	-1.5
WB2	**Warramunga Arr** comp=Z,62nm,0.9s	24.20	150	IAmb		IAmb	IAmb	10 51 30.6	
GSI	**Gunungsitoli**	24.21	271	P		P	P	10 51 29.6	-0.9
GSI	**Gunungsitoli** comp=Z,8µmcomp=Z,159nm,0.8s	24.21	271	P		P	P	10 51 29.6	-0.9
WC3	**Warramunga Arr** baz=24	24.23	150	P		P	P	10 51 29.1	-1.3
GIRL	**Giralia** baz=25,SNR=5.5	24.65	197	P		P	P	10 51 34.2	0.0
GIRL	**Giralia**	24.65	197	P		P	P	10 51 33.9	-0.4
COEN	**Coen** baz=26,SNR=4.7	25.89	126	P		P	P	10 51 46.3	+0.6
COEN	**Coen**	25.89	126	P		P	P	10 51 46.9	+1.2
GUMO	**Guam** comp=Z,84nm,21.6s,baz=240,slow=34	26.03	60	LR		LR	LR	11 00 51.7	
JOW	**Kunigami** comp=Z,9.3nm,0.8s,baz=173,slow=11,SNR=5.6	26.41	13	P		P	P	10 51 50.0	-0.1
JOW	comp=Z,209nm,21.8s,baz=169,slow=34 comp=Z,9.3nm,0.8s			LR		LR	LR	11 01 31.4	
JOW	**Kunigami** comp=Z,24nm,1.1s	26.41	13	IAmb		IAmb	IAmb	10 51 55.4	
WRKA	**Warakurna** baz=27,SNR=41	26.66	167	P		P	P	10 51 51.6	-0.9
WRKA	**Warakurna**	26.66	167	P		P	P	10 51 51.7	-0.9
ASAR	**Alice Springs** comp=Z,12nm,0.6s,baz=343,slow=13,SNR=270	27.22	155	P		P	P	10 51 56.6	-1.0
ASAR				PcP		PcP	PcP	10 55 16.1	-0.8
ASAR	comp=Z,7.0nm,0.6s,baz=345,slow=2.4,SNR=13			S		S	S	10 56 30.8	-2.4
ASAR	comp=Z,2.0nm,0.8s,baz=332,slow=17,SNR=5.5			ScP		ScP	ScP	10 58 48.9	-4.3
ASAR	comp=Z,0.9nm,0.9s,baz=328,slow=3.3,SNR=2.6			LR		LR	LR	11 03 24.0	
ASAR	comp=Z,372nm,20.4s,baz=316,slow=38 comp=Z,12nm,0.6s								
ASAR	**Alice Springs**	27.22	155	P		P	P	10 51 56.9	-0.7
ASAR							PcP	10 55 15.3	-1.6
PMG	**Port Moresby** comp=Z,21nm,0.7s,baz=335,slow=7.5,SNR=5.4	27.30	113	P		P	P	10 51 57.6	-0.8
PMG	comp=Z,167nm,20.8s,baz=245,slow=41 comp=Z,21nm,0.7s			LR		LR	LR	11 04 54.1	
PMG	**Port Moresby**	27.30	113	P		P	P	10 51 58.5	+0.1
PMG	comp=Z,42nm,1.1s			IAmb		IAmb	IAmb	10 52 08.2	
QIS	**Mount Isa** baz=28,SNR=20	27.65	142	P		P	P	10 52 00.8	-0.7
QIS	**Mount Isa**	27.65	142	P		P	P	10 52 01.1	-0.3
CMAR	**Chiang Mai Arr** comp=Z,1.4nm,0.3s,baz=149,slow=8.2,SNR=6.8	28.34	309	P		P	P	10 52 09.1	+1.5
CMAR	comp=Z,307nm,20.7s,baz=125,slow=38 comp=Z,1.4nm,0.3s			LR		LR	LR	11 04 16.0	
CHTO	**Chiang Mai**	28.54	310	P		P	P	10 52 08.9	-0.5
CHTO				pP		pP	pP	10 52 22.1	-0.4
MTSU	**Mount Surprise** baz=29,SNR=8.4	29.22	132	P		P	P	10 52 15.6	+0.1
MORW	**Morawa** baz=30,SNR=5.1	30.43	190	P		P	P	10 52 25.4	-0.6
MORW	**Morawa**	30.43	190	P		P	P	10 52 25.2	-0.8
NJ2	**Nanjing**	30.98	355	*e*	P	P	P	10 52 34.8	+4.0
NJ2	comp=Z,14nm,0.5s			pmax		pmax			
OOD	**Oodnadatta**	31.61	156	P		P	P	10 52 35.9	-0.5
BLDU	**Ballidu** baz=32,SNR=5.1	31.84	188	P		P	P	10 52 36.8	-1.5
BLDU	**Ballidu**	31.84	188	P		P	P	10 52 36.9	-1.5
PZH	**PanZhiHua**	31.84	324	P		P	P	10 52 40.0	+1.4
PZH				S		S	S	10 57 47.0	+1.1
PZH	comp=Z,10.0nm,0.9s			pmax		pmax			
PZH	comp=Z,50nm,4.2s			pmax		pmax			
PZH	comp=Z,410nm,23.5s			LR		LR			
PZH	comp=Z,330nm,24.0s			LR		LR			
PZH	comp=Z,820nm,22.5s			LR		LR			
CTA	**Charters Tower** comp=Z,8.7nm,0.9s,baz=299,slow=9.4,SNR=6.4	31.86	132	P		P	P	10 52 38.3	-0.5
CTA				PcP		PcP	PcP	10 55 29.5	+0.7
CTA	comp=Z,4.7nm,0.7s,baz=252,slow=6.4,SNR=4.1			LR		LR	LR	11 06 42.6	
FORT	comp=Z,158nm,18.7s,baz=298,slow=38 comp=Z,8.7nm,0.9s **Forrest** baz=32,SNR=10	32.19	170	P		P	P	10 52 40.6	-0.8
FORT	**Forrest**	32.19	170	P		P	P	10 52 40.7	-0.8
FORT	**Forrest**	32.19	170	P		P	P	10 52 40.7	-0.8
JCJ	**Chichijima** comp=Z,91nm,0.6s,baz=267,slow=2.4,SNR=11	32.48	35	P		P	P	10 52 43.9	-0.2
JCJ	comp=Z,40nm,18.8s,baz=275,slow=39			LR		LR	LR	11 07 35.2	
JCJ	**Chichijima**	32.48	35	P		P	P	10 52 43.9	-0.2
JCJ	**Chichijima**	32.48	35	P		P	P	10 52 44.3	+0.2
KLBR	**Kellerberrin** baz=33,SNR=4.3	32.66	186	P		P	P	10 52 44.4	-1.2
KLBR	**Kellerberrin** comp=Z,26nm,1.2s	32.66	186	P		P	P	10 52 44.8	-0.8
MULG	**Mulgathing**	33.26	160	P		P	P	10 52 50.4	-0.4
INKA	**Innaminka**	33.91	149	P		P	P	10 52 56.6	+0.1
NWAO	**Narrogin (SRO)**	34.04	187	P		P	P	10 52 57.7	+0.1
LYN	**LuoYang**	34.47	346	↓		P	P	10 53 04.5	+3.2
LYN	comp=Z,10.0nm,0.5s			pmax		pmax			
LYN	comp=Z,200nm,16.3s			LR		LR			
LYN	comp=Z,140nm,13.6s			LR		LR			
LYN	comp=Z,230nm,21.6s			LR		LR			
QLP	**Quilpie** baz=35,SNR=3.9	34.95	143	P		P	P	10 53 05.5	-0.1
QLP	**Quilpie**	34.95	143	P		P	P	10 53 05.9	+0.3
XAN	**Xi'an**	34.99	341	P		P	P	10 53 07.5	+1.7
XAN	comp=Z,6.0nm,1.0s			pmax		pmax			
LCRK	**Leigh Creek**	34.99	155	P		P	P	10 53 05.2	-0.6
BBOO	**Buckleboo** baz=36,SNR=8.3	36.25	159	P		P	P	10 53 15.8	-0.8
BBOO	**Buckleboo**	36.25	159	P		P	P	10 53 15.7	-0.9
KSRS	**Korea Array** comp=Z,1.8nm,0.7s,baz=189,slow=9.4,SNR=8.5	36.69	8	P		P	P	10 53 21.1	+0.8
KSRS				PcP		PcP	PcP	10 55 42.5	+0.3
KSRS	comp=Z,2.6nm,0.8s,baz=187,slow=3.0,SNR=8.3			LR		LR	LR	11 08 16.3	
RK1H	comp=Z,146nm,20.5s,baz=195,slow=36 comp=Z,1.8nm,0.7s **Rockhampton Ha**	36.99	133	P		P	P	10 53 23.5	+0.5
STKA	**Stephens Creek** comp=Z,34nm,0.8s,baz=322,slow=9.1,SNR=53	37.72	152	P		P	P	10 53 28.7	-0.4
STKA				PcP		PcP	PcP	10 55 44.6	-0.9
STKA	comp=Z,5.2nm,1.0s,baz=356,slow=11,SNR=3.1			LR		LR	LR	11 09 56.6	
STKA	comp=Z,176nm,21.6s,baz=293,slow=38 comp=Z,34nm,0.8s **Stephens Creek** baz=38,SNR=11	37.72	152	P		P	P	10 53 28.8	-0.4
STKA	**Stephens Creek**	37.72	152	P		P	P	10 53 28.9	-0.2
STKA	comp=Z,7.5nm,0.8s			IAmb		IAmb	IAmb	10 53 29.7	
STKA	**Stephens Creek**	37.72	152	P		P	P	10 53 28.7	-0.4
HTT	**Hallett** baz=38,SNR=36	37.88	156	P		P	P	10 53 30.4	-0.1
HTT	**Hallett**	37.88	156	P		P	P	10 53 30.6	+0.1
MAJO	**Matsushiro**	38.47	21	P		P	P	10 53 35.7	+0.3

baz=40,SNR=22
CMSA Cobar Meteorol 39.53 147 P P 10 53 44.5 +0.2
JMM Marumori 40.62 23 pP pP 10 54 08.2 +1.9
HHC Hu-ho-hao-te 40.71 348 *eP* **P 10 53 56.3 +2.2**
HHC pmax pmax
comp=Z,34nm,0.9s
HHC pmax pmax
comp=Z,140nm,4.5s
HHC LR LR
comp=Z,370nm,16.7s
HHC LR LR
comp=Z,240nm,17.3s
HHC LR LR
comp=Z,420nm,18.0s
LSA Lhasa 40.78 317 P **P 10 53 55.2 -0.1**
LSA IAmb IAmb 10 53 58.7
comp=Z,9.2nm,0.5s
PALK Pallekele 41.43 280 LR LR 11 11 52.5
comp=Z,188nm,21.1s,baz=206,slow=37
TAPN Taplejung 41.87 312 *eP* **P 10 54 05.3 +1.2**
comp=Z,43nm,0.7s
ARPS Mount Arapiles 41.96 156 P **P 10 54 04.3 0.0**
baz=42,SNR=10
ARPS Mount Arapiles 41.96 156 P **P 10 54 04.3 0.0**
ARMA Armidale 42.25 140 P **P 10 54 08.1 +1.2**
baz=42,SNR=11
ARMA Armidale 42.25 140 P **P 10 54 07.0 +0.1**
ARMA IAmb IAmb 10 54 28.7
comp=Z,16nm,0.9s
ARMA Armidale 42.25 140 P **P 10 54 07.8 +0.9**
RAMN Ramite 42.49 310 *eP* **P 10 54 10.6 +1.5**
comp=Z,56nm,0.8s
GOMU GeErMu 43.02 327 P **P 10 54 15.8 +2.5**
GOMU pmax pmax
comp=Z,3.0nm,0.9s
GTA Gaotai 43.15 335 *eP* **P 10 54 16.0 +1.9**
GTA pP pP 10 54 29.0 +1.7
GTA sP sP 10 54 35.5 +2.3
GTA PcP **PcP 10 56 03.5 +0.4**
GTA pmax pmax
comp=Z,9.0nm,1.0s
JIRN Jiri 43.17 311 *eP* **P 10 54 15.7 +0.9**
comp=Z,45nm,0.6s
GUN Gumba 43.54 311 *eP* **P 10 54 18.8 +1.1**
comp=Z,78nm,0.8s
PKI Pulchoki 43.72 310 *eP* **P 10 54 19.8 +0.7**
PKIN Phulchoki 43.73 310 *eP* **P 10 54 19.6 +0.5**
comp=Z,22nm,0.7s
USRK Ussuriysk Ar. 43.94 11 P **P 10 54 20.7 +0.6**
comp=Z,1.5nm,0.5s,baz=194,slow=6.9,SNR=5.0
USRK LR LR 11 12 56.2
comp=Z,86nm,20.3s,baz=234,slow=36
comp=Z,1.5nm,0.5s
MDJ Mudanjiang 43.95 8 P **P 10 54 22.0 +1.7**
MDJ pP pP 10 54 32.8 -0.8
MDJ ScP **ScP 10 59 57.5 +4.3**
MDJ S **S 11 00 50.5 +2.1**
MDJ pmax pmax
comp=Z,11nm,1.2s
MDJ pmax pmax
comp=Z,160nm,7.4s
MDJ LR LR
comp=Z,140nm,19.5s
MDJ LR LR
comp=Z,84nm,13.8s
MDJ LR LR
comp=Z,240nm,17.5s
DMN Daman 43.97 310 *eP* **P 10 54 22.0 +1.0**
CAN Canberra 44.20 148 P **P 10 54 23.3 +0.8**
CAN Canberra 44.20 148 P **P 10 54 23.0 +0.5**
TOO Toolangi 44.22 153 P **P 10 54 23.5 +0.9**
baz=44,SNR=7.0
TOO Toolangi 44.22 153 P **P 10 54 23.4 +0.8**
TOO IAmb IAmb 10 54 24.2
comp=Z,32nm,1.1s
TOO Toolangi 44.22 153 P **P 10 54 23.2 +0.6**
CNB Canberra Magne 44.39 147 P **P 10 54 25.0 +1.0**
baz=44,SNR=5.2
CNB Canberra Magne 44.39 147 P **P 10 54 24.8 +0.8**
GKN Gorkha 44.53 310 *eP* **P 10 54 26.1 +0.7**
comp=Z,53nm,0.9s
DANN Dangsing 45.37 310 *eP* **P 10 54 32.9 +0.7**
comp=Z,74nm,0.7s
KOUNC Koumac, New Ca 46.79 120 P **P 10 54 44.4 +1.2**
ULN Ulaanbaatar 48.38 347 P **P 10 54 56.5 +1.2**
ULN IAmb IAmb 10 54 57.4
comp=Z,9.1nm,0.8s
ULN pP **pP 10 55 06.3 -2.4**
SONM Songino Array 48.50 346 P **P 10 54 57.7 +1.5**
comp=Z,8.2nm,0.7s,baz=162,slow=8.7,SNR=55
SONM PcP **PcP 10 56 20.7 -0.8**
comp=Z,3.7nm,0.8s,baz=164,slow=4.1,SNR=4.9
SONM LR LR 11 16 21.9
comp=Z,212nm,20.1s,baz=162,slow=37
comp=Z,8.2nm,0.7s
SONM Songino Array 48.50 346 P **P 10 54 56.9 +0.8**
SONM IAmb IAmb 10 54 58.7
comp=Z,8.9nm,0.8s
KLR Kul'dur 48.78 9 P **P 10 54 58.0 -0.1**
comp=Z,1.5nm,0.6s,baz=210,slow=6.0,SNR=6.1
KLR LR LR 11 15 18.2
comp=Z,123nm,21.1s,baz=204,slow=36
comp=Z,1.5nm,0.6s
NOUC Port Laguerre 49.11 121 P **P 10 55 02.0 +0.9**
DZM Mont Dzumac 49.22 121 P **P 10 55 02.5 +0.4**
DZM Mont Dzumac 49.22 121 P **P 10 55 03.0 +1.0**
ONTNC Ouen Toro 49.32 121 P **P 10 55 03.6 +1.0**
LIFNC LIFOU 49.45 119 P **P 10 55 04.8 +1.1**
YATNC Mamie plateau, 49.60 120 P **P 10 55 06.5 +1.7**
OUENC Ouen Island, N 49.69 121 P **P 10 55 06.9 +1.4**
WMQ Urumqi 52.30 329 *eP* **P 10 55 24.0 -0.8**
WMQ pmax pmax
comp=Z,42nm,0.7s
KSH Kashi 56.62 318 P **P 10 55 58.3 +2.0**
KSH sP sP 10 56 20.3 +4.2
KSH PcP **PcP 10 56 53.5 +1.2**
KSH PcS **PcS 11 00 53.5 +0.4**
KSH pmax pmax
comp=Z,8.0nm,0.8s
MK31 Makanchi Array 57.12 329 IAmb IAmb 10 56 01.7
comp=Z,7.4nm,0.9s
MKAR Makanchi Array 57.12 329 P **P 10 56 00.7 +1.1**
comp=Z,6.3nm,0.8s,baz=124,slow=8.8,SNR=50
MKAR PcP **PcP 10 56 53.4 -0.5**
comp=Z,5.7nm,0.6s,baz=111,slow=4.4,SNR=6.9
MKAR LR LR 11 22 18.4
comp=Z,88nm,19.1s,baz=108,slow=38
comp=Z,6.3nm,0.8s
KDJ Kajisay 57.23 322 P **P 10 56 01.9 +1.2**
KDJ IAmb IAmb 10 56 03.4
comp=Z,9.5nm,0.8s
MSVF Nonsavu 58.40 111 P **P 10 56 10.1 +0.9**
MSVF Nonsavu 58.40 111 P **P 10 56 11.1 +1.9**
TKM2 Tokmak 2 58.64 322 P **P 10 56 12.0 +1.4**
SNR=9.8
KBK Karagaybulak 58.90 321 P **P 10 56 14.3 +1.9**
SNR=6.5
UCH Uchtor 58.96 320 P **P 10 56 14.9 +1.8**
SNR=7.9
AAK Ala-Archa 59.18 321 LR LR 11 23 13.9
comp=Z,57nm,21.4s,baz=116,slow=37
AAK Ala-Archa 59.18 321 P **P 10 56 15.3 +1.0**
AAK IAmb IAmb 10 56 17.0
comp=Z,7.9nm,0.9s
KBL Kabul 59.36 310 P **P 10 56 15.5 -0.3**
USP Ospenovka 59.50 321 P **P 10 56 18.0 +1.6**
SNR=7.6
EKS2 Erkin-Say 59.65 321 P **P 10 56 19.6 +2.1**
SNR=6.0
PETK Petropavlovsk- 59.84 24 P **P 10 56 17.9 -0.6**
comp=Z,1.3nm,0.3s,baz=202,slow=6.1,SNR=4.8
comp=Z,1.3nm,0.3s
ZAA0 Zalesovo Array 60.89 336 IAmb IAmb 10 56 41.7
comp=Z,14nm,1.1s
ZALV Zalesovo Beam 60.89 336 P **P 10 56 25.6 +0.1**
comp=Z,2.6nm,0.5s,baz=123,slow=5.5,SNR=13
ZALV LR LR 11 23 21.2
comp=Z,69nm,19.3s,baz=103,slow=36
comp=Z,2.6nm,0.5s
ZALV Zalesovo Beam 60.89 336 P **P 10 56 24.7 -0.9**
CHGR Chuyangaron 60.91 315 P **P 10 56 26.6 +0.4**
KURBB Kurchatov Arra 61.48 330 P **P 10 56 30.0 +0.3**
comp=Z,12nm,1.0s,baz=127,slow=6.4,SNR=8.9
comp=Z,12nm,1.0s
KURK Kurchatov 61.49 330 P **P 10 56 30.3 +0.5**
KK31 Karatay Array 61.96 320 P **P 10 56 33.3 +0.3**
KK31 IAmb IAmb 10 56 34.7
comp=Z,5.5nm,0.9s
KKAR Karatay Array 61.96 320 P **P 10 56 33.2 +0.1**
KKAR Karatay Array 61.96 320 IAmb IAmb 10 56 34.7
comp=Z,5.5nm,0.9s
QRZ Quartz Range 62.05 138 P **P 10 56 35.1 +1.4**
RPZ Rata Peaks 62.55 142 P **P 10 56 37.5 +0.4**
RPZ Rata Peaks 62.55 142 P **P 10 56 37.6 +0.6**
MA2 Magadan 62.58 16 P **P 10 56 37.7 +0.8**
comp=Z,8.9nm,0.7s,baz=201,slow=6.1,SNR=17
comp=Z,8.9nm,0.7s
MA2 Magadan 62.58 16 P **P 10 56 37.2 +0.3**
MA2 IAmb IAmb 10 56 38.6
comp=Z,10.0nm,0.8s
THZ Tophouse 62.75 139 P **P 10 56 37.1 -1.3**
KHZ Kahutara 63.48 139 P **P 10 56 43.2 +0.1**
SNZO South Karori 63.73 138 P **P 10 56 44.5 -0.3**
BKZ Black Stump Fm 64.02 135 P **P 10 56 46.9 0.0**
URZ Urewera 64.09 134 P **P 10 56 47.0 -0.3**
HRA Herat 64.59 308 IAmb IAmb 10 56 52.7
comp=Z,6.9nm,0.8s
WSAR Wadi Sarin 65.03 295 LR LR 11 25 17.0
comp=Z,28nm,21.7s,baz=118,slow=36
SEY Seymchan 65.82 15 P **P 10 56 58.7 +0.7**
comp=Z,2.8nm,0.9s,baz=240,slow=5.8,SNR=9.3
comp=Z,2.8nm,0.9s
GEYT Alibeck 68.81 311 P **P 10 57 18.2 +0.7**
comp=Z,6.7nm,0.7s,baz=101,slow=3.9,SNR=7.0
comp=Z,6.7nm,0.7s
ABKAR Akbulak array 71.19 322 P **P 10 57 31.1 -0.7**
ABKAR Akbulak array 71.19 322 P **P 10 57 32.0 +0.2**
ABKAR IAmb IAmb 10 57 32.9
comp=Z,11nm,0.8s
ATKA Atka Island 73.52 35 P **P 10 57 46.8 +1.2**
ARU Arti 74.64 329 P **P 10 57 51.2 -0.9**
ARU IAmb IAmb 10 57 52.5
comp=Z,15nm,0.7s
VOI Vohitsoka 76.48 247 P **P 10 58 01.6 -2.0**
VOI IAmb IAmb 10 58 03.2
comp=Z,15nm,0.8s
RAYN Ar Rayn 77.02 294 P **P 10 58 05.0 -1.4**
RAYN IAmb IAmb 10 58 06.8
comp=Z,13nm,0.8s
SPIA Saint Paul Isl 77.33 31 P **P 10 58 08.5 +1.1**
baz=252
UNV Unalaska Valle 78.44 35 P **P 10 58 14.7 +1.1**
baz=256
MAW Mawson 79.55 199 P **P 10 58 19.8 +0.4**
comp=Z,2.2nm,1.0s,baz=40,slow=1.8,SNR=3.6
comp=Z,2.2nm,1.0s
MAW Mawson 79.55 199 IAmb IAmb 10 58 22.1
comp=Z,1.1nm,1.1s
KBZ Khabaz 81.27 314 P **P 10 58 28.9 -0.2**
comp=Z,1.5nm,0.7s,baz=84,slow=6.6,SNR=3.8
comp=Z,1.5nm,0.7s
VNDA Vanda 81.42 172 P **P 10 58 28.3 -1.0**
comp=Z,2.2nm,0.6s,baz=330,slow=5.6,SNR=16
comp=Z,2.2nm,0.6s
VNDA Vanda 81.42 172 P **P 10 58 28.8 -0.5**
N16K Nishlik Lake 83.90 29 P **P 10 58 43.3 +0.7**
baz=261,SNR=12
P16K Nushagak River 84.08 31 P **P 10 58 44.1 +0.7**
baz=262
O16K Kokwok River B 84.11 30 P **P 10 58 44.1 +0.5**
baz=262,SNR=7.8
KMBO Kilima Mbogo 84.56 269 P **P 10 58 47.1 -0.1**
comp=Z,3.8nm,0.7s,baz=40,slow=9.5,SNR=6.6
comp=Z,3.8nm,0.7s
KMBO Kilima Mbogo 84.56 269 P **P 10 58 46.8 -0.4**
KMBO IAmb IAmb 10 58 50.0
comp=Z,6.9nm,1.1s
O17K Koligranek Bris 84.64 30 P **P 10 58 47.1 +0.9**
baz=263
R17K Ugashik Creek 84.75 32 P **P 10 58 46.4 -0.4**
baz=264
KLMR Klimovskoe 85.34 331 *eP* **P 10 58 47.9 -1.8**
KLMR AMP 10 58 49.7
comp=Z,40nm,0.8s
TTA Tatalina 85.53 27 P **P 10 58 51.3 +0.5**
baz=264
L19K White Mountain 85.99 28 P **P 10 58 53.9 +0.9**
baz=265
N19K Bonanza Creek 86.04 29 P **P 10 58 53.8 +0.5**
baz=265
M19K Big River Lodg 86.18 28 P **P 10 58 55.0 +1.0**
baz=265
Q19K Cape Douglas, 86.31 31 P **P 10 58 56.2 +1.5**
baz=266
K20K Telida 86.45 27 P **P 10 58 55.4 +0.1**
baz=265
L20K Farewell, AK 86.47 28 P **P 10 58 55.7 +0.3**
baz=266
J20K Nowinta River 86.49 26 P **P 10 58 55.6 +0.3**
J20K Nowinta River 86.49 26 P **P 10 58 55.7 +0.3**
baz=265,SNR=5.8
M20K Styx River 86.77 28 P **P 10 58 58.0 +1.0**
baz=266
KDAK Kodiak Island 86.80 32 P **P 10 58 57.6 +0.6**
baz=267
G21K Allakaket 86.94 24 P **P 10 58 58.1 +0.5**
baz=266
F21K Alatna River 87.01 23 P **P 10 58 58.1 +0.2**
baz=266
H21K Melozitna Rive 87.17 24 P **P 10 58 59.3 +0.6**
baz=266
CHUM Lake Minchumin 87.27 26 P **P 10 58 59.4 +0.3**
baz=267
PPLA Purkeypile 87.27 27 P **P 10 58 59.3 -0.1**
baz=267
CAST Castle Rocks 87.35 27 P **P 10 58 59.9 +0.3**
baz=267
I21K Tanana 87.48 25 P **P 10 59 00.3 +0.1**
baz=267,SNR=6.4
SKT Skwentna 87.53 28 P **P 10 59 01.0 +0.5**
baz=268
E22K Anaktuvuk Pass 87.71 22 P **P 10 59 01.6 +0.3**
baz=267
H22K Ishtalitna Cre 87.77 24 P **P 10 59 02.3 +0.7**
baz=268
BRSE Bradley Lake S 87.84 30 P **P 10 59 02.6 +0.6**
baz=268
BPAW Bear Paw Mtn. 87.86 26 P **P 10 59 02.1 +0.1**
baz=268
BRTR Keskin Array B 87.93 310 P **P 10 59 02.9 -0.2**
comp=Z,2.0nm,0.8s,baz=101,slow=3.9,SNR=6.3
comp=Z,2.0nm,0.8s
LVZ Lovozero 87.98 338 P **P 10 58 59.8 -2.8**
MLY Manley 88.00 25 P **P 10 59 02.5 -0.3**
MLY IAmb IAmb 10 59 04.0
comp=Z,5.7nm,0.9s
MLY pP **pP 10 59 17.0 -0.7**
MLY Manley 88.00 25 P **P 10 59 02.5 -0.3**
baz=268,SNR=9.0
CUT Chulitna 88.14 28 P **P 10 59 03.1 -0.2**
baz=269
TRF Thorofare Moun 88.16 27 P **P 10 59 03.6 0.0**
baz=269
D23K Nanushuk River 88.16 21 P **P 10 59 03.7 +0.4**
baz=268
M22K Willow 88.19 28 P **P 10 59 03.6 0.0**
baz=269
C23K Itkillik River 88.21 20 P **P 10 59 03.4 -0.1**
baz=268
G23K Bananza Creek 88.34 23 P **P 10 59 04.9 +0.6**
baz=269
SEW Seward 88.50 30 P **P 10 59 04.6 -0.4**
baz=269
H23K Yukon River 88.52 24 IAmb IAmb 10 59 06.9
comp=Z,4.1nm,0.8s
H23K Yukon River 88.52 24 P **P 10 59 05.3 +0.1**
baz=269,SNR=7.9
TOLK Toolik Lake Re 88.55 21 P **P 10 59 05.4 +0.1**
baz=269
I23K Minto, Yukon-K 88.59 25 IAmb IAmb 10 59 06.5
comp=Z,8.5nm,0.9s
I23K Minto, Yukon-K 88.59 25 P **P 10 59 05.2 -0.2**
baz=269,SNR=8.4
NEA2 Nenana 88.71 26 P **P 10 59 05.8 -0.3**
baz=270
MCK McKinley 88.76 26 P **P 10 59 06.0 -0.3**
baz=270
RND Reindeer 88.80 27 IAmb IAmb 10 59 06.7
comp=Z,4.8nm,0.9s
D24K Happy Valley 88.83 21 P **P 10 59 06.6 +0.2**
baz=270
C24K Franklin Bluff 88.87 20 P **P 10 59 06.5 -0.1**
baz=270
KNK Knik Glacier 88.99 29 P **P 10 59 07.7 +0.3**
baz=270
SML Sawmill 89.05 28 IAmb IAmb 10 59 08.0
comp=Z,5.2nm,0.8s
SML Sawmill 89.05 28 P **P 10 59 07.3 -0.4**
baz=270
WRH Wood River Hil 89.13 26 IAmb IAmb 10 59 07.8
comp=Z,4.4nm,1.0s
H24K Noodor Dome 89.21 24 P **P 10 59 09.1 +0.7**
H24K IAmb IAmb 10 59 10.6
comp=Z,4.8nm,0.8s
H24K Noodor Dome 89.21 24 P **P 10 59 08.1 -0.3**
baz=271,SNR=7.5
WAT6 Susitna Watana 89.31 28 P **P 10 59 08.5 -0.6**
baz=271
DHY Denali Highway 89.47 27 P **P 10 59 09.8 -0.1**
baz=271
SCM Sheep Creek Mo 89.52 28 P **P 10 59 10.0 0.0**
baz=271
HDA Harding Lake 89.63 26 IAmb IAmb 10 59 09.7
comp=Z,3.3nm,0.8s
HDA Harding Lake 89.63 26 P **P 10 59 09.4 -1.0**
baz=272
ILAR Eielson Array 89.65 25 P **P 10 59 08.6 -1.8**
comp=Z,0.5nm,0.6s,baz=249,slow=4.7,SNR=11
comp=Z,0.5nm,0.6s
D25K Kavik River 89.70 21 P **P 10 59 09.9 -0.7**
baz=272
M24K Tolsona, Glenn 90.06 28 P **P 10 59 12.5 0.0**
baz=272
Q23K Middleton Isla 90.07 31 P **P 10 59 12.4 -0.1**
baz=272
K24K Donnelly Dome 90.17 26 P **P 10 59 12.3 -0.6**
baz=273
KLU Klutina 90.20 29 P **P 10 59 12.7 -0.5**
baz=272
J25K Salcha River, 90.30 26 P **P 10 59 12.6 -1.0**
baz=273
PAX Paxson 90.34 27 P **P 10 59 13.6 -0.2**
baz=273
RIDG Independent Ri 90.58 26 P **P 10 59 14.7 -0.2**
baz=274
C27K Jago River 90.62 20 P **P 10 59 15.1 +0.2**
baz=275
AKASG Malin Array Be 90.85 321 P **P 10 59 14.8 -1.5**
comp=Z,0.3nm,0.3s,baz=70,slow=4.9,SNR=5.2
comp=Z,0.3nm,0.3s
SCRK Sand Creek 90.95 26 P **P 10 59 16.4 -0.3**
baz=274
QSPA South Pole Qui 90.95 180 P **P 10 59 15.8 -0.8**
J26L Joseph Creek 91.09 26 P **P 10 59 17.1 -0.1**
baz=275
I26K Coal Creek Min 91.20 25 IAmb IAmb 10 59 18.8
comp=Z,5.3nm,0.8s
I26K Coal Creek Min 91.20 25 P **P 10 59 17.3 -0.3**
baz=275
ARCES ARCESS Array B 91.25 340 P **P 10 59 15.9 -1.9**
comp=Z,2.4nm,0.7s,baz=88,slow=8.6,SNR=13
comp=Z,2.4nm,0.7s
ARCES ARCESS Array B 91.25 340 IAmb IAmb 10 59 17.2
comp=Z,3.8nm,0.8s
MNK Minsk 91.45 324 *i* P **P 10 59 16.6 -2.4**
comp=E,2.0nm,0.9s
MNK *i* P **P 10 59 16.6 -2.4**
comp=N,16nm,0.9s
MNK *i* P **P 10 59 16.6 -2.4**
comp=Z,21nm,1.4s,baz=86
MNK *i* PP **PP 11 02 54.6 -2.5**
MNK *i* PPP PPP 11 04 52.9
MNK *i* S **SKSac 11 09 44.2 -3.0**
MNK *i* SS **SS 11 16 20.0 -1.0**
MNK *i* SSS SSS 11 19 57.9
MNK *i* LR LR 11 37 51.2
MNK *i* LRM MLR 11 41 28.4
comp=N,316nm,16.6s
MNK *i* LRM MLR 11 42 02.4
comp=E,14nm,21.7s
MNK *i* LRM MLR 11 42 10.3
comp=Z,4μm,17.4s
M26K Nabesna, AK 91.52 28 P **P 10 59 19.4 +0.1**
baz=275
CRQE Cirque 91.62 29 P **P 10 59 20.0 +0.2**
baz=275
K27K Chicken 91.78 26 IAmb IAmb 10 59 22.2
comp=Z,6.8nm,1.1s
K27K Chicken 91.78 26 P **P 10 59 21.3 +1.0**
baz=276
FINES FINESS Array B 91.85 331 P **P 10 59 19.1 -1.5**
comp=Z,4.0nm,0.7s,baz=104,slow=8.0,SNR=17
comp=Z,4.0nm,0.7s
L27K Beaver Creek, 91.99 27 P **P 10 59 22.5 +1.1**
baz=276
M27K Edge Creek, AK 92.05 28 P **P 10 59 22.2 +0.4**
baz=276
MESA MESA 92.24 30 P **P 10 59 22.9 +0.1**
baz=276
CTG Chitna Glacier 92.45 29 P **P 10 59 24.1 +0.4**
baz=276
YUK3 Moose Creek 92.78 28 P **P 10 59 25.2 -0.1**
baz=277
DAWY Dawson 92.95 26 IAmb IAmb 10 59 26.8
comp=Z,2.5nm,0.8s
DAWY Dawson 92.95 26 P **P 10 59 25.6 -0.3**
baz=278,SNR=5.1
I29M Ogilvie Camp, 93.21 24 IAmb IAmb 10 59 27.8
comp=Z,5.6nm,0.9s
I29M Ogilvie Camp, 93.21 24 P **P 10 59 27.1 +0.1**
baz=280
PNL Peninsula 93.58 30 P **P 10 59 29.1 +0.3**
baz=278
EPYK Eagle Plains 93.67 23 P **P 10 59 28.7 -0.4**
baz=281
YUK4 Talbot Arm 93.70 28 P **P 10 59 29.6 +0.1**
baz=279
YUK6 Outpost Mounta 93.90 29 P **P 10 59 29.9 -0.6**
baz=279
HYT Haines Junctio 94.33 29 IAmb IAmb 10 59 33.8
comp=Z,4.5nm,0.9s
HYT Haines Junctio 94.33 29 P **P 10 59 32.9 +0.5**
baz=280
M30M Minto, Yukon 94.35 27 IAmb IAmb 10 59 33.9
comp=Z,4.0nm,0.8s
M30M Minto, Yukon 94.35 27 P **P 10 59 32.5 +0.2**
baz=281,SNR=7.0
N30M Aishikik Lake 94.42 28 P **P 10 59 32.7 0.0**
baz=280,SNR=5.6
P30M Million Dollar 94.72 30 P **P 10 59 34.2 +0.1**
baz=280
O30N Mendenhall 95.02 29 P **P 10 59 36.0 +0.6**
baz=281
N31M Braeburn, Yuko 95.03 28 IAmb IAmb 10 59 37.1
comp=Z,6.9nm,0.8s
N31M Braeburn, Yuko 95.03 28 P **P 10 59 36.4 +1.0**
baz=282
M31M Drury Creek, Y 95.52 27 IAmb IAmb 10 59 38.7
comp=Z,2.5nm,0.7s
M31M Drury Creek, Y 95.52 27 P **P 10 59 38.2 +0.5**
baz=283
WHY Whitehorse 95.63 29 P **P 10 59 38.6 +0.3**
baz=282,SNR=5.8
SKAG Skagway 95.65 30 P **P 10 59 38.9 +0.7**
baz=282
A36M Sachs Harbour 96.00 17 P **P 10 59 39.5 0.0**
baz=292
N32M Quiet Lake 96.37 28 P **P 10 59 42.1 +0.5**
baz=284
P32M Atlin 96.43 30 P **P 10 59 42.2 +0.4**
baz=283
P33M Teslin, Yukon 96.72 29 P **P 10 59 43.8 +0.6**
baz=284
C36M Paulatuk 97.38 19 P Pdif 10 59 46.1 +0.2
baz=293
WRAK Wrangell Islan 97.88 33 P **P 10 59 48.1 -0.2**
baz=284
DLBC Dease Lake 98.57 30 P Pdif 10 59 52.4 +0.9
baz=286
NB2 NORSAR Subarra 98.95 333 P **P 10 59 50.7 -2.4**
comp=Z,1.4nm,0.7s,baz=75,slow=4.6
NOA NORSAR Array B 98.95 333 P **P 10 59 50.9 -2.2**
comp=Z,1.3nm,0.8s,baz=73,slow=4.4,SNR=5.8
comp=Z,1.3nm,0.8s
YKA Yellowknife Ar 103.96 23 Pdiff **Pdif 11 00 15.7 +0.4**
comp=Z,0.3nm,0.6s,baz=301,slow=4.7,SNR=5.5
NVAR Mina Array Bea 112.36 47 PKiKP **PKiKP 11 04 49.6 +0.3**
comp=Z,0.7nm,0.6s,baz=248,slow=2.4,SNR=8.5
MPMC Manual Prospec 113.79 50 P **PKiKP 11 04 51.9 -0.2**
baz=290
LRMC Laurel Mtn Rad 113.84 50 P **PKiKP 11 04 52.3 +0.2**
baz=290

BOZ	**Bozeman (W)**	**113.93**	**38**	P		**PKiKP**	**11 04 52.1**	**+0.1**
	baz=299							
FURC	**Furnace Creek,**	**114.12**	**49**	P		**PKiKP**	**11 04 52.4**	**0.0**
	baz=291							
R11A	**Troy Canyon, C**	**114.38**	**47**	P		PKPdf	11 04 53.0	-0.1
	baz=292							
TPNV	**Topopah Spring**	**114.41**	**48**	P		**PKiKP**	**11 04 53.5**	**+0.3**
	baz=291							
SHOC	**Shoshone, Teco**	**114.77**	**49**	P		PKPdf	11 04 54.3	+0.6
	baz=291							
BBRC	**Big Bear Solar**	**114.84**	**51**	P		**PKiKP**	**11 04 53.7**	**-0.5**
	baz=290							
MURC	**Murrieta**	**114.84**	**52**	P		**PKiKP**	**11 04 53.6**	**-0.4**
	baz=289							
HEC	**Hector,Ludlow**	**115.10**	**50**	P		**PKPdf**	**11 04 54.6**	**+0.2**
	baz=290							
PFO	**Pinyon Flats O**	**115.42**	**52**	P		**PKPdf**	**11 04 55.4**	**+0.2**
	baz=290							
TPFO	**Pinon Flats**	**115.42**	**52**	P		**PKPdf**	**11 04 55.4**	**+0.2**
	baz=290							
DUG	**Dugway, Tooele**	**115.60**	**44**	P		**PKiKP**	**11 04 55.1**	**-0.3**
	baz=295							
GMRC	**Granite Mounta**	**115.64**	**50**	P		**PKPdf**	**11 04 56.1**	**+0.5**
	baz=291							
BELC	**Belle Mtn. Jos**	**115.65**	**51**	P		**PKPdf**	**11 04 56.0**	**+0.4**
	baz=290							
MONP2	**Monument Peak**	**115.69**	**53**	P		**PKiKP**	**11 04 55.5**	**-0.3**
	baz=290							
IKP	**In-Ko-Pah, Jac**	**116.02**	**53**	P		**PKPdf**	**11 04 56.3**	**0.0**
	baz=290							
WUAZ	**Wupatki**	**118.60**	**48**	P		**PKiKP**	**11 05 02.2**	**+0.9**
	baz=294							
O20A	**White River Ci**	**118.75**	**42**	P		**PKPdf**	**11 05 01.4**	**-0.1**
	baz=299							
TORD	**Torodi Ar. Bea**	**118.97**	**286**	PKP		**PKPdf**	**11 05 00.5**	**-1.9**
	comp=Z,1.9nm,0.7s,baz=24,slow=1.7,SNR=12							
TORD	**Torodi Ar. Bea**	**118.97**	**286**			**PKPdf**	**11 05 01.1**	**-1.2**
RSSD	**Black Hills**	**119.30**	**36**	P		**PKPdf**	**11 05 01.6**	**-0.9**
	baz=305							
N23A	**Red Feather La**	**119.88**	**40**	P		**PKPdf**	**11 05 03.5**	**-0.3**
	baz=302							
MVCO	**Mesa Verde**	**119.95**	**45**	P		**PKPdf**	**11 05 03.1**	**-0.9**
	baz=298							
W18A	**Petrified Fore**	**119.98**	**48**	P		**PKPdf**	**11 05 03.5**	**-0.5**
	baz=296							
TUC	**Tucson**	**120.33**	**51**	P		**PKPdf**	**11 05 04.2**	**-0.4**
	baz=293							
ISCO	**Idaho Springs**	**120.66**	**41**	P		**PKPdf**	**11 05 04.4**	**-0.9**
	baz=301							
S22A	**4UR Ranch, Cre**	**120.87**	**44**	P		**PKPdf**	**11 05 04.6**	**-1.2**
	baz=299							
OGNE	**Ogallala**	**122.33**	**38**	P		**PKiKP**	**11 05 09.2**	**+0.8**
	baz=305							
ANMO	**Albuquerque**	**122.47**	**47**	P		**PKPdf**	**11 05 08.7**	**-0.1**
	baz=298							
121A	**Cookes Peak, D**	**122.56**	**50**	P		**PKPdf**	**11 05 09.1**	**+0.1**
	baz=296							
EYMN	**Ely**	**123.28**	**26**	P		**PKPdf**	**11 05 09.4**	**-0.3**
	baz=319							
ECSD	**EROS Data Cent**	**123.76**	**33**	P		**PKPdf**	**11 05 10.7**	**-0.1**
	baz=312							
SCHQ	**Schefferville**	**123.88**	**6**	PKP		**PKPdf**	**11 05 10.3**	**-0.4**
	comp=Z,2.8nm,0.8s,baz=20,slow=6.7,SNR=4.9							
MNTX	**Cornudas Mount**	**124.75**	**50**	P		**PKiKP**	**11 05 13.7**	**+0.4**
	baz=297							
MSTX	**Muleshoe**	**125.60**	**46**	P		**PKiKP**	**11 05 15.2**	**+0.1**
	baz=300							
DBIC	**Dimbokro**	**126.21**	**279**	PKP		**PKPdf**	**11 05 15.6**	**-0.7**
	comp=Z,5.8nm,0.9s,baz=5.0,slow=5.1,SNR=3.8							
TXAR	**Lajitas Array**	**127.14**	**51**	PKP		**PKPdf**	**11 05 17.9**	**+0.1**
	comp=Z,1.3nm,0.6s,baz=294,slow=0.5,SNR=27							
JCT	**Junction City**	**129.53**	**48**	P		**PKPdf**	**11 05 21.9**	**-0.4**
	baz=301							
MIAR	**Mount Ida**	**131.53**	**40**	P		**PKPdf**	**11 05 25.8**	**-0.1**
	baz=310							
LONY	**Lake Ozonia**	**132.27**	**16**	P		**PKPdf**	**11 05 26.5**	**-0.5**
	baz=338							
WVT	**Waverly**	**133.88**	**34**	P		**PKPdf**	**11 05 29.6**	**-0.7**
	baz=317							
OXF	**Oxford**	**134.12**	**37**	P		**PKPdf**	**11 05 30.3**	**-0.5**
	baz=314							
SSPA	**Standing Stone**	**134.82**	**21**	P		**PKPdf**	**11 05 31.5**	**-0.4**
	baz=332							
PLCA	**Paso Flores**	**138.92**	**166**	PKP		**PKPdf**	**11 05 39.4**	**-0.2**
	comp=Z,2.4nm,0.8s,baz=355,slow=2.8,SNR=5.7							
CPUP	**Villa Florida**	**154.83**	**182**	PKP		**PKPdf**	**11 06 05.9**	**-0.2**
	comp=Z,0.8nm,0.3s,baz=220,slow=0.6,SNR=6.6							
LPAZ	**La Paz**	**161.95**	**148**	PKP		**PKPdf**	**11 06 15.4**	**-0.3**
	comp=Z,4.6nm,1.2s,baz=331,slow=2.9,SNR=6.5							
LPAZ				PKPab		**PKPab**	**11 07 01.4**	**-0.3**
	comp=Z,4.6nm,0.6s,baz=182,slow=3.3,SNR=13							
BDFB	**Brasilia**	**162.33**	**214**	PKPab		**PKPab**	**11 07 01.5**	**-1.3**
	comp=Z,2.0nm,0.6s,baz=106,slow=7.1,SNR=3.3							
SIV	**San Ignacio**	**164.86**	**169**	PKP		**PKPdf**	**11 06 17.6**	**-0.1**
	comp=Z,0.6nm,0.4s,baz=175,slow=2.7,SNR=7.2							
SIV				PKPab		**PKPab**	**11 07 13.2**	**-0.4**
	comp=Z,1.5nm,0.8s,baz=224,slow=2.4,SNR=5.4							

JMA 30 10:50:26.5±0.1, 35°.9N±0°.2×137°.7E±0°.2, h7km, MV0.1/11, WESTERN NAGANO PREF,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JGN	**Niukaw**	**0.43**	**320**	P	Pg	10 50 35.0	+0.2

*IDC **30** 11:01:12.8±3.4, 53°.67N×90°.70E, h0km, mbtmp3.2/3, ML3.1/2, Error ellipse: s-maj=32.0km s-min=22.8km az=39.0*
*NNC **30** 11:01:12.8±3.3, 53°.43N×90°.59E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=24.1km s-min=20.5km az=49.0, Suspected Mining explosion.*

ISC 30 11:01:11.4±4.0, 53°.4N±0°.1×90°.8E±0°.2, h0km, n9, σ1s12/11, 5C-6D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.59**	**281**	*i*		11 22 52.6	
	0.1nm,1.2s,baz=90,slow=325,SNR=10						
ZAA0	**Zalesovo Array**	**3.59**	**281**	⇓Pg	**Pb**	**11 02 14.8**	**-0.9**
	1.2nm,0.7s						
ZAA0				⇓Lg	Lg	11 03 03.7	
	24nm,1.0s						
ZALV	**Zalesovo Beam**	**3.59**	**281**	Pn	**Pn**	**11 02 08.7**	**+0.5**
	0.5nm,0.3s,baz=93,slow=12,SNR=1.2						
ZALV				Pg	**Pb**	**11 02 14.7**	**-1.0**
	1.5nm,0.3s,baz=94,slow=15,SNR=17						
ZALV				Lg	Lg	11 03 05.1	
	3.3nm,0.3s,baz=93,slow=27,SNR=9.3						
KURK	**Kurchatov**	**7.96**	**255**	⇓Pn	**Pn**	**11 03 09.4**	**+1.2**
	3.4nm,0.9s						
KURK				⇓Sn	**Sn**	**11 04 39.9**	**+0.9**
	18nm,0.8s						
KURK				⇑Lg	Lg	11 05 25.8	
	25nm,1.0s						
KURBB	**Kurchatov Arra**	**8.05**	**255**	Pn	**Pn**	**11 03 11.3**	**+1.8**
	0.1nm,0.3s,baz=65,slow=15,SNR=13						
KURBB				Sn	**Sn**	**11 04 41.2**	**0.0**
	baz=67,slow=25,SNR=2.9						
KURBB				Lg	Lg	11 05 30.7	
	0.1nm,0.3s,baz=68,slow=30,SNR=5.1						
	2.1nm,0.7s						
KURBB	**Kurchatov Arra**	**8.05**	**255**	⇓Pn	**Pn**	**11 03 10.7**	**+1.2**
	6.6nm,0.9s,baz=65,slow=15						
KURBB				⇑Sn	**Sn**	**11 04 40.2**	**-1.0**
	54nm,0.8s						
KURBB				⇓Lg	Lg	11 05 28.7	
	88nm,1.1s						
MK31	**Makanchi Array**	**8.57**	**223**	⇑Pn	**Pn**	**11 03 16.7**	**+0.1**
	2.5nm,0.8s,baz=34,slow=13,SNR=4.2						
MK31				⇑Sn	**Sn**	**11 04 53.5**	**-0.4**
	5.0nm,0.9s,baz=44,slow=28,SNR=4.3						
MK31				⇑Lg	Lg	11 05 40.3	
	15nm,1.0s,baz=30,slow=34,SNR=4.3						
MKAR	**Makanchi Array**	**8.57**	**223**	Pn	Pn	11 03 21.1	+4.5
	0.4nm,0.3s,baz=31,slow=11,SNR=12						
MKAR				Lg	Lg	11 05 49.3	
	baz=31,slow=25,SNR=2.0						
	0.7nm,0.3s						
SONM	**Songino Array**	**11.36**	**113**	Lg	Lg	11 07 02.7	
	0.1nm,0.3s,baz=284,slow=19,SNR=5.5						

*IDC **30** 11:02:22.0±1.3, 3°.21S×147°.69E, h0km, mb3.7/7, mbtmp3.7/7, Error ellipse: s-maj=59.4km s-min=22.0km az=106.0*

ISC 30 11:02:23.6±1.1, 3°.2S±0°.2×147°.7E±0°.3, h10km, n14, σ0s80/7, mb3.7/7, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.09**	**217**	P	**P**	**11 07 09.1**	**+0.7**
	1.6nm,0.9s,baz=41,slow=11,SNR=8.7						
	1.6nm,0.9s						
ASAR	**Alice Springs**	**24.28**	**212**	P	**P**	**11 07 42.0**	**+0.6**
	1.1nm,0.8s,baz=37,slow=7.3,SNR=17						
	1.1nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**28.59**	**40**	T	T	11 38 06.4	
	baz=223,slow=76,SNR=273						
H11S2	**WAKE ISLAND Hy**	**28.60**	**40**	T	T	11 38 03.9	
	baz=223,slow=76,SNR=150						
H11S1	**WAKE ISLAND Hy**	**28.61**	**40**	T	T	11 38 05.9	
	baz=223,slow=76,SNR=176						
STKA	**Stephens Creek**	**29.05**	**191**	P	**P**	**11 08 23.4**	**-0.7**
	3.1nm,0.9s,baz=335,slow=19,SNR=2.2						
	3.1nm,0.9s						
H11N1	**WAKE ISLAND Hy**	**29.62**	**39**	T	T	11 39 21.5	
	baz=222,slow=76,SNR=33						
H11N3	**WAKE ISLAND Hy**	**29.63**	**39**	T	T	11 39 23.0	
	baz=222,slow=76,SNR=58						
H11N2	**WAKE ISLAND Hy**	**29.63**	**39**	T	T	11 39 23.6	
	baz=222,slow=76,SNR=41						
SONM	**Songino Array**	**62.35**	**330**	P	**P**	**11 12 46.3**	**-0.2**
	0.3nm,0.5s,baz=138,slow=12,SNR=2.1						
	0.3nm,0.5s						
MKAR	**Makanchi Array**	**75.82**	**320**	P	**P**	**11 14 09.8**	**-0.3**
	0.8nm,1.1s,baz=113,slow=3.3,SNR=2.5						
	0.8nm,1.1s						
ILAR	**Eielson Array**	**82.70**	**23**	P	**P**	**11 14 46.9**	**-0.4**
	0.4nm,0.9s,baz=247,slow=5.7,SNR=4.4						
	0.4nm,0.9s						
H02S1	**DAWSON INLET T**	**86.51**	**36**	T	T	12 50 04.9	
	SNR=20						
YKA	**Yellowknife Ar**	**96.44**	**28**	P	**P**	**11 15 53.7**	**+0.9**
	0.4nm,0.9s,baz=271,slow=5.4,SNR=2.8						
	0.4nm,0.9s						

*IDC **30** 11:14:12.4±0.5, 55°.39S×27°.06W, h0km, mb4.4/10, mbtmp4.3/11, ML4.1/1, MS3.6/2, Error ellipse: s-maj=22.8km s-min=15.4km az=52.0*
*NEIC **30** 11:14:19.8±2.8, 55°.5S±0°.1×27°.5W±0°.2, h47km±6km, mb4.6/20, Error ellipse: s-maj=25.1km s-min=14.2km az=219.0*

ISC 30 11:14:13.7±0.5, 55°.36S±0°.1×27°.1W±0°.1, h10km, n46, σ0s84/44, mb4.5/12, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.53**	**277**	Pn	**Pn**	**11 15 35.9**	**-0.2**
VNA1	**Neumayer--Stat**	**17.42**	**159**	P	**P**	**11 18 18.8**	**+1.1**
VNA3	**Neumayer Olymp**	**17.63**	**161**	P	**P**	**11 18 20.9**	**+0.9**
VNA2	**Neumayer--Watz**	**17.82**	**159**	P	**P**	**11 18 22.4**	**+0.3**
	baz=314,slow=13						
SNAA	**Sanae**	**19.36**	**157**	P	**Pn**	**11 18 40.8**	**+0.7**
SNAA	**Sanae**	**19.36**	**157**	P	**P**	**11 18 38.3**	**-0.7**
	0.5nm,0.3s,baz=300,slow=12,SNR=13						
	3.4nm,0.7s						
SNAA	**Sanae**	**19.36**	**157**	P	**P**	**11 18 38.9**	**-0.1**
PMSA	**Palmer Station**	**20.40**	**228**	LR	LR	11 25 07.6	
	comp=Z,159nm,18.0s,baz=88,slow=32						
TROLL	**Troll, Antarti**	**20.85**	**154**	P	**P**	**11 18 55.4**	**0.0**
BELA	**Belgrano 2**	**22.77**	**184**	P	**P**	**11 19 14.9**	**-0.9**
PLCA	**Paso Flores**	**31.94**	**279**	P	**P**	**11 20 39.1**	**-0.3**
	3.0nm,1.0s,baz=153,slow=6.4,SNR=4.4						
	3.0nm,1.0s						
PLCA	**Paso Flores**	**31.94**	**279**	IAmb	IAmb	11 20 40.9	
	comp=Z,19nm,1.4s						
QSPA	**South Pole Qui**	**34.89**	**180**	P	**P**	**11 21 04.7**	**-0.4**
	comp=Z,3.8nm,0.6s,baz=208,slow=1.5,SNR=37						
	comp=Z,3.8nm,0.6s						
QSPA	**South Pole Qui**	**34.89**	**180**	P	**P**	**11 21 05.5**	**+0.4**
QSPA				IAmb	IAmb	11 21 21.9	
	comp=Z,9.5nm,1.1s						
CPUP	**Villa Florida**	**36.40**	**310**	P	**P**	**11 21 17.4**	**-0.7**
	comp=Z,1.1nm,0.6s,baz=126,slow=2.7,SNR=3.5						
CPUP				LR	LR	11 36 37.5	
	comp=Z,91nm,18.5s,baz=192,slow=37						
	comp=Z,1.1nm,0.6s						
MT09	**Talagante**	**37.15**	**287**	P	**P**	**11 21 23.8**	**-0.9**
MT09				IAmb	IAmb	11 21 26.7	
	comp=Z,11nm,0.8s						
PEL	**Peldehue**	**37.46**	**288**	P	**P**	**11 21 27.0**	**-0.2**
VA03	**San Esteban**	**37.68**	**289**	P	**P**	**11 21 29.6**	**+0.5**
CO02	**Combarbal**	**39.12**	**290**	P	**P**	**11 21 42.5**	**+1.2**
CO01	**Juntas del Tor**	**39.60**	**292**	P	**P**	**11 21 48.1**	**+2.7**
CO01				IAmb	IAmb	11 21 49.8	
	comp=Z,6.1nm,0.8s						
MAW	**Mawson**	**40.68**	**144**	P	**P**	**11 21 53.3**	**-0.3**
	comp=Z,4.9nm,0.7s,baz=213,slow=7.5,SNR=12						
	comp=Z,4.9nm,0.7s						
MAW	**Mawson**	**40.68**	**144**	IAmb	IAmb	11 21 55.6	
	comp=Z,2.9nm,1.4s						
LVC	**Limon Verde**	**45.00**	**299**	P	**P**	**11 22 30.3**	**+0.7**
	comp=Z,6.2nm,0.5s,baz=181,slow=4.2,SNR=12						
	comp=Z,6.2nm,0.5s						
LVC	**Limon Verde**	**45.00**	**299**	P	**P**	**11 22 30.9**	**+1.3**
LVC				IAmb	IAmb	11 22 32.9	
	comp=Z,7.0nm,0.7s						
PB01	**IPOC Station P**	**46.61**	**300**	P	**P**	**11 22 43.0**	**+1.1**
PB01				IAmb	IAmb	11 23 05.6	
	comp=Z,13nm,1.1s						
SBA	**Scott Base**	**46.77**	**184**	P	**P**	**11 22 43.4**	**+0.9**
VNDA	**Vanda**	**47.27**	**183**	P	**P**	**11 22 46.5**	**0.0**
	comp=Z,3.3nm,0.8s,baz=189,slow=6.4,SNR=13						
	comp=Z,3.3nm,0.8s						
VNDA	**Vanda**	**47.27**	**183**	P	**P**	**11 22 46.4**	**0.0**
VNDA				IAmb	IAmb	11 22 50.3	
	comp=Z,4.5nm,0.8s						
LBTB	**Lobatse**	**48.76**	**74**	P	**P**	**11 22 58.9**	**+0.1**
	comp=Z,3.8nm,0.9s,baz=235,slow=7.0,SNR=4.3						
	comp=Z,3.8nm,0.9s						
LPAZ	**La Paz**	**50.02**	**305**	P	**P**	**11 23 10.0**	**+1.0**
	comp=Z,3.5nm,0.5s,baz=145,slow=5.3,SNR=18						
	comp=Z,3.5nm,0.5s						
LPAZ	**La Paz**	**50.02**	**305**	P	**P**	**11 23 10.1**	**+1.1**
LPAZ				IAmb	IAmb	11 23 30.2	
	comp=Z,4.9nm,0.8s						
SAML	**Samuel**	**54.35**	**314**	P	**P**	**11 23 39.7**	**-0.8**
TORD	**Torodi Ar. Bea**	**72.43**	**29**	P	**P**	**11 25 39.5**	**-0.5**
	comp=Z,2.2nm,0.7s,baz=202,slow=6.5,SNR=14						
	comp=Z,2.2nm,0.7s						
HIZ	**Hauiti**	**84.63**	**197**	P	**P**	**11 26 46.2**	**-1.0**
ASAR	**Alice Springs**	**99.63**	**162**	P	**Pdif**	**11 27 56.5**	**-0.9**
	comp=Z,0.2nm,0.5s,baz=184,slow=4.2,SNR=5.9						
	comp=Z,0.2nm,0.5s						
NVAR	**Mina Array Bea**	**121.17**	**293**	PKP	**PKiKP**	**11 33 07.5**	**+1.0**
	comp=Z,0.1nm,0.4s,baz=193,slow=3.7,SNR=2.5						
FINES	**FINESS Array B**	**123.75**	**28**	PKP	**PKPdf**	**11 33 10.2**	**0.0**
	comp=Z,0.9nm,0.7s,baz=253,slow=14,SNR=1.6						
CMAR	**Chiang Mai Arr**	**125.26**	**110**	PKP	**PKiKP**	**11 33 15.3**	**+0.5**
	comp=Z,0.5nm,0.4s,baz=212,slow=3.2,SNR=2.2						
ARCES	**ARCESS Array B**	**130.28**	**21**	PKP	**PKPdf**	**11 33 21.8**	**-0.6**
	comp=Z,1.5nm,0.9s,baz=148,slow=5.3,SNR=2.7						
YKA	**Yellowknife Ar**	**135.69**	**318**	PKP	**PKPdf**	**11 33 31.2**	**-1.6**
	comp=Z,0.6nm,0.7s,baz=122,slow=2.2,SNR=5.5						
INK	**Inuvik**	**145.30**	**321**	PKPbc	**PKPab**	**11 33 50.5**	**+0.5**
	comp=Z,8.4nm,0.8s,baz=37,slow=3.8,SNR=10						
INK	**Inuvik**	**145.30**	**321**		**PKPab**	**11 33 50.1**	**+0.2**
ILAR	**Eielson Array**	**149.69**	**313**	PKPbc	**PKPbc**	**11 34 02.5**	**+0.4**
	comp=Z,4.0nm,0.8s,baz=133,slow=2.9,SNR=37						
KDAK	**Kodiak Island**	**150.55**	**297**	PKPbc	**PKiKP**	**11 34 04.8**	**-0.2**
	comp=Z,5.8nm,0.7s,baz=195,slow=2.7,SNR=6.1						
SONM	**Songino Array**	**150.63**	**85**	PKPbc	**PKPbc**	**11 34 05.4**	**+0.4**
	comp=Z,2.3nm,0.8s,baz=222,slow=3.3,SNR=14						
SONM				PKPab	**pPKPab**	**11 34 13.2**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=224,slow=4.1,SNR=6.1						
SONM	**Songino Array**	**150.63**	**85**		**PKPbc**	**11 34 05.2**	**+0.2**

*TAP **30** 11:20:47.8, 24°.73N×122°.58E, h98km±1km, ML3.2, D*
*JMA **30** 11:20:47.2±0.2, 25°.N±2°.×122°.6E±0°.7, h100km±2km, MV1.9/10, NW OFF ISHIGAKIJIMA IS*

ISC 30 11:20:48.2±1.5, 24°.71N±0°.04×122°.58E±0°.03, h97km±8km, n79, σ0s71/147, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.42**	**128**	P	**Pn**	**11 21 03.2**	**0.0**
JYNG				S	**Sn**	**11 21 14.6**	**+0.3**
YOJ	**Yonaguni jima**	**0.46**	**122**	P	**Pn**	**11 21 03.3**	**-0.2**
	baz=124						
YOJ				S	**Sn**	**11 21 15.4**	**+0.5**
	baz=124						
YOJ	**Yonaguni jima**	**0.46**	**122**	P	**Pn**	**11 21 03.4**	**0.0**
YOJ				*e*S	**Sn**	**11 21 15.4**	**+0.5**
EGS		**0.60**	**283**	P	**Pn**	**11 21 04.3**	**-0.3**
	baz=280						
EGS				S	**Sn**	**11 21 16.1**	**-0.6**
	baz=280						
TWB1	**Santiao Chiao**	**0.61**	**299**	*i* P	**Pn**	**11 21 04.2**	**-0.5**
	baz=297						
TWB1				S	**Sn**	**11 21 16.8**	**-0.1**
	baz=297						
TWC	**Suao**	**0.67**	**261**	*i* P	**Pn**	**11 21 04.6**	**-0.5**
	baz=259						
TWC				S	**Sn**	**11 21 17.5**	**-0.3**
	baz=259						
TIPB	**Shuangxi**	**0.73**	**291**	*i* P	**Pn**	**11 21 05.5**	**-0.2**
	baz=289						
TIPB				S	**Sn**	**11 21 18.1**	**-0.8**
	baz=289						
SXI1	**Grass Mountain**	**0.74**	**301**	P	**Pn**	**11 21 05.3**	**-0.6**
	baz=299						
SXI1				*e*S	**Sn**	**11 21 20.2**	**+1.0**
	baz=299						
EWUT	**Wuta**	**0.78**	**250**	P	**Pn**	**11 21 06.4**	**+0.3**
	baz=248						
EWUT				S	**Sn**	**11 21 20.3**	**+0.8**
	baz=248						
NDS	**Dongshan**	**0.79**	**265**	P	**Pn**	**11 21 06.3**	**0.0**
	baz=262						
NDS				S	**Sn**	**11 21 21.0**	**+1.2**
	baz=262						
NWF	**Wu-fen Shan**	**0.81**	**296**	*i* P	**Pn**	**11 21 06.2**	**-0.4**
	baz=295						
NWF				S	**Sn**	**11 21 20.1**	**-0.2**
	baz=295						
WFSB	**Wu-fen Shan**	**0.81**	**296**	P	**Pn**	**11 21 06.2**	**-0.2**
	baz=295						
ENA	**Nanau**	**0.81**	**250**	P	**Pn**	**11 21 06.5**	**0.0**
	baz=248						
ENA				*i* S	**Sn**	**11 21 20.8**	**+0.5**
	baz=248						
TWE	**Neicheng**	**0.83**	**271**	*i* P	**Pn**	**11 21 06.5**	**-0.2**
	baz=269						
TWE				*i* S	**Sn**	**11 21 20.4**	**-0.1**
	baz=269						
EHP	**Heping Village**	**0.86**	**243**	*e*P	**Pn**	**11 21 09.0**	**+1.9**
	baz=240						
EHP				*e*S	**Sn**	**11 21 20.7**	**-0.4**
	baz=240						
FUSB	**Fushanzhiwuyua**	**0.90**	**273**	P	**Pn**	**11 21 07.7**	**+0.2**
	baz=271						
FUSB				*e*S	**Sn**	**11 21 21.5**	**-0.5**
	baz=271						
TWA	**Mucha**	**0.94**	**287**	P	**Pn**	**11 21 07.6**	**-0.3**
	baz=285						
TWA				S	**Sn**	**11 21 21.3**	**-1.4**
	baz=285						
LATG	**Datong**	**0.97**	**260**	P	**Pn**	**11 21 08.6**	**+0.3**
	baz=258						
LATG				S	**Sn**	**11 21 24.4**	**+1.0**
	baz=258						
NWLT	**Wulai**	**0.98**	**274**	*e*P	**Pn**	**11 21 08.2**	**-0.1**
	baz=272						
NWLT				S	**Sn**	**11 21 24.6**	**+1.2**
	baz=272						
NHDH	**Xindian Distri**	**0.99**	**285**	*e*S	**Sn**	**11 21 23.5**	**0.0**
	baz=283						
YM01	**YM01**	**1.01**	**295**	P	**Pn**	**11 21 08.3**	**-0.4**
	baz=294						
YM01				S	**Sn**	**11 21 24.3**	**+0.2**
	baz=294						
ETL	**Fush Village**	**1.03**	**238**	*e*P	**Pn**	**11 21 09.5**	**+0.6**
	baz=236						
ETL				*e*S	**Sn**	**11 21 22.6**	**-1.7**
	baz=236						
NACB	**Ninganchiao**	**1.05**	**239**	P	**Pn**	**11 21 09.3**	**+0.3**
	baz=238						
TWD	**Chiawan**	**1.10**	**235**	P	**Pn**	**11 21 10.2**	**+0.6**
	baz=233						
TWD				S	**Sn**	**11 21 25.2**	**-0.4**
	baz=233						
YHNB	**Yeheng**	**1.10**	**268**	P	**Pn**	**11 21 10.0**	**+0.4**
	baz=266						
YHNB				S	**Sn**	**11 21 25.8**	**+0.1**
	baz=266						
IRIF	**Iriomote-Funau**	**1.11**	**109**	P	**Pn**	**11 21 09.2**	**-0.5**
IRIF				*e*S	**Sn**	**11 21 26.1**	**+0.2**
NSK	**Sanguang**	**1.11**	**268**	*i* P	**Pn**	**11 21 09.8**	**0.0**
	baz=266						
NSK				*i* S	**Sn**	**11 21 25.8**	**-0.2**
	baz=266						
ETLH	**Xiulin Townshi**	**1.12**	**244**	P	**Pn**	**11 21 10.1**	**+0.2**
	baz=242						
ETLH				S	**Sn**	**11 21 26.1**	**-0.1**
	baz=242						
NTST	**Danshui**	**1.12**	**294**	*e*P	**Pn**	**11 21 09.7**	**-0.1**
	baz=292						
NTST				S	**Sn**	**11 21 26.8**	**+0.7**
	baz=292						
TWS1	**Kuangyinshan**	**1.12**	**290**	*i* P	**Pn**	**11 21 09.8**	**0.0**
	baz=289						
TWS1				S	**Sn**	**11 21 26.2**	**+0.1**
	baz=289						
NNSB	**Datong**	**1.13**	**256**	P	**Pn**	**11 21 10.1**	**+0.1**
	baz=254						
NNSB				S	**Sn**	**11 21 26.1**	**-0.3**
	baz=254						
NNS	**Nan Shan**	**1.13**	**256**	*i* P	**Pn**	**11 21 10.0**	**-0.1**
	baz=254						
NNS				*i* S	**Sn**	**11 21 26.3**	**-0.2**
	baz=254						
HATJ	**Hateruma jima**	**1.29**	**120**	P	**Pn**	**11

HGSD	**Ruisui**	**1.61**	**221**	P	**Pn**	**11 21 16.4 +0.7**
	baz=220					
HGSD				S	**Sn**	**11 21 36.5 -0.1**
	baz=220					
VWDT	**VWDT**	**1.62**	**234**	*eP*	**Pn**	**11 21 16.3 +0.4**
	baz=233					
VWDT				S	**Sn**	**11 21 36.9 0.0**
	baz=233					
NMLH	**Miaoli**	**1.64**	**264**	*eP*	**Pn**	**11 21 16.1 0.0**
	baz=263					
NMLH				*eS*	**Sn**	**11 21 37.3 0.0**
	baz=263					
WCS	**Beigang Elemen**	**1.66**	**247**	*eP*	**Pn**	**11 21 17.7 +1.4**
	baz=246					
WCS				*eS*	**Sn**	**11 21 38.3 +0.7**
	baz=246					
EHY	**Hungye**	**1.66**	**224**	*eP*	**Pn**	**11 21 17.3 +0.8**
	baz=223					
EHY				S	**Sn**	**11 21 36.8 -1.1**
	baz=223					
NSY	**Sanyi**	**1.68**	**260**	P	**Pn**	**11 21 17.2 +0.5**
	baz=259					
NSY				S	**Sn**	**11 21 39.0 +0.8**
	baz=259					
TWQ1	**Liyutan**	**1.69**	**258**	P	**Pn**	**11 21 16.8 +0.1**
	baz=256					
TWQ1				S	**Sn**	**11 21 37.8 -0.6**
	baz=256					
SMLT	**Sun Moon Lake**	**1.74**	**242**	*eP*	**Pn**	**11 21 17.5 0.0**
	baz=240					
SMLT				*eS*	**Sn**	**11 21 39.4 -0.4**
	baz=240					
SSLB	**Suanglung**	**1.75**	**239**	P	**Pn**	**11 21 18.7 +1.2**
	baz=237					
SSLB				*eS*	**Sn**	**11 21 40.8 +1.0**
	baz=237					
YULB	**Yu-li**	**1.76**	**222**	*eP*	**Pn**	**11 21 16.8 -0.9**
	baz=221					
YULB				*eS*	**Sn**	**11 21 38.5 -1.6**
	baz=221					
TYC	**Yuchr**	**1.77**	**243**	P	**Pn**	**11 21 19.2 +1.5**
	baz=242					
TYC				S	**Sn**	**11 21 41.4 +1.2**
	baz=242					
EYUL	**Yuli**	**1.78**	**221**	*eP*	**Pn**	**11 21 19.4 +1.5**
	baz=219					
EYUL				*eS*	**Sn**	**11 21 39.9 -0.6**
	baz=219					
FULB	**Fuli**	**1.91**	**218**	P	**Pn**	**11 21 20.5 +0.9**
	baz=217					
FULB				S	**Sn**	**11 21 43.8 +0.3**
	baz=217					
YUS	**Yu-Shan**	**1.92**	**231**	P	**Pn**	**11 21 20.4 +0.2**
	baz=230					
YUS				*eS*	**Sn**	**11 21 43.6 -0.9**
	baz=230					
JTJ	**Tarama**	**1.93**	**92**	P	**Pn**	**11 21 20.1 +0.3**
JTJ				S	**Sn**	**11 21 44.6 +0.7**
ALS	**Alishan**	**2.02**	**234**	P	**Pn**	**11 21 22.6 +1.4**
	baz=232					
ALS				S	**Sn**	**11 21 47.6 +1.3**
	baz=232					
ELDTW	**Lidau**	**2.08**	**224**	*eP*	**Pn**	**11 21 22.7 +0.8**
	baz=222					
ELDTW				*eS*	**Sn**	**11 21 47.2 -0.5**
	baz=222					
EDH	**Donghe**	**2.09**	**214**	*eP*	**Pn**	**11 21 21.3 -0.6**
	baz=213					
EDH				*eS*	**Sn**	**11 21 46.8 -0.8**
	baz=213					
WRL	**Guolierlin Hig**	**2.17**	**249**	*eP*	**Pn**	**11 21 22.7 -0.1**
	baz=247					
WRL				*eS*	**Sn**	**11 21 48.5 -0.8**
	baz=247					
LONT	**Longtian**	**2.23**	**217**	*eP*	**Pn**	**11 21 23.3 -0.5**
	baz=216					
LONT				*eS*	**Sn**	**11 21 50.1 -0.9**
	baz=216					
STYH	**Taoyuan**	**2.25**	**227**	*eP*	**Pn**	**11 21 24.1 +0.1**
	baz=226					
STYH				*eS*	**Sn**	**11 21 52.0 +0.6**
	baz=226					
CHN4	**Tsaushan**	**2.27**	**234**	*eP*	**Pn**	**11 21 25.7 +1.5**
	baz=232					
LDUT	**Ludao**	**2.27**	**207**	*eP*	**Pn**	**11 21 23.6 -0.7**
	baz=206					
TPUB	**Ta-pu**	**2.27**	**232**	*eP*	**Pn**	**11 21 25.5 +1.2**
	baz=231					
TPUB				*eS*	**Sn**	**11 21 53.3 +1.4**
	baz=231					
WTP	**Ta-pu**	**2.32**	**231**	*eP*	**Pn**	**11 21 26.4 +1.5**
	baz=230					
TWGBT	**Beinan**	**2.33**	**216**	*eP*	**Pn**	**11 21 24.7 -0.4**
	baz=215					
TWGBT				*eS*	**Sn**	**11 21 52.5 -0.9**
	baz=215					
TWG	**Pinlang**	**2.33**	**217**	*eP*	**Pn**	**11 21 24.4 -0.7**
	baz=215					
TWG				*eS*	**Sn**	**11 21 51.7 -1.7**
	baz=215					
TWK	**Hsinying**	**2.39**	**234**	*eP*	**Pn**	**11 21 26.3 +0.4**
	baz=232					
WSL	**Shuilin Townsh**	**2.45**	**242**	*eP*	**Pn**	**11 21 27.2 +0.5**
	baz=240					
WSL				*eS*	**Sn**	**11 21 56.1 -0.1**
	baz=240					
VWUC	**VWUC**	**2.86**	**276**	*eP*	**Pn**	**11 21 30.9 -1.2**
	baz=275					

NOU ***30*** *11:30:31.5, 15˚.99S×167˚.44E, h7km, ML5.8/120, Vanuatu Islands*

IDC ***30*** *11:30:31.4±1.1, 16˚.02S×167˚.64E, h27km±6km, mb5.4/38, mbtmp5.6/41, ML5.9/3, MS5.4/55, Error ellipse: s-maj=10.0km s-min=9.3km az=91.0*

BJI ***30*** *11:30:32.0±0.0, 16˚.10S×167˚.60E, h46km, mb5.5/85, mB5.7/74, Ms5.6/96, Ms7 5.5/91*

NEIC ***30*** *11:30:32.8, 16˚.04S×167˚.49E, h34km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr6.26; Mθθ-0.69; Mϕϕ-5.58; Mrθ-2.20; Mϕϕ2.90; Mϕr0.10; Fault plane solution: Mo6.98000×10¹⁷ NP1:ϕs318.52000°, δ51.88000°, λ68.07000°. NP2:ϕs171.63000°, δ43.13000°, λ115.45000°. Principal axes: T 6.9478, Plg72.0000°, Azm168.0000°; N 0.0585, Plg17.0000°, Azm332.0000°; P -7.0063, Plg5.0000°, Azm64.0000°;*

NEIC ***30*** *11:30:33.0±2.8, 16˚.06S±0˚.07×167˚.47E±0˚.07, h27km±1km, mb5.7/325, Ms_20 5.7/397, Mwb5.8/62, Mww6.0 Error ellipse: s-maj=11.7km s-min=10.6km az=222.0*

MOS ***30*** *11:30:34.7±1.3, 15˚.97S×167˚.49E, h58km, mb6.1/41, MS5.5/36, Error ellipse: s-maj=7.6km s-min=5.8km az=126.6*

GCMT ***30*** *11:30:37.0±0.1, 16˚.02S×167˚.36E, h38km, MW6.0/165, Moment Tensor Solution. s165,c347; s165,c507; Duration: 2s3 Moment tensor: Scale 10¹⁸Nm; Mrr0.93±.01; Mθθ-0.02±.01; Mϕϕ-0.91±.01; Mrθ-0.27±.01; Mθϕ0.50±.00; Mϕr0.01±.01; Best double couple: Mo1.07200×10¹⁸ NP1:ϕs172.00000°, δ44.00000°, λ114.00000°. NP2:ϕs320.00000°, δ51.00000°, λ68.00000°. Principal axes: T 1.0050, Plg73.0000°, Azm167.0000°; N 0.1350, Plg17.0000°, Azm334.0000°; P -1.1400, Plg3.0000°, Azm65.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***30*** *11:30:38, 15˚.89S×167˚.32E, h40km, Moment Tensor Solution. Duration: 8s0 Moment tensor: Scale 10¹⁸Nm; Mrr0.89; Mθθ0.03; Mϕϕ-0.92; Mrθ0.02; Mϕϕ0.49; Mϕr-0.30; Fault plane solution: Mo1.07000×10¹⁸ NP1: ϕs329.00000°, δ38.00000°, λ77.00000°. NP2: ϕs165.00000°, δ53.00000°, λ100.00000°. Principal axes: T 0.9410, Plg79.0000°, Azm112.0000°; N 0.2245, Plg8.0000°, Azm339.0000°; P -1.1655, Plg8.0000°, Azm248.0000°;*

ISC 30 11:30:33.9±0.3, 16˚02S±0˚.03×167˚55E±0˚.03, h44km±2km, h44km:pP-P, n1772, σ2s13/1686, mb5.7/325, MS5.6/303, 148C-76D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
DVP	**Devils Point**	**1.81**	**160**	P		**Pn**	**11 31 02.8**	**+0.2**
RTV	**Rentapao**	**1.96**	**155**	P		**Pn**	**11 31 05.6**	**+1.0**
LIFNC	**LIFOU**	**4.75**	**184**	Pn		**Pn**	**11 31 39.8**	**-3.1**
MARNC	**Mare, Loyalty**	**5.46**	**175**			**Pn**	**11 31 49.6**	**-3.1**
MARNC	**Mare, Loyalty**	**5.46**	**175**	P		**Pn**	**11 31 51.0**	**-1.7**
MARNC	**Mare, Loyalty**	**5.46**	**175**	⇑P		**Pn**	**11 31 49.5**	**-3.1**
KOUNC	**Koumac, New Ca**	**5.47**	**214**	Pn		**Pn**	**11 31 51.3**	**-1.6**
KOUNC	**Koumac, New Ca**	**5.47**	**214**	P		**Pn**	**11 31 52.8**	**-0.2**
KOUNC	**Koumac, New Ca**	**5.47**	**214**	⇓P		**Pn**	**11 31 51.8**	**-1.2**
YATNC	**Mamie plateau,**	**6.04**	**186**	P		**Pn**	**11 32 00.0**	**-0.8**
DZM	**Mont Dzumac**	**6.11**	**190**	Pn		**Pn**	**11 32 00.2**	**-1.7**
	133nm,0.3s,baz=56,slow=12,SNR=382							
DZM				Sn		**Sn**	**11 33 08.9**	**-1.6**
	210nm,0.3s,baz=329,slow=21,SNR=5.8							
DZM				LR		LR	11 33 13.2	
	comp=Z,8µm,20.9s,baz=4.0,slow=26 391nm,0.3s							
DZM	**Mont Dzumac**	**6.11**	**190**	*e*Pn		**Pn**	**11 32 02.6**	**+0.8**
	3µm,1.0s							
DZM				*e*Sn		**Sn**	**11 33 06.8**	**-3.8**
	6µm,1.2s							
DZM	**Mont Dzumac**	**6.11**	**190**	P		**Pn**	**11 32 01.6**	**-0.2**
DZM	**Mont Dzumac**	**6.11**	**190**	⇑P		**Pn**	**11 31 60.0**	**-1.9**
NOUC	**Port Laguerre**	**6.17**	**191**	P		**Pn**	**11 32 02.8**	**+0.3**
ONTNC	**Ouen Toro**	**6.34**	**189**	Pn		**Pn**	**11 32 04.0**	**-0.9**
ONTNC	**Ouen Toro**	**6.34**	**189**	P		**Pn**	**11 32 05.4**	**+0.5**
ONTNC	**Ouen Toro**	**6.34**	**189**	⇑P		**Pn**	**11 32 03.9**	**-0.9**
OUENC	**Ouen Island, N**	**6.40**	**186**	Pn		**Pn**	**11 32 04.6**	**-1.1**
OUENC	**Ouen Island, N**	**6.40**	**186**	P		**Pn**	**11 32 06.0**	**+0.3**
PINNC	**Pines Island,**	**6.56**	**181**	Pn		**Pn**	**11 32 06.9**	**-1.0**
PINNC	**Pines Island,**	**6.56**	**181**	P		**Pn**	**11 32 08.2**	**+0.3**
HNR	**Honiara**	**9.89**	**311**	Pn		**Pn**	**11 32 53.4**	**-0.2**
	86nm,0.3s,baz=186,slow=2.6,SNR=24							
HNR				Sn		**Sn**	**11 34 41.5**	**-1.8**
	11nm,0.3s,baz=197,slow=22,SNR=1.3							
HNR				LR		LR	11 36 22.3	
	comp=Z,32µm,21.7s,baz=148,slow=35 635nm,0.7s							
HNR	**Honiara**	**9.89**	**311**			**Pn**	**11 32 54.3**	**+0.7**
HNR	**Honiara**	**9.89**	**311**	P		**Pn**	**11 32 54.3**	**+0.7**
HNR	**Honiara**	**9.89**	**311**	P		**Pn**	**11 32 53.8**	**+0.2**
HNR	**Honiara**	**9.89**	**311**	⇑P		**Pn**	**11 32 54.0**	**+0.5**
MSVF	**Nonsavu**	**10.19**	**101**	Pn		Pn	11 33 04.4	+6.6
	6.7nm,0.3s,baz=268,slow=9.8,SNR=142							
MSVF				LR		LR	11 36 03.9	
	comp=Z,57µm,19.0s,baz=282,slow=33							
MSVF	**Nonsavu**	**10.19**	**101**	Pn		Pn	11 33 02.9	+5.0
MSVF	**Nonsavu**	**10.19**	**101**	*d*P		**Pn**	**11 33 02.2**	**+4.4**
MSVF	**Nonsavu**	**10.19**	**101**	⇓P		Pn	11 33 03.2	+5.4
TAVE	**Taveuni**	**12.06**	**95**	P		**Pn**	**11 33 25.8**	**+2.6**
NFK	**Norfolk Island**	**12.97**	**178**	P		**Pn**	**11 33 38.8**	**+3.1**
	baz=13							
FUNA	**Funafuti**	**13.59**	**58**	Pn		**Pn**	**11 33 44.8**	**+0.5**
FUNA	**Funafuti**	**13.59**	**58**	P		**Pn**	**11 33 46.3**	**+2.1**
FUNA	**Funafuti**	**13.59**	**58**	⇑P		**Pn**	**11 33 45.0**	**+0.8**
LHI	**Lord Howe Isla**	**17.27**	**205**	P		**P**	**11 34 34.5**	**+1.7**
	baz=17,SNR=7.4							
LHI	**Lord Howe Isla**	**17.27**	**205**	P		**Pn**	**11 34 31.9**	**+0.1**
LHI	**Lord Howe Isla**	**17.27**	**205**	⇑P		**P**	**11 34 34.0**	**+1.2**
RK1H	**Rockhampton Ha**	**17.65**	**243**	P		**P**	**11 34 39.0**	**+1.9**
	117nm,1.7s							
EIDS	**Eidsvold**	**17.98**	**236**	P		**P**	**11 34 43.0**	**+2.2**
	baz=18,SNR=40							
EIDS	**Eidsvold**	**17.98**	**236**	P		**P**	**11 34 41.7**	**+0.9**
EIDS				IAmb		IAmb	11 34 47.1	
	comp=Z,848nm,1.5s							
EIDS	**Eidsvold**	**17.98**	**236**	P		**P**	**11 34 43.8**	**+2.9**
EIDS	**Eidsvold**	**17.98**	**236**	⇓P		**P**	**11 34 41.0**	**+0.1**
TARA	**Tarawa**	**18.06**	**18**	P		**P**	**11 34 44.4**	**+2.7**
TARA				IAmb		IAmb	11 34 47.8	
	comp=Z,751nm,1.4s							
RABL	**Rabaul**	**19.15**	**306**	P		**P**	**11 34 52.8**	**-1.0**
RABL	**Rabaul**	**19.15**	**306**	P		**P**	**11 34 53.3**	**-0.5**
RABL	**Rabaul**	**19.15**	**306**	⇓P		**P**	**11 34 52.8**	**-1.0**
KRVT	**Keravat (AS076**	**19.19**	**306**	P		**P**	**11 34 53.9**	**-0.2**
	comp=Z,118nm,0.3s,baz=34,slow=2.0,SNR=48							
	comp=Z,309nm,0.4s							
OUZ	**Omahuta**	**19.88**	**165**			**Pn**	**11 35 03.6**	**+0.2**
OUZ	**Omahuta**	**19.88**	**165**	⇑P		**Pn**	**11 35 04.1**	**+0.8**
AFI	**Afiamalu**	**20.08**	**87**	LR		LR	11 40 59.8	
	comp=Z,13µm,19.0s,baz=272,slow=31							
AFI	**Afiamalu**	**20.08**	**87**	P		Pn	11 35 05.2	-0.8
AFI				IAmb		IAmb	11 35 19.9	
	comp=Z,273nm,1.1s							
AFI	**Afiamalu**	**20.08**	**87**	P		Pn	11 35 05.2	-0.8
AFI				pmax		pmax		
	comp=Z,273nm,1.1s							
AFI	**Afiamalu**	**20.08**	**87**	P		Pn	11 35 09.2	+3.2
AFI	**Afiamalu**	**20.08**	**87**	⇑P		Pn	11 35 06.4	+0.3
RMQ	**Roma**	**20.35**	**236**	P		Pn	11 35 08.9	-0.3
	baz=20,SNR=69							
RMQ	**Roma**	**20.35**	**236**	P		Pn	11 35 09.6	+0.5
ARMA	**Armidale**	**20.45**	**223**	P		Pn	11 35 09.7	-0.6
	baz=21,SNR=28							
ARMA	**Armidale**	**20.45**	**223**	P		**P**	**11 35 07.8**	**-0.1**
ARMA				IAmb		IAmb	11 35 16.9	
	comp=Z,332nm,1.0s							
ARMA	**Armidale**	**20.45**	**223**	P		Pn	11 35 11.0	+0.7
ARMA	**Armidale**	**20.45**	**223**	⇓P		Pn	11 35 09.6	-0.7
CTA	**Charters Tower**	**20.65**	**256**	P		**P**	**11 35 10.8**	**+0.8**
	comp=Z,33nm,0.8s,baz=77,slow=13,SNR=3.2							
CTA				S		**S**	**11 38 57.5**	**-1.0**
	comp=Z,5.6nm,0.8s,baz=3.1,slow=16,SNR=1.1							
CTA				LR		LR	11 41 56.8	
	comp=Z,13µm,20.6s,baz=95,slow=33							
CTA				ScP		**ScP**	**11 42 54.9**	**+2.4**
	comp=Z,28nm,1.1s,baz=88,slow=6.4,SNR=7.6							
	comp=Z,33nm,0.8s							
CTA	**Charters Tower**	**20.65**	**256**	P		Pn	11 35 12.4	-0.3
CTAO	**Charters Tower**	**20.65**	**256**	P		**P**	**11 35 10.8**	**+0.8**
CTAO				IAmb		IAmb	11 35 25.6	
	comp=Z,544nm,1.2s							
CTAO	**Charters Tower**	**20.65**	**256**	P		**P**	**11 35 10.8**	**+0.8**
CTAO				pmax		pmax		
	comp=Z,544nm,1.3s							
CTAO	**Charters Tower**	**20.65**	**256**	P		Pn	11 35 12.6	-0.1
CTAO	**Charters Tower**	**20.65**	**256**	⇓P		**P**	**11 35 11.2**	**+1.2**
PMG	**Port Moresby**	**20.94**	**286**	P		**P**	**11 35 14.5**	**+1.4**
	comp=Z,43nm,0.9s,baz=83,slow=5.0,SNR=5.8							
PMG				S		**S**	**11 39 03.2**	**-1.1**
	comp=Z,34nm,1.1s,baz=61,slow=19,SNR=2.2							
PMG				ScP		**ScP**	**11 42 57.3**	**+4.0**
	comp=Z,55nm,1.1s,baz=40,slow=5.3,SNR=4.7							
	comp=Z,43nm,0.9s							
PMG	**Port Moresby**	**20.94**	**286**	IAMs_20		IAMs_20	11 42 48.2	
	comp=Z,21µm,18.0s							
PMG	**Port Moresby**	**20.94**	**286**	*ce*P		Pn	11 35 16.7	+0.6
PMG				pmax		pmax		
	comp=Z,122nm,1.7s							
PMG				MLR		MLR		
	comp=Z,11µm,16.0s							
PMG	**Port Moresby**	**20.94**	**286**	⇑P		Pn	11 35 16.7	+0.6
NIUE	**Niue**	**21.68**	**101**	P		**P**	**11 35 21.2**	**+0.1**
	baz=22,SNR=5.3							
NIUE	**Niue**	**21.68**	**101**	P		**P**	**11 35 23.4**	**+2.3**
NIUE				IAmb		IAmb	11 35 24.6	
	comp=Z,398nm,0.9s							
NIUE	**Niue**	**21.68**	**101**	P		**P**	**11 35 22.8**	**+1.6**
NIUE	**Niue**	**21.68**	**101**	⇑P		**P**	**11 35 23.6**	**+2.5**
MTSU	**Mount Surprise**	**22.31**	**261**	P		**P**	**11 35 29.0**	**+1.1**
	baz=22,SNR=121							
MTSU	**Mount Surprise**	**22.31**	**261**	P		**P**	**11 35 29.7**	**+1.8**
MGCD	**Mangrove Creek**	**22.67**	**218**	P		**P**	**11 35 33.9**	**+2.3**
	baz=23,SNR=55							
MGCD	**Mangrove Creek**	**22.67**	**218**	P		**P**	**11 35 34.4**	**+2.8**
SYDH	**Sydney Hard Ro**	**23.28**	**218**	P		**P**	**11 35 40.4**	**+2.6**
	comp=Z,314nm,1.0s							
HIZ	**Hauiti**	**23.31**	**165**	P		**P**	**11 35 39.7**	**+1.6**
MXZ	**Matakaoa Point**	**23.48**	**158**	P		**P**	**11 35 41.4**	**+1.8**
MXZ				IAmb		IAmb	11 35 42.7	
	comp=Z,517nm,1.5s							
MXZ				IAMs_20		IAMs_20	11 43 05.1	
	comp=Z,23µm,22.0s							
COEN	**Coen**	**23.63**	**272**	P		**P**	**11 35 41.9**	**+0.5**
	baz=24,SNR=10							
COEN	**Coen**	**23.63**	**272**	IAmb		IAmb	11 35 57.9	
	comp=Z,305nm,1.1s							
COEN	**Coen**	**23.63**	**272**	P		**P**	**11 35 43.6**	**+2.2**
COEN	**Coen**	**23.63**	**272**	⇓P		**P**	**11 35 42.0**	**+0.5**
URZ	**Urewera**	**23.70**	**161**	P		**P**	**11 35 41.6**	**-0.1**
	comp=Z,62nm,0.9s,baz=12,slow=1.4,SNR=30							
URZ				LR		LR	11 44 03.4	
	comp=Z,25µm,20.1s,baz=32,slow=34 comp=Z,62nm,0.9s							
URZ	**Urewera**	**23.70**	**161**	IAmb		IAmb	11 36 00.1	
	comp=Z,419nm,1.4s							
URZ				IAMs_20		IAMs_20	11 43 52.0	
	comp=Z,24µm,20.0s							
URZ	**Urewera**	**23.70**	**161**	⇑P		**P**	**11 35 42.6**	**+0.8**
QLP	**Quilpie**	**24.09**	**240**	P		**P**	**11 35 46.5**	**+1.0**
	baz=24,SNR=57							
QLP	**Quilpie**	**24.09**	**240**	P		**P**	**11 35 47.0**	**+1.5**
QLP	**Quilpie**	**24.09**	**240**	⇑P		**P**	**11 35 46.0**	**+0.4**
KNTN	**Kanton**	**24.28**	**59**	P		**P**	**11 35 48.3**	**+1.0**
KNTN				IAmb		IAmb	11 35 55.9	
	comp=Z,565nm,1.2s							
BKZ	**Black Stump Fm**	**24.36**	**163**	P		**P**	**11 35 48.9**	**+1.0**
BKZ				IAmb		IAmb	11 35 54.2	
	comp=Z,166nm,0.7s							
BKZ	**Black Stump Fm**	**24.36**	**163**	P		**P**	**11 35 50.5**	**+2.6**
PATS	**Pohnpei**	**24.48**	**337**	P		**P**	**11 35 49.2**	**+0.2**
	baz=25,SNR=16							
PATS	**Pohnpei**	**24.48**	**337**	P		**P**	**11 35 48.7**	**-0.4**
PATS				IAmb		IAmb	11 36 05.6	
	comp=Z,402nm,0.9s							
PATS	**Pohnpei**	**24.48**	**337**	P		**P**	**11 35 51.8**	**+2.7**
KWAJ	**Kwajalein Atol**	**24.66**	**0**	P		**P**	**11 35 52.8**	**+2.1**
KWAJ				IAmb		IAmb	11 36 06.4	
	comp=Z,290nm,0.9s							
KWAJ	**Kwajalein Atol**	**24.66**	**0**	P		**P**	**11 35 52.8**	**+2.1**
KWAJ				pmax		pmax		
	comp=Z,291nm,1.0s							
KWAJ				MLR		MLR		
	comp=Z,9µm,19.0s							
KWAJ	**Kwajalein Atol**	**24.66**	**0**	P		**P**	**11 35 52.9**	**+2.2**
KWAJ	**Kwajalein Atol**	**24.66**	**0**	⇑P		**P**	**11 35 52.5**	**+1.8**
QRZ	**Quartz Range**	**25.10**	**171**	P		**P**	**11 35 55.5**	**+1.1**
QRZ				IAmb		IAmb	11 36 01.1	
	comp=Z,460nm,1.3s							
CNB	**Canberra Magne**	**25.18**	**217**	P		**P**	**11 35 56.5**	**+1.1**
	baz=25,SNR=71							
CNB	**Canberra Magne**	**25.18**	**217**	P		**P**	**11 35 56.9**	**+1.5**
CMSA	**Cobar Meteorol**	**25.20**	**228**	P		**P**	**11 35 55.8**	**+0.2**
	baz=25,SNR=186							
CMSA	**Cobar Meteorol**	**25.20**	**228**	P		**P**	**11 35 56.3**	**+0.7**
CAN	**Canberra**	**25.40**	**217**	IAmb		IAmb	11 36 10.3	
	comp=Z,136nm,1.0s							
CAN				IAMs_20		IAMs_20	11 44 01.6	
	comp=Z,21µm,21.0s							
CAN	**Canberra**	**25.40**	**217**	P		**P**	**11 35 58.5**	**+1.1**
CAN	**Canberra**	**25.40**	**217**	⇑P		**P**	**11 35 58.0**	**+0.7**
BFZ	**Birch Farm**	**25.71**	**165**	IAmb		IAmb	11 36 02.9	
	comp=Z,201nm,1.1s							
BFZ				IAMs_20		IAMs_20	11 45 35.8	
	comp=Z,21µm,20.0s							
SNZO	**South Karori**	**25.95**	**168**	IAMs_20		IAMs_20	11 45 05.1	
	comp=Z,17µm,20.0s							
THZ	**Tophouse**	**26.07**	**171**	P		**P**	**11 36 03.2**	**-0.2**
THZ				IAmb		IAmb	11 36 23.9	
	comp=Z,142nm,0.9s							
KHZ	**Kahutara**	**26.81**	**170**	P		**P**	**11 36 10.9**	**+1.0**
KHZ				IAmb		IAmb	11 36 19.3	
	comp=Z,260nm,1.3s							
KHZ	**Kahutara**	**26.81**	**170**	⇑P		**P**	**11 36 10.9**	**+1.0**
QIS	**Mount Isa**	**26.90**	**256**	P		**P**	**11 36 11.5**	**+0.4**
	baz=27,SNR=33							
QIS	**Mount Isa**	**26.90**	**256**	P		**P**	**11 36 12.0**	**+0.9**
INKA	**Innaminka**	**27.41**	**240**	P		**P**	**11 36 17.0**	**+1.5**
OXZ	**Oxford**	**27.49**	**173**	IAmb		IAmb	11 36 20.3	
	comp=Z,169nm,1.1s							
FOZ	**Fox Glacier**	**27.49**	**176**	P		**P**	**11 36 17.3**	**+1.2**
FOZ				IAmb		IAmb	11 36 24.2	
	comp=Z,171nm,0.9s							
RPZ	**Rata Peaks**	**27.77**	**175**	P		**P**	**11 36 19.5**	**+0.9**
	comp=Z,69nm,0.8s,baz=302,slow=2.1,SNR=28							
RPZ				LR		LR	11 46 18.6	
	comp=Z,20µm,21.4s,baz=349,slow=34 comp=Z,69nm,0.8s							
RPZ	**Rata Peaks**	**27.77**	**175**	IAmb		IAmb	11 36 23.1	
	comp=Z,160nm,1.1s							
RPZ				IAMs_20		IAMs_20	11 46 27.7	
	comp=Z,18µm,20.0s							
MQZ	**McQueen's Vall**	**27.94**	**172**	IAmb		IAmb	11 36 22.4	
	comp=Z,141nm,1.0s							
LBZ	**Lake Benmore**	**28.37**	**176**	IAMs_20		IAMs_20	11 46 03.5	
	comp=Z,18µm,22.0s							
STKA	**Stephens Creek**	**28.39**	**232**	P		**P**	**11 36 24.6**	**+0.4**
	comp=Z,55nm,0.9s,baz=60,slow=8.1,SNR=24							
STKA				PcP		**PcP**	**11 39 36.0**	**0.0**
	comp=Z,20nm,0.8s,baz=79,slow=4.8,SNR=7.7							
STKA				S		**S**	**11 41 09.3**	**+1.0**
	comp=Z,2.3nm,0.7s,baz=81,slow=19,SNR=0.7							
STKA				ScP		**ScP**	**11 43 15.8**	**+2.0**
	comp=Z,19nm,0.9s,baz=70,slow=3.7,SNR=7.5							
STKA				LR		LR	11 46 51.0	
	comp=Z,16µm,20.7s,baz=100,slow=34 comp=Z,55nm,0.9s							
STKA	**Stephens Creek**	**28.39**	**232**	P		**P**	**11 36 25.1**	**+0.8**
	baz=28,SNR=22							
STKA	**Stephens Creek**	**28.39**	**232**	P		**P**	**11 36 24.9**	**+0.7**
STKA	**Stephens Creek**	**28.39**	**232**	P		**P**	**11 36 27.1**	**+2.8**
WKZ	**Wanaka**	**28.75**	**178**	IAmb		IAmb	11 36 43.7	
	comp=Z,220nm,1.4s							
WKZ				IAMs_20		IAMs_20	11 46 23.4	
	comp=Z,18µm,21.0s							
TOO	**Toolangi**	**29.00**	**218**	P		**P**	**11 36 30.6**	**+1.0**
	baz=29,SNR=22							
TOO	**Toolangi**	**29.00**	**218**	P		**P**	**11 36 30.2**	**+0.6**
TOO				IAmb		IAmb	11 36 33.7	
	comp=Z,170nm,1.0s							
TOO	**Toolangi**	**29.00**	**218**	P		**P**	**11 36 30.2**	**+0.6**
TOO				pmax		pmax		
	comp=Z,170nm,1.0s							
TOO	**Tool

comp=Z,13nm,1.0s,baz=85,slow=3.8,SNR=4.1
WRA S **S** **11 42 01.0 -1.2**
comp=Z,8.2nm,1.2s,baz=57,slow=30,SNR=4.7
WRA ScP **ScP** **11 43 26.4 +1.3**
comp=Z,16nm,1.3s,baz=86,slow=1.8,SNR=5.5
WRA PKiKP **PKiKP** **11 47 12.1 -1.9**
comp=Z,3.2nm,0.9s,baz=24,slow=0.5,SNR=16
WRA LR LR 11 48 34.8
comp=Z,12µm,21.2s,baz=89,slow=34
comp=Z,21nm,0.7s
TAU Tasmania Unive 31.90 209 IAMs_20 IAMs_20 11 47 39.9
comp=Z,16µm,20.0s
TAU Tasmania Unive 31.90 209 ⇓P **P** **11 36 57.7 +2.6**
WHYH Whyalla 31.95 232 P **P** **11 36 58.8 +3.1**
comp=Z,50nm,1.1s
AS31 Alice Springs 32.49 251 IAmb IAmb 11 37 13.0
comp=Z,91nm,0.8s
ASAR Alice Springs 32.49 251 P **P** **11 36 59.5 -1.1**
comp=Z,139nm,0.7s,baz=76,slow=8.4,SNR=353
ASAR PcP **PcP** **11 39 48.0 +1.0**
comp=Z,10.0nm,0.8s,baz=106,slow=2.3,SNR=3.0
ASAR S **S** **11 42 07.4 -5.5**
comp=Z,1.1nm,0.6s,baz=102,slow=4.9,SNR=1.6
ASAR ScP **ScP** **11 43 29.7 +2.3**
comp=Z,96nm,1.1s,baz=88,slow=2.9,SNR=38
ASAR PKiKP **PKiKP** **11 47 12.4 -2.0**
comp=Z,1.2nm,0.6s,baz=113,slow=1.1,SNR=9.8
ASAR LR LR 11 49 58.5
comp=Z,17µm,18.2s,baz=94,slow=36
comp=Z,139nm,0.7s
BBOO Buckleboo 33.03 234 P **P** **11 37 05.6 +0.4**
baz=33,SNR=19
BBOO Buckleboo 33.03 234 P **P** **11 37 06.1 +1.0**
BBOO IAmb IAmb 11 37 18.9
comp=Z,72nm,0.9s
BBOO Buckleboo 33.03 234 P **P** **11 37 06.7 +1.5**
MULG Mulgathing 33.77 239 P **P** **11 37 12.0 +0.4**
KDU Kakadu 34.12 271 P **P** **11 37 14.1 -0.7**
baz=34,SNR=18
KDU Kakadu 34.12 271 P **P** **11 37 14.2 -0.7**
KDU Kakadu 34.12 271 ⇓P **P** **11 37 14.1 -0.7**
BAKI Biak 34.32 292 P **P** **11 37 17.9 +1.3**
comp=Z,2µmcomp=Z,128nm,1.5s
MTN Manton Dam 35.38 270 P **P** **11 37 25.5 -0.3**
baz=35,SNR=7.4
MTN Manton Dam 35.38 270 P **P** **11 37 26.1 +0.3**
MTN Manton Dam 35.38 270 ⇓P **P** **11 37 25.6 -0.2**
GUMO Guam 36.99 321 P **P** **11 37 39.1 -0.3**
comp=Z,72nm,0.6s,baz=156,slow=12,SNR=13
GUMO LR LR 11 52 51.2
comp=Z,3µm,18.7s,baz=144,slow=36
comp=Z,72nm,0.6s
GUMO Guam 36.99 321 P **P** **11 37 39.8 +0.4**
GUMO IAmb IAmb 11 37 52.8
comp=Z,156nm,1.0s
GUMO Guam 36.99 321 P **P** **11 37 39.8 +0.4**
GUMO pmax pmax
comp=Z,156nm,1.0s
FAKI Fak Fak 37.09 287 P **P** **11 37 39.9 -0.4**
FAKI IAmb IAmb 11 37 56.8
comp=Z,154nm,0.8s
FAKI IAMs_20 IAMs_20 11 54 00.2
comp=Z,8µm,19.0s
FAKI Fak Fak 37.09 287 P **P** **11 37 40.8 +0.4**
comp=Z,5µmcomp=Z,3µmcomp=Z,215nm,1.1s
FAKI Fak Fak 37.09 287 P **P** **11 37 41.4 +1.0**
FAKI Fak Fak 37.09 287 ⇓P **P** **11 37 40.3 -0.1**
KNRA Kununurra 37.28 265 P **P** **11 37 41.2 -0.8**
baz=37,SNR=52
KNRA Kununurra 37.28 265 IAmb IAmb 11 37 53.1
comp=Z,173nm,0.8s
KNRA Kununurra 37.28 265 P **P** **11 37 41.5 -0.5**
WRKA Warakurna 37.73 250 P **P** **11 37 45.4 -0.3**
baz=38,SNR=110
WRKA Warakurna 37.73 250 P **P** **11 37 46.5 +0.7**
WRKA Warakurna 37.73 250 ⇑P **P** **11 37 45.7 -0.1**
BNDI Bandanaira 38.69 283 P **P** **11 37 57.3 +3.5**
BNDI Bandanaira 38.69 283 ⇑P **P** **11 37 54.5 +0.6**
SIJI Sorong 38.81 289 P **P** **11 37 55.4 +0.5**
comp=Z,73nm,0.6s,baz=103,slow=8.1,SNR=11
SIJI LR LR 11 55 16.2
comp=Z,10µm,18.2s,baz=116,slow=38
comp=Z,73nm,0.6s
SWI Sorong 38.82 289 P **P** **11 37 56.3 +1.4**
comp=Z,4µmcomp=Z,2µmcomp=Z,260nm,0.9s
FORT Forrest 38.89 241 P **P** **11 37 55.7 +0.2**
baz=39,SNR=90
FORT Forrest 38.89 241 P **P** **11 37 55.2 -0.2**
FORT Forrest 38.89 241 P **P** **11 37 58.5 +3.1**
FORT Forrest 38.89 241 ⇓P **P** **11 37 55.6 +0.2**
XMAS Kiritimati 38.97 66 P **P** **11 37 58.2 +2.1**
XMAS IAmb IAmb 11 38 11.1
comp=Z,151nm,1.1s
XMAS Kiritimati 38.97 66 IAMs_20 IAMs_20 11 51 25.2
comp=Z,11µm,19.0s
AAI Ambon 40.57 283 P **P** **11 38 11.0 +1.4**
comp=Z,2µmcomp=Z,152nm,1.4s
PAE Paea 41.00 99 *e*P **P** **11 38 15.6 +2.6**
comp=Z,32nm,1.0s
PPT2 Papeete2 41.01 99 *e*P **P** **11 38 16.0 +2.8**
comp=Z,136nm,0.9s
PPT2 Papeete2 41.01 99 *e*P **P** **11 38 16.4 +3.2**
comp=Z,931nm,25.0s
PPT2 *e*S **S** **11 44 25.8 +3.0**
comp=Z,4µm,28.5s
PPT2 *e*LR LR 11 49 36.3
comp=Z,11µm,25.2s
TBI Tubuai 41.01 107 *e*P **P** **11 38 15.3 +2.2**
comp=Z,1µm,27.2s
TBI *e*S **S** **11 44 24.7 +2.1**
comp=Z,4µm,29.5s
TBI *e*LR LR 11 49 36.8
comp=Z,6µm,30.0s
PPT Papeete 41.01 98 P **P** **11 38 12.7 -0.5**
comp=Z,82nm,0.8s,baz=303,slow=2.7,SNR=8.3
PPT LR LR 11 51 22.7
comp=Z,3µm,21.2s,baz=249,slow=31
comp=Z,82nm,0.8s
PPTF Pamatai, Papee 41.02 99 P **P** **11 38 14.1 +0.8**
PPTF IAmb IAmb 11 38 30.4
comp=Z,165nm,0.9s
PPTF Pamatai, Papee 41.02 99 P **P** **11 38 17.7 +4.4**
PPTF Pamatai, Papee 41.02 99 ⇓P **P** **11 38 16.1 +2.8**
TIAR Tiarei 41.23 98 *e*P **P** **11 38 17.8 +2.8**
comp=Z,24nm,0.9s
NLAI Namlea 41.75 283 P **P** **11 38 20.7 +1.4**
comp=Z,5µmcomp=Z,386nm,1.5s
LBMI Labuha 42.34 287 P **P** **11 38 25.5 +1.4**
comp=Z,4µmcomp=Z,3µmcomp=Z,216nm,1.1s
PMOR Pomariorio Ree 42.88 95 *e*P **P** **11 38 31.1 +2.7**
comp=Z,366nm,1.1s
BATI Baumata 43.07 272 P **P** **11 38 31.5 +1.5**
comp=Z,3µmcomp=Z,2µmcomp=Z,239nm,1.1s
VAH Vaihoa 43.11 95 *e*P **P** **11 38 32.9 +2.7**
comp=Z,112nm,1.0s
SANI Sanana 43.21 284 P **P** **11 38 32.4 +1.3**
comp=Z,5µmcomp=Z,3µmcomp=Z,145nm,1.6s
SANI Sanana 43.21 284 P **P** **11 38 32.6 +1.5**
SANI Sanana 43.21 284 ⇑P **P** **11 38 30.6 -0.6**
MMRI Maumere 44.80 274 P **P** **11 38 45.4 +1.5**
comp=Z,5µmcomp=Z,3µmcomp=Z,168nm,1.5s
EDFI Ende, Flores 45.30 274 P **P** **11 38 48.7 +0.8**
comp=Z,849nmcomp=Z,47nm,0.7s
BBSI Bau Bau 45.32 278 P **P** **11 38 49.6 +1.6**
comp=Z,260nmcomp=Z,25nm,1.5s
PSA00 Pilbara Seismi 45.37 255 IAmb IAmb 11 38 50.9
comp=Z,151nm,1.1s
PSA00 Pilbara Seismi 45.37 255 IAmb IAmb 11 38 50.9
comp=Z,76nm,1.1s
PSA00 Pilbara Seismi 45.37 255 P **P** **11 38 49.8 +1.5**
MBWA Marble Bar 45.48 256 P **P** **11 38 49.1 -0.2**
MBWA Marble Bar 45.48 256 P **P** **11 38 50.1 +0.9**
MBWA Marble Bar 45.48 256 P **P** **11 38 50.6 +1.4**
MBWA Marble Bar 45.48 256 ⇑P **P** **11 38 49.4 +0.1**
SGSI Sangihe 45.94 292 P **P** **11 38 54.3 +1.4**
comp=Z,133nm,0.7s
BASI Baing, Sumba 46.03 271 P **P** **11 38 55.2 +1.6**
comp=Z,3µmcomp=Z,3µmcomp=Z,246nm,1.7s
KMSI Cibinong 46.05 287 P **P** **11 38 55.2 +1.4**
comp=Z,3µmcomp=Z,224nm,1.1s
MIDW Midway 46.33 19 IAMs_20 IAMs_20 11 54 04.3
comp=Z,6µm,21.0s
LUWI Luwuk 46.57 284 P **P** **11 38 57.2 -0.6**
LUWI Luwuk 46.57 284 P **P** **11 38 59.3 +1.4**
comp=Z,5µmcomp=Z,3µmcomp=Z,160nm,0.9s
LUWI Luwuk 46.57 284 P **P** **11 38 59.1 +1.2**
LUWI Luwuk 46.57 284 ⇑P **P** **11 38 58.4 +0.6**

BSSI Bau Bau, Buton 47.11 277 P **P** **11 39 03.7 +1.6**
comp=Z,3µmcomp=Z,919nmcomp=Z,77nm,1.3s
WBSI Waikabubak, Su 47.30 272 P **P** **11 39 04.7 +1.1**
comp=Z,2µmcomp=Z,272nm,0.9s
BIPH Bislig 47.34 298 ⇓*i*P **P** **11 39 04.1 +0.3**
DAV Davao City (W) 47.46 296 P **P** **11 39 05.3 +0.5**
comp=Z,107nm,0.3s,baz=64,slow=11,SNR=5.0
comp=Z,107nm,0.3s
DAV Davao City (W) 47.46 296 P **P** **11 39 03.6 -1.2**
APSI Ampana 47.67 284 P **P** **11 39 07.9 +1.5**
comp=Z,2µmcomp=Z,152nm,1.1s
BKSI Bulukumba 47.70 277 P **P** **11 39 07.4 +0.8**
comp=Z,1µmcomp=Z,65nm,1.3s
KLBR Kellerberrin 47.73 242 P **P** **11 39 06.3 -0.3**
baz=48,SNR=19
KLBR Kellerberrin 47.73 242 P **P** **11 39 07.2 +0.5**
KCP Kidapawan 47.86 295 ⇓*e*P **P** **11 39 07.6 -0.3**
MRSI Marisa 47.90 286 P **P** **11 39 08.6 +0.4**
BNSI Bone 47.98 279 P **P** **11 39 09.7 +0.9**
comp=Z,5µmcomp=Z,2µmcomp=Z,156nm,1.2s
KAPI Kappang 48.14 278 P **P** **11 39 10.3 +0.3**
comp=Z,107nm,0.8s,baz=116,slow=5.8
comp=Z,107nm,0.8s
KAPI Kappang 48.14 278 P **P** **11 39 10.5 +0.4**
KAPI Kappang 48.14 278*c* *i*P **P** **11 39 10.6 +0.6**
KAPI pmax pmax
comp=Z,190nm,1.0s
KAPI MLR MLR
comp=Z,4µm,20.0s
KAPI Kappang 48.14 278 P **P** **11 39 10.7 +0.6**
KAPI Kappang 48.14 278 P **P** **11 39 11.4 +1.3**
KAPI Kappang 48.14 278 ⇑P **P** **11 39 10.4 +0.4**
BUKP Musuan 48.30 296 ⇓*e*P **P** **11 39 13.9 +2.6**
BUKP Musuan 48.30 296 *e*S S 11 45 59.1 -9.5
NWAO Narrogin (SRO) 48.34 240 P **P** **11 39 11.3 -0.1**
NWAO Narrogin (SRO) 48.34 240 P **P** **11 39 11.3 -0.1**
NWAO pmax pmax
comp=Z,252nm,1.0s
NWAO MLR MLR
comp=Z,17µm,19.0s
NWAO Narrogin (SRO) 48.34 240 P **P** **11 39 11.9 +0.5**
SPSI Sidrap Palu 48.43 279 P **P** **11 39 12.6 +0.3**
comp=Z,4µmcomp=Z,1µmcomp=Z,86nm,1.3s
BLDU Ballidu 48.51 243 P **P** **11 39 12.6 -0.2**
baz=49,SNR=22
BLDU Ballidu 48.51 243 P **P** **11 39 14.1 +1.3**
TTSI Tana Toraja 48.67 280 P **P** **11 39 15.5 +1.3**
comp=Z,4µmcomp=Z,2µmcomp=Z,69nm,1.0s
CTBH Cotabato--PC H 48.69 295 ⇓*e*P **P** **11 39 15.1 +0.8**
RKGY Rocky Gully 48.79 238 P **P** **11 39 15.1 +0.3**
baz=49,SNR=11
RKGY Rocky Gully 48.79 238 P **P** **11 39 16.9 +2.0**
comp=Z,242nm,0.8s
MORW Morawa 48.97 245 P **P** **11 39 16.3 0.0**
baz=49,SNR=59
MORW Morawa 48.97 245 P **P** **11 39 16.7 +0.4**
MORW Morawa 48.97 245 ⇑P **P** **11 39 16.1 -0.2**
PLAI Plampang 49.04 272 P **P** **11 39 18.1 +1.1**
comp=Z,5µmcomp=Z,2µmcomp=Z,216nm,1.0s
PLAI Plampang 49.04 272 P **P** **11 39 20.2 +3.2**
MUN Mundaring 49.08 241 P **P** **11 39 17.0 -0.1**
baz=49,SNR=22
MUN Mundaring 49.08 241 P **P** **11 39 19.0 +1.9**
TOLI2 Tolitoli 49.21 286 P **P** **11 39 21.4 +3.1**
JCJ Chichijima 49.43 330 LR LR 11 58 38.3
comp=Z,3µm,21.2s,baz=146,slow=34
JCJ Chichijima 49.43 330 P **P** **11 39 18.5 -1.2**
JCJ Chichijima 49.43 330 P **P** **11 39 20.8 +1.1**
JCJ Chichijima 49.43 330 ⇑P **P** **11 39 19.6 -0.1**
MSLP Maasin 49.61 299 ⇓*e*P **P** **11 39 23.0 +1.8**
PAGZ Pagadian 49.74 295 ⇑*e*P **P** **11 39 23.2 +0.8**
MPSI Mapaga 49.75 284 P **P** **11 39 22.0 -0.4**
comp=Z,4µmcomp=Z,2µmcomp=Z,151nm,1.1s
TWSI Taliwang, Sumb 49.92 272 P **P** **11 39 24.2 +0.5**
comp=Z,3µmcomp=Z,3µmcomp=Z,392nm,1.1s
TBP Tagbilaran 50.23 298 ⇑*e*P **P** **11 39 25.2 -0.8**
KIP Kipapa 50.25 43 P **P** **11 39 26.9 +0.9**
KIP IAmb IAmb 11 39 29.1
comp=Z,114nm,0.9s
KIP Kipapa 50.25 43 P **P** **11 39 26.9 +0.9**
KIP pmax pmax
comp=Z,114nm,0.9s
KIP Kipapa 50.25 43 P **P** **11 39 27.3 +1.3**
KIP Kipapa 50.25 43 P **P** **11 39 27.5 +1.5**
KHLU Kahalu`u 50.44 47 IAmb IAmb 11 39 33.2
comp=Z,120nm,1.0s
OPA Opana 50.44 43 P **P** **11 39 28.7 +1.3**
OPA Opana 50.44 43 P **P** **11 39 28.7 +1.3**
OPA pmax pmax
comp=Z,422nm,0.9s
GIRL Giralia 50.53 254 P **P** **11 39 28.9 +0.7**
baz=51,SNR=13
GIRL Giralia 50.53 254 P **P** **11 39 32.2 +4.0**
GIRL Giralia 50.53 254 ⇑P **P** **11 39 29.6 +1.4**
PUH Pauahi 50.77 48 IAmb IAmb 11 39 32.7
comp=Z,97nm,0.8s
POHA Pohakuloa 50.80 47 P **P** **11 39 31.6 +1.1**
POHA Pohakuloa 50.80 47 P **P** **11 39 33.9 +3.4**
POHA Pohakuloa 50.80 47 ⇑P **P** **11 39 31.7 +1.2**
H01W1 Cape Leeuwin H 51.13 238 P **P** **11 39 34.8 +2.4**
baz=101,slow=8.9,SNR=5.3
H01W3 Cape Leeuwin H 51.15 238 P **P** **11 39 36.4 +4.0**
baz=101,slow=8.9,SNR=8.7
H01W2 Cape Leeuwin H 51.15 238 P **P** **11 39 35.7 +3.2**
baz=101,slow=8.9,SNR=8.2
TAOE Nuku Hiva Isla 51.46 89 *e*P **P** **11 39 38.5 +3.1**
comp=Z,293nm,1.0s
TAOE Nuku Hiva Isla 51.46 89 *e*LR LR 11 54 29.0
comp=Z,4µm,25.5s
DNP Denpasar 51.54 272 P **P** **11 39 37.6 +1.7**
comp=Z,1µm,0.8s
IGBI Denpasar 51.57 271 P **P** **11 39 36.7 +0.6**
comp=Z,2µmcomp=Z,8µmcomp=Z,870nm,0.8s
SRBI Singaraja 51.68 272 P **P** **11 39 38.4 +1.5**
comp=Z,4µmcomp=Z,3µmcomp=Z,216nm,0.9s
RCP Roxas 52.12 299 ⇓*e*P **P** **11 39 41.2 +1.1**
JAGI Jajag, Banyuwa 52.60 272 IAmb IAmb 11 40 04.1
comp=Z,152nm,0.9s
JAGI Jajag, Banyuwa 52.60 272 P **P** **11 39 43.5 -0.4**
comp=Z,4µmcomp=Z,3µmcomp=Z,226nm,1.1s
JAGI Jajag, Banyuwa 52.60 272 P **P** **11 39 44.7 +0.8**
JAGI Jajag, Banyuwa 52.60 272 ⇑P **P** **11 39 42.9 -0.9**
ABJI Asem Bagus 52.69 272 P **P** **11 39 46.1 +1.7**
comp=Z,6µmcomp=Z,4µmcomp=Z,264nm,1.0s
MYLDM Lahad Datu 52.91 289 P **P** **11 39 48.2 +2.2**
MYLDM IAmb IAmb 11 40 10.6
comp=Z,168nm,1.1s
MYLDM Lahad Datu 52.91 289 ⇑P **P** **11 39 47.8 +1.8**
BBKI Banjar Baru 53.27 278 P **P** **11 39 49.8 +1.0**
comp=Z,3µmcomp=Z,92nm,0.9s
BLJI Banyuglugur 53.31 272 P **P** **11 39 49.9 +0.8**
comp=Z,2µmcomp=Z,79nm,1.4s
GMJI Gumukmas 53.33 272 P **P** **11 39 49.8 +0.6**
comp=Z,123nm,1.0s
JCNP Jose Panganiba 53.58 302 ⇑*e*P **P** **11 39 51.0 0.0**
MTKI Muara Teweh, K 54.00 281 P **P** **11 39 55.7 +1.6**
comp=Z,3µmcomp=Z,18nm,0.6s
JMZ Minamidaito 2 54.58 319 P **P** **11 39 56.1 -1.9**
JMZ IAmb IAmb 11 40 18.1
comp=Z,223nm,1.5s
GRJI Gresik 54.59 273 P **P** **11 40 00.1 +1.7**
comp=Z,81nm,0.9s
PPR Puerto Princes 54.70 295 ⇓*i*P **P** **11 40 00.5 +1.3**
TGY Tagaytay City 54.93 301 P **P** **11 40 01.8 +0.9**
comp=Z,111nm,0.3s,baz=169,slow=16,SNR=16
TGY LR LR 12 00 39.1
comp=Z,695nm,21.0s,baz=122,slow=33
comp=Z,111nm,0.3s
PWJI Pagerwojo 54.97 271 P **P** **11 40 01.0 -0.1**
comp=Z,2µmcomp=Z,120nm,1.0s
KKM Kota Kinabalu 55.33 289 P **P** **11 40 05.5 +1.6**
KKM Kota Kinabalu 55.33 289 ⇑P **P** **11 40 04.0 +0.1**
PCJI Pacitan 55.53 271 P **P** **11 40 05.6 +0.4**
comp=Z,5µmcomp=Z,486nm,1.1s
PCPH Palayan 55.57 302 ⇑*e*P **P** **11 40 06.0 +0.6**
WOJI Wonogiri, Jawa 55.86 271 P **P** **11 40 08.0 +0.5**
comp=Z,2µmcomp=Z,192nm,1.0s
UWJI Ujung Watu 56.19 273 P **P** **11 40 11.6 +1.7**
comp=Z,3µmcomp=Z,143nm,1.7s
UGM Wanagama 56.23 271 P **P** **11 40 10.8 +0.6**
comp=Z,4µmcomp=Z,507nm,1.1s
UGM Wanagama 56.23 271 P **P** **11 40 10.9 +0.7**
YOGI Yogyakarta 56.47 271 P **P** **11 40 12.8 +0.9**
comp=Z,3µmcomp=Z,317nm,0.9s
SMRI Semarang 56.51 272 P **P** **11 40 13.7 +1.4**
comp=Z,6µmcomp=Z,4µmcomp=Z,268nm,1.2s

SMRI Semarang 56.51 272 P **P** **11 40 16.2 +3.9**
SMRI Semarang 56.51 272 ⇑P **P** **11 40 13.2 +1.0**
JOW Kunigami 57.17 318 P **P** **11 40 17.1 +0.5**
comp=Z,128nm,0.7s,baz=179,slow=6.4,SNR=37
JOW LR LR 12 02 56.0
comp=Z,2µm,21.6s,baz=139,slow=34
comp=Z,128nm,0.7s
JOW Kunigami 57.17 318 P **P** **11 40 18.0 +1.4**
JOW Kunigami 57.17 318 ⇑P **P** **11 40 17.3 +0.7**
STKI Sintang 57.56 281 P **P** **11 40 20.8 +1.1**
comp=Z,3µmcomp=Z,9µmcomp=Z,65nm,1.3s
SBUM Sibu 57.66 283 P **P** **11 40 20.2 -0.2**
SBUM Sibu 57.66 283 ⇑P **P** **11 40 20.8 +0.5**
JYT Yasato 58.04 334 ⇑P **P** **11 40 22.4 -0.1**
CMJI Cimerak 58.25 271 P **P** **11 40 25.5 +1.0**
comp=Z,2µmcomp=Z,1µmcomp=Z,151nm,1.1s
INU Inuyama 58.72 331 P **P** **11 40 27.7 +0.4**
INU IAmb IAmb 11 40 42.3
comp=Z,186nm,1.4s
INU Inuyama 58.72 331 P **P** **11 40 28.6 +1.3**
INU Inuyama 58.72 331 ⇑P **P** **11 40 27.3 0.0**
JCJI Jatiwangi 58.74 272 P **P** **11 40 29.8 +1.9**
comp=Z,25µmcomp=Z,392nm,1.8s
JGF Kuroka 58.77 331 IAmb IAmb 11 40 41.9
comp=Z,64nm,1.0s
JGF Kuroka 58.77 331 ⇑P **P** **11 40 27.2 -0.5**
KSM Kuching 59.13 282 IAmb IAmb 11 40 32.9
comp=Z,105nm,1.1s
KSM Kuching 59.13 282 P **P** **11 40 31.4 +0.8**
KSM Kuching 59.13 282 ⇑P **P** **11 40 30.4 -0.2**
JSU Suzuyama 59.16 323 ⇑P **P** **11 40 30.6 +0.2**
MJAR Matsushiro Arr 59.17 333 P **P** **11 40 29.2 -1.2**
comp=Z,48nm,0.8s,baz=156,slow=9.6,SNR=84
MJAR LR LR 12 01 25.9
comp=Z,968nm,21.2s,baz=138,slow=31
MJAR PKPPKP **P'P'df** **12 10 02.1 +2.2**
comp=Z,0.6nm,0.5s,baz=50,slow=10,SNR=2.9
MJAR PKP2bc 12 10 11.3
comp=Z,2.6nm,0.9s,baz=360,slow=2.3,SNR=6.2
comp=Z,48nm,0.8s
MJAR Matsushiro Arr 59.17 333 IAmb IAmb 11 40 33.4
comp=Z,40nm,0.9s
MAJO Matsushiro 59.17 333 P **P** **11 40 29.6 -0.8**
MAJO Matsushiro 59.17 333*c* *i*P **P** **11 40 30.6 +0.2**
MAJO pmax pmax
comp=Z,83nm,0.7s
MAJO MLR MLR
comp=Z,829nm,18.0s
MAJO Matsushiro 59.17 333 P **P** **11 40 31.1 +0.7**
MAJO Matsushiro 59.17 333 ⇑P **P** **11 40 29.9 -0.5**
MJB9 Matsu-Tunnel 59.17 333 IAmb IAmb 11 40 32.4
comp=Z,87nm,0.7s
JMM Marumori 59.20 335 ⇑P **P** **11 40 30.6 +0.1**
YOJ Yonaguni jima 59.22 312 P **P** **11 40 32.5 +1.5**
YOJ Yonaguni jima 59.22 312 ⇑P **P** **11 40 31.2 +0.3**
LEM Lembang 59.28 272 P **P** **11 40 31.9 +0.1**
comp=Z,136nm,0.6s,baz=90,slow=7.1,SNR=33
LEM LR LR 12 07 47.9
comp=Z,2µm,19.1s,baz=94,slow=38
comp=Z,136nm,0.6s
LEM Lembang 59.28 272 P **P** **11 40 32.0 +0.1**
CNJI Cibinong 59.63 271 P **P** **11 40 34.0 -0.1**
comp=Z,4µmcomp=Z,3µmcomp=Z,305nm,1.3s
TWG Pinlang 59.65 309 IAmb IAmb 11 41 00.4
comp=Z,69nm,0.9s
JNU Nakatsue 60.12 325 LR LR 12 03 32.8
comp=Z,2µm,21.9s,baz=117,slow=33
JNU Nakatsue 60.12 325 P **P** **11 40 38.8 +1.7**
JNU Nakatsue 60.12 325 ⇑P **P** **11 40 36.8 -0.3**
DBJI Dramaga 60.19 272 P **P** **11 40 38.1 +0.2**
comp=Z,12µmcomp=Z,303nm,1.2s
SKJI Sukabumi 60.26 271 P **P** **11 40 39.5 +1.1**
comp=Z,2µmcomp=Z,148nm,1.1s
TPUB Ta-pu 60.26 309 P **P** **11 40 39.3 +1.1**
XMI Christmas Isla 60.30 267 P **P** **11 40 41.4 +2.7**
comp=Z,245nm,1.1s
SSLB Suanglung 60.31 310 P **P** **11 40 37.3 -1.3**
SSLB IAmb IAmb 11 40 52.6
comp=Z,113nm,0.9s
SSLB Suanglung 60.31 310 P **P** **11 40 39.5 +1.0**
XMIS Christmas Isla 60.33 267 P **P** **11 40 41.7 +2.8**
comp=Z,202nm,0.9s
JHS Saijyo 60.36 328 IAmb IAmb 11 40 41.4
comp=Z,61nm,0.7s
JHS Saijyo 60.36 328 ⇑P **P** **11 40 38.9 +0.3**
JSD Sado 60.40 334 P **P** **11 40 38.3 -0.5**
JSD Sado 60.40 334 ⇑P **P** **11 40 38.6 -0.1**
YHNB Yeheng 60.53 311 P **P** **11 40 39.4 -0.7**
YHNB IAMs_20 IAMs_20 12 04 39.8
comp=Z,4µm,21.0s
YHNB Yeheng 60.53 311 P **P** **11 40 41.1 +1.0**
TATO Taipei 60.63 311 P **P** **11 40 40.7 +0.1**
SBJI Serang 60.89 272 P **P** **11 40 43.9 +1.2**
comp=Z,9µmcomp=Z,244nm,1.5s
VNDA Vanda 61.59 181 P **P** **11 40 45.5 -0.9**
comp=Z,25nm,1.1s,baz=358,slow=6.9,SNR=46
VNDA LR LR 12 04 35.5
comp=Z,2µm,20.1s,baz=14,slow=33
VNDA PKP2bc 12 10 04.3
comp=Z,2.4nm,1.0s,baz=275,slow=2.3,SNR=5.8
comp=Z,25nm,1.1s
VNDA Vanda 61.59 181 P **P** **11 40 46.5 +0.2**
VNDA Vanda 61.59 181 P **P** **11 40 46.6 +0.2**
VNDA pmax pmax
comp=Z,219nm,1.7s
SBA Scott Base 61.86 180 P **P** **11 40 48.9 +0.7**
SBA Scott Base 61.86 180 P **P** **11 40 48.9 +0.7**
SBA pmax pmax
comp=Z,217nm,1.2s
SBA MLR MLR
comp=Z,2µm,18.0s
BLSI Bandar Lampung 61.94 272 P **P** **11 40 50.2 +0.4**
comp=Z,78nm,1.0s
PPBI Pangkal Pinang 61.96 276 P P 11 41 04.6 +15
ERM Erimo 61.98 340 IAMs_20 IAMs_20 12 02 45.3
comp=Z,4µm,21.0s
CASY Casey 62.45 203 P **P** **11 40 52.1 -0.2**
CASY Casey 62.45 203 IAMs_20 IAMs_20 12 03 34.1
comp=Z,5µm,19.0s
CASY Casey 62.45 203 ⇑P **P** **11 40 52.3 0.0**
KASI Kota Agung 62.61 272 P **P** **11 40 53.2 -1.1**
comp=Z,3µmcomp=Z,212nm,1.3s
QZH Quanzhou 62.73 310 ⇓*i*P **P** **11 40 54.5 -0.3**
QZH S **S** **11 49 19.0 -1.6**
QZH pmax pmax
comp=Z,74nm,0.8s
QZH pmax pmax
comp=Z,1µm,6.6s
QZH LR LR
comp=Z,900nm,18.5s
QZH LR LR
comp=Z,1µm,20.4s
QZH LR LR
comp=Z,2µm,20.4s
LWLI Liwa 63.17 272 P **P** **11 40 58.2 +0.1**
comp=Z,2µmcomp=Z,7µmcomp=Z,139nm,1.2s
KURI Kuril'sk 63.53 345 *e*P **P** **11 41 00.4 +0.8**
KURI *e* 11 41 36.7
KURI *e*S **S** **11 49 32.3 +2.5**
KURI *e*SS **SS** **11 53 44.3 +6.2**
KURI pmax pmax
comp=Z,424nm,1.6s
KURI pmax pmax
comp=E,77nm,0.8s
KURI pmax pmax
comp=N,56nm,1.6s
KURI pmax pmax
comp=Z,1µm,4.2s
KURI MLR MLR
comp=Z,2µm,17.0s
KURI MLR MLR
comp=N,3µm,21.0s
KURI MLR MLR
comp=E,1µm,19.0s
NAWB Namwon 63.76 324 IAmb IAmb 11 41 17.7
comp=Z,58nm,1.1s
DSRI Dabo 63.95 277 P **P** **11 41 04.6 +1.5**
comp=Z,2µmcomp=Z,883nmcomp=Z,48nm,1.3s
TPRI Tanjung Pinang 64.42 279 P **P** **11 41 08.7 +2.5**
comp=Z,48nm,1.2s
TJN Taejon 64.47 325 *de*P **P** **11 41 06.4 +0.4**
TJN Taejon 64.47 325 P **P** **11 41 08.4 +2.4**
KSCHJ Chungju 64.50 326 IAmb IAmb 11 41 09.2
comp=Z,83nm,0.8s
JMBI JAMBI 64.50 276 P **P** **11 41 10.3 +3.5**
SSE Sheshan 64.64 317 P **P** **11 41 08.3 +1.1**

SSE S **S** **11 49 44.0 -0.2**
SSE pmax pmax
comp=Z,32nm,0.7s
SSE pmax pmax
comp=Z,240nm,10.6s
SSE LR LR
comp=Z,520nm,20.6s
SSE LR LR
comp=Z,640nm,22.4s
KSRS Korea Array 64.95 326 P **P** **11 41 09.4 +0.3**
comp=Z,28nm,0.8s,baz=141,slow=7.0,SNR=70
KSRS LR LR 12 07 43.3
comp=Z,1μm,20.5s,baz=130,slow=34
KSRS PKPPKP **P'P'df** **12 09 52.3 +1.2**
comp=Z,3.0nm,1.0s,baz=314,slow=2.7,SNR=10
comp=Z,28nm,0.8s
KS19 Wonju Array Si 65.02 326 IAmb IAmb 11 41 23.2
comp=Z,56nm,1.0s
MYKOM **Kota Tinggi 65.33 280** P **P** **11 41 12.2 0.0**
MYKOM IAmb IAmb 11 41 29.3
comp=Z,89nm,1.5s
INCN Inchon 65.67 325 P **P** **11 41 15.9 +2.0**
INCN IAmb IAmb 11 41 29.5
comp=Z,103nm,1.1s
INCN Inchon 65.67 325 P **P** **11 41 15.9 +2.0**
INCN pmax pmax
comp=Z,103nm,1.1s
INCN Inchon 65.67 325 P **P** **11 41 16.1 +2.2**
comp=Z,88nm,1.7s
GZH Guangzhou 65.73 305 P **P** **11 41 15.3 +0.8**
KRJI Kerinci 66.46 275 P **P** **11 41 20.9 +1.4**
comp=Z,4μmcomp=Z,145nm,1.0s
YSS Yuzh-Sakhalins 66.53 342 P **P** **11 41 20.0 +0.9**
YSS IAMs_20 IAMs_20 12 04 50.9
comp=Z,5μm,22.0s
YSS Yuzh-Sakhalins 66.53 342α *i*P **P** **11 41 20.1 +1.0**
YSS *e**SP **pP** **11 41 32.0 +0.4**
YSS *e* 11 43 45.0
YSS *e*S **S** **11 50 06.1 -0.6**
YSS *e*PS **PnS** **11 50 20.0 -12**
YSS *e* 11 51 15.4
YSS *e*SS **SS** **11 54 26.6 +1.8**
YSS *e*SSS SSS 11 57 21.1
YSS pmax pmax
comp=Z,1μm,4.4s
YSS pmax pmax
comp=N,400nm,3.8s
YSS pmax pmax
comp=Z,240nm,0.8s
YSS smax smax
comp=N,600nm,6.8s
YSS Yuzh-Sakhalins 66.53 342 P **P** **11 41 21.4 +2.3**
YSS Yuzh-Sakhalins 66.53 342 ⇑P **P** **11 41 19.9 +0.9**
HJU Haeju 66.58 325 P **P** **11 41 20.6 +1.0**
HJU pP **pP** **11 41 30.3 -1.8**
HJU S S 11 50 17.1 +10
HJU AmB
comp=Z,256nm,1.3s
HJU AMS AMS
comp=N,438nm,7.8s
HJU AMS AMS
comp=E,116nm,2.1s
HJU AMS AMS
comp=Z,109nm,1.9s
QIZ Qiongzhong 66.60 299 P **P** **11 41 21.3 +1.1**
QIZ pP **pP** **11 41 31.5 -1.4**
QIZ S **S** **11 50 09.0 +0.4**
QIZ sS **sS** **11 50 28.5 -1.1**
QIZ SS **SS** **11 54 31.0 +4.1**
QIZ pmax pmax
comp=Z,70nm,1.4s
QIZ pmax pmax
comp=Z,540nm,2.8s
QIZ LR LR
comp=Z,1μm,29.9s
QIZ LR LR
comp=Z,1μm,25.1s
QIZ LR LR
comp=Z,2μm,28.2s
QIZ Qiongzhong 66.60 299 P **P** **11 41 22.0 +1.8**
NJ2 Nanjing 66.78 316 ⇑P **P** **11 41 21.0 -0.1**
NJ2 pP **pP** **11 41 34.5 +1.0**
NJ2 sP **sP** **11 41 39.5 +1.1**
NJ2 S **S** **11 50 10.5 +0.1**
NJ2 sS **sS** **11 50 29.5 -2.1**
NJ2 ScS **SKSac** **11 51 13.8 -0.8**
NJ2 SS **SS** **11 54 26.5 -2.8**
NJ2 pmax pmax
comp=Z,71nm,1.1s
NJ2 pmax pmax
comp=Z,1μm,6.6s
NJ2 LR LR
comp=Z,2μm,20.4s
NJ2 LR LR
comp=Z,2μm,21.8s
NJ2 LR LR
comp=Z,3μm,22.3s
TEY Ternei 66.96 337⇓ *e*P **P** **11 41 22.1 +0.2**
TEY *e* 11 50 04.1
TEY pmax pmax
comp=N,10.0nm,1.0s
TEY pmax pmax
comp=E,10.0nm,1.0s
TEY pmax pmax
comp=Z,10.0nm,1.0s
TEY pmax pmax
comp=Z,100nm,3.3s
HHU Hamhung 66.98 328 P **P** **11 41 22.8 +0.7**
HHU pP **pP** **11 41 34.0 -0.6**
HHU S **S** **11 50 21.0 +8.6**
HHU AmB
comp=Z,318nm,1.9s
HHU AMS AMS
comp=N,207nm,3.7s
HHU AMS AMS
comp=E,534nm,9.5s
HHU AMS AMS
comp=Z,106nm,1.9s
SKR Severo-Kuril's 67.17 352 *e*P **P** **11 41 22.8 -0.3**
SKR *e*S **S** **11 50 20.1 +5.9**
SKR pmax pmax
comp=Z,58nm,0.8s
SKR pmax pmax
comp=Z,300nm,12.3s
MSHR Mys Shultsa 67.24 332*d i*P **P** **11 41 25.7 +2.0**
MSHR pmax pmax
comp=Z,67nm,0.8s
MSHR MLR MLR
comp=Z,381nm,17.0s
PYAG Pyongyang 67.28 326 P **P** **11 41 24.9 +0.9**
PYAG pP **pP** **11 41 34.1 -2.4**
PYAG S **S** **11 50 24.7 +8.7**
PYAG AmB
comp=Z,127nm,1.4s
PYAG AMS AMS
comp=N,103nm,1.1s
PYAG AMS AMS
comp=E,77nm,0.9s
PYAG AMS AMS
comp=Z,149nm,1.7s
VLA Vladivostok 67.34 332*c i*P **P** **11 41 25.0 +0.7**
VLA pmax pmax
comp=Z,123nm,0.8s
VLA MLR MLR
comp=Z,1μm,18.0s
BKNI Bangkinang 67.56 277 P **P** **11 41 27.9 +1.5**
comp=Z,5μmcomp=Z,3μmcomp=Z,239nm,1.4s
BKNI Bangkinang 67.56 277 P **P** **11 41 27.8 +1.4**
comp=Z,242nm,1.4s
PPSI Pulau Pagai 67.66 274 P **P** **11 41 29.4 +2.3**
comp=Z,259nm,1.3s
AMKA Amchitka 67.89 8 P **P** **11 41 28.3 +0.7**
USA0B Ussuriysk Arra 68.15 333 P **P** **11 41 30.6 +1.2**
USA0B IAmb IAmb 11 41 47.0
comp=Z,77nm,1.0s
USA0B Ussuriysk Arra 68.15 333 P **P** **11 41 30.6 +1.2**
USA0B pmax pmax
comp=Z,77nm,1.0s
USRK Ussuriysk Ar. 68.15 333 P **P** **11 41 29.9 +0.5**
comp=Z,175nm,0.8s,baz=132,slow=4.5,SNR=98
USRK LR LR 12 09 06.1
comp=Z,612nm,20.4s,baz=238,slow=34
USRK PKP2bc 12 09 47.5
comp=Z,2.0nm,0.8s,baz=289,slow=5.8,SNR=6.2
comp=Z,175nm,0.8s
UGL Uglegorsk 68.64 342 *e*P **P** **11 41 33.3 +0.9**
UGL *e* 11 44 02.0
UGL *e*S **S** **11 50 34.6 +2.7**
UGL pmax pmax
comp=Z,310nm,1.0s
UGL pmax pmax
comp=Z,1μm,7.0s
UGL smax smax
comp=E,880nm,8.0s
UGL smax smax
comp=N,1μm,8.5s
SHEM Shemya Is, Ala 68.69 4 P **P** **11 41 32.6 0.0**
comp=N,63nm,0.3s,baz=174,slow=5.3,SNR=89
SHEM LR LR 12 06 11.4
comp=N,5μm,21.1s,baz=186,slow=31
comp=N,63nm,0.3s
SMY Shemya 68.69 4 P **P** **11 41 33.0 +0.4**
SMY Shemya 68.69 4 P **P** **11 41 33.0 +0.4**
SMY pmax pmax
comp=Z,204nm,0.4s
SMY Shemya 68.69 4 ⇓P **P** **11 41 33.1 +0.5**
SMY ⇑s **pP** **11 41 46.1 +1.0**
SMY ⇑s **pP** **11 41 46.4 +1.3**
SUJ Sinuiju 68.71 326 P **P** **11 41 34.1 +1.1**
SUJ pP **pP** **11 41 43.6 -1.9**
SUJ S S 11 50 42.4 +9.2
SUJ AmB
comp=Z,252nm,1.4s
SUJ AMS AMS
comp=N,3μm,2.1s
SUJ AMS AMS
comp=E,7μm,5.5s
SUJ AMS AMS
comp=Z,36μm,27.9s
CNSH ChangSha 68.73 309 ⇑P **P** **11 41 35.0 +1.5**
CNSH S **S** **11 50 37.5 +3.6**
CNSH LR LR
comp=Z,1μm,20.3s
CNSH LR LR
comp=Z,1μm,20.1s
CNSH LR LR
comp=Z,2μm,22.6s
IPM Ipoh 68.86 281 IAmb IAmb 11 41 49.5
comp=Z,146nm,1.4s
IPM Ipoh 68.86 281 P **P** **11 41 35.8 +1.2**
IPM Ipoh 68.86 281 ⇓P **P** **11 41 34.6 0.0**
IPM ⇓P **P** **11 41 34.9 +0.3**
KIWB Kanaga Island 68.88 10 P **P** **11 41 34.2 +0.3**
ADK Adak 68.99 10 IAMs_20 IAMs_20 12 04 06.9
comp=Z,3μm,22.0s
WHN Wuhan 69.00 312 ⇑P **P** **11 41 35.0 -0.1**
WHN pP **pP** **11 41 46.0 -1.5**
WHN S **S** **11 50 36.5 -0.4**
WHN sS **pS** **11 50 55.0 +2.4**
WHN pmax pmax
comp=Z,740nm,1.9s
WHN pmax pmax
comp=Z,1μm,3.4s
WHN LR LR
comp=Z,5μm,26.5s
WHN LR LR
comp=Z,6μm,23.5s
WHN LR LR
comp=Z,9μm,24.3s
MNSI Mandailing Nat 69.09 277 P **P** **11 41 35.3 -0.7**
comp=Z,2μmcomp=Z,142nm,1.2s
PET Petropavlovsk 69.18 354 P **P** **11 41 35.1 -0.6**
PET Petropavlovsk 69.18 354 *e*P **P** **11 41 35.5 -0.2**
PET *e**PP **pP** **11 41 48.8 +0.7**
PET *e*S **S** **11 50 37.8 -0.3**
PET *e*PS 11 51 07.0
PET *e*PS **PnS** **11 51 15.0 +6.6**
PET pmax pmax
comp=Z,800nm,9.3s
PET pmax pmax
comp=Z,206nm,1.3s
PET pmax pmax
comp=Z,800nm,17.7s
PET Petropavlovsk 69.18 354 P **P** **11 41 36.4 +0.7**
comp=Z,608nm,1.2s
PET Petropavlovsk 69.18 354 ⇑P **P** **11 41 35.2 -0.4**
GULI GuiLin 69.19 306 ⇑P P 11 41 27.8 -8.6
GULI sP pP 11 41 39.3 -10
GULI S **S** **11 50 32.5 -6.9**
GULI pmax pmax
comp=Z,180nm,1.0s
GULI LR LR
comp=N,1μm,21.7s
GULI LR LR
comp=E,1μm,21.7s
GULI LR LR
comp=Z,3μm,22.7s
PEA0B Petropavlovsk- 69.36 354*c i*P **P** **11 41 37.0 +0.2**
PETK Petropavlovsk- 69.36 354 P **P** **11 41 36.5 -0.3**
comp=Z,90nm,0.8s,baz=119,slow=7.3,SNR=110
PETK LR LR 12 07 33.9
PETK PKP2bc 12 09 44.5
comp=Z,2.1nm,1.0s,baz=69,slow=8.3,SNR=5.1
comp=Z,90nm,0.8s
KULM Kulim 69.48 282 IAmb IAmb 11 41 53.3
comp=Z,117nm,1.2s
KULM Kulim 69.48 282 ⇑P **P** **11 41 38.0 -0.4**
KULM ⇓P **P** **11 41 38.3 -0.1**
DL2 Dalian 69.49 323⇑ *i*P **P** **11 41 37.8 -0.1**
DL2 S **S** **11 50 43.0 +0.7**
DL2 pmax pmax
comp=Z,220nm,0.9s
DL2 pmax pmax
comp=Z,1μm,7.3s
DL2 LR LR
comp=Z,1μm,19.4s
DL2 LR LR
comp=Z,2μm,26.1s
DL2 LR LR
comp=Z,3μm,25.7s
MDJ Mudanjiang 69.54 332 P **P** **11 41 40.0 +1.9**
MDJ pP pP 11 41 49.8 -0.8
MDJ sP sP 11 41 56.0 +0.5
MDJ S **S** **11 50 47.8 +5.1**
MDJ sS sS 11 51 06.8 +3.2
MDJ pmax pmax
comp=Z,1μm,3.5s
MDJ LR LR
comp=Z,1μm,20.1s
MDJ LR LR
comp=Z,1μm,20.7s
MDJ LR LR
comp=Z,3μm,21.6s
ATKA Atka Island 69.76 12 P **P** **11 41 42.1 +2.9**
ATKA Atka Island 69.76 12 ⇑P **P** **11 41 41.0 +1.8**
TYV Tymovskoe 70.08 344 *e*P **P** **11 41 42.2 +0.9**
TYV *e*S **S** **11 50 52.0 +3.2**
TYV pmax pmax
comp=Z,72nm,1.0s
TYV pmax pmax
comp=Z,700nm,4.7s
TYV smax smax
comp=N,400nm,7.1s
TYV smax smax
comp=E,200nm,7.1s
RPSI Rantau Prapat 70.29 279 IAmb IAmb 11 41 57.6
comp=Z,96nm,1.0s
PSI Prapat 70.32 279 P **P** **11 41 43.1 -0.6**
SNY Shenyang 70.42 327 ⇑P **P** **11 41 44.5 +0.9**
SNY S **S** **11 50 48.0 -5.2**
SNY pmax pmax
comp=Z,120nm,0.8s
SNY pmax pmax
comp=Z,2μm,10.8s
SNY LR LR
comp=Z,2μm,20.0s
SNY LR LR
comp=Z,2μm,19.8s
SNY LR LR
comp=Z,6μm,24.0s
TIA Tai'an 70.48 319 ⇑P **P** **11 41 43.8 -0.3**
TIA pP **pP** **11 41 54.5 -2.1**
TIA sP **PcP** **11 42 05.5 +0.3**
TIA S **S** **11 50 53.0 -1.1**
TIA pmax pmax
comp=Z,14nm,0.7s
TIA pmax pmax
comp=Z,250nm,3.9s
TIA LR LR
comp=Z,750nm,18.5s
TIA LR LR
comp=Z,910nm,20.6s
TIA LR LR
comp=Z,2μm,17.8s
TSI Tuntungan 70.88 280 P **P** **11 41 48.2 +1.2**
comp=Z,4μmcomp=Z,197nm,1.4s
CN2 Changchun 70.88 329 *e*P **P** **11 41 46.3 0.0**
CN2 *e*S **S** **11 50 53.0 -5.5**
CN2 SS **SS** **11 55 29.0 -3.2**
CN2 pmax pmax
comp=Z,90nm,0.7s
CN2 pmax pmax
comp=Z,800nm,10.0s
CN2 LR LR
comp=Z,1μm,22.0s
CN2 LR LR
comp=Z,1μm,22.0s
CN2 LR LR
comp=Z,1μm,22.0s
GSI Gunungsitoli 71.16 277 P **P** **11 41 49.1 +0.4**
GSI Gunungsitoli 71.16 277 P **P** **11 41 49.5 +0.8**
GSI Gunungsitoli 71.16 277 P **P** **11 41 50.3 +1.6**
GSI Gunungsitoli 71.16 277 ⇓P **P** **11 41 49.0 +0.4**
BNX BinXian 71.39 332 ⇓P **P** **11 41 50.5 +1.1**
BNX pP **pP** **11 42 03.5 +1.5**
BNX sP **PcP** **11 42 10.3 +1.5**
BNX PP **PP** **11 44 32.5 +4.1**
BNX S **S** **11 51 07.5 +3.2**
BNX sS **SKiKP** **11 51 30.3 +4.4**
BNX pmax pmax
comp=Z,190nm,0.8s
BNX pmax pmax
comp=Z,710nm,6.3s
BNX LR LR
comp=Z,1μm,19.6s
BNX LR LR
comp=Z,1μm,21.1s
BNX LR LR
comp=Z,1μm,27.9s
SRIT Nakonsritamara 71.56 285 IAmb IAmb 11 42 07.0
comp=Z,130nm,1.2s
KCSI Kotacane, Aceh 71.64 279 P **P** **11 41 51.9 +0.3**
comp=Z,1μmcomp=Z,48nm,1.0s
NIKH Nikolski High 71.66 15 P **P** **11 41 49.6 -1.2**
baz=204
GRNR Gornyy 71.89 340⇑ *i*P **P** **11 41 54.5 +2.2**
GRNR *e*S **S** **11 51 16.7 +6.9**
GRNR pmax pmax
comp=E,30nm,1.0s
GRNR pmax pmax
comp=N,30nm,0.9s
GRNR pmax pmax
comp=Z,120nm,1.0s
GRNR smax smax
comp=E,8.0nm,0.7s
KLR Kul'dur 72.29 336 P **P** **11 41 55.2 +0.6**
comp=E,122nm,0.8s,baz=126,slow=3.6,SNR=164
KLR LR LR 12 10 25.5
comp=E,2μm,21.3s,baz=152,slow=33
comp=E,122nm,0.8s
KLR Kul'dur 72.29 336*c i*P **P** **11 41 55.0 +0.3**
KLR pmax pmax
comp=Z,255nm,1.5s
KLR MLR MLR
comp=Z,1μm,19.0s
LYN LuoYang 72.57 315⇑ *i*P **P** **11 41 56.5 -0.2**
LYN pP pP 11 42 08.8 -0.4
LYN sP PcP 11 42 14.8 +0.7
LYN PP **PP** **11 44 37.8 -1.0**
LYN S **S** **11 51 16.0 -2.3**
LYN pmax pmax
comp=Z,80nm,1.3s
LYN pmax pmax
comp=Z,1μm,7.1s
LYN LR LR
comp=Z,3μm,22.5s
LYN LR LR
comp=Z,2μm,23.7s
LYN LR LR
comp=Z,4μm,22.6s
GYA Guiyang 72.67 305⇓ *i*P **P** **11 41 58.5 +0.9**
GYA pP pP 11 42 11.3 +1.1
GYA S **S** **11 51 22.0 +2.0**
GYA SKS **SKSac** **11 51 54.8 -4.9**
GYA pmax pmax
comp=Z,120nm,1.3s
GYA LR LR
comp=Z,1μm,23.6s
GYA LR LR
comp=Z,1μm,26.3s
GYA LR LR
comp=Z,2μm,21.9s
NKL Nikolayevsk 72.67 343 *e*P **P** **11 41 56.1 -0.7**
NKL *e* 11 44 39.8
NKL *e*S **S** **11 51 18.1 -0.6**
NKL pmax pmax
comp=N,282nm,0.5s
NKL pmax pmax
comp=Z,200nm,0.9s
NKL smax smax
comp=E,3.0nm,1.6s
NKL smax smax
comp=N,1μm,1.9s
HNS HongShan 72.74 318 ⇑P **P** **11 41 58.3 +0.7**
HNS pP **pP** **11 42 09.3 -0.9**
HNS PP **PP** **11 44 45.5 +5.4**
HNS S **S** **11 51 16.8 -3.3**
HNS sS **pS** **11 51 36.8 +1.0**
HNS pmax pmax
comp=N,99nm,1.4s
HNS LR LR
comp=N,2μm,21.2s
HNS LR LR
comp=N,3μm,24.9s
UNV Unalaska Valle 73.05 16 P **P** **11 41 57.4 -1.7**
baz=206
BJT Baijiatuan 73.42 321 IAmb IAmb 11 42 17.8
comp=Z,117nm,1.1s
BJI Beijing 73.43 321 P **P** **11 42 02.0 +0.3**
BJI pP **pP** **11 42 11.3 -2.9**
BJI PP **PP** **11 44 52.5 +6.5**
BJI S **SKiKP** **11 51 28.8 -0.3**
BJI pmax pmax
comp=Z,20nm,0.9s
BJI pmax pmax
comp=Z,750nm,4.6s
BJI LR LR
comp=Z,540nm,22.6s
BJI LR LR
comp=Z,2μm,23.7s
BJI LR LR
comp=Z,4μm,26.3s
QSPA South Pole Qui 74.02 180 S **SKiKP** **11 51 30.7 +1.2**
comp=Z,1.5nm,1.0s,baz=1.7,slow=12,SNR=1.6
QSPA LR LR 12 11 56.5
comp=Z,3μm,19.5s,baz=32,slow=34
QSPA South Pole Qui 74.02 180 P **P** **11 42 04.7 -0.3**
QSPA South Pole Qui 74.02 180 IAMs_20 IAMs_20 12 11 36.5
comp=Z,3μm,20.0s
TIY Taiyuan 74.39 318 *e*P **P** **11 42 08.8 +1.4**
TIY pP **PcP** **11 42 21.8 -0.1**
TIY sP **sP** **11 42 28.0 +3.1**
TIY S **S** **11 51 42.3 +3.4**
TIY pmax pmax
comp=Z,63nm,0.9s
TIY pmax pmax
comp=Z,760nm,4.5s
TIY LR LR
comp=Z,1μm,25.4s
TIY LR LR
comp=Z,1μm,24.0s
TIY LR LR
comp=Z,2μm,28.2s
XAN Xi'an 74.76 313 ⇑P **P** **11 42 09.8 +0.2**
XAN pP pP 11 42 21.0 -1.3
XAN sP sP 11 42 26.0 -1.2
XAN PP **PP** **11 45 02.5 +5.0**
XAN S **S** **11 51 42.0 -1.1**
XAN SS **SS** **11 56 35.5 +3.6**
XAN pmax pmax
comp=Z,67nm,1.2s
XAN pmax pmax
comp=Z,930nm,8.1s
XAN LR LR
comp=Z,2μm,20.6s
XAN LR LR
comp=Z,2μm,21.3s

XAN LR LR
comp=Z,5µm,21.6s
KMI Kunming 75.21 302 ⇑P **P** **11 42 13.8 +1.1**
KMI pP pP 11 42 25.3 0.0
KMI PP **PP** **11 45 00.0 -1.7**
KMI S **S** **11 51 51.3 +2.4**
KMI sS sS 11 52 11.0 +0.5
KMI SS **SS** **11 56 40.0 +0.5**
KMI pmax pmax
comp=Z,150nm,1.0s
KMI pmax pmax
comp=Z,720nm,4.1s
KMI LR LR
comp=Z,1µm,26.0s
KMI LR LR
comp=Z,2µm,26.3s
KMI LR LR
comp=Z,3µm,26.2s
SPIA Saint Paul Isl 75.23 12 P **P** **11 42 09.6 -2.0**
baz=202
CM31 Chiang Mai Arr 75.72 294 IAmb IAmb 11 42 31.7
comp=Z,198nm,1.3s
CM31 Chiang Mai Arr 75.72 294 P **P** **11 42 15.9 +0.5**
SNR=33
CMAR Chiang Mai Arr 75.72 294 P **P** **11 42 16.4 +1.0**
comp=Z,24nm,0.8s,baz=124,slow=4.1,SNR=78
CMAR PKPPKP 12 09 35.5
comp=Z,0.3nm,0.3s,baz=260,slow=5.4,SNR=2.8
CMAR LR LR 12 16 05.3
comp=Z,756nm,20.1s,baz=150,slow=36
comp=Z,24nm,0.8s
CHTO Chiang Mai 75.86 295 P **P** **11 42 16.5 +0.3**
CHTO IAmb IAmb 11 42 33.7
comp=Z,102nm,1.0s
CHTO Chiang Mai 75.86 295 P **P** **11 42 16.5 +0.3**
CHTO pmax pmax
comp=Z,102nm,1.0s
CHTO Chiang Mai 75.86 295 P **P** **11 42 16.9 +0.7**
CHTO Chiang Mai 75.86 295 P **P** **11 42 18.5 +2.3**
CHTO Chiang Mai 75.86 295 ⇑P **P** **11 42 16.9 +0.7**
CHNA Chernabura Isl 75.89 19 P **P** **11 42 13.6 -1.9**
baz=213
SDPT Sand Point 76.06 18 P **P** **11 42 14.5 -2.0**
baz=212
MA2 Magadan 76.55 351 P **P** **11 42 18.7 -0.6**
comp=Z,49nm,0.8s,baz=155,slow=6.1,SNR=68
MA2 LR LR 12 11 26.1
comp=Z,3µm,21.9s,baz=178,slow=32
comp=Z,49nm,0.8s
MA2 Magadan 76.55 351 P **P** **11 42 18.5 -0.7**
MA2 IAmb IAmb 11 42 32.3
comp=Z,84nm,0.8s
MA2 Magadan 76.55 351*c i*P **P** **11 42 18.3 -0.9**
MA2 pmax pmax
comp=Z,100nm,1.0s
MA2 MLR MLR
comp=Z,1µm,18.0s
MA2 Magadan 76.55 351 ⇑P **P** **11 42 18.5 -0.7**
MA2 ⇑P **P** **11 42 19.0 -0.3**
MA2 ⇓P **pP** **11 42 31.6 -0.2**
PZH PanZhiHua 76.62 303 P **P** **11 42 20.5 0.0**
PZH pP **pP** **11 42 34.0 +0.8**
PZH PP **PP** **11 45 08.8 -4.6**
PZH S **S** **11 51 57.3 -6.9**
PZH ScS **SKSac** **11 52 27.3 -2.0**
PZH pmax pmax
comp=Z,60nm,1.0s
PZH pmax pmax
comp=Z,1µm,9.4s
PZH LR LR
comp=Z,3µm,25.0s
PZH LR LR
comp=Z,4µm,24.5s
PZH LR LR
comp=Z,7µm,26.5s
HHC Hu-ho-hao-te 76.74 320 ⇑*i*P **P** **11 42 21.8 +0.9**
HHC pP PcP 11 42 32.5 +0.5
HHC S **S** **11 52 08.5 +3.6**
HHC sS sS 11 52 27.0 +0.6
HHC pmax pmax
comp=Z,100nm,1.3s
HHC pmax pmax
comp=Z,2µm,7.3s
HHC LR LR
comp=Z,2µm,22.6s
HHC LR LR
comp=Z,2µm,23.1s
HHC LR LR
comp=Z,6µm,23.1s
CD2 Chengdu 77.01 308 P **P** **11 42 22.8 +0.3**
CD2 pP PcP 11 42 34.0 +0.6
CD2 PP **PP** **11 45 20.3 +3.8**
CD2 S **S** **11 52 06.8 -1.3**
CD2 sS sS 11 52 30.3 +0.7
CD2 SS **SS** **11 57 08.3 +2.1**
CD2 pmax pmax
comp=Z,80nm,1.1s
CD2 pmax pmax
comp=Z,1µm,7.1s
CD2 LR LR
comp=Z,2µm,22.7s
CD2 LR LR
comp=Z,3µm,22.7s
S14K Fog Glacier 77.13 18 P **P** **11 42 20.8 -1.9**
baz=212
HIA Hailar 77.53 330 IAmb IAmb 11 42 27.8
comp=Z,90nm,0.8s
BTO Baotou 77.57 319*e*P **P** **11 42 27.0 +1.5**
BTO S **S** **11 52 17.0 +3.1**
BTO LR LR
comp=Z,3µm,23.0s
BTO LR LR
comp=Z,4µm,20.1s
ZEA Zeya 77.58 337*ce*P **P** **11 42 26.1 +1.0**
ZEA *e* 11 42 45.4
ZEA *e* 11 45 29.2
ZEA *e*S **S** **11 52 15.5 +2.3**
ZEA pmax pmax
comp=N,140nm,0.8s
ZEA pmax pmax
comp=E,40nm,0.8s
ZEA pmax pmax
comp=Z,270nm,0.7s
ZEA pmax pmax
comp=E,100nm,3.5s
ZEA pmax pmax
comp=N,200nm,5.1s
ZEA pmax pmax
comp=Z,400nm,4.5s
ZEA pmax pmax
comp=Z,200nm,8.9s
ZEA smax smax
comp=N,400nm,11.3s
ZEA smax smax
comp=E,700nm,8.2s
CHIR Chirikof Isl 77.99 20 IAMs_20 IAMs_20 12 17 55.2
comp=Z,4µm,18.0s
CHIR Chirikof Isl 77.99 20 P **P** **11 42 25.5 -1.9**
baz=216
SII Sitkinak Islan 79.06 20 IAMs_20 IAMs_20 12 16 23.6
comp=Z,3µm,19.0s
SII Sitkinak Islan 79.06 20 P **P** **11 42 32.6 -0.7**
baz=217
R17K Ugashik Creek 79.23 19 P **P** **11 42 33.5 -0.7**
baz=215
R17K S **S** **11 52 29.3 -1.3**
baz=215
LZH Lanzhou 79.38 312 ⇑*i*P **P** **11 42 37.0 +1.3**
LZH pP pP 11 42 47.8 -0.8
LZH sP sP 11 42 51.0 -2.4
LZH S **S** **11 52 35.0 +1.3**
LZH sS sS 11 52 52.8 -2.5
LZH pmax pmax
comp=Z,100nm,1.2s
LZH pmax pmax
comp=Z,910nm,4.5s
LZH LR LR
comp=Z,2µm,18.6s
LZH LR LR
comp=Z,2µm,17.5s
LZH LR LR
comp=Z,3µm,19.2s
SEY Seymchan 79.58 353 P **P** **11 42 35.5 -0.5**
comp=Z,68nm,0.9s,baz=155,slow=6.2,SNR=108
SEY LR LR 12 15 19.9
comp=Z,2µm,20.1s,baz=170,slow=34
comp=Z,68nm,0.9s
OHAK Old Harbor 79.89 20 IAmb IAmb 11 42 58.5
comp=Z,82nm,1.1s
OHAK Old Harbor 79.89 20 P **P** **11 42 37.2 -0.6**
baz=218
OHAK S **S** **11 52 35.1 -2.6**
baz=218
P16K Nushagak River 79.90 17 P **P** **11 42 36.1 -1.7**
baz=214
P16K S **S** **11 52 37.8 +0.1**
baz=214
Q16K King Salmon 80.00 18 P **P** **11 42 36.9 -1.3**
baz=215,SNR=15
Q16K S **S** **11 52 34.6 -4.2**
baz=215
O16K Kokwok River B 80.34 17 P **P** **11 42 38.3 -1.8**
baz=213,SNR=7.9
O16K S **S** **11 52 35.9 -6.5**
baz=213
Q18K Katmai Hardscr 80.47 19 P **P** **11 42 39.2 -1.8**
baz=216
Q18K S **S** **11 52 39.3 -4.8**
baz=216
P17K Kvichak River 80.49 18 P **P** **11 42 38.9 -2.0**
baz=215
P17K S **S** **11 52 41.5 -2.4**
baz=215
KDAK Kodiak Island 80.57 20 LR LR 12 16 58.4
comp=Z,2µm,18.1s,baz=235,slow=35
KDAK Kodiak Island 80.57 20 P **P** **11 42 40.7 -0.7**
KDAK Kodiak Island 80.57 20 IAMs_20 IAMs_20 12 16 56.4
comp=Z,2µm,19.0s
KDAK Kodiak Island 80.57 20 P **P** **11 42 40.7 -0.7**
KDAK pmax pmax
comp=Z,40nm,1.1s
KDAK Kodiak Island 80.57 20 P **P** **11 42 40.6 -0.7**
baz=219
KDAK S **S** **11 52 43.0 -1.8**
baz=219
O17K Koliganek Bris 80.77 17 P **P** **11 42 40.8 -1.6**
baz=214,SNR=10
O17K S **S** **11 52 38.7 -8.2**
baz=214
MAW Mawson 80.80 202 P **P** **11 42 42.9 +0.3**
comp=Z,57nm,0.9s,baz=108,slow=6.5,SNR=76
MAW LR LR 12 14 09.9
comp=Z,4µm,20.1s,baz=93,slow=32
comp=Z,57nm,0.9s
MAW Mawson 80.80 202 P **P** **11 42 43.0 +0.4**
baz=81,SNR=66
MAW Mawson 80.80 202 P **P** **11 42 42.5 -0.1**
MAW Mawson 80.80 202 P **P** **11 42 42.5 -0.1**
MAW pmax pmax
comp=Z,25nm,1.1s
N16K Nishlik Lake 80.90 16 P **P** **11 42 42.9 -0.3**
baz=213,SNR=18
N16K S **S** **11 52 45.3 -3.0**
baz=213
P18K Big Mountain, 81.01 18 IAmb IAmb 11 42 59.5
comp=Z,68nm,1.0s
P18K IAMs_20 IAMs_20 12 11 38.0
comp=Z,3µm,21.0s
P18K Big Mountain, 81.01 18 P **P** **11 42 41.7 -2.0**
baz=216,SNR=24
P18K S **S** **11 52 42.6 -6.8**
baz=216
Q19K Cape Douglas, 81.13 19 IAmb IAmb 11 42 48.0
comp=Z,76nm,0.8s
Q19K IAMs_20 IAMs_20 12 16 48.1
comp=Z,3µm,19.0s
Q19K Cape Douglas, 81.13 19 P **P** **11 42 42.5 -1.9**
baz=218,SNR=19
Q19K S **S** **11 52 46.0 -4.7**
baz=218
GAMB Gambell 81.15 9 P **P** **11 42 44.1 -0.2**
baz=200
GAMB S **S** **11 52 46.0 -4.5**
baz=200
Q20K Shuyak Island 81.28 20 P **P** **11 42 44.9 -0.3**
baz=219
Q20K S **S** **11 52 46.2 -5.9**
baz=219
O18K Koktuh Hills 81.39 18 IAmb IAmb 11 42 48.7
comp=Z,93nm,1.5s
O18K IAMs_20 IAMs_20 12 11 18.0
comp=Z,4µm,22.0s
O18K Koktuh Hills 81.39 18 P **P** **11 42 44.4 -1.3**
baz=216,SNR=18
O18K S **S** **11 52 46.8 -6.6**
baz=216
N18K Kilae Creek 81.86 17 P **P** **11 42 47.5 -0.8**
baz=215,SNR=12
N18K S **S** **11 52 53.1 -5.2**
baz=215
CIT Chita 82.31 330*e*P **P** **11 42 51.2 +0.3**
CIT *e* 11 43 11.3
CIT pmax pmax
comp=Z,363nm,1.4s
HOM Homer 82.34 20 P **P** **11 42 49.5 -1.2**
baz=219,SNR=8.1
HOM S **S** **11 52 57.1 -5.9**
baz=219
O20K Slope Mountain 82.36 19 P **P** **11 42 49.3 -1.6**
baz=218,SNR=5.8
O20K S **S** **11 52 57.8 -5.7**
baz=218
CNPM China Poot 82.37 20 IAMs_20 IAMs_20 12 11 43.9
comp=Z,3µm,22.0s
N19K Bonanza Creek 82.38 18 P **P** **11 42 49.3 -1.7**
baz=217,SNR=15
N19K S **S** **11 52 57.4 -6.3**
baz=217
IMP Imphal 82.41 298*e*P **P** **11 42 51.5 -0.5**
IMP IAmb IAmb 11 43 06.8
comp=Z,139nm,0.8s
MOKO MOKOCHONG 82.48 300*e*P **P** **11 42 52.2 -0.2**
MOKO IAmb IAmb 11 43 07.0
comp=Z,574nm,1.3s
KOHI KOHIMA 82.60 299*e*P **P** **11 42 52.9 -0.2**
KOHI IAmb IAmb 11 43 08.5
comp=Z,329nm,1.2s
BRLK Bradley Lake 82.67 20 IAmb IAmb 11 42 55.1
comp=Z,69nm,0.8s
BRLK IAMs_20 IAMs_20 12 13 20.6
comp=Z,2µm,21.0s
BRSE Bradley Lake S 82.69 20 P **P** **11 42 51.3 -1.3**
baz=220,SNR=28
BRSE S **S** **11 53 01.7 -5.1**
baz=220
PAF Port-aux-Franc 82.70 221 P **P** **11 42 54.5 +1.5**
PAF Port-aux-Franc 82.70 221 P **P** **11 42 54.5 +1.5**
PAF pmax pmax
comp=Z,814nm,1.1s
ANM Nome 82.97 11 IAMs_20 IAMs_20 12 13 10.4
comp=Z,3µm,22.0s
ANM Nome 82.97 11 P **P** **11 42 52.7 -1.2**
baz=206,SNR=5.1
ANM S **S** **11 53 07.4 -1.9**
baz=206
M19K Big River Lodg 83.28 17 IAmb IAmb 11 42 59.7
comp=Z,41nm,0.8s
M19K Big River Lodg 83.28 17 P **P** **11 42 55.2 -0.4**
baz=217
M19K S **S** **11 53 10.1 -2.6**
baz=217
ULN Ulaanbaatar 83.33 324 P **P** **11 42 56.5 +0.2**
ULN Ulaanbaatar 83.33 324 P **P** **11 42 56.5 +0.2**
ULN pmax pmax
comp=Z,213nm,0.8s
ULN Ulaanbaatar 83.33 324 P **P** **11 42 56.4 +0.1**
YAK Yakutsk 83.33 343 P **P** **11 42 55.8 -0.1**
comp=Z,224nm,0.7s,baz=51,slow=0.2,SNR=68
YAK LR LR 12 15 35.0
comp=Z,3µm,21.9s,baz=132,slow=32
comp=Z,224nm,0.7s
YAK Yakutsk 83.33 343 P **P** **11 42 55.7 -0.1**
YAK IAMs_20 IAMs_20 12 14 38.2
comp=Z,4µm,22.0s
YAK Yakutsk 83.33 343*c i*P **P** **11 42 55.7 -0.1**
YAK *e**PP **pP** **11 43 07.6 -0.9**
YAK *e* 11 46 10.0
YAK *e*PPP PPP 11 47 58.8
YAK *e*S **S** **11 53 13.2 +0.1**
YAK *e*SS **SS** **11 58 40.1 +0.7**
YAK *e*SSS SSS 12 02 08.8
YAK pmax pmax
comp=Z,144nm,0.6s
YAK pmax pmax
comp=N,21nm,0.7s
YAK pmax pmax
comp=E,41nm,0.9s
YAK pmax pmax
comp=Z,45nm,1.9s
YAK pmax pmax
comp=N,19nm,1.5s
YAK pmax pmax
comp=E,31nm,2.0s
YAK smax smax
comp=N,101nm,1.6s
YAK smax smax
comp=E,161nm,1.8s
CAPN Captain Cook N 83.35 19 IAMs_20 IAMs_20 12 20 15.0
comp=Z,3µm,18.0s
CAPN Captain Cook N 83.35 19 P **P** **11 42 55.7 -0.2**
baz=220
SPCR Spurr Chakacha 83.36 18 P **P** **11 42 53.8 -2.3**
baz=219
L19K White Mountain 83.38 17 P **P** **11 42 56.1 -0.1**
baz=216,SNR=68
L19K S **S** **11 53 12.2 -1.5**
baz=216
SEW Seward 83.39 20 P **P** **11 42 55.2 -0.9**
baz=221,SNR=16
SEW S **S** **11 53 10.7 -3.1**
baz=221
TNA Tin City 83.42 10 P **P** **11 42 55.0 -1.2**
baz=204
TNA S **S** **11 53 11.8 -1.9**
baz=204
ITAN ITANAGAR 83.44 301*e*P **P** **11 42 58.6 +1.4**
ITAN IAmb IAmb 11 43 15.5
comp=Z,112nm,0.9s
ZIRO ZIRO 83.48 301*e*P **P** **11 42 58.3 +0.7**
ZIRO IAmb IAmb 11 42 59.8
comp=Z,83nm,0.9s
O22K Cooper Landing 83.59 20 P **P** **11 42 55.8 -1.4**
baz=221,SNR=22
M20K Styx River 83.63 18 P **P** **11 42 56.2 -1.3**
baz=218,SNR=29
M20K S **S** **11 53 17.8 +1.5**
baz=218
TTA Tatalina 83.68 16 IAmb IAmb 11 43 01.6
comp=Z,52nm,1.3s
TTA Tatalina 83.68 16 P **P** **11 42 56.8 -0.9**
baz=215,SNR=35
SONM Songino Array 83.69 324 P **P** **11 42 58.2 0.0**
comp=Z,118nm,0.9s,baz=141,slow=4.0,SNR=128
SONM S **S** **11 53 15.7 -1.9**
comp=Z,2.3nm,0.7s,baz=143,slow=5.6,SNR=1.5
SONM PKKPbc **PKKPbc** **12 01 15.4 -2.0**
comp=Z,1.3nm,0.8s,baz=243,slow=1.7,SNR=6.8
SONM PKPPKP **P'P'df** **12 09 16.1 -2.8**
comp=Z,1.1nm,0.9s,baz=290,slow=2.0,SNR=6.5
SONM LR LR 12 18 10.9
comp=Z,1µm,21.9s,baz=122,slow=34
comp=Z,118nm,0.9s
GTA Gaotai 83.75 314 ⇑P **P** **11 42 59.3 +0.6**
GTA pP pP 11 43 10.0 -1.6
GTA sP sP 11 43 13.3 -3.2
GTA PP **PP** **11 46 17.8 +5.4**
GTA S **S** **11 53 14.8 -3.8**
GTA pmax pmax
comp=Z,52nm,1.2s
GTA pmax pmax
comp=Z,550nm,4.5s
GTA LR LR
comp=Z,1µm,22.9s
GTA LR LR
comp=Z,2µm,22.5s
GTA LR LR
comp=Z,2µm,22.2s
BILL Bilibino 83.82 360 P **P** **11 42 58.7 +0.4**
BILL Bilibino 83.82 360*c i*P **P** **11 42 59.6 +1.4**
BILL *i* S **S** **11 53 21.4 +3.5**
BILL pmax pmax
comp=Z,87nm,0.9s
BILL MLR MLR
comp=Z,504nm,19.0s
L20K Farewell, AK 83.89 17 P **P** **11 42 58.2 -0.5**
baz=217,SNR=185
L20K S **S** **11 53 18.6 -0.2**
baz=217
FIS Fire Island 83.94 19 IAMs_20 IAMs_20 12 13 21.3
comp=Z,3µm,22.0s
Q23K Middleton Isla 83.96 22 IAMs_20 IAMs_20 12 22 00.3
comp=Z,2µm,18.0s
Q23K Middleton Isla 83.96 22 P **P** **11 42 58.8 -0.3**
baz=224
SUA Susitna One 84.02 19 IAMs_20 IAMs_20 12 19 45.4
comp=Z,2µm,18.0s
SUA Susitna One 84.02 19 P **P** **11 42 58.1 -1.4**
baz=220,SNR=24
SUA S **S** **11 53 14.3 -5.9**
baz=220
TEZP TEZPUR 84.02 300*e*P **P** **11 42 59.7 -0.4**
TEZP IAmb IAmb 11 43 14.9
comp=Z,138nm,0.8s
RC01 Rabbit Creek A 84.05 19 IAMs_20 IAMs_20 12 12 50.3
comp=Z,3µm,22.0s
RC01 Rabbit Creek A 84.05 19 P **P** **11 42 58.6 -0.9**
baz=221,SNR=12
RC01 S **S** **11 53 15.6 -4.8**
baz=221
SKT Skwentna 84.17 18 IAMs_20 IAMs_20 12 13 17.7
comp=Z,3µm,22.0s
SKT Skwentna 84.17 18 P **P** **11 42 57.5 -2.7**
baz=219,SNR=17
SKT S **S** **11 53 17.8 -3.8**
baz=219
SHL Shillong 84.42 298 P **P** **11 43 02.7 +0.3**
SNR=86
SHL Shillong 84.42 298*e*P **P** **11 43 02.4 0.0**
SHL IAmb IAmb 11 43 17.2
comp=Z,267nm,1.1s
M22K Willow 84.43 19 IAMs_20 IAMs_20 12 13 17.4
comp=Z,4µm,22.0s
M22K Willow 84.43 19 P **P** **11 42 59.8 -1.6**
baz=221,SNR=40
M22K S **S** **11 53 21.8 -2.3**
baz=221
K20K Telida 84.54 16 IAmb IAmb 11 43 17.0
comp=Z,85nm,1.1s
K20K Telida 84.54 16 P **P** **11 43 01.6 -0.4**
baz=217,SNR=74
K20K S **S** **11 53 21.3 -4.0**
baz=217
HIN Hinchinbrook I 84.61 21 IAmb IAmb 11 43 17.1
comp=Z,47nm,1.0s
HIN IAMs_20 IAMs_20 12 15 26.2
comp=Z,2µm,20.0s
PMR Palmer 84.62 19 IAmb IAmb 11 43 17.1
comp=Z,118nm,1.5s
PMR Palmer 84.62 19 P **P** **11 43 01.4 -1.0**
baz=222,SNR=16
PMR S **S** **11 53 21.7 -4.3**
baz=222
PPLA Purkeypile 84.70 17 P **P** **11 43 00.5 -2.4**
baz=219,SNR=14
PPLA S **S** **11 53 18.3 -8.8**
baz=219
KNK Knik Glacier 84.70 20 P **P** **11 43 01.5 -1.4**
baz=222,SNR=14
KNK S **S** **11 53 22.6 -4.3**
baz=222
GLI Glacier Island 84.75 20 IAmb IAmb 11 43 17.6
comp=Z,60nm,1.1s
GLI Glacier Island 84.75 20 P **P** **11 43 01.0 -2.1**
baz=223,SNR=14
GLI S **S** **11 53 22.9 -4.5**
baz=223
GUWA GUWAHATI 84.80 299*e*P **P** **11 43 03.5 -0.6**
GUWA IAmb IAmb 11 43 18.6
comp=Z,194nm,0.9s
GHO Glory Hole Cre 84.82 19 IAmb IAmb 11 43 23.0
comp=Z,74nm,1.0s
GHO IAMs_20 IAMs_20 12 21 18.7
comp=Z,3µm,18.0s
JCC Jacoby Creek, 84.84 45 IAMs_20 IAMs_20 12 13 02.6
comp=Z,3µm,20.0s
FID Port Fidalgo 84.87 21 IAmb IAmb 11 43 19.8
comp=Z,41nm,1.0s
CUT Chulitna 84.88 18 IAMs_20 IAMs_20 12 19 56.4
comp=Z,2µm,19.0s
CUT Chulitna 84.88 18 P **P** **11 43 02.1 -1.5**
baz=220

GCSA	**Galena City Sc**	**84.96**	**15**	P	**P**		**11 43 03.4**	**-0.6**
	baz=214,SNR=21								
GCSA				S	**S**		**11 53 23.9**	**-5.3**
	baz=214								
EYAK	**Cordova Ski Ar**	**84.98**	**21**	P	**P**		**11 43 02.3**	**-1.9**
	baz=225,SNR=8.2								
EYAK				S	**S**		**11 53 22.9**	**-6.6**
	baz=225								
SNCC	**San Nicolas Is**	**85.01**	**54**	P	**P**		**11 43 02.3**	**-2.8**
	baz=247								
SML	**Sawmill**	**85.03**	**19**	IAmb	IAmb		11 43 21.8		
	comp=Z,111nm,1.5s								
SML	**Sawmill**	**85.03**	**19**	P	**P**		**11 43 02.9**	**-1.7**
	baz=222,SNR=12								
SML				S	**S**		**11 53 25.4**	**-4.9**
	baz=222								
CAST	**Castle Rocks**	**85.14**	**17**	P	**P**		**11 43 02.6**	**-2.4**
	baz=219,SNR=119								
CAST				S	**S**		**11 53 24.3**	**-6.9**
	baz=219								
J20K	**Nowinta River**	**85.18**	**16**	IAmb	IAmb		11 43 08.3		
	comp=Z,42nm,0.8s								
J20K	**Nowinta River**	**85.18**	**16**	P	**P**		**11 43 04.1**	**-1.1**
	baz=217,SNR=42								
J20K				S	**S**		**11 53 27.7**	**-3.8**
	baz=217								
SCZ2	**Santa Cruz Isl**	**85.21**	**53**	P	P		11 43 00.4	-5.6	
	baz=247								
SCZ2				S	S		11 53 23.3	-10	
	baz=247								
M23K	**Glacier View**	**85.22**	**20**	P	**P**		**11 43 04.4**	**-1.1**
	baz=223								
M23K				S	**S**		**11 53 26.8**	**-5.2**
	baz=223								
SBC	**Santa Barbara**	**85.32**	**52**	P	**P**		**11 43 03.3**	**-3.3**
	baz=247								
SBC				S	**S**		**11 53 26.6**	**-7.6**
	baz=247								
HMT	**Hamilton**	**85.35**	**22**	IAmb	IAmb		11 43 25.6		
	comp=Z,32nm,0.8s								
HMT				IAMs_20	IAMs_20		12 16 54.9		
	comp=Z,3µm,20.0s								
SCM	**Sheep Creek Mo**	**85.38**	**20**	IAmb	IAmb		11 43 45.7		
	comp=Z,64nm,1.2s								
SCM	**Sheep Creek Mo**	**85.38**	**20**	P	**P**		**11 43 04.8**	**-1.5**
	baz=223,SNR=15								
SCM				S	**S**		**11 53 28.7**	**-5.0**
	baz=223								
PKM	**Mcpherson Peak**	**85.42**	**52**	P	**P**		**11 43 04.3**	**-3.0**
	baz=247								
CHUM	**Lake Minchumin**	**85.44**	**17**	P	**P**		**11 43 04.2**	**-2.2**
	baz=218,SNR=26								
CHUM				S	**S**		**11 53 25.7**	**-8.3**
	baz=218								
SMMC	**Simmler**	**85.45**	**51**	P	**P**		**11 43 06.6**	**-0.6**
	baz=247								
BGLC	**Bering Glacier**	**85.56**	**22**	P	**P**		**11 43 06.3**	**-0.8**
	baz=227								
KLU	**Klutina**	**85.59**	**20**	P	**P**		**11 43 06.3**	**-1.1**
	baz=224,SNR=14								
SCI2	**San Clemente I**	**85.67**	**54**	P	**P**		**11 43 06.6**	**-1.7**
	baz=248								
BMRM	**Bremner River**	**85.67**	**21**	IAmb	IAmb		11 43 54.4		
	comp=Z,39nm,1.1s								
BMRM				IAMs_20	IAMs_20		12 15 49.4		
	comp=Z,3µm,20.0s								
BMRM	**Bremner River**	**85.67**	**21**	P	**P**		**11 43 06.4**	**-1.4**
	baz=226,SNR=5.3								
TRF	**Thorofare Moun**	**85.67**	**18**	IAmb	IAmb		11 43 46.3		
	comp=Z,40nm,1.0s								
TRF	**Thorofare Moun**	**85.67**	**18**	P	**P**		**11 43 06.0**	**-1.8**
	baz=220,SNR=24								
L02F	**Cave Junction**	**85.72**	**44**	P	**P**		**11 43 07.6**	**-0.8**
	baz=244								
TURI	**Tura**	**85.72**	**298**	*e*P	**P**		**11 43 07.6**	**-1.2**
TURI				IAmb	IAmb		11 43 22.2		
	comp=Z,319nm,1.3s								
WAT1	**Susitna Watana**	**85.73**	**19**	P	**P**		**11 43 05.8**	**-2.1**
	baz=222								
BOD	**Bodaibo**	**85.75**	**334**	*e*P	**P**		**11 43 07.2**	**-0.9**
BOD				pmax	pmax				
	comp=Z,137nm,1.3s								
SNH	**Sunshine Point**	**85.76**	**22**	IAmb	IAmb		11 43 28.1		
	comp=Z,60nm,1.0s								
SNH				IAMs_20	IAMs_20		12 16 27.7		
	comp=Z,3µm,20.0s								
WAT6	**Susitna Watana**	**85.79**	**19**	P	**P**		**11 43 06.7**	**-1.7**
	baz=223,SNR=7.8								
K02D	**Willamette Mer**	**85.91**	**44**	P	**P**		**11 43 07.6**	**-1.8**
	baz=244								
CIS	**Catalina Islan**	**85.92**	**54**	P	**P**		**11 43 07.1**	**-2.5**
	baz=248								
WAX	**Waxell Ridge**	**85.94**	**22**	IAmb	IAmb		11 43 11.8		
	comp=Z,40nm,0.6s								
WAX				IAMs_20	IAMs_20		12 16 53.4		
	comp=Z,3µm,20.0s								
J01E	**Myrtle Point**	**85.94**	**43**	IAMs_20	IAMs_20		12 13 08.6		
	comp=Z,3µm,21.0s								
J01E	**Myrtle Point**	**85.94**	**43**	P	**P**		**11 43 08.0**	**-1.4**
	baz=244								
M24K	**Tolsona, Glenn**	**85.95**	**20**	IAmb	IAmb		11 43 46.0		
	comp=Z,150nm,1.6s								
M24K	**Tolsona, Glenn**	**85.95**	**20**	P	**P**		**11 43 08.1**	**-1.0**
	baz=224,SNR=8.8								
BPAW	**Bear Paw Mtn.**	**85.97**	**17**	IAmb	IAmb		11 43 39.4		
	comp=Z,77nm,1.9s								
BPAW	**Bear Paw Mtn.**	**85.97**	**17**	P	**P**		**11 43 07.0**	**-2.2**
	baz=220,SNR=20								
GOMU	**GeErMu**	**86.01**	**309**	P	**P**		**11 43 12.0**	**+1.6**
GOMU				pP	pP		11 43 21.8	-1.6	
GOMU				sP	sP		11 43 27.3	-0.9	
GOMU				PP	**PP**		**11 46 32.0**	**+0.9**	
GOMU				S	**S**		**11 53 38.0**	**-3.7**	
GOMU				sS	sS		11 54 04.0	+0.3	
GOMU				pmax	pmax				
	comp=Z,10.0nm,1.4s								
GOMU				pmax	pmax				
	comp=Z,880nm,7.2s								
GOMU				LR	LR				
	comp=Z,790nm,22.8s								
GOMU				LR	LR				
	comp=Z,2µm,22.1s								
GOMU				LR	LR				
	comp=Z,3µm,23.1s								
CRQM	**Cirque**	**86.04**	**22**	IAmb	IAmb		11 43 29.2		
	comp=Z,42nm,1.0s								
CRQM				IAMs_20	IAMs_20		12 17 26.6		
	comp=Z,2µm,19.0s								
ORV	**Oroville**	**86.06**	**47**	IAMs_20	IAMs_20		12 13 44.8		
	comp=Z,3µm,20.0s								
CRQE	**Cirque**	**86.06**	**22**	P	**P**		**11 43 08.0**	**-1.7**
	baz=227								
RND	**Reindeer**	**86.07**	**18**	IAmb	IAmb		11 43 29.4		
	comp=Z,58nm,1.1s								
MESA	**MESA**	**86.08**	**23**	IAmb	IAmb		11 43 29.2		
	comp=Z,59nm,1.1s								
MESA				IAMs_20	IAMs_20		12 15 48.4		
	comp=Z,3µm,20.0s								
MESA	**MESA**	**86.08**	**23**	P	**P**		**11 43 09.2**	**-0.8**
	baz=228,SNR=5.8								
N25K	**Chitina, Valde**	**86.12**	**21**	P	**P**		**11 43 08.3**	**-1.7**
	baz=226,SNR=26								
YBH	**Yreka Blue Hor**	**86.13**	**45**	P	**P**		**11 43 11.2**	**+0.6**
	comp=Z,4.7nm,1.0s,baz=168,slow=7.9,SNR=5.3								
YBH				LR	LR		12 13 06.6		
	comp=Z,2µm,21.9s,baz=248,slow=30								
	comp=Z,4.7nm,1.0s								
YBH	**Yreka Blue Hor**	**86.13**	**45**	P	**P**		**11 43 14.1**	**+3.6**
YBH				IAmb	IAmb		11 43 53.0		
	comp=Z,52nm,1.4s								
YBH				IAMs_20	IAMs_20		12 12 32.8		
	comp=Z,2µm,22.0s								
YBH	**Yreka Blue Hor**	**86.13**	**45**	P	**P**		**11 43 14.1**	**+3.6**
YBH				pmax	pmax				
	comp=Z,52nm,1.4s								
FMP	**Fort Macarthur**	**86.14**	**53**	P	**P**		**11 43 08.6**	**-2.0**
	baz=248								
OSI	**Osito Audit: C**	**86.14**	**53**	P	**P**		**11 43 10.3**	**-0.5**
	baz=248								
TGL	**Tana Glacier**	**86.15**	**22**	IAMs_20	IAMs_20		12 16 42.1		
	comp=Z,2µm,19.0s								
DHUB	**DHUBRI**	**86.17**	**298**	*e*P	**P**		**11 43 10.8**	**-0.1**
DHUB				IAmb	IAmb		11 43 25.6		
	comp=Z,134nm,1.3s								
ISLE	**Juniper Island**	**86.23**	**22**	IAMs_20	IAMs_20		12 16 43.1		
	comp=Z,3µm,20.0s								
CMB	**Columbia Colle**	**86.24**	**49**	IAMs_20	IAMs_20		12 13 20.7		
	comp=Z,3µm,20.0s								
ARVC	**Arvin**	**86.26**	**52**	P	**P**		**11 43 08.5**	**-2.8**
	baz=248								
DHY	**Denali Highway**	**86.27**	**19**	IAMs_20	IAMs_20		12 14 35.1		
	comp=Z,3µm,22.0s								
DHY	**Denali Highway**	**86.27**	**19**	P	**P**		**11 43 09.3**	**-1.5**
	baz=223								
GLB	**Gilahina Butte**	**86.28**	**21**	IAMs_20	IAMs_20		12 15 56.4		
	comp=Z,2µm,21.0s								
YAH	**Yahtse**	**86.28**	**23**	IAMs_20	IAMs_20		12 16 05.5		
	comp=Z,3µm,20.0s								
MCK	**McKinley**	**86.29**	**18**	IAmb	IAmb		11 43 42.4		
	comp=Z,52nm,1.2s								
MCK				IAMs_20	IAMs_20		12 14 37.4		
	comp=Z,4µm,22.0s								
MCK	**McKinley**	**86.29**	**18**	P	**P**		**11 43 09.0**	**-1.7**
	baz=222,SNR=15								
VOG	**Valley Oaks Go**	**86.30**	**51**	P	**P**		**11 43 10.2**	**-1.2**
	baz=247								
DECC	**Green Verdugo**	**86.31**	**53**	P	**P**		**11 43 09.7**	**-1.8**
	baz=248								
VES	**Vestal, Richgr**	**86.34**	**51**	P	**P**		**11 43 10.2**	**-1.3**
	baz=247								
I02E	**Swisshome, OR**	**86.41**	**42**	P	**P**		**11 43 09.7**	**-2.0**
	baz=244								
BWN	**Browne**	**86.46**	**17**	IAMs_20	IAMs_20		12 15 46.4		
	comp=Z,3µm,20.0s								
LSA	**Lhasa**	**86.47**	**302**	IAmb	IAmb		11 43 15.4		
	comp=Z,32nm,0.8s								
LSA	**Lhasa**	**86.47**	**302**	P	**P**		**11 43 13.2**	**+0.2**	
LSA	**Lhasa**	**86.47**	**302**	P	**P**		**11 43 12.9**	**-0.1**	
HARP	**HAARP**	**86.49**	**20**	P	P		11 43 06.7	-5.0	
	baz=225								
MCARA	**McCarthy VSAT**	**86.51**	**21**	IAmb	IAmb		11 43 34.0		
	comp=Z,36nm,1.0s								
MCARA	**McCarthy VSAT**	**86.51**	**21**	P	P		11 43 06.7	-5.1	
	baz=227								
GRNC	**Granite Creek**	**86.53**	**22**	IAMs_20	IAMs_20		12 17 02.1		
	comp=Z,2µm,20.0s								
RDOG	**Red Dog Mine**	**86.54**	**11**	P	P		11 43 05.4	-6.4	
	baz=208								
I21K	**Tanana**	**86.55**	**16**	IAmb	IAmb		11 43 27.3		
	comp=Z,70nm,0.9s								
I21K	**Tanana**	**86.55**	**16**	P	**P**		**11 43 11.1**	**-0.8**
	baz=219,SNR=69								
I03D	**Drain, OR**	**86.56**	**43**	P	**P**		**11 43 10.9**	**-1.5**
	baz=244								
TABL	**Table Mountain**	**86.56**	**23**	IAmb	IAmb		11 43 14.8		
	comp=Z,32nm,0.7s								
TABL				IAMs_20	IAMs_20		12 16 02.9		
	comp=Z,3µm,20.0s								
L04D	**Klamath Falls**	**86.61**	**44**	IAMs_20	IAMs_20		12 13 22.5		
	comp=Z,3µm,22.0s								
L04D	**Klamath Falls**	**86.61**	**44**	P	**P**		**11 43 11.8**	**-1.2**
	baz=245								
PINM	**Pinnacle**	**86.67**	**23**	P	**P**		**11 43 08.3**	**-4.4**
	baz=230								
H21K	**Melozitna Rive**	**86.71**	**15**	P	**P**		**11 43 12.1**	**-0.6**
	baz=218,SNR=48								
PNL	**Peninsula**	**86.72**	**24**	P	**P**		**11 43 10.3**	**-2.6**
	baz=230								
ISA	**Isabella, Lake**	**86.73**	**52**	IAmb	IAmb		11 43 37.4		
	comp=Z,52nm,1.2s								
ISA	**Isabella, Lake**	**86.73**	**52**	P	**P**		**11 43 12.9**	**-0.7**
	baz=248,SNR=8.0								
ZAK	**Zakamensk**	**86.75**	**325**	*e*P	**P**		**11 43 12.8**	**-0.6**
ZAK				pmax	pmax				
	comp=Z,60nm,1.2s								
109C	**Camp Elliot, M**	**86.76**	**55**	P	**P**		**11 43 11.4**	**-2.3**
	baz=249								
MLY	**Manley**	**86.76**	**16**	IAmb	IAmb		11 43 16.0		
	comp=Z,84nm,1.9s								
MLY				IAMs_20	IAMs_20		12 15 54.9		
	comp=Z,4µm,21.0s								
MLY	**Manley**	**86.76**	**16**	P	**P**		**11 43 11.6**	**-1.5**
	baz=220,SNR=25								
BARN	**Barnard Glacie**	**86.78**	**22**	IAmb	IAmb		11 43 33.0		
	comp=Z,44nm,1.0s								
BARN				IAMs_20	IAMs_20		12 17 39.8		
	comp=Z,3µm,20.0s								
PAX	**Paxson**	**86.80**	**20**	P	**P**		**11 43 11.9**	**-1.4**
	baz=225								
EDW2	**Edwards Air Fo**	**86.80**	**52**	P	**P**		**11 43 12.0**	**-2.0**
	baz=248,SNR=6.7								
SIT	**Sitka**	**86.81**	**27**	P	**P**		**11 43 10.0**	**-3.3**
	baz=234								
BCPM	**Bancas Point**	**86.81**	**24**	IAMs_20	IAMs_20		12 16 07.7		
	comp=Z,2µm,20.0s								
CTG	**Chitna Glacier**	**86.83**	**22**	P	**P**		**11 43 11.8**	**-1.8**
	baz=229,SNR=14								
CTGM	**Chitina Glacie**	**86.84**	**22**	IAmb	IAmb		11 43 33.2		
	comp=Z,34nm,0.8s								
CTGM				IAMs_20	IAMs_20		12 17 22.2		
	comp=Z,3µm,20.0s								
LOGN	**Logan Glacier**	**86.87**	**23**	IAMs_20	IAMs_20		12 17 03.0		
	comp=Z,2µm,20.0s								
NEA2	**Nenana**	**86.89**	**17**	IAmb	IAmb		11 43 29.2		
	comp=Z,43nm,1.2s								
NEA2				IAMs_20	IAMs_20		12 15 14.5		
	comp=Z,4µm,22.0s								
NEA2	**Nenana**	**86.89**	**17**	P	**P**		**11 43 11.6**	**-2.0**
	baz=222,SNR=9.2								
CRAG	**Craig**	**86.91**	**29**	P	**P**		**11 43 13.3**	**-0.6**
	baz=236								
MURC	**Murrieta**	**86.94**	**54**	P	**P**		**11 43 12.7**	**-2.0**
	baz=249								
MPK	**Martis Peak**	**86.99**	**48**	IAmb	IAmb		11 43 40.8		
	comp=Z,58nm,1.1s								
MDPB	**Devils Postpil**	**87.03**	**50**	IAmb	IAmb		11 43 41.1		
	comp=Z,42nm,1.0s								
OMMB	**Old Mammoth Mi**	**87.08**	**50**	IAmb	IAmb		11 43 42.1		
	comp=Z,55nm,1.3s								
K04D	**Chiloquin, OR**	**87.15**	**44**	P	**P**		**11 43 14.1**	**-1.4**
	baz=245								
IRK	**Irkutsk**	**87.16**	**327**	*e*P	**P**		**11 43 13.9**	**-1.3**
IRK				pmax	pmax				
	comp=Z,76nm,3.4s								
J04D	**Umpqua Nationa**	**87.17**	**44**	IAmb	IAmb		11 43 44.4		
	comp=Z,69nm,1.2s								
J04D				IAMs_20	IAMs_20		12 14 00.3		
	comp=Z,3µm,22.0s								
J04D	**Umpqua Nationa**	**87.17**	**44**	P	**P**		**11 43 14.8**	**-1.0**
	baz=245								
MLAC	**Mammoth, Mammo**	**87.21**	**50**	P	**P**		**11 43 14.9**	**-1.2**
	baz=247								
I04A	**Tendick Farm,**	**87.21**	**43**	P	**P**		**11 43 14.6**	**-1.1**
	baz=245								
G21K	**Allakaket**	**87.22**	**15**	P	**P**		**11 43 14.6**	**-0.5**
	baz=217								
M26K	**Nabesna, AK**	**87.22**	**21**	IAMs_20	IAMs_20		12 17 40.3		
	comp=Z,2µm,20.0s								
M26K	**Nabesna, AK**	**87.22**	**21**	P	**P**		**11 43 14.2**	**-1.1**
	baz=227,SNR=25								
PNTR	**Pine Nut**	**87.22**	**48**	IAmb	IAmb		11 43 42.7		
	comp=Z,56nm,1.2s								
I23K	**Minto, Yukon-K**	**87.23**	**17**	IAMs_20	IAMs_20		12 15 25.4		
	comp=Z,3µm,22.0s								
I23K	**Minto, Yukon-K**	**87.23**	**17**	P	**P**		**11 43 13.0**	**-2.2**
	baz=221,SNR=11								
LRMC	**Laurel Mtn Rad**	**87.26**	**52**	P	**P**		**11 43 15.9**	**-0.3**
	baz=248								
H22K	**Ishtalitna Cre**	**87.26**	**16**	P	**P**		**11 43 14.6**	**-0.8**
	baz=219,SNR=39								
VCNR	**Virginia City**	**87.26**	**48**	IAmb	IAmb		11 43 42.0		
	comp=Z,65nm,1.7s								
G03D	**McMinnville, O**	**87.27**	**41**	P	**P**		**11 43 15.5**	**-0.4**
	baz=244								
K24K	**Donnelly Dome**	**87.30**	**19**	P	**P**		**11 43 14.2**	**-1.4**
	baz=224,SNR=12								
MONP2	**Monument Peak**	**87.30**	**55**	P	**P**		**11 43 15.8**	**-0.8**
	baz=249								
CCB	**Clear Creek Bu**	**87.30**	**18**	IAMs_20	IAMs_20		12 15 17.2		
	comp=Z,4µm,22.0s								
H04D	**Lebanon**	**87.31**	**42**	P	**P**		**11 43 13.7**	**-2.4**
	baz=244								
CWC	**Cottonwood Cre**	**87.32**	**51**	P	**P**		**11 43 15.6**	**-0.9**
	baz=248								
HDA	**Harding Lake**	**87.38**	**18**	P	**P**		**11 43 14.3**	**-1.7**
	baz=223,SNR=66								
BBRC	**Big Bear Solar**	**87.40**	**53**	P	**P**		**11 43 14.5**	**-2.6**
	baz=249								
MDM	**Murphy Dome**	**87.41**	**17**	IAMs_20	IAMs_20		12 15 51.1		
	comp=Z,3µm,22.0s								
TIN	**Tinemaha, Big**	**87.44**	**50**	P	**P**		**11 43 16.2**	**-0.8**
	baz=248								
YERR	**Yerington**	**87.44**	**48**	IAmb	IAmb		11 43 38.0		
	comp=Z,70nm,1.6s								
TCOL	**CIGO, UAF Yank**	**87.45**	**17**	IAMs_20	IAMs_20		12 15 43.2		
	comp=Z,3µm,21.0s								
TCOL	**CIGO, UAF Yank**	**87.45**	**17**	P	**P**		**11 43 13.8**	**-2.5**
	baz=223								
COLA	**College**	**87.45**	**17**	IAMs_20	IAMs_20		12 15 43.2		
	comp=Z,3µm,21.0s								
COLA	**College**	**87.45**	**17**	*c i*P	**P**		**11 43 14.8**	**-1.5**
COLA				pmax	pmax				
	comp=Z,45nm,1.0s								
COLA				MLR	MLR				
	comp=Z,807nm,18.0s								
COLA	**College**	**87.45**	**17**	P	**P**		**11 43 14.1**	**-2.2**
	baz=223								
IKP	**In-Ko-Pah, Jac**	**87.46**	**55**	P	**P**		**11 43 17.1**	**-0.1**
	baz=249								
PFO	**Pinyon Flats O**	**87.52**	**54**	LR	LR		12 14 53.1		
	comp=Z,5µm,19.9s,baz=254,slow=30								
PFO	**Pinyon Flats O**	**87.52**	**54**	‖ *e*P	**P**		**11 43 18.2**	**+0.6**
PFO				pmax	pmax				
	comp=Z,43nm,1.1s								
PFO				MLR	MLR				
	comp=Z,2µm,16.0s								
PFO	**Pinyon Flats O**	**87.52**	**54**	P	**P**		**11 43 16.9**	**-0.7**
	baz=249								
TPFO	**Pinon Flats**	**87.52**	**54**	P	**P**		**11 43 15.7**	**-1.9**
	baz=249								
L26K	**Log Cabin Wild**	**87.53**	**20**	IAMs_20	IAMs_20		12 17 47.4		
	comp=Z,2µm,20.0s								
L26K	**Log Cabin Wild**	**87.53**	**20**	P	**P**		**11 43 15.6**	**-1.2**
	baz=227,SNR=18								
RIDG	**Independent Ri**	**87.54**	**19**	P	**P**		**11 43 15.1**	**-1.8**
	baz=225,SNR=19								
RRX	**Edison Barstow**	**87.56**	**53**	P	**P**		**11 43 16.8**	**-0.8**
	baz=249								
M27K	**Edge Creek, AK**	**87.57**	**21**	P	**P**		**11 43 16.3**	**-0.8**
	baz=228,SNR=17								
PAHR	**Pah Rah Range**	**87.61**	**48**	IAmb	IAmb		11 43 38.9		
	comp=Z,56nm,1.3s								
MPMC	**Manual Prospec**	**87.62**	**52**	P	**P**		**11 43 17.3**	**-0.8**
	baz=248,SNR=6.2								
ILAR	**Eielson Array**	**87.66**	**18**	P	**P**		**11 43 15.2**	**-2.1**
	comp=Z,16nm,0.6s,baz=238,slow=4.8,SNR=88								
ILAR				PKPPKP	**P'P'df**		**12 09 10.4**	**+0.4**	
	comp=Z,0.4nm,0.8s,baz=280,slow=1.6,SNR=3.0								
ILAR				LR	LR		12 16 24.6		
	comp=Z,4µm,21.8s,baz=228,slow=31								
	comp=Z,16nm,0.6s								
E03A	**Lebam**	**87.67**	**40**	IAmb	IAmb		11 43 46.5		
	comp=Z,86nm,1.1s								
BBB	**Bella Bella**	**87.69**	**34**	P	**P**		**11 43 18.7**	**+1.1**
	comp=Z,9.4nm,1.1s,baz=161,slow=12,SNR=2.1								
BBB				LR	LR		12 16 39.2		
	comp=Z,2µm,19.4s,baz=248,slow=32								
LHV	**Little Huntoon**	**87.69**	**49**	IAmb	IAmb		11 43 42.3		
	comp=Z,76nm,1.3s								
YUK3	**Moose Creek**	**87.69**	**22**	P	**P**		**11 43 16.6**	**-1.3**
	baz=229,SNR=8.6								
H23K	**Yukon River**	**87.69**	**16**	P	**P**		**11 43 16.0**	**-1.5**
	baz=221,SNR=9.5								
H04A	**Detroit Lake**	**87.73**	**42**	IAmb	IAmb		11 43 59.1		
	comp=Z,42nm,1.2s								
POKR	**Poker Plat Res**	**87.75**	**17**	IAMs_20	IAMs_20		12 19 39.2		
	comp=Z,3µm,20.0s								
POKR	**Poker Plat Res**	**87.75**	**17**	P	**P**		**11 43 14.3**	**-3.4**
	baz=223,SNR=5.7								
J05D	**Fort Rock, OR**	**87.77**	**44**	P	P		11 43 12.9	-5.7	
	baz=246,SNR=9.6								
F21K	**Alatna River**	**87.79**	**14**	P	**P**		**11 43 16.9**	**-1.0**
	baz=217								
WRAK	**Wrangell Islan**	**87.80**	**29**	IAMs_20	IAMs_20		12 19 09.0		
	comp=Z,2µm,19.0s								
WRAK	**Wrangell Islan**	**87.80**	**29**	P	**P**		**11 43 13.4**	**-4.7**
	baz=237								
SWSC	**Sam W. Stewart**	**87.80**	**55**	P	**P**		**11 43 15.3**	**-3.5**
	baz=249								
PLBC	**Pleasant Camp**	**87.80**	**25**	P	P		11 43 12.0	-6.1	
	baz=233,SNR=7.2								
F04D	**Rainier, OR**	**87.81**	**41**	P	**P**		**11 43 14.3**	**-4.2**
	baz=244								
MOD	**Modoc Plateau**	**87.84**	**45**	IAMs_20	IAMs_20		12 16 40.0		
	comp=Z,3µm,20.0s								
GSC	**Goldstone, Bar**	**87.86**	**52**	IAmb	IAmb		11 43 43.9		
	comp=Z,64nm,1.6s								
GSC	**Goldstone, Bar**	**87.86**	**52**	P	P		11 43 12.0	-7.1	
	baz=249								
NVAR	**Mina Array Bea**	**87.90**	**49**	P	**P**		**11 43 18.9**	**-0.5**
	comp=Z,3.0nm,0.8s,baz=230,slow=6.6,SNR=22								
NVAR				PKKPbc	**PKKPbc**		**12 01 06.9**	**+0.1**	
	comp=Z,0.9nm,0.6s,baz=73,slow=3.2,SNR=9.4								
NVAR				PKPPKP	**P'P'df**		**12 09 10.5**	**-1.8**	
	comp=Z,0.5nm,0.8s,baz=88,slow=4.6,SNR=2.6								
NVAR				LR	LR		12 14 30.1		
	comp=Z,3µm,21.5s,baz=263,slow=30								
YUK6	**Outpost Mounta**	**87.93**	**23**	P	P		11 43 13.5	-5.5	
	baz=231								
LCH	**Last Change Ra**	**87.94**	**50**	IAmb	IAmb		11 43 43.1		
	comp=Z,81nm,1.8s								
JIS	**Juneau Island**	**87.94**	**27**	IAMs_20	IAMs_20		12 18 47.5		
	comp=Z,2µm,19.0s								
BVCY	**Beaver Creek**	**87.97**	**21**	P	P		11 43 13.0	-5.9	
	baz=229								
P30M	**Million Dollar**	**87.97**	**24**	P	**P**		**11 43 14.2**	**-4.8**
	baz=232								
SCRK	**Sand Creek**	**87.98**	**19**	P	**P**		**11 43 17.5**	**-1.6**
	baz=226,SNR=31								
J25K	**Salcha River,**	**88.00**	**18**

K27K	Chicken	88.63	20	P		P		11 43 21.1	-0.8
	baz=228								
MOY	Mondy	88.64	325	eP		P		11 43 23.4	+1.0
MOY				pmax		pmax			
	comp=Z,40nm,1.9s								
ODAN	Odare	88.65	298	eP		P		11 43 22.6	-0.6
	comp=Z,67nm,1.1s								
ODAN	Odare	88.65	298	eP		P		11 43 21.8	-1.4
	comp=Z,46nm,1.1s								
O30N	Mendenhall	88.70	24	P		P		11 43 19.9	-2.5
	baz=233,SNR=9.8								
IRM	Iron Mountain	88.74	54	P		P		11 43 22.3	-0.9
	baz=250,SNR=11								
N30M	Aishikik Lake	88.74	23	P		P		11 43 19.0	-3.6
	baz=232,SNR=5.5								
TPNV	Topopah Spring	88.87	51	IAmb		IAmb		11 43 47.9	
	comp=Z,105nm,1.8s								
TPNV				IAMs_20		IAMs_20		12 18 52.6	
	comp=Z,3μm,19.0s								
TPNV	Topopah Spring	88.87	51	P		P		11 43 20.0	-3.9
	baz=249,SNR=11								
E22K	Anaktuvuk Pass	88.90	14	P		P		11 43 21.3	-1.9
	baz=219								
PALK	Pallekele	88.97	278	LR		LR		12 24 58.8	
	comp=Z,1μm,19.4s,baz=216,slow=37								
PALK	Pallekele	88.97	278	IAMs_20		IAMs_20		12 24 38.1	
	comp=Z,2μm,19.0s								
PALK	Pallekele	88.97	278	P		P		11 43 24.2	-0.6
P32M	Atlin	88.98	26	P		P		11 43 21.3	-2.5
	baz=235,SNR=6.9								
T35M	Bob Quinn	89.08	29	P		P		11 43 20.6	-3.7
	baz=238								
BLYC	Blythe	89.08	55	IAmb		IAmb		11 43 44.8	
	comp=Z,38nm,1.1s								
WHY	Whitehorse	89.12	25	P		P		11 43 21.1	-3.4
	baz=234								
I26K	Coal Creek Min	89.16	19	IAmb		IAmb		11 43 39.5	
	comp=Z,101nm,1.8s								
I26K	Coal Creek Min	89.16	19	P		P		11 43 21.5	-2.9
	baz=227								
WVOR	Wild Horse Val	89.19	45	IAmb		IAmb		11 43 49.4	
	comp=Z,108nm,1.7s								
WVOR				IAMs_20		IAMs_20		12 17 42.7	
	comp=Z,2μm,19.0s								
I07A	Izee	89.24	44	IAmb		IAmb		11 43 54.4	
	comp=Z,34nm,1.1s								
N31M	Braeburn, Yuko	89.25	24	IAMs_20		IAMs_20		12 16 57.2	
	comp=Z,2μm,20.0s								
N31M	Braeburn, Yuko	89.25	24	P		P		11 43 21.7	-3.3
	baz=234								
RAMN	Ramite	89.35	298	eP		P		11 43 25.7	-0.8
RAMN	Ramite	89.35	298	eP		P		11 43 25.5	-1.0
NEE2	Needles Airpor	89.36	54	P		P		11 43 23.7	-2.3
	baz=250								
BMN	Battle Mountai	89.42	48	IAmb		IAmb		11 43 51.4	
	comp=Z,89nm,1.6s								
S11A	Rachel	89.49	51	IAmb		IAmb		11 43 51.7	
	comp=Z,57nm,1.2s								
LPIG	La Paz	89.49	65	LR		LR		12 17 14.6	
	comp=Z,3μm,18.2s,baz=239,slow=31								
M30M	Minto, Yukon	89.53	22	IAMs_20		IAMs_20		12 18 30.5	
	comp=Z,3μm,19.0s								
M30M	Minto, Yukon	89.53	22	P		P		11 43 22.7	-3.6
	baz=233,SNR=18								
SHPR	Sheep Range	89.54	52	IAmb		IAmb		11 43 51.3	
	comp=Z,68nm,1.6s								
DAWY	Dawson	89.55	21	P		P		11 43 24.3	-2.0
	baz=230,SNR=14								
PDMCI	Parker Dam,Lak	89.57	54	P		P		11 43 26.5	-0.5
	baz=250,SNR=7.6								
J08A	Circle Bar Ran	89.65	45	IAmb		IAmb		11 43 56.2	
	comp=Z,37nm,1.2s								
P33M	Teslin, Yukon	89.70	26	P		P		11 43 25.5	-1.7
	baz=236,SNR=5.4								
D23K	Nanushuk River	89.81	14	P		P		11 43 26.9	-0.5
	baz=220								
TOLK	Toolik Lake Re	89.83	14	P		P		11 43 26.1	-1.4
	baz=221								
214A	Organ Pipe Nat	89.85	57	P		P		11 43 24.8	-3.7
	baz=251								
R11A	Troy Canyon, C	89.86	50	P		P		11 43 27.9	-0.7
	baz=249,SNR=8.0								
JIRN	Jiri	89.91	299	eP		P		11 43 28.9	-0.4
JIRN	Jiri	89.91	299	eP		P		11 43 28.6	-0.7
PRN	Pahroc Range	89.93	51	IAmb		IAmb		11 43 49.5	
	comp=Z,57nm,1.0s								
DLBC	Dease Lake	89.94	28	P		P		11 43 27.5	-0.9
	comp=Z,11nm,1.2s,baz=237,slow=5.0,SNR=10								
DLBC				LR		LR		12 19 08.7	
	comp=Z,2μm,18.9s,baz=248,slow=32								
	comp=Z,11nm,1.2s								
DLBC	Dease Lake	89.94	28	P		P		11 43 27.4	-0.9
	baz=238,SNR=11								
E07A	Sunnyside	90.00	41	IAmb		IAmb		11 43 57.6	
	comp=Z,50nm,1.1s								
G08A	Pilot Rock	90.07	43	IAmb		IAmb		11 43 58.0	
	comp=Z,47nm,1.1s								
KNGR	Kungurtug, Tuv	90.12	323	eP	ǁ	P		11 43 30.2	+0.8
KNGR				pmax		pmax			
	comp=Z,53nm,0.8s								
N32M	Quiet Lake	90.12	25	P		P		11 43 27.6	-1.5
	baz=236,SNR=6.5								
HAWA	Hanford	90.14	41	IAmb		IAmb		11 43 58.3	
	comp=Z,48nm,1.1s								
M31M	Drury Creek, Y	90.21	23	IAMs_20		IAMs_20		12 22 37.5	
	comp=Z,3μm,19.0s								
M31M	Drury Creek, Y	90.21	23	P		P		11 43 28.5	-0.9
	baz=235								
GUN	Gumba	90.25	299	eP		P		11 43 30.7	-0.1
GUN	Gumba	90.25	299	eP		P		11 43 30.8	-0.1
	comp=Z,74nm,0.8s								
D24K	Happy Valley	90.39	14	P		P		11 43 29.0	-1.1
	baz=222								
LLLB	Lillooet	90.43	37	IAmb		IAmb		11 43 59.3	
	comp=Z,53nm,1.2s								
PMSA	Palmer Station	90.47	160	LR		LR		12 18 25.5	
	comp=Z,2μm,20.8s,baz=236,slow=32								
PMSA	Palmer Station	90.47	160	eP		P		11 43 31.4	+0.7
E08A	Dider Farm, El	90.47	41	IAmb		IAmb		11 43 59.9	
	comp=Z,80nm,1.2s								
A21K	Barrow	90.48	11	IAMs_20		IAMs_20		12 17 50.9	
	comp=Z,3μm,22.0s								
A21K	Barrow	90.48	11	P		P		11 43 29.4	-1.0
	baz=214								
C23K	Itkillik River	90.50	13	P		P		11 43 30.1	-0.5
	baz=220								
PKI	Pulchoki	90.55	298	eP		P		11 43 31.5	-0.6
	comp=Z,112nm,1.3s								
PKI	Pulchoki	90.55	298	eP		P		11 43 31.6	-0.6
PKIN	Phulchoki	90.56	298	eP		P		11 43 31.7	-0.4
PKIN	Phulchoki	90.56	298	eP		P		11 43 31.8	-0.4
	comp=Z,98nm,1.2s								
I29M	Ogilvie Camp,	90.73	20	IAMs_20		IAMs_20		12 20 14.1	
	comp=Z,2μm,20.0s								
I29M	Ogilvie Camp,	90.73	20	P		P		11 43 29.3	-2.4
	baz=231								
DMN	Daman	90.81	298	eP		P		11 43 32.9	-0.5
	comp=Z,234nm,1.3s								
DMN	Daman	90.81	298	eP		P		11 43 32.9	-0.5
C24K	Franklin Bluff	90.85	14	P		P		11 43 32.0	-0.2
	baz=222								
ELK	Elko	90.95	48	P		P		11 43 32.3	-1.3
	comp=Z,4.4nm,1.0s,baz=264,slow=3.3,SNR=8.3								
ELK				LR		LR		12 21 12.4	
	comp=Z,2μm,18.1s,baz=246,slow=34								
	comp=Z,4.4nm,1.0s								
BMO	Blue Mountains	90.99	43	IAmb		IAmb		11 44 14.0	
	comp=Z,51nm,1.6s								
BMO				IAMs_20		IAMs_20		12 16 53.3	
	comp=Z,2μm,20.0s								
E09A	Wood Farm, Sta	91.07	42	IAmb		IAmb		11 44 02.2	
	comp=Z,36nm,1.1s								
D25K	Kavik River	91.11	15	P		P		11 43 31.9	-1.6
	baz=224								
LCMT	Little Creek M	91.16	52	IAmb		IAmb		11 43 55.0	
	comp=Z,41nm,1.1s								
CCUT	Cedar City	91.24	51	IAmb		IAmb		11 43 58.7	
	comp=Z,43nm,1.3s								
TIXI	Tiksi	91.28	349	LR		LR		12 23 11.4	
	comp=Z,2μm,19.8s,baz=180,slow=35								
TIXI	Tiksi	91.28	349	P		P		11 43 34.2	+0.1
TIXI				IAMs_20		IAMs_20		12 22 30.0	
	comp=Z,2μm,20.0s								
TIXI	Tiksi	91.28	349	c iP		P		11 43 32.5	-1.6
TIXI				pmax		pmax			
	comp=Z,74nm,1.3s								
TIXI				MLR		MLR			
	comp=Z,1μm,18.0s								
GKN	Gorkha	91.33	299	eP		P		11 43 34.4	-1.2
GKN	Gorkha	91.33	299	eP		P		11 43 35.2	-0.4
F10A	Beach Ranch, E	91.46	42	IAmb		IAmb		11 43 55.3	
	comp=Z,43nm,1.1s								
TUC	Tucson	91.59	57	P		P		11 43 37.6	+1.0
TUC	Tucson	91.59	57	IAMs_20		IAMs_20		12 15 29.4	
	comp=Z,2μm,21.0s								
TUC	Tucson	91.59	57	P		P		11 43 37.6	+1.0
TUC				pmax		pmax			
	comp=Z,24nm,1.3s								
TUC	Tucson	91.59	57	P		P		11 43 34.4	-2.3
	baz=252								
TROLL	Troll, Antarti	91.61	185	P		P		11 43 35.4	-0.7
TROLL	Troll, Antarti	91.61	185	pP		pP		11 43 47.2	-2.0
TROLL	Troll, Antarti	91.61	185	sP		sP		11 43 52.2	-1.9
NVL	N'lazarevskaya	91.82	188	eP		P		11 43 36.0	-0.9
NVL				eS		SKSac		11 54 05.4	-0.5
NVL				pmax		pmax			
	comp=Z,82nm,1.1s								
NVL				MLR		MLR			
	comp=Z,2μm,18.0s								
EPYK	Eagle Plains	91.87	19	IAMs_20		IAMs_20		12 18 27.1	
	comp=Z,2μm,22.0s								
EPYK	Eagle Plains	91.87	19	P		P		11 43 34.3	-2.7
	baz=233								
C26K	Camden Bay	91.89	15	P		P		11 43 36.0	-1.0
	baz=225								
C27K	Jago River	91.99	15	P		P		11 43 35.8	-1.7
	baz=226								
WUAZ	Wupatki	92.11	54	IAmb		IAmb		11 43 58.9	
	comp=Z,80nm,1.6s								
WUAZ	Wupatki	92.11	54	P		P		11 43 36.7	-2.4
	baz=252								
KOLN	Koldanda	92.14	298	eP		P		11 43 37.2	-2.2
KOLN	Koldanda	92.14	298	eP		P		11 43 38.8	-0.6
DANN	Dangsing	92.17	299	eP		P		11 43 38.6	-1.1
DANN	Dangsing	92.17	299	eP		P		11 43 40.0	+0.3
SNAA	Sanae	92.29	183	P		P		11 43 38.0	-1.1
SNAA	Sanae	92.29	183	PKiKP		PKiKP		11 48 33.1	+4.8
SNAA	Sanae	92.29	183	sP		sP		11 43 55.3	-1.9
SNAA	Sanae	92.29	183	P		P		11 43 37.5	-1.6
	comp=Z,14nm,0.8s,baz=184,slow=5.8,SNR=32			PKKP					
SNAA						PKKPdf		12 00 50.9	-1.5
	comp=Z,1.7nm,0.9s,baz=45,slow=8.8,SNR=3.4								
SNAA				LR		LR		12 24 44.0	
	comp=Z,3μm,18.5s,baz=160,slow=35								
	comp=Z,14nm,0.8s								
SNAA	Sanae	92.29	183	P		P		11 43 37.6	-1.6
SNAA	Sanae	92.29	183	P		P		11 43 37.6	-1.5
SNAA				pmax		pmax			
	comp=Z,96nm,1.2s								
SNAA				MLR		MLR			
	comp=Z,3μm,19.0s								
NEW	Newport	92.36	40	P		P		11 43 37.4	-2.4
	comp=Z,1.8nm,0.7s,baz=223,slow=5.6,SNR=3.7								
NEW				LR		LR		12 19 38.5	
	comp=Z,1μm,19.1s,baz=236,slow=32								
NEW	Newport	92.36	40	P		P		11 43 38.6	-1.1
	baz=249,SNR=5.2								
HLID	Hailey	92.48	45	IAMs_20		IAMs_20		12 16 51.9	
	comp=Z,3μm,21.0s								
HLID	Hailey	92.48	45	P		P		11 43 38.8	-1.8
	baz=250								
DUG	Dugway, Tooele	92.51	49	IAmb		IAmb		11 44 20.7	
	comp=Z,34nm,1.5s								
DUG				IAMs_20		IAMs_20		12 17 32.7	
	comp=Z,3μm,20.0s								
DUG	Dugway, Tooele	92.51	49	P		P		11 43 38.9	-1.8
	baz=251								
PYUN	Piuthan	92.75	298	eP		P		11 43 39.7	-2.5
VNA3	Neumayer Olymp	92.94	181	P		P		11 43 40.8	-1.3
VNA3	Neumayer Olymp	92.94	181	PKiKP		PKiKP		11 48 32.5	+3.2
HVU	Hansel Valley	93.04	47	IAmb		IAmb		11 44 06.2	
	comp=Z,30nm,1.4s								
VNA2	Neumayer--Watz	93.21	182	P		P		11 43 42.4	-0.9
	baz=177,slow=4.5								
VNA2	Neumayer--Watz	93.21	182	PKiKP		PKiKP		11 48 31.2	+1.5
VNA2	Neumayer--Watz	93.21	182	pP		pP		11 43 54.0	-2.5
W18A	Petrified Fore	93.27	55	IAmb		IAmb		11 44 03.3	
	comp=Z,28nm,1.3s								
W18A	Petrified Fore	93.27	55	P		P		11 43 41.8	-2.7
	baz=253								
VNA1	Neumayer--Stat	93.51	181	P		P		11 43 43.7	-1.0
HYBB	Hyderabad (bro	93.76	287	eP		P		11 43 45.9	-1.0
HYBB				esP		pP		11 43 59.2	-0.6
HYBB				eSKSac		SKSac		11 54 20.3	+1.7
HYBB				eScS		ScS		11 54 55.8	+0.8
TCUT	Toone Canyon	93.81	48	IAmb		IAmb		11 44 18.4	
	comp=Z,21nm,0.9s								
WMQ	Urumqi	93.82	314	eP		P		11 43 48.5	+1.9
WMQ				pP		pP		11 44 00.5	+0.8
WMQ				SKS		SKSac		11 54 19.0	+1.1
WMQ				S		S		11 54 52.5	-0.6
WMQ				SS		SS		12 01 09.5	-3.5
WMQ				pmax		pmax			
	comp=Z,46nm,1.3s								
WMQ				pmax		pmax			
	comp=Z,620nm,6.9s								
WMQ				LR		LR			
	comp=Z,1μm,18.9s								
WMQ				LR		LR			
	comp=Z,2μm,24.3s								
WMQ				LR		LR			
	comp=Z,3μm,21.1s								
HWUT	Hardware Ranch	93.85	48	IAMs_20		IAMs_20		12 23 20.1	
	comp=Z,2μm,19.0s								
MSO	Misoula	93.89	42	P		P		11 43 45.6	-1.3
	baz=251								
INK	Inuvik	94.01	19	P		P		11 43 45.4	-1.4
	comp=Z,3.6nm,1.1s,baz=251,slow=6.5,SNR=3.1								
INK				LR		LR		12 20 13.0	
	comp=Z,3μm,21.8s,baz=217,slow=32								
	comp=Z,3.6nm,1.1s								
INK	Inuvik	94.01	19	P		P		11 43 44.8	-2.0
	baz=236								
121A	Cookes Peak, D	94.08	57	P		P		11 43 45.8	-2.5
	baz=254								
DLMT	Dillon	94.30	44	IAMs_20		IAMs_20		12 19 59.9	
	comp=Z,3μm,20.0s								
AHID	Auburn Hatcher	94.53	47	IAMs_20		IAMs_20		12 18 36.1	
	comp=Z,2μm,21.0s								
MVCO	Mesa Verde	94.83	53	P		P		11 43 48.4	-3.2
	baz=254								
TPAW	Teton Pass	94.85	46	IAMs_20		IAMs_20		12 17 56.0	
	comp=Z,3μm,22.0s								
REDW	Red Top Meadow	94.88	46	IAMs_20		IAMs_20		12 17 56.4	
	comp=Z,3μm,22.0s								
SNOW	Snow King Moun	94.98	46	IAMs_20		IAMs_20		12 17 59.9	
	comp=Z,3μm,22.0s								
BOZ	Bozeman (W)	95.02	44	IAMs_20		IAMs_20		12 19 22.9	
	comp=Z,2μm,20.0s								
BOZ	Bozeman (W)	95.02	44	P		P		11 43 50.4	-1.8
	baz=252								
USHA	Ushuaia	95.03	151	LR		LR		12 18 28.4	
	comp=Z,2μm,21.3s,baz=222,slow=30								
MOOW	Moose Ponds	95.07	46	IAMs_20		IAMs_20		12 18 14.4	
	comp=Z,3μm,21.0s								
LOHW	Long Hollow	95.13	46	IAMs_20		IAMs_20		12 18 04.9	
	comp=Z,3μm,22.0s								
FLWY	Flagg Ranch	95.20	46	IAMs_20		IAMs_20		12 18 08.8	
	comp=Z,3μm,22.0s								
Y22D	IRIS PASSCAL I	95.20	56	IAMs_20		IAMs_20		12 18 18.9	
	comp=Z,3μm,21.0s								
BW06	Boulder Array	95.61	47	IAMs_20		IAMs_20		12 25 48.9	
	comp=Z,2μm,18.0s								
BW06	Boulder Array	95.61	47	P		P		11 43 51.6	-3.6
	baz=254								
PDAR	Pinedale Array	95.62	47	P		P		11 43 54.0	-1.1
	comp=Z,0.3nm,0.5s,baz=151,slow=3.4,SNR=4.4								
PDAR				PP		PP		11 47 42.5	-4.4
	comp=Z,1.8nm,1.0s,baz=251,slow=4.5,SNR=4.1								
PDAR				PKKP		PKKPbc		12 00 46.4	-0.9
	comp=Z,1.1nm,0.7s,baz=95,slow=5.4,SNR=9.1								
PDAR				PKPPKP		P'P'df		12 08 57.8	-0.1
	comp=Z,0.1nm,0.4s,baz=54,slow=7.5,SNR=4.3								
PDAR				LR		LR		12 19 32.7	
	comp=Z,2μm,21.3s,baz=258,slow=31								
ANMO	Albuquerque	95.80	55	LR		LR		12 19 01.9	
	comp=Z,3μm,20.7s,baz=272,slow=30								
ANMO	Albuquerque	95.80	55	P		P		11 43 54.7	-1.4
ANMO	Albuquerque	95.80	55	IAMs_20		IAMs_20		12 19 10.8	
	comp=Z,3μm,20.0s								
ANMO	Albuquerque	95.80	55	eP	ǁ	P		11 43 57.3	+1.2
ANMO				pmax		pmax			
	comp=Z,8.0nm,1.3s								
ANMO				MLR		MLR			
	comp=Z,2μm,17.0s								
ANMO	Albuquerque	95.80	55	P		P		11 43 52.0	-4.1
	baz=255								
MNTX	Cornudas Mount	95.82	59	IAMs_20		IAMs_20		12 20 22.4	
	comp=Z,2μm,20.0s								
MNTX	Cornudas Mount	95.82	59	P		P		11 43 51.9	-4.1
	baz=255								
O20A	White River Ci	95.83	50	P		P		11 43 50.8	-5.3
	baz=254								
S22A	4UR Ranch, Cre	96.25	53	P		P		11 43 53.9	-4.3
	baz=255								
TXAR	Lajitas Array	96.65	62	P		P		11 43 59.5	-0.4
	comp=Z,0.6nm,0.8s,baz=220,slow=6.3,SNR=9.9								
TXAR				PP		PP		11 47 54.5	-0.7
	comp=Z,1.8nm,1.0s,baz=231,slow=9.5,SNR=5.4								
TXAR				PKKPbc		PKKPbc		12 00 43.3	-0.4
	comp=Z,0.3nm,0.5s,baz=101,slow=3.7,SNR=7.4								
TXAR				LR		LR		12 21 13.5	
	comp=Z,2μm,18.3s,baz=266,slow=32								
ZSN	Zaisan	96.79	317	eP		P		11 43 58.4	-1.6
ZSN	Zaisan	96.79	317	eP		P		11 43 58.5	-1.6
	baz=317								
EGMT	Eagleton	96.96	42	P		P		11 43 56.5	-4.4
	baz=254								
RWWY	Rawlins	97.00	49	IAMs_20		IAMs_20		12 24 16.6	
	comp=Z,2μm,18.0s								
SDCO	Great Sand Dun	97.27	53	P		P		11 43 56.0	-6.9
	baz=255								
C36M	Paulatuk	97.51	19	P		P		11 43 58.2	-4.5
	baz=244								
ISCO	Idaho Springs	97.69	51	IAMs_20		IAMs_20		12 22 18.1	
	comp=Z,3μm,20.0s								
ISCO	Idaho Springs	97.69	51	P		P		11 43 59.1	-5.6
	baz=256								
N23A	Red Feather La	97.72	50	P		P		11 43 58.4	-6.3
	baz=256								
PHWY	Pilot Hill	98.18	49	IAMs_20		IAMs_20		12 23 27.8	
	comp=Z,2μm,20.0s								
MK31	Makanchi Array	98.32	316	IAmb		IAmb		11 44 23.4	
	comp=Z,22nm,1.2s								
MK31	Makanchi Array	98.32	316	ceP		P		11 44 06.2	-0.7
MKAR	Makanchi Array	98.32	316	P		P		11 44 06.7	-0.3
	comp=Z,4.4nm,0.6s,baz=92,slow=6.1,SNR=15								
MKAR				PP		PP		11 48 05.0	-2.4
	comp=Z,1.5nm,0.8s,baz=64,slow=5.5,SNR=3.1								
MKAR				PKiKP		PKiKP		11 48 39.3	+0.1
	comp=Z,2.2nm,0.6s,baz=96,slow=5.8,SNR=5.4								
MKAR				S		SKSac		11 54 40.6	-0.7
	comp=Z,2.0nm,0.6s,baz=119,slow=8.1,SNR=1.3								
MKAR				PKKPbc		PKKPbc		12 00 37.4	-2.3
	comp=Z,2.3nm,0.7s,baz=287,slow=2.8,SNR=9.7								
MKAR				LR		LR		12 31 29.3	
	comp=Z,472nm,18.5s,baz=90,slow=37								
	comp=Z,4.4nm,0.6s								
SMLA	Simla	98.43	300	eP		P		11 44 06.7	-1.1
SMLA				IAmb		IAmb		11 44 09.2	
	comp=Z,12nm,0.8s								
MAKZ	Makanchi	98.53	316	P		Pdif		11 44 08.7	+0.8
MAKZ				IAmb		IAmb		11 44 24.3	
	comp=Z,24nm,1.1s								
MAKZ	Makanchi	98.53	316	P		Pdif		11 44 08.7	+0.8
MAKZ				pmax		pmax			
	comp=Z,24nm,1.2s								
YKA	Yellowknife Ar	98.56	27	P		P		11 44 06.0	-1.5
	comp=Z,11nm,1.0s,baz=252,slow=4.4,SNR=30								
YKA				PP		PP		11 48 06.1	-2.6
	comp=Z,0.1nm,0.6s,baz=248,slow=6.6,SNR=3.0								
YKA				PKiKP		PKiKP		11 48 38.0	-1.1
	comp=Z,0.5nm,0.6s,baz=247,slow=1.3,SNR=6.3								
YKA				PKKPbc		PKKPbc		12 00 37.2	-2.3
	comp=Z,0.6nm,0.9s,baz=69,slow=3.4,SNR=3.7								
YKA				PKKP		PKKPdf		12 00 42.2	-0.7
	comp=Z,0.5nm,0.8s,baz=71,slow=2.2,SNR=4.5								
YKA				LR		LR		12 26 44.3	
	comp=Z,1μm,18.1s,baz=254,slow=34								
	comp=Z,11nm,1.0s								
ZAA0	Zalesovo Array	98.58	324	IAmb		IAmb		11 44 09.4	
	comp=Z,23nm,0.9s								
ZALV	Zalesovo Beam	98.58	324	P		P		11 44 06.5	-1.4
	comp=Z,20nm,0.8s,baz=114,slow=3.6,SNR=50								
ZALV				PKiKP		PKiKP		11 48 39.5	0.0
	comp=Z,0.8nm,0.3s,baz=153,slow=3.6,SNR=3.5								
ZALV				PKKPbc		PKKPbc		12 00 36.6	-2.5
	comp=Z,1.6nm,0.6s,baz=299,slow=3.1,SNR=4.6								
ZALV				LR		LR		12 28 21.0	
	comp=Z,789nm,21.0s,baz=100,slow=35								
	comp=Z,20nm,0.8s								
AMTX	Amarillo	99.59	56	IAMs_20		IAMs_20		12 29 38.2	
	comp=Z,2μm,18.0s								
UZB	Uzunbulak	99.72	312	eP		Pdif		11 44 13.0	-0.4
UZB				e				11 48 15.6	
UZB	Uzunbulak	99.72	312	eP		Pdif		11 44 13.1	-0.4
	baz=312								
UZB				ePP		PP		11 48 15.7	-2.7
	baz=312								
RSSD	Black Hills	99.85	47	IAMs_20		IAMs_20		12 23 55.8	
	comp=Z,3μm,20.0s								
KPKS	Kokpek	100.03	312	eP		Pdif		11 44 12.3	-2.5
KPKS				e				11 48 15.2	
KPKS	Kokpek	100.03	312	eP		Pdif		11 44 12.3	-2.5
	baz=312								
KPKS				ePP		PP		11 48 15.2

comp=Z,1µm,21.0s
FFC Flin Flon 103.17 37 IAMs_20 IAMs_20 12 22 41.1
comp=Z,2µm,22.0s
BTLS Baital 103.59 313 *e*PKiKP **PKiKP 11 48 47.4 -1.4**
baz=313
KSU1 Kansas State U 104.38 53 IAMs_20 IAMs_20 12 26 39.2
comp=Z,2µm,20.0s
TUL1 Leonard 104.51 56 IAMs_20 IAMs_20 12 23 56.4
comp=Z,3µm,21.0s
NATX Nacogdoches 104.75 61 IAMs_20 IAMs_20 12 24 15.0
comp=Z,2µm,20.0s
ECSD EROS Data Cent 105.06 48 IAMs_20 IAMs_20 12 28 00.7
comp=Z,2µm,20.0s
W39A Magazine 106.02 57 IAMs_20 IAMs_20 12 30 50.4
comp=Z,2µm,19.0s
IUG luzhnay 106.08 310 *e*PP **PP 11 49 01.3 -4.6**
baz=310
MIAR Mount Ida 106.09 58 IAMs_20 IAMs_20 12 27 45.4
comp=Z,2µm,20.0s
AGMN Agassiz Nation 106.13 44 IAMs_20 IAMs_20 12 26 39.7
comp=Z,2µm,20.0s
VBMS Vicksburg 108.30 61 IAMs_20 IAMs_20 12 27 45.0
comp=Z,2µm,21.0s
CCM Cathedral Cave 108.41 55 IAMs_20 IAMs_20 12 26 20.5
comp=Z,2µm,21.0s
TRQA Tornquist 108.93 141 IAMs_20 IAMs_20 12 29 07.2
comp=Z,2µm,20.0s
EYMN Ely 109.02 44 IAMs_20 IAMs_20 12 28 05.2
comp=Z,2µm,21.0s
JTS Las Juntas de 109.46 85 IAMs_20 IAMs_20 12 23 37.5
comp=Z,2µm,20.0s
OXF Oxford 109.50 59 IAMs_20 IAMs_20 12 28 27.6
comp=Z,2µm,20.0s
HDC Heredia 110.20 85 IAMs_20 IAMs_20 12 23 08.1
comp=Z,2µm,22.0s
WVT Waverly 110.94 57 IAMs_20 IAMs_20 12 36 00.7
comp=Z,2µm,18.0s
BRAL Brewton 111.11 62 IAMs_20 IAMs_20 12 34 06.4
comp=Z,1µm,20.0s
LRAL Lakeview Retre 111.34 60 IAMs_20 IAMs_20 12 33 40.6
comp=Z,2µm,19.0s
JLN Jalan Bani Buh 112.36 288 P **PKiKP 11 49 06.3 +0.5**
SVE Sverdlovsk 112.51 325 *i* PKiKP **PKiKP 11 49 05.1 0.0**
SVE pmax pmax
comp=Z,31nm,1.3s
SVE MLR MLR
comp=Z,1µm,20.0s
TULEG Thule 113.04 12 IAMs_20 IAMs_20 12 31 40.0
comp=Z,2µm,22.0s
MHTO MHTO 113.51 286 P **PKiKP 11 49 08.2 +0.1**
JMDO Jabal Madar 113.59 288 P **PKiKP 11 49 08.5 +0.3**
ARU Arti 113.69 325 PKKPbc PKKPbc 11 59 49.8 -2.5
comp=Z,6.6nm,0.6s,baz=242,slow=1.0,SNR=7.0
ARU Arti 113.69 325 IAMs_20 IAMs_20 12 37 52.5
comp=Z,1µm,20.0s
ARU Arti 113.69 325 *i* PKiKP **PKiKP 11 49 06.9 -0.4**
ARU 11 49 59.9
ARU 11 56 15.5
ARU SP SP 11 59 31.6 +0.3
ARU SS **SS 12 05 38.9 -6.2**
ARU MLR MLR
comp=Z,2µm,20.0s
SMDO Samad 113.73 288 P **PKiKP 11 49 08.8 +0.2**
DQM DQM 113.74 285 P **PKiKP 11 49 08.6 +0.1**
GOGA Godfrey 114.33 60 IAMs_20 IAMs_20 12 30 16.5
comp=Z,2µm,21.0s
TZTN Tazewell 114.42 57 IAMs_20 IAMs_20 12 31 02.7
comp=Z,2µm,22.0s
AKTO Aktyubinsk 114.61 318 SKP 11 52 42.6
comp=Z,3.1nm,0.9s,baz=4.5,slow=2.9,SNR=4.4
AKTO PKKPbc PKKPbc 11 59 47.0 -2.1
comp=Z,4.5nm,0.8s,baz=235,slow=0.7,SNR=3.7
GEYT Alibeck 114.89 305 PKP PKPdf 11 49 09.7 -0.6
comp=Z,9.1nm,0.7s,baz=123,slow=10.0,SNR=9.4
SOHO SOHO 115.25 289 P **PKPdf 11 49 10.4 -0.9**
SOHO SOHO 115.25 289 *i* P **PKPdf 11 49 10.4 -0.9**
SNR=13
UOSS Minazif 115.64 290 **PKPdf 11 49 10.6 -1.4**
UOSS Minazif 115.64 290 P **PKiKP 11 49 12.3 +0.2**
UOSS Minazif 115.64 290 P **PKPdf 11 49 11.7 -0.4**
BANOM Banah 115.67 291 P **PKPdf 11 49 11.5 -0.7**
SOCY Socotra 115.69 276 P **PKPdf 11 49 12.1 -0.4**
HATD Hatta, Dubai 115.70 290 P **PKPdf 11 49 11.5 -0.7**
HATD Hatta, Dubai 115.70 290 *i* P **PKPdf 11 49 11.6 -0.6**
SNR=12
MSFE Esma-Masafi 115.73 291 *i* P **PKPdf 11 49 11.6 -0.7**
SNR=5.8
MASF Masafi 115.73 291 P **PKPdf 11 49 12.1 -0.2**
ASHO Ashiyiah 115.75 290 P **PKiKP 11 49 12.4 +0.1**
ASHO Ashiyiah 115.75 290 *i* P **PKPdf 11 49 11.9 -0.5**
SNR=7.3
DMTO DMTO 115.80 282 P **PKiKP 11 49 13.2 +0.7**
SHME Shamm 115.82 292 P **PKiKP 11 49 12.8 +0.4**
SHME Shamm 115.82 292 P **PKPdf 11 49 11.4 -1.0**
ALNE Al Ain 115.95 289 P **PKiKP 11 49 13.0 +0.3**
ALNE Al Ain 115.95 289 *i* P **PKPdf 11 49 12.0 -0.7**
SNR=6.3
KBS Kingsbay 116.00 355 *e*PKPdf **PKPdf 11 49 11.8 +0.6**
YOTC Yotoco, Valle 116.17 93 *e*P **PKPdf 11 49 13.3 -0.2**
FAQ Al Faqa, Dubai 116.17 290 P **PKiKP 11 49 13.8 +0.7**
FAQ Al Faqa, Dubai 116.17 290 P **PKPdf 11 49 12.3 -0.7**
SPA0 Spitsbergen Ar 116.23 354 *e*PKPdf **PKPdf 11 49 10.6 -1.2**
LPAZ La Paz 116.38 118 PKP **PKPdf 11 49 13.2 -1.3**
comp=Z,3.4nm,0.8s,baz=8.5,slow=2.1,SNR=9.8
LPAZ PKKPbc **PKKPbc 11 59 41.2 -1.7**
comp=Z,1.4nm,0.6s,baz=0.0,slow=5.1,SNR=4.7
LPAZ La Paz 116.38 118 *e*P **PKPdf 11 49 12.6 -1.9**
ASUD Al Ashush, Dub 116.40 290 P **PKPdf 11 49 13.2 -0.3**
ASUD Al Ashush, Dub 116.40 290 P **PKPdf 11 49 13.4 -0.1**
M53A WI Miller and 116.68 51 IAMs_20 IAMs_20 12 31 54.5
comp=Z,2µm,21.0s
DOK Doka 116.71 283 P **PKiKP 11 49 14.3 0.0**
BLA Blacksburg 116.94 56 IAMs_20 IAMs_20 12 33 11.4
comp=Z,2µm,20.0s
WHFO Wadi Hawf 116.94 282 P **PKiKP 11 49 15.1 +0.3**
NHSC New Hope 117.06 61 IAMs_20 IAMs_20 12 32 20.0
comp=Z,1µm,20.0s
DBBC Dabeiba 117.08 90 *e*P **PKiKP 11 49 17.4 +2.2**
ABTO Aybut 117.30 282 P **PKPdf 11 49 15.2 -0.2**
GUY2C Guyana, Caldas 117.44 92 *e*P **PKPdf 11 49 15.0 -1.4**
ITQB Itaqui 117.72 137 PKPdf **PKPdf 11 49 15.1 -0.9**
MZR Muzera 117.90 288 P **PKPdf 11 49 16.3 -0.2**
SNR=6.0
MZR Muzera 117.90 288 *i* P **PKiKP 11 49 17.0 +0.6**
SNR=9.6
KIRV Kirov 118.11 328 *d i* PKiKP **PKPdf 11 49 15.7 0.0**
ZARC Zaragoza, Cauc 118.50 90 *e*P **PKPdf 11 49 12.5 -5.4**
PTBC PUERTO BERRIO 118.65 91 *e*P **PKPdf 11 49 13.7 -4.5**
JRN Qarnain Island 118.67 290 P **PKiKP 11 49 18.6 +0.7**
SPBC San Pablo de B 118.80 92 *e*P **PKPdf 11 49 13.1 -5.5**
CHIC Chingaza 118.85 94 *e*P **PKPdf 11 49 18.3 -0.8**
PRGR Permogore 118.93 332 *e*PKiKP **PKPdf 11 49 16.4 -0.8**
DAG Danmarks Havn 119.14 2 *i* P **PKPdf 11 49 14.2 -3.1**
CPUP Villa Florida 119.38 133 PKP **PKPdf 11 49 18.3 -1.0**
comp=Z,8.8nm,1.0s,baz=243,slow=1.7,SNR=13
CPUP PKKPbc **PKKPbc 11 59 30.7 -1.0**
comp=Z,3.1nm,0.8s,baz=65,slow=1.2,SNR=5.5
CPUP Villa Florida 119.38 133 PKPdf **PKPdf 11 49 17.3 -1.9**
RUSC La Rusia 119.81 92 *e*P **PKPdf 11 49 18.9 -2.1**
BARC Barichara 119.89 92 *e*P **PKPdf 11 49 17.7 -3.2**
LVZ Lovozero 120.10 341 IAMs_20 IAMs_20 12 41 10.9
comp=Z,2µm,22.0s
LVZ Lovozero 120.10 341 *d i* PKiKP **PKPdf 11 49 18.2 -1.2**
LVZ MLR MLR
comp=Z,2µm,21.0s
SMRA Abu-Samra 120.49 290 P **PKiKP 11 49 21.7 +0.2**
ALGR Alto Alegre (B 120.64 138 *e*P **PKiKP 11 49 22.0 +0.2**
APA Apatity 120.68 341 *i* SS SS 12 07 41.0 +26
APA pmax pmax
comp=Z,32nm,0.6s
BELG Belogornoye 120.71 322 *c i* PKiKP **PKPdf 11 49 20.2 -0.7**
BELG MLR MLR
comp=Z,114nm,21.0s
SAKB Bahrain 120.84 291 P **PKiKP 11 49 22.7 +0.6**
CRSM Crissiumal (Br 120.86 137 *e*P **PKiKP 11 49 22.2 0.0**
ETMB Extrema 120.92 112 *e*P **PKiKP 11 49 23.0 +0.4**
KEV Kevo 121.03 345 PKPdf **PKPdf 11 49 20.2 -0.9**
KEV Kevo 121.03 345 PKiKP **PKPdf 11 49 20.2 -0.9**
KEV MLR MLR
comp=Z,2µm,22.0s
HAMF Hammerfest 121.16 347 *e*PKPdf **PKPdf 11 49 20.2 -1.1**
HAMF IAmb IAmb 11 49 21.7
comp=Z,50nm,0.7s
SUMG Summit 121.46 9 PKPdf **PKPdf 11 49 21.7 -0.7**
SUMG IAMs_20 IAMs_20 12 37 52.3
comp=Z,1µm,22.0s
SUMG Summit 121.46 9 PKiKP **PKPdf 11 49 21.7 -0.7**
SUMG Summit 121.46 9 *i* P **PKPdf 11 49 22.0 -0.4**
DBG Daneborg 121.55 2 *i* P **PKPdf 11 49 19.8 -2.2**
ARCES ARCESS Array B 121.56 345 PKP **PKPdf 11 49 21.3 -0.9**
comp=Z,45nm,0.6s,baz=17,slow=1.3,SNR=163
ARCES PKKPbc **PKKPab 11 59 21.7 -0.3**
comp=Z,2.9nm,0.7s,baz=207,slow=2.4,SNR=9.5
ILULI Ilulissat 121.62 15 IAMs_20 IAMs_20 12 37 36.9
comp=Z,1µm,21.0s
CNLB Canela 121.64 140 *e*P **PKPdf 11 49 23.6 -0.1**
PAL Palisades 121.80 51 IAMs_20 IAMs_20 12 41 29.1
comp=Z,2µm,19.0s
KLMR Klimovskoe 121.95 333 *e*PKiKP **PKPdf 11 49 20.7 -2.4**
KLMR *e* 11 50 59.1
KLMR pmax pmax
comp=Z,86nm,0.8s
KLMR Klimovskoe 121.95 333 *e*PKPdf **PKPdf 11 49 20.7 -2.4**
KLMR AMP 11 49 24.1
comp=Z,86nm,0.8s
KLMR *e*PP **PP 11 50 59.1 +1.8**
KLMR *e*SKP 11 52 56.7
KLMR LQ LQ 12 27 23.2
KLMR LQ LQ 12 27 23.2
KLMR LR LR 12 37 27.5
KLMR AMP 12 47 48.8
comp=Z,2µm,19.6s
WSPT Westport, CT 122.22 51 IAMs_20 IAMs_20 12 35 07.1
comp=Z,2µm,22.0s
ITAB Concordia 122.29 138 *e*P **PKPdf 11 49 24.3 -0.6**
YLE Yale 122.49 51 IAMs_20 IAMs_20 12 43 47.6
comp=Z,2µm,18.0s
KTK1 Kautokeino 122.49 346 *e*PKPdf **PKPdf 11 49 22.9 -1.0**
KTK1 IAmb IAmb 11 49 24.3
comp=Z,27nm,0.7s
FRBT Francisco Belt 122.53 136 *e*P **PKPdf 11 49 25.2 -0.3**
BOSA Boshof 122.57 220 PKP **PKPdf 11 49 25.6 +0.1**
comp=Z,5.0nm,0.5s,baz=82,slow=1.3,SNR=14
BOSA Boshof 122.57 220 **PKPdf 11 49 25.3 -0.2**
MAK Makhachkala 122.66 311 *i* P **Pdif 11 45 55.6 +0.4**
MAK *i* 11 49 24.8
MAK *e* 11 51 02.9
MAK *e*PPP PPP 11 53 38.3
MAK *e*PS **PS 12 00 53.1 -5.8**
MAK *e*SS SS 12 07 41.1 -1.0
MAK *e*SSS SSS 12 12 16.0
MAK pmax pmax
comp=Z,310nm,1.3s
SDV Santo Domingo 122.89 90 *e*P **PKPdf 11 49 25.9 -0.6**
TRO Tromso 122.98 347 *e*PKPdf **PKPdf 11 49 23.9 -0.9**
TRO IAmb IAmb 11 49 25.2
comp=Z,62nm,0.8s
SCHQ Schefferville 123.20 34 PKP **PKPdf 11 49 24.0 -1.7**
comp=Z,3.3nm,0.6s,baz=229,slow=2.8,SNR=8.3
TER01 Tubaro-SC 123.25 141 *e*P **PKPdf 11 49 26.5 -0.2**
SFJD Kangerlussuaq 123.32 17 IAMs_20 IAMs_20 12 43 01.9
comp=Z,2µm,19.0s
SFJD Kangerlussuaq 123.32 17 *e*P **PKiKP 11 49 25.8 +0.1**
GROC Groznyy 123.86 312 *i* PKiKP **PKiKP 11 49 28.6 +1.0**
GROC pmax pmax
comp=Z,80nm,0.9s
SAML Samuel 123.98 113 **PKPdf 11 49 25.6 -2.8**
SAML Samuel 123.98 113 PKiKP **PKPdf 11 49 25.6 -2.8**
SDDR Presa de Saban 124.02 78 IAMs_20 IAMs_20 12 32 21.3
comp=Z,2µm,22.0s
PTGB Pitanga 124.04 136 *e*P **PKiKP 11 49 28.9 +0.2**
VBST Vila Bela da S 124.06 120 *e*P **PKiKP 11 49 28.8 0.0**
ICESG Greenland Ices 124.26 11 *e*P **PKiKP 11 49 29.5 +1.4**
PTLB Pontes e Lacer 124.30 122 *e*P **PKPdf 11 49 28.8 -0.1**
GRTK Grand Turk 124.43 75 IAMs_20 IAMs_20 12 34 24.0
comp=Z,2µm,20.0s
VRH Novokhopyorsk 124.56 322 *i* PKiKP **PKPdf 11 49 28.3 -0.1**
VRH pmax pmax
comp=Z,140nm,0.6s
VRH MLR MLR
comp=Z,1µm,23.0s
VILB Vilhena 124.70 119 *e*P **PKPdf 11 49 29.1 -0.7**
LBTB Lobatse 124.88 223 PKPdf **PKPdf 11 49 28.0 -2.0**
LBTB Lobatse 124.88 223 PKiKP **PKPdf 11 49 28.0 -2.0**
DY2G Dye2 124.88 16 *i* P **PKPdf 11 49 27.6 -1.2**
TRCB Terra Rica 124.91 133 *e*P **PKPdf 11 49 29.7 -0.3**
NUUK Nuuk 124.92 20 *e*P **PKPdf 11 49 26.3 -2.3**
PQI Presque Isle 124.98 44 IAMs_20 IAMs_20 12 36 37.4
comp=Z,2µm,22.0s
MOS Moscow 125.11 328 *i* PKiKP **PKPdf 11 49 28.3 -1.0**
MOS *e* 11 49 42.6
MOS *e* 11 51 21.4
MOS pmax pmax
comp=Z,111nm,0.8s
MOS pmax pmax
comp=Z,117nm,0.8s
MOS MLR MLR
comp=Z,1µm,20.0s
GNI Garni 125.14 308 *e*P **PKiKP 11 49 31.4 +1.0**
GNI Garni 125.14 308 PKPdf **PKiKP 11 49 31.2 +0.8**
GNI Garni 125.14 308 *d i* PKiKP **PKiKP 11 49 30.7 +0.3**
GNI MLR MLR
comp=Z,711nm,22.0s
GNI Garni 125.14 308 P **PKPdf 11 49 30.1 +0.1**
GNI Garni 125.14 308 P **PKiKP 11 49 31.2 +0.8**
STEI Steigen 125.15 348 *e*PKPdf **PKPdf 11 49 28.4 -0.6**
STEI IAmb IAmb 11 49 29.7
comp=Z,82nm,0.8s
SCO Scoresbysund 125.24 4 PKPdf **PKPdf 11 49 28.7 -0.4**
SCO IAMs_20 IAMs_20 12 40 18.0
comp=Z,2µm,21.0s
SCO Scoresbysund 125.24 4 PKiKP **PKPdf 11 49 28.7 -0.4**
SCO Scoresbysund 125.24 4 *e*P **PKPdf 11 49 28.4 -0.7**
RAYN Ar Rayn 125.25 288 PKPdf **PKPdf 11 49 29.7 -0.9**
RAYN Ar Rayn 125.25 288 PKiKP **PKPdf 11 49 29.7 -0.9**
RAYN Ar Rayn 125.25 288 P **PKiKP 11 49 30.9 -0.1**
RAYN Ar Rayn 125.25 288 *i* P **PKiKP 11 49 30.9 -0.1**
SNR=5.5
VALR Valaam 125.26 336 *c i* PKiKP **PKPdf 11 49 28.1 -1.3**
ZEI Tsey 125.30 311 *i* PKiKP **PKiKP 11 49 30.6 -0.1**
ZEI pmax pmax
comp=Z,39nm,0.9s
LOF Lofoten 125.31 348 *e*PKPdf **PKPdf 11 49 29.1 -0.3**
LOF IAmb IAmb 11 49 29.7
comp=Z,71nm,1.1s
BAUV El Baul 125.40 90 PKPdf **PKPdf 11 49 28.4 -2.7**
GOF Gofitskoye 125.42 314⇑ *e*PKiKP **PKPdf 11 49 28.7 -1.5**
GOF pmax pmax
comp=Z,88nm,1.3s
FAUS Fauske 125.60 347 *e*PKPdf **PKPdf 11 49 29.2 -0.7**
FAUS IAmb IAmb 11 49 38.2
comp=Z,32nm,1.0s
TIJ01 Guaruva-PR 125.62 138 *e*P **PKPdf 11 49 30.6 -0.8**
LPSR Galich'ya Gora 125.69 324 *i* PKiKP **PKiKP 11 49 31.5 +0.6**
LPSR pmax pmax
comp=Z,150nm,1.0s
LPSR MLR MLR
comp=Z,1µm,24.0s
KBZ Khabaz 125.82 313 PKP **PKPdf 11 49 30.4 -0.7**
comp=Z,14nm,0.9s,baz=99,slow=2.3,SNR=23
KBZ Khabaz 125.82 313 *c i* PKiKP **PKiKP 11 49 31.8 +0.4**
VORR Voronezh 125.88 323 *e*PKiKP **PKiKP 11 49 31.2 -0.1**
VORR pmax pmax
comp=Z,230nm,0.8s
KVAR Kislovodsk Arr 125.92 313 PKP **PKiKP 11 49 31.7 -0.1**
CLDR Caldiran 125.92 307 *e*P **PKiKP 11 49 32.9 +0.8**
KIV Kislovodsk 125.92 313 ⇑P **PKiKP 11 49 32.2 +0.4**
KIV Kislovodsk 125.92 313 *e*P **PKiKP 11 49 32.1 +0.3**
KIV Kislovodsk 125.92 313 PKPdf **PKPdf 11 49 31.5 +0.1**
KIV Kislovodsk 125.92 313 *c i* PKiKP **PKPdf 11 49 31.5 +0.1**
KIV *i* 11 49 43.7
KIV *i* 11 49 52.8
KIV *i* 11 51 34.9
KIV pmax pmax
comp=Z,32nm,1.1s
KIV Kislovodsk 125.92 313 P **PKiKP 11 49 32.2 +0.4**
KIV Kislovodsk 125.92 313 *i* P **PKiKP 11 49 32.0 +0.3**
SNR=14
OBN Obninsk 125.93 328 ⇓P **PKPdf 11 49 30.4 -0.4**
OBN Obninsk 125.93 328 PKP **PKPdf 11 49 30.0 -0.8**
comp=Z,16nm,0.6s,baz=50,slow=2.3,SNR=3.0
OBN Obninsk 125.93 328 IAMs_20 IAMs_20 12 46 58.7
comp=Z,1µm,20.0s
OBN Obninsk 125.93 328 *c i* PKiKP **PKPdf 11 49 30.4 -0.4**
OBN *i* 11 49 42.8
OBN *i* 11 51 26.5
OBN *i* 11 56 38.8
OBN pmax pmax
comp=Z,82nm,1.0s
OBN MLR MLR
comp=Z,2µm,21.0s
PTET Porto Estrela 125.94 123 *e*P **PKiKP 11 49 33.2 +0.7**
VSR Storozhevoye 126.07 322 *i* PKiKP **PKPdf 11 49 30.7 -0.6**
VSR pmax pmax
comp=Z,110nm,0.7s
BATG Bathurst New B 126.11 43 PKPdf **PKPdf 11 49 29.8 -1.7**
KARS Kars 126.31 309 *e*P **PKiKP 11 49 33.1 +0.4**
PUL Pulkovo 126.42 335⇑ *e*PKiKP **PKiKP 11 49 32.1 0.0**
PUL MLR MLR
comp=Z,1µm,21.0s
CUKT Cukurca 126.42 305 *e*P **PKiKP 11 49 33.6 +0.6**
CHVG Ch'k'valeri 126.62 312 ⇑P **PKiKP 11 49 32.9 -0.2**
CHVG Ch'k'valeri 126.62 312 ⇑PKiKP **PKiKP 11 49 32.9 -0.2**
FRTB Fartura 126.64 136 *e*P **PKPdf 11 49 33.2 -0.1**
PCMB Pacaembu 126.65 133 *e*P **PKPdf 11 49 32.7 -0.7**
AKDM Akdamar-Van 126.76 306 *e*P **PKiKP 11 49 34.1 +0.3**
MOR8 Moi Rana 126.80 347 *e*PKPdf **PKPdf 11 49 31.0 -1.2**
MOR8 IAmb IAmb 11 49 32.3
comp=Z,30nm,0.8s
KONS Konsvik 126.80 348 *e*PKPdf **PKPdf 11 49 32.1 -0.1**
KONS IAmb IAmb 11 49 33.1
comp=Z,38nm,0.8s
SALV Santo Antonio 126.83 125 *e*P **PKPdf 11 49 33.2 -0.5**
KIBK Kibwezi 126.88 255 PKPdf **PKiKP 11 49 35.0 +0.4**
KIBK IAMs_20 IAMs_20 12 39 15.8
comp=Z,1µm,20.0s
KIBK Kibwezi 126.88 255 P **PKiKP 11 49 35.2 +0.6**
STOK Stokkvaagen 126.97 347 *e*PKPdf **PKiKP 11 49 33.8 +0.7**
FINES FINESS Array B 127.01 338 PKP **PKPdf 11 49 31.6 -1.2**
comp=Z,66nm,0.9s,baz=64,slow=2.2,SNR=58
BATM Batumi 127.15 310 *e*P **PKPdf 11 49 33.6 -0.1**
LMN Caledonia Moun 127.34 44 PKPdf **PKPdf 11 49 32.4 -1.5**
PET01 Itanhaem-SP 127.46 139 *e*P **PKPdf 11 49 34.4 -0.4**
NBRS Nobres 127.64 123 *e*P **PKiKP 11 49 36.1 +0.1**
ANGG Ammassalik, Gr 127.64 13 IAMs_20 IAMs_20 12 41 17.0
comp=Z,2µm,22.0s
CHOM Cayeli-Rize 127.94 310 *e*P **PKiKP 11 49 36.2 +0.4**
KMBO Kilima Mbogo 128.06 256 PKP **PKPdf 11 49 36.7 +0.1**
comp=Z,7.6nm,0.9s,baz=32,slow=2.7,SNR=9.0
KMBO PP **PP 11 51 38.8 -1.2**
comp=Z,3.9nm,1.0s,baz=100,slow=5.3,SNR=3.1
KMBO Kilima Mbogo 128.06 256 P **PKiKP 11 49 37.1 -0.1**
KMBO Kilima Mbogo 128.06 256 *i* P **PKiKP 11 49 37.2 +0.1**
SNR=6.9
SOC Sochi 128.10 313 *i* PKiKP **PKPdf 11 49 34.1 -1.3**
SOC *e* 11 51 36.6
SOC *e*PPP PPP 11 54 21.0
SOC *e*PS **PS 12 01 37.5 -9.2**
SOC *e*SS SS 12 08 51.6 +1.4
SOC MLR MLR
comp=Z,764nm,20.0s
SVAN Silvan-Diyarba 128.18 306 *e*P **PKPdf 11 49 35.2 -0.6**
PDRB Porto dos Gac 128.30 119 *e*P **PKPdf 11 49 36.0 -0.6**
BNGB Bingl 128.43 307 *e*P **PKiKP 11 49 37.9 +0.9**
MEF Metsahovi 128.45 338 *e*P **PKPdf 11 49 35.7 +0.2**
ITRB Iturama 128.53 132 *e*P **PKPdf 11 49 36.2 -0.8**
VAO Valinhos 128.58 138 *e*P **PKPdf 11 49 36.3 -0.8**
RCLB Rio Claro- Sao 128.62 137 *e*P **PKPdf 11 49 37.1 -0.1**
MACA Manacapuru-AM 128.65 108 *e*P **PKPdf 11 49 36.9 -0.4**
VSU Vasula 128.69 335 *d i* PKiKP **PKPdf 11 49 35.9 -0.1**
VSU Vasula 128.69 335 *e*P **PKiKP 11 49 36.9 +0.2**
KTUT Trabzon 128.70 310 *e*P **PKiKP 11 49 37.6 +0.3**
NSS Namsos 128.75 347 *e*PKPdf **PKPdf 11 49 35.9 0.0**
NSS IAmb IAmb 11 49 37.3
comp=Z,41nm,0.9s
SJG San Juan 128.77 79 **PKPdf 11 49 37.2 -0.2**
SJG San Juan 128.77 79 PKiKP **PKPdf 11 49 37.2 -0.2**
RAF Rauma 128.81 339 *e*P **PKPdf 11 49 35.7 -0.5**
MAZI Mazidag 128.88 305 *e*P **PKPdf 11 49 37.4 +0.1**
BB19B Bebedouro 128.90 135 *e*P **PKPdf 11 49 37.1 -0.7**
DYBB Diyarbakir 129.03 306 *e*P **PKPdf 11 49 38.6 +0.4**
DVLD Doverlandia 129.13 128 *e*P **PKPdf 11 49 38.1 -0.2**
PARB Paraibuna 129.19 140 *e*P **PKPdf 11 49 37.8 -0.4**
ANN Anapa 129.32 315 *i* PKiKP **PKiKP 11 49 38.5 +0.1**
ANN *e*PP **pPKPdf 11 49 49.8 -1.1**
ANN *e* 11 51 48.5
ANN *e* 11 56 42.9
ANN pmax pmax
comp=Z,70nm,1.2s
CLDB Colider 129.46 119 *e*P **PKPdf 11 49 39.0 +0.1**
ESPY Espiye-Giresun 129.48 310 *e*P **PKPdf 11 49 37.8 -0.4**
SLP01 Ubatuba-SP 129.49 140 *e*P **PKPdf 11 49 38.8 -0.1**
MTSE Matsula 129.68 336 *e*P **PKiKP 11 49 38.4 -0.3**
ARAG Araguaiana, MT 129.97 127 *e*P **PKPdf 11 49 39.6 -0.2**
BBSR BB Station 130.12 61 IAMs_20 IAMs_20 12 39 34.7
comp=Z,1µm,20.0s
ESAR Angra dos Reis 130.15 140 *e*P **PKPdf 11 49 40.1 +0.2**
URFA Urfa 130.16 306 *e*P **PKPdf 11 49 37.6 -2.0**
ARPR Arapgir-MALATY 130.19 308 *e*P **PKiKP 11 49 40.2 -0.4**
MAN01 Angra dos Reis 130.56 141 *e*P **PKPdf 11 49 39.8 -1.0**
MNK Minsk 130.56 330 *i* PKiKP **PKiKP 11 49 41.2 +0.7**
MNK *i* 11 56.1
MNK *i* PPP PPP 11 54 45.3
MNK *i* 11 56 46.2
MNK *i* SS SS 12 09 24.5 +5.0
MNK *i* SSS SSS 12 14 12.3
MNK pmax pmax
comp=Z,50nm,0.9s
MNK pmax pmax
comp=E,7.0nm,1.2s
MNK pmax pmax
comp=N,28nm,0.9s
MNK MLR MLR
comp=Z,8µm,20.0s
MNK MLR MLR
comp=E,205nm,22.0s
MNK Minsk 130.56 330 *i* PKP **PKiKP 11 49 41.3 +0.7**
comp=E,7.0nm,1.2s
MNK *i* PKP **PKiKP 11 49 41.3 +0.7**
comp=N,28nm,0.9s
MNK *i* PKP **PKiKP 11 49 41.3 +0.7**
comp=Z,50nm,0.9s,baz=235
MNK *i* PP **PP 11 51 56.1 +1.6**
MNK *i* PPP PPP 11 54 45.4
MNK *i* SKS **SKSdf 11 56 46.3 -1.3**
MNK *i* SKKS **SKKSdf 12 06 52.8 +1.3**
MNK *i* SS **SS 12 09 24.6 +5.1**
MNK *i* SSS SSS 12 14 12.4
MNK *i* LR LR 12 41 45.3
MNK *i* LRM MLR 12 47 31.0
comp=Z,8µm,19.8s
MNK *i* LRM MLR 12 47 58.5
comp=N,573nm,18.2s
MNK *i* LRM MLR 12 48 44.9
comp=E,205nm,21.8s
IDID Didziasalis 130.62 332 *e*P **PKiKP 11 49 41.6 +0.9**
RSDY Resadiye-TOKAT 130.64 310 *e*P **PKiKP 11 49 41.7 +0.4**
ISAL Salakas 130.75 332 *e*P **PKiKP 11 49 42.0 +1.1**
BOAV Boa Vista 130.80 101 *e*P **PKPdf 11 49 40.6 -0.8**
IIGN Ignalina 130.84 332 *e*P **PKiKP 11 49 41.1 0.0**
NACGM Naroch 130.85 331⇑ *e*PKP **PKPdf 11 49 37.7 -2.6**
baz=53
BORG Borgarnes 130.94 5 SKPbc **SKPab 11 53 03.3 +2.2**
comp=E,34nm,1.0s,baz=325,slow=4.9,SNR=9.1
DARE Darende-Malaty 130.96 307 *e*P **PKiKP 11 49 42.6 +0.5**
UPP Uppsala 131.05 340 *e*P **PKPdf 11 49 40.7 +0.2**
IPMB Ipameri, GO 131.19 132 *e*P **PKPdf 11 49 41.0 -1.1**
TOKT Tokat 131.24 310 *e*P **PKPdf 11 49 40.5 -1.1**
VAS01 Vassouras-RJ 131.31 141 *e*P **PKPdf 11 49 41.9 -0.3**
LODK Lodwar 131.38 260 IAMs_20 IAMs_20 12 45 02.4
comp=Z,2µm,20.0s
MOL Molde 131.42 348 *e*PKPdf **PKiKP 11 49 42.1 0.0**
MOL IAmb IAmb 11 49 43.2
comp=Z,139nm,1.6s
BSCB Bom Sucesso 131.43 138 *e*P **PKPdf 11 49 42.5 -0.1**
VSVD Vaisvydziai 131.45 334 *e*P **PKiKP 11 49 43.2 +0.9**
SIM Simferopol' 131.50 316 *e*PKiKP **PKiKP 11 49 42.9 +0.1**
SIM pmax pmax
comp=Z,36nm,0.8s
DOMB Dombas 131.57 347 *e*PKPdf **PKiKP 11 49 42.5 +0.1**
KMRS Kahramanmaras 131.64 306 *e*P **PKPdf 11 49 42.8 +0.4**
SEUS St. Eustatius 131.70 81 IAMs_20 IAMs_20 12 35 20.8
comp=Z,1µm,19.0s
NPGB Novo Progresso 131.74 115 *e*P **PKPdf 11 49 42.2 -1.0**
PABE Paberze 131.74 333 *e*P **PKiKP 11 49 43.1 +0.2**
DIKM Dikmen 131.80 312 ⇑P **PKPdf 11 49 42.8 +0.3**
DIKM Dikmen 131.80 312 *e*P **PKiKP 11 49 43.1 -0.4**
SARI SarD1z-Kayseri 131.81 307 *e*P **PKPdf 11 49 42.9 0.0**
AKN Aaknes 131.88 348 *e*PKPdf **PKiKP 11 49 43.9 +0.8**
NB2 NORSAR Subarra 131.93 345 PKPdf **PKPdf 11 49 42.1 -0.1**
baz=31,slow=1.9
NB2 NORSAR Subarra 131.93 345 PKPdf **PKPdf 11 49 42.1 -0.1**

comp=Z,30nm,1.2s,baz=31,slow=1.9
NOA NORSAR Array B 131.93 345 PKP **PKPdf** 11 49 40.9 -1.3
comp=Z,13nm,0.6s,baz=32,slow=2.0,SNR=47
NOA PP **PP** 11 52 05.5 +2.5
comp=Z,4.1nm,0.9s,baz=32,slow=6.3,SNR=4.3
NOA SKPbc **SKPab** 11 53 05.3 -0.3
comp=Z,0.9nm,0.8s,baz=25,slow=4.0,SNR=2.5
AKASG Malin Array Be 131.94 325 PKP **PKPdf** 11 49 41.5 -1.0
comp=Z,18nm,0.6s,baz=52,slow=2.9,SNR=55
AKASG PP **PP** 11 52 05.2 +1.6
comp=Z,4.0nm,0.9s,baz=45,slow=8.3,SNR=4.2
AKASG SKPbc **SKPab** 11 53 06.3 +0.4
comp=Z,43nm,1.0s,baz=46,slow=4.8,SNR=17
AKBB Malin Array Si 131.94 325*c i* PKIKP **PKPdf** 11 49 41.6 -0.9
HFS Hagfors 132.03 343 PKP **PKPdf** 11 49 40.6 -1.7
comp=Z,24nm,0.7s,baz=57,slow=5.3,SNR=6.9
HFS SKPbc **SKPab** 11 53 06.8 +0.9
comp=Z,16nm,0.9s,baz=195,slow=11,SNR=8.1
HFS SKP 11 53 10.5
comp=Z,17nm,0.9s,baz=42,slow=2.4,SNR=8.4
PMNB Patos De Minas 132.06 134 *e*P **PKPdf** 11 49 42.9 -0.9
NC602 NORSAR Array S 132.11 344 *e*PKPdf **PKPdf** 11 49 42.6 +0.1
DUB01 Friburgo-RJ 132.11 141 *e*P **PKPdf** 11 49 43.4 -0.4
BNN Bunyan 132.13 308 *e*P **PKPdf** 11 49 42.6 -0.8
NAO01 NORSAR Array S 132.18 345 IAmb IAmb 11 49 58.1
comp=Z,308nm,2.2s
PBUR Paburge 132.26 335 *e*P **PKiKP** 11 49 43.5 -0.4
YOZ Yozgat 132.32 309 *e*P **PKPdf** 11 49 42.3 -1.5
VIKU Vikbolandet 132.40 340 *e*P **PKiKP** 11 49 43.8 -0.4
TAHT Tahtakopru-Hat 132.44 305 *e*P **PKiKP** 11 49 44.7 -0.3
KOZT Kozan 132.48 306 *e*P **PKPdf** 11 49 43.3 -0.6
SNDB Serra Nova Dou 132.56 124 *e*P **PKPdf** 11 49 44.3 -0.5
ASF Jabal al Asfar 132.58 299 PP **PP** 11 52 10.0 +1.2
comp=Z,7.8nm,1.1s,baz=12,slow=2.3,SNR=2.9
ASF SKPbc **SKPab** 11 53 09.9 +0.5
comp=Z,3.8nm,0.7s,baz=8.3,slow=6.8,SNR=2.2
ITTB Itaituba 132.63 112 *e*P **PKPdf** 11 49 44.1 -0.8
CORM Corum 132.69 310 *e*P **PKPdf** 11 49 44.9 +0.5
CAM01 Campos-RJ 132.73 142 *e*P **PKPdf** 11 49 44.4 -0.5
FOO Floro 132.79 349 *e*PKPdf **PKiKP** 11 49 44.3 -0.6
FOO IAmb IAmb 11 49 46.0
comp=Z,35nm,0.8s
CBE Ff, Capester 132.85 83 IAMs_20 IAMs_20 12 37 55.1
comp=Z,2µm,22.0s
BDFB Brasilia 132.86 130 PKP **PKPdf** 11 49 44.1 -1.3
comp=Z,17nm,0.9s,baz=313,slow=0.3,SNR=13
BDFB SKPbc **SKPab** 11 53 10.7 -0.4
comp=Z,7.5nm,0.9s,baz=308,slow=3.7,SNR=4.4
BDFB Brasilia 132.86 130 *e*P **PKPdf** 11 49 45.4 0.0
MQOL MQOL 132.93 283 *i* P **PKiKP** 11 49 46.3 -0.1
MQOL *i* 11 49 47.1
baz=107,slow=9.3
SKAR Skarslia 132.94 346 *e*PKPdf **PKiKP** 11 49 45.0 -0.3
SKAR IAmb IAmb 11 49 46.8
comp=Z,27nm,0.9s
HYA Hoyanger 132.97 348 *e*PKPdf **PKiKP** 11 49 45.9 +0.7
HYA IAmb IAmb 11 49 46.4
comp=Z,26nm,0.9s
SUW Suwalki 133.05 332 *e*PKPdf **PKPdf** 11 49 44.9 +0.5
SUW *e*PP **PP** 11 52 13.2 +2.7
SUW *e*L L 12 47 18.4
comp=Z,3µm,23.8s
SUW Suwalki 133.05 332 *e*P **PKPdf** 11 49 44.2 -0.2
CMRD Camardi-Nigde 133.08 307 *e*P **PKiKP** 11 49 47.8 +1.4
BIM Bigot 133.15 85 IAMs_20 IAMs_20 12 37 43.4
comp=Z,1µm,22.0s
CANT Cankiri 133.29 311 *e*P **PKPdf** 11 49 45.4 -0.1
MPOM Morne Pois Mar 133.34 85 IAMs_20 IAMs_20 12 37 27.4
comp=Z,1µm,22.0s
GDSD La Dsirade Is 133.39 83 IAMs_20 IAMs_20 12 38 21.7
comp=Z,1µm,21.0s
GULA Gulagac 133.49 308 *e*P **PKPdf** 11 49 45.7 -0.2
KONO Kongsberg 133.54 345 IAMs_20 IAMs_20 12 54 00.0
comp=Z,1µm,21.0s
KONO Kongsberg 133.54 345 *e*PKPdf **PKiKP** 11 49 46.3 -0.2
BR131 Keskin Array S 133.55 310‖ *e*PKIKP **PKPdf** 11 49 45.9 -0.2
BR131 Keskin Array S 133.55 310 P **PKPdf** 11 49 46.3 +0.2
SNR=12
BRTR Keskin Array B 133.55 310 PKP **PKPdf** 11 49 45.3 -0.8
comp=Z,14nm,0.9s,baz=129,slow=3.3,SNR=17
BRTR PP **PP** 11 52 15.3 +0.7
comp=Z,1.0nm,0.5s,baz=131,slow=4.2,SNR=3.1
BRTR SKPbc **SKPab** 11 53 13.4 0.0
comp=Z,3.3nm,0.7s,baz=86,slow=3.8,SNR=4.6
BRTR Keskin Array B 133.55 310 *e*P **PKiKP** 11 49 46.8 -0.5
KAMT Kaman 133.59 309 *e*P **PKPdf** 11 49 45.7 -0.4
MERS Mersin 133.63 306 *e*P **PKPdf** 11 49 45.0 -1.2
MMAI Mount Meron Ar 133.70 300 PKP **PKiKP** 11 49 47.1 -0.6
comp=Z,34nm,0.9s,baz=75,slow=1.6,SNR=5.1
MMAI SKP 11 53 17.6
comp=Z,81nm,1.1s,baz=76,slow=3.5,SNR=16
ASK Askoy 133.79 348 *e*PKPdf **PKiKP** 11 49 47.2 +0.3
UJAP Al Uja 133.82 299 *e*P **PKPdf** 11 49 46.8 +0.3
GHAJ Ghor Haditha 133.82 298 IAMs_20 IAMs_20 12 51 29.9
comp=Z,1µm,22.0s
SERE Serefikochisa 133.83 309 *e*P **PKiKP** 11 49 47.5 -0.4
KLNR Kaliningrad 133.95 334‖ *r* PKIKP **PKiKP** 11 49 47.7 +0.3
KIS Kishinev 134.00 321 *e*PKP **PKPdf** 11 49 46.0 -0.5
comp=Z,110nm,1.6s
KIS Kishinev 134.00 321 *e*PP PP 11 52 14.0 -2.9
comp=Z,240nm,9.8s
KIS *e*SKP 11 53 12.0
KIS LRM MLR 12 48 48.0
comp=Z,200nm,23.0s
KIS Kishinev 134.00 321 *e*PKIKP **PKPdf** 11 49 46.0 -0.5
KIS *e* 11 52 14.0
KIS pmax pmax
comp=Z,110nm,1.6s
ODD1 Odda 134.01 347 *e*PKPdf **PKiKP** 11 49 46.9 -0.6
ODD1 IAmb IAmb 11 49 48.5
comp=Z,54nm,0.9s
MILM Milestii Mici 134.04 321‖ *e*PKP **PKPdf** 11 49 46.0 -0.5
comp=Z,300nm,2.5s
MILM Milestii Mici 134.04 321 *e*PP PP 11 52 07.0 -10
comp=Z,500nm,9.9s
MILM Milestii Mici 134.04 321 *e*PKS 11 53 13.0
MILM *e*L L 12 41 49.0
MILM LRM MLR 12 48 48.0
comp=Z,900nm,22.5s
MILM Milestii Mici 134.04 321‖ P **PKPdf** 11 49 46.9 +0.4
MILM Milestii Mici 134.04 321*c i* PKIKP **PKPdf** 11 49 46.0 -0.5
MILM pmax pmax
comp=Z,300nm,2.5s
AFSR Afar-Bala (An 134.05 310 *e*P **PKPdf** 11 49 46.9 0.0
SULT Sultanhani-AKS 134.07 308 *e*P **PKPdf** 11 49 45.2 -1.8
DIAM Diamantina, MG 134.09 137 *e*P **PKPdf** 11 49 47.8 +0.1
ANTO Ankara 134.12 310‖ P **PKPdf** 11 49 44.1 -3.0
ANTO Ankara 134.12 310 *e*P **PKPdf** 11 49 46.1 -0.9
ANTO Ankara 134.12 310 **PKPdf** 11 49 46.8 -0.2
ANTO Ankara 134.12 310 PKIKP **PKPdf** 11 49 46.8 -0.2
ANTO Ankara 134.12 310 P **PKiKP** 11 49 47.9 -0.5
LOD Lodumlu 134.14 310 *e*P **PKPdf** 11 49 46.8 -0.3
TSUM Tsumeb 134.20 221 PKP **PKPdf** 11 49 47.9 0.0
baz=122,slow=1.1
TSUM SKP 11 53 19.6
comp=Z,13nm,1.1s,baz=84,slow=5.3,SNR=9.8
ALF01 Guarapari-ES 134.22 142 *e*P **PKPdf** 11 49 47.8 +0.1
EREN Erenkoy 134.22 304 *e*P **PKPdf** 11 49 47.6 +0.4
SILI Silifke-Mersin 134.22 305 *e*P **PKPdf** 11 49 47.5 +0.3
MBAR Mbarara 134.29 253 SKP 11 53 20.9
comp=Z,17nm,0.8s,baz=97,slow=6.6,SNR=16
MBAR Mbarara 134.29 253 P **PKPdf** 11 49 48.8 +0.6
CHBY Cihanbeyli 134.44 309 *e*P **PKPdf** 11 49 47.1 -0.6
IKL Isikli 134.44 305 *e*P **PKPdf** 11 49 48.2 +0.6
EIL Elat 134.55 296 PP **PP** 11 52 21.9 +0.5
comp=Z,7.7nm,0.9s,baz=75,slow=16,SNR=3.4
EIL SKP 11 53 20.2
comp=Z,27nm,1.1s,baz=102,slow=3.7,SNR=11
EIL Elat 134.55 296 *e*P **PKPdf** 11 49 47.9 -0.2
AKKU Akkuyu-Mersin 134.56 305 *e*P **PKPdf** 11 49 47.6 -0.3
TEVE Tevekalti-Mers 134.58 306 *e*P **PKPdf** 11 49 46.8 -1.2
YUVA Yuva-Kibriscik 134.76 311 *e*P **PKPdf** 11 49 48.2 -0.1
BERE Bereket-Mersin 134.78 306 *e*P **PKPdf** 11 49 48.5 0.0
LFK Lefkose 134.78 304 *e*P **PKiKP** 11 49 49.2 -0.6
TLCR 134.84 319‖ P **PKPdf** 11 49 48.1 0.0
TLCR 134.84 319‖ PKIKP **PKPdf** 11 49 48.1 0.0
PEXB Peixe 134.85 126 *e*P **PKPdf** 11 49 48.4 -0.7
TEKE Tekeli-Mersin 134.91 305 *e*P **PKPdf** 11 49 46.8 -1.7
LADK Ladik-KONYA 134.94 306 *e*P **PKPdf** 11 49 48.7 0.0
DEL Delary 134.95 340 *e*P **PKPdf** 11 49 46.1 -1.8
CSS Mathiatis 135.01 304 *e*P **PKPdf** 11 49 49.2 +0.4
HOMB Homborsund 135.02 344 *e*PKPdf **PKiKP** 11 49 49.1 -0.4
MALB Monte Alegre 135.03 109 *e*P **PKPdf** 11 49 48.7 -0.7
MDUB Mudurnu 135.09 312 *e*P **PKPdf** 11 49 48.3 -0.6

KIZT Kizilcal 135.10 309 *e*P **PKPdf** 11 49 49.0 0.0
SCTR Scanteiesti 135.13 320‖ P **PKPdf** 11 49 49.3 +0.7
SVRH Sivrihisar-ESK 135.19 310 *e*P **PKPdf** 11 49 48.2 -0.9
HDMB Hadim 135.19 307 *e*P **PKPdf** 11 49 48.2 -1.1
LVV L'vov 135.22 327 *e*PKIKP **PKPdf** 11 49 49.2 +0.5
TPGR Topolog 135.23 319‖ P **PKiKP** 11 49 49.6 -0.8
SNART Snartemo 135.29 345 *e*PKPdf **PKiKP** 11 49 50.0 0.0
GHRR 135.30 321‖ P **PKPdf** 11 49 49.6 +0.7
LEF Lefka 135.33 304 *e*P **PKPdf** 11 49 49.5 +0.2
SJMB Sao Joao De Ma 135.39 140 *e*P **PKPdf** 11 49 49.8 -0.1
RIB01 Linhares ES 135.41 141 *e*P **PKPdf** 11 49 49.4 -0.6
TIRR Tirgusor 135.42 318‖ P **PKiKP** 11 49 50.1 -0.6
TIRR Tirgusor 135.42 318‖ P **PKiKP** 11 49 50.1 -0.6
TIRR Tirgusor 135.42 318‖ PKIKP **PKiKP** 11 49 50.1 -0.6
BSFB Barra de Sao F 135.50 140 *e*P **PKPdf** 11 49 49.8 -0.3
MFTR Murfatlar 135.53 318‖ P **PKPdf** 11 49 50.0 +0.6
SEYD Seydisehir-KON 135.57 307 *e*P **PKPdf** 11 49 50.4 +0.5
BEL Belsk 135.57 331 *e*PKPdf **PKPdf** 11 49 49.5 +0.2
GULT Gulveren 135.59 312 *e*P **PKPdf** 11 49 49.9 +0.1
HARR Harsova 135.62 319‖ P **PKPdf** 11 49 49.9 +0.3
HARR Harsova 135.62 319‖ PKIKP **PKPdf** 11 49 49.9 +0.3
BIZ Bicaz 135.65 322‖ P **PKPdf** 11 49 46.5 -3.1
BSD Bornholm Skovb 135.65 338 *e*P **PKPdf** 11 49 49.2 -0.1
BSD Bornholm Skovb 135.65 338 *i* P **PKPdf** 11 49 49.2 -0.1
BURAR Bucovina Array 135.80 324‖ P **PKiKP** 11 49 51.6 0.0
BURAR Bucovina Array 135.80 324‖ PKIKP **PKiKP** 11 49 51.6 0.0
VRI Vrincioaia 135.81 321‖ P **PKPdf** 11 49 47.4 -2.6
VRI Vrincioaia 135.81 321 *e*P **PKPdf** 11 49 49.0 -0.9
VRI Vrincioaia 135.81 321‖ PKIKP **PKPdf** 11 49 47.4 -2.6
JANB Januaria 135.91 133 *e*P **PKPdf** 11 49 50.4 -0.6
KWP Kalwaria Pacla 136.02 327 *e*PKPdf **PKPdf** 11 49 49.4 -0.8
KWP *e*PP **PP** 11 52 25.6 -3.9
GKP Gorka Klasztor 136.14 335 *e*PKPdf **PKPdf** 11 49 51.1 +0.8
ADVT Abdulvahap 136.14 312 *e*P **PKPdf** 11 49 49.4 -1.3
COVR Voineasa-Covas 136.14 321‖ P **PKPdf** 11 49 50.6 0.0
SUTC Sutluce-Ispart 136.18 308 *e*P **PKPdf** 11 49 49.4 -1.6
SHUT Suhut-Afyon 136.19 309 *e*P **PKPdf** 11 49 49.7 -1.3
ISR Istrita 136.29 320‖ P **PKiKP** 11 49 52.3 -0.3
ISR Istrita 136.29 320‖ PKIKP **PKiKP** 11 49 52.3 -0.3
NEHR Nehoiu 136.29 320‖ P **PKiKP** 11 49 53.2 +0.7
YLV Yalova 136.35 313 *e*P **PKPdf** 11 49 50.6 -0.6
ISK Istanbul-Kandi 136.38 313 *e*P **PKPdf** 11 49 51.8 +0.7
ISK Istanbul-Kandi 136.38 313 P **PKPdf** 11 49 46.3 -4.8
MUD Monsted U'grnd 136.42 343 *e*P **PKPdf** 11 49 50.2 -0.4
ISP Isparta 136.44 308 *e*P **PKPdf** 11 49 50.7 -0.8
ISP Isparta 136.44 308 IAMs_20 IAMs_20 12 57 48.4
comp=Z,1µm,22.0s
MLR Muntele Rosu 136.47 321‖ P **PKPdf** 11 49 51.4 +0.1
MLR Muntele Rosu 136.47 321 PKhKP PKPpre 11 49 43.1
comp=Z,2.1nm,0.4s,baz=110,slow=12,SNR=3.7
MLR PKP **PKPdf** 11 49 51.0 -0.3
comp=Z,16nm,1.0s,baz=338,slow=3.2,SNR=14
MLR Muntele Rosu 136.47 321 IAMs_20 IAMs_20 12 57 43.2
comp=Z,954nm,20.0s
MLR Muntele Rosu 136.47 321‖ PKIKP **PKPdf** 11 49 51.4 +0.1
BCK Bucak 136.50 308 *e*P **PKPdf** 11 49 50.9 -0.7
GEMT Gemlik 136.53 313 *e*P **PKPdf** 11 49 51.8 +0.4
TSVK Tesvikiye-Yalo 136.53 313 *e*P **PKPdf** 11 49 51.3 -0.1
DOPR Dopca 136.57 322‖ P **PKPdf** 11 49 51.6 +0.3
SEOR 136.62 320‖ P **PKPdf** 11 49 52.3 +0.8
PRD Provadia 136.63 317 *e*P **PKiKP** 11 49 52.4 -0.8
KOLS Kolonicke sedl 136.67 327 *e*PKIKP **PKiKP** 11 49 52.3 -0.9
KOLS Kolonicke sedl 136.67 327 *e*PKP **PKiKP** 11 49 52.3 -0.9
RGN Rugen 136.67 338 IAMs_20 IAMs_20 12 49 32.2
comp=Z,2µm,22.0s
TVSB Tavsanli 136.69 311 *e*P **PKPdf** 11 49 51.9 0.0
NAN01 Guarapari, ES 136.69 140 *e*P **PKPdf** 11 49 51.8 -0.6
CTKS Kestanelik-??a 136.70 314 *e*P **PKPdf** 11 49 50.6 -1.1
ARMT Armutlu 136.71 313 *e*P **PKPdf** 11 49 50.2 -1.6
CTYL Yalikoy Yolu 136.76 314 *e*P **PKPdf** 11 49 51.3 -0.5
MDNY Mudanya-Bursa 136.77 313 *e*P **PKPdf** 11 49 51.6 -0.2
JAWL J.Aulia 136.78 275 *i* P **PKiKP** 11 49 53.5 -0.8
UZH Uzhgorod 136.84 326 *e*P **Pdif** 11 47 04.4 +6.2
UZH *e* 11 49 51.2
UZH *e* 11 52 36.0
UZH *e*PPP PPP 11 55 41.5
UZH *e* 11 56 57.9
PRPB Parauapebas 136.94 118 *e*P **PKPdf** 11 49 52.5 -0.5
VOIR 137.05 321‖ P **PKPdf** 11 49 51.5 -0.8
VOIR 137.05 321‖ PKIKP **PKPdf** 11 49 51.5 -0.8
OJC Ojcow 137.11 330 *e*PKPdf **PKPdf** 11 49 51.2 -1.0
OJC *e*PP **PP** 11 52 38.2 +2.0
OJC *e*L L 12 46 49.9
comp=Z,2µm,25.1s
CRVS Cervenica-Dubn 137.11 327 *e*PKIKP **PKPdf** 11 49 52.8 +0.6
CRVS MLR MLR
comp=Z,2µm,25.1s
CRVS Cervenica-Dubn 137.11 327 *e*PKP **PKPdf** 11 49 52.8 +0.6
CRVS *e*PP PP 11 52 47.9 +12
CJR Cluj-Napoca 137.22 323‖ P **PKiKP** 11 49 53.7 -0.7
CJR Cluj-Napoca 137.22 323‖ PKIKP **PKiKP** 11 49 53.7 -0.7
SDBA SAO DESIDERIO 137.24 129 *e*P **PKPdf** 11 49 52.9 -0.6
SMTB Santa Maria do 137.32 123 *e*P **PKPdf** 11 49 53.2 -0.5
ARR Arges 137.33 321‖ P **PKPdf** 11 49 45.0 -7.8
ABR01 Abrolhos, BA 137.47 141 *e*P **PKPdf** 11 49 54.2 +0.4
EDC Edincik 137.50 313 *e*P **PKPdf** 11 49 52.9 -0.3
SZH Strazhica 137.56 318 *e*P **PKPdf** 11 49 53.8 +0.6
MRMT Marmara Adasi 137.59 313 *e*P **PKPdf** 11 49 53.5 0.0
KULA Kula-Manisa 137.60 310 *e*P **PKPdf** 11 49 51.6 -2.0
KULA Kula-Manisa 137.60 310 P **PKPdf** 11 49 50.9 -2.7
CAME Cameli-Denizli 137.64 308 *e*P **PKPdf** 11 49 54.7 +0.9
MCPB Macapa, AP 137.66 109 *e*P **PKPdf** 11 49 54.0 -0.4
DRGR 137.68 324‖ P **PKPdf** 11 49 47.0 -6.5
DRGR 137.68 324‖ PKIKP **PKPdf** 11 49 47.0 -6.5
GZKV Gazikoy-Tekird 137.72 314 *e*P **PKPdf** 11 49 53.2 -0.4
GUA01 Guaratinga, BA 137.84 139 *e*P **PKPdf** 11 49 54.5 0.0
KRBG Karabiga-Canak 137.88 313 *e*P **PKPdf** 11 49 53.3 -0.6
PVL Pavlikeni 137.97 318 *e*P **PKPdf** 11 49 53.8 -0.1
LANS Liptovska Anna 137.97 329 *e*PKIKP **PKiKP** 11 49 55.2 -0.7
LANS Liptovska Anna 137.97 329 *e*PKP **PKiKP** 11 49 55.2 -0.7
KSP Ksiaz 138.30 333 *e*PKPdf **PKPdf** 11 49 54.8 +0.5
KSP *e*PP **PP** 11 52 40.4 -3.1
KSP *e*L L 12 45 40.9
comp=Z,3µm,27.4s
ERIK Erikli-Kesan 138.31 314 *e*P **PKPdf** 11 49 54.7 0.0
AYDB Zeytinkoy-Aydi 138.37 310 *e*P **PKPdf** 11 49 53.7 -1.4
GELI Tayfur-Gelibol 138.45 314 *e*P **PKPdf** 11 49 54.9 0.0
MORC Moravsky Berou 138.48 331‖ P **PKPdf** 11 49 55.2 +0.4
MORC Moravsky Berou 138.48 331‖ PKIKP **PKPdf** 11 49 55.2 +0.4
MORC Moravsky Berou 138.48 331 *e*PKP **PKPdf** 11 49 47.3 -7.5
MORC *e* 11 49 55.9
MORC *e* 11 52 46.4
ALN Alexandroupoli 138.54 315 *e*P **PKPdf** 11 49 54.2 -0.9
ALN Alexandroupoli 138.54 315 P **PKPdf** 11 49 48.4 -6.7
OSTC Ostas 138.54 332 AMS AMS 12 51 30.0
comp=Z,2µm,20.5s
PSZ Piszkesteto 138.54 327‖ P **PKPdf** 11 49 55.3 +0.3
PSZ Piszkesteto 138.54 327 IAMs_20 IAMs_20 12 53 02.5
comp=Z,2µm,21.0s
PSZ Piszkesteto 138.54 327‖ PKIKP **PKPdf** 11 49 55.3 +0.3
SIRR Siria 138.58 324‖ P **PKPdf** 11 49 48.4 -6.7
CHVC Chvalec 138.59 333 *e*PKPpre PKPpre 11 49 47.0
CHVC *e*PKPDF **PKPdf** 11 49 55.8 +0.9
CHVC AMS AMS 12 52 20.0
comp=Z,2µm,21.5s
KRLC Kraliky 138.63 332 *e*PKIKP **PKPdf** 11 49 55.7 +0.7
KRLC *e* 11 50 09.2
KRLC MLR MLR
comp=Z,3µm,22.9s
KRLC Kraliky 138.63 332 *e*PKPDF **PKPdf** 11 49 55.7 +0.7
KRLC *e*PKP **pPKPdf** 11 50 09.2 +0.9
KRLC AMS AMS 12 50 20.0
comp=Z,3µm,22.9s
MAUC Maruska 138.63 330 *e*PKPDF **PKPdf** 11 49 56.0 +0.9
KDZ Kurdzhali 138.63 316 *e*P **PKPdf** 11 49 55.8 +0.5
DPC Dobruska-Polom 138.64 332 *e*PKHKP PKPpre 11 49 47.2
DPC *e* 11 49 55.5
DPC MLR MLR
comp=Z,2µm,21.2s
DPC Dobruska-Polom 138.64 332 *e*PKPpre PKPpre 11 49 47.2
DPC *e*PKPDF **PKPdf** 11 49 55.5 +0.4
DPC AMS AMS 12 51 30.0
comp=Z,2µm,21.2s
UPC Upice 138.66 333 AMS AMS 12 51 40.0
comp=Z,2µm,20.2s
DKL Dikili 138.67 312 *e*P **PKPdf** 11 49 53.9 -1.5
VYHS Vyhne 138.71 328 *e*PKIKP **PKPdf** 11 49 55.4 +0.2
VYHS Vyhne 138.71 328 *e*PKP **PKPdf** 11 49 55.4 +0.2
RDO Rodhopi 138.78 315 *e*P **PKPdf** 11 49 54.6 -0.9
RDO Rodhopi 138.78 315 P **PKPdf** 11 49 51.3 -4.2
EZN Ezine 138.79 313 *e*P **PKPdf** 11 49 54.4 -1.2

EZN Ezine 138.79 313 P **PKPdf** 11 49 49.3 -6.3
HERR Herculane 138.92 322‖ P PKPdf 11 49 47.1 -8.6
CMC01 Camacan, BA 138.93 138 *e*P **PKPdf** 11 49 56.2 -0.4
BZS Buzias 138.98 323‖ P **PKPdf** 11 49 52.3 -3.5
BZS Buzias 138.98 323‖ PKIKP **PKPdf** 11 49 52.3 -3.5
DAT Datca 139.02 308 *e*P **PKPdf** 11 49 57.1 +0.8
DAT Datca 139.02 308 P **PKPdf** 11 49 51.6 -4.7
PGB Panagyurishte 139.04 318 *e*P **PKPdf** 11 49 56.3 +0.2
JAVC Velka Javorina 139.05 330 *e*PKP **PKPdf** 11 49 49.4 -6.5
JAVC *e* 11 49 57.6
PRK Paraskevi 139.06 312 P **PKPdf** 11 49 51.9 -4.2
SMTH Samothraki Isl 139.07 314 P PKPpre 11 49 49.4
SMG Samos 139.23 310 P **PKPdf** 11 49 51.6 -4.9
VRAC Vranov 139.25 331‖ P PKPpre 11 49 49.4
VRAC Vranov 139.25 331 PKhKP PKPpre 11 49 48.3
comp=Z,3.0nm,0.3s,baz=107,slow=2.1,SNR=5.6
VRAC PKP **PKPdf** 11 49 56.4 +0.2
comp=Z,8.2nm,0.7s,baz=0.4,slow=1.3,SNR=13
VRAC SKPbc **SKiKP** 11 53 31.6 +0.5
comp=Z,2.2nm,0.5s,baz=120,slow=1.4,SNR=3.8
VRAC Vranov 139.25 331 *e*PKP PKPpre 11 49 48.9
VRAC *e* 11 49 57.0
PVCC Panska Ves 139.28 334 AMS AMS 12 50 00.0
comp=Z,2µm,22.8s
BRG Berggiesshubel 139.28 334 *e*PKP PKPpre 11 49 49.3
BRG Amp 11 49 51.3
comp=Z,6.1nm,0.6s
BRG *ex* x 11 49 57.5
BRG Amp 11 50 00.1
comp=Z,54nm,0.9s
BRG *ex* x 11 50 06.0
BRG Amp 11 50 12.4
comp=Z,70nm,1.4s
BRG PP PP 11 53 33.7 +44
BRG Amp 11 53 35.6
comp=Z,33nm,1.3s
BRG Berggiesshubel 139.28 334 *e*PKHKP PKPpre 11 49 49.3
BRG *e* 11 49 57.4
BRG pmax pmax
comp=Z,6.0nm,0.6s
CLL Collm 139.33 336 IAMs_20 IAMs_20 12 53 19.7
comp=Z,1µm,21.0s
CLL Collm 139.33 336 *e*PKIKP **PKPdf** 11 49 57.0 +0.8
CLL pmax pmax
comp=Z,22nm,0.9s
CLL Collm 139.33 336 *e*PKPpre PKPpre 11 49 48.0
CLL *e*PKPdf **PKPdf** 11 49 57.0 +0.8
comp=Z,22nm,0.9s
CLL *i* PKiKP **PKiKP** 11 49 59.3 +0.8
comp=Z,70nm,1.1s
CLL *e*pPKPdf pPKPdf 11 50 07.0 -2.5
CLL *e*pPKiKP pPKiKP 11 50 10.0 -1.8
CLL *e*PP **PP** 11 52 49.0 -0.8
CLL *ex* x 11 53 16.0
CLL *ex* x 11 53 20.0
CLL *e*SKPbc **SKiKP** 11 53 32.0 +0.8
comp=Z,29nm,1.2s
CLL *e*SKPab **SKPab** 11 53 43.0 +4.8
CLL *e*SKSac **SKSac** 11 57 06.0 -2.0
CLL *e*SKSac **SKSac** 11 59 42.0 +1.4
CLL *e*SKSP 12 02 54.0
CLL *e*PPS PPS 12 05 06.0
CLL *e*SKKSdf **SKKSdf** 12 06 36.0 +1.5
CLL *ex* x 12 10 24.0
CLL *e*PSPS 12 12 00.0
CLL *ex* x 12 15 30.0
CLL Lm MLR 12 53 00.0
comp=Z,1µm,22.0s
SIGR SIGRI 139.37 312 P **PKPdf** 11 49 49.3 -7.4
MDVR Moldovita 139.39 322‖ P **PKPdf** 11 49 55.9 -0.7
SMOL Smolenice 139.40 329 *e*PKIKP **PKiKP** 11 49 57.8 -1.0
SMOL *e* 11 52 52.2
SMOL Smolenice 139.40 329 *e*PKP **PKiKP** 11 49 57.8 -1.0
SMOL *e*PP **PP** 11 52 52.1 +1.7
KRUC Moravsky 139.52 331 *e*PKP **PKPdf** 11 49 49.2 -7.4
KRUC *e* 11 49 57.4
KRUC *e* 11 52 53.0
LIA Limnos Island 139.56 314 P **PKPdf** 11 49 52.6 -4.4
MODS Modra-Piesok 139.57 329 *e*PKIKP **PKPdf** 11 49 57.5 +0.7
MODS *e* 11 53 00.4
MODS MLR MLR
comp=Z,8µm,25.5s
MODS Modra-Piesok 139.57 329 *e*PKP **PKPdf** 11 49 57.5 +0.7
MODS *e*PP PP 11 53 00.4 +8.9
VTS Vitosha 139.60 318 *e*P **PKPdf** 11 49 56.9 -0.3
PRU Pruhonice 139.69 333 *e*PKIKP **PKPdf** 11 49 52.8 -4.1
PRU MLR MLR
comp=Z,3µm,21.8s
PRU Pruhonice 139.69 333 *e*PKPpre PKPpre 11 49 52.8
PRU AMS AMS 12 50 50.0
comp=Z,3µm,21.8s
TREC Trest 139.77 332 AMS AMS 12 51 30.0
comp=Z,3µm,21.8s
ZST Bratislava 139.78 329 *e*PKIKP **PKPdf** 11 49 57.5 +0.4
ZST Bratislava 139.78 329 *e*PKP **PKPdf** 11 49 57.5 +0.4
ZST *e*PP PP 11 53 07.6 +15
NVR Nevrokopi 139.81 316 P **PKPdf** 11 49 55.2 -2.3
BOVS Bovan 140.03 321‖ P **PKPdf** 11 49 50.3 -7.4
KKB Krupnik 140.07 317 *e*P **PKPdf** 11 49 57.6 -0.3
SRS Serrai 140.10 316 P **PKPdf** 11 49 53.1 -4.9
GDU01 Guandu, BA 140.10 136 *e*P **PKPdf** 11 49 57.9 -0.8
EKA Eskdalemuir Ar 140.11 352 PKhKP PKPpre 11 49 48.0
comp=Z,2.2nm,0.5s,baz=0.5,slow=2.1,SNR=17
EKA PKP **PKPdf** 11 49 55.0 -2.5
comp=Z,7.7nm,0.7s,baz=20,slow=2.2,SNR=10.0
EKA Eskdalemuir Ar 140.11 352 PKIKP **PKPdf** 11 49 55.0 -2.5
ESK Eskdalemuir 140.13 352 IAMs_20 IAMs_20 12 53 49.5
comp=Z,1µm,22.0s
OUR Ouranopolis 140.20 315 *e*P **PKPdf** 11 49 57.7 -0.4
MORH Mrgy, Hungar 140.28 326‖ P **PKPdf** 11 49 59.3 +1.2
MORH Mrgy, Hungar 140.28 326 *e*P **PKPdf** 11 49 57.3 -0.8
FRGS Fruska Gora 140.28 324‖ P **PKPdf** 11 49 52.4 -5.8
FRGS Fruska Gora 140.28 324 *e*P **PKPdf** 11 49 57.4 -0.8
TMAB Tom-Au,PA,Br 140.31 114 *e*P **PKPdf** 11 49 58.6 -0.5
NKC Novy Kostel 140.39 335 AMS AMS 12 51 50.0
comp=Z,2µm,24.1s
RONA Rosalia, Austr 140.51 329 *i* P **PKPdf** 11 49 55.0 -3.5
comp=Z,8.7nm,1.0s,SNR=10
RONA *e*P **PKiKP** 11 49 59.7 -1.4
comp=Z,28nm,0.9s
RONA *e*P **PP** 11 53 00.1 +2.8
comp=Z,159nm,3.3s
CONA Conrad Observa 140.56 330 *i* P **PKPdf** 11 49 53.1 -5.6
comp=Z,3.2nm,0.7s
CONA *i* P **PKiKP** 11 49 59.5 -1.8
comp=Z,17nm,0.8s,SNR=12
CONA *e*P **PP** 11 52 59.9 +2.3
comp=Z,205nm,3.5s
PAIG Paliouri 140.59 314 P **PKPdf** 11 49 52.4 -6.4
CKRC Cesky Krumlov 140.65 332 *e*PKPDF **PKPdf** 11 49 52.5 -6.2
CKRC *ex* x 11 50 11.9
CKRC *e*PP PP 11 53 06.9 +8.8
CKRC AMS AMS 12 51 00.0
comp=Z,2µm,22.3s
HORT Hortiatis 140.67 316 *e*P **PKPdf** 11 49 57.1 -2.0
VAY Valandovo 140.68 317 *i* P **PKPdf** 11 49 53.0 -6.0
KHC Kasperske Hory 140.75 333*c i* PKIKP **PKPdf** 11 49 59.5 +0.6
KHC Kasperske Hory 140.75 333 *e*PKPpre PKPpre 11 49 54.3
KHC *e*PKPDF **PKPdf** 11 49 59.0 +0.1
KHC *e*pPKP pPKPdf 11 50 14.5 +2.3
KHC *e*PP PP 11 53 06.9 +8.3
KHC *e*SKP 11 53 36.0
KHC AMS AMS 12 49 40.0
comp=Z,2µm,24.3s
DIVS Divibare 140.79 322 IAMs_20 IAMs_20 12 53 46.4
comp=Z,1µm,22.0s
DIVS Divibare 140.79 322 *e*P **PKPdf** 11 49 52.2 -7.0
TEKS Tekeris 140.80 323 *e*P **PKPdf** 11 49 58.5 -0.6
KYMI Kymi, Euboea I 140.86 312 P **PKPdf** 11 49 52.6 -6.8
GERES GERESS Array B 140.91 333 PKhKP PKPpre 11 49 52.9
com

GRA1	**Grafenberg Arr**	**141.31 335**		IAMs_20	IAMs_20	12 55 08.9		
	comp=Z,1µm,20.0s							
GRFO	**Grafenberg**	**141.31 335**		PKPdf	**PKPdf**	**11 50 00.6**	**+0.8**	
GRFO				IAMs_20	IAMs_20	12 54 59.0		
	comp=Z,1µm,20.0s							
GRFO	**Grafenberg**	**141.31 335**		PKIKP	**PKPdf**	**11 50 00.6**	**+0.8**	
GRFO				MLR	MLR			
	comp=Z,1µm,20.0s							
LIT	**Litokhoron**	**141.32 315**		P	PKPdf	11 49 51.1	-9.1	
MOA	**Molln**	**141.38 331**	*eP*		**PKPdf**	**11 49 55.4**	**-4.7**	
	comp=Z,2.2nm,0.5s							
MOA			*eP*		**PP**	**11 53 02.3**	**-0.2**	
	comp=Z,317nm,5.0s							
VLY	**Voula,Athens**	**141.40 311**		P	PKPdf	11 49 50.3	-10	
ATH	**Athens Observa**	**141.41 312**		P	PKiKP	11 50 16.7	+14	
MHLO	**Agia Marina, M**	**141.41 309**		P	PKPdf	11 49 47.0	-13	
RUDO	**Rudo**	**141.44 322**	*eP*		**PKPdf**	**11 49 55.1**	**-5.2**	
IDI	**Anoyia**	**141.55 307**	⇓P		**PKPdf**	**11 49 55.0**	**-5.9**	
IDI	**Anoyia**	**141.55 307**		PKhKP	PKPpre	11 49 54.4		
	comp=Z,5.4nm,0.4s,baz=90,slow=4.0,SNR=2.6							
IDI				PKP	**PKPdf**	**11 49 59.8**	**-1.0**	
	comp=Z,29nm,0.6s,baz=91,slow=6.6,SNR=14							
IDI	**Anoyia**	**141.55 307**	*eP*		**PKPdf**	**11 50 02.1**	**+1.3**	
IDI	**Anoyia**	**141.55 307**		P	PKPdf	11 49 52.4	-8.4	
LKR	**Lokris**	**141.63 313**		P	**PKPdf**	**11 49 55.7**	**-5.1**	
KZN	**Kozani**	**141.70 316**		P	**PKPdf**	**11 49 54.1**	**-6.9**	
SOKA	**Soboth**	**141.84 329**	*i* P		**PKPdf**	**11 49 57.5**	**-3.5**	
	comp=Z,20nm,0.8s,SNR=19							
THL	**Klokotos Trika**	**141.89 315**		P	**PKPdf**	**11 49 57.2**	**-4.0**	
LTK	**Loutraki**	**141.92 312**		P	PKPdf	11 49 51.9	-9.5	
AGG	**Agios Georgios**	**141.93 314**	*eP*		**PKPdf**	**11 50 00.1**	**-1.3**	
AGG	**Agios Georgios**	**141.93 314**		P	**PKPdf**	**11 49 55.4**	**-6.0**	
OHR	**Ohrid**	**141.94 318**	*i* P		**PKPdf**	**11 49 57.1**	**-4.2**	
UPM	**Unac-Piva**	**141.96 322**	*eP*		**PKPdf**	**11 49 57.1**	**-4.4**	
BLY	**Banja Luka**	**142.00 325**	*eP*		**PKPdf**	**11 49 55.4**	**-5.8**	
MAKR	**Makrakomi, Fth**	**142.07 314**		P	**PKPdf**	**11 50 00.5**	**-1.1**	
IMMV	**Iera Moni Meta**	**142.19 308**	*eP*		**PKPdf**	**11 50 00.4**	**-1.5**	
IMMV	**Iera Moni Meta**	**142.19 308**		P	**PKPdf**	**11 49 58.0**	**-3.9**	
PDG	**Podgorica**	**142.19 321**	⇑P		**PKPdf**	**11 49 57.7**	**-4.0**	
PDG	**Podgorica**	**142.19 321**		IAMs_20	IAMs_20	12 55 05.3		
	comp=Z,2µm,22.0s							
PDG	**Podgorica**	**142.19 321**	*eP*		**PKPdf**	**11 49 57.0**	**-4.6**	
KBN	**Korca**	**142.19 317**		P	**PKPdf**	**11 50 00.2**	**-1.6**	
OBKA	**Obir**	**142.20 329**	*i* P		**PKPdf**	**11 49 58.2**	**-3.4**	
	comp=Z,15nm,0.9s,SNR=7.3							
OBKA			*eP*		**PP**	**11 53 07.2**	**-0.4**	
	comp=Z,98nm,2.2s							
CRES	**Cresnjev**	**142.21 328**	*eP*		**PKPdf**	**11 49 54.4**	**-7.2**	
MGRS	**Mrkonjic Grad**	**142.26 325**	*eP*		**PKPdf**	**11 49 57.4**	**-4.4**	
RODP	**Rodopos**	**142.32 308**		P	**PKPdf**	**11 50 00.0**	**-2.1**	
GVD	**Gavdhos**	**142.33 307**	*eP*		**PKPdf**	**11 49 57.1**	**-5.0**	
BRY	**Bratogost**	**142.35 322**	*eP*		**PKPdf**	**11 49 57.9**	**-4.2**	
KBA	**Koelnbreinsper**	**142.37 331**	*i* P		**PKPdf**	**11 49 58.1**	**-3.9**	
	comp=Z,34nm,1.3s,SNR=32							
KBA			*eP*		**PP**	**11 53 10.8**	**+2.1**	
	comp=Z,52nm,1.5s							
DRME	**Dracevica, Mon**	**142.37 320**	*eP*		**PKPdf**	**11 49 55.7**	**-6.3**	
BTNL	**Ternell**	**142.41 341**	*dx*		x	11 50 00.5		
ANX	**Ano Chora**	**142.41 314**		P	**PKPdf**	**11 49 56.6**	**-5.7**	
TIR	**Tirane**	**142.41 319**	⇓P		**PKPdf**	**11 49 58.3**	**-3.8**	
TIR	**Tirane**	**142.41 319**		IAMs_20	IAMs_20	12 58 43.4		
	comp=Z,1µm,22.0s							
TIR	**Tirane**	**142.41 319**	⇓PKIKP		**PKPdf**	**11 49 58.3**	**-3.8**	
MEM	**Membach**	**142.43 341**	*dx*		x	11 49 58.2		
MEM			*d*PKPdf		**PKPdf**	**11 50 01.9**	**+0.1**	
SRKY	**Kupres RS**	**142.44 324**	*eP*		**PKPdf**	**11 49 58.7**	**-3.5**	
VLI	**Veliai**	**142.49 310**		P	PKPdf	11 49 50.6	-12	
KLV	**Kalavryta, Ach**	**142.49 313**		P	**PKPdf**	**11 49 56.0**	**-6.4**	
EFP	**Efpalio**	**142.49 313**		P	**PKPdf**	**11 49 59.0**	**-3.3**	
LAKA	**Lakka**	**142.53 313**		P	**PKPdf**	**11 49 59.7**	**-2.7**	
LJU	**Ljubljana**	**142.53 329**	*eP*		**PKPdf**	**11 49 56.5**	**-5.7**	
LJU	**Ljubljana**	**142.53 329**	*e*PKPdf		**PKPdf**	**11 49 57.2**	**-5.0**	
LJU			*e*			11 53 08.4		
LJU			*e*			11 53 38.6		
DSB	**Dublin**	**142.55 354**		IAMs_20	IAMs_20	13 02 58.2		
	comp=Z,1µm,20.0s							
ANKY	**Antikythira Is**	**142.55 309**		P	**PKPdf**	**11 49 55.2**	**-7.3**	
MYKA	**Terra Mystica**	**142.55 330**	*i* P		**PKPdf**	**11 49 58.7**	**-3.6**	
	comp=Z,22nm,1.1s,SNR=11							
MYKA			*eP*		**PP**	**11 53 09.0**	**-0.8**	
	comp=Z,108nm,2.1s							
LSK	**Leskovik**	**142.56 317**		P	**PKPdf**	**11 49 59.7**	**-2.8**	
TREB	**Trebinje**	**142.57 322**	*eP*		**PKPdf**	**11 49 59.0**	**-3.3**	
KTHA	**Kythira Island**	**142.58 309**		P	PKPdf	11 49 52.9	-10	
BSTI	**Sart Tilman**	**142.59 341**	*dx*		x	11 49 59.9		
HCY	**Herceg Novi**	**142.64 321**	*eP*		**PKPdf**	**11 49 57.8**	**-4.7**	
BHOU	**Houvegnez**	**142.65 340**	*d*PKPdf		**PKPdf**	**11 50 02.1**	**-0.2**	
BHOU			*dp*PKPdf		**pPKPdf**	**11 50 15.8**	**+0.3**	
CEY	**Cerknica**	**142.79 328**	*eP*		**PKPdf**	**11 49 58.2**	**-4.0**	
BCLA	**Clavier**	**142.81 341**	*d*PKPdf		**PKPdf**	**11 50 03.2**	**-0.7**	
BCLA			*dp*PKPdf		**sPKPdf**	**11 50 19.1**	**-1.4**	
STU	**Stuttgart**	**142.84 336**		IAMs_20	IAMs_20	12 51 14.5		
	comp=Z,1µm,22.0s							
VOJS	**Vojsko**	**142.86 329**	*e*PKPdf		**PKPdf**	**11 49 57.6**	**-5.3**	
VOJS			*e*			11 50 10.3		
STON	**Ston**	**142.87 322**	*eP*		**PKPdf**	**11 49 58.4**	**-4.4**	
WATA	**Walderalm**	**142.98 333**	*i* P		**PKPdf**	**11 50 01.1**	**-2.0**	
	comp=Z,68nm,1.3s,SNR=12							
ABTA	**Abfaltersbach**	**143.00 331**	*i* P		**PKPdf**	**11 49 59.1**	**-3.9**	
	comp=Z,50nm,0.7s,SNR=32							
ABTA			*eP*		**PP**	**11 53 12.5**	**+0.1**	
	comp=Z,280nm,4.7s							
WTTA	**Wattenberg**	**143.01 332**	*eP*		PKPbc	11 50 00.7	+0.6	
	comp=Z,103nm,1.4s,SNR=29							
WTTA			*eP*		**PP**	**11 53 14.7**	**+2.2**	
	comp=Z,209nm,3.3s							
SNF	**Seneffe**	**143.04 342**	*d*PKPdf		PKPbc	11 50 01.2	+1.5	
SNF			*dp*PKPdf		pPKPdf	11 50 14.5	-1.7	
RCHB	**Rochefort**	**143.06 341**	*d*PKPdf		**PKPdf**	**11 50 03.6**	**+0.6**	
RCHB			*dp*PKPdf		**pPKPdf**	**11 50 16.2**	**0.0**	
BMRD	**Maredsous**	**143.08 342**	*d*PKPdf		**PKPdf**	**11 50 03.1**	**+0.2**	
BMRD			*dp*PKPdf		**pPKPdf**	**11 50 15.9**	**-0.3**	
SKDS	**Skadanscina**	**143.14 329**	*eP*		PKPab	11 49 58.5	-0.3	
MOTA	**Moosalm**	**143.18 333**	*i* P		PKPbc	11 50 00.4	0.0	
	comp=Z,101nm,1.0s,SNR=39							
MOTA			*eP*		**PP**	**11 53 15.3**	**+1.8**	
	comp=Z,75nm,2.4s							
WLF	**Walferdange**	**143.19 340**	*d*PKPdf		PKPbc	11 50 00.8	+0.6	
RETA	**Reutte**	**143.22 333**	*i* P		PKPbc	11 50 01.4	+1.0	
	comp=Z,59nm,1.7s,SNR=10							
SQTA	**Sankt Quirin**	**143.23 333**	*i* P		PKPbc	11 50 01.0	+0.4	
	comp=Z,80nm,1.3s,SNR=22							
PYL	**PYLOS**	**143.28 311**		P	PKPab	11 49 55.9	-3.8	
KEK	**Kerkira**	**143.31 316**		P	PKPab	11 49 58.0	-1.7	
DOU	**Dourbes**	**143.31 342**	*d*PKPdf		PKPbc	11 50 01.8	+1.3	
ROSB	**Rosrio**	**143.48 118**	*eP*		**PKPdf**	**11 50 04.7**	**-0.1**	
BFO	**Black Forest**	**143.53 337**	PKPdf		PKPbc	11 50 01.4	+0.1	
BFO				IAMs_20	IAMs_20	13 00 30.8		
	comp=Z,967nm,20.0s							
BFO	**Black Forest**	**143.53 337**	PKIKP		PKPbc	11 50 01.4	+0.1	
FETA	**Feichten**	**143.59 333**	*eP*		PKPbc	11 50 01.4	-0.2	
	comp=Z,46nm,0.7s,SNR=60							
DMLN	**Damoulianata-K**	**143.65 314**		P	PKPbc	11 50 02.3	+0.4	
KEF3	**Kipouria, Keph**	**143.68 314**		P	PKPab	11 49 57.2	-4.0	
DAVA	**Damuels**	**143.75 334**	*i* P		PKPbc	11 50 02.4	+0.3	
	comp=Z,47nm,0.6s,SNR=34							
DAVA			*eP*		**PP**	**11 53 14.3**	**-2.6**	
	comp=Z,41nm,1.9s							
ECH	**Echery**	**144.07 338**		IAMs_20	IAMs_20	13 06 53.9		
	comp=Z,1µm,19.0s							
FUORN	**Ofenpass-Fuorn**	**144.11 333**		IAMs_20	IAMs_20	12 58 06.2		
	comp=Z,1µm,22.0s							
DAVOX	**Davos/Dischmat**	**144.15 334**		PKP	PKPbc	11 50 03.3	-0.1	
	comp=Z,97nm,0.5s,baz=279,slow=1.6,SNR=81							
MATE	**Matera**	**144.78 320**	⇑P		PKPbc	11 50 05.6	+0.3	
NBMA	**Muriti-CE**	**145.09 130**	*eP*		**PKPbc**	**11 50 06.1**	**-1.0**	
NBAN	**Anadia - AL**	**145.25 136**	*eP*		**PKPbc**	**11 50 07.0**	**-0.6**	
SENIN	**Lac Senin/Sane**	**145.55 336**		IAMs_20	IAMs_20	13 02 57.2		
	comp=Z,1µm,20.0s							
TIP	**Timpagrande**	**145.58 318**	⇑P		**PKPab**	**11 50 08.3**	**0.0**	
TIP	**Timpagrande**	**145.58 318**	PKPdf		**PKPdf**	**11 50 06.5**	**-1.3**	
TIP				IAMs_20	IAMs_20	13 00 56.5		
	comp=Z,1µm,21.0s							
NBPB	**Pedra_Branca-C**	**145.65 126**	*eP*		**PKPdf**	**11 50 07.8**	**-0.8**	
CLF	**Chambon-Foret**	**145.86 342**		IAMs_20	IAMs_20	12 56 48.0		
	comp=Z,2µm,21.0s							
NBCA	**Caruaru-PE**	**146.47 134**	*eP*		**PKPdf**	**11 50 09.9**	**-0.1**	
NBMO	**Morrinhos-CE**	**146.63 123**	*eP*		**PKPdf**	**11 50 10.0**	**-0.3**	
NBRF	**Rio Formoso -**	**146.74 136**	*eP*		**PKPdf**	**11 50 10.0**	**-0.4**	
SSB	**Saint Sauveur**	**147.51 337**		IAMs_20	IAMs_20	12 59 59.6		
	comp=Z,992nm,21.0s							
VAE	**Valguarnera**	**148.06 317**	PKPbc		**PKPbc**	**11 50 15.1**	**-0.1**	
	comp=Z,25nm,0.4s,baz=71,slow=3.7,SNR=2.4							
RCBR	**Riachuelo**	**148.22 131**	PKPdf		**PKPdf**	**11 50 13.4**	**+0.5**	
RCBR	**Riachuelo**	**148.22 131**		IAMs_20	IAMs_20	12 52 52.1		
	comp=Z,1µm,20.0s							
RCBR	**Riachuelo**	**148.22 131**	PKIKP		**PKPdf**	**11 50 13.4**	**+0.5**	
RCBR	**Riachuelo**	**148.22 131**	*eP*		**PKPdf**	**11 50 12.4**	**-0.5**	
MAHO	**Mahon**	**152.10 332**		IAMs_20	IAMs_20	13 14 19.7		
	comp=Z,1µm,21.0s							
KEST	**Kesra**	**152.37 319**	PKP		**PKPdf**	**11 50 19.8**	**+0.9**	
	comp=Z,5.3nm,0.7s,baz=61,slow=4.2,SNR=5.2							
KEST				PKPbc	**PKiKP**	**11 50 25.9**	**0.0**	
	comp=Z,112nm,0.7s,baz=318,slow=1.1,SNR=84							
KEST	**Kesra**	**152.37 319**	P		**PKPdf**	**11 50 20.2**	**+1.4**	
SNR=18								
PBRG	**Braganca**	**153.83 350**	*e*PKPbc		**PKiKP**	**11 50 28.7**	**0.0**	
PBRG	**Braganca**	**153.83 350**	*e*PKPab		**PKPab**	**11 50 42.6**	**+1.0**	
PBRG			*ep*PKPab		**pPKPab**	**11 50 54.3**	**-0.2**	
PGAV	**Gavieira, Arco**	**153.89 353**	*e*PKPdf		**PKPdf**	**11 50 21.6**	**+0.7**	
PGAV	**Gavieira, Arco**	**153.89 353**	*e*PKPbc		**PKiKP**	**11 50 30.0**	**+1.1**	
PGAV			*ep*PKPab		**pPKPab**	**11 50 54.9**	**+0.1**	
PGAV	**Gavieira, Arco**	**153.89 353**	*e*LR		LR	12 45 50.8		
	comp=Z,1µm,22.0s							
PCAB	**Cabril**	**154.11 352**	*e*PKPdf		**PKPdf**	**11 50 21.8**	**+0.7**	
PCAB	**Cabril**	**154.11 352**	*e*PKPbc		**PKiKP**	**11 50 30.3**	**+1.0**	
PCAB	**Cabril**	**154.11 352**	*e*PKPab		**PKPab**	**11 50 44.3**	**+1.5**	
PCAB			*ep*PKPab		**pPKPab**	**11 50 55.7**	**0.0**	
POLO	**Lamas de Olo**	**154.41 352**	*e*PKPdf		**PKPdf**	**11 50 22.2**	**+0.6**	
POLO	**Lamas de Olo**	**154.41 352**	*e*PKPbc		**PKiKP**	**11 50 30.4**	**+0.4**	
POLO	**Lamas de Olo**	**154.41 352**	*e*PKPab		**PKPab**	**11 50 45.6**	**+1.4**	
POLO			*ep*PKPab		**pPKPab**	**11 50 56.9**	**-0.1**	
PVRL	**Vila Real**	**154.50 352**	*e*PKPbc		**PKiKP**	**11 50 30.9**	**+0.8**	
PVRL	**Vila Real**	**154.50 352**	*e*PKPab		**PKPab**	**11 50 45.7**	**+1.2**	
PVRL			*ep*PKPab		**pPKPab**	**11 50 57.2**	**-0.1**	
MVO	**Moncorvo**	**154.50 350**	*e*PKPdf		**PKPdf**	**11 50 22.4**	**+0.7**	
MVO			*ep*PKPab		**pPKPab**	**11 50 57.2**	**-0.2**	
MVO	**Moncorvo**	**154.50 350**	*e*LR		LR	12 47 38.3		
	comp=Z,2µm,20.0s							
PVIS	**Viseu**	**155.07 352**	*e*PKPdf		**PKPdf**	**11 50 23.2**	**+0.7**	
PVIS	**Viseu**	**155.07 352**	*e*PKPbc		PKPdf	11 50 32.0	+9.5	
PVIS	**Viseu**	**155.07 352**	*e*PKPab		**PKPab**	**11 50 48.4**	**+1.5**	
PVIS			*ep*PKPab		**pPKPab**	**11 50 59.1**	**-0.7**	
ESDC	**Sonseca Array**	**155.29 344**	PKP		**PKPdf**	**11 50 22.2**	**-0.6**	
	comp=Z,4.7nm,1.1s,baz=354,slow=2.5,SNR=17							
ESDC				PKPbc	**pPKPdf**	**11 50 32.0**	**-4.1**	
	comp=Z,8.5nm,0.8s,baz=332,slow=2.5,SNR=15							
ESDC				PKPab	**PKPab**	**11 50 48.3**	**+0.4**	
	comp=Z,9.6nm,0.7s,baz=358,slow=3.6,SNR=6.0							
ESDC				PP	**PP**	**11 54 18.2**	**-5.1**	
	comp=Z,5.3nm,0.9s,baz=16,slow=6.5,SNR=7.7							
MTE	**Manteigas**	**155.33 351**	*e*PKPdf		**PKPdf**	**11 50 22.8**	**-0.1**	
PAB	**Manteigas**	**155.33 351**	*e*PKPbc		PKPdf	11 50 32.7	+10	
MTE	**Manteigas**	**155.33 351**	*e*PKPab		**PKPab**	**11 50 49.5**	**+1.4**	
MTE			*ep*PKPab		**pPKPab**	**11 51 00.8**	**-0.1**	
MTE	**Manteigas**	**155.33 351**	*e*PP		**PP**	**11 54 25.9**	**+2.5**	
MTE	**Manteigas**	**155.33 351**	*e*LR		LR	12 47 19.2		
	comp=Z,1µm,20.0s							
PAB	**San Pablo**	**155.51 345**	PKPdf		**PKPdf**	**11 50 24.2**	**+1.0**	
PAB	**San Pablo**	**155.51 345**	IAMs_20		IAMs_20	13 03 13.4		
	comp=Z,1µm,20.0s							
PAB	**San Pablo**	**155.51 345**	PKIKP		**PKPdf**	**11 50 24.2**	**+1.0**	
COI	**Coimbra**	**155.64 352**	*e*PKPab		**PKPab**	**11 50 50.4**	**+1.1**	
COI			*ep*PKPab		**pPKPab**	**11 51 02.0**	**-0.2**	
PCAS	**Casmilo, Conde**	**155.80 353**	*e*PKPdf		**PKPdf**	**11 50 23.5**	**+0.1**	
PCAS	**Casmilo, Conde**	**155.80 353**	*e*PKPab		**PKPab**	**11 50 51.1**	**+1.1**	
PCAS			*ep*PKPab		**pPKPab**	**11 51 03.6**	**+0.7**	
PCBR	**Castelo Branco**	**155.87 351**	*e*PKPdf		**PKPdf**	**11 50 24.3**	**+0.8**	
PCBR	**Castelo Branco**	**155.87 351**	*e*PKPab		**PKPab**	**11 50 51.6**	**+1.3**	
PCBR			*ep*PKPab		**pPKPab**	**11 51 02.4**	**-0.7**	
PCBR	**Castelo Branco**	**155.87 351**	*e*PP		**PP**	**11 54 29.6**	**+3.3**	
CART	**Cartagena**	**156.25 337**		IAMs_20	IAMs_20	13 05 16.3		
	comp=Z,1µm,20.0s							
PMRV	**Marv??o**	**156.26 350**	*e*PKPdf		**PKPdf**	**11 50 24.6**	**+0.5**	
PMRV	**Marv??o**	**156.26 350**	*e*PKPab		**PKPab**	**11 50 53.3**	**+1.3**	
PMRV			*ep*PKPab		**pPKPab**	**11 51 04.1**	**-0.8**	
PMRV	**Marv??o**	**156.26 350**	*e*LR		LR	12 49 57.1		
	comp=Z,999nm,20.0s							
PSBE	**So Bento**	**156.37 353**	*e*PKPab		**PKPab**	**11 50 53.5**	**+1.0**	
PSBE			*ep*PKPab		**pPKPab**	**11 51 04.8**	**-0.6**	
PMTG	**Montargil**	**156.74 352**	*e*PKPdf		**PKPdf**	**11 50 24.9**	**+0.2**	
PMTG	**Montargil**	**156.74 352**	*e*PKPab		**PKPab**	**11 50 55.1**	**+1.1**	
PMTG			*ep*PKPab		**pPKPab**	**11 51 06.4**	**-0.5**	
PMTG	**Montargil**	**156.74 352**	*e*PP		**PP**	**11 54 33.8**	**+2.7**	
PESTR	**Estremoz**	**156.84 350**	*e*PKPdf		**PKPdf**	**11 50 24.5**	**-0.3**	
PESTR	**Estremoz**	**156.84 350**	*e*PKPab		**PKPab**	**11 50 55.8**	**+1.3**	
PESTR			*ep*PKPab		**pPKPab**	**11 51 07.0**	**-0.4**	
PESTR	**Estremoz**	**156.84 350**	*e*PP		**PP**	**11 54 34.3**	**+2.5**	
PMAFR	**Mafra**	**156.98 354**	*e*PKPab		**PKPab**	**11 50 56.5**	**+1.4**	
PMAFR			*ep*PKPab		**pPKPab**	**11 51 08.8**	**+0.8**	
LIS	**Lisbon**	**157.20 353**	*e*PKPdf		**PKPdf**	**11 50 25.9**	**+0.6**	
LIS			*e*PP		**PP**	**11 54 36.6**	**+2.9**	
LIS				IAMs_20	IAMs_20	13 02 23.8		
	comp=Z,3µm,18.5s							
LIS	**Lisbon**	**157.20 353**	*e*PKIKP		**PKPdf**	**11 50 25.8**	**+0.6**	
LIS			*e*			11 54 36.5		
EVO	**Evora**	**157.23 351**	*e*PKPdf		**PKPdf**	**11 50 25.8**	**+0.5**	
EVO	**Evora**	**157.23 351**	*e*PKPab		**PKPab**	**11 50 57.5**	**+1.3**	
EVO			*ep*PKPab		**pPKPab**	**11 51 08.8**	**-0.2**	
PBEJ	**Beja**	**157.71 350**	*e*PKPdf		**PKPdf**	**11 50 26.8**	**+0.9**	
PBEJ	**Beja**	**157.71 350**	*e*PKPab		**PKPab**	**11 50 59.8**	**+1.6**	
PBEJ			*ep*PKPab		**pPKPab**	**11 51 11.0**	**-0.1**	
PNCL	**Nicolau / Gran**	**157.72 352**	*e*PKPdf		**PKPdf**	**11 50 26.2**	**+0.3**	
PNCL	**Nicolau / Gran**	**157.72 352**	*e*PKPab		**PKPab**	**11 50 59.8**	**+1.5**	
PNCL			*ep*PKPab		**pPKPab**	**11 51 10.6**	**-0.5**	
MESJ	**Messejana**	**157.94 351**	*e*PKPdf		**PKPdf**	**11 50 26.9**	**+0.7**	
MESJ			*e*PP		**PP**	**11 54 40.6**	**+2.9**	
MESJ				IAMs_20	IAMs_20	13 05 27.3		
	comp=Z,1µm,19.3s							
MESJ	**Messejana**	**157.94 351**	*e*PKPdf		**PKPdf**	**11 50 26.9**	**+0.7**	
MESJ	**Messejana**	**157.94 351**	*e*PKPab		**PKPab**	**11 51 00.3**	**+1.1**	
MESJ			*ep*PKPab		**pPKPab**	**11 51 12.1**	**0.0**	
MESJ	**Messejana**	**157.94 351**	*e*PKIKP		**PKPdf**	**11 50 26.9**	**+0.7**	
MESJ			*e*			11 54 40.6		
PCVE	**Castro Verde**	**158.12 351**	*e*PKPdf		**PKPdf**	**11 50 27.2**	**+0.7**	
PCVE	**Castro Verde**	**158.12 351**	*e*PKPab		**PKPab**	**11 51 00.8**	**+0.8**	
PCVE			*ep*PKPab		**pPKPab**	**11 51 12.9**	**0.0**	
PVAQ	**Vaqueiros**	**158.29 350**	*e*PKPdf		**PKPdf**	**11 50 26.7**	**0.0**	
PVAQ	**Vaqueiros**	**158.29 350**	*e*PKPab		**PKPab**	**11 51 02.3**	**+1.5**	
PVAQ			*ep*PKPab		**pPKPab**	**11 51 13.7**	**+0.1**	
PVAQ	**Vaqueiros**	**158.29 350**	*e*PP		**PP**	**11 54 42.3**	**+2.6**	
PVAQ	**Vaqueiros**	**158.29 350**	*e*LR		LR	12 45 55.2		
	comp=Z,2µm,20.0s							
PTEO	**Sao Teotonio**	**158.30 352**	*e*PKPdf		**PKPdf**	**11 50 27.6**	**+0.9**	
PTEO	**Sao Teotonio**	**158.30 352**	*e*PKPab		**PKPab**	**11 51 02.4**	**+1.6**	
PTEO			*ep*PKPab		**pPKPab**	**11 51 14.0**	**+0.3**	
PBDV	**Barranco-do-Ve**	**158.48 350**	*e*PKPdf		**PKPdf**	**11 50 27.9**	**+0.9**	
PBDV	**Barranco-do-Ve**	**158.48 350**	*e*PKPab		**PKPab**	**11 51 03.3**	**+1.6**	
PBDV			*ep*PKPab		**pPKPab**	**11 51 14.8**	**+0.3**	
MORF	**Marmelete**	**158.53 352**	*e*PKPdf		**PKPdf**	**11 50 27.7**	**+0.6**	
MORF			*e*PP		**PP**	**11 54 43.9**	**+2.8**	
MORF				IAMs_20	IAMs_20	13 01 21.4		
	comp=Z,2µm,22.9s							
MORF	**Marmelete**	**158.53 352**	*e*PKPab		**PKPab**	**11 51 03.5**	**+1.6**	
MORF			*ep*PKPab		**pPKPab**	**11 51 14.7**	**0.0**	
MORF	**Marmelete**	**158.53 352**	*e*PKIKP		**PKPdf**	**11 50 27.6**	**+0.6**	
MORF			*e*			11 54 43.8		
PFVI	**Vila Bisbo**	**158.72 352**	*e*PKPab		**PKPab**	**11 51 04.2**	**+1.6**	
PFVI			*ep*PKPab		**pPKPab**	**11 51 15.8**	**+0.3**	
MDT	**Midelt**	**161.83 338**	PKP		**PKPdf**	**11 50 30.9**	**0.0**	
	comp=Z,13nm,1.0s,baz=57,slow=2.1,SNR=13							
PMOZ	**Porto Moniz, M**	**162.72 14**	*e*PP		PP	11 55 15.8	+12	
PMOZ	**Porto Moniz, M**	**162.72 14**	*e*LR		LR	12 49 26.3		
	comp=Z,1µm,20.0s							
TOA0	**Torodi Ar. Sit**	**166.02 260**			**PKPdf**	**11 50 34.3**	**-0.8**	
TOA0	**Torodi Ar. Sit**	**166.02 260**	P		**PKPdf**	**11 50 36.0**	**+0.9**	
SNR=9.4								
TORD	**Torodi Ar. Bea**	**166.02 260**	PKP		**PKPdf**	**11 50 33.8**	**-1.3**	
	comp=Z,12nm,0.7s,baz=17,slow=1.0,SNR=47							
TORD				PKPab	**PKPab**	**11 51 35.3**	**-0.2**	
	comp=Z,14nm,0.9s,baz=99,slow=4.0,SNR=7.8							
TORD				PP	**PP**	**11 55 22.0**	**-1.2**	
	comp=Z,9.2nm,1.2s,baz=116,slow=3.4,SNR=5.3							
KIC	**Kosan Boka**	**167.79 219**	*e*PKIKP		**PKPdf**	**11 50 35.5**	**-1.0**	
	comp=Z,66nm,1.1s							
KIC	**Kosan Boka**	**167.79 219**	⇑*i*PKP1		**PKPab**	**11 51 43.4**	**+0.3**	
	comp=Z,38nm,0.6s							
LIC	**Lamto**	**167.85 218**	⇓*i*PKIKP		**PKPdf**	**11 50 35.5**	**-1.0**	
	comp=Z,68nm,0.8s							
LIC	**Lamto**	**167.85 218**	⇓*i*PKP1		**PKPab**	**11 51 43.7**	**+0.3**	
	comp=Z,120nm,0.6s							
DBIC	**Dimbokro**	**168.10 220**	PKP		**PKPdf**	**11 50 35.5**	**-1.1**	
	comp=Z,33nm,1.1s,baz=172,slow=3.0,SNR=13							
DBIC				PKPab	**PKPab**	**11 51 44.0**	**-0.4**	
	comp=Z,20nm,0.7s,baz=158,slow=4.7,SNR=9.4							
DBIC				PP	**PP**	**11 55 36.3**	**+3.9**	
	comp=Z,11nm,1.0s,baz=104,slow=1.6,SNR=3.9							
DBIC	**Dimbokro**	**168.10 220**			**PKPdf**	**11 50 35.2**	**-1.5**	
TIC	**Toumodi**	**168.18 219**	⇑*i*PKIKP		**PKPdf**	**11 50 35.4**	**-1.4**	
	comp=Z,31nm,0.6s							
TIC	**Toumodi**	**168.18 219**	⇓*i*PKP1		**PKPab**	**11 51 44.8**	**0.0**	
	comp=Z,65nm,0.6s							

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7µm5µm247nm,0.4s
WOJI Wonogiri, Jawa 15.04 236 P **Pn** **11 46 33.8 +2.1**
3µm3µm295nm,1.1s
SMRI Semarang 15.05 240 P **Pn** **11 46 33.0 +1.1**
SMRI Semarang 15.05 240 P **Pn** **11 46 34.3 +2.5**
6µm286nm,0.9s
SMRI Semarang 15.05 240 P **Pn** **11 46 34.3 +2.5**
283nm,0.9s
MTN Manton Dam 15.26 151 P **P** **11 46 32.9 -0.5**
baz=15,SNR=190
MTN Manton Dam 15.26 151 P **P** **11 46 32.9 -0.5**
MTN Manton Dam 15.26 151 P **P** **11 46 33.7 +0.3**
SMPI Sarmi 15.39 99 P **P** **11 46 34.3 -0.6**
86nm,1.3s
UGM Wanagama 15.42 237 P **Pn** **11 46 37.0 +0.8**
UGM Wanagama 15.42 237 P **Pn** **11 46 37.2 +1.0**
6µm155nm,1.1s
UGM Wanagama 15.42 237 P **Pn** **11 46 37.9 +1.7**
YOGI Yogyakarta 15.56 238 P **Pn** **11 46 38.7 +0.8**
177nm,1.0s
KDU Kakadu 15.83 146 P **P** **11 46 39.1 -0.5**
baz=16,SNR=357
KDU Kakadu 15.83 146 P **P** **11 46 40.0 +0.3**
TPI Tanjungpandan 16.18 258 P **Pn** **11 46 44.8 -0.4**
2µm145nm,1.2s
KNRA Kununurra 16.89 162 P **P** **11 46 51.3 0.0**
baz=17,SNR=224
KNRA Kununurra 16.89 162 P **P** **11 46 51.3 0.0**
KNRA Kununurra 16.89 162 P **P** **11 46 51.5 +0.3**
GENI Genyem 16.93 101 P **P** **11 46 51.1 -0.6**
5µm240nm,1.2s
GENI Genyem 16.93 101 P **Pn** **11 46 53.2 -0.8**
241nm,1.2s
CMJI Cimerak 17.13 241 P **P** **11 46 54.4 +0.5**
4µm79nm,0.6s
LEM Lembang 17.45 245 P **P** **11 46 58.3 +0.7**
83nm,0.5s,baz=81,slow=8.7,SNR=15
PPBI Pangkal Pinang 17.58 261 P **Pn** **11 47 00.4 -1.2**
238nm,0.7s
CBJI Citeko 18.00 247 P **P** **11 47 04.8 +1.5**
14µm288nm,0.6s
CNJI Cibinong 18.09 244 P **P** **11 47 05.8 +1.5**
2µm176nm,1.0s
DBJI Dramaga 18.14 247 P **P** **11 47 05.4 +0.5**
70nm,0.9s
SKJI Sukabumi 18.49 246 P **Pn** **11 47 11.6 -0.6**
2µm155nm,0.6s
DSRI Dabo 18.96 267 P **P** **11 47 15.5 +1.8**
1µm53nm,1.1s
TPRI Tanjung Pinang 18.99 271 P **Pn** **11 47 16.3 -1.8**
6µm101nm,1.0s
BLSI Bandar Lampung 19.16 252 P **P** **11 47 16.9 +1.2**
130nm,0.4s
KLI Kotabumi 19.39 254 P **Pn** **11 47 21.0 -1.7**
137nm,0.5s
KASI Kota Agung 19.91 252 P **P** **11 47 23.0 -0.8**
JMBI JAMBI 19.98 264 P **Pn** **11 47 27.7 -2.0**
132nm,0.4s
LWLI Liwa 20.19 254 P **P** **11 47 26.6 -0.3**
5µm203nm,0.6s
XMIS Christmas Isla 20.85 238 P **P** **11 47 32.8 -0.9**
XMIS Christmas Isla 20.85 238 P **P** **11 47 32.9 -0.8**
MNAI Manna 21.10 257 P **P** **11 47 36.8 +0.7**
MBWA Marble Bar 21.84 190 P **P** **11 47 41.6 -1.3**
MBWA Marble Bar 21.84 190 P **P** **11 47 42.3 -0.6**
PSA00 Pilbara Seismi 22.23 189 P **P** **11 47 46.2 -0.2**
BKNI Bangkinang 22.48 270 P **P** **11 47 50.4 +1.6**
TPUB Ta-pu 22.83 353 P **P** **11 47 53.1 +1.1**
YULB Yu-li 22.86 355 P **P** **11 47 51.4 -0.7**
WRAB Tennant Creek 22.92 153 P **P** **11 47 51.1 -1.7**
WRAB Tennant Creek 22.92 153 *d* iP **P** **11 47 52.1 -0.7**
WRAB pmax pmax
comp=Z,346nm,0.9s
WRAB Tennant Creek 22.92 153 P **P** **11 47 52.8 0.0**
WRA Warramunga Arr 22.92 153 P **P** **11 47 52.0 -0.8**
comp=Z,67nm,0.3s,baz=333,slow=8.6,SNR=526
WRA PcP **PcP** **11 51 35.1 +0.4**
comp=Z,34nm,0.8s,baz=334,slow=16,SNR=7.2
WRA ScP **ScP** **11 54 47.4 +0.1**
comp=Z,2.6nm,0.8s,baz=323,slow=3.2,SNR=4.8
comp=Z,67nm,0.3s
SSLB Suanglung 23.28 354 P **P** **11 47 56.0 0.0**
SSLB Suanglung 23.28 354 P **P** **11 47 57.5 +1.5**
KULM Kulim 23.32 282 P **P** **11 47 56.4 -0.1**
PPSI Pulau Pagai 23.72 262 P **P** **11 48 03.4 +3.3**
comp=Z,185nm,0.5s
YOJ Yonaguni jima 23.82 359 P **P** **11 48 02.0 +1.1**
YOJ Yonaguni jima 23.82 359 P **P** **11 48 02.0 +1.1**
YOJ Yonaguni jima 23.82 359 P **P** **11 48 01.4 +0.5**
MNSI Mandailing Nat 23.94 271 P **P** **11 48 01.7 -0.4**
comp=Z,933nmcomp=Z,44nm,0.4s
MANU Manus Island 23.98 96 P **P** **11 48 01.9 -0.6**
YHNB Yeheng 24.11 355 P **P** **11 48 02.9 -0.7**
COEN Coen 24.20 127 P **P** **11 48 03.8 -0.6**
baz=24,SNR=52
COEN Coen 24.20 127 P **P** **11 48 03.7 -0.7**
SISI Saibi 24.49 266 P **P** **11 48 09.0 +1.9**
comp=Z,1µmcomp=Z,119nm,0.8s
RPSI Rantau Prapat 24.68 275 P **P** **11 48 09.8 +1.0**
PSI Prapat 24.68 276 P **P** **11 48 09.8 +0.8**
PSI Prapat 24.68 276 P **P** **11 48 11.7 +2.7**
GIRL Giralia 24.72 201 P **P** **11 48 10.6 +1.6**
baz=25,SNR=4.7
PMG Port Moresby 25.52 113 P **P** **11 48 16.2 -0.1**
comp=Z,95nm,0.9s,baz=283,slow=7.4,SNR=10
comp=Z,95nm,0.9s
PMG Port Moresby 25.52 113 P **P** **11 48 15.8 -0.5**
PMG Port Moresby 25.52 113 *de*P **P** **11 48 15.3 -1.0**
PMG pmax pmax
comp=Z,113nm,0.9s
PMG Port Moresby 25.52 113 P **P** **11 48 17.1 +0.7**
PMG Port Moresby 25.52 113 P **P** **11 48 17.0 +0.7**
WRKA Warakurna 25.81 170 P **P** **11 48 19.1 +0.3**
baz=26,SNR=109
WRKA Warakurna 25.81 170 P **P** **11 48 19.5 +0.7**
KCSI Kotacane, Aceh 25.90 277 P **P** **11 48 20.7 +0.9**
comp=Z,56nm,1.6s
GSI Gunungsitoli 25.95 272 P **P** **11 48 19.8 -0.4**
GSI Gunungsitoli 25.95 272 P **P** **11 48 21.0 +0.8**
GSI Gunungsitoli 25.95 272 P **P** **11 48 20.7 +0.5**
AS31 Alice Springs 26.06 158 IAmb IAmb 11 48 24.8
comp=Z,17nm,0.5s
ASAR Alice Springs 26.06 158 P **P** **11 48 20.9 -0.2**
comp=Z,41nm,0.8s,baz=333,slow=7.6,SNR=251
ASAR pP **pP** **11 49 12.4 +0.1**
comp=Z,29nm,0.7s,baz=332,slow=10,SNR=3.9
ASAR PcP **PcP** **11 51 42.0 +0.5**
comp=Z,3.9nm,0.4s,baz=343,slow=1.9,SNR=4.9
ASAR S **S** **11 52 30.0 -2.4**
comp=Z,27nm,1.0s,baz=350,slow=20,SNR=7.5
ASAR ScP **ScP** **11 54 56.2 +0.2**
comp=Z,8.5nm,0.7s,baz=337,slow=2.9,SNR=11
comp=Z,41nm,0.8s
QIS Mount Isa 26.19 144 P **P** **11 48 22.3 0.0**
baz=26,SNR=189
QIS Mount Isa 26.19 144 P **P** **11 48 22.9 +0.6**
JMZ Minamidaito 2 26.24 16 P **P** **11 48 22.6 -0.1**
JOW Kunigami 26.58 10 P **P** **11 48 25.1 -0.6**
comp=Z,5.2nm,0.4s,baz=191,slow=7.8,SNR=15
comp=Z,5.2nm,0.4s
MTSU Mount Surprise 27.60 133 P **P** **11 48 34.7 -0.2**
baz=28,SNR=14
MTSU Mount Surprise 27.60 133 P **P** **11 48 35.0 +0.2**
KRVT Keravat (AS076 28.89 100 P **P** **11 48 46.6 +0.3**
comp=Z,315nm,0.9s,baz=184,slow=2.9,SNR=13
RABL Rabaul 29.00 100 P **P** **11 48 49.1 +1.7**
comp=Z,578nm,1.1s
CMAR Chiang Mai Arr 30.01 308 P **P** **11 48 56.6 +0.5**
comp=Z,13nm,0.8s,baz=137,slow=7.2,SNR=35
CMAR PcP **PcP** **11 51 51.8 +0.3**
comp=Z,4.3nm,0.8s,baz=157,slow=2.0,SNR=6.5
CMAR ScP **ScP** **11 55 09.5 +1.2**
comp=Z,0.6nm,0.3s,baz=167,slow=2.5,SNR=4.5
comp=Z,13nm,0.8s
CMAR Chiang Mai Arr 30.01 308 *i* P **P** **11 48 58.5 +2.4**
CMAR pmax pmax
comp=Z,13nm,0.8s
CM31 Chiang Mai Arr 30.01 308 IAmb IAmb 11 49 00.1
comp=Z,69nm,1.2s
CHTO Chiang Mai 30.21 308 P **P** **11 48 59.6 +1.7**
CHTO Chiang Mai 30.21 308 P **P** **11 48 59.6 +1.7**
CHTO pmax pmax
comp=Z,81nm,1.1s
CHTO Chiang Mai 30.21 308 P **P** **11 49 00.3 +2.4**
CTA Charters Tower 30.25 134 P **P** **11 48 59.0 +0.8**
CTAO Charters Tower 30.25 134 P **P** **11 48 57.8 -0.4**
CTAO IAmb IAmb 11 48 60.0
comp=Z,58nm,1.0s
CTAO Charters Tower 30.25 134 P **P** **11 48 57.8 -0.4**
CTAO pmax pmax
comp=Z,58nm,1.0s
CTAO Charters Tower 30.25 134 P **P** **11 48 59.2 +1.0**
MORW Morawa 30.26 193 P **P** **11 48 58.5 +0.3**
baz=30,SNR=5.9
MORW Morawa 30.26 193 IAmb IAmb 11 48 59.5
comp=Z,63nm,1.4s
MORW Morawa 30.26 193 P **P** **11 48 58.5 +0.3**
OOD Oodnadatta 30.47 158 P **P** **11 49 00.3 +0.3**
GYA Guiyang 30.48 329 ⇓ *i*P **P** **11 49 02.5 +2.2**
GYA pmax pmax
comp=Z,39nm,1.4s
WHN Wuhan 31.12 345 P **P** **11 49 08.8 +3.1**
FORT Forrest 31.41 172 P **P** **11 49 08.6 +0.4**
baz=32,SNR=64
FORT Forrest 31.41 172 P **P** **11 49 08.6 +0.4**
FORT Forrest 31.41 172 P **P** **11 49 08.5 +0.3**
BLDU Ballidu 31.62 191 P **P** **11 49 10.0 0.0**
baz=32,SNR=41
BLDU Ballidu 31.62 191 P **P** **11 49 10.1 +0.1**
KMI Kunming 31.66 322 ⇓ P **P** **11 49 13.5 +2.8**
KMI pmax pmax
comp=Z,35nm,1.2s
KMI LR LR
comp=Z,520nm,22.9s
KMI LR LR
comp=Z,900nm,21.5s
KMI LR LR
comp=Z,1µm,21.0s
NJ2 Nanjing 31.69 352 *e*P **P** **11 49 11.5 +0.9**
NJ2 pmax pmax
comp=Z,21nm,1.0s
MULG Mulgathing 32.22 163 P **P** **11 49 16.0 +0.7**
KLBR Kellerberrin 32.38 189 P **P** **11 49 16.7 0.0**
baz=32,SNR=13
KLBR Kellerberrin 32.38 189 P **P** **11 49 16.7 0.0**
ENH Enshi 32.47 337 IAmb IAmb 11 49 22.0
comp=Z,35nm,0.8s
INKA Innaminka 32.59 151 P **P** **11 49 19.2 +0.7**
comp=Z,251nm,1.2s
MUN Mundaring 33.04 191 P **P** **11 49 22.8 +0.5**
baz=33,SNR=4.5
PZH PanZhiHua 33.28 323 P **P** **11 49 26.3 +1.6**
PZH pmax pmax
comp=Z,40nm,1.1s
PZH pmax pmax
comp=Z,150nm,5.1s
QLP Quilpie 33.52 145 P **P** **11 49 26.6 0.0**
baz=34,SNR=28
QLP Quilpie 33.52 145 P **P** **11 49 27.0 +0.4**
NWAO Narrogin (SRO) 33.77 190 P **P** **11 49 29.0 +0.3**
NWAO Narrogin (SRO) 33.77 190 P **P** **11 49 29.0 +0.3**
NWAO pmax pmax
comp=Z,97nm,1.5s
NWAO Narrogin (SRO) 33.77 190 P **P** **11 49 29.4 +0.7**
LCRK Leigh Creek 33.81 157 P **P** **11 49 29.4 +0.4**
comp=Z,130nm,0.9s
BBOO Buckleboo 35.19 161 P **P** **11 49 40.7 -0.1**
baz=35,SNR=5.3
BBOO Buckleboo 35.19 161 P **P** **11 49 40.8 +0.1**
RK1H Rockhampton Ha 35.38 134 P **P** **11 49 42.7 +0.2**
LYN LuoYang 35.41 344 ⇑ P **P** **11 49 43.5 +0.9**
LYN pmax pmax
comp=Z,20nm,1.2s
CD2 Chengdu 35.58 330 P **P** **11 49 45.3 +1.1**
CD2 pmax pmax
comp=Z,70nm,1.1s
TJN Taejon 35.87 5 ⇓ *e*P **P** **11 49 47.9 +1.4**
WHYH Whyalla 35.89 160 P **P** **11 49 47.4 +0.7**
TIA Tai'an 36.02 351 P **P** **11 49 48.0 +0.2**
TIA pmax pmax
comp=Z,7.0nm,0.6s
XAN Xi'an 36.06 339 ⇑ P **P** **11 49 48.0 -0.2**
XAN pP pwP 11 50 46.0 -0.9
XAN S **S** **11 55 08.8 +1.5**
XAN pmax pmax
comp=Z,10.0nm,1.0s
RMQ Roma 36.22 140 P **P** **11 49 49.6 0.0**
baz=36,SNR=9.0
RMQ Roma 36.22 140 P **P** **11 49 50.0 +0.4**
KSCHJ Chungju 36.42 6 IAmb IAmb 11 49 55.2
comp=Z,32nm,1.1s
STKA Stephens Creek 36.47 154 P **P** **11 49 51.8 +0.2**
comp=Z,69nm,0.7s,baz=326,slow=8.4,SNR=107
comp=Z,69nm,0.7s
STKA Stephens Creek 36.47 154 P **P** **11 49 51.9 +0.2**
baz=36,SNR=90
STKA Stephens Creek 36.47 154 P **P** **11 49 51.9 +0.2**
STKA Stephens Creek 36.47 154 P **P** **11 49 51.9 +0.3**
STKA pmax pmax
comp=Z,19nm,0.8s
STKA Stephens Creek 36.47 154 P **P** **11 49 51.9 +0.3**
HTT Hallett 36.74 158 P **P** **11 49 54.5 +0.6**
baz=37,SNR=40
HTT Hallett 36.74 158 P **P** **11 49 55.1 +1.2**
INU Inuyama 36.88 19 P **P** **11 49 54.8 -0.2**
INU IAmb IAmb 11 49 56.3
comp=Z,72nm,1.6s
INU Inuyama 36.88 19 P **P** **11 49 55.6 +0.6**
KSRS Korea Array 36.99 6 P **P** **11 49 55.5 -0.3**
comp=Z,10nm,0.8s,baz=184,slow=10.0,SNR=18
KSRS PcP **PcP** **11 52 11.5 +0.7**
comp=Z,2.0nm,0.7s,baz=180,slow=2.6,SNR=2.8
KSRS ScP **ScP** **11 55 33.1 +0.7**
comp=Z,1.2nm,0.5s,baz=171,slow=3.1,SNR=4.8
comp=Z,10nm,0.8s
EIDS Eidsvold 37.04 136 P **P** **11 49 56.0 -0.5**
baz=37,SNR=7.9
EIDS Eidsvold 37.04 136 P **P** **11 49 55.0 -1.5**
EIDS IAmb IAmb 11 49 57.0
comp=Z,66nm,1.4s
EIDS Eidsvold 37.04 136 P **P** **11 49 56.5 0.0**
HNS HongShan 37.60 348 ⇑ P **P** **11 50 02.0 +1.0**
HNS pmax pmax
comp=Z,36nm,1.3s
SEHB SEOHWA 37.83 6 P **P** **11 50 03.2 +0.3**
TWOA Tennyson Woods 38.05 160 P **P** **11 50 06.4 +1.6**
CMSA Cobar Meteorol 38.17 149 P **P** **11 50 06.6 +0.7**
baz=38,SNR=151
CMSA Cobar Meteorol 38.17 149 P **P** **11 50 07.1 +1.2**
DL2 Dalian 38.26 358 P **P** **11 50 08.0 +1.6**
DL2 pmax pmax
comp=Z,52nm,1.0s
MAJO Matsushiro 38.36 19 P **P** **11 50 05.8 -1.6**
MAJO IAmb IAmb 11 50 07.8
comp=Z,36nm,1.2s
MAJO Matsushiro 38.36 19 P **P** **11 50 05.8 -1.6**
MAJO pmax pmax
comp=Z,36nm,1.2s
MAJO Matsushiro 38.36 19 P **P** **11 50 07.2 -0.2**
MJAR Matsushiro Arr 38.36 19 P **P** **11 50 06.0 -1.3**
comp=Z,14nm,1.0s,baz=188,slow=8.9,SNR=30
MJAR pP **pP** **11 51 00.4 +0.8**
comp=Z,6.4nm,0.8s,baz=195,slow=8.8,SNR=4.3
MJAR ScP **ScP** **11 55 36.6 -1.1**
comp=Z,6.6nm,1.1s,baz=219,slow=5.2,SNR=11
comp=Z,14nm,1.0s
MJB9 Matsu-Tunnel 38.36 19 IAmb IAmb 11 50 07.8
comp=Z,36nm,1.2s
SHL Shillong 39.40 312 IAmb IAmb 11 50 18.8
comp=Z,109nm,1.2s
LZH Lanzhou 39.84 335 *e*P **P** **11 50 21.5 +1.7**
LZH pP pwP 11 51 20.3 +1.0
LZH pmax pmax
comp=Z,27nm,1.1s
BJI Beijing 39.92 351 P **P** **11 50 19.3 -0.8**
BJI pmax pmax
comp=Z,29nm,1.2s
BJI LR LR
comp=Z,130nm,18.2s
BJI LR LR
comp=Z,520nm,20.2s
BJI LR LR
comp=Z,1µm,18.7s
JMM Marumori 40.45 21 IAmb IAmb 11 50 27.1
comp=Z,35nm,0.9s
ARMA Armidale 40.76 141 P **P** **11 50 28.8 +1.5**
baz=41,SNR=21
ARMA Armidale 40.76 141 P **P** **11 50 28.5 +1.2**
ARMA IAmb IAmb 11 50 29.8
comp=Z,46nm,0.7s
ARMA Armidale 40.76 141 P **P** **11 50 29.0 +1.7**
ARPS Mount Arapiles 40.80 157 P **P** **11 50 27.7 +0.4**
baz=41,SNR=44
ARPS Mount Arapiles 40.80 157 P **P** **11 50 28.4 +1.0**
HHC Hu-ho-hao-te 41.60 346 *e*P **P** **11 50 35.5 +1.5**
HHC pmax pmax
comp=Z,34nm,1.0s
HHC pmax pmax
comp=Z,290nm,7.5s
BRAT Ballarat 42.31 156 P **P** **11 50 41.3 +1.8**
LSA Lhasa 42.34 316 P **P** **11 50 41.9 +1.4**
LSA IAmb IAmb 11 50 44.7
comp=Z,124nm,1.2s
LSA Lhasa 42.34 316 P **P** **11 50 41.9 +1.4**
LSA pmax pmax
comp=Z,124nm,1.2s
LSA Lhasa 42.34 316 P **P** **11 50 43.0 +2.5**
MGCD Mangrove Creek 42.42 145 P **P** **11 50 43.0 +2.4**
baz=42,SNR=9.8
MGCD Mangrove Creek 42.42 145 P **P** **11 50 42.8 +2.2**
MSHR Mys Shultsa 42.45 8 ⇑ *e*P **P** **11 50 44.6 +4.0**
MSHR pmax pmax
comp=Z,40nm,1.5s
NTLH Newcastle Hard 42.54 144 P **P** **11 50 44.1 +2.6**
comp=Z,130nm,0.8s
SYDH Sydney Hard Ro 42.62 146 P **P** **11 50 45.0 +2.9**
CAN Canberra 42.85 149 P **P** **11 50 44.4 +0.3**
CAN Canberra 42.85 149 P **P** **11 50 44.4 +0.3**
CAN pmax pmax
comp=Z,188nm,0.7s
CAN Canberra 42.85 149 P **P** **11 50 46.0 +2.0**
TOO Toolangi 42.99 154 P **P** **11 50 46.7 +1.6**
baz=43,SNR=25
TOO Toolangi 42.99 154 P **P** **11 50 46.0 +1.0**
TOO IAmb IAmb 11 50 47.8
comp=Z,106nm,1.0s
TOO Toolangi 42.99 154 P **P** **11 50 46.1 +1.0**
TOO pmax pmax
comp=Z,106nm,1.0s
TOO Toolangi 42.99 154 P **P** **11 50 46.7 +1.6**
GEXS Deakin Univers 43.01 156 P **P** **11 50 47.9 +2.7**
CNB Canberra Magne 43.03 149 P **P** **11 50 47.3 +1.8**
baz=43,SNR=32
CNB Canberra Magne 43.03 149 P **P** **11 50 47.6 +2.1**
VLA Vladivostok 43.09 9 ⇓ *e*P **P** **11 50 46.7 +1.0**
VLA pmax pmax
comp=Z,35nm,1.0s
CN2 Changchun 43.14 2 *e*P **P** **11 50 47.8 +1.6**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
JTM Tenmabayashi 43.15 20 IAmb IAmb 11 50 48.0
comp=Z,47nm,1.0s
ODAN Odare 43.49 310 *e*P **P** **11 50 50.1 +0.6**
TAPN Taplejung 43.50 311 *e*P **P** **11 50 50.6 +0.9**
comp=Z,71nm,0.4s
RAMN Ramite 44.15 310 *e*P **P** **11 50 55.6 +0.9**
comp=Z,191nm,0.6s
USA0B Ussuriysk Arra 44.16 9 P **P** **11 50 54.1 -0.1**
USA0B Ussuriysk Arra 44.16 9 P **P** **11 50 54.1 -0.1**
USA0B pmax pmax
comp=Z,17nm,1.0s
USRK Ussuriysk Ar. 44.16 9 P **P** **11 50 53.8 -0.4**
comp=Z,11nm,0.3s,baz=187,slow=6.3,SNR=86
comp=Z,11nm,0.3s
USRK Ussuriysk Ar. 44.16 9 P **P** **11 50 54.2 0.0**
MDJ Mudanjiang 44.26 6 IAmb IAmb 11 50 59.3
comp=Z,59nm,0.9s
MDJ Mudanjiang 44.26 6 P **P** **11 50 58.3 +3.3**
MDJ pP pwP 11 51 52.5 -2.8
MDJ sP sP 11 52 22.8 +5.0
MDJ S **S** **11 57 14.8 +6.6**
MDJ sS sS 11 58 51.0 +4.2
MDJ pmax pmax
comp=Z,78nm,0.8s
MDJ pmax pmax
comp=Z,840nm,11.4s
MDJ Mudanjiang 44.26 6 P **P** **11 50 56.2 +1.2**
comp=Z,75nm,1.1s
GTA Gaotai 44.37 334 ⇑ P **P** **11 50 56.8 +0.7**
GTA pmax pmax
comp=Z,52nm,1.2s
GTA pmax pmax
comp=Z,200nm,4.2s
GTA LR LR
comp=Z,560nm,20.7s
GTA LR LR
comp=Z,510nm,20.7s
GTA LR LR
comp=Z,530nm,22.2s
GOMU GeErMu 44.39 326 P **P** **11 50 58.5 +1.9**
GOMU pP pwP 11 51 57.8 +0.6
GOMU sP sP 11 52 23.5 +3.7
GOMU PcP **PcP** **11 52 34.0 -1.6**
GOMU pmax pmax
comp=Z,15nm,1.1s
JIRN Jiri 44.82 310 *e*P **P** **11 51 00.6 +0.4**
comp=Z,127nm,0.5s
ERM Erimo 44.96 21 ⇑ *e*P **P** **11 51 01.2 +0.7**
ERM pmax pmax
comp=Z,19nm,1.0s
BNX BinXian 45.18 4 ⇓ P **P** **11 51 03.8 +1.6**
BNX pmax pmax
BNX pmax pmax
comp=Z,270nm,6.3s
GUN Gumba 45.18 310 *e*P **P** **11 51 03.4 +0.4**
comp=Z,246nm,0.5s
PKI Pulchoki 45.37 310 *e*P **P** **11 51 04.6 +0.1**
comp=Z,59nm,0.5s
PKIN Phulchoki 45.38 310 *e*P **P** **11 51 04.9 +0.4**
comp=Z,47nm,0.4s
KKN Kakani 45.58 310 *e*P **P** **11 51 05.6 -0.3**
DMN Daman 45.62 310 *e*P **P** **11 51 07.0 +0.7**
GKN Gorkha 46.18 310 *e*P **P** **11 51 10.5 0.0**
comp=Z,112nm,0.6s
JKA Kamikawa-asahi 46.63 19 IAmb IAmb 11 51 15.4
comp=Z,50nm,1.1s
KOLN Koldanda 46.87 309 *e*P **P** **11 51 15.2 -0.7**
DANN Dangsing 47.02 310 *e*P **P** **11 51 17.2 0.0**
comp=Z,300nm,0.6s
HYBB Hyderabad (bro 47.31 293 *e*P **P** **11 51 19.6 +0.3**
HYBB *es*P **sP** **11 52 42.8 -1.7**
HYBB *e*S **S** **11 57 54.9 +2.3**
NOUC Port Laguerre 47.37 121 P **P** **11 51 20.7 +1.1**
DZM Mont Dzumac 47.48 121 P **P** **11 51 21.9 +1.4**
YATNC Mamie plateau, 47.85 121 P **P** **11 51 25.7 +2.4**
HIA Hailar 48.69 357 *d* iP **P** **11 51 29.6 +0.4**
HIA pmax pmax
comp=Z,31nm,0.8s
KLR Kul'dur 49.05 7 *c* iP **P** **11 51 31.7 -0.3**
KLR pmax pmax
comp=Z,19nm,1.0s
YSS Yuzh-Sakhalins 49.23 17 P **P** **11 51 31.3 -1.9**
YSS IAmb IAmb 11 51 34.6
comp=Z,40nm,1.1s
YSS Yuzh-Sakhalins 49.23 17 *e*P **P** **11 51 33.9 +0.7**
YSS pmax pmax
comp=Z,20nm,0.9s
YSS Yuzh-Sakhalins 49.23 17 P **P** **11 51 34.5 +1.3**
comp=Z,35nm,1.4s
ULN Ulaanbaatar 49.30 345 P **P** **11 51 34.0 0.0**
ULN Ulaanbaatar 49.30 345 P **P** **11 51 34.0 0.0**
ULN pmax pmax
comp=Z,25nm,0.8s
SONM Songino Array 49.44 345 P **P** **11 51 34.7 -0.3**
comp=Z,18nm,0.7s,baz=160,slow=8.6,SNR=44
SONM PcP **PcP** **11 52 52.9 -0.1**
comp=Z,1.9nm,0.4s,baz=162,slow=6.1,SNR=2.4
SONM ScP **ScP** **11 56 22.1 -0.7**
comp=Z,0.4nm,0.4s,baz=190,slow=2.5,SNR=3.1
comp=Z,18nm,0.7s
GRNR Gornyy 51.27 10 ⇑ *i*P **P** **11 51 49.2 +0.7**
GRNR pmax pmax
comp=Z,30nm,0.9s
GRNR MLR MLR
comp=Z,670nm,17.0s
ZAK Zakamensk 52.60 344 *e*P **P** **11 51 57.5 -0.9**
ZAK *e* 11 53 00.4
ZAK pmax pmax
comp=Z,15nm,1.3s
TYV Tymovskoe 52.74 15 *e*P P 11 52 09.2 +10
TYV pmax pmax
comp=Z,200nm,6.3s
TYV pmax pmax
comp=Z,13nm,0.6s
ZEA Zeya 53.15 3 *e*P **P** **11 52 04.8 +2.6**
ZEA *e* 11 53 03.8

ZEA pmax pmax
comp=Z,20nm,1.4s
WMQ Urumqi 53.64 328 *e*P **P** **11 52 07.5 +1.5**
WMQ pP pwP 11 53 06.0 -2.0
WMQ pmax pmax
comp=Z,57nm,1.3s
WMQ pmax pmax
comp=Z,250nm,4.1s
MOY Mondy 54.40 343 *e*P **P** **11 52 12.1 +0.7**
MOY pmax pmax
comp=Z,43nm,1.6s
KNGR Kungurtug, Tuv 54.59 340‖ *e*P **P** **11 52 12.6 -0.2**
KNGR pmax pmax
comp=Z,21nm,1.1s
MSVF Nonsavu 56.61 112 P **P** **11 52 29.6 +1.9**
ZSN Zaisan 57.56 330 *e*P **P** **11 52 32.5 -1.2**
ZSN *e*S **S** **12 00 11.1 +0.8**
ZSN Zaisan 57.56 330 *e*P **P** **11 52 32.6 -1.2**
baz=330
ZSN *e*S **S** **12 00 11.2 +0.8**
baz=330
BOD Bodaibo 57.65 354 *e*P **P** **11 52 33.6 -0.4**
BOD pmax pmax
comp=Z,62nm,1.4s
SHLS Shalkode 57.87 323 *e*P **P** **11 52 32.9 -3.2**
SHLS pmax pmax
comp=Z,74nm,1.4s
SHLS Shalkode 57.87 323 *e*P **P** **11 52 32.9 -3.2**
comp=Z,74nm,1.4s,baz=323
PDGK Podgornoye 57.95 323 P **P** **11 52 36.8 +0.1**
TARG Taragay, Kyrgy 58.10 321 IAmb IAmb 11 52 52.1
comp=Z,77nm,1.2s
UZB Uzynbulak 58.13 323 *e*P **P** **11 52 36.6 -1.3**
UZB Uzynbulak 58.13 323 *e*P **P** **11 52 36.7 -1.3**
baz=323
KSH Kashi 58.15 318 P **P** **11 52 38.8 +0.7**
KSH pmax pmax
comp=Z,51nm,1.2s
SATY Saty 58.45 322 *e*P **P** **11 52 39.8 -0.3**
SATY pmax pmax
comp=Z,82nm,1.3s
SATY Saty 58.45 322 *e*P **P** **11 52 39.9 -0.3**
comp=Z,82nm,1.3s,baz=322
MK31 Makanchi Array 58.46 328 IAmb IAmb 11 52 43.2
comp=Z,42nm,0.8s
MK31 Makanchi Array 58.46 328 *i* P **P** **11 52 39.7 -0.3**
MK31 pmax pmax
comp=Z,50nm,0.7s
MKAR Makanchi Array 58.46 328 P **P** **11 52 39.8 -0.2**
comp=Z,27nm,0.4s,baz=121,slow=8.4,SNR=117
MKAR PcP **PcP** **11 53 27.6 +0.1**
comp=Z,7.5nm,0.6s,baz=162,slow=2.9,SNR=5.5
MKAR ScP **ScP** **11 57 01.3 -0.9**
comp=Z,2.7nm,0.9s,baz=126,slow=4.6,SNR=3.7
comp=Z,27nm,0.4s
ZHN Zhinishke 58.50 323 *e*P **P** **11 52 39.4 -1.0**
ZHN Zhinishke 58.50 323 *e*P **P** **11 52 39.5 -1.0**
baz=323
KPKS Kokpek 58.51 323 *e*P **P** **11 52 40.2 -0.3**
KPKS *e*S **S** **12 00 23.2 +0.3**
KPKS pmax pmax
comp=Z,76nm,1.3s
KPKS smax smax
comp=E,36nm,3.1s
KPKS Kokpek 58.51 323 *e*P **P** **11 52 40.2 -0.3**
comp=E,76nm,1.3s,baz=323
KPKS *e*S **S** **12 00 23.2 +0.3**
comp=E,36nm,3.1s,baz=323
MAKZ Makanchi 58.64 328 P **P** **11 52 40.9 -0.3**
MAKZ IAmb IAmb 11 52 44.3
comp=Z,55nm,0.9s
MAKZ Makanchi 58.64 328 P **P** **11 52 40.9 -0.3**
MAKZ pmax pmax
comp=Z,55nm,0.9s
TNSS Tian-Shan 59.34 322 *e*P **P** **11 52 45.9 -0.6**
TNSS Tian-Shan 59.34 322 *e*P **P** **11 52 46.0 -0.6**
baz=322
ULHL Ulahol 59.36 321 P **P** **11 52 47.2 +0.8**
SNR=19
AAA Alma-Ata 59.45 322 *e*P **P** **11 52 47.2 +0.4**
AAA Alma-Ata 59.45 322 *e*P **P** **11 52 47.2 +0.4**
baz=322
PEA0B Petropavlovsk- 59.62 23 IAmb IAmb 11 52 50.1
comp=Z,23nm,1.0s
PEA0B Petropavlovsk- 59.62 23 *c i*P **P** **11 52 48.7 +0.9**
PETK Petropavlovsk- 59.62 23 P **P** **11 52 47.0 -0.8**
comp=Z,7.7nm,0.8s,baz=194,slow=5.6,SNR=14
PETK pP **pP** **11 53 46.1 +1.3**
comp=Z,5.7nm,0.7s,baz=198,slow=8.9,SNR=5.4
comp=Z,7.7nm,0.8s
PETK Petropavlovsk- 59.62 23 P **P** **11 52 47.0 -0.8**
CHKK Chushkaly 59.75 323 *e*P **P** **11 52 47.8 -1.0**
CHKK Chushkaly 59.75 323 *e*P **P** **11 52 47.8 -1.0**
baz=323
PET Petropavlovsk 59.94 24 P **P** **11 52 49.9 +0.1**
PET IAmb IAmb 11 52 52.1
comp=Z,26nm,0.9s
PET Petropavlovsk 59.94 24 *e*P **P** **11 52 50.5 +0.7**
PET pmax pmax
comp=Z,44nm,0.9s
PET Petropavlovsk 59.94 24 P **P** **11 52 50.9 +1.1**
TKM2 Tokmak 2 60.12 321 P **P** **11 52 53.6 +2.0**
SNR=8.9
TKM2 Tokmak 2 60.12 321 *i* P **P** **11 52 51.5 -0.1**
TKM2 pmax pmax
comp=Z,52nm,0.6s
KUU Kurty 60.17 322 *e*P **P** **11 52 50.9 -0.7**
KUU Kurty 60.17 322 *e*P **P** **11 52 51.0 -0.7**
baz=322
FOZ Fox Glacier 60.23 143 P **P** **11 52 50.3 -1.7**
KBK Karagaybulak 60.39 320 P **P** **11 52 54.4 +1.0**
SNR=25
UCH Uchtor 60.46 320 P **P** **11 52 54.9 +0.7**
SNR=40
WHZ Wether Hill Ro 60.50 146 P **P** **11 52 52.2 -1.6**
WHZ IAmb IAmb 11 52 55.2
comp=Z,43nm,0.9s
AAK Ala-Archa 60.67 320 P **P** **11 52 58.2 +2.9**
SNR=18
AAK Ala-Archa 60.67 320 P **P** **11 52 56.4 +1.1**
AAK Ala-Archa 60.67 320 *ce*P **P** **11 52 55.8 +0.5**
AAK pmax pmax
comp=Z,31nm,0.6s
AAK Ala-Archa 60.67 320 *i* P **P** **11 52 56.8 +1.5**
SNR=11
CHMS Chumysh 60.69 321 P **P** **11 52 57.6 +2.4**
SNR=7.7
LBZ Lake Benmore 60.93 143 P **P** **11 52 57.5 +0.8**
LBZ IAmb IAmb 11 52 58.4
comp=Z,42nm,1.0s
AML Almayashu 60.94 319 P **P** **11 52 58.0 +0.6**
SNR=18
AML Almayashu 60.94 319 *i* P **P** **11 52 58.6 +1.3**
SNR=10
USP Ospenovka 60.99 321 P **P** **11 52 57.1 -0.1**
SNR=44
SGDS Sogindy 61.00 321 *e*P **P** **11 52 56.2 -1.1**
SGDS pmax pmax
comp=Z,28nm,1.2s
SGDS Sogindy 61.00 321 *e*P **P** **11 52 56.2 -1.1**
comp=Z,28nm,1.2s,baz=321
KBL Kabul 61.01 310 P **P** **11 52 57.3 -0.5**
KBL IAmb IAmb 11 53 00.3
comp=Z,51nm,0.9s
KBL Kabul 61.01 310 P **P** **11 52 57.3 -0.5**
KBL pmax pmax
comp=Z,51nm,1.0s
RPZ Rata Peaks 61.09 142 P **P** **11 52 59.2 +1.3**
RPZ Rata Peaks 61.09 142 P **P** **11 52 59.0 +1.2**
EKS2 Erkin-Say 61.15 320 P **P** **11 53 00.1 +1.7**
SNR=17
OXZ Oxford 61.49 142 IAmb IAmb 11 53 03.8
comp=Z,32nm,0.8s
YAK Yakutsk 61.55 3 P **P** **11 53 00.8 +0.3**
YAK Yakutsk 61.55 3 *c i*P **P** **11 53 00.4 -0.1**
YAK pmax pmax
comp=Z,95nm,0.7s
ODZ Otahua Downs 61.56 144 P **P** **11 53 01.4 +0.4**
ODZ IAmb IAmb 11 54 31.8
comp=Z,43nm,1.3s
SEM Semipalatinsk 61.80 330 *e*P **P** **11 53 00.5 -2.1**
SEM Semipalatinsk 61.80 330 *e*P **P** **11 53 00.6 -2.1**
baz=330
KHZ Kahutara 61.97 140 P **P** **11 53 04.8 +1.1**
ZAA0 Zalesovo Array 62.07 335 IAmb IAmb 11 53 06.4
comp=Z,34nm,1.1s

ZALV Zalesovo Beam 62.07 335 P **P** **11 53 02.8 -1.4**
comp=Z,5.3nm,0.3s,baz=131,slow=7.3,SNR=21
ZALV PcP **PcP** **11 53 41.0 -0.8**
comp=Z,2.4nm,0.4s,baz=141,slow=4.4,SNR=1.7
ZALV PKPPKP **P'P'df** **12 22 08.7 -4.5**
comp=Z,0.5nm,0.3s,baz=316,slow=6.2,SNR=3.6
comp=Z,5.3nm,0.3s
ZALV Zalesovo Beam 62.07 335 *i* P **P** **11 53 02.7 -1.4**
ZALV pmax pmax
comp=Z,6.0nm,0.3s
BTLS Baital 62.17 322 *e*P **P** **11 53 04.0 -1.0**
BTLS pmax pmax
comp=Z,29nm,1.2s
BTLS Baital 62.17 322 *e*P **P** **11 53 04.0 -1.0**
comp=Z,28nm,1.2s,baz=322
MA2 Magadan 62.62 15 P **P** **11 53 08.6 +0.9**
MA2 IAmb IAmb 11 53 10.0
comp=Z,58nm,1.1s
MA2 Magadan 62.62 15 *c i*P **P** **11 53 08.3 +0.7**
KURK Kurchatov 62.80 330 P **P** **11 53 08.7 -0.3**
KURK Kurchatov 62.80 330 *c i*P **P** **11 53 08.4 -0.6**
KURK pmax pmax
comp=Z,177nm,1.1s
DZA Taraz 62.84 319 *i* P **P** **11 53 07.3 -2.2**
baz=319
IUG Iuzhnay 63.36 318 *e*P **P** **11 53 12.4 -0.6**
IUG Iuzhnay 63.36 318 *e*P **P** **11 53 12.4 -0.6**
baz=318
KK31 Karatay Array 63.47 319 IAmb IAmb 11 53 16.6
comp=Z,66nm,1.5s
KK31 Karatay Array 63.47 319 *i* P **P** **11 53 13.6 0.0**
KKAR Karatay Array 63.47 319 P **P** **11 53 13.2 -0.4**
KKAR Karatay Array 63.47 319 IAmb IAmb 11 53 16.6
comp=Z,66nm,1.5s
KKAR Karatay Array 63.47 319 P **P** **11 53 13.2 -0.4**
OTUK Ortayu 64.82 325 P **P** **11 53 21.8 -0.4**
SEY Seymchan 65.90 14‖ *e*P **P** **11 53 29.9 +1.1**
SEY pmax pmax
comp=Z,41nm,1.2s
WSAR Wadi Sarin 66.81 295 P **P** **11 53 34.0 -1.4**
MHTO MHTO 67.05 293 P **P** **11 53 35.8 -1.1**
SNR=5.1
DQM DQM 67.30 291 P **P** **11 53 37.2 -1.3**
UOSS Minazif 69.28 296 P **P** **11 53 49.2 -1.5**
UOSS Minazif 69.28 296 P **P** **11 53 49.5 -1.2**
HATD Hatta, Dubai 69.33 296 P **P** **11 53 50.3 -0.6**
BANOM Banah 69.36 297 P **P** **11 53 50.5 -0.7**
ASHO Ashiyiah 69.37 296 P **P** **11 53 50.2 -1.0**
ASHO Ashiyiah 69.37 296 P **P** **11 53 50.3 -1.0**
MSFE Esma-Masafi 69.39 297 P **P** **11 53 51.3 -0.1**
SHME Shamm 69.52 298 P **P** **11 53 51.0 -1.1**
ALNE Al Ain 69.55 295 *i* P **P** **11 53 51.8 -0.6**
SNR=7.0
FAQ Al Faqa, Dubai 69.80 296 P **P** **11 53 52.9 -0.9**
FAQ Al Faqa, Dubai 69.80 296 *i* P **P** **11 53 53.1 -0.7**
SNR=8.5
UMZA Um Al Zommool 69.88 294 P **P** **11 53 53.0 -1.4**
ASUD Al Ashush, Dub 70.01 296 P **P** **11 53 54.3 -0.8**
SNR=10
ASUD Al Ashush, Dub 70.01 296 *i* P **P** **11 53 54.3 -0.8**
SNR=10
DOK Doka 70.33 290 P **P** **11 53 55.4 -1.7**
GEYT Alibeck 70.46 310 P **P** **11 53 57.0 -0.7**
comp=Z,3.6nm,0.4s,baz=108,slow=9.3,SNR=7.6
comp=Z,3.6nm,0.4s
GEYT Alibeck 70.46 310 IAmb IAmb 11 54 00.2
comp=Z,29nm,1.5s
WHFO Wadi Hawf 70.59 289 P **P** **11 53 56.7 -2.1**
ABTO Aybut 70.99 288 P **P** **11 54 00.3 -0.9**
SNR=5.6
TIXI Tiksi 71.12 2 P **P** **11 54 00.4 -0.4**
TIXI Tiksi 71.12 2 *c i*P **P** **11 54 00.0 -0.8**
TIXI pmax pmax
comp=Z,94nm,1.5s
MZR Muzera 71.46 294 P **P** **11 54 03.1 -0.7**
MZR Muzera 71.46 294 *i* P **P** **11 54 03.0 -0.9**
SNR=6.6
JRN Qarnain Island 72.29 296 P **P** **11 54 07.2 -1.5**
ABKAR Akbulak array 72.65 322 P **P** **11 54 09.7 -0.7**
ABKAR Akbulak array 72.65 322 IAmb IAmb 11 54 13.2
comp=Z,34nm,1.1s
BILL Bilibino 73.49 15 *c i*P **P** **11 54 15.4 +0.5**
BILL *i* 11 54 22.7
BILL pmax pmax
comp=Z,8.0nm,1.2s
SHMA Al-Shehemyia 74.10 297 P **P** **11 54 18.7 -0.6**
AKTO Aktyubinsk 74.22 323 P **P** **11 54 18.9 -0.6**
comp=Z,32nm,0.4s,baz=107,slow=6.0,SNR=47
comp=Z,32nm,0.4s
SVE Sverdlovsk 75.06 330 *e*P **P** **11 54 23.6 -0.5**
SVE pmax pmax
comp=Z,123nm,1.0s
ARU Arti 75.97 329 P **P** **11 54 28.6 -0.7**
ARU Arti 75.97 329 *c i*P **P** **11 54 28.4 -0.9**
ARU S **S** **12 03 49.4 -0.4**
ARU pmax pmax
comp=Z,81nm,0.9s
NIKH Nikolski High 76.28 35 P **P** **11 54 32.0 +0.9**
baz=252
SPIA Saint Paul Isl 76.89 31 P **P** **11 54 35.4 +1.0**
baz=250
ABPO Ambohimpanom 77.21 250 P **P** **11 54 38.1 +0.9**
ABPO IAmb IAmb 11 54 38.9
comp=Z,27nm,0.8s
ABPO Ambohimpanom 77.21 250 P **P** **11 54 38.1 +0.9**
ABPO pmax pmax
comp=Z,27nm,0.9s
VOI Vohitsoka 77.87 248 P **P** **11 54 41.5 +0.7**
UNV Unalaska Valle 77.89 35 P **P** **11 54 40.6 +0.7**
baz=254
FOMA Nahampoana Res 78.02 244 P **P** **11 54 42.5 +1.2**
AKUT Akutan 78.38 35 P **P** **11 54 43.6 +0.9**
GAMB Gambell 78.63 24 P **P** **11 54 44.8 +1.0**
baz=247
RAYN Ar Rayn 78.81 294 P **P** **11 54 45.0 -0.8**
RAYN IAmb IAmb 11 54 46.2
comp=Z,17nm,0.8s
RAYN Ar Rayn 78.81 294 P **P** **11 54 45.0 -0.8**
RAYN pmax pmax
comp=Z,17nm,0.8s
RAYN Ar Rayn 78.81 294 P **P** **11 54 44.9 -0.9**
RAYN Ar Rayn 78.81 294 *i* P **P** **11 54 44.8 -1.0**
SNR=14
MAW Mawson 79.64 200 P **P** **11 54 49.9 +0.7**
comp=Z,7.8nm,0.5s,baz=76,slow=4.8,SNR=71
comp=Z,7.8nm,0.5s
MAW Mawson 79.64 200 P **P** **11 54 50.2 +1.0**
baz=80,SNR=41
MAW Mawson 79.64 200 P **P** **11 54 50.5 +1.3**
MAW Mawson 79.64 200 P **P** **11 54 50.5 +1.3**
MAW pmax pmax
comp=Z,2.0nm,0.6s
VNDA Vanda 80.67 172 P **P** **11 54 55.2 +0.7**
comp=Z,4.9nm,0.8s,baz=313,slow=5.8,SNR=26
comp=Z,4.9nm,0.8s
VNDA Vanda 80.67 172 P **P** **11 54 55.3 +0.7**
VNDA Vanda 80.67 172 P **P** **11 54 55.3 +0.7**
VNDA pmax pmax
comp=Z,6.0nm,0.9s
TNA Tin City 80.79 23 P **P** **11 54 55.7 +0.3**
baz=250
BELG Belogornoye 81.01 323 P **P** **11 54 56.1 -0.6**
comp=Z,53nm,0.5s,baz=154,slow=1.3,SNR=16
comp=Z,53nm,0.5s
BELG Belogornoye 81.01 323 *c i*P **P** **11 54 55.5 -1.3**
BELG pmax pmax
comp=Z,14nm,0.8s
KIRV Kirov 81.32 329 P **P** **11 54 57.6 -0.7**
comp=Z,69nm,0.5s,baz=130,slow=1.1,SNR=17
comp=Z,69nm,0.5s
KIRV Kirov 81.32 329 *c i*P **P** **11 54 57.3 -1.0**
ANM Nome 81.51 24 P **P** **11 55 00.0 +0.8**
baz=253
SDPT Sand Point 81.65 34 P **P** **11 55 00.4 +0.4**
baz=259
ZEI Tsey 82.03 313 *e*P **P** **11 55 01.3 -1.4**
ZEI pmax pmax
comp=Z,43nm,1.5s
CHNA Chignahura Isl 82.05 35 P **P** **11 55 02.6 +0.4**
baz=260
NCK Nalchik 82.34 314‖ *i*P **P** **11 55 04.3 +0.3**
NCK pmax pmax
comp=Z,33nm,0.4s
S14K Fog Glacier 82.34 33 P **P** **11 55 03.5 -0.3**
baz=259
KBZ Khabaz 82.87 314 P **P** **11 55 06.5 -0.2**

comp=Z,7.0nm,0.8s,baz=137,slow=2.4,SNR=7.4
comp=Z,7.0nm,0.8s
KBZ Khabaz 82.87 314 *c i*P **P** **11 55 06.4 -0.2**
KBZ pmax pmax
comp=Z,16nm,1.0s
GOF Gofitskoye 82.91 315‖ *e*P **P** **11 55 06.8 0.0**
GURO Guroymak-BITLI 83.02 309 IAmb IAmb 11 55 09.7
comp=Z,24nm,0.8s
KIV Kislovodsk 83.04 314 *i* P **P** **11 55 07.0 -0.7**
KIV pmax pmax
comp=Z,16nm,1.1s
RDOG Red Dog Mine 83.43 21 P P 11 55 03.9 -5.1
baz=255
N16K Nishlik Lake 83.52 29 P **P** **11 55 11.1 +1.5**
baz=260,SNR=34
P16K Nushagak River 83.65 31 P **P** **11 55 11.0 +0.7**
baz=260,SNR=11
O16K Kokwok River B 83.69 30 P **P** **11 55 11.1 +0.6**
baz=260,SNR=24
PRGR Permogore 83.81 332‖ *i*P **P** **11 55 10.8 -0.2**
O17K Koliganek Bris 84.22 30 P **P** **11 55 13.3 +0.2**
baz=261,SNR=15
R17K Ugashik Creek 84.27 32 P **P** **11 55 12.7 -0.7**
baz=262,SNR=6.2
Q16K King Salmon 84.28 31 P **P** **11 55 13.5 0.0**
baz=262
CHIR Chirikof Islan 84.44 34 P **P** **11 55 14.8 +0.5**
baz=263
VRH Novokhopyorsk 84.46 321 *e*P **P** **11 55 13.6 -0.9**
VRH pmax pmax
comp=Z,140nm,1.4s
P17K Kvichak River 84.47 31 P **P** **11 55 14.8 +0.5**
baz=262
Q17K Contact Creek 84.62 32 P **P** **11 55 14.9 -0.4**
baz=262
N18K Kilae Creek 84.95 29 P **P** **11 55 17.4 +0.5**
baz=262
P18K Big Mountain, 85.11 31 P **P** **11 55 17.6 -0.1**
baz=263
GCSA Galena City Sc 85.11 25 P **P** **11 55 18.2 +0.7**
baz=261
Q18K Katmai Hardscr 85.13 31 P **P** **11 55 17.3 -0.5**
baz=263
O18K Koktuh Hills 85.18 30 P **P** **11 55 18.1 +0.2**
baz=263
TTA Tatalina 85.21 27 P **P** **11 55 18.1 0.0**
baz=262,SNR=7.3
SII Sitkinak Islan 85.33 33 P **P** **11 55 19.0 +0.2**
baz=264
KIBK Kibwezi 85.49 268 IAmb IAmb 11 55 26.1
comp=Z,20nm,1.1s
L19K White Mountain 85.64 28 P **P** **11 55 20.4 +0.2**
baz=263,SNR=7.6
N19K Bonanza Creek 85.65 29 IAmb IAmb 11 55 22.4
comp=Z,20nm,1.1s
N19K Bonanza Creek 85.65 29 P **P** **11 55 20.8 +0.4**
baz=263,SNR=9.4
M19K Big River Lodg 85.83 28 P **P** **11 55 21.3 +0.2**
baz=263
Q19K Cape Douglas, 85.87 31 P **P** **11 55 19.8 -1.6**
baz=264
OHAK Old Harbor 85.89 33 P **P** **11 55 21.0 -0.4**
baz=264
VSR Storozhevoye 86.06 321 *e*P **P** **11 55 21.5 -0.9**
VSR pmax pmax
comp=Z,80nm,0.6s
VORR Voronezh 86.07 322 *e*P **P** **11 55 22.5 +0.1**
L20K Farewell, AK 86.13 27 P **P** **11 55 23.0 +0.4**
baz=264,SNR=7.0
K20K Telida 86.14 27 IAmb IAmb 11 55 25.5
comp=Z,31nm,1.8s
K20K Telida 86.14 27 P **P** **11 55 23.3 +0.7**
baz=263
J20K Nowinta River 86.20 26 P **P** **11 55 23.1 +0.3**
baz=263,SNR=9.3
KMBO Kilima Mbogo 86.27 269 P **P** **11 55 25.6 +1.0**
comp=Z,15nm,1.0s,baz=61,slow=5.9,SNR=13
comp=Z,15nm,1.0s
KMBO Kilima Mbogo 86.27 269 P **P** **11 55 25.2 +0.6**
KMBO IAmb IAmb 11 55 27.1
comp=Z,42nm,1.2s
KMBO Kilima Mbogo 86.27 269 P **P** **11 55 25.2 +0.6**
KMBO pmax pmax
comp=Z,42nm,1.3s
KMBO Kilima Mbogo 86.27 269 *i* P **P** **11 55 25.6 +1.0**
SNR=12
A21K Barrow 86.28 19 P **P** **11 55 23.3 +0.3**
baz=260
LPSR Galich'ya Gora 86.31 323 *e*P **P** **11 55 22.1 -1.5**
LPSR pmax pmax
comp=Z,70nm,0.8s
KDAK Kodiak Island 86.31 32 P **P** **11 55 23.4 -0.1**
baz=265
M20K Styx River 86.42 28 IAmb IAmb 11 55 25.8
comp=Z,16nm,1.2s
M20K Styx River 86.42 28 P **P** **11 55 24.2 +0.1**
baz=264,SNR=8.6
Q20K Shuyak Island 86.48 31 P **P** **11 55 24.1 -0.2**
baz=265
O20K Slope Mountain 86.49 30 P **P** **11 55 24.0 -0.5**
baz=265
IMAR Indian Mountai 86.58 24 pP pP 11 56 27.2 +0.1
KLMR Klimovskoe 86.63 331 *e*P **P** **11 55 22.7 -2.2**
KLMR *e* 11 58 47.3
KLMR *e*SS SS 12 11 20.1 -6.2
KLMR pmax pmax
comp=Z,63nm,0.5s
KLMR Klimovskoe 86.63 331 *e*P **P** **11 55 22.8 -2.2**
KLMR AMP 11 55 28.4
comp=Z,63nm,0.5s
KLMR *e*pP **pP** **11 56 24.4 -3.6**
KLMR *e*PP **PP** **11 58 47.4 -3.5**
KLMR *e*SS **SS** **12 11 20.2 -6.1**
KLMR *e*SS **SS** **12 11 20.2 -6.1**
G21K Allakaket 86.73 23 P **P** **11 55 25.1 -0.3**
baz=264
SPCR Spurr Chakacha 86.79 29 P **P** **11 55 25.2 -0.7**
baz=265
F21K Alatna River 86.82 23 P **P** **11 55 25.4 -0.4**
baz=264
ANN Anapa 86.86 315 *e*P **P** **11 55 24.8 -1.6**
ANN *e*S **SKSac** **12 05 24.5 -3.4**
ANN pmax pmax
comp=Z,59nm,0.6s
ASF Jabal al Asfar 86.87 302 P **P** **11 55 27.5 +0.6**
comp=Z,12nm,0.5s,baz=111,slow=0.7,SNR=12
comp=Z,12nm,0.5s
H21K Melozitna Rive 86.93 24 P **P** **11 55 26.2 -0.2**
baz=264,SNR=15
PPLA Purkeypile 86.95 27 P **P** **11 55 26.5 -0.2**
baz=265
HOM Homer 86.95 30 P **P** **11 55 25.8 -0.8**
baz=266
CHUM Lake Minchumin 86.97 26 P **P** **11 55 26.5 -0.1**
baz=265
CAST Castle Rocks 87.04 27 P **P** **11 55 26.7 -0.3**
baz=265
SKT Skwentna 87.18 28 P **P** **11 55 26.2 -1.4**
baz=266,SNR=6.8
I21K Tanana 87.23 25 P **P** **11 55 27.1 -0.6**
baz=265,SNR=7.5
MOS Moscow 87.27 326 *e*P **P** **11 55 25.1 -3.0**
MOS *e**PP **pwP** **11 56 34.6 +1.5**
MOS *e* 11 58 56.4
MOS *e*S **SKSac** **12 05 24.9 -5.0**
MOS *e* 12 05 35.0
MOS pmax pmax
comp=Z,75nm,1.2s
MOS pmax pmax
comp=Z,100nm,1.5s
BRLK Bradley Lake 87.34 30 IAmb IAmb 11 56 35.2
comp=Z,70nm,1.9s
BRSE Bradley Lake S 87.42 30 P **P** **11 55 28.0 -0.8**
baz=266
SUA Susitna One 87.52 29 P **P** **11 55 28.7 -0.7**
baz=266
H22K Ishtalitna Cre 87.54 24 P **P** **11 55 29.6 +0.4**
baz=266,SNR=15
E22K Anaktuvuk Pass 87.54 22 P **P** **11 55 29.4 +0.1**
baz=265
G22K Bettles 87.56 23 P **P** **11 55 28.1 -1.2**
baz=266
BPAW Bear Paw Mtn. 87.58 26 P **P** **11 55 29.1 -0.4**
baz=266,SNR=6.3
MLY Manley 87.74 25 P **P** **11 55 30.2 -0.1**
baz=266,SNR=18
CUT Chulitna 87.80 28 P **P** **11 55 30.6 +0.1**

baz=267
M22K **Willow** 87.83 28 IAmb IAmb 11 55 31.5
comp=Z,24nm,1.1s
M22K **Willow** 87.83 28 P **P** **11 55 30.6 0.0**
baz=267
OBN **Obninsk** 87.84 325↓ *i*P **P**
OBN pmax pmax
comp=Z,108nm,1.7s
TRF **Thorofare Moun** 87.84 27 P **P** **11 55 30.0 -0.9**
baz=267
RC01 **Rabbit Creek A** 87.98 29 P **P** **11 55 30.5 -0.9**
baz=267
GHAJ **Ghor Haditha** 87.99 301 IAmb IAmb 11 55 33.7
comp=Z,18nm,0.8s
D23K **Nanushuk River** 88.02 21 P **P** **11 55 32.1 +0.7**
baz=266,SNR=7.5
SEW **Seward** 88.08 30 P **P** **11 55 31.7 -0.2**
baz=268
COLD **Coldfoot** 88.09 23 P **P** **11 55 32.3 +0.5**
baz=267,SNR=8.5
C23K **Itkillik River** 88.10 20 P **P** **11 55 31.6 -0.2**
baz=266,SNR=7.1
LODK **Lodwar** 88.13 273 IAmb IAmb 11 55 35.5
comp=Z,24nm,1.2s
G23K **Bananza Creek** 88.14 23 P **P** **11 55 32.6 +0.6**
baz=267
MMAI **Mount Meron Ar** 88.14 303 P **P** **11 55 33.5 +0.6**
comp=Z,4.6nm,0.4s,baz=83,slow=8.0,SNR=8.9
comp=Z,4.6nm,0.4s
H23K **Yukon River** 88.29 24 IAmb IAmb 11 55 34.7
comp=Z,18nm,1.2s
H23K pwP 11 56 37.3 -1.6
H23K **Yukon River** 88.29 24 P **P** **11 55 33.2 +0.4**
baz=267,SNR=12
PMR **Palmer** 88.30 29 P **P** **11 55 32.2 -0.6**
baz=268
I23K **Minto, Yukon-K** 88.33 25 IAmb IAmb 11 55 34.6
comp=Z,28nm,1.1s
I23K pwP 11 56 36.5 -2.6
I23K **Minto, Yukon-K** 88.33 25 P **P** **11 55 33.2 +0.3**
baz=268,SNR=26
TOLK **Toolik Lake Re** 88.41 21 pwP 11 56 37.5 -1.8
TOLK **Toolik Lake Re** 88.41 21 P **P** **11 55 33.6 +0.2**
baz=267
NEA2 **Nenana** 88.44 26 P **P** **11 55 32.9 -0.6**
baz=268
MCK **McKinley** 88.46 26 P **P** **11 55 32.7 -1.0**
baz=268,SNR=5.1
RND **Reindeer** 88.49 27 IAmb IAmb 11 55 34.2
comp=Z,15nm,1.2s
EIL **Elat** 88.50 300 P **P** **11 55 32.6 -2.0**
comp=Z,7.8nm,0.8s,baz=60,slow=3.4,SNR=3.9
comp=Z,7.8nm,0.8s
WAT1 **Susitna Watana** 88.61 27 P **P** **11 55 33.6 -0.8**
baz=268
KNK **Knik Glacier** 88.61 29 P **P** **11 55 33.8 -0.6**
baz=268
SML **Sawmill** 88.68 28 P **P** **11 55 33.8 -1.0**
baz=269,SNR=5.2
D24K **Happy Valley** 88.70 21 P **P** **11 55 33.7 -0.9**
baz=268
C24K **Franklin Bluff** 88.76 20 P **P** **11 55 34.4 -0.4**
baz=268
WRH **Wood River Hil** 88.86 26 IAmb IAmb 11 55 35.9
comp=Z,19nm,1.3s
COLA **College** 88.97 25↓ *e*P **P** **11 55 36.6 +0.7**
COLA pmax pmax
comp=Z,3.0nm,1.2s
M23K **Glacier View** 88.97 28 P **P** **11 55 35.9 -0.1**
baz=269
H24K **Noodor Dome** 88.97 24 IAmb IAmb 11 55 38.9
comp=Z,25nm,1.6s
H24K **Noodor Dome** 88.97 24 P **P** **11 55 35.8 -0.2**
baz=269,SNR=10.0
WAT6 **Susitna Watana** 88.98 28 P **P** **11 55 35.3 -1.0**
baz=269,SNR=9.4
LVZ **Lovozero** 89.11 338 P **P** **11 55 35.5 -1.1**
LVZ IAmb IAmb 11 55 41.0
comp=Z,20nm,1.1s
LVZ **Lovozero** 89.11 338↓ *e*P **P** **11 55 35.2 -1.4**
LVZ pmax pmax
comp=Z,23nm,1.2s
POKR **Poker Plat Res** 89.15 25 P **P** **11 55 36.9 +0.1**
baz=269
DHY **Denali Highway** 89.15 27 P **P** **11 55 36.5 -0.5**
baz=269
SCM **Sheep Creek Mo** 89.16 28 IAmb IAmb 11 55 40.6
comp=Z,11nm,1.0s
SCM **Sheep Creek Mo** 89.16 28 P **P** **11 55 36.8 -0.2**
baz=269
GLI **Glacier Island** 89.27 29 P **P** **11 55 37.0 -0.5**
baz=270
HDA **Harding Lake** 89.35 26 P **P** **11 55 36.6 -1.2**
baz=270
ILAR **Eielson Array** 89.38 25 P **P** **11 55 36.1 -1.8**
comp=Z,0.7nm,0.4s,baz=256,slow=4.2,SNR=16
ILAR pP **pP** **11 56 40.5 -0.3**
comp=Z,0.8nm,0.9s,baz=237,slow=5.8,SNR=2.7
comp=Z,0.7nm,0.4s
D25K **Kavik River** 89.57 21 P **P** **11 55 38.2 -0.6**
baz=270
APA **Apatity** 89.58 337↓ *i*P **P** **11 55 35.6 -3.1**
APA pmax pmax
comp=Z,7.0nm,0.8s
BRTR **Keskin Array B** 89.59 310 P **P** **11 55 38.9 -0.8**
comp=Z,3.7nm,0.9s,baz=134,slow=6.2,SNR=5.6
comp=Z,3.7nm,0.9s
Q23K **Middleton Isla** 89.64 31 P **P** **11 55 38.9 -0.2**
baz=270
M24K **Tolsona, Glenn** 89.70 28 P **P** **11 55 40.0 +0.5**
baz=270,SNR=5.9
KLU **Klutina** 89.83 29 P **P** **11 55 39.8 -0.4**
baz=271
K24K **Donnelly Dome** 89.87 26 P **P** **11 55 39.9 -0.4**
baz=271
EYAK **Cordova Ski Ar** 89.93 30 P **P** **11 55 40.3 -0.2**
baz=271
PAX **Paxson** 90.02 27 P **P** **11 55 40.5 -0.6**
baz=271,SNR=7.2
J25K **Salcha River,** 90.03 26 P **P** **11 55 40.4 -0.6**
baz=271
HARP **HAARP** 90.18 28 P **P** **11 55 40.5 -1.2**
baz=271
BMAR **Burnt Mountain** 90.27 23 pwP 11 56 45.9 -2.6
RIDG **Independent Ri** 90.28 26 IAmb IAmb 11 55 43.2
comp=Z,15nm,1.2s
RIDG **Independent Ri** 90.28 26 P **P** **11 55 41.2 -1.0**
baz=272
QSPA **South Pole Qui** 90.43 180 P **P** **11 55 43.2 +0.4**
comp=Z,1.7nm,0.5s,baz=323,slow=5.1,SNR=21
comp=Z,1.7nm,0.5s
QSPA **South Pole Qui** 90.43 180 P **P** **11 55 43.6 +0.8**
QSPA IAmb IAmb 11 57 00.3
comp=Z,45nm,1.9s
N25K **Chitina, Valde** 90.46 29 IAmb IAmb 11 55 44.9
comp=Z,14nm,1.2s
N25K **Chitina, Valde** 90.46 29 P **P** **11 55 42.8 -0.3**
baz=272,SNR=6.1
BMRM **Bremner River** 90.48 29 P **P** **11 55 43.0 -0.1**
baz=272
C27K **Jago River** 90.50 20 P **P** **11 55 42.8 -0.2**
baz=273
SCRK **Sand Creek** 90.65 26 P **P** **11 55 43.7 -0.3**
baz=272
J26L **Joseph Creek** 90.81 26 P **P** **11 55 44.0 -0.7**
baz=273
VALR **Valaam** 90.83 331 *c i*P **P** **11 55 43.3 -1.3**
VALR pmax pmax
comp=Z,31nm,1.0s
GLB **Gilahina Butte** 90.85 29 IAmb IAmb 11 55 46.4
comp=Z,15nm,1.3s
I26K **Coal Creek Min** 90.94 25 IAmb IAmb 11 55 47.2
comp=Z,26nm,1.3s
I26K **Coal Creek Min** 90.94 25 P **P** **11 55 45.0 -0.2**
baz=273
L26K **Log Cabin Wild** 90.99 27 P **P** **11 55 45.1 -0.3**
baz=273
M26K **Nabesna, AK** 91.18 28 IAmb IAmb 11 55 48.1
comp=Z,14nm,1.4s
M26K **Nabesna, AK** 91.18 28 P **P** **11 55 46.0 -0.4**
baz=273,SNR=6.1
MCARA **McCarthy VSAT** 91.23 29 P **P** **11 55 46.3 -0.2**
baz=273
CRQE **Cirque** 91.23 29 P **P** **11 55 46.6 -0.1**
baz=273
K27K **Chicken** 91.49 26 IAmb IAmb 11 55 50.4
comp=Z,26nm,1.2s
K27K **Chicken** 91.49 26 P **P** **11 55 48.2 +0.5**
baz=274
HOPEN **Hopen** 91.50 347 *e*P **P** **11 55 47.7 +0.2**
ISLE **Juniper Island** 91.61 29 IAmb IAmb 11 55 50.3
comp=Z,15nm,1.1s
L27K **Beaver Creek,** 91.67 27 IAmb IAmb 11 55 50.9
comp=Z,12nm,1.1s
L27K **Beaver Creek,** 91.67 27 P **P** **11 55 48.7 +0.1**
baz=274
BCAR **Beaver Creek A** 91.69 27 pwP 11 56 52.7 -2.5
M27K **Edge Creek, AK** 91.70 28 P **P** **11 55 48.0 -0.9**
baz=274,SNR=5.3
MESA **MESA** 91.83 30 P **P** **11 55 49.2 -0.4**
baz=274
GRNC **Granite Creek** 91.89 29 IAmb IAmb 11 55 52.0
comp=Z,34nm,1.4s
GRNC pwP 11 56 54.2 -1.6
BARN **Barnard Glacie** 91.91 29 IAmb IAmb 11 55 52.2
comp=Z,24nm,1.2s
BARN pwP 11 56 52.9 -3.0
YAH **Yahtse** 91.92 30 IAmb IAmb 11 55 52.3
comp=Z,19nm,1.2s
CTG **Chitna Glacier** 92.07 29 P **P** **11 55 51.5 +0.8**
baz=275,SNR=10
BVCY **Beaver Creek** 92.17 28 P **P** **11 55 50.9 0.0**
baz=275
LOGN **Logan Glacier** 92.25 29 IAmb IAmb 11 55 53.6
comp=Z,15nm,1.2s
AKASG **Malin Array Be** 92.34 321 P **P** **11 55 50.4 -1.5**
comp=Z,1.3nm,0.4s,baz=68,slow=5.1,SNR=6.9
comp=Z,1.3nm,0.4s
AKASG **Malin Array Be** 92.34 321 *i* P **P** **11 55 50.7 -1.2**
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKBB **Malin Array Si** 92.34 321↓ *e*P **P** **11 55 50.6 -1.3**
AKBB pmax pmax
comp=Z,9.0nm,0.9s
ARA0 **ARCESS Array S** 92.34 340 *e*P **P** **11 55 50.1 -1.5**
ARCES **ARCESS Array B** 92.34 340 P **P** **11 55 50.2 -1.3**
comp=Z,3.5nm,0.4s,baz=87,slow=5.2,SNR=31
ARCES PKKP **PKKPdf** **12 13 05.2 +0.7**
comp=Z,0.2nm,0.4s,baz=270,slow=3.6,SNR=5.1
comp=Z,3.5nm,0.4s
ARCES **ARCESS Array B** 92.34 340 IAmb IAmb 11 59 36.0
comp=Z,16nm,1.3s
YUK3 **Moose Creek** 92.42 28 P **P** **11 55 52.8 +0.5**
baz=276,SNR=5.6
DAWY **Dawson** 92.66 26 IAmb IAmb 11 55 55.5
comp=Z,11nm,1.1s
DAWY **Dawson** 92.66 26 P **P** **11 55 53.0 -0.1**
baz=277
PINM **Pinnacle** 92.69 30 P **P** **11 55 52.9 -0.5**
baz=276
MBAR **Mbarara** 92.78 269 P **P** **11 55 54.5 -0.4**
comp=Z,2.3nm,0.2s,baz=21,slow=8.6,SNR=1.5
comp=Z,2.3nm,0.2s
HAMF **Hammerfest** 92.79 341 *e*P **P** **11 55 52.2 -1.3**
MNK **Minsk** 92.88 324 *i* P **P** **11 55 51.9 -2.3**
MNK *i* 11 59 39.5
MNK *i* PPP PPP 12 01 40.0
MNK *i* S **SKSac** **12 05 58.8 -3.5**
MNK *i* SS **SS** **12 12 54.4 -2.2**
MNK *i* SSS SSS 12 16 37.7
MNK pmax pmax
comp=N,26nm,0.9s
MNK pmax pmax
comp=Z,41nm,1.1s
MNK pmax pmax
comp=E,6.0nm,1.1s
MNK MLR MLR
comp=N,357nm,15.0s
MNK MLR MLR
comp=E,65nm,25.0s
MNK MLR MLR
comp=Z,3μm,14.0s
MNK **Minsk** 92.88 324 *i* P **P** **11 55 52.0 -2.3**
comp=E,6.0nm,1.1s
MNK *i* P **P** **11 55 52.0 -2.3**
comp=N,26nm,0.9s
MNK *i* P **P** **11 55 52.0 -2.3**
comp=Z,41nm,1.1s,baz=85
MNK *i* PP **PP** **11 59 39.5 -0.9**
MNK *i* PPP PPP 12 01 40.0
MNK *i* S **SKSac** **12 05 58.9 -3.5**
MNK *i* SS **SS** **12 12 54.4 -2.2**
MNK *i* SSS SSS 12 16 37.8
MNK *i* LRM MLR 12 39 13.5
comp=N,357nm,15.5s
MNK *i* LRM MLR 12 39 29.0
comp=E,65nm,24.5s
MNK *i* LRM MLR 12 39 50.9
comp=Z,3μm,13.5s
SPA0 **Spitsbergen Ar** 93.00 349 *e*P **P** **11 55 53.9 -0.5**
SPITS **Spitsbergen Ar** 93.00 349 P **P** **11 55 53.2 -1.2**
comp=Z,8.3nm,0.4s,baz=95,slow=9.3,SNR=41
comp=Z,8.3nm,0.4s
FINES **FINESS Array B** 93.13 331 P **P** **11 55 53.6 -1.6**
comp=Z,3.9nm,0.5s,baz=101,slow=4.8,SNR=30
comp=Z,3.9nm,0.5s
FINES **FINESS Array B** 93.13 331 *i* P **P** **11 55 53.9 -1.4**
FINES pmax pmax
comp=Z,4.0nm,0.5s
VSU **Vasula** 93.13 328 *de*P **P** **11 55 54.7 -0.6**
VSU pmax pmax
comp=Z,61nm,0.9s
VSU **Vasula** 93.13 328 *e*P **P** **11 55 55.7 +0.4**
PNL **Peninsula** 93.16 30 P **P** **11 55 54.1 -1.4**
baz=276
KTK1 **Kautokeino** 93.22 339 *e*P **P** **11 55 55.3 -0.3**
YUK4 **Talbot Arm** 93.33 29 P **P** **11 55 55.8 -0.7**
baz=277
IDID **Didziasalis** 93.46 325 *e*P **P** **11 55 57.9 +1.0**
EPYK **Eagle Plains** 93.46 23 IAmb IAmb 11 55 58.6
comp=Z,25nm,1.1s
EPYK **Eagle Plains** 93.46 23 P **P** **11 55 56.0 -0.8**
baz=279
NACGM **Naroch** 93.47 325↓ *e*P **P** **11 55 57.0 0.0**
baz=83
YUK6 **Outpost Mounta** 93.52 29 P **P** **11 55 56.2 -1.2**
baz=277
KBS **Kingsbay** 93.58 350 *e*P **P** **11 55 57.4 +0.3**
IIGN **Ignalina** 93.75 325 *e*P **P** **11 55 59.4 +1.1**
ISAL **Salakas** 93.78 326 *e*P **P** **11 55 58.7 +0.4**
HYT **Haines Junctio** 93.95 29 P **P** **11 56 00.1 +0.9**
baz=278,SNR=11
M30M **Minto, Yukon** 94.03 27 IAmb IAmb 11 56 01.8
comp=Z,19nm,1.1s
M30M **Minto, Yukon** 94.03 27 P **P** **11 55 59.9 +0.5**
baz=279
N30M **Ashikik Lake** 94.06 28 P **P** **11 56 00.7 +1.1**
baz=278,SNR=13
INK **Inuvik** 94.32 21 P **P** **11 55 59.7 -0.8**
comp=Z,2.3nm,0.4s,baz=290,slow=4.9,SNR=8.8
comp=Z,2.3nm,0.4s
INK **Inuvik** 94.32 21 IAmb IAmb 11 56 01.6
comp=Z,5.5nm,0.8s
INK **Inuvik** 94.32 21 P **P** **11 55 59.9 -0.7**
baz=282
P30M **Million Dollar** 94.32 30 P **P** **11 56 01.5 +0.6**
baz=278
TRO **Tromso** 94.59 340 *e*P **P** **11 56 01.0 -0.8**
O30N **Mendenhall** 94.64 29 P **P** **11 56 02.5 +0.1**
baz=279,SNR=9.3
N31M **Braeburn, Yuko** 94.67 28 pwP 11 57 06.8 -1.7
N31M **Braeburn, Yuko** 94.67 28 P **P** **11 56 03.1 +0.6**
baz=280
PLBC **Pleasant Camp** 94.72 30 P **P** **11 56 02.4 -0.3**
baz=279
MLR **Muntele Rosu** 94.96 316 P **P** **11 56 03.4 -0.8**
comp=Z,4.8nm,0.8s,baz=120,slow=1.3,SNR=4.6
comp=Z,4.8nm,0.8s
PABE **Paberze** 95.00 326 *e*P **P** **11 56 04.0 +0.1**
M31M **Drury Creek, Y** 95.19 27 IAmb IAmb 11 56 06.5
comp=Z,8.2nm,1.1s
M31M **Drury Creek, Y** 95.19 27 P **P** **11 56 04.8 +0.1**
baz=281
BURAR **Bucovina Array** 95.23 318 IAmb IAmb 11 56 07.1
comp=Z,9.3nm,1.0s
SKAG **Skagway** 95.24 30 P **P** **11 56 05.4 +0.4**
baz=280
BUR08 **Bucovina Ar. S** 95.24 318 IAmb IAmb 11 56 06.9
comp=Z,10nm,1.1s
WHY **Whitehorse** 95.25 29 P **P** **11 56 04.9 -0.3**
baz=280,SNR=12
RAF **Rauma** 95.25 331 *e*P **P** **11 56 05.6 +0.7**
SIT **Sitka** 95.65 33 P **P** **11 56 06.4 -0.4**
baz=280
N32M **Quiet Lake** 96.02 28 P **P** **11 56 08.9 +0.3**
baz=282,SNR=19
P32M **Atlin** 96.02 30 P **P** **11 56 08.3 -0.3**
baz=281
P33M **Teslin, Yukon** 96.34 29 IAmb IAmb 11 56 11.9
comp=Z,7.1nm,1.1s
P33M **Teslin, Yukon** 96.34 29 P **P** **11 56 10.2 +0.1**
baz=282,SNR=6.5
STEI **Steigen** 96.34 339 *e*P **P** **11 56 08.4 -1.3**
FAUS **Fauske** 96.48 338 *e*P **P** **11 56 09.4 -1.0**
LOF **Lofoten** 96.89 339 *e* P **11 56 06.0 -6.3**
CRAG **Craig** 97.15 34 P **P** **11 56 13.6 -0.1**
baz=281
MOR8 **Moi Rana** 97.17 337 *e*P **P** **11 56 11.3 -2.3**
KLNR **Kaliningrad** 97.28 325↑ *e*P Pdif 11 56 14.7 +0.4
KLNR pmax pmax
comp=Z,62nm,1.0s
C36M **Paulatuk** 97.30 19 P **P** **11 56 13.6 -0.5**
baz=291
BOSA **Boshof** 97.50 241 P **P** **11 56 14.9 -1.1**
comp=Z,1.1nm,0.5s,baz=106,slow=4.0,SNR=5.5
comp=Z,1.1nm,0.5s
CRVS **Cervenica-Dubn** 97.54 319 *e*P Pdif 11 56 16.7 +1.0
CRVS **Cervenica-Dubn** 97.54 319 *e*PDIFF Pdif 11 56 16.7 +1.0
KONS **Konsvik** 97.57 338 *e*Pdif Pdif 11 56 15.6 +0.2
NSS **Namsos** 98.68 336 *e*Pdif Pdif 11 56 18.5 -1.9
VYHS **Vyhne** 99.33 319 *e*P **Pdif** **11 56 26.4 +2.8**
VYHS **Vyhne** 99.33 319 *e*PDIFF **Pdif** **11 56 26.4 +2.8**
HFS **Hagfors** 99.33 332 P **Pdif** **11 56 21.5 -1.8**
comp=Z,3.0nm,0.4s,baz=114,slow=3.6,SNR=19
comp=Z,3.0nm,0.4s
TROLL **Troll, Antarti** 99.69 196 PKiKP **PKiKP** **12 00 53.4 +1.3**
NC602 **NORSAR Array S** 100.15 332 *e*Pdif **Pdif** **11 56 23.1 -3.9**
NB2 **NORSAR Subarra** 100.20 333 P **Pdif** **11 56 25.6 -1.7**
baz=73,slow=4.4
NB2 **NORSAR Subarra** 100.20 333 P **Pdif** **11 56 25.6 -1.7**
comp=Z,2.8nm,0.9s,baz=73,slow=4.4
NOA **NORSAR Array B** 100.20 333 P **Pdif** **11 56 26.2 -1.1**
comp=Z,0.4nm,0.5s,baz=75,slow=6.7,SNR=3.8
SNAA **Sanae** 101.29 195 P **Pdif** **11 56 32.8 +0.8**
comp=Z,0.6nm,0.5s,baz=146,slow=9.9,SNR=6.0
SKAR **Skarsiia** 101.66 333 *e*Pdif **Pdif** **11 56 33.3 -0.5**
YKA **Yellowknife Ar** 103.74 24 PKiKP **PKiKP** **12 00 59.0 -0.5**
comp=Z,0.9nm,0.9s,baz=308,slow=2.0,SNR=3.6
YKA PKKPbc **PKKPbc** **12 12 32.4 -3.9**
comp=Z,0.5nm,0.4s,baz=121,slow=3.6,SNR=14
K02D **Willamette Mer** 106.26 45 P **PKiKP** **12 01 03.8 -1.0**
baz=286
J05D **Fort Rock, OR** 107.79 44 P **PKiKP** **12 01 07.1 -0.6**
baz=288
HLID **Hailey** 112.33 42 P **PKiKP** **12 01 16.6 +0.2**
baz=294
EGMT **Eagleton** 113.27 36 P **PKiKP** **12 01 18.1 +0.2**
baz=299
BOZ **Bozeman (W)** 113.27 39 P **PKiKP** **12 01 18.0 -0.1**
baz=297
TPNV **Topopah Spring** 113.46 49 P **PKiKP** **12 01 18.1 -0.6**
baz=290
R11A **Troy Canyon, C** 113.48 47 P **PKiKP** **12 01 18.7 -0.1**
baz=291
PFO **Pinyon Flats O** 114.38 52 P PKPdf 12 01 20.4 -0.1
baz=288
TPFO **Pinon Flats** 114.38 52 P PKPdf 12 01 20.3 -0.2
baz=288
MONP2 **Monument Peak** 114.63 53 P **PKiKP** **12 01 21.7 +0.6**
baz=288
GMRC **Granite Mounta** 114.63 51 P **PKiKP** **12 01 21.5 +0.5**
baz=289
DUG **Dugway, Tooele** 114.78 45 P PKPdf 12 01 21.7 +0.6
baz=294
IKP **In-Ko-Pah, Jac** 114.95 53 P PKPdf 12 01 22.2 +0.6
baz=288
RLMT **Red Lodge** 114.96 38 P PKPdf 12 01 22.9 +1.4
baz=299
IRM **Iron Mountain** 115.24 52 P **PKPdf** **12 01 22.6 +0.6**
baz=289
BW06 **Boulder Array** 115.88 41 P **PKiKP** **12 01 23.9 +0.6**
baz=297
PDAR **Pinedale Array** 115.88 41 PKP **PKiKP** **12 01 23.4 +0.1**
comp=Z,0.3nm,0.3s,baz=29,slow=1.6,SNR=4.7
PDAR PKKPbc **PKKPbc** **12 11 54.8 -2.1**
comp=Z,0.4nm,0.4s,baz=116,slow=6.6,SNR=5.8
ESDC **Sonseca Array** 117.65 316 PP **PP** **12 02 43.1 +0.2**
comp=Z,2.4nm,1.1s,baz=54,slow=5.7,SNR=6.9
WUAZ **Wupatki** 117.66 49 P **PKiKP** **12 01 27.6 +0.7**
baz=293
O20A **White River Ci** 117.97 43 **PKiKP** **12 01 27.9 +0.5**
O20A **White River Ci** 117.97 43 P **PKiKP** **12 01 28.3 +0.9**
baz=297
RSSD **Black Hills** 118.69 37 P **PKiKP** **12 01 28.9 +0.2**
baz=303
W18A **Petrified Fore** 119.04 49 P **PKiKP** **12 01 29.7 +0.1**
baz=294
MVCO **Mesa Verde** 119.08 46 P **PKiKP** **12 01 30.3 +0.6**
baz=296
ULM **Lac du Bonnet** 119.30 28 PKP **PKPdf** **12 01 28.8 -0.6**
comp=Z,2.8nm,0.4s,baz=263,slow=7.9,SNR=3.6
TUC **Tucson** 119.31 52 P **PKiKP** **12 01 30.2 +0.1**
baz=291
ISCO **Idaho Springs** 119.90 42 P **PKPdf** **12 01 31.2 -0.1**
baz=299
S22A **4UR Ranch, Cre** 120.04 45 P **PKPdf** **12 01 31.2 -0.3**
baz=297
TORD **Torodi Ar. Bea** 120.77 286 PKP **PKPdf** **12 01 32.6 -0.5**
comp=Z,2.7nm,0.6s,baz=82,slow=1.6,SNR=20
TORD pPKP **pPKPdf** **12 02 37.7 -2.8**
comp=Z,2.4nm,1.0s,baz=97,slow=1.6,SNR=4.6
SDCO **Great Sand Dun** 120.97 44 P **PKiKP** **12 01 34.2 +0.8**
baz=298
ANMO **Albuquerque** 121.56 48 *c i*PKIKP **PKiKP** **12 01 36.3 +1.7**
ANMO pmax pmax
comp=Z,13nm,2.5s
ANMO **Albuquerque** 121.56 48 P **PKiKP** **12 01 35.0 +0.5**
baz=296
121A **Cookes Peak, D** 121.56 51 P **PKiKP** **12 01 35.1 +0.4**
baz=294
T25A **Trinidad** 122.02 44 P **PKiKP** **12 01 36.2 +0.8**
baz=299
RPN **Rapa Nui** 122.83 122 PKP **PKPdf** **12 01 36.2 -0.5**
comp=Z,42nm,0.8s,baz=349,slow=5.1,SNR=1.8
EYMN **Ely** 122.97 27 **PKPdf** **12 01 35.9 -0.6**
EYMN **Ely** 122.97 27 P **PKPdf** **12 01 36.3 -0.2**
baz=317
ECSD **EROS Data Cent** 123.24 34 P **PKiKP** **12 01 37.3 -0.1**
baz=310
MNTX **Cornudas Mount** 123.77 51 P **PKiKP** **12 01 39.9 +1.2**
baz=295
BGNE **Belgrade** 123.79 37 P **PKiKP** **12 01 39.1 +0.6**
baz=307
SCHQ **Schefferville** 124.20 7 PKP **PKPdf** **12 01 38.4 -0.2**
comp=Z,4.2nm,0.5s,baz=28,slow=2.4,SNR=9.6
SPMN **Marine on St.** 124.28 30 P **PKiKP** **12 01 39.8 +0.4**
baz=314
CBKS **Cedar Bluff** 124.30 40 P **PKiKP** **12 01 40.0 +0.3**
baz=304
TXAR **Lajitas Array** 126.10 52 PKP **PKiKP** **12 01 43.9 +0.3**
comp=Z,1.0nm,0.9s,baz=182,slow=1.0,SNR=6.3
KSU1 **Kansas State U** 126.12 38 P **PKiKP** **12 01 43.1 -0.1**
baz=307
JFWS **Jewell Farm** 127.22 31 P **PKiKP** **12 01 45.2 0.0**
baz=316
JCT **Junction City** 128.59 49 P **PKiKP** **12 01 48.8 +0.4**
baz=299
S39A **Bolivar** 129.02 38 PKPdf **PKPdf** **12 01 48.2 -0.1**
CCM **Cathedral Cave** 130.03 36 P **PKiKP** **12 01 51.4 +0.3**
baz=312
W39A **Magazine** 130.28 41 P **PKiKP** **12 01 51.9 +0.2**
baz=308
MIAR **Mount Ida** 130.81 41 P **PKiKP** **12 01 53.5 +0.8**
baz=307
W41B **Gary Mavity, V** 131.28 40 P **PKiKP** **12 01 53.3 -0.4**
baz=309
LONY **Lake Ozonia** 132.28 17 P **PKiKP** **12 01 55.3 -0.1**
baz=335
P49A **Miami Univ. Ec** 132.52 30 P **PKiKP** **12 01 56.5 +0.4**
baz=320
ACSO **Alum Creek Sta** 132.81 28 P **PKiKP** **12 01 57.0 +0.4**
baz=323
M53A **WI Miller and** 132.85 25 P **PKiKP** **12 01 56.6 -0.1**
baz=326
WVT **Waverly** 133.34 35 P **PKiKP** **12 01 57.9 +0.1**
baz=314
LBNH **Lisbon** 133.37 15 P **PKiKP** **12 01 57.9 +0.3**
baz=338
OXF **Oxford** 133.49 38 P **PKiKP** **12 01 58.0 -0.2**
baz=312
O53A **New Philadelph** 133.59 26 P **PKiKP** **12 01 58.5 +0.2**
baz=325
P52A **Corning** 133.68 28 P **PKPdf** **12 01 57.4 +0.3**

baz=323
BINY Binghamton 133.99 20 P **PKiKP 12 01 59.4 +0.4**
baz=332
SSPA Standing Stone 134.66 23 P **PKiKP 12 01 59.9 -0.5**
baz=329
L61B Northampton 134.82 17 P **PKiKP 12 02 00.3 -0.4**
baz=337
HRV Adam Dziewonsk 135.08 16 P **PKiKP 12 02 01.0 -0.2**
baz=338
PAL Palisades 135.76 19 P **PKiKP 12 02 02.1 -0.4**
baz=335
LRAL Lakeview Retre 135.97 38 P **PKiKP 12 02 02.8 -0.4**
baz=313
KMSC Kings Mountain 137.62 31 P **PKiKP 12 02 06.0 -0.5**
baz=322
GOGA Godfrey 137.78 34 P **PKPdf 12 02 05.5 +0.7**
baz=318
PLCA Paso Flores 137.97 164 PKP **PKiKP 12 02 07.3 +0.1**
comp=Z,1.2nm,0.8s,baz=157,slow=5.8,SNR=4.6
PLCA SKP 12 05 15.6
comp=Z,4.0nm,0.8s,baz=194,slow=4.0,SNR=6.9
BO01 Tunca 143.62 159 PKPdf PKPbc 12 02 13.8 +0.3
BO04 La Punta 144.15 160 PKPdf 12 02 15.9 -0.5
RTLS Leoncito 146.60 160 *i* P **PKPab 12 02 24.0 -0.5**
ZON Zonda 147.04 161 *i* P **PKPbc 12 02 23.6 -0.3**
CO01 Juntas del Tor 147.95 157 PKPab **PKiKP 12 02 27.8 -0.5**
AVFE Valle Fertil 148.25 162 *i* P **PKiKP 12 02 28.0 -0.6**
APLL PUNTA DE LOS L 148.78 163 *i* P **PKPbc 12 02 29.0 +0.6**
PLTB Pedras Altas 148.79 185 *e*P **PKPdf 12 02 23.9 -0.3**
ACLC CERRO LA CRUZ 149.55 162 *i* P **PKiKP 12 02 31.2 -0.3**
JTS Las Juntas de 149.72 68*c i*PKP2 **PKiKP 12 02 33.0 +1.0**
CPSB Cacapava Do Su 150.12 185 *e*P **PKPdf 12 02 28.0 +1.6**
AC02 Maricunga 151.13 156 *i* P **PKiKP 12 02 36.3 +1.1**
CPUP Villa Florida 154.31 178 PKP **PKPdf 12 02 33.1 +0.5**
comp=Z,2.7nm,0.9s,baz=225,slow=1.4,SNR=3.1
TRCB Terra Rica 157.53 189 *e*P **PKPdf 12 02 37.4 +0.4**
GDU01 Guandu, BA 158.72 231 *e*P **PKPdf 12 02 38.9 +0.4**
LPAZ La Paz 160.56 144 PKP **PKPdf 12 02 41.4 0.0**
comp=Z,1.9nm,1.0s,baz=196,slow=7.4,SNR=5.0
LPAZ PKPab **PKPab 12 03 23.8 -0.3**
comp=Z,2.5nm,0.7s,baz=195,slow=4.9,SNR=6.1
BDFB Brasilia 162.79 209 PKPab **PKPab 12 03 34.0 +0.8**
comp=Z,1.8nm,0.3s,baz=95,slow=4.2,SNR=3.4
SIV San Ignacio 163.96 164 PKP **PKPdf 12 02 42.8 -1.3**
comp=Z,3.4nm,0.9s,baz=225,slow=2.7,SNR=4.9

KOLA 30 11:49:23.8, 67.59N×33.84E, h0km, ML2.0, 1D, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
APA	**Apatity**	**0.17**	**264**	P		Pg	11 49 27.1	+0.1
APA				S		Sg	11 49 29.5	+0.4
APA	**Apatity**	**0.17**	**264**	⇓*i*P	KIKP	Pg	11 49 26.9	-0.1
APA0	**Apatity Array**	**0.33**	**274**	P		Pg	11 49 29.5	-0.5
APA0				S		Sg	11 49 33.5	-0.8
LVZ	**Lovozero**	**0.44**	**44**	P		Pg	11 49 31.9	-0.2
LVZ				S		Sg	11 49 37.5	-0.3
TERR	**Teriberka**	**1.69**	**16**	P		Pn	11 49 53.1	-1.3
TERR				S		Sn	11 50 14.4	-2.3
PRVG	**Vayda Guba**	**2.25**	**345**	P		Pn	11 50 01.8	-0.4
PRVG				S		Sn	11 50 31.1	+0.4
ARCES	**ARCESS Array B**	**3.63**	**306**	P		Pn	11 50 20.3	-0.9

*IDC **30** 12:02:05.4±1.2, 39.35N×73.68E, h0km, mb3.7/7, mbtmp3.6/12, ML3.1/4, MS3.1/1, Error ellipse: s-maj=21.7km s-min=15.8km az=126.0*
*KRNET **30** 12:02:07.4±0.1, 39.50N×73.53E, mb4.3*
*MOS **30** 12:02:07.5±1.2, 39.38N×73.59E, h16km, mb4.0/2, Error ellipse: s-maj=8.6km s-min=5.1km az=84.1*
*SOME **30** 12:02:07.3, 39.57N×73.67E, h5km*
*NNC **30** 12:02:10.5±1.1, 39.62N×73.71E, h0km, mb4.5, mpv4.1, Error ellipse: s-maj=9.3km s-min=5.1km az=171.0*

ISC 30 12:02:04.3±1.3, 39.19N±0.04×73.51E±0.02, h1km±8km, n123, σ1s97/190, mb3.8/10, 31C-15D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**1.36**	**283**	⇑*e*P		**Pb**	**12 02 32.7**	**+1.9**
DRK	baz=70			⇑*e*S		**Sn**	**12 02 51.1**	**+1.5**
OHH	**Osh**	**1.45**	**337**	⇓*e*P		**Pn**	**12 02 29.6**	**-2.2**
OHH	baz=31			⇓*e*S		**Sb**	**12 02 46.0**	**-5.1**
OHH	**Osh**	**1.45**	**337**	*e*PG		**Pn**	**12 02 29.6**	**-2.2**
OHH				*e*S		**Sb**	**12 02 46.0**	**-5.1**
KSH	**Kashi**	**1.94**	**79**	Pg		**Pn**	**12 02 34.5**	**-4.0**
KSH				Sg		**Sn**	**12 02 55.0**	**-8.5**
KSH	comp=Z,300nm,0.5s			pmax		pmax		
KSH	comp=N,1μm,0.6s			smax		smax		
KSH	comp=E,450nm,0.5s			smax		smax		
BTK	**Batken**	**2.26**	**294**	⇑*e*P		**Pb**	**12 02 46.4**	**+0.5**
BTK	baz=86			⇑*e*S		**Sb**	**12 03 14.7**	**+0.3**
BTK	**Batken**	**2.26**	**294**	*e*PN		**Pb**	**12 02 46.4**	**+0.5**
BTK				*e*S		**Sb**	**12 03 14.7**	**+0.3**
GAR	**Garm**	**2.50**	**267**	⇑*e*P		**Pg**	**12 02 51.7**	**-0.5**
GAR	baz=60			⇑*e*S		**Sg**	**12 03 23.9**	**-0.6**
GAR	**Garm**	**2.50**	**267**	*e*PN		**Pg**	**12 02 51.7**	**-0.5**
GAR				*e*S		**Sg**	**12 03 23.9**	**-0.6**
AML	**Almayashu**	**2.94**	**3**	P		**Pn**	**12 02 53.0**	**+0.4**
AML	**Almayashu**	**2.94**	**3**	*e*PN		**Pn**	**12 02 53.1**	**+0.5**
AML				*e*S		**Sn**	**12 03 26.6**	**-2.2**
TRKS	**Terek-Say**	**2.96**	**323**	⇑*e*P		**Pn**	**12 02 53.2**	**+0.6**
TRKS	baz=18			⇑*e*S		**Sn**	**12 03 26.8**	**-2.1**
TRKS	**Terek-Say**	**2.96**	**323**	*e*PN		**Pn**	**12 02 53.2**	**+0.6**
TRKS				*e*S		**Sn**	**12 03 26.8**	**-2.1**
UCH	**Uchtor**	**3.13**	**14**	P		**Pn**	**12 02 56.1**	**+0.9**
UCH	**Uchtor**	**3.13**	**14**	⇓*i*P		**Pn**	**12 02 55.8**	**+0.6**
UCH	baz=15			⇓*i*S		**Sn**	**12 03 31.1**	**-2.4**
UCH	**Uchtor**	**3.13**	**14**	*e*PN		**Pn**	**12 02 55.8**	**+0.6**
UCH				*e*S		**Sn**	**12 03 31.1**	**-2.4**
CHGR	**Chuyangaron**	**3.44**	**263**	⇑*e*P		**Pb**	**12 03 05.0**	**-1.1**
CHGR	baz=58			⇑*e*S		**Sb**	**12 03 47.0**	**-1.4**
CHGR	**Chuyangaron**	**3.44**	**263**	*e*PN		**Pb**	**12 03 05.0**	**-1.1**
CHGR				*e*S		**Sb**	**12 03 47.0**	**-1.4**
EKS2	**Erkin-Say**	**3.48**	**3**	P		**Pn**	**12 03 00.8**	**+1.1**
EKS2	**Erkin-Say**	**3.48**	**3**	⇓*e*P		**Pn**	**12 03 00.2**	**+0.5**
EKS2	baz=3.0			⇓*e*S		**Sn**	**12 03 38.8**	**-2.7**
EKS2	**Erkin-Say**	**3.48**	**3**	*e*PN		**Pn**	**12 03 00.2**	**+0.5**
EKS2				*e*S		**Sn**	**12 03 38.8**	**-2.7**
AAK	**Ala-Archa**	**3.53**	**12**	P		**Pn**	**12 03 02.6**	**+2.2**
AAK	**Ala-Archa**	**3.53**	**12**	Pn		**Pn**	**12 03 01.8**	**+1.5**
AAK	comp=E,8.6nm,0.3s,baz=171,slow=6.6,SNR=19			Lg		Lg	12 03 49.0	
AAK	comp=E,24nm,0.3s,baz=108,slow=20,SNR=9.1			LR		LR	12 04 07.3	
AAK	comp=E,275nm,21.3s,baz=179,slow=36 comp=E,21nm,0.3s **Ala-Archa**	**3.53**	**12**	⇑*i*P		**Pn**	**12 03 01.2**	**+0.8**
AAK	baz=13			⇑*e*S		**Sn**	**12 03 40.1**	**-2.7**
AAK	**Ala-Archa**	**3.53**	**12**	*i* PN		**Pn**	**12 03 01.2**	**+0.8**
AAK				*e*S		**Sn**	**12 03 40.1**	**-2.7**
MRKS	**Merke**	**3.56**	**357**	*e*P		**Pb**	**12 03 09.1**	**+0.9**
MRKS	comp=E,19nm,0.3s			*e*S		**Sb**	**12 03 53.8**	**+1.8**
MRKS	comp=E,289nm,0.5s **Merke** comp=E,19nm,0.3s	**3.56**	**357**	Pg		**Pb**	**12 03 09.7**	**+1.5**
MRKS	comp=E,289nm,0.5s			Lg		Lg	12 03 53.8	
KBK	**Karagaybulak**	**3.63**	**17**	P		**Pn**	**12 03 04.0**	**+2.1**
KBK	**Karagaybulak**	**3.63**	**17**	⇓*e*P		**Pn**	**12 03 02.7**	**+0.8**
KBK	baz=18			⇓*e*S		**Sn**	**12 03 42.9**	**-2.5**
KBK	**Karagaybulak**	**3.63**	**17**	*e*PN		**Pn**	**12 03 02.7**	**+0.8**
KBK				*e*S		**Sn**	**12 03 42.9**	**-2.5**
ULHL	**Ulahol**	**3.69**	**33**	P		**Pb**	**12 03 08.5**	**-1.9**
ULHL	**Ulahol**	**3.69**	**33**	⇑*e*P		**Pn**	**12 03 04.0**	**+1.3**
ULHL	baz=36			⇑*e*S		**Sn**	**12 03 45.4**	**-1.6**
ULHL	**Ulahol**	**3.69**	**33**	*e*PN		**Pn**	**12 03 04.0**	**+1.3**
ULHL				*e*S		**Sn**	**12 03 45.4**	**-1.6**
TAS	**Tashkent**	**3.87**	**305**	⇑*e*P		**Pn**	**12 03 07.8**	**+2.8**
TAS	baz=1.0			⇑*e*S		**Sn**	**12 03 51.8**	**+0.7**
TAS	**Tashkent**	**3.87**	**305**	*e*PN		**Pn**	**12 03 07.8**	**+2.8**
TAS	baz=1.0			*e*S		**Sn**	**12 03 51.8**	**+0.7**
CHMS	**Chumysh**	**3.92**	**13**	P		**Pn**	**12 03 07.8**	**+2.1**
CHMS	**Chumysh**	**3.92**	**13**	⇑*e*P		**Pn**	**12 03 06.5**	**+0.8**
CHMS	baz=14			⇑*e*S		**Sn**	**12 03 49.6**	**-2.8**
CHMS	**Chumysh**	**3.92**	**13**	*e*PN		**Pn**	**12 03 06.5**	**+0.8**
CHMS				*e*S		**Sn**	**12 03 49.6**	**-2.8**
CHMS	**Chumysh**	**3.92**	**13**	⇓Pn		**Pn**	**12 03 07.3**	**+1.6**
IUG	comp=E,13nm,0.5s			⇑Pg		**Pb**	**12 03 13.8**	**-0.5**
CHMS	comp=E,20nm,0.5s			Lg		Lg	12 04 00.7	
IUG	**luzhnay**	**3.97**	**319**	*e*P		**Pg**	**12 03 18.9**	**-1.5**
IUG	comp=E,960nm,0.4s			*e*S		**Sg**	**12 04 10.8**	**-1.0**
IUG	**luzhnay**	**3.97**	**319**	Pg		**Pg**	**12 03 19.6**	**-0.8**
IUG	comp=E,130nm,0.5s comp=E,960nm,0.4s			Lg		Lg	12 04 10.8	
TKM2	**Tokmak 2**	**4.05**	**22**	P		**Pn**	**12 03 09.1**	**+1.5**
TKM2	**Tokmak 2**	**4.05**	**22**	⇑*e*P		**Pn**	**12 03 08.5**	**+0.9**
TKM2	baz=24			⇑*e*S		**Sn**	**12 03 53.2**	**-2.6**
TKM2	**Tokmak 2**	**4.05**	**22**	*e*PN		**Pn**	**12 03 08.5**	**+0.9**
TKM2				*e*S		**Sn**	**12 03 53.2**	**-2.6**
TKM2	**Tokmak 2**	**4.05**	**22**	Pn		**Pn**	**12 03 08.8**	**+1.2**
TKM2	comp=E,7.8nm,0.4s			Pg		**Pb**	**12 03 18.5**	**+1.9**
TKM2	comp=E,15nm,0.4s			Lg		Lg	12 04 05.4	
KDJ	**Kajisay**	**4.05**	**42**	⇑*e*P		**Pn**	**12 03 09.5**	**+1.9**
KDJ	baz=45			⇑*i*S		**Sn**	**12 03 54.6**	**-1.2**
KDJ	**Kajisay**	**4.05**	**42**	*e*PN		**Pn**	**12 03 09.5**	**+1.9**
KDJ				*e*S		**Sn**	**12 03 54.6**	**-1.2**
TARG	**Taragay, Kyrgy**	**4.14**	**51**	⇑*e*P		**Pn**	**12 03 10.2**	**+1.1**
TARG	baz=54			⇑*e*S		**Sn**	**12 03 57.7**	**-0.7**
TARG	**Taragay, Kyrgy**	**4.14**	**51**	*e*PN		**Pn**	**12 03 10.2**	**+1.1**
TARG				*e*S		**Sn**	**12 03 57.7**	**-0.7**
USP	**Ospenovka**	**4.14**	**10**	P		**Pn**	**12 03 10.1**	**+1.3**
USP	**Ospenovka**	**4.14**	**10**	⇓*e*P		**Pn**	**12 03 09.6**	**+0.8**
USP	baz=11			⇓*e*S		**Sn**	**12 03 54.8**	**-3.1**
USP	**Ospenovka**	**4.14**	**10**	*e*PN		**Pn**	**12 03 09.6**	**+0.8**
USP				*e*S		**Sn**	**12 03 54.8**	**-3.1**
KST	**Kastek**	**4.27**	**25**	*e*P		**Pb**	**12 03 18.6**	**-1.8**
KST	comp=E,18nm,0.4s			*e*S		**Sb**	**12 04 10.6**	**-1.8**
KST	**Kastek**	**4.27**	**25**	Pg		**Pb**	**12 03 19.2**	**-1.1**
KST	comp=E,133nm,0.5s comp=E,18nm,0.4s			Lg		Lg	12 04 10.6	
CHM	**Chimkent**	**4.31**	**318**	*e*P		**Pg**	**12 03 25.8**	**-1.2**
CHM	comp=E,7.8nm,0.8s			*e*S		**Sg**	**12 04 21.9**	**-1.0**
DGS	**Degeres**	**4.39**	**22**	*e*P		**Pb**	**12 03 21.5**	**-0.9**
DGS	comp=E,328nm,0.8s comp=E,33nm,0.4s			*e*S		**Sb**	**12 04 15.5**	**-0.4**
DGS	**Degeres**	**4.39**	**22**	Pg		**Pb**	**12 03 22.0**	**-0.4**
DGS	comp=E,101nm,0.5s comp=E,33nm,0.4s			Lg		Lg	12 04 15.5	
IZV	**Izvestkoviy**	**4.50**	**30**	*e*P		**Pb**	**12 03 24.2**	**-0.1**
IZV	comp=E,50nm,0.1s			*e*S		**Sb**	**12 04 19.7**	**+0.6**
IZV	**Izvestkoviy**	**4.50**	**30**	Pg		**Pb**	**12 03 24.5**	**+0.3**
IZV	comp=E,102nm,0.7s comp=E,50nm,0.1s			Lg		Lg	12 04 19.7	
MTBS	**Maitube**	**4.51**	**28**	*e*P		**Pb**	**12 03 23.6**	**-0.7**
MTBS	comp=E,102nm,0.7s comp=E,25nm,0.6s			*e*S		**Sb**	**12 04 19.2**	**-0.1**
MTBS	**Maitube**	**4.51**	**28**	Pg		**Pb**	**12 03 24.6**	**+0.2**
MTBS	comp=E,94nm,0.6s comp=E,25nm,0.6s			Lg		Lg	12 04 19.2	
KK31	**Karatay Array**	**4.52**	**331**	PN		**Pn**	**12 03 14.9**	**+1.0**
KK31				PG		**Pb**	**12 03 25.4**	**+0.9**
KK31				LG		Lg	12 04 21.9	
KK31	**Karatay Array**	**4.52**	**331**	⇑Pn		**Pn**	**12 03 15.0**	**+1.0**
KK31	comp=E,1.6nm,0.3s,baz=125,slow=13,SNR=87 comp=E,8.4nm,0.3s,baz=140,slow=14,SNR=20			Pg		**Pb**	**12 03 25.4**	**+0.9**
KK31	comp=E,14nm,0.3s,baz=0.0,slow=0.1,SNR=4.1			⇑Lg		Lg	12 04 21.8	
KKAR	**Karatay Array**	**4.52**	**331**	⇑*e*P		**Pn**	**12 03 15.5**	**+1.6**
KKAR	baz=29			⇑*e*S		**Sn**	**12 04 05.0**	**-2.1**
KKAR	**Karatay Array**	**4.52**	**331**	*e*PN		**Pn**	**12 03 15.5**	**+1.6**
KKAR				*e*S		**Sn**	**12 04 05.0**	**-2.1**
TNSS	**Tian-Shan**	**4.64**	**33**	*e*P		**Pb**	**12 03 25.8**	**-0.9**
TNSS	comp=E,32nm,0.5s			*e*S		**Sb**	**12 04 23.1**	**-0.1**
TNSS	**Tian-Shan**	**4.64**	**33**	Pg		**Pb**	**12 03 26.7**	**0.0**
TNSS	comp=E,35nm,0.6s comp=E,32nm,0.5s			Lg		Lg	12 04 23.1	
BRLS	**Boroldaу**	**4.74**	**325**	*e*P		**Pb**	**12 03 27.9**	**-0.2**
BRLS	comp=E,35nm,0.6s comp=E,10nm,0.6s			*e*S		**Sb**	**12 04 26.5**	**+0.8**
BRLS	**Boroldaу**	**4.74**	**325**	Pg		**Pb**	**12 03 28.6**	**+0.4**
BRLS	comp=E,32nm,0.5s comp=E,10nm,0.6s			Lg		Lg	12 04 27.3	
AAA	**Alma-Ata**	**4.77**	**31**	*e*P		**Pb**	**12 03 30.0**	**+1.3**
AAA	comp=E,47nm,0.2s			*e*S		**Sb**	**12 04 29.9**	**+3.3**
AAA	**Alma-Ata**	**4.77**	**31**	Pg		**Pb**	**12 03 30.4**	**+1.7**
AAA	comp=E,196nm,0.6s			Lg		Lg	12 04 30.4	
KOTS	**Kotyrbulak**	**4.87**	**33**	*e*P		**Pb**	**12 03 31.4**	**+0.8**
KOTS	comp=E,36nm,0.6s comp=E,271nm,0.7s			*e*S		**Sb**	**12 04 32.3**	**+2.7**
KOTS	**Kotyrbulak**	**4.87**	**33**	Pg		**Pb**	**12 03 32.0**	**+1.5**
KOTS	comp=E,36nm,0.6s comp=E,271nm,0.7s			Lg		Lg	12 04 32.3	
KTBS	**Karatobe**	**5.11**	**27**	*e*P		**Pb**	**12 03 33.5**	**-1.0**
KTBS	comp=E,12nm,0.5s comp=E,128nm,0.5s			*e*S		**Sb**	**12 04 35.8**	**-0.6**
KTBS	**Karatobe** comp=E,12nm,0.5s	**5.11**	**27**	Pg		**Pb**	**12 03 34.2**	**-0.3**
KTBS	comp=E,128nm,0.5s			Lg		Lg	12 04 35.8	
KUU	**Kurty**	**5.16**	**23**	*e*P		**Pb**	**12 03 35.0**	**-0.3**
KUU	comp=E,16nm,0.3s comp=E,88nm,0.7s			*e*S		**Sb**	**12 04 38.4**	**+0.6**
KUU	**Kurty**	**5.16**	**23**	Pg		**Pb**	**12 03 35.8**	**+0.4**
KUU	comp=E,16nm,0.3s comp=E,88nm,0.7s			Lg		Lg	12 04 38.4	
CHKK	**Chushkaly**	**5.34**	**28**	*e*P		**Pb**	**12 03 38.7**	**+0.2**
CHKK	comp=E,17nm,0.5s comp=E,74nm,0.6s			*e*S		**Sb**	**12 04 44.5**	**+1.4**
CHKK	**Chushkaly**	**5.34**	**28**	Pg		**Pb**	**12 03 39.0**	**+0.5**
CHKK				Lg		Lg	12 04 44.5	
SATY	**Saty** comp=E,26nm,0.9s	**5.35**	**42**	*e*P		**Pb**	**12 03 38.9**	**+0.2**
SATY	comp=E,50nm,0.7s			*e*S		**Sb**	**12 04 45.4**	**+2.0**
SATY	**Saty** comp=E,26nm,0.9s	**5.35**	**42**	Pg		**Pb**	**12 03 39.6**	**+1.0**
SATY	comp=E,50nm,0.7s			Lg		Lg	12 04 46.1	
ZHN	**Zhinishke** comp=E,15nm,0.2s	**5.44**	**41**	*e*P		**Pb**	**12 03 41.2**	**+1.0**
ZHN	comp=E,82nm,0.9s			*e*S		**Sb**	**12 04 48.9**	**+2.9**
ZHN	**Zhinishke** comp=E,15nm,0.2s	**5.44**	**41**	Pg		**Pb**	**12 03 42.0**	**+1.7**
ZHN	comp=E,82nm,0.9s			Lg		Lg	12 04 48.9	
KURS	**Kuram** comp=E,16nm,0.8s	**5.54**	**38**	*e*P		**Pb**	**12 03 42.9**	**+1.0**
KURS	comp=E,27nm,1.0s			*e*S		**Sb**	**12 04 52.1**	**+3.2**
KURS	**Kuram** comp=E,16nm,0.8s	**5.54**	**38**	Pg		**Pb**	**12 03 43.7**	**+1.8**
KURS	comp=E,27nm,1.0s			Lg		Lg	12 04 52.1	
UZB	**Uzynbulak** comp=E,7.6nm,0.3s	**5.74**	**45**	*e*P		**Pb**	**12 03 46.1**	**+0.8**
UZB	comp=E,24nm,0.8s			*e*S		**Sb**	**12 04 57.2**	**+2.6**
UZB	**Uzynbulak** comp=E,7.6nm,0.3s	**5.74**	**45**	Pg		**Pb**	**12 03 46.8**	**+1.5**
UZB	comp=E,24nm,0.8s			Lg		Lg	12 04 57.2	
KPKS	**Kokpek** comp=E,16nm,0.5s	**5.78**	**41**	*e*P		**Pb**	**12 03 47.7**	**+1.7**
KPKS	comp=E,56nm,0.8s			*e*S		**Sb**	**12 04 59.8**	**+4.0**
KPKS	**Kokpek** comp=E,16nm,0.5s	**5.78**	**41**	Pg		**Pb**	**12 03 48.2**	**+2.2**
KPKS	comp=E,56nm,0.8s			Lg		Lg	12 04 59.8	
BTLS	**Baital** comp=E,6.9nm,0.5s	**5.86**	**4**	*e*P		**Pb**	**12 03 48.5**	**+1.2**
BTLS	comp=E,27nm,0.7s			*e*S		**Sb**	**12 05 01.5**	**+3.5**
BTLS	**Baital** comp=E,6.9nm,0.5s	**5.86**	**4**	Pg		**Pb**	**12 03 49.8**	**+2.4**
BTLS	comp=E,27nm,0.7s			Lg		Lg	12 05 02.6	
ARXS	**Arharly** comp=E,7.9nm,0.5s	**5.97**	**31**	*e*P		**Pb**	**12 03 50.1**	**+1.0**
ARXS	comp=E,76nm,0.9s			*e*S		**Sb**	**12 05 03.9**	**+2.7**
SHLS	**Shalkode** comp=E,12nm,0.7s	**5.99**	**47**	*e*P		**Pg**	**12 03 57.5**	**-1.6**
SHLS	comp=E,28nm,0.7s			*e*S		**Sg**	**12 05 17.3**	**+0.6**
SHLS	**Shalkode** comp=E,12nm,0.7s	**5.99**	**47**	Pg		**Pg**	**12 03 58.5**	**-0.6**
SHLS	comp=E,28nm,0.7s			Lg		Lg	12 05 17.3	
PDGK	**Podgornoye**	**6.12**	**45**	PN		**Pn**	**12 03 36.7**	**+0.8**
PDGK				PG		**Pb**	**12 03 53.1**	**+1.4**
PDGK				LG		Lg	12 05 08.7	
PDGK	**Podgornoye** comp=E,8.7nm,0.7s	**6.12**	**45**	Pg		**Pb**	**12 03 53.9**	**+2.2**
PDGK	comp=E,15nm,0.9s			Lg		Lg	12 05 08.9	
PDGK	**Podgornoye** comp=E,4.6nm,0.6s	**6.12**	**45**	Pn		**Pn**	**12 03 36.7**	**+0.8**
PDGK	comp=E,21nm,0.7s			Pg		**Pb**	**12 03 53.1**	**+1.4**
PDGK	comp=E,33nm,0.7s			⇑Lg		Lg	12 05 08.7	
BLB	**Baldybastay** comp=E,19nm,0.5s	**6.16**	**36**	*e*P		**Pb**	**12 03 53.9**	**+1.5**
BLB	comp=E,63nm,0.9s			*e*S		**Sb**	**12 05 10.3**	**+3.8**
KNOS	**Konyrlen** comp=E,20nm,0.9s	**6.68**	**37**	*e*P		**Pb**	**12 04 03.9**	**+2.6**
KNOS	comp=E,62nm,0.6s			*e*S		**Sb**	**12 05 26.4**	**+4.7**
DJR	**Jarkent** comp=E,3.2nm,0.6s	**6.96**	**40**	*e*P		**Pb**	**12 04 09.1**	**+3.1**
DJR	comp=E,22nm,0.9s			*e*S		**Sb**	**12 05 36.6**	**+6.9**
DJR	**Jarkent** comp=E,3.2nm,0.6s	**6.96**	**40**	Pg		**Pb**	**12 04 09.1**	**+3.1**
DJR	comp=E,22nm,0.9s			Lg		Lg	12 05 36.6	
MK31	**Makanchi Array**	**9.95**	**37**	⇓*e*P		**Pn**	**12 04 30.3**	**+1.9**
MK31	**Makanchi Array** comp=E,1.7nm,0.6s,baz=222,slow=28,SNR=4.1	**9.95**	**37**	⇓Lg		Lg	12 07 10.8	
MKAR	**Makanchi Array** baz=225,slow=12,SNR=4.2	**9.95**	**37**	Pn		**Pn**	**12 04 29.6**	**+1.1**
MKAR	comp=E,0.2nm,0.3s,baz=238,slow=25,SNR=3.9 comp=E,0.5nm,0.6s			Lg		Lg	12 07 11.9	
WMQ	**Urumqi**	**11.60**	**62**	*e*P		**Pn**	**12 04 51.3**	**+0.3**
KURBB	**Kurchatov Array** baz=213,slow=8.9,SNR=2.8	**11.97**	**16**	Pn		**Pn**	**12 04 54.5**	**-1.5**
KURBB	comp=E,0.1nm,0.3s,baz=204,slow=28,SNR=4.1 comp=E,0.3nm,0.6s			Lg		Lg	12 08 13.0	
KURK	**Kurchatov**	**12.08**	**16**	⇓*e*P		**Pn**	**12 04 59.2**	**+1.8**
AKTO	**Aktyubinsk** comp=E,3.3nm,0.3s,baz=116,slow=15,SNR=4.4 comp=E,1.3nm,0.5s	**15.69**	**321**	Pn		**Pn**	**12 05 46.0**	**-0.5**
ZALV	**Zalesovo Beam** comp=E,3.2nm,0.8s,baz=209,slow=12,SNR=9.0	**16.65**	**24**	Pn		**Pn**	**12 05 57.5**	**-1.3**
ZALV	comp=E,0.1nm,0.3s,baz=212,slow=28,SNR=1.9			Lg		Lg	12 10 46.2	
ARU	**Arti**	**19.88**	**335**	P		**P**	**12 06 37.3**	**+0.5**
ARU				S		**S**	**12 10 20.1**	**-1.1**
GTA	**Gaotai**	**20.34**	**81**	⇑P		Pn	12 06 44.0	0.0
GTA				pP		sP	12 06 47.5	+2.9
GTA				sP		pP	12 06 51.0	+7.2
GTA	comp=Z,6.0nm,1.0s			pmax		pmax		
LZH	**Lanzhou**	**24.16**	**88**	*e*P		**P**	**12 07 16.5**	**-5.7**
LZH				pP		pP	12 07 20.3	-3.8
LZH				sP		sP	12 07 23.0	-1.9
LZH	comp=Z,13nm,1.1s			pmax		pmax		
SONM	**Songino Array** comp=Z,2.0nm,0.9s,baz=263,slow=9.7,SNR=6.8 comp=Z,2.0nm,0.9s	**25.21**	**59**	P		**P**	**12 07 31.5**	**-0.1**
ULN	**Ulaanbaatar**	**25.65**	**59**	⇓*i*P		**P**	**12 07 37.9**	**+2.3**
ULN	comp=Z,2.0nm,0.9s			pmax		pmax		
FINES	**FINESS Array B** comp=Z,0.4nm,0.4s,baz=106,slow=10,SNR=6.1 comp=Z,0.4nm,0.4s	**36.44**	**323**	P		**P**	**12 09 11.0**	**+0.8**
FINES	**FINESS Array B** comp=Z,1.0nm,0.4s	**36.44**	**323**	*i* P		**P**	**12 09 13.8**	**+3.5**
FINES				pmax		pmax		
NJ2	**Nanjing**	**37.23**	**87**	*e*P		**P**	**12 09 18.5**	**+1.2**
NJ2	comp=Z,6.0nm,0.5s			pmax		pmax		
ARCES	**ARCESS Array B** comp=Z,0.4nm,0.4s,baz=108,slow=8.3,SNR=7.0 comp=Z,0.4nm,0.4s	**39.47**	**336**	P		**P**	**12 09 36.9**	**+1.2**
HFS	**Hagfors** comp=Z,1.7nm,0.7s,baz=98,slow=10,SNR=1.3 comp=Z,1.7nm,0.7s	**42.24**	**320**	P		**P**	**12 09 59.8**	**+1.1**
CLL	**Collm**	**43.11**	**307**	*e*P		**P**	**12 10 06.0**	**+0.1**
CLL	**Collm**	**43.11**	**307**	*e*P		**P**	**12 10 06.0**	**+0.1**
TORD	**Torodi Ar. Bea** comp=Z,0.2nm,0.4s,baz=41,slow=6.3,SNR=1.7 comp=Z,0.2nm,0.4s	**67.76**	**269**	P		**P**	**12 13 04.7**	**+0.8**
YKA	**Yellowknife Ar** comp=Z,0.2nm,0.6s,baz=350,slow=4.9,SNR=2.3 comp=Z,0.2nm,0.6s	**78.45**	**4**	P		**P**	**12 14 05.7**	**-0.7**

WRA Warramunga Arr 81.78 124 P **P** **12 14 25.5 +0.6**
comp=Z,0.5nm,0.9s,baz=324,slow=4.9,SNR=2.2
comp=Z,0.5nm,0.9s

IDC ***30*** *12:20:17.0±0.4,29°.14S×61°.15E,h0km,mb4.7/21, mbtmp4.7/22,ML5.1/1,MS4.5/9,Error ellipse: s-maj=15.9km s-min=13.4km az=40.0*

BJI ***30*** *12:20:17.0±0.0,29°.10S×61°.10E,h10km,mb4.8/40, mB5.1/16,Ms4.9/4,Ms7 4.6/5*

MOS ***30*** *12:20:17.6±1.1,29°.10S×61°.29E,h10km,mb5.2/32,Error ellipse: s-maj=13.0km s-min=7.6km az=94.8*

NEIC ***30*** *12:20:19.5±3.0,29°.07S±0°.09×61°.1E±0°.1,h10km±1km, mb5.1/71,Error ellipse: s-maj=17.2km s-min=15.1km az=250.0*

GCMT ***30*** *12:20:19.5±0.3,29°.12S±0°.02×60°.83E±0°.05,h19km±1km, MW5.1/73,Moment Tensor Solution. s27,c32; s73,c96; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=5.71±.51; $M_{\theta\theta}$5.45±.30; $M_{\phi\phi}$0.26±.32; $M_{r\theta}$2.26±.52; $M_{r\phi}$1.65±.20; $M_{\theta\phi}$-1.71±.90; Best double couple: $M_0$6.45900×10^{16} NP1:ϕ_s273.00000°,δ56.00000°,λ-68.00000°. NP2: ϕ_s273.00000°,δ56.00000°,λ-68.00000°. Principal axes: T 6.1880, Plg9.0000°, Azm347.0000°; N 0.5440, Plg18.0000°, Azm80.0000°; P -6.7300, Plg70.0000°, Azm233.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 12:20:19.0±0.3,29°.11S±0°.06×61°.03E±0°.06,h10km,n539, σ1§13/547,mb5.2/124,MS4.6/11,26C-23D,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
RER	**Riviere de l'E**	**9.25**	**328**	Pn	**Pn**		**12 22 29.9**	**-2.7**
FOMA	**Nahampoana Res**	**13.19**	**285**	Pn	**Pn**		**12 23 24.4**	**-1.9**
VOI	**Vohitsoka**	**14.72**	**296**	Pn	**Pn**		**12 23 47.3**	**-0.1**
VOI	**Vohitsoka**	**14.72**	**296**	P	**Pn**		**12 23 48.4**	**+0.9**
ABPO	**Ambohimpanom**	**16.11**	**306**	Pn	**Pn**		**12 24 06.5**	**+0.7**
ABPO	**Ambohimpanom**	**16.11**	**306**	P	**Pn**		**12 24 06.5**	**+0.7**
ABPO				pmax	pmax			
	comp=Z,61nm,1.2s							
OPO	**Ambohidratompo**	**16.43**	**307**	Pn	**Pn**		**12 24 09.7**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=125,slow=12,SNR=23							
OPO				Sn	Sn		12 26 59.3	-13
	comp=Z,0.3nm,0.3s,baz=180,slow=20,SNR=7.7							
	comp=Z,21nm,0.5s							
H08S1	**Diego Carcia H**	**23.92**	**29**	T	T		12 50 14.3	
	baz=204,slow=76,SNR=35							
H08S2	**Diego Garcia H**	**23.93**	**29**	T	T		12 50 13.8	
	baz=204,slow=76,SNR=21							
H08S3	**Diego Garcia H**	**23.94**	**29**	T	T		12 50 16.6	
	baz=204,slow=76,SNR=37							
BOSA	**Boshof**	**31.27**	**262**	P	**P**		**12 26 39.1**	**-0.2**
	comp=Z,12nm,1.1s,baz=88,slow=12,SNR=7.2							
	comp=Z,12nm,1.1s							
BOSA	**Boshof**	**31.27**	**262**	P	**P**		**12 26 40.9**	**+1.6**
BOSA				IAmb	IAmb		12 26 41.8	
	comp=Z,22nm,1.2s							
BOSA	**Boshof**	**31.27**	**262**	P	**P**		**12 26 40.9**	**+1.6**
BOSA				pmax	pmax			
	comp=Z,22nm,1.2s							
LBTB	**Lobatse**	**31.75**	**269**	P	**P**		**12 26 45.0**	**+1.5**
LBTB	**Lobatse**	**31.75**	**269**	P	**P**		**12 26 45.0**	**+1.5**
LBTB				pmax	pmax			
	comp=Z,75nm,1.6s							
LSZ	**Lusaka**	**33.25**	**287**	P	**P**		**12 26 55.8**	**-1.0**
	comp=Z,25nm,0.9s,baz=124,slow=8.1,SNR=29							
LSZ				LR	LR		12 40 32.5	
	comp=Z,3μm,19.2s,baz=124,slow=36							
	comp=Z,25nm,0.9s							
LSZ	**Lusaka**	**33.25**	**287**	IAmb	IAmb		12 27 00.2	
	comp=Z,26nm,0.9s							
LSZ	**Lusaka**	**33.25**	**287**	P	**P**		**12 26 55.8**	**-1.0**
LSZ				pmax	pmax			
	comp=Z,26nm,1.0s							
MAW	**Mawson**	**38.54**	**179**	P	**P**		**12 27 41.2**	**-0.1**
	comp=Z,6.9nm,1.0s,baz=346,slow=9.8,SNR=11							
MAW				PcP	**PcP**		**12 29 54.1**	**+0.3**
	comp=Z,5.6nm,0.8s,baz=3.7,slow=3.7,SNR=8.5							
MAW				LR	LR		12 40 03.9	
	comp=Z,436nm,19.2s,baz=18,slow=31							
	comp=Z,6.9nm,1.0s							
MAW	**Mawson**	**38.54**	**179**	P	**P**		**12 27 41.8**	**+0.5**
MAW					**PcP**		**12 29 54.5**	**+0.7**
MAW	**Mawson**	**38.54**	**179**	P	**P**		**12 27 41.8**	**+0.5**
MAW							12 29 54.5	
TSUM	**Tsumeb**	**40.66**	**274**	P	**P**		**12 28 00.4**	**+0.6**
	comp=Z,7.5nm,0.9s,baz=126,slow=10,SNR=7.9							
	comp=Z,7.5nm,0.9s							
PALK	**Pallekele**	**40.84**	**31**	LR	LR		12 41 24.9	
	comp=Z,480nm,18.5s,baz=256,slow=31							
PALK	**Pallekele**	**40.84**	**31**	P	**P**		**12 28 01.7**	**+0.6**
PALK	**Pallekele**	**40.84**	**31**	P	**P**		**12 28 01.7**	**+0.6**
PALK				pmax	pmax			
	comp=Z,138nm,1.9s							
H01W2	**Cape Leeuwin H**	**44.97**	**112**	T	T		13 16 10.0	
	baz=261,slow=75,SNR=116							
H01W3	**Cape Leeuwin H**	**44.97**	**112**	T	T		13 16 11.2	
	baz=261,slow=75,SNR=110							
H01W1	**Cape Leeuwin H**	**44.98**	**112**	T	T		13 16 10.8	
	baz=261,slow=75,SNR=150							
KASI	**Kota Agung**	**47.27**	**69**	P	**P**		**12 28 54.5**	**+1.7**
	comp=Z,45nm,1.2s							
CASY	**Casey**	**47.74**	**155**	P	**P**		**12 28 56.0**	**+0.3**
BKNI	**Bangkinang**	**48.12**	**60**	P	**P**		**12 29 00.3**	**+0.9**
	comp=Z,58nm,1.1s							
BKNI	**Bangkinang**	**48.12**	**60**	P	**P**		**12 29 01.8**	**+2.4**
CNJI	**Cibinong**	**48.46**	**73**	P	**P**		**12 29 03.2**	**+1.2**
	comp=Z,172nm,0.9s							
DBJI	**Dramaga**	**48.55**	**72**	P	**P**		**12 29 03.6**	**+0.8**
	comp=Z,13μmcomp=Z,108nm,1.0s							
CBJI	**Citeko**	**48.71**	**72**	P	**P**		**12 29 04.2**	**+0.3**
	comp=Z,213nm,0.9s							
HYBB	**Hyderabad (bro**	**49.26**	**22**	*e*P	**P**		**12 29 08.2**	**+0.2**
HYBB				*e*PP	**PP**		**12 31 01.3**	**-0.8**
HYBB				*e*S	**S**		**12 36 14.3**	**+0.1**
DSRI	**Dabo**	**50.34**	**63**	P	**P**		**12 29 18.0**	**+1.6**
	comp=Z,16nm,1.3s							
IPM	**Ipoh**	**50.89**	**56**	P	**P**		**12 29 23.7**	**+3.2**
SMRI	**Semarang**	**51.38**	**75**	P	**P**		**12 29 25.1**	**+0.8**
	comp=Z,81nm,1.2s							
SMRI	**Semarang**	**51.38**	**75**	P	**P**		**12 29 25.6**	**+1.3**
WOJI	**Wonogiri, Jawa**	**51.38**	**76**	P	**P**		**12 29 25.8**	**+1.6**
	comp=Z,40nm,2.1s							
PCJI	**Pacitan**	**51.41**	**76**	P	**P**		**12 29 25.2**	**+0.7**
	comp=Z,105nm,2.0s							
TPI	**Tanjungpandan**	**51.43**	**68**	P	**P**		**12 29 26.0**	**+1.4**
	comp=Z,23nm,1.1s							
PWJI	**Pagerwojo**	**52.03**	**77**	P	**P**		**12 29 29.2**	**+0.1**
	comp=Z,63nm,0.9s							
WSAR	**Wadi Sarin**	**52.10**	**357**	LR	LR		12 46 24.4	
	comp=Z,97nm,18.4s,baz=148,slow=30							
TROLL	**Troll, Antarti**	**52.98**	**199**	P	**P**		**12 29 35.9**	**+0.4**
TROLL	**Troll, Antarti**	**52.98**	**199**	PcP	**PcP**		**12 30 43.7**	**-0.5**
JAGI	**Jajag, Banyuwa**	**53.82**	**79**	P	**P**		**12 29 42.9**	**+0.6**
	comp=Z,66nm,1.1s							
JAGI	**Jajag, Banyuwa**	**53.82**	**79**	P	**P**		**12 29 42.2**	**-0.1**
RAYN	**Ar Rayn**	**54.42**	**342**	P	**P**		**12 29 45.4**	**-1.1**
RAYN				IAmb	IAmb		12 29 50.7	
	comp=Z,14nm,1.1s							
RAYN	**Ar Rayn**	**54.42**	**342**	P	**P**		**12 29 45.4**	**-1.1**
RAYN				pmax	pmax			
	comp=Z,14nm,1.2s							
SNAA	**Sanae**	**54.47**	**200**	P	**P**		**12 29 45.7**	**-0.7**
SNAA	**Sanae**	**54.47**	**200**	PcP	**PcP**		**12 30 49.5**	**-0.3**
SNAA	**Sanae**	**54.47**	**200**	P	**P**		**12 29 45.1**	**-1.3**
	comp=Z,5.6nm,1.0s,baz=101,slow=7.8,SNR=14							
	comp=Z,5.6nm,1.0s							
SNAA	**Sanae**	**54.47**	**200**	*ce*P	**P**		**12 29 47.8**	**+1.4**
SNAA				pmax	pmax			
	comp=Z,10.0nm,1.2s							
VNA2	**Neumayer--Watz**	**55.74**	**202**	P	**P**		**12 29 55.0**	**-0.5**
	baz=77,slow=6.4							
VNA2	**Neumayer--Watz**	**55.74**	**202**	PcP	**PcP**		**12 30 54.1**	**-0.5**
VNA1	**Neumayer--Stat**	**55.98**	**202**	P	**P**		**12 29 53.8**	**-3.4**
VNA1	**Neumayer--Stat**	**55.98**	**202**	PcP	**PcP**		**12 30 55.2**	**-0.2**
KSM	**Kuching**	**56.06**	**66**	P	**P**		**12 29 58.7**	**+0.1**
KSM				IAmb	IAmb		12 29 60.0	
	comp=Z,17nm,1.1s							
KSM	**Kuching**	**56.06**	**66**	P	**P**		**12 29 59.3**	**+0.8**
STKI	**Sintang**	**56.17**	**68**	P	**P**		**12 30 00.3**	**+1.0**
VNA3	**Neumayer Olymp**	**56.53**	**201**	P	**P**		**12 29 58.2**	**-2.9**
VNA3	**Neumayer Olymp**	**56.53**	**201**	PcP	**PcP**		**12 30 57.5**	**-0.2**
BBKI	**Banjar Baru**	**56.99**	**74**	P	**P**		**12 30 05.5**	**+0.3**
	comp=Z,36nm,0.8s							
SBUM	**Sibu**	**58.17**	**66**	P	**P**		**12 30 13.1**	**-0.3**
WRKA	**Warakurna**	**59.30**	**103**	P	**P**		**12 30 20.7**	**-0.7**
CM31	**Chiang Mai Arr**	**59.80**	**42**	P	**P**		**12 30 23.7**	**-0.9**
CM31				IAmb	IAmb		12 30 36.5	
	comp=Z,24nm,1.1s							
CMAR	**Chiang Mai Arr**	**59.80**	**42**	P	**P**		**12 30 24.7**	**0.0**
	comp=Z,4.5nm,0.6s,baz=231,slow=7.3,SNR=36							
CMAR				LR	LR		12 52 47.3	
	comp=Z,129nm,18.9s,baz=165,slow=33							
	comp=Z,4.5nm,0.6s							
CMAR	**Chiang Mai Arr**	**59.80**	**42**	P	**P**		**12 30 24.1**	**-0.5**
CHTO	**Chiang Mai**	**60.08**	**42**	P	**P**		**12 30 25.4**	**-1.2**
CHTO				IAmb	IAmb		12 30 38.9	
	comp=Z,22nm,1.4s							
CHTO	**Chiang Mai**	**60.08**	**42**	P	**P**		**12 30 25.4**	**-1.2**
CHTO				pmax	pmax			
	comp=Z,22nm,1.4s							
CHTO	**Chiang Mai**	**60.08**	**42**	P	P		12 30 35.7	+9.1
KAPI	**Kappang**	**60.35**	**78**	P	**P**		**12 30 26.9**	**-1.7**
KAPI	**Kappang**	**60.35**	**78**	⇓*i*P	**P**		**12 30 27.2**	**-1.4**
KAPI				pmax	pmax			
	comp=Z,34nm,0.9s							
KAPI	**Kappang**	**60.35**	**78**	P	**P**		**12 30 27.9**	**-0.7**
BKSI	**Bulukumba**	**60.51**	**79**	P	**P**		**12 30 29.5**	**-0.2**
	comp=Z,25nm,1.3s							
KOLN	**Koldanda**	**60.55**	**23**	*e*P	**P**		**12 30 29.6**	**-0.2**
	comp=Z,50nm,1.4s							
H09N1	**TRISTAN DA CUN**	**60.59**	**242**	T	T		13 36 10.5	
	SNR=15							
PYUN	**Piuthan**	**60.65**	**22**	*e*P	**P**		**12 30 30.3**	**-0.2**
RAMN	**Ramite**	**60.89**	**26**	*e*P	**P**		**12 30 32.5**	**+0.2**
	comp=Z,95nm,0.8s							
DMN	**Daman**	**60.93**	**24**	*e*P	**P**		**12 30 32.6**	**+0.1**
	comp=Z,117nm,1.0s							
BNSI	**Bone**	**60.97**	**78**	P	**P**		**12 30 33.7**	**+0.9**
	comp=Z,40nm,1.1s							
PKI	**Pulchoki**	**61.01**	**25**	*e*P	**P**		**12 30 32.6**	**-0.5**
PKIN	**Phulchoki**	**61.01**	**25**	*e*P	**P**		**12 30 32.5**	**-0.6**
	comp=Z,31nm,0.9s							
QSPA	**South Pole Qui**	**61.04**	**180**	LR	LR		12 53 10.4	
	comp=Z,400nm,21.7s,baz=290,slow=32							
QSPA	**South Pole Qui**	**61.04**	**180**	P	**P**		**12 30 32.3**	**-0.5**
QSPA				IAmb	IAmb		12 30 35.8	
	comp=Z,23nm,1.2s							
GKN	**Gorkha**	**61.12**	**24**	*e*P	**P**		**12 30 33.5**	**-0.2**
ODAN	**Odare**	**61.12**	**27**	*e*P	**P**		**12 30 33.7**	**-0.1**
DANN	**Dangsing**	**61.13**	**23**	*e*P	**P**		**12 30 33.7**	**-0.2**
	comp=Z,139nm,0.8s							
KKN	**Kakani**	**61.16**	**25**	*e*P	**P**		**12 30 33.6**	**-0.4**
JIRN	**Jiri**	**61.38**	**25**	*e*P	**P**		**12 30 35.3**	**-0.4**
	comp=Z,63nm,0.8s							
TTSI	**Tana Toraja**	**61.42**	**77**	P	**P**		**12 30 37.0**	**+1.1**
	comp=Z,2μmcomp=Z,28nm,1.1s							
GUN	**Gumba**	**61.49**	**25**	*e*P	**P**		**12 30 36.4**	**0.0**
	comp=Z,78nm,0.8s							
TAPN	**Taplejung**	**61.69**	**27**	*e*P	**P**		**12 30 37.8**	**+0.1**
	comp=Z,109nm,1.0s							
SHL	**Shillong**	**61.91**	**32**	P	**P**		**12 30 39.3**	**+0.2**
SHL				pmax	pmax			
	comp=Z,50nm,1.1s							
BELA	**Belgrano 2**	**62.95**	**194**	P	**P**		**12 30 44.4**	**-0.8**
MPSI	**Mapaga**	**63.28**	**73**	P	**P**		**12 30 48.5**	**+0.2**
	comp=Z,22nm,1.0s							
KBL	**Kabul**	**63.76**	**7**	P	**P**		**12 30 50.8**	**-0.5**
KBL				IAmb	IAmb		12 30 54.9	
	comp=Z,28nm,1.8s							
KBL	**Kabul**	**63.76**	**7**	P	**P**		**12 30 50.8**	**-0.5**
KBL				pmax	pmax			
	comp=Z,28nm,1.8s							
APSI	**Ampana**	**64.09**	**76**	P	**P**		**12 30 53.8**	**+0.1**
	comp=Z,644nmcomp=Z,54nm,0.9s							
VNDA	**Vanda**	**64.11**	**166**	P	**P**		**12 30 52.2**	**-0.7**
	comp=Z,6.4nm,0.9s,baz=266,slow=7.3,SNR=28							
VNDA				LR	LR		12 55 59.5	
	comp=Z,388nm,19.9s,baz=270,slow=33							
	comp=Z,6.4nm,0.9s							
VNDA	**Vanda**	**64.11**	**166**	P	**P**		**12 30 52.2**	**-0.7**
VNDA				IAmb	IAmb		12 30 53.3	
	comp=Z,9.3nm,1.0s							
VNDA	**Vanda**	**64.11**	**166**	P	**P**		**12 30 52.2**	**-0.7**
VNDA				pmax	pmax			
	comp=Z,9.0nm,1.0s							
TOLI2	**Tolitoli**	**64.44**	**73**	P	**P**		**12 30 53.7**	**-2.2**
TOLI2	**Tolitoli**	**64.44**	**73**	P	**P**		**12 30 55.4**	**-0.6**
ASAR	**Alice Springs**	**64.56**	**104**	P	**P**		**12 30 55.3**	**-1.5**
	comp=Z,10nm,0.8s,baz=243,slow=6.3,SNR=116							
	comp=Z,10nm,0.8s							
ASAR	**Alice Springs**	**64.56**	**104**	P	**P**		**12 30 55.1**	**-1.7**
LUWI	**Luwuk**	**64.97**	**76**	P	**P**		**12 30 57.7**	**-1.7**
LUWI	**Luwuk**	**64.97**	**76**	P	**P**		**12 31 00.5**	**+1.0**
	comp=Z,65nm,0.7s							
LUWI	**Luwuk**	**64.97**	**76**	P	**P**		**12 30 59.5**	**0.0**
SBA	**Scott Base**	**64.99**	**167**	P	**P**		**12 30 58.8**	**+0.2**
SBA				IAmb	IAmb		12 31 17.3	
	comp=Z,18nm,1.3s							
SBA	**Scott Base**	**64.99**	**167**	P	**P**		**12 30 58.8**	**+0.2**
SBA				pmax	pmax			
	comp=Z,18nm,1.3s							
MRSI	**Marisa**	**65.07**	**74**	P	**P**		**12 30 58.3**	**-1.8**
	comp=Z,922nmcomp=Z,39nm,0.7s							
WRA	**Warramunga Arr**	**66.38**	**100**	P	**P**		**12 31 06.9**	**-1.7**
	comp=Z,12nm,0.9s,baz=248,slow=5.9,SNR=58							
WRA				LR	LR		12 56 18.9	
	comp=Z,259nm,19.4s,baz=225,slow=33							
	comp=Z,12nm,0.9s							
WRA	**Warramunga Arr**	**66.38**	**100**	P	**P**		**12 31 06.6**	**-2.0**
WRA	**Warramunga Arr**	**66.38**	**100**	P	**P**		**12 31 06.6**	**-2.0**
WB2	**Warramunga Arr**	**66.39**	**100**	P	**P**		**12 31 06.5**	**-2.1**
WB2				IAmb	IAmb		12 31 08.5	
	comp=Z,22nm,1.2s							
WRAB	**Tennant Creek**	**66.40**	**100**	P	**P**		**12 31 07.4**	**-1.3**
WRAB				IAmb	IAmb		12 31 08.7	
	comp=Z,23nm,1.1s							
WRAB	**Tennant Creek**	**66.40**	**100**	P	**P**		**12 31 07.4**	**-1.3**
WRAB				pmax	pmax			
	comp=Z,23nm,1.2s							
WRAB	**Tennant Creek**	**66.40**	**100**	P	**P**		**12 31 07.9**	**-0.8**
WB0	**Warramunga Arr**	**66.50**	**100**	P	**P**		**12 31 06.8**	**-2.5**
WB0				IAmb	IAmb		12 31 09.1	
	comp=Z,23nm,1.1s							
KMI	**Kunming**	**67.18**	**41**	⇓P	P		12 31 22.5	+8.9
KMI				pmax	pmax			
	comp=Z,21nm,1.0s							
PZH	**PanZhiHua**	**67.69**	**39**	P	**P**		**12 31 15.8**	**-0.9**
PZH				pmax	pmax			
	comp=Z,10.0nm,1.0s							
STKA	**Stephens Creek**	**67.89**	**115**	P	**P**		**12 31 16.8**	**-1.1**
	comp=Z,6.1nm,0.9s,baz=288,slow=10,SNR=4.8							
	comp=Z,6.1nm,0.9s							
GAR	**Garm**	**68.31**	**8**	IAmb	IAmb		12 31 22.9	
	comp=Z,13nm,0.8s							
INKA	**Innaminka**	**68.74**	**111**	P	**P**		**12 31 22.4**	**-0.9**
KSH	**Kashi**	**69.68**	**12**	P	**P**		**12 31 26.0**	**-2.9**
KSH				pP	pwP		12 31 34.3	-2.2
KSH				pmax	pmax			
	comp=Z,40nm,0.7s							
GNI	**Garni**	**70.55**	**347**	⇑*e*P	**P**		**12 31 36.3**	**+2.1**
GNI				pmax	pmax			
	comp=Z,19nm,0.9s							
QIS	**Mount Isa**	**70.64**	**103**	P	**P**		**12 31 34.4**	**-0.8**
TOA0	**Torodi Ar. Sit**	**71.02**	**298**	P	**P**		**12 31 35.9**	**-1.6**
TOA0				IAmb	IAmb		12 31 40.9	
	comp=Z,15nm,1.0s							
TORD	**Torodi Ar. Bea**	**71.02**	**298**	P	**P**		**12 31 37.4**	**0.0**
	comp=Z,8.1nm,0.8s,baz=112,slow=5.5,SNR=15							
	comp=Z,8.1nm,0.8s							
TORD	**Torodi Ar. Bea**	**71.02**	**298**	IAmb	IAmb		12 31 40.9	
	comp=Z,13nm,1.0s							
CMSA	**Cobar Meteorol**	**71.25**	**116**	P	**P**		**12 31 38.7**	**0.0**
QLP	**Quilpie**	**72.05**	**111**	P	**P**		**12 31 42.6**	**-1.0**
FAKI	**Fak Fak**	**72.19**	**83**	IAmb	IAmb		12 31 45.8	
	comp=Z,19nm,1.0s							
FAKI	**Fak Fak**	**72.19**	**83**	P	**P**		**12 31 45.6**	**+1.0**
	comp=Z,23nm,1.5s							
FAKI	**Fak Fak**	**72.19**	**83**	P	P		**12 31 45.1**	**+0.5**
GOMU	**GeErMu**	**72.32**	**28**	P	**P**		**12 31 45.3**	**0.0**
GOMU				sP	pwP		12 31 51.5	-1.4
GOMU				pmax	pmax			
	comp=Z,5.0nm,1.1s							
GOMU				pmax	pmax			
	comp=Z,100nm,6.0s							
KIC	**Kosan Boka**	**72.33**	**288**	⇑*i*P	**P**		**12 31 46.7**	**+1.3**
	comp=Z,19nm,0.9s							
SWI	**Sorong**	**72.35**	**81**	P	**P**		**12 31 46.2**	**+0.7**
	comp=Z,63nm,0.9s							
KK31	**Karatay Array**	**72.39**	**7**	IAmb	IAmb		12 31 46.7	
	comp=Z,14nm,1.0s							
KK31	**Karatay Array**	**72.39**	**7**	*i*P	**P**		**12 31 45.7**	**+0.6**
KKAR	**Karatay Array**	**72.39**	**7**	P	**P**		**12 31 45.2**	**+0.1**
KKAR	**Karatay Array**	**72.39**	**7**	P	**P**		**12 31 45.2**	**+0.1**
AAK	**Ala-Archa**	**72.46**	**10**	P	**P**		**12 31 45.0**	**-0.7**
AAK				IAmb	IAmb		12 31 47.7	
	comp=Z,18nm,1.1s							
AAK	**Ala-Archa**	**72.46**	**10**	*de*P	**P**		**12 31 46.4**	**+0.7**
AAK				pmax	pmax			
	comp=Z,19nm,1.3s							
LIC	**Lamto**	**72.49**	**288**	⇑*e*P	**P**		**12 31 46.7**	**+0.3**
	comp=Z,21nm,0.9s							
DBIC	**Dimbokro**	**72.59**	**288**	P	**P**		**12 31 48.1**	**+1.3**
	comp=Z,17nm,1.0s,baz=138,slow=5.1,SNR=5.7							
	comp=Z,17nm,1.0s							
DBIC	**Dimbokro**	**72.59**	**288**	P	**P**		**12 31 48.2**	**+1.3**
DBIC				IAmb	IAmb		12 31 51.6	
	comp=Z,32nm,1.2s							
DBIC	**Dimbokro**	**72.59**	**288**	P	**P**		**12 31 48.2**	**+1.3**
DBIC				pmax	pmax			
	comp=Z,32nm,1.3s							
TIC	**Toumodi**	**72.71**	**288**	⇑*i*P	**P**		**12 31 48.9**	**+1.2**
	comp=Z,2.9nm,0.3s							
MAK	**Makhachkala**	**72.79**	**350**	*e*P	P		12 31 42.4	-5.0
MAK				*e*S	**S**		**12 41 05.7**	**-7.4**
MAK				pmax	pmax			
	comp=Z,138nm,1.2s							
MAK				MLR	MLR			
	comp=Z,331nm,18.0s							
TKM2	**Tokmak 2**	**72.92**	**11**	*i*P	**P**		**12 31 48.2**	**-0.3**
TKM2				pmax	pmax			
	comp=Z,11nm,0.7s							
BRTR	**Keskin Array B**	**73.08**	**338**	P	**P**		**12 31 48.4**	**-1.0**
	comp=Z,4.6nm,0.9s,baz=187,slow=6.1,SNR=11							
	comp=Z,4.6nm,0.9s							
BRTR	**Keskin Array B**	**73.08**	**338**	*i*P	**P**		**12 31 49.5**	**+0.1**
BRTR				pmax	pmax			
	comp=Z,4.0nm,0.9s							
PDGK	**Podgornoye**	**74.05**	**14**	P	**P**		**12 31 54.9**	**-0.2**
KBZ	**Khabaz**	**74.37**	**346**	P	**P**		**12 31 57.6**	**+1.0**
	comp=Z,4.3nm,1.0s,baz=244,slow=4.0,SNR=5.0							
	comp=Z,4.3nm,1.0s							
KBZ	**Khabaz**	**74.37**	**346**	*d*P	**P**		**12 31 59.5**	**+2.8**
KBZ				pmax	pmax			
	comp=Z,8.0nm,1.1s							
KIV	**Kislovodsk**	**74.63**	**346**	*i*P	**P**		**12 31 58.6**	**+0.3**
KIV				*i*			12 32 07.1	
KIV				*i*			12 32 13.1	
KIV				*i*			12 34 42.2	
KIV				pmax	pmax			
	comp=Z,11nm,0.8s							
LZH	**Lanzhou**	**76.34**	**35**	*e*P	**P**		**12 32 10.0**	**+1.5**
LZH				pP	PcP		12 32 17.8	-2.5
LZH				sP	pwP		12 32 22.5	+6.4
LZH				pmax	pmax			
	comp=Z,20nm,1.0s							
WMQ	**Urumqi**	**76.58**	**20**	*e*P	**P**		**12 32 11.5**	**+2.0**
WMQ				pmax	pmax			
	comp=Z,22nm,1.1s							
AGG	**Agios Georgios**	**76.80**	**330**	IAmb	IAmb		12 32 13.9	
	comp=Z,22nm,1.2s							
ALN	**Alexandroupoli**	**76.83**	**333**	IAmb	IAmb		12 32 13.7	
	comp=Z,11nm,1.0s							
GTA	**Gaotai**	**77.15**	**30**	⇓P	**P**		**12 32 13.0**	**+0.1**
GTA				pP	PcP		12 32 21.8	-1.9
GTA				sP	pwP		12 32 25.3	+4.7
GTA				pmax	pmax			
	comp=Z,12nm,1.2s							
GTA				pmax	pmax			
	comp=Z,310nm,6.7s							
GTA				LR	LR			
	comp=Z,170nm,17.1s							
GTA				LR	LR			
	comp=Z,250nm,18.5s							
GTA				LR	LR			
	comp=Z,260nm,19.6s							
XAN	**Xi'an**	**77.43**	**39**	⇑P	**P**		**12 32 14.0**	**-0.5**
XAN				pP	pwP		12 32 20.0	-2.2
XAN				sP	PcP		12 32 23.0	-1.9
XAN				pmax	pmax			
	comp=Z,8.0nm,1.3s							
OTUK	**Ortayu**	**77.67**	**8**	P	**P**		**12 32 15.5**	**0.0**
MAKZ	**Makanchi**	**77.90**	**15**	P	**P**		**12 32 15.9**	**-0.9**
MAKZ	**Makanchi**	**77.90**	**15**	P	**P**		**12 32 15.9**	**-0.9**
MAKZ				pmax	pmax			
	comp=Z,8.0nm,1.0s							
MK31	**Makanchi Array**	**77.96**	**15**	*d*P	**P**		**12 32 16.9**	**-0.2**
MKAR	**Makanchi Array**	**77.96**	**15**	P	**P**		**12 32 16.2**	**-0.9**
	comp=Z,

comp=Z,4.5nm,0.8s
AKASG **Malin Array Be** 84.30 340 *i* P **P** 12 32 50.2 -0.5
AKASG pmax pmax
comp=Z,4.0nm,0.8s
AKBB **Malin Array Si** 84.30 340*c* *i* P **P** 12 32 50.8 +0.1
AKBB pmax pmax
comp=Z,22nm,1.3s
CASP **Castiglione de** 85.13 325 IAmb IAmb 12 32 57.8
comp=Z,9.4nm,0.9s
ARU **Arti** 85.23 359 P **P** 12 32 54.5 -0.7
ARU **Arti** 85.23 359*d* *i* P **P** 12 32 55.4 +0.2
ARU S **S** 12 43 19.9 -5.2
ARU SS **SS** 12 49 04.9 +4.8
ARU pmax pmax
comp=Z,27nm,1.3s
ZAA0 **Zalesovo Array** 85.24 14 IAmb IAmb 12 33 04.7
comp=Z,20nm,1.1s
ZALV **Zalesovo Beam** 85.24 14 P **P** 12 32 55.0 -0.3
comp=Z,10nm,0.8s,baz=212,slow=4.5,SNR=40
comp=Z,10nm,0.8s
ZALV **Zalesovo Beam** 85.24 14 *i* P **P** 12 32 55.5 +0.1
ZALV pmax pmax
comp=Z,10.0nm,0.8s
SVE **Sverdlovsk** 85.60 360 *e* P **P** 12 32 58.1 +1.0
SVE pmax pmax
comp=Z,47nm,1.5s
KNGR **Kungurtug, Tuv** 85.68 22⇑ *i* P **P** 12 32 58.5 +0.7
KNGR pmax pmax
comp=Z,18nm,1.3s
SOKA **Soboth** 86.13 330 *e* P **P** 12 33 02.4 +2.3
comp=Z,1.3nm,0.8s
OBKA **Obir** 86.21 330 *e* P **P** 12 33 02.8 +2.3
comp=Z,4.5nm,0.8s
RONA **Rosalia, Austr** 86.39 332 *e* P **P** 12 33 03.5 +2.1
comp=Z,8.6nm,1.2s
OBN **Obninsk** 86.48 346 *i* P **P** 12 33 00.3 -1.1
OBN *i* 12 33 08.8
OBN *i* 12 36 19.2
OBN pmax pmax
comp=Z,47nm,1.3s
CONA **Conrad Observa** 86.75 331 *e* P **P** 12 33 03.1 0.0
comp=Z,12nm,1.3s
SONM **Songino Array** 86.76 29 P **P** 12 33 02.2 -1.0
comp=Z,2.1nm,0.9s,baz=219,slow=4.0,SNR=8.4
SONM PP **PP** 12 36 27.2 +1.1
comp=Z,2.8nm,1.2s,baz=212,slow=10,SNR=4.2
comp=Z,2.1nm,0.9s
MOS **Moscow** 86.85 347 *e* P **P** 12 32 59.0 -4.3
MOS pmax pmax
comp=Z,100nm,0.7s
MOS pmax pmax
comp=Z,56nm,0.7s
ULN **Ulaanbaatar** 87.06 29 P **P** 12 33 02.6 -2.2
ULN IAmb IAmb 12 33 15.2
comp=Z,7.1nm,0.9s
ULN **Ulaanbaatar** 87.06 29⇑ *e* P **P** 12 33 04.4 -0.3
ULN pmax pmax
comp=Z,6.0nm,1.3s
KBA **Koelnbreinsper** 87.18 330 *e* P **P** 12 33 07.1 +1.8
comp=Z,3.7nm,0.9s
ABTA **Abfaltersbach** 87.30 329 *e* P **P** 12 33 08.6 +2.7
KIRV **Kirov** 87.90 354*c* *i* P **P** 12 33 08.6 +0.3
WTTA **Wattenberg** 88.08 329 *e* P **P** 12 33 12.1 +2.4
comp=Z,14nm,1.2s
WATA **Walderalm** 88.16 329 *e* P **P** 12 33 10.6 +0.6
comp=Z,6.8nm,0.7s
FUORN **Ofenpass-Fuorn** 88.24 328 IAmb IAmb 12 33 14.3
comp=Z,7.3nm,1.0s
SQTA **Sankt Quirin** 88.24 329 *e* P **P** 12 33 10.5 +0.1
comp=Z,1.6nm,1.3s
FETA **Feichten** 88.32 328 *e* P **P** 12 33 11.0 +0.2
comp=Z,18nm,1.2s
GERES **GERESS Array B** 88.37 331 P **P** 12 33 11.1 +0.1
comp=Z,0.3nm,0.2s,baz=177,slow=4.8,SNR=6.3
comp=Z,0.3nm,0.2s
MOTA **Moosalm** 88.39 329 *e* P **P** 12 33 11.1 0.0
comp=Z,15nm,1.1s
TUE **Stuetta** 88.56 327 P **P** 12 33 10.8 -1.2
TUE IAmb IAmb 12 33 18.2
comp=Z,11nm,0.9s
KHC **Kasperske Hory** 88.64 331 *e* P **P** 12 33 13.6 +1.5
KHC **Kasperske Hory** 88.64 331 *e* P **P** 12 33 13.6 +1.5
RETA **Reutte** 88.65 329 *e* P **P** 12 33 12.4 +0.1
comp=Z,12nm,1.0s
DAVA **Damuels** 88.90 328 *e* P **P** 12 33 13.7 +0.2
comp=Z,18nm,1.0s
BRG **Berggiesshubel** 89.83 332 *i* P **P** 12 33 20.9 +3.3
BRG Amp 12 33 21.9
comp=Z,13nm,1.3s
BRG Amp 12 52 05.0
comp=E,1.1nm,23.7s
BRG Amp 12 52 11.0
comp=Z,1.9nm,24.1s
BRG Amp 12 52 17.0
comp=N,1.2nm,23.7s
BRG **Berggiesshubel** 89.83 332 *i* P **P** 12 33 20.9 +3.3
BRG pmax pmax
comp=Z,13nm,1.3s
KLNR **Kaliningrad** 90.48 338⇓ *e* P **P** 12 33 23.9 +3.4
KLNR pmax pmax
comp=Z,22nm,0.5s
CLL **Collm** 90.54 332 *e* P **P** 12 33 22.0 +1.1
CLL **Collm** 90.54 332 *e* P **P** 12 33 22.0 +1.1
ESBB **Sonseca Array** 91.28 316 IAmb IAmb 12 33 29.8
comp=Z,17nm,1.4s
ESDC **Sonseca Array** 91.28 316 P **P** 12 33 26.2 +1.5
comp=Z,5.0nm,1.0s,baz=119,slow=3.3,SNR=18
comp=Z,5.0nm,1.0s
ESDC **Sonseca Array** 91.28 316 P **P** 12 33 26.2 +1.5
ESDC IAmb IAmb 12 33 29.7
comp=Z,17nm,1.4s
PRGR **Permogore** 91.28 353 *e* P **P** 12 33 22.9 -1.2
KLMR **Klimovskoe** 91.35 350 *e* P **P** 12 33 23.5 -0.9
KLMR pmax pmax
comp=Z,17nm,1.1s
KLMR **Klimovskoe** 91.35 350 *e* P **P** 12 33 23.5 -0.9
KLMR AMP 12 33 27.6
comp=Z,17nm,1.1s
PAB **San Pablo** 91.44 315 ⇓ P **P** 12 33 27.6 +2.1
SEY **Seymchan** 116.09 31⇓ *i* PKIKP **PKPdf** 12 39 00.8 -0.8
OTAV **Otavalo** 131.85 241 **PKiKP** 12 39 34.7 -0.3
OTAV **Otavalo** 131.85 241 PKIKP **PKiKP** 12 39 34.7 -0.3
GAMB **Gambell** 131.99 28 P **PKPdf** 12 39 32.1 +0.2
baz=290
ANM **Nome** 134.20 26 P **PKiKP** 12 39 37.2 -0.4
baz=298
SPIA **Saint Paul Isl** 134.75 37 P **PKiKP** 12 39 38.4 -0.4
baz=286
C23K **Itkillik River** 135.42 15 P **PKiKP** 12 39 39.6 -0.2
baz=319
D23K **Nanushuk River** 136.06 16 P **PKiKP** 12 39 40.5 -0.7
baz=318
D24K **Happy Valley** 136.35 15 P **PKiKP** 12 39 41.5 -0.3
baz=321
E22K **Anaktuvuk Pass** 136.40 17 P **PKiKP** 12 39 41.5 -0.4
baz=316
TOLK **Toolik Lake Re** 136.57 16 P **PKPdf** 12 39 41.1 +0.5
baz=320
NIKH **Nikolski High** 136.59 42 P **PKPdf** 12 39 41.4 +0.5
baz=283
F21K **Alatna River** 136.60 19 P **PKiKP** 12 39 41.6 -0.8
baz=314
C27K **Jago River** 137.03 12 P **PKPdf** 12 39 41.1 -0.2
baz=327
G21K **Allakaket** 137.08 19 P **PKPdf** 12 39 41.4 -0.1
baz=313
IMAR **Indian Mountai** 137.37 20 PKPdf **PKPdf** 12 39 42.2 +0.2
H21K **Melozitna Rive** 137.88 20 PKPdf **PKPdf** 12 39 43.7 +0.6
H21K **Melozitna Rive** 137.88 20 P **PKiKP** 12 39 44.4 -0.7
baz=313
G23K **Bananza Creek** 137.92 18 P **PKPdf** 12 39 43.7 +0.6
baz=318
PKME **Peaks-Kenny Pk** 137.95 306 P **PKiKP** 12 39 44.9 -0.8
baz=85
H22K **Ishtalitna Cre** 138.14 19 P **PKiKP** 12 39 44.6 -0.9
baz=315
J20K **Nowinta River** 138.45 22 PKPdf **PKiKP** 12 39 45.0 -1.1
J20K **Nowinta River** 138.45 22 P **PKiKP** 12 39 45.5 -0.7
baz=310
I21K **Tanana** 138.46 20 P **PKiKP** 12 39 45.6 -0.5
baz=314
TTA **Tatalina** 138.58 25 P **PKiKP** 12 39 46.2 -0.4
baz=307
H23K **Yukon River** 138.71 19 P **PKiKP** 12 39 46.2 -0.5
baz=318
N16K **Nishlik Lake** 138.89 29 P **PKPdf** 12 39 45.8 +0.8
baz=302
MLY **Manley** 138.94 20 P **PKiKP** 12 39 46.4 -0.9
baz=315
K20K **Telida** 139.01 23 P **PKiKP** 12 39 46.5 -0.9
baz=310
H24K **Noodor Dome** 139.15 18 P **PKPdf** 12 39 46.0 +0.6
baz=320
CHUM **Lake Minchumin** 139.25 22 P **PKPdf** 12 39 46.0 +0.5
baz=322
I23K **Minto, Yukon-K** 139.26 19 P **PKiKP** 12 39 47.0 -0.8
baz=317
L19K **White Mountain** 139.47 25 P **PKiKP** 12 39 47.4 -0.9
baz=308
C36M **Paulatuk** 139.62 3 P **PKPdf** 12 39 46.8 +0.8
baz=353
L20K **Farewell, AK** 139.64 24 P **PKPdf** 12 39 47.3 +0.9
baz=309
CAST **Castle Rocks** 139.64 22 P **PKiKP** 12 39 48.3 -0.4
baz=312
O16K **Kokwok River B** 139.64 30 P **PKPdf** 12 39 46.8 +0.5
baz=301
ILAR **Eielson Array** 140.24 18 PKhKP PKPpre 12 39 38.1
comp=Z,0.2nm,0.6s,baz=0.0,slow=1.8,SNR=5.5
ILAR PKP **PKPdf** 12 39 46.1 -1.2
comp=Z,0.9nm,0.7s,baz=308,slow=2.8,SNR=8.4
ILAR PP **PP** 12 42 47.1 +2.0
comp=Z,0.6nm,0.9s,baz=309,slow=5.0,SNR=4.9
Q16K **King Salmon** 140.76 30 P **PKPdf** 12 39 47.7 -0.7
baz=302
J25K **Salcha River,** 140.77 18 P **PKPdf** 12 39 48.1 -0.3
baz=322
SKT **Skwentna** 140.80 24 P **PKPdf** 12 39 48.0 -0.5
baz=312
CUT **Chulitna** 140.94 23 P **PKPdf** 12 39 48.1 -0.5
baz=314
EPYK **Eagle Plains** 141.16 11 P **PKPdf** 12 39 48.8 -0.3
baz=335
N58A **Sunbury** 143.78 300 P PKPab 12 39 51.6 +0.3
baz=85
N58A P PKPab 12 39 51.6 +0.3
baz=85
T60A **Surry** 143.97 294 P PKPbc 12 39 53.7 +1.0
baz=90
T60A P PKPbc 12 39 53.7 +1.0
baz=90
MCARA **McCarthy VSAT** 143.99 20 P PKPbc 12 39 52.8 +0.8
baz=323,SNR=5.5
M57A **Sunshine Farm,** 144.04 301 P **PKPab** 12 39 52.8 +0.5
baz=84,SNR=7.4
M57A P **PKPab** 12 39 52.8 +0.5
baz=84,SNR=7.4
L56A **Greenwood** 144.26 303 P **PKPab** 12 39 53.2 +0.1
baz=82,SNR=14
L56A P **PKPab** 12 39 53.2 +0.1
baz=82,SNR=14
YUK3 **Moose Creek** 144.38 17 P PKPbc 12 39 53.8 +0.3
baz=326,SNR=6.8
Q23K **Middleton Isla** 144.41 24 P **PKPdf** 12 39 54.6 -0.2
baz=316
CRQE **Cirque** 144.47 20 P **PKPdf** 12 39 54.7 -0.4
baz=322
M30M **Minto, Yukon** 144.56 14 P **PKPdf** 12 39 55.4 +0.2
baz=332
T59A **Double "B" Far** 144.63 294 P **PKPab** 12 39 54.8 +0.2
baz=89
T59A P **PKPab** 12 39 54.8 +0.2
baz=89
SSPA **Standing Stone** 144.69 300 PKPdf **PKPab** 12 39 55.0 +0.3
SSPA **Standing Stone** 144.69 300 P **PKPab** 12 39 54.3 -0.4
baz=84,SNR=9.5
SSPA **Standing Stone** 144.69 300 P **PKPab** 12 39 54.8 +0.1
baz=84
CTG **Chitna Glacier** 144.81 19 P PKPbc 12 39 55.0 +0.2
baz=325,SNR=17
U59A **Littleton** 144.82 293 P **PKPdf** 12 39 56.1 -0.3
baz=90
U59A P **PKPdf** 12 39 56.1 -0.3
baz=90
R58B **Mineral** 144.87 295 P **PKPbc** 12 39 55.6 +0.1
baz=88
R58B P **PKPbc** 12 39 55.6 +0.1
baz=88
J54A **Appleton** 144.87 305 P **PKPbc** 12 39 55.5 +0.2
baz=80
J54A P **PKPbc** 12 39 55.5 +0.2
baz=80
P57A **Homestead Farm** 144.88 298 P **PKPbc** 12 39 55.6 +0.1
baz=86
P57A P **PKPbc** 12 39 55.6 +0.1
baz=86
BOAB **BOACO BROADBAN** 144.89 249 **PKPdf** 12 39 56.7 -0.4
WVNY **West Valley, N** 144.99 303 P **PKPbc** 12 39 55.7 -0.2
baz=312,SNR=12
YUK4 **Talbot Arm** 145.21 17 P **PKPbc** 12 39 55.8 -0.3
baz=329,SNR=24
M55A **Ridgway** 145.25 302 P **PKPbc** 12 39 56.9 +0.2
baz=82,SNR=6.4
M55A P **PKPbc** 12 39 56.9 +0.2
baz=82,SNR=6.4
MESA **MESA** 145.27 20 P **PKPab** 12 39 56.5 0.0
baz=323
MATN **Matagalpa** 145.37 249 **PKPbc** 12 39 57.1 -0.7
M31M **Drury Creek, Y** 145.38 13 P **PKPbc** 12 39 55.5 -0.9
baz=336
N30M **Aishikik Lake** 145.48 15 P **PKPbc** 12 39 56.8 0.0
baz=331,SNR=13
YUK6 **Outpost Mounta** 145.62 17 P **PKPab** 12 39 57.7 -0.1
baz=329
S57A **Dark Hollow, R** 145.72 295 P **PKPbc** 12 39 58.4 +0.1
baz=87
S57A P **PKPbc** 12 39 58.4 +0.1
baz=87
N31M **Braeburn, Yuko** 145.75 14 P **PKPdf** 12 39 57.1 -0.1
baz=333
FCC **Fort Churchill** 145.77 337 PKPdf **PKPdf** 12 39 57.5 +0.3
FCC **Fort Churchill** 145.77 337 PKP2 **PKPdf** 12 39 57.5 +0.3
Q56A **Snyder Ridge,** 145.83 297 P **PKPbc** 12 39 58.6 0.0
baz=85
Q56A P **PKPbc** 12 39 58.6 0.0
baz=85
PINM **Pinnacle** 145.84 19 P **PKPbc** 12 39 58.1 +0.1
baz=326
V58A **Windy Hill, Pi** 145.89 292 P **PKPdf** 12 39 58.6 +0.4
baz=90,SNR=6.9
V58A P **PKPdf** 12 39 58.6 +0.4
baz=90,SNR=6.9
HYT **Haines Junctio** 145.94 16 PKPdf **PKPbc** 12 39 58.4 +0.1
HYT **Haines Junctio** 145.94 16 P **PKPbc** 12 39 58.3 -0.1
baz=330,SNR=15
T57A **Hurt** 145.99 294 P **PKPab** 12 39 59.8 +0.1
baz=88
T57A P **PKPab** 12 39 59.8 +0.1
baz=88
ERPA **Erie** 146.05 303 P **PKPdf** 12 39 58.1 -0.2
baz=80
MCWV **Mont Chateau** 146.28 299 P **PKPdf** 12 39 58.7 -0.1
baz=84
O30N **Mendenhall** 146.32 15 P **PKPdf** 12 39 58.7 +0.4
baz=332,SNR=15
PNL **Peninsula** 146.43 19 P **PKPbc** 12 39 59.2 -0.6
baz=326
YKA **Yellowknife Ar** 146.49 356 PKPbc **PKPdf** 12 39 58.8 +0.4
comp=Z,7.1nm,0.6s,baz=355,slow=3.1,SNR=71
YKA PP **PP** 12 43 23.4 +0.9
comp=Z,0.5nm,0.7s,baz=3.7,slow=5.7,SNR=3.5
YKA **Yellowknife Ar** 146.49 356 PKPdf **PKPdf** 12 39 57.7 -0.7
N32M **Quiet Lake** 146.60 12 P **PKPdf** 12 39 59.1 +0.4
baz=337
W57A **Gilead** 146.60 291 P **PKPdf** 12 39 59.6 +0.2
baz=91,SNR=7.0
W57A P **PKPdf** 12 39 59.6 +0.2
baz=91,SNR=7.0
O54A **Avella** 146.63 300 P **PKPbc** 12 40 01.0 +0.1
baz=83,SNR=8.1
O54A P **PKPbc** 12 40 01.0 +0.1
baz=83,SNR=8.1
M53A **WI Miller and** 146.67 302 P **PKPdf** 12 39 59.6 +0.2
baz=81
WHY **Whitehorse** 146.69 14 P **PKPbc** 12 39 59.8 -0.7
baz=334
N53A **Lisbon** 146.89 301 P **PKPdf** 12 40 00.3 +0.6
baz=81,SNR=6.8
N53A P **PKPdf** 12 40 00.3 +0.6
baz=81,SNR=6.8
BLA **Blacksburg** 146.91 294 P **PKPdf** 12 40 00.7 +0.7
baz=87
U56A **King** 146.91 293 P **PKPdf** 12 40 00.6 +0.6
baz=89
U56A P **PKPdf** 12 40 00.6 +0.6
baz=89
BIRD **Birdtown, Kers** 146.98 290 P **PKPdf** 12 40 00.4 +0.3
baz=91
Q54A **Coxs Mills** 147.11 298 P **PKPdf** 12 40 00.3 +0.2
baz=84,SNR=14
Q54A P **PKPdf** 12 40 00.3 +0.2
baz=84,SNR=14
SOR **Soroa** 147.15 267 **PKPdf** 12 40 01.3 +0.6
SOR **Soroa** 147.15 267 PKIKP **PKPdf** 12 40 01.3 +0.6
O53A **New Philadelph** 147.25 300 P **PKPdf** 12 40 00.8 +0.4
baz=82
PLBC **Pleasant Camp** 147.41 16 P **PKPdf** 12 40 01.0 +1.0
baz=331
P53A **Whipple** 147.49 299 P **PKPdf** 12 40 01.2 +0.4
baz=83,SNR=13
P53A P **PKPdf** 12 40 01.2 +0.4
baz=83,SNR=13
P33M **Teslin, Yukon** 147.52 13 **PKPbc** 12 40 01.6 -1.3
P33M **Teslin, Yukon** 147.52 13 P **PKPbc** 12 40 01.9 -1.0
baz=337
V55A **Taylorsville** 147.60 292 P **PKPdf** 12 40 01.5 +0.4
baz=89,SNR=8.8
V55A P **PKPdf** 12 40 01.5 +0.4
baz=89,SNR=8.8
JSC **Jenkinsville** 147.63 289 P **PKPbc** 12 40 04.1 +0.2
baz=91
SKAG **Skagway** 147.66 16 P **PKPbc** 12 40 02.4 -0.8
baz=332
KMSC **Kings Mountain** 147.70 291 P **PKPdf** 12 40 01.9 +0.7
baz=90
KMSC **Kings Mountain** 147.70 291 P **PKPdf** 12 40 02.0 +0.7
baz=90
O52A **Adamsville** 147.74 300 P **PKPdf** 12 40 00.9 -0.3
baz=82,SNR=8.9
O52A P **PKPdf** 12 40 00.9 -0.3
baz=82,SNR=8.9
HAW **Hawthorne Fire** 147.89 287 P **PKPdf** 12 40 02.3 +0.6
baz=93
P32M **Atlin** 147.91 14 P **PKPbc** 12 40 03.2 -0.7
baz=335
N51A **Ashland** 148.02 301 P **PKPdf** 12 40 01.5 -0.1
baz=80
N51A P **PKPdf** 12 40 01.5 -0.1
baz=80
P52A **Corning** 148.03 299 P **PKPbc** 12 40 03.6 -1.2
baz=82
U54A **Nelsons Funny** 148.07 293 P **PKPdf** 12 40 02.3 +0.3
baz=87,SNR=9.4
U54A P **PKPdf** 12 40 02.3 +0.3
baz=87,SNR=9.4
PAULI **Pauline** 148.10 290 P **PKPdf** 12 40 02.2 +0.2
baz=90
Q52A **Bidwell** 148.22 298 P **PKPdf** 12 40 02.2 +0.2
baz=83,SNR=9.7
Q52A P **PKPdf** 12 40 02.2 +0.2
baz=83,SNR=9.7
HODGE **Hodges** 148.46 289 P **PKPbc** 12 40 05.9 -0.2
baz=91
255A **Hazlehurst** 148.53 284 P **PKPbc** 12 40 06.7 +0.4
baz=94
ACSO **Alum Creek Sta** 148.59 300 P **PKPdf** 12 40 02.7 +0.1
baz=80
ACSO **Alum Creek Sta** 148.59 300 P **PKPbc** 12 40 05.5 -0.7
baz=80
P51A **Williamsport** 148.77 299 P **PKPdf** 12 40 02.7 -0.2
baz=82
P51A P **PKPdf** 12 40 02.7 -0.2
baz=82
V53A **Saluda** 148.90 292 P **PKPdf** 12 40 03.6 +0.3
baz=88,SNR=14
V53A P **PKPdf** 12 40 03.6 +0.3
baz=88,SNR=14
CASEE **Lake Jocassee** 149.01 290 P **PKPdf** 12 40 04.0 +0.6
baz=89,SNR=8.9
L48A **N Adams** 149.33 304 P **PKPdf** 12 40 03.8 +0.1
baz=76
L48A P **PKPdf** 12 40 03.8 +0.1
baz=76
S51A **Beattyville** 149.40 295 P **PKPbc** 12 40 08.5 +0.1
baz=84,SNR=8.6
S51A P **PKPbc** 12 40 08.5 +0.1
baz=84,SNR=8.6
GOGA **Godfrey** 149.45 287 P **PKPdf** 12 40 04.7 +0.5
baz=92,SNR=6.6
GOGA **Godfrey** 149.45 287 P **PKPbc** 12 40 07.8 -0.8
baz=92
TZTN **Tazewell** 149.46 293 P **PKPdf** 12 40 04.9 +0.8
baz=86,SNR=6.3
TZTN **Tazewell** 149.46 293 P **PKPbc** 12 40 08.1 -0.5
baz=86
V52A **Sevierville** 149.53 292 P **PKPbc** 12 40 08.5 -0.3
baz=87
O49A **Covington** 149.62 301 P **PKPbc** 12 40 08.3 -0.6
baz=79
O49A P **PKPbc** 12 40 08.3 -0.6
baz=79
E43A **Lone Tree Farm** 149.68 313 P **PKPdf** 12 40 04.1 0.0
baz=66
TKL **Tuckaleechee C** 149.69 292 P **PKPbc** 12 40 08.7 -0.5
baz=88
DLBC **Dease Lake** 149.70 12 P **PKPbc** 12 40 08.4 -0.2
baz=340
SIT **Sitka** 149.78 18 P **PKPbc** 12 40 08.7 +0.1
baz=331
W52A **Murphy** 149.83 290 P **PKPbc** 12 40 09.6 +0.1
baz=88,SNR=5.9
R50A **Paris** 149.91 297 P **PKPbc** 12 40 09.5 -0.1
baz=83
R50A P **PKPbc** 12 40 09.5 -0.1
baz=83
Y52A **Lilburn** 149.95 288 P **PKPdf** 12 40 06.4 +1.4
baz=90,SNR=8.0
Y52A P **PKPdf** 12 40 06.4 +1.4
baz=90,SNR=8.0
P49A **Miami Univ. Ec** 150.02 299 P **PKPbc** 12 40 09.6 -0.2
baz=80,SNR=6.9
P49A **Miami Univ. Ec** 150.02 299 P **PKPbc** 12 40 08.8 -1.0
baz=80
V51A **Loudon** 150.15 292 P **PKPbc** 12 40 10.5 +0.2
baz=87,SNR=19
O48B **Farmland** 150.22 301 P **PKPbc** 12 40 09.9 -0.4
baz=79
D41A **Chassel** 150.37 316 P **PKPbc** 12 40 10.3 -0.2
baz=63
T50A **Nancy** 150.45 294 P **PKPbc** 12 40 10.5 -0.5
baz=84
T50A P **PKPbc** 12 40 10.5 -0.5
baz=84
152A **Waverly Hall** 150.47 286 P **PKPdf** 12 40 06.5 +0.6
baz=92,SNR=8.3
N47A **Urbana** 150.50 302 P **PKPbc** 12 40 10.4 -0.5
baz=77
N47A P **PKPbc** 12 40 10.4 -0.5
baz=77
R49A **Shelbyville** 150.56 297 P **PKPdf** 12 40 05.4 -0.4
baz=82,SNR=9.1
R49A P **PKPdf** 12 40 05.4 -0.4
baz=82,SNR=9.1
P48A **Milroy** 150.58 299 P **PKPbc** 12 40 10.3 -0.9
baz=80,SNR=7.4
P48A P **PKPbc** 12 40 10.3 -0.9
baz=80,SNR=7.4
352A **Blakely** 150.58 283 P **PKPbc** 12 40 11.6 +0.2
baz=94,SNR=5.3
X51A **Calhoun** 150.61 289 P **PKPbc** 12 40 11.5 +0.1
baz=89,SNR=17
X51A P **PKPbc** 12 40 11.5 +0.1
baz=89,SNR=17
F42A **Maple Grove Fa** 150.65 313 P **PKPbc** 12 40 11.5 +0.4
baz=66
Z51A **Franklin** 150.87 287 P **PKiKP** 12 40 12.6 -0.1
baz=91
H43A **Windswept, Lux** 150.91 310 P **PKPbc** 12 40 11.8 0.0
baz=69
W50A **Signal Mountai** 150.96 291 P **PKPbc** 12 40 12.2 -0.1
baz=87,SNR=32
T35M **Bob Quinn** 151.03 13 P **PKPbc** 12 40 11.8 +0.1
baz=339
WRAK **Wrangell Islan** 151.10 15 P **PKPbc** 12 40 11.5 -0.3
baz=335
COWI **Conover** 151.15 314 P **PKPdf** 12 40 06.6 +0.2
baz=64
U49A **Red Boiling Sp** 151.25 294 P **PKPbc** 12 40 13.1 +0.3
baz=85
FFC **Flin Flon** 151.61 339 **PKPbc** 12 40 12.0 -1.1
FFC **Flin Flon** 151.61 339 PKIKP **PKPbc** 12 40 12.0 -1.1
SFIN **Lafayette** 151.65 302 P **PKPbc** 12 40 12.9 -0.7
baz=76,SNR=6.4

SFIN	Lafayette baz=76	151.65	302	P		PKPbc	12 40 13.8	+0.2
EYMN	Ely baz=58,SNR=16	151.68	319	P		PKPbc	12 40 13.0	-0.6
EYMN	Ely baz=58	151.68	319	P		PKPbc	12 40 12.9	-0.6
250A	Grady baz=93,SNR=6.1	151.75	284	P		PKiKP	12 40 14.7	+0.2
L44A	Lake County Fo baz=72	151.76	306	P		PKPbc	12 40 14.1	+0.2
CRAG	Craig baz=333	151.77	17	P		PKPbc	12 40 13.1	-0.3
I42A	Draeger Farm, baz=68	151.88	310	P		PKPbc	12 40 13.8	-0.2
K43A	Burlington baz=71	151.90	307	P		PKPbc	12 40 13.9	-0.3
Y49A	Blount Mountai baz=89	151.91	288	P		PKPbc	12 40 14.7	+0.2
M44A	Midewin, Midew baz=74,SNR=6.5	152.09	304	P		PKiKP	12 40 15.3	+0.4
V48A	Smith Brothers baz=85	152.16	292	P		PKPbc	12 40 14.6	-0.4
G40A	Rib Lake baz=64,SNR=5.6	152.18	313	P		PKPbc	12 40 14.5	-0.2
T47A	Sharon Grove baz=83	152.26	295	P		PKPbc	12 40 14.9	-0.3
BRAL	Brewton baz=94	152.37	282	P		PKPbc	12 40 15.4	-0.2
E38A	The Farm, Brul baz=60,SNR=6.0	152.40	317	P		PKPbc	12 40 14.8	-0.4
LRAL	Lakeview Retre baz=90	152.40	286	P		PKiKP	12 40 16.1	+0.2
LRAL	Lakeview Retre baz=90	152.40	286	P		PKPbc	12 40 15.4	-0.2
X48A	Hartselle baz=88	152.42	289	P		PKPbc	12 40 15.6	+0.1
ULM	Lac du Bonnet comp=Z,13nm,0.8s,baz=36,slow=3.2,SNR=10	152.61	327	PKPbc		PKPbc	12 40 14.5	-1.0
O44A	Mansfield baz=76,SNR=8.3	152.72	302	P		PKiKP	12 40 16.6	+0.3
OLIL	Olney baz=79	152.76	299	P		PKPbc	12 40 16.2	0.0
WVT	Waverly baz=84	152.94	293	P		PKPbc	12 40 16.2	-0.4
WVT	Waverly baz=84	152.94	293	P		PKPbc	12 40 15.8	-0.8
JFWS	Jewell Farm baz=68,SNR=7.0	153.15	309	P		PKPbc	12 40 16.1	-0.8
JFWS	Jewell Farm baz=68	153.15	309	P		PKPbc	12 40 16.3	-0.6
HDIL	Hopedale baz=74	153.23	303	P		PKiKP	12 40 17.7	+0.3
HDIL	Hopedale baz=74	153.23	303	P		PKPbc	12 40 17.3	+0.1
Q44A	Meyer Farm, Va baz=77	153.42	299	P		PKPbc	12 40 17.4	-0.3
SPMN	Marine on St. baz=61	153.83	315	P		PKPbc	12 40 17.8	-0.6
AGMN	Agassiz Nation baz=51	153.86	324	P		PKPdf	12 40 10.1	-0.3
AGMN	Agassiz Nation baz=51	153.86	324	P		PKPbc	12 40 17.7	-0.7
OXF	Oxford baz=86	154.36	290	P		PKPbc	12 40 19.1	-0.7
CCM	Cathedral Cave	155.31	298			PKPdf	12 40 11.8	-0.9
CCM	Cathedral Cave	155.31	298	PKIKP		PKPdf	12 40 11.8	-0.9
CCM	Cathedral Cave baz=77	155.31	298	P		PKPdf	12 40 21.4	+8.7
W41B	Gary Mavity, V baz=82	156.62	292	P		PKPdf	12 40 14.5	0.0
ECSD	EROS Data Cent	156.94	315	PKPdf		PKPdf	12 40 14.3	-0.5
ECSD	EROS Data Cent baz=58	156.94	315	P		PKPdf	12 40 14.2	-0.5
MIAR	Mount Ida baz=83	157.78	291	P		PKPdf	12 40 15.9	-0.1
W39A	Magazine baz=81	157.86	292	P		PKPdf	12 40 16.1	0.0
EGMT	Eagleton baz=24	159.82	342	P		PKPdf	12 40 18.2	+0.1
NEW	Newport baz=4.7	160.82	356	P		PKPdf	12 40 19.1	-0.1
RSSD	Black Hills	160.86	326	PKPdf		PKPdf	12 40 19.2	-0.4
RSSD	Black Hills	160.86	326	PKIKP		PKPdf	12 40 19.2	-0.4
RSSD	Black Hills baz=43	160.86	326	P		PKPdf	12 40 19.4	-0.2
OGNE	Ogallala baz=54	161.82	315	P		PKPdf	12 40 20.0	-0.5
MSO	Missoula baz=14	161.88	349	P		PKPdf	12 40 20.1	-0.3
WMOK	Wichita Mounta baz=77	161.98	293	P		PKPdf	12 40 20.7	-0.2
BOZ	Bozeman (W) baz=22	162.56	343	P		PKPdf	12 40 22.3	+1.1
833A	Chaparral WMA, baz=97	162.81	272	P		PKPdf	12 40 22.2	+0.4
ABTX	Abilene, Hawle baz=83	163.05	287	P		PKPdf	12 40 22.9	+1.0
ABTX	Abilene, Hawle baz=83	163.05	287	P		PKPdf	12 40 22.4	+0.5
JCT	Junction City baz=90	163.31	279	P		PKPdf	12 40 22.8	+0.5
JCT	Junction City baz=90	163.31	279	P		PKPdf	12 40 22.3	+0.1
G03D	McMinnville, O baz=346	163.57	11	P		PKPdf	12 40 21.9	-0.1
G05D	Wamic, OR baz=352	163.79	6	P		PKPdf	12 40 22.1	-0.1
N23A	Red Feather La baz=46	164.15	321	P		PKPdf	12 40 22.8	-0.2
AMTX	Amarillo baz=73	164.25	296	P		PKPdf	12 40 23.8	+0.7
AMTX	Amarillo baz=73	164.25	296	P		PKPdf	12 40 23.1	0.0
H04D	Lebanon baz=348	164.33	10	P		PKPdf	12 40 22.6	-0.1
BW06	Boulder Array baz=32	164.41	333	P		PKPdf	12 40 23.1	-0.1
PDAR	Pinedale Array comp=Z,2.8nm,0.9s,baz=116,slow=2.1,SNR=22	164.41	333	PKP		PKPdf	12 40 22.1	-1.1
I02E	Swisshome, OR baz=344	164.53	13	P		PKPdf	12 40 23.0	+0.1
ISCO	Idaho Springs baz=50	164.69	318	P		PKPdf	12 40 23.8	+0.2
ISCO	Idaho Springs baz=50	164.69	318	P		PKPdf	12 40 23.8	+0.2
Q24A	Divide baz=53	164.93	314	P		PKPdf	12 40 24.1	+0.3
HLID	Hailey baz=15	165.12	347	P		PKPdf	12 40 23.9	+0.2
MSTX	Muleshoe baz=75	165.37	293	P		PKPdf	12 40 24.9	+0.8
MSTX	Muleshoe baz=75	165.37	293	P		PKPdf	12 40 24.4	+0.3
T25A	Trinidad baz=61	165.42	307	P		PKPdf	12 40 24.4	+0.2
J04D	Umpqua Nationa baz=349	165.68	9	P		PKPdf	12 40 23.6	-0.6
J05D	Fort Rock, OR baz=352	165.74	7	P		PKPdf	12 40 24.3	+0.1
SDCO	Great Sand Dun baz=56	165.85	311	P		PKPdf	12 40 24.8	+0.2
SDCO	Great Sand Dun baz=56	165.85	311	P		PKPdf	12 40 25.1	+0.5
O20A	White River Ci baz=42	165.91	324	P		PKPdf	12 40 24.3	-0.2
TX31	Lajitas Ar. Si baz=93	166.63	275	P		PKPdf	12 40 25.8	+0.5
TXAR	Lajitas Array comp=Z,2.3nm,0.8s,baz=134,slow=2.0,SNR=34	166.63	275	PKP		PKPdf	12 40 25.1	-0.1
S22A	4UR Ranch, Cre baz=53	166.71	314	P		PKPdf	12 40 26.2	+0.9
DUG	Dugway, Tooele baz=26	167.84	337	P		PKPdf	12 40 26.4	+0.6
ANMO	Albuquerque baz=64	167.90	302	P		PKPdf	12 40 25.7	-0.4
ANMO	Albuquerque baz=64	167.90	302	P		PKPdf	12 40 26.6	+0.5
MNTX	Cornudas Mount baz=81	167.99	286	P		PKPdf	12 40 25.7	-0.3
MNTX	Cornudas Mount baz=81	167.99	286	P		PKPdf	12 40 26.9	+0.9
MVCO	Mesa Verde baz=50	168.09	315	P		PKPdf	12 40 26.6	+0.4
Y22A	Socorro baz=68	168.69	298	P		PKPdf	12 40 28.1	+1.4
121A	Cookes Peak, D baz=73	169.80	292	P		PKPdf	12 40 28.6	+1.2
121A	Cookes Peak, D	169.80	292	P		PKPdf	12 40 28.4	+1.0
	baz=73							
R11A	Troy Canyon, C baz=18	170.37	344	P		PKPdf	12 40 28.5	+0.9
NVAR	Mina Array Bea comp=Z,2.8nm,1.0s,baz=220,slow=1.7,SNR=11	170.69	357	PKP		PKPdf	12 40 28.6	+0.9
NVAR				PKPab		PKPab	12 41 45.1	-0.2
	comp=Z,0.1nm,0.3s,baz=34,slow=0.3,SNR=2.6							
WUAZ	Wupatki baz=47	170.94	317	P		PKPdf	12 40 28.5	+0.6
TPNV	Topopah Spring baz=16	171.86	344	P		PKPdf	12 40 28.8	+0.5
TUC	Tucson baz=68	172.27	296	P		PKPdf	12 40 29.6	+1.0
FURC	Furnace Creek, baz=14	172.46	347	P		PKPdf	12 40 29.9	+1.5
CWC	Cottonwood Cre baz=5.5	172.65	354	P		PKPdf	12 40 30.1	+1.4
SHOC	Shoshone, Teco baz=19	172.86	342	P		PKPdf	12 40 30.1	+1.5
MPMC	Manual Prospec baz=10.0	172.96	350	P		PKPdf	12 40 29.8	+0.9
PDMCI	Parker Dam,Lak baz=39	173.39	323	P		PKPdf	12 40 29.9	+1.1
ISA	Isabella, Lake baz=3.1	173.45	356	P		PKPdf	12 40 29.9	+1.0
LRMC	Laurel Mtn Rad baz=9.4	173.56	351	P		PKPdf	12 40 30.4	+1.4
GSC	Goldstone, Bar baz=16	173.56	344	P		PKPdf	12 40 30.6	+1.6
GMRC	Granite Mounta baz=27,SNR=7.8	173.69	334	P		PKPdf	12 40 30.5	+1.4
HEC	Hector,Ludlow baz=21	173.88	339	P		PKPdf	12 40 30.7	+1.6
214A	Organ Pipe Nat baz=63	173.98	300	P		PKPdf	12 40 30.2	+1.0
IRM	Iron Mountain baz=33,SNR=5.9	174.01	328	P		PKPdf	12 40 30.1	+0.9
EDW2	Edwards Air Fo baz=7.7	174.19	352	P		PKPdf	12 40 30.3	+1.1
BELC	Belle Mtn. Jos baz=28,SNR=6.4	174.51	333	P		PKPdf	12 40 29.5	+0.1
BC3	Big Chuckawall baz=34,SNR=7.8	174.57	327	P		PKPdf	12 40 29.4	0.0
GLA	Glamis baz=42	174.71	319	P		PKPdf	12 40 30.6	+1.2
PFO	Pinyon Flats O baz=25	175.03	335	P		PKPdf	12 40 30.5	+0.9
TPFO	Pinon Flats baz=26	175.03	335	P		PKPdf	12 40 31.0	+1.4
SWSC	Sam W. Stewart baz=36	175.31	325	P		PKPdf	12 40 31.5	+2.0
MONP2	Monument Peak baz=30,SNR=5.1	175.65	331	P		PKPdf	12 40 31.4	+1.5
IKP	In-Ko-Pah, Jac baz=35,SNR=5.2	175.70	326	P		PKPdf	12 40 31.3	+1.5

*KRNET **30** 12:40:21.9±0.1,39°.42N×73°.48E,mb2.9*
*SOME **30** 12:40:35.0,39°.88N×73°.57E,h10km*
ISC 30 12:40:26.9±1.3,39°.57N±0°.06×73°.22E±0°.04,h10km,n13,
σ2s38/26,10C,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	Osh baz=34	1.01	341	⇑eP	Pg	12 40 45.2	-1.2
				⇑eS	Sn	12 41 02.2	+0.5
DRK	Karamyk baz=73	1.10	266	⇑eP	Pg	12 40 46.5	-1.7
DRK				⇑eS	Sn	12 41 04.5	+0.3
GAR	Garm baz=61	2.33	257	⇑iP	Pn	12 41 05.4	0.0
GAR				⇑eS	Sb	12 41 37.5	-0.3
TRKS	Terek-Say baz=20	2.52	322	⇑eP	Pn	12 41 08.5	+0.4
TRKS				⇑eS	Sb	12 41 42.5	-1.1
UCH	Uchtor baz=15	2.83	20	⇑eP	Pn	12 41 11.7	-1.0
UCH				⇑eS	Sn	12 41 48.4	+1.3
MRKS	Merke 2.6nm,0.3s	3.17	0	eP	Pg	12 41 28.1	+0.4
MRKS				eS	Sg	12 42 06.2	-2.7
KST	Kastek 2.1nm,0.4s	4.04	30	eP	Pg	12 41 42.1	-2.2
KST				eS	Sb	12 42 30.6	+3.4
DGS	Degeres 2.3nm,0.4s	4.14	27	eP	Pb	12 41 42.6	+2.6
DGS				eS	Sb	12 42 31.2	+1.1
BRLS	Borolday 3.5nm,0.9s	4.30	325	eP	Pg	12 41 50.0	+0.8
BRLS				eS	Sg	12 42 44.3	-0.6
TNSS	Tian-Shan 0.8nm,0.2s	4.46	38	eP	Pb	12 41 48.3	+2.7
TNSS				eS	Sb	12 42 40.8	+1.3
KOTS	Kotyrbulak 2.1nm,0.4s	4.69	37	eP	Pg	12 41 54.9	-1.8
KOTS				eS	Sg	12 42 52.3	-5.1
KTBS	Karatobe 1.2nm,0.8s	4.89	31	eP	Pb	12 41 56.0	+3.4
KTBS				eS	Sb	12 42 54.1	+2.7
BTLS	Baital 1.3nm,0.8s	5.50	6	eP	Pg	12 42 09.9	-2.4
BTLS				eS	Sg	12 43 18.5	-5.1
	1.6nm,0.7s						

*KRNET **30** 13:24:01.0±0.1,39°.41N×73°.36E,mb3.2*
*ISU **30** 13:24:02.5,39°.54N×73°.59E,h30km*
*SOME **30** 13:24:14.3,39°.87N×73°.68E,h0km*
*NNC **30** 13:24:16.7±3.3,40°.05N×73°.56E,h0km,mb3.3,mpv3.1,*
Error ellipse: s-maj=26.2km s-min=9.8km az=177.0
ISC 30 13:24:02.0±1.1,39°.44N±0°.05×73°.48E±0°.03,h10km,n41,
σ2s29/66,12C-11D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	Osh baz=39	1.21	334	⇑eP	Pg	13 24 23.6	-1.7
OHH				⇑eS	Sn	13 24 40.4	-1.2
OHH	Osh	1.21	334	P	Pg	13 24 22.8	-2.5
OHH				S	Sn	13 24 39.7	-1.9
DRK	Karamyk baz=74	1.30	272	⇓eP	Pn	13 24 24.1	-2.5
DRK				⇓eS	Sb	13 24 41.0	-2.7
ANR	Andizhan	1.57	327	P	Sg	13 24 53.7	+1.1
FRG	Fergana	1.61	306	P	Pn	13 24 31.4	+0.9
FRG				S	Sg	13 24 54.6	+0.9
BTK	Batken	2.15	288	P	Pn	13 24 40.0	+2.0
BTK				S	Sg	13 25 10.1	-0.9
MINT	Mingtut	2.18	299	P	Pb	13 24 41.6	0.0
MINT				S	Sg	13 25 11.7	-0.5
GAR	Garm baz=61	2.50	261	⇑eP	Pn	13 24 43.5	+0.7
GAR				⇑eS	Sn	13 25 14.6	+1.2
CHDK	Chadak	2.59	307	P	Pb	13 24 48.3	-0.3
CHDK				S	Sg	13 25 23.3	-2.0
TRKS	Terek-Say baz=22	2.75	320	⇓eP	Pn	13 24 46.9	+0.6
TRKS				⇓eS	Sn	13 25 20.6	+0.9
UCH	Uchtor baz=17	2.90	15	⇓eP	Pn	13 24 51.3	+2.7
UCH				⇓eS	Sb	13 25 28.0	-1.7
EKS2	Erkin-Say baz=5.0	3.23	4	⇑eP	Pn	13 24 55.6	+2.7
EKS2				⇑eS	Sb	13 25 35.4	-3.6
AAK	Ala-Archa baz=15	3.29	13	⇑eP	Pn	13 24 56.6	+2.9
AAK				⇑eS	Sb	13 25 37.1	-3.6
	baz=15						
KBK	Karagaybulak baz=20	3.40	19	⇓eP	Pn	13 24 58.2	+2.9
KBK				⇓eS	Sb	13 25 40.2	-3.8
	baz=20						
CHGR	Chuyangaron baz=58	3.46	258	⇓eP	Pn	13 24 56.7	+0.7
CHGR				⇓eS	Sn	13 25 37.3	+0.3
	baz=58						
IUG	Iuzhnay 90nm,0.5s	3.77	317	eP	Pg	13 25 21.2	+7.0
IUG				eS	Sg	13 26 09.3	+6.3
	26nm,0.7s						
IUG	Iuzhnay	3.77	317	Pg	Pg	13 25 21.2	+7.0
IUG				Lg	Lg	13 26 09.9	
TKM2	Tokmak 2 1.3nm,0.4s	3.83	24	⇑Pg	Pb	13 25 12.1	+2.3
TKM2				⇑Lg	Lg	13 25 55.6	
	5.1nm,0.5s						
KST	Kastek 1.6nm,0.2s	4.06	27	eP	Pg	13 25 21.0	+1.2
KST				eS	Sg	13 26 09.1	-3.2
	23nm,0.8s						
KST	Kastek 1.6nm,0.2s	4.06	27	Pg	Pg	13 25 21.0	+1.2
KST				Lg	Lg	13 26 09.7	
	23nm,0.8s						
DGS	Degeres 2.4nm,0.5s	4.17	24	eP	Pg	13 25 24.1	+2.1
DGS				eS	Sg	13 26 14.3	-1.8
	12nm,0.8s						
DGS	Degeres 2.4nm,0.5s	4.17	24	Pg	Pg	13 25 24.1	+2.1
DGS				Lg	Lg	13 26 14.3	
	12nm,0.8s						
KK31	Karatay Array 0.4nm,0.3s,baz=0.0,slow=0.1,SNR=5.7	4.29	330	⇓Pn	Pn	13 25 10.9	+3.5
KK31				⇑Sn	Sn	13 26 01.4	+3.9
	1.5nm,0.4s						
KK31				⇑Lg	Lg	13 26 14.3	
	2.1nm,0.4s						
MTBS	Maitube 1.6nm,0.1s	4.31	30	eP	Pg	13 25 25.9	+1.4
MTBS				eS	Sg	13 26 17.6	-2.7
	13nm,0.3s						
MTBS	Maitube 1.6nm,0.1s	4.31	30	Pg	Pg	13 25 25.9	+1.4
MTBS				Lg	Lg	13 26 17.6	
	13nm,0.3s						
TNSS	Tian-Shan 2.2nm,0.5s	4.45	35	eP	Pg	13 25 28.4	+1.2
TNSS				eS	Sg	13 26 21.9	-2.9
	6.0nm,0.5s						
TNSS	Tian-Shan	4.45	35	Pg	Pg	13 25 28.4	+1.2
TNSS				Lg	Lg	13 26 22.8	
BRLS	Borolday 1.1nm,0.2s	4.52	324	eP	Pg	13 25 29.9	+1.3
BRLS				eS	Sg	13 26 24.7	-2.4
	5.2nm,0.6s						
BRLS	Borolday 1.1nm,0.2s	4.52	324	Pg	Pg	13 25 29.9	+1.3
BRLS				Lg	Lg	13 26 24.7	
	5.2nm,0.6s						
KTBS	Karatobe 1.1nm,0.4s	4.90	28	eP	Pg	13 25 36.2	+0.4
KTBS				eS	Sg	13 26 35.1	-4.2
	14nm,0.5s						
KTBS	Karatobe 1.1nm,0.4s	4.90	28	Pg	Pg	13 25 36.2	+0.4
KTBS				Lg	Lg	13 26 35.1	
	14nm,0.5s						
KUU	Kurty 1.6nm,0.4s	4.94	25	eP	Pg	13 25 37.4	+0.8
KUU				eS	Sg	13 26 37.2	-3.3
	13nm,0.7s						
KUU	Kurty	4.94	25	Pg	Pg	13 25 37.4	+0.8
KUU				Lg	Lg	13 26 37.2	
CHKK	Chushkaly 0.9nm,0.2s	5.13	30	eP	Pg	13 25 40.8	+0.5
CHKK				eS	Sg	13 26 42.9	-3.9
	7.1nm,0.5s						
SATY	Saty 2.0nm,0.1s	5.18	44	eP	Pg	13 25 41.5	+0.3
SATY				eS	Sg	13 26 44.5	-3.9
	3.1nm,0.2s						
SATY	Saty 2.0nm,0.1s	5.18	44	Pg	Pg	13 25 41.5	+0.3
SATY				Lg	Lg	13 26 45.0	
	3.1nm,0.2s						
KURS	Kuram	5.37	40	eP	Pg	13 25 47.6	+2.8
KURS				eS	Sg	13 26 54.6	+0.4
KURS	Kuram	5.37	40	Pg	Pg	13 25 47.6	+2.8
KURS				Lg	Lg	13 26 54.6	
UZB	Uzynbulak 0.8nm,0.3s	5.58	47	eP	Pg	13 25 50.8	+1.9
UZB				eS	Sg	13 27 00.0	-1.1
	3.0nm,0.5s						
UZB	Uzynbulak	5.58	47	Pg	Pg	13 25 50.8	+1.9
UZB				Lg	Lg	13 27 00.8	
PDGK	Podgornoye	5.96	47	Pg	Pg	13 25 55.8	-0.3
PDGK				Lg	Lg	13 27 08.9	

IDC 30 13:26:41.8±5.0,18°.87S×175°.84W,h0km,mb4.1/3,
mbtmp4.1/3,Error ellipse: s-maj=175.2km
s-min=99.0km az=159.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek 0.6nm,0.4s,baz=100,slow=18,SNR=1.1	40.33	243	P	P	13 34 21.0	-0.3
	0.6nm,0.4s						
WRA	Warramunga Arr 1.1nm,0.4s,baz=96,slow=7.5,SNR=55	46.87	260	P	P	13 35 14.3	+0.2
	1.1nm,0.4s						
ASAR	Alice Springs 3.5nm,0.7s,baz=90,slow=8.6,SNR=67	46.89	255	P	P	13 35 14.1	-0.3
ASAR				PcP	PcP	13 36 47.0	-0.4
	0.5nm,0.7s,baz=96,slow=4.0,SNR=4.6						
	3.5nm,0.7s						

*SOME **30** 13:33:43.7,39°.42N×73°.73E,h10km*
*IDC **30** 13:33:44.3±1.3,39°.44N×73°.85E,h0km,mb3.6/6,*
mbtmp3.6/13,ML3.3/6,Error ellipse: s-maj=22.6km
s-min=13.7km az=130.0
*KRNET **30** 13:33:44.0±0.1,39°.40N×73°.77E,mb4.4*
*MOS **30** 13:33:45.7±1.4,39°.43N×73°.69E,h15km,mb4.2/1,Error*
ellipse: s-maj=9.0km s-min=5.0km az=89.5
*NNC **30** 13:33:49.5±1.2,39°.58N×73°.73E,h0km,mb4.5,mpv4.1,*
Error ellipse: s-maj=9.4km s-min=4.7km az=175.0
ISC 30 13:33:47.2±0.6,39°.47N±0°.03×73°.71E±0°.02,h10km,n118,
σ2s37/172,mb3.7/7,28C-17D,Tajikistan-Xinjiang border
region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	Osh baz=26	1.27	327	⇑eP	Pn	13 34 09.3	-1.8
OHH				⇑eS	Sb	13 34 27.8	+0.1
	baz=26						
OHH	Osh	1.27	327	ePG	Pn	13 34 09.3	-1.8
OHH				eS	Sb	13 34 27.8	+0.1
DRK	Karamyk baz=74	1.48	271	⇓eP	Pn	13 34 12.5	-1.6
DRK				⇓eS	Sn	13 34 33.4	-0.2
	baz=74						
KSH	Kashi	1.76	88	Pg	Pn	13 34 14.5	-3.3
KSH				pP	Pb	13 34 18.5	-1.1
KSH				Sg	Sn	13 34 35.0	-5.3
KSH				pmax	pmax		
	comp=Z,260nm,0.6s						
KSH				smax	smax		
	comp=N,1μm,0.6s						
KSH				smax	smax		
	comp=E,690nm,0.6s						
AML	Almayashu SNR=35	2.66	360	P	Pn	13 34 33.1	+2.6
AML	Almayashu	2.66	360	ePN	Pn	13 34 30.8	+0.3
AML				eS	Sn	13 35 05.0	+2.0
GAR	Garm baz=63	2.67	261	⇑eP	Pn	13 34 30.5	+0.1
GAR				⇑eS	Sn	13 35 04.4	+1.5
	baz=63						
GAR	Garm	2.67	261	ePN	Pn	13 34 30.5	+0.1
GAR				eS	Sn	13 35 04.4	+1.5
UCH	Uchtor	2.83	12	P	Pb	13 34 36.9	-1.1

SNR=52
UCH Uchtor 2.83 12⇓*i*P Pn 13 34 32.9 +0.1
baz=11
UCH ⇓*e*S **Sn 13 35 08.9 +1.8**
baz=11
UCH Uchtor 2.83 12 *e*PN Pn 13 34 32.9 +0.1
UCH *e*S **Sn 13 35 08.9 +1.8**
TRKS Terek-Say 2.84 317⇑*e*P Pn 13 34 32.6 -0.2
baz=17
TRKS ⇑*e*S **Sn 13 35 08.1 +1.0**
baz=17
TRKS Terek-Say 2.84 317 *e*PN Pn 13 34 32.6 -0.2
TRKS *e*S **Sn 13 35 08.1 +1.0**
EKS2 Erkin-Say 3.19 1 P Pn 13 34 40.8 +3.3
SNR=14
EKS2 Erkin-Say 3.19 1⇓*e*P Pn 13 34 38.0 +0.4
baz=0.0
EKS2 ⇓*e*S **Sn 13 35 17.6 +1.9**
baz=0.0
EKS2 Erkin-Say 3.19 1 *e*PN Pn 13 34 38.0 +0.4
EKS2 *e*S **Sn 13 35 17.6 +1.9**
AAK Ala-Archa 3.22 10 P Pb 13 34 42.5 -2.1
SNR=17
AAK Ala-Archa 3.22 10 Pn Pn 13 34 41.5 +3.5
comp=E,7.9nm,0.3s,baz=174,slow=5.9,SNR=13
AAK Lg Lg 13 35 25.5
comp=E,34nm,0.3s,baz=312,slow=20,SNR=9.6
comp=E,22nm,0.4s
AAK Ala-Archa 3.22 10⇑*e*P Pn 13 34 38.2 +0.2
baz=9.0
AAK ⇑*e*S **Sn 13 35 18.0 +1.4**
baz=9.0
AAK Ala-Archa 3.22 10 *e*PN Pn 13 34 38.2 +0.2
AAK *e*S **Sn 13 35 18.0 +1.4**
MRKS Merke 3.29 354 *e*P Pb 13 34 47.9 +2.1
comp=E,36nm,0.3s
MRKS *e*S **Sg 13 35 33.6 +0.6**
comp=E,357nm,0.4s
MRKS Merke 3.29 354 Pg Pg 13 34 49.6 -0.7
comp=E,36nm,0.3s
MRKS Lg Lg 13 35 34.4
comp=E,357nm,0.4s
KBK Karagaybulak 3.32 16 P Pb 13 34 43.9 -2.4
SNR=14
KBK Karagaybulak 3.32 16⇑*e*P Pn 13 34 39.7 +0.3
baz=15
KBK ⇑*e*S **Sn 13 35 20.3 +1.3**
baz=15
KBK Karagaybulak 3.32 16 *e*PN Pn 13 34 39.7 +0.3
KBK *e*S **Sn 13 35 20.3 +1.3**
ULHL Ulahol 3.38 34 P Pn 13 34 43.5 +3.4
SNR=17
ULHL Ulahol 3.38 34⇓*e*P Pn 13 34 40.1 -0.1
baz=33
ULHL ⇓*e*S **Sn 13 35 20.9 +0.5**
baz=33
ULHL Ulahol 3.38 34 *e*PN Pn 13 34 40.1 -0.1
ULHL *e*S **Sn 13 35 20.9 +0.5**
CHMS Chumysh 3.62 12 P Pn 13 34 47.5 +4.2
SNR=16
CHMS Chumysh 3.62 12⇑*e*P Pn 13 34 43.6 +0.3
baz=11
CHMS ⇑*e*S **Sn 13 35 26.9 +0.9**
baz=11
CHMS Chumysh 3.62 12 *e*PN Pn 13 34 43.6 +0.3
CHMS *e*S **Sn 13 35 26.9 +0.9**
CHMS Chumysh 3.62 12 ⇑Pn Pn 13 34 47.1 +3.8
comp=E,18nm,0.5s
CHMS ⇑Lg Lg 13 35 39.7
comp=E,192nm,0.9s
CHGR Chuyangaron 3.63 259⇑*e*P Pn 13 34 43.8 +0.3
baz=60
CHGR ⇑*e*S **Sn 13 35 27.2 +0.7**
baz=60
CHGR Chuyangaron 3.63 259 *e*PN Pn 13 34 43.8 +0.3
CHGR *e*S **Sn 13 35 27.2 +0.7**
TKM2 Tokmak 2 3.73 22 P Pn 13 34 49.3 +4.2
SNR=8.9
TKM2 Tokmak 2 3.73 22⇑*e*P Pn 13 34 45.3 +0.2
baz=21
TKM2 ⇑*e*S **Sn 13 35 29.9 +0.7**
baz=21
TKM2 Tokmak 2 3.73 22 *e*PN Pn 13 34 45.3 +0.2
TKM2 *e*S **Sn 13 35 29.9 +0.7**
TKM2 Tokmak 2 3.73 22 ⇑Pn Pn 13 34 48.2 +3.2
comp=E,16nm,0.4s
TKM2 ⇓Lg Lg 13 35 45.6
comp=E,116nm,0.6s
KDJ Kajisay 3.75 44⇓*e*P Pn 13 34 45.1 -0.1
baz=43
KDJ ⇓*e*S **Sn 13 35 29.6 +0.1**
baz=43
KDJ Kajisay 3.75 44 *e*PN Pn 13 34 45.1 -0.1
KDJ *e*S **Sn 13 35 29.6 +0.1**
USP Ospenovka 3.84 9 P Pn 13 34 50.5 +4.1
SNR=7.1
USP Ospenovka 3.84 9⇓*e*P Pn 13 34 46.9 +0.5
baz=8.0
USP ⇓*e*S **Sn 13 35 32.9 +1.2**
baz=8.0
USP Ospenovka 3.84 9 *e*PN Pn 13 34 46.9 +0.5
USP *e*S **Sn 13 35 32.9 +1.2**
TAS Tashkent 3.84 300⇑*e*P Pn 13 34 47.2 +0.8
baz=1.0
TAS ⇑*i*S **Sn 13 35 33.4 +1.7**
baz=1.0
TAS Tashkent 3.84 300 *e*PN Pn 13 34 47.2 +0.8
TAS *e*S **Sn 13 35 33.4 +1.7**
TARG Taragay, Kyrgy 3.85 53⇑*e*P Pn 13 34 46.5 -0.4
baz=52
TARG ⇑*e*S **Sn 13 35 31.8 -0.6**
baz=52
TARG Taragay, Kyrgy 3.85 53 *e*PN Pn 13 34 46.5 -0.4
TARG *e*S **Sn 13 35 31.8 -0.6**
IUG Iuzhnay 3.87 315 *e*P Pb 13 34 55.9 +0.4
comp=E,831nm,0.5s
IUG *e*S **Sg 13 35 48.2 -3.1**
comp=E,119nm,0.6s
IUG Iuzhnay 3.87 315 Pg Pb 13 34 57.4 +1.9
comp=E,831nm,0.5s
IUG Lg Lg 13 35 48.2
comp=E,119nm,0.6s
KST Kastek 3.96 25 *e*P Pb 13 34 57.3 +0.2
comp=E,22nm,0.4s
KST *e*S **Sg 13 35 50.8 -3.5**
comp=E,178nm,0.4s
KST Kastek 3.96 25 Pg Pb 13 34 59.2 +2.1
comp=E,22nm,0.4s
KST Lg Lg 13 35 51.5
comp=E,178nm,0.4s
DGS Degeres 4.08 22 *e*P Pb 13 35 00.3 +1.1
comp=E,32nm,0.5s
DGS *e*S **Sg 13 35 55.5 -2.7**
comp=E,136nm,0.7s
DGS Degeres 4.08 22 Pg Pb 13 35 01.5 +2.4
comp=E,32nm,0.5s
DGS Lg Lg 13 35 56.1
comp=E,136nm,0.7s
MTBS Maitube 4.20 28 *e*P Pb 13 35 02.9 +1.7
comp=E,34nm,0.6s
MTBS *e*S **Sg 13 36 00.1 -1.8**
comp=E,122nm,0.6s
MTBS Maitube 4.20 28 Pg Pb 13 35 04.6 +3.5
comp=E,34nm,0.6s
MTBS Lg Lg 13 36 00.1
comp=E,122nm,0.6s
CHM Chimkent 4.22 314 PN Pn 13 34 47.1 -4.4
TNSS Tian-Shan 4.32 33 *e*P Pb 13 35 04.9 +1.4
comp=E,33nm,0.4s
TNSS *e*S **Sg 13 36 03.4 -2.7**
comp=E,43nm,0.6s
TNSS Tian-Shan 4.32 33 Pg Pb 13 35 06.8 +3.3
comp=E,33nm,0.4s
TNSS Lg Lg 13 36 03.4
comp=E,43nm,0.6s
KK31 Karatay Array 4.36 328 PN Pn 13 34 55.8 +2.3
KK31 13 35 04.7
KK31 13 35 48.8
KK31 Karatay Array 4.36 328 Pn Pn 13 34 55.8 +2.3
comp=E,2.1nm,0.2s,baz=122,slow=13,SNR=34
KK31 ⇑Pg **Pb 13 35 04.8 +1.0**
comp=E,14nm,0.4s,baz=138,slow=15,SNR=12
KK31 ⇑Sn **Sn 13 35 48.9 +4.6**
comp=E,17nm,0.4s,baz=142,slow=23,SNR=3.5
KK31 ⇑Lg Lg 13 36 02.0
comp=E,43nm,0.6s,baz=135,slow=29,SNR=4.8
KKAR Karatay Array 4.36 328⇓*e*P Pn 13 34 54.5 +1.0
baz=27
KKAR ⇓*e*S **Sn 13 35 45.9 +1.6**
baz=27
KKAR Karatay Array 4.36 328 *e*PN Pn 13 34 54.5 +1.0
KKAR *e*S **Sn 13 35 45.9 +1.6**
KOTS Kotyrbulak 4.55 33 *e*P Pb 13 35 09.8 +2.6
comp=E,18nm,0.6s
KOTS *e*S **Sg 13 36 12.3 -1.1**
comp=E,322nm,0.8s
KOTS Kotyrbulak 4.55 33 Pg Pb 13 35 11.5 +4.3
KOTS Lg Lg 13 36 12.3
BRLS Borolday 4.60 322 *e*P Pb 13 35 08.9 +0.9
comp=E,9.7nm,0.4s
BRLS *e*S **Sg 13 36 10.6 -4.4**
comp=E,92nm,0.6s
BRLS Borolday 4.60 322 Pg Pb 13 35 10.5 +2.4
comp=E,9.7nm,0.4s
BRLS Lg Lg 13 36 10.5
comp=E,92nm,0.6s
KTBS Karatobe 4.79 27 *e*P Pb 13 35 13.3 +2.0
comp=E,17nm,0.5s
KTBS *e*S **Sg 13 36 17.7 -3.4**
comp=E,160nm,0.6s
KTBS Karatobe 4.79 27 Pg Pb 13 35 15.1 +3.9
comp=E,17nm,0.5s
KTBS Lg Lg 13 36 18.4
comp=E,160nm,0.6s
KUU Kurty 4.84 23 *e*P Pb 13 35 13.3 +1.2
comp=E,12nm,0.4s
KUU *e*S **Sg 13 36 18.1 -4.5**
comp=E,129nm,0.6s
KUU Kurty 4.84 23 Pg Pb 13 35 15.0 +2.9
KUU Lg Lg 13 36 18.1
CHKK Chushkaly 5.03 28 *e*P Pb 13 35 17.3 +2.1
comp=E,15nm,0.8s
CHKK *e*S **Sg 13 36 24.2 -4.2**
comp=E,78nm,0.6s
CHKK Chushkaly 5.03 28 Pg Pb 13 35 18.4 +3.1
comp=E,15nm,0.8s
CHKK Lg Lg 13 36 24.3
comp=E,78nm,0.6s
SATY Saty 5.04 43 *e*P Pb 13 35 18.5 +2.9
comp=E,32nm,0.7s
SATY *e*S **Sg 13 36 26.3 -2.8**
comp=E,62nm,0.6s
SATY Saty 5.04 43 Pg Pb 13 35 19.4 +3.8
comp=E,32nm,0.7s
SATY Lg Lg 13 36 26.3
comp=E,62nm,0.6s
ZHN Zhinishke 5.13 42 *e*P Pb 13 35 19.6 +2.4
comp=E,13nm,0.2s
ZHN *e*S **Sg 13 36 28.6 -3.4**
comp=E,41nm,0.4s
ZHN Zhinishke 5.13 42 Pg Pb 13 35 21.3 +4.2
comp=E,13nm,0.2s
ZHN Lg Lg 13 36 28.6
comp=E,41nm,0.4s
KURS Kuram 5.23 38 *e*P Pb 13 35 21.2 +2.4
comp=E,17nm,0.7s
KURS *e*S **Sg 13 36 31.6 -3.5**
comp=E,32nm,1.0s
KURS Kuram 5.23 38 Pg Pb 13 35 23.4 +4.6
comp=E,17nm,0.7s
KURS Lg Lg 13 36 32.5
comp=E,32nm,1.0s
UZB Uzynbulak 5.43 46 *e*P Pb 13 35 24.5 +2.2
comp=E,8.4nm,0.4s
UZB *e*S **Sg 13 36 37.2 -4.4**
comp=E,28nm,0.6s
UZB Uzynbulak 5.43 46 Pg Pb 13 35 26.3 +4.0
comp=E,8.4nm,0.4s
UZB Lg Lg 13 36 37.2
comp=E,28nm,0.6s
KPKS Kokpek 5.47 41 *e*P Pb 13 35 25.6 +2.7
comp=E,25nm,0.4s
KPKS *e*S **Sg 13 36 39.3 -3.5**
comp=E,64nm,0.6s
KPKS Kokpek 5.47 41 Pg Pb 13 35 27.0 +4.1
comp=E,25nm,0.4s
KPKS Lg Lg 13 36 39.7
comp=E,64nm,0.6s
BTLS Baital 5.58 2 *e*P Pb 13 35 27.3 +2.7
comp=E,9.3nm,0.6s
BTLS *e*S **Sg 13 36 42.4 -3.8**
comp=E,27nm,0.6s
BTLS Baital 5.58 2 Pg Pb 13 35 28.7 +4.1
comp=E,9.3nm,0.6s
BTLS Lg Lg 13 36 42.4
comp=E,27nm,0.6s
ARXS Arharly 5.65 32 *e*P Pb 13 35 27.9 +1.9
comp=E,17nm,0.6s
ARXS *e*S **Sg 13 36 43.4 -5.2**
comp=E,105nm,0.7s
ARXS Arharly 5.65 32 Pg Pb 13 35 29.2 +3.3
comp=E,17nm,0.6s
ARXS Lg Lg 13 36 43.4
comp=E,105nm,0.7s
SHLS Shalkode 5.69 48 *e*P Pg 13 35 35.4 -0.7
comp=E,23nm,0.2s
SHLS *e*S **Sg 13 36 55.5 +5.7**
comp=E,34nm,0.6s
SHLS Shalkode 5.69 48 Pg Pg 13 35 36.9 +0.8
comp=E,23nm,0.2s
SHLS Lg Lg 13 36 55.5
comp=E,34nm,0.6s
PDGK Podgornoye 5.81 47 Pg Pb 13 35 32.9 +4.2
comp=E,3.9nm,0.5s
PDGK Lg Lg 13 36 48.6
comp=E,17nm,1.0s
BLB Baldybastay 5.84 36 *e*P Pb 13 35 31.8 +2.6
comp=E,34nm,0.8s
BLB *e*S **Sg 13 36 50.3 -4.3**
comp=E,60nm,0.5s
BLB Baldybastay 5.84 36 Pg Pb 13 35 33.4 +4.2
comp=E,34nm,0.8s
BLB Lg Lg 13 36 50.3
comp=E,60nm,0.5s
KNOS Konyrlen 6.37 38 *e*P Pb 13 35 43.6 +5.4
comp=E,7.3nm,0.8s
KNOS *e*S **Sg 13 37 07.1 -4.5**
comp=E,67nm,0.7s
KNOS Konyrlen 6.37 38 Pg Pb 13 35 43.6 +5.4
comp=E,7.3nm,0.8s
KNOS Lg Lg 13 37 07.1
comp=E,67nm,0.7s
DJR Jarkent 6.65 41 *e*P Pb 13 35 47.4 +4.5
comp=E,3.8nm,0.5s
DJR *e*S **Sg 13 37 16.5 -4.1**
comp=E,25nm,1.0s
DJR Jarkent 6.65 41 Pg Pb 13 35 48.7 +5.8
comp=E,3.8nm,0.5s
DJR Lg Lg 13 37 16.5
comp=E,25nm,1.0s
OTUK Ortayu 8.83 354 P Pn 13 35 56.0 +1.2
OTUK Ortayu 8.83 354 ⇓Pn Pn 13 35 56.0 +1.2
comp=E,1.7nm,0.5s
OTUK ⇑Lg Lg 13 38 21.9
comp=E,23nm,0.7s
MK31 Makanchi Array 9.64 38⇑*e*P Pn 13 36 09.3 +3.4
MKAR Makanchi Array 9.64 38 Pn Pn 13 36 03.6 -2.3
comp=E,0.1nm,0.3s,baz=179,slow=26,SNR=1.7
MKAR Lg Lg 13 38 46.7
comp=E,0.2nm,0.3s,baz=51,slow=52,SNR=2.2
comp=E,0.2nm,0.4s
WMQ Urumqi 11.33 63 *e*P Pn 13 36 30.5 +1.3
WMQ *e*P 13 36 36.8
WMQ pmax pmax
comp=Z,19nm,0.9s
WMQ LR LR
comp=N,430nm,14.3s
WMQ LR LR
comp=E,220nm,15.7s
WMQ LR LR
comp=Z,250nm,18.3s
KURBB Kurchatov Arra 11.66 15 Pn Pn 13 36 31.6 -1.9
comp=Z,0.9nm,1.2s,baz=209,slow=9.2,SNR=3.1
KURBB Lg Lg 13 39 51.9
comp=Z,0.1nm,0.3s,baz=201,slow=28,SNR=9.3
KURK Kurchatov 11.77 15⇓*e*P Pn 13 36 38.4 +3.4
GEYT Alibeck 12.28 268 Pn Pn 13 36 42.4 +0.3
comp=Z,0.8nm,0.3s,baz=42,slow=42,SNR=2.2
GEYT Lg Lg 13 40 15.8
comp=Z,0.3nm,0.3s,baz=310,slow=53,SNR=1.1
comp=Z,1.3nm,0.3s
AB31 Akbulak array 13.86 319 *e*P Pn 13 37 01.8 -1.7
AB31 Akbulak array 13.86 319 Pn Pn 13 37 01.9 -1.7
comp=Z,0.5nm,0.4s,baz=133,slow=14,SNR=20
AKTO Aktyubinsk 15.57 320 Pn Pn 13 37 25.2 -1.4
comp=Z,0.3nm,0.3s,baz=126,slow=16,SNR=6.5
comp=Z,1.7nm,0.5s
ZALV Zalesovo Beam 16.34 24 Pn Pn 13 37 35.1 -1.4
comp=Z,0.3nm,0.3s,baz=215,slow=8.3,SNR=15
ZALV Lg Lg 13 42 22.6
comp=Z,0.2nm,0.3s,baz=195,slow=28,SNR=1.7
comp=Z,3.5nm,0.6s
ARU Arti 19.69 334 P P 13 38 15.2 -1.2
baz=106,slow=23,SNR=2.1
comp=Z,1.5nm,0.3s
ARU Arti 19.69 334 P P 13 38 16.7 +0.3
ARU S Sn **13 41 59.4 +0.6**
GTA Gaotai 20.15 82 *e*P P 13 38 23.0 +1.4
GTA pP pP 13 38 27.8 +2.1
GTA sP sP 13 38 30.5 +2.9
GTA pmax pmax
comp=Z,7.0nm,0.9s
FINES FINESS Array B 36.30 323 P P 13 40 48.8 -1.8
comp=Z,0.5nm,0.4s,baz=120,slow=11,SNR=7.7
comp=Z,0.5nm,0.4s
FINES FINESS Array B 36.30 323 *i* P P 13 40 52.5 +1.9
FINES pmax pmax
comp=Z,1.0nm,0.4s
NJ2 Nanjing 37.07 87 *e*P P 13 40 56.3 -1.1
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
ARCES ARCESS Array B 39.28 336 P P 13 41 13.8 -1.9
comp=Z,0.4nm,0.6s,baz=115,slow=8.6,SNR=11
comp=Z,0.4nm,0.6s
NOA NORSAR Array B 43.36 321 P P 13 41 48.3 -1.0
comp=Z,0.3nm,0.6s,baz=109,slow=7.6,SNR=1.5
comp=Z,0.3nm,0.6s
ESDC Sonseca Array 57.98 297 P P 13 43 40.9 +0.9
comp=Z,0.2nm,0.4s,baz=90,slow=7.7,SNR=1.8
comp=Z,0.2nm,0.4s
TORD Torodi Ar. Bea 67.92 269 P P 13 44 44.7 -1.6
comp=Z,0.2nm,0.4s,baz=53,slow=5.8,SNR=1.8
comp=Z,0.2nm,0.4s
WRA Warramunga Arr 81.81 124 P P 13 46 05.2 -1.4
comp=Z,1.0nm,0.9s,baz=337,slow=5.2,SNR=2.1
comp=Z,1.0nm,0.9s

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*IDC **30** 13:33:56.0±0.7, 32°.86N×84°.98E, h0km, mb3.9/16, mbtmp3.9/19, ML3.7/3, MS3.8/6, Error ellipse: s-maj=21.0km s-min=13.8km az=35.0*
*BJI **30** 13:33:56.4±0.0, 33°.11N×85°.04E, h8km, mb4.3/19, mB4.5/9, Ms4.2/14, Ms7 3.8/14*
*MOS **30** 13:33:57.4±1.8, 32°.81N×85°.02E, h14km, mb4.4/11, Error ellipse: s-maj=12.6km s-min=8.0km az=91.4*
ISC 30 13:33:59.1±0.4, 32°.95N±0°.06×85°.03E±0°.05, h10km, n70, σ1§83/75, mb4.1/23, MS3.9/8, 6C-3D, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
DANN	**Dangsing**	**4.71**	**194**	***e*P**	**Pn**	**Pn**	**13 35 13.0**	**+2.5**
	204nm,0.4s							
GKN	**Gorkha**	**4.94**	**184**	***e*P**	**Pn**	**Pn**	**13 35 15.8**	**+2.3**
	18nm,0.4s							
GUN	**Gumba**	**5.07**	**171**	***e*P**	**Pn**	**Pn**	**13 35 17.8**	**+2.3**
	88nm,0.5s							
KKN	**Kakani**	**5.14**	**178**	***e*P**	**Pn**	**Pn**	**13 35 18.1**	**+1.7**
KOLN	**Koldanda**	**5.31**	**194**	***e*P**	**Pn**	**Pn**	**13 35 20.4**	**+1.8**
	46nm,0.6s							
DMN	**Daman**	**5.32**	**179**	***e*P**	**Pn**	**Pn**	**13 35 20.7**	**+1.8**
	38nm,0.5s							
PKIN	**Phulchoki**	**5.36**	**177**	***e*P**	**Pn**	**Pn**	**13 35 21.2**	**+1.8**
	96nm,0.5s							
JIRN	**Jiri**	**5.36**	**169**	***e*P**	**Pn**	**Pn**	**13 35 21.8**	**+2.2**
	144nm,0.4s							
PKI	**Pulchoki**	**5.37**	**176**	***e*P**	**Pn**	**Pn**	**13 35 21.2**	**+1.6**
	40nm,0.4s							
TAPN	**Taplejung**	**6.04**	**157**	***e*P**	**Pn**	**Pn**	**13 35 30.4**	**+1.6**
	52nm,0.6s							
RAMN	**Ramite**	**6.13**	**167**	***e*P**	**Pn**	**Pn**	**13 35 30.7**	**+0.7**
	107nm,0.5s							
ODAN	**Odare**	**6.40**	**161**	***e*P**	**Pn**	**Pn**	**13 35 34.6**	**+0.9**
	53nm,0.5s							
NDI	**New Delhi**	**7.95**	**240**	***e*P**	Pn	Pn	13 36 05.0	+10
NDI				*e*S	**Sn**	**Sn**	**13 37 28.0**	**+3.3**
GOMU	**GeErMu**	**8.70**	**65**	P	**Pn**	**Pn**	**13 36 05.5**	**+0.2**
GOMU				pmax	pmax			
	comp=Z,6.0nm,1.1s							
GOMU				pmax	pmax			
	comp=Z,110nm,5.9s							
GOMU				LR	LR			
	comp=N,1μm,10.0s							
GOMU				LR	LR			
	comp=E,400nm,9.2s							
GOMU				LR	LR			
	comp=Z,410nm,8.7s							
GTA	**Gaotai**	**13.57**	**57**	***e*P**	**Pn**	**Pn**	**13 37 15.0**	**+3.3**
GTA				pmax	pmax			
	comp=Z,4.0nm,1.2s							
MKAR	**Makanchi Array**	**13.99**	**352**	Pn	**Pn**	**Pn**	**13 37 16.7**	**-0.6**
	0.3nm,0.3s,baz=174,slow=12,SNR=9.2							
	4.3nm,0.8s							
MKAR	**Makanchi Array**	**13.99**	**352**	***e*P**	**Pn**	**Pn**	**13 37 17.2**	**-0.1**
MKAR				pmax	pmax			
	comp=Z,4.0nm,0.8s							
LZH	**Lanzhou**	**15.82**	**73**	***e*P**	**P**	**P**	**13 37 48.3**	**+2.3**
LZH				sP	sP		13 37 53.0	+0.9
LZH				sS	S		13 40 48.0	-4.3
LZH				SS	Sn		13 41 06.0	+28
LZH				pmax	pmax			
	comp=Z,13nm,0.9s							
LZH				LR	LR			
	comp=N,1μm,10.3s							
LZH				LR	LR			
	comp=E,420nm,9.8s							
LZH				LR	LR			
	comp=Z,380nm,10.5s							
PZH	**PanZhiHua**	**15.87**	**110**	P	**Pn**	**Pn**	**13 37 42.5**	**-0.2**
PZH				S	**Sn**	**Sn**	**13 40 40.5**	**+1.8**
PZH				pmax	pmax			
	comp=Z,10.0nm,1.1s							
PZH				pmax	pmax			
	comp=Z,80nm,3.5s							
PZH				LR	LR			
	comp=Z,690nm,13.9s							
PZH				LR	LR			
	comp=Z,360nm,13.5s							
PZH				LR	LR			
	comp=Z,580nm,14.2s							
KURBB	**Kurchatov Arra**	**18.30**	**347**	P	**Pn**	**Pn**	**13 38 11.6**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=160,slow=10,SNR=21							
	comp=Z,5.5nm,0.9s							
KURK	**Kurchatov**	**18.37**	**347**	***c*** ***i*P**	**P**	**P**	**13 38 13.8**	**-0.1**
CMAR	**Chiang Mai Arr**	**19.08**	**136**	P	**P**	**P**	**13 38 21.8**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=319,slow=11,SNR=19							
	comp=Z,5.1nm,0.7s							
KNGR	**Kungurtug, Tuv**	**19.90**	**24⇑**	***e*P**	**Pn**	**Pn**	**13 38 33.0**	**+0.6**
KNGR				pmax	pmax			
	comp=Z,36nm,1.0s							
XAN	**Xi'an**	**19.95**	**80**	P	**P**	**P**	**13 38 30.0**	**-1.4**
XAN				pP	sP		13 38 37.5	-0.1
XAN				sP	pP		13 38 40.5	+4.9
XAN				pmax	pmax			
	comp=Z,3.0nm,0.9s							
ZALV	**Zalesovo Beam**	**20.99**	**360**	P	**P**	**P**	**13 38 42.1**	**-0.3**
	comp=Z,2.4nm,0.8s,baz=188,slow=8.7,SNR=4.1							
	comp=Z,2.4nm,0.8s							
SONM	**Songino Array**	**21.94**	**41**	P	**P**	**P**	**13 38 53.1**	**+0.3**
	comp=Z,7.7nm,0.9s,baz=240,slow=8.4,SNR=40							
	comp=Z,7.7nm,0.9s							
SONM	**Songino Array**	**21.94**	**41**	***e*P**	**P**	**P**	**13 38 54.0**	**+1.2**
SONM				pmax	pmax			
	comp=Z,7.0nm,0.9s							
ZAK	**Zakamensk**	**22.02**	**32**	***e*P**	**P**	**P**	**13 38 55.4**	**+1.8**
ZAK				pmax	pmax			
	comp=Z,5.0nm,1.2s							
MOY	**Mondy**	**22.03**	**27**	***e*P**	**P**	**P**	**13 38 57.8**	**+4.0**
MOY				pmax	pmax			
	comp=Z,23nm,1.6s							
ULN	**Ulaanbaatar**	**22.32**	**42**	***de*P**	**P**	**P**	**13 38 59.6**	**+2.6**
ULN				pmax	pmax			
	comp=Z,19nm,1.0s							
GEYT	**Alibeck**	**22.45**	**290**	P	**P**	**P**	**13 38 55.8**	**-2.5**
	comp=Z,1.6nm,0.4s,baz=190,slow=11,SNR=1.8							
	comp=Z,1.6nm,0.4s							
PALK	**Pallekele**	**25.86**	**190**	***i*P**	**P**	**P**	**13 39 29.9**	**-1.1**
QIZ	**Qiongzhong**	**26.18**	**116**	P	**P**	**P**	**13 39 33.5**	**-0.4**
QIZ				S	**S**	**S**	**13 44 09.5**	**+3.6**
QIZ				LR	LR			
	comp=Z,280nm,19.9s							
QIZ				LR	LR			
	comp=Z,270nm,15.9s							

QIZ LR LR
comp=Z,260nm,19.9s
NJ2 Nanjing 28.48 83 *eP* **P 13 39 51.3 -3.1**
NJ2 pmax pmax
comp=Z,8.0nm,0.6s
ARU Arti 29.75 330⇑ *eP* **P 13 40 05.3 -0.1**
ARU pmax pmax
comp=Z,5.0nm,1.6s
KBZ Khabaz 34.42 301 LR LR 13 56 20.8
comp=Z,111nm,18.6s,baz=58,slow=39
KIRV Kirov 35.00 328 *c iP* **P 13 40 51.8 +0.4**
KSRS Korea Array 35.12 70 P **P 13 40 50.4 -2.3**
comp=Z,0.5nm,0.6s,baz=272,slow=14,SNR=2.5
comp=Z,0.5nm,0.6s
KLR Kul'dur 38.13 51 P **P 13 41 17.6 -0.7**
comp=Z,1.5nm,0.7s,baz=288,slow=14,SNR=3.3
comp=Z,1.5nm,0.7s
KLR Kul'dur 38.13 51⇓ *eP* **P 13 41 19.6 +1.4**
KLR pmax pmax
comp=Z,2.0nm,0.9s
EIL Elat 42.59 280 LR LR 14 02 17.9
comp=Z,180nm,20.6s,baz=88,slow=40
MAJO Matsushiro 43.39 70⇓ *eP* **P 13 41 59.3 -2.5**
MAJO pmax pmax
comp=Z,5.0nm,1.1s
MJAR Matsushiro Arr 43.39 70 P **P 13 42 00.9 -1.0**
comp=Z,1.2nm,0.9s,baz=288,slow=9.7,SNR=5.5
comp=Z,1.2nm,0.9s
MJA0 Matsu Arr-Jizo 43.42 70 *eP* **P 13 42 01.3 -0.8**
MJA0 pmax pmax
comp=Z,1.0nm,0.8s
AKASG Malin Array Be 44.09 311 P **P 13 42 06.0 -1.2**
comp=Z,0.6nm,0.5s,baz=79,slow=7.4,SNR=5.9
AKASG LR LR 14 01 42.6
comp=Z,151nm,20.8s,baz=59,slow=38
comp=Z,0.6nm,0.5s
MNK Minsk 45.11 316 *i* P **P 13 42 13.9 -1.4**
MNK *i* 13 44 00.1
MNK *i* PPP PPP 13 44 38.7
MNK *i* S **S 13 48 53.8 -0.6**
MNK *i* SS **SS 13 52 17.3 +1.0**
MNK *i* SSS SSS 13 53 03.9
MNK pmax pmax
comp=N,33nm,1.1s
MNK pmax pmax
comp=E,1.0nm,0.7s
MNK pmax pmax
comp=Z,21nm,1.1s
MNK MLR MLR
comp=Z,4μm,18.0s
MNK MLR MLR
comp=E,25nm,19.0s
MNK MLR MLR
comp=N,284nm,19.0s
MNK Minsk 45.11 316 *i* P **P 13 42 14.0 -1.4**
comp=E,1.0nm,0.7s
MNK *i* P **P 13 42 14.0 -1.4**
comp=N,33nm,1.1s
MNK *i* P **P 13 42 14.0 -1.4**
comp=Z,21nm,1.1s,baz=94
MNK *i* PP **PP 13 44 00.2 -0.4**
MNK *i* PPP PPP 13 44 38.8
MNK *i* S **S 13 48 53.8 -0.6**
MNK *i* SS **SS 13 52 17.3 +1.0**
MNK *i* SSS SSS 13 53 04.0
MNK *i* LQ LQ 13 57 54.8
MNK *i* LR LR 14 00 32.5
MNK *i* LRM MLR 14 02 57.5
comp=Z,4μm,18.1s
MNK *i* LRM MLR 14 03 20.7
comp=E,25nm,18.7s
MNK *i* LRM MLR 14 03 22.7
comp=N,284nm,19.3s
MLR Muntele Rosu 46.48 304 P **P 13 42 26.0 -0.5**
baz=17,slow=6.3
MLR Muntele Rosu 46.48 304 P **P 13 42 26.0 -0.5**
FINES FINESS Array B 46.91 326 P **P 13 42 28.5 -1.0**
comp=N,0.9nm,0.8s,baz=159,slow=4.2,SNR=1.8
comp=N,0.9nm,0.8s
ARCES ARCESS Array B 48.95 336 P **P 13 42 44.4 -0.8**
comp=N,0.9nm,0.7s,baz=78,slow=7.8,SNR=4.6
comp=N,0.9nm,0.7s
ARCES ARCESS Array B 48.95 336 *eP* **P 13 42 47.8 +2.6**
ARCES pmax pmax
comp=Z,2.0nm,0.8s
SEY Seymchan 50.99 33⇑ *eP* **P 13 43 00.2 -0.5**
NOA NORSAR Array B 54.06 325 P **P 13 43 22.8 -0.7**
comp=Z,1.6nm,0.9s,baz=110,slow=15,SNR=2.7
NOA LR LR 14 07 18.2
comp=Z,56nm,19.4s,baz=230,slow=37
comp=Z,1.6nm,0.9s
NOA NORSAR Array B 54.06 325 *eP* **P 13 43 27.5 +3.9**
NOA pmax pmax
comp=Z,1.0nm,0.8s
GERES GERESS Array B 54.25 310 P **P 13 43 23.8 -1.4**
comp=Z,0.5nm,0.2s,baz=84,slow=9.0,SNR=2.5
comp=Z,0.5nm,0.2s
GERES GERESS Array B 54.25 310 *eP* **P 13 43 28.5 +3.3**
GERES pmax pmax
comp=Z,1.0nm,0.2s
BILL Bilibino 56.65 26 *i* P **P 13 43 43.6 +1.5**
BILL *i* 13 44 40.4
BILL pmax pmax
comp=Z,3.0nm,1.1s
DAVOX Davos/Dischmat 57.23 308 LR LR 14 11 53.1
comp=Z,82nm,19.9s,baz=262,slow=40
WRA Warramunga Arr 70.60 131 P **P 13 45 13.2 -1.6**
comp=Z,1.5nm,0.7s,baz=326,slow=6.4,SNR=27
comp=Z,1.5nm,0.7s
WRA Warramunga Arr 70.60 131 *eP* **P 13 45 13.5 -1.3**
WRA pmax pmax
comp=Z,3.0nm,0.8s
PMG Port Moresby 72.55 114 *ce* **P 13 45 23.5 -3.1**
PMG pmax pmax
comp=Z,40nm,1.7s
ASAR Alice Springs 73.08 134 P **P 13 45 28.1 -1.6**
comp=Z,1.0nm,0.7s,baz=315,slow=5.7,SNR=15
comp=Z,1.0nm,0.7s
ILAR Eielson Array 74.53 20 P **P 13 45 35.6 -2.0**
comp=Z,0.6nm,0.9s,baz=292,slow=4.8,SNR=3.4
comp=Z,0.6nm,0.9s
ILAR Eielson Array 74.53 20 *eP* **P 13 45 40.4 +2.8**
ILAR pmax pmax
comp=Z,1.0nm,0.9s
SFJD Kangerlussuaq 74.85 343 LR LR 14 24 02.5
comp=Z,74nm,18.4s,baz=260,slow=40
TORD Torodi Ar. Bea 77.44 278 P **P 13 45 52.5 -2.6**
comp=Z,1.8nm,0.8s,baz=41,slow=4.4,SNR=7.4
comp=Z,1.8nm,0.8s
YKA Yellowknife Ar 83.59 9 P **P 13 46 25.8 -1.4**
comp=Z,1.0nm,0.7s,baz=339,slow=5.4,SNR=6.2
comp=Z,1.0nm,0.7s
YKA Yellowknife Ar 83.59 9 *eP* **P 13 46 28.1 +0.9**
YKA pmax pmax
comp=Z,1.0nm,0.7s
BDFB Brasilia 134.26 281 PKP **PKPdf 13 53 17.4 -0.5**
comp=Z,2.4nm,0.4s,baz=124,slow=7.3,SNR=3.1

*IDC **30** 13:54:21.3±1.7, 35°.21N×138°.40E, h0km, mb3.3/3, mbtmp3.3/3, Error ellipse: s-maj=78.1km s-min=18.7km az=85.0*
*JMA **30** 13:54:22.9±0.1, 35°.7N±0°.3×139°.6E±0°.3, h30km±1km, MV3.4/35, TOKYO PREF*
JMA Felt III J1 at TOKYO PREF .
ISC 30 13:54:22.6±1.1, 35°.67N±0°.04×139°.61E±0°.05, h33km±3km, n19, σ 9°60/21, mb3.3/3, 8D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TOK	**Tokyo**	**0.12**	**83**	P		**Pb**	**13 54 28.9**	**+0.4**
TOK				S		**Sb**	**13 54 32.5**	**0.0**
JHU	**Hanno**	**0.32**	**304**	⇓P		**Pb**	**13 54 30.6**	**-0.1**
JHU				⇓S		**Sb**	**13 54 36.1**	**0.0**
JSGW	**Sagamiharawaka**	**0.33**	**258**	⇓P		**Pb**	**13 54 30.6**	**-0.1**
JSGW				⇓S		**Sb**	**13 54 36.5**	**+0.1**
JOD2	**Odawara 2**	**0.59**	**226**	P		**Pb**	**13 54 34.9**	**+0.3**
JOD2				S		**Sn**	**13 54 43.8**	**+0.9**
JRY	**Ryogami san**	**0.67**	**301**	⇓P		**Pn**	**13 54 35.3**	**-0.4**
JRY				⇓S		**Sb**	**13 54 44.8**	**-0.3**
JAG	**Ashikaga**	**0.76**	**351**	⇓P		**Pn**	**13 54 36.9**	**-0.1**
JYN	**Shimodate**	**0.88**	**259**	⇓P		**Pb**	**13 54 39.3**	**-0.2**
JFNN	**Fujinakano**	**0.89**	**238**	P		**Pb**	**13 54 39.7**	**+0.1**
JFNN				S		**Sb**	**13 54 51.6**	**+0.4**
JIM2	**Oshima 3**	**0.96**	**189**	P		**Pn**	**13 54 39.8**	**+0.1**
JIM2				S		**Sb**	**13 54 52.9**	**-0.4**
MJAR	**Matsushiro Arr**	**1.43**	**308**	Pn		**Pn**	**13 54 46.1**	**-0.1**
	11nm,0.3s,baz=140,slow=14,SNR=520							
MJAR				Sn		**Sb**	**13 55 08.1**	**+1.6**
	4.7nm,0.3s,baz=225,slow=48,SNR=4.0							
MJAR				LR		LR	13 55 34.9	
	comp=Z,136nm,19.2s,baz=150,slow=55							
H11N2	**WAKE ISLAND Hy**	**28.78**	**116**	T		T	14 30 02.4	
	baz=308,slow=75,SNR=5.5							
H11N1	**WAKE ISLAND Hy**	**28.79**	**116**	T		T	14 29 57.0	
	baz=308,slow=75,SNR=4.2							
H11N3	**WAKE ISLAND Hy**	**28.80**	**116**	T		T	14 30 09.4	
	baz=308,slow=75,SNR=5.8							
H11S3	**WAKE ISLAND Hy**	**29.42**	**118**	T		T	14 30 27.3	
	baz=310							
H11S1	**WAKE ISLAND Hy**	**29.42**	**118**	T		T	14 30 26.4	
	baz=310							
H11S2	**WAKE ISLAND Hy**	**29.44**	**118**	T		T	14 30 33.5	
	baz=310							
MKAR	**Makanchi Array**	**43.62**	**303**	P		**P**	**14 02 23.1**	**-0.6**
	0.3nm,0.5s,baz=91,slow=7.5,SNR=2.6							
	0.3nm,0.5s							
WRA	**Warramunga Arr**	**55.53**	**186**	P		**P**	**14 03 53.6**	**-0.9**
	0.2nm,0.3s,baz=0.2,slow=7.6,SNR=4.8							
	0.2nm,0.3s							
ASAR	**Alice Springs**	**59.26**	**186**	P		**P**	**14 04 21.5**	**+0.7**
	0.1nm,0.5s,baz=19,slow=11,SNR=1.5							
	0.1nm,0.5s							

NOU 30 13:56:31.3, 15°.96S×167°.59E, h17km, MLv4.5/15, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DVP	**Devils Point**	**1.85**	**162**	P		Pb	13 57 03.5	-1.1
RTV	**Rentapao**	**1.99**	**156**	P		Pn	13 57 04.0	-0.2
MARNC	**Mare, Loyalty**	**5.51**	**176**	P		Pn	13 57 53.6	+1.0
KOUNC	**Koumac, New Ca**	**5.54**	**214**	P		Pn	13 57 51.7	-1.3
YATNC	**Mamie plateau,**	**6.10**	**186**	P		Pn	13 57 59.3	-1.5
NOUC	**Port Laguerre**	**6.23**	**191**	P		Pn	13 58 01.9	-0.6
OUENC	**Ouen Island, N**	**6.46**	**186**	P		Pn	13 58 07.3	+1.6
PINNC	**Pines Island,**	**6.62**	**181**	P		Pn	13 58 07.7	-0.2

*AEIC **30** 14:01:09.0±0.3, 52°.0N±0°.2×173°.2W±0°.1, h68km±10km, ML3.3, Error ellipse: s-maj=30.2km s-min=8.8km az=175.0*
*NEIC **30** 14:01:10.2±0.3, 52°.N±1°×173°.2W±0°.4, h72km±71km, Error ellipse: s-maj=164.0km s-min=9.8km az=168.0*
*IDC **30** 14:01:11.6±1.4, 52°.11N×170°.90W, h0km, mb3.7/5, mbtmp3.8/6, ML4.3/1, Error ellipse: s-maj=74.5km s-min=24.3km az=149.0*
ISC 30 14:01:09.4±1.1, 52°.1N±0°.2×173°.22W±0°.06, h72km, n38, σ 1s°05/30, mb3.6/5, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KOFP	**Korovin Flat P**	**0.57**	**290**			**Pn**	**14 01 23.8**	**+0.6**
KOSE	**Korovin Southe**	**0.57**	**298**			**Pn**	**14 01 23.9**	**+0.7**
ATKA	**Atka Island**	**0.61**	**282**			**Pn**	**14 01 23.5**	**0.0**
KONE	**Korovin Northe**	**0.63**	**300**			**Pn**	**14 01 24.4**	**+0.6**
KOKL	**Mount Kliuchef**	**0.65**	**292**			**Pn**	**14 01 24.6**	**+0.6**
KOWE	**Korovin West**	**0.69**	**295**			**Pn**	**14 01 25.4**	**+0.9**
GSMY	**Great Sitkin M**	**1.75**	**270**			**Pn**	**14 01 38.4**	**+0.7**
GSTR	**Great Sitkin T**	**1.75**	**272**			**Pn**	**14 01 38.6**	**+0.8**
GSTD	**Great Sitkin T**	**1.80**	**270**			**Pn**	**14 01 39.1**	**+0.5**
GSCK	**Great Sitkin C**	**1.82**	**269**			**Pn**	**14 01 39.2**	**+0.6**
ADAG	**Mount Adagdak**	**2.09**	**269**			**Pn**	**14 01 43.6**	**+1.3**
ADK	**Adak**	**2.12**	**266**	Pn		**Pn**	**14 01 43.6**	**+0.5**
KIWB	**Kanaga Island**	**2.44**	**266**			**Pn**	**14 01 48.0**	**+1.0**
KIKV	**Kanaga Island**	**2.45**	**267**			**Pn**	**14 01 48.0**	**+0.8**
KICM	**Kanaga Island**	**2.46**	**268**			**Pn**	**14 01 48.2**	**+0.9**
KIMD	**Kanaga Island**	**2.50**	**264**			**Pn**	**14 01 48.7**	**+0.8**
NIKH	**Nikolski High**	**2.81**	**70**			**Pn**	**14 01 52.9**	**+0.9**
TAPA	**Tanaga Point A**	**2.85**	**266**			**Pn**	**14 01 53.6**	**+0.9**
TAFP	**Tanaga Falls P**	**2.95**	**268**			**Pn**	**14 01 54.4**	**+0.5**
TANO	**Tanaga North**	**3.03**	**269**			**Pn**	**14 01 55.7**	**+0.6**
GAEA	**Gareloi East**	**3.43**	**267**			**Pn**	**14 02 01.2**	**+0.7**
GANO	**Gareloi North**	**3.46**	**268**			**Pn**	**14 02 01.7**	**+0.8**
MNAT	**Makushin Natee**	**4.34**	**63**			**Pn**	**14 02 14.4**	**+1.5**
UNV	**Unalaska Valle**	**4.43**	**64**			**Pn**	**14 02 15.1**	**+1.1**
CESW	**Semis' Southwe**	**4.46**	**271**			**Pn**	**14 02 17.6**	**+3.1**
AMKA	**Amchitka**	**4.70**	**264**			**Pn**	**14 02 17.6**	**-0.2**
ILAR	**Eielson Array**	**18.56**	**37**	P		**P**	**14 05 18.2**	**-2.0**
	0.9nm,0.3s,baz=233,slow=10,SNR=47							
	0.8nm,0.4s							
DLBC	**Dease Lake**	**25.06**	**58**	P		**P**	**14 06 26.9**	**+0.1**
	0.8nm,0.4s,baz=186,slow=17,SNR=4.8							
	0.8nm,0.4s							
H11N2	**WAKE ISLAND Hy**	**35.83**	**213**	T		T	14 45 58.9	
	baz=21,slow=76,SNR=37							
H11N3	**WAKE ISLAND Hy**	**35.84**	**213**	T		T	14 45 58.5	
	baz=21,slow=76,SNR=39							
H11N1	**WAKE ISLAND Hy**	**35.85**	**213**	T		T	14 46 05.0	
	baz=21,slow=76,SNR=32							
H11S1	**WAKE ISLAND Hy**	**37.03**	**213**	T		T	14 47 21.2	
	baz=20,slow=76,SNR=18							
H11S2	**WAKE ISLAND Hy**	**37.05**	**213**	T		T	14 47 21.0	
	baz=20,slow=76,SNR=16							
H11S3	**WAKE ISLAND Hy**	**37.05**	**213**	T		T	14 47 21.6	
	baz=20,slow=76,SNR=10							
PDAR	**Pinedale Array**	**42.78**	**76**	P		**P**	**14 09 00.1**	**+0.1**
	1.7nm,0.5s,baz=305,slow=3.5,SNR=25							
	1.7nm,0.5s							
TXAR	**Lajitas Array**	**55.13**	**86**	P		**P**	**14 10 33.7**	**-0.6**
	0.2nm,0.4s,baz=312,slow=5.2,SNR=6.6							
	0.2nm,0.4s							
WRA	**Warramunga Arr**	**85.00**	**228**	P		P	14 13 54.4	+18
	0.6nm,0.9s,baz=32,slow=5.9,SNR=2.7							
	0.6nm,0.9s							
ASAR	**Alice Springs**	**88.43**	**227**	P		P	14 14 10.6	+17
	0.3nm,0.6s,baz=19,slow=4.4,SNR=7.9							
	0.3nm,0.6s							

*IDC **30** 14:08:04.2±4.5, 14°.13S×173°.33E, h0km, mb4.1/4, mbtmp4.1/5, ML4.0/1, Error ellipse: s-maj=99.2km s-min=65.0km az=119.0*
*NOU **30** 14:09:15.4, 17°.06S×168°.43E, h208km, MLv4.0/15, Vanuatu Islands*
ISC 30 14:09:10.9±3.0, 16°.9S±0°.2×168°.9E±0°.3, h250km, n15, σ 1s°11/15, mb3.8/4, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RTV	**Rentapao**	**1.03**	**207**	P		**Pn**	**14 09 45.2**	**-0.9**
DVP	**Devils Point**	**1.10**	**219**	P		**Pn**	**14 09 45.4**	**-1.1**
LIFNC	**LIFOU**	**4.20**	**202**	P		**Pn**	**14 10 14.8**	**-2.3**
MARNC	**Mare, Loyalty**	**4.67**	**190**	P		**Pn**	**14 10 22.0**	**-0.7**
YATNC	**Mamie plateau,**	**5.51**	**200**	P		**Pn**	**14 10 31.4**	**-1.6**
DZM	**Mont Dzumac**	**5.68**	**204**	Pn		**Pn**	**14 10 34.2**	**-0.9**
	1.3nm,0.3s,baz=46,slow=14,SNR=35							
	5.8nm,0.5s							
DZM	**Mont Dzumac**	**5.68**	**204**	P		**Pn**	**14 10 34.3**	**-0.9**
NOUC	**Port Laguerre**	**5.76**	**205**	P		**Pn**	**14 10 35.6**	**-0.5**
OUENC	**Ouen Island, N**	**5.86**	**199**	P		**Pn**	**14 10 37.3**	**0.0**
PINNC	**Pines Island,**	**5.88**	**193**	P		**Pn**	**14 10 38.1**	**+0.5**
ONTNC	**Ouen Toro**	**5.89**	**203**	P		**Pn**	**14 10 37.2**	**-0.5**
CTA	**Charters Tower**	**21.73**	**258**	P		**P**	**14 13 42.7**	**+0.1**
	1.8nm,0.6s,baz=100,slow=11,SNR=1.7							
	1.8nm,0.6s							
STKA	**Stephens Creek**	**28.92**	**234**	P		**P**	**14 14 48.4**	**+1.3**
	1.3nm,0.6s,baz=86,slow=12,SNR=3.8							
	1.3nm,0.6s							
WRA	**Warramunga Arr**	**32.92**	**259**	P		**P**	**14 15 21.9**	**-0.3**
	0.2nm,0.3s,baz=81,slow=6.5,SNR=13							
WRA				PcP		PcP	14 17 39.0	-22
	0.4nm,0.8s,baz=90,slow=2.6,SNR=2.4							
	0.2nm,0.3s							
ASAR	**Alice Springs**	**33.47**	**253**	P		**P**	**14 15 27.5**	**+0.5**
	4.6nm,0.4s,baz=79,slow=9.0,SNR=229							
	4.6nm,0.4s							

IDC 30 14:09:54.2±6.6, 28°.43S×22°.99E, h0km, Error ellipse: s-maj=40.4km s-min=39.3km az=178.0, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
I47ZA	**BOSHOF INFRASO**	**1.98**	**96**	*i*			14 20 40.0	
	0.2nm,0.8s,baz=275,slow=305,SNR=2.6							
BOSA	**Boshof**	**2.00**	**96**	Pn		Pn	14 10 29.2	-0.2
	0.7nm,0.3s,baz=276,slow=16,SNR=7.8							
BOSA				Lg		Lg	14 10 58.1	
	3.8nm,0.3s,baz=195,slow=20,SNR=21							
BOSA				Rg		Rg	14 11 07.7	
	123nm,0.9s,baz=321,slow=2.4,SNR=24							
I35NA	**TSUMEB INFRASO**	**10.44**	**331**	*i*			15 17 40.0	
	baz=154,slow=321,SNR=4.9							

ASRS 30 14:14:20.3±0.2, 52°N±1°×9°6E±°, h5km, MLh3.4/9, Error ellipse: s-maj=3.3km s-min=2.1km az=25.2, confirmed, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KZLR	**Kyzyl**	**1.01**	**256**	Pg		Pn	14 14 43.1	+2.0
KZLR				Sg		Sn	14 14 55.7	+0.1
KNGR	**Kungurtug, Tuv**	**1.65**	**145**	Pg		Pg	14 14 55.2	+3.3
KNGR				Sg		Sg	14 15 14.9	+1.7
ARDR	**Aradan**	**1.71**	**292**	Pg		Pg	14 14 57.3	+4.2
ARDR				Sg		Sg	14 15 19.8	+4.6
ERNS	**Erzin**	**1.78**	**198**	Pg		Pg	14 14 54.5	+0.1
ERNS				Sg		Sb	14 15 15.7	-0.5
DJOS	**Djoyskaya Sosn**	**2.96**	**288**	Pg		Pg	14 15 20.0	+3.1
DJOS				Sg		Sg	14 15 58.4	+3.2
CERR	**Cheremushki**	**2.96**	**289**	Pg		Pg	14 15 20.0	+3.0
CERR				Sg		Sg	14 15 58.6	+3.2
DJO	**Djoy, Khakassi**	**3.06**	**288**	Pg		Pg	14 15 21.1	+2.2
DJO				Sg		Sg	14 16 00.5	+2.0
MOY	**Mondy**	**3.10**	**93**	Pg		Pg	14 15 21.4	+1.7
MOY				Sg		Sg	14 16 01.6	+1.8
ORY	**Orie**	**3.10**	**350**	Pg		Pg	14 15 21.7	+2.0
ORY				Sg		Sg	14 16 02.6	+2.9
SHTK	**Zheleznogorsk-**	**4.61**	**343**	Pg		Pg	14 15 47.7	-0.8
SHTK				Sg		Sg	14 16 47.9	-0.3
LUZB	**Luzhba, Kemero**	**4.65**	**294**	Pg		Pg	14 15 50.5	+1.2
LUZB				Sg		Sg	14 16 49.9	+0.5
ZAK	**Zakamensk**	**4.83**	**106**	Pg		Pg	14 15 53.0	+0.2
ZAK				Sg		Sg	14 16 55.6	+0.2
TASR	**Tashtagol**	**5.05**	**282**	Sg		Sg	14 17 02.7	+0.1
ULGR	**Ulagan, Altay**	**5.23**	**258**	Pg		Pg	14 16 01.5	+1.0
ULGR				Sg		Sg	14 17 09.9	+1.7
ARYR	**Artybash**	**5.42**	**272**	Sg		Sg	14 17 14.9	+0.8
AKAR	**Aktash**	**5.54**	**256**	Sg		Sg	14 17 13.4	-4.7
ELT	**Eltsovka**	**6.10**	**286**	Sg		Sg	14 17 34.1	-2.0

*NEIC **30** 14:17:55.0±1.1, 22°.1S±0°.1×178°.9W±0°.2, h551km±9km, mb4.4/36, Error ellipse: s-maj=23.4km s-min=17.8km az=81.0*
*IDC **30** 14:17:55.7±1.3, 22°.08S×178°.96W, h558km±13km, mb3.5/16, mbtmp4.4/19, Error ellipse: s-maj=16.3km s-min=11.2km az=117.0*
ISC 30 14:17:57.2±0.5, 22°.12S±0°.07×179°.08W±0°.08, h576km, n87, σ 1s°07/95, mb4.3/32, 1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**5.13**	**328**	P		**P**	**14 19 28.1**	**-1.8**
	122nm,0.4s,baz=266,slow=23,SNR=345							
MSVF				S		**S**	**14 20 42.3**	**-3.0**
	25nm,0.8s,baz=86,slow=12,SNR=5.6							
MSVF	**Nonsavu**	**5.13**	**328**	P		**P**	**14 19 27.7**	**-2.1**
DZM	**Mont Dzumac**	**13.42**	**267**	P		**P**	**14 20 49.8**	**-0.8**
	4.4nm,0.5s,baz=325,slow=17,SNR=1.9							
URZ	**Urewera**	**16.42**	**191**	P		**P**	**14 21 17.2**	**-2.1**
	8.2nm,0.3s,baz=225,slow=2.6,SNR=6.7							
URZ				S		**S**	**14 23 58.2**	**-5.7**
	7.3nm,0.9s,baz=199,slow=22,SNR=1.3							
URZ	**Urewera**	**16.42**	**191**	P		**P**	**14 21 17.2**	**-2.1**
RPZ	**Rata Peaks**	**23.04**	**199**	P		**P**	**14 22 19.2**	**+0.1**
	5.0nm,0.5s,baz=8.4,slow=2.4,SNR=7.3							
	5.0nm,0.5s							
EIDS	**Eidsvold**	**27.48**	**257**	P		**P**	**14 22 59.0**	**+0.6**
EIDS				IAmb		IAmb	14 22 59.8	
	comp=Z,5.8nm,0.6s							
CAN	**Canberra**	**30.79**	**238**	P		**P**	**14 23 27.8**	**+0.8**
CTA	**Charters Tower**	**32.37**	**267**	P		**P**	**14 23 41.1**	**+0.5**
	comp=Z,10nm,0.6s,baz=94,slow=11,SNR=24							
CTA				PcP		**PcP**	**14 26 11.2**	**+0.5**
	comp=Z,1.7nm,0.5s,baz=104,slow=4.2,SNR=1.5							
	comp=Z,10nm,0.6s							
CTAO	**Charters Tower**	**32.37**	**267**	P		**P**	**14 23 41.0**	**+0.4**
CTAO				IAmb		IAmb	14 23 41.8	
	comp=Z,7.8nm,0.7s							
TOO	**Toolangi**	**34.14**	**235**	P		**P**	**14 23 55.9**	**+0.7**
STKA	**Stephens Creek**	**36.20**	**246**	P		**P**	**14 24 13.3**	**+0.9**
	comp=Z,14nm,0.5s,baz=95,slow=11,SNR=54							
	comp=Z,14nm,0.5s							
STKA	**Stephens Creek**	**36.20**	**246**	P		**P**	**14 24 13.2**	**+0.9**
BBOO	**Buckleboo**	**40.94**	**245**	P		**P**	**14 24 50.7**	**+0.1**
BBOO				IAmb		IAmb	14 25 20.2	
	comp=Z,13nm,1.1s							
AS31	**Alice Springs**	**43.19**	**259**	P		**P**	**14 25 08.9**	**+0.4**
ASAR	**Alice Springs**	**43.19**	**259**	P		**P**	**14 25 08.8**	**+0.4**
	comp=Z,18nm,0.7s,baz=102,slow=7.8,SNR=247							
ASAR				PcP		**PcP**	**14 26 45.7**	**+1.0**
	comp=Z,2.9nm,0.7s,baz=107,slow=4.1,SNR=8.1							
ASAR				ScP		**ScP**	**14 29 42.2**	**+0.6**
	comp=Z,0.4nm,1.0s,baz=114,slow=4.1,SNR=1.6							
ASAR				S		**S**	**14 30 54.8**	**+0.5**
	comp=Z,1.1nm,1.0s,baz=100,slow=15,SNR=6.1							
	comp=Z,18nm,0.7s							
WR0	**Warramunga Arr**	**43.22**	**264**	P		**P**	**14 25 08.4**	**-0.3**
WB0	**Warramunga Arr**	**43.39**	**264**	P		**P**	**14 25 09.6**	**-0.4**
WB0				IAmb		IAmb	14 25 10.2	
	comp=Z,11nm,0.8s							
WB2	**Warramunga Arr**	**43.39**	**264**	P		**P**	**14 25 10.0**	**0.0**
WB2				IAmb		IAmb	14 25 10.7	
	comp=Z,13nm,0.8s							
WRAB	**Tennant Creek**	**43.40**	**264**	P		**P**	**14 25 09.5**	**-0.6**
WRAB				IAmb		IAmb	14 25 10.6	
	comp=Z,14nm,0.9s							
WRA	**Warramunga Arr**	**43.40**	**264**	P		**P**	**14 25 09.9**	**-0.2**
	comp=Z,4.7nm,0.3s,baz=95,slow=8.1,SNR=227							
WRA				PcP		**PcP**	**14 26 46.5**	**+1.0**
	comp=Z,1.6nm,0.8s,baz=96,slow=3.8,SNR=5.3							
WRA				S		**S**	**14 30 55.8**	**-1.6**
	comp=Z,0.6nm,1.0s,baz=101,slow=12,SNR=2.2							
	comp=Z,4.7nm,0.3s							
WRA	**Warramunga Arr**	**43.40**	**264**	P		**P**	**14 25 08.8**	**-1.3**
FORT	**Forrest**	**47.74**	**248**			**P**	**14 25 43.0**	**+0.1**
MTN	**Manton Dam**	**48.20**	**272**	P		**P**	**14 25 46.5**	**-0.1**
MTN				IAmb		IAmb	14 25 47.2	
	comp=Z,10nm,0.7s							
KNRA	**Kununurra**	**49.57**	**268**	P		**P**	**14 25 57.0**	**+0.4**
VNDA	**Vanda**	**56.22**	**185**	P		**P**	**14 26 43.3**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=12,slow=6.2,SNR=6.0							
	comp=Z,0.5nm,0.5s							
VNDA	**Vanda**	**56.22**	**185**	P		**P**	**14 26 43.1**	**+0.2**
PSA00	**Pilbara Seismi**	**56.34**	**258**	P		**P**	**14 26 44.0**	**-0.7**
MBWA	**Marble Bar**	**56.53**	**259**	P		**

	comp=Z,1.3nm,0.6s								
NVAR	**Mina Array Bea**	**82.89**	**44**	P		**P**	**14 29 22.4**	**0.0**
	comp=Z,0.9nm,0.7s,baz=221,slow=8.7,SNR=7.4							
	comp=Z,0.9nm,0.7s							
O18K	**Koktuh Hills**	**83.98**	**12**	P		**P**	**14 29 27.0**	**0.0**
O18K				IAmb		IAmb	14 29 28.1	
	comp=Z,7.8nm,0.9s							
TROLL	**Troll, Antarti**	**86.11**	**181**	P		**P**	**14 29 37.5**	**0.0**
SNAA	**Sanae**	**86.42**	**179**	P		**P**	**14 29 38.6**	**-0.3**
VNA3	**Neumayer Olymp**	**86.60**	**177**	P		**P**	**14 29 39.5**	**-0.2**
GHO	**Glory Hole Cre**	**87.03**	**14**	P		**P**	**14 29 42.0**	**+0.4**
GHO				IAmb		IAmb	14 29 42.8	
	comp=Z,7.0nm,0.7s							
VNA2	**Neumayer--Watz**	**87.03**	**177**	P		**P**	**14 29 41.7**	**+0.1**
	baz=188,slow=4.3							
VNA1	**Neumayer--Stat**	**87.26**	**177**	P		**P**	**14 29 43.5**	**+0.8**
CAST	**Castle Rocks**	**87.86**	**12**	P		**P**	**14 29 45.0**	**-0.4**
CAST				IAmb		IAmb	14 29 45.3	
	comp=Z,4.0nm,0.8s							
TRF	**Thorofare Moun**	**88.24**	**13**	P		**P**	**14 29 46.8**	**-0.6**
TRF				IAmb		IAmb	14 29 48.2	
	comp=Z,6.5nm,0.8s							
TXAR	**Lajitas Array**	**88.77**	**58**	P		**P**	**14 29 50.9**	**+0.2**
	comp=Z,1.3nm,0.8s,baz=205,slow=5.5,SNR=12							
	comp=Z,1.3nm,0.8s							
CMAR	**Chiang Mai Arr**	**89.71**	**290**	P		**P**	**14 29 57.3**	**+2.1**
	comp=Z,4.6nm,0.8s,baz=133,slow=3.3,SNR=26							
	comp=Z,4.6nm,0.8s							
CHTO	**Chiang Mai**	**89.85**	**290**	P		**P**	**14 29 57.7**	**+2.0**
CHTO				IAmb		IAmb	14 29 59.0	
	comp=Z,6.1nm,0.8s							
ILAR	**Eielson Array**	**90.11**	**13**	P		**P**	**14 29 54.4**	**-1.5**
	comp=Z,0.6nm,0.7s,baz=210,slow=6.3,SNR=5.6							
	comp=Z,0.6nm,0.7s							
PDAR	**Pinedale Array**	**90.82**	**44**	P		**P**	**14 29 58.5**	**-1.5**
	comp=Z,0.7nm,0.8s,baz=211,slow=2.6,SNR=6.1							
	comp=Z,0.7nm,0.8s							
ZALV	**Zalesovo Beam**	**111.11**	**321**	PKiKP		**PKiKP**	**14 35 25.2**	**-0.3**
	comp=Z,0.6nm,0.3s,baz=90,slow=0.4,SNR=1.4							
ARCES	**ARCESS Array B**	**130.32**	**349**	PKP		**PKPdf**	**14 36 01.9**	**0.0**
	comp=Z,0.8nm,0.4s,baz=360,slow=1.6,SNR=16							
FINES	**FINESS Array B**	**137.02**	**343**	PKhKP		PKPpre	14 36 05.5	
	comp=Z,0.8nm,0.6s,baz=264,slow=1.7,SNR=3.6							
FINES				PKP		**PKPdf**	**14 36 14.4**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=95,slow=3.2,SNR=7.3							
NOA	**NORSAR Array B**	**140.45**	**352**	PKhKP		PKPpre	14 36 14.9	
	comp=Z,0.5nm,0.6s,baz=35,slow=5.3,SNR=2.3							
AKASG	**Malin Array Be**	**143.91**	**329**	PKP		PKPbc	14 36 26.5	-0.2
	comp=Z,4.2nm,0.4s,baz=44,slow=4.4,SNR=28							
BRTR	**Keskin Array B**	**147.14**	**310**	PKPbc		**PKPbc**	**14 36 36.9**	**+0.3**
	comp=Z,3.5nm,0.6s,baz=133,slow=4.6,SNR=13							
BRTR	**Keskin Array B**	**147.14**	**310**			**PKPbc**	**14 36 37.1**	**+0.6**
CRVS	**Cervenica-Dubn**	**148.68**	**334**	*e*PKP		**PKiKP**	**14 36 41.4**	**+0.4**
CHVC	**Chvalec**	**149.21**	**341**	*e*PKP		**PKiKP**	**14 36 42.4**	**+0.4**
LANS	**Liptovska Anna**	**149.27**	**336**	*e*PKP		**PKiKP**	**14 36 43.5**	**+1.3**
DPC	**Dobruska-Polom**	**149.34**	**341**	*e*PKP		**PKiKP**	**14 36 42.8**	**+0.5**
CLL	**Collm**	**149.38**	**345**			**PKiKP**	**14 36 42.0**	**-0.3**
CLL	**Collm**	**149.38**	**345**	⇓ *i*PKPbc		**PKiKP**	**14 36 42.2**	**-0.1**
	comp=Z,14nm,1.0s							
CLL				*i* PKPab		**PKPab**	**14 36 49.1**	**+0.4**
	comp=Z,5.0nm,0.9s							
KRLC	**Kraliky**	**149.43**	**340**	*e*PKP		**PKiKP**	**14 36 43.0**	**+0.5**
MORC	**Moravsky Berou**	**149.44**	**339**	*e*PKP		**PKiKP**	**14 36 43.0**	**+0.4**
MAUC	**Maruska**	**149.69**	**338**	*e*PKP		**PKiKP**	**14 36 43.8**	**+0.7**
PVCC	**Panska Ves**	**149.69**	**343**	*e*PKP		**PKiKP**	**14 36 43.7**	**+0.7**
VYHS	**Vyhne**	**150.05**	**336**	*e*PKP		**PKiKP**	**14 36 44.1**	**+0.3**
VYHS				*e*			14 36 52.9	
VRAC	**Vranov**	**150.16**	**339**	*e*PKP		**PKiKP**	**14 36 44.5**	**+0.5**
JAVC	**Velka Javorina**	**150.17**	**338**	*e*PKP		**PKiKP**	**14 36 45.8**	**+1.7**
PRU	**Pruhonice**	**150.18**	**342**	*e*PKP		**PKiKP**	**14 36 44.3**	**+0.3**
KRUC	**Moravsky**	**150.43**	**339**	*e*PKP		**PKiKP**	**14 36 45.0**	**+0.4**
MODS	**Modra-Piesok**	**150.72**	**337**	*e*PKP		**PKiKP**	**14 36 46.1**	**+0.9**
KHC	**Kasperske Hory**	**151.23**	**343**	*e*PKP		**PKiKP**	**14 36 47.0**	**+0.7**
KHC				*ex*		x	14 36 57.0	
GERES	**GERESS Array B**	**151.45**	**342**	PKPbc		**PKiKP**	**14 36 46.8**	**0.0**
	comp=Z,1.2nm,0.6s,baz=90,slow=1.3,SNR=7.6							
TORD	**Torodi Ar. Bea**	**171.05**	**185**	PKP		**PKPdf**	**14 37 00.3**	**-0.4**
	comp=Z,1.2nm,0.8s,baz=336,slow=0.7,SNR=5.5							
TORD				PKPab		**PKPab**	**14 38 22.9**	**-0.9**
	comp=Z,0.7nm,0.6s,baz=148,slow=4.6,SNR=5.1							

*KRNET **30** 14:19:38.5±0.1, 41˚41N×72˚36E, h29km, mb3.3*
*NNC **30** 14:19:39.9±1.2, 41˚41N×72˚41E, h0km, mb4.0, mpv3.7,*
Error ellipse: s-maj=13.9km s-min=3.4km az=177.0
*SOME **30** 14:19:39.3, 41˚50N×72˚32E, h0km*
*KNET **30** 14:19:40.1±0.4, 41˚38N×72˚66E, h2km±2km, ml2.5, Error*
ellipse: s-maj=5.9km s-min=2.3km az=137.0
*ISU **30** 14:19:42.4, 41˚28N×72˚35E, h20km*

ISC 30 14:19:37.2±1.1, 41˚36N±0˚03×72˚48E±0˚02, h6km±10km, n63, σ1°61/107, 17C-19D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**0.87**	**164**	⇑ *e*P	**Pn**	**14 19 56.0**	**-0.1**
OHH	baz=60			⇑ *e*S	**Sn**	**14 20 08.7**	**-0.5**
	baz=60						
OHH	**Osh**	**0.87**	**164**	P	**Pn**	**14 19 56.0**	**-0.1**
OHH				S	**Sn**	**14 20 07.9**	**-1.3**
TRKS	**Terek-Say**	**1.02**	**280**	⇑ *e*P	**Pg**	**14 19 55.5**	**-1.3**
	baz=74						
TRKS				⇑ *e*S	**Sg**	**14 20 07.6**	**-2.5**
	baz=74						
FRG	**Fergana**	**1.12**	**208**	P	Pn	14 20 06.3	+6.8
FRG				S	**Sn**	**14 20 19.7**	**+4.4**
AML	**Almayashu**	**1.19**	**49**	⇑ P	**Pn**	**14 20 00.8**	**-0.1**
	36nm,0.2s,SNR=14						
AML				⇑ S	**Sn**	**14 20 17.4**	**-0.1**
	44nm,0.2s						
CHDK	**Chadak**	**1.36**	**254**	P	**Pg**	**14 20 04.5**	**+1.1**
MINT	**Mingtut**	**1.45**	**232**	P	Pg	14 20 08.7	+3.6
MINT				S	**Sg**	**14 20 27.7**	**+3.8**
MRKS	**Merke**	**1.49**	**22**	*e*P	**Pg**	**14 20 09.3**	**+3.5**
	4.7nm,0.1s						
MRKS				*e*S	**Sg**	**14 20 30.8**	**+5.7**
	68nm,0.2s						
EKS2	**Erkin-Say**	**1.62**	**36**	⇑ P	**Pg**	**14 20 09.0**	**+0.7**
	10nm,0.2s,SNR=10						
EKS2				⇓ S	**Sg**	**14 20 32.2**	**+3.0**
	19nm,0.2s						
EKS2	**Erkin-Say**	**1.62**	**36**	⇓ *e*P	**Pg**	**14 20 07.7**	**-0.6**
	baz=40						
EKS2				⇓ *e*S	**Sg**	**14 20 28.9**	**-0.3**
	baz=40						
UCH	**Uchtor**	**1.75**	**60**	⇑ P	**Pg**	**14 20 11.4**	**+0.6**
	23nm,0.2s,SNR=33						
UCH				⇑ S	**Sg**	**14 20 35.0**	**+1.5**
	43nm,0.2s						
UCH	**Uchtor**	**1.75**	**60**	⇑ *e*P	**Pg**	**14 20 10.4**	**-0.4**
	baz=62						
UCH				⇑ *e*S	**Sg**	**14 20 33.1**	**-0.4**
	baz=62						
DZA	**Taraz**	**1.75**	**331**	*e*P	**Pg**	**14 20 11.0**	**+0.2**
	110nm,0.1s						
DZA				*e*S	**Sg**	**14 20 34.8**	**+1.3**
	481nm,0.3s						
DZA	**Taraz**	**1.75**	**331**	P	**Pg**	**14 20 11.0**	**+0.2**
	110nm,0.1s						
DZA				S	**Sg**	**14 20 34.8**	**+1.3**
	481nm,0.3s						
BTK	**Batken**	**1.82**	**225**	P	**Pg**	**14 20 11.6**	**-0.4**
BTK				S	**Sg**	**14 20 34.7**	**-0.9**
CHMG	**Chimgan**	**1.87**	**277**	P	**Pg**	**14 20 14.3**	**+1.3**
CHMG				S	**Sg**	**14 20 38.5**	**+1.3**
AAK	**Ala-Archa**	**1.97**	**49**	⇓ P	**Pg**	**14 20 15.6**	**+0.6**
	20nm,0.3s,SNR=12						
AAK				⇑ S	**Sg**	**14 20 41.9**	**+1.4**
	25nm,0.2s						
AAK	**Ala-Archa**	**1.97**	**49**	⇓ *e*P	**Pb**	**14 20 12.9**	**-0.7**
	baz=51						
AAK				⇓ *e*S	**Sb**	**14 20 38.1**	**-0.4**
	baz=51						
IUG	**Iuzhnay**	**1.99**	**294**	*e*P	**Pg**	**14 20 14.0**	**-1.4**
	1μm,0.2s						
IUG				*e*S	**Sg**	**14 20 39.6**	**-1.7**
	140nm,0.2s						
IUG	**Iuzhnay**	**1.99**	**294**	P	**Pg**	**14 20 14.0**	**-1.4**
	1μm,0.2s						
IUG				S	**Sg**	**14 20 39.6**	**-1.7**
	140nm,0.2s						
YBZ	**Yangibazar**	**2.18**	**269**	P	**Pg**	**14 20 18.8**	**-0.2**
YBZ				S	**Sg**	**14 20 46.6**	**-0.7**
TGS	**TashGRES**	**2.23**	**272**	S	**Sg**	**14 20 52.2**	**+3.4**
KBK	**Karagaybulak**	**2.25**	**54**	⇑ P	**Pg**	**14 20 19.7**	**-0.6**
	14nm,0.2s,SNR=14						
KBK				⇓ S	**Sg**	**14 20 50.2**	**+0.8**
	50nm,0.3s						
KBK	**Karagaybulak**	**2.25**	**54**	⇓ *e*P	**Pb**	**14 20 16.9**	**-1.5**
	baz=56						
KBK				⇓ *e*S	**Sb**	**14 20 44.9**	**-1.6**
	baz=56						
KK31	**Karatay Array**	**2.27**	**321**	Pn	**Pb**	**14 20 18.2**	**-0.5**
	9.3nm,0.2s,baz=136,slow=14,SNR=137						
KK31				⇑ Sn	**Sb**	**14 20 47.7**	**+0.6**
	9.3nm,0.3s,baz=141,slow=25,SNR=9.1						
KKAR	**Karatay Array**	**2.27**	**321**	⇓ *e*P	**Pn**	**14 20 15.3**	**-0.1**
	baz=22						
KKAR				⇓ *e*S	**Sn**	**14 20 42.1**	**-1.6**
	baz=22						
CHMS	**Chumysh**	**2.35**	**45**	⇑ P	**Pg**	**14 20 21.1**	**-1.1**
	9.0nm,0.2s,SNR=6.7						
CHMS				⇓ S	**Sg**	**14 20 53.3**	**+0.6**
	44nm,0.4s						
CHMS	**Chumysh**	**2.35**	**45**	⇓ *e*P	**Pb**	**14 20 17.8**	**-2.2**
	baz=47						
CHMS				⇓ *e*S	**Sn**	**14 20 46.6**	**+1.0**
	baz=47						
CHMS	**Chumysh**	**2.35**	**45**	⇑ Pn	**Pb**	**14 20 20.7**	**+0.7**
	6.8nm,0.5s						
CHMS				⇓ Sn	**Sg**	**14 20 53.3**	**+0.6**
	23nm,0.6s						
USP	**Ospenovka**	**2.42**	**38**	⇑ P	**Pb**	**14 20 21.8**	**+0.5**
	13nm,0.2s,SNR=9.3						
USP	**Ospenovka**	**2.42**	**38**	⇓ *e*P	**Pb**	**14 20 18.8**	**-2.5**
	baz=40						
USP				⇓ *e*S	**Sn**	**14 20 48.4**	**+1.0**
	baz=40						
BRLS	**Boroldav**	**2.58**	**311**	*e*P	**Pb**	**14 20 23.3**	**-0.6**
	12nm,0.2s						
BRLS				*e*S	**Sb**	**14 20 55.5**	**-0.3**
	26nm,0.2s						
BRLS	**Boroldav**	**2.58**	**311**	Pg	**Pb**	**14 20 23.3**	**-0.6**
	12nm,0.2s						
BRLS				Lg	Lg	14 20 55.5	
	26nm,0.2s						
SGDS	**Sogindy**	**2.62**	**37**	*e*P	**Pb**	**14 20 25.7**	**+0.9**
	5.5nm,0.4s						
SGDS				*e*S	**Sb**	**14 20 58.8**	**+1.5**
	32nm,0.4s						
TKM2	**Tokmak 2**	**2.79**	**55**	⇓ *e*P	**Pn**	**14 20 24.4**	**+1.7**
	baz=57						
TKM2				⇓ *e*S	**Sn**	**14 20 57.9**	**+1.1**
	baz=57						
DGS	**Degeres**	**3.08**	**51**	*e*P	**Pg**	**14 20 35.4**	**-0.8**
	1.9nm,0.3s						
DGS				*e*S	**Sg**	**14 21 16.2**	**+0.1**
	18nm,0.7s						
DGS	**Degeres**	**3.08**	**51**	Pg	**Pg**	**14 20 35.4**	**-0.8**
	1.9nm,0.3s						
DGS				Lg	Lg	14 21 16.2	
KST	**Kastek**	**3.08**	**56**	*e*P	**Pg**	**14 20 35.9**	**-0.5**
	4.3nm,0.3s						
KST				*e*S	**Sg**	**14 21 16.6**	**+0.3**
	34nm,0.4s						
KST	**Kastek**	**3.08**	**56**	Pg	**Pg**	**14 20 35.9**	**-0.5**
	4.3nm,0.3s						
KST				Lg	Lg	14 21 16.6	
	34nm,0.4s						
KRBS	**Karabastau**	**3.32**	**44**	*e*P	**Pg**	**14 20 38.8**	**-2.1**
	0.2nm,0.1s						
KRBS				*e*S	**Sg**	**14 21 21.2**	**-2.6**
	17nm,0.8s						
MTBS	**Maitube**	**3.42**	**58**	*e*P	**Pg**	**14 20 42.3**	**-0.5**
	2.1nm,0.2s						
MTBS				*e*S	**Sg**	**14 21 27.4**	**+0.3**
	16nm,0.4s						
MTBS	**Maitube**	**3.42**	**58**	Pg	**Pg**	**14 20 42.3**	**-0.5**
MTBS				Lg	Lg	14 21 27.4	
IZV	**Izvestkoviy**	**3.50**	**60**	*e*P	**Pg**	**14 20 45.3**	**+1.1**
	65nm,0.2s						
IZV				*e*S	**Sg**	**14 21 32.5**	**+3.0**
	12nm,0.3s						
TNSS	**Tian-Shan**	**3.72**	**62**	*e*P	**Pg**	**14 20 47.9**	**-0.6**
	2.0nm,0.3s						
TNSS				*e*S	**Sg**	**14 21 37.0**	**+0.3**
	5.4nm,0.4s						
TNSS	**Tian-Shan**	**3.72**	**62**	Pg	**Pg**	**14 20 47.9**	**-0.6**
	2.0nm,0.3s						
TNSS				Lg	Lg	14 21 37.0	
	5.4nm,0.4s						
KUU	**Kurty**	**3.81**	**47**	*e*P	**Pg**	**14 20 48.1**	**-2.0**
	1.0nm,0.1s						
KUU				*e*S	**Sg**	**14 21 37.6**	**-1.9**
	12nm,0.4s						
KUU	**Kurty**	**3.81**	**47**	Pg	**Pg**	**14 20 48.1**	**-2.0**
KUU				Lg	Lg	14 21 37.6	
KTBS	**Karatobe**	**3.89**	**52**	*e*P	**Pg**	**14 20 50.5**	**-1.3**
	2.1nm,0.3s						
KTBS				*e*S	**Sg**	**14 21 41.6**	**-0.6**
	16nm,0.3s						
KTBS	**Karatobe**	**3.89**	**52**	Pg	**Pg**	**14 20 50.5**	**-1.3**
	2.1nm,0.3s						
KTBS				Lg	Lg	14 21 41.6	
	16nm,0.3s						
KOTS	**Kotyrbulak**	**3.91**	**60**	*e*P	**Pg**	**14 20 51.8**	**-0.4**
	3.4nm,0.4s						
KOTS				*e*S	**Sg**	**14 21 43.9**	**+1.1**
	11nm,0.5s						
KOTS	**Kotyrbulak**	**3.91**	**60**	Pg	**Pg**	**14 20 51.7**	**-0.4**
KOTS				Lg	Lg	14 21 43.9	
CHKK	**Chushkaly**	**4.16**	**52**	*e*P	**Pg**	**14 20 55.1**	**-1.7**
	1.6nm,0.2s						
CHKK				*e*S	**Sg**	**14 21 49.3**	**-1.3**
	8.8nm,0.3s						
CHKK	**Chushkaly**	**4.16**	**52**	Pg	**Pg**	**14 20 54.9**	**-1.9**
CHKK				Lg	Lg	14 21 49.3	
KURS	**Kuram**	**4.72**	**61**	*e*P	**Pg**	**14 21 08.9**	**+1.3**
	2.6nm,0.6s						
KURS				*e*S	**Sg**	**14 22 13.1**	**+4.4**
	4.4nm,0.8s						
KURS	**Kuram**	**4.72**	**61**	Pg	**Pg**	**14 21 08.9**	**+1.3**
KURS				Lg	Lg	14 22 13.1	
ARXS	**Arharly**	**4.86**	**52**	*e*P	**Pg**	**14 21 08.0**	**-2.3**
	1.5nm,0.6s						
ARXS				*e*S	**Sg**	**14 22 11.9**	**-1.2**
	15nm,0.8s						
ARXS	**Arharly**	**4.86**	**52**	Pg	**Pg**	**14 21 08.0**	**-2.3**
ARXS				Lg	Lg	14 22 11.9	
KPKS	**Kokpek**	**5.05**	**63**	*e*P	**Pg**	**14 21 12.4**	**-1.6**
	4.5nm,0.3s						
KPKS				*e*S	**Sg**	**14 22 19.2**	**-0.2**
	11nm,0.5s						
KPKS	**Kokpek**	**5.05**	**63**	Pg	**Pg**	**14 21 12.4**	**-1.6**
KPKS				Lg	Lg	14 22 19.2	
UZB	**Uzynbulak**	**5.17**	**68**	*e*P	**Pg**	**14 21 15.0**	**-1.3**
	0.6nm,0.2s						
UZB				*e*S	**Sg**	**14 22 23.3**	**0.0**
	3.4nm,0.7s						
BLB	**Baldybastay**	**5.19**	**56**	*e*P	**Pg**	**14 21 14.9**	**-1.8**
	2.3nm,0.3s						
BLB				*e*S	**Sg**	**14 22 23.3**	**-0.7**
	7.8nm,0.5s						
BLB	**Baldybastay**	**5.19**	**56**	Pg	**Pg**	**14 21 14.7**	**-2.0**
	2.3nm,0.3s						
BLB				Lg	Lg	14 22 23.4	
	5.8nm,0.6s						
PDGK	**Podgornoye**	**5.55**	**67**	Pg	**Pg**	**14 21 22.8**	**-0.8**
PDGK				Lg	Lg	14 22 36.8	

TAP 30 14:28:19.3, 23˚35N×120˚94E, h2km, ML1.2, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUS	**Yu-Shan**	**0.14**	**5**	*i* P	Pg	14 28 22.9	+0.6
	baz=8.0						
YUS				*i* S	Sg	14 28 25.6	+1.4
	baz=8.0						
ELDTW	**Lidau**	**0.17**	**155**	*i* P	Pg	14 28 23.6	+0.9
	baz=154						
ELDTW				*i* S	Sg	14 28 26.1	+1.0
	baz=154						
ALS	**Alishan**	**0.20**	**323**	*i* P	Pg	14 28 24.1	+0.8
	baz=324						
ALS				*i* S	Sg	14 28 27.6	+1.6
	baz=324						
STYH	**Taoyuan**	**0.23**	**220**	*i* P	Pg	14 28 24.4	+0.7
	baz=219						
STYH				*i* S	Sg	14 28 27.8	+1.0
	baz=219						
STYT	**Tauyuan**	**0.25**	**222**	*i* P	Pg	14 28 25.1	+1.0
	baz=219						
STYT				*i* S	Sg	14 28 28.5	+1.2
	baz=219						
TPUB	**Ta-pu**	**0.29**	**261**	*i* P	Pb	14 28 26.1	-1.1
	baz=259						
TPUB				*i* S	Sg	14 28 30.5	+1.9
	baz=259						
WTP	**Ta-pu**	**0.32**	**251**	*i* P	Pb	14 28 26.7	-1.0
	baz=264						
WTP				*i* S	Sb	14 28 31.6	-1.8
	baz=264						
CHN4	**Tsaushan**	**0.32**	**271**	P	Pb	14 28 26.9	-0.9
	baz=269						
CHN4				*i* S	Sb	14 28 31.7	-1.6
	baz=269						
TWF1	**Yuli**	**0.33**	**89**	P	Pg	14 28 26.5	+0.8
	baz=90						
TWF1				S	Sg	14 28 30.8	+0.8
	baz=90						
YULB	**Yu-li**	**0.33**	**82**	IAmb	IAmb	14 28 31.6	
	comp=Z,10.0nm,1.0s						
YULB	**Yu-li**	**0.33**	**82**	P	Pg	14 28 26.4	+0.6
	baz=83						
YULB	**Yu-li**	**0.33**	**82**	S	Sg	14 28 30.4	+0.3
	baz=83						
YULB	**Yu-li**	**0.33**	**82**	P	Sg	14 28 30.6	+0.5
CHN5	**Tsauling**	**0.34**	**316**	*e*P	Pg	14 28 27.1	+1.1
	baz=316						
CHN5				S	Sg	14 28 32.2	+1.8
	baz=316						
EYUL	**Yuli**	**0.35**	**90**	*e*P	Pg	14 28 27.1	+1.0
	baz=91						
EYUL				*e*S	Sg	14 28 31.3	+0.6
	baz=91						
FULB	**Fuli**	**0.36**	**114**	*e*P	Pb	14 28 27.4	-1.1
	baz=116						
EHY	**Hungye**	**0.39**	**66**	*e*P	Pg	14 28 27.6	+0.8
	baz=79						
EHY				S	Sg	14 28 32.4	+0.6
	baz=79						
CHN1	**Nanshi**	**0.41**	**247**	P	Pb	14 28 29.0	-0.3
	baz=245						
CHN1				S	Sb	14 28 35.4	-0.7
	baz=245						
TWK	**Hsinying**	**0.42**	**259**	P	Pb	14 28 29.1	-0.5
	baz=257						
TWK				S	Sb	14 28 35.7	-0.8
	baz=257						
SNST	**Tainan City**	**0.42**	**253**	*e*P	Pg	14 28 28.5	+1.0
	baz=251						
SNST				*e*S	Sb	14 28 35.8	-0.7
	baz=251						
SSLB	**Suanglung**	**0.44**	**2**	*e*P	Pg	14 28 28.7	+1.0
	baz=3.0						
VWDT	**VWDT**	**0.45**	**25**	*e*P	Pg	14 28 28.2	+0.3
	baz=26						
HGSD	**Ruisui**	**0.47**	**72**	P	Pb	14 28 29.5	-0.9
	baz=74						
HGSD				S	Sb	14 28 36.6	-1.1
	baz=74						
LONT	**Longtian**	**0.47**	**158**	*e*P	Pb	14 28 29.9	-0.5
	baz=158						
EDH	**Donghe**	**0.50**	**138**	*e*P	Pg	14 28 29.9	+0.9
	baz=150						
TWGBT	**Beinan**	**0.54**	**166**	*e*P	Pg	14 28 30.5	+0.7
	baz=166						
TYC	**Yuchr**	**0.56**	**352**	*e*P	Pg	14 28 30.9	+0.9
	baz=2.0						

*IGIL **30** 14:33:50.4, 37˚44N×16˚46W, h30km, ML2.7*
*MDD **30** 14:33:52.1±1.0, 37˚73N×15˚98W, h0km, Mb4.4/10,*
M_mb3.8/10, Error ellipse: s-maj=8.0km s-min=7.1km
az=59.0
*INMG **30** 14:33:53.5±2.0, 37˚49N×16˚43W, h10km, ML2.8, Error*
ellipse: s-maj=9.3km s-min=7.2km az=147.0
*CNRM **30** 14:34:12.8, 37˚72N×14˚13W, h282km, ml3.2*

ISC 30 14:33:50.2±2.9, 37˚65N±0˚07×16˚0W±0˚2, h10km, n38, σ2°77/61, 10C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMPST	**Porto Santo, M**	**4.57**	**184**	*e*Pn	**Pn**	**14 34 54.7**	**-4.7**
PMPST				*e*Sn	Sn	14 35 37.7	-15
PMPST				A	A	14 35 42.4	
	18nm,0.3s						
PMAFR	**Mafra**	**5.40**	**74**	*e*Pn	**Pn**	**14 35 14.0**	**+3.2**
PMAFR				*e*Sn	**Sn**	**14 36 15.6**	**+2.6**
PMAFR				A	A	14 36 20.9	
	21nm,0.2s						
PFVI	**Vila Bisbo**	**5.69**	**93**	*e*Pn	**Pn**	**14 35 16.8**	**+2.0**
PFVI				*e*Sn	**Sn**	**14 36 19.5**	**-0.7**
PFVI	**Vila Bisbo**	**5.69**	**93**	P	Pn	14 35 21.6	+6.8
PFVI				S	**Sn**	**14 36 17.3**	**-2.9**
PTEO	**Sao Teotonio**	**5.74**	**89**	*e*Pn	**Pn**	**14 35 17.4**	**+2.0**
MORF	**Marmelete**	**5.81**	**91**	*e*P	**Pn**	**14 35 17.9**	**+1.4**
MORF	**Marmelete**	**5.81**	**91**	*e*Pn	**Pn**	**14 35 17.9**	**+1.4**
MORF				A	A	14 36 30.5	
	5.4nm,0.1s						
PNCL	**Nicolau / Gran**	**5.89**	**83**	*e*Pn	**Pn**	**14 35 19.2**	**+1.8**
PNCL				*e*Sn	**Sn**	**14 36 24.9**	**0.0**
PNCL				A	A	14 36 27.4	
	3.8nm,0.2s						
MESJ	**Messejana**	**6.13**	**86**	*e*P	**Pn**	**14 35 22.6**	**+1.9**
MESJ				*e*S	**Sn**	**14 36 29.7**	**-1.2**
MESJ				IAML		14 36 32.4	
	comp=N,6.7nm,0.1s						
MESJ	**Messejana**	**6.13**	**86**	*e*Pn	**Pn**	**14 35 23.8**	**+3.1**
MESJ				*e*Sn	**Sn**	**14 36 30.9**	**0.0**
MESJ				A	A	14 36 34.0	
	comp=N,4.3nm,0.3s						
PMTG	**Montargil**	**6.23**	**75**	*e*Pn	**Pn**	**14 35 24.7**	**+2.5**
PMTG				*e*Sn	**Sn**	**14 36 33.9**	**

PCAB					A	A	14 37 02.9		
	comp=N,6.9nm,0.4s								
EMIN	**Mina Concepcio**	**7.35**	**86**		P	**Pn**	**14 35 39.9**	**+2.3**	
EMIN				⇑	*i*Vmb_V		14 35 45.9		
	comp=N,76nm,SNR=1.4								
EMIN					S	**Sn**	**14 36 59.0**	**-2.1**	
ELOB	**Lobios**	**7.39**	**53**		P	**Pn**	**14 35 40.2**	**+2.0**	
ELOB				⇑	*i*Vmb_V		14 35 40.3		
	comp=N,94nm,SNR=0.8								
ELOB					S	**Sn**	**14 36 58.8**	**-3.3**	
EMAZ	**Mazaricos**	**7.51**	**43**		P	**Pn**	**14 35 41.6**	**+1.9**	
EMAZ				⇑	*i*Vmb_V		14 35 44.8		
	comp=N,270nm,SNR=1.2								
EMAZ					S	**Sn**	**14 36 59.0**	**-5.9**	
MVO	**Moncorvo**	**7.74**	**60**	*e*	Pn	**Pn**	**14 35 45.7**	**+2.7**	
MVO				*e*	Sn	**Sn**	**14 37 08.6**	**-2.2**	
MVO					A	A	14 37 13.9		
	comp=N,3.7nm,0.1s								
EAGO	**Agolada(Pontev**	**7.91**	**47**	⇑	*i*Vmb_V		14 35 52.4		
	comp=N,231nm,SNR=1.7								
EAGO					S	**Sn**	**14 37 10.0**	**-4.8**	
ECAL	**Calabor**	**8.28**	**56**		P	**Pn**	**14 35 52.5**	**+2.1**	
ECAL				⇑	*i*Vmb_V		14 35 58.8		
	comp=N,125nm,SNR=1.2								
ECAL					S	**Sn**	**14 37 20.4**	**-3.6**	
ECAB	**El Cabril**	**8.34**	**84**		P	**Pn**	**14 35 53.1**	**+2.0**	
ECAB				⇑	*i*Vmb_V		14 35 59.8		
	comp=N,68nm,SNR=1.7								
ECAB					S	**Sn**	**14 37 22.6**	**-2.8**	
EADA	**Adamuz**	**9.00**	**83**		P	**Pn**	**14 36 02.6**	**+2.4**	
EADA				⇑	*i*Vmb_V		14 36 03.8		
	comp=N,99nm,SNR=2.2								
EADA					S	**Sn**	**14 37 37.1**	**-4.6**	
OUK	**Oukaimeden**	**9.26**	**132**		P	Pn	14 36 11.1	+7.0	
OUK					S	**Sn**	**14 37 43.7**	**-4.9**	
MD31	**MD31**	**10.31**	**114**		P	**Pn**	**14 36 19.8**	**+1.5**	
MD31					S	Sn	14 38 04.0	-10	
MDT	**Midelt**	**10.45**	**114**		P	**Pn**	**14 36 21.7**	**+1.6**	
MDT					S	Sn	14 38 05.3	-12	

*SJA **30** 14:34:29.7±0.8,21°.22S×69°.91W,h28km±1km,ML3.9, MW4.0*
*GUC **30** 14:34:32.0±0.7,21°.23S×69°.89W,h24km±1km,ML3.9*
*IDC **30** 14:34:36.0±2.5,21°.22S×69°.70W,h61km±24km,mb3.6/3, mbtmp3.8/6,ML3.5/3,Error ellipse: s-maj=38.8km s-min=15.3km az=83.0*
ISC 30 14:34:30.6±0.9,21°.19S±0°.02×69°.91W±0°.03,h17km±7km, n52,σ1°16/73,mb3.9/3,2C-11D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB02	**IPOC Station P**	**0.13**	**176**	⇑	*i*P	**Pb**	**14 34 36.0**	**+1.3**	
PB02					*i*S	**Sb**	**14 34 39.1**	**+1.7**	
PB02					IAML		14 34 39.7		
	comp=E,95μm,0.2s								
PB02	**IPOC Station P**	**0.13**	**176**		*e*P	**Pb**	**14 34 36.0**	**+1.3**	
PB02					IAML		14 34 43.2		
	comp=Z,30μm,0.3s								
PB01	**IPOC Station P**	**0.42**	**69**	⇓	*i*P	**Pb**	**14 34 40.0**	**+0.4**	
PB01					*i*S	**Sb**	**14 34 45.8**	**+0.2**	
PB01					IAML		14 34 46.4		
	comp=N,35μm,0.2s								
PB01	**IPOC Station P**	**0.42**	**69**		*e*P	**Pb**	**14 34 39.6**	**0.0**	
PB01					IAML	**Sb**	**14 34 46.2**	**+0.5**	
	comp=Z,17μm,0.2s								
PB01					*e*S	**Sb**	**14 34 46.2**	**+0.5**	
PATCX	**Punta Patache**	**0.43**	**328**	⇓	*i*P	**Pb**	**14 34 40.6**	**+0.7**	
PATCX					*i*S	**Sb**	**14 34 47.0**	**+0.8**	
PATCX					IAML		14 34 48.0		
	comp=N,13μm,0.3s								
PATCX	**Punta Patache**	**0.43**	**328**		*e*P	**Pb**	**14 34 39.6**	**-0.3**	
PATCX					*e*P	**Pg**	**14 34 40.3**	**+0.8**	
PATCX					*e*P	**Pg**	**14 34 40.4**	**+0.8**	
PATCX					*e*P	**Pg**	**14 34 40.4**	**+0.8**	
PATCX					IAML		14 34 47.6		
	comp=Z,9μm,0.3s								
PB07	**IPOC Station P**	**0.53**	**178**	⇓	*i*P	**Pg**	**14 34 41.4**	**-0.1**	
PB07					*i*S	**Sg**	**14 34 48.3**	**-0.3**	
PB07					IAML		14 34 48.6		
	comp=E,10μm,0.1s								
PB07	**IPOC Station P**	**0.53**	**178**		*e*P	**Pg**	**14 34 41.3**	**-0.1**	
PB07					*e*S	**Sg**	**14 34 48.6**	**0.0**	
PB07					IAML		14 34 48.9		
	comp=Z,7μm,0.4s								
TA01	**Diego Aracena**	**0.67**	**338**	⇓	*i*P	**Pb**	**14 34 44.1**	**+0.2**	
TA01					*i*S	**Sb**	**14 34 53.6**	**+0.7**	
TA01					IAML		14 34 54.8		
	comp=N,3μm,0.4s								
TA01	**Diego Aracena**	**0.67**	**338**		*e*P	**Pg**	**14 34 39.6**	**-4.3**	
TA01					*e*P	**Pb**	**14 34 44.0**	**+0.2**	
TA01					IAML		14 34 54.1		
	comp=Z,3μm,0.6s								
PB09	**IPOC Station P**	**0.86**	**134**	⇓	*i*P	**Pb**	**14 34 47.1**	**-0.2**	
PB09					IAML		14 34 59.6		
	comp=N,2μm,0.3s								
PB09	**IPOC Station P**	**0.86**	**134**		*e*P	**Pb**	**14 34 46.9**	**-0.4**	
PB09					*e*S	**Sb**	**14 34 58.8**	**+0.2**	
PB09					IAML		14 34 59.1		
	comp=Z,2μm,0.2s								
HMBC	**Humberstone**	**0.91**	**1**	⇓	*i*P	**Pb**	**14 34 48.0**	**0.0**	
HMBC					*i*S	**Sg**	**14 35 00.1**	**-0.2**	
HMBC					IAML		14 35 01.8		
	comp=N,5μm,0.5s								
TA02	**Huaiquique**	**0.94**	**347**		*e*P	**Pb**	**14 34 48.4**	**-0.1**	
TA02					*i*S	**Sg**	**14 35 01.2**	**-0.1**	
TA02					IAML		14 35 02.7		
TA02	**Huaiquique**	**0.94**	**347**		*e*P	**Pb**	**14 34 48.4**	**-0.1**	
TA02					*e*S	**Sn**	**14 35 01.6**	**-0.5**	
TA02					IAML		14 35 02.5		
	comp=Z,4μm,0.1s								
PB04	**IPOC Station P**	**1.16**	**191**	⇓	*i*P	**Pn**	**14 34 51.0**	**-1.2**	
PB04					*i*S	**Sb**	**14 35 05.6**	**-1.5**	
PB04					IAML		14 35 06.4		
	comp=E,3μm,0.1s								
PB04	**IPOC Station P**	**1.16**	**191**		*e*P	**Pn**	**14 34 51.1**	**-1.2**	
PB04					*e*S	**Sb**	**14 35 06.1**	**-1.0**	
PB04					IAML		14 35 07.0		
	comp=Z,3μm,0.2s								
PB08	**IPOC Station P**	**1.26**	**34**	⇓	*i*P	**Pb**	**14 34 54.1**	**-0.1**	
PB08					*i*S	**Sn**	**14 35 10.6**	**+0.1**	
PB08					IAML		14 35 12.3		
	comp=N,5μm,0.2s								
PB08	**IPOC Station P**	**1.26**	**34**		*e*P	Pn	14 34 48.6	-5.2	
PB08					*e*P	**Pb**	**14 34 54.0**	**-0.1**	
PB08					*e*S	**Sg**	**14 35 11.0**	**-0.6**	
PB08					IAML		14 35 12.5		
	comp=Z,1μm,0.1s								
PB06	**IPOC Station P**	**1.54**	**168**	⇓	*i*P	**Pn**	**14 34 56.9**	**-0.5**	
PB06					*i*S	**Sn**	**14 35 16.4**	**-0.7**	
PB06					IAML		14 35 18.4		
	comp=E,8μm,0.3s								
PB06	**IPOC Station P**	**1.54**	**168**		*e*P	**Pn**	**14 34 57.1**	**-0.3**	
PB06					*e*S	**Sn**	**14 35 16.9**	**-0.2**	
PB06					IAML		14 35 18.3		
	comp=Z,4μm,0.4s								
GO01	**Chusmiza**	**1.66**	**24**	⇓	*i*P	**Pb**	**14 35 00.4**	**-0.6**	
GO01					*i*S	**Sb**	**14 35 22.4**	**+0.7**	
GO01	**Chusmiza**	**1.66**	**24**		*e*P	**Pn**	**14 35 00.0**	**+0.7**	
GO01					*e*S	**Sb**	**14 35 22.5**	**+0.7**	
LVC	**Limon Verde**	**1.69**	**147**		P	**Pn**	**14 35 00.8**	**+1.1**	
	comp=Z,223nm,0.3s,baz=320,slow=12,SNR=867								
LVC					S	**Sn**	**14 35 21.5**	**+0.5**	
	comp=Z,1μm,0.4s,baz=243,slow=23,SNR=32								
LVC					LR	LR	14 35 47.1		
	comp=Z,170nm,19.0s,baz=332,slow=45								
LVC	**Limon Verde**	**1.69**	**147**		*e*P	**Pn**	**14 35 00.1**	**+0.4**	
LVC					*i*S	**Sn**	**14 35 21.8**	**+0.8**	
LVC	**Limon Verde**	**1.69**	**147**		*e*P	**Pn**	**14 35 00.0**	**+0.4**	
LVC					*e*S	**Sb**	**14 35 23.5**	**+0.9**	
PB15	**IPOC Station P**	**2.05**	**169**	⇓	*i*P	**Pn**	**14 35 04.5**	**+0.1**	
PB15					*i*S	**Sn**	**14 35 30.7**	**+1.0**	
PB15	**IPOC Station P**	**2.05**	**169**		*e*P	**Pn**	**14 35 04.5**	**+0.1**	
PB15					*e*S	**Sn**	**14 35 31.6**	**+1.9**	
AF01	**San Pedro de A**	**2.38**	**138**		*e*P	**Pb**	**14 35 12.2**	**-0.9**	
AF01					IAML		14 35 51.3		
	comp=E,4μm,0.6s								
PB10	**IPOC Station P**	**2.39**	**194**		IAML		14 35 51.6		
	comp=E,389nm,0.4s								
PB10	**IPOC Station P**	**2.39**	**194**		*e*P	**Pn**	**14 35 09.1**	**+0.1**	
PB10					*e*S	**Sn**	**14 35 38.1**	**+0.3**	
PB10					IAML		14 35 51.3		
	comp=Z,296nm,0.9s								
PB12	**IPOC Station P**	**2.59**	**351**		*e*P	**Pn**	**14 35 13.1**	**+1.2**	
PB12					*i*S	**Sn**	**14 35 44.9**	**+1.9**	
PB12					IAML		14 35 56.2		
	comp=E,739nm,0.3s								
PB12	**IPOC Station P**	**2.59**	**351**		*e*P	**Pn**	**14 35 13.0**	**+1.2**	
PB12					IAML		14 35 57.2		
	comp=Z,542nm,0.4s								
PB16	**IPOC Station P**	**2.87**	**8**	⇑	*i*P	**Pn**	**14 35 18.5**	**+2.5**	
PB16					*i*S	**Sb**	**14 35 53.8**	**-2.9**	
PB16					IAML		14 36 03.5		
	comp=E,483nm,0.3s								
PB14	**IPOC Station P**	**3.45**	**188**		IAML		14 36 19.6		
	comp=E,136nm,0.5s								
AC01	**Pan de Azucar**	**4.97**	**187**		*e*P	**Pn**	**14 35 43.0**	**-1.6**	
LPAZ	**La Paz**	**5.16**	**19**		P	**Pn**	**14 35 52.0**	**+4.3**	
	comp=E,0.8nm,0.3s,baz=192,slow=8.1,SNR=12								
	comp=E,1.7nm,0.4s								
SIV	**San Ignacio**	**9.84**	**60**		P	**Pn**	**14 36 51.5**	**+0.1**	
	comp=E,0.1nm,0.3s,baz=237,slow=10,SNR=19								
	comp=E,3.9nm,0.6s								
H03N1	**Juan Fernandez**	**14.58**	**211**		T	T	14 52 23.8		
	baz=36,slow=72,SNR=76								
H03N2	**Juan Fernandez**	**14.59**	**211**		T	T	14 52 23.3		
	baz=36,slow=72,SNR=32								
H03N3	**Juan Fernandez**	**14.60**	**211**		T	T	14 52 13.5		
	baz=36,slow=72,SNR=29								
PLCA	**Paso Flores**	**19.49**	**181**		P	**Pn**	**14 38 58.1**	**+0.1**	
	baz=8.3,slow=14,SNR=1.7								
	comp=E,18nm,1.1s								
TKL	**Tuckaleechee C**	**58.05**	**347**		P	**P**	**14 44 23.6**	**+0.9**	
	comp=E,5.6nm,1.0s,baz=133,slow=16,SNR=3.1								
	comp=E,5.6nm,1.0s								
NVAR	**Mina Array Bea**	**74.68**	**322**		P	**P**	**14 46 09.5**	**-0.1**	
	comp=E,0.1nm,0.3s,baz=148,slow=7.1,SNR=1.4								
	comp=E,0.1nm,0.3s								
TORD	**Toroidi Ar. Bea**	**78.13**	**71**		P	**P**	**14 46 27.9**	**-1.5**	
	comp=E,0.8nm,0.6s,baz=244,slow=4.6,SNR=5.0								
	comp=E,0.8nm,0.6s								
H11S2	**WAKE ISLAND Hy**	**26.92**	**278**		T	T	17 12 54.1		
	baz=103,slow=75,SNR=105								
H11S1	**WAKE ISLAND Hy**	**26.92**	**278**		T	T	17 12 55.6		
	baz=103,slow=75,SNR=73								
H11S3	**WAKE ISLAND Hy**	**26.93**	**278**		T	T	17 12 53.1		
	baz=103,slow=75,SNR=68								
H11N3	**WAKE ISLAND Hy**	**26.99**	**279**		T	T	17 13 20.6		
	baz=102,slow=74,SNR=28								
H11N2	**WAKE ISLAND Hy**	**27.01**	**279**		T	T	17 13 21.7		
	baz=102,slow=74,SNR=26								
H11N1	**WAKE ISLAND Hy**	**27.01**	**279**		T	T	17 13 24.9		
	baz=102,slow=74,SNR=15								
MKAR	**Makanchi Array**	**145.92**	**35**		PKPbc	**PKPdf**	**14 54 08.1**	**-0.4**	
	comp=E,0.3nm,0.5s,baz=320,slow=3.1,SNR=4.4								

IDC 30 14:57:52.9±2.1,8°.48S×125°.94E,h0km,mb3.4/1, mbtmp3.3/3,ML3.2/2,Error ellipse: s-maj=192.9km s-min=34.1km az=60.0,Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.99**	**145**			Pn	Pn	15 01 11.2	-1.4
	0.1nm,0.3s,baz=321,slow=14,SNR=9.6								
WRA						Sn	Sn	15 03 43.0	-5.9
	0.1nm,0.3s,baz=219,slow=33,SNR=4.6								
	0.3nm,0.3s								
ASAR	**Alice Springs**	**16.92**	**154**			Pn	P	15 01 52.4	-0.9
	0.1nm,0.3s,baz=322,slow=11,SNR=4.5								
	0.3nm,0.6s								
MKAR	**Makanchi Array**	**67.34**	**329**			P	P	15 08 49.8	0.0
	0.3nm,0.6s,baz=148,slow=6.0,SNR=2.6								
	0.3nm,0.6s								

*IDC **30** 15:06:48.5±1.6,3°.60S×103°.40W,h0km,mb3.5/7, mbtmp3.5/7,MS3.7/20,Error ellipse: s-maj=82.6km s-min=22.4km az=60.0*
ISC 30 15:06:50.1±1.5,3°.6S±0°.3×103°.4W±0°.4,h10km,n35, σ0°60/10,mb3.5/7,MS3.7/20,Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**22.22**	**22**		LR	LR	15 18 21.2		
	comp=Z,145nm,19.2s,baz=198,slow=31								
JTS	**Las Juntas de**	**22.98**	**53**		LR	LR	15 18 13.2		
	comp=Z,360nm,19.9s,baz=304,slow=30								
NNA	**Nana**	**27.57**	**109**		LR	LR	15 20 16.5		
	comp=Z,131nm,21.3s,baz=282,slow=29								
TXAR	**Lajitas Array**	**32.75**	**360**		P	**P**	**15 13 23.8**	**+0.4**	
	0.2nm,0.6s,baz=190,slow=10.0,SNR=1.5								
TXAR					LR	LR	15 24 54.3		
	comp=Z,158nm,21.7s,baz=174,slow=33								
	0.2nm,0.6s								
SDV	**Santo Domingo**	**34.94**	**69**		LR	LR	15 26 49.5		
	comp=Z,108nm,18.6s,baz=262,slow=34								
LPAZ	**La Paz**	**36.87**	**112**		P	**P**	**15 13 59.6**	**-0.2**	
	1.4nm,0.8s,baz=77,slow=14,SNR=3.6								
LPAZ					LR	LR	15 26 11.7		
	comp=Z,66nm,20.7s,baz=272,slow=32								
	1.4nm,0.8s								
H03N2	**Juan Fernandez**	**37.45**	**145**		T	T	15 53 14.0		
	baz=322,slow=78,SNR=16								
H03N1	**Juan Fernandez**	**37.46**	**145**		T	T	15 53 17.3		
	baz=322,slow=78,SNR=22								
H03N3	**Juan Fernandez**	**37.47**	**145**		T	T	15 53 17.7		
	baz=322,slow=78,SNR=21								
LVC	**Limon Verde**	**38.37**	**123**		LR	LR	15 25 34.1		
	comp=Z,109nm,19.7s,baz=292,slow=29								
ANMO	**Albuquerque**	**38.46**	**356**		LR	LR	15 27 36.7		
	comp=Z,76nm,18.2s,baz=204,slow=32								
PFO	**Pinyon Flats O**	**39.02**	**343**		LR	LR	15 27 05.2		
	comp=Z,73nm,19.9s,baz=235,slow=31								
SIV	**San Ignacio**	**43.38**	**109**		LR	LR	15 30 24.9		
	comp=Z,122nm,19.6s,baz=290,slow=33								
NVAR	**Mina Array Bea**	**44.04**	**343**		P	**P**	**15 14 58.6**	**+0.2**	
	0.2nm,0.6s,baz=164,slow=8.4,SNR=1.4								
NVAR					LR	LR	15 31 15.3		
	comp=Z,78nm,18.9s,baz=188,slow=33								
	0.2nm,0.6s								
PDAR	**Pinedale Array**	**46.49**	**354**		P	**P**	**15 15 18.2**	**+0.4**	
	0.2nm,0.7s,baz=180,slow=6.9,SNR=1.9								
	0.2nm,0.7s								
PPT	**Papeete**	**47.32**	**249**		LR	LR	15 29 41.2		
	comp=Z,78nm,20.2s,baz=13,slow=29								
PLCA	**Paso Flores**	**47.33**	**146**		P	**P**	**15 15 24.6**	**+0.4**	
	3.8nm,1.0s,baz=328,slow=7.3,SNR=4.8								
PLCA					LR	LR	15 29 52.5		
	comp=Z,116nm,21.9s,baz=312,slow=29								
	3.8nm,1.0s								
YBH	**Yreka Blue Hor**	**48.43**	**341**		LR	LR	15 31 32.8		
	comp=Z,95nm,21.7s,baz=206,slow=31								
SADO	**Sadowa**	**52.82**	**22**		LR	LR	15 38 05.3		
	comp=Z,51nm,18.9s,baz=168,slow=36								
NEW	**Newport**	**53.03**	**349**		LR	LR	15 36 15.0		
	comp=Z,69nm,18.1s,baz=270,slow=33								
ULM	**Lac du Bonnet**	**54.03**	**6**		LR	LR	15 38 22.9		
	comp=Z,96nm,18.6s,baz=150,slow=35								
YKA	**Yellowknife Ar**	**66.47**	**354**		P	**P**	**15 17 38.6**	**-0.9**	
	0.6nm,0.8s,baz=160,slow=6.6,SNR=2.8								
	0.6nm,0.8s								
KDAK	**Kodiak Island**	**72.74**	**335**		LR	LR	15 44 10.8		
	comp=Z,84nm,18.4s,baz=207,slow=31								
INK	**Inuvik**	**74.76**	**349**		LR	LR	15 50 00.1		
	comp=Z,44nm,18.3s,baz=166,slow=35								
ILAR	**Eielson Array**	**75.29**	**342**		P	**P**	**15 18 33.4**	**+0.3**	
	0.4nm,0.8s,baz=155,slow=4.3,SNR=5.0								
	0.4nm,0.8s								
RES	**Resolute Bay**	**78.34**	**2**		LR	LR	15 51 06.5		
	comp=Z,49nm,18.3s,baz=28,slow=34								
H11N3	**WAKE ISLAND Hy**	**90.91**	**290**		T	T	17 01 16.0		
	baz=94,slow=74,SNR=7.2								
H11N2	**WAKE ISLAND Hy**	**90.93**	**290**		T	T	17 01 17.0		
	baz=94,slow=74,SNR=10								
H11N1	**WAKE ISLAND Hy**	**90.93**	**290**		T	T	17 01 18.8		
	baz=94,slow=74,SNR=6.6								
H11S2	**WAKE ISLAND Hy**	**91.03**	**288**		T	T	17 01 31.3		
	baz=94,slow=75,SNR=19								
H11S1	**WAKE ISLAND Hy**	**91.04**	**288**		T	T	17 01 33.6		
	baz=94,slow=75,SNR=16								
H11S3	**WAKE ISLAND Hy**	**91.05**	**288**		T	T	17 01 24.1		
	baz=94,slow=75,SNR=14								
ZALV	**Zalesovo Beam**	**129.37**	**354**		PKP	**PKPdf**	**15 25 58.4**	**-0.5**	
	0.4nm,0.3s,baz=352,slow=4.4,SNR=2.2								
KURBB	**Kurchatov Arra**	**133.12**	**358**		PKP	**PKPdf**	**15 26 05.3**	**-0.9**	
	0.3nm,0.8s,baz=25,slow=2.4,SNR=2.6								
MKAR	**Makanchi Array**	**136.70**	**354**		PKP	**PKPdf**	**15 26 13.1**	**+0.1**	
	0.3nm,0.8s,baz=5.5,slow=1.5,SNR=2.3								

*EAF **30** 15:09:17.6±2.3,20°.82S×25°.25E,h39km±86km,MD3.0*
BUL 30 15:09:20.0±1.1,21°.25S×25°.82E,h0km±17km,MD2.9, Botswana

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MATP	**Matopo**	**2.64**	**72**	*e*	P	Pn		15 10 04.3	+0.3
MATP				*e*	S	Sn		15 10 35.6	-1.2
MATP	**Matopo**	**2.64**	**72**	*e*	P	Pn		15 10 04.3	+0.3
MATP				*e*	S	Sn		15 10 35.6	-1.2
BLWY	**Bulawayo**	**2.83**	**68**	*e*	P	Pn		15 10 05.4	-1.3
BLWY				*e*	S	Sn		15 10 39.8	-1.8
BLWY	**Bulawayo**	**2.83**	**68**	*e*	P	Pn		15 10 05.4	-1.3
BLWY				*e*	S	Sn		15 10 39.8	-1.8
LBTB	**Lobatse**	**3.75**	**183**	*e*	P	Pn		15 10 18.5	-0.8
LBTB				*e*	S	Sn		15 11 02.0	-2.3
LBTB	**Lobatse**	**3.75**	**183**	*e*	P	Pn		15 10 18.5	-0.8
LBTB				*e*	S	Sn		15 11 02.0	-2.3
MOPA	**Mopani**	**5.63**	**115**	*e*	P	Pn		15 10 49.0	+4.0
MOPA				*e*	S	Sn		15 11 53.8	+3.2
MOPA	**Mopani**	**5.63**	**115**	*e*	P	Pn		15 10 49.0	+4.0
MOPA				*e*	S	Sn		15 11 53.8	+3.2

*KRSC **30** 15:20:22.7±1.2,52°.41N×156°.52E,h290km±10km,ML5.0*
*MOS **30** 15:20:22.5±0.7,52°.67N×155°.82E,h281km,mb4.5/89, Error ellipse: s-maj=6.2km s-min=4.0km az=76.4*
*IDC **30** 15:20:23.5±0.5,52°.73N×155°.83E,h276km±4km,mb4.1/39, mbtmp4.8/45,Error ellipse: s-maj=8.2km s-min=6.2km az=163.0*
*NEIC **30** 15:20:23.7±1.5,52°.74N±0°.08×155°.8E±0°.1,h272km±4km, mb4.6/445,Error ellipse: s-maj=11.3km s-min=10.0km az=151.0*
ISC 30 15:20:23.5±0.4,52°.65N±0°.03×155°.92E±0°.03,h278km±4km, n1040,σ1°11/1104,mb4.5/318,156C-94D,Fault plane solution: NP1:ϕ81.28845°,δ80.79826°,λ-174.31764°. NP2:ϕ350.37686°,δ84.39100°,λ-9.24640°. Principal axes: T Plg2.5197°, Azm36.0625°; N Plg79.1980°, Azm139.3971°; P Plg10.4971°, Azm305.5954°;
Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
APC	**Apacha**	**0.80**	**70**		PN	**Pn**		**15 21 00.6**	**+0.1**
APC					S	**S**		**15 21 29.1**	**-0.7**
APC	**Apacha**	**0.80**	**70**	*e*	P	**Pn**		**15 21 00.6**	**+0.1**
APC				*e*	S	**S**		**15 21 29.1**	**-0.7**
PEA0B	**Petropavlovsk-**	**1.17**	**66**			**Pn**		**15 21 02.1**	**-0.3**
PEA0B					Sn	**S**		**15 21 32.0**	**-1.2**
PEA0B	**Petropavlovsk-**	**1.17**	**66**	*d*	PN	**Pn**		**15 21 02.1**	**-0.3**
PETK	**Petropavlovsk-**	**1.17**	**66**		P	**Pn**		**15 21 01.6**	**-0.8**
	691nm,0.5s,baz=129,slow=1.9,SNR=1022								
PETK					S	**S**		**15 21 32.9**	**-0.3**
	121nm,0.6s,baz=159,slow=21,SNR=7.0								
PETK	**Petropavlovsk-**	**1.17**	**66**			**Pn**		**15 21 01.3**	**-1.1**
ASAK	**Asacha**	**1.24**	**102**		PN	**Pn**		**15 21 02.8**	**-0.1**
ASAK	**Asacha**	**1.24**	**102**	*e*	P	**Pn**		**15 21 02.8**	**-0.1**
GRL	**Gorelyy**	**1.32**	**94**		PN	**Pn**		**15 21 03.4**	**0.0**
GRL	**Gorelyy**	**1.32**	**94**	*e*	P	**Pn**		**15 21 03.4**	**0.0**
KRMR	**Karymshinskiy**	**1.36**	**82**		PN	**Pn**		**15 21 03.3**	**-0.2**
KRMR					S	**S**		**15 21 34.6**	**-0.5**
KRMR	**Karymshinskiy**	**1.36**	**82**	*e*	P	**Pn**		**15 21 03.3**	**-0.2**
KRMR				*e*	S	**S**		**15 21 34.6**	**-0.5**
MTVR	**Mutnovka**	**1.39**	**96**		PN	**Pn**		**15 21 03.4**	**-0.5**
MTVR	**Mutnovka**	**1.39**	**96**	*e*	P	**Pn**		**15 21 03.4**	**-0.5**
KDTR	**Khodutka, Kamc**	**1.57**	**122**		PN	**Pn**		**15 21 03.0**	**-2.0**
KDTR	**Khodutka, Kamc**	**1.57**	**122**	*e*	P	**Pn**		**15 21 03.0**	**-2.0**
KDTR				*e*	S	**S**		**15 21 33.0**	**-4.9**
RUS	**Russkaya**	**1.60**	**97**		PN	**Pn**		**15 21 04.0**	**-1.1**
RUS					S	**S**		**15 21 34.7**	**-3.5**
RUS	**Russkaya**	**1.60**	**97**	*e*	P	**Pn**		**15 21 04.0**	**-1.1**
RUS				*e*	S	**S**		**15 21 34.7**	**-3.5**
GNL	**Ganaly**	**1.60**	**49**		PN	**Pn**		**15 21 05.4**	**+0.1**
GNL	**Ganaly**	**1.60**	**49**	*e*	P	**Pn**		**15 21 05.4**	**+0.1**
PET	**Petropavlovsk**	**1.70**	**76**			**Pn**		**15 21 05.4**	**-0.4**
PET					Sn	**S**		**15 21 36.8**	**-2.7**
PET	**Petropavlovsk**	**1.70**	**76**	⇓	*i*PN	**Pn**		**15 21 05.7**	**-0.1**
PET					*i*S	**S**		**15 21 37

PALN Palana 6.84 18 *e*P **Pn** **15 22 03.9 +1.6**
MA2 Magadan 7.51 340 P **Pn** **15 22 10.5 -0.1**
comp=E,67nm,0.7s,baz=151,slow=9.1,SNR=189
MA2 S **S** **15 23 36.9 -0.2**
comp=E,3.9nm,0.8s,baz=227,slow=14,SNR=0.9
MA2 Magadan 7.51 340 Pn **Pn** **15 22 11.6 +1.0**
MA2 Magadan 7.51 340 PN **Pn** **15 22 11.6 +1.0**
MA2 15 23 36.9
MA2 Magadan 7.51 340 P **Pn** **15 22 12.3 +1.7**
KUR Kuril'sk 9.12 219 *e*PN **Pn** **15 22 31.0 +0.3**
KUR *e*S **S** **15 24 11.9 -2.1**
KUR pmax pmax
comp=Z,16nm,0.5s
KUR smax smax
comp=N,33nm,0.5s
KUR smax smax
comp=E,31nm,0.6s
NKL Nikolayevsk 9.23 279 *e*PN **Pn** **15 22 31.5 -0.5**
NKL *e*S **S** **15 24 14.6 -1.7**
NKL pmax pmax
comp=N,336nm,1.0s
NKL pmax pmax
comp=E,2.0nm,0.9s
NKL pmax pmax
comp=Z,36nm,0.9s
NKL smax smax
comp=N,437nm,0.8s
NKL smax smax
comp=E,2.0nm,0.8s
NKL MLR MLR
comp=E,84nm,12.0s
NKL MLR MLR
comp=N,865nm,10.0s
NKL MLR MLR
comp=Z,34nm,8.0s
YSS Yuzh-Sakhalins 10.24 241 Pn **Pn** **15 22 43.7 -0.9**
YSS Yuzh-Sakhalins 10.24 241 *e*PN **P** **15 22 50.4 +1.6**
YSS pmax pmax
comp=Z,10.0nm,0.9s
SEY Seymchan 10.48 351 P **Pn** **15 22 47.5 +0.1**
comp=Z,22nm,1.0s,baz=158,slow=9.8,SNR=58
SEY S **S** **15 24 44.0 -0.8**
comp=Z,1.1nm,0.5s,baz=172,slow=24,SNR=0.9
SEY ScP **ScP** **15 31 30.3 +0.7**
comp=Z,2.3nm,0.7s,baz=204,slow=1.3,SNR=8.8
SHO Shikotan 10.66 218 *d i*PN **Pn** **15 22 46.1 -3.8**
SHO pmax pmax
comp=N,3.0nm,0.3s
SHO pmax pmax
comp=E,15nm,0.3s
SHO pmax pmax
comp=Z,20nm,0.3s
SHEM Shemya Is, Ala 11.04 82 P **Pn** **15 22 55.9 +1.5**
comp=Z,279nm,0.6s,baz=344,slow=3.4,SNR=76
SHEM S **S** **15 25 00.1 +2.3**
comp=Z,13nm,0.6s,baz=254,slow=18,SNR=1.8
SMY Shemya 11.04 82 P **P** **15 22 58.5 +0.9**
SMY Shemya 11.04 82 PN **P** **15 22 58.5 +0.9**
NMR Nemuro--Hokkai 11.51 220 *e*PN **Pn** **15 22 56.7 -3.7**
GRNR Gornyy 12.24 269 *i* PN **P** **15 23 12.2 +1.2**
GRNR *e*S **S** **15 25 26.6 +1.3**
GRNR pmax pmax
comp=E,20nm,0.6s
GRNR pmax pmax
comp=N,5.0nm,0.7s
GRNR pmax pmax
comp=Z,20nm,0.6s
GRNR smax smax
comp=N,1.0nm,0.4s
GRNR MLR MLR
comp=N,20nm,0.0s
GRNR MLR MLR
comp=E,40nm,0.0s
GRNR MLR MLR
comp=Z,40nm,0.0s
JKA Kamikawa-asahi 12.29 231 **Pn** **15 23 10.6 +0.8**
ASAJ Asahikawa 12.29 231 PN **Pn** **15 23 10.6 +0.8**
ERM Erimo 13.69 224 **Pn** **15 23 25.7 -1.2**
ERM Erimo 13.69 224 *de*P **Pn** **15 23 26.8 -0.1**
JEW Eniwo 13.80 230 P **P** **15 23 28.7 +0.4**
AMKA Amchitka 14.44 86 **P** **15 23 35.3 0.0**
TEY Ternei 14.79 247 ‖ *e*P **Pn** **15 23 42.1 +2.1**
TEY pmax pmax
comp=N,10.0nm,1.1s
TEY pmax pmax
comp=E,10.0nm,1.1s
TEY pmax pmax
comp=Z,20nm,1.2s
KLR Kul'dur 15.59 267 P **Pn** **15 23 49.5 +0.1**
comp=Z,16nm,0.7s,baz=69,slow=9.8,SNR=63
KLR S **S** **15 26 38.5 +0.5**
comp=Z,1.1nm,0.3s,baz=96,slow=23,SNR=2.1
JTM Tenmabayashi 15.60 226 P **P** **15 23 46.4 -1.8**
JTM IAmb IAmb 15 24 10.9
comp=Z,18nm,1.1s
BILL Bilibino 16.22 14 **P** **15 23 55.3 +0.7**
BILL IAmb IAmb 15 23 59.8
comp=Z,24nm,0.8s
BILL Bilibino 16.22 14 *c i*P **Pn** **15 23 55.9 -0.7**
BILL pmax pmax
comp=Z,19nm,0.9s
KIWB Kanaga Island 16.48 82 P **P** **15 23 56.9 -0.8**
ADK Adak 16.75 82 P **P** **15 23 59.3 -1.3**
ADK IAmb IAmb 15 24 01.1
comp=Z,34nm,0.9s
ADK Adak 16.75 82 P **P** **15 23 59.3 -1.3**
ADK pmax pmax
comp=Z,34nm,1.0s
YAK Yakutsk 16.87 314 P **P** **15 24 02.2 +0.4**
comp=Z,354nm,0.6s,baz=98,slow=0.5,SNR=342
YAK S **S** **15 27 00.8 -2.3**
comp=Z,4.7nm,0.4s,baz=170,slow=1.1,SNR=2.0
YAK Yakutsk 16.87 314 P **P** **15 24 02.0 +0.2**
YAK Yakutsk 16.87 314 *d i*P **P** **15 24 02.4 +0.6**
YAK *e*S **S** **15 27 02.4 -0.7**
YAK pmax pmax
comp=N,19nm,0.6s
YAK pmax pmax
comp=Z,463nm,0.6s
YAK pmax pmax
comp=E,64nm,0.6s
YAK smax smax
comp=N,55nm,1.6s
YAK smax smax
comp=E,26nm,1.8s
GSTR Great Sitkin T 17.08 81 P **P** **15 24 04.2 -0.1**
ZEA Zeya 17.17 285 *e*P **P** **15 24 05.9 +0.8**
ZEA pmax pmax
comp=E,10.0nm,0.9s
ZEA pmax pmax
comp=N,10.0nm,0.5s
ZEA pmax pmax
comp=Z,20nm,1.0s
USA0B Ussuriysk Arra 17.93 251 P **P** **15 24 13.6 +0.2**
USA0B Ussuriysk Arra 17.93 251 P **P** **15 24 13.6 +0.2**
USA0B pmax pmax
comp=Z,5.0nm,0.7s
USRK Ussuriysk Ar. 17.93 251 P **P** **15 24 13.6 +0.2**
comp=Z,11nm,0.8s,baz=48,slow=13,SNR=15
USRK Ussuriysk Ar. 17.93 251 P **P** **15 24 13.3 -0.1**
JMM Marumori 18.16 221 P **P** **15 24 16.1 +0.1**
JMM IAmb IAmb 15 24 21.3
comp=Z,19nm,0.7s
ATKA Atka Island 18.18 79 P **P** **15 24 16.3 +0.3**
MDJ Mudanjiang 19.09 256 P **P** **15 24 25.4 -0.4**
MDJ Mudanjiang 19.09 256 P **P** **15 24 26.0 +0.2**
MDJ pP pP 15 25 05.0 -2.9
MDJ sP sP 15 25 39.0 -4.7
MDJ S S **15 27 48.0 +1.0**
MDJ sS sS 15 28 57.3 -2.8
MDJ ScP **ScP** **15 31 49.0 +3.6**
MDJ PcS **PcS** **15 32 14.3 +0.5**
MDJ Mudanjiang 19.09 256 ScS ScS 15 35 31.3 +4.1
MDJ pmax pmax
comp=Z,12nm,1.2s
MDJ pmax pmax
comp=Z,34nm,3.8s
JSD Sado 19.10 227 P **P** **15 24 25.9 -0.1**
BNX BinXian 19.79 261 ‖ P **P** **15 24 34.0 +0.8**
BNX pmax pmax
comp=Z,12nm,0.7s
BNX pmax pmax
comp=Z,81nm,8.1s
JYT Yasato 19.82 220 P **P** **15 24 33.4 -0.3**
JYT IAmb IAmb 15 24 38.3

comp=Z,29nm,1.3s
SPIA Saint Paul Isl 19.83 63 P **P** **15 24 33.9 +0.3**
baz=272
GAMB Gambell 20.11 44 P **P** **15 24 36.4 -0.1**
GAMB IAmb IAmb 15 24 37.1
comp=Z,13nm,0.6s
GAMB Gambell 20.11 44 P **P** **15 24 36.5 +0.1**
baz=252
MJB9 Matsu-Tunnel 20.36 225 P **P** **15 24 40.0 +0.5**
MJB9 IAmb IAmb 15 24 42.5
comp=Z,23nm,1.1s
MAJO Matsushiro 20.37 225 P **P** **15 24 39.9 +0.4**
MAJO IAmb IAmb 15 24 42.5
comp=Z,23nm,1.1s
MAJO Matsushiro 20.37 225 *c i*P **P** **15 24 41.3 +1.8**
MAJO pmax pmax
comp=Z,25nm,1.2s
MAJO Matsushiro 20.37 225 P **P** **15 24 40.9 +1.4**
MJAR Matsushiro Arr 20.37 225 P **P** **15 24 39.6 +0.1**
comp=Z,14nm,1.1s,baz=25,slow=9.0,SNR=25
MJAR ScP **ScP** **15 31 47.9 -0.7**
comp=Z,3.0nm,1.0s,baz=289,slow=1.9,SNR=7.0
comp=Z,14nm,1.1s
MJAR Matsushiro Arr 20.37 225 P **P** **15 24 39.6 +0.1**
MJAR **ScP** **15 31 49.3 +0.7**
MJAR Matsushiro Arr 20.37 225 P **P** **15 24 39.6 +0.1**
MJAR pmax pmax
comp=Z,5.0nm,1.0s
NIKH Nikolski High 21.17 75 P **P** **15 24 45.5 -1.8**
baz=284
JGF Kuroka 21.53 225 P **P** **15 24 51.0 +0.1**
INU Inuyama 21.89 225 P **P** **15 24 53.9 -0.2**
CN2 Changchun 22.00 259 *e*P **P** **15 24 54.3 -0.7**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
TNA Tin City 22.22 40 P **P** **15 24 58.1 +1.4**
baz=252
UNV Unalaska Valle 22.35 72 P **P** **15 24 58.5 +0.5**
baz=283,SNR=7.6
TIXI Tiksi 22.48 338 P **P** **15 24 58.6 -0.4**
comp=Z,43nm,0.7s,baz=271,slow=24,SNR=30
comp=Z,43nm,0.7s
TIXI Tiksi 22.48 338 P **P** **15 24 59.1 +0.1**
TIXI Tiksi 22.48 338 *d i*P **P** **15 24 59.7 +0.7**
TIXI pmax pmax
comp=Z,77nm,1.3s
AKUT Akutan 22.71 71 P **P** **15 25 00.4 -0.9**
HIA Hailar 22.88 276 P **P** **15 25 02.6 -0.4**
HIA Hailar 22.88 276 P **P** **15 25 02.6 -0.4**
HIA pmax pmax
comp=Z,32nm,0.7s
ANM Nome 22.99 44 P **P** **15 25 04.4 +0.6**
ANM Nome 22.99 44 P **P** **15 25 04.4 +0.6**
ANM pmax pmax
comp=Z,9.0nm,0.7s
ANM Nome 22.99 44 P **P** **15 25 04.7 +0.9**
baz=258
JHS Saijyo 23.96 232 P **P** **15 25 14.0 +1.1**
JHS IAmb IAmb 15 25 17.4
comp=Z,26nm,1.4s
SEHB SEOHWA 23.96 244 P **P** **15 25 13.6 +0.7**
SEHB IAmb IAmb 15 25 16.0
comp=Z,26nm,0.9s
BOD Bodaibo 24.15 299 *e*P **P** **15 25 14.1 -0.2**
BOD pmax pmax
comp=Z,25nm,1.2s
KS19 Wonju Array Si 24.73 243 P **P** **15 25 20.3 +0.5**
KS19 IAmb IAmb 15 25 23.1
comp=Z,16nm,1.1s
KSRS Korea Array 24.73 243 P **P** **15 25 20.6 +0.8**
comp=Z,9.3nm,0.8s,baz=41,slow=9.2,SNR=28
KSRS ScP **ScP** **15 31 59.4 -0.5**
comp=Z,1.1nm,0.8s,baz=60,slow=3.0,SNR=4.4
comp=Z,9.3nm,0.8s
KSAR Wonju Array Be 24.76 243 P **P** **15 25 20.5 +0.5**
KSAR Wonju Array Be 24.76 243 P **P** **15 25 20.5 +0.5**
RDOG Red Dog Mine 24.88 36 P **P** **15 25 18.0 -2.7**
baz=253,SNR=7.2
SDPT Sand Point 25.46 66 P **P** **15 25 25.3 -0.8**
SDPT Sand Point 25.46 66 P **P** **15 25 24.4 -1.7**
baz=282
N16K Nishlik Lake 25.70 54 P **P** **15 25 28.9 +0.6**
baz=273,SNR=14
S14K Fog Glacier 25.78 64 P **P** **15 25 28.2 -0.9**
baz=281
CHNA Chernabura Isl 26.07 67 P **P** **15 25 30.2 -1.3**
baz=284
CNBA Chernabura Isl 26.08 67 P **P** **15 25 30.4 -1.2**
O16K Kokwok River B 26.10 56 P **P** **15 25 32.1 +0.3**
baz=275,SNR=6.2
JTU Tsushima 26.17 237 P **P** **15 25 33.5 +0.8**
P16K Nushagak River 26.20 58 P **P** **15 25 32.9 +0.2**
baz=277
NAWB Namwon 26.52 241 P **P** **15 25 36.6 +0.8**
NAWB IAmb IAmb 15 26 08.3
comp=Z,18nm,1.4s
O17K Koliganek Bris 26.58 56 P **P** **15 25 37.0 +0.9**
baz=276,SNR=17
GCSA Galena City Sc 26.63 45 P **P** **15 25 36.5 +0.1**
baz=266
Q16K King Salmon 26.94 58 P **P** **15 25 39.5 +0.3**
baz=278
TTA Tatalina 26.95 49 P **P** **15 25 40.1 +0.7**
TTA IAmb IAmb 15 25 40.6
comp=Z,9.9nm,0.5s
TTA Tatalina 26.95 49 P **P** **15 25 40.1 +0.7**
TTA pmax pmax
comp=Z,10.0nm,0.5s
TTA Tatalina 26.95 49 P **P** **15 25 40.1 +0.7**
baz=270,SNR=20
P17K Kvichak River 26.98 57 P **P** **15 25 40.3 +0.7**
baz=277
N18K Kilae Creek 27.10 54 P **P** **15 25 41.7 +1.0**
N18K IAmb IAmb 15 25 42.9
comp=Z,16nm,0.8s
N18K Kilae Creek 27.10 54 P **P** **15 25 42.0 +1.2**
baz=275,SNR=15
SVW2 Sparrevohn 27.22 53 P **P** **15 25 42.6 +0.9**
R17K Ugashik Creek 27.24 60 P **P** **15 25 41.5 -0.5**
baz=280
L19K White Mountain 27.50 50 P **P** **15 25 45.0 +0.7**
L19K White Mountain 27.50 50 P **P** **15 25 45.0 +0.7**
baz=273,SNR=8.5
O18K Koktuh Hills 27.52 55 P **P** **15 25 45.4 +0.9**
O18K IAmb IAmb 15 25 46.5
comp=Z,17nm,1.1s
O18K Koktuh Hills 27.52 55 P **P** **15 25 45.5 +1.1**
baz=277,SNR=7.9
P18K Big Mountain, 27.57 56 P **P** **15 25 45.5 +0.6**
P18K IAmb IAmb 15 25 46.6
comp=Z,19nm,0.7s
P18K Big Mountain, 27.57 56 P **P** **15 25 45.7 +0.8**
baz=278,SNR=15
M19K Big River Lodg 27.74 51 P **P** **15 25 47.1 +0.7**
M19K Big River Lodg 27.74 51 P **P** **15 25 47.4 +1.1**
baz=274
N19K Bonanza Creek 27.78 53 P **P** **15 25 47.8 +1.0**
N19K IAmb IAmb 15 25 48.9
comp=Z,14nm,0.8s
N19K Bonanza Creek 27.78 53 P **P** **15 25 47.9 +1.1**
baz=276,SNR=12
Q18K Katmai Hardscr 27.79 58 P **P** **15 25 47.4 +0.4**
baz=279
J20K Nowinta River 27.79 46 P **P** **15 25 47.3 +0.5**
J20K IAmb IAmb 15 25 48.1
comp=Z,6.2nm,0.6s
J20K Nowinta River 27.79 46 P **P** **15 25 47.6 +0.8**
baz=270,SNR=11
K20K Telida 27.83 48 P **P** **15 25 47.7 +0.6**
K20K Telida 27.83 48 P **P** **15 25 47.7 +0.6**
baz=271,SNR=8.5
L20K Farewell, AK 27.95 50 P **P** **15 25 48.8 +0.6**
baz=273,SNR=7.4
IMAR Indian Mountai 28.03 42 P **P** **15 25 49.2 +0.4**
IMAR **PcP** **15 28 56.4 +0.9**
CHIR Chirikof Islan 28.04 64 P **P** **15 25 48.8 -0.2**
JSU Suzuyama 28.09 231 P **P** **15 25 50.7 +0.9**
JSU IAmb IAmb 15 26 15.3
comp=Z,28nm,1.4s
G21K Allakaket 28.17 41 P **P** **15 25 50.9 +0.8**
baz=266
F21K Alatna River 28.24 39 P **P** **15 25 51.3 +0.6**
baz=264
M20K Styx River 28.33 51 P **P** **15 25 52.7 +1.0**
M20K IAmb IAmb 15 25 54.0
comp=Z,8.0nm,0.6s
M20K Styx River 28.33 51 P **P** **15 25 52.9 +1.2**
baz=275,SNR=11
H21K Melozitna Rive 28.40 43 P **P** **15 25 52.7 +0.6**
H21K Melozitna Rive 28.40 43 P **P** **15 25 52.8 +0.6**
baz=268,SNR=11
Q19K Cape Douglas, 28.45 57 P **P** **15 25 52.8 +0.2**
Q19K Cape Douglas, 28.45 57 P **P** **15 25 53.0 +0.4**
baz=280,SNR=12
CHUM Lake Minchumin 28.60 47 P **P** **15 25 55.0 +1.1**
baz=272
SII Sitkinak Islan 28.64 62 P **P** **15 25 53.9 -0.5**
SII Sitkinak Islan 28.64 62 P **P** **15 25 54.9 +0.5**
baz=284
RSO Redoubt South 28.66 54 P **P** **15 25 53.9 -0.9**
PPLA Purkeypile 28.70 49 P **P** **15 25 56.4 +1.4**
baz=274
CAST Castle Rocks 28.72 48 P **P** **15 25 55.2 +0.2**
CAST IAmb IAmb 15 25 56.6
comp=Z,7.9nm,0.6s
CAST Castle Rocks 28.72 48 P **P** **15 25 56.2 +1.2**
baz=273,SNR=15
I21K Tanana 28.73 44 P **P** **15 25 55.5 +0.4**
I21K Tanana 28.73 44 P **P** **15 25 55.9 +0.8**
baz=270,SNR=9.7
O20K Slope Mountain 28.78 55 P **P** **15 25 56.4 +0.8**
baz=278
SPCR Spurr Chakacha 28.84 52 P **P** **15 25 57.2 +1.0**
baz=277
SPU Mount Spurr 28.92 52 P **P** **15 25 57.1 +0.3**
E22K Anaktuvuk Pass 28.96 38 P **P** **15 25 57.9 +0.7**
baz=264
OHAK Old Harbor 28.97 60 P **P** **15 25 57.0 -0.2**
OHAK IAmb IAmb 15 25 57.5
comp=Z,24nm,1.0s
OHAK Old Harbor 28.97 60 P **P** **15 25 56.4 -0.8**
baz=283
G22K Bettles 28.99 40 P **P** **15 25 57.9 +0.6**
baz=267
H22K Ishtalitna Cre 29.00 42 P **P** **15 25 58.5 +1.1**
baz=269,SNR=15
SKT Skwentna 29.08 50 P **P** **15 25 58.3 +0.1**
SKT Skwentna 29.08 50 P **P** **15 25 58.5 +0.3**
baz=276,SNR=6.0
Q20K Shuyak Island 29.14 57 P **P** **15 25 58.4 -0.4**
baz=281,SNR=6.2
BPAW Bear Paw Mtn. 29.18 46 P **P** **15 25 59.6 +0.6**
BPAW IAmb IAmb 15 26 03.5
comp=Z,6.9nm,0.6s
BPAW Bear Paw Mtn. 29.18 46 P **P** **15 25 60.0 +0.9**
baz=273,SNR=9.3
KDAK Kodiak Island 29.21 59 P **P** **15 25 58.8 -0.5**
comp=Z,16nm,0.4s,baz=38,slow=0.2,SNR=93
KDAK PcP **PcP** **15 28 58.4 -0.2**
comp=Z,4.3nm,0.8s,baz=291,slow=21,SNR=2.1
comp=Z,16nm,0.4s
KDAK Kodiak Island 29.21 59 P **P** **15 25 58.5 -0.8**
KDAK Kodiak Island 29.21 59 P **P** **15 25 58.6 -0.8**
KDAK 15 28 58.4
KDAK pmax pmax
comp=Z,57nm,1.5s
KDAK Kodiak Island 29.21 59 P **P** **15 25 58.9 -0.5**
baz=283
KTH Kantishna Hill 29.23 47 P **P** **15 26 00.3 +0.7**
MLY Manley 29.26 44 P **P** **15 26 00.6 +0.8**
MLY **PcP** **15 28 59.6 +0.9**
MLY Manley 29.26 44 P **P** **15 26 00.8 +1.0**
baz=271,SNR=5.5
HOM Homer 29.34 55 P **P** **15 26 01.1 +0.7**
HOM Homer 29.34 55 P **P** **15 26 01.5 +1.1**
baz=280
D23K Nanushuk River 29.46 36 P **P** **15 26 02.6 +1.1**
baz=264
SUA Susitna One 29.51 51 P **P** **15 26 02.2 +0.2**
SUA IAmb IAmb 15 26 03.5
comp=Z,16nm,1.0s
SUA Susitna One 29.51 51 P **P** **15 26 02.4 +0.3**
baz=277
COLD Coldfoot 29.51 40 P **P** **15 26 02.4 +0.5**
baz=268,SNR=8.7
TRF Thorofare Moun 29.52 47 P **P** **15 26 02.9 +0.7**
TRF IAmb IAmb 15 26 04.0
comp=Z,14nm,1.0s
TRF Thorofare Moun 29.52 47 P **P** **15 26 03.1 +0.8**
baz=274,SNR=9.3
CNPM China Poot 29.56 55 P **P** **15 26 01.8 -0.6**
G23K Bananza Creek 29.56 41 P **P** **15 26 03.3 +0.8**
baz=269
C23K Itkillik River 29.59 34 P **P** **15 26 03.6 +1.0**
baz=263
CUT Chulitna 29.62 49 P **P** **15 26 02.8 -0.1**
CUT Chulitna 29.62 49 P **P** **15 26 03.1 +0.2**
baz=276,SNR=5.7
BRLK Bradley Lake 29.70 55 P **P** **15 26 02.8 -0.8**
H23K Yukon River 29.75 43 P **P** **15 26 05.0 +0.9**
H23K IAmb IAmb 15 26 06.3
comp=Z,9.6nm,0.8s
H23K Yukon River 29.75 43 P **P** **15 26 05.4 +1.3**
baz=271,SNR=18
M22K Willow 29.77 51 P **P** **15 26 05.0 +0.8**
M22K IAmb IAmb 15 26 08.3
comp=Z,22nm,1.1s
M22K Willow 29.77 51 P **P** **15 26 04.0 -0.2**
baz=277
BRSE Bradley Lake S 29.77 55 P **P** **15 26 03.8 -0.5**
baz=280,SNR=11
TOLK Toolik Lake Re 29.84 37 P **P** **15 26 05.6 +0.8**
TOLK Toolik Lake Re 29.84 37 P **P** **15 26 05.7 +0.8**
baz=266,SNR=7.0
I23K Minto, Yukon-K 29.84 44 P **P** **15 26 05.7 +0.9**
I23K Minto, Yukon-K 29.84 44 P **P** **15 26 05.7 +0.9**
baz=272,SNR=8.6
BWN Browne 29.84 46 P **P** **15 26 06.7 +1.9**
NEA2 Nenana 29.99 45 P **P** **15 26 06.6 +0.5**
NEA2 IAmb IAmb 15 26 08.9
comp=Z,9.9nm,0.6s
NEA2 Nenana 29.99 45 P **P** **15 26 06.7 +0.6**
baz=273
RC01 Rabbit Creek A 30.04 52 P **P** **15 26 06.5 -0.1**
RC01 Rabbit Creek A 30.04 52 P **P** **15 26 06.8 +0.1**
baz=279
MCK McKinley 30.11 47 P **P** **15 26 07.7 +0.5**
MCK IAmb IAmb 15 26 08.8
comp=Z,13nm,0.7s
MCK McKinley 30.11 47 P **P** **15 26 07.7 +0.5**
MCK pmax pmax
comp=Z,13nm,0.7s
MCK McKinley 30.11 47 P **P** **15 26 07.6 +0.5**
baz=275,SNR=7.9
O22K Cooper Landing 30.15 53 P **P** **15 26 07.7 +0.2**
O22K Cooper Landing 30.15 53 P **P** **15 26 07.6 +0.1**
baz=280
D24K Happy Valley 30.15 36 P **P** **15 26 08.0 +0.5**
baz=266
RND Reindeer 30.17 47 P **P** **15 26 08.0 +0.1**
RND IAmb IAmb 15 26 08.8
comp=Z,14nm,0.9s
RND Reindeer 30.17 47 P **P** **15 26 08.0 +0.1**
RND pmax pmax
comp=Z,14nm,0.9s
C24K Franklin Bluff 30.24 35 P **P** **15 26 08.7 +0.5**
baz=265
PMR Palmer 30.26 51 P **P** **15 26 08.5 0.0**
PMR IAmb IAmb 15 26 09.9
comp=Z,11nm,0.6s
PMR Palmer 30.26 51 P **P** **15 26 08.5 0.0**
PMR pmax pmax
comp=Z,11nm,0.6s
PMR Palmer 30.26 51 P **P** **15 26 09.1 +0.7**
baz=278
MDM Murphy Dome 30.33 44 P **P** **15 26 09.6 +0.4**
GHO Glory Hole Cre 30.33 51 P **P** **15 26 09.6 +0.4**
GHO IAmb IAmb 15 26 10.7
comp=Z,18nm,0.7s
SEW Seward 30.35 54 P **P** **15 26 09.0 -0.3**
baz=281,SNR=8.9
WAT1 Susitna Watana 30.37 48 P **P** **15 26 09.4 -0.1**
baz=277
WRH Wood River Hil 30.42 45 P **P** **15 26 10.6 +0.7**
H24K Noodor Dome 30.44 42 P **P** **15 26 10.8 +0.7**
H24K Noodor Dome 30.44 42 P **P** **15 26 11.2 +1.1**
baz=272,SNR=8.9
TCOL CIGO, UAF Yank 30.49 44 P **P** **15 26 11.0 +0.5**
TCOL IAmb IAmb 15 26 12.3
comp=Z,19nm,0.9s
TCOL CIGO, UAF Yank 30.49 44 P **P** **15 26 11.0 +0.5**
baz=274

COLA College 30.50 44 P P 15 26 11.2 +0.7
COLA IAmb IAmb 15 26 12.3
comp=Z,23nm,1.0s
COLA College 30.50 44 P P 15 26 11.2 +0.7
COLA pmax pmax
comp=Z,23nm,1.0s
COLA College 30.50 44 P P 15 26 11.4 +0.9
baz=274
CCB Clear Creek Bu 30.53 45 P P 15 26 11.5 +0.6
CCB IAmb IAmb 15 26 12.5
comp=Z,13nm,0.9s
KNK Knik Glacier 30.60 51 P P 15 26 11.7 +0.1
KNK Knik Glacier 30.60 51 P P 15 26 12.0 +0.5
baz=279,SNR=20
SML Sawmill 30.60 50 P P 15 26 12.2 +0.5
SML Sawmill 30.60 50 P P 15 26 12.1 +0.5
baz=279,SNR=30
POKR Poker Plat Res 30.66 44 P P 15 26 12.8 +0.8
POKR IAmb IAmb 15 26 14.4
comp=Z,12nm,0.5s
POKR Poker Plat Res 30.66 44 P P 15 26 13.0 +1.0
baz=274,SNR=5.6
WAT6 Susitna Watana 30.77 49 P P 15 26 13.0 -0.2
baz=278,SNR=9.1
DHY Denali Highway 30.87 48 P P 15 26 14.4 +0.3
DHY IAmb IAmb 15 26 15.9
comp=Z,25nm,1.2s
DHY Denali Highway 30.87 48 P P 15 26 14.2 +0.1
baz=277,SNR=6.1
M23K Glacier View 30.89 50 P P 15 26 14.3 +0.2
baz=279,SNR=12
IL31 30.91 45 P P 15 26 14.5 +0.4
ILAR Eielson Array 30.91 45 P P 15 26 14.6 +0.4
comp=Z,14nm,0.7s,baz=268,slow=8.4,SNR=176
ILAR PcP PcP 15 29 02.2 -0.8
comp=Z,0.7nm,0.6s,baz=275,slow=3.1,SNR=4.2
ILAR ScP ScP 15 32 17.8 -0.8
comp=Z,0.8nm,0.8s,baz=278,slow=3.8,SNR=6.0
comp=Z,14nm,0.7s
HDA Harding Lake 30.92 45 P P 15 26 14.5 +0.2
HDA Harding Lake 30.92 45 P P 15 26 14.3 0.0
baz=275,SNR=25
D25K Kavik River 31.03 36 P P 15 26 15.9 +0.7
baz=268
SCM Sheep Creek Mo 31.07 50 P P 15 26 16.2 +0.5
SCM Sheep Creek Mo 31.07 50 P P 15 26 16.2 +0.5
SCM pmax pmax
comp=Z,42nm,0.7s
SCM Sheep Creek Mo 31.07 50 P P 15 26 16.4 +0.6
baz=279,SNR=27
ULN Ulaanbaatar 31.11 281 P P 15 26 16.5 +0.1
ULN Ulaanbaatar 31.11 281 P P 15 26 16.5 +0.1
ULN pmax pmax
comp=Z,5.0nm,0.9s
GLI Glacier Island 31.35 52 P P 15 26 18.5 +0.4
GLI IAmb IAmb 15 26 18.9
comp=Z,15nm,1.1s
GLI Glacier Island 31.35 52 P P 15 26 17.8 -0.2
baz=281
K24K Donnelly Dome 31.50 46 P P 15 26 19.2 -0.2
baz=277,SNR=14
SONM Songino Array 31.52 281 P P 15 26 20.1 +0.2
comp=Z,2.3nm,0.4s,baz=62,slow=7.7,SNR=21
SONM PcP PcP 15 29 03.3 -1.8
comp=Z,1.6nm,0.8s,baz=89,slow=2.1,SNR=6.2
SONM ScP ScP 15 32 20.5 -0.7
comp=Z,0.5nm,0.4s,baz=74,slow=1.5,SNR=2.5
comp=Z,2.3nm,0.4s
SONM Songino Array 31.52 281 P P 15 26 20.1 +0.2
M24K Tolsona, Glenn 31.56 50 P P 15 26 21.1 +1.1
M24K Tolsona, Glenn 31.56 50 P P 15 26 21.2 +1.1
baz=280,SNR=9.9
J25K Salcha River, 31.58 45 P P 15 26 19.6 -0.5
J25K IAmb IAmb 15 26 21.1
comp=Z,9.3nm,0.8s
J25K Salcha River, 31.58 45 P P 15 26 19.6 -0.5
baz=276,SNR=20
FID Port Fidalgo 31.67 52 P P 15 26 20.4 -0.5
FID IAmb IAmb 15 26 21.6
comp=Z,18nm,1.1s
BMAR Burnt Mountain 31.69 39 P P 15 26 22.2 +1.1
BMAR PcP PcP 15 29 05.8 +0.7
HIN Hinchinbrook I 31.73 53 P P 15 26 21.6 +0.2
TIA Tai'an 31.74 254 P P 15 26 22.5 +0.7
TIA pmax pmax
comp=Z,10.0nm,0.6s
PAX Paxson 31.75 48 P P 15 26 22.3 +0.7
baz=279,SNR=15
KLU Klutina 31.79 51 P P 15 26 22.5 +0.5
KLU IAmb IAmb 15 26 24.3
comp=Z,21nm,1.1s
KLU Klutina 31.79 51 P P 15 26 22.7 +0.7
baz=281,SNR=14
RIDG Independent Ri 31.91 46 P P 15 26 22.8 -0.3
RIDG IAmb IAmb 15 26 23.7
comp=Z,13nm,0.7s
RIDG Independent Ri 31.91 46 P P 15 26 22.7 -0.3
baz=278,SNR=14
C27K Jago River 31.98 35 P P 15 26 24.8 +1.4
baz=270
HARP HAARP 31.98 49 P P 15 26 24.5 +0.9
baz=280,SNR=8.0
Q23K Middleton Isla 32.02 55 P P 15 26 24.6 +0.7
Q23K Middleton Isla 32.02 55 P P 15 26 24.7 +0.8
baz=284
MID Middleton Isla 32.03 55 P P 15 26 24.7 +0.8
MID Middleton Isla 32.03 55 P P 15 26 24.7 +0.8
MID pmax pmax
comp=Z,79nm,1.2s
EYAK Cordova Ski Ar 32.06 52 P P 15 26 25.0 +0.8
baz=283,SNR=7.6
HHC Hu-ho-hao-te 32.10 266 eP P 15 26 27.5 +2.5
HHC pmax pmax
comp=Z,26nm,0.9s
HHC pmax pmax
comp=Z,100nm,4.9s
ZAK Zakamensk 32.23 287 eP P 15 26 25.8 -0.2
ZAK pmax pmax
comp=Z,5.0nm,1.2s
SCRK Sand Creek 32.26 46 P P 15 26 25.7 -0.4
SCRK IAmb IAmb 15 26 26.8
comp=Z,21nm,0.8s
SCRK Sand Creek 32.26 46 P P 15 26 25.9 -0.1
baz=279,SNR=40
J26L Joseph Creek 32.37 45 P P 15 26 26.1 -0.9
J26L Joseph Creek 32.37 45 P P 15 26 26.8 -0.1
baz=278,SNR=9.0
HNS HongShan 32.37 259 ⇑P P 15 26 28.3 +1.1
HNS pmax pmax
comp=Z,19nm,0.7s
N25K Chitina, Valde 32.39 50 P P 15 26 27.8 +0.6
N25K Chitina, Valde 32.39 50 P P 15 26 28.2 +1.0
baz=282,SNR=15
I26K Coal Creek Min 32.44 43 P P 15 26 26.7 -0.7
baz=277
BMRM Bremner River 32.52 51 P P 15 26 28.9 +0.6
BMRM Bremner River 32.52 51 P P 15 26 29.2 +0.9
baz=283,SNR=24
MENT Mentasta 32.54 48 P P 15 26 29.0 +0.6
L26K Log Cabin Wild 32.69 47 P P 15 26 30.1 +0.4
L26K Log Cabin Wild 32.69 47 P P 15 26 30.1 +0.4
baz=280
GLB Gilahina Butte 32.80 50 P P 15 26 31.3 +0.7
HMT Hamilton 32.83 52 P P 15 26 31.8 +0.9
HMT IAmb IAmb 15 26 32.9
comp=Z,26nm,1.2s
M26K Nabesna, AK 32.97 49 P P 15 26 33.5 +1.4
M26K Nabesna, AK 32.97 49 P P 15 26 33.8 +1.6
baz=282,SNR=30
VRDI Verde Repeater 33.01 51 P P 15 26 33.3 +0.6
VRDI IAmb IAmb 15 26 34.5
comp=Z,9.9nm,0.8s
MOY Mondy 33.02 291 eP P 15 26 33.7 +0.9
MOY pmax pmax
comp=Z,12nm,1.7s
JOW Kunigami 33.04 229 P P 15 26 33.7 +0.6
JOW Kunigami 33.04 229 P P 15 26 33.9 +0.8
K27K Chicken 33.08 45 P P 15 26 33.8 +0.8
baz=280
SUCK Suckling Hills 33.13 53 P P 15 26 34.9 +1.4
SUCK IAmb IAmb 15 26 35.5
comp=Z,16nm,0.7s
MCARA McCarthy VSAT 33.18 50 P P 15 26 34.6 +0.7
MCARA IAmb IAmb 15 26 38.5
comp=Z,19nm,0.8s
MCARA McCarthy VSAT 33.18 50 P P 15 26 34.9 +1.0
baz=283,SNR=5.2
CRQM Cirque 33.27 51 P P 15 26 35.8 +0.9
CRQE Cirque 33.29 51 P P 15 26 36.2 +1.2
baz=284,SNR=14
L27K Beaver Creek, 33.37 47 P P 15 26 36.4 +0.8
L27K Beaver Creek, 33.37 47 P P 15 26 37.0 +1.5
baz=282,SNR=82
BCAR Beaver Creek A 33.39 47 P P 15 26 36.5 +0.8
TGL Tana Glacier 33.42 51 P P 15 26 37.0 +0.9
TGL IAmb IAmb 15 26 37.7
comp=Z,18nm,0.7s
WAX Waxell Ridge 33.48 52 P P 15 26 37.7 +1.1
M27K Edge Creek, AK 33.49 48 P P 15 26 38.3 +1.6
M27K Edge Creek, AK 33.49 48 P P 15 26 38.6 +1.9
baz=283,SNR=54
SNH Sunshine Point 33.56 52 P P 15 26 38.7 +1.5
ISLE Juniper Island 33.69 52 P P 15 26 39.4 +1.0
NJ2 Nanjing 33.74 247 eP P 15 26 30.5 -8.5
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
BARN Barnard Glacie 33.90 51 P P 15 26 41.6 +1.3
GRNC Granite Creek 33.93 51 P P 15 26 41.8 +1.1
BVCY Beaver Creek 33.94 48 P P 15 26 42.2 +1.8
baz=283,SNR=30
MESA MESA 33.98 52 P P 15 26 42.4 +1.3
MESA MESA 33.98 52 P P 15 26 42.7 +1.6
baz=286,SNR=9.9
YAH Yahtse 34.03 52 P P 15 26 42.8 +1.3
CTG Chitna Glacier 34.07 51 P P 15 26 43.2 +1.5
baz=285,SNR=26
CTGM Chitina Glacie 34.07 51 P P 15 26 42.9 +1.1
DAWY Dawson 34.23 45 P P 15 26 43.4 +0.5
DAWY Dawson 34.23 45 P P 15 26 43.5 +0.5
baz=282,SNR=11
LOGN Logan Glacier 34.27 51 P P 15 26 44.4 +0.9
LOGN IAmb IAmb 15 26 45.5
comp=Z,21nm,1.0s
YUK3 Moose Creek 34.28 49 P P 15 26 44.6 +1.0
baz=284,SNR=11
TABL Table Mountain 34.30 52 P P 15 26 44.8 +1.0
I29M Ogilvie Camp, 34.44 43 P P 15 26 45.6 +0.9
I29M IAmb IAmb 15 26 46.7
comp=Z,18nm,0.8s
I29M Ogilvie Camp, 34.44 43 P P 15 26 45.8 +1.1
baz=281
PINM Pinnacle 34.82 52 P P 15 26 49.2 +1.1
baz=287,SNR=29
EPYK Eagle Plains 34.89 41 P P 15 26 49.5 +1.0
baz=281
BCPM Bancas Point 35.16 52 P P 15 26 51.6 +0.7
YUK4 Talbot Arm 35.23 49 P P 15 26 52.8 +1.2
baz=286
PNL Peninsula 35.36 52 P P 15 26 53.4 +0.8
baz=288,SNR=8.7
YUK6 Outpost Mounta 35.47 50 P P 15 26 55.2 +1.4
baz=287,SNR=23
M30M Minto, Yukon 35.73 47 P P 15 26 56.6 +0.9
M30M Minto, Yukon 35.73 47 P P 15 26 57.4 +1.8
baz=286,SNR=15
INK Inuvik 35.75 37 P P 15 26 55.9 +0.2
comp=Z,7.4nm,0.5s,baz=294,slow=9.6,SNR=17
INK PcP PcP 15 29 16.4 -0.2
comp=Z,2.4nm,0.5s,baz=312,slow=3.9,SNR=2.8
comp=Z,7.4nm,0.5s
INK Inuvik 35.75 37 P P 15 26 56.7 +1.0
INK Inuvik 35.75 37 P P 15 26 56.7 +1.0
INK pmax pmax
comp=Z,6.0nm,0.7s
INK Inuvik 35.75 37 P P 15 26 57.0 +1.3
baz=281,SNR=6.5
HYT Haines Junctio 35.91 50 P P 15 26 58.6 +1.3
HYT Haines Junctio 35.91 50 P P 15 26 59.2 +1.8
baz=288,SNR=49
N30M Aishikik Lake 35.91 49 P P 15 26 58.5 +1.3
baz=287,SNR=9.4
P30M Million Dollar 36.39 51 P P 15 27 03.0 +1.7
baz=289
N31M Braeburn, Yuko 36.50 49 P P 15 27 04.4 +2.1
N31M Braeburn, Yuko 36.50 49 P P 15 27 04.5 +2.3
baz=288,SNR=15
O30N Mendenhall 36.59 50 P P 15 27 04.8 +1.9
baz=289,SNR=48
PLBC Pleasant Camp 36.89 52 P P 15 27 07.4 +2.0
baz=290,SNR=20
M31M Drury Creek, Y 36.91 47 P P 15 27 07.4 +1.7
M31M IAmb IAmb 15 27 08.5
comp=Z,14nm,0.8s
M31M Drury Creek, Y 36.91 47 P P 15 27 07.3 +1.7
baz=288,SNR=18
WHY Whitehorse 37.18 50 P P 15 27 09.7 +1.7
WHY IAmb IAmb 15 27 11.0
comp=Z,12nm,0.7s
WHY Whitehorse 37.18 50 P P 15 27 10.0 +2.0
baz=290,SNR=14
FARO Faro, Yukon 37.36 47 P P 15 27 11.0 +1.6
SKAG Skagway 37.39 52 P P 15 27 11.4 +1.8
SKAG IAmb IAmb 15 27 13.0
comp=Z,12nm,0.7s
SKAG Skagway 37.39 52 P P 15 27 11.3 +1.8
baz=291
WHN Wuhan 37.42 250 ⇓P P 15 27 11.3 +1.1
WHN pmax pmax
comp=Z,24nm,0.8s
A36M Sachs Harbour 37.78 30 P P 15 27 12.7 +0.1
baz=283
XAN Xi'an 38.10 260 P P 15 27 15.5 -0.5
XAN pmax pmax
comp=Z,8.0nm,1.1s
P32M Atlin 38.11 51 P P 15 27 16.8 +1.1
baz=292
JIS Juneau Island 38.28 53 P P 15 27 19.0 +2.0
JIS IAmb IAmb 15 27 59.2
comp=Z,9.8nm,0.6s
P33M Teslin, Yukon 38.30 50 P P 15 27 19.0 +1.8
P33M IAmb IAmb 15 27 20.1
comp=Z,16nm,1.1s
P33M Teslin, Yukon 38.30 50 P P 15 27 19.0 +1.8
baz=292,SNR=17
SIT Sitka 38.30 55 P P 15 27 18.8 +1.7
SIT IAmb IAmb 15 27 20.8
comp=Z,29nm,1.4s
SIT Sitka 38.30 55 P P 15 27 18.8 +1.7
SIT pmax pmax
comp=Z,29nm,1.4s
SIT Sitka 38.30 55 P P 15 27 19.5 +2.3
baz=294
C36M Paulatuk 38.84 34 P P 15 27 22.5 +1.0
baz=287
TPUB Ta-pu 39.73 236 P P 15 27 30.6 +1.2
LZH Lanzhou 39.80 267 eP P 15 27 31.0 +1.0
LZH sP pP 15 28 20.3 -5.7
LZH pmax pmax
comp=Z,21nm,1.0s
WRAK Wrangell Islan 40.06 55 P P 15 27 33.6 +1.9
baz=296
CRAG Craig 40.09 57 P P 15 27 34.1 +2.3
CRAG IAmb IAmb 15 27 38.3
comp=Z,28nm,1.5s
CRAG Craig 40.09 57 P P 15 27 34.2 +2.3
baz=297
GTA Gaotai 40.12 274 ⇑P P 15 27 33.5 +0.9
GTA pP pP 15 28 31.3 +2.5
GTA sP sP 15 29 04.3 +4.0
GTA pmax pmax
comp=Z,15nm,1.1s
DLBC Dease Lake 40.32 51 P P 15 27 35.8 +1.9
DLBC Dease Lake 40.32 51 P P 15 27 36.5 +2.6
baz=295,SNR=12
T35M Bob Quinn 40.85 54 P P 15 27 41.2 +3.1
baz=297,SNR=14
ZAA0 Zalesovo Array 40.86 301 P P 15 27 37.4 -0.9
ZALV Zalesovo Beam 40.86 301 P P 15 27 37.2 -1.1
comp=Z,2.5nm,0.4s,baz=55,slow=6.3,SNR=16
ZALV PcP PcP 15 29 32.2 -0.7
comp=Z,2.5nm,0.4s,baz=56,slow=5.6,SNR=11
ZALV ScP ScP 15 32 54.5 -0.9
comp=Z,0.3nm,0.3s,baz=90,slow=0.6,SNR=4.1
comp=Z,2.5nm,0.4s
ZALV Zalesovo Beam 40.86 301 *i* P P 15 27 37.9 -0.3
ZALV pmax pmax
comp=Z,3.0nm,0.4s
DIB Dawson Inlet, 41.49 60 P P 15 27 44.7 +1.4
GRNB Grenville Isla 42.48 58 P P 15 27 53.5 +2.2
GRNB IAmb IAmb 15 27 54.5
comp=Z,29nm,0.7s
HG4B Hotspring 42.61 60 P P 15 27 54.2 +1.8
HG4B IAmb IAmb 15 27 54.6
comp=Z,24nm,0.9s
EUNU Eureka 42.97 13 P P 15 27 56.6 +1.7
EUNU IAmb IAmb 15 27 57.2
comp=Z,31nm,0.7s
BBB Bella Bella 44.29 59 P P 15 28 06.0 +0.3
BBB Bella Bella 44.29 59 P P 15 28 07.3 +1.7
RES Resolute Bay 44.66 21 P P 15 28 08.4 +0.1
comp=Z,2.3nm,0.5s,baz=310,slow=4.4,SNR=9.2
comp=Z,2.3nm,0.5s
RES Resolute Bay 44.66 21 P P 15 28 09.3 +1.1
RES Resolute Bay 44.66 21 P P 15 28 09.3 +1.1
RES pmax pmax
comp=Z,7.0nm,1.3s
WMQ Urumqi 44.70 287 ⇑P P 15 28 10.8 +1.6
WMQ pmax pmax
comp=Z,44nm,0.9s
KWAJ Kwajalein Atol 44.75 163 P P 15 28 10.7 +1.0
KWAJ Kwajalein Atol 44.75 163 P P 15 28 10.7 +1.0
KWAJ pmax pmax
comp=Z,54nm,0.6s
GYA Guiyang 44.94 254 ⇑*i*P P 15 28 11.8 +0.5
GYA pmax pmax
comp=Z,21nm,0.8s
HOLB Holberg 45.12 61 P P 15 28 13.2 +1.0
YKA Yellowknife Ar 45.18 41 P P 15 28 13.3 +0.9
comp=Z,8.6nm,0.8s,baz=301,slow=7.6
YKA PcP PcP 15 29 47.8 +0.5
comp=Z,1.2nm,0.7s,baz=305,slow=4.1,SNR=5.4
comp=Z,8.6nm,0.8s
KURK Kurchatov 45.79 300 P P 15 28 17.0 -0.4
KURK Kurchatov 45.79 300 *d*i P P 15 28 17.2 -0.2
KURK pmax pmax
comp=Z,44nm,0.7s
KURBB Kurchatov Arra 45.89 300 P P 15 28 18.1 -0.1
comp=Z,31nm,0.7s,baz=62,slow=7.8,SNR=189
KURBB PcP PcP 15 29 48.9 -1.2
comp=Z,3.2nm,0.8s,baz=60,slow=3.3,SNR=6.8
comp=Z,31nm,0.7s
MK31 Makanchi Array 46.04 294 P P 15 28 19.0 -0.5
MK31 IAmb IAmb 15 28 20.2
comp=Z,11nm,0.6s
MK31 Makanchi Array 46.04 294 P P 15 28 19.0 -0.5
MK31 pmax pmax
comp=Z,11nm,0.6s
MKAR Makanchi Array 46.04 294 P P 15 28 19.4 0.0
comp=Z,10nm,0.5s,baz=58,slow=7.1,SNR=170
MKAR ScP ScP 15 33 15.3 -1.3
comp=Z,0.7nm,0.9s,baz=57,slow=4.5,SNR=3.7
comp=Z,10nm,0.5s
MKAR Makanchi Array 46.04 294 P P 15 28 18.9 -0.6
MAKZ Makanchi 46.20 294 P P 15 28 20.4 -0.4
MAKZ Makanchi 46.20 294 P P 15 28 20.4 -0.4
MAKZ pmax pmax
comp=Z,16nm,1.0s
KBS Kingsbay 46.94 351 P P 15 28 25.8 -0.1
KBS IAmb IAmb 15 28 28.0
comp=Z,15nm,0.8s
KBS Kingsbay 46.94 351 P P 15 28 25.8 -0.1
KBS pmax pmax
comp=Z,15nm,0.8s
SPA0 Spitsbergen Ar 47.13 349 eP P 15 28 27.0 -0.5
SPITS Spitsbergen Ar 47.13 349 P P 15 28 26.9 -0.5
SPITS pmax pmax
comp=Z,12nm,0.8s
SPB2 Spitsbergen Ar 47.13 349 P P 15 28 26.8 -0.7
PZH PanZhiHua 47.82 259 P P 15 28 34.0 +0.5
PZH pmax pmax
comp=Z,10.0nm,0.6s
PZH pmax pmax
comp=Z,100nm,4.5s
CLRS Cowichan Lake 48.29 61 P P 15 28 37.8 +1.1
LLLB Lillooet 48.40 58 P P 15 28 38.9 +1.4
HLK Haleakala 48.54 112 P P 15 28 39.9 +0.7
C03A Quillayute Air 48.58 62 P P 15 28 40.5 +1.7
PGC Sidney 48.75 60 P P 15 28 41.1 +1.0
PGC IAmb IAmb 15 29 14.5
comp=Z,21nm,1.2s
B04A Port Angeles 49.08 61 P P 15 28 43.6 +1.0
B04A IAmb IAmb 15 28 50.8
comp=Z,48nm,1.3s
MHA Mahukona 49.18 112 P P 15 28 44.5 +0.7
MHA Mahukona 49.18 112 P P 15 28 44.5 +0.7
NLWA Neilton Lookou 49.29 62 P P 15 28 45.4 +1.1
HMH Humu'ula Sheep 49.89 112 P P 15 28 50.0 +0.6
MLOA Mauna Loa Obse 49.89 113 P P 15 28 50.0 +0.4
MWH Moku'aweowe 49.92 113 P P 15 28 50.0 +0.1
MLH Mauna Loa 50.03 112 P P 15 28 50.7 +0.3
KHU Kahuku 50.10 113 P P 15 28 51.2 +0.3
KHU Kahuku 50.10 113 P P 15 28 51.2 +0.3
KHU pmax pmax
comp=Z,164nm,1.3s
SVE Sverdlovsk 50.83 315 eP P 15 28 55.5 -0.1
SVE pmax pmax
comp=Z,46nm,0.8s
F04A Amboy 50.98 63 P P 15 28 57.7 +0.8
EDM Edmonton 51.03 51 P P 15 28 57.9 +0.7
EDM Edmonton 51.03 51 P P 15 28 57.9 +0.7
EDM pmax pmax
comp=Z,38nm,0.7s
LTY Liberty 51.08 60 P P 15 28 58.3 +0.6
B08A Colville Reser 51.09 59 P P 15 28 58.2 +0.5
B08A IAmb IAmb 15 28 59.6
comp=Z,14nm,0.9s
I02E Swisshome, OR 51.36 65 P P 15 29 01.4 +1.7
TARG Taragay, Kyrgy 51.70 291 P P 15 29 02.7 -0.1
TARG Taragay, Kyrgy 51.70 291 P P 15 29 02.7 -0.1
TARG pmax pmax
comp=Z,7.0nm,0.8s
H04D Lebanon 51.70 64 P P 15 29 02.7 +0.5
H04D IAmb IAmb 15 29 10.6
comp=Z,21nm,1.2s
H04D Lebanon 51.70 64 P P 15 29 03.2 +0.9
baz=310
KDJ Kajisay 51.79 292 P P 15 29 03.5 +0.3
KDJ IAmb IAmb 15 29 04.4
comp=Z,24nm,0.8s
KDJ Kajisay 51.79 292 P P 15 29 03.5 +0.3
KDJ pmax pmax
comp=Z,24nm,0.8s
I03D Drain, OR 51.90 65 P P 15 29 05.2 +1.5
baz=310
LSA Lhasa 51.91 270 P P 15 29 05.4 +0.8
LSA IAmb IAmb 15 29 07.4
comp=Z,11nm,0.7s
LSA Lhasa 51.91 270 P P 15 29 05.4 +0.8
LSA pmax pmax
comp=Z,11nm,0.7s
ARU Arti 51.97 316 P P 15 29 03.1 -1.0
ARU Arti 51.97 316 *d*i P P 15 29 03.3 -0.7
ARU pmax pmax
comp=Z,24nm,0.4s
C09A Chrisman Ranch 52.00 59 P P 15 29 03.8 -0.6
G05D Wamic, OR 52.02 63 P P 15 29 05.5 +0.9
baz=310
LVZ Lovozero 52.09 336 ⇓*i*P P 15 29 04.3 -0.5
LVZ pmax pmax
comp=Z,28nm,2.5s
TKM2 Tokmak 2 52.17 294 P P 15 29 05.8 -0.2
SNR=10
HAWA Hanford 52.23 61 P P 15 29 07.0 +0.8
NEW Newport 52.30 57 P P 15 29 06.9 +0.3
NEW Newport 52.30 57 P P 15 29 06.9 +0.3
NEW pmax pmax
comp=Z,8.0nm,1.0s
NEW Newport 52.30 57 P P 15 29 07.4 +0.8
baz=310,SNR=5.4
DBO Dodson Butte 52.33 66 P P 15 29 08.8 +1.9
I04A Tendick Farm, 52.35 65 P P 15 29 08.3 +1.2
baz=311
KEV Kevo 52.40 340 P P 15 29 05.1 -1.8
KEV Kevo 52.40 340 P P 15 29 05.1 -1.8
KEV pmax pmax
comp=Z,8.0nm,1.3s
USP Ospenovka 52.56 295 P P 15 29 09.1 +0.5
SNR=12
CHMS Chumysh 52.59 294 P P 15 29 09.2 +0.4
SNR=6.5
KBK Karagaybulak 52.71 294 P P 15 29 10.3 +0.4
SNR=6.7
L02F Cave Junction 52.80 67 P P 15 29 11.7 +1.4
baz=311
KSXB Camp Six Broad 52.82 68 P P 15 29 12.3 +1.7
KSXB IAmb IAmb 15 29 15.0
comp=Z,18nm,1.1s

J04D Umpqua Nationa 52.88 65 P **P** **15 29 12.6 +1.5**
J04D Umpqua Nationa 52.88 65 P **P** **15 29 12.8 +1.7**
baz=311,SNR=5.6
ARA0 ARCESS Array S 52.88 340 *e*P **P** **15 29 09.2 -1.3**
ARCES ARCESS Array B 52.88 340 P **P** **15 29 09.4 -1.1**
comp=Z,1.3nm,0.4s,baz=40,slow=8.0,SNR=25
ARCES PcP **PcP** **15 30 15.3 -0.2**
comp=Z,1.9nm,0.5s,baz=38,slow=3.5,SNR=11
comp=Z,1.3nm,0.4s
ARCES ARCESS Array B 52.88 340 P **P** **15 29 09.4 -1.1**
ARCES PcP **PcP** **15 30 15.1 -0.3**
AAK Ala-Archa 52.97 294 P **P** **15 29 12.1 +0.4**
SNR=6.1
AAK Ala-Archa 52.97 294 P **P** **15 29 11.5 -0.2**
comp=Z,13nm,0.7s,baz=118,slow=5.0,SNR=14
comp=Z,13nm,0.7s
AAK Ala-Archa 52.97 294 P **P** **15 29 11.7 0.0**
AAK IAmb IAmb 15 29 12.9
comp=Z,14nm,0.8s
AAK Ala-Archa 52.97 294 *d i*P **P** **15 29 12.0 +0.2**
AAK pmax pmax
comp=Z,15nm,0.8s
PINE Pine Mountain 53.16 64 P **P** **15 29 14.0 +0.8**
KRPM Rodgers 53.18 68 P **P** **15 29 15.2 +2.1**
G08A Pilot Rock 53.25 61 P **P** **15 29 14.5 +0.8**
J05D Fort Rock, OR 53.33 65 P **P** **15 29 16.3 +2.0**
baz=311,SNR=14
EKS2 Erkin-Say 53.35 294 P **P** **15 29 15.0 +0.6**
SNR=14
WALA Waterton Lakes 53.41 55 P **P** **15 29 15.4 +0.6**
WALA IAmb IAmb 15 29 16.6
comp=Z,14nm,0.7s
PRGR Permogore 53.43 326 *e*P **P** **15 29 13.6 -0.9**
PRGR *e* 15 30 12.0
L04D Klamath Falls 53.44 66 P **P** **15 29 16.7 +1.5**
L04D IAmb IAmb 15 29 17.8
comp=Z,27nm,0.8s
L04D Klamath Falls 53.44 66 P **P** **15 29 16.9 +1.8**
baz=312,SNR=6.9
K04D Chiloquin, OR 53.48 66 P **P** **15 29 17.2 +1.8**
baz=312
KHMM Horse Mountain 53.53 68 P **P** **15 29 17.6 +1.8**
KHMM IAmb IAmb 15 29 18.7
comp=Z,15nm,0.7s
YBH Yreka Blue Hor 53.54 67 P **P** **15 29 17.8 +2.0**
YBH IAmb IAmb 15 29 18.5
comp=Z,12nm,0.6s
YBH Yreka Blue Hor 53.54 67 P **P** **15 29 17.8 +2.0**
YBH pmax pmax
comp=Z,12nm,0.6s
I07A Izee 53.75 63 P **P** **15 29 18.2 +0.8**
KTK1 Kautokeino 53.78 341 *e*P **P** **15 29 15.8 -1.2**
JETT Jettan, Norway 53.86 342 *e*P **P** **15 29 17.0 -0.6**
K05A Summer Lake 53.89 65 P **P** **15 29 20.4 +2.0**
K05A IAmb IAmb 15 29 21.1
comp=Z,12nm,0.8s
JTMT Jette 54.08 56 P **P** **15 29 20.1 +0.5**
KIRV Kirov 54.21 322 *de*P **P** **15 29 19.8 -0.4**
KSH Kashi 54.21 290 P **P** **15 29 24.5 +3.8**
KSH pmax pmax
comp=Z,11nm,0.9s
KCPM Cahto Peak 54.41 69 P **P** **15 29 23.7 +1.6**
BMO Blue Mountains 54.42 61 P **P** **15 29 23.1 +1.0**
BMO Blue Mountains 54.42 61 P **P** **15 29 23.1 +1.0**
BMO pmax pmax
comp=Z,12nm,1.4s
SHL Shillong 54.46 266 P **P** **15 29 22.5 -0.2**
SHL Shillong 54.46 266 P **P** **15 29 22.5 -0.2**
SHL pmax pmax
comp=Z,33nm,0.9s
SUMG Summit 54.66 5 P **P** **15 29 24.1 +0.3**
SUMG IAmb IAmb 15 29 25.5
comp=Z,26nm,0.9s
SUMG Summit 54.66 5 P **P** **15 29 24.1 +0.3**
SUMG pmax pmax
comp=Z,26nm,0.9s
SUMG Summit 54.66 5 *i*P **P** **15 29 24.0 +0.2**
MOD Modoc Plateau 54.77 65 P **P** **15 29 26.2 +1.5**
J08A Circle Bar Ran 54.79 63 P **P** **15 29 25.7 +0.9**
KK31 Karatay Array 54.85 297 P **P** **15 29 24.7 -0.4**
KK31 IAmb IAmb 15 29 25.7
comp=Z,10nm,0.7s
KK31 Karatay Array 54.85 297 P **P** **15 29 24.7 -0.4**
KK31 pmax pmax
comp=Z,10.0nm,0.7s
KKAR Karatay Array 54.85 297 P **P** **15 29 24.6 -0.5**
KKAR IAmb IAmb 15 29 25.7
comp=Z,10nm,0.7s
KKAR Karatay Array 54.85 297 P **P** **15 29 24.4 -0.7**
KKAR Karatay Array 54.85 297 P **P** **15 29 24.4 -0.7**
KKAR pmax pmax
comp=Z,10.0nm,0.7s
MSO Missoula 54.87 57 P **P** **15 29 25.9 +0.6**
MSO Missoula 54.87 57 P **P** **15 29 26.2 +1.0**
baz=312,SNR=6.4
PLID Pearl Lake 54.96 60 P **P** **15 29 26.9 +0.8**
PLID IAmb IAmb 15 29 28.0
comp=Z,12nm,0.6s
FFC Flin Flon 55.12 44 P **P** **15 29 27.7 +0.9**
FFC Flin Flon 55.12 44 P **P** **15 29 27.7 +0.9**
FFC pmax pmax
comp=Z,8.0nm,0.9s
HOPS Hopland Field 55.17 70 P **P** **15 29 28.7 +1.3**
WVOR Wild Horse Val 55.32 64 P **P** **15 29 30.2 +1.6**
WVOR IAmb IAmb 15 29 31.2
comp=Z,23nm,1.0s
WVOR Wild Horse Val 55.32 64 P **P** **15 29 30.2 +1.6**
WVOR pmax pmax
comp=Z,23nm,1.0s
CHTO Chiang Mai 55.34 255 P **P** **15 29 29.1 +0.3**
CHTO Chiang Mai 55.34 255 P **P** **15 29 29.1 +0.3**
CHTO pmax pmax
comp=Z,11nm,0.9s
FCC Fort Churchill 55.37 37 P **P** **15 29 28.8 +0.3**
FCC Fort Churchill 55.37 37 P **P** **15 29 28.8 +0.3**
FCC pmax pmax
comp=Z,6.0nm,0.6s
CMAR Chiang Mai Arr 55.62 255 P **P** **15 29 31.6 +0.8**
comp=Z,4.2nm,0.8s,baz=22,slow=6.9,SNR=25
CMAR PcP **PcP** **15 30 27.1 +0.3**
comp=Z,2.0nm,0.7s,baz=11,slow=3.5,SNR=7.7
comp=Z,4.2nm,0.8s
CMAR Chiang Mai Arr 55.62 255 P **P** **15 29 31.3 +0.5**
ORV Oroville 55.68 68 P **P** **15 29 31.6 +0.6**
ORV Oroville 55.68 68 P **P** **15 29 31.6 +0.6**
ORV pmax pmax
comp=Z,10.0nm,0.8s
TAPN Taplejung 55.70 271 *e*P **P** **15 29 31.5 -0.2**
HRY Holter Researc 56.02 56 P **P** **15 29 34.7 +1.3**
KLMR Klimovskoe 56.02 328 *e*P **P** **15 29 31.9 -1.1**
KLMR pmax pmax
comp=Z,9.0nm,0.6s
KLMR Klimovskoe 56.02 328 *e*P **P** **15 29 32.0 -1.1**
KLMR AMP 15 29 33.9
comp=Z,9.0nm,0.6s
BEKR Beckworth 56.11 67 P **P** **15 29 34.8 +0.5**
BEKR IAmb IAmb 15 29 36.5
comp=Z,13nm,0.9s
ABKAR Akbulak array 56.12 308 P **P** **15 29 33.0 -1.0**
ABKAR Akbulak array 56.12 308 P **P** **15 29 32.9 -1.0**
ABKAR IAmb IAmb 15 29 34.3
comp=Z,21nm,0.8s
EGMT Eagleton 56.16 54 P **P** **15 29 33.5 -0.9**
baz=313
MFID Camas Ranch 56.18 61 P **P** **15 29 35.6 +1.0**
AKTO Aktyubinsk 56.21 310 P **P** **15 29 34.0 -0.6**
comp=Z,10nm,0.5s,baz=67,slow=8.9,SNR=28
comp=Z,10nm,0.5s
STEI Steigen 56.21 343 *e*P **P** **15 29 33.0 -1.2**
LRM Limekiln Ridge 56.31 57 P **P** **15 29 36.2 +0.6**
LOF Lofoten 56.33 344 *e*P **P** **15 29 33.9 -1.2**
JIRN Jiri 56.40 273 *e*P **P** **15 29 36.5 -0.2**
comp=Z,16nm,0.4s
GUN Gumba 56.41 273 *e*P **P** **15 29 36.7 0.0**
comp=Z,22nm,0.4s
DLMT Dillon 56.55 58 P **P** **15 29 37.1 -0.1**
RAMN Ramite 56.66 272 *e*P **P** **15 29 38.1 -0.3**
comp=Z,112nm,0.5s
MPK Martis Peak 56.69 67 P **P** **15 29 39.7 +1.2**
MPK IAmb IAmb 15 29 40.4
comp=Z,16nm,0.6s
FAUS Fauske 56.69 343 *e*P **P** **15 29 37.2 -0.5**
BTK Batken 56.75 294 P **P** **15 29 38.3 -0.3**
BTK Batken 56.75 294 P **P** **15 29 38.3 -0.3**
PAHR Pah Rah Range 56.77 67 P **P** **15 29 40.0 +1.2**

MCMT McKenzie Canyo 56.78 58 P **P** **15 29 39.0 0.0**
HLID Hailey 56.83 60 P **P** **15 29 40.2 +1.0**
HLID Hailey 56.83 60 P **P** **15 29 40.6 +1.3**
baz=314,SNR=6.0
KKN Kakani 56.86 273 *e*P **P** **15 29 39.7 0.0**
EMB Emerald Bay 56.87 68 P **P** **15 29 40.8 +1.1**
EMB IAmb IAmb 15 29 41.9
comp=Z,11nm,0.8s
BOZ Bozeman (W) 56.88 57 P **P** **15 29 40.6 +1.1**
BOZ IAmb IAmb 15 29 41.9
comp=Z,17nm,1.2s
BOZ Bozeman (W) 56.88 57 P **P** **15 29 40.6 +1.1**
BOZ pmax pmax
comp=Z,17nm,1.3s
BOZ Bozeman (W) 56.88 57 P **P** **15 29 40.9 +1.3**
baz=314,SNR=14
VCNR Virginia City 56.90 67 P **P** **15 29 41.2 +1.3**
VCNR IAmb IAmb 15 29 42.4
comp=Z,12nm,0.7s
PKI Pulchoki 56.94 273 *e*P **P** **15 29 40.3 -0.1**
PKIN Phulchoki 56.94 273 *e*P **P** **15 29 40.3 -0.1**
comp=Z,33nm,0.6s
PNTR Pine Nut 57.07 67 P **P** **15 29 42.5 +1.4**
PNTR IAmb IAmb 15 29 43.7
comp=Z,19nm,0.8s
DMN Daman 57.09 273 *e*P **P** **15 29 41.6 +0.2**
comp=Z,72nm,0.6s
GKN Gorkha 57.09 274 *e*P **P** **15 29 41.3 0.0**
comp=Z,39nm,0.8s
SCO Scoresbysund 57.16 359 P **P** **15 29 41.7 +0.8**
SCO Scoresbysund 57.16 359 P **P** **15 29 41.7 +0.8**
SCO pmax pmax
comp=Z,4.0nm,0.7s
YERR Yerington 57.35 67 P **P** **15 29 44.1 +1.2**
YERR IAmb IAmb 15 29 45.5
comp=Z,21nm,0.9s
DANN Dangsing 57.38 275 *e*P **P** **15 29 43.4 0.0**
comp=Z,43nm,0.8s
BMN Battle Mountai 57.47 65 P **P** **15 29 45.1 +1.4**
BMN IAmb IAmb 15 29 46.3
comp=Z,13nm,0.8s
BMN Battle Mountai 57.47 65 P **P** **15 29 45.1 +1.4**
BMN pmax pmax
comp=Z,13nm,0.8s
QLMT Earthquake Lak 57.51 57 P **P** **15 29 45.2 +1.2**
YHL Hebgen Lake 57.62 57 P **P** **15 29 46.2 +1.3**
YHL IAmb IAmb 15 29 47.4
comp=Z,17nm,1.3s
GCMT Greycliff 57.74 56 P **P** **15 29 47.0 +1.5**
GAR Garm 57.76 293 P **P** **15 29 45.5 -0.2**
KOLN Koldanda 57.89 275 *e*P **P** **15 29 46.8 -0.1**
KVN Kaiserville 57.94 66 P **P** **15 29 48.1 +1.1**
KVN IAmb IAmb 15 29 49.5
comp=Z,24nm,1.1s
KVN Kaiserville 57.94 66 P **P** **15 29 48.1 +1.1**
KVN pmax pmax
comp=Z,24nm,1.1s
RYN Ryan 58.00 67 P **P** **15 29 48.4 +1.0**
RYN IAmb IAmb 15 29 49.8
comp=Z,14nm,0.8s
VALR Valaam 58.24 332 *d i*P **P** **15 29 47.4 -1.1**
VALR pmax pmax
comp=Z,6.0nm,0.6s
NVAR Mina Array Bea 58.26 67 P **P** **15 29 50.7 +1.4**
comp=Z,13nm,0.7s,baz=299,slow=7.3,SNR=88
comp=Z,13nm,0.7s
NVAR Mina Array Bea 58.26 67 P **P** **15 29 50.4 +1.1**
LHV Little Huntoon 58.27 67 P **P** **15 29 51.0 +2.0**
LHV IAmb IAmb 15 29 52.2
comp=Z,17nm,0.9s
ELK Elko 58.34 63 P **P** **15 29 51.1 +1.3**
ELK Elko 58.34 63 P **P** **15 29 51.1 +1.3**
ELK pmax pmax
comp=Z,5.0nm,0.8s
NV11 Mina Array Sit 58.34 67 P **P** **15 29 50.8 +1.0**
NV11 IAmb IAmb 15 29 52.2
comp=Z,7.9nm,0.8s
RLMT Red Lodge 58.41 56 P **P** **15 29 51.5 +1.3**
RLMT IAmb IAmb 15 29 53.1
comp=Z,21nm,0.9s
RLMT Red Lodge 58.41 56 P **P** **15 29 52.1 +1.9**
baz=315,SNR=20
OMMB Old Mammoth Mi 58.44 68 P **P** **15 29 50.8 +0.1**
Q09A Carvers 58.60 66 P **P** **15 29 51.3 -0.3**
MOOW Moose Ponds 58.62 58 P **P** **15 29 53.1 +1.4**
CHGR Chuyangaron 58.65 294 P **P** **15 29 51.3 -0.5**
CHGR Chuyangaron 58.65 294 P **P** **15 29 51.3 -0.5**
CHGR pmax pmax
comp=Z,40nm,0.7s
TPAW Teton Pass 58.69 58 P **P** **15 29 53.9 +1.6**
TPAW IAmb IAmb 15 29 55.5
comp=Z,9.6nm,0.7s
LOHW Long Hollow 58.79 58 P **P** **15 29 54.2 +1.4**
LOHW IAmb IAmb 15 29 55.9
comp=Z,26nm,1.4s
LAO LASA Array 58.81 53 P **P** **15 29 54.0 +1.2**
LAO IAmb IAmb 15 29 55.5
comp=Z,26nm,1.0s
LAO LASA Array 58.81 53 P **P** **15 29 54.5 +1.7**
baz=315
HVU Hansel Valley 58.94 61 P **P** **15 29 54.8 +1.0**
HVU Hansel Valley 58.94 61 P **P** **15 29 54.8 +1.0**
HVU pmax pmax
comp=Z,5.0nm,0.8s
TPH Tonopah 59.11 67 P **P** **15 29 56.0 +0.9**
TPH Tonopah 59.11 67 P **P** **15 29 56.1 +0.9**
TPH pmax pmax
comp=Z,57nm,0.8s
AHID Auburn Hatcher 59.12 59 P **P** **15 29 56.3 +1.1**
TIN Tinemaha, Big 59.27 68 P **P** **15 29 58.1 +2.0**
baz=315
BELG Belogornoye 59.37 317 *d i*P **P** **15 29 55.4 -0.9**
BELG pmax pmax
comp=Z,9.0nm,0.9s
BGU Big Grassy Mou 59.40 62 P **P** **15 29 58.1 +1.1**
LCH Last Change Ra 59.47 68 P **P** **15 29 58.7 +1.2**
FIA1 FINESS Array S 59.47 335 P **P** **15 29 55.9 -1.1**
FINES FINESS Array B 59.48 335 P **P** **15 29 56.1 -0.8**
comp=Z,3.0nm,0.4s,baz=38,slow=7.4,SNR=61
FINES PcP **PcP** **15 30 40.3 -1.0**
comp=Z,1.6nm,0.5s,baz=27,slow=3.3,SNR=6.0
FINES ScP **ScP** **15 34 14.1 -0.5**
comp=Z,1.3nm,0.9s,baz=32,slow=4.2,SNR=2.3
comp=Z,3.0nm,0.4s
FINES FINESS Array B 59.48 335 P **P** **15 29 55.8 -1.1**
VES Vestal, Richgr 59.64 70 P **P** **15 29 59.0 +0.5**
baz=316
HWUT Hardware Ranch 59.70 60 P **P** **15 30 00.3 +1.2**
HWUT IAmb IAmb 15 30 01.6
comp=Z,12nm,0.7s
CWC Cottonwood Cre 59.79 69 P **P** **15 30 00.7 +1.0**
baz=316
GRAC Grapevine Rang 59.80 68 P **P** **15 30 00.9 +1.3**
GRAC IAmb IAmb 15 30 02.3
comp=Z,13nm,0.7s
GRAC Grapevine Rang 59.80 68 P **P** **15 30 01.3 +1.7**
baz=316,SNR=7.3
R11A Troy Canyon, C 59.83 65 P **P** **15 30 00.9 +0.9**
R11A Troy Canyon, C 59.83 65 P **P** **15 30 01.1 +1.2**
baz=316,SNR=15
PKM Mcpherson Peak 59.90 71 P **P** **15 30 02.1 +1.6**
baz=316
BW06 Boulder Array 59.92 58 P **P** **15 30 01.6 +1.0**
BW06 IAmb IAmb 15 30 02.8
comp=Z,17nm,0.8s
BW06 Boulder Array 59.92 58 P **P** **15 30 01.9 +1.3**
baz=316,SNR=31
PD31 Pinedale Array 59.92 58 P **P** **15 30 01.5 +0.9**
PD31 IAmb IAmb 15 30 02.8
comp=Z,15nm,0.8s
PDAR Pinedale Array 59.92 58 P **P** **15 30 01.6 +1.0**
comp=Z,14nm,0.7s,baz=320,slow=2.2,SNR=182
comp=Z,14nm,0.7s
PDAR Pinedale Array 59.92 58 P **P** **15 30 01.5 +0.9**
DUG Dugway, Tooele 60.04 62 P **P** **15 30 02.5 +1.2**
DUG IAmb IAmb 15 30 03.9
comp=Z,9.9nm,0.8s
DUG Dugway, Tooele 60.04 62 P **P** **15 30 02.5 +1.2**
DUG pmax pmax
comp=Z,10.0nm,0.8s
DUG Dugway, Tooele 60.04 62 P **P** **15 30 02.9 +1.6**
baz=316,SNR=9.8
BCW Bitter Crk WRg 60.09 71 P **P** **15 30 02.7 +1.0**
ISA Isabella, Lake 60.11 69 P **P** **15 30 02.0 +0.2**
ISA Isabella, Lake 60.11 69 P **P** **15 30 02.0 +0.2**

ISA pmax pmax
comp=Z,9.0nm,1.1s
ISA Isabella, Lake 60.11 69 P **P** **15 30 02.2 +0.4**
baz=316
S11A Rachel 60.24 66 P **P** **15 30 03.9 +1.1**
CTU Camp Tracy 60.25 61 P **P** **15 30 03.8 +1.1**
CTU IAmb IAmb 15 30 05.0
comp=Z,8.5nm,0.7s
MPMC Manual Prospec 60.39 68 P **P** **15 30 05.0 +1.2**
baz=316,SNR=9.2
FURC Furnace Creek, 60.45 68 P **P** **15 30 05.5 +1.6**
baz=316,SNR=13
TPNV Topopah Spring 60.46 67 P **P** **15 30 05.2 +1.0**
TPNV IAmb IAmb 15 30 06.5
comp=Z,16nm,0.9s
TPNV Topopah Spring 60.46 67 P **P** **15 30 05.2 +1.0**
TPNV pmax pmax
comp=Z,16nm,1.0s
TPNV Topopah Spring 60.46 67 P **P** **15 30 05.5 +1.3**
baz=316,SNR=18
JLU Jordanelle 60.48 61 P **P** **15 30 05.6 +1.2**
NLU North Lily Min 60.60 62 P **P** **15 30 06.3 +1.1**
NLU IAmb IAmb 15 30 07.7
comp=Z,13nm,0.9s
SCZ2 Santa Cruz Isl 60.64 72 P **P** **15 30 05.8 +0.5**
baz=316
PSUT Pine Spring 60.65 64 P **P** **15 30 06.6 +1.0**
LRMC Laurel Mtn Rad 60.70 69 P **P** **15 30 06.5 +0.7**
baz=316,SNR=7.1
CCAC Calif City Air 60.74 70 P **P** **15 30 06.8 +0.8**
CCAC IAmb IAmb 15 30 08.3
comp=Z,14nm,0.8s
GWY Greenwater Val 60.77 68 P **P** **15 30 07.1 +0.8**
GWY IAmb IAmb 15 30 08.4
comp=Z,15nm,0.8s
MPU Maple Canyon 60.80 62 P **P** **15 30 07.6 +1.1**
MPU IAmb IAmb 15 30 08.9
comp=Z,13nm,0.7s
PRN Pahroc Range 60.80 66 P **P** **15 30 07.7 +1.2**
PRN IAmb IAmb 15 30 08.9
comp=Z,11nm,0.9s
QSM Queen of Sheba 60.81 68 P **P** **15 30 07.4 +1.0**
QSM IAmb IAmb 15 30 08.2
comp=Z,11nm,0.6s
HEL Helsinki 60.84 334 P **P** **15 30 03.5 -2.7**
HEL pmax pmax
comp=Z,9.0nm,0.8s
ULM Lac du Bonnet 60.93 44 P **P** **15 30 07.5 +0.5**
comp=Z,2.5nm,0.5s,baz=319,slow=9.0,SNR=2.2
ULM PcP **PcP** **15 30 46.8 -0.6**
comp=Z,5.3nm,0.4s,baz=80,slow=20,SNR=7.5
comp=Z,2.5nm,0.5s
ULM Lac du Bonnet 60.93 44 P **P** **15 30 07.5 +0.5**
ULM IAmb IAmb 15 30 46.6
comp=Z,11nm,1.0s
ULM Lac du Bonnet 60.93 44 P **P** **15 30 07.5 +0.5**
ULM pmax pmax
comp=Z,11nm,1.0s
EDW2 Edwards Air Fo 60.95 70 P **P** **15 30 08.5 +1.1**
baz=316,SNR=10.0
SNCC San Nicolas Is 61.24 72 P **P** **15 30 10.0 +0.7**
baz=316
GSC Goldstone, Bar 61.32 69 P **P** **15 30 11.2 +1.2**
baz=316
TCRU Three Creeks R 61.37 63 P **P** **15 30 11.3 +0.9**
OBN Obninsk 61.48 325 *i* P **P** **15 30 09.8 -0.7**
OBN *i* 15 30 48.8
OBN *i* *PP **pP** **15 31 14.4 +2.5**
OBN *i* 15 32 30.4
OBN pmax pmax
comp=Z,10.0nm,0.9s
RDMU Red Mountain 61.49 60 P **P** **15 30 12.2 +1.0**
RDMU IAmb IAmb 15 30 13.7
comp=Z,15nm,0.9s
TMUT Trail Mountain 61.54 62 P **P** **15 30 12.5 +0.9**
TMUT IAmb IAmb 15 30 13.9
comp=Z,16nm,0.7s
K22A Casper 61.56 56 P **P** **15 30 12.7 +1.2**
K22A IAmb IAmb 15 30 14.0
comp=Z,9.6nm,0.6s
K22A Casper 61.56 56 P **P** **15 30 13.2 +1.7**
baz=317,SNR=8.6
KNTN Kanton 61.58 143 P **P** **15 30 11.8 +0.1**
MSU Marysvale 61.58 63 P **P** **15 30 12.7 +0.9**
MSU Marysvale 61.58 63 P **P** **15 30 12.7 +0.9**
CCUT Cedar City 61.63 65 P **P** **15 30 13.2 +1.1**
KBL Kabul 61.64 290 P **P** **15 30 10.8 -1.4**
KBL IAmb IAmb 15 30 11.7
comp=Z,10nm,0.9s
KBL Kabul 61.64 290 P **P** **15 30 10.8 -1.4**
KBL pmax pmax
comp=Z,10.0nm,0.9s
P17A Butcher Ranch, 61.66 61 P **P** **15 30 13.3 +1.0**
SBUM Sibu 61.72 232 P **P** **15 30 14.7 +2.0**
SBUM IAmb IAmb 15 30 18.6
comp=Z,6.7nm,0.6s
TUQ Turquoise Moun 61.72 68 P **P** **15 30 14.0 +1.3**
baz=316
RSSD Black Hills 61.73 54 P **P** **15 30 13.6 +0.9**
RSSD Black Hills 61.73 54 P **P** **15 30 13.6 +0.9**
RSSD pmax pmax
comp=Z,24nm,0.8s
RSSD Black Hills 61.73 54 P **P** **15 30 13.9 +1.2**
baz=317
P18A Preston Nutter 61.82 61 P **P** **15 30 14.5 +1.1**
Q16A Castle Valley 61.84 62 P **P** **15 30 14.4 +1.0**
Q16A IAmb IAmb 15 30 16.3
comp=Z,7.8nm,0.7s
MTPU Mount Pierson 61.92 63 P **P** **15 30 15.9 +1.7**
HEC Hector,Ludlow 61.93 69 P **P** **15 30 15.2 +1.3**
baz=317,SNR=10.0
HNR Honiara 61.93 175 P **P** **15 30 16.3 +2.3**
HNR Honiara 61.93 175 P **P** **15 30 16.3 +2.3**
HNR pmax pmax
comp=Z,58nm,0.7s
SCI2 San Clemente I 62.00 72 P **P** **15 30 14.8 +0.4**
baz=317
SRU San Rafael Swe 62.04 62 P **P** **15 30 15.8 +1.0**
SRU IAmb IAmb 15 30 17.0
comp=Z,18nm,0.7s
SRU San Rafael Swe 62.04 62 P **P** **15 30 15.8 +1.0**
SRU pmax pmax
comp=Z,18nm,0.7s
LCMT Little Creek M 62.08 65 P **P** **15 30 16.1 +1.1**
LCMT IAmb IAmb 15 30 17.6
comp=Z,12nm,1.2s
ELS Elsinore Mount 62.16 70 P **P** **15 30 16.2 +0.7**
ELS IAmb IAmb 15 30 17.2
comp=Z,15nm,0.8s
PMG Port Moresby 62.27 190 P **P** **15 30 16.4 +0.2**
PMG Port Moresby 62.27 190 P **P** **15 30 16.4 +0.2**
PMG pmax pmax
comp=Z,54nm,1.3s
PKCU Pink Cliffs 62.28 64 P **P** **15 30 18.3 +1.7**
PKCU IAmb IAmb 15 30 19.4
comp=Z,11nm,0.9s
MURC Murrieta 62.33 70 P **P** **15 30 17.2 +0.7**
baz=317
GMRC Granite Mounta 62.34 68 P **P** **15 30 18.1 +1.3**
baz=317,SNR=9.8
AGMN Agassiz Nation 62.41 46 P **P** **15 30 17.5 +0.6**
baz=320
O20A White River Ci 62.51 59 P **P** **15 30 18.6 +0.8**
O20A White River Ci 62.51 59 P **P** **15 30 18.5 +0.6**
baz=317,SNR=9.5
DOMB Dombas 62.68 343 *e*P **P** **15 30 17.7 -0.7**
BELC Belle Mtn. Jos 62.72 69 P **P** **15 30 19.5 +0.2**
baz=317,SNR=5.1
PFO Pinyon Flats O 62.74 70 P **P** **15 30 19.9 +0.5**
PFO Pinyon Flats O 62.74 70 P **P** **15 30 19.9 +0.5**
PFO pmax pmax
comp=Z,7.0nm,0.9s
PFO Pinyon Flats O 62.74 70 P **P** **15 30 20.2 +0.8**
baz=317
TPFO Pinon Flats 62.75 70 P **P** **15 30 19.7 +0.2**
baz=317
AKN Aaknes 62.90 344 *e*P **P** **15 30 19.2 -0.6**
BORG Borgarnes 62.91 359 P **P** **15 30 20.2 +0.4**
comp=Z,4.3nm,0.5s,baz=170,slow=22,SNR=2.5
comp=Z,4.3nm,0.5s
NC303 NORSAR Array S 63.01 342 P **P** **15 30 19.9 -0.6**
NC303 IAmb IAmb 15 30 55.4
comp=Z,18nm,1.4s
NC303 NORSAR Array S 63.01 342 *e*P **P** **15 30 20.4 -0.2**
NC405 NORSAR Array S 63.05 341 P **P** **15 30 20.1 -0.6**

NC204 NORSAR Array S 63.08 342 P **P** **15 30 20.4 -0.7**
IRM Iron Mountain 63.09 68 P **P** **15 30 22.7 +1.1**
baz=317,SNR=7.0
N23A Red Feather La 63.14 57 P **P** **15 30 23.3 +1.2**
N23A IAmb IAmb 15 30 24.3
comp=Z,12nm,0.8s
N23A Red Feather La 63.14 57 P **P** **15 30 23.3 +1.2**
baz=318,SNR=14
NB201 NORSAR Array S 63.18 342 P **P** **15 30 21.0 -0.7**
NB2 NORSAR Subarra 63.21 342 P **P** **15 30 21.0 -0.9**
baz=23,slow=6.9
NB2 NORSAR Subarra 63.21 342 P **P** **15 30 21.0 -0.9**
comp=Z,2.5nm,0.6s,baz=23,slow=6.9
NOA NORSAR Array B 63.21 342 P **P** **15 30 21.0 -0.9**
comp=Z,2.2nm,0.6s,baz=23,slow=6.6,SNR=18
NOA PcP **PcP** **15 30 55.8 -0.8**
comp=Z,0.9nm,0.7s,baz=26,slow=3.4,SNR=3.5
comp=Z,2.2nm,0.6s
VORR Voronezh 63.26 321 *e*P **P** **15 30 23.2 +0.9**
VORR pmax pmax
comp=Z,70nm,0.4s
BC3 Big Chuckawall 63.28 69 P **P** **15 30 23.3 +0.4**
baz=317
MONP2 Monument Peak 63.29 70 P **P** **15 30 23.4 +0.4**
baz=317
BAR Barrett 63.30 71 P **P** **15 30 23.3 +0.3**
PV23 Carpenter Ridg 63.33 61 P **P** **15 30 24.9 +1.5**
PV23 IAmb IAmb 15 30 25.5
comp=Z,16nm,1.0s
PV10 Paradox Valley 63.37 61 P **P** **15 30 24.9 +1.3**
NC602 NORSAR Array S 63.43 341 P **P** **15 30 23.2 -0.1**
NC602 IAmb IAmb 15 30 32.3
comp=Z,12nm,1.1s
NC602 NORSAR Array S 63.43 341 *e*P **P** **15 30 23.1 -0.1**
KSM Kuching 63.49 233 P **P** **15 30 24.9 +0.6**
PV11 David Mesa, Pa 63.52 61 P **P** **15 30 25.4 +0.9**
PV07 Paradox Valley 63.54 61 P **P** **15 30 25.4 +0.7**
PV07 IAmb IAmb 15 30 26.6
comp=Z,14nm,1.2s
PDMCI Parker Dam,Lak 63.55 68 P **P** **15 30 25.2 +0.7**
baz=317
CBX Cerro Bola 63.57 71 P **P** **15 30 25.6 +0.8**
SWSC Sam W. Stewart 63.60 70 P **P** **15 30 25.4 +0.5**
baz=317
IKP In-Ko-Pah, Jac 63.64 70 P **P** **15 30 25.8 +0.5**
baz=318
PV13 Radium Mtn., P 63.65 61 P **P** **15 30 26.1 +0.7**
RMX La Rumorosa 63.69 70 P **P** **15 30 26.7 +1.0**
PV15 Paradox Valley 63.70 61 P **P** **15 30 26.4 +0.6**
BLYC Blythe 63.74 68 P **P** **15 30 26.8 +1.1**
BLYC IAmb IAmb 15 30 28.0
comp=Z,18nm,1.1s
YUH Yuha Desert 63.75 70 P **P** **15 30 26.4 +0.5**
YUH IAmb IAmb 15 30 27.6
comp=Z,8.8nm,0.8s
SMCO Snowmass 63.87 59 P **P** **15 30 27.8 +0.7**
SMCO IAmb IAmb 15 30 29.0
comp=Z,9.4nm,0.8s
GLA Glamis 64.08 69 P **P** **15 30 29.0 +1.0**
GLA IAmb IAmb 15 30 30.3
comp=Z,22nm,1.2s
GLA Glamis 64.08 69 P **P** **15 30 29.0 +1.0**
GLA pmax pmax
comp=Z,22nm,1.2s
GLA Glamis 64.08 69 P **P** **15 30 29.3 +1.3**
baz=318
ISCO Idaho Springs 64.12 58 P **P** **15 30 29.7 +1.2**
ISCO IAmb IAmb 15 30 31.1
comp=Z,13nm,1.1s
ISCO Idaho Springs 64.12 58 P **P** **15 30 29.7 +1.2**
ISCO pmax pmax
comp=Z,13nm,1.2s
ISCO Idaho Springs 64.12 58 P **P** **15 30 30.1 +1.5**
baz=318,SNR=10
WUAZ Wupatki 64.20 65 P **P** **15 30 30.2 +1.2**
WUAZ IAmb IAmb 15 30 32.2
comp=Z,10nm,1.1s
WUAZ Wupatki 64.20 65 P **P** **15 30 30.5 +1.6**
baz=318,SNR=6.8
MVCO Mesa Verde 64.52 62 P **P** **15 30 31.3 +0.2**
MVCO IAmb IAmb 15 30 33.1
comp=Z,11nm,1.1s
MVCO Mesa Verde 64.52 62 P **P** **15 30 32.2 +1.2**
baz=318
EYMN Ely 64.55 43 P **P** **15 30 30.7 -0.1**
EYMN IAmb IAmb 15 30 31.9
comp=Z,12nm,0.9s
EYMN Ely 64.55 43 P **P** **15 30 31.2 +0.4**
baz=322
NACGM Naroch 64.83 330 *e*P P 15 30 27.6 -4.9
baz=31
MNK Minsk 64.84 329 *i* P P 15 30 27.4 -5.1
MNK *i* 15 32 54.2
MNK *i* PPP PPP 15 34 31.5
MNK *i* S **S** **15 38 44.6 -5.6**
MNK *i* SS **SS** **15 43 04.4 -1.8**
MNK pmax pmax
comp=N,25nm,0.8s
MNK pmax pmax
comp=Z,35nm,1.1s
MNK pmax pmax
comp=E,1.0nm,0.6s
MNK MLR MLR
comp=N,309nm,15.0s
MNK MLR MLR
comp=Z,5μm,15.0s
MNK MLR MLR
comp=E,3.0nm,12.0s
MNK Minsk 64.84 329 *i* P P 15 30 27.5 -5.0
comp=E,1.0nm,0.6s
MNK *i* P P 15 30 27.5 -5.0
comp=N,25nm,0.8s
MNK *i* P P 15 30 27.5 -5.0
comp=Z,35nm,1.1s,baz=32
MNK *i* PP **PP** **15 32 54.3 -4.0**
MNK *i* PPP PPP 15 34 31.5
MNK *i* S **S** **15 38 44.7 -5.6**
MNK *i* sS sS 15 40 40.9 +1.1
MNK *i* SS **SS** **15 43 04.5 -1.8**
MNK *i* SSS SSS 15 46 17.2
MNK *i* LRM MLR 16 01 07.0
comp=N,309nm,14.8s
MNK *i* LRM MLR 16 01 25.5
comp=Z,5μm,15.2s
MNK *i* LRM MLR 16 01 29.5
comp=E,3.0nm,11.6s
IVI Ivigtut 64.88 13 P **P** **15 30 33.0 +0.5**
Q24A Divide 64.98 58 P **P** **15 30 34.8 +0.7**
Q24A Divide 64.98 58 P **P** **15 30 34.8 +0.7**
baz=319
S22A 4UR Ranch, Cre 65.01 60 P **P** **15 30 35.5 +1.3**
S22A IAmb IAmb 15 30 36.9
comp=Z,12nm,1.2s
S22A 4UR Ranch, Cre 65.01 60 P **P** **15 30 35.6 +1.3**
baz=318,SNR=9.3
OGNE Ogallala 65.08 55 P **P** **15 30 35.2 +0.8**
OGNE Ogallala 65.08 55 P **P** **15 30 35.5 +1.1**
baz=319
GEYT Alibeck 65.16 300 P **P** **15 30 34.8 -0.1**
comp=Z,16nm,0.8s,baz=48,slow=4.4,SNR=16
comp=Z,16nm,0.8s
GEYT Alibeck 65.16 300 P **P** **15 30 34.6 -0.3**
GEYT IAmb IAmb 15 30 36.1
comp=Z,11nm,0.8s
GYA0B ALIBECK ARRAY 65.16 300 P **P** **15 30 34.7 -0.2**
GYA0B IAmb IAmb 15 30 36.0
comp=Z,14nm,0.8s
KULM Kulim 65.28 244 P **P** **15 30 36.5 +0.7**
W18A Petrified Fore 65.40 64 P **P** **15 30 36.9 +0.3**
baz=318
ECSD EROS Data Cent 65.56 49 P **P** **15 30 37.6 +0.2**
ECSD EROS Data Cent 65.56 49 P **P** **15 30 37.4 +0.1**
baz=321,SNR=14
HRA Herat 65.57 295 P **P** **15 30 37.6 -0.2**
HRA IAmb IAmb 15 30 38.7
comp=Z,6.1nm,0.8s
E38A The Farm, Brul 65.58 44 P **P** **15 30 37.8 +0.4**
E38A IAmb IAmb 15 30 38.1
comp=Z,10nm,0.8s
BLS5 Blasjo 65.59 343 *e*P **P** **15 30 36.5 -0.8**
SDCO Great Sand Dun 65.71 59 P **P** **15 30 39.7 +1.0**
baz=319,SNR=8.6
214A Organ Pipe Nat 66.03 68 P **P** **15 30 41.6 +1.1**
baz=318
KSCO Kaye Shedlock' 66.24 57 P **P** **15 30 42.7 +0.8**
baz=320

SNART Snartemo 66.48 343 *e*P **P** **15 30 42.5 -0.3**
T25A Trinidad 66.74 59 P **P** **15 30 45.8 +0.7**
baz=319
TUC Tucson 66.91 67 P **P** **15 30 47.1 +0.9**
TUC Tucson 66.91 67 P **P** **15 30 47.1 +0.9**
TUC pmax pmax
comp=Z,3.0nm,0.8s
TUC Tucson 66.91 67 P **P** **15 30 47.0 +0.9**
baz=319
L34A Svendsen Farm, 67.04 50 P **P** **15 30 46.4 -0.3**
SCHQ Schefferville 67.17 25 P **P** **15 30 47.5 +0.2**
comp=Z,2.4nm,0.6s,baz=328,slow=6.0,SNR=5.8
comp=Z,2.4nm,0.6s
SCHQ Schefferville 67.17 25 P **P** **15 30 47.5 +0.2**
COEN Coen 67.24 193 P **P** **15 30 48.5 +0.4**
ANMO Albuquerque 67.31 62 P **P** **15 30 49.1 +1.2**
ANMO Albuquerque 67.31 62 P **P** **15 30 49.9 +1.2**
ANMO pmax pmax
comp=Z,5.0nm,0.7s
ANMO Albuquerque 67.31 62 P **P** **15 30 49.5 +0.8**
baz=319
AKASG Malin Array Be 67.64 327 P **P** **15 30 48.8 -1.5**
comp=Z,6.2nm,0.5s,baz=31,slow=6.9,SNR=24
comp=Z,6.2nm,0.5s
AKASG Malin Array Be 67.64 327 *ce*P **P** **15 30 48.7 -1.5**
AKASG pmax pmax
comp=Z,7.0nm,0.5s
AKBB Malin Array Si 67.64 327 *d i*P **P** **15 30 48.7 -1.5**
AKBB pmax pmax
comp=Z,5.0nm,0.6s
BNM Barren Site 67.82 63 P **P** **15 30 53.4 +1.4**
NCK Nalchik 67.94 313⇑ *e*P **P** **15 30 51.3 -1.0**
NCK pmax pmax
comp=Z,12nm,0.4s
KIV Kislovodsk 67.98 314 *i* P **P** **15 30 51.7 -0.9**
KIV pmax pmax
comp=Z,4.0nm,0.8s
KBZ Khabaz 68.07 314 P **P** **15 30 51.9 -1.1**
comp=Z,5.4nm,0.7s,baz=88,slow=2.1,SNR=10
comp=Z,5.4nm,0.7s
KBZ Khabaz 68.07 314 *de*P **P** **15 30 52.8 -0.2**
KBZ pmax pmax
comp=Z,12nm,1.4s
121A Cookes Peak, D 68.41 65 P **P** **15 30 56.8 +1.2**
baz=320
MTN Manton Dam 68.64 206 P **P** **15 30 57.2 +0.4**
ONI Oni 68.73 313 P **P** **15 30 56.9 -0.3**
ONI IAmb IAmb 15 30 58.4
comp=Z,12nm,1.3s
ONI Oni 68.73 313 P **P** **15 30 56.9 -0.3**
ONI pmax pmax
comp=Z,12nm,1.3s
H43A Windswept, Lux 68.88 43 P **P** **15 30 57.9 -0.1**
H43A IAmb IAmb 15 30 59.0
comp=Z,13nm,0.8s
ANN Anapa 69.51 318 *e*P P 15 30 51.6 -10
ANN *e**PP pP 15 32 00.1 -4.8
ANN *e*PPP PPP 15 35 20.1
ANN pmax pmax
comp=Z,42nm,0.9s
VLDQ Val d'Or 69.82 35 P **P** **15 31 02.4 -1.3**
VLDQ IAmb IAmb 15 31 03.5
comp=Z,10nm,0.9s
AMTX Amarillo 69.88 59 P **P** **15 31 05.2 +0.8**
AMTX IAmb IAmb 15 31 06.6
comp=Z,13nm,1.1s
AMTX Amarillo 69.88 59 P **P** **15 31 05.4 +0.9**
baz=321
GNI Garni 70.09 311 P **P** **15 31 05.6 0.0**
comp=Z,6.1nm,0.3s,baz=87,slow=7.6,SNR=3.3
comp=Z,6.1nm,0.3s
GNI Garni 70.09 311⇓ *e*P **P** **15 31 06.3 +0.6**
GNI pmax pmax
comp=Z,12nm,1.3s
SORM Soroca 70.12 326⇓ P **P** **15 31 03.9 -1.6**
SORM Soroca 70.12 326⇓ P **P** **15 31 03.9 -1.6**
P38A Dawn 70.21 50 P **P** **15 31 06.1 -0.1**
P38A IAmb IAmb 15 31 07.3
comp=Z,13nm,0.9s
GSI Gunungsitoli 70.27 245 P **P** **15 31 06.9 0.0**
GSI IAmb IAmb 15 31 10.6
comp=Z,9.6nm,0.6s
GSI Gunungsitoli 70.27 245 P **P** **15 31 07.2 +0.3**
comp=Z,15nm,1.2s
MNTX Cornudas Mount 70.36 63 P **P** **15 31 08.0 +0.7**
MNTX IAmb IAmb 15 31 09.3
comp=Z,6.7nm,0.7s
MNTX Cornudas Mount 70.36 63 P **P** **15 31 08.4 +1.2**
baz=320,SNR=16
T35A Sooner Cattle 70.92 54 P **P** **15 31 10.0 -0.5**
T35A IAmb IAmb 15 31 11.3
comp=Z,6.3nm,0.8s
P40A Paris 70.98 49 P **P** **15 31 10.8 0.0**
P40A IAmb IAmb 15 31 12.0
comp=Z,16nm,1.0s
EKA Eskdalemuir Ar 71.00 348 P **P** **15 31 10.1 -0.5**
comp=Z,2.3nm,0.5s,baz=18,slow=5.3,SNR=14
comp=Z,2.3nm,0.5s
OJC Ojcow 71.00 332 P **P** **15 31 09.5 -1.2**
OJC IAmb IAmb 15 31 10.9
comp=Z,13nm,1.4s
OJC Ojcow 71.00 332 P **P** **15 31 09.5 -1.2**
OJC pmax pmax
comp=Z,13nm,1.4s
ESK Eskdalemuir 71.02 348 P **P** **15 31 10.4 -0.4**
ESK Eskdalemuir 71.02 348 P **P** **15 31 10.4 -0.4**
ESK pmax pmax
comp=Z,34nm,1.4s
HDIL Hopedale 71.40 47 P **P** **15 31 13.5 +0.2**
baz=324
KOLS Kolonicke sedl 71.41 330 *e*P **P** **15 31 13.0 -0.2**
KOLS pmax pmax
comp=Z,7.0nm,0.6s
KOLS Kolonicke sedl 71.41 330 *e*P **P** **15 31 13.0 -0.2**
WMOK Wichita Mounta 71.49 57 P **P** **15 31 14.4 +0.4**
WMOK IAmb IAmb 15 31 15.4
comp=Z,6.7nm,0.8s
WMOK Wichita Mounta 71.49 57 P **P** **15 31 14.4 +0.4**
WMOK pmax pmax
comp=Z,7.0nm,0.9s
WMOK Wichita Mounta 71.49 57 P **P** **15 31 14.3 +0.4**
baz=322
BUR08 Bucovina Ar. S 71.61 327 P **P** **15 31 14.0 -0.6**
BUR08 IAmb IAmb 15 31 14.6
comp=Z,5.1nm,0.6s
BURAR Bucovina Array 71.63 327⇑ P **P** **15 31 13.8 -0.9**
BURAR Bucovina Array 71.63 327 P **P** **15 31 14.0 -0.7**
BURAR IAmb IAmb 15 31 15.0
comp=Z,7.5nm,0.7s
BURAR Bucovina Array 71.63 327⇑ P **P** **15 31 13.8 -0.9**
CLL Collm 71.81 337 *i* P **P** **15 31 14.6 -0.9**
CLL pmax pmax
comp=Z,4.0nm,0.7s
CLL Collm 71.81 337 *i* P **P** **15 31 14.6 -0.9**
comp=Z,4.0nm,0.7s
CLL *e*pP PcP 15 31 19.0 -14
S39A Bolivar 71.85 51 P **P** **15 31 15.0 -1.1**
S39A IAmb IAmb 15 31 16.3
comp=Z,8.6nm,1.1s
R40A Maddies Statio 71.87 50 P **P** **15 31 15.6 -0.6**
R40A IAmb IAmb 15 31 17.0
comp=Z,14nm,1.2s
KRLC Kraliky 71.97 334 *e*P **P** **15 31 15.7 -0.9**
KRLC smax smax
comp=N,2.0nm,0.4s
KRLC Kraliky 71.97 334 *e*P **P** **15 31 15.7 -0.9**
KNRA Kununurra 71.99 208 P **P** **15 31 17.8 +0.8**
KNRA IAmb IAmb 15 31 56.9
comp=Z,20nm,1.1s
MORC Moravsky Berou 72.03 333 P **P** **15 31 16.4 -0.6**
MORC Moravsky Berou 72.03 333 P **P** **15 31 16.4 -0.6**
MORC pmax pmax
comp=Z,3.0nm,0.6s
LANS Liptovska Anna 72.05 332 *e*P **P** **15 31 17.8 +0.7**
LANS pmax pmax
comp=Z,6.0nm,0.6s
LANS Liptovska Anna 72.05 332 *e*P **P** **15 31 17.8 +0.7**
TUL1 Leonard 72.07 54 P **P** **15 31 17.3 -0.1**
TUL1 Leonard 72.07 54 P **P** **15 31 17.8 +0.4**
baz=323
U38A Gravette 72.34 53 P **P** **15 31 18.6 -0.4**
U38A IAmb IAmb 15 31 19.7
comp=Z,8.2nm,0.8s
CCM Cathedral Cave 72.53 50 P **P** **15 31 19.1 -1.0**
CCM Cathedral Cave 72.53 50 P **P** **15 31 19.1 -1.0**
CCM pmax pmax
comp=Z,6.0nm,1.0s
CCM Cathedral Cave 72.53 50 P **P** **15 31 20.1 0.0**
baz=324
VRI Vrincioaia 72.64 325⇑ P P 15 31 13.6 -7.0
VRI Vrincioaia 72.64 325⇑ P P 15 31 13.6 -7.0
MSVF Nonsavu 72.67 158 P **P** **15 31 22.3 +1.2**
MSVF IAmb IAmb 15 31 43.1
comp=Z,25nm,1.3s
MSVF Nonsavu 72.67 158 P **P** **15 31 22.3 +1.2**
MSVF pmax pmax
comp=Z,25nm,1.3s
HHAR Hobbs 72.68 53 P **P** **15 31 20.6 -0.4**
ABTX Abilene, Hawle 72.70 59 P **P** **15 31 21.1 -0.1**
ABTX IAmb IAmb 15 31 22.5
comp=Z,12nm,1.1s
ABTX Abilene, Hawle 72.70 59 P **P** **15 31 21.7 +0.5**
baz=322
VRAC Vranov 72.71 333 P **P** **15 31 21.0 +0.1**
comp=Z,1.2nm,0.4s,baz=23,slow=8.4,SNR=3.0
comp=Z,1.2nm,0.4s
MGMO Mountain Grove 72.78 51 P **P** **15 31 20.9 -0.7**
MGMO IAmb IAmb 15 31 21.6
comp=Z,6.1nm,0.5s
VYHS Vyhne 72.82 332 *e*P **P** **15 31 21.5 -0.1**
VYHS pmax pmax
comp=Z,3.0nm,0.6s
VYHS Vyhne 72.82 332 *e*P **P** **15 31 21.5 -0.1**
CTAO Charters Tower 72.92 190 P **P** **15 31 22.5 +0.1**
CTAO IAmb IAmb 15 31 23.5
comp=Z,7.5nm,0.9s
CTAO Charters Tower 72.92 190 P **P** **15 31 22.5 +0.1**
CTAO pmax pmax
comp=Z,7.0nm,0.9s
TPGR Topolog 72.92 324⇑ P **P** **15 31 21.4 -0.8**
FVM French Village 72.97 49 P **P** **15 31 22.6 -0.1**
FVM IAmb IAmb 15 31 23.6
comp=Z,10nm,0.8s
FVM French Village 72.97 49 P **P** **15 31 22.6 -0.1**
FVM pmax pmax
comp=Z,10.0nm,0.9s
P46A Rosedale 73.09 46 P **P** **15 31 23.0 -0.2**
TX31 Lajitas Ar. Si 73.12 64 P **P** **15 31 24.6 +0.8**
TX32 Lajitas Array 73.12 64 P **P** **15 31 24.6 +0.9**
TX32 IAmb IAmb 15 31 25.8
comp=Z,7.9nm,0.8s
TXAR Lajitas Array 73.12 64 P **P** **15 31 24.5 +0.7**
comp=Z,12nm,0.8s,baz=299,slow=5.3,SNR=130
comp=Z,12nm,0.8s
TXAR Lajitas Array 73.12 64 P **P** **15 31 24.6 +0.8**
TXAR Lajitas Array 73.12 64 P **P** **15 31 24.6 +0.8**
DRGR 73.17 328⇑ P **P** **15 31 22.9 -0.8**
DRGR 73.17 328⇑ P **P** **15 31 22.9 -0.8**
MLR Muntele Rosu 73.24 326⇓ P **P** **15 31 24.6 +0.4**
MLR Muntele Rosu 73.24 326 P **P** **15 31 24.8 +0.6**
comp=Z,7.0nm,0.6s,baz=154,slow=1.7,SNR=13
comp=Z,7.0nm,0.6s
MLR Muntele Rosu 73.24 326 P **P** **15 31 24.3 +0.1**
MLR IAmb IAmb 15 31 25.3
comp=Z,6.8nm,0.6s
D62A Allapoint, All 73.48 30 P **P** **15 31 25.6 +0.2**
D62A IAmb IAmb 15 31 29.6
comp=Z,8.2nm,1.1s
VOIR 73.59 326⇑ P **P** **15 31 25.9 -0.3**
VOIR 73.59 326⇑ P **P** **15 31 25.9 -0.3**
W39A Magazine 73.62 53 P **P** **15 31 26.1 -0.3**
W39A Magazine 73.62 53 P **P** **15 31 26.6 +0.1**
baz=324
KHC Kasperske Hory 73.67 335 P **P** **15 31 26.1 -0.4**
KHC Kasperske Hory 73.67 335⇓ *e*P **P** **15 31 26.4 -0.1**
KHC pmax pmax
comp=Z,19nm,1.8s
KHC Kasperske Hory 73.67 335 *e*P **P** **15 31 26.5 -0.1**
SIUC Southern Illin 73.74 49 P **P** **15 31 27.2 +0.1**
E62A Clayton Lake 73.75 31 P **P** **15 31 27.3 +0.3**
E62A IAmb IAmb 15 31 41.8
comp=Z,11nm,1.1s
S44A Carbondale 73.75 49 P **P** **15 31 26.9 -0.2**
S44A IAmb IAmb 15 31 28.2
comp=Z,14nm,0.8s
ARR Arges 73.80 327⇑ P **P** **15 31 27.7 +0.3**
FCAR Ozark Folk Cen 73.87 52 P **P** **15 31 27.3 -0.5**
FCAR IAmb IAmb 15 31 28.4
comp=Z,8.0nm,0.9s
GEC2 GERESS Array S 73.90 335 P **P** **15 31 27.4 -0.5**
GERES GERESS Array B 73.90 335 P **P** **15 31 27.4 -0.5**
comp=Z,1.8nm,0.5s,baz=40,slow=7.9,SNR=19
comp=Z,1.8nm,0.5s
M52A Chesterland 73.94 41 P **P** **15 31 28.4 +0.2**
SIRR Siria 73.97 329⇑ P **P** **15 31 27.5 -0.8**
MIAR Mount Ida 74.25 53 P **P** **15 31 30.1 0.0**
MIAR IAmb IAmb 15 31 31.4
comp=Z,7.5nm,0.8s
MIAR Mount Ida 74.25 53 P **P** **15 31 30.1 0.0**
MIAR pmax pmax
comp=Z,8.0nm,0.8s
MIAR Mount Ida 74.25 53 P **P** **15 31 30.4 +0.3**
baz=324,SNR=6.9
WHAR Wooly Hollow 74.27 52 P **P** **15 31 29.8 -0.4**
WHAR IAmb IAmb 15 31 30.7
comp=Z,8.7nm,0.9s
WVNY West Valley, N 74.28 39 P **P** **15 31 30.0 -0.2**
WVNY IAmb IAmb 15 31 30.6
comp=Z,8.6nm,0.8s
M53A WI Miller and 74.30 41 P **P** **15 31 29.8 -0.4**
M53A WI Miller and 74.30 41 P **P** **15 31 30.6 +0.3**
baz=328,SNR=5.0
JCT Junction City 74.31 60 P **P** **15 31 30.9 +0.3**
baz=322
WHTX Lake Whitney, 74.34 58 P **P** **15 31 30.9 +0.3**
baz=323
W41B Gary Mavity, V 74.39 52 P **P** **15 31 30.7 -0.1**
W41B IAmb IAmb 15 31 32.0
comp=Z,12nm,0.8s
W41B Gary Mavity, V 74.39 52 P **P** **15 31 30.9 +0.1**
baz=324,SNR=8.9
WB0 Warramunga Arr 74.51 201 P **P** **15 31 31.6 0.0**
WB0 IAmb IAmb 15 32 07.8
comp=Z,17nm,1.4s
WR0 Warramunga Arr 74.66 201 P **P** **15 31 32.4 0.0**
WRAB Tennant Creek 74.68 201⇑ *i*P **P** **15 31 32.5 0.0**
WRAB pmax pmax
comp=Z,11nm,1.2s
WB2 Warramunga Arr 74.69 201 P **P** **15 31 32.6 0.0**
WB2 IAmb IAmb 15 31 33.7
comp=Z,9.7nm,1.1s
WRA Warramunga Arr 74.69 201 P **P** **15 31 32.9 +0.3**
comp=Z,2.7nm,0.5s,baz=19,slow=6.1,SNR=63
comp=Z,2.7nm,0.5s
WRA Warramunga Arr 74.69 201 P **P** **15 31 32.4 -0.2**
WRA Warramunga Arr 74.69 201 P **P** **15 31 32.4 -0.2**
N53A Lisbon 74.77 41 P **P** **15 31 32.8 -0.2**
N53A IAmb IAmb 15 31 34.0
comp=Z,11nm,0.9s
J59A Piesco 74.87 36 P **P** **15 31 33.0 -0.5**
J59A IAmb IAmb 15 32 00.2
comp=Z,13nm,1.4s
MORH Mrgy, Hungar 74.94 331⇓ P **P** **15 31 32.8 -0.9**
HERR Herculane 74.96 328⇑ P **P** **15 31 33.0 -0.9**
M55A Ridgway 75.02 39 P **P** **15 31 34.2 -0.2**
O53A New Philadelph 75.09 42 P **P** **15 31 34.8 0.0**
baz=328
BNN Bunyan 75.10 316 P **P** **15 31 34.4 -0.7**
BNN IAmb IAmb 15 31 37.1
comp=Z,17nm,1.0s
BR131 Keskin Array S 75.29 318 P **P** **15 31 35.3 -0.8**
BR131 Keskin Array S 75.29 318 P **P** **15 31 35.3 -0.8**
BR131 pmax pmax
comp=Z,4.0nm,0.7s
BRTR Keskin Array B 75.29 318 P **P** **15 31 35.6 -0.5**
comp=Z,1.8nm,0.6s,baz=54,slow=2.2,SNR=6.9
comp=Z,1.8nm,0.6s
BRTR Keskin Array B 75.29 318 P **P** **15 31 35.5 -0.7**
T47A Sharon Grove 75.30 48 P **P** **15 31 35.6 -0.4**
T47A IAmb IAmb 15 31 37.4
comp=Z,11nm,0.7s
KBA Koelnbreinsper 75.63 335 *e*P **P** **15 31 38.6 +0.7**
comp=Z,7.6nm,0.6s
WVT Waverly 75.68 49 P **P** **15 31 38.4 +0.2**
WVT IAmb IAmb 15 31 39.5
comp=Z,8.6nm,0.6s
WVT Waverly 75.68 49 P **P** **15 31 38.4 +0.2**
WVT pmax pmax
comp=Z,9.0nm,0.6s
WVT Waverly 75.68 49 P **P** **15 31 38.7 +0.5**

baz=326
M57A Sunshine Farm, 75.76 38 P P 15 31 38.5 -0.1
M57A IAmb IAmb 15 31 39.3
comp=Z,11nm,0.7s
L59A Walton 75.79 37 P P 15 31 38.2 -0.6
L59A IAmb IAmb 15 31 39.7
comp=Z,11nm,1.1s
OBKA Obir 75.83 334 *e*P **P 15 31 39.1 +0.1**
comp=Z,2.1nm,0.5s
WATA Walderalm 75.84 336 *e*P **P 15 31 39.2 +0.2**
comp=Z,3.0nm,0.4s
LMN Caledonia Moun 75.85 28 P P 15 31 39.1 +0.1
LMN IAmb IAmb 15 32 15.7
comp=Z,17nm,1.4s
WTTA Wattenberg 75.89 336 *e*P **P 15 31 39.9 +0.5**
comp=Z,2.0nm,0.3s
MOTA Moosalm 75.95 336 *e*P **P 15 31 39.8 +0.1**
comp=Z,0.9nm,0.3s
SSPA Standing Stone 76.07 39 P P 15 31 40.4 +0.1
SSPA IAmb IAmb 15 31 54.8
comp=Z,15nm,1.5s
SSPA Standing Stone 76.07 39 P P 15 31 39.9 -0.4
baz=330
ABTA Abfaltersbach 76.15 335 *e*P **P 15 31 41.1 +0.3**
comp=Z,1.1nm,0.5s
PRED Cave del Predi 76.16 334 P P 15 31 39.9 -0.9
UOSS Minazif 76.16 293 P P 15 31 39.8 -1.2
UOSS IAmb IAmb 15 31 47.9
comp=Z,12nm,1.1s
OXF Oxford 76.28 51 P P 15 31 41.5 -0.1
baz=326
T50A Nancy 76.28 46 P P 15 31 41.8 +0.2
T50A IAmb IAmb 15 31 42.7
comp=Z,7.9nm,0.8s
U49A Red Boiling Sp 76.28 47 P P 15 31 41.8 +0.2
U49A IAmb IAmb 15 31 42.7
comp=Z,8.2nm,0.7s
BOVS Bovan 76.30 328 ⇑P **P 15 31 39.6 -1.9**
FETA Feichten 76.34 336 *e*P **P 15 31 42.0 0.0**
comp=Z,3.1nm,0.6s
CLTN Cedars of Leba 76.39 48 P P 15 31 42.3 +0.1
CLTN IAmb IAmb 15 31 43.4
comp=Z,13nm,0.8s
DIVS Divibare 76.43 329 P P 15 31 41.1 -1.3
V48A Smith Brothers 76.46 48 P P 15 31 40.6 -2.0
V48A IAmb IAmb 15 31 41.9
comp=Z,13nm,0.8s
DAVOX Davos/Dischmat 76.77 337 P P 15 31 44.7 +0.3
comp=Z,5.4nm,0.5s,baz=327,slow=23,SNR=11
comp=Z,5.4nm,0.5s
FUORN Ofenpass-Fuorn 76.83 336 P P 15 31 44.8 0.0
CTI Castel Tesino 77.02 335 P P 15 31 44.6 -1.1
CTI Castel Tesino 77.02 335 P P 15 31 44.6 -1.1
CTI pmax pmax
comp=Z,3.0nm,0.5s
TUE Stuetta 77.19 337 P P 15 31 46.6 -0.1
TUE IAmb IAmb 15 31 48.7
comp=Z,8.6nm,0.7s
RDO Rodhopi 77.19 324 P P 15 31 46.1 -0.4
TZTN Tazewell 77.24 45 P P 15 31 47.0 +0.1
TZTN IAmb IAmb 15 32 27.7
comp=Z,13nm,0.8s
TZTN Tazewell 77.24 45 P P 15 31 47.2 +0.3
baz=328
PAL Palisades 77.24 36 P P 15 31 46.9 +0.1
baz=332
SWET Sewanee 77.30 48 P P 15 31 47.1 -0.2
SWET IAmb IAmb 15 31 48.0
comp=Z,15nm,0.8s
X48A Hartselle 77.42 49 P P 15 31 47.4 -0.5
X48A IAmb IAmb 15 31 48.5
comp=Z,5.4nm,0.7s
V51A Loudon 77.51 46 P P 15 31 48.1 -0.3
V51A IAmb IAmb 15 31 49.4
comp=Z,6.8nm,0.6s
CPCT Cooper Cave 77.73 47 P P 15 31 49.3 -0.4
CPCT IAmb IAmb 15 31 50.5
comp=Z,7.4nm,0.6s
EIDS Eidsvold 77.80 184 P P 15 31 50.8 +0.9
EIDS IAmb IAmb 15 31 51.3
comp=Z,5.3nm,0.7s
V52A Sevierville 77.81 46 P P 15 31 49.9 -0.2
V52A IAmb IAmb 15 31 50.8
comp=Z,9.1nm,0.6s
PDG Podgorica 78.17 329 P P 15 31 50.7 -1.2
PDG IAmb IAmb 15 31 51.9
comp=Z,5.3nm,0.4s
Y49A Blount Mountai 78.21 49 P P 15 31 52.0 -0.3
Y49A IAmb IAmb 15 31 52.9
comp=Z,7.6nm,0.8s
AS31 Alice Springs 78.38 201 P P 15 31 54.0 +0.8
ASAR Alice Springs 78.39 201 P P 15 31 54.2 +1.0
comp=Z,5.9nm,0.6s,baz=14,slow=5.2,SNR=104
comp=Z,5.9nm,0.6s
ASAR Alice Springs 78.39 201 P P 15 31 53.9 +0.7
JSRW J. Sargeant Re 78.62 41 P P 15 31 54.4 0.0
LRAL Lakeview Retre 78.62 50 P P 15 31 54.0 -0.6
LRAL IAmb IAmb 15 31 54.9
comp=Z,6.4nm,0.6s
LRAL Lakeview Retre 78.62 50 P P 15 31 54.2 -0.3
baz=327
BG3 Lake Jocassee 78.81 46 P P 15 31 55.8 +0.2
BG3 IAmb IAmb 15 31 56.8
comp=Z,7.0nm,0.8s
BNI Bardonecchia 79.15 338 P P 15 31 57.6 +0.3
BNI IAmb IAmb 15 31 58.7
comp=Z,4.2nm,0.6s
BNI Bardonecchia 79.15 338 P P 15 31 57.6 +0.3
BNI pmax pmax
comp=Z,4.0nm,0.6s
LIT Litokhoron 79.19 325 P P 15 31 56.5 -1.0
LIT IAmb IAmb 15 32 34.4
comp=Z,11nm,1.4s
LIT Litokhoron 79.19 325 P P 15 31 56.5 -1.0
LIT pmax pmax
comp=Z,11nm,1.4s
KMSC Kings Mountain 79.38 45 P P 15 31 58.3 -0.3
baz=329
CSS Mathiatis 79.46 315 P P 15 31 58.0 -1.1
CSS IAmb IAmb 15 32 40.6
comp=Z,11nm,0.9s
OSSC Osservatorio P 79.48 335 P P 15 31 58.0 -1.0
OSSC IAmb IAmb 15 31 59.2
comp=Z,7.7nm,0.5s
NRCA Norcia 79.62 333 P P 15 31 59.8 -0.1
NRCA IAmb IAmb 15 32 02.4
comp=Z,12nm,0.7s
250A Grady 79.84 50 P P 15 32 00.9 -0.2
250A IAmb IAmb 15 32 23.3
comp=Z,10nm,0.7s
GOGA Godfrey 79.92 47 P P 15 32 01.3 -0.2
GOGA Godfrey 79.92 47 P P 15 32 01.3 -0.2
GOGA pmax pmax
comp=Z,6.0nm,1.1s
JSC Jenkinsville 80.14 45 P P 15 32 02.4 -0.3
JSC IAmb IAmb 15 32 03.1
comp=Z,5.6nm,0.5s
JSC Jenkinsville 80.14 45 P P 15 32 02.4 -0.3
JSC pmax pmax
comp=Z,6.0nm,0.5s
ARG Arkhangelos 80.53 320 P P 15 32 04.4 -0.3
ARG Arkhangelos 80.53 320 P P 15 32 04.4 -0.3
ARG pmax pmax
comp=Z,35nm,1.1s
SCTE Santa Cesarea 80.56 328 P P 15 32 03.7 -1.1
TIP Timpagrande 81.91 329 ⇑P **P 15 32 11.8 -0.2**
TIP Timpagrande 81.91 329 P P 15 32 11.5 -0.4
TIP IAmb IAmb 15 32 19.9
comp=Z,7.7nm,1.1s
IDI Anoyia 82.59 322 P P 15 32 13.9 -1.7
RAYN Ar Rayn 83.13 300 P P 15 32 17.6 -0.9
RAYN Ar Rayn 83.13 300 P P 15 32 17.6 -0.9
RAYN pmax pmax
comp=Z,3.0nm,0.8s
STKA Stephens Creek 85.10 192 P P 15 32 27.6 -0.2
comp=Z,3.0nm,0.7s,baz=356,slow=7.1,SNR=7.5
comp=Z,3.0nm,0.7s
STKA Stephens Creek 85.10 192 P P 15 32 28.3 +0.5
STKA Stephens Creek 85.10 192 P P 15 32 28.3 +0.5
STKA pmax pmax
comp=Z,3.0nm,1.4s
MTE Manteigas 86.22 347 P P 15 32 33.1 -0.5
ESBB Sonseca Array 86.40 345 P P 15 32 34.1 -0.3
ESBB IAmb IAmb 15 32 34.6
comp=Z,4.6nm,0.7s
ESDC Sonseca Array 86.40 345 P P 15 32 34.0 -0.5
comp=Z,3.8nm,0.6s,baz=4.2,slow=4.1,SNR=30
comp=Z,3.8nm,0.6s
ESDC Sonseca Array 86.40 345 P P 15 32 34.0 -0.5
FORT Forrest 86.57 204 P P 15 32 35.0 0.0
PAB San Pablo 86.59 345 P P 15 32 34.8 -0.6
PAB IAmb IAmb 15 32 35.8
comp=Z,4.6nm,0.8s
PAB San Pablo 86.59 345 P P 15 32 34.8 -0.6
PAB pmax pmax
comp=Z,5.0nm,0.8s
KEST Kesra 87.28 333 P P 15 32 38.4 -0.4
comp=Z,4.0nm,0.5s,baz=350,slow=1.3,SNR=10.0
comp=Z,4.0nm,0.5s
KEST Kesra 87.28 333 P P 15 32 38.6 -0.2
KEST IAmb IAmb 15 32 40.1
comp=Z,5.6nm,0.6s
CPUP Villa Florida 143.81 56 PKP PKPbc 15 39 23.4 -0.3
comp=Z,5.1nm,0.6s,baz=326,slow=4.2,SNR=13
PLCA Paso Flores 146.54 88 PKPbc PKPbc 15 39 30.9 -0.7
comp=Z,8.3nm,0.7s,baz=304,slow=3.6,SNR=26
TROLL Troll, Antarti 157.37 201 PKPab PKPab 15 40 17.6 -0.3
TROLL Troll, Antarti 157.37 201 PKPdf PKPdf 15 39 45.2 +0.5
SNAA Sanae 158.74 198 PKPab PKPab 15 40 23.4 -0.4
VNA2 Neumayer--Watz 160.18 196 PKPab PKPab 15 40 29.5 -0.5
VNA2 Neumayer--Watz 160.18 196 PKPdf PKPdf 15 39 47.8 -0.1
VNA3 Neumayer Olymp 160.26 194 PKPab PKPab 15 40 29.2 -1.2
VNA1 Neumayer--Stat 160.57 196 PKPab PKPab 15 40 31.2 -0.4

PRU 30 15:39:49.6±0.0, 50.15N×19.17E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LANS	**Liptovska Anna**	**1.02**	**169**	*e*SG	Sg	15 40 22.2	-0.1
LANS				*e*LG	Lg	15 40 22.9	
MORC	**Moravsky Berou**	**1.11**	**251**	*e*PG	Pg	15 40 10.5	-0.5
MORC				*e*SG	Sg	15 40 25.0	-0.4
MAUC	**Maruska**	**1.17**	**228**	*e*SG	Sg	15 40 27.7	+0.5
	comp=Z,8.9nm,0.6s						
KRLC	**Kraliky**	**1.54**	**268**	*e*PG	Pn	15 40 17.4	-1.0
KRLC				*e*SG	Sg	15 40 37.7	-1.3
	comp=Z,2.2nm,0.4s						
KRLC	**Kraliky**	**1.54**	**268**	*e*	Pn	15 40 17.4	-1.0
VYHS	**Vyhne**	**1.67**	**188**	*e*PN	Pn	15 40 18.8	-1.3
VYHS				*e*SN	Sn	15 40 40.1	-2.2
VYHS				*e*LG	Lg	15 40 42.0	
DPC	**Dobruska-Polom**	**1.84**	**277**	*e*SG	Sb	15 40 47.4	-0.3

IDC 30 15:42:05.1±1.2, 4.69N×127.58E, h0km, mb3.7/5, mbtmp3.7/5, ML3.5/1, MS2.4/1, Error ellipse: s-maj=61.4km s-min=20.1km az=73.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**3.09**	**320**	LR	LR	15 44 33.5	
	comp=Z,65nm,20.1s,baz=128,slow=48						
SIJI	**Sorong**	**6.64**	**146**	Pn	Pn	15 43 44.5	+0.5
	1.1nm,0.3s,baz=160,slow=8.7,SNR=29						
SIJI				Sn	Sn	15 44 50.7	-10
	baz=191,slow=23						
WRA	**Warramunga Arr**	**25.37**	**165**	P	P	15 47 34.1	-0.1
	0.5nm,0.6s,baz=344,slow=10,SNR=9.6						
	0.5nm,0.6s						
ASAR	**Alice Springs**	**28.86**	**168**	P	P	15 48 05.5	-0.1
	0.4nm,0.5s,baz=351,slow=7.6,SNR=20						
	0.4nm,0.5s						
STKA	**Stephens Creek**	**38.74**	**161**	P	P	15 49 31.1	-0.1
	1.9nm,0.6s,baz=343,slow=7.0,SNR=14						
	1.9nm,0.6s						
PETK	**Petropavlovsk-**	**54.23**	**22**	P	P	15 51 31.9	-0.6
	0.7nm,0.7s,baz=211,slow=10,SNR=2.1						
	0.7nm,0.7s						
MKAR	**Makanchi Array**	**57.26**	**325**	P	P	15 51 54.8	+0.3
	0.3nm,0.4s,baz=117,slow=8.5,SNR=6.0						
	0.3nm,0.4s						

*IDC **30** 15:43:43.9±0.8, 14.10N×144.65E, h450km±6km, mb2.8/5, mbtmp3.7/6, Error ellipse: s-maj=42.3km s-min=18.0km az=99.0*
*NEIC **30** 15:43:44.5±1.8, 14.2N±0.1×144.8E±0.1, h458km±9km, mb4.2/17, Error ellipse: s-maj=20.7km s-min=15.4km az=90.0*
ISC 30 15:43:44.0±0.6, 14.12N±0.09×144.7E±0.1, h450km, n24, σ0992/26, mb3.8/12, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.54**	**167**	P	P	15 44 40.3	+1.0
	164nm,0.5s,baz=0.0,slow=2.0,SNR=41						
GUMO				S	S	15 45 24.2	+0.4
	139nm,0.4s,baz=0.6,slow=2.4,SNR=6.5						
GUMO	**Guam**	**0.54**	**167**	P	P	15 44 40.7	+1.5
GUMO				S	S	15 45 24.0	+0.2
JHJ2	**Mitsune**	**19.43**	**347**	P	P	15 47 38.0	-2.1
JOW	**Kunigami**	**19.92**	**312**	P	P	15 47 45.7	+1.0
JOW				IAmb	IAmb	15 47 50.7	
	comp=Z,20nm,1.3s						
SIJI	**Sorong**	**20.00**	**223**	P	P	15 47 44.9	-0.6
	comp=Z,4.0nm,0.5s,baz=342,slow=23,SNR=4.0						
FAKI	**Fak Fak**	**20.97**	**217**	P	P	15 47 54.3	-0.1
FAKI				IAmb	IAmb	15 48 10.7	
	comp=Z,5.8nm,1.1s						
MAJO	**Matsushiro**	**23.08**	**346**	P	P	15 48 13.8	+0.6
MAJO				IAmb	IAmb	15 48 15.0	
	comp=Z,4.1nm,1.1s						
COEN	**Coen**	**27.94**	**183**	P	P	15 48 57.2	+0.7
COEN				IAmb	IAmb	15 49 19.4	
	comp=Z,25nm,1.4s						
WB0	**Warramunga Arr**	**35.18**	**197**	P	P	15 49 58.2	-0.6
WB0				IAmb	IAmb	15 50 12.5	
	comp=Z,9.4nm,1.4s						
WR0	**Warramunga Arr**	**35.32**	**197**	P	P	15 49 59.2	-0.8
WR0				IAmb	IAmb	15 49 59.5	
	comp=Z,11nm,1.4s						
WB2	**Warramunga Arr**	**35.36**	**197**	P	P	15 49 59.9	-0.4
WB2				IAmb	IAmb	15 50 34.4	
	comp=Z,8.1nm,1.3s						
WRA	**Warramunga Arr**	**35.36**	**197**	P	P	15 49 59.8	-0.5
	comp=Z,1.6nm,0.8s,baz=16,slow=9.6,SNR=9.7						
	comp=Z,1.6nm,0.8s						
WRA	**Warramunga Arr**	**35.36**	**197**	P	P	15 49 59.3	-1.0
AS31	**Alice Springs**	**39.02**	**196**	P	P	15 50 30.3	-0.2
ASAR	**Alice Springs**	**39.02**	**196**	P	P	15 50 29.9	-0.7
	comp=Z,0.3nm,0.5s,baz=20,slow=12,SNR=9.4						
	comp=Z,0.3nm,0.5s						
MA2	**Magadan**	**45.60**	**4**	P	P	15 51 22.4	+0.4
MA2				IAmb	IAmb	15 51 24.5	
	comp=Z,4.0nm,1.1s						
STKA	**Stephens Creek**	**45.83**	**184**	P	P	15 51 23.5	-0.7
	comp=Z,2.3nm,1.1s,baz=349,slow=10,SNR=1.0						
	comp=Z,2.3nm,1.1s						
KNTN	**Kanton**	**46.31**	**108**	P	P	15 51 26.8	-1.4
KNTN				IAmb	IAmb	15 51 58.9	
	comp=Z,44nm,0.9s						
AKUT	**Akutan**	**55.47**	**33**	P	P	15 52 34.6	0.0
NIUE	**Niue**	**55.51**	**125**	P	P	15 52 37.2	+1.7
MK31	**Makanchi Array**	**61.02**	**316**	P	P	15 53 12.8	+0.2
MKAR	**Makanchi Array**	**61.02**	**316**	P	P	15 53 12.4	-0.3
	comp=Z,0.2nm,0.4s,baz=96,slow=7.9,SNR=4.1						
	comp=Z,0.2nm,0.4s						
Q23K	**Middleton Isla**	**67.25**	**31**	P	P	15 53 51.3	-0.8
ILAR	**Eielson Array**	**68.15**	**25**	P	P	15 53 57.5	-0.2
	comp=Z,0.2nm,0.5s,baz=229,slow=8.2,SNR=1.7						
	comp=Z,0.2nm,0.5s						

*NEIC **30** 15:45:43.7±1.7, 47.66N±0.03×91.91W±0.04, h0km±2km, mb_Lg2.1/5, Error ellipse: s-maj=7.2km s-min=3.1km az=40.0*
*OTT **30** 15:45:44.3±0.2, 47.67N×91.91W, h0km, MN2.7/7, Blast, Minnesota, Us 122km south from Atikokan, On Mining explosion.*
*IDC **30** 15:45:49.6±4.9, 47.80N×92.14W, h0km, mbtmp2.7/1, ML1.0/1, Error ellipse: s-maj=73.3km s-min=31.6km az=47.0*
ISC 30 15:45:43.2±1.0, 47.65N±0.03×91.91W±0.03, h0km, n29, σ1907/37, Minnesota

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EYMN	**Ely**	**0.41**	**44**	PG	**Pg**	15 45 51.2	**+0.2**
EYMN				Sg	**Sg**	15 45 56.9	**+0.7**
EYMN	**Ely**	**0.41**	**44**	PG	**Pg**	15 45 51.1	**+0.2**
EYMN				SG	**Sg**	15 45 56.8	**+0.6**
E38A	**The Farm, Brul**	**1.07**	**167**		**Pg**	15 46 02.9	**-0.9**
ATKO	**Atikokan Iron**	**1.19**	**10**	PG	**Pg**	15 46 05.5	**-0.4**
ATKO				SG	**Sg**	15 46 20.8	**-0.6**
ATKO				Trac		15 46 34.5	
	comp=Z,5.7nm,0.0s						
B35A	**Bob, Littlefor**	**1.41**	**301**		**Pg**	15 46 09.4	**-0.8**
TBO	**Thunder Bay**	**1.95**	**58**	PN	**Pn**	15 46 18.1	**+0.6**
TBO				SN	**Sn**	15 46 42.9	**+0.2**
TBO				Trac		15 46 53.5	
	comp=Z,9.6nm,0.1s						
F36A	**Milaca**	**2.11**	**212**		**Pn**	15 46 20.1	**+0.4**
F36A				IAmb_Lg		15 46 51.4	
	comp=Z,7.2nm,0.9s						
D41A	**Chassel**	**2.35**	**103**	Pn	**Pn**	15 46 23.7	**+0.7**
EPLO	**Experimental L**	**2.35**	**330**	PN	**Pn**	15 46 24.1	**+1.0**
EPLO				SN	**Sn**	15 46 52.7	**0.0**
EPLO				Trac		15 46 59.4	
	comp=Z,8.3nm,0.1s						
SOLO	**Sioux Lookout**	**2.37**	**357**	PN	**Pn**	15 46 24.2	**+0.8**
SOLO				SN	**Sn**	15 46 52.4	**-0.8**
SOLO				Trac		15 47 02.5	
	comp=Z,6.1nm,0.1s						
COWI	**Conover**	**2.46**	**128**	Pn	**Pn**	15 46 25.4	**+0.9**
SPMN	**Marine on St.**	**2.51**	**195**	Pn	**Pn**	15 46 26.7	**+1.6**
G40A	**Rib Lake**	**2.66**	**153**	Pn	**Pn**	15 46 28.8	**+1.5**
G40A				IAmb_Lg		15 47 16.0	
	comp=Z,8.7nm,1.2s						
AGMN	**Agassiz Nation**	**2.73**	**285**	Pn	**Pn**	15 46 29.4	**+1.2**
AGMN					**Sn**	15 47 03.7	**+1.7**
F42A	**Maple Grove Fa**	**3.22**	**125**	Pn	**Pn**	15 46 35.5	**+0.6**
F33A	**5 Mile Ranch,**	**3.52**	**241**	IAmb_Lg		15 47 40.1	
	comp=Z,5.7nm,0.8s						
E43A	**Lone Tree Farm**	**3.60**	**109**	Pn	**Pn**	15 46 40.5	**+0.3**
ULM	**Lac du Bonnet**	**3.69**	**316**	Pn	**Pn**	15 46 44.0	**+2.6**
	comp=Z,0.2nm,0.3s,baz=135,slow=9.4,SNR=1.9						
ULM				Sn	**Sn**	15 47 23.6	**-1.9**
	comp=Z,0.3nm,0.3s,baz=130,slow=22,SNR=1.4						
ULM				Lg	Lg	15 47 37.4	
	comp=Z,0.6nm,0.3s,baz=44,slow=22,SNR=3.1						
	comp=Z,2.7nm,0.7s						
ULM	**Lac du Bonnet**	**3.69**	**316**	Pn	**Pn**	15 46 41.1	**-0.2**
ULM	**Lac du Bonnet**	**3.69**	**316**	PN	**Pn**	15 46 41.5	**+0.2**
ULM				SN	**Sn**	15 47 23.6	**-1.9**
ULM				Trac		15 47 34.9	
	comp=Z,1.1nm,0.1s						
I10CA	**LAC DU BONNET**	**3.72**	**315**	*i*		16 07 20.0	
	comp=Z,0.1nm,0.9s,baz=132,slow=316,SNR=3.6						
I40A	**Norwalk**	**3.87**	**166**	Pn	**Pn**	15 46 45.7	**+1.8**
PNPO	**Pukaskwa Natio**	**3.88**	**74**	PN	**Pn**	15 46 44.5	**+0.4**
PNPO				SN	**Sn**	15 47 29.4	**-0.9**
PNPO				Trac		15 47 43.0	
	comp=Z,1.7nm,0.1s						
PKLO	**Pickle Lake**	**3.98**	**14**	PN	**Pn**	15 46 45.8	**+0.4**
PKLO				SN	**Sn**	15 47 31.2	**-1.5**
PKLO				Trac		15 47 39.5	
	comp=Z,1.9nm,0.1s						
H43A	**Windswept, Lux**	**4.29**	**136**	Pn	**Pn**	15 46 48.7	**-1.0**
K38A	**Parkersburg**	**5.04**	**187**	Pn	**Pn**	15 46 59.7	**-0.3**
L40A	**Anamosa**	**5.61**	**175**	Pn	**Pn**	15 47 07.8	**0.0**
L34A	**Svendsen Farm,**	**6.51**	**211**	Pn	**Pn**	15 47 20.2	**0.0**
I56US	**NEWPORT INFRAST**	**6.88**	**281**	*i*		17 30 50.0	
	baz=85,slow=308,SNR=6.6						

*IDC **30** 16:17:13.7±1.9, 6.80S×129.58E, h0km, mb3.7/2, mbtmp3.7/4, ML4.0/2, MS3.4/1, Error ellipse: s-maj=118.0km s-min=28.8km az=66.0*
ISC 30 16:17:41.5±2.9, 8.3S±0.2×129.3E±0.2, h150km, n15, σ1919/15, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTN	**Manton Dam**	**4.84**	**158**	P	**Pn**	16 18 54.5	**+1.6**
KDU	**Kakadu**	**5.35**	**144**	P	**Pn**	16 19 00.0	**+0.4**
KNRA	**Kununurra**	**7.32**	**184**	P	**Pn**	16 19 26.5	**+0.6**
WRAB	**Tennant Creek**	**12.54**	**157**	P	**Pn**	16 20 33.4	**-1.5**
WRA	**Warramunga Arr**	**12.54**	**158**	Pn	**Pn**	16 20 32.9	**-2.0**
	0.8nm,0.3s,baz=340,slow=12,SNR=27						
WRA				Sn	**Sn**	16 22 53.0	**-0.7**
	1.5nm,0.3s,baz=334,slow=22,SNR=11						
	1.2nm,0.4s						
QIS	**Mount Isa**	**15.73**	**142**	P	**P**	16 21 16.6	**+0.7**
ASAR	**Alice Springs**	**15.88**	**164**	P	**Pn**	16 21 17.8	**+0.8**
	0.3nm,0.3s,baz=338,slow=9.3,SNR=31						
ASAR				S	**S**	16 24 15.1	**+0.7**
	0.9nm,0.5s,baz=350,slow=27,SNR=6.0						
	1.1nm,0.6s						
WRKA	**Warakurna**	**16.64**	**183**	P	**Pn**	16 21 27.4	**+1.2**
OOD	**Oodnadatta**	**20.29**	**163**	P	**P**	16 22 06.3	**+0.7**
INKA	**Innaminka**	**22.14**	**152**	P	**P**	16 22 25.9	**+0.7**
QLP	**Quilpie**	**23.05**	**144**	P	**P**	16 22 34.5	**+0.7**
LCRK	**Leigh Creek**	**23.54**	**160**	P	**P**	16 22 38.7	**+0.4**
STKA	**Stephens Creek**	**26.08**	**156**	P	**P**	16 22 59.6	**-1.7**
	1.8nm,0.9s,baz=342,slow=10,SNR=1.3						
	1.8nm,0.9s						
JNU	**Nakatsue**	**41.25**	**2**	LR	LR	16 44 03.9	
	comp=Z,52nm,18.4s,baz=326,slow=40						
MKAR	**Makanchi Array**	**68.95**	**327**	P	P	16 28 14.0	-16
	0.2nm,0.5s,baz=144,slow=7.9,SNR=2.3						
	0.2nm,0.5s						

*IDC **30** 16:26:55.9±0.7, 5.45S×147.11E, h182km±6km, mb3.6/14, mbtmp4.3/19, Error ellipse: s-maj=14.6km s-min=9.7km az=94.0*
*NEIC **30** 16:26:57.0±2.1, 5.60S±0.07×147.10E±0.08, h184km±6km, mb4.6/48, Error ellipse: s-maj=11.4km s-min=9.6km az=94.0*
*DJA **30** 16:26:57.6±0.5, 6°S±4°×147°E±°, h179km±6km, M4.6/14, mB4.5/2, mb4.6/14, MLv4.6/3, Mw(mB)3.7/2*
ISC 30 16:26:57.3±0.3, 5.58S±0.04×147.14E±0.05, h195km, n110, σ1938/118, mb4.5/42, 1C, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**3.52**	**4**		**Pn**	16 27 52.8	**-0.3**
PMG	**Port Moresby**	**3.80**	**180**	P	**Pn**	16 27 55.1	**-1.4**
	69nm,0.2s,baz=360,slow=8.8,SNR=284						
PMG				S	**Sn**	16 28 39.2	**-3.8**
	168nm,0.4s,baz=212,slow=17,SNR=5.9						
PMG	**Port Moresby**	**3.80**	**180**	Pn	**Pn**	16 27 55.0	**-1.5**
PMG	**Port Moresby**	**3.80**	**180**	P	**Pn**	16 27 55.0	**-1.5**
PMG	**Port Moresby**	**3.80**	**180**	P	**Pn**	16 27 55.1	**-1.4**
KRVT	**Keravat (AS076**	**5.03**	**76**	P	**Pn**	16 28 11.2	**-0.9**
	53nm,0.5s,baz=1.8,slow=3.4,SNR=20						
KRVT				S	**Sn**	16 29 06.7	**-4.2**
	39nm,0.4s,baz=3.6,slow=18,SNR=2.2						
GENI	**Genyem**	**7.56**	**293**	P	**Pn**	16 28 42.8	**-2.1**
	0.6nm26nm,0.7s						
COEN	**Coen**	**9.20**	**205**	Pn	**Pn**	16 29 05.9	**-0.3**
MTSU	**Mount Surprise**	**12.78**	**192**	P	**Pn**	16 29 54.6	**-1.4**
HNR	**Honiara**	**13.26**	**108**	P	**Pn**	16 29 58.2	**-0.2**
	121nm,0.6s,baz=264,slow=4.7,SNR=3.9						
HNR	**Honiara**	**13.26**	**108**	Pn	**Pn**	16 29 58.0	**-0.4**
HNR				P	**P**	16 30 01.6	**+0.2**
CTA	**Charters Tower**	**14.45**	**183**	P	**P**	16 30 14.7	**+0.2**
	18nm,0.8s,baz=357,slow=12,SNR=22						
CTA	**Charters Tower**	**14.45**	**183**	P	**P**	16 30 15.3	**+0.7**
CTAO	**Charters Tower**	**14.45**	**183**		**P**	16 30 15.1	**+0.6**
CTAO	**Charters Tower**	**14.45**	**183**	P	**P**	16 30 15.2	**+0.7**
FAKI	**Fak Fak**	**15.08**	**279**	P	**P**	16 30 21.9	**+0.3**
FAKI				IAmb	IAmb	16 30 34.8	
	comp=Z,6.3nm,0.7s						
KDU	**Kakadu**	**16.10**	**243**	P	**Pn**	16 30 33.3	**+0.1**
SIJI	**Sorong**	**16.52**	**286**	P	**P**	16 30 36.3	**-1.2**
	comp=Z,11nm,0.8s,baz=94,slow=11,SNR=5.7						
QIS	**Mount Isa**	**16.59**	**205**	P	**Pn**	16 30 40.1	**+1.0**
PATS	**Pohnpei**	**16.63**	**42**		**Pn**	16 30 39.8	**+0.2**
MTN	**Manton Dam**	**17.36**	**244**	P	**Pn**	16 30 47.6	**-0.7**
MTN	**Manton Dam**	**17.36**	**244**	P	**Pn**	16 30 47.9	**-0.3**
WB0	**Warramunga Arr**	**18.78**	**220**	P	**P**	16 31 03.1	**+1.0**
WR0	**Warramunga Arr**	**18.83**	**219**	P	**P**	16 31 03.7	**+1.2**
WRAB	**Tennant Creek**	**18.93**	**220**	P	**P**	16 31 05.0	**+1.3**
WB2	**Warramunga Arr**	**18.93**	**220**	P	**P**	16 31 04.9	**+1.2**
WRA	**Warramunga Arr**	**18.94**	**220**	P	**P**	16 31 04.9	**+1.0**
	comp=Z,66nm,0.8s,baz=47,slow=10,SNR=192						
WRA				ScP	**ScP**	16 38 38.1	**-0.4**
	comp=Z,0.4nm,0.7s,baz=46,slow=2.1,S

KNRA	**Kununurra**	**20.64**	**239**	P	**P**	**16 31 21.6**	**-0.4**
KNRA				IAmb	IAmb	16 31 25.3	
	comp=Z,38nm,0.8s						
KNRA	**Kununurra**	**20.64**	**239**	P	**P**	**16 31 22.2**	**+0.2**
RMQ	**Roma**	**20.85**	**176**	P	**P**	**16 31 26.7**	**+2.5**
QLP	**Quilpie**	**21.07**	**187**	P	**P**	**16 31 28.2**	**+1.7**
AS31	**Alice Springs**	**22.04**	**214**	P	**P**	**16 31 37.4**	**+0.9**
AS31				IAmb	IAmb	16 31 38.6	
	comp=Z,29nm,1.1s						
ASAR	**Alice Springs**	**22.04**	**214**	P	**P**	**16 31 37.7**	**+1.2**
	comp=Z,46nm,0.7s,baz=50,slow=8.2,SNR=6						94
ASAR				S	**S**	**16 35 28.5**	**+3.0**
	comp=Z,4.9nm,0.9s,baz=32,slow=14,SNR=10						
ASAR				ScP	**ScP**	**16 38 47.0**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=44,slow=2.8,SNR=2.2						
	comp=Z,46nm,0.7s						
ASAR	**Alice Springs**	**22.04**	**214**	P	**P**	**16 31 37.4**	**+0.9**
INKA	**Innaminka**	**22.86**	**195**	P	**P**	**16 31 45.8**	**+1.9**
BATI	**Baumata**	**23.70**	**257**	P	**P**	**16 31 53.6**	**+1.9**
	comp=Z,37nm,0.9s						
OOD	**Oodnadatta**	**24.63**	**205**	P	**P**	**16 32 01.5**	**+1.5**
LIFNC	**LIFOU**	**24.68**	**130**	P	**P**	**16 32 01.6**	**+1.2**
DZM	**Mont Dzumac**	**24.85**	**133**	P	**P**	**16 32 02.6**	**+0.5**
	comp=Z,9.3nm,1.0s,baz=121,slow=23,SNR=6.2						
	comp=Z,9.3nm,1.0s						
MMRI	**Maumere**	**24.89**	**262**	P	**P**	**16 32 01.4**	**-1.1**
MMRI				IAmb	IAmb	16 32 04.7	
	comp=Z,30nm,0.8s						
MMRI	**Maumere**	**24.89**	**262**	P	**P**	**16 32 01.3**	**-1.2**
	comp=Z,44nm,0.7s						
ARMA	**Armidale**	**25.07**	**171**	P	**P**	**16 32 02.6**	**-1.4**
ARMA				IAmb	IAmb	16 32 06.5	
	comp=Z,10nm,1.1s						
EDFI	**Ende, Flores**	**25.44**	**261**	P	**P**	**16 32 06.4**	**-1.2**
	comp=Z,27nm,0.8s						
PINNC	**Pines Island,**	**25.91**	**133**	P	**P**	**16 32 10.8**	**-0.7**
WRKA	**Warakurna**	**26.47**	**221**	P	**P**	**16 32 17.7**	**+1.0**
STKA	**Stephens Creek**	**26.67**	**191**	P	**P**	**16 32 18.4**	**+0.1**
	comp=Z,3.1nm,0.8s,baz=337,slow=7.9,SNR=5.3						
	comp=Z,3.1nm,0.8s						
STKA	**Stephens Creek**	**26.67**	**191**	P	**P**	**16 32 17.9**	**-0.3**
TOLI2	**Tolitoli**	**27.15**	**283**	P	**P**	**16 32 23.6**	**+0.8**
TOLI2				IAmb	IAmb	16 32 46.6	
	comp=Z,5.2nm,0.9s						
BBOO	**Buckleboo**	**29.00**	**199**	P	**P**	**16 32 39.7**	**+0.8**
BBOO				IAmb	IAmb	16 32 44.9	
	comp=Z,43nm,1.4s						
CAN	**Canberra**	**29.65**	**177**	P	**P**	**16 32 45.8**	**+1.1**
CAN				IAmb	IAmb	16 33 08.4	
	comp=Z,26nm,1.3s						
MBWA	**Marble Bar**	**30.75**	**237**	P	**P**	**16 32 55.0**	**+0.4**
MBWA				IAmb	IAmb	16 33 05.8	
	comp=Z,12nm,1.3s						
FORT	**Forrest**	**30.82**	**213**	P	**P**	**16 32 55.5**	**+0.4**
PSA00	**Pilbara Seismi**	**30.84**	**236**	P	**P**	**16 32 54.4**	**-0.9**
PSA00				IAmb	IAmb	16 32 56.7	
	comp=Z,7.1nm,0.8s						
PSA00	**Pilbara Seismi**	**30.84**	**236**	P	**P**	**16 32 56.1**	**+0.8**
MSVF	**Nonsavu**	**32.53**	**114**	P	**P**	**16 33 12.0**	**+1.7**
MSVF				IAmb	IAmb	16 33 37.5	
	comp=Z,15nm,1.4s						
JAGI	**Jajag, Banyuwa**	**32.85**	**263**	P	**P**	**16 33 10.5**	**-2.5**
JAGI				IAmb	IAmb	16 33 11.0	
	comp=Z,12nm,0.8s						
GIRL	**Giralia**	**36.00**	**239**	P	**P**	**16 33 41.0**	**+1.0**
UGM	**Wanagama**	**36.43**	**264**	P	**P**	**16 33 42.5**	**-1.2**
MORW	**Morawa**	**37.55**	**228**	P	**P**	**16 33 53.5**	**+0.5**
MORW				IAmb	IAmb	16 33 54.3	
	comp=Z,13nm,0.8s						
YULB	**Yu-li**	**38.29**	**320**	P	**P**	**16 33 59.2**	**+0.1**
YULB				IAmb	IAmb	16 34 03.3	
	comp=Z,8.7nm,0.9s						
TPUB	**Ta-pu**	**38.65**	**319**	P	**P**	**16 34 01.0**	**-1.3**
TPUB				IAmb	IAmb	16 34 02.8	
	comp=Z,15nm,0.7s						
YHNB	**Yeheng**	**39.15**	**321**	P	**P**	**16 34 06.0**	**-0.4**
YHNB				IAmb	IAmb	16 34 10.8	
	comp=Z,18nm,0.8s						
KNTN	**Kanton**	**41.12**	**88**	P	**P**	**16 34 22.5**	**-0.2**
AFI	**Afiamalu**	**41.28**	**105**	P	**P**	**16 34 24.7**	**+0.7**
BKZ	**Black Stump Fm**	**42.68**	**146**	P	**P**	**16 34 35.5**	**+0.4**
BKZ				IAmb	IAmb	16 34 48.1	
	comp=Z,49nm,1.5s						
BSWZ	**Blackbirch Sta**	**43.16**	**150**	P	**P**	**16 34 39.0**	**+0.3**
KSRS	**Korea Array**	**46.41**	**339**	P	**P**	**16 35 02.7**	**-1.7**
	comp=Z,1.2nm,0.7s,baz=155,slow=8.7,SNR=3.7						
	comp=Z,1.2nm,0.7s						
USRK	**Ussuriysk Ar.**	**51.40**	**346**	P	**P**	**16 35 41.1**	**-1.1**
	comp=Z,0.5nm,0.6s,baz=171,slow=9.8,SNR=2.6						
	comp=Z,0.5nm,0.6s						
MDJ	**Mudanjiang**	**52.40**	**344**	P	**P**	**16 35 52.3**	**+2.7**
MDJ				pP	pwP	16 36 35.5	+0.4
MDJ				PcS	**PcS**	**16 40 59.5**	**+3.3**
MDJ				S	**S**	**16 43 02.8**	**+2.6**
MDJ				sS	sS	16 44 18.5	+2.8
MDJ				pmax	pmax		
	comp=Z,5.0nm,2.2s						
MDJ				pmax	pmax		
	comp=Z,82nm,6.1s						
CN2	**Changchun**	**52.91**	**340**	*e*P	P	16 35 59.8	+6.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CM31	**Chiang Mai Arr**	**53.17**	**298**	P	**P**	**16 35 54.9**	**-0.8**
CMAR	**Chiang Mai Arr**	**53.17**	**298**	P	**P**	**16 35 55.1**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=119,slow=5.6,SNR=5.4						
	comp=Z,0.4nm,0.3s						
CMAR	**Chiang Mai Arr**	**53.17**	**298**	P	**P**	**16 35 55.5**	**-0.3**
XAN	**Xi'an**	**53.45**	**320**	⇑P	**P**	**16 35 57.8**	**+0.3**
XAN				pmax	pmax		
	comp=Z,11nm,1.0s						
HHC	**Hu-ho-hao-te**	**56.55**	**328**	*e*P	P	16 36 26.3	+6.6
HHC				pmax	pmax		
	comp=Z,31nm,0.9s						
HHC				pmax	pmax		
	comp=Z,120nm,4.8s						
XLT	**XiLinHaoTe**	**56.66**	**333**	*e*P	**P**	**16 36 23.5**	**+3.1**
XLT				pP	pwP	16 37 07.0	+0.5
XLT				sP	sP	16 37 27.8	+2.6
XLT				pmax	pmax		
	comp=Z,6.0nm,0.9s						
XLT				pmax	pmax		
	comp=Z,90nm,4.9s						
PEA0B	**Petropavlovsk-**	**59.15**	**7**	P	**P**	**16 36 38.1**	**+0.7**
PEA0B				IAmb	IAmb	16 36 48.0	
	comp=Z,12nm,1.4s						
PETK	**Petropavlovsk-**	**59.15**	**7**	P	**P**	**16 36 36.8**	**-0.5**
	comp=Z,1.2nm,0.8s,baz=196,slow=15,SNR=3.6						
	comp=Z,1.2nm,0.8s						
PETK	**Petropavlovsk-**	**59.15**	**7**	P	**P**	**16 36 38.1**	**+0.7**
GTA	**Gaotai**	**62.51**	**320**	*e*P	**P**	**16 37 02.0**	**+1.5**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ULN	**Ulaanbaatar**	**63.81**	**331**	P	**P**	**16 37 09.2**	**+0.3**
ULN				IAmb	IAmb	16 37 10.7	
	comp=Z,3.3nm,0.8s						
SONM	**Songino Array**	**64.11**	**331**	P	**P**	**16 37 10.0**	**-0.8**
	comp=Z,1.9nm,0.8s,baz=150,slow=5.3,SNR=12						
	comp=Z,1.9nm,0.8s						
SONM	**Songino Array**	**64.11**	**331**	P	**P**	**16 37 11.4**	**+0.6**
CASY	**Casey**	**65.70**	**195**	P	**P**	**16 37 20.5**	**-0.1**
CASY				IAmb	IAmb	16 37 24.8	
	comp=Z,4.1nm,1.1s						
VNDA	**Vanda**	**72.32**	**177**	P	**P**	**16 38 02.2**	**+1.1**
	comp=Z,0.7nm,0.6s,baz=331,slow=5.7,SNR=6.6						
	comp=Z,0.7nm,0.6s						
VNDA	**Vanda**	**72.32**	**177**	P	**P**	**16 38 02.3**	**+1.1**
WMQ	**Urumqi**	**72.56**	**319**	*e*P	**P**	**16 38 05.5**	**+2.2**
MK31	**Makanchi Array**	**77.26**	**320**	P	**P**	**16 38 30.1**	**0.0**
MKAR	**Makanchi Array**	**77.26**	**320**	P	**P**	**16 38 30.0**	**-0.1**
	comp=Z,1.8nm,1.0s,baz=96,slow=7.6,SNR=8.6						
MKAR				pP	**pP**	**16 39 13.7**	**-2.9**
	comp=Z,1.0nm,1.0s,baz=104,slow=5.2,SNR=2.7						
	comp=Z,1.8nm,1.0s						
MKAR	**Makanchi Array**	**77.26**	**320**	P	**P**	**16 38 29.7**	**-0.4**
MAKZ	**Makanchi**	**77.47**	**320**	P	**P**	**16 38 30.9**	**-0.4**
ZALV	**Zalesovo Beam**	**78.73**	**328**	P	**P**	**16 38 36.6**	**-1.3**
	comp=Z,0.9nm,0.6s,baz=122,slow=7.0,SNR=4.3						
ZALV				pP	**pP**	**16 39 20.9**	**-3.7**
	comp=Z,0.6nm,0.6s,baz=125,slow=7.2,SNR=2.0						
	comp=Z,0.9nm,0.6s						
Q19K	**Cape Douglas,**	**79.54**	**27**	P	**P**	**16 38 43.0**	**+0.8**
Q19K				IAmb	IAmb	16 39 00.1	
	comp=Z,13nm,1.1s						
CNPM	**China Poot**	**80.91**	**27**	P	**P**	**16 38 50.5**	**+0.9**
CNPM				IAmb	IAmb	16 38 53.6	
	comp=Z,12nm,1.1s						

MAW	**Mawson**	**82.69**	**203**	P	**P**	**16 38 59.1**	**+0.4**
	comp=Z,1.6nm,1.0s,baz=259,slow=4.2,SNR=2.4						
	comp=Z,1.6nm,1.0s						
IMAR	**Indian Mountai**	**83.05**	**21**	P	**P**	**16 39 01.3**	**+0.7**
MLY	**Manley**	**83.68**	**22**	P	**P**	**16 39 03.6**	**-0.2**
RND	**Reindeer**	**83.68**	**24**	P	**P**	**16 39 03.5**	**-0.5**
KKAR	**Karatay Array**	**84.09**	**314**	P	**P**	**16 39 06.7**	**+0.3**
QSPA	**South Pole Qui**	**84.39**	**180**	P	**P**	**16 39 08.0**	**+0.4**
IL31		**85.04**	**23**	P	**P**	**16 39 09.3**	**-1.3**
ILAR	**Eielson Array**	**85.04**	**23**	P	**P**	**16 39 09.4**	**-1.2**
	comp=Z,1.4nm,0.8s,baz=254,slow=4.9,SNR=14						
ILAR				pP	**pP**	**16 39 55.1**	**-2.9**
	comp=Z,0.6nm,0.9s,baz=238,slow=5.2,SNR=2.7						
	comp=Z,1.4nm,0.8s						
ILAR	**Eielson Array**	**85.04**	**23**	P	**P**	**16 39 09.1**	**-1.5**
H24K	**Noodor Dome**	**85.11**	**22**	P	**P**	**16 39 12.1**	**+1.1**
J25K	**Salcha River,**	**85.58**	**24**	P	**P**	**16 39 12.5**	**-0.9**
TABL	**Table Mountain**	**85.93**	**28**	P	**P**	**16 39 16.2**	**+0.8**
TABL				IAmb	IAmb	16 39 16.8	
	comp=Z,8.7nm,0.6s						
NVAR	**Mina Array Bea**	**97.00**	**52**	P	Pdif	16 40 08.4	+0.9
	comp=Z,0.5nm,0.7s,baz=251,slow=4.5,SNR=4.5						
	comp=Z,0.5nm,0.7s						
PDAR	**Pinedale Array**	**103.53**	**47**	Pdiff	**Pdif**	**16 40 36.1**	**-0.3**
	comp=Z,0.2nm,0.6s,baz=270,slow=1.8,SNR=2.8						
TORD	**Torodi Ar. Bea**	**145.12**	**285**	PKPbc	**PKPbc**	**16 46 11.5**	**-1.0**
	comp=Z,1.7nm,0.6s,baz=62,slow=3.5,SNR=14						

*BER **30** 17:00:56.1±1.3,66.58N×21.56E, h0km, ML2.0, Suspected explosion*
*IDC **30** 17:00:58.3±1.1,67.09N×21.19E, h0km, mbtmp2.9/4, ML2.0/4, Error ellipse: s-maj=19.1km s-min=7.8km az=108.0*
*HEL **30** 17:00:58.7,67.09N×20.96E, h0km, ML2.3, Explosion*
*UPP **30** 17:00:58.4±0.1,67.07N×20.94E, h0km, ML2.2, Explosion*
*KOLA **30** 17:01:08.5,67.30N×21.51E, h0km, ML2.6*

ISC 30 17:00:57.6±0.7, 67.05N±0.02×20.95E±0.02, h0km, n63, σ1§33/74, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DUNU	**Dundret**	**0.17**	**295**	P	**Pg**	**17 01 01.6**	**+0.9**
DUNU				S	**Sg**	**17 01 03.9**	**+1.0**
DUNU	**Dundret**	**0.17**	**295**	*i* P	**Pg**	**17 01 01.6**	**+0.9**
DUNU				*i* S	**Sg**	**17 01 03.9**	**+1.0**
MASU	**Masugnsbyn**	**0.57**	**45**	P	**Pg**	**17 01 09.3**	**+0.7**
MASU	**Masugnsbyn**	**0.57**	**45**	*i* P	**Pg**	**17 01 09.3**	**+0.7**
ERTU	**Ertsjaerv**	**0.70**	**135**	P	**Pg**	**17 01 11.9**	**+0.9**
ERTU	**Ertsjaerv**	**0.70**	**135**	*e*P	**Pg**	**17 01 11.7**	**+0.7**
PAJU	**Pajala**	**0.85**	**91**	P	**Pg**	**17 01 14.3**	**+0.5**
PAJU	**Pajala**	**0.85**	**91**	*e*P	**Pg**	**17 01 14.0**	**+0.2**
	baz=278						
PAJU				*e*SB	**Sg**	**17 01 26.6**	**+1.8**
HARU	**Harads**	**0.89**	**179**	P	**Pg**	**17 01 15.3**	**+0.7**
HARU	**Harads**	**0.89**	**179**	*e*P	**Pg**	**17 01 15.3**	**+0.7**
RATU	**Laukkuluspa**	**0.94**	**327**	P	**Pg**	**17 01 15.4**	**-0.1**
RATU	**Laukkuluspa**	**0.94**	**327**	*e*P	**Pg**	**17 01 15.4**	**-0.1**
KUA	**Kurravaara**	**0.94**	**346**	P	**Pg**	**17 01 15.2**	**-0.3**
KUA	**Kurravaara**	**0.94**	**346**	*e*P	**Pg**	**17 01 15.2**	**-0.3**
SALU	**Saltoluokta**	**1.01**	**290**	P	**Pg**	**17 01 17.0**	**+0.1**
SALU	**Saltoluokta**	**1.01**	**290**	*e*P	**Pg**	**17 01 17.0**	**+0.1**
LANU	**Lannavaara**	**1.08**	**21**	P	**Pg**	**17 01 17.9**	**-0.3**
LANU	**Lannavaara**	**1.08**	**21**	*e*P	**Pg**	**17 01 17.7**	**-0.5**
LANU				*e*SN	**Sn**	**17 01 35.3**	**-0.3**
NIKU	**Nikkaluokta**	**1.10**	**319**	P	**Pg**	**17 01 18.4**	**-0.3**
NIKU	**Nikkaluokta**	**1.10**	**319**	*e*P	**Pg**	**17 01 18.4**	**-0.3**
KLF	**Kolari**	**1.19**	**80**	*e*P	**Pg**	**17 01 20.4**	**0.0**
KLF				*e*S	**Sg**	**17 01 33.2**	**-2.5**
KOVU	**Salmi**	**1.21**	**346**	P	**Pg**	**17 01 20.2**	**-0.6**
KOVU	**Salmi**	**1.21**	**346**	*e*P	**Pg**	**17 01 20.2**	**-0.6**
KALU	**Kalix**	**1.54**	**140**	P	**Pn**	**17 01 26.8**	**+0.6**
KALU	**Kalix**	**1.54**	**140**	*e*P	**Pn**	**17 01 26.8**	**+0.6**
SJUU	**Sjulsmark**	**1.57**	**170**	P	**Pn**	**17 01 27.4**	**+0.8**
SJUU	**Sjulsmark**	**1.57**	**170**	*e*P	**Pn**	**17 01 27.4**	**+0.8**
TOF	**Tornio**	**1.67**	**124**	*e*P	**Pn**	**17 01 29.0**	**+1.0**
TOF				MSG		17 01 49.2	
	comp=Z,47nm,0.2s						
HEF	**Hetta**	**1.71**	**36**	*e*P	**Pn**	**17 01 29.2**	**+0.6**
HEF				*e*S	**Sg**	**17 01 53.5**	**+1.1**
HEF	**Hetta**	**1.71**	**36**	*e*PG	**Pn**	**17 01 29.0**	**+0.4**
	baz=221						
HEF				MSG		17 01 48.7	
	comp=Z,27nm,0.2s						
KIF	**Kilpisjarvi**	**1.96**	**358**	*e*PB	**Pb**	**17 01 33.8**	**-0.3**
KIF				MSG		17 01 57.0	
	comp=Z,24nm,0.2s						
RNF	**Rovaniemi**	**2.05**	**100**	*e*PB	**Pn**	**17 01 35.1**	**+1.8**
KTK1	**Kautokeino**	**2.15**	**23**	*e*P	**Pb**	**17 01 36.5**	**-0.8**
KTK1				IAML		17 02 10.9	
	comp=Z,13nm,0.2s						
KTK1	**Kautokeino**	**2.15**	**23**	*e*PB	**Pb**	**17 01 36.4**	**-0.8**
KTK1				*e*SG	**Sb**	**17 02 05.3**	**+0.8**
SGF	**Sodankyl**	**2.20**	**77**	*e*PB	**Pn**	**17 01 37.1**	**+1.8**
I37NO	**I37NO**	**2.21**	**338**	*i*		17 14 37.3	
	baz=159,slow=316,SNR=0.5						
FAUS	**Fauske**	**2.23**	**281**	*e*P	**Pb**	**17 01 38.0**	**-0.7**
FAUS				IAML		17 02 14.1	
	comp=Z,19nm,0.2s						
STEI	**Steigen**	**2.37**	**294**	*e*P	**Pb**	**17 01 40.7**	**-0.3**
JETT	**Jettan, Norway**	**2.52**	**356**	*e*P	**Pb**	**17 01 43.0**	**-0.8**
JETT				*e*S	**Sg**	**17 02 18.5**	**-0.1**
JETT				IAML		17 02 25.0	
	comp=Z,38nm,0.2s						
TRO	**Tromso**	**2.70**	**345**	*e*SG	**Sg**	**17 02 22.5**	**-1.7**
OBF4	**Vikkela, Lumij**	**2.82**	**141**	*e*P	**Pn**	**17 01 45.6**	**+1.8**
OUL	**Oulu**	**2.82**	**132**	*e*P	**Pn**	**17 01 46.0**	**+2.2**
	baz=318						
OBF0	**Syolatti, Pyha**	**2.90**	**151**	*e*P	**Pn**	**17 01 47.1**	**+2.2**
OBF8	**Ulkokalla**	**2.92**	**158**	*e*P	**Pn**	**17 01 47.1**	**+1.9**
ARA0	**ARCESS Array S**	**3.01**	**32**	*e*P	**Pn**	**17 01 47.5**	**+1.0**
ARA0				IAML		17 02 39.6	
	comp=Z,8.2nm,0.2s						
ARA0	**ARCESS Array S**	**3.01**	**32**	*e*P	**Pn**	**17 01 47.3**	**+0.8**
	baz=216						
ARCES	**ARCESS Array B**	**3.01**	**32**	Pn	**Pn**	**17 01 47.5**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=208,slow=14,SNR=57						
ARCES				Lg	Lg	17 02 29.1	
	comp=Z,1.1nm,0.3s,baz=216,slow=27,SNR=10						
	comp=Z,1.0nm,0.3s						
ARCES	**ARCESS Array B**	**3.01**	**32**	P	**Pb**	**17 01 51.5**	**-0.6**
ARCES				S	**Sn**	**17 02 25.4**	**+2.1**
LOF	**Lofoten**	**3.04**	**294**	*e*P	**Pn**	**17 01 48.0**	**+1.2**
LOF				IAML		17 02 50.6	
	comp=Z,4.7nm,0.2s						
OUF	**Merijarvi**	**3.12**	**148**	*e*P	**Pn**	**17 01 50.2**	**+2.3**
OUF				MSG		17 02 31.2	
	comp=Z,2.9nm,0.2s						
UMAU	**Umeaa**	**3.19**	**182**	*e*P	**Pn**	**17 01 50.7**	**+1.9**
UMAU				*e*SB	**Sb**	**17 02 32.6**	**-1.6**
VRF	**Varrio**	**3.42**	**74**	*e*PB	**Pn**	**17 01 55.4**	**+3.4**
	baz=258						
OLKF	**Oulanka, Finla**	**3.44**	**98**	*e*P	**Pn**	**17 01 54.2**	**+1.8**
MSF	**Maaselka**	**3.44**	**106**	*e*P	**Pn**	**17 01 54.8**	**+2.5**
KEV	**Kevo**	**3.52**	**37**	*e*P	**Pn**	**17 01 53.9**	**+0.5**
KEV				*e*SB	**Sb**	**17 02 42.6**	**-1.2**
KU6	**Riekki**	**3.72**	**102**	*e*P	**Pn**	**17 01 58.6**	**+2.4**
HEMU	**Hemsoen**	**4.57**	**197**	*e*PB	**Pb**	**17 02 15.8**	**-2.7**
RMF	**Romuvaara**	**4.68**	**123**	*e*PB	**Pb**	**17 02 17.5**	**-3.0**
	baz=307						
PRVG	**Vayda Guba**	**4.95**	**52**	P	Pn	17 02 18.7	+5.6
PRVG				S	**Sn**	**17 03 11.8**	**+0.8**
TERR	**Teriberka**	**5.71**	**61**	P	Pn	17 02 29.5	+6.0
TERR				S	**Sn**	**17 03 28.1**	**-1.5**
FINES	**FINESS Array B**	**6.06**	**156**	Pn	**Pn**	**17 02 30.3**	**+2.1**
	comp=Z,0.1nm,0.3s,baz=348,slow=14,SNR=2.0						
FINES				Sn	**Sn**	**17 03 37.6**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=347,slow=23,SNR=1.9						
FINES				Lg	Lg	17 04 08.3	
	comp=Z,0.2nm,0.3s,baz=348,slow=27,SNR=2.0						
	comp=Z,0.3nm,0.2s						
NOA	**NORSAR Array B**	**7.38**	**220**	Pn	**Pn**	**17 02 46.4**	**-0.2**
	baz=44,slow=9.4,SNR=1.6						
	comp=Z,0.3nm,0.6s						
HFS	**Hagfors**	**7.66**	**208**	Pn	**Pn**	**17 02 49.2**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=24,slow=14,SNR=2.0						
	comp=Z,2.7nm,1.0s						

*TIR **30** 17:07:53.7,40.01N×21.52E, h4km, Md2.8*
*ATH **30** 17:07:54.8,40.04N×21.39E, h21km±6km, ML2.6/5, Error ellipse: s-maj=6.7km s-min=1.4km az=320.0*

*THE **30** 17:07:55.3,40.03N×21.39E, h14km±1km, ML2.6/10, Error ellipse: s-maj=1.8km s-min=0.5km az=314.0*
*BEO **30** 17:07:56.0±0.8, 40.00N×21.47E, h11km±6km, ML2.6/9*

ISC 30 17:07:55.2±1.0, 40.01N±0.02×21.45E±0.02, h8km±9km, n59, σ1§35/85, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PENT	**Pentalofos**	**0.30**	**307**	P	**Pg**	**17 08 00.4**	**-0.8**
PENT				S	**Sg**	**17 08 05.3**	**+0.1**
PENT				AML	AML	17 08 06.4	
	comp=N,3259μm,0.3s						
PENT				AML	AML	17 08 06.9	
	comp=E,7062μm,0.2s						
PENT	**Pentalofos**	**0.30**	**307**	P	**Pg**	**17 08 00.4**	**-0.8**
PENT				S	**Sg**	**17 08 05.4**	**+0.1**
	comp=E,3μm,0.2s						
KZN	**Kozani**	**0.38**	**40**	P	**Pg**	**17 08 03.2**	**+0.6**
KZN	**Kozani**	**0.38**	**40**	P	**Pg**	**17 08 03.1**	**+0.5**
KZN				S	**Sb**	**17 08 09.1**	**-1.3**
	comp=E,1μm,0.6s						
NEST	**Nestorio**	**0.51**	**322**	P	**Pg**	**17 08 04.0**	**-1.1**
NEST	**Nestorio**	**0.51**	**322**	P	**Pg**	**17 08 03.9**	**-1.1**
JAN	**Janina**	**0.58**	**233**	P	**Pg**	**17 08 05.0**	**-1.5**
JAN				S	**Sg**	**17 08 14.8**	**+0.7**
JAN				AML	AML	17 08 16.6	
	comp=N,1269μm,0.2s						
JAN				AML	AML	17 08 17.1	
	comp=E,1448μm,0.4s						
JAN	**Janina**	**0.58**	**233**	P	**Pg**	**17 08 05.0**	**-1.5**
JAN				S	**Sg**	**17 08 14.8**	**+0.7**
	comp=E,685nm,0.3s						
THL	**Klokotos Trika**	**0.62**	**136**	P	**Pg**	**17 08 07.2**	**+0.1**
THL				S	**Sn**	**17 08 18.5**	**-2.0**
THL				AML	AML	17 08 21.9	
	comp=N,1274μm,0.3s						
THL				AML	AML	17 08 25.7	
	comp=E,1117μm,0.5s						
THL	**Klokotos Trika**	**0.62**	**136**	P	**Pg**	**17 08 07.0**	**-0.1**
THL				S	**Sn**	**17 08 18.3**	**-2.2**
	comp=E,600nm,0.4s						
KTI	**Kastanea**	**0.63**	**53**	P	**Pb**	**17 08 08.0**	**-0.6**
LSK	**Leskovik**	**0.67**	**282**	P	**Pg**	**17 08 06.5**	**-1.5**
LSK				S	**Sg**	**17 08 16.8**	**0.0**
	comp=E,975nm,0.7s						
LSK	**Leskovik**	**0.67**	**282**	P	**Pg**	**17 08 06.6**	**-1.5**
	baz=282						
LSK				S	**Sb**	**17 08 18.8**	**+0.2**
	baz=282						
TYRN	**Tyrnavos**	**0.67**	**116**	P	**Pb**	**17 08 09.2**	**+0.1**
TYRN	**Tyrnavos**	**0.67**	**116**	P	**Pb**	**17 08 08.9**	**-0.2**
TYRN				S	**Sn**	**17 08 20.8**	**-0.9**
	comp=E,1μm,0.5s						
KBN	**Korca**	**0.80**	**320**	P	**Pg**	**17 08 09.2**	**-1.3**
KBN				S	**Sg**	**17 08 20.7**	**-0.1**
	comp=E,495nm,0.7s						
KBN	**Korca**	**0.80**	**320**	P	**Pg**	**17 08 10.3**	**-0.2**
	baz=318						
KBN				S	**Sn**	**17 08 23.1**	**-1.8**
	baz=318						
LIT	**Litokhoron**	**0.80**	**83**	P	**Pb**	**17 08 11.0**	**-0.3**
LIT				S	**Sn**	**17 08 23.7**	**-1.3**
LIT				AML	AML	17 08 28.4	
	comp=N,1148μm,0.4s						
LIT				AML	AML	17 08 29.2	
	comp=E,1072μm,0.3s						
LIT	**Litokhoron**	**0.80**	**83**	P	**Pb**	**17 08 10.8**	**-0.6**
LIT				S	**Sn**	**17 08 24.3**	**-0.6**
	comp=E,558nm,0.3s						
IGT	**Igoumenitsa**	**0.99**	**241**	*e*Pg	**Pb**	**17 08 13.4**	**-1.1**
IGT				*e*Sg	**Sn**	**17 08 28.8**	**-0.8**
IGT	**Igoumenitsa**	**0.99**	**241**	P	**Pb**	**17 08 13.8**	**-0.8**
IGT	**Igoumenitsa**	**0.99**	**241**	P	**Pb**	**17 08 13.5**	**-1.1**
IGT	**Igoumenitsa**	**0.99**	**241**	P	**Pb**	**17 08 14.3**	**-0.2**
	baz=243						
IGT				S	**Sn**	**17 08 30.8**	**+1.3**
	baz=243						
SRN	**Sarande**	**1.12**	**264**	P	**Pb**	**17 08 16.1**	**-0.8**
	baz=265						
SRN				S	**Sn**	**17 08 34.1**	**+1.2**
	baz=265						
MAKR	**Makrakomi, Fth**	**1.13**	**152**	P	**Pn**	**17 08 17.0**	**-0

68nm,0.5s,baz=122,slow=13,SNR=8.4
PMG Port Moresby 7.13 231 Pn **Pn** 17 10 40.0 +1.3
PMG Port Moresby 7.13 231 P **Pn** 17 10 40.6 +2.0
HNR Honiara 8.47 123 LR LR 17 14 42.4
comp=Z,56nm,20.6s,baz=284,slow=40
PATS Pohnpei 12.90 26 Pn **Pn** 17 11 57.3 -0.2
SMPI Sarmi 14.29 281 P **Pn** 17 12 18.5 +2.1
9.9nm,1.7s
MTSU Mount Surprise 15.54 211 P **P** 17 12 34.9 -1.1
CTA Charters Tower 16.39 202 LR LR 17 17 57.8
comp=Z,174nm,21.2s,baz=59,slow=33
GUMO Guam 19.94 337 LR LR 17 20 16.7
comp=Z,26nm,19.9s,baz=148,slow=34
QIS Mount Isa 20.15 218 P **P** 17 13 27.3 +0.6
EIDS Eidsvold 20.44 184 P **P** 17 13 29.3 -0.5
FAKI Fak Fak 20.53 275 P **P** 17 13 30.7 -0.2
FAKI Fak Fak 20.53 275 P Pn 17 13 32.5 -1.1
10.0nm,1.0s
KDU Kakadu 21.46 247 P **P** 17 13 39.5 -1.4
NOUC Port Laguerre 21.58 144 P **P** 17 13 43.9 +1.8
DZM Mont Dzumac 21.64 143 P **P** 17 13 44.0 +1.1
5.7nm,0.4s,baz=221,slow=8.9,SNR=16
DZM LR LR 17 20 57.3
comp=Z,121nm,19.1s,baz=216,slow=33
5.7nm,0.4s
DZM Mont Dzumac 21.64 143 P **P** 17 13 43.3 +0.5
DZM IAmb IAmb 17 14 07.4
comp=Z,55nm,1.5s
DZM Mont Dzumac 21.64 143 P **P** 17 13 43.9 +1.1
SIJI Sorong 21.80 280 P **P** 17 13 45.1 +0.5
comp=Z,5.8nm,0.5s,baz=100,slow=6.1,SNR=6.6
comp=Z,5.8nm,0.5s
OUENC Ouen Island, N 22.15 143 P **P** 17 13 48.7 +0.6
OUENC IAmb IAmb 17 14 03.2
comp=Z,34nm,1.3s
OUENC Ouen Island, N 22.15 143 P **P** 17 13 50.3 +2.2
MARNC Mare, Loyalty 22.19 139 P **P** 17 13 48.6 -0.1
MTN Manton Dam 22.75 248 P **P** 17 13 53.9 -0.8
MTN IAmb IAmb 17 14 12.9
comp=Z,28nm,1.3s
WB0 Warramunga Arr 23.20 229 P **P** 17 13 58.3 -0.9
WB0 IAmb IAmb 17 14 00.6
comp=Z,24nm,0.8s
WR0 Warramunga Arr 23.21 228 **P** 17 13 58.4 -0.9
WR0 IAmb IAmb 17 14 00.8
comp=Z,26nm,0.8s
WRAB Tennant Creek 23.33 229 P **P** 17 13 59.5 -0.9
WB2 Warramunga Arr 23.34 229 P **P** 17 13 59.7 -0.8
WRA Warramunga Arr 23.35 229 P **P** 17 13 59.5 -1.1
comp=Z,19nm,0.7s,baz=55,slow=10.0,SNR=73
comp=Z,19nm,0.7s
WRA Warramunga Arr 23.35 229 P **P** 17 13 58.8 -1.8
INKA Innaminka 25.45 205 P **P** 17 14 20.2 +0.5
KNRA Kununurra 25.88 244 P **P** 17 14 21.9 -1.8
KNRA Kununurra 25.88 244 P **P** 17 14 23.0 -0.8
AS31 Alice Springs 26.05 222 P **P** 17 14 24.7 -0.6
ASAR Alice Springs 26.05 222 P **P** 17 14 24.8 -0.5
comp=Z,2.4nm,0.4s,baz=54,slow=8.8,SNR=122
ASAR LR LR 17 24 08.2
comp=Z,107nm,21.4s,baz=86,slow=35
comp=Z,2.4nm,0.4s
ASAR Alice Springs 26.05 222 P **P** 17 14 24.1 -1.2
MSVF Nonsavu 27.87 119 P **P** 17 14 42.0 +0.3
comp=Z,1.5nm,0.5s,baz=304,slow=14,SNR=6.4
comp=Z,1.5nm,0.5s
STKA Stephens Creek 28.82 200 P **P** 17 14 48.8 -1.2
comp=Z,3.3nm,0.6s,baz=21,slow=12,SNR=11
STKA LR LR 17 26 01.8
comp=Z,106nm,19.1s,baz=28,slow=36
comp=Z,3.3nm,0.6s
STKA Stephens Creek 28.82 200 P **P** 17 14 48.6 -1.4
STKA Stephens Creek 28.82 200 P **P** 17 14 48.9 -1.1
LCRK Leigh Creek 28.89 207 P **P** 17 14 51.1 +0.6
DAV Davao City (W) 29.59 293 LR LR 17 28 01.5
comp=Z,27nm,18.0s,baz=114,slow=39
KAPI Kappang 32.86 268 LR LR 17 29 09.4
comp=Z,26nm,21.1s,baz=82,slow=37
JCJ Chichijima 33.38 343 LR LR 17 28 14.3
comp=Z,18nm,20.4s,baz=165,slow=35
NIUE Niue 39.04 114 P **P** 17 16 18.3 -0.3
JOW Kunigami 39.42 324 LR LR 17 32 58.9
comp=Z,16nm,19.2s,baz=246,slow=37
BKZ Black Stump Fm 40.35 151 P **P** 17 16 30.6 +1.3
TUWZ Tuamarina 41.05 156 P **P** 17 16 35.0 +0.1
LTZ Lake Taylor 41.54 158 P **P** 17 16 38.4 -0.6
RPZ Rata Peaks 41.92 160 P **P** 17 16 42.9 +0.8
comp=Z,23nm,0.9s,baz=306,slow=2.2,SNR=9.4
RPZ LR LR 17 33 08.8
comp=Z,83nm,19.8s,baz=284,slow=35
comp=Z,23nm,0.9s
RPZ Rata Peaks 41.92 160 P **P** 17 16 41.0 -1.1
LBZ Lake Benmore 42.23 161 P **P** 17 16 45.4 +0.8
MQZ McQueen's Vall 42.48 159 P **P** 17 16 48.0 +1.5
MLZ Mavora Lakes 42.51 164 P **P** 17 16 46.2 -0.2
KSM Kuching 42.85 277 P **P** 17 16 49.2 -0.9
KSM IAmb IAmb 17 16 50.2
comp=Z,8.5nm,1.0s
MJAR Matsushiro Arr 43.38 343 LR LR 17 32 23.0
comp=Z,22nm,20.8s,baz=178,slow=32
KSRS Korea Array 48.04 333 LR LR 17 36 53.2
comp=Z,11nm,19.8s,baz=140,slow=35
QIZ Qiongzhong 48.45 301 P **P** 17 17 35.1 +0.9
KLR Kul'dur 56.90 344 LR LR 17 40 39.8
comp=Z,22nm,20.9s,baz=200,slow=33
CM31 Chiang Mai Arr 57.85 295 P **P** 17 18 43.6 +0.2
CMAR Chiang Mai Arr 57.85 295 P **P** 17 18 43.9 +0.4
comp=Z,4.9nm,0.8s,baz=114,slow=5.4,SNR=38
comp=Z,4.9nm,0.8s
PEA0B Petropavlovsk- 57.92 4 P **P** 17 18 43.0 -0.2
PETK Petropavlovsk- 57.92 4 P **P** 17 18 43.0 -0.3
comp=Z,1.5nm,0.5s,baz=163,slow=5.4,SNR=9.0
comp=Z,1.5nm,0.5s
PETK Petropavlovsk- 57.92 4 P **P** 17 18 42.8 -0.4
CHTO Chiang Mai 57.96 296 P **P** 17 18 44.0 -0.1
CHTO IAmb IAmb 17 18 45.2
comp=Z,3.5nm,0.8s
SHEM Shemya Is, Ala 60.18 15 LR LR 17 40 36.2
comp=Z,46nm,21.2s,baz=305,slow=32
SMY Shemya 60.18 15 P **P** 17 18 58.5 -0.3
MA2 Magadan 64.27 359 P **P** 17 19 25.4 -0.7
comp=Z,2.1nm,0.6s,baz=189,slow=4.9,SNR=5.1
MA2 LR LR 17 47 11.2
comp=Z,17nm,19.2s,baz=174,slow=36
comp=Z,2.1nm,0.6s
MA2 Magadan 64.27 359 P **P** 17 19 25.8 -0.3
MA2 IAmb IAmb 17 20 08.0
comp=Z,9.0nm,1.5s
SHL Shillong 66.29 301 P **P** 17 19 38.8 -1.3
SONM Songino Arrav 66.35 328 P **P** 17 19 39.9 -0.2
YAK Yakutsk 69.03 349 LR LR 17 47 33.4
comp=Z,17nm,21.7s,baz=88,slow=34
VNDA Vanda 72.76 178 P **P** 17 20 19.5 +0.6
comp=Z,3.6nm,0.8s,baz=319,slow=6.3,SNR=20
comp=Z,3.6nm,0.8s
VNDA Vanda 72.76 178 P **P** 17 20 19.4 +0.6
VNDA IAmb IAmb 17 20 20.4
comp=Z,4.2nm,0.8s
SBA Scott Base 73.31 177 P **P** 17 20 23.8 +1.7
SBA IAmb IAmb 17 20 24.9
comp=Z,5.0nm,1.1s
R17K Ugashik Creek 74.52 26 P **P** 17 20 28.9 -0.6
baz=233
O17K Koliganek Bris 75.52 24 P **P** 17 20 35.4 +0.3
baz=232
Q18K Katmai Hardscr 75.70 25 P **P** 17 20 36.1 -0.3
baz=234
P18K Big Mountain, 76.05 25 P **P** 17 20 38.3 0.0
baz=234
KDAK Kodiak Island 76.27 27 LR LR 17 47 32.3
comp=Z,55nm,21.7s,baz=231,slow=30
Q19K Cape Douglas, 76.45 25 P **P** 17 20 40.5 0.0
baz=236
N18K Kilae Creek 76.55 23 P **P** 17 20 41.3 +0.3
baz=233
Q20K Shuyak Island 76.81 26 P **P** 17 20 43.5 +1.0
baz=237
N19K Bonanza Creek 77.18 24 P **P** 17 20 45.5 +0.8
baz=234
CNPM China Poot 77.81 26 P **P** 17 20 48.6 +0.5
L19K White Mountain 77.84 22 P **P** 17 20 49.5 +1.2
L19K IAmb IAmb 17 20 50.2
comp=Z,4.6nm,0.9s
L19K White Mountain 77.84 22 P **P** 17 20 49.2 +0.9
baz=234,SNR=6.0
M19K Big River Lodg 77.86 23 P **P** 17 20 48.8 +0.5
M19K Big River Lodg 77.86 23 P **P** 17 20 48.9 +0.5
baz=234
TTA Tatalina 77.86 21 P **P** 17 20 48.9 +0.5
TTA Tatalina 77.86 21 P **P** 17 20 49.2 +0.8
baz=233
BRSE Bradley Lake S 78.14 26 P **P** 17 20 50.0 0.0
baz=238
M20K Styx River 78.33 23 P **P** 17 20 51.5 +0.4
M20K IAmb IAmb 17 20 52.8
comp=Z,3.5nm,0.9s
M20K Styx River 78.33 23 P **P** 17 20 51.9 +0.8
baz=236
L20K Farewell, AK 78.39 22 P **P** 17 20 52.0 +0.7
baz=235
CAPN Captain Cook N 78.51 25 P **P** 17 20 51.9 0.0
baz=238
GCSA Galena City Sc 78.68 20 P **P** 17 20 53.3 +0.5
baz=232
K20K Telida 78.83 22 P **P** 17 20 54.9 +1.2
K20K IAmb IAmb 17 20 56.1
comp=Z,3.9nm,0.8s
K20K Telida 78.83 22 P **P** 17 20 54.2 +0.5
baz=234,SNR=7.5
SEW Seward 78.88 26 P **P** 17 20 53.8 -0.2
baz=239
SKT Skwentna 79.02 23 P **P** 17 20 54.2 -0.5
baz=237
SUA Susitna One 79.05 24 P **P** 17 20 54.9 -0.2
SUA IAmb IAmb 17 20 55.7
comp=Z,7.2nm,0.9s
SUA Susitna One 79.05 24 P **P** 17 20 54.7 -0.4
baz=238
RC01 Rabbit Creek A 79.27 25 P **P** 17 20 55.5 -0.7
RC01 IAmb IAmb 17 20 59.8
comp=Z,6.9nm,1.1s
RC01 Rabbit Creek A 79.27 25 P **P** 17 20 55.9 -0.2
baz=239
J20K Nowinta River 79.28 21 P **P** 17 20 57.4 +1.3
J20K IAmb IAmb 17 20 58.2
comp=Z,5.4nm,0.7s
J20K Nowinta River 79.28 21 P **P** 17 20 56.4 +0.3
baz=234,SNR=8.9
CAST Castle Rocks 79.60 22 P **P** 17 20 58.1 +0.3
CAST IAmb IAmb 17 20 59.0
comp=Z,4.7nm,0.7s
CAST Castle Rocks 79.60 22 P **P** 17 20 57.5 -0.4
baz=236,SNR=8.7
CHUM Lake Minchumin 79.77 22 P **P** 17 20 59.3 +0.6
baz=236
GHO Glory Hole Cre 79.96 24 P **P** 17 20 59.9 0.0
GHO IAmb IAmb 17 21 01.2
comp=Z,3.9nm,0.8s
KNK Knik Glacier 79.97 25 P **P** 17 21 00.5 +0.6
KNK IAmb IAmb 17 21 23.4
comp=Z,6.3nm,0.9s
KTH Kantishna Hill 80.11 22 P **P** 17 21 00.1 -0.6
KTH IAmb IAmb 17 21 01.4
comp=Z,3.8nm,0.7s
SML Sawmill 80.22 24 P **P** 17 21 01.5 +0.1
SML IAmb IAmb 17 21 02.8
comp=Z,9.0nm,0.8s
SML Sawmill 80.22 24 P **P** 17 21 01.1 -0.2
baz=240
GLI Glacier Island 80.28 26 P **P** 17 21 01.9 +0.3
GLI IAmb IAmb 17 21 02.7
comp=Z,4.6nm,0.7s
GLI Glacier Island 80.28 26 P **P** 17 21 01.2 -0.4
baz=241
TRF Thorofare Moun 80.29 22 **P** 17 21 01.1 -0.8
TRF IAmb IAmb 17 21 04.5
comp=Z,4.0nm,0.8s
TRF Thorofare Moun 80.29 22 P **P** 17 21 00.8 -1.0
baz=238
MKAR Makanchi Array 80.34 319 P **P** 17 21 02.0 -0.3
comp=Z,0.3nm,0.5s,baz=92,slow=10,SNR=4.6
comp=Z,0.3nm,0.5s
MKAR Makanchi Array 80.34 319 P **P** 17 21 02.5 +0.2
BPAW Bear Paw Mtn. 80.38 22 P **P** 17 21 02.1 0.0
baz=237
IMAR Indian Mountai 80.47 19 P **P** 17 21 03.2 +0.7
FID Port Fidalgo 80.48 26 P **P** 17 21 02.4 -0.3
FID IAmb IAmb 17 21 31.0
comp=Z,11nm,1.4s
MAKZ Makanchi 80.55 319 P **P** 17 21 02.8 -0.6
H21K Melozitna Rive 80.60 20 P **P** 17 21 03.6 +0.4
H21K Melozitna Rive 80.60 20 P **P** 17 21 03.7 +0.4
baz=235
I21K Tanana 80.62 21 P **P** 17 21 04.4 +1.1
I21K IAmb IAmb 17 21 05.7
comp=Z,7.1nm,0.9s
I21K Tanana 80.62 21 P **P** 17 21 03.7 +0.4
baz=236,SNR=10
SCM Sheep Creek Mo 80.64 25 P **P** 17 21 04.3 +0.7
SCM IAmb IAmb 17 21 08.1
comp=Z,4.4nm,0.8s
SCM Sheep Creek Mo 80.64 25 P **P** 17 21 03.8 +0.2
baz=241
WAT1 Susitna Watana 80.64 23 P **P** 17 21 03.3 -0.3
baz=240
EYAK Cordova Ski Ar 80.71 26 P **P** 17 21 03.6 -0.2
baz=242
RND Reindeer 80.82 23 P **P** 17 21 04.2 -0.4
RND IAmb IAmb 17 21 05.3
comp=Z,6.4nm,0.8s
WAT6 Susitna Watana 80.84 24 P **P** 17 21 04.5 -0.3
baz=240
G21K Allakaket 80.87 19 P **P** 17 21 05.0 +0.4
baz=234
MCK McKinley 80.96 23 P **P** 17 21 04.8 -0.4
MCK IAmb IAmb 17 21 06.1
comp=Z,10.0nm,1.0s
MCK McKinley 80.96 23 P **P** 17 21 05.1 -0.1
baz=239
MLY Manley 80.97 21 **P** 17 21 05.3 0.0
MLY IAmb IAmb 17 21 06.4
comp=Z,7.0nm,0.6s
MLY Manley 80.97 21 P **P** 17 21 05.4 0.0
baz=237,SNR=17
KLU Klutina 81.07 25 P **P** 17 21 07.0 +1.1
KLU IAmb IAmb 17 21 08.1
comp=Z,6.0nm,1.0s
KLU Klutina 81.07 25 P **P** 17 21 06.3 +0.4
baz=242
ZALV Zalesovo Beam 81.18 326 P **P** 17 21 05.6 -0.9
comp=Z,1.5nm,0.6s,baz=109,slow=6.5,SNR=7.0
comp=Z,1.5nm,0.6s
H22K Ishtalitna Cre 81.22 20 P **P** 17 21 07.6 +1.0
baz=237
DHY Denali Highway 81.23 23 P **P** 17 21 07.1 +0.2
DHY IAmb IAmb 17 21 08.3
comp=Z,3.6nm,0.8s
DHY Denali Highway 81.23 23 P **P** 17 21 07.2 +0.4
baz=241
M24K Tolsona, Glenn 81.25 25 P **P** 17 21 07.6 +0.7
M24K Tolsona, Glenn 81.25 25 P **P** 17 21 07.2 +0.3
baz=242
F21K Alatna River 81.29 19 P **P** 17 21 06.8 -0.1
baz=234
NEA2 Nenana 81.35 22 P **P** 17 21 06.9 -0.4
NEA2 IAmb IAmb 17 21 07.5
comp=Z,4.9nm,0.7s
NEA2 Nenana 81.35 22 P **P** 17 21 06.9 -0.4
baz=239
BMRM Bremner River 81.40 26 P **P** 17 21 07.3 -0.4
baz=244
I23K Minto, Yukon-K 81.53 21 P **P** 17 21 08.6 +0.4
I23K Minto, Yukon-K 81.53 21 P **P** 17 21 08.0 -0.2
baz=238
WRH Wood River Hil 81.65 22 P **P** 17 21 08.3 -0.5
WRH IAmb IAmb 17 21 10.1
comp=Z,4.2nm,1.0s
N25K Chitina, Valde 81.69 25 P **P** 17 21 10.0 +0.8
N25K Chitina, Valde 81.69 25 P **P** 17 21 09.8 +0.6
baz=243
HARP HAARP 81.81 25 P **P** 17 21 09.7 -0.1
baz=243
H23K Yukon River 81.82 21 P **P** 17 21 10.5 +0.8
H23K IAmb IAmb 17 21 11.2
comp=Z,2.8nm,0.7s
H23K Yukon River 81.82 21 P **P** 17 21 10.2 +0.4
baz=239
CCB Clear Creek Bu 81.85 22 P **P** 17 21 09.4 -0.5
CCB IAmb IAmb 17 21 09.9
comp=Z,3.5nm,0.8s
MDM Murphy Dome 81.85 22 P **P** 17 21 09.4 -0.5
TCOL CIGO, UAF Yank 81.94 22 P **P** 17 21 09.9 -0.4
COLA College 81.94 22 P **P** 17 21 09.7 -0.6
PAX Paxson 81.95 24 P **P** 17 21 11.2 +0.7
baz=242
GLB Gilahina Butte 81.95 26 P **P** 17 21 10.7 +0.1
GLB IAmb IAmb 17 21 12.4
comp=Z,5.5nm,0.8s
CRQE Cirque 81.97 27 P **P** 17 21 11.1 +0.3
baz=245
VRDI Verde Repeater 82.02 26 P **P** 17 21 11.0 0.0
VRDI IAmb IAmb 17 21 12.3
comp=Z,5.2nm,1.0s
HDA Harding Lake 82.05 22 P **P** 17 21 09.7 -1.2
HDA Harding Lake 82.05 22 P **P** 17 21 11.1 +0.2
baz=241
G23K Bananza Creek 82.13 20 P **P** 17 21 11.7 +0.3
baz=238
K24K Donnelly Dome 82.21 23 P **P** 17 21 12.3 +0.5
baz=242
IL31 82.25 22 P **P** 17 21 11.1 -0.8
IL31 IAmb IAmb 17 21 11.8
comp=Z,4.2nm,0.8s
ILAR Eielson Array 82.25 22 P **P** 17 21 11.0 -1.0
comp=Z,3.5nm,0.7s,baz=250,slow=5.6,SNR=32
ILAR LR LR 17 56 50.6
comp=Z,29nm,18.4s,baz=232,slow=35
comp=Z,3.5nm,0.7s
E22K Anaktuvuk Pass 82.33 18 P **P** 17 21 12.7 +0.3
baz=236
COLD Coldfoot 82.35 19 P **P** 17 21 13.1 +0.6
baz=238
H24K Noodor Dome 82.42 21 **P** 17 21 13.2 +0.3
H24K IAmb IAmb 17 21 14.4
comp=Z,2.4nm,0.7s
H24K Noodor Dome 82.42 21 P **P** 17 21 12.8 -0.1
baz=240
RIDG Independent Ri 82.55 23 P **P** 17 21 13.9 +0.2
RIDG IAmb IAmb 17 21 14.7
comp=Z,3.7nm,0.8s
RIDG Independent Ri 82.55 23 P **P** 17 21 13.4 -0.3
baz=243
GRNC Granite Creek 82.56 27 P **P** 17 21 14.6 +0.6
GRNC IAmb IAmb 17 21 14.9
comp=Z,2.8nm,0.7s
KDJ Kajisay 82.62 313 P **P** 17 21 15.5 +0.9
MENT Mentasta 82.65 24 P **P** 17 21 14.6 +0.5
M26K Nabesna, AK 82.72 25 P **P** 17 21 14.7 +0.1
baz=245
BARN Barnard Glacie 82.74 27 P **P** 17 21 14.2 -0.6
BARN IAmb IAmb 17 21 16.5
comp=Z,4.2nm,0.7s
J25K Salcha River, 82.75 23 P **P** 17 21 14.2 -0.4
J25K Salcha River, 82.75 23 P **P** 17 21 14.3 -0.4
baz=242
L26K Log Cabin Wild 82.84 24 P **P** 17 21 15.5 +0.4
L26K IAmb IAmb 17 21 16.9
comp=Z,4.1nm,0.8s
L26K Log Cabin Wild 82.84 24 P **P** 17 21 15.4 +0.4
baz=244
CTG Chitna Glacier 82.84 27 P **P** 17 21 15.8 +0.5
baz=246
CTGM Chitina Glacie 82.84 27 P **P** 17 21 15.6 +0.3
CTGM IAmb IAmb 17 21 17.0
comp=Z,4.8nm,0.7s
A21K Barrow 82.90 15 P **P** 17 21 15.7 +0.5
baz=231
SCRK Sand Creek 83.00 23 P **P** 17 21 16.1 0.0
SCRK Sand Creek 83.00 23 P **P** 17 21 16.2 +0.2
baz=244
D23K Nanushuk River 83.14 18 P **P** 17 21 18.0 +1.4
baz=237,SNR=11
M27K Edge Creek, AK 83.17 25 P **P** 17 21 18.3 +1.3
M27K Edge Creek, AK 83.17 25 P **P** 17 21 17.9 +0.9
baz=246
PNL Peninsula 83.23 28 P **P** 17 21 17.7 +0.4
baz=248
TOLK Toolik Lake Re 83.31 18 P **P** 17 21 18.6 +1.1
TOLK IAmb IAmb 17 21 19.6
comp=Z,3.5nm,0.8s
TOLK Toolik Lake Re 83.31 18 P **P** 17 21 18.0 +0.5
baz=238,SNR=5.7
J26L Joseph Creek 83.40 23 P **P** 17 21 18.3 +0.2
J26L Joseph Creek 83.40 23 P **P** 17 21 18.7 +0.7
baz=244
L27K Beaver Creek, 83.48 25 P **P** 17 21 19.4 +0.9
L27K Beaver Creek, 83.48 25 P **P** 17 21 19.8 +1.3
baz=246
BCAR Beaver Creek A 83.50 25 P **P** 17 21 19.3 +0.8
YUK3 Moose Creek 83.55 26 P **P** 17 21 19.6 +0.6
baz=247
BVCY Beaver Creek 83.63 25 P **P** 17 21 20.2 +1.0
baz=247
C23K Itkillik River 83.64 17 P **P** 17 21 19.6 +0.5
baz=237
K27K Chicken 83.78 24 P **P** 17 21 21.2 +1.3
K27K Chicken 83.78 24 P **P** 17 21 20.6 +0.7
baz=245
D24K Happy Valley 83.81 18 P **P** 17 21 20.9 +1.0
baz=239
I26K Coal Creek Min 83.91 22 P **P** 17 21 20.8 +0.3
I26K Coal Creek Min 83.91 22 P **P** 17 21 20.6 +0.1
baz=244
C24K Franklin Bluff 84.14 17 P **P** 17 21 22.2 +0.6
baz=239
BMAR Burnt Mountain 84.34 20 P **P** 17 21 24.3 +1.5
HYT Haines Junctio 84.53 28 P **P** 17 21 25.4 +1.4
HYT IAmb IAmb 17 21 26.5
comp=Z,5.3nm,0.8s
HYT Haines Junctio 84.53 28 P **P** 17 21 24.2 +0.3
baz=250
P30M Million Dollar 84.54 28 P **P** 17 21 24.4 +0.5
baz=250
D25K Kavik River 84.65 18 P **P** 17 21 24.5 +0.2
baz=241
DAWY Dawson 84.88 24 P **P** 17 21 26.2 +0.7
DAWY Dawson 84.88 24 P **P** 17 21 26.3 +0.7
baz=248
N30M Aishikik Lake 84.94 27 P **P** 17 21 26.7 +0.8
baz=250
QSPA South Pole Qui 85.09 180 P **P** 17 21 26.9 +0.2
O30N Mendenhall 85.17 28 P **P** 17 21 27.9 +0.8
baz=251
M30M Minto, Yukon 85.44 26 P **P** 17 21 29.6 +1.2
M30M Minto, Yukon 85.44 26 P **P** 17 21 29.4 +1.0
baz=250
MAW Mawson 85.48 203 P **P** 17 21 28.2 -0.2
comp=Z,2.8nm,0.6s,baz=112,slow=4.5,SNR=9.2
comp=Z,2.8nm,0.6s
MAW Mawson 85.48 203 P **P** 17 21 27.8 -0.5
C27K Jago River 85.62 18 P **P** 17 21 30.2 +1.1
baz=243
I29M Ogilvie Camp, 85.79 23 P **P** 17 21 30.2 +0.2
I29M IAmb IAmb 17 21 31.4
comp=Z,3.7nm,1.1s
I29M Ogilvie Camp, 85.79 23 P **P** 17 21 30.8 +0.8
baz=249
M31M Drury Creek, Y 86.39 27 P **P** 17 21 33.9 +0.9
baz=252
P33M Teslin, Yukon 86.54 29 P **P** 17 21 34.5 +0.6
baz=254
EPYK Eagle Plains 86.76 22 P **P** 17 21 35.7 +0.9
EPYK Eagle Plains 86.76 22 P **P** 17 21 35.7 +0.9
baz=250
FARO Faro, Yukon 86.86 27 P **P** 17 21 35.9 +0.5
FARO IAmb IAmb 17 21 37.3
comp=Z,1.8nm,0.8s
DLBC Dease Lake 87.48 31 P **P** 17 21 38.8 +0.3
comp=Z,1.5nm,0.7s,baz=208,slow=5.7,SNR=3.7
comp=Z,1.5nm,0.7s
DLBC Dease Lake 87.48 31 P **P** 17 21 39.0 +0.5
baz=257
INK Inuvik 88.55 21 P **P** 17 21 43.1 -0.1
baz=253
YBH Yreka Blue Hor 89.15 48 LR LR 17 56 19.8
comp=Z,29nm,19.2s,baz=316,slow=32
J05D Fort Rock, OR 90.42 47 P **P** 17 21 53.0 +0.3
baz=264
NVAR Mina Array Bea 92.18 52 P **P** 17 22 01.9 +0.8
comp=Z,0.2nm,0.5s,baz=218,slow=10,SNR=1.8
NVAR LR LR 17 55 58.7
comp=Z,37nm,22.0s,baz=278,slow=30
comp=Z,0.2nm,0.5s
MONP2 Monument Peak 93.32 57 P **P** 17 22 06.6 +0.1
baz=266
PFO Pinyon Flats O 93.33 57 LR LR 18 02 33.7
comp=Z,15nm,18.1s,baz=218,slow=34
YKA Yellowknife Ar 95.52 28 P **P** 17 22 15.5 -0.2
comp=Z,1.1nm,0.7s,baz=266,slow=4.7,SNR=6.3
comp=Z,1.1nm,0.7s
AKTO Aktyubinsk 96.74 320 LR LR 18 09 41.2

comp=Z,12nm,18.0s,baz=99,slow=38
PDAR **Pinedale Array** **98.95 48** P Pdif 17 22 32.7 +0.8
comp=Z,0.2nm,0.5s,baz=269,slow=4.3,SNR=1.8
comp=Z,0.2nm,0.5s
AKASG **Malin Array Be** **114.52 324** PKP **PKiKP** **17 27 28.8 -2.0**
comp=Z,0.7nm,0.5s,baz=60,slow=1.6,SNR=2.4
GERES **GERESS Array B** **124.08 328** PKP **PKPdf** **17 27 49.2 -0.3**
comp=Z,0.3nm,0.4s,baz=73,slow=3.4,SNR=7.3
TORD **Torodi Ar. Bea** **150.27 288** PKPbc **PKPbc** **17 28 42.0 -0.9**
comp=Z,1.3nm,0.4s,baz=64,slow=2.4,SNR=13
TORD **Torodi Ar. Bea** **150.27 288** **PKPbc** **17 28 42.4 -0.6**
BDFB **Brasilia** **151.06 135** PKPbc **PKiKP** **17 28 46.0 +0.5**
comp=Z,2.9nm,0.6s,baz=147,slow=3.7,SNR=3.5

*JMA **30** 17:10:14.8±0.6,23°N×2°×12°1E±°, h0km,MV3.5/15, TAIWAN REGION*
*TAP **30** 17:10:17.8,22°.69N×121°.11E,h26km,ML3.4,B*
ISC 30 17:10:16.9±0.9,22°.65N±0°.02×121°.20E±0°.02,h28km±5km, n118,σ1§02/187,10C-25D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TTN	**Taitung** baz=35	**0.12**	**337**	⇑*iP*			**Pb**	**17 10 23.4**	**+1.3**
TTN	baz=35			*e*S			**Sb**	**17 10 27.9**	**+2.4**
TWGBT	**Beinan** baz=350	**0.20**	**328**	⇓*i*P			**Pb**	**17 10 22.8**	**-0.1**
TWGBT	baz=350			*i* S			**Sb**	**17 10 26.5**	**-0.5**
TWG	**Pinlang** baz=350	**0.21**	**327**	⇓*i*P			**Pb**	**17 10 22.8**	**-0.2**
TWG	baz=350			*i* S			**Sb**	**17 10 26.5**	**-0.6**
ECL	**Taimali** baz=236	**0.23**	**258**	⇑*i*P			**Pb**	**17 10 22.8**	**-0.4**
ECL	baz=236			*i* S			**Sb**	**17 10 26.6**	**-0.9**
LDUT	**Ludao** baz=92	**0.25**	**84**	⇓*i*P			**Pn**	**17 10 25.1**	**+0.3**
LDUT	baz=92			*i* S			**Sn**	**17 10 30.9**	**+1.0**
LONT	**Longtian** baz=6.0	**0.27**	**347**	⇓*i*P			**Pb**	**17 10 23.7**	**-0.1**
LONT	baz=6.0			*i* S			**Sb**	**17 10 28.0**	**-0.3**
EDH	**Donghe** baz=33	**0.34**	**17**	⇓*i*P			**Pb**	**17 10 25.2**	**+0.5**
EDH	baz=33			S			**Sn**	**17 10 31.1**	**-1.0**
TAW	**Tawu** baz=210	**0.40**	**224**	*i* P			**Pb**	**17 10 25.5**	**-0.2**
TAW	baz=210			S			**Sb**	**17 10 31.1**	**-0.4**
EAST	**Anshuo** baz=217	**0.41**	**231**	⇑*i*P			**Pb**	**17 10 25.7**	**-0.2**
EAST	baz=217			S			**Sb**	**17 10 31.5**	**-0.5**
TAWH	**Dawu Township** baz=210	**0.42**	**223**	⇓*i*P			**Pb**	**17 10 25.7**	**-0.2**
TAWH	baz=210			*e*S			**Sb**	**17 10 31.5**	**-0.5**
ECS	**Chishang** baz=14	**0.45**	**3**	⇓*i*P			**Pb**	**17 10 26.4**	**0.0**
ECS	baz=14			*e*S			**Sn**	**17 10 33.5**	**-1.3**
CHKT	**Chengkung** baz=31	**0.48**	**19**	⇓*i*P			**Pb**	**17 10 27.0**	**+0.1**
CHKT	baz=31			S			**Sn**	**17 10 34.4**	**-1.1**
TSMG	**Majia** baz=273	**0.51**	**277**	⇑*i*P			**Pb**	**17 10 26.9**	**-0.5**
TSMG	baz=273			*e*S			**Sb**	**17 10 32.9**	**-1.7**
MASBT	**Mashibuluo** baz=261	**0.52**	**266**	⇑*i*P			**Pb**	**17 10 27.3**	**-0.3**
MASBT	baz=261			S			**Sb**	**17 10 33.6**	**-1.3**
SSD	**Sandimen** baz=278	**0.53**	**281**	⇑*i*P			**Pb**	**17 10 27.1**	**-0.6**
SSD	baz=278			S			**Sb**	**17 10 33.4**	**-1.7**
FULB	**Fuli** baz=19	**0.56**	**9**	⇓*i*P			**Pb**	**17 10 28.1**	**-0.2**
FULB	baz=19			*e*S			**Sn**	**17 10 36.5**	**-1.1**
SLIU	**Shizi** baz=211	**0.56**	**221**	⇓P			**Pb**	**17 10 27.8**	**-0.5**
SLIU	baz=211			*e*S			**Sb**	**17 10 35.6**	**-0.4**
ELDTW	**Lidau** baz=352	**0.57**	**343**	⇓*i*P			**Pb**	**17 10 27.6**	**-0.9**
ELDTW	baz=352			*e*S			**Sb**	**17 10 34.6**	**-1.7**
SCZT	**Fangliau** baz=235	**0.60**	**243**	⇑*i*P			**Pb**	**17 10 28.8**	**-0.1**
SCZT	baz=235			*e*S			**Sb**	**17 10 36.4**	**-0.6**
SSPT	**Xinbi** baz=248	**0.60**	**255**	⇑*i*P			**Pb**	**17 10 29.3**	**+0.3**
SSPT	baz=248			*e*S			**Sb**	**17 10 37.3**	**+0.2**
SLGT	**Liugui** baz=306	**0.61**	**304**	P			**Pb**	**17 10 29.1**	**-0.1**
SLGT	baz=306			*e*S			**Sb**	**17 10 37.0**	**-0.5**
TSPT	**Pingtung City** baz=269	**0.65**	**273**	*e*P			**Pn**	**17 10 30.4**	**+0.1**
TSPT	baz=269			*e*S			**Sn**	**17 10 39.3**	**-0.3**
STYH	**Taoyuan** baz=329	**0.65**	**324**	⇓*i*P			**Pb**	**17 10 29.5**	**-0.3**
STYH	baz=329			*e*S			**Sb**	**17 10 37.8**	**-0.7**
SGLT	**Jiouru** baz=274	**0.66**	**277**	*e*P			**Pn**	**17 10 30.4**	**0.0**
SGLT	baz=274			*e*S			**Sn**	**17 10 39.4**	**-0.4**
STYT	**Tauyuan** baz=327	**0.66**	**322**	⇓*i*P			**Pb**	**17 10 29.5**	**-0.4**
STYT	baz=327			*e*S			**Sb**	**17 10 38.1**	**-0.6**
LAY	**Lan-yu** baz=147	**0.69**	**151**	*e*P			**Pn**	**17 10 30.4**	**-0.5**
SCST	**Cishan** baz=289	**0.69**	**290**	⇑*i*P			**Pn**	**17 10 31.0**	**+0.2**
SCST	baz=289			*e*S			**Sn**	**17 10 40.1**	**-0.6**
SMST	**Manzhou Townsh** baz=201	**0.70**	**208**	*e*P			**Pn**	**17 10 30.2**	**-0.9**
ECBN	**Changbin** baz=27	**0.71**	**19**	*e*P			**Pn**	**17 10 31.0**	**-0.1**
ECBN	baz=27			*e*S			**Sn**	**17 10 41.4**	**+0.3**
EYUL	**Yuli** baz=17	**0.71**	**9**	*e*P			**Pb**	**17 10 29.3**	**-1.5**
EYUL	baz=17			*e*S			**Sb**	**17 10 39.0**	**-1.1**
TWF1	**Yuli** baz=16	**0.71**	**8**	⇓*e*P			**Pb**	**17 10 29.2**	**-1.5**
TWF1	baz=16			*e*S			**Sb**	**17 10 38.1**	**-2.1**
SGST	**Jiashian** baz=310	**0.71**	**308**	⇓*e*P			**Pn**	**17 10 30.1**	**-1.1**
SGST	baz=310			*e*S			**Sn**	**17 10 40.5**	**-0.9**
LYUB	**Lan-yu** baz=147	**0.73**	**151**	⇓*e*P			**Pn**	**17 10 29.9**	**-1.6**
LYUB	baz=147			*e*S			**Sb**	**17 10 39.5**	**-1.4**
TWM1	**Shoushan** baz=282	**0.74**	**284**	⇑*e*P			**Pb**	**17 10 32.4**	**+1.2**
TWM1	baz=282			*e*S			**Sn**	**17 10 43.2**	**+1.4**
YULB	**Yu-li** baz=14	**0.75**	**7**	⇓*e*P			**Pn**	**17 10 29.7**	**-2.0**
YULB	baz=14			*e*S			**Sb**	**17 10 38.8**	**-2.5**
HEN	**Hengchun** baz=206	**0.77**	**214**	*e*P			**Pn**	**17 10 31.8**	**-0.1**
TWK1	**Hengchun** baz=200	**0.79**	**207**	*e*P			**Pn**	**17 10 31.6**	**-0.6**
TWK1	baz=200			*e*S			**Sn**	**17 10 42.8**	**-0.3**
TWKBT	**Hengchun** baz=200	**0.79**	**207**	*e*P			**Pn**	**17 10 31.6**	**-0.6**
TSEB	**Hengchuen, Pin** baz=196	**0.79**	**200**	*e*P			**Pn**	**17 10 32.0**	**-0.3**
TSEB	baz=196			*e*S			**Sn**	**17 10 43.8**	**+0.7**
WTP	**Ta-pu** baz=321	**0.80**	**318**	⇓*e*P			**Pb**	**17 10 32.7**	**+0.3**
WTP	baz=321			*e*S			**Sn**	**17 10 44.0**	**+0.4**
WLCH	**Liuqiu** baz=244	**0.81**	**249**	*e*P			**Pb**	**17 10 34.4**	**+2.0**
CHN1	**Nanshi** baz=313	**0.82**	**311**	⇓*e*P			**Pb**	**17 10 32.9**	**+0.3**
CHN1	baz=313			*e*S			**Sn**	**17 10 44.5**	**+0.6**
TWP	**Hsiaoliuchiu** baz=244	**0.83**	**249**	*e*P			**Pb**	**17 10 33.8**	**+1.1**
TPUB	**Ta-pu** baz=324	**0.84**	**321**	⇓P			**Pb**	**17 10 33.1**	**+0.2**
SNST	**Tainan City** baz=314	**0.86**	**312**	*e*P			**Pb**	**17 10 33.9**	**+0.6**
SNST	baz=314			*e*S			**Sb**	**17 10 45.1**	**+0.6**
EHY	**Hungye** baz=14	**0.86**	**8**	*e*P			**Pn**	**17 10 31.5**	**-1.8**
EHY	baz=14			*e*S			**Sn**	**17 10 41.8**	**-3.3**
SHHT	**Tainan City** baz=296	**0.87**	**296**	⇓*e*P			**Pb**	**17 10 34.8**	**+1.4**
SHHT	baz=296			*e*S			**Sb**	**17 10 48.0**	**+3.3**
HGSD	**Ruisui** baz=20	**0.87**	**14**	⇓*e*P			**Pn**	**17 10 32.4**	**-0.9**
HGSD	baz=20			*e*S			**Sn**	**17 10 44.1**	**-1.0**
YUS	**Yu-Shan** baz=350	**0.87**	**345**	*e*P			**Pn**	**17 10 32.9**	**-0.9**
CHN3	**Shinhua** baz=300	**0.88**	**299**	*e*P			**Pb**	**17 10 34.3**	**+0.7**
CHN4	**Tsaushan** baz=325	**0.90**	**322**	⇓*e*P			**Pb**	**17 10 34.2**	**+0.3**
CHN4	baz=325			*e*S			**Sb**	**17 10 47.2**	**+1.7**
TWK	**Hsinying** baz=316	**0.90**	**314**	⇓*e*P			**Pb**	**17 10 34.2**	**+0.2**
ALS	**Alishan** baz=342	**0.93**	**337**	⇓*e*P			**Pb**	**17 10 34.5**	**-0.2**
ALS	baz=342			*e*S			**Sb**	**17 10 47.0**	**+0.2**
SSHA	**Shanhua** baz=301	**0.97**	**300**	*e*P			**Pb**	**17 10 36.0**	**+0.9**
EGFH	**Guangfu** baz=17	**1.04**	**12**	*e*P			**Pn**	**17 10 33.8**	**-1.9**
SCLT	**Jiali** baz=300	**1.06**	**300**	*e*P			**Pb**	**17 10 36.8**	**+0.1**
SCLT	baz=300			*e*S			**Sb**	**17 10 52.3**	**+2.1**
CHN2	**Minshiung** baz=325	**1.10**	**323**	*e*P			**Pb**	**17 10 37.9**	**+0.5**
CHN2	baz=325			*e*S			**Sb**	**17 10 53.9**	**+2.5**
ICHU	**Yijhu** baz=311	**1.10**	**310**	*e*P			**Pb**	**17 10 37.1**	**-0.3**
TEGC	**Jichi Village** baz=22	**1.10**	**17**	*e*P			**Pn**	**17 10 36.5**	**-0.1**
VWDT	**VWDT** baz=2.0	**1.10**	**357**	*e*P			**Pn**	**17 10 36.3**	**-0.3**
VWDT	baz=2.0			*e*S			**Sn**	**17 10 49.9**	**-1.0**
CHY	**Chiayi** baz=323	**1.11**	**320**	*e*P			**Pb**	**17 10 37.4**	**0.0**
CHN8	**Yiju** baz=309	**1.15**	**308**	*e*P			**Pb**	**17 10 37.6**	**-0.5**
SSLB	**Suanglung** baz=353	**1.16**	**349**	*e*P			**Pb**	**17 10 37.7**	**-0.7**
ESL	**Shilin** baz=15	**1.18**	**11**	*e*P			**Pn**	**17 10 36.3**	**-1.4**
WGK	**Gukeng** baz=334	**1.19**	**331**	*e*P			**Pb**	**17 10 39.1**	**+0.2**
WGK	baz=334			*e*S			**Sb**	**17 10 55.8**	**+1.9**
WDLH	**Douliu** baz=332	**1.20**	**330**	*e*P			**Pb**	**17 10 39.1**	**0.0**
WDLH	baz=332			*e*S			**Sb**	**17 10 56.0**	**+1.8**
WJS	**Zhushan** baz=343	**1.25**	**340**	*e*P			**Pb**	**17 10 40.6**	**+0.8**
WSL	**Shuilin Townsh** baz=316	**1.25**	**315**	*e*P			**Pb**	**17 10 39.2**	**-0.7**
SMLT	**Sun Moon Lake** baz=351	**1.26**	**348**	*e*P			**Pb**	**17 10 40.1**	**-0.1**
SMLT	baz=351			*e*S			**Sb**	**17 10 57.1**	**+1.1**
TEYL	**Yanliau Villag** baz=21	**1.27**	**17**	*e*P			**Pn**	**17 10 39.3**	**+0.4**
WTK	**Tuku** baz=327	**1.28**	**325**	*e*P			**Pb**	**17 10 39.6**	**-0.8**
WTK	baz=327			*e*S			**Sb**	**17 10 56.5**	**+0.1**
TYC	**Yuchr** baz=350	**1.29**	**346**	*e*P			**Pb**	**17 10 41.0**	**+0.4**
TYC	baz=350			*e*S			**Sb**	**17 10 58.4**	**+1.6**
OWD	**Renai** baz=3.0	**1.30**	**359**	*e*P			**Pn**	**17 10 39.1**	**-0.4**
OWD	baz=3.0			*e*S			**Sn**	**17 10 54.7**	**-1.3**
WNT	**Mingjian** baz=342	**1.31**	**339**	*e*P			**Pb**	**17 10 41.3**	**+0.3**
WNT	baz=342			*e*S			**Sb**	**17 10 59.4**	**+1.9**
WSF	**Szhu** baz=320	**1.33**	**318**	*e*P			**Pn**	**17 10 40.2**	**+0.5**
ETM	**Tongmen** baz=16	**1.34**	**12**	*e*P			**Pn**	**17 10 38.4**	**-1.5**
WNT1	**Nantou City** baz=342	**1.34**	**339**	*e*P			**Pb**	**17 10 42.0**	**+0.5**
WUSB	**Renai** baz=1.0	**1.34**	**357**	*e*P			**Pn**	**17 10 40.2**	**+0.2**
WUSB	baz=1.0			*e*S			**Sn**	**17 10 56.0**	**-1.0**
WPL	**Puli Township** baz=354	**1.38**	**351**	*e*P			**Pb**	**17 10 42.1**	**+0.1**
DPDB	**Guoxing** baz=353	**1.40**	**350**	*e*P			**Pb**	**17 10 42.6**	**+0.1**
CHGB	**Renai** baz=3.0	**1.41**	**359**	*e*P			**Pn**	**17 10 41.2**	**+0.3**
CHGB	baz=3.0			*e*S			**Sn**	**17 10 58.1**	**-0.6**
WCS	**Beigang Elemen** baz=353	**1.43**	**350**	*e*P			**Pb**	**17 10 42.8**	**-0.1**
WRL	**Guolierlin Hig** baz=331	**1.46**	**329**	*e*P			**Pn**	**17 10 42.0**	**+0.5**
WWF	**Wufeng** baz=345	**1.47**	**342**	*e*P			**Pb**	**17 10 43.8**	**+0.3**
TWD	**Chiawan** baz=18	**1.48**	**14**	*e*P			**Pn**	**17 10 42.0**	**+0.3**
WDGT	**Dungji** baz=293	**1.54**	**294**	*e*P			**Pn**	**17 10 42.2**	**-0.4**
WDGT	baz=293			*e*S			**Sn**	**17 11 00.4**	**-1.3**
NACB	**Ninganchiao** baz=17	**1.56**	**13**	*e*P			**Pn**	**17 10 41.3**	**-1.6**
ETLH	**Xiulin Townshi** baz=13	**1.58**	**10**	*e*P			**Pn**	**17 10 42.0**	**-1.2**
FUSS	**Fushou** baz=5.0	**1.60**	**2**	*e*P			**Pn**	**17 10 43.6**	**+0.1**
FUSS	baz=5.0			*e*S			**Sn**	**17 11 02.5**	**-0.9**
TDCB	**Techi** baz=2.0	**1.60**	**359**	*e*P			**Pb**	**17 10 46.4**	**+0.4**
WHP	**Taichung City** baz=355	**1.64**	**352**	*e*P			**Pb**	**17 10 46.8**	**+0.2**
WHP	baz=355			*e*S			**Sb**	**17 11 08.1**	**+1.1**
VCHM	**Qimei** baz=289	**1.72**	**289**	*e*P			**Pn**	**17 10 44.6**	**-0.5**
PHUB	**P'eng-hu** baz=300	**1.73**	**300**	*e*P			**Pn**	**17 10 44.6**	**-0.5**
PHUB	baz=300			*e*S			**Sn**	**17 11 05.0**	**-1.3**
TWQ1	**Liyutan** baz=350	**1.74**	**347**	*e*P			**Pb**	**17 10 47.7**	**-0.5**
TWQ1	baz=350			*e*S			**Sb**	**17 11 10.7**	**+1.0**
PNG	**Penghu** baz=302	**1.77**	**302**	*e*P			**Pn**	**17 10 45.3**	**-0.4**
NNSB	**Datong** baz=8.0	**1.78**	**5**	*e*P			**Pb**	**17 10 48.6**	**-0.4**
NNSH	**Datong** baz=8.0	**1.78**	**5**	*e*P			**Pn**	**17 10 46.7**	**+0.7**
NNS	**Nan Shan** baz=8.0	**1.79**	**5**	*e*P			**Pb**	**17 10 49.1**	**-0.1**
NSY	**Sanyi** baz=350	**1.81**	**347**	*e*P			**Pb**	**17 10 49.2**	**-0.2**
NSY	baz=350			*e*S			**Sb**	**17 11 12.5**	**+0.9**
LATG	**Datong** baz=12	**1.91**	**9**	*e*P			**Pn**	**17 10 47.4**	**-0.3**
NDT	**Datong Townshi** baz=11	**1.97**	**8**	*e*P			**Pn**	**17 10 49.4**	**+0.9**
NFF	**Wufeng Townshi**	**1.98**	**358**	*e*P			**Pb**	**17 10 50.6**	**-1.7**
NSTT	**Nanjuang** baz=357	**1.98**	**355**	*e*P			**Pb**	**17 10 50.9**	**-1.5**
LIOB	**Emei** baz=358	**2.00**	**355**	*e*P			**Pb**	**17 10 50.8**	**-1.8**
YHNB	**Yeheng** baz=7.0	**2.02**	**5**	*e*P			**Pn**	**17 10 50.2**	**+0.9**
NSK	**Sanguang** baz=7.0	**2.03**	**4**	*e*P			**Pn**	**17 10 50.5**	**+1.1**
JYNG	**Yonagunijimaku**	**2.41**	**41**	P			**Pn**	**17 10 55.8**	**+1.3**
JYNG				*e*S			**Sn**	**17 11 24.0**	**+0.9**
YOJ	**Yonaguni jima**	**2.46**	**42**	P			**Pn**	**17 10 56.6**	**+1.4**
YOJ				*e*S			**Sn**	**17 11 25.0**	**+0.7**
HATJ	**Hateruma jima**	**2.78**	**59**	P			**Pn**	**17 11 00.5**	**+0.9**
HATJ				S			**Sn**	**17 11 32.2**	**-0.1**
IRIF	**Iriomote-Funau**	**2.87**	**54**	P			**Pn**	**17 11 02.0**	**+1.2**
IRIF				*e*S			**Sn**	**17 11 36.0**	**+1.5**
JKRS	**Kuro-shima**	**3.03**	**58**	P			**Pn**	**17 11 04.1**	**+1.1**
JKRS				S			**Sn**	**17 11 39.1**	**+0.6**
JIJ	**Ishigaki jima**	**3.20**	**57**	P			**Pn**	**17 11 06.4**	**+0.9**
JIJ				S			**Sn**	**17 11 42.8**	**+0.2**
JISG	**Ishigakijimahi**	**3.45**	**55**	P			**Pn**	**17 11 09.3**	**+0.5**
JISG				*e*S			**Sn**	**17 11 48.1**	**-0.7**
JTJ	**Tarama**	**3.78**	**58**	P			**Pn**	**17 11 14.5**	**+1.1**
JTJ				S			**Sn**	**17 11 57.2**	**+0.3**
JIRB	**Irabujima**	**4.24**	**58**	P			**Pn**	**17 11 20.8**	**+1.1**
JMJ2	**Miyako jima3**	**4.32**	**60**	P			**Pn**	**17 11 22.1**	**+1.2**
JIKM	**Ikemajima**	**4.35**	**58**	*e*P			**Pn**	**17 11 22.4**	**+1.2**
JOGS	**Gusukube**	**4.40**	**61**	P			**Pn**	**17 11 23.2**	**+1.4**

*AUST **30** 17:11:19.6±1.4,32°.38S×122°.35E,h0km, Error ellipse: s-maj=25.1km s-min=13.2km az=167.0*
*NOU **30** 17:11:20.7,32°.25S×122°.34E,h0km,MLv4.5/6, Western Australia*
ISC 30 17:11:20.9±1.1,32°.3S±0°.1×122°.39E±0°.06,h19km,n19, σ1§89/21,Western Australia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KLBR	**Kellerberrin** baz=4.0	**4.00**	**278**	P			**Pn**	**17 12 22.3**	**+1.1**
KLBR	baz=4.0			S			**Sn**	**17 13 06.4**	**-1.1**
KLBR	**Kellerberrin**	**4.00**	**278**	P			**Pn**	**17 12 22.7**	**+1.6**
FORT	**Forrest** baz=5.1	**5.06**	**75**	P			**Pn**	**17 12 37.8**	**+2.0**
FORT	baz=5.1			S			**Sn**	**17 13 34.1**	**+0.3**
FORT	**Forrest**	**5.06**	**75**	P			**Pn**	**17 12 38.2**	**+2.4**
RKGY	**Rocky Gully** baz=5.0	**5.09**	**241**	P			**Pn**	**17 12 36.3**	**+0.1**
RKGY	**Rocky Gully**	**5.09**	**241**	P			**Pn**	**17 12 38.2**	**+2.0**
BLDU	**Ballidu** baz=5.1	**5.12**	**287**	P			**Pn**	**17 12 36.7**	**+0.1**
BLDU	baz=5.1			S			**Sn**	**17 13 33.6**	**-1.7**
BLDU	**Ballidu**	**5.12**	**287**	P			**Pn**	**17 12 37.8**	**+1.2**
MUN	**Mundaring** baz=5.2	**5.25**	**271**	P			**Pn**	**17 12 38.2**	**-0.2**
MUN	**Mundaring**	**5.25**	**271**	P			**Pn**	**17 12 38.6**	**+0.2**
AUMAZ	**Mazenod Senior** baz=5.4	**5.39**	**271**	P			**Pn**	**17 12 40.6**	**+0.3**
MORW	**Morawa** baz=6.4	**6.33**	**299**	P			**Pn**	**17 12 55.4**	**+2.2**
MORW	**Morawa**	**6.33**	**299**	P			**Pn**	**17 12 55.0**	**+1.8**
WRKA	**Warakurna** baz=9.0	**8.87**	**37**	P			Pn	17 13 32.9	+4.7
MULG	**Mulgathing** baz=10	**10.18**	**82**	P			**Pn**	**17 13 46.3**	**+0.2**
GIRL	**Giralia** baz=12	**12.00**	**321**	P			**Pn**	**17 14 14.5**	**+3.4**
OOD	**Oodnadatta** baz=12	**12.35**	**72**	P			**Pn**	**17 14 14.9**	**-0.9**
ASPA	**Alice Springs** baz=13	**13.29**	**53**	P			**Pn**	**17 14 24.7**	**-3.9**
LCRK	**Leigh Creek** baz=14	**13.65**	**87**	P			**Pn**	**17 14 31.1**	**-2.4**

*IDC **30** 18:23:03.8±1.0,3°.83S×102°.83W,h0km,mb4.0/16, mbtmp4.0/16,MS4.4/53,Error ellipse: s-maj=40.8km s-min=14.9km az=55.0*
*NEIC **30** 18:23:06.6±2.5,3°.8S±0°.1×102°.8W±0°.1,h10km±1km, mb4.9/301,Error ellipse: s-maj=26.3km s-min=18.2km az=244.0*
*GCMT **30** 18:23:10.6±0.2,3°.62S±0°.01×102°.79W±0°.01,h22km±1km, MW5.1/127,Moment Tensor Solution. s65,c86; s127,c201; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.88±.16; $M_{\theta\theta}$1.07±.13; $M_{\phi\phi}$-1.95±.15; $M_{r\theta}$0.67±.23; $M_{\theta\phi}$6.25±.14; $M_{\phi r}$-0.00±.23; Best double couple: M_o6.46800×10^{16} NP1:∅$_s$7.00000°,δ84.00000°, λ178.00000°. NP2:∅$_s$97.00000°,δ88.00000°,λ6.00000°. Principal axes: T 6.0430, Plg6.0000°, Azm322.0000°; N 0.8490, Plg83.0000°, Azm114.0000°; P -6.8920, Plg3.0000°, Azm232.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 30 18:23:06.2±0.5,3.77S±0°.08×102°.72W±0°.09,h10km,n364, σ1§08/320,mb4.8/156,MS4.5/55,Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**21.59**	**11**	P			**P**	**18 27 58.1**	**+1.6**
CMIG	**Matias Romero** comp=Z,1μm,19.8s,baz=203,slow=31	**22.12**	**20**	LR			LR	18 34 40.2	
MTO3	**Montecristo**	**22.39**	**36**	P			**P**	**18 28 06.2**	**+1.0**
CCIG	**Comitan**	**22.50**	**27**	P			**P**	**18 28 07.9**	**+1.5**
ESQI	**Esquipulas**	**22.53**	**36**	P			**P**	**18 28 09.1**	**+2.5**
JTS	**Las Juntas de** comp=Z,4μm,19.8s,baz=294,slow=30	**22.54**	**52**	LR			LR	18 34 31.6	
SRBA	**San Rafael, Bu**	**23.22**	**56**	P			**P**	**18 28 14.2**	**+0.3**
CDITO	**Canoas**	**23.28**	**58**	P			**P**	**18 28 15.1**	**+0.7**
BOAB	**BOACO BROADBAND**	**23.39**	**46**	P			**P**	**18 28 14.7**	**-0.6**
TGUH	**Tegucigalpa,Un**	**23.42**	**41**	P			**P**	**18 28 16.9**	**+1.0**
TGUH	comp=Z,53nm,1.4s				IAmb		IAmb	18 28 20.5	
ACON	**Acoyapa**	**23.43**	**48**	P			**P**	**18 28 14.9**	**-0.9**
COHC	**Cochancay**	**23.47**	**88**	P			**P**	**18 28 16.4**	**+0.1**
MATN	**Matagalpa**	**23.53**	**45**	P			**P**	**18 28 17.4**	**+0.5**
BRU2	**Volcan**	**23.55**	**58**	P			**P**	**18 28 18.2**	**+1.0**
PORT	**Chimborazo Vol**	**24.03**	**85**	P			**P**	**18 28 23.2**	**+0.8**
RPN	**Rapa Nui** comp=Z,223nm,18.5s,baz=300,slow=31	**24.07**	**195**	LR			LR	18 35 16.9	
BOSC	**San Juan Bosco**	**24.19**	**89**	P			**P**	**18 28 23.7**	**+0.3**
ATAH	**Atahualpa** comp=Z,2.9nm,0.7s,baz=296,slow=18,SNR=2.4 comp=Z,2.9nm,0.7s	**24.44**	**99**	P			**P**	**18 28 24.1**	**-1.8**
OTAV	**Otavalo**	**24.58**	**81**	P			**P**	**18 28 28.2**	**+1.0**
ZAIG	**Zacatecas**	**26.38**	**0**	P			**P**	**18 28 43.7**	**+0.5**
NNA	**Nana** comp=Z,628nm,18.7s,baz=286,slow=30	**26.88**	**109**	LR			LR	18 36 46.0	
LPIG	**La Paz** comp=Z,998nm,21.2s,baz=182,slow=30	**28.67**	**345**	LR			LR	18 37 33.8	
ROSC	**El Rosal** comp=Z,1μm,21.1s,baz=232,slow=32	**29.64**	**73**	LR			LR	18 38 46.3	
ZARC	**Zaragoza, Cauc**	**29.97**	**68**	P			**P**	**18 29 16.1**	**+1.0**
HPIG		**30.66**	**355**	P			**P**	**18 29 20.8**	**-0.5**
HPIG	comp=Z,25nm,1.8s				IAmb		IAmb	18 29 41.1	
833A	**Chaparral WMA,**	**32.07**	**6**	P			**P**	**18 29 34.6**	**+1.2**
SOR	**Soroa**	**32.67**	**35**	P			**P**	**18 29 40.0**	**+1.1**
TX31	**Lajitas Ar. Si**	**32.93**	**358**	P			**P**	**18 29 42.4**	**+1.3**
TX31	comp=Z,32nm,1.6s				IAmb		IAmb	18 29 43.9	
TX32	**Lajitas Array**	**32.93**	**358**	P			**P**	**18 29 40.9**	**-0.2**
TXAR	**Lajitas Array** comp=Z,1.5nm,1.1s,baz=188,slow=7.6,SNR=10	**32.93**	**358**	P			**P**	**18 29 41.5**	**+0.4**
TXAR	comp=Z,0.2nm,0.7s,baz=105,slow=1.4,SNR=3.5				PcP		**PcP**	**18 32 25.4**	**-0.1**
TXAR					LR		LR	18 41 44.5	

comp=Z,751nm,19.5s,baz=175,slow=34
comp=Z,1.5nm,1.1s
TXAR Lajitas Array 32.93 358 P **P** **18 29 42.0 +0.9**
HSIG 33.55 347 P **P** **18 29 45.5 -0.9**
HSIG IAmb IAmb 18 29 48.8

comp=Z,22nm,1.5s
JCT Junction City 34.17 4 P **P** **18 29 52.0 +0.1**
HKT Hockley 34.17 11 P **P** **18 29 52.5 +0.7**
HKT IAmb IAmb 18 30 04.5

comp=Z,20nm,1.6s
SDV Santo Domingo 34.37 68 LR LR 18 41 36.4
comp=Z,1μm,21.2s,baz=248,slow=32
SDV Santo Domingo 34.37 68 P **P** **18 29 54.0 -0.1**
SDV IAmb IAmb 18 30 13.3

comp=Z,10nm,0.7s
PB18 Visviri 35.35 115 P **P** **18 30 00.7 -2.1**
MNTX Cornudas Mount 35.36 356 P **P** **18 29 59.5 -2.6**
PB16 IPOC Station P 35.57 117 P **P** **18 30 05.6 +0.9**
PB16 IAmb IAmb 18 30 22.3

comp=Z,18nm,1.2s
PB11 IPOC Station P 35.95 119 P **P** **18 30 07.8 +0.3**
PB11 IAmb IAmb 18 30 17.8

comp=Z,23nm,1.1s
NATX Nacogdoches 36.16 12 P **P** **18 30 08.8 -0.1**
237A Washetta, Mont 36.17 10 P **P** **18 30 09.3 +0.3**
237A IAmb IAmb 18 30 16.6

comp=Z,11nm,0.8s
LPAZ La Paz 36.19 113 P **P** **18 30 10.1 0.0**
comp=Z,0.5nm,0.5s,baz=268,slow=13,SNR=3.8
LPAZ LR LR 18 42 29.9
comp=Z,481nm,18.7s,baz=288,slow=32
comp=Z,0.5nm,0.5s
LPAZ La Paz 36.19 113 P **P** **18 30 11.2 +1.1**
ABTX Abilene, Hawle 36.31 4 P **P** **18 30 10.2 -0.1**
ABTX IAmb IAmb 18 30 16.1

comp=Z,21nm,1.5s
342A Flagon Creek P 36.33 15 P **P** **18 30 10.5 +0.2**
121A Cookes Peak, D 36.42 353 P **P** **18 30 09.7 -1.7**
121A IAmb IAmb 18 30 31.2

comp=Z,49nm,1.7s
PB07 IPOC Station P 36.52 122 P **P** **18 30 13.2 +0.8**
PB08 IPOC Station P 36.53 119 P **P** **18 30 14.7 +2.0**
PB08 IAmb IAmb 18 30 38.2

comp=Z,13nm,0.5s
PB01 IPOC Station P 36.59 121 P **P** **18 30 14.0 +1.1**
PB01 IAmb IAmb 18 30 24.7

comp=Z,32nm,1.4s
TUC Tucson 36.69 349 P **P** **18 30 13.3 -0.3**
BAUV El Baul 36.81 70 P **P** **18 30 14.7 0.0**
BAUV IAmb IAmb 18 30 18.5

comp=Z,29nm,1.2s
H03N2 Juan Fernandez 36.94 146 T T 19 09 33.7
baz=322,slow=78,SNR=37
H03N1 Juan Fernandez 36.95 146 T T 19 09 35.8
baz=322,slow=78,SNR=47
H03N3 Juan Fernandez 36.95 146 T T 19 09 35.0
baz=322,slow=78,SNR=40
TAOE Nuku Hiva Isla 37.52 260 *e*LR LR 18 39 52.1
comp=Z,1μm,25.3s
MSTX Muleshoe 37.53 360 P **P** **18 30 21.8 +1.0**
MSTX IAmb IAmb 18 30 33.1

comp=Z,58nm,1.9s
LVC Limon Verde 37.71 123 LR LR 18 41 52.6
comp=Z,829nm,19.7s,baz=288,slow=30
GLA Glamis 38.37 344 P **P** **18 30 28.3 +0.6**
GLA IAmb IAmb 18 30 48.0

comp=Z,38nm,1.7s
AMTX Amarillo 38.46 1 P **P** **18 30 29.6 +1.1**
ANMO Albuquerque 38.67 355 P **P** **18 30 30.3 -0.1**
comp=Z,1.0nm,0.2s,baz=165,slow=9.1,SNR=5.9
ANMO LR LR 18 43 56.5
comp=Z,204nm,20.2s,baz=176,slow=32
comp=Z,1.0nm,0.2s
MIAR Mount Ida 39.07 12 P **P** **18 30 35.4 +1.8**
MIAR IAmb IAmb 18 30 45.8

comp=Z,31nm,1.6s
W18A Petrified Fore 39.24 351 P **P** **18 30 36.9 +1.7**
W18A IAmb IAmb 18 30 42.7

comp=Z,41nm,1.9s
PFO Pinyon Flats O 39.38 342 LR LR 18 43 08.3
comp=Z,710nm,18.3s,baz=139,slow=31
PFO Pinyon Flats O 39.38 342 P **P** **18 30 36.3 0.0**
W39A Magazine 39.66 12 P **P** **18 30 40.0 +1.5**
W39A IAmb IAmb 18 30 50.3

comp=Z,36nm,1.8s
WUAZ Wupatki 39.91 349 P **P** **18 30 40.8 0.0**
W41B Gary Mavity, V 39.97 13 P **P** **18 30 42.4 +1.4**
W41B IAmb IAmb 18 30 53.4

comp=Z,34nm,1.8s
152A Waverly Hall 40.06 24 P **P** **18 30 40.8 -1.0**
WHAR Wooly Hollow 40.07 13 P **P** **18 30 44.1 +2.2**
WHAR IAmb IAmb 18 30 54.5

comp=Z,25nm,1.4s
HHAR Hobbs 40.68 11 P **P** **18 30 47.4 +0.5**
FCAR Ozark Folk Cen 40.68 13 P **P** **18 30 47.6 +0.7**
154A Montrose 40.69 26 P **P** **18 30 47.0 0.0**
154A IAmb IAmb 18 30 59.4

comp=Z,26nm,0.9s
T25A Trinidad 40.73 358 P **P** **18 30 48.4 +0.8**
T25A IAmb IAmb 18 31 08.4

comp=Z,47nm,2.0s
U38A Gravette 40.75 10 P **P** **18 30 47.9 +0.4**
X48A Hartselle 40.78 20 P **P** **18 30 46.6 -1.2**
PLAL Pickwick Lake 40.93 18 P **P** **18 30 49.2 +0.2**
PLAL IAmb IAmb 18 31 01.2

comp=Z,25nm,1.3s
GSC Goldstone, Bar 41.05 342 P **P** **18 30 49.9 -0.2**
LCAR Lake Charles 41.08 14 P **P** **18 30 50.6 +0.4**
LCAR IAmb IAmb 18 31 02.4

comp=Z,28nm,1.6s
MVCO Mesa Verde 41.12 353 P **P** **18 30 51.8 +0.9**
MVCO IAmb IAmb 18 31 03.1

comp=Z,45nm,1.8s
FPAL Fort Paine 41.37 22 P **P** **18 30 50.5 -2.2**
SDCO Great Sand Dun 41.38 357 P **P** **18 30 50.4 -2.7**
S22A 4UR Ranch, Cre 41.48 355 P **P** **18 30 54.6 +0.8**
X51A Calhoun 41.68 22 P **P** **18 30 56.5 +1.4**
X51A IAmb IAmb 18 31 07.3

comp=Z,41nm,1.6s
QSM Queen of Sheba 41.69 343 P **P** **18 30 56.3 +1.1**
SHPR Sheep Range 41.72 345 P **P** **18 30 56.6 +0.9**
LCMT Little Creek M 41.74 347 P **P** **18 30 57.0 +1.2**
GWY Greenwater Val 41.83 343 P **P** **18 30 57.6 +1.0**
GWY IAmb IAmb 18 30 59.3

comp=Z,29nm,1.7s
MGMO Mountain Grove 41.86 13 P **P** **18 30 57.3 +0.7**
MGMO IAmb IAmb 18 31 09.1

comp=Z,44nm,1.9s
SWET Sewanee 41.86 21 P **P** **18 30 58.0 +1.3**
SWET IAmb IAmb 18 31 08.1

comp=Z,39nm,1.8s
ISA Isabella, Lake 41.91 341 P **P** **18 30 58.2 +1.0**
PBMO Poplar Bluff 41.94 15 P **P** **18 30 56.8 -0.4**
PBMO IAmb IAmb 18 31 09.5

comp=Z,44nm,1.5s
MT05 Renca 41.94 138 P **P** **18 30 57.1 -0.3**
PKCU Pink Cliffs 41.96 349 P **P** **18 30 55.5 -2.3**
PKCU IAmb IAmb 18 31 01.4

comp=Z,21nm,1.3s
V48A Smith Brothers 42.03 19 P **P** **18 30 58.7 +0.6**
HICK Hickman 42.03 16 P **P** **18 30 58.4 +0.4**
WVT Waverly 42.07 18 P **P** **18 30 57.3 -1.0**
WVT IAmb IAmb 18 31 10.3

comp=Z,23nm,1.4s
W50A Signal Mountai 42.07 21 P **P** **18 30 57.6 -0.8**
W50A IAmb IAmb 18 31 09.8

comp=Z,25nm,1.4s
PV13 Radium Mtn., P 42.10 353 P **P** **18 30 59.4 +0.6**
SJG San Juan 42.10 58 LR LR 18 45 31.6
comp=Z,490nm,19.2s,baz=255,slow=32
R32A Long Quarter, 42.14 5 P **P** **18 30 59.6 +0.6**
MT03 Universidad Ad 42.15 138 P **P** **18 30 58.0 -1.2**
MT03 IAmb IAmb 18 31 23.1

comp=Z,37nm,1.2s
S39A Bolivar 42.16 11 P **P** **18 30 59.6 +0.5**
S39A IAmb IAmb 18 31 11.1

comp=Z,27nm,1.7s
GO05 Huala 42.19 141 P **P** **18 31 00.6 +1.2**
GO05 IAmb IAmb 18 31 10.2

comp=Z,52nm,1.5s
PV15 Paradox Valley 42.24 353 P **P** **18 31 01.2 +1.3**
PV15 IAmb IAmb 18 31 12.4

comp=Z,34nm,1.7s
PV11 David Mesa, Pa 42.24 353 P **P** **18 31 01.5 +1.6**
PV11 IAmb IAmb 18 31 12.2

comp=Z,31nm,1.6s
SZCU Shurtz Canyon 42.27 348 P **P** **18 31 01.5 +1.3**
ZON Zonda 42.27 135 P **P** **18 31 01.0 +0.8**
ZON IAmb IAmb 18 31 21.0

comp=Z,30nm,1.4s
CCUT Cedar City 42.28 347 P **P** **18 31 01.8 +1.4**
PV10 Paradox Valley 42.34 353 P **P** **18 31 01.2 +0.4**
PV07 Paradox Valley 42.35 353 P **P** **18 31 02.6 +1.7**
PV23 Carpenter Ridg 42.41 353 P **P** **18 31 01.1 -0.3**
TPNV Topopah Spring 42.43 344 P **P** **18 31 00.9 -0.6**
TPNV IAmb IAmb 18 31 08.9

comp=Z,34nm,1.9s
CBKS Cedar Bluff 42.46 3 P **P** **18 31 00.5 -1.1**
W52A Murphy 42.50 23 P **P** **18 31 01.4 -0.5**
W52A IAmb IAmb 18 31 14.8

comp=Z,38nm,1.6s
MTPU Mount Pierson 42.52 349 P **P** **18 31 04.2 +1.9**
PRN Pahroc Range 42.54 345 P **P** **18 31 03.1 +0.7**
KSCO Kaye Shedlock' 42.57 0 P **P** **18 31 02.7 +0.2**
KSCO IAmb IAmb 18 31 05.7

comp=Z,8.7nm,0.5s
LMEL Las Melosas 42.57 139 P **P** **18 31 02.3 -0.4**
LMEL IAmb IAmb 18 31 22.6

comp=Z,27nm,1.2s
Q24A Divide 42.58 357 P **P** **18 31 04.3 +1.5**
CPCT Cooper Cave 42.59 22 P **P** **18 31 01.6 -1.0**
SIV San Ignacio 42.69 109 P **P** **18 31 03.3 -0.5**
comp=Z,0.9nm,0.8s,baz=272,slow=7.1,SNR=4.9
SIV LR LR 18 47 01.9
comp=Z,830nm,18.2s,baz=298,slow=34
comp=Z,0.9nm,0.8s
GRAC Grapevine Rang 42.79 343 P **P** **18 31 04.6 +0.3**
BG3 Lake Jocassee 42.81 24 P **P** **18 31 05.8 +1.4**
SMCO Snowmass 42.91 355 P **P** **18 31 06.1 +0.4**
S11A Rachel 42.95 345 P **P** **18 31 06.1 +0.5**
S11A IAmb IAmb 18 31 27.8

comp=Z,35nm,1.4s
CCM Cathedral Cave 42.95 13 P **P** **18 31 04.2 -1.3**
R40A Maddies Statio 42.95 12 P **P** **18 31 05.8 +0.3**
R40A IAmb IAmb 18 31 17.7

comp=Z,24nm,1.6s
V51A Loudon 42.96 22 P **P** **18 31 05.8 +0.2**
MSU Marysvale 42.97 349 P **P** **18 31 05.7 -0.2**
ML02 Panimavida 42.99 142 P **P** **18 31 05.7 -0.3**
KSU1 Kansas State U 43.03 7 P **P** **18 31 05.6 -0.5**
TKL Tuckaleechee C 43.05 23 P **P** **18 31 07.1 +0.8**
comp=Z,2.8nm,0.8s,baz=196,slow=1.9,SNR=3.8
TKL LR LR 18 49 20.8
comp=Z,206nm,18.6s,baz=194,slow=36
comp=Z,2.8nm,0.8s
FVM French Village 43.08 14 P **P** **18 31 05.7 -0.9**
T47A Sharon Grove 43.08 18 P **P** **18 31 07.2 +0.6**
T47A IAmb IAmb 18 31 24.7

comp=Z,46nm,2.0s
U49A Red Boiling Sp 43.09 20 P **P** **18 31 07.2 +0.6**
LCH Last Change Ra 43.09 342 P **P** **18 31 04.2 -2.6**
S44A Carbondale 43.11 16 P **P** **18 31 05.5 -1.3**
S44A IAmb IAmb 18 31 18.0

comp=Z,32nm,1.8s
TCRU Three Creeks R 43.12 349 P **P** **18 31 05.9 -1.2**
PAULI Pauline 43.13 25 P **P** **18 31 07.4 +0.5**
SIUC Southern Illin 43.14 16 P **P** **18 31 06.8 -0.2**
Q16A Castle Valley 43.19 350 P **P** **18 31 09.1 +1.5**
Q16A IAmb IAmb 18 31 19.5

comp=Z,26nm,1.7s
SRU San Rafael Swe 43.27 351 P **P** **18 31 09.3 +1.0**
PSUT Pine Spring 43.33 347 P **P** **18 31 09.5 +0.7**
ISCO Idaho Springs 43.44 357 P **P** **18 31 09.2 -0.6**
V53A Saluda 43.44 24 P **P** **18 31 09.5 -0.1**
V53A IAmb IAmb 18 31 22.1

comp=Z,21nm,1.4s
TMUT Trail Mountain 43.56 350 P **P** **18 31 11.7 +0.9**
TMUT IAmb IAmb 18 31 30.9

comp=Z,35nm,1.8s
R11A Troy Canyon, C 43.57 345 P **P** **18 31 11.6 +0.9**
R11A IAmb IAmb 18 31 23.7

comp=Z,33nm,1.9s
P17A Butcher Ranch, 43.66 351 P **P** **18 31 12.0 +0.6**
P17A IAmb IAmb 18 31 24.0

comp=Z,37nm,1.7s
P18A Preston Nutter 43.73 352 P **P** **18 31 13.3 +1.1**
P18A IAmb IAmb 18 31 18.5

comp=Z,37nm,2.0s
TPH Tonopah 43.75 343 P **P** **18 31 13.7 +1.5**
P40A Paris 44.19 12 P **P** **18 31 14.6 -0.9**
P40A IAmb IAmb 18 31 27.2

comp=Z,45nm,1.8s
V55A Taylorsville 44.26 25 P **P** **18 31 14.0 -2.1**
LHV Little Huntoon 44.29 342 P **P** **18 31 14.8 -1.5**
Q44A Meyer Farm, Va 44.31 15 P **P** **18 31 15.1 -1.3**
MPU Maple Canyon 44.33 350 P **P** **18 31 16.2 -0.6**
MPU IAmb IAmb 18 31 19.7

comp=Z,22nm,1.4s
NLU North Lily Min 44.35 350 P **P** **18 31 14.7 -2.3**
NLU IAmb IAmb 18 31 29.9

comp=Z,25nm,1.8s
NV11 Mina Array Sit 44.35 343 P **P** **18 31 14.6 -2.4**
NVAR Mina Array Bea 44.40 342 P **P** **18 31 16.4 -1.0**
comp=Z,1.0nm,1.0s,baz=168,slow=8.5,SNR=5.3
NVAR PcP **PP** **18 33 00.9 -0.2**
comp=Z,0.2nm,0.7s,baz=131,slow=5.1,SNR=1.7
NVAR LR LR 18 45 58.5
comp=Z,532nm,19.9s,baz=152,slow=31
comp=Z,1.0nm,1.0s
Q09A Carvers 44.45 344 P **P** **18 31 19.8 +2.0**
Q09A IAmb IAmb 18 31 30.7

comp=Z,15nm,0.9s
OGNE Ogallala 44.50 1 P **P** **18 31 18.9 +0.9**
OGNE IAmb IAmb 18 31 44.7

comp=Z,16nm,0.8s
N23A Red Feather La 44.55 357 P **P** **18 31 15.9 -2.7**
RDMU Red Mountain 44.57 353 P **P** **18 31 19.3 +0.6**
RDMU IAmb IAmb 18 31 39.1

comp=Z,27nm,1.6s
RYN Ryan 44.65 342 P **P** **18 31 19.7 +0.4**
RYN IAmb IAmb 18 31 32.8

comp=Z,36nm,2.0s
CMB Columbia Colle 44.70 340 P **P** **18 31 21.3 +1.6**
CMB IAmb IAmb 18 31 31.9

comp=Z,24nm,1.6s
DUG Dugway, Tooele 44.72 349 P **P** **18 31 18.6 -1.3**
DUG IAmb IAmb 18 31 39.8

comp=Z,23nm,1.6s
S51A Beattyville 44.87 22 P **P** **18 31 21.1 +0.2**
JLU Jordanelle 44.87 351 P **P** **18 31 21.2 0.0**
JLU IAmb IAmb 18 31 32.8

comp=Z,35nm,1.7s
N35A Tabor 44.88 8 P **P** **18 31 21.9 +0.9**
R49A Shelbyville 44.90 20 P **P** **18 31 21.3 +0.2**
KVN Kaiserville 44.91 343 P **P** **18 31 21.8 +0.4**
KVN IAmb IAmb 18 31 33.1

comp=Z,28nm,1.7s
PHWY Pilot Hill 44.92 357 P **P** **18 31 20.6 -1.0**
PHWY IAmb IAmb 18 31 40.9

comp=Z,19nm,1.6s
CTU Camp Tracy 45.01 350 P **P** **18 31 22.3 +0.1**
CTU IAmb IAmb 18 31 41.8

comp=Z,22nm,1.4s
R50A Paris 45.18 20 P **P** **18 31 20.9 -2.4**
R50A IAmb IAmb 18 31 43.5

comp=Z,20nm,1.4s
N38A Joes South For 45.19 10 P **P** **18 31 22.3 -1.1**
YERR Yerington 45.20 342 P **P** **18 31 21.3 -2.5**
YERR IAmb IAmb 18 31 26.7

comp=Z,24nm,1.7s
TCUT Toone Canyon 45.37 351 P **P** **18 31 26.4 +1.2**
PNTR Pine Nut 45.40 341 P **P** **18 31 26.6 +1.2**
PNTR IAmb IAmb 18 31 42.4

comp=Z,27nm,1.3s
RWWY Rawlins 45.43 355 P **P** **18 31 27.1 +1.5**
EMB Emerald Bay 45.46 341 P **P** **18 31 25.0 -0.9**
EMB IAmb IAmb 18 31 53.7

comp=Z,15nm,0.9s
BGU Big Grassy Mou 45.47 349 P **P** **18 31 25.9 +0.1**
BGU IAmb IAmb 18 31 37.4

comp=Z,21nm,1.6s
VCNR Virginia City 45.61 342 P **P** **18 31 27.1 +0.1**
VCNR IAmb IAmb 18 31 46.8

comp=Z,23nm,1.4s
MPK Martis Peak 45.73 341 P **P** **18 31 28.5 +0.5**
MPK IAmb IAmb 18 31 51.8

comp=Z,17nm,1.0s
ELK Elko 45.76 347 P **P** **18 31 27.6 -0.6**
comp=Z,0.3nm,0.3s,baz=152,slow=7.3,SNR=7.8
ELK LR LR 18 48 13.9
comp=Z,460nm,18.1s,baz=168,slow=33
comp=Z,0.3nm,0.3s
ELK Elko 45.76 347 P **P** **18 31 29.5 +1.2**
ELK IAmb IAmb 18 31 41.1

comp=Z,30nm,1.9s
HWUT Hardware Ranch 45.87 351 P **P** **18 31 29.9 +0.8**
PAHR Pah Rah Range 45.90 342 P **P** **18 31 30.8 +1.5**
BMN Battle Mountai 45.95 345 P **P** **18 31 29.6 -0.1**
P49A Miami Univ. Ec 46.17 19 P **P** **18 31 31.5 +0.3**
HVU Hansel Valley 46.25 350 P **P** **18 31 32.8 +0.9**
K22A Casper 46.33 356 P **P** **18 31 32.8 +0.2**
K22A IAmb IAmb 18 31 44.5

comp=Z,19nm,1.6s
BEKR Beckworth 46.35 341 P **P** **18 31 33.9 +1.0**
ORV Oroville 46.45 340 P **P** **18 31 34.6 +1.2**
ORV IAmb IAmb 18 31 37.2

comp=Z,11nm,0.8s
Q52A Bidwell 46.53 22 P **P** **18 31 35.5 +1.5**
BW06 Boulder Array 46.73 353 P **P** **18 31 35.0 -0.8**
BW06 IAmb IAmb 18 31 53.6

comp=Z,22nm,1.6s
PD31 Pinedale Array 46.73 353 P **P** **18 31 36.0 +0.2**
PD31 IAmb IAmb 18 31 53.6

comp=Z,18nm,1.6s
PDAR Pinedale Array 46.73 353 P **P** **18 31 35.3 -0.5**
comp=Z,6.0nm,1.3s,baz=160,slow=4.7,SNR=13
PDAR LR LR 18 48 49.7
comp=Z,142nm,18.4s,baz=174,slow=33
comp=Z,6.0nm,1.3s
PDAR Pinedale Array 46.73 353 P **P** **18 31 35.0 -0.8**
PLCA Paso Flores 46.82 146 P **P** **18 31 36.3 -0.1**
comp=Z,3.5nm,1.1s,baz=282,slow=3.5,SNR=3.5
PLCA LR LR 18 46 21.1
comp=Z,887nm,19.8s,baz=330,slow=30
comp=Z,3.5nm,1.1s
N47A Urbana 47.09 18 P **P** **18 31 38.4 0.0**
N47A IAmb IAmb 18 31 48.8

comp=Z,16nm,1.1s
Q54A Coxs Mills 47.10 23 P **P** **18 31 39.5 +1.1**
ECR Eagle Creek 47.26 351 P **P** **18 31 39.4 -0.6**
REDW Red Top Meadow 47.48 352 P **P** **18 31 41.4 -0.3**
SNOW Snow King Moun 47.57 352 P **P** **18 31 42.5 +0.1**
SNOW IAmb IAmb 18 31 54.2

comp=Z,13nm,1.2s
TPAW Teton Pass 47.62 352 **P** **18 31 42.9 +0.1**
TPAW IAmb IAmb 18 32 07.2

comp=Z,20nm,1.5s
RSSD Black Hills 47.69 359 P **P** **18 31 43.1 -0.1**
RSSD IAmb IAmb 18 32 01.5

comp=Z,22nm,1.8s
LOHW Long Hollow 47.70 352 P **P** **18 31 43.6 +0.3**
MOOW Moose Ponds 47.85 352 P **P** **18 31 44.2 -0.3**
MOOW IAmb IAmb 18 31 56.1

comp=Z,31nm,2.0s
PPT Papeete 47.89 250 LR LR 18 47 08.1
comp=Z,660nm,18.0s,baz=80,slow=30
PPT2 Papeete2 47.90 250 *e*S **S** **18 38 44.4 +1.5**
comp=Z,152nm,24.5s
PPT2 *e*LR LR 18 44 44.3
comp=Z,1μm,24.8s
FLWY Flagg Ranch 48.17 352 P **P** **18 31 47.0 0.0**
MOD Modoc Plateau 48.19 342 P **P** **18 31 48.2 +1.1**
WWOR Wild Horse Val 48.20 344 P **P** **18 31 47.5 +0.3**
HLID Hailey 48.28 349 P **P** **18 31 48.2 +0.4**
MFID Camas Ranch 48.43 347 P **P** **18 31 49.6 +0.7**
LKWY Lake 48.61 353 P **P** **18 31 51.4 +1.0**
N53A Lisbon 48.67 22 P **P** **18 31 50.7 0.0**
N53A IAmb IAmb 18 32 10.9

comp=Z,18nm,1.1s
P57A Homestead Farm 48.69 26 P **P** **18 31 50.4 -0.3**
YMR Madison River 48.78 352 P **P** **18 31 52.6 +0.8**
YBH Yreka Blue Hor 48.81 340 LR LR 18 48 14.2
comp=Z,478nm,21.4s,baz=170,slow=31
CPUP Villa Florida 48.88 122 P **P** **18 31 52.6 0.0**
comp=Z,0.7nm,0.4s,baz=305,slow=4.1,SNR=3.0
CPUP LR LR 18 50 00.8
comp=Z,235nm,18.2s,baz=292,slow=33
comp=Z,0.7nm,0.4s
CPUP Villa Florida 48.88 122 **P** **18 31 52.5 0.0**
YHL Hebgen Lake 48.99 352 P **P** **18 31 54.4 +1.0**
QLMT Earthquake Lak 49.01 352 P **P** **18 31 54.8 +1.4**
J08A Circle Bar Ran 49.02 345 P **P** **18 31 54.1 +0.7**
J08A IAmb IAmb 18 32 12.5

comp=Z,13nm,1.3s
TBI Tubuai 49.14 242 *e*S **S** **18 39 04.4 +4.3**
comp=Z,197nm,24.5s
TBI *e*LR LR 18 45 23.5
comp=Z,1μm,27.2s
MCMT McKenzie Canyo 49.22 350 P **P** **18 31 56.2 +1.1**
J47A Sunmer 49.51 17 P **P** **18 31 56.5 -0.5**
J47A IAmb IAmb 18 32 16.6

comp=Z,17nm,1.1s
GCMT Greycliff 49.73 354 P **P** **18 31 57.2 -1.7**
BOZ Bozeman (W) 49.78 352 P **P** **18 32 00.8 +1.5**
BOZ IAmb IAmb 18 32 02.6

comp=Z,20nm,2.0s
J04D Umpqua Nationa 49.96 342 P **P** **18 32 01.2 +0.5**
I07A Izee 49.97 344 P **P** **18 32 01.4 +0.8**
PLID Pearl Lake 50.07 348 P **P** **18 32 00.6 -0.9**
PLID IAmb IAmb 18 32 19.4

comp=Z,18nm,1.3s
PINE Pine Mountain 50.10 343 P **P** **18 32 01.2 -0.6**
PINE IAmb IAmb 18 32 21.2

comp=Z,24nm,1.3s
LRM Limekiln Ridge 50.13 351 P **P** **18 32 01.2 -0.7**
MDP Montagnes des 50.80 80 LR LR 18 52 31.7
comp=Z,488nm,18.2s,baz=254,slow=35
G08A Pilot Rock 50.95 345 P **P** **18 32 09.3 +1.2**
G08A IAmb IAmb 18 32 27.3

comp=Z,29nm,1.9s
F10A Beach Ranch, E 51.17 347 P **P** **18 32 09.8 0.0**
F10A IAmb IAmb 18 32 27.3

comp=Z,33nm,1.8s
H04A Detroit Lake 51.29 342 P **P** **18 32 10.9 +0.4**
H04A IAmb IAmb 18 32 12.8

comp=Z,26nm,1.4s
HOOD Mount Hood Mea 51.71 343 P **P** **18 32 14.1 +0.3**
F07A Phinny Hill Vi 51.76 345 P **P** **18 32 14.6 +0.7**
F07A IAmb IAmb 18 32 16.6

comp=Z,11nm,0.7s
E09A Wood Farm, Sta 51.90 347 P **P** **18 32 13.8 -1.1**
HAWA Hanford 52.12 345 P **P** **18 32 16.2 -0.5**
HAWA IAmb IAmb 18 32 18.7

comp=Z,19nm,1.4s
D41A Chassel 52.13 12 P **P** **18 32 17.0 +0.3**
D41A IAmb IAmb 18 32 19.2

comp=Z,31nm,1.6s
AGMN Agassiz Nation 52.20 6 P **P** **18 32 16.4 -0.7**
AGMN IAmb IAmb 18 32 22.3

comp=Z,17nm,1.6s
JTMT Jette 52.30 350 P **P** **18 32 17.8 -0.3**
E07A Sunnyside 52.35 345 P **P** **18 32 17.9 -0.5**
EYMN Ely 52.43 10 P **P** **18 32 19.6 +0.7**
EYMN IAmb IAmb 18 32 21.0

comp=Z,22nm,1.7s
SADO Sadowa 52.73 21 LR LR 18 54 01.9
comp=Z,147nm,18.4s,baz=182,slow=35
C09A Chrisman Ranch 53.14 347 P **P** **18 32 24.0 -0.2**
C09A IAmb IAmb 18 32 35.8

comp=Z,13nm,1.2s
NEW Newport 53.33 348 P **P** **18 32 25.0 -0.7**
comp=Z,4.9nm,1.1s,baz=149,slow=8.1,SNR=9.5
NEW LR LR 18 52 22.6
comp=Z,390nm,19.6s,baz=158,slow=33
comp=Z,4.9nm,1.1s
NEW Newport 53.33 348 P **P** **18 32 25.6 0.0**
NEW IAmb IAmb 18 32 27.0

comp=Z,24nm,1.6s
WALA Waterton Lakes 53.51 351 P **P** **18 32 27.0 0.0**
WALA IAmb IAmb 18 32 44.1

comp=Z,18nm,1.6s
D05A Enumclaw 53.51 344 P **P** **18 32 27.1 +0.2**
D05A IAmb IAmb 18 32 39.3

comp=Z,14nm,0.9s
B08A Colville Reser 53.91 346 P **P** **18 32 29.4 -0.5**
B08A IAmb IAmb 18 32 48.6

comp=Z,13nm,1.6s
ULM Lac du Bonnet 54.13 5 P **P** **18 32 30.8 -0.5**
comp=Z,5.1nm,0.9s,baz=177,slow=7.6,SNR=4.9
ULM LR LR 18 54 40.5
comp=Z,694nm,18.2s,baz=234,slow=35
comp=Z,5.1nm,0.9s
ULM Lac du Bonnet 54.13 5 P **P** **18 32 31.3 0.0**
ULM IAmb IAmb 18 32 32.4

comp=Z,19nm,1.5s
LLLB Lillooet 56.62 345 P P 18 32 49.6 +0.2
LLLB IAmb IAmb 18 33 00.6
comp=Z,25nm,2.0s
EDM Edmonton 57.48 352 P P 18 32 56.3 +0.8
EDM IAmb IAmb 18 32 57.0
comp=Z,17nm,1.2s
USHA Ushuaia 57.98 157 LR LR 18 52 42.9
comp=Z,770nm,19.1s,baz=283,slow=31
RAR Rarotonga 58.00 247 LR LR 18 51 20.1
comp=Z,294nm,19.1s,baz=82,slow=29
FFC Flin Flon 58.29 1 P P 18 33 00.2 -0.8
BBB Bella Bella 59.76 342 LR LR 18 55 03.6
comp=Z,264nm,21.1s,baz=156,slow=32
FCC Fort Churchill 62.72 5 P P 18 33 30.7 -0.5
FCC IAmb IAmb 18 33 32.7
comp=Z,9.2nm,1.2s
SCHQ Schefferville 65.51 22 LR LR 19 01 21.0
comp=Z,638nm,20.4s,baz=240,slow=35
DLBC Dease Lake 65.74 345 P P 18 33 50.5 -0.6
comp=Z,0.6nm,0.3s,baz=136,slow=9.5,SNR=4.9
DLBC LR LR 19 00 43.5
comp=Z,256nm,18.4s,baz=128,slow=34
comp=Z,0.6nm,0.3s
DLBC Dease Lake 65.74 345 P P 18 33 51.7 +0.5
DLBC IAmb IAmb 18 34 03.4
comp=Z,20nm,1.7s
RCBR Riachuelo 66.59 95 LR LR 19 01 25.6
comp=Z,301nm,21.3s,baz=56,slow=34
YKA Yellowknife Ar 66.70 354 P P 18 33 55.9 -1.2
comp=Z,3.0nm,1.0s,baz=161,slow=6.1,SNR=12
YKA LR LR 19 02 03.9
comp=Z,324nm,18.6s,baz=152,slow=35
comp=Z,3.0nm,1.0s
YKA Yellowknife Ar 66.70 354 P P 18 33 56.4 -0.7
PMSA Palmer Station 66.87 163 LR LR 18 55 18.7
comp=Z,515nm,21.5s,baz=313,slow=29
P33M Teslin, Yukon 68.01 344 P P 18 34 04.0 -1.6
P33M IAmb IAmb 18 34 07.8
comp=Z,11nm,1.6s
HYT Haines Junctio 69.84 343 P P 18 34 17.2 +0.2
HYT IAmb IAmb 18 34 19.8
comp=Z,16nm,1.6s
FARO Faro, Yukon 69.85 345 P P 18 34 18.3 +1.4
FARO IAmb IAmb 18 34 20.2
comp=Z,16nm,1.7s
N31M Braeburn, Yuko 69.88 344 P P 18 34 17.5 +0.4
N31M IAmb IAmb 18 34 44.5
comp=Z,12nm,1.3s
M31M Drury Creek, Y 70.09 345 P P 18 34 19.8 +1.4
M31M IAmb IAmb 18 34 20.8
comp=Z,9.7nm,1.5s
M30M Minto, Yukon 71.04 344 P P 18 34 23.4 -0.8
M30M IAmb IAmb 18 34 26.3
comp=Z,14nm,1.6s
GRNC Granite Creek 71.09 341 P P 18 34 23.8 -1.1
CTGM Chitina Glacie 71.13 341 P P 18 34 24.0 -0.9
BARN Barnard Glacie 71.31 341 P P 18 34 24.4 -1.7
BARN IAmb IAmb 18 34 28.2
comp=Z,13nm,1.3s
MCARA McCarthy VSAT 71.99 341 P P 18 34 31.3 +1.4
VRDI Verde Repeater 72.02 341 P P 18 34 31.5 +1.1
FRB Frobisher Bay 72.02 15 LR LR 19 06 12.2
comp=Z,277nm,18.3s,baz=203,slow=36
BMRM Bremner River 72.22 340 P P 18 34 32.2 +0.8
GLB Gilahina Butte 72.29 341 P P 18 34 31.7 -0.1
GLB IAmb IAmb 18 34 42.8
comp=Z,25nm,1.8s
M27K Edge Creek, AK 72.35 342 P P 18 34 33.0 +0.7
M27K IAmb IAmb 18 34 51.2
comp=Z,17nm,1.7s
FID Port Fidalgo 72.72 339 P P 18 34 33.2 -1.1
FID IAmb IAmb 18 34 37.3
comp=Z,14nm,1.4s
M26K Nabesna, AK 72.73 342 P P 18 34 35.3 +0.8
M26K IAmb IAmb 18 34 46.2
comp=Z,16nm,1.6s
BCAR Beaver Creek A 72.86 343 P P 18 34 34.9 -0.3
L27K Beaver Creek, 72.87 343 P P 18 34 35.1 -0.1
L27K IAmb IAmb 18 34 47.1
comp=Z,11nm,1.5s
DAWY Dawson 72.94 344 P P 18 34 35.6 0.0
DAWY IAmb IAmb 18 34 37.5
comp=Z,18nm,1.8s
KLU Klutina 73.04 340 P P 18 34 35.2 -1.1
KLU IAmb IAmb 18 34 38.0
comp=Z,13nm,1.6s
KDAK Kodiak Island 73.17 335 LR LR 18 59 18.3
comp=Z,481nm,18.8s,baz=159,slow=30
L26K Log Cabin Wild 73.31 342 P P 18 34 37.3 -0.5
K27K Chicken 73.67 343 P P 18 34 40.4 +0.5
I29M Ogilvie Camp, 73.68 345 P P 18 34 39.5 -0.4
I29M IAmb IAmb 18 34 42.0
comp=Z,14nm,1.5s
CNPM China Poot 73.70 337 P P 18 34 39.0 -1.1
SCM Sheep Creek Mo 73.76 340 P P 18 34 38.5 -2.0
SCM IAmb IAmb 18 35 06.1
comp=Z,14nm,1.4s
KNK Knik Glacier 73.88 339 P P 18 34 40.3 -0.8
SML Sawmill 74.09 339 P P 18 34 42.3 -0.1
EPYK Eagle Plains 74.11 346 P P 18 34 42.0 -0.4
RC01 Rabbit Creek A 74.12 338 P P 18 34 40.4 -2.2
RC01 IAmb IAmb 18 34 59.5
comp=Z,17nm,1.4s
SCRK Sand Creek 74.20 342 P P 18 34 43.9 +0.8
SCRK IAmb IAmb 18 34 45.6
comp=Z,24nm,1.9s
PMR Palmer 74.23 339 P P 18 34 42.0 -1.2
PMR IAmb IAmb 18 34 56.0
comp=Z,5.1nm,0.6s
RIDG Independent Ri 74.29 342 P P 18 34 41.9 -1.7
J26L Joseph Creek 74.46 343 P P 18 34 43.8 -0.8
DHY Denali Highway 74.63 341 P P 18 34 43.8 -1.8
DHY IAmb IAmb 18 34 47.0
comp=Z,19nm,1.8s
I26K Coal Creek Min 74.94 344 P P 18 34 47.0 -0.2
INK Inuvik 75.05 349 LR LR 19 05 36.5
comp=Z,174nm,18.8s,baz=178,slow=34
INK Inuvik 75.05 349 P P 18 34 47.9 +0.2
J25K Salcha River, 75.08 342 P P 18 34 47.4 -0.8
J25K IAmb IAmb 18 34 59.9
comp=Z,24nm,1.9s
RND Reindeer 75.35 340 P P 18 34 49.1 -0.6
SKT Skwentna 75.36 338 P P 18 34 48.2 -1.5
SKT IAmb IAmb 18 34 51.1
comp=Z,15nm,1.6s
HDA Harding Lake 75.42 342 P P 18 34 48.6 -1.4
HDA IAmb IAmb 18 35 00.1
comp=Z,21nm,1.8s
O18K Koktuh Hills 75.50 336 P P 18 34 48.6 -2.0
O18K IAmb IAmb 18 35 00.6
comp=Z,16nm,1.6s
MCK McKinley 75.59 341 P P 18 34 49.6 -1.4
IL31 75.65 342 P P 18 34 49.7 -1.5
IL31 IAmb IAmb 18 34 52.5
comp=Z,24nm,1.9s
ILAR Eielson Array 75.65 342 P P 18 34 50.3 -1.0
comp=Z,1.1nm,0.9s,baz=154,slow=5.1,SNR=10
comp=Z,1.1nm,0.9s
ILAR Eielson Array 75.65 342 P P 18 34 49.7 -1.6
WRH Wood River Hil 75.82 341 P P 18 34 51.6 -0.7
WRH IAmb IAmb 18 34 53.7
comp=Z,25nm,1.7s
TRF Thorofare Moun 75.86 340 P P 18 34 51.4 -1.4
TRF IAmb IAmb 18 35 08.5
comp=Z,28nm,2.0s
M20K Styx River 75.89 338 P P 18 34 52.5 -0.4
BWN Browne 76.06 341 P P 18 34 51.8 -1.9
KTH Kantishna Hill 76.15 340 P P 18 34 53.3 -0.9
MDM Murphy Dome 76.20 342 P P 18 34 54.2 -0.3
MDM IAmb IAmb 18 35 05.9
comp=Z,18nm,1.7s
NEA2 Nenana 76.22 341 P P 18 34 52.7 -1.9
NEA2 IAmb IAmb 18 34 56.0
comp=Z,13nm,1.5s
N18K Kilae Creek 76.26 336 P P 18 34 55.0 +0.1
M19K Big River Lodg 76.38 338 P P 18 34 54.8 -0.8
M19K IAmb IAmb 18 34 58.1
comp=Z,10nm,1.4s
CAST Castle Rocks 76.46 339 P P 18 34 55.9 -0.1
CAST IAmb IAmb 18 34 57.2
comp=Z,18nm,1.5s
BPAW Bear Paw Mtn. 76.52 340 P P 18 34 55.1 -1.3
BPAW IAmb IAmb 18 35 10.8
comp=Z,17nm,2.0s
I23K Minto, Yukon-K 76.68 342 P P 18 34 57.2 0.0
H24K Noodor Dome 76.69 343 P P 18 34 57.5 +0.1
H24K IAmb IAmb 18 35 09.0
comp=Z,26nm,1.7s
L19K White Mountain 76.72 338 P P 18 34 56.7 -0.8
L19K IAmb IAmb 18 34 58.6
comp=Z,12nm,1.6s
MLY Manley 77.04 341 P P 18 34 59.0 -0.3
K20K Telida 77.13 339 P P 18 34 59.2 -0.6
K20K IAmb IAmb 18 35 10.7
comp=Z,15nm,1.5s
I21K Tanana 77.54 341 P P 18 35 01.8 -0.2
J20K Nowinta River 77.65 339 P P 18 35 01.4 -1.2
J20K IAmb IAmb 18 35 03.8
comp=Z,27nm,1.9s
H21K Melozitna River 78.11 341 P P 18 35 04.9 -0.3
H21K IAmb IAmb 18 35 06.7
comp=Z,17nm,1.6s
RES Resolute Bay 78.48 2 LR LR 19 08 35.6
comp=Z,302nm,20.3s,baz=219,slow=35
MSVF Nonsavu 78.61 253 LR LR 19 01 28.9
comp=Z,142nm,20.9s,baz=91,slow=29
SFJD Kangerlussuaq 79.58 18 LR LR 19 09 51.3
comp=Z,380nm,20.0s,baz=230,slow=35
URZ Urewera 79.96 232 LR LR 19 04 55.0
comp=Z,343nm,18.0s,baz=32,slow=32
RPZ Rata Peaks 84.69 227 LR LR 19 07 40.7
comp=Z,416nm,18.1s,baz=78,slow=32
QSPA South Pole Qui 86.28 180 LR LR 19 07 15.5
comp=Z,172nm,19.6s,baz=112,slow=31
QSPA South Pole Qui 86.28 180 P P 18 35 48.1 -0.1
VNDA Vanda 87.52 193 LR LR 19 07 46.7
comp=Z,93nm,18.2s,baz=96,slow=31
SHEM Shemya Is, Ala 88.84 323 LR LR 19 07 37.7
comp=Z,310nm,20.5s,baz=96,slow=30
SNAA Sanae 89.56 162 LR LR 19 07 59.2
comp=Z,115nm,21.7s,baz=297,slow=30
BORG Borgarnes 89.71 25 LR LR 19 16 32.7
comp=Z,74nm,18.1s,baz=268,slow=36
H11S2 WAKE ISLAND Hy 91.72 288 T T 20 17 35.3
baz=94,slow=74,SNR=22
H11S1 WAKE ISLAND Hy 91.73 288 T T 20 17 33.8
baz=94,slow=74,SNR=23
H11S3 WAKE ISLAND Hy 91.74 288 T T 20 17 39.9
baz=94,slow=74,SNR=22
JMIC Jan Mayen 94.92 19 LR LR 19 17 36.6
comp=Z,212nm,22.0s,baz=249,slow=34
DBIC Dimbokro 98.23 84 LR LR 19 19 49.0
comp=Z,89nm,18.2s,baz=270,slow=35
EKA Eskdalemuir Ar 98.53 35 LR LR 19 17 31.7
comp=Z,83nm,21.0s,baz=236,slow=33
PETK Petropavlovsk- 98.75 323 LR LR 19 13 21.6
comp=Z,201nm,20.5s,baz=82,slow=31
ESDC Sonseca Array 99.14 51 LR LR 19 14 00.7
comp=Z,196nm,21.7s,baz=274,slow=31
SPITS Spitsbergen Ar 99.44 11 LR LR 19 21 13.8
comp=Z,238nm,21.5s,baz=260,slow=35
SONM Songino Array 129.46 335 PKP PKPdf 18 42 13.5 -2.2
comp=Z,0.5nm,0.7s,baz=75,slow=2.4,SNR=4.6
ZALV Zalesovo Beam 129.60 354 PKP PKPdf 18 42 14.7 -0.8
comp=Z,0.6nm,0.6s,baz=291,slow=6.2,SNR=4.4
MKAR Makanchi Array 136.92 355 PKP PKPdf 18 42 28.3 -1.3
comp=Z,1.4nm,1.0s,baz=28,slow=2.9,SNR=6.8
KSH Kashi 144.40 2 PKP PKPdf 18 42 43.8 +0.4
CMAR Chiang Mai Arr 154.26 306 PKPbc PKPbc 18 43 07.2 -0.5
comp=Z,0.5nm,0.7s,baz=315,slow=0.8,SNR=5.6
CMAR Chiang Mai Arr 154.26 306 PKPdf 18 42 56.6 -2.9

IDC 30 18:31:56.4±3.1, 33°.18S×178°.48W, h0km, mb3.6/2, mbtmp3.7/3, ML3.7/1, Error ellipse: s-maj=71.4km s-min=36.4km az=117.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.21**	**214**	Pn	Pn	18 33 29.5	+0.2
	1.6nm,0.3s,baz=58,slow=12,SNR=13						
URZ				Sn	Sn	18 34 39.3	-1.7
	1.1nm,0.3s,baz=9.9,slow=16,SNR=2.1						
	4.0nm,0.3s						
ASAR	**Alice Springs**	**42.63**	**270**	P	P	18 39 55.1	+0.4
	0.6nm,0.5s,baz=112,slow=8.1,SNR=19						
	0.6nm,0.5s						
WRA	**Warramunga Arr**	**43.87**	**275**	P	P	18 40 04.3	-0.5
	0.3nm,0.5s,baz=115,slow=7.9,SNR=7.8						
	0.3nm,0.5s						
H03S2	**Juan Fernandez**	**79.28**	**123**	T	T	20 11 32.9	
	SNR=22						
H03S1	**Juan Fernandez**	**79.29**	**123**	T	T	20 11 32.9	
	SNR=20						
H03S3	**Juan Fernandez**	**79.30**	**123**	T	T	20 11 31.7	
	SNR=21						
FINES	**FINESS Array B**	**147.59**	**338**	PKPbc	PKPbc	18 51 41.0	-0.9
	0.4nm,0.5s,baz=18,slow=3.0,SNR=5.9						

*IDC **30** 18:34:09.2±2.2, 33°.26N×140°.46E, h186km±23km, mb3.1/2, mbtmp3.8/5, Error ellipse: s-maj=109.0km s-min=20.5km az=73.0*
*JMA **30** 18:34:11.1±0.3, 33°.1N±0°.7×13°.9E±°, h191km±2km, MV3.0/28, NEAR HACHIJOJIMA ISLAND*
ISC 30 18:34:09.5±1.0, 33°.05N±0°.06×139°.57E±0°.08, h200km, n21, σ2s25/23, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHCJ	**Hachijojimakas**	**0.20**	**84**	P	Pn	18 34 36.8	+1.0
JHJ2	**Mitsune**	**0.22**	**74**	P	Pn	18 34 36.6	+0.8
JMKN	**Mikurajimanish**	**0.84**	**1**	*i* P	Pn	18 34 38.5	+0.3
JKO	**Kozu shima**	**1.19**	**343**	P	Pn	18 34 40.8	+0.2
JIM2	**Oshima 3**	**1.67**	**356**	P	Pn	18 34 45.6	+0.8
TK02	**Tokai 2**	**1.75**	**301**	P	Pn	18 34 45.6	+0.3
TK02				S	Sn	18 35 12.5	-0.8
JIZS	**Izushimoda**	**1.76**	**341**	P	Pn	18 34 46.2	+0.6
JIZS				S	Sn	18 35 12.3	-1.5
BSO3	**Boso 3**	**1.92**	**24**	P	Pn	18 34 48.2	+1.4
TK04	**Tokai 4**	**1.94**	**314**	P	Pn	18 34 47.8	+0.6
TK04				S	Sn	18 35 15.4	-1.3
BSO1	**Boso 1**	**1.98**	**36**	P	Pn	18 34 48.7	+1.5
TTO2	**TONANKAI O.B.S**	**2.23**	**288**	P	Pn	18 34 50.5	+0.4
JOD2	**Odawara 2**	**2.24**	**350**	P	Pn	18 34 51.6	+1.0
JIE	**Ise**	**2.73**	**300**	P	Pn	18 34 56.1	+0.1
MJAR	**Matsushiro Arr**	**3.66**	**343**	P	Pn	18 35 07.0	-0.1
	2.3nm,0.4s,baz=147,slow=14,SNR=13						
MJAR				S	Sn	18 35 45.4	-6.9
	1.1nm,0.3s,baz=121,slow=18,SNR=2.1						
JCJ	**Chichijima**	**6.36**	**158**	P	Pn	18 35 40.6	-0.9
	25nm,0.4s,baz=3.1,slow=18,SNR=25						
JCJ				S	Sn	18 36 49.5	-4.7
	18nm,0.4s,baz=307,slow=23,SNR=1.6						
KLR	**Kul'dur**	**17.18**	**342**	P	Pn	18 37 57.9	+0.1
	1.4nm,0.3s,baz=157,slow=9.4,SNR=7.5						
H11N2	**WAKE ISLAND Hy**	**27.75**	**112**	T	T	19 08 57.6	
	baz=301						
H11N1	**WAKE ISLAND Hy**	**27.75**	**112**	T	T	19 08 57.3	
	baz=301						
H11N3	**WAKE ISLAND Hy**	**27.77**	**112**	T	T	19 09 01.0	
	baz=301						
WRA	**Warramunga Arr**	**52.93**	**186**	P	P	18 43 08.0	+2.7
	0.4nm,0.4s,baz=1.2,slow=7.7,SNR=4.9						
	0.4nm,0.4s						
ASAR	**Alice Springs**	**56.66**	**186**	P	P	18 43 35.2	+3.2
	0.2nm,0.5s,baz=23,slow=10.0,SNR=23						
	0.2nm,0.5s						

MAN 30 18:35:49.4, 9°.91N×126°.11E, h21km, mb3.9, ML2.7, MS2.2, Mindanao

MAN 30 18:49:15.8, 7°.00N×124°.04E, h29km, mb3.6, ML2.3, MS1.7, Mindanao

IDC 30 19:06:32.7±1.3, 31°.05S×68°.29W, h0km, mb3.7/2, mbtmp3.6/3, ML3.1/1, Error ellipse: s-maj=52.2km s-min=41.3km az=83.0, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLCA	**Paso Flores**	**9.84**	**190**	Pn	Pn	19 08 56.0	+0.5
	baz=14,slow=16,SNR=1.6						
	1.1nm,1.0s						
TXAR	**Lajitas Array**	**68.84**	**327**	P	P	19 17 39.5	+0.3
	0.3nm,0.6s,baz=151,slow=8.7,SNR=5.6						
	0.3nm,0.6s						
TORD	**Torodi Ar. Bea**	**80.20**	**68**	P	P	19 18 46.1	+0.7
	0.8nm,0.7s,baz=254,slow=3.6,SNR=3.2						
	0.8nm,0.7s						
ZALV	**Zalesovo Beam**	**150.04**	**32**	PKPbc	PKPbc	19 26 23.9	-0.8
	1.2nm,0.4s,baz=319,slow=3.5,SNR=6.7						
MKAR	**Makanchi Array**	**152.44**	**47**	PKPbc	PKPbc	19 26 29.4	-1.3
	0.4nm,0.7s,baz=300,slow=1.5,SNR=4.3						
MKAR				PKPab	PKPab	19 26 40.8	0.0
	0.6nm,0.8s,baz=270,slow=5.5,SNR=4.9						

IDC 30 19:20:21.1±4.2, 32°.75N×84°.06E, h0km, mb3.2/2, mbtmp3.2/3, ML2.8/1, Error ellipse: s-maj=110.3km s-min=39.1km az=85.0, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**14.09**	**355**	Pn	Pn	19 23 41.2	-0.9
	baz=176,slow=13,SNR=2.9						
	0.2nm,0.5s						
SONM	**Songino Array**	**22.63**	**42**	P	P	19 25 23.8	+0.1
	0.7nm,1.0s,baz=229,slow=11,SNR=3.1						
	0.7nm,1.0s						
WRA	**Warramunga Arr**	**71.09**	**130**	P	P	19 31 41.5	0.0
	0.2nm,0.5s,baz=326,slow=6.6,SNR=1.7						
	0.2nm,0.5s						

*KRNET **30** 19:22:54.1±0.1, 39°.41N×73°.67E, mb2.8*
*SOME **30** 19:22:56.4, 39°.52N×73°.77E, h5km*
ISC 30 19:22:51.6±1.7, 39°.38N±0°.07×73°.78E±0°.04, h13km±13km, n17, σ1s37/34, 8C-4D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.38**	**327**	⇓*e*P	Pg	19 23 18.2	+0.1
	baz=29						
OHH				⇓*e*S	Sg	19 23 36.1	+0.1
	baz=29						
DRK	**Karamyk**	**1.53**	**274**	⇓*e*P	Pg	19 23 21.1	0.0
	baz=74						
DRK				⇓*e*S	Sg	19 23 40.9	-0.1
	baz=74						
BTK	**Batken**	**2.38**	**288**	⇑*e*P	Pb	19 23 34.2	-0.2
	baz=87						
BTK				⇑*e*S	Sb	19 24 03.7	0.0
	baz=87						
GAR	**Garm**	**2.71**	**263**	⇑*e*P	Pb	19 23 39.2	-0.9
	baz=62						
GAR				⇑*e*S	Sb	19 24 11.8	-1.5
	baz=62						
UCH	**Uchtor**	**2.90**	**11**	⇑*i*P	Pb	19 23 42.5	-1.0
	baz=13						
UCH				⇑*e*S	Sb	19 24 18.3	-0.8
	baz=13						
TRKS	**Terek-Say**	**2.94**	**318**	⇑*e*P	Pb	19 23 41.5	-2.5
	baz=18						
TRKS				⇑*e*S	Sn	19 24 15.8	+2.3
	baz=18						
MRKS	**Merke**	**3.39**	**353**	*e*P	Pg	19 23 56.4	-0.2
	1.6nm,0.1s						
MRKS				*e*S	Sg	19 24 39.4	-1.1
	4.2nm,0.4s						
IUG	**Iuzhnay**	**3.97**	**315**	*e*P	Pg	19 24 09.2	+1.6
	38nm,0.5s						
IUG				*e*S	Sg	19 25 01.9	+2.9
	8.7nm,0.5s						
KST	**Kastek**	**4.02**	**24**	*e*P	Pg	19 24 08.6	+0.1
	0.7nm,0.1s						
KST				*e*S	Sg	19 25 00.8	+0.1
	4.4nm,0.6s						
DGS	**Degeres**	**4.14**	**21**	*e*P	Pg	19 24 10.9	-0.1
	2.0nm,0.5s						
DGS				*e*S	Sg	19 25 05.0	+0.3
	3.4nm,0.3s						
TNSS	**Tian-Shan**	**4.37**	**32**	*e*P	Pg	19 24 16.8	+1.4
	0.7nm,0.2s						
TNSS				*e*S	Sg	19 25 14.2	+2.3
	2.1nm,0.7s						
KOTS	**Kotyrbulak**	**4.60**	**32**	*e*P	Pg	19 24 20.5	+0.8
	1.4nm,0.3s						
KOTS				*e*S	Sg	19 25 21.4	+2.1
	12nm,0.6s						
KTBS	**Karatobe**	**4.85**	**26**	*e*P	Pg	19 24 24.2	-0.3
	0.9nm,0.6s						
KTBS				*e*S	Sg	19 25 27.4	+0.1
	3.2nm,0.7s						
KUU	**Kurty**	**4.91**	**22**	*e*P	Pg	19 24 25.3	-0.2
	0.8nm,0.4s						
KUU				*e*S	Sg	19 25 29.0	-0.1
	2.4nm,0.4s						
KPKS	**Kokpek**	**5.50**	**41**	*e*P	Pg	19 24 38.3	+1.3
	2.2nm,0.1s						
KPKS				*e*S	Sg	19 25 51.4	+3.1
	3.5nm,0.3s						
ARXS	**Arharly**	**5.70**	**31**	*e*P	Pg	19 24 39.7	-1.1
	0.8nm,0.6s						
ARXS				*e*S	Sg	19 25 54.2	-0.5
	2.0nm,0.5s						
BLB	**Baldybastay**	**5.88**	**35**	*e*P	Pg	19 24 42.9	-1.3
	2.3nm,0.2s						
BLB				*e*S	Sg	19 25 59.6	-0.8
	2.3nm,0.7s						

*JMA **30** 19:26:25.1±0.2, 43°.6N±0°.7×14°.0E±°, h221km±1km, MV2.9/35, NW OFF SHAKOTAN PEN*
*IDC **30** 19:26:26.6±3.3, 43°.67N×139°.67E, h240km±34km, mb3.1/8, mbtmp3.7/9, Error ellipse: s-maj=30.6km s-min=18.4km az=112.0*
ISC 30 19:26:24.9±0.8, 43°.58N±0°.05×139°.96E±0°.06, h225km±6km, n30, σ0s96/41, mb3.3/8, Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JSK	**Shakotan**	**0.44**	**121**	P	Pn	19 26 54.6	-0.1
JSK				*e*S	S	19 27 17.6	-0.3
JSH	**Shimam**	**0.94**	**176**	*e*P	Pn	19 26 57.0	+0.1
JSH				*e*S	S	19 27 21.8	0.0
JISS	**Ishikarishitsu**	**1.10**	**106**	*e*P	Pn	19 26 58.2	+0.4
JHST	**Hiyamasetana**	**1.16**	**183**	P	Pn	19 26 58.6	+0.3
JHR	**Hokuryu**	**1.29**	**82**	*e*P	Pn	19 26 59.8	+0.6
JEW	**Eniwo**	**1.32**	**124**	*e*P	Pn	19 27 00.1	+0.8
JYG	**Yagishiri**	**1.35**	**51**	*e*P	Pn	19 26 59.1	-0.4
JNB	**Noboribetsu**	**1.37**	**144**	*e*P	Pn	19 26 60.0	+0.2
JOSM	**Okushiri--Mats**	**1.54**	**194**	P	Pn	19 27 01.6	+0.5
JOSM				*e*S	S	19 27 29.5	+0.1
JSS	**Shosan**	**1.59**	**58**	*e*P	Pn	19 27 01.8	+0.3
JRBN	**Rebuntou**	**2.00**	**23**	P	Pn	19 27 04.5	-0.7
JRBN				*e*S	S	19 27 34.7	-2.0
JKK2	**Kamakawa 2**	**2.04**	**81**	*e*P	Pn	19 27 06.1	+0.5
JKK2				*e*S	S	19 27 37.8	+0.4
JOMM	**Oshimamatsumae**	**2.06**	**179**	*e*P	Pn	19 27 06.4	+0.6
JOMM				*e*S	S	19 27 38.1	+0.3
JWK2	**Keihoku**	**2.22**	**38**	*e*P	Pn	19 27 07.8	+0.4
JSE	**Soyaes**	**2.33**	**53**	*e*P	Pn	19 27 08.7	+0.2
JSE				*e*S	S	19 27 42.5	-0.1
JNBK	**Urakawa-nobuka**	**2.43**	**121**	*e*P	Pn	19 27 09.3	-0.3
JCH	**Churui**	**2.67**	**110**	*e*S	S	19 27 46.9	-2.2
JAR	**Ashorobuto**	**2.79**	**95**	*e*P	Pn	19 27 13.8	+0.3
JAR				*e*S	S	19 27 51.7	+0.3
JTKR	**Abashiri--Toko**	**2.89**	**81**	*e*P	Pn	19 27 14.8	+0.3
JTKR				*e*S	S	19 27 53.2	0.0
JANG	**Nango**	**3.41**	**160**	*e*P	Pn	19 27 19.9	-0.7
JANG				*e*S	S	19 28 01.1	-3.2
JAK	**Akkeshi**	**3.51**	**98**	*e*P	Pn	19 27 22.3	+0.6
JAK				*e*S	S	19 28 03.6	-2.5
USRK	**Ussuriysk Ar.**	**5.79**	**279**	P	Pn	19 27 49.1	-0.7
	1.7nm,0.5s,baz=84,slow=14,SNR=5.3						
ILAR	**Eielson Array**	**44.69**	**36**	P	P	19 34 15.9	+0.9
	0.6nm,0.6s,baz=283,slow=8.9,SNR=8.5						
	0.6nm,0.6s						
INK	**Inuvik**	**49.14**	**29**	P	P	19 34 49.8	+0.5
	2.7nm,0.3s,baz=286,slow=8.1,SNR=12						
	2.7nm,0.3s						
YKA	**Yellowknife Ar**	**58.76**	**32**	P	P	19 35 58.9	+0.1
	0.4nm,0.5s,baz=305,slow=6.3,SNR=2.9						
	0.4nm,0.5s						
FINES	**FINESS Array B**	**62.54**	**330**	P	P	19 36 23.4	-0.9
	0.7nm,0.6s,baz=70,slow=6.3,SNR=6.5						
	0.7nm,0.6s						
WRA	**Warramunga Arr**	**63.42**	**186**	P	P	19 36 31.0	+0.4
	0.6nm,1.0s,baz=3.4,slow=7.1,SNR=2.1						
	0.6nm,1.0s						
ASAR	**Alice Springs**	**67.15**	**186**	P	P	19 36 55.3	+0.9

0.2nm,0.8s,baz=349,slow=3.8,SNR=1.6
0.2nm,0.8s
NOA NORSAR Array B 67.74 336 P **P** **19 36 56.8 -1.0**
0.5nm,0.8s,baz=42,slow=7.8,SNR=1.8
0.5nm,0.8s
NVAR Mina Array Bea 71.99 54 P **P** **19 37 24.8 +0.6**
0.3nm,0.6s,baz=313,slow=4.2,SNR=3.7
0.3nm,0.6s

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*IDC **30** 20:11:09.3±1.9,21°.06S×178°.66W,h584km±20km,mb2.9/5, mbtmp3.9/6,Error ellipse: s-maj=30.0km s-min=24.5km az=173.0*
ISC 30 20:11:09.4±1.2,**21°.2S**±0°.2×**178°.7W**±0°.2,**h579**km,**n7,**
σ0s**54**/**7**,**mb3.7**/5,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.60**	**317**	P	**P**	**20 12 38.3**	**+0.4**
	14nm,0.6s,baz=140,slow=4.1,SNR=17						
STKA	**Stephens Creek**	**36.94**	**245**	P	**P**	**20 17 30.1**	**-0.3**
	2.9nm,1.0s,baz=54,slow=8.7,SNR=2.5						
	2.9nm,1.0s						
ASAR	**Alice Springs**	**43.76**	**257**	P	**P**	**20 18 24.9**	**0.0**
	2.7nm,0.8s,baz=96,slow=7.9,SNR=24						
ASAR				ScP	**ScP**	**20 22 56.3**	**+0.7**
	0.4nm,1.0s,baz=111,slow=5.1,SNR=2.0						
	2.7nm,0.8s						
WRA	**Warramunga Arr**	**43.89**	**263**	P	**P**	**20 18 25.4**	**-0.5**
	1.3nm,0.5s,baz=98,slow=7.7,SNR=29						
	1.3nm,0.5s						
VNDA	**Vanda**	**57.20**	**185**	P	**P**	**20 20 01.9**	**+0.3**
	0.4nm,0.4s,baz=8.1,slow=7.1,SNR=8.9						
	0.4nm,0.4s						
TXAR	**Lajitas Array**	**87.94**	**58**	P	**P**	**20 22 58.4**	**-0.3**
	0.3nm,0.8s,baz=214,slow=4.0,SNR=4.1						
	0.3nm,0.8s						
AKASG	**Malin Array Be**	**143.27**	**330**	PKP	PKPab	20 29 34.7	-1.6
	0.6nm,0.4s,baz=45,slow=3.4,SNR=4.6						

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*SOME **30** 20:15:49.8,39°.38N×73°.45E,h5km*
*KRNET **30** 20:15:49.3±0.1,39°.42N×73°.72E,mb3.5*
*NNC **30** 20:15:53.2±1.7,39°.50N×73°.49E,h0km,mb3.7,mpv3.4, Error ellipse: s-maj=12.8km s-min=6.3km az=175.0*
ISC 30 20:15:55.7±1.1,**39°.58N**±0°.05×**73°.42E**±0°.03,**h10**km,**n40,**
σ2s**43**/**66**,**10C-7D**,**Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.06**	**333**	⇑*i*	P	**20 16 14.0**	**-2.2**
	baz=27						
OHH				⇑*i*	S	**20 16 31.8**	**+0.1**
	baz=27						
DRK	**Karamyk**	**1.26**	**266**	⇑*i*	P	**20 16 17.1**	**-2.5**
	baz=73						
DRK				⇑*i*	S	**20 16 37.3**	**+0.5**
	baz=73						
BTK	**Batken**	**2.06**	**284**	⇓*i*	P	**20 16 30.2**	**-0.3**
	baz=87						
BTK				⇓*i*	S	**20 17 00.1**	**+1.1**
	baz=87						
GAR	**Garm**	**2.48**	**258**	⇑*i*	P	**20 16 35.2**	**-1.1**
	baz=62						
GAR				⇑*i*	S	**20 17 08.6**	**+2.0**
	baz=62						
TRKS	**Terek-Say**	**2.61**	**319**	⇓*i*	P	**20 16 37.1**	**-1.1**
	baz=17						
TRKS				⇓*i*	S	**20 17 12.0**	**+2.0**
	baz=17						
UCH	**Uchtor**	**2.77**	**17**	⇓*i*	P	**20 16 37.8**	**-2.9**
	baz=12						
UCH				⇓*i*	S	**20 17 13.3**	**-1.1**
	baz=12						
MRKS	**Merke**	**3.17**	**357**	*e*P	**Pb**	**20 16 53.1**	**+1.0**
	3.7nm,0.4s						
MRKS				*e*S	**Sg**	**20 17 39.1**	**+1.6**
	30nm,0.2s						
MRKS	**Merke**	**3.17**	**357**	Pg	**Pb**	**20 16 53.1**	**+1.0**
	3.7nm,0.4s						
MRKS				Lg	Lg	20 17 39.1	
	30nm,0.2s						
KBK	**Karagaybulak**	**3.29**	**20**	⇑*i*	P	**20 16 44.5**	**-2.9**
	baz=16						
KBK				⇑*i*	S	**20 17 25.0**	**-1.6**
	baz=16						
IUG	**Iuzhnay**	**3.63**	**316**	*e*P	**Pb**	**20 17 00.2**	**+0.2**
	134nm,0.7s						
IUG				*e*S	**Sg**	**20 17 51.3**	**-1.1**
	39nm,0.7s						
IUG	**Iuzhnay**	**3.63**	**316**	Pg	**Pb**	**20 17 00.2**	**+0.2**
	134nm,0.7s						
IUG				Lg	Lg	20 17 52.4	
	39nm,0.7s						
TKM2	**Tokmak 2**	**3.72**	**25**	⇑Pg	**Pb**	**20 17 02.9**	**+1.2**
	2.4nm,0.6s						
TKM2				⇑Lg	Lg	20 17 51.4	
	5.7nm,0.4s						
KST	**Kastek**	**3.96**	**28**	*e*P	**Pb**	**20 17 05.2**	**-0.4**
	2.5nm,0.5s						
KST				*e*S	**Sg**	**20 17 59.7**	**-3.1**
	18nm,0.8s						
KST	**Kastek**	**3.96**	**28**	Pg	**Pb**	**20 17 05.2**	**-0.4**
	2.5nm,0.5s						
KST				Lg	Lg	20 18 00.5	
	18nm,0.8s						
SGDS	**Sogindy**	**3.98**	**13**	*e*P	**Pb**	**20 17 04.4**	**-1.5**
	3.2nm,0.7s						
SGDS				*e*S	**Sb**	**20 17 58.0**	**+3.9**
	11nm,0.5s						
DGS	**Degeres**	**4.07**	**25**	*e*P	**Pb**	**20 17 07.5**	**0.0**
	4.2nm,0.4s						
DGS				*e*S	**Sg**	**20 18 04.0**	**-2.3**
	13nm,0.6s						
DGS	**Degeres**	**4.07**	**25**	Pg	**Pb**	**20 17 07.5**	**0.0**
	4.2nm,0.4s						
DGS				Lg	Lg	20 18 04.0	
	13nm,0.6s						
KK31	**Karatay Array**	**4.15**	**329**	Pn	**Pn**	**20 17 00.8**	**+1.7**
	0.5nm,0.2s,baz=134,slow=14,SNR=12						
KK31				Pg	**Pg**	**20 17 12.3**	**-2.8**
	0.9nm,0.3s,baz=150,slow=15,SNR=5.8						
KK31				⇓Sn	**Sn**	**20 17 53.4**	**+5.7**
	2.6nm,0.4s,baz=144,slow=22,SNR=4.0						
KK31				Lg	Lg	20 18 06.9	
	3.4nm,0.4s,baz=154,slow=26,SNR=5.4						
MTBS	**Maitube**	**4.21**	**32**	*e*P	**Pb**	**20 17 11.3**	**+1.4**
	2.9nm,0.1s						
MTBS				*e*S	**Sg**	**20 18 10.3**	**-0.6**
	13nm,0.2s						
MTBS	**Maitube**	**4.21**	**32**	Pg	**Pb**	**20 17 11.3**	**+1.4**
	2.9nm,0.1s						
MTBS				Lg	Lg	20 18 10.3	
	13nm,0.2s						
TNSS	**Tian-Shan**	**4.36**	**36**	*e*P	**Pb**	**20 17 13.6**	**+0.9**
	3.7nm,0.5s						
TNSS				*e*S	**Sg**	**20 18 14.2**	**-1.6**
	4.3nm,0.4s						
TNSS	**Tian-Shan**	**4.36**	**36**	Pg	**Pb**	**20 17 13.6**	**+0.9**
TNSS				Lg	Lg	20 18 14.2	
BRLS	**Borolday**	**4.38**	**323**	*e*P	**Pb**	**20 17 11.7**	**-1.1**
	4.5nm,0.6s						
BRLS				*e*S	**Sb**	**20 18 10.7**	**+5.0**
	5.5nm,0.5s						
BRLS	**Borolday**	**4.38**	**323**	Pg	**Pb**	**20 17 11.7**	**-1.1**
	4.5nm,0.6s						
BRLS				Lg	Lg	20 18 11.7	
	5.5nm,0.5s						
KOTS	**Kotyrbulak**	**4.59**	**36**	*e*P	**Pb**	**20 17 17.4**	**+1.0**
	2.6nm,0.7s						
KOTS				*e*S	**Sg**	**20 18 21.4**	**-1.6**
	24nm,0.9s						
KOTS	**Kotyrbulak**	**4.59**	**36**	Pg	**Pb**	**20 17 17.4**	**+1.0**
	2.6nm,0.7s						
KOTS				Lg	Lg	20 18 21.4	
	24nm,0.9s						
KTBS	**Karatobe**	**4.80**	**30**	*e*P	**Pb**	**20 17 19.9**	**-0.1**
	1.7nm,0.3s						
KTBS				*e*S	**Sg**	**20 18 25.7**	**-4.1**
	13nm,0.5s						
KTBS	**Karatobe**	**4.80**	**30**	Pg	**Pb**	**20 17 19.9**	**-0.1**
	1.7nm,0.3s						
KTBS				Lg	Lg	20 18 25.7	
	13nm,0.5s						
KUU	**Kurty**	**4.83**	**26**	*e*P	**Pb**	**20 17 20.1**	**-0.4**
	1.5nm,0.1s						
KUU				*e*S	**Sb**	**20 18 24.9**	**+6.2**
	13nm,0.7s						

SATY	**Saty**	**5.12**	**46**	*e*P	**Pb**	**20 17 26.1**	**+0.7**
	1.4nm,0.2s						
SATY				*e*S	**Sg**	**20 18 35.7**	**-4.3**
	6.1nm,0.6s						
SATY	**Saty**	**5.12**	**46**	Pg	**Pb**	**20 17 26.1**	**+0.7**
SATY				Lg	Lg	20 18 35.7	
BTLS	**Baital**	**5.48**	**5**	*e*P	**Pb**	**20 17 34.6**	**+3.2**
	1.8nm,0.8s						
BTLS				*e*S	**Sg**	**20 18 49.9**	**-1.6**
	5.3nm,0.7s						
BTLS	**Baital**	**5.48**	**5**	Pg	**Pb**	**20 17 31.6**	**+0.1**
BTLS				Lg	Lg	20 18 45.5	
UZB	**Uzynbulak**	**5.52**	**48**	*e*P	**Pb**	**20 17 35.6**	**+3.3**
	0.9nm,0.2s						
UZB				*e*S	**Sg**	**20 18 51.8**	**-1.1**
	3.4nm,0.6s						
UZB	**Uzynbulak**	**5.52**	**48**	Pg	**Pb**	**20 17 35.6**	**+3.3**
UZB				Lg	Lg	20 18 51.8	
KPKS	**Kokpek**	**5.54**	**44**	*e*P	**Pb**	**20 17 34.7**	**+2.1**
	1.5nm,0.2s						
KPKS				*e*S	**Sg**	**20 18 50.0**	**-3.6**
	8.8nm,0.6s						
ARXS	**Arharly**	**5.68**	**34**	*e*P	**Pb**	**20 17 36.0**	**+1.0**
	3.4nm,0.7s						
ARXS				*e*S	**Sg**	**20 18 53.0**	**-5.0**
	6.2nm,0.7s						
ARXS	**Arharly**	**5.68**	**34**	Pg	**Pb**	**20 17 35.9**	**+1.0**
	3.4nm,0.7s						
ARXS				Lg	Lg	20 18 53.0	
	6.2nm,0.7s						
SHLS	**Shalkode**	**5.78**	**50**	*e*P	**Pg**	**20 17 45.1**	**-1.3**
	1.4nm,0.2s						
SHLS				*e*S	**Sg**	**20 19 08.2**	**+6.9**
	3.6nm,0.7s						
SHLS	**Shalkode**	**5.78**	**50**	Pg	**Pg**	**20 17 45.1**	**-1.3**
SHLS				Lg	Lg	20 19 08.2	

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*IDC **30** 20:50:35.0±0.7,30°.03N×70°.29E,h0km,mb4.3/25, mbtmp4.3/27,ML4.0/2,MS3.4/24,Error ellipse: s-maj=18.0km s-min=12.6km az=18.0*
*NDI **30** 20:50:35.7±3.8,30°.16N×70°.08E,h10km,ML4.4, mb4.5(NEIC)*
*NEIC **30** 20:50:36.8±2.1,30°.06N±0°.09×70°.27E±0°.09,h10km±1km, mb4.5/85,Error ellipse: s-maj=15.6km s-min=13.5km az=197.0*
*MOS **30** 20:50:36.9±1.1,30°.26N×70°.28E,h15km,mb4.7/25,Error ellipse: s-maj=7.2km s-min=3.9km az=93.6*
ISC 30 20:50:36.9±0.4,**30°.11N**±0°.05×**70°.33E**±0°.04,**h10**km,**n421,**
σ1s**30**/431,**mb4.5**/102,**MS3.4**/26,**31C-11D**,**Pakistan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SARP	**Sargodha**	**2.70**	**47**	P	**Pn**	**20 51 22.7**	**+2.3**
SARP				S	**Sn**	**20 51 55.0**	**+1.8**
THW	**Thamme Wali**	**2.94**	**24**	P	**Pn**	**20 51 25.5**	**+1.8**
THW				S	**Sb**	**20 52 05.0**	**-0.4**
CEP	**Cherat**	**3.94**	**19**	P	**Pn**	**20 51 40.4**	**+2.8**
CHCP	**Chirah Chowk**	**4.33**	**34**	P	**Pn**	**20 51 45.5**	**+2.7**
CHCP				S	**Sn**	**20 52 37.0**	**+3.6**
KBL	**Kabul**	**4.55**	**346**	Pn	**Pn**	**20 51 47.3**	**+1.2**
KBL	**Kabul**	**4.55**	**346**	P	**Pn**	**20 51 47.3**	**+1.2**
JMU	**Jammu**	**4.69**	**55**	*e*P	**Pn**	**20 51 46.0**	**-1.7**
JMU				*e*P	Pb	20 51 50.4	-8.8
JMU				*e*S	**Sn**	**20 52 40.0**	**-2.2**
THN	**Thein Dam**	**5.16**	**62**	*e*P	**Pn**	**20 51 57.7**	**+3.6**
KHET	**Khetri**	**5.20**	**112**	*e*P	**Pn**	**20 51 55.1**	**+0.3**
AJM	**Ajmer**	**5.24**	**133**	*e*P	**Pn**	**20 51 56.8**	**+1.3**
KUDL	**Kundal**	**5.73**	**108**	*e*P	**Pn**	**20 52 02.6**	**+0.6**
SMLA	**Simla**	**5.98**	**78**	*e*P	**Pn**	**20 52 07.6**	**+2.2**
SMLA				*e*S	**Sn**	**20 53 14.7**	**+0.7**
SMLA				*e*S	Sb	20 53 15.4	-17
SMLA				IAML		20 53 16.9	
	comp=N,719nm,0.4s						
SMLA				IAML		20 53 21.0	
	comp=E,527nm,0.5s						
NDI	**New Delhi**	**6.17**	**102**	*e*P	**Pn**	**20 52 07.5**	**-0.6**
NDI				*e*P	Pb	20 52 09.5	-15
NDI				*e*S	**Sn**	**20 53 19.0**	**+0.2**
SONA	**Sohna**	**6.18**	**106**	*e*P	**Pn**	**20 52 11.4**	**+3.1**
DDI	**Dehra Dun**	**6.69**	**86**	*e*P	**Pn**	**20 52 16.6**	**+1.3**
DDI				*e*S	**Sn**	**20 53 30.2**	**-1.4**
DDI				IAML		20 53 32.5	
	comp=E,670nm,0.4s						
HRA	**Herat**	**8.07**	**304**	Pn	**Pn**	**20 52 34.6**	**+0.3**
CHGR	**Chuyangaron**	**8.58**	**354**	Pn	**Pn**	**20 52 40.7**	**-0.6**
CHGR	**Chuyangaron**	**8.58**	**354**	P	**Pn**	**20 52 40.7**	**-0.6**
PTH	**Pithoragarh**	**8.60**	**91**	*e*P	**Pn**	**20 52 41.8**	**+0.2**
JHNI	**Jhansi**	**8.61**	**120**	*e*P	**Pn**	**20 52 41.6**	**-0.1**
LGTI	**Lohaghat**	**8.64**	**92**	*e*P	**Pn**	**20 52 41.4**	**-0.6**
GAR	**Garm**	**8.87**	**360**		**Pn**	**20 52 46.0**	**+0.8**
BHPL	**Bhopal**	**9.32**	**135**	*e*P	**Pn**	**20 52 51.9**	**+0.5**
BHPL				*e*S	**Sn**	**20 54 32.0**	**-4.4**
BHPL				*e*S		20 54 33.2	
BHPL				IAML		20 54 34.8	
	comp=N,155nm,0.5s						
BHPL				IAML		20 54 35.5	
	comp=E,133nm,0.3s						
DRK	**Karamyk**	**9.43**	**7**	Pn	**Pn**	**20 52 53.8**	**+0.7**
BTK	**Batken**	**9.94**	**2**	Pn	**Pn**	**20 53 00.2**	**+0.4**
BTK	**Batken**	**9.94**	**2**	P	**Pn**	**20 53 00.2**	**+0.4**
KSH	**Kashi**	**10.47**	**25**	P	**Pn**	**20 53 03.5**	**-3.6**
KSH				sP		20 53 17.3	
KSH				S	Sn	20 54 53.0	-12
KSH				pmax	pmax		
	comp=Z,27nm,0.9s						
KSH				smax	smax		
	comp=N,94nm,0.7s						
KSH				smax	smax		
	comp=E,120nm,0.7s						
TAS	**Tashkent**	**11.23**	**356**	Pn	**Pn**	**20 53 15.7**	**-1.7**
TAS	**Tashkent**	**11.23**	**356**	P	**Pn**	**20 53 15.7**	**-1.7**
ALBI	**Allahabad**	**11.23**	**112**	*e*P	**Pn**	**20 53 16.7**	**-0.8**
PYUN	**Piuthan**	**11.25**	**97**	*e*P	**Pn**	**20 53 17.7**	**-0.3**
KOLN	**Koldanda**	**11.85**	**98**	*e*P	**Pn**	**20 53 26.0**	**-0.2**
DANN	**Dangsing**	**11.86**	**95**	*e*P	**Pn**	**20 53 26.0**	**-0.4**
	comp=E,86nm,0.6s						
IUG	**Iuzhnay**	**12.02**	**359**	*e*P	**Pn**	**20 53 29.1**	**+0.8**
WSAR	**Wadi Sarin**	**12.49**	**240**	Sn	Sn	20 55 38.4	-16
	comp=E,0.5nm,0.3s,baz=107,slow=23,SNR=2.4						
WSAR				LR	LR	21 00 33.1	
	comp=E,143nm,18.9s,baz=76,slow=48						
UCH	**Uchtor**	**12.56**	**14**	P	**Pn**	**20 53 36.1**	**+0.1**
GKN	**Gorkha**	**12.69**	**96**	*e*P	**Pn**	**20 53 36.4**	**-1.2**
	comp=E,41nm,0.3s						
GEYT	**Alibeck**	**12.78**	**311**	LR	LR	20 59 31.5	
	comp=E,104nm,18.9s,baz=150,slow=42						
GEYT	**Alibeck**	**12.78**	**311**	Pn	**Pn**	**20 53 35.9**	**-2.8**
GYA0B	**ALIBECK ARRAY**	**12.78**	**311**	Pn	**Pn**	**20 53 35.6**	**-3.1**
EKS2	**Erkin-Say**	**12.83**	**12**	P	**Pn**	**20 53 40.6**	**+1.1**
AAK	**Ala-Archa**	**12.94**	**14**	Pn	**Pn**	**20 53 40.5**	**-0.5**
	comp=E,1.5nm,0.3s,baz=169,slow=2.3,SNR=7.4						
AAK				Sn	**Sn**	**20 56 00.1**	**-5.1**
	comp=E,0.1nm,0.3s,baz=320,slow=20,SNR=1.2						
AAK				LR	LR	20 59 09.9	
	comp=E,147nm,19.2s,baz=205,slow=40						
	comp=E,5.0nm,0.3s						
AAK	**Ala-Archa**	**12.94**	**14**	Pn	**Pn**	**20 53 41.3**	**+0.3**
AAK	**Ala-Archa**	**12.94**	**14**	P	**Pn**	**20 53 41.3**	**+0.3**
KK31	**Karatay Array**	**12.97**	**1**	Pn	**Pn**	**20 53 40.7**	**-0.6**
KK31	**Karatay Array**	**12.97**	**1**	P	**Pn**	**20 53 40.7**	**-0.6**
KKAR	**Karatay Array**	**12.97**	**1**	Pn	**Pn**	**20 53 40.6**	**-0.7**
KKAR	**Karatay Array**	**12.97**	**1**		**Pn**	**20 53 40.6**	**-0.7**
KKAR	**Karatay Array**	**12.97**	**1**	P	**Pn**	**20 53 40.6**	**-0.7**
ULHL	**Ulahol**	**13.02**	**20**	P	**Pn**	**20 53 42.8**	**+0.7**
TARG	**Taragay, Kyrgy**	**13.07**	**25**		**Pn**	**20 53 43.2**	**+0.1**
TARG	**Taragay, Kyrgy**	**13.07**	**25**	P	**Pn**	**20 53 43.2**	**+0.1**
BOOM	**Boomskoye usch**	**13.15**	**19**	Pn	**Pn**	**20 53 43.5**	**-0.4**
BOOM	**Boomskoye usch**	**13.15**	**19**	P	**Pn**	**20 53 43.5**	**-0.4**
DMN	**Daman**	**13.19**	**97**	*e*P	**Pn**	**20 53 44.1**	**-0.4**
	comp=E,12nm,0.2s						
KDJ	**Kajisay**	**13.21**	**23**	Pn	**Pn**	**20 53 44.8**	**+0.2**
KDJ	**Kajisay**	**13.21**	**23**	P	**Pn**	**20 53 44.8**	**+0.2**
KKN	**Kakani**	**13.29**	**96**	*e*P	**Pn**	**20 53 44.5**	**-1.4**
PKIN	**Phulchoki**	**13.44**	**97**	*e*P	**Pn**	**20 53 47.0**	**-1.0**
PKI	**Pulchoki**	**13.46**	**97**	*e*P	**Pn**	**20 53 47.1**	**-1.1**
	comp=E,15nm,0.3s						
GUN	**Gumba**	**13.78**	**95**	*e*P	**Pn**	**20 53 52.1**	**-0.6**
	comp=E,65nm,0.3s						
PRZ	**Przheval'sk**	**13.95**	**26**	Pn	**Pn**	**20 53 53.3**	**-1.5**
PRZ	**Przheval'sk**	**13.95**	**26**	P	**Pn**	**20 53 53.3**	**-1.5**
JIRN	**Jiri**	**14.11**	**96**	*e*P	**Pn**	**20 53 55.8**	**-1.4**

	comp=E,34nm,0.4s						
RAMN	**Ramite**	**14.64**	**98**	*e*P	**Pn**	**20 54 02.3**	**-2.1**
HYBB	**Hyderabad (bro**	**14.69**	**147**	*e*Pn	**Pn**	**20 54 05.0**	**+0.1**
HYBB				*e*Sn	**Sn**	**20 56 49.0**	**+1.1**
KPKS	**Kokpek**	**14.90**	**24**	*e*P	**Pn**	**20 54 08.6**	**+0.9**
SHLS	**Shalkode**	**14.93**	**27**	*e*P	**Pn**	**20 54 10.5**	**+2.4**
ODAN	**Odare**	**15.34**	**98**	*e*P	**Pn**	**20 54 11.3**	**-2.5**
TAPN	**Taplejung**	**15.49**	**96**	*e*P	**Pn**	**20 54 14.3**	**-1.5**
	comp=E,14nm,0.3s						
GTK	**Tadong**	**16.27**	**95**	*e*P	**P**	**20 54 29.4**	**+0.6**
LSA	**Lhasa**	**18.06**	**86**		**Pn**	**20 54 46.1**	**-2.3**
LSA	**Lhasa**	**18.06**	**86**	P	**Pn**	**20 54 46.1**	**-2.3**
LSA				pmax	pmax		
	comp=Z,12nm,0.9s						
OTUK	**Ortayu**	**18.18**	**4**	P	**Pn**	**20 54 47.0**	**-2.3**
TURI	**Tura**	**18.26**	**100**	*e*P	**Pn**	**20 54 48.8**	**-1.6**
MAKZ	**Makanchi**	**18.97**	**25**	P	**P**	**20 54 58.3**	**0.0**
MAKZ	**Makanchi**	**18.97**	**25**	P	**P**	**20 54 58.3**	**0.0**
MAKZ				pmax	pmax		
	comp=Z,12nm,0.9s						
MK31	**Makanchi Array**	**19.07**	**26**	P	**P**	**20 55 00.2**	**+0.7**
MK31	**Makanchi Array**	**19.07**	**26**	*d* iP	**P**	**20 55 00.4**	**+0.9**
MKAR	**Makanchi Array**	**19.07**	**26**	P	**P**	**20 55 00.0**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=206,slow=11,SNR=20						
	comp=Z,3.4nm,0.8s						
MKAR	**Makanchi Array**	**19.07**	**26**	P	**P**	**20 54 59.6**	**+0.1**
MKAR	**Makanchi Array**	**19.07**	**26**	P	**P**	**20 55 00.0**	**+0.5**
SHL	**Shillong**	**19.58**	**98**	P	**P**	**20 55 02.6**	**-2.7**
SHL	**Shillong**	**19.58**	**98**	P	**P**	**20 55 02.6**	**-2.7**
SHL				pmax	pmax		
	comp=Z,19nm,1.1s						
LKRN	**Lenkeran, Azer**	**19.71**	**302**	P	**Pn**	**20 55 11.3**	**+3.4**
TEZP	**TEZPUR**	**20.07**	**94**	*e*P	Pn	20 55 12.9	+0.6
ABKAR	**Akbulak array**	**20.69**	**340**	P	**P**	**20 55 17.6**	**+0.5**
ABKAR	**Akbulak array**	**20.69**	**340**	P	**P**	**20 55 17.4**	**+0.4**
ABKAR				lAmb	lAmb	20 55 29.3	
	comp=Z,23nm,0.9s						
ITAN	**ITANAGAR**	**20.74**	**92**	*e*P	Pn	20 55 21.6	+1.5
AZL	**Aizawl**	**20.90**	**102**	*e*P	Pn	20 55 23.4	+1.3
GOMU	**GeErMu**	**21.35**	**67**	P	**P**	**20 55 24.3**	**-0.4**
GOMU				sP	pP	20 55 27.3	-0.4
GOMU				pmax	pmax		
	comp=Z,2.0nm,1.1s						
GOMU				pmax	pmax		
	comp=Z,75nm,6.5s						
KURBB	**Kurchatov Arra**	**21.40**	**14**	P	**P**	**20 55 23.9**	**-0.7**
	comp=Z,3.1nm,0.2s,baz=210,slow=9.0,SNR=4.2						
KURBB				LR	LR	21 05 01.5	
	comp=Z,79nm,18.6s,baz=176,slow=40						
	comp=Z,3.1nm,0.2s						
KOHI	**KOHIMA**	**21.45**	**96**	*e*P	**P**	**20 55 28.2**	**+2.6**
KURK	**Kurchatov**	**21.50**	**14**	P	**P**	**20 55 25.1**	**-0.7**
KURK	**Kurchatov**	**21.50**	**14**	⇑*e*P	**P**	**20 55 24.4**	**-1.4**
KURK				pmax	pmax		
	comp=Z,20nm,1.7s						
MNGR	**Mingechevir, A**	**21.66**	**306**	P	**P**	**20 55 31.5**	**+3.9**
SEKA	**Sheki**	**21.75**	**307**	P	**P**	**20 55 29.2**	**+0.6**
GANJ	**Ganja**	**22.16**	**305**	P	**P**	**20 55 36.9**	**+3.9**
NAX	**Nakhchivan**	**22.29**	**301**	P	**P**	**20 55 37.3**	**+2.8**
AKTO	**Aktyubinsk**	**22.32**	**339**	P	**P**	**20 55 35.4**	**+0.9**
	comp=Z,7.1nm,0.5s,baz=150,slow=9.8,SNR=44						
AKTO				LR	LR	21 05 25.7	
	comp=Z,57nm,18.1s,baz=146,slow=40						
	comp=Z,7.1nm,0.5s						
AKTO	**Aktyubinsk**	**22.32**	**339**	P	**P**	**20 55 35.4**	**+0.9**
ZKTA	**Zakatala**	**22.32**	**307**	P	**P**	**20 55 39.2**	**+4.5**
BVAR	**Borovoye Array**	**22.90**	**0**	LR	LR	21 06 02.4	
	comp=Z,71nm,20.0s,baz=70,slow=40						
RAYN	**Ar Rayn**	**23.08**	**259**	P	**P**	**20 55 43.3**	**+0.4**
RAYN	**Ar Rayn**	**23.08**	**259**	P	**P**	**20 55 43.3**	**+0.4**
RAYN				pmax	pmax		
	comp=Z,9.0nm,1.2s						
GNI	**Garni**	**23.13**	**303**	P	**P**	**20 55 44.6**	**+1.2**
	comp=Z,7.4nm,0.6s,baz=83,slow=1.7,SNR=7.0						
	comp=Z,7.4nm,0.6s						
GNI	**Garni**	**23.13**	**303**	P	**P**	**20 55 44.1**	**+0.7**
GNI	**Garni**	**23.13**	**303**	⇑*e*P	**P**	**20 55 45.8**	**+2.4**
GNI				pmax	pmax		
	comp=Z,23nm,1.3s						
ZEI	**Tsey**	**24.63**	**308**	*e*P	**P**	**20 56 00.0**	**+2.3**
ZEI				pmax	pmax		
	comp=Z,14nm,0.9s						
GURO	**Guroymak-BITLI**	**24.77**	**297**	P	**P**	**20 55 58.3**	**-0.6**
ONI	**Oni**	**24.86**	**307**	P	**P**	**20 55 58.3**	**-1.4**
ONI	**Oni**	**24.86**	**307**	P	**P**	**20 55 58.3**	**-1.4**
ONI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MARD	**Mardin**	**25.54**	**294**	P	**P**	**20 56 06.9**	**+0.9**
KBZ	**Khabaz**	**25.67**	**310**	P	**P**	**20 56 07.0**	**+0.2**
	comp=Z,5.6nm,0.8s,baz=118,slow=8.7,SNR=12						
	comp=Z,5.6nm,0.8s						
KBZ	**Khabaz**	**25.67**	**310**	*c*e P	**P**	**20 56 07.3**	**+0.5**
KBZ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GTA	**Gaotai**	**25.84**	**61**	*e*P	**P**	**20 56 10.3**	**+1.6**
GTA				pP	sP	20 56 17.0	+3.9
GTA				sP	pP	20 56 21.0	+9.2
GTA				S	S	21 01 16.0	+38
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						

ANN **Anapa** 29.72 309 *e*P **P** **20 56 40.4 -2.7**
ANN *e**PP **sP** **20 56 47.8 +0.2**
ANN *e*S **S** **21 01 35.2 -3.8**
ANN pmax pmax
comp=Z,14nm,0.7s
EIL Elat 30.61 278 LR LR 21 11 40.5
comp=Z,127nm,18.6s,baz=90,slow=41
BR131 Keskin Array S 31.40 298 P **P** **20 56 56.0 -2.2**
BR131 IAmb IAmb 20 56 59.5
comp=Z,4.5nm,0.8s
BR131 Keskin Array S 31.40 298 P **P** **20 56 56.0 -2.2**
BR131 pmax pmax
comp=Z,5.0nm,0.9s
BRTR Keskin Array B 31.40 298 P **P** **20 56 58.2 0.0**
comp=Z,1.5nm,0.8s,baz=75,slow=12,SNR=4.0
BRTR LR LR 21 11 42.2
comp=Z,63nm,19.1s,baz=127,slow=40
comp=Z,1.5nm,0.8s
BRTR Keskin Array B 31.40 298 P **P** **20 56 56.4 -1.8**
BRTR Keskin Array B 31.40 298 *e*P **P** **20 56 58.5 +0.3**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
KIRV Kirov 31.88 339 *c i*P **P** **20 57 02.8 +0.8**
SONM Songino Array 32.78 47 P **P** **20 57 11.3 +1.0**
comp=Z,2.5nm,0.9s,baz=246,slow=9.4,SNR=15
comp=Z,2.5nm,0.9s
SONM Songino Array 32.78 47 P **P** **20 57 12.4 +2.2**
SONM Songino Array 32.78 47 P **P** **20 57 12.5 +2.2**
SONM pmax pmax
comp=Z,4.0nm,1.1s
ULN Ulaanbaatar 33.21 47 P **P** **20 57 14.8 +0.8**
ULN Ulaanbaatar 33.21 47 P **P** **20 57 14.8 +0.8**
ULN pmax pmax
comp=Z,6.0nm,1.4s
OBN Obninsk 34.67 326 *i* P **P** **20 57 25.7 -0.7**
OBN *i* 20 58 40.8
OBN pmax pmax
comp=Z,9.0nm,1.0s
OBN MLR MLR
comp=Z,185nm,16.0s
PRGR Permogore 35.47 340 *e*P **P** **20 57 31.7 -1.5**
PRGR *e**PP **sP** **20 57 38.3 +0.6**
VLDR Vladesti 36.36 308 ⇓P **P** **20 57 42.0 +0.9**
SORM Soroca 36.67 311 ⇑P **P** **20 57 42.8 -0.9**
SORM Soroca 36.67 311 ⇑P **P** **20 57 42.8 -0.9**
AKASG Malin Array Be 36.83 316 P **P** **20 57 44.6 -0.4**
AKASG
comp=Z,1.1nm,0.6s,baz=94,slow=7.5,SNR=15
AKASG LR LR 21 16 03.2
comp=Z,49nm,18.3s,baz=94,slow=42
comp=Z,1.1nm,0.6s
AKASG Malin Array Be 36.83 316 *e*P **P** **20 57 45.1 +0.1**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKBB Malin Array Si 36.83 316 ⇑*e*P **P** **20 57 44.5 -0.5**
AKBB pmax pmax
comp=Z,4.0nm,0.7s
KLMR Klimovskoe 36.91 335 *e*P **P** **20 57 44.4 -1.2**
KLMR pmax pmax
comp=Z,14nm,0.8s
KLMR Klimovskoe 36.91 335 *e*P **P** **20 57 44.4 -1.2**
KLMR AMP 20 57 46.4
comp=Z,14nm,0.8s
VRI Vrincioaia 37.30 307 ⇑P **P** **20 57 47.3 -1.8**
VRI Vrincioaia 37.30 307 ⇑P **P** **20 57 47.3 -1.8**
PLOR Plostina 37.35 307 ⇑P **P** **20 57 50.7 +1.1**
PLOR Plostina 37.35 307 ⇑P **P** **20 57 50.7 +1.1**
COVR Voineasa-Covas 37.66 307 ⇑P **P** **20 57 53.4 +1.3**
MLR Muntele Rosu 37.78 307 ⇓P **P** **20 57 55.3 +1.9**
MLR Muntele Rosu 37.78 307 LR LR 21 18 05.5
comp=Z,33nm,19.1s,baz=127,slow=44
MLR Muntele Rosu 37.78 307 P **P** **20 57 51.6 -1.8**
MLR IAmb IAmb 20 57 57.2
comp=Z,8.3nm,0.8s
MLR Muntele Rosu 37.78 307 P **P** **20 57 51.6 -1.8**
MLR pmax pmax
comp=Z,8.0nm,0.8s
BIZ Bicaz 37.91 309 ⇑P **P** **20 57 55.2 +1.0**
DOPR Dopca 38.24 307 ⇑P **P** **20 57 57.8 +0.7**
VOIR 38.40 306 ⇑P **P** **20 57 58.9 +0.4**
VOIR 38.40 306 ⇑P **P** **20 57 58.9 +0.4**
IPM Ipoh 38.59 125 P **P** **20 58 00.1 -0.2**
IPM IAmb IAmb 20 58 05.3
comp=Z,8.5nm,0.6s
BURAR Bucovina Array 38.62 310 ⇑P **P** **20 58 00.8 +0.4**
BURAR Bucovina Array 38.62 310 P **P** **20 58 00.4 0.0**
BURAR IAmb IAmb 20 58 01.4
comp=Z,4.9nm,0.6s
BURAR Bucovina Array 38.62 310 ⇑P **P** **20 58 00.8 +0.4**
BUR08 Bucovina Ar. S 38.64 310 P **P** **20 58 00.7 +0.1**
ARR Arges 38.68 306 ⇑P **P** **20 58 01.0 +0.1**
MNK Minsk 38.89 321 *i* P **P** **20 58 00.6 -1.7**
MNK *i* 20 59 29.3
MNK *i* 21 00 10.8
MNK *i* S **S** **21 03 58.2 -2.1**
MNK pmax pmax
comp=Z,24nm,1.2s
MNK pmax pmax
comp=E,1.0nm,0.9s
MNK pmax pmax
comp=N,30nm,1.8s
MNK MLR MLR
comp=Z,6µm,17.0s
MNK MLR MLR
comp=N,348nm,16.0s
MNK MLR MLR
comp=E,9.0nm,17.0s
MNK Minsk 38.89 321 *i* P **P** **20 58 00.7 -1.7**
comp=E,1.0nm,0.9s
MNK *i* P **P** **20 58 00.7 -1.7**
comp=N,30nm,1.8s
MNK *i* P **P** **20 58 00.7 -1.7**
comp=Z,24nm,1.2s,baz=111
MNK *i* PP **PP** **20 59 29.4 -2.0**
MNK *i* PPP PPP 20 59 49.7
MNK *i* S **S** **21 03 58.3 -2.1**
MNK *i* SS **SnSn** **21 06 48.4 -1.9**
MNK *i* SSS SSS 21 07 06.4
MNK *i* LQ LQ 21 10 48.1
MNK *i* LR LR 21 11 56.5
MNK *i* LRM MLR 21 15 20.3
comp=Z,6µm,16.6s
MNK *i* LRM MLR 21 15 28.6
comp=N,348nm,16.0s
MNK *i* LRM MLR 21 15 47.8
comp=E,9.0nm,16.6s
NACGM Naroch 39.63 321 ⇑*e*P P 20 58 03.1 -5.4
baz=110
VALR Valaam 40.56 332 ⇓*e*P **P** **20 58 16.5 +0.4**
VALR pmax pmax
comp=Z,10.0nm,0.9s
BOVS Bovan 40.62 303 ⇑P **P** **20 58 19.1 +2.2**
KWP Kalwaria Pacla 40.63 312 P **P** **20 58 15.9 -1.0**
KWP Kalwaria Pacla 40.63 312 P **P** **20 58 15.9 -1.0**
MDVR Moldovita 40.68 305 ⇑P **P** **20 58 18.1 +0.5**
KOLS Kolonicke sedl 40.79 311 *e*P **P** **20 58 19.5 +1.2**
KOLS Kolonicke sedl 40.79 311 *e*P **P** **20 58 19.5 +1.2**
BZS Buzias 40.82 306 ⇑P **P** **20 58 19.3 +0.7**
BZS Buzias 40.82 306 ⇑P **P** **20 58 19.3 +0.7**
KBN Korca 41.27 299 P **P** **20 58 20.9 -1.5**
KBN IAmb IAmb 20 58 27.6
comp=Z,14nm,1.3s
KBN Korca 41.27 299 P **P** **20 58 20.9 -1.5**
KBN pmax pmax
comp=Z,14nm,1.3s
CRVS Cervenica-Dubn 41.31 311 *e*P **P** **20 58 23.5 +0.9**
CRVS Cervenica-Dubn 41.31 311 *e*P **P** **20 58 23.5 +0.9**
NJ2 Nanjing 41.33 74 *e*P **P** **20 58 22.0 -0.9**
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
SUW Suwalki 41.35 319 P **P** **20 58 20.6 -2.2**
SUW IAmb IAmb 20 58 25.4
comp=Z,13nm,1.1s
SUW Suwalki 41.35 319 P **P** **20 58 20.6 -2.2**
SUW pmax pmax
comp=Z,13nm,1.1s
DIVS Divibare 41.88 304 P **P** **20 58 27.0 -0.4**
PSZ Piszkesteto 42.22 309 ⇓P **P** **20 58 30.9 +0.8**
PSZ Piszkesteto 42.22 309 P **P** **20 58 30.4 +0.3**
PSZ IAmb IAmb 20 58 36.7
comp=Z,16nm,1.5s
PSZ Piszkesteto 42.22 309 P **P** **20 58 30.4 +0.3**
PSZ pmax pmax
comp=Z,16nm,1.5s
FINES FINESS Array B 42.61 330 P **P** **20 58 33.2 +0.2**
comp=Z,6.0nm,1.0s,baz=120,slow=7.7,SNR=15
FINES PcP **PcP** **21 00 22.7 -2.3**
comp=Z,2.3nm,0.9s,baz=113,slow=3.2,SNR=3.0
FINES LR LR 21 18 07.6
comp=Z,66nm,18.6s,baz=84,slow=39
comp=Z,6.0nm,1.0s
FINES FINESS Array B 42.61 330 P **P** **20 58 33.2 +0.2**
FINES 21 00 22.7
MORH Mrgy, Hungar 42.93 307 ⇑P **P** **20 58 36.3 +0.5**
MORC Moravsky Berou 43.97 312 ⇑P **P** **20 58 45.0 +0.8**
MORC Moravsky Berou 43.97 312 P **P** **20 58 44.6 +0.4**
MORC IAmb IAmb 20 58 45.4
comp=Z,4.5nm,0.6s
MORC Moravsky Berou 43.97 312 P **P** **20 58 44.6 +0.4**
MORC pmax pmax
comp=Z,4.0nm,0.6s
MORC Moravsky Berou 43.97 312 *e*P **P** **20 58 44.5 +0.4**
KRLC Kraliky 44.49 312 *e*P **P** **20 58 49.0 +0.6**
KRLC Kraliky 44.49 312 *e*P **P** **20 58 49.0 +0.6**
DPC Dobruska-Polom 44.81 313 *e*P **P** **20 58 52.0 +1.1**
DPC Dobruska-Polom 44.81 313 *e*P **P** **20 58 52.0 +1.1**
CHVC Chvalec 45.00 313 *e*P **P** **20 58 53.6 +1.2**
CUC Castrocucco 45.10 298 P **P** **20 58 54.0 +0.7**
CUC IAmb IAmb 20 58 55.0
comp=Z,6.4nm,1.0s
ARSA Arzberg 45.12 308 *e*P **P** **20 58 53.6 +0.2**
comp=Z,2.5nm,0.6s
SOKA Soboth 45.44 307 *e*P **P** **20 58 56.0 0.0**
comp=Z,2.5nm,1.1s
MOA Molln 45.99 309 *e*P **P** **20 59 00.4 +0.1**
comp=Z,3.4nm,0.5s
CKRC Cesky Krumlov 46.00 310 *e*P **P** **20 59 00.5 +0.1**
GERES GERESS Array B 46.41 310 P **P** **20 59 03.8 +0.1**
comp=Z,0.9nm,0.6s,baz=96,slow=7.5,SNR=11
comp=Z,0.9nm,0.6s
GERES GERESS Array B 46.41 310 P **P** **20 59 03.4 -0.2**
GERES GERESS Array B 46.41 310 P **P** **20 59 03.8 +0.1**
PRED Cave del Predi 46.45 307 P **P** **20 59 03.8 -0.2**
PRED IAmb IAmb 20 59 14.4
comp=Z,7.1nm,1.3s
KHC Kasperske Hory 46.50 311 *e*P **P** **20 59 04.5 +0.2**
KHC Kasperske Hory 46.50 311 *e*P **P** **20 59 04.5 +0.2**
KBA Koelnbreinsper 46.61 308 *e*P **P** **20 59 05.4 0.0**
comp=Z,2.2nm,0.6s
ARA0 ARCESS Array S 46.89 340 *e*P **P** **20 59 08.5 +1.5**
ARCES ARCESS Array B 46.89 340 P **P** **20 59 07.9 +0.8**
comp=Z,4.8nm,0.6s,baz=127,slow=7.6,SNR=46
ARCES LR LR 21 20 51.5
comp=Z,42nm,19.8s,baz=126,slow=39
comp=Z,4.8nm,0.6s
ARCES ARCESS Array B 46.89 340 P **P** **20 59 07.8 +0.8**
ARCES ARCESS Array B 46.89 340 P **P** **20 59 07.8 +0.8**
ARCES pmax pmax
comp=Z,8.0nm,0.9s
CLL Collm 46.99 314 *e*P **P** **20 59 12.0 +4.0**
CLL Collm 46.99 314 *e*(sP) **P** **20 59 12.0 +4.0**
KTK1 Kautokeino 47.30 339 *e*P **P** **20 59 10.7 +0.5**
KTK1 IAmb IAmb 20 59 17.1
comp=Z,7.8nm,0.8s
WTTA Wattenberg 47.77 308 *e*P **P** **20 59 13.6 -0.9**
comp=Z,2.7nm,0.6s
KSRS Korea Array 47.79 65 P **P** **20 59 14.9 +0.5**
comp=Z,1.8nm,0.8s,baz=261,slow=7.0,SNR=6.0
KSRS LR LR 21 19 34.5
comp=Z,24nm,19.9s,baz=180,slow=36
comp=Z,1.8nm,0.8s
KSRS Korea Array 47.79 65 *e*P **P** **20 59 15.2 +0.7**
KSRS pmax pmax
comp=Z,2.0nm,0.8s
HFS Hagfors 47.89 326 LR LR 21 22 55.8
comp=Z,110nm,18.8s,baz=100,slow=40
HAMF Hammerfest 48.02 341 *e*P **P** **20 59 17.4 +1.6**
HAMF IAmb IAmb 20 59 23.5
comp=Z,17nm,0.8s
SALU Saltoluokta 48.13 336 *e*P **P** **20 59 17.2 +0.5**
MOTA Moosalm 48.13 308 *e*P **P** **20 59 16.0 -1.2**
comp=Z,3.2nm,0.7s
FETA Feichten 48.40 308 *e*P **P** **20 59 18.3 -1.0**
comp=Z,2.1nm,0.8s
TRO Tromso 48.95 339 *e*P **P** **20 59 23.0 +0.1**
TRO IAmb IAmb 20 59 30.0
comp=Z,17nm,1.1s
DAVA Damuels 48.97 308 *e*P **P** **20 59 22.7 -0.9**
comp=Z,4.2nm,0.6s
DAVOX Davos/Dischmat 48.99 308 LR LR 21 23 47.6
comp=Z,25nm,18.8s,baz=68,slow=41
NC602 NORSAR Array S 49.06 326 *e*P **P** **20 59 23.9 0.0**
MOR8 Moi Rana 49.20 334 *e*P **P** **20 59 24.6 -0.3**
MOR8 IAmb IAmb 20 59 24.7
comp=Z,8.1nm,0.8s
NB2 NORSAR Subarra 49.27 327 P **P** **20 59 25.4 -0.2**
baz=104,slow=7.9
NB2 NORSAR Subarra 49.27 327 P **P** **20 59 25.4 -0.2**
comp=Z,0.9nm,0.5s,baz=104,slow=7.9
NOA NORSAR Array B 49.27 327 P **P** **20 59 25.3 -0.4**
comp=Z,2.7nm,0.8s,baz=102,slow=7.6,SNR=8.6
NOA LR LR 21 23 49.5
comp=Z,122nm,18.1s,baz=100,slow=40
comp=Z,2.7nm,0.8s
NOA NORSAR Array B 49.27 327 *e*P **P** **20 59 25.2 -0.4**
NOA pmax pmax
comp=Z,3.0nm,0.8s
FAUS Fauske 49.29 335 *e*P **P** **20 59 25.9 +0.4**
FAUS IAmb IAmb 20 59 26.4
comp=Z,15nm,1.1s
STEI Steigen 49.50 336 *e*P **P** **20 59 27.5 +0.4**
STEI IAmb IAmb 20 59 33.8
comp=Z,7.6nm,1.0s
KLR Kul'dur 49.56 49 *ce*P **P** **20 59 28.8 +0.9**
KLR pmax pmax
comp=Z,4.0nm,1.0s
YAK Yakutsk 49.58 32 P **P** **20 59 26.5 -1.3**
YAK Yakutsk 49.58 32 *e*P **P** **20 59 27.1 -0.7**
YAK pmax pmax
comp=Z,12nm,0.9s
YAK pmax pmax
comp=E,2.0nm,1.0s
NSS Namsos 49.72 331 *e*P **P** **20 59 28.6 -0.2**
KONS Konsvik 49.81 334 *e*P **P** **20 59 30.0 +0.5**
KONS IAmb IAmb 20 59 43.2
comp=Z,24nm,1.1s
TBLU Trondheim 50.16 329 *e*P **P** **20 59 32.9 +0.6**
DOMB Dombas 50.47 328 *e*P **P** **20 59 35.5 +0.9**
SENIN Lac Senin/Sane 50.79 307 P **P** **20 59 37.2 -0.4**
SENIN IAmb IAmb 20 59 37.9
comp=Z,4.1nm,0.8s
BMRD Maredsous 52.21 312 *d*P **P** **20 59 48.6 +0.8**
CLF Chambon-Foret 54.05 310 P **P** **21 00 00.8 -0.6**
MJAR Matsushiro Arr 56.03 64 P **P** **21 00 18.2 +2.2**
comp=Z,0.5nm,0.4s,baz=285,slow=8.3,SNR=2.0
MJAR LR LR 21 27 17.7
comp=Z,33nm,19.7s,baz=139,slow=39
comp=Z,0.5nm,0.4s
MJAR Matsushiro Arr 56.03 64 IAmb IAmb 21 00 23.2
comp=Z,3.4nm,1.4s
MJAR Matsushiro Arr 56.03 64 P **P** **21 00 18.2 +2.2**
MJAR pmax pmax
comp=Z,3.0nm,1.5s
EKA Eskdalemuir Ar 56.61 319 LR LR 21 28 14.3
comp=Z,29nm,18.8s,baz=345,slow=40
YSS Yuzh-Sakhalins 57.12 51 ⇓*e*P **P** **21 00 25.1 +1.6**
YSS pmax pmax
comp=Z,26nm,2.5s
SEY Seymchan 60.09 32 ⇓*i*P **P** **21 00 45.1 +1.1**
SEY pmax pmax
comp=Z,6.0nm,1.0s
ESDC Sonseca Array 60.11 301 P **P** **21 00 43.9 -0.6**
comp=Z,1.9nm,0.9s,baz=61,slow=7.9,SNR=14
comp=Z,1.9nm,0.9s
ESDC Sonseca Array 60.11 301 P **P** **21 00 43.7 -0.9**
BORG Borgarnes 63.89 331 LR LR 21 33 15.2
comp=Z,24nm,18.8s,baz=81,slow=40
BILL Bilibino 64.61 24 P **P** **21 01 15.2 +1.1**
BILL Bilibino 64.61 24 *i* P **P** **21 01 13.2 -1.0**
BILL *i* 21 01 46.3
BILL pmax pmax
comp=Z,5.0nm,1.2s
BILL MLR MLR
comp=Z,38nm,15.0s
TORD Torodi Ar. Bea 65.15 271 P **P** **21 01 17.8 -0.7**
comp=Z,2.5nm,0.8s,baz=56,slow=5.2,SNR=11
comp=Z,2.5nm,0.8s
TORD Torodi Ar. Bea 65.15 271 P **P** **21 01 17.7 -0.7**
TORD IAmb IAmb 21 01 18.9
comp=Z,3.1nm,1.1s
DBIC Dimbokro 73.88 268 P **P** **21 02 12.5 0.0**
comp=Z,8.8nm,0.7s,baz=60,slow=7.7,SNR=8.2
DBIC LR LR 21 38 34.4
comp=Z,53nm,18.9s,baz=85,slow=39
comp=Z,8.8nm,0.7s
DBIC Dimbokro 73.88 268 P **P** **21 02 11.9 -0.6**
DBIC Dimbokro 73.88 268 P **P** **21 02 11.9 -0.6**
DBIC pmax pmax
comp=Z,15nm,0.9s
KIC Kosan Boka 73.93 268 ⇑*e*P **P** **21 02 12.8 0.0**
comp=Z,7.6nm,0.5s
TIC Toumodi 74.03 268 ⇑*i*P **P** **21 02 13.3 -0.1**
comp=Z,2.7nm,0.3s
LIC Lamto 74.25 268 ⇑*e*P **P** **21 02 14.5 -0.1**
comp=Z,1.5nm,0.2s
C23K Itkillik River 76.05 14 P **P** **21 02 24.5 +0.4**
baz=324
C24K Franklin Bluff 76.52 13 P **P** **21 02 26.7 -0.1**
baz=326
D23K Nanushuk River 76.74 14 P **P** **21 02 28.9 +0.8**
baz=324
E22K Anaktuvuk Pass 77.17 15 P **P** **21 02 30.6 +0.1**
baz=324
TOLK Toolik Lake Re 77.24 14 **P** **21 02 31.0 +0.1**
TOLK IAmb IAmb 21 02 32.2
comp=Z,7.3nm,1.0s
TOLK Toolik Lake Re 77.24 14 P **P** **21 02 31.3 +0.3**
baz=325
D25K Kavik River 77.30 13 P **P** **21 02 31.8 +0.6**
baz=328
F21K Alatna River 77.51 16 P **P** **21 02 32.6 +0.1**
baz=322
C27K Jago River 77.52 12 P **P** **21 02 33.1 +0.7**
baz=330
G21K Allakaket 78.07 16 P **P** **21 02 35.2 -0.3**
baz=322
COLD Coldfoot 78.27 15 P **P** **21 02 36.8 +0.2**
baz=325
IMAR Indian Mountai 78.43 17 P **P** **21 02 36.5 -1.0**
G23K Bananza Creek 78.73 15 P **P** **21 02 39.6 +0.4**
baz=325
H21K Melozitna Rive 78.92 17 P **P** **21 02 40.5 +0.2**
H21K IAmb IAmb 21 02 41.6
comp=Z,6.8nm,0.9s
H21K Melozitna Rive 78.92 17 P **P** **21 02 40.5 +0.2**
baz=323
H22K Ishtalitna Cre 79.08 16 P **P** **21 02 41.6 +0.5**
baz=324
WRA Warramunga Arr 79.16 121 P **P** **21 02 41.9 -0.3**
comp=Z,2.7nm,0.8s,baz=318,slow=4.9,SNR=6.7
comp=Z,2.7nm,0.8s
WRA Warramunga Arr 79.16 121 P **P** **21 02 40.8 -1.5**
WRA Warramunga Arr 79.16 121 *e*P **P** **21 02 42.9 +0.7**
WRA pmax pmax
comp=Z,3.0nm,0.8s
BMAR Burnt Mountain 79.28 13 **P** **21 02 42.8 +0.6**
I21K Tanana 79.52 17 P **P** **21 02 43.9 +0.4**
baz=324
H23K Yukon River 79.58 16 P **P** **21 02 44.5 +0.6**
H23K IAmb IAmb 21 02 45.6
comp=Z,6.0nm,0.9s
H23K Yukon River 79.58 16 P **P** **21 02 44.6 +0.8**
baz=326
J20K Nowinta River 79.75 18 P **P** **21 02 45.1 +0.3**
J20K IAmb IAmb 21 02 46.3
comp=Z,5.2nm,1.1s
J20K Nowinta River 79.75 18 P **P** **21 02 45.3 +0.5**
baz=322
MLY Manley 79.94 16 P **P** **21 02 45.9 0.0**
MLY IAmb IAmb 21 02 47.0
comp=Z,4.7nm,0.8s
MLY Manley 79.94 16 P **P** **21 02 46.0 +0.1**
baz=325,SNR=8.6
H24K Noodor Dome 79.95 15 P **P** **21 02 46.2 +0.3**
H24K Noodor Dome 79.95 15 P **P** **21 02 46.5 +0.6**
baz=327
I23K Minto, Yukon-K 80.18 16 P **P** **21 02 47.7 +0.7**
I23K IAmb IAmb 21 02 48.5
comp=Z,4.3nm,0.9s
I23K Minto, Yukon-K 80.18 16 P **P** **21 02 47.6 +0.6**
baz=326
TTA Tatalina 80.20 20 P **P** **21 02 48.0 +0.7**
baz=321
INK Inuvik 80.29 9 P **P** **21 02 47.0 -0.6**
comp=Z,6.9nm,0.9s,baz=356,slow=8.3,SNR=6.3
comp=Z,6.9nm,0.9s
INK Inuvik 80.29 9 P **P** **21 02 47.6 +0.1**
INK IAmb IAmb 21 02 49.0
comp=Z,11nm,1.1s
INK Inuvik 80.29 9 P **P** **21 02 47.6 +0.1**
INK pmax pmax
comp=Z,11nm,1.1s
INK Inuvik 80.29 9 P **P** **21 02 47.7 +0.1**
baz=339,SNR=5.6
K20K Telida 80.42 19 P **P** **21 02 48.6 +0.1**
K20K IAmb IAmb 21 02 49.9
comp=Z,5.7nm,1.1s
K20K Telida 80.42 19 P **P** **21 02 48.8 +0.4**
baz=322,SNR=5.9
CHUM Lake Minchumin 80.48 18 P **P** **21 02 48.7 +0.1**
baz=324
MDM Murphy Dome 80.60 16 P **P** **21 02 49.3 -0.1**
BPAW Bear Paw Mtn. 80.64 17 P **P** **21 02 49.1 -0.5**
BPAW Bear Paw Mtn. 80.64 17 P **P** **21 02 49.3 -0.3**
baz=325,SNR=5.1
POKR Poker Plat Res 80.65 15 P **P** **21 02 48.7 -0.9**
POKR Poker Plat Res 80.65 15 P **P** **21 02 49.9 +0.2**
baz=328
NEA2 Nenana 80.71 16 P **P** **21 02 49.9 -0.1**
NEA2 Nenana 80.71 16 P **P** **21 02 49.7 -0.3**
baz=326,SNR=12
TCOL CIGO, UAF Yank 80.76 16 P **P** **21 02 49.7 -0.5**
COLA College 80.76 16 P **P** **21 02 49.5 -0.7**
COLA College 80.76 16 *de*P **P** **21 02 50.6 +0.4**
COLA pmax pmax
comp=Z,8.0nm,0.9s
CAST Castle Rocks 80.91 18 P **P** **21 02 50.4 -0.7**
CAST IAmb IAmb 21 02 52.2
comp=Z,9.1nm,1.0s
CAST Castle Rocks 80.91 18 P **P** **21 02 50.6 -0.5**
baz=324,SNR=12
CCB Clear Creek Bu 80.97 16 P **P** **21 02 50.4 -0.9**
WRH Wood River Hil 81.05 16 P **P** **21 02 50.8 -0.9**
WRH IAmb IAmb 21 02 52.0
comp=Z,3.9nm,0.8s
IL31 81.07 15 P **P** **21 02 51.0 -0.8**
ILAR Eielson Array 81.07 15 P **P** **21 02 51.0 -0.9**
comp=Z,2.5nm,0.9s,baz=319,slow=4.3,SNR=19
comp=Z,2.5nm,0.9s
ILAR Eielson Array 81.07 15 P **P** **21 02 51.0 -0.9**
ILAR Eielson Array 81.07 15 *e*P **P** **21 02 51.3 -0.6**
ILAR pmax pmax
comp=Z,3.0nm,0.9s
ASAR Alice Springs 81.12 124 P **P** **21 02 52.5 -0.3**
comp=Z,1.6nm,0.7s,baz=303,slow=5.7,SNR=14
comp=Z,1.6nm,0.7s
ASAR Alice Springs 81.12 124 P **P** **21 02 52.5 -0.3**
L19K White Mountain 81.13 20 P **P** **21 02 52.8 +0.5**
baz=322
L20K Farewell, AK 81.17 19 P **P** **21 02 53.0 +0.5**
baz=322
N16K Nishlik Lake 81.23 22 P **P** **21 02 53.8 +1.0**
baz=319
PPLA Purkeypile 81.31 18 P **P** **21 02 53.8 +0.4**
baz=324
TRF Thorofare Moun 81.36 17 P **P** **21 02 53.4 -0.2**
baz=325
HDA Harding Lake 81.37 15 P **P** **21 02 52.1 -1.3**
HDA IAmb IAmb 21 03 07.2
comp=Z,4.4nm,1.2s
HDA Harding Lake 81.37 15 P **P** **21 02 52.0 -1.5**
baz=328
I26K Coal Creek Min 81.41 14 P **P** **21 02 52.9 -0.8**
I26K IAmb IAmb 21 02 55.0
comp=Z,3.7nm,0.8s
I26K Coal Creek Min 81.41 14 P **P** **21 02 54.1 +0.4**
baz=331
MCK McKinley 81.46 17 P **P** **21 02 54.0 0.0**
baz=326
M19K Big River Lodg 81.48 20 P **P** **21 02 54.4 +0.2**
baz=322
J25K Salcha River, 81.55 15 P **P** **21 02 53.8 -0.7**
J25K IAmb IAmb 21 02 55.0
comp=Z,3.3nm,0.8s
J25K Salcha River, 81.55 15 P **P** **21 02 53.7 -0.7**
baz=329,SNR=6.1
EPYK Eagle Plains 81.62 11 P **P** **21 02 54.2 -0.6**
EPYK IAmb IAmb 21 02 55.2

	comp=Z,5.2nm,0.8s							
EPYK	**Eagle Plains**	**81.62**	**11**	P	**P**	**21 02 54.8**	**0.0**
	baz=337							
RND	**Reindeer**	**81.76**	**17**	P	**P**	**21 02 55.1**	**-0.5**
RND				IAmb	IAmb	21 02 56.2		
	comp=Z,5.6nm,0.8s							
RND	**Reindeer**	**81.76**	**17**	P	**P**	**21 02 55.1**	**-0.5**
RND				pmax	pmax			
	comp=Z,6.0nm,0.8s							
N18K	**Kilae Creek**	**81.99**	**21**	P	**P**	**21 02 57.5**	**+0.7**
	baz=321							
J26L	**Joseph Creek**	**82.03**	**14**	P	**P**	**21 02 56.9**	**-0.2**
J26L	**Joseph Creek**	**82.03**	**14**	P	**P**	**21 02 56.9**	**-0.2**
	baz=331,SNR=11							
O16K	**Kokwok River B**	**82.11**	**23**	P	**P**	**21 02 58.7**	**+1.2**
	baz=319							
K24K	**Donnelly Dome**	**82.15**	**15**	P	**P**	**21 02 56.9**	**-0.8**
	baz=329,SNR=8.6							
SKT	**Skwentna**	**82.23**	**19**	P	**P**	**21 02 57.7**	**-0.4**
	baz=324							
I29M	**Ogilvie Camp,**	**82.28**	**12**	P	**P**	**21 02 58.2**	**-0.1**
I29M	**Ogilvie Camp,**	**82.28**	**12**	P	**P**	**21 02 58.4**	**+0.1**
	baz=335							
O17K	**Koliganek Bris**	**82.31**	**22**	P	**P**	**21 02 59.1**	**+0.7**
	baz=320							
N19K	**Bonanza Creek**	**82.31**	**20**	P	**P**	**21 02 59.2**	**+0.6**
	baz=322							
WAT1	**Susitna Watana**	**82.31**	**17**	P	**P**	**21 02 57.9**	**-0.6**
	baz=327							
DHY	**Denali Highway**	**82.40**	**16**	P	**P**	**21 02 58.8**	**-0.3**
DHY				IAmb	IAmb	21 03 00.3		
	comp=Z,3.4nm,0.7s							
DHY	**Denali Highway**	**82.40**	**16**	P	**P**	**21 02 59.0**	**-0.1**
	baz=328							
SCRK	**Sand Creek**	**82.40**	**15**	P	**P**	**21 02 59.1**	**0.0**
SCRK				IAmb	IAmb	21 03 00.2		
	comp=Z,3.0nm,0.8s							
SCRK	**Sand Creek**	**82.40**	**15**	P	**P**	**21 02 58.8**	**-0.3**
	baz=330,SNR=5.8							
RIDG	**Independent Ri**	**82.42**	**15**	P	**P**	**21 02 57.9**	**-1.2**
RIDG				IAmb	IAmb	21 02 59.5		
	comp=Z,3.5nm,0.9s							
RIDG	**Independent Ri**	**82.42**	**15**	P	**P**	**21 02 58.7**	**-0.4**
	baz=330							
NIKH	**Nikolski High**	**82.59**	**32**	P	**P**	**21 03 01.2**	**+1.2**
	baz=312							
WAT6	**Susitna Watana**	**82.73**	**17**	P	**P**	**21 03 00.8**	**-0.1**
	baz=328							
O18K	**Koktuh Hills**	**82.85**	**21**	P	**P**	**21 03 01.1**	**-0.2**
O18K	**Koktuh Hills**	**82.85**	**21**	P	**P**	**21 03 00.7**	**-0.6**
	baz=322							
SUA	**Susitna One**	**82.87**	**19**	P	**P**	**21 03 01.6**	**+0.1**
	baz=325							
PAX	**Paxson**	**82.94**	**16**	P	**P**	**21 03 01.6**	**-0.2**
	baz=329,SNR=7.7							
P17K	**Kvichak River**	**82.97**	**22**	P	**P**	**21 03 02.8**	**+0.9**
	baz=321							
P18K	**Big Mountain,**	**83.20**	**22**	P	**P**	**21 03 03.4**	**+0.2**
	baz=322							
SML	**Sawmill**	**83.23**	**17**	P	**P**	**21 03 03.1**	**-0.2**
SML	**Sawmill**	**83.23**	**17**	P	**P**	**21 03 02.9**	**-0.4**
	baz=327,SNR=5.7							
DAWY	**Dawson**	**83.26**	**13**	P	**P**	**21 03 03.3**	**-0.1**
DAWY	**Dawson**	**83.26**	**13**	P	**P**	**21 03 02.9**	**-0.5**
	baz=334,SNR=6.1							
M23K	**Glacier View**	**83.40**	**17**	P	**P**	**21 03 04.0**	**-0.1**
	baz=328							
RC01	**Rabbit Creek A**	**83.46**	**18**	P	**P**	**21 03 04.2**	**-0.2**
	baz=326							
SCM	**Sheep Creek Mo**	**83.47**	**17**	P	**P**	**21 03 04.4**	**-0.1**
	baz=328							
HARP	**HAARP**	**83.51**	**16**	P	**P**	**21 03 06.0**	**+1.2**
	baz=330							
M24K	**Tolsona, Glenn**	**83.52**	**16**	P	**P**	**21 03 05.4**	**+0.6**
M24K	**Tolsona, Glenn**	**83.52**	**16**	P	**P**	**21 03 05.4**	**+0.6**
	baz=329							
KNK	**Knik Glacier**	**83.53**	**18**	P	**P**	**21 03 05.5**	**+0.7**
	baz=327							
L27K	**Beaver Creek,**	**83.67**	**14**	P	**P**	**21 03 04.8**	**-0.7**
L27K	**Beaver Creek,**	**83.67**	**14**	P	**P**	**21 03 06.1**	**+0.5**
	baz=332,SNR=7.8							
BCAR	**Beaver Creek A**	**83.68**	**14**	P	**P**	**21 03 06.0**	**+0.4**
M26K	**Nabesna, AK**	**84.00**	**15**	P	**P**	**21 03 07.7**	**+0.4**
M26K				IAmb	IAmb	21 03 09.3		
	comp=Z,5.9nm,1.3s							
M26K	**Nabesna, AK**	**84.00**	**15**	P	**P**	**21 03 08.4**	**+1.1**
	baz=332							
KLU	**Klutina**	**84.11**	**17**	P	**P**	**21 03 08.0**	**+0.2**
KLU				IAmb	IAmb	21 03 09.7		
	comp=Z,5.1nm,1.0s							
KLU	**Klutina**	**84.11**	**17**	P	**P**	**21 03 08.5**	**+0.6**
	baz=329							
M27K	**Edge Creek, AK**	**84.29**	**14**	P	**P**	**21 03 09.7**	**+0.8**
M27K				IAmb	IAmb	21 03 10.6		
	comp=Z,4.1nm,1.0s							
M27K	**Edge Creek, AK**	**84.29**	**14**	P	**P**	**21 03 09.1**	**+0.3**
	baz=332,SNR=5.7							
N25K	**Chitina, Valde**	**84.33**	**16**	P	**P**	**21 03 06.6**	**-2.4**
N25K				IAmb	IAmb	21 03 10.7		
	comp=Z,3.7nm,1.0s							
N25K	**Chitina, Valde**	**84.33**	**16**	P	**P**	**21 03 09.4**	**+0.4**
	baz=330							
BVCY	**Beaver Creek**	**84.45**	**14**	P	**P**	**21 03 10.8**	**+1.2**
	baz=333							
Q20K	**Shuyak Island**	**84.72**	**21**	P	**P**	**21 03 10.9**	**+0.1**
	baz=324							
VRDI	**Verde Repeater**	**84.93**	**16**	P	**P**	**21 03 10.8**	**-1.4**
VRDI				IAmb	IAmb	21 03 14.0		
	comp=Z,6.0nm,1.1s							
EYAK	**Cordova Ski Ar**	**84.96**	**17**	P	**P**	**21 03 12.4**	**+0.3**
	baz=329							
M30M	**Minto, Yukon**	**85.11**	**12**	P	**P**	**21 03 13.0**	**+0.1**
M30M				IAmb	IAmb	21 03 24.1		
	comp=Z,2.8nm,1.0s							
M30M	**Minto, Yukon**	**85.11**	**12**	P	**P**	**21 03 12.5**	**-0.4**
	baz=337							
YUK3	**Moose Creek**	**85.11**	**14**	P	**P**	**21 03 13.5**	**+0.4**
	baz=334							
KDAK	**Kodiak Island**	**85.33**	**21**	P	**P**	**21 03 15.1**	**+1.1**
	baz=324							
CTG	**Chitna Glacier**	**85.65**	**15**	P	**P**	**21 03 16.1**	**+0.4**
	baz=333							
M31M	**Drury Creek, Y**	**85.88**	**11**	P	**P**	**21 03 16.4**	**-0.3**
M31M				IAmb	IAmb	21 03 17.8		
	comp=Z,3.0nm,0.9s							
M31M	**Drury Creek, Y**	**85.88**	**11**	P	**P**	**21 03 16.9**	**+0.2**
	baz=339							
N30M	**Aishikik Lake**	**86.08**	**13**	P	**P**	**21 03 18.3**	**+0.6**
	baz=336							
YUK6	**Outpost Mounta**	**86.30**	**14**	P	**P**	**21 03 19.2**	**+0.1**
	baz=335							
HYT	**Haines Junctio**	**86.58**	**13**	P	**P**	**21 03 21.1**	**+0.8**
	baz=336							
O30N	**Mendenhall**	**86.91**	**13**	P	**P**	**21 03 22.7**	**+0.9**
	baz=337							
P30M	**Million Dollar**	**87.34**	**13**	P	**P**	**21 03 24.2**	**+0.3**
	baz=337							
YKA	**Yellowknife Ar**	**87.64**	**2**	P	**P**	**21 03 25.4**	**+0.2**
	comp=Z,3.3nm,0.9s,baz=349,slow=5.0,SNR=15							
	comp=Z,3.3nm,0.9s							
YKA	**Yellowknife Ar**	**87.64**	**2**	P	**P**	**21 03 26.0**	**+0.8**
YKA	**Yellowknife Ar**	**87.64**	**2**	P	**P**	**21 03 26.0**	**+0.8**
P33M	**Teslin, Yukon**	**88.02**	**11**	P	**P**	**21 03 26.9**	**-0.3**
P33M				IAmb	IAmb	21 03 27.7		
	comp=Z,3.7nm,0.9s							
P33M	**Teslin, Yukon**	**88.02**	**11**	P	**P**	**21 03 27.2**	**0.0**
	baz=340							
PLBC	**Pleasant Camp**	**88.07**	**13**	P	**P**	**21 03 27.8**	**+0.5**
	baz=337							
WRAK	**Wrangell Islan**	**91.68**	**12**	P	**P**	**21 03 44.6**	**+0.3**
	baz=341							

*NNC **30** 21:00:05.5±2.0, 46°.80N×84°.65E, h0km, mb3.5, mpv3.3, Error ellipse: s-maj=13.8km s-min=9.7km az=90.0*
*ASRS **30** 21:00:08.9±0.5, 47°.N±4°×8°.4E±°, h10km, MLh3.5/5, Error ellipse: s-maj=9.2km s-min=2.9km az=145.7, confirmed*
ISC 30 21:00:10.0±1.4, **46°.92N**±0°.07×**84°.35E**±0°.06, **h10**km, **n14**, σ1s **47/33, 5C-1D, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**1.42**	**266**	⇑Pn	**Pn**	**21 00 35.4**	**-0.4**
	11nm,0.3s,baz=90,slow=17,SNR=1024						
MK31				⇓Sn	**Sg**	**21 00 58.0**	**+2.5**
	16nm,0.2s,baz=88,slow=31,SNR=22						
MKAR	**Makanchi Array**	**1.42**	**266**	Pg	**Pn**	**21 00 36.0**	**+0.1**
MKAR				Sg	**Sg**	**21 00 58.0**	**+2.4**
MAKZ	**Makanchi**	**1.63**	**267**	⇑Pn	**Pn**	**21 00 38.3**	**-0.4**
	4.0nm,0.2s						
MAKZ				⇑Sn	**Sg**	**21 01 03.3**	**+0.9**
	46nm,0.4s						
MAKZ	**Makanchi**	**1.63**	**267**	Pn	**Pn**	**21 00 38.3**	**-0.4**
MAKZ				Pg	**Pb**	**21 00 39.4**	**-0.8**
MAKZ				Sg	**Sg**	**21 01 04.2**	**+1.8**
UKR	**Ust'-Kan**	**4.04**	**4**	Pn	**Pn**	**21 01 09.4**	**-2.4**
UKR				Pg	**Pb**	**21 01 23.0**	**+1.8**
UKR				S	**Sn**	**21 02 00.9**	**+1.7**
UKR				Sg	**Sg**	**21 02 18.8**	**-0.7**
AKAR	**Aktash**	**4.04**	**31**	Pn	**Pn**	**21 01 10.9**	**-1.1**
AKAR				Pg	**Pb**	**21 01 21.7**	**+0.4**
AKAR				S	**Sn**	**21 01 59.9**	**+0.5**
AKAR				Sg	**Sg**	**21 02 17.8**	**-1.8**
ULGR	**Ulagan, Altay**	**4.41**	**31**	Pn	**Pn**	**21 01 17.6**	**+0.5**
ULGR				Pg	**Pb**	**21 01 28.3**	**+0.6**
ULGR				S	**Sn**	**21 02 09.2**	**+0.6**
ULGR				Sg	**Sg**	**21 02 29.2**	**-2.4**
PDGK	**Podgornoye**	**4.97**	**226**	⇑Lg	Lg	21 02 40.8	
	19nm,0.6s						
ARTR	**Artybash**	**5.25**	**20**	Pn	**Pn**	**21 01 29.0**	**+0.6**
ARTR				S	**Sn**	**21 02 29.2**	**+0.2**
ARTR				Sg	**Sg**	**21 02 58.6**	**+0.2**
KURK	**Kurchatov**	**5.36**	**317**	⇑Lg	Lg	21 03 00.9	
	31nm,0.7s						
KURK	**Kurchatov**	**5.36**	**317**	Pn	**Pn**	**21 01 29.1**	**-0.9**
KURK				S	**Sn**	**21 02 33.0**	**+1.2**
KURK				Sg	**Sg**	**21 03 01.3**	**-0.8**
TASR	**Tashtagol**	**6.28**	**20**	S	**Sn**	**21 02 53.7**	**-0.7**
TASR				Sg	**Sg**	**21 03 30.9**	**-0.6**
ELT	**Eltsovka**	**6.47**	**10**	Pn	**Pn**	**21 01 44.5**	**-0.7**
ELT				S	**Sn**	**21 02 58.2**	**-0.8**
ELT				Sg	**Sg**	**21 03 38.1**	**+0.6**
KDJ	**Kajisay**	**7.01**	**230**	Sg	**Sg**	**21 03 50.7**	**-4.2**

*DDA **30** 21:04:17.0±0.0, 35°.77N×27°.82E, h41km±8km, ML2.6, Hypocentre not reviewed by the ISC*
*NIC **30** 21:04:17.7±0.0, 35°.65N×28°.02E, h23km±2km, Ml3.4/4*
*ISK **30** 21:04:18.0, 35°.84N×27°.83E, h56km±1km, ML2.7/19*
ISC 30 21:04:18.2±1.3, **35°.79N**±0°.04×**27°.92E**±0°.03, **h58**km±11km, **n30**, σ0s **78/40, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.46**	**22**	PG	**Pn**	**21 04 29.6**	**+0.1**
ARG				SG	**Sn**	**21 04 37.9**	**+0.1**
ARG	**Arkhangelos**	**0.46**	**22**	P	**Pn**	**21 04 29.7**	**+0.1**
ARG				S	**Sn**	**21 04 37.8**	**0.0**
KARP	**Karpathos**	**0.66**	**249**	PG	**Pn**	**21 04 31.7**	**-0.1**
KARP				SG	**Sn**	**21 04 41.6**	**-0.2**
KARP	**Karpathos**	**0.66**	**249**	P	**Pn**	**21 04 31.8**	**0.0**
KARP				S	**Sn**	**21 04 41.8**	**0.0**
KARP				AML	AML	21 04 42.0	
	2.8nm,0.1s						
KARP				AML	AML	21 04 42.0	
	2.8nm,0.1s						
KARP				AML	AML	21 04 42.1	
	3.0nm,0.2s						
KARP				AML	AML	21 04 42.1	
	3.0nm,0.2s						
DAT	**Datca**	**0.98**	**344**	PG	**Pn**	**21 04 35.5**	**-0.4**
DAT				SG	**Sn**	**21 04 48.2**	**-0.9**
DAT	**Datca**	**0.98**	**344**	P		21 04 35.3	
DAT				*i* AML		21 04 48.0	
	comp=N,220nm,0.6s						
DAT				S		21 04 48.0	
DAT				*i* AML		21 04 49.0	
	comp=E,181nm,0.2s						
NIS1	**Nisyros Isl.**	**1.01**	**324**	PG	**Pn**	**21 04 35.5**	**-0.7**
TURN	**Turunc**	**1.02**	**15**	PG	**Pn**	**21 04 36.9**	**+0.5**
TURN				SG	**Sn**	**21 04 50.0**	**+0.2**
TURN	**Turunc**	**1.02**	**15**	P		21 04 36.8	
DALY	**Dalyan (Mula)**	**1.19**	**30**	PN	**Pn**	**21 04 39.2**	**+0.6**
FETY	**Fethiye**	**1.27**	**48**	PN	**Pn**	**21 04 40.2**	**+0.5**
FETY	**Fethiye**	**1.27**	**48**	P		21 04 40.1	
BDRM	**Kayabasi**	**1.33**	**344**	P		21 04 39.7	
BDRM				S		21 04 55.3	
BDRM				*i* AML		21 04 56.0	
	comp=E,102nm,0.5s						
BODT	**Bodrum**	**1.36**	**339**	PN	**Pn**	**21 04 40.1**	**-0.9**
YER	**Yerkesik**	**1.38**	**12**	PN	**Pn**	**21 04 41.8**	**+0.6**
AKAS	**Kas**	**1.44**	**72**	PN	**Pn**	**21 04 43.2**	**+1.1**
AKAS	**Kas**	**1.44**	**72**	P		21 04 42.2	
AKAS				S		21 05 00.2	
AKAS				*i* AML		21 05 02.0	
	comp=E,66nm,0.2s						
AKAS				*i* AML		21 05 03.0	
	comp=N,86nm,0.4s						
MULA	**Mugla, Merkez-**	**1.50**	**12**	P		21 04 44.9	
ZKR	**Zakros**	**1.54**	**245**	PN	**Pn**	**21 04 43.8**	**+0.5**
ZKR	**Zakros**	**1.54**	**245**	P	**Pn**	**21 04 44.6**	**+1.3**
ZKR				S	**Sn**	**21 05 04.6**	**+2.3**
CAME	**Cameli-Denizli**	**1.61**	**44**	PN	**Pn**	**21 04 45.2**	**+0.8**
CAEL	**Denizli, Camel**	**1.75**	**40**	P		21 04 47.6	
CAEL				S		21 05 08.9	
CAEL				*i* AML		21 05 11.0	
	comp=N,45nm,0.7s						
CAEL				*i* AML		21 05 16.0	
	comp=E,60nm,0.4s						
DDIM	**Aydin, Didim**	**1.75**	**342**	P		21 04 45.6	
TAVA	**DENIZLI_Tavas**	**1.86**	**25**	P		21 04 48.3	
AYDN	**Tasoluk**	**1.87**	**359**	P		21 04 47.9	
ELL	**Elmali**	**1.87**	**59**	PN	**Pn**	**21 04 49.7**	**+1.7**
GOLH	**Golhisar**	**1.96**	**42**	P		21 04 49.2	
GOLH				S		21 05 12.4	
GCAM	**G?zelcaml?**	**1.99**	**344**	PN	**Pn**	**21 04 49.6**	**+0.2**
GCAM				SN	**Sn**	**21 05 12.5**	**-0.6**
GCAM	**G?zelcaml?**	**1.99**	**344**	P		21 04 48.9	
APMY	**Acipayam-Deniz**	**2.02**	**33**	PN	**Pn**	**21 04 50.4**	**+0.5**
SANT	**Santorini**	**2.07**	**287**	PN	**Pn**	**21 04 50.6**	**0.0**
AYDB	**Zeytinkoy-Aydi**	**2.15**	**359**	PN	**Pn**	**21 04 52.1**	**+0.3**
KORT	**Korkueli**	**2.31**	**58**	PN	**Pn**	**21 04 55.4**	**+1.5**
APE	**Apeiranthos**	**2.31**	**304**	PN	**Pn**	**21 04 53.4**	**-0.4**
OSC1	**CSNet OBS 1**	**3.59**	**129**	P	**Pn**	**21 05 10.7**	**-0.6**
OSC1				S	**Sn**	**21 05 51.6**	**-0.8**
AKMS	**Akamas**	**3.69**	**101**	P	**Pn**	**21 05 12.4**	**-0.3**
AKMS				AML	AML	21 05 54.0	
	0.2nm,0.6s						
AKMS				AML	AML	21 05 55.1	
	0.2nm,0.2s						
ALFC	**Alefka**	**3.87**	**98**	P	**Pn**	**21 05 14.6**	**-0.6**
ALFC				AML	AML	21 05 59.7	
	0.2nm,0.3s						
ALFC				AML	AML	21 05 59.7	
	0.2nm,0.2s						
NATA	**Nata**	**3.94**	**103**	P	**Pn**	**21 05 15.8**	**-0.3**
SZAC	**Souni**	**4.19**	**103**	P	**Pn**	**21 05 19.4**	**-0.1**
SZAC				AML	AML	21 06 07.8	
	0.2nm,0.3s						
SZAC				AML	AML	21 06 08.0	
	0.2nm,0.2s						
ASGA	**Asgata**	**4.47**	**101**	P	**Pn**	**21 05 22.9**	**-0.5**
OSC2	**CSNet OBS 4**	**4.50**	**126**	P	**Pn**	**21 05 23.8**	**+0.1**
OSC2				S	**Sn**	**21 06 13.6**	**-1.2**
CSS	**Mathiatis**	**4.50**	**99**	P	**Pn**	**21 05 23.5**	**-0.3**

*JMA **30** 21:25:59.6±0.3, 24°N±1°×122°.1E±0°.4, h17km, MV2.2/9, TAIWAN REGION*
*TAP **30** 21:26:00.0, 24°.50N×121°.82E, h68km, ML2.7, B*
ISC 30 21:25:60.0±1.3, **24°.53N**±0°.03×**121°.84E**±0°.02, **h73**km±5km, **n66**, σ0s **86/120, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.08**	**5**	*i* P	**Pn**	**21 26 10.7**	**+0.1**
	baz=19						
TWC				S	**Sn**	**21 26 18.8**	**+0.6**
	baz=19						
EWUT	**Wuta**	**0.10**	**213**	*i* P	**Pn**	**21 26 10.4**	**-0.2**
	baz=213						
EWUT				*i* S	**Sn**	**21 26 18.2**	**-0.1**
	baz=213						
ENA	**Nanau**	**0.14**	**221**	P	**Pn**	**21 26 10.6**	**-0.1**
	baz=230						
ENA				S	**Sn**	**21 26 18.5**	**0.0**
	baz=230						
NDS	**Dongshan**	**0.15**	**311**	*i* P	**Pn**	**21 26 10.8**	**+0.1**
	baz=324						
NDS				S	**Sn**	**21 26 18.9**	**+0.3**
	baz=324						
TWE	**Neicheng**	**0.24**	**320**	P	**Pn**	**21 26 11.5**	**+0.3**
	baz=321						
TWE				S	**Sn**	**21 26 20.1**	**+0.9**
	baz=321						
ILA	**Ilan**	**0.25**	**340**	*e*P	**Pn**	**21 26 11.8**	**+0.7**
	baz=339						
ILA				*e*S	**Sn**	**21 26 21.0**	**+1.7**
	baz=339						
LATG	**Datong**	**0.29**	**270**	*i* P	**Pn**	**21 26 11.6**	**0.0**
	baz=272						
LATG				*i* S	**Sn**	**21 26 19.8**	**-0.2**
	baz=272						
NTC	**Toucheng**	**0.32**	**358**	P	**Pn**	**21 26 12.2**	**+0.6**
	baz=1.0						
NTC				*e*S	**Sn**	**21 26 20.8**	**+0.7**
	baz=1.0						
EGS		**0.32**	**15**	*e*P	**Pn**	**21 26 12.4**	**+0.8**
	baz=18						
EGS				*e*S	**Sn**	**21 26 20.9**	**+0.8**
	baz=18						
FUSB	**Fushanzhiwuyua**	**0.32**	**314**	*i* P	**Pn**	**21 26 11.9**	**+0.2**
	baz=309						
FUSB				S	**Sn**	**21 26 20.0**	**-0.3**
	baz=309						
NWLT	**Wulai**	**0.39**	**308**	P	**Pn**	**21 26 12.2**	**0.0**
	baz=314						
NWLT				*e*S	**Sn**	**21 26 20.4**	**-0.7**
	baz=314						
ETL	**Fush Village**	**0.42**	**208**	*e*P	**Pn**	**21 26 11.8**	**-0.6**
	baz=218						
ETL				*e*S	**Sn**	**21 26 20.4**	**-1.1**
	baz=218						
NACB	**Ninganchiao**	**0.42**	**212**	P	**Pn**	**21 26 11.6**	**-0.8**
	baz=212						
NACB				S	**Sn**	**21 26 20.1**	**-1.4**
	baz=212						
NNSB	**Datong**	**0.43**	**256**	*i* P	**Pn**	**21 26 12.6**	**0.0**
	baz=260						
NNSB				*i* S	**Sn**	**21 26 21.0**	**-0.8**
	baz=260						
NNS	**Nan Shan**	**0.44**	**258**	P	**Pn**	**21 26 12.7**	**+0.1**
	baz=254						
NNS				S	**Sn**	**21 26 21.4**	**-0.5**
	baz=254						
TIPB	**Shuangxi**	**0.44**	**358**	*i* P	**Pn**	**21 26 13.1**	**+0.5**
	baz=351						
TIPB				*i* S	**Sn**	**21 26 22.0**	**+0.3**
	baz=351						
YHNB	**Yeheng**	**0.45**	**288**	*i* P	**Pn**	**21 26 12.6**	**-0.1**
	baz=292						
YHNB				*i* S	**Sn**	**21 26 21.2**	**-0.7**
	baz=292						
ETLH	**Xiulin Townshi**	**0.46**	**225**	*i* P	**Pn**	**21 26 12.3**	**-0.5**
	baz=235						
ETLH				*i* S	**Sn**	**21 26 21.1**	**-1.1**
	baz=235						
NSK	**Sanguang**	**0.46**	**288**	P	**Pn**	**21 26 12.6**	**-0.1**
	baz=293						
NSK				S	**Sn**	**21 26 21.4**	**-0.8**
	baz=293						
TWB1	**Santiao Chiao**	**0.49**	**16**	P	**Pn**	**21 26 13.1**	**+0.2**
	baz=27						
TWB1				S	**Sn**	**21 26 22.5**	**0.0**
	baz=27						
TWA	**Mucha**	**0.50**	**332**	*e*P	**Pn**	**21 26 13.3**	**+0.2**
	baz=326						
TWA				S	**Sn**	**21 26 22.9**	**+0.1**
	baz=326						
TWD	**Chiawan**	**0.50**	**206**	*e*P	**Pn**	**21 26 12.8**	**-0.3**
	baz=216						
TWD				*e*S	**Sn**	**21 26 21.3**	**-1.4**
	baz=216						
NHDH	**Xindian Distri**	**0.52**	**326**	*e*P	**Pn**	**21 26 13.6**	**+0.4**
	baz=321						
NHDH				S	**Sn**	**21 26 22.7**	**-0.2**
	baz=321						
NWF	**Wu-fen Shan**	**0.54**	**354**	P	**Pn**	**21 26 14.0**	**+0.4**
	baz=349						
NWF				S	**Sn**	**21 26 24.0**	**+0.6**
	baz=349						
SXI1	**Grass Mountain**	**0.56**	**3**	P	**Pn**	**21 26 13.9**	**+0.2**
	baz=5.0						
SXI1				*e*S	**Sn**	**21 26 24.3**	**+0.5**
	baz=5.0						
FUSS	**Fushou**	**0.61**	**243**	P	**Pn**	**21 26 14.6**	**+0.1**
	baz=244						
FUSS				*e*S	**Sn**	**21 26 24.6**	**-0.4**
	baz=244						
WHF	**Hehuan Shan**	**0.65**	**234**	*e*S	**Sn**	**21 26 25.8**	**-0.3**
	baz=232						
YM01	**YM01**	**0.66**	**338**	P	**Pn**	**21 26 14.8**	**+0.1**
	baz=333						
YM01				S	**Sn**	**21 26 25.5**	**0.0**
	baz=333						
NFF	**Wufeng Townshi**	**0.67**	**279**	*i* P	**Pn**	**21 26 14.8**	**+0.1**
	baz=288						
NFF				S	**Sn**	**21 26 25.2**	**-0.5**
	baz=288						
TWT	**Tachien**	**0.67**	**245**	S	**Sn**	**21 26 25.9**	**0.0**
	baz=243						
TDCB	**Techi**	**0.68**	**246**	*i* P	**Pn**	**21 26 15.6**	**+0.5**
	baz=243						
TDCB				*i* S	**Sn**	**21 26 26.0**	**-0.2**
	baz=243						
TWS1	**Kuangyinshan**	**0.68**	**326**	P	**Pn**	**21 26 15.2**	**+0.3**
	baz=321						
TWS1				S	**Sn**	**21 26 26.5**	**+0.6**
	baz=321						
NTST	**Danshui**	**0.72**	**331**	*e*S	**Sn**	**21 26 27.2**	**+0.6**
	baz=333						
LIOB	**Emei**	**0.76**	**279**	*i* P	**Pn**	**21 26 16.0**	**+0.2**
	baz=281						
LIOB				S	**Sn**	**21 26 27.4**	**-0.1**
	baz=281						
CHGB	**Renai**	**0.77**	**232**	P	**Pn**	**21 26 16.5**	**+0.4**
	baz=233						
CHGB				S	**Sn**	**21 26 27.7**	**-0.3**
	baz=233						
NSTT	**Nanjuang**	**0.77**	**277**	P	**Pn**	**21 26 16.1**	**+0.2**
	baz=280						
NSTT				*e*S	**Sn**	**21 26 27.5**	**-0.1**
	baz=280						
TWY	**Chenhua**	**0.77**	**344**	*e*P	**Pn**	**21 26 16.4**	**+0.5**
	baz=336						
TWY				*e*S	**Sn**	**21 26 28.6**	**+1.0**
	baz=336						
ESL	**Shilin**	**0.81**	**208**	*e*P	**Pn**	**21 26 15.3**	**-1.0**
	baz=212						
ESL				*e*S	**Sn**	**21 26 26.1**	**-2.3**
	baz=212						
OWD	**Renai**	**0.84**	**227**	P	**Pn**	**21 26 16.9**	**+0.1**
	baz=222						
OWD				S	**Sn**	**21 26 28.3**	**-1.0**
	baz=222						
WUSB	**Renai**	**0.85**	**231**	*i* P	**Pn**	**21 26 17.

baz=235
SSLB Suanglung 1.10 228 *e*P Pn 21 26 21.0 +1.1
baz=232
SSLB *e*S Sn 21 26 35.3 +0.5
baz=232
HGSD Ruisui 1.10 200 *e*P Pn 21 26 20.4 +0.4
baz=208
YULB Yu-li 1.24 204 *e*P Pn 21 26 21.7 0.0
baz=203
ALS Alishan 1.39 223 *e*P Pn 21 26 25.3 +1.4
baz=234
ALS *e*S Sn 21 26 43.6 +1.7
baz=234
CHN5 Tsauling 1.41 229 *e*S Sn 21 26 43.7 +1.6
baz=239
EDH Donghe 1.63 198 *e*S Sn 21 26 45.7 -1.3
baz=197
CHN4 Tsaushan 1.64 224 *e*P Pn 21 26 28.4 +1.5
baz=237
CHN4 *e*S Sn 21 26 50.1 +2.8
baz=237
TPUB Ta-pu 1.65 222 *e*P Pn 21 26 28.4 +1.3
baz=233
TPUB *e*S Sn 21 26 49.9 +2.3
baz=233
IRIF Iriomote-Funau 1.73 96 P Pn 21 26 28.0 -0.1
IRIF *e*S Sn 21 26 48.5 -0.9
JKRS Kuro-shima 2.00 98 P Pn 21 26 32.2 +0.6
JKRS S Sn 21 26 55.9 +0.1
JIJ Ishigaki jima 2.10 94 P Pn 21 26 33.1 0.0
JIJ *e*S Sn 21 26 57.3 -1.0
VWUC VWUC 2.22 282 *e*P Pn 21 26 34.0 -0.7
baz=283
VWUC *e*S Sn 21 26 58.8 -2.4
baz=283
MATB Ma-tsu 2.35 314 *e*S Sn 21 27 02.4 -2.0
baz=313
PTMZ Houxiangcun 2.52 282 *e*P Pn 21 26 38.1 -0.6
baz=282
PTMZ *e*S Sn 21 27 06.2 -2.3
baz=282
JTJ Tarama 2.61 87 P Pn 21 26 40.8 +1.0
KNMB Chin-men Tao 3.15 269 *e*P Pn 21 26 46.5 -0.7
baz=270
AXDP Jialang 3.54 277 *e*P Pn 21 26 52.3 -0.2
baz=277

IDC 30 21:26:23.1±4.5, 22°.90N×142°.32E, h56$^{km}_{\pm}$42^{km}, mb3.6/4, mbtmp3.9/5, ML3.6/1, Error ellipse: s-maj=92.8km s-min=25.0km az=98.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**4.18**	**358**	P	Pn	21 27 24.4	0.0
	3.7nm,0.3s,baz=280,slow=19,SNR=4.6 17nm,0.4s						
H11N1	**WAKE ISLAND Hy**	**23.10**	**93**	T	T	21 55 07.5	
	baz=282,slow=74						
H11N2	**WAKE ISLAND Hy**	**23.11**	**93**	T	T	21 55 06.7	
	baz=282,slow=74						
H11N3	**WAKE ISLAND Hy**	**23.12**	**93**	T	T	21 55 08.8	
	baz=282,slow=74						
H11S3	**WAKE ISLAND Hy**	**23.20**	**96**	T	T	21 55 25.1	
	baz=284						
H11S1	**WAKE ISLAND Hy**	**23.21**	**96**	T	T	21 55 27.1	
	baz=284,slow=74						
H11S2	**WAKE ISLAND Hy**	**23.22**	**96**	T	T	21 55 27.2	
	baz=284,slow=74						
WRA	**Warramunga Arr**	**43.29**	**191**	P	P	21 34 19.5	0.0
	0.7nm,0.8s,baz=12,slow=9.0,SNR=3.1 0.7nm,0.8s						
ASAR	**Alice Springs**	**47.00**	**191**	P	P	21 34 48.7	-0.2
	0.3nm,0.6s,baz=16,slow=11,SNR=1.7 0.3nm,0.6s						
YKA	**Yellowknife Ar**	**75.77**	**28**	P	P	21 38 02.8	+0.1
	1.0nm,0.8s,baz=293,slow=5.6,SNR=3.9 1.0nm,0.8s						
FINES	**FINESS Array B**	**81.76**	**334**	P	P	21 38 35.5	-0.1
	10nm,1.4s,baz=53,slow=9.2,SNR=3.8 10nm,1.4s						

*IDC **30** 21:26:26.3±2.7, 36°.14N×139°.94E, h46$^{km}_{\pm}$25^{km}, mb3.5/8, mbtmp3.9/9, ML4.6/1, MS3.2/2, Error ellipse: s-maj=27.4km s-min=15.2km az=59.0*
*NEIC **30** 21:26:28.2±2.6, 36°.20N±0°.06×139°.85E±0°.06, h56$^{km}_{\pm}$5^{km}, mb4.3/7, Error ellipse: s-maj=8.8km s-min=6.2km az=154.0*
*NIED **30** 21:26:28.5, 36°.13N×139°.83E, h50^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.66; $M_{\theta\theta}$-0.14; $M_{\phi\phi}$-0.53; $M_{r\theta}$3.89; $M_{\theta\phi}$-1.38; $M_{\phi r}$1.21; Fault plane solution: $M_0$4.34000×10^{14} NP1: ϕ_s181.00000°, δ17.00000°, λ18.00000°. NP2:ϕ_s73.00000°, δ85.00000°, λ107.00000°.*
*JMA **30** 21:26:28.5±0.1, 36°.1N±0°.3×139°.8E±0°.3, h50^{km}, MV3.8/35, SW IBARAKI PREF*
JMA Felt II J1 at SW IBARAKI PREF .
ISC 30 21:26:27.5±0.8, 36°.13N±0°.05×139°.86E±0°.04, h57$^{km}_{\pm}$6^{km}, n47, σ1^{s}15/45, mb3.8/11, 6D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.29**	**71**		**Pn**	**21 26 36.6**	**-0.6**
JYT				Sn	**Sn**	**21 26 44.4**	**+0.3**
JYT	**Yasato**	**0.29**	**71**	P	**Pn**	**21 26 37.8**	**+0.6**
JYT				S	**Sn**	**21 26 44.3**	**+0.2**
JAG	**Ashikaga**	**0.44**	**312**	⇓P	**Pn**	**21 26 38.8**	**+0.3**
JAG				⇓S	**Sn**	**21 26 46.0**	**-0.6**
JRY	**Ryogami san**	**0.79**	**262**	⇓P	**Pn**	**21 26 43.0**	**+0.3**
JRY				⇓S	**Sn**	**21 26 53.5**	**-0.2**
JKT	**Katashina**	**0.80**	**322**	⇓P	**Pn**	**21 26 43.0**	**+0.1**
JKT				⇓S	**Sn**	**21 26 54.4**	**+0.1**
JOD2	**Odawara 2**	**1.07**	**216**	P	**Pn**	**21 26 47.3**	**+0.9**
JYN	**Shimob**	**1.24**	**240**	*i* P	**Pn**	**21 26 50.4**	**+1.7**
JUON	**Uonuma**	**1.25**	**329**	*i* P	**Pn**	**21 26 49.3**	**+0.5**
MJAR	**Matsushiro Arr**	**1.39**	**287**	P	**Pn**	**21 26 49.9**	**-0.8**
	82nm,0.3s,baz=88,slow=16,SNR=217						
MJAR				S	**Sn**	**21 27 07.3**	**-0.8**
	24nm,0.3s,baz=294,slow=12,SNR=5.1						
MJAR	**Matsushiro Arr**	**1.39**	**287**		**Pn**	**21 26 50.2**	**-0.5**
MAJO	**Matsushiro**	**1.40**	**288**	Pn	**Pn**	**21 26 51.2**	**+0.5**
MAJO				Sn	**Sn**	**21 27 06.2**	**-1.9**
MJB9	**Matsu-Tunnel**	**1.40**	**288**		**Pn**	**21 26 51.6**	**+0.8**
JMM	**Marumori**	**1.88**	**23**		**Pn**	**21 26 58.2**	**+0.9**
JMM				Sn	**Sn**	**21 27 20.6**	**+0.7**
JGF	**Kuroka**	**2.10**	**256**		**Pn**	**21 27 02.0**	**+1.7**
JSD	**Sado**	**2.29**	**327**		**Pn**	**21 27 03.3**	**+0.4**
INU	**Inuyama**	**2.44**	**252**		**Pn**	**21 27 06.5**	**+1.6**
JHJ2	**Mitsune**	**3.02**	**181**		**Pn**	**21 27 13.1**	**+0.3**
JTM	**Tenmabayashi**	**4.74**	**11**	Pn	**Pn**	**21 27 36.7**	**+0.3**
JHS	**Saijyo**	**5.61**	**260**	Pn	**Pn**	**21 27 51.6**	**+3.2**
ERM	**Erimo**	**6.41**	**23**	Pn	**Pn**	**21 27 59.3**	**+0.1**
JCJ	**Chichijima**	**9.22**	**167**	P	**Pn**	**21 28 34.9**	**-3.0**
	6.5nm,0.3s,baz=272,slow=21,SNR=9.8						
JCJ				S	Sn	21 30 11.5	-8.7
	22nm,0.8s,baz=69,slow=24,SNR=1.4 20nm,0.3s						
KSRS	**Korea Array**	**9.66**	**281**	P	**Pn**	**21 28 46.5**	**+2.6**
	1.0nm,0.5s,baz=99,slow=15,SNR=4.5						
USRK	**Ussuriysk Ar.**	**10.05**	**326**	LR	LR	21 32 41.3	
	comp=Z,48nm,20.2s,baz=292,slow=37						
MA2	**Magadan**	**24.51**	**13**	P	**P**	**21 31 40.9**	**-0.3**
	4.3nm,0.6s,baz=198,slow=11,SNR=4.4 4.3nm,0.6s						
MA2	**Magadan**	**24.51**	**13**	IAmb	IAmb	21 31 43.6	
	comp=Z,3.9nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**28.80**	**117**	T	T	22 02 24.0	
	baz=308						
H11N1	**WAKE ISLAND Hy**	**28.81**	**117**	T	T	22 02 29.5	
	baz=308,SNR=8.6						
H11N3	**WAKE ISLAND Hy**	**28.82**	**117**	T	T	22 02 24.2	
	baz=308						
H11S1	**WAKE ISLAND Hy**	**29.46**	**119**	T	T	22 03 21.8	
	baz=314,slow=75,SNR=3.9						
H11S3	**WAKE ISLAND Hy**	**29.46**	**119**	T	T	22 03 17.5	
	baz=314,slow=75,SNR=3.2						
H11S2	**WAKE ISLAND Hy**	**29.48**	**119**	T	T	22 03 20.2	
	baz=314,slow=75,SNR=3.8						
ZALV	**Zalesovo Beam**	**41.61**	**313**	P	**P**	**21 34 10.0**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=94,slow=6.2,SNR=5.7 comp=Z,1.1nm,0.6s						
ZALV	**Zalesovo Beam**	**41.61**	**313**	P	**P**	**21 34 09.3**	**-0.3**
MK31	**Makanchi Array**	**43.54**	**303**	P	**P**	**21 34 24.7**	**-0.9**
MKAR	**Makanchi Array**	**43.54**	**303**	P	**P**	**21 34 24.8**	**-0.8**
	comp=Z,0.4nm,0.7s,baz=89,slow=10,SNR=4.1 comp=Z,0.4nm,0.7s						
KURK	**Kurchatov**	**45.51**	**309**	P	**P**	**21 34 40.6**	**-0.5**
KURK				IAmb	IAmb	21 34 42.5	
	comp=Z,5.5nm,1.4s						
BWN	**Browne**	**49.83**	**3**	P	**P**	**21 35 16.3**	**+1.9**
NEA2	**Nenana**	**49.99**	**32**	P	**P**	**21 35 15.4**	**-0.2**
NEA2				IAmb	IAmb	21 35 17.3	
	comp=Z,4.8nm,1.4s						
CRQM	**Cirque**	**53.07**	**37**		pP	21 35 54.8	+0.8
CTGM	**Chitina Glacie**	**53.90**	**36**	P	**P**	**21 35 43.4**	**-1.6**
CTGM				IAmb	IAmb	21 35 45.9	
	comp=Z,5.1nm,0.8s						
WRA	**Warramunga Arr**	**56.01**	**186**	P	**P**	**21 36 00.4**	**0.0**
	comp=Z,0.6nm,0.3s,baz=0.3,slow=7.6,SNR=24 comp=Z,0.6nm,0.3s						
ASAR	**Alice Springs**	**59.74**	**186**	P	**P**	**21 36 26.9**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=20,slow=6.8,SNR=8.1 comp=Z,0.5nm,0.7s						
FINES	**FINESS Array B**	**69.02**	**332**	P	**P**	**21 37 26.4**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=46,slow=6.0,SNR=3.6 comp=Z,0.4nm,0.5s						
KVAR	**Kislovodsk Arr**	**70.54**	**311**	LR	LR	22 12 07.4	
	comp=Z,42nm,18.6s,baz=65,slow=39						
AKASG	**Malin Array Be**	**74.24**	**322**	P	**P**	**21 37 57.9**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=49,slow=5.3,SNR=2.8 comp=Z,0.2nm,0.3s						
CLL	**Collm**	**81.24**	**329**	*e*P	**P**	**21 38 37.0**	**-0.2**
TXAR	**Lajitas Array**	**91.66**	**51**	P	**P**	**21 39 29.8**	**+0.9**
	comp=Z,0.1nm,0.5s,baz=305,slow=3.2,SNR=2.5 comp=Z,0.1nm,0.5s						

*IDC **30** 21:47:41.2±1.4, 2°.41S×139°.49E, h0^{km}, mb3.7/4, mbtmp3.9/6, ML4.2/2, Error ellipse: s-maj=44.1km s-min=23.9km az=94.0*
*NEIC **30** 21:47:49.3±1.5, 2°.63S±0°.05×139°.04E±0°.08, h51$^{km}_{\pm}$8^{km}, mb4.1/16, Error ellipse: s-maj=11.7km s-min=6.4km az=110.0*
*DJA **30** 21:47:51.1±0.4, 3°.S±6°×13°.9E±°, h48$^{km}_{\pm}$10^{km}, M4.3/10, mB5.0/2, mb4.3/10, MLv4.4/7, Mw(mB)4.3/2*
ISC 30 21:47:47.6±0.7, 2°.63S±0°.07×139°.05E±0°.07, h37^{km}, n39, σ1^{s}38/41, mb4.0/9, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.72**	**332**	P	**Pn**	**21 48 03.4**	**+2.1**
GENI	**Genyem**	**1.11**	**88**	P	Pn	21 48 12.3	+5.6
SRPI	**Serui, Papua**	**2.91**	**285**	P	**Pn**	**21 48 32.2**	**+0.8**
BAKI	**Biak**	**3.27**	**296**	P	**Pn**	**21 48 37.1**	**+0.7**
FAKI	**Fak Fak**	**6.80**	**267**		**Pn**	**21 49 26.1**	**+1.1**
FAKI				Sn	**Sn**	**21 50 39.9**	**-1.3**
FAKI	**Fak Fak**	**6.80**	**267**	P	**Pn**	**21 49 25.0**	**+0.1**
	0.1nm20nm,0.7s						
SIJI	**Sorong**	**7.98**	**283**	Pn	**Pn**	**21 49 43.1**	**+2.0**
	3.1nm,0.3s,baz=155,slow=22,SNR=7.4						
SIJI				Sn	**Sn**	**21 51 07.6**	**-2.6**
	1.6nm,0.3s,baz=298,slow=23,SNR=1.9 6.9nm,0.2s						
SWI	**Sorong**	**7.99**	**283**	P	**Pn**	**21 49 43.5**	**+2.3**
	0.1nm940nm17nm,0.7s						
PMG	**Port Moresby**	**10.50**	**130**	Pn	**Pn**	**21 50 16.4**	**+0.8**
COEN	**Coen**	**11.97**	**160**	Pn	**Pn**	**21 50 36.6**	**+0.8**
MTN	**Manton Dam**	**12.82**	**217**	Pn	**Pn**	**21 50 48.9**	**+1.4**
SANI	**Sanana**	**13.07**	**272**	P	**Pn**	**21 50 51.9**	**+1.1**
	17nm,0.9s						
KNRA	**Kununurra**	**16.46**	**217**		**Pn**	**21 51 38.0**	**+2.1**
KNRA				IAmb	IAmb	21 52 05.8	
	comp=Z,29nm,1.4s						
BATI	**Baumata**	**17.04**	**243**	P	**P**	**21 51 45.7**	**+1.0**
	comp=Z,49nm,0.8s						
APSI	**Ampana**	**17.48**	**275**	P	**P**	**21 51 50.0**	**+0.4**
	comp=Z,11nm,1.0s						
WB0	**Warramunga Arr**	**17.63**	**195**		**P**	**21 51 52.1**	**+0.9**
WR0	**Warramunga Arr**	**17.78**	**194**		**Pn**	**21 51 52.5**	**+0.1**
WB2	**Warramunga Arr**	**17.81**	**195**		**P**	**21 51 53.9**	**+0.7**
WB2				IAmb	IAmb	21 52 12.9	
	comp=Z,15nm,1.2s						
WRA	**Warramunga Arr**	**17.82**	**195**	P	**Pn**	**21 51 53.4**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=18,slow=12,SNR=9.3						
WRA				S	Sn	21 55 01.5	-8.9
	comp=Z,1.3nm,0.5s,baz=13,slow=23,SNR=3.6 comp=Z,1.5nm,0.4s						
WRA	**Warramunga Arr**	**17.82**	**195**	P	**Pn**	**21 51 53.1**	**+0.3**
TOLI2	**Tolitoli**	**18.64**	**281**	P	**P**	**21 52 00.8**	**-1.6**
TOLI2				IAmb	IAmb	21 52 24.6	
	comp=Z,6.6nm,0.8s						
AS31	**Alice Springs**	**21.50**	**193**	P	**P**	**21 52 35.0**	**+1.6**
ASAR	**Alice Springs**	**21.50**	**193**	P	**P**	**21 52 35.5**	**+2.1**
	comp=Z,1.2nm,0.5s,baz=14,slow=11,SNR=24						
ASAR				S	**S**	**21 56 27.9**	**-2.1**
	comp=Z,1.0nm,0.7s,baz=4.1,slow=21,SNR=4.4 comp=Z,1.2nm,0.5s						
ASAR	**Alice Springs**	**21.50**	**193**	P	**P**	**21 52 35.1**	**+1.7**
MBWA	**Marble Bar**	**26.33**	**224**	P	**P**	**21 53 21.7**	**+1.4**
MBWA				IAmb	IAmb	21 53 28.1	
	comp=Z,13nm,1.1s						
PSA00	**Pilbara Seismi**	**26.53**	**223**	P	**P**	**21 53 21.3**	**-0.7**
BBOO	**Buckleboo**	**30.16**	**185**	P	**P**	**21 53 52.3**	**-1.9**
MORW	**Morawa**	**34.22**	**217**	P	**P**	**21 54 30.3**	**+0.4**
MQZ	**McQueen's Vall**	**50.60**	**149**	P	**P**	**21 56 42.3**	**-0.5**
SONM	**Songino Array**	**57.79**	**335**	P	**P**	**21 57 35.0**	**-0.3**
	comp=Z,0.2nm,0.5s,baz=141,slow=7.1,SNR=1.5 comp=Z,0.2nm,0.5s						
RAR	**Rarotonga**	**62.24**	**113**	P	**P**	**21 58 05.1**	**-1.0**
MK31	**Makanchi Array**	**69.93**	**322**	P	**P**	**21 58 54.9**	**-0.2**
MK31				IAmb	IAmb	21 58 55.6	
	comp=Z,1.6nm,1.0s						
MKAR	**Makanchi Array**	**69.93**	**322**	P	**P**	**21 58 55.0**	**-0.2**
	comp=Z,1.4nm,0.7s,baz=111,slow=8.1,SNR=12 comp=Z,1.4nm,0.7s						
MKAR	**Makanchi Array**	**69.93**	**322**	P	**P**	**21 58 54.8**	**-0.4**
MAKZ	**Makanchi**	**70.13**	**322**	P	**P**	**21 58 55.9**	**-0.5**
MAKZ				IAmb	IAmb	21 58 57.0	
	comp=Z,3.2nm,1.1s						
TTA	**Tatalina**	**81.19**	**25**	P	**P**	**22 00 00.7**	**+1.3**
TTA				IAmb	IAmb	22 00 23.5	
	comp=Z,2.3nm,1.3s						
L19K	**White Mountain**	**81.39**	**26**	P	**P**	**22 00 00.4**	**0.0**
L19K				IAmb	IAmb	22 00 04.2	
	comp=Z,1.4nm,1.0s						
ILAR	**Eielson Array**	**85.62**	**24**	P	**P**	**22 00 19.4**	**-2.7**
	comp=Z,0.6nm,0.7s,baz=261,slow=4.9,SNR=7.0 comp=Z,0.6nm,0.7s						
ILAR	**Eielson Array**	**85.62**	**24**	P	**P**	**22 00 20.4**	**-1.6**

*KRNET **30** 22:11:04.1±0.1, 39°.48N×73°.89E, mb2.9*
*SOME **30** 22:11:08.3, 39°.68N×73°.62E, h5^{km}*
ISC 30 22:11:04.6±1.9, 39°.48N±0°.09×74°.08E±0°.08, h10^{km}, n11, σ1^{s}15/22, 2C-8D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.45**	**317**	⇓*i*P	**Pn**	**22 11 28.8**	**-2.1**
	baz=21						
OHH				⇓*i*S	**Sn**	**22 11 47.9**	**-2.1**
	baz=21						
DRK	**Karamyk**	**1.77**	**271**	⇓*e*P	**Pn**	**22 11 34.1**	**-1.4**
	baz=71						
DRK				⇓*i*S	**Sn**	**22 11 56.4**	**-1.8**
	baz=71						
BTK	**Batken**	**2.58**	**284**	⇓*i*P	**Pn**	**22 11 47.0**	**+0.5**
	baz=85						
BTK				⇓*i*S	**Sn**	**22 12 17.9**	**-0.1**
	baz=85						
GAR	**Garm**	**2.96**	**262**	⇑*i*P	**Pn**	**22 11 52.2**	**+0.4**
	baz=61						
GAR				⇑*i*S	**Sn**	**22 12 27.0**	**-0.5**
	baz=61						
TRKS	**Terek-Say**	**3.04**	**313**	⇓*i*P	**Pn**	**22 11 52.9**	**0.0**
	baz=15						
TRKS				⇓*i*S	**Sn**	**22 12 28.5**	**-0.9**
	baz=15						
MRKS	**Merke**	**3.33**	**349**	*e*P	**Pb**	**22 12 04.6**	**+0.8**
	1.9nm,0.1s						
MRKS				*e*S	**Sb**	**22 12 45.3**	**+0.9**
	3.6nm,0.4s						
KST	**Kastek**	**3.84**	**21**	*e*P	**Pg**	**22 12 18.4**	**+0.3**
	0.9nm,0.2s						
KST				*e*S	**Sg**	**22 13 09.1**	**+1.3**
	2.4nm,0.5s						
DGS	**Degeres**	**3.97**	**18**	*e*P	**Pg**	**22 12 20.2**	**-0.5**
	1.9nm,0.6s						
DGS				*e*S	**Sg**	**22 13 11.8**	**-0.3**
	2.1nm,0.7s						
IUG	**Iuzhnay**	**4.07**	**312**	*e*P	**Pb**	**22 12 17.8**	**+1.3**
	40nm,0.3s						
IUG				*e*S	**Sb**	**22 13 07.7**	**+2.0**
	7.2nm,0.4s						
KTBS	**Karatobe**	**4.66**	**24**	*e*P	**Pg**	**22 12 33.4**	**-0.5**
	0.9nm,0.6s						
KTBS				*e*S	**Sg**	**22 13 34.3**	**+0.1**
	3.0nm,0.6s						
BRLS	**Borolday**	**4.78**	**319**	*e*P	**Pb**	**22 12 28.5**	**0.0**
	0.9nm,0.3s						
BRLS				*e*S	**Sb**	**22 13 26.3**	**+0.3**
	2.8nm,0.6s						

*NEIC **30** 22:20:10.6±1.6, 17°.34N±0°.05×147°.5E±0°.2, h54$^{km}_{\pm}$9^{km}, mb4.3/12, Error ellipse: s-maj=22.6km s-min=7.6km az=95.0*
*IDC **30** 22:20:15.3±9.2, 17°.35N×146°.95E, h87$^{km}_{\pm}$65^{km}, mb3.1/3, mbtmp3.5/4, ML4.1/1, Error ellipse: s-maj=114.3km s-min=29.0km az=85.0*
ISC 30 22:20:10.0±1.2, 17°.39N±0°.10×147°.4E±0°.2, h50^{km}, n16, σ1^{s}36/16, mb4.3/7, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.50**	**213**	P	**Pn**	**22 21 16.4**	**+0.7**
	11nm,0.3s,baz=347,slow=19,SNR=2.7						
GUMO				S	**Sn**	**22 22 07.4**	**+0.5**
	40nm,0.7s,baz=146,slow=21,SNR=1.8 20nm,0.3s						
GUMO	**Guam**	**4.50**	**213**		**Pn**	**22 21 16.0**	**+0.2**
JMN	**Monobe**	**20.30**	**326**	P	**P**	**22 24 41.4**	**-0.4**
JMN				IAmb	IAmb	22 24 51.7	
	comp=Z,12nm,0.8s						
MAJO	**Matsushiro**	**20.74**	**339**		**P**	**22 24 49.1**	**+2.6**
MAJO				IAmb	IAmb	22 25 25.5	
	comp=Z,2.5nm,0.6s						
MJB9	**Matsu-Tunnel**	**20.74**	**339**		**P**	**22 24 49.1**	**+2.6**
NACB	**Ninganchiao**	**25.03**	**290**	P	**P**	**22 25 27.0**	**-2.6**
NACB				IAmb	IAmb	22 25 27.9	
	comp=Z,12nm,0.8s						
KNMB	**Chin-men Tao**	**27.96**	**289**	P	**P**	**22 25 55.5**	**-0.5**
WB0	**Warramunga Arr**	**39.08**	**200**	P	**P**	**22 27 32.5**	**0.0**
WB0				IAmb	IAmb	22 27 56.7	
	comp=Z,7.9nm,1.3s						
WR0	**Warramunga Arr**	**39.21**	**199**	P	**P**	**22 27 32.9**	**-0.7**
WR0				IAmb	IAmb	22 27 41.5	
	comp=Z,7.0nm,1.2s						
WB2	**Warramunga Arr**	**39.26**	**200**	P	**P**	**22 27 33.5**	**-0.5**
WRA	**Warramunga Arr**	**39.26**	**200**	P	**P**	**22 27 33.5**	**-0.5**
	comp=Z,0.7nm,0.7s,baz=20,slow=9.7,SNR=9.4 comp=Z,0.7nm,0.7s						
ASAR	**Alice Springs**	**42.89**	**198**	P	**P**	**22 28 04.2**	**+0.4**
	comp=Z,0.2nm,0.4s,baz=12,slow=14,SNR=1.2 comp=Z,0.2nm,0.4s						
SONM	**Songino Array**	**45.17**	**321**	P	**P**	**22 28 21.9**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=105,slow=6.9,SNR=1.9 comp=Z,0.2nm,0.3s						
SONM	**Songino Array**	**45.17**	**321**	IAmb	IAmb	22 28 28.4	
	comp=Z,1.6nm,1.4s						
N18K	**Kilae Creek**	**58.90**	**29**	P	**P**	**22 30 03.7**	**0.0**
SVW2	**Sparrevohn**	**59.19**	**28**	P	**P**	**22 30 04.6**	**-1.2**
SVW2				IAmb	IAmb	22 30 22.1	
	comp=Z,2.6nm,1.1s						

*NEIC **30** 22:25:03.8±0.5, 36°.48N±0°.01×98°.73W±0°.01, h5$^{km}_{\pm}$1^{km}, Error ellipse: s-maj=1.9km s-min=1.2km az=215.0*
*NEIC **30** 22:25:03.7, 36°.45N×98°.70W, h7^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.06; $M_{\theta\theta}$1.93; $M_{\phi\phi}$-1.99; $M_{r\theta}$-0.37; $M_{\theta\phi}$-0.31; $M_{\phi r}$-0.10; Fault plane solution: $M_0$2.02000×10^{14} NP1:ϕ_s320.00000°, δ80.00000°,λ5.00000°. NP2:ϕ_s229.00000°,δ85.00000°, λ170.00000°. Principal axes: T 2.0230, Plg11.0000°, Azm184.0000°; N -0.0001, Plg79.0000°, Azm23.0000°; P -2.0229, Plg4.0000°, Azm275.0000°;*
*TUL **30** 22:25:03.7±0.5, 36°.48N±0°.02×98°.74W±0°.01, h8$^{km}_{\pm}$1^{km}, ML4.1, mb_Lg3.8/107(NEIC), Mwr3.5/12(SLM) Error ellipse: s-maj=2.2km s-min=1.1km az=162.0*
*IDC **30** 22:25:03.7±1.7, 36°.58N×99°.01W, h0^{km}, mbtmp3.5/3, ML3.5/3, Error ellipse: s-maj=28.9km s-min=11.4km az=99.0*
*ANF **30** 22:25:04.3±0.2, 36°.45N×98°.71W, h8^{km}, ML4.6/17, Error ellipse: s-maj=2.8km s-min=2.2km az=54.0*
ISC 30 22:25:04.8±1.1, 36°.47N±0°.04×98°.69W±0°.04, h10^{km}, n82, σ0^{s}92/42, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKCFA	**Oklahoma City**	**1.46**	**136**		**Pn**	**22 25 30.7**	**-0.4**
OKCFA	**Oklahoma City**	**1.46**	**136**	P	**Pn**	**22 25 30.9**	**-0.3**
	baz=316,SNR=15						
OKCFA				S	**Sb**	**22 25 50.9**	**+0.3**
	baz=316						
OK005	**Luther M Schoo**	**1.46**	**123**		**Pn**	**22 25 30.6**	**-0.6**
OKCSW	**OKLAHOMA CITY**	**1.47**	**136**		**Pn**	**22 25 30.8**	**-0.6**
FNO	**Franklin**	**1.60**	**139**		**Pn**	**22 25 33.2**	**0.0**
WMOK	**Wichita Mounta**	**1.73**	**182**	Pn	**Pn**	**22 25 33.9**	**-1.0**
WMOK	**Wichita Mounta**	**1.73**	**182**	P	**Pn**	**22 25 34.1**	**-0.8**
	baz=1.8,SNR=464						
T35A	**Sooner Cattle**	**1.81**	**75**	Pn	**Pn**	**22 25 35.8**	**-0.2**
T35A				IAmb_Lg		22 26 05.2	
	comp=Z,316nm,0.8s						
T35B	**Sooner Cattle**	**1.81**	**75**	P	**Pn**	**22 25 36.0**	**0.0**
	baz=256,SNR=279						
T35B				S	**Sb**	**22 26 01.3**	**+0.6**
	baz=256						
R32A	**Long Quarter,**	**1.95**	**360**	Pn	**Pn**	**22 25 38.3**	**+0.2**
R32A				IAmb_Lg		22 26 08.4	
	comp=Z,346nm,0.8s						
R32A	**Long Quarter,**	**1.95**	**360**	P	**Pn**	**22 25 38.2**	**+0.2**
	baz=180,SNR=123						
R32A				S	**Sb**	**22 26 04.8**	**0.0**
	baz=180						
X34A	**Smith Ranch, M**	**1.99**	**159**	Pn	**Pn**	**22 25 39.5**	**+0.9**
X34A				IAmb_Lg		22 26 07.3	
	comp=Z,318nm,0.8s						
TUL1	**Leonard**	**2.41**	**103**	Pn	**Pn**	**22 25 44.2**	**-0.1**
TUL1				IAmb_Lg		22 26 19.7	
	comp=Z,317nm,0.8s						
TUL1	**Leonard**	**2.41**	**103**	P	**Pn**	**22 25 44.5**	**+0.2**
	baz=284,SNR=59						

Z38A	**Mt. Pleasant**	**4.42**	**135**	IAmb_Lg			22 27 25.9		
	comp=Z,277nm,0.8s								
S39A	**Bolivar**	**4.46**	**73**	Pn	**Pn**	**22 26 12.1**	**-0.4**		
S39A				IAmb_Lg		22 27 27.1			
	comp=Z,222nm,0.7s								
S39A	**Bolivar**	**4.46**	**73**	P	**Pn**	**22 26 12.2**	**-0.4**		
	baz=256,SNR=28								
WHTX	**Lake Whitney,**	**4.58**	**167**	Pn	**Pn**	**22 26 13.6**	**-0.6**		
MIAR	**Mount Ida**	**4.59**	**113**	IAmb_Lg		22 27 41.3			
	comp=Z,148nm,0.7s								
MIAR	**Mount Ida**	**4.59**	**113**	P	**Pn**	**22 26 14.4**	**+0.1**		
	baz=296,SNR=17								
T25A	**Trinidad**	**4.64**	**280**	Pn	**Pn**	**22 26 14.2**	**-0.9**		
T25A				IAmb_Lg		22 27 29.5			
	comp=Z,206nm,1.1s								
BGNE	**Belgrade**	**4.95**	**5**	Pn	**Pn**	**22 26 18.5**	**-0.8**		
BGNE				IAmb_Lg		22 27 50.5			
	comp=Z,199nm,0.7s								
BGNE	**Belgrade**	**4.95**	**5**	P	**Pn**	**22 26 18.8**	**-0.4**		
	baz=185,SNR=10								
237A	**Washetta, Mont**	**5.05**	**151**	IAmb_Lg		22 27 54.8			
	comp=Z,182nm,0.9s								
P38A	**Dawn**	**5.15**	**51**	IAmb_Lg		22 27 57.7			
	comp=Z,161nm,0.8s								
P38A	**Dawn**	**5.15**	**51**	P	**Pn**	**22 26 21.6**	**-0.3**		
	baz=234,SNR=14								
OGNE	**Ogallala**	**5.18**	**331**	IAmb_Lg		22 27 58.7			
	comp=Z,197nm,0.8s								
MGMO	**Mountain Grove**	**5.20**	**81**	IAmb_Lg		22 27 51.3			
	comp=Z,146nm,0.8s								
FCAR	**Ozark Folk Cen**	**5.34**	**94**	IAmb_Lg		22 28 02.1			
	comp=Z,151nm,0.9s								
WLAR	**White Oak Lake**	**5.35**	**120**	IAmb_Lg		22 28 08.2			
	comp=Z,144nm,0.9s								
W41B	**Gary Mavity, V**	**5.39**	**102**	IAmb_Lg		22 27 57.5			
	comp=Z,117nm,0.8s								
R40A	**Maddies Statio**	**5.43**	**69**	IAmb_Lg		22 27 59.9			
	comp=Z,235nm,0.8s								
UALR	**University of**	**5.44**	**106**	IAmb_Lg		22 28 11.0			
	comp=Z,138nm,1.0s								
Q24A	**Divide**	**5.69**	**298**	IAmb_Lg		22 28 05.0			
	comp=Z,108nm,0.7s								
NATX	**Nacogdoches**	**5.76**	**143**	IAmb_Lg		22 28 23.8			
	comp=Z,124nm,0.8s								
L34A	**Svendsen Farm,**	**5.78**	**17**	P	**Pn**	**22 26 29.8**	**-0.7**		
	baz=199,SNR=17								
Z41A	**Richland Creek**	**5.80**	**122**	IAmb_Lg		22 28 12.1			
	comp=Z,112nm,0.9s								
JCT	**Junction City**	**6.04**	**189**	IAmb_Lg		22 28 30.1			
	comp=Z,126nm,1.0s								
CCM	**Cathedral Cave**	**6.15**	**73**	IAmb_Lg		22 28 21.8			
	comp=Z,204nm,0.8s								
CCAR	**Cane Creek**	**6.21**	**112**	IAmb_Lg		22 28 33.6			
	comp=Z,125nm,1.0s								
ISCO	**Idaho Springs**	**6.39**	**303**	IAmb_Lg		22 28 39.0			
	comp=Z,83nm,0.7s								
PBMO	**Poplar Bluff**	**6.65**	**85**	IAmb_Lg		22 28 37.4			
	comp=Z,180nm,0.8s								
FVM	**French Village**	**6.76**	**75**	IAmb_Lg		22 28 43.2			
	comp=Z,157nm,0.7s								
143A	**Socs Landing,**	**7.09**	**120**	IAmb_Lg		22 29 02.4			
	comp=Z,112nm,1.1s								
PHWY	**Pilot Hill**	**7.15**	**314**	IAmb_Lg		22 28 49.3			
	comp=Z,98nm,0.8s								
MNTX	**Cornudas Mount**	**7.31**	**231**	IAmb_Lg		22 29 03.8			
	comp=Z,66nm,0.9s								
HALT	**Halls**	**7.58**	**91**	IAmb_Lg		22 29 25.8			
	comp=Z,111nm,0.7s								
735A	**Kenedy**	**7.63**	**174**	IAmb_Lg		22 29 26.3			
	comp=Z,56nm,0.9s								
SIUC	**Southern Illin**	**7.67**	**78**	IAmb_Lg		22 29 10.4			
	comp=Z,148nm,0.8s								
OXF	**Oxford**	**7.82**	**102**	IAmb_Lg		22 29 14.8			
	comp=Z,66nm,0.9s								
W45A	**Hickory Valley**	**7.83**	**97**	IAmb_Lg		22 29 16.9			
	comp=Z,121nm,0.8s								
UTMT	**University of**	**7.92**	**88**	IAmb_Lg		22 29 21.4			
	comp=Z,113nm,0.9s								
Y45A	**Yeager Farm, C**	**7.93**	**106**	IAmb_Lg		22 29 38.9			
	comp=Z,94nm,0.8s								
SUSD	**Miller**	**7.97**	**359**	IAmb_Lg		22 29 18.3			
	comp=Z,81nm,0.8s								
TXAR	**Lajitas Array**	**8.25**	**212**	Pn	**Pn**	**22 27 02.7**	**-2.0**		
	comp=Z,0.7nm,0.3s,baz=41,slow=11,SNR=22								
TXAR				Lg	Lg	22 29 19.2			
	comp=Z,2.4nm,0.3s,baz=35,slow=29,SNR=4.5								
	comp=Z,1.4nm,0.4s								
RWWY	**Rawlins**	**8.43**	**311**	IAmb_Lg		22 29 42.2			
	comp=Z,130nm,1.3s								
I37A	**Lemond, Waseca**	**8.55**	**27**	IAmb_Lg		22 29 56.2			
	comp=Z,96nm,1.0s								
K22A	**Casper**	**8.64**	**318**	IAmb_Lg		22 29 43.0			
	comp=Z,98nm,0.9s								
RSSD	**Black Hills**	**8.66**	**334**	IAmb_Lg		22 29 44.1			
	comp=Z,82nm,0.9s								
JFWS	**Jewell Farm**	**9.15**	**43**	IAmb_Lg		22 30 19.0			
	comp=Z,106nm,0.8s								
F33A	**5 Mile Ranch,**	**9.53**	**10**	IAmb_Lg		22 30 06.8			
	comp=Z,50nm,0.9s								
I40A	**Norwalk**	**9.64**	**37**	IAmb_Lg		22 30 12.3			
	comp=Z,84nm,1.0s								
SPMN	**Marine on St.**	**9.81**	**25**	IAmb_Lg		22 30 17.5			
	comp=Z,48nm,1.0s								
PDAR	**Pinedale Array**	**10.47**	**310**	Pn	**Pn**	**22 27 33.0**	**-2.2**		
	comp=Z,0.1nm,0.3s,baz=122,slow=13,SNR=4.5								
PDAR				Lg	Lg	22 30 22.2			
	comp=Z,0.7nm,0.3s,baz=120,slow=32,SNR=1.8								
	comp=Z,0.3nm,0.4s								
ULM	**Lac du Bonnet**	**13.93**	**8**	Pn	Pn	22 28 16.4	-5.7		
	comp=Z,0.4nm,0.3s,baz=187,slow=16,SNR=2.2								
ULM				Sn	Sn	22 30 43.0	-14		
	comp=Z,0.8nm,0.3s,baz=269,slow=21,SNR=3.3								
ULM				Lg	Lg	22 32 12.6			
	comp=Z,0.3nm,0.3s,baz=99,slow=16,SNR=1.9								
	comp=Z,1.3nm,0.4s								

IDC 30 22:36:36.4±1.7, 7°21N×135°11E, h0km, mb3.6/3, mbtmp3.6/3, Error ellipse: s-maj=50.4km s-min=20.6km az=42.0, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I39PW	**PALAU INFRASON**	**0.65**	**300**	Pn	Pn	22 36 53.6	+0.7
	baz=251,slow=41						
I39PW				Sn	Sn	22 37 03.7	-0.1
	baz=136,slow=98						
WRA	**Warramunga Arr**	**27.00**	**182**	P	P	22 42 20.1	-0.2
	0.4nm,0.8s,baz=359,slow=8.8,SNR=2.3						
	0.4nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**32.70**	**67**	T	T	23 18 52.0	
	baz=253,slow=74						
H11S2	**WAKE ISLAND Hy**	**32.71**	**67**	T	T	23 18 53.1	
	baz=253,slow=74						
H11S1	**WAKE ISLAND Hy**	**32.72**	**67**	T	T	23 18 52.4	
	baz=253						
MKAR	**Makanchi Array**	**59.83**	**321**	P	P	22 46 43.5	-0.3
	0.5nm,0.7s,baz=110,slow=8.2,SNR=6.4						
	0.5nm,0.7s						
ARCES	**ARCESS Array B**	**90.02**	**341**	P	P	22 49 37.5	-0.2
	0.3nm,0.5s,baz=81,slow=7.8,SNR=4.0						
	0.3nm,0.5s						

*NEIC **30** 22:51:19.7±1.6, 16°72N±0°.09×146°.33E±0°.08, h74km±6km, mb4.4/31, Error ellipse: s-maj=12.7km s-min=10.5km az=170.0*

*IDC **30** 22:51:21.5±3.7, 16°.79N×146°.09E, h96km±35km, mb3.3/10, mbtmp3.7/11, MS2.2/1, Error ellipse: s-maj=34.2km s-min=19.8km az=100.0*

ISC 30 22:51:21.4±0.5, 16°.64N±0°.07×146°.3E±0°.1, h100km, n57, σ0°.91/52, mb4.2/27, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.33**	**205**	P	**Pn**	**22 52 13.2**	**+1.5**
	37nm,0.3s,baz=30,slow=5.5,SNR=3.3						
GUMO				S	**Sn**	**22 52 49.7**	**-0.8**
	72nm,0.3s,baz=340,slow=17,SNR=7.5						
GUMO				LR	LR	22 53 24.2	
	comp=Z,41nm,22.0s,baz=62,slow=36						
GUMO	**Guam**	**3.33**	**205**		**Pn**	**22 52 11.7**	**0.0**
GUMO				Sn	**Sn**	**22 52 49.5**	**-1.1**
PATS	**Pohnpei**	**15.26**	**128**	Pn	Pn	**22 54 48.8**	**-2.7**
H11S3	**WAKE ISLAND Hy**	**19.52**	**82**	T	T	23 16 26.9	
	baz=266,slow=75,SNR=7.9						
H11S1	**WAKE ISLAND Hy**	**19.53**	**82**	T	T	23 16 17.9	
	baz=266,slow=75,SNR=9.8						
H11S2	**WAKE ISLAND Hy**	**19.54**	**82**	T	T	23 16 31.6	
	baz=266,slow=75,SNR=14						
H11N1	**WAKE ISLAND Hy**	**19.79**	**78**	T	T	23 16 50.3	
	baz=264,slow=75,SNR=26						
H11N2	**WAKE ISLAND Hy**	**19.80**	**78**	T	T	23 16 51.1	
	baz=264,slow=75,SNR=29						
H11N3	**WAKE ISLAND Hy**	**19.81**	**78**	T	T	23 16 51.7	
	baz=264,slow=75,SNR=34						
PETK	**Petropavlovsk-**	**37.48**	**11**	P	**P**	**22 58 25.3**	**+0.1**
	1.1nm,0.6s,baz=202,slow=6.2,SNR=1.5						
	1.1nm,0.6s						
WB0	**Warramunga Arr**	**38.03**	**198**	P	**P**	**22 58 29.3**	**-0.8**
WB0				IAmb	IAmb	22 58 45.4	
	comp=Z,12nm,1.4s						
WR0	**Warramunga Arr**	**38.16**	**198**	P	**P**	**22 58 31.1**	**-0.3**
WR0				IAmb	IAmb	22 58 37.1	
	comp=Z,8.3nm,1.2s						
WB2	**Warramunga Arr**	**38.20**	**198**	P	**P**	**22 58 32.1**	**+0.4**
WRA	**Warramunga Arr**	**38.21**	**198**	P	**P**	**22 58 31.9**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=23,slow=8.9,SNR=5.9						
	comp=Z,0.3nm,0.5s						
WRA	**Warramunga Arr**	**38.21**	**198**	IAmb	IAmb	22 58 40.7	
	comp=Z,0.3nm,1.4s						
SLVN	**Son La**	**40.28**	**283**	P	**P**	**22 58 49.0**	**-0.1**
ASAR	**Alice Springs**	**41.85**	**197**	P	**P**	**22 59 02.3**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=29,slow=6.8,SNR=2.1						
	comp=Z,0.2nm,0.5s						
SMY	**Shemya**	**42.13**	**25**	P	**P**	**22 59 03.8**	**+0.2**
SONM	**Songino Array**	**45.11**	**322**	P	**P**	**22 59 26.6**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=104,slow=6.1,SNR=2.6						
	comp=Z,0.2nm,0.3s						
XMIS	**Christmas Isla**	**48.41**	**239**	P	**P**	**22 59 54.6**	**+0.8**
GSI	**Gunungsitoli**	**50.31**	**258**	P	**P**	**23 00 08.5**	**+0.1**
MKAR	**Makanchi Array**	**60.31**	**315**	P	**P**	**23 01 19.1**	**-0.6**
	comp=Z,0.1nm,0.5s,baz=83,slow=6.0,SNR=1.8						
	comp=Z,0.1nm,0.5s						
SVW2	**Sparrevohn**	**60.34**	**28**	P	**P**	**23 01 20.3**	**+0.6**
SVW2				IAmb	IAmb	23 01 30.4	
	comp=Z,5.4nm,1.4s						
N19K	**Bonanza Creek**	**60.75**	**29**	P	**P**	**23 01 22.2**	**-0.3**
N19K				IAmb	IAmb	23 01 24.5	
	comp=Z,3.1nm,0.8s						
CAST	**Castle Rocks**	**62.66**	**26**	P	**P**	**23 01 36.1**	**+0.8**
CAST				IAmb	IAmb	23 01 59.1	
	comp=Z,3.1nm,0.7s						
IMAR	**Indian Mountai**	**62.86**	**23**	P	**P**	**23 01 36.0**	**-0.5**
KTH	**Kantishna Hill**	**63.20**	**26**	P	**P**	**23 01 39.6**	**+0.7**
KTH				IAmb	IAmb	23 01 55.6	
	comp=Z,3.9nm,1.2s						
I21K	**Tanana**	**63.27**	**25**	P	**P**	**23 01 40.5**	**+1.3**
I21K				IAmb	IAmb	23 01 52.0	
	comp=Z,5.3nm,1.4s						
BPAW	**Bear Paw Mtn.**	**63.34**	**26**	P	**P**	**23 01 40.1**	**+0.4**
BPAW				IAmb	IAmb	23 01 41.7	
	comp=Z,4.0nm,1.1s						
DHY	**Denali Highway**	**64.62**	**27**	P	**P**	**23 01 48.0**	**-0.2**
WRH	**Wood River Hil**	**64.66**	**26**	P	**P**	**23 01 48.4**	**+0.1**
IL31		**65.23**	**26**	P	**P**	**23 01 50.4**	**-1.6**
ILAR	**Eielson Array**	**65.23**	**26**	P	**P**	**23 01 50.7**	**-1.3**
	comp=Z,1.0nm,0.9s,baz=250,slow=5.3,SNR=7.1						
	comp=Z,1.0nm,0.9s						
ILAR	**Eielson Array**	**65.23**	**26**	P	**P**	**23 01 51.7**	**-0.3**
ODZ	**Otahua Downs**	**65.26**	**161**	P	**P**	**23 01 53.9**	**+1.5**
MENT	**Mentasta**	**66.22**	**28**	P	**P**	**23 01 58.7**	**+0.2**
MENT				IAmb	IAmb	23 02 06.4	
	comp=Z,1.9nm,0.6s						
TABL	**Table Mountain**	**67.07**	**31**	P	**P**	**23 02 04.5**	**+0.4**
TABL				IAmb	IAmb	23 02 07.4	
	comp=Z,6.0nm,1.0s						
L27K	**Beaver Creek,**	**67.09**	**28**	P	**P**	**23 02 04.9**	**+0.9**
BCAR	**Beaver Creek A**	**67.11**	**28**	P	**P**	**23 02 04.2**	**+0.1**
ARU	**Arti**	**75.08**	**325**	P	**P**	**23 02 51.2**	**-1.1**
ABKAR	**Akbulak array**	**75.24**	**317**	P	**P**	**23 02 53.6**	**+0.3**
YKA	**Yellowknife Ar**	**79.53**	**28**	P	**P**	**23 03 16.8**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=293,slow=5.9,SNR=5.5						
	comp=Z,0.8nm,0.7s						
LTY	**Liberty**	**79.98**	**44**	P	**P**	**23 03 20.4**	**+0.5**
LTY				IAmb	IAmb	23 03 46.5	
	comp=Z,3.3nm,0.6s						
B08A	**Colville Reser**	**80.59**	**42**	P	**P**	**23 03 24.0**	**+0.9**
B08A				IAmb	IAmb	23 03 25.0	
	comp=Z,3.3nm,0.7s						
PINE	**Pine Mountain**	**80.62**	**47**	P	**P**	**23 03 24.7**	**+1.1**
MOD	**Modoc Plateau**	**81.54**	**49**	P	**P**	**23 03 29.2**	**+0.8**
MOD				IAmb	IAmb	23 03 31.3	
	comp=Z,5.4nm,1.2s						
E09A	**Wood Farm, Sta**	**81.85**	**44**	P	**P**	**23 03 30.6**	**+0.9**
E09A				IAmb	IAmb	23 03 36.6	
	comp=Z,3.2nm,0.9s						
NEW	**Newport**	**82.04**	**42**	P	**P**	**23 03 30.1**	**-0.7**
J08A	**Circle Bar Ran**	**82.47**	**47**	P	**P**	**23 03 33.9**	**+0.8**
J08A				IAmb	IAmb	23 03 55.2	
	comp=Z,3.0nm,0.6s						
PNTR	**Pine Nut**	**82.79**	**51**	P	**P**	**23 03 33.7**	**-1.3**
PNTR				IAmb	IAmb	23 03 35.6	
	comp=Z,6.3nm,0.9s						
YERR	**Yerington**	**83.09**	**52**	P	**P**	**23 03 36.8**	**+0.2**
YERR				IAmb	IAmb	23 03 39.5	
	comp=Z,2.5nm,0.8s						
NVAR	**Mina Array Bea**	**83.95**	**52**	P	**P**	**23 03 42.0**	**+1.0**
	comp=Z,1.4nm,0.8s,baz=263,slow=6.3,SNR=8.4						
	comp=Z,1.4nm,0.8s						
NVAR	**Mina Array Bea**	**83.95**	**52**	P	**P**	**23 03 41.4**	**+0.4**
ELK	**Elko**	**85.53**	**49**	P	**P**	**23 03 51.0**	**+2.0**
	comp=Z,0.7nm,0.6s,baz=276,slow=10,SNR=3.9						
	comp=Z,0.7nm,0.6s						
PDAR	**Pinedale Array**	**88.85**	**46**	P	**P**	**23 04 05.5**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=280,slow=1.6,SNR=2.2						
	comp=Z,0.2nm,0.5s						
LPAZ	**La Paz**	**146.99**	**94**	PKPbc	**PKiKP**	**23 10 56.7**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=198,slow=3.2,SNR=5.0						
MDP	**Montagnes des**	**151.40**	**43**	PKPbc	**PKPbc**	**23 11 04.8**	**+0.1**
	comp=Z,5.6nm,0.9s,baz=3.2,slow=3.9,SNR=1.7						

*IDC **30** 22:55:42.4±2.5, 25°.62S×68°.78W, h0km, mb3.8/1, mbtmp3.7/3, ML3.7/2, Error ellipse: s-maj=81.6km s-min=50.7km az=94.0*

*GUC **30** 22:55:56.2±1.0, 25°.00S±0°.05×69°.07W±0°.09, h106km±4km, ML3.8*

ISC 30 22:55:56.2±1.0, 25°.00S±0°.05×69°.07W±0°.09, h108km±9km, n19, σ0°76/24, 1C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO02	**Mina Guanaco**	**0.50**	**251**	⇓*iP*	**Pn**	**22 56 12.6**	**-0.6**
GO02				*i* S	**Sn**	**22 56 25.5**	**-0.4**
GO02				IAML		22 56 26.7	
	comp=N,4μm,0.1s						
PB14	**IPOC Station P**	**1.27**	**287**	⇑*iP*	**Pn**	**22 56 20.7**	**+0.2**
PB14				*i* S	**Sn**	**22 56 39.8**	**+1.0**
AC01	**Pan de Azucar**	**1.79**	**230**	*eP*	**Pn**	**22 56 26.3**	**-0.1**
AC01				IAML		22 56 56.9	
	comp=N,660nm,0.2s						
PB15	**IPOC Station P**	**1.82**	**348**	*eP*	**Pn**	**22 56 27.4**	**+0.2**
PB15				*i* S	**Sn**	**22 56 51.7**	**+1.1**
AC02	**Maricunga**	**1.82**	**182**	⇓*iP*	**Pn**	**22 56 27.2**	**-0.3**
AC02				*i* S	**Sn**	**22 56 51.8**	**+0.7**
PB10	**IPOC Station P**	**2.01**	**317**	*eP*	**Pn**	**22 56 30.0**	**+0.8**
PB10				IAML		22 57 04.6	
	comp=N,660nm,0.3s						
AF01	**San Pedro de A**	**2.20**	**22**	*eP*	**Pn**	**22 56 32.5**	**+0.5**
AF01				*i* S	**Sn**	**22 57 00.3**	**+0.9**
AF01				IAML		22 57 02.9	
	comp=E,857nm,0.2s						
PB06	**IPOC Station P**	**2.33**	**349**	*i* S	**Sn**	**22 57 02.0**	**-0.2**
PB06				IAML		22 57 10.4	
	comp=N,373nm,0.1s						
LVC	**Limon Verde**	**2.39**	**4**	*eP*	**Pn**	**22 56 34.4**	**-0.1**
LVC				*i* S	**Sn**	**22 57 03.5**	**-0.3**
GO03	**Copiap**	**2.78**	**202**	*eP*	**Pn**	**22 56 38.5**	**-0.9**
GO03				IAML		22 57 20.4	
	comp=E,236nm,0.2s						
PB04	**IPOC Station P**	**2.83**	**339**	*eP*	**Pn**	**22 56 39.7**	**-0.5**
PB04				IAML		22 57 28.7	
	comp=E,320nm,0.4s						
PB09	**IPOC Station P**	**3.20**	**357**	*eP*	**Pn**	**22 56 45.3**	**+0.3**
PB07	**IPOC Station P**	**3.35**	**347**	*eP*	**Pn**	**22 56 46.1**	**-0.9**
PB07				IAML		22 57 42.4	
	comp=E,182nm,0.2s						
PB02	**IPOC Station P**	**3.74**	**348**	*eP*	**Pn**	**22 56 51.1**	**-1.1**
LPAZ	**La Paz**	**8.72**	**6**	Pn	**Pn**	**22 57 58.5**	**-1.5**
	comp=E,0.3nm,0.3s,baz=197,slow=5.3,SNR=9.4						
	comp=E,0.7nm,0.3s						
SIV	**San Ignacio**	**11.68**	**41**	Pn	Pn	22 58 34.5	-5.2
	comp=E,0.1nm,0.3s,baz=222,slow=14,SNR=11						
SIV				Sn	Sn	23 00 38.6	-10
	baz=295,slow=21,SNR=1.8						
	comp=E,1.2nm,0.4s						
TORD	**Torodi Ar. Bea**	**78.69**	**70**	P	**P**	**23 07 46.9**	**-0.2**
	comp=E,0.5nm,0.5s,baz=254,slow=4.6,SNR=7.8						
	comp=E,0.5nm,0.5s						
ZALV	**Zalesovo Beam**	**145.15**	**27**	PKPbc	**PKPdf**	**23 15 21.5**	**+0.8**
	comp=E,0.3nm,0.4s,baz=339,slow=3.6,SNR=4.3						
MKAR	**Makanchi Array**	**148.49**	**39**	PKPbc	**PKiKP**	**23 15 31.2**	**-0.5**
	comp=E,0.7nm,0.7s,baz=315,slow=1.7,SNR=7.2						

IDC 30 22:56:46.0±7.5, 18°.56S×176°.70W, h0km, mb3.7/2, mbtmp3.7/2, MS3.3/1, Error ellipse: s-maj=301.2km s-min=120.3km az=152.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**34.95**	**261**	LR	LR	23 18 27.5	
	comp=Z,45nm,18.0s,baz=230,slow=37						
WRA	**Warramunga Arr**	**46.11**	**260**	P	P	23 05 12.6	+0.2
	0.3nm,0.3s,baz=96,slow=7.5,SNR=13						
	0.3nm,0.3s						
ASAR	**Alice Springs**	**46.18**	**255**	P	P	23 05 12.6	-0.4
	0.6nm,0.5s,baz=92,slow=8.0,SNR=12						
	0.6nm,0.5s						
AKASG	**Malin Array Be**	**141.88**	**333**	PKP	PKPdf	23 16 18.9	-0.8
	0.3nm,0.4s,baz=44,slow=3.7,SNR=4.3						

*IDC **30** 23:04:57.0±0.5, 36°.83N×137°.90E, h0km, mb4.1/17, mbtmp4.0/20, ML3.5/2, MS3.7/56, Error ellipse: s-maj=16.7km s-min=5.8km az=51.0*

*JMA **30** 23:04:56.8±0.1, 36°.8N±0°.2×137°.9E±0°.3, h0km, MD4.6/20, MW4.5/20, SW NIIGATA PREF*

JMA Felt III J1 at SW NIIGATA PREF .

*NIED **30** 23:04:56.8, 36°.82N×137°.85E, h0km, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr-0.88; Mθθ5.10; Mφφ-4.22; Mrθ-4.72; Mθφ-1.69; Mφr0.57; Fault plane solution: M06.26000×10^15 NP1: φs331.00000°, δ63.00000°, λ14.00000°. NP2: φs234.00000°, δ78.00000°, λ152.00000°.*

*MOS **30** 23:04:57.8±1.1, 36°.72N×137°.91E, h17km, mb4.6/18 Error ellipse: s-maj=8.3km s-min=5.1km az=100.4*

*NEIC **30** 23:04:59.2±1.1, 36°.76N±0°.03×137°.92E±0°.04, h10km±4km, mb4.5/147, Error ellipse: s-maj=4.8km s-min=3.8km az=78.0*

ISC 30 23:04:59.9±0.3, 36°.77N±0°.03×137°.92E±0°.02, h18km, n381, σ1°75/323, mb4.5/114, MS3.8/58, 10C-7D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJB9	**Matsu-Tunnel**	**0.32**	**133**		**Pg**	**23 05 04.7**	**-2.1**
MJB9				Sg	**Sg**	**23 05 09.8**	**-1.7**
MAJO	**Matsushiro**	**0.32**	**133**		**Pg**	**23 05 04.7**	**-2.2**
MAJO				Sg	**Sg**	**23 05 10.1**	**-1.5**
MAJO	**Matsushiro**	**0.32**	**133**	P	**Pg**	**23 05 04.7**	**-2.2**
MAJO						23 05 10.1	
MAT	**Matsushiro**	**0.32**	**133**	*i* P	**Pg**	**23 05 04.7**	**-2.2**
MAT				S	**Sb**	**23 05 10.4**	**-1.6**
MJAR	**Matsushiro Arr**	**0.33**	**133**	Pg	**Pg**	**23 05 05.1**	**-1.8**
	75nm,0.3s,baz=311,slow=18,SNR=728						
MJAR				Lg	Lg	23 05 10.4	
	294nm,0.3s,baz=309,slow=30,SNR=62						
MJAR	**Matsushiro Arr**	**0.33**	**133**		**Pg**	**23 05 03.0**	**-3.9**
JNG	**Nsakai**	**0.39**	**157**	*i* P	**Pg**	**23 05 06.0**	**-2.1**
JNG				S	**Sb**	**23 05 12.6**	**-1.5**
JNG	**Nsakai**	**0.39**	**157**	A	A	23 05 06.0	
	comp=E,62nm,4.5s,comp=E,34nm,2.5s						
JJN	**Nakama**	**0.39**	**30**	A	A	23 05 04.7	
	comp=E,343nm,0.6s,comp=E,387nm,0.3s						
JTT	**Ttatey**	**0.49**	**251**	*i* P	**Pg**	**23 05 06.5**	**-3.4**
JTT				S	**Sg**	**23 05 13.0**	**-3.6**
JTT	**Ttatey**	**0.49**	**251**	A	A	23 05 06.5	
	comp=E,77nm,3.8s,comp=E,166nm,3.3s						
JGK	**Kuni**	**0.62**	**109**	*i* P	**Pb**	**23 05 10.2**	**-2.0**
JGK				*e*S	**Sg**	**23 05 19.9**	**-0.6**
JGK	**Kuni**	**0.62**	**109**	A	A	23 05 10.2	
	comp=E,35nm,2.5s,comp=E,48nm,3.2s						
JGN	**Niukaw**	**0.73**	**222**	*i* P	**Pb**	**23 05 10.9**	**-3.2**
JGN				*e*S	**Sg**	**23 05 20.6**	**-3.3**
JGN	**Niukaw**	**0.73**	**222**	A	A	23 05 10.9	
	comp=E,22nm,3.3s,comp=E,39nm,3.6s						
JSZ	**Suzu**	**0.81**	**327**	*i* P	Pb	23 05 11.3	-4.2
JSZ				S	**Sb**	**23 05 22.0**	**-4.1**
JSZ	**Suzu**	**0.81**	**327**	A	A	23 05 11.3	
	comp=E,24nm,4.5s,comp=E,17nm,2.5s						
JNT	**Takato**	**0.91**	**169**	A	A	23 05 15.8	
	comp=E,19nm,5.1s,comp=E,15nm,4.4s						
JJH	**Hakui**	**0.92**	**280**	A	A	23 05 13.8	
	comp=E,

comp=E,8.0nm,2.4s,comp=E,9.0nm,1.9s
JYA Atsumi 2.32 37 A A 23 05 37.0
comp=E,8.0nm,0.9s,comp=E,5.0nm,0.4s
JMM Marumori 2.54 64 Pn **Pn** **23 05 39.4 -0.8**
JNIO Niijimaoohara 2.65 155 A A 23 05 42.9
comp=E,19nm,3.1s,comp=E,15nm,2.9s
JHJ2 Mitsune 3.96 156 **Pn** **23 05 58.8 -1.1**
JHS Saijyo 4.28 247 Pn **Pn** **23 06 04.2 +0.1**
JTM Tenmabayashi 4.71 31 Pn **Pn** **23 06 09.5 -0.5**
ERM Erimo 6.63 36 Pn **Pn** **23 06 37.3 +0.9**
ERM Erimo 6.63 36 P **Pn** **23 06 37.3 +0.9**
JEW Eniwo 6.65 23 **Pn** **23 06 38.5 +1.8**
JNU Nakatsue 6.83 240 Pn **Pn** **23 06 39.9 +0.7**
0.8nm,0.3s,baz=38,slow=12,SNR=5.0
32nm,1.2s
JNU Nakatsue 6.83 240 Pn **Pn** **23 06 40.6 +1.4**
KSRS Korea Array 8.01 278 Pn **Pn** **23 06 55.1 -0.3**
1.0nm,0.3s,baz=92,slow=14,SNR=6.8
KSRS LR LR 23 09 42.6
comp=Z,704nm,21.2s,baz=90,slow=36
1.9nm,0.3s
ASAJ Asahikawa 8.16 24 LR LR 23 10 18.4
comp=Z,620nm,19.5s,baz=204,slow=40
ASAJ Asahikawa 8.16 24 P **Pn** **23 06 58.4 +0.9**
JKA Kamikawa-asahi 8.16 24 **Pn** **23 06 58.4 +0.9**
USA0B Ussuriysk Arra 8.69 331 Pn **Pn** **23 07 05.2 +0.5**
USA0B Ussuriysk Arra 8.69 331⇓ *e*P **Pn** **23 07 07.3 +2.6**
USRK Ussuriysk Ar. 8.69 331 Pn **Pn** **23 07 04.1 -0.6**
1.2nm,0.5s,baz=137,slow=14,SNR=3.3
USRK LR LR 23 10 05.3
comp=Z,280nm,20.4s,baz=238,slow=36
USRK Ussuriysk Ar. 8.69 331 **Pn** **23 07 06.0 +1.4**
USRK Ussuriysk Ar. 8.69 331 P **Pn** **23 07 06.0 +1.4**
JCJ Chichijima 10.30 158 LR LR 23 11 02.6
comp=Z,276nm,20.5s,baz=94,slow=35
YSS Yuzh-Sakhalins 10.80 18 Pn **Pn** **23 07 33.5 0.0**
YSS Yuzh-Sakhalins 10.80 18 *e*P **Pn** **23 07 34.2 +0.7**
YSS pmax pmax
comp=Z,20nm,1.0s
YSS MLR MLR
comp=E,600nm,15.0s
YSS MLR MLR
comp=Z,800nm,15.0s
CN2 Changchun 11.83 310 *e*P **Pn** **23 07 51.3 +3.7**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
CN2 LR LR
comp=N,1μm,13.0s
CN2 LR LR
comp=E,500nm,13.0s
CN2 LR LR
comp=Z,200nm,13.0s
KLR Kul'dur 13.24 342 Pn **Pn** **23 08 08.9 +1.9**
comp=Z,0.2nm,0.3s,baz=150,slow=11,SNR=25
KLR LR LR 23 12 52.9
comp=Z,448nm,19.6s,baz=156,slow=36
KLR Kul'dur 13.24 342 *d i*P **Pn** **23 08 10.2 +3.2**
KLR pmax pmax
comp=Z,34nm,1.3s
TYV Tymovskoe 14.50 12 *e*P **Pn** **23 08 23.6 -0.5**
TYV pmax pmax
comp=Z,16nm,1.3s
TYV pmax pmax
comp=Z,100nm,3.5s
NJ2 Nanjing 16.41 259 *e*P **Pn** **23 08 46.0 -3.3**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
NJ2 LR LR
comp=N,350nm,11.8s
NJ2 LR LR
comp=E,860nm,17.5s
NJ2 LR LR
comp=Z,690nm,17.1s
TIA Tai'an 16.73 274 P **P** **23 08 58.0 +2.4**
TIA pP **sP** **23 09 10.3 +6.9**
TIA S **S** **23 12 10.5 +0.9**
TIA SS SnSn 23 12 31.0 +19
TIA pmax pmax
comp=Z,5.0nm,1.1s
TIA pmax pmax
comp=Z,45nm,4.0s
TIA LR LR
comp=N,280nm,12.8s
TIA LR LR
comp=E,350nm,12.8s
TIA LR LR
comp=Z,440nm,14.2s
BJI Beijing 17.35 287 P **P** **23 09 04.5 +2.2**
BJI S **S** **23 12 19.3 -2.7**
BJI pmax pmax
comp=Z,4.0nm,1.0s
BJI pmax pmax
comp=Z,120nm,5.3s
BJI LR LR
comp=N,51nm,13.7s
BJI LR LR
comp=E,210nm,12.0s
BJT Baijiatuau 17.35 287 P **P** **23 09 02.1 -0.3**
BJT Baijiatuau 17.35 287 P **P** **23 09 02.1 -0.3**
BJT pmax pmax
comp=Z,21nm,1.1s
YOJ Yonaguni jima 17.72 230 Pn **Pn** **23 09 03.3 -2.4**
YOJ IAmb IAmb 23 09 04.7
comp=Z,47nm,1.1s
YOJ Yonaguni jima 17.72 230 P **Pn** **23 09 03.3 -2.4**
YOJ pmax pmax
comp=Z,47nm,1.1s
XLT XiLinHaoTe 18.08 300 *e*P **P** **23 09 13.5 +3.0**
XLT pP sP 23 09 17.3 -1.0
XLT sP pP 23 09 21.3 +5.2
XLT PP **PnPn** **23 09 29.3 +8.1**
XLT S **S** **23 12 41.3 +4.2**
XLT sS sS 23 12 48.3 +3.2
XLT pmax pmax
comp=Z,13nm,0.9s
XLT pmax pmax
comp=Z,120nm,3.7s
XLT LR LR
comp=N,63nm,15.2s
XLT LR LR
comp=E,360nm,14.3s
XLT LR LR
comp=Z,370nm,15.2s
HIA Hailar 18.18 319 **Pn** **23 09 10.2 -1.1**
HIA Hailar 18.18 319 P **Pn** **23 09 10.2 -1.1**
HIA pmax pmax
comp=Z,10.0nm,1.0s
ZEA Zeya 18.52 340 *e*P **P** **23 09 15.3 +0.1**
ZEA *e* 23 12 39.7
ZEA pmax pmax
comp=Z,10.0nm,0.7s
ZEA MLR MLR
comp=E,300nm,12.0s
ZEA MLR MLR
comp=N,200nm,15.0s
ZEA MLR MLR
comp=Z,200nm,15.0s
HNS HongShan 18.52 279 ⇑P **Pn** **23 09 17.3 +1.8**
HNS S **S** **23 12 50.5 +4.5**
HNS SS **SnSn** **23 13 08.3 +13**
HNS pmax pmax
comp=Z,28nm,1.4s
HNS LR LR
comp=N,300nm,15.5s
HNS LR LR
comp=E,360nm,18.2s
HNS LR LR
comp=Z,340nm,19.2s
LYN LuoYang 20.78 271 ⇑P Pn 23 09 44.8 +2.4
LYN S **S** **23 13 29.0 -2.2**
LYN sS pS 23 13 42.5 -0.4
LYN SS **SnSn** **23 14 02.5 +11**
LYN pmax pmax
comp=Z,10.0nm,0.9s
LYN pmax pmax
comp=Z,120nm,3.7s
LYN LR LR
comp=N,320nm,13.3s
LYN LR LR
comp=E,350nm,16.3s
LYN LR LR
comp=Z,300nm,17.2s
HHC Hu-ho-hao-te 20.91 289 *e*P Pn 23 09 45.5 +1.5
HHC S Sn 23 13 37.8 -1.9
HHC sS pS 23 13 48.8 +4.0
HHC pmax pmax
comp=Z,21nm,1.0s
HHC pmax pmax
comp=Z,120nm,5.4s
HHC LR LR
comp=N,260nm,11.4s
HHC LR LR
comp=E,450nm,12.0s
HHC LR LR
comp=Z,490nm,13.2s
PEA0B Petropavlovsk- 21.41 34⇓ *e*P **P** **23 09 48.3 +1.7**
PETK Petropavlovsk- 21.41 34 P **P** **23 09 48.7 +2.2**
comp=Z,4.4nm,0.8s,baz=220,slow=16,SNR=7.5
PETK LR LR 23 18 28.5
comp=Z,269nm,18.4s,baz=223,slow=38
PETK Petropavlovsk- 21.41 34 **P** **23 09 47.9 +1.3**
PETK Petropavlovsk- 21.41 34 P **P** **23 09 47.9 +1.3**
GUMO Guam 23.91 163 LR LR 23 18 24.3
comp=Z,187nm,21.3s,baz=331,slow=34
MA2 Magadan 24.29 16 P **P** **23 10 15.3 -0.7**
comp=Z,4.5nm,0.6s,baz=197,slow=14,SNR=4.7
MA2 LR LR 23 19 10.1
comp=Z,170nm,21.5s,baz=230,slow=35
comp=Z,4.5nm,0.6s
MA2 Magadan 24.29 16 P **P** **23 10 15.4 -0.7**
MA2 IAmb IAmb 23 10 16.6
comp=Z,22nm,1.4s
MA2 Magadan 24.29 16⇓ *e*P **P** **23 10 15.9 -0.1**
MA2 pmax pmax
comp=Z,21nm,1.5s
ULN Ulaanbaatar 25.21 306 P **P** **23 10 25.4 +0.8**
ULN Ulaanbaatar 25.21 306 P **P** **23 10 25.5 +0.8**
ULN pmax pmax
comp=Z,7.0nm,1.2s
SONM Songino Array 25.63 305 P **P** **23 10 28.1 -0.3**
comp=Z,0.5nm,0.4s,baz=110,slow=7.4,SNR=6.0
SONM LR LR 23 20 49.4
comp=Z,165nm,18.7s,baz=102,slow=37
comp=Z,0.5nm,0.4s
SONM Songino Array 25.63 305 P **P** **23 10 28.1 -0.3**
SONM Songino Array 25.63 305 P **P** **23 10 28.1 -0.3**
SONM pmax pmax
comp=Z,4.0nm,1.1s
YAK Yakutsk 25.81 351 LR LR 23 20 37.7
comp=Z,446nm,18.4s,baz=262,slow=36
YAK Yakutsk 25.81 351⇑ *e*P **P** **23 10 29.5 -0.2**
YAK pmax pmax
comp=Z,12nm,0.6s
SEY Seymchan 27.67 14 P **P** **23 10 46.8 +0.3**
comp=Z,3.7nm,0.9s,baz=194,slow=6.5,SNR=10
SEY LR LR 23 21 29.2
comp=Z,164nm,21.2s,baz=182,slow=36
comp=Z,3.7nm,0.9s
SEY Seymchan 27.67 14⇓ *e*P **P** **23 10 46.4 -0.1**
SEY pmax pmax
comp=Z,6.0nm,1.0s
GYA Guiyang 28.42 258 P **P** **23 10 57.5 +3.8**
GYA S **S** **23 15 40.0 -0.1**
GYA pmax pmax
comp=Z,7.0nm,0.7s
GYA LR LR
comp=Z,680nm,17.8s
SHEM Shemya Is, Ala 29.86 46 LR LR 23 22 37.7
comp=Z,69nm,21.8s,baz=290,slow=36
QIZ Qiongzhong 30.29 242 P **P** **23 11 11.3 +1.1**
QIZ S S 23 16 19.0 +10
QIZ LR LR
comp=N,370nm,19.8s
QIZ LR LR
comp=E,330nm,20.6s
QIZ LR LR
comp=Z,260nm,16.9s
DAV Davao City (W) 31.63 204 LR LR 23 25 31.6
comp=Z,188nm,18.0s,baz=33,slow=39
KNGR Kungurtug, Tuv 31.90 309⇑ *e*P **P** **23 11 26.1 +1.9**
KNGR pmax pmax
comp=Z,6.0nm,1.4s
PZH PanZhiHua 32.29 262 P **P** **23 11 30.5 +2.6**
PZH S **S** **23 16 42.3 +1.5**
PZH pmax pmax
comp=Z,10.0nm,0.5s
PZH pmax pmax
comp=Z,80nm,3.8s
PZH LR LR
comp=N,720nm,16.2s
PZH LR LR
comp=E,570nm,15.7s
PZH LR LR
comp=Z,370nm,14.7s
BILL Bilibino 35.12 18 P **P** **23 11 51.7 -0.2**
BILL IAmb IAmb 23 12 06.4
comp=Z,3.6nm,0.4s
BILL Bilibino 35.12 18 *i* P **P** **23 11 50.9 -1.0**
BILL *i* 23 11 58.1
BILL *i* 23 14 21.2
BILL pmax pmax
comp=Z,4.0nm,1.3s
BILL MLR MLR
comp=Z,117nm,15.0s
TIXI Tiksi 35.27 355 LR LR 23 26 59.0
comp=Z,142nm,18.5s,baz=186,slow=38
TIXI Tiksi 35.27 355⇑ *e*P **P** **23 11 51.6 -1.5**
TIXI pmax pmax
comp=Z,15nm,1.2s
SIJI Sorong 37.95 191 LR LR 23 26 38.9
comp=Z,107nm,19.1s,baz=256,slow=34
CMAR Chiang Mai Arr 38.73 253 LR LR 23 29 58.8
comp=Z,128nm,20.2s,baz=50,slow=39
ZALV Zalesovo Beam 40.03 313 PcP **PcP** **23 14 39.0 +0.7**
comp=Z,1.4nm,0.7s,baz=93,slow=2.9,SNR=6.3
ZALV LR LR 23 28 58.0
comp=Z,44nm,20.4s,baz=82,slow=36
MKAR Makanchi Array 41.88 302 P **P** **23 12 48.1 -0.9**
comp=Z,0.5nm,0.8s,baz=92,slow=9.5,SNR=4.1
MKAR PcP **PcP** **23 14 45.4 +0.9**
comp=Z,0.7nm,0.8s,baz=101,slow=3.1,SNR=4.5
MKAR LR LR 23 30 42.6
comp=Z,133nm,18.3s,baz=85,slow=37
comp=Z,0.5nm,0.8s
KRVT Keravat (AS076 42.93 159 LR LR 23 29 25.5
comp=Z,76nm,21.9s,baz=149,slow=34
KURK Kurchatov 43.89 308 P **P** **23 13 03.6 -1.6**
KURK Kurchatov 43.89 308⇓ *e*P **P** **23 13 03.7 -1.5**
KURK pmax pmax
comp=Z,3.0nm,1.0s
KURBB Kurchatov Arra 43.95 308 LR LR 23 30 15.1
comp=Z,86nm,18.5s,baz=76,slow=35
KAPI Kappang 44.90 206 LR LR 23 31 30.3
comp=Z,44nm,20.5s,baz=354,slow=35
PMG Port Moresby 46.74 167 LR LR 23 31 25.5
comp=Z,45nm,21.9s,baz=110,slow=34
N18K Kilae Creek 47.29 38 P **P** **23 13 32.9 +1.0**
N18K IAmb IAmb 23 13 35.2
comp=Z,6.2nm,1.1s
J20K Nowinta River 48.10 33 P **P** **23 13 38.8 +0.6**
J20K IAmb IAmb 23 13 40.9
comp=Z,3.9nm,0.9s
K20K Telida 48.13 34 P **P** **23 13 38.9 +0.4**
K20K IAmb IAmb 23 13 41.2
comp=Z,4.4nm,0.9s
AAK Ala-Archa 48.14 298 LR LR 23 34 39.3
comp=Z,177nm,18.2s,baz=68,slow=37
IMAR Indian Mountai 48.31 31 P **P** **23 13 40.5 +0.6**
H21K Melozitna Rive 48.69 31 P **P** **23 13 42.6 -0.1**
H21K IAmb IAmb 23 13 45.3
comp=Z,4.4nm,1.0s
PPLA Purkeypile 48.99 35 P **P** **23 13 47.0 +1.7**
CAST Castle Rocks 49.02 34 P **P** **23 13 46.1 +0.8**
CAST IAmb IAmb 23 13 47.5
comp=Z,6.9nm,1.4s
I21K Tanana 49.03 32 P **P** **23 13 45.7 +0.3**
I21K IAmb IAmb 23 13 48.2
comp=Z,6.8nm,1.1s
BPAW Bear Paw Mtn. 49.48 33 P **P** **23 13 49.5 +0.7**
BPAW IAmb IAmb 23 13 51.5
comp=Z,6.3nm,1.5s
KTH Kantishna Hill 49.54 34 P **P** **23 13 50.0 +0.7**
KTH IAmb IAmb 23 13 53.9
comp=Z,7.9nm,1.1s
MLY Manley 49.56 32 P **P** **23 13 50.1 +0.6**
MLY IAmb IAmb 23 13 52.1
comp=Z,4.0nm,1.0s
COLD Coldfoot 49.75 29 P **P** **23 13 51.8 +1.0**
SUA Susitna One 49.75 37 P **P** **23 13 52.1 +1.1**
SUA IAmb IAmb 23 13 54.1
comp=Z,6.3nm,1.0s
TOLK Toolik Lake Re 49.99 27 P **P** **23 13 55.6 +2.9**
TOLK IAmb IAmb 23 14 18.8
comp=Z,6.1nm,1.3s
H23K Yukon River 50.04 31 P **P** **23 13 54.1 +1.0**
NEA2 Nenana 50.29 32 P **P** **23 13 55.3 +0.3**
NEA2 IAmb IAmb 23 13 57.4
comp=Z,4.4nm,1.0s
MCK McKinley 50.41 34 P **P** **23 13 54.7 -1.2**
MCK IAmb IAmb 23 13 57.2
comp=Z,3.8nm,0.5s
MCK McKinley 50.41 34 P **P** **23 13 54.7 -1.2**
MCK pmax pmax
comp=Z,4.0nm,0.5s
RND Reindeer 50.47 34 P **P** **23 13 56.2 -0.3**
RND IAmb IAmb 23 14 00.0
comp=Z,9.3nm,1.2s
RND Reindeer 50.47 34 P **P** **23 13 56.2 -0.3**
RND pmax pmax
comp=Z,9.0nm,1.2s
GHO Glory Hole Cre 50.59 36 P **P** **23 13 57.7 +0.4**
MDM Murphy Dome 50.63 32 P **P** **23 13 58.4 +0.8**
MDM IAmb IAmb 23 14 00.0
comp=Z,6.2nm,1.0s
H24K Noodor Dome 50.72 31 P **P** **23 13 58.5 +0.2**
WRH Wood River Hil 50.73 33 P **P** **23 13 58.5 +0.3**
KK31 Karatay Array 50.82 299 P **P** **23 13 58.7 -0.6**
KK31 Karatay Array 50.82 299 P **P** **23 13 58.7 -0.6**
KK31 pmax pmax
comp=Z,5.0nm,1.3s
KKAR Karatay Array 50.82 299 P **P** **23 13 59.3 0.0**
KKAR Karatay Array 50.82 299 P **P** **23 13 59.4 +0.1**
KKAR IAmb IAmb 23 14 00.4
comp=Z,5.1nm,1.3s
KKAR Karatay Array 50.82 299 P **P** **23 13 59.3 0.0**
KKAR pmax pmax
comp=Z,5.0nm,1.3s
CCB Clear Creek Bu 50.83 32 P **P** **23 13 59.8 +0.8**
SML Sawmill 50.86 36 P **P** **23 13 59.5 +0.1**
SML IAmb IAmb 23 14 02.1
comp=Z,6.1nm,0.8s
POKR Poker Plat Res 50.96 32 P **P** **23 14 00.8 +0.8**
IL31 51.22 32 P **P** **23 14 01.6 -0.3**
ILAR Eielson Array 51.22 32 P **P** **23 14 01.4 -0.6**
comp=Z,2.1nm,0.9s,baz=279,slow=7.4,SNR=14
ILAR LR LR 23 35 25.1
comp=Z,98nm,21.8s,baz=248,slow=36
comp=Z,2.1nm,0.9s
ILAR Eielson Array 51.22 32 P **P** **23 14 01.6 -0.3**
ILAR Eielson Array 51.22 32 P **P** **23 14 01.6 -0.3**
HDA Harding Lake 51.22 33 P **P** **23 14 01.5 -0.5**
HDA IAmb IAmb 23 14 03.5
comp=Z,5.5nm,1.0s
SCM Sheep Creek Mo 51.33 36 IAmb IAmb 23 14 05.1
comp=Z,8.8nm,1.0s
LEM Lembang 51.82 220 LR LR 23 35 42.4
comp=Z,67nm,21.6s,baz=240,slow=36
FID Port Fidalgo 51.89 37 P **P** **23 14 06.9 -0.1**
BMAR Burnt Mountain 51.91 29 P **P** **23 14 07.5 +0.3**
KLU Klutina 52.05 36 IAmb IAmb 23 14 10.5
comp=Z,7.4nm,1.2s
GAR Garm 52.27 294 P **P** **23 14 08.4 -1.9**
SCRK Sand Creek 52.56 33 P **P** **23 14 12.1 0.0**
N25K Chitina, Valde 52.65 36 P **P** **23 14 13.0 +0.2**
BMRM Bremner River 52.76 37 P **P** **23 14 13.9 +0.3**
L26K Log Cabin Wild 52.99 34 P **P** **23 14 16.1 +0.9**
L26K IAmb IAmb 23 14 17.3
comp=Z,5.8nm,1.1s
GLB Gilahina Butte 53.05 36 P **P** **23 14 17.0 +1.3**
CHGR Chuyangaron 53.23 294 P **P** **23 14 16.8 -0.6**
CHGR Chuyangaron 53.23 294 P **P** **23 14 16.8 -0.6**
CHGR pmax pmax
comp=Z,15nm,0.9s
M26K Nabesna, AK 53.26 35 P **P** **23 14 17.7 +0.5**
M26K IAmb IAmb 23 14 19.4
comp=Z,5.8nm,1.1s
VRDI Verde Repeater 53.26 36 P **P** **23 14 18.1 +0.7**
VRDI IAmb IAmb 23 14 19.8
comp=Z,6.2nm,1.0s
MCARA McCarthy VSAT 53.44 36 P **P** **23 14 19.9 +1.5**
MCARA IAmb IAmb 23 14 21.2
comp=Z,5.9nm,0.7s
L27K Beaver Creek, 53.67 34 P **P** **23 14 21.0 +0.8**
L27K IAmb IAmb 23 14 23.0
comp=Z,4.9nm,1.0s
BCAR Beaver Creek A 53.69 34 P **P** **23 14 20.8 +0.4**
M27K Edge Creek, AK 53.78 35 IAmb IAmb 23 14 23.7
comp=Z,7.7nm,1.1s
ISLE Juniper Island 53.92 37 P **P** **23 14 23.1 +0.9**
ISLE IAmb IAmb 23 14 25.3
comp=Z,4.9nm,0.8s
GRNC Granite Creek 54.17 37 P **P** **23 14 25.8 +1.6**
GRNC IAmb IAmb 23 14 33.4
comp=Z,5.9nm,1.1s
CTGM Chitina Glacie 54.33 36 P **P** **23 14 26.1 +1.0**
CTGM IAmb IAmb 23 14 27.4
comp=Z,6.2nm,0.9s
ARU Arti 54.69 318 LR LR 23 41 22.4
comp=Z,62nm,19.3s,baz=46,slow=40
ARU Arti 54.69 318 P **P** **23 14 27.0 -0.7**
ARU Arti 54.69 318 *c i*P **P** **23 14 26.9 -0.7**
ARU S **S** **23 22 07.0 +0.2**
ARU SS **SS** **23 25 43.6 -5.7**
ARU pmax pmax
comp=Z,6.0nm,1.3s
I29M Ogilvie Camp, 54.72 31 P **P** **23 14 28.7 +0.9**
I29M IAmb IAmb 23 14 30.4
comp=Z,6.0nm,1.1s
INK Inuvik 55.89 27 LR LR 23 42 06.6
comp=Z,72nm,18.2s,baz=275,slow=40
INK Inuvik 55.89 27 P **P** **23 14 35.8 -0.3**
INK IAmb IAmb 23 14 38.1
comp=Z,5.5nm,0.9s
INK Inuvik 55.89 27 P **P** **23 14 35.8 -0.3**
INK pmax pmax
comp=Z,6.0nm,1.0s
ABKAR Akbulak array 55.95 309 P **P** **23 14 35.8 -1.1**
M30M Minto, Yukon 56.03 34 P **P** **23 14 37.9 +0.6**
HYT Haines Junctio 56.17 36 P **P** **23 14 39.7 +1.2**
HYT IAmb IAmb 23 14 42.9
comp=Z,4.4nm,0.8s
WRA Warramunga Arr 56.50 184 P **P** **23 14 40.7 -0.3**
comp=Z,2.8nm,0.9s,baz=360,slow=7.6,SNR=12
WRA LR LR 23 38 47.2
comp=Z,46nm,18.1s,baz=42,slow=36
comp=Z,2.8nm,0.9s
WRA Warramunga Arr 56.50 184 P **P** **23 14 41.1 +0.1**
WRA Warramunga Arr 56.50 184 P **P** **23 14 41.1 +0.1**
WRA pmax pmax
comp=Z,1.0nm,1.2s
AKTO Aktyubinsk 56.75 311 LR LR 23 39 23.7
comp=Z,59nm,20.0s,baz=67,slow=36
CTA Charters Tower 57.09 171 LR LR 23 38 14.1
comp=Z,71nm,19.8s,baz=340,slow=35
FARO Faro, Yukon 57.67 34 P **P** **23 14 49.2 +0.3**
FARO IAmb IAmb 23 14 52.9
comp=Z,6.7nm,1.3s
P33M Teslin, Yukon 58.57 36 P **P** **23 14 55.8 +0.5**
P33M IAmb IAmb 23 14 58.2
comp=Z,3.7nm,0.9s
PALK Pallekele 59.58 255 LR LR 23 42 23.7
comp=Z,64nm,18.5s,baz=197,slow=38
ASAR Alice Springs 60.23 184 P **P** **23 15 07.5 +0.5**
comp=Z,1.1nm,0.9s,baz=9.2,slow=7.5,SNR=7.8
ASAR LR LR 23 39 24.6
comp=Z,81nm,21.4s,baz=338,slow=34
comp=Z,1.1nm,0.9s
ASAR Alice Springs 60.23 184 P **P** **23 15 08.6 +1.6**
ASAR Alice Springs 60.23 184 P **P** **23 15 08.6 +1.6**
SPITS Spitsbergen Ar 60.23 348 LR LR 23 41 27.7
comp=Z,112nm,19.8s,baz=9.0,slow=36
LVZ Lovozero 61.19 335 P **P** **23 15 13.5 +0.3**
LVZ Lovozero 61.19 335⇓ *e*P **P** **23 15 13.4 +0.3**
LVZ pmax pmax
comp=Z,23nm,2.5s
BELG Belogornoye 62.07 316⇑ *e*P **P** **23 15 20.4 +1.2**
BELG pmax pmax
comp=Z,2.0nm,1.1s
GRNB Grenville Isla 62.46 42 P **P** **23 15 23.5 +1.6**
KLMR Klimovskoe 62.47 327 *e*P **P** **23 15 20.1 -1.6**
KLMR pmax pmax
comp=Z,6.0nm,1.2s
KLMR Klimovskoe 62.47 327 *e*P **P** **23 15 20.2 -1.5**
KLMR AMP 23 15 22.3
comp=Z,6.0nm,1.2s
ARCES ARCESS Array B 63.24 339 P **P** **23 15 26.0 -0.8**
comp=Z,1.4nm,0.8s,baz=52,slow=7.9,SNR=6.4

ARCES LR LR 23 46 09.1
comp=Z,161nm,19.8s,baz=68,slow=39
comp=Z,1.4nm,0.8s
ARCES ARCESS Array B 63.24 339 P **P** **23 15 27.8 +1.0**
ARCES IAmb IAmb 23 15 31.6
comp=Z,3.4nm,1.1s
ARCES ARCESS Array B 63.24 339 P **P** **23 15 27.8 +1.0**
ARCES pmax pmax
comp=Z,3.0nm,1.1s
RES Resolute Bay 63.54 14 LR LR 23 47 03.0
comp=Z,56nm,18.2s,baz=32,slow=40
DZM Mont Dzumac 64.42 151 LR LR 23 39 54.5
comp=Z,46nm,21.7s,baz=48,slow=32
HOLB Holberg 64.89 45 P **P** **23 15 38.1 +0.1**
HOLB IAmb IAmb 23 15 41.4
comp=Z,5.1nm,1.3s
YKA Yellowknife Ar 65.43 29 P **P** **23 15 39.8 -1.4**
comp=Z,1.4nm,0.9s,baz=297,slow=6.4,SNR=6.3
YKA LR LR 23 48 33.1
comp=Z,44nm,18.1s,baz=332,slow=40
comp=Z,1.4nm,0.9s
YKA Yellowknife Ar 65.43 29 P **P** **23 15 41.5 +0.3**
YKA Yellowknife Ar 65.43 29 *i* P **P** **23 15 41.9 +0.7**
YKA pmax pmax
comp=Z,2.0nm,0.9s
VORR Voronezh 67.01 318 *e*P **P** **23 15 52.6 +1.1**
VORR pmax pmax
comp=Z,10.0nm,0.3s
VSR Storozhevoye 67.26 318 *e*P **P** **23 15 51.6 -1.5**
VSR pmax pmax
comp=Z,6.0nm,0.6s
FINES FINESS Array B 67.72 331 P **P** **23 15 54.8 -1.1**
comp=Z,2.2nm,0.8s,baz=29,slow=4.4,SNR=9.1
FINES LR LR 23 47 28.7
comp=Z,82nm,20.8s,baz=54,slow=38
comp=Z,2.2nm,0.8s
FINES FINESS Array B 67.72 331 P **P** **23 15 55.3 -0.5**
FINES FINESS Array B 67.72 331 *i* P **P** **23 15 55.4 -0.5**
FINES pmax pmax
comp=Z,2.0nm,0.8s
STKA Stephens Creek 68.37 177 LR LR 23 46 06.9
comp=Z,71nm,19.3s,baz=24,slow=36
KBZ Khabaz 68.93 309 LR LR 23 47 03.4
comp=Z,73nm,18.6s,baz=59,slow=37
KBZ Khabaz 68.93 309⇑ *e*P **P** **23 16 04.6 +0.9**
KBZ pmax pmax
comp=Z,4.0nm,0.9s
GNI Garni 69.59 305 LR LR 23 48 25.6
comp=Z,58nm,18.1s,baz=66,slow=38
SUMG Summit 70.92 359 P **P** **23 16 16.2 +0.2**
SUMG Summit 70.92 359 P **P** **23 16 16.2 +0.2**
SUMG pmax pmax
comp=Z,10.0nm,1.2s
B08A Colville Reser 70.98 43 P **P** **23 16 16.4 +0.1**
B08A IAmb IAmb 23 16 17.8
comp=Z,2.9nm,0.8s
MNK Minsk 71.12 325 *i* P **P** **23 16 14.0 -3.0**
MNK *i* 23 18 50.2
MNK *i* PPP PPP 23 20 35.7
MNK *i* S **S** **23 25 30.6 -1.9**
MNK *i* SS **SS** **23 30 03.9 -1.2**
MNK pmax pmax
comp=N,26nm,0.9s
MNK pmax pmax
comp=Z,20nm,1.2s
MNK pmax pmax
comp=E,1.0nm,0.9s
MNK MLR MLR
comp=E,24nm,15.0s
MNK MLR MLR
comp=N,240nm,16.0s
MNK MLR MLR
comp=Z,5μm,17.0s
MNK Minsk 71.12 325 *i* P **P** **23 16 14.0 -3.0**
comp=E,1.0nm,0.9s
MNK *i* P **P** **23 16 14.0 -3.0**
comp=N,26nm,0.9s
MNK *i* P **P** **23 16 14.0 -3.0**
comp=Z,20nm,1.2s,baz=52
MNK *i* PP **PP** **23 18 50.2 -3.9**
MNK *i* PPP PPP 23 20 35.7
MNK *i* S **S** **23 25 30.6 -1.9**
MNK *i* SS **SS** **23 30 03.9 -1.2**
MNK *i* SSS SSS 23 33 22.8
MNK *i* LQ LQ 23 41 10.7
MNK *i* LR LR 23 46 58.6
MNK *i* LRM MLR 23 49 54.9
comp=E,24nm,14.7s
MNK *i* LRM MLR 23 50 04.9
comp=N,240nm,16.0s
MNK *i* LRM MLR 23 50 21.1
comp=Z,5μm,17.2s
HOOD Mount Hood Mea 71.35 47 P **P** **23 16 18.8 0.0**
NACGM Naroch 71.38 325⇑ *e*P **P** **23 16 17.2 -1.4**
baz=53
DBO Dodson Butte 71.61 50 P **P** **23 16 21.0 +0.7**
C09A Chrisman Ranch 71.89 44 P **P** **23 16 21.8 0.0**
GURO Guroymak-BITLI 72.22 305 P **P** **23 16 24.2 +0.1**
NEW Newport 72.25 43 P **P** **23 16 24.5 +0.5**
NEW IAmb IAmb 23 16 26.5
comp=Z,3.9nm,1.1s
NEW Newport 72.25 43 P **P** **23 16 24.5 +0.5**
NEW pmax pmax
comp=Z,4.0nm,1.1s
PINE Pine Mountain 72.63 48 P **P** **23 16 27.0 +0.5**
E09A Wood Farm, Sta 72.70 45 P **P** **23 16 27.1 +0.5**
E09A IAmb IAmb 23 16 29.5
comp=Z,4.5nm,0.8s
AKASG Malin Array Be 72.77 321 P **P** **23 16 25.7 -1.3**
comp=Z,0.7nm,0.5s,baz=43,slow=5.9,SNR=9.9
AKASG LR LR 23 50 54.5
comp=Z,109nm,18.5s,baz=50,slow=38
comp=Z,0.7nm,0.5s
AKASG Malin Array Be 72.77 321 *i* P **P** **23 16 26.5 -0.4**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKBB Malin Array Si 72.77 321⇑ *i*P **P** **23 16 26.9 0.0**
AKBB pmax pmax
comp=Z,10.0nm,2.2s
HFS Hagfors 73.15 334 LR LR 23 50 51.2
comp=Z,112nm,18.4s,baz=40,slow=38
NB201 NORSAR Array S 73.29 336 P **P** **23 16 30.2 +0.3**
I07A Izee 73.31 47 P **P** **23 16 30.8 +0.3**
I07A IAmb IAmb 23 16 32.9
comp=Z,3.8nm,1.1s
NB2 NORSAR Subarra 73.32 336 P **P** **23 16 29.6 -0.5**
comp=Z,8.3nm,1.2s,baz=40,slow=6.2
NOA NORSAR Array B 73.32 336 P **P** **23 16 28.6 -1.5**
comp=Z,3.8nm,1.0s,baz=42,slow=5.9,SNR=6.5
NOA LR LR 23 51 48.9
comp=Z,84nm,19.6s,baz=50,slow=38
comp=Z,3.8nm,1.0s
F10A Beach Ranch, E 73.53 45 IAmb IAmb 23 16 36.9
comp=Z,3.4nm,0.9s
JTMT Jette 74.09 42 P **P** **23 16 35.1 +0.1**
JTMT IAmb IAmb 23 16 37.3
comp=Z,7.7nm,1.0s
BMO Blue Mountains 74.14 46 P **P** **23 16 35.6 +0.3**
BMO IAmb IAmb 23 16 38.0
comp=Z,4.2nm,0.9s
BMO Blue Mountains 74.14 46 P **P** **23 16 35.6 +0.3**
BMO pmax pmax
comp=Z,4.0nm,1.0s
J08A Circle Bar Ran 74.34 47 P **P** **23 16 37.0 +0.5**
J08A IAmb IAmb 23 16 39.6
comp=Z,6.7nm,1.1s
PLID Pearl Lake 74.75 45 P **P** **23 16 39.4 +0.4**
TOKA Tokat 74.79 309 P **P** **23 16 39.4 +0.3**
TOKA IAmb IAmb 23 16 40.7
comp=Z,7.6nm,1.2s
WVOR Wild Horse Val 74.79 48 P **P** **23 16 40.5 +1.4**
WVOR IAmb IAmb 23 16 42.0
comp=Z,5.7nm,1.2s
WVOR Wild Horse Val 74.79 48 P **P** **23 16 40.6 +1.4**
WVOR pmax pmax
comp=Z,6.0nm,1.3s
MSO Missoula 74.84 43 P **P** **23 16 39.8 +0.5**
MSO IAmb IAmb 23 16 41.7
comp=Z,4.2nm,1.1s
BEKR Beckworth 75.23 51 P **P** **23 16 42.3 +0.5**
BEKR IAmb IAmb 23 16 44.4
comp=Z,5.0nm,1.0s
FFC Flin Flon 75.42 31 P **P** **23 16 42.4 0.0**
FFC IAmb IAmb 23 16 44.2
comp=Z,4.2nm,1.0s
FFC Flin Flon 75.42 31 P **P** **23 16 42.4 0.0**

FFC pmax pmax
comp=Z,4.0nm,1.0s
MFID Camas Ranch 75.86 46 P **P** **23 16 45.4 +0.1**
PAHR Pah Rah Range 75.94 51 P **P** **23 16 46.5 +0.7**
PAHR IAmb IAmb 23 16 54.9
comp=Z,9.5nm,1.4s
BNN Bunyan 76.04 308 P **P** **23 16 46.2 -0.2**
LRM Limekiln Ridge 76.27 43 P **P** **23 16 47.7 0.0**
YERR Yerington 76.45 51 P **P** **23 16 49.2 +0.3**
YERR IAmb IAmb 23 16 51.8
comp=Z,5.6nm,1.0s
DLMT Dillon 76.48 43 P **P** **23 16 48.8 0.0**
HLID Hailey 76.58 45 P **P** **23 16 49.9 +0.5**
HLID IAmb IAmb 23 16 52.5
comp=Z,3.6nm,1.0s
KWP Kalwaria Pacla 76.68 323 *e*P P 23 16 37.0 -13
KWP Kalwaria Pacla 76.68 323 P **P** **23 16 49.6 -0.1**
KWP Kalwaria Pacla 76.68 323 P **P** **23 16 49.6 -0.1**
BURAR Bucovina Array 76.75 320 P **P** **23 16 50.1 -0.1**
BOZ Bozeman (W) 76.86 42 P **P** **23 16 51.0 0.0**
BOZ IAmb IAmb 23 16 53.7
comp=Z,3.1nm,0.9s
BOZ Bozeman (W) 76.86 42 P **P** **23 16 51.0 0.0**
BOZ pmax pmax
comp=Z,3.0nm,1.0s
BRTR Keskin Array B 76.90 310 P **P** **23 16 51.4 +0.2**
comp=Z,2.1nm,1.1s,baz=132,slow=1.8,SNR=5.4
comp=Z,2.1nm,1.1s
BRTR Keskin Array B 76.90 310 P **P** **23 16 51.2 -0.1**
BRTR Keskin Array B 76.90 310 *i* P **P** **23 16 53.2 +1.9**
BRTR pmax pmax
comp=Z,2.0nm,1.1s
KVN Kaiserville 77.12 51 P **P** **23 16 52.7 +0.1**
KVN IAmb IAmb 23 16 55.6
comp=Z,4.3nm,0.9s
KVN Kaiserville 77.12 51 P **P** **23 16 52.7 +0.1**
KVN pmax pmax
comp=Z,4.0nm,0.9s
LHV Little Huntoon 77.35 52 P **P** **23 16 54.0 +0.3**
NVAR Mina Array Bea 77.37 51 P **P** **23 16 54.4 +0.3**
comp=Z,1.6nm,0.8s,baz=285,slow=5.2,SNR=11
comp=Z,1.6nm,0.8s
NV11 Mina Array Sit 77.46 51 P **P** **23 16 54.7 +0.2**
BORG Borgarnes 77.51 351 LR LR 23 51 50.9
comp=Z,34nm,18.7s,baz=339,slow=36
FRB Frobisher Bay 77.64 12 LR LR 23 53 44.0
comp=Z,39nm,19.0s,baz=22,slow=38
MLR Muntele Rosu 77.75 318 LR LR 23 52 02.5
comp=Z,63nm,19.5s,baz=84,slow=36
NIE Niedzica 77.98 324 *e*P **P** **23 16 57.9 +0.9**
TPH Tonopah 78.26 51 P **P** **23 16 59.0 0.0**
TPH Tonopah 78.26 51 P **P** **23 16 59.0 0.0**
TPH pmax pmax
comp=Z,32nm,1.3s
FLWY Flagg Ranch 78.34 43 P **P** **23 17 00.3 +1.0**
FLWY IAmb IAmb 23 17 02.7
comp=Z,3.8nm,0.8s
RLMT Red Lodge 78.44 42 P **P** **23 17 00.8 +0.9**
RLMT IAmb IAmb 23 17 02.3
comp=Z,3.9nm,0.9s
TPAW Teton Pass 78.58 44 P **P** **23 17 00.5 -0.2**
TPAW IAmb IAmb 23 17 10.5
comp=Z,3.9nm,0.9s
HVU Hansel Valley 78.64 46 P **P** **23 17 01.2 +0.3**
HVU IAmb IAmb 23 17 03.4
comp=Z,5.4nm,1.3s
HVU Hansel Valley 78.64 46 P **P** **23 17 01.2 +0.3**
HVU pmax pmax
comp=Z,5.0nm,1.3s
KSP Ksiaz 78.82 327 *e*P **P** **23 17 02.1 +0.6**
MORC Moravsky Berou 79.02 325 P **P** **23 17 02.3 -0.4**
MORC IAmb IAmb 23 17 04.4
comp=Z,4.3nm,1.1s
MORC Moravsky Berou 79.02 325 P **P** **23 17 02.3 -0.4**
MORC pmax pmax
comp=Z,4.0nm,1.1s
BGU Big Grassy Mou 79.03 47 P **P** **23 17 02.9 -0.3**
BGU IAmb IAmb 23 17 13.7
comp=Z,5.2nm,1.5s
R11A Troy Canyon, C 79.11 50 P **P** **23 17 03.6 0.0**
DPC Dobruska-Polom 79.16 326 *e*P **P** **23 17 05.4 +1.9**
DPC Dobruska-Polom 79.16 326 *e*P **P** **23 17 05.4 +1.9**
PSZ Piszkesteto 79.21 323 P **P** **23 17 04.6 +0.7**
PSZ IAmb IAmb 23 17 11.9
comp=Z,3.1nm,0.9s
PSZ Piszkesteto 79.21 323 P **P** **23 17 04.6 +0.7**
PSZ pmax pmax
comp=Z,3.0nm,0.9s
HWUT Hardware Ranch 79.45 46 P **P** **23 17 05.8 +0.4**
HWUT IAmb IAmb 23 17 08.5
comp=Z,5.3nm,1.1s
S11A Rachel 79.45 51 P **P** **23 17 04.0 -1.5**
TPNV Topopah Spring 79.56 52 P **P** **23 17 05.7 -0.4**
TPNV Topopah Spring 79.56 52 P **P** **23 17 05.7 -0.4**
TPNV pmax pmax
comp=Z,4.0nm,1.0s
DUG Dugway, Tooele 79.62 47 P **P** **23 17 06.6 +0.2**
DUG IAmb IAmb 23 17 09.4
comp=Z,3.9nm,1.0s
DUG Dugway, Tooele 79.62 47 P **P** **23 17 06.6 +0.2**
DUG pmax pmax
comp=Z,4.0nm,1.0s
QSM Queen of Sheba 79.78 53 P **P** **23 17 07.7 +0.6**
QSM IAmb IAmb 23 17 09.8
comp=Z,6.7nm,1.0s
BW06 Boulder Array 79.83 44 P **P** **23 17 07.5 -0.1**
PD31 Pinedale Array 79.83 44 P **P** **23 17 07.6 +0.1**
PDAR Pinedale Array 79.83 44 P **P** **23 17 07.4 -0.1**
comp=Z,1.5nm,0.7s,baz=289,slow=2.8,SNR=13
comp=Z,1.5nm,0.7s
PDAR Pinedale Array 79.83 44 P **P** **23 17 07.2 -0.3**
TCUT Toone Canyon 79.85 46 P **P** **23 17 07.9 +0.2**
TCUT IAmb IAmb 23 17 17.8
comp=Z,4.1nm,0.9s
CLL Collm 79.90 328 P **P** **23 17 07.2 -0.2**
CLL IAmb IAmb 23 17 09.1
comp=Z,9.7nm,1.3s
CLL Collm 79.90 328 *i* P **P** **23 17 07.4 0.0**
CLL pmax pmax
comp=Z,7.0nm,1.1s
CLL Collm 79.90 328 *i* P **P** **23 17 07.4 0.0**
comp=Z,7.0nm,1.1s
CLL LmH 23 49 00.0
comp=N,100nm,19.7s
CLL LmH 23 49 00.0
comp=E,100nm,18.5s
PSUT Pine Spring 80.05 49 P **P** **23 17 09.0 +0.2**
NLU North Lily Min 80.21 47 P **P** **23 17 08.4 -1.2**
MPU Maple Canyon 80.43 47 P **P** **23 17 10.8 0.0**
SHPR Sheep Range 80.52 51 P **P** **23 17 11.5 +0.2**
MSU Marysvale 81.08 48 P **P** **23 17 14.2 -0.1**
MSU Marysvale 81.08 48 P **P** **23 17 14.2 -0.1**
CKRC Cesky Krumlov 81.17 326 *e*P **P** **23 17 14.8 +0.4**
ULM Lac du Bonnet 81.23 32 P **P** **23 17 14.4 -0.2**
ULM IAmb IAmb 23 17 15.2
comp=Z,4.1nm,1.1s
ULM Lac du Bonnet 81.23 32 P **P** **23 17 14.4 -0.2**
ULM pmax pmax
comp=Z,4.0nm,1.1s
RDMU Red Mountain 81.27 45 P **P** **23 17 15.4 +0.2**
KHC Kasperske Hory 81.27 327 P **P** **23 17 14.8 -0.1**
KHC IAmb IAmb 23 17 16.5
comp=Z,5.5nm,1.2s
KHC Kasperske Hory 81.27 327 P **P** **23 17 14.8 -0.1**
KHC pmax pmax
comp=Z,6.0nm,1.2s
KHC Kasperske Hory 81.27 327 *e*P **P** **23 17 14.6 -0.3**
P17A Butcher Ranch, 81.31 47 P **P** **23 17 15.6 +0.1**
MTPU Mount Pierson 81.38 49 P **P** **23 17 16.2 +0.1**
GERES GERESS Array B 81.42 326 P **P** **23 17 15.7 -0.1**
comp=Z,0.5nm,0.6s,baz=46,slow=4.2,SNR=7.5
comp=Z,0.5nm,0.6s
P18A Preston Nutter 81.50 46 P **P** **23 17 16.4 -0.2**
SRU San Rafael Swe 81.67 47 P **P** **23 17 17.2 -0.2**
SRU IAmb IAmb 23 17 19.3
comp=Z,5.9nm,1.2s
SRU San Rafael Swe 81.67 47 P **P** **23 17 17.2 -0.2**
SRU pmax pmax
comp=Z,6.0nm,1.2s
GRA1 Grafenberg Arr 81.86 328 P **P** **23 17 18.7 +0.7**
GRF Grafenberg Arr 81.86 328 P **P** **23 17 18.7 +0.7**
GRF pmax pmax
comp=Z,9.0nm,1.1s
GRFO Grafenberg 81.86 328 P **P** **23 17 18.7 +0.7**
GRFO Grafenberg 81.86 328 P **P** **23 17 18.7 +0.7**
GRFO pmax pmax
comp=Z,9.0nm,1.1s
O20A White River Ci 82.31 45 P **P** **23 17 21.2 +0.5**
O20A IAmb IAmb 23 17 29.4
comp=Z,5.5nm,1.1s
RAR Rarotonga 82.31 124 LR LR 23 45 21.2
comp=Z,34nm,21.2s,baz=315,slow=29
EKA Eskdalemuir Ar 82.41 339 LR LR 23 57 39.2
comp=Z,51nm,19.0s,baz=51,slow=38
PV23 Carpenter Ridg 82.99 47 P **P** **23 17 24.8 +0.4**
PV10 Paradox Valley 83.03 47 P **P** **23 17 25.1 +0.5**
N23A Red Feather La 83.08 43 P **P** **23 17 25.2 +0.4**
PV11 David Mesa, Pa 83.18 47 P **P** **23 17 25.6 +0.3**
PV13 Radium Mtn., P 83.30 47 P **P** **23 17 26.9 +1.0**
PDG Podgorica 83.37 319 P **P** **23 17 26.2 +0.3**
WUAZ Wupatki 83.51 50 P **P** **23 17 27.5 +0.4**
WUAZ IAmb IAmb 23 17 30.1
comp=Z,5.0nm,1.0s
CLUD Cludinico 83.58 325 P **P** **23 17 24.9 -2.0**
BFO Black Forest 84.12 329 P **P** **23 17 29.8 +0.1**
BFO Black Forest 84.12 329 P **P** **23 17 29.8 +0.1**
BFO pmax pmax
comp=Z,18nm,1.5s
CTI Castel Tesino 84.44 326 P **P** **23 17 30.2 -1.3**
CTI IAmb IAmb 23 17 31.7
comp=Z,2.7nm,0.9s
CTI Castel Tesino 84.44 326 P **P** **23 17 30.2 -1.3**
CTI pmax pmax
comp=Z,3.0nm,0.9s
FUORN Ofenpass-Fuorn 84.62 327 P **P** **23 17 32.5 -0.1**
S22A 4UR Ranch, Cre 84.74 46 P **P** **23 17 33.2 -0.2**
S22A IAmb IAmb 23 17 36.6
comp=Z,4.2nm,1.0s
BSWZ Blackbirch Sta 84.75 154 P **P** **23 17 32.9 +0.3**
RPZ Rata Peaks 85.57 157 LR LR 23 51 58.6
comp=Z,56nm,19.3s,baz=304,slow=33
SCHQ Schefferville 86.32 14 LR LR 23 59 02.1
comp=Z,41nm,20.1s,baz=3.0,slow=38
ATD Arta Tunnel 87.20 282 LR LR 23 59 47.4
comp=Z,36nm,20.3s,baz=160,slow=38
SADO Sadowa 92.19 25 LR LR 00 04 29.2
comp=Z,46nm,20.1s,baz=349,slow=39
TXAR Lajitas Array 92.48 50 P **P** **23 18 10.5 +0.3**
comp=Z,1.6nm,0.9s,baz=312,slow=2.3,SNR=15
comp=Z,1.6nm,0.9s
KEST Kesra 93.49 320 LR LR 00 03 08.7
comp=Z,40nm,18.7s,baz=231,slow=37
TKL Tuckaleechee C 98.19 33 LR LR 00 06 29.2
comp=Z,44nm,18.1s,baz=338,slow=38
KMBO Kilima Mbogo 99.22 275 LR LR 00 04 18.2
comp=Z,23nm,20.2s,baz=229,slow=36
LPAZ La Paz 149.20 55 PKPbc **PKiKP** **23 24 49.1 -0.7**
comp=Z,2.8nm,1.0s,baz=230,slow=2.0,SNR=4.0

*ISN **30** 23:06:51.2±0.8, 35°.92N×45°.75E, h10km±968km, ML2.4*
*DDA **30** 23:06:52.0±0.0, 35°.43N×45°.88E, h24km, ML2.7,*
Hypocentre not reviewed by the ISC
*TEH **30** 23:06:53.8, 35°.93N×45°.66E, h8km, ML3.1*
ISC 30 23:06:53.2±0.9, **35°.99N**±0°.03×**45°.83E**±0°.08, **h10km, n18,**
σ1s27/22, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MAHB	**Mahabad**	**0.78**	**353**	*e*Pg		**Pn**	**23 07 10.0**	**-0.4**
MAHB				*e*Sg		**Sn**	**23 07 21.5**	**-0.7**
MAHB				*e*			23 07 22.4	
	comp=Z,6μm,0.4s							
IDHR	**Dehrash**	**1.37**	**160**	*e*Pg		**Pn**	**23 07 18.2**	**-0.4**
IDHR				*e*			23 07 21.5	
	comp=Z,3μm,0.2s							
ILIN	**Lien**	**1.42**	**139**	*e*Pn		**Pg**	**23 07 20.2**	**-0.2**
ILIN				*e*Sg		**Sg**	**23 07 42.0**	**+3.1**
ILIN				*e*			23 07 50.1	
	comp=Z,2μm,0.5s							
IAZR	**Azarshahr**	**1.69**	**4**	*e*Pn		**Pg**	**23 07 26.2**	**+0.6**
IAZR				*e*			23 07 54.3	
	comp=Z,4μm,0.8s							
IGHG	**Ghaleghazi**	**1.77**	**160**	*e*Pn		**Pg**	**23 07 26.4**	**-0.7**
IGHG				*e*Sg		**Sg**	**23 07 52.2**	**+2.1**
IGHG				*e*			23 08 01.1	
	comp=Z,1μm,0.9s							
KER	**Kermanshah**	**1.93**	**146**	*e*Pn		**Pg**	**23 07 29.3**	**-0.9**
KCHF	**Cheshme Sefid,**	**1.98**	**150**	*e*			23 08 04.9	
	comp=Z,2μm,1.0s							
YOVA	**Hakkari_Yksek**	**2.01**	**323**	P			23 07 32.2	
YOVA				S			23 08 03.5	
YOVA				*i* AML			23 08 08.0	
	comp=Z,32nm,0.5s							
YOVA				*i* AML			23 08 12.0	
	comp=Z,39nm,0.7s							
CUKT	**Cukurca**	**2.18**	**306**	P			23 07 33.5	
CUKT				S			23 08 04.9	
CUKT				*i* AML			23 08 12.0	
	comp=Z,85nm,0.6s							
IBZA	**Bozab**	**2.26**	**132**	*e*Pn		**Pb**	**23 07 34.5**	**+0.3**
IBZA				*e*			23 08 20.5	
	comp=Z,705nm,0.4s							
IKOM	**Komasi**	**2.28**	**142**	*e*Pn		**Pb**	**23 07 34.6**	**+0.1**
IKOM				*e*			23 08 14.8	
	comp=Z,1μm,0.7s							
HAKT	**HAKKARI**	**2.31**	**313**	P			23 07 35.5	
HAKT				S			23 08 09.5	
HAKT				*i* AML			23 08 16.0	
	comp=Z,57nm,0.4s							
HAKT				*i* AML			23 08 17.0	
	comp=Z,34nm,1.1s							
IHRS	**Heris**	**2.52**	**22**	*e*Pn		**Pb**	**23 07 38.7**	**+0.1**
IMRD	**Marand**	**2.72**	**358**	*e*Pn		**Pb**	**23 07 41.2**	**-0.8**
IBDR	**Badra**	**2.88**	**178**	*e*Pn		**Pn**	**23 07 39.0**	**-0.1**
IBDR				*e*Sn		**Sn**	**23 08 14.0**	**+0.2**
IBDR				AML		AML	23 08 29.6	
	comp=N,25nm,0.4s							
IBDR				AML		AML	23 08 30.4	
	comp=E,21nm,0.7s							
IDOB	**Doab**	**2.93**	**138**	*e*Pn		**Pb**	**23 07 44.7**	**-0.9**
BHD	**Baghdad**	**2.97**	**204**	*e*Pn		**Pn**	**23 07 40.0**	**-0.3**
BHD				*e*Sn		**Sn**	**23 08 16.0**	**0.0**
IKFM	**Kafar-mosalman**	**2.97**	**145**	*e*Pn		**Pb**	**23 07 43.5**	**-2.7**
IKFM				*e*			23 07 46.0	
	comp=Z,1μm,0.2s							
GEVA	**Gevas**	**3.20**	**317**	P			23 07 48.7	
JIR1	**Jirandeh**	**3.29**	**76**	*e*Pn		**Pb**	**23 07 49.7**	**-2.0**
IRAZ	**Razeghan**	**3.39**	**99**	*e*			23 09 01.4	
	comp=Z,128nm,0.8s							
RAFI	**Al-Rafai**	**4.27**	**177**	*e*Pn		**Pn**	**23 07 59.0**	**+0.8**
RAFI				*e*Sn		**Sn**	**23 08 48.0**	**0.0**

*IDC **30** 23:25:35.6±1.3, 39°.37N×73°.37E, h0km, mb3.5/7,*
mbtmp3.5/12, ML3.1/5, MS3.0/2, Error ellipse:
s-maj=23.5km s-min=15.9km az=128.0
*SOME **30** 23:25:37.0, 39°.55N×73°.43E, h5km*
*KRNET **30** 23:25:37.1±0.1, 39°.45N×73°.36E, mb4.0*
*NNC **30** 23:25:41.8±1.4, 39°.62N×73°.46E, h0km, mb4.3, mpv3.9,*
Error ellipse: s-maj=11.4km s-min=5.5km az=174.0
ISC 30 23:25:37.4±1.4, **39°.42N**±0°.04×**73°.09E**±0°.03, **h0km**±9km,
n91, σ2s04/125, mb3.4/7, 37C-9D, Tajikistan-Xinjiang
border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**1.00**	**274**⇑	*e*P		**Pn**	**23 26 00.1**	**+1.2**
	baz=72							
DRK				⇑*e*S		**Sn**	**23 26 17.1**	**+3.2**
	baz=72							
OHH	**Osh**	**1.12**	**348**⇑	*e*P		**Pb**	**23 25 59.2**	**-0.5**
	baz=38							
OHH				⇑*e*S		**Sn**	**23 26 15.5**	**-1.1**
	baz=38							
GAR	**Garm**	**2.20**	**260**⇑	*e*P		**Pg**	**23 26 19.8**	**+0.3**
	baz=60							
GAR				⇑*e*S		**Sg**	**23 26 51.1**	**+3.1**
	baz=60							
TRKS	**Terek-Say**	**2.58**	**325**⇑	*e*P		**Pb**	**23 26 22.8**	**-1.7**
	baz=21							
TRKS				⇑*e*S		**Sg**	**23 26 56.2**	**-4.0**
	baz=21							
AML	**Almayashu**	**2.74**	**9**	P		**Pn**	**23 26 24.2**	**+1.3**
	SNR=32							
UCH	**Uchtor**	**3.00**	**21**	P		**Pn**	**23 26 27.7**	**+1.1**
	SNR=44							
UCH	**Uchtor**	**3.00**	**21**⇑	*e*P		**Pn**	**23 26 27.0**	**+0.4**
	baz=17							

UCH				⇑eS	Sn	23 27 03.6	+0.2		
	baz=17								
CHGR	**Chuyangaron**	**3.16**	**257**	⇑eP	Pb	23 26 33.2	-1.2		
	baz=58								
CHGR				⇑eS	Sb	23 27 14.0	+0.6		
	baz=58								
EKS2	**Erkin-Say**	**3.27**	**9**	P	Pn	23 26 31.8	+1.8		
	SNR=16								
EKS2	**Erkin-Say**	**3.27**	**9**	⇑eP	Pn	23 26 31.1	+1.1		
	baz=5.0								
EKS2				⇑eS	Sn	23 27 10.8	+1.1		
	baz=5.0								
MRKS	**Merke**	**3.32**	**2**	eP	Pb	23 26 36.1	-1.1		
	7.7nm,0.3s								
MRKS				eS	Sb	23 27 18.9	+0.8		
	112nm,0.5s								
MRKS	**Merke**	**3.32**	**2**	Pg	Pg	23 26 41.6	+0.6		
	24nm,0.2s								
MRKS				Lg	Lg	23 27 25.2			
	112nm,0.5s								
AAK	**Ala-Archa**	**3.38**	**18**	P	Pn	23 26 33.5	+2.0		
	SNR=13								
AAK	**Ala-Archa**	**3.38**	**18**	Pn	Pn	23 26 32.2	+0.7		
	10.0nm,0.3s,baz=206,slow=17,SNR=15								
AAK				Sn	Sb	23 27 15.9	-4.0		
	6.1nm,0.3s,baz=147,slow=22,SNR=6.4								
	14nm,0.4s								
AAK	**Ala-Archa**	**3.38**	**18**	⇑iP	Pn	23 26 32.2	+0.7		
	baz=15								
AAK				⇑iS	Sn	23 27 12.4	0.0		
	baz=15								
TAS	**Tashkent**	**3.47**	**304**	⇑eP	Pb	23 26 36.8	-2.8		
	baz=2.0								
TAS				⇑eS	Sb	23 27 20.1	-2.1		
	baz=2.0								
KBK	**Karagaybulak**	**3.52**	**23**	P	Pn	23 26 35.1	+1.7		
	SNR=15								
KBK	**Karagaybulak**	**3.52**	**23**	⇑eP	Pn	23 26 33.9	+0.5		
	baz=20								
KBK				⇑eS	Sn	23 27 15.3	-0.6		
	baz=20								
IUG	**Iuzhnay**	**3.58**	**320**	eP	Pg	23 26 45.4	-0.5		
	733nm,0.5s								
IUG				eS	Sg	23 27 35.0	+2.7		
	264nm,0.4s								
IUG	**Iuzhnay**	**3.58**	**320**	Pg	Pg	23 26 47.3	+1.4		
	733nm,0.5s								
IUG				Lg	Lg	23 27 35.0			
	264nm,0.4s								
ULHL	**Ulahol**	**3.69**	**39**	P	Pb	23 26 41.5	-2.1		
	SNR=24								
ULHL	**Ulahol**	**3.69**	**39**	⇑eP	Pn	23 26 35.7	-0.2		
	baz=37								
ULHL				⇑eS	Sn	23 27 18.3	-1.9		
	baz=37								
DZA	**Taraz**	**3.71**	**340**	eP	Pg	23 26 45.9	-2.6		
	47nm,0.3s								
DZA				eS	Sg	23 27 36.3	-0.2		
	133nm,0.3s								
DZA	**Taraz**	**3.71**	**340**	Pg	Pg	23 26 48.0	-0.4		
	47nm,0.3s								
DZA				Lg	Lg	23 27 37.7			
	133nm,0.3s								
CHMS	**Chumysh**	**3.78**	**19**	P	Pn	23 26 38.5	+1.6		
	SNR=11								
CHMS	**Chumysh**	**3.78**	**19**	⇑eP	Pn	23 26 37.5	+0.6		
	baz=16								
CHMS				⇑eS	Sn	23 27 21.8	-0.3		
	baz=16								
CHMS	**Chumysh**	**3.78**	**19**	⇓Pn	Pn	23 26 38.3	+1.4		
	8.1nm,0.5s								
CHMS				⇑Lg	Lg	23 27 33.5			
	16nm,0.6s								
CHM	**Chimkent**	**3.92**	**319**	eP	Pg	23 26 52.0	-0.4		
	8.4nm,0.6s								
CHM				eS	Sg	23 27 46.4	+3.1		
	333nm,0.4s								
TKM2	**Tokmak 2**	**3.97**	**28**	P	Pn	23 26 40.7	+1.0		
	SNR=6.8								
TKM2	**Tokmak 2**	**3.97**	**28**	⇓eP	Pn	23 26 39.9	+0.2		
	baz=25								
TKM2				⇓eS	Sn	23 27 25.9	-1.1		
	baz=25								
TKM2	**Tokmak 2**	**3.97**	**28**	⇓Pg	Pb	23 26 47.9	-0.5		
	8.7nm,0.4s								
TKM2				⇑Lg	Lg	23 27 38.2			
	20nm,0.6s								
USP	**Ospenovka**	**3.98**	**15**	P	Pn	23 26 41.1	+1.4		
	SNR=12								
USP	**Ospenovka**	**3.98**	**15**	⇑eP	Pn	23 26 40.5	+0.8		
	baz=12								
USP				⇑eS	Sn	23 27 26.9	-0.2		
	baz=12								
KDJ	**Kajisay**	**4.12**	**48**	⇓eP	Pn	23 26 41.3	-0.3		
	baz=46								
KDJ				⇓eS	Sn	23 27 28.3	-2.2		
	baz=46								
KK31	**Karatay Array**	**4.16**	**333**	Pn	Pn	23 26 45.4	+3.3		
	1.0nm,0.2s,baz=132,slow=12,SNR=47								
KK31				Pg	Pg	23 26 55.0	-2.1		
	3.2nm,0.3s,baz=145,slow=17,SNR=14								
KK31				⇑Sn	Sb	23 27 38.5	-3.7		
	8.8nm,0.3s,baz=159,slow=27,SNR=4.0								
KK31				⇑Lg	Lg	23 27 50.9			
	52nm,0.7s,baz=140,slow=30,SNR=3.1								
KKAR	**Karatay Array**	**4.16**	**333**	⇑eP	Pn	23 26 45.3	+3.2		
	baz=30								
KKAR				⇑eS	Sn	23 27 34.9	+3.5		
	baz=30								
KST	**Kastek**	**4.21**	**30**	eP	Pb	23 26 51.9	-0.5		
	7.5nm,0.3s								
KST				eS	Sb	23 27 45.9	+2.1		
	67nm,0.8s								
KST	**Kastek**	**4.21**	**30**	Pg	Pb	23 26 53.8	+1.4		
	7.5nm,0.3s								
KST				Lg	Lg	23 27 45.9			
	67nm,0.8s								
TARG	**Taragay, Kyrgy**	**4.26**	**56**	⇑eP	Pn	23 26 43.0	-0.9		
	baz=55								
TARG				⇑eS	Sn	23 27 31.3	-3.2		
	baz=55								
DGS	**Degeres**	**4.32**	**27**	eP	Pb	23 26 54.5	+0.4		
	22nm,0.4s								
DGS				eS	Sb	23 27 50.1	+3.4		
	70nm,0.7s								
DGS	**Degeres**	**4.32**	**27**	Pg	Pb	23 26 55.3	+1.2		
	22nm,0.4s								
DGS				Lg	Lg	23 27 49.4			
	70nm,0.7s								
BRLS	**Boroldav**	**4.36**	**327**	eP	Pb	23 26 56.6	+1.8		
	5.3nm,0.4s								
BRLS				eS	Sg	23 27 54.1	-3.2		
	42nm,0.5s								
BRLS	**Boroldav**	**4.36**	**327**	Pg	Pg	23 26 58.7	-2.2		
	5.3nm,0.4s								
BRLS				Lg	Lg	23 27 54.1			
	42nm,0.5s								
MTBS	**Maitube**	**4.47**	**33**	eP	Pb	23 26 56.6	-0.2		
	5.4nm,0.1s								
MTBS				eS	Sb	23 27 53.5	+2.2		
	42nm,0.5s								
MTBS	**Maitube**	**4.47**	**33**	Pg	Pb	23 26 57.6	+0.7		
	5.4nm,0.1s								
MTBS				Lg	Lg	23 27 52.8			
	42nm,0.5s								
TNSS	**Tian-Shan**	**4.63**	**38**	eP	Pb	23 26 59.9	+0.2		
	14nm,0.5s								
TNSS				eS	Sb	23 27 58.9	+2.7		
	17nm,0.5s								
TNSS	**Tian-Shan**	**4.63**	**38**	Pg	Pb	23 27 01.1	+1.4		
	14nm,0.5s								
TNSS				Lg	Lg	23 27 58.9			
	17nm,0.5s								
AAA	**Alma-Ata**	**4.75**	**36**	eP	Pb	23 27 02.1	+0.6		
	28nm,0.3s								
AAA				eS	Sb	23 28 03.2	+4.0		
	106nm,0.5s								
AAA	**Alma-Ata**	**4.75**	**36**	Pg	Pb	23 27 04.0	+2.4		
	28nm,0.3s								
AAA				Lg	Lg	23 28 03.2			
	106nm,0.5s								
KNDC	**Almaty**	**4.78**	**36**	⇓Pg	Pb	23 27 04.9	+2.9		
	27nm,0.5s								
KNDC				⇑Lg	Lg	23 28 04.2			
	140nm,0.6s								
PRZ	**Przheval'sk**	**5.05**	**51**	⇓eP	Pn	23 26 54.1	-0.3		
	baz=50								
PRZ				⇓eS	Sn	23 27 50.3	-3.2		
	baz=50								
KTBS	**Karatobe**	**5.06**	**31**	eP	Pb	23 27 07.2	+0.5		
	10nm,0.4s								
KTBS				eS	Sb	23 28 11.9	+3.8		
	75nm,0.6s								
KTBS	**Karatobe**	**5.06**	**31**	Pg	Pb	23 27 08.9	+2.2		
	10nm,0.4s								
KTBS				Lg	Lg	23 28 11.9			
	75nm,0.6s								
KUU	**Kurty**	**5.08**	**28**	eP	Pb	23 27 07.3	+0.1		
	5.9nm,0.5s								
KUU				eS	Sb	23 28 12.4	+3.6		
	47nm,0.6s								
KUU	**Kurty**	**5.08**	**28**	Pg	Pb	23 27 09.3	+2.2		
	5.9nm,0.5s								
KUU				Lg	Lg	23 28 13.2			
	47nm,0.6s								
CHKK	**Chushkaly**	**5.30**	**32**	eP	Pb	23 27 11.8	+0.9		
	3.9nm,0.3s								
CHKK				eS	Sb	23 28 20.1	+5.1		
	29nm,0.5s								
CHKK	**Chushkaly**	**5.30**	**32**	Pg	Pb	23 27 13.8	+3.0		
	3.9nm,0.3s								
CHKK				Lg	Lg	23 28 20.1			
	29nm,0.5s								
SATY	**Saty**	**5.41**	**46**	eP	Pb	23 27 11.8	-0.9		
	8.7nm,0.9s								
SATY				eS	Sb	23 28 21.0	+2.8		
	19nm,0.7s								
SATY	**Saty**	**5.41**	**46**	Pg	Pb	23 27 14.0	+1.3		
	8.7nm,0.9s								
SATY				Lg	Lg	23 28 21.0			
	19nm,0.7s								
ZHN	**Zhinishke**	**5.49**	**45**	eP	Pb	23 27 13.5	-0.7		
	7.0nm,0.1s								
ZHN				eS	Sb	23 28 23.1	+2.5		
	24nm,0.7s								
ZHN	**Zhinishke**	**5.49**	**45**	Pg	Pb	23 27 15.2	+1.0		
	7.0nm,0.1s								
ZHN				Lg	Lg	23 28 23.1			
	24nm,0.7s								
KURS	**Kuram**	**5.57**	**42**	eP	Pb	23 27 15.2	-0.3		
	6.7nm,0.8s								
KURS				eS	Sb	23 28 26.2	+3.4		
	17nm,0.9s								
KURS	**Kuram**	**5.57**	**42**	Pg	Pb	23 27 17.3	+1.8		
	6.7nm,0.8s								
KURS				Lg	Lg	23 28 26.2			
	17nm,0.9s								
BTLS	**Baital**	**5.66**	**7**	eP	Pb	23 27 16.6	-0.4		
	5.5nm,0.5s								
BTLS				eS	Sb	23 28 28.5	+3.3		
	14nm,0.6s								
BTLS	**Baital**	**5.66**	**7**	Pg	Pb	23 27 18.2	+1.3		
	5.5nm,0.5s								
BTLS				Lg	Lg	23 28 27.6			
	2.3nm,0.4s								
UZB	**Uzynbulak**	**5.81**	**48**	eP	Pb	23 27 19.3	-0.3		
	4.2nm,0.6s								
UZB				eS	Sb	23 28 32.2	+2.4		
	11nm,0.6s								
UZB	**Uzynbulak**	**5.81**	**48**	Pg	Pb	23 27 20.5	+0.9		
	4.2nm,0.6s								
UZB				Lg	Lg	23 28 32.2			
	11nm,0.6s								
KPKS	**Kokpek**	**5.83**	**44**	eP	Pb	23 27 20.1	+0.3		
	6.9nm,0.6s								
KPKS				eS	Sb	23 28 33.5	+3.3		
	19nm,0.6s								
KPKS	**Kokpek**	**5.83**	**44**	Pg	Pb	23 27 22.3	+2.5		
	6.9nm,0.6s								
KPKS				Lg	Lg	23 28 34.8			
	19nm,0.6s								
ARXS	**Arharly**	**5.95**	**35**	eP	Pb	23 27 22.8	+0.9		
	11nm,0.5s								
ARXS				eS	Sb	23 28 39.2	+5.5		
	27nm,0.4s								
ARXS	**Arharly**	**5.95**	**35**	Pg	Pb	23 27 24.4	+2.5		
	11nm,0.5s								
ARXS				Lg	Lg	23 28 38.3			
	27nm,0.4s								
SHLS	**Shalkode**	**6.08**	**50**	eP	Pb	23 27 29.0	+4.9		
	8.6nm,0.6s								
SHLS				eS	Sg	23 28 49.5	-3.0		
	10nm,0.8s								
SHLS	**Shalkode**	**6.08**	**50**	Pg	Pb	23 27 30.6	+6.5		
	8.6nm,0.6s								
SHLS				Lg	Lg	23 28 49.5			
	10nm,0.8s								
PDGK	**Podgornoye**	**6.19**	**49**	Pg	Pb	23 27 27.8	+1.7		
	1.8nm,0.6s								
PDGK				Lg	Lg	23 28 44.8			
	8.4nm,0.8s								
PDGK	**Podgornoye**	**6.19**	**49**	⇑Lg	Lg	23 28 45.0			
	23nm,0.8s								
OTUK	**Ortayu**	**8.83**	**357**	⇑Lg	Lg	23 30 13.6			
	14nm,0.8s								
MKAR	**Makanchi Array**	**9.97**	**39**	Lg	Lg	23 30 44.8			
	0.1nm,0.3s,baz=233,slow=26,SNR=2.7								
GEYT	**Alibeck**	**11.80**	**267**	Pn	Pn	23 28 28.2	+1.2		
	0.5nm,0.3s,baz=76,slow=18,SNR=2.3								
	1.3nm,0.4s								
KURBB	**Kurchatov Arra**	**11.84**	**17**	Pn	Pn	23 28 24.5	-2.7		
	baz=209,slow=12,SNR=1.3								
KURBB				Lg	Lg	23 31 44.2			
	baz=207,slow=28,SNR=5.2								
	0.1nm,0.4s								
AB31	**Akbulak array**	**13.59**	**321**	P	Pn	23 28 51.4	+0.2		
	0.4nm,0.5s,baz=132,slow=13,SNR=13								
AKTO	**Aktyubinsk**	**15.30**	**321**	Pn	Pn	23 29 14.6	+0.1		
	0.1nm,0.3s,baz=131,slow=9.3,SNR=1.8								
	0.5nm,0.5s								
ZALV	**Zalesovo Beam**	**16.57**	**25**	Pn	Pn	23 29 28.9	-1.9		
	0.1nm,0.3s,baz=204,slow=14,SNR=2.2								
	0.8nm,0.6s								
SONM	**Songino Array**	**25.37**	**60**	P	P	23 31 04.4	-1.7		
	0.2nm,0.6s,baz=266,slow=9.8,SNR=1.6								
	0.2nm,0.6s								
AKASG	**Malin Array Be**	**32.52**	**305**	P	P	23 32 09.2	-0.4		
	0.2nm,0.3s,baz=74,slow=8.0,SNR=2.8								
	0.2nm,0.3s								
FINES	**FINESS Array B**	**36.05**	**323**	P	P	23 32 40.3	+0.2		
	0.5nm,0.3s,baz=120,slow=9.3,SNR=12								
	0.5nm,0.3s								
ARCES	**ARCESS Array B**	**39.12**	**336**	P	P	23 33 05.9	-0.1		
	0.5nm,0.5s,baz=113,slow=9.3,SNR=3.8								
	0.5nm,0.5s								
KLR	**Kul'dur**	**42.12**	**57**	LR	LR	23 52 04.6			
	comp=Z,13nm,18.1s,baz=178,slow=38								
NOA	**NORSAR Array B**	**43.09**	**321**	P	P	23 33 38.4	-0.4		
	0.2nm,0.5s,baz=110,slow=7.2,SNR=1.0								
	0.2nm,0.5s								
MDT	**Midelt**	**61.31**	**290**	LR	LR	00 06 13.7			
	comp=Z,12nm,18.6s,baz=70,slow=40								
TORD	**Torodi Ar. Bea**	**67.44**	**269**	P	P	23 36 34.0	-1.0		
	0.7nm,0.7s,baz=47,slow=5.7,SNR=8.6								
	0.7nm,0.7s								
WRA	**Warramunga Arr**	**82.18**	**124**	P	P	23 37 57.6	-2.6		
	0.2nm,0.6s,baz=315,slow=5.7,SNR=1.1								
	0.2nm,0.6s								

*UCR **30** 23:34:13.3±0.9, 13°.11N×90°.05W, h32km±6km, mb3.6(NEIC)*
*GCG **30** 23:34:16.2±0.7, 13°.27N×90°.36W, h0km±9km, MD3.3*
ISC 30 23:34:06.7±2.6,**12'.8N**±0'.1×**90'.13W**±0'.06,**h29**km,**n21,**
σ1^{s}26,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAYA	**Jayaque - finc**	**1.09**	**37**	eP	**Pb**	**23 34 28.4**	**+1.3**
JAYA	**Jayaque - finc**	**1.09**	**37**	eP	**Pb**	**23 34 28.4**	**+1.3**
CEVE	**Cerro Verde**	**1.15**	**25**	eP	**Pb**	**23 34 29.1**	**+0.9**
CEVE	**Cerro Verde**	**1.15**	**25**	eP	**Pb**	**23 34 29.1**	**+0.9**
NUBE	**Las Nubes**	**1.17**	**17**	eP	**Pb**	**23 34 29.3**	**+0.9**
NUBE	**Las Nubes**	**1.17**	**17**	eP	**Pb**	**23 34 29.3**	**+0.9**
SLOZ	**Alcaldia de Sa**	**1.28**	**15**	eP	**Pb**	**23 34 30.4**	**+0.1**
COEG	**Centro de Oper**	**1.48**	**55**	eP	**Pb**	**23 34 34.2**	**+0.6**
COEG	**Centro de Oper**	**1.48**	**55**	eP	**Pb**	**23 34 34.2**	**+0.6**
PAVA	**Las Pavas**	**1.49**	**51**	eP	**Pb**	**23 34 34.8**	**+0.9**
PAVA				eS	**Sb**	**23 34 51.9**	**-0.4**
PAVA	**Las Pavas**	**1.49**	**51**	eP	**Pb**	**23 34 34.8**	**+0.9**
PAVA				eS	**Sb**	**23 34 51.9**	**-0.4**
SCLA	**Alcaldia de Sa**	**1.64**	**56**	eP	**Pb**	**23 34 37.2**	**+0.7**
SCLA	**Alcaldia de Sa**	**1.64**	**56**	eP	**Pb**	**23 34 37.2**	**+0.7**
PCG	**Pacaya**	**1.67**	**344**	eS	**Sb**	**23 34 55.3**	**-2.4**
COEB	**Comit de Eme**	**1.71**	**65**	eP	**Pb**	**23 34 38.9**	**+1.2**
COEB	**Comit de Eme**	**1.71**	**65**	eP	**Pb**	**23 34 38.9**	**+1.2**
FUG	**Fuego 3**	**1.79**	**337**	eP	**Pb**	**23 34 40.2**	**+1.0**
FUG				eS	**Sb**	**23 34 59.2**	**-2.1**
NBG	**Las Nubes**	**1.81**	**353**	eP	**Pb**	**23 34 41.8**	**+2.4**
NBG				eS	**Sb**	**23 35 01.4**	**-0.3**
LCND	**La Caada**	**2.25**	**76**	eP	**Pb**	**23 34 46.7**	**0.0**
LCND	**La Caada**	**2.25**	**76**	eP	**Pb**	**23 34 46.7**	**0.0**
STG3	**Santiaguito 3,**	**2.37**	**324**	eP	**Pb**	**23 34 50.5**	**+1.5**
STG3				eS	**Sb**	**23 35 15.8**	**-2.1**

*NEIC **30** 23:34:59.8±1.6, 17°.9N±0°.2×68°.53W±0°.04, h74km±21km, Error ellipse: s-maj=26.0km s-min=5.4km az=181.0*
*RSPR **30** 23:35:00.1, 17°.96N×68°.58W, h66km±7km, MD3.8/15*
*OSPL **30** 23:35:02.7±1.5, 18°.09N×68°.39W, h77km±13km, ML3.7*
ISC 30 23:35:02.5±1.3,**18'.23N**±0'.08×**68'.44W**±0'.03,**h48**km±35km,
n68,σ1^{s}42/78,17C,Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDE	**Isla Desecheo**	**0.93**	**80**	⇑eP	**Pn**	**23 35 18.6**	**-0.7**
IDE	**Isla Desecheo**	**0.93**	**80**	eS	**Sn**	**23 35 32.1**	**+0.6**
DR12	**Loma Pena Alta**	**1.05**	**302**	⇑eP	**Pn**	**23 35 19.7**	**-1.2**
DR12				eS	**Sn**	**23 35 31.3**	**-3.2**
DR12	**Loma Pena Alta**	**1.05**	**302**		**Pn**	**23 35 19.7**	**-1.2**
PRSN	**Puerto Rico Se**	**1.23**	**91**		**Pn**	**23 35 23.2**	**-0.1**
PRSN				IAML		23 35 44.9	
	comp=E,3μm,0.3s						
AGPR	**Aguadilla, PR**	**1.28**	**79**	⇑eP	**Pn**	**23 35 23.8**	**-0.2**
AGPR	**Aguadilla, PR**	**1.28**	**79**	eS	**Sn**	**23 35 42.7**	**+2.6**
AGPR	**Aguadilla, PR**	**1.28**	**79**		**Pn**	**23 35 23.8**	**-0.2**
AGPR	**Aguadilla, PR**	**1.28**	**79**		**Sn**	**23 35 42.5**	**+2.4**
AGPR				IAML		23 35 44.1	
	comp=E,2μm,0.6s						
AGPR	**Aguadilla, PR**	**1.28**	**79**	*i* P	**Pn**	**23 35 23.5**	**-0.5**
AGPR				eS	**Sn**	**23 35 40.5**	**+0.4**
AGPR				IAML		23 35 45.8	
	comp=Z,995nm,0.2s						
CRPR	**Cabo Rojo, PR**	**1.28**	**100**	⇑eP	**Pn**	**23 35 22.9**	**-1.1**
CRPR	**Cabo Rojo, PR**	**1.28**	**100**	eS	**Sn**	**23 35 41.6**	**+1.5**
CRPR	**Cabo Rojo, PR**	**1.28**	**100**		**Pn**	**23 35 22.9**	**-1.1**
CRPR					**Sn**	**23 35 41.6**	**+1.5**
CRPR	**Cabo Rojo, PR**	**1.28**	**100**	*i* P	**Pn**	**23 35 22.8**	**-1.3**
CRPR				IAML		23 35 44.2	
	comp=Z,517nm,0.3s						
LSP	**Las Mesas**	**1.29**	**92**	⇑eP	**Pn**	**23 35 24.1**	**-0.1**
LSP	**Las Mesas**	**1.29**	**92**	eS	**Sn**	**23 35 41.7**	**+1.4**
MLPR	**Magueyes Islan**	**1.35**	**101**	⇑eP	**Pn**	**23 35 23.6**	**-1.4**
MLPR	**Magueyes Islan**	**1.35**	**101**	eS	**Sn**	**23 35 42.3**	**+0.5**
MLPR	**Magueyes Islan**	**1.35**	**101**		**Pn**	**23 35 23.6**	**-1.4**
MLPR	**Magueyes Islan**	**1.35**	**101**		**Sn**	**23 35 42.5**	**+0.8**
SDD	**Santo Domingo**	**1.42**	**279**		**Sn**	**23 35 42.8**	**-0.5**
SDD	**Santo Domingo**	**1.42**	**279**	eS	**Sn**	**23 35 44.2**	**+0.9**
GBPR	**Guanica, Bosqu**	**1.51**	**100**	⇑eP	**Pn**	**23 35 25.6**	**-1.4**
GBPR	**Guanica, Bosqu**	**1.51**	**100**	eS	**Sn**	**23 35 45.5**	**0.0**
AOPR	**Arecibo Observ**	**1.61**	**86**	⇑eP	**Pn**	**23 35 28.4**	**-0.1**
AOPR	**Arecibo Observ**	**1.61**	**86**	eS	**Sn**	**23 35 49.5**	**+1.4**
AOPR	**Arecibo Observ**	**1.61**	**86**		**Pn**	**23 35 28.4**	**-0.1**
AOPR					**Sn**	**23 35 49.5**	**+1.4**
OBIP	**Obispado Ponce**	**1.75**	**96**	⇑eP	**Pn**	**23 35 29.1**	**-1.3**
OBIP	**Obispado Ponce**	**1.75**	**96**	eS	**Sn**	**23 35 54.1**	**+2.5**
OBIP	**Obispado Ponce**	**1.75**	**96**		**Pn**	**23 35 29.1**	**-1.3**
OBIP	**Obispado Ponce**	**1.75**	**96**		**Sn**	**23 35 54.0**	**+2.4**
OBIP				IAML		23 35 56.2	
	comp=N,498nm,0.5s						
LONA1	**Toro Cenizo, N**	**1.77**	**310**	eS	**Sn**	**23 35 54.2**	**+2.2**
LONA1				IAML		23 36 00.8	
	comp=Z,1μm,1.3s						
CELP	**Cerrillos**	**1.78**	**95**		**Pn**	**23 35 29.5**	**-1.3**
CELP				IAML		23 35 57.6	
	comp=E,563nm,0.4s						
CELP				IAML		23 35 57.6	
	comp=N,850nm,0.3s						
BANI	**BANI**	**1.83**	**275**	⇑eP	**Pn**	**23 35 32.0**	**+0.4**
BANI				eS	**Sn**	**23 35 58.6**	**+5.0**
BANI	**BANI**	**1.83**	**275**		**Pn**	**23 35 29.3**	**-2.3**
BANI	**BANI**	**1.83**	**275**	*i* P	**Pn**	**23 35 32.3**	**+0.7**
BANI				IAML		23 36 03.2	
	comp=Z,518nm,0.4s						
EMPR	**Esperanza - Ma**	**1.83**	**82**	⇑eP	**Pn**	**23 35 31.7**	**+0.2**
EMPR	**Esperanza - Ma**	**1.83**	**82**	eS	**Sn**	**23 35 55.3**	**+1.8**
EMPR	**Esperanza - Ma**	**1.83**	**82**		**Pn**	**23 35 31.7**	**+0.2**
EMPR					**Sn**	**23 35 55.3**	**+1.8**
ICMP	**Isla Caja de M**	**1.85**	**100**	⇑eP	**Pn**	**23 35 31.9**	**+0.2**
ICMP	**Isla Caja de M**	**1.85**	**100**	eS	**Sn**	**23 35 52.6**	**-1.4**
ICMP	**Isla Caja de M**	**1.85**	**100**		**Pn**	**23 35 29.0**	**-2.8**
ICMP					**Sn**	**23 35 52.6**	**-1.4**
SJG	**San Juan**	**2.18**	**93**		**Pn**	**23 35 35.2**	**-1.0**
SJG				IAML		23 36 06.5	
	comp=Z,515nm,0.2s						
SJG				IAML		23 36 08.8	
	comp=Z,643nm,0.4s						
IGPR	**InterUniversit**	**2.23**	**96**	⇑eP	**Pn**	**23 35 36.5**	**-0.6**
GCPR	**Guaynabo City**	**2.24**	**88**	⇑eP	**Pn**	**23 35 35.7**	**-1.4**
GCPR	**Guaynabo City**	**2.24**	**88**	eS	**Sn**	**23 36 04.6**	**+1.0**
GCPR	**Guaynabo City**	**2.24**	**88**		**Pn**	**23 35 35.7**	**-1.4**
GCPR	**Guaynabo City**	**2.24**	**88**		**Sn**	**23 36 03.1**	**-0.5**
PDPR	**Patillas Dam,**	**2.31**	**95**	Pn	**Pn**	**23 35 36.7**	**-1.3**
CBYP	**Canovanas**	**2.46**	**89**	⇑eP	**Pn**	**23 35 39.8**	**-0.3**
CBYP	**Canovanas**	**2.46**	**89**	eS	**Sn

	baz=33							
OHH				⇑*e*S		**Sg**	**23 49 50.0**	**+5.7**
	baz=33							
CHGR	**Chuyangaron**	**2.02**	**257**	⇑*e*P		**Pb**	**23 49 29.1**	**+0.9**
	baz=58							
CHGR				⇑*e*S		**Sg**	**23 49 55.0**	**-1.9**
	baz=58							
TRKS	**Terek-Say**	**2.43**	**350**	⇓*e*P		**Pg**	**23 49 36.4**	**-2.0**
	baz=53							
TRKS				⇓*e*S		**Sg**	**23 50 07.7**	**-2.2**
	baz=53							
IUG	**Iuzhnay**	**3.26**	**338**	*e*P		**Pg**	**23 49 53.0**	**-1.2**
	138nm,0.3s							
IUG				*e*S		**Sg**	**23 50 34.6**	**-2.0**
	26nm,0.3s							
IUG	**Iuzhnay**	**3.26**	**338**	Pg		**Pg**	**23 49 53.0**	**-1.2**
	138nm,0.3s							
IUG				Lg		Lg	23 50 35.3	
	26nm,0.3s							
UCH	**Uchtor**	**3.77**	**34**	⇓*e*P		**Pb**	**23 49 57.2**	**-0.9**
	baz=35							
UCH				⇓*e*S		**Sb**	**23 50 43.5**	**-0.2**
	baz=35							
MRKS	**Merke**	**3.79**	**17**	*e*P		**Pg**	**23 50 03.9**	**-0.5**
	2.0nm,0.1s							
MRKS				*e*S		**Sg**	**23 50 53.6**	**0.0**
	7.3nm,0.3s							
MRKS	**Merke**	**3.79**	**17**	Pg		**Pg**	**23 50 03.9**	**-0.5**
	2.0nm,0.1s							
MRKS				Lg		Lg	23 50 53.6	
	7.3nm,0.3s							
KK31	**Karatay Array**	**4.07**	**348**	⇓Pn		**Pb**	**23 50 03.7**	**+0.8**
	1.4nm,0.3s,baz=174,slow=13,SNR=19							
KK31				⇓Sn		**Sb**	**23 50 51.4**	**-0.3**
	3.4nm,0.5s,baz=170,slow=24,SNR=4.4							
BRLS	**Borolday**	**4.14**	**341**	*e*P		**Pb**	**23 50 04.9**	**+0.8**
	2.5nm,0.3s							
BRLS				*e*S		**Sb**	**23 50 55.3**	**+1.5**
	2.9nm,0.5s							
BRLS	**Borolday**	**4.14**	**341**	Pg		**Pb**	**23 50 04.9**	**+0.8**
	2.5nm,0.3s							
BRLS				Lg		Lg	23 50 55.3	
	2.9nm,0.5s							
TKM2	**Tokmak 2**	**4.81**	**37**	⇓Pn		**Pb**	**23 50 13.1**	**-2.5**
	0.9nm,0.4s							
TKM2				⇓Sn		**Sb**	**23 51 12.9**	**-0.4**
	1.2nm,0.6s							
MTBS	**Maitube**	**5.37**	**40**	*e*P		**Pg**	**23 50 33.1**	**-1.3**
	4.7nm,0.1s							
MTBS				*e*S		**Sg**	**23 51 43.5**	**-0.5**
	4.8nm,0.1s							
MTBS	**Maitube**	**5.37**	**40**	Pg		**Pg**	**23 50 33.1**	**-1.3**
	4.7nm,0.1s							
MTBS				Lg		Lg	23 51 43.4	
	4.8nm,0.1s							
BTLS	**Baital**	**6.16**	**16**	*e*P		**Pg**	**23 50 47.8**	**-1.9**
	0.8nm,0.3s							
BTLS				*e*S		**Sg**	**23 52 08.6**	**-0.8**
	1.1nm,0.3s							
BTLS	**Baital**	**6.16**	**16**	Pg		**Pg**	**23 50 47.8**	**-1.9**
	0.8nm,0.3s							
BTLS				Lg		Lg	23 52 08.6	
	1.1nm,0.3s							

ISC Computed Locations for June 2016

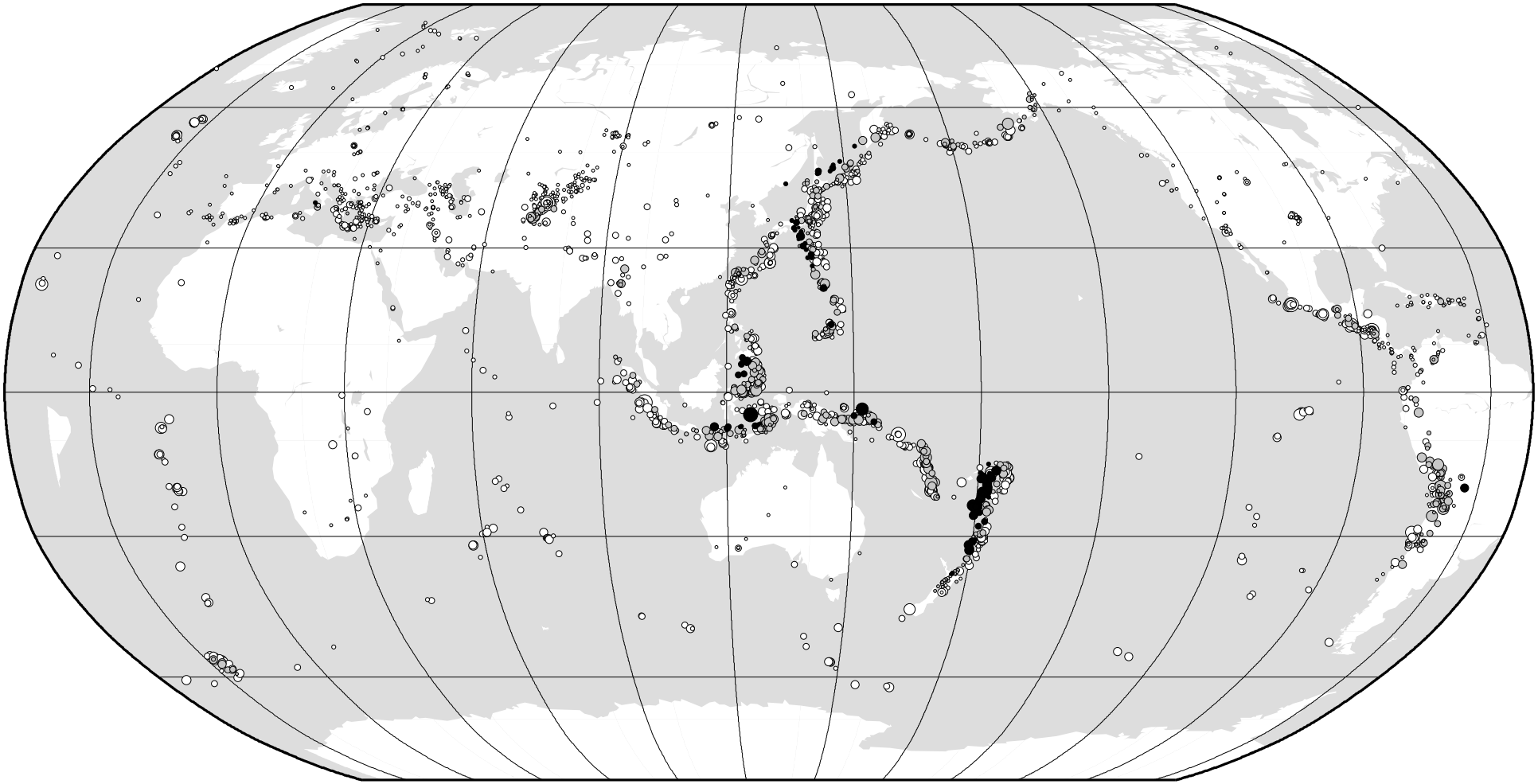

Depth (km)	0-70	70-300	>300
M=8	○	○	●
M=6.5	○	○	●
M=4	○	○	●

Robinson Projection, centred on 0˚N,130˚E

3053 Events